Report of Existing Geotechnical Data

Mid Barataria Diversion (BA-153)
Plaquemines Parish, Louisiana

for
HDR Engineering, Inc.

May 22, 2013

GeoEngineers
Earth Science + Technology

"Confidential Information: Privileged & Confidential Work Product"

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May 22, 2013

GeoEngineers

11955 Lakeland Park Boulevard, Suite 100
Baton Rouge, Louisiana 70809
225.293.2460

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Report of Existing Geotechnical Data

Mid Barataria Diversion (BA-153)
Plaquemines Parish, Louisiana

File No. 18274-001-00

May 22, 2013

Prepared for:

HDR Engineering, Inc.
2365 Iron Point Road, Suite 300
Folsom, CA 95630

Attention: Mark Stanley

Prepared by:

GeoEngineers, Inc.
11955 Lakeland Park Boulevard, Suite 100
Baton Rouge, Louisiana 70809
225.293.2460

Venu Tammineni, PE, LEED AP
Geotechnical Engineer

Charles L. Eustis, PE
Principal

VT:CLE:cc

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INTRODUCTION AND PURPOSE

GeoEngineers, Inc. (GeoEngineers) is working with HDR, Inc. (HDR) on the Mid Barataria Diversion (MBD) Project (BA-153) under DNR Contract No. 2503-11-64, Task Order 0200. GeoEngineers performed a search for available information for the MBD project. The purpose of this report is to present the available information GeoEngineers compiled that might be helpful in the design of the MBD project.

MBD PROJECT

The MBD project is a large scale, permanent river diversion feature that will restore the natural over-land flooding cycle of the Mississippi River and Tributaries (MR&T) as shown in Figure 1. The area between the MR&T levee and the Mid-Barataria marsh levee (back levee) is relatively flat as can be observed on Figure 2. Highway 23 (Hwy 23) runs approximately north-south through the project area. The batture and the area between the MR&T levee and Hwy 23 has vegetation including trees and shrubs. The area between Hwy 23 and the Back levee is predominantly open agriculture land. Multiple drainage channels within the open fields drain excess water into perimeter drainage channels that are pumped to remove water to the marsh.

EXISTING DATA

GeoEngineers performed a search for available geotechnical information in and around the project area and compiled this report. The following information is included in this report:

1. Vicinity Map (Figure 1)
2. USGS Topographic Map (Figure 2)
3. Aerial photographs (Figure 3)
4. Geology Map (Figure 4)
5. USDA soil information (Figure 5)
6. GeoEngineers requested information from the United States Army Corps of Engineers (USACE) on January 8, 2013 through a "Freedom of Information Act" (FOIA) request (FA#13-0059). A response was received from Department of the Army, New Orleans District, Corps of Engineers on January 8, 2013. The cover letter and information provided through the FOIA request are included in Appendix A and B.
7. GeoEngineers requested geotechnical data and design profiles in and around the MBD project area from the Coastal Protection and Restoration Authority (CPRA) and received information attached in Appendices B and E.
8. GeoEngineers received geotechnical design information from station 728+00 to 819+00 for the USACE New Orleans to Venice, Louisiana (NOV), Plaquemines Parish Non-Federal Levee (Project No.NOV-NF-W-06) from HDR. This information is included in Appendix D. HDR also provided the geotechnical data for the back levee in and around the MBD project site. This information is given in Appendix C.

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9. With verbal permission from Russ Joffrion of CPRA on May 16, 2013, GeoEngineers included geotechnical information available for the Bayou Dupont (BA-39) project that was constructed immediately north of the MBD Outfall area collected by GeoEngineers. This information is included in Appendix E.
10. Appendix F contains geotechnical information from various projects in the vicinity of the MBD project site. This information was provided by CPRA.

LIMITATIONS

We have prepared this report for the HDR and their authorized agents and regulatory agencies for the Mid Barataria Diversion (BA-153) project in Myrtle Grove, Louisiana.

Within the limitations of scope, schedule and budget, our services have been executed. All data presented have been provided to us by other agencies or companies to include in this report for the Mid Barataria Diversion (BA-153) project. No warranty or other conditions express or implied should be understood.

Any electronic form, facsimile or hard copy of the original document (email, text, table and/or figure), if provided, and any attachments should be considered a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

Please refer to Appendix G titled "Report Limitations and Guidelines for Use" for additional information pertaining to use of this report.

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FIGURES

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P:\18\18274001\00\CAD\Vicinity Map.dwg\TAB:Layout1 (2) modified on May 22, 2013 - 10:10am

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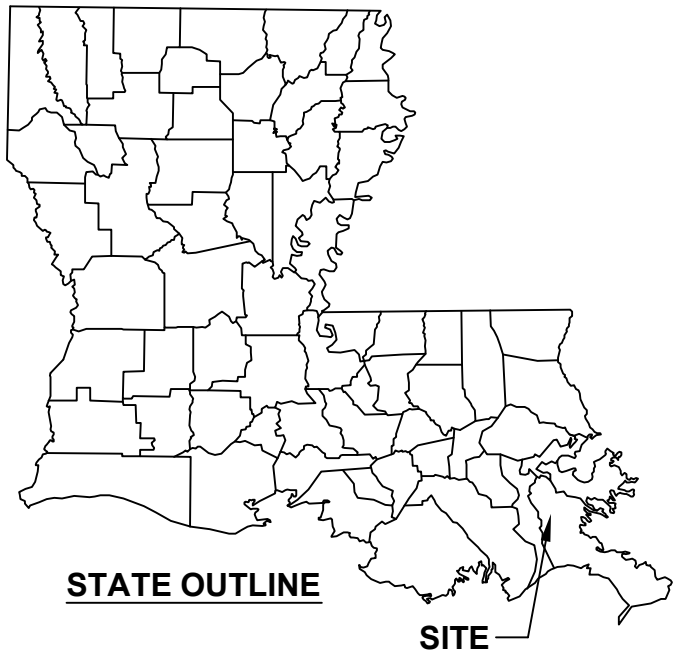

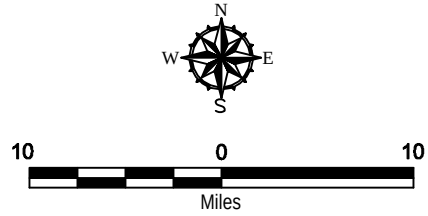

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. can not guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Reference: Aerial image was taken from Google Earth Pro., Licensed to GeoEngineers Inc., Imagery dated: 11/14/2012

VICINITY MAP

Mid Barataria Diversion (BA-153) Project
Plaquemines Parish, Louisiana

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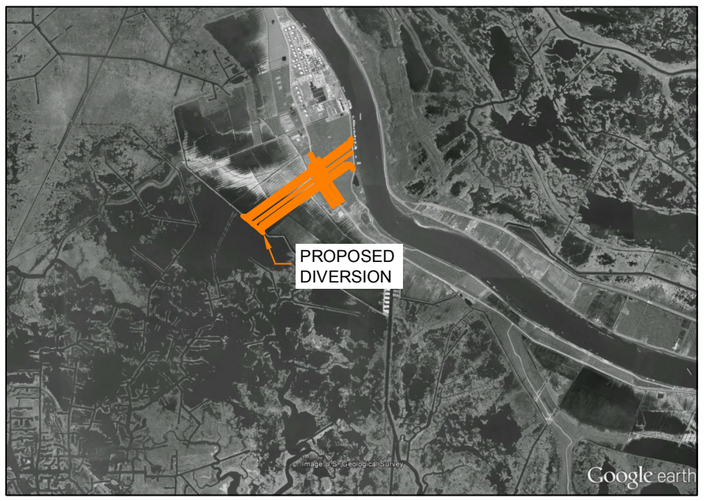
Figure 1

"Confidential Information: Privileged & Confidential Work Product"

AERIAL IMAGE
Dated: 11-14-2012

AERIAL IMAGE
Dated: 12-31-2009

AERIAL IMAGE
Dated: 7-22-2007



AERIAL IMAGE
Dated: 10-26-2005

AERIAL IMAGE
Dated: 1-18-1999

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Reference: Aerial images were taken from Google Earth Pro., Licensed to GeoEngineers Inc., Imagery Dated 2012, 2009, 2007, 2005 and 1999

AERIAL PHOTOS

Mid Barataria Diversion (BA-153) Project
Plaquemines Parish, Louisiana

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Figure 2

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VT : KMC

P:\18\18274001\00\CAD\Historical Photos.dwg\TAB:Layout1 modified on May 21, 2013 - 5:59am

LEGEND

- PROJECT AREA
- CONTOUR (0 FT)
- CONTOUR (5 FT)
- CONTOUR (10 FT)

N
W E
S

1000 0 1000
Feet

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Reference: 1. Aerial image was taken from Google Earth Pro., Licensed to GeoEngineers Inc., Imagery dated: 10/29/2012
2. Elevation data was taken from USGS, 1/9-Arc Second National Elevation Database, Dated 2006

USGS TOPOGRAPHY MAP

Mid Barataria Sediment Diversion (BA-153) Project
Plaquemines Parish, Louisiana

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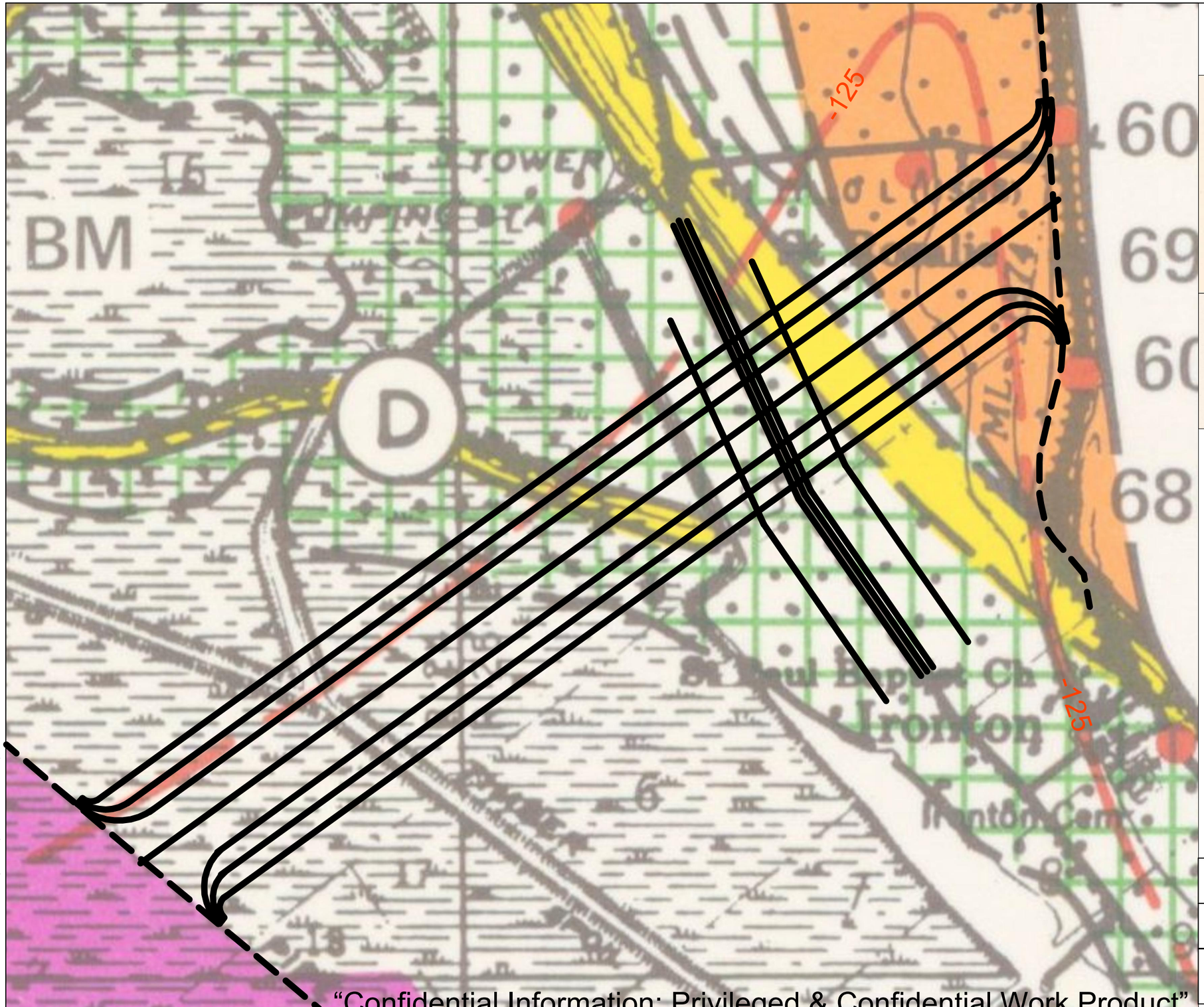
Figure 3

VT : KMC

P:\18\18274001\00\CAD\USGS contour map.dwg\TAB:Layout1 modified on May 22, 2013 - 10:06am

"Confidential Information: Privileged & Confidential Work Product"



Legend

- NATURAL LEVEE
- POINT BAR
- ABANDONED COURSE
- ABANDONED DISTRIBUTARY
- INLAND SWAMP
- INTERDISTRIBUTARY
- INTRADELTA
- LAND LOSS (1939 – 1983)
- INDEFINITE CONTACT
- ELEVATION OF UPPER FINE-GRAINED PLEISTOCENE SURFACE IN FEET-MSL
- BORING USED TO CONTOUR UPPER FINE-GRAINED PLEISTOCENE SURFACE
- BORINGS USED ON CROSS SECTIONS

N W E S

1000 0 1000
Feet

Notes:
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Reference: Geology map was taken from USACE, Quads: Bartaria & PointeAlaHache, Dated 1987

AREA GEOLOGY MAP

Mid Barataria Sediment Diversion (BA-153) Project
Plaquemines Parish, Louisiana

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Figure 4

VT : KMC

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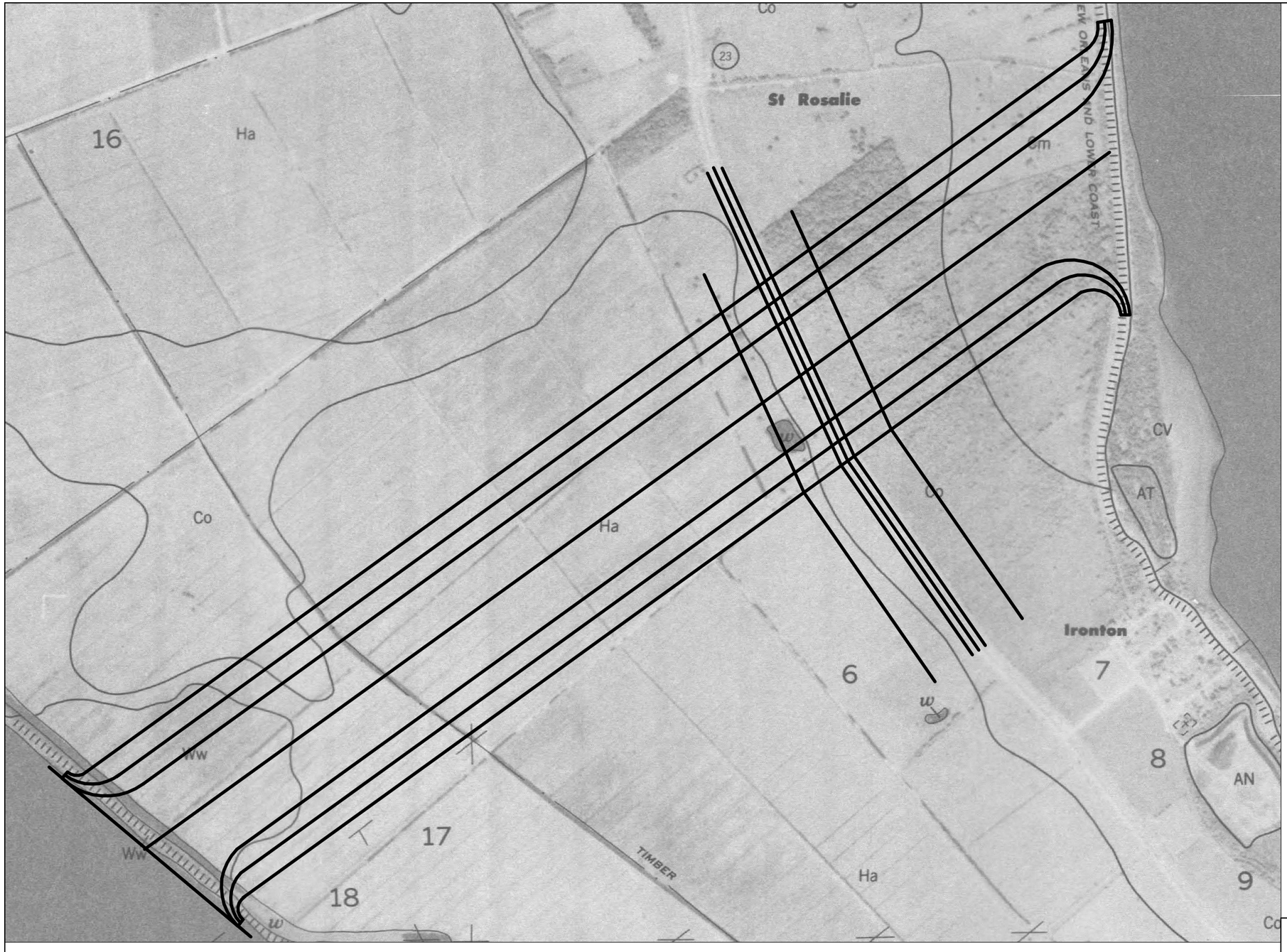

LEGEND

Cm
COMMERCE SILT LOAM

Co
COMMERCE SILTY CLAY LOAM

Ha
HARAHAN CLAY

Ww
WESTWEGO CLAY

AT
AQUENTS, DREDGED, FREQUENTLY FLOODED

AN
AQUENTS, DREDGED

CV
CONVENT, COMMERCE, AND SHARKLEY SOILS , FREQUENTLY FLOODED

N
W E
S

1000 0 1000
Feet

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Reference: Soil survey map was taken from USDA, Plaquemines Parish Map No. 17, dated 1983

USDA SURFACE SOIL INFORMATION

Mid Barataria Diversion (BA-153) Project
Plaquemines Parish, Louisiana

GeoEngineers | **Figure 5**

VT : KMC

P:\18\18274001\00\CAD\Boring Locations dwg\TAB:Layout2 (2) modified on May 20, 2013 - 10:27am

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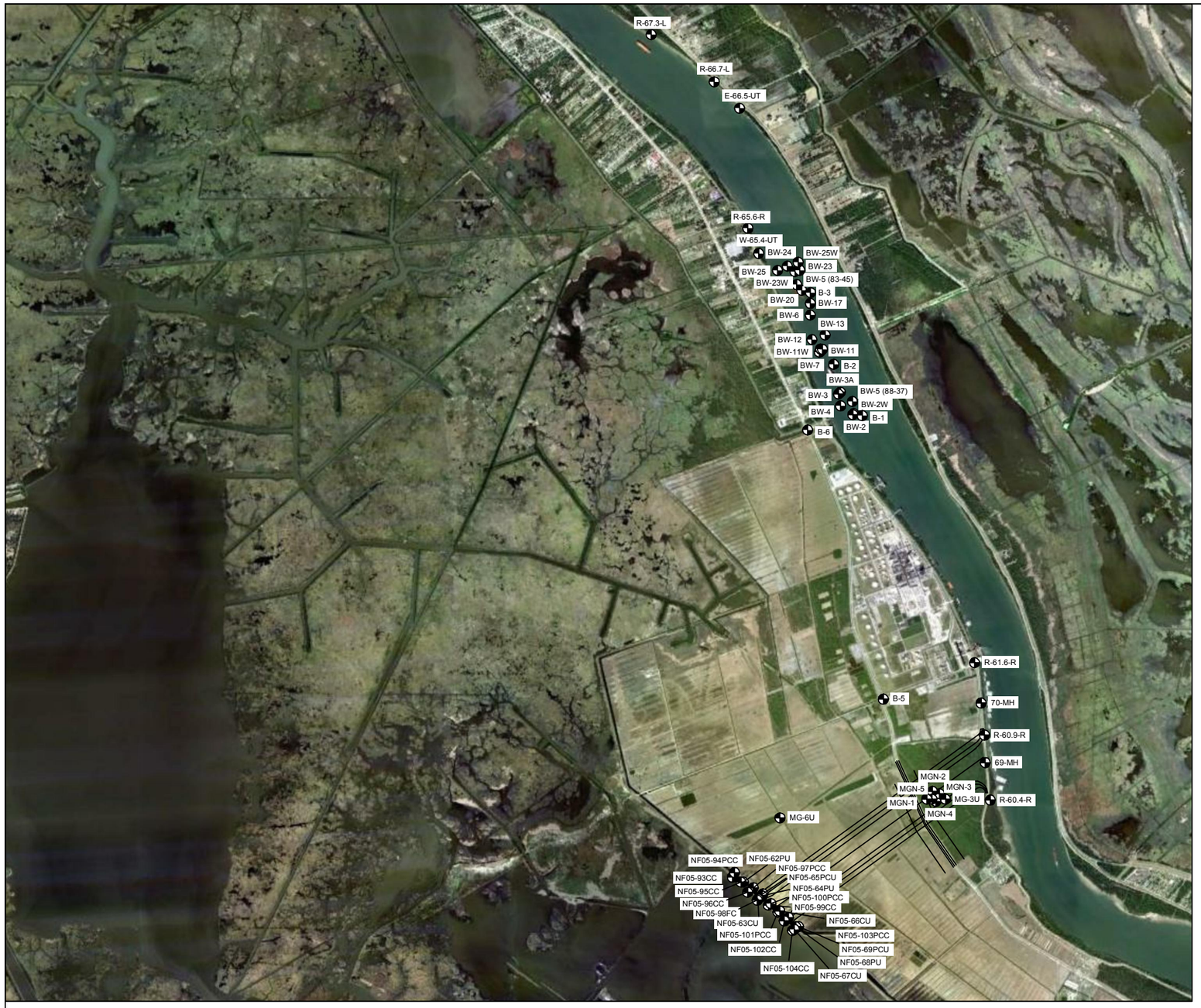

BORING DETAILS	
BORING #	**REPORT LOCATION**
R-60.9-R	APPENDIX A
R-60.4-R	APPENDIX A
69-MH	APPENDIX A
MGN-1	APPENDIX B
MGN-2	APPENDIX B
MGN-3	APPENDIX B
MG-3U	APPENDIX B
MGN-4	APPENDIX B
MGN-5	APPENDIX B
MG-6U	APPENDIX B
NF05-62PU	APPENDIX B
NF05-63CU	APPENDIX C
NF05-64PU	APPENDIX C
NF05-65PCU	APPENDIX C
NF05-68PU	APPENDIX C
NF05-69PCU	APPENDIX C
NF05-93CC	APPENDIX C
NF05-94PCC	APPENDIX C
NF05-95CC	APPENDIX C
NF05-96CC	APPENDIX C
NF05-97PCC	APPENDIX C
NF05-98FC	APPENDIX C
NF05-99CC	APPENDIX C
NF05-100PCC	APPENDIX C
NF05-101PCC	APPENDIX C
NF05-102CC	APPENDIX C
NF05-103PCC	APPENDIX C
NF05-104CC	APPENDIX C
NF05-66CU	APPENDIX C
NF05-67CU	APPENDIX C
E-66.5-UT	APPENDIX F

BORING DETAILS	
BORING #	**REPORT LOCATION**
R-66.7-L	APPENDIX F
R-61.6-R	APPENDIX F
R-67.3-L	APPENDIX F
W-65.4-UT	APPENDIX F
R-65.6-R	APPENDIX F
BW-5 (83-45)	APPENDIX F
BW-4	APPENDIX F
BW-2W	APPENDIX F
BW-2	APPENDIX F
BW-3	APPENDIX F
BW-12	APPENDIX F
BW-11W	APPENDIX F
BW-11	APPENDIX F
BW-7	APPENDIX F
BW-3A	APPENDIX F
BW-5 (88-37)	APPENDIX F
BW-20	APPENDIX F
BW-17	APPENDIX F
BW-6	APPENDIX F
BW-13	APPENDIX F
BW-25B	APPENDIX F
BW-24	APPENDIX F
BW-25	APPENDIX F
BW-23W	APPENDIX F
BW-23	APPENDIX F
70-MH	APPENDIX F
B-1	APPENDIX E
B-2	APPENDIX E
B-3	APPENDIX E
B-5	APPENDIX E
B-6	APPENDIX E

LEGEND

MGN-1 Boring Location

N
W E
S

5000 0 5000
Feet

Notes:
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3. All geotechnical exploration locations shown above were provided to GeoEngineers by other agencies or HDR, Inc.

Reference: Aerial image was taken from Google Earth Pro., Licensed to Google Earth Pro., Imagery Dated: 10-29-2012

MAP SHOWING LOCATION OF AVAILABLE SUBSURFACE INFORMATION

Mid Barataria Diversion (BA-153) Project
Plaquemines Parish, Louisiana

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Figure 6a

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BORING DETAILS	
BORING #	**REPORT LOCATION**
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R-60.4-R	APPENDIX A
69-MH	APPENDIX A
MGN-1	APPENDIX B
MGN-2	APPENDIX B
MGN-3	APPENDIX B
MG-3U	APPENDIX B
MGN-4	APPENDIX B
MGN-5	APPENDIX B
MG-6U	APPENDIX B
NF05-62PU	APPENDIX B
NF05-63CU	APPENDIX C
NF05-64PU	APPENDIX C
NF05-65PCU	APPENDIX C
NF05-68PU	APPENDIX C
NF05-69PCU	APPENDIX C
NF05-93CC	APPENDIX C
NF05-94PCC	APPENDIX C
NF05-95CC	APPENDIX C
NF05-96CC	APPENDIX C
NF05-97PCC	APPENDIX C
NF05-98FC	APPENDIX C
NF05-99CC	APPENDIX C
NF05-100PCC	APPENDIX C
NF05-101PCC	APPENDIX C
NF05-102CC	APPENDIX C
NF05-103PCC	APPENDIX C
NF05-104CC	APPENDIX C
NF05-66CU	APPENDIX C
NF05-67CU	APPENDIX C

LEGEND

MGN-1 Boring Location

N
W E
S

1000 0 1000
Feet

Notes:
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3. All geotechnical exploration locations shown above were provided to GeoEngineers by other agencies or HDR, Inc.

Reference: Aerial image was taken from Google Earth Pro., Licensed to Google Earth Pro., Imagery Dated: 10-29-2012.

MAP SHOWING LOCATION OF AVAILABLE SUBSURFACE INFORMATION

Mid Barataria Diversion (BA-153) Project
Plaquemines Parish, Louisiana

GeoEngineers

Figure 6b

VT : KMC

P:\18\18274001\00\CAD\Boring Locations.dwg\TAB:Layout2 (3) modified on May 23, 2013 - 9:08am

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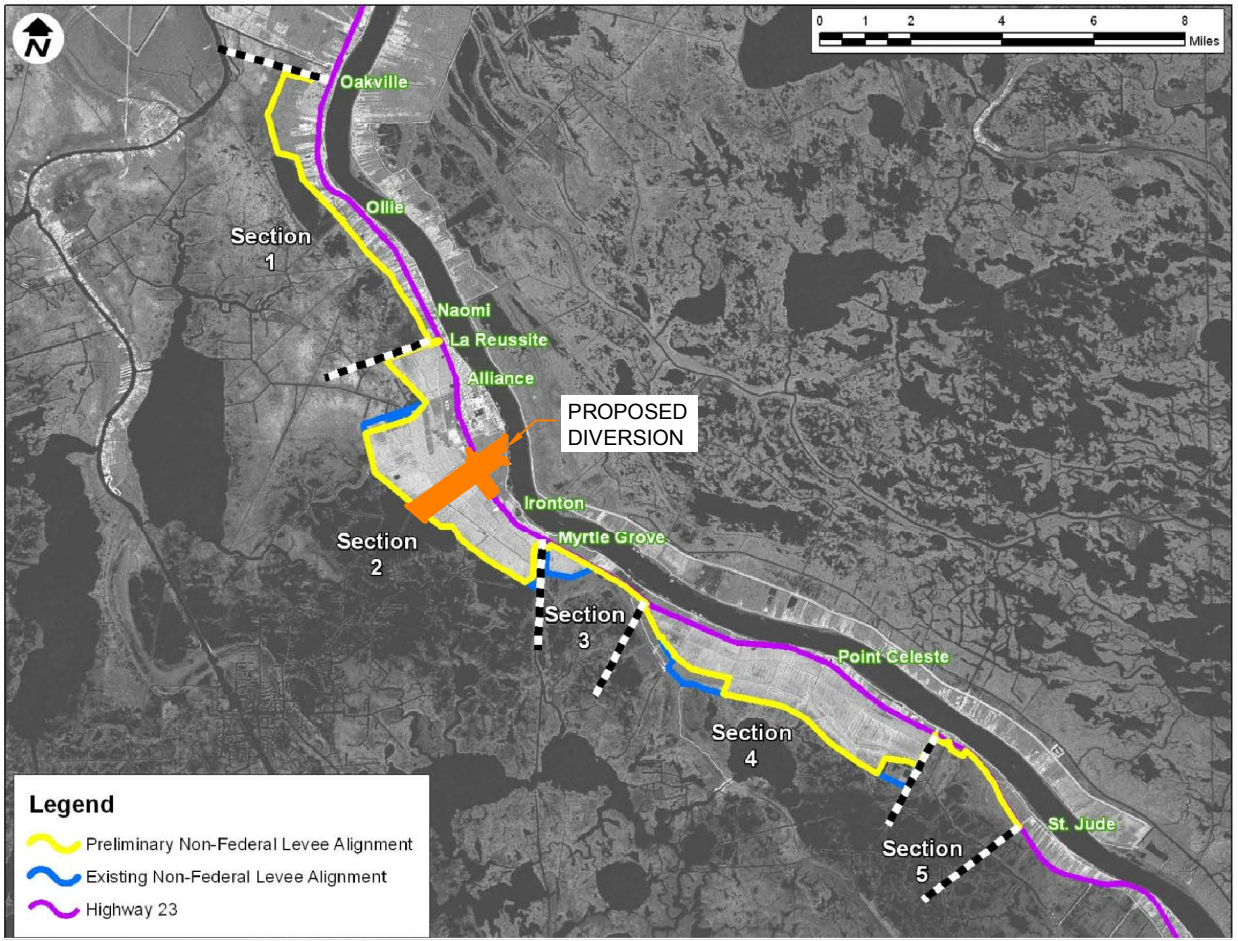
Plaquemines Parish Non-Federal Levee



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Reference: PDF was taken from the PDF presentation: New Orleans to Venice, LA (NOV) Plaquemines Parish Non-Federal Levee IER13 Workshop Meeting, Dated Sept. 19, 2009

MAP SHOWING PLAQUEMINES PARISH NON-FEDERAL LEVEE	
Mid Barataria Diversion (BA-153) Project Plaquemines Parish, Louisiana	
GeoEngineers	Figure 7

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APPENDICES

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APPENDIX A
MR&T Levee Subsurface Information

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DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

January 8, 2013

Reply to:
Office of Counsel

Via email: ***vtammineni@geoengineers.com***
Venu Tammineni
GeoEngineers, Inc.
11955 Lakeland Park Boulevard, Suite 100
Baton Rouge, LA 70809

RE: Freedom of Information Act Request, FA# 13-0059

Dear Mr. Tammineni:

Reference your Freedom of Information Act (FOIA) request dated November 8, 2012, which seeks information regarding Any design documentation (geotechnical data, slope stability, seepage, soil data, levee footprints, etc.) for the proposed Mid-Barataria Diversion Project north of Ironton, Louisiana.

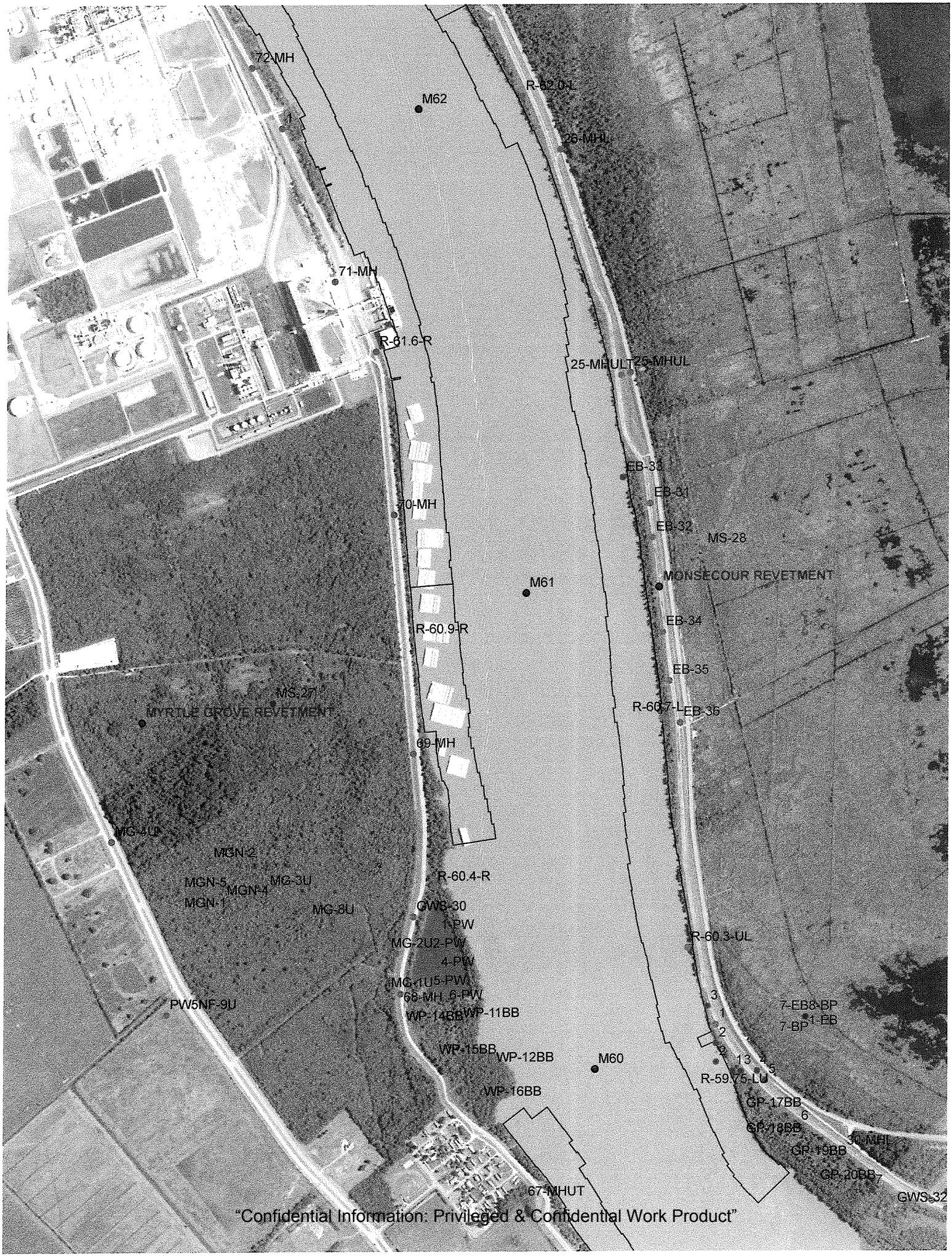
After a diligent search of our files for records responsive to your request, records have been located, reviewed and deemed releasable in their entirety. Due to the sizes of the files, the records have been placed on our ftp site. You will receive retrieval instructions through a separate email.

THE PROVIDED INFORMATION CONTAINS INTERPRETIVE DATA. RESPONSIBILITY FOR ANY DESIGN RESULTING FROM YOUR USE THEREOF WILL REST WITH YOUR FIRM.

I trust you find this response satisfies your request. The fee for processing your request falls below the minimum collectable amount and will not be collected. Should yo have any questions regarding this response, please call me at 504-862-2264.

Sincerely,

Frederick W. Wallace
Freedom of Information Act Coordinator



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R-60.9-R - MRCB MYRTLE GROVE REVETMENT

ZZ 29^39'51.62" 89^57'47.833" (G)
BOR. R-60.9-R (69-594)
STA. STA. 1098+50 3RD ORDER
78 FT. R.S.

Date: 9/26/1969

GROUND EL. 4

0.0	1.5	25	2.8	ML		BR		CS RT				
3.5	4.0	42	5.0	CH	SISSO	GR BR		RT				
6.0	6.5	36	7.5	ML		GR						
8.5	9.0	40		CL	SISSO	GR						
11.0	11.5	40	12.5	CL	SISSO	GR						
13.5	14.0	39		ML		GR		CS				
16.0	16.5	37	17.5	ML		GR		CS				
18.5	19.0	48	20.0	CH	SISSO	GR		OX				
21.0	21.5	32		ML		GR						
23.5	24.0	34		ML		GR						
26.0	26.5	39		ML		GR		OX CS				
28.5	29.0	32		ML		GR						
31.0	31.5	32		ML		GR						
33.5	34.0	34		ML		GR						
36.0	36.5	35		ML		GR						
38.5	39.0	32		ML		GR		OX				
41.0	41.5	25		ML		GR		CS CC				
43.5	44.0	31		ML		GR						
46.0	46.5	36		ML		GR		CS				
48.5	49.0	31	49.0	ML		GR						
51.0	51.5			SM		GR						
53.5	54.0		55.0	SM		GR						
56.0	56.5	61	57.0	CH	SISSO	GR		OX				
58.5	59.0		60.0	SP	F	GR		CS				.1000
61.0	61.5	52		CH	SS SO	GR		OX				
63.5	64.0	47	65.0	CH	SS SO	GR						
66.0	66.5	53	67.5	CH	SIS M	GR						
68.5	69.0			SP	F	GR		O				
71.0	71.5			SP	F	GR						
73.0	74.0		74.5	SP	F	GR BR				19		.0780
76.0	76.5	53	77.0	CH	SS SO	GR						
78.5	79.0			SP	F	GR		CS				
81.0	81.5			SP	F	GR						
83.0	84.0		84.7	SP	F	BR				60		
86.0	86.5		87.5	SM		GR		S CS				
88.5	89.0			SP	F	GR		CS				
91.0	91.5		92.3	SP	F	GR		CS OX				
93.0	94.0		95.0	SM		GR BR		S CS		31		
96.0	96.5			SP	F	GR		CS				
98.5	99.0		100.0	SP	F	BR		CS				
101.0	101.5		103.0	SM		BR		S CS				
103.5	104.0			SP	F	GR		CS				
106.0	106.5			SP	F	GR		OX				
108.0	109.0			SP	F	BR		O		40		
111.0	111.5			SP	F	GR BR						.0910
113.0	114.0			SP	F	BR				53		
116.0	116.5			SP	F	BR GR						
118.5	119.0		122.0	SP	F	GR						
123.5	124.0	54	125.0	CH	SS SO	BR		OX				
126.0	126.5			SP	F	GR						
128.0	129.0		130.0	SP	F	GR BR		O		89		
133.0	134.0		136.0	SM		GR BR		CS O		58		
138.0	139.0			SP	F	GR BR		CS O		60		
140.0	141.0			SP	F	GR						.0900

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999.9

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R-60.4-R - MRCB MYRTLE GROVE REVETMENT

```
ZZ 29^39'25.15"    89^57'45.389" (G)
BOR. R-60.4-R (69-594)
STA. STA. 1125+50 3RD ORDER
135 FT. R.S.

Date: 12/30/1969

GROUND EL. 4.2
  0.0  1.5 40      CH  SIS M GR BR     WD RT
  3.5  4.0 52  5.0CH  SIS M GR BR     WD RT OX
  6.0  6.5     6.5WD
  8.5  9.0 28 10.0ML         GR        CS OX
 11.0 11.5 45 12.5CL  SISVSOGR DGR
 13.5 14.0 28 15.0ML         GR        CS
 16.0 16.5 43 17.7CL     SO GR
 18.5 19.0 63 20.5CH  SISSO GR BR     OX
 21.0 21.5 28      ML        GR        CS OX
 23.5 24.0 34      ML        GR        CS
 26.0 26.5 28      ML        GR        CS
 28.5 29.0 25      ML        GR
 31.0 31.5 28      ML        GR        CS
 33.5 34.0 26      ML        GR
 36.0 36.5 31      ML        GR        CS
 38.5 39.0 24 40.0ML         GR        CS OX
 41.0 41.5 31 42.5CL  SISSO GR
 43.5 44.0 29      ML        GR        CS
 46.0 46.5 30      ML        GR        CS
 48.5 49.0 31      ML        GR        CS
 51.0 51.5 31      ML        GR        CS
 53.5 54.0 30      ML        GR        CS
 56.0 56.5 33      ML        GR        CS
 58.5 59.0 31      ML        GR        CS
 61.0 61.5 31      ML        GR        CS OX
 63.5 64.5 32      ML        GR BR     CS
 66.0 66.5 30      ML        GR        CS
 68.5 69.0 32      ML        GR        CS
 71.0 71.5 29      ML        GR        CS OX
 73.5 74.0 30      ML        GR        CS OX
 76.0 76.5 32 77.5ML         GR        CS
 78.5 79.0 31 80.0CL  SIS M GR         OX
 81.0 81.5 34      ML        GR        CS OX
 83.5 84.0 28 85.0ML         GR        OX
 86.0 86.5         SM        GR        CS
 88.5 89.0    90.0SM         GR
 91.0 91.5 28      ML        GR        CS OX
 93.5 94.0 33 95.5ML         GR         O CS OX
 96.0 96.5 33 97.5CH  SIS M GR BR     OX
 98.5 99.0 31100.0ML         GR        CS
101.0101.5   102.5SM         GR BR     CS
103.5104.0 31     ML         GR        CS OX
106.0106.5 28     ML         GR BR     CS OX
108.5109.0 31     ML         GR BR     CS OX
111.0111.5 30112.5ML         GR BR     CS OX
113.5114.0 35      CH  SISST GR         OX
116.0116.5 34      CH  SISST GR BR      OX SL              1803119 56 24       341163
118.5119.0 52119.0CH  SISST GR         OX
121.0121.5   122.5SM         GR
123.5124.0 30      CH  SISST GR         CC
126.0126.5 43127.5CH  SISVSTGR         OX
128.5129.0         SM        GR         S OX
131.0131.5         SM        GR BR      O OX CS
133.5134.0   135.0SM         GR         OX
```

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```
136.0136.4 31137.5ML        GR       OX
138.5139.0        SP   F    GR BR     O OX CS
141.0141.5   143.0SP   F    GR BR    TR  M CS OX                    .0740
143.5144.0 39144.0CH  SS ST GR BR    OX
146.0146.5        SM        GR
148.5149.0   149.0SM        GR
999.9
```

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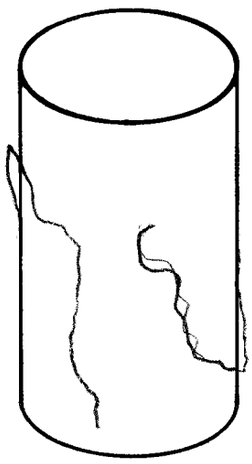
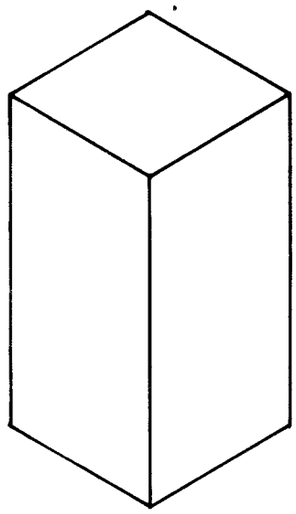
UNCONFINED COMPRESSION TEST

PROJECT

M.R.C.B. MYRTLEGROVE REVET.
BOR. R-60.4-R
DEPTH: 116.0-116.5

FAILURE DIAGRAM





DATE 17Feb.69

SAMPLE NUMBER 47

TARE NUMBER 705

WET WEIGHT OF SOIL 144.0 gms

DRY WEIGHT OF SOIL 107.6 gms

WEIGHT OF WATER 36.4 gms

MOISTURE CONTENT 33.8 %

BULK WET DENSITY 118.7 #/cu. ft.

MACHINE NUMBER 1

Ⓐ CYLINDRICAL SAMPLE 1.4X3.0
DENSITY FACTOR 0.82452

CRum BLY
OX; SL

☐ LARGE SAMPLE = 1.4^2 X 3.5
DENSITY FACTOR = 0.55511

☐ SMALL SAMPLE = 1.0^2 X 2.5
DENSITY FACTOR = 1.52307

DIAL READING	LOAD IN POUNDS	PROVING RING DIAL READING 10-4 in.	CORRECTED AREA (sq. ft.)	UNCONFINED COMPRESSIVE STRENGTH q_u (#/sq. ft.)	COHESION = (#/ft.^{2})
.000		0			
.025		25			
.050		75			
.075		95			
.100		111			
.125		121			
.150	40.572	126	.01125	3606	1803
.175					
.200		119			
.225					
.250					
.275					
.300					
.325					
.350					
.375					
.400					
.425					
.450					
.475					
.500					
.525					

Technician LB Computations LB Checked _____

LMN FORM 768
SEP 67

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DISC. Upon 1/31/70

LIQUID AND PLASTIC LIMIT TESTS 58

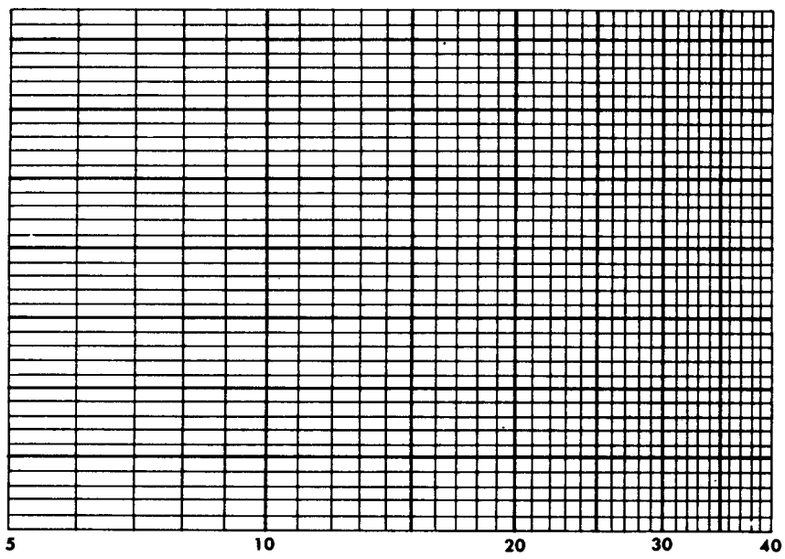
DATE

PROJECT M.R.C.B. MYRTLE GROVE REVETMENT

BORING NO. C-60.4-R SAMPLE NO. 47

LIQUID LIMIT

RUN NO.		1	2	3	4	5	6
TARE NO.		99					
WEIGHT IN GRAMS: TARE PLUS WET SOIL		20.99					
TARE PLUS DRY SOIL		17.41					
WATER	W_w	3.58					
TARE		10.98					
DRY SOIL	W_s	6.43					
WATER CONTENT	w	55.7					
NUMBER OF BLOWS/.00935		26-28					



LL 56

PL 24

PI 32

Symbol from plasticity chart

PLASTIC LIMIT

RUN NO.		1	2	3	4	5	NATURAL WATER CONTENT
TARE NO.		44					
WEIGHT IN GRAMS: TARE PLUS WET SOIL		14.14					
TARE PLUS DRY SOIL		13.41					
WATER	W_w	.73					
TARE		10.31					
DRY SOIL	W_s	3.10					
WATER CONTENT	w						
PLASTIC LIMIT		23.5					

REMARKS

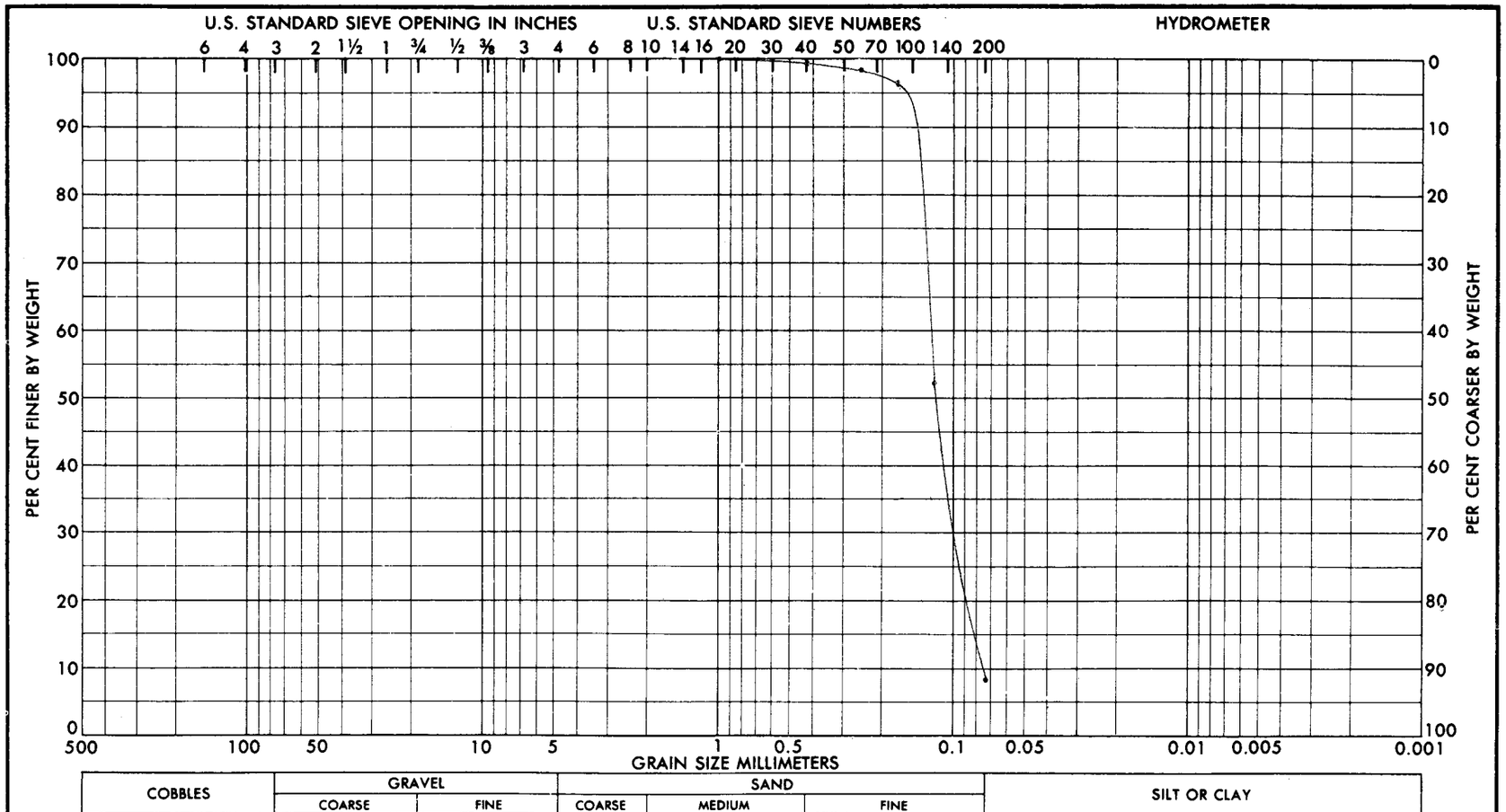
TECHNICIAN D.D. M.D. COMPUTED BY E.K.T. CHECKED BY

ENG FORM 3838 1 JUN 65

GPO : 1966 OF—798-790

PLATE III-1

"Confidential Information: Privileged & Confidential Work Product"



SAMPLE NO.	DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI
		FINE SAND (SP) Tr-M		D-10	SIZE	MM
57	141.3'	90.3 % FINE				0.074
		0.4 % MED.				
		90.7 % SAND				

GRADATION CURVES

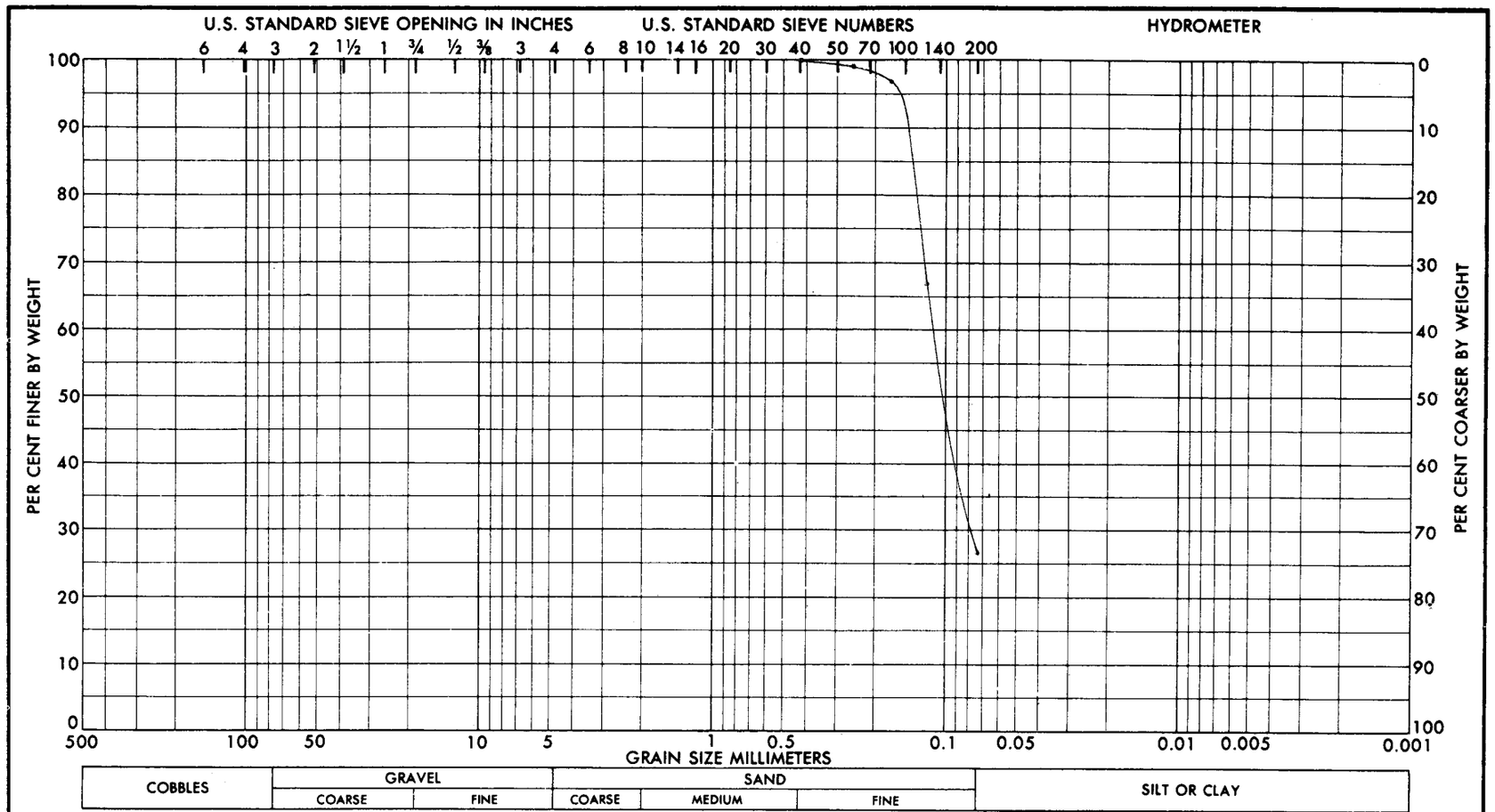
PROJECT Miss. River Caving Bank
Myrtle Grove Revetment
AREA STA. 1125+50 - 135 Ft. R.S.
BORING NO. R-60.4-R
DATE 7 MAR. 69

ENG FORM 2087 1 MAY 63

REPLACES WES FORM NO. 1241, SEP 1962, WHICH IS OBSOLETE.

U.S. GOVERNMENT PRINTING OFFICE : 1963 OF—709-126

Confidential Information: Privileged & Confidential Work Product"



SAMPLE NO.	DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI
59	146.3'	Silty Sand (SM.) 72.6% Sand				

GRADATION CURVES

PROJECT Miss. River Caving Bank
Myrtle Grove Revetment
AREA Sta. 1125+50 - 1351 Ft. R.S.
BORING NO. R-60.4-R
DATE 7 MAR. '69

ENG FORM 2087
1 MAY 63

REPLACES WES FORM NO. 1241, SEP 1962, WHICH IS OBSOLETE.

U.S. GOVERNMENT PRINTING OFFICE : 1963 OF—709-126

L.E.B.

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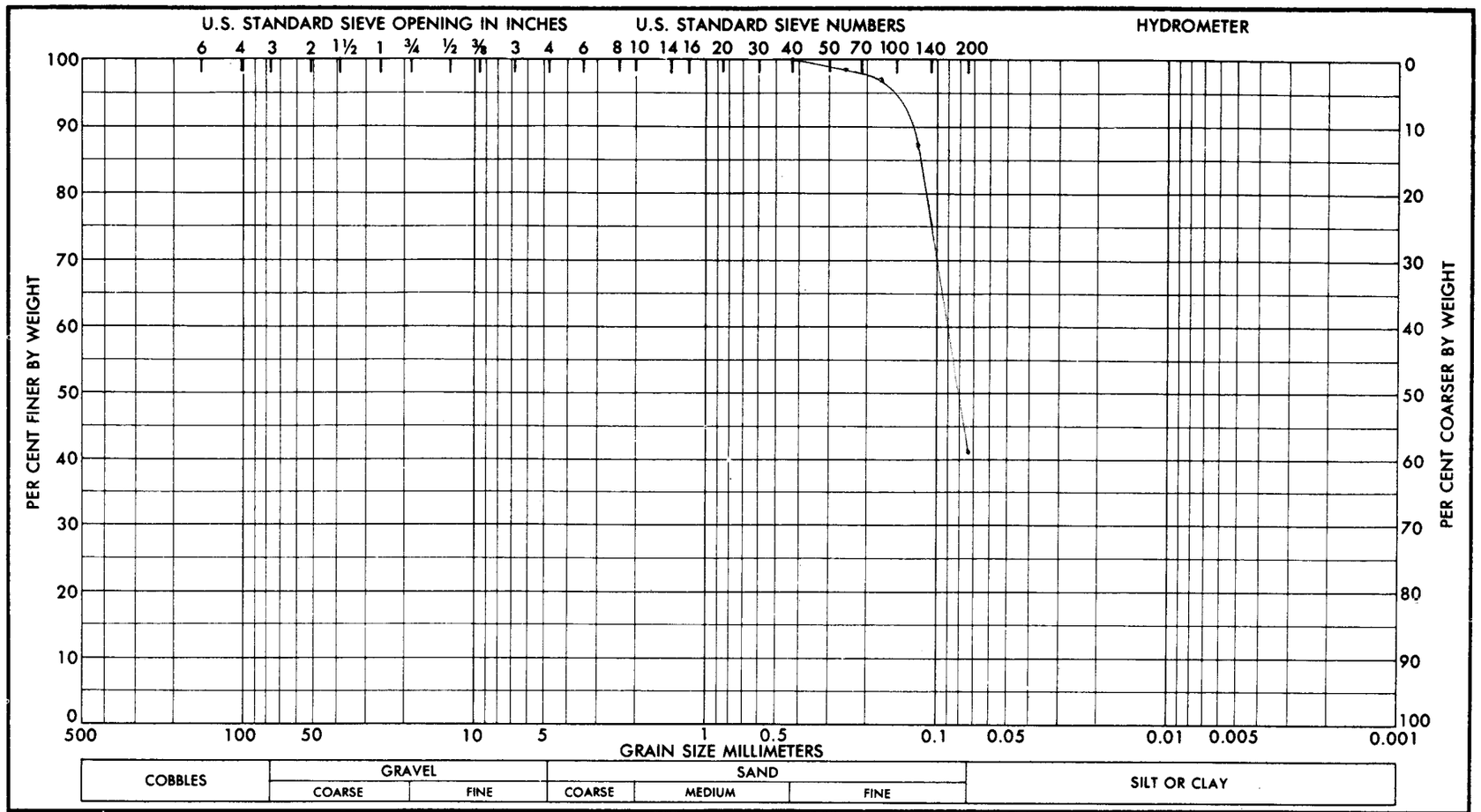

SAMPLE NO.	DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI
S3	131.3'	Silty Sand (SM) 59.3% Sand				

GRADATION CURVES

PROJECT Miss. River Caving Bank
Myrtle Grove Revetment
AREA Sta. 1125+50 - 135 Ft. R. S.
BORING NO. R-60.4-R
DATE 7 MAR. '69

ENG FORM 2087
1 MAY 63

REPLACES WES FORM NO. 1241, SEP 1962, WHICH IS OBSOLETE.

U.S. GOVERNMENT PRINTING OFFICE : 1963 OF—709-126

L.E.B.

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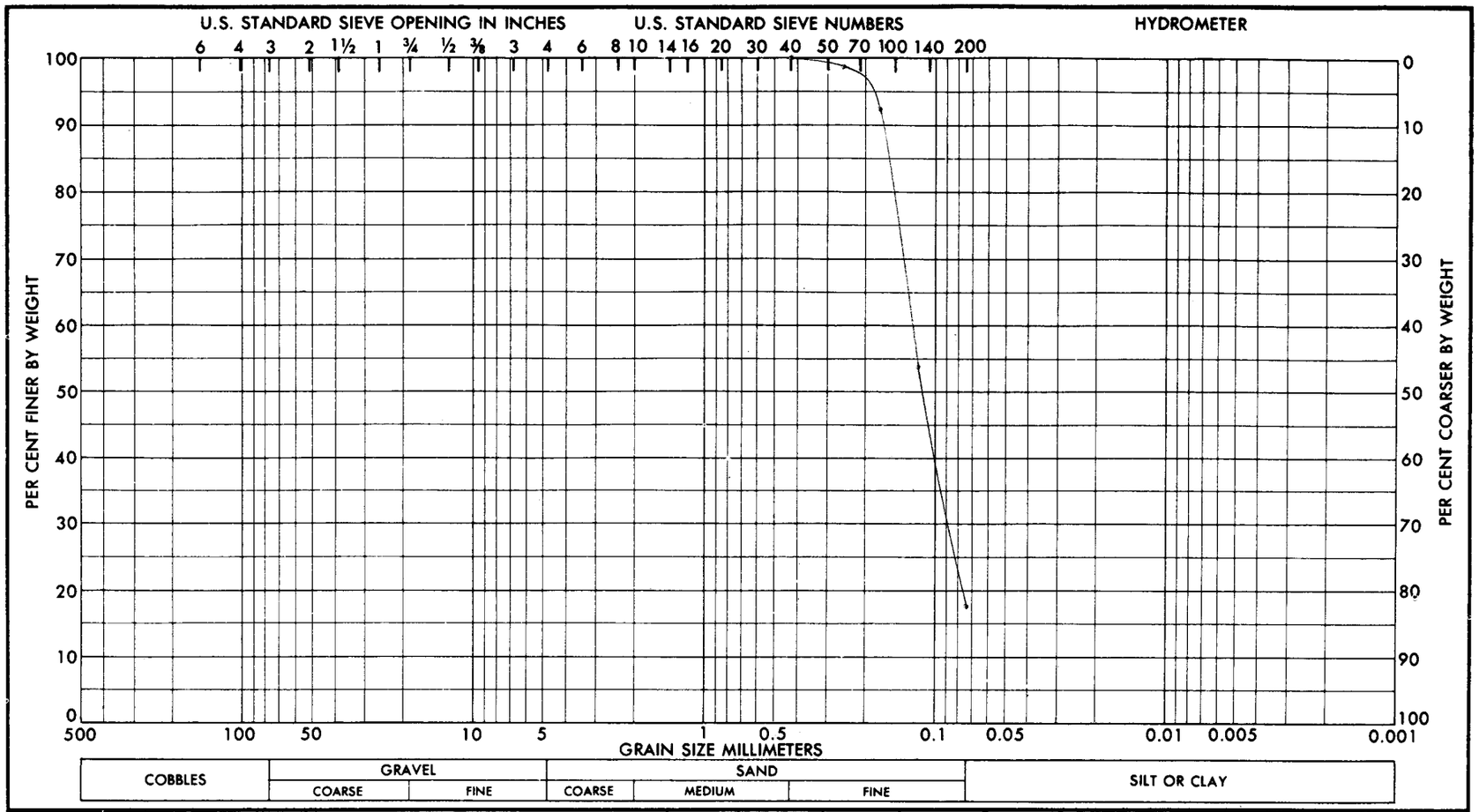

SAMPLE NO.	DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI
52	128.8'	Silty Sand (SM(1-2)) 81.3 % Sand				

GRADATION CURVES

PROJECT Miss. River Caving Bank Myrtle Grove Revetment
AREA Sta. 1125+50 - 135 Ft. R.S.
BORING NO. R-60.4-R
DATE 7 MAR. '69

ENG FORM 2087
1 MAY 63

REPLACES WES FORM NO. 1241, SEP 1962, WHICH IS OBSOLETE.

U.S. GOVERNMENT PRINTING OFFICE : 1963 OF—709-126

L.E.B.

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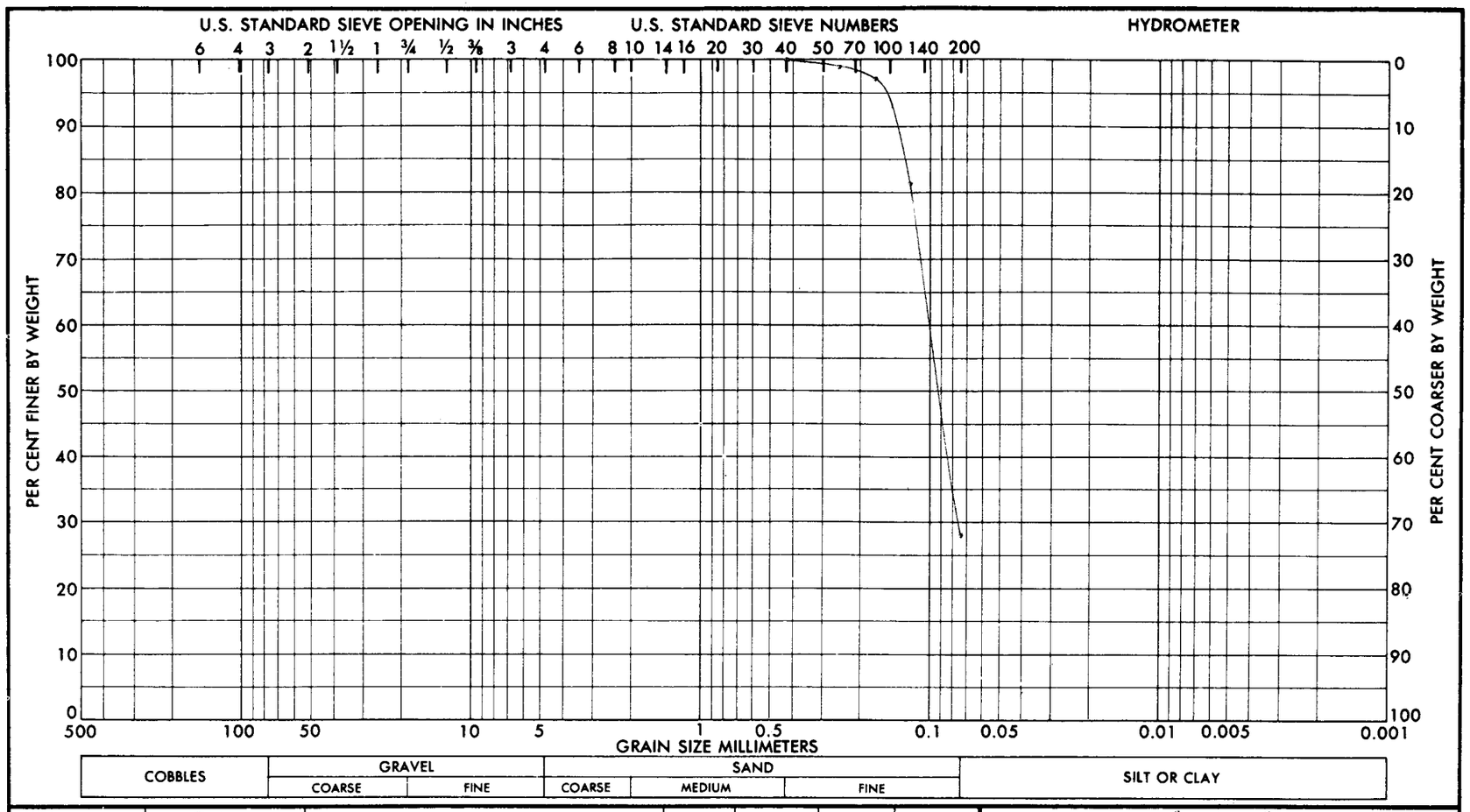

SAMPLE NO.	[redacted] DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI
41	101.3'	SILTY SAND (SM.) 71.3% SAND				

GRADATION CURVES

PROJECT MISS. RIVER CAVING BANK
MYRTLE GROVE REVETMENT
AREA STA. 1125+50 - 135 Ft. R.S.
BORING NO. R-60.4-R
DATE 7 MAR. '69

ENG FORM 2087
1 MAY 63

REPLACES WES FORM NO. 1241, SEP 1962, WHICH IS OBSOLETE.

U.S. GOVERNMENT PRINTING OFFICE : 1963 OF—709-126

L.E.B.

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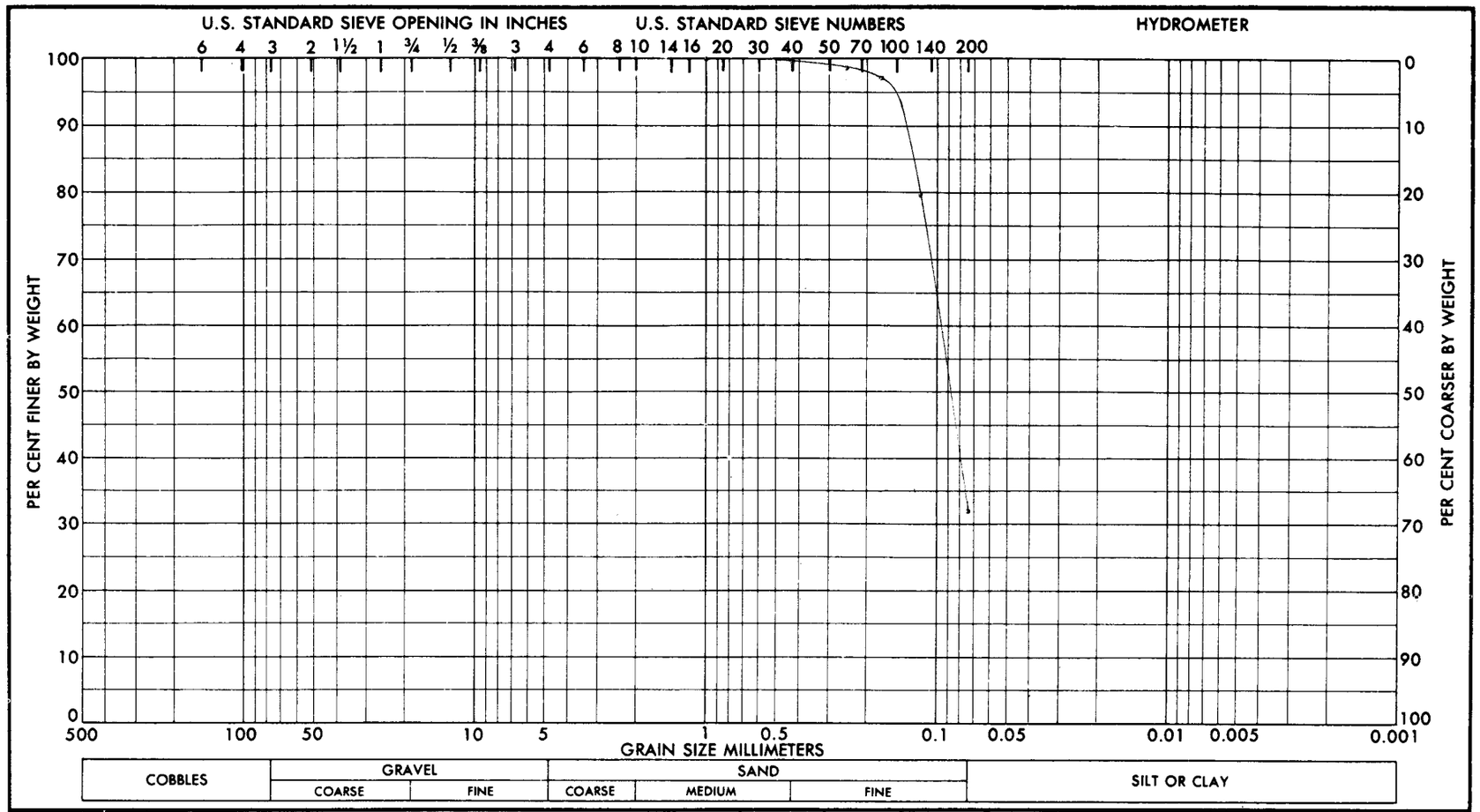

SAMPLE NO.	DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI
36	88.8'	Silty Sand (SM) 67.7% Sand				

GRADATION CURVES

PROJECT Miss. River Caving Bank
Myrtle Grove Revetment
AREA Sta. 1125+50 - 135 Ft. R.S.
BORING NO. R-60.4-R
DATE 7 MAR. '69

ENG FORM 2087
1 MAY 63

REPLACES WES FORM NO. 1241, SEP 1962, WHICH IS OBSOLETE.

U.S. GOVERNMENT PRINTING OFFICE : 1963 OF—709-126

L.E.B.

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SIEVE ANALYSIS WORK SHEET

Date 30 JAN. 69

Sheet No.

Project M.R.C.B. MYRTLE GROVE

Boring No. R-60.4-R

U.S. STD Sieve No.	Opening mm.	Sample No. 36			Sample No. 41			Sample No. 52		
		Sample Elev.			Sample Elev.			Sample Elev.		
		Sample Wt. 122.0 gms			Sample Wt. 101.7 gms			Sample Wt. 129.5 gms		
		Sieve Wt. 121.7 gms			Sieve Wt. 101.6 gms			Sieve Wt. 129.4 gms		
		Ret. gms	Ret. %	Pass %	Ret. gms	Ret. %	Pass %	Ret. gms	Ret. %	Pass %
1"	25.4	P-440			P-494			P-339		
3/4"	19.1									
1/2"	12.7									
3/8"	9.52									
4	4.76									
6	3.36									
10	2.00									
12	1.68									
16	1.19									
18	1.00	0.0		100.0						
20	0.84									
30	0.59									
35	0.50			✓						
40	0.42	0.1		99.9	0.0		100.0	0.0		100.0
50	0.297			✓			✓			✓
60	0.250	1.0		98.2	0.6		99.4	0.5		99.6
70	0.210			✓						✓
80	0.177	3.0		97.5	2.2		97.8	9.4		92.7
100	0.149			✓						✓
120	0.125	24.5		79.9	18.8		81.4	58.7		54.6
140	0.105		—	✓		—	✓		—	✓
200	0.074	82.4	67.7	32.3	72.4	71.3	28.7	105.2	81.3	18.7
230	0.062									
Pan		121.7			101.6			129.4		
Total										

Technician L.E.B. Computed Checked G.T.H.

LMN Form 478 (Revised & reinstated 1/8/58)

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69-MH - MRL BELOW N.O. - RIGHT BANK GRADE INCREASE

```
ZZ 29^39'39.37"    89^57'47.858" (G)
BOR. 69-MH (66-528)
STA. STA. 1111+00 3RD ORDER
49 FT. L.S. C/L LEVEE

Date: 8/23/1966

GROUND EL. 3.6
  0.0  2.0 39     CH     SO DBR       WD
  4.0  4.5 47  5.5CH     VSOBR        WD
  6.5  7.0 37  8.0ML        GR        CS
  9.0  9.5 39 10.5CL     VSOGR BR
 11.5 12.0 41 13.0CH     SO DGR
 14.0 14.5 42 15.5CL     VSOGR
 16.5 17.0 34 18.0ML        GR        CS
 19.0 19.5 36 20.5CL     VSOGR
 21.5 22.0 30 22.5ML        GR        CS
 24.0 24.5 54     CH  SISSO GR
 26.5 27.0 72 27.5CH  SISSO GR
 29.0 29.5 34 30.5ML        GR
 31.5 32.0 50 32.5CH  SISSO GR
 34.0 34.5 28     ML        GR        CS
 36.5 37.0 34     ML        GR        CS
 39.0 39.5 35 40.0ML        GR        CS
 41.5 42.0 40 43.0CH     SO DGR
 44.0 44.5 38 45.5CL     VSOGR
 46.5 47.0 36     ML        GR        CS
 49.0 49.5 33     ML        GR
 51.5 52.0 33 52.5ML        GR
 54.0 54.5 34 55.5CL     SO GR
 56.5 57.0 33 58.0ML        GR
 59.0 59.5 37 59.5CL     SO DGR
999.9
```

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Rt. Bank

Reach: Mile 60.0 to 67.2

LABORATORY DATA

Project: Miss River Levee - Below N.O. - Grade Increase

Boring No. 69-MH Location STA 1114+20 - 49' L.S. Levee

Date Analyzed 9-1-66 Date Reported 17 Nov 66 Gr. Surface Elev.

REPORTING DATA

PAN NO.	DRY WEIGHT	LABORATORY MODIFICATIONS	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENETRATION RESISTANCE BLOWS/FT.	U.C.T. COHESION LBS./SQ.FT.	BULK DENSITY LBS./CU.FT.	ATTERBERG LIMITS L.L.	ATTERBERG LIMITS P.I.	D_{10} SIZE
~~326~~	39.0	CH4; [illegible]	72	28.0	CH (S1S)	So	Gr							
~~352~~	37.4	ML2	34	30.5	ML	—	Gr							
~~114~~	53.3	CH3; Lns Slt	50	32.5	CH (S1S)	So	Gr							
~~87~~	39.1	ML2; Lns Sd	28			—	Gr							
~~256~~	37.4	ML2; [illegible]	34		ML	—	Gr							
~~225~~	37.0	ML2; Ans Cl	35	40.0		—	Gr							
~~382~~	35.7	CH2	40	43.0	CH	So	dGr							
~~546~~	36.2	CL4; Lg [illegible] CH	38	45.5	CL	VSo	Gr							
~~246~~	36.7	[illegible] CL	36		ML	—	Gr							
~~604~~	37.6	ML2	33			—	Gr							

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Classifier J.P.B. Recorder L.F.B. Checked [illegible]

SIEVE ANALYSIS WORK SHEET

Date

Sheet No.

Project M.R.C.B. MYRTLE GROVE Boring No. R-604-R

U.S. STD Sieve No.	Opening mm.	Sample No. 53			Sample No. 57			Sample No. 59		
		Sample Elev.			Sample Elev.			Sample Elev.		
		Sample Wt. 109.1 gms			Sample Wt. 108.4 gms			Sample Wt. 127.2 gms		
		Sieve Wt. 109.0 gms			Sieve Wt. 108.2 gms			Sieve Wt. 127.2 gms		
		Ret. gms	Ret. %	Pass %	Ret. gms	Ret. %	Pass %	Ret. gms	Ret. %	Pass %
1"	25.4	P-725			P-485			P-507		
3/4"	19.1									
1/2"	12.7									
3/8"	9.52									
4	4.76									
6	3.36									
10	2.00									
12	1.68									
16	1.19									
18	1.00				0.0		100.0			
20	0.84									
30	0.59									
35	0.50						✓			
40	0.42	0.0		100.0	0.4		99.6	0.0		100.0
50	0.297			✓			✓			✓
60	0.250	0.8		99.3	1.7		98.4	0.3		99.8
70	0.210									
80	0.177	2.6		99.6	3.6		96.7	3.5		97.2
100	0.149									
120	0.125	12.4		88.6	48.4		55.3	42.1		66.9
140	0.105		—	✓		—	✓		—	✓
200	0.074	64.6	59.3	40.7	98.1	90.7	9.3	92.4	72.6	27.4
230	0.062									
Pan		109.0			108.2			127.2		
Total										

Technician L.E.D. Computed Checked GTH

LMN Form 478 (Revised & reinstated 1/8/58)

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XXU00881.dat

LABORATORY BORING LOG

Project M.R.C.B. MYRTLE GROVE REVETMENT - MILE 59.0 - R.

(2) – (4) Location (STA 1125+50) - (135 FT. R.S.)

Date Analyzed 1-28-69 Date Reported 3-20-69

(1) Boring No. R-60.4R

(5) Date Taken 30 Dec 68 / 1 Jan 69

(6) G. S. E. 4.21

UND. BOR.

SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG		CONSISTENCY	COLOR		MODIFICATION SYMBOLS				PENTRN. RES.	U. C. T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	D_{10} SIZE	T WATER CONTENT	UCT DEPTH
0.0	1.5	40		CH	SIS	M	GR	BR	WD	RT										
7.75	35.8			3																
3.5	4.0	52	5.0	CH	SIS	M	GR	BR	WD	RT	OX									
7.56	32.8			4																
6.0	6.5		6.5	WD																
8.5	9.0	28	10.0	ML			GR		CS	OX										
24.9	39.2			2																
11.0	11.5	45	12.5	CL	SIS	VSO	GR	DGR												
23	34.5			4																
13.5	14.0	28	15.0	ML			GR		CS											
1.07	39.1			2																
16.0	16.5	43	17.7	CL		SO	GR													
7.49	35.1			6																
18.5	19.0	63	20.5	CH	SIS	SO	GR	BR	OX											
7.47	30.7			4																
21.0	21.5	28		ML			GR		CS	OX										
6.19	39.2			2																
23.5	24.0	34		ML			GL		CS											
6.87	37.4			2																

Classifier [illegible] Recorder [illegible] Checker [illegible]

Sheet 1 of 6 Sheets

LMN Form 721
MAY 68 (Previous edition obsolete)

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LABORATORY BORING LOG

Project M.R.G.O. MYRTLE GROVE REVETMENT - MILE 59.0 - R

(2)–(4) Location STA 1125 + 50 - 135 FT. R.S.

Date Analyzed 1-28-69 Date Reported

(1) Boring No. R-60.4R

(5) Date Taken 30 Dec 68 2 Jun 69

(6) G. S. E.

UND. BOR.

SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U. C. T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	D_{10} SIZE	T WATER CONTENT	UCT DEPTH
26.0	26.5	28		ML		GR	CS								
.538	39.2			2											
28.5	29.0	25		ML		GR									
.52	40.0			2											
31.0	31.5	28		ML		GR	CS								
.648	39.0			2											
33.5	34.0	26		ML		GR									
.752	39.7			2											
36.0	36.5	31		ML		GR	CS								
.125	38.1			2											
38.5	39.0	24	40.0	ML		GR	CS OX								
.711	40.2			2											
41.0	41.5	31	42.5	CL	SI S	GR									
.717	38.2			4											
43.5	44.0	29		ML		GR	CS								
.792	38.7			2											
46.0	46.5	30		ML		GR	CS								
.278	38.4			2											
48.5	49.0	31		ML		GR	CS								
728	38.3			2											

Classifier LEB Recorder LJF Checker

Sheet 2 of 6 Sheets

LMN Form 721
MAY 68 (Previous edition obsolete)

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LABORATORY BORING LOG

Project M.R.C.B. MYRTLE GROVE REVETMENT — MILE 59.0 - R

(2) – (4) Location STA. 1125 +50 - 135 FT. R.S.

Date Analyzed 1-28-69 Date Reported

(1) Boring No. R-60.4R
(5) Date Taken 20 Dec 68 & 2 Jan 69
(6) G. S. E.

UND. BOR.

SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U. C. T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P. L.	D_{10} SIZE	T WATER CONTENT	UCT DEPTH
51.0	51.5	31		ML		GR	CS								
1.49	38.2			2											
53.5	54.0	30		ML		GR	CS								
7.22	38.5			2											
56.0	56.5	33		ML		GR	CS								
4.51	37.7			2											
58.5	59.0	31		ML		GR	CS								
9.7	38.1			2											
61.0	61.5	31		ML		GR	CS OX								
5.01	38.2			2											
63.5	64.5	32		ML		GR FR	CS								
1.22	38.0			2											
66.0	66.5	30		ML		GR	CS								
6.39	38.4			2											
68.5	69.0	32		ML		GR	CS								
6.26	37.8			2											
71.0	71.5	29		ML		GR	CS OX								
4.28	38.7			2											
73.5	74.0	30		ML		GR	CS OX								
4.27	38.4			2											

Classifier LAB Recorder LJE Checker

LMN Form 721
MAY 68 (Previous edition obsolete)

"Confidential Information: Privileged & Confidential Work Product"

LABORATORY BORING LOG

Project M.R.C.B. MYRTLE GROVE REVETMENT - MILE 59.0 R

(2)–(4) Location STA. 1125 +50 -135 Ft. R.S.

Date Analyzed 1-28-69 Date Reported

(1) Boring No. R-60.4R
(5) Date Taken 30 Dec 68 & 3 Jan 69
(6) G. S. E.

UND. BOR.

SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U. C. T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	D_{10} SIZE	T WATER CONTENT	UCT DEPTH
76.0	76.5	32	77.5	ML		GR	CS								
384	38.0			2											
78.5	79.0	31	80.0	CL	SIS M	GR	OX								
8.06	38.2			4											
81.0	81.5	34		ML		GR	CS OX								
751	37.4			2											
83.5	84.0	28	85.0	ML		GR	OX								
6.01	39.0			2											
86.0	86.5			SM		GR	CS								
1.90				1											
88.5	89.0		90.0	SM		GR									
440				1	67.7% SAND										
91.0	91.5	28		ML		GR	CS OX								
672	39.0			2											
93.5	94.0	33	95.5	ML		GR	O CS OX								
259	37.6			2			ORG MAT								
96.0	96.5	33	97.5	CH	SIS M	GR BR	OX								
336	37.7			3											
98.5	99.0	31	100.0	ML		GR	CS								
203	38.2			2											

SV

Classifier LEB Recorder LJF Checker

Sheet 4 of 6 Sheets

LMN Form 721
MAY 68 (Previous edition obsolete)

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LABORATORY BORING LOG

Project M.R.C.B. MYRTLE GROVE REVETMENT - MILE 59.0-R

(2)-(4) Location STA 1125+50 - 135FT. R.S.

Date Analyzed 1-29-69 Date Reported

(1) Boring No. R-60.4R

(5) Date Taken 30 Dec 68 - 2 Jan 69

(6) G. S. E.

UND. BOR.

SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U. C. T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P. L.	D_{10} SIZE	T WATER CONTENT	UCT DEPTH
101.0	101.5		102.5	SM		GR BR	CS								
494				1 71.3%	SHELL										
103.5	104.0	31		ML		GR	CS OX								
48	38.2			2											
106.0	106.5	28		ML		GR BR	CS OX								
148	39.2			2											
108.5	109.0	31		ML		GR BR	CS OX								
281	38.3			2											
111.0	111.5	30	112.5	ML		GR BR	CS OX								
141	38.4			2											
F → 113.5	114.0	35		CH	SIS	ST GR	OX								
788	37.0			3											
116.0	116.5	34		CH	SIS	ST GR BR	OX SL		1803	119	56	24		34	1163
				3		CRUMBLY; SLICKENSIDES									
118.5	119.0	52	119.0	CH	SIS	ST GR	OX								
80	33.0			4			ORG STKS								
121.0	121.5		122.5	SM		GR									
766				1											
123.5	124.0	30		CH	SIS	ST GR	CC								
413	38.5			2											

5↓

Classifier LEB Recorder LWE Checker

Sheet 5 of 6 Sheets

LMN Form 721
MAY 68 (Previous edition obsolete)

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LABORATORY BORING LOG

Project M.R.C.B. MYRTLE GROVE REVETMENT - MILE 59.0 R

(2)–(4) Location STA. 1125+50 - 135 Ft. R.S.

Date Analyzed 1-29-69 Date Reported

(1) Boring No. R-60.4R

(5) Date Taken 30 Dec 68 & 2 Jan 69

(6) G. S. E.

UND. BOR.

SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG		CONSISTENCY	COLOR		MODIFICATION SYMBOLS				PENTRN. RES.	U. C. T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P. L.	D_{10} SIZE	T WATER CONTENT	UCT DEPTH	
126.0	126.5	43	127.5	CH	SIS	VST	GR		OX												
427	35.0			4		22 PP															
128.5	129.0			SM			GR		S	OX											SV
339				1	81.3%	Sand															
131.0	131.5			SM			GR	BR	O	OX	CS										SV
725				1	59.3%	Sandy			ORG	MAT											
133.5	134.0		135.0	SM			GR		OX												
654				1																	
136.0	136.5	31	137.5	ML			GR		OX												
208	38.2			2																	
138.5	139.0			SP	F		GR	BR	O	OX	CS										
29																					
141.0	141.5		143.0	SP	F		GR	BR	TR	M	CG	OX						.074			SV
485					90.7%	Sand															
143.5	144.0	39	144.0	CH	SS	ST	GR	BR	OX												
343	36.0			4																	
146.0	146.5			SM			GR														SV
507				1	72.6%	Sand															
148.5	149.0		149.0	SM			GR														
319				1																	

Classifier LEB Recorder LWF Checker

Sheet 6 of 6 Sheets

LMN Form 721
MAY 68 (Previous edition obsolete)

HOLE Complete

"Confidential Information: Privileged & Confidential Work Product"

BORING LOG

Boring No. R-ea 4-R.
Levee District
Job No.

FIELD DATA

Project Myrtle Grove Location 1125+50 — 25' K S —
Drill Rig C.E. 1978 Inspector Hungerford Operator Wills Surface Elev.
Natural Ground Elev.

LABORATORY DATA

Date 1-2-79 Classified by

SAMPLE NUMBER	DATE TAKEN	STRATUM FROM	STRATUM TO	DRIVE FROM	DRIVE TO	SAMPLE FROM	SAMPLE TO	TYPE OF SAMPLER			CLASSIFICATION AND REMARKS	CLASSIFICATION	SYMBOL	NAT WC %	
								Wireline							
34				82.5	84.5	83.5	84.0	"			FINE Grey Sandy clay				
35				85.0	91.0	86.0	86.5	"			V. FINE Grey Sandy Silt				
36				81.5	89.5	88.5	89.0	"			V. FINE Grey Sandy Silt				
37				90.0	92.0	91.0	91.5	"			V. FINE Grey Sandy Silt - Layer clay				
38			455	92.5	94.5	93.5	94.0	"			V. FINE Grey Sandy Silt - Layer clay				
39		75.5		95.0	97.0	96.0	96.5	"			FINE Grey Sandy clay				
40				97.5	99.5	98.5	99.0	"			FINE Grey Sandy clay				
41				100.0	102.0	101.0	101.5	"			FINE Grey Sandy clay				
42				102.5	104.5	103.5	104.0	"			FINE Grey Sandy clay				
43				105.0	107.0	106.0	106.5	"			FINE Grey Sandy clay				
44				107.5	109.5	108.5	109.0	"			FINE Grey Sandy clay				

RECEIVED
JAN 3 1979
TESTING SEC.

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(R. Bank) REACH: Mile 620 to 662

LABORATORY DATA

Project Mississippi River & Tribs - Bonnet N.O. 40' Project Increase

Boring No. 69 MH Location STA. 1111+00 - 49'CS & Levee

Date Analyzed 9-1-66 Date Reported 17 Nov 66 Gr. Surface Elev. + 3.6

REPORTING DATA

PAN NO.	DRY WEIGHT	LABORATORY MODIFICATIONS	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENETRATION RESISTANCE BLOWS/FT.	U.C.T. COHESION LBS./SQ.FT.	BULK DENSITY LBS./CU.FT.	ATTERBERG LIMITS L.L.	ATTERBERG LIMITS P.I.	D_{10} SIZE
~~765~~	36.0	CH2; Lts	39		CH	So	d Br	Wd						
~~775~~	34.0	CH2; Lts	47	5.5		VSo	Br	Wd						
~~627~~	36.6	ML2; [illegible]	37	8.0	ML	—	Gr							
~~302~~	36.0	CL6	39	10.5	CL	VSo	Gr & Br							
~~29~~	35.5	CH2	41	13.0	CH	So	d Gr							
~~220~~	35.2	CL4	42	15.5	CL	VSo	Gr							
~~775~~	37.2	ML2; [illegible]	34	18.0	ML	—	Gr							
~~721~~	36.7	CL4	36	20.5	CL	VSo	Gr							
~~631~~	38.5	ML Lts; Lts CL	30	22.5	ML	—	Gr							
~~219~~	32A	CH3; Lts Slt	54		CH (SIS)	So	Gr							

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Classifier J.K. Recorder [illegible] Checked [illegible]

LMN Form No. 721 13 April 1966 Sheet 1 of 3 Sheets

(Rt. Bank) REACH: Mile 60.0 to 69.2

LABORATORY DATA

Project Miss. River Levee - Below O.D. Grade Increase

Boring No. 69-MH Location Sta. 1111+00 - 49' L.S. Levee

Date Analyzed 9-1-66 Date Reported 7 Nov 66 Gr. Surface Elev. _____

REPORTING DATA

PAN NO.	DRY WEIGHT	LABORATORY MODIFICATIONS	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENETRATION RESISTANCE BLOWS/FT.	U.C.T. COHESION LBS./SQ.FT.	BULK DENSITY LBS./CU.FT.	ATTERBERG LIMITS L.L.	ATTERBERG LIMITS P.I.	D_{10} SIZE
~~64~~	32.7	ML2	33	52.5	ML	—	Gr							
~~75~~	37.3	CL4	39	55.5	CL	So	Gr							
~~72~~	37.5	ML2	33	58.0	ML	—	Gr							
~~69~~	36.6	CL6	37	59.5	CL	So	dGr							

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Classifier J.T.S. Recorder L.E.B. Checked [signature]

LMN Form No. 721 13 April 1966

BORING LOG

Boring No. 69-MH
Levee District
Job No.

Rt. Bank FIELD DATA Reach: Mile 60.0 to 69.2

Project Miss. River Levee Grade Increase Location Stg. 111+00 - 49' L.S. & Levee
Drill Rig W-1881 Inspector Walton Operator Willis Surface Elev.
Natural Ground Elev.

LABORATORY DATA
Date Classified by

SAMPLE NUMBER	DATE TAKEN 66	STRATUM FROM	STRATUM TO	DRIVE FROM	DRIVE TO	SAMPLE FROM	SAMPLE TO	TYPE OF SAMPLER	CLASSIFICATION AND REMARKS	CLASSIFICATION	SYMBOL	NAT WC %
1	8/23	0.0'		0.0'	2.5'	1.5'	2.0'	Wire Line	Firm Br. Clay	+ 1.05 ℄ Levee Stg. 111+00		
			2.5'							- 13.25 Hole #69-MH		
2		2.5'		2.5'	5.0'	4.0'	4.5'	" "	Soft Br. Sandy Clay			
			5.5'									
3		5.5'		5.0'	7.5'	6.5'	7.0'	" "	soft Gray silty Sand			
4				7.5'	10.0'	9.0'	9.5'	" "	soft Gray silty Sand &	silty Clay		
5				10.0	12.5'	11.5'	12.0'	" "	Firm Gray silty Sand	& silty Clay		
6				12.5'	15.0'	14.0'	14.5'	" "	Soft Gray silty Sand &	silty Clay		
7				15.0	17.5'	16.5'	17.0'	" "	soft Gray silty Sand &	silty Clay		
8				17.5'	20.0	19.0'	19.5'	" "	soft Gray silty Sand &	silty Clay		
9				20.0	22.5'	21.5'	22.0'	" "	soft Gray silty Sand &	silty Clay		
			22.5'									
10		22.5'		22.5'	25.0'	24.0'	24.5'	" "	Firm Gray Clay - Layers	silt		

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AUG

BORING LOG

Boring No. 69-MH
Levee District
Job No.

FIELD DATA

Project Miss. River Levee Grade Increase Location Sta. 1111+00 - 49' L.S. & Levee
Drill Rig VJ-18811 Inspector Walton Operator Willis Surface Elev.
Natural Ground Elev.

LABORATORY DATA

Date Classified by

SAMPLE NUMBER	DATE TAKEN 66	STRATUM FROM	STRATUM TO	DRIVE FROM	DRIVE TO	SAMPLE FROM	SAMPLE TO	TYPE OF SAMPLER			CLASSIFICATION AND REMARKS	CLASSIFICATION	SYMBOL	NAT WC %	
11	8/23			25.0'	27.5'	26.5'	27.0'	Wire Line			Firm Gray Clay- Layers Silty Sand				
			27.5'												
12		27.5'		27.5'	30.0'	29.0'	29.5'	"	"		Soft Gray Silty Clay & Silty Sand				
13				30.0'	32.5'	31.5'	32.0'	"	"		Firm Gray silty clay & silty Sand				
			32.5'												
14		32.5'		32.5'	35.0'	34.0'	34.5'	"	"		Fine Gray silty Sand & Clay				
			35.5'												
15		35.5'		35.0'	37.5'	36.5'	37.0'	"	"		Fine Gray silty Sand				
16				37.5'	40.0'	39.0'	39.5'	"	"		Fine Gray silty Sand				
			40.0												
17		40.0'		40.0'	42.5'	41.5'	42.0'	"	"		Soft Gray silty Clay & silty Sand				
18				42.5'	45.0'	44.0'	44.5'	"	"		Soft Gray silty Sand & Clay				
19				45.0'	47.5'	46.5'	47.0'	"	"		Fine Gray [redacted] silty Sand				
20				47.5'	50.0'	49.0'	49.5'	"	"		Fine Gray silty Sand				

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BORING LOG

Boring No. 69-M H
Levee District
Job No.

FIELD DATA

Project Miss. River Levee Grade Increase Location Sta. 1111+00 - 49' L.S. & Levee
Drill Rig W-1881 Inspector Walton Operator Willis Surface Elev.
Natural Ground Elev.

LABORATORY DATA

Date Classified by

SAMPLE NUMBER	DATE TAKEN 66	STRATUM FROM	STRATUM TO	DRIVE FROM	DRIVE TO	SAMPLE FROM	SAMPLE TO	TYPE OF SAMPLER			CLASSIFICATION AND REMARKS	CLASSIFICATION	SYMBOL	NAT WC %	
21	8/23			50.0'	52.5'	51.5'	52.0'	Wire Line			Fine Gray silty Sand				
			52.5'												
22		52.5'		52.5'	55.0'	54.0'	54.5'	" "			soft Gray silty Sand & silty Clay				
23				55.0'	57.5'	56.5'	57.0'	" "			soft Gray silty Sand & silty Clay				
24				57.5'	60.0'	59.0'	59.5'	" "			soft Gray silty Sand & silty Clay				
											Hole completed				

AUG 29 1966

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WES Form No. 819
April 1954

Sheet 3 of 3 Sheets

LABORATORY BORING LOG

Project: MISS. RIVER LEVEE - BELOW NO. - GRADE INCREASE

(2)-(4) Location: (STA. 1111+00 X 49 FT L.S. C/L LEVEE)

Date Analyzed: 15 SEPT. 66 Date Reported: 1-17-69

(1) Boring No. 69-MH

(5) Date Taken 23 AUG. 66

(6) G. S. E. +3.6 GBR

UND. BOR.

SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U. C. T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P. L.	D_{10} SIZE	T WATER CONTENT	UCT DEPTH
0.0	2.0	39		CH 2	SO	DBR	WD								
4.0	4.5	47	5.5	CH 2	VSO	BR	WD								
6.5	7.0	37	8.0	ML 2		GR	CS ARSCL								
9.0	9.5	39	10.5	CL 6	VSO	GR	SR								
11.5	12.0	41	13.0	CH 2	SO	DGR									
14.0	14.5	42	15.5	CL 4	VSO	GR									
16.5	17.0	34	18.0	ML 2		GR	CS ARSCL								
19.0	19.5	36	20.5	CL 4	VSO	GR									
21.5	22.0	30	22.5	ML 2		GR	CS ARSCL								
24.0	24.5	54		CH 3	SIS	SO	GR								

Classifier J.B. Recorder L.E.B. 31 DEC. 66 Checker

Sheet 1 of 3 Sheets

LMN Form 721
MAY 68 (Previous edition obsolete)

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LABORATORY BORING LOG

Project: MISS. RIVER LEVEE - BELOW N.O. - GRADE INCREASE

(2)-(4) Location: (STA. 1111+00 + 49 FT. L.S. G/L LEVEE

Date Analyzed: 1, SEPT. '66

Date Reported: 1-17-69

(1) Boring No. 69-MH

(5) Date Taken 23, Aug. 66

(6) G. S. E. +3.6

UND. BOR.

SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U. C. T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	D_{10} SIZE	T WATER CONTENT	UCT DEPTH
26.5	27.0	.72	27.5	CH 4	SIS SO	GR									
29.0	29.5	34	30.5	ML 2		GR									
31.5	32.0	50	32.5	CH 3	SIS SO	GR									
34.0	34.5	28		ML 2		GR	CS 2% SL								
36.5	37.0	34		ML 2		GR	CS 2% SL								
39.0	39.5	35	40.0	ML 2		GR	CS 2% SL								
41.5	42.0	40	43.0	CH 2	SO	DGR									
44.0	44.5	38	45.5	CL 4	VSO	GR									
46.5	47.0	36		ML 2		GR	CS 2% SL								
49.0	49.5	33		ML 2		GR									

Classifier: J.B. Recorder: G.T.H. 31 DEC. 68 G.T.H. Checker: 1-17-69

Sheet 2 of 3 Sheets

LMN Form 721
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LABORATORY BORING LOG

Project: MISS. RIVER LEVEE - BELOW N.O. - GRADE INCREASE

(2)–(4) Location: STA. 1111+00 ± 49 FT. L.S. C/L LEVEE

Date Analyzed: 1, SEPT. '66 Date Reported: 1-17-69

(1) Boring No. 69-MH

(5) Date Taken 23 Aug 66

(6) G. S. E. +3.6

UND. BOR.

SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U. C. T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	D_{10} SIZE	T WATER CONTENT	UCT DEPTH
51.5	52.0	33	52.5	ML 2		GR									
54.0	54.5	34	55.5	CL 4	5.0	GR									
56.5	57.0	33	58.0	ML 2		GR									
59.0	59.5	37	59.5	CL 6	5.0	D.GR									

Classifier J.B. Recorder L.E.B. 31 Dec. 68 Checker 1-17-69

Sheet 3 of 3 Sheets

LMN Form 721 MAY 68 (Previous edition obsolete)

HOLE COMPLETE

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GeoEngineers

"Confidential Information: Privileged & Confidential Work Product"

APPENDIX B
Conveyance Channel Subsurface Information

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

January 8, 2013

Reply to:
Office of Counsel

Via email: ***vtammineni@geoengineers.com***
Venu Tammineni
GeoEngineers, Inc.
11955 Lakeland Park Boulevard, Suite 100
Baton Rouge, LA 70809

RE: Freedom of Information Act Request, FA# 13-0059

Dear Mr. Tammineni:

Reference your Freedom of Information Act (FOIA) request dated November 8, 2012, which seeks information regarding Any design documentation (geotechnical data, slope stability, seepage, soil data, levee footprints, etc.) for the proposed Mid-Barataria Diversion Project north of Ironton, Louisiana.

After a diligent search of our files for records responsive to your request, records have been located, reviewed and deemed releasable in their entirety. Due to the sizes of the files, the records have been placed on our ftp site. You will receive retrieval instructions through a separate email.

THE PROVIDED INFORMATION CONTAINS INTERPRETIVE DATA. RESPONSIBILITY FOR ANY DESIGN RESULTING FROM YOUR USE THEREOF WILL REST WITH YOUR FIRM.

I trust you find this response satisfies your request. The fee for processing your request falls below the minimum collectable amount and will not be collected. Should yo have any questions regarding this response, please call me at 504-862-2264.

Sincerely,

Frederick W. Wallace
Freedom of Information Act Coordinator

A22501

29 39 25.0
89 58 15.0

BORING LOG
FIELD DATA

Project HSDRRS to replace Prior TFC Site _____ Date 11/14/16
Location Plaquemine Parish
Drill Rig _____ Inspector _____ Operator _____ Surface El ~~+3.05~~ +2.63 Job No. 07-233 Boring No. MCN-GT1

SAMPLE NUMBER	DATE TAKEN	STRATUM FROM	STRATUM TO	DRIVE FROM	DRIVE TO	SAMPLE FROM	SAMPLE TO	TYPE OF SAMPLER	CLASSIFICATION AND REMARKS
1				0.0	3.0	0.0	2.7	Geoprobe	Dr. 3.0 Rec. 2.7
2				3.0	7.0	3.0	6.0		4.0 " 3.0
3				7.0	11.0	7.0	9.9		4.0 " 2.9
4				11.0	15.0	11.0	13.8		4.0 " 2.8
5				15.0	19.0	15.0	18.0		4.0 " 3.0
6				19.0	23.0	19.0	22.3		4.0 " 3.3
7				23.0	25.0	23.0	24.7		4.0 " 1.7

WES FORM JAN 74 619 EDITION OF NOV 1971 MAY BE USED

Sheet _____ of _____ Sheets

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SIEVE ANALYSIS WORK SHEET

Project: HPO-NO MYRTLE GROVE

Date: 29 NOV 2006

Sheet No:

Boring No: MGN-1

U.S. STD Sieve No.	Opening mm.	Sample No.			Sample No.			Sample No.		
		Sample Elev. 16.5-18.0			Sample Elev.			Sample Elev.		
		Sample Wt. 171.5 gms			Sample Wt. gms			Sample Wt. gms		
		Sieve Wt. 129.1 gms			Sieve Wt. gms			Sieve Wt. gms		
		Ret. gms	Ret. %	Pass %	Ret. gms	Ret. %	Pass %	Ret. gms	Ret. %	Pass %
1"	25.4	P-	28							
3/4"	19.1	C-	BK							
1/2"	12.7									
3/8"	9.52									
4	4.76									
6	3.36									
10	2.00									
12	1.68									
16	1.19									
(18)	1.00									
20	0.84									
30	0.59									
35	0.50									
(40)	0.42	0.0								
50	0.297									
(60)	0.250	0.1								
70	0.210									
(80)	0.177	1.5								
100	0.149									
(120)	0.125	25.7								
140	0.105									
(200)	0.074	117.7								
230	0.062									
(Pan)		129.1								
Total										

Technician: J.M.E.

Computed: J.M.E.

Checked:

SILTY SAND (SM1)

68.6% SAND

"Confidential Information: Privileged & Confidential Work Product"

ORGANIC CONTENT

ASTM D 2974, Method C

Project Name _____ HPO-NO MYRTLE GROVE MGN-1 29-Nov-06

Boring/Sample No.	0.0 - 1.0	0.0 - 1.0	4.5 - 5.0	4.5 - 5.0	9.3 - 9.9	9.3 - 9.9	15.0-16.5	15.0-16.5
Tare No.	A-22	A-23	C-17	C-18	C-10	C-11	D-3	D-4
Tare + Dry Soil g	50.80	53.50	51.90	54.70	50.40	51.30	52.50	53.40
Tare Wt. g	25.80	28.50	26.90	29.70	25.40	26.30	26.10	28.40
Dry Soil "B"	25.00	25.00	25.00	25.00	25.00	25.00	26.40	25.00
Tare + Ashed Soil g	49.60	52.30	50.70	53.50	48.90	49.90	51.90	52.90
Ashed Soil "C"	23.80	23.80	23.80	23.80	23.50	23.60	25.80	24.50
Weight Lost	1.20	1.20	1.20	1.20	1.50	1.40	0.60	0.50
Percent Ash "D" %	95.2%	95.2%	95.2%	95.2%	94.0%	94.4%	97.7%	98.0%
Organic Matter %	4.8%	4.8%	4.8%	4.8%	6.0%	5.6%	2.3%	2.0%
	4.8%		4.8%		5.8%		2.2%	

Boring/Sample No.	20.7-21.2	20.7-21.2						
Tare No.	C-12	C-13						
Tare + Dry Soil g	55.50	50.00						
Tare Wt. g	30.50	25.00						
Dry Soil "B"	25.00	25.00						
Tare + Ashed Soil g	54.80	49.30						
Ashed Soil "C"	24.30	24.30						
Weight Lost	0.70	0.70						
Percent Ash "D" %	97.2%	97.2%						
Organic Matter %	2.8%	2.8%						
	2.8%							

Boring/Sample No.								
Tare No.								
Tare + Dry Soil g								
Tare Wt. g								
Dry Soil "B"								
Tare + Ashed Soil g								
Ashed Soil "C"								
Weight Lost								
Percent Ash "D" %								
Organic Matter %								

D = Ash Content (%) = (C/B)100 Organic Matter, (%) = 100-D

Remarks:_____

_____

Recorded By:_____ RJF RJF

"Confidential Information: Privileged & Confidential Work Product"

(07-023B)

LIQUID AND PLASTIC LIMIT TESTS

For use of this form, see EM 1110-2-1906.

PROJECT HPO-NO TO VENICE (336) MYRTLE GROVE DATE

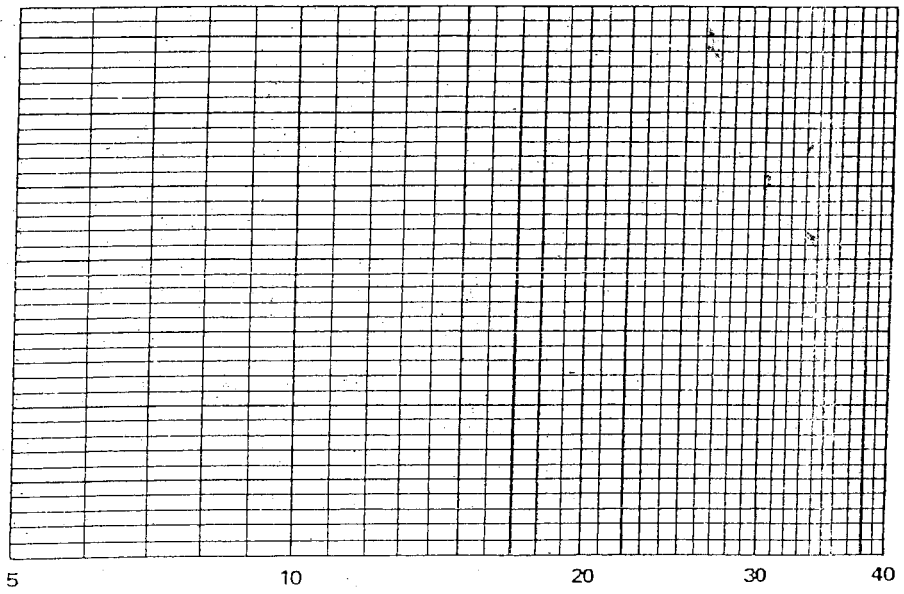
BORING NO. MGN-1 SAMPLE NO. 1

LIQUID LIMIT

	RUN NO.	1	2	3	4	5	6
	TARE NO.	144	118				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	23.78	25.08				
	TARE PLUS DRY SOIL	19.84	20.86				
	WATER W_w	3.94	4.22				
	TARE	10.61	10.93				
	DRY SOIL W_s	9.23	9.93				
	WATER CONTENT, % w	42.69	42.50				
	NUMBER OF BLOWS	27	29				

CUP: 45

DEPTH: 1.0 - 1.8



LL 43

PL 20

PI 23

Symbol from plasticity chart CL-6

PLASTIC LIMIT

	RUN NO.	1	2	3	4	5	NATURAL WATER CONTENT
	TARE NO.	22	119				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	15.13	18.14				
	TARE PLUS DRY SOIL	14.12	17.06				
	WATER W_w	1.01	1.08				
	TARE	9.10	11.77				
	DRY SOIL W_s	5.02	5.29				
	WATER CONTENT, % w	20.12	20.42				
	PLASTIC LIMIT						

REMARKS

TECHNICIAN V. Hankins COMPUTED BY V. Hankins CHECKED BY

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(07-023B)

LIQUID AND PLASTIC LIMIT TESTS

For use of this form, see EM 1110-2-1906.

PROJECT HPO-NO TO VENICE (336) MYRTLE GROVE DATE

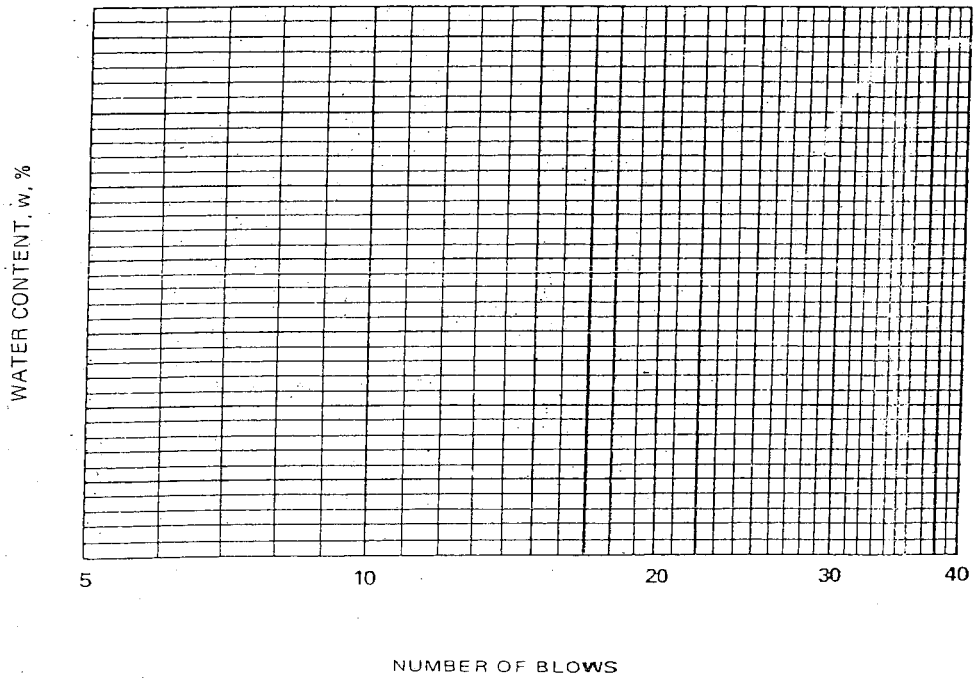
BORING NO. MGN-1 SAMPLE NO. 2

LIQUID LIMIT

	RUN NO.	1	2	3	4	5	6
	TARE NO.	101	116				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	24.19	29.29				
	TARE PLUS DRY SOIL	20.09	24.36				
	WATER W_w	4.10	4.93				
	TARE	10.38	12.43				
	DRY SOIL W_s	9.71	11.93				
	WATER CONTENT, % w	42.22	41.32				
	NUMBER OF BLOWS	23	23				

CUP: 96

DEPTH: 5.4-6.0



LL 42

PL 21

PI 21

Symbol from plasticity chart CL-4 - CL-6

PLASTIC LIMIT

	RUN NO.	1	2	3	4	5	NATURAL WATER CONTENT
	TARE NO.	138	18				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	18.38	15.83				
	TARE PLUS DRY SOIL	17.35	14.79				
	WATER W_w	1.03	1.04				
	TARE	12.36	9.67				
	DRY SOIL W_s	4.99	5.12				
	WATER CONTENT, % w	20.64	20.31				
	PLASTIC LIMIT						

REMARKS

TECHNICIAN COMPUTED BY CHECKED BY

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A22502

3P Lat 27 57 28.0
GPS Lon 89 58 12.9

BORING LOG
FIELD DATA

Project HPO-NOTo Venice Prior TFG (336) Plug. Struct Site _____ Date 11/14/06
Location _____ Job No. 07-023 B
Drill Rig _____ Inspector _____ Operator _____ Surface El +2.53 Boring No. ONGN - 2

SAMPLE NUMBER	DATE TAKEN	STRATUM FROM	STRATUM TO	DRIVE FROM	DRIVE TO	SAMPLE FROM	SAMPLE TO	TYPE OF SAMPLER	CLASSIFICATION AND REMARKS
1				0.0	3.0	0.0	2.7		Dr 3.0 Rec 2.7
2				3.0	7.0	3.0	5.8		" 4.0 " 2.8
3				7.0	11.0	7.0	10.5		" 4.0 " 3.5
4				11.0	15.0	11.0	15.0		" 4.0 " 4.0
5				15.0	19.0	15.0	19.0		" 4.0 " 4.0
6				19.0	23.0	19.0	22.5		" 4.0 " 3.5
7				23.0	27.0	23.0	26.0		" 4.0 " 3.0

WES FORM JAN 74 619 EDITION OF NOV 1971 MAY BE USED

Sheet _____ of _____ Sheets

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SIEVE ANALYSIS WORK SHEET

Project: HPO-NO MYRTLE GROVE

Date: 29 NOV 2006

Sheet No:

Boring No: MGN-2

U.S. STD Sieve No.	Opening mm.	Sample No.			Sample No.			Sample No.		
		Sample Elev. 23.0-24.5			Sample Elev.			Sample Elev.		
		Sample Wt. 170.5 gms			Sample Wt. gms			Sample Wt. gms		
		Sieve Wt. 119.1 gms			Sieve Wt. gms			Sieve Wt. gms		
		Ret. gms	Ret. %	Pass %	Ret. gms	Ret. %	Pass %	Ret. gms	Ret. %	Pass %
1"	25.4	P-	526							
3/4"	19.1	C-	84							
1/2"	12.7									
3/8"	9.52									
4	4.76									
6	3.36									
10	2.00									
12	1.68									
16	1.19									
(18)	1.00									
20	0.84									
30	0.59									
35	0.50									
(40)	0.42									
50	0.297									
(60)	0.250	0.0								
70	0.210									
(80)	0.177	0.3								
100	0.149									
(120)	0.125	13.9								
140	0.105									
(200)	0.074	112.3								
230	0.062									
(Pan)		119.1								
Total										

Technician: J.MC

Computed: J.MC.

Checked:

SILTY SAND (SM1)

65.9% SAND

"Confidential Information: Privileged & Confidential Work Product"

ORGANIC CONTENT

ASTM D 2974, Method C

Project Name _____ HPO-NO MYRTLE GROVE MGN-2 29-Nov-06

Boring/Sample No.		0.7 - 1.7	0.7 - 1.7	3.0 - 4.5	3.0 - 4.5	7.7 - 8.2	7.7 - 8.2	11.0-11.6	11.0-11.6
Tare No.		A-13	A-14	C-21	C-24	A-16	A-19	C-19	C-20
Tare + Dry Soil	g	53.80	54.40	52.40	50.20	51.70	53.30	54.40	52.60
Tare Wt.	g	28.80	29.40	27.40	25.20	26.70	28.30	29.40	27.60
Dry Soil "B"		25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00
Tare + Ashed Soil	g	52.00	52.60	51.50	49.30	50.60	52.20	52.70	50.90
Ashed Soil "C"		23.20	23.20	24.10	24.10	23.90	23.90	23.30	23.30
Weight Lost		1.80	1.80	0.90	0.90	1.10	1.10	1.70	1.70
Percent Ash "D"	%	92.8%	92.8%	96.4%	96.4%	95.6%	95.6%	93.2%	93.2%
Organic Matter	%	7.2%	7.2%	3.6%	3.6%	4.4%	4.4%	6.8%	6.8%
		7.2%		3.6%		4.4%		6.8%	

Boring/Sample No.		16.9-17.5	16.9-17.5	21.0-22.5	21.0-22.5				
Tare No.		B-7	B-11	C-7	C-15				
Tare + Dry Soil	g	46.70	47.10	51.90	50.60				
Tare Wt.	g	21.70	22.10	26.30	25.60				
Dry Soil "B"		25.00	25.00	25.60	25.00				
Tare + Ashed Soil	g	45.30	45.70	51.60	50.30				
Ashed Soil "C"		23.60	23.60	25.30	24.70				
Weight Lost		1.40	1.40	0.30	0.30				
Percent Ash "D"	%	94.4%	94.4%	98.8%	98.8%				
Organic Matter	%	5.6%	5.6%	1.2%	1.2%				
		5.6%		1.2%					

Boring/Sample No.									
Tare No.									
Tare + Dry Soil	g								
Tare Wt.	g								
Dry Soil "B"									
Tare + Ashed Soil	g								
Ashed Soil "C"									
Weight Lost									
Percent Ash "D"	%								
Organic Matter	%								

D = Ash Content (%) = (C/B)100 Organic Matter, (%) = 100-D

Remarks:_____

_____

Recorded By:_____ RJF RJF

"Confidential Information: Privileged & Confidential Work Product"

(07-023B)

LIQUID AND PLASTIC LIMIT TESTS

For use of this form, see EM 1110-2-1906.

PROJECT HPO-NO TO VENICE (336) MYRTLE GROVE DATE

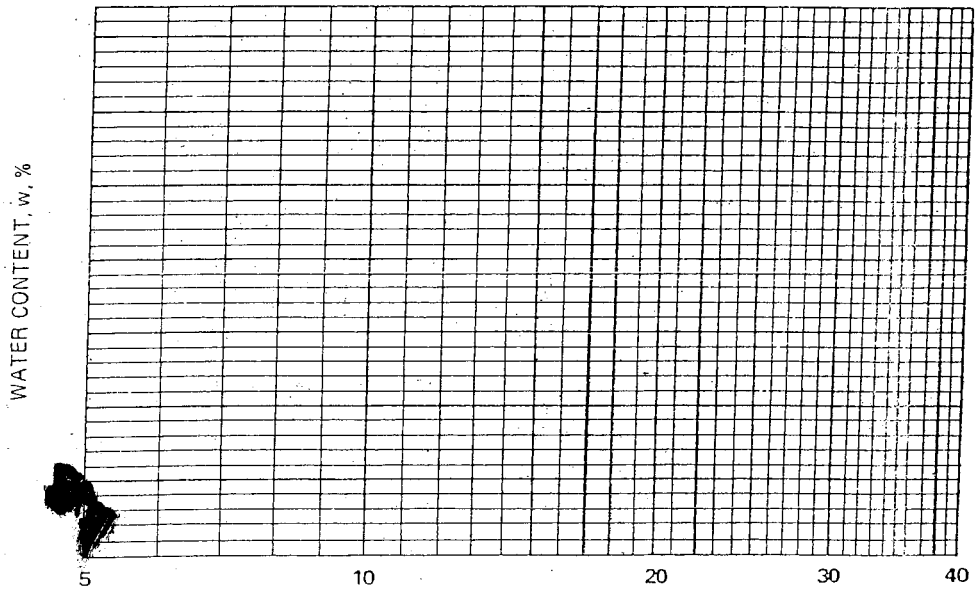
BORING NO. MGN-2 SAMPLE NO. 1

LIQUID LIMIT

	RUN NO.	1	2	3	4	5	6
	TARE NO.	221	219				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	30.96	30.86				
	TARE PLUS DRY SOIL	24.68	24.78				
	WATER W_w	6.28	6.08				
	TARE	14.79	14.84				
	DRY SOIL W_s	illegible	illegible				
	WATER CONTENT, % w	61.88	61.17				
	NUMBER OF BLOWS	23	33				

CUP: 88

DEPTH: 0.7-1.7



LL 61

PL 26

PI 35

Symbol from plasticity chart CH-3

PLASTIC LIMIT

	RUN NO.	1	2	3	4	5	NATURAL WATER CONTENT
	TARE NO.	5	87				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	illegible	10.19				
	TARE PLUS DRY SOIL	15.42	10.92				
	WATER W_w	illegible	illegible				
	TARE	10.27	9.81				
	DRY SOIL W_s	illegible	illegible				
	WATER CONTENT, % w	illegible					
	PLASTIC LIMIT						

REMARKS

TECHNICIAN COMPUTED BY CHECKED BY

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(07-023B)

LIQUID AND PLASTIC LIMIT TESTS

For use of this form, see EM 1110-2-1906.

PROJECT HPO-NO TO VENICE (336) MYRTLE GROVE DATE

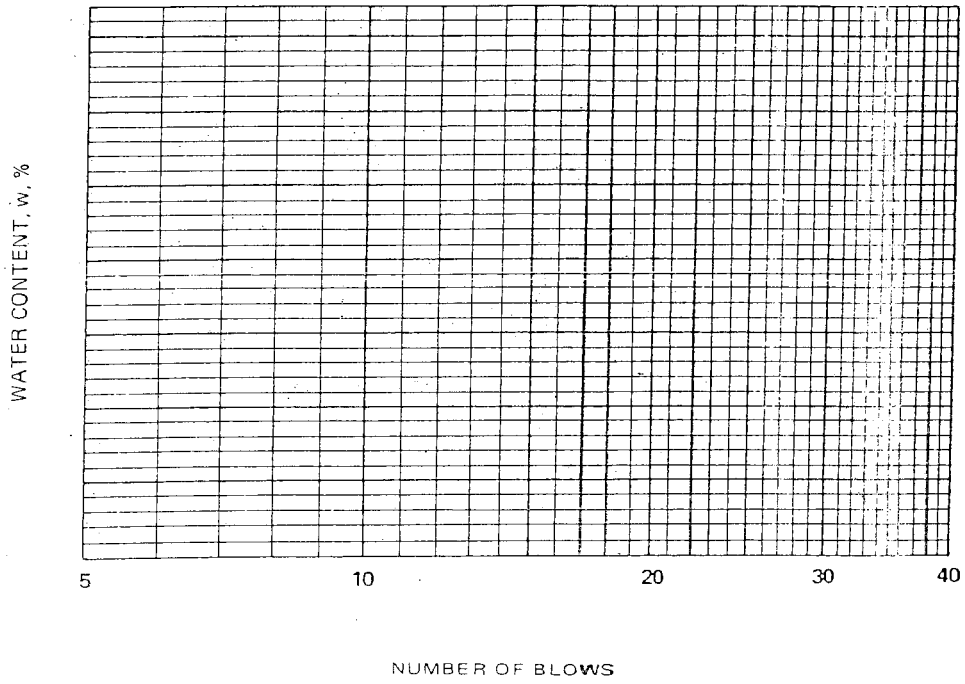
BORING NO. MGN 2 SAMPLE NO. 4

LIQUID LIMIT

	RUN NO.	1	2	3	4	5	6
	TARE NO.	2322	206				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	30.43	31.79				
	TARE PLUS DRY SOIL	26.63	27.72				
	WATER W_w	3.80	4.07				
	TARE	15.33	15.47				
	DRY SOIL W_s	11.30	12.25				
	WATER CONTENT, % w	33.63	33.22				
	NUMBER OF BLOWS	29	24				

CUP: 93

DEPTH: 11.6 - 12.6



LL 33

PL 22

PI 11

Symbol from plasticity chart CL-4

PLASTIC LIMIT

	RUN NO.	1	2	3	4	5	NATURAL WATER CONTENT
	TARE NO.	132	88				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	19.00	15.79				
	TARE PLUS DRY SOIL	17.80	14.68				
	WATER W_w	1.20	1.09				
	TARE	12.25	9.65				
	DRY SOIL W_s	5.55	5.03				
	WATER CONTENT, % w	21.62	21.67				
	PLASTIC LIMIT						

REMARKS

TECHNICIAN Yi Hsin-Kuo COMPUTED BY Yi Hsin-Kuo CHECKED BY

Confidential Information: Privileged & Confidential Work Product

GPS Lat 29 39 26.8
GPS Lon 89 58 09.8

A22503

BORING LOG
FIELD DATA

Project HPO-NO To Venice Prior TFG(336) Plaq Psoich Site _____ Date 11/14/06
Location _____ Job No. 07-023B
Drill Rig _____ Inspector _____ Operator _____ Surface El +3.08 Boring No. 07-MGN 3

SAMPLE NUMBER	DATE TAKEN	STRATUM FROM	STRATUM TO	DRIVE FROM	DRIVE TO	SAMPLE FROM	SAMPLE TO	TYPE OF SAMPLER			CLASSIFICATION AND REMARKS
1				0.0	3.0	0.0	2.8				Dr 3.0 Rec 2.8
2				3.0	7.0	3.0	5.2				4.0 2.2
3				7.0	11.0	7.0	9.6				4.0 2.6
4				11.0	15.0	11.0	14.5				4.0 3.0
5				15.0	19.0	15.0	18.2				4.0 3.2
6				19.0	23.0	19.0	23.0				4.0 4.6
7				23.0	27.0	23.0	27.0				4.0 4.0

WES FORM JAN 74 819 EDITION OF NOV 1971 MAY BE USED

Sheet _____ of _____ Sheets

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ORGANIC CONTENT

ASTM D 2974, Method C

Project Name _____ HPO-NO MYRTLE GROVE MGN-3 29-Nov-06

Boring/Sample No.	0.0 - 1.0	0.0 - 1.0	4.4 - 5.2	4.4 - 5.2	12.0-13.3	12.0-13.3	19.6-20.4	19.6-20.4
Tare No.	C-22	10	A-15	12	A-17	B-9	A-20	C-9
Tare + Dry Soil g	50.59	45.65	51.15	52.81	42.38	42.03	54.80	49.71
Tare Wt. g	25.59	20.65	26.15	27.81	17.38	17.03	29.80	24.71
Dry Soil "B"	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00
Tare + Ashed Soil g	48.84	43.89	49.33	51.00	40.56	40.19	52.71	47.64
Ashed Soil "C"	23.25	23.24	23.18	23.19	23.18	23.16	22.91	22.93
Weight Lost	1.75	1.76	1.82	1.81	1.82	1.84	2.09	2.07
Percent Ash "D" %	93.0%	93.0%	92.7%	92.8%	92.7%	92.6%	91.6%	91.7%
Organic Matter %	7.0%	7.0%	7.3%	7.2%	7.3%	7.4%	8.4%	8.3%
	7.0%		7.3%		7.4%		8.4%	

Boring/Sample No.	24.6-25.6	24.6-25.6						
Tare No.	C-25	C-14						
Tare + Dry Soil g	53.63	51.53						
Tare Wt. g	28.63	26.53						
Dry Soil "B"	25.00	25.00						
Tare + Ashed Soil g	51.41	49.30						
Ashed Soil "C"	22.78	22.77						
Weight Lost	2.22	2.23						
Percent Ash "D" %	91.1%	91.1%						
Organic Matter %	8.9%	8.9%						
	8.9%							

Boring/Sample No.								
Tare No.								
Tare + Dry Soil g								
Tare Wt. g								
Dry Soil "B"								
Tare + Ashed Soil g								
Ashed Soil "C"								
Weight Lost								
Percent Ash "D" %								
Organic Matter %								

D = Ash Content (%) = (C/B)100 Organic Matter, (%) = 100-D

Remarks:_____

_____

Recorded By:_____ RJF RJF

"Confidential Information: Privileged & Confidential Work Product"

(07-023B)

LIQUID AND PLASTIC LIMIT TESTS

For use of this form, see EM 1110-2-1906.

PROJECT HPO-NO TO VENICE (336) MYRTLE GROVE DATE

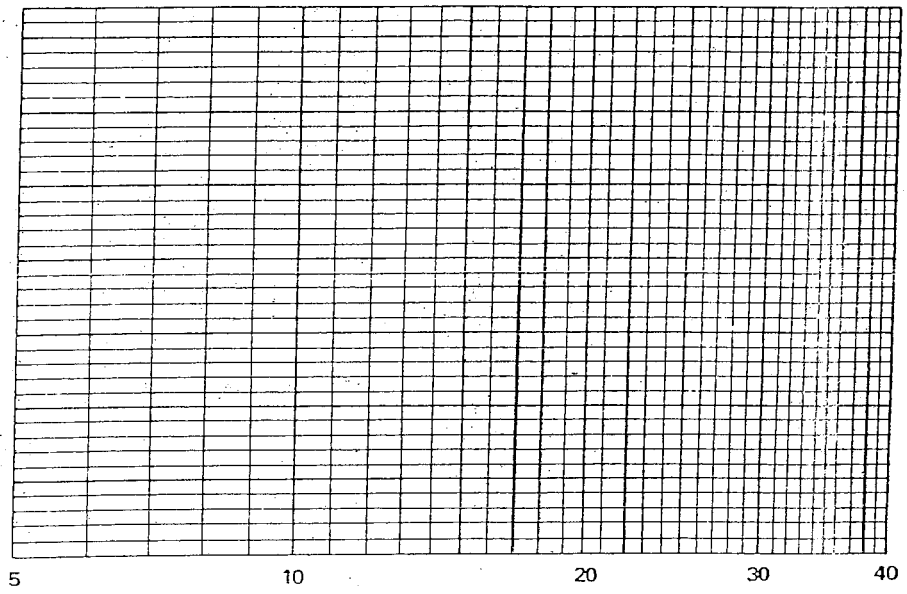
BORING NO. MGN-3 SAMPLE NO. 1

LIQUID LIMIT

	RUN NO.	1	2	3	4	5	6
	TARE NO.	239	262				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	31.41	illegible				
	TARE PLUS DRY SOIL	illegible	illegible				
	WATER W_w						
	TARE	15.59	15.53				
	DRY SOIL W_s						
	WATER CONTENT, % w	illegible	illegible				
	NUMBER OF BLOWS	25	23				

CUP: 47

DEPTH: 1.0-2.8



LL 36

PL 20

PI 16

Symbol from plasticity chart CL-A

PLASTIC LIMIT

	RUN NO.	1	2	3	4	5	NATURAL WATER CONTENT
	TARE NO.	74	115				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	15.95	illegible				
	TARE PLUS DRY SOIL	illegible	17.58				
	WATER W_w	illegible					
	TARE	9.85	12.39				
	DRY SOIL W_s		illegible				
	WATER CONTENT, % w	illegible					
	PLASTIC LIMIT						

REMARKS

TECHNICIAN COMPUTED BY CHECKED BY

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(07-023B)

LIQUID AND PLASTIC LIMIT TESTS
For use of this form, see EM 1110-2-1906.

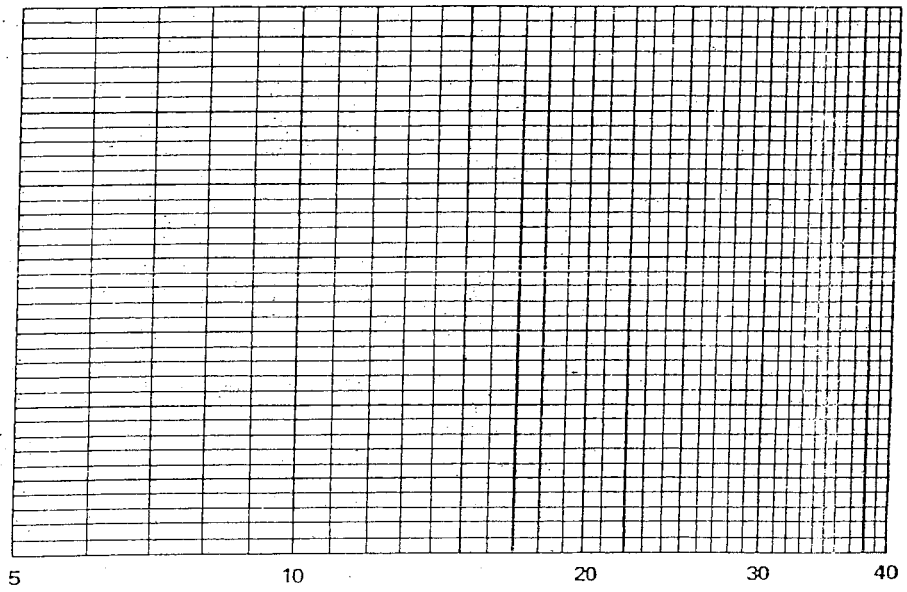
PROJECT HPO-NO TO VENICE (336) MYRTLE GROVE DATE

BORING NO. MGN-3 SAMPLE NO. 3

LIQUID LIMIT

RUN NO.		1	2	3	4	5	6
TARE NO.		39	104				
WEIGHT IN GRAMS: TARE PLUS WET SOIL		18.89	21.66				
WEIGHT IN GRAMS: TARE PLUS DRY SOIL		15.63	18.13				
WEIGHT IN GRAMS: WATER	W_w	3.26	3.53				
WEIGHT IN GRAMS: TARE		8.81	10.76				
WEIGHT IN GRAMS: DRY SOIL	W_s	6.82	7.37				
WATER CONTENT, %	w	47.80	47.90				
NUMBER OF BLOWS		24	24				

CUP: 32
DEPTH: 7.0 - 8.4



LL 48
PL 22
PI 26

Symbol from plasticity chart
CL-G

PLASTIC LIMIT

RUN NO.		1	2	3	4	5	NATURAL WATER CONTENT
TARE NO.		1	95				
WEIGHT IN GRAMS: TARE PLUS WET SOIL		18.69	20.12				
WEIGHT IN GRAMS: TARE PLUS DRY SOIL		17.08	18.40				
WEIGHT IN GRAMS: WATER	W_w	1.61	1.72				
WEIGHT IN GRAMS: TARE		9.68	10.12				
WEIGHT IN GRAMS: DRY SOIL	W_s	7.40	8.28				
WATER CONTENT, %	w	21.76	20.77				
PLASTIC LIMIT		22	21				

REMARKS

TECHNICIAN COMPUTED BY CHECKED BY

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(07-023B)

LIQUID AND PLASTIC LIMIT TESTS

For use of this form, see EM 1110-2-1906.

PROJECT HPO-NO TO VENICE (336) MYRTLE GROVE DATE

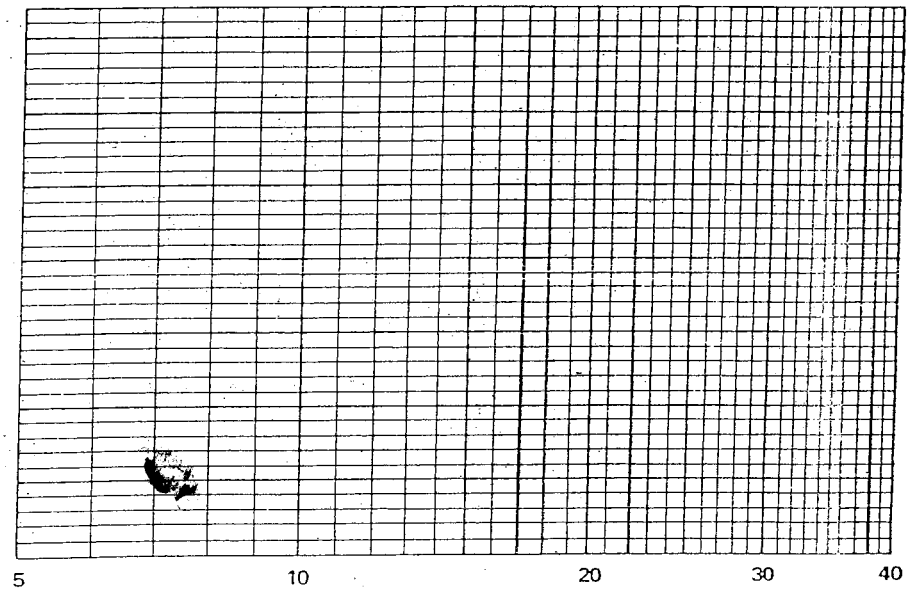
BORING NO. MGN-3 SAMPLE NO. 4

LIQUID LIMIT

	RUN NO.	1	2	3	4	5	6
	TARE NO.	4	13				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	24.25	24.92				
	TARE PLUS DRY SOIL	18.83	19.56				
	WATER W_w	5.42	5.36				
	TARE	9.27	10.02				
	DRY SOIL W_s	9.56	9.54				
	WATER CONTENT, % w	56.7	56.2				
	NUMBER OF BLOWS	23	33				

CUP: 91

DEPTH: 12.0 - 13.3



LL 56

PL 24

PI 32

Symbol from plasticity chart

CH-2 - CH-3

PLASTIC LIMIT

	RUN NO.	1	2	3	4	5	NATURAL WATER CONTENT
	TARE NO.	122	139				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	18.18	18.63				
	TARE PLUS DRY SOIL	16.98	17.40				
	WATER W_w	1.20	1.23				
	TARE	12.01	12.25				
	DRY SOIL W_s	4.97	5.15				
	WATER CONTENT, % w	24.1	23.9				
	PLASTIC LIMIT						

REMARKS

TECHNICIAN YL COMPUTED BY YL CHECKED BY

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(07-023B)

LIQUID AND PLASTIC LIMIT TESTS

For use of this form, see EM 1110-2-1906.

PROJECT HPO-NO TO VENICE (336) MYRTLE GROVE DATE

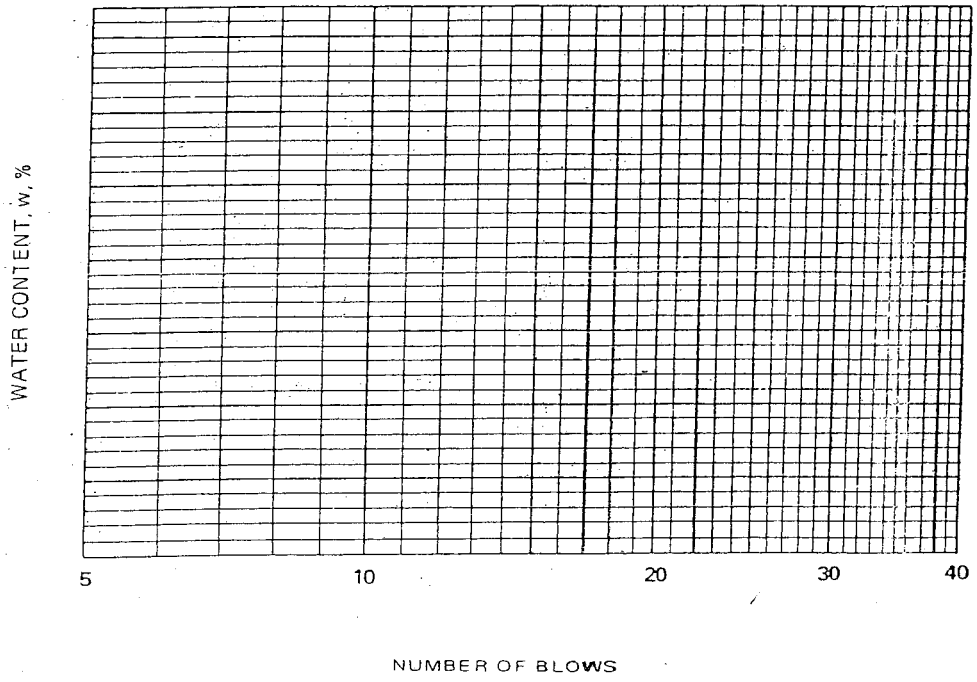
BORING NO. MGN-3 SAMPLE NO. 7

LIQUID LIMIT

	RUN NO.	1	2	3	4	5	6
	TARE NO.	45	75				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	19.23	20.17				
	TARE PLUS DRY SOIL	14.82	15.78				
	WATER W_w	4.41	4.39				
	TARE	9.86	10.80				
	DRY SOIL W_s	4.96	4.98				
	WATER CONTENT, % w	88.91	88.15				
	NUMBER OF BLOWS	22	22				

CUP: 19

DEPTH: 25.6 - 27.0



LL 88

PL 30

PI 58

Symbol from plasticity chart CH-4

PLASTIC LIMIT

	RUN NO.	1	2	3	4	5	NATURAL WATER CONTENT
	TARE NO.	114	108				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	22.20	22.29				
	TARE PLUS DRY SOIL	19.91	19.96				
	WATER W_w	2.29	2.33				
	TARE	12.18	12.27				
	DRY SOIL W_s	7.73	7.69				
	WATER CONTENT, % w	29.62	30.30				
	PLASTIC LIMIT	30	30				

REMARKS

TECHNICIAN COMPUTED BY CHECKED BY

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A20873 29°39'25.0" 89 58' 6"

MYRTLE GROVE ECOSYSTEM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-3U

5" UNDIST. (03-15) WATER TABLE 2.5 FT.

LABORATORY BORING LOG

① Boring Number MG-3U

②-④ Location

⑤ Date Taken 6 MAY '03 ⑥ G.S.E. 2.4

SAMPLE NO. / FOR UNDISTURBED

FOR UNDISTURBED SAMPLES ONLY

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH
			0.0	1.3	27	1.3 CH	SIS	ST.	BR	RT. WD OX								
0.0																		
			346.	92.0	24													76.3
0.4																		
			208.	82.8	31	CH		ST.	BR	MS ars ML few rts, rt, ox, CRUMBLY								66.
B										SAMPLE DRY								
1.3																		
			1.3	2.3	27	CL	SIS	ST.	BR	OX								
C			469.	111.7	27	CL	6	ST.	BR	MS lge ars ML, OX, SPKS dw,								90.3
2.2																		
D																		

Classifier E.C.S. Recorder V.J.L. Checker ____ Date Analyzed 7 MAY '03 Sheet 1 of 21 Sheets

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LMN Form 721 Nov 69 (Replaces previous edition & LMN Form 680, 30 Jun 68)

MYRTLE GROVE ECOSYSTEM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-3U

5" UNDIST. (03-15)

LABORATORY BORING LOG

FOR UNDISTURBED SAMPLES ONLY

① Boring Number MG-3U

②-④ Location

⑤ Date Taken

⑥ G.S.E.

SAMPLE NO. 2 FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH
			2.3	4.8	34	4.8 CL	SIS	M	BR	WD OX								
3.5																		
			360	75.0	34													59.1
3.9	DISCARD																	
							CL	M	BR	lge ars ML, dw, OX / MS MA.								
B			10.6	106.8	33													83.4
4.8																		
			54.2	99.4	33													77.8
C																		
			4.8	6.8	33	6.8 MH			BR	CS OX								
5.7						MH-2			BR	ars CL, OX, SPKS								
			54.5	96.9	32													76.5
D																		
6.6																		

Classifier E.C.S Recorder V.J.L. Checker Date Analyzed 7 MAY '03

Sheet 2 of 21 Sheets

LMN Form 721 Nov 69 (Replaces previous edition & LMN Form 680, 30 Jun 88)

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MYRTLE GROVE ECOSYSTEM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-3U

5" UNDIST. (03-15)

LABORATORY BORING LOG

SAMPLE NO. 3 FOR UNDISTURBED

① Boring Number MG-3U

②-④ Location

⑤ Date Taken

⑥ G.S.E.

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH
7.0			16.8	8.3	37		CL SIS	M	BR	OX								
A			339	141.8	37													106.7
7.6							CH	M	BR	lns alt thin lyrs ML, ox, SPKS dw								
B			184	100.9	36													77.2
8.5		1 2	8.3	9.4	35	9.4	CL SIS	M	GR BR	R								
C			485	131.1	35		CH	M	GR BR	R lns lge ars ML, SPKS dw								100.5
9.4			9.4	10.5	38		CH SIS	M	GR	R ox								
D			59	116.2	38		CH2	M	GR	R lns lyrs ars ML, OX, SPKS dw								87.6
10.3																		

Classifier ECS Recorder V.J.L. Checked: Date Applyed: 7 MAY '03

Sheet 3 of 21 Sheets

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MYRTLE GROVE ECOSYSTEM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-3U

5" UNDIST. (03-15)

LABORATORY BORING LOG

① Boring Number MG-3U

②-④ Location

⑤ Date Taken

⑥ G.S.E.

SAMPLE NO. 4 FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT LL	ATTERBERG LIMIT PL	SIZE	TEST WATER CONTENT	UCT DEPTH	
11.0																			
A	DISCARD		10.5	12.7	42		CH SIS	M	GR R	OX									
			66	119.9	43														87.5
11.8							CH2	M	GR R	1/2S 1/4YS ars ML, SPKS dw, OX									
B			52.1	154.4	40														113.5
12.7										NO UCT DUE TO LAYERS ML									
			12.7	14.7	47	14.7	CH SIS	M	BR R	NO CC									
C			62.1	152.2	49														106.3
							CH3	M	BR R	1/2S 1/4YS ars ML, dw, org. ars, CLAYROCK									
13.6																			
D			67.9	111.0	45														80.1
14.5																			

Classifier E.C.S. Recorder V.J.L. Checker Date Analyzed 7 MAY 03

Sheet 4 of 21 Sheets

LMN Form 721 Nov 69 (Replaces previous edition & LMN Form 680, 30 Jun 68)

Confidential Information: Privileged & Confidential Work Product"

MYRTLE GROVE
ECOSYSTEM RESTORATION
PROJECT FEASIBILITY STUDY
BOR: MG-3U
5" UNDIST. (03-15)

LABORATORY BORING LOG

① Boring Number MG-311

②–④ Location

⑤ Date Taken

⑥ G.S.E.

FOR UNDISTURBED SAMPLES ONLY

SAMPLE NO. 5 FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH
15.0			14.7	15.7	39	15.7 CL	ST S	VSO	GR	OX								
A	DISCARD		6.14	100.5	39	CL	G	VSO	GR	1/2 S ML, OX, TR-MICA								75.7
15.5		2	49.6	121.0	60	CH	4	ST	R GR	1/2 S ML								79.9
		1																
B		2	41.5	138.2	38	CL	G	ST	GR R	1/2 S alt thin lyrs ML, OX								103.
16.4		3	25.4	115.3	63													75.4
C			15.7	18.5	61	CH		SI S	M	R GR	SL						67	175
			1.17	12.7	56	CH	4		M	R GR	1/2 S ML, SL	6.98	99					76.3
17.3		(4)								P = 500								
D			56.7	92.7	63													61.5
18.2																		

Classifier ECS Recorder VJT Checker Date Analyzed 7 MAY '03 Sheet 5 of 21 Sheets

Confidential Information: Privileged & Confidential Work Product"

LMN Form 721 Nov 69 (Replaces previous edition of LMN Form 680, 30 Jun 68)

MYRTLE GROVE ECOSYSTEM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-3U

5" UNDIST. (03-15)

LABORATORY BORING LOG

FOR UNDISTURBED SAMPLES ONLY

① Boring Number MG-3U

②-④ Location

⑤ Date Taken

⑥ G.S.E.

SAMPLE NO. 6 FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS	ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH
19.0				18.5	19.5	67	19.5 CH	SIS	M	R									
A			1	38.4	95.6	67	CH	4	M	R	1/2S ML								61.9
19.6			2																
			1	19.5	20.5	41	CL	SIS	ST	GR									
				15.	93.6	41	CL	4	ST	GR	1/2S a/f 1gr S. ML,								83.8
B			2	59.9	150.7	59	CH	3	M	GR	BR R 1/2S ML,								99.1
20.5			3																
				20.5	21.5	39	21.5 CL	SIS	M	GR	0X								
C				13.4	118.2	39	CL	4	M	GR	1/2S a/f 1gr S. ML, 0X								88.3
21.4																			
			1	21.5	22.5	66	22.5 CH	SIS	ST	R GR									
			2																
D				11.6	95.0	66	CH	4	ST	R GR	1/2S ML								62.0
22.3																			

Classifier E.C.S. Recorder V.J.L. Checker Date Applied 7 MAY '03

Sheet 6 of 21 Sheets

Confidential Information: Privileged & Confidential Work Product"

LMN Form 721 Nov 69 (Replaces previous edition & LMN Form 680, 30 Jun 68)

MYRTLE GROVE
ECOSYSTEM RESTORATION
PROJECT FEASIBILITY STUDY
BOR: MG-3U
5" UNDIST. (03-15)

LABORATORY BORING LOG

SAMPLE NO. 7

FOR UNDISTURBED SAMPLES ONLY

① Boring Number MG-3U

②–④ Location

⑤ Date Taken

⑥ G.S.E.

FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH
			22.5	23.5	31	23.5 ML			GR	CS OX								
23.0			24.2	131.8	31		ML 2		Gr	ars cl tr MICA ox								103.1
23.4			23.5	24.5	59		CH SIS	M	GR R									
		1	26.5	116.9	56		CH 3	50	Gr R	INS ars ml								79.1
B		2	116.	134.2	31		ML 2		Gr Br	ars cl tr MICA								105.1
24.3		3	53.1	119.5	61		CH 4	M	Gr R	INS ars ml								78.6
C			63.9	95.4	59		CH 4	M	Gr	INS ml org stks								64.5
25.2		ML	24.5	25.5	59		CH SIS	M	GR									
D																		

Classifier V.L. Recorder R.L. Checker Date Analyzed 5/9/03

Sheet 7 of 21 Sheets

LMN Form 721
Nov 69

(Replaces previous edition of LMN Form 660, 30 Jun 66)

"Confidential Information: Privileged & Confidential Work Product"

MYRTLE GROVE ECOSYSTEM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-3U

5" UNDIST. (03-15)

LABORATORY BORING LOG

FOR UNDISTURBED SAMPLES ONLY

① Boring Number MG-3U

②-④ Location

⑤ Date Taken

⑥ G.S.E.

SAMPLE NO. 8 FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH
			25.5	28.0	61	28.0 CH	SIS	SO	GR									
A																		
27.0			346	125.2	60													82.5
27.3	DISCARD A					CH	H	SO	Gr	INS ml arg stks								
B		1	496	129.2	62													84.5
		2	28.0	29.5	31	29.5 ML			GR	CS								
28.2			559	114.7	32													90.0
C																		
			350	108.9	30		ml	2	Gr	ars cl tr MICA class rep half of SAMPLE								86.0
29.1																		
D		1	184	134.8	29													107.0
		2	295	305	54		CH	SIS	SO	R								
			446	127.5	54		CH	H	SO	R	INS ars ml spks dw							87.0
30.0																		

Classifier V.L. Recorder R.L. Checker Date Analyzed 5/9/03

Sheet 8 of 21 Sheets

Confidential Information: Privileged & Confidential Work Product"

LMN Form 721 Rev 69 (Replaces previous edition & LMN Form 680, 30 Jun 68)

MYRTLE GROVE ECOSYSTEM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-3U

5" UNDIST. (03-15)

LABORATORY BORING LOG

FOR UNDISTURBED SAMPLES ONLY

① Boring Number MG-311

②-④ Location

⑤ Date Taken

⑥ G.S.E.

SAMPLE NO. 9 FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN ND	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH
31.0			30.5	31.7	73		CH SIS	VSO	BR GR R									
			61.4	109.5	73		CH 4	VSO	Br. Gr. R.	I.N.S MI SPKS dw org stks								68.0
A	discard-A																	
31.7																		
		1	31.7	33.5	61		CH SIS	M	GR BR R			7.7	9.9				70	333
			33.0	143.4	28		MI 2		Gr.	ars cl tr. MICA								114.8
B		2	11.7	109.8	58													74.6
32.6																		
		MI					CH 4	M	Gr. Br. R.	I.N.S ars MI		7.7	9.9				70	
C																		
33.5	4		27.7	105.2	64					P= 500								68.7
			33.9	113.7	66		CH 4	M	Gr.	I.N.S MI								73.2
D			33.5	34.5	66	34.5	CH SIS	M	GR									
34.4																		

Classifier V.L. Recorder R.L. Checker Date Analyzed 5/9/03

Sheet 9 of 21 Sheets

Confidential Information: Privileged & Confidential Work Product"

LMN Form 721 Nov 69 (Replaces previous edition & LMN Form 680, 30 Jun 68)

FOR UNDISTURBED SAMPLES ONLY

MYRTLE GROVE ECOSYSTEM RESTORATION PROJECT FEASIBILITY STUDY
BOR: MG-3U
5" UNDIST. (03-15)

LABORATORY BORING LOG

① Boring Number MG-3U

②–④ Location

⑤ Date Taken

⑥ G.S.E.

SAMPLE NO. 10 FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH	
35.0			345	36.7	33	36.7 ML			GR	CS									
A	disc And-A	1	503	110.4	62		CH 3	SO	R Br Gr	INS ars ml									76.5
		2																	
35.8			66	144.2	33		ML 2		Gr Br	ars cl									111.2
B			384	144.6	32		ML 2		Gr	ars ch ars cl									112.1
36.7																			
			36.7	37.7	49		CH SIS	M	R										
C		1	106	119.5	38		CH 2	M	Gr	INS lge ars ml									89.9
		2																	
37.6			609	107.3	49		CH 3	M	R	INS ars ml									76.0
			37.7	38.7	58		CH SIS	M	GR										
D			485	117.8	58		CH 4	M	Gr	INS ml org stks									79.1
38.5		ML																	

Classifier V.L Recorder R.L Checked Date Analyzed 5-9-03

Sheet 10 of 21 Sheets

"Confidential Information: Privileged & Confidential Work Product"

LMN Form 721
Nov 69

(Replaces previous edition of LMN Form 660, 30 Jun 66)

MYRTLE GROVE ECOSYSTEM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-3U

5" UNDIST. (03-15)

LABORATORY BORING LOG

SAMPLE NO. 11

FOR UNDISTURBED

FOR UNDISTURBED SAMPLES ONLY

① Boring Number MG-311

②-④ Location

⑤ Date Taken

⑥ G.S.E.

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO.	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT LL	ATTERBERG LIMIT PL	SIZE	TEST WATER CONTENT	UCT DEPTH
			38.7	40.3	57		CH SIS	M	GR			645/103					57	39.1
39.0																		
			67.9	92.9	60							645/103					57	62.2
39.4	Discard-A	C					CH A	M	Gr.	INS MI spks dw	Drg	s.t.ks						
										P 500								
B			12.7	121.1	53													83.1
40.2																		
			40.3	41.3	65		CH SIS	M	R GR									
			13.4	117.9	65		CH A	M	R Gr.	INS MI								76.1
C		1																
		2																
41.2			41.5	141.2	24		MH 2		Gr.	Qrs cl fr-MICA								116.
			41.3	42.3	65		CH SIS	M	GR									
D			35.9	116.8	65		CH A	M	Gr.	INS MI								75.5
42.1																		

Classifier V.L. Recorder [illegible] Checker Date Analyzed 5/9/03

Sheet 11 of 21 Sheets

LMN Form 721 Nov 69 (Replaces previous edition & LMN Form 680, 30 Jun 68)

Confidential Information: Privileged & Confidential Work Product"

MYRTLE GROVE ECOSYSTEM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-3U

5" UNDIST. (03-15)

LABORATORY BORING LOG

FOR UNDISTURBED SAMPLES ONLY

① Boring Number MG-3U

②-④ Location

⑤ Date Taken

⑥ G.S.E.

SAMPLE NO. 9 FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH	
31.0			30.5	31.7	73		CH	SIS	VSO BR GR R										
			614	109.5	73		CH 4	VSO	Br. Gr. R.	I.N.S M1 S.P ks. dw	org	stks							68.2
A																			
31.7	discard-A																		
			31.7	33.5	61		CH	SIS	M GR BR R			7.7	99				70	333	
		1	330	143.4	28		M1 2		Gr.	org s.l tr- M.i.CA									114.8
B		2	117	109.8	58														74.0
32.6																			
		M1																	
							CH 4		M Gr. Br. R.	I.N.S org s M1		7.7	99				70		
C																			
33.5	4		277	105.2	64					P= 500									68.7
			339	113.7	66		CH 4		M Gr.	I.N.S M1									
			335	345	66	345	CH	SIS	M GR										73.2
D																			
34.4																			

Classifier V.L. Recorder R.L. Checked Date Received 5/9/03

Sheet 9 of 21 Sheets

Confidential Information: Privileged & Confidential Work Product"

LMN Form 721 Nov 69 (Replaces previous edition & LMN Form 680, 30 Jun 66)

MYRTLE GROVE ECOSYSTEM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-3U

5" UNDIST. (03-15)

LABORATORY BORING LOG

SAMPLE NO. 10

FOR UNDISTURBED

FOR UNDISTURBED SAMPLES ONLY

① Boring Number MG-3U

②-④ Location

⑤ Date Taken

⑥ G.S.E.

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO.	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH	
35.0			345	36.7	33	36.7 ML			GR	CS									
		1	503	110.4	62	CH 3		SO	R Br Gr	INS ars ml									76.5
A	discard-A	2																	
35.8			66	144.2	33	ML 2			Gr Br	ars cl									111.2
		1A																	
B			384	144.6	32	ML 2			Gr	ars ch ars cl									112.4
36.7																			
			36.7	37.7	49	CH SIS		M	R										
		1	106	119.5	38	CH 2		M	Gr	INS lge ars ml									89.9
C		2																	
37.6			609	107.3	49	CH 3		M	R	INS ars ml									76.0
			37.7	38.7	58	CH SIS		M	GR										
D			485	117.8	68	CH 4		M	Gr	INS ml org stks									79.1
38.5		M1																	

Classifier V.L Recorder L.L Date 6 Feb 98

Sheet 10 of 21 Sheets

"Confidential Information: Privileged & Confidential Work Product"

LMN Form 721 Rev 69 (Replaces previous edition & LMN Form 680, 30 Jun 66)

MYRTLE GROVE ECOSYSTEM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-3U

5" UNDIST. (03-15)

LABORATORY BORING LOG

FOR UNDISTURBED SAMPLES ONLY

① Boring Number MG-3U

②–④ Location

⑤ Date Taken

⑥ G.S.E.

SAMPLE NO. 11 FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH
			38.7	40.3	57	. .	CH	SIS	M GR			6#5/103					57	39.1
39.0																		
			6.79	92.9	60	. .						6#5/103					57	62.5
39.4	disturbed	4					CH A	M	Gr	INS MI sp ks dw	Orq	st ks						
										P 500								
B			127	121.1	53													83.1
40.2																		
			40.3	41.3	65	. .	CH	SIS	M R GR									
			134	117.9	65	. .	CH A		M R Gr	INS MI								76.1
C		1																
		2																
41.2			41.5	141.2	24	. .	MH 2		Gr	Qrs Cl tr-MICA								116.3
			41.3	42.3	65	. .	CH	SIS	M GR									
D			359	116.8	65	. .	CH A		M Gr	INS MI								75.5
42.1																		

Classifier V.L. Reviewer R.L. Checked Date Analyzed 6/9/03

Sheet 11 of 21 Sheets

LMN Form 721 Nov 69 (Replaces previous edition & LMN Form 680, 30 Jun 66)

Confidential Information: Privileged & Confidential Work Product"

FOR UNDISTURBED SAMPLES ONLY

MYRTLE GROVE ECOSYSTEM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-3U

5" UNDIST. (03-15)

LABORATORY BORING LOG

① Boring Number MG-3U

②–④ Location

⑤ Date Taken

⑥ G.S.E.

SAMPLE NO. 12

FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO.	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH	
43.0			42.3	44.5	56		CH	SIS	M GR BR	R SS									
A			42.8	86.3	58														59.1
43.6	4	4 SCARD-A																	
B			38.9	87.5	53														61.3
44.5			44.5	46.5	61		CH CH	SIS	M Gr Br M GR BR	R R SS	IN.S	a.r.s	m.l.	l.y.r.s.	SM	S.D.K.S.	773	102	59	460
C			36	87.3	60														59.0
45.4																	773	102	59	
D			79	91.4	62					P= 700									60.9
46.3	(4)																		

Classifier V.L. Recorder L.L. Checked D.C. Computed S.G. 2.93

Sheet 12 of 21 Sheets

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MYRTLE GROVE ECOSYSTEM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-3U

5" UNDIST. (03-15)

LABORATORY BORING LOG

① Boring Number MG-311

②-④ Location

⑤ Date Taken

⑥ G.S.E.

SAMPLE NO. 13

FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH
47.0			46.5	47.5	49	47.5 CH	SIS	50	GR									
		1	659.	106.1	49		CH 2	50	Gr	lns ars ml spks dw org stks								75.0
A		2																
47.8			36.0				SM 1		Gr	tr MICA								
			47.5	48.5			SM		GR									
B			469.	103.6	58		CH 3	M	Gr. R	lns ml spks dw ars sm								69.9
48.7																		
			48.5	50.5			SM		BR GR	OX								
			567				SM 1		Br Gr	OX tr MICA								
C	disturb-c																	
49.6																		
D																		

Classifier V.L. Reviewer P.L. Checked Date Analyzed 5/9/03

Sheet 13 of 21 Sheets

LMN Form 721 Rev 69 (Replaces previous edition & LMN Form 680, 30 Jun 66)

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MYRTLE GROVE ECOSYSTEM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-3U

5" UNDIST. (03-15)

LABORATORY BORING LOG

FOR UNDISTURBED SAMPLES ONLY

① Boring Number MG-3U

②-④ Location

⑤ Date Taken

⑥ G.S.E.

SAMPLE NO. 14 FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH
51.0																		
A	discard-A		50.5 / 404	52.0		52-QSM			GR									
51.5							SM 1		Gr	tr MICA								
B		1	590															
		2	84	114.3	61													75.7
52.4																		
			52.0	53.8	57		CH	SIS	MGR									
							CH 4		M Gr	INS MI org stks ars SM spks dw								
C		SM	67	89.6	56													61.6
53.3																		
			292	98.3	53													
		1	538 / 489	548 / 117.8	63 / 63		CH	SIS	M R									68.4
D							CH 4		M R	INS MI								76.9
		2																
54.2																		

Classifier V.L Recorder R.K Checked Date Received 5/9/03

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LMN Form 721 Nov 69 (Replaces previous edition & LMN Form 680, 30 Jun 66)

FOR UNDISTURBED SAMPLES ONLY

MYRTLE GROVE ECOSYSTEM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-3U

5" UNDIST. (03-15)

LABORATORY BORING LOG

① Boring Number MG-3U

②-④ Location

⑤ Date Taken

⑥ G.S.E.

SAMPLE NO. 15 FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH
55.0			54.8	56.8	53		CH	SIS	MGR BR R									
			562	112.2	62		CH 4	SO	R	IN.S MI								74.0
A		1																
	discard-A	2																
55.6			613	115.4	31		MI 2		Gr	Ars cl +r-MICA								91.0
B																		
		M1	521	102.8	53		CH 4	M	Gr Br R	IN.S ars ml								71.3
56.5																		
		1	56.8	57.8	39	57.8	CH	SIS	M GR									
		2																
C			612	106.0	39		CH 3	M	Gr	IN.S ly r ars ml s.pks. dw								79.8
57.4																		
		1	670	141.5	39		CH 2	M	Gr	IN.S ly r ars ml								105.1
D			578	588		58.8	SM		BR									
	bg-2 Disturb	2	483				SM 1		Br									
58.3																		

Classifier V.L. Reviewer [illegible] Checked [illegible] Date Received 6/19/03

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LMN Form 721 Nov 69 (Replaces previous edition & LMN Form 680, 30 Jun 66)

MYRTLE GROVE ECOSYSTEM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-3U

5" UNDIST. (03-15)

LABORATORY BORING LOG

FOR UNDISTURBED SAMPLES ONLY

① Boring Number MG-3U

②-④ Location

⑤ Date Taken

⑥ G.S.E.

SAMPLE NO. 16 FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH
59.0			58.8	59.8	54		CH SIS	M	GR									
A	Shelby-A (1)		58.3	123.9	54					P= 500								84.6
59.6							CH 4	M	Gr	INS Ml org stks								
			59.8	60.8	49		CH SIS	M	GR									
B		Ml																
60.5			50.5	143.3	49		CH 3	M	GR	INS Ml org stks								99.9
			33.3	139.7	40		CH 2	M	Gr	INS lyrs grs Ml								103.2
C			60.8	61.8	40		CH SIS	M	GR									
61.4																		
			61.8	62.8	50	62.8	CH SIS	M	GR									
		1	62.	131.1	37		CL 4	M	Gr	INS lyrs grs Ml								98.7
D		2	49.5	112.1	50		CH 4	M	Gr	INS Ml								78.8
62.3																		

Classifier V.L. Reviewer P.L. Date 5/9/03

Sheet 16 of 21 Sheets

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MYRTLE GROVE ECOSYSTEM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-3U

5" UNDIST. (03-15)

LABORATORY BORING LOG

FOR UNDISTURBED SAMPLES ONLY

① Boring Number MG-3U

②-④ Location

⑤ Date Taken

⑥ G.S.E.

SAMPLE NO. 17 FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH
63.0			62.8	64.8		64.8 SP	F		GR	M SI SIF						0.235		
			50.1															
A																		
63.8	Sample disturb					SP	F		Gr	Trp- Med. SI. S.I.F.		(91% SAND)						
B	SV		25.4															
64.7																		
			64.8	66.8		66.8 NS												
C																		
D																		

Classifier V-L Reviewer [illegible] Checked [illegible] Date Analyzed 5/9/93

Sheet 17 of 21 Sheets

Confidential Information: Privileged & Confidential Work Product"

LMN Form 721 Nov 69 (Replaces previous edition & LMN Form 680, 30 Jun 66)

MYRTLE GROVE ECOSYSTEM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-3U

5" UNDIST. (03-15)

LABORATORY BORING LOG

FOR UNDISTURBED SAMPLES ONLY

① Boring Number MG-3U

②-④ Location

⑤ Date Taken

⑥ G.S.E.

SAMPLE NO. 18 FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO.	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH
67.0			66.8 62	68.8		68.8 SP	F		GR	M GS SI SIF						0.272		
A																		
67.7						SP	F		Gr	Grs Ch SI Sif tr MICA			M			(97.5% SAND)		
B		SV	208															
68.6	Sample distorted - IN cup																	
			68.8	70.8		70.8 NS												
C																		
D																		

Classifier V.L. Recorder R.L. Checked Date Analyzed 5/6/03

Sheet 18 of 21 Sheets

LMN Form 721 Nov 69 (Replaces previous edition & LMN Form 680, 30 Jun 66)

Confidential Information: Privileged & Confidential Work Product"

MYRTLE GROVE ECOSYSTEM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-3U

5" UNDIST. (03-15)

LABORATORY BORING LOG

① Boring Number MG-3U

②-④ Location

⑤ Date Taken

⑥ G.S.E.

SAMPLE NO. 19 FOR UNDISTURBED

FOR UNDISTURBED SAMPLES ONLY

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSIS-TENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH
71.0	(SV)		70.8 / 51	71.8		71.8	SP	F	GR	F SI F SI						0.264		
A	discard-A						SP	F	Gr	F S.l.f SI dist u.r.b			(96.6 % SAND)					
71.6																		
B		1	4.40															
		2	71.8 / 27	72.8 / 118.0	32 / 32		CH	SIS	M GR									92.5
72.5							CH 2		M Gr	I.NS 1 gr ors. ml ors SM								
C		1	34.0	101.4	31													80.2
		2	3.65	118.7	47					P= .1200								84.4
73.4	(U)						CH 4	ST	Gr	I.NS ml org stks		1136/106					52	
			72.8 / 138	74.8 / 129.5	51 / 55		CH	SIS.ST	GR			1136/106					52	73.2 87.8
D																		
74.3																		

Classifier V.L. Reviewer R.L. Checked Date Analyzed 5/9/03

Sheet 19 of 21 Sheets

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FOR UNDISTURBED SAMPLES ONLY

MYRTLE GROVE ECOSYSTEM RESTORATION PROJECT FEASIBILITY STUDY
BOR: MG-3U
5" UNDIST. (03-15)

LABORATORY BORING LOG

① Boring Number MG-311

②-④ Location

⑤ Date Taken

⑥ G.S.E.

SAMPLE NO. 20 FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN ND	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH
75.0																		
A			74.8	75.8	36	.	CH	SIS	ST GR									
			65.1	127.4	36	.	CH 3	.	St Gr	INS Alt thin lyrs ml sAks dw org stks								96.6
75.8																		
B			81.	113.2	42													83.0
			75.8	78.2	47	.	CH	SIS	M GR								57	76.9
76.7	(U)						CH 4	.	M Gr	INS ml org stks		89.8/104	89.8/104				57	
C			116	122.3	62					P= 1200								84.6
77.6																		
D																		

Classifier V.L Recorder R.L Checker Date Analyzed 5/9/03 Sheet 20 of 21 Sheets

"Confidential Information: Privileged & Confidential Work Product"

MYRTLE GROVE ECOSYSTEM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-3U

5" UNDIST. (03-15)

LABORATORY BORING LOG

SAMPLE NO. 21

FOR UNDISTURBED

FOR UNDISTURBED SAMPLES ONLY

① Boring Number MG-3U

②-④ Location

⑤ Date Taken

⑥ G.S.E.

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT LL	ATTERBERG LIMIT PL	SIZE	TEST WATER CONTENT	UCT DEPTH	
A 79.0			78.2	80.2	46		CH	SIS	ST GR			1466	109				47	79.6	
79.3	discard		467	102.5	47														73.6
B 80.2	(4)		674	90.4	44							1466	109				47		
C 81.1			80.2	82.0	5.1	82.0	CH	SIS	ST GR	INS MI									66.5
			100	97.0	5.1		CH		ST Gr										68.4
D 82.0			29.9	89.7	5.1														63.4

Classifier V.L Recorder R.L Checked Date Analyzed 5/16/03

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LMN Form 721 Nov 69 (Replaces previous edition & LMN Form 680, 30 Jun 66)

SIEVE ANALYSIS WORK SHEET

Project: MYRTLE GROVE ECOSYSTEM RESTORATION PROJECT FEASIBILITY STUDY
BOR: MG-3U

Date:

Sheet No:

Boring No: 5" UNDIST. (03-15)

U.S. STD Sieve No.	Opening mm.	Sample No. 17-B			Sample No. 18-B			Sample No. 19-A		
		Sample Elev.			Sample Elev.			Sample Elev.		
		Sample Wt. 136.1 gms			Sample Wt. 141.2 gms			Sample Wt. 159.5 gms		
		Sieve Wt. 132.7 gms			Sieve Wt. 138.1 gms			Sieve Wt. 154.6 gms		
		Ret. gms	Ret. %	Pass %	Ret. gms	Ret. %	Pass %	Ret. gms	Ret. %	Pass %
1"	25.4	TARE 254			TARE 208			TARE 751		
3/4"	19.1	CUP AX			CUP 43			CUP 47		
1/2"	12.7									
3/8"	9.52									
4	4.76									
(8)	3.36				0.0			0.0		
(10)	2.00				.3			.5		
(12)	1.68	0.0			1.1			.7		
(16)	1.19	.5			2.5			1.2		
(18)	1.00	.6			2.8			1.3		
20	0.84									
30	0.59									
35	0.50									
(40)	0.42	12.7			36.7			36.3		
50	0.297									
(60)	0.250	117.4			135.6			149.3		
70	0.210									
(80)	0.177	129.3			136.8			151.8		
100	0.149									
(120)	0.125	131.2			137.2			152.5		
140	0.105									
(200)	0.074	132.4			137.7			154.1		
230	0.062									
Pan		132.7			138.1			154.4		
Total										

Technician:

Computed:

Checked:

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29 39 25.0

89 58 06

water table 2.5

BORING LOG
FIELD DATA

Project Myrtle Grove Site _____ Date 5/6/03

Location _____ Job No. 03-15

Drill Rig _____ Inspector _____ Operator Mobile Surface El 2.38 Boring No. MG-3U

SAMPLE NUMBER	DATE TAKEN	STRATUM FROM	STRATUM TO	DRIVE FROM	DRIVE TO	SAMPLE FROM	SAMPLE TO	TYPE OF SAMPLER			CLASSIFICATION AND REMARKS
1				0.0	3.5	0.0	2.5	UND			DR. 3.5 REC. 2.5
2				3.5	7.0	3.5	7.0				" 3.5 " 3.5
3				7.0	10.5	7.0	10.5				" 3.5 " 3.5
4				11.0	14.5	11.0	14.5				" 3.5 " 3.5
5				15.0	18.5	15.0	18.5				" 3.5 " 3.5
6				19.0	22.5	19.0	22.5				" 3.5 " 3.5
7				23.0	26.5	23.0	25.5				" 3.5 " 2.5
8				27.0	30.5	27.0	30.5				" 3.5 " 3.5
9				31.0	34.5	31.0	34.5				" 3.5 " 3.5

WES FORM JAN 74 819 EDITION OF NOV 1971 MAY BE USED

Sheet _____ of _____ Sheets

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BORING LOG
FIELD DATA

Project Myrtle Grove Site _____ Date 5/7

Location _____ Job No. 03-15

Drill Rig _____ Inspector _____ Operator Mobile Surface El _____ Boring No. MG-30

SAMPLE NUMBER	DATE TAKEN	STRATUM FROM	STRATUM TO	DRIVE FROM	DRIVE TO	SAMPLE FROM	SAMPLE TO	TYPE OF SAMPLER			CLASSIFICATION AND REMARKS
10				35.0	38.5	35.0	38.5	cnd			Dr 3.5 Rec 3.0
11				39.0	42.5	39.0	42.5				" 3.5 " 3.0
12				43.0	46.5	43.0	46.5				" 3.5 " 3.5
13				47.0	50.5	47.0	50.5				" 3.5 " 3.5
14				51.0	54.5	51.0	54.5				" 3.5 " 3.5
15				55.0	58.5	55.0	58.5				" 3.5 " 3.5
16				59.0	62.5	59.0	62.5				" 3.5 " 3.5
17				63.0	66.5	63.0	65.5				" 3.5 " 3.5
18				67.0	70.5	67.0	68.8				" 3.5 " 1.8

WES FORM JAN 74 819 EDITION OF NOV 1971 MAY BE USED

Sheet _____ of _____ Sheets

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BORING LOG
FIELD DATA

Project Myrtle Grove Site _____ Date 5/7/03
Location _____ Job No. 03-15
Drill Rig _____ Inspector _____ Operator Mobile Surface El _____ Boring No. MG-30

SAMPLE NUMBER	DATE TAKEN	STRATUM FROM	STRATUM TO	DRIVE FROM	DRIVE TO	SAMPLE FROM	SAMPLE TO	TYPE OF SAMPLER			CLASSIFICATION AND REMARKS
19				71.0	74.5	71.0	74.5				Or 3.5 Rec 3.5
20				75.0	78.5	75.0	76.8				" 3.5 Rec 2.8
21				79.0	82.5	79.0	82.5				" 3.5 " 3.5

WES FORM JAN 74 819 EDITION OF NOV 1971 MAY BE USED

Sheet _____ of _____ Sheets

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ZZ 29^39'24.998" 89^58'5.999"
BOR. MG-3U (03-15)
STA.
Boring Date: 5/6/2003

GROUND EL. 2.4

0.0	1.3	27	1.3	CH	SISST	BR		RT WD OX		
1.3	2.3	27		CL	SISST	BR		OX		
2.3	4.8	34	4.8	CL	SIS M	BR		WD OX		
4.8	6.8	33	6.8	ML		BR		CS OX		
6.8	8.3	37		CL	SIS M	BR		OX		
8.3	9.4	35	9.4	CL	SIS M	GR	BR R			
9.4	10.5	38		CH	SIS M	GR	R	OX		
10.5	12.7	42		CH	SIS M	GR	R	OX		
12.7	14.7	47	14.7	CH	SIS M	BR	R	OX		
14.7	15.7	39	15.7	CL	SISVSO	GR		OX		
15.7	18.5	61		CH	SIS M	R	GR	SL		
18.5	19.5	67	19.5	CH	SIS M	R				
19.5	20.5	41		CL	SISST	GR				
20.5	21.5	39	21.5	CL	SIS M	GR				
21.5	22.5	66	22.5	CH	SISST	R	GR			
22.5	23.5	31	23.5	ML		GR		CS OX		
23.5	24.5	59		CH	SIS M	GR	R			
24.5	25.5	59		CH	SIS M	GR				
25.5	28.0	61	28.0	CH	SISSO	GR				
28.0	29.5	31	29.5	ML		GR		CS		
29.5	30.5	54		CH	SISSO	R				
30.5	31.7	73		CH	SISVSO	GR	R			
31.7	33.5	61		CH	SIS M	GR	BR R		71799	70 333
33.5	34.5	66	34.5	CH	SIS M	GR				
34.5	36.7	33	36.7	ML		GR		CS		
36.7	37.7	49		CH	SIS M	R				
37.7	38.7	58		CH	SIS M	GR				
38.7	40.3	57		CH	SIS M	GR			645103	57 391
40.3	41.3	65		CH	SIS M	R	GR			
41.3	42.3	65		CH	SIS M	GR				
42.3	44.5	56		CH	SIS M	GR	BR R SS			
44.5	46.5	61		CH	SIS M	GR	BR R SS		773102	59 460
46.5	47.5	49	47.5	CH	SISSO	GR				
47.5	48.5			SM		GR				
48.5	50.5			SM		BR	GR	OX		
50.5	52.0		52.0	SM		GR				
52.0	53.8	57		CH	SIS M	GR				
53.8	54.8	63		CH	SIS M	R				
54.8	56.8	53		CH	SIS M	GR	BR R			
56.8	57.8	39	57.8	CH	SIS M	GR				
57.8	58.8		58.8	SM		BR				
58.8	59.8	54		CH	SIS M	GR				
59.8	60.8	49		CH	SIS M	GR				
60.8	61.8	40		CH	SIS M	GR				
61.8	62.8	50	62.8	CH	SIS M	GR				
62.8	64.8		64.8	SP	F		GR	M SI SIF		
64.8	66.8		66.8	NS						
66.8	68.8		68.8	SP	F		GR	M CS SI SIF		
68.8	70.8		70.8	NS						
70.8	71.8		71.8	SP	M		GR	F SIFSI		
71.8	72.8	32		CH	SIS M	GR				
72.8	74.8	51		CH	SISST	GR			1136106	52 732
74.8	75.8	36		CH	SISST	GR				
75.8	78.2	47		CH	SIS M	GR			898104	57 769
78.2	80.2	46		CH	SISST	GR			1466109	47 796
80.2	82.0	51	82.0	CH	SISST	GR				
999.9										

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```
**********************************************************************
SHEAR STRENGTH DESIGN VALUES
Test Type:(Q)                    Classif  :CL
Depth/Ele:   4.4/-2.0            Water Con: 31.0
LL,PL,PI : 33,21,12              Dry Dens : 88.0
Cohesion : 0.280                 Saturat  : 93.0
Shear Str:  0.00                 Frict Ang:    .0
Toggles  :(     )(     )(     )(     )
**********************************************************************
SHEAR STRENGTH DESIGN VALUES
Test Type:(Q)                    Classif  :CL
Depth/Ele:   9.8/-7.4            Water Con: 39.0
LL,PL,PI : 39,19,20              Dry Dens : 80.0
Cohesion : 0.235                 Saturat  : 94.0
Shear Str:  0.00                 Frict Ang:    .0
Toggles  :(     )(     )(     )(     )
**********************************************************************
SHEAR STRENGTH DESIGN VALUES
Test Type:(Q)                    Classif  :CL
Depth/Ele:  13.1/-10.7            Water Con: 43.0
LL,PL,PI : 41,21,20              Dry Dens : 77.0
Cohesion : 0.241                 Saturat  : 98.0
Shear Str:  0.00                 Frict Ang:    .0
Toggles  :(     )(     )(     )(     )
**********************************************************************
SHEAR STRENGTH DESIGN VALUES
Test Type:(Q)                    Classif  :CL
Depth/Ele:  21.0/-18.6           Water Con: 38.0
LL,PL,PI : 39,20,19              Dry Dens : 82.0
Cohesion : 0.229                 Saturat  : 97.0
Shear Str:  0.00                 Frict Ang:    .0
Toggles  :(     )(     )(     )(     )
**********************************************************************
SHEAR STRENGTH DESIGN VALUES
Test Type:(Q)                    Classif  :CH
Depth/Ele:  33.9/-31.5           Water Con: 70.0
LL,PL,PI : 96,25,71              Dry Dens : 59.0
Cohesion : 0.287                 Saturat  :100.0
Shear Str:  0.00                 Frict Ang:    .0
Toggles  :(     )(     )(     )(     )
**********************************************************************
SHEAR STRENGTH DESIGN VALUES
Test Type:(Q)                    Classif  :CH
Depth/Ele:  38.0/-35.6           Water Con: 64.0
LL,PL,PI : 88,24,64              Dry Dens : 63.0
Cohesion : 0.328                 Saturat  :100.0
Shear Str:  0.00                 Frict Ang:    .0
Toggles  :(     )(     )(     )(     )
**********************************************************************
SHEAR STRENGTH DESIGN VALUES
Test Type:(Q)                    Classif  :CH
Depth/Ele:  44.9/-42.5           Water Con: 73.0
LL,PL,PI :103,28,75              Dry Dens : 57.0
Cohesion : 0.478                 Saturat  :100.0
Shear Str:  0.00                 Frict Ang:    .0
Toggles  :(     )(     )(     )(     )
**********************************************************************
SHEAR STRENGTH DESIGN VALUES
Test Type:(Q)                    Classif  :CH
Depth/Ele:  60.9/-58.5           Water Con: 46.0
LL,PL,PI : 60,19,41              Dry Dens : 74.0
Cohesion : 0.406                 Saturat  : 97.0
Shear Str:  0.00                 Frict Ang:    .0
```


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Toggles :( )( )( )( )

****

SHEAR STRENGTH DESIGN VALUES

Test Type:(Q) Classif :CH

Depth/Ele: 76.2/-73.8 Water Con: 44.0

LL,PL,PI : 65,21,44 Dry Dens : 77.0

Cohesion : 0.622 Saturat : 99.0

Shear Str: 0.00 Frict Ang: .0

Toggles :( )( )( )( )

****

SHEAR STRENGTH DESIGN VALUES

Test Type:(C) Classif :CL

Depth/Ele: 4.4/-2.0 Water Con: 30.30

LL,PL,PI : 33,12,21 Dry Dens : 87.90

Cohesion : Saturat : 89.90

Shear Str: Frict Ang:

Norm Str: 4.470, 0.904

Toggles :( )( )( )( )

Test Data:

Pressure	Void Ratio
.120	0.900
.250	0.900
0.490	0.890
0.970	0.880
1.930	0.870
3.850	0.840
7.690	0.810
15.370	0.750
30.730	0.700
45.210	0.670
0.250	0.680

****

SHEAR STRENGTH DESIGN VALUES

Test Type:(C) Classif :CL

Depth/Ele: 9.8/-7.4 Water Con: 35.90

LL,PL,PI : 39,20,19 Dry Dens : 81.80

Cohesion : Saturat : 91.50

Shear Str: Frict Ang:

Norm Str: 0.500, 1.061

Toggles :( )( )( )( )

Test Data:

Pressure	Void Ratio
.120	1.050
.250	1.040
.490	1.030
0.970	1.000
1.930	0.960
3.850	0.870
7.690	0.820
0.250	0.840

****

SHEAR STRENGTH DESIGN VALUES

Test Type:(C) Classif :CL

Depth/Ele: 13.1/-10.7 Water Con: 35.00

LL,PL,PI : 41,20,21 Dry Dens : 83.90

Cohesion : Saturat : 93.60

Shear Str: Frict Ang:

Norm Str: 1.820, 1.009

Toggles :( )( )( )( )

Test Data:

Pressure	Void Ratio
.120	1.000
.250	0.990

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0.490	0.980
0.970	0.950
1.930	0.910
3.850	0.840
7.690	0.770
15.370	0.700
30.730	0.630
0.250	0.650

****

SHEAR STRENGTH DESIGN VALUES

Test Type:(C) Classif :CL

Depth/Ele: 21.0/-18.6 Water Con: 40.40

LL,PL,PI : 39,19,20 Dry Dens : 79.10

Cohesion : Saturat : 95.80

Shear Str: Frict Ang:

Norm Str: 1.550, 1.137

Toggles :( )( )( )( )

Test Data:

Pressure	Void Ratio
.120	1.130
.250	1.120
0.490	1.110
0.970	1.090
1.930	1.030
3.850	0.950
7.690	0.870
15.370	0.790
30.730	0.710
45.210	0.660
0.250	0.720

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SUMMARY OF LABORATORY TEST RESULTS

Project: U.S.A.C.O.E. - MYRTLE GROVE ECOSYSTEM RESTORATION STUDY Assigned By: _____

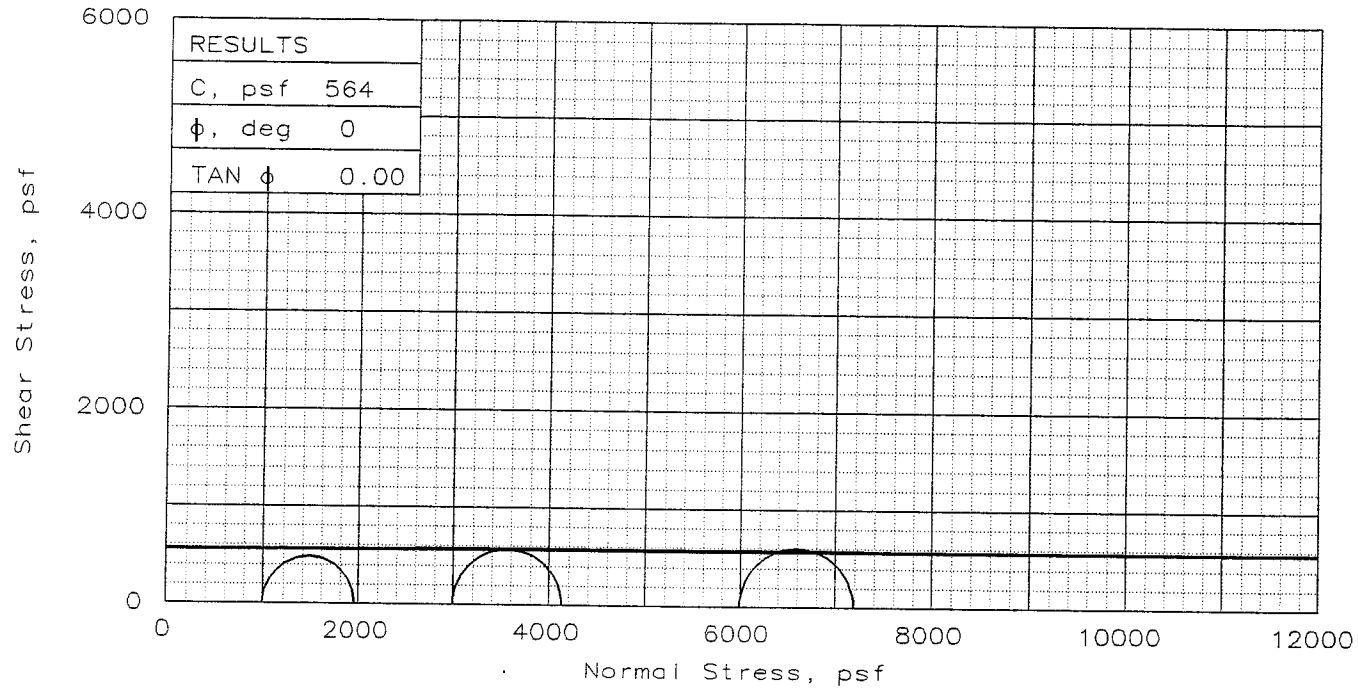
Project Number: 18002
Boring: MG-3U

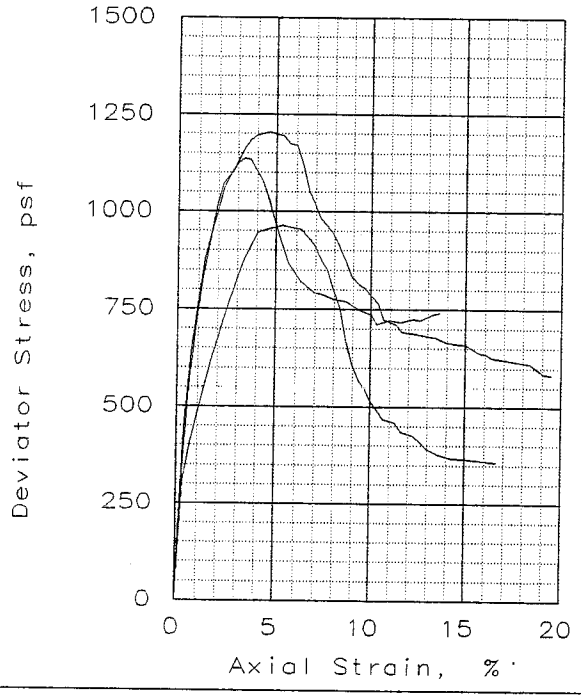
Current Date: 7/21/2003

Sample Number	Depth in Feet	Visual Classification	USCS	E(f)	W%	Dry Dens (pcf)	Wet Dens (pcf)	Sat %	Shear Test Type	Angle	Cohesion (psf)	Unconf. Comp. Str.	LL	PL	PI	TORVANE (tsf)	Other Tests
2B	4.4	M LGR & T CL4 W/ CC	CL4		31	88	116	93	UU	0	564		33	21	12		CON
3D	9.8	SO GR CL4	CL4		39	80	111	94	UU	0	469		39	19	20	0.380	CON
4C	13.1	SO GR CL4	CL4		43	77	110	98	UU	0	482		41	21	20	0.300	CON
6C	21.0	SO GR CL4	CL4		38	82	113	97	UU	0	458		39	20	19	0.250	CON
9D	33.9	M GR CH4 W/ SL	CH4		70	59	100	100	UU	0	574		96	25	71	0.350	
10D	38.0	M GR CH4 W/ SL	CH4		64	63	102	100	UU	0	655		88	24	64	0.330	
12C	44.9	M BR & GR CH4 W/ SL	CH4		73	57	99	100	UU	0	955		103	28	75	0.400	
16C	60.9	M GR CH3 W/ ARS SM	CH3		46	74	108	97	UU	0	812		60	19	41	0.430	
20B	76.2	ST GR CH3 W/ SL	CH3		44	77	111	99	UU	0	1243		65	21	44	0.580	
							QQ	✓			QA	✓					

Remarks: "Confidential Information: Privileged & Confidential Work Product" Checked by: RWE

EUSTIS ENGINEERING COMPANY, INC. File Name: 18002





SPECIMEN NO.:		1	2	3
INITIAL	WATER CONTENT, %	32.2	31.2	31.9
	DRY DENSITY, pcf	87.2	88.1	89.9
	SATURATION, %	94.2	93.4	99.6
	VOID RATIO	0.911	0.892	0.854
	DIAMETER, in	1.40	1.40	1.38
	HEIGHT, in	2.93	2.93	2.91
AT TEST	WATER CONTENT, %	34.2	33.5	31.9
	DRY DENSITY, pcf	87.2	88.0	90.0
	SATURATION, %	100.0	100.0	100.0
	VOID RATIO	0.912	0.894	0.851
	DIAMETER, in	1.40	1.40	1.38
	HEIGHT, in	2.93	2.93	2.91
Strain rate, in/min		0.0287	0.0287	0.0287
BACK PRESSURE, psf		0	0	0
CELL PRESSURE, psf		994	2995	5990
FAIL. STRESS, psf		964	1137	1204
ULT. STRESS, psf		358	741	582
σ_1 FAILURE, psf		1957	4132	7194
σ_3 FAILURE, psf		994	2995	5990

TYPE OF TEST:
Unconsolidated Undrained
SAMPLE TYPE: Undisturbed
DESCRIPTION: M lGr & T CL4
w/ cc
LL= 33 PL= 21 PI= 12
SPECIFIC GRAVITY= 2.67
REMARKS:

Fig. No.: _____

CLIENT: U.S. Army Corps of Engineers

PROJECT: Contract No. DACW29-01-D-0005,
Work Packet No. 104
SAMPLE LOCATION: Boring MG-3U,
Sample 2-B, Depth 4.4'

PROJ. NO.: 18002 DATE: 7/11/03

TRIAXIAL SHEAR TEST REPORT

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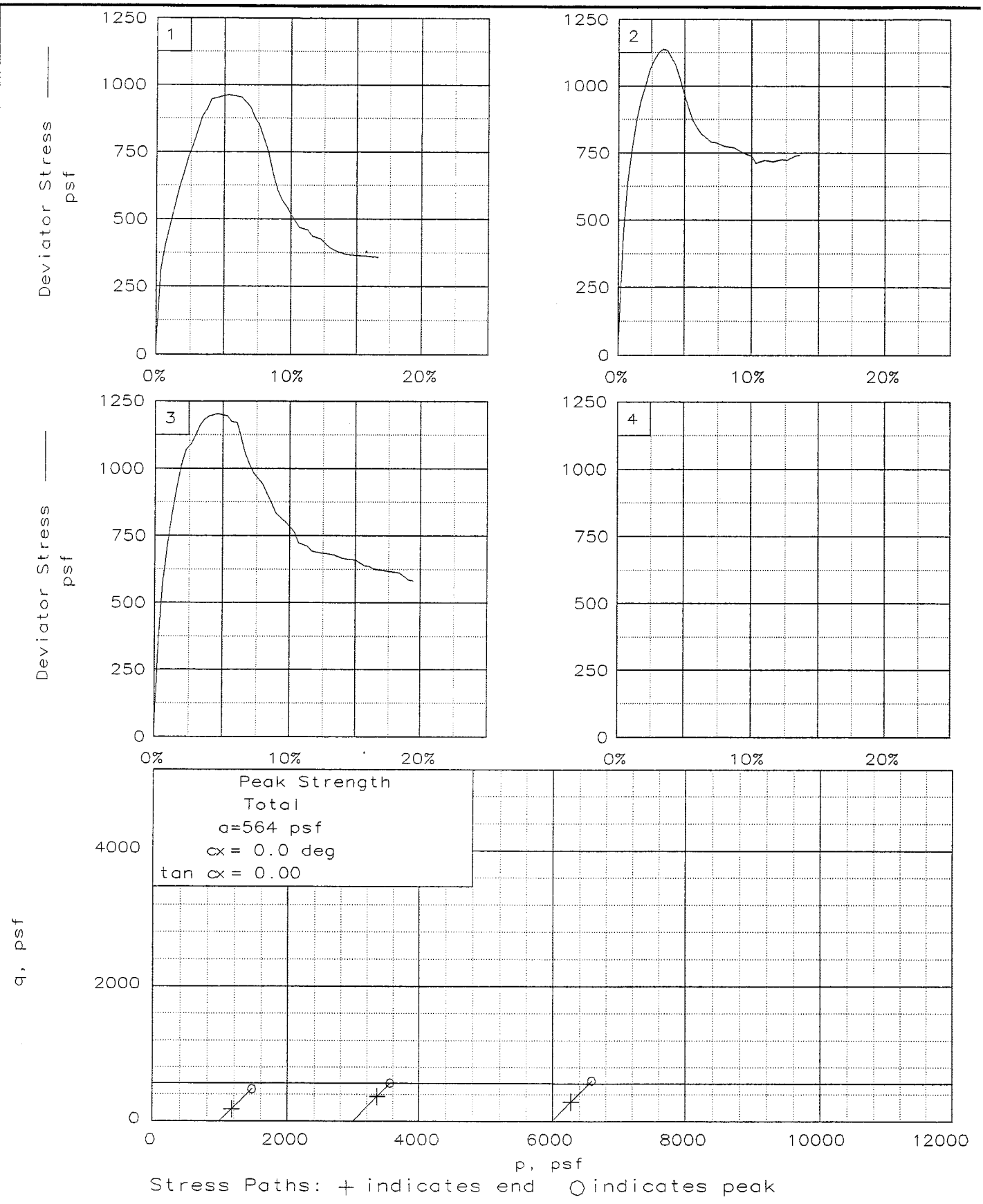

Stress Paths: + indicates end ○ indicates peak

Client: U.S. Army Corps of Engineers

Project: Contract No. DACW29-01-D-0005, Work Packet No. 104

Location: Boring MG-3U, Sample 2-B, Depth 4.4'

File: UU-21695 Project No.: 18002 Fig. No.: ____

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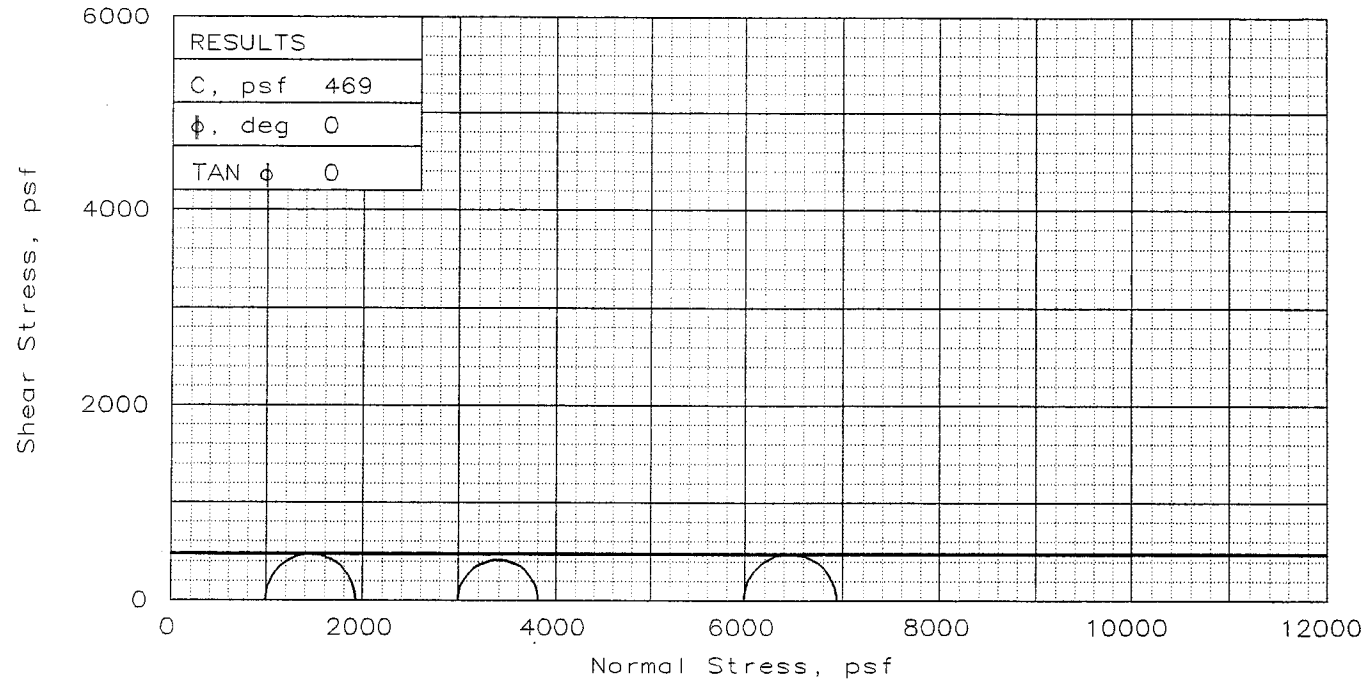

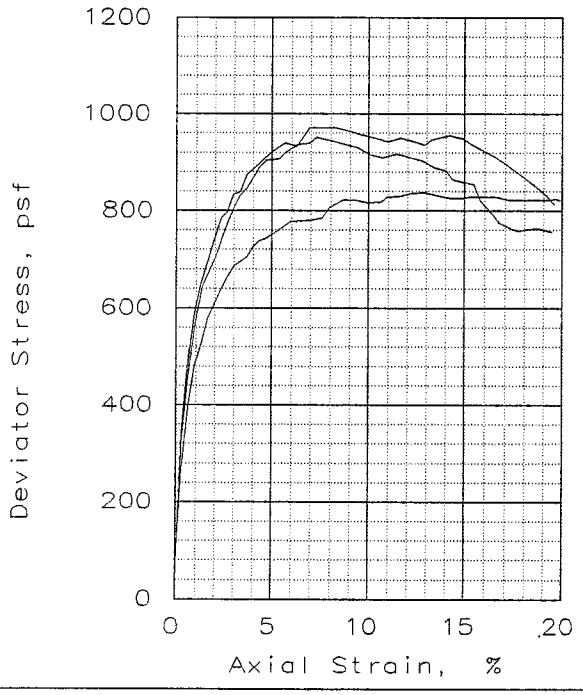

SAMPLE NO.:		1	2	3
INITIAL	WATER CONTENT, %	38.9	39.9	41.0
	DRY DENSITY, pcf	79.8	78.6	79.1
	SATURATION, %	93.6	93.5	97.2
	VOID RATIO	1.129	1.161	1.148
	DIAMETER, in	1.395	1.395	1.382
	HEIGHT, in	2.929	2.929	2.910
AT TEST	WATER CONTENT, %	41.4	42.7	42.1
	DRY DENSITY, pcf	79.9	78.5	79.1
	SATURATION, %	100.0	100.0	100.0
	VOID RATIO	1.125	1.162	1.146
	DIAMETER, in	1.394	1.395	1.382
	HEIGHT, in	2.927	2.930	2.910
Strain rate, in/min		0.0289	0.0288	0.0259
BACK PRESSURE, psf		0	0	0
CELL PRESSURE, psf		994	2995	5990
FAIL. STRESS, psf		939	822	951
ULT. STRESS, psf		813	821	757
σ_1 FAILURE, psf		1932	3817	6942
σ_3 FAILURE, psf		994	2995	5990

TYPE OF TEST:
Unconsolidated Undrained
SAMPLE TYPE: Undisturbed
DESCRIPTION: So Gr CL4

LL= 39 PL= 19 PI= 20
SPECIFIC GRAVITY= 2.72
REMARKS: Torvane = 0.380 tsf

Fig. No.: _____

CLIENT: U.S. Army Corps of Engineers

PROJECT: Contract No. DACW29-01-D-0005,
Work Packet No. 104
SAMPLE LOCATION: Boring MG-3U,
Sample 3-D, Depth 9.8'

PROJ. NO.: 18002 DATE: 7/11/03

TRIAXIAL SHEAR TEST REPORT

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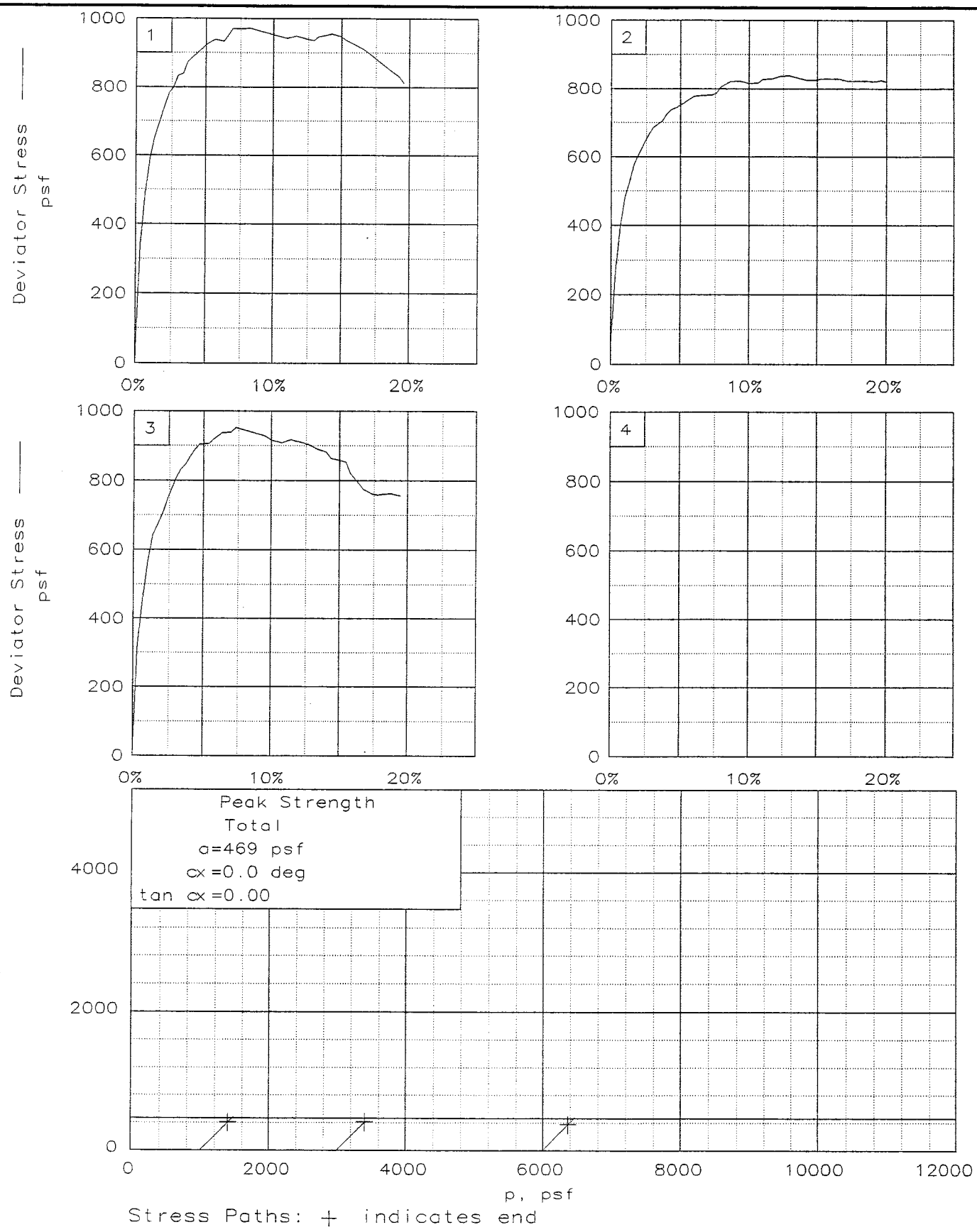

Client: U.S. Army Corps of Engineers

Project: Contract No. DACW29-01-D-0005, Work Packet No. 104

Location: Boring MG-3U, Sample 3-D, Depth 9.8'

File: UU-21696 Project No.: 18002 Fig. No.: ____

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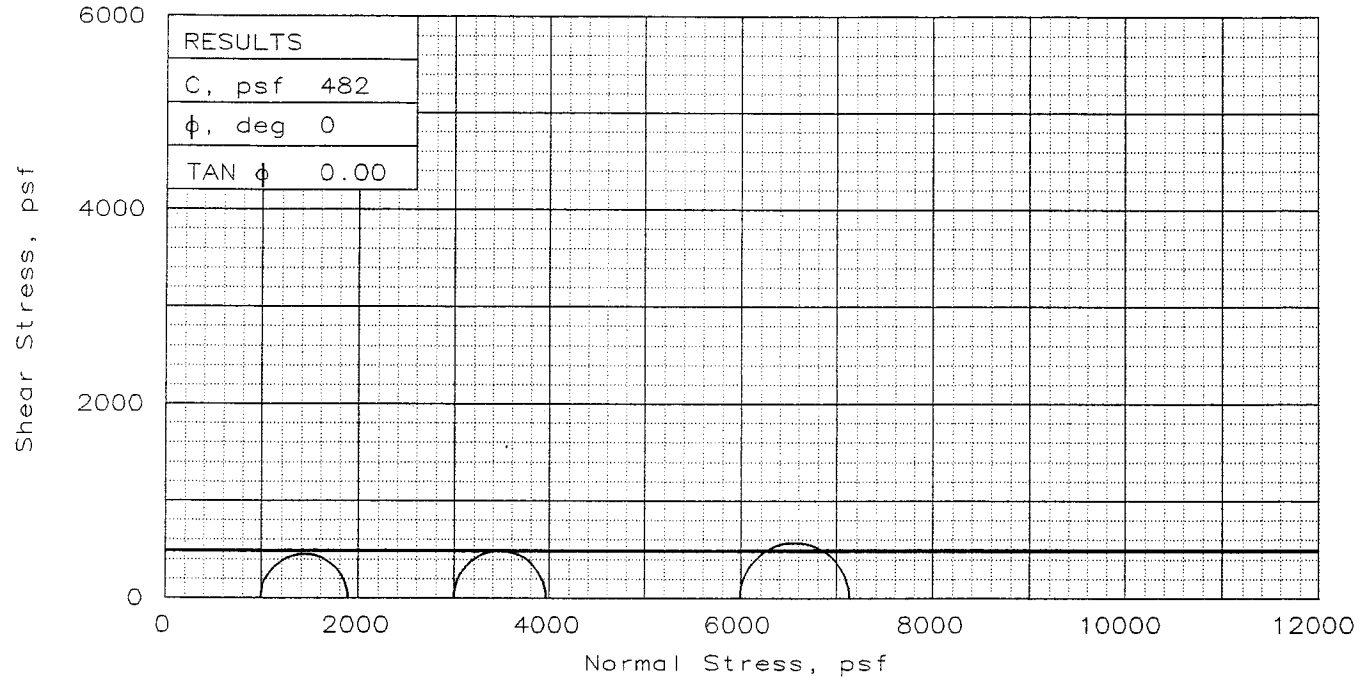

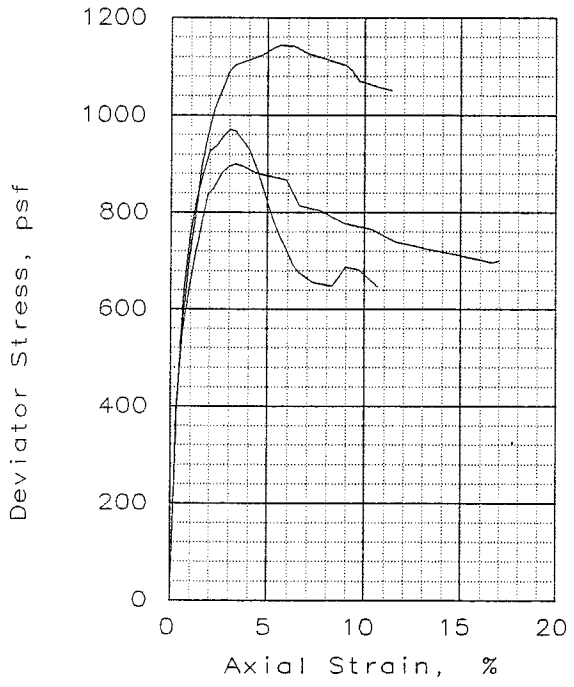

SPECIMEN NO.:		1	2	3
INITIAL	WATER CONTENT, %	44.9	43.0	44.3
	DRY DENSITY, pcf	74.7	77.2	77.5
	SATURATION, %	95.9	97.5	101.0
	VOID RATIO	1.273	1.200	1.192
	DIAMETER, in	1.40	1.40	1.39
	HEIGHT, in	2.93	2.93	2.91
AT TEST	WATER CONTENT, %	46.8	44.2	43.8
	DRY DENSITY, pcf	74.7	77.1	77.5
	SATURATION, %	100.0	100.0	100.0
	VOID RATIO	1.273	1.203	1.191
	DIAMETER, in	1.40	1.40	1.39
	HEIGHT, in	2.93	2.93	2.90
Strain rate, in/min		0.0290	0.0265	0.0287
BACK PRESSURE, psf		0	0	0
CELL PRESSURE, psf		994	2995	5990
FAIL. STRESS, psf		899	970	1143
ULT. STRESS, psf		701	646	1050
σ_1 FAILURE, psf		1893	3966	7133
σ_3 FAILURE, psf		994	2995	5990

TYPE OF TEST:
Unconsolidated Undrained
SAMPLE TYPE: Undisturbed
DESCRIPTION: So Gr CL4

LL= 41 PL= 21 PI= 20
SPECIFIC GRAVITY= 2.72
REMARKS: Torvane = 0.300 tsf

Fig. No.: _____

CLIENT: U.S. Army Corps of Engineers

PROJECT: Contract No. DACW29-01-D-0005,
Work Packet No. 104
SAMPLE LOCATION: Boring MG-3U,
Sample 4-C, Depth 13.1'

PROJ. NO.: 18002 DATE: 7/11/03

TRIAXIAL SHEAR TEST REPORT

Eustis Engineering Company, Inc.

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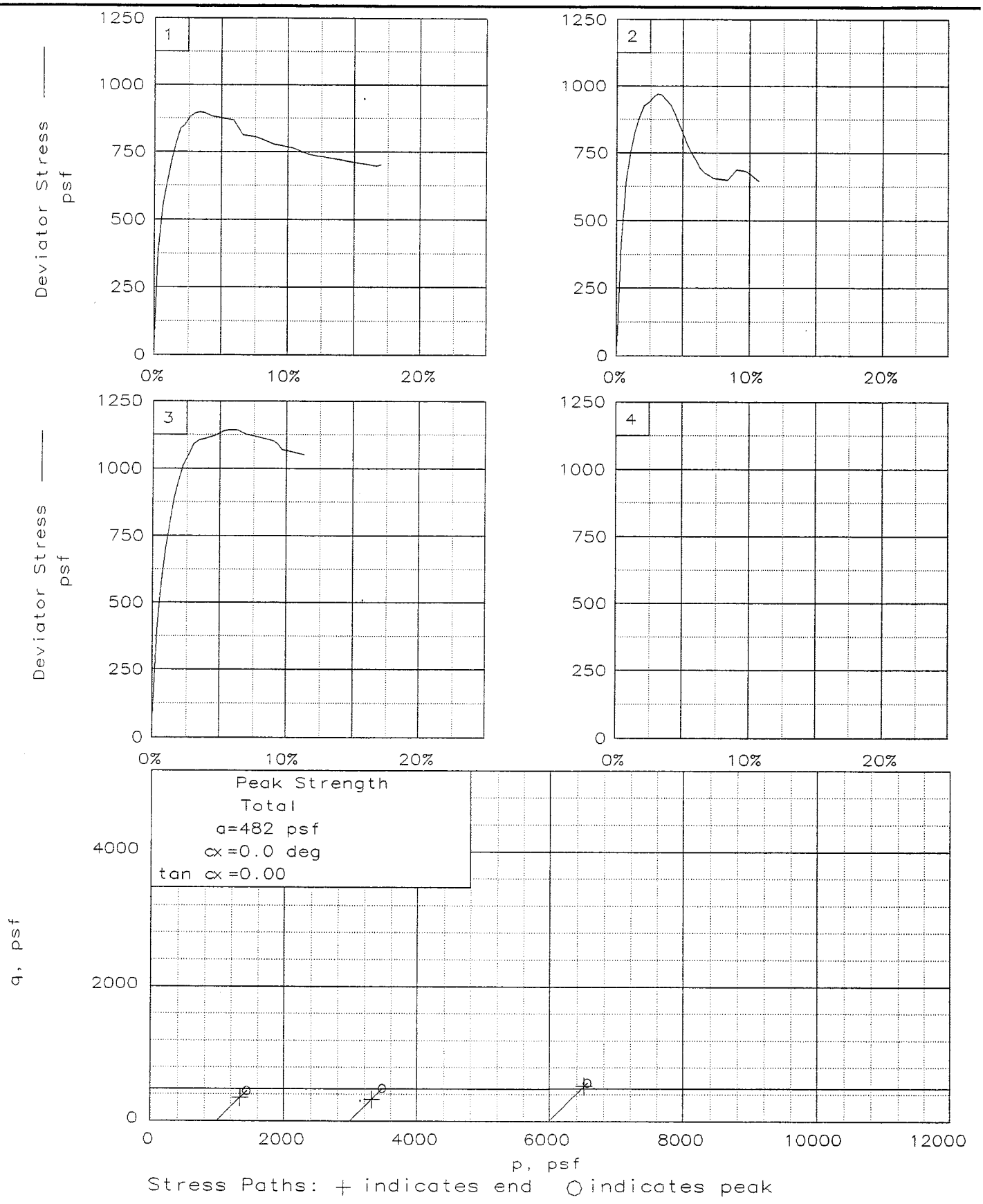

Client: U.S. Army Corps of Engineers

Project: Contract No. DACW29-01-D-0005, Work Packet No. 104

Location: Boring MG-3U, Sample 4-C, Depth 13.1'

File: UU-21697 Project No.: 18002 Fig. No.: ____

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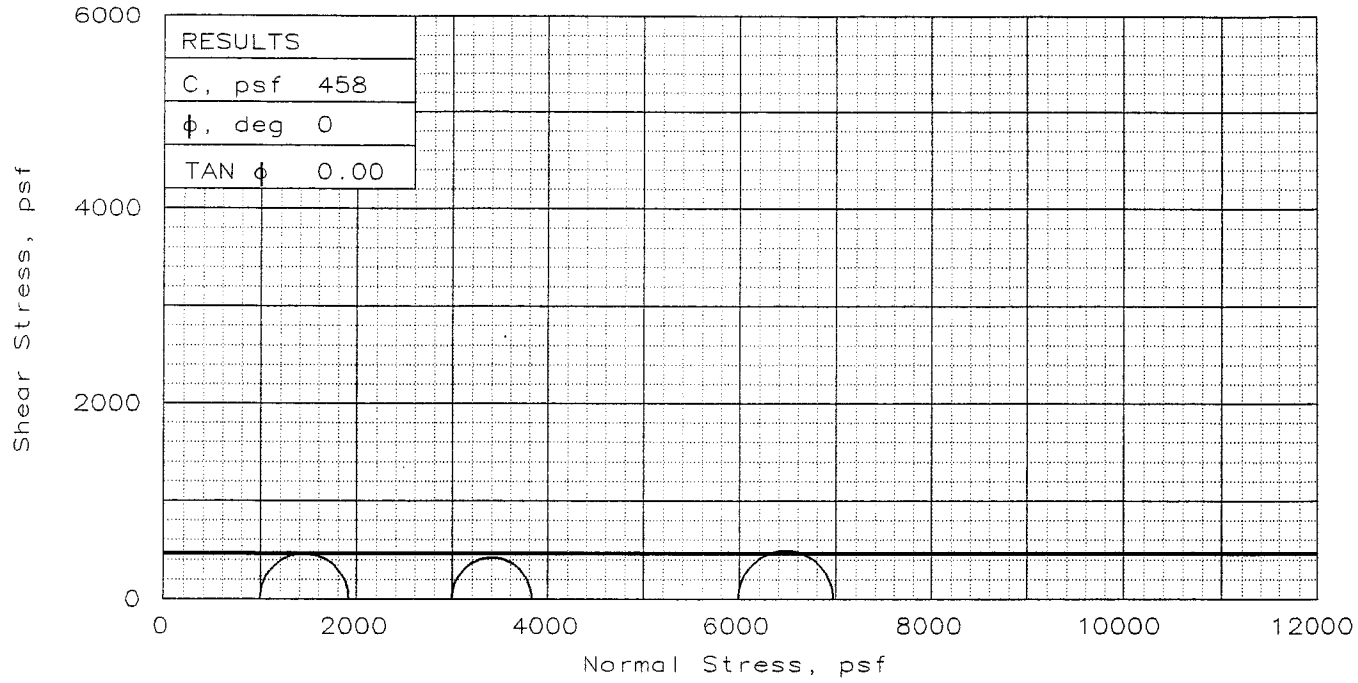
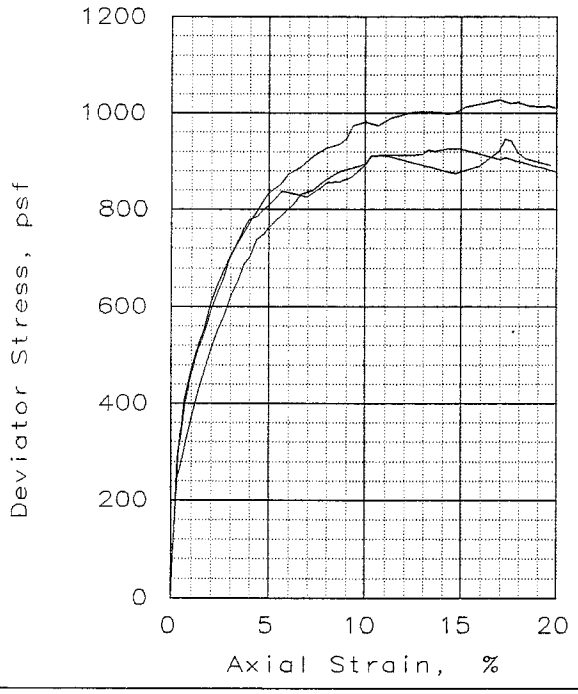




SPECIMEN NO.:		1	2	3
INITIAL	WATER CONTENT, %	37.7	39.0	39.1
	DRY DENSITY, pcf	82.2	80.4	82.7
	SATURATION, %	96.9	96.2	101.5
	VOID RATIO	1.051	1.096	1.039
	DIAMETER, in	1.40	1.40	1.37
	HEIGHT, in	2.93	2.93	2.93
AT TEST	WATER CONTENT, %	39.0	40.6	38.5
	DRY DENSITY, pcf	82.1	80.4	82.7
	SATURATION, %	100.0	100.0	100.0
	VOID RATIO	1.053	1.096	1.039
	DIAMETER, in	1.40	1.40	1.37
	HEIGHT, in	2.93	2.93	2.93
Strain rate, in/min		0.0287	0.0288	0.0284
BACK PRESSURE, psf		0	0	0
CELL PRESSURE, psf		994	2995	5990
FAIL. STRESS, psf		924	837	981
ULT. STRESS, psf		878	892	1011
σ_1 FAILURE, psf		1917	3833	6971
σ_3 FAILURE, psf		994	2995	5990

TYPE OF TEST:
Unconsolidated Undrained
SAMPLE TYPE: Undisturbed
DESCRIPTION: So Gr CL4

LL= 39 PL= 20 PI= 19
SPECIFIC GRAVITY= 2.7
REMARKS: Torvane = 0.250 tsf

CLIENT: U.S. Army Corps of Engineers

PROJECT: Contract No. DACW29-01-D-0005,
Work Packet No. 104
SAMPLE LOCATION: Boring MG-3U,
Sample 6-C, Depth 21.0'

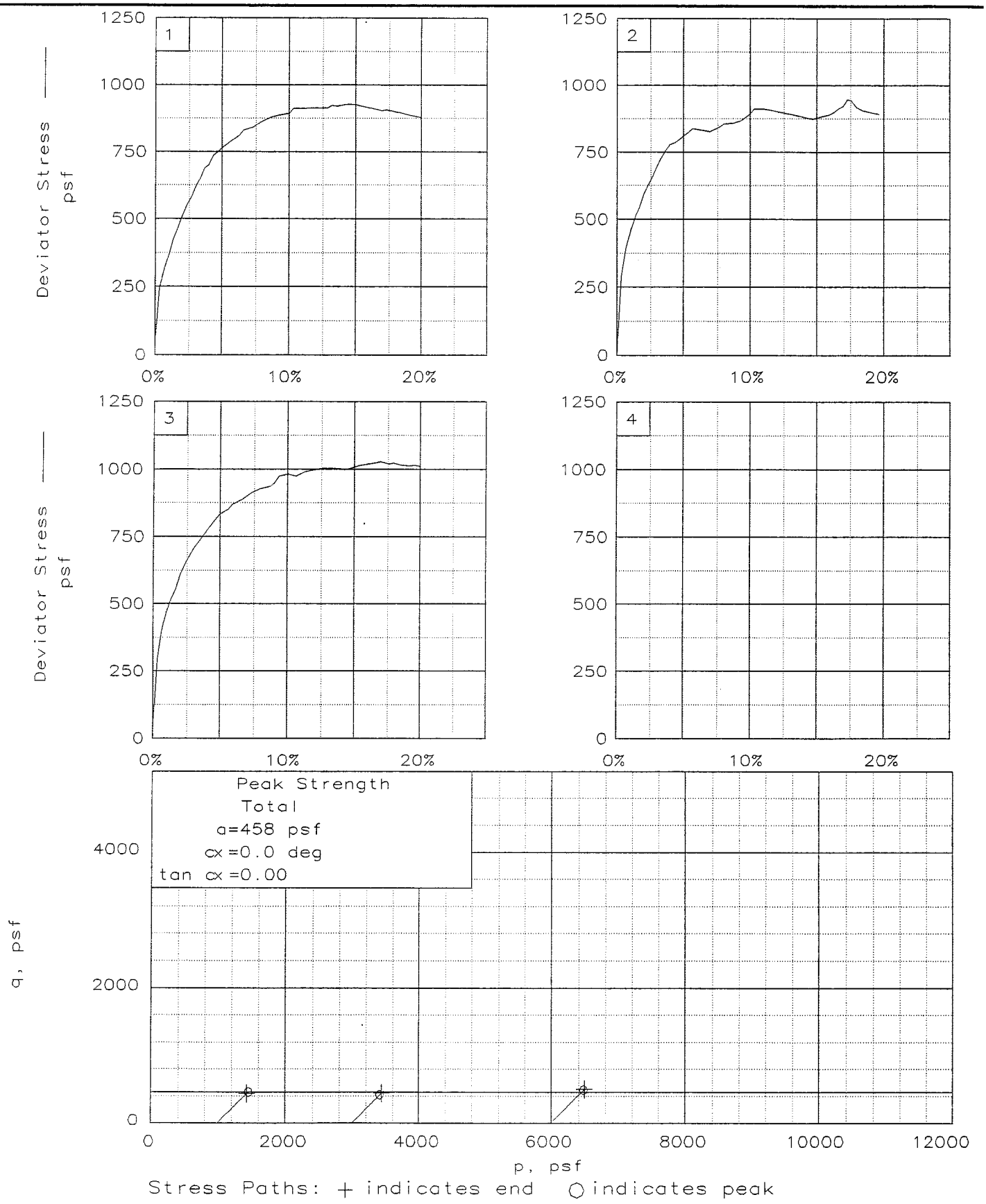
PROJ. NO.: 18002 DATE: 7/11/03

TRIAXIAL SHEAR TEST REPORT

Eustis Engineering Company, Inc.

Fig. No.: _____

"Confidential Information: Privileged & Confidential Work Product"



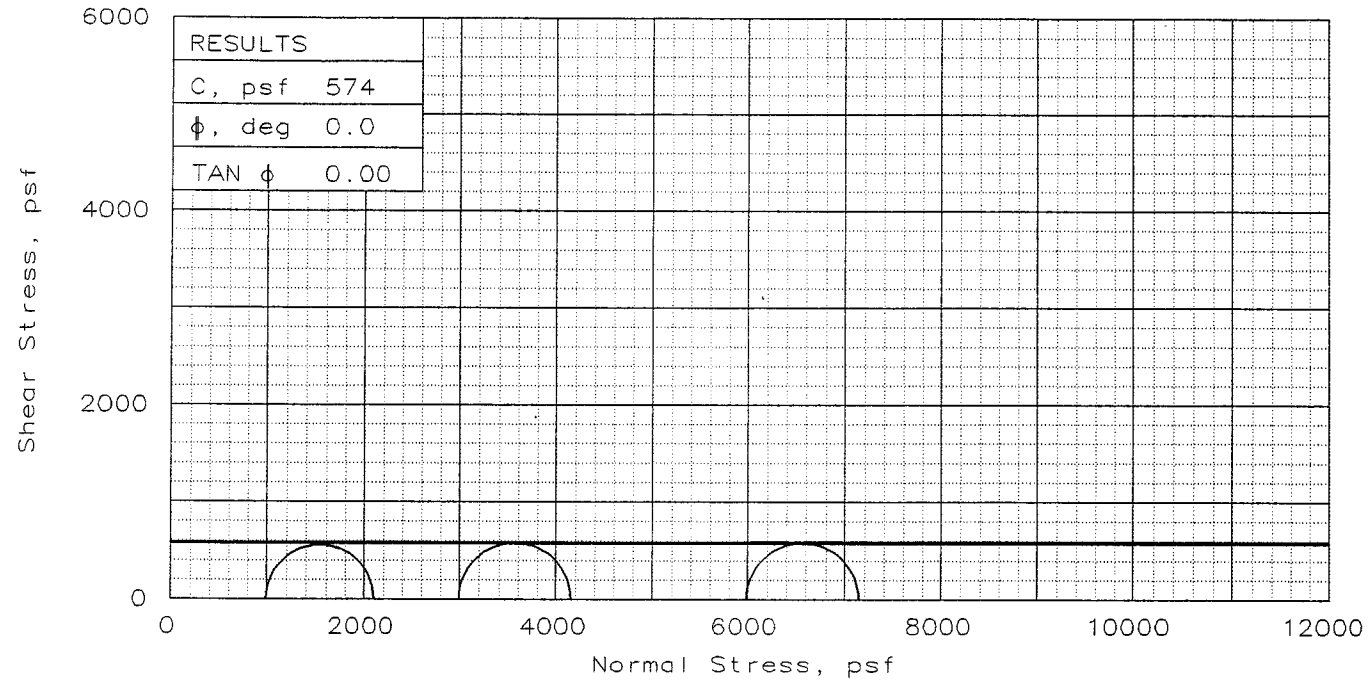
Client: U.S. Army Corps of Engineers

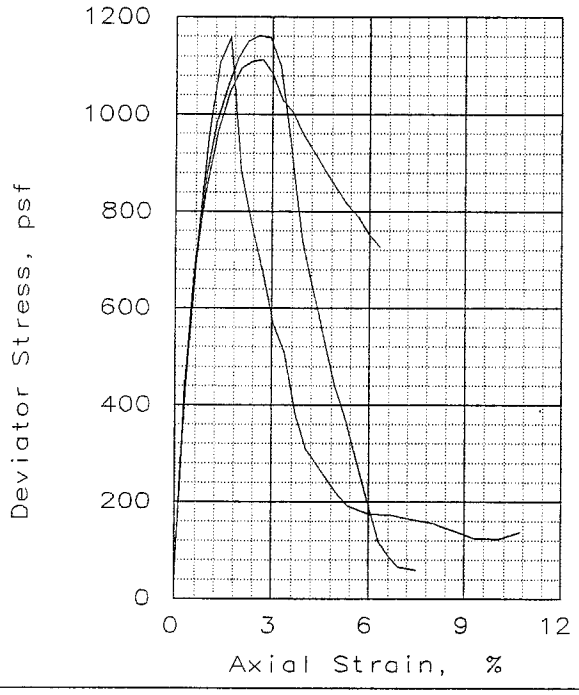
Project: Contract No. DACW29-01-D-0005, Work Packet No. 104

Location: Boring MG-3U, Sample 6-C, Depth 21.0'

File: UU-21698 Project No.: 18002 Fig. No.: ____

"Confidential Information: Privileged & Confidential Work Product"





SAMPLE NO.:		1	2	3
INITIAL	WATER CONTENT, %	67.2	70.9	70.2
	DRY DENSITY, pcf	59.4	57.4	58.9
	SATURATION, %	98.0	98.1	100.9
	VOID RATIO	1.880	1.980	1.905
	DIAMETER, in	1.395	1.395	1.384
	HEIGHT, in	2.929	2.929	2.911
AT TEST	WATER CONTENT, %	68.6	72.3	69.6
	DRY DENSITY, pcf	59.4	57.4	58.8
	SATURATION, %	100.0	100.0	100.0
	VOID RATIO	1.880	1.982	1.907
	DIAMETER, in	1.395	1.395	1.384
	HEIGHT, in	2.929	2.930	2.912
Strain rate, in/min		0.0272	0.0285	0.0289
BACK PRESSURE, psf		0	0	0
CELL PRESSURE, psf		994	2995	5990
FAIL. STRESS, psf		1113	1161	1159
ULT. STRESS, psf		728	59	137
σ_1 FAILURE, psf		2107	4157	7149
σ_3 FAILURE, psf		994	2995	5990

TYPE OF TEST:
Unconsolidated Undrained
SAMPLE TYPE: Undisturbed
DESCRIPTION: M Gr CH4
w/ SL
LL= 96 PL= 25 PI= 71
SPECIFIC GRAVITY= 2.74
REMARKS: Torvane = 0.350 tsf

CLIENT: U.S. Army Corps of Engineers

PROJECT: Contract No. DACW29-01-D-0005,
Work Packet No. 104
SAMPLE LOCATION: Boring MG-3U,
Sample 9-D, Depth 33.9'

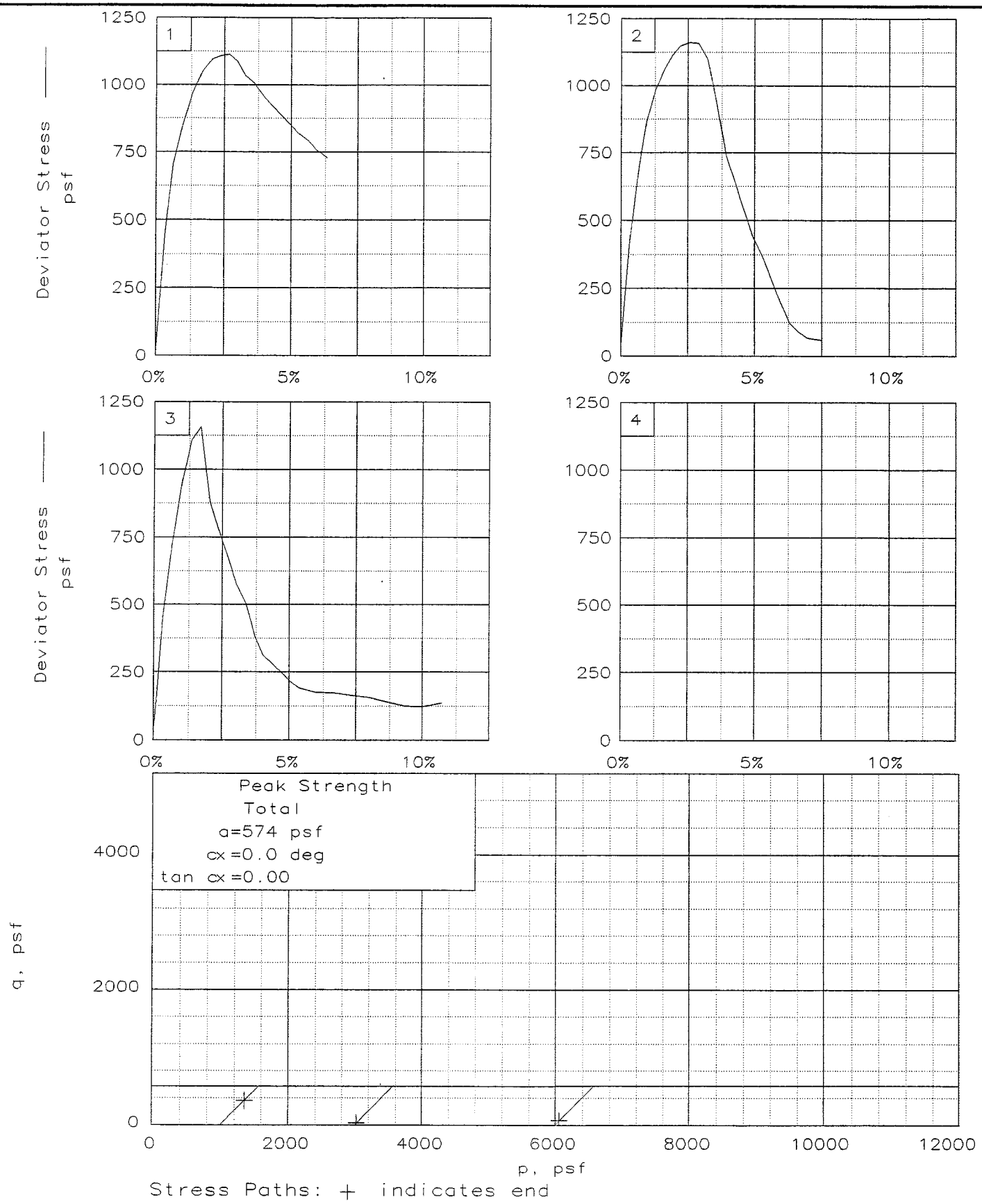
PROJ. NO.: 18002 DATE: 7/11/03

TRIAXIAL SHEAR TEST REPORT

Eustis Engineering Company, Inc.

Fig. No.: _____

"Confidential Information: Privileged & Confidential Work Product"



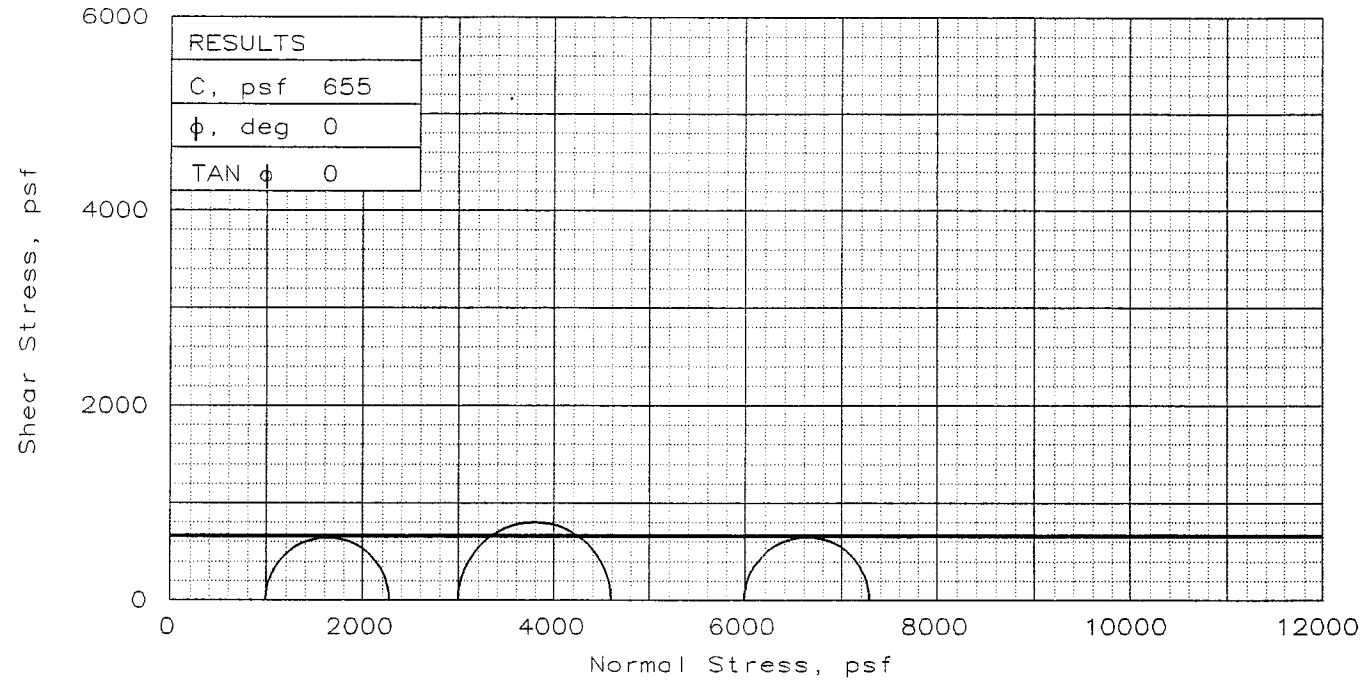
Client: U.S. Army Corps of Engineers

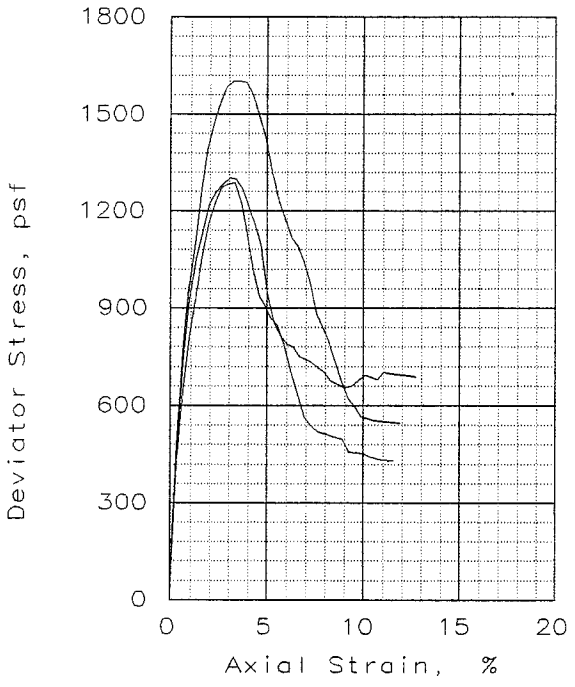
Project: Contract No. DACW29-01-D-0005, Work Packet No. 104

Location: Boring MG-3U, Sample 9-D, Depth 33.9'

File: UU-21699 Project No.: 18002 Fig. No.: _____

"Confidential Information: Privileged & Confidential Work Product"





SPECIMEN NO.:		1	2	3
INITIAL	WATER CONTENT, %	63.8	62.3	63.6
	DRY DENSITY, pcf	61.2	62.2	62.5
	SATURATION, %	97.4	97.4	100.4
	VOID RATIO	1.797	1.751	1.736
	DIAMETER, in	1.40	1.40	1.39
	HEIGHT, in	2.93	2.93	2.91
AT TEST	WATER CONTENT, %	65.7	63.9	63.3
	DRY DENSITY, pcf	61.1	62.2	62.5
	SATURATION, %	100.0	100.0	100.0
	VOID RATIO	1.799	1.750	1.736
	DIAMETER, in	1.40	1.39	1.39
	HEIGHT, in	2.93	2.93	2.91
Strain rate, in/min		0.0282	0.0287	0.0288
BACK PRESSURE, psf		0	0	0
CELL PRESSURE, psf		994	2995	5990
FAIL. STRESS, psf		1287	1602	1301
ULT. STRESS, psf		430	547	688
σ_1 FAILURE, psf		2280	4598	7292
σ_3 FAILURE, psf		994	2995	5990

TYPE OF TEST:
Unconsolidated Undrained
SAMPLE TYPE: Undisturbed
DESCRIPTION: M Gr CH4
w/ SL
LL= 88 PL= 24 PI= 64
SPECIFIC GRAVITY= 2.74
REMARKS: Torvane = 0.330 tsf

CLIENT: U.S. Army Corps of Engineers

PROJECT: Contract No. DACW29-01-D-0005,
Work Packet No. 104
SAMPLE LOCATION: Boring MG-3U,
Sample 10-D, Depth 38.0'

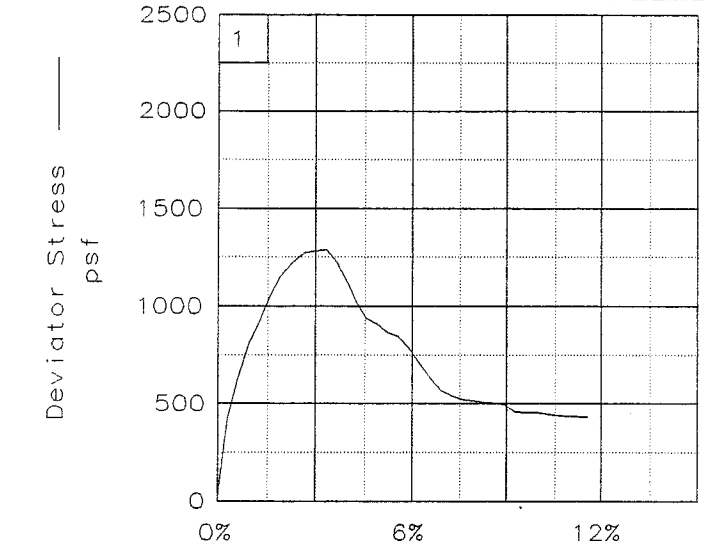
PROJ. NO.: 18002 DATE: 7/11/03

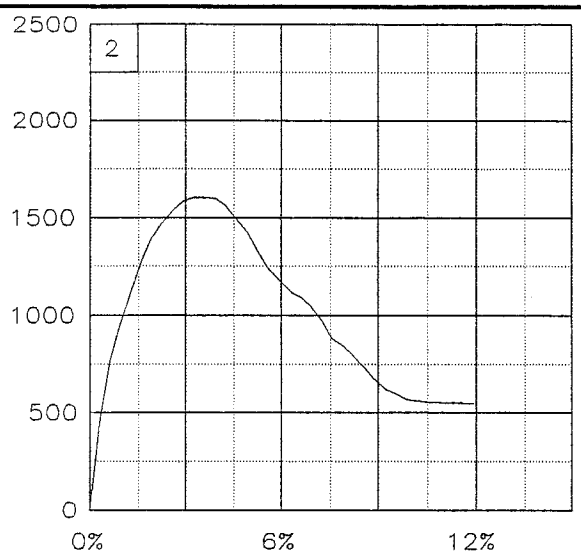
TRIAXIAL SHEAR TEST REPORT

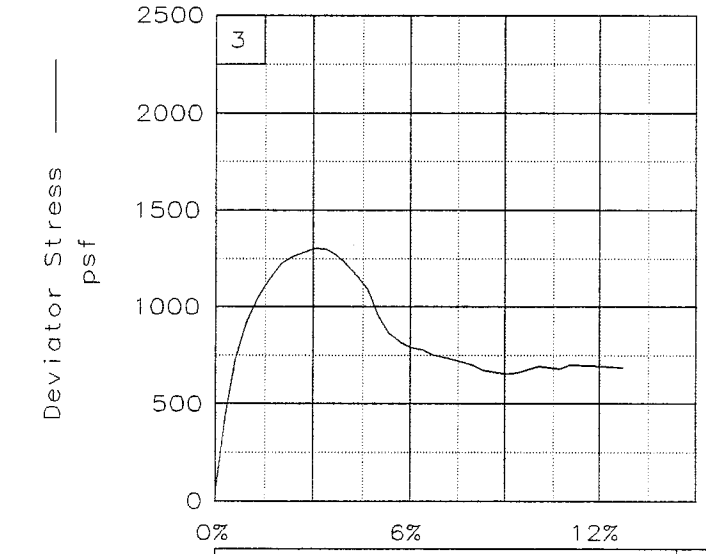
Eustis Engineering Company, Inc.

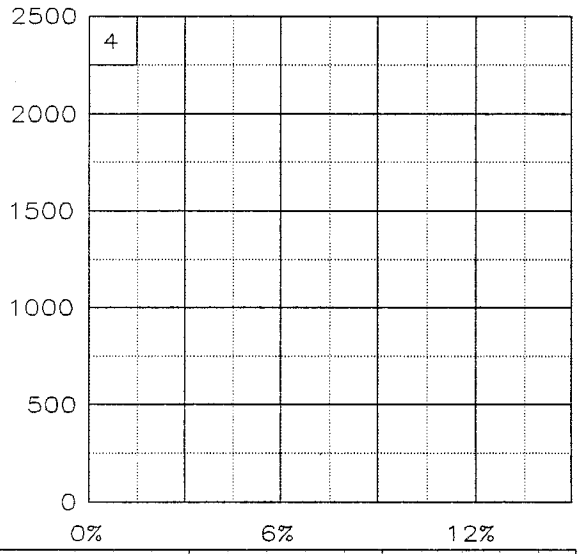
Fig. No.: _____

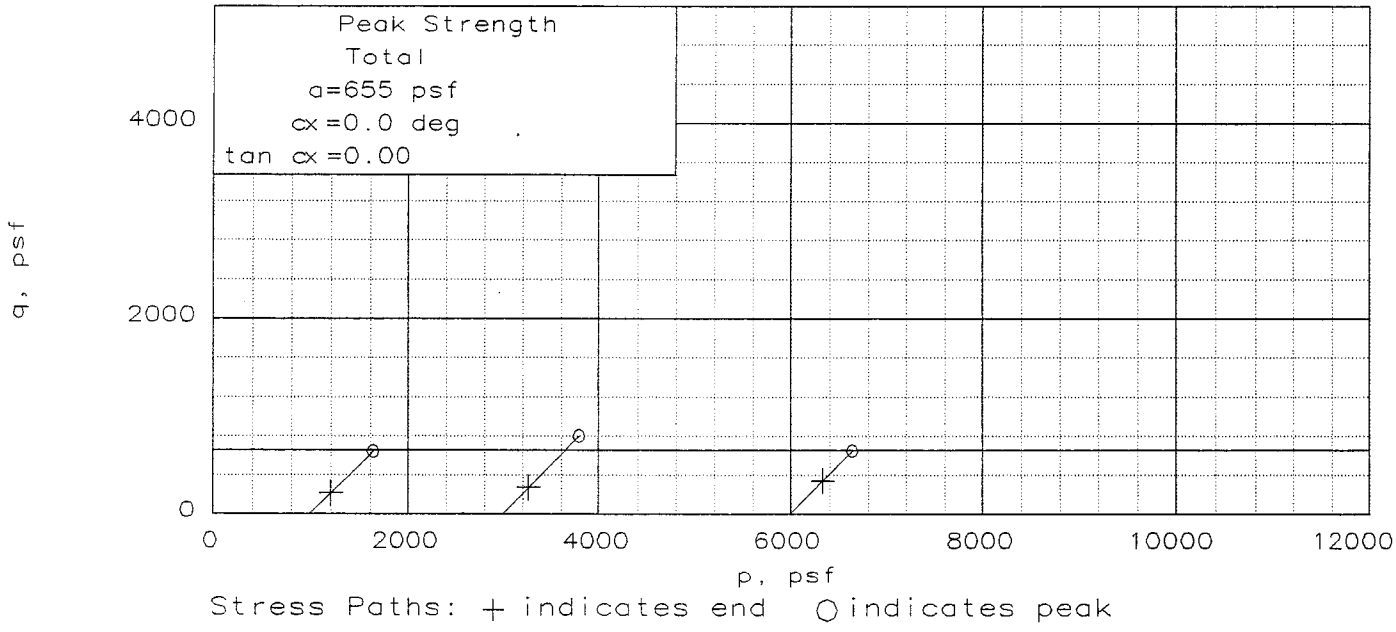
"Confidential Information: Privileged & Confidential Work Product"











Stress Paths: + indicates end ○ indicates peak

Client: U.S. Army Corps of Engineers

Project: Contract No. DACW29-01-D-0005, Work Packet No. 104

Location: Boring MG-3U, Sample 10-D, Depth 38.0'

File: UU-21700 Project No.: 18002 Fig. No.: ____

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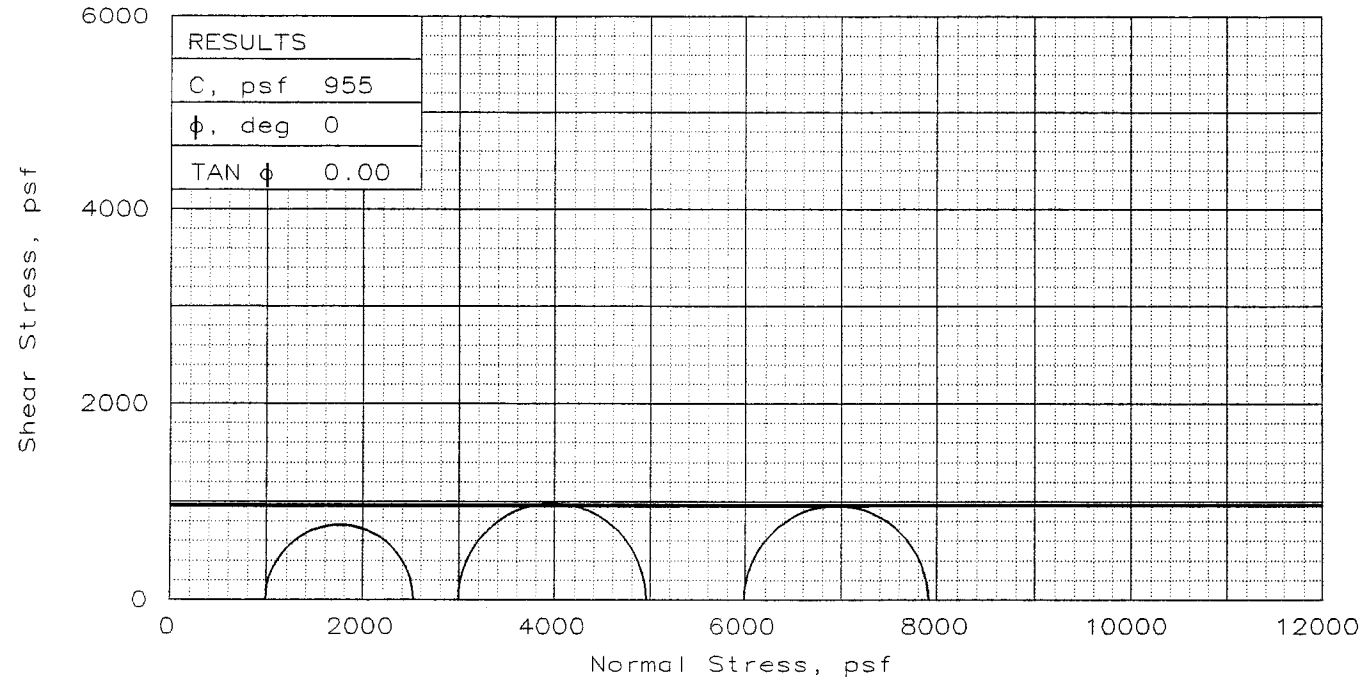
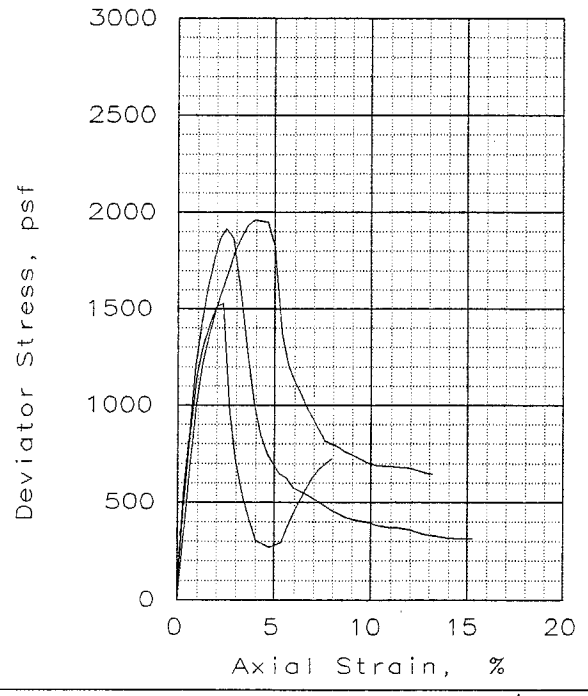




SPECIMEN NO.:		1	2	3
INITIAL	WATER CONTENT, %	72.7	74.2	72.9
	DRY DENSITY, pcf	56.4	55.7	57.2
	SATURATION, %	97.9	98.2	100.4
	VOID RATIO	2.035	2.069	1.992
	DIAMETER, in	1.40	1.40	1.39
	HEIGHT, in	2.93	2.93	2.92
AT TEST	WATER CONTENT, %	74.3	75.4	72.7
	DRY DENSITY, pcf	56.3	55.8	57.2
	SATURATION, %	100.0	100.0	100.0
	VOID RATIO	2.036	2.065	1.991
	DIAMETER, in	1.40	1.39	1.39
	HEIGHT, in	2.93	2.93	2.92
Strain rate, in/min		0.0277	0.0287	0.0287
BACK PRESSURE, psf		0	0	0
CELL PRESSURE, psf		994	2995	5990
FAIL. STRESS, psf		1529	1961	1918
ULT. STRESS, psf		725	645	313
σ_1 FAILURE, psf		2523	4956	7909
σ_3 FAILURE, psf		994	2995	5990

TYPE OF TEST:
Unconsolidated Undrained
SAMPLE TYPE: Undisturbed
DESCRIPTION: M Br & Gr CH4
w/ SL
LL= 103 PL= 28 PI= 75
SPECIFIC GRAVITY= 2.74
REMARKS: Torvane = 0.400 tsf

Fig. No.: _____

CLIENT: U.S. Army Corps of Engineers

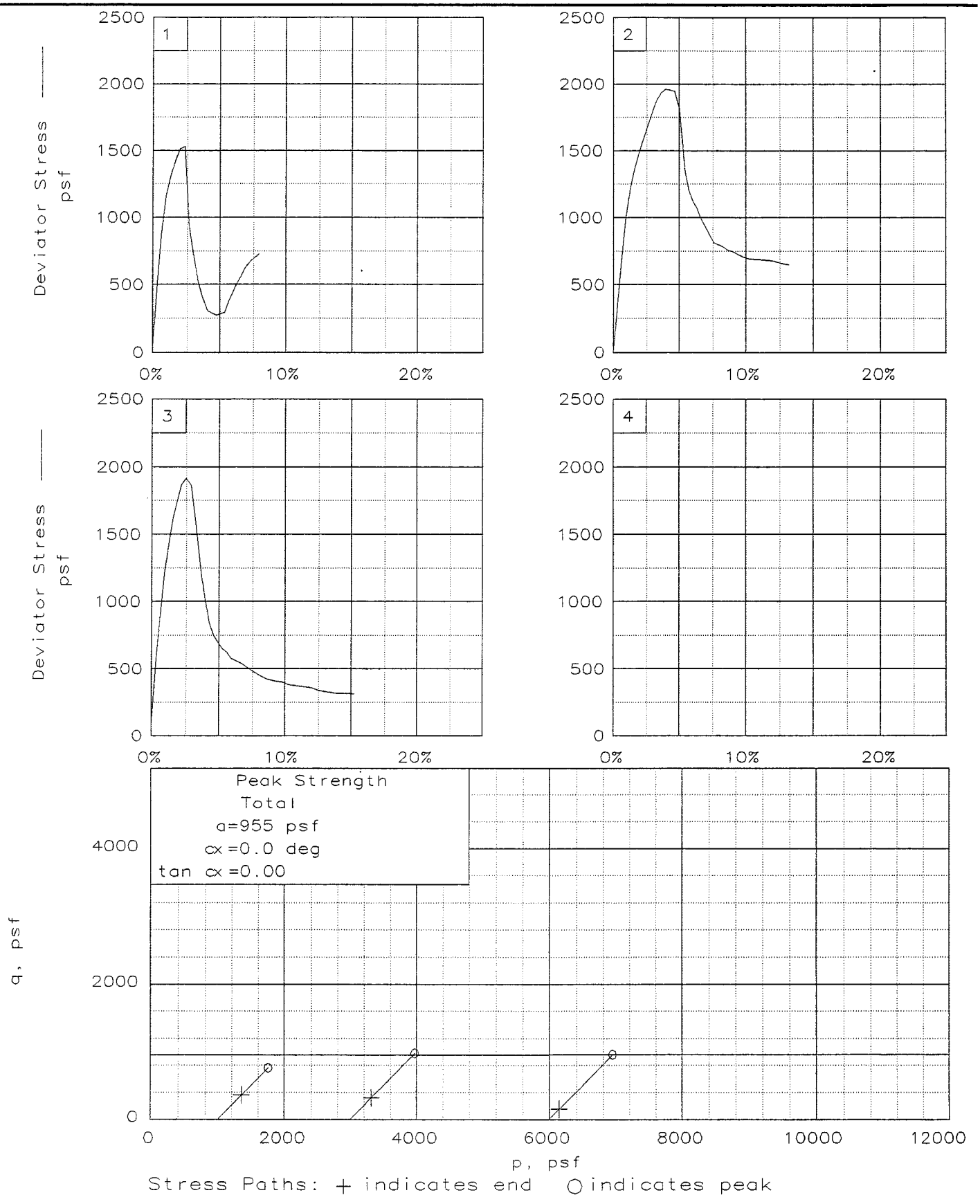
PROJECT: Contract No. DACW29-01-D-0005,
Work Packet No. 104
SAMPLE LOCATION: Boring MG-3U,
Sample 12-C, Depth 44.9'

PROJ. NO.: 18002 DATE: 7/11/03

TRIAXIAL SHEAR TEST REPORT

Eustis Engineering Company, Inc.

"Confidential Information: Privileged & Confidential Work Product"



Client: U.S. Army Corps of Engineers

Project: Contract No. DACW29-01-D-0005, Work Packet No. 104

Location: Boring MG-3U, Sample 12-C, Depth 44.9'

File: UU-21701 Project No.: 18002 Fig. No.: ____

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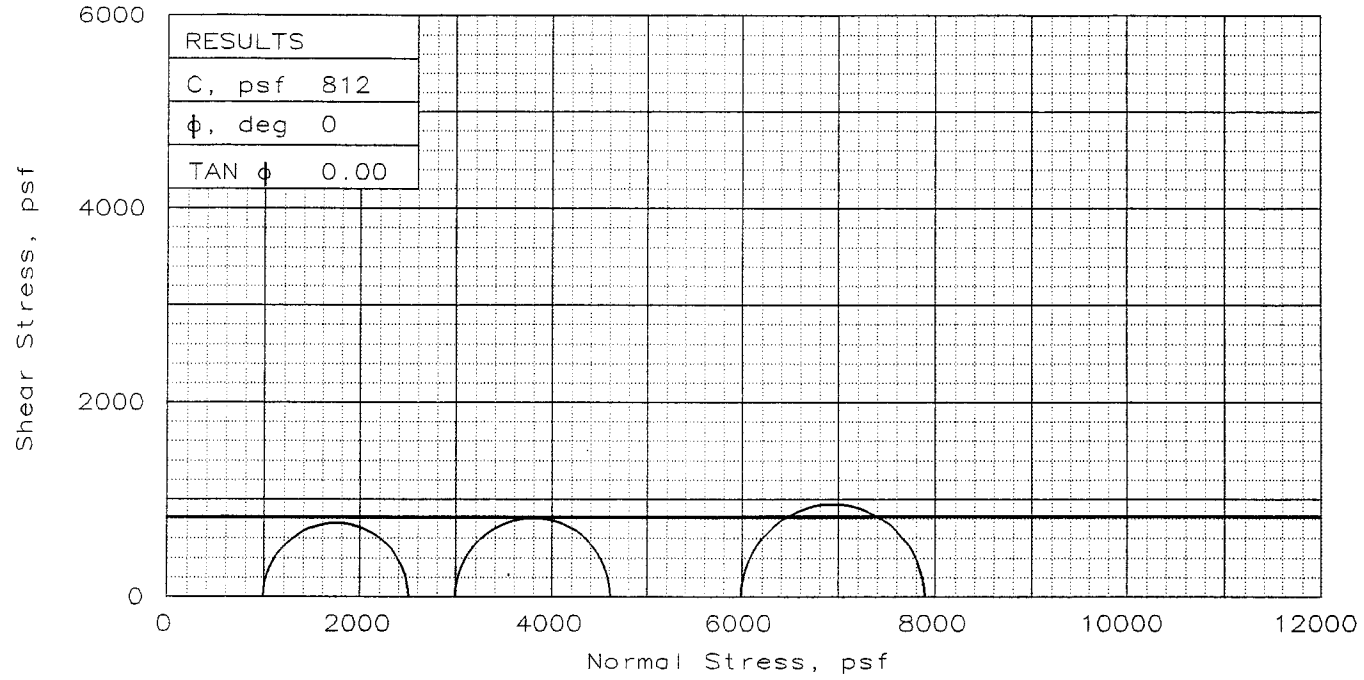
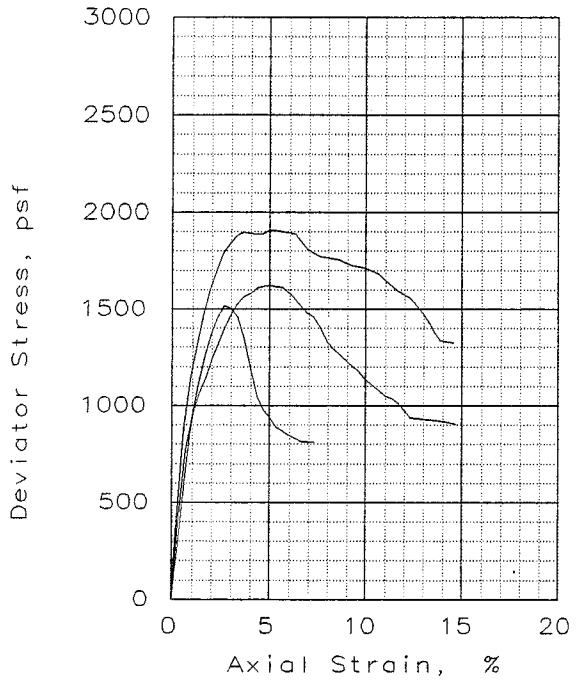




SPECIMEN NO.:		1	2	3
INITIAL	WATER CONTENT, %	45.5	45.7	42.9
	DRY DENSITY, pcf	73.9	74.4	79.0
	SATURATION, %	95.4	96.8	101.5
	VOID RATIO	1.298	1.283	1.149
	DIAMETER, in	1.40	1.40	1.38
	HEIGHT, in	2.93	2.93	2.93
AT TEST	WATER CONTENT, %	47.9	47.1	42.4
	DRY DENSITY, pcf	73.8	74.4	78.8
	SATURATION, %	100.0	100.0	100.0
	VOID RATIO	1.302	1.282	1.154
	DIAMETER, in	1.40	1.39	1.38
	HEIGHT, in	2.93	2.93	2.93
Strain rate, in/min		0.0262	0.0276	0.0287
BACK PRESSURE, psf		0	0	0
CELL PRESSURE, psf		994	2995	5990
FAIL. STRESS, psf		1515	1621	1899
ULT. STRESS, psf		810	904	1325
σ_1 FAILURE, psf		2509	4616	7889
σ_3 FAILURE, psf		994	2995	5990

TYPE OF TEST:
Unconsolidated Undrained
SAMPLE TYPE: Undisturbed
DESCRIPTION: M Gr CH3
w/ ars SM
LL= 60 PL= 19 PI= 41
SPECIFIC GRAVITY= 2.72
REMARKS: Torvane = 0.430 tsf

Fig. No.: _____

CLIENT: U.S. Army Corps of Engineers

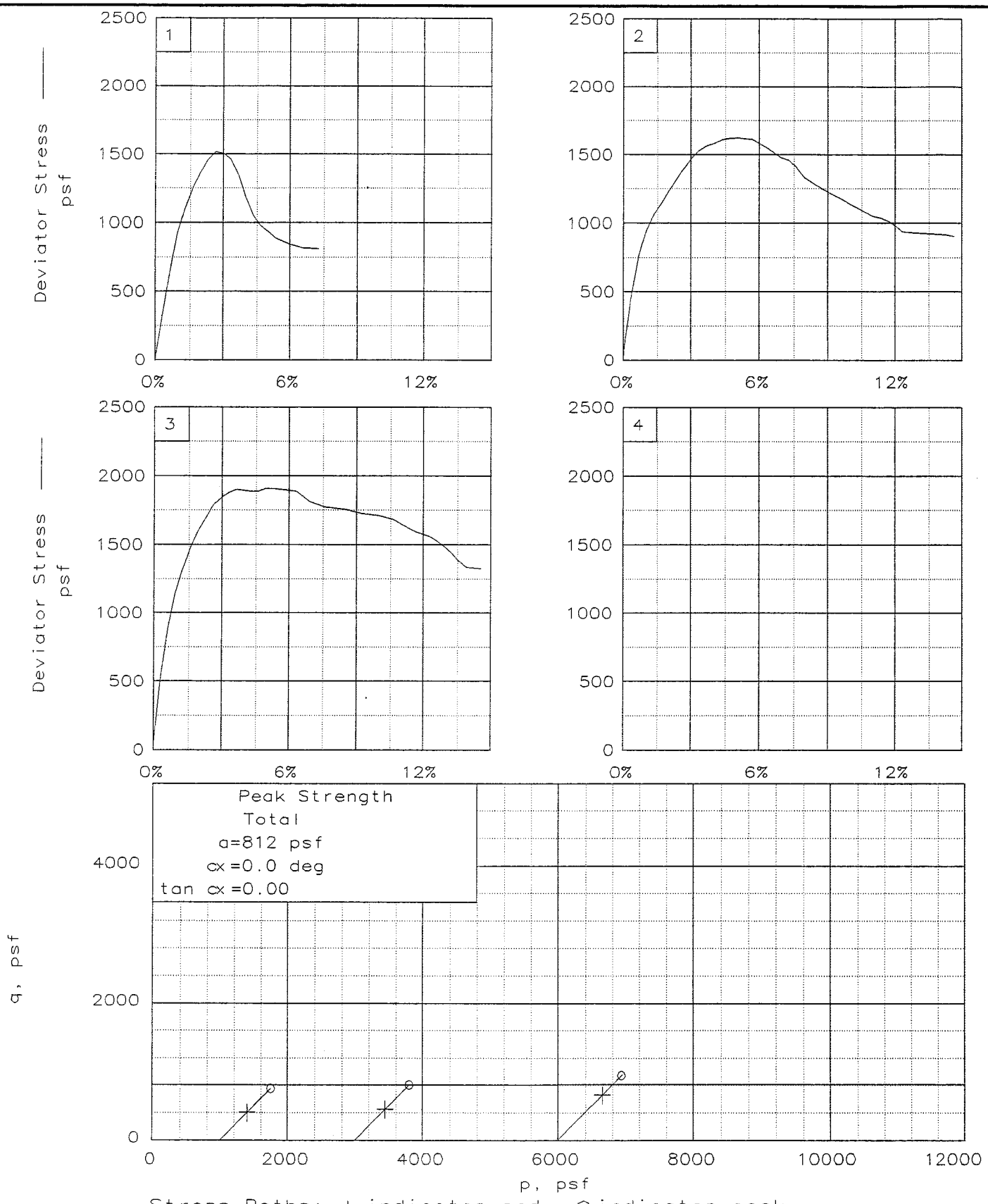
PROJECT: Contract No. DACW29-01-D-0005,
Work Packet No. 104
SAMPLE LOCATION: Boring MG-3U,
Sample 16-C, Depth 60.9'

PROJ. NO.: 18002 DATE: 7/11/03

TRIAXIAL SHEAR TEST REPORT

Eustis Engineering Company, Inc.

"Confidential Information: Privileged & Confidential Work Product"



Client: U.S. Army Corps of Engineers

Project: Contract No. DACW29-01-D-0005, Work Packet No. 104

Location: Boring MG-3U, Sample 16-C, Depth 60.9'

File: UU-21702 Project No.: 18002 Fig. No.: ____

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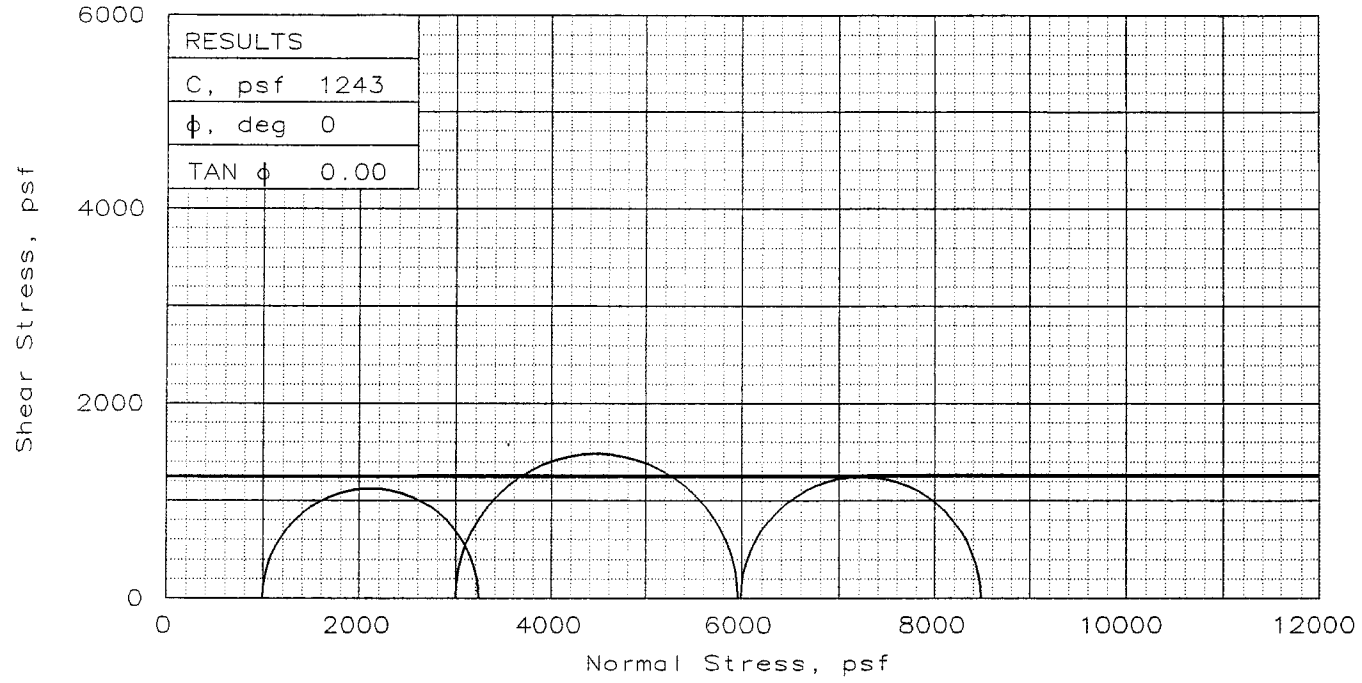
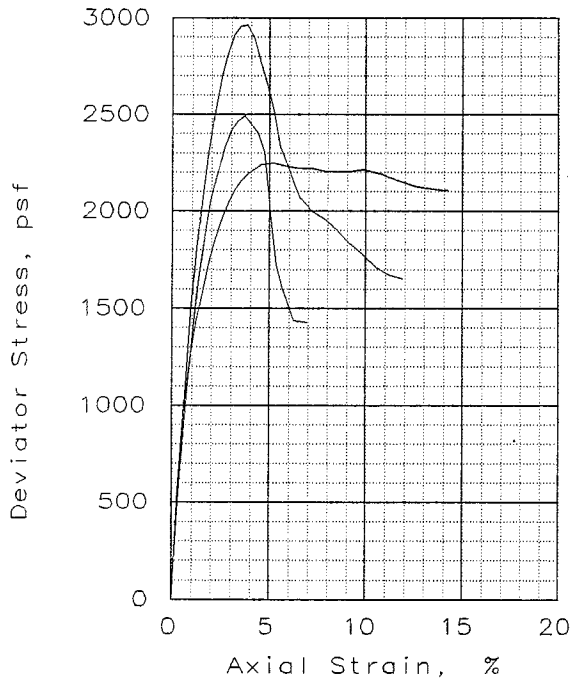




SPECIMEN NO.:		1	2	3
INITIAL	WATER CONTENT, %	35.6	41.3	44.3
	DRY DENSITY, pcf	84.4	78.8	76.9
	SATURATION, %	95.1	96.6	99.0
	VOID RATIO	1.026	1.171	1.226
	DIAMETER, in	1.40	1.40	1.39
	HEIGHT, in	2.93	2.93	2.92
AT TEST	WATER CONTENT, %	37.5	42.8	44.9
	DRY DENSITY, pcf	84.3	78.7	76.7
	SATURATION, %	100.0	100.0	100.0
	VOID RATIO	1.029	1.174	1.229
	DIAMETER, in	1.40	1.40	1.39
	HEIGHT, in	2.93	2.93	2.92
Strain rate, in/min		0.0286	0.0284	0.0285
BACK PRESSURE, psf		0	0	0
CELL PRESSURE, psf		994	2995	5990
FAIL. STRESS, psf		2244	2964	2492
ULT. STRESS, psf		2106	1652	1427
σ_1 FAILURE, psf		3238	5959	8483
σ_3 FAILURE, psf		994	2995	5990

TYPE OF TEST:
Unconsolidated Undrained
SAMPLE TYPE: Undisturbed
DESCRIPTION: St Gr CH3
w/ SL
LL= 65 PL= 21 PI= 44
SPECIFIC GRAVITY= 2.74
REMARKS: Torvane = 0.580 tsf

CLIENT: U.S. Army Corps of Engineers

PROJECT: Contract No. DACW29-01-D-0005,
Work Packet No. 104
SAMPLE LOCATION: Boring MG-3U,
Sample 20-B, Depth 76.2'

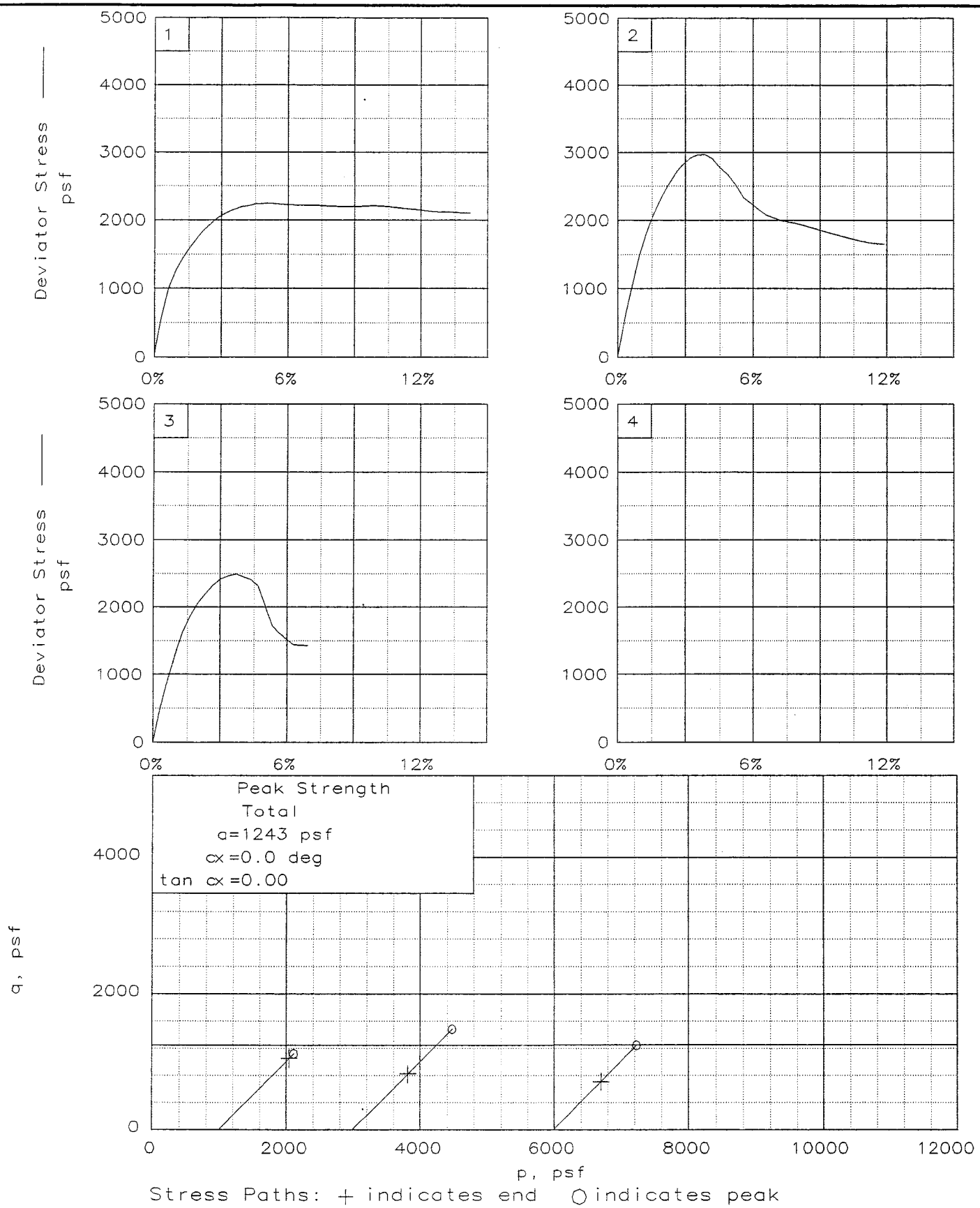
PROJ. NO.: 18002 DATE: 7/11/03

TRIAXIAL SHEAR TEST REPORT

Eustis Engineering Company, Inc.

Fig. No.: _____

"Confidential Information: Privileged & Confidential Work Product"



Client: U.S. Army Corps of Engineers

Project: Contract No. DACW29-01-D-0005, Work Packet No. 104

Location: Boring MG-3U, Sample 20-B, Depth 76.2'

File: UU-21703 Project No.: 18002 Fig. No.: ____

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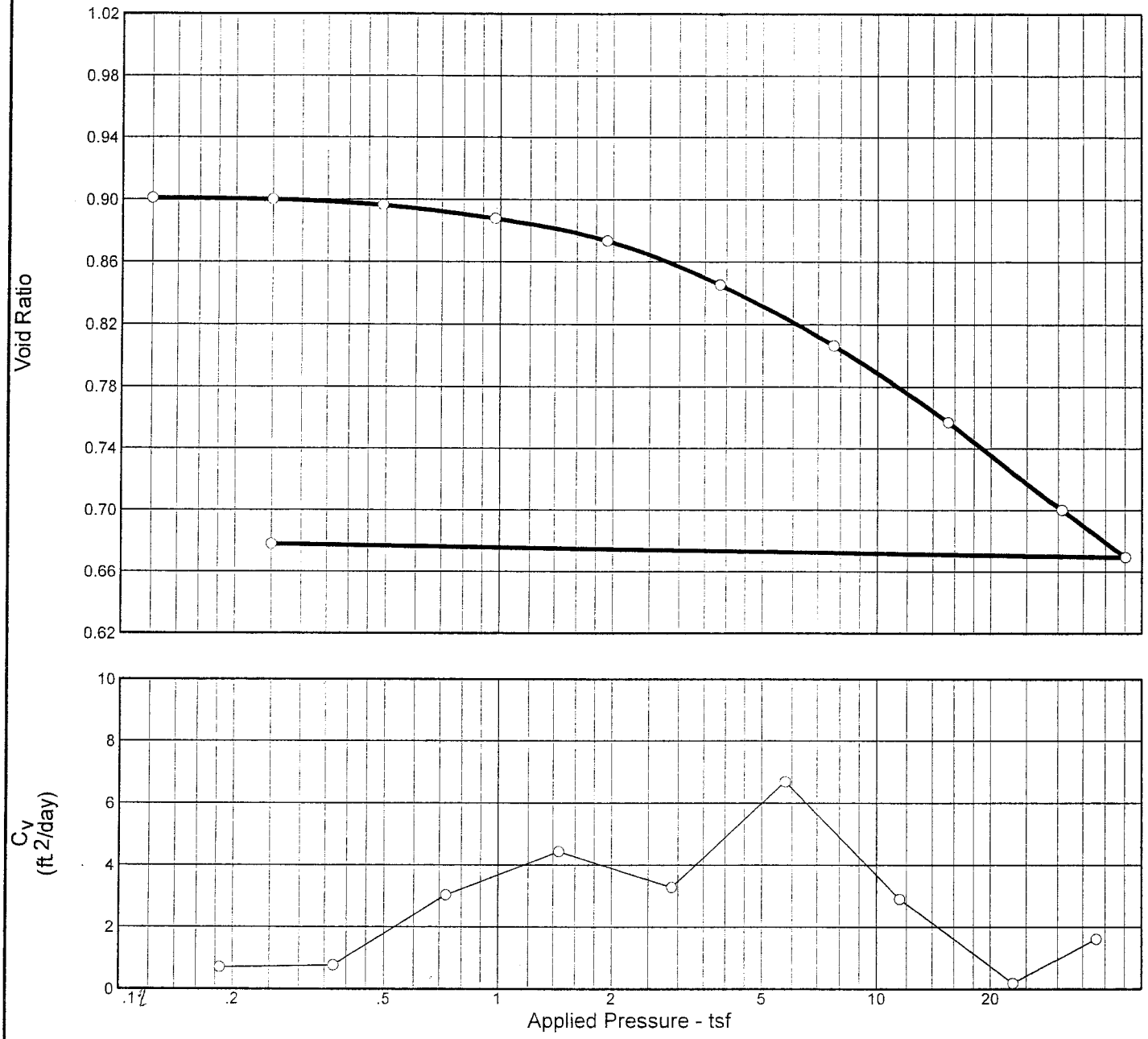
CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
89.9 %	30.3 %	87.9	33	12	2.68	4.47	0.19	0.904

MATERIAL DESCRIPTION	USCS	AASHTO
So Gr & T CL4 w/ cc PP = 0.184	CL4	

Project No. 18002 **Client:** U.S.Army Corps of Engineers

Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

Source: MG-3U **Sample No.:** 2B **Elev./Depth:** 4.4'

CONSOLIDATION TEST REPORT

EUSTIS ENGINEERING COMPANY, INC.

Remarks:
Tested by LWR & BJD

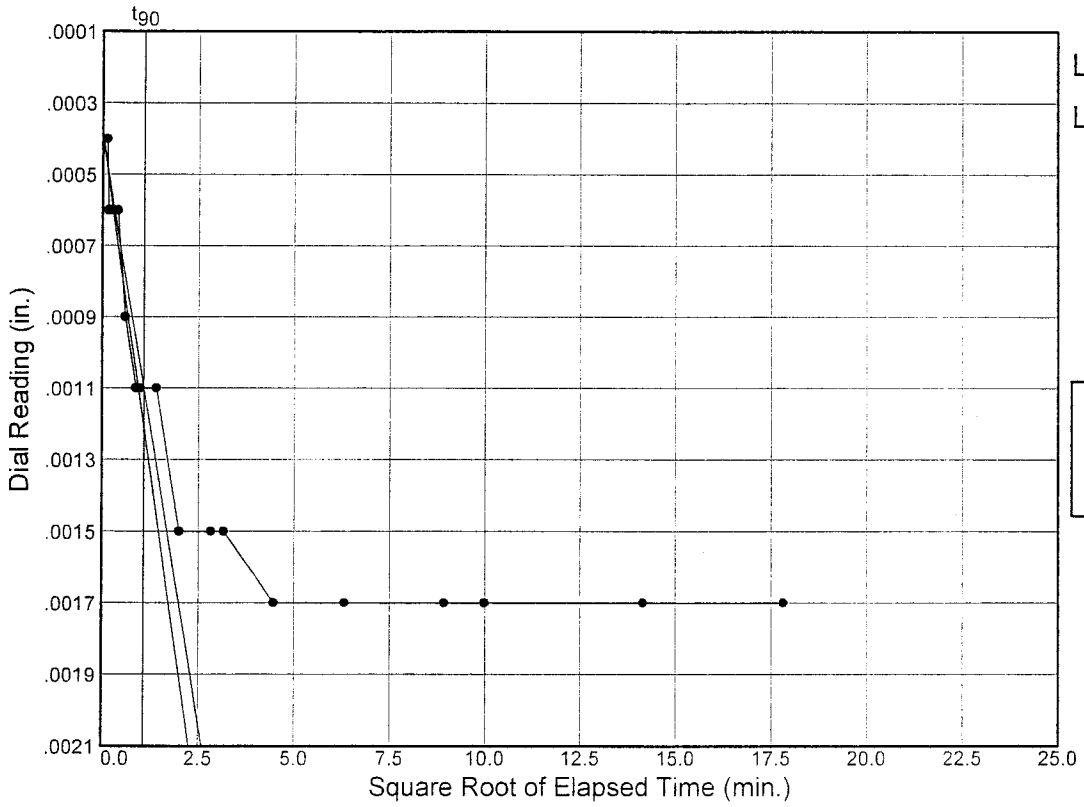
Figure No.

"Confidential Information: Privileged & Confidential Work Product"

Dial Reading vs. Time

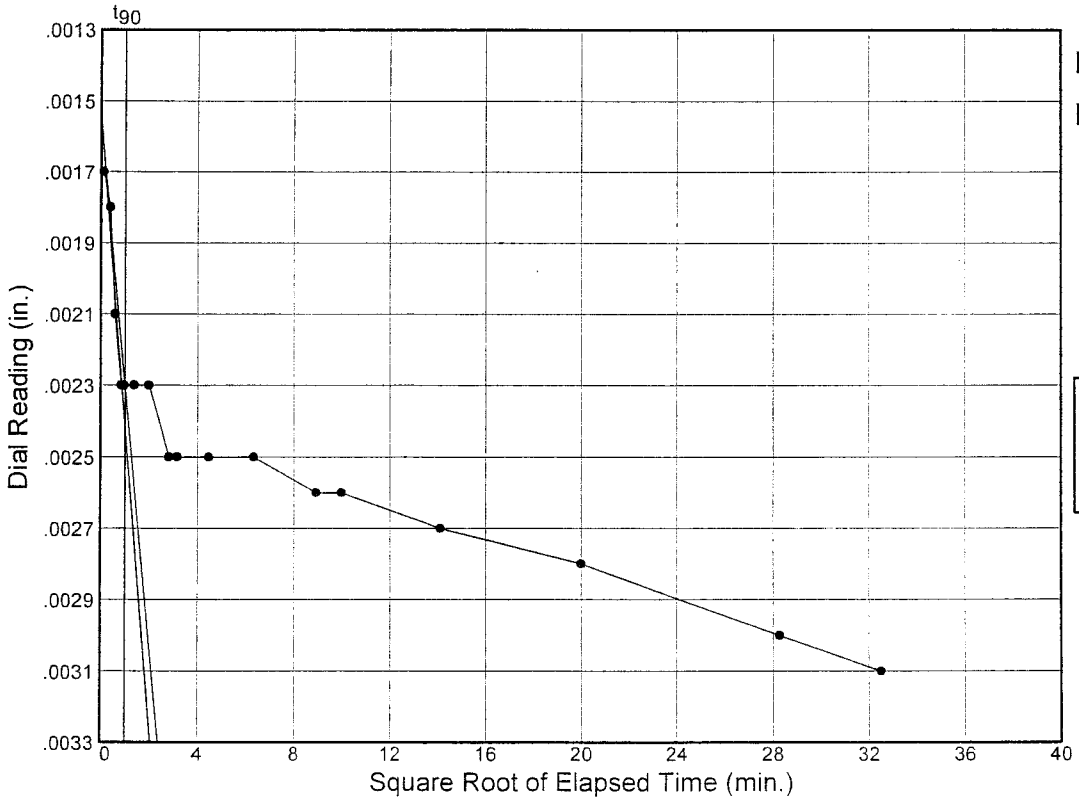
Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

Source: MG-3U Sample No.: 2B Elev./Depth: 4.4'



Load No.= 2
Load= 0.25 tsf
D_0 = 0.00038
D_{90} = 0.00110
D_{100} = 0.00118
T_{90} = 1.17 min.

C_v @ T_{90}
0.71 ft.^{2}/day



Load No.= 3
Load= 0.49 tsf
D_0 = 0.00153
D_{90} = 0.00230
D_{100} = 0.00239
T_{90} = 1.06 min.

C_v @ T_{90}
0.77 ft.^{2}/day

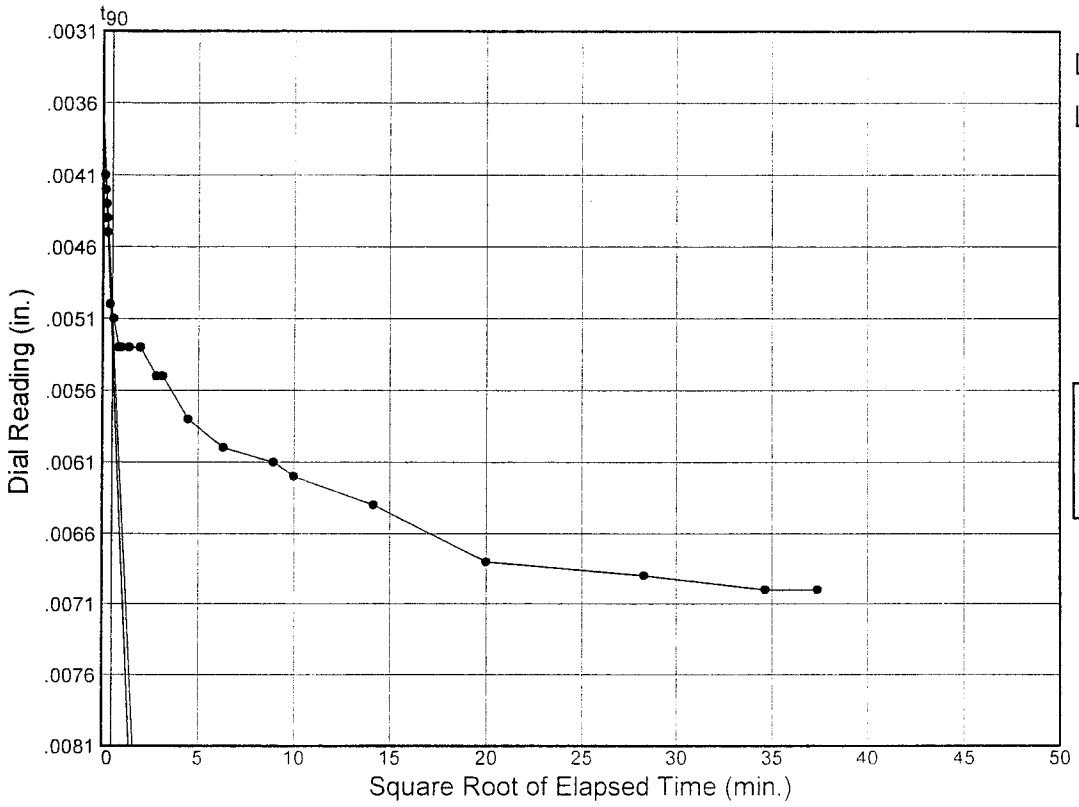
Figure No.

"Confidential Information: Privileged & Confidential Work Product"

Dial Reading vs. Time

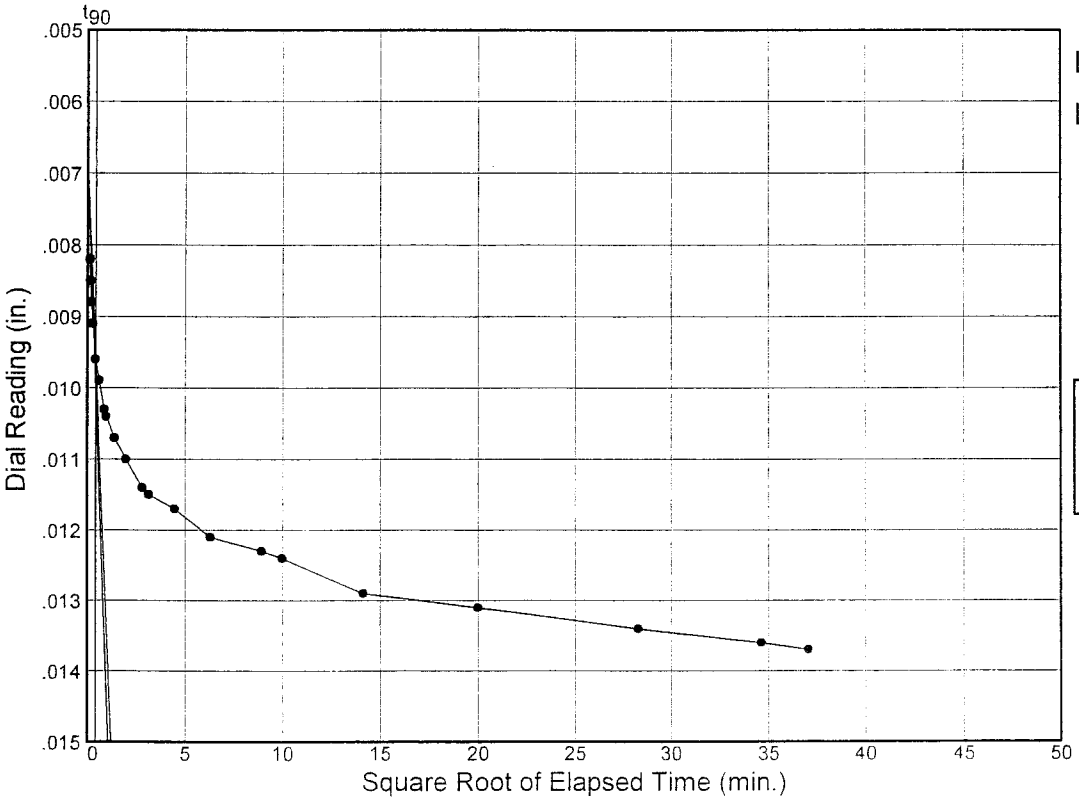
Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

Source: MG-3U Sample No.: 2B Elev./Depth: 4.4'



Load No.= 4
Load= 0.97 tsf
D_0 = 0.00362
D_{90} = 0.00505
D_{100} = 0.00521
T_{90} = 0.27 min.

C_v @ T_{90}
3.03 ft.^{2}/day



Load No.= 5
Load= 1.93 tsf
D_0 = 0.00677
D_{90} = 0.00960
D_{100} = 0.00992
T_{90} = 0.18 min.

C_v @ T_{90}
4.44 ft.^{2}/day

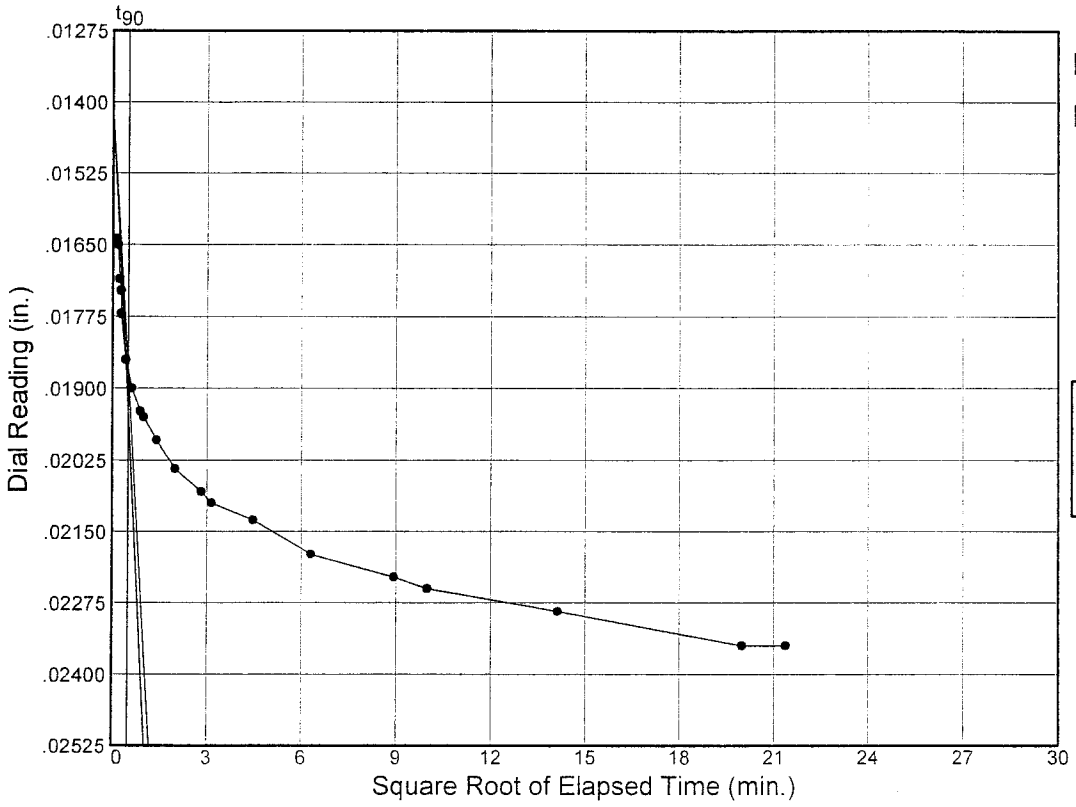
Figure No.

"Confidential Information: Privileged & Confidential Work Product"

Dial Reading vs. Time

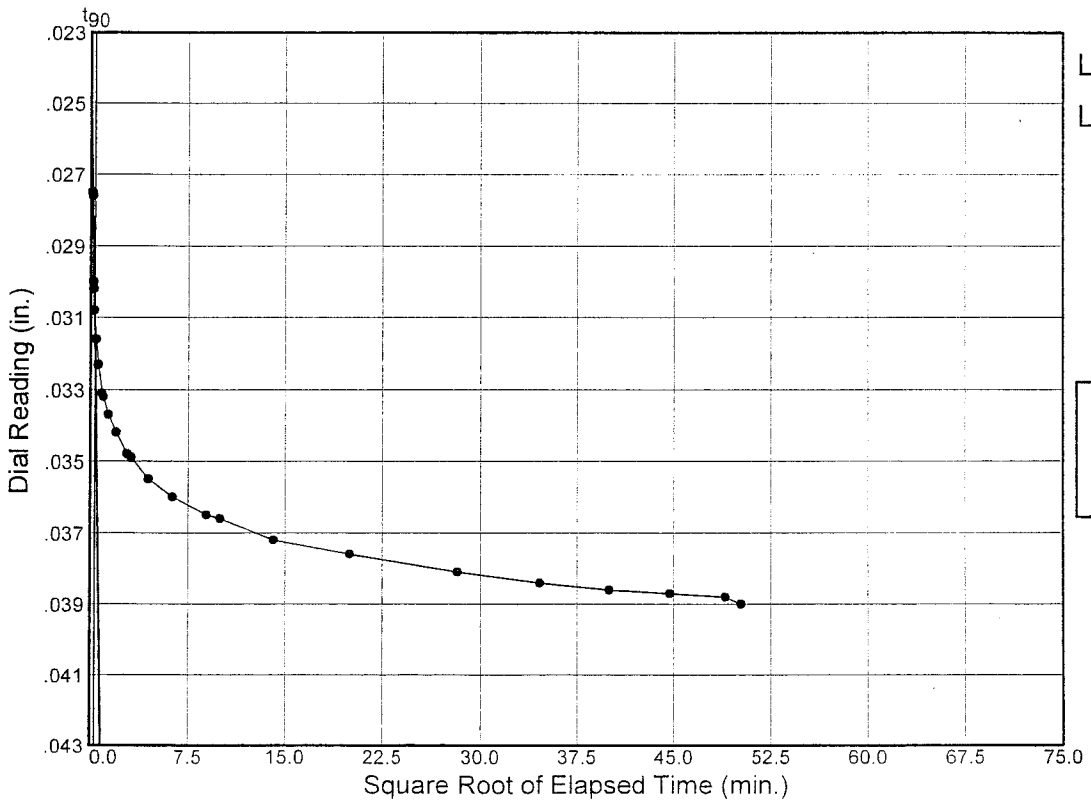
Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

Source: MG-3U Sample No.: 2B Elev./Depth: 4.4'



Load No.= 6
Load= 3.85 tsf
D_0 = 0.01400
D_{90} = 0.01867
D_{100} = 0.01919
T_{90} = 0.24 min.

C_v @ T_{90}
3.27 ft.^{2}/day



Load No.= 7
Load= 7.69 tsf
D_0 = 0.02379
D_{90} = 0.03110
D_{100} = 0.03191
T_{90} = 0.11 min.

C_v @ T_{90}
6.68 ft.^{2}/day

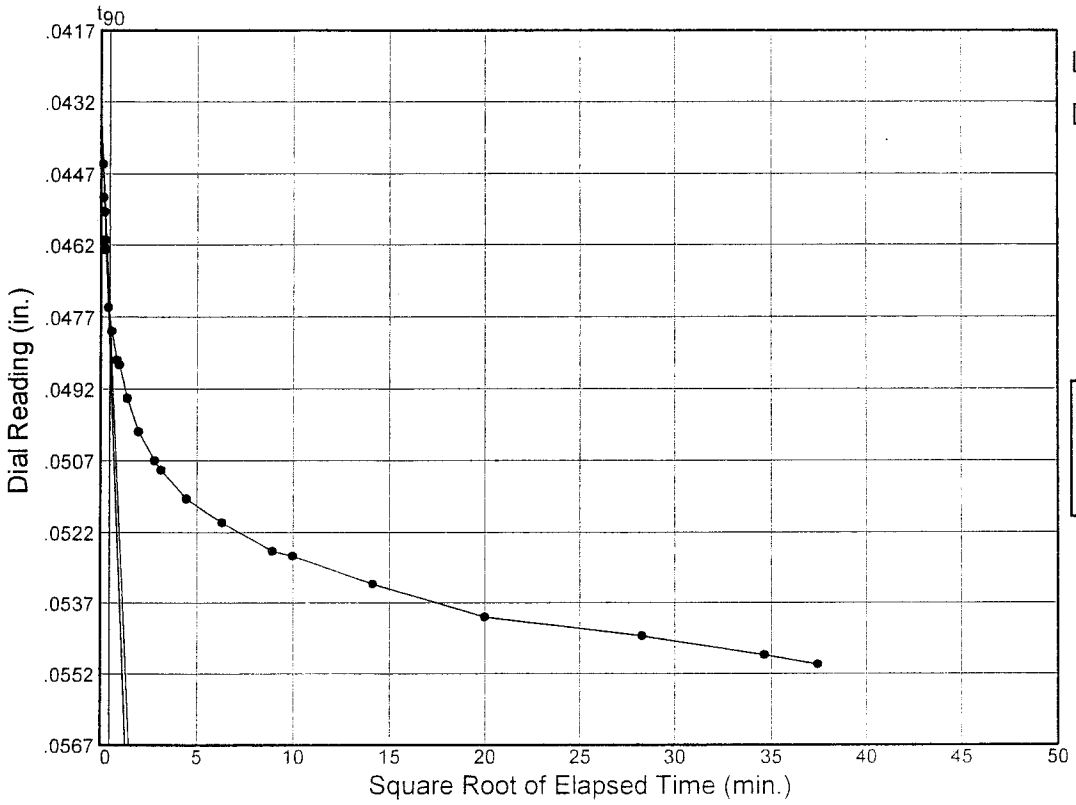
Figure No.

"Confidential Information: Privileged & Confidential Work Product"

Dial Reading vs. Time

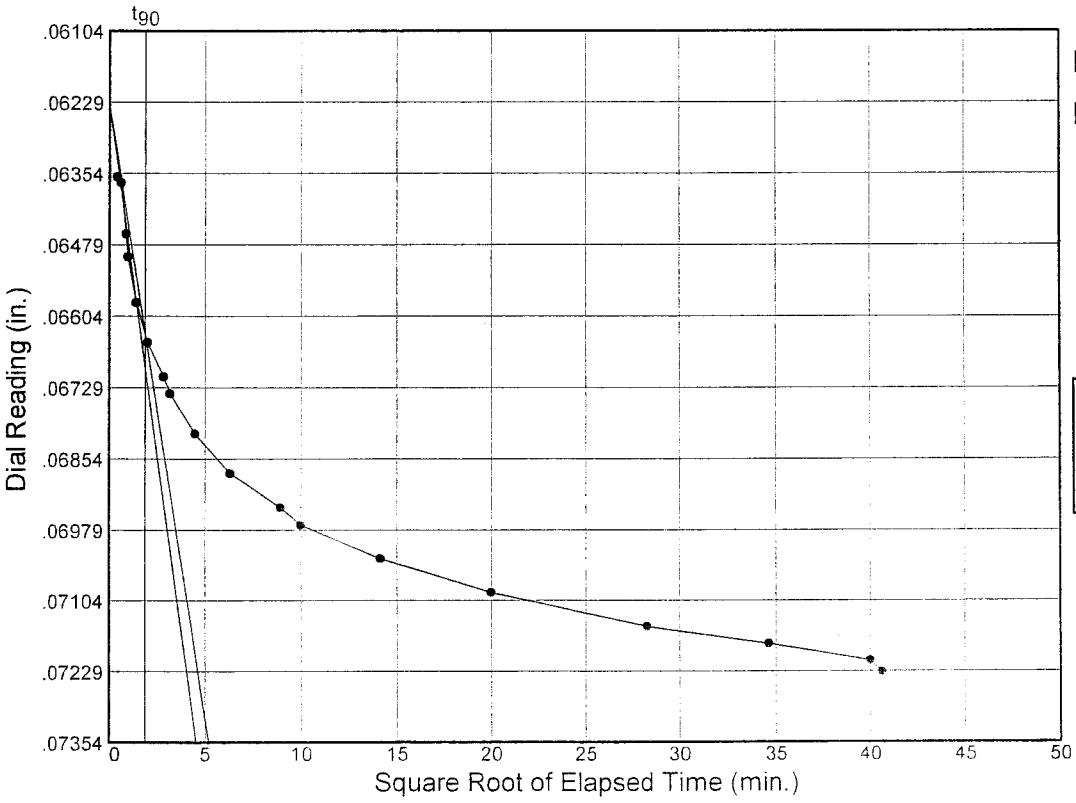
Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

Source: MG-3U Sample No.: 2B Elev./Depth: 4.4'



Load No.= 8
Load= 15.37 tsf
D_0 = 0.04328
D_{90} = 0.04769
D_{100} = 0.04818
T_{90} = 0.25 min.

C_v @ T_{90}
2.89 ft.^{2}/day



Load No.= 9
Load= 30.73 tsf
D_0 = 0.06229
D_{90} = 0.06636
D_{100} = 0.06681
T_{90} = 3.51 min.

C_v @ T_{90}
0.19 ft.^{2}/day

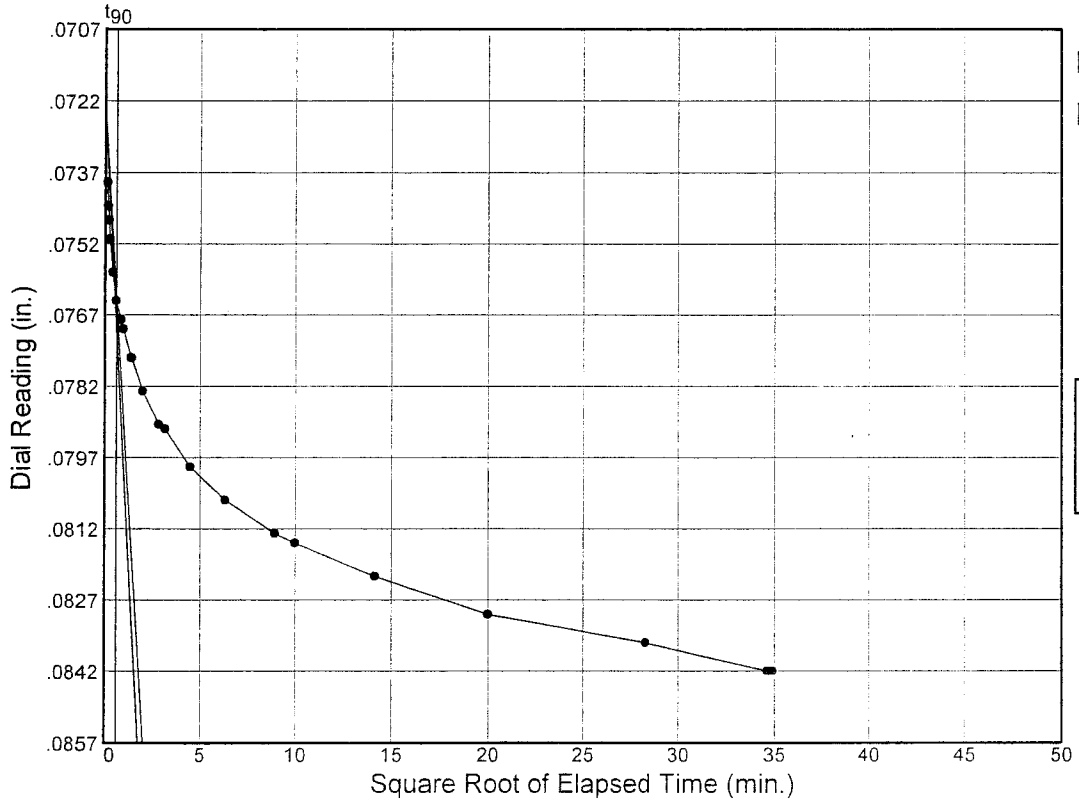
Figure No.

"Confidential Information: Privileged & Confidential Work Product"

Dial Reading vs. Time

Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

Source: MG-3U Sample No.: 2B Elev./Depth: 4.4'



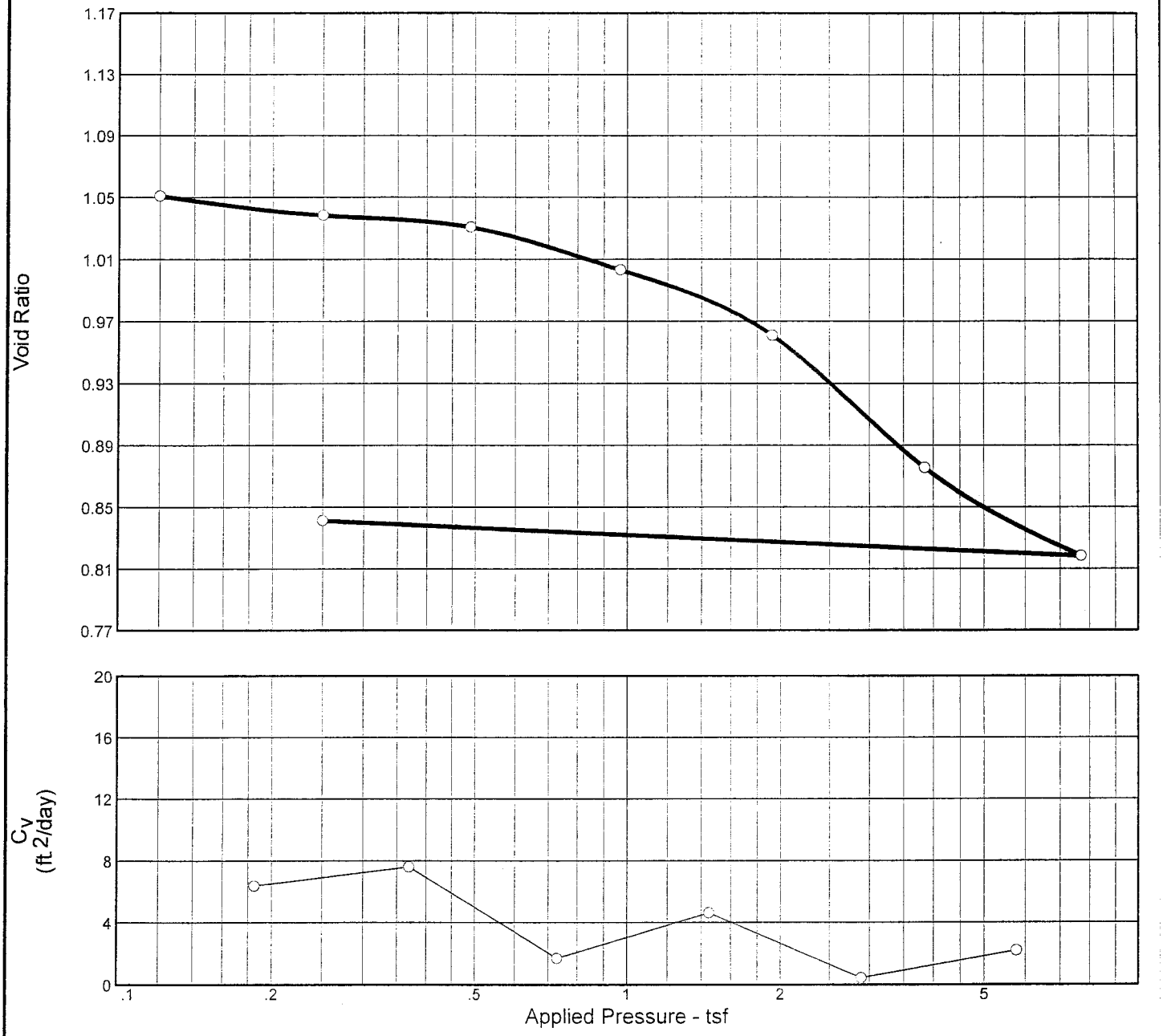
Load No.= 10
Load= 45.21 tsf
D_0 = 0.07221
D_{90} = 0.07642
D_{100} = 0.07689
T_{90} = 0.40 min.

C_v @ T_{90}
1.61 ft.^{2}/day

Figure No.

"Confidential Information: Privileged & Confidential Work Product"

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
91.5 %	35.9 %	81.8	39	20	2.70	0.50	0.18	1.061

MATERIAL DESCRIPTION	USCS	AASHTO
So Gr CL4 Po= 0.319	CL4	

Project No. 18002 **Client:** U.S.Army Corps of Engineers

Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

Source: MG-3U **Sample No.:** 3D **Elev./Depth:** 9.8'

Remarks:
Tested by LWR & BJD

CONSOLIDATION TEST REPORT

EUSTIS ENGINEERING COMPANY, INC.

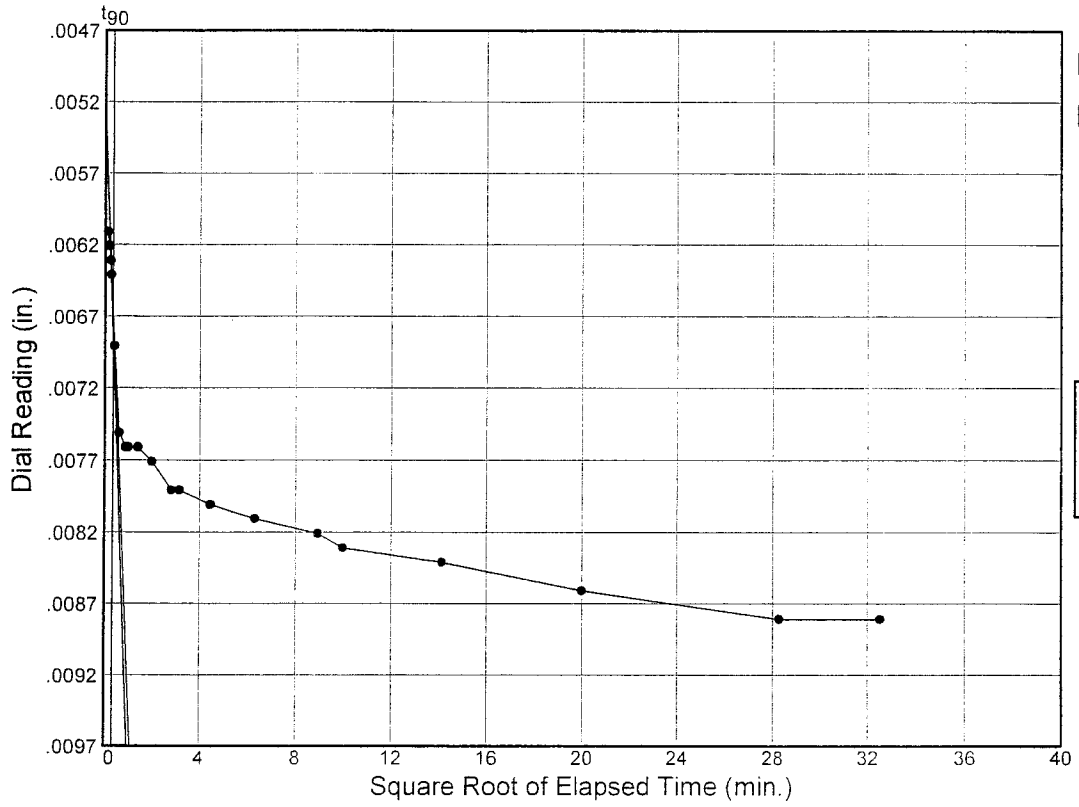
Figure No.

"Confidential Information: Privileged & Confidential Work Product"

Dial Reading vs. Time

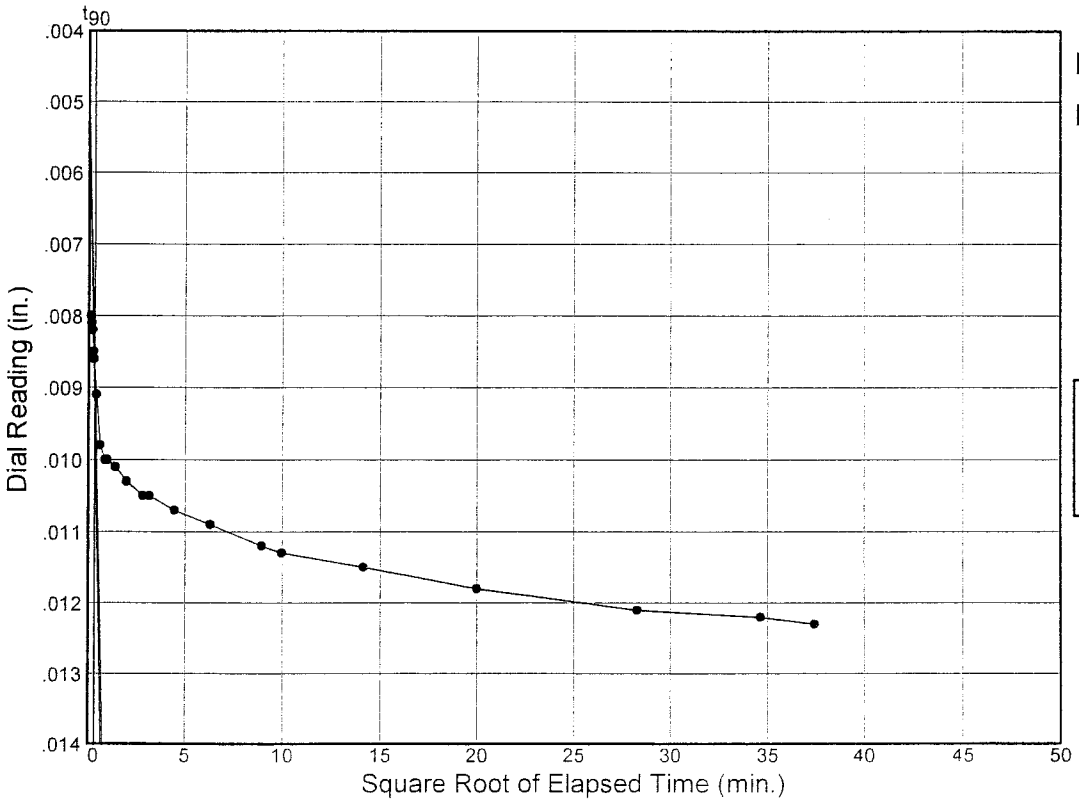
Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

Source: MG-3U Sample No.: 3D Elev./Depth: 9.8'



Load No.= 2
Load= 0.25 tsf
D_0 = 0.00523
D_{90} = 0.00668
D_{100} = 0.00684
T_{90} = 0.13 min.

C_v @ T_{90}
6.38 ft.^{2}/day



Load No.= 3
Load= 0.49 tsf
D_0 = 0.00482
D_{90} = 0.00876
D_{100} = 0.00920
T_{90} = 0.11 min.

C_v @ T_{90}
7.61 ft.^{2}/day

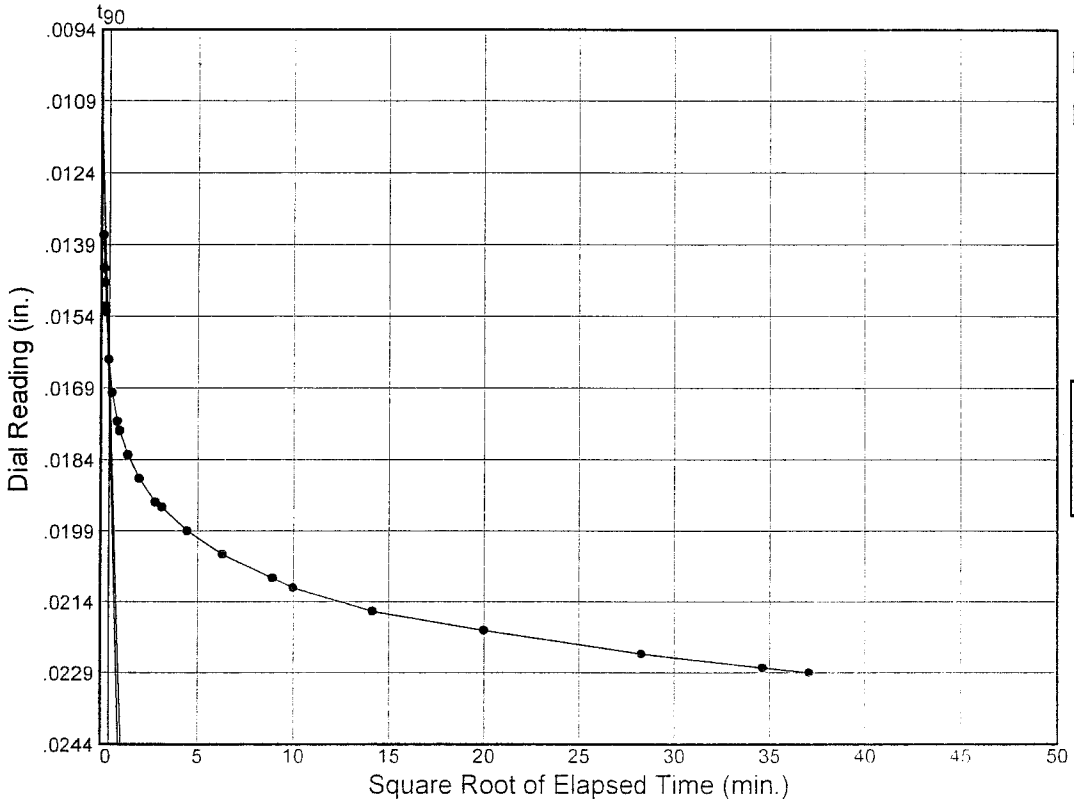
Figure No.

"Confidential Information: Privileged & Confidential Work Product"

Dial Reading vs. Time

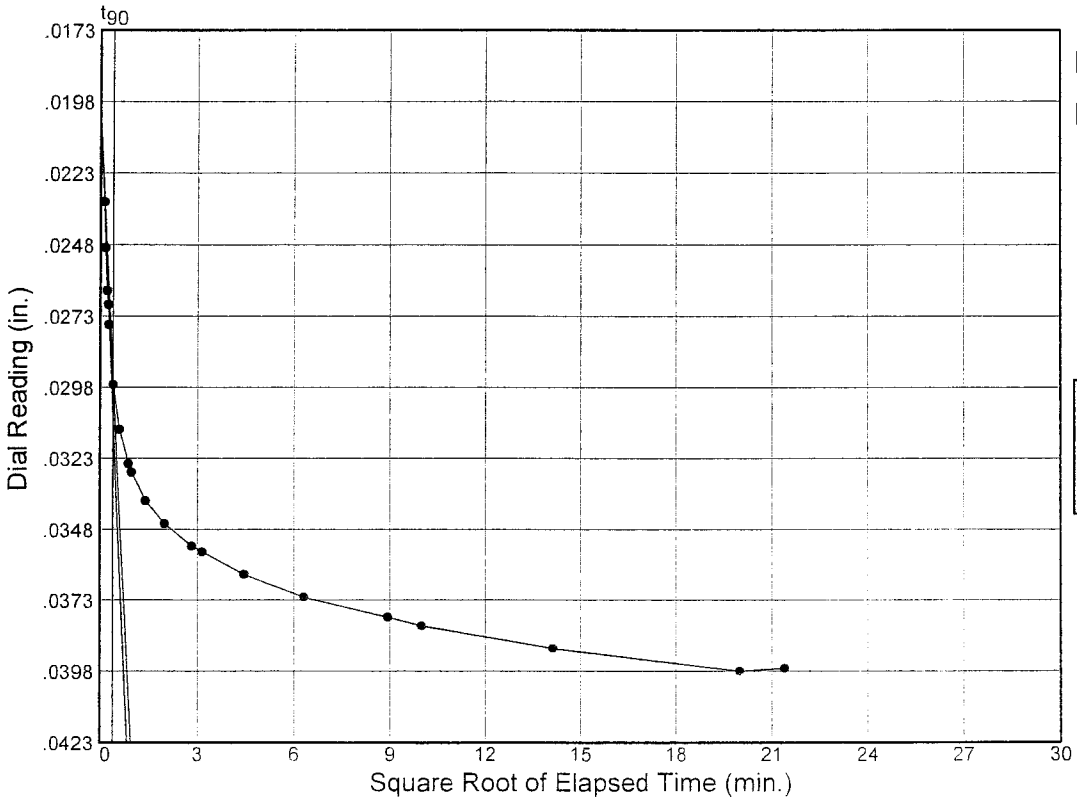
Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

Source: MG-3U Sample No.: 3D Elev./Depth: 9.8'



Load No.= 4
Load= 0.97 tsf
D_0 = 0.01090
D_{90} = 0.01635
D_{100} = 0.01695
T_{90} = 0.19 min.

C_v @ T_{90}
4.22 ft.^{2}/day



Load No.= 5
Load= 1.93 tsf
D_0 = 0.01987
D_{90} = 0.02948
D_{100} = 0.03055
T_{90} = 0.17 min.

C_v @ T_{90}
4.62 ft.^{2}/day

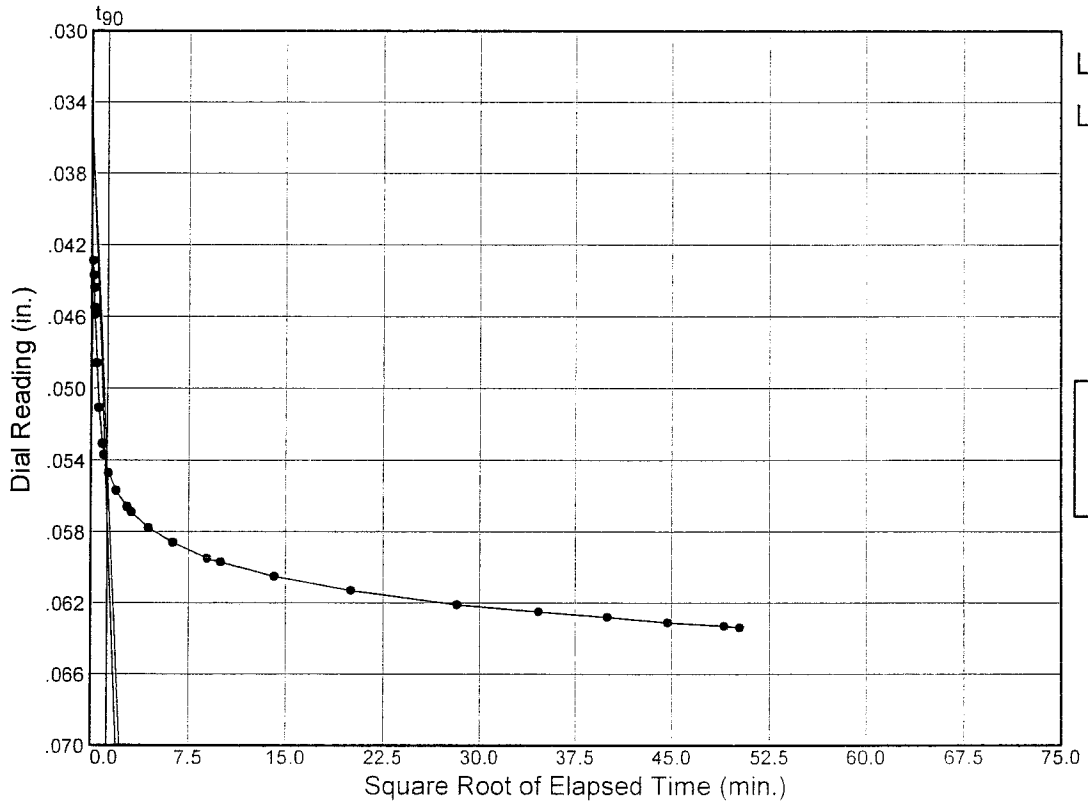
Figure No.

"Confidential Information: Privileged & Confidential Work Product"

Dial Reading vs. Time

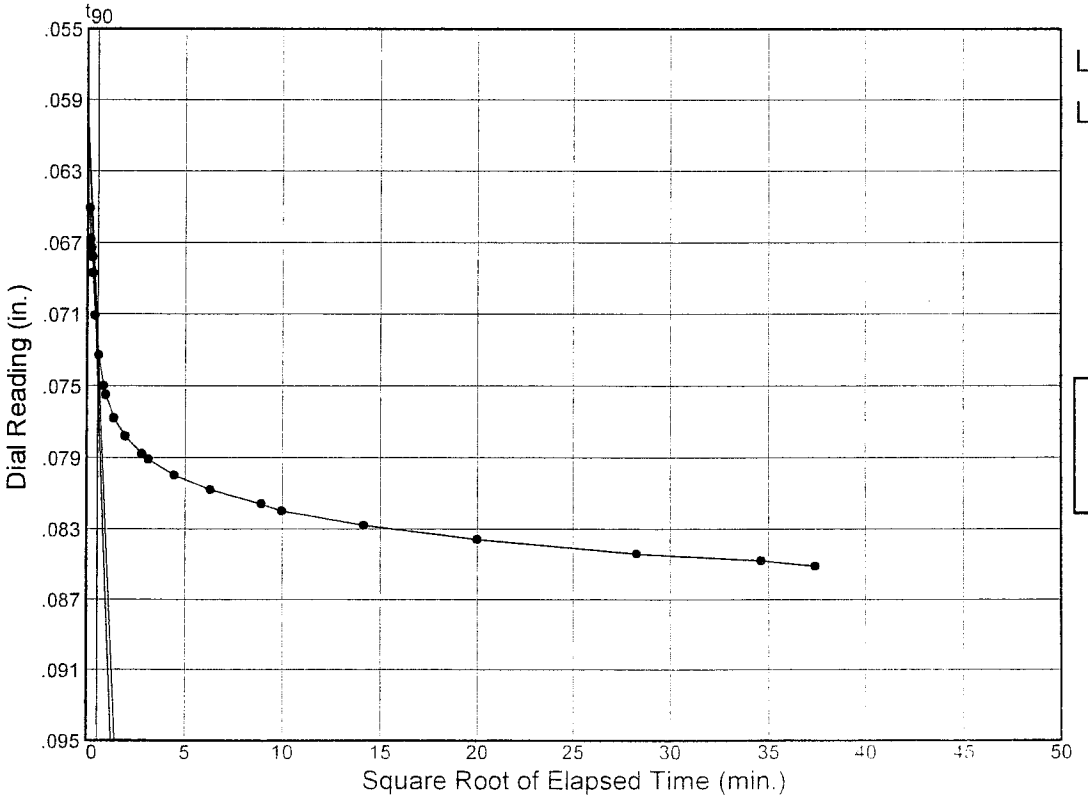
Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

Source: MG-3U Sample No.: 3D Elev./Depth: 9.8'



Load No.= 6
Load= 3.85 tsf
D_0 = 0.03440
D_{90} = 0.05440
D_{100} = 0.05662
T_{90} = 1.64 min.

C_v @ T_{90}
0.44 ft.^{2}/day



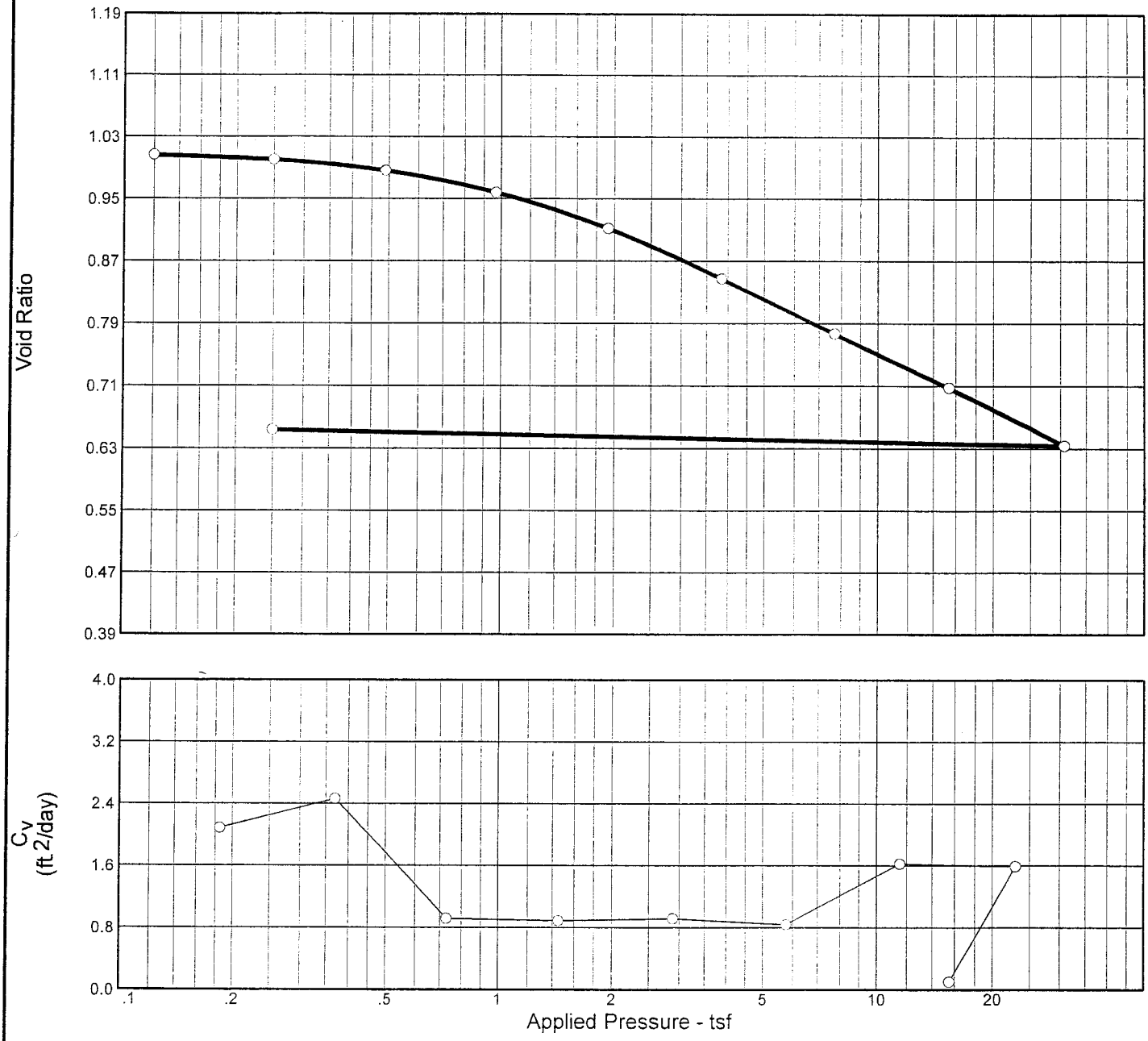
Load No.= 7
Load= 7.69 tsf
D_0 = 0.05907
D_{90} = 0.07257
D_{100} = 0.07407
T_{90} = 0.31 min.

C_v @ T_{90}
2.20 ft.^{2}/day

Figure No.

"Confidential Information: Privileged & Confidential Work Product"

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
93.6 %	35.0 %	83.9	41	20	2.70	1.82	0.23	1.009

MATERIAL DESCRIPTION	USCS	AASHTO
So Gr CL4 $\rho_o = 0.401$	CL4	

Project No. 18002 **Client:** U.S.Army Corps of Engineers

Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

Source: MG-3U **Sample No.:** 4C **Elev./Depth:** 13.1

Remarks:
Tested by BJD

CONSOLIDATION TEST REPORT

EUSTIS ENGINEERING COMPANY, INC.

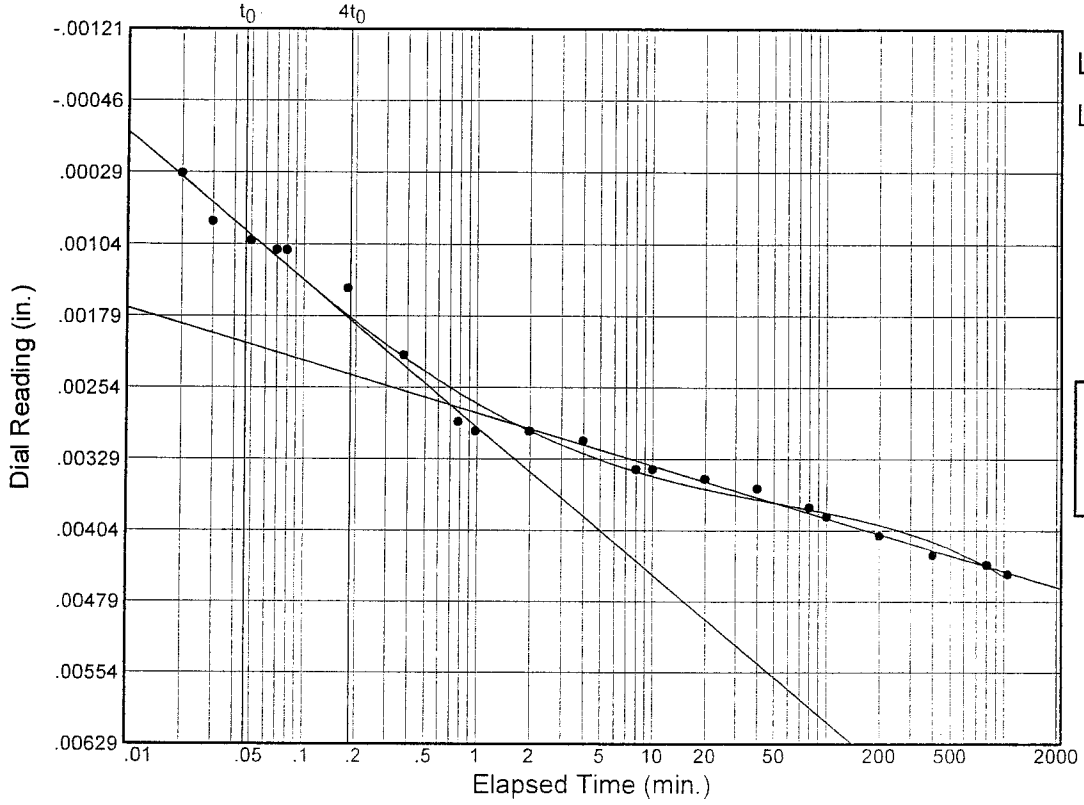
Figure No.

"Confidential Information: Privileged & Confidential Work Product"

Dial Reading vs. Time

Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

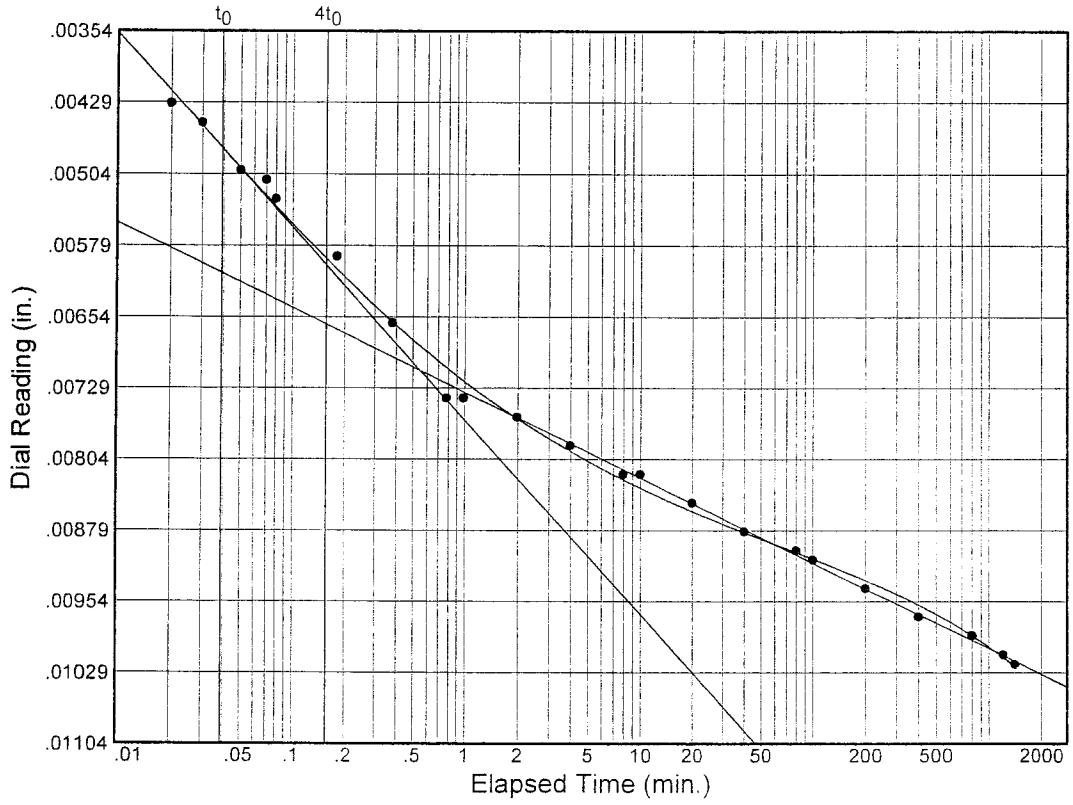
Source: MG-3U Sample No.: 4C Elev./Depth: 13.1



Load No.= 2
Load= 0.25 tsf
D_0 = -0.00001
D_{50} = 0.00136
D_{100} = 0.00273
T_{50} = 0.09 min.

C_v @ T_{50}
2.09 ft.^{2}/day

C_α = 0.001



Load No.= 3
Load= 0.49 tsf
D_0 = 0.00360
D_{50} = 0.00535
D_{100} = 0.00710
T_{50} = 0.08 min.

C_v @ T_{50}
2.46 ft.^{2}/day

C_α = 0.001

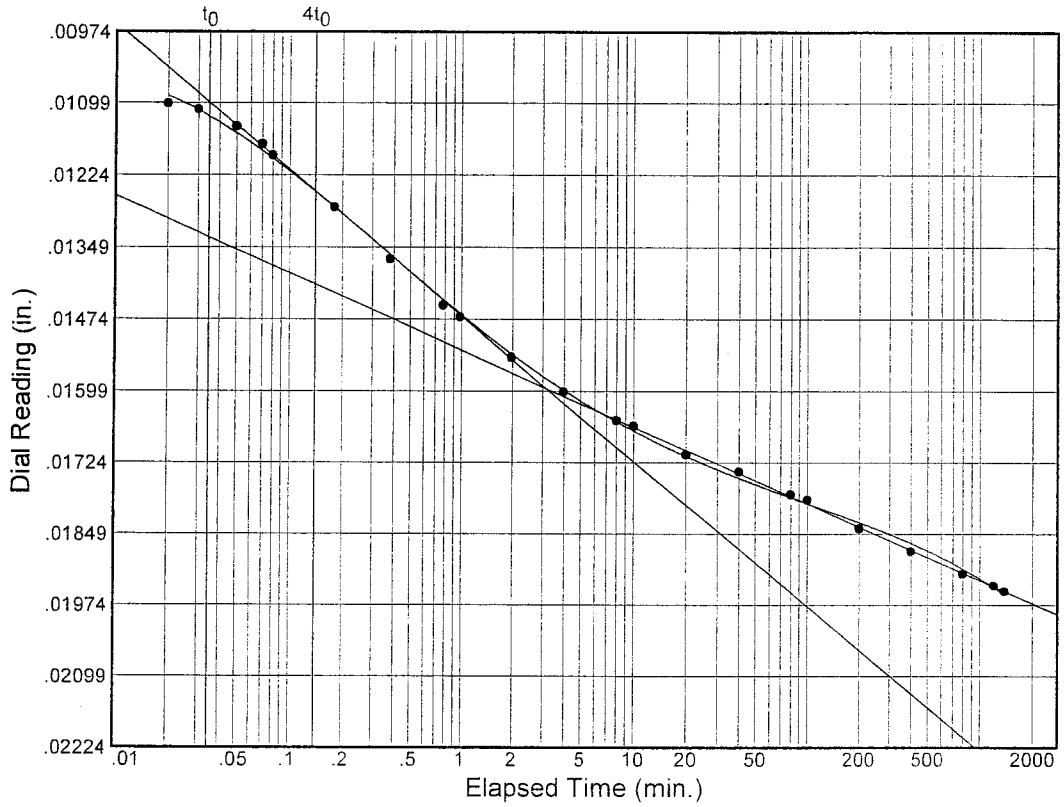
Figure No.

"Confidential Information: Privileged & Confidential Work Product"

Dial Reading vs. Time

Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

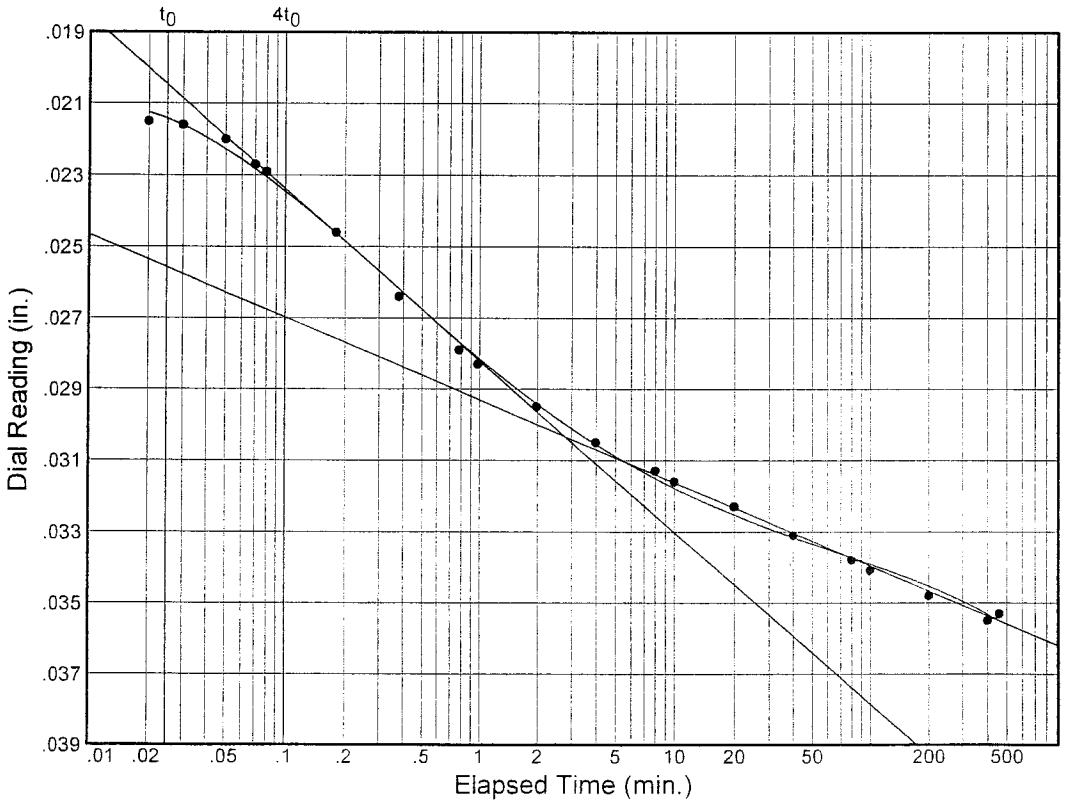
Source: MG-3U Sample No.: 4C Elev./Depth: 13.1



Load No.= 4
Load= 0.97 tsf
D_0 = 0.00992
D_{50} = 0.01293
D_{100} = 0.01594
T_{50} = 0.20 min.

C_v @ T_{50}
0.92 ft.^{2}/day

C_α = 0.002



Load No.= 5
Load= 1.93 tsf
D_0 = 0.01938
D_{50} = 0.02486
D_{100} = 0.03033
T_{50} = 0.20 min.

C_v @ T_{50}
0.89 ft.^{2}/day

C_α = 0.004

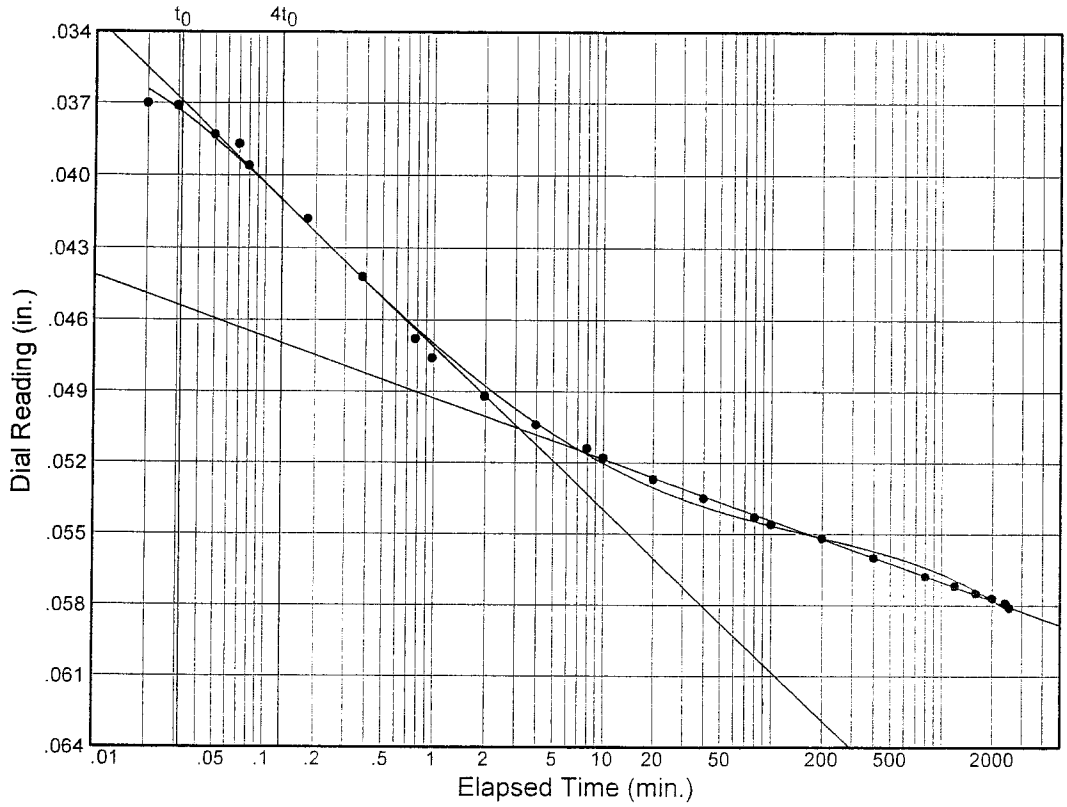
Figure No.

"Confidential Information: Privileged & Confidential Work Product"

Dial Reading vs. Time

Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

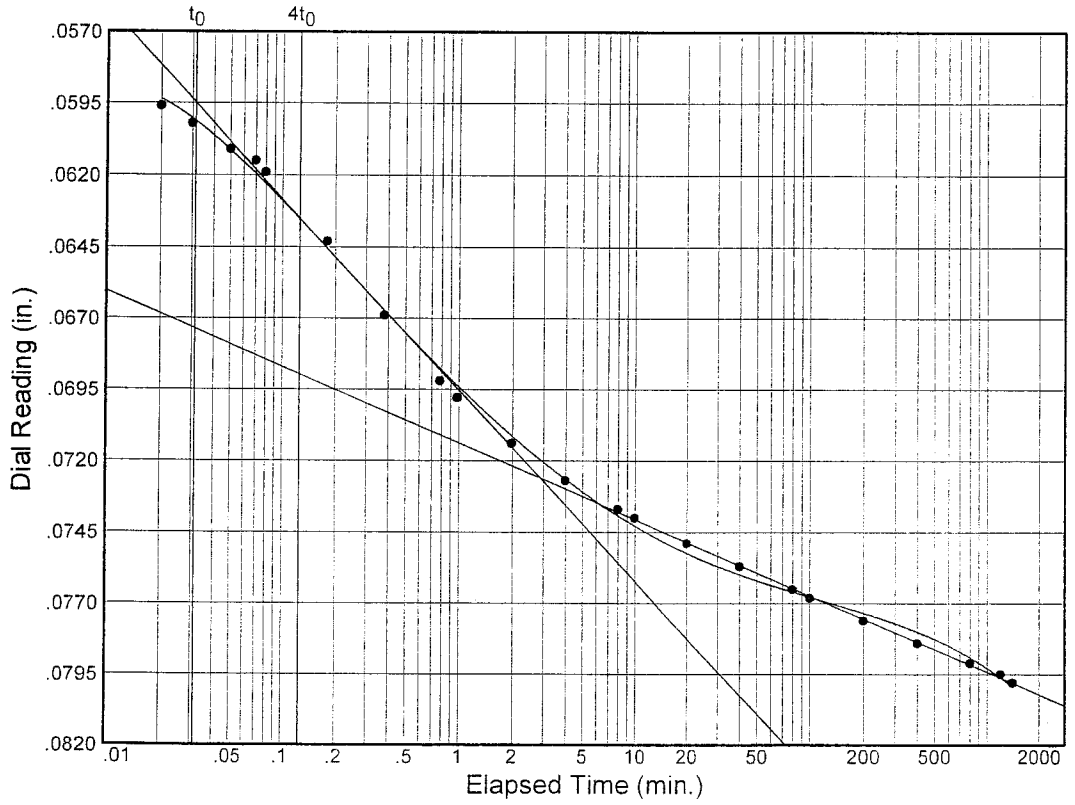
Source: MG-3U Sample No.: 4C Elev./Depth: 13.1



Load No.= 6
Load= 3.85 tsf
D_0 = 0.03369
D_{50} = 0.04213
D_{100} = 0.05058
T_{50} = 0.18 min.

C_v @ T_{50}
0.91 ft.^{2}/day

C_α = 0.004



Load No.= 7
Load= 7.69 tsf
D_0 = 0.05670
D_{50} = 0.06465
D_{100} = 0.07261
T_{50} = 0.19 min.

C_v @ T_{50}
0.84 ft.^{2}/day

C_α = 0.005

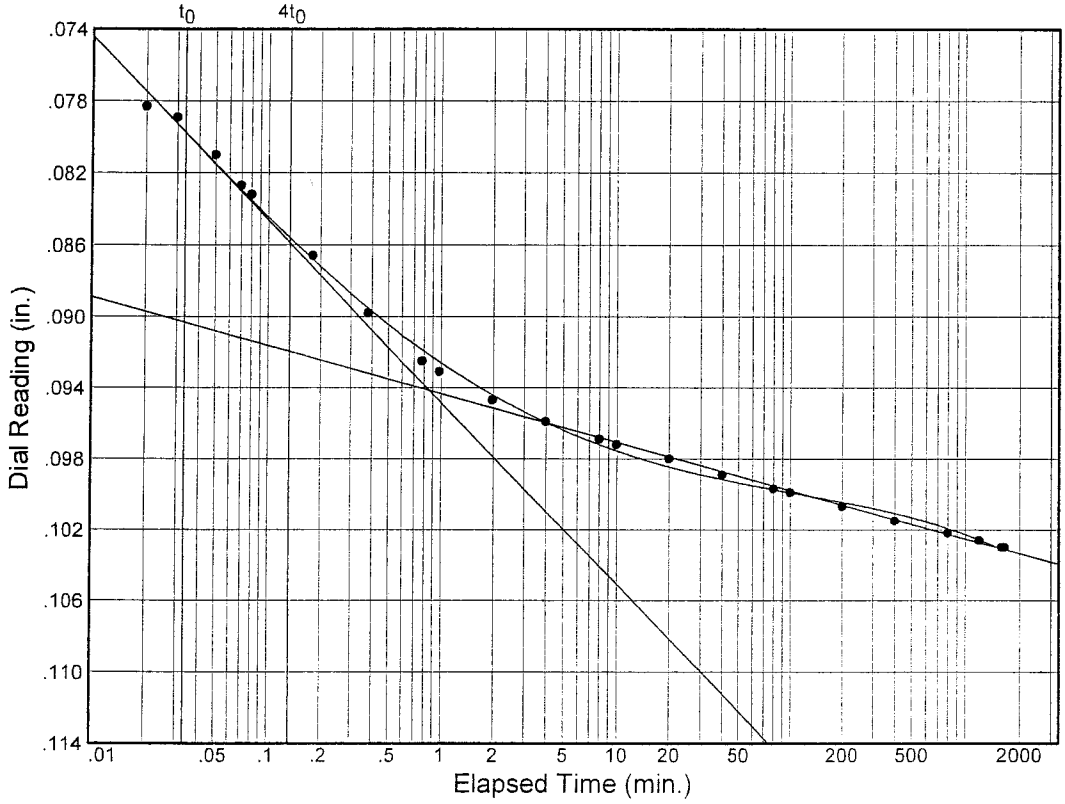
Figure No.

"Confidential Information: Privileged & Confidential Work Product"

Dial Reading vs. Time

Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

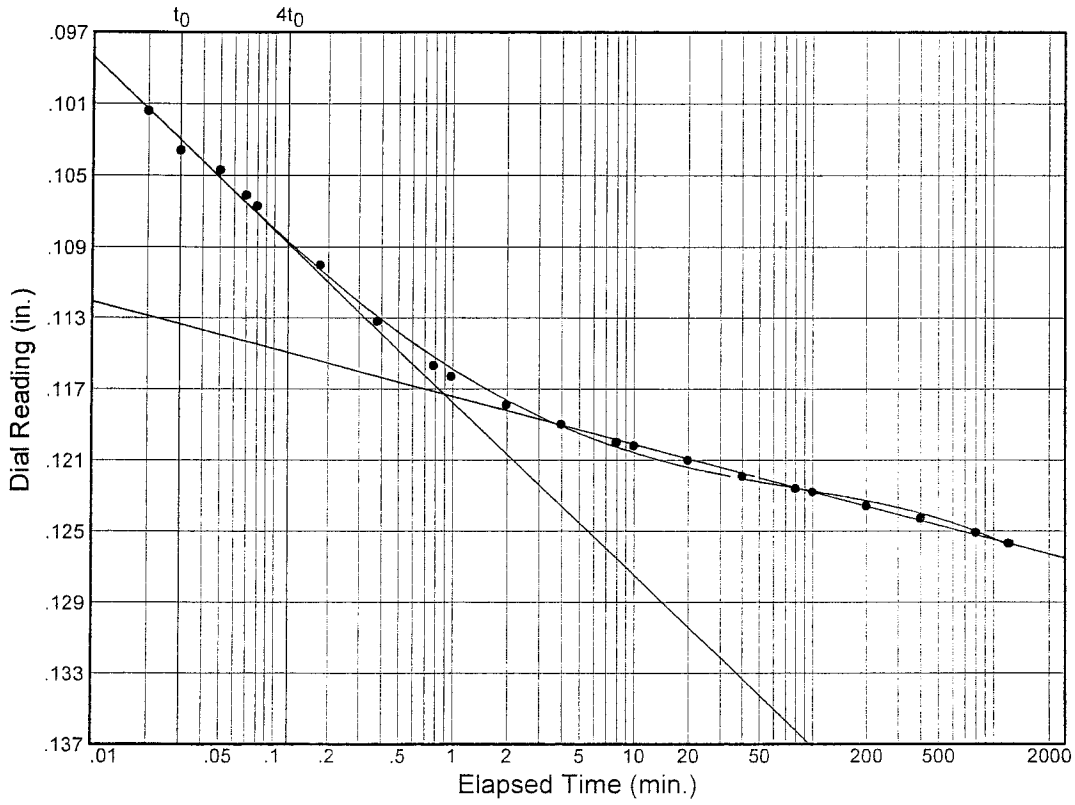
Source: MG-3U Sample No.: 4C Elev./Depth: 13.1



Load No.= 8
Load= 15.37 tsf
D_0 = 0.07385
D_{50} = 0.08401
D_{100} = 0.09416
T_{50} = 0.09 min.

C_v @ T_{50}
1.62 ft.^{2}/day

C_α = 0.005



Load No.= 9
Load= 30.73 tsf
D_0 = 0.09727
D_{50} = 0.10728
D_{100} = 0.11729
T_{50} = 0.08 min.

C_v @ T_{50}
1.59 ft.^{2}/day

C_α = 0.005

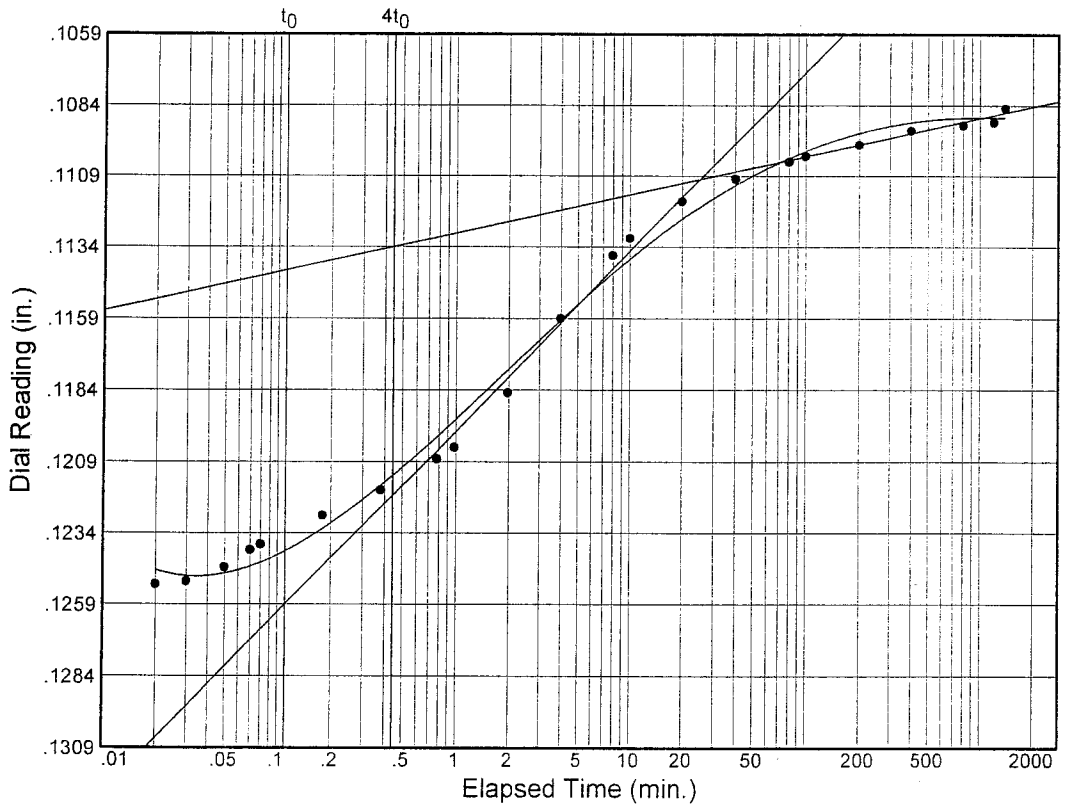
Figure No.

"Confidential Information: Privileged & Confidential Work Product"

Dial Reading vs. Time

Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

Source: MG-3U Sample No.: 4C Elev./Depth: 13.1



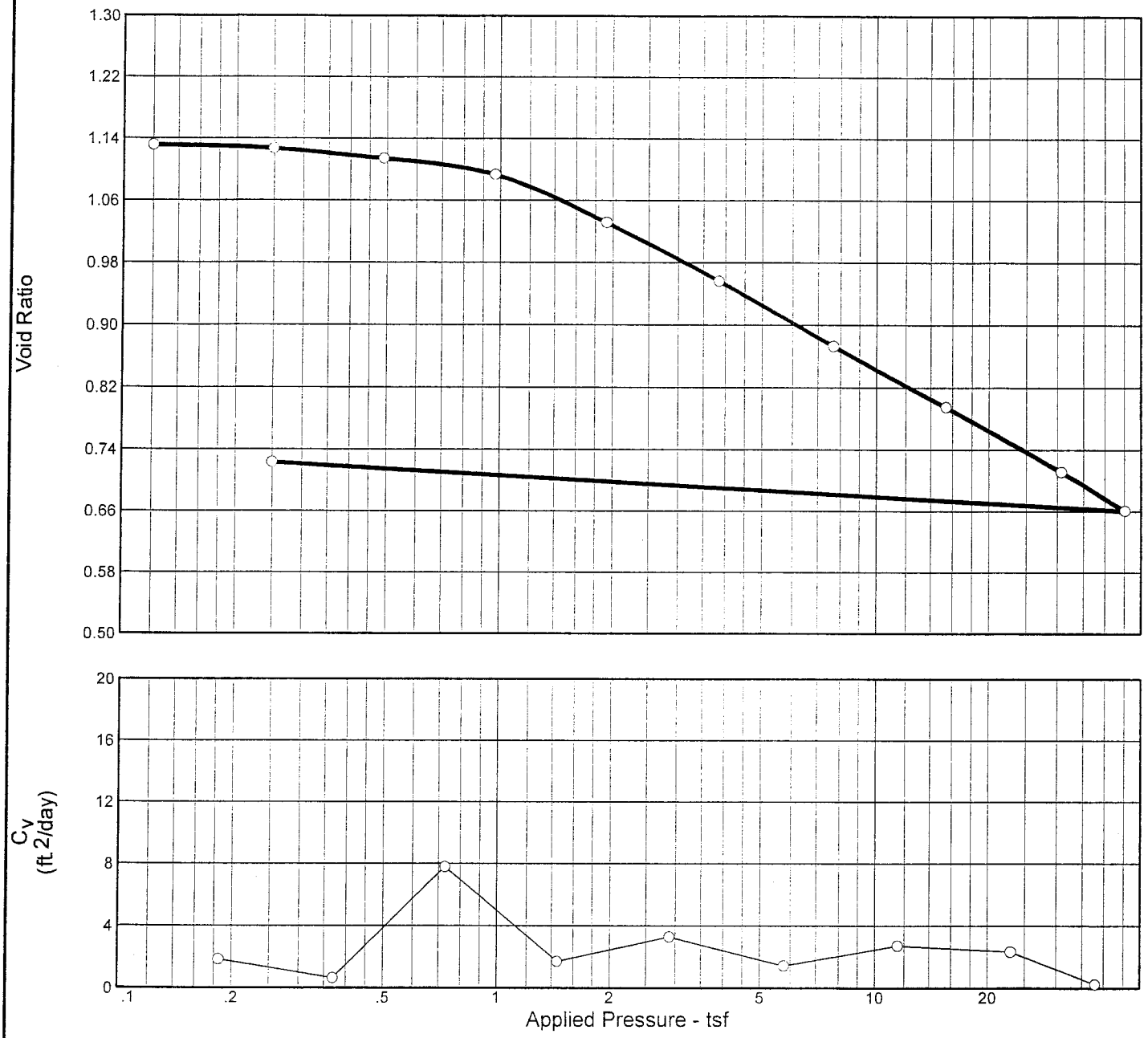
Load No.= 10
Load= 0.25 tsf
D_0 = 0.12667
D_{50} = 0.11884
D_{100} = 0.11101
T_{50} = 1.26 min.

C_v @ T_{50}
0.10 ft.^{2}/day

Figure No.

"Confidential Information: Privileged & Confidential Work Product"

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
95.8 %	40.4 %	79.1	39	19	2.70	1.55	0.27	1.137

MATERIAL DESCRIPTION	USCS	AASHTO
So Gr CL4 to 0.599	CL4	

Project No. 18002 **Client:** U.S.Army Corps of Engineers

Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

Source: MG-3U **Sample No.:** 6C **Elev./Depth:** 21.0

Remarks:
Tested by BJD

CONSOLIDATION TEST REPORT

EUSTIS ENGINEERING COMPANY, INC.

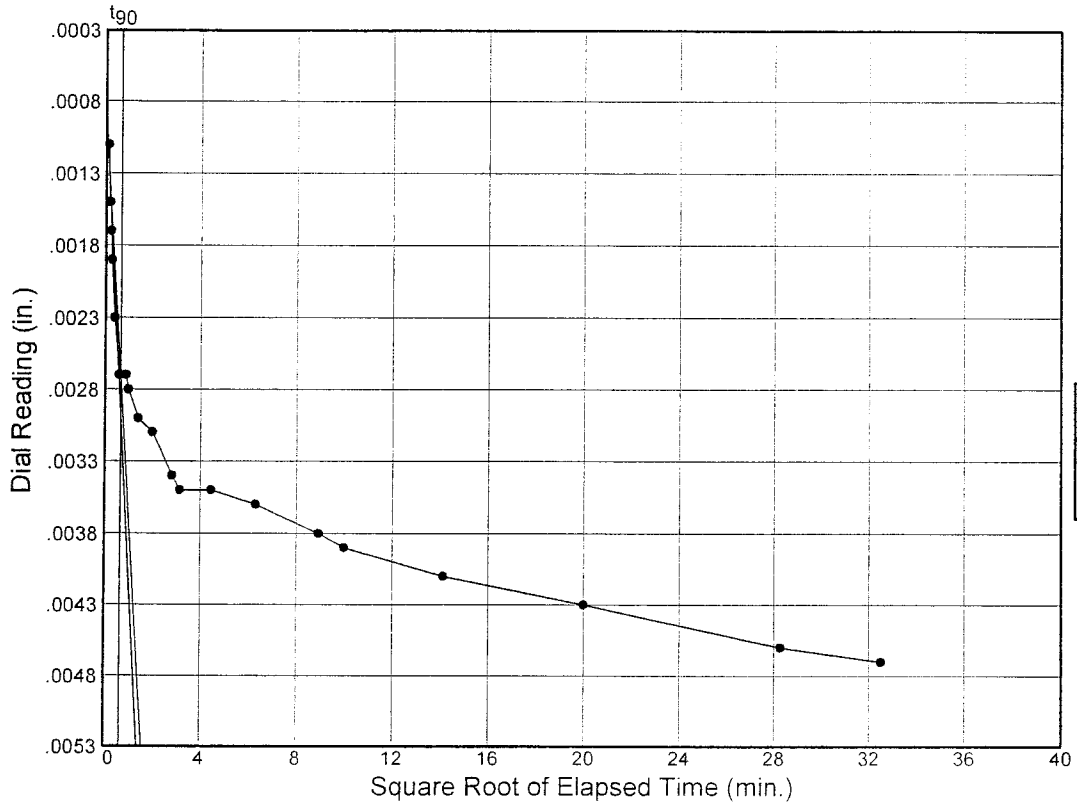
Figure No.

"Confidential Information: Privileged & Confidential Work Product"

Dial Reading vs. Time

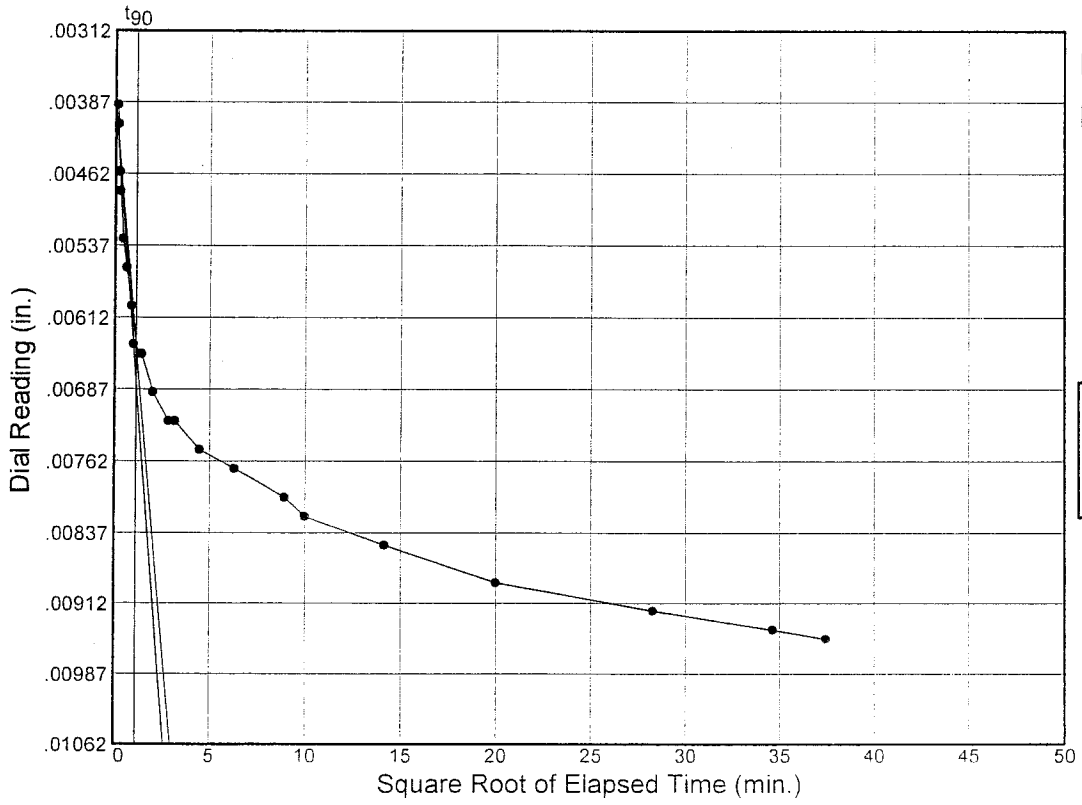
Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

Source: MG-3U Sample No.: 6C Elev./Depth: 21.0



Load No.= 2
Load= 0.25 tsf
D_0 = 0.00085
D_{90} = 0.00270
D_{100} = 0.00291
T_{90} = 0.45 min.

C_v @ T_{90}
1.84 ft.^{2}/day



Load No.= 3
Load= 0.49 tsf
D_0 = 0.00387
D_{90} = 0.00643
D_{100} = 0.00672
T_{90} = 1.27 min.

C_v @ T_{90}
0.64 ft.^{2}/day

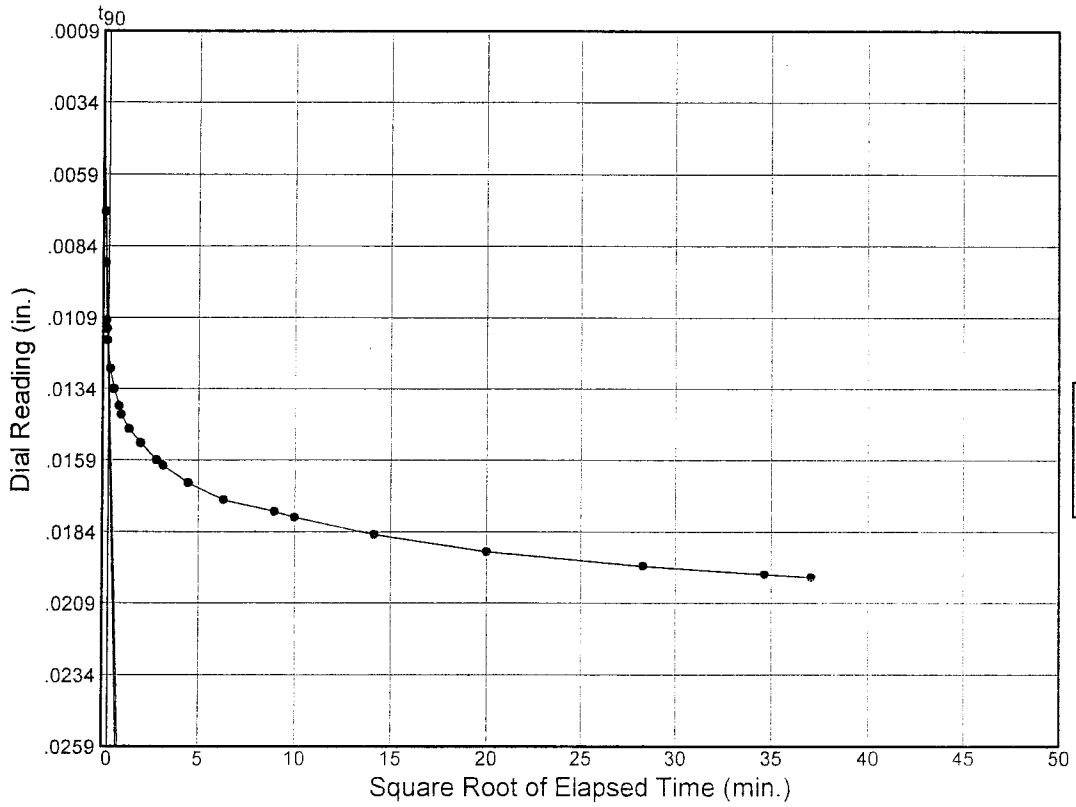
Figure No.

"Confidential Information: Privileged & Confidential Work Product"

Dial Reading vs. Time

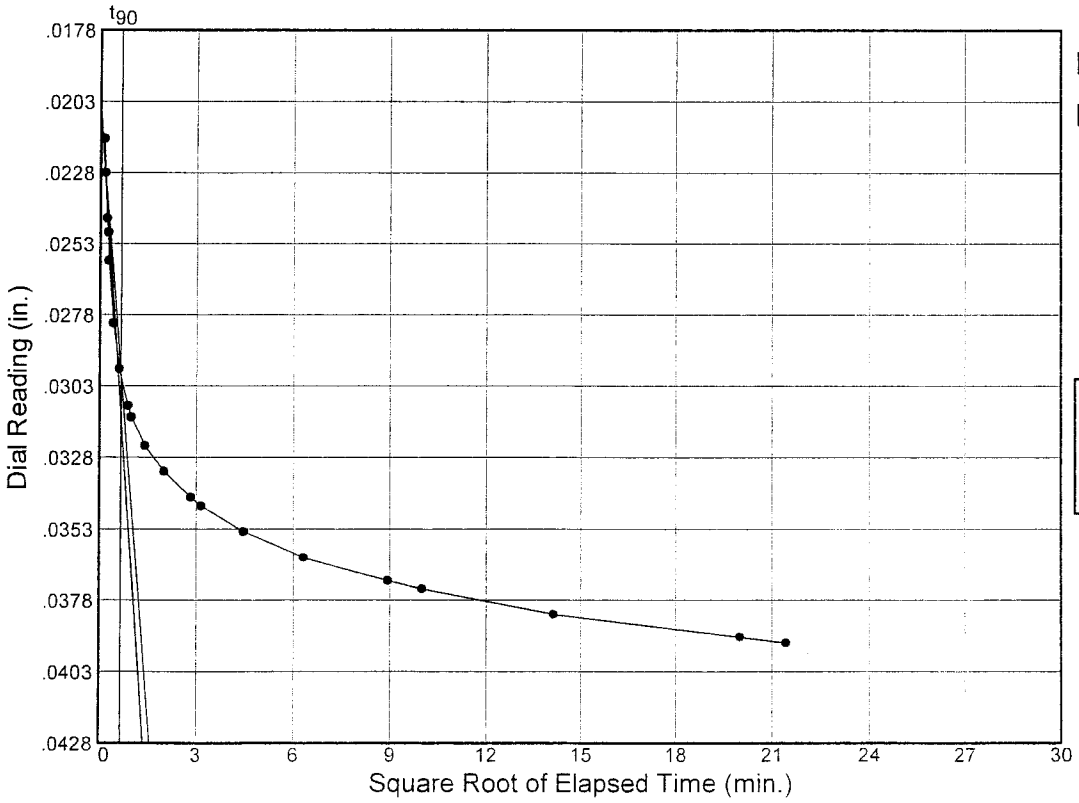
Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

Source: MG-3U Sample No.: 6C Elev./Depth: 21.0



Load No.= 4
Load= 0.97 tsf
D_0 = 0.00341
D_{90} = 0.01198
D_{100} = 0.01294
T_{90} = 0.10 min.

C_v @ T_{90}
7.79 ft.^{2}/day



Load No.= 5
Load= 1.93 tsf
D_0 = 0.02032
D_{90} = 0.02996
D_{100} = 0.03103
T_{90} = 0.45 min.

C_v @ T_{90}
1.71 ft.^{2}/day

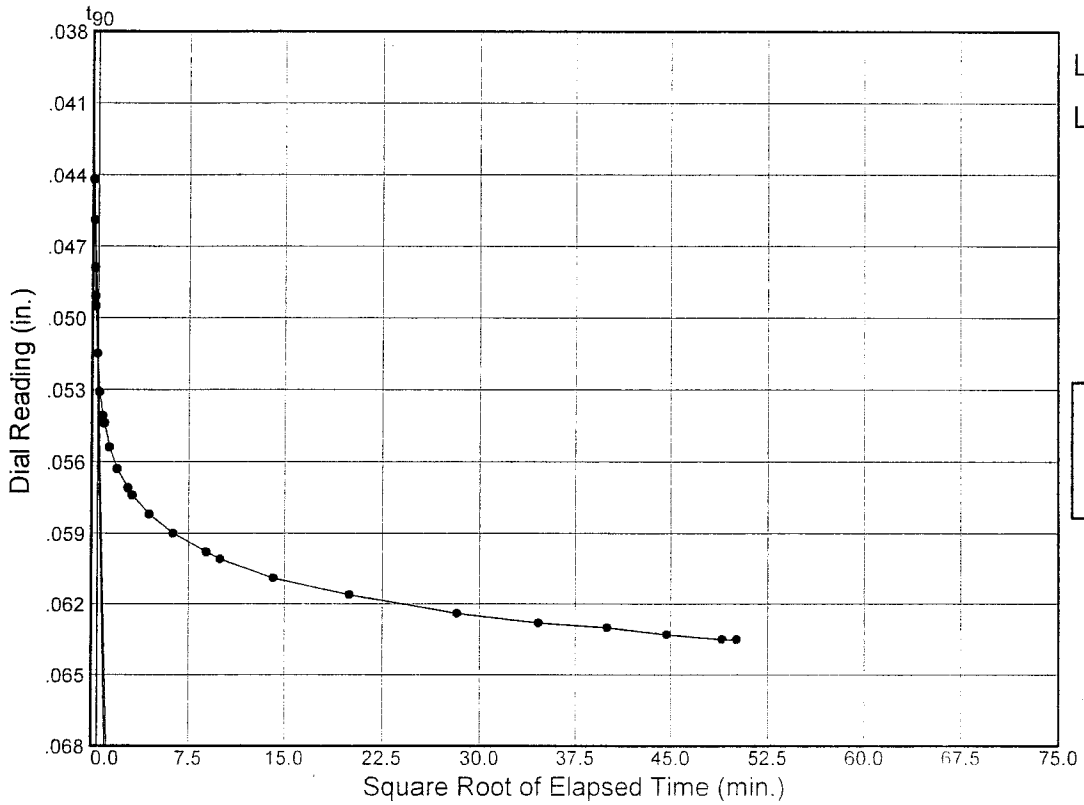
Figure No.

"Confidential Information: Privileged & Confidential Work Product"

Dial Reading vs. Time

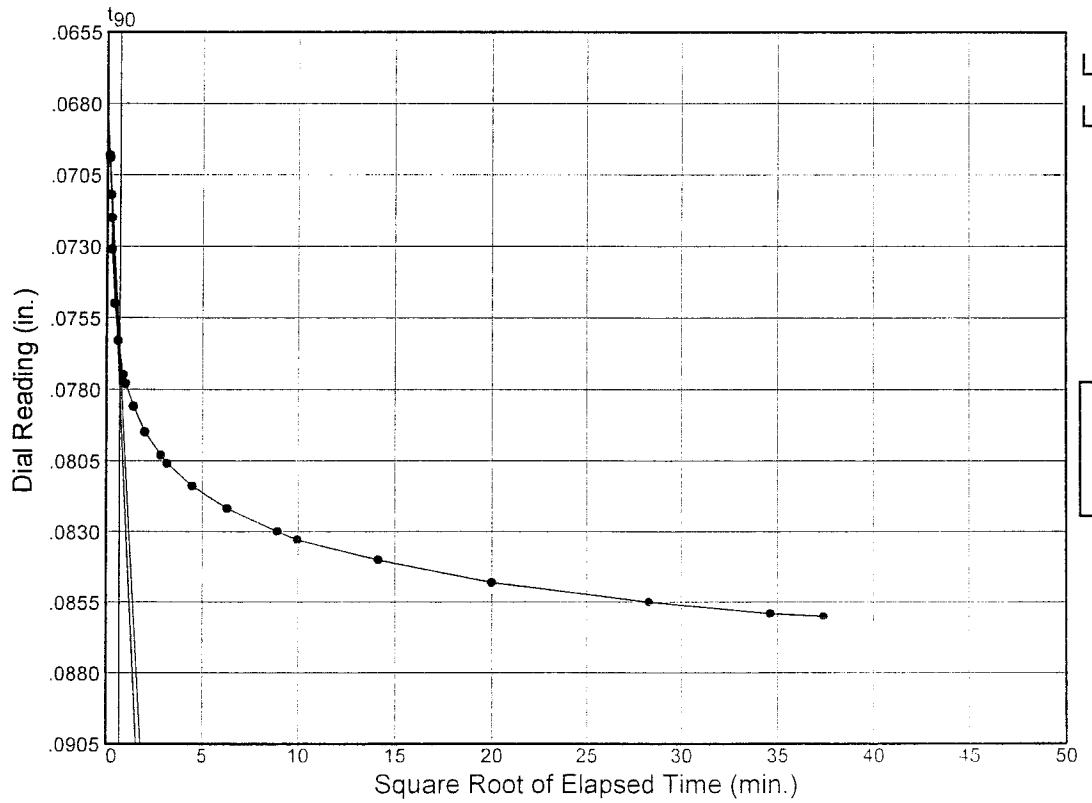
Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

Source: MG-3U Sample No.: 6C Elev./Depth: 21.0



Load No.= 6
Load= 3.85 tsf
D_0 = 0.04172
D_{90} = 0.05184
D_{100} = 0.05297
T_{90} = 0.22 min.

C_v @ T_{90}
3.29 ft.^{2}/day



Load No.= 7
Load= 7.69 tsf
D_0 = 0.06807
D_{90} = 0.07656
D_{100} = 0.07750
T_{90} = 0.45 min.

C_v @ T_{90}
1.44 ft.^{2}/day

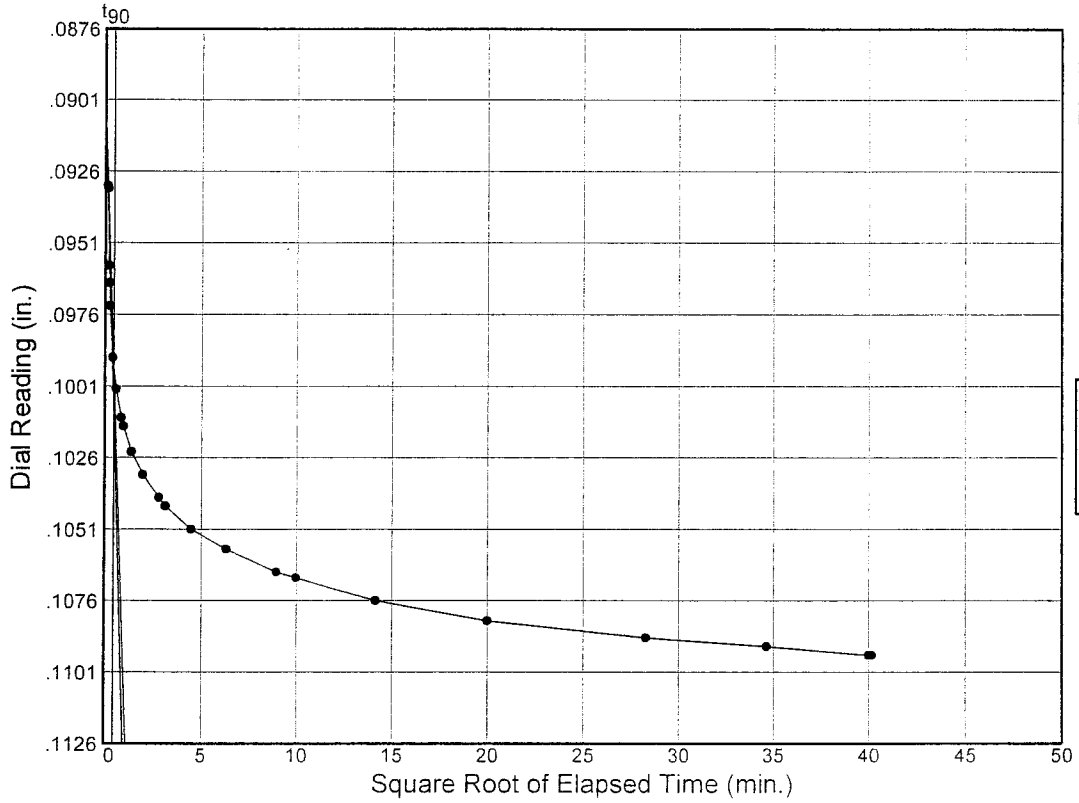
Figure No.

"Confidential Information: Privileged & Confidential Work Product"

Dial Reading vs. Time

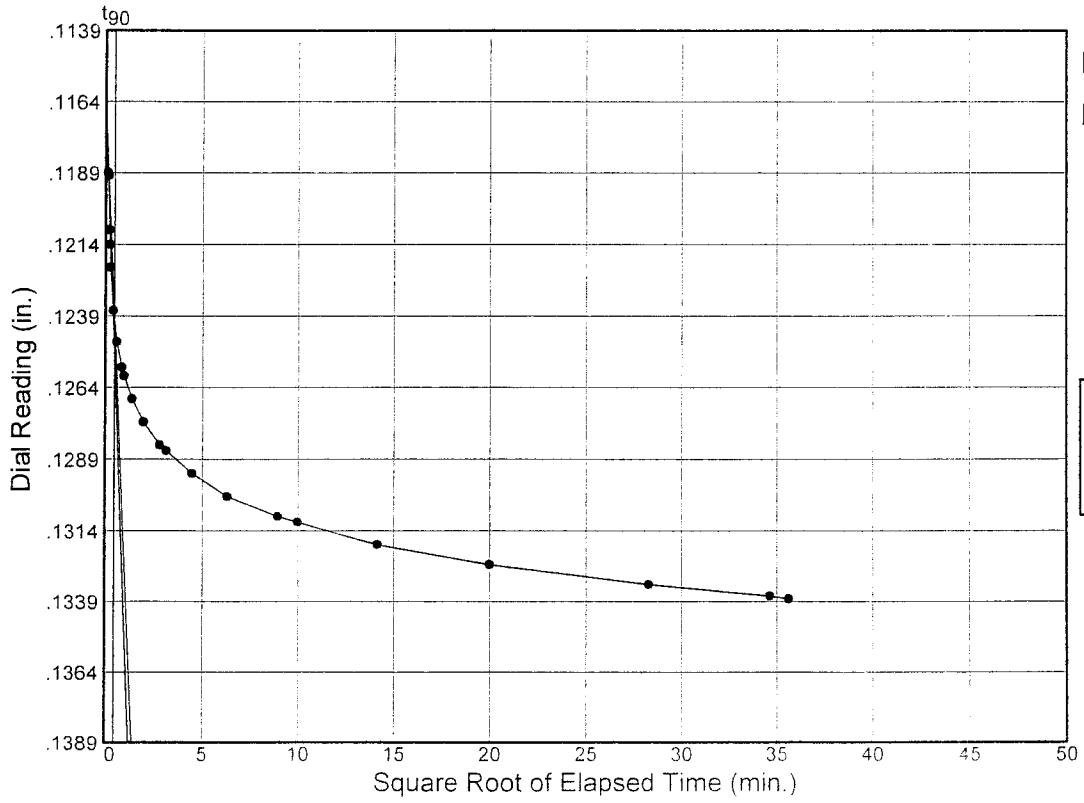
Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

Source: MG-3U Sample No.: 6C Elev./Depth: 21.0



Load No.= 8
Load= 15.37 tsf
D_0 = 0.09019
D_{90} = 0.09935
D_{100} = 0.10037
T_{90} = 0.22 min.

C_v @ T_{90}
2.73 ft.^{2}/day



Load No.= 9
Load= 30.73 tsf
D_0 = 0.11649
D_{90} = 0.12403
D_{100} = 0.12487
T_{90} = 0.23 min.

C_v @ T_{90}
2.34 ft.^{2}/day

Figure No.

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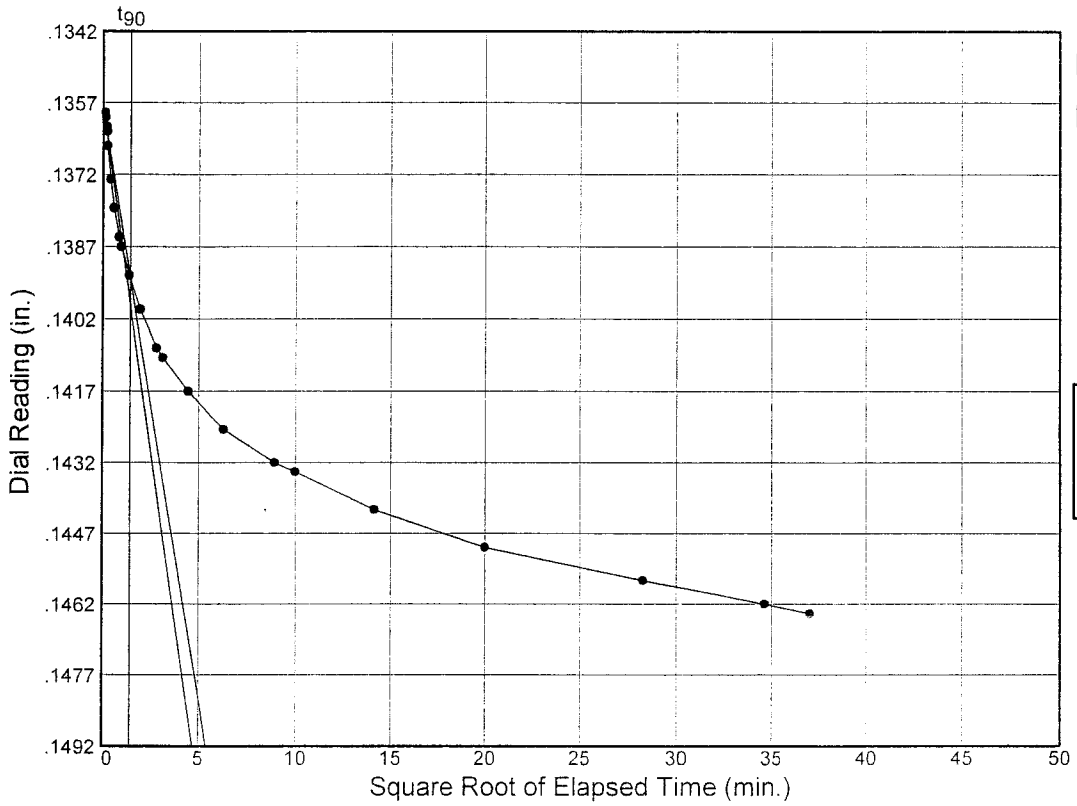
Dial Reading vs. Time

Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

Source: MG-3U Sample No.: 6C Elev./Depth: 21.0



Load No.= 10
Load= 45.21 tsf
D_0 = 0.13572
D_{90} = 0.13937
D_{100} = 0.13977
T_{90} = 2.14 min.

C_v @ T_{90}

0.24 ft.^{2}/day

Figure No.

EUSTIS ENGINEERING COMPANY, INC.

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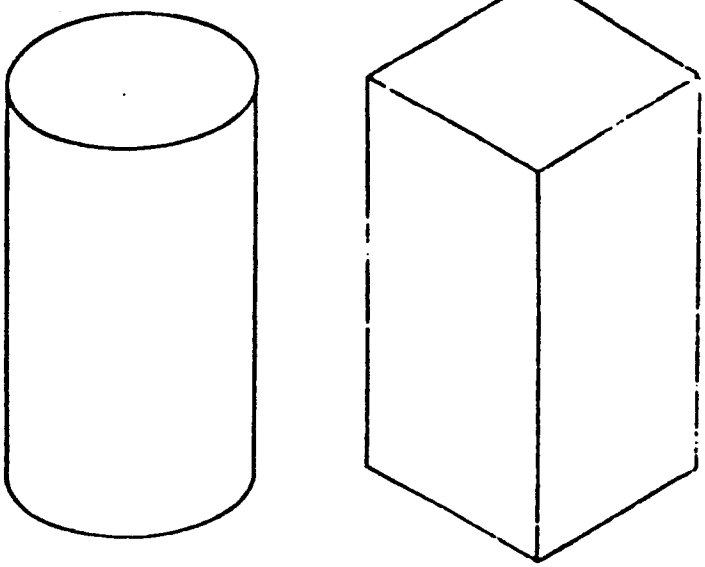
SSION TEST

MYRTLE GROVE
ECOSYSTEM RESTORATION
PROJECT FEASIBILITY STUDY
BOR: MG-3U
5" UNDIST. (03-15)

DATE 7 MAY 03
SAMPLE NUMBER 5-D
TARE NUMBER 181
WET WEIGHT OF SOIL 119.6 gms
DRY WEIGHT OF SOIL 71.5 gms
WEIGHT OF WATER _____ gms
MOISTURE CONTENT _____ %
BULK WET DENSITY _____ #/cu.ft
MACHINE NUMBER _____

FAILURE DIAGRAM



☐ LARGE SAMPLE = 1.4^2 x 3.5
DENSITY FACTOR = 0.55511

○ CYLINDRICAL SAMPLE 1.4X3.0
DENSITY FACTOR 0.82452

☐ SMALL SAMPLE = 1.0^2 x 2.5
DENSITY FACTOR = 1.52307

DIAL READING	LOAD IN POUNDS	PROVING RING DIAL READING 10^{-4} in.	CORRECTED AREA (sq.ft.)	UNIT STRESS #/sq.ft.	UNCONFINED COMPRESSIVE STRENGTH #/sq. ft.	REMARKS
000		0				
025		6.5				
050		10.5				
075		13.5				
100		14.9				
125		15.6				
150	✓	15.7	✓			
175		15.4				
200		14.8				
225		14.1				
250		13.7				
275		12.9				
300		12.4				
325		12.2				
350		11.9				
375		11.4				
400		11.1				
425		10.8				
450		10.7				
475		10.7				
500		10.7				
525		10.7				

Technician _____ Computations _____ Checked _____

"Confidential Information: Privileged & Confidential Work Product"

SHEET FOR USE WITH LOAD CELL MACHINE

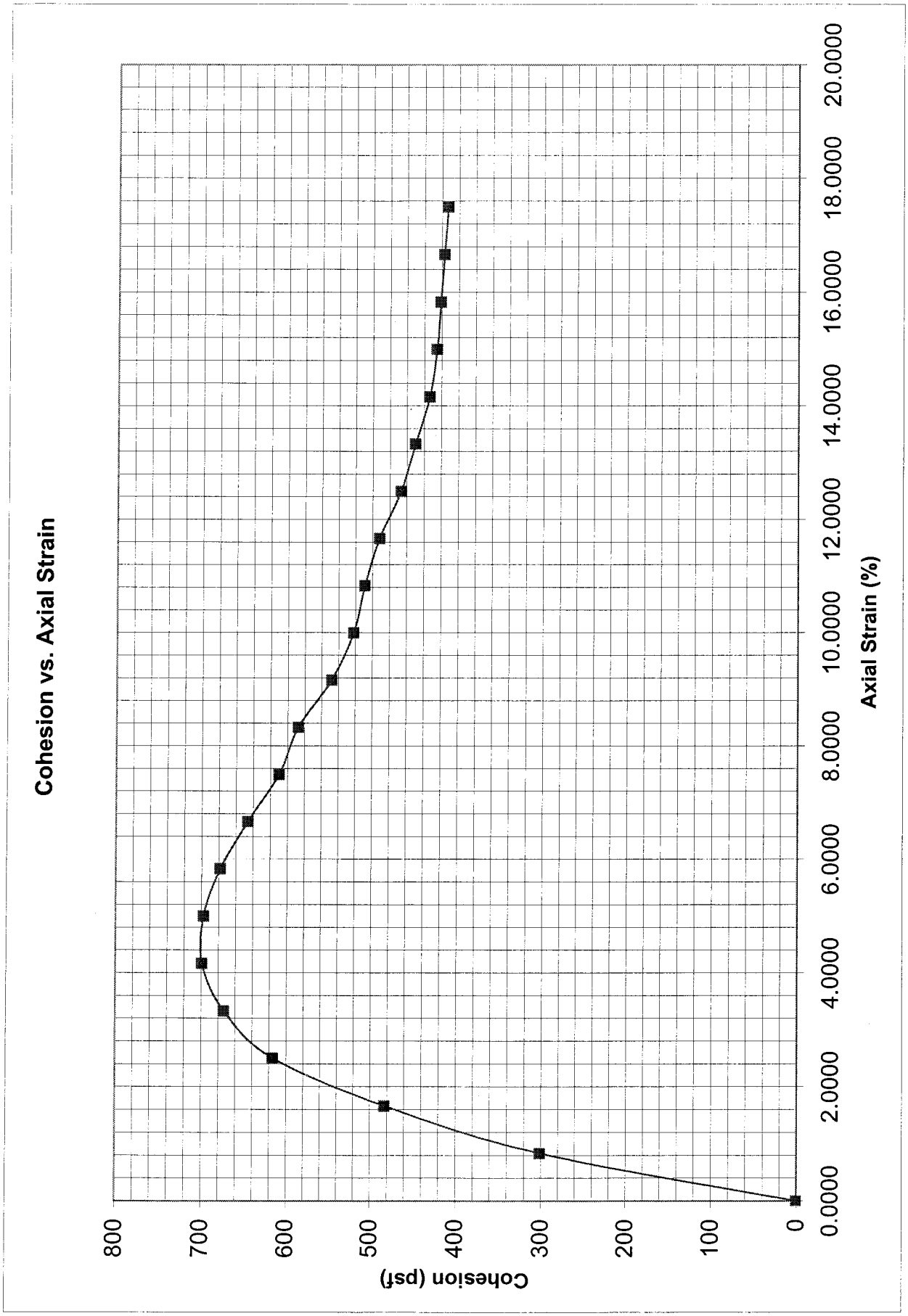
Date	5/7/2003	Design Engineer	Mark Woodward
Sample No.	5-D	Soil Description	CH
Type Test	UCT	Boring Location	
		Boring Name	MG-3U
		Depth/Elevation	
		Testing Technician	

Tare No.	181		Initial Condition of Specimen			
wet soil (g)	119.60		Top	Center	Bottom	Average
dry soil (g)	71.50	Diameter (in)	1.400	1.400	1.4	1.400
Water (g)	48.10	Height (in)	3			
Water Content (%)	67.27	Area (in^2)	1.539			
Bulk Density (pcf)	98.57	Volume (in3)	4.618			

Inches/Div	0.001
Strain Rate (% / min)	1

Dial Rdg (div)	Δ H (in)	Load (lbs)	Axl Strain	Axl Strain %	A-Corr (in^2)	UC Stress (psi)	UC Stress (psf)	Cohesion (psf)
0	0	0	0.0000	0.0000	1.539	0.000	0	0
25	0.025	6.5	0.0083	0.8333	1.552	4.187	603	301
50	0.05	10.5	0.0167	1.6667	1.565	6.707	966	483
75	0.075	13.5	0.0250	2.5000	1.579	8.551	1231	616
100	0.1	14.9	0.0333	3.3333	1.592	9.357	1347	674
125	0.125	15.6	0.0417	4.1667	1.606	9.712	1398	699
150	0.15	15.7	0.0500	5.0000	1.620	9.689	1395	698
175	0.175	15.4	0.0583	5.8333	1.635	9.420	1357	678
200	0.2	14.8	0.0667	6.6667	1.649	8.973	1292	646
225	0.225	14.1	0.0750	7.5000	1.664	8.473	1220	610
250	0.25	13.7	0.0833	8.3333	1.679	8.158	1175	587
275	0.275	12.9	0.0917	9.1667	1.695	7.612	1096	548
300	0.3	12.4	0.1000	10.0000	1.710	7.250	1044	522
325	0.325	12.2	0.1083	10.8333	1.726	7.067	1018	509
350	0.35	11.9	0.1167	11.6667	1.743	6.829	983	492
375	0.375	11.4	0.1250	12.5000	1.759	6.480	933	467
400	0.4	11.1	0.1333	13.3333	1.776	6.249	900	450
425	0.425	10.8	0.1417	14.1667	1.793	6.022	867	434
450	0.45	10.7	0.1500	15.0000	1.811	5.908	851	425
475	0.475	10.7	0.1583	15.8333	1.829	5.850	842	421
500	0.5	10.7	0.1667	16.6667	1.847	5.792	834	417
525	0.525	10.7	0.1750	17.5000	1.866	5.734	826	413

"Confidential Information: Privileged & Confidential Work Product"



"Confidential Information: Privileged & Confidential Work Product"

SHEET FOR USE WITH LOAD CELL MACHINE

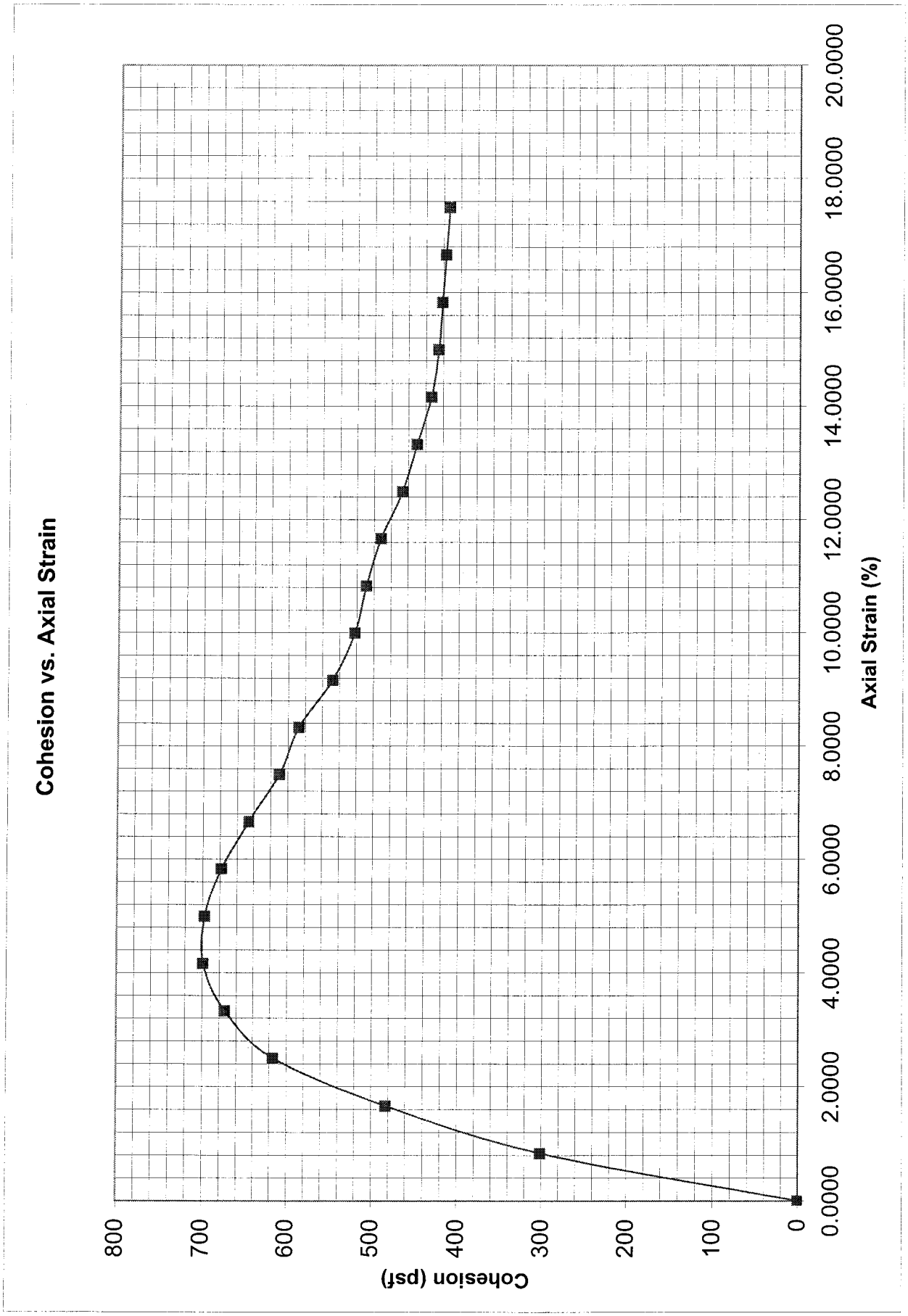
Date	5/7/2003	Design Engineer	Mark Woodward
Sample No.	5-D	Soil Description	CH
Type Test	UCT	Boring Location	
		Boring Name	MG-3U
		Depth/Elevation	
		Testing Technician	

Tare No.	181		Initial Condition of Specimen			
wet soil (g)	119.60		Top	Center	Bottom	Average
dry soil (g)	71.50	Diameter (in)	1.400	1.400	1.4	1.400
Water (g)	48.10	Height (in)	3			
Water Content (%)	67.27	Area (in^2)	1.539			
Bulk Density (pcf)	98.57	Volume (in3)	4.618			

Inches/Div	0.001
Strain Rate (% / min)	1

Dial Rdg (div)	Δ H (in)	Load (lbs)	Axl Strain	Axl Strain %	A-Corr (in^2)	UC Stress (psi)	UC Stress (psf)	Cohesion (psf)
0	0	0	0.0000	0.0000	1.539	0.000	0	0
25	0.025	6.5	0.0083	0.8333	1.552	4.187	603	301
50	0.05	10.5	0.0167	1.6667	1.565	6.707	966	483
75	0.075	13.5	0.0250	2.5000	1.579	8.551	1231	616
100	0.1	14.9	0.0333	3.3333	1.592	9.357	1347	674
125	0.125	15.6	0.0417	4.1667	1.606	9.712	1398	699
150	0.15	15.7	0.0500	5.0000	1.620	9.689	1395	698
175	0.175	15.4	0.0583	5.8333	1.635	9.420	1357	678
200	0.2	14.8	0.0667	6.6667	1.649	8.973	1292	646
225	0.225	14.1	0.0750	7.5000	1.664	8.473	1220	610
250	0.25	13.7	0.0833	8.3333	1.679	8.158	1175	587
275	0.275	12.9	0.0917	9.1667	1.695	7.612	1096	548
300	0.3	12.4	0.1000	10.0000	1.710	7.250	1044	522
325	0.325	12.2	0.1083	10.8333	1.726	7.067	1018	509
350	0.35	11.9	0.1167	11.6667	1.743	6.829	983	492
375	0.375	11.4	0.1250	12.5000	1.759	6.480	933	467
400	0.4	11.1	0.1333	13.3333	1.776	6.249	900	450
425	0.425	10.8	0.1417	14.1667	1.793	6.022	867	434
450	0.45	10.7	0.1500	15.0000	1.811	5.908	851	425
475	0.475	10.7	0.1583	15.8333	1.829	5.850	842	421
500	0.5	10.7	0.1667	16.6667	1.847	5.792	834	417
525	0.525	10.7	0.1750	17.5000	1.866	5.734	826	413

"Confidential Information: Privileged & Confidential Work Product"



"Confidential Information: Privileged & Confidential Work Product"

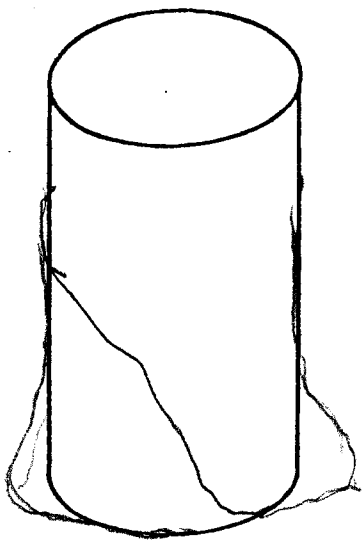
MYRTLE GROVE ECOSYSTEM RESTORATION PROJECT FEASIBILITY STUDY

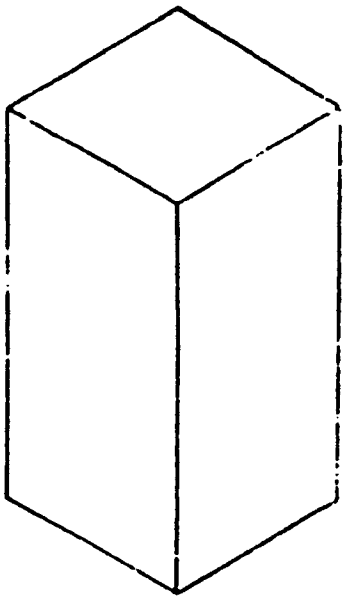
SSION TEST

BOR: MG-3U
5" UNDIST. (03-15)

DATE 5/9/03
SAMPLE NUMBER 9-C
TARE NUMBER 278
WET WEIGHT OF SOIL 119.5 gms
DRY WEIGHT OF SOIL 70.5 gms
WEIGHT OF WATER 49.0 gms
MOISTURE CONTENT 69.5 %
BULK WET DENSITY 98.5 #/cu ft
MACHINE NUMBER E-210

FAILURE DIAGRAM





☐ LARGE SAMPLE = 1.4^2 X 3.5
DENSITY FACTOR = 0.55511

☐ SMALL SAMPLE = 1.0^2 x 2.5
DENSITY FACTOR = 1.52307

Ⓓ CYLINDRICAL SAMPLE 1.4X3.0
DENSITY FACTOR 0.82452

DIAL READING	LOAD IN POUNDS	PROVING RING DIAL READING 10^{-4} in.	CORRECTED AREA (sq.ft.)	UNIT STRESS #/sq.ft.	UNCONFINED COMPRESSIVE STRENGTH #/sq. ft.	REMARKS
000		0				
025		5.3				
050		10.5				
075		14.1				
100		15.6				
125		16.0			717	
150		15.7				
175		15.3				
200		15.1				
225		14.6				
250		14.2				
275		13.8				
300		13.5				
325		13.2				
350		12.8				
375		12.6				
400		12.3				
425		11.9				
450		11.0				
475		10.5				
500		10.2				
525		9.9				

Technician JMC Computations _____ Checked _____

Confidential Information: Privileged & Confidential Work Product

SHEET FOR USE WITH LOAD CELL MACHINE

Date	5/12/2003	Design Engineer	Mark Woodward
Sample No.	9-C	Soil Description	CH
Type Test	UCT	Boring Location	
		Boring Name	MG-3U
		Depth/Elevation	
		Testing Technician	JMC

Tare No.	278		Initial Condition of Specimen			
wet soil (g)	119.50		Top	Center	Bottom	Average
dry soil (g)	70.50	Diameter (in)	1.400	1.400	1.4	1.400
Water (g)	49.00	Height (in)	3			
Water Content (%)	69.50	Area (in^2)	1.539			
Bulk Density (pcf)	98.49	Volume (in3)	4.618			

Inches/Div	0.001
Strain Rate (% / min)	1

Dial Rdg (div)	Δ H (in)	Load (lbs)	Axl Strain	Axl Strain %	A-Corr (in^2)	UC Stress (psi)	UC Stress (psf)	Cohesion (psf)
0	0	0	0.0000	0.0000	1.539	0.000	0	0
25	0.025	5.3	0.0083	0.8333	1.552	3.414	492	246
50	0.05	10.5	0.0167	1.6667	1.565	6.707	966	483
75	0.075	14.1	0.0250	2.5000	1.579	8.931	1286	643
100	0.1	15.6	0.0333	3.3333	1.592	9.796	1411	705
125	0.125	16	0.0417	4.1667	1.606	9.961	1434	717
150	0.15	15.7	0.0500	5.0000	1.620	9.689	1395	698
175	0.175	15.3	0.0583	5.8333	1.635	9.359	1348	674
200	0.2	15.1	0.0667	6.6667	1.649	9.155	1318	659
225	0.225	14.6	0.0750	7.5000	1.664	8.773	1263	632
250	0.25	14.2	0.0833	8.3333	1.679	8.456	1218	609
275	0.275	13.8	0.0917	9.1667	1.695	8.143	1173	586
300	0.3	13.5	0.1000	10.0000	1.710	7.893	1137	568
325	0.325	13.2	0.1083	10.8333	1.726	7.646	1101	551
350	0.35	12.8	0.1167	11.6667	1.743	7.345	1058	529
375	0.375	12.6	0.1250	12.5000	1.759	7.162	1031	516
400	0.4	12.3	0.1333	13.3333	1.776	6.925	997	499
425	0.425	11.9	0.1417	14.1667	1.793	6.635	955	478
450	0.45	11	0.1500	15.0000	1.811	6.074	875	437
475	0.475	10.5	0.1583	15.8333	1.829	5.741	827	413
500	0.5	10.2	0.1667	16.6667	1.847	5.522	795	398
525	0.525	9.9	0.1750	17.5000	1.866	5.306	764	382

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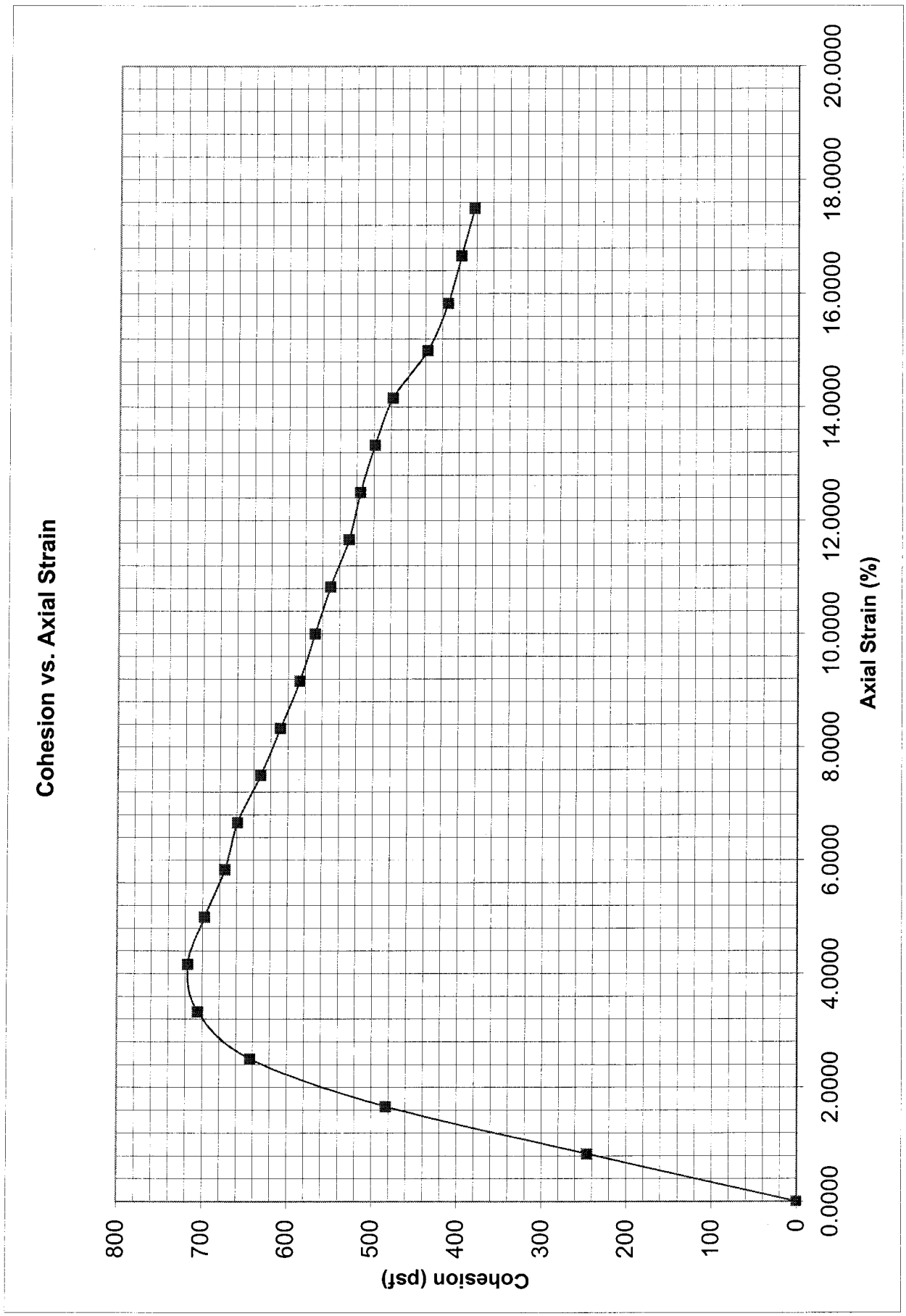


"Confidential Information: Privileged & Confidential Work Product"

MYRTLE GROVE ECOSYSTEM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-3U

5" UNDIST. (03-15)

SSION TEST

DATE 5-9-03

SAMPLE NUMBER 11-A

TARE NUMBER 313

WET WEIGHT OF SOIL 125.3 gms

DRY WEIGHT OF SOIL 79.8 gms

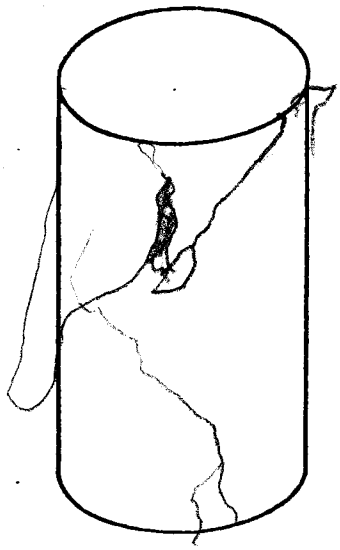
WEIGHT OF WATER 45.5 gms

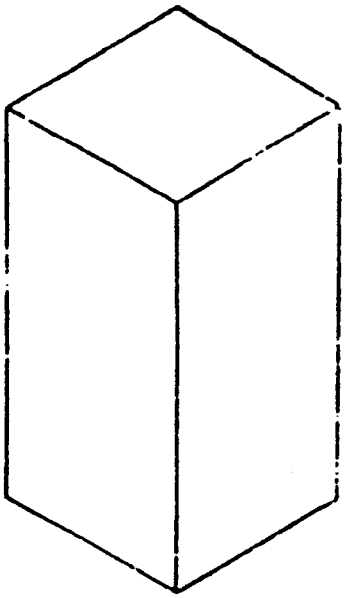
MOISTURE CONTENT 57.0 %

BULK WET DENSITY 103.3 #/cu ft

MACHINE NUMBER E-210

FAILURE DIAGRAM





☐ LARGE SAMPLE = 1.4^2 X 3.5 DENSITY FACTOR = 0.55511

☐ SMALL SAMPLE = 1.0^2 x 2.5 DENSITY FACTOR = 1.52307

Ⓥ CYLINDRICAL SAMPLE 1.4X3.0 DENSITY FACTOR 0.82452

DIAL READING	LOAD IN POUNDS	PROVING RING DIAL READING 10^{-4} in.	CORRECTED AREA (sq.ft.)	UNIT STRESS #/sq.ft.	UNCONFINED COMPRESSIVE STRENGTH #/sq. ft.	REMARKS
.000		0				
.025		3.0				
.050		7.3				
.075		11.5				
.100		14.2				
.125		14.4			645	
.150		13.4				
.175		13.2				
.200		13.2				
.225		13.1				
.250		13.0				
.275		12.9				
.300		12.9				
.325		12.7				
.350		12.7				
.375		12.8				
.400		12.8				
.425		13.0				
.450		13.0				
.475		13.0				
.500		13.0				
.525		13.1				

Technician JMF Computations _____ Checked _____

"Confidential Information: Privileged & Confidential Work Product"

SHEET FOR USE WITH LOAD CELL MACHINE

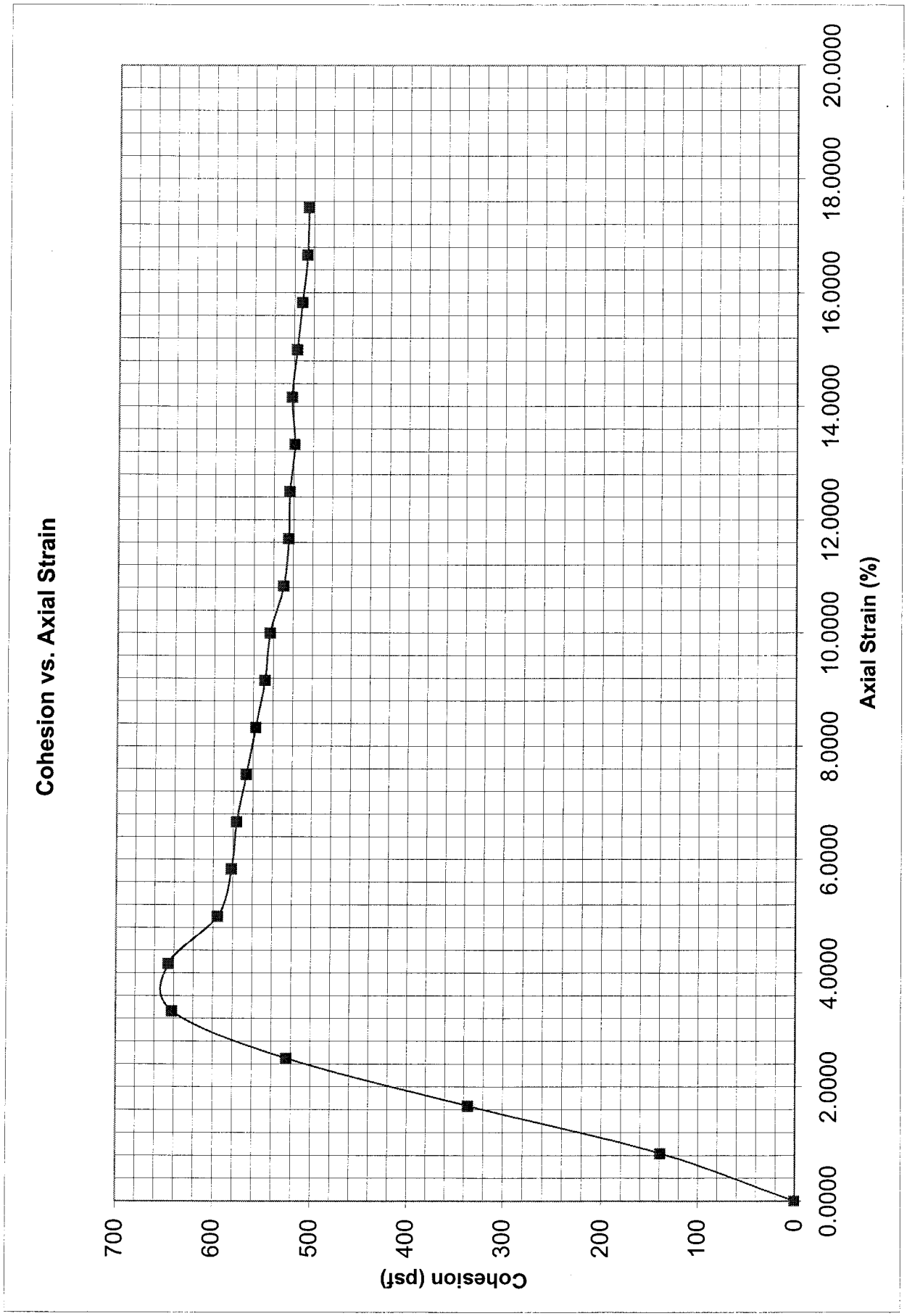
Date	5/12/2003	Design Engineer	Mark Woodward
Sample No.	11-A	Soil Description	CH
Type Test	UCT	Boring Location	
		Boring Name	MG-3U
		Depth/Elevation	
		Testing Technician	JMC

Tare No.	313		Initial Condition of Specimen			
wet soil (g)	125.30		Top	Center	Bottom	Average
dry soil (g)	79.80	Diameter (in)	1.400	1.400	1.4	1.400
Water (g)	45.50	Height (in)	3			
Water Content (%)	57.02	Area (in^2)	1.539			
Bulk Density (pcf)	103.27	Volume (in3)	4.618			

Inches/Div	0.001
Strain Rate (% / min)	1

Dial Rdg (div)	Δ H (in)	Load (lbs)	Axl Strain	Axl Strain %	A-Corr (in^2)	UC Stress (psi)	UC Stress (psf)	Cohesion (psf)
0	0	0	0.0000	0.0000	1.539	0.000	0	0
25	0.025	3	0.0083	0.8333	1.552	1.933	278	139
50	0.05	7.3	0.0167	1.6667	1.565	4.663	671	336
75	0.075	11.5	0.0250	2.5000	1.579	7.284	1049	524
100	0.1	14.2	0.0333	3.3333	1.592	8.917	1284	642
125	0.125	14.4	0.0417	4.1667	1.606	8.965	1291	645
150	0.15	13.4	0.0500	5.0000	1.620	8.270	1191	595
175	0.175	13.2	0.0583	5.8333	1.635	8.075	1163	581
200	0.2	13.2	0.0667	6.6667	1.649	8.003	1152	576
225	0.225	13.1	0.0750	7.5000	1.664	7.872	1134	567
250	0.25	13	0.0833	8.3333	1.679	7.741	1115	557
275	0.275	12.9	0.0917	9.1667	1.695	7.612	1096	548
300	0.3	12.9	0.1000	10.0000	1.710	7.542	1086	543
325	0.325	12.7	0.1083	10.8333	1.726	7.356	1059	530
350	0.35	12.7	0.1167	11.6667	1.743	7.288	1049	525
375	0.375	12.8	0.1250	12.5000	1.759	7.276	1048	524
400	0.4	12.8	0.1333	13.3333	1.776	7.206	1038	519
425	0.425	13	0.1417	14.1667	1.793	7.249	1044	522
450	0.45	13	0.1500	15.0000	1.811	7.178	1034	517
475	0.475	13	0.1583	15.8333	1.829	7.108	1024	512
500	0.5	13	0.1667	16.6667	1.847	7.037	1013	507
525	0.525	13.1	0.1750	17.5000	1.866	7.021	1011	505

"Confidential Information: Privileged & Confidential Work Product"



"Confidential Information: Privileged & Confidential Work Product"

MYRTLE GROVE ECOSYSTEM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-3U

5" UNDIST. (03-15)

:SSION TEST

DATE 5/9/03

SAMPLE NUMBER 12-D

TARE NUMBER 284

WET WEIGHT OF SOIL 124.3 gms

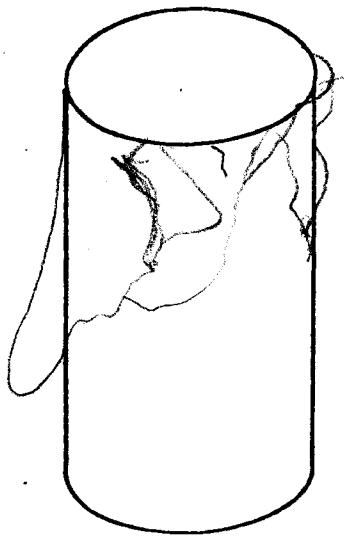
DRY WEIGHT OF SOIL 78.1 gms

WEIGHT OF WATER 46.2 gms

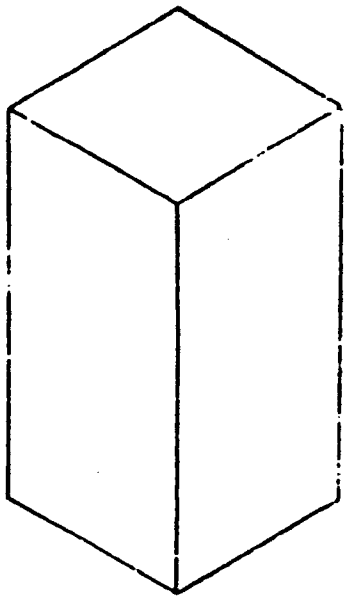
MOISTURE CONTENT 59.2 %

BULK WET DENSITY 102 #/cu ft

MACHINE NUMBER E-210



FAILURE DIAGRAM



☑ CYLINDRICAL SAMPLE 1.4X3.0
DENSITY FACTOR 0.82452

☐ LARGE SAMPLE = 1.4^2 X 3.5
DENSITY FACTOR = 0.55511

☐ SMALL SAMPLE = 1.0^2 x 2.5
DENSITY FACTOR = 1.52307

DIAL READING	LOAD IN POUNDS	PROVING RING DIAL READING 10^{-4} in.	CORRECTED AREA (sq.ft.)	UNIT STRESS #/sq.ft.	UNCONFINED COMPRESSIVE STRENGTH #/sq. ft.	REMARKS
000		0				
025		5.9				
050		10.7				
075		14.1				
100		16.2				
125		17.2				
150		17.4			773	
175		17.4				
200		16.9				
225		16.0				
250		15.4				
275		14.8				
300		14.4				
325		14.0				
350		13.8				
375		13.7				
400		13.7				
425		13.5				
450		13.5				
475		13.5				
500		13.6				
525		13.5				

Technician JMG Computations _____ Checked _____

"Confidential Information: Privileged & Confidential Work Product"

SHEET FOR USE WITH LOAD CELL MACHINE

Date	5/12/2003	Design Engineer	Mark Woodward
Sample No.	12-D	Soil Description	CH
Type Test	UCT	Boring Location	
		Boring Name	MG-3U
		Depth/Elevation	
		Testing Technician	

Tare No.	284		Initial Condition of Specimen			
wet soil (g)	124.30		Top	Center	Bottom	Average
dry soil (g)	78.10	Diameter (in)	1.400	1.400	1.4	1.400
Water (g)	46.20	Height (in)	3			
Water Content (%)	59.15	Area (in^2)	1.539			
Bulk Density (pcf)	102.45	Volume (in3)	4.618			

Inches/Div	0.001
Strain Rate (% / min)	1

Dial Rdg (div)	Δ H (in)	Load (lbs)	Axl Strain	Axl Strain %	A-Corr (in^2)	UC Stress (psi)	UC Stress (psf)	Cohesion (psf)
0	0	0	0.0000	0.0000	1.539	0.000	0	0
25	0.025	5.9	0.0083	0.8333	1.552	3.801	547	274
50	0.05	10.7	0.0167	1.6667	1.565	6.835	984	492
75	0.075	14.1	0.0250	2.5000	1.579	8.931	1286	643
100	0.1	16.2	0.0333	3.3333	1.592	10.173	1465	732
125	0.125	17.2	0.0417	4.1667	1.606	10.708	1542	771
150	0.15	17.4	0.0500	5.0000	1.620	10.738	1546	773
175	0.175	17.4	0.0583	5.8333	1.635	10.644	1533	766
200	0.2	16.9	0.0667	6.6667	1.649	10.247	1476	738
225	0.225	16	0.0750	7.5000	1.664	9.614	1384	692
250	0.25	15.4	0.0833	8.3333	1.679	9.170	1321	660
275	0.275	14.8	0.0917	9.1667	1.695	8.733	1258	629
300	0.3	14.4	0.1000	10.0000	1.710	8.419	1212	606
325	0.325	14	0.1083	10.8333	1.726	8.109	1168	584
350	0.35	13.8	0.1167	11.6667	1.743	7.919	1140	570
375	0.375	13.7	0.1250	12.5000	1.759	7.787	1121	561
400	0.4	13.7	0.1333	13.3333	1.776	7.713	1111	555
425	0.425	13.5	0.1417	14.1667	1.793	7.527	1084	542
450	0.45	13.5	0.1500	15.0000	1.811	7.454	1073	537
475	0.475	13.5	0.1583	15.8333	1.829	7.381	1063	531
500	0.5	13.6	0.1667	16.6667	1.847	7.362	1060	530
525	0.525	13.5	0.1750	17.5000	1.866	7.235	1042	521

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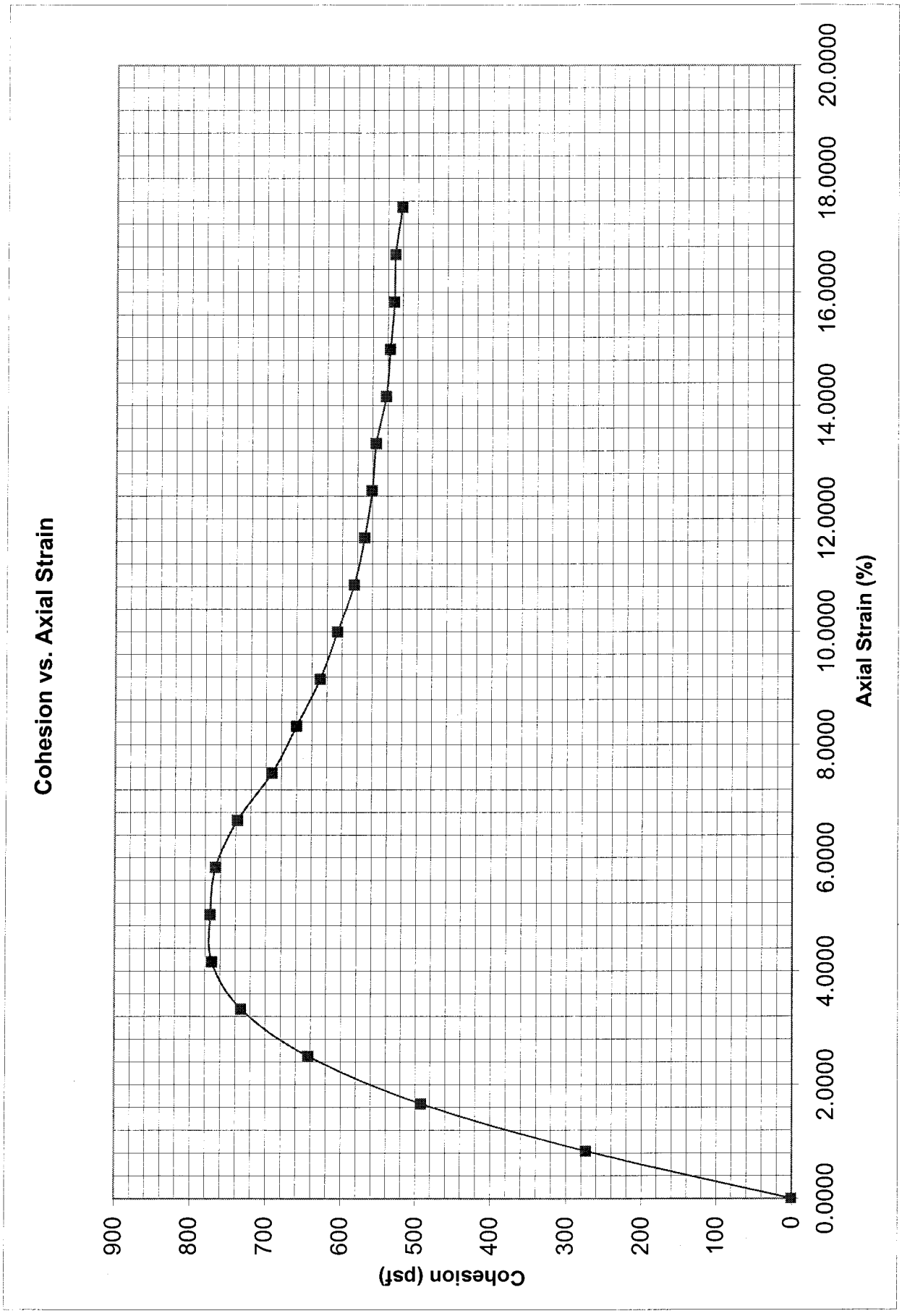


"Confidential Information: Privileged & Confidential Work Product"

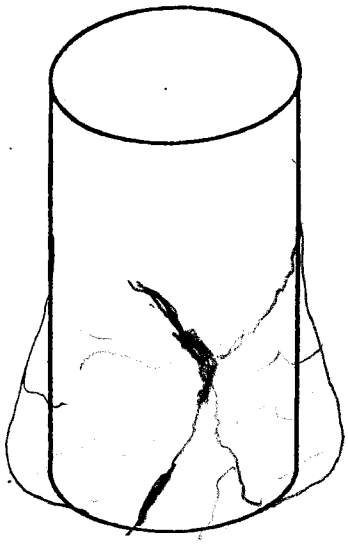
MYRTLE GROVE ECOSYSTEM RESTORATION PROJECT FEASIBILITY STUDY

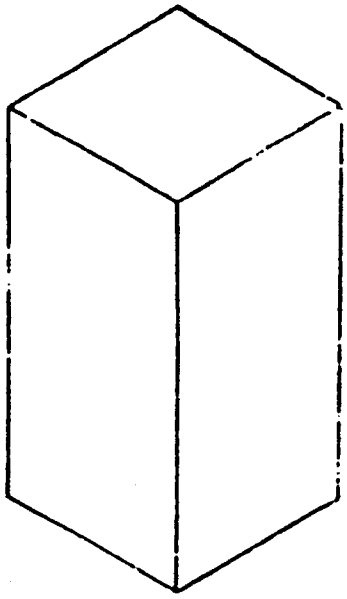
BOR: MG-3U

5" UNDIST. (03-15)

SSION TEST

FAILURE DIAGRAM





DATE 5/9/03

SAMPLE NUMBER 16-A

TARE NUMBER 320

WET WEIGHT OF SOIL 125.6 gms

DRY WEIGHT OF SOIL 81.8 gms

WEIGHT OF WATER 43.8 gms

MOISTURE CONTENT 53.6 %

BULK WET DENSITY 103.5 #/cu.ft

MACHINE NUMBER E-210

✓ CYLINDRICAL SAMPLE 1.4X3.0
DENSITY FACTOR 0.82452

☐ LARGE SAMPLE = 1.4^2 X 3.5
DENSITY FACTOR = 0.55511

☐ SMALL SAMPLE = 1.0^2 x 2.5
DENSITY FACTOR = 1.52307

DIAL READING	LOAD IN POUNDS	PROVING RING DIAL READING 10^{-4} in.	CORRECTED AREA (sq.ft.)	UNIT STRESS #/sq.ft.	UNCONFINED COMPRESSIVE STRENGTH #/sq. ft.	REMARKS
000		0				
025		2.4				
050		3.3				
075		4.4				
100		5.5				
125		6.5				
150		7.5				
175		8.6				
200		9.7				
225		10.9				
250		12.0				
275		13.1				
300		13.9				
325		14.6				
350		14.8				
375		15.0			614	
400		14.9				
425		14.5				
450		14.2				
475		13.8				
500		13.0				
525		12.5				

Technician JMS Computations _____ Checked _____

Confidential Information: Privileged & Confidential Work Product

SHEET FOR USE WITH LOAD CELL MACHINE

Date	5/12/2003	Design Engineer	Mark Woodward
Sample No.	16-A	Soil Description	CH
Type Test	UCT	Boring Location	
		Boring Name	MG-3U
		Depth/Elevation	
		Testing Technician	JMC

Tare No.	320		Initial Condition of Specimen			
wet soil (g)	125.60		Top	Center	Bottom	Average
dry soil (g)	81.80	Diameter (in)	1.400	1.400	1.4	1.400
Water (g)	43.80	Height (in)	3			
Water Content (%)	53.55	Area (in^2)	1.539			
Bulk Density (pcf)	103.52	Volume (in3)	4.618			

Inches/Div	0.001
Strain Rate (% / min)	1

Dial Rdg (div)	Δ H (in)	Load (lbs)	Axl Strain	Axl Strain %	A-Corr (in^2)	UC Stress (psi)	UC Stress (psf)	Cohesion (psf)
0	0	0	0.0000	0.0000	1.539	0.000	0	0
25	0.025	2.4	0.0083	0.8333	1.552	1.546	223	111
50	0.05	3.3	0.0167	1.6667	1.565	2.108	304	152
75	0.075	4.4	0.0250	2.5000	1.579	2.787	401	201
100	0.1	5.5	0.0333	3.3333	1.592	3.454	497	249
125	0.125	6.5	0.0417	4.1667	1.606	4.047	583	291
150	0.15	7.5	0.0500	5.0000	1.620	4.628	667	333
175	0.175	8.6	0.0583	5.8333	1.635	5.261	758	379
200	0.2	9.7	0.0667	6.6667	1.649	5.881	847	423
225	0.225	10.9	0.0750	7.5000	1.664	6.550	943	472
250	0.25	12	0.0833	8.3333	1.679	7.146	1029	514
275	0.275	13.1	0.0917	9.1667	1.695	7.730	1113	557
300	0.3	13.9	0.1000	10.0000	1.710	8.127	1170	585
325	0.325	14.6	0.1083	10.8333	1.726	8.457	1218	609
350	0.35	14.8	0.1167	11.6667	1.743	8.493	1223	611
375	0.375	15	0.1250	12.5000	1.759	8.526	1228	614
400	0.4	14.9	0.1333	13.3333	1.776	8.389	1208	604
425	0.425	14.5	0.1417	14.1667	1.793	8.085	1164	582
450	0.45	14.2	0.1500	15.0000	1.811	7.841	1129	565
475	0.475	13.8	0.1583	15.8333	1.829	7.545	1087	543
500	0.5	13	0.1667	16.6667	1.847	7.037	1013	507
525	0.525	12.5	0.1750	17.5000	1.866	6.699	965	482

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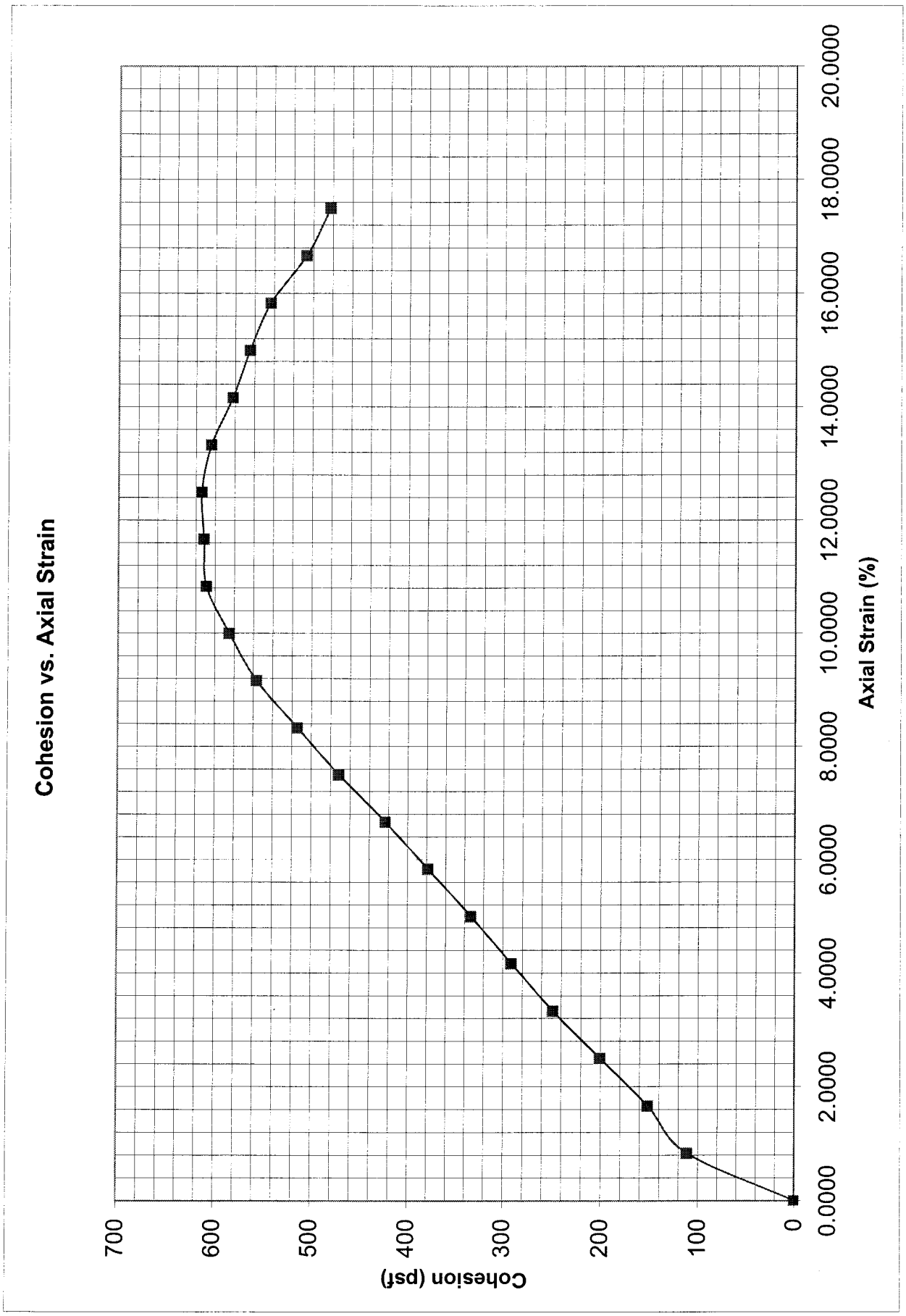
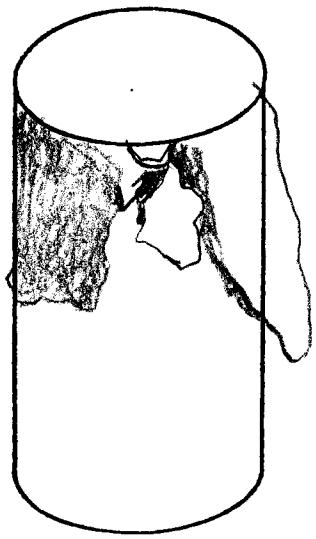


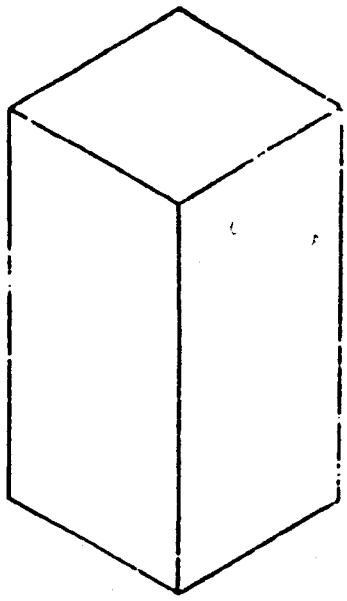
"Confidential Information: Privileged & Confidential Work Product"

SSION TEST

MYRTLE GROVE
ECOSYSTEM RESTORATION
PROJECT FEASIBILITY STUDY
BOR: MG-3U
5" UNDIST. (03-15)

FAILURE DIAGRAM





DATE 5/9/03

SAMPLE NUMBER 19-C

TARE NUMBER 289

WET WEIGHT OF SOIL 128.3 gms

DRY WEIGHT OF SOIL 84.2 gms

WEIGHT OF WATER 44.1 gms

MOISTURE CONTENT 52.4 %

BULK WET DENSITY 105.7 #/cu.ft

MACHINE NUMBER E-210

(L) CYLINDRICAL SAMPLE 1.4X3.0
DENSITY FACTOR 0.82452

☐ LARGE SAMPLE = 1.4^2 X 3.5
DENSITY FACTOR = 0.55511

☐ SMALL SAMPLE = 1.0^2 x 2.5
DENSITY FACTOR = 1.52307

DIAL READING	LOAD IN POUNDS	PROVING RING DIAL READING 10^{-4} in.	CORRECTED AREA (sq.ft.)	UNIT STRESS #/sq.ft.	UNCONFINED COMPRESSIVE STRENGTH #/sq. ft.	REMARKS
000		0				
025		12.3				
050		20.9				
075		24.9			1136	
100		20.7				
125		19.1				
150		18.2				
175		17.5				
200		16.9				
225		16.4				
250		15.5				
275		13.4				
300		12.2				
325		11.3				
350		10.3				
375		9.7				
400		9.2				
425		8.6				
450		6.6				
475		5.0				
500		4.2				
525		4.0				

Technician JHF Computations Checked

Confidential Information: Privileged & Confidential Work Product

SHEET FOR USE WITH LOAD CELL MACHINE

Date	5/12/2003	Design Engineer	Mark Woodward
Sample No.	19-C	Soil Description	CH
Type Test	UCT	Boring Location	
		Boring Name	MG-3U
		Depth/Elevation	
		Testing Technician	JMC

Tare No.	289		Initial Condition of Specimen			
wet soil (g)	128.30		Top	Center	Bottom	Average
dry soil (g)	84.20	Diameter (in)	1.400	1.400	1.4	1.400
Water (g)	44.10	Height (in)	3			
Water Content (%)	52.38	Area (in^2)	1.539			
Bulk Density (pcf)	105.74	Volume (in3)	4.618			

Inches/Div	0.001
Strain Rate (% / min)	1

Dial Rdg (div)	Δ H (in)	Load (lbs)	Axl Strain	Axl Strain %	A-Corr (in^2)	UC Stress (psi)	UC Stress (psf)	Cohesion (psf)
0	0	0	0.0000	0.0000	1.539	0.000	0	0
25	0.025	12.3	0.0083	0.8333	1.552	7.924	1141	571
50	0.05	20.9	0.0167	1.6667	1.565	13.351	1922	961
75	0.075	24.9	0.0250	2.5000	1.579	15.771	2271	1136
100	0.1	20.7	0.0333	3.3333	1.592	12.999	1872	936
125	0.125	19.1	0.0417	4.1667	1.606	11.891	1712	856
150	0.15	18.2	0.0500	5.0000	1.620	11.232	1617	809
175	0.175	17.5	0.0583	5.8333	1.635	10.705	1542	771
200	0.2	16.9	0.0667	6.6667	1.649	10.247	1476	738
225	0.225	16.4	0.0750	7.5000	1.664	9.855	1419	710
250	0.25	15.5	0.0833	8.3333	1.679	9.230	1329	665
275	0.275	13.4	0.0917	9.1667	1.695	7.907	1139	569
300	0.3	12.2	0.1000	10.0000	1.710	7.133	1027	514
325	0.325	11.3	0.1083	10.8333	1.726	6.545	943	471
350	0.35	10.3	0.1167	11.6667	1.743	5.910	851	426
375	0.375	9.7	0.1250	12.5000	1.759	5.514	794	397
400	0.4	9.2	0.1333	13.3333	1.776	5.180	746	373
425	0.425	8.6	0.1417	14.1667	1.793	4.795	691	345
450	0.45	6.6	0.1500	15.0000	1.811	3.644	525	262
475	0.475	5	0.1583	15.8333	1.829	2.734	394	197
500	0.5	4.2	0.1667	16.6667	1.847	2.274	327	164
525	0.525	4	0.1750	17.5000	1.866	2.144	309	154

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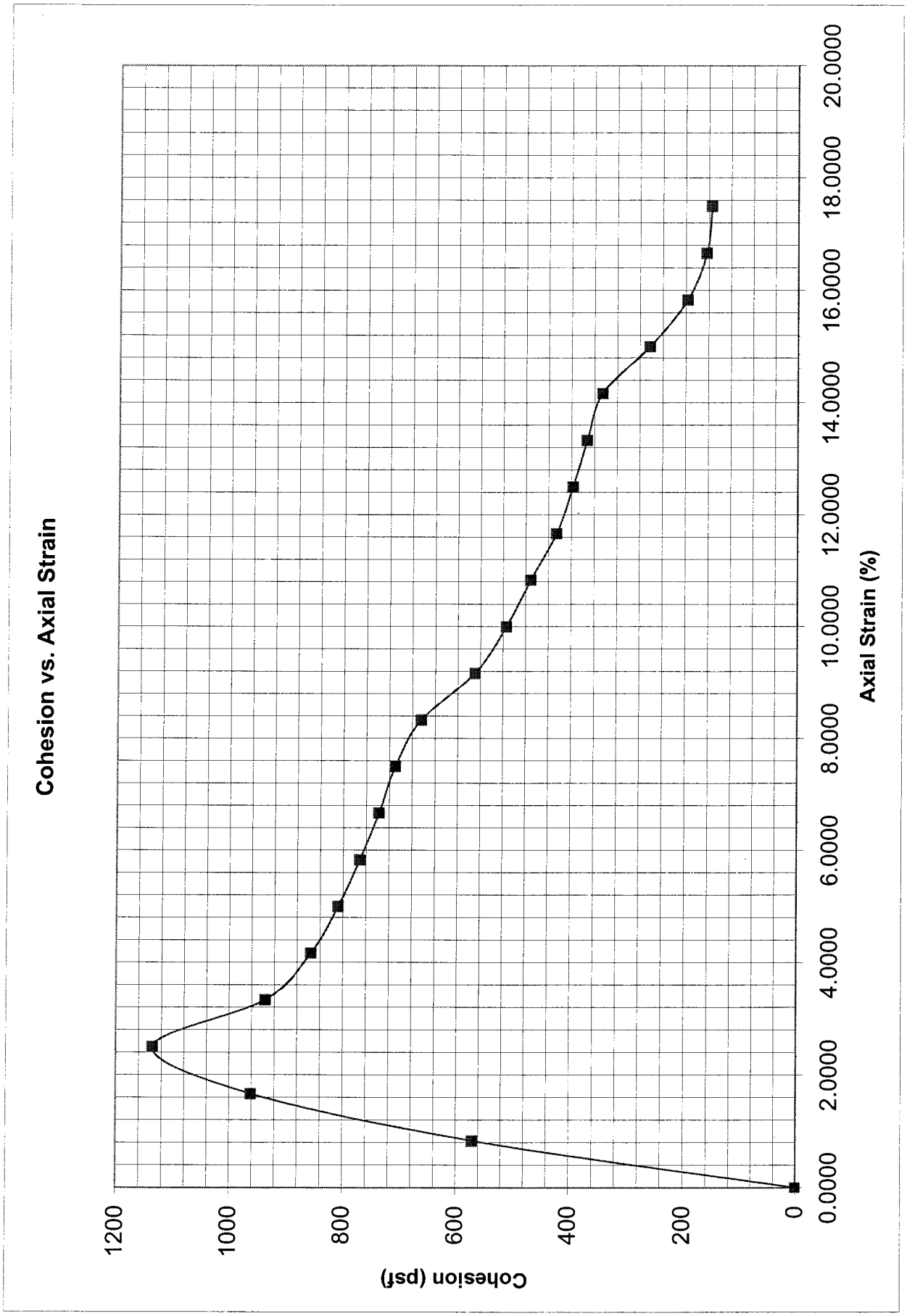


"Confidential Information: Privileged & Confidential Work Product"

:SSION TEST

MYRTLE GROVE
ECOSYSTEM RESTORATION
PROJECT FEASIBILITY STUDY
BOR: MG-3U
5" UNDIST. (03-15)

DATE 5/9/03

SAMPLE NUMBER 20-C

TARE NUMBER 319

WET WEIGHT OF SOIL 126.1 gms

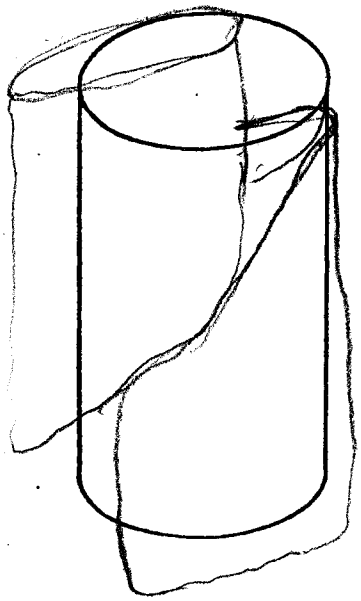
DRY WEIGHT OF SOIL 80.6 gms

WEIGHT OF WATER 45.5 gms

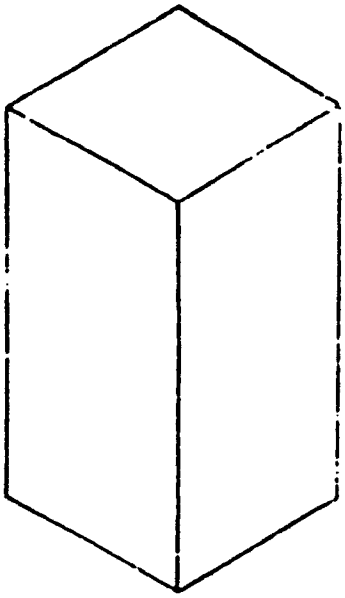
MOISTURE CONTENT 56.5 %

BULK WET DENSITY 104 #/cu.ft

MACHINE NUMBER E-210



FAILURE DIAGRAM



☑ CYLINDRICAL SAMPLE 1.4X3.0
DENSITY FACTOR 0.82452

☐ LARGE SAMPLE = 1.4^2 X 3.5
DENSITY FACTOR = 0.55511

☐ SMALL SAMPLE = 1.0^2 x 2.5
DENSITY FACTOR = 1.52307

DIAL READING	LOAD IN POUNDS	PROVING RING DIAL READING 10^{-4} in.	CORRECTED AREA (sq.ft.)	UNIT STRESS#/sq.ft.	UNCONFINED COMPRESSIVE STRENGTH#/sq. ft.	REMARKS
000		0				
025		13.2				
050		19.0				
075		19.7			898	
100		19.5				
125		18.1				
150		15.0				
175		13.3				
200		11.5				
225		10.4				
250		9.5				
275		9.0				
300		8.4				
325		8.4				
350		8.4				
375		8.4				
400		8.3				
425		7.6				
450		6.8				
475		6.0				
500		5.0				
525		4.1				

Technician JMS Computations _____ Checked _____

"Confidential Information: Privileged & Confidential Work Product"

SHEET FOR USE WITH LOAD CELL MACHINE

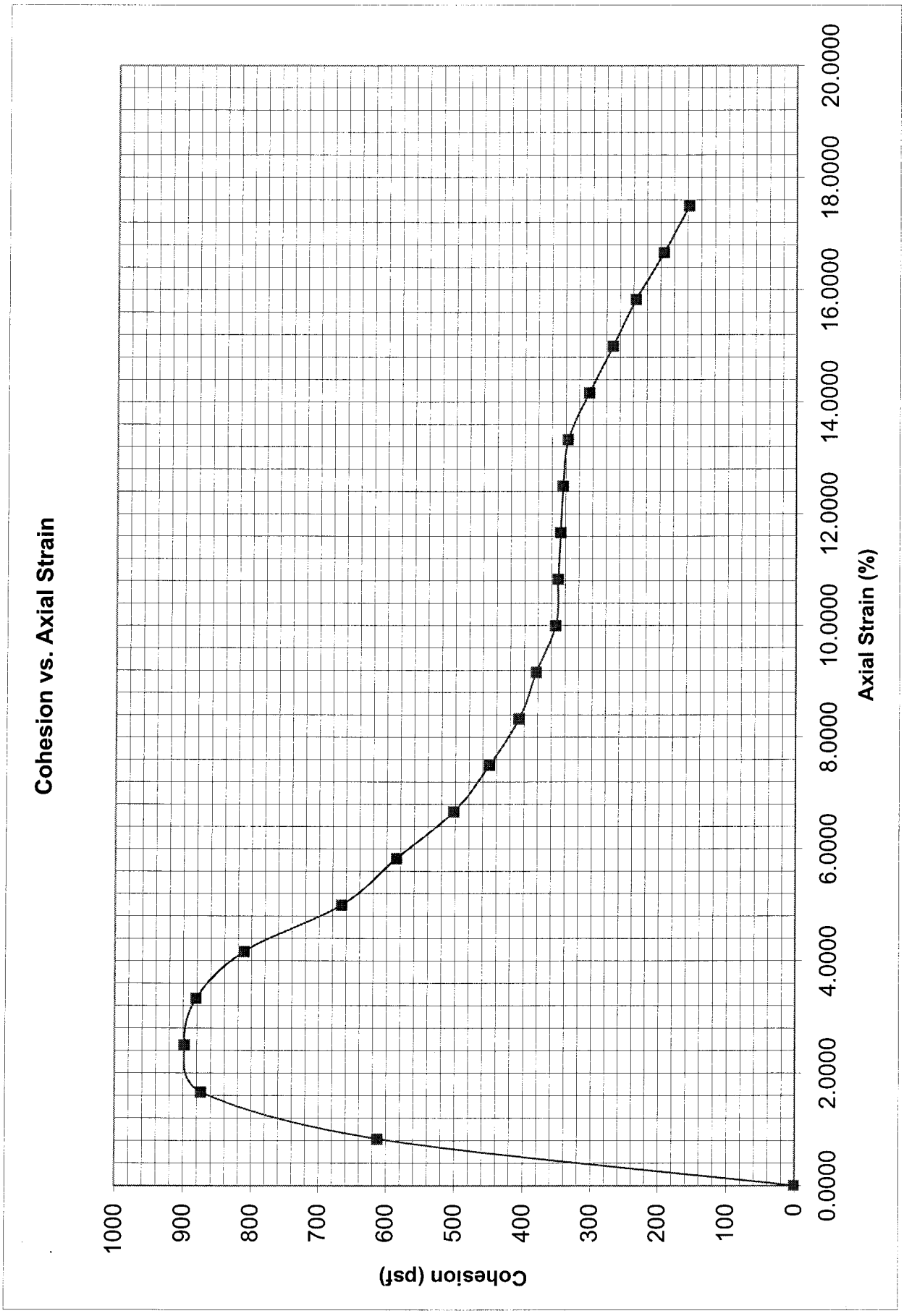
Date	5/12/2003	Design Engineer	Mark Woodward
Sample No.	20-C	Soil Description	CH
Type Test	UCT	Boring Location	
		Boring Name	MG-3U
		Depth/Elevation	
		Testing Technician	

Tare No.	319		Initial Condition of Specimen			
wet soil (g)	126.10		Top	Center	Bottom	Average
dry soil (g)	80.60	Diameter (in)	1.400	1.400	1.4	1.400
Water (g)	45.50	Height (in)	3			
Water Content (%)	56.45	Area (in^2)	1.539			
Bulk Density (pcf)	103.93	Volume (in3)	4.618			

Inches/Div	0.001
Strain Rate (% / min)	1

Dial Rdg (div)	Δ H (in)	Load (lbs)	Axl Strain	Axl Strain %	A-Corr (in^2)	UC Stress (psi)	UC Stress (psf)	Cohesion (psf)
0	0	0	0.0000	0.0000	1.539	0.000	0	0
25	0.025	13.2	0.0083	0.8333	1.552	8.503	1224	612
50	0.05	19	0.0167	1.6667	1.565	12.137	1748	874
75	0.075	19.7	0.0250	2.5000	1.579	12.477	1797	898
100	0.1	19.5	0.0333	3.3333	1.592	12.245	1763	882
125	0.125	18.1	0.0417	4.1667	1.606	11.268	1623	811
150	0.15	15	0.0500	5.0000	1.620	9.257	1333	667
175	0.175	13.3	0.0583	5.8333	1.635	8.136	1172	586
200	0.2	11.5	0.0667	6.6667	1.649	6.973	1004	502
225	0.225	10.4	0.0750	7.5000	1.664	6.249	900	450
250	0.25	9.5	0.0833	8.3333	1.679	5.657	815	407
275	0.275	9	0.0917	9.1667	1.695	5.311	765	382
300	0.3	8.4	0.1000	10.0000	1.710	4.911	707	354
325	0.325	8.4	0.1083	10.8333	1.726	4.866	701	350
350	0.35	8.4	0.1167	11.6667	1.743	4.820	694	347
375	0.375	8.4	0.1250	12.5000	1.759	4.775	688	344
400	0.4	8.3	0.1333	13.3333	1.776	4.673	673	336
425	0.425	7.6	0.1417	14.1667	1.793	4.238	610	305
450	0.45	6.8	0.1500	15.0000	1.811	3.755	541	270
475	0.475	6	0.1583	15.8333	1.829	3.281	472	236
500	0.5	5	0.1667	16.6667	1.847	2.707	390	195
525	0.525	4.1	0.1750	17.5000	1.866	2.197	316	158

"Confidential Information: Privileged & Confidential Work Product"



"Confidential Information: Privileged & Confidential Work Product"

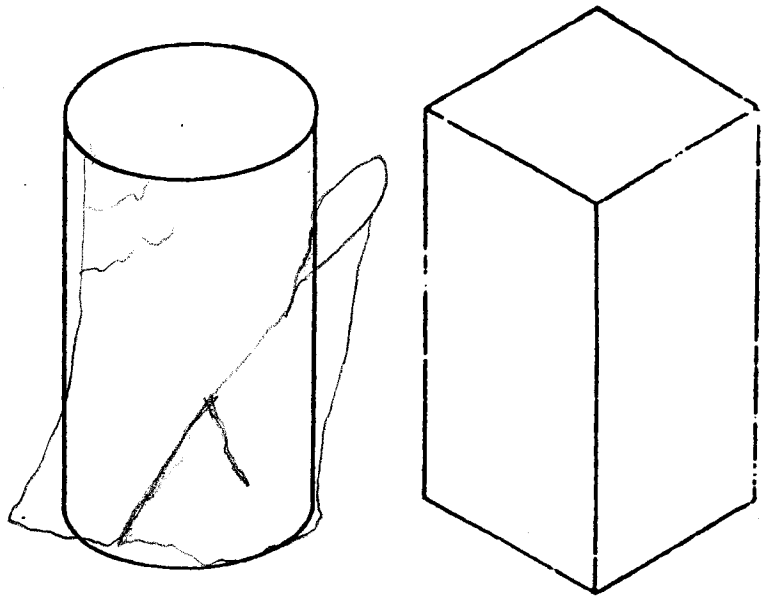
MYRTLE GROVE ECOSYSTEM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-3U

5" UNDIST. (03-15)

SSION TEST

FAILURE DIAGRAM



DATE 5/9/03

SAMPLE NUMBER 21-B

TARE NUMBER 290

WET WEIGHT OF SOIL 132.0 gms

DRY WEIGHT OF SOIL 89.7 gms

WEIGHT OF WATER 42.3 gms

MOISTURE CONTENT 47.2 %

BULK WET DENSITY 108.8 #/cu ft

MACHINE NUMBER E-210

Ⓓ CYLINDRICAL SAMPLE 1.4X3.0 DENSITY FACTOR 0.82452

☐ LARGE SAMPLE = 1.4^2 X 3.5 DENSITY FACTOR = 0.55511

☐ SMALL SAMPLE = 1.0^2 x 2.5 DENSITY FACTOR = 1.52307

DIAL READING	LOAD IN POUNDS	PROVING RING DIAL READING 10^{-4} in.	CORRECTED AREA (sq.ft.)	UNIT STRESS #/sq.ft.	UNCONFINED COMPRESSIVE STRENGTH #/sq. ft.	REMARKS
000		0				
025		8.8				
050		18.3				
075		25.7				
100		30.0				
125		32.2				
150		33.0			1466	
175		32.8				
200		31.9				
225		31.1				
250		29.3				
275		28.2				
300		27.4				
325		26.1				
350		25.2				
375		24.5				
400		24.0				
425		23.6				
450		23.4				
475		22.7				
500		20.9				
525		19.6				

Technician JMS Computations _____ Checked _____

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SHEET FOR USE WITH LOAD CELL MACHINE

Date	5/12/2003	Design Engineer	Mark Woodward
Sample No.	21-B	Soil Description	CH
Type Test	UCT	Boring Location	
		Boring Name	MG-3U
		Depth/Elevation	
		Testing Technician	JMC

Tare No.	290		Initial Condition of Specimen			
wet soil (g)	132.00		Top	Center	Bottom	Average
dry soil (g)	89.70	Diameter (in)	1.400	1.400	1.4	1.400
Water (g)	42.30	Height (in)	3			
Water Content (%)	47.16	Area (in^2)	1.539			
Bulk Density (pcf)	108.79	Volume (in3)	4.618			

Inches/Div	0.001
Strain Rate (% / min)	1

Dial Rdg (div)	Δ H (in)	Load (lbs)	Axl Strain	Axl Strain %	A-Corr (in^2)	UC Stress (psi)	UC Stress (psf)	Cohesion (psf)
0	0	0	0.0000	0.0000	1.539	0.000	0	0
25	0.025	8.8	0.0083	0.8333	1.552	5.669	816	408
50	0.05	18.3	0.0167	1.6667	1.565	11.690	1683	842
75	0.075	25.7	0.0250	2.5000	1.579	16.278	2344	1172
100	0.1	30	0.0333	3.3333	1.592	18.839	2713	1356
125	0.125	32.2	0.0417	4.1667	1.606	20.046	2887	1443
150	0.15	33	0.0500	5.0000	1.620	20.365	2933	1466
175	0.175	32.8	0.0583	5.8333	1.635	20.064	2889	1445
200	0.2	31.9	0.0667	6.6667	1.649	19.341	2785	1393
225	0.225	31.1	0.0750	7.5000	1.664	18.688	2691	1346
250	0.25	29.3	0.0833	8.3333	1.679	17.447	2512	1256
275	0.275	28.2	0.0917	9.1667	1.695	16.640	2396	1198
300	0.3	27.4	0.1000	10.0000	1.710	16.019	2307	1153
325	0.325	26.1	0.1083	10.8333	1.726	15.118	2177	1089
350	0.35	25.2	0.1167	11.6667	1.743	14.460	2082	1041
375	0.375	24.5	0.1250	12.5000	1.759	13.926	2005	1003
400	0.4	24	0.1333	13.3333	1.776	13.512	1946	973
425	0.425	23.6	0.1417	14.1667	1.793	13.159	1895	947
450	0.45	23.4	0.1500	15.0000	1.811	12.921	1861	930
475	0.475	22.7	0.1583	15.8333	1.829	12.411	1787	894
500	0.5	20.9	0.1667	16.6667	1.847	11.314	1629	815
525	0.525	19.6	0.1750	17.5000	1.866	10.504	1513	756

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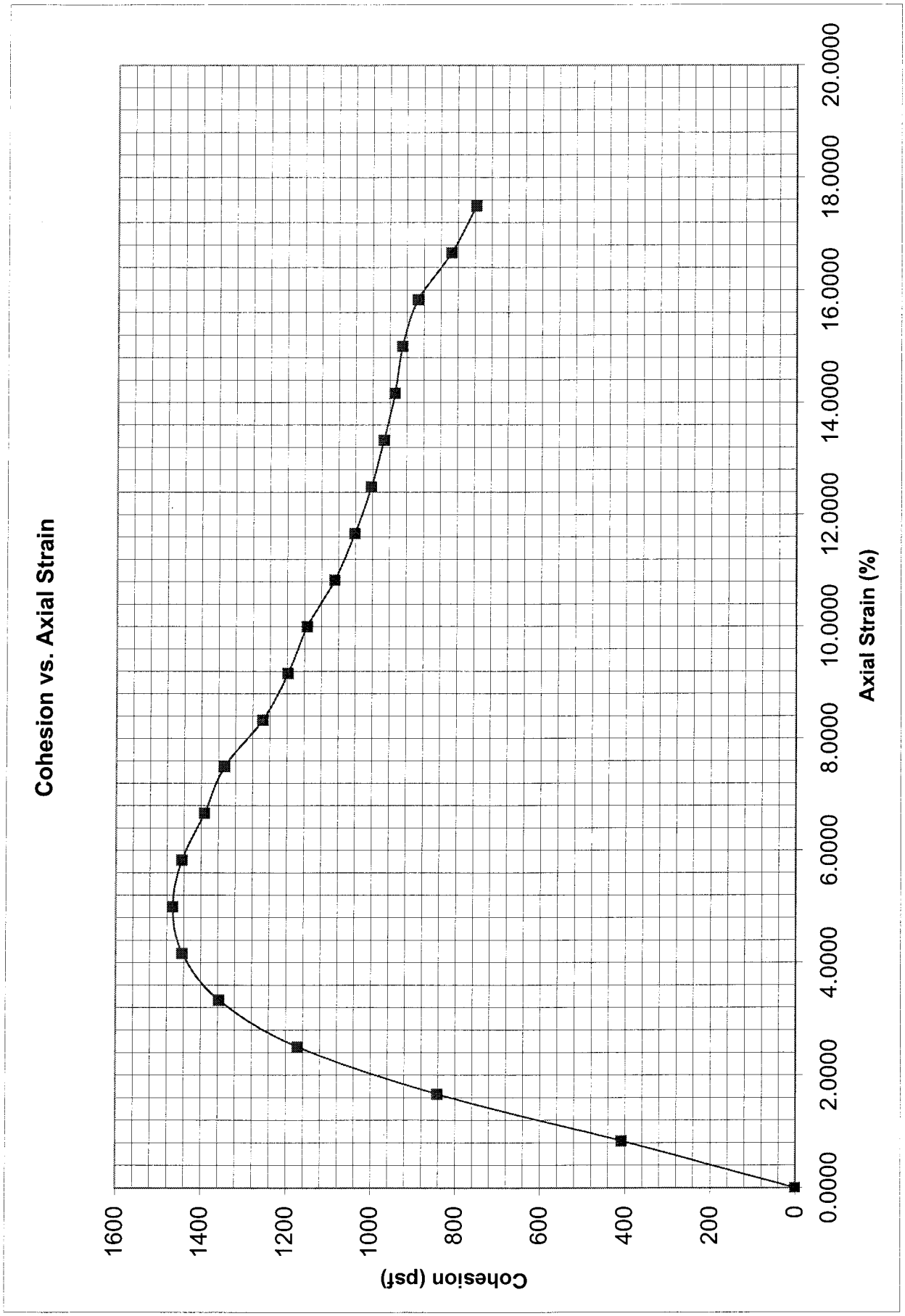
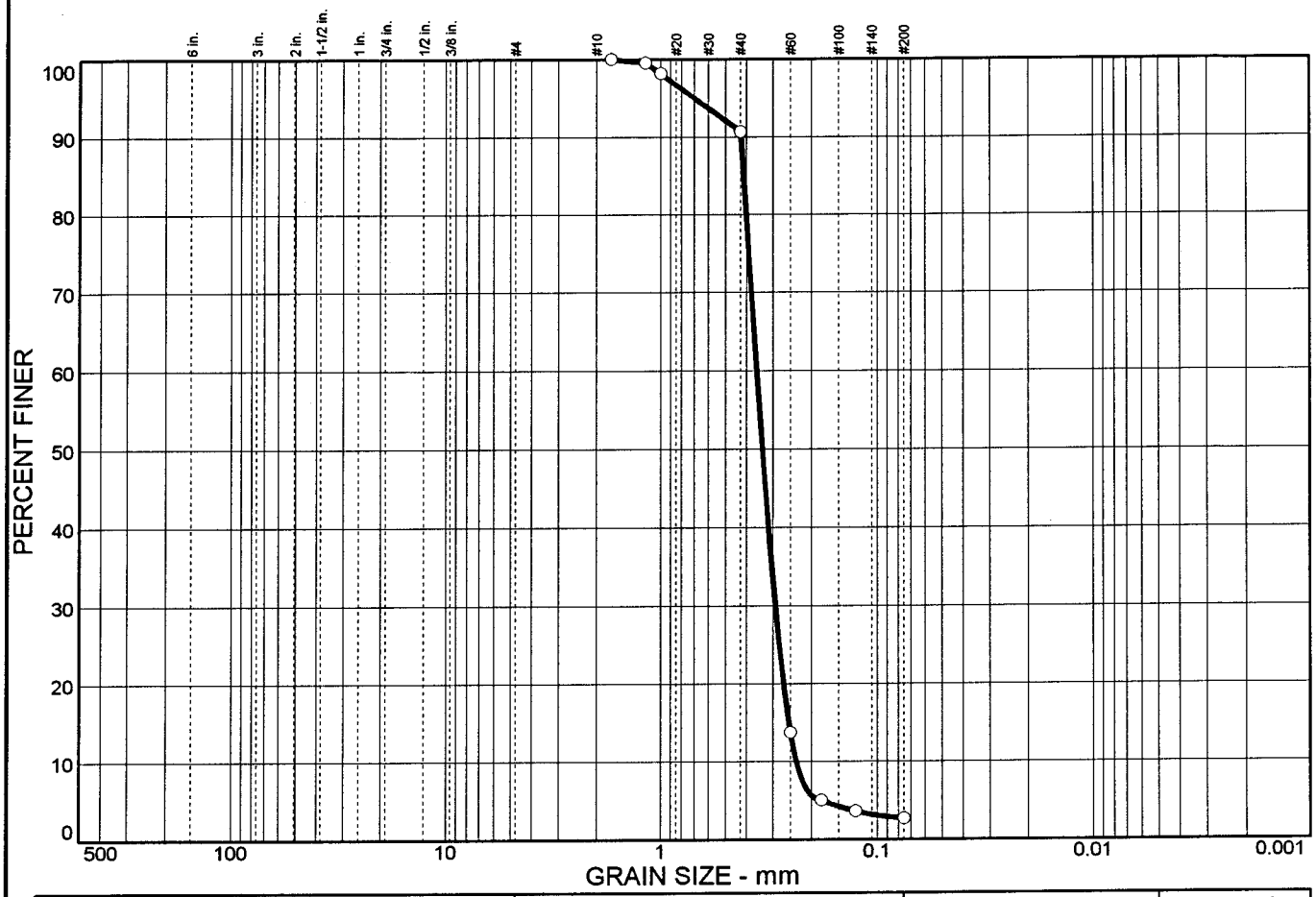


"Confidential Information: Privileged & Confidential Work Product"

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	97.3	2.7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#12	100.0		
#16	99.6		
#18	98.2		
#40	90.7		
#60	13.7		
#80	5.0		
#120	3.6		
#200	2.7		

* (no specification provided)

Soil Description

FINE SAND (SP)

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.412 D_{60}= 0.358 D_{50}= 0.337
D_{30}= 0.293 D_{15}= 0.254 D_{10}= 0.235
C_u= 1.52 C_c= 1.02

Classification

USCS= AASHTO=

Remarks

ECS

Sample No.: 17-B **Source of Sample:** **Date:** 14MAY2003
Location: MYRTLE GROVE BOR:-3U **Elev./Depth:**

US Army Corps of Engineers
New Orleans District

Client:
Project: MYRTLE GROVE
Project No: BOR: MG-3U **Plate**

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GRAIN SIZE DISTRIBUTION TEST DATA

Client:
Project: MYRTLE GROVE
Project Number: BOR: MG-3U

Sample Data

Source:
Sample No.: 17-B
Elev. or Depth:
Sample Length (in./cm.):
Location: MYRTLE GROVE BOR:-3U
Description: FINE SAND (SP)
Date: 14MAY2003 **PL:**
LL: **PI:**
USCS Classification:
AASHTO Classification:
Testing Remarks: ECS

Mechanical Analysis Data

	Initial	After wash
Dry sample and tare=	136.10	132.70
Tare =	0.00	0.00
Dry sample weight =	136.10	132.70

Minus #200 from wash= 2.5 %
Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 12	0.00	100.0
# 16	0.50	99.6
# 18	2.50	98.2
# 40	12.70	90.7
# 60	117.40	13.7
# 80	129.30	5.0
# 120	131.20	3.6
# 200	132.40	2.7

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = % GRAVEL = % SAND = 97.3
% FINES = 2.7

D_{85}= 0.41 D_{60}= 0.36 D_{50}= 0.34
D_{30}= 0.29 D_{15}= 0.25 D_{10}= 0.23
C_C= 1.0248 C_u= 1.5219

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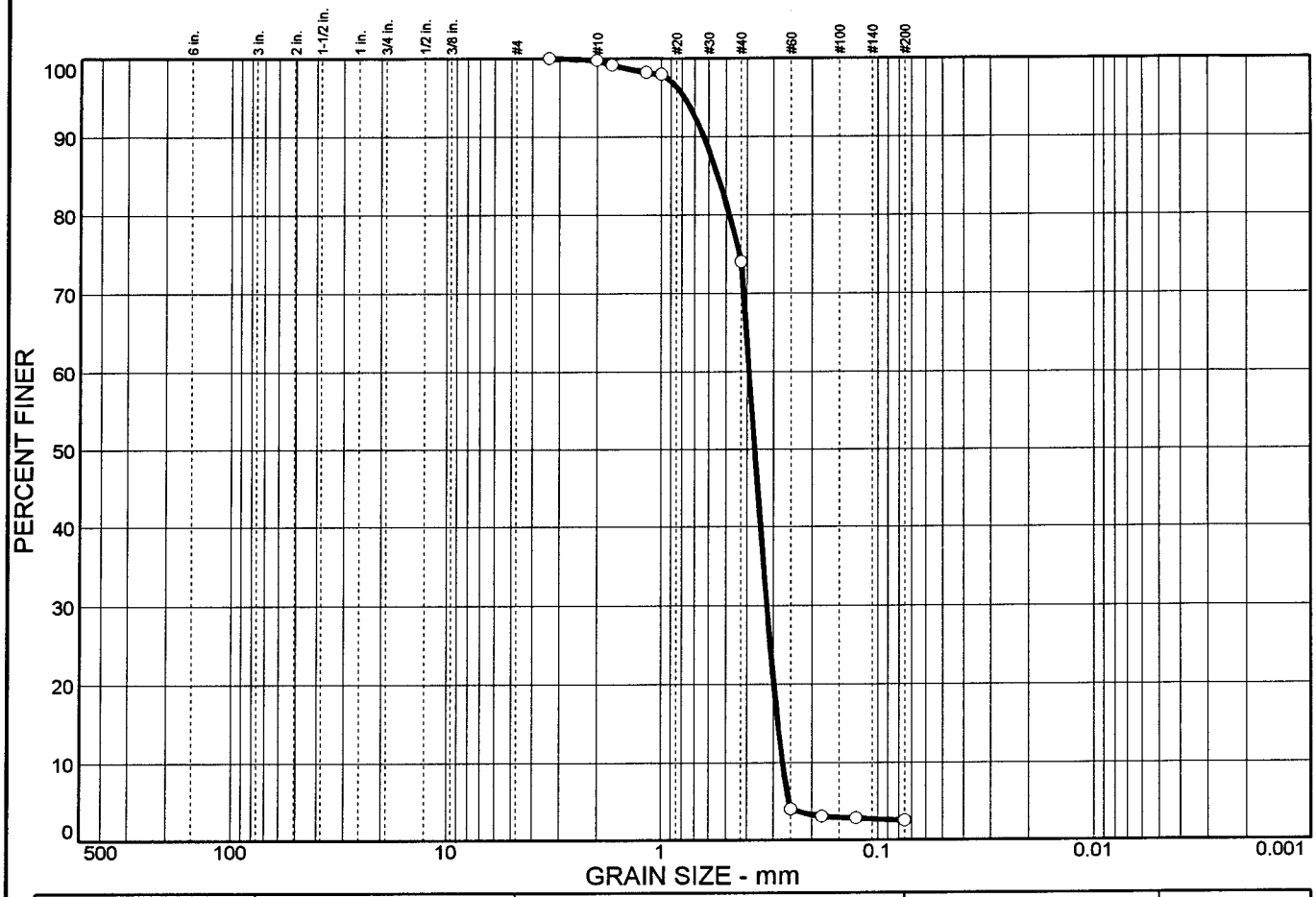
Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	97.5	2.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#6	100.0		
#10	99.8		
#12	99.2		
#16	98.2		
#18	98.0		
#40	74.0		
#60	4.0		
#80	3.1		
#120	2.8		
#200	2.5		

* (no specification provided)

Soil Description

FINE SAND (SP)

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.546 D_{60}= 0.391 D_{50}= 0.368
D_{30}= 0.323 D_{15}= 0.287 D_{10}= 0.272
C_u= 1.43 C_c= 0.98

Classification

USCS= AASHTO=

Remarks

ECS

Sample No.: 18-B **Source of Sample:** **Date:** 14MAY2003
Location: MYRTLE GROVE BOR:3U **Elev./Depth:**

US Army Corps of Engineers
New Orleans District

Client:
Project: MYRTLE GROVE
Project No: BOR: MG-3U **Plate**

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GRAIN SIZE DISTRIBUTION TEST DATA

Client:
Project: MYRTLE GROVE
Project Number: BOR: MG-3U

Sample Data

Source:
Sample No.: 18-B
Elev. or Depth:
Sample Length (in./cm.):
Location: MYRTLE GROVE BOR:3U
Description: FINE SAND (SP)
Date: 14MAY2003 **PL:**
LL: **PI:**
USCS Classification:
AASHTO Classification:
Testing Remarks: ECS

Mechanical Analysis Data

	Initial	After wash
Dry sample and tare=	141.20	138.10
Tare =	0.00	0.00
Dry sample weight =	141.20	138.10

Minus #200 from wash= 2.2 %
Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 6	0.00	100.0
# 10	0.30	99.8
# 12	1.10	99.2
# 16	2.50	98.2
# 18	2.80	98.0
# 40	36.70	74.0
# 60	135.60	4.0
# 80	136.80	3.1
# 120	137.20	2.8
# 200	137.70	2.5

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = % GRAVEL = % SAND = 97.5
% FINES = 2.5

D_{85}= 0.55 D_{60}= 0.39 D_{50}= 0.37
D_{30}= 0.32 D_{15}= 0.29 D_{10}= 0.27
C_c= 0.9797 C_u= 1.4345

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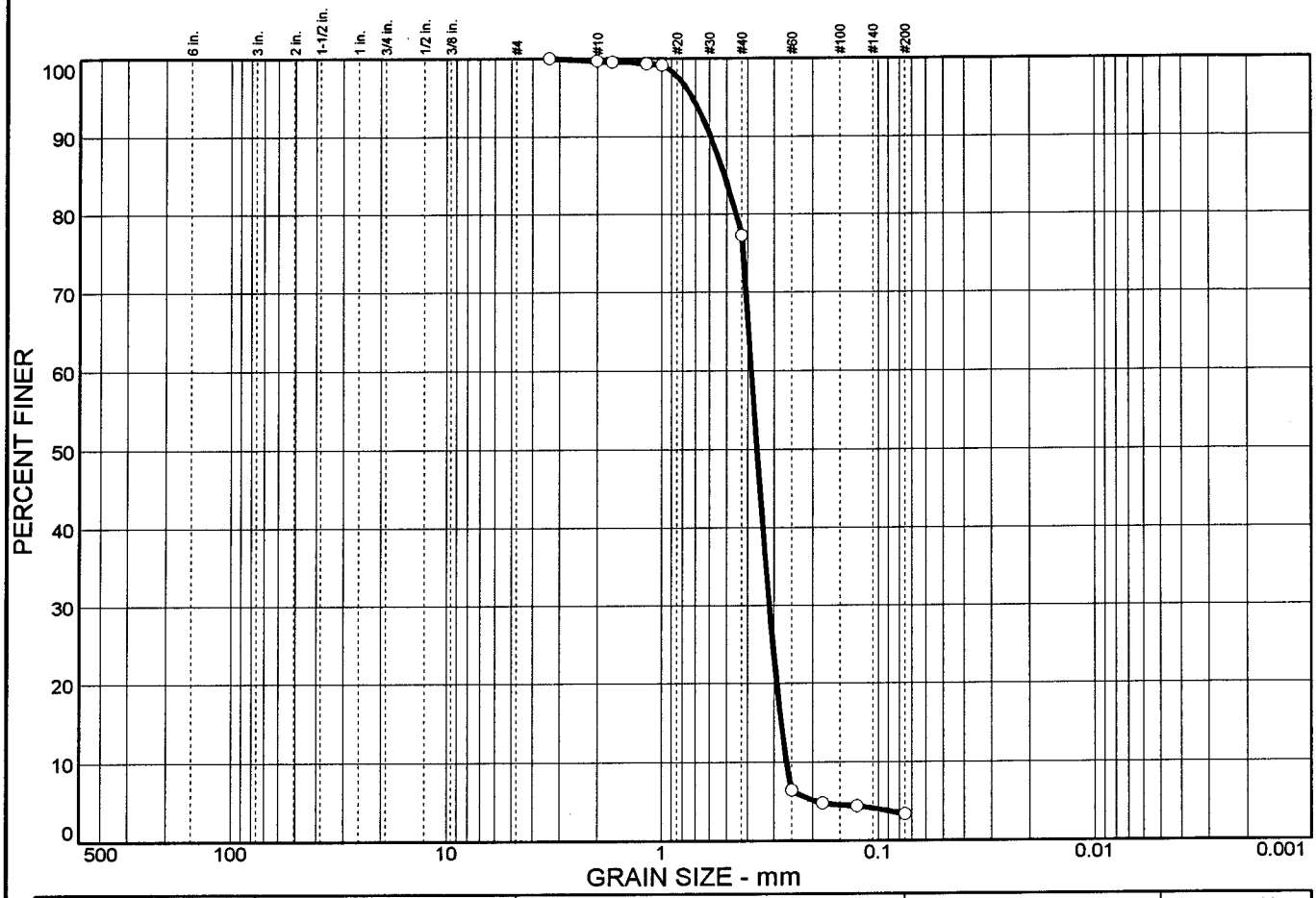
Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	96.6	3.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#6	100.0		
#10	99.7		
#12	99.6		
#16	99.3		
#18	99.2		
#40	77.2		
#60	6.4		
#80	4.8		
#120	4.4		
#200	3.4		

* (no specification provided)

Soil Description

FINE SAND

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.511 D_{60}= 0.384 D_{50}= 0.361
D_{30}= 0.317 D_{15}= 0.280 D_{10}= 0.264
C_u= 1.45 C_c= 0.99

Classification

USCS= AASHTO=

Remarks

ECS

Sample No.: 19-A **Source of Sample:** **Date:** 14MAY2003
Location: MYRTLE GROVE BOR:3U **Elev./Depth:**

US Army Corps of Engineers

New Orleans District

Client:
Project: MYRTLE GROVE
Project No: BOR: MG-3U **Plate**

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GRAIN SIZE DISTRIBUTION TEST DATA

Client:
Project: MYRTLE GROVE
Project Number: BOR: MG-3U

Sample Data

Source:
Sample No.: 19-A
Elev. or Depth:
Sample Length (in./cm.):
Location: MYRTLE GROVE BOR:3U
Description: FINE SAND
Date: 14MAY2003 **PL:**
LL: **PI:**
USCS Classification:
AASHTO Classification:
Testing Remarks: ECS

Mechanical Analysis Data

	Initial	After wash
Dry sample and tare=	159.50	154.60
Tare =	0.00	0.00
Dry sample weight =	159.50	154.60

Minus #200 from wash= 3.1 %
Tare for cumulative weight retained= .00

Sieve	Cumul. Wt. retained	Percent finer
# 6	0.00	100.0
# 10	0.50	99.7
# 12	0.70	99.6
# 16	1.20	99.3
# 18	1.30	99.2
# 40	36.30	77.2
# 60	149.30	6.4
# 80	151.80	4.8
# 120	152.50	4.4
# 200	154.10	3.4

Fractional Components

Gravel/Sand based on #4
Sand/Fines based on #200
% COBBLES = % GRAVEL = % SAND = 96.6
% FINES = 3.4

D_{85}= 0.51 D_{60}= 0.38 D_{50}= 0.36
D_{30}= 0.32 D_{15}= 0.28 D_{10}= 0.26
C_C= 0.9884 C_u= 1.4522

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A22504

29 39 24.0
89 58 11.3

BORING LOG
FIELD DATA

Project HPO-NO to Venice Prior TFG Site _____ Date 11/13/06
Location (336) Plaq Parish Job No. 27-023B
Drill Rig _____ Inspector _____ Operator _____ Surface El +3.09 Boring No. MGA-4

SAMPLE NUMBER	DATE TAKEN	STRATUM FROM	STRATUM TO	DRIVE FROM	DRIVE TO	SAMPLE FROM	SAMPLE TO	TYPE OF SAMPLER			CLASSIFICATION AND REMARKS
1				0.0	3.0	0.0	2.8	Geoprobe			Dr. 3.0 Rec 2.8
2				3.0	7.0	3.0	6.6				" 4.0 " 3.6
3				7.0	11.0	7.0	10.1				" 4.0 " 3.1
4				11.0	15.0	11.0	14.0				" 4.0 " 3.0
5				15.0	19.0	15.0	18.8				" 4.0 " 3.8
6				19.0	23.0	19.0	22.1				" 4.0 " 3.1
7				23.0	27.0	23.0	27.0				" 4.0 " 4.0
[illegible]				[illegible]							

WES FORM JAN 74 819 EDITION OF NOV 1971 MAY BE USED

Sheet _____ of _____ Sheets

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ORGANIC CONTENT

ASTM D 2974, Method C

Project Name _____ HPO-NO MYRTLE GROVE MGN-4 12/4/2006

Boring/Sample No.	12.8-14.0	12.8-14.0	16.5-17.5	16.5-17.5	17.5-18.8	17.5-18.8	19.0-20.0	19.0-20.0
Tare No.	C-20	C-7	D-4	C-13	C-21	C-17	A-14	A-16
Tare + Dry Soil g	52.55	51.32	53.42	50.04	52.45	51.87	54.38	51.77
Tare Wt. g	27.55	26.32	28.42	25.04	27.45	26.87	29.38	26.77
Dry Soil "B"	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00
Tare + Ashed Soil g	51.66	50.41	52.12	48.75	51.35	50.75	53.23	50.64
Ashed Soil "C"	24.11	24.09	23.70	23.71	23.90	23.88	23.85	23.87
Weight Lost	0.89	0.91	1.30	1.29	1.10	1.12	1.15	1.13
Percent Ash "D" %	96.4%	96.4%	94.8%	94.8%	95.6%	95.5%	95.4%	95.5%
Organic Matter %	3.6%	3.6%	5.2%	5.2%	4.4%	4.5%	4.6%	4.5%

Boring/Sample No.	23.0-25.0	23.0-25.0	25.7-26.2	25.7-26.2				
Tare No.	A-22	C-18	A-15	D-2				
Tare + Dry Soil g	50.78	54.68	51.15	54.49				
Tare Wt. g	25.78	29.68	26.15	29.49				
Dry Soil "B"	25.00	25.00	25.00	25.00				
Tare + Ashed Soil g	49.93	53.84	50.08	53.44				
Ashed Soil "C"	24.15	24.16	23.93	23.95				
Weight Lost	0.85	0.84	1.07	1.05				
Percent Ash "D" %	96.6%	96.6%	95.7%	95.8%				
Organic Matter %	3.4%	3.4%	4.3%	4.2%				

Boring/Sample No.								
Tare No.								
Tare + Dry Soil g								
Tare Wt. g								
Dry Soil "B"								
Tare + Ashed Soil g								
Ashed Soil "C"								
Weight Lost								
Percent Ash "D" %								
Organic Matter %								

D = Ash Content (%) = (C/B)100 Organic Matter, (%) = 100-D

Remarks:_____

_____

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(07-023B)

LIQUID AND PLASTIC LIMIT TESTS
For use of this form, see EM 1110-2-1906.

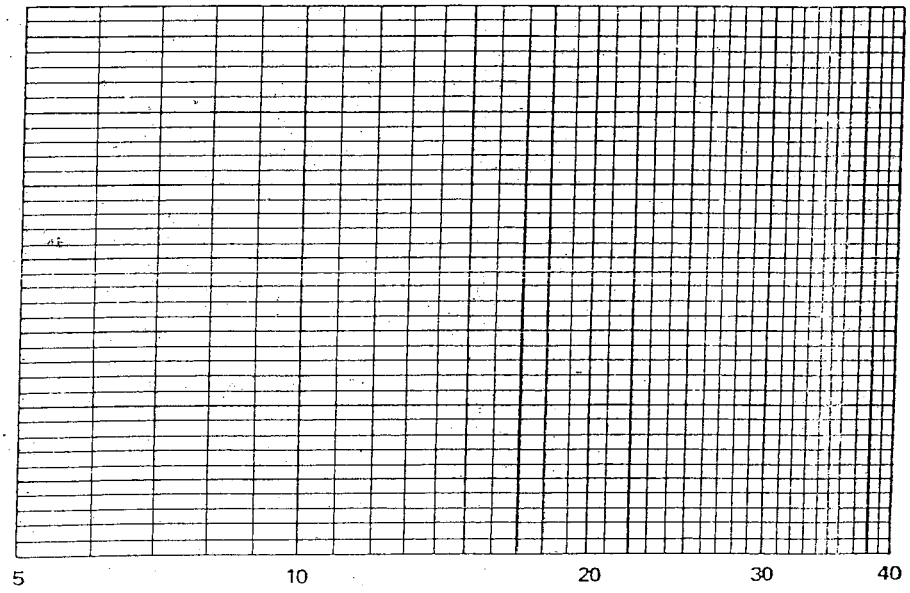
PROJECT HPO-NO TO VENICE (336) MYRTLE GROVE DATE 30 NOV. 2006

BORING NO. MGN-4 SAMPLE NO. 1

LIQUID LIMIT

	RUN NO.	1	2	3	4	5	6
	TARE NO.	209	218				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	32.35	31.89				
	TARE PLUS DRY SOIL	27.10	26.58				
	WATER W_w	5.25	5.31				
	TARE	13.51	14.62				
	DRY SOIL W_s	13.59	11.96				
	WATER CONTENT, % w	38.6	44.4				
	NUMBER OF BLOWS	33	23				

CUP: 52
DEPTH: 0.7 – 1.6



LL 44
PL 21
PI 23
Symbol from plasticity chart CL-6

PLASTIC LIMIT

	RUN NO.	1	2	3	4	5	NATURAL WATER CONTENT
	TARE NO.	96	68				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	16.68	16.84				
	TARE PLUS DRY SOIL	15.20	15.02				
	WATER W_w	1.48	1.82				
	TARE	10.51	10.22				
	DRY SOIL W_s	4.69	4.80				
	WATER CONTENT, % w	31.6	37.9				
	PLASTIC LIMIT						

REMARKS

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(07-023B)

LIQUID AND PLASTIC LIMIT TESTS

For use of this form, see EM 1110-2-1906.

PROJECT HPO-NO TO VENICE (336) MYRTLE GROVE DATE 30 NOV 2006

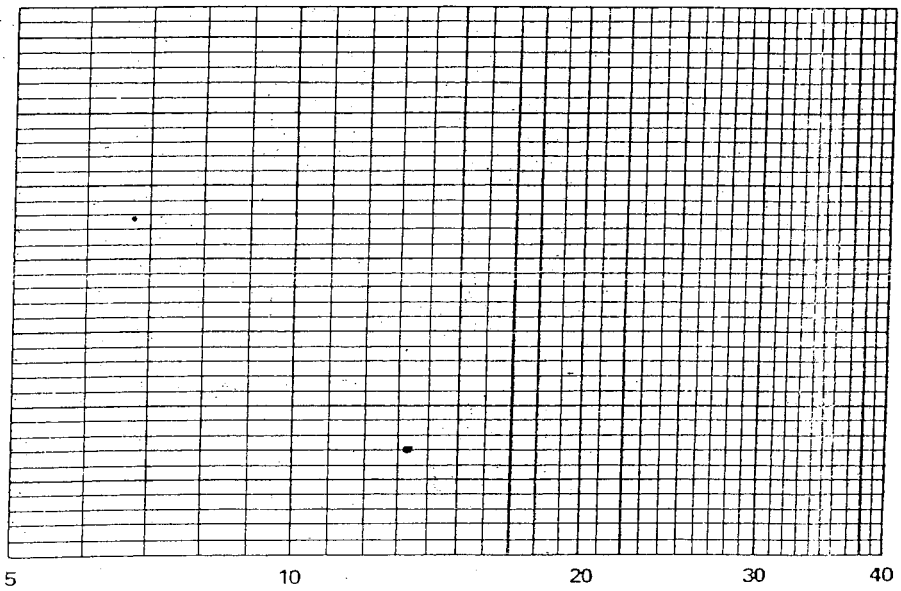
BORING NO. MGN-4 SAMPLE NO. 2

LIQUID LIMIT

	RUN NO.	1	2	3	4	5	6
	TARE NO.	5	139				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	26.41	29.28				
	TARE PLUS DRY SOIL	20.29	22.86				
	WATER W_w	6.12	6.42				
	TARE	15.29	12.25				
	DRY SOIL W_s	15.62	10.61				
	WATER CONTENT, % w	39.18	60.51				
	NUMBER OF BLOWS	25	35				

61 CUP: 30

DEPTH: 6.0-6.6



LL 61

PL 23

PI 38

Symbol from plasticity chart CH-3

PLASTIC LIMIT

	RUN NO.	1	2	3	4	5	NATURAL WATER CONTENT
	TARE NO.	18	87				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	16.04	16.65				
	TARE PLUS DRY SOIL	14.83	15.31				
	WATER W_w	1.21	1.34				
	TARE	9.67	9.81				
	DRY SOIL W_s	5.16	5.50				
	WATER CONTENT, % w	23.45	24.36				
	PLASTIC LIMIT	23	23				

REMARKS

TECHNICIAN COMPUTED BY CHECKED BY

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(07-023B)

LIQUID AND PLASTIC LIMIT TESTS
For use of this form, see EM 1110-2-1906.

PROJECT HPO-NO TO VENICE (336) MYRTLE GROVE DATE 30 NOV 2006

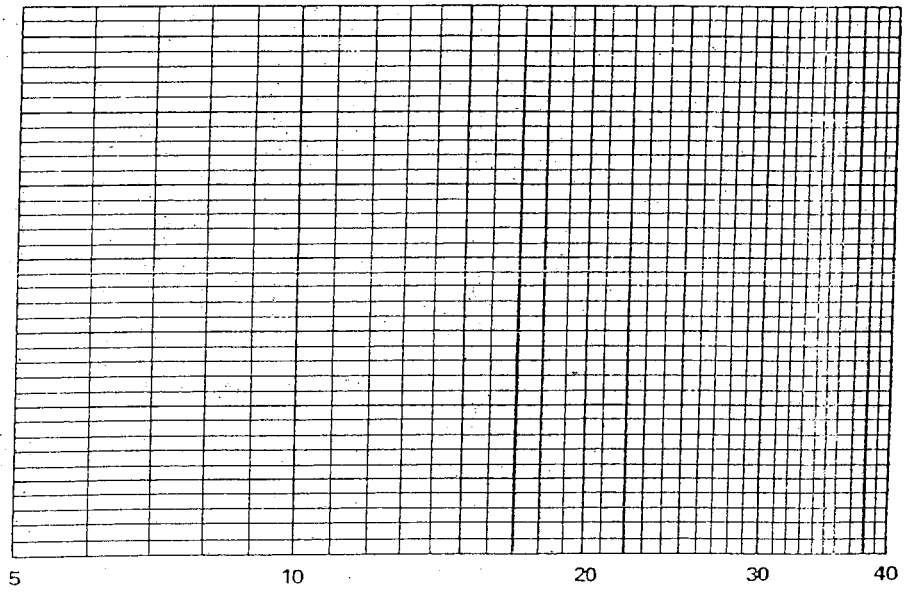
BORING NO. MGN-4 SAMPLE NO. 3

LIQUID LIMIT

RUN NO.		1	2	3	4	5	6
TARE NO.		56	97	208	203		
WEIGHT IN GRAMS: TARE PLUS WET SOIL		24.23	22.33	30.73	29.31		
WEIGHT IN GRAMS: TARE PLUS DRY SOIL		19.85	18.57	25.84	24.83		
WEIGHT IN GRAMS: WATER	W_w	4.38	3.66	4.89	4.48		
WEIGHT IN GRAMS: TARE		10.79	10.76	15.53	15.35		
WEIGHT IN GRAMS: DRY SOIL	W_s	9.06	7.81	10.33	9.48		
WATER CONTENT, %	w	48.34	46.86	47.38	47.26		
NUMBER OF BLOWS		27 (48)	22	25	26		

CUP: 46 33

DEPTH: 8.5-10.1



LL 47

PL 17

PI 30

Symbol from plasticity chart CL-6

PLASTIC LIMIT

RUN NO.		1	2	3	4	5	NATURAL WATER CONTENT
TARE NO.		225	53	24	144		
WEIGHT IN GRAMS: TARE PLUS WET SOIL		20.65	16.88	17.59	18.38		
WEIGHT IN GRAMS: TARE PLUS DRY SOIL		19.77	15.97	16.28	17.09		
WEIGHT IN GRAMS: WATER	W_w	0.88	0.91	1.31	1.29		
WEIGHT IN GRAMS: TARE		14.72	10.61	9.72	10.61		
WEIGHT IN GRAMS: DRY SOIL	W_s	5.05	5.36	6.56	6.48		
WATER CONTENT, %	w	17.43	16.98	19.97	19.91		
PLASTIC LIMIT		17	17	20	20		

REMARKS

TECHNICIAN COMPUTED BY DY CHECKED BY

"Confidential Information: Privileged & Confidential Work Product"

(07-023B)

LIQUID AND PLASTIC LIMIT TESTS
For use of this form, see EM 1110-2-1906.

PROJECT HPO-NO TO VENICE (336) MYRTLE GROVE DATE 30 NOV 2006

BORING NO. MGN-4 SAMPLE NO. 4

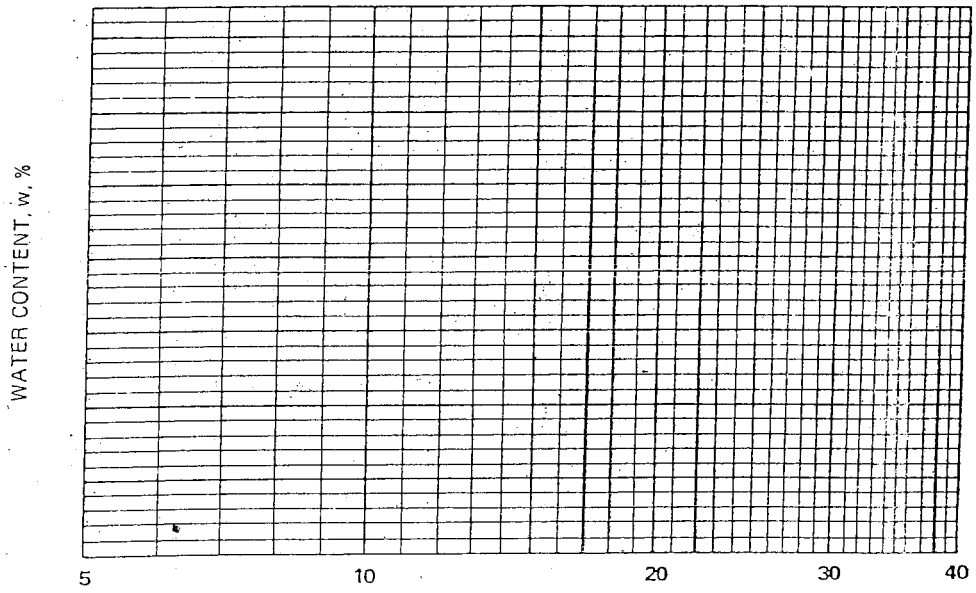
LIQUID LIMIT

	RUN NO.	1	2	3	4	5	6
	TARE NO.	5A	110				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	23.95	25.17				
	TARE PLUS DRY SOIL	20.26	21.42				
	WATER W_w	3.69	3.75				
	TARE	10.89	11.81				
	DRY SOIL W_s	9.37	9.61				
	WATER CONTENT, % w	39.38	39.02				
	NUMBER OF BLOWS	22	21				

39 38

CUP: 42

DEPTH: 12.8-13.1



LL 39

PL 19

PI 20

Symbol from plasticity chart CL-4

PLASTIC LIMIT

	RUN NO.	1	2	3	4	5	NATURAL WATER CONTENT
	TARE NO.	223	111				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	21.36	18.56				
	TARE PLUS DRY SOIL	20.30	17.57				
	WATER W_w	1.06	0.99				
	TARE	14.82	12.44				
	DRY SOIL W_s	5.48	5.13				
	WATER CONTENT, % w	19.34	19.30				
	PLASTIC LIMIT	19	19				

REMARKS

TECHNICIAN COMPUTED BY CHECKED BY

"Confidential Information: Privileged & Confidential Work Product"

A22505

Lat 29 39 24.9
Lon 89 58 14.4

BORING LOG
FIELD DATA

Project HPO-NO-To Venice Prior TFG (33L) Plug Pavers Site _____ Date 11/14/06
Location _____ Job No. 07-023B
Drill Rig _____ Inspector _____ Operator _____ Surface El +3.05 Boring No. MGN-5

SAMPLE NUMBER	DATE TAKEN	STRATUM FROM	STRATUM TO	DRIVE FROM	DRIVE TO	SAMPLE FROM	SAMPLE TO	TYPE OF SAMPLER			CLASSIFICATION AND REMARKS	
1				0.0	3.0	0.0	2.7	und			Dr 3.0	2.7
2				3.0	7.0	3.0	6.8				4.0	3.8
3				7.0	11.0	7.0	9.5				4.0	2.5
4				11.0	15.0	11.0	13.7				4.0	2.7
5				15.0	19.0	15.0	18.0				4.0	3.0
6				19.0	23.0	19.0	22.3				4.0	3.3
7				23.0	27.0	23.0	27.0				4.0	4.0

WES FORM JAN 74 019 EDITION OF NOV 1971 MAY BE USED

Sheet _____ of _____ Sheets

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ORGANIC CONTENT

ASTM D 2974, Method C

Project Name _____ HPO-NO MYRTLE GROVE MGN-5 12/4/2006

Boring/Sample No.		15.0-15.5	15.0-15.5	15.5-16.1	15.5-16.1	16.1-16.9	16.1-16.9	20.8-21.5	20.8-21.5
Tare No.		D-3	C012	A-13	C-11	C-15	B-11	C-24	C-19
Tare + Dry Soil	g	51.12	55.47	53.84	51.34	50.62	47.09	50.21	50.42
Tare Wt.	g	26.12	30.47	28.84	26.34	25.62	22.09	25.21	25.42
Dry Soil "B"		25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00
Tare + Ashed Soil	g	50.02	54.38	52.77	50.28	49.44	45.92	49.22	49.42
Ashed Soil "C"		23.90	23.91	23.93	23.94	23.82	23.83	24.01	24.00
Weight Lost		1.10	1.09	1.07	1.06	1.18	1.17	0.99	1.00
Percent Ash "D"	%	95.6%	95.6%	95.7%	95.8%	95.3%	95.3%	96.0%	96.0%
Organic Matter	%	4.4%	4.4%	4.3%	4.2%	4.7%	4.7%	4.0%	4.0%

Boring/Sample No.		24.4-25.2	24.4-25.2	26.0-27.0	26.0-27.0				
Tare No.		C-23	A-20	14	A-3				
Tare + Dry Soil	g	51.54	54.79	53.43	45.95				
Tare Wt.	g	26.54	29.79	28.43	20.95				
Dry Soil "B"		25.00	25.00	25.00	25.00				
Tare + Ashed Soil	g	50.47	53.74	52.46	44.99				
Ashed Soil "C"		23.93	23.95	24.03	24.04				
Weight Lost		1.07	1.05	0.97	0.96				
Percent Ash "D"	%	95.7%	95.8%	96.1%	96.2%				
Organic Matter	%	4.3%	4.2%	3.9%	3.8%				

Boring/Sample No.									
Tare No.									
Tare + Dry Soil	g								
Tare Wt.	g								
Dry Soil "B"									
Tare + Ashed Soil	g								
Ashed Soil "C"									
Weight Lost									
Percent Ash "D"	%								
Organic Matter	%								

D = Ash Content (%) = (C/B)100 Organic Matter, (%) = 100-D

Remarks:_____

_____

Recorded By:_R.J.L. / JMc_____Computed By:_____R.J.L._____Checked By:R.J.L./ J.

"Confidential Information: Privileged & Confidential Work Product"

(07-023B)

LIQUID AND PLASTIC LIMIT TESTS

For use of this form, see EM 1110-2-1906.

PROJECT HPO-NO TO VENICE (336) MYRTLE GROVE DATE 30 NOV 2006

BORING NO. MGN-5 SAMPLE NO. 2

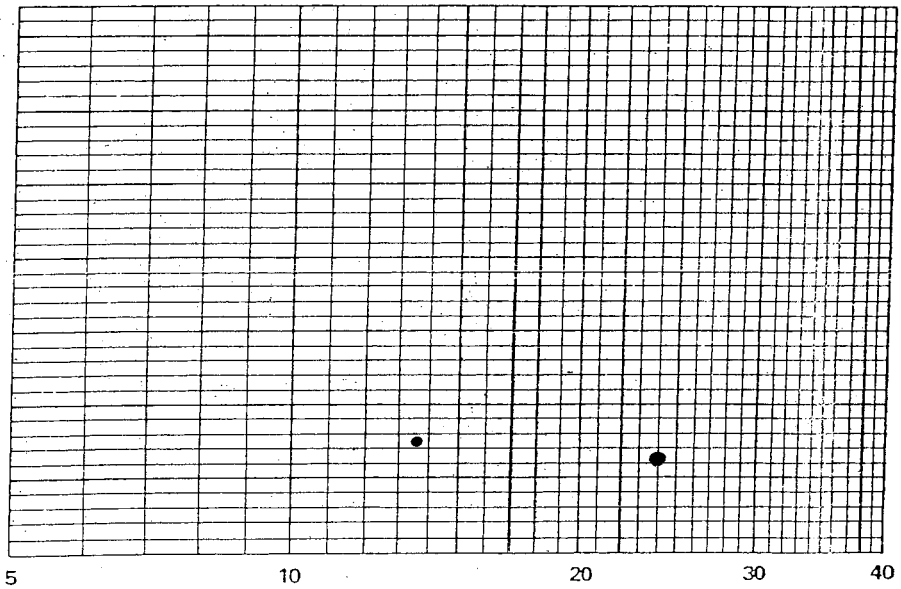
LIQUID LIMIT

	RUN NO.	1	2	3	4	5	6
	TARE NO.	38	22				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	25.29	22.93				
	TARE PLUS DRY SOIL	20.12	18.50				
	WATER W_w	5.17	4.43				
	TARE	9.64	9.09				
	DRY SOIL W_s	10.48	9.41				
	WATER CONTENT, % w	49.33	49.3[illegible]				
	NUMBER OF BLOWS	25	25				

49 49

CUP: 92

DEPTH: 5.2-6.8



LL 49

PL 22

PI 27

Symbol from plasticity chart CL-6

PLASTIC LIMIT

	RUN NO.	1	2	3	4	5	NATURAL WATER CONTENT
	TARE NO.	2322	85				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	21.53	12.07				
	TARE PLUS DRY SOIL	20.43	15.94				
	WATER W_w	1.10	1.[illegible]				
	TARE	15.93	10.70				
	DRY SOIL W_s	4.[illegible]	5.[illegible]				
	WATER CONTENT, % w	21.[illegible]	21.[illegible]				
	PLASTIC LIMIT	22	22				

REMARKS

TECHNICIAN [illegible] COMPUTED BY [illegible] CHECKED BY

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ENG FORM 3838

PLATE III-1

(07-023B)

LIQUID AND PLASTIC LIMIT TESTS

For use of this form, see EM 1110-2-1906.

PROJECT HPO-NO TO VENICE (336) MYRTLE GROVE DATE 30 NOV 2006

BORING NO. MGN-5 SAMPLE NO. 3

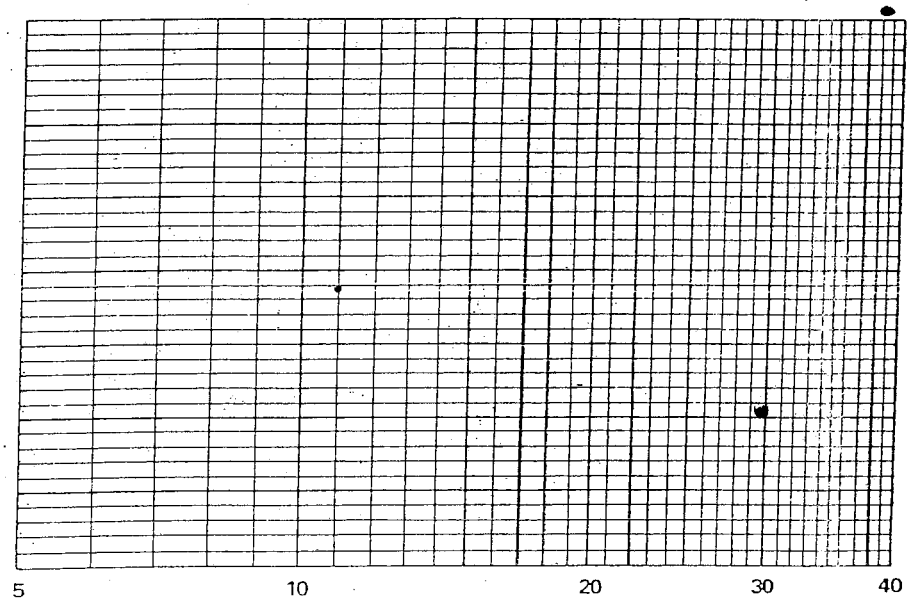
LIQUID LIMIT

	RUN NO.	1	2	3	4	5	6
	TARE NO.	118	119				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	25.98	28.76				
	TARE PLUS DRY SOIL	19.82	21.98				
	WATER W_w	4.16	4.78				
	TARE	10.93	11.86				
	DRY SOIL W_s	8.89	10.22				
	WATER CONTENT, % w	46.8	46.8				
	NUMBER OF BLOWS	23	23				

46

CUP: 59

DEPTH: 7.0-8.0



LL 46

PL 20

PI 26

Symbol from plasticity chart CL-6

PLASTIC LIMIT

	RUN NO.	1	2	3	4	5	NATURAL WATER CONTENT
	TARE NO.	152	114				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	18.44	16.74				
	TARE PLUS DRY SOIL	17.91	15.70				
	WATER W_w	1.03	1.04				
	TARE	12.24	10.61				
	DRY SOIL W_s	5.67	5.09				
	WATER CONTENT, % w	18.2	20.4				
	PLASTIC LIMIT	20	20				

REMARKS

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(07-023B)

LIQUID AND PLASTIC LIMIT TESTS
For use of this form, see EM 1110-2-1906.

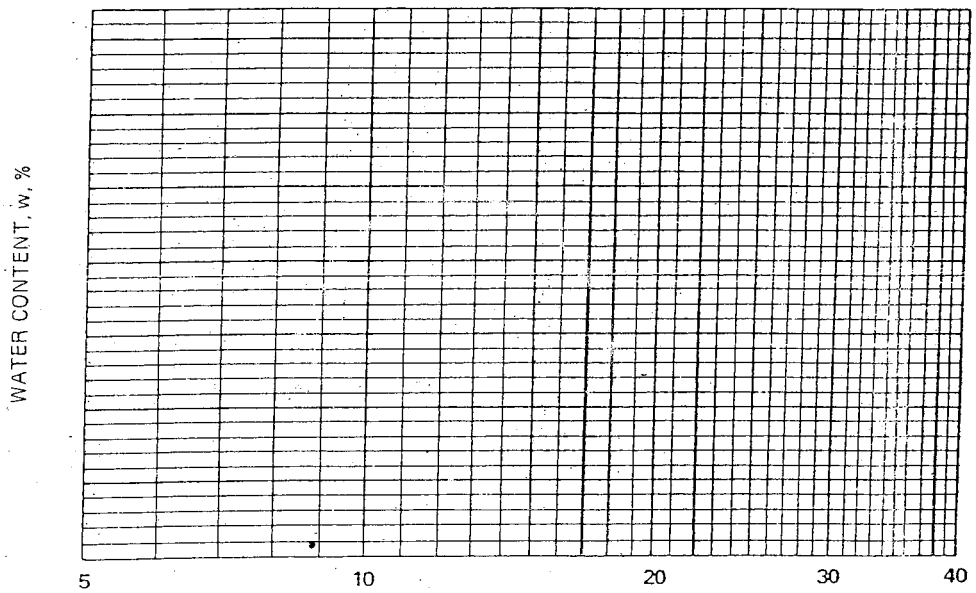
PROJECT HPO-NO TO VENICE (336) MYRTLE GROVE DATE 30 NOV 2006

BORING NO. MGN-5 SAMPLE NO. 4

LIQUID LIMIT

	RUN NO.	1	2	3	4	5	6
	TARE NO.	59	239				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	23.59	28.29				
	TARE PLUS DRY SOIL	19.47	24.22				
	WATER W_w	4.12	4.07				
	TARE	10.72	15.59				
	DRY SOIL W_s	8.75	8.63				
	WATER CONTENT, % w	47.09	47.16				
	NUMBER OF BLOWS	24	24				

CUP: 3
DEPTH: 12.3 – 13.1



LL 47
PL 19
PI 28

Symbol from plasticity chart CL-6

PLASTIC LIMIT

	RUN NO.	1	2	3	4	5	NATURAL WATER CONTENT
	TARE NO.	126	209				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	18.82	22.32				
	TARE PLUS DRY SOIL	17.82	21.23				
	WATER W_w	1.00	1.09				
	TARE	12.61	15.50				
	DRY SOIL W_s	5.21	5.73				
	WATER CONTENT, % w	19.19	19.02				
	PLASTIC LIMIT	19	19				

REMARKS

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(07-023B)

LIQUID AND PLASTIC LIMIT TESTS

For use of this form, see EM 1110-2-1906.

PROJECT HPO-NO TO VENICE (336) MYRTLE GROVE DATE 30 NOV 2006

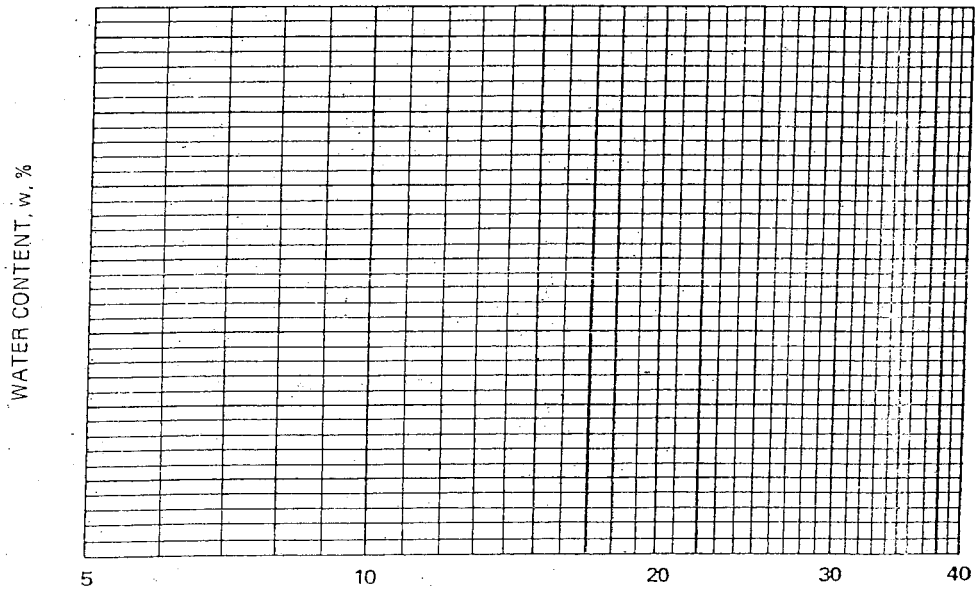
BORING NO. MGN-5 SAMPLE NO. 5

LIQUID LIMIT

	RUN NO.	1	2	3	4	5	6
	TARE NO.	219	138				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	30.13	27.10				
	TARE PLUS DRY SOIL	25.03	22.20				
	WATER W_w	5.10	4.90				
	TARE	14.84	12.25				
	DRY SOIL W_s	10.19	9.95				
	WATER CONTENT, % w	50.05	49.25				
	NUMBER OF BLOWS	25	25				

CUP: 35

DEPTH: 16.1-16.9



LL 50

PL 22

PI 28

Symbol from plasticity chart CH-2

PLASTIC LIMIT

	RUN NO.	1	2	3	4	5	NATURAL WATER CONTENT
	TARE NO.	116	39				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	18.99	17.88				
	TARE PLUS DRY SOIL	17.63	16.79				
	WATER W_w	1.36	1.09				
	TARE	12.42	8.80				
	DRY SOIL W_s	5.21	4.99				
	WATER CONTENT, % w	21.69	21.84				
	PLASTIC LIMIT	22	22				

REMARKS

TECHNICIAN [illegible] COMPUTED BY DY CHECKED BY

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(07-023B)

LIQUID AND PLASTIC LIMIT TESTS

For use of this form, see EM 1110-2-1906.

PROJECT HPO-NO TO VENICE (336) MYRTLE GROVE DATE 30 NOV 2006

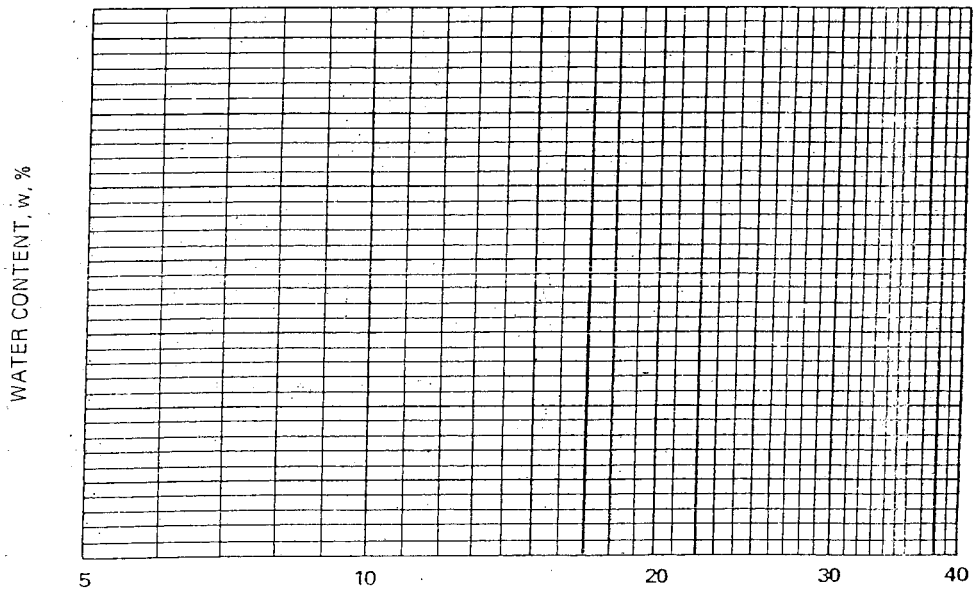
BORING NO. MGN-5 SAMPLE NO. 7

LIQUID LIMIT

	RUN NO.	1	2	3	4	5	6
	TARE NO.	206	13				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	29.93	26.90				
	TARE PLUS DRY SOIL	25.76	22.02				
	WATER W_w	4.17	4.88				
	TARE	15.47	10.01				
	DRY SOIL W_s	10.29	12.01				
	WATER CONTENT, % w	40.53	40.63				
	NUMBER OF BLOWS	24 / 40	24 / 40				

CUP: 89

DEPTH: 24.4-25.2



LL 40

PL 21

PI 19

Symbol from plasticity chart CL-4

PLASTIC LIMIT

	RUN NO.	1	2	3	4	5	NATURAL WATER CONTENT
	TARE NO.	35	101				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	17.15	16.56				
	TARE PLUS DRY SOIL	16.10	15.60				
	WATER W_w	1.05	0.96				
	TARE	10.98	10.38				
	DRY SOIL W_s	5.12	5.22				
	WATER CONTENT, % w	20.51	20.31				
	PLASTIC LIMIT	21	20				

REMARKS

TECHNICIAN [illegible] COMPUTED BY DV CHECKED BY

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LOT 42

29 39 17.6
89 59 27.0

BORING LOG
FIELD DATA

Project Myrtle Grove Site Date 4/22/03
Location "Myrtle" Grove, LA Job No. 03-15
Drill Rig CME 750 Inspector Richard Operator Mobile Surface El Boring No. MG-44

SAMPLE NUMBER	DATE TAKEN	STRATUM FROM	STRATUM TO	FROM	TO	SAMPLE FROM	SAMPLE TO	TYPE OF SAMPLER			CLASSIFICATION AND REMARKS
1				2.0	3.5	0.0	2.0	UND.			DR. 3.5 REC 2.0
2				3.5	7.0	3.5	7.0				" 3.5 " 3.5
3				7.0	10.5	7.0	9.7				" 3.5 " 2.7
4				11.0	14.5	11.0	14.5				" 3.5 " 3.5
5				15.0	18.5	15.0	18.5				" 3.5 " 3.5
6				19.0	22.5	19.0	22.5				" 3.5 " 3.5
7				23.0	26.5	23.0	26.5				" 3.5 " 3.5
8				27.0	30.5	27.0	30.5				" 3.5 " 3.5
9				31.0	34.5	31.0	34.0				" 3.5 " 3.0

WES FORM 819 JAN 74 EDITION OF NOV 19[illegible] E USED

Sheet 1 of 3 Sheets

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BORING LOG
FIELD DATA

Project: MYRTLE Grove — Site: — Date: 4/22/03
Location: — Job No.: 03-15
Drill Rig: — Inspector: Reed — Operator: Mobile — Surface El: — Boring No.: MG-60

SAMPLE NUMBER	DATE TAKEN	STRATUM FROM	STRATUM TO	CORE FROM	CORE TO	SAMPLE FROM	SAMPLE TO	TYPE OF SAMPLER	CLASSIFICATION AND REMARKS
10				35.0	38.5	35.0	38.5	4"	DR. 3.5 REC. 3.5
11				39.0	42.5	39.0	41.8		" 3.5 " 2.8
12				43.0	46.5	43.0	46.5		" 3.5 " 3.5
13				47.0	50.5	47.0	50.5		" 3.5 " 3.5
14				51.0	54.5	51.0	54.5		" 3.5 " 3.5
15				55.0	58.5	55.0	58.5		" 3.5 " 3.5
									Water Table 4/23/03 - 4.2
16				59.0	62.5	59.0	62.5		" 3.5 " 3.5
							66.5		
17				63.0	66.5	63.0	~~70.5~~		" 3.5 " 3.5
						~~71.0~~			
18				67.0	70.5	~~67.5~~ 67.0	~~71.5~~ 70.5		" 3.5 " 3.5

WES FORM 819 JAN 74 EDITION OF NOV 197 MAY BE USED

Sheet 2 of 3 Sheets

"Confidential Information: Privileged & Confidential Work Product"

BORING LOG
FIELD DATA

Project Myrtle Grove Site Date 4/23/03
Location Job No. 03-45
Drill Rig Inspector Operator Surface El Boring No. MG-60

SAMPLE NUMBER	DATE TAKEN	STRATUM FROM	STRATUM TO	CASING FROM	CASING TO	SAMPLE FROM	SAMPLE TO	TYPE OF SAMPLER			CLASSIFICATION AND REMARKS
19				71.0	74.5	71.0	74.5	(HS)			DR 3.5 Rec 3.5
20				75.0	78.5	75.0	77.5				" 3.5 " 2.5
21				79.0	82.5	79.0	82.0				" 3.5 " 3.0
				Complete							

WES FORM JAN 74 819 EDITION OF NOV 197 [illegible] BE USED

Sheet 3 of 3 Sheets

"Confidential Information: Privileged & Confidential Work Product"

A20868 PHOENIX 29° 39' 17.6" 89° 59' 27.0"

FOR UNDISTURBED SAMPLES ONLY

MYRTLE GROVE ECOSYSTERM RESTORATION PROJECT FEASIBILITY STUDY
BOR: MG-6U
5" UNDIST. (03-15)

LABORATORY BORING LOG

① Boring Number MG-6U

②-④ Location

⑤ Date Taken 22 APR '03 ⑥ G.S.E.

SAMPLE NO. 1 FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH	
0.0			0.0	1.0	30	1.0 CL	SIS	VST	BR	OX RT									
A			428	98.8	30	CL 4		VST	BR	1NS 1gr ars ML, SPKS, dw, ox, rt, MAT VEG, CRUMBY									78.7
0.8																			
			1.0	2.0	28	2.0 CH	SIS	VST	BR	RT									
B			18.0	116.6	28	CH 2		VST	BR	1NS 1gr ars ML, SPKS, dry, fair rt, CRUMBLY									93.9
1.7																			
			2.0	3.5		3.5 NS													
C																			
D																			

Classifier E.C.S. Recorder V.T.L. Checker _____ Date Analyzed 24 APR '03 Sheet 1 of 21 Sheets

LMN Form 721 Nov 69 (Replaces previous edition of this form)

"Confidential Information: Privileged & Confidential Work Product"

FOR UNDISTURBED SAMPLES ONLY

MYRTLE GROVE
ECOSYSTERM RESTORATION
PROJECT FEASIBILITY STUDY
BOR: MG-6U
5" UNDIST. (03-15)

LABORATORY BORING LOG

① Boring Number _____

②-④ Location _____

⑤ Date Taken _____ ⑥ G.S.E. _____

SAMPLE NO. 2

FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH
3.5			3.5	5.2	36		CL SIS	M	BR GR	WD OX								
A			3.67	104.7	37													79.8
4.3																		
B			3.73	122.0	35		CL	M	BR GR	WS								93.3
5.2																		
			5.2	7.0	40		CL SIS	M	BR GR	WD OX				42	21			
C			1.44	91.4	35													70.0
6.1																		
D			7.64	88.8	45													64.0
7.0																		

Classifier E.C.S. Recorder V.J.L. Checker _____ Date Analyzed 24 APR '03

Sheet 2 of 21 Sheets

LMN Form 721
Nov 69

(Replaces previous edition of ENG Form 1836, Jun 66)

"Confidential Information: Privileged & Confidential Work Product"

MYRTLE GROVE ECOSYSTERM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-6U

5" UNDIST. (03-15)

LABORATORY BORING LOG

① Boring Number

②-④ Location

⑤ Date Taken

⑥ G.S.E.

SAMPLE NO. 3

FOR UNDISTURBED

FOR UNDISTURBED SAMPLES ONLY

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH	
7.0			7.0	8.0	35	8.0	CL SIS	ST	BR GR	WD OX									
A			6.96	10.92	35		CL	ST	BR GR	lns ars ML, dw, OX,									84.1
7.8																			
			8.0	9.0	45	9.0	CH SIS	M	GR	OX WD									
B			1.87	12.61	45														90.1
8.7							CH2	M	GR	lns lge ars ML, org ars, OX, CRUMBLY, CTS									
		1	4.67	10.18	44														74.5
C		2	9.0	10.09	37		CH SIS	M	GR										
9.6			7.48	8.94	37		CH	M	GR	lns lge ars ML, org STKS, SPKS, dw,									68.4
D																			

Classifier E.C.S. Recorder V.T.L. Checker _____ Date Analyzed 24 APR '03

Sheet 3 of 21 Sheets

LMN Form 721 Nov 69 (Replaces previous edition of LMN Form 721, Jan 68)

"Confidential Information: Privileged & Confidential Work Product"

MYRTLE GROVE ECOSYSTERM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-6U

5" UNDIST. (03-15)

LABORATORY BORING LOG

① Boring Number

②-④ Location

⑤ Date Taken

⑥ G.S.E.

SAMPLE NO. 4 FOR UNDISTURBED

FOR UNDISTURBED SAMPLES ONLY

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH	
			10.0	12.0	40	12.0 CL	SIS	VSO	GR	OX									
11.0																			
			303	104.5	41	CLG		VSO	GR	lts MIL OX,									77.7
11.4																			
		1	304	122.5	39	CLY		VSO	GR	lts, lge ars MIL, OX									91.4
B																			
12.3		2	357	154.9	42					NO UCT DUE TO ars MIL, SLUSH PCKTS									112.3
			120	145	41	14.5 CL	SIS	SO	GR BR	OX									
C			83	121.6	40	CLZ		SO	GR BR	lts lyrs ars MIL, SPKS dw, SLUSH PCKTS, OX									90.1
13.2																			
			444	135.7	41														99.7
D																			
14.1																			

Classifier E.C.S. Recorder V.J.L. Checker _____ Date Analyzed 24 APR '03

Sheet 4 of 21 Sheets

LMN Form 721 Nov 69 (Replaces previous edition of LMN Form 721, Nov 68)

"Confidential Information: Privileged & Confidential Work Product"

FOR UNDISTURBED SAMPLES ONLY

MYRTLE GROVE ECOSYSTERM RESTORATION PROJECT FEASIBILITY STUDY
BOR: MG-6U
5" UNDIST. (03-15)

LABORATORY BORING LOG

① Boring Number _____

②-④ Location _____

⑤ Date Taken _____ ⑥ G.S.E. _____

SAMPLE NO. 5 — FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH	
15.0																			
A	DISCARD	1	14.5	15.5	36	15.5 MH			GR	CS									
			26.9	100.2	36	MH2			GR	ars CL, TR-MICA									76.6
		2																	
15.8			26.7	171.2	49														119.1
B			15.5	17.0	50	CH1	SIS	M	GR BR										
			62.5	101.0	49	CH2		M	GR BR	/as lys ars ML, ars SM, SPKS. dw CRUMBLY									71.7
16.7																			
C		1	24.2	94.5	50														67.1
		2	58.1	126.8	35	MH2			GR	ars CH									97.1
17.6		3																	
D			117.5	164.0	52	CH1	SIS	M	GR BR	OX /as alt thin lys. ML, OX,									111.9
					52	CH3		M	GR BR										
18.5																			

Classifier E.C.S. Recorder V.J.L. Checker _____ Date Analyzed 24 APR '03

Sheet 5 of 21 Sheets

LMN Form 721 Nov 69 (Replaces previous edition of LMN Form 721, Jun 68)

"Confidential Information: Privileged & Confidential Work Product"

MYRTLE GROVE
ECOSYSTERM RESTORATION
PROJECT FEASIBILITY STUDY
BOR: MG-6U
5" UNDIST. (03-15)

LABORATORY BORING LOG

① Boring Number

②-④ Location

⑤ Date Taken

⑥ G.S.E.

SAMPLE NO. 6

FOR UNDISTURBED SAMPLES ONLY

FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO WET WT	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH
19.0																			
CK A	DISCARD			18.6	20.7	44		CH	SIS	M GR	SS CC								
				61.9	123.3	46													88.2
19.8																			
CK B				50.5	125.2	42													91.9
20.7								CH 2		M Gr	INS alt. lyrs ml. lyrs. SM. CC. org. STKS								101.1
				20.7	22.7	41		CH	SIS	M GR	SS CC								
C				57.6	120.0	41													88.1
21.6																			
CK D		1		29.4	136.7	41													100.3
		2																	
22.5				53.3	137.7	57		CH 3		M Gr	INS lyrs ml few SLA								92.2

Classifier R.L. Recorder J.M. Checker _____ Date Analyzed 24 APR 2003

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LMN Form 721
Nov 69

(Replaces previous edition, which is obsolete)

"Confidential Information: Privileged & Confidential Work Product"

FOR UNDISTURBED SAMPLES ONLY

MYRTLE GROVE ECOSYSTERM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-6U

5" UNDIST. (03-15)

LABORATORY BORING LOG

① Boring Number

②-④ Location

⑤ Date Taken

⑥ G.S.E.

SAMPLE NO. 7 FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO.	SAMPLE TO	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH	
23.0			22.7	24.0 w/w dry	78		CH SIS	M	DGR GR	SI SIF									
A	DISCARD		55A	127.1	78		CH 3	M	dGr Gr	ins ans mL SPKS dw	SI SLf					lge Dry ans			76.5
23.7		1																	
B		2	24.0 40	25.5 103.1	73 72		CH SIS	M	GR	SIF CC									64.2
24.6							CH A	M	Gr	ins mL few SLf SPKS dw	Clay rock forming								
C			751	128.6	73														79.2
25.5			25.5	26.5	68		CH P=600	SIS	V.S.O	DGR		160	99				66	260	
D	U		27	158.1	68		CH 3	M	dGr	ins mL ly sm SPKS dw									98.5
26.4																			

Classifier R.L. Recorder J.M. Checker Date Analyzed 24 APR 2003

Sheet 7 of 24 Sheets

LMN Form 721 Nov 69 (Replaces previous edition of LMN Form 721, Jan 68)

"Confidential Information: Privileged & Confidential Work Product"

FOR UNDISTURBED SAMPLES ONLY

MYRTLE GROVE ECOSYSTERM RESTORATION PROJECT FEASIBILITY STUDY
BOR: MG-6U
5" UNDIST. (03-15)

LABORATORY BORING LOG

① Boring Number _____

②–④ Location _____

⑤ Date Taken _____ ⑥ G.S.E. _____

SAMPLE NO. 8

FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT LL	ATTERBERG LIMIT PL	SIZE	TEST WATER CONTENT	UCT DEPTH
27.0																		
A			26.5	28.4	58		CH	SIS SO	GR	SI SLF OX WD		356	104				57	28.0
27.5			41.4	86.3	64													57.2
B			54.1	100.4	53			P= 5.00										69.9
28.4	(U)						CH		GR	1/2 S SL SI SLF	ars	SM, org		ars	OX, dw			
			28.4	30.4	55		CH	SIS SO	GR	SI SLF OX WD								
C			41.6	109.5	50													76.9
29.3																		
D			37.8	108.4	61													71.8
30.2																		

Classifier E.C.S. Recorder N.J.L. Checker _____ Date Analyzed 24 Apr '03

Sheet 8 of 21 Sheets

LMN Form 721
Nov 69

(Replaces previous edition of LMN Form 721, Jun 64)

"Confidential Information: Privileged & Confidential Work Product"

LABORATORY BORING LOG

MYRTLE GROVE ECOSYSTERM RESTORATION PROJECT FEASIBILITY STUDY
BOR: MG-6U
5" UNDIST. (03-15)

① Boring Number

②-④ Location

⑤ Date Taken

⑥ G.S.E.

SAMPLE NO. 9 — FOR UNDISTURBED

FOR UNDISTURBED SAMPLES ONLY

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO.	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH	
31.0			30.4	31.8	49		CH SIS	SO	GR										
LW SM																			
A			12	39.0	49		CH 2	So	Gr	INS mL INS ars	Sm	org	STKS						97.0
CK																			
31.8																			
			31.8	32.8	50		CH SIS	M	GR	SS CC									
B			656	149.9	5.0		CH 2	M	Gr	INS INS mL INS	Sm	clay	rock	farming					104.2
CK																			
LW SM																			
32.7																			
			32.8	33.8	48		CH SIS	SO	GR	SS									
CK																			
C			216	158.0	4.8		CH 2	So	Gr	INS alt. INS mL INS	Sm	org	STKS						110.9
33.6																			
D										(NO UCT DUE TO INS SM)									

Classifier K.L. Recorder J.M. Checker _____ Date Analyzed 24 APR 2003

Sheet 9 of 21 Sheets

LMN Form 721 Nov 69 (Replaces previous edition which is obsolete.)

"Confidential Information: Privileged & Confidential Work Product"

MYRTLE GROVE
ECOSYSTERM RESTORATION
PROJECT FEASIBILITY STUDY
BOR: MG-6U
5" UNDIST. (03-15)

LABORATORY BORING LOG

① Boring Number

②–④ Location

⑤ Date Taken ⑥ G.S.E.

SAMPLE NO. 10

FOR UNDISTURBED SAMPLES ONLY

FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH
35.0			33.8	35.8	65	35.8 CH	SIS	M	GR BR	OX								
A	DISCARD		225	116.1	65	CH4		M	GR BR	lns ML, org STKS, SRKS dw, OX								75.0
38.8																		
		2	35.8	36.8	43	36.8 CH	SIS	M	GR BR	OX								
B		1/2	6.17	103.8	43	CH6		M	GR BR	lns aff thin lyrs ML, OX								76.2
36.7		3																
			36.8	37.8	68	CH	SIS	M	GR BR	OX								
			20	84.6	68	CH4		M	GR BR	lns ML, OX								55.1
C		1																
37.6		2	72	123.5	48	CH6		M	GR BR	lns lyrs. ars ML, OX								87.3
			37.8	38.8	58	CH	SIS	ST	GR BR									
D			76	100.6	58	CH3		ST	GR BR	lns ars ML, SRKS dw								68.0
38.5																		

Classifier E.C.S. Recorder V.J.L. Checker _____ Date Analyzed 24 APR '03

Sheet 10 of 21 Sheets

LMN Form 721
Nov 69

(Replaces previous edition of LMN Form 721 which is obsolete)

"Confidential Information: Privileged & Confidential Work Product"

LABORATORY BORING LOG

MYRTLE GROVE ECOSYSTERM RESTORATION PROJECT FEASIBILITY STUDY
BOR: MG-6U
5" UNDIST. (03-15)

① Boring Number

②-④ Location

⑤ Date Taken

⑤ G.S.E.

SAMPLE NO. 11 — FOR UNDISTURBED

FOR UNDISTURBED SAMPLES ONLY

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO.	SAMPLE TO	W/W DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH	
39.0			38.8	39.8	60		CH	SIS	SO	GR	SS									
	A	CKS	40	117.11	60		CH	3	So	Gr	lns mL 1YS Sm org STKS									77.8
39.8			39.8	40.8	51		CH	SIS	M	GR	SS OX									
	B	CKS	10	128.7	51		CH	3	M	Gr	lns mL 1YS Sm org STKS OX									89.4
40.7			40.8	42.0	44		CH	SIS	M	GR	SS CC									
	C	CKS	141	116.6	44		CH	2	M	Gr	lns a\H 1YS mL 1YS Sm org STKS Clay rock forming									84.8
41.6																				
	D																			

Classifier R.L. Recorder J.M. Checker _____ Date Analyzed 24 APR 2003 Sheet 11 of 21 Sheets

LMN Form 721 Nov 69 (Replaces previous edition which is obsolete)

"Confidential Information: Privileged & Confidential Work Product"

MYRTLE GROVE ECOSYSTERM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-6U

5" UNDIST. (03-15)

LABORATORY BORING LOG

SAMPLE NO. 12

FOR UNDISTURBED SAMPLES ONLY

① Boring Number

②-④ Location

⑤ Date Taken

⑥ G.S.E.

FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH	
43.0			42.0	44.6	50	.	CH	SIS	SO GR										
A	DISCARD	1	42.	107.2	55														73.4
43.7																			
B	(4) (8) (11)							P=600											
			47.0	107.4	46														77.3
44.6							CH	N	GR	Ins ML, org. ars									
			44.6	46.6	43	.	CH	SIS	SO GR			493 1/2					40	44.8	
								P=600		NO UCT SAMPLE DISTURBED									
C			28	109.0	39														81.7
45.5																			
D			34.3	87.9	47														63.1
46.4																			

Classifier E.C.S. Recorder V.J.L. Checker _____ Date Analyzed 24 APR '03

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LMN Form 721
Nov 69

(Replaces previous edition of LMN Form 721, Jun 66)

"Confidential Information: Privileged & Confidential Work Product"

FOR UNDISTURBED SAMPLES ONLY

MYRTLE GROVE ECOSYSTERM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-6U

5" UNDIST. (03-15)

LABORATORY BORING LOG

① Boring Number

②-④ Location

⑤ Date Taken

⑥ G.S.E.

SAMPLE NO. 13 FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH	
47.0			46.6	48.7	60		CH, SIS	M	GR			704/102					60	48.0	
A	DISCARD		23.1	128.5	61														84.1
47.8	(U)							P=.60Q											
B			94	88.6	59														60.6
48.7							CH/CH	M/M	GR/GR	lns, MI, org, STKS,									
			48.7	50.7	56		CH, SIS	M	GR										
C			395	112.4	54														77.1
49.6																			
			211	135.9	57														90.7
D																			
50.5																			

Classifier E.C.S. Recorder V.J.L. Checker _____ Date Analyzed 24 APR '03

Sheet 13 of 21 Sheets

LMN Form 721 Nov 69 (Replaces previous edition of this form, which is obsolete)

"Confidential Information: Privileged & Confidential Work Product"

FOR UNDISTURBED SAMPLES ONLY

MYRTLE GROVE ECOSYSTERM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-6U

5" UNDIST. (03-15)

LABORATORY BORING LOG

① Boring Number _____

②-④ Location _____

⑤ Date Taken _____ ⑥ G.S.E. _____

SAMPLE NO. 14 FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN ND	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH
51.0			50.7	52.6	53		CH, SIS	M	GR			700	106				54	51.5
A	DISCARD		600	97.8	53													68.1
51.7	W																	
B			300	76.4	54				P=1000									53.8
52.6							CH	M	GR	10%								
			52.6	54.6	53		CH, SIS	M	GR	ML, org. silt,								
			594	96.0	51													67.1
C																		
53.5																		
D			595	95.4	55													65.8
54.4																		

Classifier E.C.S. Recorder V.J.L. Checker _____ Date Analyzed 24 APR '03

Sheet 14 of 21 Sheets

LMN Form 721 Nov 69 (Replaces previous edition of LMN Form 721, Jun 61)

"Confidential Information: Privileged & Confidential Work Product"

FOR UNDISTURBED SAMPLES ONLY

MYRTLE GROVE ECOSYSTERM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-6U

5" UNDIST. (03-15)

LABORATORY BORING LOG

① Boring Number

②-④ Location

⑤ Date Taken

⑥ G.S.E.

SAMPLE NO. 15 FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH
55.0			54.6	55.8	47		CH SIS	M	GR									
	DISCARD	SM																
A			19	89.7	47		CH3	M	GR	1/0S	1/4C	Mk,						64.8
55.8																		
			55.8	58.8	51		CH SIS	M	GR	0X								
B			45.6	140.6	52													96.8
56.7																		
							CH4	M	GR	1/0S few alt thin	1/4C	Mk, 0X,						
C			152	101.2	52													70.7
57.6																		
			258	133.0	48													93.5
D																		
58.5																		

Classifier E.C.S. Recorder V.J.L. Checker Date Analyzed 24 Apr '03

Sheet 15 of 21 Sheets

LMN Form 721 Nov 69 (Replaces previous edition of LMN Form 680, 30 Jun 64)

"Confidential Information: Privileged & Confidential Work Product"

LABORATORY BORING LOG

MYRTLE GROVE ECOSYSTERM RESTORATION PROJECT FEASIBILITY STUDY
BOR: MG-6U
5" UNDIST. (03-15)

① Boring Number _____

②-④ Location _____

⑤ Date Taken _____ ⑥ G.S.E. _____

SAMPLE NO. 16 FOR UNDISTURBED

FOR UNDISTURBED SAMPLES ONLY

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH	
			58.8	60.4	5.1		CH	SIS	M GR			620	105				5.1	59.3	
59.0																			
A	DISCARD (4)		16.7	132.9	5.1														92.2
59.5								P=800											
B			30.1	105.9	5.1														74.3
60.4							CH		M GR										
			60.4	62.4	5.1		CH	SIS	M GR	lots NL, org ars									
C			30.8	97.7	4.9														69.3
61.3																			
D			21.7	96.9	5.3														67.5
62.7																			

Classifier E.C.S. Recorder V.J.L. Checker _____ Date Analyzed 24 APR '03

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LMN Form 721 Nov 69 (Replaces previous edition of LMN Form 721, Jan 68)

"Confidential Information: Privileged & Confidential Work Product"

FOR UNDISTURBED SAMPLES ONLY

MYRTLE GROVE ECOSYSTERM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-6U

5" UNDIST. (03-15)

LABORATORY BORING LOG

① Boring Number

②–④ Location

⑤ Date Taken

⑥ G.S.E.

SAMPLE NO. 17 FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH	
63.0			62.4	64.7	54		CH	SLS ST	GR			67.1	103				59	64.5	
A	DISCARD		27.1	83.2	54														58.3
63.8																			
B			45.3	85.6	54		CH	ST	GR	LOS ML, org, ars									59.7
64.7	(4)							P= 1000											
			64.7	66.7	58		CH	SLS ST	GR										
C			48.4	103.7	59														69.2
65.6																			
D			48.0	98.8	57														67.6
66.5																			

Classifier E.C.S. Recorder V.J.L. Checker _____ Date Analyzed 24 APR '03

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LMN Form 721 Nov 69 (Replaces previous edition of LMN Form 680, 30 Jun 64)

"Confidential Information: Privileged & Confidential Work Product"

FOR UNDISTURBED SAMPLES ONLY

MYRTLE GROVE ECOSYSTERM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-6U

5" UNDIST. (03-15)

LABORATORY BORING LOG

① Boring Number

②-④ Location

⑤ Date Taken

⑥ G.S.E.

SAMPLE NO. 18 FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO.	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH	
67.0			66.7	68.7	58		CH	SIS	M GR			8.16	103				58	68.0	
A	DISCARD		5.75	92.5	58														62.9
67.8	(U)							P= 800											
B			54.6	107.9	58		CH		M GR										72.6
68.7			68.7	70.7	56		CH	SIS	M GR										
C			3.79	113.7	54														77.9
69.6																			
D			88.	106.6	57														72.1
70.5																			

Classifier E.C.S. Recorder V.J.L. Checker Date Analyzed 24 APR '03

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LMN Form 721 Nov 69 (Replaces previous edition of LMN Form 680, 3 Jun 68)

"Confidential Information: Privileged & Confidential Work Product"

FOR UNDISTURBED SAMPLES ONLY

MYRTLE GROVE ECOSYSTERM RESTORATION PROJECT FEASIBILITY STUDY
BOR: MG-6U
5" UNDIST. (03-15)

LABORATORY BORING LOG

① Boring Number _____

②–④ Location _____

⑤ Date Taken _____ ⑥ G.S.E. _____

SAMPLE NO. 19 FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH	
71.0			70.7	72.7	53		CH	SLS	M GR			866	106				53	72.5	
A	DISCARD		28.4	83.2	54														58.3
71.8																			
B			35.4	108.5	52				P=800										75.4
72.7	④						CH		M GR	10.5 ML									
			72.7	74.7	53		CH	SLS	M GR										
C			63.9	71.0	53														50.5
73.6																			
			68.0	117.5	52														81.3
D																			
74.5																			

Classifier E.C.S. Recorder V.T.L. Checker _____ Date Analyzed 24 APR '03

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LMN Form 721 Nov 69 (Replaces previous edition of LMN Form 721, Jul 68)

"Confidential Information: Privileged & Confidential Work Product"

FOR UNDISTURBED SAMPLES ONLY

MYRTLE GROVE ECOSYSTERM RESTORATION PROJECT FEASIBILITY STUDY

BOR: MG-6U

5" UNDIST. (03-15)

LABORATORY BORING LOG

① Boring Number

②-④ Location

⑤ Date Taken

⑤ G.S.E.

SAMPLE NO. 20

FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH
15.0	DISTURBED		74.7	76.7	56	76.7CH	SLS	MGR										
A			65.4	76.6	56													53.5
15.8							CH	MGR		SLS ML, org. grs								
B			62.0	104.7	56													71.5
16.7			76.7	78.7		78.7 MS												
C																		
D																		

Classifier E.C.S. Recorder V.J.L. Checker _____ Date Analyzed 24 APR '03 Sheet 20 of 21 Sheets

LMN Form 721 Nov 69 (Replaces previous edition of LMN Form 680, 30 Jun 64)

"Confidential Information: Privileged & Confidential Work Product"

FOR UNDISTURBED SAMPLES ONLY

MYRTLE GROVE ECOSYSTERM RESTORATION PROJECT FEASIBILITY STUDY
BOR: MG-6U
5" UNDIST. (03-15)

LABORATORY BORING LOG

① Boring Number _____

②-④ Location _____

⑤ Date Taken _____ ⑥ G.S.E. _____

SAMPLE NO. 21 FOR UNDISTURBED

DEPTH & SUB SAMP.	TESTS ASSIGNED	LOG	SAMPLE FROM PAN NO	SAMPLE TO DRY WT	WATER CONTENT	STRATUM CHANGE	BORING LOG	CONSISTENCY	COLOR	MODIFICATION SYMBOLS	PENTRN. RES.	U.C.T.	BULK DENSITY	ATTERBERG LIMIT L.L.	ATTERBERG LIMIT P.L.	SIZE	TEST WATER CONTENT	UCT DEPTH	
79.0																			
A	UNDISTURBED		78.7	81.6	61	81.6CH	SIS	M	GR										
			116.	85.4	62														57.3
79.8																			
B			387	102.1	60		CH	M	GR	LOS ML, org ars,									68.3
80.7																			
C										NO UCT SAMPLE DISTURBED									
			78.	104.4	59														70.0
81.6																			
D																			

Classifier E.C.S. Recorder N.J.L. Checker _____ Date Analyzed 24 APR '03 Sheet 21 of 21 Sheets

LMN Form 721 Nov 69 (Replaces previous edition of LMN Form 721, Jan 66)

"Confidential Information: Privileged & Confidential Work Product"

SUMMARY OF LABORATORY TEST RESULTS

Project: U.S.A.C.O.E. - MYRTLE GROVE ECOSYSTEM RESTORATION STUDY Assigned By: _____

Project Number: 18002
Boring: MG-6U

Current Date: 7/25/2003

Sample Number	Depth in Feet	Visual Classification	USCS	E(f)	W%	Dry Dens (pcf)	Wet Dens (pcf)	Sat %	Shear Test Type	Angle	Cohesion (psf)	Unconf. Comp. Str.	LL	PL	PI	TORVANE (tsf)	Other Tests
2C	5.6	VSO LGR CL6	CL6		42	77	109	95	UU	0	182	0.041	48	17	31	0.180	
3B	8.4	SO GR & T CH2	CH2		39	81	112	96					56	17	39		CON
5B	16.2	SO GR CH3 W/ LNS ML, SL	CH3		55	67	103	97	UU	0	458	0.229	64	18	46	0.280	
6C	21.1	SO GR CL6	CL6		39	76	106	88					42	19	23		CON
7C	24.8	SO GR CH4 W/ CC, SL	CH4		69	59	100	99	UU	0	402	0.201	95	25	70	0.280	
8D	29.6	SO GR CH4 W/ LNS SM, SIF, SL	CH4		62	62	101	97	UU	0	282	0.141	77	21	56	0.250	
9B	31.3	SO GR CH4 W/ LNS ML, SL	CH4		49	71	106	95	UU	0	466	0.233	84	21	63	0.250	
11B	40.5	SO GR CH4 W/ LNS ML	CH4		49	72	107	98					70	20	50		CON
14C	53.0	SO GR CH3 W/ LNS ML, SL	CH3		52	67	102	93	UU	0	365	0.183	68	22	46	0.300	
15C	57.1	M GR CH4 W/ SL	CH4		48	70	104	92	UU	0	723	0.362	71	22	49	0.380	
18D	70.0	M GR CH4 W/ SL	CH4		55	67	103	96	UU	0	692	0.346	88	24	64	0.400	

Remarks: "Confidential Information: Privileged & Confidential Work Product" Checked by: RNE
EUSTIS ENGINEERING COMPANY, INC. File Name: 18002

SUMMARY OF LABORATORY TEST RESULTS

Project: U.S.A.C.O.E. - MYRTLE GROVE ECOSYSTEM RESTORATION STUDY Assigned By: _____

Project Number: 18002
Boring: MG-6U

Current Date: 7/25/2003

Sample Number	Depth in Feet	Visual Classification	USCS	E(f)	W%	Dry Dens (pcf)	Wet Dens (pcf)	Sat %	Shear Test Type	Angle	Cohesion (psf)	Unconf. Comp. Str.	LL	PL	PI	TORVANE (tsf)	Other Tests
2C	5.6	VSO LGR CL6	CL6		42	77	109	95	UU	0	182		48	17	31	0.180	
3B	8.4	SO GR & T CH2	CH2		39	81	112	96					56	17	39		CON
5B	16.2	SO GR CH3 W/ LNS ML, SL	CH3		55	67	103	97	UU	0	458		64	18	46	0.280	
6C	21.1	SO GR CL6	CL6		39	76	106	88					42	19	23		CON
7C	24.8	SO GR CH4 W/ CC, SL	CH4		69	59	100	99	UU	0	402		95	25	70	0.280	
8D	29.6	SO GR CH4 W/ LNS SM, SIF, SL	CH4		62	62	101	97	UU	0	282		77	21	56	0.250	
9B	31.3	SO GR CH4 W/ LNS ML, SL	CH4		49	71	106	95	UU	0	466		84	21	63	0.250	
11B	40.5	SO GR CH4 W/ LNS ML	CH4		49	72	107	98					70	20	50		CON
14C	53.0	SO GR CH3 W/ LNS ML, SL	CH3		52	67	102	93	UU	0	365		68	22	46	0.300	
15C	57.1	M GR CH4 W/ SL	CH4		48	70	104	92	UU	0	723		71	22	49	0.380	
18D	70.0	M GR CH4 W/ SL	CH4		55	67	103	96	UU	0	692		88	24	64	0.400	

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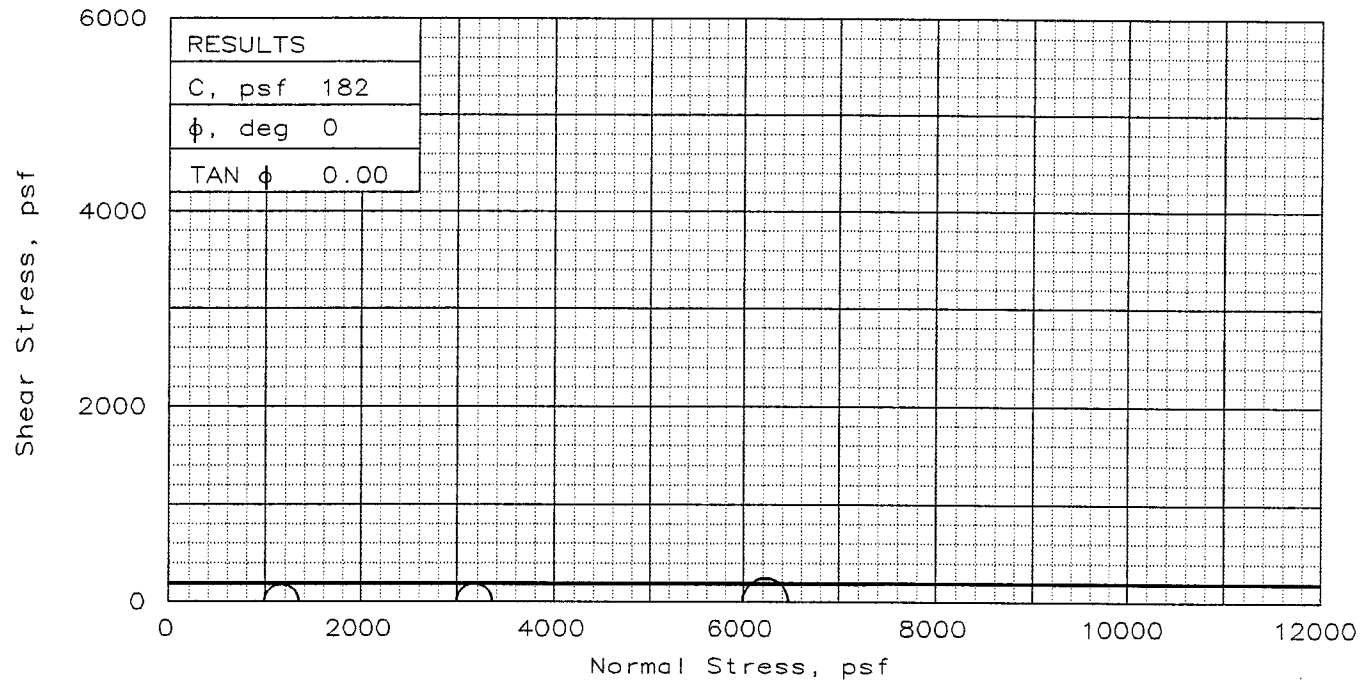
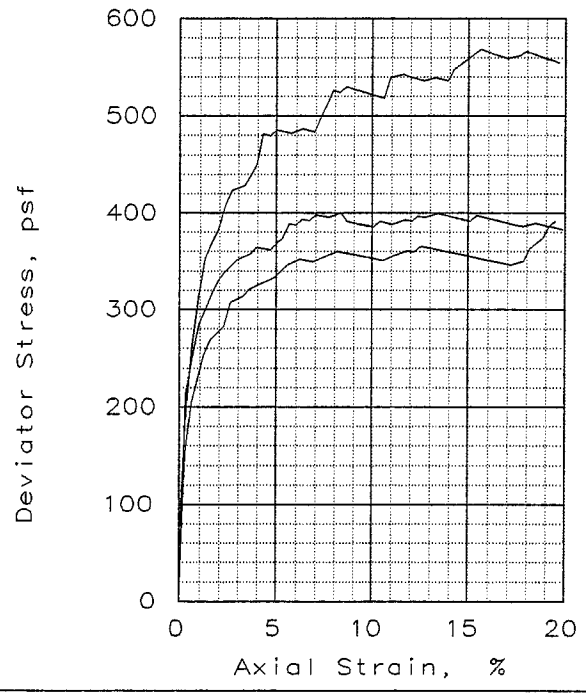
Remarks: _____

Checked by: RNE

EUSTIS ENGINEERING COMPANY, INC.

File Name: 18002





SPECIMEN NO.:		1	2	3
INITIAL	WATER CONTENT, %	41.0	41.7	35.1
	DRY DENSITY, pcf	76.5	77.1	82.8
	SATURATION, %	92.1	94.9	91.6
	VOID RATIO	1.202	1.187	1.036
	DIAMETER, in	1.40	1.40	1.40
	HEIGHT, in	2.93	2.93	2.93
AT TEST	WATER CONTENT, %	44.6	44.2	38.5
	DRY DENSITY, pcf	76.5	76.9	82.6
	SATURATION, %	100.0	100.0	100.0
	VOID RATIO	1.203	1.193	1.040
	DIAMETER, in	1.40	1.40	1.40
	HEIGHT, in	2.93	2.93	2.93
Strain rate, in/min		0.0287	0.0297	0.0287
BACK PRESSURE, psf		0	0	0
CELL PRESSURE, psf		994	2995	5990
FAIL. STRESS, psf		352	364	481
ULT. STRESS, psf		383	391	555
σ_1 FAILURE, psf		1346	3359	6472
σ_3 FAILURE, psf		994	2995	5990

TYPE OF TEST:
Unconsolidated Undrained
SAMPLE TYPE: Undisturbed
DESCRIPTION: vSo lGr CL6

LL= 48 PL= 17 PI= 31
SPECIFIC GRAVITY= 2.7
REMARKS: Torvane = 0.180 tsf

CLIENT: U.S. Army Corps of Engineers

PROJECT: Contract No. DACW29-01-D-0005,
Work Packet No. 104
SAMPLE LOCATION: Boring MG-6U,
Sample 2-C, Depth 5.6'

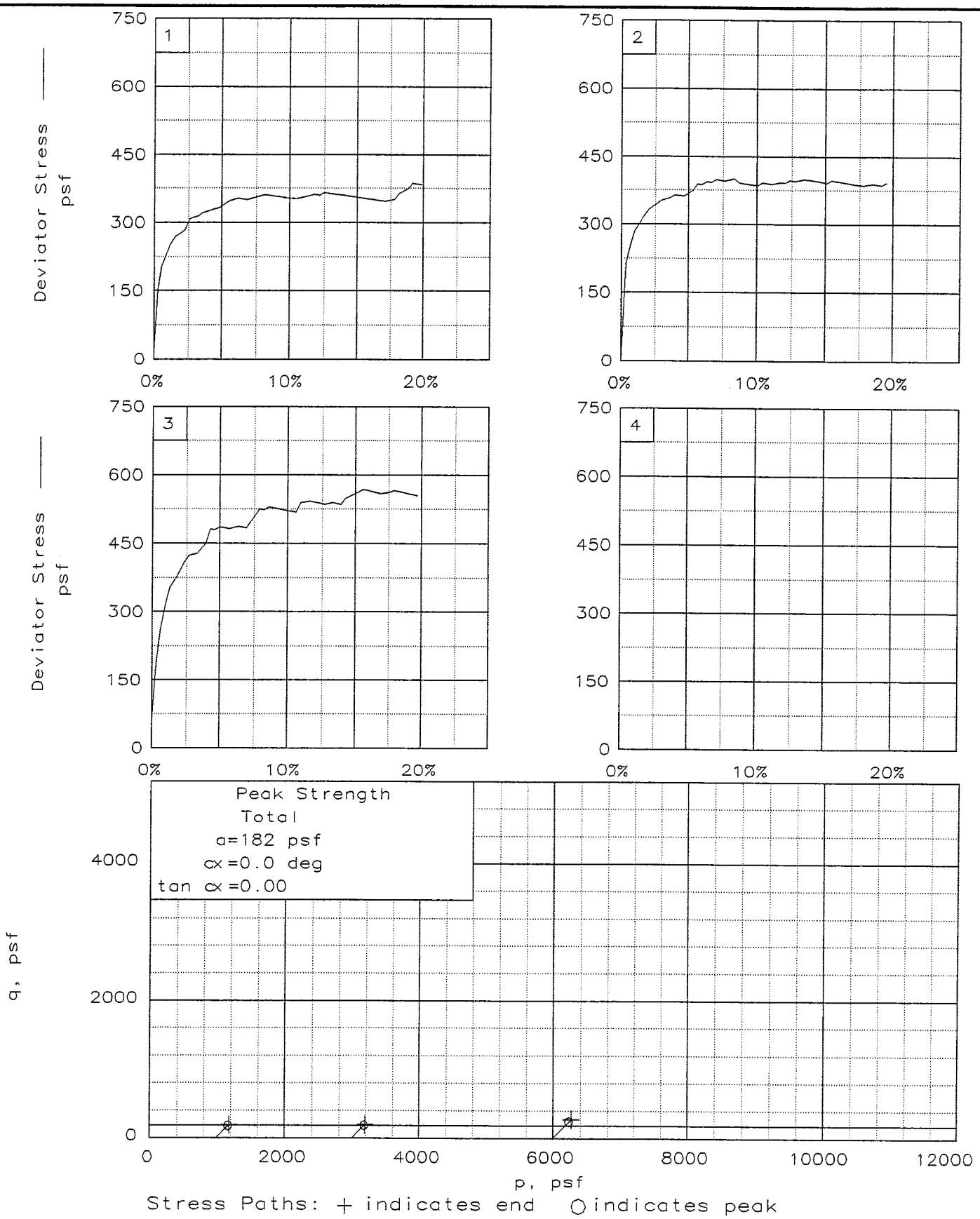
PROJ. NO.: 18002 DATE: 7/16/03

TRIAXIAL SHEAR TEST REPORT

Fig. No.: ____

Eustis Engineering Company, Inc.

"Confidential Information: Privileged & Confidential Work Product"



Stress Paths: + indicates end ○ indicates peak

Client: U.S. Army Corps of Engineers

Project: Contract No. DACW29-01-D-0005, Work Packet No. 104

Location: Boring MG-6U, Sample 2-C, Depth 5.6'

File: UU-21733 Project No.: 18002 Fig. No.: ———

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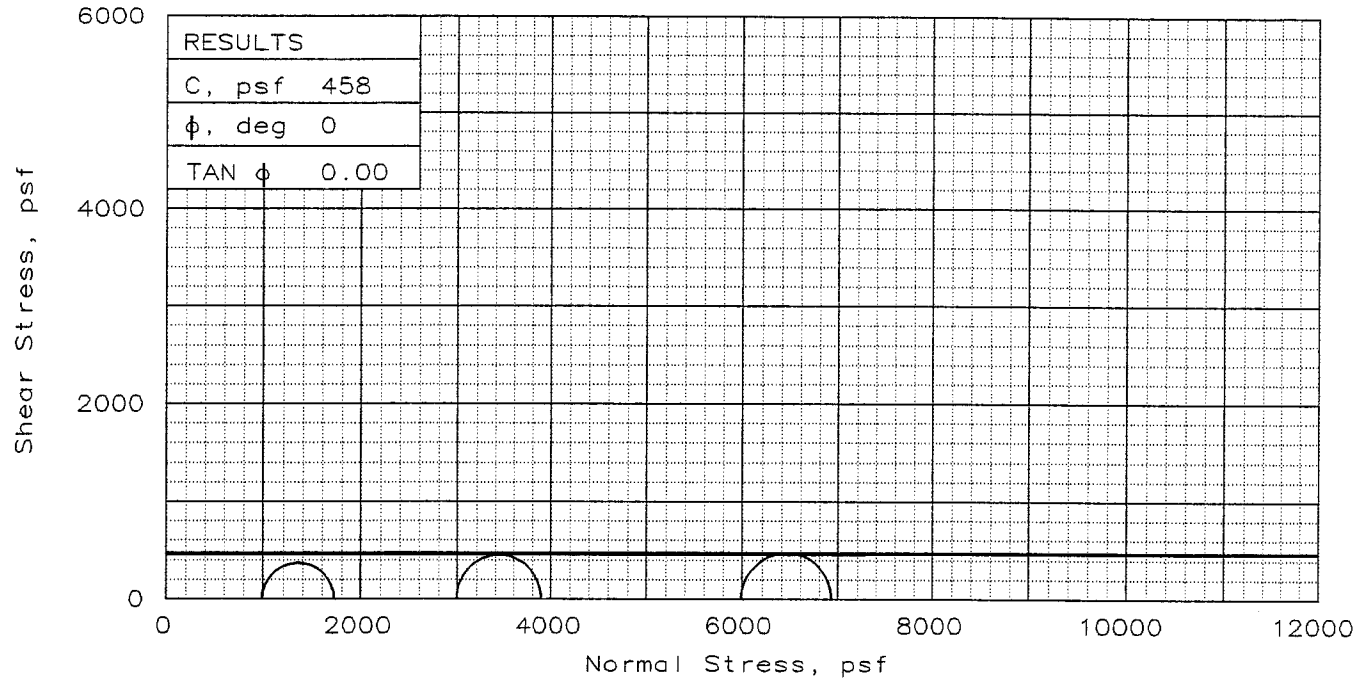
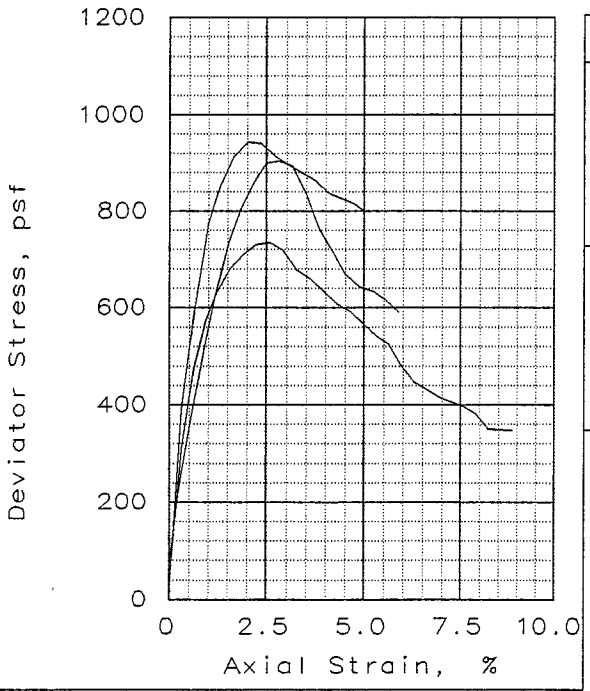




SPECIMEN NO.:		1	2	3
INITIAL	WATER CONTENT, %	54.2	55.4	54.5
	DRY DENSITY, pcf	66.9	66.6	68.9
	SATURATION, %	95.4	96.6	100.8
	VOID RATIO	1.556	1.570	1.482
	DIAMETER, in	1.40	1.40	1.38
	HEIGHT, in	2.93	2.93	2.93
AT TEST	WATER CONTENT, %	56.9	57.3	54.1
	DRY DENSITY, pcf	66.9	66.5	68.9
	SATURATION, %	100.0	100.0	100.0
	VOID RATIO	1.558	1.571	1.482
	DIAMETER, in	1.40	1.40	1.38
	HEIGHT, in	2.93	2.93	2.93
Strain rate, in/min		0.0285	0.0281	0.0283
BACK PRESSURE, psf		0	0	0
CELL PRESSURE, psf		994	2995	5990
FAIL. STRESS, psf		735	904	943
ULT. STRESS, psf		348	591	798
σ_1 FAILURE, psf		1729	3899	6934
σ_3 FAILURE, psf		994	2995	5990

TYPE OF TEST:
Unconsolidated Undrained
SAMPLE TYPE: Undisturbed
DESCRIPTION: So Gr CH3
w/ Ins ML, SL
LL= 64 PL= 18 PI= 46
SPECIFIC GRAVITY= 2.74
REMARKS: Torvane = 0.280 tsf

CLIENT: U.S. Army Corps of Engineers

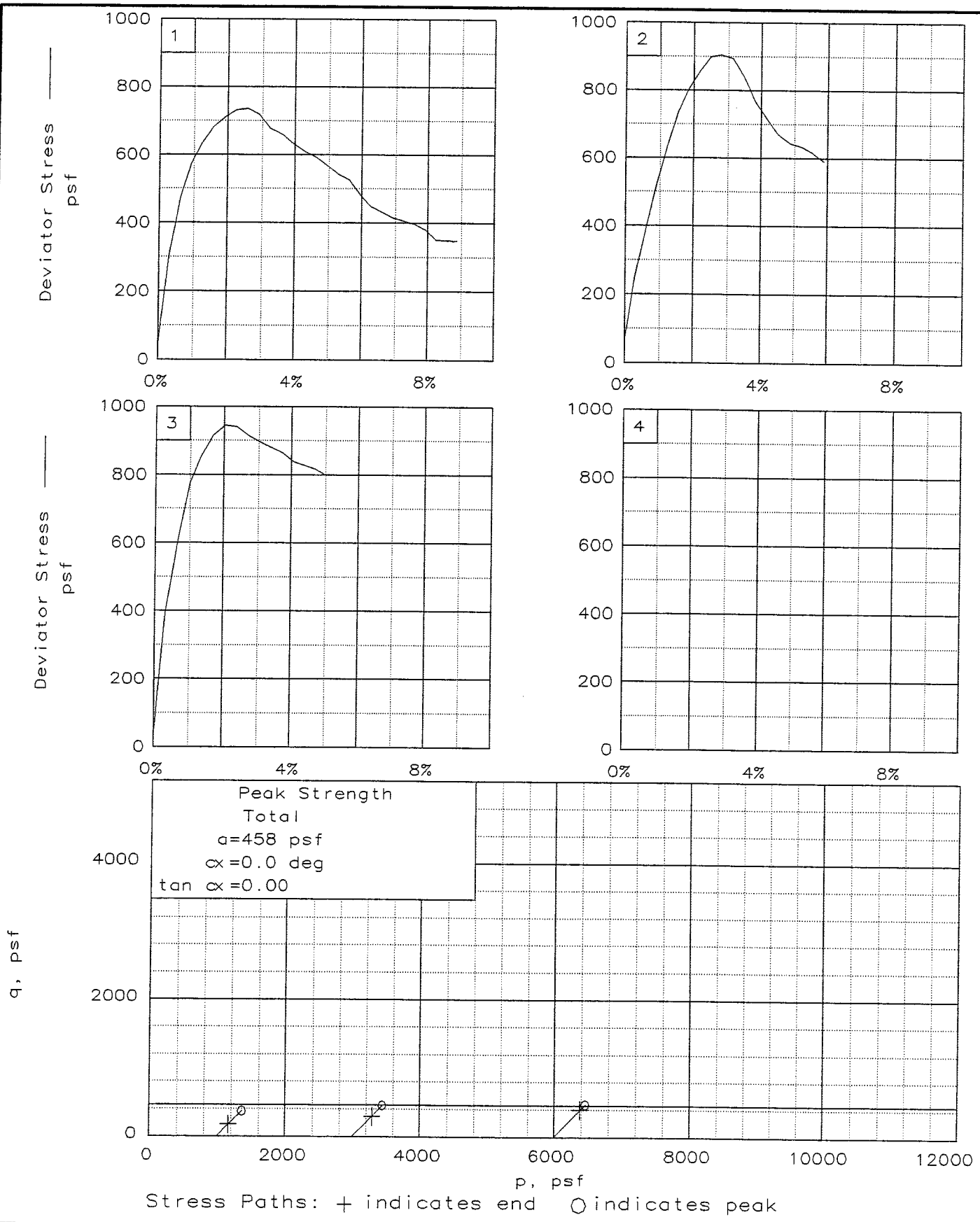
PROJECT: Contract No. DACW29-01-D-0005,
Work Packet No. 104
SAMPLE LOCATION: Boring MG-6U,
Sample 5-B, Depth 16.2'
PROJ. NO.: 18002 DATE: 7/16/03

TRIAXIAL SHEAR TEST REPORT

Eustis Engineering Company, Inc.

Fig. No.:

"Confidential Information: Privileged & Confidential Work Product"



Stress Paths: + indicates end ○ indicates peak

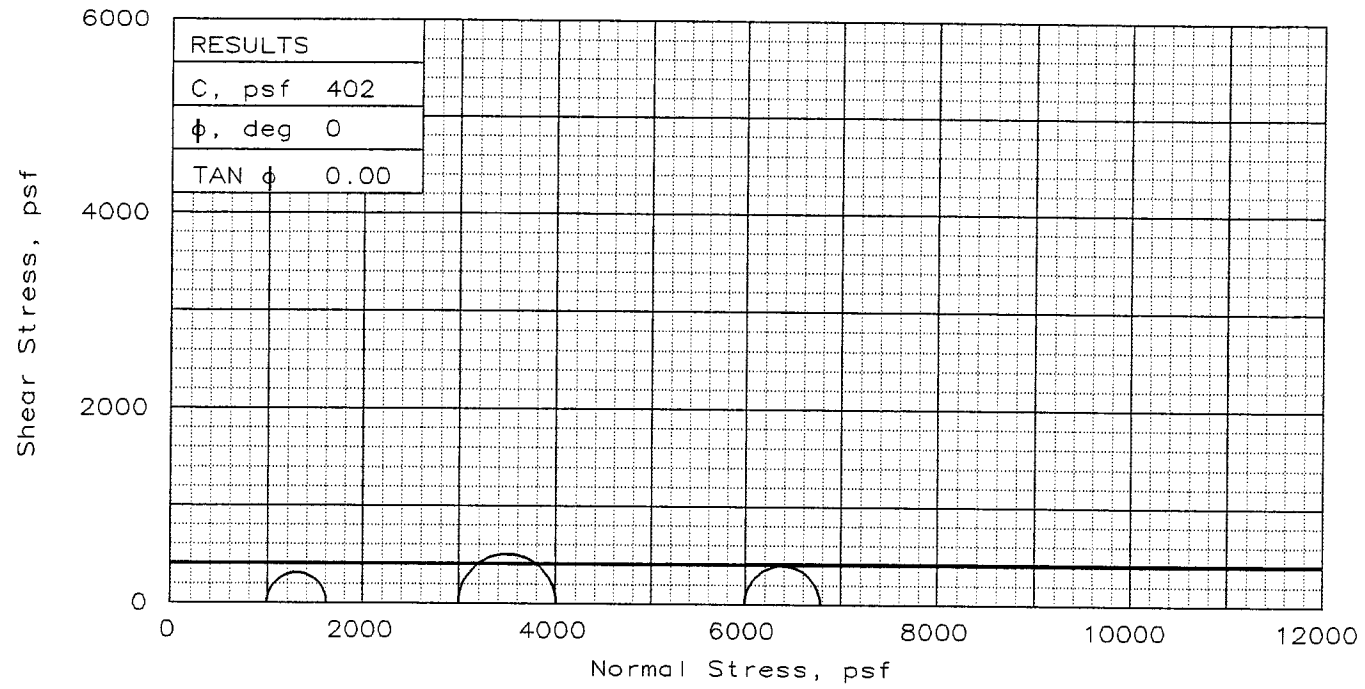
Client: U.S. Army Corps of Engineers

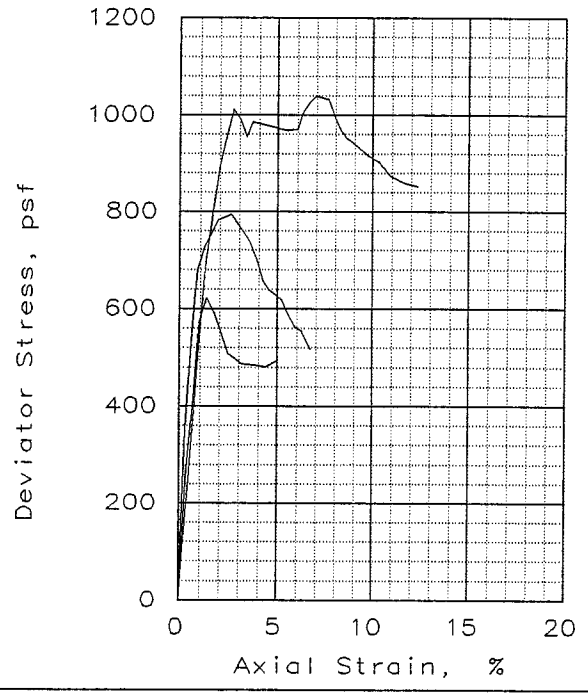
Project: Contract No. DACW29-01-D-0005, Work Packet No. 104

Location: Boring MG-6U, Sample 5-B, Depth 16.2'

File: UU-21734 Project No.: 18002 Fig. No.: ——

"Confidential Information: Privileged & Confidential Work Product"





SPECIMEN NO.:		1	2	3
INITIAL	WATER CONTENT, %	66.7	62.9	69.1
	DRY DENSITY, pcf	58.5	59.2	58.8
	SATURATION, %	95.0	91.1	99.2
	VOID RATIO	1.925	1.889	1.909
	DIAMETER, in	1.40	1.40	1.38
	HEIGHT, in	2.93	2.93	2.93
AT TEST	WATER CONTENT, %	70.3	69.1	69.8
	DRY DENSITY, pcf	58.5	59.1	58.7
	SATURATION, %	100.0	100.0	100.0
	VOID RATIO	1.926	1.894	1.912
	DIAMETER, in	1.40	1.40	1.38
	HEIGHT, in	2.93	2.93	2.93
Strain rate, in/min		0.0286	0.0290	0.0273
BACK PRESSURE, psf		0	0	0
CELL PRESSURE, psf		994	2995	5990
FAIL. STRESS, psf		623	1012	794
ULT. STRESS, psf		494	852	518
σ_1 FAILURE, psf		1617	4007	6785
σ_3 FAILURE, psf		994	2995	5990

TYPE OF TEST:
Unconsolidated Undrained
SAMPLE TYPE: Undisturbed
DESCRIPTION: So Gr CH4
w/ cc, SL
LL= 95 PL= 25 PI= 70
SPECIFIC GRAVITY= 2.74
REMARKS: Torvane = 0.280 tsf

CLIENT: U.S. Army Corps of Engineers

PROJECT: Contract No. DACW29-01-D-0005,
Work Packet No. 104
SAMPLE LOCATION: Boring MG-6U,
Sample 7-C, Depth 24.8'

PROJ. NO.: 18002 DATE: 7/16/03

TRIAXIAL SHEAR TEST REPORT

Fig. No.: ____

Eustis Engineering Company, Inc.

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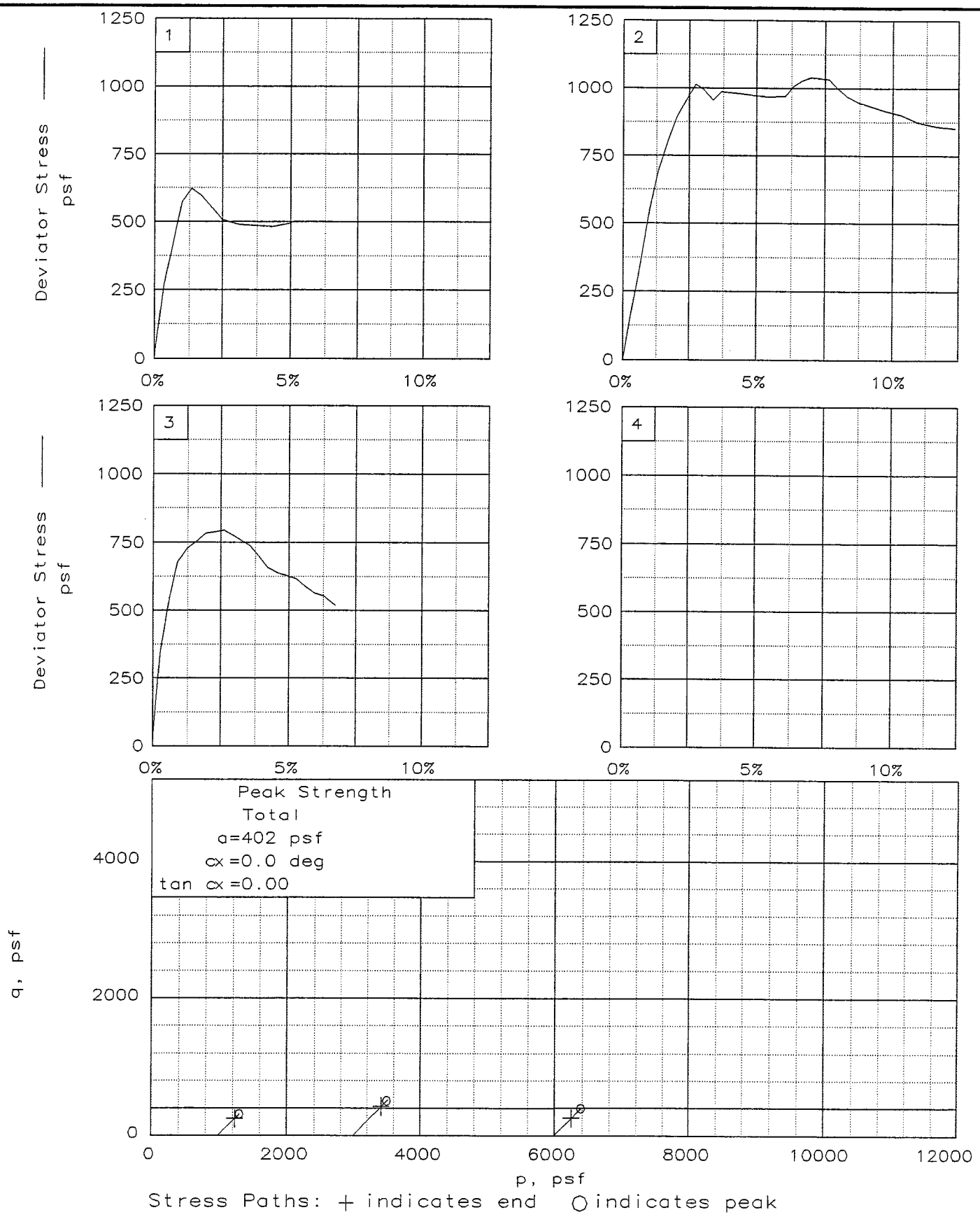


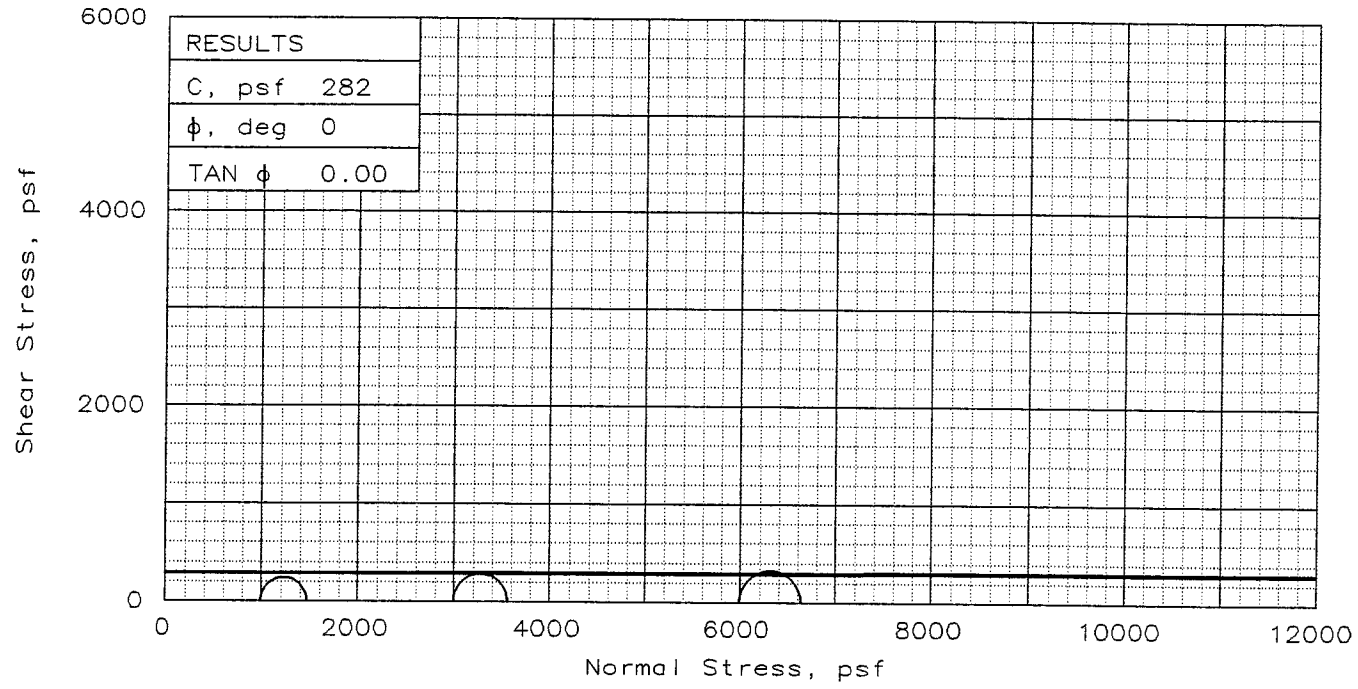
Client: U.S. Army Corps of Engineers

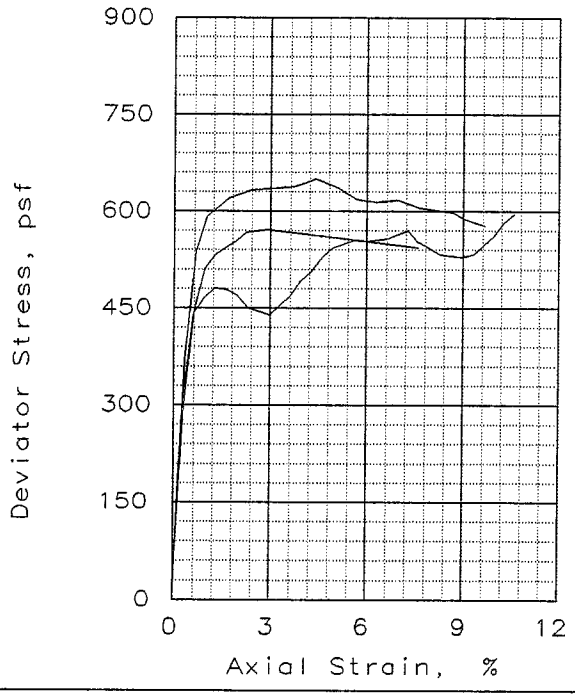
Project: Contract No. DACW29-01-D-0005, Work Packet No. 104

Location: Boring MG-6U, Sample 7-C, Depth 24.8'

File: UU-21735 Project No.: 18002 File No.: ———

"Confidential Information: Privileged & Confidential Work Product"





SPECIMEN NO.:		1	2	3
INITIAL	WATER CONTENT, %	59.6	62.4	59.4
	DRY DENSITY, pcf	63.0	61.9	64.9
	SATURATION, %	95.3	96.9	99.4
	VOID RATIO	1.715	1.765	1.637
	DIAMETER, in	1.40	1.40	1.38
	HEIGHT, in	2.93	2.93	2.93
AT TEST	WATER CONTENT, %	62.6	64.5	59.8
	DRY DENSITY, pcf	63.0	61.8	64.8
	SATURATION, %	100.0	100.0	100.0
	VOID RATIO	1.715	1.767	1.640
	DIAMETER, in	1.40	1.40	1.38
	HEIGHT, in	2.93	2.93	2.93
Strain rate, in/min		0.0288	0.0286	0.0287
BACK PRESSURE, psf		0	0	0
CELL PRESSURE, psf		994	2995	5990
FAIL. STRESS, psf		480	571	649
ULT. STRESS, psf		595	543	577
σ_1 FAILURE, psf		1474	3566	6640
σ_3 FAILURE, psf		994	2995	5990

TYPE OF TEST:
Unconsolidated Undrained
SAMPLE TYPE: Undisturbed
DESCRIPTION: So Gr CH4
w/ Ins SM, SIF, SL
LL= 77 PL= 21 PI= 56
SPECIFIC GRAVITY= 2.74
REMARKS: Torvane = 0.250 tsf

CLIENT: U.S. Army Corps of Engineers

PROJECT: Contract No. DACW29-01-D-0005,
Work Packet No. 104
SAMPLE LOCATION: Boring MG-6U,
Sample 8-D, Depth 29.6'

PROJ. NO.: 18002 DATE: 7/16/03

TRIAXIAL SHEAR TEST REPORT

Fig. No.: ____

Eustis Engineering Company, Inc.

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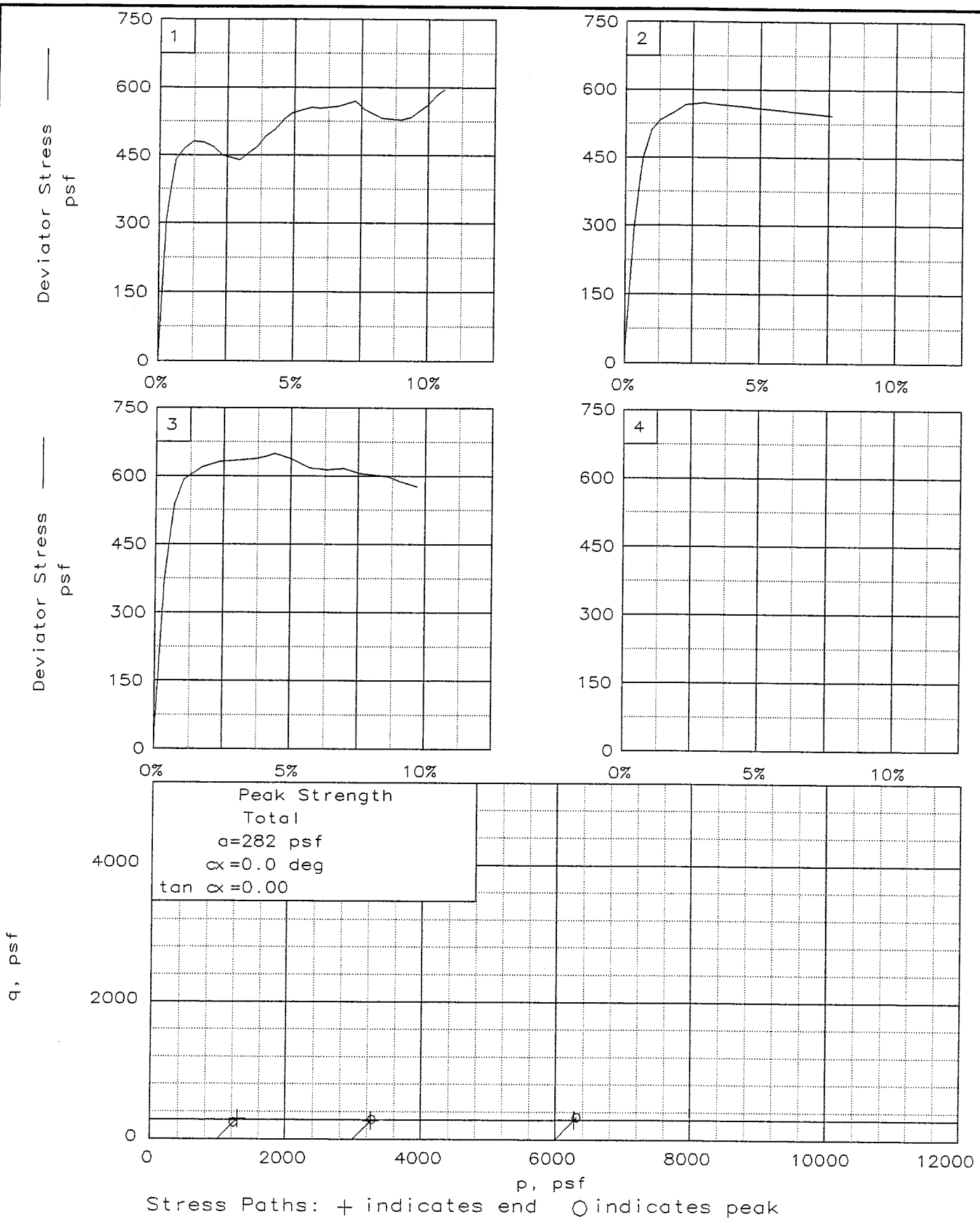

Client: U.S. Army Corps of Engineers

Project: Contract No. DACW29-01-D-0005, Work Packet No. 104

Location: Boring MG-6U, Sample 8-D, Depth 29.6'

File: UU-21736 Project No.: 18002 Fig. No. ____

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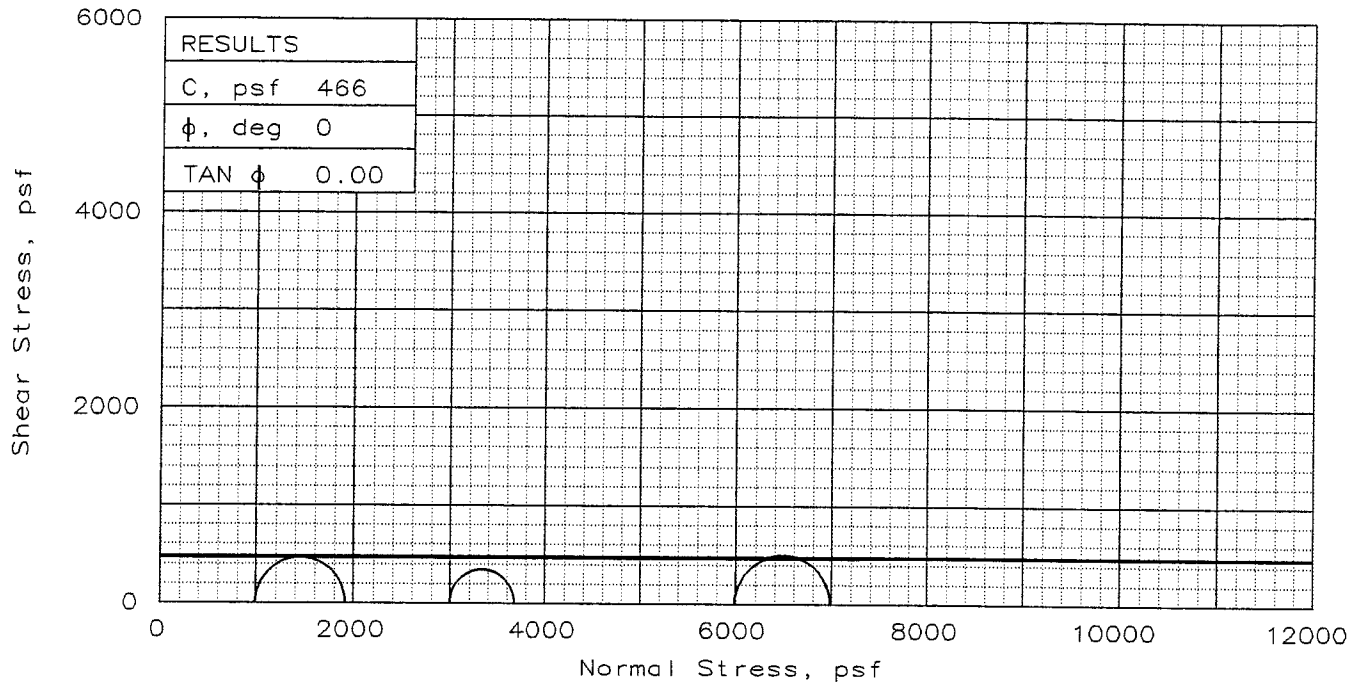
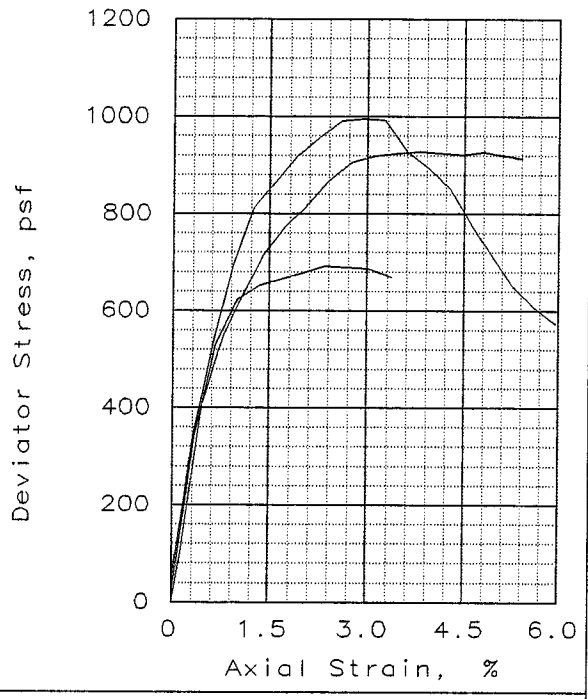




SPECIMEN NO.:		1	2	3
INITIAL	WATER CONTENT, %	48.7	51.8	51.7
	DRY DENSITY, pcf	71.3	69.3	70.7
	SATURATION, %	95.3	96.7	99.8
	VOID RATIO	1.400	1.468	1.420
	DIAMETER, in	1.40	1.40	1.38
	HEIGHT, in	2.93	2.93	2.93
AT TEST	WATER CONTENT, %	51.1	53.6	52.0
	DRY DENSITY, pcf	71.3	69.3	70.5
	SATURATION, %	100.0	100.0	100.0
	VOID RATIO	1.400	1.468	1.426
	DIAMETER, in	1.40	1.40	1.38
	HEIGHT, in	2.93	2.93	2.93
Strain rate, in/min		0.0281	0.0269	0.0283
BACK PRESSURE, psf		0	0	0
CELL PRESSURE, psf		994	2995	5990
FAIL. STRESS, psf		928	691	995
ULT. STRESS, psf		912	669	574
σ_1 FAILURE, psf		1921	3686	6986
σ_3 FAILURE, psf		994	2995	5990

TYPE OF TEST:
Unconsolidated Undrained
SAMPLE TYPE: Undisturbed
DESCRIPTION: So Gr CH4
w/ Ins ML, SL
LL= 84 PL= 21 PI= 63
SPECIFIC GRAVITY= 2.74
REMARKS: Torvane = 0.250 tsf

CLIENT: U.S. Army Corps of Engineers

PROJECT: Contract No. DACW29-01-D-0005,
Work Packet No. 104
SAMPLE LOCATION: Boring MG-6U,
Sample 9-B, Depth 31.3'

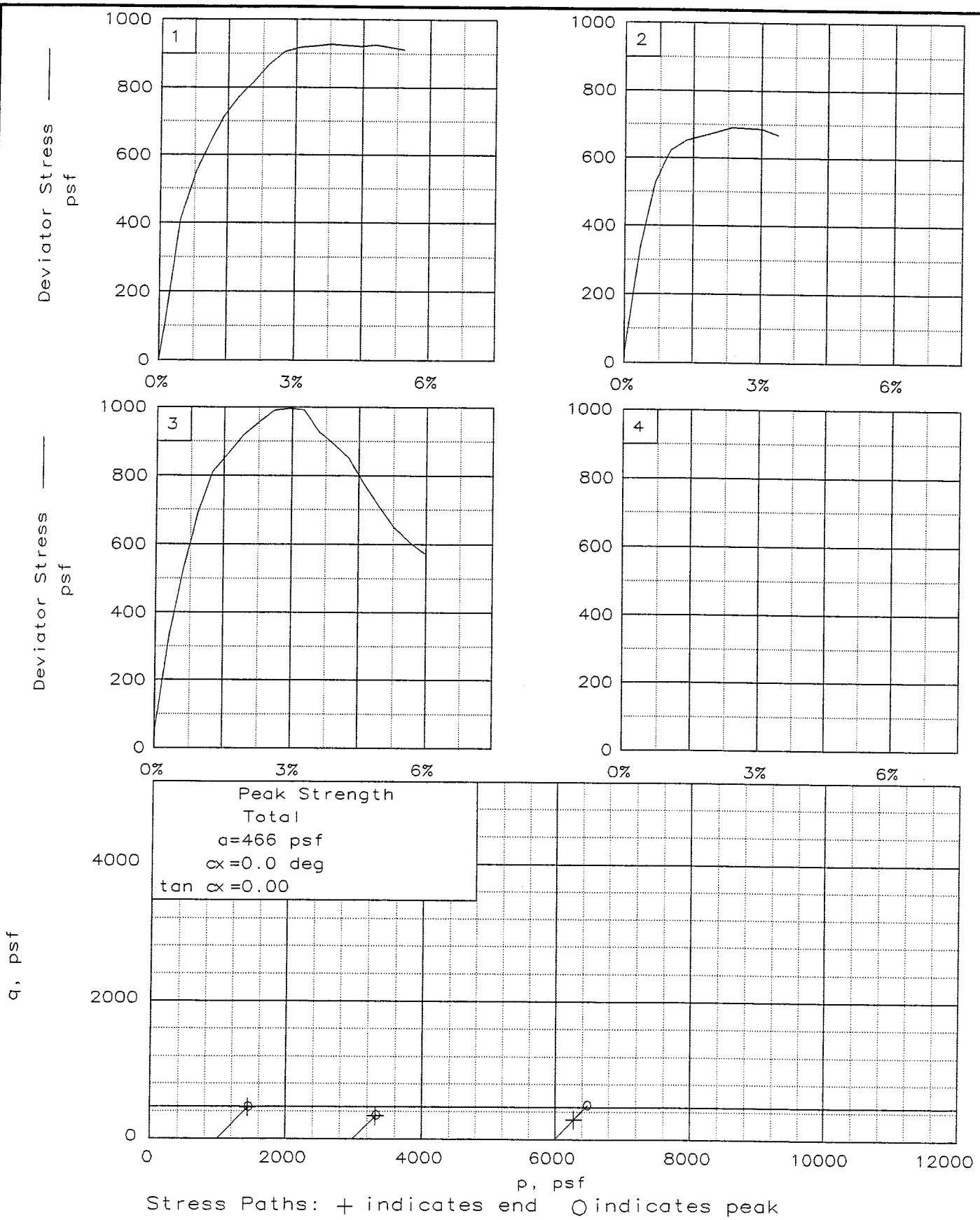
PROJ. NO.: 18002 DATE: 7/16/03

TRIAXIAL SHEAR TEST REPORT

Fig. No.: ____

Eustis Engineering Company, Inc.

"Confidential Information: Privileged & Confidential Work Product



Stress Paths: + indicates end ○ indicates peak

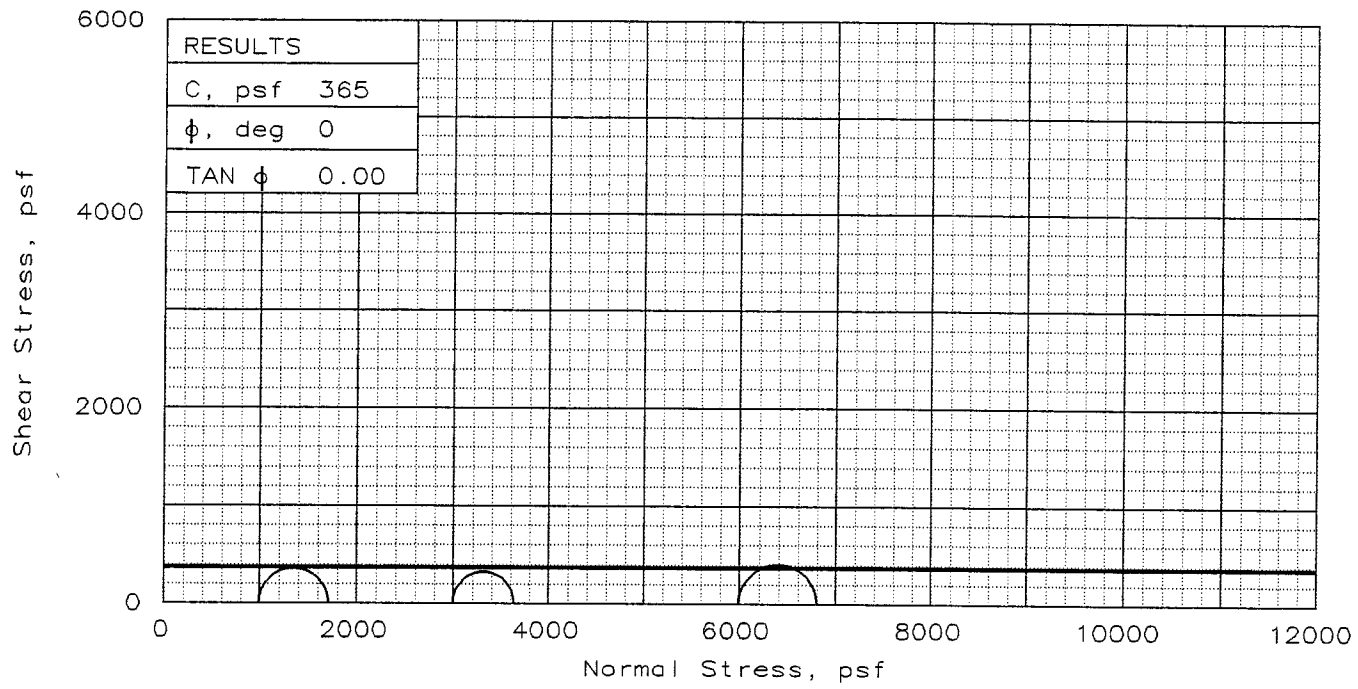
Client: U.S. Army Corps of Engineers

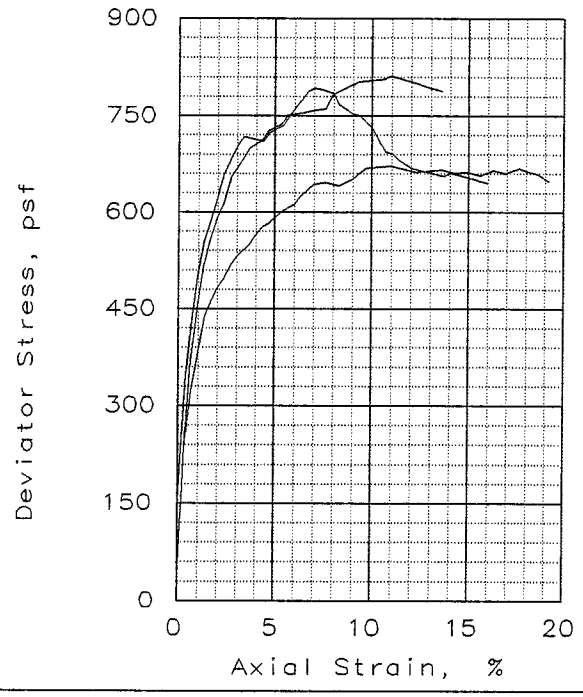
Project: Contract No. DACW29-01-D-0005, Work Packet No. 104

Location: Boring MG-6U, Sample 9-B, Depth 31.3'

File: UU-21737 Project No.: 18002 Fig. No.: ——

"Confidential Information: Privileged & Confidential Work Product"





SPECIMEN NO.:		1	2	3
INITIAL	WATER CONTENT, %	52.4	52.5	52.8
	DRY DENSITY, pcf	67.0	66.3	69.6
	SATURATION, %	92.6	91.0	99.3
	VOID RATIO	1.552	1.579	1.456
	DIAMETER, in	1.40	1.40	1.37
	HEIGHT, in	2.93	2.93	2.93
AT TEST	WATER CONTENT, %	56.6	57.8	53.1
	DRY DENSITY, pcf	67.0	66.2	69.7
	SATURATION, %	100.0	100.0	100.0
	VOID RATIO	1.552	1.584	1.455
	DIAMETER, in	1.40	1.40	1.37
	HEIGHT, in	2.93	2.93	2.93
Strain rate, in/min		0.0290	0.0288	0.0288
BACK PRESSURE, psf		0	0	0
CELL PRESSURE, psf		994	2995	5990
FAIL. STRESS, psf		717	646	812
ULT. STRESS, psf		645	648	788
σ_1 FAILURE, psf		1711	3641	6802
σ_3 FAILURE, psf		994	2995	5990

TYPE OF TEST:
Unconsolidated Undrained
SAMPLE TYPE: Undisturbed
DESCRIPTION: So Gr CH3
w/ Ins ML, SL
LL= 68 PL= 22 PI= 46
SPECIFIC GRAVITY= 2.74
REMARKS: Torvane = 0.300 tsf

CLIENT: U.S. Army Corps of Engineers

PROJECT: Contract No. DACW29-01-D-0005,
Work Packet No. 104
SAMPLE LOCATION: Boring MG-6U,
Sample 14-C, Depth 53.0'

PROJ. NO.: 18002 DATE: 7/16/03

TRIAXIAL SHEAR TEST REPORT

Fig. No.: ____

Eustis Engineering Company, Inc.

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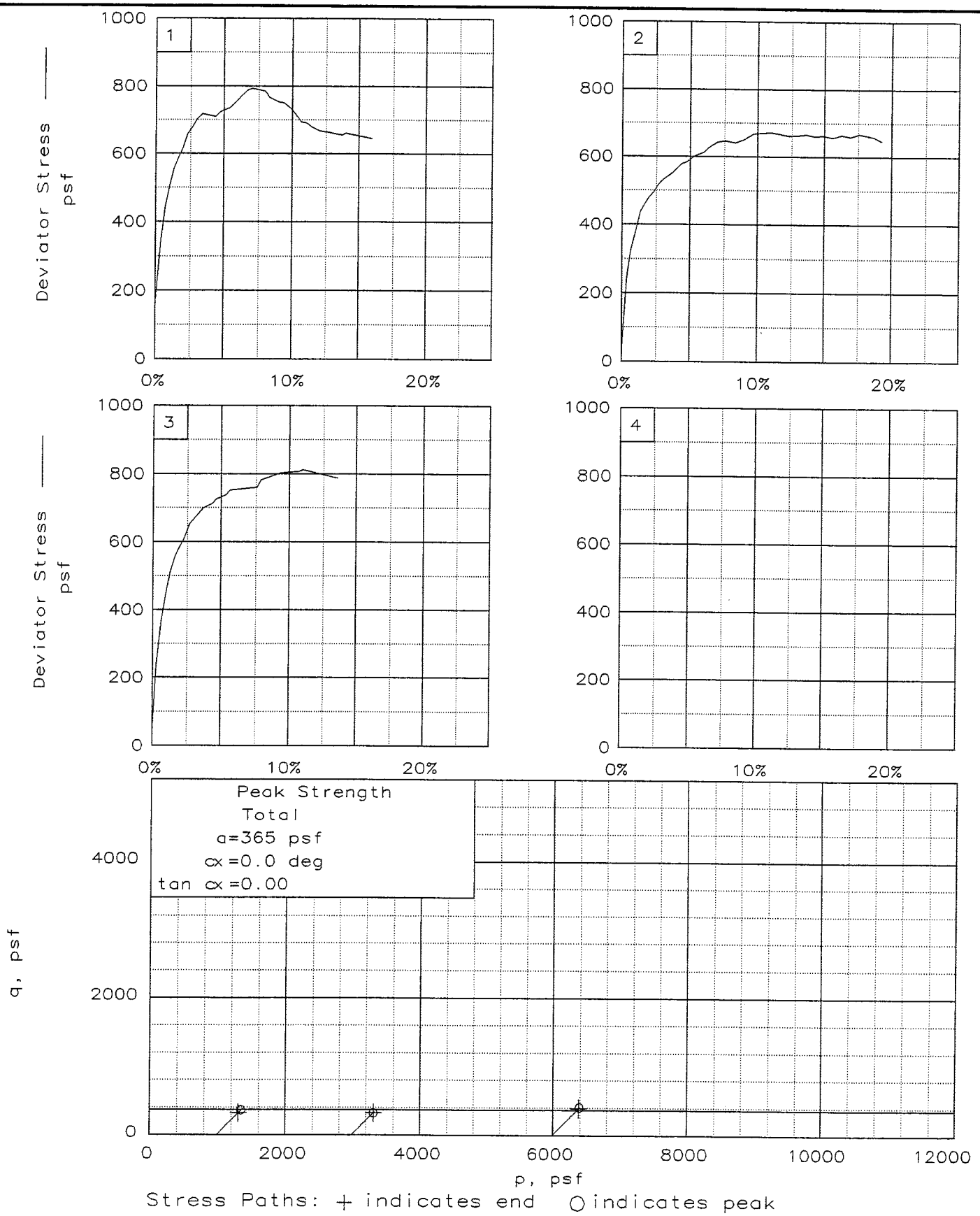

Client: U.S. Army Corps of Engineers

Project: Contract No. DACW29-01-D-0005, Work Packet No. 104

Location: Boring MG-6U, Sample 14-C, Depth 53.0'

File: UU-21738 Project No.: 18002 Fig. No. ———

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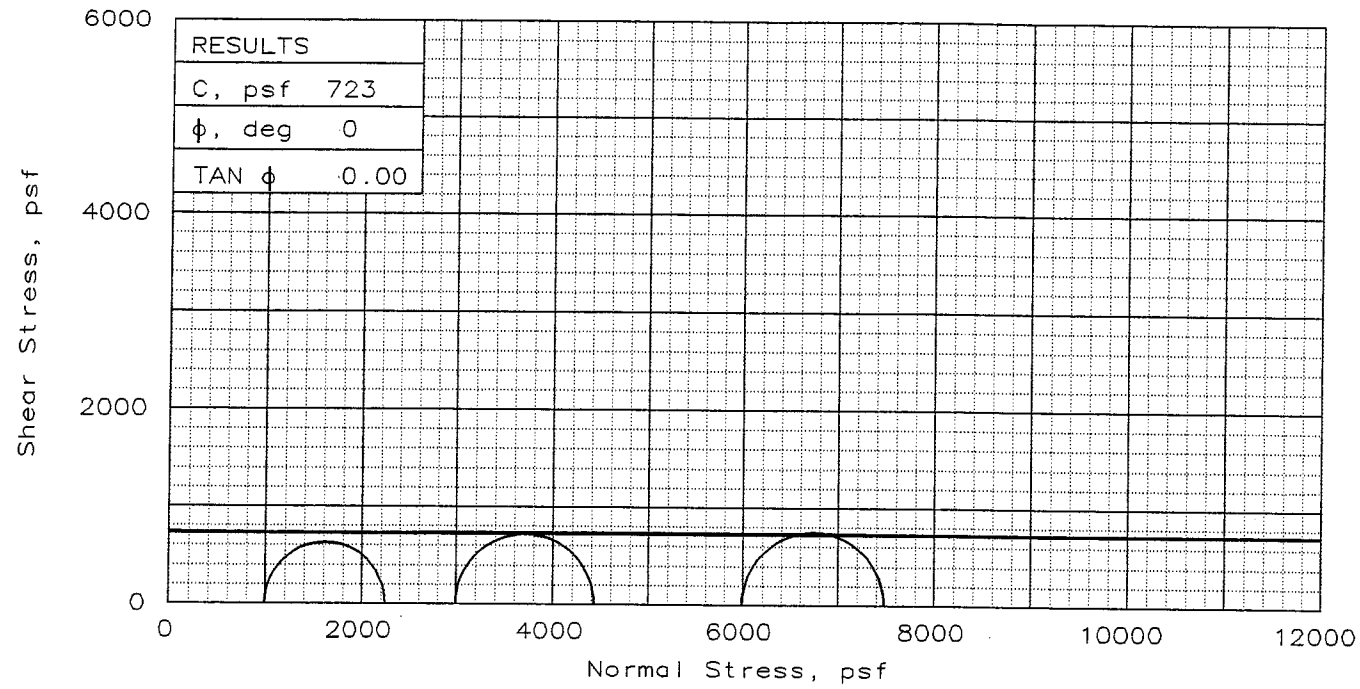

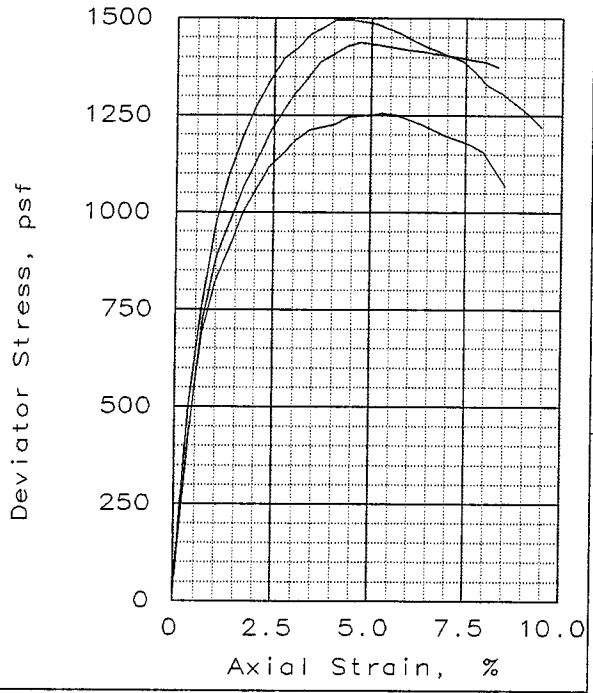

SPECIMEN NO.:		1	2	3
INITIAL	WATER CONTENT, %	48.2	48.2	48.7
	DRY DENSITY, pcf	71.5	70.2	72.7
	SATURATION, %	94.9	91.9	98.5
	VOID RATIO	1.393	1.438	1.354
	DIAMETER, in	1.40	1.40	1.38
	HEIGHT, in	2.93	2.93	2.93
AT TEST	WATER CONTENT, %	51.0	52.6	49.5
	DRY DENSITY, pcf	71.3	70.0	72.6
	SATURATION, %	100.0	100.0	100.0
	VOID RATIO	1.398	1.443	1.356
	DIAMETER, in	1.40	1.40	1.38
	HEIGHT, in	2.93	2.93	2.93
Strain rate, in/min		0.0284	0.0286	0.0290
BACK PRESSURE, psf		0	0	0
CELL PRESSURE, psf		994	2995	5990
FAIL. STRESS, psf		1256	1438	1496
ULT. STRESS, psf		1068	1375	1218
σ_1 FAILURE, psf		2249	4433	7486
σ_3 FAILURE, psf		994	2995	5990

TYPE OF TEST:
Unconsolidated Undrained
SAMPLE TYPE: Undisturbed
DESCRIPTION: M Gr CH4
w/ SL
LL= 71 PL= 22 PI= 49
SPECIFIC GRAVITY= 2.74
REMARKS: Torvane = 0.380 tsf

CLIENT: U.S. Army Corps of Engineers

PROJECT: Contract No. DACW29-01-D-0005,
Work Packet No. 104
SAMPLE LOCATION: Boring MG-6U,
Sample 15-C, Depth 57.1'

PROJ. NO.: 18002 DATE: 7/16/03

TRIAXIAL SHEAR TEST REPORT

Fig. No.: ____

Eustis Engineering Company, Inc.

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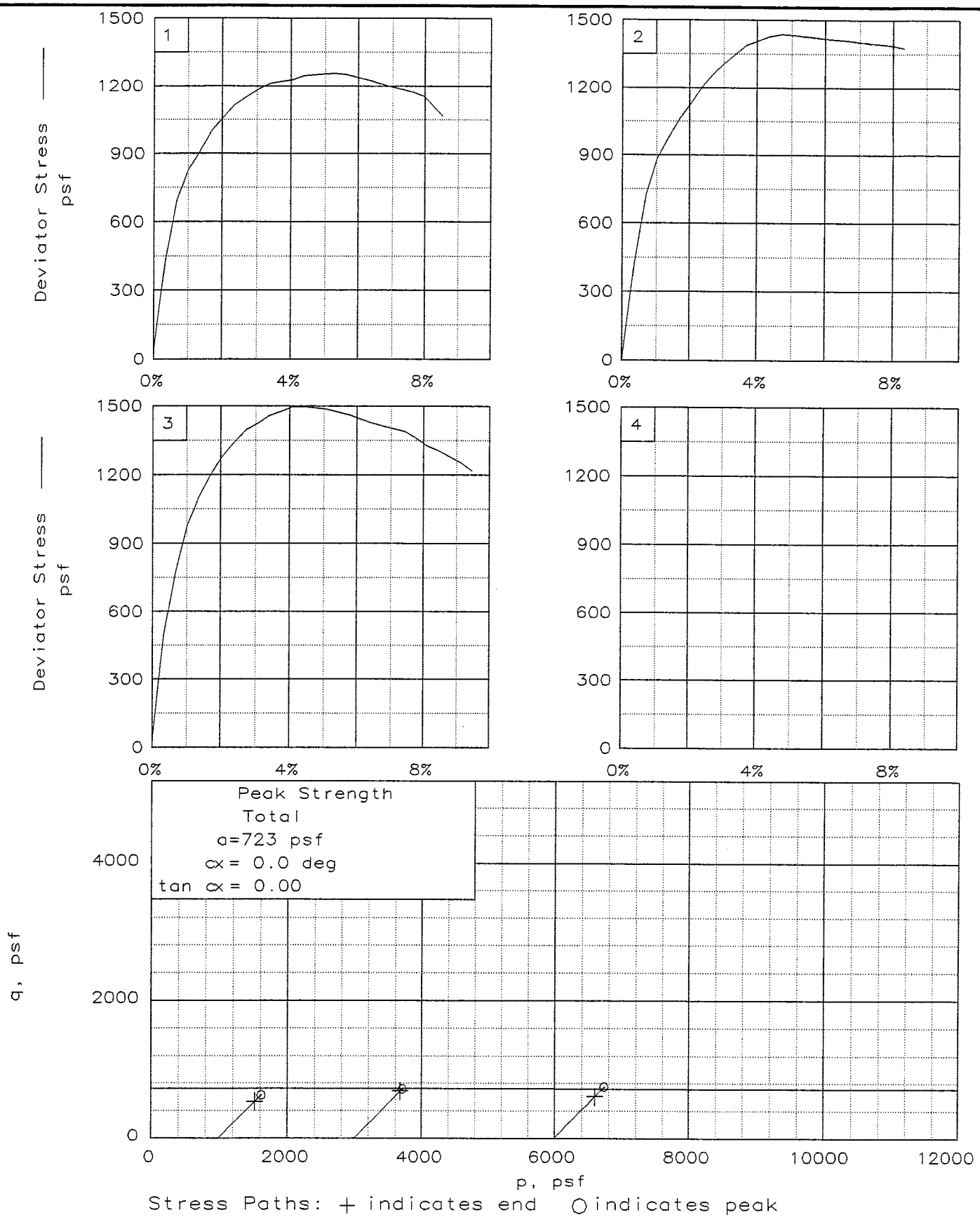


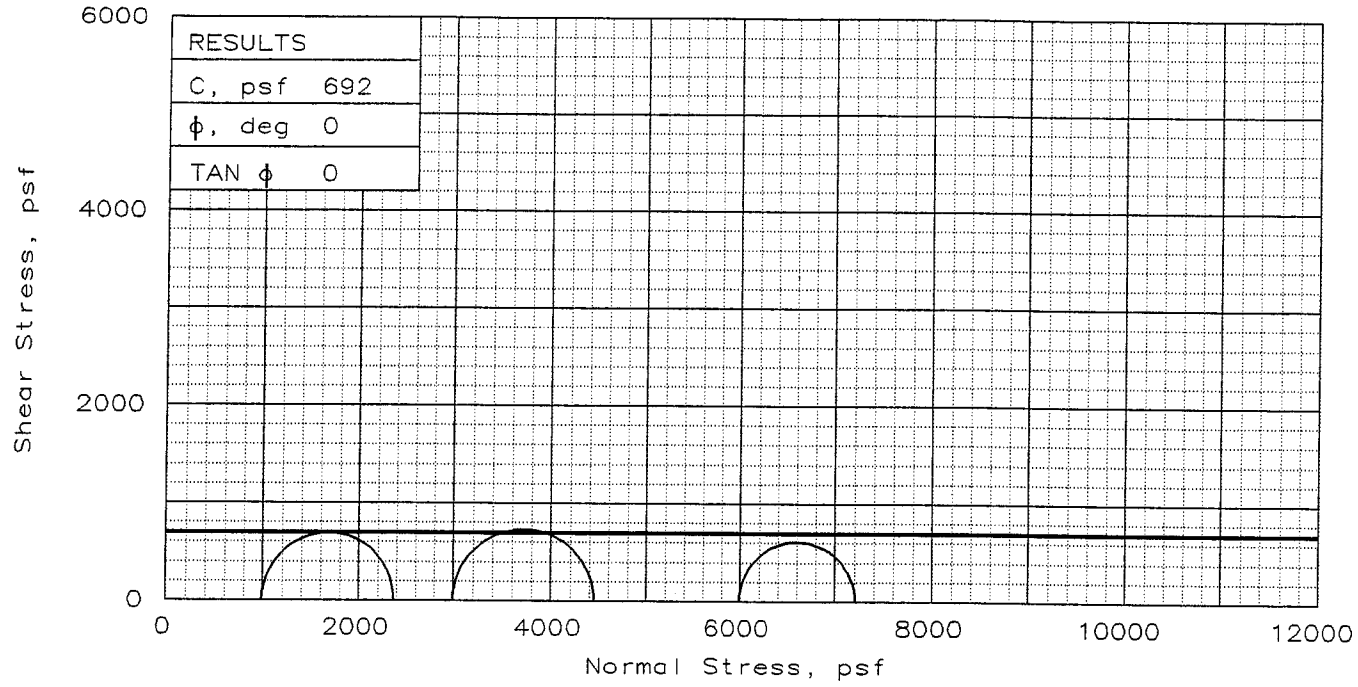
Client: U.S. Army Corps of Engineers

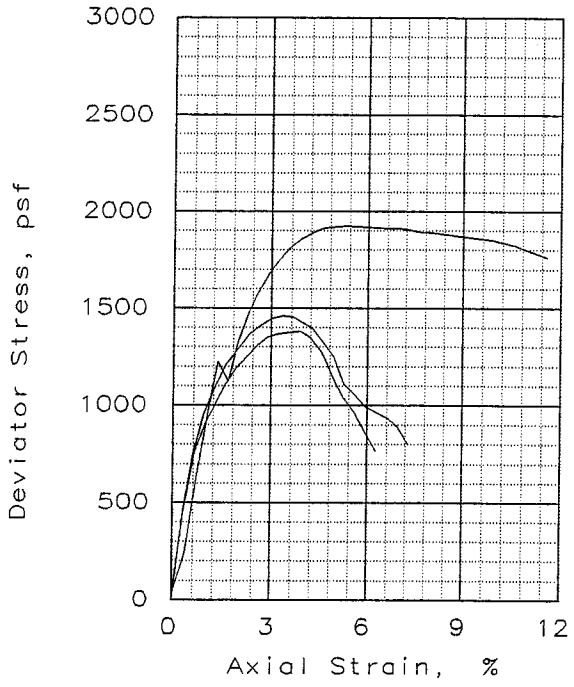
Project: Contract No. DACW29-01-D-0005, Work Packet No. 104

Location: Boring MG-6U, Sample 15-C, Depth 57.1'

File: UU-21739 Project No.: 18002 Fig. No.: ____

"Confidential Information: Privileged & Confidential Work Product"





SPECIMEN NO.:		1	2	3
INITIAL	WATER CONTENT, %	54.6	53.9	53.9
	DRY DENSITY, pcf	66.6	67.3	68.1
	SATURATION, %	95.5	95.7	97.7
	VOID RATIO	1.567	1.543	1.511
	DIAMETER, in	1.40	1.40	1.39
	HEIGHT, in	2.93	2.93	2.93
AT TEST	WATER CONTENT, %	57.4	56.4	55.2
	DRY DENSITY, pcf	66.5	67.2	68.0
	SATURATION, %	100.0	100.0	100.0
	VOID RATIO	1.573	1.546	1.514
	DIAMETER, in	1.40	1.40	1.39
	HEIGHT, in	2.93	2.93	2.93
Strain rate, in/min		0.0286	0.0286	0.0287
BACK PRESSURE, psf		0	0	0
CELL PRESSURE, psf		994	2995	5990
FAIL. STRESS, psf		1381	1459	1224
ULT. STRESS, psf		767	806	1760
σ_1 FAILURE, psf		2375	4454	7215
σ_3 FAILURE, psf		994	2995	5990

TYPE OF TEST:
Unconsolidated Undrained
SAMPLE TYPE: Undisturbed
DESCRIPTION: M Gr CH4
w/ SL
LL= 88 PL= 24 PI= 64
SPECIFIC GRAVITY= 2.74
REMARKS: Torvane = 0.400 tsf

CLIENT: U.S. Army Corps of Engineers

PROJECT: Contract No. DACW29-01-D-0005,
Work Packet No. 104
SAMPLE LOCATION: Boring MG-6U,
Sample 18-D, Depth 70.0'

PROJ. NO.: 18002 DATE: 7/16/03

TRIAXIAL SHEAR TEST REPORT

Eustis Engineering Company, Inc.

Fig. No.:

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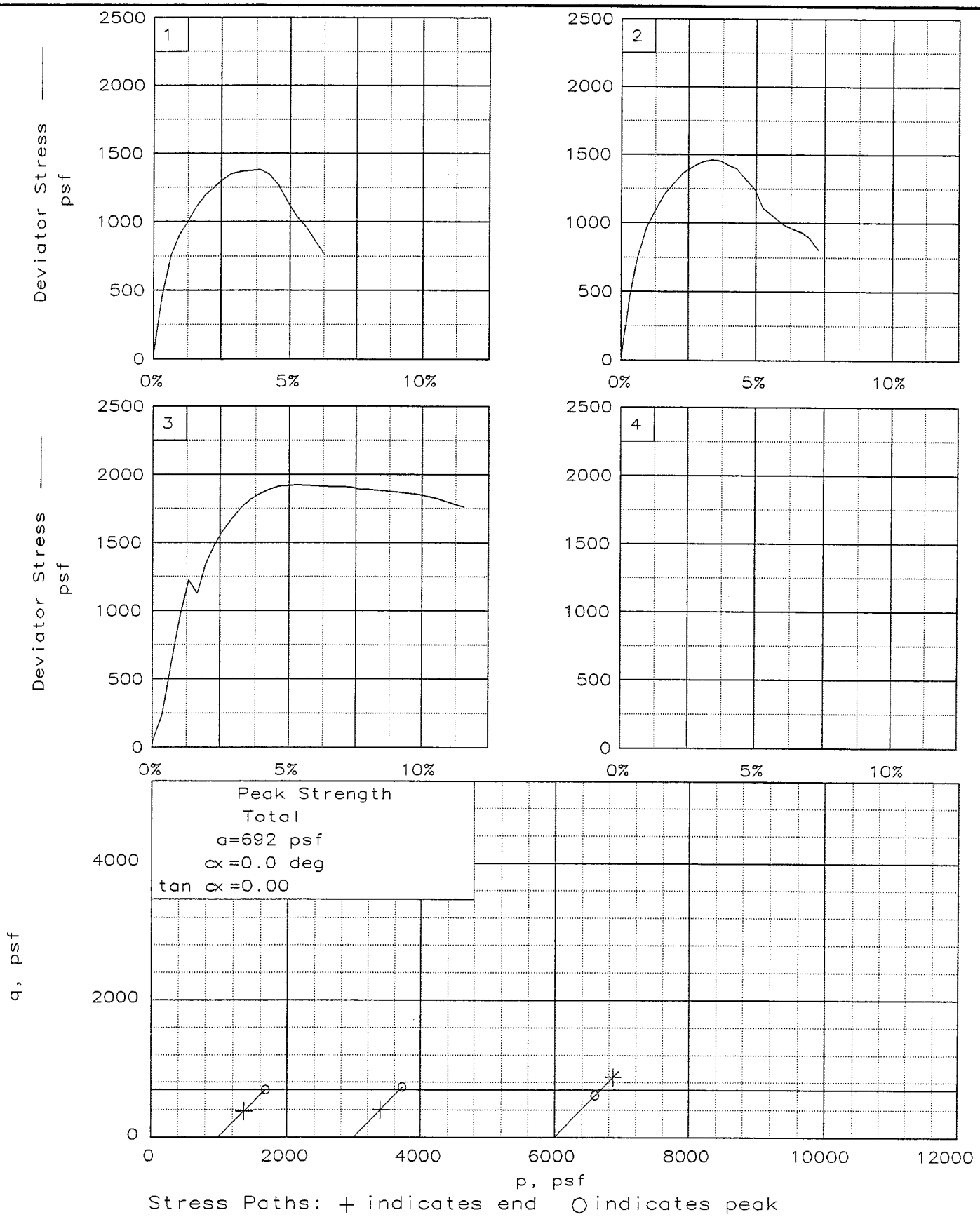

Client: U.S. Army Corps of Engineers

Project: Contract No. DACW29-01-D-0005, Work Packet No. 104

Location: Boring MG-6U, Sample 18-D, Depth 70.0'

File: UU-21740 Project No.: 18002 Fig. No.: ——

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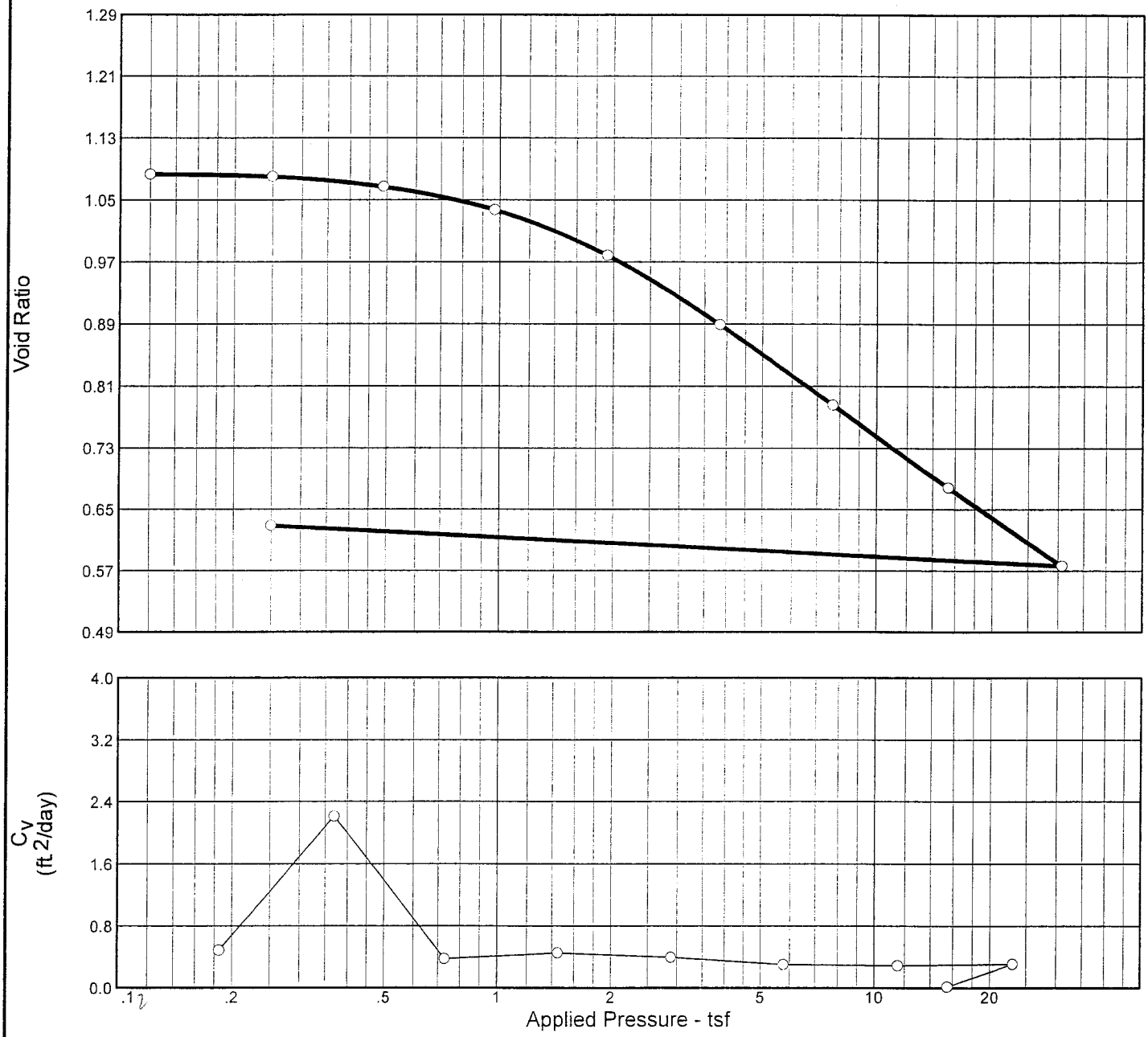
CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
95.6 %	38.5 %	80.7	56	39	2.70	2.07	0.35	1.088

MATERIAL DESCRIPTION	USCS	AASHTO
So Gr & T CH2 $\nu_0 = 0.258$	CH2	

Project No. 18002 **Client:** U.S.Army Corps of Engineers

Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

Source: MG-6U **Sample No.:** 3B **Elev./Depth:** 8.4'

Remarks:
Tested by CLD

CONSOLIDATION TEST REPORT

EUSTIS ENGINEERING COMPANY, INC.

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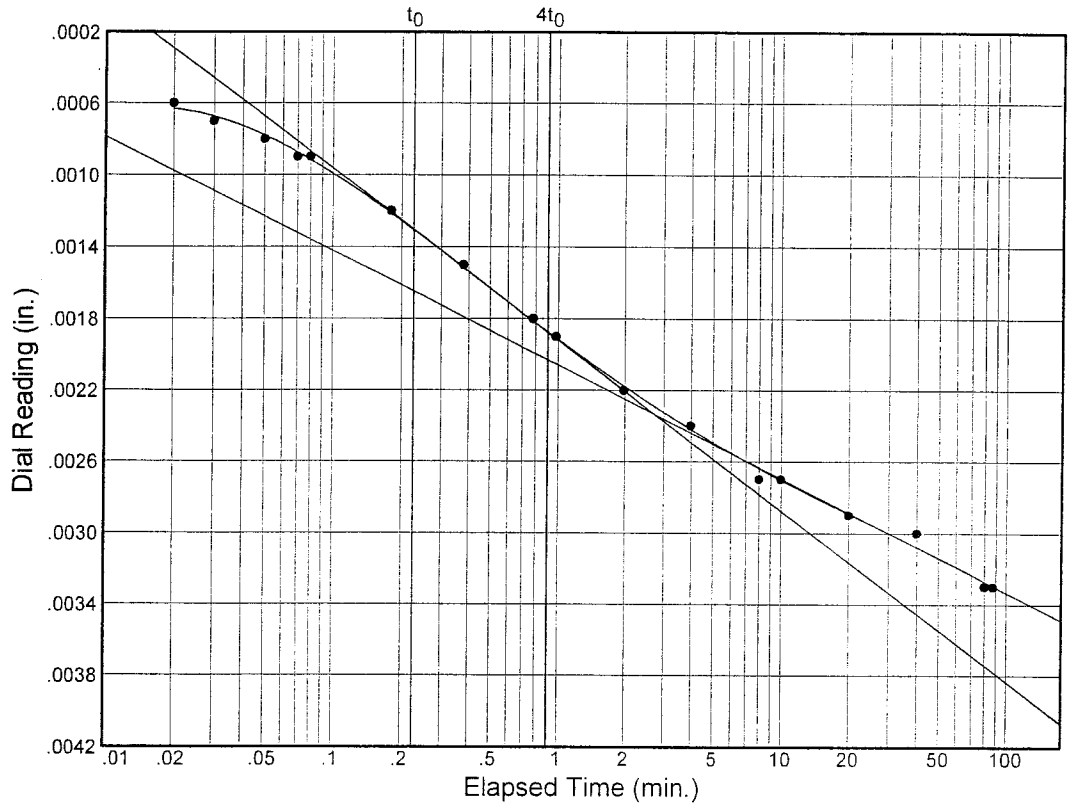
Figure No.

Dial Reading vs. Time

Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

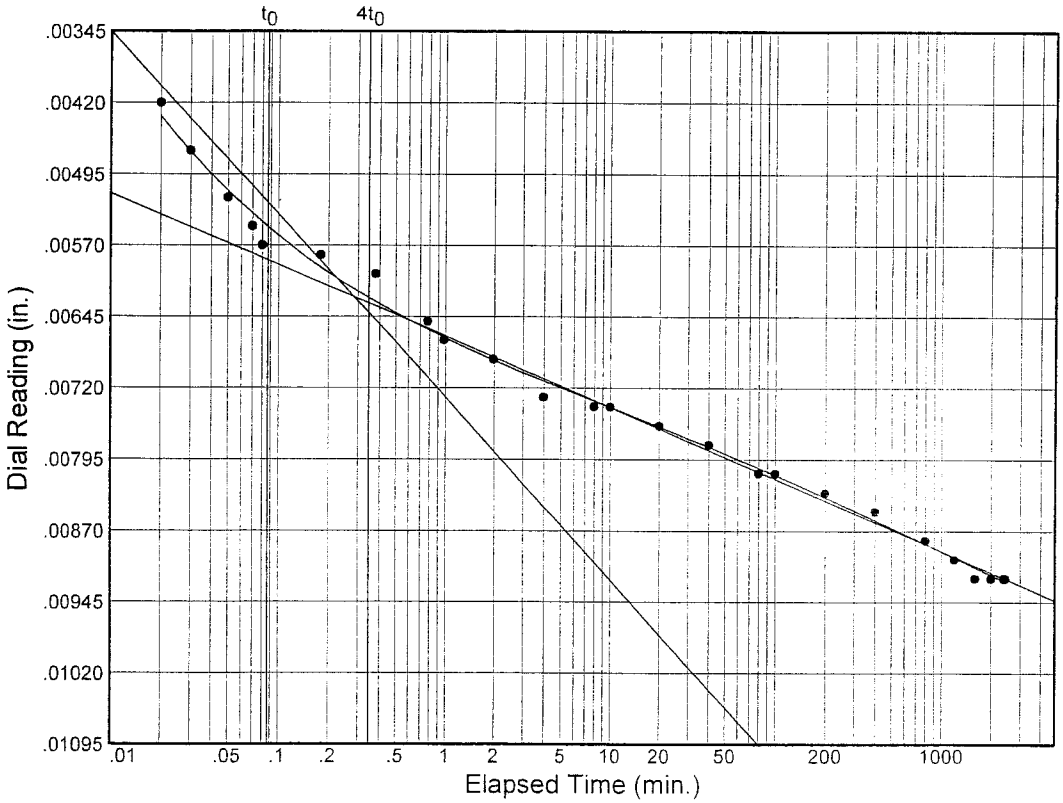
Source: MG-6U Sample No.: 3B Elev./Depth: 8.4'



Load No.= 2
Load= 0.25 tsf
D_0 = 0.00073
D_{50} = 0.00154
D_{100} = 0.00234
T_{50} = 0.40 min.

C_v @ T_{50}
0.48 ft.^{2}/day

C_α = 0.001



Load No.= 3
Load= 0.49 tsf
D_0 = 0.00476
D_{50} = 0.00550
D_{100} = 0.00624
T_{50} = 0.09 min.

C_v @ T_{50}
2.21 ft.^{2}/day

C_α = 0.001

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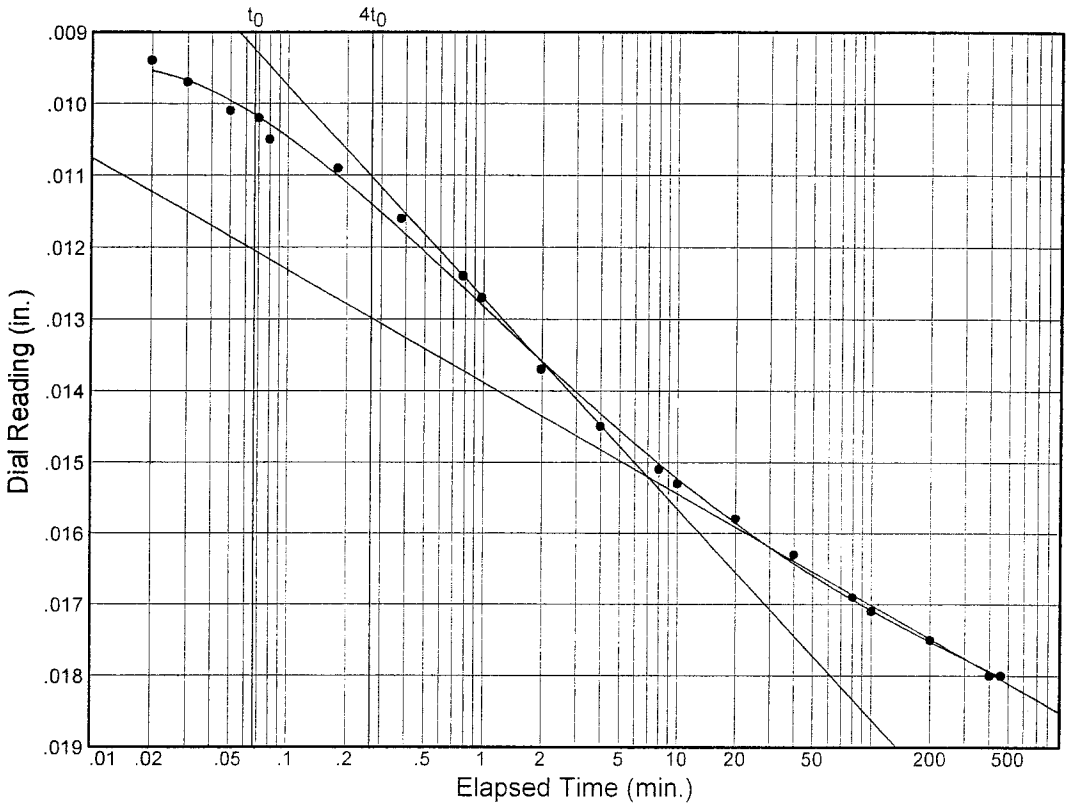
Dial Reading vs. Time

Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

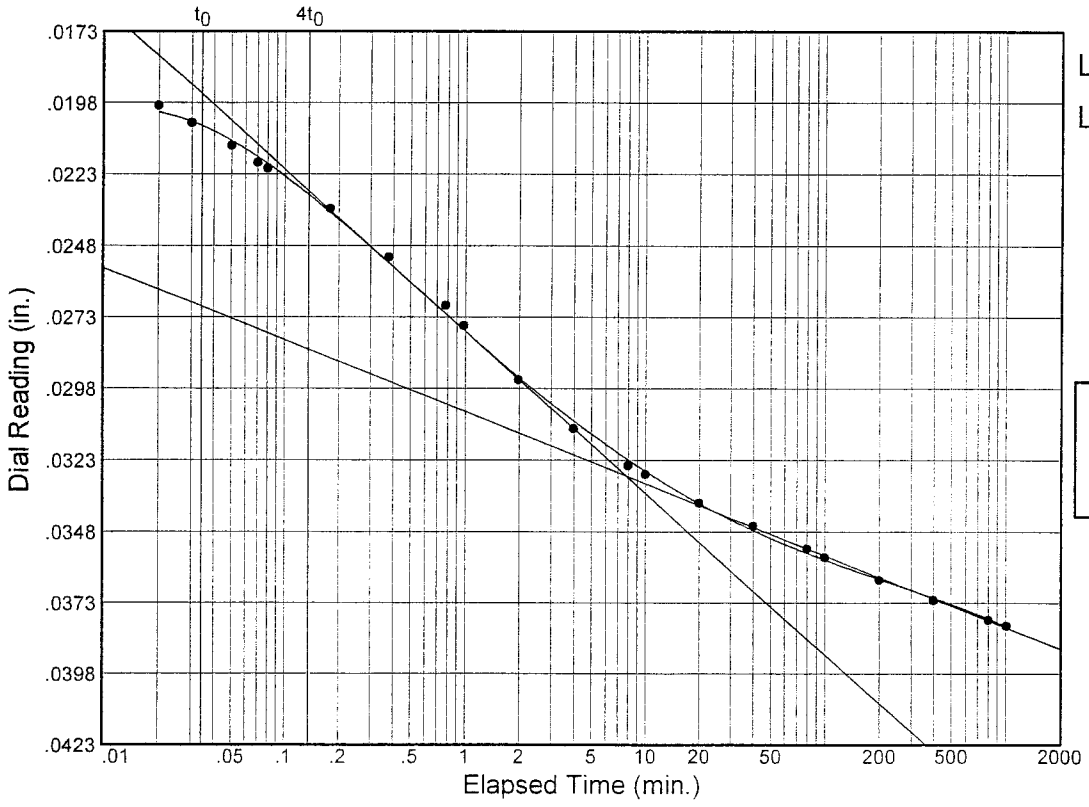
Source: MG-6U Sample No.: 3B Elev./Depth: 8.4'



Load No.= 4
Load= 0.97 tsf
D_0 = 0.00891
D_{50} = 0.01206
D_{100} = 0.01521
T_{50} = 0.50 min.

C_v @ T_{50}
0.37 ft.^{2}/day

C_α = 0.003



Load No.= 5
Load= 1.93 tsf
D_0 = 0.01818
D_{50} = 0.02551
D_{100} = 0.03284
T_{50} = 0.39 min.

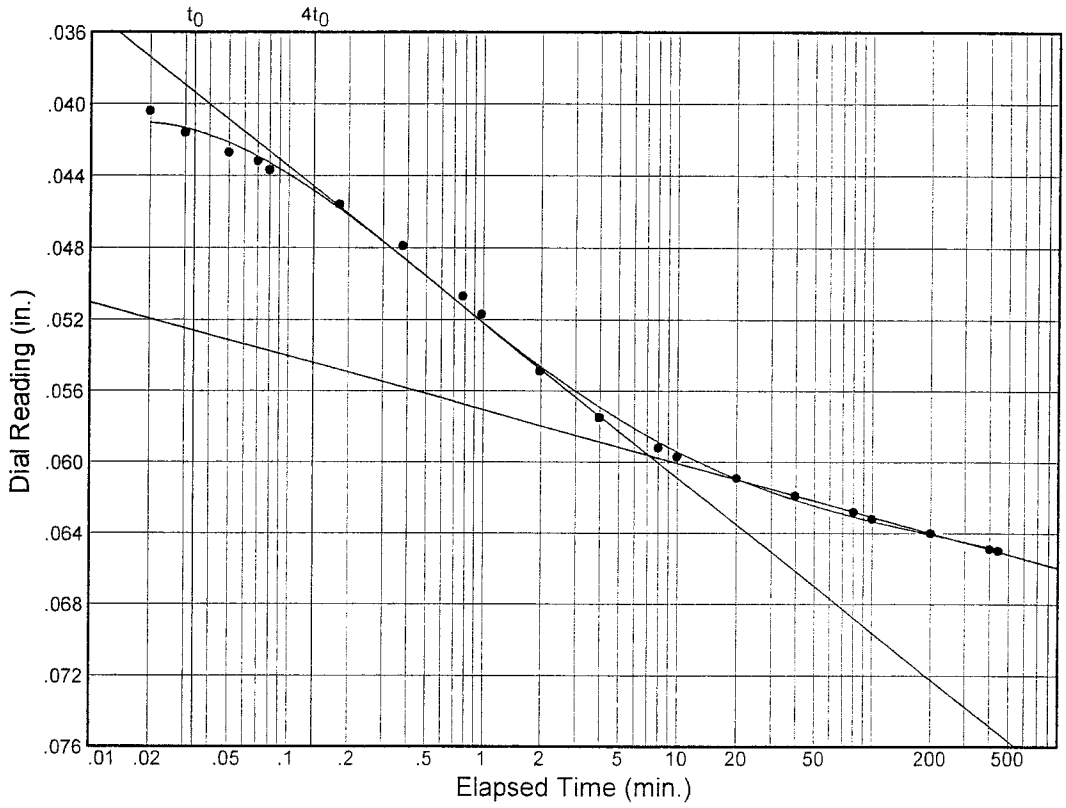
C_v @ T_{50}
0.45 ft.^{2}/day

C_α = 0.004

Dial Reading vs. Time

Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

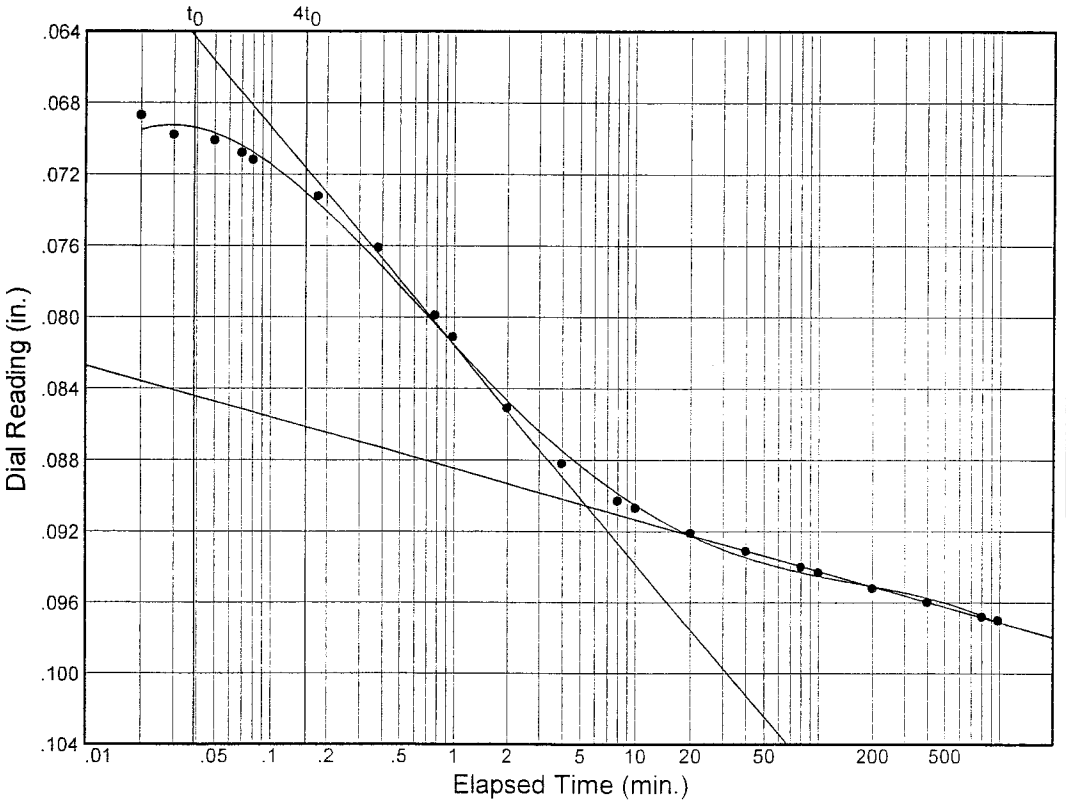
Source: MG-6U Sample No.: 3B Elev./Depth: 8.4'



Load No.= 6
Load= 3.85 tsf
D_0 = 0.03810
D_{50} = 0.04887
D_{100} = 0.05963
T_{50} = 0.41 min.

C_v @ T_{50}
0.40 ft.^{2}/day

C_α = 0.005



Load No.= 7
Load= 7.69 tsf
D_0 = 0.06572
D_{50} = 0.07815
D_{100} = 0.09058
T_{50} = 0.49 min.

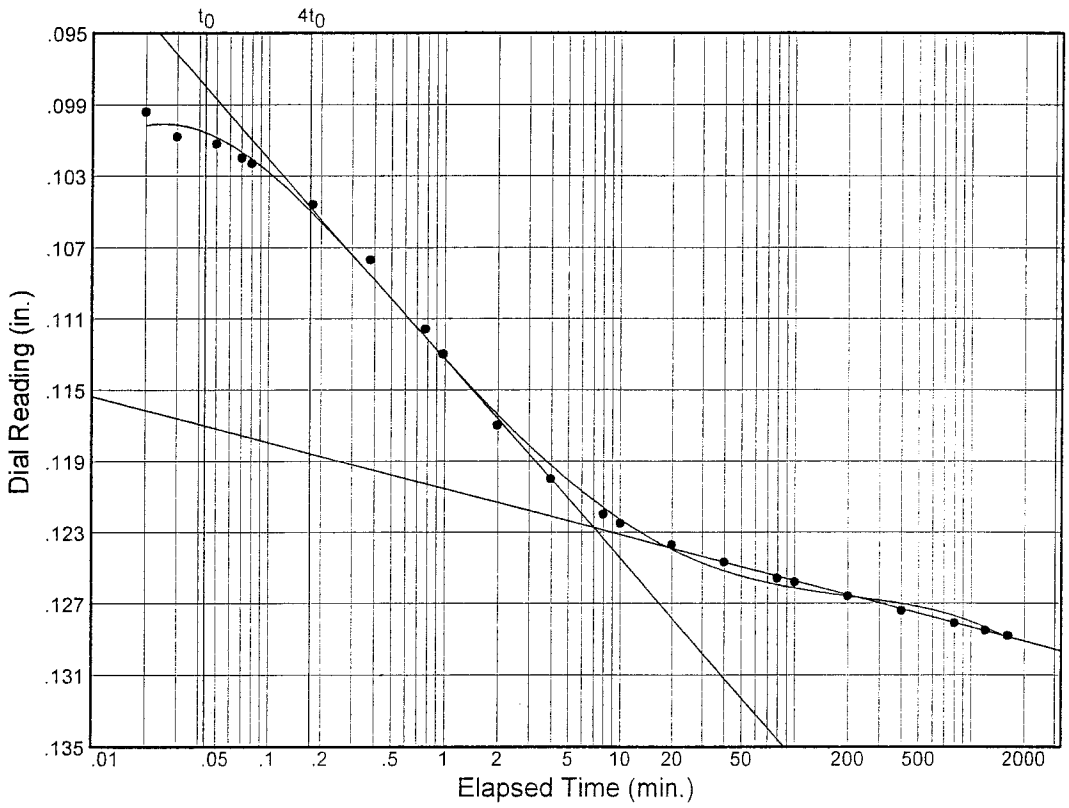
C_v @ T_{50}
0.30 ft.^{2}/day

C_α = 0.005

Dial Reading vs. Time

Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

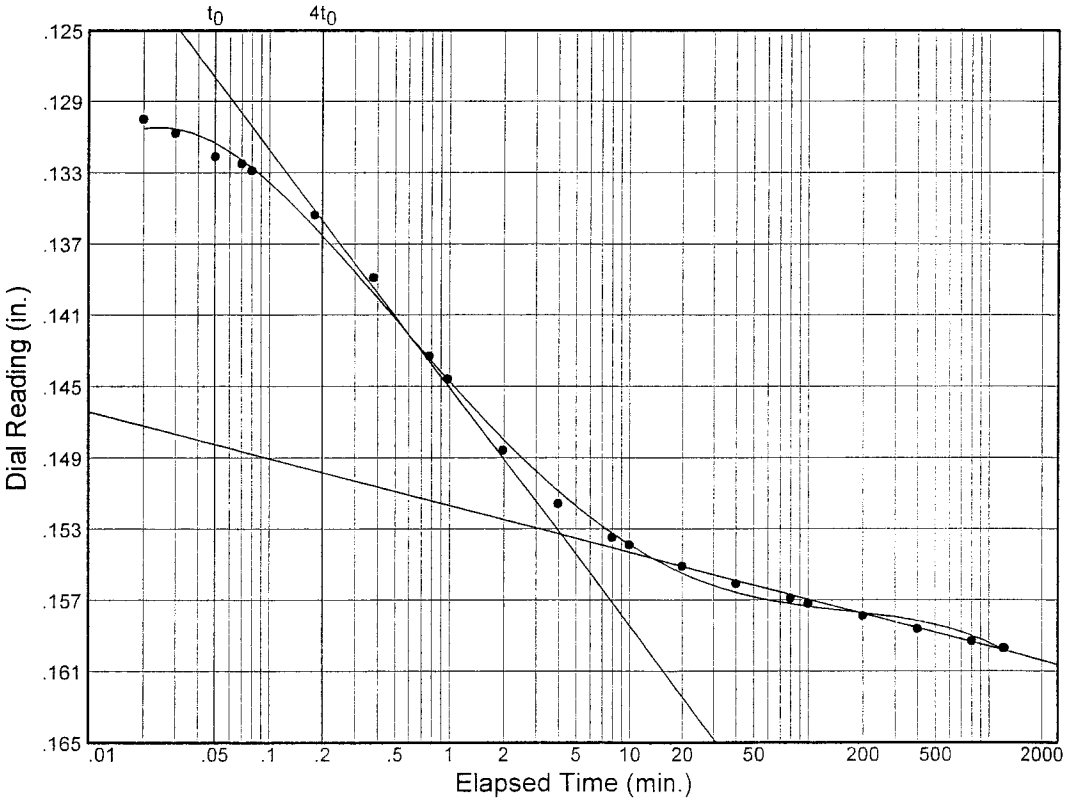
Source: MG-6U Sample No.: 3B Elev./Depth: 8.4'



Load No.= 8
Load= 15.37 tsf
D_0 = 0.09615
D_{50} = 0.10944
D_{100} = 0.12274
T_{50} = 0.46 min.

C_v @ T_{50}
0.29 ft.^{2}/day

C_α = 0.005



Load No.= 9
Load= 30.73 tsf
D_0 = 0.12615
D_{50} = 0.13973
D_{100} = 0.15332
T_{50} = 0.38 min.

C_v @ T_{50}
0.31 ft.^{2}/day

C_α = 0.005

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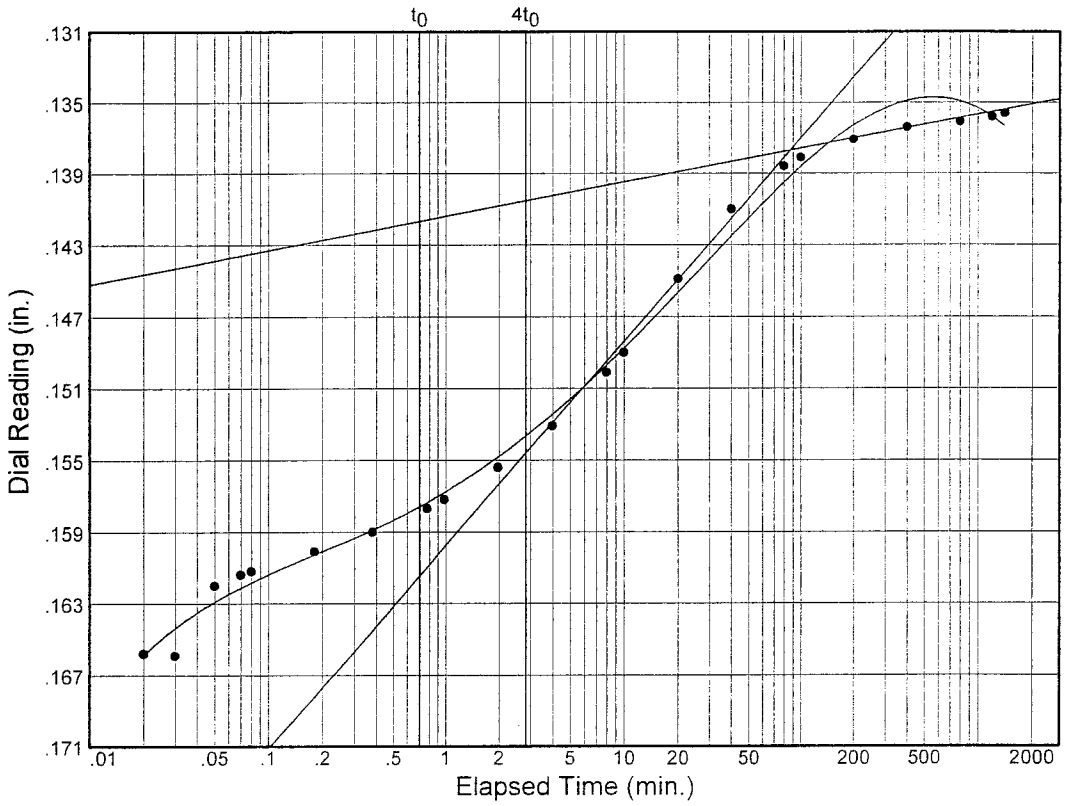
Figure No.

Dial Reading vs. Time

Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

Source: MG-6U Sample No.: 3B Elev./Depth: 8.4'



Load No.= 10
Load= 0.25 tsf
D_0 = 0.16151
D_{50} = 0.14959
D_{100} = 0.13768
T_{50} = 8.23 min.

C_v @ T_{50}
0.01 ft.^{2}/day

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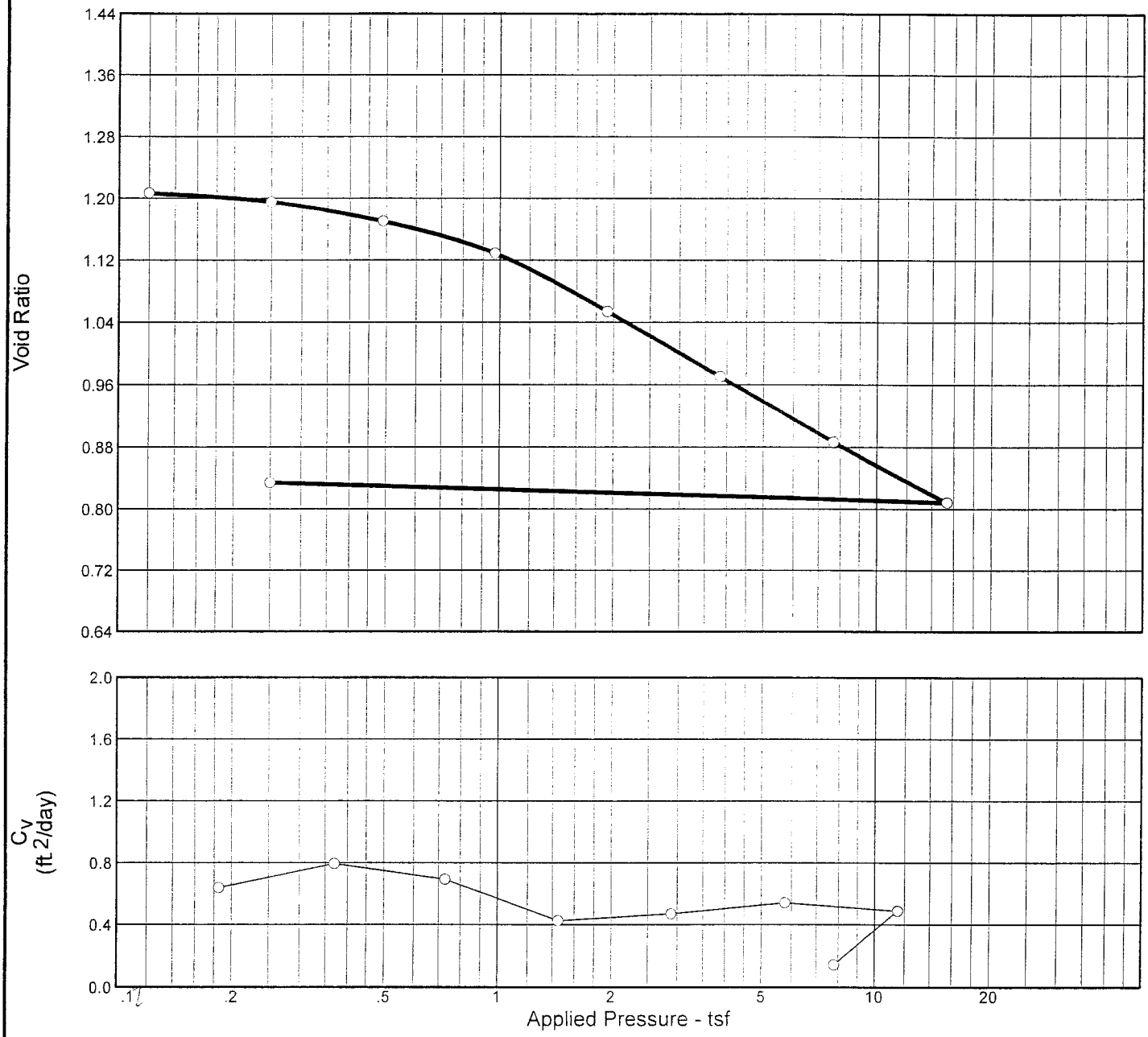
Figure No.

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
87.6 %	39.3 %	76.3	42	23	2.70	1.09	0.28	1.209

MATERIAL DESCRIPTION	USCS	AASHTO
So Gr CL6	CL6	

Project No. 18002 **Client:** U.S.Army Corps of Engineers

Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

Source: MG-6U **Sample No.:** 6C **Elev./Depth:** 21.1'

Remarks:
Tested by CLD

CONSOLIDATION TEST REPORT

EUSTIS ENGINEERING COMPANY, INC.

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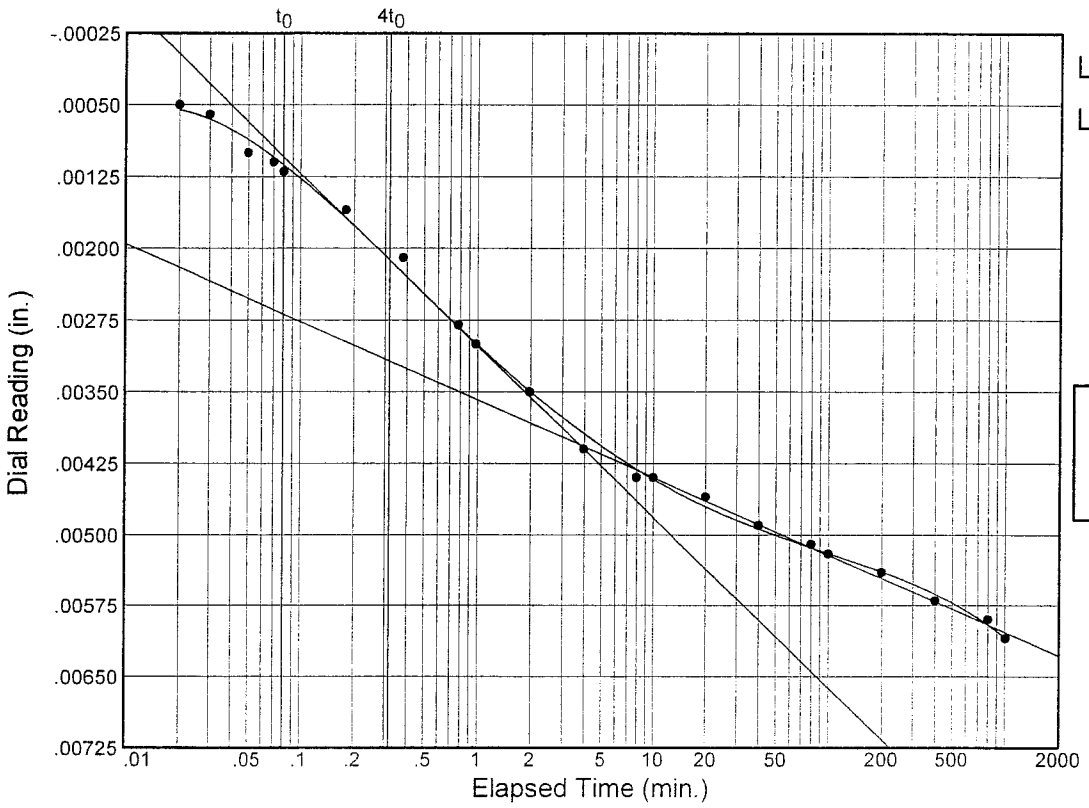
Figure No.

Dial Reading vs. Time

Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

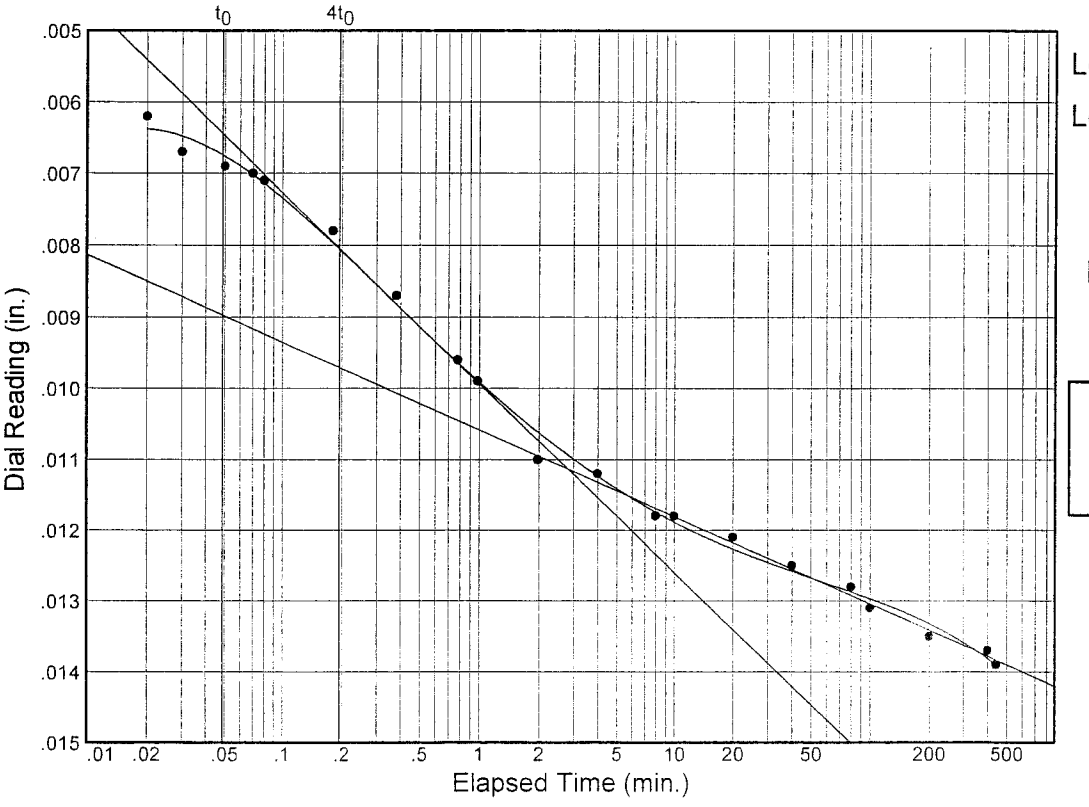
Source: MG-6U Sample No.: 6C Elev./Depth: 21.1'



Load No.= 2
Load= 0.25 tsf
D_0 = 0.00013
D_{50} = 0.00209
D_{100} = 0.00405
T_{50} = 0.30 min.

C_v @ T_{50}
0.64 ft.^{2}/day

C_α = 0.001



Load No.= 3
Load= 0.49 tsf
D_0 = 0.00543
D_{50} = 0.00828
D_{100} = 0.01113
T_{50} = 0.24 min.

C_v @ T_{50}
0.79 ft.^{2}/day

C_α = 0.002

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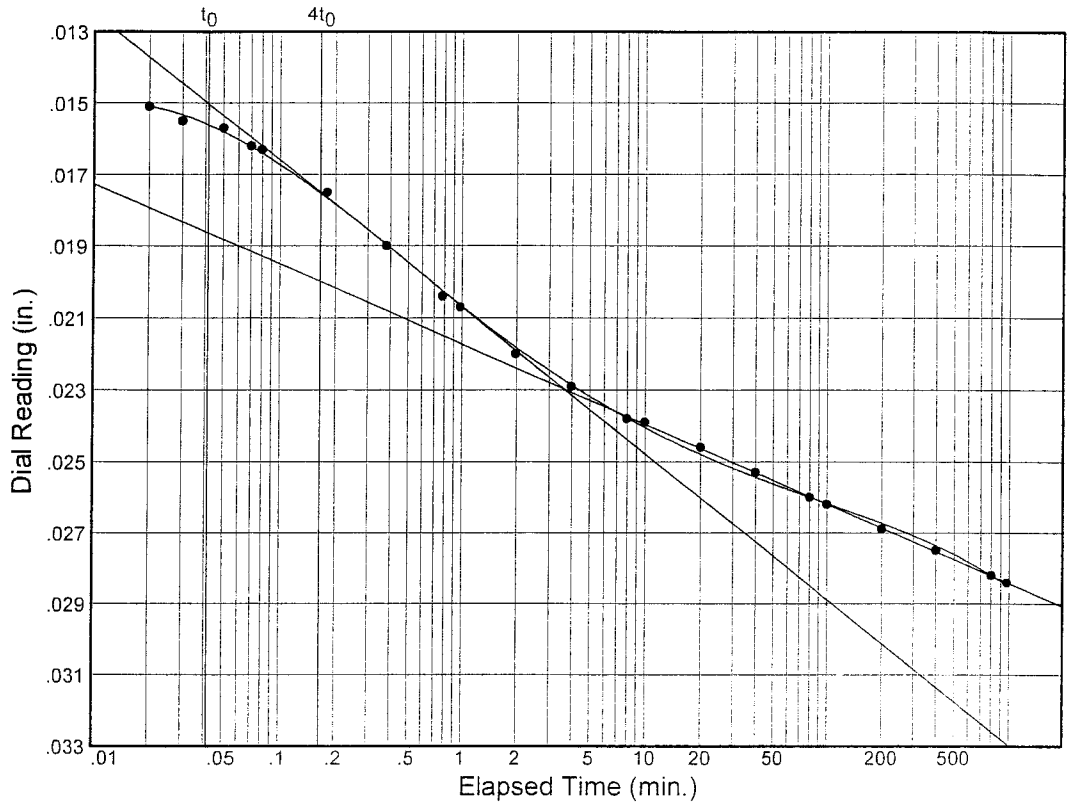
Figure No.

Dial Reading vs. Time

Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

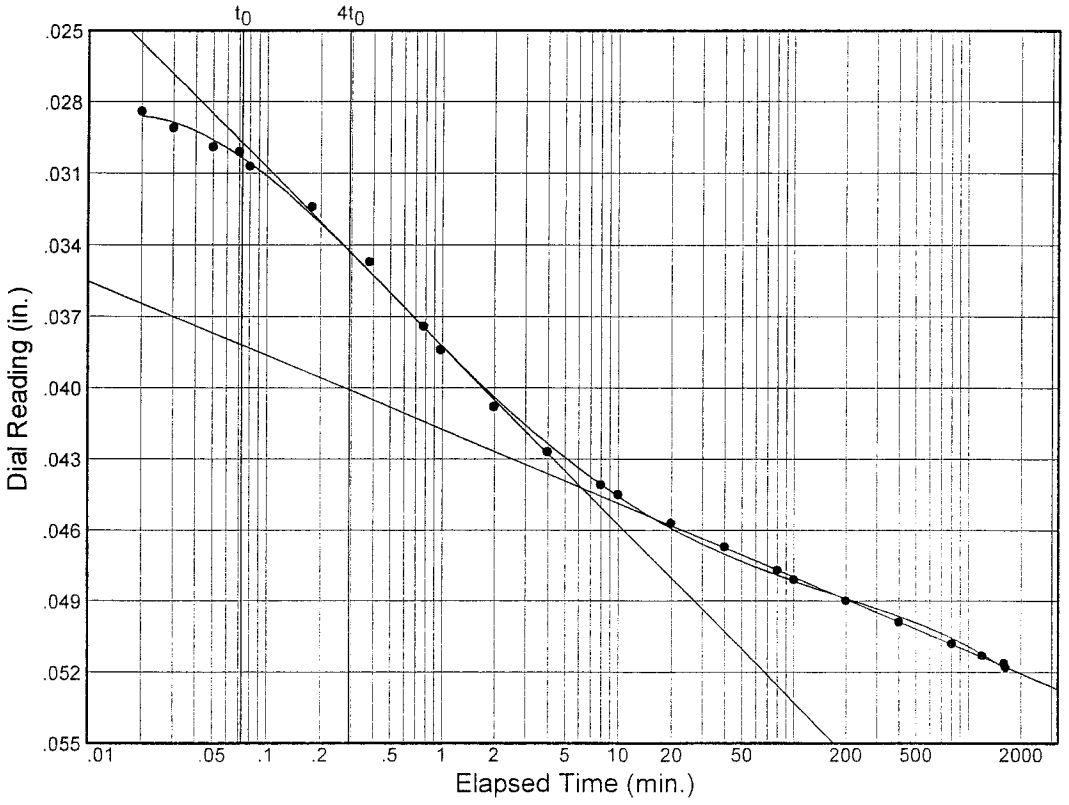
Source: MG-6U Sample No.: 6C Elev./Depth: 21.1'



Load No.= 4
Load= 0.97 tsf
D_0 = 0.01369
D_{50} = 0.01833
D_{100} = 0.02297
T_{50} = 0.26 min.

C_v @ T_{50}
0.69 ft.^{2}/day

C_α = 0.004



Load No.= 5
Load= 1.93 tsf
D_0 = 0.02647
D_{50} = 0.03534
D_{100} = 0.04422
T_{50} = 0.41 min.

C_v @ T_{50}
0.42 ft.^{2}/day

C_α = 0.005

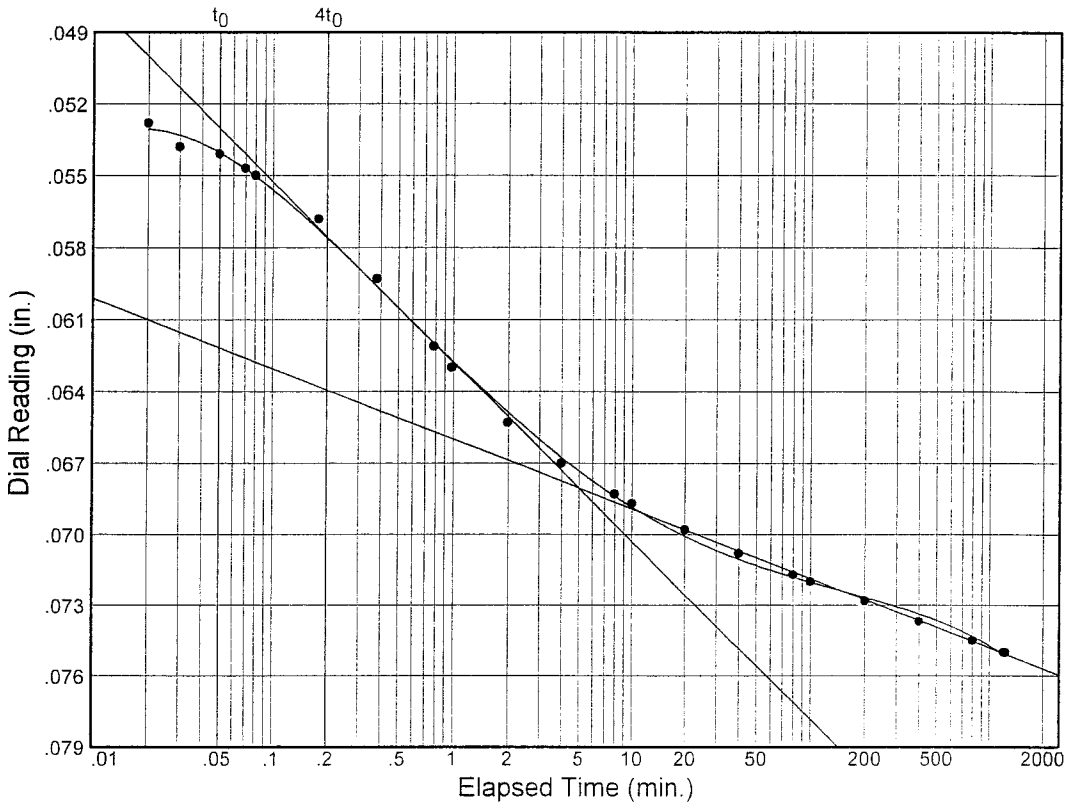
"Confidential Information Privileged & Confidential Work Product"

Figure No.

Dial Reading vs. Time

Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

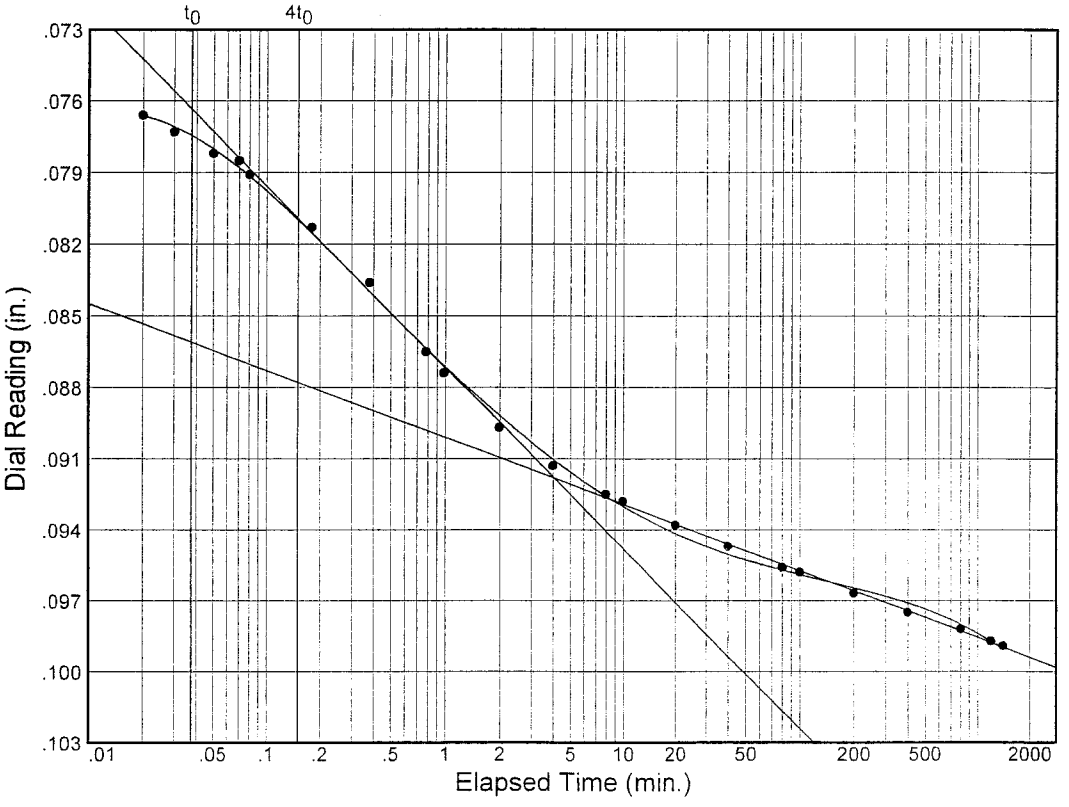
Source: MG-6U Sample No.: 6C Elev./Depth: 21.1'



Load No.= 6
Load= 3.85 tsf
D_0 = 0.05050
D_{50} = 0.05927
D_{100} = 0.06804
T_{50} = 0.34 min.

C_v @ T_{50}
0.47 ft.^{2}/day

C_α = 0.005



Load No.= 7
Load= 7.69 tsf
D_0 = 0.07391
D_{50} = 0.08286
D_{100} = 0.09182
T_{50} = 0.27 min.

C_v @ T_{50}
0.54 ft.^{2}/day

C_α = 0.005

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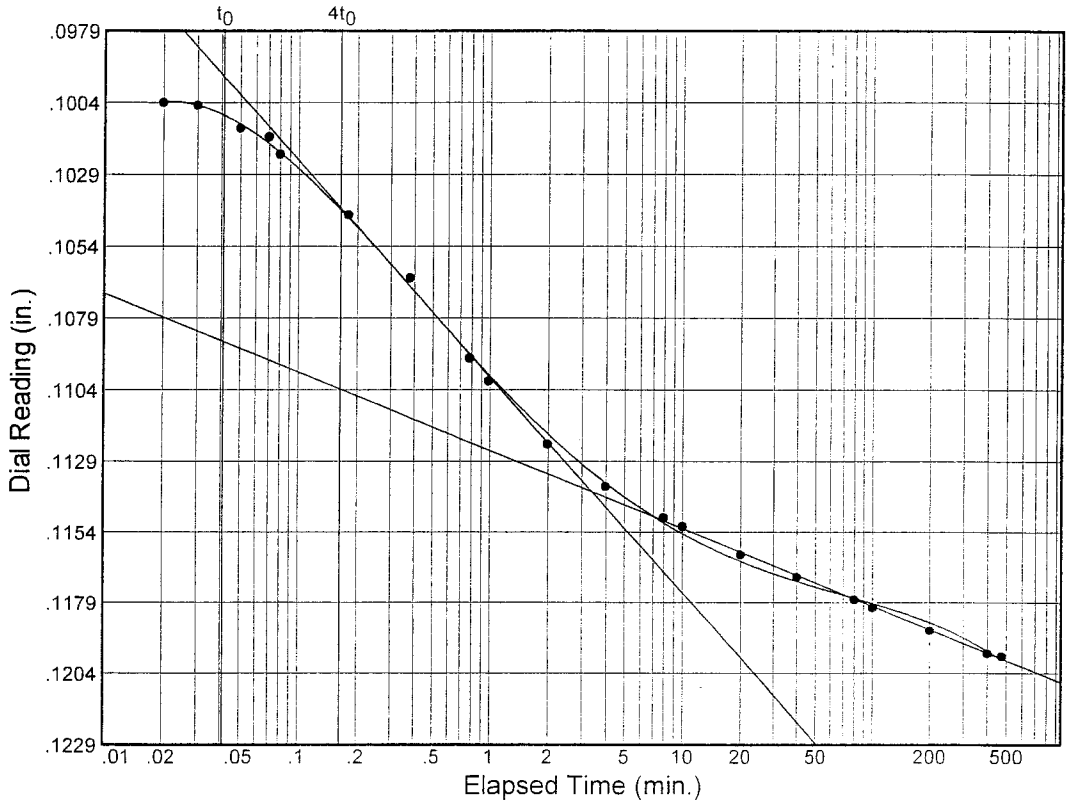
Figure No.

Dial Reading vs. Time

Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

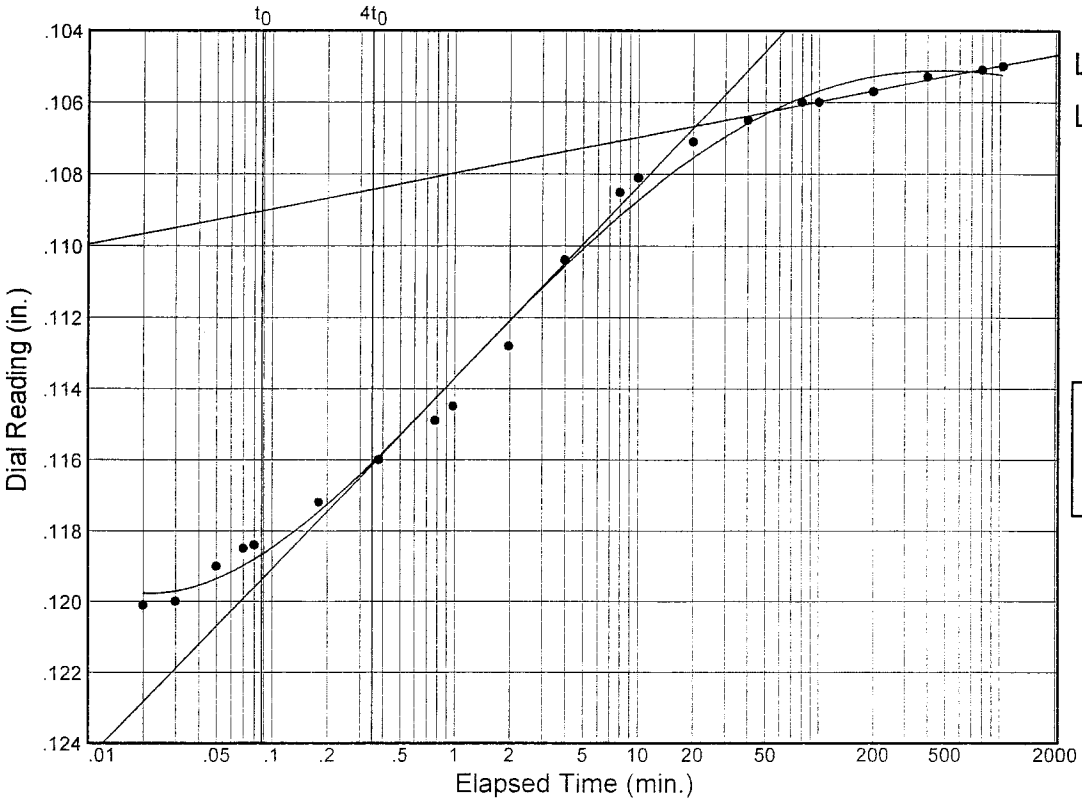
Source: MG-6U Sample No.: 6C Elev./Depth: 21.1'



Load No.= 8
Load= 15.37 tsf
D_0 = 0.09756
D_{50} = 0.10576
D_{100} = 0.11397
T_{50} = 0.28 min.

C_v @ T_{50}
0.49 ft.^{2}/day

C_α = 0.005



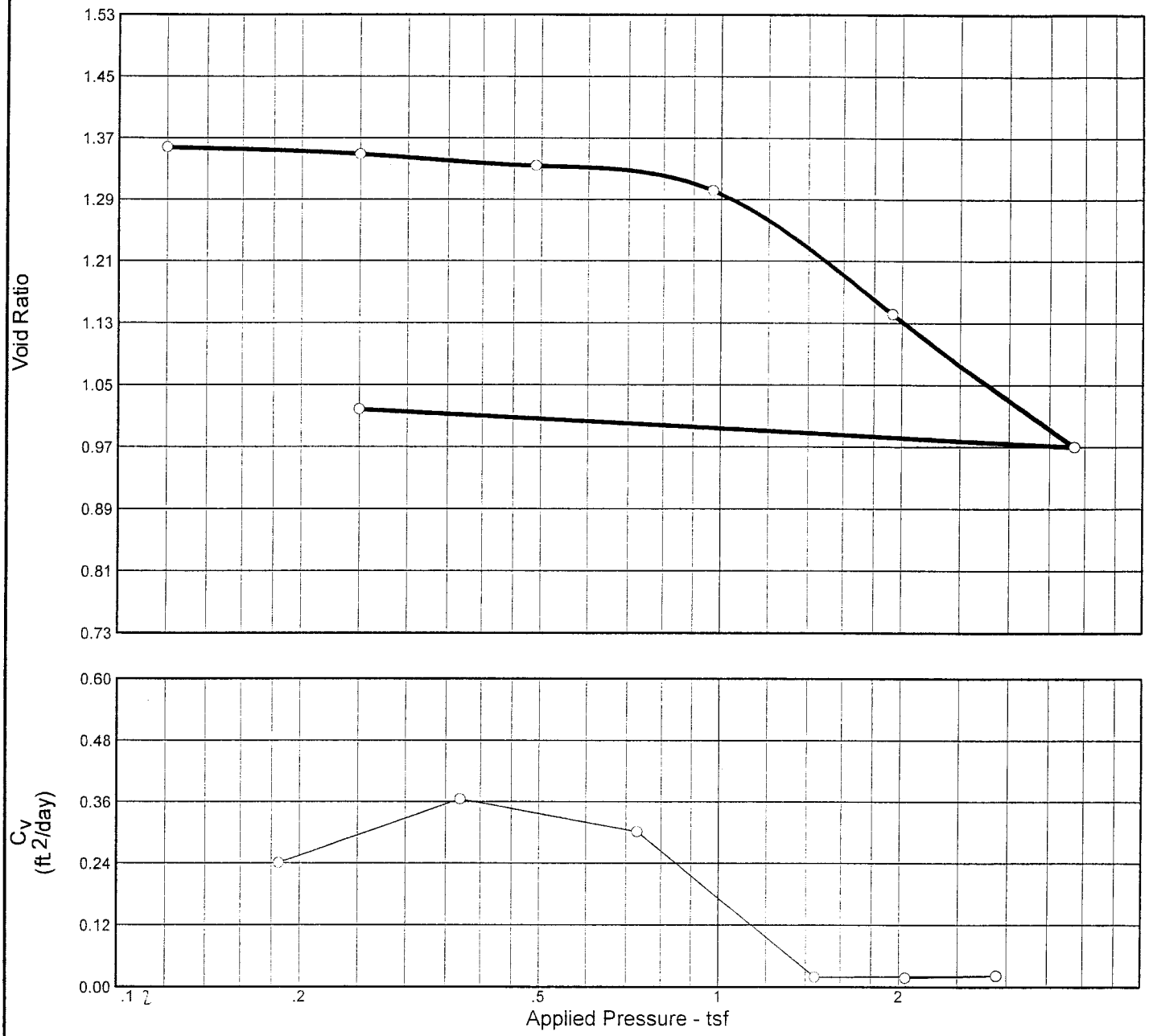
Load No.= 9
Load= 0.25 tsf
D_0 = 0.12125
D_{50} = 0.11396
D_{100} = 0.10666
T_{50} = 0.90 min.

C_v @ T_{50}
0.14 ft.^{2}/day

"Confidential Information: Privileged & Confidential Work Product"

Figure No.

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
98.1 %	49.1 %	71.9	70	50	2.72	1.06	0.59	1.362

MATERIAL DESCRIPTION	USCS	AASHTO
So Gr CH4 w/ lns ML $P_0 = 1.027$	CH4	

Project No. 18002 **Client:** U.S.Army Corps of Engineers

Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

Source: MG-6U **Sample No.:** 11B **Elev./Depth:** 40.5'

Remarks:
Tested by CLD

CONSOLIDATION TEST REPORT

EUSTIS ENGINEERING COMPANY, INC.

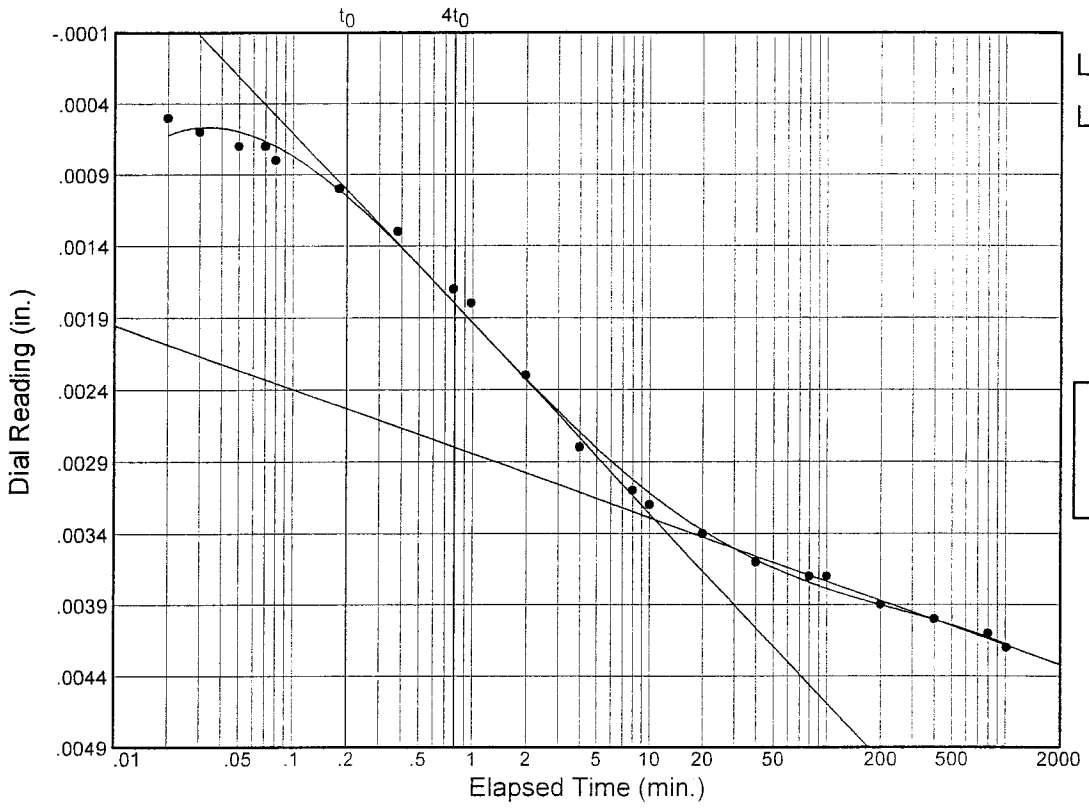
"Confidential Information: Privileged & Confidential Work Product"

Figure No.

Dial Reading vs. Time

Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

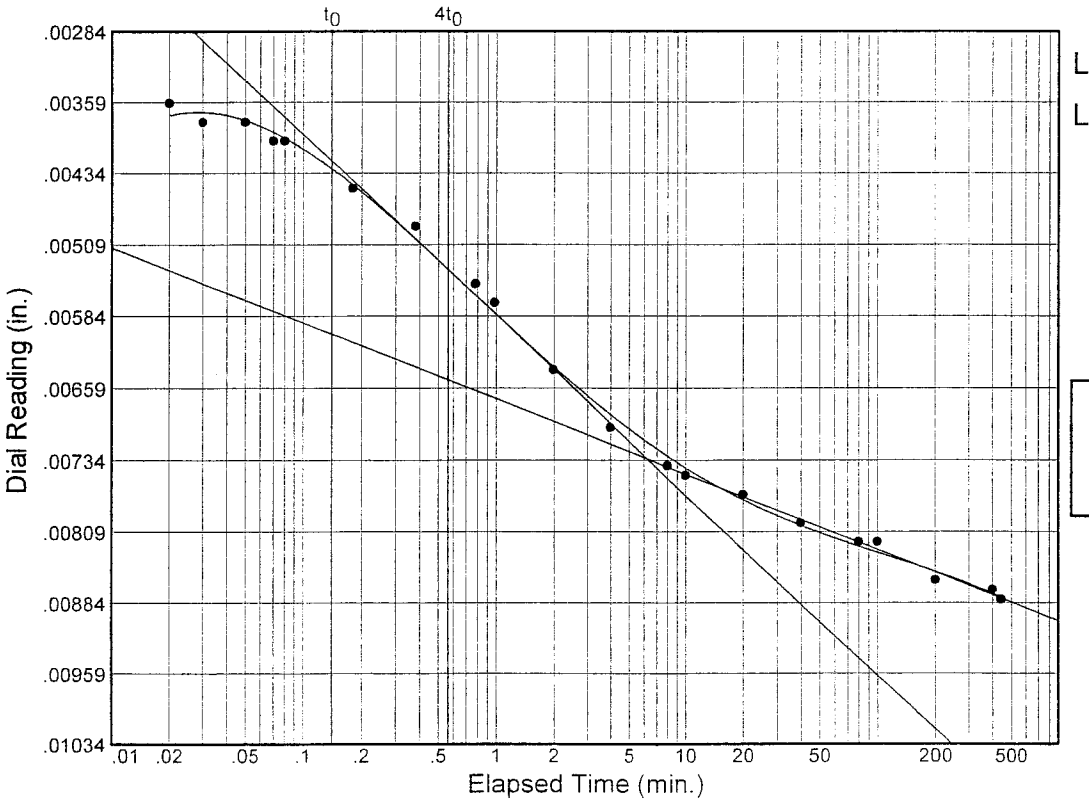
Source: MG-6U Sample No.: 11B Elev./Depth: 40.5'



Load No.= 2
Load= 0.25 tsf
D_0 = 0.00030
D_{50} = 0.00180
D_{100} = 0.00330
T_{50} = 0.79 min.

C_v @ T_{50}
0.24 ft.^{2}/day

C_α = 0.001



Load No.= 3
Load= 0.49 tsf
D_0 = 0.00324
D_{50} = 0.00528
D_{100} = 0.00732
T_{50} = 0.52 min.

C_v @ T_{50}
0.37 ft.^{2}/day

C_α = 0.001

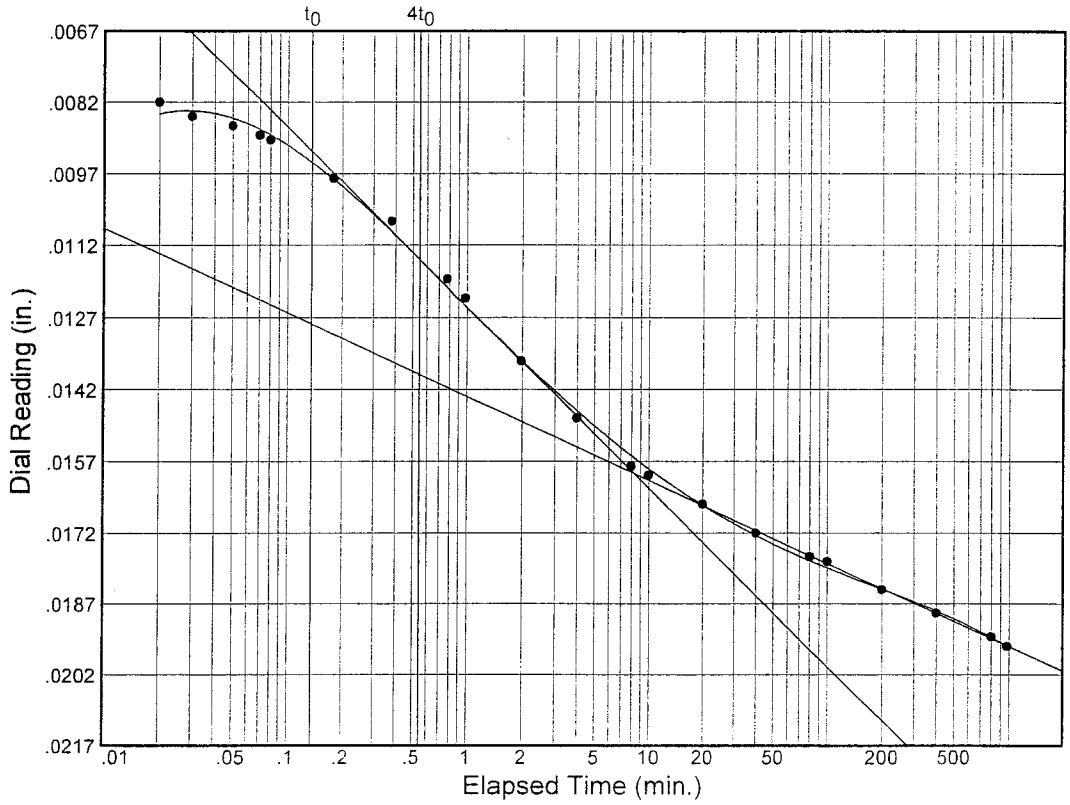
"Confidential Information Privileged & Confidential Work Product"

Figure No.

Dial Reading vs. Time

Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

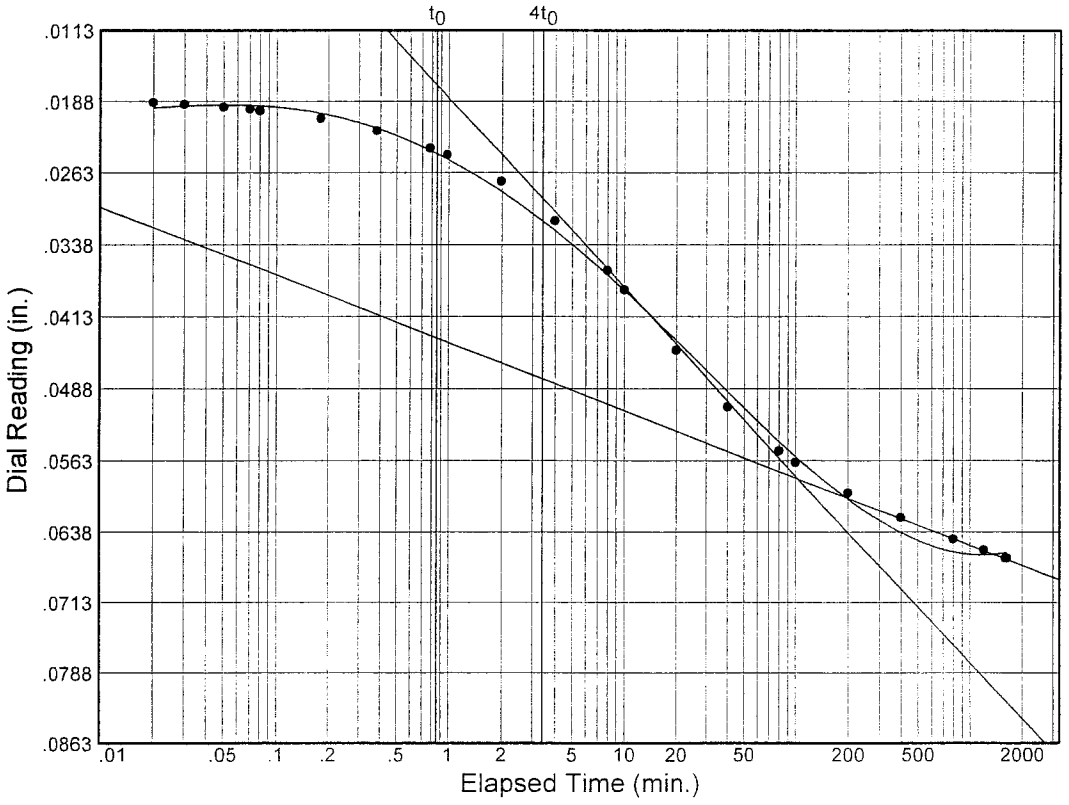
Source: MG-6U Sample No.: 11B Elev./Depth: 40.5'



Load No.= 4
Load= 0.97 tsf
D_0 = 0.00742
D_{50} = 0.01169
D_{100} = 0.01596
T_{50} = 0.61 min.

C_v @ T_{50}
0.30 ft.^{2}/day

C_α = 0.003



Load No.= 5
Load= 1.93 tsf
D_0 = 0.01727
D_{50} = 0.03775
D_{100} = 0.05824
T_{50} = 8.91 min.

C_v @ T_{50}
0.02 ft.^{2}/day

C_α = 0.012

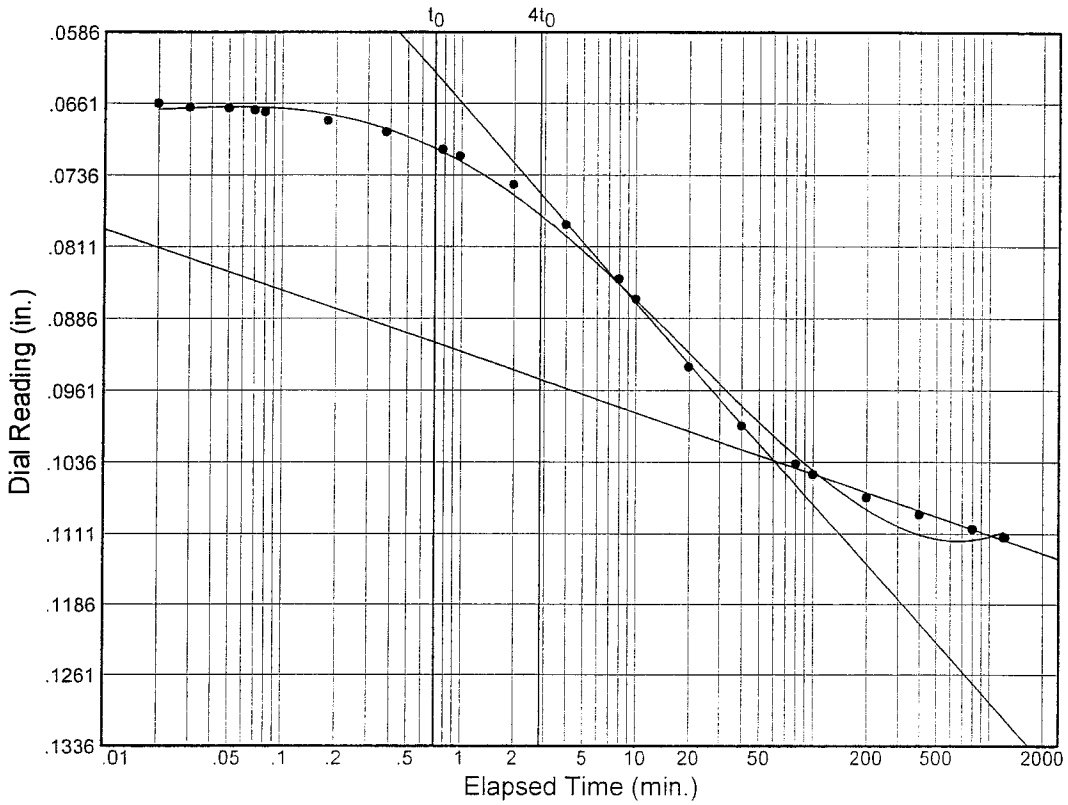
"Confidential Information; Privileged & Confidential Work Product"

Figure No.

Dial Reading vs. Time

Project No.: 18002
Project: Myrtle Grove Ecosystem Restoration Study, Contract No. DACW29-01-D-0005, Work Packet No. 104

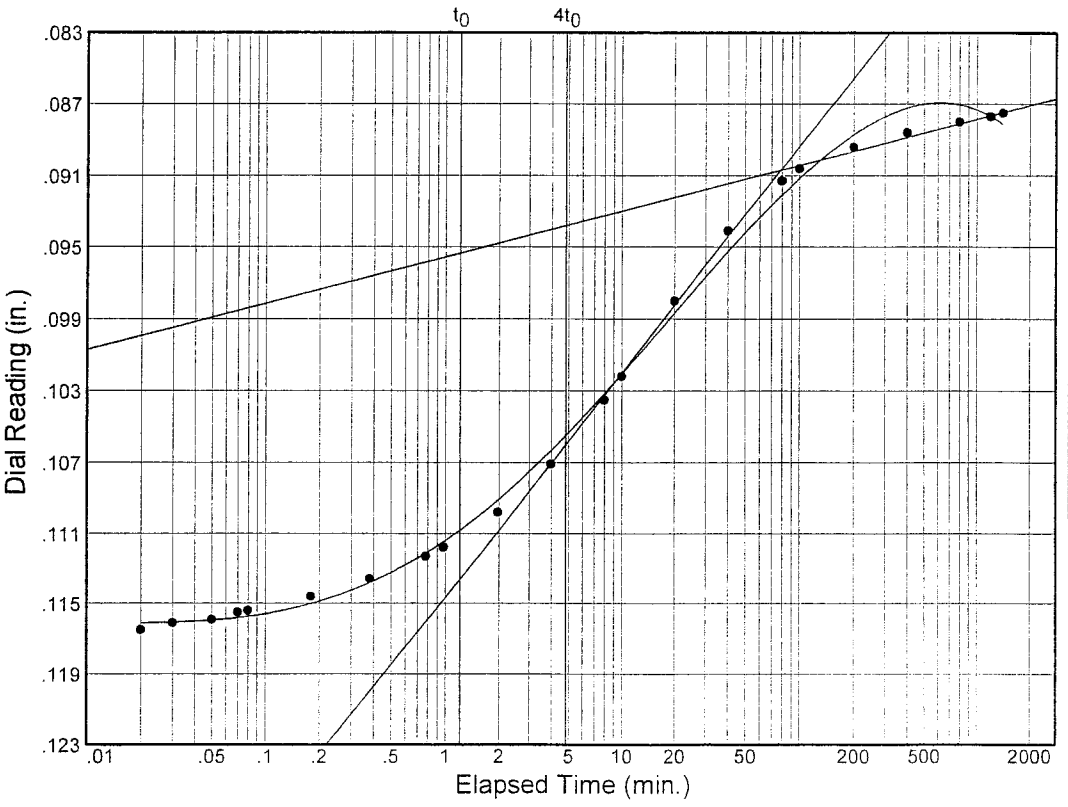
Source: MG-6U Sample No.: 11B Elev./Depth: 40.5'



Load No.= 6
Load= 3.85 tsf
D_0 = 0.06378
D_{50} = 0.08362
D_{100} = 0.10345
T_{50} = 6.63 min.

C_v @ T_{50}
0.02 ft.^{2}/day

C_α = 0.011



Load No.= 7
Load= 0.25 tsf
D_0 = 0.11618
D_{50} = 0.10344
D_{100} = 0.09069
T_{50} = 7.56 min.

C_v @ T_{50}
0.02 ft.^{2}/day

"Confidential Information Privileged & Confidential Work Product"

Figure No.

ZZ 29^39'17.6" 89^59'26.999"
BOR. MG-6U (03-15)
STA.
Date: 4/20/2003

GROUND EL. 1.6

0.0	1.0	30	1.0	CL	SISVSTBR	OX RT			
1.0	2.0	28	2.0	CH	SISVSTBR	RT			
2.0	3.5		3.5	NS					
3.5	5.2	36		CL	SIS M BR GR	WD OX			
5.2	7.0	40		CL	SIS M BR GR	WD OX		42	21
7.0	8.0	35	8.0	CL	SISST BR GR	WD OX			
8.0	9.0	45	9.0	CH	SIS M GR	OX WD			
9.0	10.0	37		CL	SIS M GR				
10.0	12.0	40	12.0	CL	SISVSOGR	OX			
12.0	14.5	41	14.5	CH	SISSO GR BR	OX			
14.5	15.5	36	15.5	ML	GR	CS			
15.5	17.0	50		CH	SIS M GR BR				
17.0	18.6	52		CH	SIS M GR BR	OX			
18.6	20.7	44		CH	SIS M GR	SS CC			
20.7	22.7	41		CH	SIS M GR	SS CC			
22.7	24.0	78		CH	SIS M DGRGR	SI SIF			
24.0	25.5	73		CH	SIS M GR	SIFCC			
25.5	26.5	68		CH	SISSO GR		16099	66	260
26.5	28.4	58		CH	SISSO GR	SI SIFOX WD	356104	57	280
28.4	30.4	55		CH	SISSO GR	SI SIFOX WD			
30.4	31.8	49		CH	SISSO GR				
31.8	32.8	50		CH	SIS M GR	SS CC			
32.8	33.8	48		CH	SISSO GR	SS			
33.8	35.8	65	35.8	CH	SIS M GR BR	OX			
35.8	36.8	43	36.8	CL	SIS M GR BR	OX			
36.8	37.8	68		CH	SIS M GR BR	OX			
37.8	38.8	58		CH	SISST GR BR				
38.8	39.8	60		CH	SISSO GR	SS			
39.8	40.8	51		CH	SIS M GR	SS OX			
40.8	42.0	44		CH	SIS M GR	SS CC			
42.0	44.6	50		CH	SISSO GR				
44.6	46.6	43		CH	SISSO GR		493112	40	448
46.6	48.7	60		CH	SIS M GR		704102	60	480
48.7	50.7	56		CH	SIS M GR				
50.7	52.6	53		CH	SIS M GR		700106	54	515
52.6	54.6	53		CH	SIS M GR				
54.6	55.8	47		CH	SIS M GR				
55.8	58.8	51		CH	SIS M GR	OX			
58.8	60.4	51		CH	SIS M GR		620105	51	593
60.4	62.4	51		CH	SIS M GR				
62.4	64.7	54		CH	SISST GR		671103	59	645
64.7	66.7	58		CH	SISST GR				
66.7	68.7	58		CH	SIS M GR		816103	58	680
68.7	70.7	56		CH	SIS M GR				
70.7	72.7	53		CH	SIS M GR		866106	53	725
72.7	74.7	53		CH	SIS M GR				
74.7	76.7	56	76.7	CH	SIS M GR				
76.7	78.7		78.7	NS					
78.7	81.6	61	81.6	CH	SIS M GR				

999.9

****

SHEAR STRENGTH DESIGN VALUES
Test Type:(Q) Classif :CL
Depth/Ele: 5.8/ -4.2 Water Con: 42.0
LL,PL,PI : 48, 17, 31 Dry Dens : 77.0
Cohesion : 0.091 Saturat : 95.0
Shear Str: 0.00 Frict Ang: .0
Toggles :( )( )( )( )

****

SHEAR STRENGTH DESIGN VALUES
Test Type:(Q) Classif :CH
Depth/Ele: 16.2/ -14.6 Water Con: 55.0
LL,PL,PI : 64, 18, 46 Dry Dens : 67.0
Cohesion : 0.290 Saturat : 97.0

Shear Str: 0.00 Frict Ang: .0
Toggles :( )( )( )( )
****
SHEAR STRENGTH DESIGN VALUES
Test Type:(Q) Classif :CL
Depth/Ele: 24.8/ -23.2 Water Con: 69.0
LL,PL,PI : 95, 25, 70 Dry Dens : 59.0
Cohesion : 0.201 Saturat : 99.0
Shear Str: 0.00 Frict Ang: .0
Toggles :( )( )( )( )
****
SHEAR STRENGTH DESIGN VALUES
Test Type:(Q) Classif :CH
Depth/Ele: 29.6/ -28.0 Water Con: 62.0
LL,PL,PI : 77, 21, 56 Dry Dens : 62.0
Cohesion : 0.141 Saturat : 97.0
Shear Str: 0.00 Frict Ang: .0
Toggles :( )( )( )( )
****
SHEAR STRENGTH DESIGN VALUES
Test Type:(Q) Classif :CH
Depth/Ele: 31.3/ -29.7 Water Con: 49.0
LL,PL,PI : 84, 21, 63 Dry Dens : 71.0
Cohesion : 0.233 Saturat : 95.0
Shear Str: 0.00 Frict Ang: .0
Toggles :( )( )( )( )
****
SHEAR STRENGTH DESIGN VALUES
Test Type:(Q) Classif :CH
Depth/Ele: 53.0/ -51.4 Water Con: 52.0
LL,PL,PI : 68, 22, 46 Dry Dens : 67.0
Cohesion : 0.183 Saturat : 93.0
Shear Str: 0.00 Frict Ang: .0
Toggles :( )( )( )( )
****
SHEAR STRENGTH DESIGN VALUES
Test Type:(Q) Classif :CH
Depth/Ele: 57.1/ -55.5 Water Con: 48.0
LL,PL,PI : 71, 22, 49 Dry Dens : 70.0
Cohesion : 0.362 Saturat : 92.0
Shear Str: 0.00 Frict Ang: .0
Toggles :( )( )( )( )
****
SHEAR STRENGTH DESIGN VALUES
Test Type:(Q) Classif :CH
Depth/Ele: 70.0/ -68.4 Water Con: 55.0
LL,PL,PI : 88, 24, 64 Dry Dens : 67.0
Cohesion : 0.346 Saturat : 96.0
Shear Str: 0.00 Frict Ang: .0
Toggles :( )( )( )( )
SHEAR STRENGTH DESIGN VALUES
Test Type:(C) Classif :CL
Depth/Ele: 8.4/ -6.8 Water Con: 38.50
LL,PL,PI : 56, 39, 17 Dry Dens : 76.30
Cohesion : Saturat : 87.60
Shear Str: Frict Ang:
Norm Str: 2.070, 1.088
Toggles :( )( )( )( )
Test Data:

Pressure	Void Ratio
.120	1.085
.250	1.080
0.490	1.065
0.970	1.040
1.930	0.980
3.850	0.890
7.690	0.785
15.370	0.680
30.730	0.575
0.250	0.630

****

SHEAR STRENGTH DESIGN VALUES

Test Type:(C) Classif :CH

Depth/Ele: 21.1/ -19.5 Water Con: 39.30

LL,PL,PI : 42, 23, 19 Dry Dens : 80.70

Cohesion : Saturat : 95.60

Shear Str: Frict Ang:

Norm Str: 1.090, 1.209

Toggles :( )( )( )( )

Test Data:

Pressure	Void Ratio
.120	1.210
.250	1.190
0.490	1.170
0.970	1.130
1.930	1.050
3.850	0.970
7.690	0.890
15.370	0.810
0.250	0.830

****

SHEAR STRENGTH DESIGN VALUES

Test Type:(C) Classif :CH

Depth/Ele: 40.5/ -38.9 Water Con: 49.10

LL,PL,PI : 70, 50, 20 Dry Dens : 71.90

Cohesion : Saturat : 98.10

Shear Str: Frict Ang:

Norm Str: 1.060, 1.362

Toggles :( )( )( )( )

Test Data:

Pressure	Void Ratio
.120	1.360
.250	1.350
0.490	1.330
0.970	1.300
1.930	1.140
3.850	0.970
0.250	1.020

UNCONFINED COMPRESSION TEST

MYRTLE GROVE
ECOSYSTERM RESTORATION
PROJECT FEASIBILITY STUDY
BOR: MG-6U
5" UNDIST. (03-15)

DATE 24 APR 2003

SAMPLE NUMBER 7-D

TARE NUMBER 109

WET WEIGHT OF SOIL 120.5 gms

DRY WEIGHT OF SOIL 72.5 gms

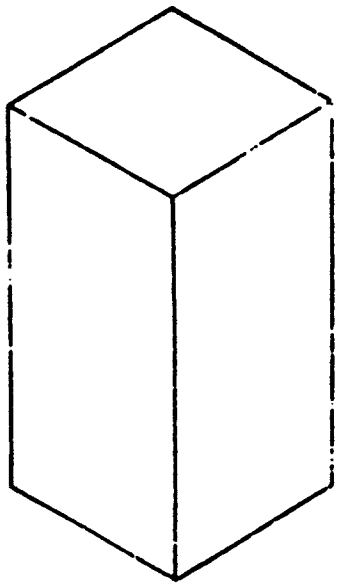
WEIGHT OF WATER 48.0 gms

MOISTURE CONTENT 66.2 %

BULK WET DENSITY 99.3 #/cu ft

MACHINE NUMBER E-210

FAILURE DIAGRAM



☐ LARGE SAMPLE = 1.4^2 X 3.5
DENSITY FACTOR = 0.55511

☐ SMALL SAMPLE = 1.0^2 x 2.5
DENSITY FACTOR = 1.52307

✓ CYLINDRICAL SAMPLE 1.4X3.0
DENSITY FACTOR 0.82452

DIAL READING	LOAD IN POUNDS	PROVING RING DIAL READING 10^{-4} in.	CORRECTED AREA (sq.ft.)	UNIT STRESS #/sq.ft.	UNCONFINED COMPRESSIVE STRENGTH #/sq. ft.	REMARKS
000		0				
025		1.7				
050		2.7				
075		3.5 ✓			160	
100		3.4				
125		3.0				
150		2.8				
175						
200						
225						
250						
275						
300						
325						
350						
375						
400						
425						
450						
475						
500						
525						

Technician R.L./J.M. Computations _____ Checked _____

"Confidential Information: Privileged & Confidential Work Product"

UNCONFINED COMPRESSION TEST

MYRTLE GROVE
ECOSYSTERM RESTORATION
PROJECT FEASIBILITY STUDY
BOR: MG-6U
5" UNDIST. (03-15)

DATE 24 APR 03

SAMPLE NUMBER 8-B

TARE NUMBER 133

WET WEIGHT OF SOIL 125.6 gms

DRY WEIGHT OF SOIL 80.0 gms

WEIGHT OF WATER 45.6 gms

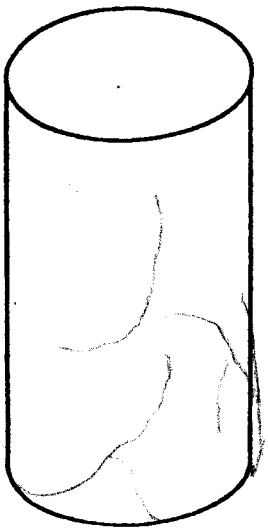
MOISTURE CONTENT 57.0 %

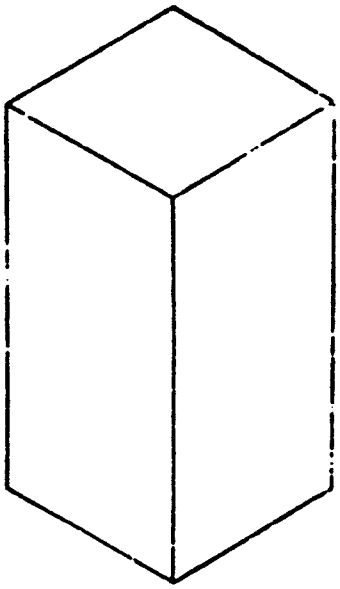
BULK WET DENSITY 103.5 #/cu.ft

MACHINE NUMBER E-210

✓ CYLINDRICAL SAMPLE 1.4X3.0
DENSITY FACTOR 0.82452

FAILURE DIAGRAM





☐ LARGE SAMPLE = 1.4^2 X 3.5
DENSITY FACTOR = 0.55511

☐ SMALL SAMPLE = 1.0^2 x 2.5
DENSITY FACTOR = 1.52307

DIAL READING	LOAD IN POUNDS	PROVING RING DIAL READING 10^{-4} in.	CORRECTED AREA (sq.ft.)	UNIT STRESS #/sq.ft.	UNCONFINED COMPRESSIVE STRENGTH #/sq. ft.	REMARKS
.000		0				
.025		4.9				
.050		7.7				
.075		7.8 ✓			356	
.100		7.3				
.125		6.6				
.150		6.2				
.175						
.200						
.225						
.250						
.275						
.300						
.325						
.350						
.375						
.400						
.425						
.450						
.475						
.500						
.525						

Technician R.L. Jones Computations _____ Checked _____

"Confidential Information: Privileged & Confidential Work Product"

UNCONFINED COMPRESSION TEST

MYRTLE GROVE
ECOSYSTERM RESTORATION
PROJECT FEASIBILITY STUDY
BOR: MG-6U
5" UNDIST. (03-15)

DATE 24 APR 03

SAMPLE NUMBER 12-C

TARE NUMBER 251

WET WEIGHT OF SOIL 135.4 gms

DRY WEIGHT OF SOIL 96.9 gms

WEIGHT OF WATER 38.5 gms

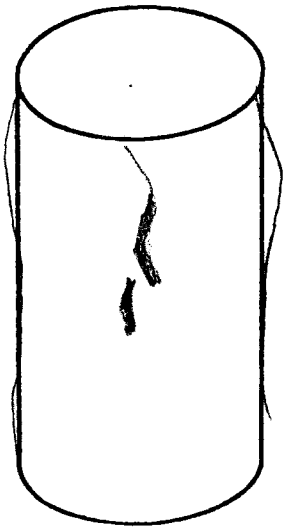
MOISTURE CONTENT 39.7 %

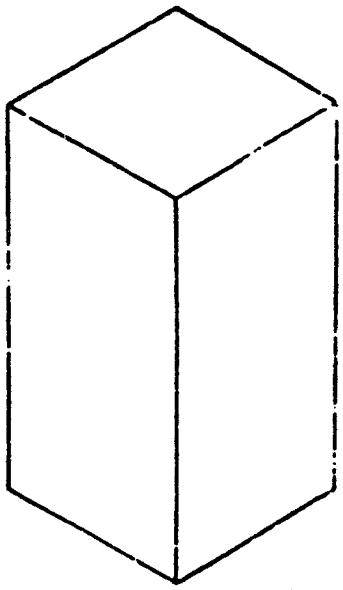
BULK WET DENSITY 111.6 #/cu.ft

MACHINE NUMBER E-210

CYLINDRICAL SAMPLE 1.4X3.0
DENSITY FACTOR 0.82452

FAILURE DIAGRAM





☐ LARGE SAMPLE = 1.4^2 X 3.5
DENSITY FACTOR = 0.55511

☐ SMALL SAMPLE = 1.0^2 x 2.5
DENSITY FACTOR = 1.52307

DIAL READING	LOAD IN POUNDS	PROVING RING DIAL READING 10^{-4} in.	CORRECTED AREA (sq.ft.)	UNIT STRESS #/sq.ft.	UNCONFINED COMPRESSIVE STRENGTH #/sq. ft.	REMARKS
000		0				
025		5.0				
050		8.4				
075		10.1				
100		10.8				
125		11.0 ✓			493	
150		11.0				
175		11.0				
200		10.8				
225						
250						
275						
300						
325						
350						
375						
400						
425						
450						
475						
500						
525						

Technician R.L./5.14.03 Computations _____ Checked _____

"Confidential Information: Privileged & Confidential Work Product"

UNCONFINED COMPRESSION TEST

MYRTLE GROVE
ECOSYSTERM RESTORATION
PROJECT FEASIBILITY STUDY
BOR: MG-6U
5" UNDIST. (03-15)

DATE 24 APR '03

SAMPLE NUMBER 13-B

TARE NUMBER 428

WET WEIGHT OF SOIL 124.2 gms

DRY WEIGHT OF SOIL 77.7 gms

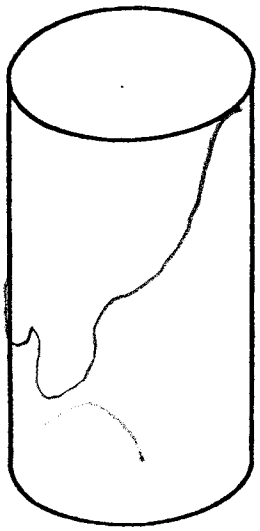
WEIGHT OF WATER 46.5 gms

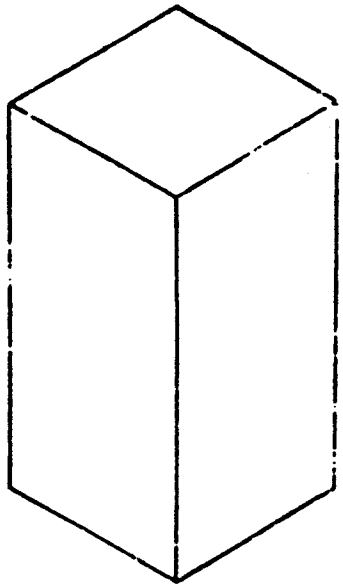
MOISTURE CONTENT 59.9 %

BULK WET DENSITY 102.4 #/cu.ft

MACHINE NUMBER E-210

FAILURE DIAGRAM





☐ LARGE SAMPLE = 1.4^2 X 3.5
DENSITY FACTOR = 0.55511

☐ SMALL SAMPLE = 1.0^2 x 2.5
DENSITY FACTOR = 1.52307

Ⓥ CYLINDRICAL SAMPLE 1.4X3.0
DENSITY FACTOR 0.82452

DIAL READING	LOAD IN POUNDS	PROVING RING DIAL READING 10^{-4} in.	CORRECTED AREA (sq.ft.)	UNIT STRESS #/sq.ft.	UNCONFINED COMPRESSIVE STRENGTH #/sq. ft.	REMARKS
000		0				
025		10.5				
050		15.3 ✓			704	
075		11.6				
100		9.4				
125		7.4				
150						
175						
200						
225						
250						
275						
300						
325						
350						
375						
400						
425						
450						
475						
500						
525						

Technician R.L./TMS Computations _____ Checked _____

"Confidential Information: Privileged & Confidential Work Product"

UNCONFINED COMPRESSION TEST

MYRTLE GROVE
ECOSYSTERM RESTORATION
PROJECT FEASIBILITY STUDY
BOR: MG-6U
5" UNDIST. (03-15)

DATE 24APR2003

SAMPLE NUMBER 14-A

TARE NUMBER 122

WET WEIGHT OF SOIL 129.1 gms

DRY WEIGHT OF SOIL 83.6 gms

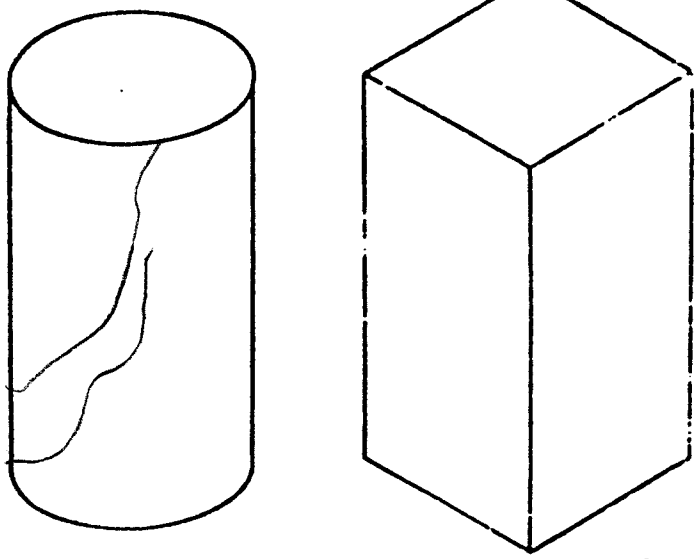
WEIGHT OF WATER 45.5 gms

MOISTURE CONTENT 54.4 %

BULK WET DENSITY 106.4 #/cu ft

MACHINE NUMBER E-210

FAILURE DIAGRAM



☑ CYLINDRICAL SAMPLE 1.4X3.0
DENSITY FACTOR 0.82452

☐ LARGE SAMPLE = 1.4^2 X 3.5
DENSITY FACTOR = 0.55511

☐ SMALL SAMPLE = 1.0^2 x 2.5
DENSITY FACTOR = 1.52307

DIAL READING	LOAD IN POUNDS	PROVING RING DIAL READING 10^{-4} in.	CORRECTED AREA (sq.ft.)	UNIT STRESS #/sq.ft.	UNCONFINED COMPRESSIVE STRENGTH #/sq. ft.	REMARKS
000		0				
025		2.9				
050		6.3				
075		9.9				
100		13.0				
125		14.9				
150		15.7				
175		15.9 ✓			700	
200		15.9				
225		15.7				
250		15.5				
275						
300						
325						
350						
375						
400						
425						
450						
475						
500						
525						

Technician R.L./5.14 Computations _____ Checked _____

"Confidential Information: Privileged & Confidential Work Product"

UNCONFINED COMPRESSION TEST

MYRTLE GROVE
ECOSYSTERM RESTORATION
PROJECT FEASIBILITY STUDY
BOR: MG-6U
5" UNDIST. (03-15)

DATE 24 APR 03

SAMPLE NUMBER 16-A

TARE NUMBER 277

WET WEIGHT OF SOIL 127.1 gms

DRY WEIGHT OF SOIL 84.4 gms

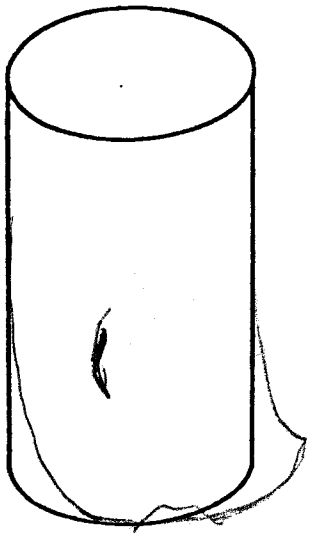
WEIGHT OF WATER 42.7 gms

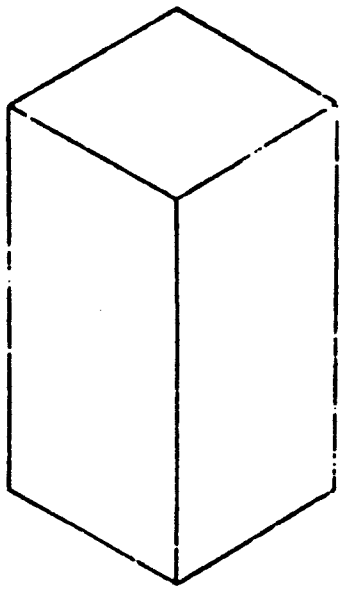
MOISTURE CONTENT 50.6 %

BULK WET DENSITY 104.8 #/cu ft

MACHINE NUMBER E-210

FAILURE DIAGRAM





☑ CYLINDRICAL SAMPLE 1.4X3.0 DENSITY FACTOR 0.82452

☐ LARGE SAMPLE = 1.4^2 X 3.5 DENSITY FACTOR = 0.55511

☐ SMALL SAMPLE = 1.0^2 x 2.5 DENSITY FACTOR = 1.52307

DIAL READING	LOAD IN POUNDS	PROVING RING DIAL READING 10^{-4} in.	CORRECTED AREA (sq.ft.)	UNIT STRESS #/sq.ft.	UNCONFINED COMPRESSIVE STRENGTH #/sq. ft.	REMARKS
000		0				
025		1.6				
050		3.2				
075		5.0				
100		7.1				
125		9.3				
150		11.2				
175		12.5				
200		13.6				
225		14.1				
250		14.4				
275		14.6 ✓			620	
300		14.6				
325		14.5				
350		14.5				
375						
400						
425						
450						
475						
500						
525						

Technician R.L./J.M.C. Computations _____ Checked _____

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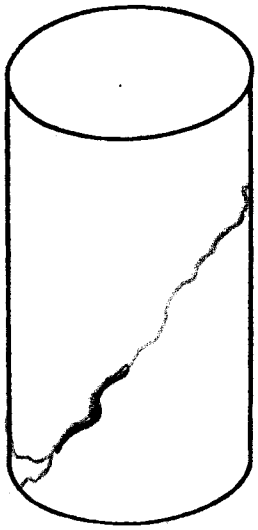
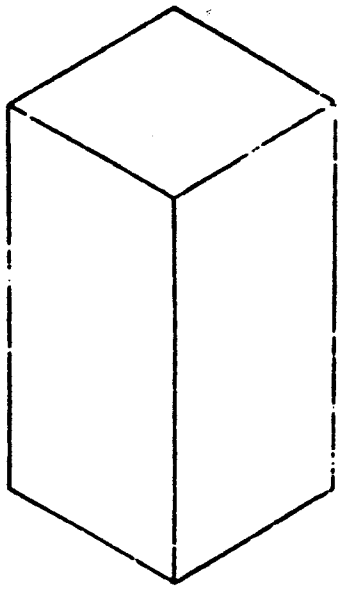
UNCONFINED COMPRESSION TEST

MYRTLE GROVE
ECOSYSTERM RESTORATION
PROJECT FEASIBILITY STUDY
BOR: MG-6U
5" UNDIST. (03-15)

DATE 24 APR '03
SAMPLE NUMBER 17-B
TARE NUMBER 4
WET WEIGHT OF SOIL 124.8 gms
DRY WEIGHT OF SOIL 78.5 gms
WEIGHT OF WATER 46.3 gms
MOISTURE CONTENT 59.0 %
BULK WET DENSITY 102.9 #/cu.ft
MACHINE NUMBER E-210

FAILURE DIAGRAM





☑ CYLINDRICAL SAMPLE 1.4X3.0 DENSITY FACTOR 0.82452

☐ LARGE SAMPLE = 1.4^2 X 3.5 DENSITY FACTOR = 0.55511

☐ SMALL SAMPLE = 1.0^2 x 2.5 DENSITY FACTOR = 1.52307

DIAL READING	LOAD IN POUNDS	PROVING RING DIAL READING 10^{-4} in.	CORRECTED AREA (sq.ft.)	UNIT STRESS #/sq.ft.	UNCONFINED COMPRESSIVE STRENGTH #/sq. ft.	REMARKS
.000		0				
.025		9.3				
.050		14.6 ✓			671	
.075		14.6				
.100		8.4				
.125		6.0				
.150						
.175						
.200						
.225						
.250						
.275						
.300						
.325						
.350						
.375						
.400						
.425						
.450						
.475						
.500						
.525						

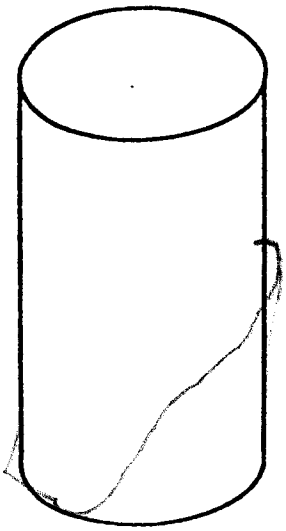
Technician R.L. Computations _____ Checked _____

"Confidential Information: Privileged & Confidential Work Product"

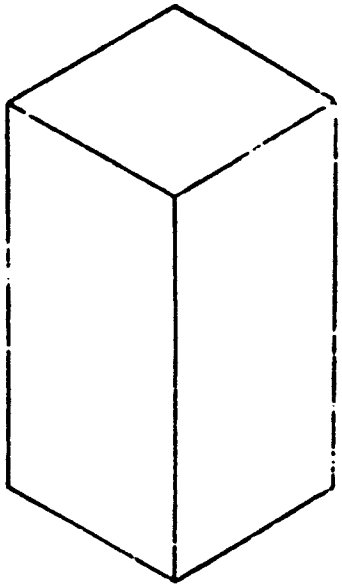
UNCONFINED COMPRESSION TEST

MYRTLE GROVE
ECOSYSTERM RESTORATION
PROJECT FEASIBILITY STUDY
BOR: MG-6U
5" UNDIST. (03-15)

DATE 24 APR '23
SAMPLE NUMBER 18-B
TARE NUMBER 802
WET WEIGHT OF SOIL 125.5 gms
DRY WEIGHT OF SOIL 79.4 gms
WEIGHT OF WATER 46.1 gms
MOISTURE CONTENT 58.1 %
BULK WET DENSITY 103.4 #/cu.ft
MACHINE NUMBER E-210



FAILURE DIAGRAM



(L) CYLINDRICAL SAMPLE 1.4X3.0
DENSITY FACTOR 0.82452

☐ LARGE SAMPLE = 1.4^2 X 3.5
DENSITY FACTOR = 0.55511

☐ SMALL SAMPLE = 1.0^2 x 2.5
DENSITY FACTOR = 1.52307

DIAL READING	LOAD IN POUNDS	PROVING RING DIAL READING 10^{-4} in.	CORRECTED AREA (sq.ft.)	UNIT STRESS #/sq.ft.	UNCONFINED COMPRESSIVE STRENGTH #/sq. ft.	REMARKS
000		0				
025		2.3				
050		3.9				
075		6.7				
100		10.0				
125		13.4				
150		16.2				
175		18.1				
200		18.7 ✓			816	
225		16.6				
250		14.3				
275		12.9				
300						
325						
350						
375						
400						
425						
450						
475						
500						
525						

Technician R.L./J.M. Computations _____ Checked _____

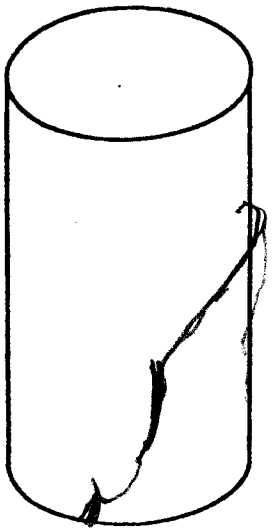
"Confidential Information: Privileged & Confidential Work Product"

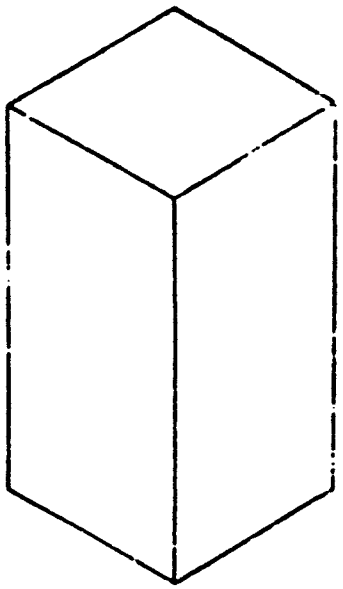
UNCONFINED COMPRESSION TEST

MYRTLE GROVE
ECOSYSTERM RESTORATION
PROJECT FEASIBILITY STUDY
BOR: MG-6U
5" UNDIST. (03-15)

DATE 24 APR '03
SAMPLE NUMBER 19-B
TARE NUMBER 241
WET WEIGHT OF SOIL 128.3 gms
DRY WEIGHT OF SOIL 83.7 gms
WEIGHT OF WATER 44.6 gms
MOISTURE CONTENT 53.3 %
BULK WET DENSITY 105.7 #/cu.ft
MACHINE NUMBER E-210

FAILURE DIAGRAM





☐ LARGE SAMPLE = 1.4^2 X 3.5
DENSITY FACTOR = 0.55511

☑ CYLINDRICAL SAMPLE 1.4X3.0
DENSITY FACTOR 0.82452

☐ SMALL SAMPLE = 1.0^2 x 2.5
DENSITY FACTOR = 1.52307

DIAL READING	LOAD IN POUNDS	PROVING RING DIAL READING 10^{-4} in.	CORRECTED AREA (sq.ft.)	UNIT STRESS #/sq.ft.	UNCONFINED COMPRESSIVE STRENGTH #/sq. ft.	REMARKS
000		0				
025		10.7				
050		17.4				
075		19.0 ✓			866	
100		17.1				
125		14.2				
150		13.1				
175						
200						
225						
250						
275						
300						
325						
350						
375						
400						
425						
450						
475						
500						
525						

Technician J.M.S/R.L Computations _____ Checked _____

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LIQUID AND PLASTIC LIMIT TESTS

For use of this form, see EM 1110-2-1906.

DATE 24 Apr '03

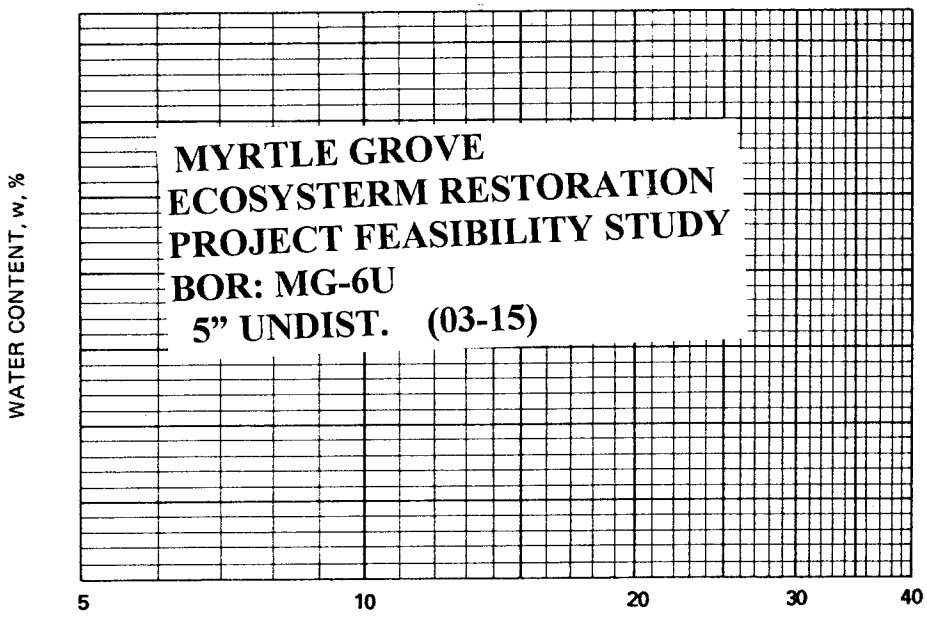
PROJECT

BORING NO. MG-6U SAMPLE NO. 2

LIQUID LIMIT

	RUN NO.	1	2	3	4	5	6
	TARE NO.	232	225				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	26.64	25.49				
	TARE PLUS DRY SOIL	23.42	22.32				
	WATER W_w	3.22	3.17				
	TARE	15.54	14.73				
	DRY SOIL W_s	7.88	7.59				
	WATER CONTENT, % w	40.86	41.77				
	NUMBER OF BLOWS	26.00	26.00				

CUP No. 82



LL 42

PL 21

PI 21

Symbol from plasticity chart CL-4

PLASTIC LIMIT

	RUN NO.	1	2	3	4	5	NATURAL WATER CONTENT
	TARE NO.	40	59				
WEIGHT IN GRAMS	TARE PLUS WET SOIL	22.05	21.31				
	TARE PLUS DRY SOIL	19.99	19.45				
	WATER W_w	2.06	1.86				
	TARE	10.13	10.72				
	DRY SOIL W_s	9.86	8.73				
	WATER CONTENT, % w	20.89	21.31				
	PLASTIC LIMIT	21	21				

REMARKS

TECHNICIAN MEB COMPUTED BY MEB CHECKED BY

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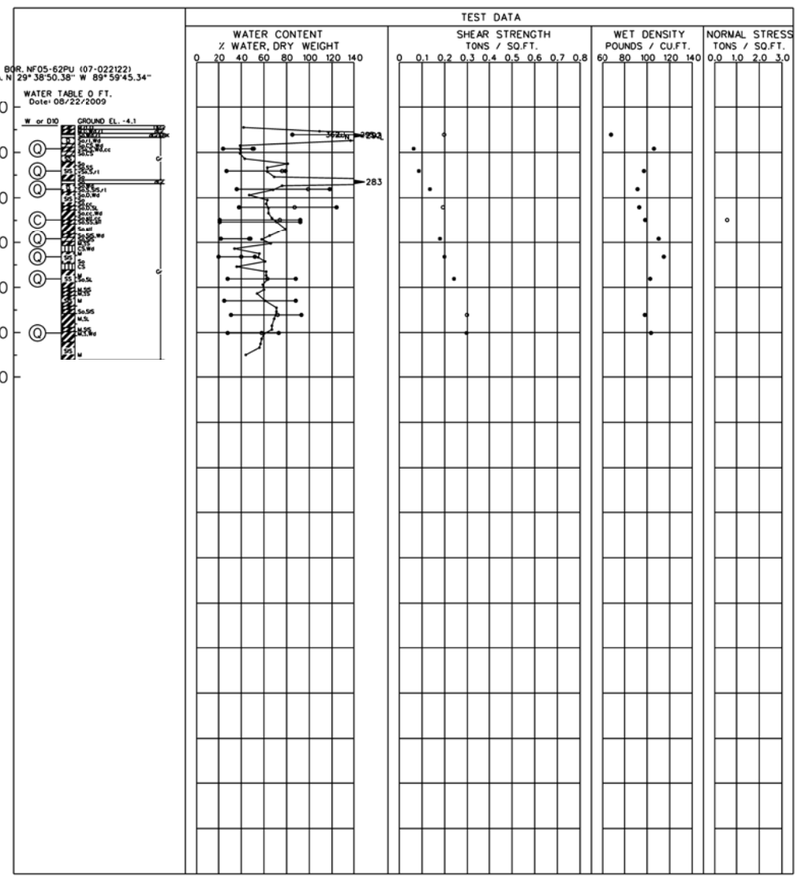
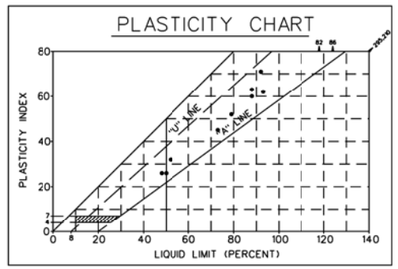
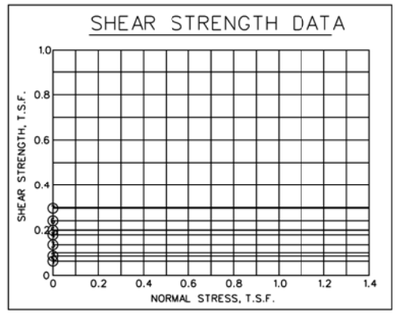






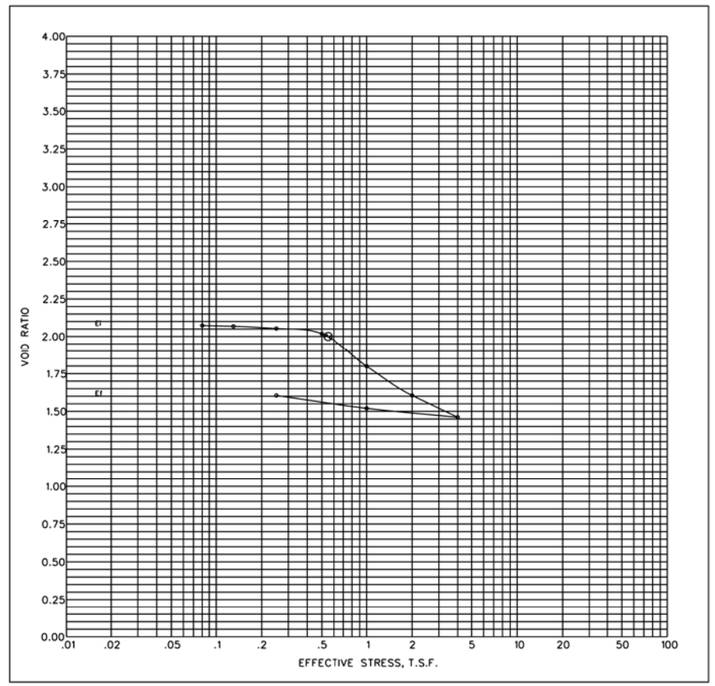
NOTES

- ○ - (UC) UNCONFINED COMPRESSION TEST
- ■ - (Q) UNCONSOLIDATED - UNDRAINED TRIAXIAL SHEAR TEST
- ▲ - (R) CONSOLIDATED - UNDRAINED TRIAXIAL SHEAR TEST
- ⊡ - (S) CONSOLIDATED - DRAINED DIRECT SHEAR TEST
- ω_P ω_N ω_L ATTERBERG LIMITS

BORING WAS TAKEN WITH A 5 INCH DIAMETER STEEL TUBE PISTON TYPE SAMPLER.
FOR SOIL BORING LEGEND SEE PLATE A.
FOR LOCATION OF BORINGS SEE PLATE
FOR DETAILED TEST DATA SEE

TABULAR TEST DATA

ENVELOPE NO.	EL.	TYPE	STRENGTH Φ	STRENGTH c - TSF	CLASS
1	-9.2	Q	0.0	0.063	CH
2	-14.1	Q	0.0	0.086	CH
3	-18.1	Q	0.0	0.135	CH
4	-29.2	Q	0.0	0.179	CL
5	-33.2	Q	0.0	0.199	CH
6	-38.1	Q	0.0	0.241	CH
7	-50.1	Q	0.0	0.296	CH
8	-24.9	C	0.0	0.000	CH



US ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT

US ARMY ENGINEER DISTRICT CORPS OF ENGINEERS MISSISSIPPI VALLEY DIVISION

SHEET IDENTIFIBATION NUMBER

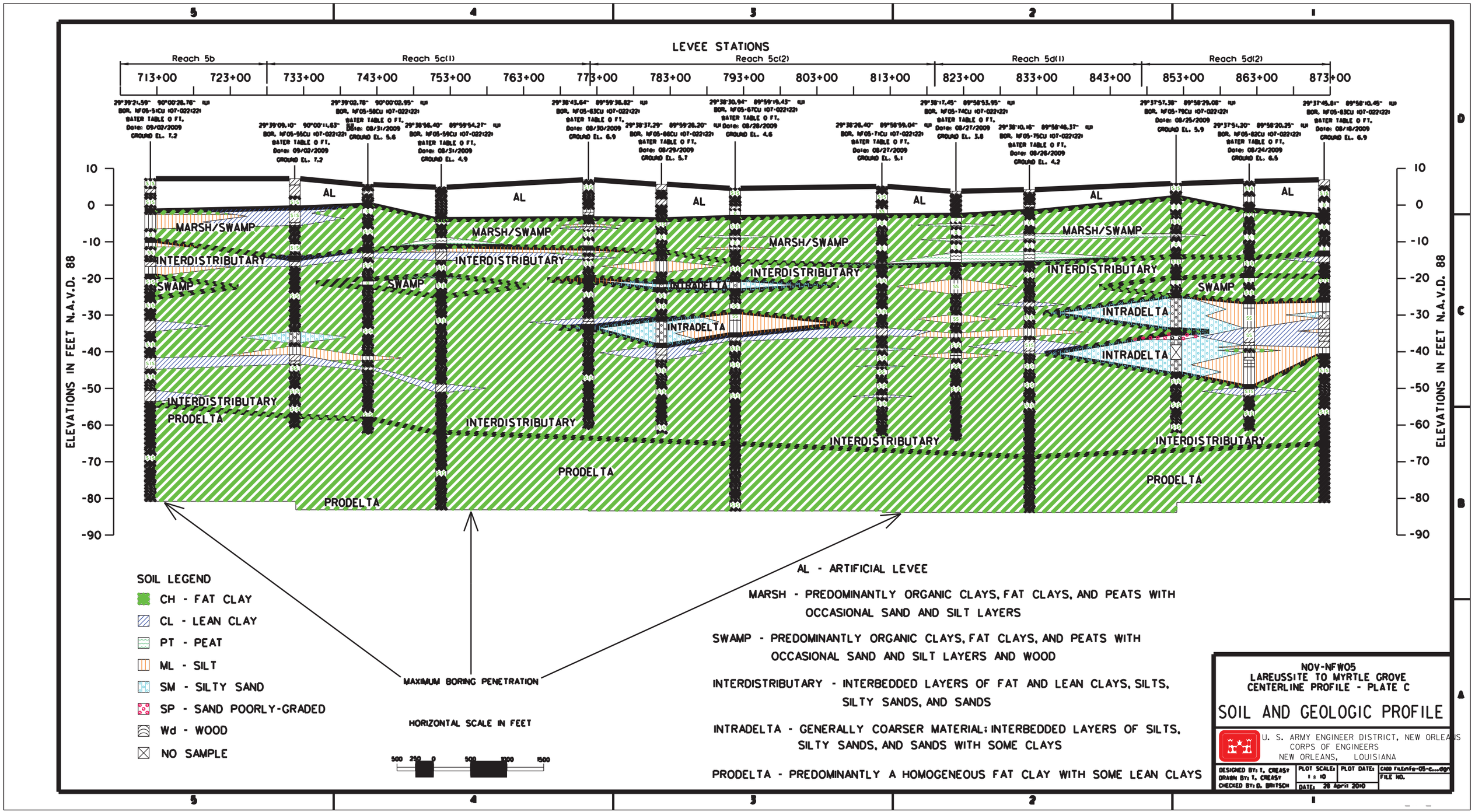
"Confidential Information: Privileged & Confidential Work Product"

GeoEngineers

"Confidential Information: Privileged & Confidential Work Product"

APPENDIX C
Back Levee Subsurface Information

"Confidential Information: Privileged & Confidential Work Product"



"Confidential Information: Privileged & Confidential Work Product"

BOR. NF05-63CU (07-022122)
STA. N 29° 38'43.64" W 89° 59'36.82"

WATER TABLE 0 FT.
Date: 08/30/2009

W or D10

GROUND EL. 6.9

ELEVATIONS IN FEET - N.A.V.D.

10 0 -10 -20 -30 -40 -50 -60 -70

TEST DATA

WATER CONTENT
% WATER, DRY WEIGHT
0 20 40 60 80 100 120 140

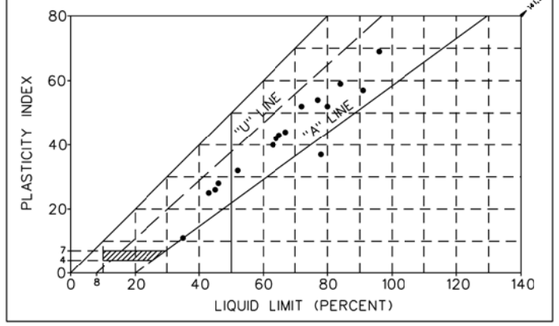
141 ω_L

SHEAR STRENGTH
TONS / SQ.FT.
0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8

WET DENSITY
POUNDS / CU.FT.
60 80 100 120 140

NORMAL STRESS
TONS / SQ.FT.
0.0 1.0 2.0 3.0

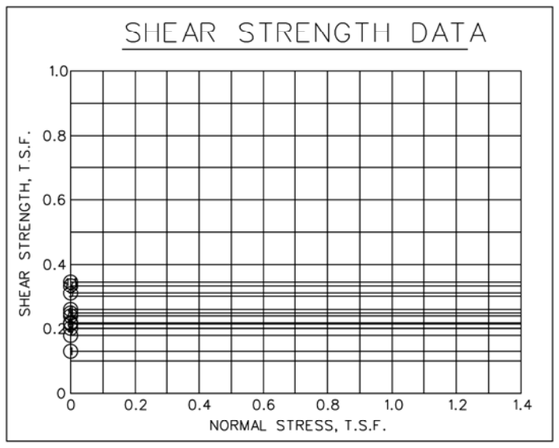
PLASTICITY CHART



TABULAR TEST DATA

ENVELOPE NO.	ENVELOPE EL.	TYPE	STRENGTH Φ	STRENGTH c - TSF	CLASS
1	-2.2	0	0.0	0.130	CL
2	-4.0	0	0.0	0.201	CH
3	-6.2	0	0.0	0.239	CL
4	-10.2	0	0.0	0.259	CH
5	-14.2	0	0.0	0.218	CL
6	-22.2	0	0.0	0.214	CH
7	-28.0	0	0.0	0.179	CH
8	-32.0	0	0.0	0.248	CL
9	-42.2	0	0.0	0.310	CH
10	-50.2	0	0.0	0.334	CH
11	-59.1	0	0.0	0.346	CH

SHEAR STRENGTH DATA



NOTES

- ○ - (UC) UNCONFINED COMPRESSION TEST
- ■ - (Q) UNCONSOLIDATED - UNDRAINED TRIAXIAL SHEAR TEST
- ▲ - (R) CONSOLIDATED - UNDRAINED TRIAXIAL SHEAR TEST
- ⊡ - (S) CONSOLIDATED - DRAINED DIRECT SHEAR TEST

ω_P ω_N ω_L ATTERBERG LIMITS

BORING WAS TAKEN WITH A 5 INCH DIAMETER STEEL TUBE PISTON TYPE SAMPLER.
FOR SOIL BORING LEGEND SEE PLATE A.
FOR LOCATION OF BORINGS SEE PLATE
FOR DETAILED TEST DATA SEE

US ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT

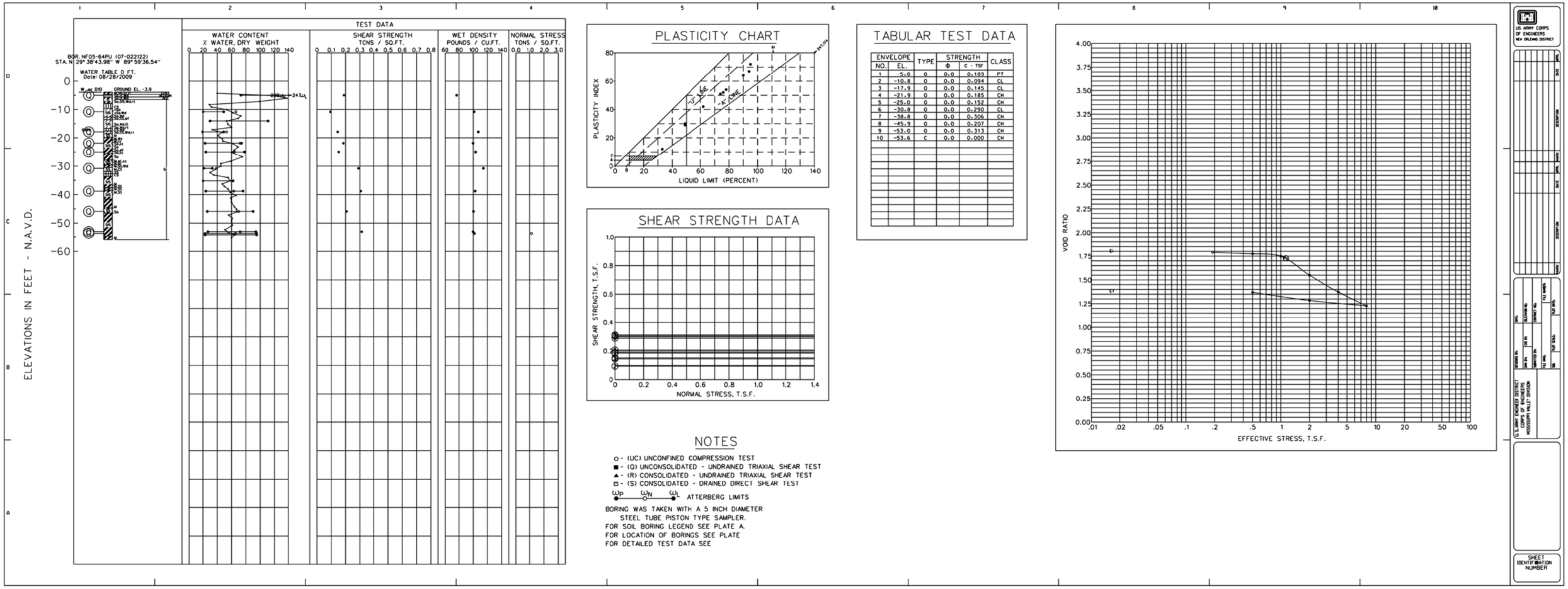
MARK | DESCRIPTION | DATE | APPR.

DESIGNED BY: | DATE: | FILE NUMBER:
DWN BY: | CHD BY: | SOLICITATION NO.:
SUBMITTED BY: | CONTRACT NO.:
FILE NAME: | PLOT SCALE: | PLOT DATE:
SEC: | PLOT SCALE:

(U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS MISSISSIPPI VALLEY DIVISION)

SHEET IDENTIFICATION NUMBER

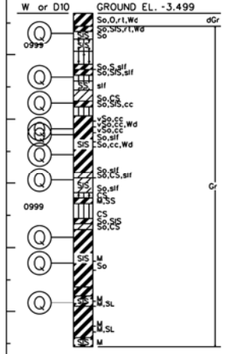
"Confidential Information: Privileged & Confidential Work Product"



“Confidential Information: Privileged & Confidential Work Product”

BOR. NF05-65PCU (07-022122)
STA. N 29° 38'45.18" W 89° 59'35.48"

WATER TABLE 0 FT.
Date: 11/17/2009



ELEVATIONS IN FEET - N.A.V.D.

0 −10 −20 −30 −40 −50 −60

TEST DATA

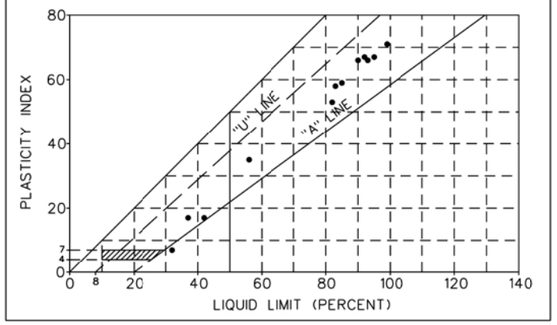
WATER CONTENT
% WATER, DRY WEIGHT
0 20 40 60 80 100 120 140

SHEAR STRENGTH
TONS / SQ.FT.
0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8

WET DENSITY
POUNDS / CU.FT.
60 80 100 120 140

NORMAL STRESS
TONS / SQ.FT.
0.0 1.0 2.0 3.0

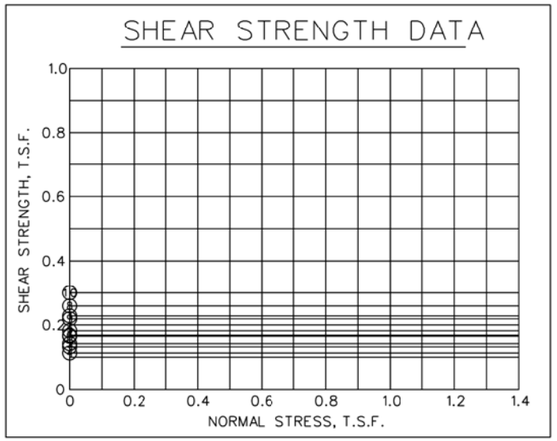
PLASTICITY CHART



TABULAR TEST DATA

ENVELOPE NO.	ENVELOPE EL.	TYPE	STRENGTH Φ	STRENGTH c - TSF	CLASS
1	-6.6	Q	0.0	0.228	CL
2	-13.5	Q	0.0	0.182	ML
3	-17.5	Q	0.0	0.132	CH
4	-21.5	Q	0.0	0.113	CH
5	-22.4	Q	0.0	0.142	CH
6	-25.5	Q	0.0	0.165	CH
7	-29.5	Q	0.0	0.168	CL
8	-38.4	Q	0.0	0.259	CH
9	-42.4	Q	0.0	0.219	CH
10	-48.6	Q	0.0	0.300	CH

SHEAR STRENGTH DATA



NOTES

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- ▲ - (R) CONSOLIDATED - UNDRAINED TRIAXIAL SHEAR TEST
- ⊡ - (S) CONSOLIDATED - DRAINED DIRECT SHEAR TEST

ω_P ω_N ω_L ATTERBERG LIMITS

BORING WAS TAKEN WITH A 5 INCH DIAMETER STEEL TUBE PISTON TYPE SAMPLER.
FOR SOIL BORING LEGEND SEE PLATE A.
FOR LOCATION OF BORINGS SEE PLATE
FOR DETAILED TEST DATA SEE

US ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
MISSISSIPPI VALLEY DIVISION

DESIGNED BY: DATE:
DRAWN BY: CHECKED BY:
SUBMITTED BY: CONTRACT NO.:
FILE NAME: SCALE: PLOT SCALE: PLOT DATE:

SHEET IDENTIFICATION NUMBER

“Confidential Information: Privileged & Confidential Work Product”

BOR. NF05-66CU (07-022122)
STA. N 29° 38' 37.29" W 89° 59' 28.20"

WATER TABLE 0 FT.
Date: 08/29/2009

ELEVATIONS IN FEET - N.A.V.D.

TEST DATA

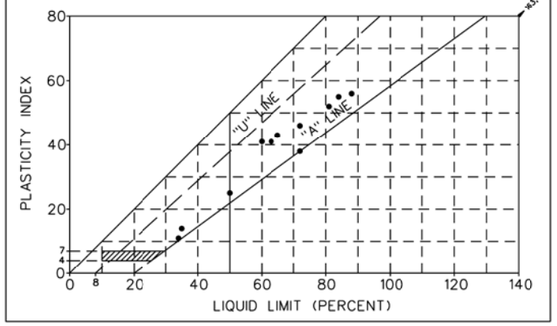
WATER CONTENT
% WATER, DRY WEIGHT

SHEAR STRENGTH
TONS / SQ.FT.

WET DENSITY
POUNDS / CU.FT.

NORMAL STRESS
TONS / SQ.FT.

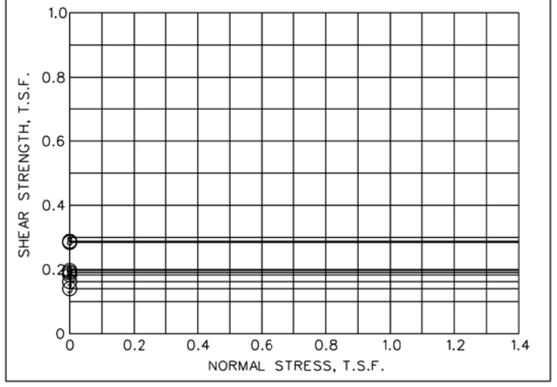
PLASTICITY CHART



TABULAR TEST DATA

ENVELOPE NO.	ENVELOPE EL.	TYPE	STRENGTH Φ	STRENGTH c - TSF	CLASS
1	-4.3	0	0.0	0.162	CH
2	-8.3	0	0.0	0.183	CH
3	-12.3	0	0.0	0.140	CH
4	-19.4	0	0.0	0.190	CH
5	-24.3	0	0.0	0.191	CH
6	-29.2	0	0.0	0.197	CH
7	-40.3	0	0.0	0.284	CL
8	-47.4	0	0.0	0.288	CH

SHEAR STRENGTH DATA



NOTES

- ○ - (UC) UNCONFINED COMPRESSION TEST
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- ▲ - (R) CONSOLIDATED - UNDRAINED TRIAXIAL SHEAR TEST
- ⊡ - (S) CONSOLIDATED - DRAINED DIRECT SHEAR TEST
- ω_P ω_N ω_L ATTERBERG LIMITS

BORING WAS TAKEN WITH A 5 INCH DIAMETER STEEL TUBE PISTON TYPE SAMPLER.
FOR SOIL BORING LEGEND SEE PLATE A.
FOR LOCATION OF BORINGS SEE PLATE
FOR DETAILED TEST DATA SEE

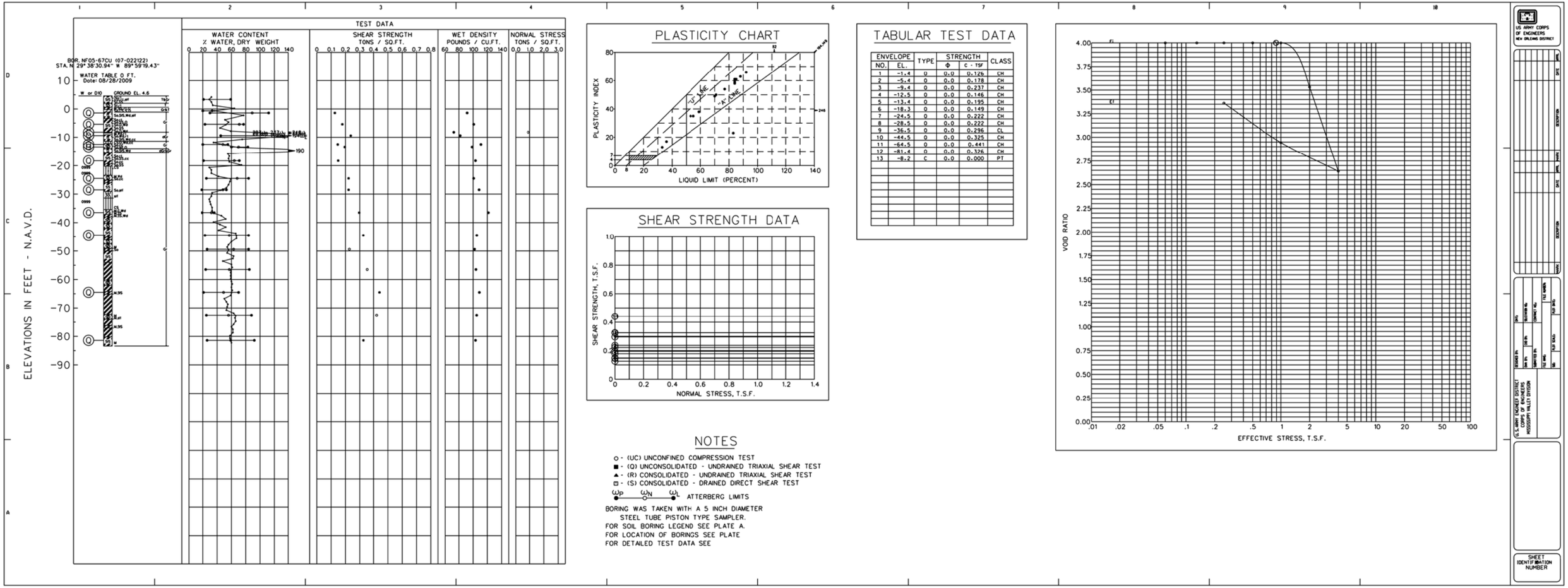
US ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT

(U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS MISSISSIPPI VALLEY DIVISION)

DESIGNED BY: DATE:
DRAWN BY: CHKD BY:
SUBMITTED BY: FILE NAME:
SUBMITTED BY: PLOT SCALE:

SHEET IDENTIFICATION NUMBER

"Confidential Information: Privileged & Confidential Work Product"

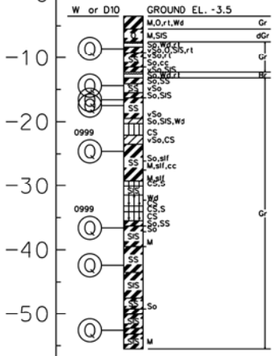


“Confidential Information: Privileged & Confidential Work Product”

BOR. NF05-68PU (07-022122)
STA. N 29° 38'31.28" W 89° 59'19.21"

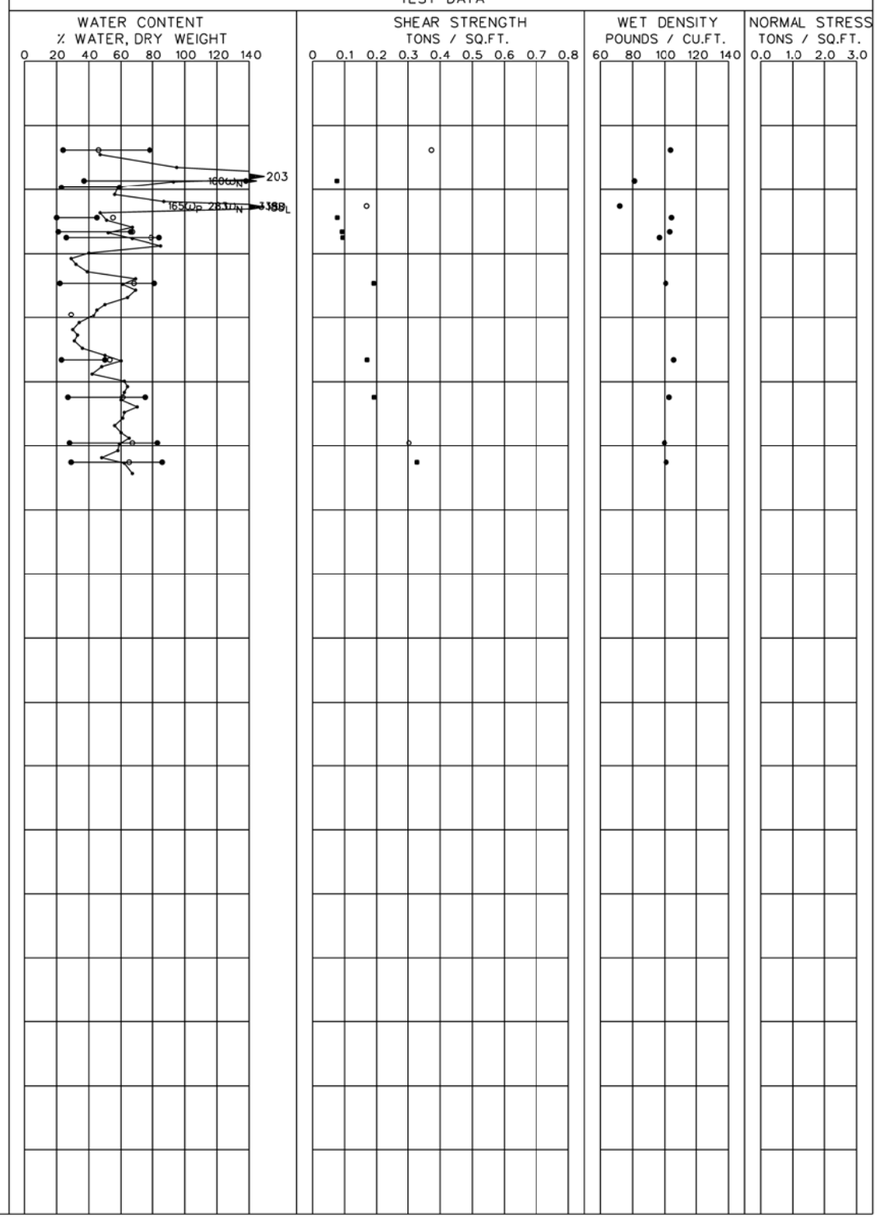
WATER TABLE 0 FT.
Date: 08/27/2009

W or D10 | GROUND EL. -3.5

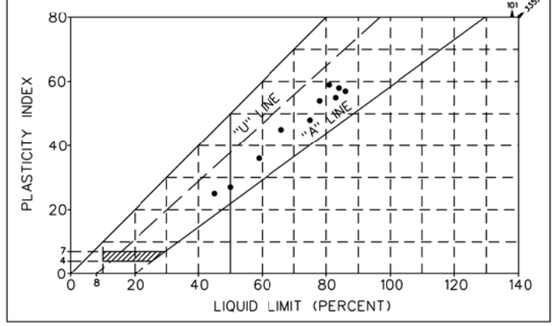


ELEVATIONS IN FEET - N.A.V.D.

TEST DATA



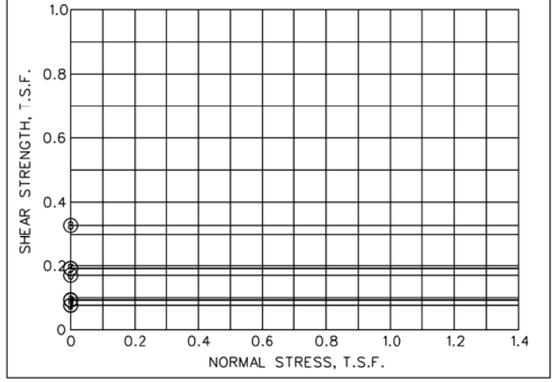
PLASTICITY CHART



TABULAR TEST DATA

ENVELOPE NO.	ENVELOPE EL.	TYPE	STRENGTH Φ	STRENGTH C - TSF	CLASS
1	-8.6	Q	0.0	0.076	CH
2	-14.4	Q	0.0	0.077	CL
3	-16.6	Q	0.0	0.092	CH
4	-17.5	Q	0.0	0.094	CH
5	-24.6	Q	0.0	0.191	CH
6	-36.6	Q	0.0	0.170	CH
7	-42.4	Q	0.0	0.192	CH
8	-52.6	Q	0.0	0.328	CH

SHEAR STRENGTH DATA



NOTES

- ○ - (UC) UNCONFINED COMPRESSION TEST
- ■ - (Q) UNCONSOLIDATED - UNDRAINED TRIAXIAL SHEAR TEST
- ▲ - (R) CONSOLIDATED - UNDRAINED TRIAXIAL SHEAR TEST
- ⊡ - (S) CONSOLIDATED - DRAINED DIRECT SHEAR TEST
- ω_P ω_N ω_L ATTERBERG LIMITS

BORING WAS TAKEN WITH A 5 INCH DIAMETER STEEL TUBE PISTON TYPE SAMPLER.
FOR SOIL BORING LEGEND SEE PLATE A.
FOR LOCATION OF BORINGS SEE PLATE
FOR DETAILED TEST DATA SEE

US ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT

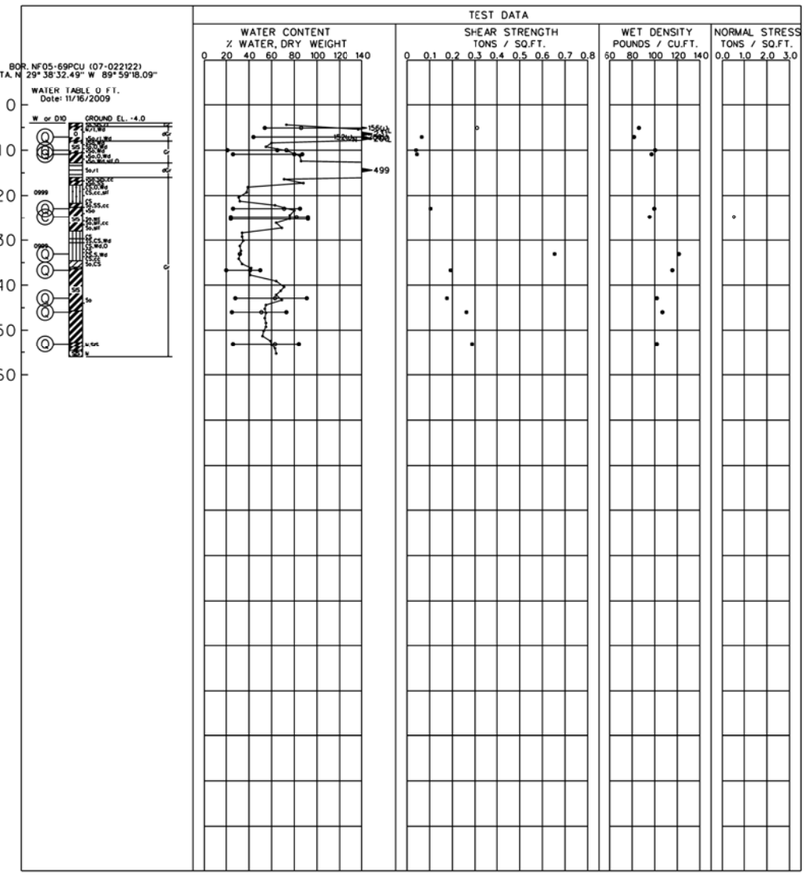
APPR. | DATE | DESCRIPTION | MARK

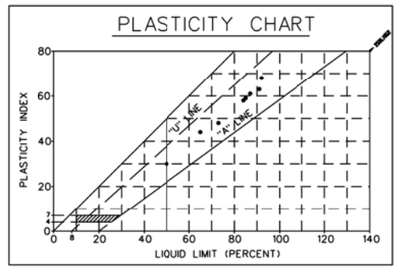
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
MISSISSIPPI VALLEY DIVISION

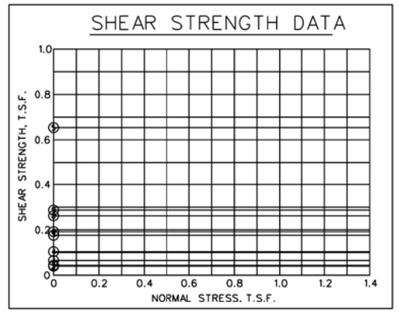
DESIGNED BY: | DATE: | FILE NUMBER:
DRAWN BY: | CHECKED BY: | CONTRACT NO.: | PLOT DATE:
CHECKED BY: | SUBMITTED BY: | FILE NAME: | PLOT SCALE:

SHEET IDENTIFICATION NUMBER

“Confidential Information: Privileged & Confidential Work Product”







NOTES

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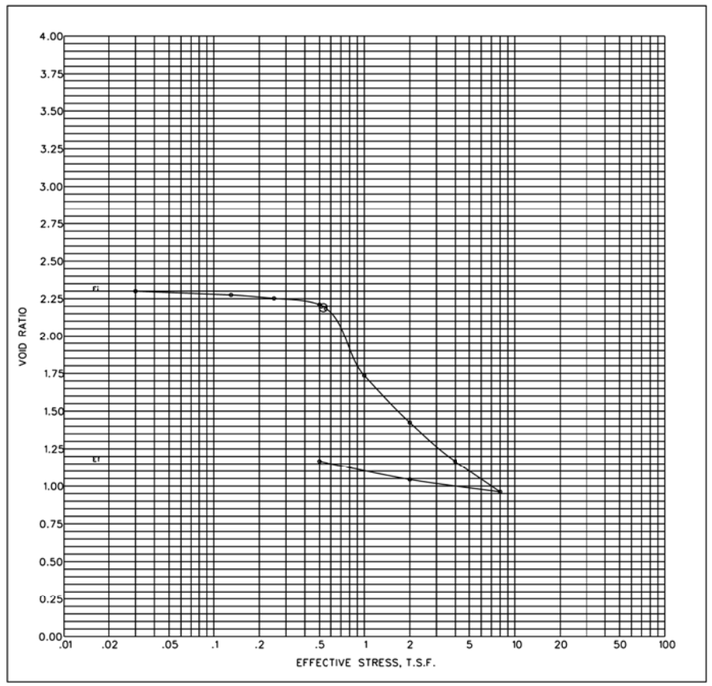
FOR SOIL BORING LEGEND SEE PLATE A.
FOR LOCATION OF BORINGS SEE PLATE
FOR DETAILED TEST DATA SEE

TABULAR TEST DATA

ENVELOPE NO.	EL.	TYPE	STRENGTH Φ	STRENGTH c - TSF	CLASS
1	-7.1	Q	0.0	0.065	CH
2	-10.0	Q	0.0	0.040	CH
3	-10.9	Q	0.0	0.044	CH
4	-22.9	Q	0.0	0.104	CH
5	-33.1	Q	0.0	0.654	ML
6	-36.7	Q	0.0	0.192	CH
7	-42.9	Q	0.0	0.176	CH
8	-46.0	Q	0.0	0.262	CH
9	-53.1	Q	0.0	0.287	CH
10	-24.8	C	0.0	0.000	CH



US ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
MISSISSIPPI VALLEY DIVISION

SHEET IDENTIFICATION NUMBER

"Confidential Information: Privileged & Confidential Work Product"

GeoEngineers

"Confidential Information: Privileged & Confidential Work Product"

SUMMARY OF LABORATORY TEST RESULTS

Project: New Orleans To Venice Plaquemines Parish, La Assigned By: _____

Project Number: 07-022122
Boring: NF05-62PU

Current Date: 3/31/2010

Sample Number	Depth	Visual Classification	USCS	E(f)	W%	Dry Dens (pcf)	Wet Dens (pcf)	Sat %	Shear Test Type	Angle	Cohesion (psf)	Unconf. Comp. Str.	LL	PL	PI	Torvane (tsf)	Other Tests
1A	0.0	M T & GR CH2 W/ RT, O	CH2		42												
1B	0.8	M DGR CHOA W/ WD, RT	CHOA		109												
1C	1.7	SO DGR & BK PT W/ WD, RT	PT	11	362	15	68	95	UC	-	394	789	295	85	210	0.22	OC=49.3%
1D	2.6	SO GR CHOA W/ RT, WD	CHOA		137												
2A	4.0	SO GR CL6 W/ LYS & ARS CH, WD	CL6		39												
2B	4.8	VSO GR CH2 W/ ARS SM, WD, CC	CH2		51	70	106	99	UU	0	126		50	24	26	0.10	
2C	5.7	SO GR CL6 W/ LNS & LYS CH	CL6		39												
2D	6.6	SO GR CH2 W/ LNS & LYS SM	CH2		43												
3A	8.0	SO GR CH4 W/ LNS & LYS ML	CH4		81												
3B	8.8	SO GR CH4 W/ LNS & LYS ML, LYS SM	CH4		63												
3C	9.7	VSO GR CH4 W/ ARS SM, ARS ML, RT	CH4		76	55	97	99	UU	0	172		79	27	52	0.15	
3D	10.6	SO GR CH4 W/ LNS & LYS ML	CH4		69												
4A	12.0	SO DGR PT	PT		283												
4B	12.8	SO GR CHOA W/ WD	CHOA		76												
4C	13.7	SO GR CHOA W/ ARS SM, ARS ML, RT	CHOA		99	46	91	100	UU	0	270		118	36	82	0.20	
4D	14.6	SO GR CH4 W/ LNS & LYS ML, O, WD	CH4		47												
5A	16.0	SO GR CH4 W/ LNS & LYS ML	CH4		63												
5B	16.8	SO GR CH4 W/ LNS & LYS ML, CC	CH4		62												
5C	17.7	SO GR CHOA W/ SL	CHOA	4	87	50	93	97	UC	-	385	770	124	38	86	0.27	
5D	18.6	SO GR CH4 W/ CC, WD	CH4		64												
6A	20.0	SO GR CH4 W/ SIF, CC	CH4		67												
6B	20.8	SO GR CH4 W/ LNS & LYS SM, SIF	CH4		74	56	97	98					92	21	71		CON, GS, -200, MV=340psf
6C	21.7	SO GR CH4 W/ SIF	CH4		79												
7A	24.0	SO GR CH4 W/ LNS & LYS ML, WD	CH4		65												
7B	24.8	SO GR CL6 W/ LNS & LYS ML	CL6		47	75	110	100	UU	0	358		48	22	26	0.22	
7C	25.7	M GR CH4 W/ LNS & LYS SM	CH4		66												
7D	26.6	GR ML W/ LYS CH, WD	ML		34												
8A	28.0	M GR CH4 W/ LNS & LYS ML	CH4		56												
8B	28.8	SO GR CH2 W/ LNS & LYS ML	CH2		40	82	114	100	UU	0	398		52	20	32	0.24	
8C	29.7	SO GR CH3 W/ LNS & LYS ML	CH3		61												
8D	30.6	GR ML W/ ARS CH	ML		36								NP	NP	NP		
9A	32.0	M GR CH4 W/ LNS & ARS SM	CH4		62												
9B	32.8	M GR CH4 W/ LNS & ARS SM	CH4		62												
9C	33.7	SO GR CH4 W/ LNS & ARS SM, SL	CH4		63	63	102	100	UU	0	482		88	28	60	0.25	
9D	34.6	M GR CH4 W/ LNS & ARS SM	CH4		59												

Remarks:
FFEB JV, LLC

Checked By: MKA MS LED
File Name: 05-62PU.xls 3/31/11

"Confidential Information: Privileged & Confidential Work Product"

SUMMARY OF LABORATORY TEST RESULTS

Project: New Orleans To Venice Plaquemines Parish, La Assigned By: _____

Project Number: 07-022122
Boring: NF05-62PU

Current Date: 3/31/2010

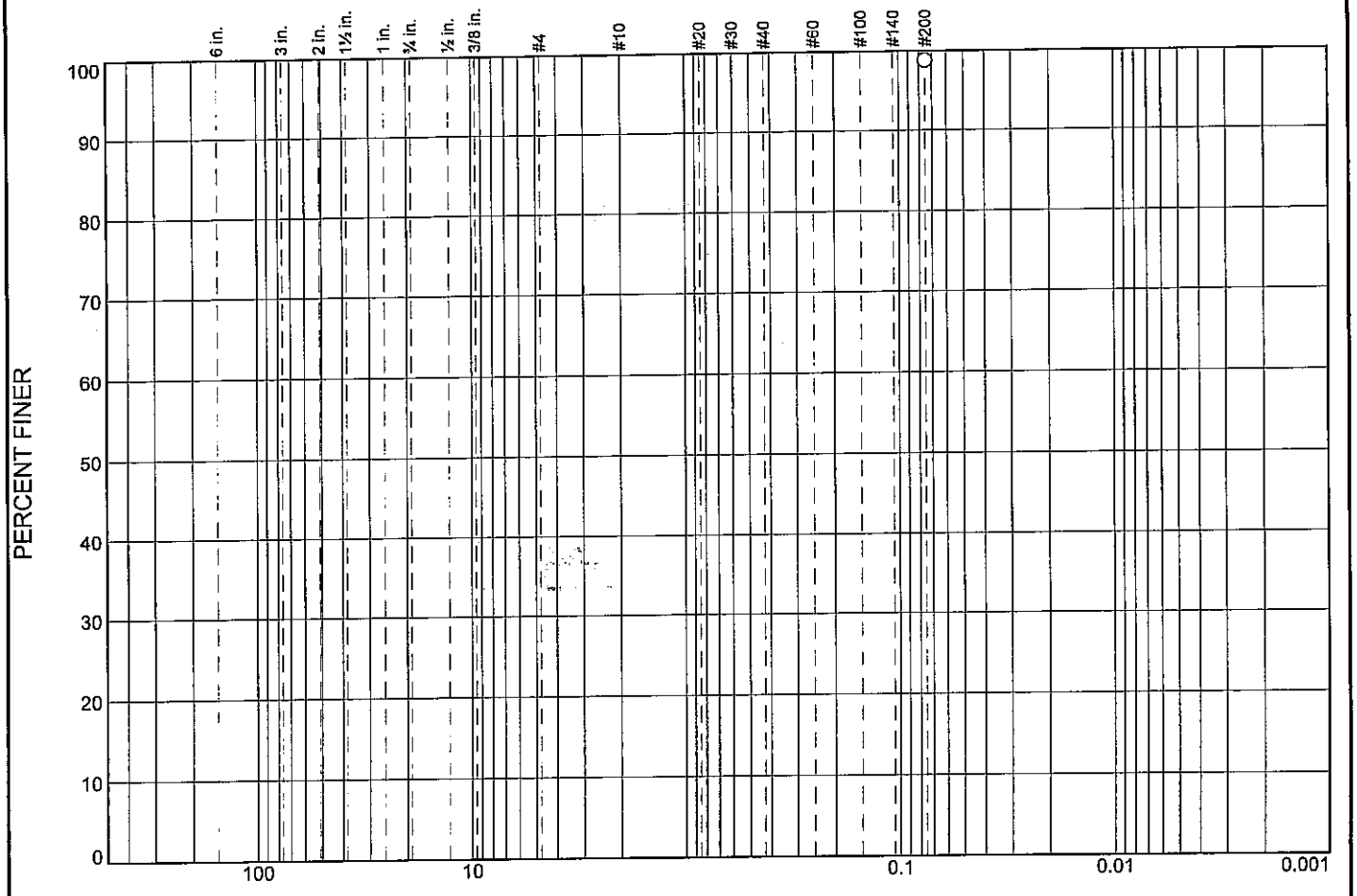
Sample Number	Depth	Visual Classification	USCS	E(f)	W%	Dry Dens (pcf)	Wet Dens (pcf)	Sat %	Shear Test Type	Angle	Cohesion (psf)	Unconf. Comp. Str.	LL	PL	PI	Torvane (tsf)	Other Tests
10A	36.0	M GR CH4 W/ LNS ML	CH4		60												
10B	36.8	M GR CH4 W/ LYS SM	CH4		54												
10C	37.7	M GR CH4 W/ LYS ML	CH4		61								88	25	63		MV=569psf
11A	40.0	SO GR CH4	CH4		71												
11B	40.8	SO GR CH4 W/ LNS ML	CH4		71												
11C	41.7	M GR CH4 W/ SL	CH4	3	72	57	98	98	UC	-	596	1191	93	31	62	0.28	
12A	44.0	M GR CH4	CH4		67												
12B	44.8	M GR CH4 W/ LNS ML	CH4		67												
12C	45.7	M GR CH4 W/ ARS SM, WD	CH4		58	65	103	98	UU	0	592		73	28	45	0.30	
12D	46.6	M GR CH4	CH4		58												
13A	48.0	M GR CH4 W/ LNS ML	CH4		57												
13B	48.8	M GR CH4 W/ LNS & LYS ML	CH4		56												
13C	49.7	M GR CH4 W/ LNS & LYS ML	CH4		44												

Remarks:
FFEB JV, LLC

Checked By: NKA | WLS | LED
File Name: 05-62PU.xls

"Confidential Information: Privileged & Confidential Work Product"

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○							98.8	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○	92	21								

Material Description	USCS	AASHTO
○ SO GR CH4 W/ LNS & LYS SM, SIF	CH4	

Project No. 07-022122 **Client:** US Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

Jefferson Parish, La

○ **Source of Sample:** NF05-62PU **Depth:** 20.8' **Sample Number:** 6B

Remarks:

FFEBJV, LLC

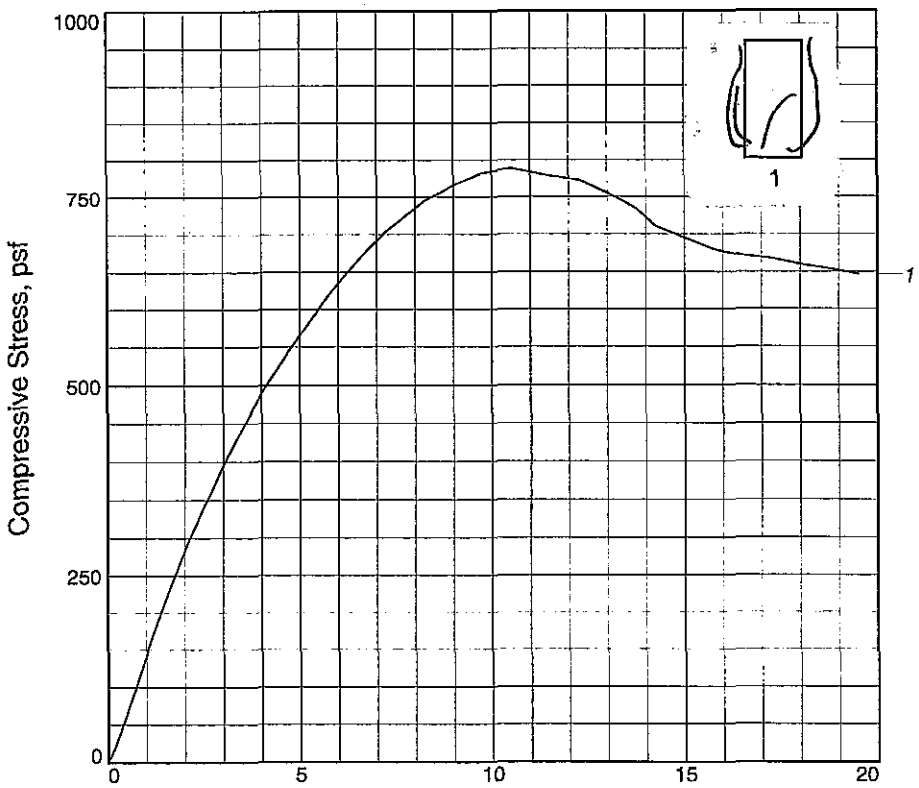
St Rose, LA

Figure

"Confidential Information: Privileged & Confidential Work Product"

Tested By: BT **Checked By:** WJY

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psf	789			
Undrained shear strength, psf	394			
Failure strain, %	10.5			
Strain rate, %/min.	1.00			
Water content, %	361.9			
Wet density, pcf	68.1			
Dry density, pcf	14.7			
Saturation, %	94.6			
Void ratio	9.3732			
Specimen diameter, in.	1.433			
Specimen height, in.	3.100			
Height/diameter ratio	2.16			

Description:

LL = 295	**PL** = 85	**PI** = 210	**Assumed GS=** 2.45	**Type:** UNDISTURBED

Project No.: 07-022122
Date Sampled: 9/24/09
Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

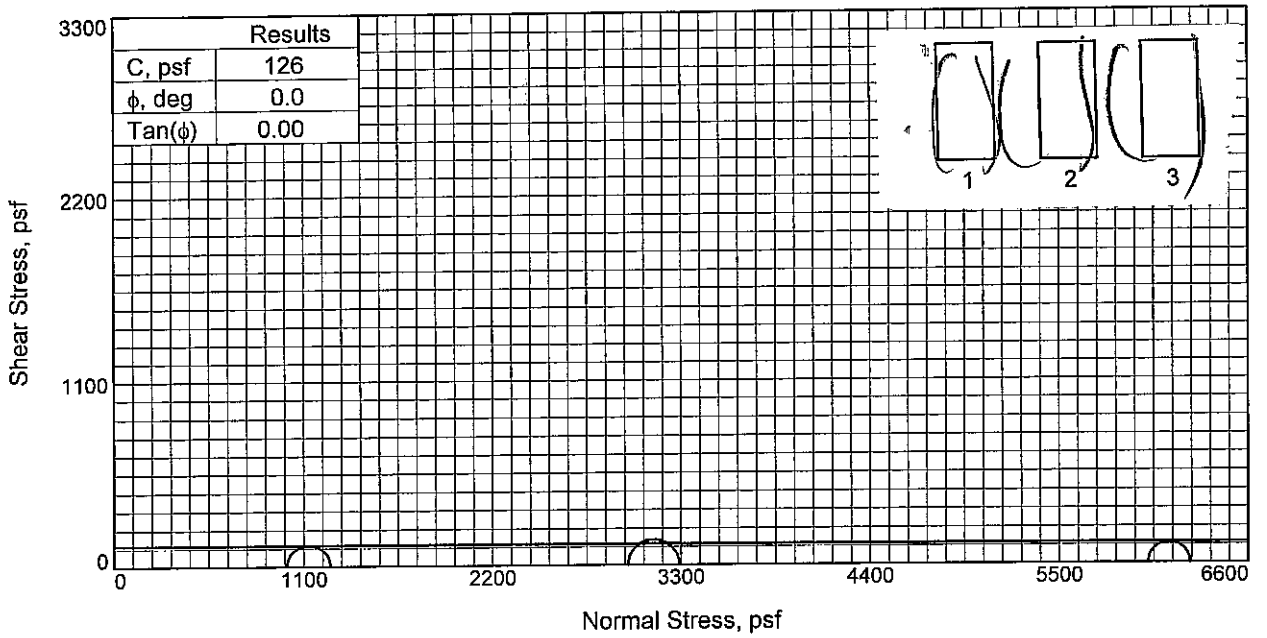
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-62PU **Depth:** 1.7
Sample Number: 1C

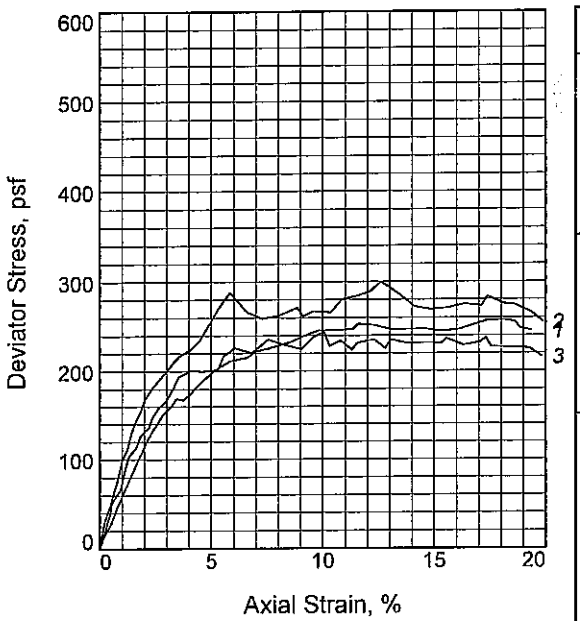
UNCONFINED COMPRESSION TEST

FFEBJV, LLC

Tested By: ARS/JC **Checked By:** MKA

"Confidential Information, Privileged & Confidential Work Product"





Sample No.		1	2	3
Initial	Water Content, %	48.7	53.3	52.1
	Dry Density, pcf	71.2	69.8	69.4
	Saturation, %	96.2	101.8	98.3
	Void Ratio	1.3670	1.4137	1.4304
	Diameter, in.	1.410	1.407	1.428
	Height, in.	3.094	3.117	3.097
At Test	Water Content, %	48.7	53.3	52.1
	Dry Density, pcf	71.2	69.8	69.4
	Saturation, %	96.2	101.8	98.3
	Void Ratio	1.3670	1.4137	1.4304
	Diameter, in.	1.410	1.407	1.428
	Height, in.	3.094	3.117	3.097
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.97	20.76	41.79
Fail. Stress, psf		253	299	244
Strain, %		11.6	12.6	10.1
Ult. Stress, psf		245	269	224
Strain, %				
σ_1 Failure, psf		1257	3289	6261
σ_3 Failure, psf		1003	2990	6017

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: VSO GR CH2 W/ ARS SM, WD, CC

LL= 50 **PL=** 24 **PI=** 26
Assumed Specific Gravity= 2.70
Remarks: SAMPLE SLUMPED

Figure _____

Client: U.S. Army Corps of Engineers

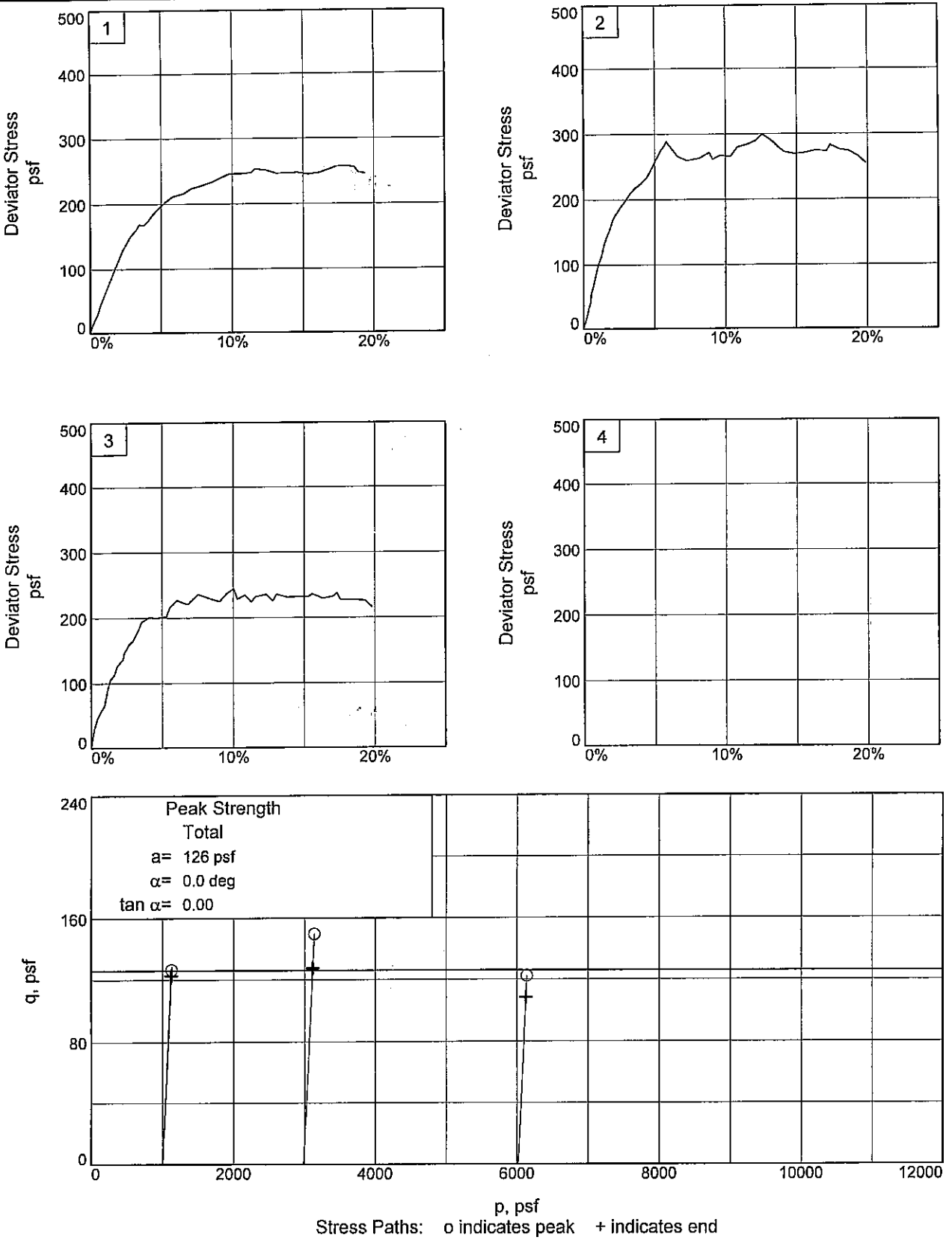
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-62PU **Depth:** 4.8
Sample Number: 2B
Proj. No.: 07-022122 **Date Sampled:** 9/24/09

TRIAXIAL SHEAR TEST REPORT

FFEBJV, LLC

Tested By: ARS/JC **Checked By:** MKA

"Confidential Information - Privileged & Confidential Work Product"



Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

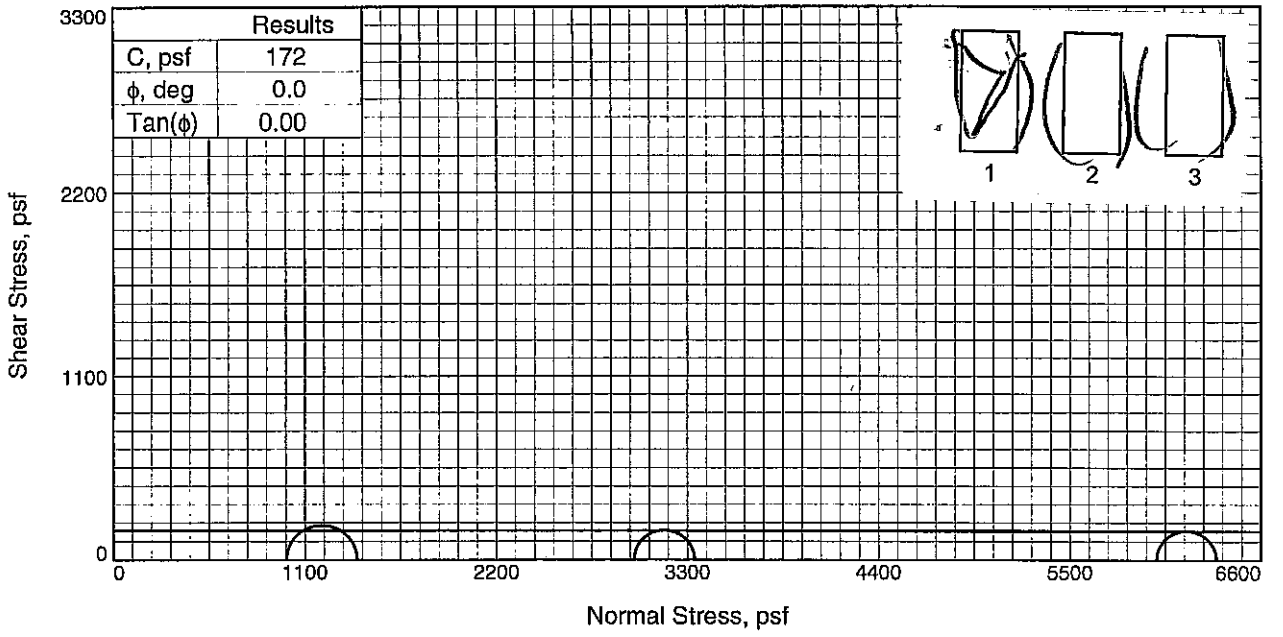
Source of Sample: NF05-62PU **Depth:** 4.8 **Sample Number:** 2B

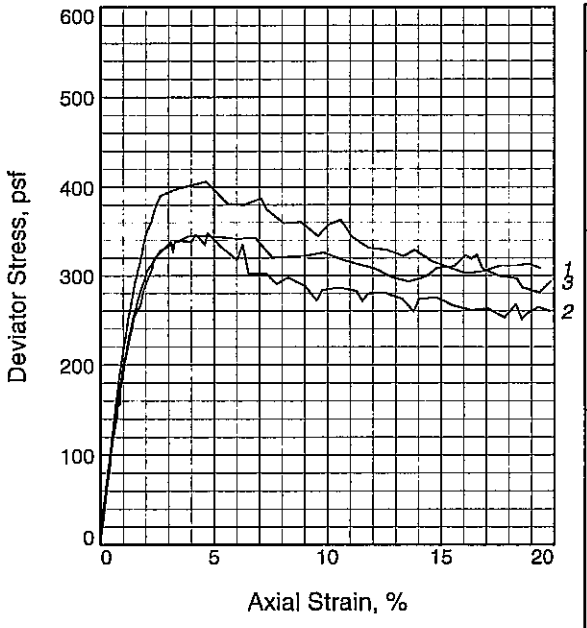
Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: ARS/JC **Checked By:** MKA

"Confidential Information, Privileged & Confidential Work Product"





Sample No.		1	2	3
Initial	Water Content, %	77.1	76.1	74.4
	Dry Density, pcf	54.4	55.2	55.9
	Saturation, %	98.5	99.4	99.0
	Void Ratio	2.1446	2.0966	2.0588
	Diameter, in.	1.404	1.406	1.415
	Height, in.	3.119	3.105	3.114
At Test	Water Content, %	77.1	76.1	74.4
	Dry Density, pcf	54.4	55.2	55.9
	Saturation, %	98.5	99.4	99.0
	Void Ratio	2.1446	2.0966	2.0588
	Diameter, in.	1.404	1.406	1.415
	Height, in.	3.119	3.105	3.114
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.90	20.79	41.66
Fail. Stress, psf		406	349	345
Strain, %		4.7	4.7	3.9
Ult. Stress, psf		309	259	293
Strain, %				
σ_1 Failure, psf		1400	3342	6343
σ_3 Failure, psf		994	2993	5999

Type of Test:
Unconsolidated Undrained

Sample Type: UNDISTURBED

Description: VSO GR CH4 W/ LNS & LYS ML, SM, CC

LL= 79 **PL=** 27 **PI=** 52

Assumed Specific Gravity= 2.74

Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La

Source of Sample: NF05-62PU **Depth:** 9.7

Sample Number: 3C

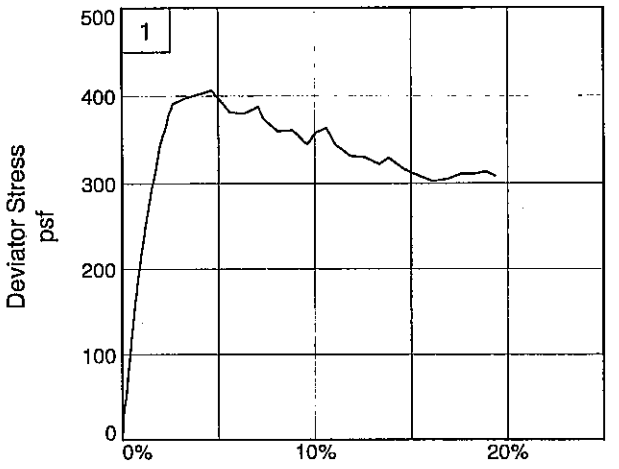
Proj. No.: 07-022122 **Date Sampled:** 9/24/09

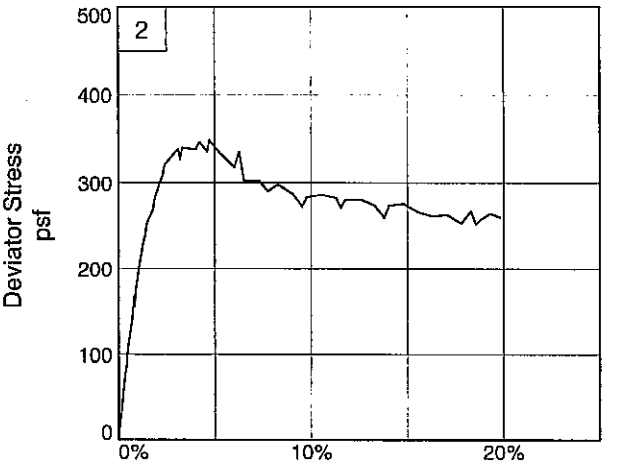
TRIAXIAL SHEAR TEST REPORT

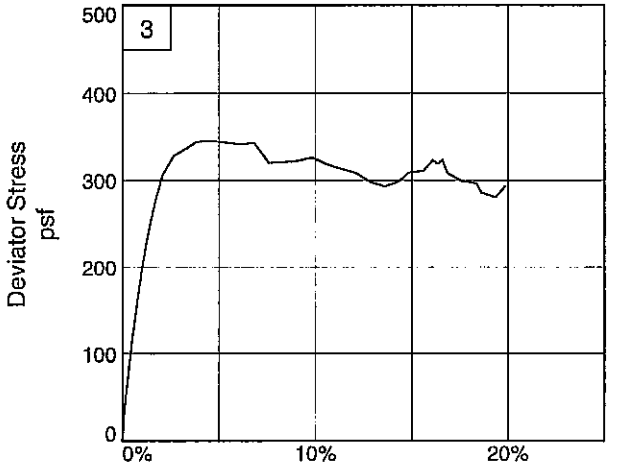
FFEBJV, LLC

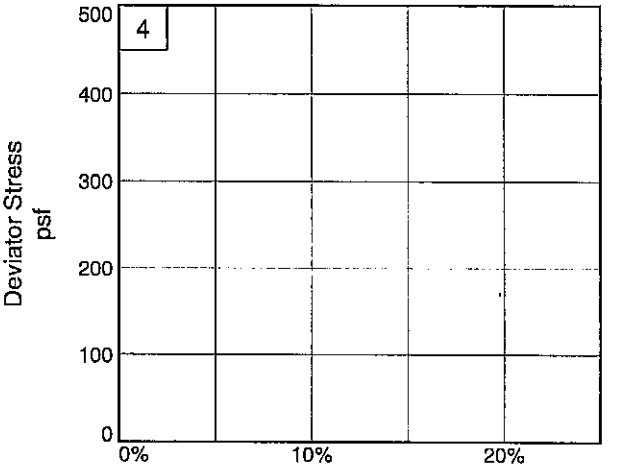
Tested By: ARS/JC **Checked By:** RJCA

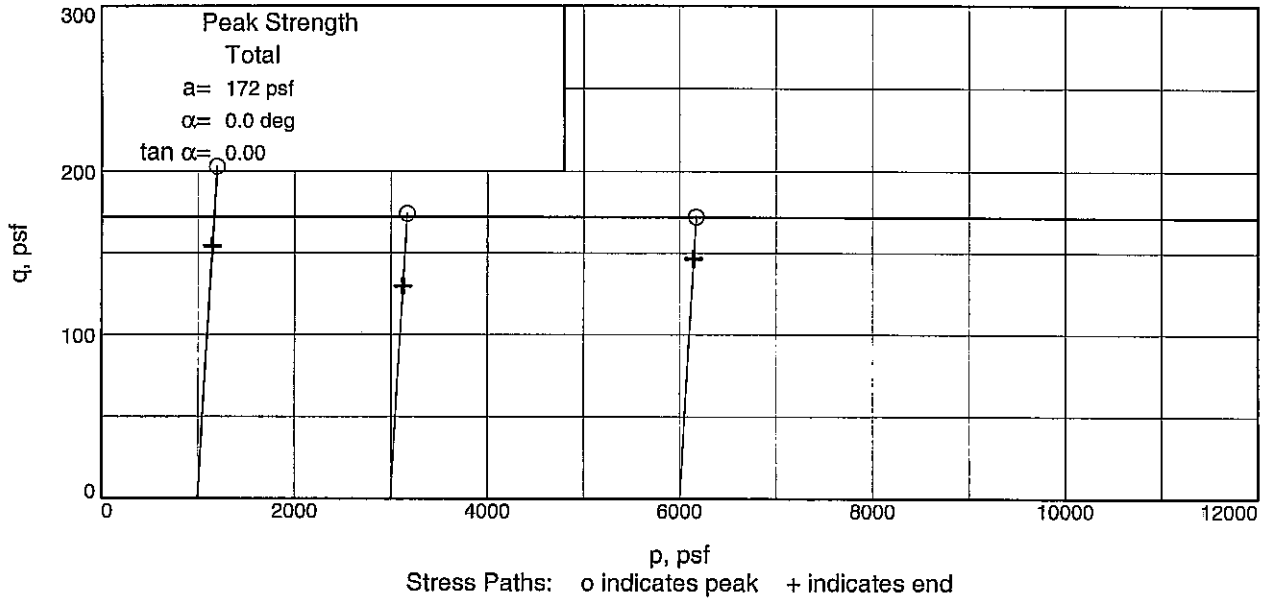
"Confidential Information, Privileged & Confidential Work Product"











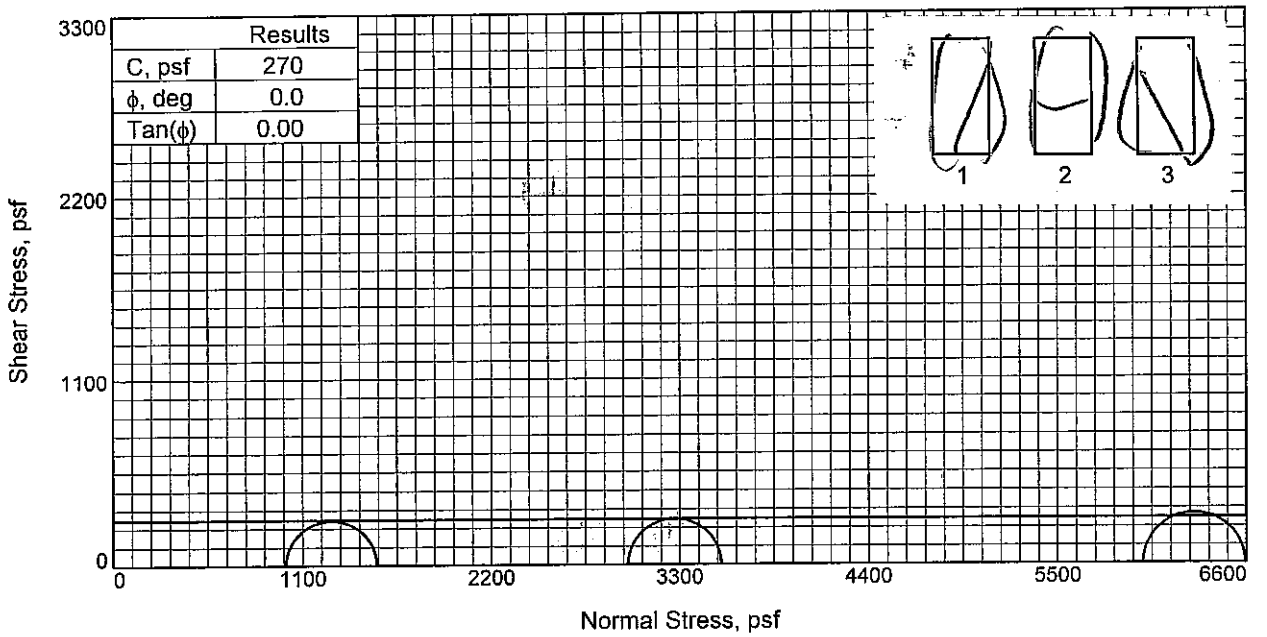
Stress Paths: o indicates peak + indicates end

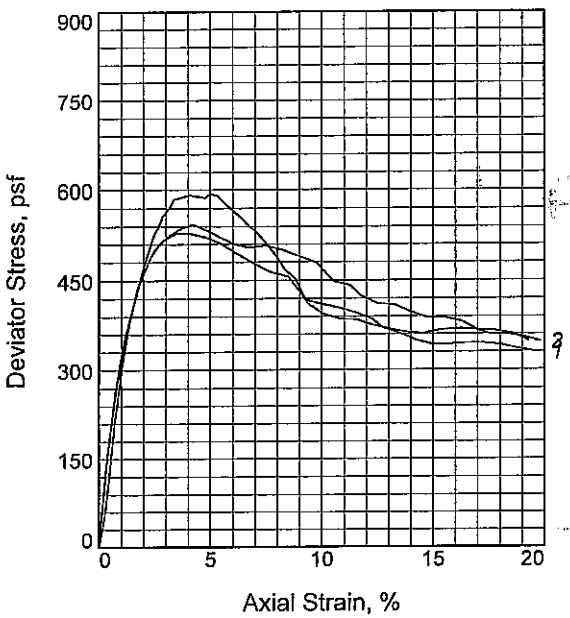
Client: U.S. Army Corps of Engineers
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Source of Sample: NF05-62PU **Depth:** 9.7 **Sample Number:** 3C
Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: ARS/JC **Checked By:** MKA

"Confidential Information Privileged & Confidential Work Product"





Sample No.		1	2	3
Initial	Water Content, %	100.4	99.4	98.4
	Dry Density, pcf	45.4	45.8	46.3
	Saturation, %	99.5	99.6	100.1
	Void Ratio	2.7643	2.7354	2.6941
	Diameter, in.	1.400	1.408	1.401
	Height, in.	3.110	3.112	3.107
At Test	Water Content, %	100.4	99.4	98.4
	Dry Density, pcf	45.4	45.8	46.3
	Saturation, %	99.5	99.6	100.1
	Void Ratio	2.7643	2.7354	2.6941
	Diameter, in.	1.400	1.408	1.401
	Height, in.	3.110	3.112	3.107
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.97	20.82	41.66
Fail. Stress, psf		528	543	594
Strain, %		3.5	4.2	5.0
Ult. Stress, psf		343	387	361
Strain, %				
σ_1 Failure, psf		1532	3541	6592
σ_3 Failure, psf		1004	2998	5999

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: SO GR CH4 W/ ARS SM, ML, RT

LL= 118 **PL=** 36 **PI=** 82
Assumed Specific Gravity= 2.74
Remarks:

Figure _____

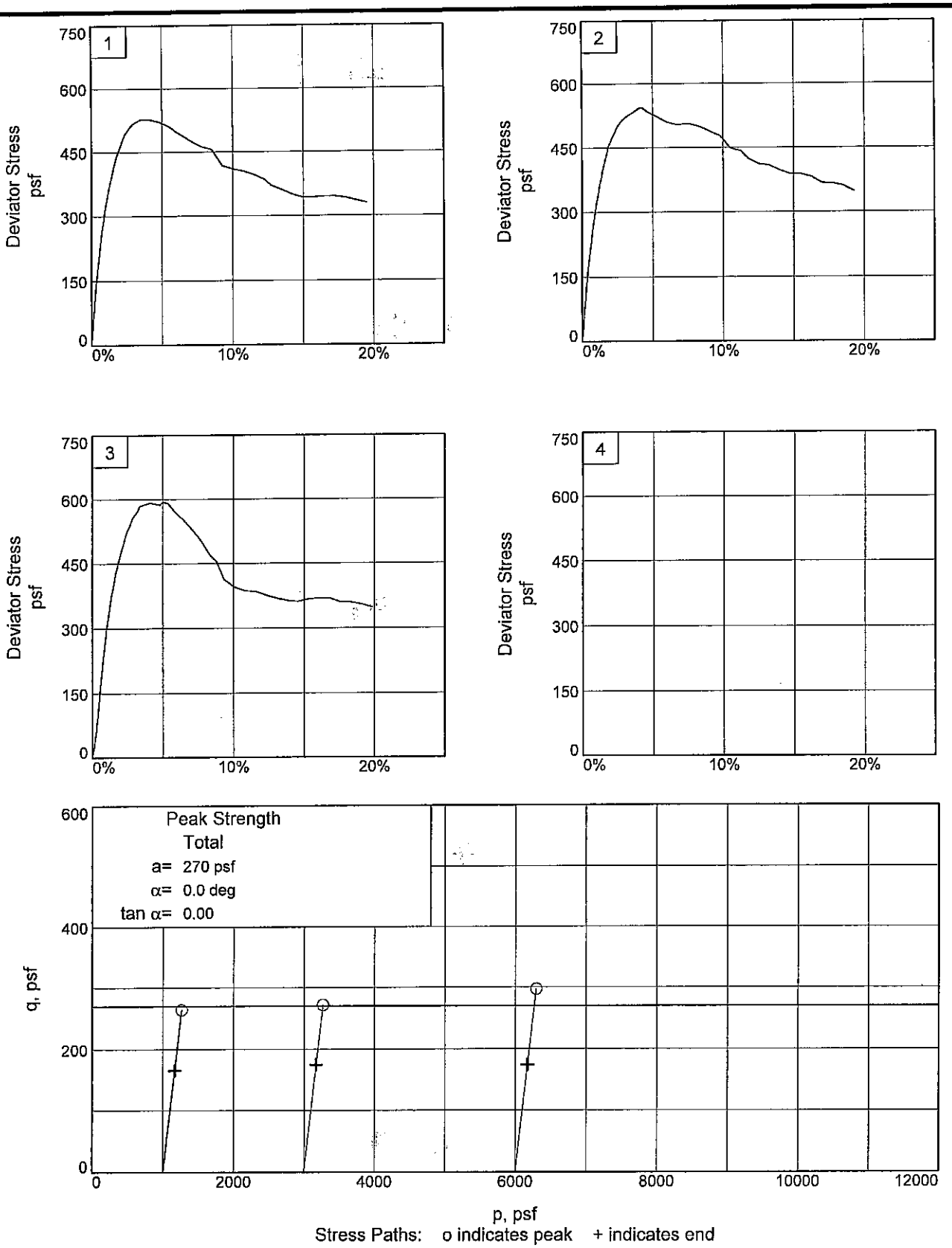
Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-62PU **Depth:** 13.7
Sample Number: 4C
Proj. No.: 07-022122 **Date Sampled:** 9/24/09

TRIAXIAL SHEAR TEST REPORT

FFEBJV, LLC

Tested By: ARS/VF "Confidential Information Provided By: MKC Confidential Work Product" **Checked By:** MKC



Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

Source of Sample: NF05-62PU **Depth:** 13.7 **Sample Number:** 4C

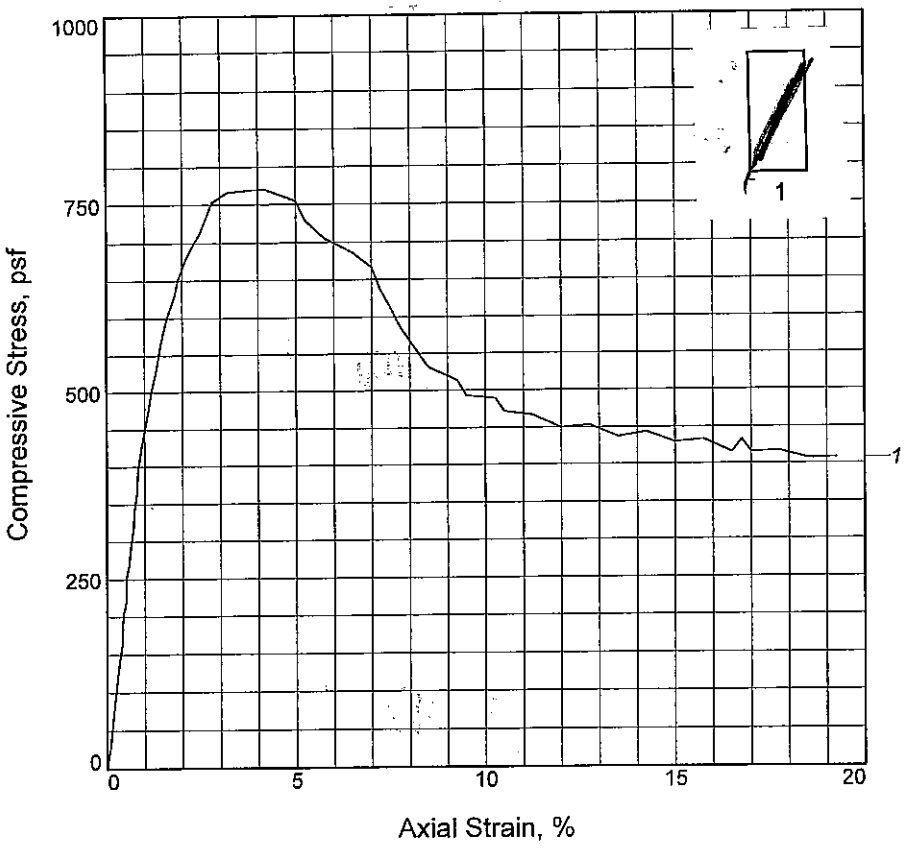
Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: ARS/VF **Checked By:** MKA

"Confidential Information Provided To Confidential Work Product"

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psf	770			
Undrained shear strength, psf	385			
Failure strain, %	3.9			
Strain rate, %/min.	1.00			
Water content, %	86.9			
Wet density, pcf	92.7			
Dry density, pcf	49.6			
.Saturation, %	97.3			
Void ratio	2.4480			
Specimen diameter, in.	1.434			
Specimen height, in.	3.118			
Height/diameter ratio	2.17			

Description: SO GR CHOA W/ SL

LL = 124	**PL** = 38	**PI** = 86	**Assumed GS=** 2.74	**Type:** UNDISTURBED

Project No.: 07-022122
Date Sampled: 9/24/09
Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-62PU **Depth:** 17.7
Sample Number: 5C

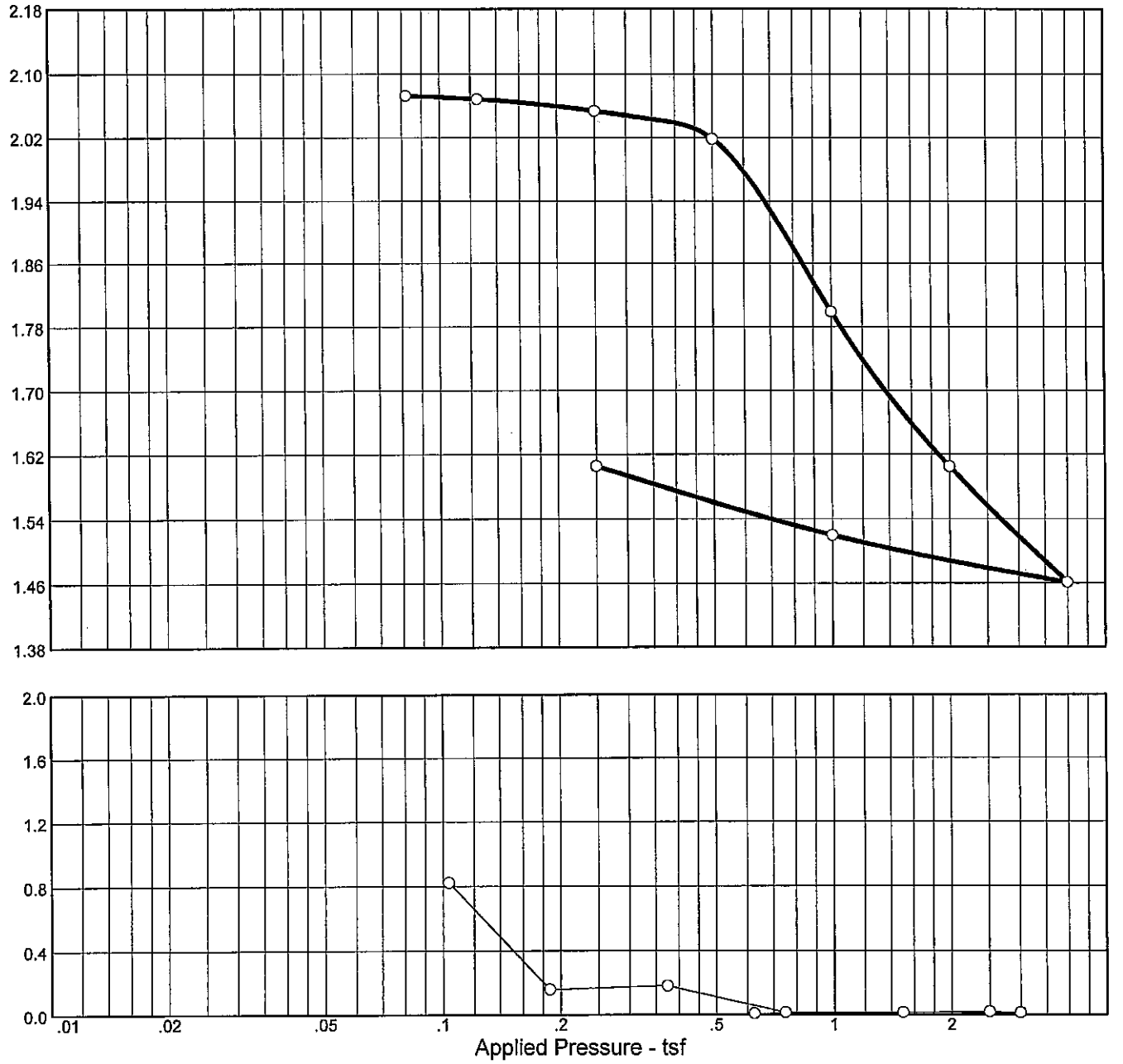
UNCONFINED COMPRESSION TEST

FFEBJV, LLC

Tested By: ARS/JC **Checked By:** MKA

"Confidential Information, Privileged & Confidential Work Product"

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
98.1 %	74.3 %	55.6	92	71	2.74	0.55	0.83	2.074

MATERIAL DESCRIPTION	USCS	AASHTO
SO GR CH4 W/ LNS & LYS SM, SIF	CH4	

Project No. 07-022122 **Client:** US Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La

Source: NF05-62PU **Sample No.:** 6B **Elev./Depth:** 20.8'

FFEBJV, LLC

St Rose, LA

Remarks:

Tested by: DG
Calculated by: WJY
Checked by: WJY

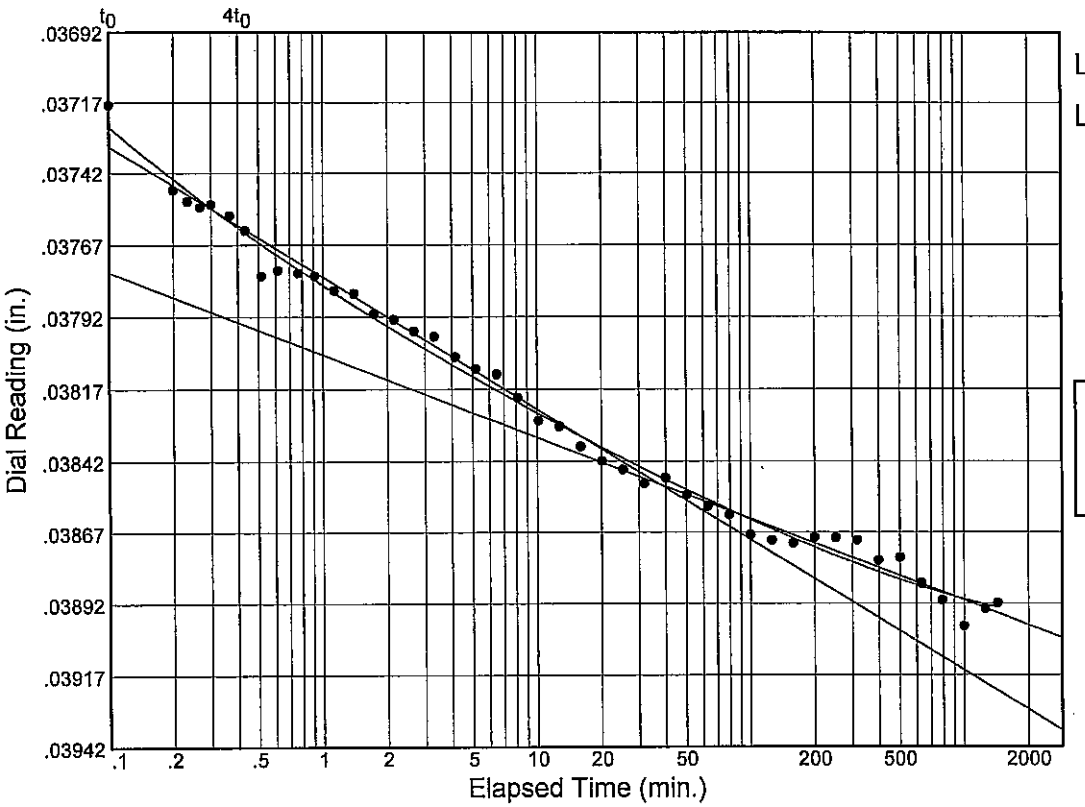
Figure

"Confidential Information: Privileged & Confidential Work Product"

Dial Reading vs. Time

Project No.: 07-022122
Project: USACE - New Orleans To Venice Plaquemines Parish, La

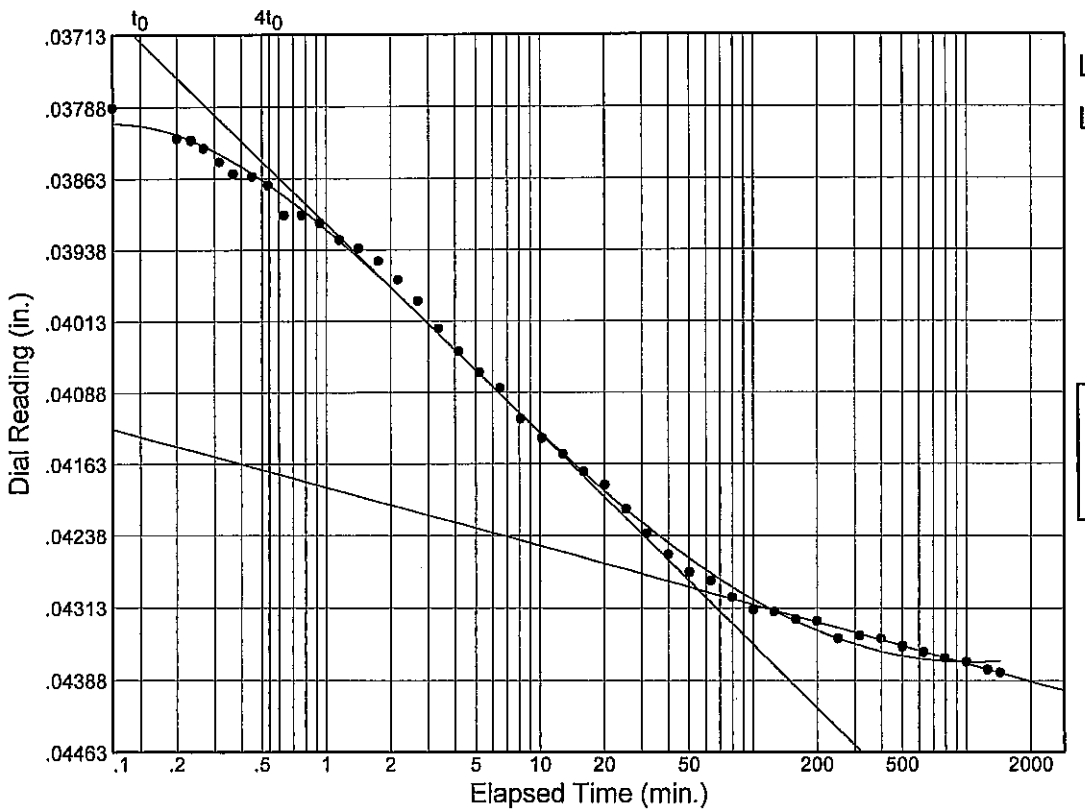
Source: NF05-62PU Sample No.: 6B Elev./Depth: 20.8'



Load No.= 2
Load= 0.13 tsf
D_0 = 0.03690
D_{50} = 0.03770
D_{100} = 0.03850
T_{50} = 0.60 min.

C_v @ T_{50}
0.82 ft.^{2}/day

C_α = 0.000



Load No.= 3
Load= 0.25 tsf
D_0 = 0.03745
D_{50} = 0.04019
D_{100} = 0.04294
T_{50} = 3.09 min.

C_v @ T_{50}
0.16 ft.^{2}/day

C_α = 0.001

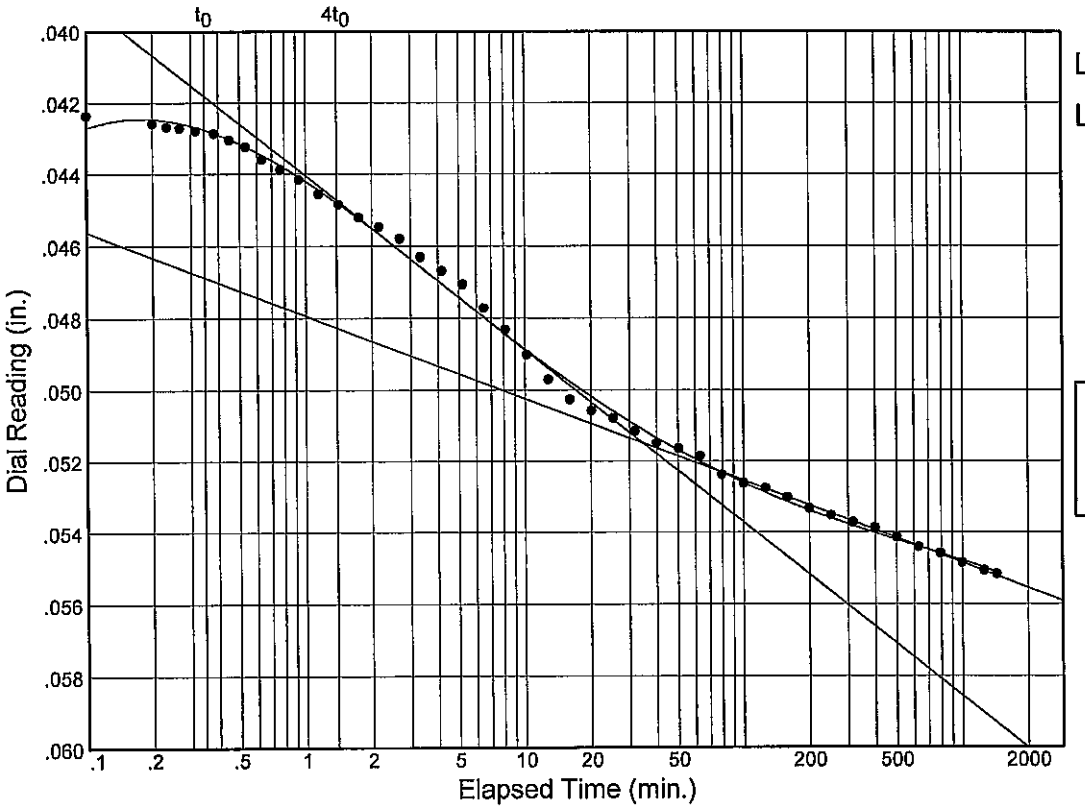
"Confidential Information, Privileged & Confidential Work Product"

Figure

Dial Reading vs. Time

Project No.: 07-022122
Project: USACE - New Orleans To Venice Plaquemines Parish, La

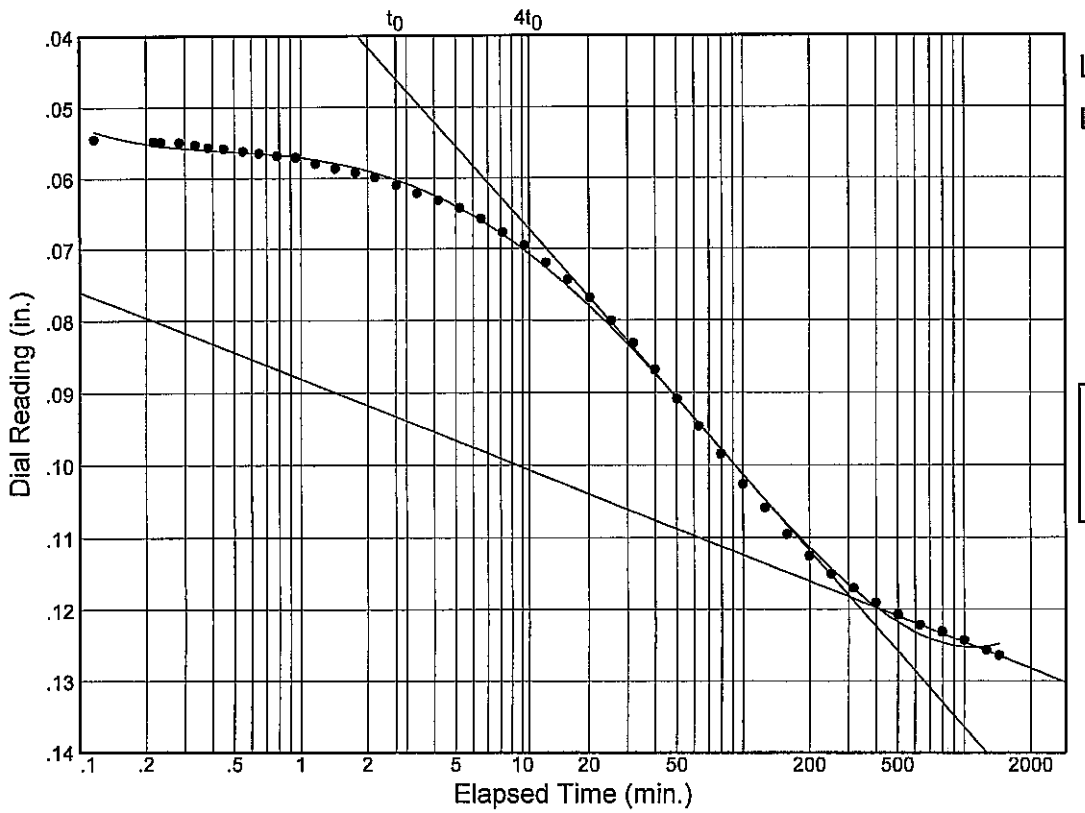
Source: NF05-62PU Sample No.: 6B Elev./Depth: 20.8'



Load No.= 4
Load= 0.50 tsf
D_0 = 0.04072
D_{50} = 0.04610
D_{100} = 0.05148
T_{50} = 2.65 min.

C_v @ T_{50}
0.18 ft.^{2}/day

C_α = 0.002



Load No.= 5
Load= 1.00 tsf
D_0 = 0.04972
D_{50} = 0.08402
D_{100} = 0.11832
T_{50} = 31.43 min.

C_v @ T_{50}
0.01 ft.^{2}/day

C_α = 0.012

"Confidential Information Provided & Confidential Work Product"

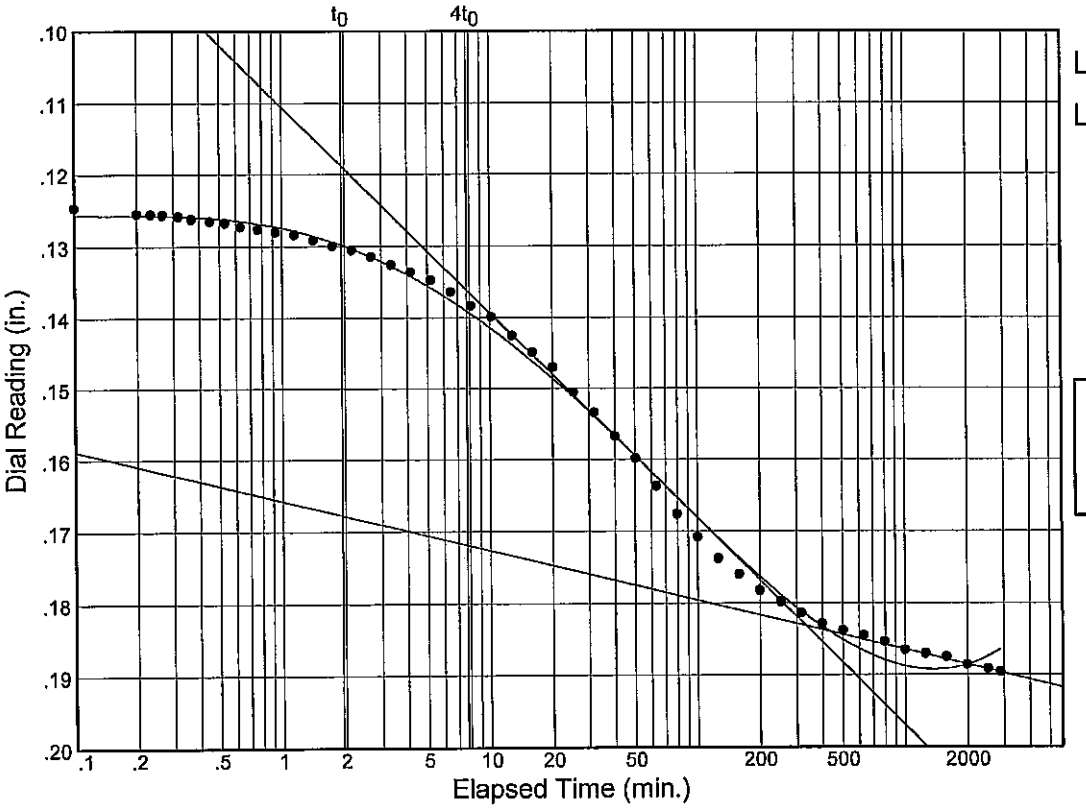
FEBJV, LLC

Figure

Dial Reading vs. Time

Project No.: 07-022122
Project: USACE - New Orleans To Venice Plaquemines Parish, La

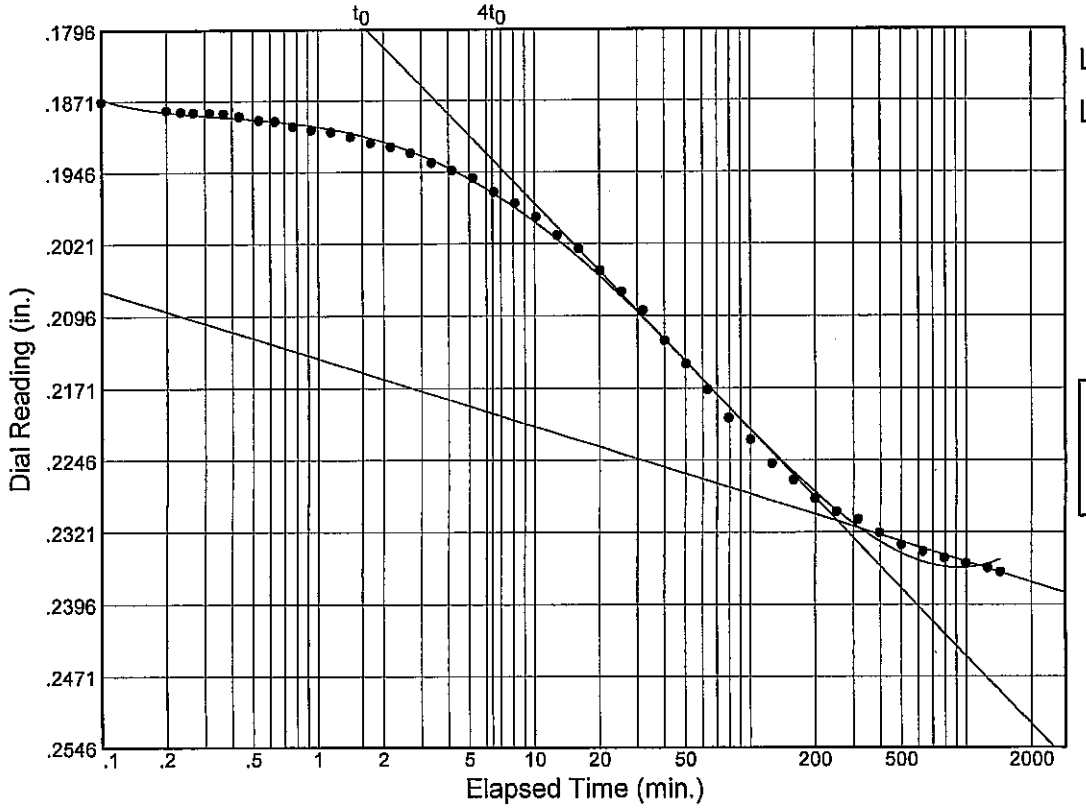
Source: NF05-62PU Sample No.: 6B Elev./Depth: 20.8'



Load No.= 6
Load= 2.00 tsf
D_0 = 0.12053
D_{50} = 0.15184
D_{100} = 0.18316
T_{50} = 26.54 min.

C_v @ T_{50}
0.01 ft.^{2}/day

C_α = 0.008



Load No.= 7
Load= 4.00 tsf
D_0 = 0.18485
D_{50} = 0.20791
D_{100} = 0.23097
T_{50} = 26.01 min.

C_v @ T_{50}
0.01 ft.^{2}/day

C_α = 0.008

"Confidential Information, Privileged & Confidential Work Product"

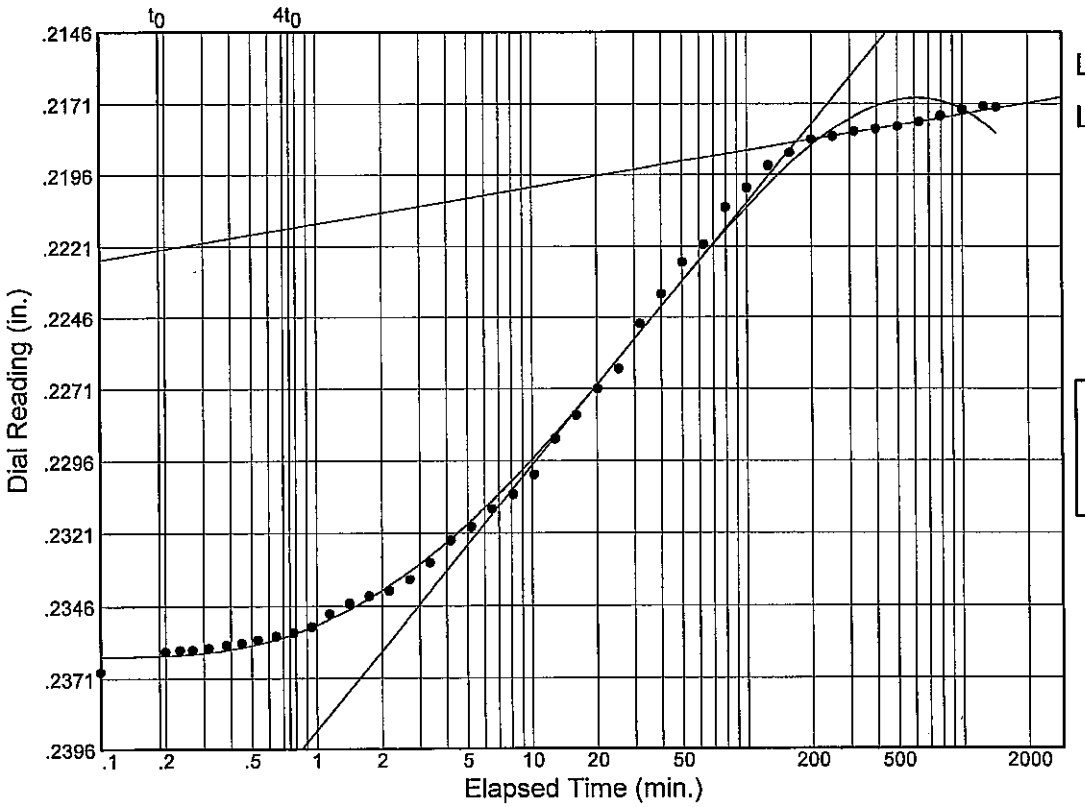
FT EBUV, LLC

Figure

Dial Reading vs. Time

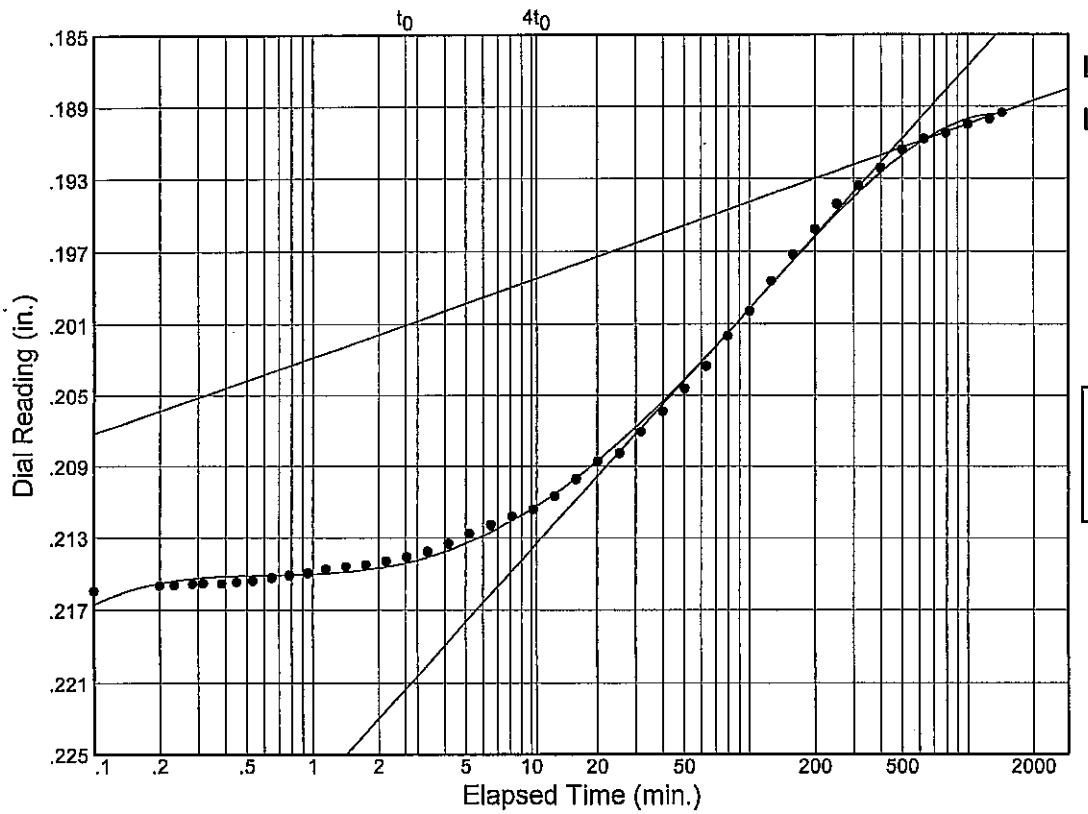
Project No.: 07-022122
Project: USACE - New Orleans To Venice Plaquemines Parish, La

Source: NF05-62PU Sample No.: 6B Elev./Depth: 20.8'



Load No.= 8
Load= 1.00 tsf
D_0 = 0.23703
D_{50} = 0.22774
D_{100} = 0.21845
T_{50} = 16.43 min.

C_v @ T_{50}
0.02 ft.^{2}/day



Load No.= 9
Load= 0.25 tsf
D_0 = 0.21751
D_{50} = 0.20452
D_{100} = 0.19152
T_{50} = 46.86 min.

C_v @ T_{50}
0.01 ft.^{2}/day

"Confidential Information Provided & Confidential Work Product"

CONSOLIDATION TEST DATA

Client: US Army Corps of Engineers
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Contract No. W912P8-07-D-0022
Task Order 122
Project Number: 07-022122

Sample Data

Source: NF05-62PU
Sample No.: 6B
Elev. or Depth: 20.8' **Sample Length(in./cm.):**
Location:
Description: SO GR CH4 W/ LNS & LYS SM, SIF
Liquid Limit: 92 **Plasticity Index:** 71
USCS: CH4 **AASHTO:** **Figure No.:**
Testing Remarks: Tested by: DG
Calculated by: WJY
Checked by: WJY

Test Specimen Data

TOTAL SAMPLE		BEFORE TEST	AFTER TEST
Wet w+t =	174.27 g.	Consolidometer # = 1	Wet w+t = 115.33 g.
Dry w+t =	100.00 g.		Dry w+t = 85.94 g.
Tare Wt. =	.00 g.	Spec. Gravity = 2.74	Tare Wt. = 30.36 g.
Height =	1.00 in.	Height = 1.00 in.	
Diameter =	4.00 in.	Diameter = 4.00 in.	
Weight =	318.83 g.	Defl. Table = n/a	
Moisture =	74.3 %	Ht. Solids = 0.3249 in.	Moisture = 52.9 %
Wet Den. =	97.0 pcf	Dry Wt. = 183.20 g.*	Dry Wt. = 55.58 g.
Dry Den. =	55.6 pcf	Void Ratio = 2.074	Void Ratio = 1.605
		Saturation = 98.1 %	

* Initial dry weight used in calculations

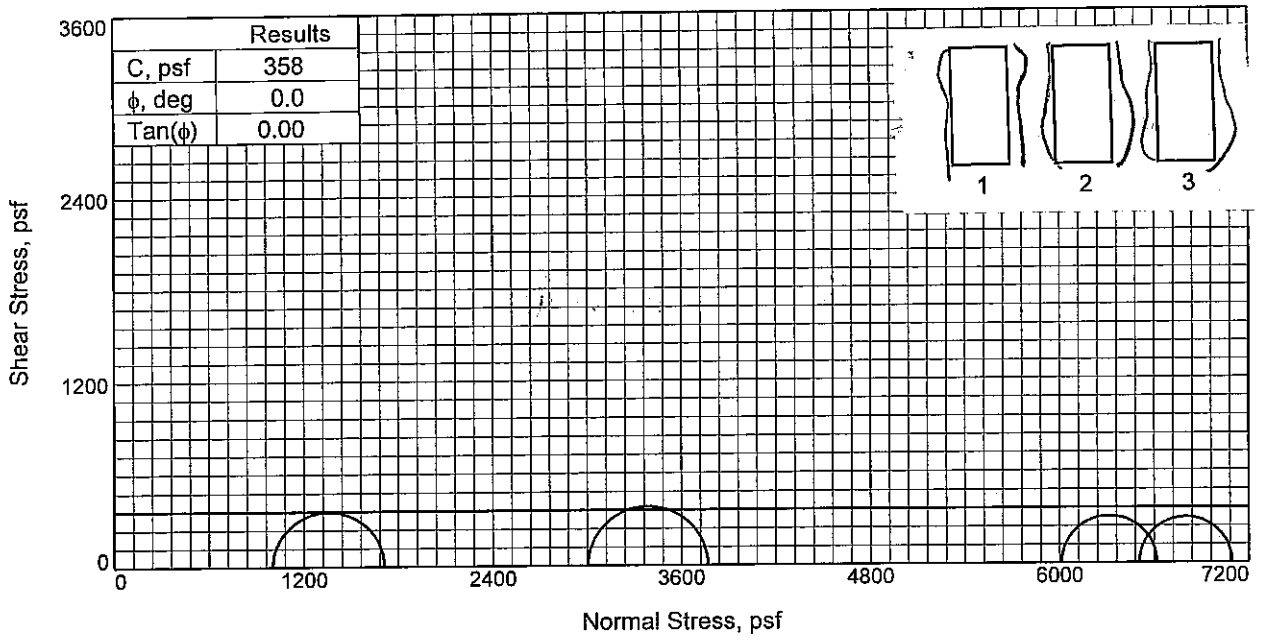
End-of-Load Summary

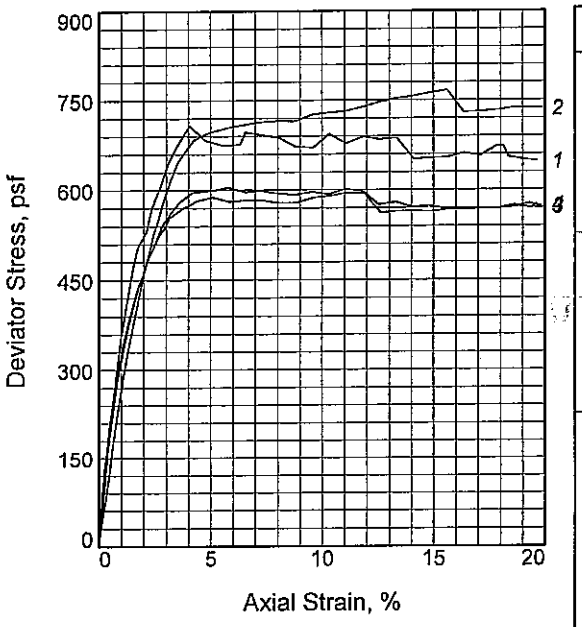
Pressure (tsf)	Final Dial (in.)	Machine Defl. (in.)	C_v (ft.^{2}/day)	C_α	Void Ratio	% Compression /Swell
start	0.03706				2.074	
0.08	0.03753	0.00000			2.073	0.0 Comprs.
0.13	0.03892	0.00000	0.82	0.000	2.068	0.2 Comprs.
0.25	0.04380	0.00000	0.16	0.001	2.053	0.7 Comprs.
0.50	0.05518	0.00000	0.18	0.002	2.018	1.8 Comprs.
1.00	0.12652	0.00000	0.01	0.012	1.799	9.0 Comprs.
2.00	0.18964	0.00000	0.01	0.008	1.605	15.3 Comprs.
4.00	0.23627	0.00000	0.01	0.008	1.461	19.9 Comprs.
1.00	0.21722	0.00000	0.02		1.520	18.0 Comprs.

"Confidential Information: Privileged & Confidential Work Product"

Pressure (tsf)	Final Dial (in.)	Machine Defl. (in.)	C_v (ft.^{2}/day)	C_α	Void Ratio	% Compression /Swell
0.25	0.18938	0.00000	0.01		1.605	15.2 Comprs.

C_c = 0.83 P_c = 0.55 tsf C_r = 0.12





Sample No.		1	2	3	4
Initial	Water Content, %	47.0	45.0	47.8	47.5
	Dry Density, pcf	73.8	76.3	73.5	74.2
	Saturation, %	98.8	100.3	99.8	100.8
	Void Ratio	1.2832	1.2101	1.2939	1.2729
	Diameter, in.	1.411	1.402	1.419	1.408
	Height, in.	3.106	3.109	3.107	3.002
At Test	Water Content, %	47.0	45.0	47.8	47.5
	Dry Density, pcf	73.8	76.3	73.5	74.2
	Saturation, %	98.8	100.3	99.8	100.8
	Void Ratio	1.2832	1.2101	1.2939	1.2729
	Diameter, in.	1.411	1.402	1.419	1.408
	Height, in.	3.106	3.109	3.107	3.002
Strain rate, %/min.		1.00	1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00	0.00
Cell Pressure, psi		6.96	20.87	41.75	45.19
Fail. Stress, psf		708	762	605	588
Strain, %		4.1	14.8	5.8	5.1
Ult. Stress, psf		651	762	567	581
Strain, %					
σ_1 Failure, psf		1711	3767	6617	7095
σ_3 Failure, psf		1003	3005	6012	6507

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: SO GR CL6 W/ LNS & LYS ML

LL= 48 **PL=** 22 **PI=** 26
Assumed Specific Gravity= 2.70
Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

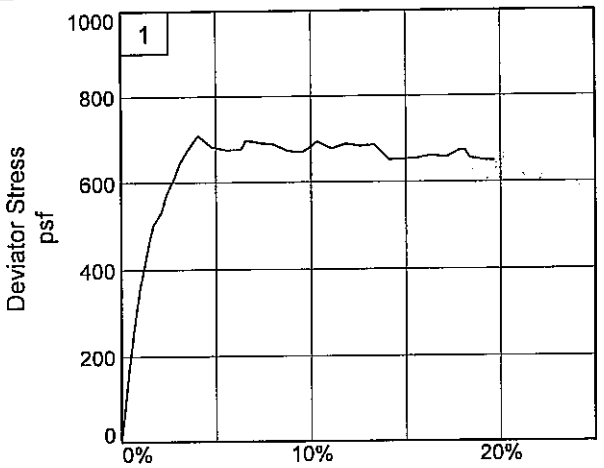
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-62PU **Depth:** 24.8
Sample Number: 7B
Proj. No.: 07-022122 **Date Sampled:** 9/24/09

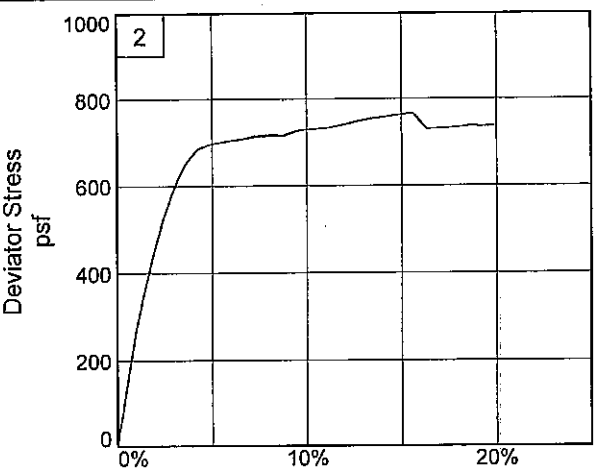
TRIAXIAL SHEAR TEST REPORT

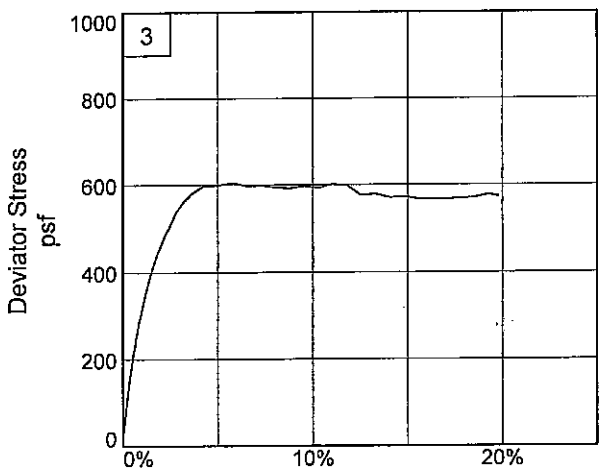
FFEBJV, LLC

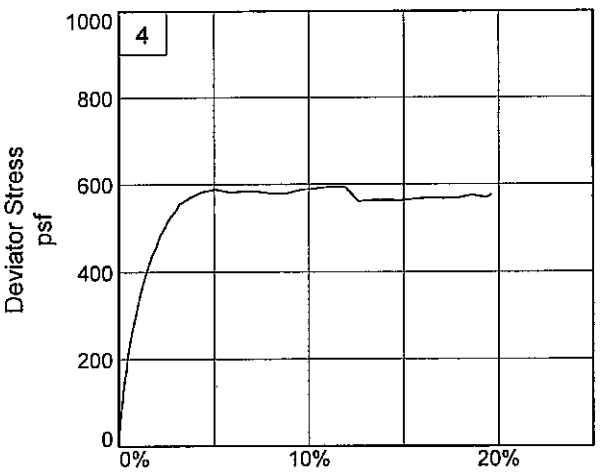
Tested By: ARS/JC **Checked By:** MKA

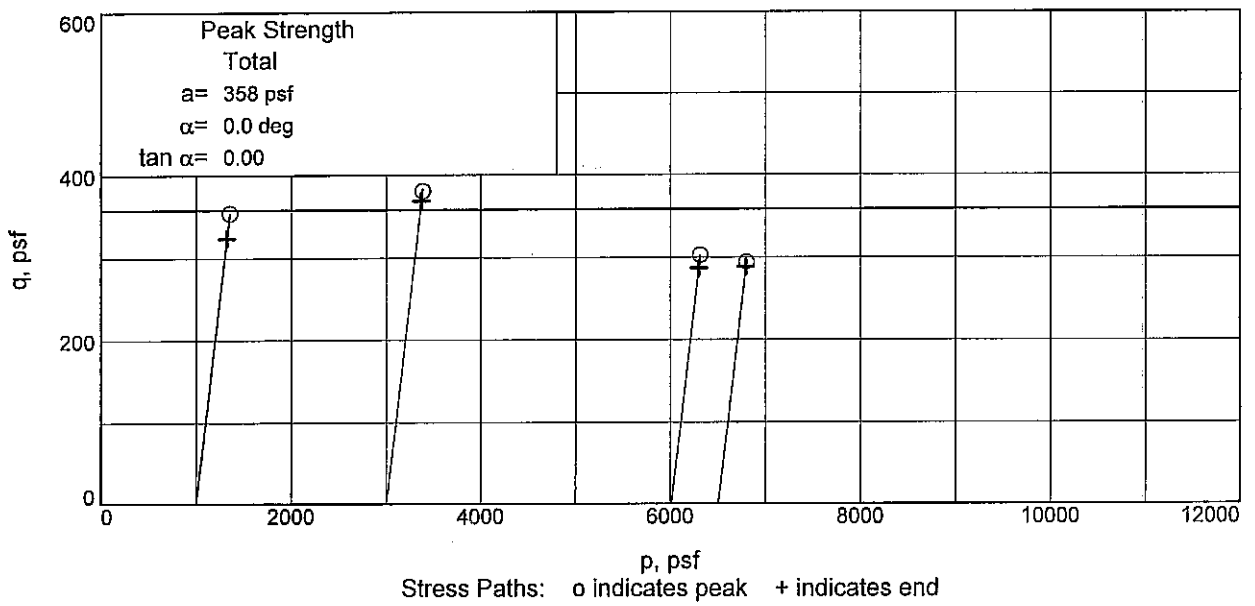
"Confidential Information Provided & Confidential Work Product"











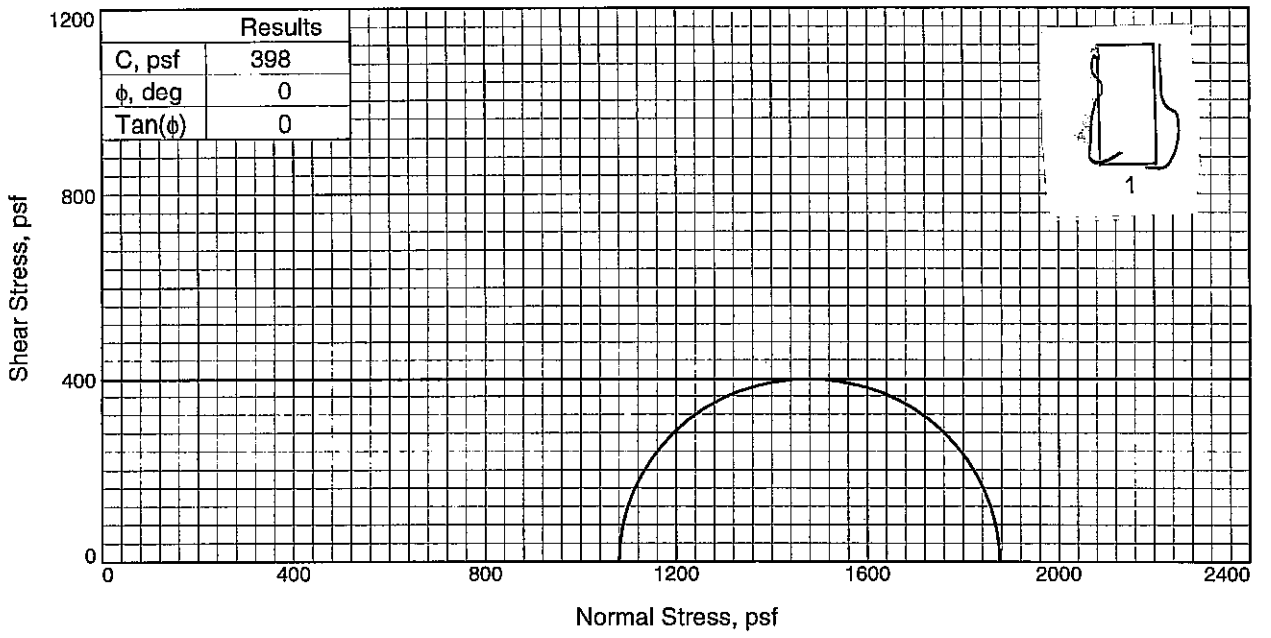
Stress Paths: o indicates peak + indicates end

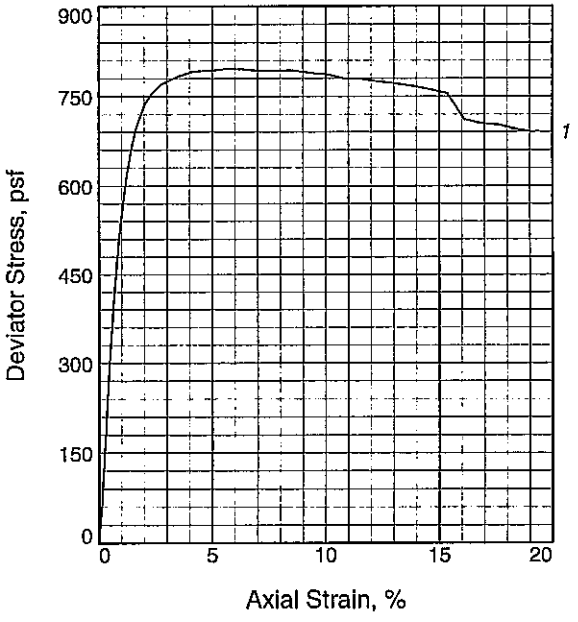
Client: U.S. Army Corps of Engineers
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Source of Sample: NF05-62PU **Depth:** 24.8 **Sample Number:** 7B
Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: ARS/JC **Checked By:** MKA

"Confidential Information - Privileged & Confidential Work Product"





Sample No.		1
Initial	Water Content, %	40.0
	Dry Density, pcf	81.6
	Saturation, %	101.2
	Void Ratio	1.0660
	Diameter, in.	1.410
	Height, in.	3.111
At Test	Water Content, %	40.0
	Dry Density, pcf	81.6
	Saturation, %	101.2
	Void Ratio	1.0660
	Diameter, in.	1.410
	Height, in.	3.111
Strain rate, %/min.		1.00
Back Pressure, psi		0.00
Cell Pressure, psi		7.50
Fail. Stress, psf		796
Strain, %		5.6
Ult. Stress, psf		
Strain, %		
σ_1 Failure, psf		1876
σ_3 Failure, psf		1080

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: SO GR CH2 W/ LNS & LYS ML

LL= 52 **PL=** 20 **PI=** 32
Assumed Specific Gravity= 2.70
Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

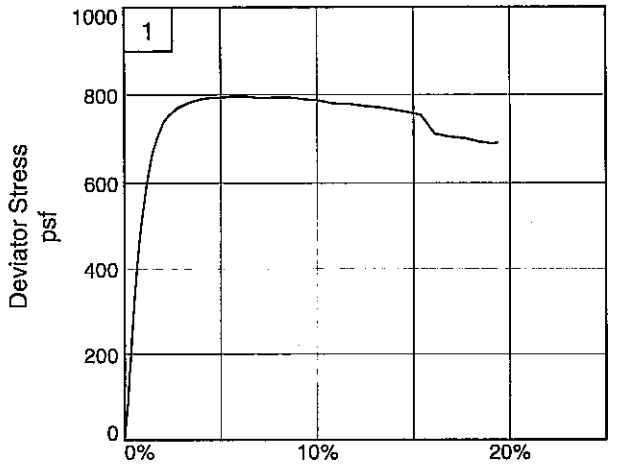
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-62PU **Depth:** 28.8
Sample Number: 8B
Proj. No.: 07-022122 **Date Sampled:** 9/24/09

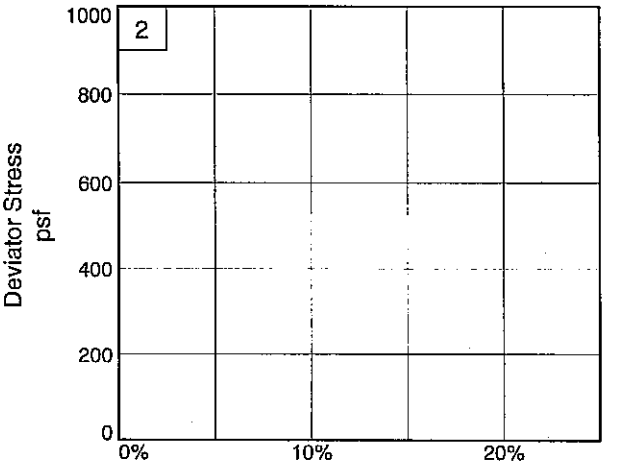
TRIAXIAL SHEAR TEST REPORT

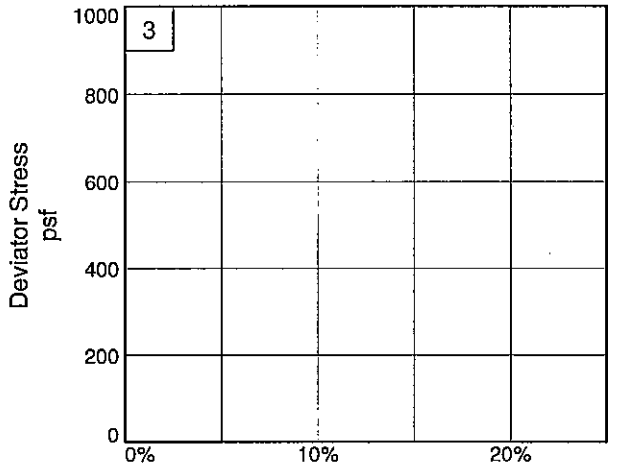
FFEBJV, LLC

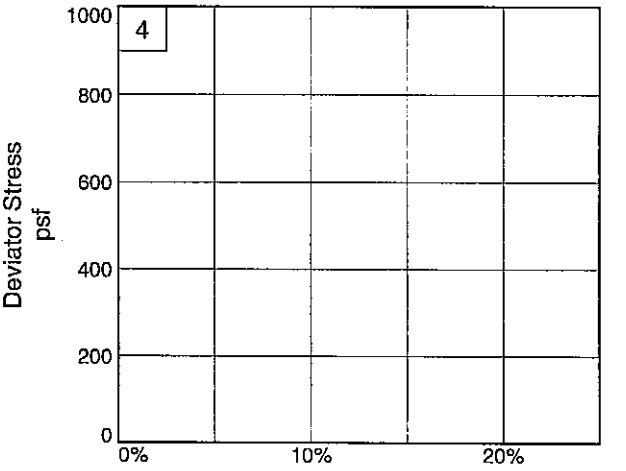
Tested By: ARS/JC **Checked By:** TGK

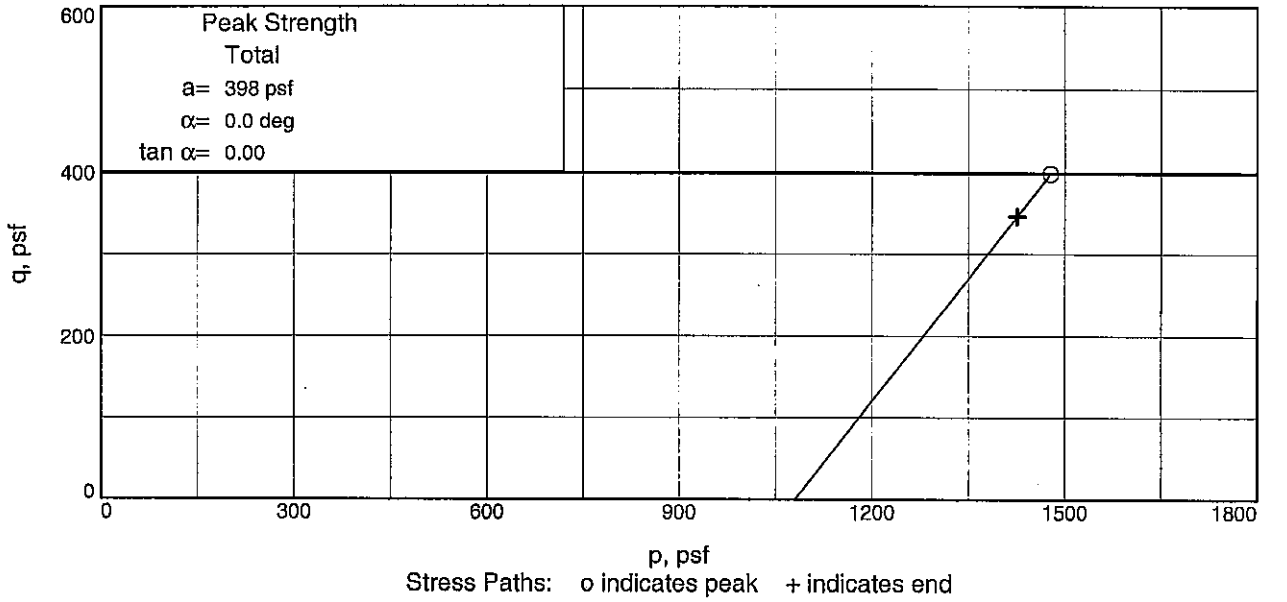
"Confidential Information, Privileged & Confidential Work Product"











Stress Paths: o indicates peak + indicates end

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

Source of Sample: NF05-62PU **Depth:** 28.8 **Sample Number:** 8B

Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: ARS/JC **Checked By:** MKA

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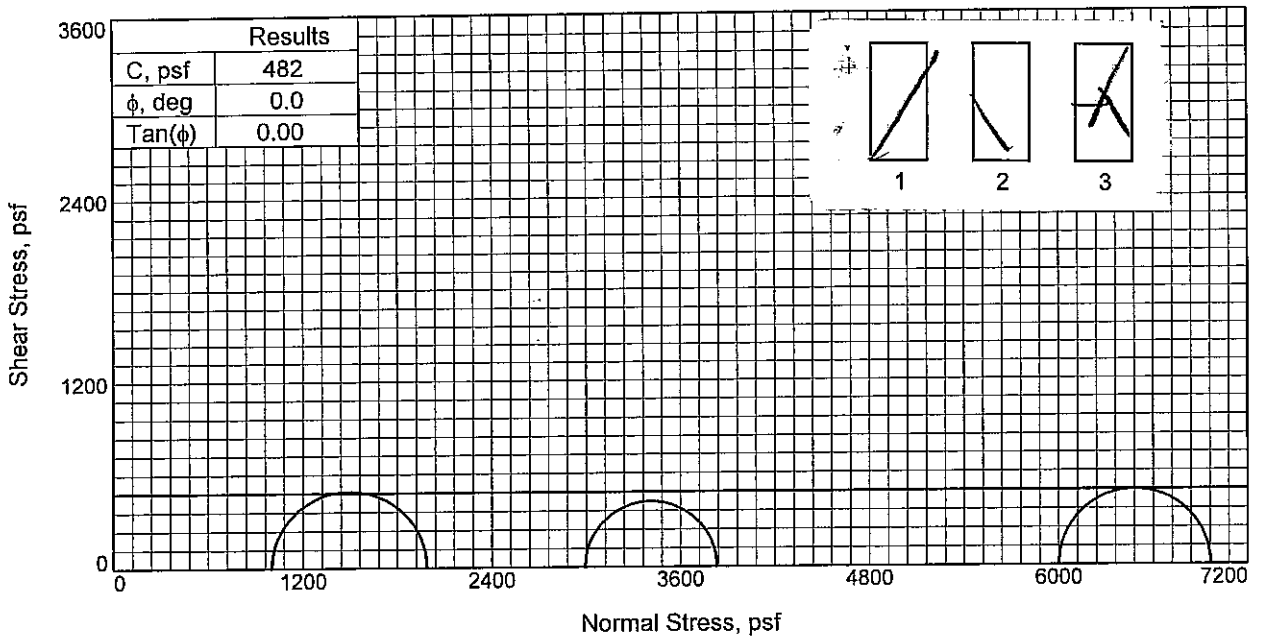

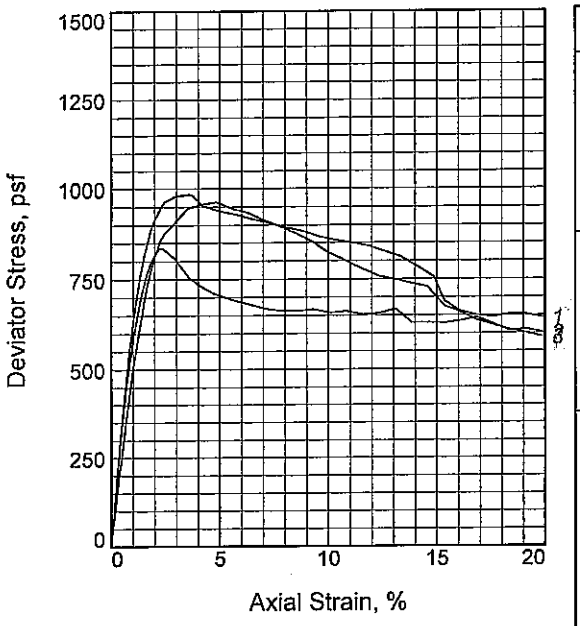

Sample No.		1	2	3
Initial	Water Content, %	60.8	66.8	60.6
	Dry Density, pcf	63.9	60.4	64.5
	Saturation, %	99.9	100.3	101.0
	Void Ratio	1.6567	1.8096	1.6313
	Diameter, in.	1.417	1.412	1.406
	Height, in.	3.108	3.095	3.107
At Test	Water Content, %	60.8	66.8	60.6
	Dry Density, pcf	63.9	60.4	64.5
	Saturation, %	99.9	100.3	101.0
	Void Ratio	1.6567	1.8096	1.6313
	Diameter, in.	1.417	1.412	1.406
	Height, in.	3.108	3.095	3.107
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.96	20.79	41.67
Fail. Stress, psf		984	837	964
Strain, %		3.7	2.3	4.9
Ult. Stress, psf		755	628	676
Strain, %				
σ_1 Failure, psf		1987	3830	6964
σ_3 Failure, psf		1003	2994	6001

Type of Test:
Unconsolidated Undrained

Sample Type: UNDISTURBED

Description: SO GR CH4 W/ LNS & ARS SM, SL

LL= 88 **PL=** 28 **PI=** 60

Assumed Specific Gravity= 2.72

Remarks:

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La

Source of Sample: NF05-62PU **Depth:** 33.7

Sample Number: 9C

Proj. No.: 07-022122 **Date Sampled:** 9/24/09

TRIAXIAL SHEAR TEST REPORT

FFEBJV, LLC

Figure _____

Tested By: ARS/JC **Checked By:** MKA

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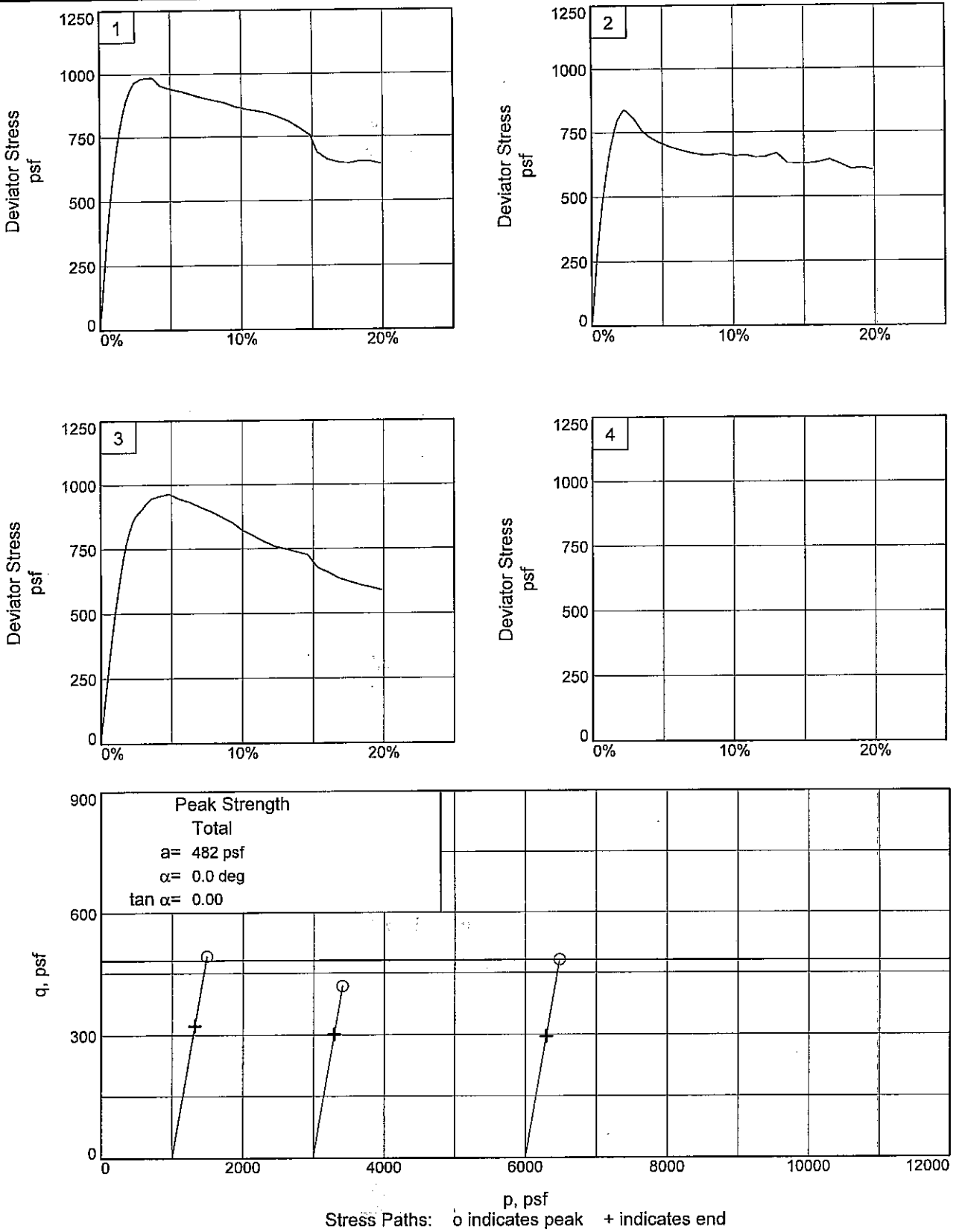

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

Source of Sample: NF05-62PU **Depth:** 33.7 **Sample Number:** 9C

Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: ARS/JC **Checked By:** MKC

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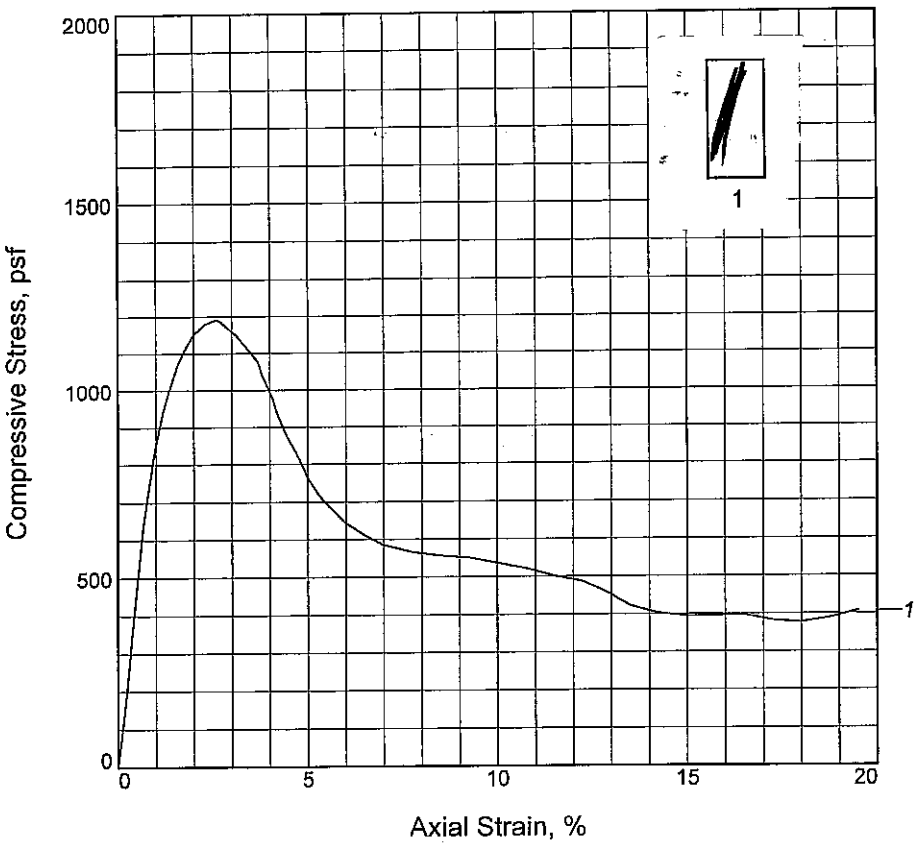
UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psf	1191			
Undrained shear strength, psf	595			
Failure strain, %	2.6			
Strain rate, %/min.	1.00			
Water content, %	72.4			
Wet density, pcf	97.7			
Dry density, pcf	56.7			
Saturation, %	98.3			
Void ratio	2.0191			
Specimen diameter, in.	1.407			
Specimen height, in.	3.111			
Height/diameter ratio	2.21			

Description: M GR CH4 W/ SL

LL = 93	**PL** = 31	**PI** = 62	**Assumed GS=** 2.74	**Type:** UNDISTURBED

Project No.: 07-022122
Date Sampled: 9/24/09
Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-62PU **Depth:** 41.7
Sample Number: 11C

UNCONFINED COMPRESSION TEST

FFEBJV, LLC

Tested By: ARS/JC **Checked By:** MKA

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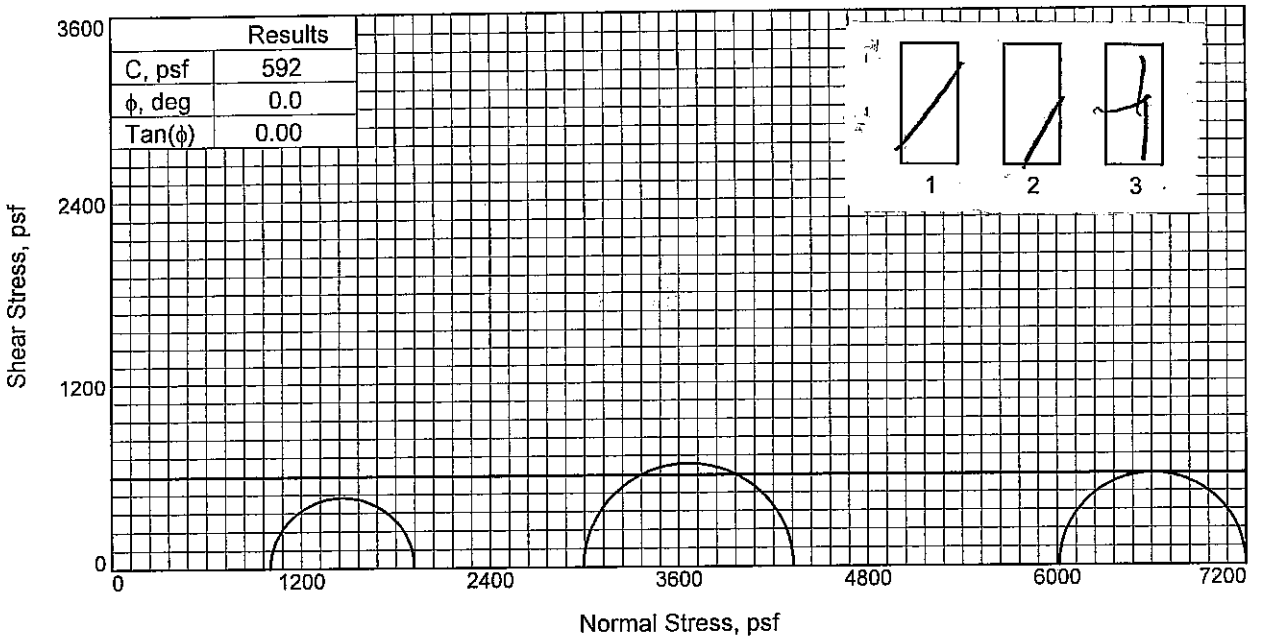

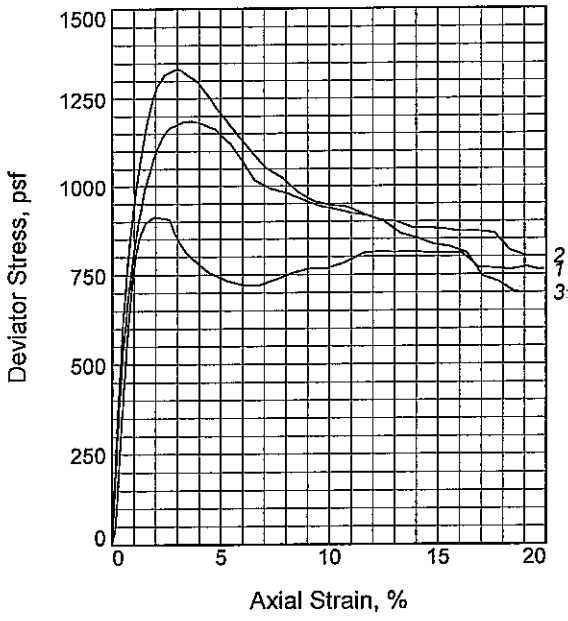

Sample No.		1	2	3
Initial	Water Content, %	57.7	58.1	58.4
	Dry Density, pcf	65.7	65.3	65.1
	Saturation, %	98.5	98.4	98.4
	Void Ratio	1.6047	1.6185	1.6273
	Diameter, in.	1.402	1.411	1.408
	Height, in.	3.110	3.110	3.108
At Test	Water Content, %	57.7	58.1	58.4
	Dry Density, pcf	65.7	65.3	65.1
	Saturation, %	98.5	98.4	98.4
	Void Ratio	1.6047	1.6185	1.6273
	Diameter, in.	1.402	1.411	1.408
	Height, in.	3.110	3.110	3.108
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.98	20.79	41.76
Fail. Stress, psf		913	1333	1185
Strain, %		1.9	3.0	3.3
Ult. Stress, psf		720	877	835
Strain, %				
σ_1 Failure, psf		1918	4327	7199
σ_3 Failure, psf		1005	2994	6014

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: M GR CH4 W/ ARS SM, WD

LL= 73 **PL=** 28 **PI=** 45
Assumed Specific Gravity= 2.74
Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-62PU **Depth:** 45.7
Sample Number: 12C
Proj. No.: 07-022122 **Date Sampled:** 9/24/09

TRIAXIAL SHEAR TEST REPORT

FFEBJV, LLC

Tested By: ARS/JC **Checked By:** MKA

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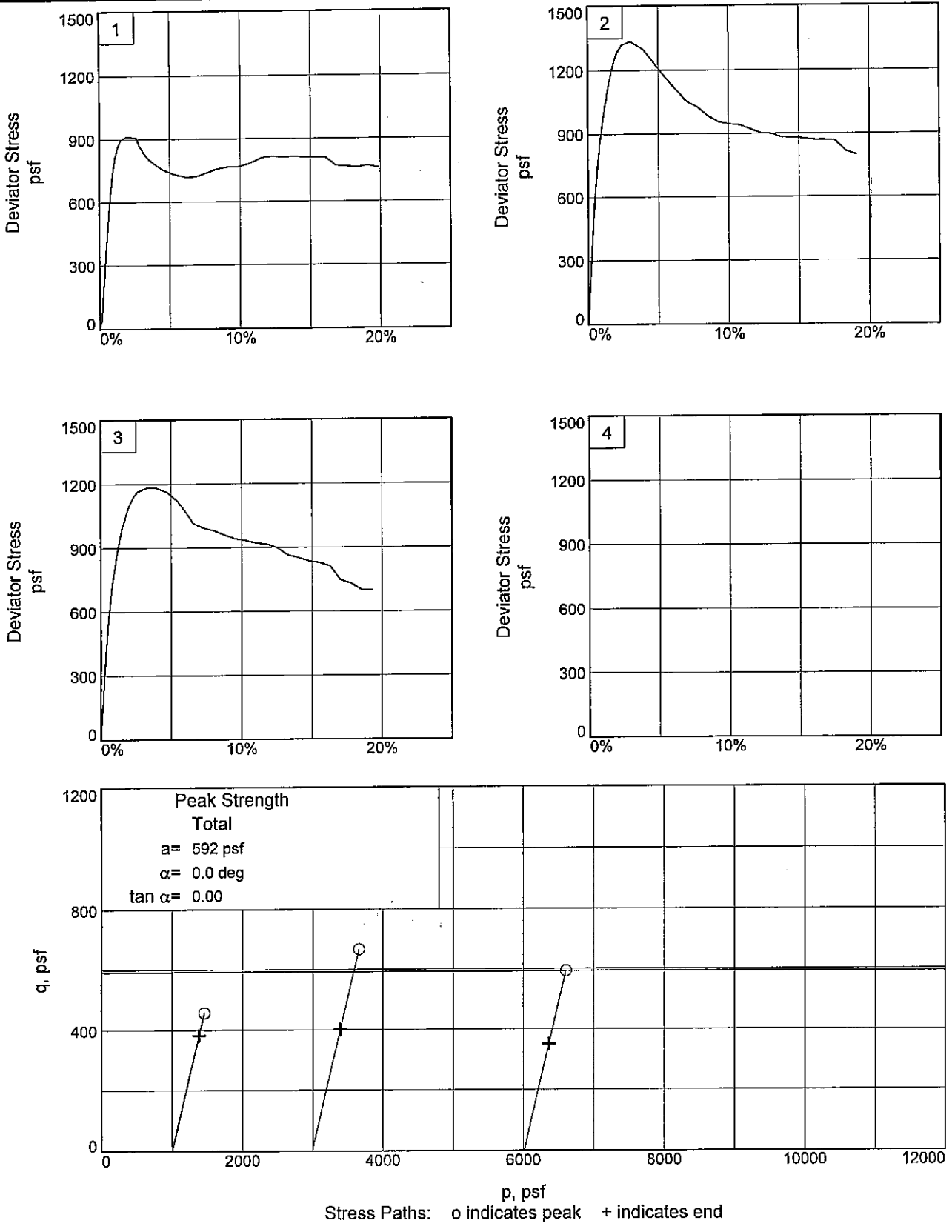

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

Source of Sample: NF05-62PU **Depth:** 45.7 **Sample Number:** 12C

Project No.: 07-022122 **Figure** _____ **FFEBJV, LLC**

Tested By: ARS/JC **Checked By:** MKA

"Confidential Information: Privileged & Confidential Work Product"

SUMMARY OF LABORATORY TEST RESULTS

Project: New Orleans To Venice Plaquemines Parish, La Assigned By: _____

Project Number: 07-022122
Boring: NF05-63CU

Current Date: 1/12/2010

Sample Number	Depth	Visual Classification	USCS	E(f)	W%	Dry Dens (pcf)	Wet Dens (pcf)	Sat %	Shear Test Type	Angle	Cohesion (psf)	Unconf. Comp. Str.	LL	PL	PI	Torvane (tsf)	Other Tests
1A	0.0	VST T & GR CH2 W/ LNS ML, RT, SIF	CH2		22												
1B	0.8	VST T & GR CH2 W/ LNS ML, RT, SIF	CH2		21												
1C	1.7	ST T & GR CH2 W/ LNS ML, ARS SM, RT	CH2		25								52	20	32		
1D	2.6	ST T & GR CH2 W/ LNS ML, ARS SM, RT	CH2		23												
2A	4.0	M GR CH3 W/ LNS & ARS SM, WD, O	CH3	3	50	71	106	96	UC	-	908	1816	78	41	37	0.66	
2B	4.8	SO DGR CH4 W/ CC, RT, O	CH4		84								91	34	57		OC = 8.1%
3A	8.0	GR ML W/ LYS CH, O, WD	ML		34												
3B	8.8	SO GR CL6 W/ LNS & ARS SM, O, WD	CL6		58	66	104	100	UU	0	259		43	18	25	0.23	
3C	9.7	SO GR CH4 W/ LNS & LYS SM, SIF, O	CH4		60												
3D	10.6	SO GR CH4 W/ LNS & LYS ML, O, RT	CH4		71	59	100	100	UU	0	401		96	27	69	0.30	
4A	12.0	GR ML W/ LNS & LYS CH	ML		33												
4B	12.8	SO GR CL6 W/ LNS & LYS SM, O, WD	CL6		43	78	112	99	UU	0	478		45	19	26	0.26	
4C	13.7	SO GR CH2 W/ LNS & LYS ML, CC	CH2		45												
4D	14.6	M GR CH4 W/ LNS & LYS ML, O, WD	CH4		51												
5A	16.0	M DGR CHOA W/ RT, WD	CHOA		140												
5B	16.8	M DGR CHOA W/ RT, WD	CHOA		117	40	86	98	UU	0	518		141	43	98	0.29	OC = 14.9%
5C	17.7	M GR CHOA W/ RT, WD	CHOA		130												
5D	18.6	GR ML W/ LYS CH, CC, RT	ML		31												
6A	20.0	M GR CH2 W/ LNS & LYS ML, WD	CH2		50												
6B	20.8	SO GR CL6 W/ LNS & LYS SM, LYS ML	CL6		51	71	107	99	UU	0	435		46	18	28	0.30	
6C	21.7	SO GR CH3 W/ LNS & LYS ML, WD	CH3		69												
6D	22.6	SO GR CH3 W/ LNS & LYS ML, SIF, O	CH3		67												
7A	24.0	M GR CH3 W/ O, RT	CH3		51												
7B	24.8	M GR CH3 W/ ARS SM, WD, RT	CH3	11	45	76	110	98	UC	-	552	1105	64	22	42	0.41	
7C	25.7	M GR CH4 W/ LNS ML, LNS SM, O, RT	CH4		47												
7D	26.6	GR ML W/ ARS CH, ARS SP, WD	ML		32												SV
8A	28.0	M GR CH2 W/ LYS & LNS ML, LNS SM, CC	CH2		43												
8B	28.8	SO GR CH3 W/ LNS & LYS ML, LYS SM, CC	CH3		58	66	104	100	UU	0	427		63	23	40	0.29	
8C	29.7	M GR CH4 W/ LNS & LYS ML, CC	CH4		48												
8D	30.6	SO GR CH4 W/ LNS & LYS ML, CC	CH4		57												
9A	32.0	SO GR CH4 W/ ARS ML, SIF	CH4		82												
9B	32.8	SO GR CH4 W/ ARS ML, SIF	CH4		60												
9C	33.7	SO GR CH4 W/ ARS ML, SIF	CH4		57												
9D	34.6	SO GR CH4 W/ ARS SM, SIF, SL	CH4		65	61	101	100	UU	0	358		80	28	52	0.30	
10A	36.0	M GR CH4 W/ ARS ML, SIF	CH4		55												

Remarks: 1 UU (3P) added

Checked By: WHM 1<A

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File Name: 05-63CU.xls

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SUMMARY OF LABORATORY TEST RESULTS

Project: New Orleans To Venice Plaquemines Parish, La Assigned By: _____

Project Number: 07-022122
Boring: NF05-63CU

Current Date: 1/12/2010

Sample Number	Depth	Visual Classification	USCS	E(f)	W%	Dry Dens (pcf)	Wet Dens (pcf)	Sat %	Shear Test Type	Angle	Cohesion (psf)	Unconf. Comp. Str.	LL	PL	PI	Torvane (tsf)	Other Tests
10B	36.8	M GR CH4 W/ ARS ML, SIF	CH4		56												
10C	37.7	M GR CL6 W/ LNS & LYS CH, SIF	CL6		36												
10D	38.6	SO GR CL4 W/ LNS & LYS CH, LYS SM, SIF	CL4		38	83	115	100	UU	0	495		35	24	11	0.20	
11A	40.0	GR SM W/ LNS & LYS CH	SM		29												
11B	40.8	M GR CH3 W/ LNS & LYS ML	CH3		41												
11C	41.7	M GR CH4 W/ LNS & LYS ML	CH4		52												
11D	42.6	M GR CH4 W/ ARS SM, SL	CH4	5	61	64	103	100	UC	-	502	1004	84	25	59	0.33	
12A	44.0	M GR CH3 W/ LNS & LYS ML	CH3		44												
12B	44.8	M GR CH4 W/ LNS & LYS SM	CH4		51												
12C	45.7	M GR CH4 W/ LNS & LYS SM	CH4		59												
12D	46.6	M GR CH4	CH4		65												
13A	48.0	M GR CH4 W/ LNS & LYS ML	CH4		63												
13B	48.8	M GR CH3 W/ ARS ML, SL	CH3		58	67	105	100	UU	0	619		65	22	43	0.30	
13C	49.7	M GR CH4 W/ LNS & LYS ML	CH4		67												
13D	50.6	M GR CH4 W/ LNS & LYS ML	CH4		65												
14A	52.0	M GR CH4 W/ LNS & LYS ML	CH4		57												
14B	52.8	M GR CH4 W/ LNS & LYS ML	CH4		56												
14C	53.7	M GR CH4 W/ LNS & LYS ML	CH4		51												
14D	54.6	M GR CH4 W/ LNS & LYS ML	CH4		51												
15A	56.0	M GR CH4 W/ LNS ML	CH4		63												
15B	56.8	M GR CH3 W/ ARS ML, SL	CH3		53	70	107	100	UU	0	668		67	23	44	0.35	
15C	57.7	M GR CH4 W/ LNS ML	CH4		67												
15D	58.6	M GR CH4 W/ LNS ML	CH4		67												
16A	60.0	M GR CH4	CH4		58												
16B	60.8	M GR CH4	CH4		68												
16C	61.7	M GR CH4 W/ ARS SM, SL	CH4	4	55	68	106	99	UC	-	743	1487	72	20	52	0.35	
16D	62.6	M GR CH4	CH4		63												
17A	64.0	M GR CH4	CH4		73												
17B	64.8	M GR CH4	CH4		75												
17C	65.7	M GR CH4 W/ LNS & LYS ML, SL	CH4		59	66	105	100	UU	0	692		77	23	54	0.39	MV=550psf
17D	66.6	M GR CH4	CH4		73												

Remarks: 1 UU (30) added

Checked By: MM / MKA

FFEB JV, LLC

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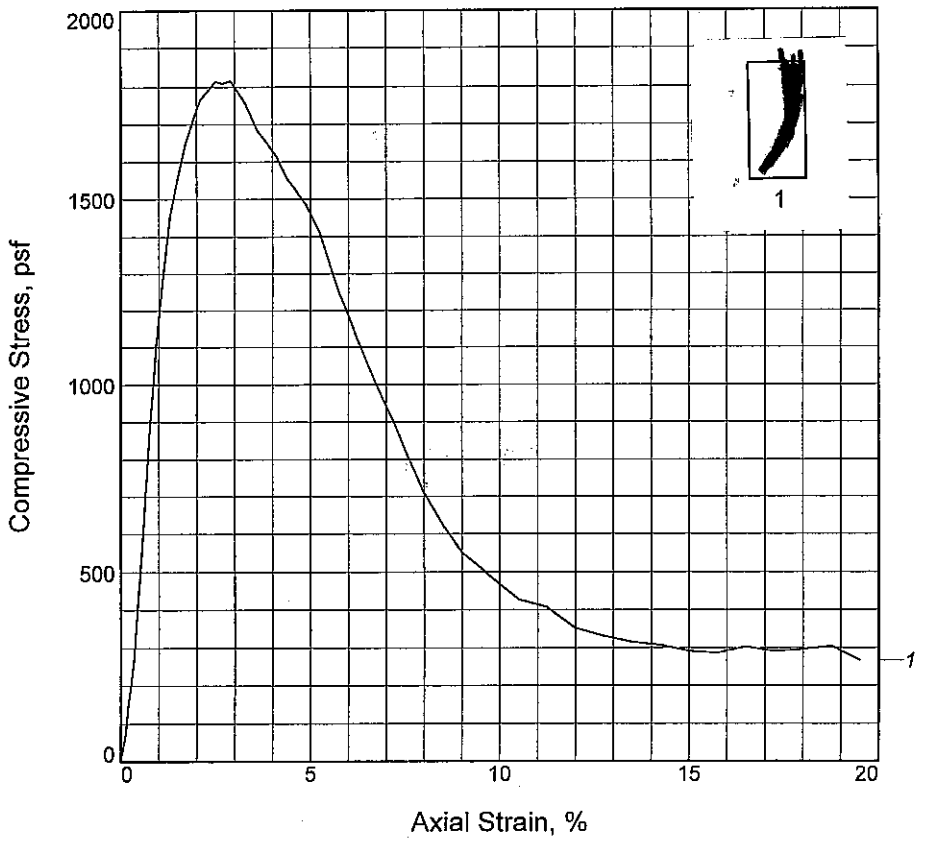
File Name: 05-63CU.xls

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psf	1816			
Undrained shear strength, psf	908			
Failure strain, %	2.9			
Strain rate, %/min.	1.00			
Water content, %	49.7			
Wet density, pcf	105.6			
Dry density, pcf	70.5			
Saturation, %	96.1			
Void ratio	1.4073			
Specimen diameter, in.	1.419			
Specimen height, in.	3.110			
Height/diameter ratio	2.19			

Description: M GR CH3 W/ LNS & ARS SM, WD, O

LL = 78	**PL** = 41	**PI** = 37	**Assumed GS=** 2.72	**Type:** UNDISTURBED

Project No.: 07-022122
Date Sampled: 10/6/09
Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-63CU **Depth:** 4.0
Sample Number: 2A

UNCONFINED COMPRESSION TEST

FFEBJV, LLC

Tested By: ARS/JC **Checked By:** MKA

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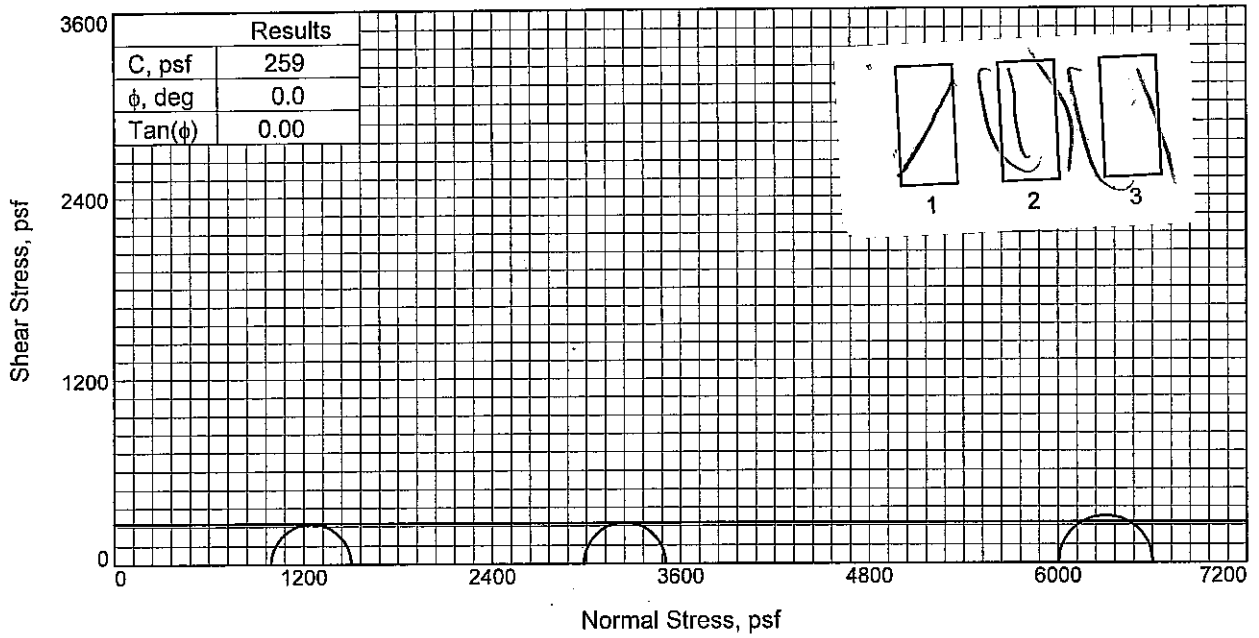

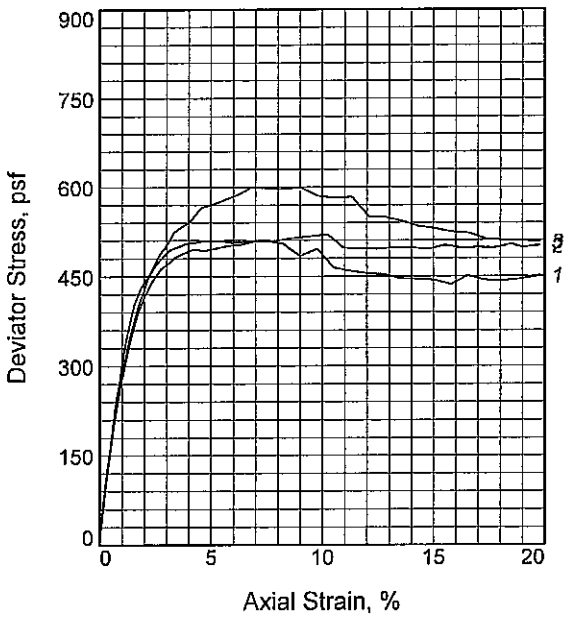

Sample No.		1	2	3
Initial	Water Content, %	63.4	57.2	54.6
	Dry Density, pcf	62.9	66.4	68.5
	Saturation, %	100.9	99.4	99.9
	Void Ratio	1.7212	1.5761	1.4971
	Diameter, in.	1.412	1.421	1.416
	Height, in.	3.096	3.095	3.093
At Test	Water Content, %	63.4	57.2	54.6
	Dry Density, pcf	62.9	66.4	68.5
	Saturation, %	100.9	99.4	99.9
	Void Ratio	1.7212	1.5761	1.4971
	Diameter, in.	1.412	1.421	1.416
	Height, in.	3.096	3.095	3.093
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.91	20.72	41.69
Fail. Stress, psf		508	520	599
Strain, %		5.2	10.2	9.1
Ult. Stress, psf		443	495	530
Strain, %				
σ_1 Failure, psf		1503	3504	6603
σ_3 Failure, psf		994	2984	6004

Type of Test: Unconsolidated Undrained

Sample Type: UNDISTURBED

Description: SO GR CH2 W/ LNS & ARS SM, O, WD

LL= 43 **PL=** 18 **PI=** 25

Assumed Specific Gravity= 2.74

Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La

Source of Sample: NF05-63CU **Depth:** 8.8

Sample Number: 3B

Proj. No.: 07-022122 **Date Sampled:** 10/6/09

TRIAXIAL SHEAR TEST REPORT

FFEBJV, LLC

Tested By: ARS/JC **Checked By:** MKC

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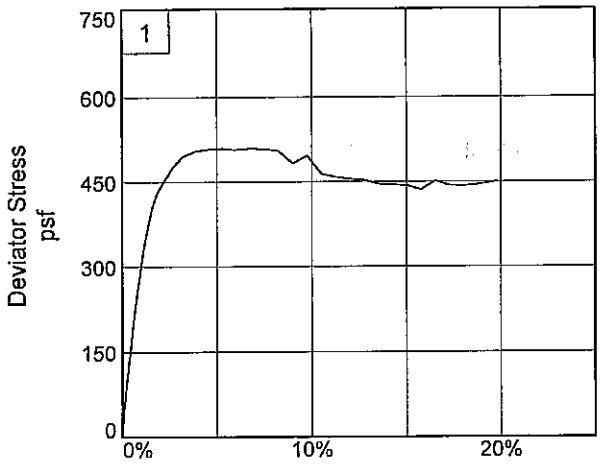

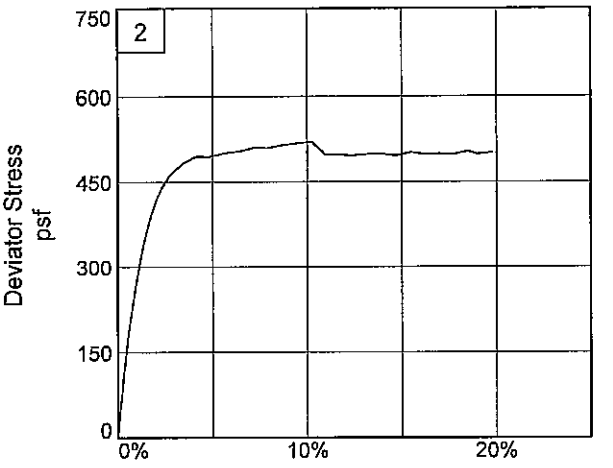

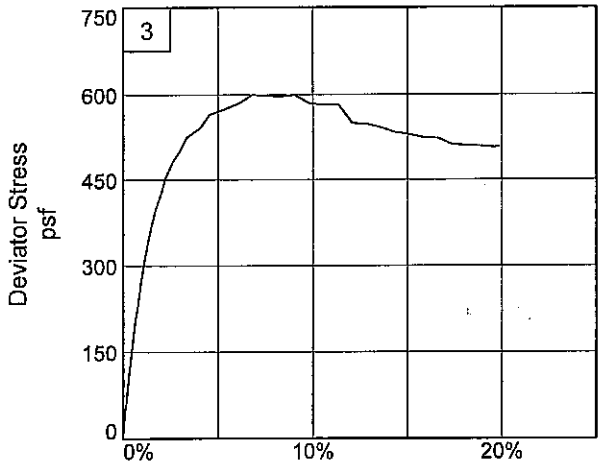

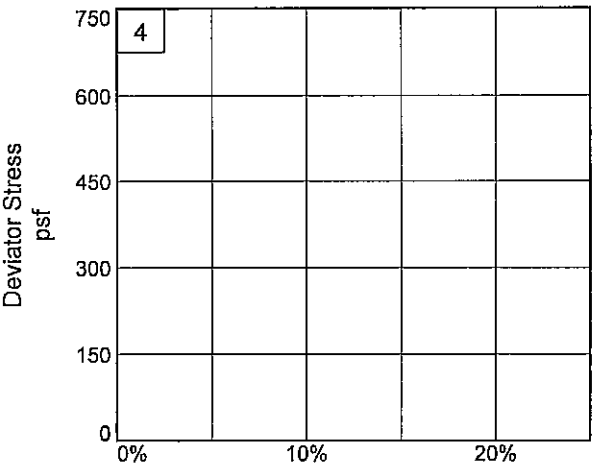

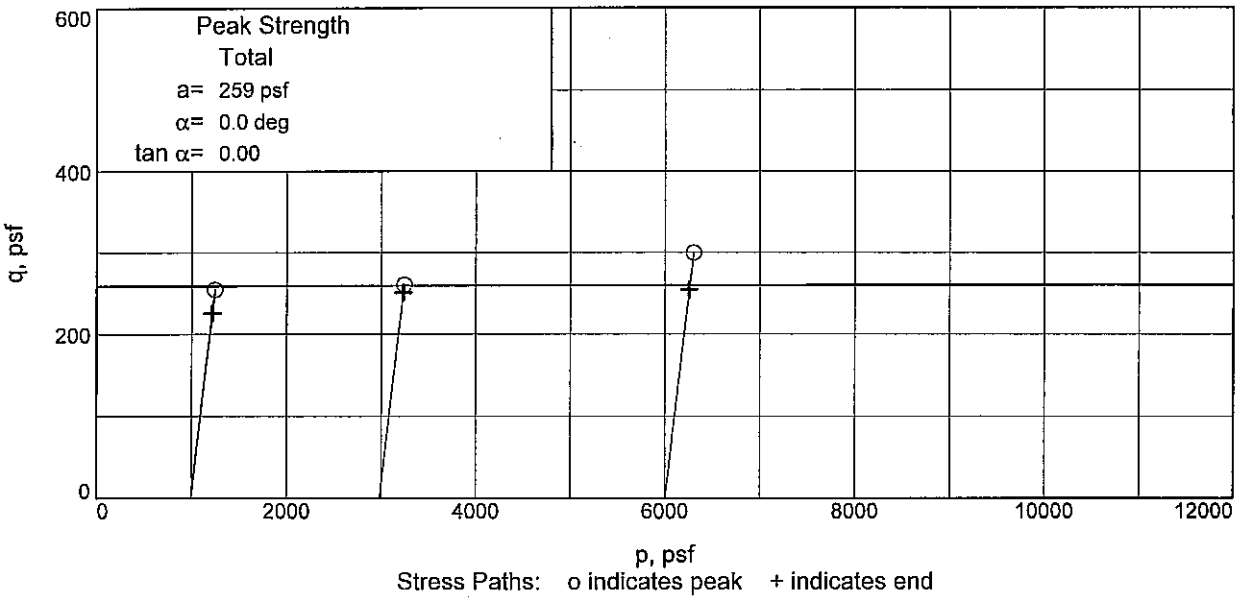

Stress Paths: o indicates peak + indicates end

Client: U.S. Army Corps of Engineers
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Source of Sample: NF05-63CU **Depth:** 8.8 **Sample Number:** 3B
Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: ARS/JC Checked By: MKC

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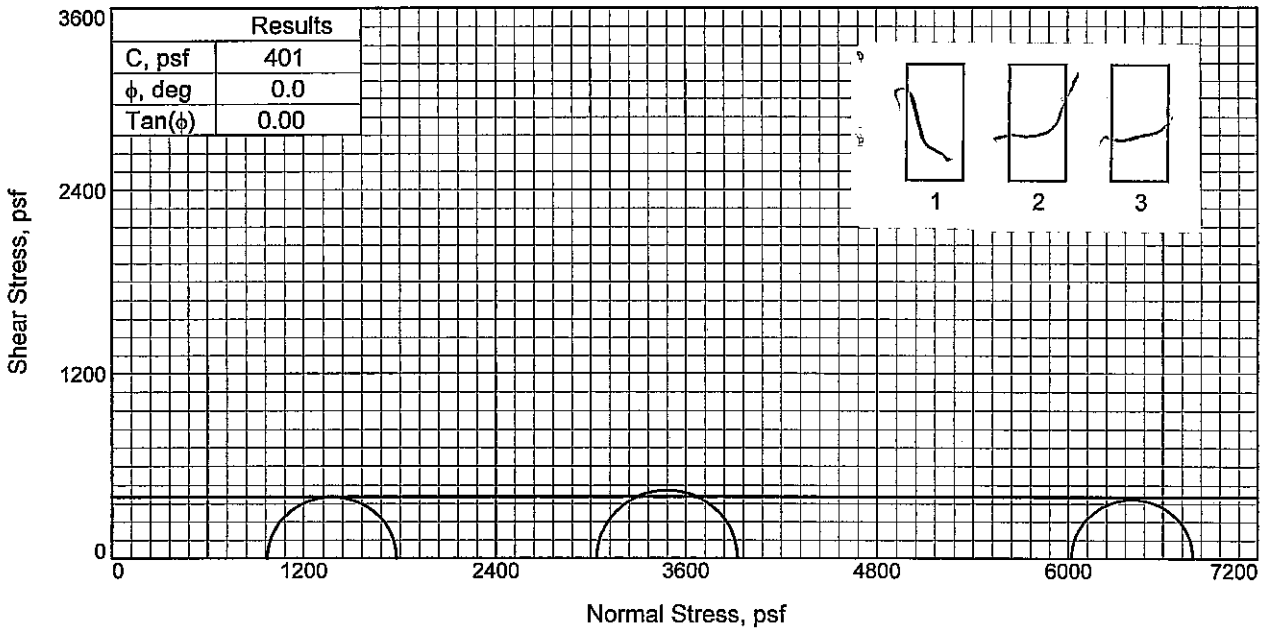

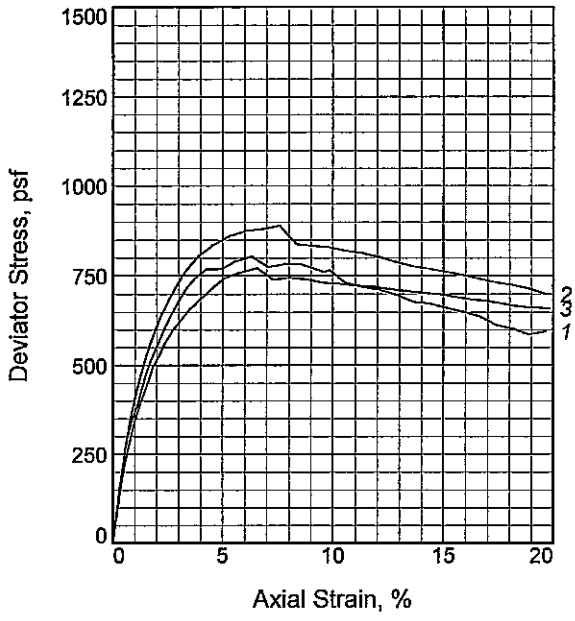

Sample No.		1	2	3
Initial	Water Content, %	71.2	60.3	80.2
	Dry Density, pcf	58.1	64.4	53.8
	Saturation, %	100.4	99.9	100.8
	Void Ratio	1.9437	1.6542	2.1793
	Diameter, in.	1.392	1.398	1.390
	Height, in.	3.096	3.095	3.093
At Test	Water Content, %	71.2	60.3	80.2
	Dry Density, pcf	58.1	64.4	53.8
	Saturation, %	100.4	99.9	100.8
	Void Ratio	1.9437	1.6542	2.1793
	Diameter, in.	1.392	1.398	1.390
	Height, in.	3.096	3.095	3.093
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.76	21.09	41.80
Fail. Stress, psf		804	889	771
Strain, %		6.3	7.6	6.6
Ult. Stress, psf		662	761	699
Strain, %				
σ_1 Failure, psf		1777	3925	6790
σ_3 Failure, psf		974	3036	6019

Type of Test:
Unconsolidated Undrained

Sample Type: UNDISTURBED

Description: SO GR CH4 W/ LYS & LNS ML, O, RT

LL= 96 **PL=** 27 **PI=** 69

Assumed Specific Gravity= 2.74

Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La

Source of Sample: NF05-63CU **Depth:** 10.6

Sample Number: 3D

Proj. No.: 07-022122 **Date Sampled:** 11/24/09

TRIAXIAL SHEAR TEST REPORT

FFEBJV, LLC

Tested By: ARS **Checked By:** MC

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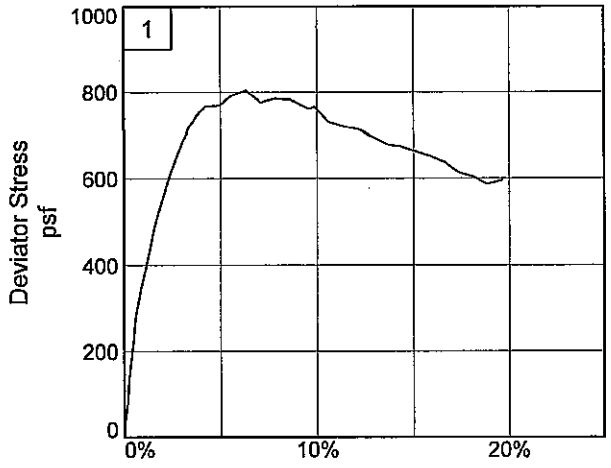

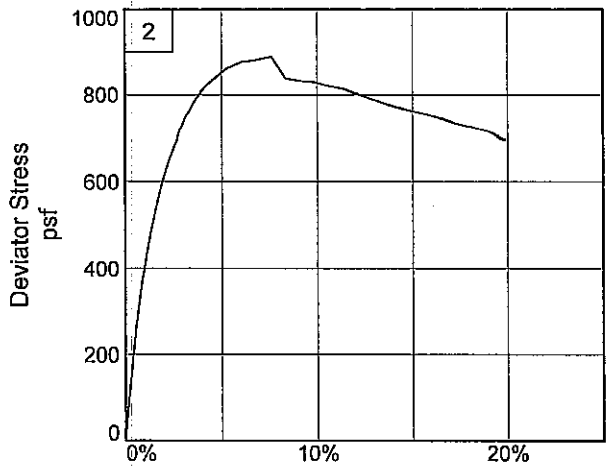

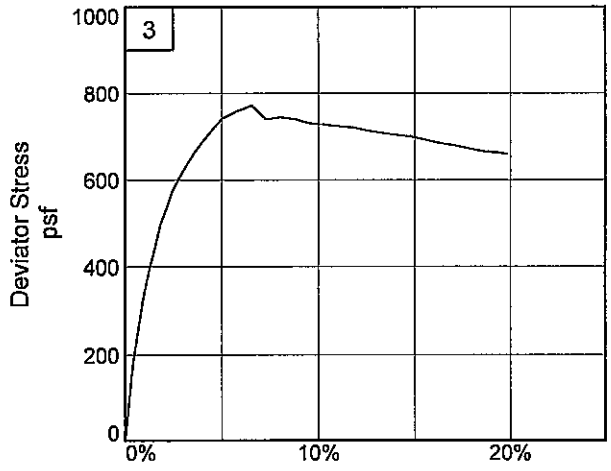

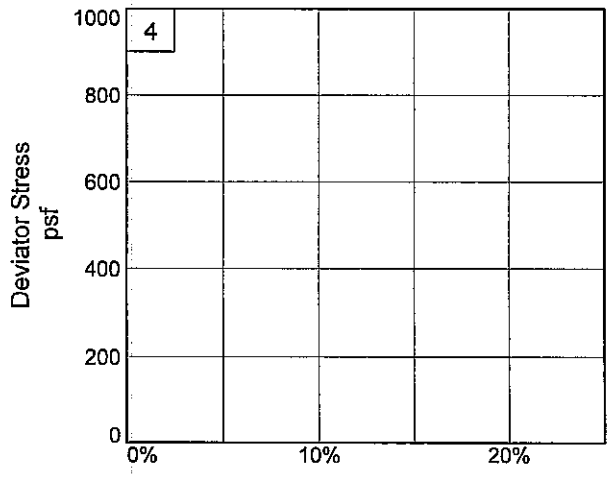

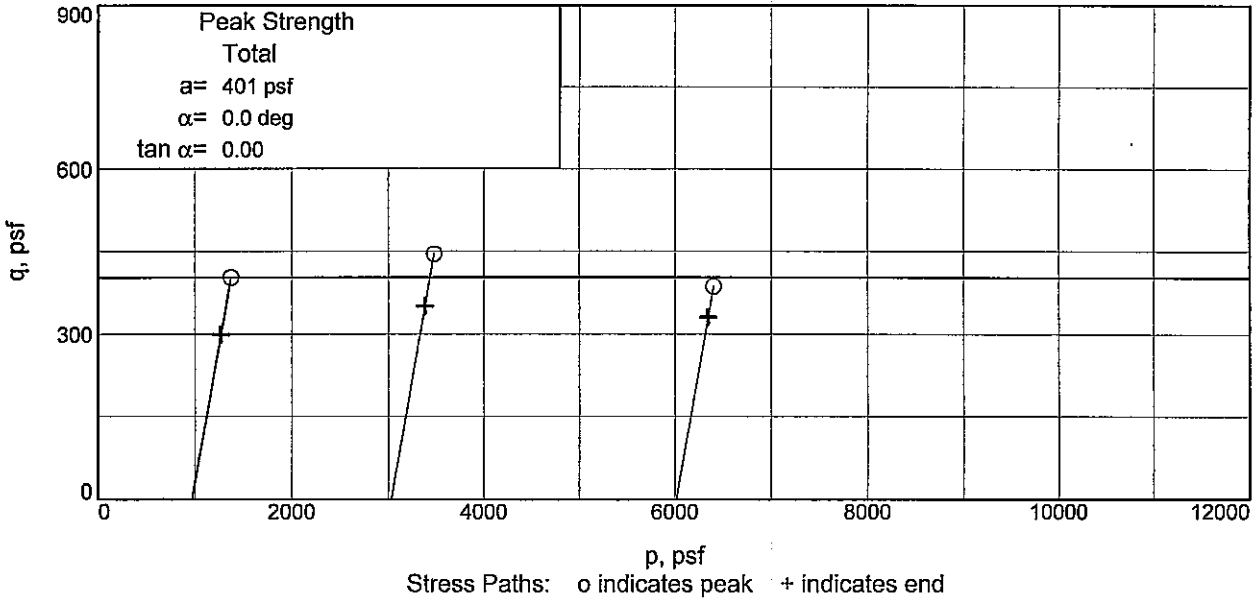

Client: U.S. Army Corps of Engineers
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Source of Sample: NF05-63CU **Depth:** 10.6 **Sample Number:** 3D
Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: ARS **Checked By:** WC

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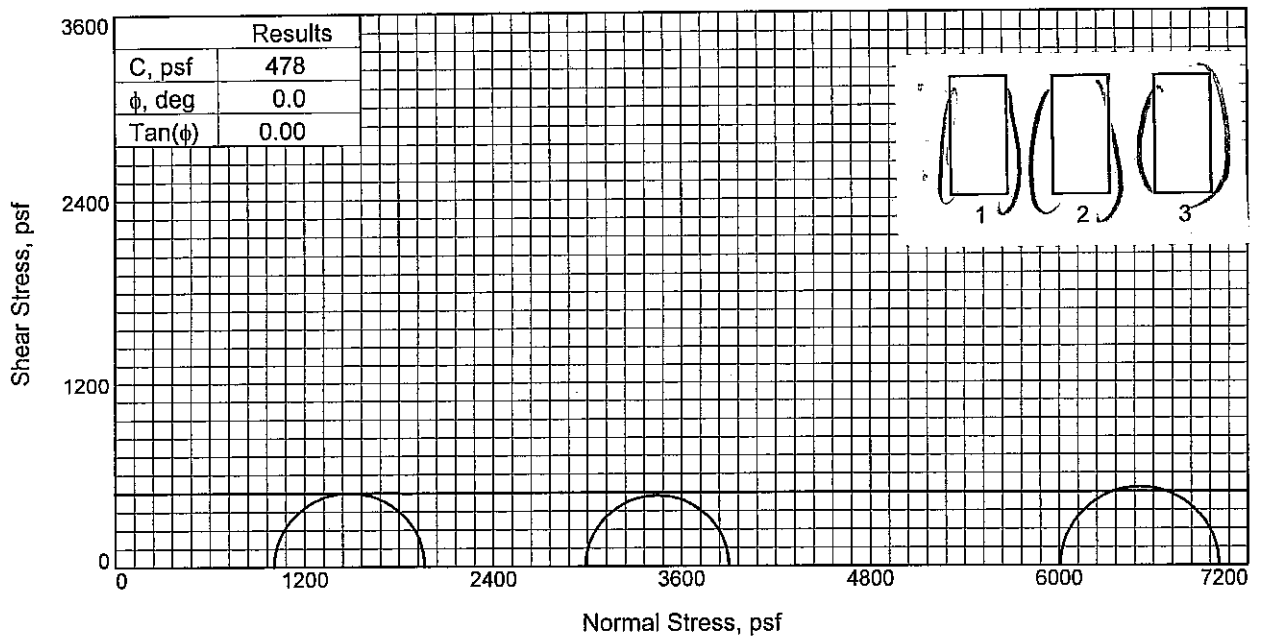

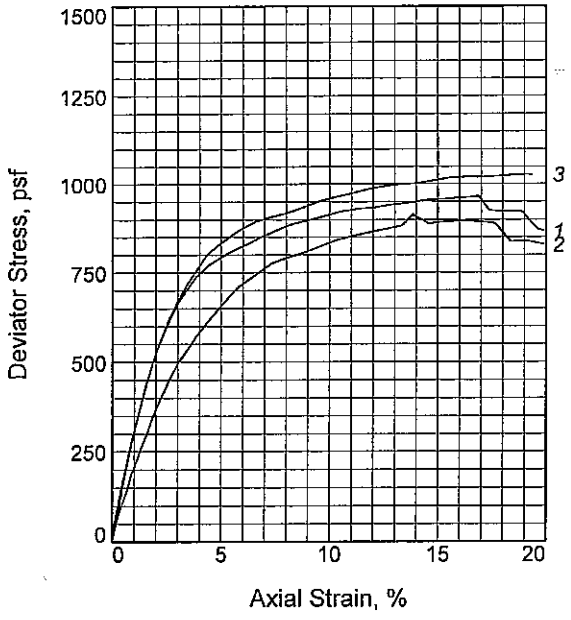

Sample No.		1	2	3
Initial	Water Content, %	42.8	44.0	41.8
	Dry Density, pcf	78.1	77.3	79.9
	Saturation, %	98.5	99.4	100.2
	Void Ratio	1.1909	1.2134	1.1415
	Diameter, in.	1.417	1.412	1.410
	Height, in.	3.098	3.094	3.104
At Test	Water Content, %	42.8	44.0	41.8
	Dry Density, pcf	78.1	77.3	79.9
	Saturation, %	98.5	99.4	100.2
	Void Ratio	1.1909	1.2134	1.1415
	Diameter, in.	1.417	1.412	1.410
	Height, in.	3.098	3.094	3.104
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.99	20.75	41.72
Fail. Stress, psf		957	913	1011
Strain, %		15.1	13.9	14.8
Ult. Stress, psf		957	888	1011
Strain, %				
σ_1 Failure, psf		1963	3901	7019
σ_3 Failure, psf		1007	2988	6008

Type of Test: Unconsolidated Undrained

Sample Type: UNDISTURBED

Description: SO GR CH2 W/ LNS & LYS SM, O, WD

LL= 45 **PL=** 19 **PI=** 26

Assumed Specific Gravity= 2.74

Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La Jefferson Parish, La

Source of Sample: NF05-63CU **Depth:** 12.8

Sample Number: 4B

Proj. No.: 07-022122 **Date Sampled:** 10/6/09

TRIAXIAL SHEAR TEST REPORT

FFEBJV, LLC

Tested By: ARS/JC **Checked By:** MKA

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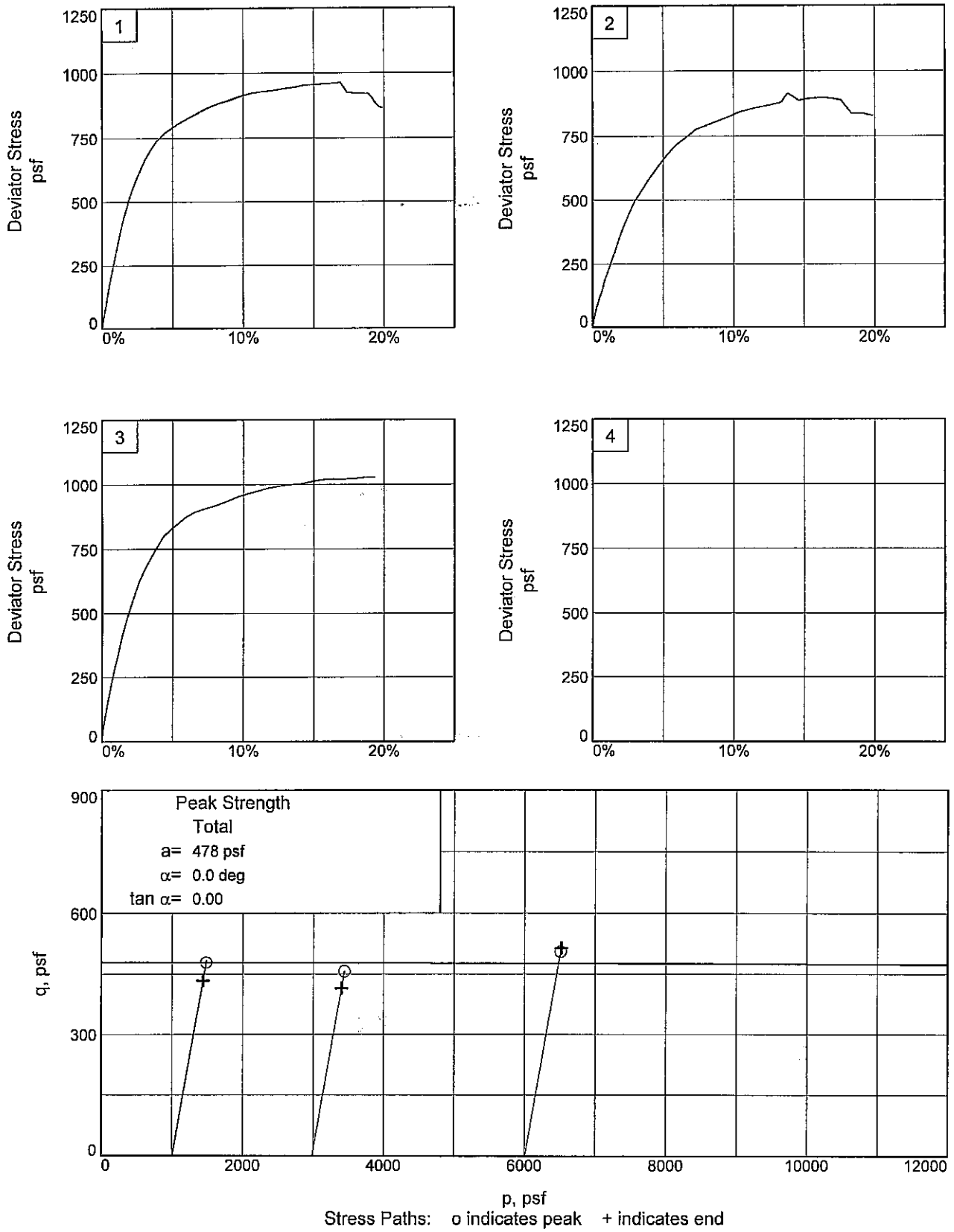


Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

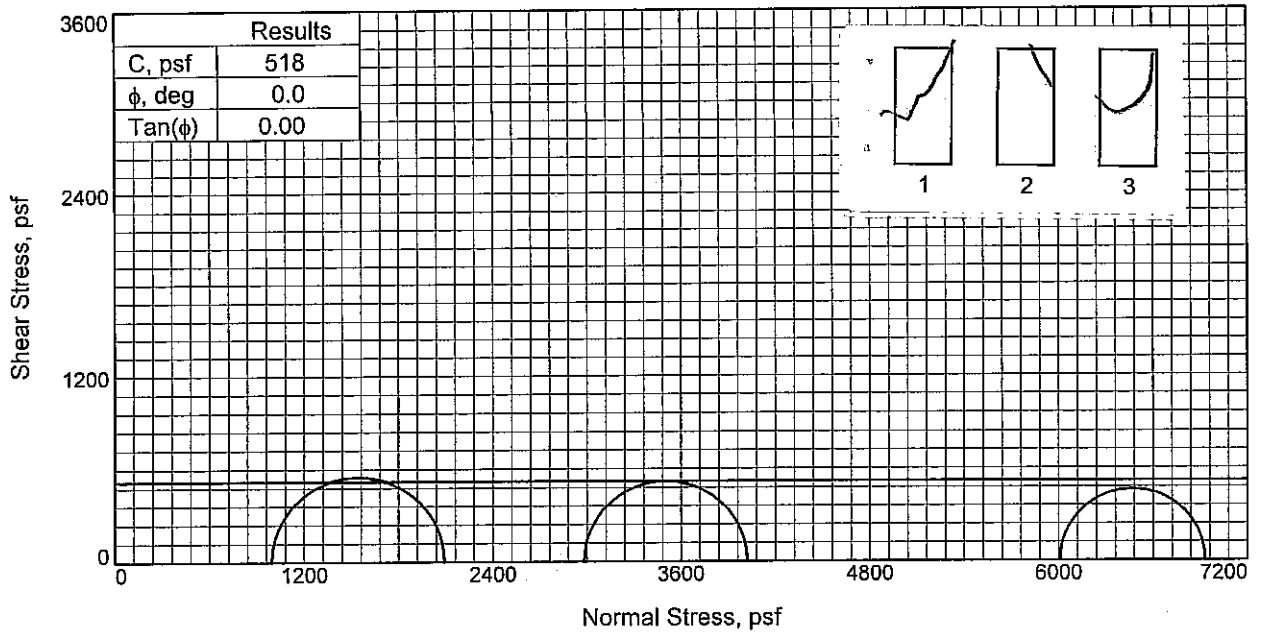
Source of Sample: NF05-63CU **Depth:** 12.8 **Sample Number:** 4B

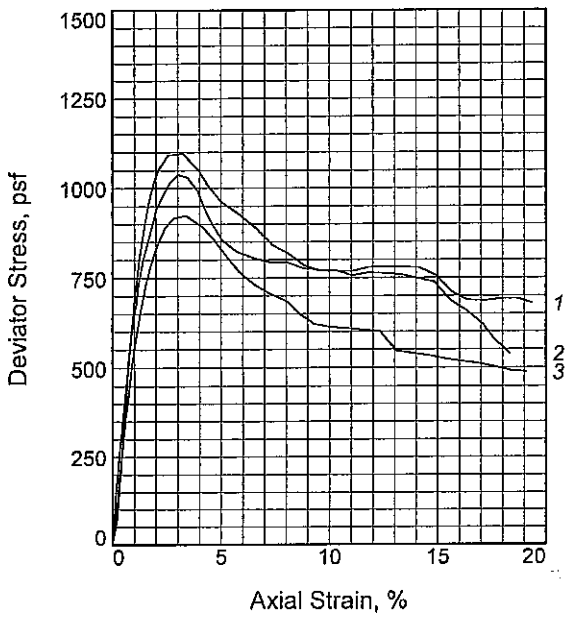
Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: ARS/JC **Checked By:** MKA

"Confidential Information: Privileged & Confidential Work Product"





Sample No.		1	2	3
Initial	Water Content, %	116.5	117.8	116.0
	Dry Density, pcf	39.6	39.6	39.6
	Saturation, %	97.9	98.9	97.2
	Void Ratio	3.0938	3.0950	3.1029
	Diameter, in.	1.427	1.416	1.423
	Height, in.	3.112	3.109	3.109
At Test	Water Content, %	116.5	117.8	116.0
	Dry Density, pcf	39.6	39.6	39.6
	Saturation, %	97.9	98.9	97.2
	Void Ratio	3.0938	3.0950	3.1029
	Diameter, in.	1.427	1.416	1.423
	Height, in.	3.112	3.109	3.109
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.91	20.71	41.73
Fail. Stress, psf		1096	1037	922
Strain, %		3.3	3.0	3.2
Ult. Stress, psf		758	739	525
Strain, %				
σ_1 Failure, psf		2091	4020	6931
σ_3 Failure, psf		995	2983	6009

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: M DGR CHOA W/ RT, WD

LL= 141 **PL=** 43 **PI=** 98
Assumed Specific Gravity= 2.60
Remarks:

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-63CU **Depth:** 16.8
Sample Number: 5B
Proj. No.: 07-022122 **Date Sampled:** 10/6/09

TRIAXIAL SHEAR TEST REPORT

FFEBJV, LLC

Figure _____

Tested By: ARS/JC **Checked By:** MKA

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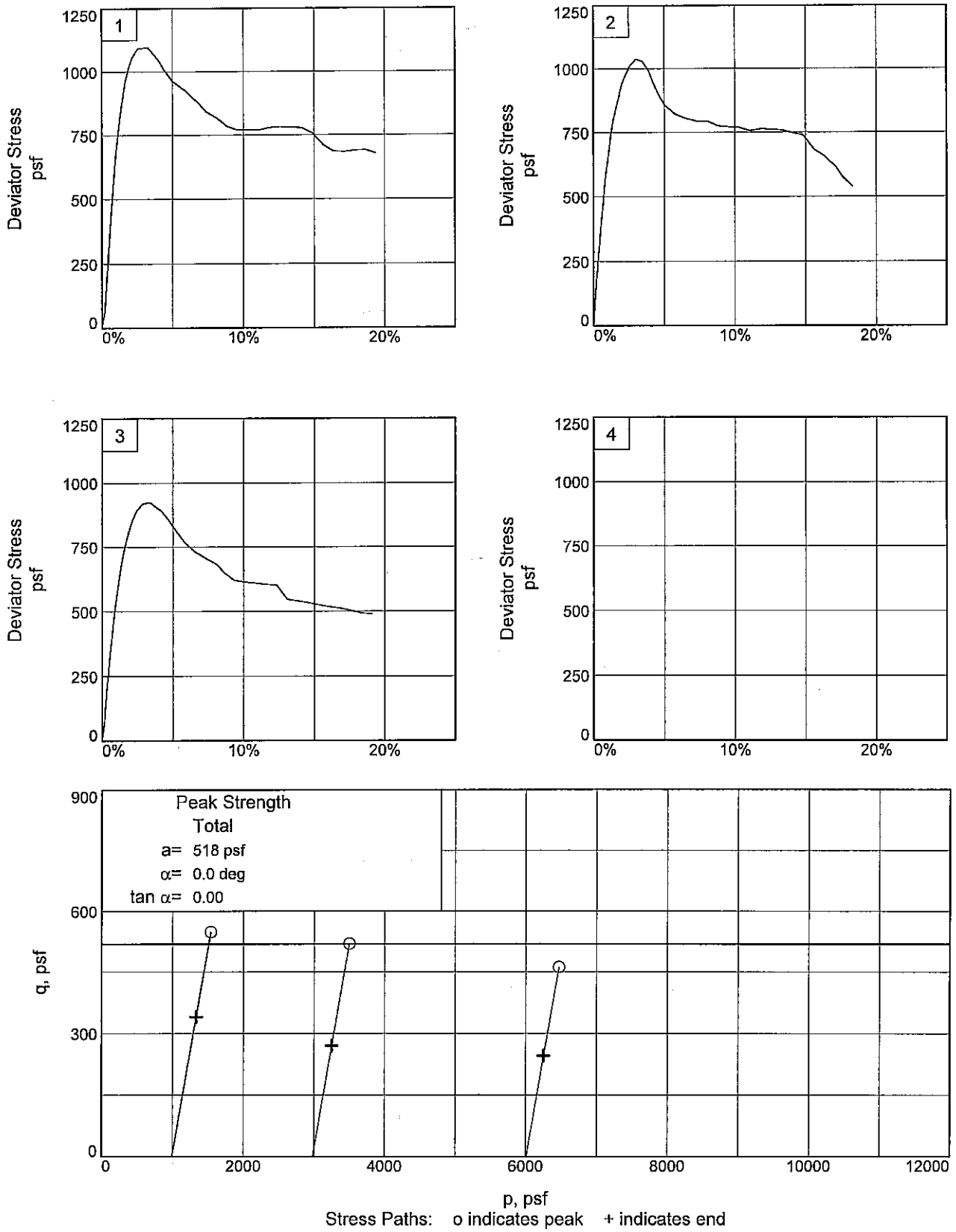

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

Source of Sample: NF05-63CU **Depth:** 16.8 **Sample Number:** 5B

Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: ARS/JC **Checked By:** MKC

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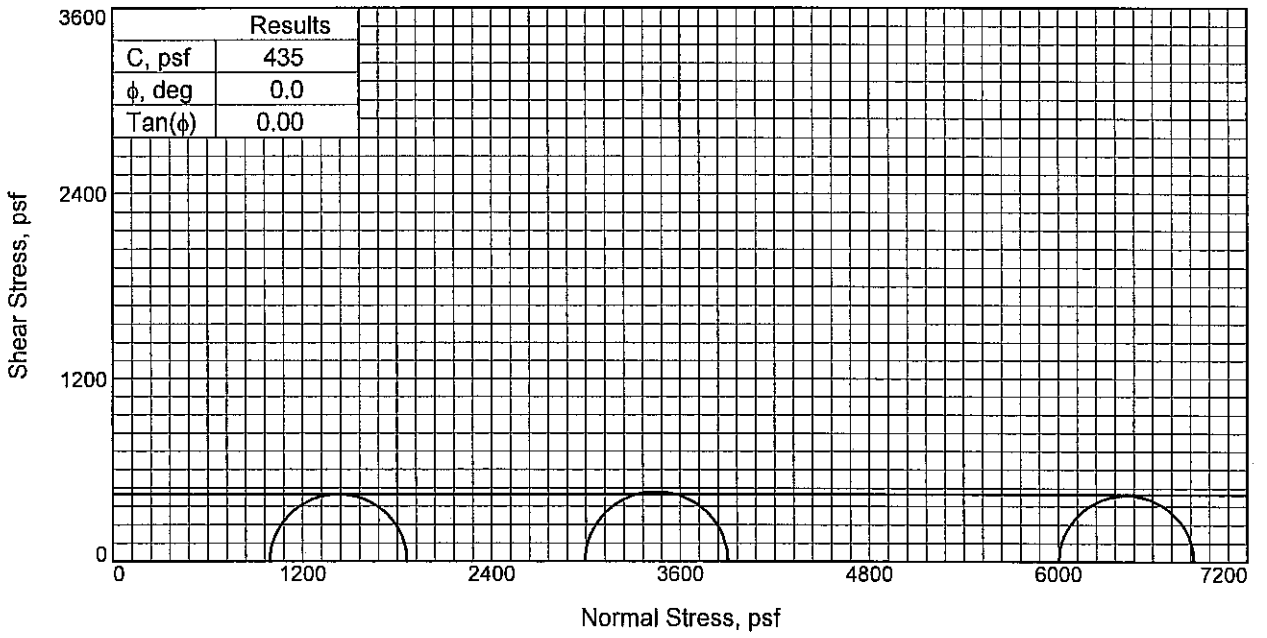

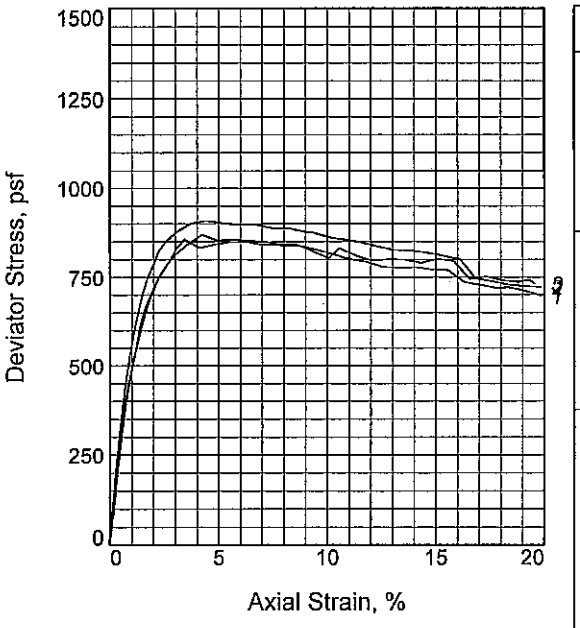

Sample No.		1	2	3
Initial	Water Content, %	51.0	51.3	51.4
	Dry Density, pcf	71.1	70.3	70.6
	Saturation, %	99.4	98.3	99.0
	Void Ratio	1.4047	1.4317	1.4237
	Diameter, in.	1.419	1.421	1.418
	Height, in.	3.112	3.099	3.114
At Test	Water Content, %	51.0	51.3	51.4
	Dry Density, pcf	71.1	70.3	70.6
	Saturation, %	99.4	98.3	99.0
	Void Ratio	1.4047	1.4317	1.4237
	Diameter, in.	1.419	1.421	1.418
	Height, in.	3.112	3.099	3.114
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.90	20.80	41.70
Fail. Stress, psf		869	908	856
Strain, %		4.2	4.5	3.4
Ult. Stress, psf		771	810	790
Strain, %				
σ_1 Failure, psf		1863	3902	6861
σ_3 Failure, psf		994	2995	6005

Type of Test:
Unconsolidated Undrained

Sample Type: UNDISTURBED

Description: SO GR CH2 W/ LNS & LYS SM, LYS ML

LL= 46 **PL=** 18 **PI=** 28

Assumed Specific Gravity= 2.74

Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La

Source of Sample: NF05-63CU **Depth:** 20.8

Sample Number: 6B

Proj. No.: 07-022122 **Date Sampled:** 10/6/09

TRIAXIAL SHEAR TEST REPORT

FFEBJV, LLC

Tested By: ARS/JC **Checked By:** MKA

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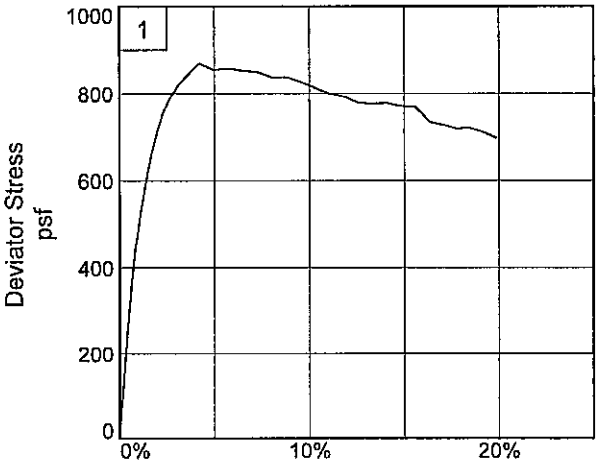
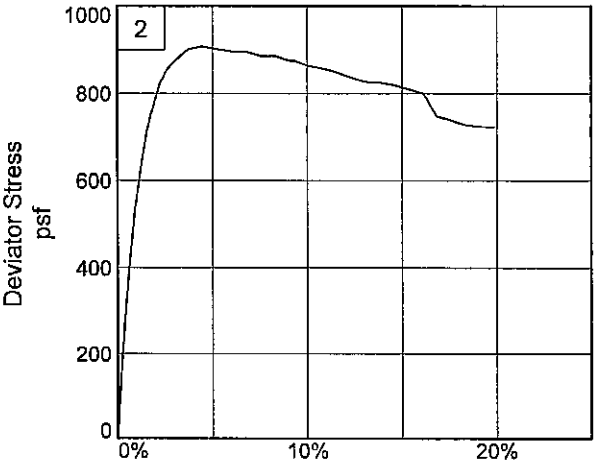
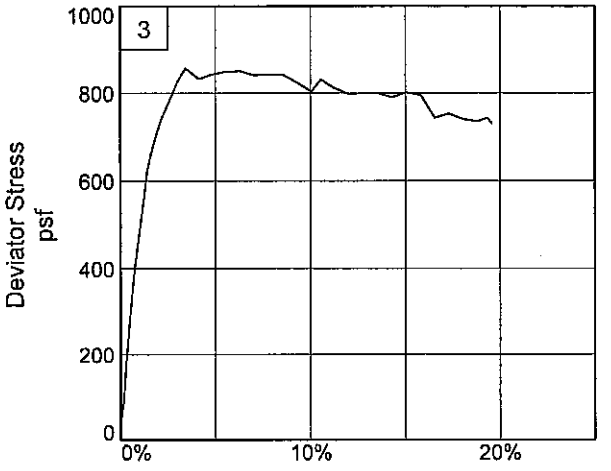
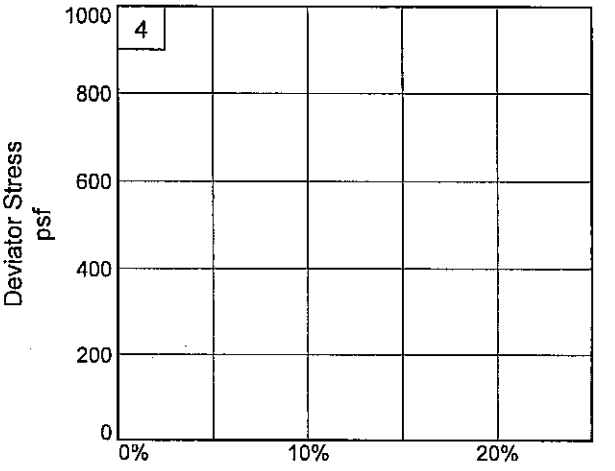
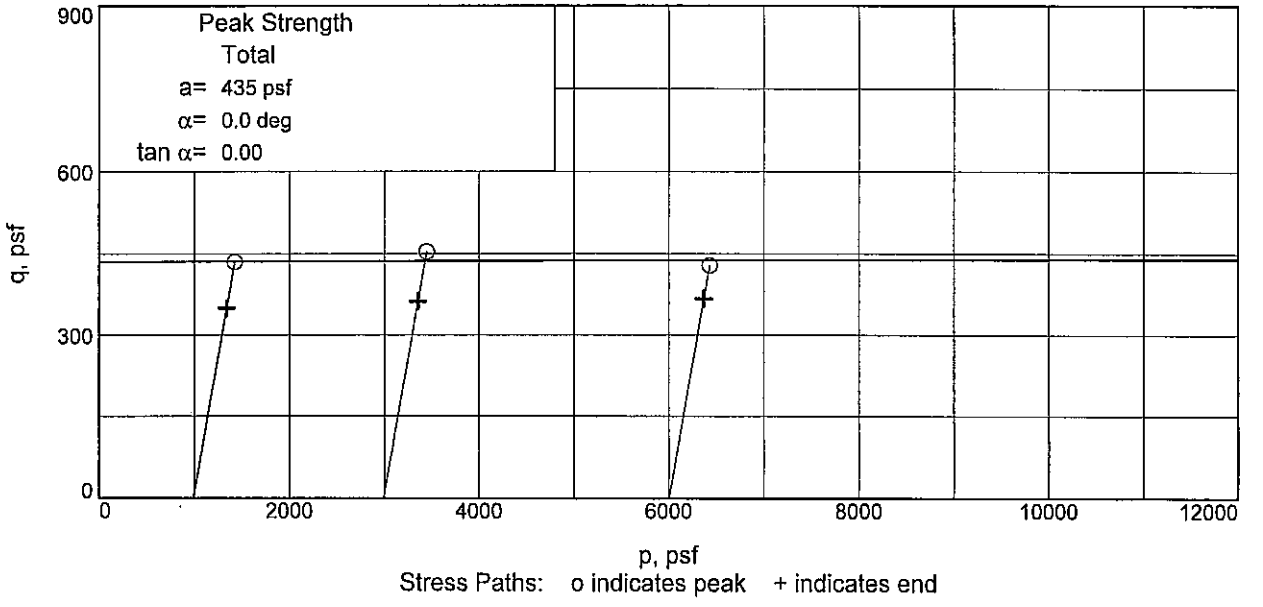










Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

Source of Sample: NF05-63CU **Depth:** 20.8 **Sample Number:** 6B

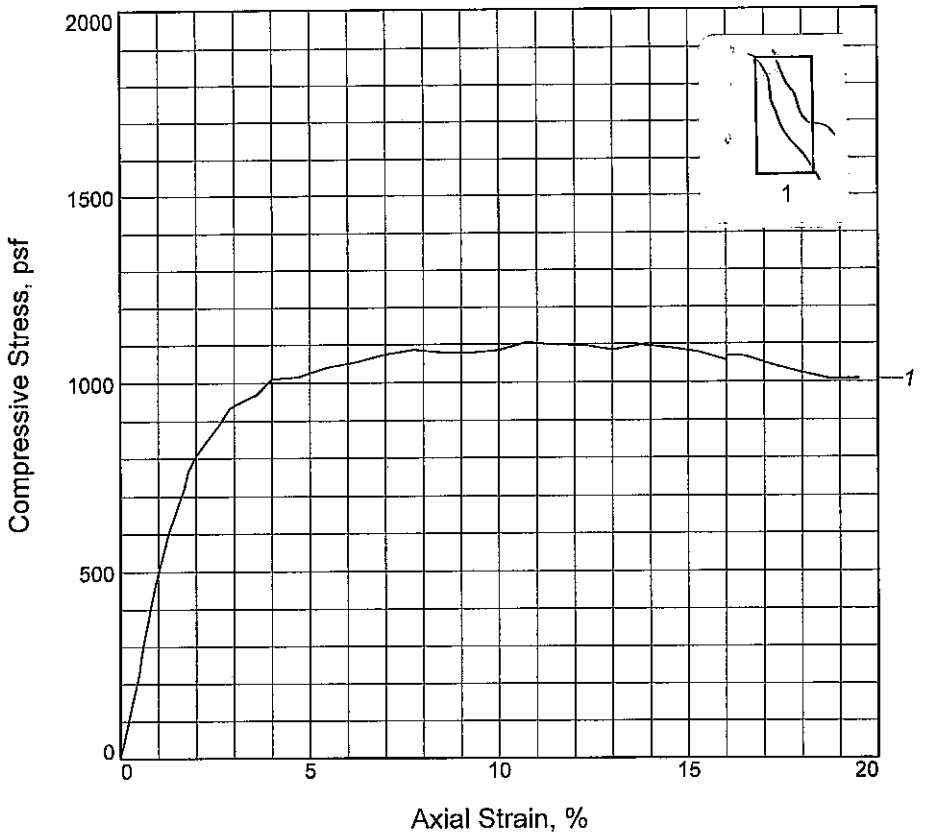
Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: ARS/JC **Checked By:** MKC

"Confidential Information Prepared for Confidential Work Product"

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psf	1105			
Undrained shear strength, psf	552			
Failure strain, %	10.8			
Strain rate, %/min.	1.00			
Water content, %	44.9			
Wet density, pcf	110.1			
Dry density, pcf	76.0			
Saturation, %	98.3			
Void ratio	1.2522			
Specimen diameter, in.	1.417			
Specimen height, in.	3.111			
Height/diameter ratio	2.20			

Description: M GR CH3 W/ ARS SM, WD, RT

LL = 64	**PL** = 22	**PI** = 42	**Assumed GS=** 2.74	**Type:** UNDISTURBED

Project No.: 07-022122
Date Sampled: 10/6/09
Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-63CU **Depth:** 24.8
Sample Number: 7B

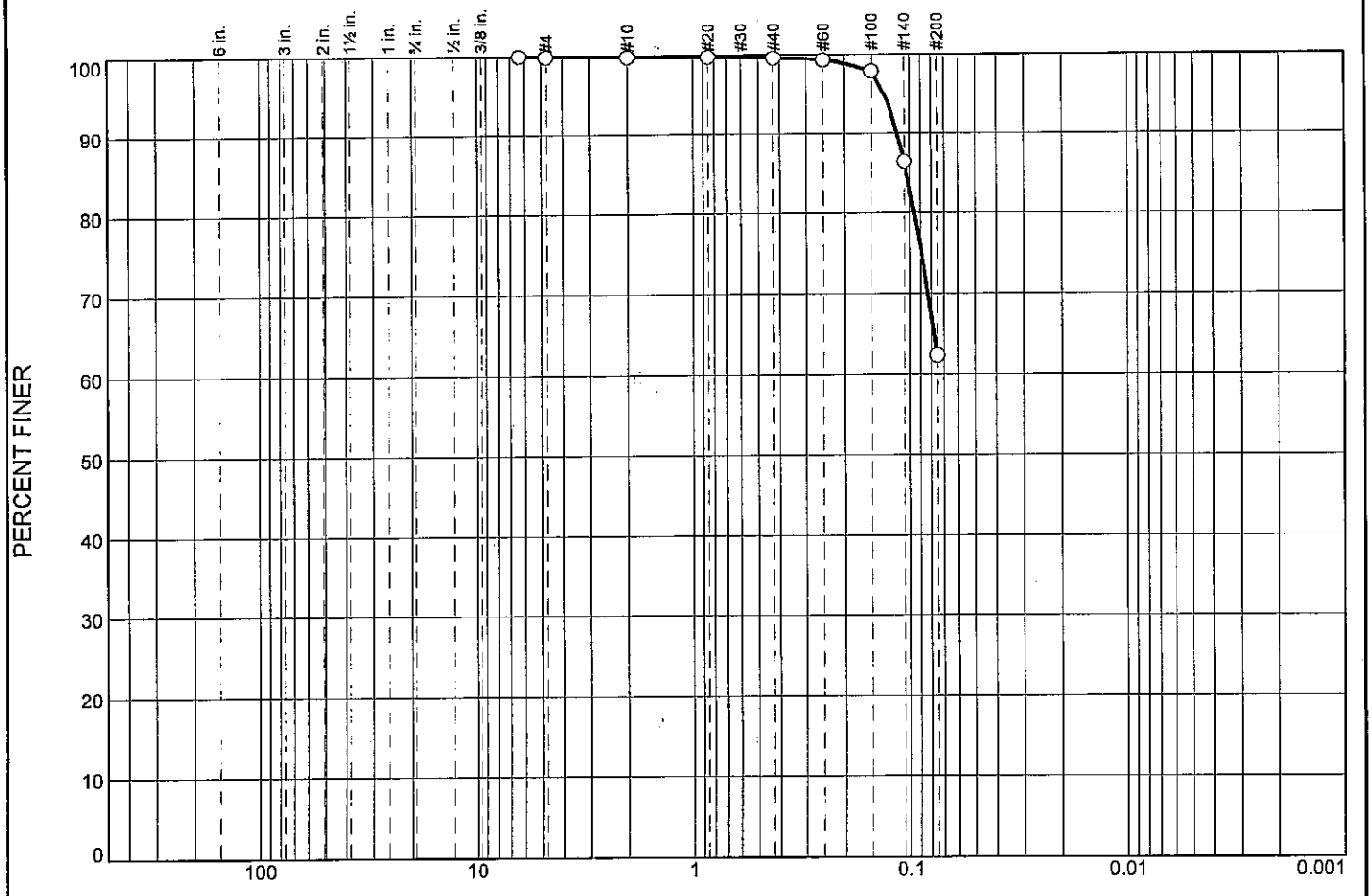
UNCONFINED COMPRESSION TEST

FFEBJV, LLC

Tested By: ARS/JC **Checked By:** MKA

"Confidential Information, Privileged & Confidential Work Product"

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.1	0.1	0.2	37.3	62.3	

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○				0.1032							

Material Description	USCS	AASHTO
○ GR ML W/ ARS CH, ARS SP, WD	ML	

Project No. 07-022122 **Client:** U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

○ **Source of Sample:** NF05-63CU **Depth:** 26.6 **Sample Number:** 7D

Date: ○ 10/05/09

Remarks:

FFEBJV, LLC

St Rose, LA

Figure

Tested By: ACN **Checked By:** MGA

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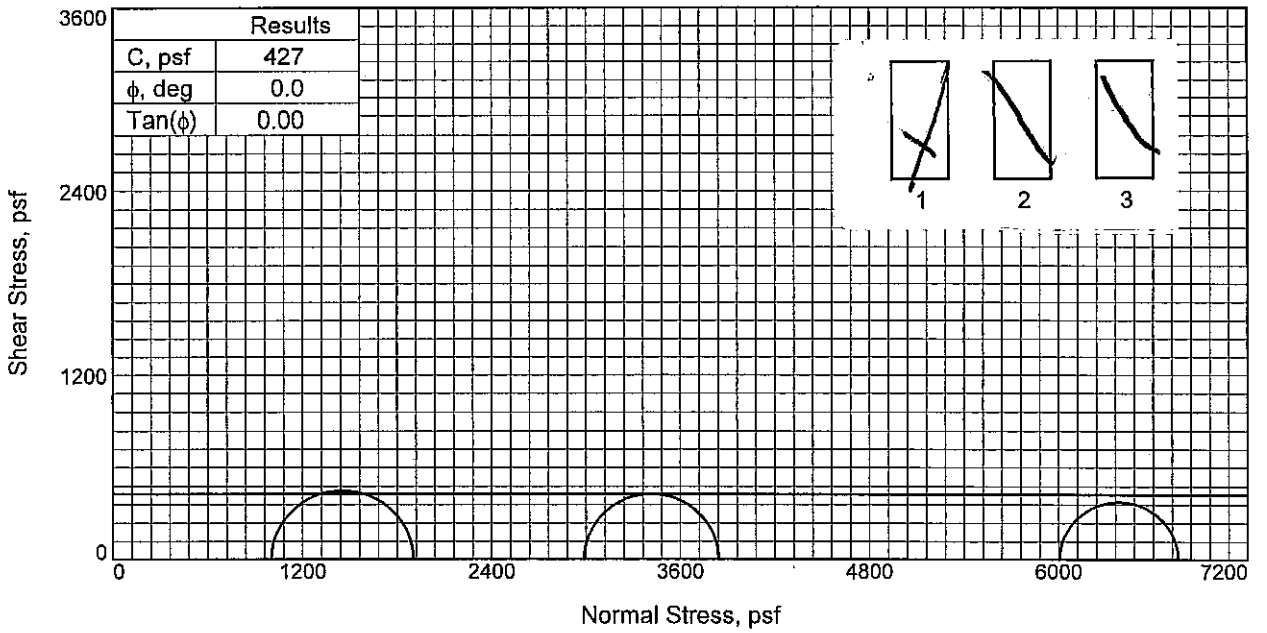

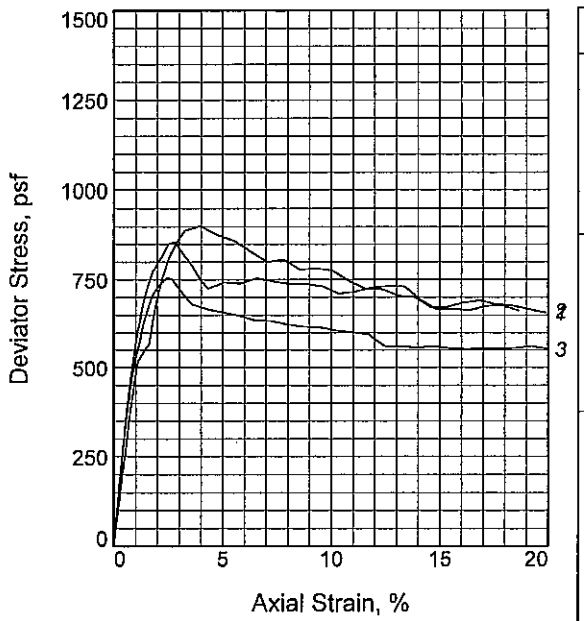

Sample No.		1	2	3
Initial	Water Content, %	58.0	57.1	58.7
	Dry Density, pcf	65.8	66.5	65.4
	Saturation, %	99.3	99.5	99.6
	Void Ratio	1.6013	1.5721	1.6142
	Diameter, in.	1.416	1.414	1.411
	Height, in.	3.103	3.105	3.100
At Test	Water Content, %	58.0	57.1	58.7
	Dry Density, pcf	65.8	66.5	65.4
	Saturation, %	99.3	99.5	99.6
	Void Ratio	1.6013	1.5721	1.6142
	Diameter, in.	1.416	1.414	1.411
	Height, in.	3.103	3.105	3.100
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.96	20.75	41.71
Fail. Stress, psf		900	856	754
Strain, %		4.0	2.8	2.5
Ult. Stress, psf		671	665	557
Strain, %				
σ_1 Failure, psf		1903	3843	6760
σ_3 Failure, psf		1002	2988	6006

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: SO GR CH3 W/ LNS & LYS ML, LYS SM, CC
LL= 63 **PL=** 23 **PI=** 40
Assumed Specific Gravity= 2.74
Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-63CU **Depth:** 28.8
Sample Number: 8B
Proj. No.: 07-022122 **Date Sampled:** 10/6/09

TRIAXIAL SHEAR TEST REPORT

FFEBJV, LLC

Tested By: ARS/JC **Checked By:** MKC

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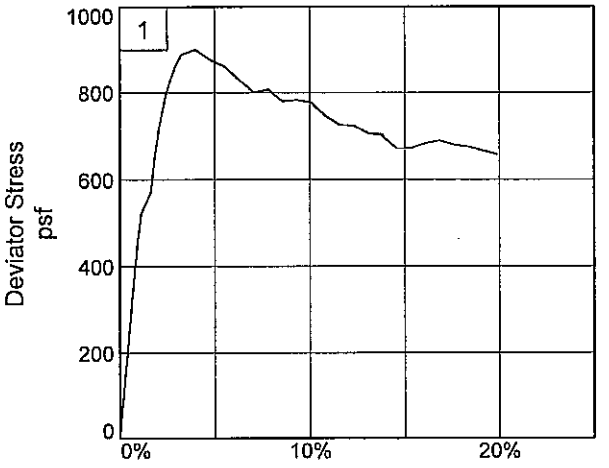
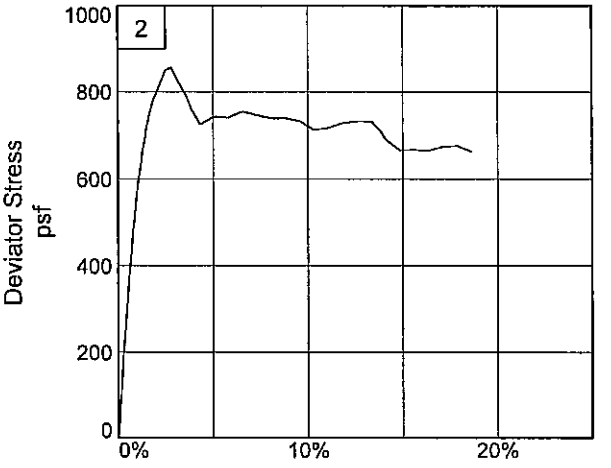
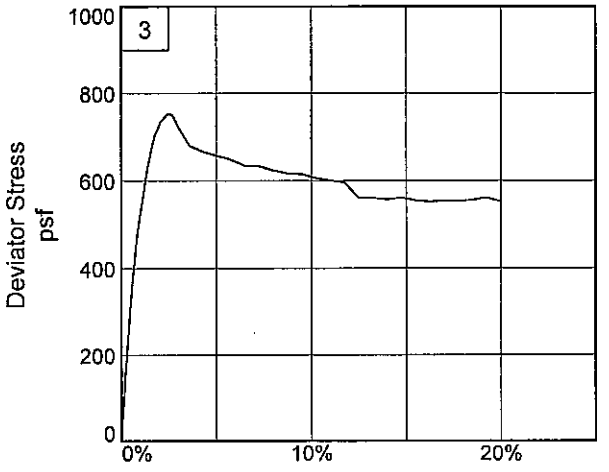
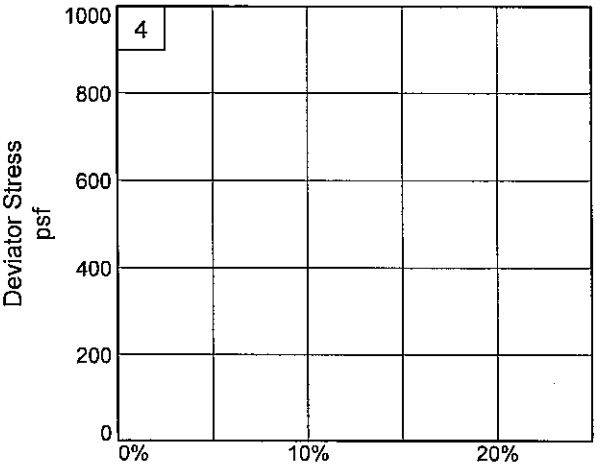
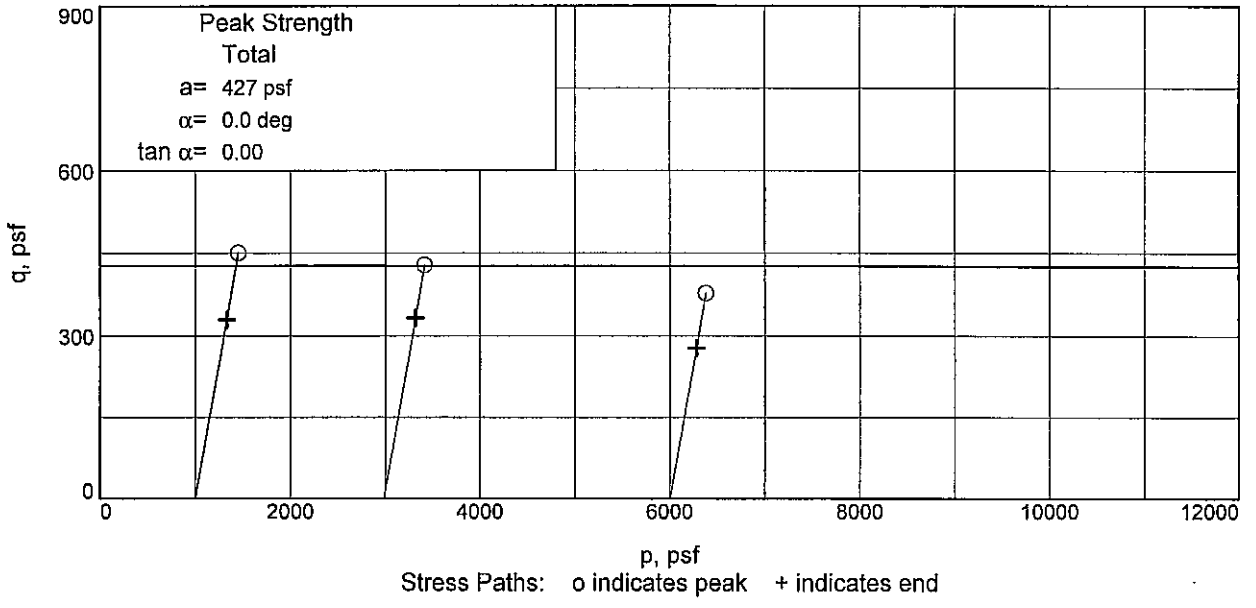






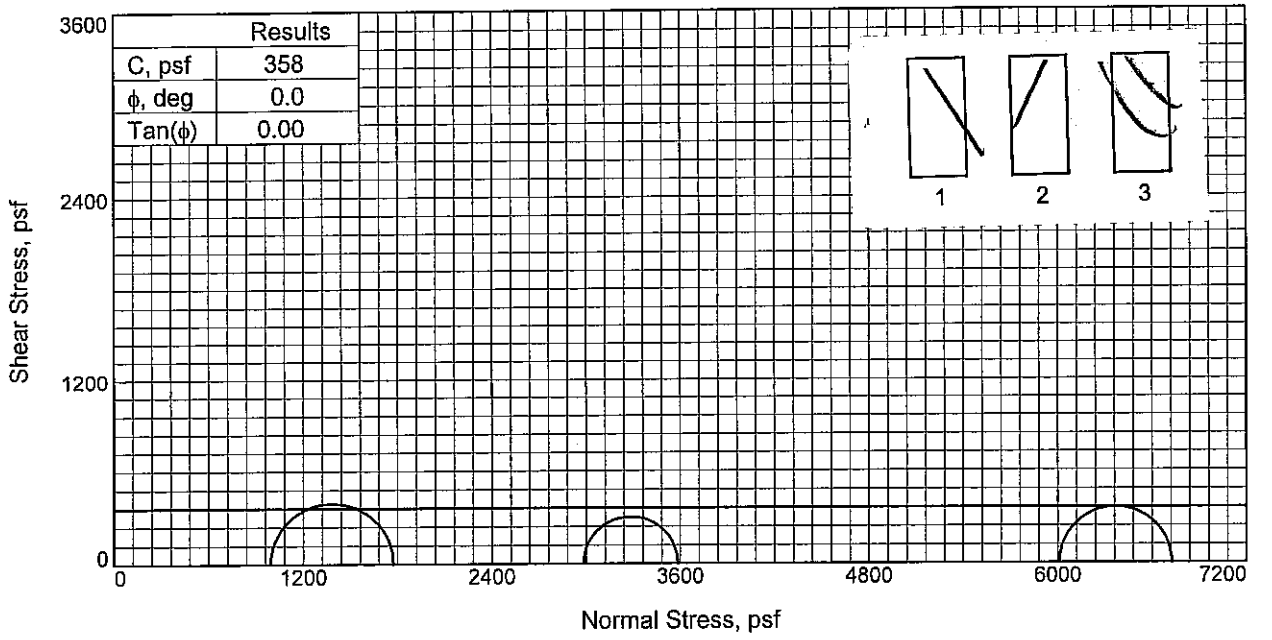


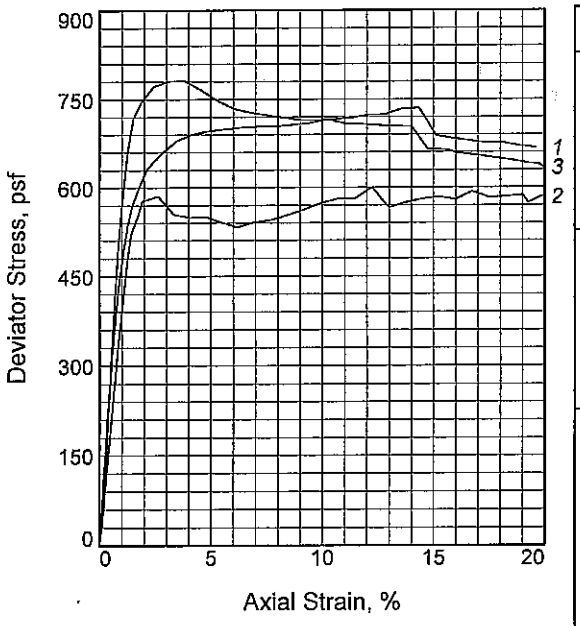


Client: U.S. Army Corps of Engineers
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Source of Sample: NF05-63CU **Depth:** 28.8 **Sample Number:** 8B
Project No.: 07-022122 **Figure** _____ **FFEBJV, LLC**

Tested By: ARS/JC **Checked By:** MKC

"Confidential Information - Privileged & Confidential Work Product"





Sample No.		1	2	3
Initial	Water Content, %	64.8	64.3	65.3
	Dry Density, pcf	61.4	62.0	61.0
	Saturation, %	99.8	100.6	99.5
	Void Ratio	1.7652	1.7394	1.7853
	Diameter, in.	1.414	1.408	1.412
	Height, in.	3.105	3.103	3.105
At Test	Water Content, %	64.8	64.3	65.3
	Dry Density, pcf	61.4	62.0	61.0
	Saturation, %	99.8	100.6	99.5
	Void Ratio	1.7652	1.7394	1.7853
	Diameter, in.	1.414	1.408	1.412
	Height, in.	3.105	3.103	3.105
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.89	20.72	41.74
Fail. Stress, psf		781	600	715
Strain, %		3.1	12.2	10.2
Ult. Stress, psf		688	565	665
Strain, %				
σ_1 Failure, psf		1773	3584	6726
σ_3 Failure, psf		993	2984	6011

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: SO GR CH4 W/ ARS SM, SIF, SL

LL= 80 **PL=** 28 **PI=** 52
Assumed Specific Gravity= 2.72
Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

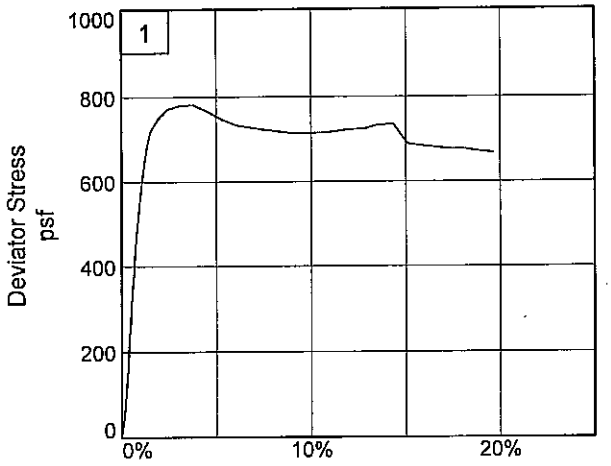
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-63CU **Depth:** 34.6
Sample Number: 9D
Proj. No.: 07-022122 **Date Sampled:** 10/6/09

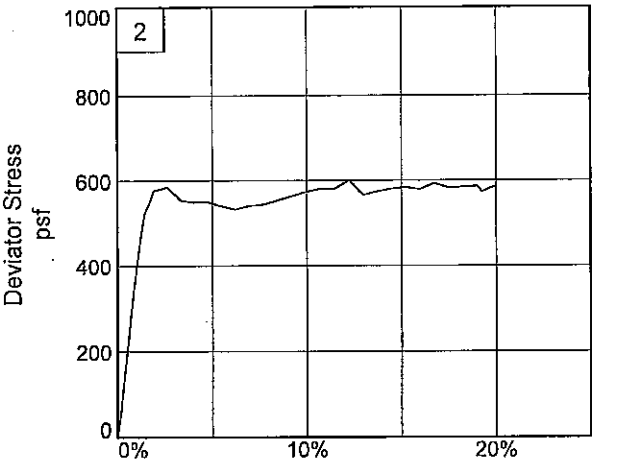
TRIAXIAL SHEAR TEST REPORT

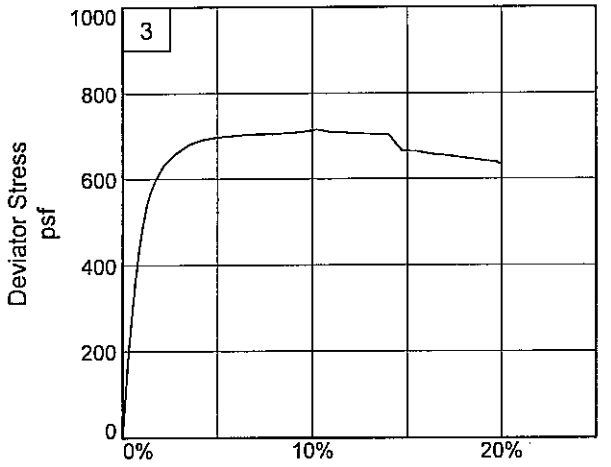
FFEBJV, LLC

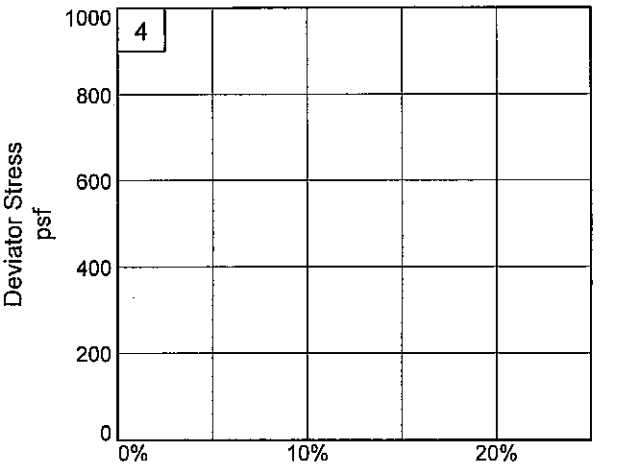
Tested By: ARS/JC **Checked By:** MKA

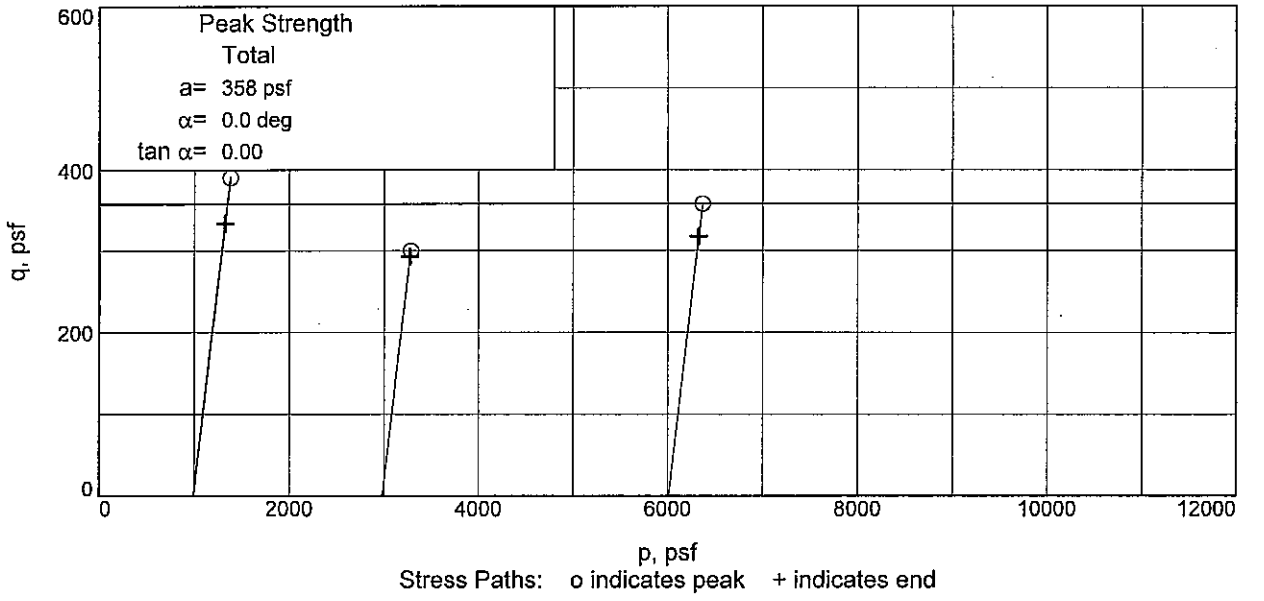
"Confidential Information - Privileged & Confidential Work Product"











Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

Source of Sample: NF05-63CU **Depth:** 34.6 **Sample Number:** 9D

Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: ARS/JC **Checked By:** MKC

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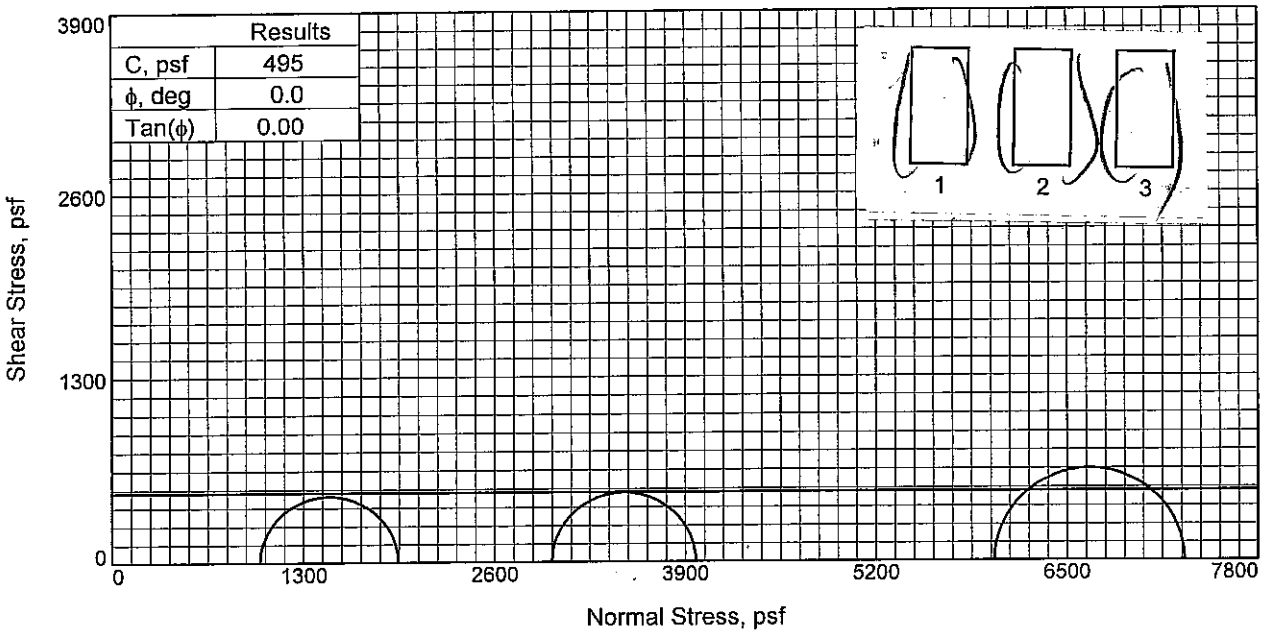

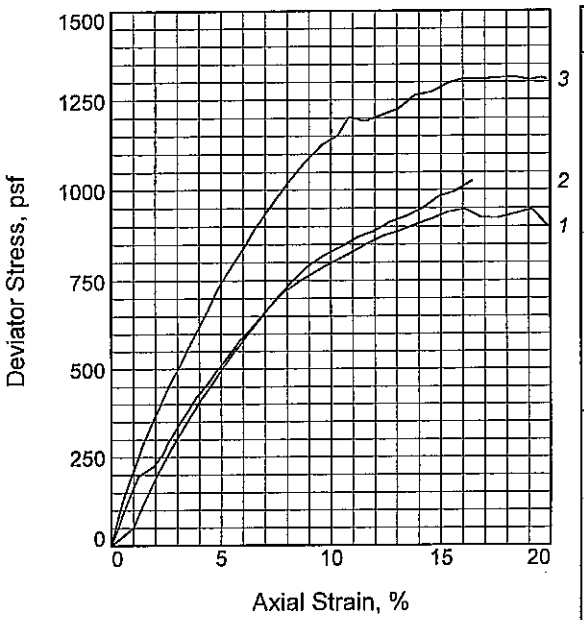

Sample No.		1	2	3
Initial	Water Content, %	38.5	37.2	37.7
	Dry Density, pcf	82.6	83.5	83.7
	Saturation, %	99.9	98.8	100.2
	Void Ratio	1.0399	1.0176	1.0140
	Diameter, in.	1.403	1.402	1.398
	Height, in.	3.073	3.100	3.104
At Test	Water Content, %	38.5	37.2	37.7
	Dry Density, pcf	82.6	83.5	83.7
	Saturation, %	99.9	98.8	100.2
	Void Ratio	1.0399	1.0176	1.0140
	Diameter, in.	1.403	1.402	1.398
	Height, in.	3.073	3.100	3.104
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.98	20.76	41.70
Fail. Stress, psf		939	982	1296
Strain, %		15.4	14.9	15.3
Ult. Stress, psf		939	982	1296
Strain, %				
σ_1 Failure, psf		1944	3971	7301
σ_3 Failure, psf		1005	2989	6005

Type of Test:
Unconsolidated Undrained

Sample Type: UNDISTURBED

Description: SO GR CL4 W/ LNS & LYS CH, LYS SM, SIF

LL= 35 **PL=** 24 **PI=** 11

Assumed Specific Gravity= 2.70

Remarks:

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La

Source of Sample: NF05-63CU **Depth:** 38.6

Sample Number: 10D

Proj. No.: 07-022122 **Date Sampled:** 10/6/09

TRIAXIAL SHEAR TEST REPORT

FFEBJV, LLC

Figure _____

Tested By: ARS/JC **Checked By:** MGC/WH

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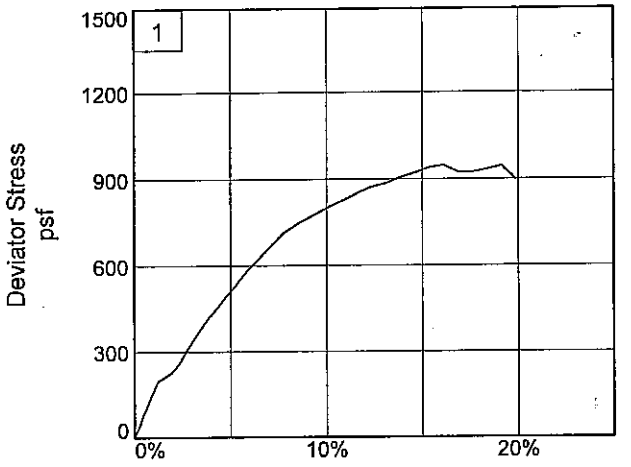
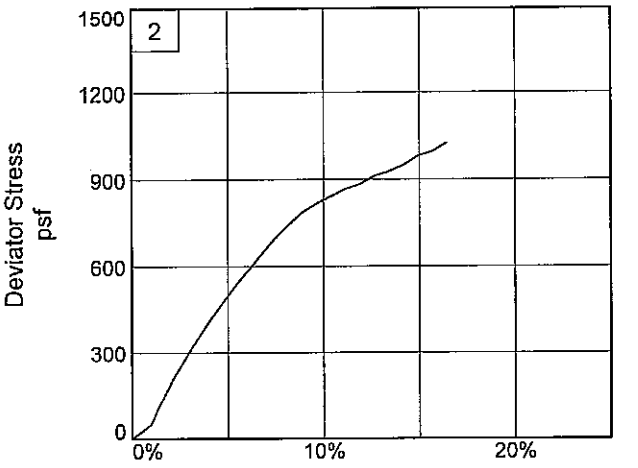
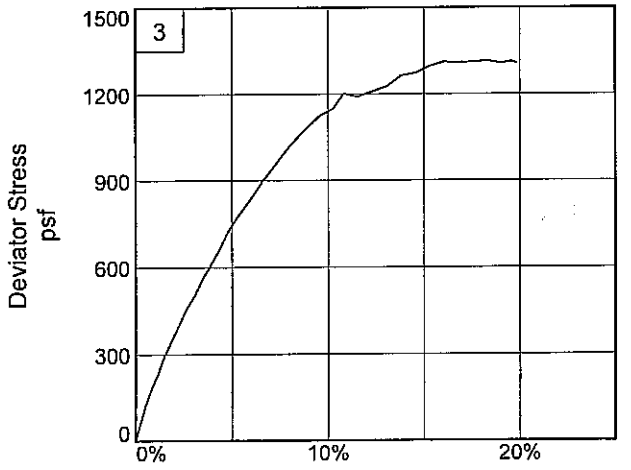
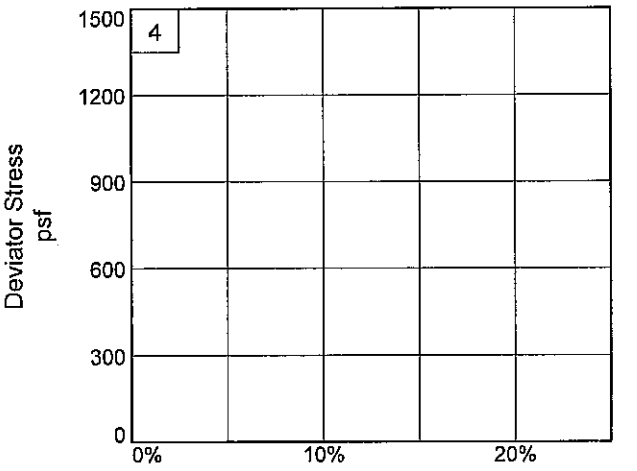
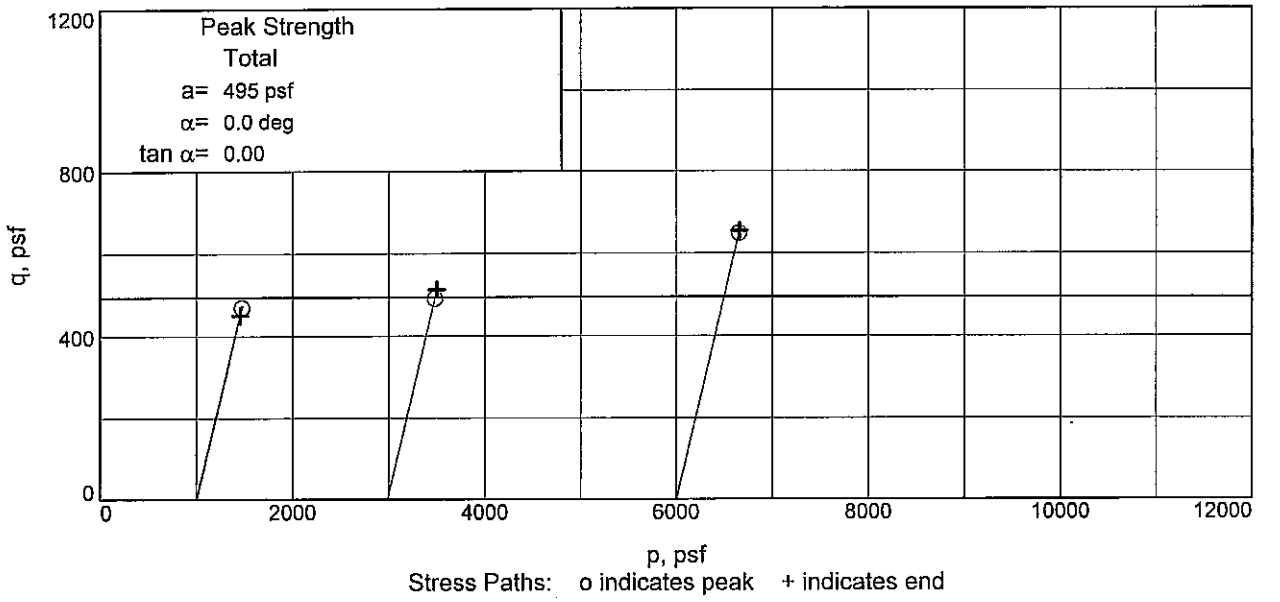










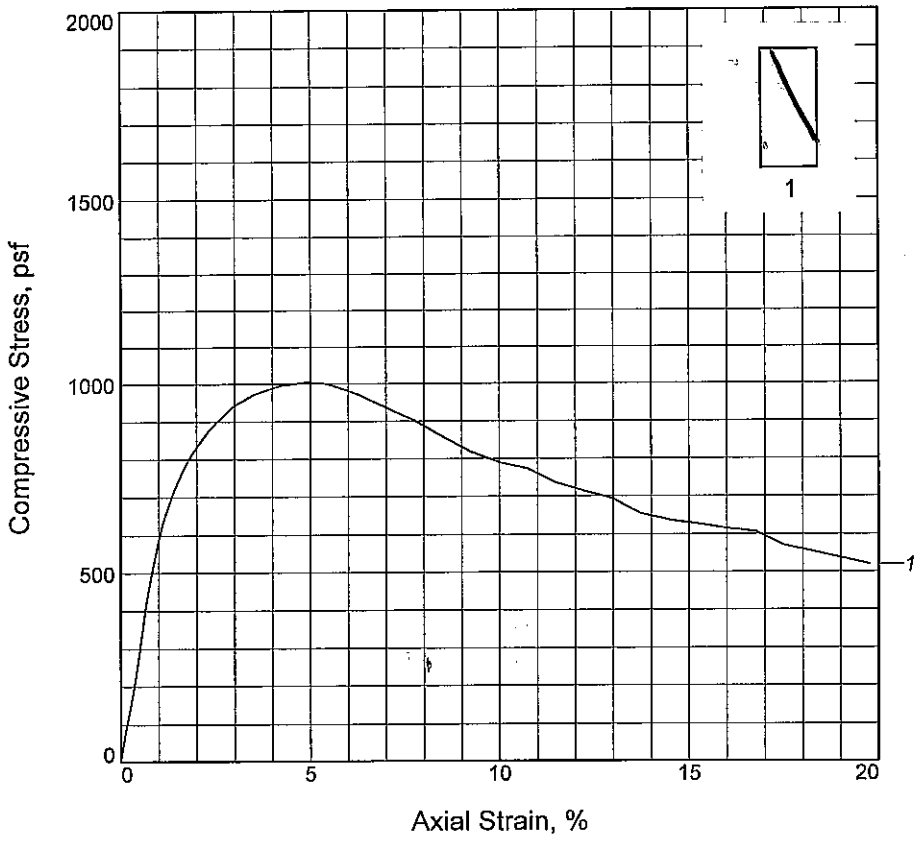
Client: U.S. Army Corps of Engineers
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Source of Sample: NF05-63CU **Depth:** 38.6 **Sample Number:** 10D
Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: ARS/JC **Checked By:** MGA/WR

"Confidential Information Privileged & Confidential Work Product"

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psf	1004			
Undrained shear strength, psf	502			
Failure strain, %	4.9			
Strain rate, %/min.	1.00			
Water content, %	61.0			
Wet density, pcf	103.2			
Dry density, pcf	64.1			
Saturation, %	100.1			
Void ratio	1.6705			
Specimen diameter, in.	1.416			
Specimen height, in.	3.100			
Height/diameter ratio	2.19			

Description: M GR CH4 W/ ARS SM, SL

LL = 84	**PL** = 25	**PI** = 59	**Assumed GS=** 2.74	**Type:** UNDISTURBED

Project No.: 07-022122
Date Sampled: 10/6/09
Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

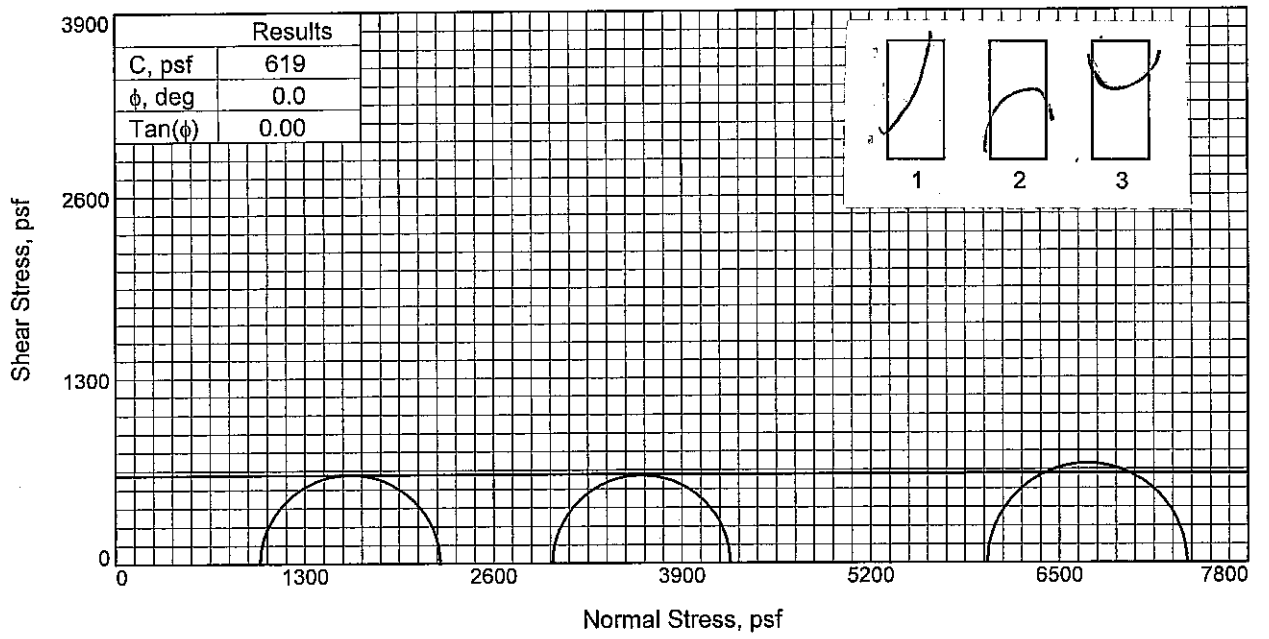
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-63CU **Depth:** 42.6
Sample Number: 11D

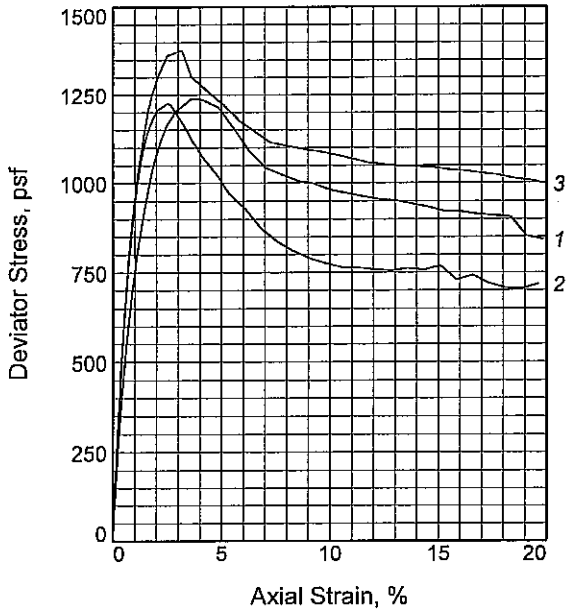
UNCONFINED COMPRESSION TEST

FFEBJV, LLC

Tested By: ARS/JC **Checked By:** MKA

"Confidential Information, Privileged & Confidential Work Product"





Sample No.		1	2	3
Initial	Water Content, %	61.9	61.4	50.8
	Dry Density, pcf	63.7	64.0	71.8
	Saturation, %	100.7	100.7	100.8
	Void Ratio	1.6837	1.6714	1.3821
	Diameter, in.	1.414	1.411	1.409
	Height, in.	3.107	3.110	3.104
At Test	Water Content, %	61.9	61.4	50.8
	Dry Density, pcf	63.7	64.0	71.8
	Saturation, %	100.7	100.7	100.8
	Void Ratio	1.6837	1.6714	1.3821
	Diameter, in.	1.414	1.411	1.409
	Height, in.	3.107	3.110	3.104
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.90	20.88	41.69
Fail. Stress, psf		1238	1226	1376
Strain, %		3.6	2.5	3.1
Ult. Stress, psf		920	757	1044
Strain, %				
σ_1 Failure, psf		2231	4233	7380
σ_3 Failure, psf		993	3007	6004

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED10/6/09
Description: M GR CH3 W/ ARS ML, SL

LL= 65 **PL=** 22 **PI=** 43
Assumed Specific Gravity= 2.74
Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-63CU **Depth:** 48.8
Sample Number: 13B
Proj. No.: 07-022122 **Date Sampled:**

TRIAXIAL SHEAR TEST REPORT

FFEBJV, LLC

Tested By: ARS/JC **Checked By:** MKA

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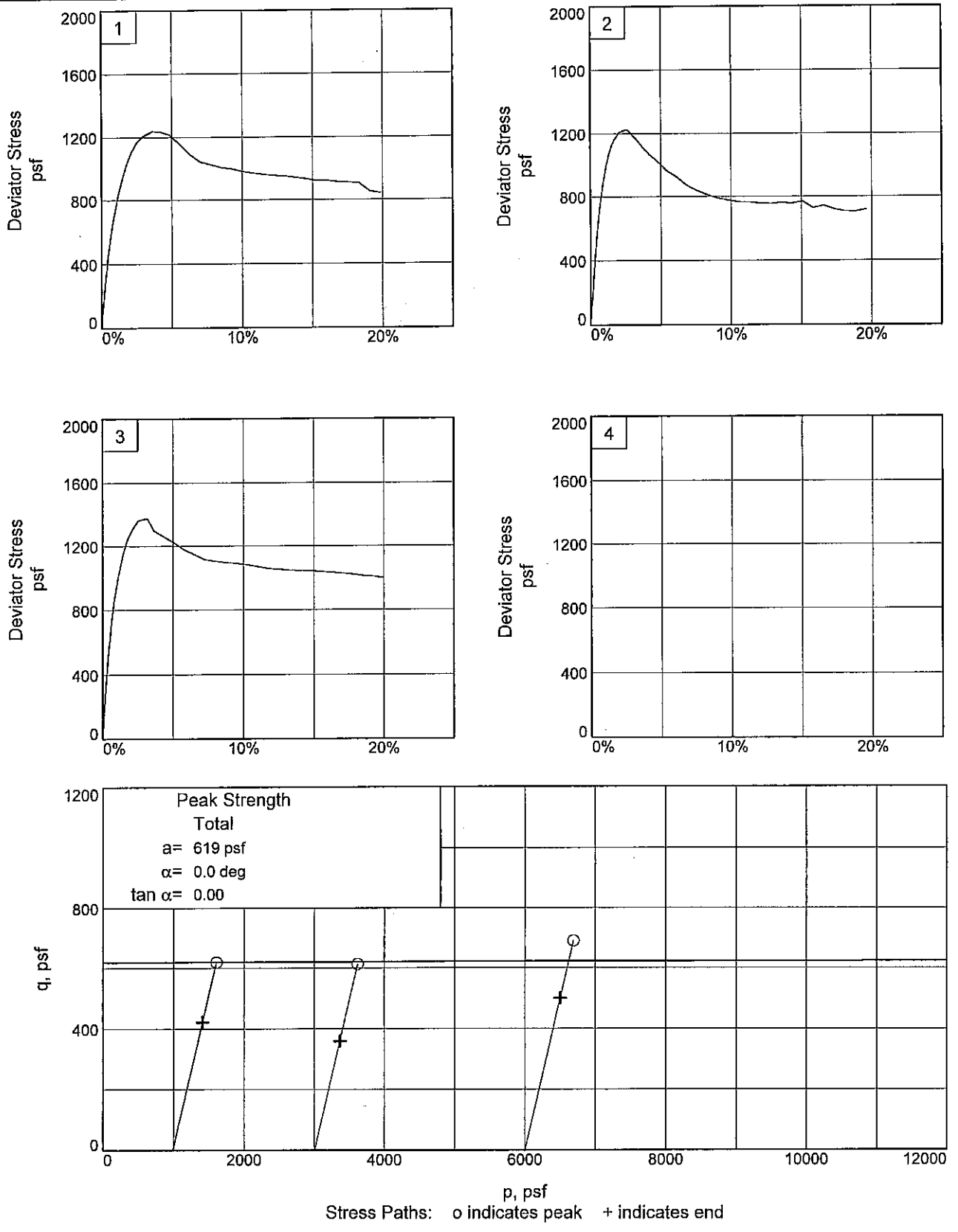

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

Source of Sample: NF05-63CU **Depth:** 48.8 **Sample Number:** 13B

Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: ARS/JC **Checked By:** MKA

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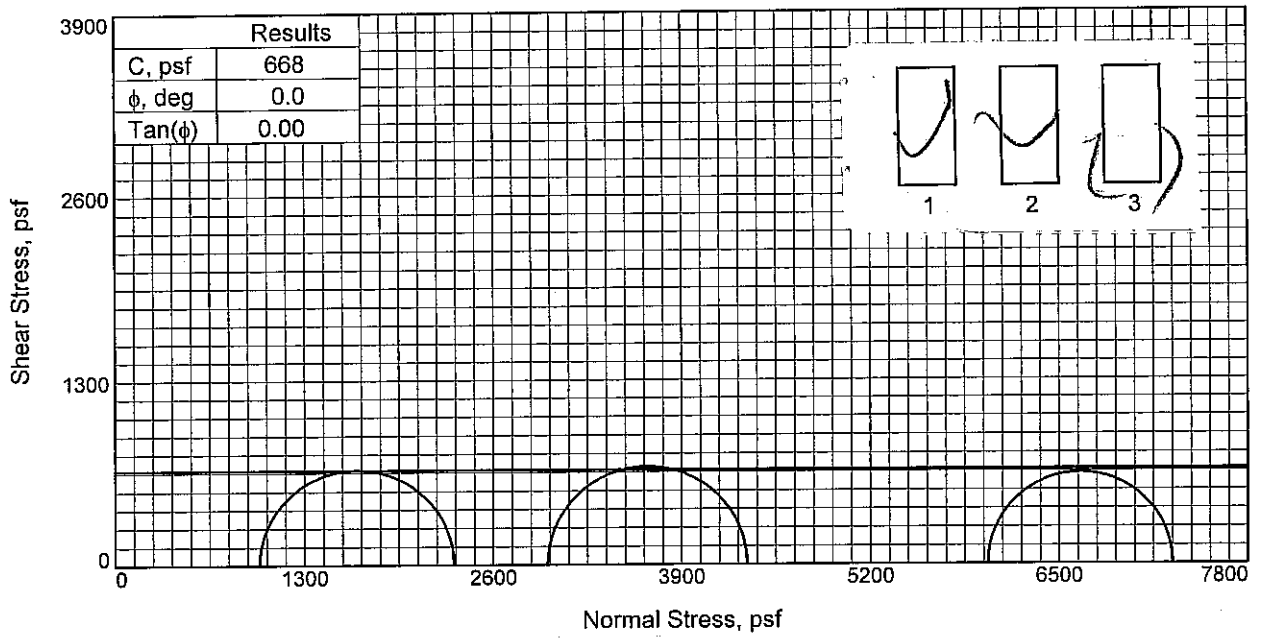
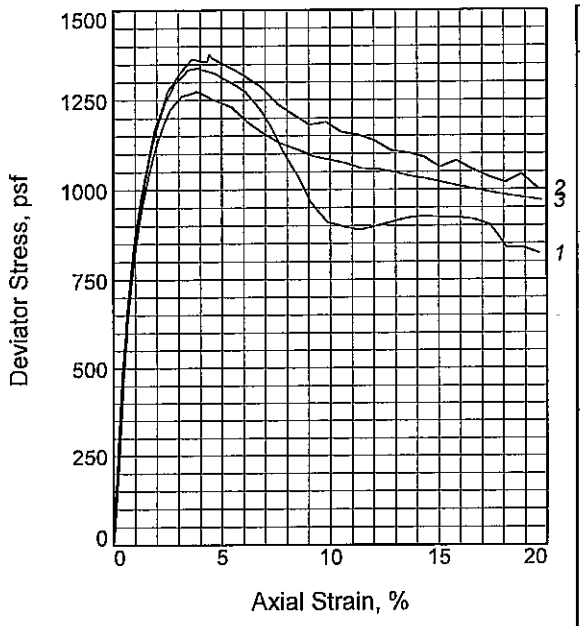




Sample No.		1	2	3
Initial	Water Content, %	52.9	52.8	53.4
	Dry Density, pcf	70.0	69.9	69.5
	Saturation, %	100.4	100.1	100.3
	Void Ratio	1.4436	1.4461	1.4604
	Diameter, in.	1.408	1.410	1.413
	Height, in.	3.103	3.107	3.104
At Test	Water Content, %	52.9	52.8	53.4
	Dry Density, pcf	70.0	69.9	69.5
	Saturation, %	100.4	100.1	100.3
	Void Ratio	1.4436	1.4461	1.4604
	Diameter, in.	1.408	1.410	1.413
	Height, in.	3.103	3.107	3.104
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.88	20.66	41.73
Fail. Stress, psf		1338	1376	1273
Strain, %		3.9	4.4	3.9
Ult. Stress, psf		887	1062	1019
Strain, %				
σ_1 Failure, psf		2329	4352	7282
σ_3 Failure, psf		991	2976	6009

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: M GR CH3 W/ ARS ML, SL

LL= 67 **PL=** 23 **PI=** 44
Assumed Specific Gravity= 2.74
Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

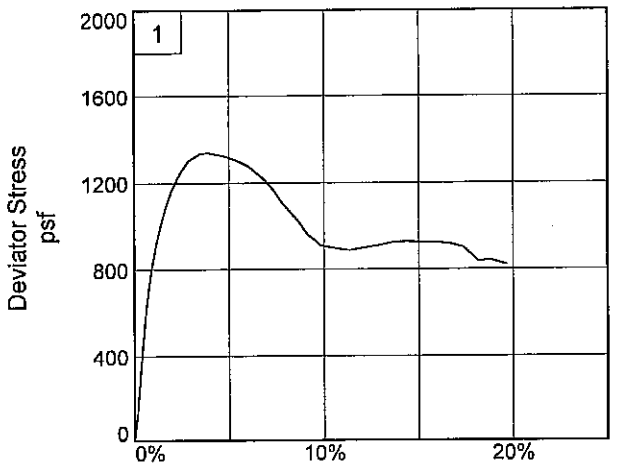
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-63CU **Depth:** 56.8
Sample Number: 15B
Proj. No.: 07-022122 **Date Sampled:** 10/6/09

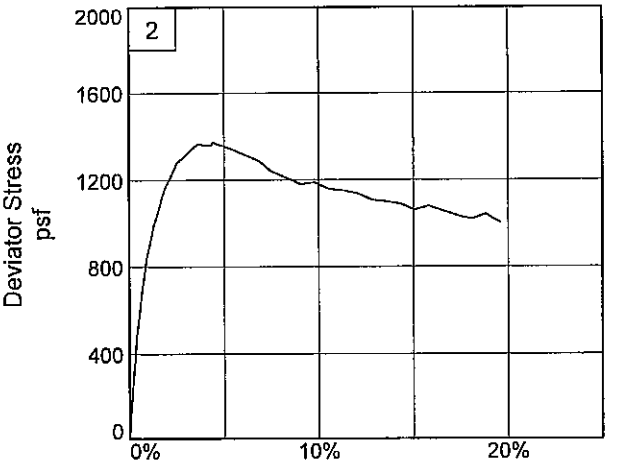
TRIAXIAL SHEAR TEST REPORT

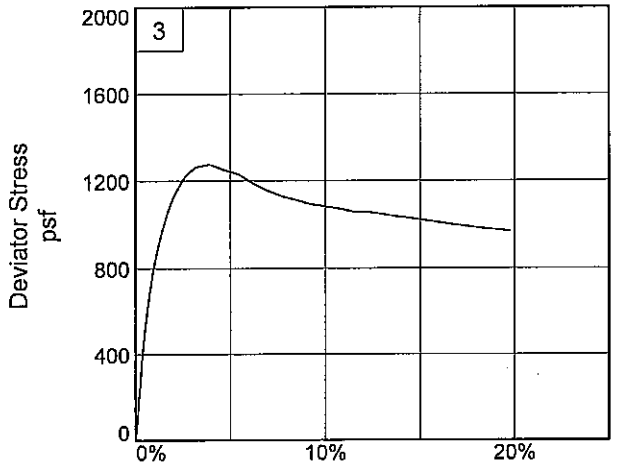
FFEBJV, LLC

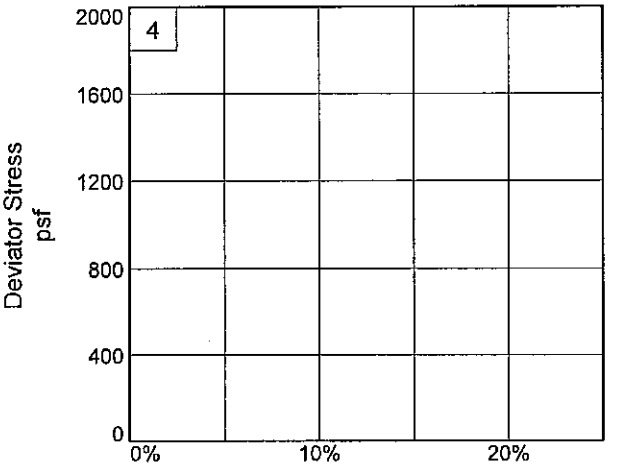
Tested By: ARS/JC **Checked By:** MKA

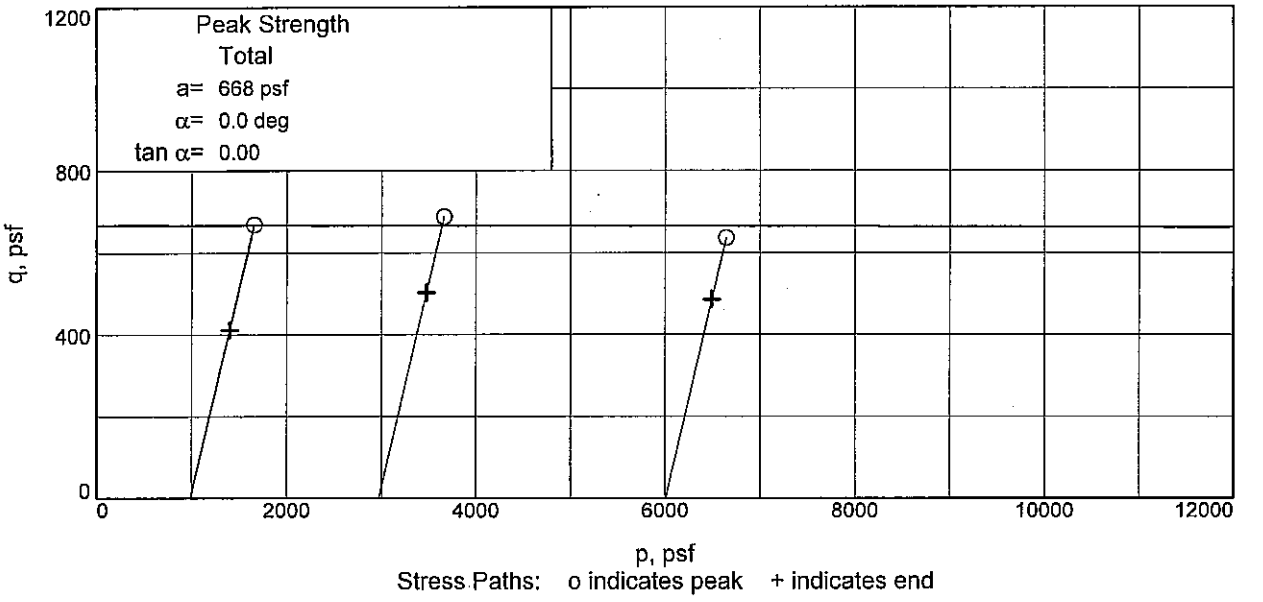
"Confidential Information, Privileged & Confidential Work Product"











Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

Source of Sample: NF05-63CU **Depth:** 56.8 **Sample Number:** 15B

Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: ARS/JC **Checked By:** MKA

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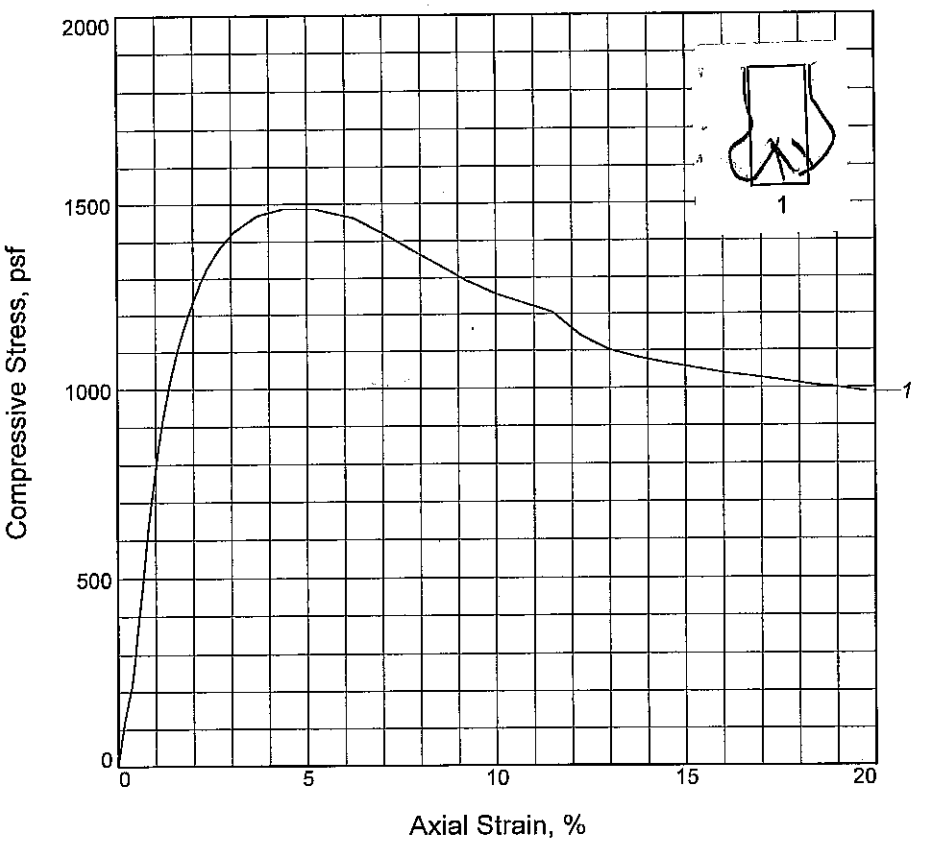
UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psf	1487			
Undrained shear strength, psf	743			
Failure strain, %	4.4			
Strain rate, %/min.	1.00			
Water content, %	54.7			
Wet density, pcf	105.5			
Dry density, pcf	68.2			
Saturation, %	99.3			
Void ratio	1.5075			
Specimen diameter, in.	1.408			
Specimen height, in.	3.107			
Height/diameter ratio	2.21			

Description: M GR CH4 W/ ARS SM, SL

LL = 72	**PL** = 20	**PI** = 52	**Assumed GS=** 2.74	**Type:** UNDISTURBED

Project No.: 07-022122
Date Sampled: 10/6/09
Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-63CU **Depth:** 61.7
Sample Number: 16C

UNCONFINED COMPRESSION TEST

FFEBJV, LLC

Tested By: ARS/VF **Checked By:** MC

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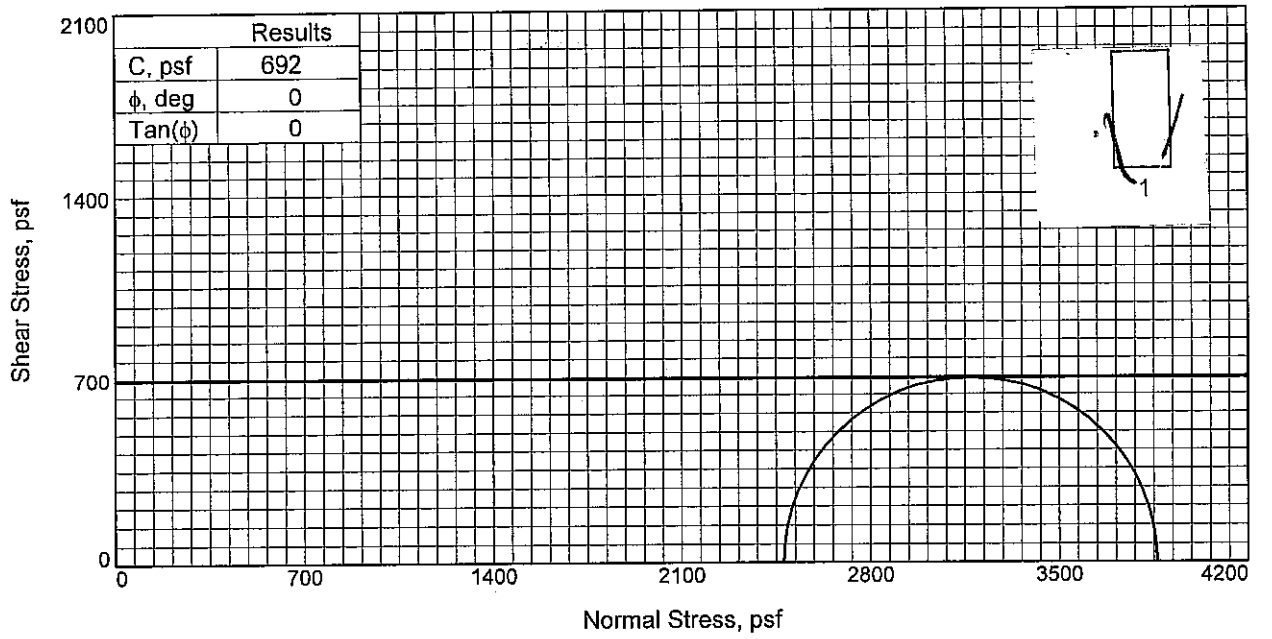

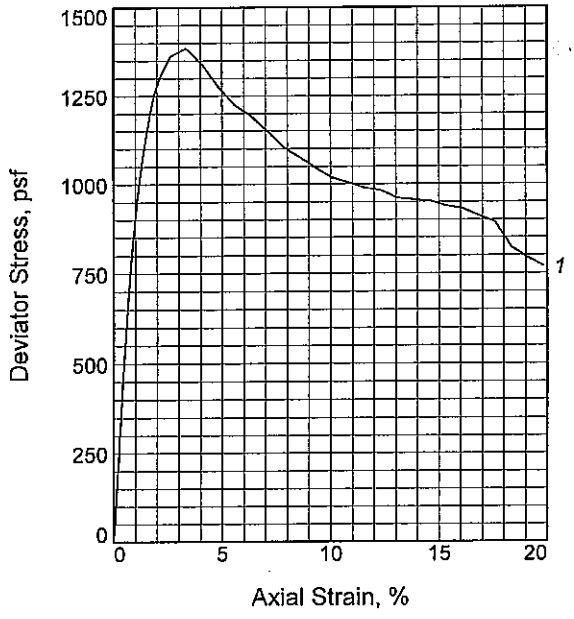

Sample No.		1
Initial	Water Content, %	59.1
	Dry Density, pcf	65.8
	Saturation, %	101.1
	Void Ratio	1.6011
	Diameter, in.	1.410
	Height, in.	3.108
At Test	Water Content, %	59.1
	Dry Density, pcf	65.8
	Saturation, %	101.1
	Void Ratio	1.6011
	Diameter, in.	1.410
	Height, in.	3.108
Strain rate, %/min.		1.00
Back Pressure, psi		0.00
Cell Pressure, psi		17.21
Fail. Stress, psf		1384
Strain, %		3.3
Ult. Stress, psf		939
Strain, %		
σ_1 Failure, psf		3863
σ_3 Failure, psf		2478

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: M GR CH4 W/ LNS & LYS ML, SL

LL= 77 **PL=** 23 **PI=** 54
Assumed Specific Gravity= 2.74
Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-63CU **Depth:** 65.7
Sample Number: 17C
Proj. No.: 07-022122 **Date Sampled:** 10/6/09

TRIAXIAL SHEAR TEST REPORT

FFEBJV, LLC

Tested By: ARS/VF **Checked By:** MKA

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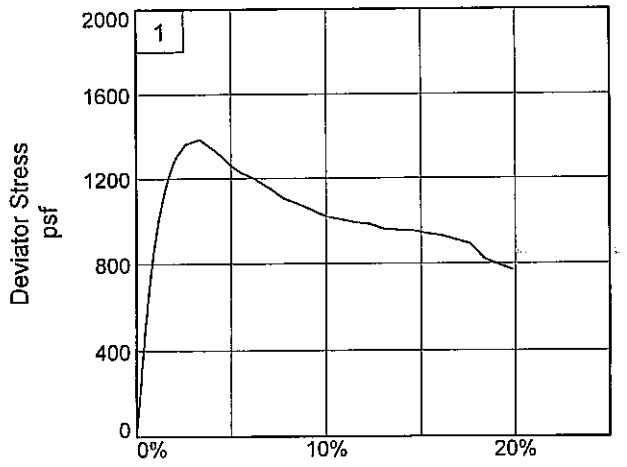

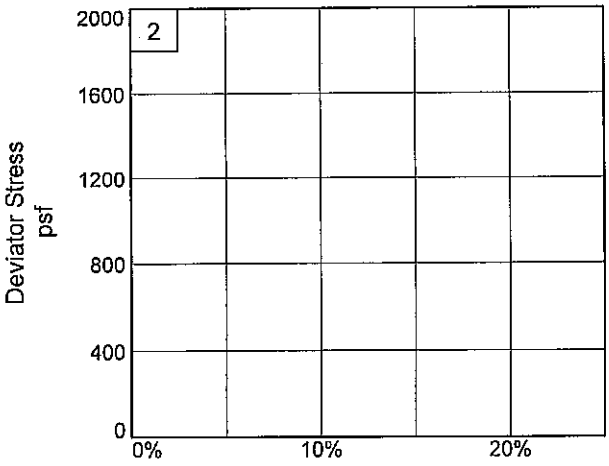

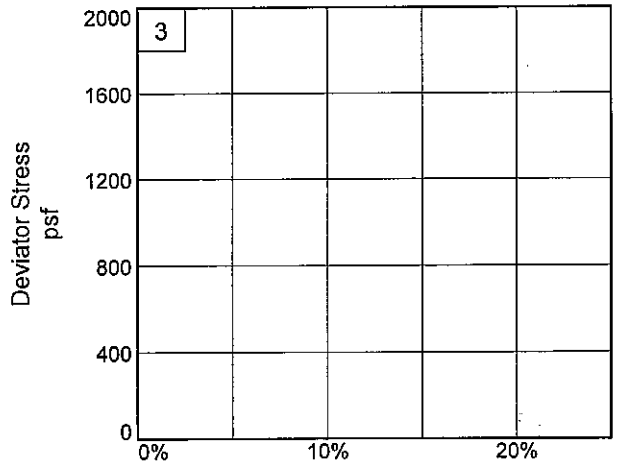

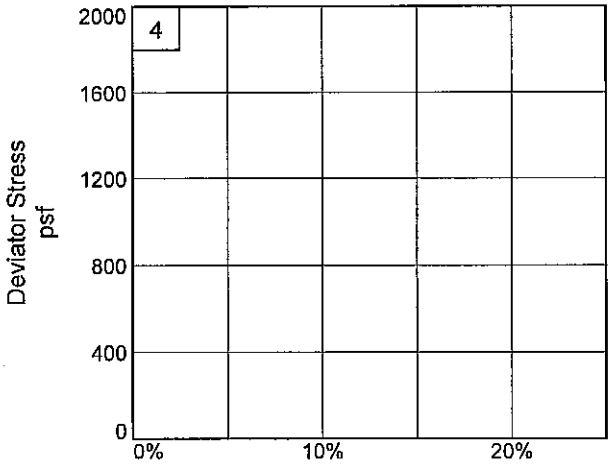

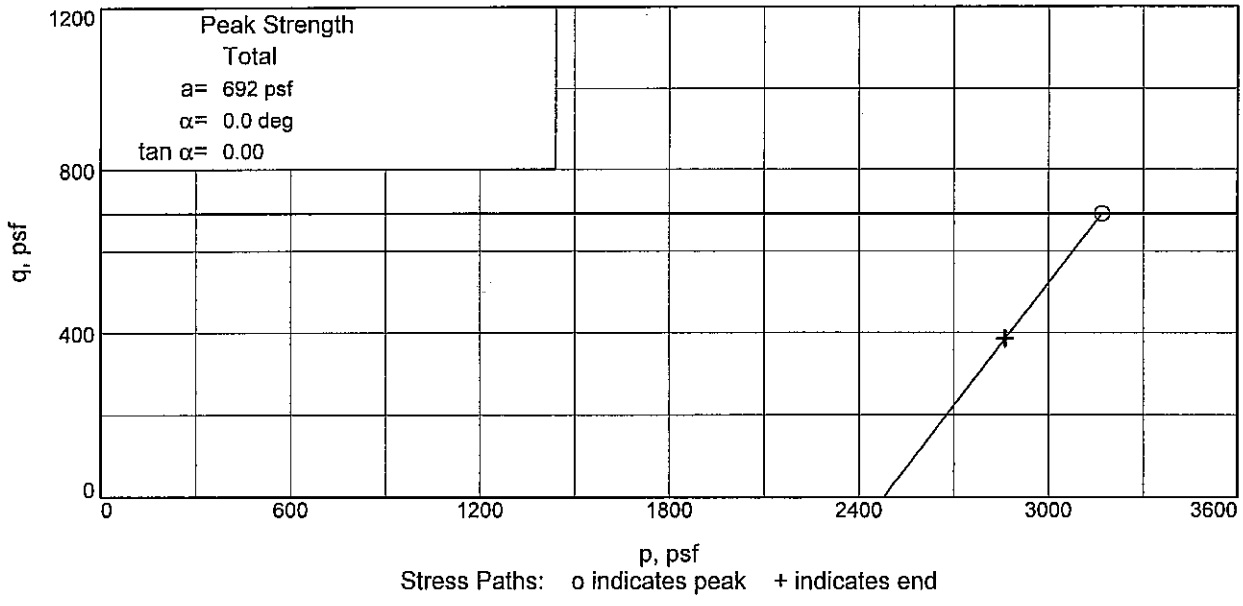

Stress Paths: o indicates peak + indicates end

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

Source of Sample: NF05-63CU **Depth:** 65.7 **Sample Number:** 17C

Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: ARS/VF **Checked By:** MKA

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SUMMARY OF LABORATORY TEST RESULTS

Project: New Orleans To Venice Plaquemines Parish, La Assigned By: _____

Project Number: 07-022122 Current Date: 1/27/2010
Boring: NF05-64PU

Sample Number	Depth	Visual Classification	USCS	E(f)	W%	Dry Dens (pcf)	Wet Dens (pcf)	Sat %	Shear Test Type	Angle	Cohesion (psf)	Unconf. Comp. Str.	LL	PL	PI	Torvane (tsf)	Other Tests
1A	0.0	M GR & T CH2 W/ LYS & ARS ML, RT, O	CH2		40												
1B	0.8	SO DGR & BK PT W/ RT, WD	PT		229	23	74	98	UU	0	377		247	73	174	0.22	OC=25.3%
1C	1.7	SO DGR CHOA W/ RT, WD	CHOA		138												
1D	2.6	SO GR CHOA W/ LNS & LYS ML, WD, RT	CHOA		99												
2A	4.0	GR ML W/ LYS CH	ML		29												
2B	4.8	GR ML W/ LYS CH	ML		32								NP	NP	NP		
2C	5.7	VSO GR CL6 W/ LNS & LYS ML	CL6		53												
2D	6.6	VSO GR CL6 W/ LNS & LYS ML, WD	CL6		66	61	102	100	UU	0	187		49	20	29	0.19	MV=61psf
3A	8.0	SO GR CL6 W/ LNS & LYS ML, WD	CL6		73												
3B	8.8	SO GR CL6 W/ LNS & LYS SM, LYS SIF	CL6		69												
3C	9.7	SO GR CL6 W/ LYS & ARS ML, WD, O	CL6		53								111	30	81		MV=405psf
3D	10.6	SO GR CL6 W/ LYS & ARS ML, WD, O	CL6		55												
4A	12.0	SO GR CL6 W/ LNS & LYS ML, WD, RT	CL6		60												
4B	12.8	GR ML W/ LYS CH, WD	ML		33												SV
4C	13.7	SO GR CL6 W/ LNS & LYS SM, WD, RT	CL6		53	70	107	100	UU	0	289		49	19	30	0.17	
4D	14.6	M GR CH4 W/ LNS & LYS SM	CH4		41												
5A	16.0	M GR CH4 W/ LNS & LYS ML, WD	CH4		47												
5B	16.8	M GR CH4 W/ LNS & LYS ML, CC	CH4		48												
5C	17.7	SO GR CH4 W/ LNS & LYS ML, CC	CH4		72	58	100	100	UU	0	370		74	23	51	0.20	
5D	18.6	SO GR CH4 W/ LNS & LYS ML	CH4		69												
6A	20.0	SO GR CH4 W/ ARS ML, SIF	CH4		64												
6B	20.8	SO GR CH4 W/ LNS & LYS ML, CC	CH4		64	63	102	100	UU	0	303		78	24	54	0.20	
6C	21.7	SO GR CH4	CH4		75												
7A	24.0	M GR CH4 W/ LNS & ARS ML, SIF, CC	CH4		59												
7B	24.8	M GR CH3 W/ LNS & LYS ML, SIF	CH3		45												
7C	25.7	M GR CH3 W/ LNS & LYS SM, WD	CH3		45												
7D	26.6	M GR CL4 W/ LNS & LYS CH, LYS SM	CL4		39	82	114	99	UU	0	580		33	21	12	0.20	-200
8A	28.0	GR ML W/ LNS SM	ML		30												
8B	28.8	GR ML W/ LYS & LNS CH	ML		35												
8C	29.7	M GR CH3 W/ LNS & LYS ML	CH3		55												
8D	30.6	M GR CH3 W/ LYS & ARS ML	CH3		58								62	20	42		MV=698psf
9A	32.0	M GR CH3 W/ LNS & LYS ML	CH3		47												
9B	32.8	M GR CH3 W/ LNS & LYS ML, LYS SM	CH3		50												
9C	33.7	M GR CH3 W/ LNS & LYS SM	CH3		55												
9D	34.6	M GR CH4 W/ LNS & LYS ML, LYS SM	CH4		63	63	102	100	UU	0	611		76	24	52	0.30	

Remarks: _____
FFEB JV, LLC

Checked By: MS/WH
File Name: 05-64PU.xls

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SUMMARY OF LABORATORY TEST RESULTS

Project: New Orleans To Venice Plaquemines Parish, La Assigned By: _____

Project Number: 07-022122
Boring: NF05-64PU

Current Date: 1/27/2010

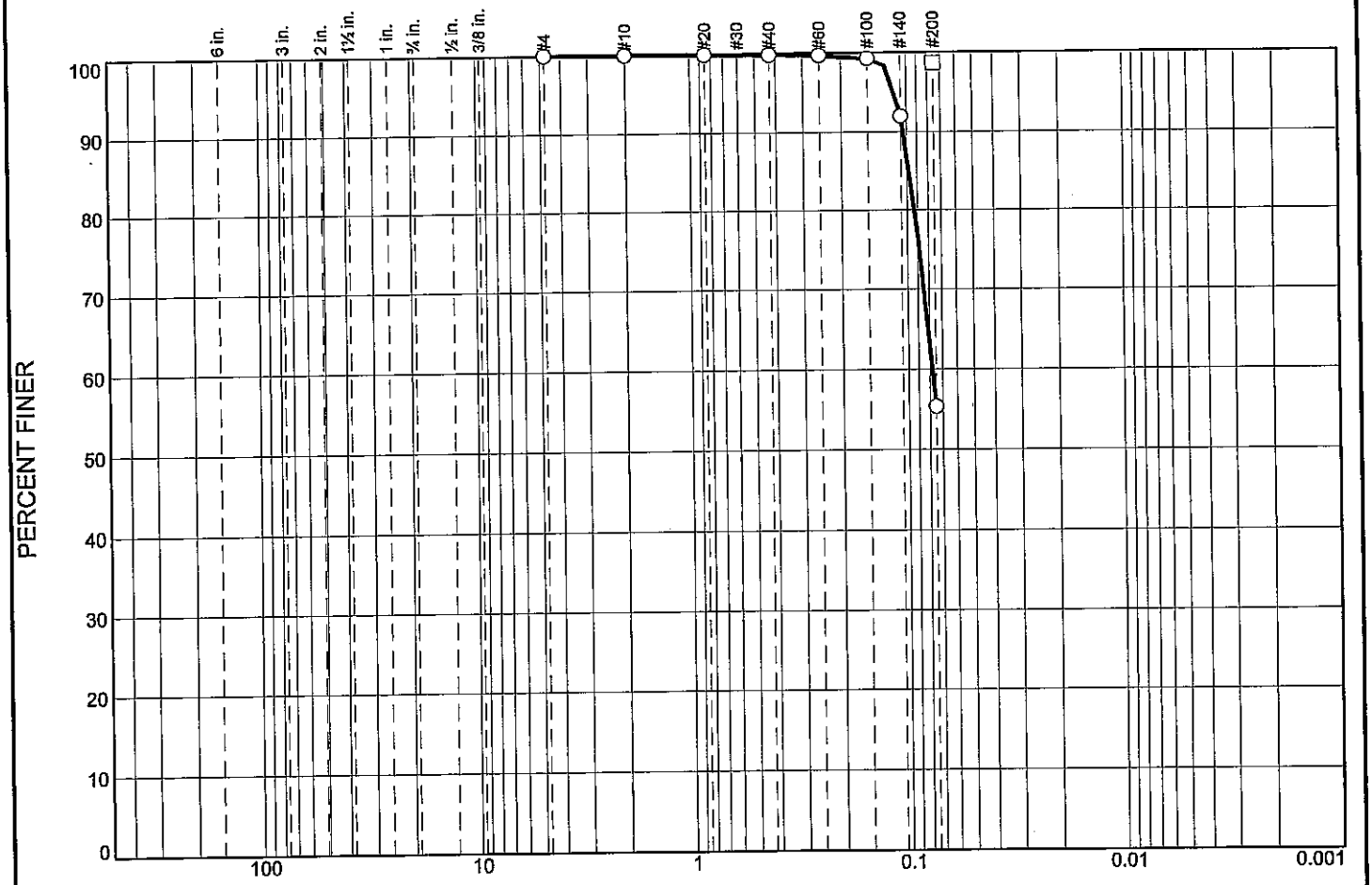
Sample Number	Depth	Visual Classification	USCS	E(f)	W%	Dry Dens (pcf)	Wet Dens (pcf)	Sat %	Shear Test Type	Angle	Cohesion (psf)	Unconf. Comp. Str.	LL	PL	PI	Torvane (tsf)	Other Tests
10A	36.0	M GR CH4 W/ ARS ML	CH4		66												
10B	36.8	M GR CH4 W/ LYS ML	CH4		59												
10C	37.7	M GR CH4	CH4		60												
11A	40.0	M GR CH4	CH4		64												
11B	40.8	SO GR CH4 W/ LNS & LYS SM	CH4		67												
11C	41.7	SO GR CH4 W/ LNS & LYS SM	CH4		70	59	100	100	UU	0	414		90	26	64	0.25	
11D	42.6	M GR CH4 W/ LNS & LYS ML	CH4		56												
12A	44.0	M GR CH4 W/ LYS ML	CH4		61												
12B	44.8	M GR CH4 W/ LNS ML	CH4		60												
12C	45.7	M GR CH4 W/ LNS ML	CH4		61												
13A	48.0	M GR CH4 W/ LNS ML	CH4		51												
13B	48.8	M GR CH4 W/ LNS ML	CH4		72	58	99	100	UU	0	625		94	27	67	0.33	
13C	49.7	M GR CH4 W/ LYS & LNS ML	CH4		65	61	101	99					95	23	72		MV=770psf, CON,GS,-200
13D	50.7	M GR CH4	CH4		60												

Remarks:
FFEB JV, LLC

Checked By: MS/WH
File Name: 05-64PU.xls

"Confidential Information: Privileged & Confidential Work Product"

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.0	0.1	44.6	55.3	
□							98.7	

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○				0.0970	0.0778						
□		33	21								

Material Description	USCS	AASHTO
○ GR ML W/ LYS CH, WD	SM	
□ M GR CL4 W/ LNS & LYS CH, LYS SM	CL	

Project No. 07-022122 **Client:** U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

○ **Source of Sample:** NF05-64PU **Depth:** 12.8 **Sample Number:** 4B

□ **Source of Sample:** NF05-64PU **Depth:** 26.6 **Sample Number:** 7D

Date: ○ 9/15/09 □ 9/18/09

FFEBJV, LLC

St Rose, LA

Remarks:

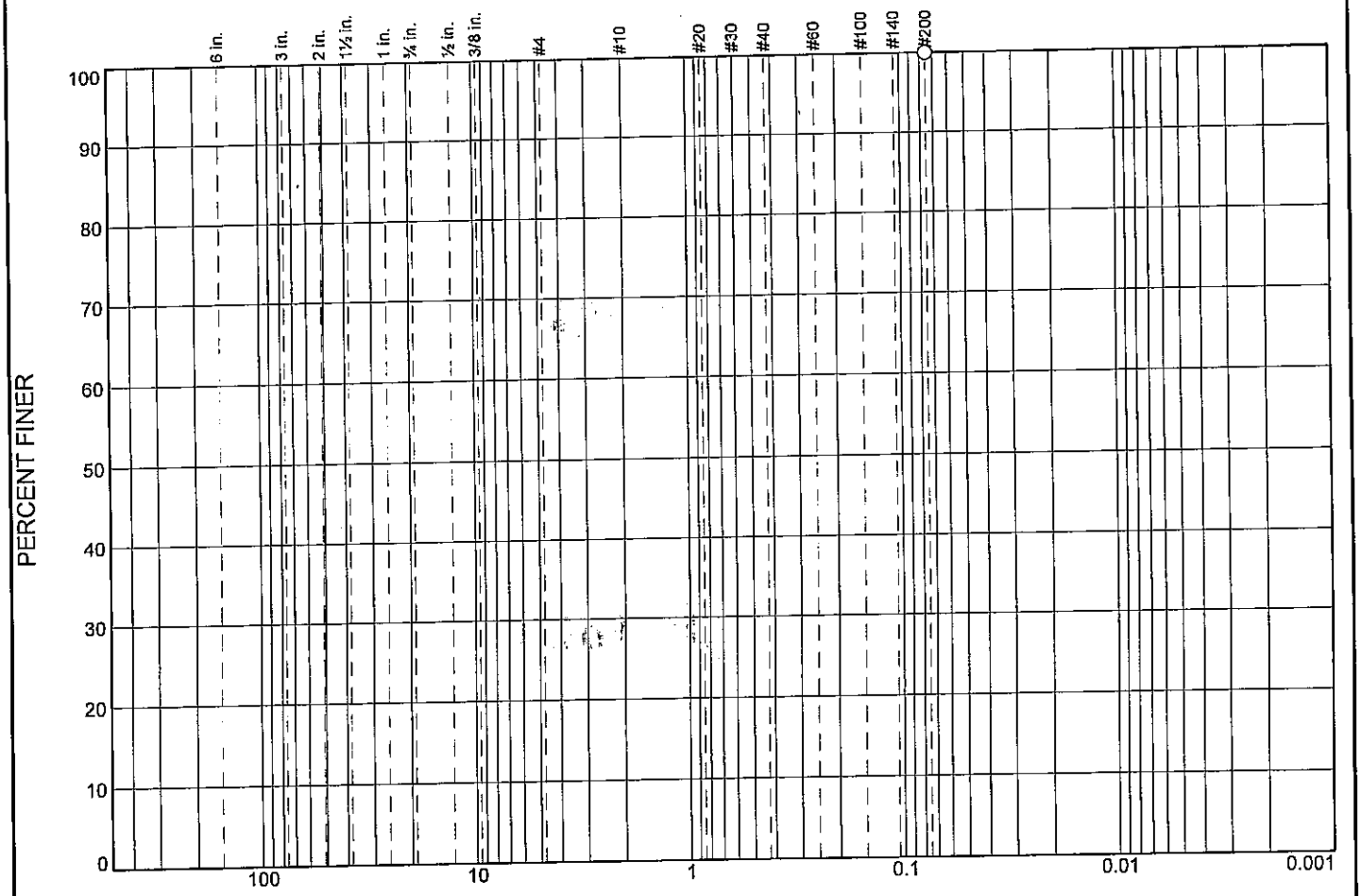
□-200

Figure

Tested By: KP **Checked By:** MS

"Confidential Information Privileged & Confidential Work Product"

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.0	0.0	0.0	100.0	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○	95	23								

Material Description	USCS	AASHTO
○ M GR CH4 W/ LYS & LNS ML	CH4	

Project No. 07-022122 **Client:** US Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

Jefferson Parish, La

○ **Source of Sample:** NF05-64PU **Depth:** 49.7' **Sample Number:** 13C

FFEBJV, LLC

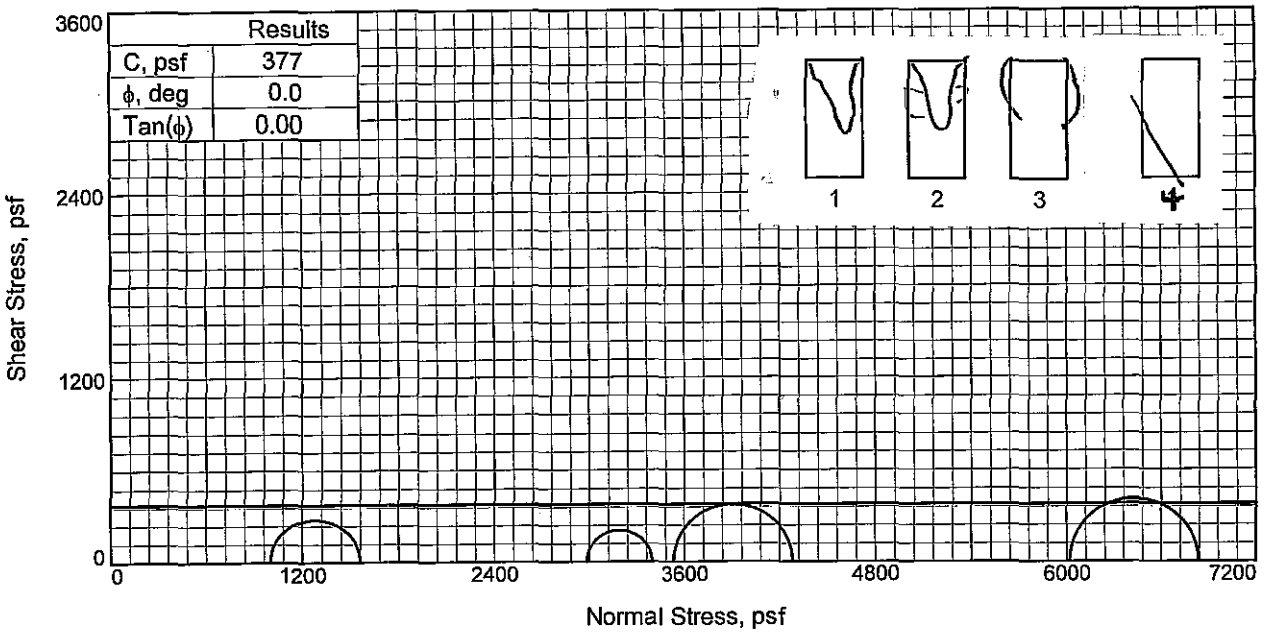
St Rose, LA.

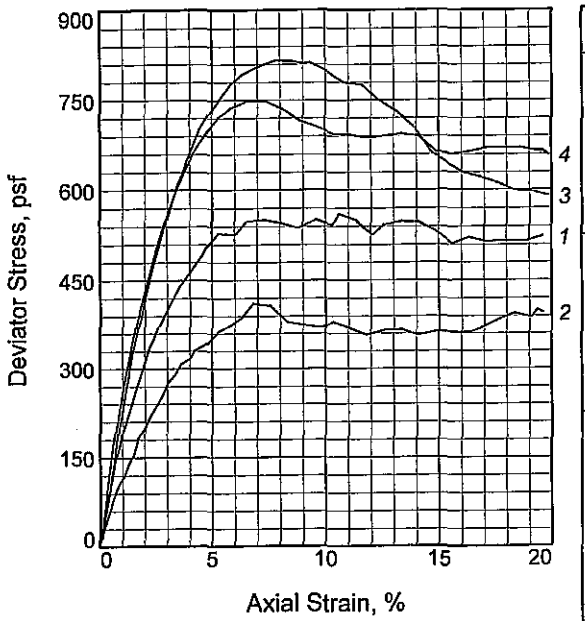
Remarks:

Figure

Tested By: BT **Checked By:** WJY

"Confidential Information; Privileged & Confidential Work Product"





Sample No.		1	2	3	4
Initial	Water Content, %	251.6	213.8	219.1	231.4
	Dry Density, pcf	20.7	24.1	23.6	21.9
	Saturation, %	96.8	98.4	98.4	95.0
	Void Ratio	6.2395	5.2180	5.3428	5.8471
	Diameter, in.	1.422	1.409	1.422	1.424
	Height, in.	3.085	3.081	3.105	3.116
At Test	Water Content, %	251.6	213.8	219.1	231.4
	Dry Density, pcf	20.7	24.1	23.6	21.9
	Saturation, %	96.8	98.4	98.4	95.0
	Void Ratio	6.2395	5.2180	5.3428	5.8471
	Diameter, in.	1.422	1.409	1.422	1.424
	Height, in.	3.085	3.081	3.105	3.116
Strain rate, %/min.		1.00	1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00	0.00
Cell Pressure, psi		6.94	20.72	41.80	24.53
Fail. Stress, psf		560	411	817	749
Strain, %		10.6	6.8	7.8	6.6
Ult. Stress, psf		525	357	666	687
Strain, %					
σ_1 Failure, psf		1560	3395	6836	4281
σ_3 Failure, psf		999	2984	6019	3532

Type of Test:
Unconsolidated Undrained

Sample Type: UNDISTURBED

Description: SO DGR & BK PT W/ RT, WD

LL= 247 **PL=** 73 **PI=** 174

Assumed Specific Gravity= 2.40

Remarks:

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La

Source of Sample: NF05-64PU **Depth:** 0.8

Sample Number: 1B

Proj. No.: 07-022122 **Date Sampled:** 9/18/09

TRIAXIAL SHEAR TEST REPORT

FFEBJV, LLC

Figure _____

Tested By: VF/JC **Checked By:** MS/MKA

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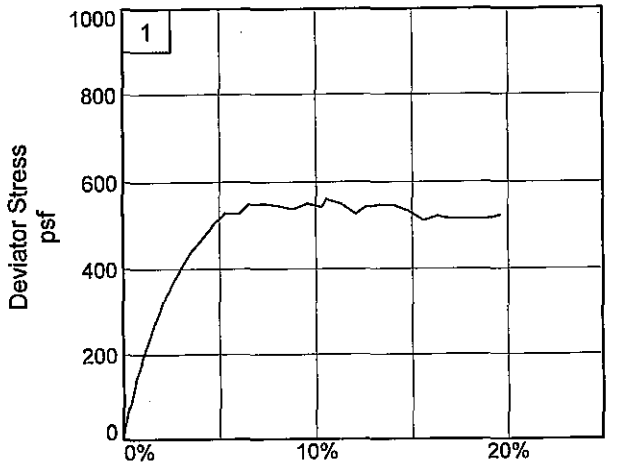
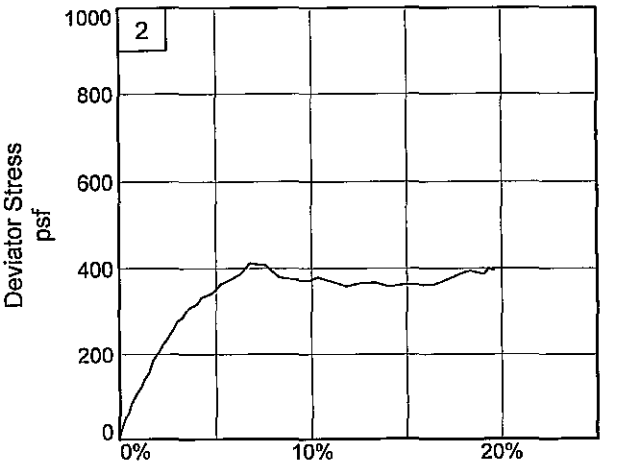
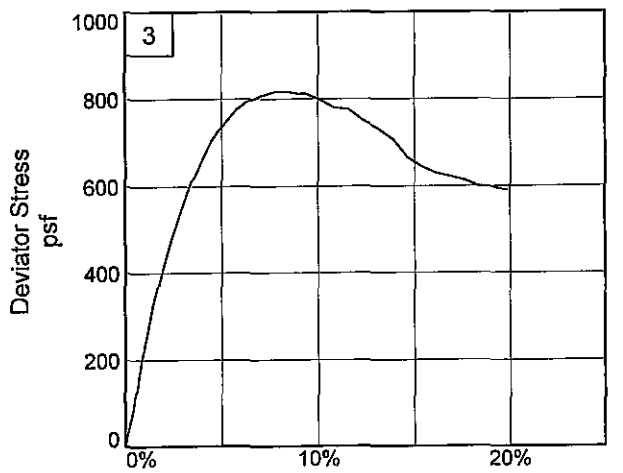
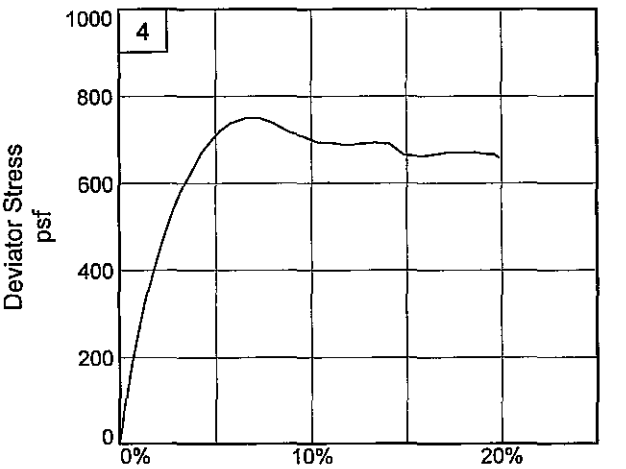
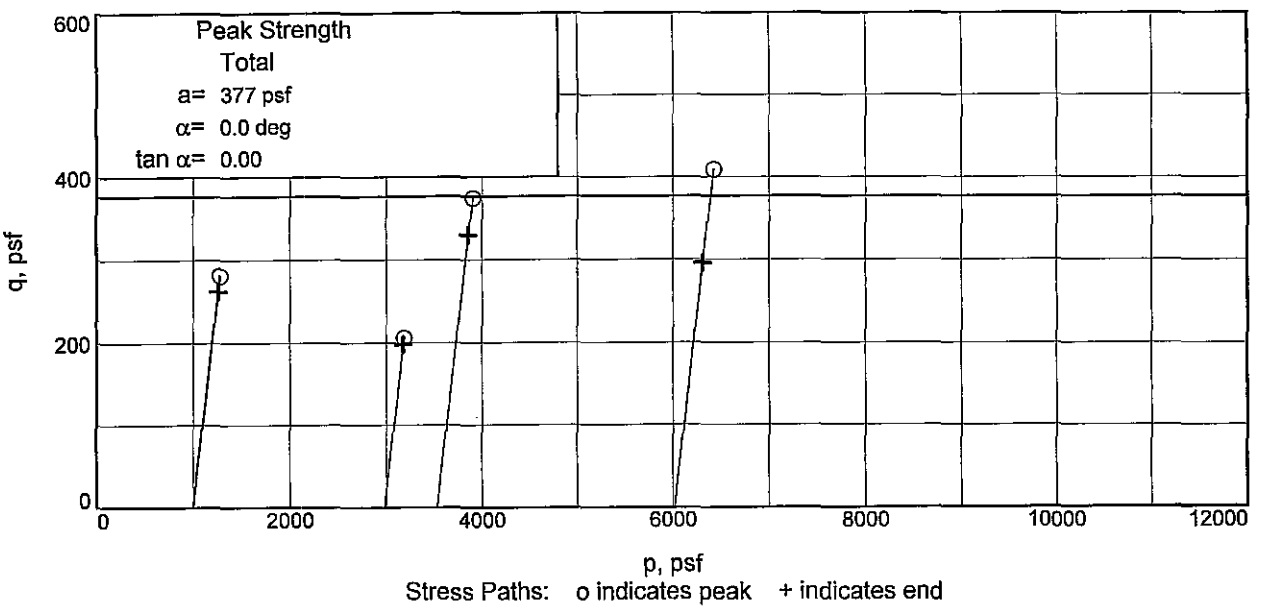










Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

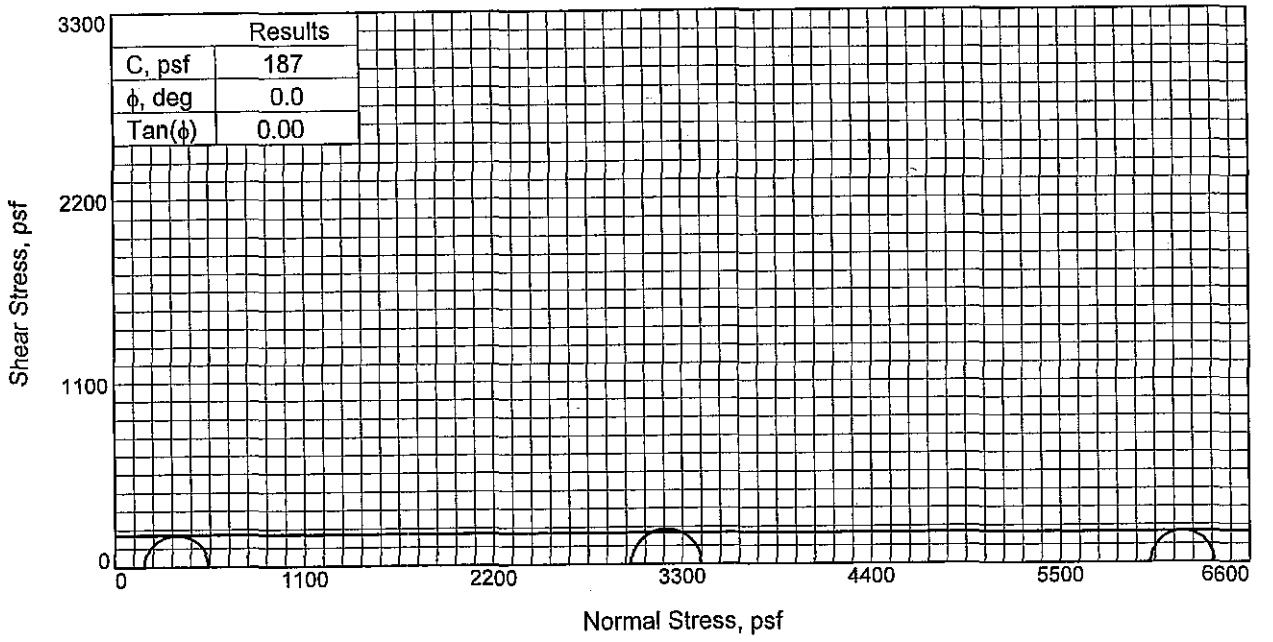
Source of Sample: NF05-64PU **Depth:** 0.8 **Sample Number:** 1B

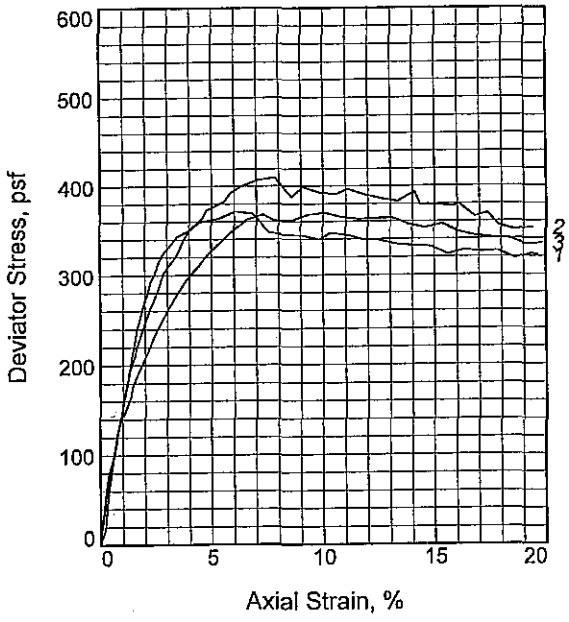
Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: VF/JC **Checked By:** MS/MKA

"Confidential Information, Privileged & Confidential Work Product"





Sample No.		1	2	3
Initial	Water Content, %	65.5	60.7	62.2
	Dry Density, pcf	61.4	65.8	64.9
	Saturation, %	101.4	105.1	105.3
	Void Ratio	1.7444	1.5604	1.5959
	Diameter, in.	1.403	1.383	1.387
	Height, in.	3.103	3.093	3.087
At Test	Water Content, %	65.5	60.7	62.2
	Dry Density, pcf	61.4	65.8	64.9
	Saturation, %	101.4	105.1	105.3
	Void Ratio	1.7444	1.5604	1.5959
	Diameter, in.	1.403	1.383	1.387
	Height, in.	3.103	3.093	3.087
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		1.18	20.84	41.83
Fail. Stress, psf		371	410	369
Strain, %		6.1	7.8	10.1
Ult. Stress, psf		339	378	352
Strain, %				
σ_1 Failure, psf		542	3410	6393
σ_3 Failure, psf		170	3000	6024

Type of Test:
Unconsolidated Undrained

Sample Type: UNDISTURBED

Description: VSO GR CL6 W/ LNS & LYS ML, WD

LL= 49 **PL=** 20 **PI=** 29

Assumed Specific Gravity= 2.70

Remarks:

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La

Source of Sample: NF05-64PU **Depth:** 6.6

Sample Number: 2D

Proj. No.: 07-022122 **Date Sampled:** 9/18/09

TRIAXIAL SHEAR TEST REPORT

FFEBJV, LLC

Figure _____

Tested By: VF/JC **Checked By:** MS/MKA

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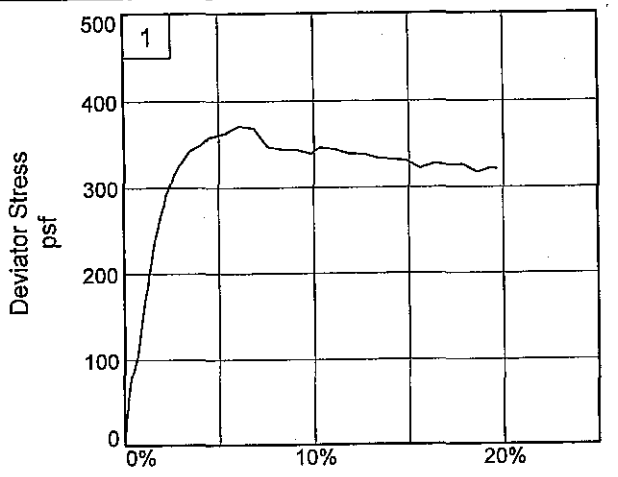

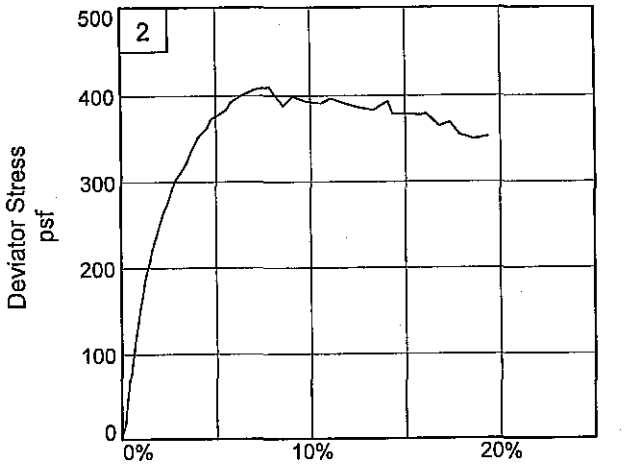

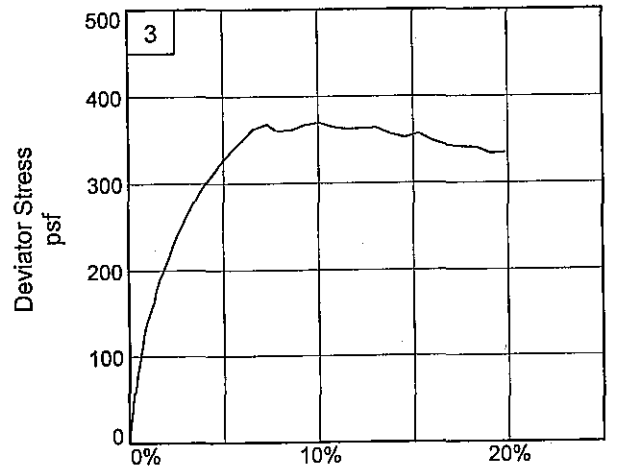

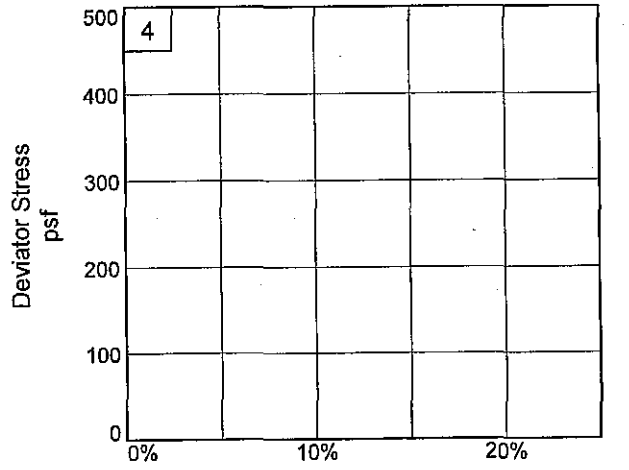

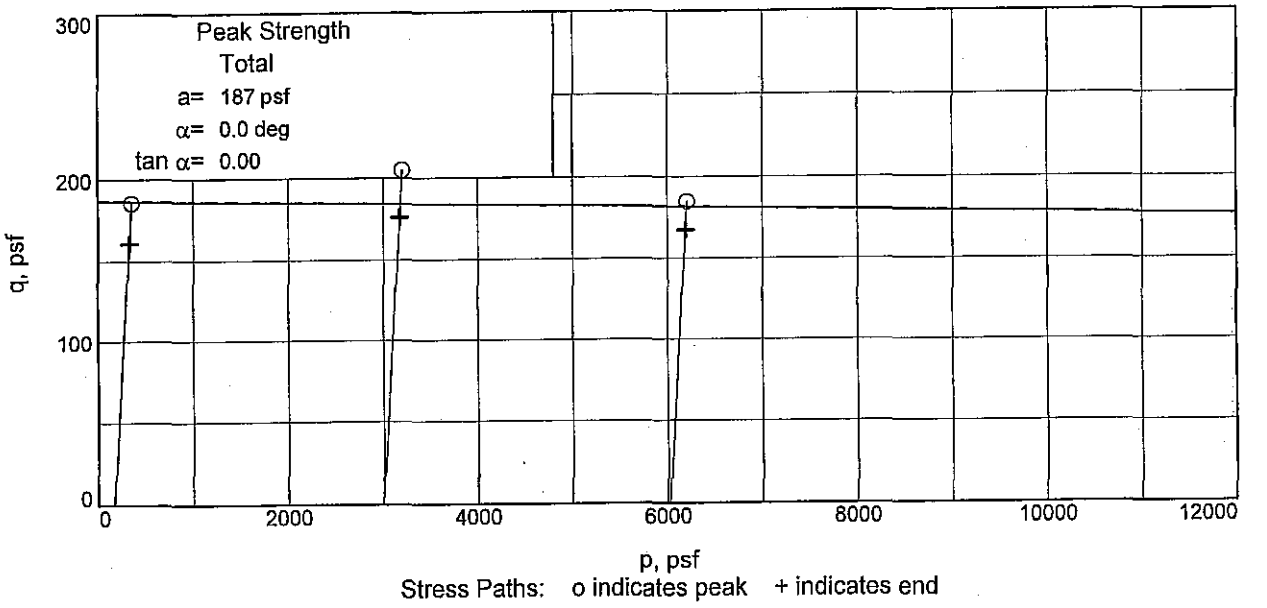

Client: U.S. Army Corps of Engineers
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Source of Sample: NF05-64PU **Depth:** 6.6 **Sample Number:** 2D
Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: VF/JC **Checked By:** MS/MKA

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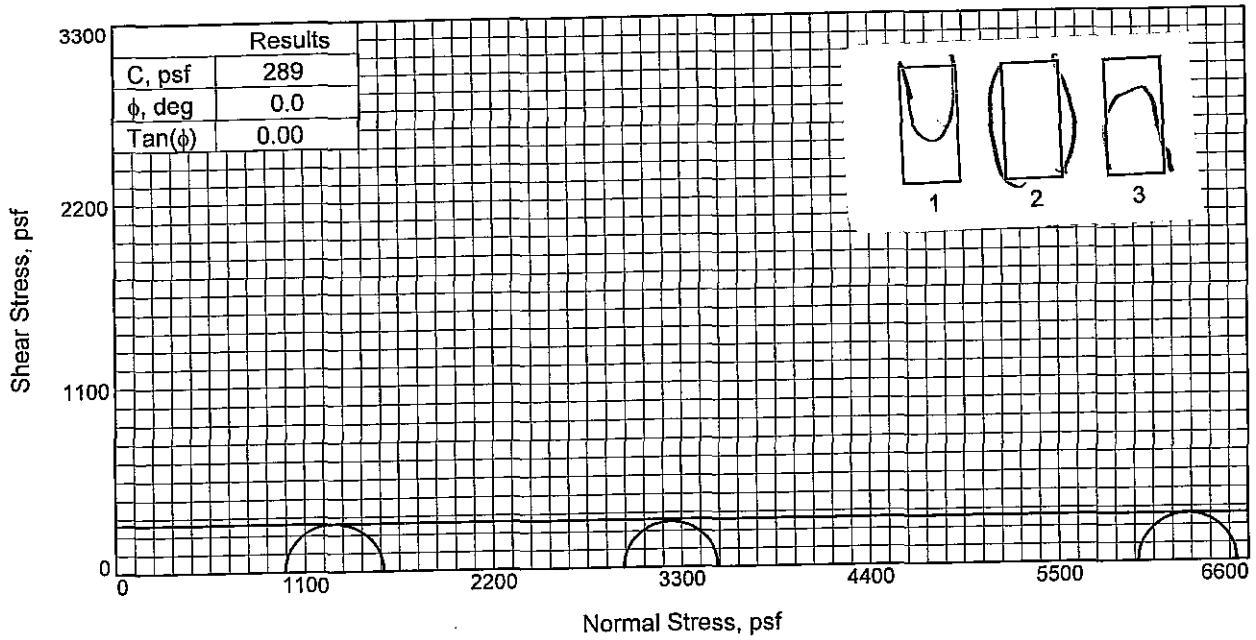
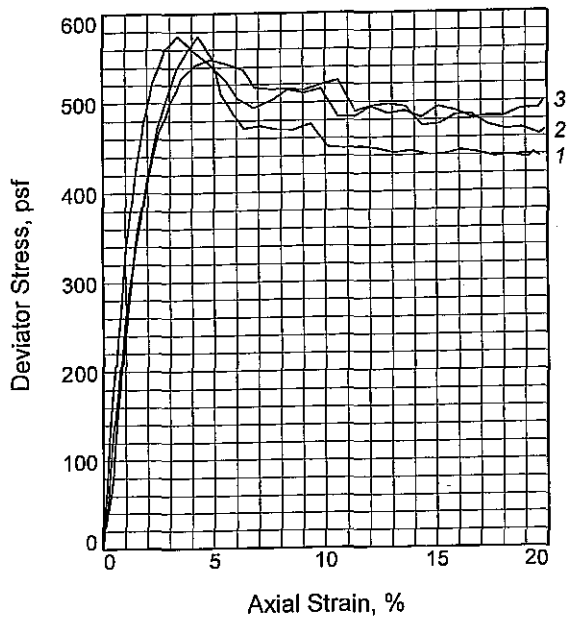




Sample No.		1	2	3
Initial	Water Content, %	53.6	52.4	52.6
	Dry Density, pcf	70.2	70.0	70.6
	Saturation, %	103.3	100.5	102.3
	Void Ratio	1.4016	1.4075	1.3871
	Diameter, in.	1.405	1.415	1.405
	Height, in.	3.100	3.099	3.111
At Test	Water Content, %	53.6	52.4	52.6
	Dry Density, pcf	70.2	70.0	70.6
	Saturation, %	103.3	100.5	102.3
	Void Ratio	1.4016	1.4075	1.3871
	Diameter, in.	1.405	1.415	1.405
	Height, in.	3.100	3.099	3.111
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.84	20.57	41.38
Fail. Stress, psf		574	548	575
Strain, %		4.3	4.9	3.4
Ult. Stress, psf		440	473	482
Strain, %				
σ_1 Failure, psf		1559	3510	6534
σ_3 Failure, psf		985	2962	5959

Type of Test:
Unconsolidated Undrained

Sample Type: UNDISTURBED

Description: SO GR CL6 W/ LNS & LYS SM, WD, RT

LL= 49 **PL=** 19 **PI=** 30

Assumed Specific Gravity= 2.70

Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La

Source of Sample: NF05-64PU **Depth:** 13.7

Sample Number: 4C

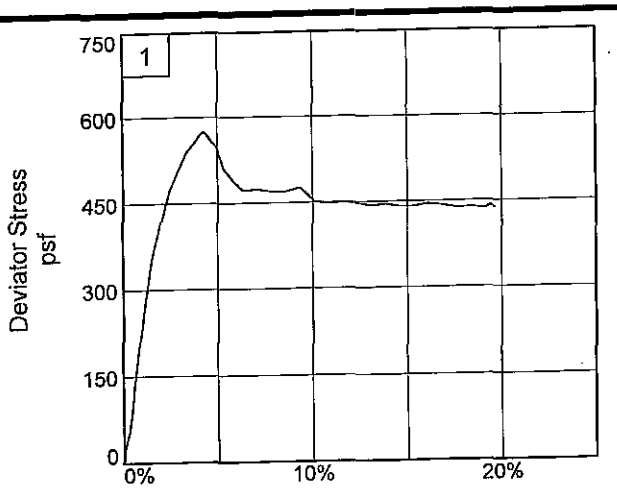
Proj. No.: 07-022122 **Date Sampled:** 9/18/09

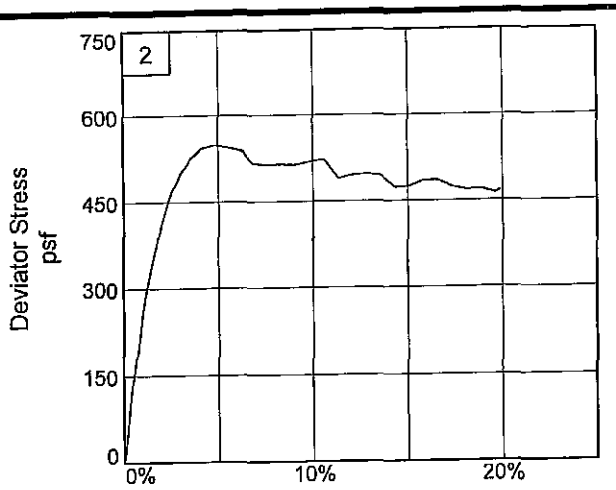
TRIAXIAL SHEAR TEST REPORT

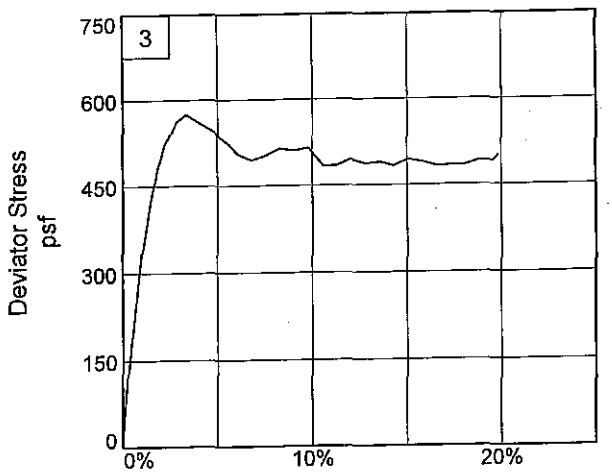
FFEBJV, LLC

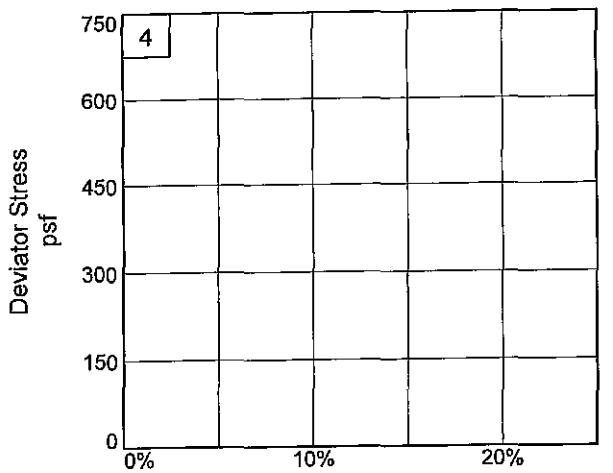
Tested By: VF/JC **Checked By:** MS

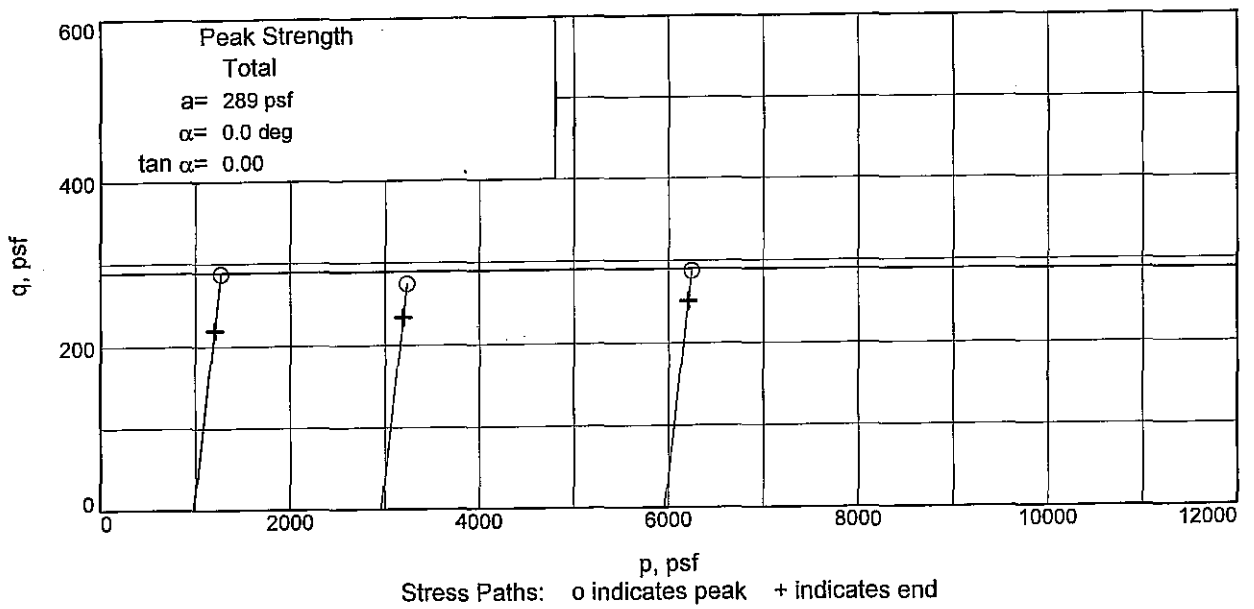
"Confidential Information, Privileged & Confidential Work Product"











Stress Paths: o indicates peak + indicates end

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

Source of Sample: NF05-64PU **Depth:** 13.7 **Sample Number:** 4C

Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: VF/JC **Checked By:** MS

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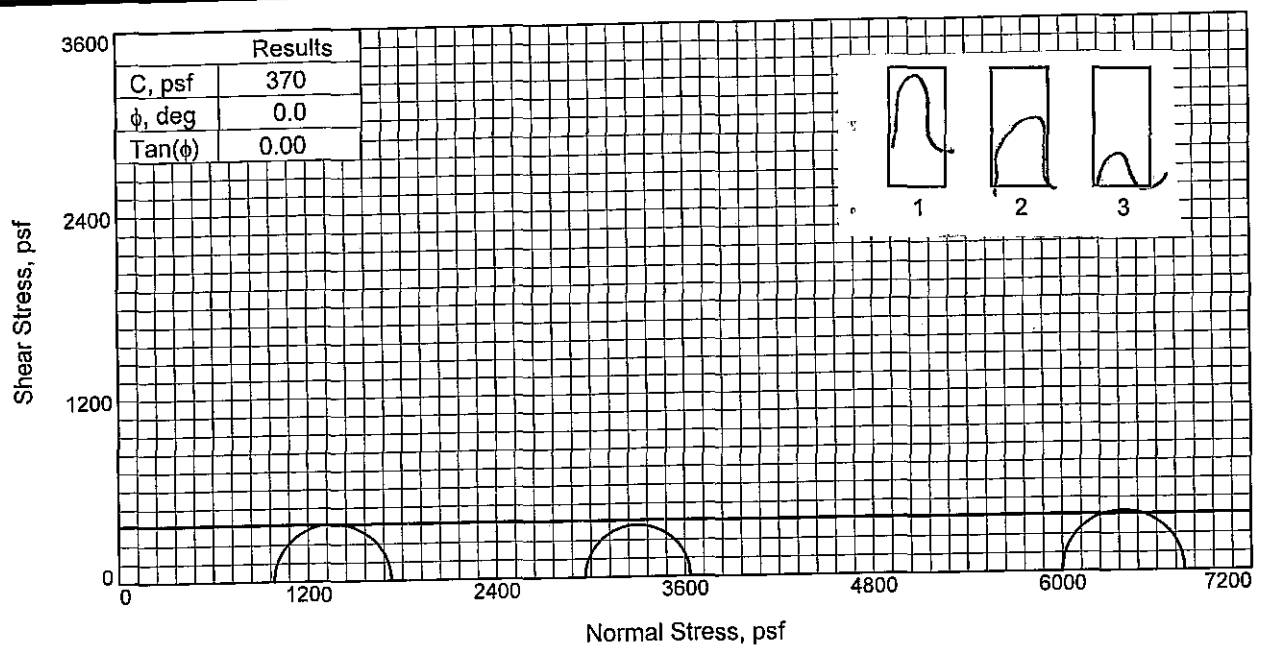

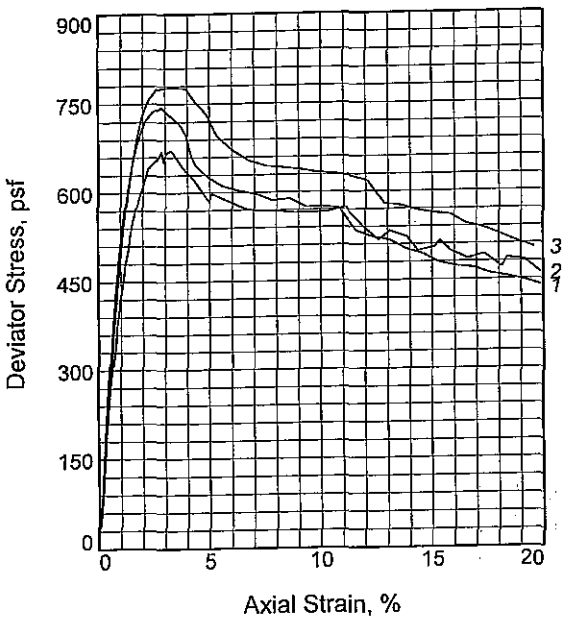

Sample No.		1	2	3
Initial	Water Content, %	75.0	70.9	69.7
	Dry Density, pcf	56.2	58.7	60.0
	Saturation, %	100.7	101.4	103.1
	Void Ratio	2.0416	1.9156	1.8503
	Diameter, in.	1.417	1.419	1.416
	Height, in.	3.107	3.098	3.092
At Test	Water Content, %	75.0	70.9	69.7
	Dry Density, pcf	56.2	58.7	60.0
	Saturation, %	100.7	101.4	103.1
	Void Ratio	2.0416	1.9156	1.8503
	Diameter, in.	1.417	1.419	1.416
	Height, in.	3.107	3.098	3.092
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.84	20.58	41.66
Fail. Stress, psf		744	669	778
Strain, %		2.8	2.8	3.3
Ult. Stress, psf		478	498	563
Strain, %				
σ_1 Failure, psf		1728	3633	6778
σ_3 Failure, psf		985	2964	5999

Type of Test:
Unconsolidated Undrained

Sample Type: UNDISTURBED

Description: SO GR CH4 W/ LNS & LYS ML, CC

LL= 74 **PL=** 23 **PI=** 51

Assumed Specific Gravity= 2.74

Remarks:

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La

Source of Sample: NF05-64PU **Depth:** 17.7

Sample Number: 5C

Proj. No.: 07-022122 **Date Sampled:** 9/18/09

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Figure _____

Tested By: VF/JC **Checked By:** MS

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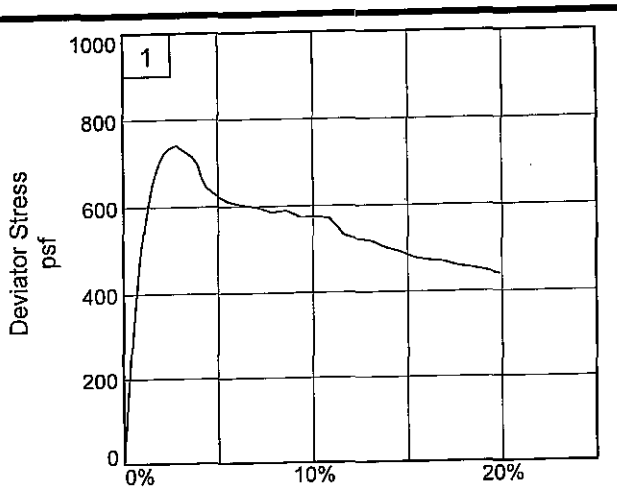

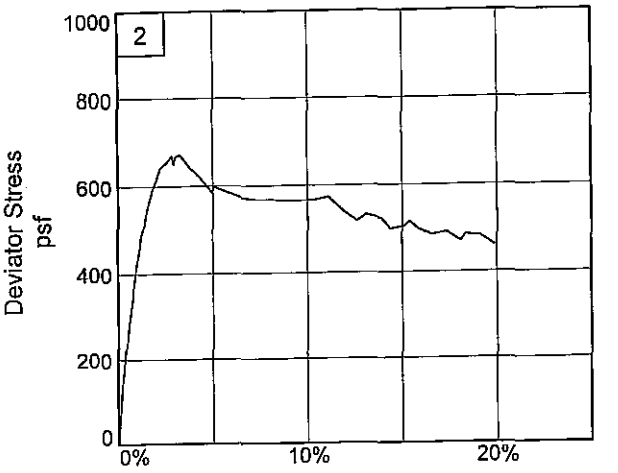

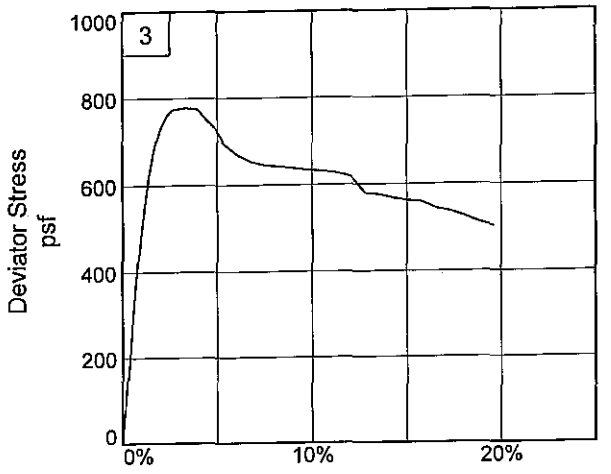

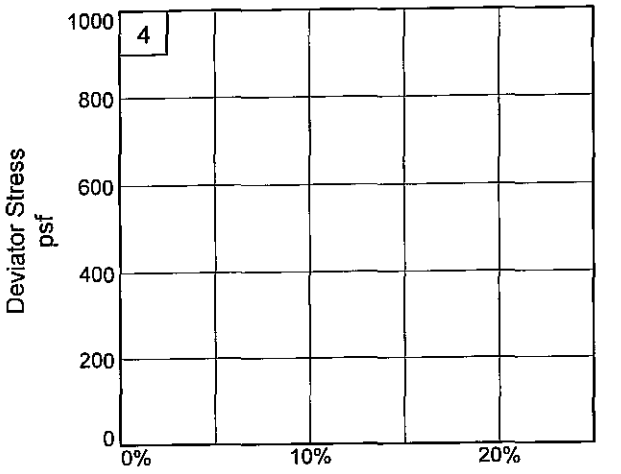

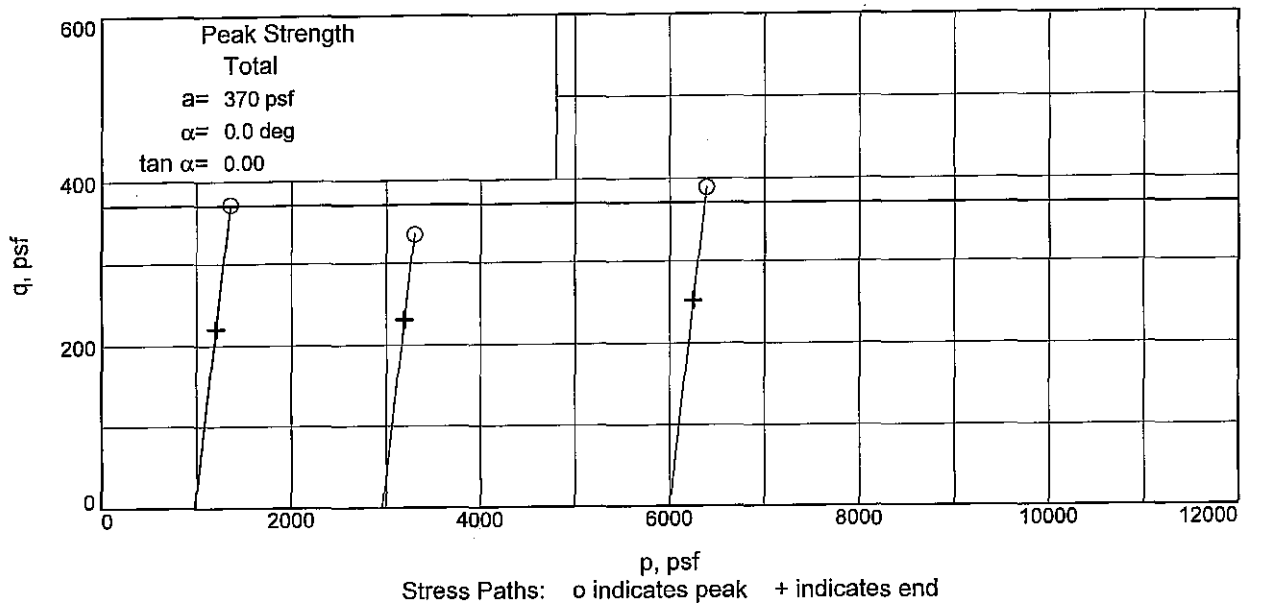

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

Source of Sample: NF05-64PU **Depth:** 17.7 **Sample Number:** 5C

Project No.: 07-022122 **Figure** _____

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Tested By: VF/JC **Checked By:** MS

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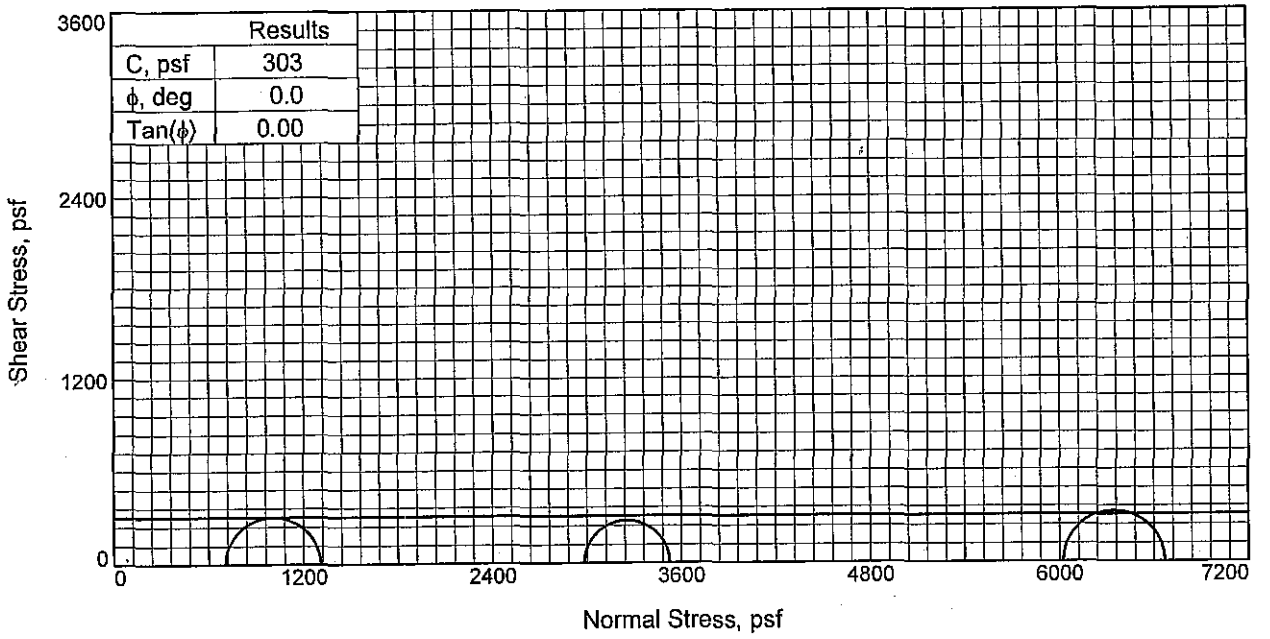

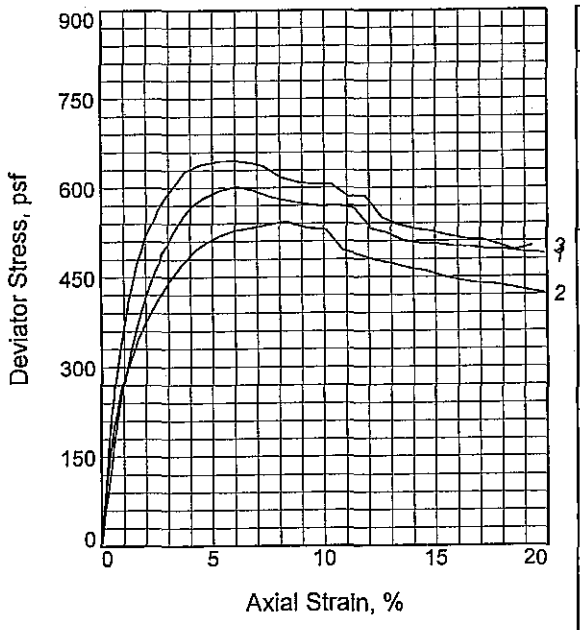

Sample No.		1	2	3
Initial	Water Content, %	65.8	63.7	61.7
	Dry Density, pcf	61.7	63.3	64.7
	Saturation, %	101.8	102.4	102.7
	Void Ratio	1.7721	1.7039	1.6458
	Diameter, in.	1.410	1.394	1.395
	Height, in.	3.108	3.097	3.098
At Test	Water Content, %	65.8	63.7	61.7
	Dry Density, pcf	61.7	63.3	64.7
	Saturation, %	101.8	102.4	102.7
	Void Ratio	1.7721	1.7039	1.6458
	Diameter, in.	1.410	1.394	1.395
	Height, in.	3.108	3.097	3.098
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		4.90	20.71	41.84
Fail. Stress, psf		602	543	645
Strain, %		6.1	8.3	5.3
Ult. Stress, psf		505	459	527
Strain, %				
σ_1 Failure, psf		1308	3524	6669
σ_3 Failure, psf		706	2982	6025

Type of Test:
Unconsolidated Undrained

Sample Type: A

Description: SO GR CH4 W/ LNS & LYS ML, CC

LL= 78 **PL=** 24 **PI=** 54

Assumed Specific Gravity= 2.74

Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La

Source of Sample: NF05-64PU **Depth:** 20.8

Sample Number: 6B

Proj. No.: 07-022122 **Date Sampled:**

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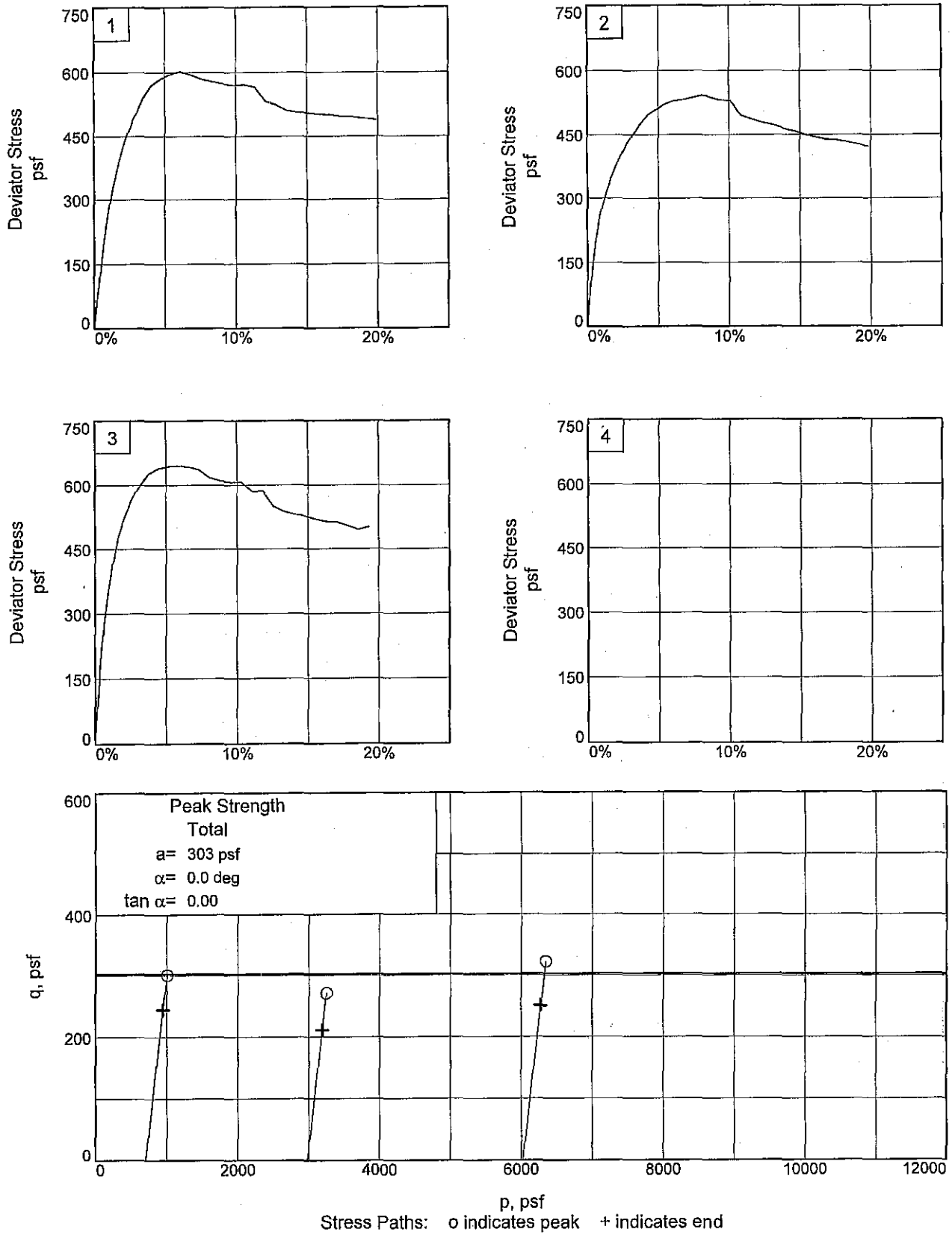

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

Source of Sample: NF05-64PU **Depth:** 20.8 **Sample Number:** 6B

Project No.: 07-022122 **Figure** _____

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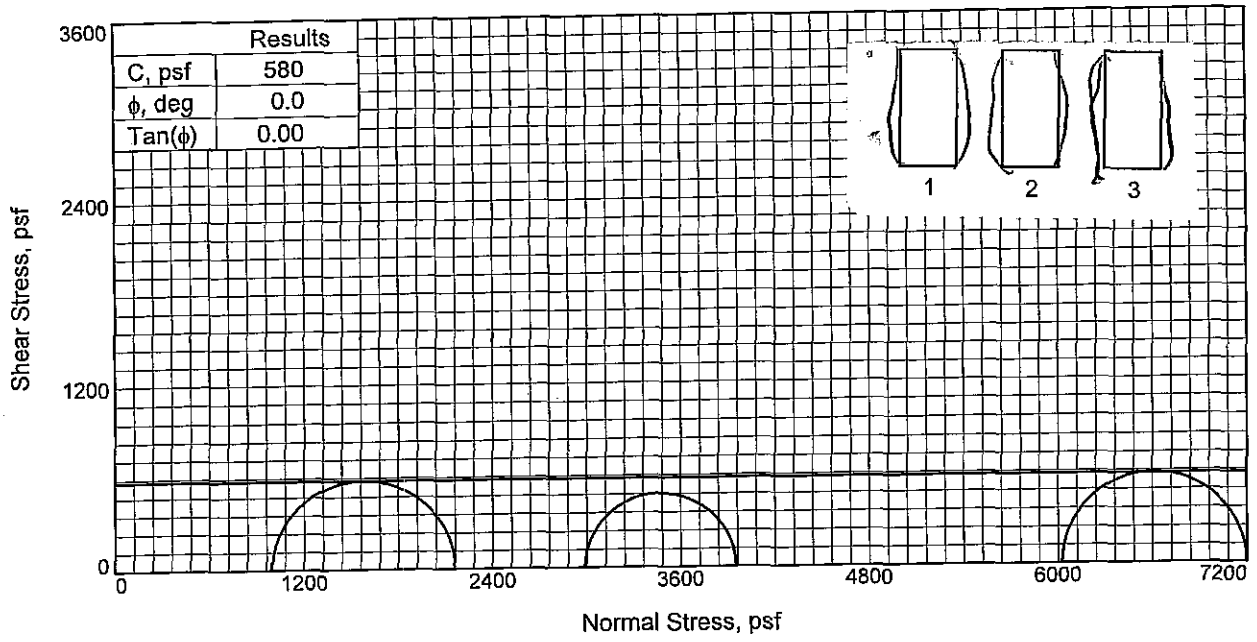

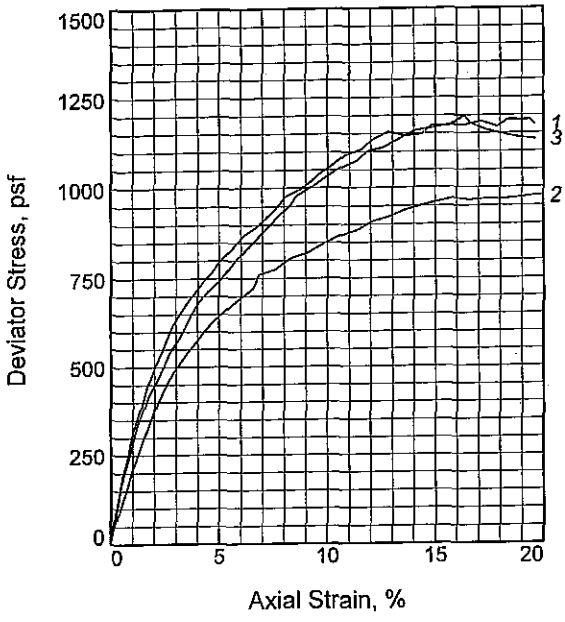

Sample No.		1	2	3
Initial	Water Content, %	37.8	40.0	39.0
	Dry Density, pcf	83.3	81.5	80.9
	Saturation, %	100.8	102.3	98.4
	Void Ratio	1.0007	1.0442	1.0593
	Diameter, in.	1.411	1.412	1.417
	Height, in.	3.108	3.079	3.100
At Test	Water Content, %	37.8	40.0	39.0
	Dry Density, pcf	83.3	81.5	80.9
	Saturation, %	100.8	102.3	98.4
	Void Ratio	1.0007	1.0442	1.0593
	Diameter, in.	1.411	1.412	1.417
	Height, in.	3.108	3.079	3.100
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.91	20.75	41.83
Fail. Stress, psf		1165	961	1173
Strain, %		14.8	15.1	14.8
Ult. Stress, psf		1165	961	1173
Strain, %				
σ_1 Failure, psf		2160	3949	7197
σ_3 Failure, psf		995	2988	6024

Type of Test: Unconsolidated Undrained

Sample Type: UNDISTURBED

Description: M GR CL4 W/ LNS & LYS CH, LYS SM

LL= 33 **PL=** 21 **PI=** 12

Assumed Specific Gravity= 2.67

Remarks:

Figure _____

Client: *U.S. Army Corps of Engineers*

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La

Source of Sample: NF05-64PU **Depth:** 26.6

Sample Number: 7D

Proj. No.: 07-022122 **Date Sampled:** 9/18/09

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Tested By: VF/JC Checked By: MS

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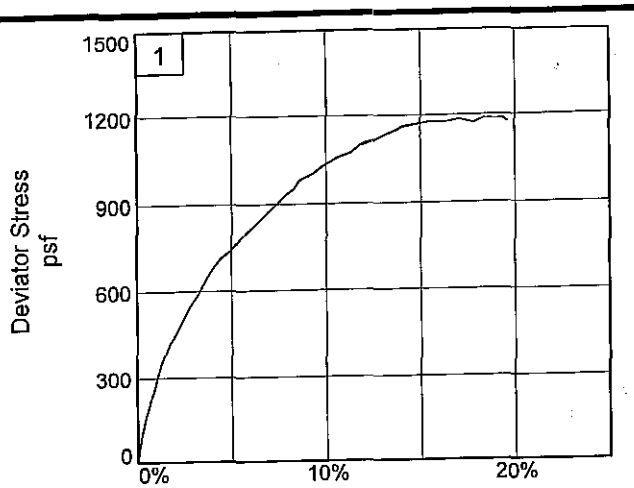

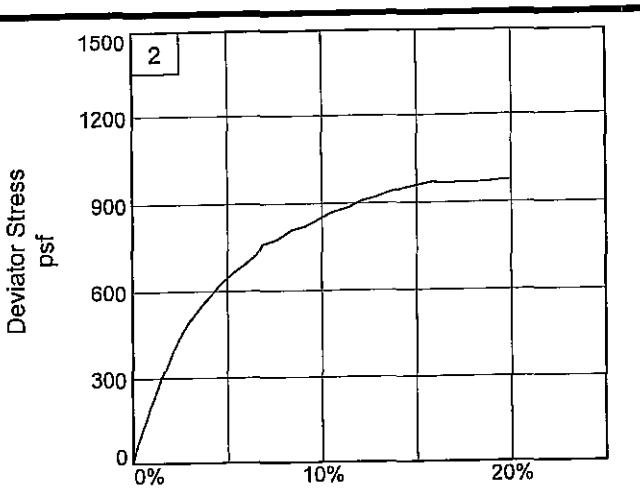

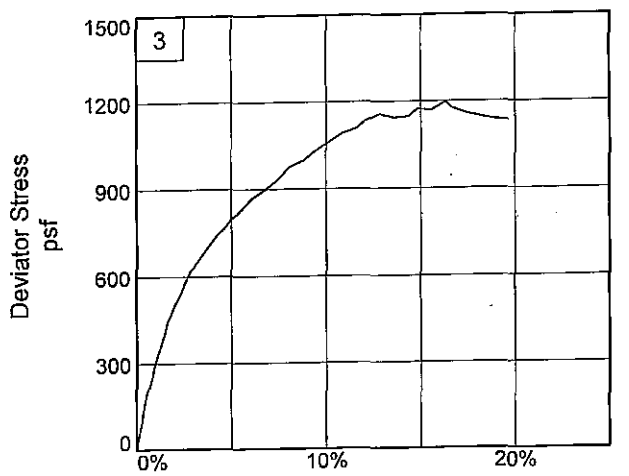

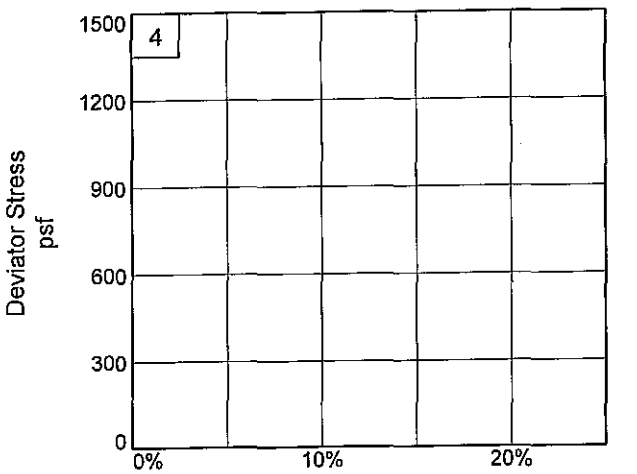

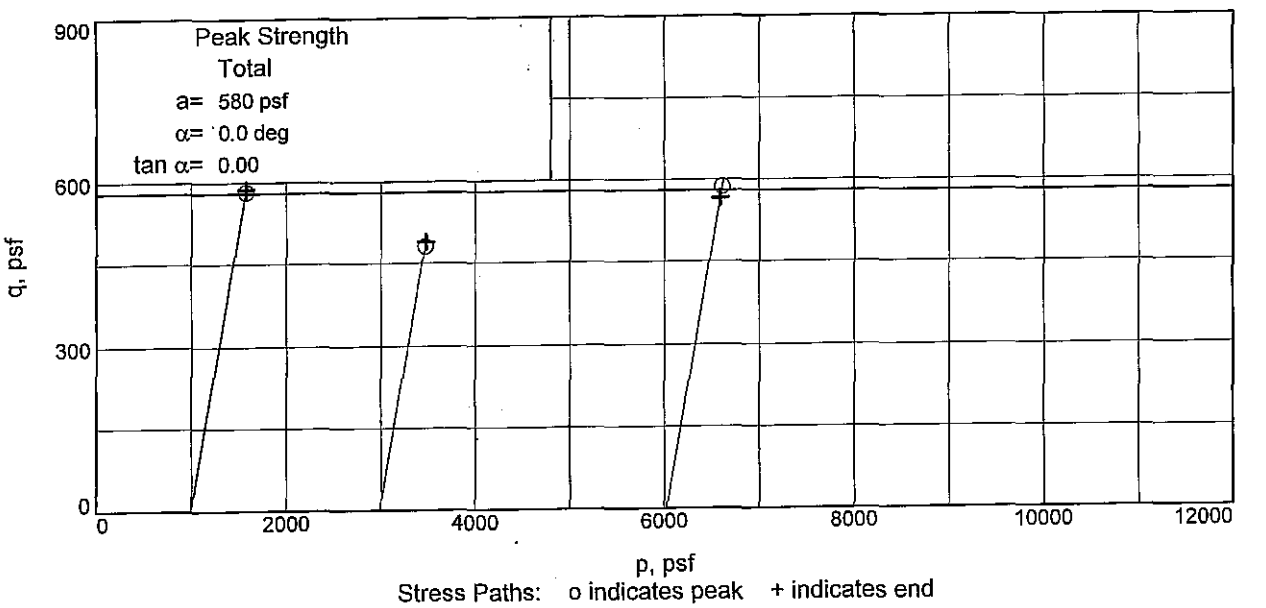

Stress Paths: o indicates peak + indicates end

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

Source of Sample: NF05-64PU **Depth:** 26.6 **Sample Number:** 7D

Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: VF/JC **Checked By:** MS

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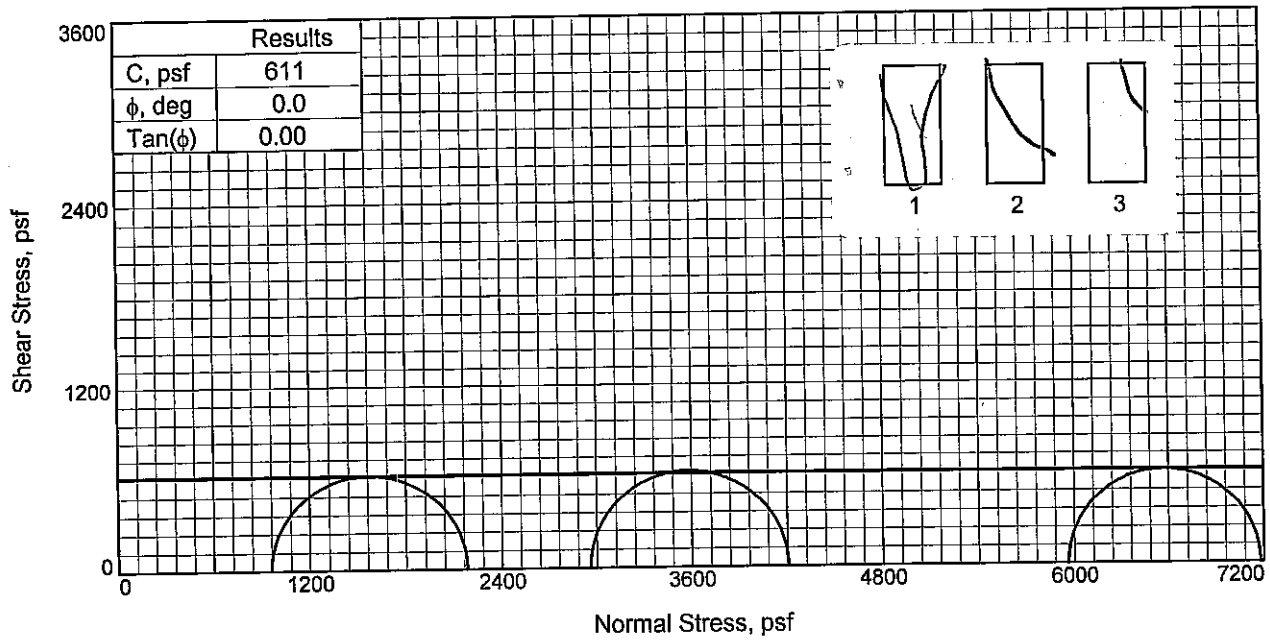

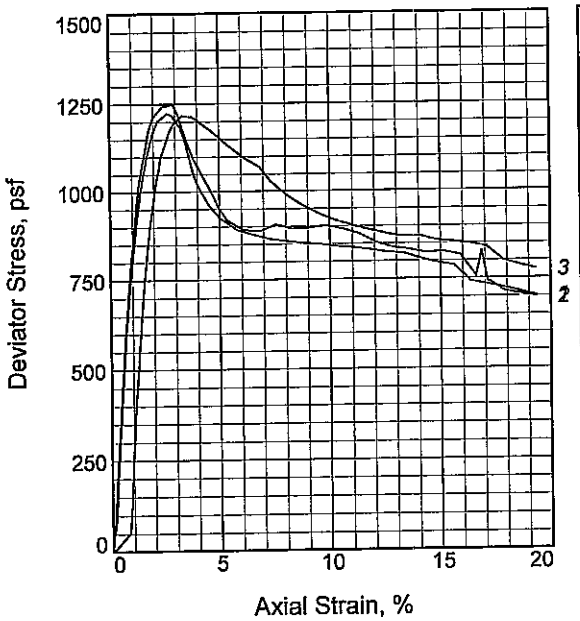

Sample No.		1	2	3
Initial	Water Content, %	63.2	64.3	63.4
	Dry Density, pcf	62.5	62.5	63.0
	Saturation, %	99.7	101.3	101.3
	Void Ratio	1.7384	1.7376	1.7164
	Diameter, in.	1.412	1.410	1.413
	Height, in.	3.103	3.105	3.106
At Test	Water Content, %	63.2	64.3	63.4
	Dry Density, pcf	62.5	62.5	63.0
	Saturation, %	99.7	101.3	101.3
	Void Ratio	1.7384	1.7376	1.7164
	Diameter, in.	1.412	1.410	1.413
	Height, in.	3.103	3.105	3.106
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.66	20.54	41.40
Fail. Stress, psf		1222	1248	1217
Strain, %		2.6	2.9	3.4
Ult. Stress, psf		795	826	858
Strain, %				
σ_1 Failure, psf		2181	4206	7179
σ_3 Failure, psf		959	2958	5962

Type of Test: Unconsolidated Undrained

Sample Type: UNDISTURBED

Description: M GR CH4 W/ LNS & LYS ML, LYS SM

LL= 76 **PL=** 24 **PI=** 52

Assumed Specific Gravity= 2.74

Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La

Source of Sample: NF05-64PU **Depth:** 34.6

Sample Number: 9D

Proj. No.: 07-022122 **Date Sampled:** 9/18/09

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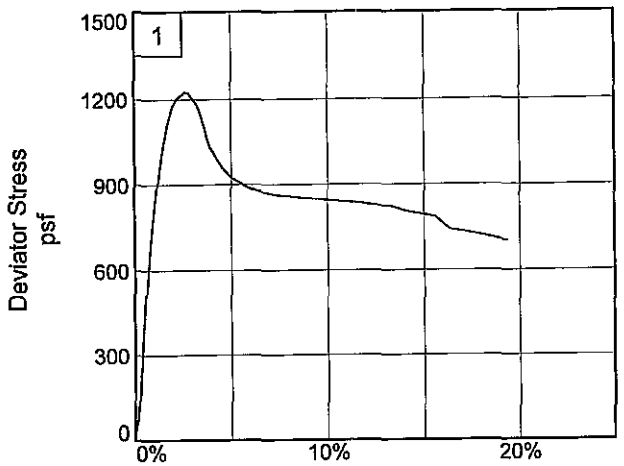

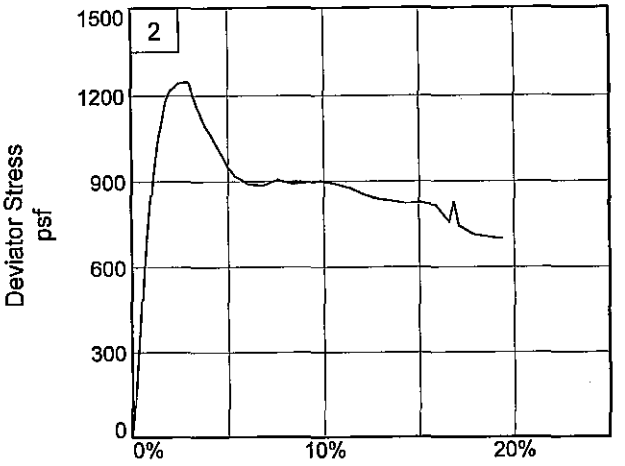

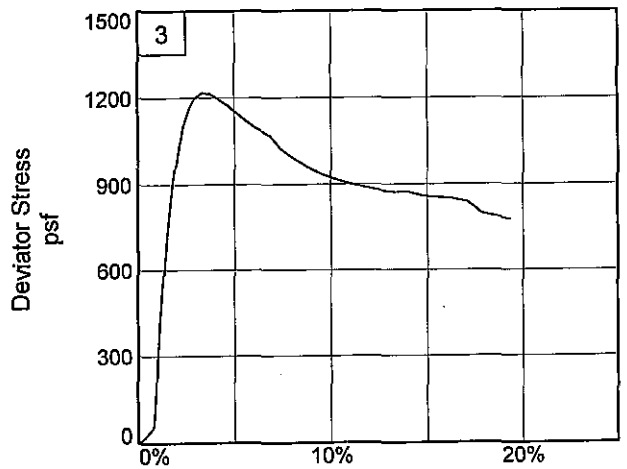

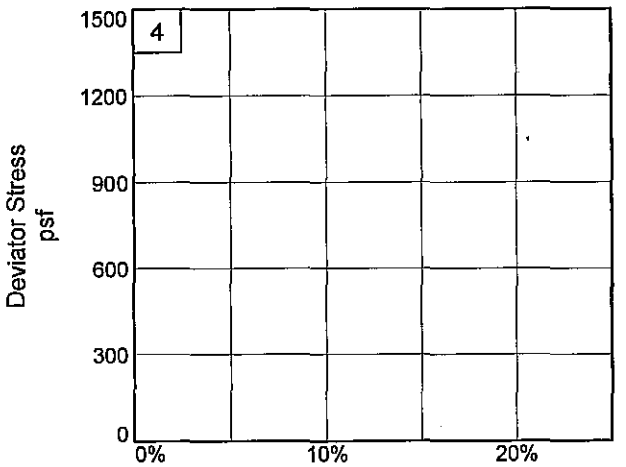

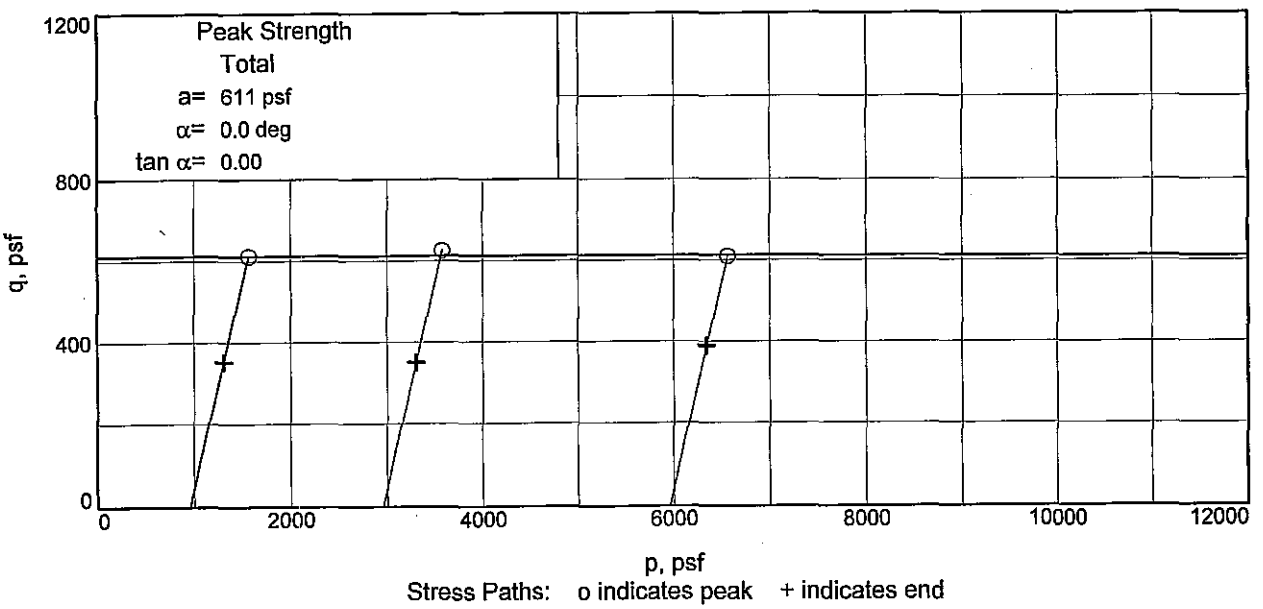

Client: U.S. Army Corps of Engineers
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Source of Sample: NF05-64PU **Depth:** 34.6 **Sample Number:** 9D
Project No.: 07-022122 **Figure** _____

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Tested By: VF/JC **Checked By:** MS

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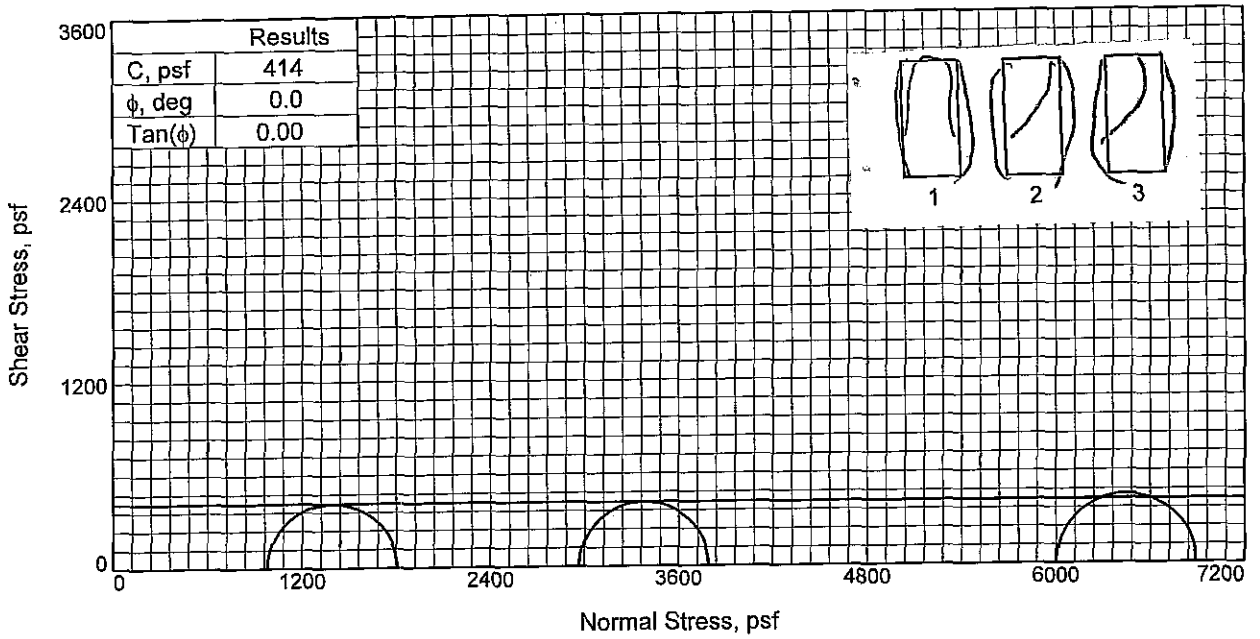

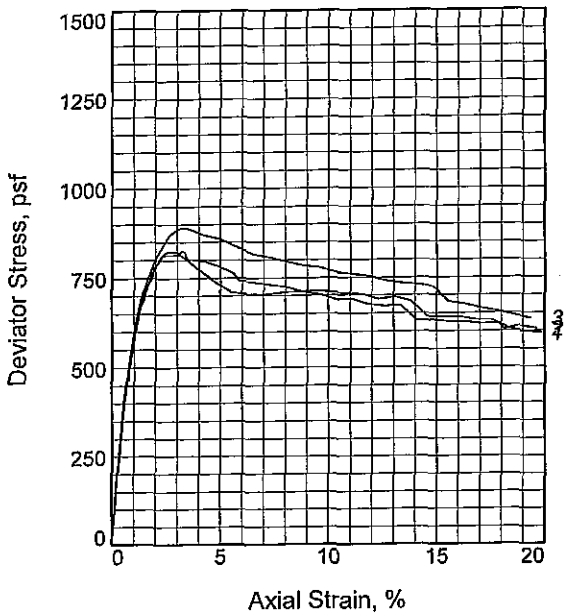

Sample No.		1	2	3
Initial	Water Content, %	72.0	69.8	69.2
	Dry Density, pcf	58.3	58.8	59.5
	Saturation, %	102.1	100.1	101.1
	Void Ratio	1.9336	1.9103	1.8748
	Diameter, in.	1.408	1.412	1.413
	Height, in.	3.096	3.104	3.103
At Test	Water Content, %	72.0	69.8	69.2
	Dry Density, pcf	58.3	58.8	59.5
	Saturation, %	102.1	100.1	101.1
	Void Ratio	1.9336	1.9103	1.8748
	Diameter, in.	1.408	1.412	1.413
	Height, in.	3.096	3.104	3.103
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.81	20.59	41.69
Fail. Stress, psf		824	825	890
Strain, %		2.9	3.2	3.4
Ult. Stress, psf		639	670	724
Strain, %				
σ_1 Failure, psf		1805	3791	6892
σ_3 Failure, psf		981	2965	6003

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: SO GR CH4 W/ LNS & LYS SM

LL= 90 **PL=** 26 **PI=** 64
Assumed Specific Gravity= 2.74
Remarks:

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-64PU **Depth:** 41.7
Sample Number: 11C
Proj. No.: 07-022122 **Date Sampled:** 9/18/09

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Figure _____

Tested By: VF/JC **Checked By:** MS

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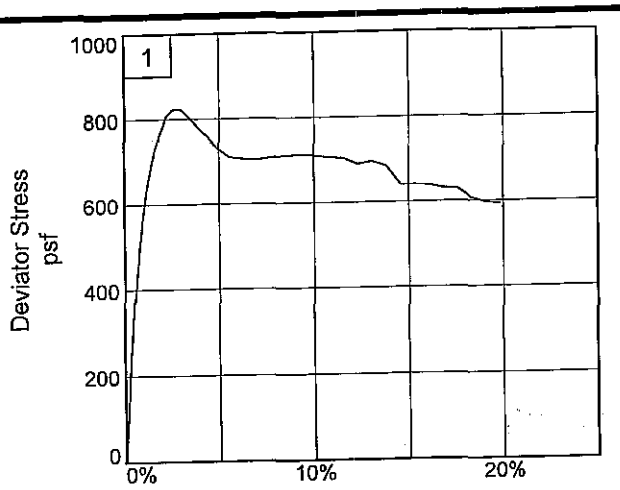

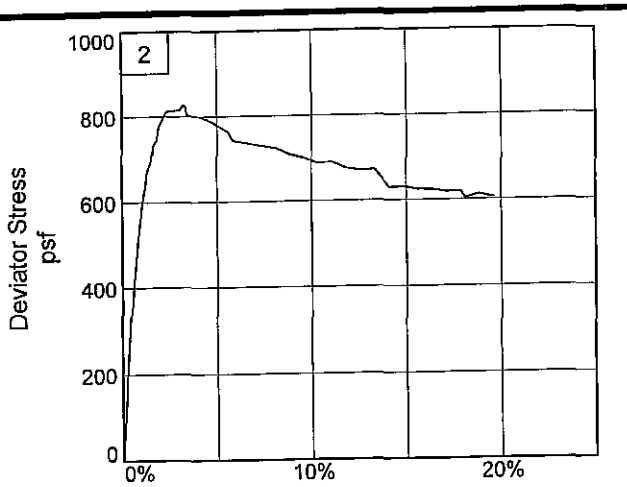

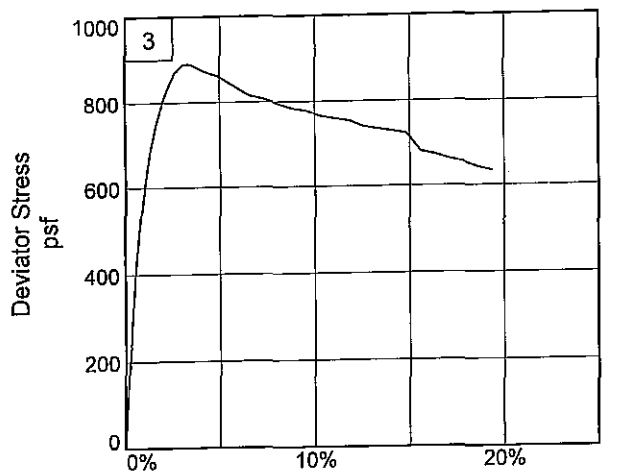

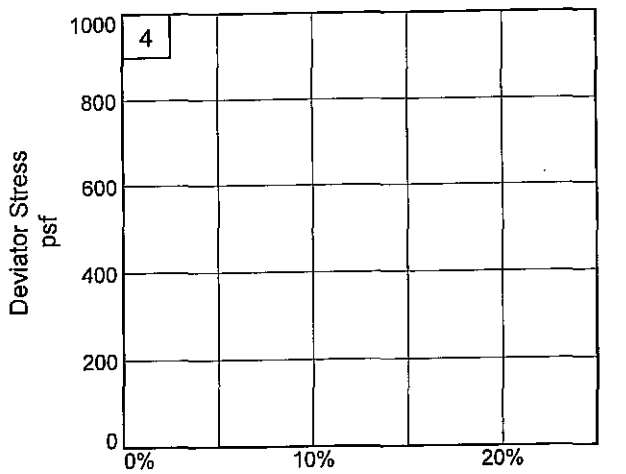

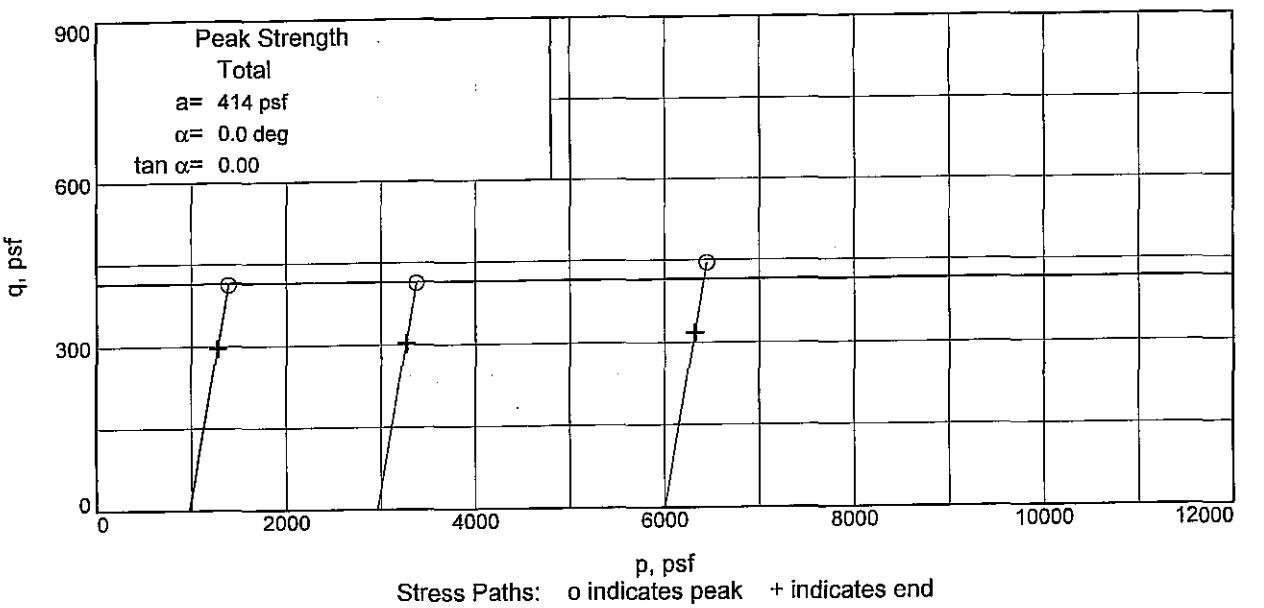

Client: U.S. Army Corps of Engineers
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Source of Sample: NF05-64PU **Depth:** 41.7 **Sample Number:** 11C
Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: VF/JC **Checked By:** MS

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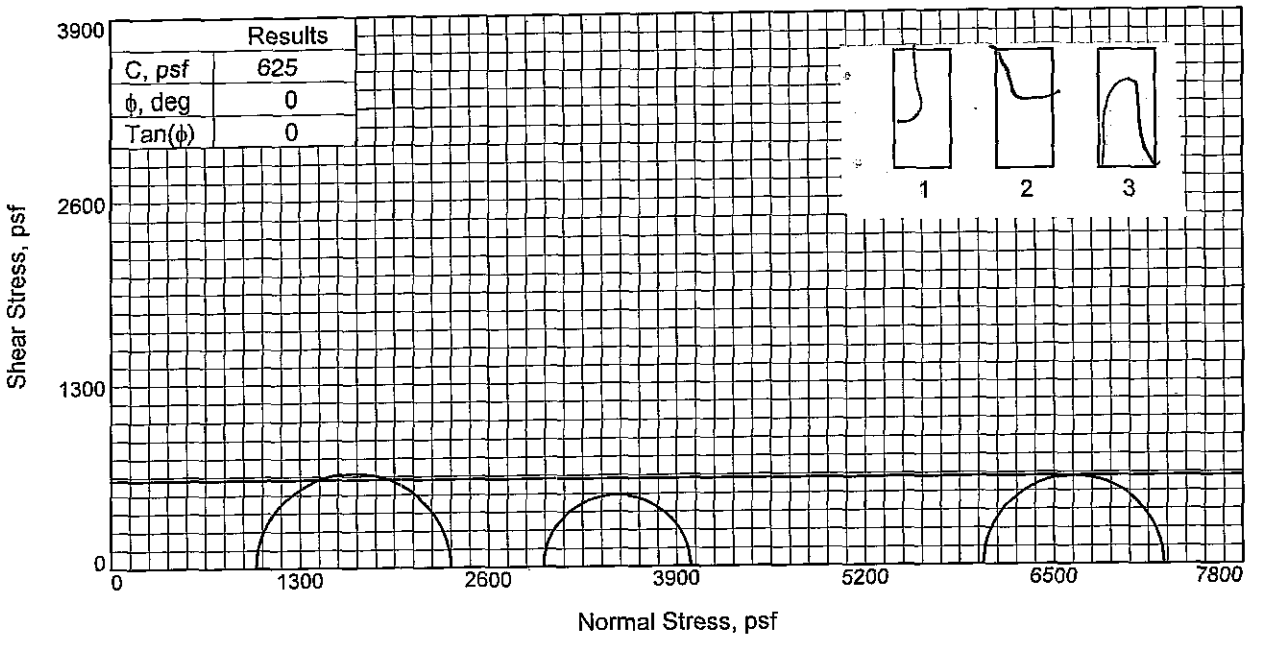
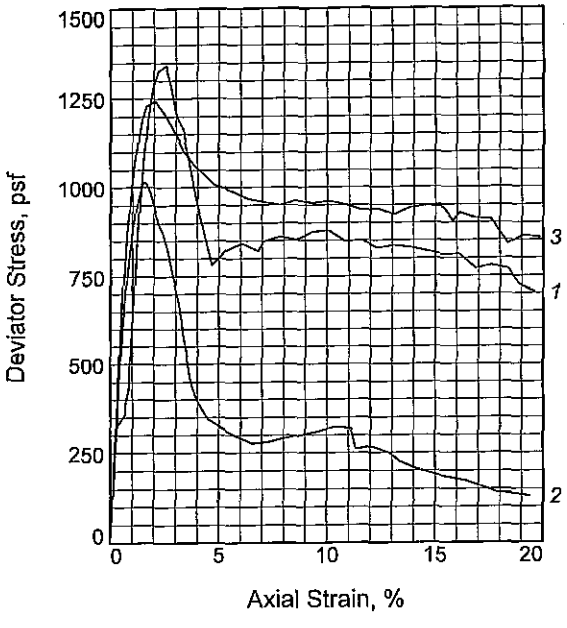




Sample No.		1	2	3
Initial	Water Content, %	72.7	73.4	69.6
	Dry Density, pcf	57.6	57.2	58.8
	Saturation, %	101.1	101.1	99.8
	Void Ratio	1.9712	1.9897	1.9111
	Diameter, in.	1.410	1.411	1.414
	Height, in.	3.112	3.116	3.110
At Test	Water Content, %	72.7	73.4	69.6
	Dry Density, pcf	57.6	57.2	58.8
	Saturation, %	101.1	101.1	99.8
	Void Ratio	1.9712	1.9897	1.9111
	Diameter, in.	1.410	1.411	1.414
	Height, in.	3.112	3.116	3.110
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.93	20.69	41.76
Fail. Stress, psf		1343	1015	1244
Strain, %		2.5	1.5	2.1
Ult. Stress, psf		781	276	950
Strain, %				
σ_1 Failure, psf		2340	3995	7256
σ_3 Failure, psf		997	2979	6013

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: M GR CH4 W/ LNS ML

LL= 94 **PL=** 27 **PI=** 67
Assumed Specific Gravity= 2.74
Remarks:

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-64PU **Depth:** 48.8
Sample Number: 13B
Proj. No.: 07-022122 **Date Sampled:** 9/18/09

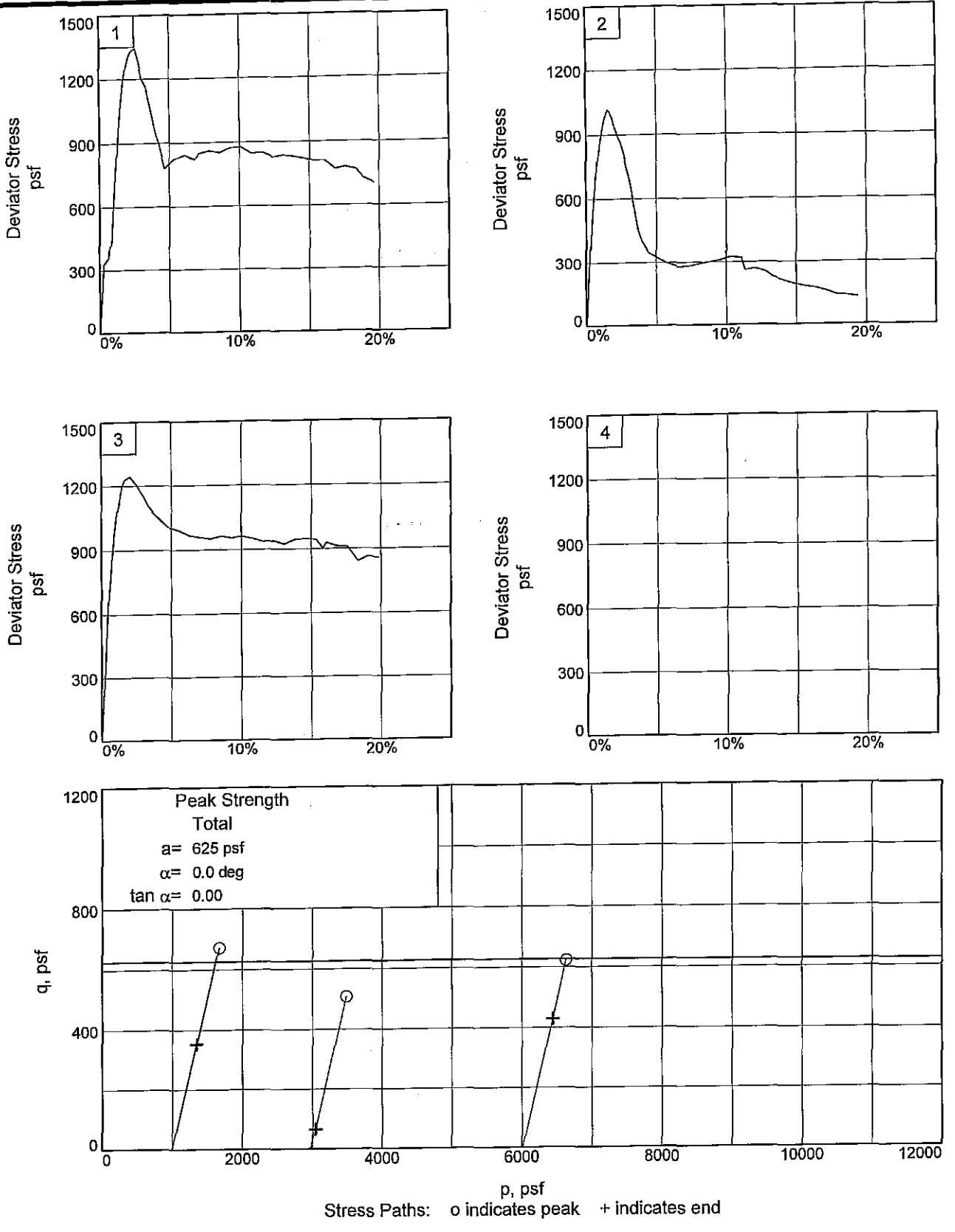
TRIAXIAL SHEAR TEST REPORT

FFEBJV, LLC

Figure _____

Tested By: VF/JC **Checked By:** MS

"Confidential Information Privileged & Confidential Work Product"



Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

Source of Sample: NF05-64PU **Depth:** 48.8 **Sample Number:** 13B

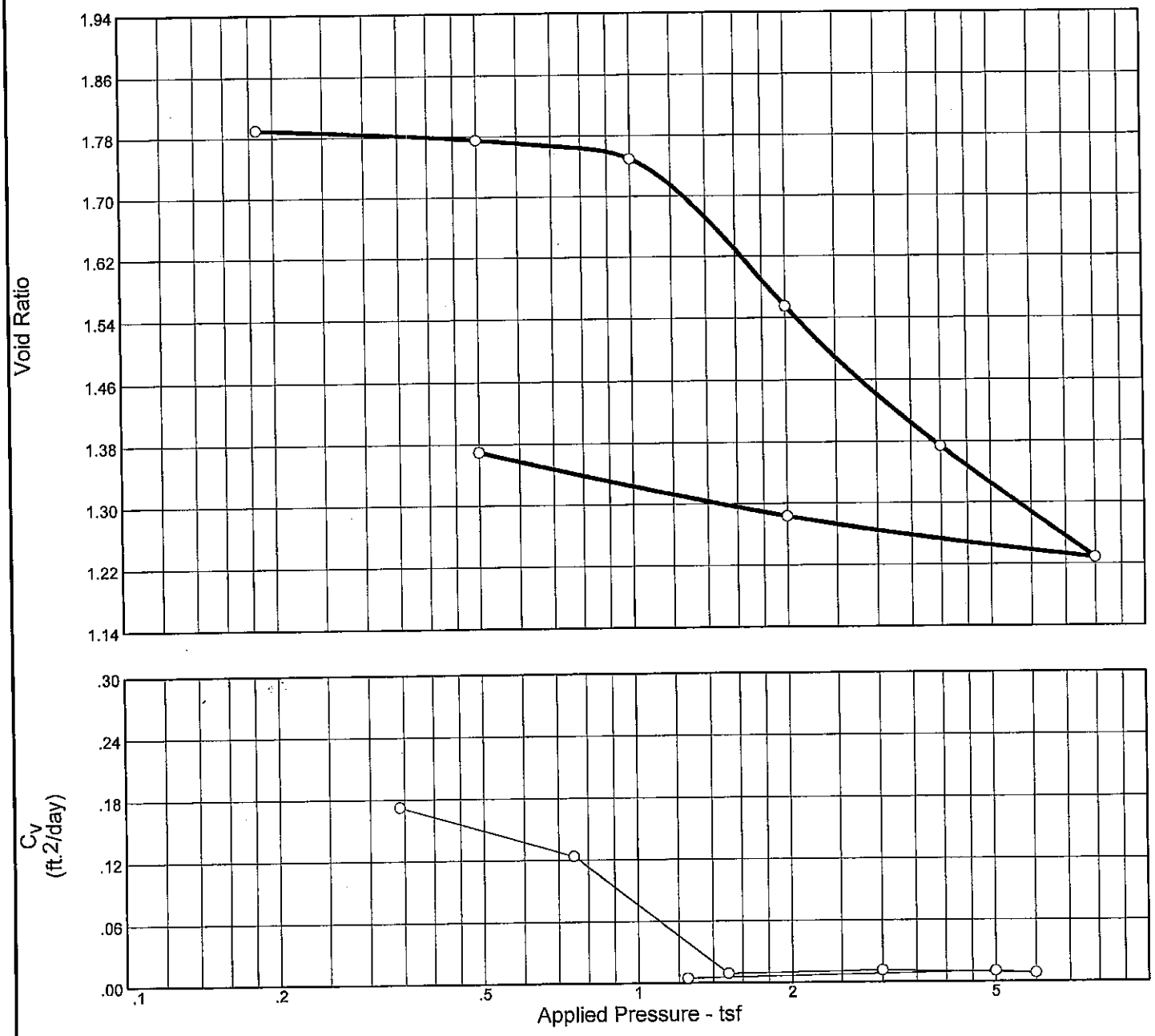
Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: VF/JC **Checked By:** MS

"Confidential Information; Privileged & Confidential Work Product"

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
99.9 %	65.4 %	61.2	95	72	2.74	1.13	0.75	1.795

MATERIAL DESCRIPTION	USCS	AASHTO
M GR CH4 W/ LYS & LNS ML	CH4	

Project No. 07-022122 **Client:** US Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La

Source: NF05-64PU **Sample No.:** 13C **Elev./Depth:** 49.7'

FFEBJV, LLC

St Rose, LA

Remarks:
Tested by: DG
Calculated by: WJY
Checked by: WJY

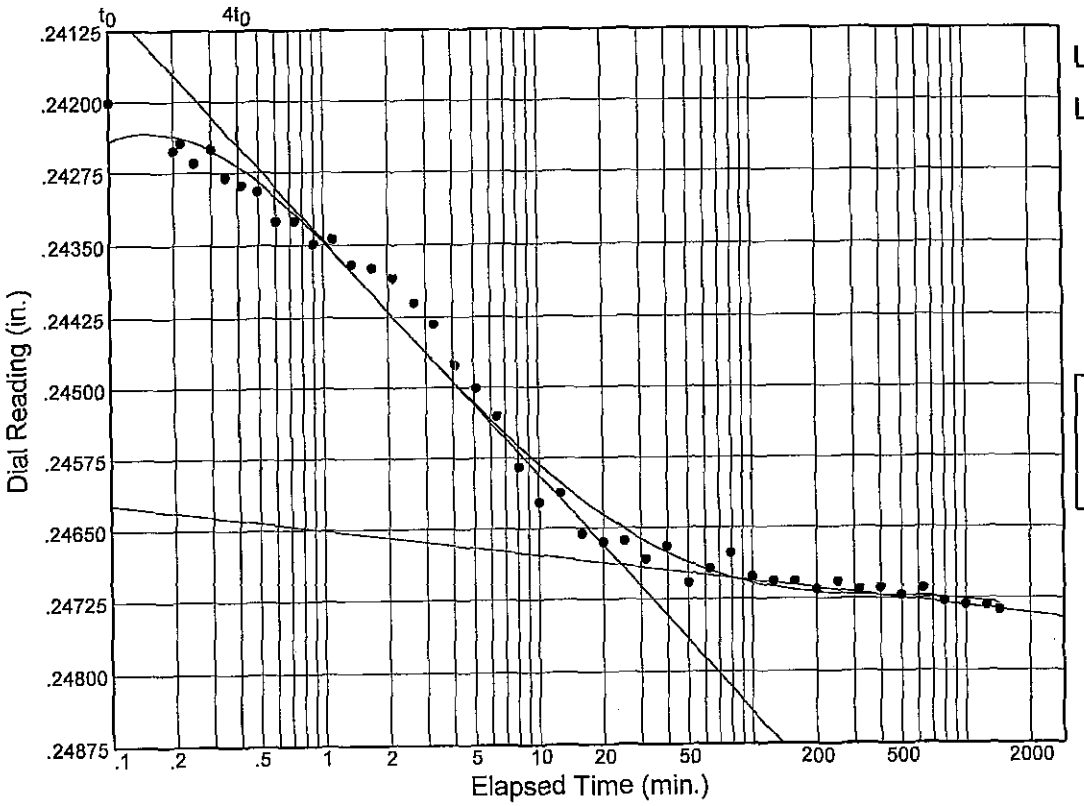
Figure

"Confidential Information: Privileged & Confidential Work Product"

Dial Reading vs. Time

Project No.: 07-022122
Project: USACE - New Orleans To Venice Plaquemines Parish, La

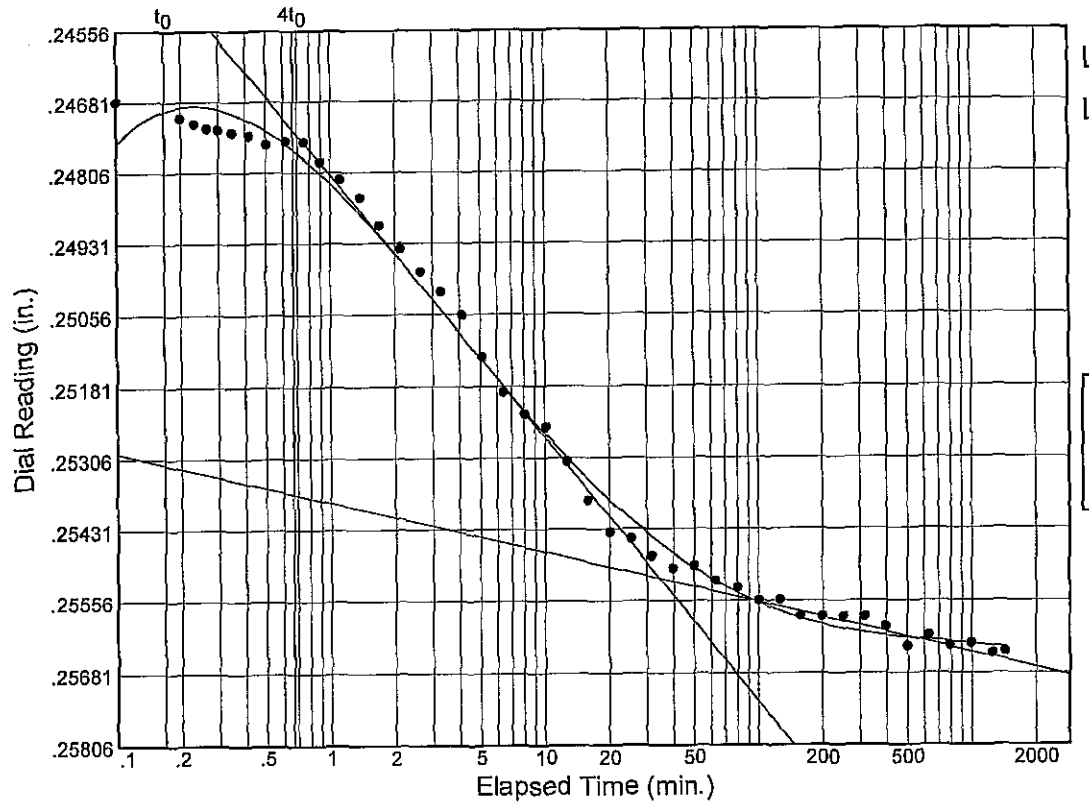
Source: NF05-64PU Sample No.: 13C Elev./Depth: 49.7'



Load No.= 2
Load= 0.50 tsf
D_0 = 0.24216
D_{50} = 0.24452
D_{100} = 0.24689
T_{50} = 2.70 min.

C_v @ T_{50}
0.17 ft.^{2}/day

C_α = 0.000



Load No.= 3
Load= 1.00 tsf
D_0 = 0.24629
D_{50} = 0.25073
D_{100} = 0.25517
T_{50} = 3.72 min.

C_v @ T_{50}
0.12 ft.^{2}/day

C_α = 0.001

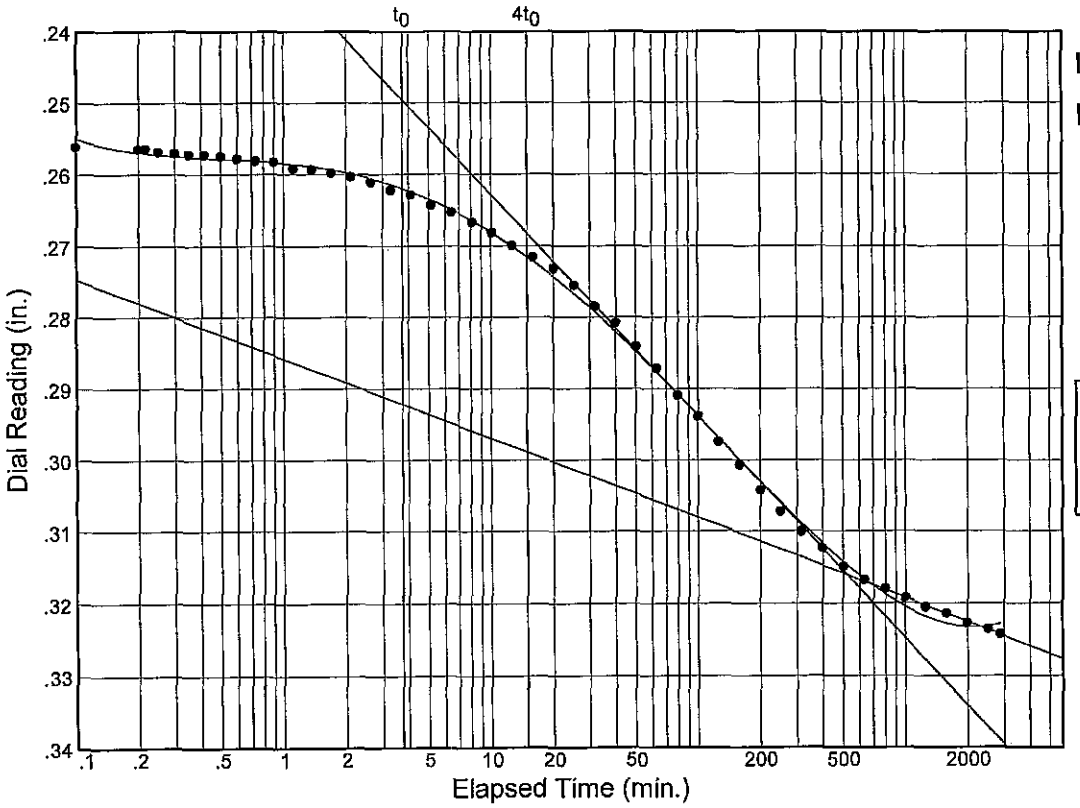
Figure

"Confidential Information: Privileged & Confidential Work Product"

Dial Reading vs. Time

Project No.: 07-022122
Project: USACE - New Orleans To Venice Plaquemines Parish, La

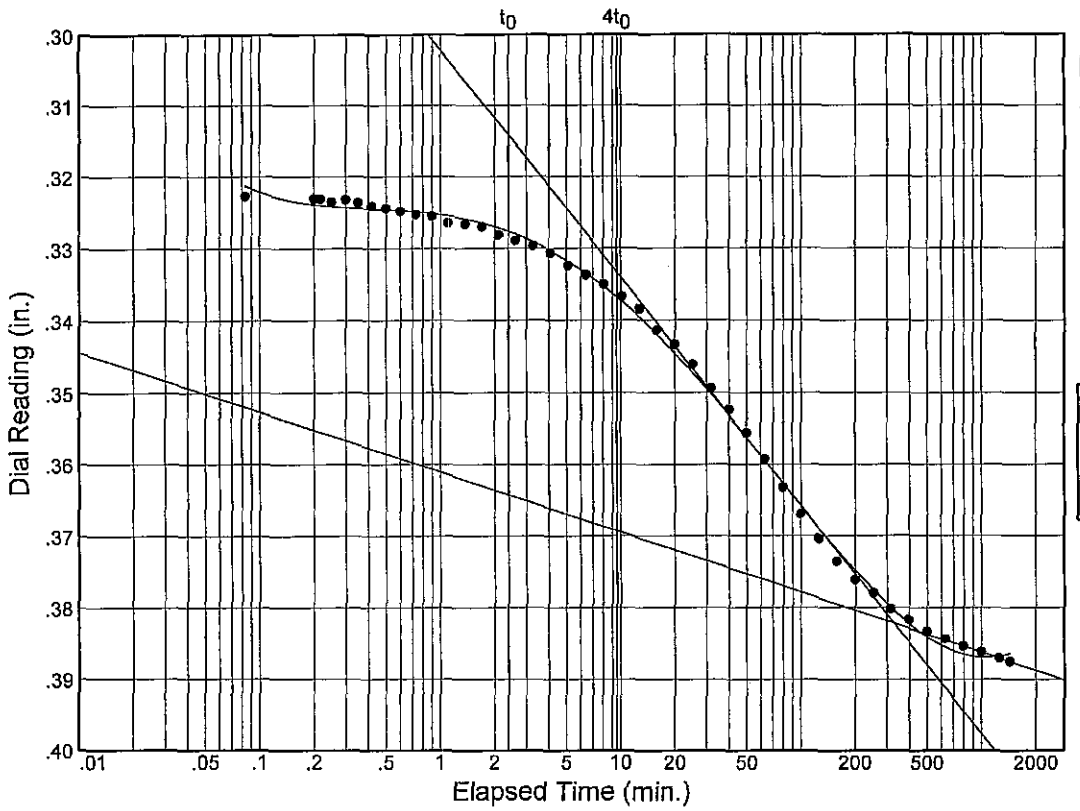
Source: NF05-64PU Sample No.: 13C Elev./Depth: 49.7'



Load No.= 4
Load= 2.00 tsf
D_0 = 0.25247
D_{50} = 0.28425
D_{100} = 0.31603
T_{50} = 47.93 min.

C_v @ T_{50}
0.01 ft.^{2}/day

C_α = 0.012



Load No.= 5
Load= 4.00 tsf
D_0 = 0.31853
D_{50} = 0.35037
D_{100} = 0.38220
T_{50} = 32.05 min.

C_v @ T_{50}
0.01 ft.^{2}/day

C_α = 0.009

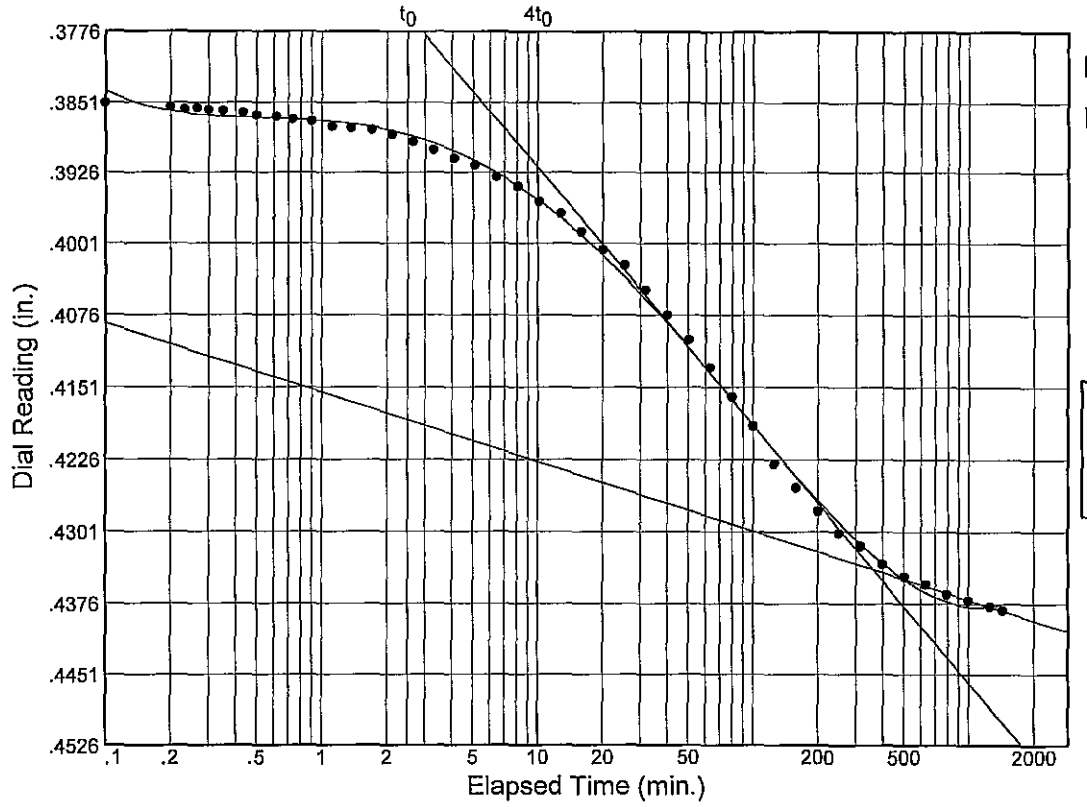
Figure

"Confidential Information & Confidential Work Product"

Dial Reading vs. Time

Project No.: 07-022122
Project: USACE - New Orleans To Venice Plaquemines Parish, La

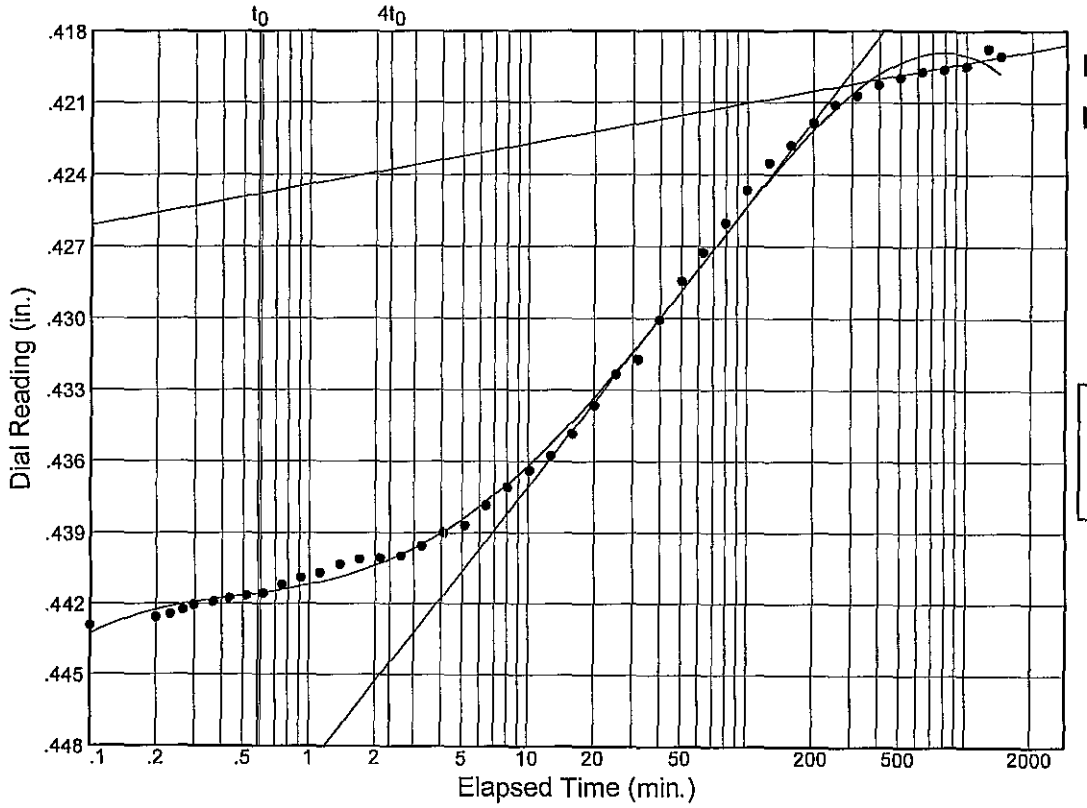
Source: NF05-64PU Sample No.: 13C Elev./Depth: 49.7'



Load No.= 6
Load= 8.00 tsf
D_0 = 0.38166
D_{50} = 0.40782
D_{100} = 0.43399
T_{50} = 37.69 min.

C_v @ T_{50}
0.01 ft.^{2}/day

C_α = 0.009



Load No.= 7
Load= 2.00 tsf
D_0 = 0.44299
D_{50} = 0.43165
D_{100} = 0.42031
T_{50} = 28.73 min.

C_v @ T_{50}
0.01 ft.^{2}/day

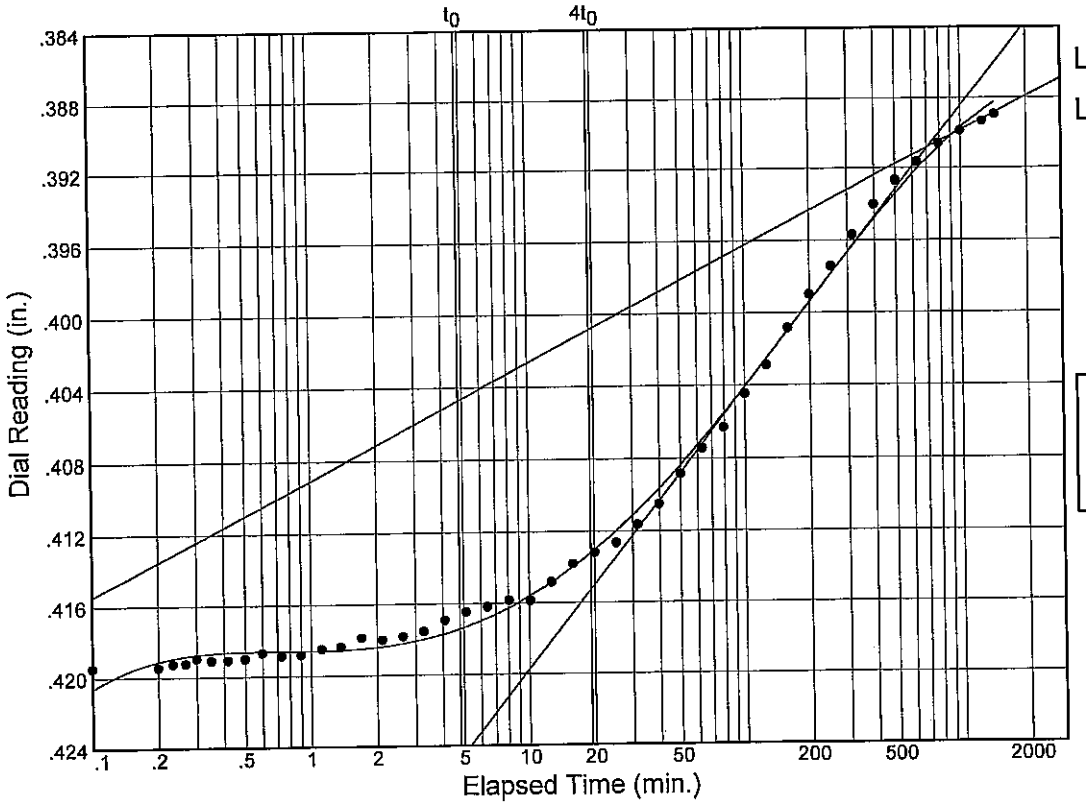
"Confidential Information & Confidential Work Product"

Figure

Dial Reading vs. Time

Project No.: 07-022122
Project: USACE - New Orleans To Venice Plaquemines Parish, La

Source: NF05-64PU Sample No.: 13C Elev./Depth: 49.7'



Load No.= 8
Load= 0.50 tsf
D_0 = 0.42161
D_{50} = 0.40621
D_{100} = 0.39080
T_{50} = 71.66 min.

C_v @ T_{50}
0.00 ft.^{2}/day

"Confidential Information - Privileged & Confidential Work Product"

CONSOLIDATION TEST DATA

Client: US Army Corps of Engineers
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Contract No. W912P8-07-D-0022
Task Order 122
Project Number: 07-022122

Sample Data

Source: NF05-64PU
Sample No.: 13C
Elev. or Depth: 49.7' **Sample Length(in./cm.):**
Location:
Description: M GR CH4 W/ LYS & LNS ML
Liquid Limit: 95 **Plasticity Index:** 72
USCS: CH4 **AASHTO:** **Figure No.:**
Testing Remarks: Tested by: DG
Calculated by: WJY
Checked by: WJY

Test Specimen Data

TOTAL SAMPLE		BEFORE TEST	AFTER TEST
Wet w+t =	165.43 g.	Consolidometer # = 1	Wet w+t = 107.93 g.
Dry w+t =	100.00 g.		Dry w+t = 81.79 g.
Tare Wt. =	.00 g.	Spec. Gravity = 2.74	Tare Wt. = 31.34 g.
Height =	.98 in.	Height = .98 in.	
Diameter =	4.00 in.	Diameter = 4.00 in.	
Weight =	325.38 g.	Defl. Table = n/a	
Moisture =	65.4 %	Ht. Solids = 0.3493 in.	Moisture = 51.8 %
Wet Den. =	101.3 pcf	Dry Wt. = 196.91 g.*	Dry Wt. = 50.45 g.
Dry Den. =	61.2 pcf	Void Ratio = 1.795	Void Ratio = 1.370
		Saturation = 99.9 %	

* Initial dry weight used in calculations

End-of-Load Summary

Pressure (tsf)	Final Dial (in.)	Machine Defl. (in.)	C_v (ft.^{2}/day)	C_α	Void Ratio	% Compression /Swell
start	0.24061				1.795	
0.19	0.24222	0.00000			1.790	0.2 Comprs.
0.50	0.24738	0.00000	0.17	0.000	1.775	0.7 Comprs.
1.00	0.25645	0.00000	0.12	0.001	1.749	1.6 Comprs.
2.00	0.32428	0.00000	0.01	0.012	1.555	8.6 Comprs.
4.00	0.38760	0.00000	0.01	0.009	1.374	15.1 Comprs.
8.00	0.43833	0.00000	0.01	0.009	1.228	20.3 Comprs.
2.00	0.41907	0.00000	0.01		1.284	18.3 Comprs.
0.50	0.38892	0.00000	0.00		1.370	15.2 Comprs.

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C_c = 0.75 P_c = 1.13 tsf C_r = 0.12

GeoEngineers

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SUMMARY OF LABORATORY TEST RESULTS

Project: New Orleans To Venice Plaquemines Parish, La Assigned By: _____

Project Number: 07-022122 Current Date: 4/1/2010
Boring: NF05-65PCU

Sample Number	Depth	Visual Classification	USCS	E(f)	W%	Dry Dens (pcf)	Wet Dens (pcf)	Sat %	Shear Test Type	Angle	Cohesion (psf)	Unconf. Comp. Str.	LL	PL	PI	Torvane (tsf)	Other Tests
1A	0.0	SO DGR CH4 W/ O, RT, WD	CH4		74								82	29	53		OC=11.8%
2A	2.0	SO GR CH3 W/ LYS & ARS ML, RT, WD	CH3		53												
2B	2.8	SO GR CL4 W/ ARS & LYS ML	CL4		34	89	120	100	UU	0	455		37	20	17	0.20	-200
3A	4.0	GR SM W/ LNS & LYS ML	SM		28												SV
3B	6.0	GR SM	SM		29												
4A	8.0	SO GR CH4 W/ ARS SM, SIF	CH4		78												
4B	8.8	SO GR CH3 W/ LYS ML, SIF	CH3		60												
4C	9.7	GR ML	ML		36	90	123	100	UU	0	363		32	25	7	0.20	-200
4D	10.6	GR ML W/ SIF, LNS SM	ML		34												
5A	12.0	SO GR CL4 W/ LNS & LYS CH	CL4		35												
5B	12.8	SO GR CL4 W/ LNS & LYS CH	CL4		36												
5C	13.7	SO GR CH2 W/ LNS & LYS ML, CC	CH2		51	73	110	100	UU	0	264		56	21	35	0.20	
5D	14.6	GR ML	ML		40												
6A	16.0	VSO GR CH3 W/ LNS & LYS ML, CC	CH3		64												
6B	16.8	VSO GR CH3 W/ LNS & LYS ML, CC, WD	CH3		57												
6C	17.7	VSO GR CH4 W/ LNS & LYS ML, CC	CH4		69	60	101	100	UU	0	226		85	26	59	0.20	
6D	18.6	SO GR CH4 W/ LNS & LYS ML, SIF	CH4		72	58	99	100	UU	0	284		90	24	66	0.19	
7A	20.0	SO GR CH4 W/ LNS & ARS ML, CC, WD	CH4		62												
7B	20.8	SO GR CH4 W/ LNS ML, SIF	CH4		64												
7C	21.7	SO GR CH4 W/ ARS ML, SIF	CH4		72	58	99	100	UU	0	330		95	28	67	0.26	
7D	22.6	SO GR CH4 W/ ARS ML, SIF	CH4		69												
8A	24.0	SO GR CH4 W/ ARS ML, SIF	CH4		62												
8B	24.8	SO GR CL4 W/ LNS & LYS CH, SIF	CL4		41												
8C	25.7	SO GR CL4 W/ LNS & LYS ML, SIF	CL4		47	77	112	100	UU	0	335		42	25	17	0.21	
8D	26.6	SO GR CL4 W/ LNS & LYS ML, SIF	CL4		47												
9A	28.0	GR SM W/ LNS & LYS CH	SM		31												
9B	28.8	M GR CH4 W/ LNS & LYS SM	CH4		64												
9C	29.7	GR ML W/ LYS CH	ML		35												SV
9D	30.6	GR ML W/ LNS & LYS CH	ML		40												
10A	32.0	SO GR CH4 W/ LNS & LYS ML	CH4		67												
10B	32.8	SO GR CL6 W/ LNS & LYS CH	CL6		36												
10C	33.7	M GR CH4 W/ LNS & LYS ML	CH4		58												
10D	34.6	M GR CH4 W/ LNS & LYS ML	CH4		66	61	101	99	UU	0	518		92	25	67	0.25	
11A	36.0	M GR CH4 W/ ARS ML	CH4		65												
11B	36.8	M GR CH4 W/ ARS ML	CH4		66												
11C	37.7	M GR CH4 W/ LNS & LYS ML	CH4		65												
11D	38.6	SO GR CH4 W/ LNS ML	CH4		71	58	99	100	UU	0	437		93	27	66	0.26	

Remarks:
FFEB JV, LLC

Checked By: MS|WH|LED 4/1/10
File Name: 05-65PCU.xls

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SUMMARY OF LABORATORY TEST RESULTS

Project: New Orleans To Venice Plaquemines Parish, La Assigned By: _____

Project Number: 07-022122
Boring: NF05-65PCU

Current Date: 4/1/2010

Sample Number	Depth	Visual Classification	USCS	E(f)	W%	Dry Dens (pcf)	Wet Dens (pcf)	Sat %	Shear Test Type	Angle	Cohesion (psf)	Unconf. Comp. Str.	LL	PL	PI	Torvane (tsf)	Other Tests
12A	40.0	M GR CH4 W/ LNS & LYS ML	CH4		62												
12B	40.8	M GR CH4 W/ LNS & LYS ML	CH4		66												
12C	41.7	M GR CH4 W/ LNS & LYS ML	CH4		61												
12D	42.6	M GR CH4	CH4		65												
13A	44.0	M GR CH4 W/ LNS ML	CH4		67												
13B	44.8	M GR CH4 W/ LNS ML, SL	CH4		73	57	98	99	UU	0	600		99	28	71	0.27	
13C	45.7	M GR CH4	CH4		61												
13D	46.6	M GR CH4	CH4		63												
14A	48.0	M GR CH4	CH4		59												
14B	48.8	M GR CH4 W/ SL	CH4	3	59	65	103	99	UC	-	817	1633	83	25	58	0.35	
14C	49.7	M GR CH4	CH4		57												
14D	50.6	M GR CH4 W/ ARS ML	CH4		58												

Remarks:
FFEB JV, LLC

Checked By: NS | WH | LED 4/1
File Name: 05-65PCU.xls

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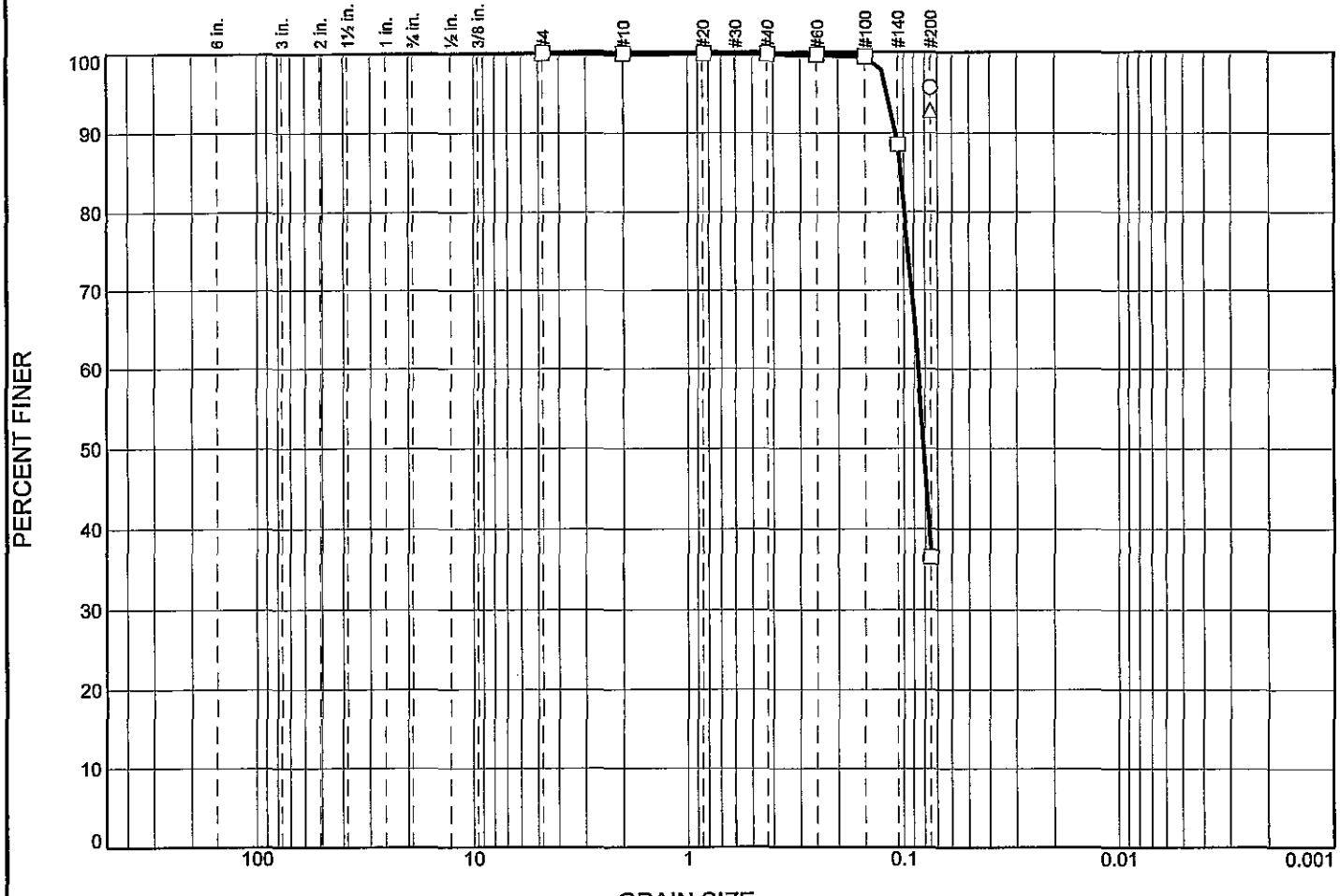
Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○							95.7	
□	0.0	0.0	0.0	0.0	0.1	63.4	36.5	
△							92.8	

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○		37	20								
□				0.1024	0.0858	0.0809					
△		32	25								

Material Description	USCS	AASHTO
○ SO GR CL4 W/ ARS & LYS ML	CL4	
□ GR SM W/ LNS & LYS ML	SM	
△ GR ML	ML	

Project No. 07-022122 **Client:** U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

○ **Source of Sample:** NF05-65PCU **Depth:** 2.8 **Sample Number:** 2B

□ **Source of Sample:** NF05-65PCU **Depth:** 4.0 **Sample Number:** 3A

△ **Source of Sample:** NF05-65PCU **Depth:** 9.7 **Sample Number:** 4C

Date: ○ 1/4/10 □ 12/21/09 △ 1/4/10

FFEBJV, LLC

St Rose, LA

Remarks:

○ -200, OTHER TEST PERFORMED AS PER ASTM D2850

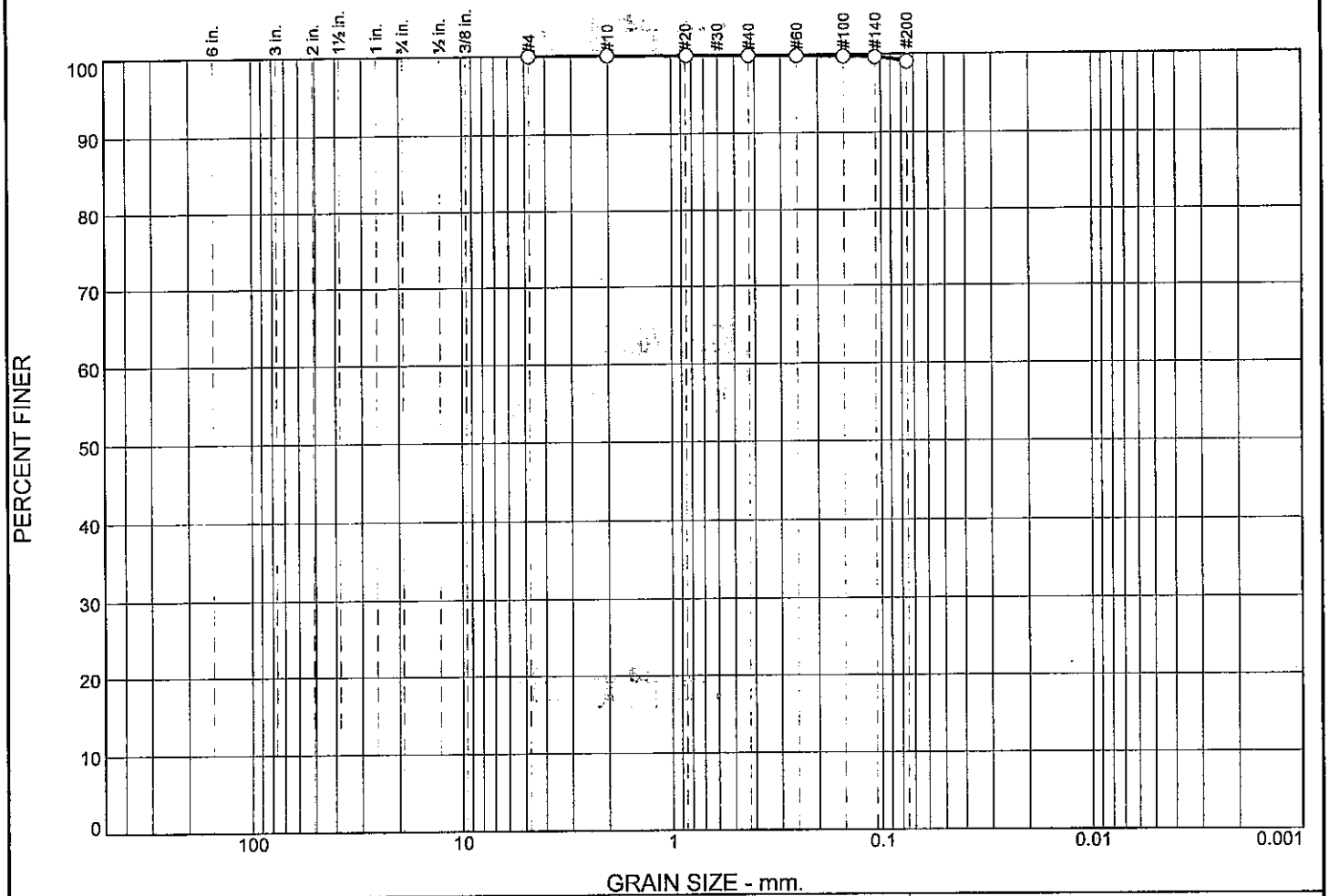
△ -200, OTHER TESTS PERFORMED AS PER ASTM D2850

Figure

Tested By: NF **Checked By:** MS

"Confidential Information: Privileged & Confidential Work Product"

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
o	0.0	0.0	0.0	0.0	0.1	0.9	99.0	

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
o											

Material Description	USCS	AASHTO
o GR ML W/ LYS CH	ML	

Project No. 07-022122 **Client:** U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

o **Source of Sample:** NF05-65PCU **Depth:** 29.7 **Sample Number:** 9C

Date: o 12/21/09

FFEBJV, LLC

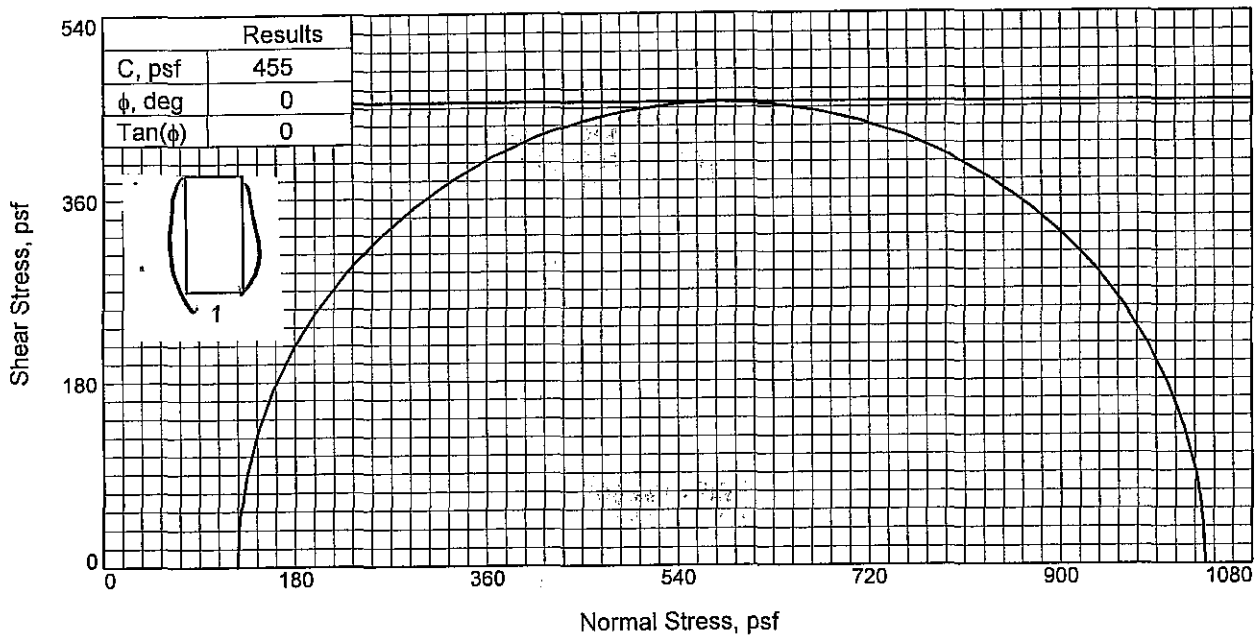
St Rose, LA

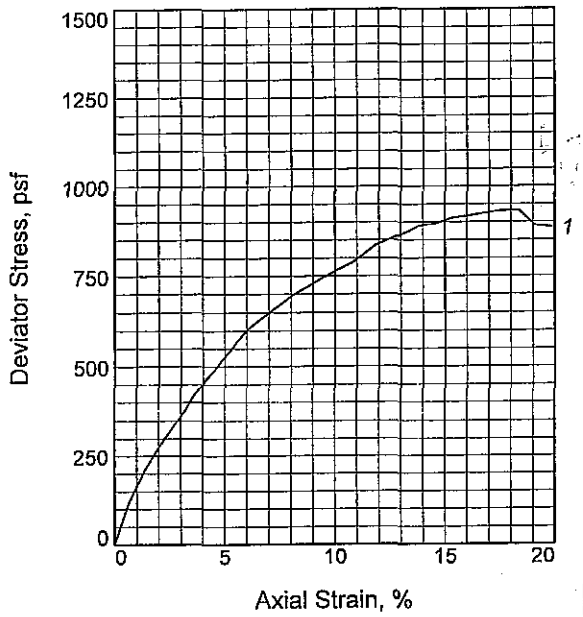
Remarks:

Figure

Tested By: NF **Checked By:** MS

"Confidential Information: Privileged & Confidential Work Product"





Sample No.		1
Initial	Water Content, %	34.4
	Dry Density, pcf	89.3
	Saturation, %	104.5
	Void Ratio	0.8881
	Diameter, in.	1.394
	Height, in.	3.069
At Test	Water Content, %	34.4
	Dry Density, pcf	89.3
	Saturation, %	104.5
	Void Ratio	0.8881
	Diameter, in.	1.394
	Height, in.	3.069
Strain rate, %/min.		1.00
Back Pressure, psi		0.00
Cell Pressure, psi		0.87
Fail. Stress, psf		910
Strain, %		15.4
Ult. Stress, psf		910
Strain, %		
σ_1 Failure, psf		1036
σ_3 Failure, psf		126

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: SO GR CL4 W/ ARS & LYS ML

LL= 37 **PL=** 20 **PI=** 17
Assumed Specific Gravity= 2.70
Remarks:

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-65PCU **Depth:** 2.8
Sample Number: 2B
Proj. No.: 07-022122 **Date Sampled:** 1/4/10

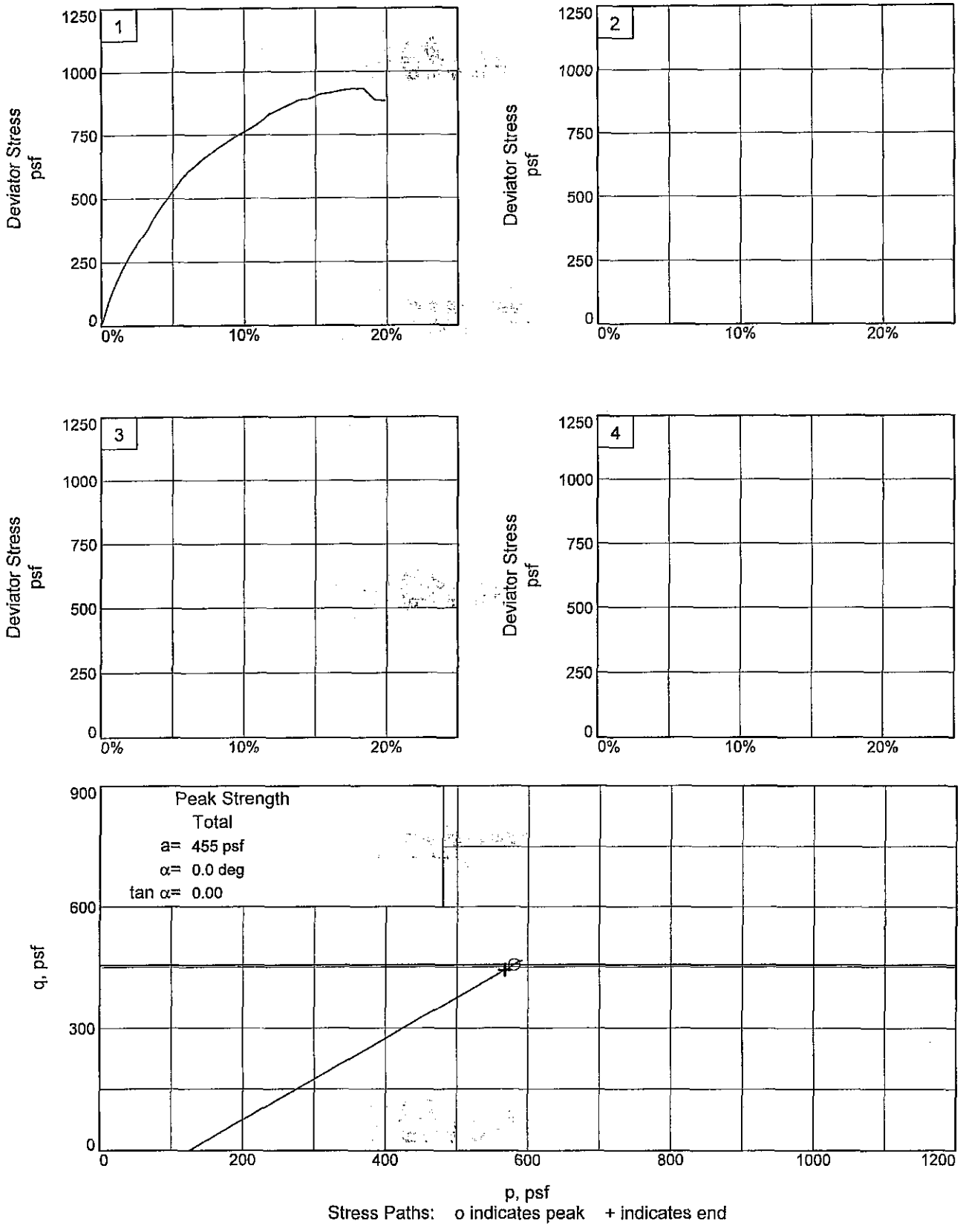
TRIAXIAL SHEAR TEST REPORT

FFEBJV, LLC

Figure _____

Tested By: VF/JC **Checked By:** MS

"Confidential Information: Privileged & Confidential Work Product"



Client: *U.S. Army Corps of Engineers*

Project: USACE - New Orleans To Venice Plaquemines Parish, La

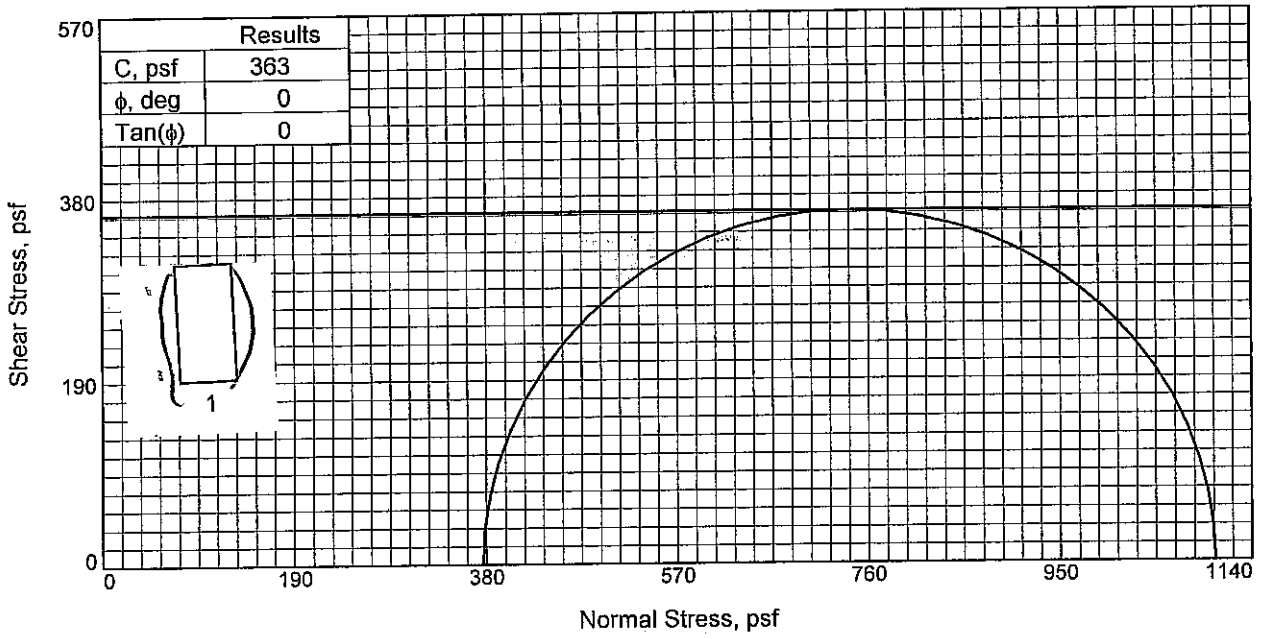
Source of Sample: NF05-65PCU **Depth:** 2.8 **Sample Number:** 2B

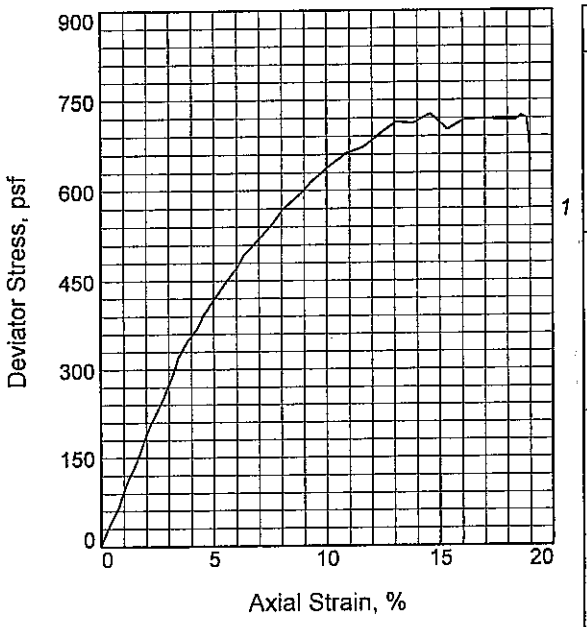
Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: VF/JC **Checked By:** MS

"Confidential Information. Privileged & Confidential Work Product"





Sample No.		1
Initial	Water Content, %	36.1
	Dry Density, pcf	90.0
	Saturation, %	113.3
	Void Ratio	0.8511
	Diameter, in.	1.389
	Height, in.	3.048
At Test	Water Content, %	36.1
	Dry Density, pcf	90.0
	Saturation, %	113.3
	Void Ratio	0.8511
	Diameter, in.	1.389
	Height, in.	3.048
Strain rate, %/min.		1.00
Back Pressure, psi		0.00
Cell Pressure, psi		2.62
Fail. Stress, psf		727
Strain, %		14.6
Ult. Stress, psf		701
Strain, %		
σ_1 Failure, psf		1104
σ_3 Failure, psf		377

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: GR ML

LL= 32 PL= 25 PI= 7
Assumed Specific Gravity= 2.67
Remarks: SLUMPING

Figure _____

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-65PCU **Depth:** 9.7
Sample Number: 4C
Proj. No.: 07-022122 **Date Sampled:** 1/4/10

TRIAXIAL SHEAR TEST REPORT

FFEBJV, LLC

Tested By: VF/JC **Checked By:** MS

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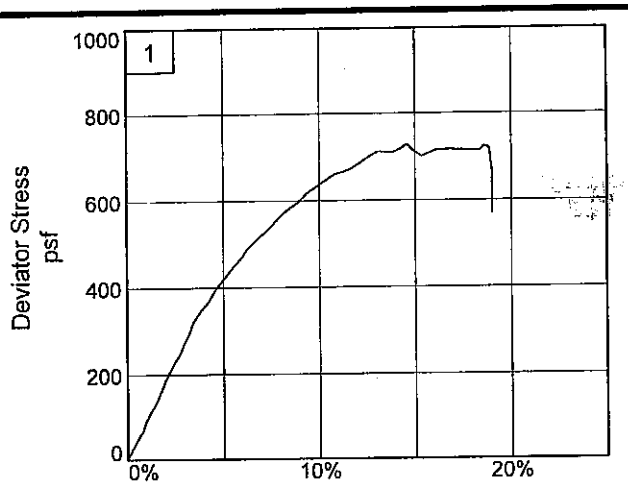

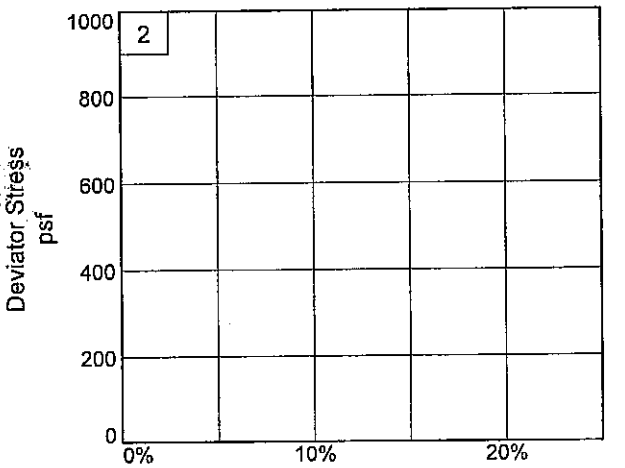

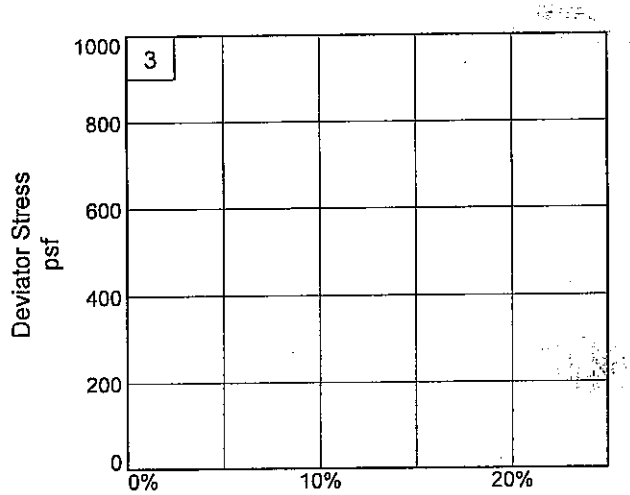

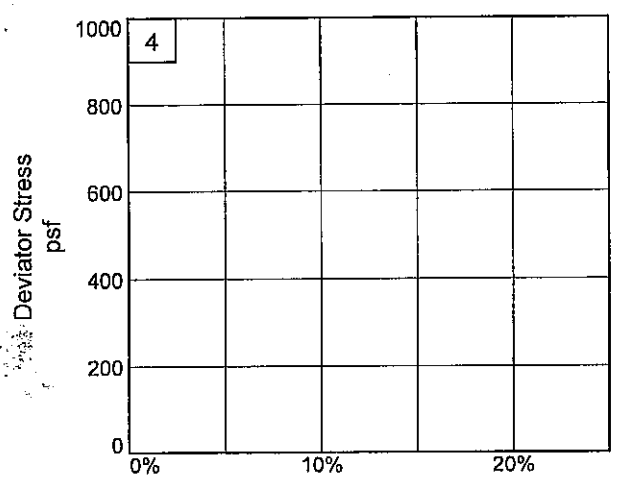

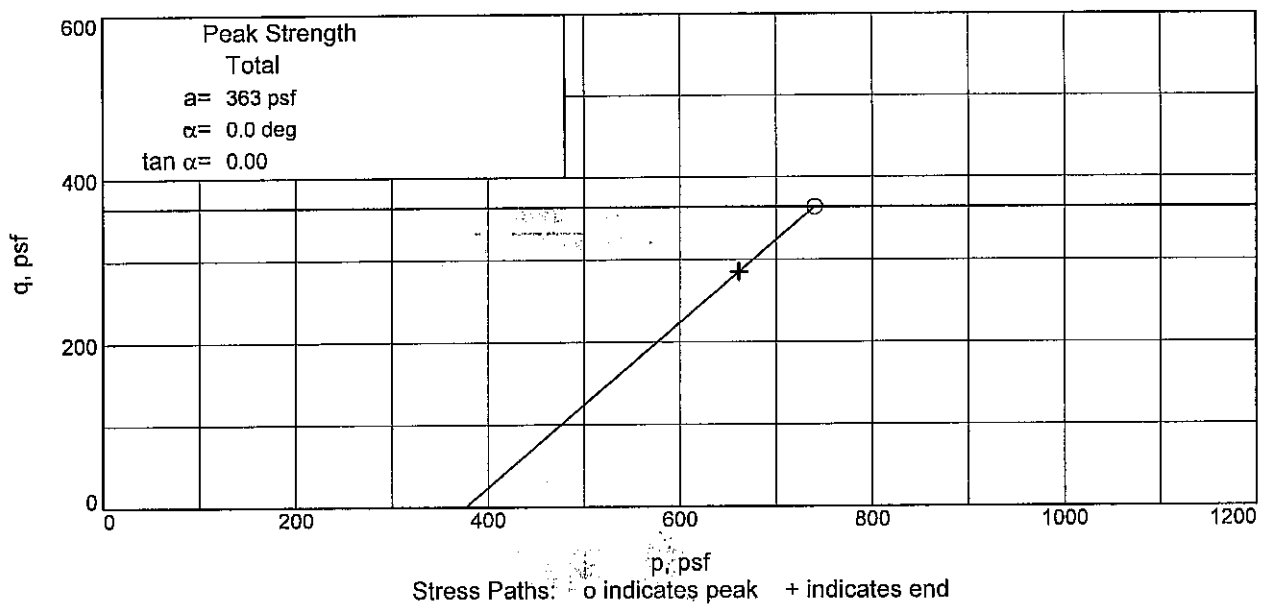

Stress Paths: o indicates peak + indicates end

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

Source of Sample: NF05-65PCU **Depth:** 9.7 **Sample Number:** 4C

Project No.: 07-022122 **Figure** _____ **FFEBJV, LLC**

Tested By: VF/JC **Checked By:** MS

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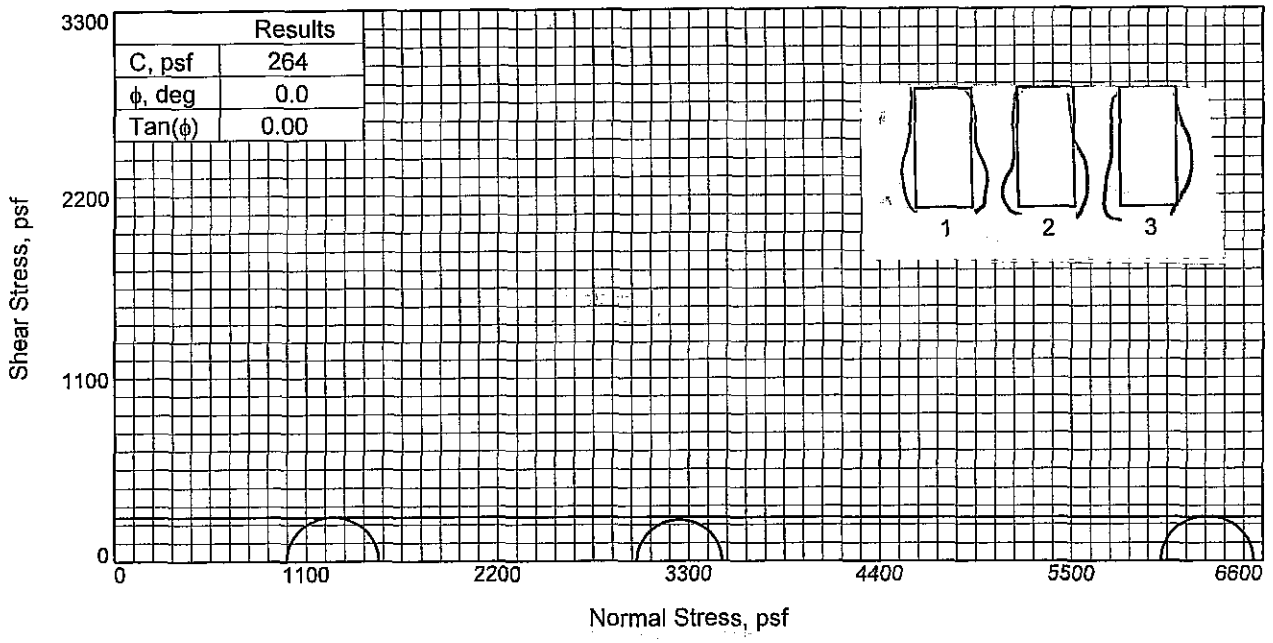

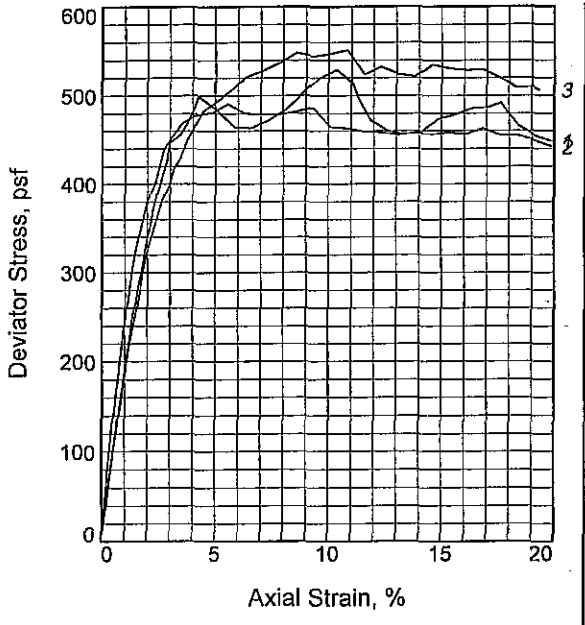

Sample No.		1	2	3
Initial	Water Content, %	50.8	53.5	50.0
	Dry Density, pcf	73.2	71.0	74.3
	Saturation, %	105.4	105.1	106.4
	Void Ratio	1.3021	1.3739	1.2689
	Diameter, in.	1.390	1.396	1.398
	Height, in.	3.077	3.086	3.064
At Test	Water Content, %	50.8	53.5	50.0
	Dry Density, pcf	73.2	71.0	74.3
	Saturation, %	105.4	105.1	106.4
	Void Ratio	1.3021	1.3739	1.2689
	Diameter, in.	1.390	1.396	1.398
	Height, in.	3.077	3.086	3.064
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.85	20.83	41.77
Fail. Stress, psf		529	491	532
Strain, %		10.4	5.6	12.3
Ult. Stress, psf		456	456	522
Strain, %				
σ_1 Failure, psf		1516	3491	6547
σ_3 Failure, psf		986	3000	6014

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: SO GR CH2 W/ LNS & LYS ML, CC

LL= 56 **PL**= 21 **PI**= 35
Assumed Specific Gravity= 2.70
Remarks:

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-65PCU **Depth:** 13.7
Sample Number: 5C
Proj. No.: 07-022122 **Date Sampled:** 1/4/10

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Figure _____

Tested By: VF/JC **Checked By:** MS

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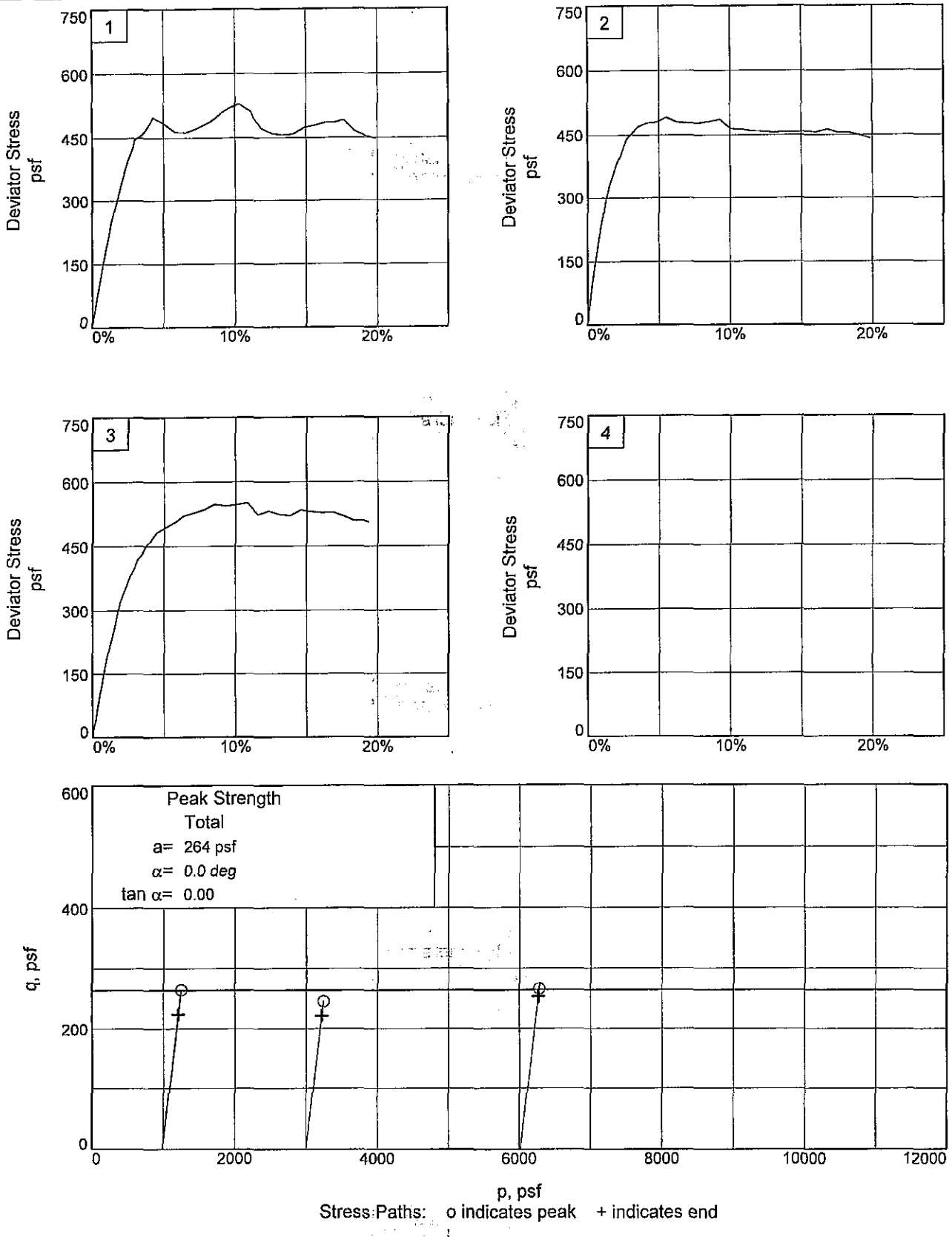


Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

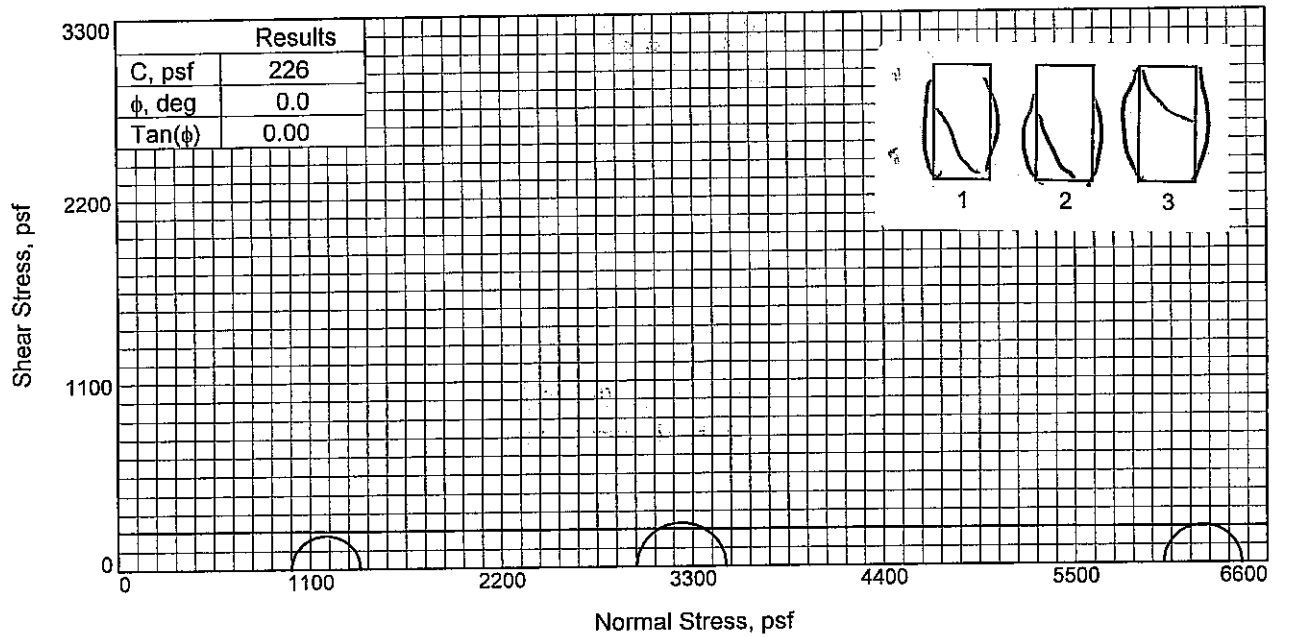
Source of Sample: NF05-65PCU **Depth:** 13.7 **Sample Number:** 5C

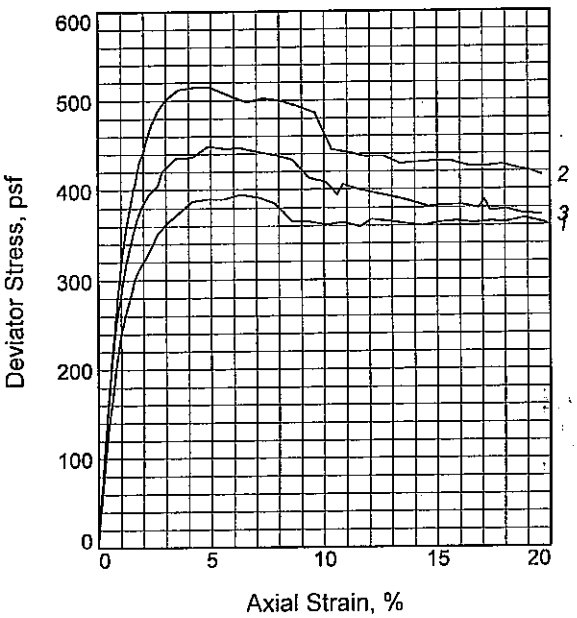
Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: VF/JC **Checked By:** MS

"Confidential Information. Privileged & Confidential Work Product"





Sample No.		1	2	3
Initial	Water Content, %	69.1	69.4	68.1
	Dry Density, pcf	59.9	59.5	60.5
	Saturation, %	102.2	101.5	102.1
	Void Ratio	1.8538	1.8742	1.8282
	Diameter, in.	1.410	1.409	1.411
	Height, in.	3.096	3.102	3.098
At Test	Water Content, %	69.1	69.4	68.1
	Dry Density, pcf	59.9	59.5	60.5
	Saturation, %	102.2	101.5	102.1
	Void Ratio	1.8538	1.8742	1.8282
	Diameter, in.	1.410	1.409	1.411
	Height, in.	3.096	3.102	3.098
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.90	20.67	41.71
Fail. Stress, psf		394	515	449
Strain, %		6.3	4.3	4.9
Ult. Stress, psf		360	429	381
Strain, %				
σ_1 Failure, psf		1388	3491	6455
σ_3 Failure, psf		993	2976	6006

Type of Test: Unconsolidated Undrained

Sample Type: UNDISTURBED

Description: VSO GR CH4 W/ LNS & LYS ML, CC

LL= 85 **PL=** 26 **PI=** 59

Assumed Specific Gravity= 2.74

Remarks:

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La Jefferson Parish, La

Source of Sample: NF05-65PCU **Depth:** 17.7

Sample Number: 6C

Proj. No.: 07-022122 **Date Sampled:** 1/4/10

TRIAXIAL SHEAR TEST REPORT

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Figure _____

Tested By: VF/JC **Checked By:** MGE

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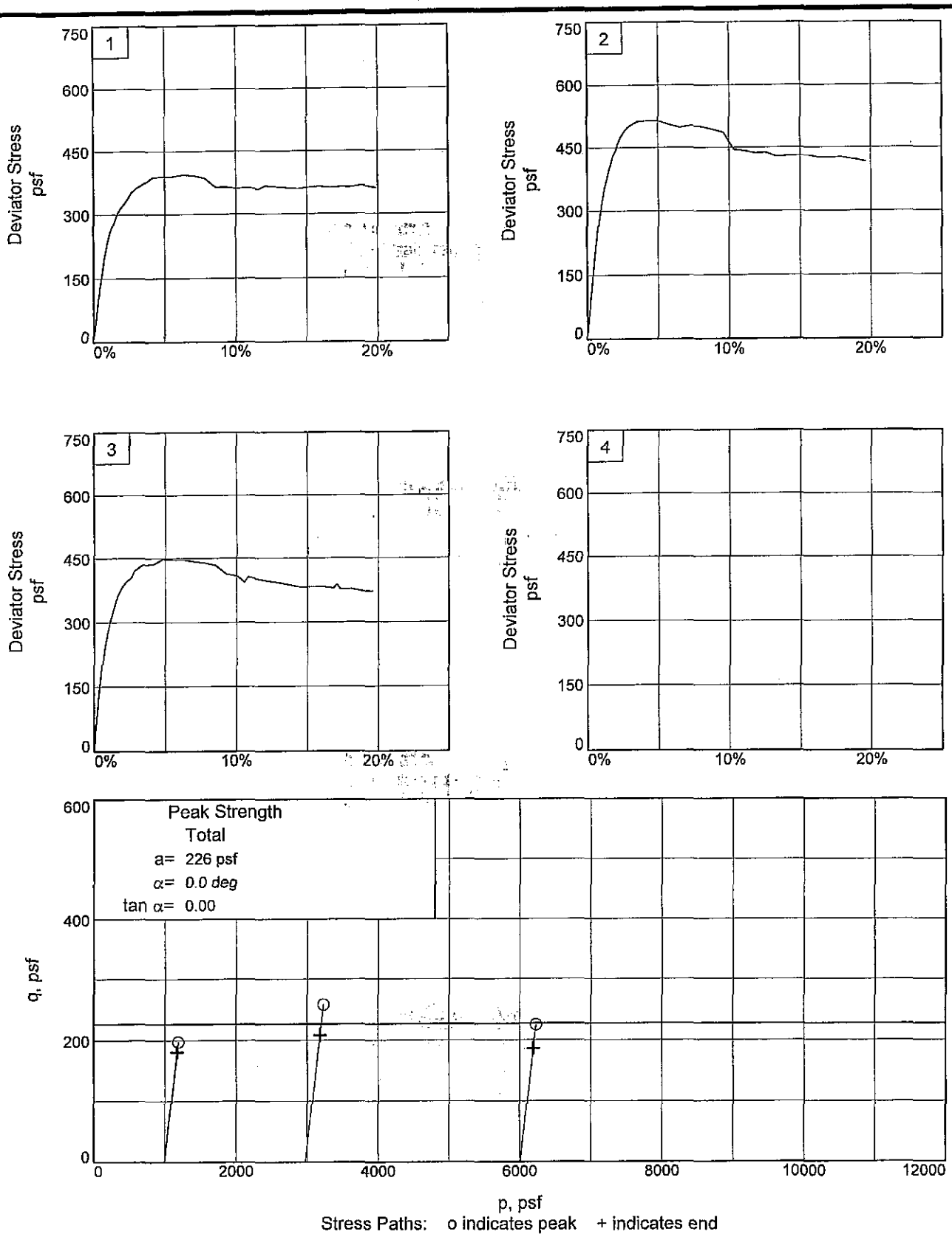


Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

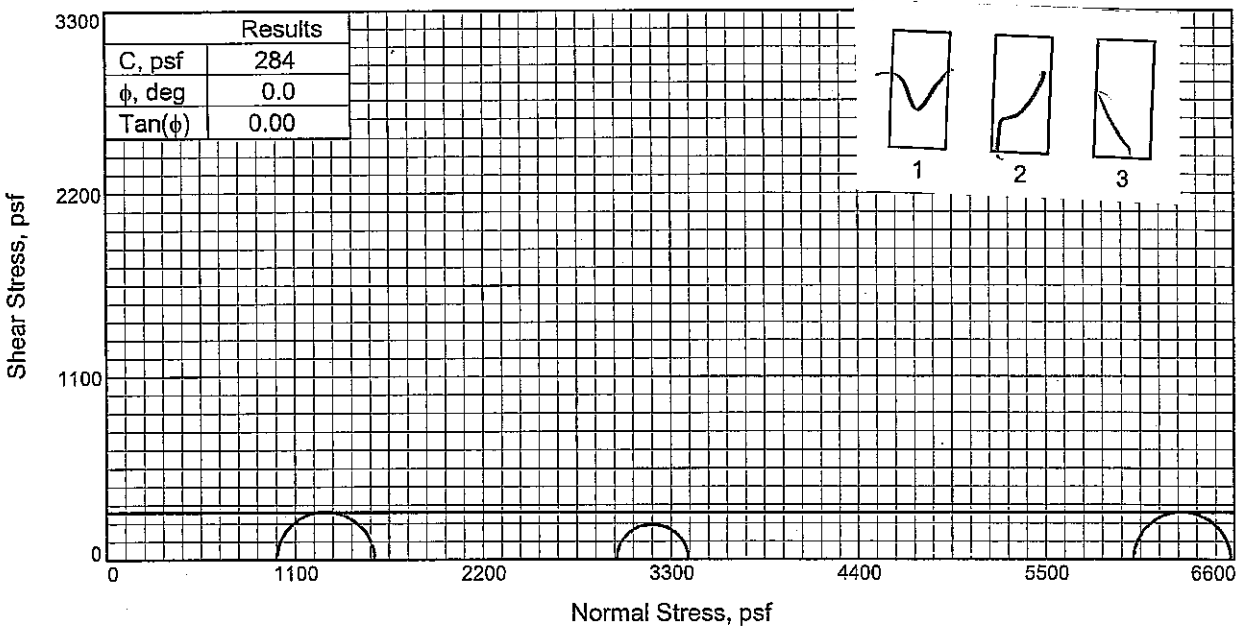
Source of Sample: NF05-65PCU **Depth:** 17.7 **Sample Number:** 6C

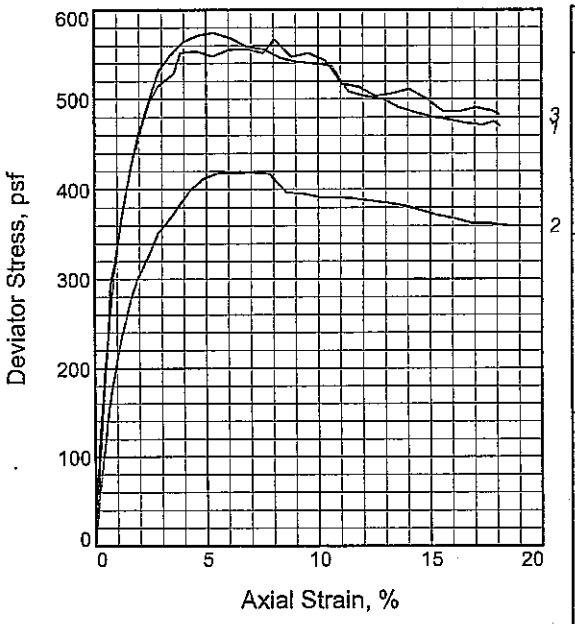
Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: VF/JC **Checked By:** MS

"Confidential Information: Privileged & Confidential Work Product"





Sample No.		1	2	3
Initial	Water Content, %	69.6	74.5	70.9
	Dry Density, pcf	59.2	56.4	58.2
	Saturation, %	101.0	100.3	100.2
	Void Ratio	1.8882	2.0347	1.9387
	Diameter, in.	1.397	1.400	1.399
	Height, in.	3.096	3.087	3.097
At Test	Water Content, %	69.6	74.5	70.9
	Dry Density, pcf	59.2	56.4	58.2
	Saturation, %	101.0	100.3	100.2
	Void Ratio	1.8882	2.0347	1.9387
	Diameter, in.	1.397	1.400	1.399
	Height, in.	3.096	3.087	3.097
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.89	20.72	41.74
Fail. Stress, psf		574	419	567
Strain, %		5.3	7.1	8.1
Ult. Stress, psf		480	363	486
Strain, %				
σ_1 Failure, psf		1566	3403	6578
σ_3 Failure, psf		992	2984	6011

Type of Test: Unconsolidated Undrained

Sample Type: A

Description: SO GR CH4 W/ LNS & LYS ML, SIF

LL= 90 **PL=** 24 **PI=** 66

Assumed Specific Gravity= 2.74

Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La

Source of Sample: NF05-65PCU **Depth:** 18.6

Sample Number: 6D

Proj. No.: 07-022122 **Date Sampled:**

TRIAXIAL SHEAR TEST REPORT

FFEBJV, LLC

Checked By: LED

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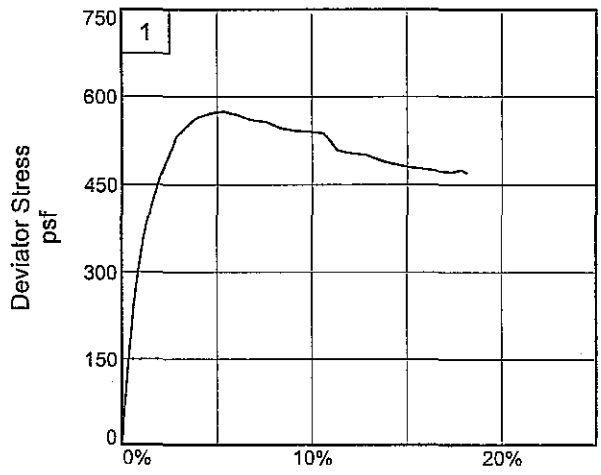
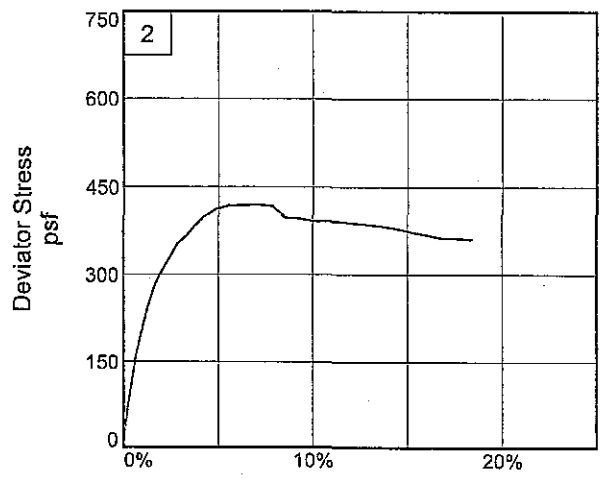
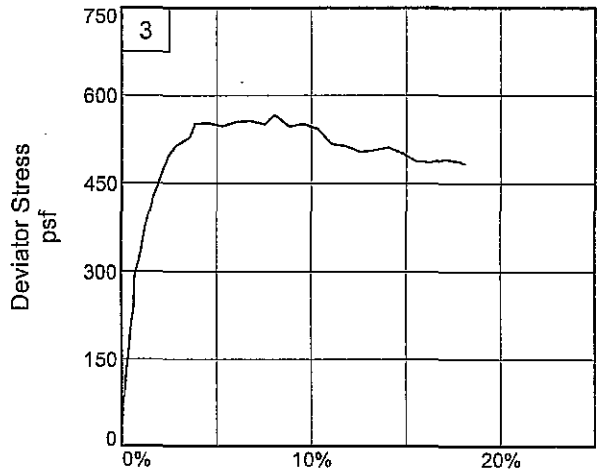
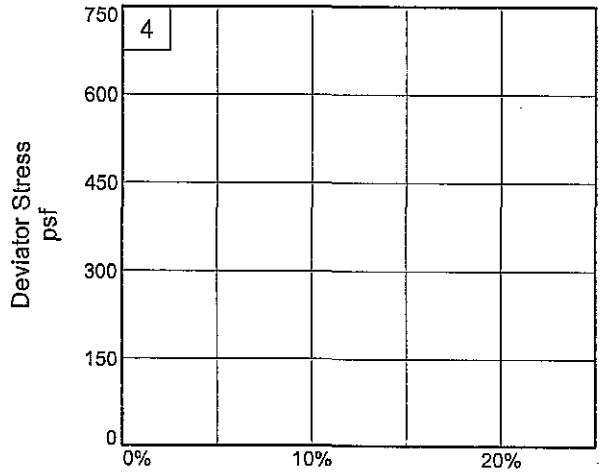
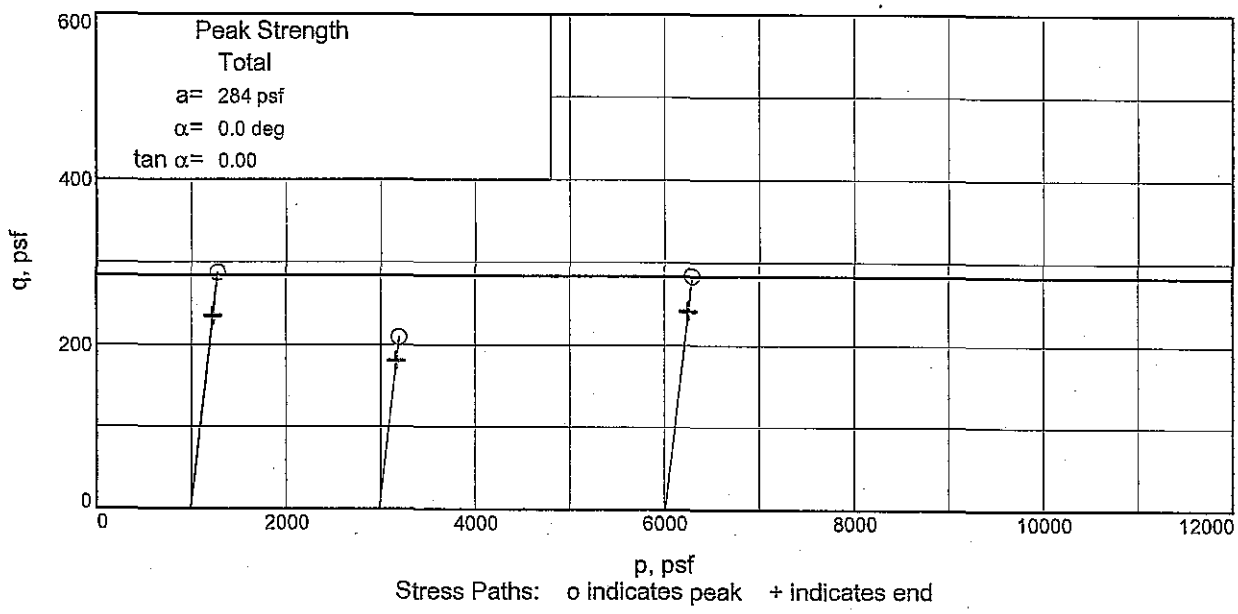




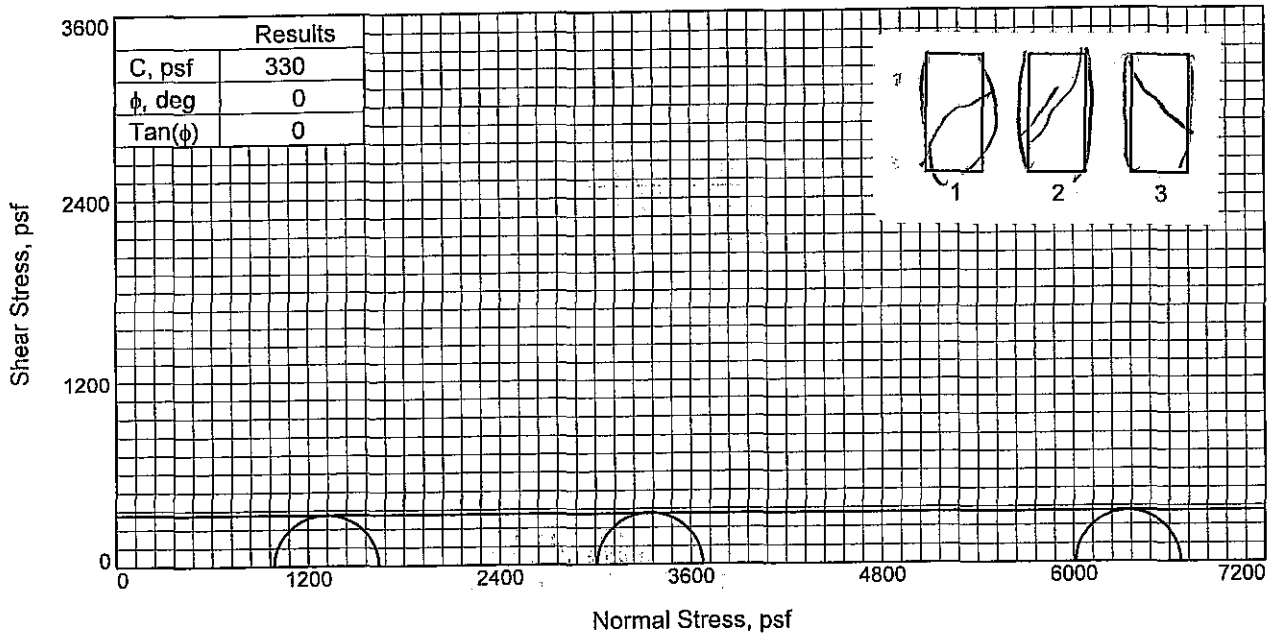


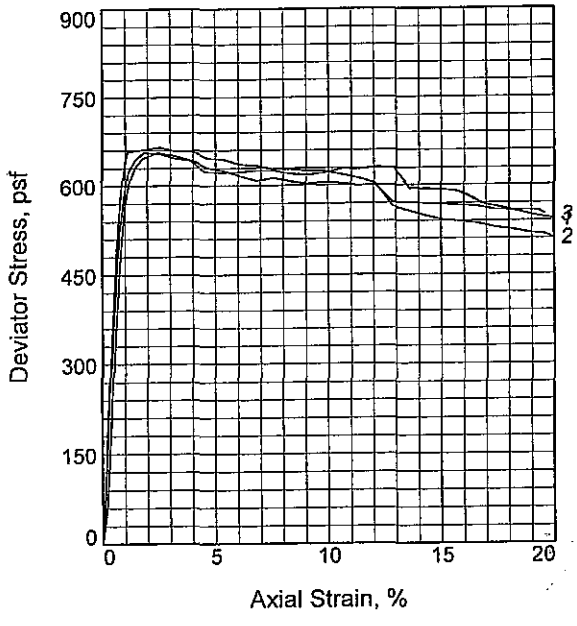




Client: U.S. Army Corps of Engineers
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Source of Sample: NF05-65PCU **Depth:** 18.6 **Sample Number:** 6D
Project No.: 07-022122 **Figure** _____ **FFEBJV, LLC**

Checked By: LED "~~Confidential Information:~~ Privileged & Confidential Work Product"





Sample No.		1	2	3
Initial	Water Content, %	68.9	74.9	71.8
	Dry Density, pcf	59.1	56.1	57.6
	Saturation, %	99.8	100.3	100.0
	Void Ratio	1.8920	2.0466	1.9677
	Diameter, in.	1.410	1.411	1.412
	Height, in.	3.100	3.104	3.099
At Test	Water Content, %	68.9	74.9	71.8
	Dry Density, pcf	59.1	56.1	57.6
	Saturation, %	99.8	100.3	100.0
	Void Ratio	1.8920	2.0466	1.9677
	Diameter, in.	1.410	1.411	1.412
	Height, in.	3.100	3.104	3.099
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.86	20.90	41.76
Fail. Stress, psf		656	665	656
Strain, %		2.5	2.5	1.8
Ult. Stress, psf				
Strain, %				
σ_1 Failure, psf		1643	3675	6670
σ_3 Failure, psf		988	3010	6013

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: SO GR CH4 W/ ARS ML, SIF

LL= 95 **PL=** 28 **PI=** 67
Assumed Specific Gravity= 2.74
Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-65PCU **Depth:** 21.7
Sample Number: 7C
Proj. No.: 07-022122 **Date Sampled:** 1/4/10

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FFEBJV, LLC

Tested By: VF/JC **Checked By:** MS

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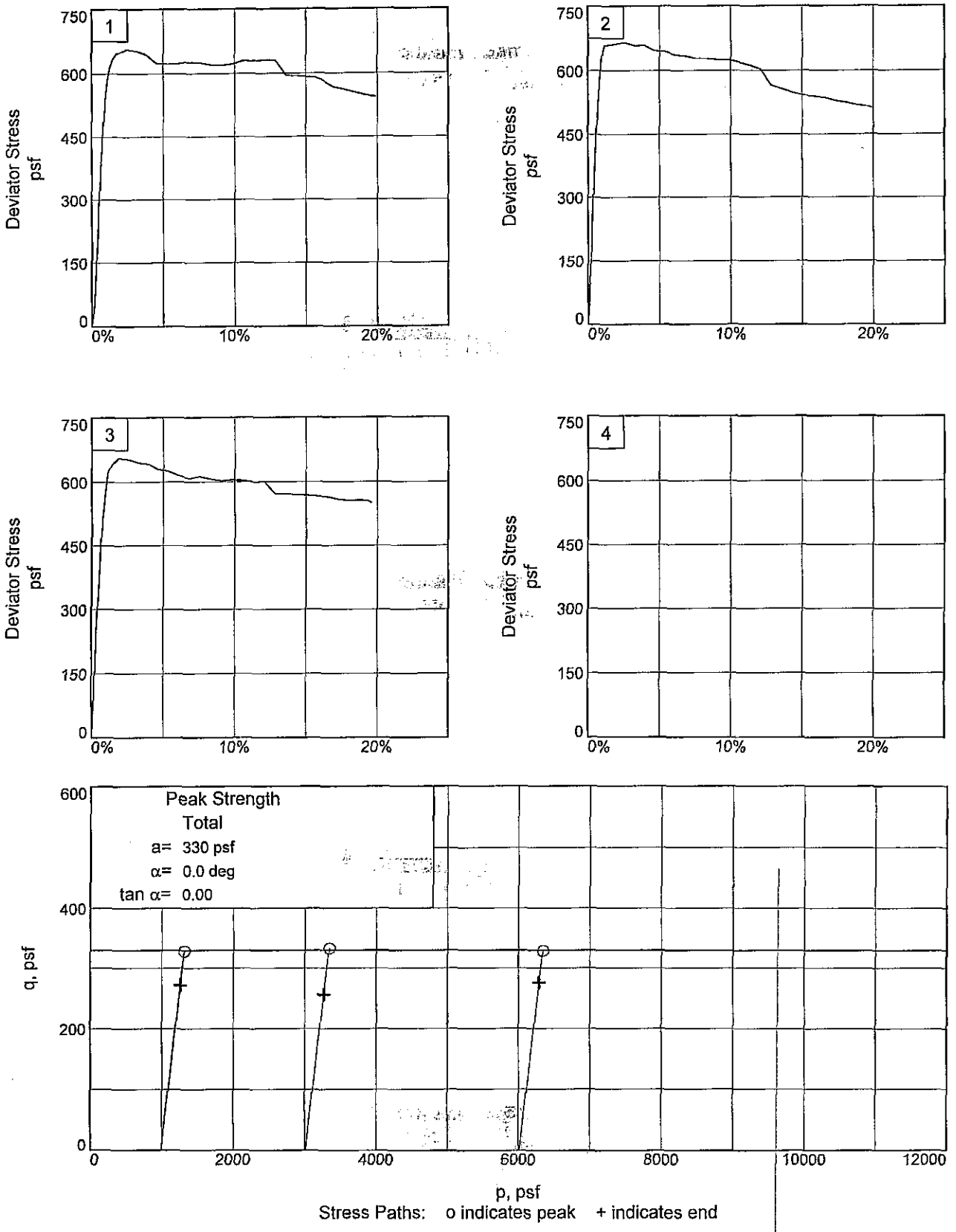

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

Source of Sample: NF05-65PCU **Depth:** 21.7 **Sample Number:** 7C

Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: VF/JC **Checked By:** MS

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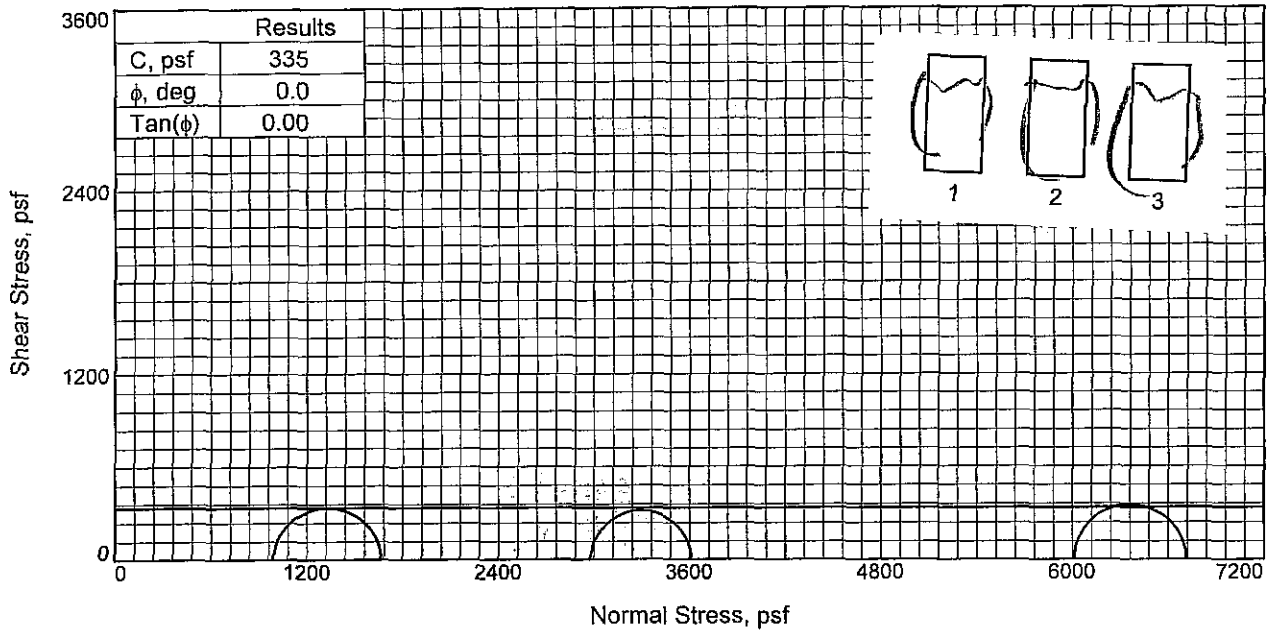

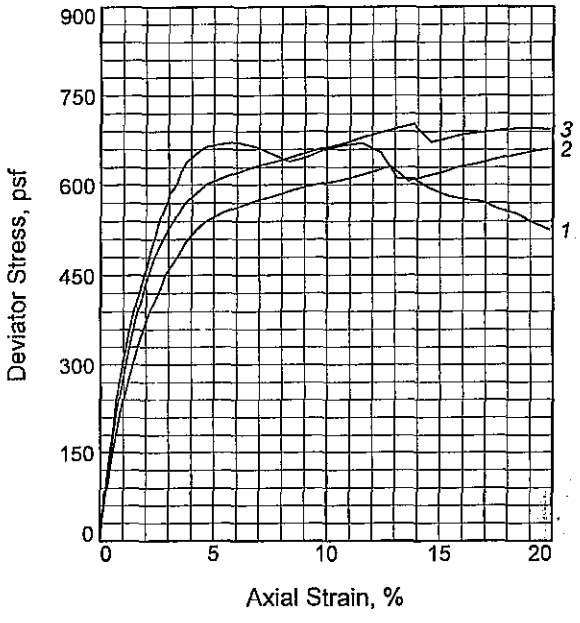

Sample No.		1	2	3
Initial	Water Content, %	47.2	46.2	46.2
	Dry Density, pcf	76.0	76.9	76.7
	Saturation, %	105.7	105.6	105.2
	Void Ratio	1.1918	1.1679	1.1735
	Diameter, in.	1.397	1.404	1.397
	Height, in.	3.091	3.063	3.085
At Test	Water Content, %	47.2	46.2	46.2
	Dry Density, pcf	76.0	76.9	76.7
	Saturation, %	105.7	105.6	105.2
	Void Ratio	1.1918	1.1679	1.1735
	Diameter, in.	1.397	1.404	1.397
	Height, in.	3.091	3.063	3.085
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.88	20.68	41.74
Fail. Stress, psf		672	632	701
Strain, %		6.1	12.8	13.8
Ult. Stress, psf		582	606	672
Strain, %				
σ_1 Failure, psf		1663	3610	6713
σ_3 Failure, psf		991	2978	6011

Type of Test:
Unconsolidated Undrained

Sample Type: UNDISTURBED

Description: SO GR CL4 W/ LNS & LYS ML, SIF

LL= 42 PL= 25 PI= 17

Assumed Specific Gravity= 2.67

Remarks:

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La

Source of Sample: NF05-65PCU **Depth:** 25.7

Sample Number: 8C

Proj. No.: 07-022122 **Date Sampled:** 1/4/10

TRIAXIAL SHEAR TEST REPORT

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Figure _____

Tested By: VF/JC **Checked By:** MS

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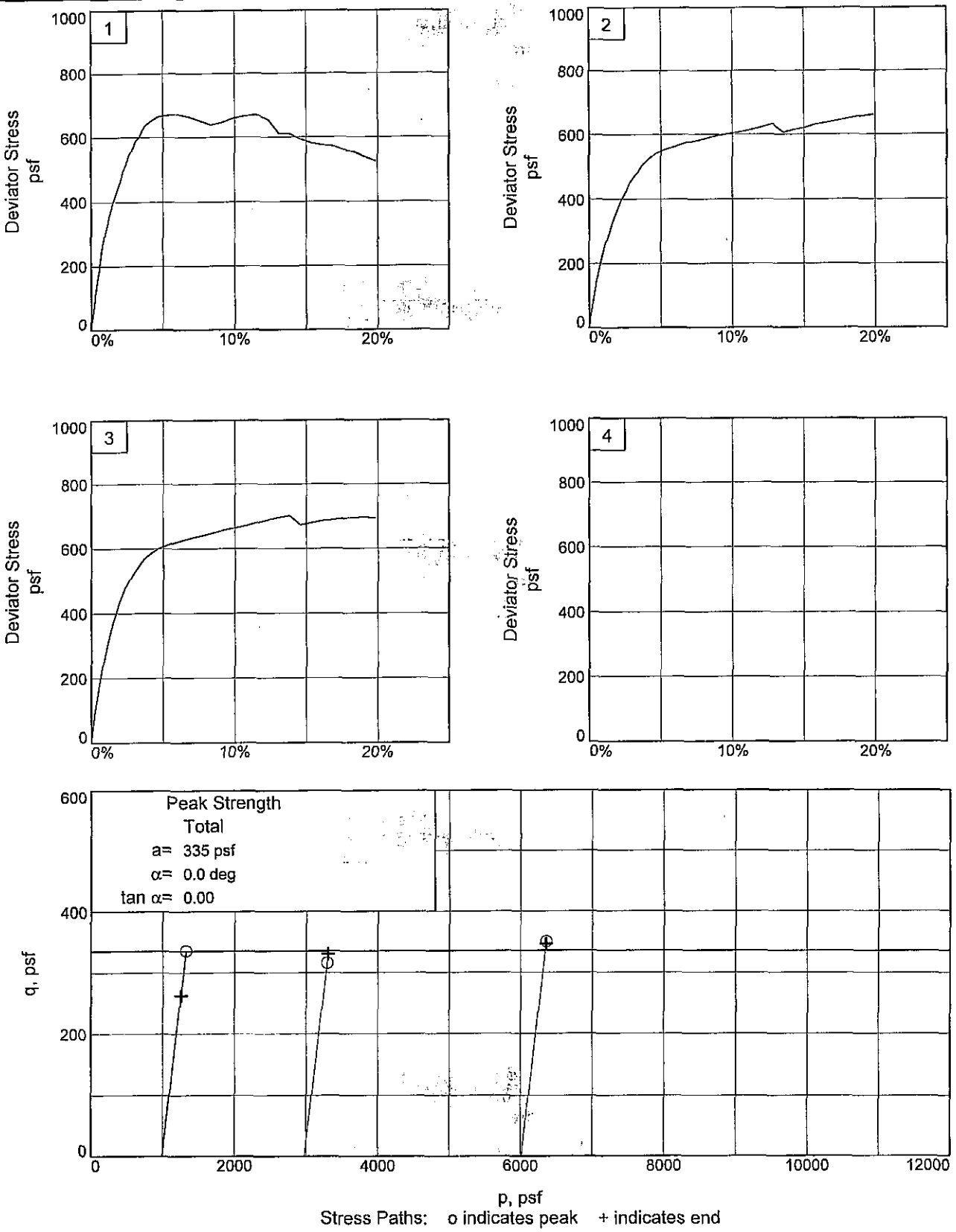

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

Source of Sample: NF05-65PCU **Depth:** 25.7 **Sample Number:** 8C

Project No.: 07-022122 **Figure** _____

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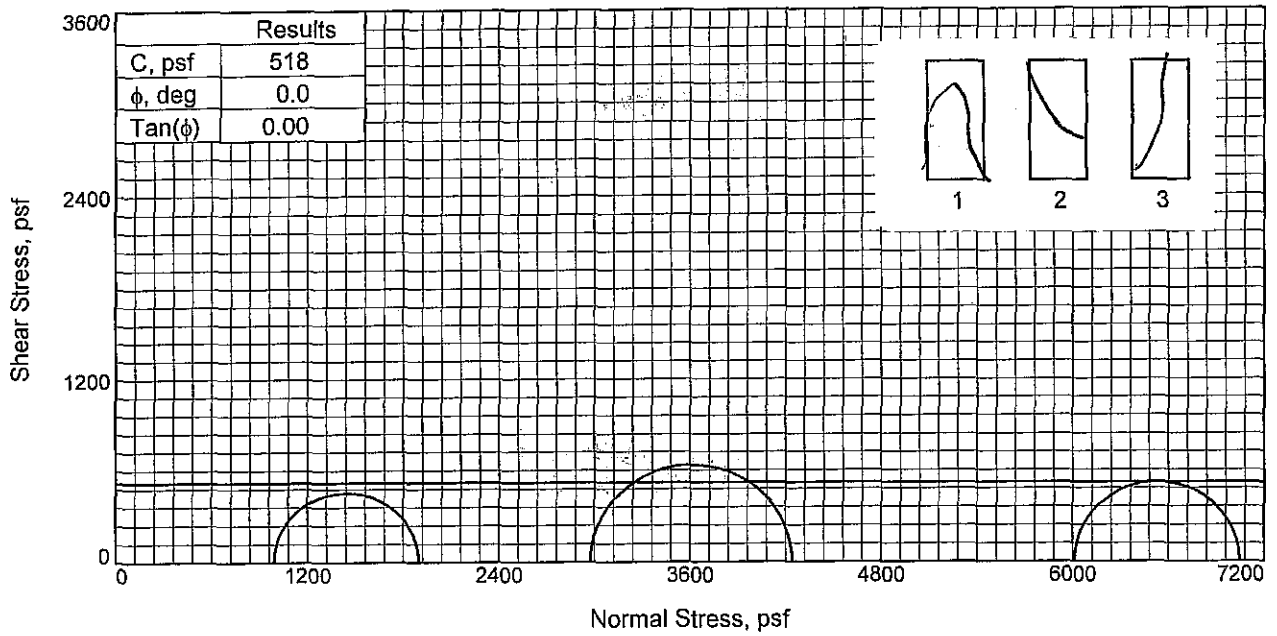
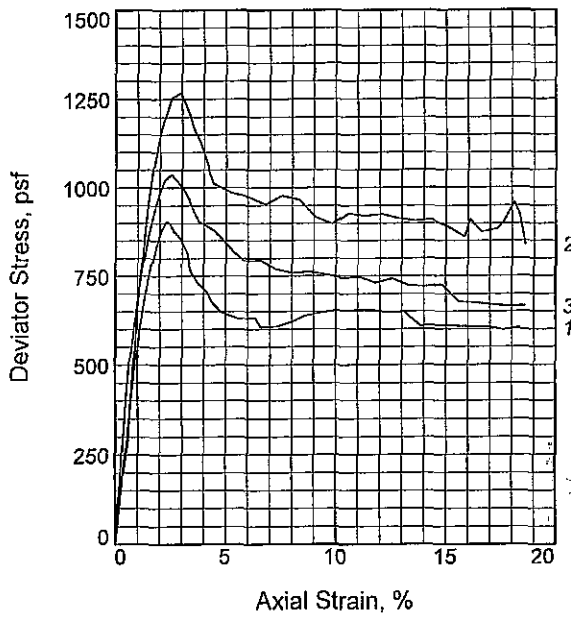
Tested By: VF/JC **Checked By:** MS

"Confidential Information: Privileged & Confidential Work Product"





Sample No.		1	2	3
Initial	Water Content, %	66.8	64.8	65.9
	Dry Density, pcf	60.2	61.1	60.6
	Saturation, %	99.4	98.6	99.1
	Void Ratio	1.8409	1.8007	1.8207
	Diameter, in.	1.417	1.411	1.412
	Height, in.	3.104	3.104	3.102
At Test	Water Content, %	66.8	64.8	65.9
	Dry Density, pcf	60.2	61.1	60.6
	Saturation, %	99.4	98.6	99.1
	Void Ratio	1.8409	1.8007	1.8207
	Diameter, in.	1.417	1.411	1.412
	Height, in.	3.104	3.104	3.102
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.89	20.66	41.74
Fail. Stress, psf		905	1267	1037
Strain, %		2.3	2.9	2.5
Ult. Stress, psf		605	890	720
Strain, %				
σ_1 Failure, psf		1897	4241	7047
σ_3 Failure, psf		992	2975	6010

Type of Test: Unconsolidated Undrained

Sample Type: UNDISTURBED

Description: M GR CH4 W/ LNS & LYS ML

LL= 92 **PL=** 25 **PI=** 67

Assumed Specific Gravity= 2.74

Remarks:

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La

Source of Sample: NF05-65PCU **Depth:** 34.6

Sample Number: 10D

Proj. No.: 07-022122 **Date Sampled:** 1/4/10

TRIAXIAL SHEAR TEST REPORT

FFEBJV, LLC

Figure _____

Tested By: VF/JC **Checked By:** MS

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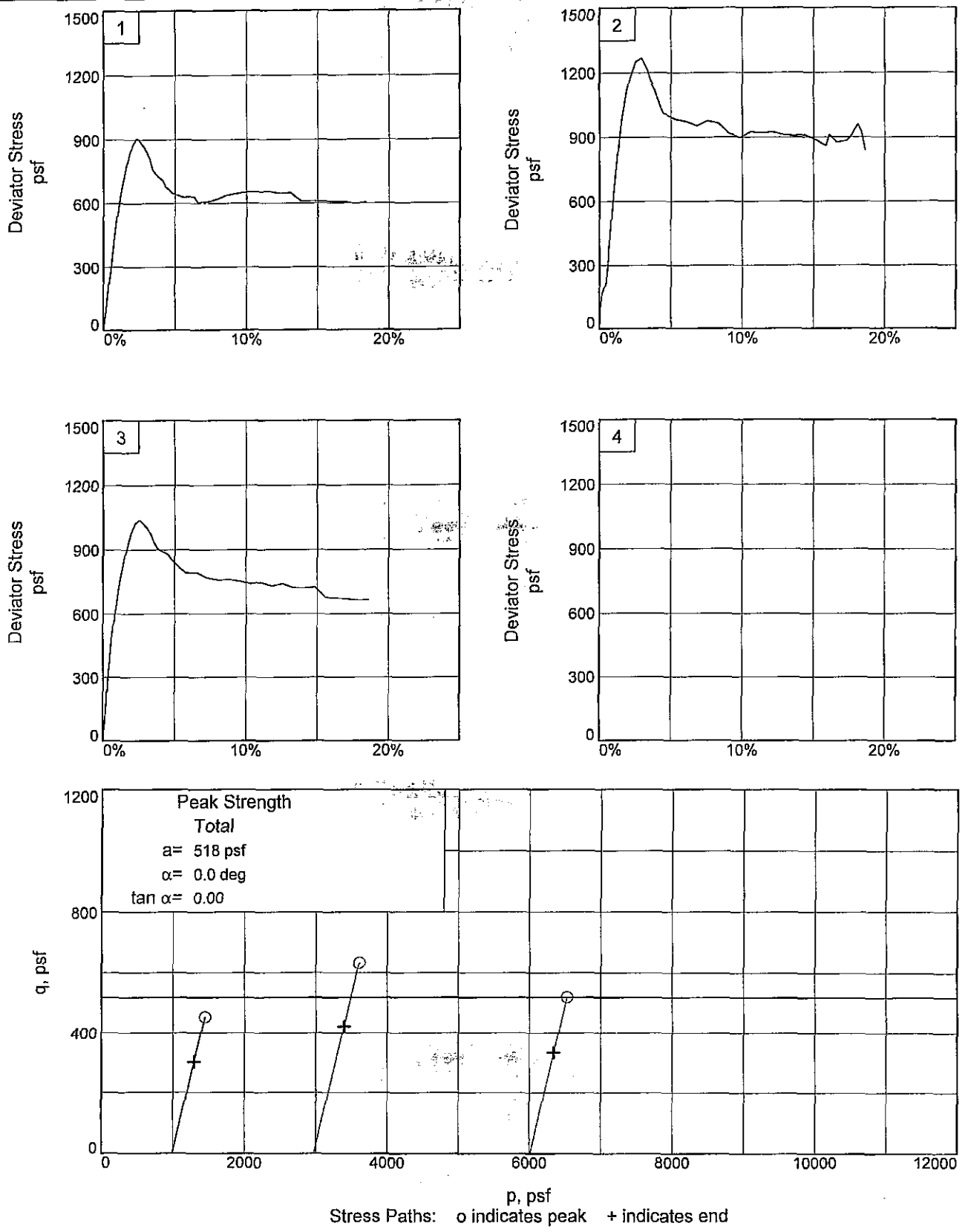
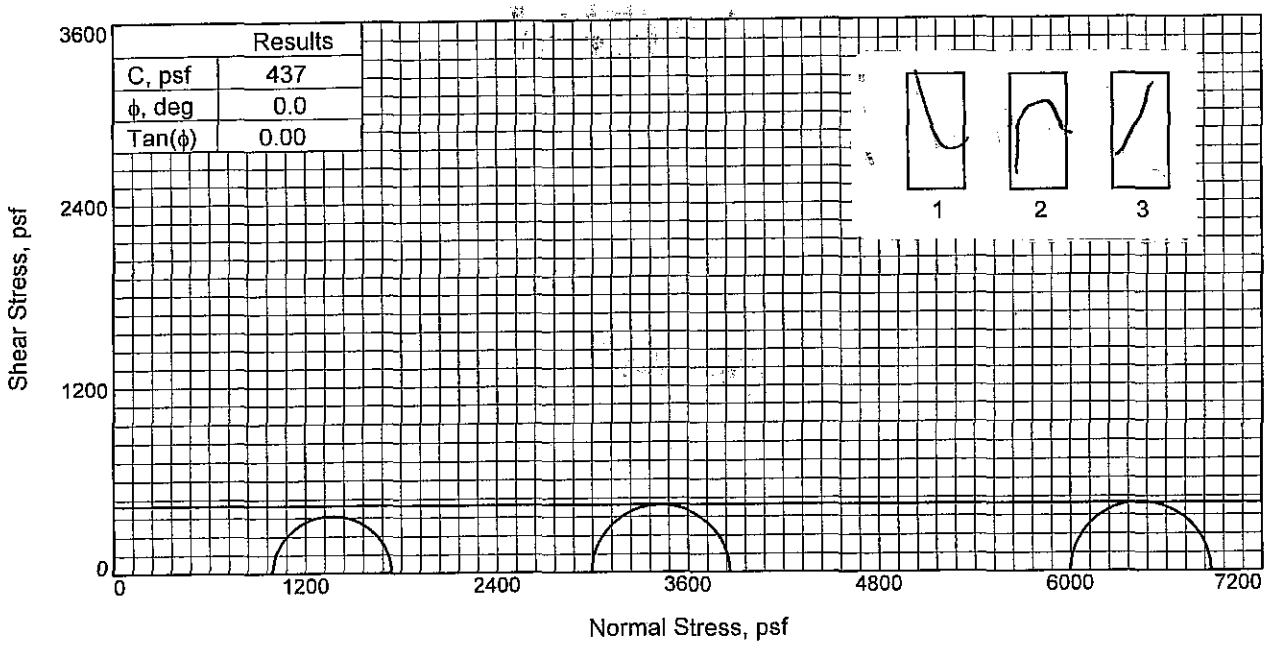


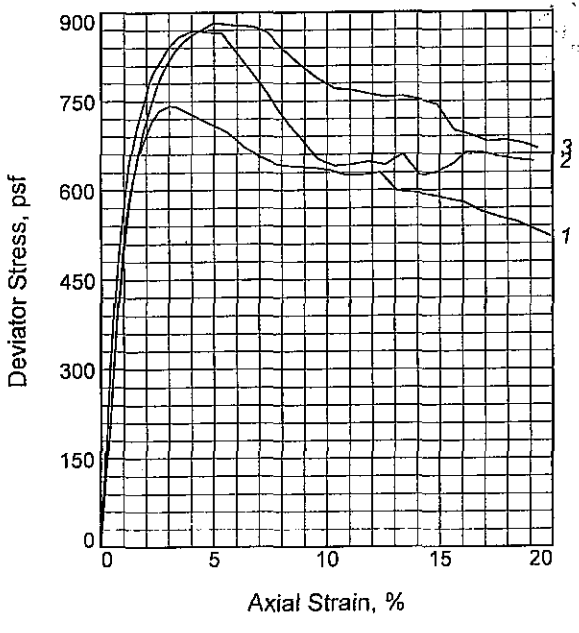
Client: U.S. Army Corps of Engineers
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Source of Sample: NF05-65PCU **Depth:** 34.6 **Sample Number:** 10D
Project No.: 07-022122 **Figure** ____

FFEBJV, LLC

Tested By: VF/JC **Checked By:** MS

"Confidential Information: Privileged & Confidential Work Product"





Sample No.		1	2	3
Initial	Water Content, %	71.7	71.4	70.0
	Dry Density, pcf	57.8	57.9	58.4
	Saturation, %	100.2	100.3	99.5
	Void Ratio	1.9604	1.9519	1.9279
	Diameter, in.	1.410	1.412	1.411
	Height, in.	3.103	3.102	3.101
At Test	Water Content, %	71.7	71.4	70.0
	Dry Density, pcf	57.8	57.9	58.4
	Saturation, %	100.2	100.3	99.5
	Void Ratio	1.9604	1.9519	1.9279
	Diameter, in.	1.410	1.412	1.411
	Height, in.	3.103	3.102	3.101
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.90	20.78	41.65
Fail. Stress, psf		742	869	882
Strain, %		3.0	4.1	5.0
Ult. Stress, psf		585	625	744
Strain, %				
σ_1 Failure, psf		1736	3861	6879
σ_3 Failure, psf		994	2992	5997

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: SO GR CH4 W/ LNS ML

LL= 93 **PL=** 27 **PI=** 66
Assumed Specific Gravity= 2.74
Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

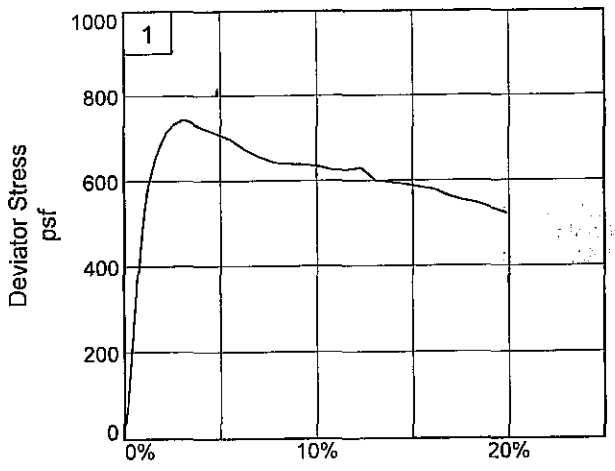
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-65PCU **Depth:** 38.6
Sample Number: 11D
Proj. No.: 07-022122 **Date Sampled:** 1/5/10

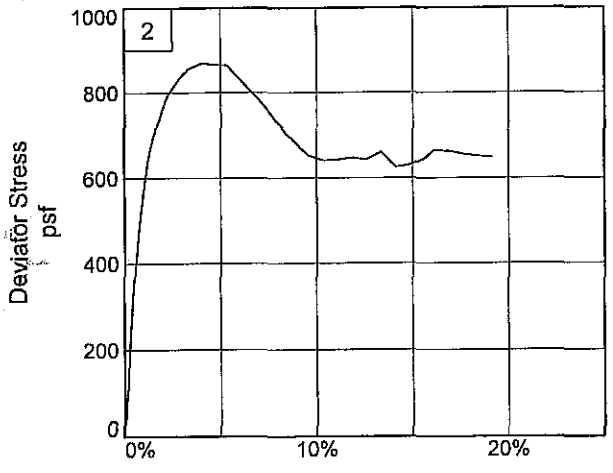
TRIAXIAL SHEAR TEST REPORT

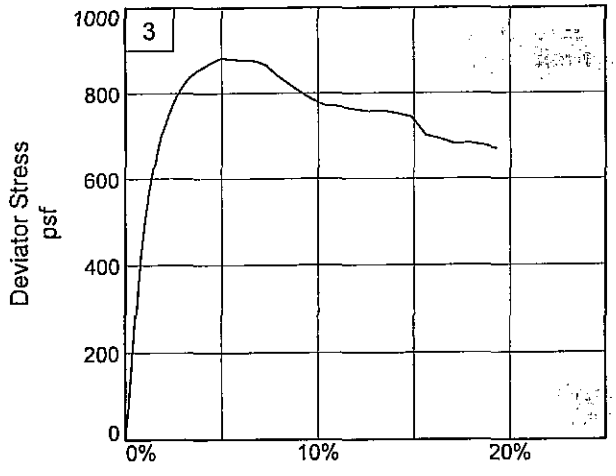
FFEBJV, LLC

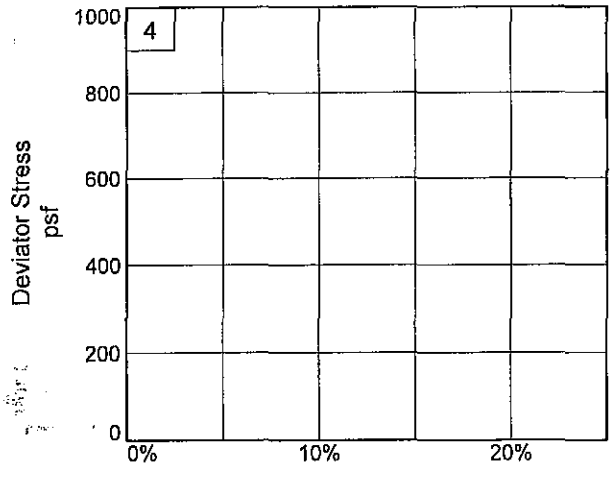
Tested By: VF/ARS **Checked By:** MS

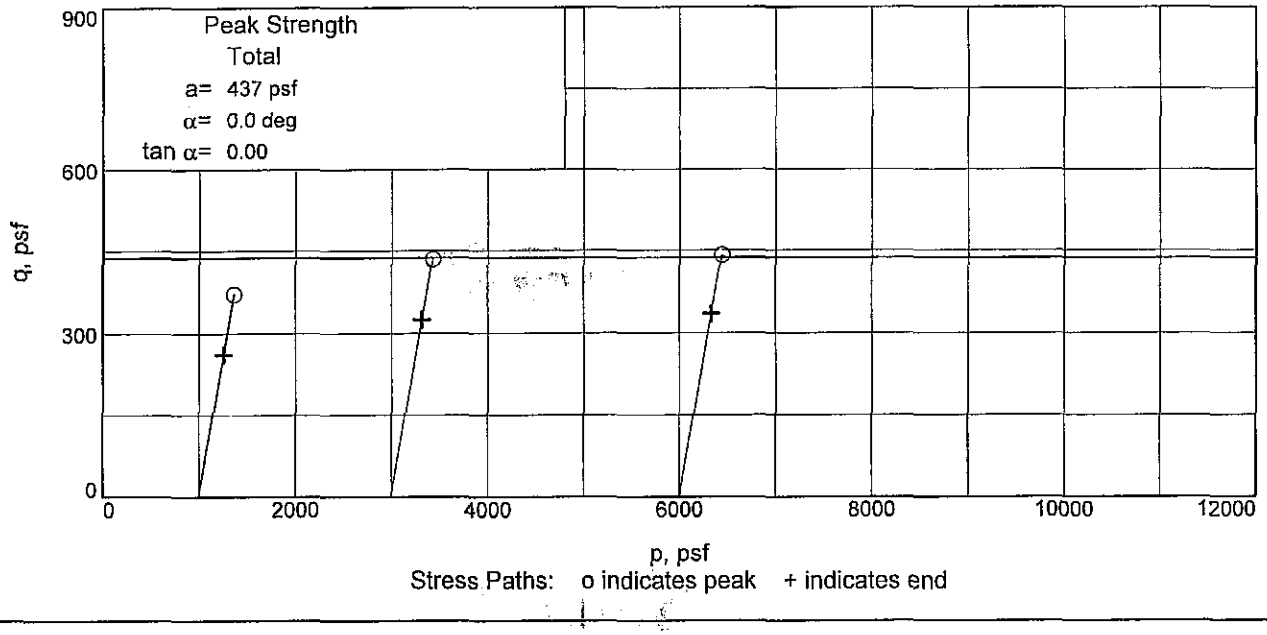
"Confidential Information: Privileged & Confidential Work Product"











Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

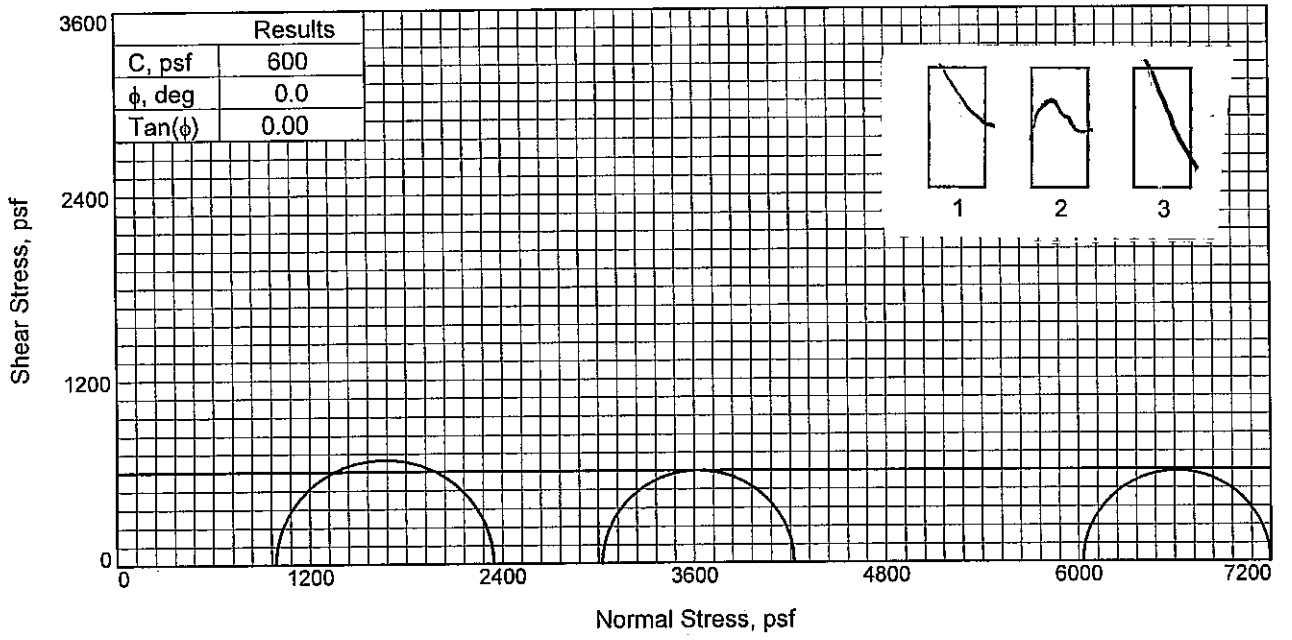
Source of Sample: NF05-65PCU **Depth:** 38.6 **Sample Number:** 11D

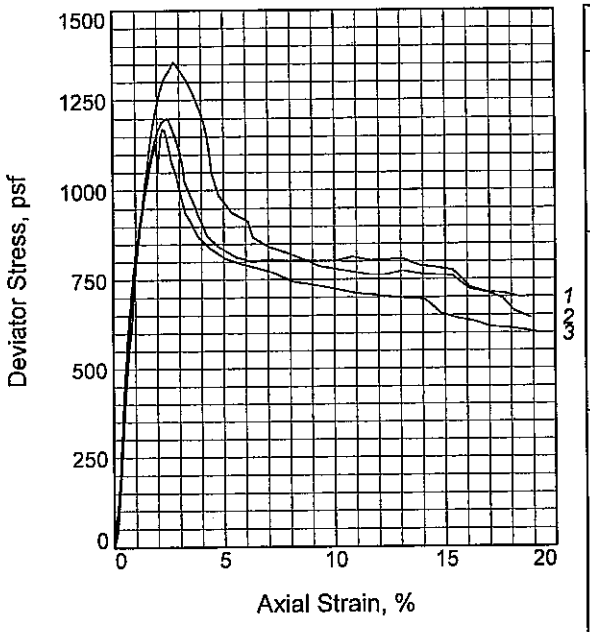
Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: VF/ARS **Checked By:** MS

"Confidential Information Privileged & Confidential Work Product"





Sample No.		1	2	3
Initial	Water Content, %	72.0	72.8	72.8
	Dry Density, pcf	57.1	56.8	56.8
	Saturation, %	98.9	99.2	99.3
	Void Ratio	1.9953	2.0108	2.0093
	Diameter, in.	1.415	1.412	1.411
	Height, in.	3.109	3.106	3.105
At Test	Water Content, %	72.0	72.8	72.8
	Dry Density, pcf	57.1	56.8	56.8
	Saturation, %	98.9	99.2	99.3
	Void Ratio	1.9953	2.0108	2.0093
	Diameter, in.	1.415	1.412	1.411
	Height, in.	3.109	3.106	3.105
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.87	21.01	41.86
Fail. Stress, psf		1356	1199	1170
Strain, %		2.7	2.4	2.3
Ult. Stress, psf		760	775	654
Strain, %				
σ_1 Failure, psf		2345	4224	7198
σ_3 Failure, psf		989	3025	6028

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: M GR CH4 W/ LNS ML, SL

LL= 99 **PL=** 28 **PI=** 71
Assumed Specific Gravity= 2.74
Remarks:

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-65PCU **Depth:** 44.8
Sample Number: 13B
Proj. No.: 07-022122 **Date Sampled:** 1/5/10

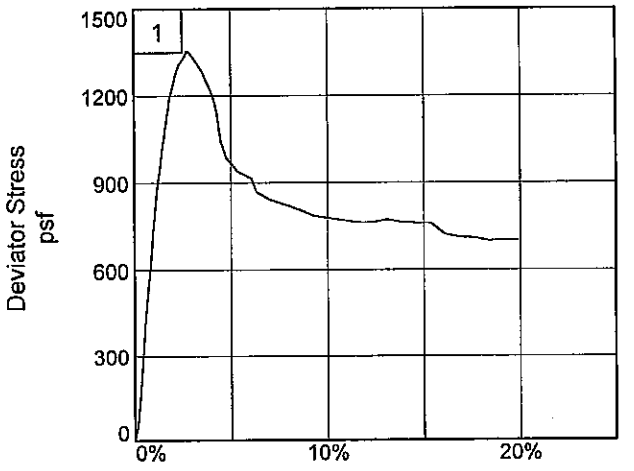
TRIAXIAL SHEAR TEST REPORT

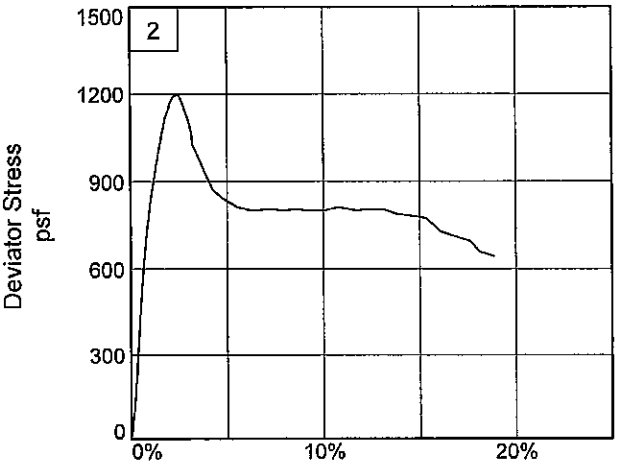
FFEBJV, LLC

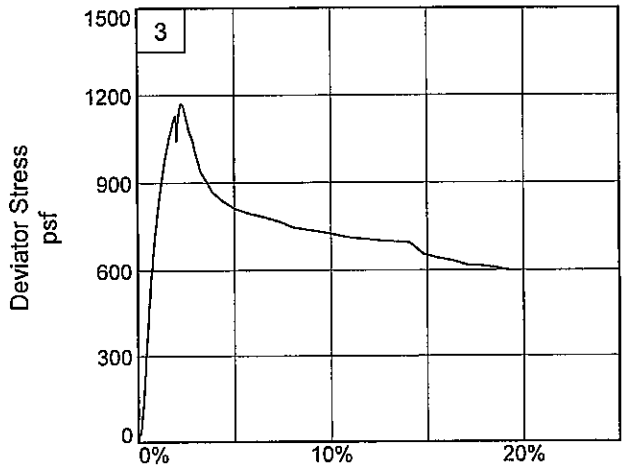
Figure _____

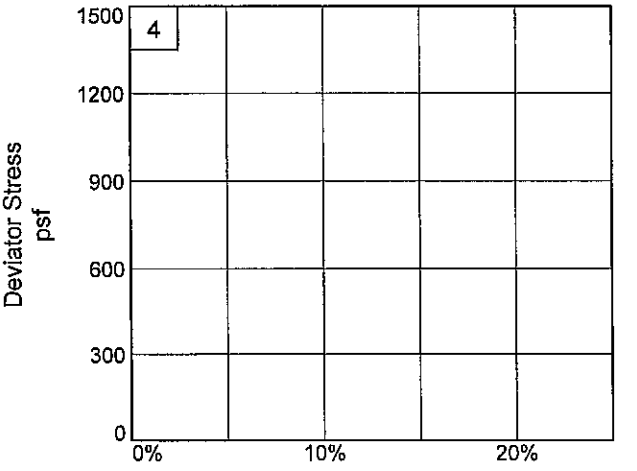
Tested By: VF/ARS **Checked By:** MS

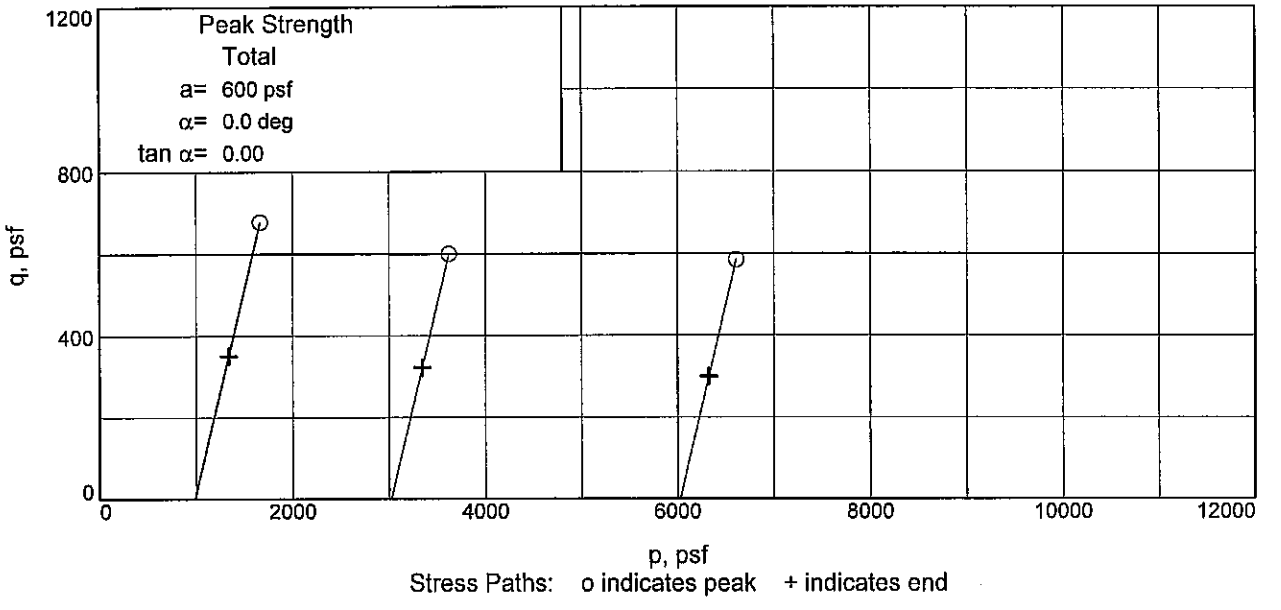
"Confidential Information - Privileged & Confidential Work Product"









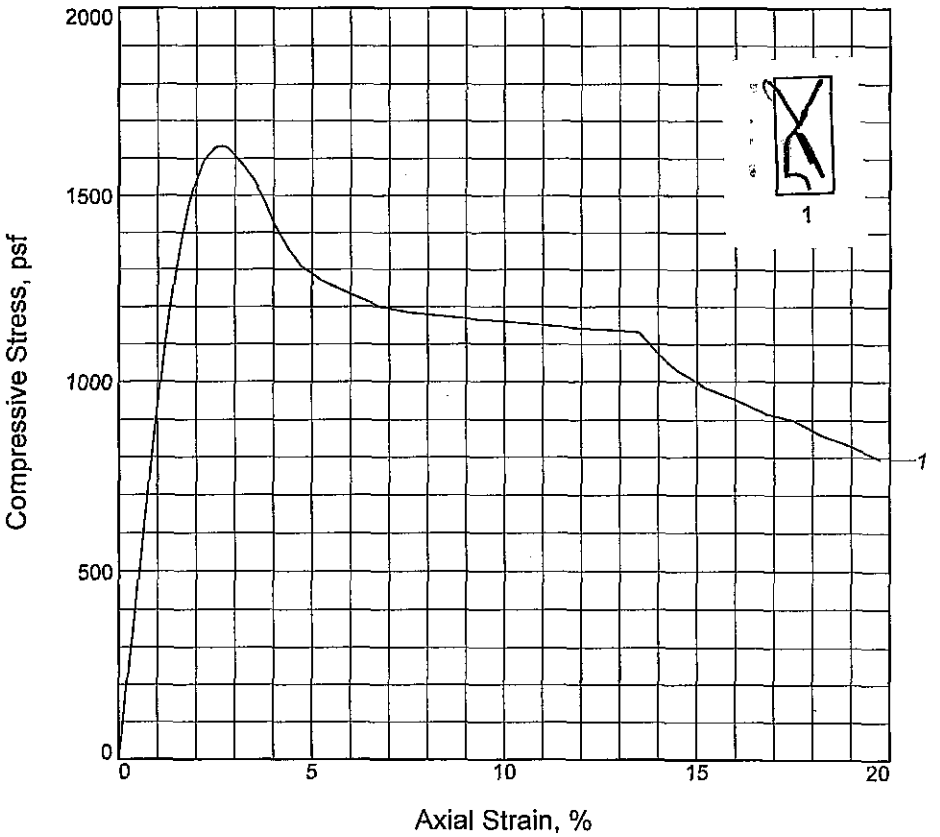


Client: U.S. Army Corps of Engineers
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Source of Sample: NF05-65PCU **Depth:** 44.8 **Sample Number:** 13B
Project No.: 07-022122 **Figure** _____ **FFEBJV, LLC**

Tested By: VF/ARS **Checked By:** MS

"Confidential Information: Privileged & Confidential Work Product"

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psf	1633			
Undrained shear strength, psf	817			
Failure strain, %	2.7			
Strain rate, %/min.	1.00			
Water content, %	59.0			
Wet density, pcf	103.1			
Dry density, pcf	64.8			
Saturation, %	98.8			
Void ratio	1.6378			
Specimen diameter, in.	1.409			
Specimen height, in.	3.104			
Height/diameter ratio	2.20			

Description: M GR CH4 W/ SL

LL = 83	**PL** = 25	**PI** = 58	**Assumed GS=** 2.74	**Type:** UNDISTURBED

Project No.: 07-022122
Date Sampled: 1/5/10
Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-65PCU **Depth:** 48.8
Sample Number: 14B

UNCONFINED COMPRESSION TEST

FFEBJV, LLC

Tested By: VF/ARS **Checked By:** MS

"Confidential Information: Privileged & Confidential Work Product"

SUMMARY OF LABORATORY TEST RESULTS

Project: New Orleans To Venice Plaquemines Parish, La **Assigned By:** _____

Project Number: 07-022122
Boring: NF05-68PU

Current Date: 3/24/2010

Sample Number	Depth	Visual Classification	USCS	E(f)	W%	Dry Dens (pcf)	Wet Dens (pcf)	Sat %	Shear Test Type	Angle	Cohesion (psf)	Unconf. Comp. Str.	LL	PL	PI	Torvane (tsf)	Other Tests
1A	0.0	M GR CH4 W/ O, RT, WD	CH4	9	46	71	104	90	UC	-	746	1491	78	24	54	0.60	
2A	2.0	M DGR CHOA W/ ARS ML	CHOA		95												
3A	4.0	SO GR PT W/ WD, RT	PT		203												
3B	4.8	VSO GR CHOA W/ LNS & LYS ML, RT	CHOA		160	31	81	99	UU	0	152		138	37	101	0.10	OC=10.5%
3C	5.7	VSO GR CH3 W/ ARS & LNS SM, RT	CH3		58				UU				59	23	36		NOT TESTABLE MV=172psf
3D	6.6	SO GR CH3 W/ LYS & LNS SM, CC	CH3		56												
4A	8.0	VSO GR CH4 W/ ARS & LNS ML	CH4		87												
4B	8.8	SO BR PT W/ WD, RT	PT	8	283	19	72	97	UC	-	337	675	335	165	170	0.25	OC=35.2%
4C	9.7	SO GR CH3 W/ LYS & LNS SM	CH3		47												
4D	10.6	VSO GR CL6 W/ LYS & LNS SM	CL6		55	67	104	98	UU	0	154		45	20	25	0.10	
5A	12.0	SO GR CH4 W/ ARS & LNS ML	CH4		67												
5B	12.8	VSO GR CH3 W/ LNS & LYS SM	CH3		67	62	103	100	UU	0	184		66	21	45	0.11	
5C	13.7	VSO GR CH4 W/ ARS & LNS SM	CH4		79	54	97	100	UU	0	187		84	26	58	0.20	
5D	14.6	VSO GR CH4 W/ ARS & LNS SM	CH4		85												MV=215psf
6A	16.0	SO GR CL4 W/ LYS ML, WD	CL4		40												
6B	16.8	GR ML	ML		29												
6C	17.7	GR ML W/ LYS CH	ML		32												SV
6D	18.6	VSO GR CL4 W/ LYS & LNS CH	CL4		39												
7A	20.0	SO GR CH4 W/ LNS & LYS SM, SIF	CH4		69												
7B	20.8	SO GR CH4 W/ LNS & LYS SM, SIF	CH4		68	60	100	100	UU	0	382		81	22	59	0.25	
7C	21.7	SO GR CH4 W/ LNS & LYS SM, SIF	CH4		69												
7D	22.6	M GR CH4 W/ LNS & LYS SM, SIF, CC	CH4		64												
8A	24.0	M GR CH3 W/ LYS & LNS SM, SIF	CH3		50												
8B	24.8	M GR CH3 W/ LYS & LNS SM, SIF	CH3		45												
8C	25.7	GR ML W/ LYS CH, ARS SM	ML		29				UU				NP	NP	NP		-200, NOT TESTABLE
8D	26.6	GR SM W/ LYS & LNS ML	SM		34				UU				NP	NP	NP		-200, NOT TESTABLE
9A	28.0	GR SM W/ WD	SM		30												
9B	28.8	GR SM W/ LYS CH	SM		33												
9C	29.7	GR ML W/ LYS CH, ARS SM	ML		31												SV
9D	30.6	GR SM W/ LYS CH	SM		36												

Remarks: _____
FFEB JV, LLC

Checked By: IB/MS/LED
File Name: 05-68PU.xls

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SUMMARY OF LABORATORY TEST RESULTS

Project: New Orleans To Venice Plaquemines Parish, La **Assigned By:** _____

Project Number: 07-022122 **Current Date:** 3/24/2010
Boring: NF05-68PU

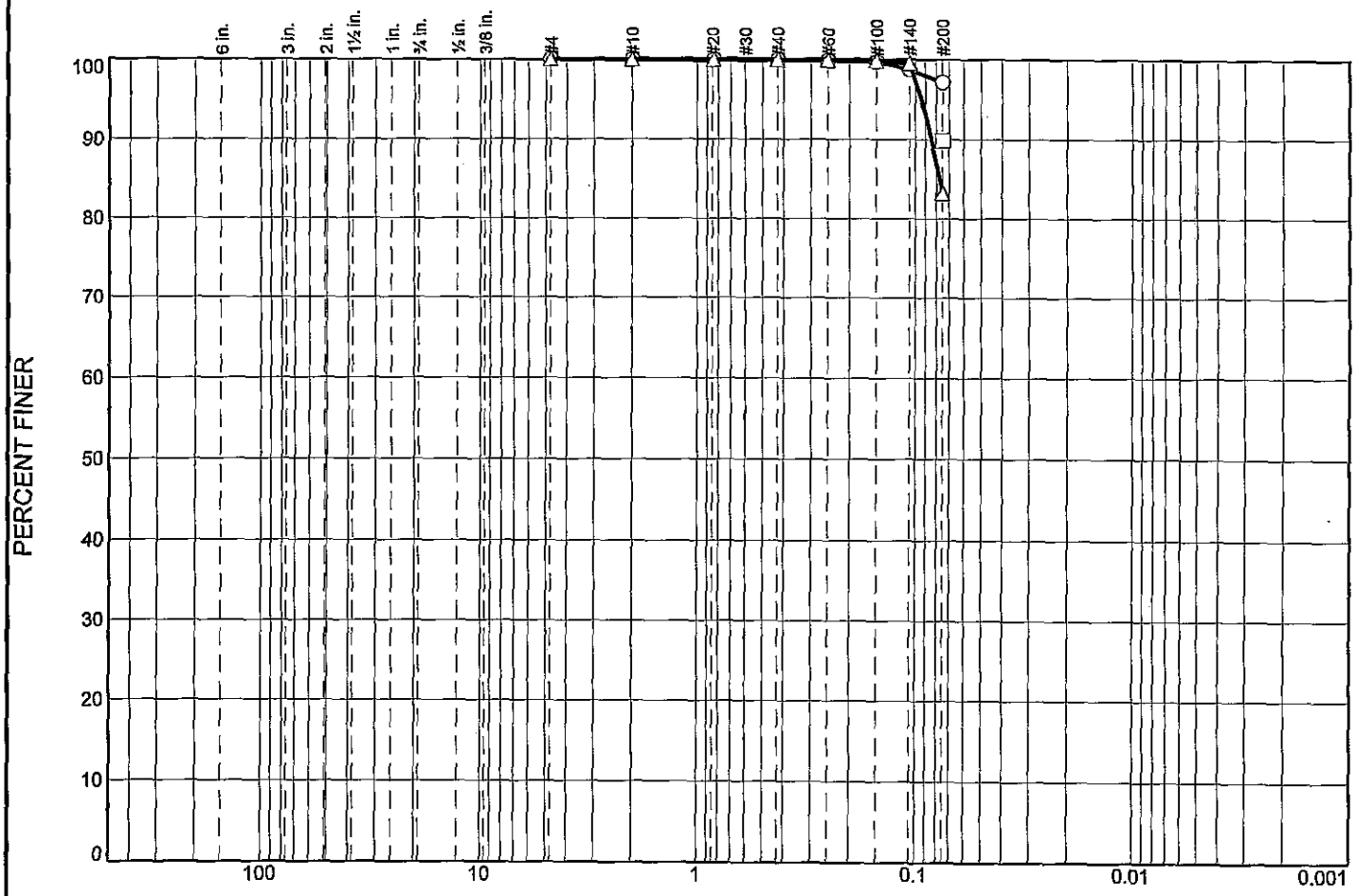
Sample Number	Depth	Visual Classification	USCS	E(f)	W%	Dry Dens (pcf)	Wet Dens (pcf)	Sat %	Shear Test Type	Angle	Cohesion (psf)	Unconf. Comp. Str.	LL	PL	PI	Torvane (tsf)	Other Tests
10A	32.0	SO GR CH3 W/ LYS & LNS SM	CH3		50												
10B	32.8	SO GR CH2 W/ LYS & LNS ML	CH2		53	69	106	99	UU	0	340		50	23	27	0.24	
10C	33.7	M GR CH3 W/ LNS ML	CH3		48												
10D	34.6	M GR CH3 W/ ARS & LNS ML	CH3		42												
11A	36.0	SO GR CH4 W/ LYS & LNS SM	CH4		62												
11B	36.8	SO GR CH4 W/ LYS & LNS SM	CH4		64												
11C	37.7	SO GR CH4 W/ LYS & LNS SM	CH4		62												
11D	38.6	SO GR CH4 W/ LYS & LNS SM	CH4		61	64	103	100	UU	0	384		75	27	48	0.30	
12A	40.0	SO GR CH4 W/ LNS ML	CH4		70												
12B	40.8	SO GR CH4 W/ ARS ML	CH4		62												
12C	41.7	SO GR CH4 W/ LYS ML	CH4		61												
12D	42.6	SO GR CH4 W/ LYS ML	CH4		56												
13A	44.0	SO GR CH4 W/ LNS & LYS SM	CH4		60												
13B	44.8	SO GR CH4 W/ LNS & LYS SM	CH4		65												
13C	45.7	M GR CH4	CH4	2	67	60	100	99	UC	-	604	1209	83	28	55	0.35	
13D	46.6	M GR CH4 W/ LNS & LYS ML	CH4		58												
14A	48.0	M GR CH4 W/ LNS & LYS ML	CH4		48												
14B	48.8	M GR CH4	CH4		65	61	101	99	UU	0	655		86	29	57	0.33	
14C	49.7	M GR CH4 W/ LNS ML	CH4		67												

Remarks:
FFEB JV, LLC

Checked By: TB | MS | LED
File Name: 05-68PU.xls

"Confidential Information: Privileged & Confidential Work Product"

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.0	0.1	2.7	97.2	
□							89.8	
△	0.0	0.0	0.0	0.0	0.0	16.8	83.2	

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○											
□			NP								
△				0.0773							

	Material Description	USCS	AASHTO
○	GR ML W/ LYS CH	ML	
□	GR ML W/ LYS CH, ARS SM	ML	
△	GR ML W/ LYS CH, ARS SM	ML	

Project No. 07-022122 **Client:** U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

○ **Source of Sample:** NF05-68PU **Depth:** 17.7 **Sample Number:** 6C

□ **Source of Sample:** NF05-68PU **Depth:** 25.7 **Sample Number:** 8C

△ **Source of Sample:** NF05-68PU **Depth:** 29.7 **Sample Number:** 9C

Date: ○ 10-20-09 □ 10-20-09 △ 10-20-09

FFEBJV, LLC

St Rose, LA

Remarks:

□-200, OTHER TESTS PERFORMED AS PER ASTM-D4318.

Figure

Tested By: JH **Checked By:** TB\MS

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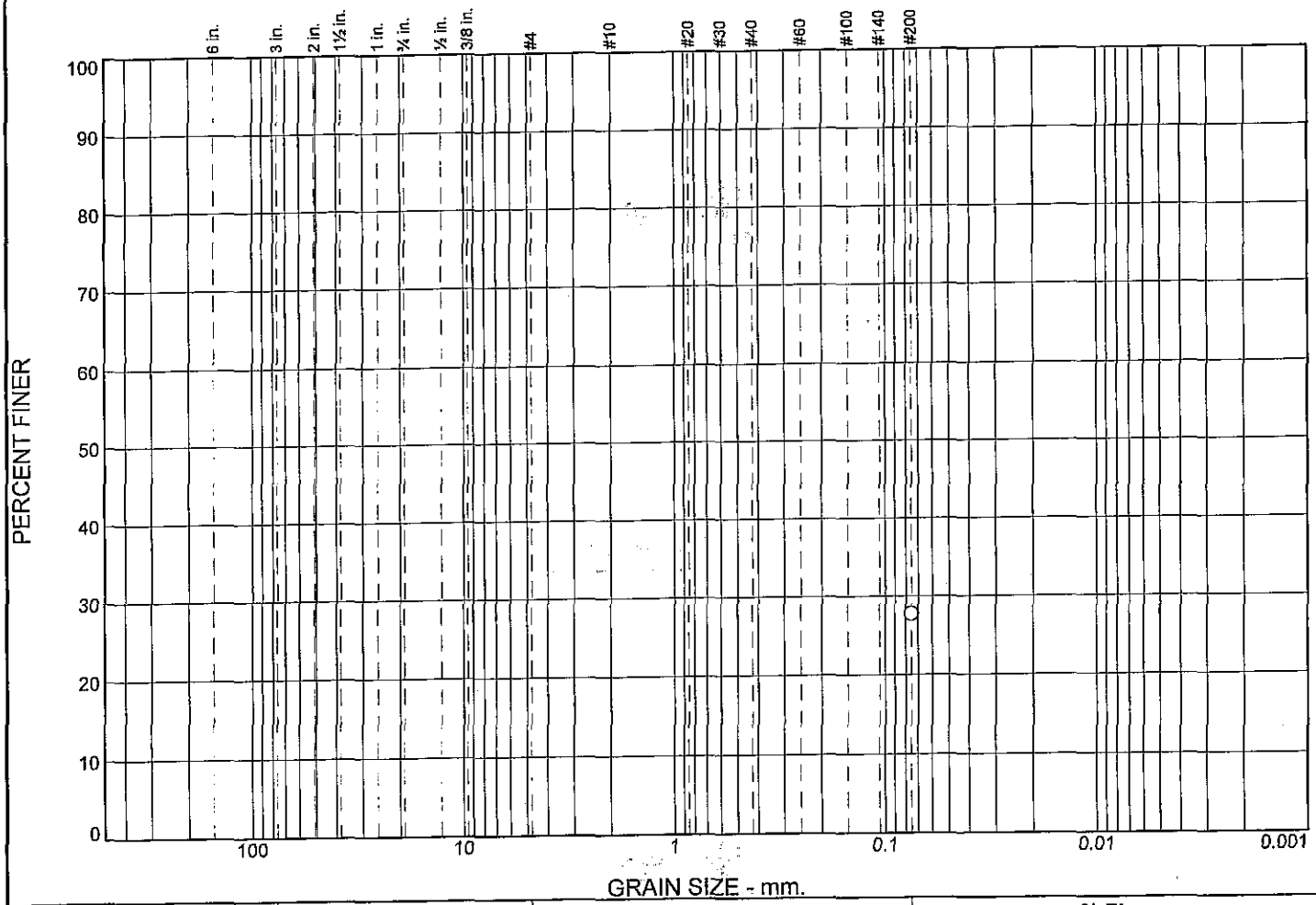
Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
o							27.8	

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
o		NP	NP								

Material Description	USCS	AASHTO
o GR SM W/ LYS & LNS ML	SM	

Project No. 07-022122 **Client:** U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

o **Source of Sample:** NF05-68PU **Depth:** 26.6 **Sample Number:** 8D

Date: o 11/9/09

FFEBJV, LLC

St Rose, LA

Remarks:

o -200, OTHER TESTS PERFORMED AS PER ASTM-D4318.

Figure

Tested By: JH **Checked By:** PB

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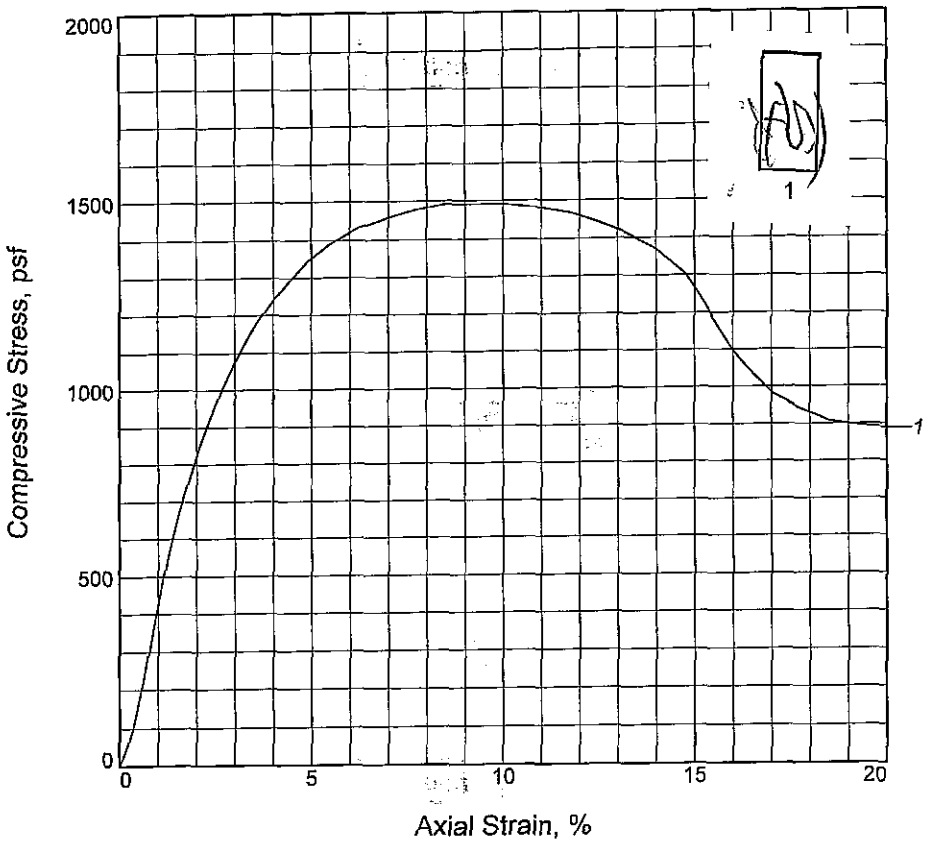
UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psf	1491			
Undrained shear strength, psf	745			
Failure strain, %	9.2			
Strain rate, %/min.	1.00			
Water content, %	46.6			
Wet density, pcf	103.8			
Dry density, pcf	70.8			
Saturation, %	90.1			
Void ratio	1.4160			
Specimen diameter, in.	1.402			
Specimen height, in.	3.107			
Height/diameter ratio	2.22			

Description: M GR CH4 W/ O, RT, WD

LL = 78	**PL** = 24	**PI** = 54	**Assumed GS=** 2.74	**Type:** UNDISTURBED

Project No.: 07-022122
Date Sampled: 10/21/09
Remarks:

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-68PU **Depth:** 0.0
Sample Number: 1A

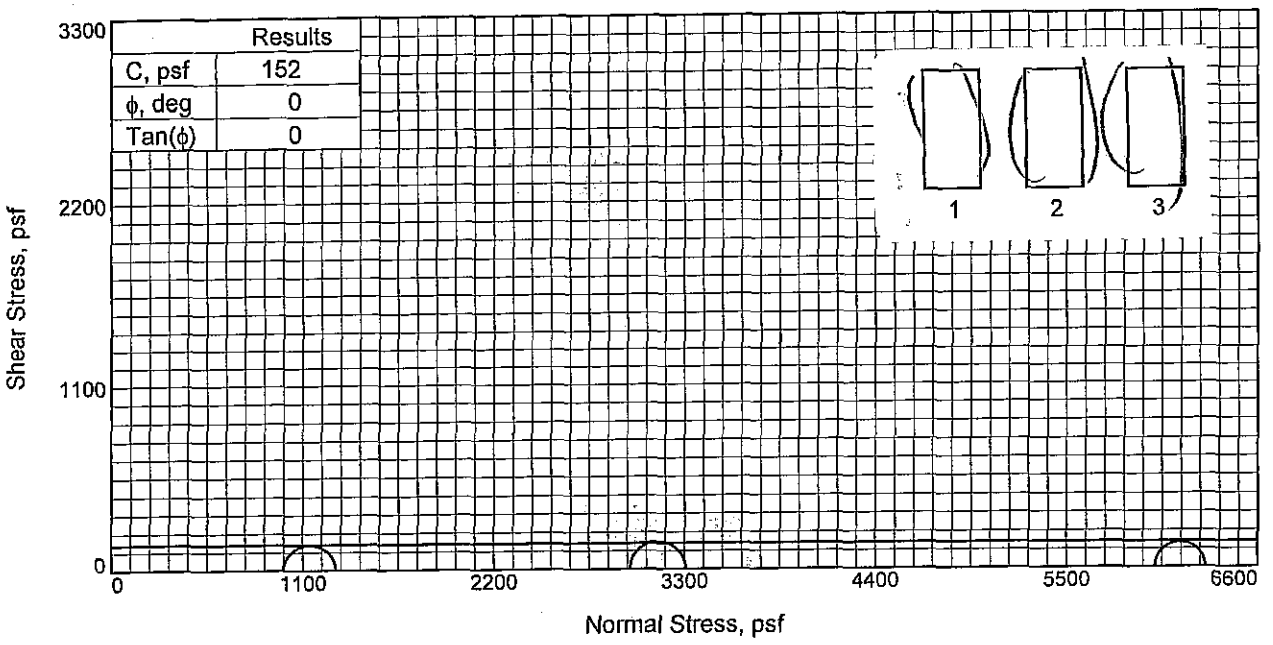
UNCONFINED COMPRESSION TEST

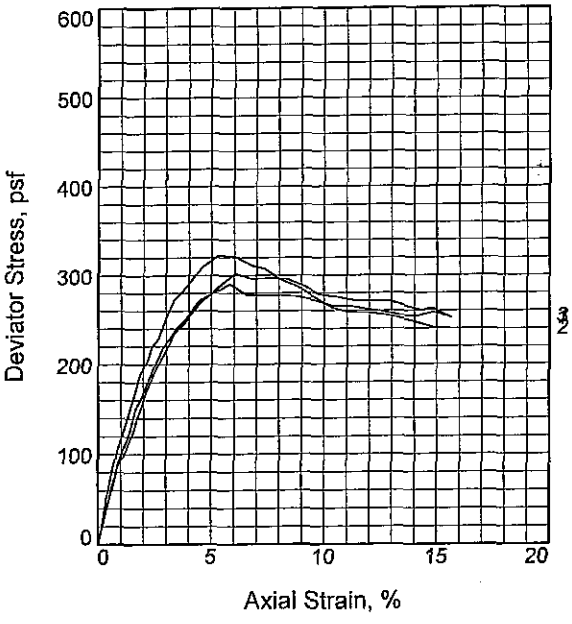
FFEBJV, LLC

Figure _____

Tested By: JC/ARS **Checked By:** TB

"Confidential Information Protected By Privileged & Confidential Work Product"





Sample No.		1	2	3
Initial	Water Content, %	159.5	149.8	171.1
	Dry Density, pcf	31.3	33.1	29.4
	Saturation, %	99.2	98.4	98.3
	Void Ratio	4.1804	4.1718	4.5257
	Diameter, in.	1.386	1.386	1.392
	Height, in.	3.075	3.082	3.092
At Test	Water Content, %	159.5	149.8	171.1
	Dry Density, pcf	31.3	33.1	29.4
	Saturation, %	99.2	98.4	98.3
	Void Ratio	4.1804	4.1718	4.5257
	Diameter, in.	1.386	1.386	1.392
	Height, in.	3.075	3.082	3.092
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.87	20.74	41.73
Fail. Stress, psf		302	322	290
Strain, %		6.1	5.3	5.8
Ult. Stress, psf		260	263	253
Strain, %				
σ_1 Failure, psf		1292	3309	6300
σ_3 Failure, psf		989	2987	6010

Type of Test: Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: VSO GR CHOA W/ LNS & LYS ML, RT
LL= 138 **PL=** 37 **PI=** 101
Assumed Specific Gravity= 2.60
Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-68PU **Depth:** 4.8
Sample Number: 3B
Proj. No.: 07-022122 **Date Sampled:** 10/21/09

TRIAXIAL SHEAR TEST REPORT

FFEBJV, LLC

Tested By: JC/ARS **Checked By:** JE

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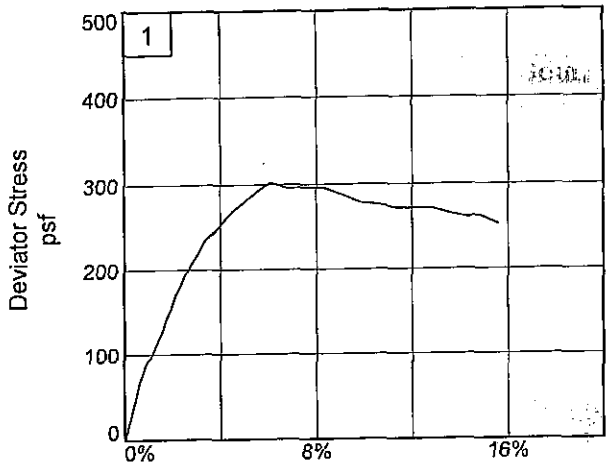

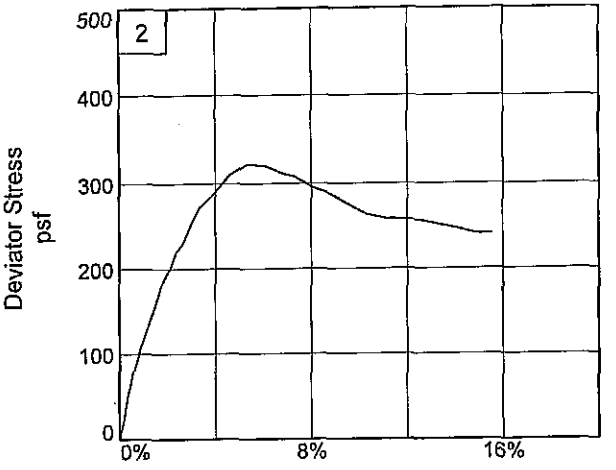

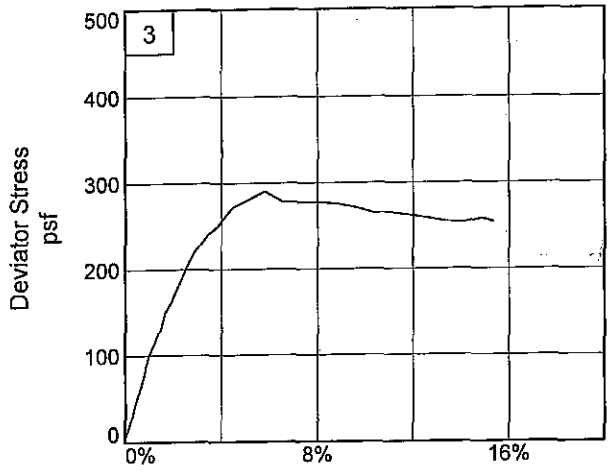

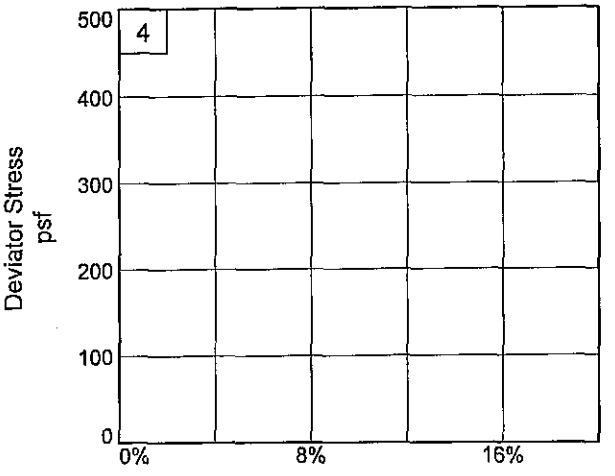

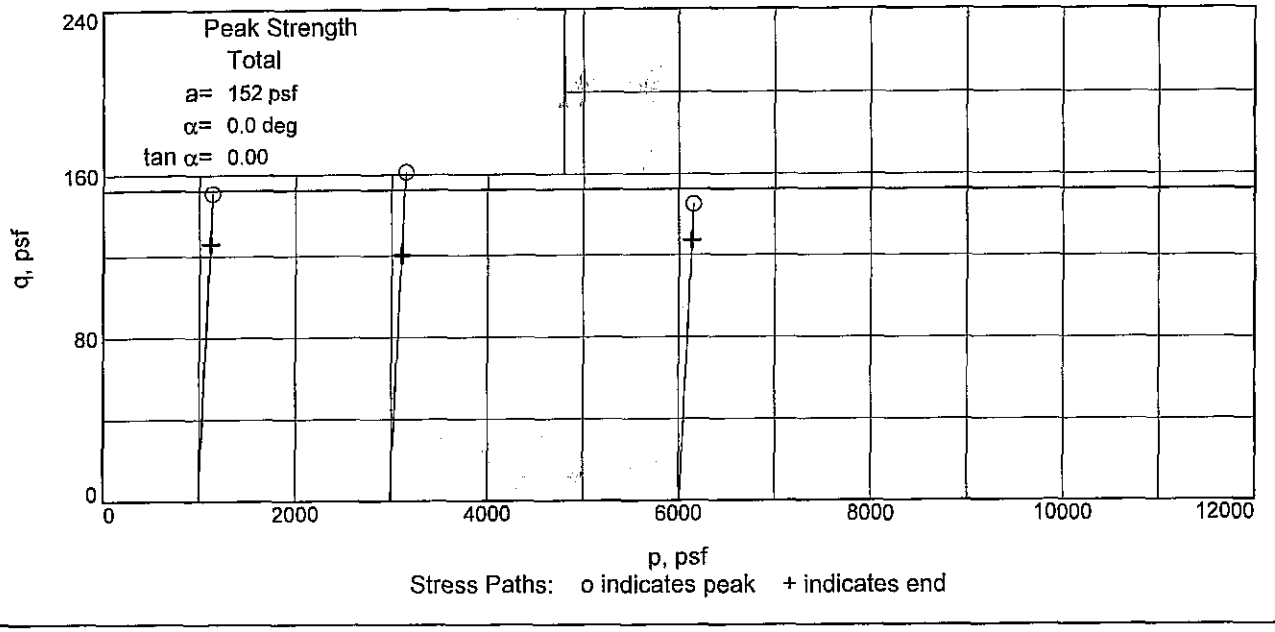

Client: U.S. Army Corps of Engineers
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Source of Sample: NF05-68PU **Depth:** 4.8 **Sample Number:** 3B
Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: JC/ARS **Checked By:** TB

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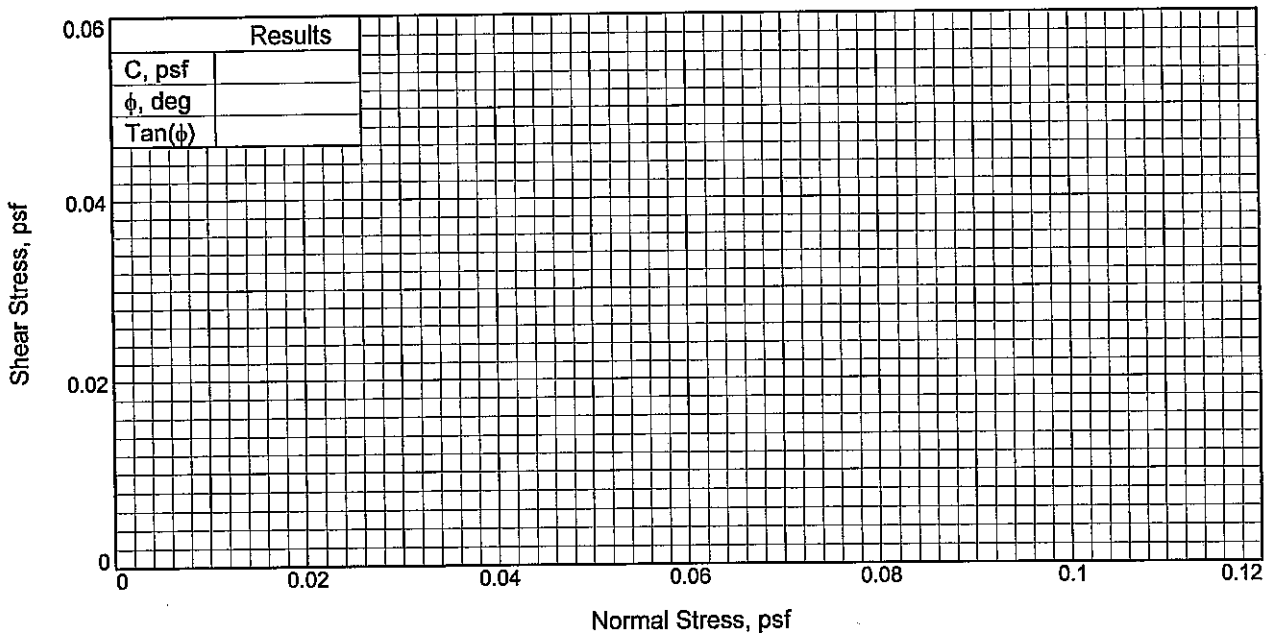

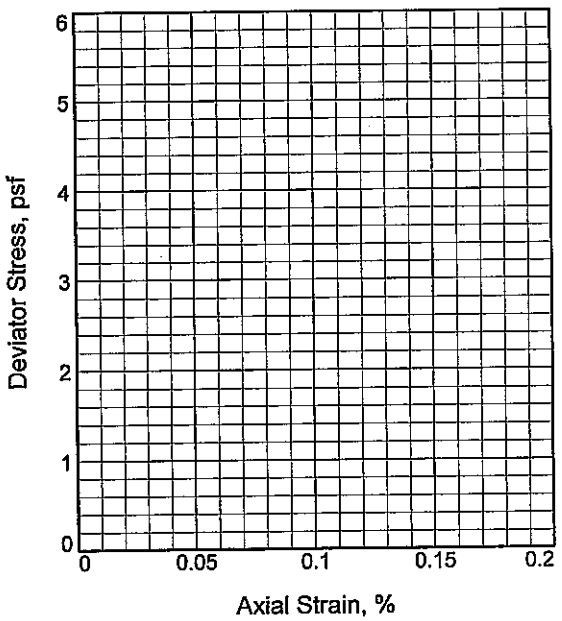

Sample No.	
Initial	Water Content, %
	Dry Density, pcf
	Saturation, %
	Void Ratio
	Diameter, in.
	Height, in.
At Test	Water Content, %
	Dry Density, pcf
	Saturation, %
	Void Ratio
	Diameter, in.
	Height, in.
Strain rate, %/min.	
Back Pressure, psi	
Cell Pressure, psi	
Fail. Stress, psf	
Strain, %	
Ult. Stress, psf	
Strain, %	
σ_1 Failure, psf	
σ_3 Failure, psf	

Type of Test:
Unconsolidated Undrained

Sample Type: UNDISTURBED

Description: VSO GR CH3 W/ ARS & LNS SM, RT

LL= 59 **PL=** 23 **PI=** 36

Assumed Specific Gravity=

Remarks: MATERIAL SLUMPING, NOT TRIMMABLE.

Figure _____

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La

Source of Sample: NF05-68PU **Depth:** 5.7

Sample Number: 3C

Proj. No.: 07-022122 **Date Sampled:**

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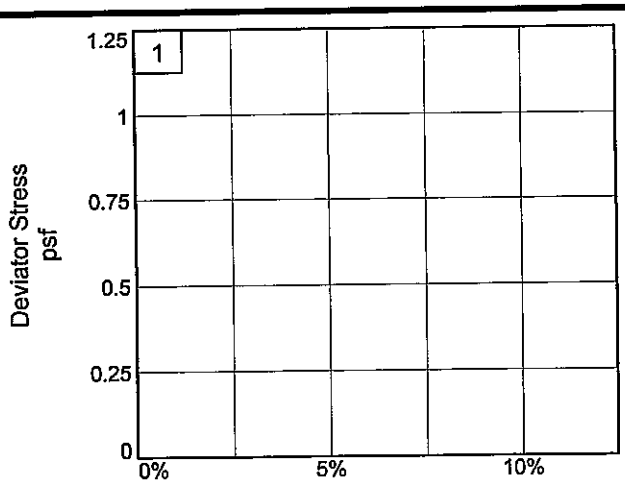
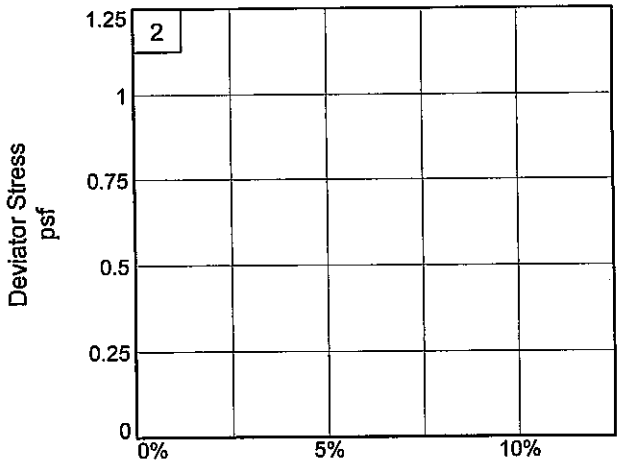
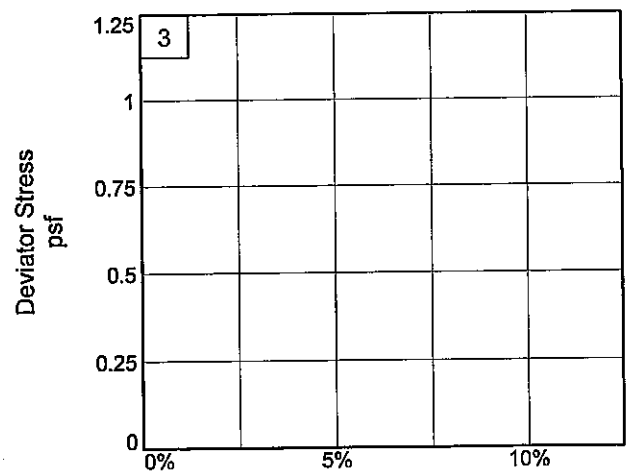
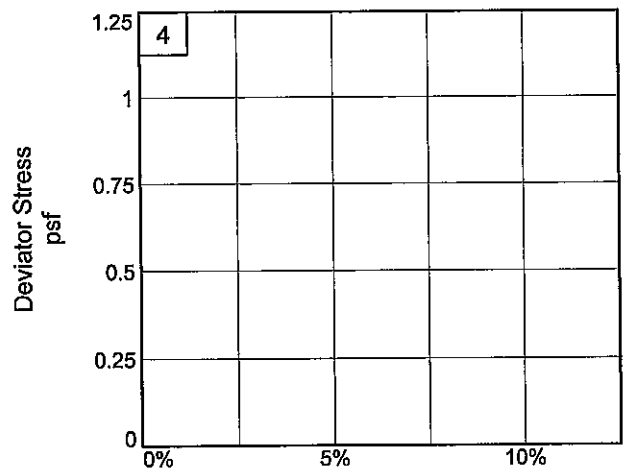
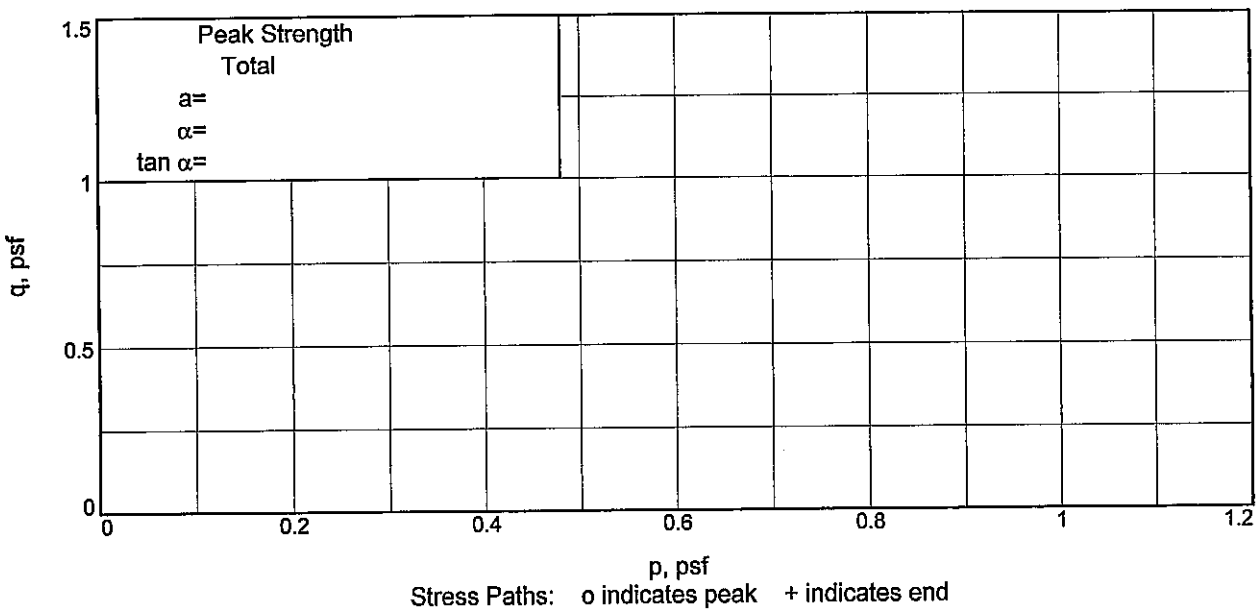










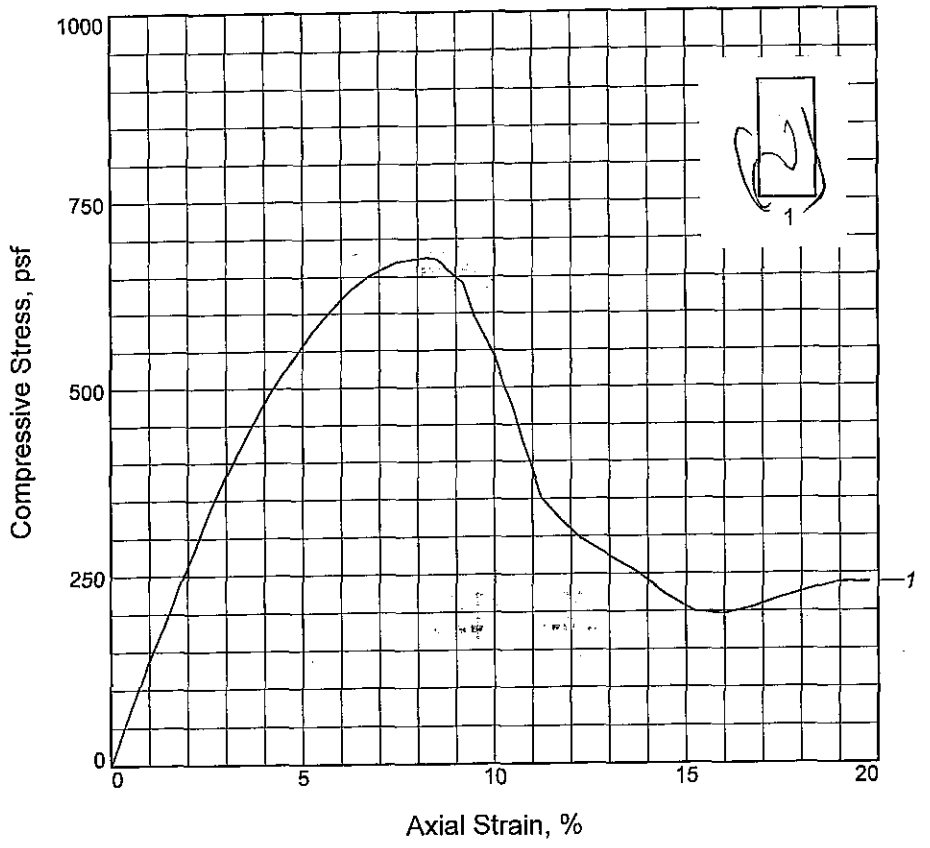
Stress Paths: o indicates peak + indicates end

Client: U.S. Army Corps of Engineers
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Source of Sample: NF05-68PU **Depth:** 5.7 **Sample Number:** 3C
Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Checked By: WH "Confidential Information: Privileged & Confidential Work Product"

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psf	675			
Undrained shear strength, psf	337			
Failure strain, %	8.2			
Strain rate, %/min.	1.00			
Water content, %	283.1			
Wet density, pcf	71.8			
Dry density, pcf	18.7			
Saturation, %	96.9			
Void ratio	7.1584			
Specimen diameter, in.	1.386			
Specimen height, in.	3.086			
Height/diameter ratio	2.23			

Description: SO BR PT W/ WD, RT

LL = 335	**PL** = 165	**PI** = 170	**Assumed GS**= 2.45	**Type:** UNDISTURBED

Project No.: 07-022122
Date Sampled: 10/14/09
Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-68PU **Depth:** 8.8
Sample Number: 4B

UNCONFINED COMPRESSION TEST

FFEBJV, LLC

Tested By: JC/ARS **Checked By:** GB

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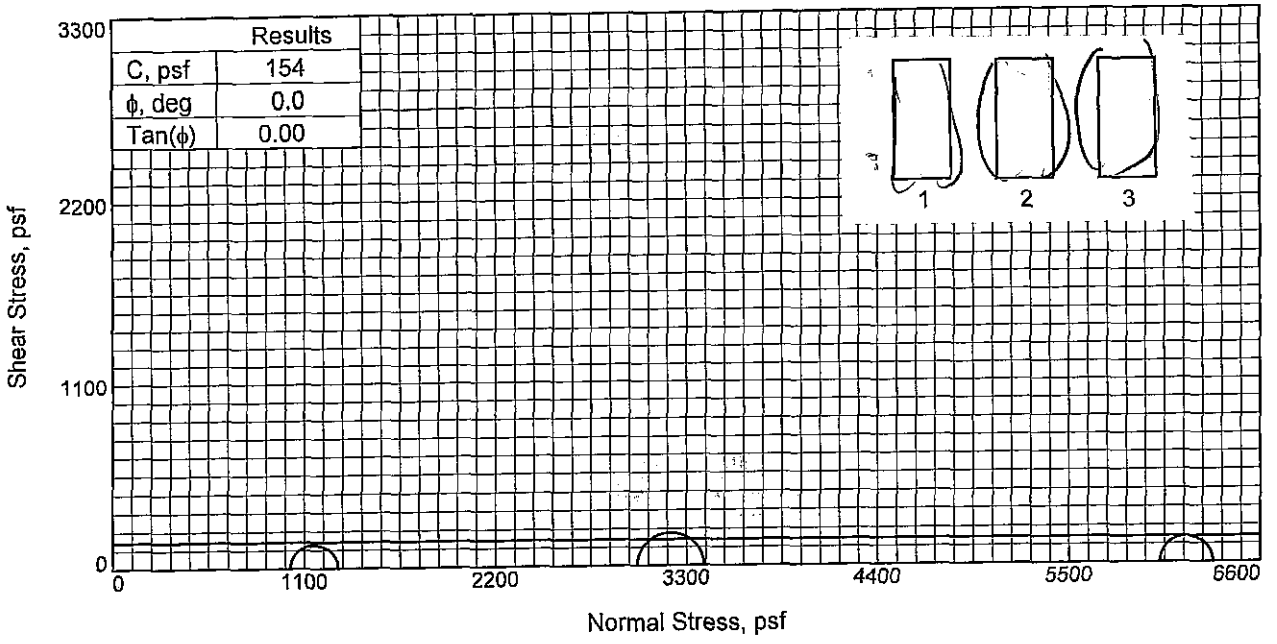

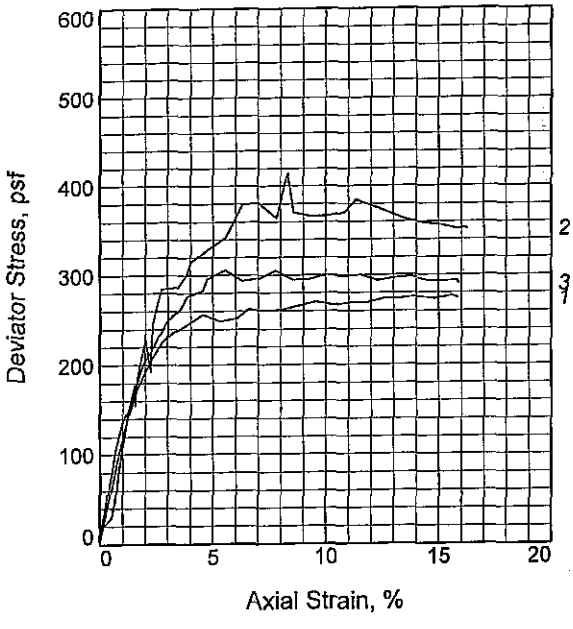

Sample No.		1	2	3
Initial	Water Content, %	55.6	54.4	56.1
	Dry Density, pcf	66.9	67.8	66.3
	Saturation, %	98.8	98.9	98.2
	Void Ratio	1.5196	1.4846	1.5422
	Diameter, in.	1.387	1.389	1.391
	Height, in.	3.088	3.098	3.094
At Test	Water Content, %	55.6	54.4	56.1
	Dry Density, pcf	66.9	67.8	66.3
	Saturation, %	98.8	98.9	98.2
	Void Ratio	1.5196	1.4846	1.5422
	Diameter, in.	1.387	1.389	1.391
	Height, in.	3.088	3.098	3.094
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		7.07	20.94	41.82
Fail. Stress, psf		275	385	306
Strain, %		14.1	11.3	5.6
Ult. Stress, psf		273	358	296
Strain, %				
σ_1 Failure, psf		1294	3401	6328
σ_3 Failure, psf		1019	3016	6022

Type of Test: Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: VSO GR CL6 W/ LYS & LNS SM

LL= 45 **PL=** 20 **PI=** 25
Assumed Specific Gravity= 2.70
Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-68PU **Depth:** 10.6
Sample Number: 4D
Proj. No.: 07-022122 **Date Sampled:** 10/20/09

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FFEBJV, LLC

Tested By: JC/ARS **Checked By:** TB

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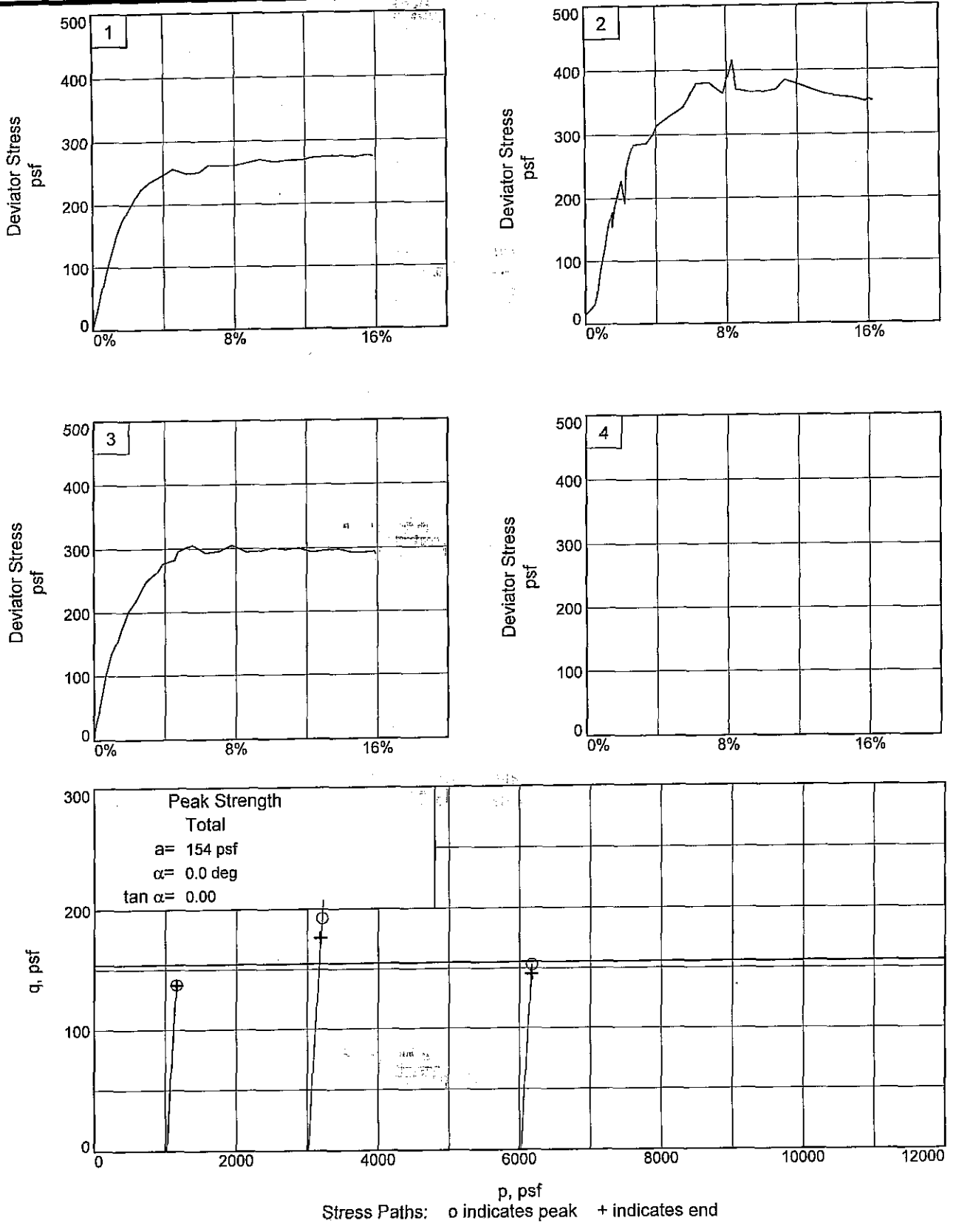

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

Source of Sample: NF05-68PU **Depth:** 10.6 **Sample Number:** 4D

Project No.: 07-022122 **Figure** _____

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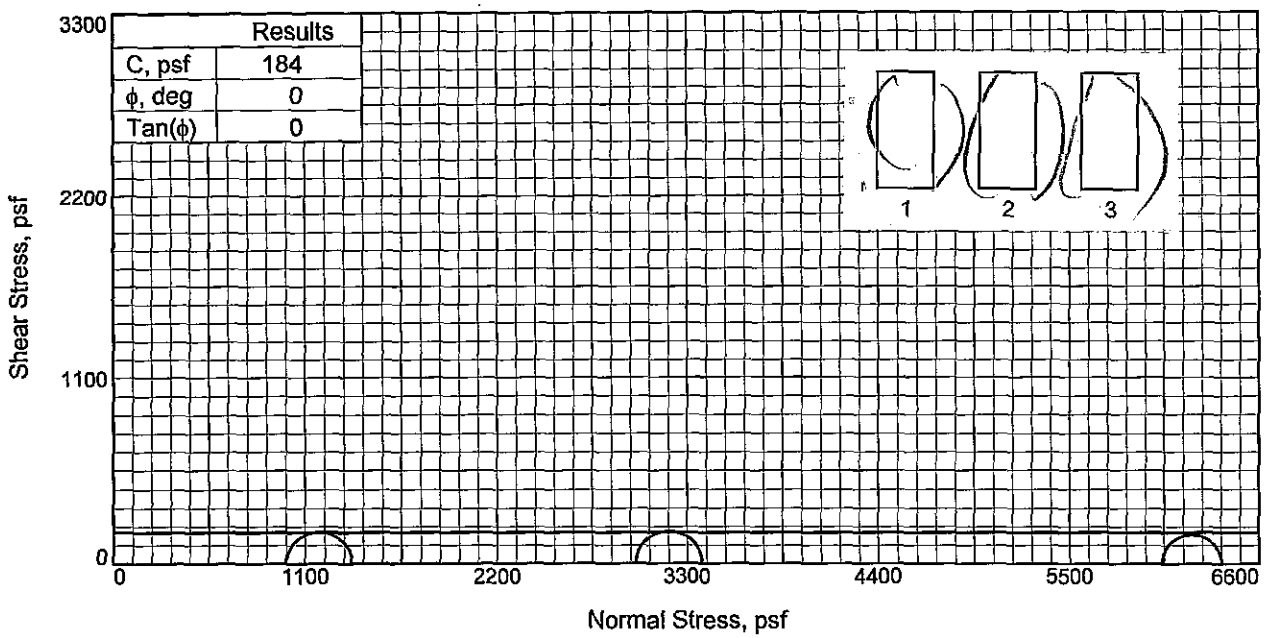
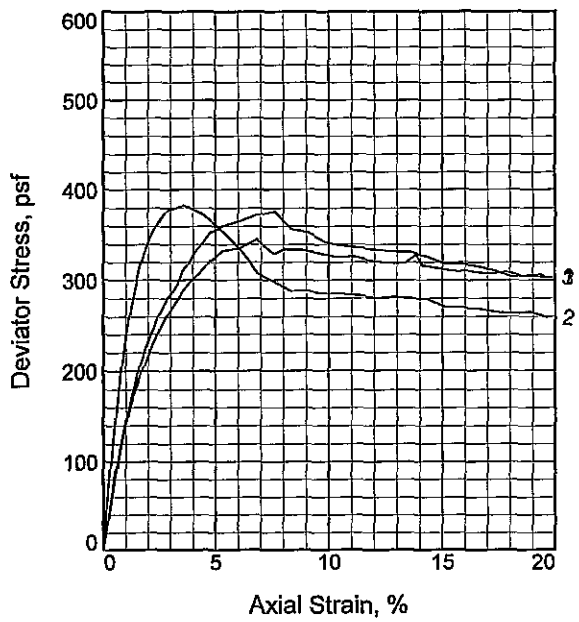




Sample No.		1	2	3
Initial	Water Content, %	66.3	67.6	66.6
	Dry Density, pcf	62.2	60.7	62.4
	Saturation, %	103.8	101.8	104.7
	Void Ratio	1.7506	1.8191	1.7429
	Diameter, in.	1.397	1.405	1.397
	Height, in.	3.086	3.096	3.085
At Test	Water Content, %	66.3	67.6	66.6
	Dry Density, pcf	62.2	60.7	62.4
	Saturation, %	103.8	101.8	104.7
	Void Ratio	1.7506	1.8191	1.7429
	Diameter, in.	1.397	1.405	1.397
	Height, in.	3.086	3.096	3.085
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.88	20.84	41.92
Fail. Stress, psf		376	383	345
Strain, %		7.6	3.6	6.8
Ult. Stress, psf		318	271	313
Strain, %				
σ_1 Failure, psf		1366	3384	6382
σ_3 Failure, psf		990	3001	6037

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: VSO GR CH3 W/ LNS & LYS SM

LL= 66 **PL=** 21 **PI=** 45
Assumed Specific Gravity= 2.74
Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

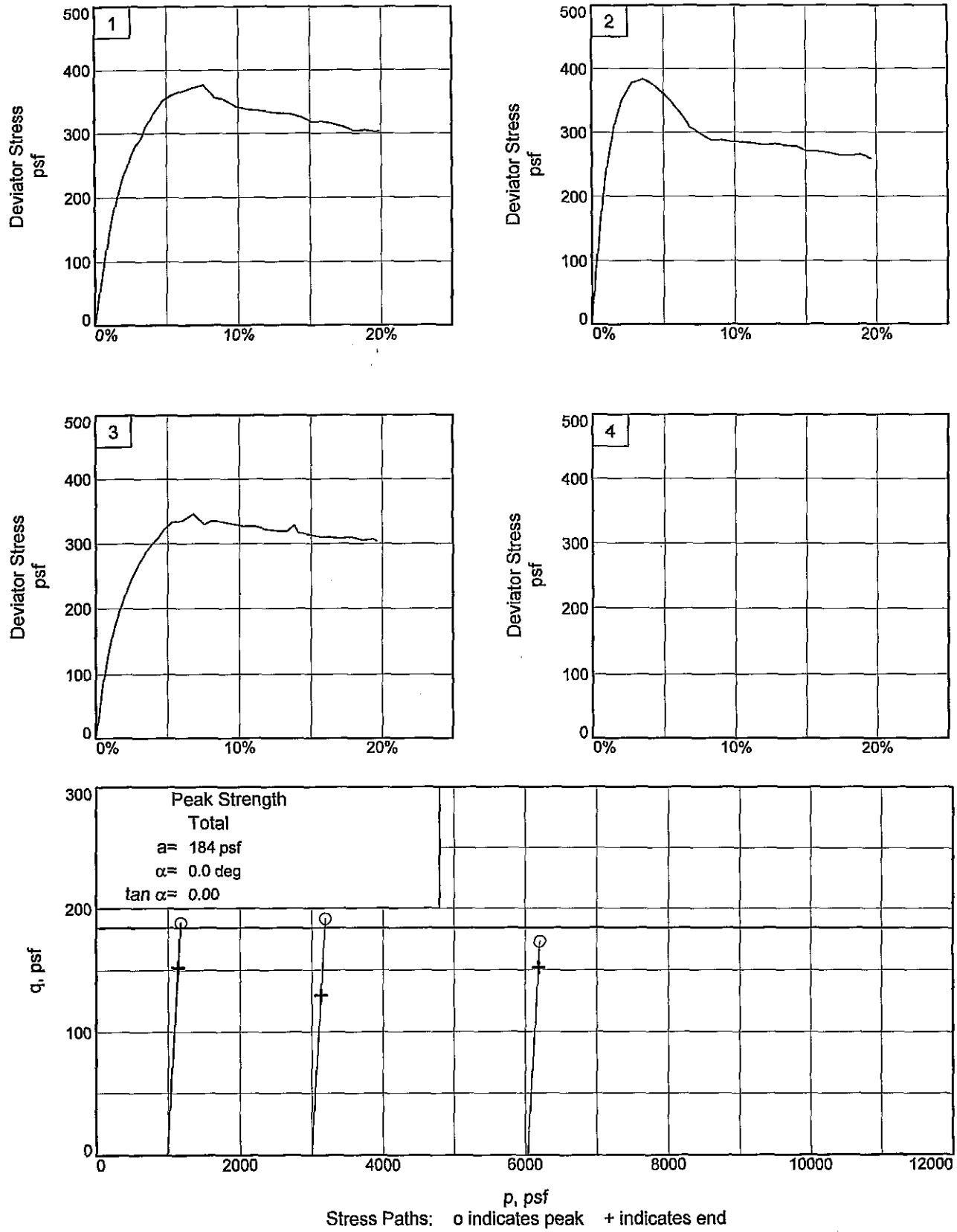
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-68PU **Depth:** 12.8
Sample Number: 5B
Proj. No.: 07-022122 **Date Sampled:** 1/7/10

TRIAXIAL SHEAR TEST REPORT

FFEBJV, LLC

Tested By: VF/ARS **Checked By:** WH

Confidential Information: Privileged & Confidential Work Product"



Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

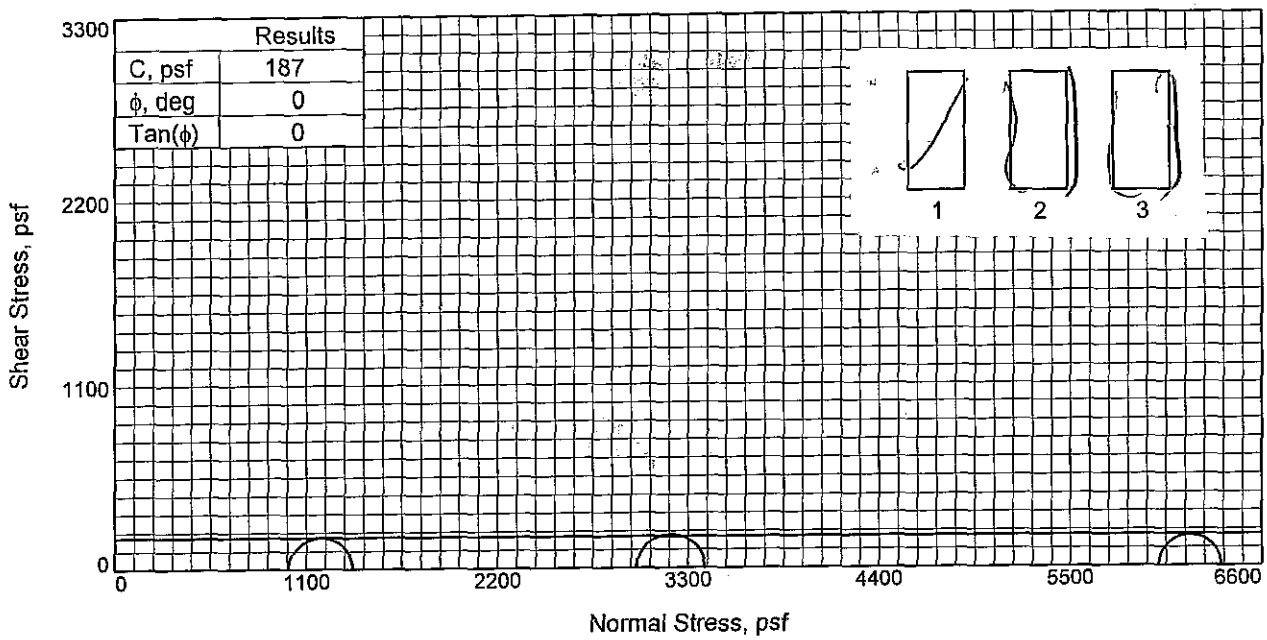
Source of Sample: NF05-68PU **Depth:** 12.8 **Sample Number:** 5B

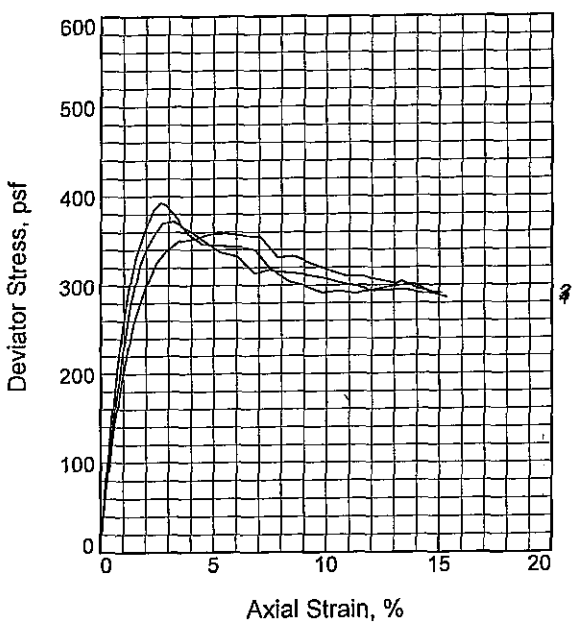
Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: VF/ARS **Checked By:** WH

Confidential Information: Privileged & Confidential Work Product"





Sample No.		1	2	3
Initial	Water Content, %	78.6	79.2	78.5
	Dry Density, pcf	54.8	54.5	54.1
	Saturation, %	101.8	101.9	99.9
	Void Ratio	2.1010	2.1144	2.1377
	Diameter, in.	1.386	1.390	1.393
	Height, in.	3.095	3.096	3.099
At Test	Water Content, %	78.6	79.2	78.5
	Dry Density, pcf	54.8	54.5	54.1
	Saturation, %	101.8	101.9	99.9
	Void Ratio	2.1010	2.1144	2.1377
	Diameter, in.	1.386	1.390	1.393
	Height, in.	3.095	3.096	3.099
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.92	20.85	41.71
Fail. Stress, psf		372	392	358
Strain, %		3.2	2.6	5.6
Ult. Stress, psf		313	290	331
Strain, %				
σ_1 Failure, psf		1369	3395	6365
σ_3 Failure, psf		997	3003	6007

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTUIRBED
Description: VSO GR CH4 W/ ARS & LNS SM

LL= 84 **PL=** 26 **PI=** 58
Assumed Specific Gravity= 2.72
Remarks:

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-68PU **Depth:** 13.7
Sample Number: 5C
Proj. No.: 07-022122 **Date Sampled:** 10/21/09

TRIAXIAL SHEAR TEST REPORT

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Figure _____

Tested By: JC/ARS **Checked By:** EGG

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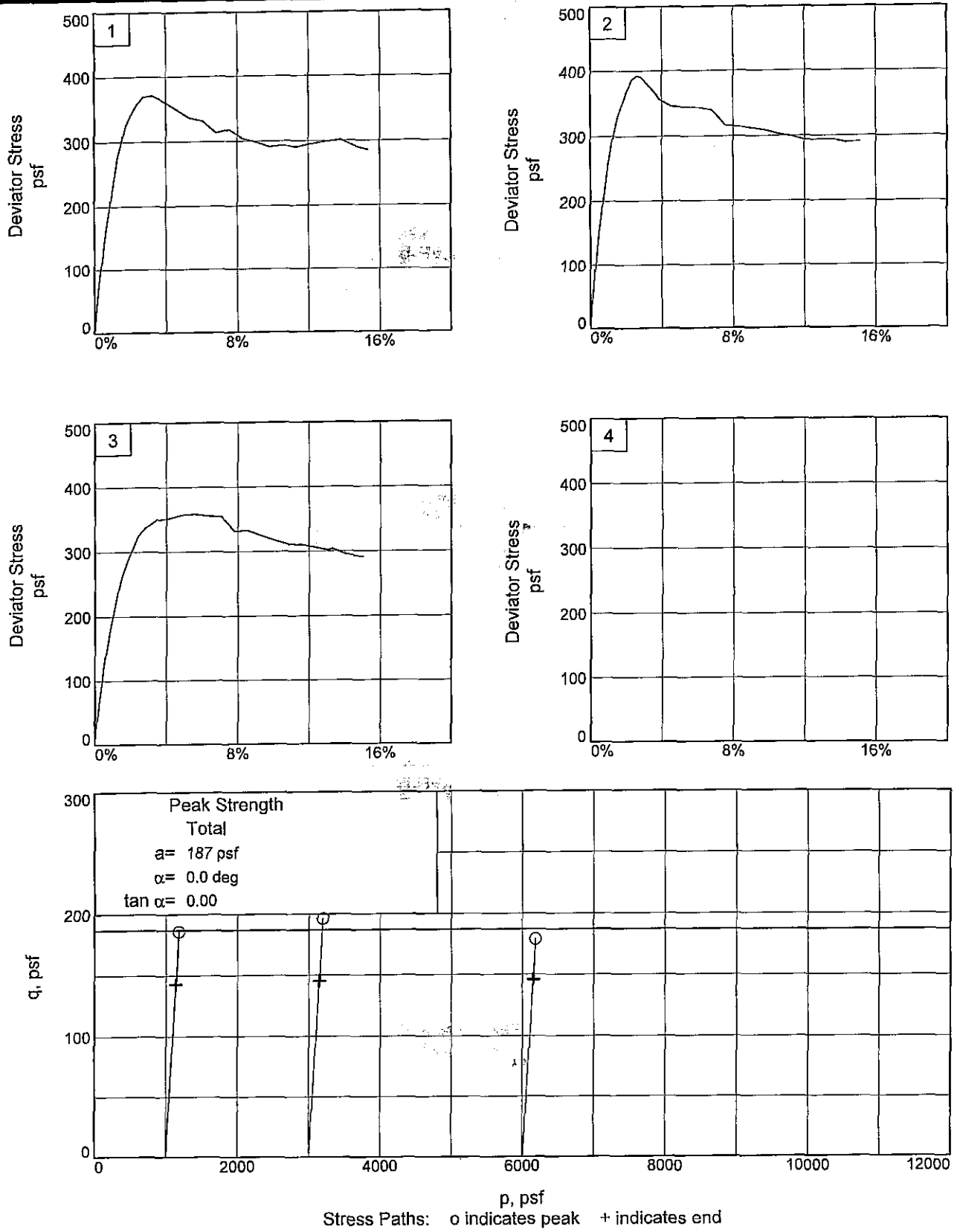

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

Source of Sample: NF05-68PU **Depth:** 13.7 **Sample Number:** 5C

Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: JC/ARS **Checked By:** CB

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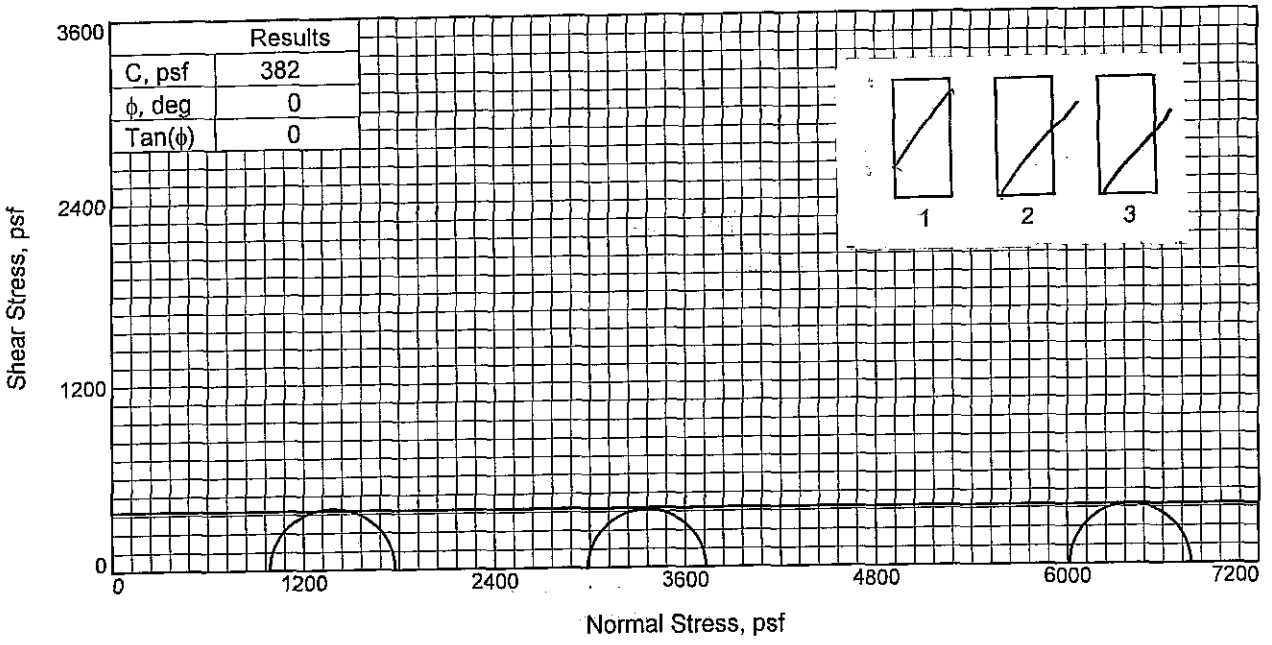

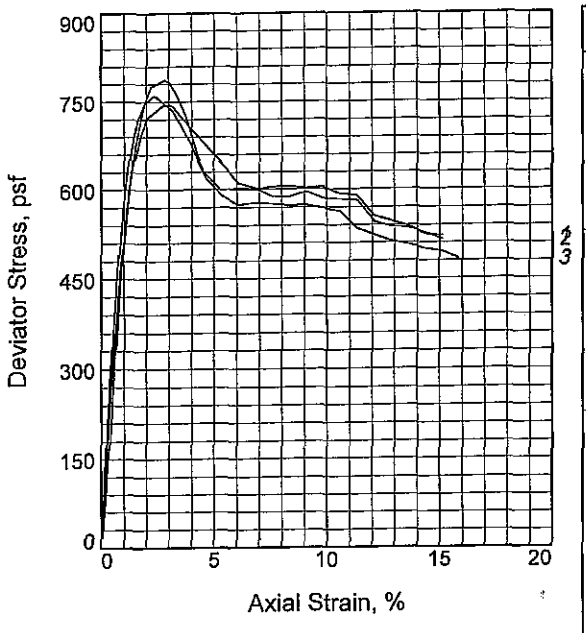

Sample No.		1	2	3
Initial	Water Content, %	67.2	67.8	68.2
	Dry Density, pcf	60.2	59.3	59.6
	Saturation, %	100.1	98.7	100.0
	Void Ratio	1.8398	1.8832	1.8700
	Diameter, in.	1.391	1.387	1.384
	Height, in.	3.102	3.099	3.102
At Test	Water Content, %	67.2	69.0	68.2
	Dry Density, pcf	60.2	59.3	59.6
	Saturation, %	100.1	100.4	100.0
	Void Ratio	1.8398	1.8832	1.8700
	Diameter, in.	1.391	1.387	1.384
	Height, in.	3.102	3.099	3.102
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.87	20.74	41.76
Fail. Stress, psf		787	744	760
Strain, %		2.8	3.1	2.3
Ult. Stress, psf		600	587	495
Strain, %				
σ_1 Failure, psf		1776	3730	6774
σ_3 Failure, psf		989	2986	6014

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: SO GR CH4 W/ LNS & LYS SM, SIF

LL= 81 **PL=** 22 **PI=** 59
Assumed Specific Gravity= 2.74
Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-68PU **Depth:** 20.8
Sample Number: 7B
Proj. No.: 07-022122 **Date Sampled:** 10/21/09

TRIAXIAL SHEAR TEST REPORT

FFEBJV, LLC

Tested By: JC/ARS **Checked By:** TB

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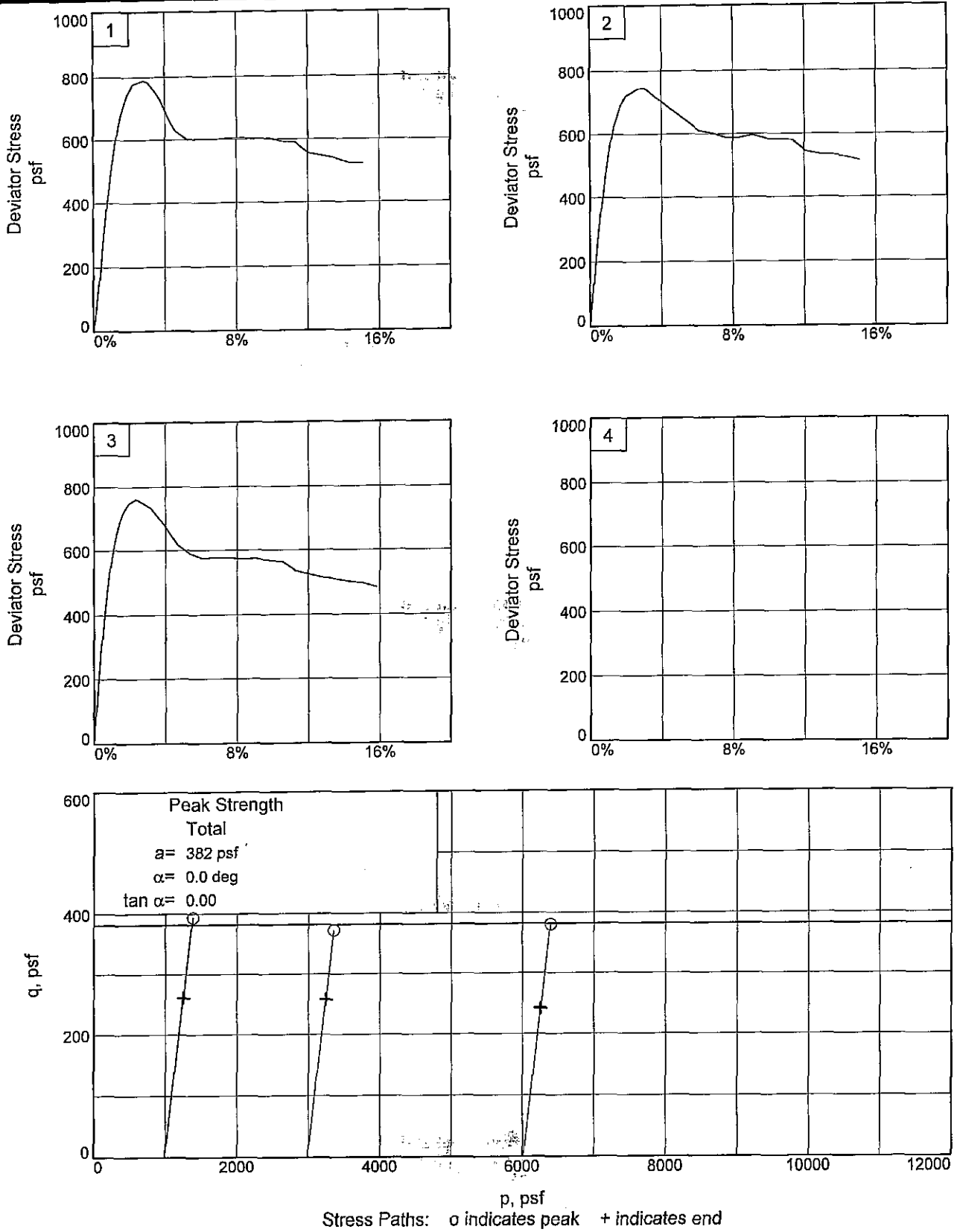

Client: U.S. Army Corps of Engineers
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Source of Sample: NF05-68PU **Depth:** 20.8 **Sample Number:** 7B
Project No.: 07-022122 **Figure** _____ **FFEBJV, LLC**

Tested By: JC/ARS **Checked By:** GS

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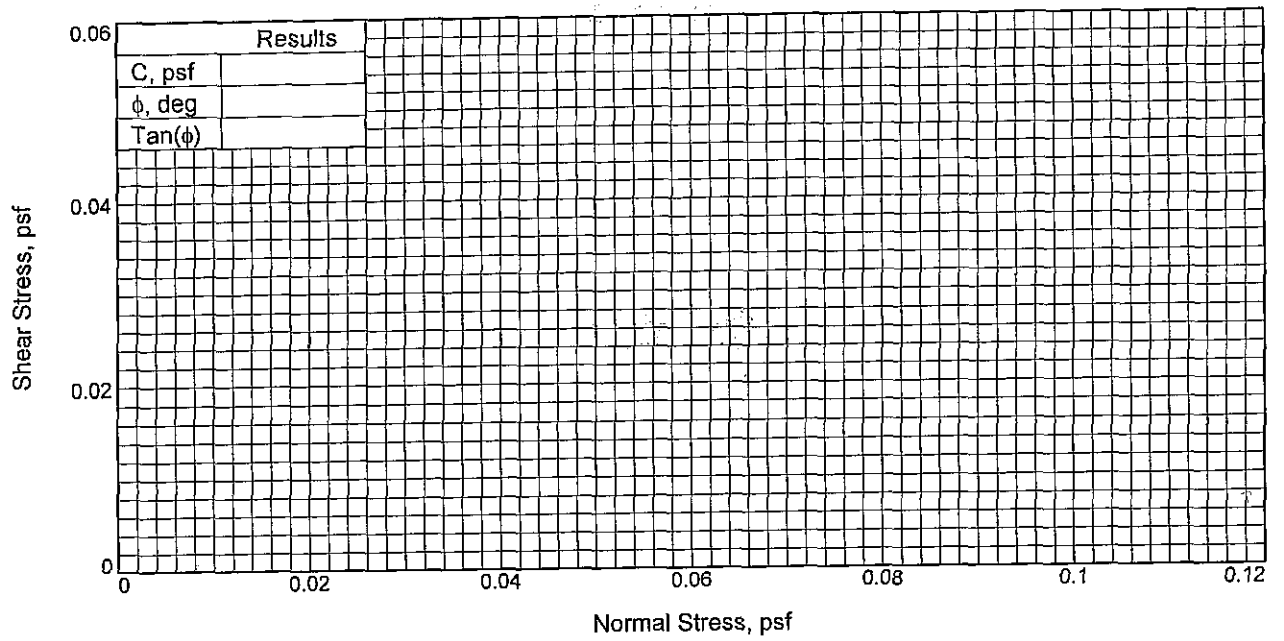

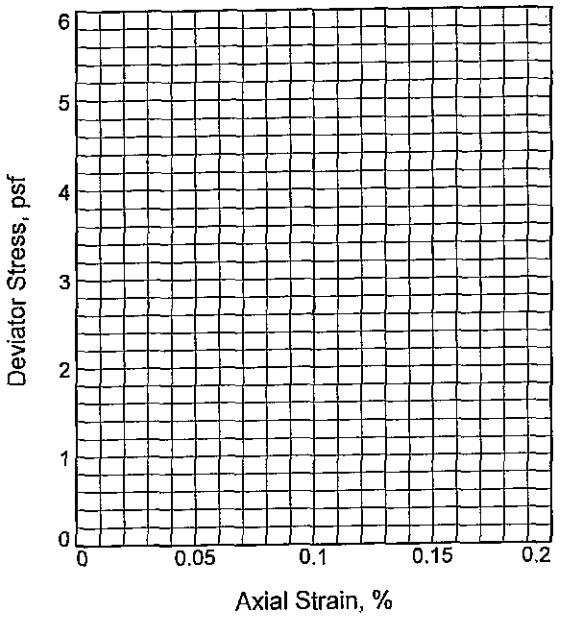

Sample No.	
Initial	Water Content, %
	Dry Density, pcf
	Saturation, %
	Void Ratio
	Diameter, in.
	Height, in.
At Test	Water Content, %
	Dry Density, pcf
	Saturation, %
	Void Ratio
	Diameter, in.
	Height, in.
Strain rate, %/min.	
Back Pressure, psi	
Cell Pressure, psi	
Fail. Stress, psf	
Strain, %	
Ult. Stress, psf	
Strain, %	
σ_1 Failure, psf	
σ_3 Failure, psf	

Type of Test:
Unconsolidated Undrained

Sample Type: UNDISTURBED

Description: GR ML W/ LYS CH

LL= NP **PI=** NP

Assumed Specific Gravity=

Remarks: NOT TESTABLE MATERIAL

Figure _____

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La

Source of Sample: NF05-68PU **Depth:** 25.7

Sample Number: 8C

Proj. No.: 07-022122 **Date Sampled:** 10-20-09

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FFEBJV, LLC

Checked By: TB

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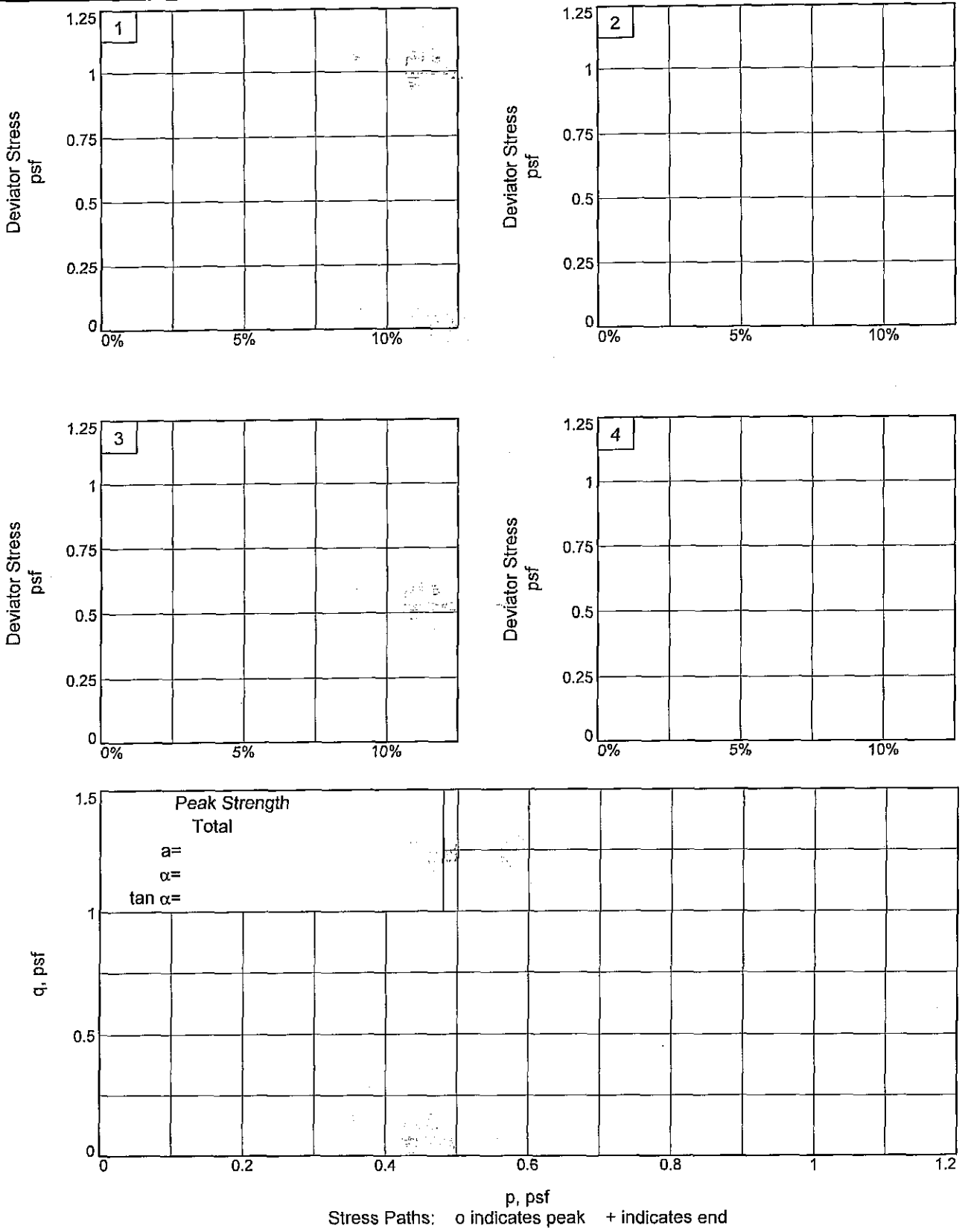

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

Source of Sample: NF05-68PU **Depth:** 25.7 **Sample Number:** 8C

Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Checked By: TB

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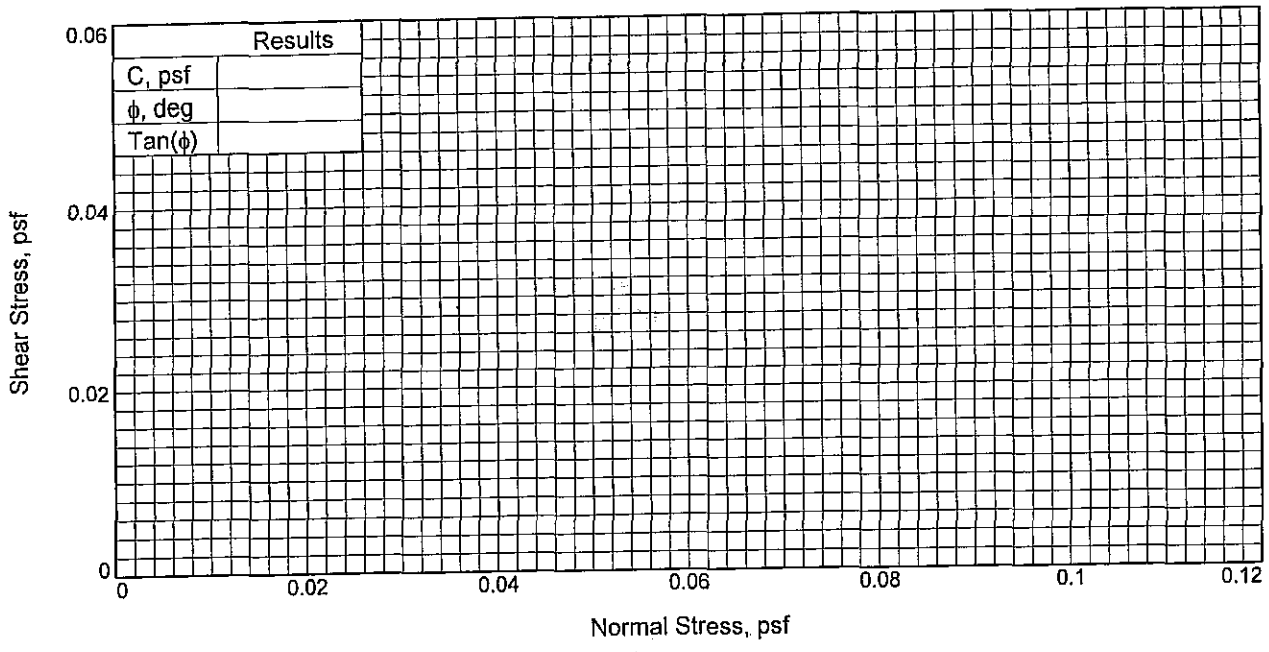
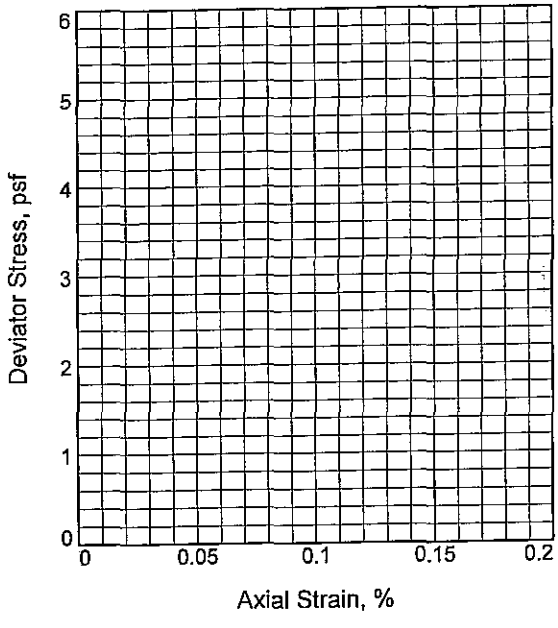




Sample No.	
Initial	Water Content, % Dry Density, pcf Saturation, % Void Ratio Diameter, in. Height, in.
At Test	Water Content, % Dry Density, pcf Saturation, % Void Ratio Diameter, in. Height, in.
Strain rate, %/min.	
Back Pressure, psi	
Cell Pressure, psi	
Fail. Stress, psf	
Strain, %	
Ult. Stress, psf	
Strain, %	
σ_1 Failure, psf	
σ_3 Failure, psf	

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: GR SM W/ LYS & LNS ML

LL= NP **PI=** NP
Assumed Specific Gravity=
Remarks: NOT TESTABLE MATERIAL

Figure _____

Client: U.S. Army Corps of Engineers

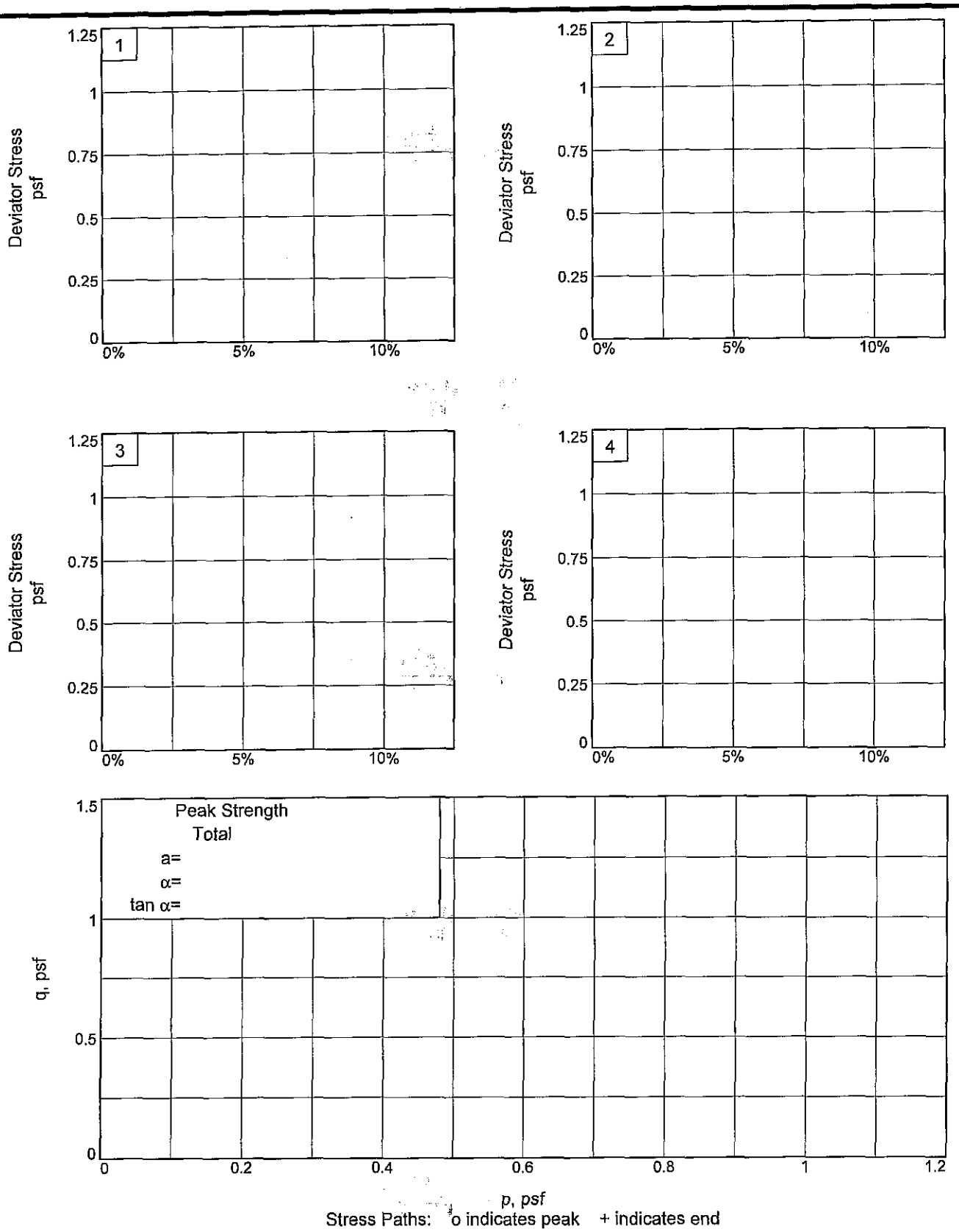
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-68PU **Depth:** 26.6
Sample Number: 8D
Proj. No.: 07-022122 **Date Sampled:** 11/9/09

TRIAXIAL SHEAR TEST REPORT

FFEBJV, LLC

Checked By: TB

"Confidential Information: Privileged & Confidential Work Product"



Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

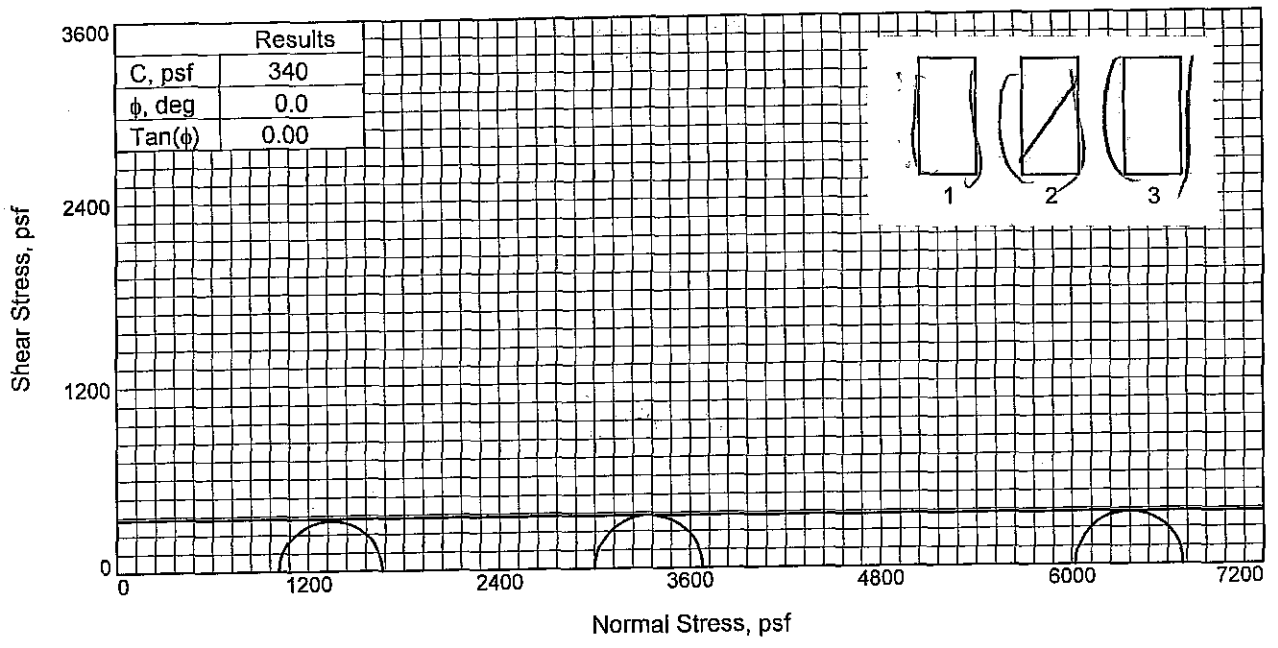
Source of Sample: NF05-68PU **Depth:** 26.6 **Sample Number:** 8D

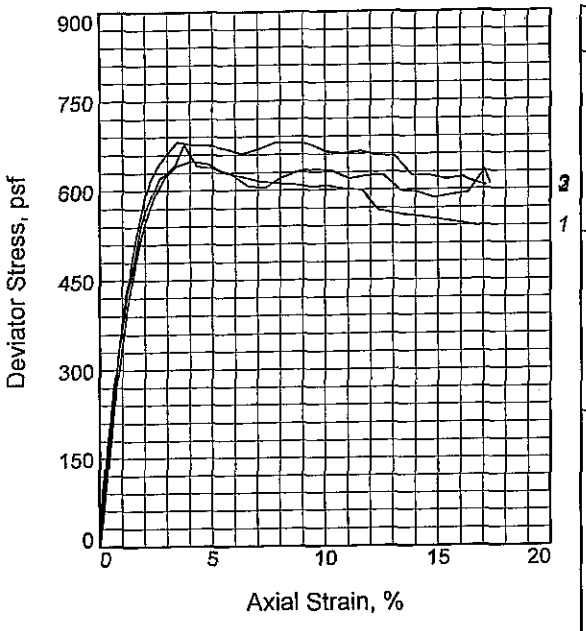
Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Checked By: TB

"Confidential Information: Privileged & Confidential Work Product"





Sample No.		1	2	3
Initial	Water Content, %	52.6	53.8	53.5
	Dry Density, pcf	69.9	68.9	69.1
	Saturation, %	99.8	99.3	99.3
	Void Ratio	1.4455	1.4841	1.4746
	Diameter, in.	1.388	1.395	1.397
	Height, in.	3.075	3.098	3.093
At Test	Water Content, %	52.6	53.8	53.5
	Dry Density, pcf	69.9	68.9	69.1
	Saturation, %	99.8	99.3	99.3
	Void Ratio	1.4455	1.4841	1.4746
	Diameter, in.	1.388	1.395	1.397
	Height, in.	3.075	3.098	3.093
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		7.06	20.83	41.81
Fail. Stress, psf		649	681	676
Strain, %		4.1	3.4	3.8
Ult. Stress, psf		605	661	586
Strain, %				
σ_1 Failure, psf		1665	3681	6697
σ_3 Failure, psf		1016	3000	6021

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: SO GR CH2 W/ LYS & LNS ML

LL= 50 **PL=** 23 **PI=** 27
Assumed Specific Gravity= 2.74
Remarks:

Figure _____

Client: *U.S. Army Corps of Engineers*

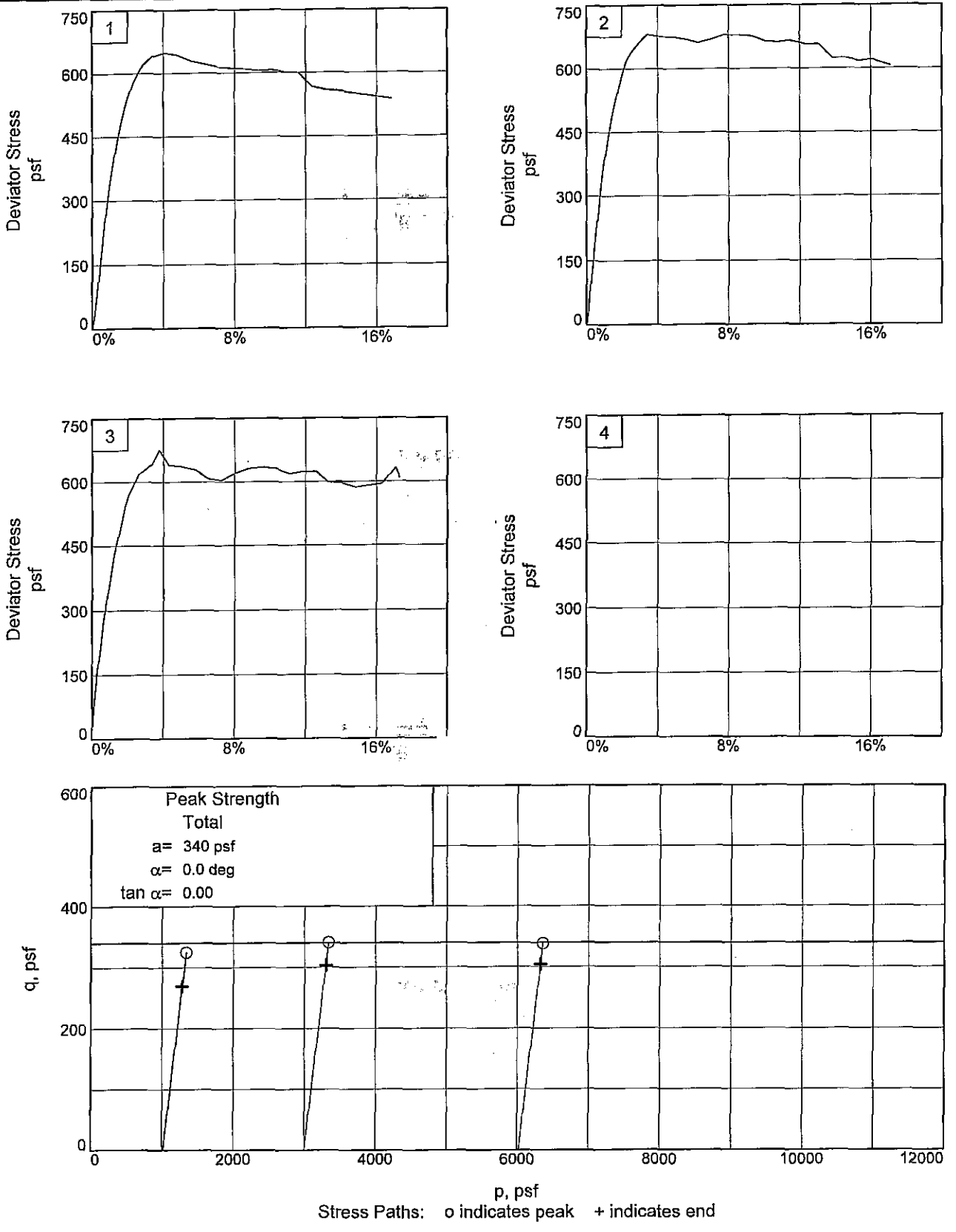
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-68PU **Depth:** 32.8
Sample Number: 10B
Proj. No.: 07-022122 **Date Sampled:** 10/21/09

TRIAXIAL SHEAR TEST REPORT

FFEBJV, LLC

Tested By: JC/ARS **Checked By:** GS

"Confidential Information: Privileged & Confidential Work Product"



Client: U.S. Army Corps of Engineers

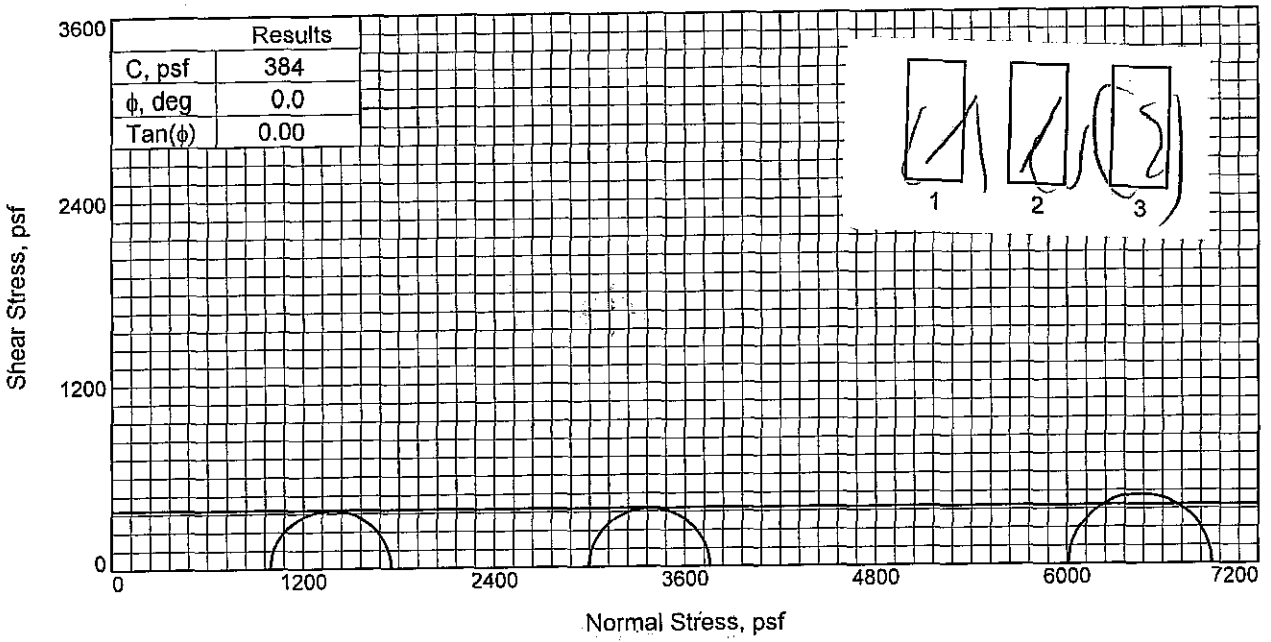
Project: USACE - New Orleans To Venice Plaquemines Parish, La

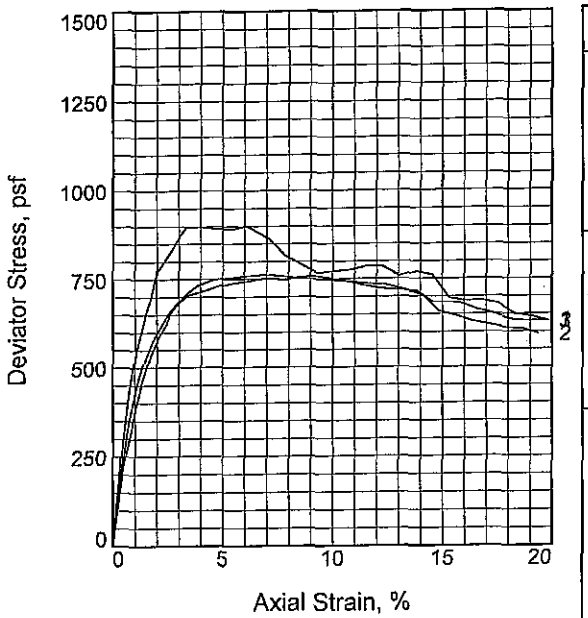
Source of Sample: NF05-68PU **Depth:** 32.8 **Sample Number:** 10B

Project No.: 07-022122 **Figure** _____ **FFEBJV, LLC**

Tested By: JC/ARS **Checked By:** TG

"Confidential Information, Privileged & Confidential Work Product"





Sample No.		1	2	3
Initial	Water Content, %	61.6	60.8	60.4
	Dry Density, pcf	63.3	63.7	64.8
	Saturation, %	99.2	98.8	100.8
	Void Ratio	1.7002	1.6862	1.6417
	Diameter, in.	1.392	1.393	1.395
	Height, in.	3.091	3.098	3.094
At Test	Water Content, %	61.6	60.8	60.4
	Dry Density, pcf	63.3	63.7	64.8
	Saturation, %	99.2	98.8	100.8
	Void Ratio	1.7002	1.6862	1.6417
	Diameter, in.	1.392	1.393	1.395
	Height, in.	3.091	3.098	3.094
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.92	20.81	41.73
Fail. Stress, psf		758	762	900
Strain, %		9.3	6.8	6.1
Ult. Stress, psf		683	733	767
Strain, %				
σ_1 Failure, psf		1754	3758	6909
σ_3 Failure, psf		996	2996	6009

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: SO GR CH4 W/ LYS & LNS SM

LL= 75 **PL=** 27 **PI=** 48
Assumed Specific Gravity= 2.74
Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

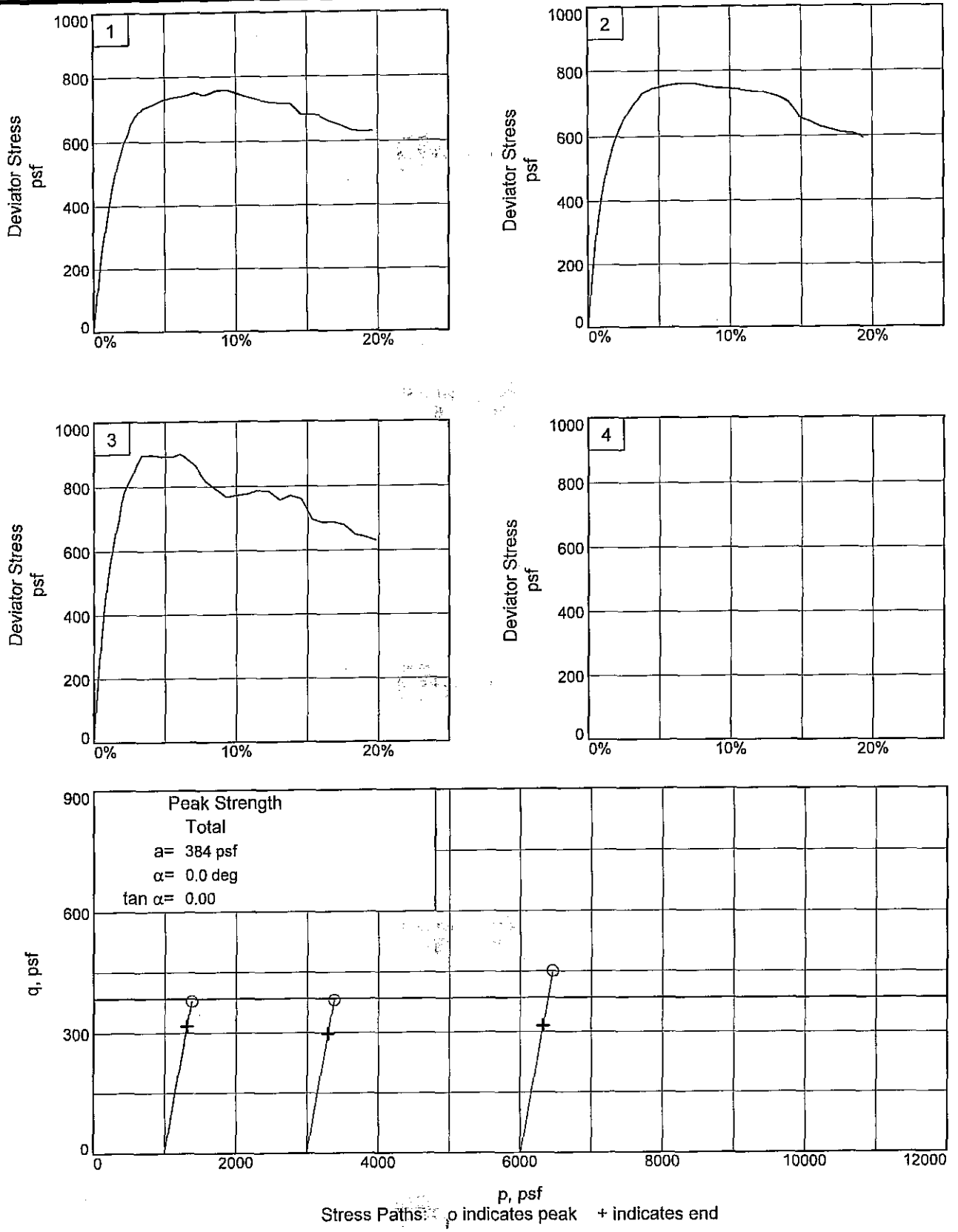
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-68PU **Depth:** 38.6
Sample Number: 11D
Proj. No.: 07-022122 **Date Sampled:** 10/21/09

TRIAXIAL SHEAR TEST REPORT

FFEBJV, LLC

Tested By: JC/ARS **Checked By:** JS

"Confidential Information, Privileged & Confidential Work Product"



Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

Source of Sample: NF05-68PU **Depth:** 38.6 **Sample Number:** 11D

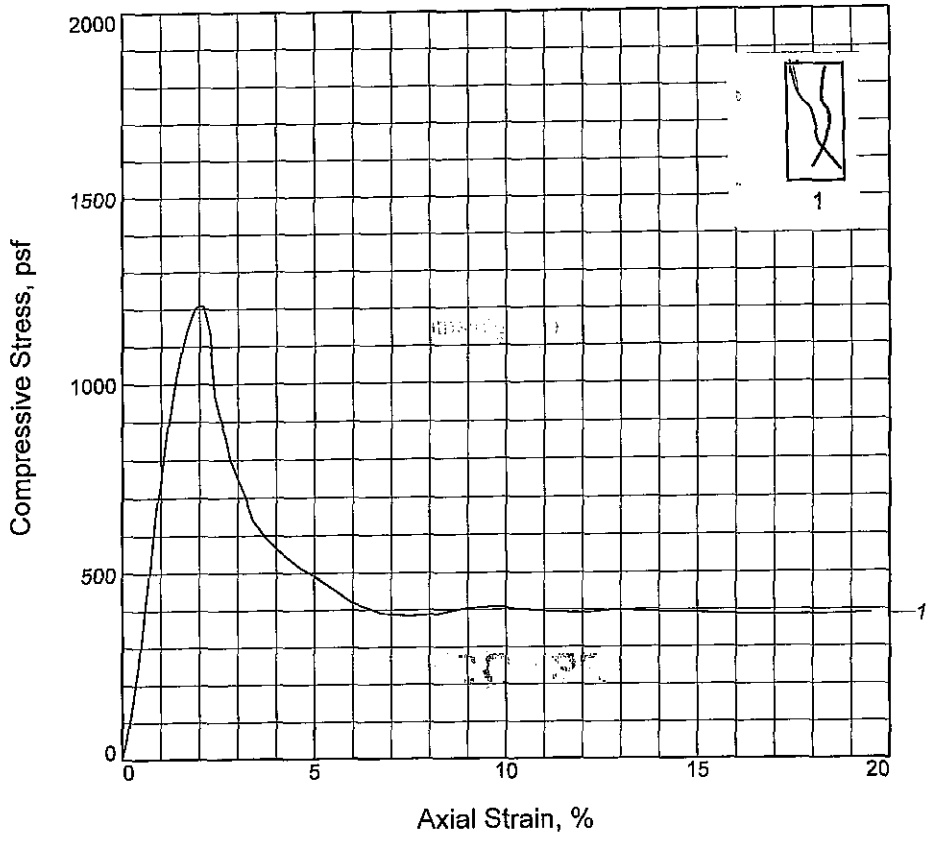
Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: JC/ARS **Checked By:** TB

"Confidential Information Protected & Confidential Work Product"

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psf	1209			
Undrained shear strength, psf	604			
Failure strain, %	2.0			
Strain rate, %/min.	1.00			
Water content, %	67.2			
Wet density, pcf	99.9			
Dry density, pcf	59.7			
Saturation, %	98.8			
Void ratio	1.8644			
Specimen diameter, in.	1.384			
Specimen height, in.	3.106			
Height/diameter ratio	2.24			

Description: M GR CH4

LL = 83	**PL** = 28	**PI** = 55	**Assumed GS**= 2.74	**Type:** UNDISTURBED

Project No.: 07-022122
Date Sampled: 10/21/09
Remarks:

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-68PU **Depth:** 45.7
Sample Number: 13C

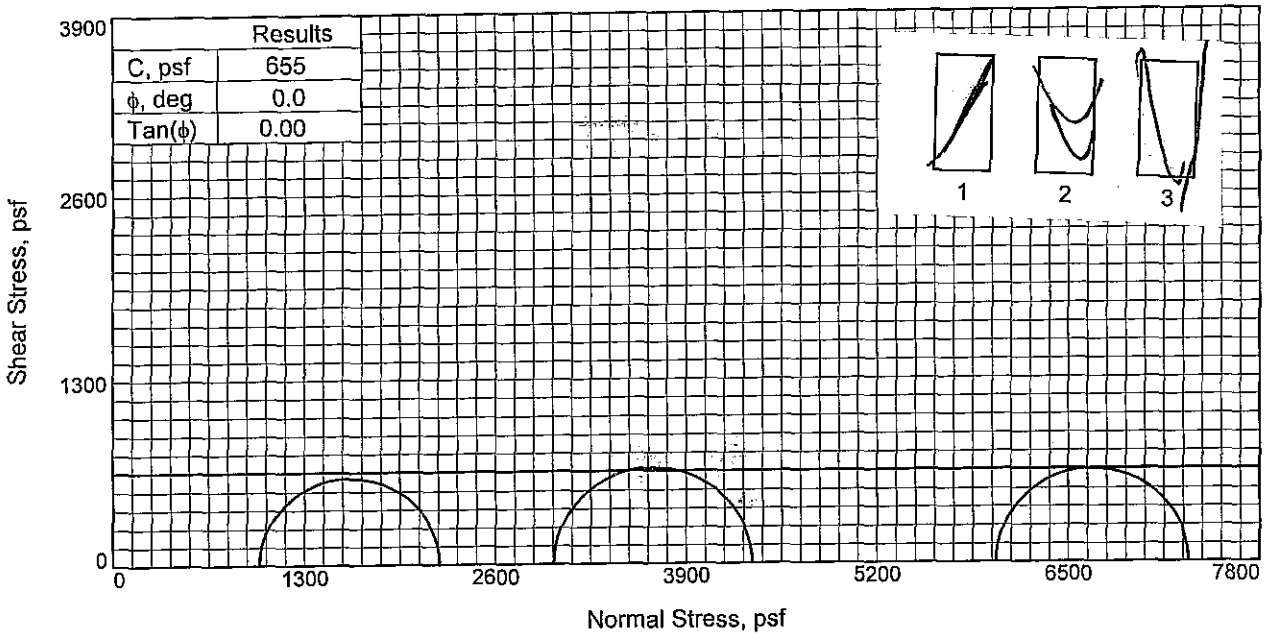
UNCONFINED COMPRESSION TEST

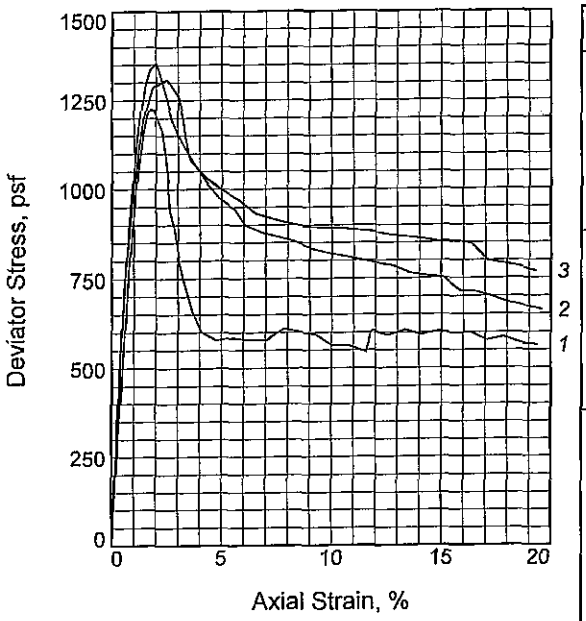
FFEBJV, LLC

Figure _____

Tested By: JC/ARS **Checked By:** TB

"Confidential Information Protected & Confidential Work Product"





Sample No.		1	2	3
Initial	Water Content, %	65.6	63.4	64.5
	Dry Density, pcf	60.6	62.0	61.4
	Saturation, %	98.6	98.9	99.1
	Void Ratio	1.8224	1.7582	1.7837
	Diameter, in.	1.389	1.385	1.391
	Height, in.	3.102	3.101	3.105
At Test	Water Content, %	65.6	63.4	64.7
	Dry Density, pcf	60.6	62.0	61.4
	Saturation, %	98.6	98.9	99.5
	Void Ratio	1.8224	1.7582	1.7837
	Diameter, in.	1.389	1.385	1.391
	Height, in.	3.102	3.101	3.105
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.92	20.81	41.73
Fail. Stress, psf		1224	1353	1308
Strain, %		1.7	2.0	2.5
Ult. Stress, psf		579	853	891
Strain, %				
σ_1 Failure, psf		2220	4350	7317
σ_3 Failure, psf		996	2997	6009

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: M GR CH4

LL= 86 **PL=** 29 **PI=** 57
Assumed Specific Gravity= 2.74
Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

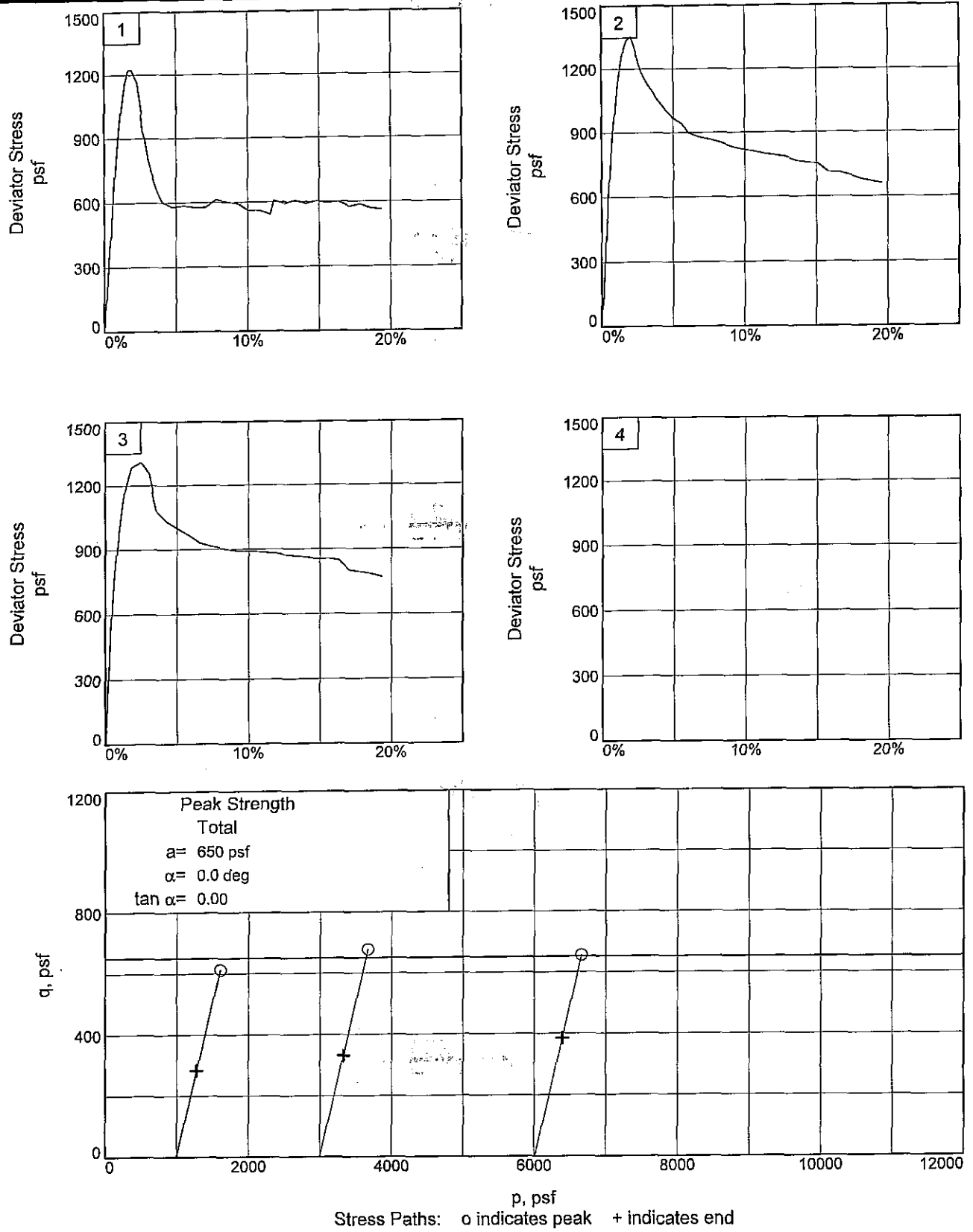
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-68PU **Depth:** 48.8
Sample Number: 14B
Proj. No.: 07-022122 **Date Sampled:** 10/21/09

TRIAXIAL SHEAR TEST REPORT

FFEBJV, LLC

Tested By: JC/ARS **Checked By:** TB

"Confidential Information, Privileged & Confidential Work Product"



Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

Source of Sample: NF05-68PU **Depth:** 48.8 **Sample Number:** 14B

Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: JC/ARS **Checked By:** GE

"Confidential Information Protected & Confidential Work Product"

SUMMARY OF LABORATORY TEST RESULTS

Project: New Orleans To Venice Plaquemines Parish, La **Assigned By:** _____

Project Number: 07-022122 **Current Date:** 3/24/2010
Boring: NF05-69PCU

Sample Number	Depth	Visual Classification	USCS	E(f)	W%	Dry Dens (pcf)	Wet Dens (pcf)	Sat %	Shear Test Type	Angle	Cohesion (psf)	Unconf. Comp. Str.	LL	PL	PI	Torvane (tsf)	Other Tests
1A	0.0	SO GR CH4 W/ LYS & LNS ML, RT	CH4		73												
1B	0.8	M DGR CHOA W/ RT, WD	CHOA	6	86	46	86	89	UC	-	623	1245	156	54	102	0.43	OC=26.8%
2A	2.0	VSO DGR CHOC W/ RT, WD	CHOC		231												
2B	2.8	VSO DGR CHOC W/ RT, WD	CHOC		152	32	81	98	UU	0	130		206	44	162	0.15	OC=13.1%
3A	4.0	VSO GR CH3 W/ LNS & LYS ML, WD	CH3		60												
3B	4.8	SO GR CH3 W/ LYS ML, O, WD	CH3		55												
3C	5.7	VSO GR CH3 W/ LNS & LYS ML, WD	CH3		73	58	101	100	UU	0	80		65	21	44	0.11	
3D	6.6	VSO GR CH4 W/ O, WD	CH4		80	54	97	100	UU	0	88		87	26	61	0.11	
4A	8.0	VSO GR CH4 W/ WD, SIF, O	CH4		86												
4B	8.8	SO DGR PT W/ RT	PT		499												
5A	12.0	VSO GR CH4 W/ LNS & LYS ML, CC	CH4		71												
5B	12.8	VSO GR CH4 W/ LNS & LYS SM	CH4		88												
5C	13.7	GR SM W/ LNS & LYS CH, O, WD	SM		39												
5D	14.6	GR SM W/ LNS & LYS CH, CC, SIF	SM		38												
6A	16.0	GR SM	SM		31												
6B	16.8	GR SM W/ LNS & LYS CH	SM		32												
6C	17.7	SO GR CH3 W/ LNS & LYS SM, CC	CH3		63												
6D	18.6	VSO GR CH4 W/ LNS ML	CH4		71	58	98	99	UU	0	207		85	26	59	0.16	
7A	20.0	SO GR CH4 W/ ARS ML, SIF	CH4		76												
7B	20.8	SO GR CH4 W/ ARS ML, SIF	CH4		82	52	95	98					92	24	68		-200, CON,
7C	21.7	SO GR CH4 W/ ARS ML, SIF, CC	CH4		64												
7D	22.6	SO GR CH4 W/ ARS ML, SIF	CH4		69												
8A	24.0	GR ML W/ LNS & LYS CH	ML		34												
8B	24.8	GR ML W/ LNS & LYS CH	ML		34												
8C	25.7	GR ML W/ LYS & LNS CH, LNS SM, WD	ML		35												
8D	26.6	GR ML W/ LNS & LYS CH, WD, O	ML		32												
9A	28.0	GR ML W/ LNS & LYS CH	ML		33												
9B	28.8	GR ML W/ LYS CH, ARS SM, WD	ML		32	92	121	100	UU	0	1307		NP	NP	NP		-200
9C	29.7	GR ML W/ LNS & LYS CH, CC	ML		31												
9D	30.6	SO GR CL4 W/ LNS & LYS CH	CL4		34												
10A	32.0	SO GR CH2	CH2		42												
10B	32.4	SO GR CH2 W/ LYS & ARS ML	CH2		41	82	115	100	UU	0	383		50	20	30	0.25	
10C	33.3	SO GR CH2 W/ LYS & ARS ML	CH2		41												
10D	34.2	SO GR CH4 W/ LNS & LYS ML	CH4		64												
11A	36.0	SO GR CH4 W/ LNS & LYS ML	CH4		71												
11B	36.8	SO GR CH4 W/ LNS & LYS ML	CH4		68												

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Remarks:
FFEB JV, LLC

Checked By: WH/MS/LED
File Name: 05-69PCU.xls

SUMMARY OF LABORATORY TEST RESULTS

Project: New Orleans To Venice Plaquemines Parish, La Assigned By: _____

Project Number: 07-022122
Boring: NF05-69PCU

Current Date: 3/24/2010

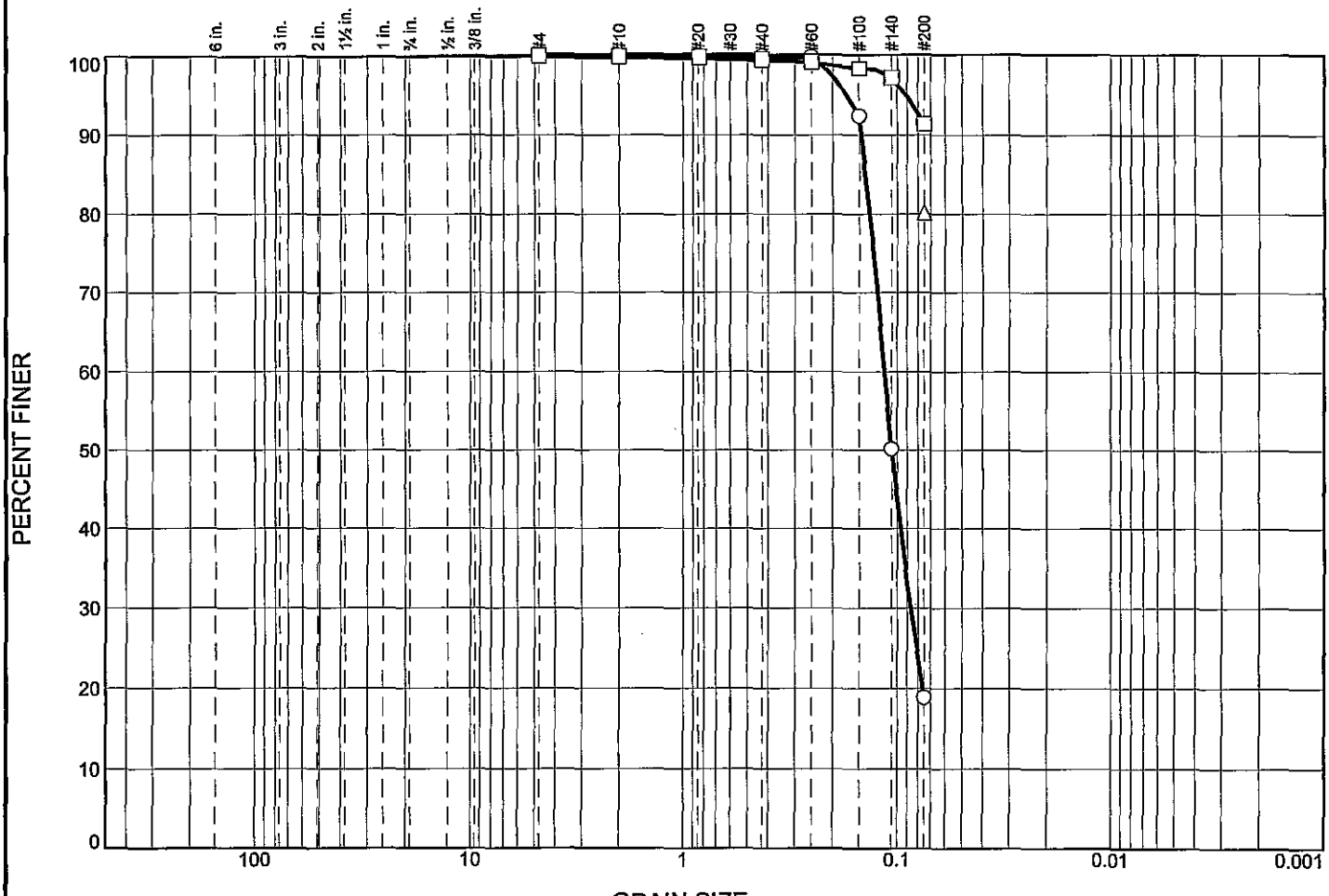
Sample Number	Depth	Visual Classification	USCS	E(f)	W%	Dry Dens (pcf)	Wet Dens (pcf)	Sat %	Shear Test Type	Angle	Cohesion (psf)	Unconf. Comp. Str.	LL	PL	PI	Torvane (tsf)	Other Tests
11C	37.7	SO GR CH4 W/ LNS & LYS ML	CH4		64												
11D	38.6	SO GR CH4 W/ LNS & LYS ML	CH4		63	62	101	98	UU	0	352		91	28	63	0.27	
12A	40.0	M GR CH4 W/ ARS ML	CH4		55												
12B	40.8	M GR CH4 W/ ARS ML	CH4		54												
12C	41.7	M GR CH4	CH4		51	70	106	97	UU	0	523		73	25	48	0.30	
12D	42.6	M GR CH4	CH4		54												
13A	44.0	M GR CH4	CH4		55												
13B	44.8	M GR CH4	CH4		55												
13C	45.7	M GR CH4	CH4		53												
13D	46.6	M GR CH4	CH4		52												
14A	48.0	M GR CH4	CH4		59												
14B	48.8	M GR CH4 W/ LNS ML	CH4		63	62	101	98	UU	0	574		84	26	58	0.33	
14C	49.7	M GR CH4	CH4		63												
14D	50.6	M GR CH4 W/ ARS ML	CH4		64												

"Confidential Information: Privileged & Confidential Work Product"

Remarks:
FFEB JV, LLC

Checked By: MH MS | KEH
File Name: 05-69PCU.xls

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.0	0.1	81.1	18.8	
□	0.0	0.0	0.0	0.1	0.4	8.2	91.3	
△							80.2	

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○				0.1392	0.1146	0.1059	0.0864				
□											
△			NP								

Material Description	USCS	AASHTO
○ GR SM W/ LNS & LYS CH, CC, SIF	SM	
□ GR ML W/ LNS & LYS CH, WD, O	ML	
△ GR ML W/ LYS CH, ARS SM, WD	ML	

Project No. 07-022122 **Client:** U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

○ **Source of Sample:** NF05-69PCU **Depth:** 14.6 **Sample Number:** 5D

□ **Source of Sample:** NF05-69PCU **Depth:** 26.6 **Sample Number:** 8D

△ **Source of Sample:** NF05-69PCU **Depth:** 28.8 **Sample Number:** 9B

Date: ○ 1/5/10 □ 1/5/10 △ 1/5/10

FFEBJV, LLC

St Rose, LA

Remarks:

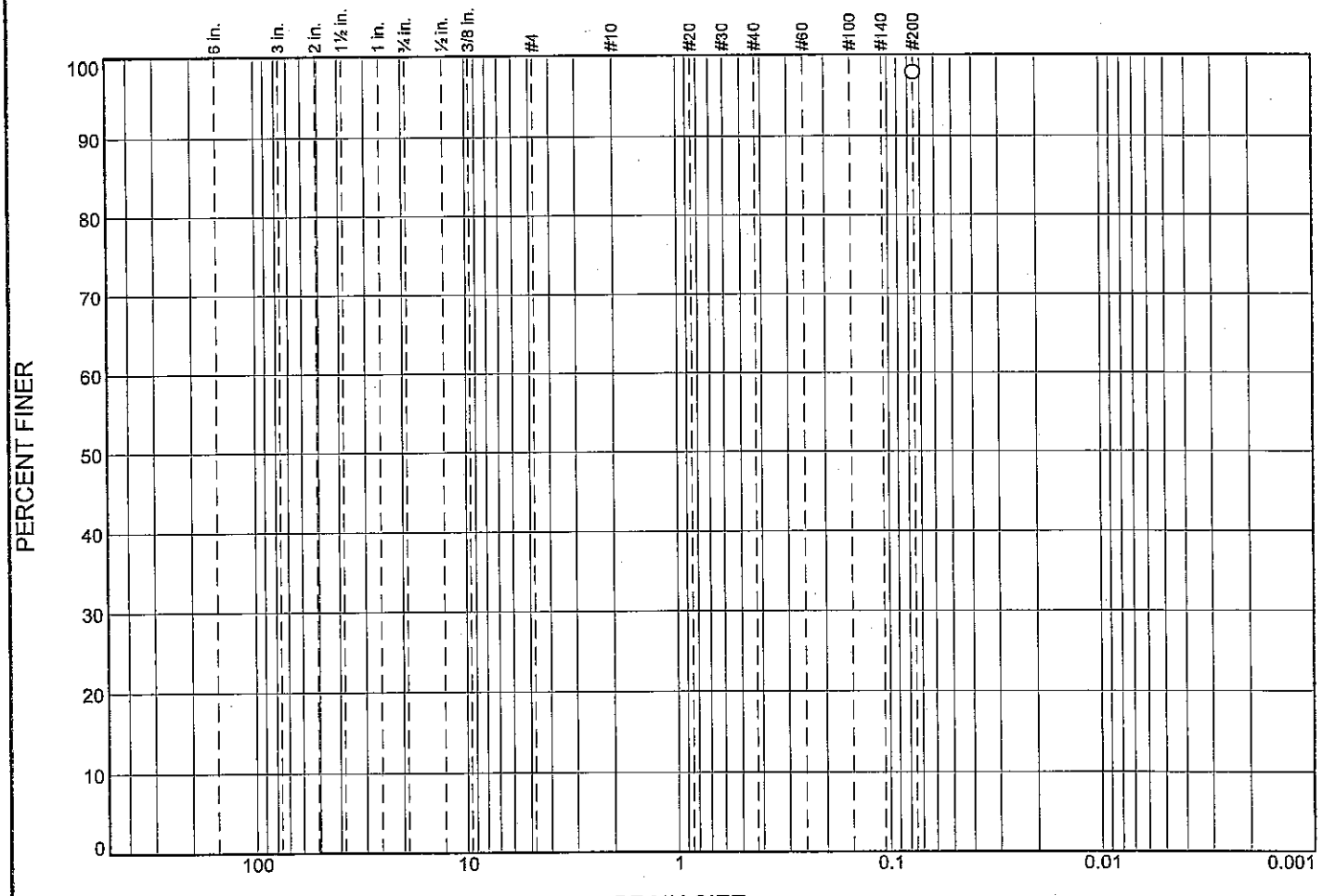
△-200

Figure

Tested By: NF **Checked By:** WE

"Confidential Information Provided By & Confidential Work Product"

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
o							98.0	

	Colloids	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
o		92	24								

Material Description	USCS	AASHTO
o SO GR CH4 W/ ARS ML, SIF	CH4	

Project No. 07-022122 **Client:** U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

o **Source of Sample:** NF05-69PCU **Depth:** 20.8 **Sample Number:** 7B

Date: o 1/5/10

Remarks:

o -200; OTHER TESTS PERFORMED AS PER ASTM D4318.

FFEBJV, LLC

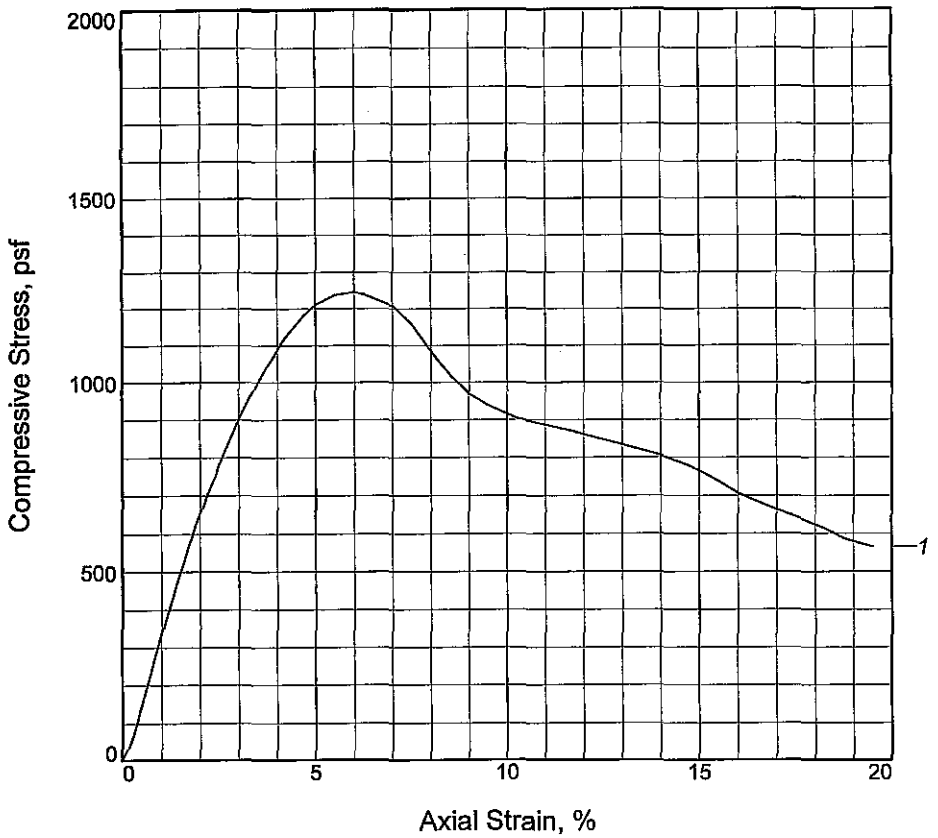
St Rose, LA

Figure

Tested By: NF **Checked By:** MKA

"Confidential Information, Privileged & Confidential Work Product"

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psf	1245			
Undrained shear strength, psf	623			
Failure strain, %	6.0			
Strain rate, %/min.	1.00			
Water content, %	85.6			
Wet density, pcf	85.8			
Dry density, pcf	46.2			
Saturation, %	88.6			
Void ratio	2.5127			
Specimen diameter, in.	1.417			
Specimen height, in.	3.106			
Height/diameter ratio	2.19			

Description: M DGR CHOA W/ RT, WD

LL = 156	**PL** = 54	**PI** = 102	**Assumed GS=** 2.60	**Type:** UNDISTURBED

Project No.: 07-022122
Date Sampled: 1/5/10
Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

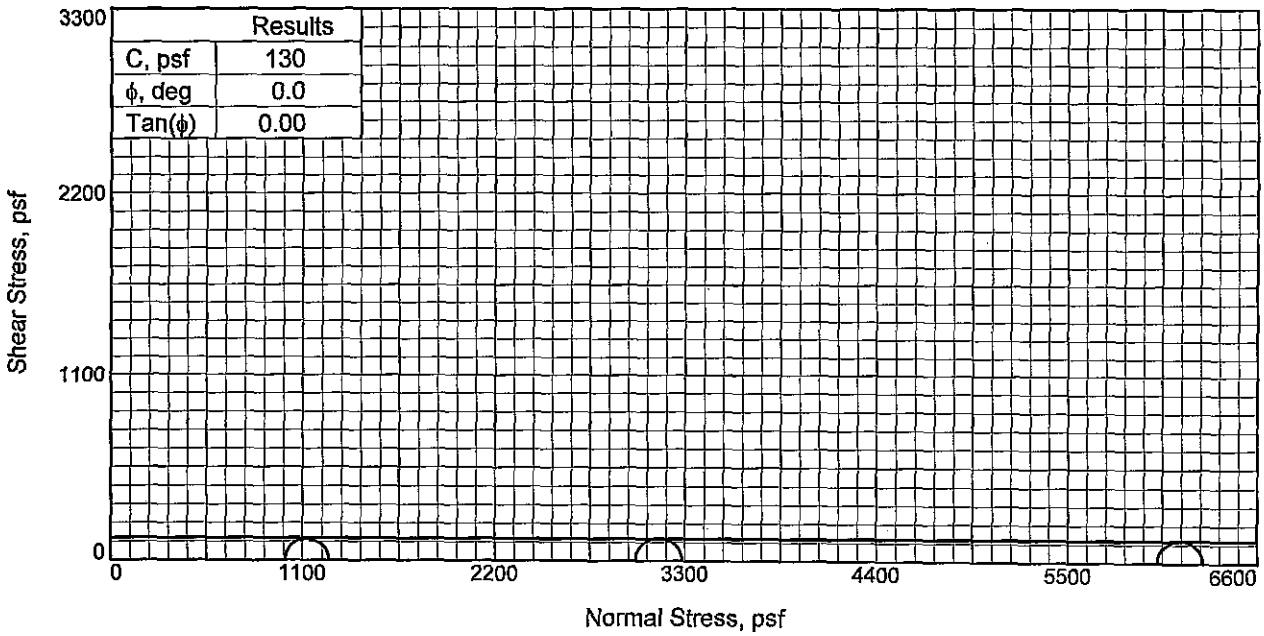
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-69PCU **Depth:** 0.8
Sample Number: 1B

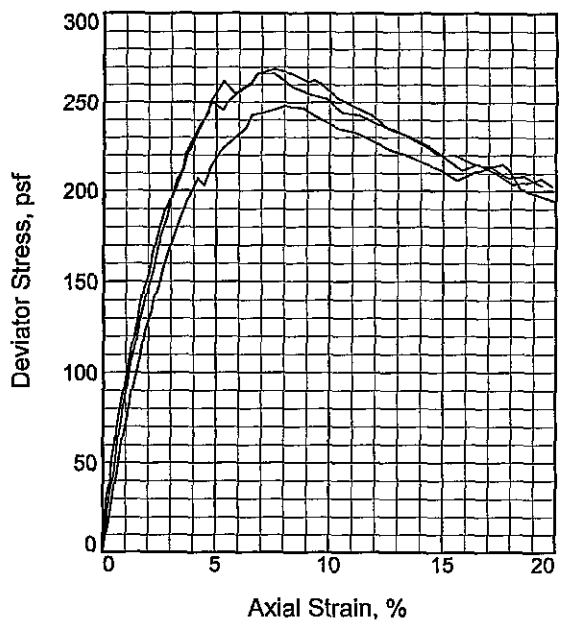
UNCONFINED COMPRESSION TEST

FFEBJV, LLC

Tested By: JC **Checked By:** WH

"Confidential Information, Privileged & Confidential Work Product"





Sample No.		1	2	3
Initial	Water Content, %	164.1	152.5	140.1
	Dry Density, pcf	30.4	32.0	34.1
	Saturation, %	99.1	98.3	97.9
	Void Ratio	4.1411	3.8785	3.5802
	Diameter, in.	1.413	1.409	1.407
	Height, in.	3.094	3.099	3.095
At Test	Water Content, %	164.1	152.5	140.1
	Dry Density, pcf	30.4	32.0	34.1
	Saturation, %	99.1	98.3	97.9
	Void Ratio	4.1411	3.8785	3.5802
	Diameter, in.	1.413	1.409	1.407
	Height, in.	3.094	3.099	3.095
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.95	20.92	41.80
Fail. Stress, psf		248	269	266
Strain, %		8.1	7.6	6.8
Ult. Stress, psf		212	220	219
Strain, %				
σ_1 Failure, psf		1249	3281	6285
σ_3 Failure, psf		1001	3012	6019

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: VSO DGR CHOC W/ RT, WD

LL= 206 **PL=** 44 **PI=** 162
Assumed Specific Gravity= 2.50
Remarks:

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-69PCU **Depth:** 2.8
Sample Number: 2B
Proj. No.: 07-022122 **Date Sampled:** 1/5/10

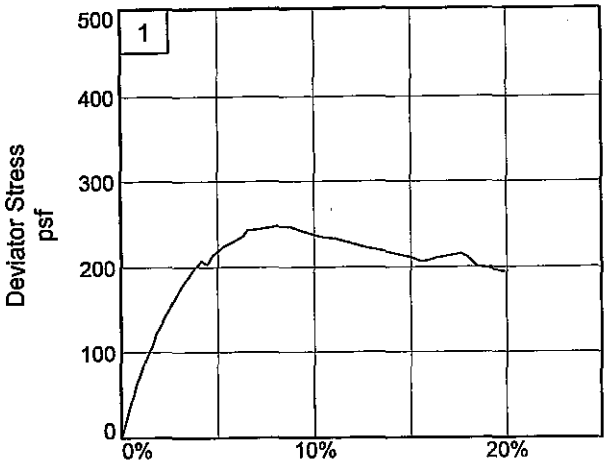
TRIAXIAL SHEAR TEST REPORT

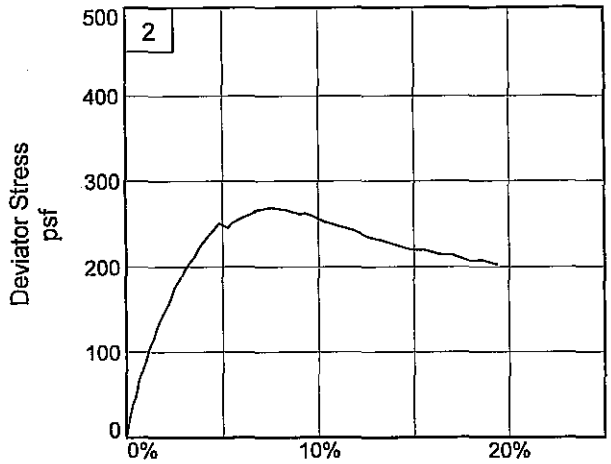
FFEBJV, LLC

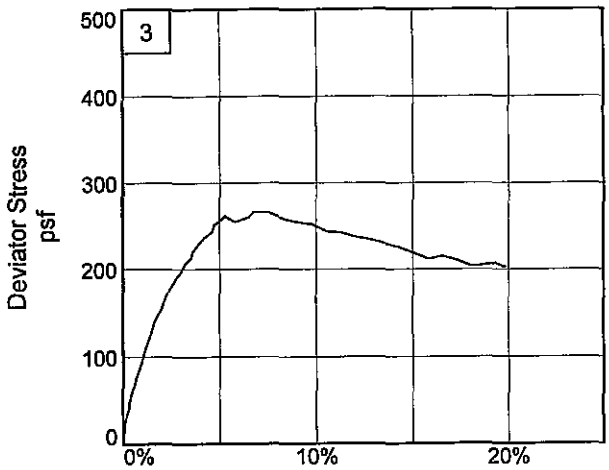
Figure _____

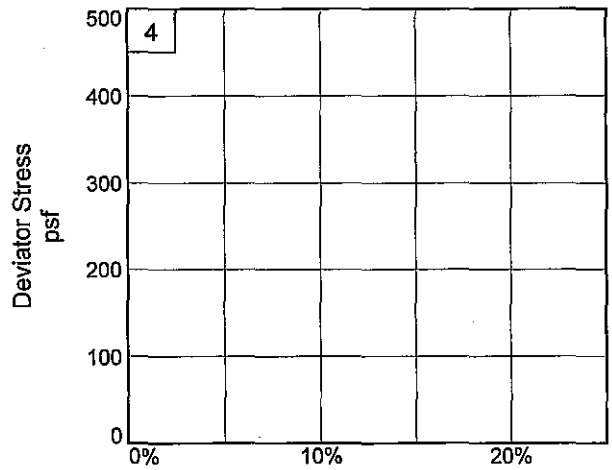
Tested By: vf **Checked By:** WH

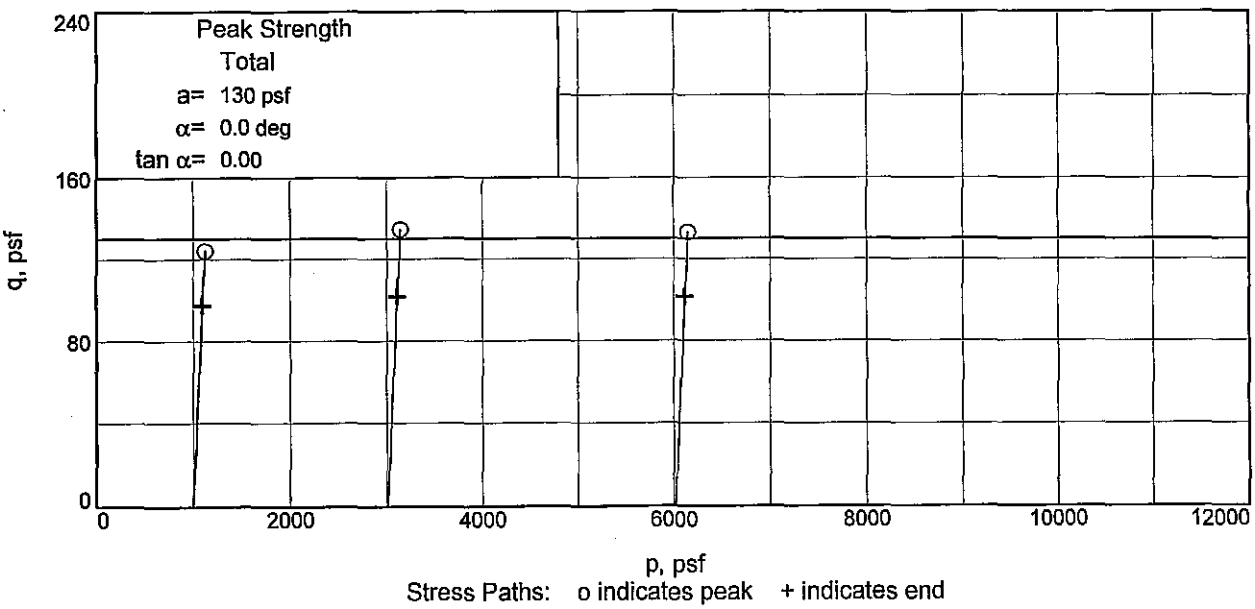
"Confidential Information. Privileged & Confidential Work Product"









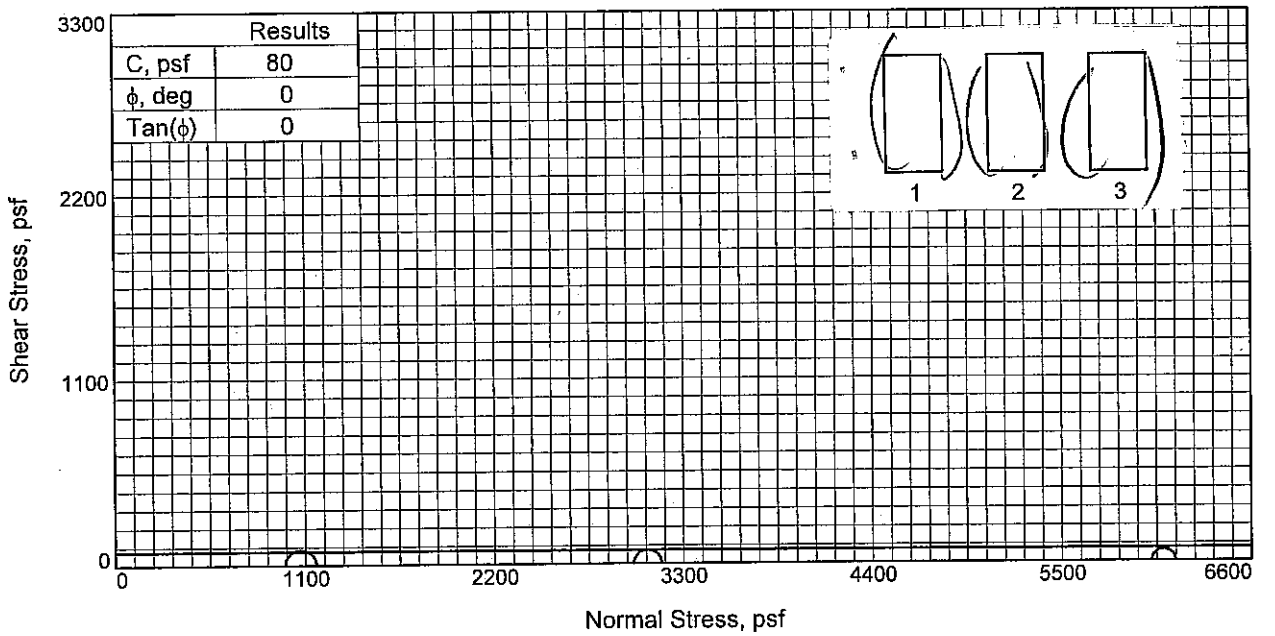


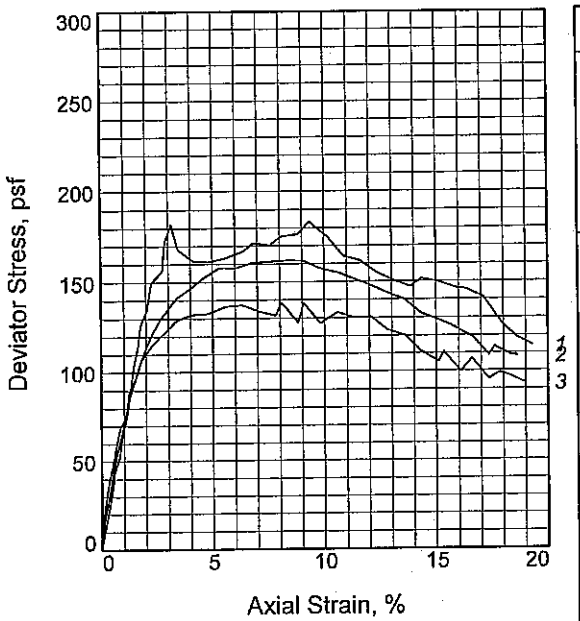
Client: U.S. Army Corps of Engineers
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Source of Sample: NF05-69PCU **Depth:** 2.8 **Sample Number:** 2B
Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: vf **Checked By:** vf

"Confidential Information Privileged & Confidential Work Product"





Sample No.		1	2	3
Initial	Water Content, %	69.3	72.6	78.0
	Dry Density, pcf	60.8	58.8	55.5
	Saturation, %	104.7	104.2	102.6
	Void Ratio	1.8155	1.9106	2.0819
	Diameter, in.	1.390	1.382	1.379
	Height, in.	3.075	3.077	3.080
At Test	Water Content, %	69.3	72.6	78.0
	Dry Density, pcf	60.8	58.8	55.5
	Saturation, %	104.7	104.2	102.6
	Void Ratio	1.8155	1.9106	2.0819
	Diameter, in.	1.390	1.382	1.379
	Height, in.	3.075	3.077	3.080
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.82	20.89	41.81
Fail. Stress, psf		182	162	137
Strain, %		3.2	8.3	6.3
Ult. Stress, psf		119	109	97
Strain, %				
σ_1 Failure, psf		1164	3170	6158
σ_3 Failure, psf		982	3009	6021

Type of Test:
Unconsolidated Undrained

Sample Type: C

Description: VSO GR CH3 W/ LNS & LYS ML, WD

LL= 65 **PL=** 21 **PI=** 44

Assumed Specific Gravity= 2.74

Remarks:

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La

Source of Sample: NF05-69PCU **Depth:** 5.7

Sample Number: 3C

Proj. No.: 07-022122 **Date Sampled:**

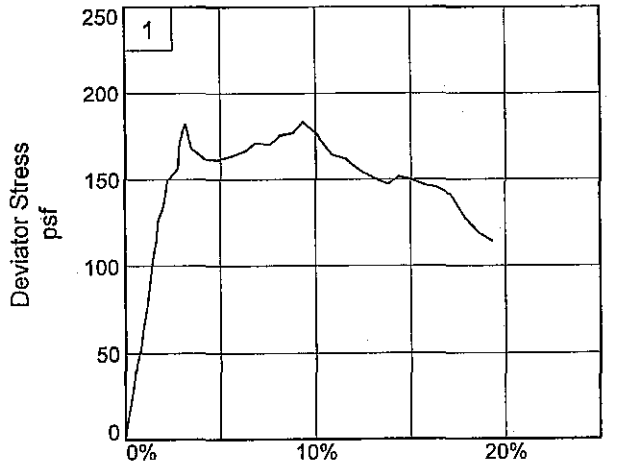
TRIAXIAL SHEAR TEST REPORT

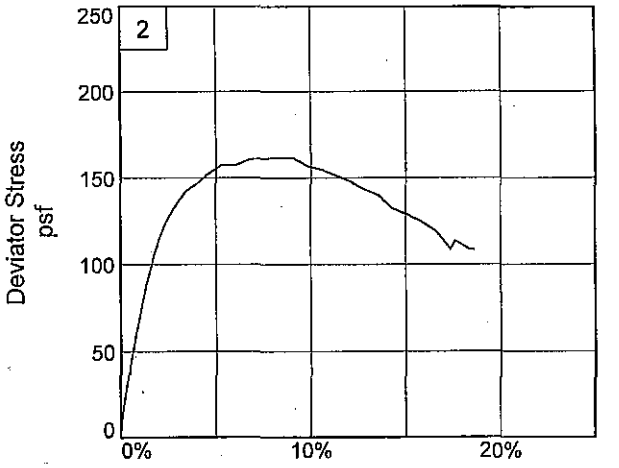
FFEBJV, LLC

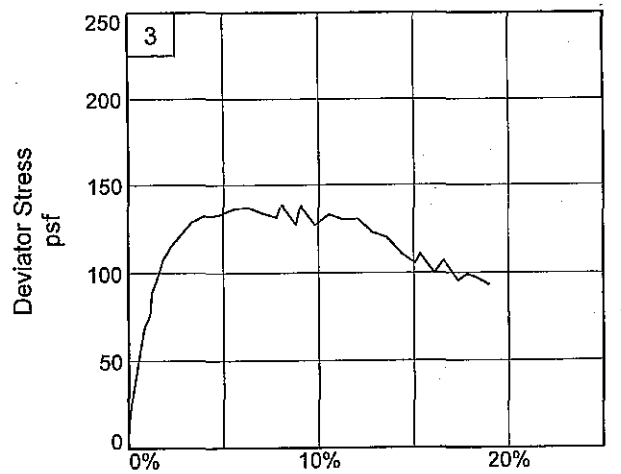
Figure _____

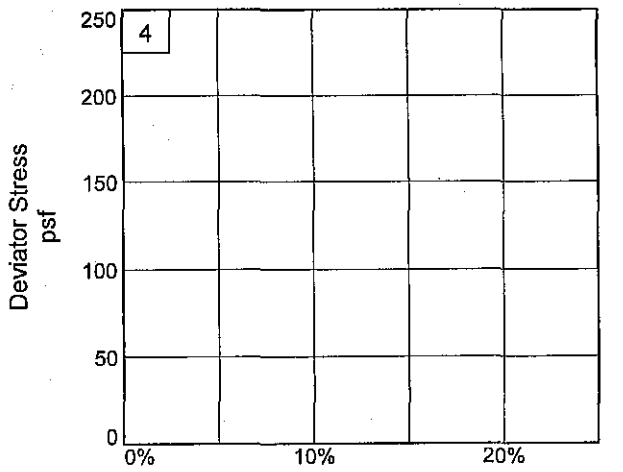
Tested By: ARS **Checked By:** MKA

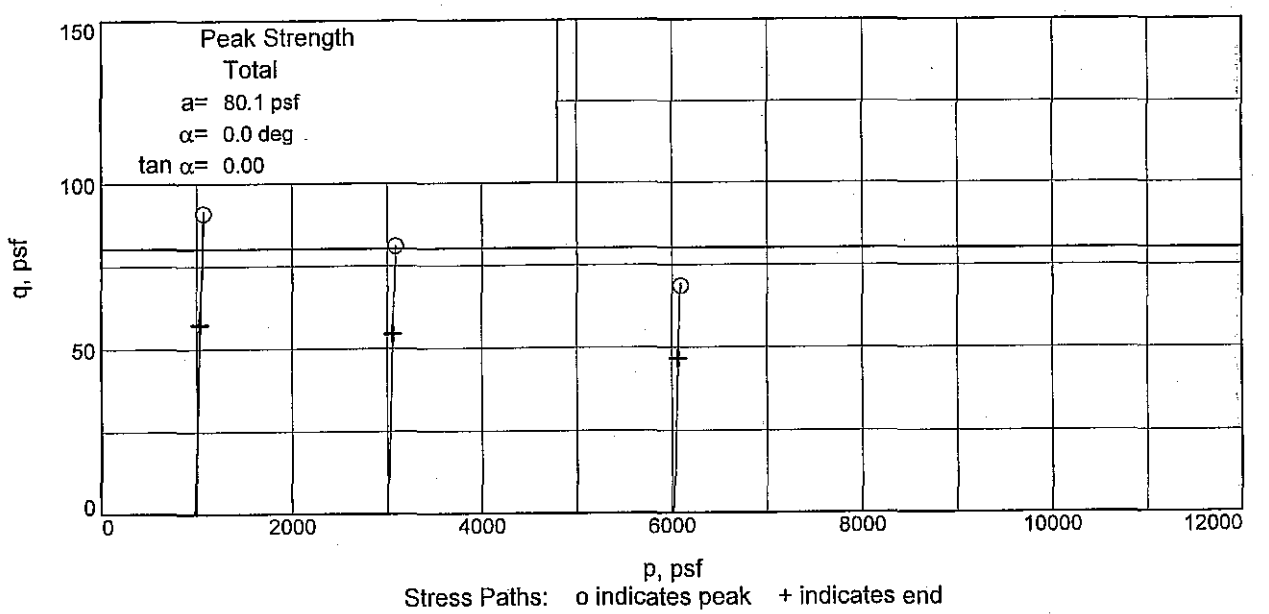
"Confidential Information Privileged & Confidential Work Product"











Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

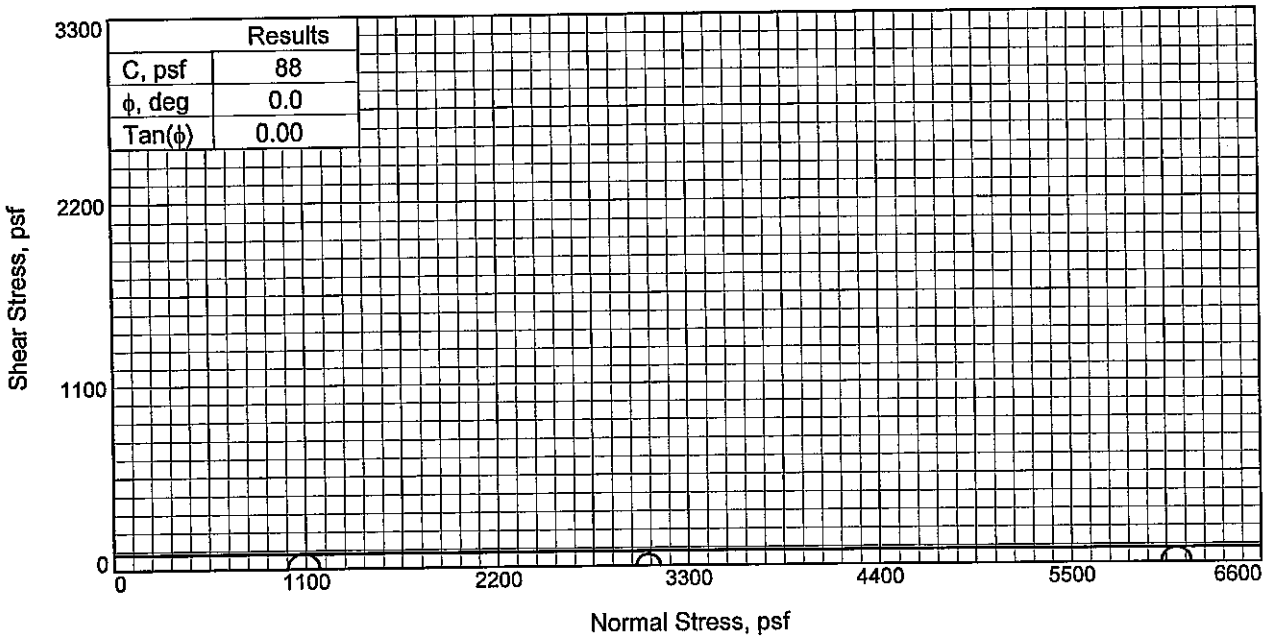
Source of Sample: NF05-69PCU **Depth:** 5.7 **Sample Number:** 3C

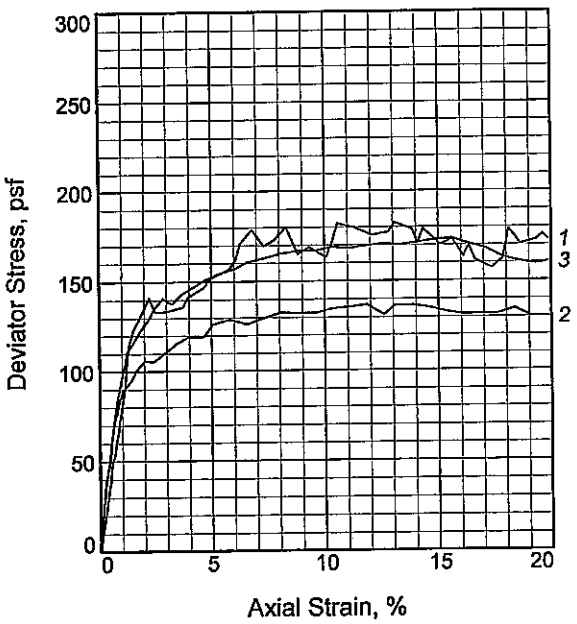
Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: ARS **Checked By:** MKA

"Confidential Information: Privileged & Confidential Work Product"





Sample No.		1	2	3
Initial	Water Content, %	83.1	79.0	79.0
	Dry Density, pcf	53.0	54.0	54.1
	Saturation, %	102.3	99.9	100.2
	Void Ratio	2.2255	2.1672	2.1607
	Diameter, in.	1.397	1.403	1.402
	Height, in.	3.093	3.098	3.083
At Test	Water Content, %	83.1	79.0	79.0
	Dry Density, pcf	53.0	54.0	54.1
	Saturation, %	102.3	99.9	100.2
	Void Ratio	2.2255	2.1672	2.1607
	Diameter, in.	1.397	1.403	1.402
	Height, in.	3.093	3.098	3.083
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.91	20.83	41.81
Fail. Stress, psf		182	137	173
Strain, %		10.6	11.8	14.8
Ult. Stress, psf		170	135	173
Strain, %				
σ_1 Failure, psf		1177	3136	6194
σ_3 Failure, psf		995	2999	6021

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: VSO GR CH4 W/ O, WD

LL= 87 **PL=** 26 **PI=** 61
Assumed Specific Gravity= 2.74
Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

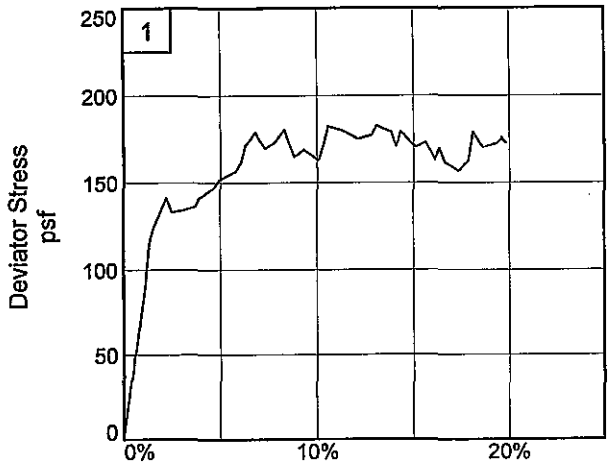
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-69PCU **Depth:** 6.6
Sample Number: 3D
Proj. No.: 07-022122 **Date Sampled:** 1/5/10

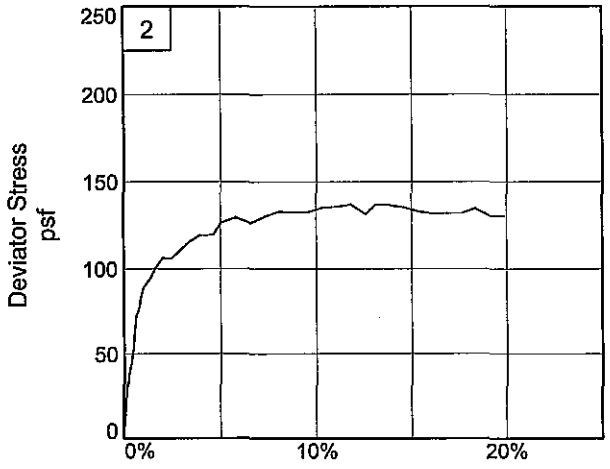
TRIAXIAL SHEAR TEST REPORT

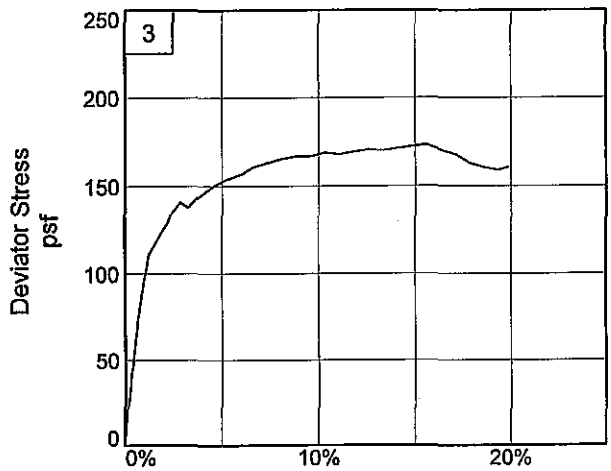
FFEBJV, LLC

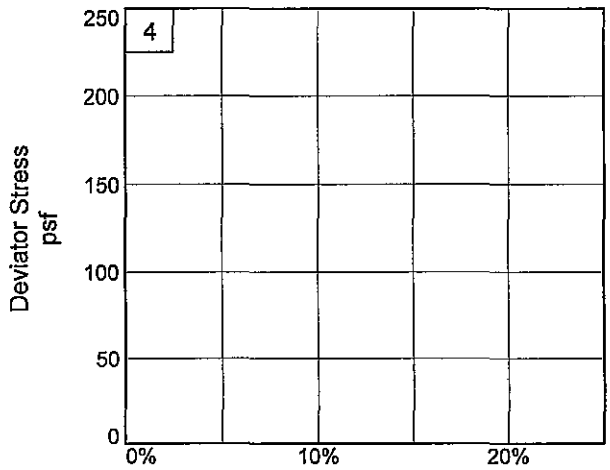
Tested By: VF **Checked By:** VH

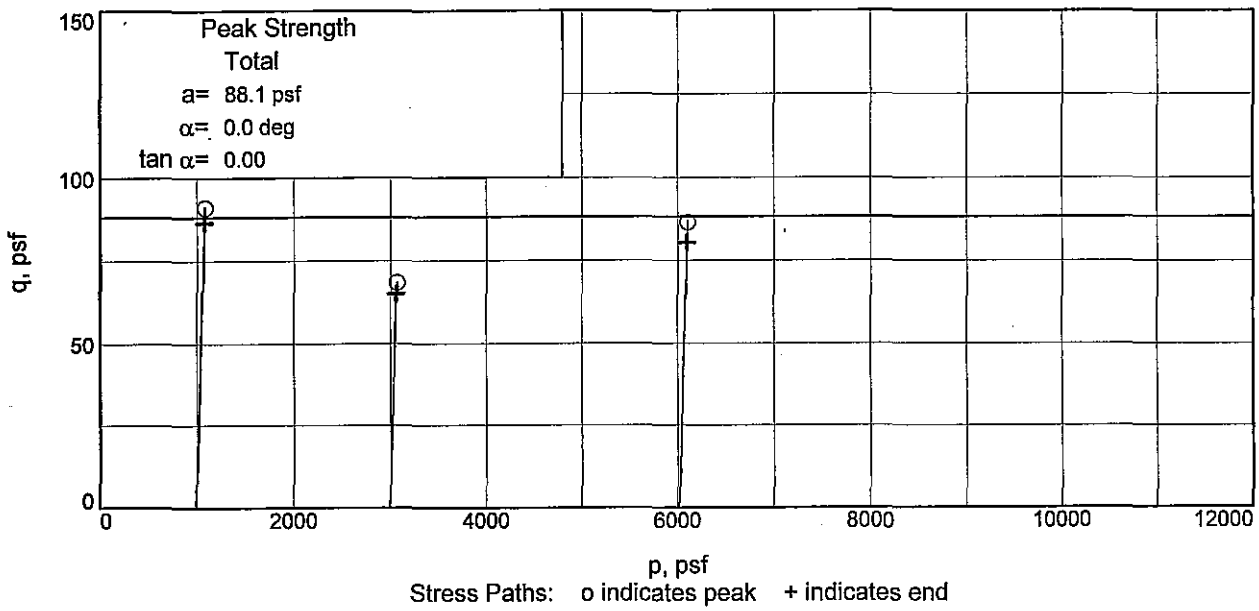
"Confidential Information Provided By & Confidential Work Product"









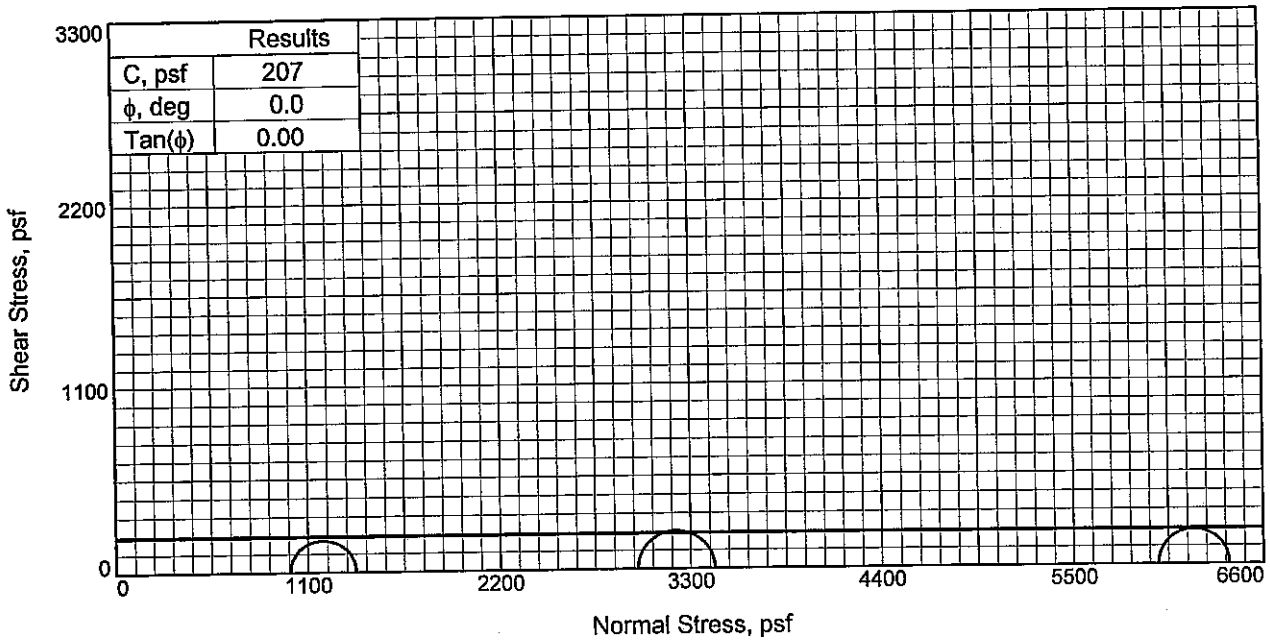


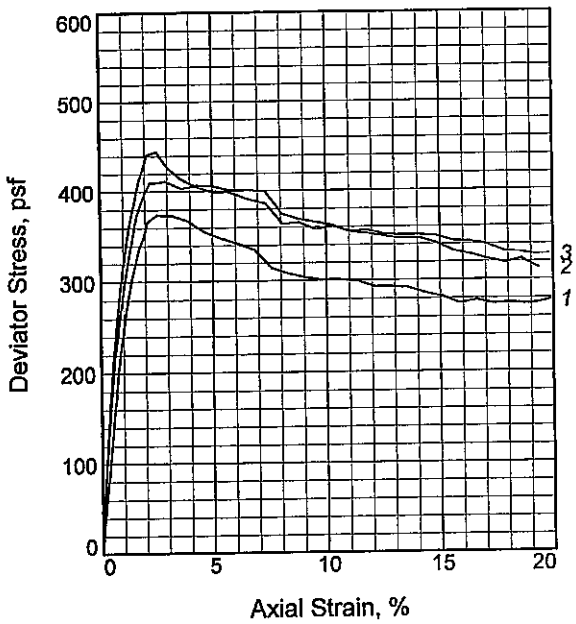
Stress Paths: o indicates peak + indicates end

Client: U.S. Army Corps of Engineers
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Source of Sample: NF05-69PCU **Depth:** 6.6 **Sample Number:** 3D
Project No.: 07-022122 **Figure** _____ **FFEBJV, LLC**

Tested By: VF **Checked By:** WH

"Confidential Information. Privileged & Confidential Work Product"





Sample No.		1	2	3
Initial	Water Content, %	72.0	70.8	69.4
	Dry Density, pcf	56.8	57.6	58.5
	Saturation, %	98.1	98.6	98.9
	Void Ratio	2.0113	1.9671	1.9219
	Diameter, in.	1.414	1.416	1.405
	Height, in.	3.103	3.102	3.107
At Test	Water Content, %	72.0	70.8	69.4
	Dry Density, pcf	56.8	57.6	58.5
	Saturation, %	98.1	98.6	98.9
	Void Ratio	2.0113	1.9671	1.9219
	Diameter, in.	1.414	1.416	1.405
	Height, in.	3.103	3.102	3.107
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.94	20.80	41.60
Fail. Stress, psf		374	444	411
Strain, %		2.5	2.5	2.9
Ult. Stress, psf		282	341	349
Strain, %				
σ_1 Failure, psf		1373	3439	6402
σ_3 Failure, psf		999	2995	5991

Type of Test: Unconsolidated Undrained

Sample Type: UNDISTURBED

Description: VSO GR CH4 W/ LNS ML

LL= 85 **PL=** 26 **PI=** 59

Assumed Specific Gravity= 2.74

Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La

Source of Sample: NF05-69PCU **Depth:** 18.6

Sample Number: 6D

Proj. No.: 07-022122 **Date Sampled:** 1/5/10

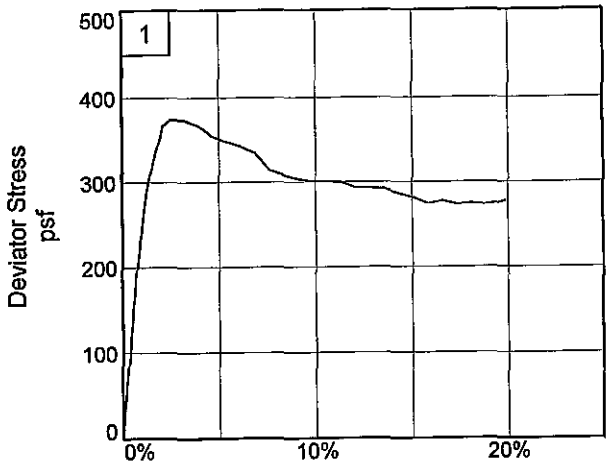
TRIAXIAL SHEAR TEST REPORT

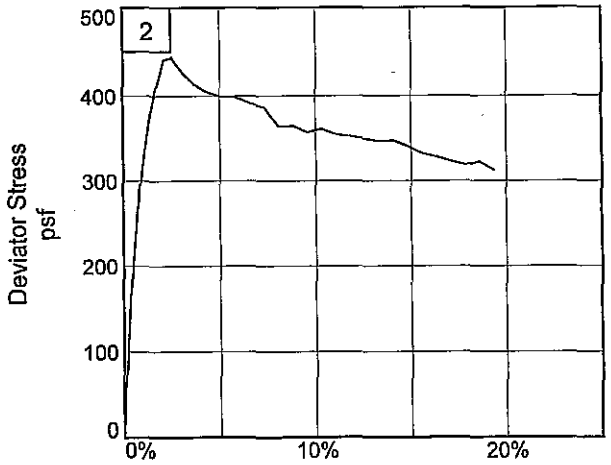
FFEBJV, LLC

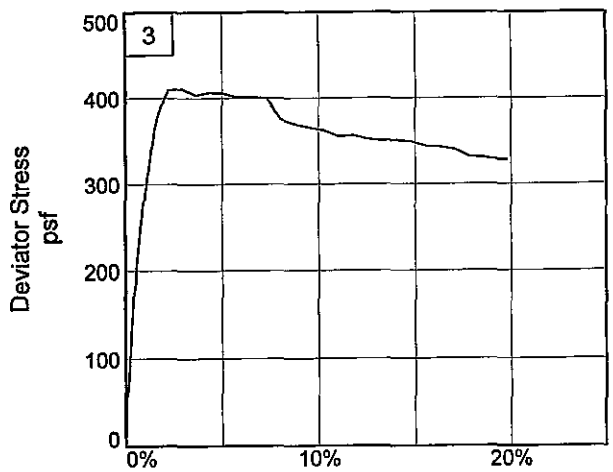
Tested By: ARS

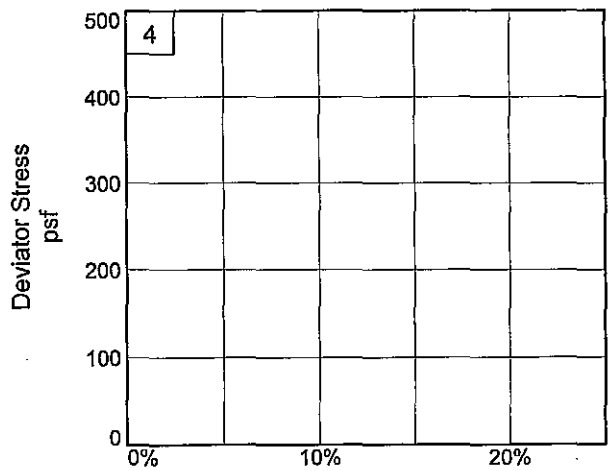
"Confidential Information Privileged & Confidential Work Product"

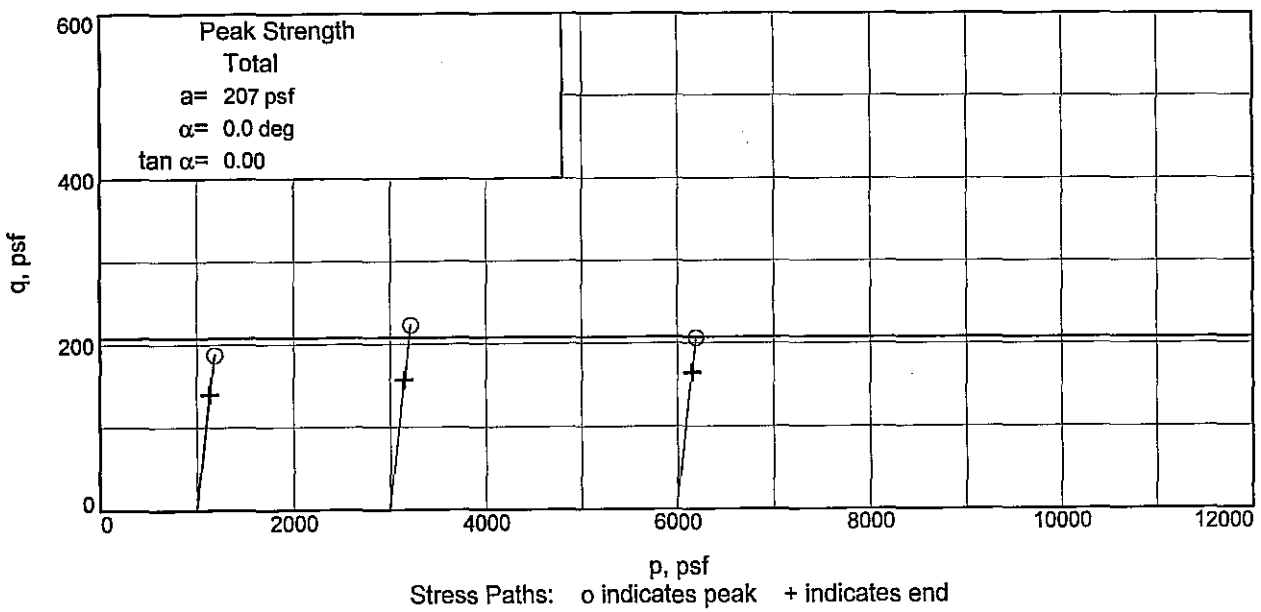
Checked By: WH











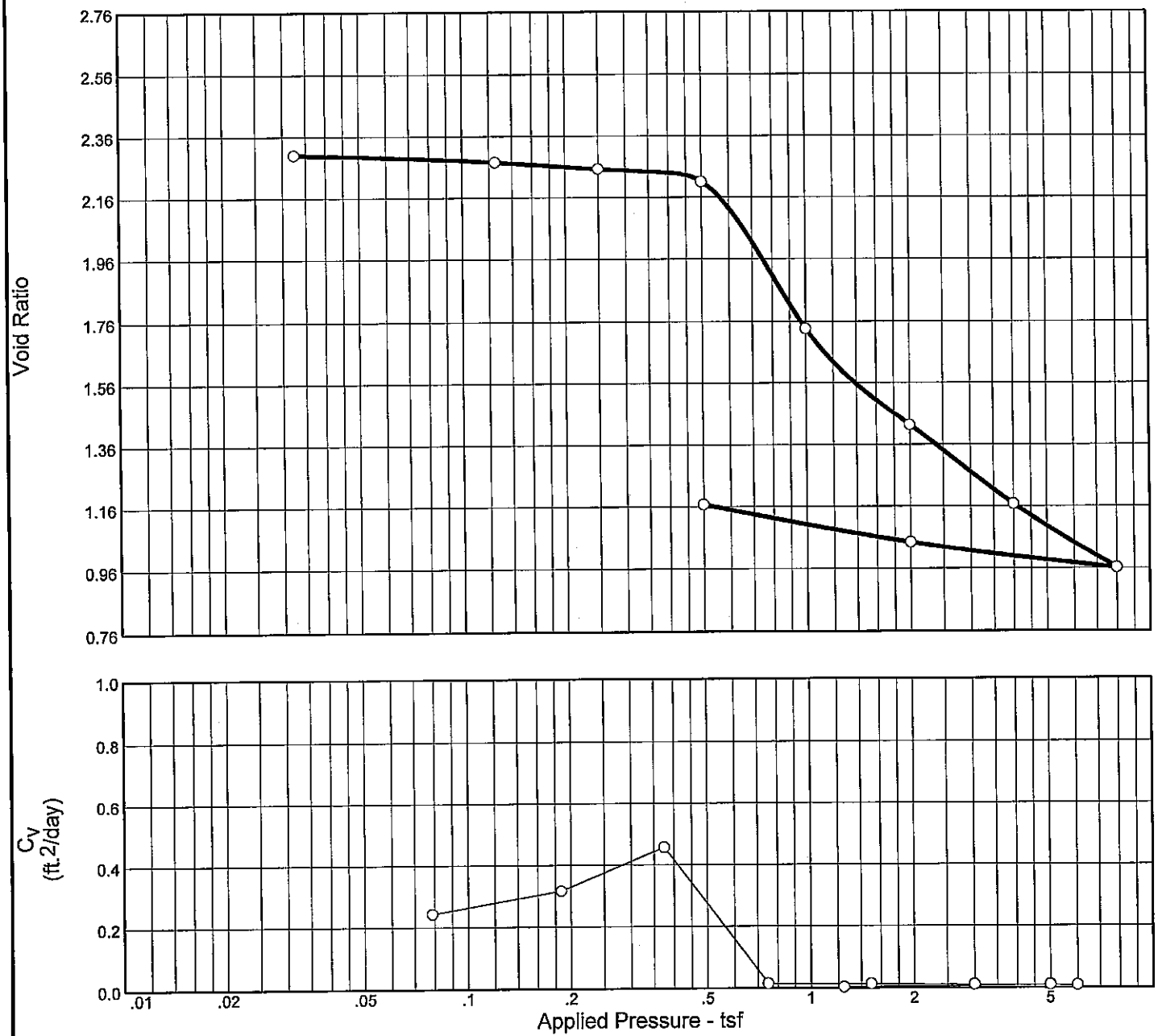
Client: U.S. Army Corps of Engineers
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Source of Sample: NF05-69PCU **Depth:** 18.6 **Sample Number:** 6D
Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: ARS **Checked By:** WPI

"Confidential Information Privileged & Confidential Work Product"

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	P_c (tsf)	C_c	Initial Void Ratio
Saturation	Moisture							
97.7 %	81.5 %	52.2	92	68	2.76	0.53	1.67	2.300

MATERIAL DESCRIPTION	USCS	AASHTO
SO GR CH4 W/ ARS ML, SIF	CH4	

Project No. 07-022122 **Client:** US Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La

Source: NF05-69PCU **Sample No.:** 7B **Elev./Depth:** 20.8

FFEBJV, LLC

St Rose, LA

Remarks:

Tested by: ALJ
Calculated by: WJY
Checked by: WJY

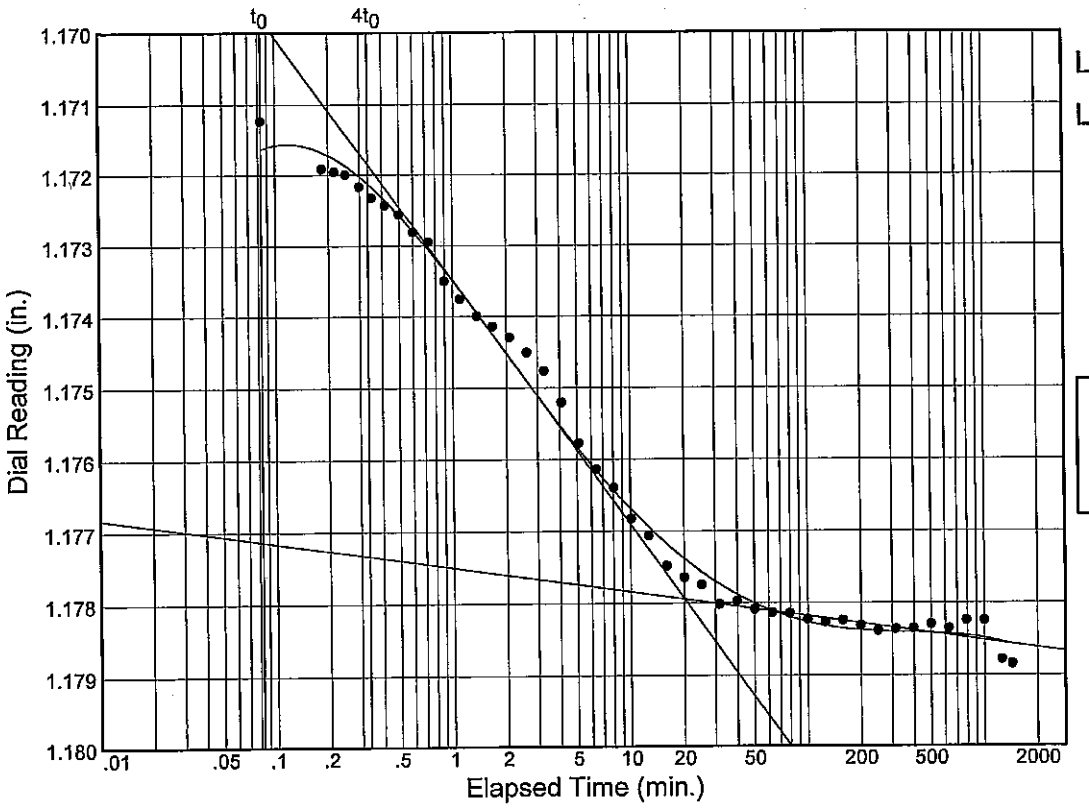
Figure

"Confidential Information: Privileged & Confidential Work Product"

Dial Reading vs. Time

Project No.: 07-022122
Project: USACE - New Orleans To Venice Plaquemines Parish, La

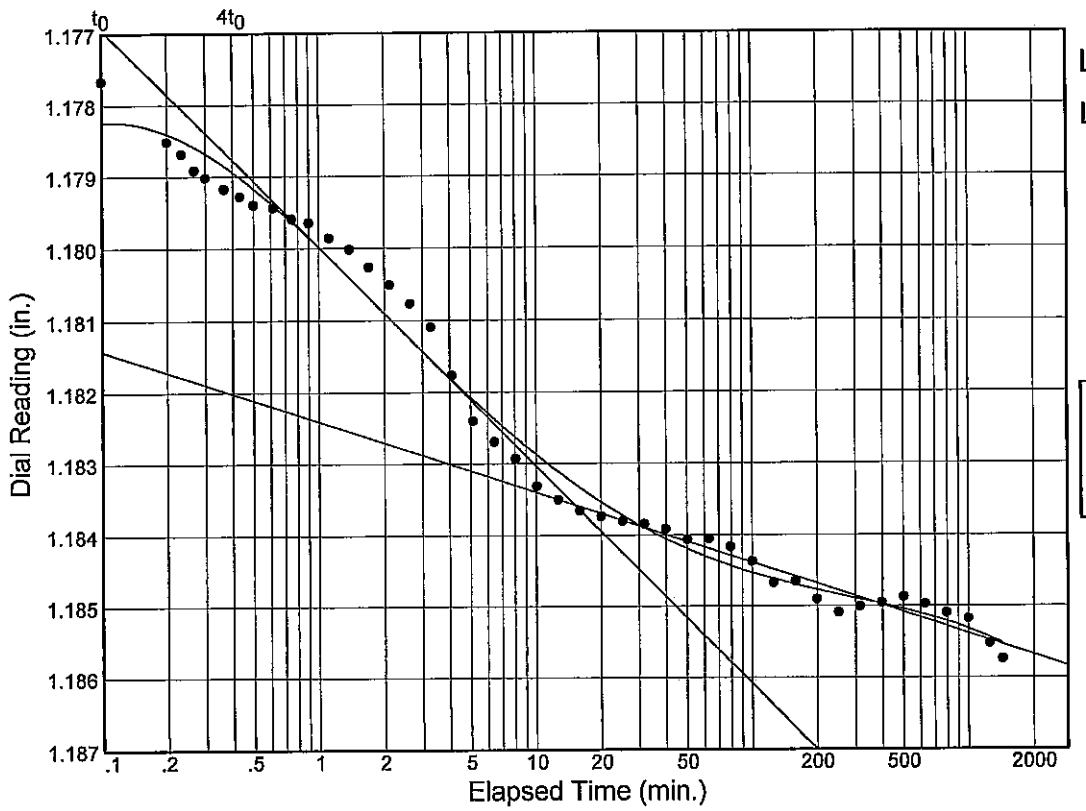
Source: NF05-69PCU Sample No.: 7B Elev./Depth: 20.8



Load No.= 2
Load= 0.13 tsf
D_0 = 1.17116
D_{50} = 1.17455
D_{100} = 1.17794
T_{50} = 2.05 min.

C_v @ T_{50}
0.24 ft.^{2}/day

C_α = 0.000



Load No.= 3
Load= 0.25 tsf
D_0 = 1.17755
D_{50} = 1.18056
D_{100} = 1.18358
T_{50} = 1.55 min.

C_v @ T_{50}
0.32 ft.^{2}/day

C_α = 0.001

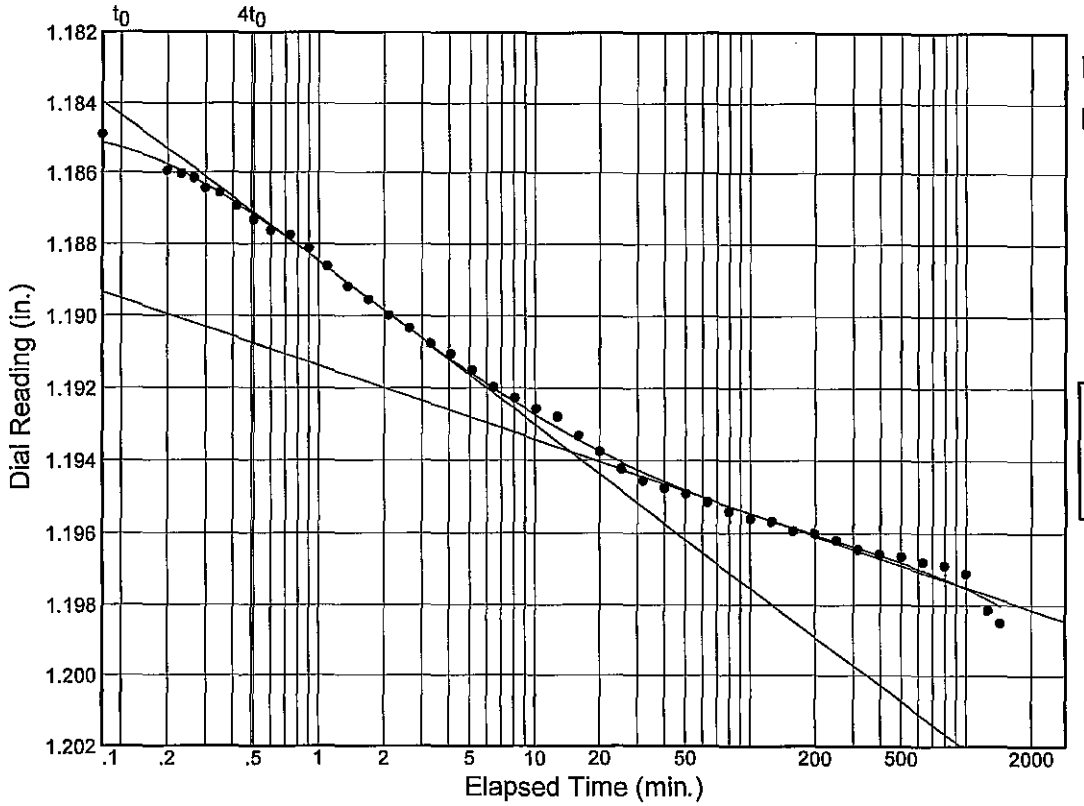
Figure

"Confidential Information Prepared for Weber & Confidential Work Product"
FFEBJV, LLC

Dial Reading vs. Time

Project No.: 07-022122
Project: USACE - New Orleans To Venice Plaquemines Parish, La

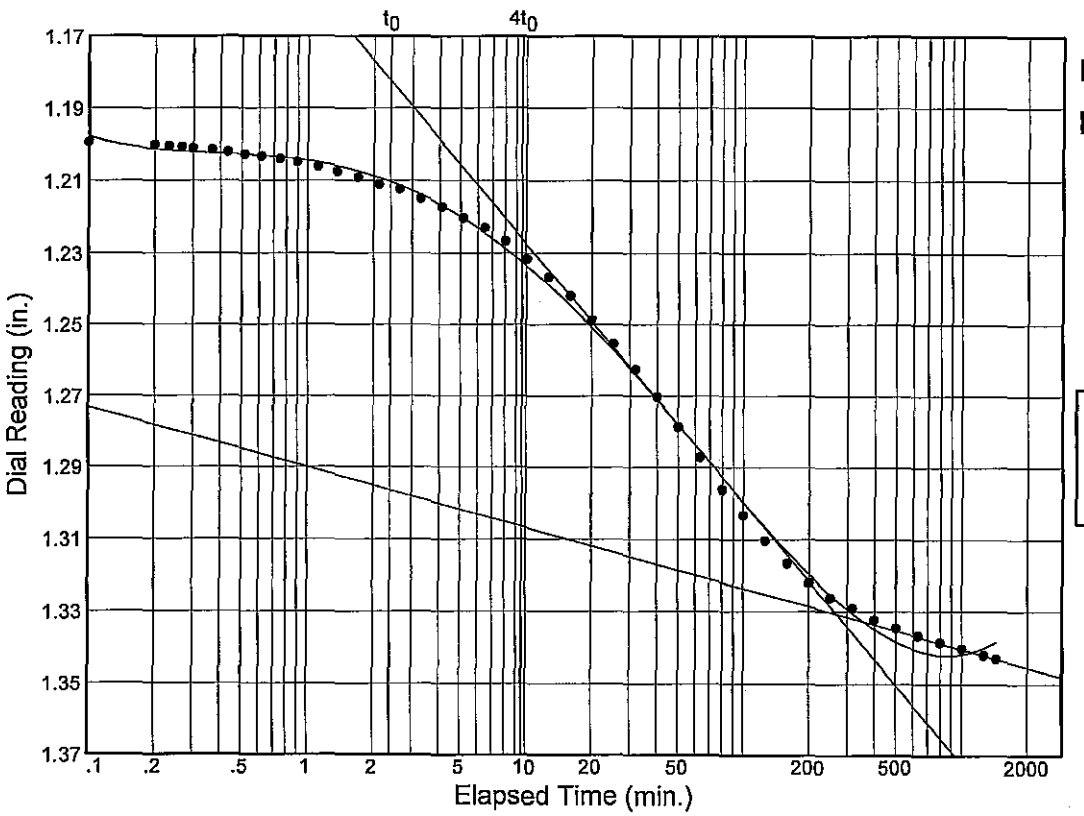
Source: NF05-69PCU Sample No.: 7B Elev./Depth: 20.8



Load No.= 4
Load= 0.50 tsf
D_0 = 1.18340
D_{50} = 1.18858
D_{100} = 1.19376
T_{50} = 1.05 min.

C_v @ T_{50}
0.46 ft.^{2}/day

C_α = 0.002



Load No.= 5
Load= 1.00 tsf
D_0 = 1.18818
D_{50} = 1.25947
D_{100} = 1.33078
T_{50} = 27.13 min.

C_v @ T_{50}
0.01 ft.^{2}/day

C_α = 0.017

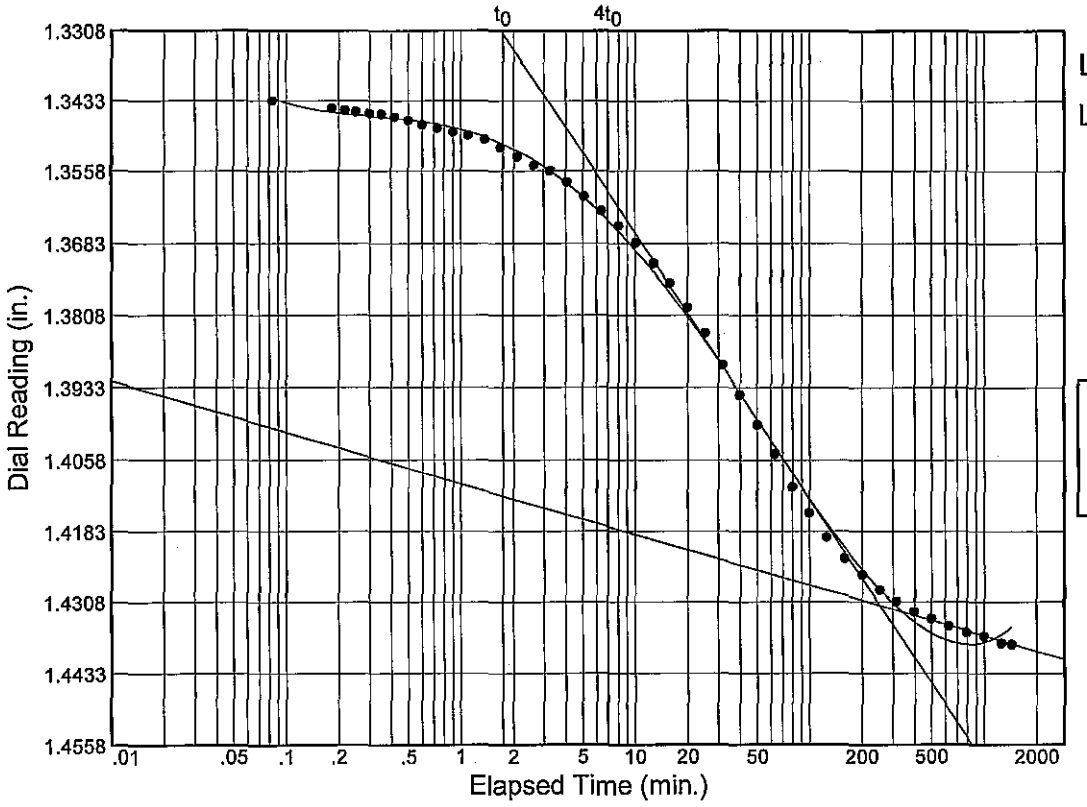
"Confidential Information - Privileged & Confidential Work Product"

Figure

Dial Reading vs. Time

Project No.: 07-022122
Project: USACE - New Orleans To Venice Plaquemines Parish, La

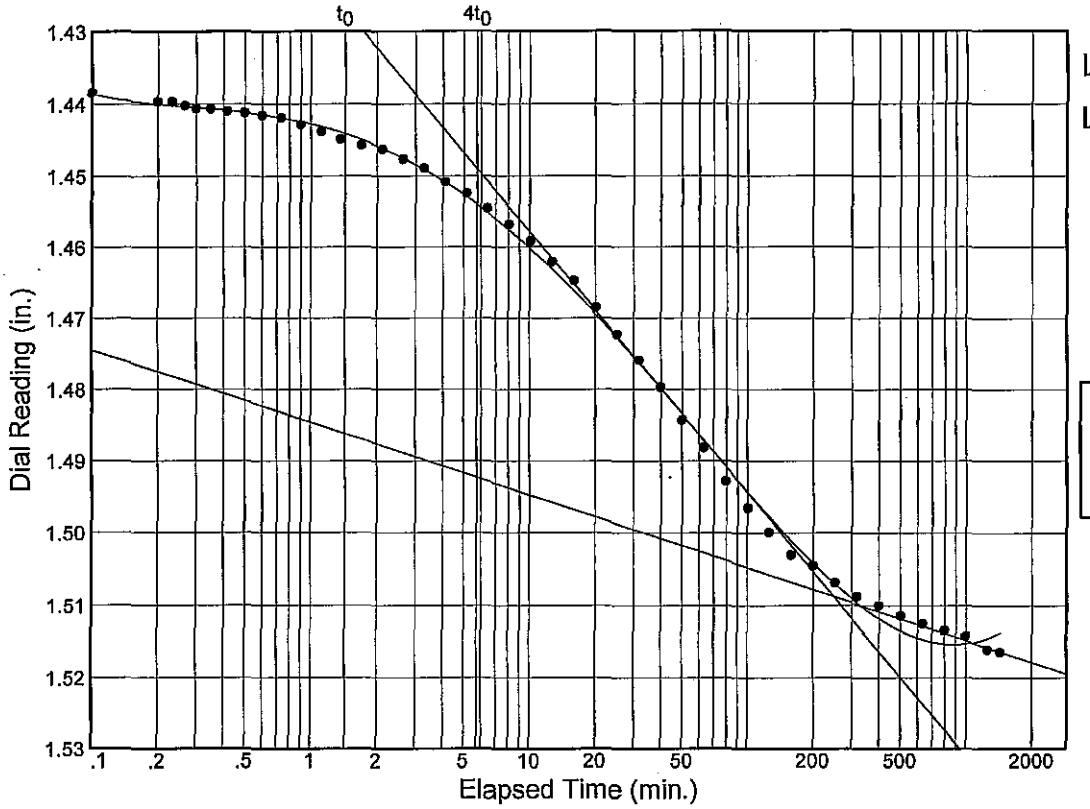
Source: NF05-69PCU Sample No.: 7B Elev./Depth: 20.8



Load No.= 6
Load= 2.00 tsf
D_0 = 1.33769
D_{50} = 1.38456
D_{100} = 1.43144
T_{50} = 24.15 min.

C_v @ T_{50}
0.01 ft.^{2}/day

C_α = 0.011



Load No.= 7
Load= 4.00 tsf
D_0 = 1.43430
D_{50} = 1.47153
D_{100} = 1.50876
T_{50} = 23.15 min.

C_v @ T_{50}
0.01 ft.^{2}/day

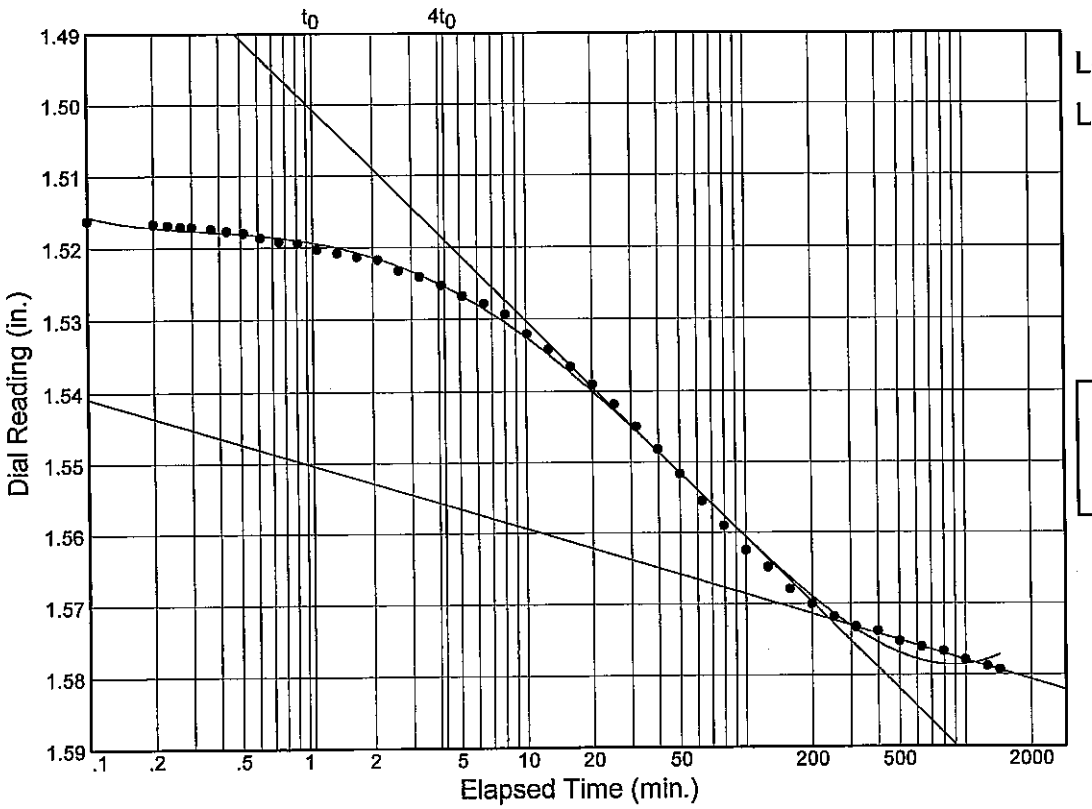
C_α = 0.014

"Confidential Information Protected & Confidential Work Product"

Dial Reading vs. Time

Project No.: 07-022122
Project: USACE - New Orleans To Venice Plaquemines Parish, La

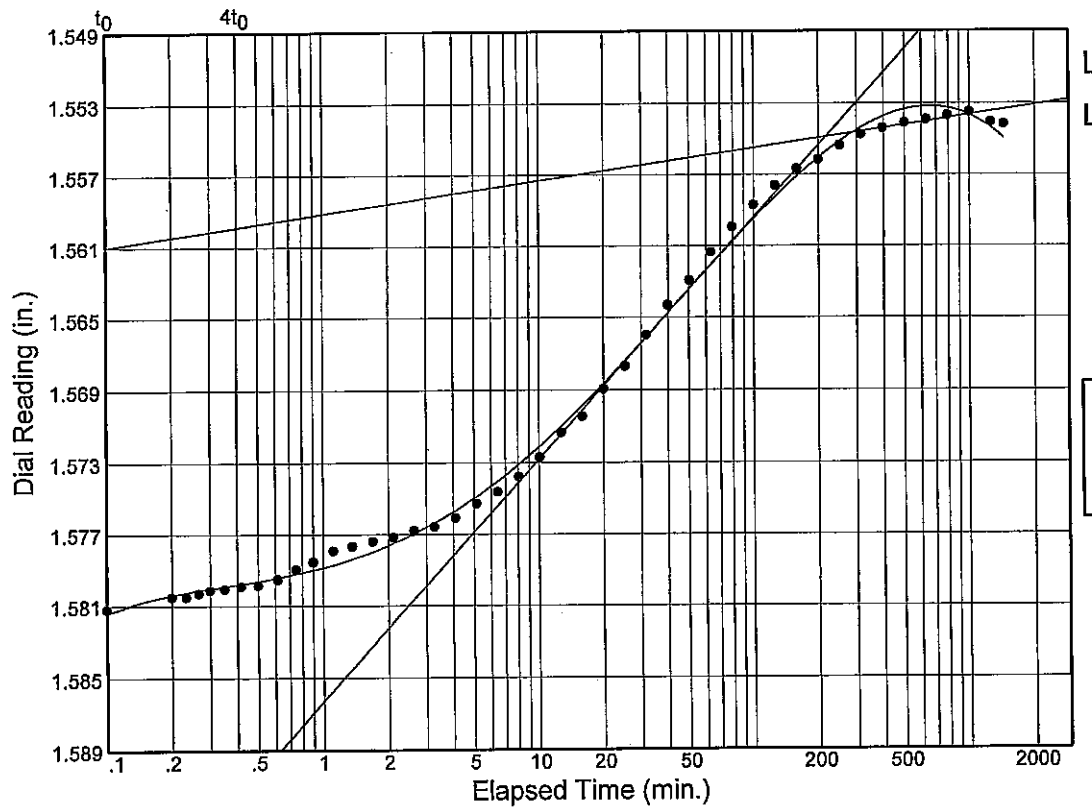
Source: NF05-69PCU Sample No.: 7B Elev./Depth: 20.8



Load No.= 8
Load= 8.00 tsf
D_0 = 1.51315
D_{50} = 1.54261
D_{100} = 1.57207
T_{50} = 24.83 min.

C_v @ T_{50}
0.01 ft.^{2}/day

C_α = 0.014



Load No.= 9
Load= 2.00 tsf
D_0 = 1.58311
D_{50} = 1.56898
D_{100} = 1.55486
T_{50} = 18.92 min.

C_v @ T_{50}
0.01 ft.^{2}/day

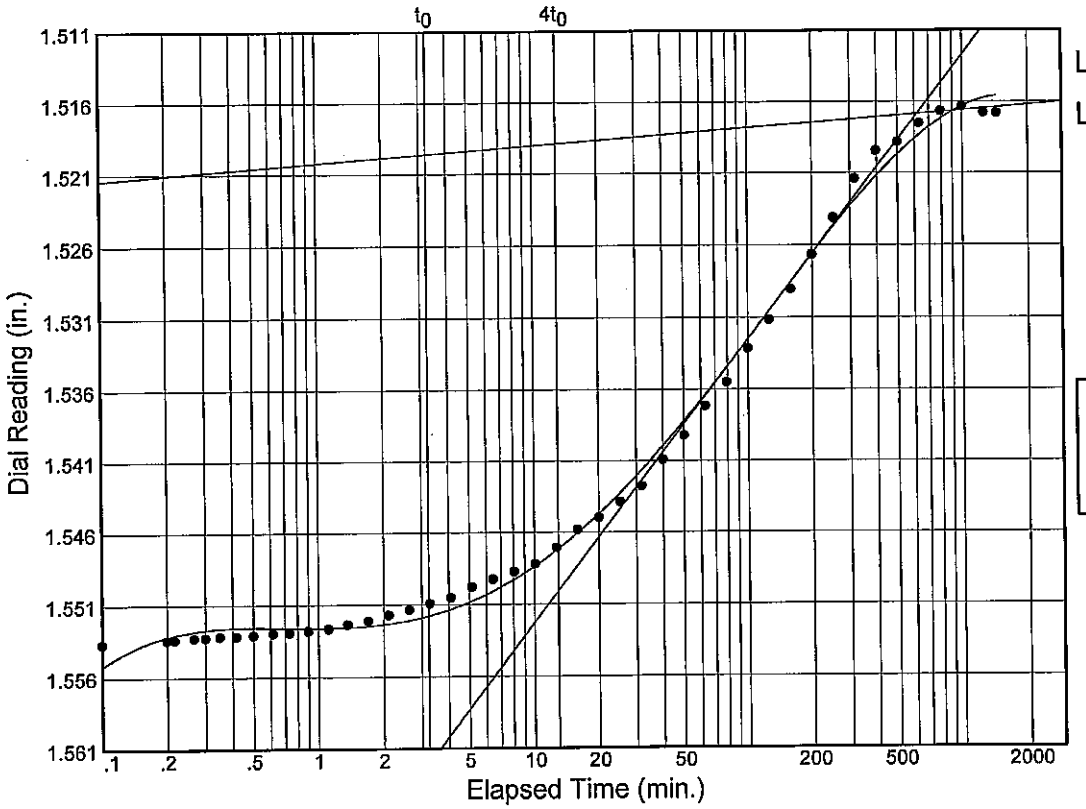
Figure

"Confidential Information: Privileged & Confidential Work Product"

Dial Reading vs. Time

Project No.: 07-022122
Project: USACE - New Orleans To Venice Plaquemines Parish, La

Source: NF05-69PCU Sample No.: 7B Elev./Depth: 20.8



Load No.= 10
Load= 0.50 tsf
D_0 = 1.55644
D_{50} = 1.53663
D_{100} = 1.51682
T_{50} = 61.47 min.

C_v @ T_{50}
0.00 ft.^{2}/day

"Confidential Information Prepared for FREEPORT LNG & Confidential Work Product"

Figure

CONSOLIDATION TEST DATA

Client: US Army Corps of Engineers
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Contract No. W912P8-07-D-0022
Task Order 122
Project Number: 07-022122

Sample Data

Source: NF05-69PCU
Sample No.: 7B
Elev. or Depth: 20.8 **Sample Length(in./cm.):**
Location:
Description: SO GR CH4 W/ ARS ML, SIF
Liquid Limit: 92 **Plasticity Index:** 68
USCS: CH4 **AASHTO:** **Figure No.:**
Testing Remarks: Tested by: ALJ
Calculated by: WJY
Checked by: WJY

Test Specimen Data

TOTAL SAMPLE		BEFORE TEST	AFTER TEST
Wet w+t =	181.46 g.	Consolidometer # = 11	Wet w+t = 358.47 g.
Dry w+t =	100.00 g.		Dry w+t = 281.80 g.
Tare Wt. =	.00 g.	Spec. Gravity = 2.76	Tare Wt. = 111.36 g.
Height =	1.01 in.	Height = 1.01 in.	
Diameter =	4.00 in.	Diameter = 3.99 in.	
Weight =	314.57 g.	Defl. Table = n/a	
Moisture =	81.5 %	Ht. Solids = 0.3049 in.	Moisture = 45.0 %
Wet Den. =	94.7 pcf	Dry Wt. = 172.64 g.*	Dry Wt. = 170.44 g.
Dry Den. =	52.2 pcf	Void Ratio = 2.300	Void Ratio = 1.167
		Saturation = 97.7 %	

* Initial dry weight used in calculations

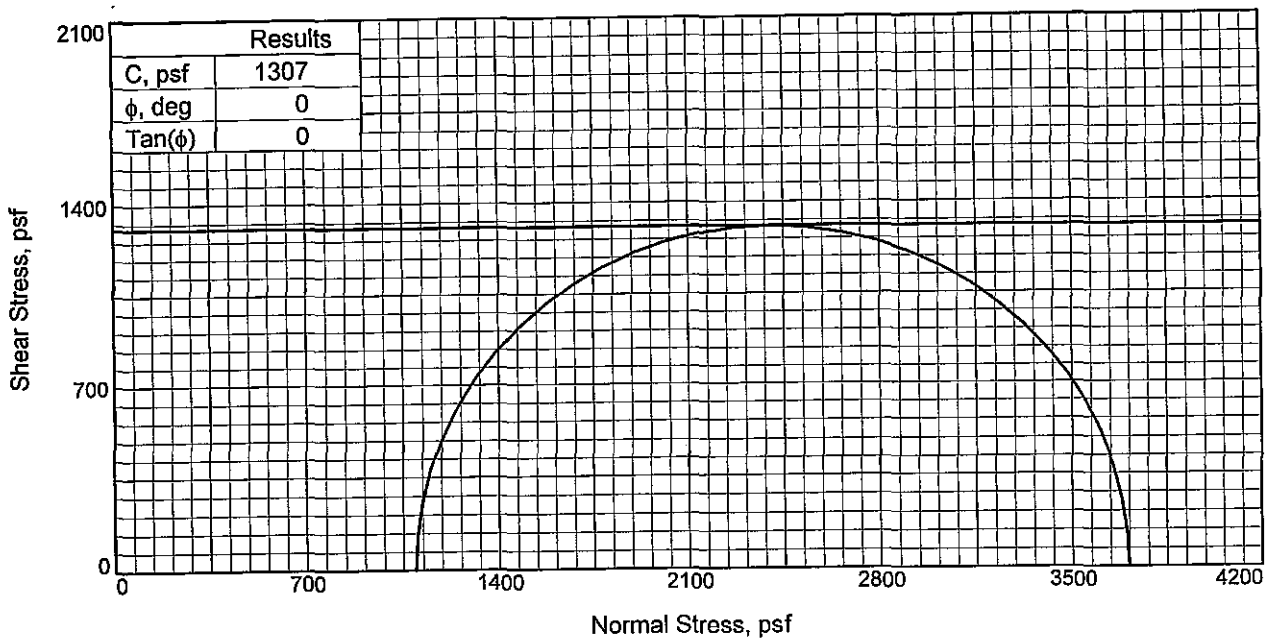
End-of-Load Summary

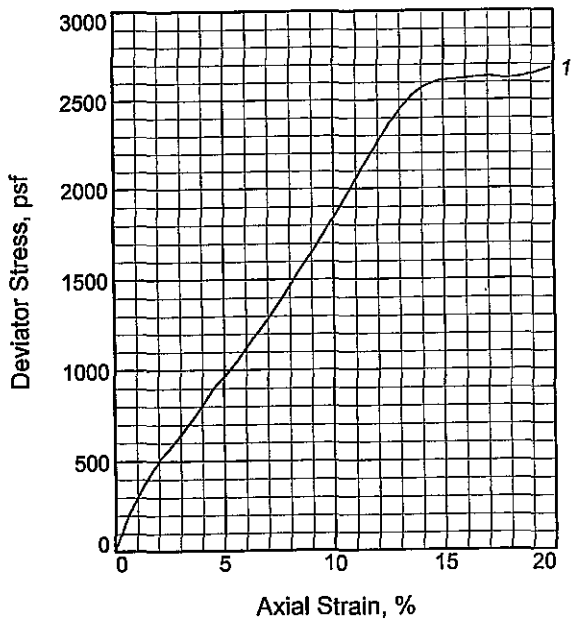
Pressure (tsf)	Final Dial (in.)	Machine Defl. (in.)	C_v (ft.^{2}/day)	C_α	Void Ratio	% Compression /Swell
start	1.17114				2.300	
0.03	1.17126	0.00000			2.300	0.0 Comprs.
0.13	1.17885	0.00000	0.24	0.000	2.275	0.8 Comprs.
0.25	1.18574	0.00000	0.32	0.001	2.252	1.5 Comprs.
0.50	1.19851	0.00000	0.46	0.002	2.210	2.7 Comprs.
1.00	1.34303	0.00000	0.01	0.017	1.736	17.1 Comprs.
2.00	1.43836	0.00000	0.01	0.011	1.424	26.6 Comprs.
4.00	1.51657	0.00000	0.01	0.014	1.167	34.3 Comprs.
8.00	1.57933	0.00000	0.01	0.014	0.962	40.6 Comprs.

"Confidential Information: Privileged & Confidential Work Product"

Pressure (tsf)	Final Dial (in.)	Machine Defl. (in.)	C_v ($ft.^2$/day)	C_α	Void Ratio	% Compression /Swell
2.00	1.55418	0.00000	0.01		1.044	38.1 Comprs.
0.50	1.51680	0.00000	0.00		1.167	34.3 Comprs.

C_c = 1.67 P_c = 0.53 tsf C_r = 0.17





Sample No.		1
Initial	Water Content, %	31.6
	Dry Density, pcf	92.0
	Saturation, %	103.9
	Void Ratio	0.8118
	Diameter, in.	1.418
	Height, in.	3.075
At Test	Water Content, %	31.6
	Dry Density, pcf	92.0
	Saturation, %	103.9
	Void Ratio	0.8118
	Diameter, in.	1.418
	Height, in.	3.075
Strain rate, %/min.		1.00
Back Pressure, psi		0.00
Cell Pressure, psi		7.60
Fail. Stress, psf		2613
Strain, %		14.9
Ult. Stress, psf		2613
Strain, %		
σ_1 Failure, psf		3708
σ_3 Failure, psf		1095

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: GR ML W/ LNS & LYS CH, WD

LL= NP **PI=** NP
Assumed Specific Gravity= 2.67
Remarks: OTHER TESTS PERFORMED PER ASTM D6913

Figure _____

Client: U.S. Army Corps of Engineers

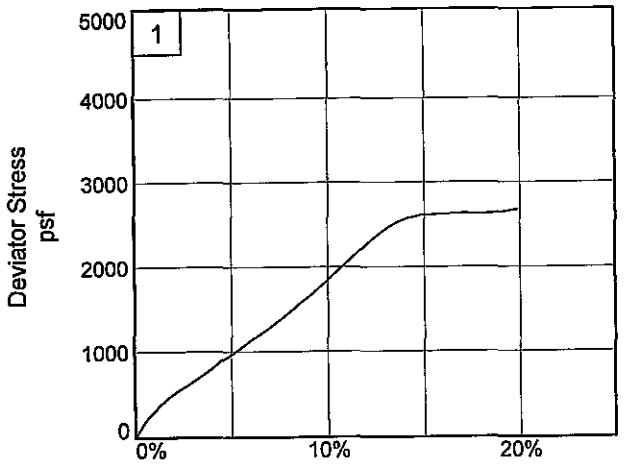
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-69PCU **Depth:** 28.8
Sample Number: 9B
Proj. No.: 07-022122 **Date Sampled:** 1/5/10

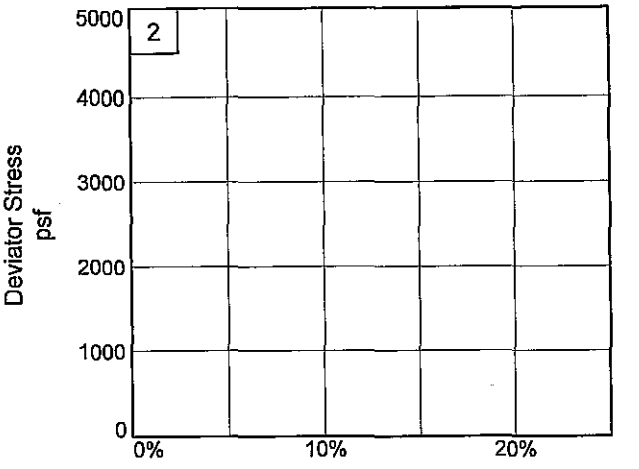
TRIAXIAL SHEAR TEST REPORT

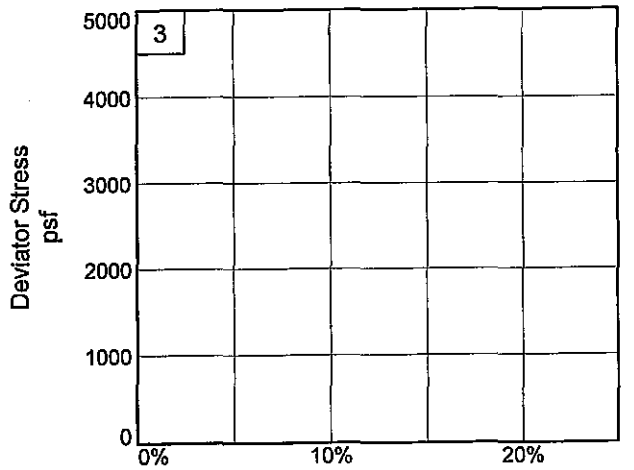
FFEBJV, LLC

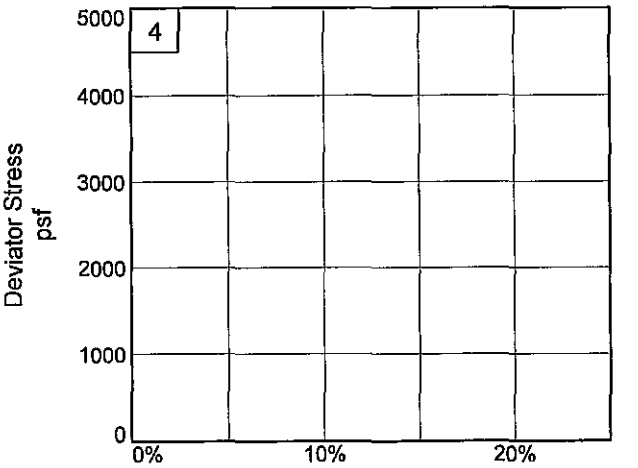
Tested By: ARS **Checked By:** WH

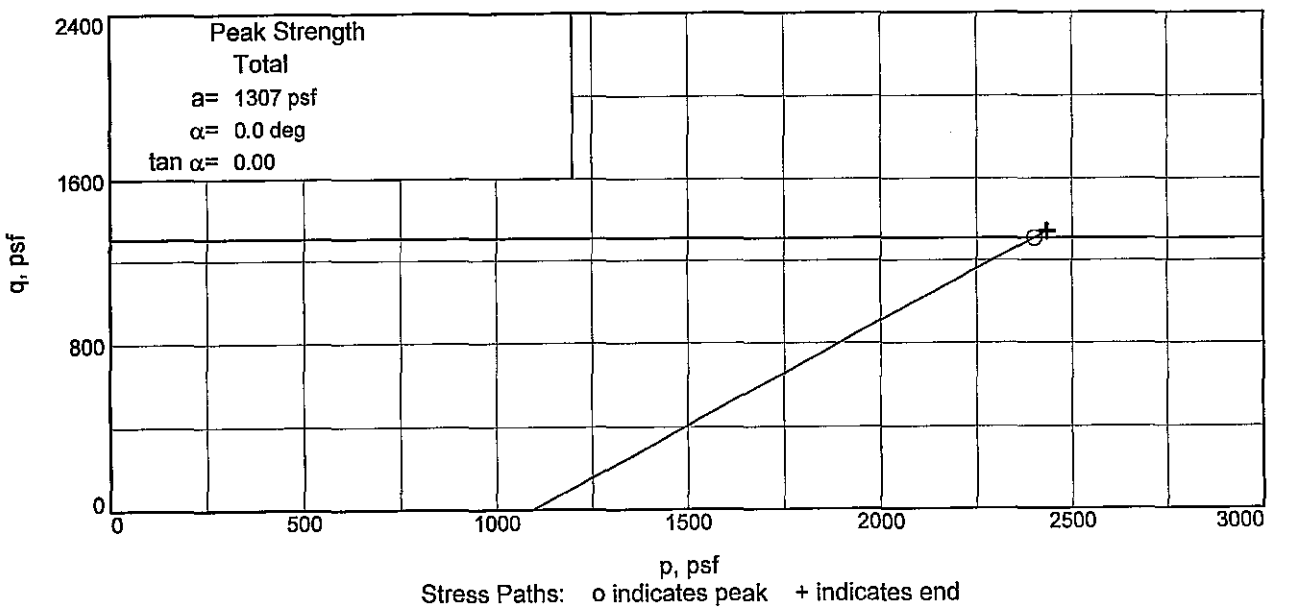
"Confidential Information, Privileged & Confidential Work Product"











Stress Paths: o indicates peak + indicates end

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

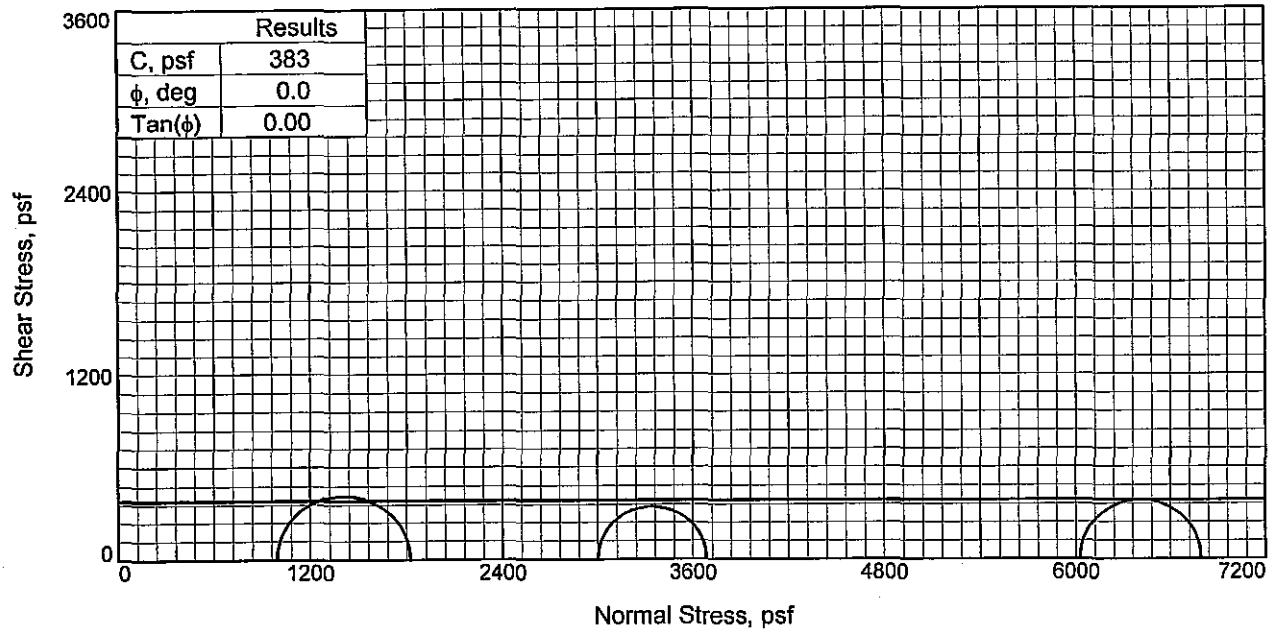
Source of Sample: NF05-69PCU **Depth:** 28.8 **Sample Number:** 9B

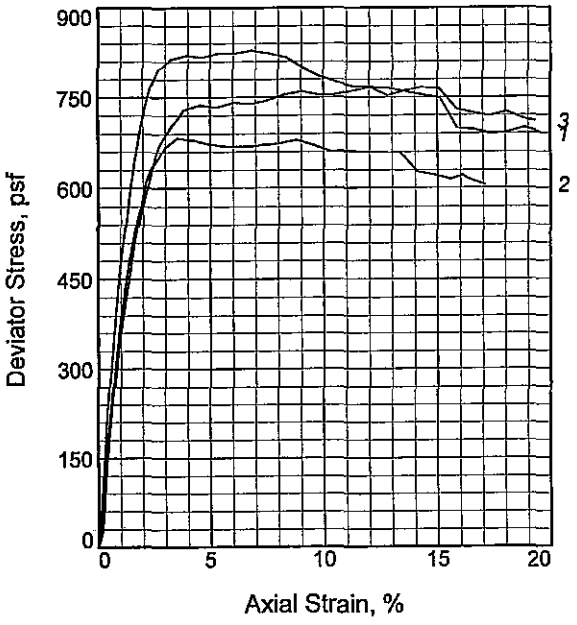
Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: ARS **Checked By:** VVH

"Confidential Information: Privileged & Confidential Work Product"





Sample No.		1	2	3
Initial	Water Content, %	39.6	40.4	41.8
	Dry Density, pcf	82.7	82.3	80.2
	Saturation, %	102.9	104.1	102.3
	Void Ratio	1.0386	1.0481	1.1020
	Diameter, in.	1.401	1.395	1.404
	Height, in.	3.096	3.098	3.092
At Test	Water Content, %	39.6	40.4	41.8
	Dry Density, pcf	82.7	82.3	80.2
	Saturation, %	102.9	104.1	102.3
	Void Ratio	1.0386	1.0481	1.1020
	Diameter, in.	1.401	1.395	1.404
	Height, in.	3.096	3.098	3.092
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.90	20.84	41.85
Fail. Stress, psf		828	683	766
Strain, %		6.8	3.5	12.1
Ult. Stress, psf		749	622	753
Strain, %				
σ_1 Failure, psf		1822	3684	6793
σ_3 Failure, psf		994	3001	6026

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: SO GR CH2 W/ LYS & ARS ML

LL= 50 **PL=** 20 **PI=** 30
Assumed Specific Gravity= 2.70
Remarks:

Client: U.S. Army Corps of Engineers

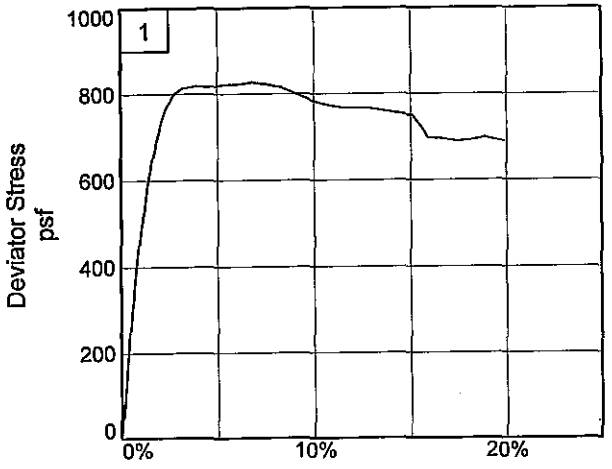
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-69PCU **Depth:** 32.4
Sample Number: 10B
Proj. No.: 07-022122 **Date Sampled:** 1/5/10

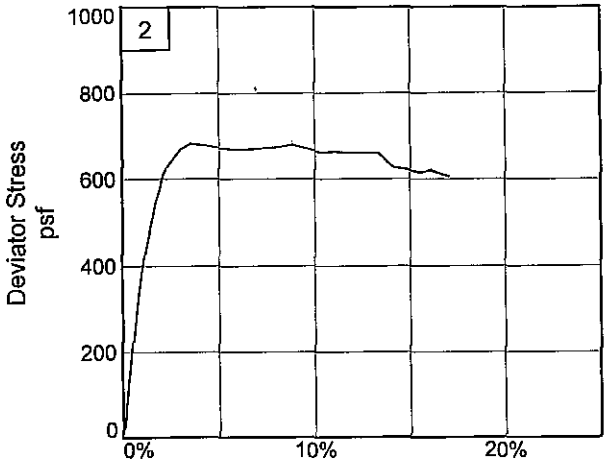
TRIAXIAL SHEAR TEST REPORT

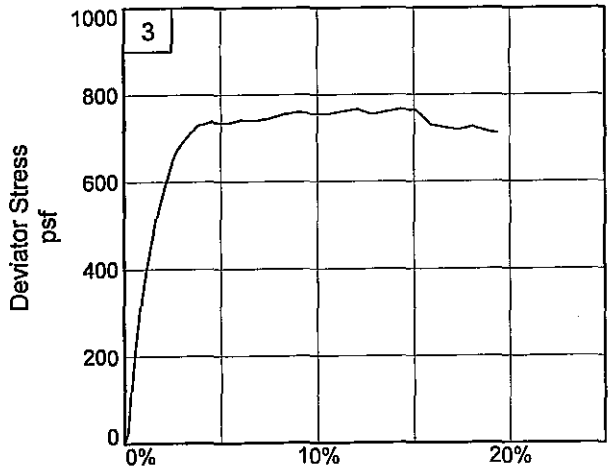
FFEBJV, LLC

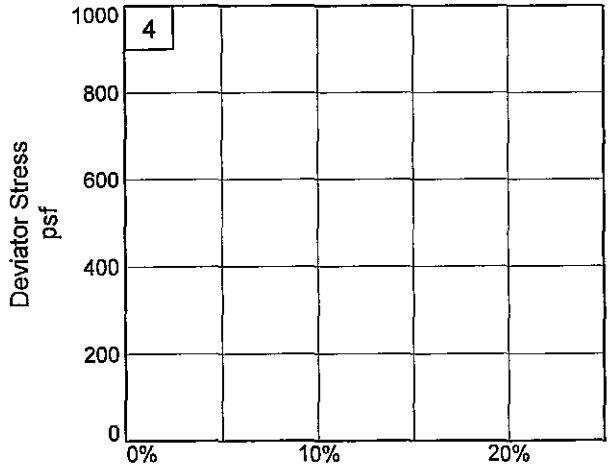
Figure _____

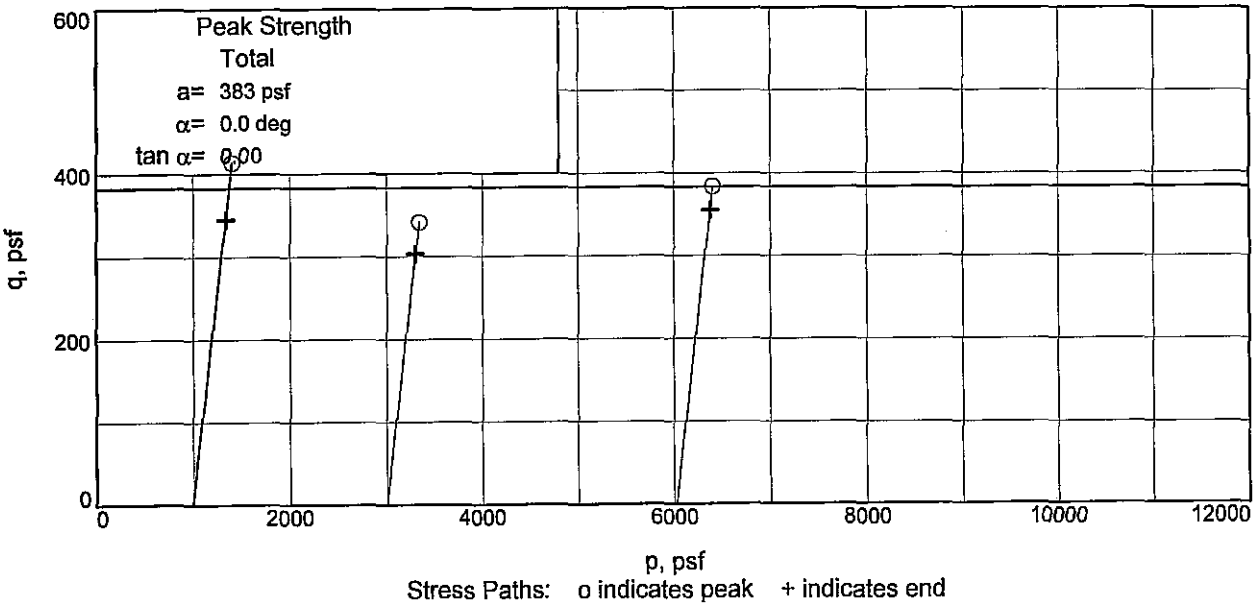
Checked By: WH "Confidential Information: Privileged & Confidential Work Product"











Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

Source of Sample: NF05-69PCU **Depth:** 32.4 **Sample Number:** 10B

Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Checked By: WH

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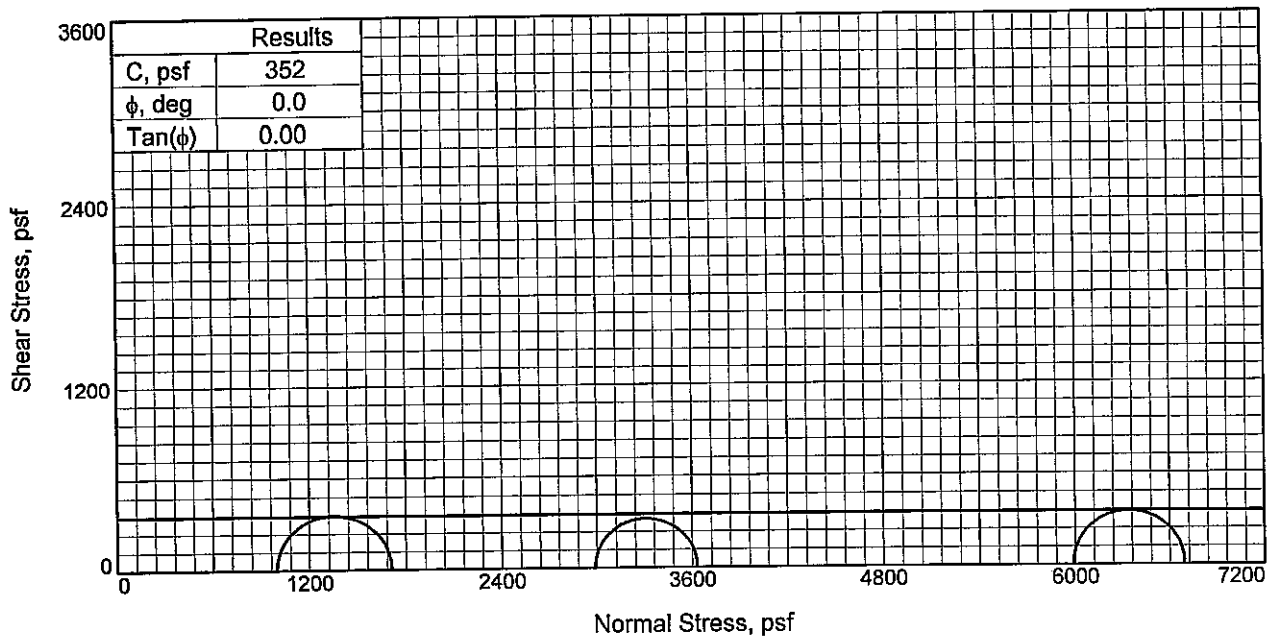
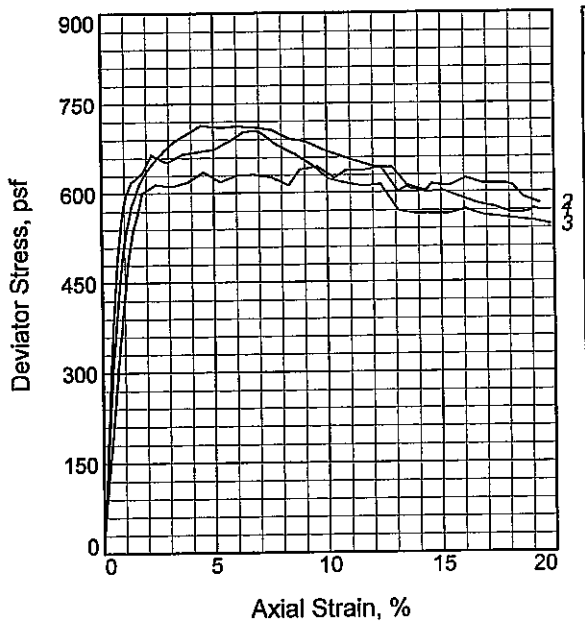




Sample No.		1	2	3
Initial	Water Content, %	62.1	61.1	65.2
	Dry Density, pcf	62.7	62.9	60.2
	Saturation, %	98.4	97.4	97.0
	Void Ratio	1.7285	1.7193	1.8413
	Diameter, in.	1.409	1.411	1.410
	Height, in.	3.101	3.099	3.104
At Test	Water Content, %	62.1	61.1	65.2
	Dry Density, pcf	62.7	62.9	60.2
	Saturation, %	98.4	97.4	97.0
	Void Ratio	1.7285	1.7193	1.8413
	Diameter, in.	1.409	1.411	1.410
	Height, in.	3.101	3.099	3.104
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.93	20.74	41.58
Fail. Stress, psf		713	644	705
Strain, %		4.5	9.6	6.8
Ult. Stress, psf		602	601	564
Strain, %				
σ_1 Failure, psf		1711	3631	6692
σ_3 Failure, psf		997	2987	5988

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: SO GR CH4 W/ LNS & LYS ML

LL= 91 **PL=** 28 **PI=** 63
Assumed Specific Gravity= 2.74
Remarks:

Figure _____

Client: U.S. Army Corps of Engineers

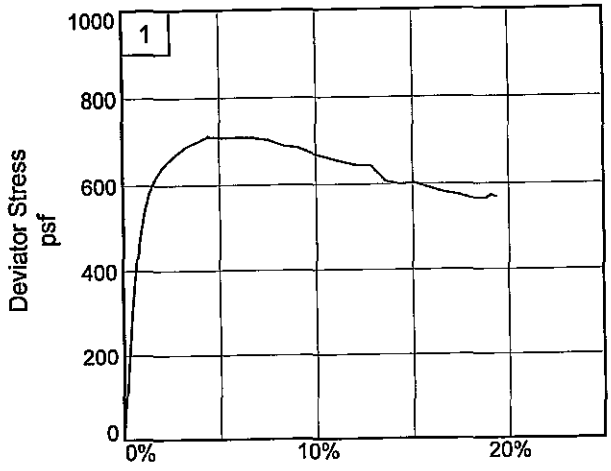
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-69PCU **Depth:** 38.6
Sample Number: 11D
Proj. No.: 07-022122 **Date Sampled:** 1/5/10

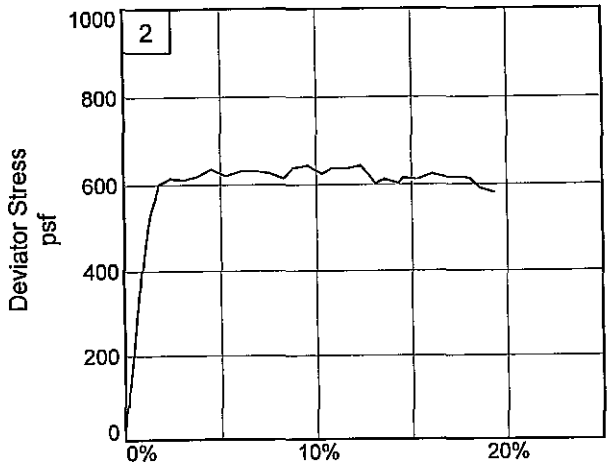
TRIAXIAL SHEAR TEST REPORT

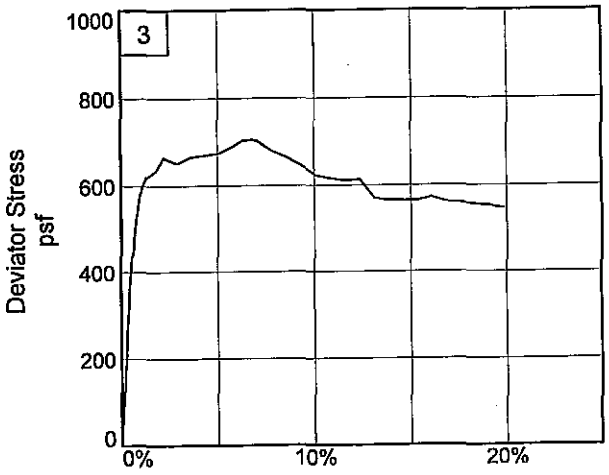
FFEBJV, LLC

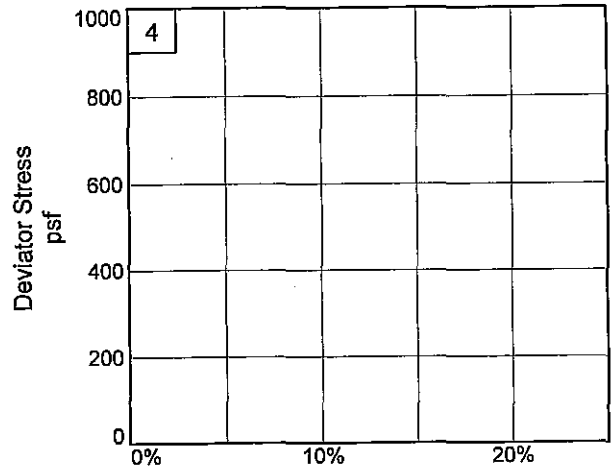
Tested By: ARS **Checked By:** WH

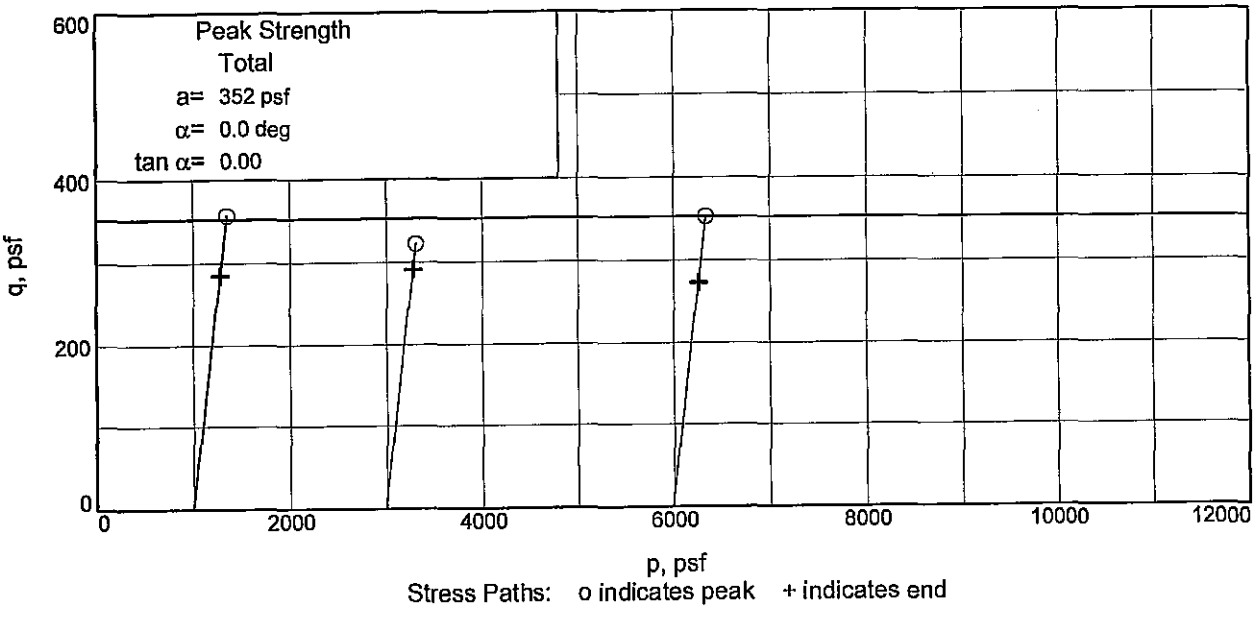
"Confidential Information - Privileged & Confidential Work Product"











Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La

Source of Sample: NF05-69PCU **Depth:** 38.6 **Sample Number:** 11D

Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: ARS **Checked By:** WH

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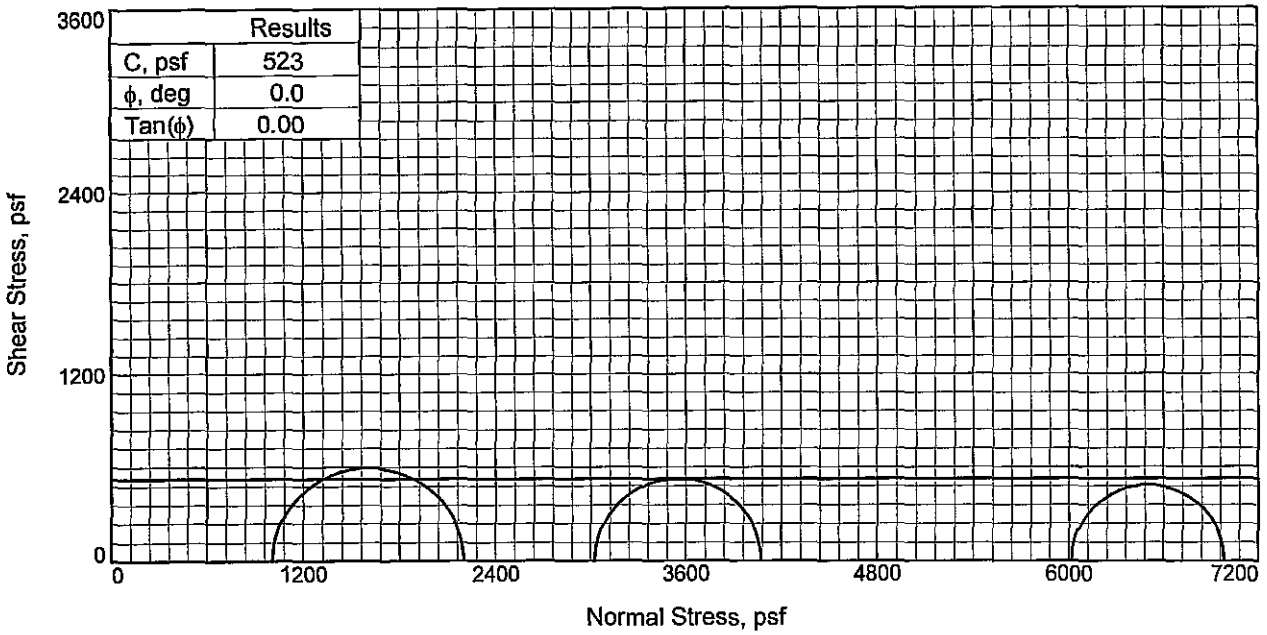
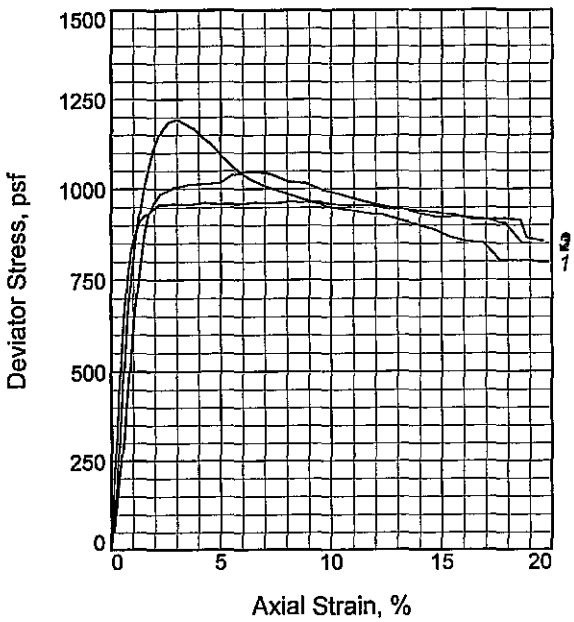




Sample No.		1	2	3
Initial	Water Content, %	51.1	50.2	51.8
	Dry Density, pcf	70.2	70.1	70.2
	Saturation, %	97.6	95.6	98.7
	Void Ratio	1.4353	1.4393	1.4373
	Diameter, in.	1.408	1.416	1.419
	Height, in.	3.103	3.104	3.086
At Test	Water Content, %	51.1	50.2	51.8
	Dry Density, pcf	70.2	70.1	70.2
	Saturation, %	97.6	95.6	98.7
	Void Ratio	1.4353	1.4393	1.4373
	Diameter, in.	1.408	1.416	1.419
	Height, in.	3.103	3.104	3.086
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		7.00	21.01	41.79
Fail. Stress, psf		1192	1049	966
Strain, %		2.9	6.3	8.1
Ult. Stress, psf		868	934	921
Strain, %				
σ_1 Failure, psf		2200	4074	6984
σ_3 Failure, psf		1008	3025	6018

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: M GR CH4

LL= 73 **PL=** 25 **PI=** 48
Assumed Specific Gravity= 2.74
Remarks:

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-69PCU **Depth:** 42.6
Sample Number: 12C
Proj. No.: 07-022122 **Date Sampled:** 1/5/10

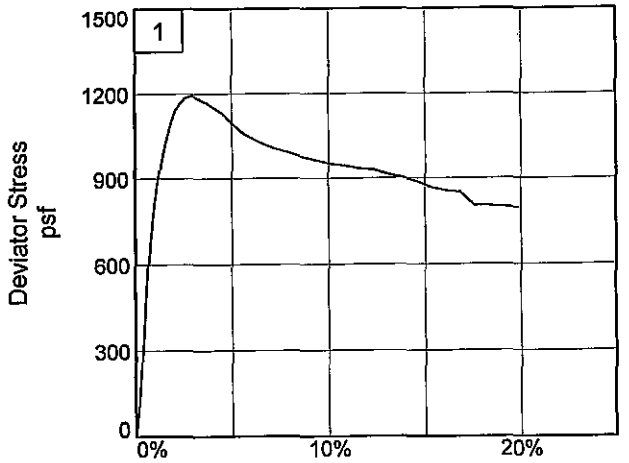
TRIAXIAL SHEAR TEST REPORT

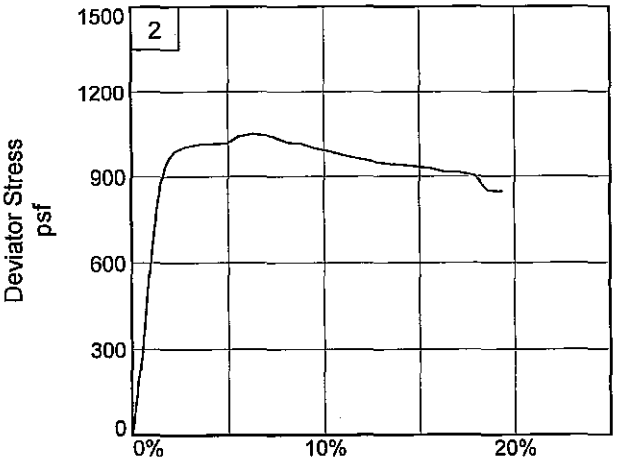
FFEBJV, LLC

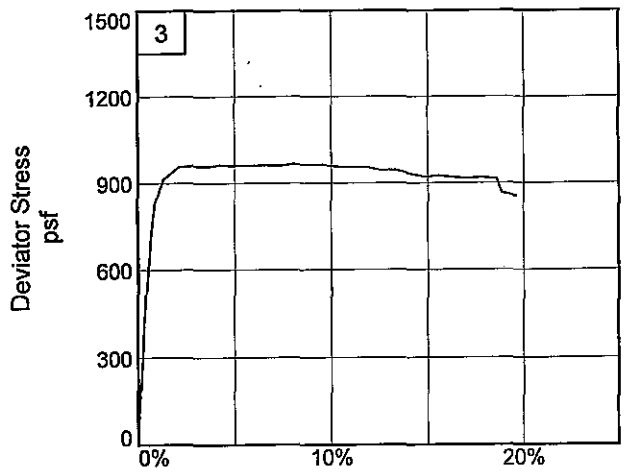
Figure _____

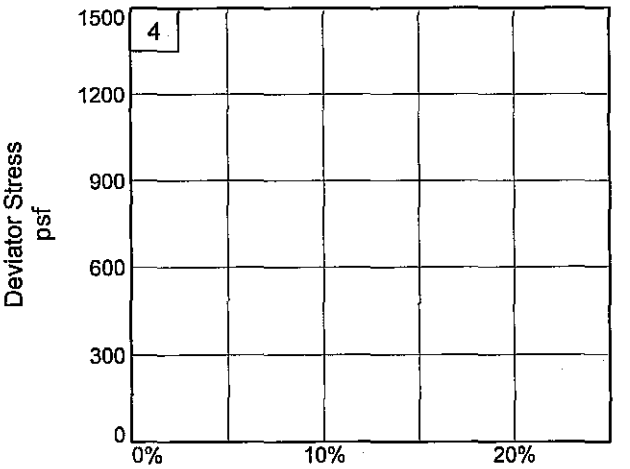
Tested By: ARS **Checked By:** WH

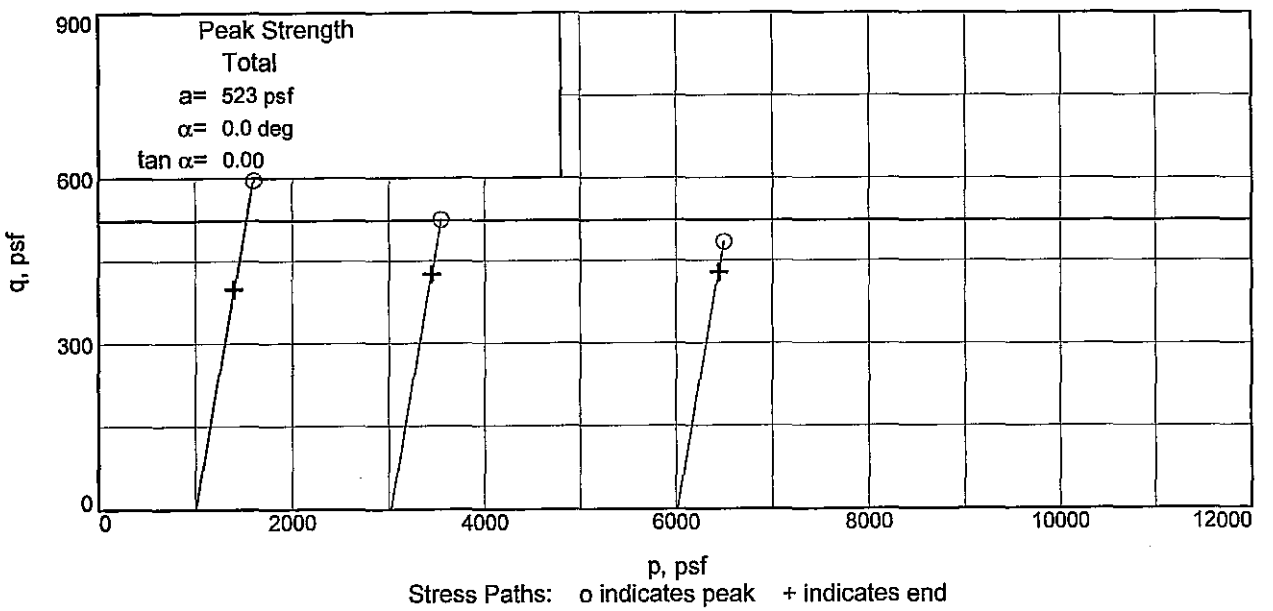
"Confidential Information: Privileged & Confidential Work Product"









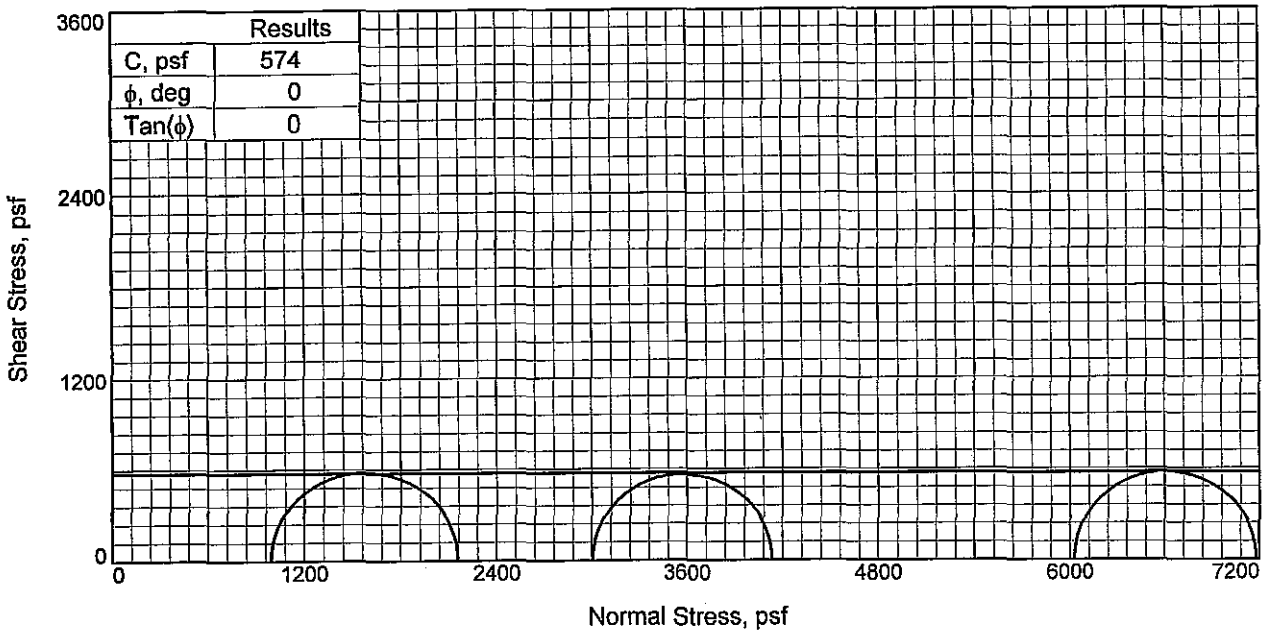


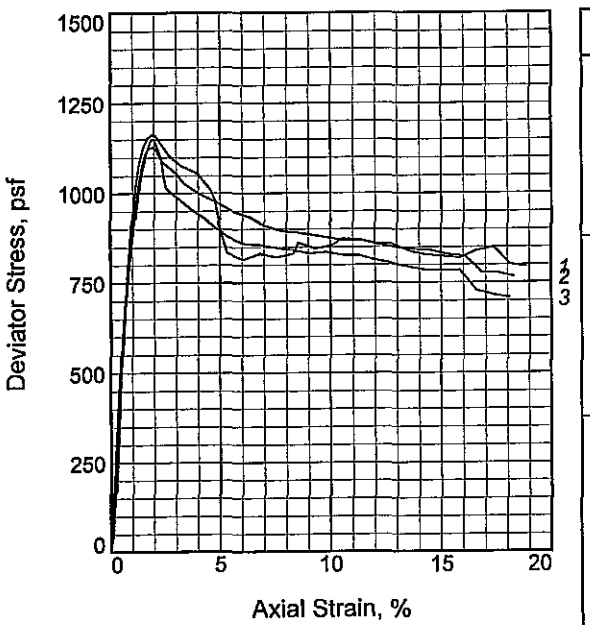
Client: U.S. Army Corps of Engineers
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Source of Sample: NF05-69PCU **Depth:** 42.6 **Sample Number:** 12C
Project No.: 07-022122 **Figure** _____

FFEBJV, LLC

Tested By: ARS **Checked By:** VVH

"Confidential Information: Privileged & Confidential Work Product"





Sample No.		1	2	3
Initial	Water Content, %	62.3	59.4	67.3
	Dry Density, pcf	62.9	63.6	59.6
	Saturation, %	99.3	96.3	98.6
	Void Ratio	1.7210	1.6901	1.8707
	Diameter, in.	1.413	1.414	1.416
	Height, in.	3.103	3.103	3.105
At Test	Water Content, %	62.3	59.4	67.3
	Dry Density, pcf	62.9	63.6	59.6
	Saturation, %	99.3	96.3	98.6
	Void Ratio	1.7210	1.6901	1.8707
	Diameter, in.	1.413	1.414	1.416
	Height, in.	3.103	3.103	3.105
Strain rate, %/min.		1.00	1.00	1.00
Back Pressure, psi		0.00	0.00	0.00
Cell Pressure, psi		6.90	20.87	41.87
Fail. Stress, psf		1162	1129	1151
Strain, %		1.9	1.9	1.9
Ult. Stress, psf		816	829	784
Strain, %				
σ_1 Failure, psf		2157	4135	7180
σ_3 Failure, psf		994	3006	6029

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: M GR CH4 W/ LNS ML

LL= 84 **PL=** 26 **PI=** 58
Assumed Specific Gravity= 2.74
Remarks:

Client: U.S. Army Corps of Engineers

Project: USACE - New Orleans To Venice Plaquemines Parish, La
Jefferson Parish, La
Source of Sample: NF05-69PCU **Depth:** 48.8
Sample Number: 14B
Proj. No.: 07-022122 **Date Sampled:** 1/5/10

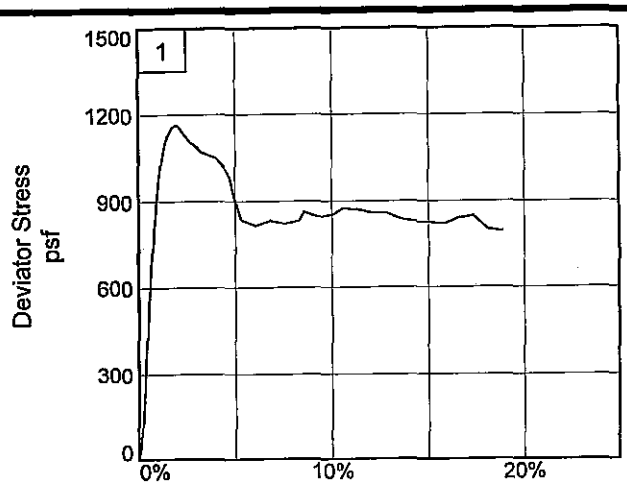
TRIAXIAL SHEAR TEST REPORT

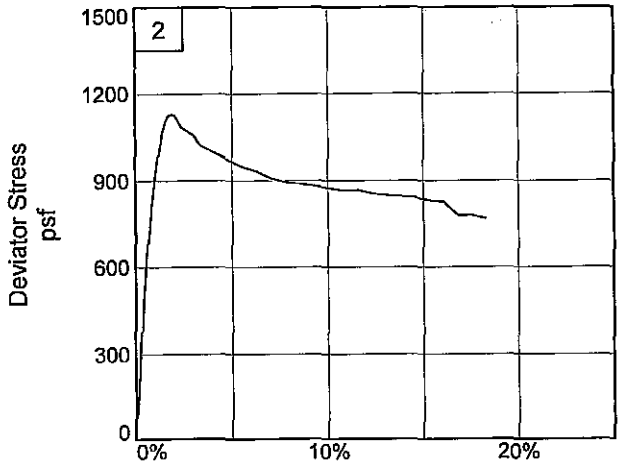
FFEBJV, LLC

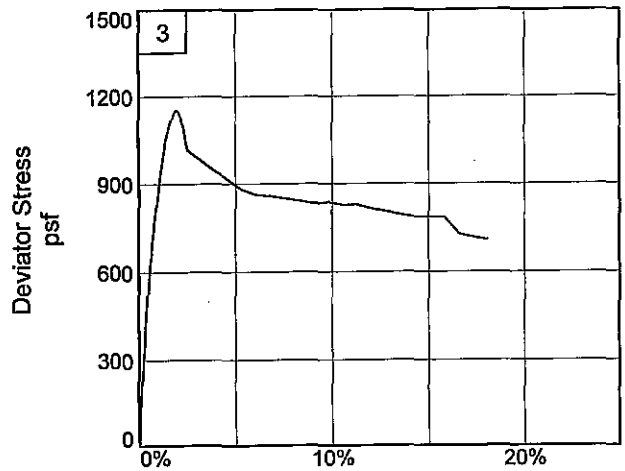
Figure _____

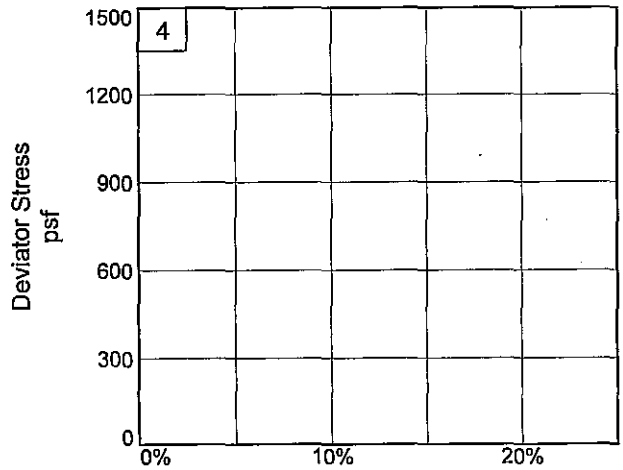
Tested By: ARS **Checked By:** WH

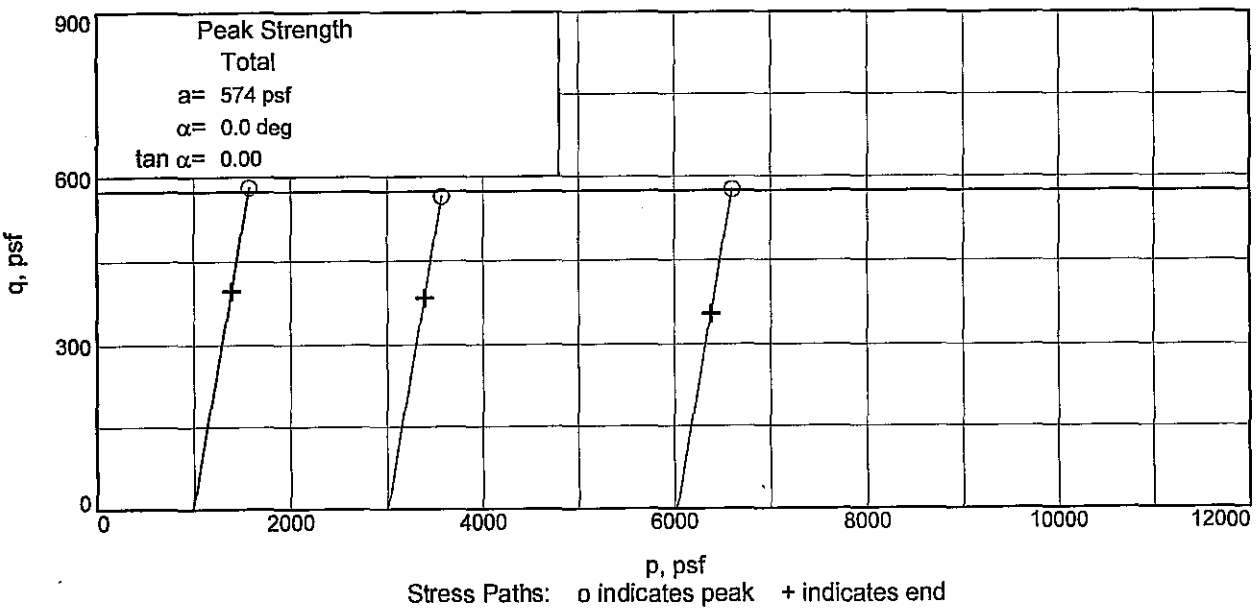
"Confidential Information, Privileged & Confidential Work Product"











Client: U.S. Army Corps of Engineers
Project: USACE - New Orleans To Venice Plaquemines Parish, La
Source of Sample: NF05-69PCU **Depth:** 48.8 **Sample Number:** 14B
Project No.: 07-022122 **Figure** _____ **FFEBJV, LLC**

Tested By: ARS **Checked By:** WH

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GeoEngineers

"Confidential Information: Privileged & Confidential Work Product"

VICKSBURG DISTRICT

OPERATOR Shinpaugh | CONE NUMBER DDG1069 | LOCATION N 29 38 53.2 W 89 59 50.0 EL 5.526

Date&Time 8/2/2009 10:42:09 AM | HOLE NUMBER NF05-93CC | NC=20

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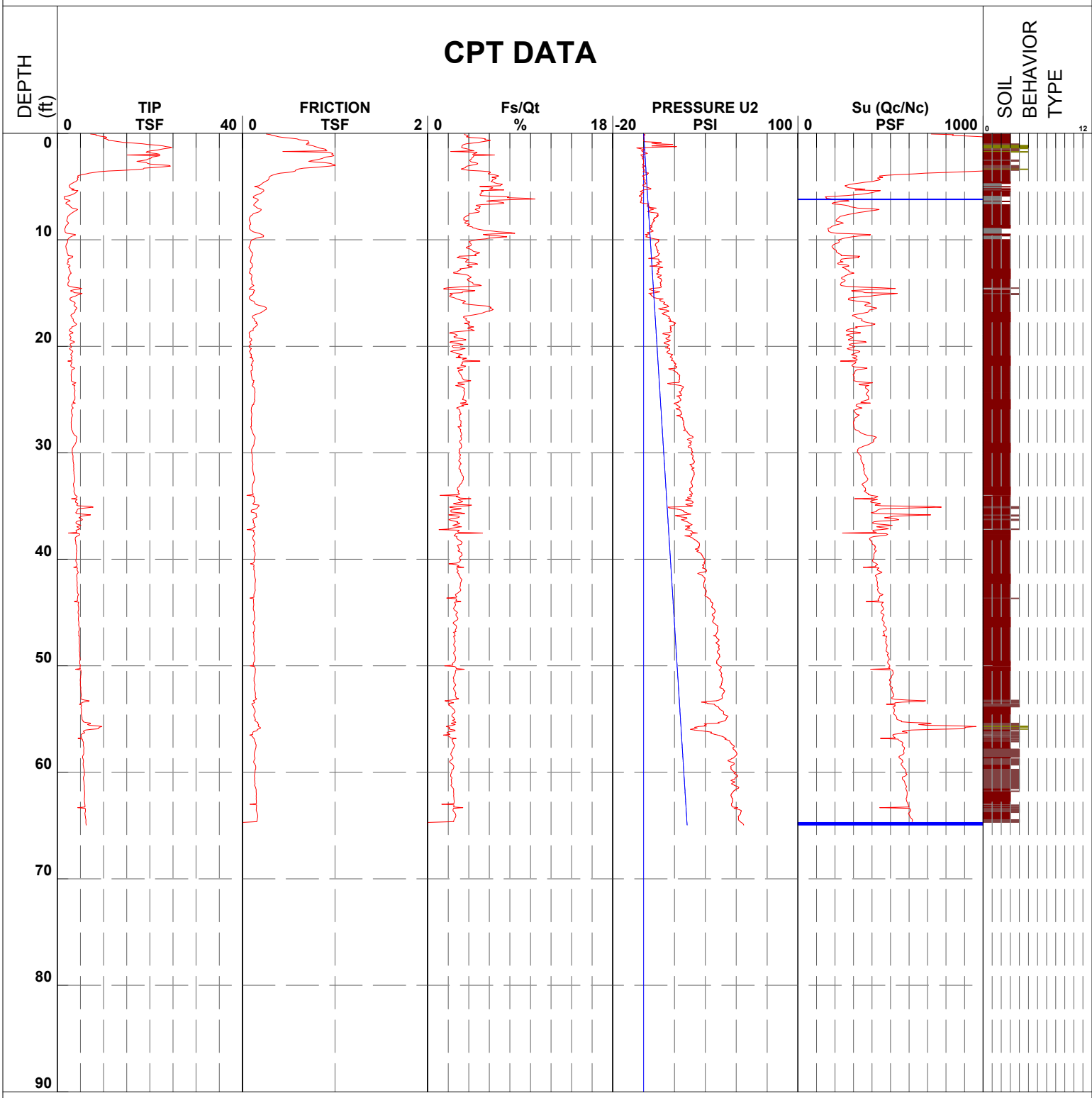

1 - sensitive fine grained
2 - organic material
3 - clay
4 - silty clay to clay
5 - clayey silt to silty clay
6 - sandy silt to clayey silt
7 - silty sand to sandy silt
8 - sand to silty sand
9 - sand
10 - gravelly sand to sand
11 - very stiff fine grained (*)
12 - sand to clayey sand (*)

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VICKSBURG DISTRICT

OPERATOR Shinpaugh | CONE NUMBER DDG1069 | LOCATION N 29 38 53.7 W 89 59 49.9 EL -3.7

Date&Time 8/2/2009 1:19:40 PM | HOLE NUMBER NF05-94PCC | NC=20

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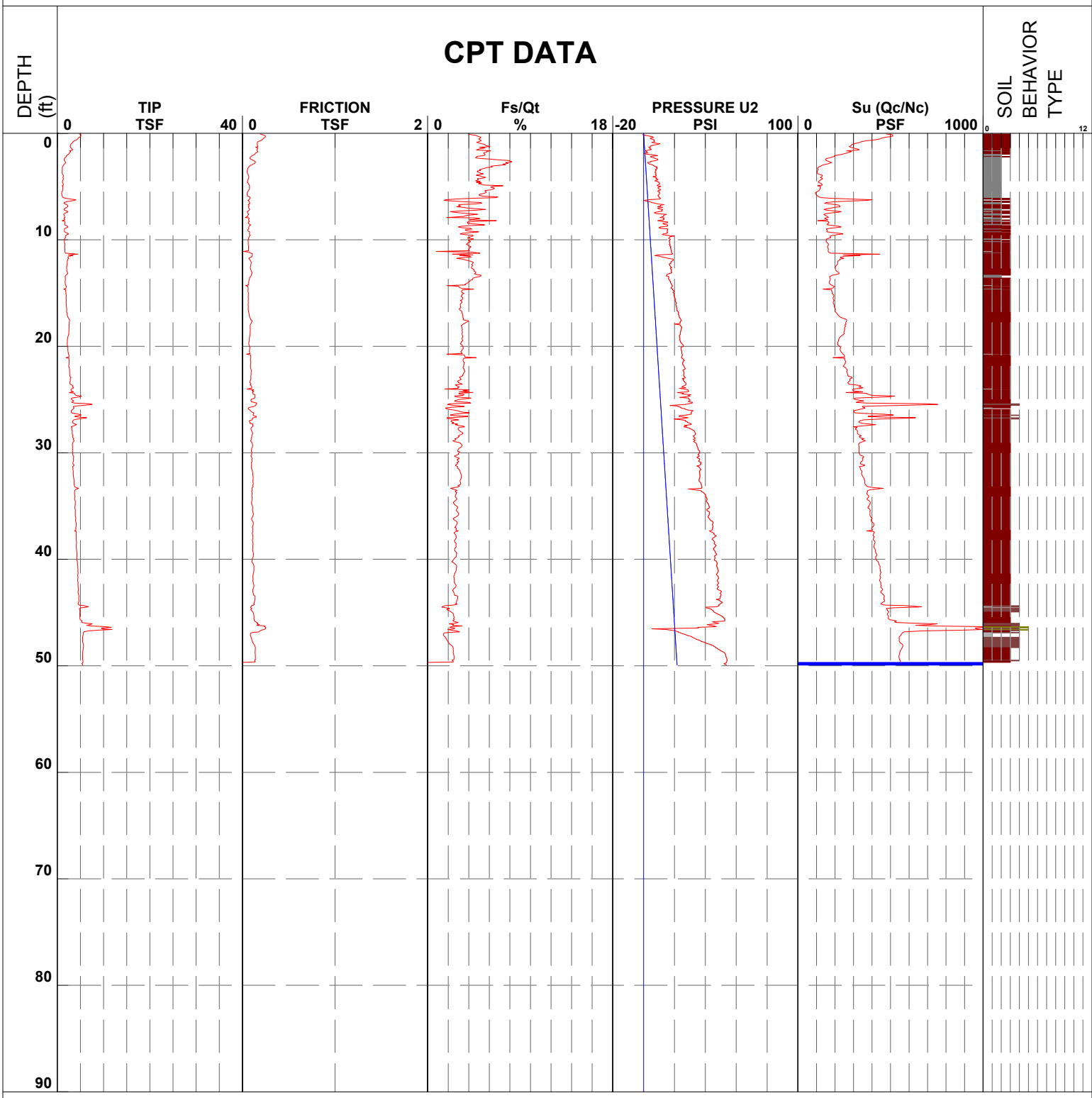

1 - sensitive fine grained
2 - organic material
3 - clay
4 - silty clay to clay
5 - clayey silt to silty clay
6 - sandy silt to clayey silt
7 - silty sand to sandy silt
8 - sand to silty sand
9 - sand
10 - gravelly sand to sand
11 - very stiff fine grained (*)
12 - sand to clayey sand (*)

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VICKSBURG DISTRICT

OPERATOR Shinpaugh | CONE NUMBER DDG1069 | LOCATION N 29 38 50.3 W 89 59 46.0 EL 6.7

Date&Time 8/2/2009 2:28:17 PM | HOLE NUMBER NF05-95CC | NC=20

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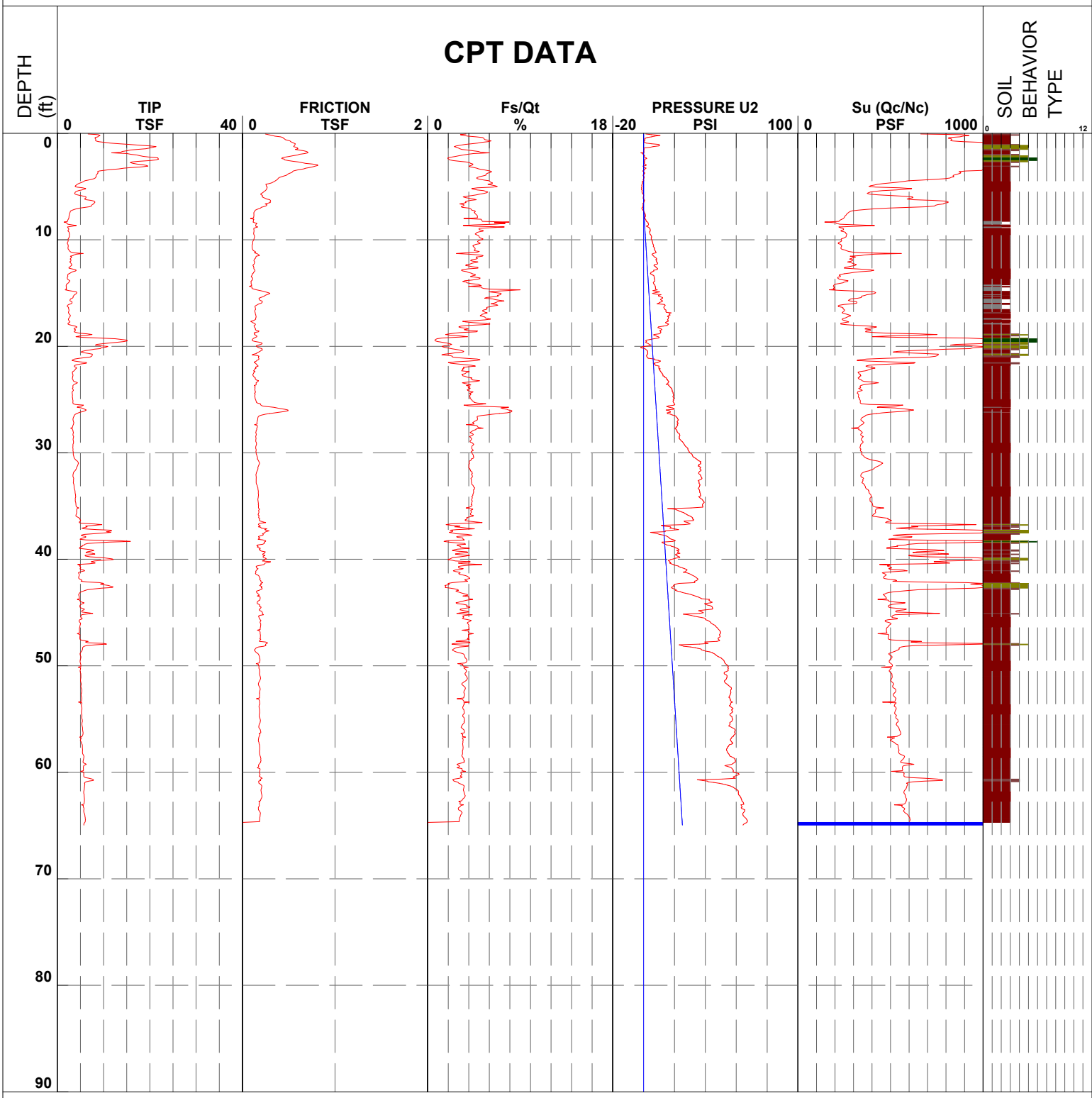

1 - sensitive fine grained
2 - organic material
3 - clay
4 - silty clay to clay
5 - clayey silt to silty clay
6 - sandy silt to clayey silt
7 - silty sand to sandy silt
8 - sand to silty sand
9 - sand
10 - gravelly sand to sand
11 - very stiff fine grained (*)
12 - sand to clayey sand (*)

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VICKSBURG DISTRICT

OPERATOR Shinpaugh | CONE NUMBER DDG1069 | LOCATION N 29 38 46.9 W 89 59 41.2 EL 8.1

Date&Time 8/3/2009 9:06:43 AM | HOLE NUMBER NF05-96CC | NC=20

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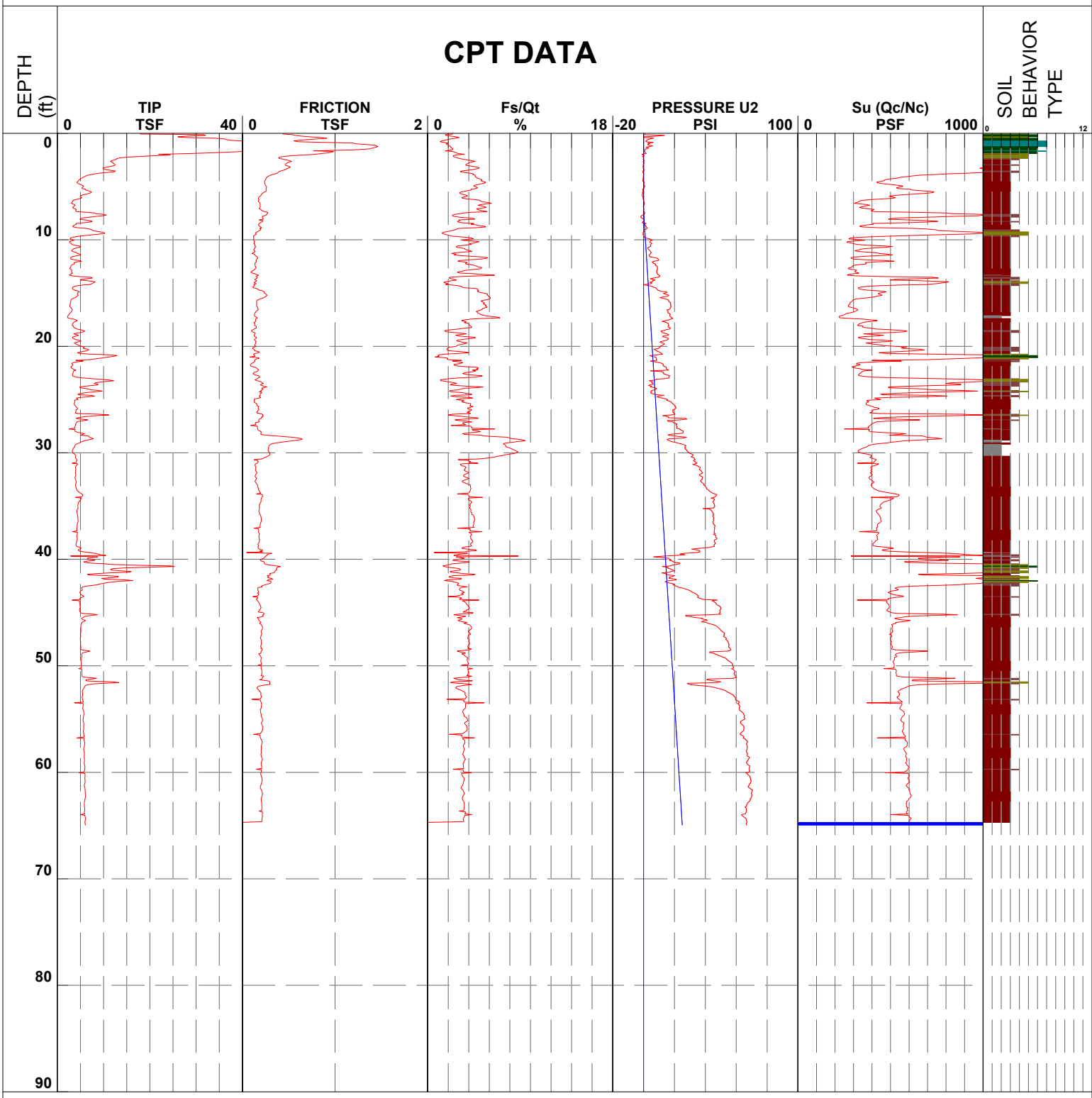

1 - sensitive fine grained
2 - organic material
3 - clay
4 - silty clay to clay
5 - clayey silt to silty clay
6 - sandy silt to clayey silt
7 - silty sand to sandy silt
8 - sand to silty sand
9 - sand
10 - gravelly sand to sand
11 - very stiff fine grained (*)
12 - sand to clayey sand (*)

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VICKSBURG DISTRICT

OPERATOR Shinpaugh | CONE NUMBER DDG1069 | LOCATION N 29 38 47.2 W 89 59 40.9 EL -3.4

Date&Time 8/3/2009 10:34:20 AM | HOLE NUMBER NF05-97PCC | NC=20

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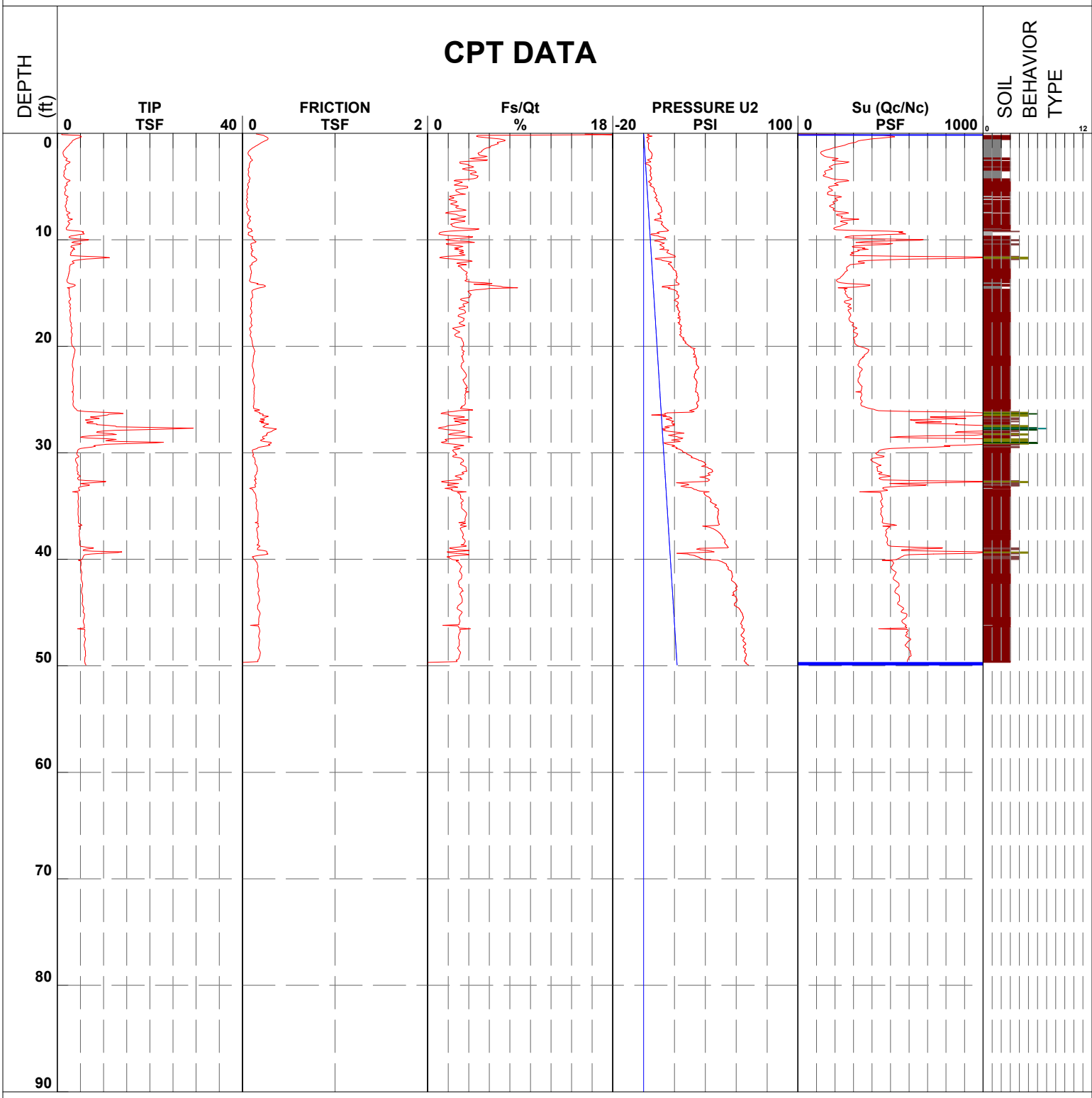

1 - sensitive fine grained
2 - organic material
3 - clay
4 - silty clay to clay
5 - clayey silt to silty clay
6 - sandy silt to clayey silt
7 - silty sand to sandy silt
8 - sand to silty sand
9 - sand
10 - gravelly sand to sand
11 - very stiff fine grained (*)
12 - sand to clayey sand (*)

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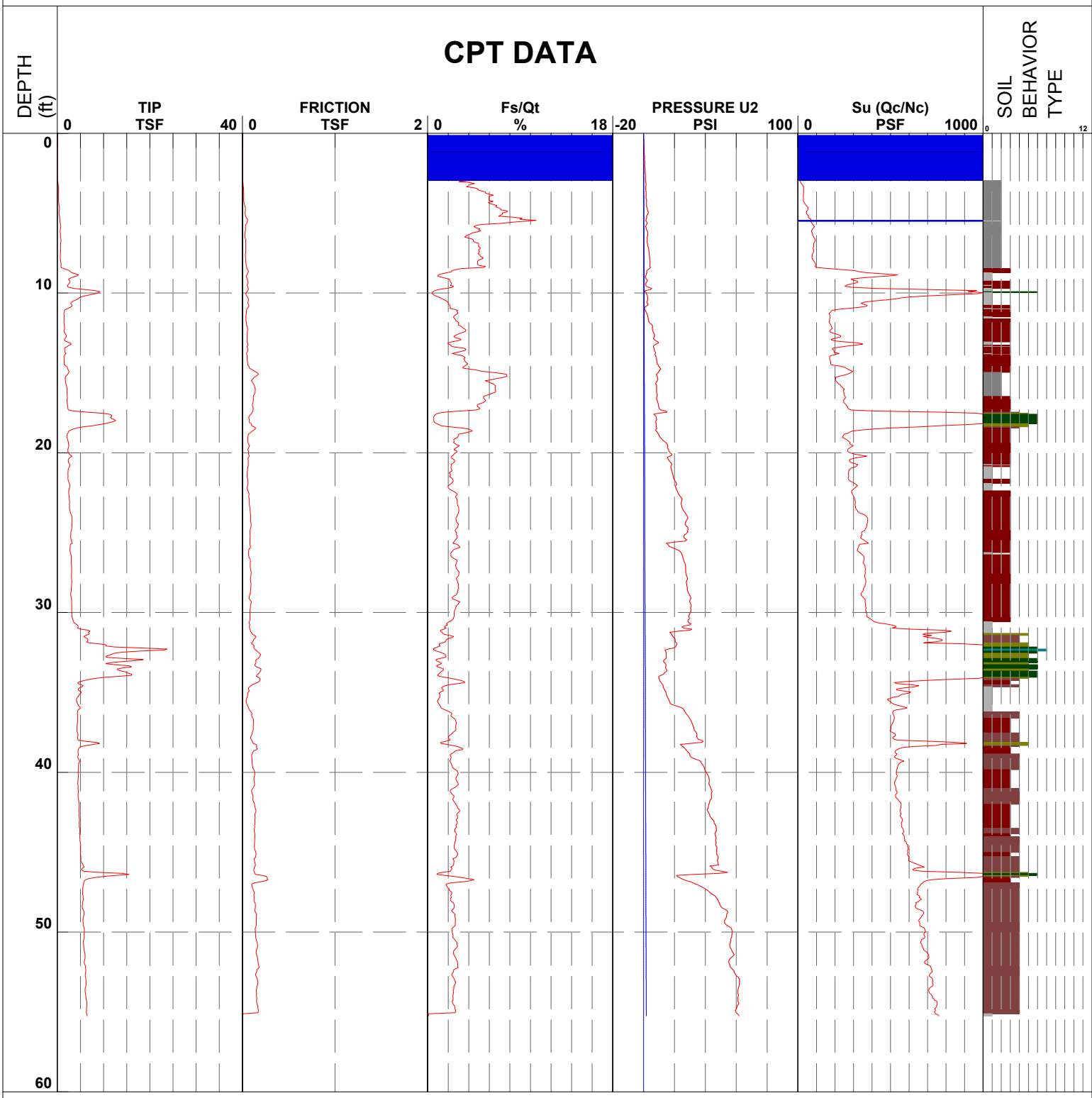
VICKSBURG DISTRICT

OPERATOR Glenn Johnson | CONE NUMBE F7.5CKE2HAW21513 | LOCATION N 29 38 43.1 W 89 59 37.8 EL -1.6

Date&Time 24-Sep-2009 14:14:21 | HOLE NUMBER NF05-098FC | NC=20



1 - sensitive fine grained
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6 - sandy silt to clayey silt
7 - silty sand to sandy silt
8 - sand to silty sand
9 - sand
10 - gravelly sand to sand
11 - very stiff fine grained (*)
12 - sand to clayey sand (*)

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VICKSBURG DISTRICT

OPERATOR Shinpaugh | CONE NUMBER DDG1069 | LOCATION N 29 38 40.5 W 89 59 32.6 EL 6.8

Date&Time 8/3/2009 3:22:54 PM | HOLE NUMBER NF05-99CC | NC=20

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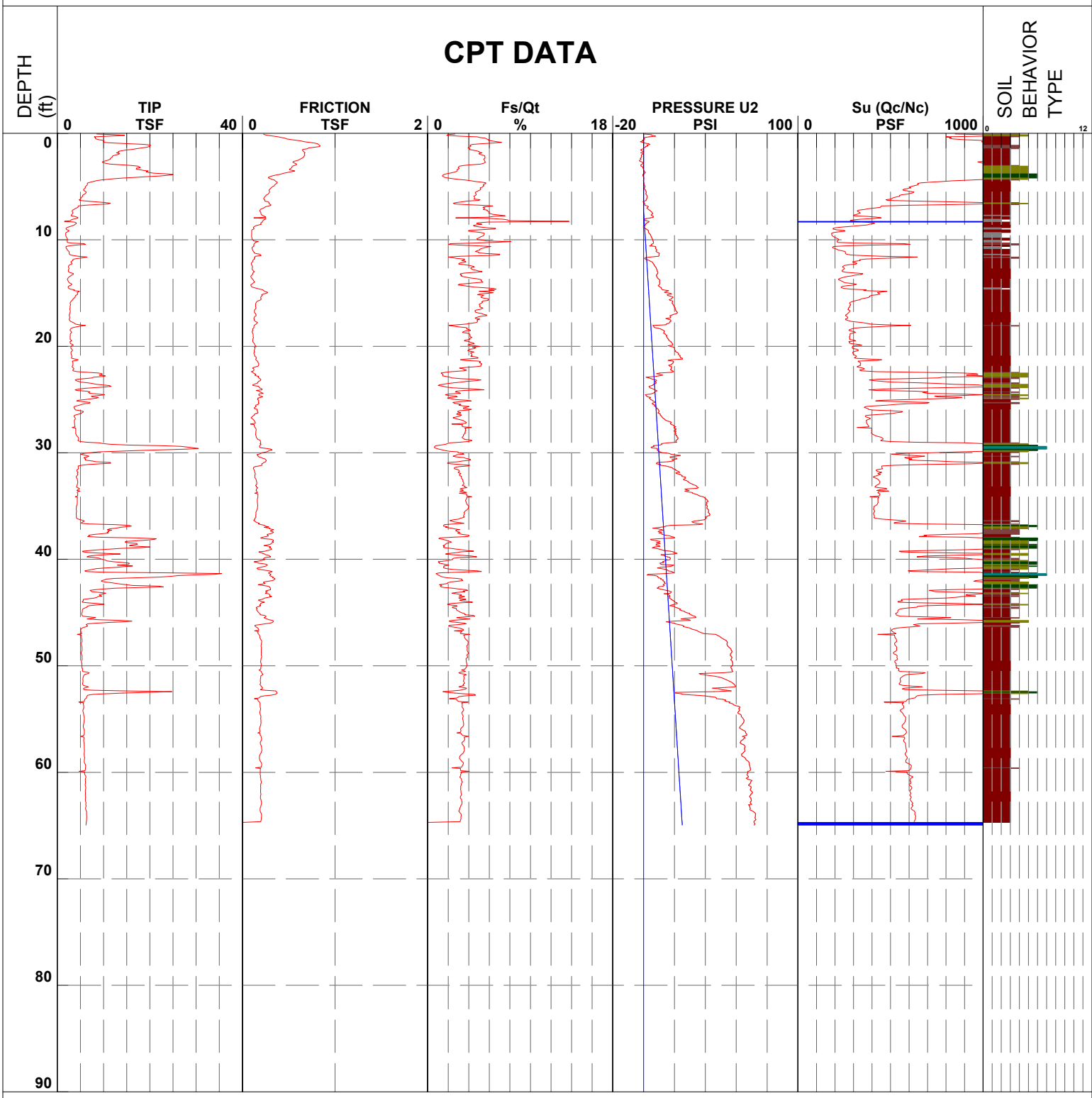

1 - sensitive fine grained
2 - organic material
3 - clay
4 - silty clay to clay
5 - clayey silt to silty clay
6 - sandy silt to clayey silt
7 - silty sand to sandy silt
8 - sand to silty sand
9 - sand
10 - gravelly sand to sand
11 - very stiff fine grained (*)
12 - sand to clayey sand (*)

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VICKSBURG DISTRICT

OPERATOR Shinpaugh | CONE NUMBER DDG1069 | LOCATION N 29 38 40.9 W 89 59 32.3 EL -4.2

Date&Time 8/3/2009 4:38:52 PM | HOLE NUMBER NF05-100PCC | NC=20

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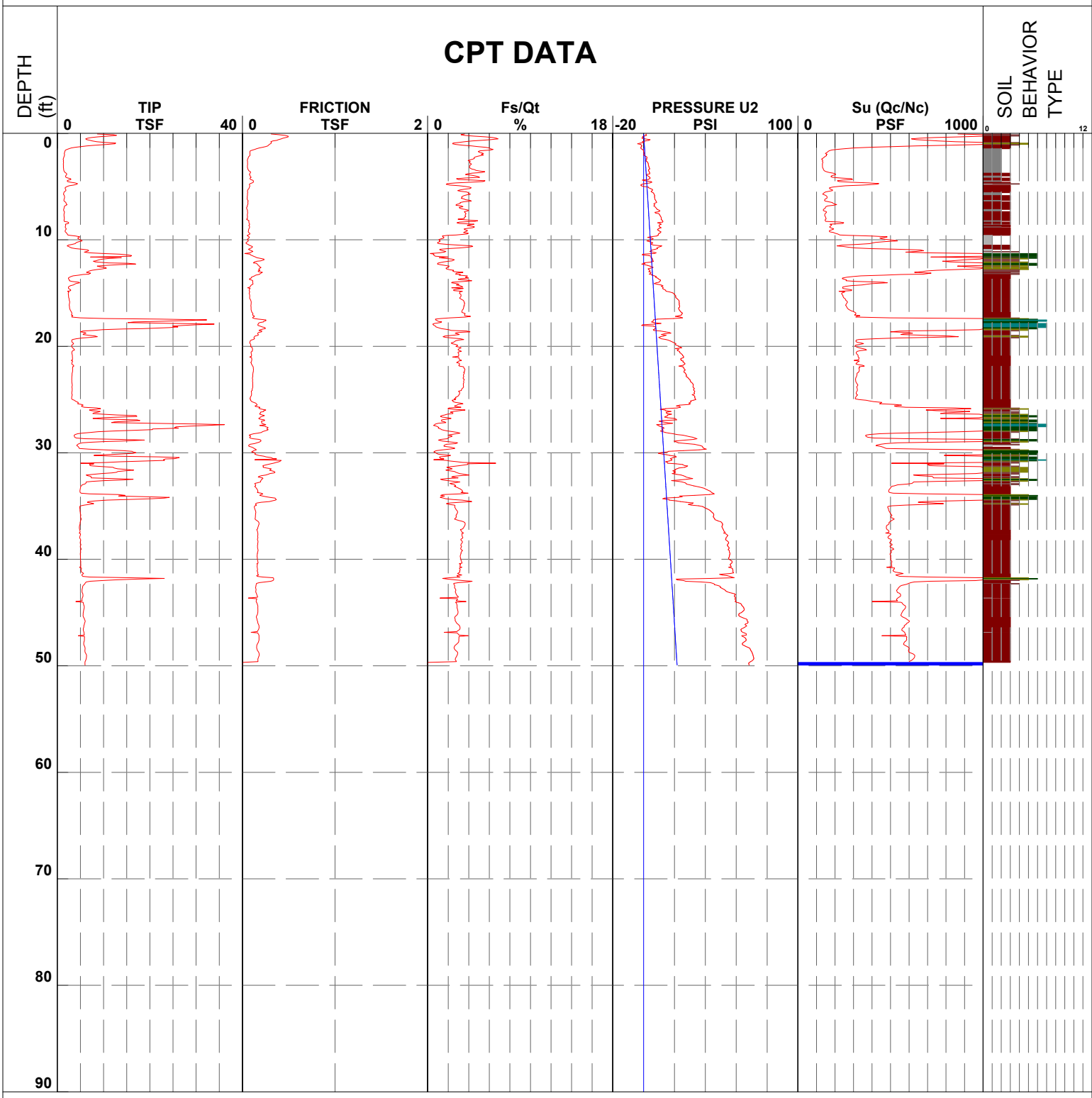

1 - sensitive fine grained
2 - organic material
3 - clay
4 - silty clay to clay
5 - clayey silt to silty clay
6 - sandy silt to clayey silt
7 - silty sand to sandy silt
8 - sand to silty sand
9 - sand
10 - gravelly sand to sand
11 - very stiff fine grained (*)
12 - sand to clayey sand (*)

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VICKSBURG DISTRICT

OPERATOR Shinpaugh | CONE NUMBER DDG1069 | LOCATION N 29 38 37.4 W 89 59 27.6 EL -4.3

Date&Time 8/4/2009 4:07:38 PM | HOLE NUMBER NF05-101PCC | NC=20

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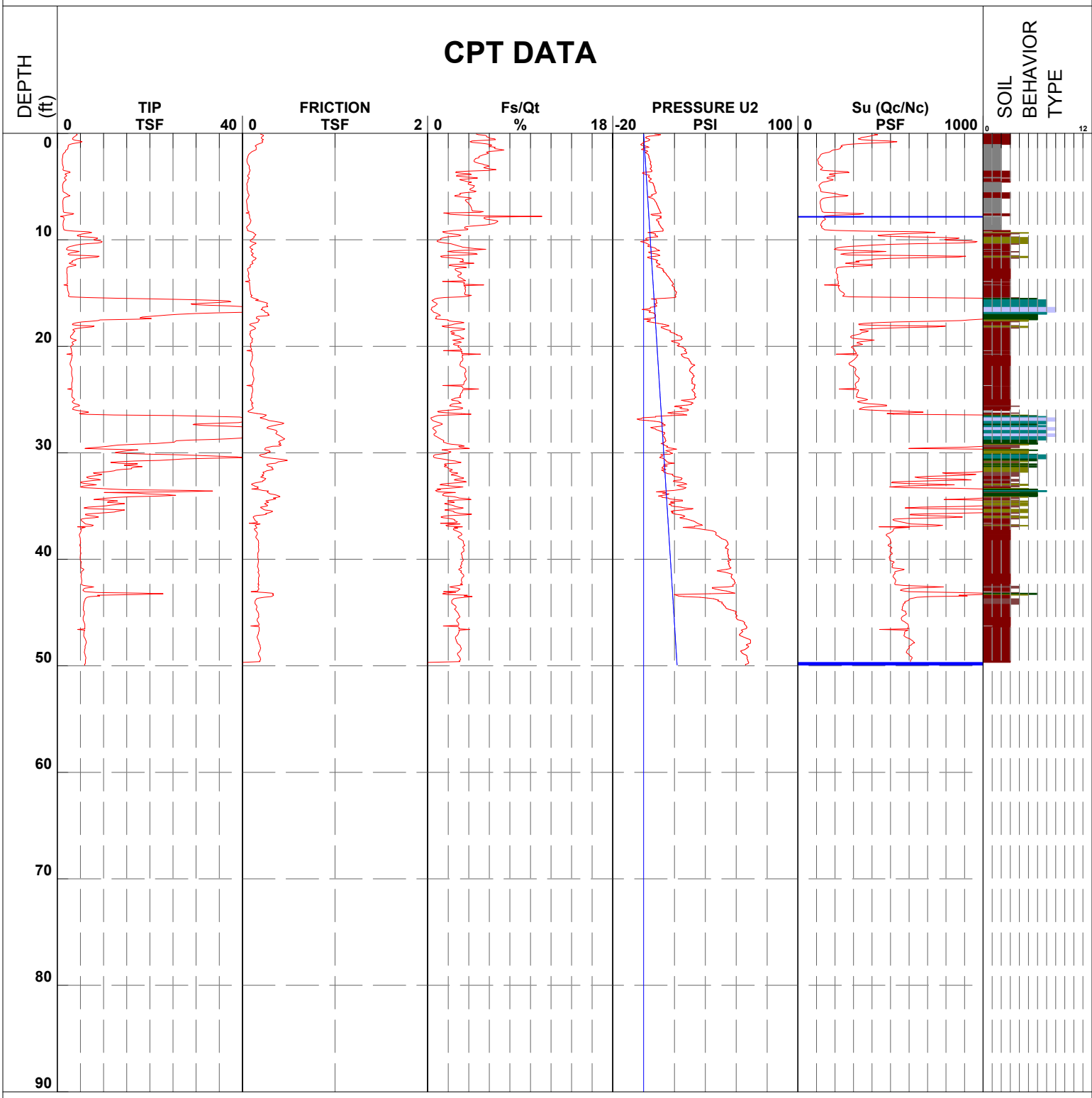

1 - sensitive fine grained
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3 - clay
4 - silty clay to clay
5 - clayey silt to silty clay
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8 - sand to silty sand
9 - sand
10 - gravelly sand to sand
11 - very stiff fine grained (*)
12 - sand to clayey sand (*)

"Confidential Information: Privileged & Confidential Work Product"

VICKSBURG DISTRICT

OPERATOR Shinpaugh | CONE NUMBER DDG1069 | LOCATION N 29 38 34.3 W 89 59 24.0 EL 5.0

Date&Time 8/4/2009 8:34:37 AM | HOLE NUMBER NF05-102CC | NC=20

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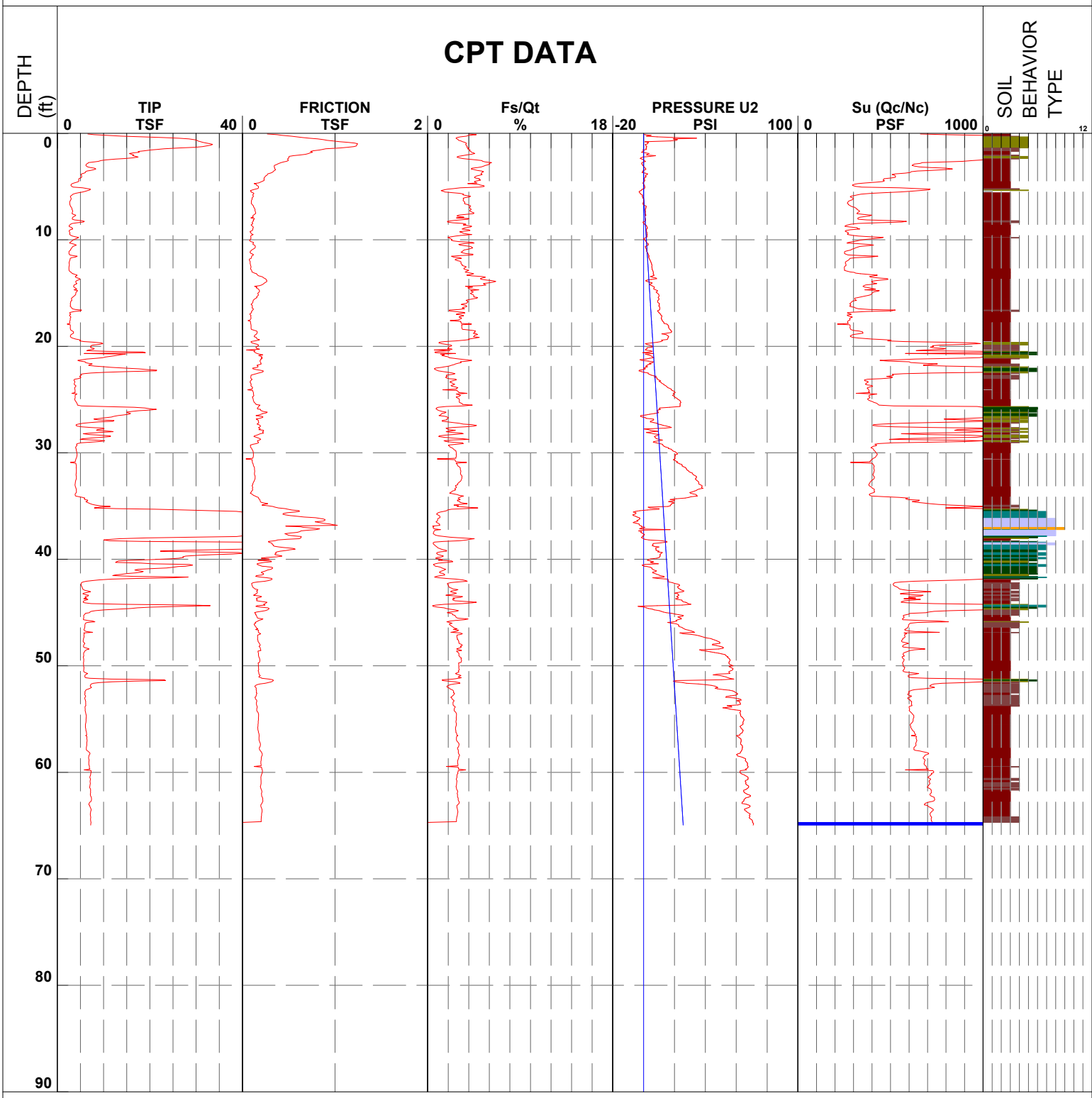

1 - sensitive fine grained
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4 - silty clay to clay
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8 - sand to silty sand
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10 - gravelly sand to sand
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12 - sand to clayey sand (*)

"Confidential Information: Privileged & Confidential Work Product"

VICKSBURG DISTRICT

OPERATOR Shinpaugh | CONE NUMBER DDG1069 | LOCATION N 29 38 34.5 W 89 59 23.6 EL -4.3

Date&Time 8/4/2009 3:07:24 PM | HOLE NUMBER NF05-103PCC | NC=20

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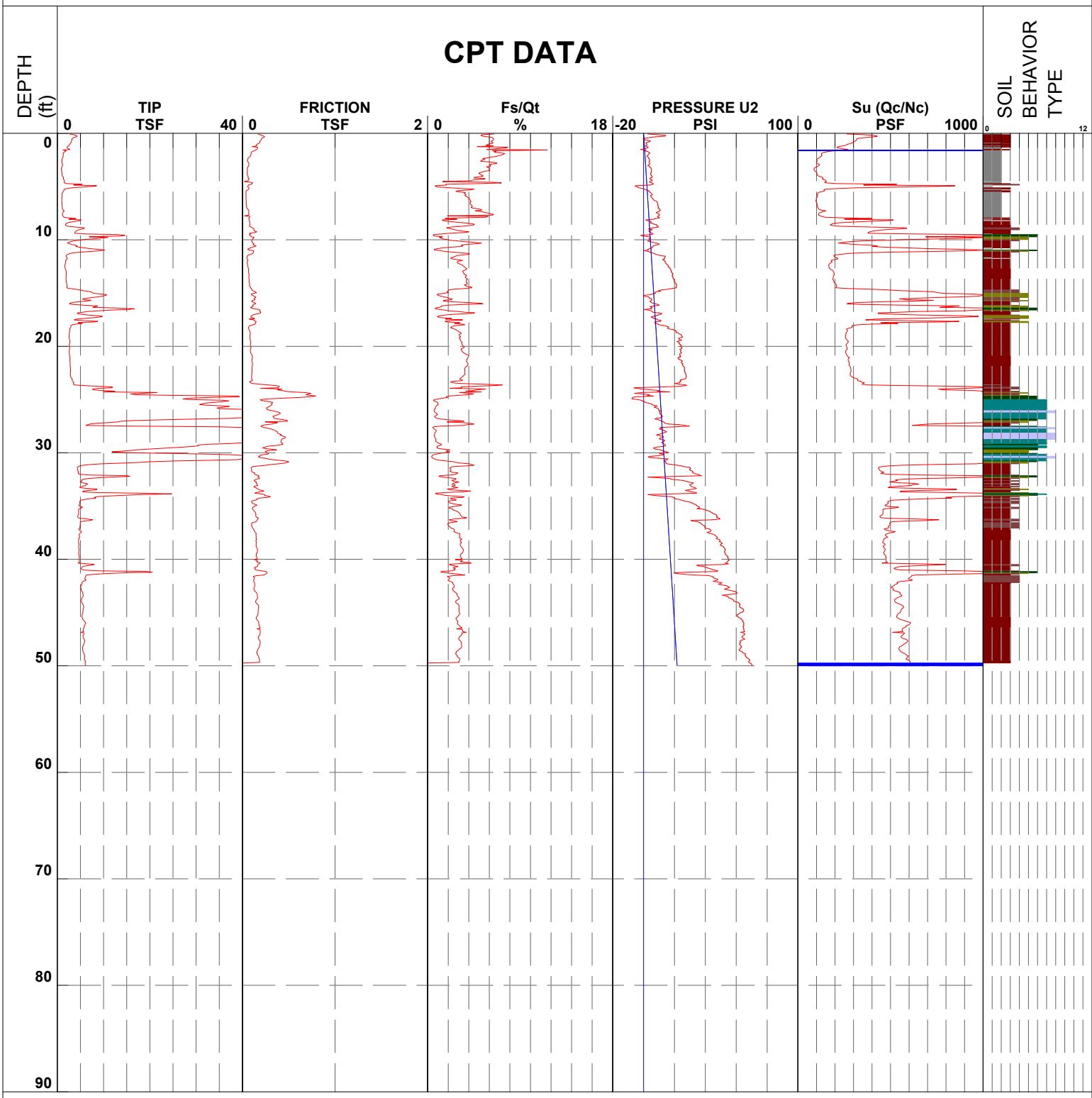

1 - sensitive fine grained
2 - organic material
3 - clay
4 - silty clay to clay
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7 - silty sand to sandy silt
8 - sand to silty sand
9 - sand
10 - gravelly sand to sand
11 - very stiff fine grained (*)
12 - sand to clayey sand (*)

"Confidential Information: Privileged & Confidential Work Product"

VICKSBURG DISTRICT

OPERATOR Shinpaugh | CONE NUMBER DDG1069 | LOCATION N 29 38 31.0 W 89 59 19.5 EL 4.5

Date&Time 8/4/2009 9:42:10 AM | HOLE NUMBER NF05-104CC | NC=20

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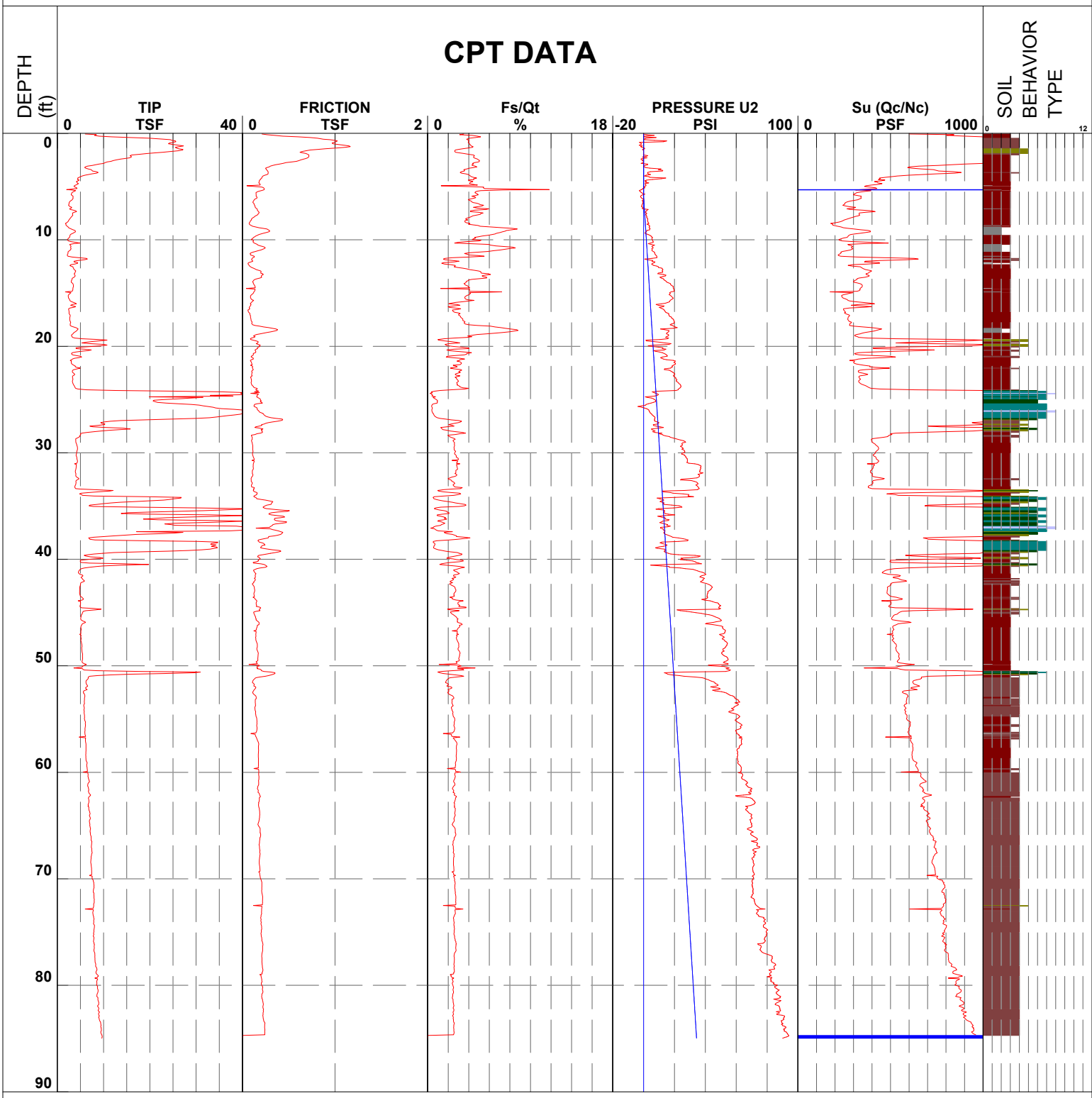

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10 - gravelly sand to sand
11 - very stiff fine grained (*)
12 - sand to clayey sand (*)

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GeoEngineers

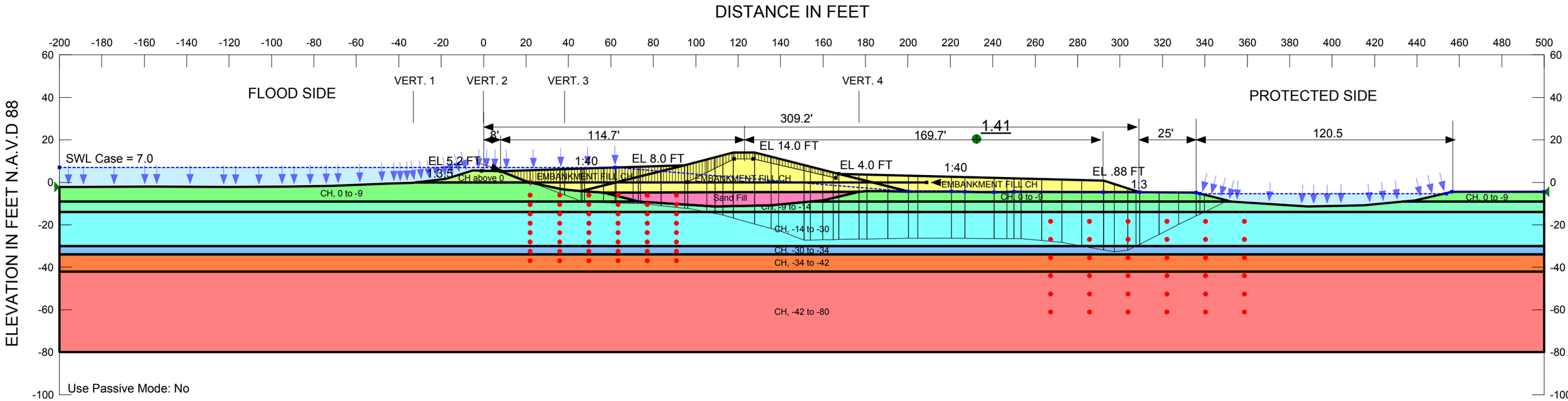
"Confidential Information: Privileged & Confidential Work Product"

APPENDIX D
NOV Back Levee Design Information

"Confidential Information: Privileged & Confidential Work Product"

Appendix L – Reach 5c(2)

Station 771+00 – Station 819+00



Type: Fabric Fabric Capacity: 27000 lbs @ 5% strain Total Length: 187 ft Inside Point: (22, 0) Outside Point: (209, 0) Contact Cohesion: 265 psf Contact Phi: 19 ° Interface Factor: 2
Governing Component: Bond

Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 102 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -9 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -9 (2) Cohesion Spatial Fn: CH, 0 to -9 Phi: 0 ° Piezometric Line: 1
Name: CH, -9 to -14 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -9 to -14 (2) Cohesion Spatial Fn: CH, -9 to -14 Phi: 0 ° Piezometric Line: 1
Name: CH, -14 to -30 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -14 to -30 (2) Cohesion Spatial Fn: CH, -14 to -30 Phi: 0 ° Piezometric Line: 1
Name: CH, -30 to -34 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -30 to -34 (2) Cohesion Spatial Fn: CH, 30 to -34 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1
Name: CH, -34 to -42 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -34 to -42 (2) Cohesion Spatial Fn: CH, -34 to -42 Phi: 0 ° Piezometric Line: 1
Name: CH, -42 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -42 to -80 (2) Cohesion Spatial Fn: CH, -42 to -80 Phi: 0 ° Piezometric Line: 1

US Army Corps of Engineers
Vicksburg District

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

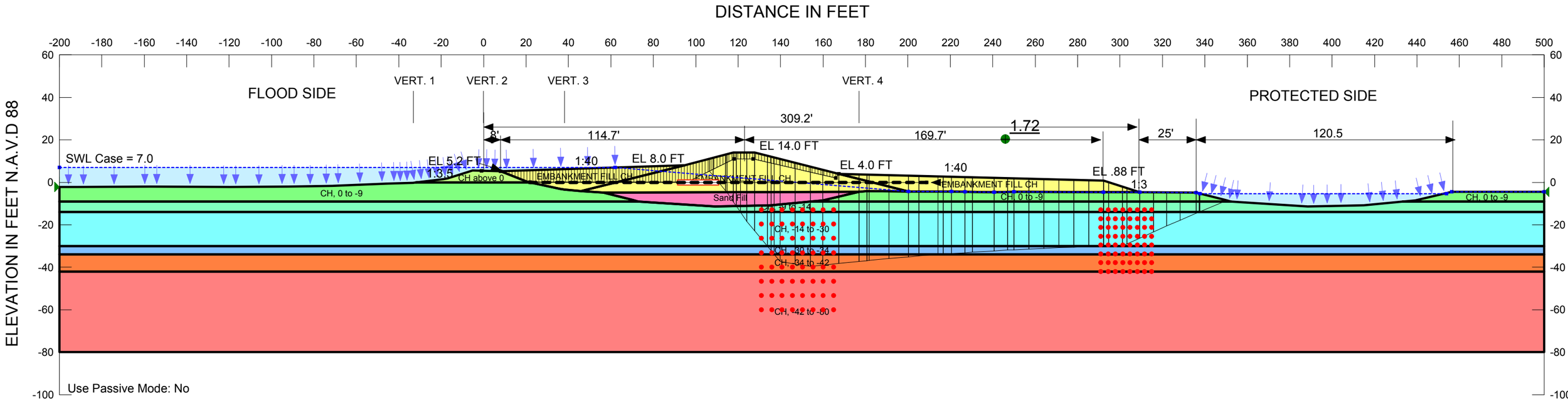
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 771+00 TO 819+00
Reach 5c (2)
SWL Case
Blocked Specified
Around Geotextile
1st Stage Construction

Name: SWL Case.BS
File Name: 5c(2) Typical 1.1st SC.80% SG.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\1st Stage Construction\80%SG, 1 Layer of Fabric\Slope W\
Last Edited By: Cox, Lane MVK

Figure L-1

"Confidential Information: Privileged & Confidential Work Product"



Type: Fabric Fabric Capacity: 27000 lbs @ 5% strain Total Length: 187 ft Inside Point: (22, 0) Outside Point: (209, 0) Contact Cohesion: 265 psf Contact Phi: 19 ° Interface Factor: 2
Governing Component: Fabric

Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 102 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -9 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -9 (2) Cohesion Spatial Fn: CH, 0 to -9 Phi: 0 ° Piezometric Line: 1
Name: CH, -9 to -14 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -9 to -14 (2) Cohesion Spatial Fn: CH, -9 to -14 Phi: 0 ° Piezometric Line: 1
Name: CH, -14 to -30 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -14 to -30 (2) Cohesion Spatial Fn: CH, -14 to -30 Phi: 0 ° Piezometric Line: 1
Name: CH, -30 to -34 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -30 to -34 (2) Cohesion Spatial Fn: CH, 30 to -34 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1
Name: CH, -34 to -42 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -34 to -42 (2) Cohesion Spatial Fn: CH, -34 to -42 Phi: 0 ° Piezometric Line: 1
Name: CH, -42 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -42 to -80 (2) Cohesion Spatial Fn: CH, -42 to -80 Phi: 0 ° Piezometric Line: 1

US Army Corps of Engineers
Vicksburg District

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

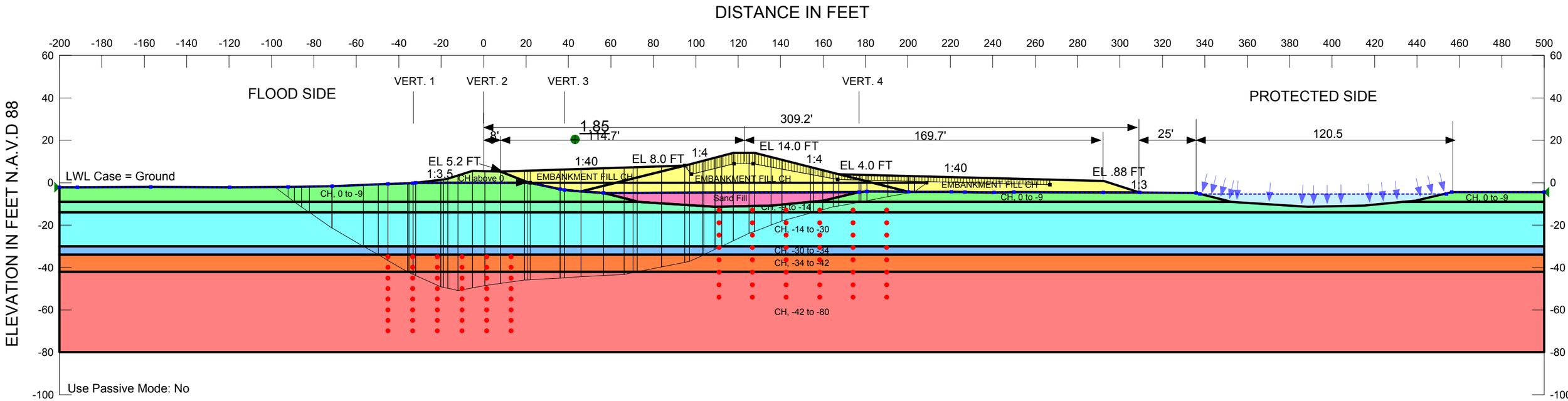
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 771+00 TO 819+00
Reach 5c (2)
SWL Case
Block Specified
Through Geotextile
1st Stage Construction

Name: SWL Case.BS.Thru Fabric
File Name: 5c(2) Typical 1.1st SC.80% SG.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\1st Stage Construction\80%SG, 1 Layer of Fabric\Slope W\
Last Edited By: Cox, Lane MVK

Figure L-2

"Confidential Information: Privileged & Confidential Work Product"



Type: Fabric Fabric Capacity: 27000 lbs @ 5% strain Total Length: 187 ft Inside Point: (209, 0) Outside Point: (22, 0) Contact Cohesion: 265 psf Contact Phi: 19 ° Interface Factor: 2
Governing Component: Bond

Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 102 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -9 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -9 (2) Cohesion Spatial Fn: CH, 0 to -9 Phi: 0 ° Piezometric Line: 1
Name: CH, -9 to -14 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -9 to -14 (2) Cohesion Spatial Fn: CH, -9 to -14 Phi: 0 ° Piezometric Line: 1
Name: CH, -14 to -30 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -14 to -30 (2) Cohesion Spatial Fn: CH, -14 to -30 Phi: 0 ° Piezometric Line: 1
Name: CH, -30 to -34 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -30 to -34 (2) Cohesion Spatial Fn: CH, 30 to -34 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1
Name: CH, -34 to -42 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -34 to -42 (2) Cohesion Spatial Fn: CH, -34 to -42 Phi: 0 ° Piezometric Line: 1
Name: CH, -42 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -42 to -80 (2) Cohesion Spatial Fn: CH, -42 to -80 Phi: 0 ° Piezometric Line: 1

US Army Corps of Engineers
Vicksburg District

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

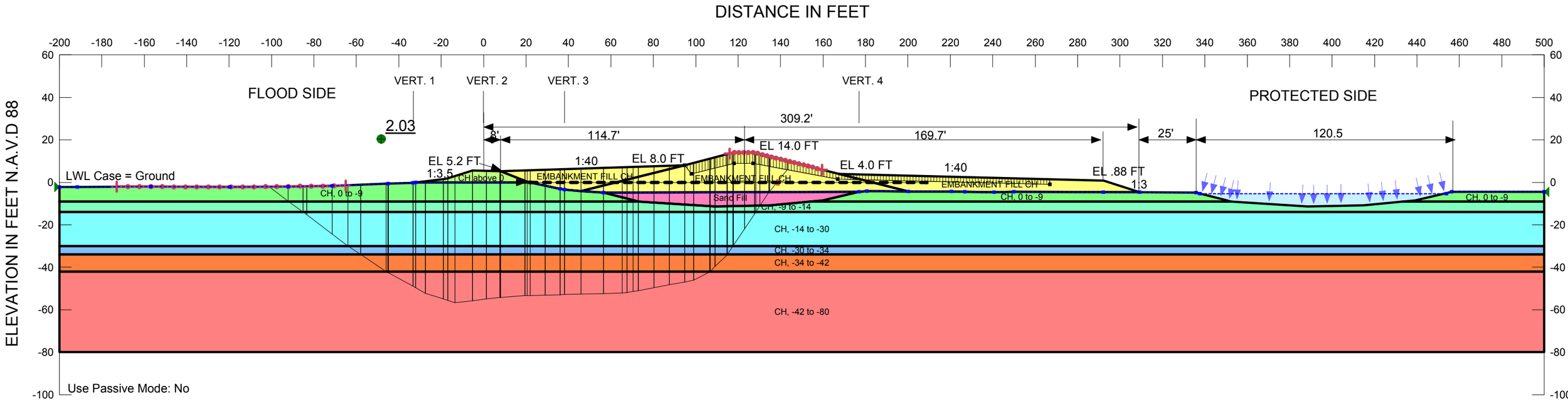
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 771+00 TO 819+00
Reach 5c (2)
LWL Case
PS to FS
Block Specified
Around Geotextile
1st Stage Construction

Name: LWL Case.BS
File Name: 5c(2) Typical 1.1st SC.80% SG.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\1st Stage Construction\80%SG, 1 Layer of Fabric\Slope W\
Last Edited By: Cox, Lane MVK

Figure L-3

"Confidential Information: Privileged & Confidential Work Product"



Type: Fabric Fabric Capacity: 27000 lbs @ 5% strain Total Length: 187 ft Inside Point: (209, 0) Outside Point: (22, 0) Contact Cohesion: 19 psf Contact Phi: 265 ° Interface Factor: 2
Governing Component: Fabric

Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 102 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -9 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -9 (2) Cohesion Spatial Fn: CH, 0 to -9 Phi: 0 ° Piezometric Line: 1
Name: CH, -9 to -14 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -9 to -14 (2) Cohesion Spatial Fn: CH, -9 to -14 Phi: 0 ° Piezometric Line: 1
Name: CH, -14 to -30 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -14 to -30 (2) Cohesion Spatial Fn: CH, -14 to -30 Phi: 0 ° Piezometric Line: 1
Name: CH, -30 to -34 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -30 to -34 (2) Cohesion Spatial Fn: CH, 30 to -34 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1
Name: CH, -34 to -42 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -34 to -42 (2) Cohesion Spatial Fn: CH, -34 to -42 Phi: 0 ° Piezometric Line: 1
Name: CH, -42 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -42 to -80 (2) Cohesion Spatial Fn: CH, -42 to -80 Phi: 0 ° Piezometric Line: 1

US Army Corps of Engineers
Vicksburg District

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

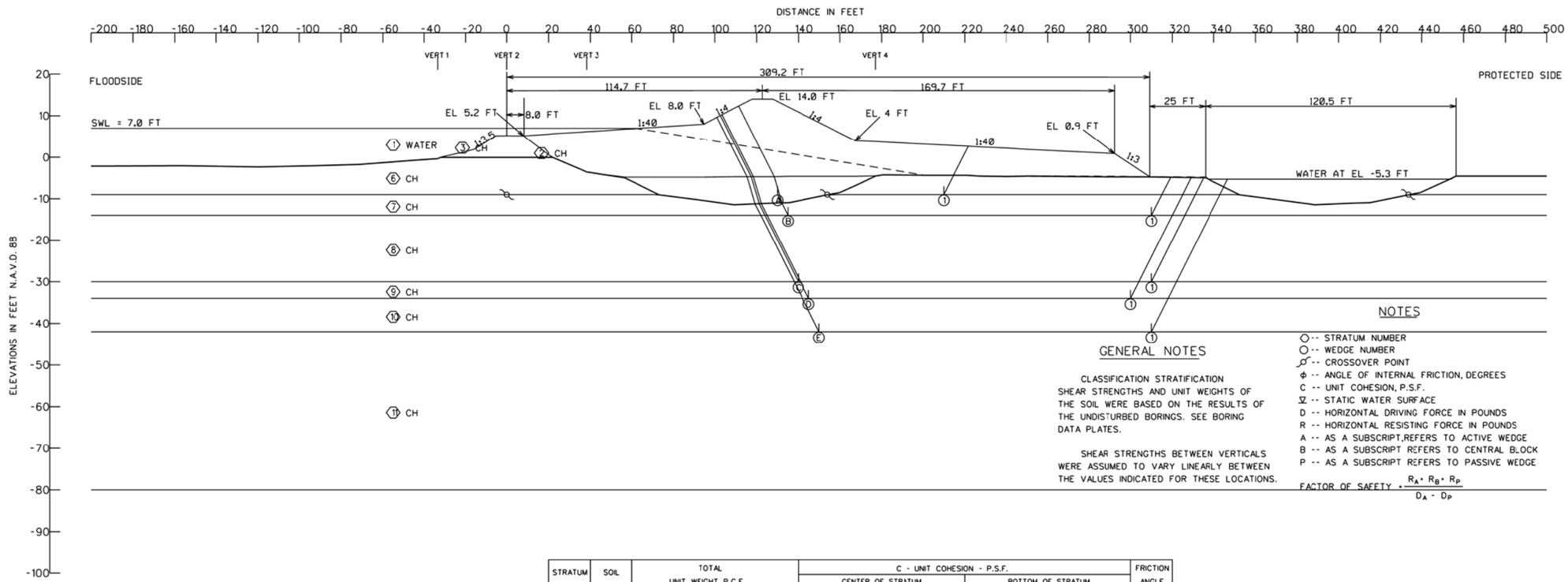
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 771+00 TO 819+00
Reach 5c (2)
LWL Case
PS to FS
Entry and Exit
Through Geotextile
1st Stage Construction

Name: LWL Case.EE.Thru Fabric
File Name: 5c(2) Typical 1.1st SC.80% SG.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\1st Stage Construction\80%SG, 1 Layer of Fabric\Slope W\
Last Edited By: Cox, Lane MVK

Figure L-4

"Confidential Information: Privileged & Confidential Work Product"



GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF THE UNDISTURBED BORINGS. SEE BORING DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

NOTES

- ⬡ -- STRATUM NUMBER
- ○ -- WEDGE NUMBER
- ⊘ -- CROSSOVER POINT
- Φ -- ANGLE OF INTERNAL FRICTION, DEGREES
- C -- UNIT COHESION, P.S.F.
- ▽ -- STATIC WATER SURFACE
- D -- HORIZONTAL DRIVING FORCE IN POUNDS
- R -- HORIZONTAL RESISTING FORCE IN POUNDS
- A -- AS A SUBSCRIPT,REFERS TO ACTIVE WEDGE
- B -- AS A SUBSCRIPT REFERS TO CENTRAL BLOCK
- P -- AS A SUBSCRIPT REFERS TO PASSIVE WEDGE

$$\text{FACTOR OF SAFETY} = \frac{R_A + R_B + R_P}{D_A - D_P}$$

ASSUMED FAILURE SURFACE		RESISTING FORCES			DRIVING FORCES		SUMMATION OF FORCES		FACTOR OF SAFETY
NO.	ELEV.	R_A	R_B	R_P	D_A	$-D_P$	RESISTING	DRIVING	
Ⓐ ①	-9.0	27800	8398	9310	29378	7687	45508	21691	2.10
Ⓑ ①	-14.0	28960	17818	1844	43524	3874	48622	39650	1.23
Ⓒ ①	-30.0	32931	45767	7718	102829	30498	86416	72331	1.19
Ⓓ ①	-34.0	35588	48253	10035	121203	42996	93876	78207	1.20
Ⓔ ①	-42.0	40778	65482	15443	162373	67533	121703	94840	1.28

STRATUM NO.	SOIL TYPE	TOTAL UNIT WEIGHT P.C.F.				C - UNIT COHESION - P.S.F. CENTER OF STRATUM				C - UNIT COHESION - P.S.F. BOTTOM OF STRATUM				FRICTION ANGLE DEGREES
		VERT. 1	VERT.2	VERT.3	VERT.4	VERT. 1	VERT.2	VERT.3	VERT.4	VERT. 1	VERT.2	VERT.3	VERT.4	
①	WATER	62	62	62	62	0	0	0	0	0	0	0	0	0
②	CH	115	115	115	115	600	600	600	600	600	600	600	600	0
③	CH	102	102	102	102	600	600	600	600	600	600	600	600	0
④	SM	122	122	122	122	0	0	0	0	0	0	0	0	30
⑤	CH	90	96	87	87	50	300	150	100	83	300	150	100	0
⑥	CH	90	96	87	87	50	300	150	100	83	300	150	100	0
⑦	CH	90	97	88	100	99	300	150	100	115	300	150	100	0
⑧	CH	100	102	100	100	203	338	230	184	291	375	310	268	0
⑨	CH	122	113	118	118	313	419	345	289	335	438	365	310	0
⑩	CH	105	116	106	106	379	476	395	367	423	514	425	409	0
⑪	CH	105	105	106	106	632	695	620	609	841	875	815	808	0

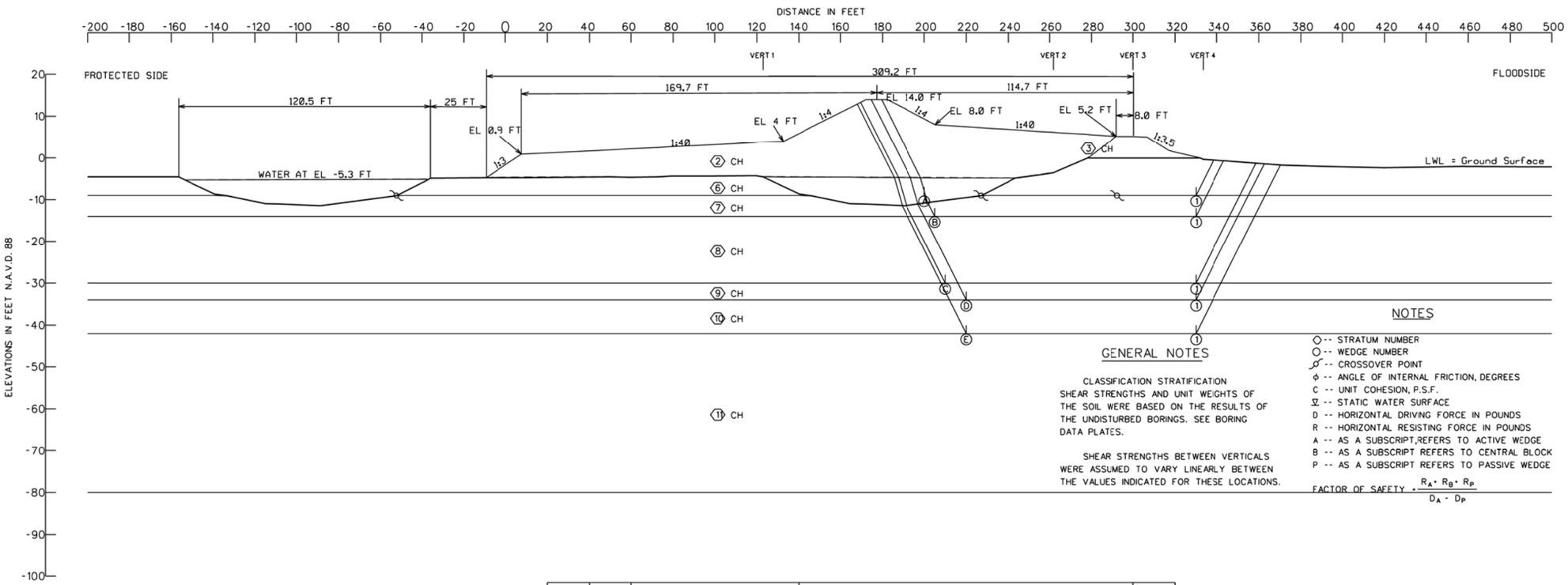
FS = (T+R)/D
FS = (27000 + 86416) / 72331
FS = 1.57

"Reach 5c(2)-1st Stage"
"FS to PS: SWL = 7.0"

U.S. ARMY ENGINEER DISTRICT NEW ORLEANS
CORPS OF ENGINEERS 01-APR-11

Figure L-5

"Confidential Information: Privileged & Confidential Work Product"



GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF THE UNDISTURBED BORINGS. SEE BORING DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

NOTES

- ◇ -- STRATUM NUMBER
- ○ -- WEDGE NUMBER
- ⌀ -- CROSSOVER POINT
- ϕ -- ANGLE OF INTERNAL FRICTION, DEGREES
- C -- UNIT COHESION, P.S.F.
- ▽ -- STATIC WATER SURFACE
- D -- HORIZONTAL DRIVING FORCE IN POUNDS
- R -- HORIZONTAL RESISTING FORCE IN POUNDS
- A -- AS A SUBSCRIPT, REFERS TO ACTIVE WEDGE
- B -- AS A SUBSCRIPT REFERS TO CENTRAL BLOCK
- P -- AS A SUBSCRIPT REFERS TO PASSIVE WEDGE

$$\text{FACTOR OF SAFETY} = \frac{R_A + R_B + R_P}{D_A - D_P}$$

ASSUMED FAILURE SURFACE		RESISTING FORCES			DRIVING FORCES		SUMMATION OF FORCES		FACTOR OF SAFETY
NO.	ELEV.	R_A	R_B	R_P	D_A	$-D_P$	RESISTING	DRIVING	
Ⓐ ①	-9.0	29163	23246	855	24355	3473	53264	20882	2.55
Ⓑ ①	-14.0	30450	23034	1878	36083	8415	55362	27668	2.00
Ⓒ ①	-30.0	38440	38851	8264	97046	40043	85555	57003	1.50
Ⓓ ①	-34.0	40774	41997	10787	109197	52008	93558	57189	1.64
Ⓔ ①	-42.0	46970	49790	16786	155053	81037	113546	74016	1.53

STRATUM NO.	SOIL TYPE	TOTAL UNIT WEIGHT P.C.F.				C - UNIT COHESION - P.S.F. CENTER OF STRATUM				C - UNIT COHESION - P.S.F. BOTTOM OF STRATUM				FRICTION ANGLE DEGREES
		VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 1	VERT. 2	VERT. 3	VERT. 4	
①	WATER	62	62	62	62	0	0	0	0	0	0	0	0	0
②	CH	115	115	115	115	600	600	600	600	600	600	600	600	0
③	CH	102	102	102	102	600	600	600	600	600	600	600	600	0
④	SM	122	122	122	122	0	0	0	0	0	0	0	0	30
⑤	CH	87	87	96	90	100	150	300	50	100	150	300	83	0
⑥	CH	87	87	96	90	100	150	300	50	100	150	300	83	0
⑦	CH	100	88	97	90	100	150	300	99	100	150	300	115	0
⑧	CH	100	100	102	100	184	230	338	203	268	310	375	291	0
⑨	CH	118	118	113	122	289	345	419	313	310	365	438	335	0
⑩	CH	106	106	116	105	367	395	476	379	409	425	514	423	0
⑪	CH	106	106	105	105	609	620	695	632	808	815	875	841	0

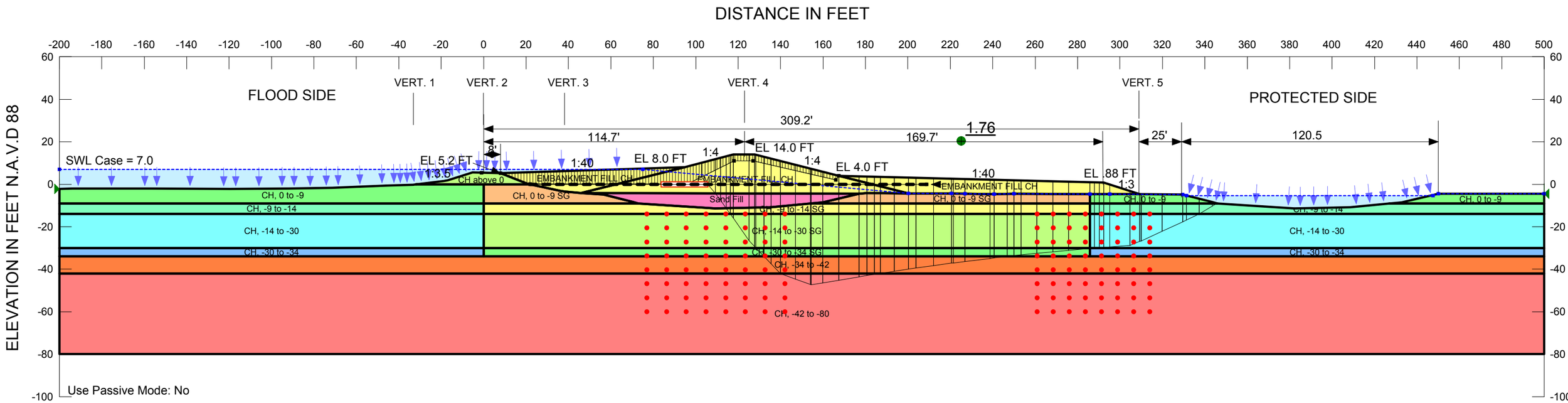
FS = (T+R)/D
FS = (27000 +85555) /57003
FS = 1.97

"Reach 5c(2)-1st Stage"
"PS to FS: LWL + GS"

U.S. ARMY ENGINEER DISTRICT NEW ORLEANS
CORPS OF ENGINEERS 01-APR-11

Figure L-6

"Confidential Information: Privileged & Confidential Work Product"



Type: Fabric Fabric Capacity: 27000 lbs @ 5% strain Total Length: 187 ft Inside Point: (22, 0) Outside Point: (209, 0) Contact Cohesion: 265 psf Contact Phi: 19 ° Interface Factor: 2
Governing Component: Fabric

Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 102 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -9 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -9 (2) Cohesion Spatial Fn: CH, 0 to -9 Phi: 0 ° Piezometric Line: 1
Name: CH, -9 to -14 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -9 to -14 (2) Cohesion Spatial Fn: CH, -9 to -14 Phi: 0 ° Piezometric Line: 1
Name: CH, -14 to -30 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -14 to -30 (2) Cohesion Spatial Fn: CH, -14 to -30 Phi: 0 ° Piezometric Line: 1
Name: CH, -30 to -34 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -30 to -34 (2) Cohesion Spatial Fn: CH, 30 to -34 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1
Name: CH, -34 to -42 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -34 to -42 (2) Cohesion Spatial Fn: CH, -34 to -42 Phi: 0 ° Piezometric Line: 1
Name: CH, -42 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -42 to -80 (2) Cohesion Spatial Fn: CH, -42 to -80 Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -9 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -9 (2) Cohesion Spatial Fn: CH, 0 to -9 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -9 to -14 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -9 to -14 (2) Cohesion Spatial Fn: CH, -9 to -14 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -14 to -30 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -14 to -30 (2) Cohesion Spatial Fn: CH, -14 to -30 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -30 to -34 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -30 to -34 (2) Cohesion Spatial Fn: CH, 30 to -34 SG Phi: 0 ° Piezometric Line: 1

US Army Corps of Engineers®
Vicksburg District

GENERAL NOTES

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SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

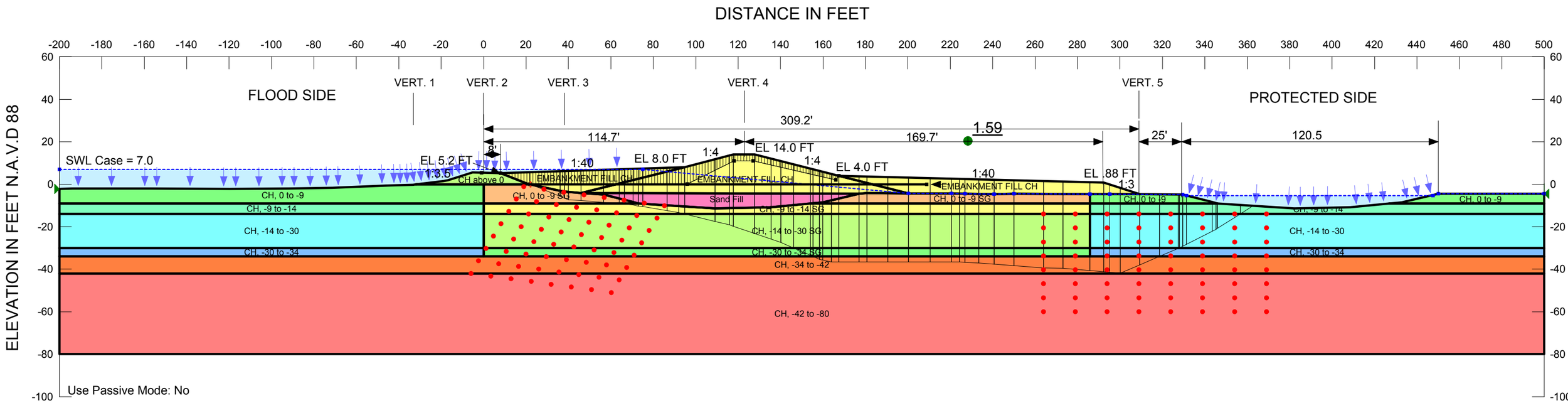
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 771+00 TO 819+00
Reach 5c (2)
SWL Case
Block Specified
Through Geotextile
2nd Stage Construction

Name: SWL Case.BS.Thru Fabric
File Name: 5c(2) Typical 1.2nd SC.80%SG.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\2nd Stage Constuction\80%SG 1 Layer of Fabric\Slope W\
Last Edited By: Cox, Lane MVK

Figure L-8

"Confidential Information: Privileged & Confidential Work Product"



Type: Fabric Fabric Capacity: 27000 lbs @ 5% strain Total Length: 187 ft Inside Point: (22, 0) Outside Point: (209, 0) Contact Cohesion: 265 psf Contact Phi: 19 ° Interface Factor: 2
Governing Component: Bond

Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 102 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -9 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -9 (2) Cohesion Spatial Fn: CH, 0 to -9 Phi: 0 ° Piezometric Line: 1
Name: CH, -9 to -14 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -9 to -14 (2) Cohesion Spatial Fn: CH, -9 to -14 Phi: 0 ° Piezometric Line: 1
Name: CH, -14 to -30 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -14 to -30 (2) Cohesion Spatial Fn: CH, -14 to -30 Phi: 0 ° Piezometric Line: 1
Name: CH, -30 to -34 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -30 to -34 (2) Cohesion Spatial Fn: CH, 30 to -34 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1
Name: CH, -34 to -42 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -34 to -42 (2) Cohesion Spatial Fn: CH, -34 to -42 Phi: 0 ° Piezometric Line: 1
Name: CH, -42 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -42 to -80 (2) Cohesion Spatial Fn: CH, -42 to -80 Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -9 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -9 (2) Cohesion Spatial Fn: CH, 0 to -9 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -9 to -14 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -9 to -14 (2) Cohesion Spatial Fn: CH, -9 to -14 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -14 to -30 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -14 to -30 (2) Cohesion Spatial Fn: CH, -14 to -30 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -30 to -34 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -30 to -34 (2) Cohesion Spatial Fn: CH, 30 to -34 SG Phi: 0 ° Piezometric Line: 1

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Vicksburg District

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

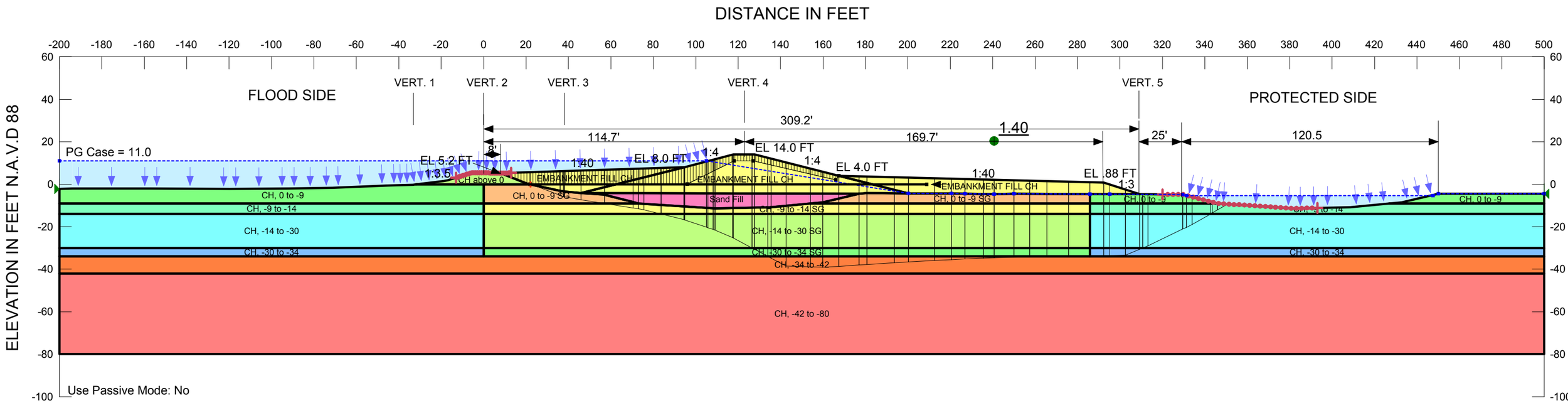
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 771+00 TO 819+00
Reach 5c (2)
SWL Case
Blocked Specified
Around Geotextile
2nd Stage Construction

Name: SWL Case.BS
File Name: 5c(2) Typical 1.2nd SC.80%SG.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\2nd Stage Constuction\80%SG 1 Layer of Fabric\Slope W\
Last Edited By: Cox, Lane MVK

Figure L-7

"Confidential Information: Privileged & Confidential Work Product"



Type: Fabric Fabric Capacity: 27000 lbs @ 5% strain Total Length: 187 ft Inside Point: (22, 0) Outside Point: (209, 0) Contact Cohesion: 265 psf Contact Phi: 19 ° Interface Factor: 2
Governing Component: Bond

Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 102 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -9 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -9 (2) Cohesion Spatial Fn: CH, 0 to -9 Phi: 0 ° Piezometric Line: 1
Name: CH, -9 to -14 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -9 to -14 (2) Cohesion Spatial Fn: CH, -9 to -14 Phi: 0 ° Piezometric Line: 1
Name: CH, -14 to -30 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -14 to -30 (2) Cohesion Spatial Fn: CH, -14 to -30 Phi: 0 ° Piezometric Line: 1
Name: CH, -30 to -34 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -30 to -34 (2) Cohesion Spatial Fn: CH, 30 to -34 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1
Name: CH, -34 to -42 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -34 to -42 (2) Cohesion Spatial Fn: CH, -34 to -42 Phi: 0 ° Piezometric Line: 1
Name: CH, -42 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -42 to -80 (2) Cohesion Spatial Fn: CH, -42 to -80 Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -9 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -9 (2) Cohesion Spatial Fn: CH, 0 to -9 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -9 to -14 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -9 to -14 (2) Cohesion Spatial Fn: CH, -9 to -14 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -14 to -30 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -14 to -30 (2) Cohesion Spatial Fn: CH, -14 to -30 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -30 to -34 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -30 to -34 (2) Cohesion Spatial Fn: CH, 30 to -34 SG Phi: 0 ° Piezometric Line: 1

US Army Corps of Engineers®
Vicksburg District

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

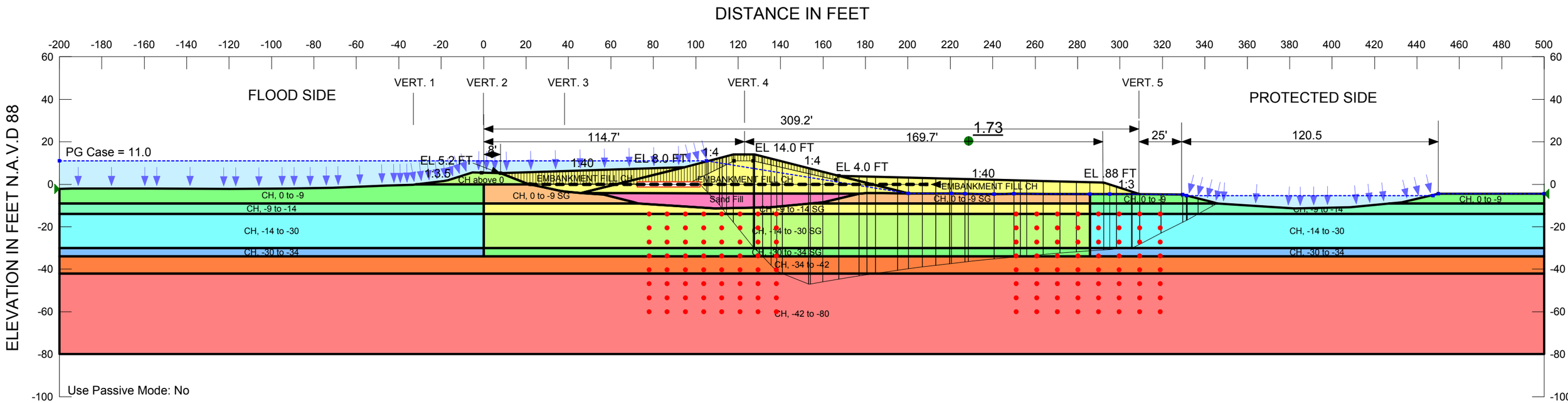
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 771+00 TO 819+00
Reach 5c (2)
PG Case
Entry and Exit
Around Geotextile
2nd Stage Construction

Name: PG Case.EE
File Name: 5c(2) Typical 1.2nd SC.80%SG.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\2nd Stage Constuction\80%SG 1 Layer of Fabric\Slope W\
Last Edited By: Cox, Lane MVK

Figure L-9

"Confidential Information: Privileged & Confidential Work Product"



Type: Fabric Fabric Capacity: 27000 lbs @ 5% strain Total Length: 187 ft Inside Point: (22, 0) Outside Point: (209, 0) Contact Cohesion: 265 psf Contact Phi: 19 ° Interface Factor: 2
Governing Component: Fabric

Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 102 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -9 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -9 (2) Cohesion Spatial Fn: CH, 0 to -9 Phi: 0 ° Piezometric Line: 1
Name: CH, -9 to -14 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -9 to -14 (2) Cohesion Spatial Fn: CH, -9 to -14 Phi: 0 ° Piezometric Line: 1
Name: CH, -14 to -30 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -14 to -30 (2) Cohesion Spatial Fn: CH, -14 to -30 Phi: 0 ° Piezometric Line: 1
Name: CH, -30 to -34 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -30 to -34 (2) Cohesion Spatial Fn: CH, 30 to -34 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1
Name: CH, -34 to -42 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -34 to -42 (2) Cohesion Spatial Fn: CH, -34 to -42 Phi: 0 ° Piezometric Line: 1
Name: CH, -42 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -42 to -80 (2) Cohesion Spatial Fn: CH, -42 to -80 Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -9 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -9 (2) Cohesion Spatial Fn: CH, 0 to -9 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -9 to -14 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -9 to -14 (2) Cohesion Spatial Fn: CH, -9 to -14 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -14 to -30 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -14 to -30 (2) Cohesion Spatial Fn: CH, -14 to -30 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -30 to -34 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -30 to -34 (2) Cohesion Spatial Fn: CH, 30 to -34 SG Phi: 0 ° Piezometric Line: 1

US Army Corps of Engineers®
Vicksburg District

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

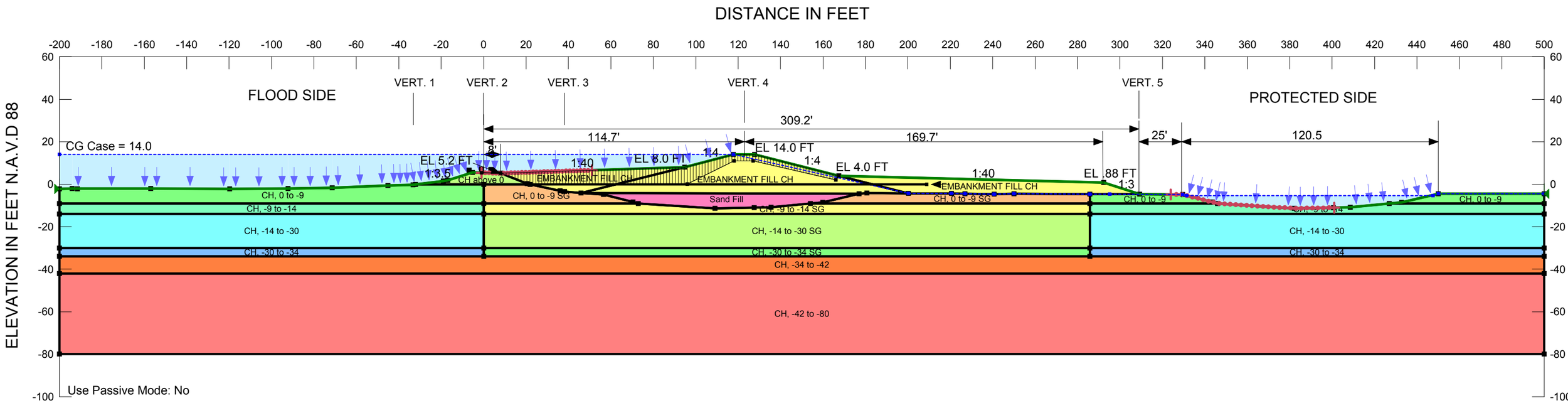
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 771+00 TO 819+00
Reach 5c (2)
PG Case
Block Specified
Through Geotextile
2nd Stage Construction

Name: PG Case.BS.Thru Fabric
File Name: 5c(2) Typical 1.2nd SC.80%SG.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\2nd Stage Constuction\80%SG 1 Layer of Fabric\Slope W\
Last Edited By: Cox, Lane MVK

Figure L-10

"Confidential Information: Privileged & Confidential Work Product"



Type: Fabric Fabric Capacity: 27000 lbs @ 5% strain Total Length: 187 ft Inside Point: (22, 0) Outside Point: (209, 0) Contact Cohesion: 265 psf Contact Phi: 19 ° Interface Factor: 2
Governing Component: (none)

Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 102 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -9 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -9 (2) Cohesion Spatial Fn: CH, 0 to -9 Phi: 0 ° Piezometric Line: 1
Name: CH, -9 to -14 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -9 to -14 (2) Cohesion Spatial Fn: CH, -9 to -14 Phi: 0 ° Piezometric Line: 1
Name: CH, -14 to -30 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -14 to -30 (2) Cohesion Spatial Fn: CH, -14 to -30 Phi: 0 ° Piezometric Line: 1
Name: CH, -30 to -34 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -30 to -34 (2) Cohesion Spatial Fn: CH, 30 to -34 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1
Name: CH, -34 to -42 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -34 to -42 (2) Cohesion Spatial Fn: CH, -34 to -42 Phi: 0 ° Piezometric Line: 1
Name: CH, -42 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -42 to -80 (2) Cohesion Spatial Fn: CH, -42 to -80 Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -9 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -9 (2) Cohesion Spatial Fn: CH, 0 to -9 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -9 to -14 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -9 to -14 (2) Cohesion Spatial Fn: CH, -9 to -14 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -14 to -30 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -14 to -30 (2) Cohesion Spatial Fn: CH, -14 to -30 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -30 to -34 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -30 to -34 (2) Cohesion Spatial Fn: CH, 30 to -34 SG Phi: 0 ° Piezometric Line: 1

US Army Corps of Engineers®
Vicksburg District

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

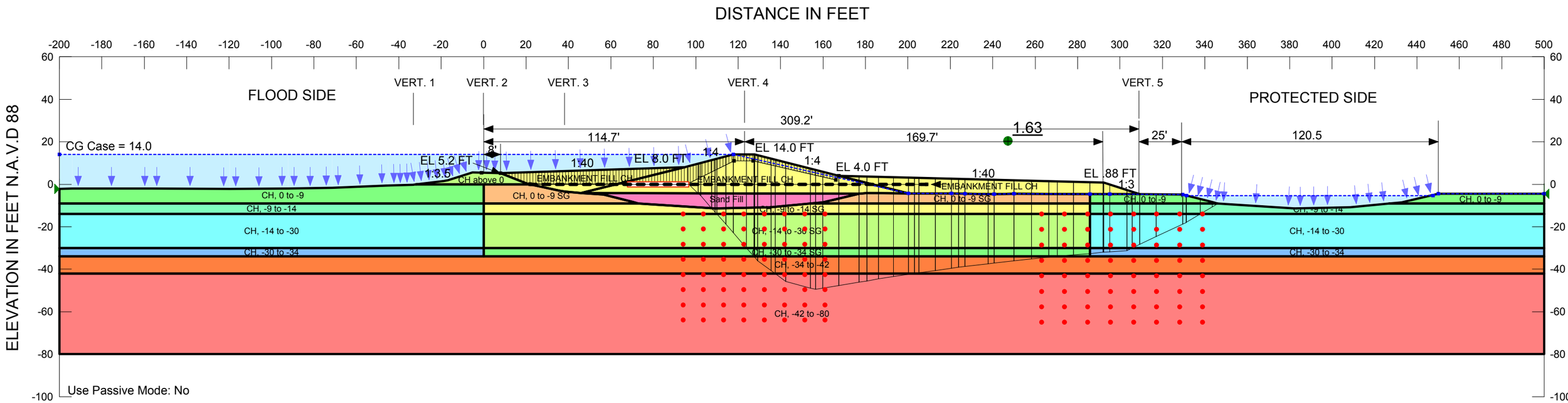
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 771+00 TO 819+00
Reach 5c (2)
CG Case
Entry and Exit
Around Geotextile
2nd Stage Construction

Name: CG Case.EE
File Name: 5c(2) Typical 1.2nd SC.80%SG.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\2nd Stage Constuction\80%SG 1 Layer of Fabric\Slope W\
Last Edited By: Cox, Lane MVK

Figure L-11

"Confidential Information: Privileged & Confidential Work Product"



Type: Fabric Fabric Capacity: 27000 lbs @ 5% strain Total Length: 187 ft Inside Point: (22, 0) Outside Point: (209, 0) Contact Cohesion: 265 psf Contact Phi: 19 ° Interface Factor: 2
Governing Component: Fabric

Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 102 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -9 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -9 (2) Cohesion Spatial Fn: CH, 0 to -9 Phi: 0 ° Piezometric Line: 1
Name: CH, -9 to -14 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -9 to -14 (2) Cohesion Spatial Fn: CH, -9 to -14 Phi: 0 ° Piezometric Line: 1
Name: CH, -14 to -30 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -14 to -30 (2) Cohesion Spatial Fn: CH, -14 to -30 Phi: 0 ° Piezometric Line: 1
Name: CH, -30 to -34 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -30 to -34 (2) Cohesion Spatial Fn: CH, 30 to -34 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1
Name: CH, -34 to -42 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -34 to -42 (2) Cohesion Spatial Fn: CH, -34 to -42 Phi: 0 ° Piezometric Line: 1
Name: CH, -42 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -42 to -80 (2) Cohesion Spatial Fn: CH, -42 to -80 Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -9 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -9 (2) Cohesion Spatial Fn: CH, 0 to -9 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -9 to -14 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -9 to -14 (2) Cohesion Spatial Fn: CH, -9 to -14 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -14 to -30 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -14 to -30 (2) Cohesion Spatial Fn: CH, -14 to -30 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -30 to -34 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -30 to -34 (2) Cohesion Spatial Fn: CH, 30 to -34 SG Phi: 0 ° Piezometric Line: 1

US Army Corps of Engineers®
Vicksburg District

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

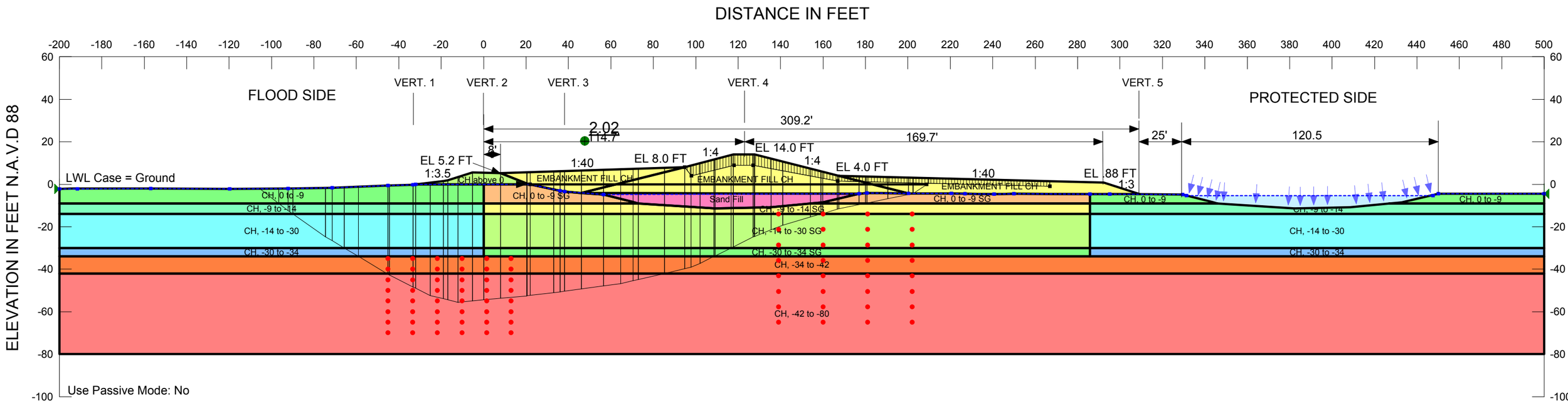
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 771+00 TO 819+00
Reach 5c (2)
CG Case
Block Specified
Through Geotextile
2nd Stage Construction

Name: CG Case.BS.Thru Fabric
File Name: 5c(2) Typical 1.2nd SC.80%SG.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\2nd Stage Constuction\80%SG 1 Layer of Fabric\Slope W\
Last Edited By: Cox, Lane MVK

Figure L-12

"Confidential Information: Privileged & Confidential Work Product"



Type: Fabric Fabric Capacity: 27000 lbs @ 5% strain Total Length: 187 ft Inside Point: (209, 0) Outside Point: (22, 0) Contact Cohesion: 265 psf Contact Phi: 19 ° Interface Factor: 2
Governing Component: Bond

Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 102 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -9 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -9 (2) Cohesion Spatial Fn: CH, 0 to -9 Phi: 0 ° Piezometric Line: 1
Name: CH, -9 to -14 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -9 to -14 (2) Cohesion Spatial Fn: CH, -9 to -14 Phi: 0 ° Piezometric Line: 1
Name: CH, -14 to -30 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -14 to -30 (2) Cohesion Spatial Fn: CH, -14 to -30 Phi: 0 ° Piezometric Line: 1
Name: CH, -30 to -34 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -30 to -34 (2) Cohesion Spatial Fn: CH, 30 to -34 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1
Name: CH, -34 to -42 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -34 to -42 (2) Cohesion Spatial Fn: CH, -34 to -42 Phi: 0 ° Piezometric Line: 1
Name: CH, -42 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -42 to -80 (2) Cohesion Spatial Fn: CH, -42 to -80 Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -9 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -9 (2) Cohesion Spatial Fn: CH, 0 to -9 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -9 to -14 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -9 to -14 (2) Cohesion Spatial Fn: CH, -9 to -14 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -14 to -30 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -14 to -30 (2) Cohesion Spatial Fn: CH, -14 to -30 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -30 to -34 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -30 to -34 (2) Cohesion Spatial Fn: CH, 30 to -34 SG Phi: 0 ° Piezometric Line: 1

US Army Corps of Engineers®
Vicksburg District

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

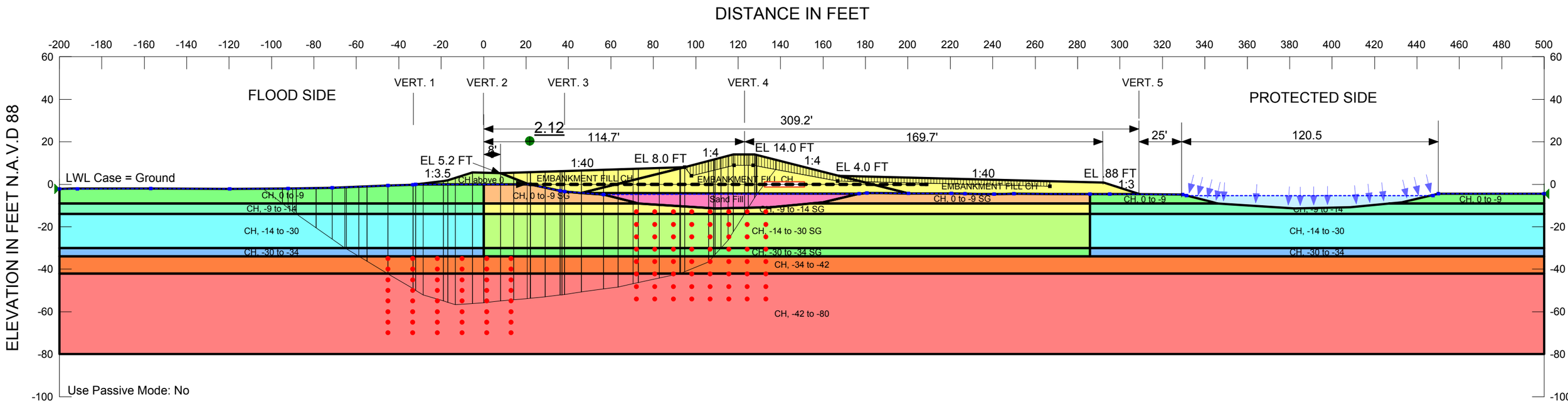
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 771+00 TO 819+00
Reach 5c (2)
LWL Case
PS to FS
Block Specified
Around Geotextile
2nd Stage Construction

Name: LWL Case.BS
File Name: 5c(2) Typical 1.2nd SC.80%SG.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\2nd Stage Constuction\80%SG 1 Layer of Fabric\Slope.W\
Last Edited By: Cox, Lane MVK

Figure L-13

"Confidential Information: Privileged & Confidential Work Product"



Type: Fabric Fabric Capacity: 27000 lbs @ 5% strain Total Length: 187 ft Inside Point: (209, 0) Outside Point: (22, 0) Contact Cohesion: 265 psf Contact Phi: 19 ° Interface Factor: 2
Governing Component: Fabric

Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 102 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -9 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -9 (2) Cohesion Spatial Fn: CH, 0 to -9 Phi: 0 ° Piezometric Line: 1
Name: CH, -9 to -14 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -9 to -14 (2) Cohesion Spatial Fn: CH, -9 to -14 Phi: 0 ° Piezometric Line: 1
Name: CH, -14 to -30 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -14 to -30 (2) Cohesion Spatial Fn: CH, -14 to -30 Phi: 0 ° Piezometric Line: 1
Name: CH, -30 to -34 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -30 to -34 (2) Cohesion Spatial Fn: CH, 30 to -34 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1
Name: CH, -34 to -42 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -34 to -42 (2) Cohesion Spatial Fn: CH, -34 to -42 Phi: 0 ° Piezometric Line: 1
Name: CH, -42 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -42 to -80 (2) Cohesion Spatial Fn: CH, -42 to -80 Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -9 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -9 (2) Cohesion Spatial Fn: CH, 0 to -9 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -9 to -14 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -9 to -14 (2) Cohesion Spatial Fn: CH, -9 to -14 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -14 to -30 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -14 to -30 (2) Cohesion Spatial Fn: CH, -14 to -30 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -30 to -34 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -30 to -34 (2) Cohesion Spatial Fn: CH, 30 to -34 SG Phi: 0 ° Piezometric Line: 1

US Army Corps of Engineers®
Vicksburg District

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

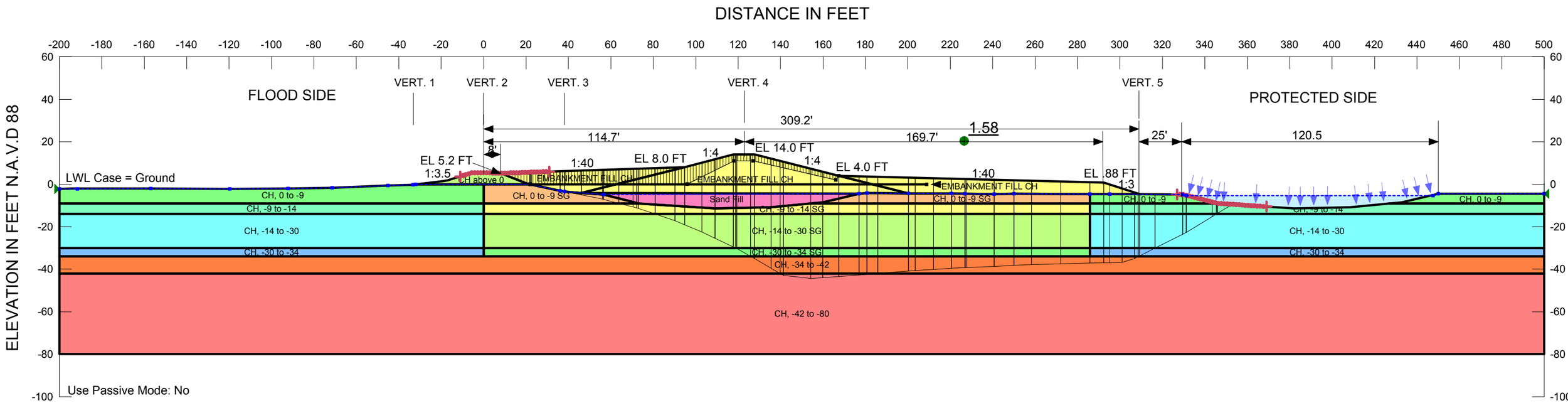
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 771+00 TO 819+00
Reach 5c (2)
LWL Case
PS to FS
Block Specified
Through Geotextile
2nd Stage Construction

Name: LWL Case.BS.Thru Fabric
File Name: 5c(2) Typical 1.2nd SC.80%SG.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\2nd Stage Constuction\80%SG 1 Layer of Fabric\Slope.W\
Last Edited By: Cox, Lane MVK

Figure L-14

"Confidential Information: Privileged & Confidential Work Product"



Type: Fabric Fabric Capacity: 27000 lbs @ 5% strain Total Length: 187 ft Inside Point: (22, 0) Outside Point: (209, 0) Contact Cohesion: 19 psf Contact Phi: 265 ° Interface Factor: 2
Governing Component: Bond

Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 102 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -9 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -9 (2) Cohesion Spatial Fn: CH, 0 to -9 Phi: 0 ° Piezometric Line: 1
Name: CH, -9 to -14 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -9 to -14 (2) Cohesion Spatial Fn: CH, -9 to -14 Phi: 0 ° Piezometric Line: 1
Name: CH, -14 to -30 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -14 to -30 (2) Cohesion Spatial Fn: CH, -14 to -30 Phi: 0 ° Piezometric Line: 1
Name: CH, -30 to -34 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -30 to -34 (2) Cohesion Spatial Fn: CH, 30 to -34 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1
Name: CH, -34 to -42 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -34 to -42 (2) Cohesion Spatial Fn: CH, -34 to -42 Phi: 0 ° Piezometric Line: 1
Name: CH, -42 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -42 to -80 (2) Cohesion Spatial Fn: CH, -42 to -80 Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -9 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -9 (2) Cohesion Spatial Fn: CH, 0 to -9 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -9 to -14 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -9 to -14 (2) Cohesion Spatial Fn: CH, -9 to -14 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -14 to -30 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -14 to -30 (2) Cohesion Spatial Fn: CH, -14 to -30 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -30 to -34 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -30 to -34 (2) Cohesion Spatial Fn: CH, 30 to -34 SG Phi: 0 ° Piezometric Line: 1

US Army Corps of Engineers®
Vicksburg District

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

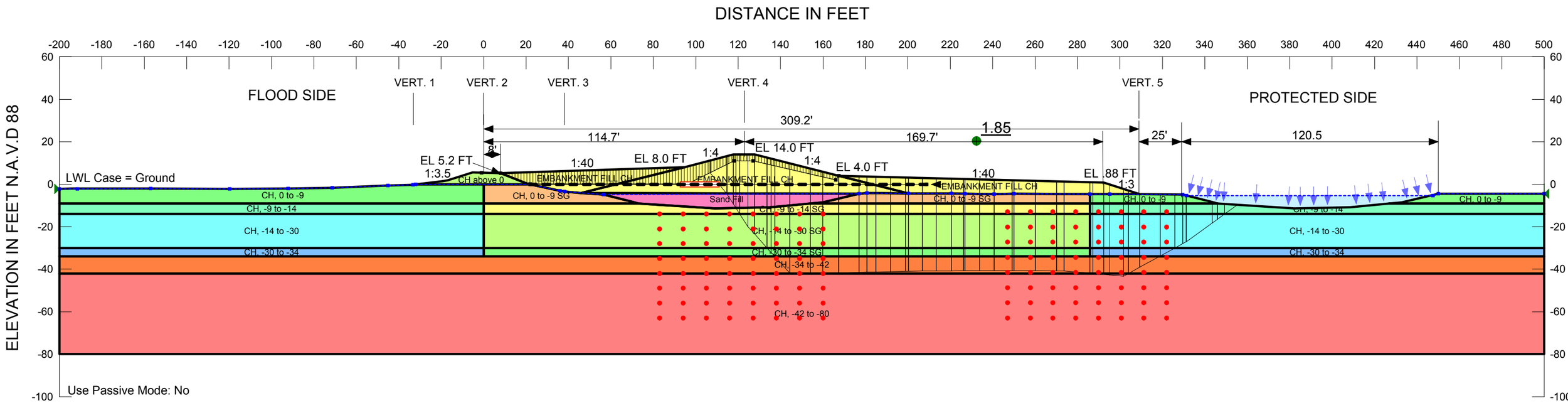
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 771+00 TO 819+00
Reach 5c (2)
LWL Case
FS to PS
Entry and Exit
Around Geotextile
2nd Stage Construction

Name: LWL Case.EE.L to R
File Name: 5c(2) Typical 1.2nd SC.80%SG.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\2nd Stage Constuction\80%SG 1 Layer of Fabric\Slope.W\
Last Edited By: Cox, Lane MVK

Figure L-15

"Confidential Information: Privileged & Confidential Work Product"



Type: Fabric Fabric Capacity: 27000 lbs @ 5% strain Total Length: 187 ft Inside Point: (22, 0) Outside Point: (209, 0) Contact Cohesion: 265 psf Contact Phi: 19 ° Interface Factor: 2
Governing Component: Fabric

Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 102 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -9 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -9 (2) Cohesion Spatial Fn: CH, 0 to -9 Phi: 0 ° Piezometric Line: 1
Name: CH, -9 to -14 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -9 to -14 (2) Cohesion Spatial Fn: CH, -9 to -14 Phi: 0 ° Piezometric Line: 1
Name: CH, -14 to -30 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -14 to -30 (2) Cohesion Spatial Fn: CH, -14 to -30 Phi: 0 ° Piezometric Line: 1
Name: CH, -30 to -34 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -30 to -34 (2) Cohesion Spatial Fn: CH, 30 to -34 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1
Name: CH, -34 to -42 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -34 to -42 (2) Cohesion Spatial Fn: CH, -34 to -42 Phi: 0 ° Piezometric Line: 1
Name: CH, -42 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -42 to -80 (2) Cohesion Spatial Fn: CH, -42 to -80 Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -9 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -9 (2) Cohesion Spatial Fn: CH, 0 to -9 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -9 to -14 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -9 to -14 (2) Cohesion Spatial Fn: CH, -9 to -14 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -14 to -30 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -14 to -30 (2) Cohesion Spatial Fn: CH, -14 to -30 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -30 to -34 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -30 to -34 (2) Cohesion Spatial Fn: CH, 30 to -34 SG Phi: 0 ° Piezometric Line: 1

US Army Corps of Engineers®
Vicksburg District

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

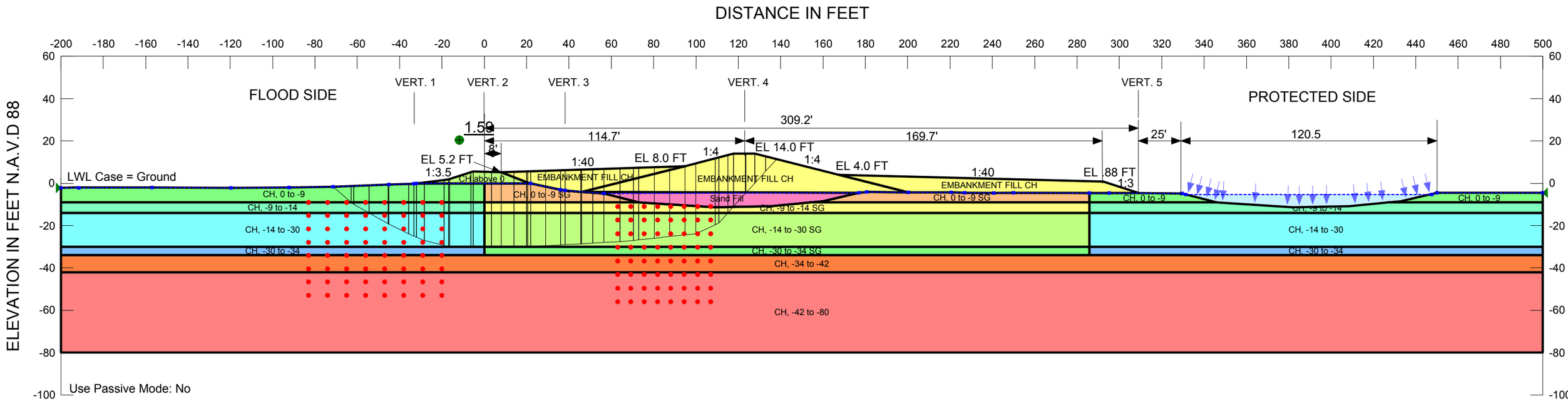
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 771+00 TO 819+00
Reach 5c (2)
LWL Case
FS to PS
Block Specified
Through Geotextile
2nd Stage Construction

Name: LWL Case.BS.L to R.Thru Fabric
File Name: 5c(2) Typical 1.2nd SC.80%SG.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\2nd Stage Constuction\80%SG 1 Layer of Fabric\Slope.W\
Last Edited By: Cox, Lane MVK

Figure L-16

"Confidential Information: Privileged & Confidential Work Product"



Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 102 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -9 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -9 (2) Cohesion Spatial Fn: CH, 0 to -9 Phi: 0 ° Piezometric Line: 1
Name: CH, -9 to -14 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -9 to -14 (2) Cohesion Spatial Fn: CH, -9 to -14 Phi: 0 ° Piezometric Line: 1
Name: CH, -14 to -30 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -14 to -30 (2) Cohesion Spatial Fn: CH, -14 to -30 Phi: 0 ° Piezometric Line: 1
Name: CH, -30 to -34 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -30 to -34 (2) Cohesion Spatial Fn: CH, 30 to -34 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1
Name: CH, -34 to -42 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -34 to -42 (2) Cohesion Spatial Fn: CH, -34 to -42 Phi: 0 ° Piezometric Line: 1
Name: CH, -42 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -42 to -80 (2) Cohesion Spatial Fn: CH, -42 to -80 Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -9 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -9 (2) Cohesion Spatial Fn: CH, 0 to -9 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -9 to -14 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -9 to -14 (2) Cohesion Spatial Fn: CH, -9 to -14 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -14 to -30 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -14 to -30 (2) Cohesion Spatial Fn: CH, -14 to -30 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -30 to -34 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -30 to -34 (2) Cohesion Spatial Fn: CH, 30 to -34 SG Phi: 0 ° Piezometric Line: 1

US Army Corps of Engineers®
Vicksburg District

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

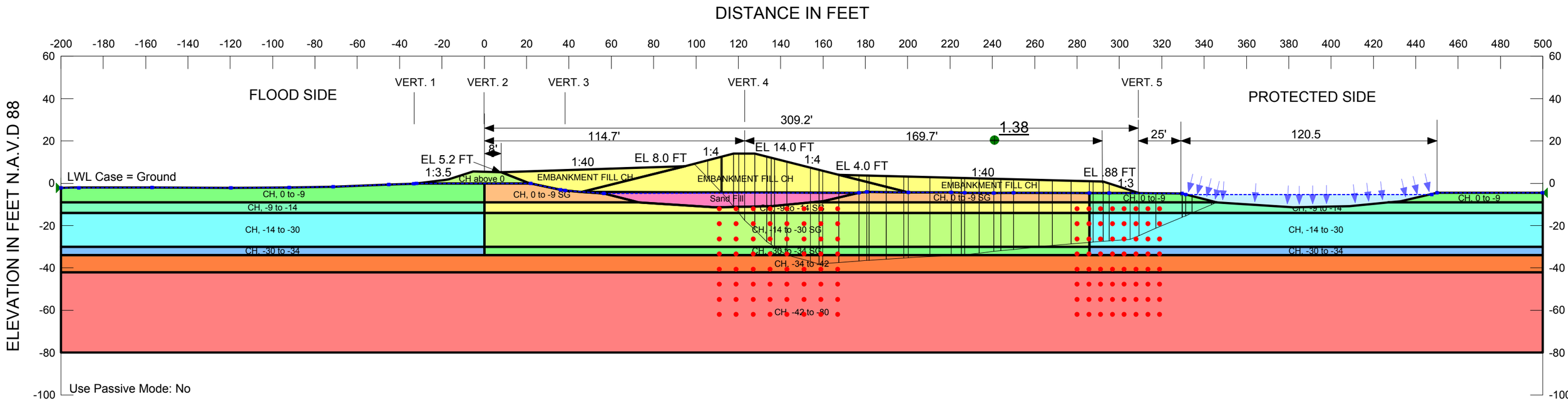
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 771+00 TO 819+00
Reach 5c (2)
LWL Case
S-Case
PS to FS
Block Specified
2nd Stage Construction

Name: LWL Case.BS
File Name: 5c(2) Typical 1.2nd SC.80%SG.S-Case.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\2nd Stage Constuction\80%SG,1 Layer of Fabric\Slope W\
Last Edited By: Cox, Lane MVK

Figure L-17

"Confidential Information: Privileged & Confidential Work Product"



Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 102 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -9 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -9 (2) Cohesion Spatial Fn: CH, 0 to -9 Phi: 0 ° Piezometric Line: 1
Name: CH, -9 to -14 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -9 to -14 (2) Cohesion Spatial Fn: CH, -9 to -14 Phi: 0 ° Piezometric Line: 1
Name: CH, -14 to -30 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -14 to -30 (2) Cohesion Spatial Fn: CH, -14 to -30 Phi: 0 ° Piezometric Line: 1
Name: CH, -30 to -34 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -30 to -34 (2) Cohesion Spatial Fn: CH, 30 to -34 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1
Name: CH, -34 to -42 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -34 to -42 (2) Cohesion Spatial Fn: CH, -34 to -42 Phi: 0 ° Piezometric Line: 1
Name: CH, -42 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -42 to -80 (2) Cohesion Spatial Fn: CH, -42 to -80 Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -9 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -9 (2) Cohesion Spatial Fn: CH, 0 to -9 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -9 to -14 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -9 to -14 (2) Cohesion Spatial Fn: CH, -9 to -14 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -14 to -30 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -14 to -30 (2) Cohesion Spatial Fn: CH, -14 to -30 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -30 to -34 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -30 to -34 (2) Cohesion Spatial Fn: CH, 30 to -34 SG Phi: 0 ° Piezometric Line: 1

US Army Corps of Engineers®
Vicksburg District

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

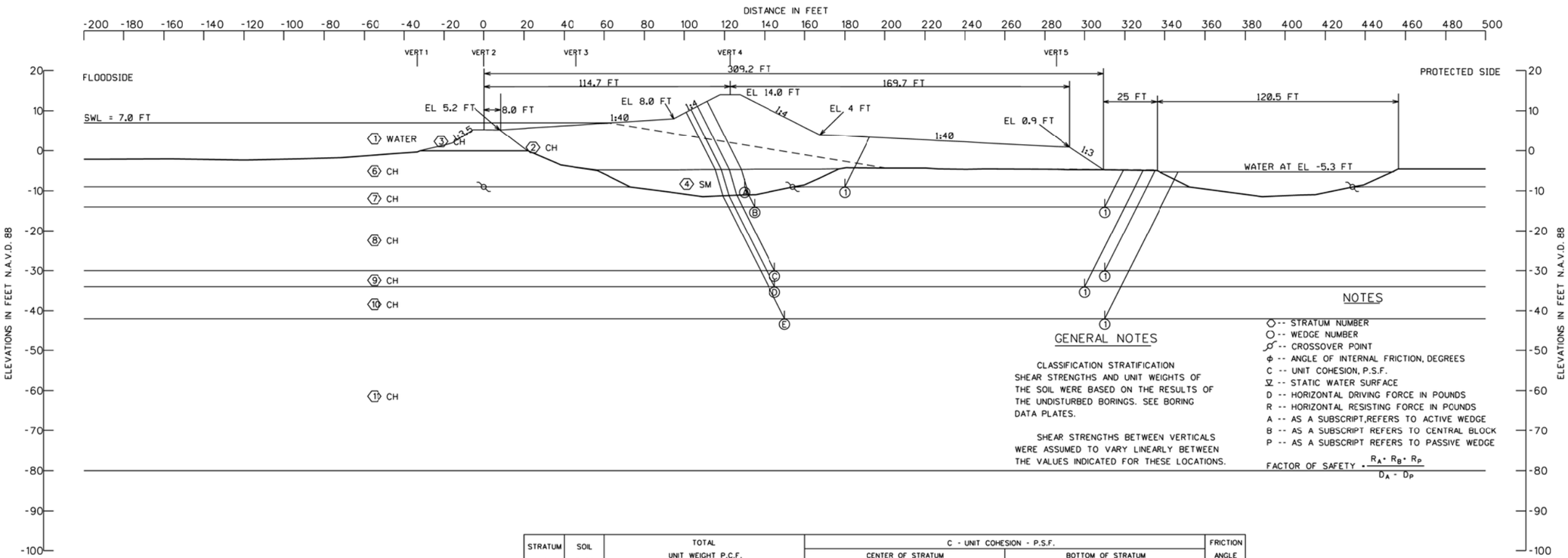
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 771+00 TO 819+00
Reach 5c (2)
LWL Case
S-Case
FS to PS
Block Specified
2nd Stage Construction

Name: LWL Case.BS.L to R
File Name: 5c(2) Typical 1.2nd SC.80%SG.S-Case.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\2nd Stage Constuction\80%SG,1 Layer of Fabric\Slope W\
Last Edited By: Cox, Lane MVK

Figure L-18

"Confidential Information: Privileged & Confidential Work Product"



GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF THE UNDISTURBED BORINGS. SEE BORING DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

NOTES

⬡ -- STRATUM NUMBER
○ -- WEDGE NUMBER
-- CROSSOVER POINT
ϕ -- ANGLE OF INTERNAL FRICTION, DEGREES
C -- UNIT COHESION, P.S.F.
▽ -- STATIC WATER SURFACE
D -- HORIZONTAL DRIVING FORCE IN POUNDS
R -- HORIZONTAL RESISTING FORCE IN POUNDS
A -- AS A SUBSCRIPT, REFERS TO ACTIVE WEDGE
B -- AS A SUBSCRIPT REFERS TO CENTRAL BLOCK
P -- AS A SUBSCRIPT REFERS TO PASSIVE WEDGE

FACTOR OF SAFETY $= \frac{R_A + R_B + R_P}{D_A - D_P}$

ASSUMED FAILURE SURFACE		RESISTING FORCES			DRIVING FORCES		SUMMATION OF FORCES		FACTOR OF SAFETY
NO.	ELEV.	R_A	R_B	R_P	D_A	$-D_P$	RESISTING	DRIVING	
Ⓐ ①	-9.0	27505	8762	10678	29381	8722	46945	20659	2.27
Ⓑ ①	-14.0	29387	23846	1844	43537	3874	55077	39663	1.39
Ⓒ ①	-30.0	37423	51151	7718	102700	30498	96292	72202	1.33
Ⓓ ①	-34.0	39584	54494	10035	121380	42996	104113	78384	1.33
Ⓔ ①	-42.0	45149	67250	15443	162645	67533	127842	95112	1.34

STRATUM NO.	SOIL TYPE	TOTAL UNIT WEIGHT P.C.F.					C - UNIT COHESION - P.S.F. CENTER OF STRATUM					C - UNIT COHESION - P.S.F. BOTTOM OF STRATUM					FRICTION ANGLE DEGREES
		VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	
①	WATER	62	62	62	62	62	0	0	0	0	0	0	0	0	0	0	0
②	CH	115	115	115	115	115	600	600	600	600	600	600	600	600	600	600	0
③	CH	102	102	102	102	102	600	600	600	600	600	600	600	600	600	600	0
④	SM	122	122	122	122	122	0	0	0	0	0	0	0	0	0	0	30
⑤	CH	90	96	94	89	87	50	300	148	198	100	83	300	148	198	100	0
⑥	CH	90	96	94	89	87	50	300	148	198	100	83	300	148	198	100	0
⑦	CH	90	97	98	99	100	99	300	144	191	100	115	300	144	191	100	0
⑧	CH	100	102	101	100	100	203	338	258	298	184	291	375	342	382	268	0
⑨	CH	122	113	114	116	118	313	419	362	395	289	335	438	383	416	310	0
⑩	CH	105	116	113	109	106	379	476	448	400	367	423	514	488	441	409	0
⑪	CH	105	105	105	106	106	632	695	672	635	609	841	875	856	829	808	0

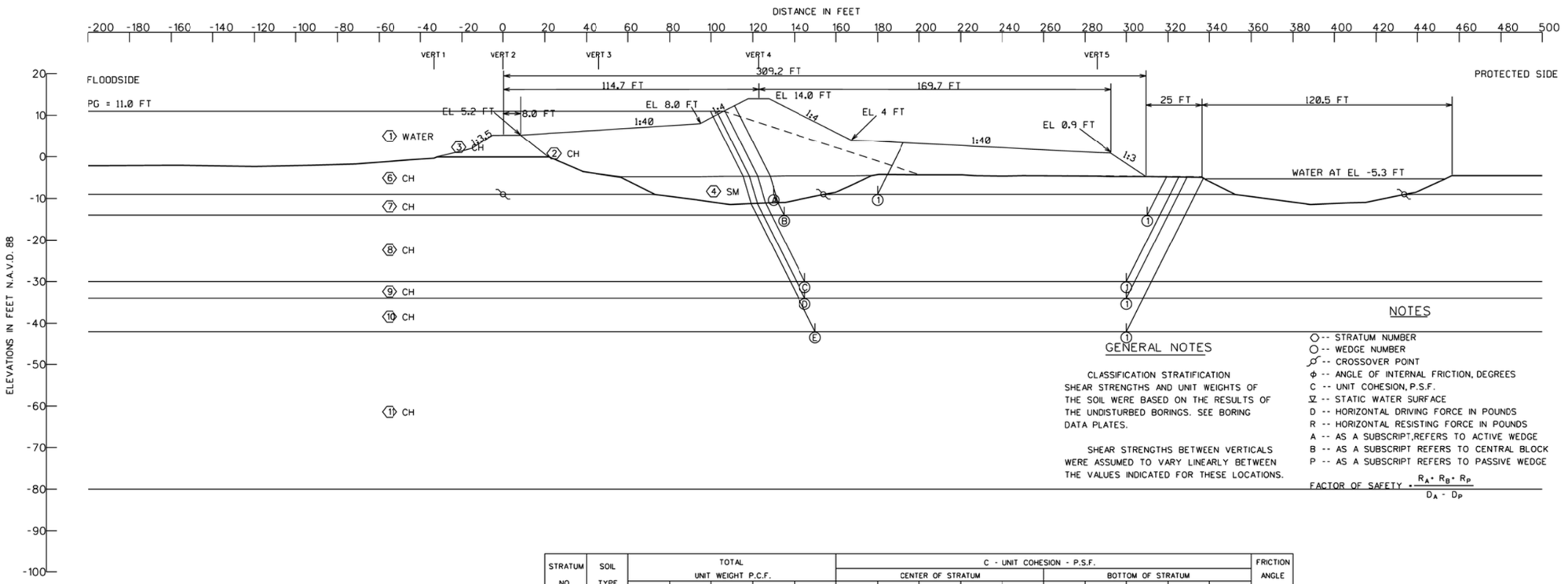
FS = (T+R)/D
FS = (27000 + 104113) /78384
FS = 1.67

"Reach 5c(2)-2nd Stage"
"FS to PS: SWL = 7.0"

U.S. ARMY ENGINEER DISTRICT NEW ORLEANS
CORPS OF ENGINEERS 02-APR-11

Figure L-19

"Confidential Information: Privileged & Confidential Work Product"



GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF THE UNDISTURBED BORINGS. SEE BORING DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

NOTES

○-- STRATUM NUMBER
○-- WEDGE NUMBER
⌀-- CROSSOVER POINT
Φ -- ANGLE OF INTERNAL FRICTION, DEGREES
C -- UNIT COHESION, P.S.F.
⧖ -- STATIC WATER SURFACE
D -- HORIZONTAL DRIVING FORCE IN POUNDS
R -- HORIZONTAL RESISTING FORCE IN POUNDS
A -- AS A SUBSCRIPT,REFERS TO ACTIVE WEDGE
B -- AS A SUBSCRIPT REFERS TO CENTRAL BLOCK
P -- AS A SUBSCRIPT REFERS TO PASSIVE WEDGE

$$\text{FACTOR OF SAFETY} = \frac{R_A + R_B + R_P}{D_A - D_P}$$

ASSUMED FAILURE SURFACE		RESISTING FORCES			DRIVING FORCES		SUMMATION OF FORCES		FACTOR OF SAFETY
NO.	ELEV.	R_A	R_B	R_P	D_A	$-D_P$	RESISTING	DRIVING	
Ⓐ ①	-9.0	26065	8762	10678	29396	8722	45505	20674	2.20
Ⓑ ①	-14.0	27948	23846	1844	43552	3874	53638	39678	1.35
Ⓒ ①	-30.0	35862	48471	7727	102744	32196	92060	70548	1.30
Ⓓ ①	-34.0	37907	54494	10035	121518	42996	102436	78522	1.30
Ⓔ ①	-42.0	43382	63160	15850	162986	69845	122392	93141	1.31

STRATUM NO.	SOIL TYPE	TOTAL UNIT WEIGHT P.C.F.					C - UNIT COHESION - P.S.F. CENTER OF STRATUM					C - UNIT COHESION - P.S.F. BOTTOM OF STRATUM					FRICTION ANGLE
		VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	DEGREES
①	WATER	62	62	62	62	62	0	0	0	0	0	0	0	0	0	0	0
②	CH	115	115	115	115	115	600	600	600	600	600	600	600	600	600	600	0
③	CH	102	102	102	102	102	600	600	600	600	600	600	600	600	600	600	0
④	SM	122	122	122	122	122	0	0	0	0	0	0	0	0	0	0	30
⑤	CH	90	96	94	89	87	50	300	148	198	100	83	300	148	198	100	0
⑥	CH	90	96	94	89	87	50	300	148	198	100	83	300	148	198	100	0
⑦	CH	90	97	98	99	100	99	300	144	191	100	115	300	144	191	100	0
⑧	CH	100	102	101	100	100	203	338	258	298	184	291	375	342	382	268	0
⑨	CH	122	113	114	116	118	313	419	362	395	289	335	438	383	416	310	0
⑩	CH	105	116	113	109	106	379	476	448	400	367	423	514	488	441	409	0
⑪	CH	105	105	105	106	106	632	695	672	635	609	841	875	856	829	808	0

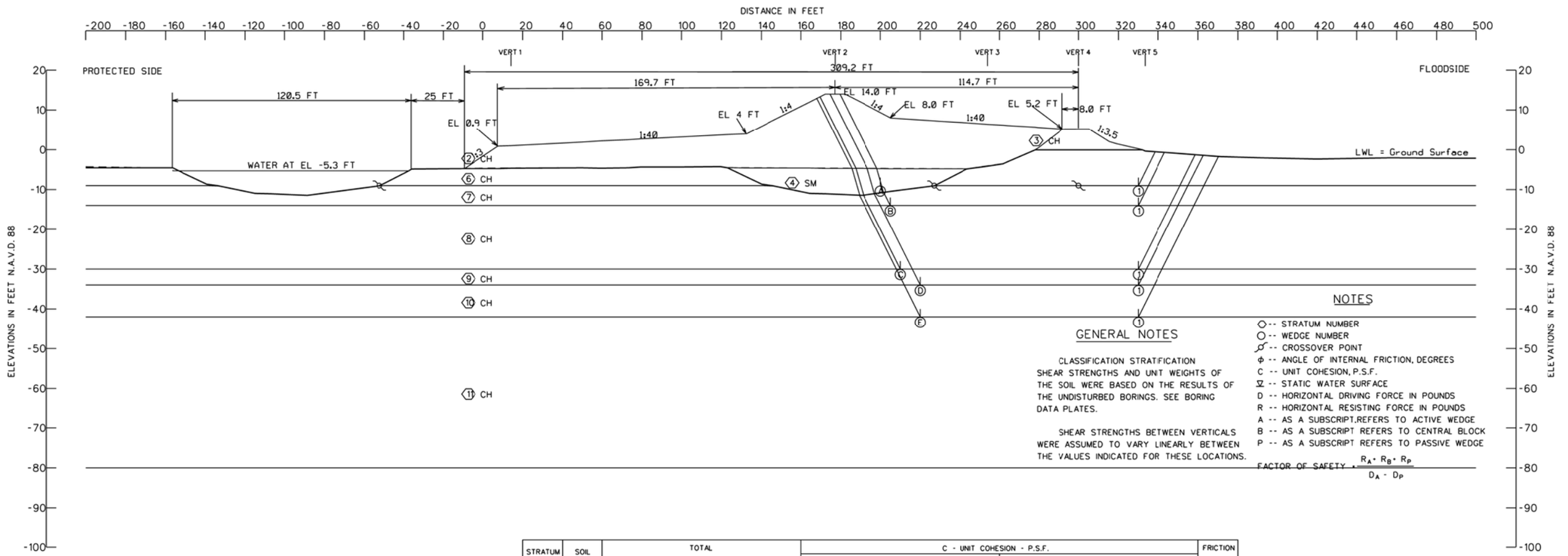
FS = (T+R)/D
FS = (27000 + 102436) / 78522
FS = 1.65

"Reach 5c(2)-2nd Stage"
"FS to PS: PG = 11.0"

U.S. ARMY ENGINEER DISTRICT NEW ORLEANS
CORPS OF ENGINEERS 06-APR-11

Figure L-20

"Confidential Information: Privileged & Confidential Work Product"



GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF THE UNDISTURBED BORINGS. SEE BORING DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

NOTES

◇ -- STRATUM NUMBER
○ -- WEDGE NUMBER
ⷯ -- CROSSOVER POINT
Φ -- ANGLE OF INTERNAL FRICTION, DEGREES
C -- UNIT COHESION, P.S.F.
⧖ -- STATIC WATER SURFACE
D -- HORIZONTAL DRIVING FORCE IN POUNDS
R -- HORIZONTAL RESISTING FORCE IN POUNDS
A -- AS A SUBSCRIPT,REFERS TO ACTIVE WEDGE
B -- AS A SUBSCRIPT REFERS TO CENTRAL BLOCK
P -- AS A SUBSCRIPT REFERS TO PASSIVE WEDGE

$$\text{FACTOR OF SAFETY} = \frac{R_A + R_B + R_P}{D_A - D_P}$$

ASSUMED FAILURE SURFACE NO.		ELEV.	RESISTING FORCES R_A	R_B	R_P	DRIVING FORCES D_A	$-D_P$	SUMMATION OF FORCES RESISTING	DRIVING	FACTOR OF SAFETY
A	1	-9.0	28982	25053	855	24360	3473	54890	20887	2.63
B	1	-14.0	30759	24506	1878	36116	8415	57143	27701	2.06
C	1	-30.0	41139	42159	8264	97399	40043	91562	57356	1.60
D	1	-34.0	43719	43903	10787	109754	52008	98409	57746	1.70
E	1	-42.0	50803	53475	16786	155830	81037	121064	74793	1.62

STRATUM NO.	SOIL TYPE	TOTAL UNIT WEIGHT P.C.F. VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	C - UNIT COHESION - P.S.F. CENTER OF STRATUM VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	BOTTOM OF STRATUM VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	FRICTION ANGLE DEGREES
1	WATER	62	62	62	62	62	0	0	0	0	0	0	0	0	0	0	0
2	CH	115	115	115	115	115	600	600	600	600	600	600	600	600	600	600	0
3	CH	102	102	102	102	102	600	600	600	600	600	600	600	600	600	600	0
4	SM	122	122	122	122	122	0	0	0	0	0	0	0	0	0	0	30
5	CH	87	89	94	96	90	100	198	148	300	50	100	198	148	300	83	0
6	CH	87	89	94	96	90	100	198	148	300	50	100	198	148	300	83	0
7	CH	100	99	98	97	90	100	191	144	300	99	100	191	144	300	115	0
8	CH	100	100	101	102	100	184	298	258	338	203	268	382	342	375	291	0
9	CH	118	116	114	113	122	289	395	362	419	313	310	416	383	438	335	0
10	CH	106	109	113	116	105	367	400	448	476	379	409	441	488	514	423	0
11	CH	106	106	105	105	105	609	635	672	695	632	808	829	856	875	841	0

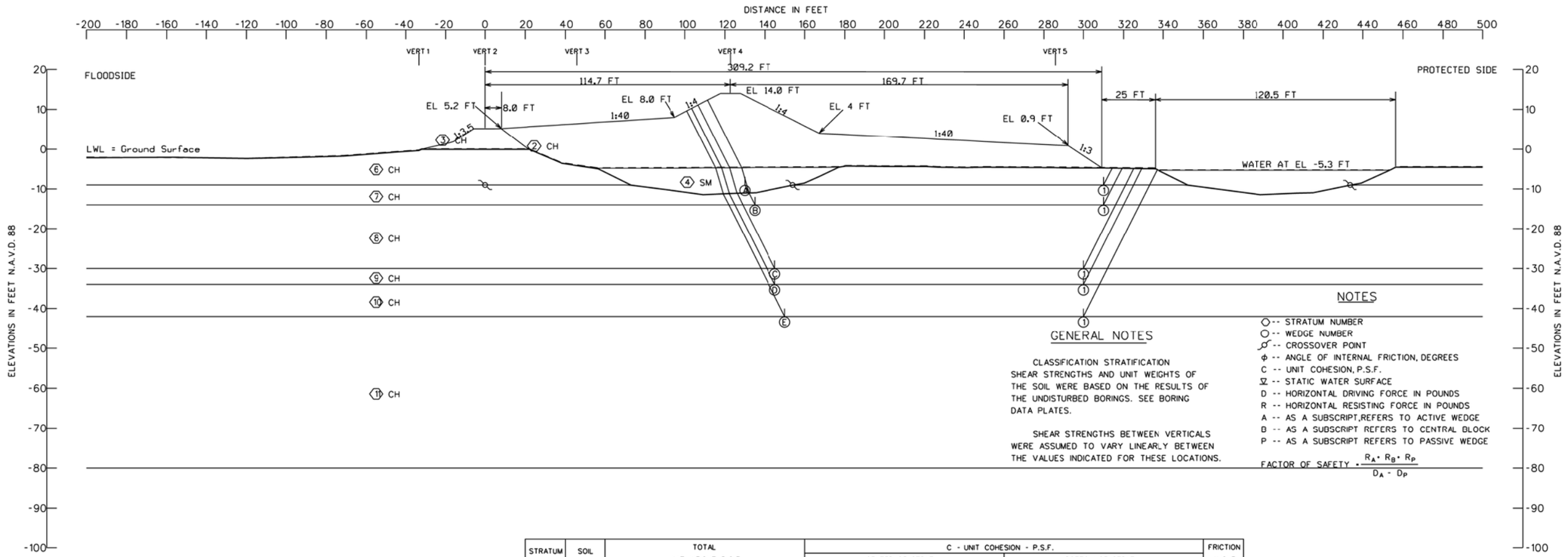
FS = (T+R)/D
FS = (27000 + 91562) / 57356
FS = 2.07

"Reach 5c(2)-2nd Stage"
"PS to FS: LWL + GS"

U.S. ARMY ENGINEER DISTRICT NEW ORLEANS
CORPS OF ENGINEERS 02-APR-11

Figure L-21

"Confidential Information: Privileged & Confidential Work Product"



GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF THE UNDISTURBED BORINGS. SEE BORING DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

NOTES

- ○ -- STRATUM NUMBER
- ○ -- WEDGE NUMBER
- ∫ -- CROSSOVER POINT
- Φ -- ANGLE OF INTERNAL FRICTION, DEGREES
- C -- UNIT COHESION, P.S.F.
- ▽ -- STATIC WATER SURFACE
- D -- HORIZONTAL DRIVING FORCE IN POUNDS
- R -- HORIZONTAL RESISTING FORCE IN POUNDS
- A -- AS A SUBSCRIPT, REFERS TO ACTIVE WEDGE
- B -- AS A SUBSCRIPT REFERS TO CENTRAL BLOCK
- P -- AS A SUBSCRIPT REFERS TO PASSIVE WEDGE

$$\text{FACTOR OF SAFETY} = \frac{R_A + R_B + R_P}{D_A - D_P}$$

ASSUMED FAILURE SURFACE		RESISTING FORCES			DRIVING FORCES		SUMMATION OF FORCES		FACTOR OF SAFETY
NO.	ELEV.	R_A	R_B	R_P	D_A	$-D_P$	RESISTING	DRIVING	
Ⓐ ①	-9.0	29091	24886	848	29381	785	54825	28596	1.92
Ⓑ ①	-14.0	30973	23846	1844	43537	3874	56663	39663	1.43
Ⓒ ①	-30.0	39167	48471	7727	102700	32196	95365	70504	1.35
Ⓓ ①	-34.0	41435	54494	10035	121380	42996	105964	78384	1.35
Ⓔ ①	-42.0	47082	63160	15851	162645	69845	126093	92800	1.36

STRATUM NO.	SOIL TYPE	TOTAL UNIT WEIGHT P.C.F.					C - UNIT COHESION - P.S.F. CENTER OF STRATUM					C - UNIT COHESION - P.S.F. BOTTOM OF STRATUM					FRICTION ANGLE DEGREES
		VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	
①	WATER	62	62	62	62	62	0	0	0	0	0	0	0	0	0	0	0
②	CH	115	115	115	115	115	600	600	600	600	600	600	600	600	600	600	0
③	CH	102	102	102	102	102	600	600	600	600	600	600	600	600	600	600	0
④	SM	122	122	122	122	122	0	0	0	0	0	0	0	0	0	0	30
⑤	CH	90	96	94	89	87	50	300	148	198	100	83	300	148	198	100	0
⑥	CH	90	96	94	89	87	50	300	148	198	100	83	300	148	198	100	0
⑦	CH	90	97	98	99	100	99	300	144	191	100	115	300	144	191	100	0
⑧	CH	100	102	101	100	100	203	338	258	298	184	291	375	342	382	268	0
⑨	CH	122	113	114	116	118	313	419	362	395	289	335	438	383	416	310	0
⑩	CH	105	116	113	109	106	379	476	448	400	367	423	514	488	441	409	0
⑪	CH	105	105	105	106	106	632	695	672	635	609	841	875	856	829	808	0

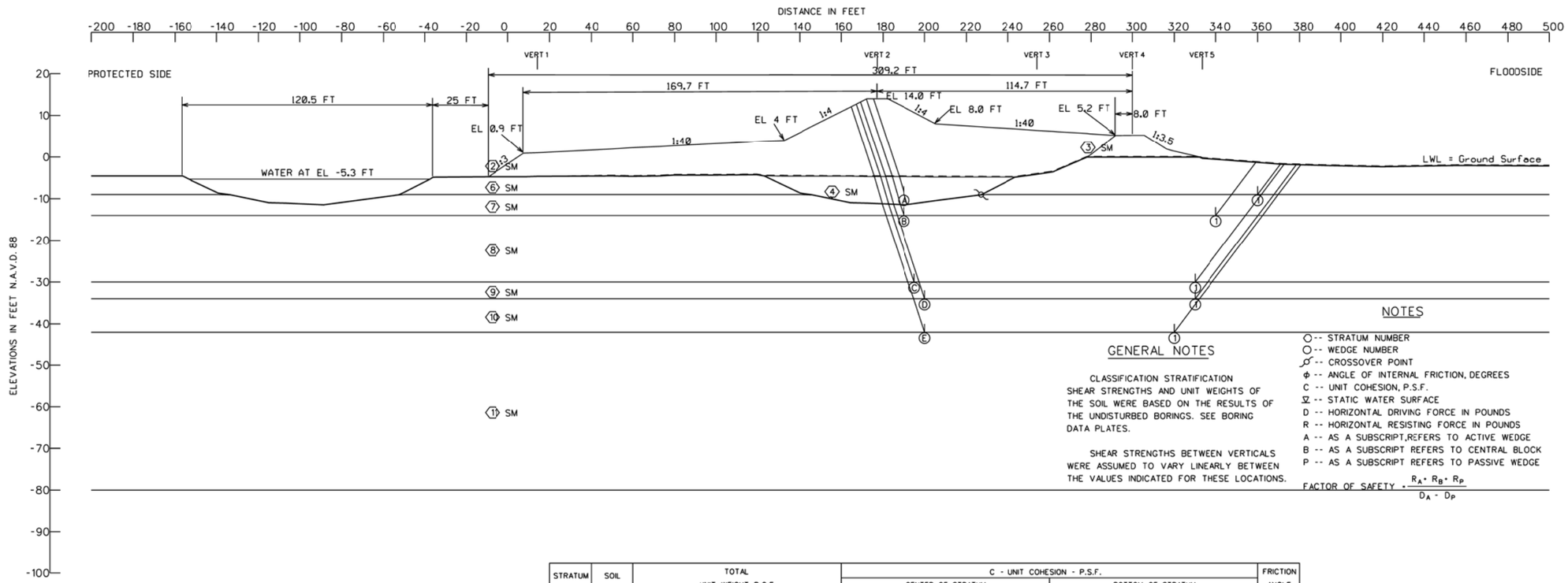
FS = (T+R)/D
FS = (27000 + 105964) / 78384
FS = 1.70

"Reach 5c(2)-2nd Stage"
"FS to PS: LWL + GS"

U.S. ARMY ENGINEER DISTRICT NEW ORLEANS
CORPS OF ENGINEERS 07-APR-11

Figure L-22

"Confidential Information: Privileged & Confidential Work Product"



GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF THE UNDISTURBED BORINGS. SEE BORING DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

NOTES

◇ -- STRATUM NUMBER
○ -- WEDGE NUMBER
⌀ -- CROSSOVER POINT
Φ -- ANGLE OF INTERNAL FRICTION, DEGREES
C -- UNIT COHESION, P.S.F.
▽ -- STATIC WATER SURFACE
D -- HORIZONTAL DRIVING FORCE IN POUNDS
R -- HORIZONTAL RESISTING FORCE IN POUNDS
A -- AS A SUBSCRIPT, REFERS TO ACTIVE WEDGE
B -- AS A SUBSCRIPT REFERS TO CENTRAL BLOCK
P -- AS A SUBSCRIPT REFERS TO PASSIVE WEDGE

FACTOR OF SAFETY $= \frac{R_A + R_B + R_P}{D_A - D_P}$

ASSUMED FAILURE SURFACE		RESISTING FORCES			DRIVING FORCES		SUMMATION OF FORCES		FACTOR OF SAFETY
NO.	ELEV.	R_A	R_B	R_P	D_A	$-D_P$	RESISTING	DRIVING	
Ⓐ ①	-9.0	16423	75538	995	28846	2538	92956	26308	3.53
Ⓑ ①	-14.0	24659	84952	3042	43833	7758	112653	36075	3.12
Ⓒ ①	-30.0	49545	113706	16493	105319	39299	179744	66020	2.72
Ⓓ ①	-34.0	55316	119357	21975	122409	51080	196648	71329	2.76
Ⓔ ①	-42.0	71008	134252	37161	167005	81775	242421	85230	2.84

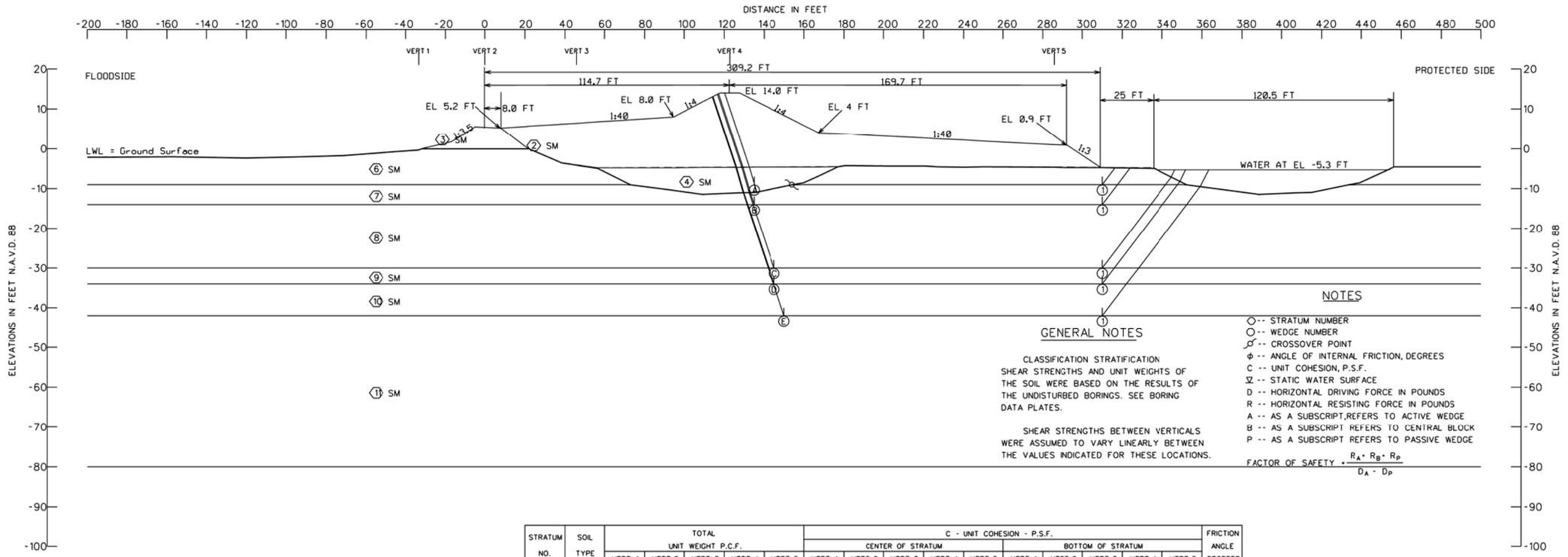
STRATUM NO.	SOIL TYPE	TOTAL UNIT WEIGHT P.C.F.					C - UNIT COHESION - P.S.F. CENTER OF STRATUM					C - UNIT COHESION - P.S.F. BOTTOM OF STRATUM					FRICTION ANGLE DEGREES
		VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	
◇①	WATER	62	62	62	62	62	0	0	0	0	0	0	0	0	0	0	0
◇②	CH	115	115	115	115	115	0	0	0	0	0	0	0	0	0	0	23
◇③	CH	102	102	102	102	102	0	0	0	0	0	0	0	0	0	0	23
◇④	SM	122	122	122	122	122	0	0	0	0	0	0	0	0	0	0	30
◇⑤	CH	87	89	94	96	90	0	0	0	0	0	0	0	0	0	0	23
◇⑥	CH	87	89	94	96	90	0	0	0	0	0	0	0	0	0	0	23
◇⑦	CH	100	99	98	97	90	0	0	0	0	0	0	0	0	0	0	23
◇⑧	CH	100	100	101	102	100	0	0	0	0	0	0	0	0	0	0	23
◇⑨	CH	118	116	114	113	122	0	0	0	0	0	0	0	0	0	0	23
◇⑩	CH	106	109	113	116	105	0	0	0	0	0	0	0	0	0	0	23
◇⑪	CH	106	106	105	105	105	0	0	0	0	0	0	0	0	0	0	23

"Reach 5c(2)-2nd Stage"
"PS to FS: S-Case: LWL + GS"

U.S. ARMY ENGINEER DISTRICT NEW ORLEANS
CORPS OF ENGINEERS 04-APR-11

Figure L-23

"Confidential Information: Privileged & Confidential Work Product"



GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF THE UNDISTURBED BORINGS. SEE BORING DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

NOTES

◇ -- STRATUM NUMBER
○ -- WEDGE NUMBER
ơ -- CROSSOVER POINT
Φ -- ANGLE OF INTERNAL FRICTION, DEGREES
C -- UNIT COHESION, P.S.F.
▽ -- STATIC WATER SURFACE
D -- HORIZONTAL DRIVING FORCE IN POUNDS
R -- HORIZONTAL RESISTING FORCE IN POUNDS
A -- AS A SUBSCRIPT, REFERS TO ACTIVE WEDGE
B -- AS A SUBSCRIPT REFERS TO CENTRAL BLOCK
P -- AS A SUBSCRIPT REFERS TO PASSIVE WEDGE

$$\text{FACTOR OF SAFETY} = \frac{R_A + R_B + R_P}{D_A - D_P}$$

ASSUMED FAILURE SURFACE NO.	ASSUMED FAILURE SURFACE ELEV.	RESISTING FORCES R_A	RESISTING FORCES R_B	RESISTING FORCES R_P	DRIVING FORCES D_A	DRIVING FORCES $-D_P$	SUMMATION OF FORCES RESISTING	SUMMATION OF FORCES DRIVING	FACTOR OF SAFETY
Ⓐ ①	-9.0	16693	74863	260	29109	783	91816	28326	3.24
Ⓑ ①	-14.0	24659	88811	1504	44014	3866	114974	40148	2.86
Ⓒ ①	-30.0	47873	121238	13277	102667	30037	182388	72630	2.51
Ⓓ ①	-34.0	55309	136580	18275	122636	40438	210164	82198	2.56
Ⓔ ①	-42.0	69037	154762	30094	163750	66233	253893	97517	2.60

STRATUM NO.	SOIL TYPE	TOTAL UNIT WEIGHT P.C.F. VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	C - UNIT COHESION - P.S.F. CENTER OF STRATUM VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	BOTTOM OF STRATUM VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	FRICTION ANGLE DEGREES
①	WATER	62	62	62	62	62	0	0	0	0	0	0	0	0	0	0	0
②	CH	115	115	115	115	115	0	0	0	0	0	0	0	0	0	0	23
③	CH	102	102	102	102	102	0	0	0	0	0	0	0	0	0	0	23
④	SM	122	122	122	122	122	0	0	0	0	0	0	0	0	0	0	30
⑤	CH	90	96	94	89	87	0	0	0	0	0	0	0	0	0	0	23
⑥	CH	90	96	94	89	87	0	0	0	0	0	0	0	0	0	0	23
⑦	CH	90	97	98	99	100	0	0	0	0	0	0	0	0	0	0	23
⑧	CH	100	102	101	100	100	0	0	0	0	0	0	0	0	0	0	23
⑨	CH	122	113	114	116	118	0	0	0	0	0	0	0	0	0	0	23
⑩	CH	105	116	113	109	106	0	0	0	0	0	0	0	0	0	0	23
⑪	CH	105	105	105	106	106	0	0	0	0	0	0	0	0	0	0	23

"Reach 5c(2)-2nd Stage"
"FS to PS: S-Case: LWL + GS"

U.S. ARMY ENGINEER DISTRICT NEW ORLEANS
CORPS OF ENGINEERS 07-APR-11

Figure L-24

"Confidential Information: Privileged & Confidential Work Product"

Settlement Analysis

```
100 TITLE
110 SECTION 5c(2), Two Stage, Elev. 14, Year 1
120 2DSO  1  4  0  0.1  115
130  56.55 -4.5
150  130.71  14
160  140.71  14
170  214.87 -4.5
190 SOIL 1 -4.5 N 59.6
200 SOIL  2 -7.54 S 24.6  .18  4.5  0.32
210 INDEX  .70  643.12  1.8
220 SOIL  3 -9 s 25.6  .15  9.70  0.32
230 INDEX  .70  807.03  1.38
240 SOIL  4 -14 d 37.6  .17  10.0  0.32
250 INDEX .75  643.52 2.40
260 SOIL  5 -30 s 55.6  .19  11.8  0.32
270 INDEX  .99  1055.52  2.20
280 SOIL  6 -34 s 43.6  .09  12.30  0.32
290 INDEX  .56  1341.12  2.0
300 SOIL  7 -42 s 43.6  .14  10.40  0.32
310 INDEX  .83  2779.92  1.60
320 SOIL  8 -100 s 43.6  .14  10.40  0.32
330 INDEX  .83  5134.32  1.79
340 SOIL  9 -150 N 43.6
350 BOUS  150
360 TIMS 0.5  1 2 3 4 5 6 7 8 9 10 11 12
370 OUTPUT  135.71 214.87 76.4
380 END
```

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PROGRAM CSETT - VERTICAL STRESS INDUCTION AND SETTLEMENT PROGRAM
DATE: 11-MAR-2011 TIME: 16.06.34

I. INPUT DATA

1. TITLE - SECTION 5c(2), Two Stage, Elev.

2. BOUSSINESQ SOLUTION WILL BE USED TO COMPUTE INDUCED STRESSES.
THE MAXIMUM DEPTH TO WHICH THE ANALYSIS WILL BE EXTENDED
IS 150.00 FEET.

3. 2-DIMENSIONAL PRESSURE LOAD DATA
NONE

4. 2-DIMENSIONAL SOIL LOAD DATA

PROFILE NUMBER 1 :NUMBER OF POINTS= 4
BEGINNING TIME OF APPLICATION = 0.0000 YRS.
ENDING TIME OF APPLICATION = 0.1000 YRS.
EFFECTIVE UNIT WEIGHT OF SOIL LOAD= 115.00 PCF

POINT NO.	X (FT.)	Y (FT.)
1	56.55	-4.50
2	130.71	14.00
3	140.71	14.00
4	214.87	-4.50

5. 3-DIMENSIONAL RECTANGULAR LOAD DATA
NONE

6. 3-DIMENSIONAL IRREGULAR LOAD DATA
NONE

7. EXCAVATION DATA
NONE

8. SOIL DATA

STRATA NO.	EL. OF TOP OF STRATUM (FEET NGVD)	DRAINAGE CONDITION	EFF UNIT WEIGHT (PCF)	RECOMPR. INDEX	COEF.OF CONSOL. (SQFT/YR)	POISSON'S RATIO
1	-4.50	N	59.60			
2	-7.54	S	24.60	0.18000	4.50000	0.32000
3	-9.00	S	25.60	0.15000	9.70000	0.32000
4	-14.00	D	37.60	0.17000	10.00000	0.32000
5	-30.00	S	55.60	0.19000	11.80000	0.32000
6	-34.00	S	43.60	0.09000	12.30000	0.32000
7	-42.00	S	43.60	0.14000	10.40000	0.32000
8	-100.00	S	43.60	0.14000	10.40000	0.32000

9. STRESS-STRAIN DATA

STRATUM NO. 1
INCOMPRESSIBLE STRATUM

STRATUM NO. 2
COMPRESSION INDEX= 0.70000
RECOMPRESSION INDEX= 0.18000
INSITU VOID RATIO= 1.80000
INSITU OVERBURDEN= 643.12 PSF

STRATUM NO. 3
COMPRESSION INDEX= 0.70000
RECOMPRESSION INDEX= 0.15000
INSITU VOID RATIO= 1.38000
INSITU OVERBURDEN= 807.03 PSF

STRATUM NO. 4
COMPRESSION INDEX= 0.75000
RECOMPRESSION INDEX= 0.17000
INSITU VOID RATIO= 2.40000
INSITU OVERBURDEN= 643.52 PSF

STRATUM NO. 5
COMPRESSION INDEX= 0.99000
RECOMPRESSION INDEX= 0.19000
INSITU VOID RATIO= 2.20000
INSITU OVERBURDEN= 1055.52 PSF

STRATUM NO. 6
COMPRESSION INDEX= 0.56000
RECOMPRESSION INDEX= 0.09000
INSITU VOID RATIO= 2.00000
INSITU OVERBURDEN= 1341.12 PSF

STRATUM NO. 7
COMPRESSION INDEX= 0.83000
RECOMPRESSION INDEX= 0.14000
INSITU VOID RATIO= 1.60000
INSITU OVERBURDEN= 2779.92 PSF

STRATUM NO. 8

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COMPRESSION INDEX= 0.83000
RECOMPRESSION INDEX= 0.14000
INSITU VOID RATIO= 1.79000
INSITU OVERBURDEN= 5134.32 PSF

10. TIME SEQUENCE FOR CONSOLIDATION CALCULATIONS

TIME RATE OF CONSOLIDATION CALCULATIONS WILL BE MADE AT TIMES (YRS):

0.50
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
11.00
12.00

11. OUTPUT CONTROL DATA

XXL= 135.7100 FT.
XUL= 214.8700 FT.
DELX= 76.4000 FT.

.
1
PROGRAM CSETT - VERTICAL STRESS INDUCTION AND SETTLEMENT PROGRAM
DATE: 11-MAR-2011 TIME: 16.06.34

II. OUTPUT SUMMARY.

1. TITLE- SECTION 5c(2), Two Stage, Elev.

POSITION: X= 135.7
****

2. SUMMARY OF ULTIMATE SETTLEMENTS.

STRATA NO.	MID-DEPTH OF STRATA (FEET)	IN-SITU OVERBURDEN (LB/SQ FT)	DELTA SIGMA (LB/SQ FT)	ULTIMATE SETTLEMENT (FEET)
1	1.52	90.59	2126.15	0.000
2	3.77	199.14	2117.70	0.243
3	7.00	281.10	2085.95	0.809
4	17.50	645.90	1930.27	2.026
5	27.50	1057.90	1771.20	0.519
6	33.50	1343.50	1678.90	0.512
7	66.50	2782.30	1271.93	2.364

8	120.50	5136.70	843.14	0.705

3. TIME-SETTLEMENT SUMMARY.

STRATA NO	ULT	0.50 (YRS.)	1.00 (YRS.)	2.00 (YRS.)	3.00 (YRS.)	4.00 (YRS.)	5.00 (YRS.)
		(SETTLEMENT IN FEET AT SPECIFIED TIMES)					
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.243	0.224	0.242	0.243	0.243	0.243	0.243
3	0.809	0.381	0.545	0.707	0.770	0.794	0.803
4	2.026	0.606	0.880	1.252	1.498	1.668	1.783
5	0.519	0.333	0.444	0.507	0.517	0.519	0.519
6	0.512	0.169	0.246	0.347	0.409	0.447	0.473
7	2.364	0.108	0.149	0.210	0.257	0.297	0.332
8	0.705	0.037	0.052	0.072	0.089	0.103	0.116
TOTALS:	7.178	1.858	2.558	3.338	3.783	4.071	4.269

STRATA NO	6.00 (YRS.)	7.00 (YRS.)	8.00 (YRS.)	9.00 (YRS.)	10.00 (YRS.)	11.00 (YRS.)	12.00 (YRS.)
	(SETTLEMENT IN FEET AT SPECIFIED TIMES)						
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.243	0.243	0.243	0.243	0.243	0.243	0.243
3	0.806	0.808	0.808	0.809	0.809	0.809	0.809
4	1.859	1.914	1.949	1.973	1.989	2.000	2.010
5	0.519	0.519	0.519	0.519	0.519	0.519	0.519
6	0.488	0.497	0.503	0.506	0.509	0.509	0.511
7	0.366	0.392	0.418	0.446	0.469	0.493	0.516
8	0.124	0.137	0.147	0.154	0.162	0.170	0.176
TOTALS:	4.405	4.510	4.587	4.650	4.700	4.743	4.784

POSITION: X= 212.1
****

2. SUMMARY OF ULTIMATE SETTLEMENTS.

STRATA NO.	MID-DEPTH OF STRATA (FEET)	IN-SITU OVERBURDEN (LB/SQ FT)	DELTA SIGMA (LB/SQ FT)	ULTIMATE SETTLEMENT (FEET)
1	1.52	90.59	80.95	0.000
2	3.77	199.14	89.90	0.015
3	7.00	281.10	112.85	0.045
4	17.50	645.90	197.92	0.294
5	27.50	1057.90	275.40	0.113
6	33.50	1343.50	316.30	0.122
7	66.50	2782.30	451.27	0.768
8	120.50	5136.70	502.56	0.394

3. TIME-SETTLEMENT SUMMARY.
(SETTLEMENT IN FEET AT SPECIFIED TIMES)

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STRATA NO	ULT	0.50 (YRS.)	1.00 (YRS.)	2.00 (YRS.)	3.00 (YRS.)	4.00 (YRS.)	5.00 (YRS.)
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.015	0.014	0.015	0.015	0.015	0.015	0.015
3	0.045	0.021	0.030	0.039	0.043	0.045	0.045
4	0.294	0.087	0.128	0.182	0.216	0.243	0.258
5	0.113	0.073	0.097	0.111	0.113	0.113	0.113
6	0.122	0.040	0.059	0.082	0.098	0.106	0.112
7	0.768	0.039	0.051	0.067	0.082	0.098	0.110
8	0.394	0.022	0.029	0.041	0.051	0.057	0.064
TOTALS:	1.751	0.296	0.409	0.537	0.618	0.677	0.717

(SETTLEMENT IN FEET AT SPECIFIED TIMES)

STRATA NO	6.00 (YRS.)	7.00 (YRS.)	8.00 (YRS.)	9.00 (YRS.)	10.00 (YRS.)	11.00 (YRS.)	12.00 (YRS.)
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.015	0.015	0.015	0.015	0.015	0.015	0.015
3	0.045	0.045	0.045	0.045	0.045	0.045	0.045
4	0.269	0.278	0.283	0.285	0.288	0.290	0.292
5	0.113	0.113	0.113	0.113	0.113	0.113	0.113
6	0.116	0.117	0.119	0.120	0.120	0.122	0.122
7	0.118	0.127	0.135	0.144	0.151	0.163	0.168
8	0.069	0.075	0.079	0.086	0.092	0.095	0.100
TOTALS:	0.745	0.770	0.789	0.808	0.824	0.843	0.855

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```
100 TITLE
110 SECTION 5c(2), Two Stage, Elev. 14, Year 2
120 2DSO  1  4  0  0.1  52.6
130  56.55 -4.5
150  130.71  -1.4
160  140.71  -1.4
170  214.87 -4.5
190 SOIL 1 -4.54 N 59.6
200 SOIL  2 -7.54 S 24.6  .18  4.5  0.32
210 INDEX  .70  643.12  1.8
220 SOIL  3 -9 s 25.6  .15  9.7.0  0.32
230 INDEX  .70  807.03  1.38
240 SOIL  4 -14 s 37.6  .17  10.2  0.32
250 INDEX .75  643.52 2.40
260 SOIL  5 -30 s 55.6  .19  11.8  0.32
270 INDEX  .99  1055.52  2.20
280 SOIL  6 -34 s 43.6  .09  12.30  0.32
290 INDEX  .56  1341.12  2.0
300 SOIL  7 -42 s 43.6  .14  10.40  0.32
310 INDEX  .83  2779.92  1.60
320 SOIL  8 -100 s 43.6  .14  10.40  0.32
330 INDEX  .83  5134.32  1.79
340 SOIL  9 -150 N 43.6
350 BOUS  150
360 TIMS 0.5  1 3 5 7 9 10
370 OUTPUT  135.71 214.87 76.4
380 END
```

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PROGRAM CSETT - VERTICAL STRESS INDUCTION AND SETTLEMENT PROGRAM
DATE: 11-MAR-2011 TIME: 16.26.34

I. INPUT DATA

1. TITLE - SECTION 5c(2), Two Stage, Elev.

2. BOUSSINESQ SOLUTION WILL BE USED TO COMPUTE INDUCED STRESSES.
THE MAXIMUM DEPTH TO WHICH THE ANALYSIS WILL BE EXTENDED
IS 150.00 FEET.

3. 2-DIMENSIONAL PRESSURE LOAD DATA
NONE

4. 2-DIMENSIONAL SOIL LOAD DATA

PROFILE NUMBER 1 :NUMBER OF POINTS= 4
BEGINNING TIME OF APPLICATION = 0.0000 YRS.
ENDING TIME OF APPLICATION = 0.1000 YRS.
EFFECTIVE UNIT WEIGHT OF SOIL LOAD= 52.60 PCF

POINT NO.	X (FT.)	Y (FT.)
1	56.55	-4.50
2	130.71	-1.40
3	140.71	-1.40
4	214.87	-4.50

5. 3-DIMENSIONAL RECTANGULAR LOAD DATA
NONE

6. 3-DIMENSIONAL IRREGULAR LOAD DATA
NONE

7. EXCAVATION DATA
NONE

8. SOIL DATA

STRATA NO.	EL. OF TOP OF STRATUM (FEET NGVD)	DRAINAGE CONDITION	EFF UNIT WEIGHT (PCF)	RECOMPR. INDEX	COEF.OF CONSOL. (SQFT/YR)	POISSON'S RATIO
1	-4.54	N	59.60			
2	-7.54	S	24.60	0.18000	4.50000	0.32000
3	-9.00	S	25.60	0.15000	0.00000	0.32000
4	-14.00	S	37.60	0.17000	10.20000	0.32000
5	-30.00	S	55.60	0.19000	11.80000	0.32000
6	-34.00	S	43.60	0.09000	12.30000	0.32000
7	-42.00	S	43.60	0.14000	10.40000	0.32000
8	-100.00	S	43.60	0.14000	10.40000	0.32000

9. STRESS-STRAIN DATA

STRATUM NO. 1
INCOMPRESSIBLE STRATUM

STRATUM NO. 2
COMPRESSION INDEX= 0.70000
RECOMPRESSION INDEX= 0.18000
INSITU VOID RATIO= 1.80000
INSITU OVERBURDEN= 643.12 PSF

STRATUM NO. 3
COMPRESSION INDEX= 0.70000
RECOMPRESSION INDEX= 0.15000
INSITU VOID RATIO= 1.38000
INSITU OVERBURDEN= 807.03 PSF

STRATUM NO. 4
COMPRESSION INDEX= 0.75000
RECOMPRESSION INDEX= 0.17000
INSITU VOID RATIO= 2.40000
INSITU OVERBURDEN= 643.52 PSF

STRATUM NO. 5
COMPRESSION INDEX= 0.99000
RECOMPRESSION INDEX= 0.19000
INSITU VOID RATIO= 2.20000
INSITU OVERBURDEN= 1055.52 PSF

STRATUM NO. 6
COMPRESSION INDEX= 0.56000
RECOMPRESSION INDEX= 0.09000
INSITU VOID RATIO= 2.00000
INSITU OVERBURDEN= 1341.12 PSF

STRATUM NO. 7
COMPRESSION INDEX= 0.83000
RECOMPRESSION INDEX= 0.14000
INSITU VOID RATIO= 1.60000
INSITU OVERBURDEN= 2779.92 PSF

STRATUM NO. 8

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COMPRESSION INDEX= 0.83000
RECOMPRESSION INDEX= 0.14000
INSITU VOID RATIO= 1.79000
INSITU OVERBURDEN= 5134.32 PSF

10. TIME SEQUENCE FOR CONSOLIDATION CALCULATIONS

TIME RATE OF CONSOLIDATION CALCULATIONS WILL BE MADE AT TIMES (YRS):

0.50
1.00
3.00
5.00
7.00
9.00
10.00

11. OUTPUT CONTROL DATA

XXL= 135.7100 FT.
XUL= 214.8700 FT.
DELX= 76.4000 FT.

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PROGRAM CSETT - VERTICAL STRESS INDUCTION AND SETTLEMENT PROGRAM
DATE: 11-MAR-2011 TIME: 16.26.34

II. OUTPUT SUMMARY.

1. TITLE- SECTION 5c(2), Two Stage, Elev.

POSITION: X= 135.7
****

2. SUMMARY OF ULTIMATE SETTLEMENTS.

STRATA NO.	MID-DEPTH OF STRATA (FEET)	IN-SITU OVERBURDEN (LB/SQ FT)	DELTA SIGMA (LB/SQ FT)	ULTIMATE SETTLEMENT (FEET)
1	1.50	89.40	165.10	0.000
2	3.73	196.76	164.40	0.024
3	6.96	278.72	162.00	0.062
4	17.46	643.52	150.08	0.211
5	27.46	1055.52	137.90	0.054
6	33.46	1341.12	130.80	0.044
7	66.46	2779.92	99.35	0.148
8	120.46	5134.32	66.04	0.046

3. TIME-SETTLEMENT SUMMARY.

STRATA NO	ULT	(SETTLEMENT IN FEET AT SPECIFIED TIMES) 0.50 (YRS.)	1.00 (YRS.)	3.00 (YRS.)	5.00 (YRS.)	7.00 (YRS.)	9.00 (YRS.)
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.024	0.022	0.024	0.024	0.024	0.024	0.024
3	0.062	0.000	0.000	0.000	0.000	0.000	0.000
4	0.211	0.034	0.047	0.082	0.107	0.125	0.140
5	0.054	0.035	0.047	0.054	0.054	0.054	0.054
6	0.044	0.015	0.022	0.036	0.042	0.044	0.044
7	0.148	0.004	0.010	0.013	0.020	0.026	0.030
8	0.046	0.000	0.000	0.006	0.009	0.009	0.009
TOTALS:	0.589	0.110	0.150	0.215	0.256	0.282	0.301

STRATA NO	(SETTLEMENT IN FEET AT SPECIFIED TIMES) 10.00 (YRS.)
1	0.000
2	0.024
3	0.000
4	0.148
5	0.054
6	0.044
7	0.032
8	0.009
TOTALS:	0.311

POSITION: X= 212.1
****

2. SUMMARY OF ULTIMATE SETTLEMENTS.

STRATA NO.	MID-DEPTH OF STRATA (FEET)	IN-SITU OVERBURDEN (LB/SQ FT)	DELTA SIGMA (LB/SQ FT)	ULTIMATE SETTLEMENT (FEET)
1	1.50	89.40	8.20	0.000
2	3.73	196.76	8.70	0.002
3	6.96	278.72	10.15	0.005
4	17.46	643.52	16.43	0.024
5	27.46	1055.52	22.25	0.006
6	33.46	1341.12	25.37	0.009
7	66.46	2779.92	35.67	0.057
8	120.46	5134.32	39.49	0.033

3. TIME-SETTLEMENT SUMMARY.

STRATA NO	ULT	(SETTLEMENT IN FEET AT SPECIFIED TIMES) 0.50 (YRS.)	1.00 (YRS.)	3.00 (YRS.)	5.00 (YRS.)	7.00 (YRS.)	9.00 (YRS.)
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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2	0.002	0.002	0.002	0.002	0.002	0.002	0.002
3	0.005	0.000	0.000	0.000	0.000	0.000	0.000
4	0.024	0.003	0.003	0.009	0.012	0.015	0.015
5	0.006	0.005	0.006	0.006	0.006	0.006	0.006
6	0.009	0.002	0.004	0.007	0.009	0.009	0.009
7	0.057	0.000	0.000	0.006	0.010	0.010	0.010
8	0.033	0.000	0.000	0.000	0.000	0.005	0.009
TOTALS:	0.136	0.012	0.015	0.030	0.039	0.047	0.051

(SETTLEMENT IN FEET AT SPECIFIED TIMES)

STRATA NO	10.00 (YRS.)
1	0.000
2	0.002
3	0.000
4	0.015
5	0.006
6	0.009
7	0.010
8	0.009
TOTALS:	0.051

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Reach 5c(2),Second Run, Split Shrinkage (Sand Layer)									
New Levee EL 14.0 (1 year hold)					New Levee EL 14.0				
Time	Settlement of Center	Shrinkage	Elevation of Center	Remaining Settlement	Time	Settlement of Center	Shrinkage	Remaining Settlement	Elevation of Center
ULT	7.178	0.500	6.322		ULT	0.589	0.500		12.911
0.5	1.858	0.500	11.642		0.5	0.110	0.500		13.390
1	2.558	0.500	10.942		1	0.150	0.500	0.780	12.570
2	3.338	0.500	10.162	0.780	3	0.215	0.500	1.513	11.772
3	3.783	0.500	9.717	1.225	5	0.256	0.500	1.847	11.397
4	4.071	0.500	9.429	1.513	7	0.282	0.500	2.029	11.189
5	4.269	0.500	9.231	1.711	9	0.301	0.500	2.142	11.057
6	4.405	0.500	9.095	1.847	10	0.311	0.500	2.185	11.004
7	4.510	0.500	8.990	1.952	20	0.360	0.500	2.466	10.674
8	4.587	0.500	8.913	2.029	30	0.389	0.500	2.663	10.448
9	4.650	0.500	8.850	2.092	40	0.406	0.500	2.831	10.263
10	4.700	0.500	8.800	2.142					
11	4.743	0.500	8.757	2.185					
12	4.784	0.500	8.716	2.226					
20	5.003	0.500	8.497	2.445					
30	5.199	0.500	8.301	2.641					
40	5.370	0.500	8.130	2.812					
21	5.024	0.500	8.476	2.466					
31	5.221	0.500	8.279	2.663					
41	5.389	0.500	8.111	2.831					

Notes:
1. Elevation 14'
2. Half of shrinkage occurring in first stage and half of shrinkage occurring in second stage
3. Assuming complete sumbergence in the second stage

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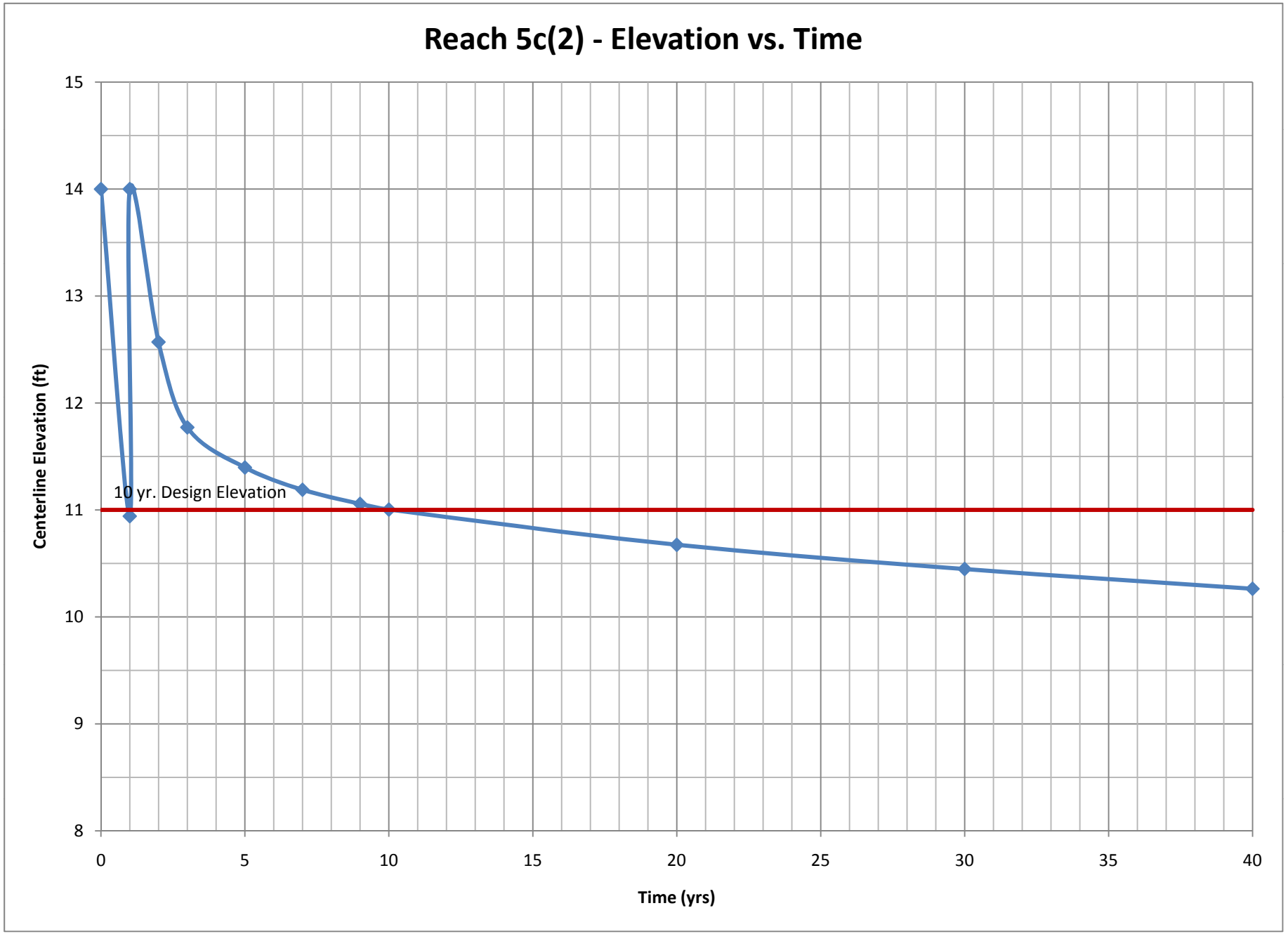

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Strength Gain

```
100 TITLE
110 SECTION 5c(2), Strength Gain
120 2DSO  1  8  0  0.1  115
130 -159.12 -4.54 -129 5.5 -29 8 -5 14 5 14 45 4 145 1.5 163.12 -4.54
190 SOIL 1 -4.54 N 59.6
200 SOIL  2 -7.54 S 24.6  .18  4.5  0.32
210 INDEX  .70  643.12  1.8
220 SOIL  3 -9 s 25.6  .15  9.86  0.32
230 INDEX  .70  807.03  1.38
240 SOIL  4 -14 d 37.6  .17  10.22  0.32
250 INDEX .75  643.52 2.40
260 SOIL  5 -30 s 55.6  .19  11.90  0.32
270 INDEX  .99  1055.52  2.20
280 SOIL  6 -34 s 43.6  .09  12.41  0.32
290 INDEX  .56  1341.12  2.0
300 SOIL  7 -42 s 43.6  .14  10.59  0.32
310 INDEX  .83  2779.92  1.60
320 SOIL  8 -100 s 43.6  .14  10.59  0.32
330 INDEX  .83  5134.32  1.79
340 SOIL  9 -150 N 43.6
350 BOUS  150
360 TIMS  1 2
370 OUTPUT  -79.2 79.2 79.2
380 END
```

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PROGRAM CSETT - VERTICAL STRESS INDUCTION AND SETTLEMENT PROGRAM
DATE: 21-MAR-2011 TIME: 11.23.56

I. INPUT DATA

1. TITLE - SECTION 5c(2), Strength Gain

2. BOUSSINESQ SOLUTION WILL BE USED TO COMPUTE INDUCED STRESSES.
THE MAXIMUM DEPTH TO WHICH THE ANALYSIS WILL BE EXTENDED
IS 150.00 FEET.

3. 2-DIMENSIONAL PRESSURE LOAD DATA
NONE

4. 2-DIMENSIONAL SOIL LOAD DATA

PROFILE NUMBER 1 :NUMBER OF POINTS= 8
BEGINNING TIME OF APPLICATION = 0.0000 YRS.
ENDING TIME OF APPLICATION = 0.1000 YRS.
EFFECTIVE UNIT WEIGHT OF SOIL LOAD= 115.00 PCF

POINT NO.	X (FT.)	Y (FT.)
1	-159.12	-4.54
2	-129.00	5.50
3	-29.00	8.00
4	-5.00	14.00
5	5.00	14.00
6	45.00	4.00
7	145.00	1.50
8	163.12	-4.54

5. 3-DIMENSIONAL RECTANGULAR LOAD DATA
NONE

6. 3-DIMENSIONAL IRREGULAR LOAD DATA
NONE

7. EXCAVATION DATA
NONE

8. SOIL DATA

STRATA NO.	EL. OF TOP OF STRATUM (FEET NGVD)	DRAINAGE CONDITION	EFF UNIT WEIGHT (PCF)	RECOMPR. INDEX	COEF.OF CONSOL. (SQFT/YR)	POISSON'S RATIO
1	-4.54	N	59.60			
2	-7.54	S	24.60	0.18000	4.50000	0.32000
3	-9.00	S	25.60	0.15000	9.86000	0.32000
4	-14.00	D	37.60	0.17000	10.22000	0.32000
5	-30.00	S	55.60	0.19000	11.90000	0.32000
6	-34.00	S	43.60	0.09000	12.41000	0.32000
7	-42.00	S	43.60	0.14000	10.59000	0.32000
8	-100.00	S	43.60	0.14000	10.59000	0.32000

9. STRESS-STRAIN DATA

STRATUM NO. 1
INCOMPRESSIBLE STRATUM

STRATUM NO. 2
COMPRESSION INDEX= 0.70000
RECOMPRESSION INDEX= 0.18000
INSITU VOID RATIO= 1.80000
INSITU OVERBURDEN= 643.12 PSF

STRATUM NO. 3
COMPRESSION INDEX= 0.70000
RECOMPRESSION INDEX= 0.15000
INSITU VOID RATIO= 1.38000
INSITU OVERBURDEN= 807.03 PSF

STRATUM NO. 4
COMPRESSION INDEX= 0.75000
RECOMPRESSION INDEX= 0.17000
INSITU VOID RATIO= 2.40000
INSITU OVERBURDEN= 643.52 PSF

STRATUM NO. 5
COMPRESSION INDEX= 0.99000
RECOMPRESSION INDEX= 0.19000
INSITU VOID RATIO= 2.20000
INSITU OVERBURDEN= 1055.52 PSF

STRATUM NO. 6
COMPRESSION INDEX= 0.56000
RECOMPRESSION INDEX= 0.09000
INSITU VOID RATIO= 2.00000
INSITU OVERBURDEN= 1341.12 PSF

STRATUM NO. 7
COMPRESSION INDEX= 0.83000
RECOMPRESSION INDEX= 0.14000
INSITU VOID RATIO= 1.60000
INSITU OVERBURDEN= 1741.52 PSF

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STRATUM NO. 8

COMPRESSION INDEX= 0.83000
RECOMPRESSION INDEX= 0.14000
INSITU VOID RATIO= 1.79000
INSITU OVERBURDEN= 5134.32 PSF

10. TIME SEQUENCE FOR CONSOLIDATION CALCULATIONS

TIME RATE OF CONSOLIDATION CALCULATIONS WILL BE MADE AT TIMES (YRS):
1.00
2.00

11. OUTPUT CONTROL DATA

XXL= -79.2000 FT.
XUL= 79.2000 FT.
DELX= 79.2000 FT.

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PROGRAM CSETT - VERTICAL STRESS INDUCTION AND SETTLEMENT PROGRAM
DATE: 21-MAR-2011 TIME: 11.23.56

II. OUTPUT SUMMARY.

1. TITLE- SECTION 5c(2), Strength Gain

POSITION: X= -79.2
****

2. SUMMARY OF ULTIMATE SETTLEMENTS.

STRATA NO.	MID-DEPTH OF STRATA (FEET)	IN-SITU OVERBURDEN (LB/SQ FT)	DELTA SIGMA (LB/SQ FT)	ULTIMATE SETTLEMENT (FEET)
1	1.50	89.40	1297.80	0.000
2	3.73	196.76	1297.70	0.176
3	6.96	278.72	1297.55	0.557
4	17.46	643.52	1294.27	1.585
5	27.46	1055.52	1287.05	0.418
6	33.46	1341.12	1279.53	0.420
7	66.46	2779.92	1203.35	2.180
8	120.46	5134.32	1042.09	0.910

3. TIME-SETTLEMENT SUMMARY.

STRATA NO	ULT	1.00 (YRS.)	2.00 (YRS.)
1	0.000	0.000	0.000
2	0.176	0.175	0.176
3	0.557	0.378	0.489
4	1.585	0.698	0.989
5	0.418	0.360	0.409
6	0.420	0.203	0.286
7	2.180	0.139	0.194
8	0.910	0.067	0.095
TOTALS:	6.246	2.020	2.638

(SETTLEMENT IN FEET AT SPECIFIED TIMES)

POSITION: X= 0.0
****

2. SUMMARY OF ULTIMATE SETTLEMENTS.

STRATA NO.	MID-DEPTH OF STRATA (FEET)	IN-SITU OVERBURDEN (LB/SQ FT)	DELTA SIGMA (LB/SQ FT)	ULTIMATE SETTLEMENT (FEET)
1	1.50	89.40	2131.30	0.000
2	3.73	196.76	2122.70	0.244
3	6.96	278.72	2092.15	0.811
4	17.46	643.52	1952.48	2.040
5	27.46	1055.52	1823.25	0.530
6	33.46	1341.12	1756.73	0.529
7	66.46	2779.92	1498.52	2.795
8	120.46	5134.32	1210.03	1.091

3. TIME-SETTLEMENT SUMMARY.

STRATA NO	ULT	1.00 (YRS.)	2.00 (YRS.)
1	0.000	0.000	0.000
2	0.244	0.242	0.244
3	0.811	0.550	0.713
4	2.040	0.897	1.274
5	0.530	0.455	0.518
6	0.529	0.256	0.360
7	2.795	0.179	0.250
8	1.091	0.081	0.113
TOTALS:	8.040	2.660	3.472

(SETTLEMENT IN FEET AT SPECIFIED TIMES)

POSITION: X= 79.2
****

2. SUMMARY OF ULTIMATE SETTLEMENTS.

STRATA MID-DEPTH IN-SITU DELTA ULTIMATE

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NO.	OF STRATA (FEET)	OVERBURDEN (LB/SQ FT)	SIGMA (LB/SQ FT)	SETTLEMENT (FEET)
1	1.50	89.40	883.80	0.000
2	3.73	196.76	883.80	0.126
3	6.96	278.72	884.25	0.369
4	17.46	643.52	889.85	1.219
5	27.46	1055.52	899.70	0.321
6	33.46	1341.12	907.17	0.321
7	66.46	2779.92	925.55	1.616
8	120.46	5134.32	883.94	0.746

3. TIME-SETTLEMENT SUMMARY.

STRATA NO	ULT	(SETTLEMENT IN FEET AT SPECIFIED TIMES) 1.00 (YRS.)	2.00 (YRS.)
1	0.000	0.000	0.000
2	0.126	0.126	0.126
3	0.369	0.250	0.324
4	1.219	0.535	0.762
5	0.321	0.276	0.314
6	0.321	0.155	0.218
7	1.616	0.103	0.146
8	0.746	0.056	0.077
TOTALS:	4.718	1.501	1.967

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Strength Gain Analysis - Reach 5c(2)

x=-79.2													
Strata #	Start EL	End EL	In-Situ/Preconsol Pressure	Delta Sigma	Ult. Sett	Sett. @ 1yr	% Sett	% Delt. Sig.	Cohesion @ Mid-Depth	ΔC	New Cohesion Mid-Depth	80% ΔC	Final Cohesion Mid-Depth
1	-4.54	-7.54	366.00	1021.20	6.246	2.020				0	0	0	0
2	-7.54	-9	643.12	851.34	6.246	2.020	32.3%	275.3293	100	61	161	48	148
3	-9	-14	807.03	769.49	6.246	2.020	32.3%	248.8584	100	55	155	44	144
4	-14	-30	643.52	1294.27	6.246	2.020	32.3%	418.576	184	92	276	74	258
5	-30	-34	1055.52	1287.05	6.246	2.020	32.3%	416.241	289	92	381	73	362
6	-34	-42	1341.12	1279.53	6.246	2.020	32.3%	413.8089	367	91	458	73	440
7	-42	-100	2779.92	1203.35	6.246	2.020	32.3%	389.1718	714	86	800	68	782
8	-100	-150	5134.32	1042.09	6.246	2.020	32.3%	337.0192	1281	74	1355	59	1340

x=0													
Strata #	Start EL	End EL	In-Situ/Preconsol Pressure	Delta Sigma	Ult. Sett	Sett. @ 1yr	% Sett	% Delt. Sig.	Cohesion @ Mid-Depth	ΔC	New Cohesion Mid-Depth	80% ΔC	Final Cohesion Mid-Depth
1	-4.54	-7.54	366.00	1854.70	8.04	2.660				0	0	0	0
2	-7.54	-9	643.12	1676.34	8.04	2.660	33.1%	554.61	100	122	222	98	198
3	-9	-14	807.03	1563.84	8.04	2.660	33.1%	517.3899	100	114	214	91	191
4	-14	-30	643.52	1952.48	8.04	2.660	33.1%	645.9698	184	142	326	114	298
5	-30	-34	1055.52	1823.45	8.04	2.660	33.1%	603.2807	289	133	422	106	395
6	-34	-42	1341.12	1756.73	8.04	2.660	33.1%	581.2067	367	128	495	102	469
7	-42	-100	2779.92	1498.52	8.04	2.660	33.1%	495.779	714	109	823	87	801
8	-100	-150	5134.32	1210.03	8.04	2.660	33.1%	400.3333	1281	88	1369	70	1351

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Stability Analysis

SWL Case.BS

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File Information

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Last Solved Date: 4/20/2011
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Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

SWL Case.BS

Kind: SLOPE/W
Method: Spencer
Settings
    Apply Phreatic Correction: No
    PWP Conditions Source: Piezometric Line
    Use Staged Rapid Drawdown: No
SlipSurface
    Direction of movement: Left to Right
    Use Passive Mode: No
    Slip Surface Option: Block
    Critical slip surfaces saved: 100
    Optimize Critical Slip Surface Location: Yes
    Tension Crack
        Tension Crack Option: Tension Crack Line
        Percentage Wet: 1
        Tension Crack Fluid Unit Weight: 62.4 pcf

FOS Distribution
    FOS Calculation Option: Constant
Restrict Block Crossing: Yes
Advanced
    Number of Slices: 30
    Optimization Tolerance: 0.01
    Minimum Slip Surface Depth: 0.1 ft
    Optimization Maximum Iterations: 2000
    Optimization Convergence Tolerance: 1e-007
    Starting Optimization Points: 8
    Ending Optimization Points: 16
    Complete Passes per Insertion: 1
    Driving Side Maximum Convex Angle: 5 °
    Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH

Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH above 0

Model: Mohr-Coulomb
Unit Weight: 102 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH, 0 to -9

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -9 (2)
Cohesion Spatial Fn: CH, 0 to -9
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH, -9 to -14

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -9 to -14 (2)

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Cohesion Spatial Fn: CH, -9 to -14
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -14 to -30

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -14 to -30 (2)
Cohesion Spatial Fn: CH, -14 to -30
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -30 to -34

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -30 to -34 (2)
Cohesion Spatial Fn: CH, 30 to -34
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sand Fill

Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -34 to -42

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -34 to -42 (2)
Cohesion Spatial Fn: CH, -34 to -42
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -42 to -80

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -42 to -80 (2)
Cohesion Spatial Fn: CH, -42 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure

Piezometric Line: 1

Slip Surface Limits

Left Coordinate: (-200, -2.13) ft
Right Coordinate: (500, -4.5) ft

Slip Surface Block

Left Grid
Upper Left: (91, -6) ft
Lower Left: (22, -6) ft
Lower Right: (22, -37) ft
X Increments: 7
Y Increments: 5
Starting Angle: 135 °
Ending Angle: 160 °
Angle Increments: 7
Right Grid
Upper Left: (267.338, -18.3931) ft
Lower Left: (358.603, -18.3931) ft
Lower Right: (358.603, -61.1186) ft
X Increments: 5
Y Increments: 5
Starting Angle: 20 °
Ending Angle: 45 °
Angle Increments: 7

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	7
	62	7
	200.3	-4.33
	220.54	-4.34
	226.87	-4.54
	240.61	-4.57
	250	-4.5
	292.25	-4.62
	309.2	-4.74
	335.91	-4.85
	337.6	-5.3
	454	-5.3

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	456.4	-4.54
	500	-4.5

Reinforcements

Reinforcement 1

Type: Fabric
Outside Point: (209, 0) ft
Inside Point: (22, 0) ft
Slip Surface Intersection: (22.273, 0) ft
Total Length: 187 ft
Reinforcement Direction: 0 °
Applied Load Option: Variable
F of S Dependent: No
Contact Cohesion: 265 psf
Contact Phi: 19 °
Interface Factor: 2
Bond Safety Factor: 1
Fabric Capacity: 27000 lbs
Fabric Safety Factor: 1
Fabric Load: 27000 lbs
Load Distribution: Even along reinf.
Load Orientation: 0
Applied Load: 27000 lbs
Fabric Load Used: 222.36 lbs
Resisting Force Used: 814.82 lbs/ft
Available Bond Length: 0.27289 ft
Required Bond Length: 0.27289 ft
Governing Component: Bond

Tension Crack Line

	X (ft)	Y (ft)
	-1	5.40517
	8	5.2
	22	0.1
	96	0.1
	118	11
	127	11
	166	2
	167.4	4

Spatial Functions

CH, 0 to -9

Model: Linear Interpolation

Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -2.5, 50)
Data Point: (-300, -9, 75)
Data Point: (-33.33, 0, 50)
Data Point: (-33.33, -9, 75)
Data Point: (0, 0, 300)
Data Point: (0, -9, 300)
Data Point: (38.18, -4.5, 150)
Data Point: (38.18, -9, 150)
Data Point: (177.04, -4.54, 100)
Data Point: (177.04, -9, 100)
Data Point: (500, 0, 100)
Data Point: (500, -9, 100)
Data Point: (-300, -4, 50)
Data Point: (-33.33, -4, 50)

CH, -34 to -42 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -38, 105)
Data Point: (0, -38, 116)
Data Point: (38.18, -38, 106)
Data Point: (177.04, -38, 106)

CH, -42 to -80 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -61, 105)
Data Point: (0, -61, 105)
Data Point: (38.18, -61, 106)
Data Point: (177.04, -61, 106)

CH, -9 to -14

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -9, 75)
Data Point: (-300, -14, 115)
Data Point: (-33.33, -9, 75)
Data Point: (-33.33, -14, 115)
Data Point: (0, -9, 300)
Data Point: (0, -14, 300)
Data Point: (38.18, -9, 150)
Data Point: (38.18, -14, 150)
Data Point: (177.04, -9, 100)

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Data Point: (177.04, -14, 100)
Data Point: (500, -9, 100)
Data Point: (500, -14, 100)

CH, -14 to -30

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -14, 115)
Data Point: (-300, -30, 291)
Data Point: (-33.33, -14, 115)
Data Point: (-33.33, -30, 291)
Data Point: (0, -14, 300)
Data Point: (0, -30, 375)
Data Point: (38.18, -14, 150)
Data Point: (38.18, -30, 310)
Data Point: (177.04, -14, 100)
Data Point: (177.04, -30, 268)
Data Point: (500, -14, 100)
Data Point: (500, -30, 268)

CH, 30 to -34

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -30, 291)
Data Point: (-300, -34, 335)
Data Point: (-33.33, -30, 291)
Data Point: (-33.33, -34, 335)
Data Point: (0, -30, 400)
Data Point: (0, -34, 438)
Data Point: (38.18, -30, 325)
Data Point: (38.18, -34, 365)
Data Point: (177.04, -30, 268)
Data Point: (177.04, -34, 310)
Data Point: (500, -30, 268)
Data Point: (500, -34, 310)

CH, 0 to -9 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -4.5, 90)
Data Point: (0, -4.5, 96)
Data Point: (38.18, -4.5, 87)
Data Point: (177.04, -4.54, 87)

CH, -9 to -14 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -11.5, 90)
Data Point: (0, -11.5, 97)
Data Point: (38.18, -11.5, 88)
Data Point: (177.04, -11.5, 100)

CH, -14 to -30 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -22, 100)
Data Point: (0, -22, 102)
Data Point: (38.18, -22, 100)
Data Point: (177.04, -22, 100)

CH, -30 to -34 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -32, 122)
Data Point: (0, -32, 113)
Data Point: (38.18, -32, 118)
Data Point: (177.04, -32, 118)

CH, -34 to -42

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -34, 335)
Data Point: (-300, -42, 423)
Data Point: (-33.33, -34, 335)
Data Point: (-33.33, -42, 423)
Data Point: (0, -34, 438)
Data Point: (0, -42, 514)
Data Point: (38.18, -34, 365)
Data Point: (38.18, -42, 425)
Data Point: (177.04, -34, 325)
Data Point: (177.04, -42, 409)
Data Point: (500, -34, 325)
Data Point: (500, -42, 409)

CH, -42 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -42, 423)

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Data Point: (-300, -80, 841)
Data Point: (-33.33, -42, 423)
Data Point: (-33.33, -80, 841)
Data Point: (0, -42, 514)
Data Point: (0, -80, 875)
Data Point: (38.18, -42, 425)
Data Point: (38.18, -80, 815)
Data Point: (177.04, -42, 409)
Data Point: (177.04, -80, 808)
Data Point: (500, -42, 409)
Data Point: (500, -80, 808)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -42 to -80	1,3,4,2	26600
Region 2	CH, -34 to -42	3,5,6,4	5600
Region 3	CH, -30 to -34	7,5,6,8	2800
Region 4	CH, -14 to -30	9,7,8,10	11200
Region 5	CH, -9 to -14	11,9,10,12,56,52,51,50,55,42,33,32,31,43	3267.8677
Region 6	CH, 0 to -9	42,34,35,36,37,38,58,39,40,62,48,49,55	784.83735
Region 7	CH, 0 to -9	16,11,43,30,29,65,28,57,44,45,20,19,18,17,15,14,13	1934.1129
Region 8	CH above 0	45,21,22,63,64,27,44	161.91095
Region 9	Sand Fill	29,30,43,31,32,33,42,34,35	557.4735
Region 10	CH, 0 to -9	56,53,54,41,12	238.9126
Region 11	EMBANKMENT FILL CH	59,46,47,60,37,36,35,29,65	1551.9685
Region 12	EMBANKMENT FILL CH	64,27,44,57,28,65,59	499.34315
Region 13	EMBANKMENT FILL CH	60,61,62,40,39,58,38,37	772.16895

Points

	X (ft)	Y (ft)
Point 1	-200	-80
Point 2	500	-80
Point 3	-200	-42
Point 4	500	-42
Point 5	-200	-34
Point 6	500	-34
Point 7	-200	-30
Point 8	500	-30
Point 9	-200	-14
Point 10	500	-14
Point 11	-200	-9
Point 12	500	-9
Point 13	-191.42	-2.12
Point 14	-156.88	-2.03
Point 15	-119.75	-2.26
Point 16	-200	-2.13

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Point 17	-92.12	-1.99
Point 18	-71.42	-1.72
Point 19	-45.06	-0.68
Point 20	-33.33	-0.27
Point 21	-19.05	1.53
Point 22	-16.9	1.81
Point 23	-6.83	6.48
Point 24	-6.79	6.72
Point 25	-0.92	7.16
Point 26	3.42	6.91
Point 27	20.53	0.36
Point 28	38.18	-3.47
Point 29	56.55	-4.85
Point 30	70.54	-8.43
Point 31	109.16	-11.38
Point 32	127.67	-11.01
Point 33	135.55	-10.86
Point 34	159.82	-8.55
Point 35	177.04	-4.54
Point 36	180.67	-4.21
Point 37	200.3	-4.33
Point 38	220.54	-4.34
Point 39	240.61	-4.57
Point 40	250	-4.5
Point 41	500	-4.5
Point 42	154	-9
Point 43	73	-9
Point 44	22	0
Point 45	-32	0
Point 46	117.71	14
Point 47	127.71	14
Point 48	335.91	-4.85
Point 49	349.9	-8.43
Point 50	388.52	-11.38
Point 51	407.03	-11.01
Point 52	414.91	-10.86
Point 53	439.18	-8.55
Point 54	456.4	-4.54
Point 55	352.36	-9
Point 56	433.36	-9
Point 57	35.99	-3
Point 58	226.87	-4.54
Point 59	94.84	8
Point 60	167.4	4
Point 61	292.4	0.875
Point 62	309.2	-4.74
Point 63	-5.16	5.5
Point 64	8	5.2

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Point 65	46	-4.06

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	1.41	(188.919, 2.421)	119.6005	(22.0042, 5.65154)	(350.816, -8.64221)
2	7267	1.73	(188.919, 2.421)	120.494	(22.3056, 5.66126)	(355.144, -9.18325)
3	7266	1.73	(192.838, 2.549)	123.168	(22.3056, 5.66126)	(362.947, -9.69684)
4	7268	1.74	(186.085, 2.209)	118.416	(22.3056, 5.66126)	(349.537, -8.33719)
5	7265	1.74	(197.833, 2.713)	127.873	(22.3056, 5.66126)	(372.893, -10.3515)
6	7269	1.75	(183.91, 1.936)	116.759	(22.3056, 5.66126)	(345.264, -7.24365)
7	12596	1.75	(201.562, 3.358)	129.367	(20.9012, 5.61598)	(381.679, -10.9298)
8	12597	1.75	(199.126, 3.278)	127.413	(20.9012, 5.61598)	(376.831, -10.6107)
9	12595	1.75	(204.484, 3.453)	131.79	(20.9012, 5.61598)	(387.497, -11.3126)
10	12598	1.75	(197.051, 3.21)	125.8	(20.9012, 5.61598)	(372.7, -10.3387)
11	7275	1.76	(196.338, 2.664)	127.253	(22.3056, 5.66126)	(369.916, -10.1555)
12	7276	1.76	(192.243, 2.53)	124.229	(22.3056, 5.66126)	(361.763, -9.61891)
13	7270	1.76	(181.966, 1.691)	116.026	(22.3056, 5.66126)	(341.436, -6.26403)
14	7274	1.76	(201.385, 2.829)	131.191	(22.3056, 5.66126)	(379.965, -10.817)
15	12599	1.77	(195.248, 3.151)	124.442	(20.9012, 5.61598)	(369.11, -10.1025)
16	12594	1.77	(208.693, 3.433)	134.114	(20.9012, 5.61598)	(395.935, -11.2318)
17	7277	1.77	(188.831, 2.418)	121.836	(22.3056, 5.66126)	(354.969, -9.17174)
18	7271	1.78	(180.205, 1.469)	114.971	(22.3056, 5.66126)	(337.961, -5.37485)
19	7257	1.78	(187.848, 2.386)	118.829	(22.3056, 5.66126)	(353.011, -9.04285)
20	7273	1.78	(208.332, 2.943)	135.932	(22.3056, 5.66126)	(393.837, -11.2737)
21	7258	1.78	(185.103, 2.086)	116.555	(22.3056, 5.66126)	(347.609, -7.84373)
22	12600	1.78	(193.655, 3.099)	123.276	(20.9012, 5.61598)	(365.94, -9.89378)
23	7278	1.79	(186.171, 2.22)	119.847	(22.3056, 5.66126)	(349.707, -8.38048)
24	7259	1.79	(182.892, 1.808)	114.773	(22.3056, 5.66126)	(343.26, -6.73083)
25	7272	1.79	(178.453, 1.336)	112.762	(22.3056, 5.66126)	(334.483, -4.84412)
26	7260	1.79	(180.976, 1.566)	113.278	(22.3056, 5.66126)	(339.484, -5.76461)
27	12593	1.80	(214.517, 3.375)	137.957	(20.9012, 5.61598)	(407.621, -10.9988)
28	7261	1.80	(179.288, 1.353)	112.829	(22.3056, 5.66126)	(336.151, -4.91167)
29	12548	1.80	(203.045, 2.857)	128.423	(23.9015, 5.71272)	(381.679, -10.9298)
30	7283	1.80	(203.757, 2.907)	134.717	(22.3056, 5.66126)	(384.687, -11.1277)
31	7262	1.80	(177.352, 1.334)	112.495	(22.3056, 5.66126)	(332.281, -4.83505)
32	12549	1.80	(200.61, 2.778)	126.426	(23.9015, 5.71272)	(376.831, -10.6107)
33	7284	1.80	(198.747, 2.743)	130.667	(22.3056, 5.66126)	(374.712, -10.4712)
34	12547	1.81	(205.968, 2.953)	130.892	(23.9015, 5.71272)	(387.497, -11.3126)
35	12550	1.81	(198.535, 2.71)	124.774	(23.9015, 5.71272)	(372.7, -10.3387)
36	7263	1.81	(175.665, 1.33)	111.02	(22.3056, 5.66126)	(328.906, -4.82115)
37	7279	1.81	(184.013, 1.949)	118.554	(22.3056, 5.66126)	(345.467, -7.29567)
38	7264	1.82	(174.199, 1.327)	109.757	(22.3056, 5.66126)	(325.973, -4.80908)
39	7282	1.82	(210.77, 2.919)	139.27	(22.3056, 5.66126)	(398.728, -11.176)
40	7285	1.82	(194.571, 2.606)	127.432	(22.3056, 5.66126)	(366.399, -9.92404)
41	12551	1.82	(196.732, 2.651)	123.379	(23.9015, 5.71272)	(369.11, -10.1025)
42	12546	1.82	(210.177, 2.933)	133.114	(23.9015, 5.71272)	(395.935, -11.2318)
43	12605	1.83	(204.869, 3.466)	132.778	(20.9012, 5.61598)	(388.261, -11.363)
44	12604	1.83	(208.497, 3.435)	135.512	(20.9012, 5.61598)	(395.541, -11.2396)
45	12552	1.84	(195.14, 2.598)	122.18	(23.9015, 5.71272)	(365.94, -9.89378)
46	7286	1.84	(191.013, 2.489)	124.787	(22.3056, 5.66126)	(359.314, -9.45772)
47	7280	1.84	(182.036, 1.7)	117.257	(22.3056, 5.66126)	(341.573, -6.2992)
48	12606	1.84	(202.142, 3.377)	130.834	(20.9012, 5.61598)	(382.835, -11.0058)
49	12603	1.85	(213.043, 3.39)	138.544	(20.9012, 5.61598)	(404.663, -11.0573)
50	9907	1.85	(198.627, 2.687)	124.555	(25.4683, 5.76323)	(371.32, -10.2479)
51	12780	1.85	(195.717, 2.644)	124.245	(22.2546, 5.65961)	(368.731, -10.0775)
52	9908	1.85	(195.576, 2.587)	122.239	(25.4683, 5.76323)	(365.247, -9.8482)
53	12781	1.85	(194.045, 2.59)	122.802	(22.2546, 5.65961)	(365.402, -9.85837)
54	12779	1.85	(197.723, 2.71)	126.007	(22.2546, 5.65961)	(372.725, -10.3404)
55	9906	1.85	(202.387, 2.81)	127.55	(25.4683, 5.76323)	(378.808, -10.7407)
56	12782	1.85	(192.62, 2.543)	121.592	(22.2546, 5.65961)	(362.564, -9.67162)
57	12788	1.85	(202.221, 2.857)	129.504	(22.2546, 5.65961)	(381.679, -10.9298)
58	12545	1.85	(216.002, 2.875)	136.873	(23.9015, 5.71272)	(407.621, -10.9988)
59	9909	1.85	(193.034, 2.504)	120.392	(25.4683, 5.76323)	(360.185, -9.51506)
60	12787	1.86	(205.143, 2.953)	131.921	(22.2546, 5.65961)	(387.497, -11.3126)
61	12778	1.86	(200.197, 2.791)	128.218	(22.2546, 5.65961)	(377.65, -10.6645)
62	12789	1.86	(199.786, 2.778)	127.551	(22.2546, 5.65961)	(376.831, -10.6107)
63	7281	1.86	(221.263, 2.717)	146.669	(22.3056, 5.66126)	(419.807, -10.3663)
64	12607	1.86	(199.774, 3.299)	129.211	(20.9012, 5.61598)	(378.121, -10.6955)
65	12790	1.86	(197.71, 2.71)	125.935	(22.2546, 5.65961)	(372.7, -10.3387)
66	12783	1.86	(191.382, 2.502)	120.557	(22.2546, 5.65961)	(360.099, -9.50939)
67	12500	1.86	(203.862, 2.857)	128.011	(25.5323, 5.7653)	(381.679, -10.9298)
68	9910	1.86	(190.868, 2.433)	119.25	(25.4683, 5.76323)	(355.872, -9.23112)
69	12502	1.86	(199.351, 2.71)	124.322	(25.5323, 5.7653)	(372.7, -10.3387)
70	12501	1.87	(201.427, 2.778)	125.994	(25.5323, 5.7653)	(376.831, -10.6107)
71	12499	1.87	(206.784, 2.953)	130.5	(25.5323, 5.7653)	(387.497, -11.3126)
72	7287	1.87	(187.922, 2.388)	122.579	(22.3056, 5.66126)	(353.159, -9.0526)
73	9905	1.87	(207.181, 2.967)	131.555	(25.4683, 5.76323)	(388.351, -11.3689)
74	12777	1.87	(203.35, 2.894)	131.087	(22.2546, 5.65961)	(383.926, -11.0777)
75	12784	1.87	(190.289, 2.467)	119.657	(22.2546, 5.65961)	(357.922, -9.36609)
76	7292	1.87	(205.251, 2.956)	137.735	(22.3056, 5.66126)	(387.661, -11.3235)
77	12786	1.87	(209.353, 2.933)	134.205	(22.2546, 5.65961)	(395.935, -11.2318)
78	12602	1.87	(219.093, 3.292)	142.939	(20.9012, 5.61598)	(416.812, -10.6682)
79	12791	1.87	(195.907, 2.651)	124.57	(22.2546, 5.65961)	(369.11, -10.1025)
80	12836	1.87	(200.389, 4.464)	133.071	(18.4728, 5.53768)	(381.679, -10.9298)
81	12608	1.87	(197.682, 3.231)	127.83	(20.9012, 5.61598)	(373.957, -10.4215)
82	12828	1.87	(193.883, 4.251)	128.392	(18.4728, 5.53768)	(368.731, -10.0775)
83	7291	1.87	(212.084, 2.906)	142.339	(22.3056, 5.66126)	(401.363, -11.1233)
84	12837	1.87	(197.953, 4.384)	130.281	(18.4728, 5.53768)	(376.831, -10.6107)
85	12829	1.87	(192.21, 4.196)	126.84	(18.4728, 5.53768)	(365.402, -9.85837)
86	12835	1.87	(203.312, 4.559)	134.966	(18.4728, 5.53768)	(387.497, -11.3126)
87	12498	1.87	(210.994, 2.933)	132.676	(25.5323, 5.7653)	(395.935, -11.2318)
88	12827	1.88	(195.89, 4.316)	130.268	(18.4728, 5.53768)	(372.725, -10.3404)
89	12557	1.88	(206.352, 2.966)	131.689	(23.9015, 5.71272)	(388.261, -11.363)
90	12556	1.88	(209.981, 2.935)	134.315	(23.9015, 5.71272)	(395.541, -11.2396)
91	12838	1.88	(195.877, 4.316)	129.086	(18.4728, 5.53768)	(372.7, -10.3387)

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92	12830	1.88	(190.785, 4.149)	125.526	(18.4728, 5.53768)	(362.564, -9.67162)
93	12503	1.88	(197.548, 2.651)	122.91	(25.5323, 5.7653)	(369.11, -10.1025)
94	9915	1.88	(206.047, 2.93)	131.218	(25.4683, 5.76323)	(386.092, -11.2202)
95	9916	1.88	(202.08, 2.8)	128.375	(25.4683, 5.76323)	(378.196, -10.7005)
96	12826	1.88	(198.364, 4.397)	132.598	(18.4728, 5.53768)	(377.65, -10.6645)
97	9911	1.88	(189.002, 2.363)	117.767	(25.4683, 5.76323)	(352.159, -8.95343)
98	12831	1.89	(189.547, 4.108)	124.392	(18.4728, 5.53768)	(360.099, -9.50939)
99	7293	1.89	(200.312, 2.794)	133.096	(22.3056, 5.66126)	(377.829, -10.6763)
100	9917	1.89	(198.775, 2.692)	126.083	(25.4683, 5.76323)	(371.615, -10.2674)
101	12558	1.89	(203.626, 2.876)	129.699	(23.9015, 5.71272)	(382.835, -11.0058)

Slices of Slip Surface: Optimized

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	28.997125	-2.5030635	592.99217	939.20246	0	213.84
2	Optimized	37.085	-5.5137355	780.85115	1276.5699	0	154.3
3	Optimized	42.09	-7.3768225	897.11158	1460.1717	0	148.59
4	Optimized	46.225255	-8.9161505	993.16319	1608.7571	0	147.1
5	Optimized	47.01386	-9.209705	1011.4503	1637.0357	0	146.82
6	Optimized	52.063605	-9.5089755	1030.1654	1740.249	0	145
7	Optimized	59.275	-9.652942	1039.1507	1799.5864	0	142.4
8	Optimized	62.25781	-9.71249	1041.5424	1836.0543	0	141.33
9	Optimized	66.52781	-9.7977355	1025.0342	1895.8442	0	139.79
10	Optimized	71.77	-9.9023895	1004.7592	1971.1114	0	137.91
11	Optimized	73.454945	-9.9360275	998.25146	1991.6022	0	137.3
12	Optimized	78.76397	-10.45906	1003.7469	2055.3303	0	135.39
13	Optimized	89.229025	-11.567095	1019.4352	2217.6969	0	131.62
14	Optimized	95.526385	-12.233855	1028.8002	2333.9609	0	129.35
15	Optimized	100.68499	-13.153265	1059.8058	2569.7088	0	127.49
16	Optimized	107.1586	-14.378925	1103.1997	2893.5582	0	129.05
17	Optimized	110.95785	-15.09824	1128.6544	3081.7753	0	135.06
18	Optimized	115.23285	-16.125245	1170.8792	3290.1558	0	144.1
19	Optimized	122.71	-18.197755	1262.0181	3564.1219	0	162.82
20	Optimized	131.63	-20.670195	1370.6435	3690.5721	0	185.3
21	Optimized	137.2989	-22.241495	1439.75	3676.3794	0	199.67

22	Optimized	145.05775	-24.96595	1570.0717	3674.6225	0	225.4
23	Optimized	152.53385	-27.18046	1670.0406	3779.397	0	246.06
24	Optimized	156.91	-27.105275	1642.9877	3635.3741	0	243.9
25	Optimized	162.323	-27.012275	1609.5036	3443.1868	0	241.24
26	Optimized	166.113	-26.949845	1586.2361	3297.2036	0	239.4
27	Optimized	172.22	-26.85768	1549.3049	3189.5745	0	236.52
28	Optimized	178.855	-26.757545	1509.112	3118.6534	0	233.95
29	Optimized	185.5775	-26.65609	1468.4013	3085.3337	0	232.89
30	Optimized	195.3925	-26.507965	1409.0091	3043.8713	0	231.33
31	Optimized	202.4651	-26.401225	1377.1731	3013.6124	0	230.21
32	Optimized	212.5851	-26.38553	1375.8772	2978.4065	0	230.05
33	Optimized	223.705	-26.409265	1370.8816	2951.8102	0	230.3
34	Optimized	233.74	-26.43068	1365.0625	2928.2323	0	230.52
35	Optimized	243.6056	-26.451735	1366.8083	2901.7637	0	230.74
36	Optimized	248.3006	-26.48724	1371.2118	2886.8638	0	231.12
37	Optimized	251.7048	-26.54555	1375.3343	2882.7476	0	231.73
38	Optimized	258.22055	-27.011505	1403.3063	2891.2787	0	236.62
39	Optimized	267.84245	-27.885015	1456.0933	2951.518	0	245.79
40	Optimized	277.32585	-29.160885	1533.9561	3026.098	0	259.19
41	Optimized	287.12415	-30.92054	1642.0372	3188.6418	0	277.67
42	Optimized	292.325	-31.85455	1699.4128	3282.8805	0	287.47
43	Optimized	294.82105	-32.302815	1726.2736	3242.5308	0	292.18
44	Optimized	300.439	-32.35741	1727.1965	3130.2621	0	292.75
45	Optimized	305.593	-30.988605	1639.4987	2885.3188	0	278.38
46	Optimized	308.37505	-29.5833	1550.57	2609.6384	0	263.62
47	Optimized	313.8159	-26.83498	1377.586	2284.5032	0	234.77
48	Optimized	323.0477	-22.171735	1084.1432	1786.9557	0	185.8
49	Optimized	331.7868	-17.84587	812.00495	1322.1199	0	140.38
50	Optimized	336.755	-15.442935	646.94217	1047.3591	0	115.15
51	Optimized	338.66915	-14.51712	575.16243	922.52484	0	105.43
52	Optimized	344.81915	-11.54259	389.53526	579.22662	0	100
53	Optimized	349.98805	-9.04259	233.54005	292.28287	0	100
54	Optimized	350.446	-8.821106	219.71988	269.5052	0	100

Slices of Slip Surface: 7267

	Slip				Base Normal	Frictional	Cohesive

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	Surface	X (ft)	Y (ft)	PWP (psf)	Stress (psf)	Strength (psf)	Strength (psf)
1	7267	22.859085	-0.10145595	443.12775	580.13556	0	600
2	7267	29.70129	-2.5918154	598.5307	968.12683	0	210.9
3	7267	37.085	-5.2792665	766.21431	1264.5518	0	154.3
4	7267	42.09	-7.1009375	879.89839	1444.3869	0	148.59
5	7267	46.653815	-8.7620305	983.57734	1604.8975	0	146.95
6	7267	51.928815	-10.681975	1103.3476	1793.1941	0	145.05
7	7267	58.79751	-13.181975	1259.3498	2057.2175	0	142.58
8	7267	61.52251	-14.17379	1321.2053	2177.0811	0	143.35
9	7267	62.25781	-14.44142	1336.6337	2210.2577	0	145.78
10	7267	62.95781	-14.6962	1348.9038	2241.8685	0	148.1
11	7267	66.97	-15.16339	1357.591	2386.1942	0	151.39
12	7267	71.77	-15.575155	1358.7495	2488.9886	0	153.85
13	7267	78.309025	-16.136095	1360.3214	2592.3709	0	157.22
14	7267	89.229025	-17.07285	1362.9378	2751.712	0	162.91
15	7267	102	-18.16839	1366.0029	3125.2544	0	169.66
16	7267	113.435	-19.149325	1368.7742	3580.6508	0	175.79
17	7267	122.71	-19.94497	1371.0641	3785.7948	0	180.82
18	7267	131.63	-20.71016	1373.1456	3746.5716	0	185.71
19	7267	140.1625	-21.44211	1375.2203	3561.7699	0	190.43
20	7267	149.3875	-22.233465	1377.4884	3354.5094	0	195.59
21	7267	156.91	-22.87877	1379.2472	3185.7225	0	199.83
22	7267	163.61	-23.45352	1380.8126	3013.6022	0	203.64
23	7267	172.22	-24.192115	1382.9912	2897.7598	0	208.58
24	7267	178.855	-24.76129	1384.5293	2893.7797	0	212.99
25	7267	185.5775	-25.33797	1386.1471	2928.0136	0	219.05
26	7267	195.3925	-26.179935	1388.4819	2985.2664	0	227.89
27	7267	205.36	-27.034985	1416.6348	3042.4813	0	236.87
28	7267	215.48	-27.903115	1470.4883	3099.8792	0	245.98
29	7267	223.705	-28.608685	1508.1262	3149.2553	0	253.39
30	7267	233.39695	-29.440095	1552.914	3207.3407	0	262.12
31	7267	240.26695	-30.02943	1588.7675	3247.237	0	268.31
32	7267	245.305	-30.461615	1617.8071	3282.5132	0	272.85
33	7267	256.09215	-31.386975	1676.6675	3359.8768	0	282.56
34	7267	268.2764	-32.432185	1739.7142	3449.009	0	293.54
35	7267	280.46065	-33.477395	1802.761	3538.0595	0	304.51
36	7267	289.4014	-34.24436	1849.0398	3600.145	0	327.57
37	7267	292.325	-34.495155	1864.1536	3618.5104	0	330.2
38	7267	298.122	-34.992445	1892.647	3452.1066	0	335.42
39	7267	305.29065	-34.74165	1873.8376	3337.6915	0	332.79
40	7267	307.96865	-33.36872	1786.9583	3067.6828	0	303.37
41	7267	311.8698	-31.36872	1660.9437	2771.4893	0	282.37
42	7267	319.8822	-27.261005	1402.5296	2311.0383	0	239.24
43	7267	330.5674	-21.783015	1057.9975	1730.5721	0	181.72
44	7267	336.755	-18.610815	844.64102	1375.5628	0	148.41
45	7267	341.67435	-16.088805	673.21948	1064.2891	0	121.93
46	7267	347.82435	-12.935885	476.48201	697.50981	0	100

47	7267	351.13	-11.241185	370.74376	504.73097	0	100
48	7267	353.75205	-9.8969245	286.84693	355.89782	0	100

Slices of Slip Surface: 7266

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7266	22.859085	-0.10145595	443.12775	580.33929	0	600
2	7266	29.70129	-2.5918154	598.5307	968.20154	0	210.9
3	7266	37.085	-5.2792665	766.21431	1264.5947	0	154.3
4	7266	42.09	-7.1009375	879.89839	1444.5071	0	148.59
5	7266	46.653815	-8.7620305	983.57734	1604.9694	0	146.95
6	7266	51.928815	-10.681975	1103.3476	1793.1941	0	145.05
7	7266	58.79751	-13.181975	1259.3498	2057.3011	0	142.58
8	7266	61.52251	-14.17379	1321.2053	2177.1795	0	143.35
9	7266	62.25781	-14.44142	1336.6337	2210.4399	0	145.78
10	7266	62.95781	-14.6962	1348.9038	2241.8685	0	148.1
11	7266	66.97	-15.16339	1357.591	2386.1942	0	151.39
12	7266	71.77	-15.575155	1358.7495	2489.0291	0	153.85
13	7266	78.309025	-16.136095	1360.3214	2592.3709	0	157.22
14	7266	89.229025	-17.07285	1362.9378	2751.712	0	162.91
15	7266	102	-18.16839	1366.0029	3125.2544	0	169.66
16	7266	113.435	-19.149325	1368.7742	3580.6508	0	175.79
17	7266	122.71	-19.94497	1371.0641	3785.7948	0	180.82
18	7266	131.63	-20.71016	1373.1456	3746.5716	0	185.71
19	7266	140.1625	-21.44211	1375.2203	3561.7699	0	190.43
20	7266	149.3875	-22.233465	1377.4884	3354.5094	0	195.59
21	7266	156.91	-22.87877	1379.2472	3185.7225	0	199.83
22	7266	163.61	-23.45352	1380.8126	3013.7336	0	203.64
23	7266	172.22	-24.192115	1382.9912	2897.7598	0	208.58
24	7266	178.855	-24.76129	1384.5293	2893.7797	0	212.99
25	7266	185.5775	-25.33797	1386.1471	2928.0136	0	219.05
26	7266	195.3925	-26.179935	1388.4819	2985.2664	0	227.89
27	7266	205.36	-27.034985	1416.6348	3042.4813	0	236.87
28	7266	215.48	-27.903115	1470.4883	3099.9777	0	245.98
29	7266	223.705	-28.608685	1508.1262	3149.4127	0	253.39
30	7266	233.39695	-29.440095	1552.914	3207.417	0	262.12
31	7266	240.26695	-30.02943	1588.7675	3247.237	0	268.31
32	7266	245.305	-30.461615	1617.8071	3282.5132	0	272.85
33	7266	256.09215	-31.386975	1676.6675	3359.8768	0	282.56
34	7266	268.2764	-32.432185	1739.7142	3449.009	0	293.54
35	7266	280.46065	-33.477395	1802.761	3538.1412	0	304.51
36	7266	289.4014	-34.24436	1849.0398	3600.145	0	327.57
37	7266	292.325	-34.495155	1864.1536	3618.5104	0	330.2
38	7266	298.122	-34.992445	1892.647	3452.1066	0	335.42
39	7266	305.5439	-34.74165	1873.7206	3303.3623	0	332.79
40	7266	308.2219	-33.57325	1799.6339	3060.5958	0	305.52
41	7266	312.80595	-31.57325	1673.4074	2775.6677	0	284.52
42	7266	321.2864	-27.87326	1440.4093	2357.2471	0	245.67

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43	7266	331.03545	-23.619785	1172.4655	1909.2639	0	201.01
44	7266	336.755	-21.12438	1001.4936	1627.6305	0	174.81
45	7266	343.75	-18.07249	797.0366	1250.1015	0	142.76
46	7266	351.13	-14.85263	596.10081	868.0888	0	108.95
47	7266	352.7221	-14.157995	552.73671	786.25392	0	101.66
48	7266	358.0157	-11.848418	408.62128	537.93298	0	100

Slices of Slip Surface: 7268

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7268	22.859085	-0.10145595	443.12775	581.17968	0	600
2	7268	29.70129	-2.5918154	598.5307	968.35096	0	210.9
3	7268	37.085	-5.2792665	766.21431	1264.8522	0	154.3
4	7268	42.09	-7.1009375	879.89839	1444.7474	0	148.59
5	7268	46.653815	-8.7620305	983.57734	1605.2569	0	146.95
6	7268	51.928815	-10.681975	1103.3476	1793.6008	0	145.05
7	7268	58.79751	-13.181975	1259.3498	2057.6983	0	142.58
8	7268	61.52251	-14.17379	1321.2053	2177.5731	0	143.35
9	7268	62.25781	-14.44142	1336.6337	2210.8044	0	145.78
10	7268	62.95781	-14.6962	1348.9038	2242.2935	0	148.1
11	7268	66.97	-15.16339	1357.591	2386.1942	0	151.39
12	7268	71.77	-15.575155	1358.7495	2489.0696	0	153.85
13	7268	78.309025	-16.136095	1360.3214	2592.3709	0	157.22
14	7268	89.229025	-17.07285	1362.9378	2751.8008	0	162.91
15	7268	102	-18.16839	1366.0029	3125.324	0	169.66
16	7268	113.435	-19.149325	1368.7742	3580.7673	0	175.79
17	7268	122.71	-19.94497	1371.0641	3785.8944	0	180.82
18	7268	131.63	-20.71016	1373.1456	3746.6987	0	185.71
19	7268	140.1625	-21.44211	1375.2203	3561.8779	0	190.43
20	7268	149.3875	-22.233465	1377.4884	3354.6174	0	195.59
21	7268	156.91	-22.87877	1379.2472	3185.7225	0	199.83
22	7268	163.61	-23.45352	1380.8126	3013.7336	0	203.64
23	7268	172.22	-24.192115	1382.9912	2897.8632	0	208.58
24	7268	178.855	-24.76129	1384.5293	2894.0541	0	212.99
25	7268	185.5775	-25.33797	1386.1471	2928.1152	0	219.05
26	7268	195.3925	-26.179935	1388.4819	2985.368	0	227.89
27	7268	205.36	-27.034985	1416.6348	3042.5798	0	236.87
28	7268	215.48	-27.903115	1470.4883	3099.9777	0	245.98
29	7268	223.705	-28.608685	1508.1262	3149.4127	0	253.39
30	7268	233.39695	-29.440095	1552.914	3207.4933	0	262.12
31	7268	240.26695	-30.02943	1588.7675	3247.237	0	268.31
32	7268	245.305	-30.461615	1617.8071	3282.6193	0	272.85
33	7268	256.09215	-31.386975	1676.6675	3359.9585	0	282.56
34	7268	268.2764	-32.432185	1739.7142	3449.0908	0	293.54
35	7268	280.46065	-33.477395	1802.761	3538.223	0	304.51
36	7268	289.4014	-34.24436	1849.0398	3600.145	0	327.57
37	7268	292.325	-34.495155	1864.1536	3618.5768	0	330.2
38	7268	298.122	-34.992445	1892.647	3452.1937	0	335.42

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39	7268	305.09235	-34.74165	1873.9246	3369.6622	0	332.79
40	7268	307.77035	-33.150665	1773.4486	3070.5579	0	301.08
41	7268	311.13685	-31.150665	1647.5251	2764.925	0	280.08
42	7268	318.78275	-26.60827	1362.1541	2259.4395	0	232.39
43	7268	330.2009	-19.824815	935.91152	1536.0845	0	161.16
44	7268	336.755	-15.93108	677.40221	1101.9741	0	120.28
45	7268	338.80275	-14.714535	587.46771	945.08783	0	107.5
46	7268	344.21355	-11.5	386.87824	579.99558	0	100
47	7268	348.97945	-8.668594	210.20202	265.2685	0	100

Slices of Slip Surface: 7265

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7265	22.859085	-0.10145595	443.12775	581.41736	0	600
2	7265	29.70129	-2.5918154	598.5307	968.50039	0	210.9
3	7265	37.085	-5.2792665	766.21431	1264.8951	0	154.3
4	7265	42.09	-7.1009375	879.89839	1444.7474	0	148.59
5	7265	46.653815	-8.7620305	983.57734	1605.3287	0	146.95
6	7265	51.928815	-10.681975	1103.3476	1793.6008	0	145.05
7	7265	58.79751	-13.181975	1259.3498	2057.6983	0	142.58
8	7265	61.52251	-14.17379	1321.2053	2177.5731	0	143.35
9	7265	62.25781	-14.44142	1336.6337	2210.8044	0	145.78
10	7265	62.95781	-14.6962	1348.9038	2242.2935	0	148.1
11	7265	66.97	-15.16339	1357.591	2386.1942	0	151.39
12	7265	71.77	-15.575155	1358.7495	2489.0696	0	153.85
13	7265	78.309025	-16.136095	1360.3214	2592.3709	0	157.22
14	7265	89.229025	-17.07285	1362.9378	2751.8008	0	162.91
15	7265	102	-18.16839	1366.0029	3125.324	0	169.66
16	7265	113.435	-19.149325	1368.7742	3580.7673	0	175.79
17	7265	122.71	-19.94497	1371.0641	3785.8944	0	180.82
18	7265	131.63	-20.71016	1373.1456	3746.6987	0	185.71
19	7265	140.1625	-21.44211	1375.2203	3561.8779	0	190.43
20	7265	149.3875	-22.233465	1377.4884	3354.6174	0	195.59
21	7265	156.91	-22.87877	1379.2472	3185.7225	0	199.83
22	7265	163.61	-23.45352	1380.8126	3013.7336	0	203.64
23	7265	172.22	-24.192115	1382.9912	2897.8632	0	208.58
24	7265	178.855	-24.76129	1384.5293	2894.0541	0	212.99
25	7265	185.5775	-25.33797	1386.1471	2928.1152	0	219.05
26	7265	195.3925	-26.179935	1388.4819	2985.368	0	227.89
27	7265	205.36	-27.034985	1416.6348	3042.5798	0	236.87
28	7265	215.48	-27.903115	1470.4883	3099.9777	0	245.98
29	7265	223.705	-28.608685	1508.1262	3149.4127	0	253.39
30	7265	233.39695	-29.440095	1552.914	3207.4933	0	262.12
31	7265	240.26695	-30.02943	1588.7675	3247.3822	0	268.31
32	7265	245.305	-30.461615	1617.8071	3282.6193	0	272.85
33	7265	256.09215	-31.386975	1676.6675	3360.0403	0	282.56
34	7265	268.2764	-32.432185	1739.7142	3449.0908	0	293.54

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35	7265	280.46065	-33.477395	1802.761	3538.223	0	304.51
36	7265	289.4014	-34.24436	1849.0398	3600.3199	0	327.57
37	7265	292.325	-34.495155	1864.1536	3618.6433	0	330.2
38	7265	298.122	-34.992445	1892.647	3452.1937	0	335.42
39	7265	305.88165	-34.74165	1873.5593	3266.6348	0	332.79
40	7265	308.55965	-33.76694	1811.562	3049.3295	0	307.55
41	7265	314.0546	-31.76694	1685.191	2778.7456	0	286.55
42	7265	327.4096	-26.906115	1378.4675	2237.4188	0	235.51
43	7265	336.755	-23.504675	1150.0395	1862.4267	0	199.8
44	7265	343.75	-20.958705	977.12728	1539.7967	0	173.07
45	7265	351.13	-18.272605	809.47271	1215.7179	0	144.86
46	7265	357.61445	-15.91246	662.21838	949.44972	0	120.08
47	7265	367.88105	-12.17573	429.04643	540.58032	0	100

Slices of Slip Surface: 7269

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7269	22.859085	-0.10145595	443.12775	582.70764	0	600
2	7269	29.70129	-2.5918154	598.5307	968.79924	0	210.9
3	7269	37.085	-5.2792665	766.21431	1265.2813	0	154.3
4	7269	42.09	-7.1009375	879.89839	1445.2281	0	148.59
5	7269	46.653815	-8.7620305	983.57734	1605.7599	0	146.95
6	7269	51.928815	-10.681975	1103.3476	1794.1091	0	145.05
7	7269	58.79751	-13.181975	1259.3498	2058.3255	0	142.58
8	7269	61.52251	-14.17379	1321.2053	2178.2619	0	143.35
9	7269	62.25781	-14.44142	1336.6337	2211.5334	0	145.78
10	7269	62.95781	-14.6962	1348.9038	2243.0373	0	148.1
11	7269	66.97	-15.16339	1357.591	2386.3338	0	151.39
12	7269	71.77	-15.575155	1358.7495	2489.1911	0	153.85
13	7269	78.309025	-16.136095	1360.3214	2592.5585	0	157.22
14	7269	89.229025	-17.07285	1362.9378	2751.8896	0	162.91
15	7269	102	-18.16839	1366.0029	3125.4631	0	169.66
16	7269	113.435	-19.149325	1368.7742	3581.0004	0	175.79
17	7269	122.71	-19.94497	1371.0641	3786.0937	0	180.82
18	7269	131.63	-20.71016	1373.1456	3746.9528	0	185.71
19	7269	140.1625	-21.44211	1375.2203	3562.0939	0	190.43
20	7269	149.3875	-22.233465	1377.4884	3354.7254	0	195.59
21	7269	156.91	-22.87877	1379.2472	3185.8937	0	199.83
22	7269	163.61	-23.45352	1380.8126	3013.865	0	203.64
23	7269	172.22	-24.192115	1382.9912	2897.9665	0	208.58
24	7269	178.855	-24.76129	1384.5293	2894.0541	0	212.99
25	7269	185.5775	-25.33797	1386.1471	2928.2167	0	219.05
26	7269	195.3925	-26.179935	1388.4819	2985.4695	0	227.89
27	7269	205.36	-27.034985	1416.6348	3042.6782	0	236.87
28	7269	215.48	-27.903115	1470.4883	3100.1746	0	245.98
29	7269	223.705	-28.608685	1508.1262	3149.5701	0	253.39
30	7269	233.39695	-29.440095	1552.914	3207.646	0	262.12
31	7269	240.26695	-30.02943	1588.7675	3247.3822	0	268.31

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32	7269	245.305	-30.461615	1617.8071	3282.7254	0	272.85
33	7269	256.09215	-31.386975	1676.6675	3360.1221	0	282.56
34	7269	268.2764	-32.432185	1739.7142	3449.2543	0	293.54
35	7269	280.46065	-33.477395	1802.761	3538.3866	0	304.51
36	7269	289.4014	-34.24436	1849.0398	3600.3199	0	327.57
37	7269	292.325	-34.495155	1864.1536	3618.7761	0	330.2
38	7269	298.122	-34.992445	1892.647	3452.2807	0	335.42
39	7269	304.9318	-34.74165	1873.9991	3401.1118	0	332.79
40	7269	307.6098	-32.91582	1758.8626	3070.2093	0	298.62
41	7269	310.54325	-30.91582	1633.0259	2756.7499	0	277.62
42	7269	317.75345	-26	1324.4357	2212.1576	0	226
43	7269	329.7652	-17.810535	810.32984	1332.9801	0	140.01
44	7269	336.755	-13.04496	497.30764	806.68266	0	100
45	7269	340.14395	-10.734425	339.11104	533.62651	0	100
46	7269	343.97595	-8.1218255	176.08265	253.61354	0	100

Slices of Slip Surface: 12596

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	12596	21.497675	0.24004116	421.8189	519.0175	0	600
2	12596	29.042055	-3.0192872	625.20482	992.32253	0	198.15
3	12596	37.085	-6.1244	818.95686	1373.4423	0	154.3
4	12596	42.09	-6.608931	849.20129	1438.1614	0	148.59
5	12596	51.275	-7.4981255	904.68068	1550.0994	0	145.28
6	12596	59.275	-8.2726005	953.01251	1666.2287	0	142.4
7	12596	62.25781	-8.5613645	969.70581	1721.7809	0	141.33
8	12596	64.652175	-8.7931615	971.93533	1770.2426	0	140.47
9	12596	68.664365	-9.181579	975.66658	1855.2816	0	139.02
10	12596	71.77	-9.4822335	978.55514	1920.8165	0	137.91
11	12596	78.309025	-10.115275	984.65553	2023.6809	0	135.55
12	12596	89.229025	-11.172435	994.72966	2183.527	0	131.62
13	12596	102	-12.408785	1006.6067	2560.0979	0	127.02
14	12596	113.435	-13.5158	1017.2443	3020.3824	0	122.9
15	12596	118.0733	-13.96483	1021.5639	3189.9642	0	121.23
16	12596	123.0733	-14.448875	1026.2063	3236.4314	0	124.06
17	12596	131.63	-15.277245	1034.1448	3203.645	0	129.55
18	12596	140.1625	-16.10327	1042.0767	3028.3354	0	135.08
19	12596	149.3875	-16.996335	1050.6437	2831.2082	0	141.12
20	12596	156.91	-17.724585	1057.6328	2670.6759	0	146.09
21	12596	163.61	-18.37321	1063.8523	2506.2252	0	150.54
22	12596	172.22	-19.20674	1071.8562	2399.7766	0	156.32
23	12596	178.855	-19.84907	1078.0179	2403.0353	0	161.42
24	12596	185.5775	-20.49987	1084.2839	2444.6079	0	168.25
25	12596	195.3925	-21.45005	1093.4109	2512.4517	0	178.23
26	12596	205.36	-22.415	1128.322	2580.6236	0	188.36
27	12596	215.48	-23.394715	1189.2034	2649.0783	0	198.64
28	12596	223.705	-24.19097	1232.4531	2707.406	0	207.01
29	12596	233.74	-25.16245	1285.9093	2778.3493	0	217.21

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30	12596	245.305	-26.28205	1357.0211	2855.7652	0	228.96
31	12596	255.6183	-27.280475	1420.4802	2925.0235	0	239.45
32	12596	266.8549	-28.368285	1486.3843	3002.0887	0	250.87
33	12596	278.0915	-29.456095	1552.2883	3079.2425	0	262.29
34	12596	287.9799	-30.413385	1610.2391	3154.5116	0	272.34
35	12596	292.325	-30.83403	1635.7523	3191.8106	0	276.76
36	12596	300.8	-31.65449	1683.2025	2967.0813	0	285.37
37	12596	317.11405	-33.233845	1775.9874	2828.6759	0	301.96
38	12596	330.46905	-34.526735	1853.2425	2968.7004	0	330.53
39	12596	336.755	-35.13527	1875.7866	3012.072	0	336.92
40	12596	338.975	-35.350185	1875.1242	3006.4169	0	339.18
41	12596	341.59835	-34.74165	1837.1492	3142.5365	0	332.79
42	12596	346.37335	-31.90485	1660.1486	2763.9889	0	288
43	12596	351.13	-29.078965	1483.7945	2397.4446	0	258.33
44	12596	358.39785	-24.761175	1214.3636	1914.7034	0	212.99
45	12596	370.4736	-17.58706	766.69296	1121.6685	0	137.66
46	12596	379.09545	-12.46488	447.08583	561.43999	0	100

Slices of Slip Surface: 12597

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	12597	21.497675	0.24004116	421.8189	518.78699	0	600
2	12597	29.042055	-3.0192872	625.20482	992.25646	0	198.15
3	12597	37.085	-6.1244	818.95686	1373.4423	0	154.3
4	12597	42.09	-6.608931	849.20129	1438.1614	0	148.59
5	12597	51.275	-7.4981255	904.68068	1550.0994	0	145.28
6	12597	59.275	-8.2726005	953.01251	1666.1921	0	142.4
7	12597	62.25781	-8.5613645	969.70581	1721.7616	0	141.33
8	12597	64.652175	-8.7931615	971.93533	1770.196	0	140.47
9	12597	68.664365	-9.181579	975.66658	1855.255	0	139.02
10	12597	71.77	-9.4822335	978.55514	1920.7761	0	137.91
11	12597	78.309025	-10.115275	984.65553	2023.5871	0	135.55
12	12597	89.229025	-11.172435	994.72966	2183.527	0	131.62
13	12597	102	-12.408785	1006.6067	2560.0284	0	127.02
14	12597	113.435	-13.5158	1017.2443	3020.266	0	122.9
15	12597	118.0733	-13.96483	1021.5639	3189.8272	0	121.23
16	12597	123.0733	-14.448875	1026.2063	3236.3241	0	124.06
17	12597	131.63	-15.277245	1034.1448	3203.518	0	129.55
18	12597	140.1625	-16.10327	1042.0767	3028.2275	0	135.08
19	12597	149.3875	-16.996335	1050.6437	2831.1003	0	141.12
20	12597	156.91	-17.724585	1057.6328	2670.6759	0	146.09
21	12597	163.61	-18.37321	1063.8523	2506.0939	0	150.54
22	12597	172.22	-19.20674	1071.8562	2399.6734	0	156.32
23	12597	178.855	-19.84907	1078.0179	2402.9804	0	161.42
24	12597	185.5775	-20.49987	1084.2839	2444.5065	0	168.25
25	12597	195.3925	-21.45005	1093.4109	2512.4517	0	178.23
26	12597	205.36	-22.415	1128.322	2580.6236	0	188.36
27	12597	215.48	-23.394715	1189.2034	2648.9799	0	198.64

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28	12597	223.705	-24.19097	1232.4531	2707.406	0	207.01
29	12597	233.74	-25.16245	1285.9093	2778.2768	0	217.21
30	12597	245.305	-26.28205	1357.0211	2855.7652	0	228.96
31	12597	255.6183	-27.280475	1420.4802	2925.0235	0	239.45
32	12597	266.8549	-28.368285	1486.3843	3002.0887	0	250.87
33	12597	278.0915	-29.456095	1552.2883	3079.1539	0	262.29
34	12597	287.9799	-30.413385	1610.2391	3154.3951	0	272.34
35	12597	292.325	-30.83403	1635.7523	3191.7442	0	276.76
36	12597	300.8	-31.65449	1683.2025	2967.022	0	285.37
37	12597	317.11405	-33.233845	1775.9874	2828.6759	0	301.96
38	12597	330.46905	-34.526735	1853.2425	2968.6089	0	330.53
39	12597	336.755	-35.13527	1875.7866	3012.0131	0	336.92
40	12597	338.975	-35.350185	1875.1242	3006.3807	0	339.18
41	12597	341.4378	-34.74165	1837.1609	3172.7152	0	332.79
42	12597	345.45905	-32	1666.0191	2805.4747	0	289
43	12597	349.14625	-29.48611	1509.2321	2475.5769	0	262.6
44	12597	351.13	-28.13362	1424.825	2318.5399	0	248.4
45	12597	357.23505	-23.971265	1165.1112	1851.2634	0	204.7
46	12597	366.98515	-17.323755	750.28452	1113.6731	0	134.9
47	12597	374.3458	-12.30534	437.13375	564.36309	0	100

Slices of Slip Surface: 12595

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	12595	21.497675	0.24004116	421.8189	519.63988	0	600
2	12595	29.042055	-3.0192872	625.20482	992.52075	0	198.15
3	12595	37.085	-6.1244	818.95686	1373.4878	0	154.3
4	12595	42.09	-6.608931	849.20129	1438.1614	0	148.59
5	12595	51.275	-7.4981255	904.68068	1550.0994	0	145.28
6	12595	59.275	-8.2726005	953.01251	1666.2652	0	142.4
7	12595	62.25781	-8.5613645	969.70581	1721.8388	0	141.33
8	12595	64.652175	-8.7931615	971.93533	1770.2891	0	140.47
9	12595	68.664365	-9.181579	975.66658	1855.3346	0	139.02
10	12595	71.77	-9.4822335	978.55514	1920.857	0	137.91
11	12595	78.309025	-10.115275	984.65553	2023.6809	0	135.55
12	12595	89.229025	-11.172435	994.72966	2183.6157	0	131.62
13	12595	102	-12.408785	1006.6067	2560.1674	0	127.02
14	12595	113.435	-13.5158	1017.2443	3020.4988	0	122.9
15	12595	118.0733	-13.96483	1021.5639	3189.9642	0	121.23
16	12595	123.0733	-14.448875	1026.2063	3236.5388	0	124.06
17	12595	131.63	-15.277245	1034.1448	3203.772	0	129.55
18	12595	140.1625	-16.10327	1042.0767	3028.4433	0	135.08
19	12595	149.3875	-16.996335	1050.6437	2831.3161	0	141.12
20	12595	156.91	-17.724585	1057.6328	2670.8469	0	146.09
21	12595	163.61	-18.37321	1063.8523	2506.2252	0	150.54
22	12595	172.22	-19.20674	1071.8562	2399.8799	0	156.32
23	12595	178.855	-19.84907	1078.0179	2403.0901	0	161.42
24	12595	185.5775	-20.49987	1084.2839	2444.7093	0	168.25

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25	12595	195.3925	-21.45005	1093.4109	2512.5531	0	178.23
26	12595	205.36	-22.415	1128.322	2580.7219	0	188.36
27	12595	215.48	-23.394715	1189.2034	2649.1766	0	198.64
28	12595	223.705	-24.19097	1232.4531	2707.5632	0	207.01
29	12595	233.74	-25.16245	1285.9093	2778.4217	0	217.21
30	12595	245.305	-26.28205	1357.0211	2855.8712	0	228.96
31	12595	255.6183	-27.280475	1420.4802	2925.1121	0	239.45
32	12595	266.8549	-28.368285	1486.3843	3002.1773	0	250.87
33	12595	278.0915	-29.456095	1552.2883	3079.3311	0	262.29
34	12595	287.9799	-30.413385	1610.2391	3154.5116	0	272.34
35	12595	292.325	-30.83403	1635.7523	3191.8769	0	276.76
36	12595	300.8	-31.65449	1683.2025	2967.1405	0	285.37
37	12595	317.11405	-33.233845	1775.9874	2828.7388	0	301.96
38	12595	330.46905	-34.526735	1853.2425	2968.7004	0	330.53
39	12595	336.755	-35.13527	1875.7866	3012.1309	0	336.92
40	12595	338.975	-35.350185	1875.1242	3006.4893	0	339.18
41	12595	341.79665	-34.74165	1837.1451	3114.092	0	332.79
42	12595	346.57165	-32.29365	1684.3717	2785.63	0	292.08
43	12595	350.4728	-30.29365	1559.5664	2513.7007	0	271.08
44	12595	351.7028	-29.663065	1520.2783	2434.8418	0	264.46
45	12595	359.8337	-25.4946	1260.1498	1971.3988	0	220.69
46	12595	374.78105	-17.831535	781.9751	1126.0203	0	140.23
47	12595	384.87565	-12.65632	459.03589	559.63672	0	100

Slices of Slip Surface: 12598

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	12598	21.497675	0.24004116	421.8189	520.13164	0	600
2	12598	29.042055	-3.0192872	625.20482	992.71896	0	198.15
3	12598	37.085	-6.1244	818.95686	1373.4878	0	154.3
4	12598	42.09	-6.608931	849.20129	1438.1614	0	148.59
5	12598	51.275	-7.4981255	904.68068	1550.1938	0	145.28
6	12598	59.275	-8.2726005	953.01251	1666.3017	0	142.4
7	12598	62.25781	-8.5613645	969.70581	1721.8581	0	141.33
8	12598	64.652175	-8.7931615	971.93533	1770.3124	0	140.47
9	12598	68.664365	-9.181579	975.66658	1855.3877	0	139.02
10	12598	71.77	-9.4822335	978.55514	1920.8975	0	137.91
11	12598	78.309025	-10.115275	984.65553	2023.7746	0	135.55
12	12598	89.229025	-11.172435	994.72966	2183.7044	0	131.62
13	12598	102	-12.408785	1006.6067	2560.2369	0	127.02
14	12598	113.435	-13.5158	1017.2443	3020.6152	0	122.9
15	12598	118.0733	-13.96483	1021.5639	3190.1012	0	121.23
16	12598	123.0733	-14.448875	1026.2063	3236.6461	0	124.06
17	12598	131.63	-15.277245	1034.1448	3203.772	0	129.55
18	12598	140.1625	-16.10327	1042.0767	3028.4433	0	135.08
19	12598	149.3875	-16.996335	1050.6437	2831.424	0	141.12
20	12598	156.91	-17.724585	1057.6328	2670.8469	0	146.09
21	12598	163.61	-18.37321	1063.8523	2506.3565	0	150.54

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22	12598	172.22	-19.20674	1071.8562	2399.8799	0	156.32
23	12598	178.855	-19.84907	1078.0179	2403.145	0	161.42
24	12598	185.5775	-20.49987	1084.2839	2444.7093	0	168.25
25	12598	195.3925	-21.45005	1093.4109	2512.6545	0	178.23
26	12598	205.36	-22.415	1128.322	2580.8203	0	188.36
27	12598	215.48	-23.394715	1189.2034	2649.1766	0	198.64
28	12598	223.705	-24.19097	1232.4531	2707.5632	0	207.01
29	12598	233.74	-25.16245	1285.9093	2778.4941	0	217.21
30	12598	245.305	-26.28205	1357.0211	2855.9772	0	228.96
31	12598	255.6183	-27.280475	1420.4802	2925.2007	0	239.45
32	12598	266.8549	-28.368285	1486.3843	3002.2659	0	250.87
33	12598	278.0915	-29.456095	1552.2883	3079.3311	0	262.29
34	12598	287.9799	-30.413385	1610.2391	3154.6282	0	272.34
35	12598	292.325	-30.83403	1635.7523	3191.9433	0	276.76
36	12598	300.8	-31.65449	1683.2025	2967.1998	0	285.37
37	12598	317.11405	-33.233845	1775.9874	2828.8017	0	301.96
38	12598	330.46905	-34.526735	1853.2425	2968.7919	0	330.53
39	12598	336.755	-35.13527	1875.7866	3012.1309	0	336.92
40	12598	338.975	-35.350185	1875.1242	3006.5255	0	339.18
41	12598	341.30415	-34.74165	1837.1543	3201.077	0	332.79
42	12598	344.8314	-32	1666.0279	2833.4288	0	289
43	12598	348.65225	-29.030145	1480.747	2451.0061	0	257.82
44	12598	351.13	-27.10424	1360.5822	2227.6035	0	237.59
45	12598	360.17455	-20.074095	921.89202	1438.9881	0	163.78
46	12598	370.3443	-12.16936	428.64825	567.61992	0	100

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SWL Case.BS.Thru Fabric

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 194
Last Edited By: Cox, Lane MVK
Date: 4/20/2011
Time: 3:10:42 PM
File Name: 5c(2) Typical 1.1st SC.80% SG.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\1st Stage Construction\80%SG, 1 Layer of Fabric\Slope W\
Last Solved Date: 4/20/2011
Last Solved Time: 3:37:00 PM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

SWL Case.BS.Thru Fabric

Kind: SLOPE/W
Method: Spencer
Settings
    Apply Phreatic Correction: No
    PWP Conditions Source: Piezometric Line
    Use Staged Rapid Drawdown: No
SlipSurface
    Direction of movement: Left to Right
    Use Passive Mode: No
    Slip Surface Option: Block
    Critical slip surfaces saved: 100
    Optimize Critical Slip Surface Location: Yes
    Tension Crack
        Tension Crack Option: Tension Crack Line
        Percentage Wet: 1
        Tension Crack Fluid Unit Weight: 62.4 pcf

FOS Distribution
    FOS Calculation Option: Constant
Restrict Block Crossing: Yes
Advanced
    Number of Slices: 30
    Optimization Tolerance: 0.01
    Minimum Slip Surface Depth: 0.1 ft
    Optimization Maximum Iterations: 2000
    Optimization Convergence Tolerance: 1e-007
    Starting Optimization Points: 8
    Ending Optimization Points: 16
    Complete Passes per Insertion: 1
    Driving Side Maximum Convex Angle: 5 °
    Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH

Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH above 0

Model: Mohr-Coulomb
Unit Weight: 102 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH, 0 to -9

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -9 (2)
Cohesion Spatial Fn: CH, 0 to -9
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH, -9 to -14

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -9 to -14 (2)

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Cohesion Spatial Fn: CH, -9 to -14
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -14 to -30

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -14 to -30 (2)
Cohesion Spatial Fn: CH, -14 to -30
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -30 to -34

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -30 to -34 (2)
Cohesion Spatial Fn: CH, 30 to -34
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sand Fill

Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -34 to -42

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -34 to -42 (2)
Cohesion Spatial Fn: CH, -34 to -42
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -42 to -80

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -42 to -80 (2)
Cohesion Spatial Fn: CH, -42 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure

Piezometric Line: 1

Slip Surface Limits

Left Coordinate: (-200, -2.13) ft
Right Coordinate: (500, -4.5) ft

Slip Surface Block

Left Grid
Upper Left: (131, -13) ft
Lower Left: (165, -13) ft
Lower Right: (165, -60) ft
X Increments: 7
Y Increments: 7
Starting Angle: 115 °
Ending Angle: 135 °
Angle Increments: 7
Right Grid
Upper Left: (291, -13) ft
Lower Left: (315, -13) ft
Lower Right: (315, -42) ft
X Increments: 7
Y Increments: 7
Starting Angle: 0 °
Ending Angle: 45 °
Angle Increments: 7

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	7
	62	7
	200.3	-4.33
	220.54	-4.34
	226.87	-4.54
	240.61	-4.57
	250	-4.5
	292.25	-4.62
	309.2	-4.74
	335.91	-4.85
	337.6	-5.3
	454	-5.3

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	456.4	-4.54
	500	-4.5

Reinforcements

Reinforcement 1

Type: Fabric
Outside Point: (209, 0) ft
Inside Point: (22, 0) ft
Slip Surface Intersection: (110.88, 0) ft
Total Length: 187 ft
Reinforcement Direction: 0 °
Applied Load Option: Variable
F of S Dependent: No
Contact Cohesion: 265 psf
Contact Phi: 19 °
Interface Factor: 2
Bond Safety Factor: 1
Fabric Capacity: 27000 lbs
Fabric Safety Factor: 1
Fabric Load: 27000 lbs
Load Distribution: Even along reinf.
Load Orientation: 0
Applied Load: 27000 lbs
Fabric Load Used: 27000 lbs
Resisting Force Used: 1387.3 lbs/ft
Available Bond Length: 88.877 ft
Required Bond Length: 19.462 ft
Governing Component: Fabric

Tension Crack Line

	X (ft)	Y (ft)
	-1	5.40517
	8	5.2
	22	0.1
	96	0.1
	118	11
	127	11
	166	2
	167.4	4

Spatial Functions

CH, 0 to -9

Model: Linear Interpolation

Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -2.5, 50)
Data Point: (-300, -9, 75)
Data Point: (-33.33, 0, 50)
Data Point: (-33.33, -9, 75)
Data Point: (0, 0, 300)
Data Point: (0, -9, 300)
Data Point: (38.18, -4.5, 150)
Data Point: (38.18, -9, 150)
Data Point: (177.04, -4.54, 100)
Data Point: (177.04, -9, 100)
Data Point: (500, 0, 100)
Data Point: (500, -9, 100)
Data Point: (-300, -4, 50)
Data Point: (-33.33, -4, 50)

CH, -34 to -42 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -38, 105)
Data Point: (0, -38, 116)
Data Point: (38.18, -38, 106)
Data Point: (177.04, -38, 106)

CH, -42 to -80 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -61, 105)
Data Point: (0, -61, 105)
Data Point: (38.18, -61, 106)
Data Point: (177.04, -61, 106)

CH, -9 to -14

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -9, 75)
Data Point: (-300, -14, 115)
Data Point: (-33.33, -9, 75)
Data Point: (-33.33, -14, 115)
Data Point: (0, -9, 300)
Data Point: (0, -14, 300)
Data Point: (38.18, -9, 150)
Data Point: (38.18, -14, 150)
Data Point: (177.04, -9, 100)

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Data Point: (177.04, -14, 100)
Data Point: (500, -9, 100)
Data Point: (500, -14, 100)

CH, -14 to -30

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -14, 115)
Data Point: (-300, -30, 291)
Data Point: (-33.33, -14, 115)
Data Point: (-33.33, -30, 291)
Data Point: (0, -14, 300)
Data Point: (0, -30, 375)
Data Point: (38.18, -14, 150)
Data Point: (38.18, -30, 310)
Data Point: (177.04, -14, 100)
Data Point: (177.04, -30, 268)
Data Point: (500, -14, 100)
Data Point: (500, -30, 268)

CH, 30 to -34

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -30, 291)
Data Point: (-300, -34, 335)
Data Point: (-33.33, -30, 291)
Data Point: (-33.33, -34, 335)
Data Point: (0, -30, 400)
Data Point: (0, -34, 438)
Data Point: (38.18, -30, 325)
Data Point: (38.18, -34, 365)
Data Point: (177.04, -30, 268)
Data Point: (177.04, -34, 310)
Data Point: (500, -30, 268)
Data Point: (500, -34, 310)

CH, 0 to -9 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -4.5, 90)
Data Point: (0, -4.5, 96)
Data Point: (38.18, -4.5, 87)
Data Point: (177.04, -4.54, 87)

CH, -9 to -14 (2)

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Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -11.5, 90)
Data Point: (0, -11.5, 97)
Data Point: (38.18, -11.5, 88)
Data Point: (177.04, -11.5, 100)

CH, -14 to -30 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -22, 100)
Data Point: (0, -22, 102)
Data Point: (38.18, -22, 100)
Data Point: (177.04, -22, 100)

CH, -30 to -34 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -32, 122)
Data Point: (0, -32, 113)
Data Point: (38.18, -32, 118)
Data Point: (177.04, -32, 118)

CH, -34 to -42

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -34, 335)
Data Point: (-300, -42, 423)
Data Point: (-33.33, -34, 335)
Data Point: (-33.33, -42, 423)
Data Point: (0, -34, 438)
Data Point: (0, -42, 514)
Data Point: (38.18, -34, 365)
Data Point: (38.18, -42, 425)
Data Point: (177.04, -34, 325)
Data Point: (177.04, -42, 409)
Data Point: (500, -34, 325)
Data Point: (500, -42, 409)

CH, -42 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -42, 423)

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Data Point: (-300, -80, 841)
Data Point: (-33.33, -42, 423)
Data Point: (-33.33, -80, 841)
Data Point: (0, -42, 514)
Data Point: (0, -80, 875)
Data Point: (38.18, -42, 425)
Data Point: (38.18, -80, 815)
Data Point: (177.04, -42, 409)
Data Point: (177.04, -80, 808)
Data Point: (500, -42, 409)
Data Point: (500, -80, 808)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -42 to -80	1,3,4,2	26600
Region 2	CH, -34 to -42	3,5,6,4	5600
Region 3	CH, -30 to -34	7,5,6,8	2800
Region 4	CH, -14 to -30	9,7,8,10	11200
Region 5	CH, -9 to -14	11,9,10,12,56,52,51,50,55,42,33,32,31,43	3267.8677
Region 6	CH, 0 to -9	42,34,35,36,37,38,58,39,40,62,48,49,55	784.83735
Region 7	CH, 0 to -9	16,11,43,30,29,65,28,57,44,45,20,19,18,17,15,14,13	1934.1129
Region 8	CH above 0	45,21,22,63,64,27,44	161.91095
Region 9	Sand Fill	29,30,43,31,32,33,42,34,35	557.4735
Region 10	CH, 0 to -9	56,53,54,41,12	238.9126
Region 11	EMBANKMENT FILL CH	59,46,47,60,37,36,35,29,65	1551.9685
Region 12	EMBANKMENT FILL CH	64,27,44,57,28,65,59	499.34315
Region 13	EMBANKMENT FILL CH	60,61,62,40,39,58,38,37	772.16895

Points

	X (ft)	Y (ft)
Point 1	-200	-80
Point 2	500	-80
Point 3	-200	-42
Point 4	500	-42
Point 5	-200	-34
Point 6	500	-34
Point 7	-200	-30
Point 8	500	-30
Point 9	-200	-14
Point 10	500	-14
Point 11	-200	-9
Point 12	500	-9
Point 13	-191.42	-2.12
Point 14	-156.88	-2.03
Point 15	-119.75	-2.26
Point 16	-200	-2.13

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Point 17	-92.12	-1.99
Point 18	-71.42	-1.72
Point 19	-45.06	-0.68
Point 20	-33.33	-0.27
Point 21	-19.05	1.53
Point 22	-16.9	1.81
Point 23	-6.83	6.48
Point 24	-6.79	6.72
Point 25	-0.92	7.16
Point 26	3.42	6.91
Point 27	20.53	0.36
Point 28	38.18	-3.47
Point 29	56.55	-4.85
Point 30	70.54	-8.43
Point 31	109.16	-11.38
Point 32	127.67	-11.01
Point 33	135.55	-10.86
Point 34	159.82	-8.55
Point 35	177.04	-4.54
Point 36	180.67	-4.21
Point 37	200.3	-4.33
Point 38	220.54	-4.34
Point 39	240.61	-4.57
Point 40	250	-4.5
Point 41	500	-4.5
Point 42	154	-9
Point 43	73	-9
Point 44	22	0
Point 45	-32	0
Point 46	117.71	14
Point 47	127.71	14
Point 48	335.91	-4.85
Point 49	349.9	-8.43
Point 50	388.52	-11.38
Point 51	407.03	-11.01
Point 52	414.91	-10.86
Point 53	439.18	-8.55
Point 54	456.4	-4.54
Point 55	352.36	-9
Point 56	433.36	-9
Point 57	35.99	-3
Point 58	226.87	-4.54
Point 59	94.84	8
Point 60	167.4	4
Point 61	292.4	0.875
Point 62	309.2	-4.74
Point 63	-5.16	5.5
Point 64	8	5.2

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Point 65	46	-4.06

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	1.72	(230.813, 7.734)	95.67476	(106.507, 11.061)	(350.283, -8.51867)
2	10596	1.79	(230.813, 7.734)	98.246	(104.558, 10.5495)	(355.968, -9.23749)
3	15269	1.79	(224.265, 5.173)	96.466	(101.066, 9.63336)	(346.822, -7.64234)
4	10597	1.79	(224.977, 7.192)	94.322	(104.558, 10.5495)	(344.583, -7.06941)
5	15205	1.79	(225.891, 7.055)	96.466	(104.105, 10.4308)	(346.822, -7.64234)
6	15268	1.79	(230.381, 5.619)	100.466	(101.066, 9.63336)	(358.854, -9.42742)
7	15270	1.79	(220.383, 4.689)	93.915	(101.066, 9.63336)	(339.264, -5.70822)
8	10532	1.79	(232.224, 9.339)	98.049	(107.148, 11.2291)	(355.968, -9.23749)
9	14758	1.79	(222.609, 7.288)	92.332	(105.261, 10.734)	(339.264, -5.70822)
10	10533	1.79	(226.374, 8.797)	94.119	(107.148, 11.2291)	(344.583, -7.06941)
11	15262	1.79	(217.736, 4.473)	93.447	(101.066, 9.63336)	(334.048, -4.84233)
12	10524	1.79	(228.095, 9.009)	94.735	(107.148, 11.2291)	(347.899, -7.91804)
13	15263	1.79	(214.284, 4.466)	90.753	(101.066, 9.63336)	(327.136, -4.81386)
14	15213	1.79	(228.861, 7.398)	98.966	(104.105, 10.4308)	(352.576, -9.01421)
15	15261	1.79	(221.378, 4.814)	94.488	(101.066, 9.63336)	(341.204, -6.20479)
16	15260	1.79	(225.84, 5.369)	97.235	(101.066, 9.63336)	(349.88, -8.4248)
17	15204	1.79	(232.02, 7.502)	100.469	(104.105, 10.4308)	(358.854, -9.42742)
18	10588	1.79	(226.692, 7.404)	94.916	(104.558, 10.5495)	(347.899, -7.91804)
19	15271	1.79	(216.865, 4.471)	91.777	(101.066, 9.63336)	(332.304, -4.83515)
20	10598	1.79	(220.979, 6.696)	91.758	(104.558, 10.5495)	(336.827, -5.08477)
21	10525	1.79	(223.467, 8.437)	91.258	(107.148, 11.2291)	(338.965, -5.63187)
22	15198	1.79	(219.339, 6.355)	93.276	(104.105, 10.4308)	(334.048, -4.84233)
23	14693	1.79	(228.007, 9.476)	94.687	(108.014, 11.4562)	(346.822, -7.64234)
24	15278	1.80	(222.787, 4.989)	96.174	(101.066, 9.63336)	(343.949, -6.90716)
25	15206	1.80	(221.992, 6.572)	93.602	(104.105, 10.4308)	(339.264, -5.70822)
26	14756	1.80	(232.647, 8.217)	99.039	(105.261, 10.734)	(358.854, -9.42742)
27	15199	1.80	(215.889, 6.348)	89.684	(104.105, 10.4308)	(327.136, -4.81386)
28	15197	1.80	(222.992, 6.696)	94.261	(104.105, 10.4308)	(341.204, -6.20479)
29	15196	1.80	(227.472, 7.251)	97.001	(104.105, 10.4308)	(349.88, -8.4248)
30	14759	1.80	(219.082, 7.069)	90.147	(105.261, 10.734)	(332.304, -4.83515)
31	15190	1.80	(216.07, 6.349)	88.626	(104.105, 10.4308)	(327.498, -4.81536)
32	10589	1.80	(222.08, 6.833)	91.496	(104.558, 10.5495)	(338.965, -5.63187)
33	15277	1.80	(227.224, 5.516)	99.253	(101.066, 9.63336)	(352.576, -9.01421)
34	10526	1.80	(219.262, 8.236)	88.777	(107.148, 11.2291)	(330.642, -4.82831)
35	14751	1.80	(216.504, 7.064)	88.107	(105.261, 10.734)	(327.136, -4.81386)
36	15214	1.80	(224.407, 6.872)	95.821	(104.105, 10.4308)	(343.949, -6.90716)
37	15191	1.80	(213.31, 6.343)	86.764	(104.105, 10.4308)	(321.967, -4.79258)
38	10590	1.80	(217.879, 6.632)	88.981	(104.558, 10.5495)	(330.642, -4.82831)
39	15254	1.80	(214.465, 4.466)	88.931	(101.066, 9.63336)	(327.498, -4.81536)
40	14750	1.80	(219.952, 7.071)	90.665	(105.261, 10.734)	(334.048, -4.84233)
41	10093	1.80	(230.016, 9.971)	95.608	(108.466, 11.5749)	(350.211, -8.50204)
42	15207	1.80	(218.468, 6.354)	91.495	(104.105, 10.4308)	(332.304, -4.83515)
43	15222	1.80	(226.828, 7.171)	98.231	(104.105, 10.4308)	(348.634, -8.10609)

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44	14694	1.80	(224.087, 8.993)	92.087	(108.014, 11.4562)	(339.264, -5.70822)
45	15255	1.80	(211.703, 4.461)	87.104	(101.066, 9.63336)	(321.967, -4.79258)
46	10534	1.80	(222.362, 8.3)	91.568	(107.148, 11.2291)	(336.827, -5.08477)
47	11108	1.80	(228.707, 5.314)	100.065	(100.649, 9.52406)	(355.968, -9.23749)
48	10517	1.80	(219.949, 8.238)	88.532	(107.148, 11.2291)	(332.019, -4.83398)
49	15285	1.80	(231.03, 5.64)	102.597	(101.066, 9.63336)	(360.144, -9.51235)
50	15272	1.80	(213.74, 4.465)	90.069	(101.066, 9.63336)	(326.048, -4.80938)
51	14749	1.80	(223.61, 7.412)	92.4	(105.261, 10.734)	(341.204, -6.20479)
52	11109	1.80	(222.892, 4.772)	95.768	(100.649, 9.52406)	(344.583, -7.06941)
53	14748	1.80	(228.098, 7.967)	95.357	(105.261, 10.734)	(349.88, -8.4248)
54	10157	1.80	(228.726, 8.507)	95.876	(106.102, 10.9547)	(350.211, -8.50204)
55	15264	1.80	(211.68, 4.46)	88.065	(101.066, 9.63336)	(321.922, -4.79239)
56	10516	1.80	(224.55, 8.571)	91.359	(107.148, 11.2291)	(341.061, -6.16809)
57	10518	1.80	(215.996, 8.23)	85.756	(107.148, 11.2291)	(324.092, -4.80133)
58	14757	1.80	(226.514, 7.771)	94.948	(105.261, 10.734)	(346.822, -7.64234)
59	15189	1.80	(220.023, 6.357)	92.247	(104.105, 10.4308)	(335.419, -4.84798)
60	15221	1.80	(232.669, 7.523)	102.345	(104.105, 10.4308)	(360.144, -9.51235)
61	15200	1.80	(213.287, 6.343)	87.803	(104.105, 10.4308)	(321.922, -4.79239)
62	15253	1.80	(218.42, 4.474)	92.449	(101.066, 9.63336)	(335.419, -4.84798)
63	14687	1.80	(217.979, 8.769)	87.45	(108.014, 11.4562)	(327.136, -4.81386)
64	10515	1.80	(230.234, 9.26)	95.338	(107.148, 11.2291)	(352.025, -8.92232)
65	14686	1.80	(221.425, 8.776)	90.498	(108.014, 11.4562)	(334.048, -4.84233)
66	10599	1.80	(217.006, 6.63)	88.924	(104.558, 10.5495)	(328.893, -4.8211)
67	11117	1.80	(225.787, 5.13)	98.334	(100.649, 9.52406)	(350.211, -8.50204)
68	14760	1.80	(215.961, 7.063)	87.973	(105.261, 10.734)	(326.048, -4.80938)
69	14821	1.80	(224.992, 6.017)	95.42	(102.429, 9.99099)	(346.822, -7.64234)
70	10660	1.80	(229.382, 6.093)	98.375	(101.907, 9.85413)	(355.968, -9.23749)
71	15182	1.80	(212.801, 6.342)	86.472	(104.105, 10.4308)	(320.948, -4.78838)
72	11100	1.80	(224.597, 4.984)	97.482	(100.649, 9.52406)	(347.899, -7.91804)
73	11044	1.80	(230.251, 7.091)	99.87	(103.52, 10.2771)	(355.968, -9.23749)
74	14685	1.80	(225.092, 9.117)	92.689	(108.014, 11.4562)	(341.204, -6.20479)
75	15181	1.80	(215.766, 6.348)	88.639	(104.105, 10.4308)	(326.889, -4.81285)
76	15188	1.80	(223.939, 6.814)	93.517	(104.105, 10.4308)	(343.041, -6.67485)
77	15286	1.80	(225.198, 5.289)	98.552	(101.066, 9.63336)	(348.634, -8.10609)
78	10581	1.80	(218.566, 6.633)	88.739	(104.558, 10.5495)	(332.019, -4.83398)
79	14684	1.80	(229.597, 9.672)	95.119	(108.014, 11.4562)	(349.88, -8.4248)
80	15252	1.80	(222.321, 4.931)	93.83	(101.066, 9.63336)	(343.041, -6.67485)
81	11045	1.80	(224.421, 6.549)	96.104	(103.52, 10.2771)	(344.583, -7.06941)
82	11061	1.80	(230.834, 7.11)	101.26	(103.52, 10.2771)	(357.128, -9.31382)
83	10661	1.80	(223.56, 5.551)	94.421	(101.907, 9.85413)	(344.583, -7.06941)
84	14752	1.80	(213.903, 7.059)	85.952	(105.261, 10.734)	(321.922, -4.79239)
85	11036	1.80	(226.133, 6.762)	97.325	(103.52, 10.2771)	(347.899, -7.91804)
86	10582	1.80	(214.61, 6.625)	86.002	(104.558, 10.5495)	(324.092, -4.80133)
87	15192	1.80	(211.228, 6.339)	85.401	(104.105, 10.4308)	(317.796, -4.7754)
88	15208	1.80	(215.346, 6.347)	89.824	(104.105, 10.4308)	(326.048, -4.80938)
89	15256	1.80	(209.62, 4.456)	85.769	(101.066, 9.63336)	(317.796, -4.7754)
90	14701	1.80	(230.991, 9.819)	97.45	(108.014, 11.4562)	(352.576, -9.01421)
91	10591	1.80	(214.427, 6.625)	86.573	(104.558, 10.5495)	(323.725, -4.79982)

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92	10527	1.80	(215.813, 8.229)	86.338	(107.148, 11.2291)	(323.725, -4.79982)
93	11053	1.80	(227.327, 6.908)	98.041	(103.52, 10.2771)	(350.211, -8.50204)
94	15246	1.80	(211.193, 4.459)	86.725	(101.066, 9.63336)	(320.948, -4.78838)
95	15183	1.80	(210.731, 6.338)	84.999	(104.105, 10.4308)	(316.799, -4.7713)
96	10509	1.80	(215.695, 8.229)	86.509	(107.148, 11.2291)	(323.49, -4.79885)
97	19365	1.80	(227.218, 7.393)	97.073	(104.419, 10.5132)	(349.061, -8.21526)
98	15279	1.81	(219.274, 4.551)	93.834	(101.066, 9.63336)	(337.099, -5.15423)
99	14695	1.81	(220.555, 8.774)	89.93	(108.014, 11.4562)	(332.304, -4.83515)
100	11037	1.81	(221.527, 6.19)	93.228	(103.52, 10.2771)	(338.965, -5.63187)
101	10029	1.81	(231.288, 11.402)	95.368	(110.777, 12.181)	(350.211, -8.50204)

Slices of Slip Surface: Optimized

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	107.36945	4.259282	-60.909618	379.21934	0	600
2	Optimized	111.15985	-0.343577	206.93676	1023.092	0	600
3	Optimized	114.3637	-4.3001335	437.43993	1496.2695	0	600
4	Optimized	116.17455	-6.93306	592.47507	1784.0314	687.94538	0
5	Optimized	118.4032	-10.173477	783.30679	2143.303	785.19416	0
6	Optimized	120.0657	-12.59069	925.62955	2955.9343	0	120.52
7	Optimized	122.57695	-16.241955	1140.6366	3291.0398	0	142.71
8	Optimized	125.91445	-20.641285	1398.0892	3721.4567	0	186.92
9	Optimized	130.7068	-26.39933	1732.9056	4165.7617	0	244.81
10	Optimized	134.6268	-31.10923	2006.754	4506.1104	0	296.89
11	Optimized	136.2914	-33.10923	2123.0377	4678.026	0	316.92
12	Optimized	138.41955	-35.66623	2271.7161	4865.6896	0	352.23
13	Optimized	143.35475	-37.89752	2385.6657	5182.9507	0	372.79
14	Optimized	150.5065	-39.036385	2420.1581	5080.811	0	382.64
15	Optimized	156.9649	-39.3188	2404.77	4974.7014	0	384.32
16	Optimized	163.61	-38.64061	2328.5374	4673.7429	0	376.25
17	Optimized	172.22	-37.761885	2229.7041	4389.6461	0	365.5
18	Optimized	178.855	-37.08472	2153.5243	4257.4988	0	357.39
19	Optimized	181.2339	-36.84193	2126.1769	4223.8625	0	354.84
20	Optimized	186.42335	-36.365325	2069.9804	4151.8027	0	349.84
21	Optimized	195.67445	-35.52721	1970.4	4037.366	0	341.04
22	Optimized	202.7179	-34.8891	1906.8067	3950.4861	0	334.34
23	Optimized	209.63595	-34.335025	1871.9879	3866.9653	0	328.52
24	Optimized	215.43685	-33.90316	1844.9052	3802.5079	0	308.98
25	Optimized	218.6388	-33.68509	1831.1798	3765.5061	0	306.69
26	Optimized	223.705	-33.36204	1804.7075	3715.361	0	303.3
			-				

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27	Optimized	228.62435	33.048355	1778.6716	3666.8481	0	300.01
28	Optimized	235.49435	-32.6177	1750.828	3596.377	0	295.49
29	Optimized	243.7827	-32.1012	1719.4873	3511.0132	0	290.06
30	Optimized	248.4777	-31.829965	1704.6739	3461.773	0	287.21
31	Optimized	253.5304	-31.58592	1689.4771	3418.4221	0	284.65
32	Optimized	260.5912	-31.244885	1666.9847	3358.5838	0	281.07
33	Optimized	267.65205	-30.90385	1644.4923	3298.7455	0	277.49
34	Optimized	274.69375	-30.623375	1625.6862	3243.1174	0	274.55
35	Optimized	281.71625	-30.40347	1610.7417	3197.7143	0	272.24
36	Optimized	288.73875	-30.183565	1595.7971	3152.3112	0	269.93
37	Optimized	292.325	-30.07126	1588.1551	3129.1334	0	268.75
38	Optimized	293.50035	-30.034455	1585.296	3082.4368	0	268.36
39	Optimized	297.8607	-29.897915	1574.8435	2901.0355	0	266.93
40	Optimized	302.21615	-29.42108	1543.167	2737.7696	0	261.92
41	Optimized	306.2558	-27.700465	1434.0397	2424.4317	0	243.85
42	Optimized	312.49225	-24.84965	1253.9949	2016.3479	0	213.92
43	Optimized	318.9068	-21.962705	1072.2066	1714.8921	0	183.61
44	Optimized	325.15145	-19.19871	898.12551	1428.1005	0	154.59
45	Optimized	332.0919	-16.20368	709.44581	1115.7085	0	123.14
46	Optimized	336.60905	-14.295325	577.77631	902.52018	0	103.1
47	Optimized	337.45405	-13.93834	541.44225	847.11396	0	100
48	Optimized	343.37165	-11.43834	383.02857	555.98116	0	100
49	Optimized	349.52165	-8.8401655	220.90854	259.06171	0	100
50	Optimized	350.09135	-8.599499	205.88863	234.59013	0	100

Slices of Slip Surface: 10596

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	10596	104.9201	3.897069	-25.785622	352.73816	0	600
2	10596	108.6208	-0.626642	237.57839	991.20603	0	600
3	10596	114.6221	-7.962516	664.66042	1939.2319	735.8742	0
4	10596	117.4975	-11.477345	869.27748	2881.8487	0	121.44
5	10596	118.6356	-12.86855	950.2828	3002.3026	0	121.03
6	10596	123.6356	-18.980465	1306.1174	3564.5685	0	170.57
7	10596	130.1802	-26.980465	1771.8814	4232.2653	0	250.98
8	10596	134.1002	-	2050.8151	4591.4813	0	303.96

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			31.772205				
9	10596	135.73635	-33.772205	2167.2667	4786.0969	0	324
10	10596	138.3185	-36.92857	2351.0097	4990.3619	0	364.45
11	10596	144.0357	-39.63974	2490.8849	5402.2249	0	389.7
12	10596	150.67855	-39.204935	2429.8971	5149.5612	0	384.28
13	10596	156.91	-38.79706	2372.5862	4912.512	0	379.08
14	10596	163.61	-38.358515	2310.8862	4635.3318	0	373.37
15	10596	172.22	-37.79495	2231.739	4385.0151	0	365.84
16	10596	178.855	-37.36066	2170.7267	4279.5472	0	360.29
17	10596	185.5775	-36.92064	2108.8851	4207.9084	0	355.67
18	10596	195.3925	-36.278205	2018.6045	4112.9512	0	348.92
19	10596	205.36	-35.62579	1952.7375	4014.826	0	342.07
20	10596	215.48	-34.96339	1911.0284	3915.3354	0	335.12
21	10596	223.705	-34.425025	1871.0358	3837.1289	0	329.46
22	10596	228.5342	-34.10893	1844.8615	3792.4951	0	326.14
23	10596	235.4042	-33.659255	1815.913	3720.6712	0	306.42
24	10596	245.305	-33.011205	1776.9219	3614.7358	0	299.62
25	10596	254.13095	-32.43351	1742.3581	3520.4667	0	293.55
26	10596	262.39285	-31.89273	1707.0906	3433.5058	0	287.87
27	10596	270.65475	-31.35195	1671.9439	3346.6657	0	282.2
28	10596	278.91665	-30.81117	1636.6764	3259.7048	0	276.52
29	10596	287.17855	-30.27039	1601.5297	3172.8647	0	270.84
30	10596	291.77975	-29.96922	1581.8757	3125.0242	0	267.68
31	10596	292.325	-29.93353	1579.5531	3119.9234	0	267.3
32	10596	295.12855	-29.750025	1566.8462	2996.6245	0	265.38
33	10596	303.52855	-27.58691	1428.1173	2500.4119	0	242.66
34	10596	313.65165	-24.044685	1203.4777	1918.5462	0	205.47
35	10596	322.555	-20.929275	1006.7783	1596.6859	0	172.76
36	10596	331.45835	-17.813865	810.08937	1274.7196	0	140.05
37	10596	336.755	-15.96048	679.26071	1064.6331	0	120.59
38	10596	339.97885	-14.8324	594.83116	914.31757	0	108.74
39	10596	346.12885	-12.680425	460.53647	658.2668	0	100
40	10596	351.13	-10.93045	351.33951	452.18156	0	100
41	10596	354.1641	-9.8687685	285.08444	334.10704	0	100

Slices of Slip Surface: 15269

	Slip	X (ft)	Y (ft)	PWP (psf)	Base Normal	Frictional	Cohesive

SWL Case.BS.Thru Fabric

	Surface				Stress (psf)	Strength (psf)	Strength (psf)
1	15269	104.3816	-1.054259	285.93361	950.47126	0	600
2	15269	110.671	-8.0043835	687.47082	1895.6698	697.554	0
3	15269	114.8706	-12.64518	955.58778	2898.4238	0	122.39
4	15269	116.9033	-14.89145	1085.3644	3171.5864	0	130.82
5	15269	122.71	-21.308195	1456.097	3783.9332	0	194.87
6	15269	129.14275	-28.416745	1866.7597	4405.0481	0	266.14
7	15269	132.38535	-32	2073.7177	4675.9211	0	307.01
8	15269	134.8726	-34.74858	2232.6083	4899.654	0	344.32
9	15269	138.4923	-38.74858	2463.6968	5178.7004	0	382.01
10	15269	143.503	-44.285715	2783.6331	5572.9431	0	436.73
11	15269	149.7857	-46.11134	2865.4316	5927.7105	0	455.12
12	15269	156.91	-45.33355	2780.3864	5623.6295	0	446.21
13	15269	163.61	-44.60208	2700.5764	5314.8581	0	437.81
14	15269	172.22	-43.66209	2597.8419	5023.883	0	426.99
15	15269	178.855	-42.93772	2518.7529	4887.7619	0	418.85
16	15269	184.0571	-42.369785	2456.6989	4806.5656	0	412.88
17	15269	190.65815	-41.64912	2377.9385	4711.801	0	405.32
18	15269	197.08605	-40.947355	2301.3855	4619.4734	0	397.95
19	15269	205.36	-40.04405	2228.3605	4497.7815	0	388.46
20	15269	215.48	-38.93921	2159.108	4350.8285	0	376.86
21	15269	223.705	-38.04125	2096.7044	4234.0834	0	367.43
22	15269	230.305	-37.3207	2045.0537	4141.1867	0	359.87
23	15269	237.175	-36.570675	1997.3025	4041.7774	0	351.99
24	15269	245.305	-35.683085	1943.6164	3922.8042	0	342.67
25	15269	255.36075	-34.585255	1876.3694	3776.2895	0	331.15
26	15269	264.66255	-33.569735	1811.3342	3635.911	0	305.48
27	15269	272.54465	-32.70921	1756.2198	3511.9351	0	296.45
28	15269	280.4268	-31.848685	1701.1054	3387.8331	0	287.41
29	15269	288.30895	-30.98816	1646.1171	3263.8572	0	278.38
30	15269	292.325	-30.54971	1617.9859	3200.6484	0	273.77
31	15269	294.88005	-30.27076	1599.4414	3072.1797	0	270.84
32	15269	299.3229	-29.785715	1567.2232	2847.8853	0	265.75
33	15269	305.24285	-27.66577	1432.3454	2466.1341	0	243.49
34	15269	313.27	-23.80009	1188.2991	1913.0554	0	202.9
35	15269	321.41005	-19.880055	941.59647	1505.0756	0	161.74
36	15269	329.5501	-15.96002	694.90486	1097.1069	0	120.58

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37	15269	334.76505	-13.448625	536.83226	837.35446	0	100
38	15269	336.755	-12.49032	462.71427	721.78821	0	100
39	15269	340.80135	-10.541695	327.0813	486.02052	0	100
40	15269	345.4123	-8.3211675	188.52078	242.91026	0	100

Slices of Slip Surface: 10597

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	10597	104.9201	3.897069	-25.785622	354.59053	0	600
2	10597	108.6208	-0.626642	237.57839	992.05954	0	600
3	10597	114.6221	-7.962516	664.66042	1940.5397	736.62926	0
4	10597	117.4975	-11.477345	869.27748	2880.6568	0	121.44
5	10597	118.6356	-12.86855	950.2828	3004.4916	0	121.03
6	10597	123.6356	-18.980465	1306.1174	3568.0651	0	170.57
7	10597	130.1802	-26.980465	1771.8814	4236.3665	0	250.98
8	10597	134.1002	-31.772205	2050.8151	4595.6304	0	303.96
9	10597	135.73635	-33.772205	2167.2667	4786.2668	0	324
10	10597	138.3185	-36.92857	2351.0097	4995.2513	0	364.45
11	10597	144.0357	-39.63974	2490.8849	5401.4738	0	389.7
12	10597	150.67855	-39.204935	2429.8971	5148.8102	0	384.28
13	10597	156.91	-38.79706	2372.5862	4911.6547	0	379.08
14	10597	163.61	-38.358515	2310.8862	4634.6736	0	373.37
15	10597	172.22	-37.79495	2231.739	4384.3941	0	365.84
16	10597	178.855	-37.36066	2170.7267	4278.4477	0	360.29
17	10597	185.5775	-36.92064	2108.8851	4207.2984	0	355.67
18	10597	195.3925	-36.278205	2018.6045	4112.3412	0	348.92
19	10597	203.67335	-35.73619	1959.5912	4032.0338	0	343.23
20	10597	210.42	-35.29459	1931.933	3964.5892	0	338.59
21	10597	217.16665	-34.85299	1904.1269	3898.3278	0	333.96
22	10597	223.705	-34.425025	1871.0358	3836.8136	0	329.46
23	10597	228.5342	-34.10893	1844.8615	3792.1953	0	326.14
24	10597	235.4042	-33.659255	1815.913	3720.2879	0	306.42
25	10597	245.305	-33.011205	1776.9219	3614.417	0	299.62
26	10597	254.13095	-32.43351	1742.3581	3520.1044	0	293.55
27	10597	262.39285	-31.89273	1707.0906	3433.1435	0	287.87
28	10597	270.65475	-31.35195	1671.9439	3346.3034	0	282.2

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29	10597	278.91665	-30.81117	1636.6764	3259.4633	0	276.52
30	10597	287.17855	-30.27039	1601.5297	3172.5024	0	270.84
31	10597	291.77975	-29.96922	1581.8757	3124.7059	0	267.68
32	10597	292.325	-29.93353	1579.5531	3119.5907	0	267.3
33	10597	295.12855	-29.750025	1566.8462	2996.4416	0	265.38
34	10597	303.52855	-26.840215	1381.5349	2442.1706	0	234.82
35	10597	312.6986	-22.424165	1102.599	1767.6401	0	188.45
36	10597	319.6958	-19.0545	890.52851	1417.6659	0	153.07
37	10597	326.69295	-15.684835	678.45806	1067.6273	0	117.69
38	10597	333.05075	-12.62307	485.77258	753.56826	0	100
39	10597	336.755	-10.83921	359.68926	554.86902	0	100
40	10597	339.0871	-9.71614	275.56586	412.9883	0	100
41	10597	342.57865	-8.0347055	170.64635	235.03485	0	100

Slices of Slip Surface: 15205

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	15205	104.35325	3.812927	-17.637329	329.39535	0	600
2	15205	107.963	-0.5995505	239.25153	967.13894	0	600
3	15205	113.99225	-7.969582	668.31215	1922.9434	724.36169	0
4	15205	117.1848	-11.87209	895.52023	2886.4493	0	121.55
5	15205	118.3178	-13.257045	976.15301	3029.4601	0	121.14
6	15205	123.3178	-19.36896	1331.9811	3580.1092	0	174.68
7	15205	129.8624	-27.36896	1797.7321	4254.5737	0	255.09
8	15205	133.65095	-32	2067.3491	4604.7085	0	306.5
9	15205	138.5594	-38	2416.6162	5060.0139	0	374.76
10	15205	143.70155	-44.285715	2782.6441	5520.0819	0	436.71
11	15205	149.7857	-46.11134	2865.4316	5930.1873	0	455.12
12	15205	156.91	-45.33355	2780.3864	5626.1916	0	446.21
13	15205	163.61	-44.60208	2700.5764	5317.2187	0	437.81
14	15205	172.22	-43.66209	2597.8419	5026.0485	0	426.99
15	15205	178.855	-42.93772	2518.7529	4890.5005	0	418.85
16	15205	184.0571	-42.369785	2456.6989	4808.7668	0	412.88
17	15205	190.65815	-41.64912	2377.9385	4713.9661	0	405.32
18	15205	197.08605	-40.947355	2301.3855	4621.6385	0	397.95
19	15205	203.67335	-40.22819	2239.9515	4526.317	0	390.4
20	15205	210.42	-39.49163	2193.8323	4425.8271	0	382.66
21	15205	217.16665	-38.75507	2147.5657	4327.8421	0	374.93
22	15205	223.705	-38.04125	2096.7044	4235.6538	0	367.43

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23	15205	230.305	-37.3207	2045.0537	4142.6337	0	359.87
24	15205	237.175	-36.570675	1997.3025	4043.2244	0	351.99
25	15205	245.305	-35.683085	1943.6164	3924.1804	0	342.67
26	15205	255.36075	-34.585255	1876.3694	3777.5876	0	331.15
27	15205	264.66255	-33.569735	1811.3342	3637.1722	0	305.48
28	15205	272.54465	-32.70921	1756.2198	3513.0702	0	296.45
29	15205	280.4268	-31.848685	1701.1054	3389.0943	0	287.41
30	15205	288.30895	-30.98816	1646.1171	3264.9923	0	278.38
31	15205	292.325	-30.54971	1617.9859	3201.7751	0	273.77
32	15205	294.88005	-30.27076	1599.4414	3073.1818	0	270.84
33	15205	299.3229	-29.785715	1567.2232	2848.8982	0	265.75
34	15205	305.24285	-27.66577	1432.3454	2469.0939	0	243.49
35	15205	313.27	-23.80009	1188.2991	1915.269	0	202.9
36	15205	321.41005	-19.880055	941.59647	1506.8466	0	161.74
37	15205	329.5501	-15.96002	694.90486	1098.3909	0	120.58
38	15205	334.76505	-13.448625	536.83226	838.3381	0	100
39	15205	336.755	-12.49032	462.71427	722.69451	0	100
40	15205	340.80135	-10.541695	327.0813	486.63968	0	100
41	15205	345.4123	-8.3211675	188.52078	243.30973	0	100

Slices of Slip Surface: 15268

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	15268	104.3816	-1.054259	285.93361	950.79503	0	600
2	15268	110.671	-8.0043835	687.47082	1895.6698	697.554	0
3	15268	114.8706	-12.64518	955.58778	2897.6029	0	122.39
4	15268	116.9033	-14.89145	1085.3644	3170.7962	0	130.82
5	15268	122.71	-21.308195	1456.097	3781.9874	0	194.87
6	15268	129.14275	-28.416745	1866.7597	4403.1748	0	266.14
7	15268	132.38535	-32	2073.7177	4673.8821	0	307.01
8	15268	134.8726	-34.74858	2232.6083	4898.3168	0	344.32
9	15268	138.4923	-38.74858	2463.6968	5176.3059	0	382.01
10	15268	143.503	-44.285715	2783.6331	5570.5102	0	436.73
11	15268	149.7857	-46.11134	2865.4316	5928.4181	0	455.12
12	15268	156.91	-45.33355	2780.3864	5624.3127	0	446.21
13	15268	163.61	-44.60208	2700.5764	5315.5138	0	437.81
14	15268	172.22	-43.66209	2597.8419	5024.5017	0	426.99

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15	15268	178.855	-42.93772	2518.7529	4888.8574	0	418.85
16	15268	184.0571	-42.369785	2456.6989	4807.1526	0	412.88
17	15268	193.8721	-41.298235	2339.662	4665.1732	0	401.63
18	15268	205.36	-40.04405	2228.3605	4498.1744	0	388.46
19	15268	215.48	-38.93921	2159.108	4351.2214	0	376.86
20	15268	223.705	-38.04125	2096.7044	4234.3974	0	367.43
21	15268	230.305	-37.3207	2045.0537	4141.4761	0	359.87
22	15268	237.175	-36.570675	1997.3025	4042.0668	0	351.99
23	15268	245.305	-35.683085	1943.6164	3923.1218	0	342.67
24	15268	255.36075	-34.585255	1876.3694	3776.5677	0	331.15
25	15268	264.66255	-33.569735	1811.3342	3636.1632	0	305.48
26	15268	272.54465	-32.70921	1756.2198	3512.1873	0	296.45
27	15268	280.4268	-31.848685	1701.1054	3388.0854	0	287.41
28	15268	288.30895	-30.98816	1646.1171	3264.1095	0	278.38
29	15268	292.325	-30.54971	1617.9859	3200.9135	0	273.77
30	15268	294.88005	-30.27076	1599.4414	3072.3801	0	270.84
31	15268	299.3229	-29.785715	1567.2232	2848.1385	0	265.75
32	15268	305.24285	-28.186765	1464.791	2499.161	0	248.96
33	15268	313.65165	-25.244395	1278.3241	2043.9615	0	218.07
34	15268	322.555	-22.128985	1081.667	1721.5711	0	185.35
35	15268	331.45835	-19.013575	884.94628	1399.2867	0	152.64
36	15268	336.755	-17.16019	754.10114	1188.9017	0	133.18
37	15268	341.69315	-15.432255	632.24951	966.22853	0	115.04
38	15268	347.84315	-13.280275	497.97271	708.67553	0	100
39	15268	351.13	-12.130155	426.20558	573.35164	0	100
40	15268	355.607	-10.563592	328.442	400.78151	0	100

Slices of Slip Surface: 15270

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	15270	104.3816	-1.054259	285.93361	951.80683	0	600
2	15270	110.671	-8.0043835	687.47082	1897.1365	698.40081	0
3	15270	114.8706	-12.64518	955.58778	2900.3393	0	122.39
4	15270	116.9033	-14.89145	1085.3644	3173.3747	0	130.82

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5	15270	122.71	-21.308195	1456.097	3787.2881	0	194.87
6	15270	129.14275	-28.416745	1866.7597	4408.5605	0	266.14
7	15270	132.38535	-32	2073.7177	4679.9992	0	307.01
8	15270	134.8726	-34.74858	2232.6083	4902.9722	0	344.32
9	15270	138.4923	-38.74858	2463.6968	5183.3753	0	382.01
10	15270	143.503	-44.285715	2783.6331	5577.809	0	436.73
11	15270	149.7857	-46.11134	2865.4316	5926.7669	0	455.12
12	15270	156.91	-45.33355	2780.3864	5622.6047	0	446.21
13	15270	163.61	-44.60208	2700.5764	5313.94	0	437.81
14	15270	172.22	-43.66209	2597.8419	5023.058	0	426.99
15	15270	178.855	-42.93772	2518.7529	4886.6665	0	418.85
16	15270	184.0571	-42.369785	2456.6989	4805.6851	0	412.88
17	15270	190.65815	-41.64912	2377.9385	4710.8731	0	405.32
18	15270	197.08605	-40.947355	2301.3855	4618.5455	0	397.95
19	15270	203.67335	-40.22819	2239.9515	4523.3701	0	390.4
20	15270	210.42	-39.49163	2193.8323	4423.7643	0	382.66
21	15270	217.16665	-38.75507	2147.5657	4325.7793	0	374.93
22	15270	223.705	-38.04125	2096.7044	4233.6122	0	367.43
23	15270	230.305	-37.3207	2045.0537	4140.6079	0	359.87
24	15270	237.175	-36.570675	1997.3025	4041.1986	0	351.99
25	15270	245.305	-35.683085	1943.6164	3922.2748	0	342.67
26	15270	255.36075	-34.585255	1876.3694	3775.7332	0	331.15
27	15270	264.66255	-33.569735	1811.3342	3635.4065	0	305.48
28	15270	272.54465	-32.70921	1756.2198	3511.4306	0	296.45
29	15270	280.4268	-31.848685	1701.1054	3387.4548	0	287.41
30	15270	288.30895	-30.98816	1646.1171	3263.3528	0	278.38
31	15270	292.325	-30.54971	1617.9859	3200.1845	0	273.77
32	15270	294.88005	-30.27076	1599.4414	3071.7789	0	270.84
33	15270	299.3229	-29.785715	1567.2232	2847.6321	0	265.75
34	15270	305.24285	-27.08499	1396.071	2427.4239	0	237.39
35	15270	313.4169	-21.948915	1072.7431	1737.9744	0	183.46
36	15270	321.85065	-16.64964	739.90663	1182.4772	0	127.82
37	15270	330.04625	-11.5	416.46405	652.01592	0	100
38	15270	334.9675	-8.407774	222.24528	347.22063	0	100
39	15270	336.755	-7.2845995	137.88079	229.77293	0	100
40	15270	338.4319	-6.2309375	58.09252	112.4089	0	100

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Slices of Slip Surface: 10532

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	10532	108.06015	4.387635	-72.44775	355.14178	0	600
2	10532	111.86975	-0.774168	230.17645	1062.7075	0	600
3	10532	116.23865	-6.69383	577.23147	1802.9277	707.65603	0
4	10532	118.627	-9.9299365	766.94511	2165.7206	807.58342	0
5	10532	120.5874	-12.586215	922.66857	2960.5069	0	120.33
6	10532	124.6704	-18.11848	1247	3466.613	0	161.32
7	10532	130.5747	-26.11848	1716.0452	4115.42	0	241.95
8	10532	134.4947	-31.42989	2027.4299	4513.4025	0	300.26
9	10532	135.97075	-33.42989	2144.6944	4696.6922	0	320.36
10	10532	138.5529	-36.92857	2349.8573	4947.5307	0	364.4
11	10532	144.0357	-39.63974	2490.8849	5403.1262	0	389.7
12	10532	150.67855	-39.204935	2429.8971	5150.3123	0	384.28
13	10532	156.91	-38.79706	2372.5862	4913.1978	0	379.08
14	10532	163.61	-38.358515	2310.8862	4636.1216	0	373.37
15	10532	172.22	-37.79495	2231.739	4385.6362	0	365.84
16	10532	178.855	-37.36066	2170.7267	4280.3719	0	360.29
17	10532	185.5775	-36.92064	2108.8851	4208.5184	0	355.67
18	10532	195.3925	-36.278205	2018.6045	4113.5612	0	348.92
19	10532	205.36	-35.62579	1952.7375	4015.2204	0	342.07
20	10532	215.48	-34.96339	1911.0284	3915.7298	0	335.12
21	10532	223.705	-34.425025	1871.0358	3837.6018	0	329.46
22	10532	228.5342	-34.10893	1844.8615	3793.0947	0	326.14
23	10532	235.4042	-33.659255	1815.913	3721.0546	0	306.42
24	10532	245.305	-33.011205	1776.9219	3615.1609	0	299.62
25	10532	254.13095	-32.43351	1742.3581	3520.8291	0	293.55
26	10532	262.39285	-31.89273	1707.0906	3433.8682	0	287.87
27	10532	270.65475	-31.35195	1671.9439	3347.0281	0	282.2
28	10532	278.91665	-30.81117	1636.6764	3260.0672	0	276.52
29	10532	287.17855	-30.27039	1601.5297	3173.2271	0	270.84
30	10532	291.77975	-29.96922	1581.8757	3125.3425	0	267.68
31	10532	292.325	-29.93353	1579.5531	3120.256	0	267.3
32	10532	295.12855	-29.750025	1566.8462	2996.9902	0	265.38
33	10532	303.52855	-27.58691	1428.1173	2501.244	0	242.66
34	10532	313.65165	-24.044685	1203.4777	1919.1823	0	205.47
35	10532	322.555	-20.929275	1006.7783	1597.11	0	172.76
			-				

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36	10532	331.45835	17.813865	810.08937	1275.1436	0	140.05
37	10532	336.755	-15.96048	679.26071	1064.9682	0	120.59
38	10532	339.97885	-14.8324	594.83116	914.61515	0	108.74
39	10532	346.12885	-12.680425	460.53647	658.49206	0	100
40	10532	351.13	-10.93045	351.33951	452.33504	0	100
41	10532	354.1641	-9.8687685	285.08444	334.18552	0	100

Slices of Slip Surface: 14758

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	14758	105.8632	4.0227995	-38.452283	412.01222	0	600
2	14758	110.1124	-0.672786	232.82706	1082.5828	0	600
3	14758	115.73465	-6.8857135	591.77899	1886.8857	747.73021	0
4	14758	118.6613	-10.119839	778.63003	2270.822	861.51746	0
5	14758	120.8926	-12.58553	921.08357	2984.5708	0	120.22
6	14758	124.9413	-17.059605	1179.5569	3401.044	0	150.31
7	14758	131.63	-24.45104	1606.5893	3975.2216	0	224.38
8	14758	136.1007	-29.391435	1891.9913	4311.6105	0	274.08
9	14758	138.46125	-32	2042.7612	4509.2748	0	304.56
10	14758	142.92125	-36.92857	2327.4149	4877.3806	0	363.42
11	14758	149.7857	-39.578765	2457.695	5216.5642	0	388.14
12	14758	156.91	-39.10817	2392.0381	4945.4085	0	382.21
13	14758	163.61	-38.665605	2330.1462	4667.9275	0	376.5
14	14758	172.22	-38.09687	2250.5933	4417.0339	0	368.98
15	14758	178.855	-37.658595	2189.3334	4310.9906	0	363.42
16	14758	183.94165	-37.322595	2142.4019	4255.3724	0	359.89
17	14758	190.485	-36.89037	2082.0139	4191.782	0	355.35
18	14758	197.02835	-36.45815	2021.4734	4128.0391	0	350.81
19	14758	203.67335	-36.019215	1977.2623	4062.7867	0	346.2
20	14758	210.42	-35.573565	1949.3094	3994.7531	0	341.52
21	14758	217.16665	-35.127915	1921.2086	3927.9028	0	336.84
22	14758	223.705	-34.696025	1887.9866	3865.9824	0	332.31
23	14758	230.55605	-34.24348	1852.9725	3801.233	0	327.56
24	14758	237.42605	-33.789685	1823.7761	3730.444	0	307.79

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25	14758	245.305	-33.26924	1793.0042	3645.3042	0	302.33
26	14758	254.225	-32.680025	1757.7079	3549.3065	0	296.14
27	14758	262.675	-32.12186	1721.3375	3459.9155	0	290.28
28	14758	271.125	-31.563695	1685.0851	3370.4064	0	284.42
29	14758	279.575	-31.00553	1648.7147	3280.8973	0	278.56
30	14758	288.025	-30.447365	1612.3442	3191.5063	0	272.7
31	14758	292.325	-30.163325	1593.8598	3145.9439	0	269.71
32	14758	293.5988	-30.079185	1588.0765	3089.7969	0	268.83
33	14758	298.04165	-29.785715	1567.7689	2888.5457	0	265.75
34	14758	305.24285	-27.08499	1396.071	2423.7863	0	237.39
35	14758	313.4169	-21.948915	1072.7431	1735.3641	0	183.46
36	14758	321.85065	-16.64964	739.90663	1180.67	0	127.82
37	14758	330.04625	-11.5	416.46405	651.02634	0	100
38	14758	334.9675	-8.407774	222.24528	346.65017	0	100
39	14758	336.755	-7.2845995	137.88079	229.36711	0	100
40	14758	338.4319	-6.2309375	58.09252	112.15444	0	100

Slices of Slip Surface: 10533

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	10533	108.06015	4.387635	-72.44775	355.89054	0	600
2	10533	111.86975	-0.774168	230.17645	1063.4248	0	600
3	10533	116.23865	-6.69383	577.23147	1803.7954	708.157	0
4	10533	118.627	-9.9299365	766.94511	2166.5948	808.08815	0
5	10533	120.5874	-12.586215	922.66857	2963.0679	0	120.33
6	10533	124.6704	-18.11848	1247	3470.1295	0	161.32
7	10533	130.5747	-26.11848	1716.0452	4119.6694	0	241.95
8	10533	134.4947	-31.42989	2027.4299	4517.6227	0	300.26
9	10533	135.97075	-33.42989	2144.6944	4699.656	0	320.36
10	10533	138.5529	-36.92857	2349.8573	4952.476	0	364.4
11	10533	144.0357	-39.63974	2490.8849	5402.3751	0	389.7
12	10533	150.67855	-39.204935	2429.8971	5149.5612	0	384.28
13	10533	156.91	-38.79706	2372.5862	4912.512	0	379.08
14	10533	163.61	-38.358515	2310.8862	4635.4634	0	373.37
15	10533	172.22	-37.79495	2231.739	4385.0151	0	365.84
16	10533	178.855	-37.36066	2170.7267	4279.5472	0	360.29
17	10533	185.5775	-36.92064	2108.8851	4207.9084	0	355.67

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18	10533	195.3925	-36.278205	2018.6045	4112.9512	0	348.92
19	10533	203.67335	-35.73619	1959.5912	4032.7733	0	343.23
20	10533	210.42	-35.29459	1931.933	3965.0329	0	338.59
21	10533	217.16665	-34.85299	1904.1269	3898.7716	0	333.96
22	10533	223.705	-34.425025	1871.0358	3837.2866	0	329.46
23	10533	228.5342	-34.10893	1844.8615	3792.4951	0	326.14
24	10533	235.4042	-33.659255	1815.913	3720.6712	0	306.42
25	10533	245.305	-33.011205	1776.9219	3614.7358	0	299.62
26	10533	254.13095	-32.43351	1742.3581	3520.4667	0	293.55
27	10533	262.39285	-31.89273	1707.0906	3433.5058	0	287.87
28	10533	270.65475	-31.35195	1671.9439	3346.6657	0	282.2
29	10533	278.91665	-30.81117	1636.6764	3259.8256	0	276.52
30	10533	287.17855	-30.27039	1601.5297	3172.8647	0	270.84
31	10533	291.77975	-29.96922	1581.8757	3125.0242	0	267.68
32	10533	292.325	-29.93353	1579.5531	3119.9899	0	267.3
33	10533	295.12855	-29.750025	1566.8462	2996.6245	0	265.38
34	10533	303.52855	-26.840215	1381.5349	2443.2826	0	234.82
35	10533	312.6986	-22.424165	1102.599	1768.4126	0	188.45
36	10533	319.6958	-19.0545	890.52851	1418.3097	0	153.07
37	10533	326.69295	-15.684835	678.45806	1068.1037	0	117.69
38	10533	333.05075	-12.62307	485.77258	753.88337	0	100
39	10533	336.755	-10.83921	359.68926	555.08227	0	100
40	10533	339.0871	-9.71614	275.56586	413.10948	0	100
41	10533	342.57865	-8.0347055	170.64635	235.07979	0	100

LWL Case.BS

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 194
Last Edited By: Cox, Lane MVK
Date: 4/20/2011
Time: 3:10:42 PM
File Name: 5c(2) Typical 1.1st SC.80% SG.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\1st Stage Construction\80%SG, 1 Layer of Fabric\Slope W\
Last Solved Date: 4/20/2011
Last Solved Time: 3:13:06 PM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

LWL Case.BS

Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

SlipSurface
- Direction of movement: Right to Left
- Use Passive Mode: No
- Slip Surface Option: Block
- Critical slip surfaces saved: 100
- Optimize Critical Slip Surface Location: Yes
- Tension Crack
  - Tension Crack Option: Tension Crack Line
  - Percentage Wet: 0
  - Tension Crack Fluid Unit Weight: 62.4 pcf

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FOS Distribution
FOS Calculation Option: Constant
Restrict Block Crossing: Yes
Advanced
Number of Slices: 30
Optimization Tolerance: 0.01
Minimum Slip Surface Depth: 0.1 ft
Optimization Maximum Iterations: 2000
Optimization Convergence Tolerance: 1e-007
Starting Optimization Points: 8
Ending Optimization Points: 16
Complete Passes per Insertion: 1
Driving Side Maximum Convex Angle: 5 °
Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH
Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH above 0
Model: Mohr-Coulomb
Unit Weight: 102 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, 0 to -9
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -9 (2)
Cohesion Spatial Fn: CH, 0 to -9
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -9 to -14
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -9 to -14 (2)

Cohesion Spatial Fn: CH, -9 to -14
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -14 to -30
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -14 to -30 (2)
Cohesion Spatial Fn: CH, -14 to -30
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -30 to -34
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -30 to -34 (2)
Cohesion Spatial Fn: CH, 30 to -34
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sand Fill
Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -34 to -42
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -34 to -42 (2)
Cohesion Spatial Fn: CH, -34 to -42
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -42 to -80
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -42 to -80 (2)
Cohesion Spatial Fn: CH, -42 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure

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Piezometric Line: 1

Slip Surface Limits

Left Coordinate: (-200, -2.13) ft
Right Coordinate: (500, -4.5) ft

Slip Surface Block

Left Grid
- Upper Left: (-45, -35) ft
- Lower Left: (13, -35) ft
- Lower Right: (13, -70) ft
- X Increments: 7
- Y Increments: 5
- Starting Angle: 135 °
- Ending Angle: 160 °
- Angle Increments: 7

Right Grid
- Upper Left: (111, -13) ft
- Lower Left: (190, -13) ft
- Lower Right: (190, -54) ft
- X Increments: 7
- Y Increments: 5
- Starting Angle: 20 °
- Ending Angle: 45 °
- Angle Increments: 7

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	-2.13
	-191.42	-2.12
	-156.88	-2.03
	-119.75	-2.26
	-92.12	-1.99
	-71.42	-1.72
	-45.06	-0.68
	-33.33	-0.27
	-32	0
	22	0
	35.99	-3
	38.18	-3.47

	56.55	-4.85
	177.04	-4.54
	180.67	-4.21
	200.3	-4.33
	220.54	-4.34
	226.87	-4.54
	240.61	-4.57
	250	-4.5
	292.25	-4.62
	309.2	-4.74
	335.91	-4.85
	337.6	-5.3
	454	-5.3
	456.4	-4.54
	500	-4.5

Reinforcements

Reinforcement 1

Type: Fabric
Outside Point: (22, 0) ft
Inside Point: (209, 0) ft
Slip Surface Intersection: (209.06, 0) ft
Total Length: 187 ft
Reinforcement Direction: 180 °
Applied Load Option: Variable
F of S Dependent: No
Contact Cohesion: 265 psf
Contact Phi: 19 °
Interface Factor: 2
Bond Safety Factor: 1
Fabric Capacity: 27000 lbs
Fabric Safety Factor: 1
Fabric Load: 27000 lbs
Load Distribution: Even along reinf.
Load Orientation: 0
Applied Load: 27000 lbs
Fabric Load Used: 0 lbs
Resisting Force Used: 924.08 lbs/ft
Available Bond Length: 0 ft
Required Bond Length: 0 ft
Governing Component: Bond

Tension Crack Line

	X (ft)	Y (ft)
	94.84	8

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	98	4
	118	9
	127	9
	166.85564	1.5
	267	-1

Spatial Functions

CH, 0 to -9

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
- Data Point: (-300, -2.5, 50)
- Data Point: (-300, -9, 75)
- Data Point: (-33.33, 0, 50)
- Data Point: (-33.33, -9, 75)
- Data Point: (0, 0, 300)
- Data Point: (0, -9, 300)
- Data Point: (38.18, -4.5, 150)
- Data Point: (38.18, -9, 150)
- Data Point: (177.04, -4.54, 100)
- Data Point: (177.04, -9, 100)
- Data Point: (500, 0, 100)
- Data Point: (500, -9, 100)
- Data Point: (-300, -4, 50)
- Data Point: (-33.33, -4, 50)

CH, -34 to -42 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
- Data Point: (-33.33, -38, 105)
- Data Point: (0, -38, 116)
- Data Point: (38.18, -38, 106)
- Data Point: (177.04, -38, 106)

CH, -42 to -80 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
- Data Point: (-33.33, -61, 105)
- Data Point: (0, -61, 105)
- Data Point: (38.18, -61, 106)
- Data Point: (177.04, -61, 106)

CH, -9 to -14

Model: Linear Interpolation

Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
- Data Point: (-300, -9, 75)
- Data Point: (-300, -14, 115)
- Data Point: (-33.33, -9, 75)
- Data Point: (-33.33, -14, 115)
- Data Point: (0, -9, 300)
- Data Point: (0, -14, 300)
- Data Point: (38.18, -9, 150)
- Data Point: (38.18, -14, 150)
- Data Point: (177.04, -9, 100)
- Data Point: (177.04, -14, 100)
- Data Point: (500, -9, 100)
- Data Point: (500, -14, 100)

CH, -14 to -30

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
- Data Point: (-300, -14, 115)
- Data Point: (-300, -30, 291)
- Data Point: (-33.33, -14, 115)
- Data Point: (-33.33, -30, 291)
- Data Point: (0, -14, 300)
- Data Point: (0, -30, 375)
- Data Point: (38.18, -14, 150)
- Data Point: (38.18, -30, 310)
- Data Point: (177.04, -14, 100)
- Data Point: (177.04, -30, 268)
- Data Point: (500, -14, 100)
- Data Point: (500, -30, 268)

CH, 30 to -34

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
- Data Point: (-300, -30, 291)
- Data Point: (-300, -34, 335)
- Data Point: (-33.33, -30, 291)
- Data Point: (-33.33, -34, 335)
- Data Point: (0, -30, 400)
- Data Point: (0, -34, 438)
- Data Point: (38.18, -30, 325)
- Data Point: (38.18, -34, 365)
- Data Point: (177.04, -30, 268)
- Data Point: (177.04, -34, 310)
- Data Point: (500, -30, 268)
- Data Point: (500, -34, 310)

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CH, 0 to -9 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -4.5, 90)
Data Point: (0, -4.5, 96)
Data Point: (38.18, -4.5, 87)
Data Point: (177.04, -4.54, 87)

CH, -9 to -14 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -11.5, 90)
Data Point: (0, -11.5, 97)
Data Point: (38.18, -11.5, 88)
Data Point: (177.04, -11.5, 100)

CH, -14 to -30 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -22, 100)
Data Point: (0, -22, 102)
Data Point: (38.18, -22, 100)
Data Point: (177.04, -22, 100)

CH, -30 to -34 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -32, 122)
Data Point: (0, -32, 113)
Data Point: (38.18, -32, 118)
Data Point: (177.04, -32, 118)

CH, -34 to -42

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -34, 335)
Data Point: (-300, -42, 423)
Data Point: (-33.33, -34, 335)
Data Point: (-33.33, -42, 423)
Data Point: (0, -34, 438)
Data Point: (0, -42, 514)
Data Point: (38.18, -34, 365)
Data Point: (38.18, -42, 425)

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Data Point: (177.04, -34, 325)
Data Point: (177.04, -42, 409)
Data Point: (500, -34, 325)
Data Point: (500, -42, 409)

CH, -42 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -42, 423)
Data Point: (-300, -80, 841)
Data Point: (-33.33, -42, 423)
Data Point: (-33.33, -80, 841)
Data Point: (0, -42, 514)
Data Point: (0, -80, 875)
Data Point: (38.18, -42, 425)
Data Point: (38.18, -80, 815)
Data Point: (177.04, -42, 409)
Data Point: (177.04, -80, 808)
Data Point: (500, -42, 409)
Data Point: (500, -80, 808)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -42 to -80	1,3,4,2	26600
Region 2	CH, -34 to -42	3,5,6,4	5600
Region 3	CH, -30 to -34	7,5,6,8	2800
Region 4	CH, -14 to -30	9,7,8,10	11200
Region 5	CH, -9 to -14	11,9,10,12,56,52,51,50,55,42,33,32,31,43	3267.8677
Region 6	CH, 0 to -9	42,34,35,36,37,38,58,39,40,62,48,49,55	784.83735
Region 7	CH, 0 to -9	16,11,43,30,29,65,28,57,44,45,20,19,18,17,15,14,13	1934.1129
Region 8	CH above 0	45,21,22,63,64,27,44	161.91095
Region 9	Sand Fill	29,30,43,31,32,33,42,34,35	557.4735
Region 10	CH, 0 to -9	56,53,54,41,12	238.9126
Region 11	EMBANKMENT FILL CH	59,46,47,60,37,36,35,29,65	1551.9685
Region 12	EMBANKMENT FILL CH	64,27,44,57,28,65,59	499.34315
Region 13	EMBANKMENT FILL CH	60,61,62,40,39,58,38,37	772.16895

Points

	X (ft)	Y (ft)
Point 1	-200	-80
Point 2	500	-80
Point 3	-200	-42
Point 4	500	-42
Point 5	-200	-34
Point 6	500	-34

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Point 7	-200	-30
Point 8	500	-30
Point 9	-200	-14
Point 10	500	-14
Point 11	-200	-9
Point 12	500	-9
Point 13	-191.42	-2.12
Point 14	-156.88	-2.03
Point 15	-119.75	-2.26
Point 16	-200	-2.13
Point 17	-92.12	-1.99
Point 18	-71.42	-1.72
Point 19	-45.06	-0.68
Point 20	-33.33	-0.27
Point 21	-19.05	1.53
Point 22	-16.9	1.81
Point 23	-6.83	6.48
Point 24	-6.79	6.72
Point 25	-0.92	7.16
Point 26	3.42	6.91
Point 27	20.53	0.36
Point 28	38.18	-3.47
Point 29	56.55	-4.85
Point 30	70.54	-8.43
Point 31	109.16	-11.38
Point 32	127.67	-11.01
Point 33	135.55	-10.86
Point 34	159.82	-8.55
Point 35	177.04	-4.54
Point 36	180.67	-4.21
Point 37	200.3	-4.33
Point 38	220.54	-4.34
Point 39	240.61	-4.57
Point 40	250	-4.5
Point 41	500	-4.5
Point 42	154	-9
Point 43	73	-9
Point 44	22	0
Point 45	-32	0
Point 46	117.71	14
Point 47	127.71	14
Point 48	335.91	-4.85
Point 49	349.9	-8.43
Point 50	388.52	-11.38
Point 51	407.03	-11.01
Point 52	414.91	-10.86
Point 53	439.18	-8.55
Point 54	456.4	-4.54

Point 55	352.36	-9
Point 56	433.36	-9
Point 57	35.99	-3
Point 58	226.87	-4.54
Point 59	94.84	8
Point 60	167.4	4
Point 61	292.4	0.875
Point 62	309.2	-4.74
Point 63	-5.16	5.5
Point 64	8	5.2
Point 65	46	-4.06

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	1.85	(44.194, 1.049)	117.9142	(209.664, 2.9434)	(-98.4955, -2.0523)
2	15177	2.21	(44.194, 1.049)	127.736	(211.284, 2.90291)	(-122.864, -2.24071)
3	15689	2.22	(39.259, 1.034)	132.972	(211.284, 2.90291)	(-132.736, -2.17956)
4	15113	2.22	(51.832, 1.024)	121.422	(211.284, 2.90291)	(-107.59, -2.14117)
5	14665	2.22	(49.027, 1.038)	122.305	(211.284, 2.90291)	(-113.198, -2.19597)
6	15625	2.23	(47.691, 1.044)	125.573	(211.284, 2.90291)	(-115.87, -2.22208)
7	15241	2.23	(34.194, 1.018)	135.423	(211.284, 2.90291)	(-142.87, -2.11679)
8	14729	2.23	(40.005, 1.036)	129.149	(211.284, 2.90291)	(-131.245, -2.1888)
9	14601	2.24	(55.972, 1.004)	117.441	(211.284, 2.90291)	(-99.3101, -2.06026)
10	11025	2.24	(46.262, 1.043)	125.482	(211.557, 2.89607)	(-119.002, -2.25269)
11	15753	2.24	(28.382, 1)	142.224	(211.284, 2.90291)	(-154.495, -2.04477)
12	16137	2.25	(43.492, 1.047)	129.81	(211.284, 2.90291)	(-124.269, -2.232)
13	11537	2.25	(42.02, 1.033)	130.338	(211.557, 2.89607)	(-127.487, -2.21207)
14	16201	2.25	(34.324, 1.018)	136.448	(211.284, 2.90291)	(-142.608, -2.11841)
15	10961	2.25	(52.425, 1.013)	120.782	(211.557, 2.89607)	(-106.676, -2.13225)
16	18817	2.25	(45.745, 1.062)	125.654	(211.01, 2.90975)	(-119.487, -2.25743)
17	11089	2.25	(38.462, 1.022)	131.319	(211.557, 2.89607)	(-134.606, -2.16798)
18	19329	2.25	(39.939, 1.045)	131.1	(211.01, 2.90975)	(-131.103, -2.18968)
19	15561	2.25	(54.392, 1.011)	120.287	(211.284, 2.90291)	(-102.47, -2.09114)
20	10513	2.25	(50.402, 1.023)	121.451	(211.557, 2.89607)	(-110.722, -2.17178)
21	15049	2.25	(58.007, 0.994)	116.569	(211.284, 2.90291)	(-95.2403, -2.02049)
22	11473	2.26	(48.81, 1.031)	124.679	(211.557, 2.89607)	(-113.906, -2.2029)
23	10577	2.26	(43.397, 1.037)	126.652	(211.557, 2.89607)	(-124.733, -2.22913)
24	18881	2.26	(33.535, 1.025)	134.328	(211.01, 2.90975)	(-143.913, -2.11032)
25	14217	2.26	(45.814, 1.053)	124.91	(211.284, 2.90291)	(-119.624, -2.25877)
26	10449	2.26	(56.041, 0.995)	117.543	(211.557, 2.89607)	(-99.4464, -2.06159)
27	14153	2.26	(53.813, 1.014)	118.244	(211.284, 2.90291)	(-103.628, -2.10245)
28	11601	2.26	(33.527, 1.007)	136.075	(211.557, 2.89607)	(-144.478, -2.10683)
29	18369	2.27	(40.521, 1.046)	127.612	(211.01, 2.90975)	(-129.938, -2.19689)
30	10897	2.27	(57.575, 0.988)	117.043	(211.557, 2.89607)	(-96.3787, -2.03162)
31	14537	2.27	(61.613, 0.973)	113.008	(211.284, 2.90291)	(-88.0296, -1.93665)
32	18305	2.27	(51.351, 1.034)	120.106	(211.01, 2.90975)	(-108.278, -2.1479)
33	19265	2.27	(49.797, 1.042)	123.161	(211.01, 2.90975)	(-111.385, -2.17826)

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34	12049	2.27	(37.769, 1.02)	133.522	(211.557, 2.89607)	(-135.992, -2.15939)
35	19841	2.27	(34.128, 1.027)	136.015	(211.01, 2.90975)	(-142.728, -2.11767)
36	19393	2.28	(26.561, 1.005)	141.272	(211.01, 2.90975)	(-157.864, -2.03257)
37	1761	2.28	(48.493, 1.017)	124.582	(212.104, 2.88239)	(-115.089, -2.21445)
38	14793	2.28	(27.773, 0.998)	138.544	(211.284, 2.90291)	(-155.714, -2.03722)
39	16073	2.28	(50.776, 1.029)	123.859	(211.284, 2.90291)	(-109.7, -2.1618)
40	16265	2.28	(22.662, 1.002)	145.343	(211.284, 2.90291)	(-165.935, -2.05359)
41	11985	2.28	(45.178, 1.043)	127.837	(211.557, 2.89607)	(-121.169, -2.25121)
42	1697	2.28	(52.745, 0.996)	121.122	(212.104, 2.88239)	(-106.585, -2.13135)
43	11409	2.28	(54.398, 1.004)	120.201	(211.557, 2.89607)	(-102.732, -2.0937)
44	1825	2.28	(43.329, 1.019)	128.912	(212.104, 2.88239)	(-125.417, -2.2249)
45	6873	2.28	(46.844, 1.033)	126.34	(211.831, 2.88923)	(-118.113, -2.244)
46	6361	2.28	(50.459, 1.015)	122.55	(211.831, 2.88923)	(-110.882, -2.17335)
47	6425	2.28	(44.8, 1.033)	127.261	(211.831, 2.88923)	(-122.199, -2.24483)
48	18753	2.28	(54.583, 1.018)	118.505	(211.01, 2.90975)	(-101.815, -2.08474)
49	15305	2.28	(20.939, 1.004)	147.08	(211.284, 2.90291)	(-169.382, -2.06258)
50	14089	2.28	(60.11, 0.983)	113.299	(211.284, 2.90291)	(-91.036, -1.97586)
51	19777	2.28	(44.992, 1.06)	128.002	(211.01, 2.90975)	(-120.994, -2.2523)
52	2273	2.29	(44.847, 1.024)	127.231	(212.104, 2.88239)	(-122.379, -2.24371)
53	10385	2.29	(60.748, 0.971)	113.931	(211.557, 2.89607)	(-90.0345, -1.9628)
54	1249	2.29	(52.108, 0.999)	121.24	(212.104, 2.88239)	(-107.859, -2.1438)
55	11153	2.29	(28.448, 0.991)	139.525	(211.557, 2.89607)	(-154.637, -2.0439)
56	6937	2.29	(40.549, 1.02)	130.615	(211.831, 2.88923)	(-130.704, -2.19214)
57	1633	2.29	(56.377, 0.978)	118.255	(212.104, 2.88239)	(-99.3222, -2.06038)
58	2209	2.29	(49.568, 1.011)	124.083	(212.104, 2.88239)	(-112.938, -2.19343)
59	1185	2.29	(55.922, 0.98)	118.203	(212.104, 2.88239)	(-100.232, -2.06927)
60	6297	2.29	(55.16, 0.992)	118.976	(211.831, 2.88923)	(-101.482, -2.08148)
61	10641	2.29	(34.26, 1.009)	133.329	(211.557, 2.89607)	(-143.012, -2.11591)
62	1313	2.29	(47.543, 1.021)	124.994	(212.104, 2.88239)	(-116.987, -2.233)
63	12113	2.29	(28.592, 0.992)	140.901	(211.557, 2.89607)	(-154.35, -2.04567)
64	14281	2.29	(34.759, 1.02)	132.485	(211.284, 2.90291)	(-141.739, -2.12379)
65	6809	2.29	(51.983, 1.007)	121.845	(211.831, 2.88923)	(-107.835, -2.14356)
66	10001	2.30	(54.543, 1.003)	117.678	(211.557, 2.89607)	(-102.442, -2.09087)
67	2337	2.30	(39.077, 1.006)	131.954	(212.104, 2.88239)	(-133.922, -2.17222)
68	1704	2.30	(22.47, 5.957)	103.269	(151.768, 7.93858)	(-106.585, -2.13135)
69	10065	2.30	(48.258, 1.034)	122.152	(211.557, 2.89607)	(-115.011, -2.21369)
70	14985	2.30	(63.152, 0.963)	112.7	(211.284, 2.90291)	(-84.9525, -1.89651)
71	1640	2.30	(26.1, 5.939)	100.511	(151.768, 7.93858)	(-99.3222, -2.06038)
72	5849	2.30	(54.075, 0.997)	119.35	(211.831, 2.88923)	(-103.652, -2.1027)
73	1889	2.30	(36.866, 0.999)	132.337	(212.104, 2.88239)	(-138.345, -2.14481)
74	6489	2.30	(37.664, 1.011)	133.412	(211.831, 2.88923)	(-136.475, -2.1564)
75	1712	2.30	(24.969, 4.797)	105.283	(156.697, 6.69657)	(-106.585, -2.13135)
76	2145	2.30	(53.575, 0.992)	120.86	(212.104, 2.88239)	(-104.926, -2.11514)
77	5913	2.30	(48.973, 1.022)	123.258	(211.831, 2.88923)	(-113.855, -2.20239)
78	1121	2.30	(59.179, 0.964)	115.689	(212.104, 2.88239)	(-93.7185, -2.00562)
79	7385	2.30	(43.163, 1.028)	129.936	(211.831, 2.88923)	(-125.475, -2.22454)
80	11921	2.30	(51.221, 1.019)	123.466	(211.557, 2.89607)	(-109.084, -2.15578)
81	17857	2.31	(47.427, 1.053)	121.384	(211.01, 2.90975)	(-116.125, -2.22457)

82	9937	2.31	(59.656, 0.978)	114.052	(211.557, 2.89607)	(-92.2164, -1.99094)
83	1648	2.31	(28.6, 4.78)	102.591	(156.697, 6.69657)	(-99.3222, -2.06038)
84	1377	2.31	(41.801, 1.015)	127.883	(212.104, 2.88239)	(-128.473, -2.20597)
85	15497	2.31	(59.988, 0.983)	115.907	(211.284, 2.90291)	(-91.279, -1.97903)
86	11665	2.31	(22.73, 0.994)	145.131	(211.557, 2.89607)	(-166.074, -2.05396)
87	19905	2.31	(19.741, 1.014)	147.108	(211.01, 2.90975)	(-171.504, -2.06811)
88	1576	2.31	(29.26, 5.924)	98.178	(151.768, 7.93858)	(-93.0014, -1.99861)
89	20353	2.31	(28.316, 1.009)	143.157	(211.01, 2.90975)	(-154.353, -2.04565)
90	7449	2.31	(36.297, 1.006)	135.903	(211.831, 2.88923)	(-139.209, -2.13946)
91	1192	2.31	(25.646, 5.941)	99.964	(151.768, 7.93858)	(-100.232, -2.06927)
92	1776	2.31	(20.717, 4.818)	108.534	(156.697, 6.69657)	(-115.089, -2.21445)
93	1128	2.31	(28.902, 5.925)	97.676	(151.768, 7.93858)	(-93.7185, -2.00562)
94	15817	2.31	(14.119, 1.013)	151.389	(211.284, 2.90291)	(-183.022, -2.09812)
95	20289	2.31	(40.057, 1.045)	132.99	(211.01, 2.90975)	(-130.866, -2.19114)
96	2152	2.31	(23.299, 5.953)	103.272	(151.768, 7.93858)	(-104.926, -2.11514)
97	2224	2.31	(21.792, 4.813)	108.444	(156.697, 6.69657)	(-112.938, -2.19343)
98	7001	2.31	(32.729, 0.995)	138.215	(211.831, 2.88923)	(-146.347, -2.09524)
99	1768	2.31	(18.219, 5.978)	107.543	(151.768, 7.93858)	(-115.089, -2.21445)
100	10833	2.31	(61.965, 0.963)	114.05	(211.557, 2.89607)	(-87.6001, -1.93104)
101	1584	2.31	(31.76, 4.764)	100.315	(156.697, 6.69657)	(-93.0014, -1.99861)

Slices of Slip Surface: Optimized

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	-95.30775	-4.4151185	149.38431	235.94026	0	53.819
2	Optimized	-90.621075	-7.888968	369.30727	556.54694	0	70.186
3	Optimized	-87.453685	-10.236695	518.38857	776.64391	0	84.894
4	Optimized	-83.97565	-12.736695	677.23374	1010.3905	0	104.89
5	Optimized	-76.85257	-17.709485	993.32587	1531.5767	0	155.8
6	Optimized	-71.47953	-21.453295	1231.2909	1916.352	0	196.99
7	Optimized	-64.03826	-25.74381	1517.2738	2394.5898	0	244.18
8	Optimized	-53.18781	-32	1934.3205	3136.871	0	313
9	Optimized	-47.38955	-35.34318	2157.2751	3565.0263	0	349.77
10	Optimized	-40.452135	-39.34318	2422.6632	4043.0048	0	393.77
11	Optimized	-35.5459	-42.172035	2609.8013	4384.1235	0	424.89
12	Optimized	-34.288765	-42.778985	2650.4622	4412.8619	0	431.57
13	Optimized	-32.665	-43.51556	2706.9202	4515.2769	0	441.44
14	Optimized	-26.099305	-46.4939	2901.1878	4964.3371	0	490.71
15	Optimized	-19.624305	-49.2858	3075.4641	5271.8827	0	536.07

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16	Optimized	-17.975	-49.61669	3096.0735	5337.8219	0	543.44
17	Optimized	-14.46264	-50.321355	3140.0749	5525.5019	0	558.98
18	Optimized	-8.59264	-50.193765	3132.1172	5551.562	0	571.55
19	Optimized	-2.29236	-49.062085	3061.4019	5568.4942	0	575.56
20	Optimized	4.28764	-48.02867	2997.0364	5453.171	0	561.79
21	Optimized	13.681395	-46.71711	2915.1896	5306.3669	0	528.21
22	Optimized	19.946395	-45.89032	2863.5652	5275.7718	0	506.01
23	Optimized	21.265	-45.814515	2858.8174	5270.5499	0	502.29
24	Optimized	28.995	-45.370135	2737.5099	5250.3015	0	480.38
25	Optimized	37.085	-44.90506	2600.2272	5237.015	0	457.3
26	Optimized	42.093945	-44.61711	2549.2238	5236.1884	0	451.43
27	Optimized	51.278945	-44.089085	2473.2208	5237.743	0	444.98
28	Optimized	61.399945	-43.50725	2412.9507	5272.5917	0	437.85
29	Optimized	68.394945	-42.80462	2370.2009	5235.48	0	429.82
30	Optimized	71.50365	-42.1904	2332.4366	5210.8493	0	423.13
31	Optimized	78.19365	-40.868585	2251.0495	5123.4741	0	410.93
32	Optimized	89.38	-38.658375	2114.8834	4959.4335	0	390.34
33	Optimized	95.966435	-37.35702	2034.7732	4892.3913	0	377.72
34	Optimized	100.04613	-35.756375	1935.591	4765.4876	0	362.7
35	Optimized	103.39845	-34.189145	1838.2886	4709.6734	0	347.9
36	Optimized	106.47875	-32.729215	1747.6404	4645.5455	0	324.93
37	Optimized	110.6986	-30.729215	1623.5622	4548.8049	0	302.71
38	Optimized	114.9736	-28.703065	1497.8032	4468.8242	0	273.44
39	Optimized	121.4369	-25.639765	1307.7434	4254.3183	0	239.91
40	Optimized	126.4369	-23.39976	1168.7169	4061.8535	0	215.21
41	Optimized	131.63	-21.46776	1049.0046	3761.2771	0	193.54
42	Optimized	138.0919	-19.063735	900.03575	3336.8798	0	166.48
43	Optimized	147.3169	-16.271135	727.25463	2797.3163	0	134.31
44	Optimized	154.7675	-14.2121	599.96232	2367.033	0	110.23
45	Optimized	157.6775	-13.407895	550.24438	2198.5482	0	106.97
46	Optimized	162.3577	-12.114475	470.2943	1913.1581	0	105.29
47	Optimized	166.1477	-11.180875	412.6278	1692.8692	0	103.92

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48	Optimized	172.22	-10.054539	343.33449	1483.7166	0	101.74
49	Optimized	177.4726	-9.080244	285.76812	1332.3042	0	100
50	Optimized	179.2876	-8.743584	275.0522	1292.3111	0	100
51	Optimized	185.5775	-7.5768885	208.2261	1170.7584	0	100
52	Optimized	195.3925	-5.7563295	90.874776	986.83505	0	100
53	Optimized	201.66965	-4.592	16.306562	869.02525	0	100
54	Optimized	203.04385	-4.334654	0.20581267	801.34969	0	100
55	Optimized	206.35615	-1.9500106	-148.69607	341.67831	0	600

Slices of Slip Surface: 15177

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	15177	-121.30685	-3.0388525	49.202686	81.834903	0	50
2	15177	-114.7146	-6.418496	262.55704	386.65177	0	63.814
3	15177	-104.80276	-11.5	585.69232	853.36022	0	95
4	15177	-96.02316	-16.001035	871.90417	1296.9072	0	137.01
5	15177	-86.945	-20.655135	1168.9561	1790.4907	0	188.21
6	15177	-76.595	-25.96127	1508.483	2354.42	0	246.57
7	15177	-70.06858	-29.30717	1724.7709	2713.1386	0	283.38
8	15177	-64.81602	-32	1905.706	3056.1553	0	313
9	15177	-52.98744	-38.06416	2313.2363	3793.337	0	379.71
10	15177	-39.195	-45.13513	2786.8244	4631.1279	0	457.49
11	15177	-32.665	-48.482865	3016.9337	5046.6447	0	495.93
12	15177	-25.525	-52.14333	3253.7694	5578.9113	0	552.32
13	15177	-17.975	-56.01399	3495.2928	6138.0469	0	609.39
14	15177	-13.55	-58.282555	3636.7867	6533.9173	0	641.62
15	15177	-7.68	-59.385055	3705.5506	6520.5662	0	664.2
16	15177	1.42	-57.164415	3567.0599	6386.9714	0	655.18
17	15177	14.265	-54.029895	3371.4591	6035.5816	0	598.46
18	15177	21.265	-52.32171	3264.8751	5881.3616	0	566.87
19	15177	28.995	-50.435385	3053.5703	5714.0992	0	531.44
20	15177	37.085	-48.46121	2822.1197	5546.3803	0	493.72
21	15177	42.093945	-47.238895	2712.8442	5448.6481	0	478.35
22	15177	51.278945	-44.997515	2529.8923	5271.9222	0	454.32
23	15177	60.05625	-42.85562	2372.1737	5126.9874	0	431.29

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24	15177	67.05125	-41.148655	2266.7001	5039.9269	0	414.76
25	15177	71.77	-39.997155	2195.6128	4979.8869	0	404.65
26	15177	78.46	-38.364615	2094.8468	4857.9949	0	389.93
27	15177	89.38	-35.699845	1930.2625	4645.6366	0	364.88
28	15177	95.592915	-34.18373	1836.686	4544.0704	0	350.07
29	15177	102.75292	-32.4365	1728.7861	4574.3121	0	323.43
30	15177	110.94875	-30.4365	1605.3321	4600.7064	0	299.61
31	15177	115.22375	-29.39329	1540.9268	4618.033	0	280.46
32	15177	122.71	-27.566445	1428.094	4511.0284	0	259.36
33	15177	131.63	-25.38973	1293.6713	4182.1271	0	234.08
34	15177	140.1625	-23.307575	1165.1592	3720.8428	0	209.77
35	15177	149.3875	-21.05643	1026.191	3214.5083	0	183.35
36	15177	156.2	-19.394	923.53624	2840.9536	0	163.74
37	15177	159.11	-18.598725	874.37762	2656.0883	0	154.45
38	15177	163.61	-16.96086	772.90333	2336.9584	0	135.78
39	15177	169.57245	-14.790705	638.44476	1965.229	0	110.97
40	15177	174.39245	-13.03637	529.74851	1742.6456	0	100.95
41	15177	178.855	-11.412135	439.11866	1544.1507	0	100
42	15177	183.07615	-9.875765	352.61825	1375.7345	0	100
43	15177	191.91405	-6.659027	148.52704	1063.4746	0	100
44	15177	198.737	-4.175678	-9.0334772	751.34642	0	600
45	15177	199.7141	-3.820046	-31.597273	708.04579	0	600
46	15177	205.7918	-1.6079436	-170.02225	438.68017	0	600

Slices of Slip Surface: 15689

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	15689	-126.2429	-5.508276	205.20267	304.79912	0	59.87
2	15689	-114.7146	-11.418496	574.56111	837.92223	0	94.348
3	15689	-105.2894	-16.250515	881.82508	1315.6122	0	139.76
4	15689	-96.5098	-20.75155	1168.0366	1791.6855	0	189.27
5	15689	-85.295015	-26.501035	1535.0154	2401.8108	0	252.51
6	15689	-74.945015	-31.80717	1874.5303	3006.3674	0	310.88
7	15689	-63.24158	-37.80717	2271.9508	3728.3365	0	376.88
8	15689	-50.06158	-44.56416	2726.0629	4515.1195	0	451.21

9	15689	-39.195	-50.13513	3098.7728	5179.4651	0	512.49
10	15689	-32.665	-53.482865	3328.9241	5595.1537	0	550.78
11	15689	-25.525	-57.14333	3565.7399	6127.2647	0	605.57
12	15689	-17.975	-61.01399	3807.286	6686.4563	0	660.94
13	15689	-13.55	-63.282555	3948.7731	7082.1846	0	692.17
14	15689	-7.68	-64.31032	4012.9408	7013.5082	0	712.69
15	15689	1.42	-61.81981	3857.5311	6852.7026	0	699.54
16	15689	14.265	-58.30436	3638.1929	6464.349	0	640.29
17	15689	21.265	-56.388585	3518.6302	6289.8484	0	607.24
18	15689	28.995	-54.27302	3293.0515	6100.1842	0	570.12
19	15689	37.085	-52.058925	3046.5921	5908.7344	0	530.57
20	15689	42.093945	-50.688065	2928.0057	5796.1279	0	513.77
21	15689	51.278945	-48.174295	2728.1402	5591.4158	0	487
22	15689	63.545	-44.81729	2495.0912	5365.8594	0	451.11
23	15689	71.77	-42.56625	2355.9224	5237.8663	0	426.97
24	15689	73.419505	-42.11481	2328.0659	5208.2872	0	422.12
25	15689	79.089255	-40.5631	2232.0916	5081.1774	0	408.24
26	15689	89.58975	-37.6893	2054.4428	4844.9247	0	381.96
27	15689	98.955	-35.1262	1896.0168	4741.4483	0	357.42
28	15689	106.115	-33.166635	1774.9471	4758.1633	0	329.55
29	15689	113.435	-31.163275	1651.0941	4750.3363	0	306.06
30	15689	122.71	-28.62487	1494.1525	4606.9784	0	270.26
31	15689	131.63	-26.183625	1343.3288	4252.7879	0	242.29
32	15689	140.1625	-23.84843	1198.9442	3767.3636	0	215.38
33	15689	149.3875	-21.32371	1042.863	3235.0688	0	186.13
34	15689	156.2	-19.459245	927.61446	2842.2935	0	164.42
35	15689	159.11	-18.598725	874.37762	2655.228	0	154.45
36	15689	163.61	-16.96086	772.90333	2336.2146	0	135.78
37	15689	169.57245	-14.790705	638.44476	1964.5585	0	110.97
38	15689	174.39245	-13.03637	529.74851	1742.0422	0	100.95
39	15689	178.855	-11.412135	439.11866	1543.6329	0	100
40	15689	183.07615	-9.875765	352.61825	1375.2854	0	100
41	15689	191.91405	-6.659027	148.52704	1063.1824	0	100
42	15689	198.737	-4.175678	-9.0334772	751.68273	0	600
43	15689	199.7141	-3.820046	-31.597273	708.3906	0	600

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44	15689	205.7918	1.6079436	170.02225	439.13361	0	600

Slices of Slip Surface: 15113

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	15113	-101.81751	-5.5705865	217.51855	325.05656	0	59.779
2	15113	-94.08251	-10.165915	508.9758	746.06123	0	84.327
3	15113	-89.874425	-12.665915	668.00116	979.5283	0	104.33
4	15113	-83.576635	-16.407395	906.59965	1361.1247	0	141.48
5	15113	-75.47221	-21.222185	1213.6722	1874.6626	0	194.44
6	15113	-66.058535	-26.81479	1579.1529	2483.7022	0	255.96
7	15113	-57.3306	-32	1924.1505	3101.8292	0	313
8	15113	-49.512065	-36.644945	2233.283	3674.3443	0	364.09
9	15113	-42.77912	-40.644945	2498.8391	4146.5764	0	408.09
10	15113	-36.91412	-44.129305	2729.0061	4562.9356	0	446.42
11	15113	-32.665	-46.65368	2902.7683	4877.3566	0	475.87
12	15113	-25.525	-50.89551	3175.8698	5477.0112	0	539.04
13	15113	-17.975	-55.38092	3455.7742	6107.2457	0	602.87
14	15113	-13.55	-58.009785	3619.8271	6544.8167	0	638.86
15	15113	-7.68	-59.385055	3705.5506	6519.7952	0	664.2
16	15113	1.42	-57.164415	3567.0599	6386.0855	0	655.18
17	15113	14.265	-54.029895	3371.4591	6034.8063	0	598.46
18	15113	21.265	-52.32171	3264.8751	5880.5686	0	566.87
19	15113	28.995	-50.435385	3053.5703	5713.3354	0	531.44
20	15113	37.085	-48.46121	2822.1197	5545.4931	0	493.72
21	15113	42.093945	-47.238895	2712.8442	5447.9035	0	478.35
22	15113	51.278945	-44.997515	2529.8923	5271.185	0	454.32
23	15113	60.05625	-42.85562	2372.1737	5126.1562	0	431.29
24	15113	67.05125	-41.148655	2266.7001	5039.0915	0	414.76
25	15113	71.77	-39.997155	2195.6128	4979.492	0	404.65
26	15113	78.46	-38.364615	2094.8468	4857.2832	0	389.93
			-				

27	15113	89.38	35.699845	1930.2625	4644.9249	0	364.88
28	15113	95.592915	-34.18373	1836.686	4543.3607	0	350.07
29	15113	102.75292	-32.4365	1728.7861	4573.554	0	323.43
30	15113	110.94875	-30.4365	1605.3321	4599.8917	0	299.61
31	15113	115.22375	-29.39329	1540.9268	4617.2515	0	280.46
32	15113	122.71	-27.566445	1428.094	4510.2512	0	259.36
33	15113	131.63	-25.38973	1293.6713	4181.5075	0	234.08
34	15113	140.1625	-23.307575	1165.1592	3720.211	0	209.77
35	15113	149.3875	-21.05643	1026.191	3213.9817	0	183.35
36	15113	156.2	-19.394	923.53624	2840.512	0	163.74
37	15113	159.11	-18.598725	874.37762	2655.4265	0	154.45
38	15113	163.61	-16.96086	772.90333	2336.3385	0	135.78
39	15113	169.57245	-14.790705	638.44476	1964.6883	0	110.97
40	15113	174.39245	-13.03637	529.74851	1742.1665	0	100.95
41	15113	178.855	-11.412135	439.11866	1543.7365	0	100
42	15113	183.07615	-9.875765	352.61825	1375.383	0	100
43	15113	191.91405	-6.659027	148.52704	1063.2555	0	100
44	15113	198.737	-4.175678	-9.0334772	751.82687	0	600
45	15113	199.7141	-3.820046	-31.597273	708.53494	0	600
46	15113	205.7918	-1.6079436	-170.02225	439.26194	0	600

Slices of Slip Surface: 14665

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	14665	-106.56221	-5.5979875	216.33046	320.07038	0	60.05
2	14665	-96.02316	-11.001035	559.90321	814.6907	0	91.008
3	14665	-91.14673	-13.501035	719.05972	1046.8401	0	111.01
4	14665	-85.485095	-16.403585	904.80651	1348.5594	0	141.44
5	14665	-76.108365	-21.210755	1212.3749	1859.0381	0	194.32
6	14665	-65.19215	-26.80717	1580.747	2467.7828	0	255.88
7	14665	-55.06316	-32	1929.7712	3087.2917	0	313
8	14665	-48.11101	-35.56416	2169.2575	3537.1658	0	352.21
9	14665	-40.30872	-39.56416	2436.7495	4013.2714	0	396.21
10	14665	-34.44372	-42.57097	2637.1699	4374.975	0	429.28
11	14665	-32.665	-43.482865	2704.8763	4497.132	0	441.08
12	14665	-25.525	-47.14333	2941.7302	5029.3211	0	499.08

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13	14665	-17.975	-51.01399	3183.2582	5588.3957	0	557.85
14	14665	-13.55	-53.282555	3324.8003	5984.0562	0	591.07
15	14665	-7.68	-54.459785	3398.3865	6025.7969	0	615.71
16	14665	1.42	-52.509015	3276.546	5919.5378	0	610.82
17	14665	14.265	-49.75543	3104.7229	5605.2946	0	556.64
18	14665	21.265	-48.254835	3011.1142	5471.3426	0	526.51
19	14665	28.995	-46.59775	2814.1215	5326.5902	0	492.75
20	14665	37.085	-44.863495	2597.6055	5182.2632	0	456.88
21	14665	42.09	-43.79057	2497.729	5099.9886	0	442.94
22	14665	48.221345	-42.47619	2386.8623	5000.8561	0	428.74
23	14665	53.496345	-41.345385	2291.6825	4915.0938	0	418.11
24	14665	63.545	-39.19125	2143.9994	4799.7462	0	399.47
25	14665	71.77	-37.428055	2035.3044	4721.5915	0	383.52
26	14665	80.38063	-35.58219	1921.4884	4588.5075	0	366.15
27	14665	91.30063	-33.241265	1777.1801	4400.8205	0	336.23
28	14665	100.6303	-31.241265	1653.882	4375.6781	0	312.06
29	14665	107.7903	-29.70637	1559.2759	4433.0465	0	285.94
30	14665	113.435	-28.49631	1484.6328	4484.8901	0	271.79
31	14665	122.71	-26.508025	1362.0555	4414.8002	0	248.45
32	14665	131.63	-24.59584	1244.1946	4111.3134	0	225.87
33	14665	140.1625	-22.766725	1131.4753	3674.1415	0	204.17
34	14665	149.3875	-20.789155	1009.5092	3193.9932	0	180.57
35	14665	156.2	-19.328755	919.47382	2839.5776	0	163.06
36	14665	159.11	-18.598725	874.37762	2657.4118	0	154.45
37	14665	163.61	-16.96086	772.90333	2338.1981	0	135.78
38	14665	169.57245	-14.790705	638.44476	1966.2022	0	110.97
39	14665	174.39245	-13.03637	529.74851	1743.5152	0	100.95
40	14665	178.855	-11.412135	439.11866	1544.9273	0	100
41	14665	183.07615	-9.875765	352.61825	1376.4179	0	100
42	14665	191.91405	-6.659027	148.52704	1064.059	0	100
43	14665	198.737	-4.175678	-9.0334772	751.88692	0	600
44	14665	199.7141	-3.820046	-31.597273	708.56702	0	600
45	14665	205.7918	-	-	439.06516	0	600

			1.6079436	170.02225			

Slices of Slip Surface: 15625

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	15625	-110.1656	-5.6110425	214.94583	321.80083	0	60.216
2	15625	-100.25311	-11.5	588.46393	863.70084	0	95
3	15625	-94.08251	-15.165915	820.97181	1220.5825	0	127.83
4	15625	-86.945	-19.406265	1090.9789	1672.6017	0	174.47
5	15625	-76.595	-25.55514	1483.1299	2328.9001	0	242.11
6	15625	-70.266625	-29.31479	1724.7439	2732.9347	0	283.46
7	15625	-65.74678	-32	1903.4648	3074.8867	0	313
8	15625	-55.647365	-38	2302.6849	3803.928	0	379
9	15625	-46.98721	-43.144945	2645.1374	4404.1013	0	435.59
10	15625	-39.195	-47.77425	2951.5021	4953.7889	0	486.52
11	15625	-32.665	-51.65368	3214.7904	5430.4896	0	530.72
12	15625	-25.525	-55.89551	3487.8935	6030.2225	0	592.28
13	15625	-17.975	-60.38092	3767.7543	6660.2687	0	654.41
14	15625	-13.55	-63.009785	3931.7661	7097.992	0	689.41
15	15625	-7.68	-64.31032	4012.9408	7011.9772	0	712.69
16	15625	1.42	-61.81981	3857.5311	6851.2367	0	699.54
17	15625	14.265	-58.30436	3638.1929	6462.9634	0	640.29
18	15625	21.265	-56.388585	3518.6302	6288.5361	0	607.24
19	15625	28.995	-54.27302	3293.0515	6098.8053	0	570.12
20	15625	37.085	-52.058925	3046.5921	5907.4131	0	530.57
21	15625	42.093945	-50.688065	2928.0057	5794.7725	0	513.77
22	15625	51.278945	-48.174295	2728.1402	5590.2263	0	487
23	15625	63.545	-44.81729	2495.0912	5364.6184	0	451.11
24	15625	71.77	-42.56625	2355.9224	5236.298	0	426.97
25	15625	73.419505	-42.11481	2328.0659	5207.1376	0	422.12
26	15625	79.089255	-40.5631	2232.0916	5079.9833	0	408.24
27	15625	89.58975	-37.6893	2054.4428	4843.8225	0	381.96
28	15625	98.955	-35.1262	1896.0168	4740.2763	0	357.42
29	15625	106.115	-33.166635	1774.9471	4757.0546	0	329.55
30	15625	113.435	-31.163275	1651.0941	4749.2082	0	306.06
31	15625	122.71	-28.62487	1494.1525	4605.8209	0	270.26
			-				

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32	15625	131.63	26.183625	1343.3288	4251.6807	0	242.29
33	15625	140.1625	-23.84843	1198.9442	3766.4226	0	215.38
34	15625	149.3875	-21.32371	1042.863	3234.3369	0	186.13
35	15625	156.2	-19.459245	927.61446	2841.6359	0	164.42
36	15625	159.11	-18.598725	874.37762	2654.3015	0	154.45
37	15625	163.61	-16.96086	772.90333	2335.3468	0	135.78
38	15625	169.57245	-14.790705	638.44476	1963.8881	0	110.97
39	15625	174.39245	-13.03637	529.74851	1741.4566	0	100.95
40	15625	178.855	-11.412135	439.11866	1543.1152	0	100
41	15625	183.07615	-9.875765	352.61825	1374.8362	0	100
42	15625	191.91405	-6.659027	148.52704	1062.8172	0	100
43	15625	198.737	-4.175678	-9.0334772	751.971	0	600
44	15625	199.7141	-3.820046	-31.597273	708.69532	0	600
45	15625	205.7918	-1.6079436	-170.02225	439.54427	0	600

Slices of Slip Surface: 15241

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	15241	-134.98145	-5.558393	211.70439	310.8929	0	60.087
2	15241	-123.4216	-10.60191	521.9602	755.5055	0	87.815
3	15241	-117.69155	-13.10191	677.79056	981.82117	0	107.82
4	15241	-109.75485	-16.564665	898.74326	1335.1732	0	143.21
5	15241	-97.9983	-21.694	1225.9488	1875.4483	0	199.63
6	15241	-85.540365	-27.129335	1574.0534	2449.9206	0	259.42
7	15241	-75.190365	-31.644995	1864.3065	2965.1687	0	309.09
8	15241	-70.606315	-33.644995	1994.129	3223.5772	0	331.09
9	15241	-65.208585	-36	2154.3183	3503.754	0	357
10	15241	-56.04049	-40	2426.5448	3969.2283	0	401
11	15241	-48.25822	-43.39537	2657.5043	4366.9849	0	438.35
12	15241	-39.195	-47.34961	2924.9513	4842.856	0	481.85
13	15241	-32.665	-50.19862	3123.962	5201.8712	0	514.76
14	15241	-25.525	-53.31377	3326.803	5671.504	0	564.79
15	15241	-17.975	-56.6078	3532.3453	6164.8397	0	615.51
16	15241	-13.55	-58.53841	3652.8424	6521.682	0	644.2
17	15241	-7.68	-59.385055	3705.5506	6522.4938	0	664.2

18	15241	1.42	-57.164415	3567.0599	6388.8907	0	655.18
19	15241	14.265	-54.029895	3371.4591	6037.4424	0	598.46
20	15241	21.265	-52.32171	3264.8751	5883.146	0	566.87
21	15241	28.995	-50.435385	3053.5703	5715.8353	0	531.44
22	15241	37.085	-48.46121	2822.1197	5547.7112	0	493.72
23	15241	42.093945	-47.238895	2712.8442	5450.2615	0	478.35
24	15241	51.278945	-44.997515	2529.8923	5273.4888	0	454.32
25	15241	60.05625	-42.85562	2372.1737	5128.5113	0	431.29
26	15241	67.05125	-41.148655	2266.7001	5041.4585	0	414.76
27	15241	71.77	-39.997155	2195.6128	4981.4666	0	404.65
28	15241	78.46	-38.364615	2094.8468	4859.4183	0	389.93
29	15241	89.38	-35.699845	1930.2625	4646.9711	0	364.88
30	15241	95.592915	-34.18373	1836.686	4545.4252	0	350.07
31	15241	102.75292	-32.4365	1728.7861	4575.6009	0	323.43
32	15241	110.94875	-30.4365	1605.3321	4602.0642	0	299.61
33	15241	115.22375	-29.39329	1540.9268	4619.4006	0	280.46
34	15241	122.71	-27.566445	1428.094	4512.2913	0	259.36
35	15241	131.63	-25.38973	1293.6713	4183.3663	0	234.08
36	15241	140.1625	-23.307575	1165.1592	3721.896	0	209.77
37	15241	149.3875	-21.05643	1026.191	3215.4561	0	183.35
38	15241	156.2	-19.394	923.53624	2841.8368	0	163.74
39	15241	159.11	-18.598725	874.37762	2657.2794	0	154.45
40	15241	163.61	-16.96086	772.90333	2337.9501	0	135.78
41	15241	169.57245	-14.790705	638.44476	1966.0941	0	110.97
42	15241	174.39245	-13.03637	529.74851	1743.4087	0	100.95
43	15241	178.855	-11.412135	439.11866	1544.8496	0	100
44	15241	183.07615	-9.875765	352.61825	1376.3593	0	100
45	15241	191.91405	-6.659027	148.52704	1063.986	0	100
46	15241	198.737	-4.175678	-9.0334772	752.11514	0	600
47	15241	199.7141	-3.820046	-31.597273	708.79957	0	600
48	15241	205.7918	-1.6079436	-170.02225	439.32183	0	600

Slices of Slip Surface: 14729

	Slip				Base Normal	Frictional	Cohesive

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	Surface	X (ft)	Y (ft)	PWP (psf)	Stress (psf)	Strength (psf)	Strength (psf)
1	14729	-125.4973	-4.6963105	154.24669	228.93003	0	56.074
2	14729	-117.69155	-8.101912	365.78961	530.02759	0	71.109
3	14729	-109.90305	-11.5	582.57847	842.89208	0	95
4	14729	-98.1465	-16.629335	909.79467	1351.0801	0	143.92
5	14729	-86.945	-21.5165	1222.7024	1867.1295	0	197.68
6	14729	-76.595	-26.03216	1512.9027	2345.5128	0	247.35
7	14729	-69.460305	-29.144995	1716.1551	2679.9576	0	281.59
8	14729	-62.91656	-32	1910.3842	3041.9787	0	313
9	14729	-51.696255	-36.89537	2243.5302	3645.7366	0	366.85
10	14729	-42.52816	-40.89537	2514.9114	4121.7106	0	410.85
11	14729	-36.66316	-43.45424	2687.4099	4432.7277	0	439
12	14729	-32.665	-45.19862	2811.9862	4657.2401	0	459.9
13	14729	-25.525	-48.31377	3014.7471	5127.0164	0	511.54
14	14729	-17.975	-51.6078	3220.3305	5620.0181	0	563.97
15	14729	-13.55	-53.53841	3340.8008	5977.3535	0	593.66
16	14729	-7.68	-54.459785	3398.3865	6026.7669	0	615.71
17	14729	1.42	-52.509015	3276.546	5920.578	0	610.82
18	14729	14.265	-49.75543	3104.7229	5606.231	0	556.64
19	14729	21.265	-48.254835	3011.1142	5472.2738	0	526.51
20	14729	28.995	-46.59775	2814.1215	5327.4988	0	492.75
21	14729	37.085	-44.863495	2597.6055	5183.1562	0	456.88
22	14729	42.09	-43.79057	2497.729	5100.8638	0	442.94
23	14729	48.221345	-42.47619	2386.8623	5001.5164	0	428.74
24	14729	53.496345	-41.345385	2291.6825	4915.8943	0	418.11
25	14729	63.545	-39.19125	2143.9994	4800.5849	0	399.47
26	14729	71.77	-37.428055	2035.3044	4722.3864	0	383.52
27	14729	80.38063	-35.58219	1921.4884	4589.3024	0	366.15
28	14729	91.30063	-33.241265	1777.1801	4401.6493	0	336.23
29	14729	100.6303	-31.241265	1653.882	4376.438	0	312.06
30	14729	107.7903	-29.70637	1559.2759	4433.7604	0	285.94
31	14729	113.435	-28.49631	1484.6328	4485.6906	0	271.79
32	14729	122.71	-26.508025	1362.0555	4415.5824	0	248.45
33	14729	131.63	-24.59584	1244.1946	4112.0617	0	225.87
34	14729	140.1625	-	1131.4753	3674.7774	0	204.17

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			22.766725				
35	14729	149.3875	-20.789155	1009.5092	3194.5231	0	180.57
36	14729	156.2	-19.328755	919.47382	2840.0221	0	163.06
37	14729	159.11	-18.598725	874.37762	2658.2721	0	154.45
38	14729	163.61	-16.96086	772.90333	2338.8179	0	135.78
39	14729	169.57245	-14.790705	638.44476	1966.8078	0	110.97
40	14729	174.39245	-13.03637	529.74851	1744.0476	0	100.95
41	14729	178.855	-11.412135	439.11866	1545.3932	0	100
42	14729	183.07615	-9.875765	352.61825	1376.8475	0	100
43	14729	191.91405	-6.659027	148.52704	1064.3512	0	100
44	14729	198.737	-4.175678	-9.0334772	752.23525	0	600
45	14729	199.7141	-3.820046	-31.597273	708.8958	0	600
46	14729	205.7918	-1.6079436	-170.02225	439.33038	0	600

Slices of Slip Surface: 14601

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	14601	-95.71503	-4.196047	135.46229	206.46371	0	52.735
2	14601	-89.874425	-7.6659165	355.99546	523.14889	0	69.219
3	14601	-83.42076	-11.5	600.50759	878.89076	0	95
4	14601	-75.316335	-16.31479	907.54335	1359.2023	0	140.46
5	14601	-66.635225	-21.472185	1244.2783	1919.6924	0	197.19
6	14601	-57.06567	-27.157395	1622.5929	2547.4915	0	259.73
7	14601	-48.91442	-32	1944.8362	3128.6439	0	313
8	14601	-45.303975	-34.144945	2087.6834	3416.3374	0	336.59
9	14601	-39.195	-37.77425	2327.487	3846.8473	0	376.52
10	14601	-32.706035	-41.629305	2588.7482	4318.8975	0	420.64
11	14601	-32.041035	-42.024375	2621.7543	4378.7047	0	426.79
12	14601	-25.525	-45.89551	2863.9125	4922.0074	0	485.79
13	14601	-17.975	-50.38092	3143.754	5551.8234	0	551.32
14	14601	-13.55	-53.009785	3307.7597	5989.2034	0	588.31
15	14601	-7.68	-54.459785	3398.3865	6025.6028	0	615.71
16	14601	1.42	-52.509015	3276.546	5919.3892	0	610.82

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17	14601	14.265	-49.75543	3104.7229	5605.0605	0	556.64
18	14601	21.265	-48.254835	3011.1142	5471.143	0	526.51
19	14601	28.995	-46.59775	2814.1215	5326.3805	0	492.75
20	14601	37.085	-44.863495	2597.6055	5182.2632	0	456.88
21	14601	42.09	-43.79057	2497.729	5099.8635	0	442.94
22	14601	48.221345	-42.47619	2386.8623	5000.6361	0	428.74
23	14601	53.496345	-41.345385	2291.6825	4914.9337	0	418.11
24	14601	63.545	-39.19125	2143.9994	4799.5365	0	399.47
25	14601	71.77	-37.428055	2035.3044	4721.194	0	383.52
26	14601	80.38063	-35.58219	1921.4884	4588.2425	0	366.15
27	14601	91.30063	-33.241265	1777.1801	4400.6824	0	336.23
28	14601	100.6303	-31.241265	1653.882	4375.4248	0	312.06
29	14601	107.7903	-29.70637	1559.2759	4432.6896	0	285.94
30	14601	113.435	-28.49631	1484.6328	4484.547	0	271.79
31	14601	122.71	-26.508025	1362.0555	4414.5068	0	248.45
32	14601	131.63	-24.59584	1244.1946	4111.064	0	225.87
33	14601	140.1625	-22.766725	1131.4753	3673.9295	0	204.17
34	14601	149.3875	-20.789155	1009.5092	3193.7812	0	180.57
35	14601	156.2	-19.328755	919.47382	2839.3554	0	163.06
36	14601	159.11	-18.598725	874.37762	2657.1471	0	154.45
37	14601	163.61	-16.96086	772.90333	2337.8262	0	135.78
38	14601	169.57245	-14.790705	638.44476	1965.9643	0	110.97
39	14601	174.39245	-13.03637	529.74851	1743.3022	0	100.95
40	14601	178.855	-11.412135	439.11866	1544.7461	0	100
41	14601	183.07615	-9.875765	352.61825	1376.2812	0	100
42	14601	191.91405	-6.659027	148.52704	1063.986	0	100
43	14601	198.737	-4.175678	-9.0334772	752.47547	0	600
44	14601	199.7141	-3.820046	-31.597273	709.16043	0	600
45	14601	205.7918	-1.6079436	-170.02225	439.72393	0	600

Slices of Slip Surface: 11025

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	11025	-113.32365	-5.626347	213.97535	319.66481	0	60.382
2	11025	-103.43693	-11.5	586.52306	859.01208	0	95
3	11025	-95.674425	-16.11166	879.02094	1315.4354	0	138.23
4	11025	-87.16427	-21.16749	1200.7487	1852.7771	0	193.84
5	11025	-77.252805	-27.05583	1576.2484	2479.9109	0	258.61
6	11025	-71.858535	-30.26053	1780.5699	2827.0529	0	293.87
7	11025	-68.492065	-32.26053	1912.9894	3091.4672	0	315.87
8	11025	-58.831185	-38	2294.8959	3784.4554	0	379
9	11025	-48.57912	-44.09069	2700.1366	4490.0077	0	446
10	11025	-39.195	-49.66574	3069.5036	5150.2136	0	507.32
11	11025	-32.665	-53.54517	3332.8248	5625.8993	0	551.47
12	11025	-26.9	-56.97012	3554.9626	6109.7784	0	600.89
13	11025	-20.425	-59.70488	3725.6945	6166.4705	0	642.71
14	11025	-17.975	-59.17903	3692.7827	6155.1685	0	642.02
15	11025	-11.03	-57.6884	3599.7891	6236.6696	0	640.71
16	11025	1.42	-55.016215	3432.9863	6179.4051	0	634.71
17	11025	14.265	-52.25925	3261.0087	5865.4614	0	581.14
18	11025	21.265	-50.756815	3167.2562	5731.7766	0	551.34
19	11025	28.995	-49.0977	2970.0998	5587.3352	0	517.95
20	11025	37.085	-47.361315	2753.5006	5443.1585	0	482.46
21	11025	42.093945	-46.28623	2653.329	5360.8661	0	468.57
22	11025	51.278945	-44.314825	2487.3402	5211.8306	0	447.3
23	11025	59.306985	-42.59174	2355.5092	5100.4115	0	428.66
24	11025	66.301985	-41.09038	2262.9881	5034.566	0	414.38
25	11025	71.77	-39.91676	2190.5983	4982.065	0	403.99
26	11025	78.46	-38.480865	2102.1247	4880.1562	0	390.9
27	11025	89.38	-36.13707	1957.6137	4700.9052	0	368.64
28	11025	97.08842	-34.482585	1855.5831	4632.7068	0	352.26
29	11025	104.24842	-32.94581	1760.8469	4690.5156	0	328.04
30	11025	113.435	-30.974065	1639.2747	4745.8347	0	304.11
31	11025	122.71	-28.983345	1516.5618	4658.5072	0	273.96
32	11025	131.63	-27.068815	1398.507	4354.9015	0	251.44
33	11025	139.075	-25.47087	1299.9963	3974.3105	0	232.55
34	11025	148.3	-22.63966	1124.8282	3384.1289	0	200.17
35	11025	156.91	-19.505875	930.6347	2813.7495	0	164.66
36	11025	163.61	-17.06727	779.54812	2348.3636	0	136.89

LWL Case.BS

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37	11025	169.71865	-14.84391	641.78021	1969.7187	0	111.48
38	11025	174.53865	-13.089575	533.09596	1747.0956	0	100.9
39	11025	178.855	-11.518545	445.74569	1555.3597	0	100
40	11025	183.2223	-9.92897	355.89305	1381.2325	0	100
41	11025	192.204	-6.659906	148.4731	1063.2887	0	100
42	11025	198.967	-4.198385	-7.704323	754.50398	0	600
43	11025	199.8003	-3.8950805	-26.948453	717.55979	0	600
44	11025	205.9286	-1.6645652	-166.4993	445.86519	0	600

LWL Case.EE.Thru Fabric

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 194
Last Edited By: Cox, Lane MVK
Date: 4/20/2011
Time: 3:10:42 PM
File Name: 5c(2) Typical 1.1st SC.80% SG.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\1st Stage Construction\80%SG, 1 Layer of Fabric\Slope W\
Last Solved Date: 4/20/2011
Last Solved Time: 3:26:14 PM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

LWL Case.EE.Thru Fabric

Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

SlipSurface
- Direction of movement: Right to Left
- Use Passive Mode: No
- Slip Surface Option: Entry and Exit
- Critical slip surfaces saved: 100
- Optimize Critical Slip Surface Location: Yes
- Tension Crack
  - Tension Crack Option: Tension Crack Line
  - Percentage Wet: 0
  - Tension Crack Fluid Unit Weight: 62.4 pcf

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FOS Distribution
FOS Calculation Option: Constant
Advanced
Number of Slices: 30
Optimization Tolerance: 0.01
Minimum Slip Surface Depth: 0.1 ft
Optimization Maximum Iterations: 2000
Optimization Convergence Tolerance: 1e-007
Starting Optimization Points: 8
Ending Optimization Points: 16
Complete Passes per Insertion: 1
Driving Side Maximum Convex Angle: 5 °
Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH
Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH above 0
Model: Mohr-Coulomb
Unit Weight: 102 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, 0 to -9
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -9 (2)
Cohesion Spatial Fn: CH, 0 to -9
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -9 to -14
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -9 to -14 (2)
Cohesion Spatial Fn: CH, -9 to -14

Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -14 to -30
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -14 to -30 (2)
Cohesion Spatial Fn: CH, -14 to -30
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -30 to -34
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -30 to -34 (2)
Cohesion Spatial Fn: CH, 30 to -34
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sand Fill
Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -34 to -42
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -34 to -42 (2)
Cohesion Spatial Fn: CH, -34 to -42
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -42 to -80
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -42 to -80 (2)
Cohesion Spatial Fn: CH, -42 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

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Slip Surface Entry and Exit

Left Projection: Range
Left-Zone Left Coordinate: (-173, -2.072) ft
Left-Zone Right Coordinate: (-65, -1.46671) ft
Left-Zone Increment: 20
Right Projection: Range
Right-Zone Left Coordinate: (116, 13.55138) ft
Right-Zone Right Coordinate: (159.462, 6) ft
Right-Zone Increment: 20
Radius Increments: 20

Slip Surface Limits

Left Coordinate: (-200, -2.13) ft
Right Coordinate: (500, -4.5) ft

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	-2.13
	-191.42	-2.12
	-156.88	-2.03
	-119.75	-2.26
	-92.12	-1.99
	-71.42	-1.72
	-45.06	-0.68
	-33.33	-0.27
	-32	0
	22	0
	35.99	-3
	38.18	-3.47
	56.55	-4.85
	177.04	-4.54
	180.67	-4.21
	200.3	-4.33
	220.54	-4.34
	226.87	-4.54
	240.61	-4.57
	250	-4.5
	292.25	-4.62
	309.2	-4.74

	335.91	-4.85
	337.6	-5.3
	454	-5.3
	456.4	-4.54
	500	-4.5

Reinforcements

Reinforcement 1

Type: Fabric
Outside Point: (22, 0) ft
Inside Point: (209, 0) ft
Slip Surface Intersection: (138.26, 0) ft
Total Length: 187 ft
Reinforcement Direction: 180 °
Applied Load Option: Variable
F of S Dependent: No
Contact Cohesion: 19 psf
Contact Phi: 265 °
Interface Factor: 2
Bond Safety Factor: 1
Fabric Capacity: 27000 lbs
Fabric Safety Factor: 1
Fabric Load: 27000 lbs
Load Distribution: Even along reinf.
Load Orientation: 0
Applied Load: 27000 lbs
Fabric Load Used: 27000 lbs
Resisting Force Used: 27264 lbs/ft
Available Bond Length: 70.744 ft
Required Bond Length: 0.99031 ft
Governing Component: Fabric

Tension Crack Line

	X (ft)	Y (ft)
	94.84	8
	98	4
	118	9
	127	9
	166.85564	1.5
	267	-1

Spatial Functions

CH, 0 to -9

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Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -2.5, 50)
Data Point: (-300, -9, 75)
Data Point: (-33.33, 0, 50)
Data Point: (-33.33, -9, 75)
Data Point: (0, 0, 300)
Data Point: (0, -9, 300)
Data Point: (38.18, -4.5, 150)
Data Point: (38.18, -9, 150)
Data Point: (177.04, -4.54, 100)
Data Point: (177.04, -9, 100)
Data Point: (500, 0, 100)
Data Point: (500, -9, 100)
Data Point: (-300, -4, 50)
Data Point: (-33.33, -4, 50)

CH, -34 to -42 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -38, 105)
Data Point: (0, -38, 116)
Data Point: (38.18, -38, 106)
Data Point: (177.04, -38, 106)

CH, -42 to -80 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -61, 105)
Data Point: (0, -61, 105)
Data Point: (38.18, -61, 106)
Data Point: (177.04, -61, 106)

CH, -9 to -14

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -9, 75)
Data Point: (-300, -14, 115)
Data Point: (-33.33, -9, 75)
Data Point: (-33.33, -14, 115)
Data Point: (0, -9, 300)
Data Point: (0, -14, 300)
Data Point: (38.18, -9, 150)
Data Point: (38.18, -14, 150)

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Data Point: (177.04, -9, 100)
Data Point: (177.04, -14, 100)
Data Point: (500, -9, 100)
Data Point: (500, -14, 100)

CH, -14 to -30

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -14, 115)
Data Point: (-300, -30, 291)
Data Point: (-33.33, -14, 115)
Data Point: (-33.33, -30, 291)
Data Point: (0, -14, 300)
Data Point: (0, -30, 375)
Data Point: (38.18, -14, 150)
Data Point: (38.18, -30, 310)
Data Point: (177.04, -14, 100)
Data Point: (177.04, -30, 268)
Data Point: (500, -14, 100)
Data Point: (500, -30, 268)

CH, 30 to -34

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -30, 291)
Data Point: (-300, -34, 335)
Data Point: (-33.33, -30, 291)
Data Point: (-33.33, -34, 335)
Data Point: (0, -30, 400)
Data Point: (0, -34, 438)
Data Point: (38.18, -30, 325)
Data Point: (38.18, -34, 365)
Data Point: (177.04, -30, 268)
Data Point: (177.04, -34, 310)
Data Point: (500, -30, 268)
Data Point: (500, -34, 310)

CH, 0 to -9 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -4.5, 90)
Data Point: (0, -4.5, 96)
Data Point: (38.18, -4.5, 87)
Data Point: (177.04, -4.54, 87)

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CH, -9 to -14 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -11.5, 90)
Data Point: (0, -11.5, 97)
Data Point: (38.18, -11.5, 88)
Data Point: (177.04, -11.5, 100)

CH, -14 to -30 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -22, 100)
Data Point: (0, -22, 102)
Data Point: (38.18, -22, 100)
Data Point: (177.04, -22, 100)

CH, -30 to -34 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -32, 122)
Data Point: (0, -32, 113)
Data Point: (38.18, -32, 118)
Data Point: (177.04, -32, 118)

CH, -34 to -42

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -34, 335)
Data Point: (-300, -42, 423)
Data Point: (-33.33, -34, 335)
Data Point: (-33.33, -42, 423)
Data Point: (0, -34, 438)
Data Point: (0, -42, 514)
Data Point: (38.18, -34, 365)
Data Point: (38.18, -42, 425)
Data Point: (177.04, -34, 325)
Data Point: (177.04, -42, 409)
Data Point: (500, -34, 325)
Data Point: (500, -42, 409)

CH, -42 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)

Data Point: (-300, -42, 423)
Data Point: (-300, -80, 841)
Data Point: (-33.33, -42, 423)
Data Point: (-33.33, -80, 841)
Data Point: (0, -42, 514)
Data Point: (0, -80, 875)
Data Point: (38.18, -42, 425)
Data Point: (38.18, -80, 815)
Data Point: (177.04, -42, 409)
Data Point: (177.04, -80, 808)
Data Point: (500, -42, 409)
Data Point: (500, -80, 808)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -42 to -80	1,3,4,2	26600
Region 2	CH, -34 to -42	3,5,6,4	5600
Region 3	CH, -30 to -34	7,5,6,8	2800
Region 4	CH, -14 to -30	9,7,8,10	11200
Region 5	CH, -9 to -14	11,9,10,12,56,52,51,50,55,42,33,32,31,43	3267.8677
Region 6	CH, 0 to -9	42,34,35,36,37,38,58,39,40,62,48,49,55	784.83735
Region 7	CH, 0 to -9	16,11,43,30,29,65,28,57,44,45,20,19,18,17,15,14,13	1934.1129
Region 8	CH above 0	45,21,22,63,64,27,44	161.91095
Region 9	Sand Fill	29,30,43,31,32,33,42,34,35	557.4735
Region 10	CH, 0 to -9	56,53,54,41,12	238.9126
Region 11	EMBANKMENT FILL CH	59,46,47,60,37,36,35,29,65	1551.9685
Region 12	EMBANKMENT FILL CH	64,27,44,57,28,65,59	499.34315
Region 13	EMBANKMENT FILL CH	60,61,62,40,39,58,38,37	772.16895

Points

	X (ft)	Y (ft)
Point 1	-200	-80
Point 2	500	-80
Point 3	-200	-42
Point 4	500	-42
Point 5	-200	-34
Point 6	500	-34
Point 7	-200	-30
Point 8	500	-30
Point 9	-200	-14
Point 10	500	-14
Point 11	-200	-9
Point 12	500	-9
Point 13	-191.42	-2.12
Point 14	-156.88	-2.03
Point 15	-119.75	-2.26

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Point 16	-200	-2.13
Point 17	-92.12	-1.99
Point 18	-71.42	-1.72
Point 19	-45.06	-0.68
Point 20	-33.33	-0.27
Point 21	-19.05	1.53
Point 22	-16.9	1.81
Point 23	-6.83	6.48
Point 24	-6.79	6.72
Point 25	-0.92	7.16
Point 26	3.42	6.91
Point 27	20.53	0.36
Point 28	38.18	-3.47
Point 29	56.55	-4.85
Point 30	70.54	-8.43
Point 31	109.16	-11.38
Point 32	127.67	-11.01
Point 33	135.55	-10.86
Point 34	159.82	-8.55
Point 35	177.04	-4.54
Point 36	180.67	-4.21
Point 37	200.3	-4.33
Point 38	220.54	-4.34
Point 39	240.61	-4.57
Point 40	250	-4.5
Point 41	500	-4.5
Point 42	154	-9
Point 43	73	-9
Point 44	22	0
Point 45	-32	0
Point 46	117.71	14
Point 47	127.71	14
Point 48	335.91	-4.85
Point 49	349.9	-8.43
Point 50	388.52	-11.38
Point 51	407.03	-11.01
Point 52	414.91	-10.86
Point 53	439.18	-8.55
Point 54	456.4	-4.54
Point 55	352.36	-9
Point 56	433.36	-9
Point 57	35.99	-3
Point 58	226.87	-4.54
Point 59	94.84	8
Point 60	167.4	4
Point 61	292.4	0.875
Point 62	309.2	-4.74
Point 63	-5.16	5.5

Point 64	8	5.2
Point 65	46	-4.06

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	2.03	(22.581, 76.014)	102.6968	(143.074, 10.129)	(-101.262, -2.07933)
2	6901	2.17	(22.581, 76.014)	138.608	(142.28, 10.3291)	(-91.9955, -1.98838)
3	7342	2.17	(25.297, 74.519)	135.508	(142.279, 10.3293)	(-86.5955, -1.91794)
4	6922	2.17	(23.844, 76.02)	139.657	(144.509, 9.76742)	(-91.9955, -1.98838)
5	6460	2.18	(19.871, 77.509)	141.703	(142.281, 10.3289)	(-97.3957, -2.04155)
6	7363	2.18	(26.561, 74.524)	136.557	(144.508, 9.76765)	(-86.5955, -1.91794)
7	6480	2.18	(20.598, 89.073)	149.078	(144.223, 9.83956)	(-97.3957, -2.04155)
8	6921	2.18	(23.311, 87.327)	145.852	(144.222, 9.83974)	(-91.9955, -1.98838)
9	6900	2.18	(22.021, 87.236)	144.779	(141.983, 10.4038)	(-91.9955, -1.98838)
10	7321	2.18	(24.031, 74.514)	134.462	(140.049, 10.8911)	(-86.5955, -1.91794)
11	6459	2.18	(19.309, 88.981)	148.004	(141.984, 10.4036)	(-97.3957, -2.04155)
12	6880	2.18	(21.316, 76.009)	137.562	(140.051, 10.8908)	(-91.9955, -1.98838)
13	6481	2.18	(21.134, 77.515)	142.753	(144.51, 9.76721)	(-97.3957, -2.04155)
14	6501	2.18	(21.885, 89.165)	150.154	(146.462, 9.27549)	(-97.3957, -2.04155)
15	6942	2.18	(24.598, 87.419)	146.928	(146.461, 9.27566)	(-91.9955, -1.98838)
16	6039	2.18	(17.885, 90.818)	152.304	(144.224, 9.83938)	(-102.796, -2.09432)
17	6018	2.18	(16.597, 90.726)	151.229	(141.985, 10.4034)	(-102.796, -2.09432)
18	6943	2.18	(25.105, 76.026)	140.708	(146.738, 9.20576)	(-91.9955, -1.98838)
19	6859	2.18	(20.049, 76.005)	136.517	(137.821, 11.4525)	(-91.9955, -1.98838)
20	6060	2.18	(19.171, 90.91)	153.381	(146.462, 9.27532)	(-102.796, -2.09432)
21	6439	2.18	(18.607, 77.503)	140.656	(140.051, 10.8905)	(-97.3957, -2.04155)
22	7783	2.18	(28.012, 73.023)	132.408	(142.278, 10.3296)	(-81.1955, -1.84751)
23	7362	2.19	(26.03, 85.58)	142.62	(144.221, 9.83995)	(-86.5955, -1.91794)
24	7804	2.19	(29.277, 73.028)	133.456	(144.507, 9.7679)	(-81.1955, -1.84751)
25	6879	2.19	(20.73, 87.145)	143.707	(139.744, 10.9679)	(-91.9955, -1.98838)
26	7762	2.19	(26.746, 73.018)	131.363	(140.048, 10.8913)	(-81.1955, -1.84751)
27	6019	2.19	(17.161, 79.003)	144.798	(142.282, 10.3287)	(-102.796, -2.09432)
28	7300	2.19	(22.763, 74.509)	133.418	(137.82, 11.4528)	(-86.5955, -1.91794)
29	6438	2.19	(18.018, 88.89)	146.932	(139.745, 10.9677)	(-97.3957, -2.04155)
30	7341	2.19	(24.74, 85.489)	141.547	(141.982, 10.404)	(-86.5955, -1.91794)
31	6418	2.19	(17.34, 77.499)	139.61	(137.822, 11.4522)	(-97.3957, -2.04155)
32	7322	2.19	(24.551, 64.826)	129.646	(140.332, 10.8199)	(-86.5955, -1.91794)
33	5598	2.19	(15.172, 92.563)	155.53	(144.224, 9.83921)	(-108.196, -2.1471)
34	6502	2.19	(22.394, 77.521)	143.804	(146.739, 9.20556)	(-97.3957, -2.04155)
35	7383	2.19	(27.318, 85.672)	143.695	(146.46, 9.27586)	(-86.5955, -1.91794)
36	5998	2.19	(15.897, 78.998)	143.75	(140.052, 10.8903)	(-102.796, -2.09432)
37	7343	2.19	(25.793, 64.753)	130.676	(142.552, 10.2604)	(-86.5955, -1.91794)
38	6522	2.19	(23.169, 89.257)	151.233	(148.7, 8.71142)	(-97.3957, -2.04155)
39	6040	2.19	(18.423, 79.009)	145.848	(144.511, 9.767)	(-102.796, -2.09432)
40	5997	2.19	(15.306, 90.635)	150.156	(139.746, 10.9675)	(-102.796, -2.09432)
41	5577	2.19	(13.884, 92.472)	154.455	(141.985, 10.4033)	(-108.196, -2.1471)
42	6963	2.19	(25.884, 87.511)	148.006	(148.7, 8.71159)	(-91.9955, -1.98838)

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43	7384	2.19	(27.822, 74.53)	137.607	(146.738, 9.20598)	(-86.5955, -1.91794)
44	6081	2.19	(20.455, 91.003)	154.46	(148.701, 8.71127)	(-102.796, -2.09432)
45	6881	2.19	(21.839, 66.097)	132.642	(140.333, 10.8196)	(-91.9955, -1.98838)
46	7301	2.19	(23.306, 64.899)	128.619	(138.111, 11.3794)	(-86.5955, -1.91794)
47	6902	2.19	(23.08, 66.025)	133.672	(142.554, 10.2601)	(-91.9955, -1.98838)
48	7763	2.19	(27.263, 63.554)	126.651	(140.331, 10.8202)	(-81.1955, -1.84751)
49	7784	2.19	(28.505, 63.481)	127.68	(142.551, 10.2607)	(-81.1955, -1.84751)
50	5619	2.19	(16.457, 92.656)	156.608	(146.463, 9.27516)	(-108.196, -2.1471)
51	6964	2.20	(26.364, 76.033)	141.761	(148.968, 8.64412)	(-91.9955, -1.98838)
52	6860	2.20	(20.595, 66.17)	131.614	(138.112, 11.3791)	(-91.9955, -1.98838)
53	7741	2.20	(25.477, 73.014)	130.32	(137.819, 11.4531)	(-81.1955, -1.84751)
54	7742	2.20	(26.018, 63.627)	125.625	(138.11, 11.3797)	(-81.1955, -1.84751)
55	7320	2.20	(23.448, 85.399)	140.477	(139.743, 10.9681)	(-86.5955, -1.91794)
56	5977	2.20	(14.632, 78.993)	142.704	(137.823, 11.452)	(-102.796, -2.09432)
57	5556	2.20	(12.594, 92.38)	153.381	(139.747, 10.9673)	(-108.196, -2.1471)
58	7364	2.20	(27.033, 64.681)	131.707	(144.773, 9.70096)	(-86.5955, -1.91794)
59	6061	2.20	(19.682, 79.016)	146.9	(146.74, 9.20537)	(-102.796, -2.09432)
60	6838	2.20	(18.78, 76)	135.475	(135.592, 12.0142)	(-91.9955, -1.98838)
61	7405	2.20	(29.081, 74.537)	138.659	(148.967, 8.64433)	(-86.5955, -1.91794)
62	7404	2.20	(28.604, 85.764)	144.772	(148.699, 8.71177)	(-86.5955, -1.91794)
63	6440	2.20	(19.131, 67.368)	135.632	(140.334, 10.8193)	(-97.3957, -2.04155)
64	5640	2.20	(17.741, 92.748)	157.687	(148.702, 8.71111)	(-108.196, -2.1471)
65	6543	2.20	(24.452, 89.35)	152.313	(150.939, 8.14737)	(-97.3957, -2.04155)
66	7825	2.20	(30.539, 73.034)	134.506	(146.737, 9.20621)	(-81.1955, -1.84751)
67	6059	2.20	(18.588, 104.458)	161.516	(146.158, 9.35196)	(-102.796, -2.09432)
68	5578	2.20	(14.451, 80.498)	147.893	(142.282, 10.3284)	(-108.196, -2.1471)
69	8224	2.20	(30.727, 71.527)	129.308	(142.277, 10.3299)	(-75.7955, -1.77707)
70	6923	2.20	(24.319, 65.953)	134.704	(144.774, 9.70071)	(-91.9955, -1.98838)
71	5157	2.20	(12.458, 94.309)	158.756	(144.225, 9.83905)	(-113.596, -2.19987)
72	6523	2.20	(23.652, 77.528)	144.858	(148.968, 8.64394)	(-97.3957, -2.04155)
73	6461	2.20	(20.372, 67.295)	136.663	(142.554, 10.2599)	(-97.3957, -2.04155)
74	7803	2.20	(28.749, 83.833)	139.388	(144.22, 9.84016)	(-81.1955, -1.84751)
75	7805	2.20	(29.746, 63.409)	128.711	(144.772, 9.70123)	(-81.1955, -1.84751)
76	7280	2.20	(22.06, 64.972)	127.594	(135.89, 11.9389)	(-86.5955, -1.91794)
77	8204	2.20	(29.974, 62.283)	123.656	(140.329, 10.8205)	(-75.7955, -1.77707)
78	8203	2.20	(29.46, 71.523)	128.264	(140.047, 10.8916)	(-75.7955, -1.77707)
79	6417	2.20	(16.725, 88.8)	145.862	(137.506, 11.5318)	(-97.3957, -2.04155)
80	6397	2.20	(16.072, 77.494)	138.567	(135.593, 12.0139)	(-97.3957, -2.04155)
81	6858	2.20	(19.436, 87.055)	142.638	(137.506, 11.532)	(-91.9955, -1.98838)
82	5599	2.20	(15.712, 80.504)	148.944	(144.512, 9.76681)	(-108.196, -2.1471)
83	6038	2.20	(17.272, 104.27)	160.405	(143.909, 9.91866)	(-102.796, -2.09432)
84	6984	2.20	(27.167, 87.604)	149.086	(150.939, 8.14752)	(-91.9955, -1.98838)
85	7824	2.20	(30.038, 83.925)	140.463	(146.459, 9.27606)	(-81.1955, -1.84751)
86	5136	2.20	(11.171, 94.217)	157.68	(141.986, 10.4031)	(-113.596, -2.19987)
87	8245	2.20	(31.992, 71.533)	130.355	(144.506, 9.76815)	(-75.7955, -1.77707)
88	5557	2.20	(13.188, 80.492)	146.844	(140.053, 10.8901)	(-108.196, -2.1471)
89	6102	2.20	(21.737, 91.096)	155.541	(150.94, 8.14722)	(-102.796, -2.09432)
90	7782	2.20	(27.458, 83.742)	138.316	(141.982, 10.4043)	(-81.1955, -1.84751)

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91	6500	2.20	(21.305, 102.427)	158.125	(146.158, 9.35209)	(-97.3957, -2.04155)
92	6419	2.20	(17.888, 67.44)	134.604	(138.113, 11.3788)	(-97.3957, -2.04155)
93	7279	2.20	(21.493, 74.505)	132.377	(135.59, 12.0145)	(-86.5955, -1.91794)
94	5976	2.20	(14.014, 90.545)	149.086	(137.507, 11.5316)	(-102.796, -2.09432)
95	5618	2.20	(15.872, 106.488)	164.908	(146.159, 9.35183)	(-108.196, -2.1471)
96	8225	2.20	(31.218, 62.21)	124.684	(142.55, 10.261)	(-75.7955, -1.77707)
97	5178	2.21	(13.743, 94.401)	159.834	(146.464, 9.27501)	(-113.596, -2.19987)
98	6080	2.21	(19.903, 104.646)	162.63	(148.407, 8.78525)	(-102.796, -2.09432)
99	6839	2.21	(19.349, 66.243)	130.588	(135.892, 11.9386)	(-91.9955, -1.98838)
100	6479	2.21	(19.988, 102.239)	157.014	(143.908, 9.9188)	(-97.3957, -2.04155)
101	5597	2.21	(14.556, 106.3)	163.795	(143.909, 9.91853)	(-108.196, -2.1471)

Slices of Slip Surface: Optimized

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	-96.69075	-5.4463475	212.8932	322.16698	0	59.014
2	Optimized	-88.599545	-11.406682	590.46103	870.08268	0	94.253
3	Optimized	-84.261925	-14.60196	793.39157	1176.7615	0	121.62
4	Optimized	-77.43238	-19.79094	1122.73	1733.5835	0	178.7
5	Optimized	-67.65446	-27.2508	1602.4125	2539.8539	0	260.76
6	Optimized	-60.955255	-32.06182	1919.0315	3095.336	0	313.68
7	Optimized	-51.967115	-38	2311.7926	3811.3468	0	379
8	Optimized	-45.48632	-42.281655	2594.9244	4310.4241	0	426.1
9	Optimized	-45.021435	-42.58879	2615.236	4346.4668	0	429.48
10	Optimized	-39.156435	-45.802585	2828.551	4696.1338	0	464.83
11	Optimized	-32.665	-49.3548	3071.3471	5132.8729	0	505.5
12	Optimized	-29.679555	-50.988485	3181.6727	5368.8837	0	530.36
13	Optimized	-23.204555	-53.597425	3344.5203	5686.4176	0	572.93
14	Optimized	-17.975	-55.28309	3449.6833	5961.2242	0	601.86
15	Optimized	-15.166365	-56.18841	3506.2311	6143.9336	0	617.07
16	Optimized	-9.296365	-56.24083	3509.3916	6191.8583	0	629.86
17	Optimized	-1.9348725	-55.33961	3453.1513	6259.9909	0	636.61
18	Optimized	4.5153825	-54.54995	3403.9085	6148.733	0	623.83
19	Optimized	7.870255	-54.146585	3378.7655	6103.4276	0	612.96
20	Optimized	13.700425	-53.76313	3354.7825	6081.32	0	597.03
21	Optimized	19.965425	-53.372825	3330.4738	6075.9458	0	580.04
22	Optimized	21.265	-53.33741	3328.2876	6075.1585	0	576.95

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23	Optimized	25.4975	-53.22207	3274.2669	6078.944	0	566.89
24	Optimized	32.4925	-53.031455	3168.8021	6088.2329	0	550.22
25	Optimized	37.085	-52.90631	3099.4886	6101.3879	0	539.25
26	Optimized	42.093945	-52.76981	3057.9251	6112.2746	0	535.15
27	Optimized	51.278945	-52.51951	2999.3306	6142.6017	0	531.69
28	Optimized	60.940635	-52.256225	2958.8379	6205.4544	0	528.04
29	Optimized	66.47025	-52.05083	2946.9355	6244.0712	0	525.38
30	Optimized	69.074615	-51.692465	2924.9712	6200.4894	0	521.43
31	Optimized	71.77	-51.191025	2894.1239	6182.9392	0	515.99
32	Optimized	76.64	-50.28503	2838.3881	6121.6164	0	506.14
33	Optimized	83.92	-48.930685	2755.065	6024.1135	0	491.4
34	Optimized	91.2	-47.57634	2671.7419	5925.9353	0	476.63
35	Optimized	96.94338	-46.507865	2606.0205	5905.2036	0	464.95
36	Optimized	102.80313	-44.133175	2458.657	5741.0253	0	439.68
37	Optimized	106.63695	-42.074895	2330.8854	5619.1691	0	417.89
38	Optimized	107.9372	-40.817325	2252.6014	5446.8507	0	406.31
39	Optimized	111.90405	-36.980635	2013.8547	5178.708	0	370.87
40	Optimized	114.7572	-34.16331	1838.4901	4917.8483	0	344.44
41	Optimized	116.2021	-32	1703.7282	4673.8599	0	313.53
42	Optimized	117.62395	-29.87118	1571.1154	4570.7465	0	284.65
43	Optimized	120.3197	-25.83507	1319.7347	4127.124	0	242.27
44	Optimized	125.3197	-18.37336	854.8959	3453.4587	0	163.73
45	Optimized	127.98535	-14.40947	607.98173	3109.8761	0	121.89
46	Optimized	129.28295	-12.47992	487.79103	2874.4487	0	117.2
47	Optimized	132.42705	-7.804581	196.54904	1719.8534	879.48018	0
48	Optimized	134.65445	-4.492386	-9.7759828	1525.764	0	600
49	Optimized	138.91695	0.8198905	-340.58007	815.09696	0	600

Slices of Slip Surface: 6901

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	6901	-89.44469	-5.494188	220.83584	354.35912	0	59.049
2	6901	-84.85753	-11.5	599.33427	912.39919	0	95
3	6901	-77.120575	-19.924195	1131.3055	1779.6685	0	180.17
4	6901	-69.065795	-27.924195	1640.9801	2625.7912	0	268.17
5	6901	-64.2229	-32	1907.1411	3104.5464	0	313
6	6901	-55.925035	-38	2302.0309	3804.1321	0	379
7	6901	-47.58793	-43.48439	2664.8242	4410.6729	0	439.33
8	6901	-42.1275	-46.51743	2866.5953	4750.9222	0	472.69
9	6901	-36.2625	-49.44154	3061.8541	5083.4342	0	504.86
10	6901	-32.665	-51.10601	3180.586	5285.3004	0	524.71
11	6901	-28.7625	-52.686585	3287.6499	5517.3821	0	550.83
12	6901	-22.2875	-55.08618	3437.3109	5869.7592	0	590.59
13	6901	-17.975	-56.52316	3527.032	6087.4237	0	614.64
14	6901	-13.965	-57.654565	3597.5999	6326.57	0	634.43
15	6901	-8.095	-59.12327	3689.2755	6685.1194	0	660.81
16	6901	-1.87	-60.37932	3767.5968	6918.5798	0	685.04
17	6901	4.71	-61.39701	3831.1081	6974.0907	0	689.12
18	6901	11.1325	-62.084595	3874.0201	7011.8586	0	683.32
19	6901	17.3975	-62.461555	3897.6691	7053.639	0	674.95
20	6901	21.265	-62.5858	3905.3349	7067.0296	0	668.75
21	6901	25.4975	-62.51916	3854.3282	7065.0535	0	659.95
22	6901	32.4925	-62.19473	3740.5017	7040.3908	0	643.22
23	6901	37.085	-61.828705	3656.2555	7018.3358	0	630.62
24	6901	42.093945	-61.156735	3581.2683	6955.1175	0	621.29
25	6901	51.278945	-59.483605	3433.8504	6808.0308	0	603.32
26	6901	60.0475	-57.384935	3278.7161	6641.5264	0	580.95
27	6901	67.0425	-55.217695	3144.6528	6485.4995	0	557.98
28	6901	71.77	-53.565845	3042.3274	6366.1153	0	540.49
29	6901	76.64	-51.556475	2917.6695	6173.7881	0	519.27
30	6901	83.92	-48.21678	2710.4233	5850.4547	0	484.02
31	6901	91.2	-44.34432	2470.043	5473.2592	0	443.16
32	6901	100.8685	-38.134545	2084.0387	5020.0511	0	383.55
33	6901	108.0285	-33.114045	1771.9246	4714.7639	0	328.25
34	6901	110.5172	-31.114045	1647.5355	4555.3047	0	306.74
35	6901	114.7922	-27.398255	1416.3636	4293.8557	0	260.09
36	6901	122.71	-19.558155	928.38984	3615.4453	0	176.84
37	6901	127.847	-14.1599	592.38077	3177.1747	0	119.36
38	6901	129.2467	-12.477975	487.65552	2899.6896	0	117.21

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39	6901	132.90575	-7.801667	196.43635	1791.3158	920.80405	0
40	6901	138.79095	0.738635	-335.52482	764.85915	0	600

Slices of Slip Surface: 7342

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7342	-84.00445	-5.4589705	223.06437	356.6181	0	58.72
2	7342	-79.35862	-11.5	603.81687	917.08164	0	95
3	7342	-74.36191	-17.19671	963.35634	1493.3036	0	150.16
4	7342	-66.184375	-25.19671	1477.8686	2349.6991	0	238.16
5	7342	-58.403515	-32	1921.5278	3118.9301	0	313
6	7342	-50.45914	-37.646565	2293.3974	3778.6876	0	375.11
7	7342	-44.471525	-41.646565	2557.5639	4226.6488	0	419.11
8	7342	-38.606525	-44.82535	2768.765	4586.8739	0	454.08
9	7342	-32.665	-47.96539	2984.6364	4955.7497	0	490.26
10	7342	-28.7625	-49.68915	3100.672	5204.133	0	518.47
11	7342	-22.2875	-52.31286	3264.3074	5581.7849	0	561.47
12	7342	-17.975	-53.88976	3362.7102	5814.9811	0	587.49
13	7342	-13.965	-55.140765	3440.7718	6067.6151	0	608.97
14	7342	-8.095	-56.775965	3542.7539	6444.5828	0	637.65
15	7342	-1.87	-58.19589	3631.3848	6696.1009	0	664.12
16	7342	4.71	-59.375215	3704.9421	6768.7858	0	669.72
17	7342	11.1325	-60.2104	3757.1069	6821.9397	0	665.1
18	7342	17.3975	-60.7227	3789.0727	6878.1413	0	657.82
19	7342	21.265	-60.92755	3801.8537	6899.6655	0	652.29
20	7342	25.4975	-60.94425	3756.1072	6906.2108	0	644.19
21	7342	32.4925	-60.753025	3650.5932	6895.6125	0	628.59
22	7342	37.085	-60.47136	3571.5683	6881.5749	0	616.72
23	7342	42.093945	-59.886605	3502.0598	6828.5538	0	608.24
24	7342	51.278945	-58.366865	3364.1726	6697.9962	0	591.83
25	7342	60.0475	-56.407955	3217.8199	6546.3181	0	570.89
26	7342	67.0425	-54.346645	3090.2181	6401.5741	0	549
27	7342	71.77	-52.76455	2992.3149	6288.6574	0	532.22
28	7342	76.579495	-50.851265	2873.6479	6107.0998	0	512
29	7342	83.73849	-47.67511	2676.6567	5800.4099	0	478.44

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30	7342	90.897485	-43.981575	2447.3375	5441.1892	0	439.44
31	7342	94.65849	-41.89185	2317.5326	5290.9565	0	417.55
32	7342	97.74305	-39.94633	2196.677	5122.9115	0	400.09
33	7342	103.54915	-36.05448	1954.7379	4892.0466	0	364.48
34	7342	107.8061	-32.96065	1762.3277	4693.7794	0	326.77
35	7342	110.35135	-30.96065	1637.933	4538.9961	0	305.23
36	7342	114.62635	-27.29444	1409.8127	4284.1632	0	259.08
37	7342	122.71	-19.403015	918.6952	3605.1637	0	175.24
38	7342	127.80385	-14.108575	589.17463	3200.2776	0	118.85
39	7342	129.17195	-12.478575	487.67178	2904.4638	0	117.24
40	7342	132.86065	-7.802302	196.4757	1796.36	923.69364	0
41	7342	138.77695	0.738693	-335.53093	767.3192	0	600

Slices of Slip Surface: 6922

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	6922	-89.47359	-5.494188	220.81069	353.88525	0	59.05
2	6922	-84.9404	-11.5	599.27222	911.03962	0	95
3	6922	-77.174545	-20.050915	1139.1738	1791.0028	0	181.56
4	6922	-69.240885	-28.050915	1648.4095	2636.2991	0	269.56
5	6922	-64.619645	-32	1906.1787	3101.3025	0	313
6	6922	-56.50102	-38	2300.6068	3800.7677	0	379
7	6922	-47.94226	-43.72786	2679.07	4433.8713	0	442.01
8	6922	-39.195	-48.426675	2992.2177	4963.5299	0	493.69
9	6922	-32.665	-51.691875	3217.1785	5346.5394	0	531.14
10	6922	-28.7625	-53.30309	3326.0727	5582.0799	0	557.48
11	6922	-22.2875	-55.753455	3478.9922	5940.1019	0	597.6
12	6922	-17.975	-57.224245	3570.7724	6161.7835	0	621.87
13	6922	-11.03	-59.07694	3686.3931	6579.21	0	654.59
14	6922	-1.87	-61.20873	3819.3909	7007.2207	0	692.99
15	6922	4.71	-62.2804	3886.2344	7069.1379	0	697.59
16	6922	11.1325	-63.02197	3932.5221	7113.1918	0	692.44
17	6922	17.3975	-63.45315	3959.5394	7161.3883	0	684.71
18	6922	21.265	-63.61152	3969.3903	7178.3661	0	678.93
19	6922	25.4975	-63.58368	3920.8118	7180.6264	0	670.61
20	6922	32.4925	-63.325195	3811.1088	7163.629	0	654.7
21	6922	37.085	-63.003845	3729.5617	7145.7469	0	642.66

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22	6922	42.093945	-62.383475	3657.8369	7089.0934	0	633.88
23	6922	51.278945	-60.81054	3516.6742	6953.1767	0	616.97
24	6922	60.0475	-58.81461	3367.9169	6797.6886	0	595.68
25	6922	67.0425	-56.737475	3239.3973	6651.4428	0	573.65
26	6922	71.77	-55.15001	3141.1687	6538.2311	0	556.84
27	6922	76.64	-53.213555	3021.0816	6354.2153	0	536.39
28	6922	83.92	-49.99115	2821.1999	6043.0194	0	502.37
29	6922	91.2	-46.25061	2588.9368	5679.1056	0	462.9
30	6922	96.676595	-43.122715	2394.5773	5424.6734	0	429.89
31	6922	103.83659	-38.27426	2093.2872	5131.22	0	384.21
32	6922	109.5131	-34.27426	1844.5788	4912.5022	0	346.93
33	6922	112.3083	-32	1703.1107	4710.4823	0	315.11
34	6922	116.2302	-28.694445	1497.4819	4469.9968	0	272.97
35	6922	122.71	-22.364435	1103.4961	3890.8044	0	205.75
36	6922	129.1639	-15.66999	686.82063	3209.7545	0	134.49
37	6922	131.88475	-12.452825	486.51471	2825.1257	0	116.26
38	6922	135.5024	-7.7732355	195.07918	1730.817	886.65866	0
39	6922	141.1811	0.5321645	-322.26205	719.2268	0	600

Slices of Slip Surface: 6460

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	6460	-94.757825	-5.6764675	228.42544	365.85032	0	60.11
2	6460	-90.221335	-11.655691	604.69248	921.02733	0	96.246
3	6460	-84.352375	-18.318185	1025.231	1603.5643	0	162.5
4	6460	-76.41179	-26.318185	1530.8327	2448.0581	0	250.5
5	6460	-71.93075	-30.434375	1791.3965	2886.7271	0	295.78
6	6460	-69.49386	-32.434375	1921.3186	3143.009	0	317.78
7	6460	-61.918675	-38	2287.2564	3787.2932	0	379
8	6460	-50.664815	-45.22123	2765.5487	4581.7645	0	458.43
9	6460	-39.195	-51.135345	3161.2245	5246.1623	0	523.49
10	6460	-32.665	-54.0937	3367.0353	5595.0131	0	557.48
11	6460	-28.7625	-	3465.9104	5812.2972	0	581.65

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			55.542565				
12	6460	-22.2875	-57.735165	3602.6116	6141.72	0	618.42
13	6460	-17.975	-59.042315	3684.2294	6344.9945	0	640.61
14	6460	-11.03	-60.653145	3784.7692	6735.8766	0	670.35
15	6460	-1.87	-62.477	3898.5494	7130.1706	0	705.15
16	6460	4.71	-63.34211	3952.5477	7169.9801	0	707.78
17	6460	11.1325	-63.889845	3986.6477	7193.299	0	700.87
18	6460	17.3975	-64.138145	4002.263	7222.0436	0	691.46
19	6460	21.265	-64.185625	4005.1807	7227.5421	0	684.62
20	6460	25.4975	-64.03938	3949.2764	7217.3179	0	675.17
21	6460	32.4925	-63.587505	3827.4629	7179.6255	0	657.36
22	6460	37.085	-63.140635	3738.0894	7148.9403	0	644.06
23	6460	42.093945	-62.384875	3657.9404	7077.4264	0	633.9
24	6460	51.278945	-60.564115	3501.3009	6915.0092	0	614.43
25	6460	60.0475	-58.33067	3337.7056	6734.4965	0	590.69
26	6460	67.0425	-56.06107	3197.3219	6568.1314	0	566.68
27	6460	71.77	-54.341755	3090.7323	6441.705	0	548.5
28	6460	76.64	-52.265315	2961.9689	6242.7118	0	526.6
29	6460	83.92	-48.827655	2748.556	5909.5057	0	490.34
30	6460	91.2	-44.860545	2502.2305	5522.7081	0	448.51
31	6460	95.4261	-42.3694	2347.4358	5310.9237	0	422.23
32	6460	101.66125	-38	2075.8239	5026.272	0	382.2
33	6460	108.23515	-33.26223	1781.2103	4736.8208	0	329.69
34	6460	110.67205	-31.26223	1656.8019	4572.9215	0	308.19
35	6460	114.94705	-27.49835	1422.6396	4306.0168	0	261.07
36	6460	122.71	-19.707535	937.70416	3628.606	0	178.38
37	6460	127.8876	-14.209185	595.47355	3156.837	0	119.86
38	6460	129.3171	-12.47741	487.63165	2896.5178	0	117.18
39	6460	132.9483	-7.8010695	196.413	1788.3341	919.0961	0
40	6460	138.80415	0.7385835	-335.52037	763.91196	0	600

Slices of Slip Surface: 7363

	Slip	X (ft)	Y (ft)	PWP (psf)	Base Normal	Frictional	Cohesive

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	Surface				Stress (psf)	Strength (psf)	Strength (psf)
1	7363	-84.034585	-5.4589705	223.04238	356.13097	0	58.721
2	7363	-79.44492	-11.5	603.73734	915.76252	0	95
3	7363	-74.418075	-17.297075	969.56923	1502.1226	0	151.27
4	7363	-66.36826	-25.297075	1483.6279	2357.5775	0	239.27
5	7363	-58.821275	-32	1920.5094	3115.8439	0	313
6	7363	-50.693015	-37.87176	2306.9197	3800.4156	0	377.59
7	7363	-39.195	-44.970905	2776.5246	4598.661	0	455.68
8	7363	-32.665	-48.51838	3019.1307	5013.4345	0	496.32
9	7363	-28.7625	-50.27366	3137.0792	5265.2215	0	524.78
10	7363	-22.2875	-52.94946	3304.0934	5648.7292	0	568.15
11	7363	-17.975	-54.560955	3404.6031	5886.0463	0	594.41
12	7363	-13.965	-55.844195	3484.7491	6141.9496	0	616.09
13	7363	-8.095	-57.526815	3589.6824	6524.3734	0	645.06
14	7363	-1.87	-58.997615	3681.4512	6781.7068	0	671.8
15	7363	4.71	-60.23162	3758.5091	6860.8468	0	677.94
16	7363	11.1325	-61.12137	3814.0367	6920.2665	0	673.96
17	7363	17.3975	-61.688375	3849.4009	6982.7822	0	667.33
18	7363	21.265	-61.927625	3864.3008	7008.3277	0	662.21
19	7363	25.4975	-61.983385	3820.8992	7019.3727	0	654.59
20	7363	32.4925	-61.8585	3719.5715	7016.3832	0	639.81
21	7363	37.085	-61.62173	3643.3308	7007.4035	0	628.5
22	7363	42.093945	-61.08877	3577.0687	6960.2061	0	620.59
23	7363	51.278945	-59.669535	3445.4161	6840.7364	0	605.23
24	7363	60.0475	-57.813595	3305.5361	6700.1863	0	585.37
25	7363	67.0425	-55.842525	3183.5681	6565.2388	0	564.42
26	7363	71.77	-54.3249	3089.6821	6459.0692	0	548.33
27	7363	76.64	-52.457775	2973.9177	6282.6297	0	528.58
28	7363	83.92	-49.33655	2780.3472	5981.9969	0	495.6
29	7363	91.2	-45.693705	2554.1928	5628.2495	0	457.13
30	7363	96.301515	-42.868265	2378.7122	5395.375	0	427.3
31	7363	103.60507	-38	2076.139	5101.9673	0	381.81

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32	7363	111.94235	-32	1703.0195	4706.2878	0	315.25
33	7363	116.0738	-28.57947	1490.2766	4459.7767	0	271.84
34	7363	122.71	-22.188035	1092.5428	3878.931	0	203.94
35	7363	129.1236	-15.608565	682.97437	3209.2861	0	133.87
36	7363	131.81525	-12.45338	486.5299	2830.7602	0	116.28
37	7363	135.46095	-7.773822	195.11326	1736.2075	889.75117	0
38	7363	141.1684	0.5322205	-322.26317	722.25213	0	600

Slices of Slip Surface: 6480

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	6480	-94.757825	-5.2670065	202.88084	322.02699	0	58.063
2	6480	-91.89934	-8.7462295	421.76558	639.07886	0	73.9
3	6480	-89.392745	-11.5	595.63679	896.66547	0	95
4	6480	-83.18511	-17.808045	994.35729	1535.2123	0	156.89
5	6480	-75.341705	-24.916805	1444.244	2283.1268	0	235.08
6	6480	-70.260745	-29.10876	1711.9154	2722.2071	0	281.2
7	6480	-66.31544	-32	1901.9761	3074.7107	0	313
8	6480	-60.25327	-36.115835	2173.7375	3566.6987	0	358.27
9	6480	-53.70103	-40.115835	2439.4787	4009.4822	0	402.27
10	6480	-47.742455	-43.384	2658.1576	4373.4454	0	438.22
11	6480	-39.195	-47.33879	2924.3318	4824.0974	0	481.73
12	6480	-32.665	-50.163965	3121.7916	5161.4127	0	514.37
13	6480	-28.7625	-51.55472	3217.0047	5374.1582	0	538.61
14	6480	-22.2875	-53.6638	3348.6468	5697.2847	0	575.65
15	6480	-17.975	-54.924475	3427.3055	5897.6521	0	598.16
16	6480	-11.03	-56.487895	3524.822	6286.364	0	628.71
17	6480	-1.87	-58.26505	3635.7813	6679.7715	0	664.78
18	6480	4.71	-59.119475	3689.0416	6720.7559	0	667.27
19	6480	11.1325	-59.67154	3723.5141	6746.6093	0	659.86
20	6480	17.3975	-59.93816	3740.0791	6779.1228	0	650.1
21	6480	21.265	-60.00215	3744.1115	6787.4818	0	643.1
22	6480	25.4975	-59.883815	3689.9272	6781.3218	0	633.57
23	6480	32.4925	-	3571.7009	6751.8028	0	615.76

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			59.488745				
24	6480	37.085	-59.086865	3485.1542	6726.9702	0	602.54
25	6480	42.093945	-58.39448	3408.9608	6664.457	0	592.92
26	6480	51.278945	-56.714655	3261.1067	6520.821	0	574.84
27	6480	60.0475	-54.64532	3107.7766	6361.1332	0	552.73
28	6480	67.0425	-52.53819	2977.4749	6214.5398	0	530.35
29	6480	71.77	-50.941565	2878.5697	6102.3661	0	513.41
30	6480	77.655175	-48.5622	2731.0151	5877.5612	0	488.24
31	6480	86.96553	-44.316185	2467.615	5471.0451	0	443.34
32	6480	93.230355	-41.10188	2268.0006	5165.5944	0	410.85
33	6480	99.7826	-37.10188	2019.4283	4900.7637	0	374.65
34	6480	106.9426	-32.424145	1728.7235	4619.4746	0	321.62
35	6480	109.72865	-30.424145	1604.3636	4486.7629	0	299.98
36	6480	114.00365	-27.01789	1392.5496	4256.8989	0	256.43
37	6480	122.71	-19.32574	913.87585	3615.3962	0	174.44
38	6480	128.0063	-14.30785	601.63971	3156.4612	0	120.83
39	6480	129.7245	-12.47191	487.34765	2903.2457	0	117.04
40	6480	133.84075	-7.794016	196.1184	1823.5465	939.59606	0
41	6480	140.37895	0.5574085	-323.96742	796.10005	0	600

Slices of Slip Surface: 6921

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	6921	-89.10062	-5.494188	221.114	347.62825	0	59.039
2	6921	-83.90129	-11.5	600.11638	901.34366	0	95
3	6921	-76.508405	-18.78657	1060.8481	1642.2318	0	167.65
4	6921	-67.376475	-26.78657	1574.0851	2489.5908	0	255.65
5	6921	-60.4849	-32	1916.4459	3089.3872	0	313
6	6921	-54.49264	-35.98385	2179.6721	3566.1249	0	356.82
7	6921	-48.204215	-39.737345	2429.4579	3984.1946	0	398.11
8	6921	-44.5914	-41.753495	2564.0154	4211.9468	0	420.29
9	6921	-38.7264	-44.538775	2750.6114	4530.695	0	450.93
10	6921	-32.665	-47.353935	2946.4736	4866.2846	0	483.55
11	6921	-28.7625	-48.86816	3049.4182	5093.0867	0	509.61
12	6921	-22.2875	-51.17189	3193.0941	5438.1032	0	549.48
13	6921	-17.975	-52.555065	3279.4454	5651.9858	0	573.74
			-				

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14	6921	-11.03	54.295715	3388.0206	6060.5735	0	606.8
15	6921	-1.87	-56.295905	3512.831	6478.5363	0	645.91
16	6921	4.71	-57.29588	3575.261	6535.0748	0	649.77
17	6921	11.1325	-57.981565	3618.121	6575.0326	0	643.43
18	6921	17.3975	-58.37124	3642.3325	6620.5668	0	634.67
19	6921	21.265	-58.50869	3650.9324	6636.6243	0	628.28
20	6921	25.4975	-58.466545	3601.4533	6638.281	0	619.39
21	6921	32.4925	-58.19342	3490.8429	6621.7153	0	602.61
22	6921	37.085	-57.86887	3409.1694	6604.5953	0	590.07
23	6921	42.093945	-57.256525	3337.9902	6551.0703	0	581.23
24	6921	51.278945	-55.71747	3198.8359	6422.6213	0	564.58
25	6921	60.0475	-53.7763	3053.6024	6276.6803	0	543.78
26	6921	67.0425	-51.76609	2929.2547	6140.4018	0	522.39
27	6921	71.77	-50.233165	2834.3552	6034.4831	0	506.1
28	6921	77.436175	-48.025925	2697.5255	5827.4756	0	482.73
29	6921	86.308525	-44.12599	2455.6352	5455.3521	0	441.45
30	6921	92.79235	-40.890375	2254.6385	5146.4667	0	409.08
31	6921	99.5494	-36.890375	2006.1984	4878.0002	0	372.83
32	6921	106.7094	-32.29142	1720.3707	4602.4394	0	320.35
33	6921	109.55745	-30.29142	1596.0094	4478.688	0	298.69
34	6921	113.83245	-26.927895	1386.8846	4248.787	0	255.56
35	6921	122.71	-19.189925	905.41075	3607.167	0	173.04
36	6921	127.96435	-14.26203	598.77222	3160.6279	0	120.38
37	6921	129.65225	-12.47249	487.38852	2909.0555	0	117.06
38	6921	133.79805	-7.794628	196.14935	1828.3457	942.34903	0
39	6921	140.3662	0.5574445	-323.96836	798.29931	0	600

Slices of Slip Surface: 6900

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	6900	-89.06907	-5.494188	221.14558	347.39718	0	59.039
2	6900	-83.810285	-11.5	600.19306	901.09391	0	95
3	6900	-76.44895	-18.67562	1053.9246	1629.9643	0	166.43
4	6900	-67.174445	-26.67562	1567.7158	2477.6345	0	254.43
5	6900	-60.02224	-32	1917.518	3089.2007	0	313
6	6900	-54.101695	-35.86375	2173.21	3552.5959	0	355.5

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7	6900	-48.0739	-39.3958	2408.3963	3946.356	0	394.35
8	6900	-44.14937	-41.53205	2551.1672	4187.7742	0	417.85
9	6900	-38.28437	-44.27193	2734.9093	4502.0095	0	447.99
10	6900	-32.665	-46.81515	2912.8072	4806.8281	0	477.64
11	6900	-28.7625	-48.2995	3013.9126	5030.3705	0	503.47
12	6900	-22.2875	-50.55364	3154.5774	5370.1034	0	542.99
13	6900	-17.975	-51.903735	3238.7973	5580.5263	0	567.02
14	6900	-13.965	-52.96609	3305.1278	5814.0878	0	586.94
15	6900	-8.095	-54.343755	3391.0788	6165.6281	0	613.66
16	6900	-1.87	-55.518695	3464.431	6393.4513	0	638.46
17	6900	4.71	-56.465645	3523.4612	6444.2887	0	641.81
18	6900	11.1325	-57.098305	3562.9002	6478.4778	0	634.84
19	6900	17.3975	-57.43475	3583.9641	6518.2998	0	625.44
20	6900	21.265	-57.53871	3590.4273	6530.8635	0	618.65
21	6900	25.4975	-57.458525	3538.6503	6528.4954	0	609.3
22	6900	32.4925	-57.120805	3423.885	6504.9966	0	591.73
23	6900	37.085	-56.752555	3339.4915	6483.3384	0	578.64
24	6900	42.093945	-56.08986	3265.1901	6424.4884	0	569.25
25	6900	51.278945	-54.453295	3119.9748	6286.027	0	551.58
26	6900	60.0475	-52.412505	2968.4024	6129.7785	0	529.73
27	6900	67.0425	-50.315395	2838.6657	5984.6623	0	507.43
28	6900	71.77	-48.720575	2739.9697	5872.8361	0	490.49
29	6900	76.570385	-46.817645	2622.016	5694.7843	0	470.34
30	6900	83.71116	-43.682395	2427.4673	5395.8639	0	437.15
31	6900	91.060775	-39.94853	2195.6341	5035.7844	0	401.18
32	6900	97.9992	-35.94853	1947.1795	4730.8851	0	364.9
33	6900	104.06505	-32	1701.8308	4484.6481	0	318.43
34	6900	108.06585	-29.19138	1527.1639	4306.4147	0	280.57
35	6900	113.435	-24.897695	1260.0738	4038.4912	0	234.83
36	6900	121.61535	-17.706315	812.67917	3464.7356	0	158.13
37	6900	126.61535	-12.85612	510.84487	3004.2138	0	118.16
38	6900	128.04275	-11.354405	417.34921	2870.702	0	117.64
39	6900	131.13955	-7.8237765	197.53302	1894.2923	979.6244	0

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40	6900	137.9434	0.764744	-337.29002	846.00015	0	600

Slices of Slip Surface: 7321

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7321	-83.97351	-5.4589705	223.08895	356.14343	0	58.719
2	7321	-79.269915	-11.5	603.8866	916.42723	0	95
3	7321	-74.304145	-17.095895	957.11002	1481.5034	0	149.05
4	7321	-65.993775	-25.095895	1472.046	2337.9915	0	237.05
5	7321	-57.969685	-32	1922.6473	3117.6868	0	313
6	7321	-50.21591	-37.419985	2279.9197	3752.2668	0	372.62
7	7321	-44.072635	-41.419985	2544.3141	4200.7315	0	416.62
8	7321	-38.207635	-44.54972	2752.4344	4555.9885	0	451.05
9	7321	-32.665	-47.40868	2949.8851	4893.3404	0	484.15
10	7321	-28.7625	-49.100605	3063.8551	5138.3344	0	512.12
11	7321	-22.2875	-51.671675	3224.2402	5510.3061	0	554.73
12	7321	-17.975	-53.2136	3320.526	5739.8844	0	580.52
13	7321	-13.965	-54.43199	3396.4971	5989.0122	0	601.79
14	7321	-8.095	-56.01919	3495.5191	6360.9481	0	630.19
15	7321	-1.87	-57.387595	3581.0026	6606.952	0	656.37
16	7321	4.71	-58.511505	3651.0512	6673.7414	0	661.43
17	7321	11.1325	-59.29133	3699.8482	6721.1182	0	656.16
18	7321	17.3975	-59.74807	3728.2536	6771.3094	0	648.22
19	7321	21.265	-59.917965	3738.8689	6789.3119	0	642.27
20	7321	25.4975	-59.894935	3690.7026	6792.0192	0	633.69
21	7321	32.4925	-59.63618	3580.8757	6774.2442	0	617.26
22	7321	37.085	-59.30877	3499.0097	6756.5172	0	604.82
23	7321	42.093945	-58.671145	3426.1419	6696.8321	0	595.76
24	7321	51.278945	-57.048645	3281.8649	6555.6488	0	578.27
25	7321	60.0475	-54.984225	3128.9852	6393.3605	0	556.22
26	7321	67.0425	-52.830185	2995.7115	6239.2823	0	533.36
27	7321	71.77	-51.18173	2893.54	6120.9646	0	515.89

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28	7321	77.53692	-48.745135	2742.4486	5886.5394	0	490.14
29	7321	86.610765	-44.387845	2471.9447	5464.4734	0	444.12
30	7321	92.993845	-40.896845	2255.168	5128.2457	0	409.1
31	7321	99.1371	-36.896845	2006.5163	4843.7345	0	372.98
32	7321	106.0321	-32	1702.1231	4524.4052	0	317.64
33	7321	108.895	-29.784365	1564.2627	4403.7604	0	286.4
34	7321	113.435	-25.757035	1313.7414	4099.844	0	243.66
35	7321	121.48035	-17.97267	829.27546	3469.6851	0	160.92
36	7321	126.48035	-12.553105	491.9096	2956.0394	0	118.21
37	7321	130.21335	-7.880123	200.9099	1868.0408	962.5185	0
38	7321	136.38305	0.945166	-348.80072	816.1021	0	600

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```
"Reach 5c(2)-1st Stage"
"FS to PS; SWL = 7.0"
20 10 1 40 1 0
11 4 2 1
166.67 200 238.18 377.04
0 62.4 0 0 62.4 0 0 62.4 0 0 62.4 0 0
0 115 600 600 115 600 600 115 600 600 115 600 600
0 102 600 600 102 600 600 102 600 600 102 600 600
30 122 0 0 122 0 0 122 0 0 122 0 0
0 90 50 83 96 300 300 87 150 150 87 100 100
0 90 50 83 96 300 300 87 150 150 87 100 100
0 90 99 115 97 300 300 88 150 150 100 100 100
0 100 203 291 102 338 375 100 230 310 100 184 268
0 122 313 335 113 419 438 118 345 365 118 289 310
0 105 379 423 116 476 514 106 395 425 106 367 409
0 105 632 841 105 695 875 106 620 815 106 609 808

0 7 262.5 6.95 294.84 8 317.71 14.00 327.71 14.00 367.4 4
492.4 0.88 509.2 -4.74 535.91 -4.85 537.67 -5.31
653.14 -5.30 656.4 -4.54 700 -4.50 9999.9 0

0 -2.13 8.58 -2.12 43.12 -2.03 80.25 -2.26 107.88 -1.99
128.58 -1.72 154.94 -0.68 166.67 -0.27 168 0 180.95 1.53
183.1 1.81 194.84 5.5 208 5.2 294.84 8 317.71 14 327.71 14
367.4 4 492.4 0.875 509.2 -4.74 535.91 -4.85 549.9 -8.43
552.36 -9 588.58 -11.38 607.03 -11.01 614.91 -10.86
633.36 -9 639.18 -8.55 656.4 -4.54 700 -4.5 9999.9 0

0 -2.13 8.58 -2.12 43.12 -2.03 80.25 -2.26 107.88 -1.99
128.58 -1.72 154.94 -0.68 166.67 -0.27 168 0 180.95 1.53
183.1 1.81 194.84 5.5 208 5.2 220.53 0.36 222 0 235.99 -3
238.18 -3.47 246 -4.06 256.55 -4.85 377.04 -4.54
380.67 -4.21 400.3 -4.33 420.54 -4.34 426.87 -4.54
440.61 -4.57 450 -4.5 509.2 -4.74 535.91 -4.85 549.9 -8.43
552.36 -9 588.52 -11.38 607.03 -11.01 614.91 -10.86 633.36 -9
639.18 -8.55 656.4 -4.54 700 -4.5 9999.9 0

0 -2.13 8.58 -2.12 43.12 -2.03 80.25 -2.26 107.88 -1.99
128.58 -1.72 154.94 -0.68 166.67 -0.27 168 0 222 0 235.99 -3
238.18 -3.47 246 -4.06 256.55 -4.85 377.04 -4.54 380.67 -4.21
400.3 -4.33 420.54 -4.34 426.87 -4.54 440.61 -4.57 450 -4.5
509.2 -4.74 535.91 -4.85 549.9 -8.43 552.36 -9 588.52 -11.38
607.03 -11.01 614.91 -10.86 633.36 -9 639.18 -8.55 656.4 -4.54
700 -4.5 9999.9 0

0 -2.13 8.58 -2.12 43.12 -2.03 80.25 -2.26 107.88 -1.99
128.58 -1.72 154.94 -0.68 166.67 -0.27 168 0 222 0 235.99 -3
238.18 -3.47 246 -4.06 256.55 -4.85 270.54 -8.43 273 -9
309.16 -11.38 327.67 -11.01 335.55 -10.86 354 -9 359.82 -8.55
377.04 -4.54 380.67 -4.21 400.3 -4.33 420.54 -4.34 426.87 -4.54
440.61 -4.57 450 -4.5 509.2 -4.74 535.91 -4.85 549.9 -8.43
552.36 -9 588.52 -11.38 607.03 -11.01 614.91 -10.86 633.36 -9
639.18 -8.55 656.4 -4.54 700 -4.5 9999.9 0

0 -2.23 8.58 -2.22 43.12 -2.13 80.25 -2.36 107.88 -2.09
128.58 -1.82 154.94 -0.78 166.67 -0.37 168 -0.1 222 -0.1
235.99 -3.1 238.18 -3.57 246 -4.16 256.55 -4.95 270.54 -8.53
273 -9.1 309.16 -11.48 327.67 -11.11 335.55 -10.96 354 -9.1
359.82 -8.65 377.04 -4.64 380.67 -4.31 400.3 -4.43
420.54 -4.44 426.87 -4.64 440.61 -4.67 450 -4.6 509.2 -4.84
535.91 -4.95 549.9 -8.53 552.36 -9.1 588.52 -11.48 607.03 -11.11
614.91 -10.96 633.36 -9.1 639.18 -8.65 656.4 -4.64 700 -4.6
9999.9 0

0 -9 700 -9 9999.9 0
0 -14 700 -14 9999.9 0
0 -30 700 -30 9999.9 0
0 -34 700 -34 9999.9 0
0 -42 700 -42 9999.9 0
0 -80 700 -80 9999.9 0

0 7 262 7 400.3 -4.33 420.54 -4.34 426.87 -4.54 440.61 -4.57
450 -4.5 492.25 -4.62 509.2 -4.74 535.91 -4.85 537.6 -5.3
654 -5.3 656.4 -4.54 700 -4.5 9999.9 0
```



```
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

6 330 -9 410 -9 1
410
7 335 -14 510 -14 1
510
8 340 -30 510 -30 1
510
9 345 -34 500 -34 1
500
10 350 -42 510 -42 1
510
```

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**** STABILITY WITH UPLIFT ****

"Reach 5c(2)-1st Stage"
"FS to PS; SWL = 7.0"
12 PROFILES
4VERTICALS
UPLIFT WITH 1 PIEZOMETRIC GRADE LINES

* * STRATUM 6 ACT. WEDGE LOC. 330.0 EL. -9.0 PASS.WEDGE LOC. 410.0 EL. -9.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-9.0	1188.	1000.	83.	115.	83.
8.6	-9.0	1188.	1000.	83.	115.	83.
43.1	-9.0	1190.	1000.	83.	115.	83.
80.3	-9.0	1183.	1000.	83.	115.	83.
107.9	-9.0	1191.	1000.	83.	115.	83.
128.6	-9.0	1198.	1000.	83.	115.	83.
154.9	-9.0	1226.	1000.	83.	115.	83.
166.7	-9.0	1237.	1000.	83.	115.	83.
168.0	-9.0	1247.	1000.	92.	122.	92.
180.9	-9.0	1328.	1000.	176.	194.	176.
183.1	-9.0	1343.	1000.	190.	206.	190.
194.8	-9.0	1508.	1000.	266.	271.	266.
SHEAR STRENGTHS ARE EQUAL 300.0 AT DIST. 200.0						
200.0	-9.0	1512.	1000.	300.	300.	300.
208.0	-9.0	1487.	1000.	269.	269.	269.
220.5	-9.0	1545.	1000.	219.	219.	219.
222.0	-9.0	1549.	1000.	214.	214.	214.
236.0	-9.0	1625.	1000.	159.	159.	159.
238.2	-9.0	1639.	1000.	150.	150.	150.
246.0	-9.0	1669.	1000.	147.	147.	147.
256.5	-9.0	1709.	1000.	143.	143.	143.
262.0	-9.0	1767.	1000.	141.	141.	141.
262.5	-9.0	1772.	997.	141.	141.	141.
270.5	-9.0	1874.	956.	138.	138.	138.
273.0	-9.0	1903.	944.	137.	137.	137.
FAILURE SURFACE IN STRATA 6 EL. -9.0 DIST. 273.0 STRENGTH 137.5						
294.8	-9.0	1985.	832.	130.	999999.	130.
309.2	-9.0	2417.	759.	124.	999999.	124.
317.7	-9.0	2675.	715.	121.	999999.	121.
327.7	-9.0	2675.	664.	118.	999999.	118.
327.7	-9.0	2675.	664.	118.	999999.	118.
335.5	-9.0	2448.	623.	115.	999999.	115.
SHEAR STRENGTHS ARE EQUAL 108.3 AT DIST. 354.0						
354.0	-9.0	1914.	529.	108.	108.	108.
359.8	-9.0	1729.	499.	106.	106.	106.
367.4	-9.0	1448.	460.	103.	103.	103.
377.0	-9.0	1342.	411.	100.	100.	100.
380.7	-9.0	1323.	392.	100.	100.	100.
400.3	-9.0	1270.	292.	100.	100.	100.
420.5	-9.0	1212.	291.	100.	100.	100.
426.9	-9.0	1199.	279.	100.	100.	100.
440.6	-9.0	1161.	277.	100.	100.	100.
450.0	-9.0	1132.	281.	100.	100.	100.
492.3	-9.0	1015.	274.	100.	100.	100.
492.4	-9.0	1014.	274.	100.	100.	100.
509.2	-9.0	371.	266.	100.	100.	100.
535.9	-9.0	361.	259.	100.	100.	100.
537.6	-9.0	322.	231.	100.	100.	100.
537.7	-9.0	321.	231.	100.	100.	100.
549.9	-9.0	244.	231.	100.	100.	100.
552.4	-9.0	230.	231.	100.	100.	100.
FAILURE SURFACE IN STRATA 6 EL. -9.0 DIST. 552.4 STRENGTH 100.0						
588.5	-9.0	231.	231.	100.	999999.	100.
588.6	-9.0	231.	231.	100.	999999.	100.
607.0	-9.0	231.	231.	100.	999999.	100.

614.9	-9.0	231.	231.	100.	999999.	100.
SHEAR STRENGTHS ARE EQUAL 100.0 AT DIST. 633.4						
633.4	-9.0	231.	231.	100.	100.	100.
639.2	-9.0	242.	231.	100.	100.	100.
653.1	-9.0	322.	231.	100.	100.	100.
654.0	-9.0	340.	231.	100.	100.	100.
656.4	-9.0	388.	279.	100.	100.	100.
700.0	-9.0	391.	281.	100.	100.	100.

ASSUMED CRIT. PASSIVE LOC. 410.0 EL. -9.0 DP 7687. RP 9310.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
330.0	-9.0	29378.	27800.	0.	8398.	2.10
335.0	-9.0	28994.	28346.	0.	7818.	2.13
340.0	-9.0	27435.	28228.	0.	7247.	2.27
345.0	-9.0	25078.	27400.	0.	6685.	2.50
350.0	-9.0	22072.	26115.	0.	6132.	2.89
355.0	-9.0	19039.	23494.	0.	5587.	3.38

CRIT. ACTIVE LOC 330.0 EL -9.0 DA 29378. RA 27800.

DIS.	EL.	DP	RP	DB	RB	FS
410.0	-9.0	7687.	9310.	0.	8398.	2.10

* * STRATUM 7 ACT. WEDGE LOC. 335.0 EL. -14.0 PASS.WEDGE LOC. 510.0 EL. -14.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-14.0	1638.	1313.	115.	291.	115.
8.6	-14.0	1638.	1313.	115.	291.	115.
43.1	-14.0	1640.	1313.	115.	291.	115.
80.3	-14.0	1633.	1313.	115.	291.	115.
107.9	-14.0	1641.	1313.	115.	291.	115.
128.6	-14.0	1648.	1313.	115.	291.	115.
154.9	-14.0	1676.	1313.	115.	291.	115.
166.7	-14.0	1687.	1313.	115.	291.	115.
168.0	-14.0	1698.	1313.	122.	294.	122.
180.9	-14.0	1793.	1313.	194.	327.	194.
183.1	-14.0	1810.	1313.	206.	332.	206.
194.8	-14.0	1987.	1313.	271.	362.	271.
200.0	-14.0	1997.	1313.	300.	375.	300.
208.0	-14.0	1963.	1313.	269.	361.	269.
220.5	-14.0	2006.	1313.	219.	340.	219.
222.0	-14.0	2008.	1313.	214.	338.	214.
236.0	-14.0	2068.	1313.	159.	314.	159.
238.2	-14.0	2079.	1313.	150.	310.	150.
246.0	-14.0	2112.	1313.	147.	308.	147.
256.5	-14.0	2156.	1313.	143.	304.	143.
262.0	-14.0	2217.	1313.	141.	303.	141.
262.5	-14.0	2222.	1310.	141.	303.	141.
270.5	-14.0	2328.	1269.	138.	300.	138.
273.0	-14.0	2357.	1256.	137.	299.	137.
294.8	-14.0	2491.	1144.	130.	293.	130.
309.2	-14.0	2954.	1071.	124.	289.	124.
317.7	-14.0	3209.	1027.	121.	286.	121.
327.7	-14.0	3206.	976.	118.	283.	118.
327.7	-14.0	3206.	976.	118.	283.	118.
335.5	-14.0	2977.	936.	115.	281.	115.
354.0	-14.0	2403.	841.	108.	275.	108.
359.8	-14.0	2222.	812.	106.	273.	106.
367.4	-14.0	1940.	768.	103.	271.	103.

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377.0	-14.0	1842.	723.	100.	268.	100.
380.7	-14.0	1823.	705.	100.	268.	100.
400.3	-14.0	1770.	604.	100.	268.	100.
420.5	-14.0	1712.	604.	100.	268.	100.
426.9	-14.0	1699.	591.	100.	268.	100.
440.6	-14.0	1661.	589.	100.	268.	100.
450.0	-14.0	1632.	594.	100.	268.	100.
492.3	-14.0	1515.	586.	100.	268.	100.
492.4	-14.0	1514.	586.	100.	268.	100.
509.2	-14.0	871.	579.	100.	268.	100.
535.9	-14.0	861.	572.	100.	268.	100.
537.6	-14.0	822.	544.	100.	268.	100.
537.7	-14.0	821.	544.	100.	268.	100.
549.9	-14.0	744.	544.	100.	268.	100.
552.4	-14.0	729.	544.	100.	268.	100.
588.5	-14.0	640.	544.	100.	268.	100.
588.6	-14.0	640.	544.	100.	268.	100.
607.0	-14.0	654.	544.	100.	268.	100.
614.9	-14.0	659.	544.	100.	268.	100.
633.4	-14.0	729.	544.	100.	268.	100.
639.2	-14.0	742.	544.	100.	268.	100.
653.1	-14.0	822.	544.	100.	268.	100.
654.0	-14.0	840.	544.	100.	268.	100.
656.4	-14.0	888.	591.	100.	268.	100.
700.0	-14.0	891.	594.	100.	268.	100.

ASSUMED CRIT. PASSIVE LOC. 510.0 EL. -14.0 DP 3874. RP 1844.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
335.0	-14.0	43524.	28960.	0.	17818.	1.23
340.0	-14.0	42382.	29488.	0.	17247.	1.26
345.0	-14.0	40031.	29352.	0.	16685.	1.32
350.0	-14.0	36886.	28506.	0.	16132.	1.41
355.0	-14.0	33096.	27203.	0.	15587.	1.53
360.0	-14.0	29280.	24564.	0.	15052.	1.63

CRIT. ACTIVE LOC 335.0 EL -14.0 DA 43524. RA 28960.

DIS.	EL.	DP	RP	DB	RB	FS
510.0	-14.0	3874.	1844.	0.	17818.	1.23

* * STRATUM 8 ACT. WEDGE LOC. 340.0 EL. -30.0 PASS.WEDGE LOC. 510.0 EL. -30.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-30.0	3238.	2313.	291.	335.	291.
8.6	-30.0	3238.	2313.	291.	335.	291.
43.1	-30.0	3240.	2313.	291.	335.	291.
80.3	-30.0	3233.	2313.	291.	335.	291.
107.9	-30.0	3241.	2313.	291.	335.	291.
128.6	-30.0	3248.	2313.	291.	335.	291.
154.9	-30.0	3276.	2313.	291.	335.	291.
166.7	-30.0	3287.	2313.	291.	335.	291.
168.0	-30.0	3300.	2313.	294.	339.	294.
180.9	-30.0	3407.	2313.	327.	379.	327.
183.1	-30.0	3426.	2313.	332.	386.	332.
194.8	-30.0	3615.	2313.	362.	422.	362.
200.0	-30.0	3629.	2313.	375.	438.	375.
208.0	-30.0	3588.	2313.	361.	423.	361.
220.5	-30.0	3620.	2313.	340.	399.	340.
222.0	-30.0	3621.	2313.	338.	397.	338.

236.0	-30.0	3670.	2313.	314.	369.	314.
238.2	-30.0	3679.	2313.	310.	365.	310.
246.0	-30.0	3712.	2313.	308.	362.	308.
256.5	-30.0	3756.	2313.	304.	358.	304.
262.0	-30.0	3817.	2313.	303.	356.	303.
262.5	-30.0	3822.	2310.	303.	355.	303.
270.5	-30.0	3928.	2269.	300.	352.	300.
273.0	-30.0	3957.	2256.	299.	351.	299.
294.8	-30.0	4091.	2144.	293.	343.	293.
309.2	-30.0	4554.	2071.	289.	337.	289.
317.7	-30.0	4809.	2027.	286.	333.	286.
327.7	-30.0	4806.	1976.	283.	330.	283.
327.7	-30.0	4806.	1976.	283.	330.	283.
335.5	-30.0	4577.	1936.	281.	326.	281.
354.0	-30.0	4003.	1841.	275.	319.	275.
359.8	-30.0	3822.	1812.	273.	317.	273.
367.4	-30.0	3544.	1773.	271.	314.	271.
377.0	-30.0	3442.	1723.	268.	310.	268.
380.7	-30.0	3423.	1705.	268.	310.	268.
400.3	-30.0	3370.	1604.	268.	310.	268.
420.5	-30.0	3312.	1604.	268.	310.	268.
426.9	-30.0	3299.	1591.	268.	310.	268.
440.6	-30.0	3261.	1589.	268.	310.	268.
450.0	-30.0	3232.	1594.	268.	310.	268.
492.3	-30.0	3115.	1586.	268.	310.	268.
492.4	-30.0	3114.	1586.	268.	310.	268.
509.2	-30.0	2471.	1579.	268.	310.	268.
535.9	-30.0	2461.	1572.	268.	310.	268.
537.6	-30.0	2422.	1544.	268.	310.	268.
537.7	-30.0	2421.	1544.	268.	310.	268.
549.9	-30.0	2344.	1544.	268.	310.	268.
552.4	-30.0	2329.	1544.	268.	310.	268.
588.5	-30.0	2240.	1544.	268.	310.	268.
588.6	-30.0	2240.	1544.	268.	310.	268.
607.0	-30.0	2254.	1544.	268.	310.	268.
614.9	-30.0	2259.	1544.	268.	310.	268.
633.4	-30.0	2329.	1544.	268.	310.	268.
639.2	-30.0	2342.	1544.	268.	310.	268.
653.1	-30.0	2422.	1544.	268.	310.	268.
654.0	-30.0	2440.	1544.	268.	310.	268.
656.4	-30.0	2488.	1591.	268.	310.	268.
700.0	-30.0	2491.	1594.	268.	310.	268.

ASSUMED CRIT. PASSIVE LOC. 510.0 EL. -30.0 DP 30498. RP 7718.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
340.0	-30.0	102829.	32931.	0.	45767.	1.19
345.0	-30.0	102548.	34100.	0.	44375.	1.20
350.0	-30.0	100795.	35092.	0.	42991.	1.22
355.0	-30.0	97427.	35647.	0.	41613.	1.27
360.0	-30.0	92810.	35684.	0.	40244.	1.34
365.0	-30.0	87243.	34770.	0.	38882.	1.43

CRIT. ACTIVE LOC 340.0 EL -30.0 DA 102829. RA 32931.

DIS.	EL.	DP	RP	DB	RB	FS
510.0	-30.0	30498.	7718.	0.	45767.	1.19

* * STRATUM 9 ACT. WEDGE LOC. 345.0 EL. -34.0 PASS.WEDGE LOC. 500.0 EL. -34.0

ASSUMED FAILURE SURFACE DATA

DIST. ELEV. WT. UPLIFT STR 1 STR 2 STR USED

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.0	-34.0	3726.	2563.	335.	423.	335.
8.6	-34.0	3726.	2563.	335.	423.	335.
43.1	-34.0	3728.	2563.	335.	423.	335.
80.3	-34.0	3721.	2563.	335.	423.	335.
107.9	-34.0	3729.	2563.	335.	423.	335.
128.6	-34.0	3736.	2563.	335.	423.	335.
154.9	-34.0	3764.	2563.	335.	423.	335.
166.7	-34.0	3775.	2563.	335.	423.	335.
168.0	-34.0	3786.	2563.	339.	427.	339.
180.9	-34.0	3880.	2563.	379.	462.	379.
183.1	-34.0	3896.	2563.	386.	468.	386.
194.8	-34.0	4072.	2563.	422.	500.	422.
200.0	-34.0	4081.	2563.	438.	514.	438.
208.0	-34.0	4044.	2563.	423.	495.	423.
220.5	-34.0	4083.	2563.	399.	466.	399.
222.0	-34.0	4085.	2563.	396.	463.	396.
236.0	-34.0	4140.	2563.	369.	430.	369.
238.2	-34.0	4151.	2563.	365.	425.	365.
246.0	-34.0	4184.	2563.	362.	424.	362.
256.5	-34.0	4228.	2563.	358.	423.	358.
262.0	-34.0	4289.	2563.	356.	422.	356.
262.5	-34.0	4294.	2560.	355.	422.	355.
270.5	-34.0	4400.	2519.	352.	421.	352.
273.0	-34.0	4429.	2506.	351.	421.	351.
294.8	-34.0	4563.	2394.	343.	418.	343.
309.2	-34.0	5026.	2321.	337.	417.	337.
317.7	-34.0	5281.	2277.	333.	416.	333.
327.7	-34.0	5278.	2226.	330.	415.	330.
327.7	-34.0	5278.	2226.	330.	415.	330.
335.5	-34.0	5049.	2186.	326.	414.	326.
354.0	-34.0	4475.	2091.	319.	412.	319.
359.8	-34.0	4294.	2062.	317.	411.	317.
367.4	-34.0	4016.	2023.	314.	410.	314.
377.0	-34.0	3914.	1973.	310.	409.	310.
380.7	-34.0	3895.	1955.	310.	409.	310.
400.3	-34.0	3842.	1854.	310.	409.	310.
420.5	-34.0	3784.	1854.	310.	409.	310.
426.9	-34.0	3771.	1841.	310.	409.	310.
440.6	-34.0	3733.	1839.	310.	409.	310.
450.0	-34.0	3704.	1844.	310.	409.	310.
492.3	-34.0	3587.	1836.	310.	409.	310.
492.4	-34.0	3586.	1836.	310.	409.	310.
509.2	-34.0	2943.	1829.	310.	409.	310.
535.9	-34.0	2933.	1822.	310.	409.	310.
537.6	-34.0	2894.	1794.	310.	409.	310.
537.7	-34.0	2893.	1794.	310.	409.	310.
549.9	-34.0	2816.	1794.	310.	409.	310.
552.4	-34.0	2801.	1794.	310.	409.	310.
588.5	-34.0	2712.	1794.	310.	409.	310.
588.6	-34.0	2712.	1794.	310.	409.	310.
607.0	-34.0	2726.	1794.	310.	409.	310.
614.9	-34.0	2731.	1794.	310.	409.	310.
633.4	-34.0	2801.	1794.	310.	409.	310.
639.2	-34.0	2814.	1794.	310.	409.	310.
653.1	-34.0	2894.	1794.	310.	409.	310.
654.0	-34.0	2912.	1794.	310.	409.	310.
656.4	-34.0	2960.	1841.	310.	409.	310.
700.0	-34.0	2963.	1844.	310.	409.	310.

ASSUMED CRIT. PASSIVE LOC. 500.0 EL. -34.0 DP 42996. RP 10035.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
345.0	-34.0	121203.	35588.	0.	48253.	1.20
350.0	-34.0	120026.	36739.	0.	46645.	1.21
355.0	-34.0	117309.	37599.	0.	45046.	1.25
360.0	-34.0	113058.	38058.	0.	43457.	1.31
365.0	-34.0	107527.	37853.	0.	41879.	1.39
370.0	-34.0	101153.	36937.	0.	40311.	1.49

CRIT. ACTIVE LOC 345.0 EL -34.0 DA 121203. RA 35588.

DIS.	EL.	DP	RP	DB	RB	FS
500.0	-34.0	42996.	10035.	0.	48253.	1.20

* * STRATUM 10 ACT. WEDGE LOC. 350.0 EL. -42.0 PASS.WEDGE LOC. 510.0 EL. -42.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-42.0	4566.	3063.	423.	841.	423.
8.6	-42.0	4566.	3063.	423.	841.	423.
43.1	-42.0	4568.	3063.	423.	841.	423.
80.3	-42.0	4561.	3063.	423.	841.	423.
107.9	-42.0	4569.	3063.	423.	841.	423.
128.6	-42.0	4576.	3063.	423.	841.	423.
154.9	-42.0	4604.	3063.	423.	841.	423.
166.7	-42.0	4615.	3063.	423.	841.	423.
168.0	-42.0	4630.	3063.	427.	842.	427.
180.9	-42.0	4757.	3063.	462.	856.	462.
183.1	-42.0	4780.	3063.	468.	858.	468.
194.8	-42.0	4986.	3063.	500.	870.	500.
200.0	-42.0	5009.	3063.	514.	875.	514.
208.0	-42.0	4956.	3063.	495.	862.	495.
220.5	-42.0	4968.	3063.	466.	843.	466.
222.0	-42.0	4967.	3063.	463.	840.	463.
236.0	-42.0	4993.	3063.	430.	818.	430.
238.2	-42.0	4999.	3063.	425.	815.	425.
246.0	-42.0	5032.	3063.	424.	815.	424.
256.5	-42.0	5076.	3063.	423.	814.	423.
262.0	-42.0	5137.	3063.	422.	814.	422.
262.5	-42.0	5142.	3060.	422.	814.	422.
270.5	-42.0	5248.	3019.	421.	813.	421.
273.0	-42.0	5277.	3006.	421.	813.	421.
294.8	-42.0	5411.	2894.	418.	812.	418.
309.2	-42.0	5874.	2821.	417.	811.	417.
317.7	-42.0	6129.	2777.	416.	811.	416.
327.7	-42.0	6126.	2726.	415.	810.	415.
327.7	-42.0	6126.	2726.	415.	810.	415.
335.5	-42.0	5897.	2686.	414.	810.	414.
354.0	-42.0	5323.	2591.	412.	809.	412.
359.8	-42.0	5142.	2562.	411.	809.	411.
367.4	-42.0	4864.	2523.	410.	808.	410.
377.0	-42.0	4762.	2473.	409.	808.	409.
380.7	-42.0	4743.	2455.	409.	808.	409.
400.3	-42.0	4690.	2354.	409.	808.	409.
420.5	-42.0	4632.	2354.	409.	808.	409.
426.9	-42.0	4619.	2341.	409.	808.	409.
440.6	-42.0	4581.	2339.	409.	808.	409.
450.0	-42.0	4552.	2344.	409.	808.	409.
492.3	-42.0	4435.	2336.	409.	808.	409.
492.4	-42.0	4434.	2336.	409.	808.	409.
509.2	-42.0	3791.	2329.	409.	808.	409.
535.9	-42.0	3781.	2322.	409.	808.	409.
537.6	-42.0	3742.	2294.	409.	808.	409.
537.7	-42.0	3741.	2294.	409.	808.	409.
549.9	-42.0	3664.	2294.	409.	808.	409.
552.4	-42.0	3649.	2294.	409.	808.	409.
588.5	-42.0	3560.	2294.	409.	808.	409.
588.6	-42.0	3560.	2294.	409.	808.	409.
607.0	-42.0	3574.	2294.	409.	808.	409.
614.9	-42.0	3579.	2294.	409.	808.	409.
633.4	-42.0	3649.	2294.	409.	808.	409.
639.2	-42.0	3662.	2294.	409.	808.	409.
653.1	-42.0	3742.	2294.	409.	808.	409.
654.0	-42.0	3760.	2294.	409.	808.	409.
656.4	-42.0	3808.	2341.	409.	808.	409.

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700.0 -42.0 3811. 2344. 409. 808. 409.

ASSUMED CRIT. PASSIVE LOC. 510.0 EL. -42.0 DP 67533. RP 15443.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
350.0	-42.0	162373.	40778.	0.	65482.	1.28
355.0	-42.0	160829.	42005.	0.	63423.	1.30
360.0	-42.0	157851.	43112.	0.	61367.	1.33
365.0	-42.0	153138.	43746.	0.	59313.	1.38
370.0	-42.0	147016.	44042.	0.	57263.	1.47
375.0	-42.0	140260.	43369.	0.	55215.	1.57

CRIT. ACTIVE LOC 350.0 EL -42.0 DA 162373. RA 40778.

DIS.	EL.	DP	RP	DB	RB	FS
510.0	-42.0	67533.	15443.	0.	65482.	1.28

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```
"Reach 5c(2)-1st Stage"
"PS to FS; LWL = GS"
20 10 1 40 1 0
11 4 2 1
322.96 461.82 500 533.33
0 62.4 0 0 62.4 0 0 62.4 0 0 62.4 0 0
0 115 600 600 115 600 600 115 600 600 115 600 600
0 102 600 600 102 600 600 102 600 600 102 600 600
30 122 0 0 122 0 0 122 0 0 122 0 0
0 87 100 100 87 150 150 96 300 300 90 50 83
0 87 100 100 87 150 150 96 300 300 90 50 83
0 100 100 100 88 150 150 97 300 300 90 99 115
0 100 184 268 100 230 310 102 338 375 100 203 291
0 118 289 310 118 345 365 113 419 438 122 313 335
0 106 367 409 106 395 425 116 476 514 105 379 423
0 106 609 808 106 620 815 105 695 875 105 632 841

0 -4.5 43.6 -4.54 46.8 -5.29 162.33 -5.3 164.09 -4.85
190.8 -4.74 207.6 0.88 332.6 4 372.29 14 382.29 14
405.16 8 492 5.2 505.16 5.5 516.9 1.81 519.05 1.53 532 0
533.33 -0.27 545.06 -0.68 571.42 -1.72 592.12 -1.99
619.75 -2.26 656.88 -2.03 691.42 -2.12 700 -2.13 9999.9 0

0 -4.5 43.6 -4.54 60.82 -8.55 66.64 -9 85.09 -10.86
92.97 -11.01 111.48 -11.38 147.64 -9 150.1 -8.43 164.09 -4.85
190.8 -4.74 207.6 0.88 332.6 4 372.29 14 382.29 14 405.16 8
492 5.2 505.16 5.5 516.9 1.81 519.05 1.53 532 0 533.33 -0.27
545.06 -0.68 571.42 -1.72 592.12 -1.99 619.75 -2.26
656.88 -2.03 691.42 -2.12 700 -2.13 9999.9 0

0 -4.5 43.6 -4.54 60.82 -8.55 66.64 -9 85.09 -10.86
92.97 -11.01 111.48 -11.38 147.64 -9 150.1 -8.43 164.09 -4.85
190.8 -4.74 250 -4.5 259.39 -4.57 273.13 -4.54 279.46 -4.34
299.7 -4.33 319.33 -4.21 322.96 -4.54 443.45 -4.85 454 -4.06
461.82 -3.47 464.01 -3 478 0 479.47 0.36 492 5.2 505.16 5.5
516.9 1.81 519.05 1.53 532 0 533.33 -0.27 545.06 -0.68
571.42 -1.72 592.12 -1.99 619.75 -2.26 656.88 -2.03
691.42 -2.12 700 -2.13 9999.9 0

0 -4.5 43.6 -4.54 60.82 -8.55 66.64 -9 85.09 -10.86
92.97 -11.01 111.48 -11.38 147.64 -9 150.1 -8.43 164.09 -4.85
190.8 -4.74 250 -4.5 259.39 -4.57 273.13 -4.54 279.46 -4.34
299.7 -4.33 319.33 -4.21 322.96 -4.54 443.45 -4.85 454 -4.06
461.82 -3.47 464.01 -3 478 0 532 0 533.33 -0.27 545.06 -0.68
571.42 -1.72 592.12 -1.99 619.75 -2.26 656.88 -2.03
691.42 -2.12 700 -2.13 9999.9 0

0 -4.5 43.6 -4.54 60.82 -8.55 66.64 -9 85.09 -10.86
92.97 -11.01 111.48 -11.38 147.64 -9 150.1 -8.43 164.09 -4.85
190.8 -4.74 250 -4.5 259.39 -4.57 273.13 -4.54 279.46 -4.34
299.7 -4.33 319.33 -4.21 322.96 -4.54 340.18 -8.55 346 -9
364.45 -10.86 372.33 -11.01 390.84 -11.38 427 -9
429.46 -8.43 443.45 -4.85 454 -4.06 461.82 -3.47 464.01 -3
478 0 532 0 533.33 -0.27 545.06 -0.68 571.42 -1.72
592.12 -1.99 619.75 -2.26 656.88 -2.03 691.42 -2.12 700 -2.13
9999.9 0

0 -4.6 43.6 -4.64 60.82 -8.65 66.64 -9.1 85.09 -10.96
92.97 -11.11 111.48 -11.48 147.64 -9.1 150.1 -8.53
164.09 -4.95 190.8 -4.84 250 -4.6 259.39 -4.67 273.13 -4.64
279.46 -4.44 299.7 -4.43 319.33 -4.31 322.96 -4.64
340.18 -8.65 346 -9.1 364.45 -10.96 372.33 -11.11
390.84 -11.48 427 -9.1 429.46 -8.53 443.45 -4.95 454 -4.16
461.82 -3.57 464.01 -3.1 478 -0.1 532 -0.1 533.33 -0.37
545.06 -0.78 571.42 -1.82 592.12 -2.09 619.75 -2.36
656.88 -2.13 691.42 -2.22 700 -2.23 9999.9 0

0 -9 700 -9 9999.9 0
0 -14 700 -14 9999.9 0
0 -30 700 -30 9999.9 0
0 -34 700 -34 9999.9 0
0 -42 700 -42 9999.9 0
0 -80 700 -80 9999.9 0

0 -4.5 43.6 -4.54 46 -5.3 162.4 -5.3 164.09 -4.85 190.8 -4.74 207.6 0.88
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207.75 -4.62 250 -4.5 259.39 -4.57 273.13 -4.54 279.46 -4.34
299.7 -4.33 319.33 -4.21 322.96 -4.54 443.45 -4.85 461.82 -3.47
464.01 -3 478 0 532 0 533.33 -0.27 545.06 -0.68 571.42 -1.72
592.12 -1.99 619.75 -2.26 656.88 -2.03 691.42 -2.12 700 -2.13
9999.9 0

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

6 400 -9 540 -9 1
530
7 405 -14 530 -14 1
530
8 410 -30 530 -30 1
530
9 420 -34 530 -34 1
530
10 420 -42 530 -42 1
530
```

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**** STABILITY WITH UPLIFT ****

"Reach 5c(2)-1st Stage"
"PS to FS; LWL = GS"
12 PROFILES
4VERTICALS
UPLIFT WITH 1 PIEZOMETRIC GRADE LINES

* * STRATUM 6 ACT. WEDGE LOC. 400.0 EL. -9.0 PASS.WEDGE LOC. 540.0 EL. -9.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-9.0	391.	0.	100.	100.	100.
43.6	-9.0	388.	569454.	100.	100.	100.
46.0	-9.0	339.	0.	100.	100.	100.
46.8	-9.0	323.	231.	100.	100.	100.
60.8	-9.0	242.	231.	100.	100.	100.
66.6	-9.0	231.	231.	100.	100.	100.
FAILURE SURFACE IN STRATA 6 EL. -9.0 DIST. 66.6 STRENGTH 100.0						
85.1	-9.0	231.	231.	100.	999999.	100.
93.0	-9.0	231.	231.	100.	999999.	100.
111.5	-9.0	231.	231.	100.	999999.	100.
SHEAR STRENGTHS ARE EQUAL 100.0 AT DIST. 147.6						
147.6	-9.0	231.	231.	100.	100.	100.
150.1	-9.0	245.	231.	100.	100.	100.
162.3	-9.0	322.	231.	100.	100.	100.
162.4	-9.0	324.	231.	100.	100.	100.
164.1	-9.0	361.	259.	100.	100.	100.
189.1	-9.0	370.	271.	100.	100.	100.
190.8	-9.0	371.	271.	100.	100.	100.
207.6	-9.0	1015.	274.	100.	100.	100.
207.8	-9.0	1015.	274.	100.	100.	100.
250.0	-9.0	1132.	281.	100.	100.	100.
259.4	-9.0	1161.	277.	100.	100.	100.
273.1	-9.0	1199.	279.	100.	100.	100.
279.5	-9.0	1212.	291.	100.	100.	100.
299.7	-9.0	1270.	292.	100.	100.	100.
319.3	-9.0	1323.	299.	100.	100.	100.
323.0	-9.0	1343.	279.	100.	100.	100.
332.6	-9.0	1449.	277.	103.	103.	103.
340.2	-9.0	1730.	276.	106.	106.	106.
346.0	-9.0	1914.	275.	108.	108.	108.
FAILURE SURFACE IN STRATA 6 EL. -9.0 DIST. 346.0 STRENGTH 108.3						
364.5	-9.0	2449.	272.	115.	999999.	115.
372.3	-9.0	2675.	271.	118.	999999.	118.
372.3	-9.0	2675.	271.	118.	999999.	118.
382.3	-9.0	2675.	269.	121.	999999.	121.
390.8	-9.0	2417.	268.	124.	999999.	124.
405.2	-9.0	1985.	266.	130.	999999.	130.
SHEAR STRENGTHS ARE EQUAL 137.5 AT DIST. 427.0						
427.0	-9.0	1903.	262.	137.	137.	137.
429.5	-9.0	1874.	262.	138.	138.	138.
443.5	-9.0	1697.	259.	143.	143.	143.
454.0	-9.0	1636.	309.	147.	147.	147.
461.8	-9.0	1590.	346.	150.	150.	150.
464.0	-9.0	1572.	375.	159.	159.	159.
478.0	-9.0	1467.	563.	214.	214.	214.
479.5	-9.0	1460.	563.	219.	219.	219.
492.0	-9.0	1377.	563.	269.	269.	269.
SHEAR STRENGTHS ARE EQUAL 269.9 AT DIST. 492.3						
500.0	-9.0	1413.	563.	300.	300.	300.
505.2	-9.0	1416.	563.	266.	271.	266.
516.9	-9.0	1021.	563.	190.	206.	190.
519.0	-9.0	989.	563.	176.	194.	176.
532.0	-9.0	812.	563.	92.	122.	92.
533.3	-9.0	786.	546.	83.	115.	83.
533.3	-9.0	786.	546.	83.	115.	83.

545.1	-9.0	749.	520.	83.	115.	83.
571.4	-9.0	655.	455.	83.	115.	83.
592.1	-9.0	631.	438.	83.	115.	83.
619.8	-9.0	607.	421.	83.	115.	83.
656.9	-9.0	627.	436.	83.	115.	83.
691.4	-9.0	619.	430.	83.	115.	83.
700.0	-9.0	618.	429.	83.	115.	83.

ASSUMED CRIT. PASSIVE LOC. 540.0 EL. -9.0 DP 3137. RP 820.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
400.0	-9.0	24355.	29163.	0.	24112.	2.55
405.0	-9.0	21155.	27429.	0.	23468.	2.87
410.0	-9.0	18591.	24939.	0.	22816.	3.14
415.0	-9.0	16941.	22528.	0.	22155.	3.30
420.0	-9.0	16166.	20130.	0.	21485.	3.26
425.0	-9.0	15863.	19550.	0.	20806.	3.24

CRIT. ACTIVE LOC 400.0 EL -9.0 DA 24355. RA 29163.

DIS.	EL.	DP	RP	DB	RB	FS
530.0	-9.0	3473.	855.	0.	23246.	2.55

* * STRATUM 7 ACT. WEDGE LOC. 405.0 EL. -14.0 PASS.WEDGE LOC. 530.0 EL. -14.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-14.0	891.	0.	100.	268.	100.
43.6	-14.0	888.	569767.	100.	268.	100.
46.0	-14.0	839.	286.	100.	268.	100.
46.8	-14.0	823.	544.	100.	268.	100.
60.8	-14.0	742.	544.	100.	268.	100.
66.6	-14.0	730.	544.	100.	268.	100.
85.1	-14.0	660.	544.	100.	268.	100.
93.0	-14.0	654.	544.	100.	268.	100.
111.5	-14.0	640.	544.	100.	268.	100.
147.6	-14.0	730.	544.	100.	268.	100.
150.1	-14.0	745.	544.	100.	268.	100.
162.3	-14.0	822.	544.	100.	268.	100.
162.4	-14.0	824.	544.	100.	268.	100.
164.1	-14.0	861.	572.	100.	268.	100.
189.1	-14.0	870.	583.	100.	268.	100.
190.8	-14.0	871.	583.	100.	268.	100.
207.6	-14.0	1515.	586.	100.	268.	100.
207.8	-14.0	1515.	586.	100.	268.	100.
250.0	-14.0	1632.	594.	100.	268.	100.
259.4	-14.0	1661.	589.	100.	268.	100.
273.1	-14.0	1699.	591.	100.	268.	100.
279.5	-14.0	1712.	604.	100.	268.	100.
299.7	-14.0	1770.	604.	100.	268.	100.
319.3	-14.0	1823.	612.	100.	268.	100.
323.0	-14.0	1843.	591.	100.	268.	100.
332.6	-14.0	1945.	590.	103.	271.	103.
340.2	-14.0	2223.	588.	106.	273.	106.
346.0	-14.0	2403.	588.	108.	275.	108.
364.5	-14.0	2977.	585.	115.	281.	115.
372.3	-14.0	3206.	583.	118.	283.	118.
372.3	-14.0	3206.	583.	118.	283.	118.
382.3	-14.0	3208.	582.	121.	286.	121.
390.8	-14.0	2953.	580.	124.	289.	124.
405.2	-14.0	2451.	577.	130.	293.	130.

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427.0	-14.0	2358.	575.	137.	299.	137.
429.5	-14.0	2328.	574.	138.	300.	138.
443.5	-14.0	2145.	572.	143.	304.	143.
454.0	-14.0	2079.	621.	147.	308.	147.
461.8	-14.0	2030.	658.	150.	310.	150.
464.0	-14.0	2014.	688.	159.	314.	159.
478.0	-14.0	1926.	875.	214.	338.	214.
479.5	-14.0	1921.	875.	219.	340.	219.
492.0	-14.0	1853.	875.	269.	361.	269.
500.0	-14.0	1898.	875.	300.	375.	300.
505.2	-14.0	1896.	875.	271.	362.	271.
516.9	-14.0	1488.	875.	206.	332.	206.
519.0	-14.0	1454.	875.	194.	327.	194.
532.0	-14.0	1263.	875.	122.	294.	122.
533.3	-14.0	1236.	858.	115.	291.	115.
533.3	-14.0	1236.	858.	115.	291.	115.
545.1	-14.0	1199.	832.	115.	291.	115.
571.4	-14.0	1105.	767.	115.	291.	115.
592.1	-14.0	1081.	751.	115.	291.	115.
619.8	-14.0	1057.	734.	115.	291.	115.
656.9	-14.0	1077.	748.	115.	291.	115.
691.4	-14.0	1069.	742.	115.	291.	115.
700.0	-14.0	1068.	1773984.	115.	291.	115.

ASSUMED CRIT. PASSIVE LOC. 530.0 EL. -14.0 DP 8415. RP 1878.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
405.0	-14.0	36083.	30450.	0.	23034.	2.00
410.0	-14.0	32387.	28733.	0.	22382.	2.21
415.0	-14.0	29674.	26262.	0.	21721.	2.35
420.0	-14.0	27876.	23869.	0.	21051.	2.40
425.0	-14.0	26952.	21488.	0.	20372.	2.36
430.0	-14.0	26473.	20926.	0.	19683.	2.35

CRIT. ACTIVE LOC 405.0 EL -14.0 DA 36083. RA 30450.

DIS.	EL.	DP	RP	DB	RB	FS
530.0	-14.0	8415.	1878.	0.	23034.	2.00

* * STRATUM 8 ACT. WEDGE LOC. 410.0 EL. -30.0 PASS.WEDGE LOC. 530.0 EL. -30.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-30.0	2491.	0.	268.	310.	268.
43.6	-30.0	2488.	570767.	268.	310.	268.
46.0	-30.0	2439.	1286.	268.	310.	268.
46.8	-30.0	2423.	1544.	268.	310.	268.
60.8	-30.0	2342.	1544.	268.	310.	268.
66.6	-30.0	2330.	1544.	268.	310.	268.
85.1	-30.0	2260.	1544.	268.	310.	268.
93.0	-30.0	2254.	1544.	268.	310.	268.
111.5	-30.0	2240.	1544.	268.	310.	268.
147.6	-30.0	2330.	1544.	268.	310.	268.
150.1	-30.0	2345.	1544.	268.	310.	268.
162.3	-30.0	2422.	1544.	268.	310.	268.
162.4	-30.0	2424.	1544.	268.	310.	268.
164.1	-30.0	2461.	1572.	268.	310.	268.
189.1	-30.0	2470.	1583.	268.	310.	268.
190.8	-30.0	2471.	1583.	268.	310.	268.
207.6	-30.0	3115.	1586.	268.	310.	268.
207.8	-30.0	3115.	1586.	268.	310.	268.

250.0	-30.0	3232.	1594.	268.	310.	268.
259.4	-30.0	3261.	1589.	268.	310.	268.
273.1	-30.0	3299.	1591.	268.	310.	268.
279.5	-30.0	3312.	1604.	268.	310.	268.
299.7	-30.0	3370.	1604.	268.	310.	268.
319.3	-30.0	3423.	1612.	268.	310.	268.
323.0	-30.0	3443.	1591.	268.	310.	268.
332.6	-30.0	3545.	1590.	271.	314.	271.
340.2	-30.0	3823.	1588.	273.	317.	273.
346.0	-30.0	4003.	1588.	275.	319.	275.
364.5	-30.0	4577.	1585.	281.	326.	281.
372.3	-30.0	4806.	1583.	283.	330.	283.
372.3	-30.0	4806.	1583.	283.	330.	283.
382.3	-30.0	4808.	1582.	286.	334.	286.
390.8	-30.0	4553.	1580.	289.	337.	289.
405.2	-30.0	4090.	1578.	293.	343.	293.
427.0	-30.0	3958.	1575.	299.	351.	299.
429.5	-30.0	3928.	1574.	300.	352.	300.
443.5	-30.0	3745.	1572.	304.	358.	304.
454.0	-30.0	3679.	1621.	308.	362.	308.
461.8	-30.0	3630.	1658.	310.	365.	310.
464.0	-30.0	3616.	1688.	314.	369.	314.
478.0	-30.0	3540.	1875.	338.	396.	338.
479.5	-30.0	3536.	1875.	340.	399.	340.
492.0	-30.0	3478.	1875.	361.	423.	361.
500.0	-30.0	3530.	1875.	375.	438.	375.
505.2	-30.0	3523.	1875.	362.	422.	362.
516.9	-30.0	3104.	1875.	332.	386.	332.
519.0	-30.0	3068.	1875.	327.	379.	327.
532.0	-30.0	2865.	1875.	294.	339.	294.
533.3	-30.0	2836.	1858.	291.	335.	291.
533.3	-30.0	2836.	1858.	291.	335.	291.
545.1	-30.0	2799.	1832.	291.	335.	291.
571.4	-30.0	2705.	1767.	291.	335.	291.
592.1	-30.0	2681.	1751.	291.	335.	291.
619.8	-30.0	2657.	1734.	291.	335.	291.
656.9	-30.0	2677.	1748.	291.	335.	291.
691.4	-30.0	2669.	1742.	291.	335.	291.
700.0	-30.0	2668.	1855992.	291.	335.	291.

ASSUMED CRIT. PASSIVE LOC. 530.0 EL. -30.0 DP 40043. RP 8264.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
410.0	-30.0	97046.	38440.	0.	38851.	1.50
415.0	-30.0	93037.	38337.	0.	37375.	1.58
420.0	-30.0	88827.	37460.	0.	35892.	1.67
425.0	-30.0	84581.	36176.	0.	34402.	1.77
430.0	-30.0	81130.	33680.	0.	32904.	1.82
435.0	-30.0	78485.	31337.	0.	31398.	1.85

CRIT. ACTIVE LOC 410.0 EL -30.0 DA 97046. RA 38440.

DIS.	EL.	DP	RP	DB	RB	FS
530.0	-30.0	40043.	8264.	0.	38851.	1.50

* * STRATUM 9 ACT. WEDGE LOC. 420.0 EL. -34.0 PASS.WEDGE LOC. 530.0 EL. -34.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-34.0	2963.	0.	310.	409.	310.
26.6	-34.0	2963.	570767.	310.	409.	310.

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46.0	-34.0	2911.	1536.	310.	409.	310.
46.8	-34.0	2895.	1794.	310.	409.	310.
60.8	-34.0	2814.	1794.	310.	409.	310.
66.6	-34.0	2802.	1794.	310.	409.	310.
85.1	-34.0	2732.	1794.	310.	409.	310.
93.0	-34.0	2726.	1794.	310.	409.	310.
111.5	-34.0	2712.	1794.	310.	409.	310.
147.6	-34.0	2802.	1794.	310.	409.	310.
150.1	-34.0	2817.	1794.	310.	409.	310.
162.3	-34.0	2894.	1794.	310.	409.	310.
162.4	-34.0	2896.	1794.	310.	409.	310.
164.1	-34.0	2933.	1822.	310.	409.	310.
189.1	-34.0	2942.	1833.	310.	409.	310.
190.8	-34.0	2943.	1833.	310.	409.	310.
207.6	-34.0	3587.	1836.	310.	409.	310.
207.8	-34.0	3587.	1836.	310.	409.	310.
250.0	-34.0	3704.	1844.	310.	409.	310.
259.4	-34.0	3733.	1839.	310.	409.	310.
273.1	-34.0	3771.	1841.	310.	409.	310.
279.5	-34.0	3784.	1854.	310.	409.	310.
299.7	-34.0	3842.	1854.	310.	409.	310.
319.3	-34.0	3895.	1862.	310.	409.	310.
323.0	-34.0	3915.	1841.	310.	409.	310.
332.6	-34.0	4017.	1840.	314.	410.	314.
340.2	-34.0	4295.	1838.	317.	411.	317.
346.0	-34.0	4475.	1838.	319.	412.	319.
364.5	-34.0	5049.	1835.	326.	414.	326.
372.3	-34.0	5278.	1833.	330.	415.	330.
372.3	-34.0	5278.	1833.	330.	415.	330.
382.3	-34.0	5280.	1832.	334.	416.	334.
390.8	-34.0	5025.	1830.	337.	417.	337.
405.2	-34.0	4562.	1828.	343.	418.	343.
427.0	-34.0	4430.	1825.	351.	421.	351.
429.5	-34.0	4400.	1824.	352.	421.	352.
443.5	-34.0	4217.	1822.	358.	423.	358.
454.0	-34.0	4151.	1871.	362.	424.	362.
461.8	-34.0	4102.	1908.	365.	425.	365.
464.0	-34.0	4087.	1938.	369.	430.	369.
478.0	-34.0	4003.	2125.	396.	463.	396.
479.5	-34.0	3998.	2125.	399.	466.	399.
492.0	-34.0	3935.	2125.	423.	495.	423.
500.0	-34.0	3982.	2125.	438.	514.	438.
505.2	-34.0	3981.	2125.	422.	500.	422.
516.9	-34.0	3574.	2125.	386.	468.	386.
519.0	-34.0	3540.	2125.	379.	462.	379.
532.0	-34.0	3351.	2125.	339.	427.	339.
533.3	-34.0	3324.	2108.	335.	423.	335.
533.3	-34.0	3324.	2108.	335.	423.	335.
545.1	-34.0	3287.	2082.	335.	423.	335.
571.4	-34.0	3193.	2017.	335.	423.	335.
592.1	-34.0	3169.	2001.	335.	423.	335.
619.8	-34.0	3145.	1984.	335.	423.	335.
656.9	-34.0	3165.	1998.	335.	423.	335.
691.4	-34.0	3157.	1992.	335.	423.	335.
700.0	-34.0	3156.	2360037.	335.	423.	335.

ASSUMED CRIT. PASSIVE LOC. 530.0 EL. -34.0 DP 52008. RP 10787.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
420.0	-34.0	109197.	40774.	0.	41997.	1.64
425.0	-34.0	104851.	39927.	0.	40249.	1.72
430.0	-34.0	100520.	38279.	0.	38492.	1.80
435.0	-34.0	97016.	35877.	0.	36725.	1.85
440.0	-34.0	94248.	33553.	0.	34949.	1.88
445.0	-34.0	92191.	31242.	0.	33162.	1.87

CRIT. ACTIVE LOC 420.0 EL -34.0 DA 109197. RA 40774.

DIS.	EL.	DP	RP	DB	RB	FS
530.0	-34.0	52008.	10787.	0.	41997.	1.64

* * STRATUM 10 ACT. WEDGE LOC. 420.0 EL. -42.0 PASS.WEDGE LOC. 530.0 EL. -42.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-42.0	3811.	0.	409.	808.	409.
43.6	-42.0	3808.	571517.	409.	808.	409.
46.0	-42.0	3759.	2036.	409.	808.	409.
46.8	-42.0	3743.	2294.	409.	808.	409.
60.8	-42.0	3662.	2294.	409.	808.	409.
66.6	-42.0	3650.	2294.	409.	808.	409.
85.1	-42.0	3580.	2294.	409.	808.	409.
93.0	-42.0	3574.	2294.	409.	808.	409.
111.5	-42.0	3560.	2294.	409.	808.	409.
147.6	-42.0	3650.	2294.	409.	808.	409.
150.1	-42.0	3665.	2294.	409.	808.	409.
162.3	-42.0	3742.	2294.	409.	808.	409.
162.4	-42.0	3744.	2294.	409.	808.	409.
164.1	-42.0	3781.	2322.	409.	808.	409.
189.1	-42.0	3790.	2333.	409.	808.	409.
190.8	-42.0	3791.	2333.	409.	808.	409.
207.6	-42.0	4435.	2336.	409.	808.	409.
207.8	-42.0	4435.	2336.	409.	808.	409.
250.0	-42.0	4552.	2344.	409.	808.	409.
259.4	-42.0	4581.	2339.	409.	808.	409.
273.1	-42.0	4619.	2341.	409.	808.	409.
279.5	-42.0	4632.	2354.	409.	808.	409.
299.7	-42.0	4690.	2354.	409.	808.	409.
319.3	-42.0	4743.	2362.	409.	808.	409.
323.0	-42.0	4763.	2341.	409.	808.	409.
332.6	-42.0	4865.	2340.	410.	808.	410.
340.2	-42.0	5143.	2338.	411.	809.	411.
346.0	-42.0	5323.	2338.	412.	809.	412.
364.5	-42.0	5897.	2335.	414.	810.	414.
372.3	-42.0	6126.	2333.	415.	810.	415.
372.3	-42.0	6126.	2333.	415.	810.	415.
382.3	-42.0	6128.	2332.	416.	811.	416.
390.8	-42.0	5873.	2330.	417.	811.	417.
405.2	-42.0	5410.	2328.	418.	812.	418.
427.0	-42.0	5278.	2325.	421.	813.	421.
429.5	-42.0	5248.	2324.	421.	813.	421.
443.5	-42.0	5065.	2322.	423.	814.	423.
454.0	-42.0	4999.	2371.	424.	815.	424.
461.8	-42.0	4950.	2408.	425.	815.	425.
464.0	-42.0	4940.	2438.	430.	818.	430.
478.0	-42.0	4885.	2625.	463.	840.	463.
479.5	-42.0	4883.	2625.	466.	843.	466.
492.0	-42.0	4846.	2625.	495.	862.	495.
500.0	-42.0	4910.	2625.	514.	875.	514.
505.2	-42.0	4895.	2625.	500.	870.	500.
516.9	-42.0	4458.	2625.	468.	858.	468.
519.0	-42.0	4418.	2625.	462.	856.	462.
532.0	-42.0	4195.	2625.	427.	842.	427.
533.3	-42.0	4164.	2608.	423.	841.	423.
533.3	-42.0	4164.	2608.	423.	841.	423.
545.1	-42.0	4127.	2582.	423.	841.	423.
571.4	-42.0	4033.	2517.	423.	841.	423.
592.1	-42.0	4009.	2501.	423.	841.	423.
619.8	-42.0	3985.	2484.	423.	841.	423.
656.9	-42.0	4005.	2498.	423.	841.	423.
691.4	-42.0	3997.	2492.	423.	841.	423.
700.0	-42.0	3996.	2507897.	423.	841.	423.

ASSUMED CRIT. PASSIVE LOC. 530.0 EL. -42.0 DP 81037. RP 16786.

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ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
420.0	-42.0	155053.	46970.	0.	49790.	1.53
425.0	-42.0	150895.	47368.	0.	47687.	1.60
430.0	-42.0	146319.	46632.	0.	45582.	1.67
435.0	-42.0	141523.	45828.	0.	43474.	1.75
440.0	-42.0	136916.	43515.	0.	41363.	1.82
445.0	-42.0	133215.	41199.	0.	39249.	1.86

CRIT. ACTIVE LOC 420.0 EL -42.0 DA 155053. RA 46970.

DIS.	EL.	DP	RP	DB	RB	FS
530.0	-42.0	81037.	16786.	0.	49790.	1.53

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SWL Case.BS

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File Information

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Revision Number: 215
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File Name: 5c(2) Typical 1.2nd SC.80%SG.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\2nd Stage Constuction\80%SG,1 Layer of Fabric\Slope W\
Last Solved Date: 4/20/2011
Last Solved Time: 11:49:22 AM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

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Kind: SLOPE/W
Method: Spencer
Settings
    Apply Phreatic Correction: No
    PWP Conditions Source: Piezometric Line
    Use Staged Rapid Drawdown: No
SlipSurface
    Direction of movement: Left to Right
    Use Passive Mode: No
    Slip Surface Option: Block
    Critical slip surfaces saved: 100
    Optimize Critical Slip Surface Location: Yes
    Tension Crack
        Tension Crack Option: Tension Crack Line
        Percentage Wet: 1
        Tension Crack Fluid Unit Weight: 62.4 pcf

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FOS Distribution
    FOS Calculation Option: Constant
Restrict Block Crossing: Yes
Advanced
    Number of Slices: 30
    Optimization Tolerance: 0.01
    Minimum Slip Surface Depth: 0.1 ft
    Optimization Maximum Iterations: 2000
    Optimization Convergence Tolerance: 1e-007
    Starting Optimization Points: 8
    Ending Optimization Points: 16
    Complete Passes per Insertion: 1
    Driving Side Maximum Convex Angle: 5 °
    Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH

Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH above 0

Model: Mohr-Coulomb
Unit Weight: 102 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH, 0 to -9

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -9 (2)
Cohesion Spatial Fn: CH, 0 to -9
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH, -9 to -14

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -9 to -14 (2)

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Cohesion Spatial Fn: CH, -9 to -14
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -14 to -30

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -14 to -30 (2)
Cohesion Spatial Fn: CH, -14 to -30
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -30 to -34

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -30 to -34 (2)
Cohesion Spatial Fn: CH, 30 to -34
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sand Fill

Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -34 to -42

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -34 to -42 (2)
Cohesion Spatial Fn: CH, -34 to -42
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -42 to -80

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -42 to -80 (2)
Cohesion Spatial Fn: CH, -42 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure

Piezometric Line: 1

CH, 0 to -9 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -9 (2)
Cohesion Spatial Fn: CH, 0 to -9 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -9 to -14 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -9 to -14 (2)
Cohesion Spatial Fn: CH, -9 to -14 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -14 to -30 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -14 to -30 (2)
Cohesion Spatial Fn: CH, -14 to -30 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -30 to -34 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -30 to -34 (2)
Cohesion Spatial Fn: CH, 30 to -34 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Limits

Left Coordinate: (-200, -2.13) ft
Right Coordinate: (500, -4.5) ft

Slip Surface Block

Left Grid
Upper Left: (18.96769, -1.12533) ft
Lower Left: (-5.99245, -41.96918) ft

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Lower Right: (60.28101, -50.96735) ft
X Increments: 7
Y Increments: 7
Starting Angle: 135 °
Ending Angle: 160 °
Angle Increments: 7

Right Grid
Upper Left: (264, -14) ft
Lower Left: (369, -14) ft
Lower Right: (369, -60) ft
X Increments: 7
Y Increments: 7
Starting Angle: 20 °
Ending Angle: 45 °
Angle Increments: 7

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	7
	75	7
	200.3	-4.33
	220.54	-4.34
	226.87	-4.54
	240.61	-4.57
	250	-4.5
	285.84	-4.64
	295.2	-4.68
	329.57	-4.85
	331.26	-5.3
	447.66	-5.3
	450.06	-4.54
	500	-4.5

Reinforcements

Reinforcement 1

Type: Fabric
Outside Point: (209, 0) ft
Inside Point: (22, 0) ft
Slip Surface Intersection: (22.229, 0) ft
Total Length: 187 ft

Reinforcement Direction: 0 °
Applied Load Option: Variable
F of S Dependent: No
Contact Cohesion: 265 psf
Contact Phi: 19 °
Interface Factor: 2
Bond Safety Factor: 1
Fabric Capacity: 27000 lbs
Fabric Safety Factor: 1
Fabric Load: 27000 lbs
Load Distribution: Even along reinf.
Load Orientation: 0
Applied Load: 27000 lbs
Fabric Load Used: 188.47 lbs
Resisting Force Used: 823.4 lbs/ft
Available Bond Length: 0.2289 ft
Required Bond Length: 0.2289 ft
Governing Component: Bond

Tension Crack Line

	X (ft)	Y (ft)
	-1	5.40517
	8	5.2
	22	0.1
	96	0.1
	118	11
	127	11
	166	2
	167.4	4

Spatial Functions

CH, 0 to -9

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -2.5, 50)
Data Point: (-300, -9, 75)
Data Point: (-33.33, 0, 50)
Data Point: (-33.33, -9, 75)
Data Point: (0, 0, 300)
Data Point: (0, -9, 300)
Data Point: (285.84, -4.62, 100)
Data Point: (285.84, -9, 100)
Data Point: (500, 0, 100)
Data Point: (500, -9, 100)

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CH, -34 to -42 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -38, 105)
Data Point: (0, -38, 116)
Data Point: (177.04, -38, 106)

CH, -42 to -80 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -61, 105)
Data Point: (0, -61, 105)
Data Point: (177.04, -61, 106)

CH, 0 to -9 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, 0, 300)
Data Point: (0, -9, 300)
Data Point: (46, 0, 148)
Data Point: (46, -9, 148)
Data Point: (122.71, 0, 198)
Data Point: (122.71, -9, 198)
Data Point: (285.84, 0, 100)
Data Point: (285.84, -9, 100)

CH, -9 to -14 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -9, 300)
Data Point: (0, -14, 300)
Data Point: (46, -9, 144)
Data Point: (46, -14, 144)
Data Point: (122.71, -9, 191)
Data Point: (122.71, -14, 191)
Data Point: (285.84, -9, 100)
Data Point: (285.84, -14, 100)

CH, -14 to -30 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -14, 300)
Data Point: (0, -30, 375)

Data Point: (46, -14, 174)
Data Point: (46, -30, 342)
Data Point: (122.71, -14, 214)
Data Point: (122.71, -30, 382)
Data Point: (285.84, -14, 100)
Data Point: (285.84, -30, 268)

CH, 30 to -34 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -30, 400)
Data Point: (0, -34, 438)
Data Point: (46, -30, 341)
Data Point: (46, -34, 383)
Data Point: (122.71, -30, 374)
Data Point: (122.71, -34, 416)
Data Point: (285.84, -30, 268)
Data Point: (285.84, -34, 310)

CH, -9 to -14

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -9, 75)
Data Point: (-300, -14, 115)
Data Point: (-33.33, -9, 75)
Data Point: (-33.33, -14, 115)
Data Point: (0, -9, 300)
Data Point: (0, -14, 300)
Data Point: (285.84, -9, 100)
Data Point: (285.84, -14, 100)
Data Point: (500, -9, 100)
Data Point: (500, -14, 100)

CH, -14 to -30

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -14, 115)
Data Point: (-300, -30, 291)
Data Point: (-33.33, -14, 115)
Data Point: (-33.33, -30, 291)
Data Point: (0, -14, 300)
Data Point: (0, -30, 375)
Data Point: (285.84, -14, 100)
Data Point: (285.84, -30, 268)
Data Point: (500, -14, 100)

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Data Point: (500, -30, 268)

CH, 30 to -34

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -30, 291)
Data Point: (-300, -34, 335)
Data Point: (-33.33, -30, 291)
Data Point: (-33.33, -34, 335)
Data Point: (0, -30, 400)
Data Point: (0, -34, 438)
Data Point: (285.84, -30, 268)
Data Point: (285.84, -34, 310)
Data Point: (500, -30, 268)
Data Point: (500, -34, 310)

CH, 0 to -9 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -4.5, 90)
Data Point: (0, -4.5, 96)
Data Point: (177.04, -4.54, 87)

CH, -9 to -14 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -11.5, 90)
Data Point: (0, -11.5, 97)
Data Point: (177.04, -11.5, 100)

CH, -14 to -30 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -22, 100)
Data Point: (0, -22, 102)
Data Point: (177.04, -22, 100)

CH, -30 to -34 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -32, 122)
Data Point: (0, -32, 113)
Data Point: (177.04, -32, 118)

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CH, -34 to -42

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -34, 335)
Data Point: (-300, -42, 423)
Data Point: (-33.33, -34, 335)
Data Point: (-33.33, -42, 423)
Data Point: (0, -34, 438)
Data Point: (0, -42, 514)
Data Point: (177.04, -34, 325)
Data Point: (177.04, -42, 409)
Data Point: (500, -34, 325)
Data Point: (500, -42, 409)

CH, -42 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -42, 423)
Data Point: (-300, -80, 841)
Data Point: (-33.33, -42, 423)
Data Point: (-33.33, -80, 841)
Data Point: (0, -42, 514)
Data Point: (0, -80, 875)
Data Point: (177.04, -42, 409)
Data Point: (177.04, -80, 808)
Data Point: (500, -42, 409)
Data Point: (500, -80, 808)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -42 to -80	1,3,4,2	26600
Region 2	CH, -34 to -42	3,5,69,73,6,4	5600
Region 3	CH above 0	45,21,22,63,64,27,44,65	161.91095
Region 4	Sand Fill	29,30,43,31,32,33,42,34,35,62	606.7023
Region 5	CH, 0 to -9	56,53,54,41,12	267.3158
Region 6	EMBANKMENT FILL CH	59,46,47,60,37,36,35,62	1502.7397
Region 7	EMBANKMENT FILL CH	64,27,44,57,28,62,59	499.34315
Region 8	EMBANKMENT FILL CH	60,61,76,75,40,39,58,38,37	772.15003
Region 9	CH, 0 to -9	16,11,66,65,45,20,19,18,17,15,14,74	1498.6738
Region 10	CH, -9 to -14	11,9,67,66	1000
Region 11	CH, -14 to -30	9,7,68,67	3200
Region 12	CH, -30 to -34	7,5,69,68	800
Region 13	CH, -30 to -34	6,8,72,73	856.64
Region 14	CH, -14 to -30	8,10,71,72	3426.56
Region 15	CH, -9 to -14	10,71,70,55,50,51,52,56,12	954.73385

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Region 16	CH, 0 to -9	55,49,48,76,75,70	220.0602
Region 17	CH, -30 to -34 SG	69,68,72,73	1143.36
Region 18	CH, -14 to -30 SG	68,67,71,72	4573.44
Region 19	CH, -9 to -14 SG	67,66,43,31,32,33,42,70,71	1313.1338
Region 20	CH, 0 to -9 SG	66,65,44,57,28,62,29,30,43	438.1553
Region 21	CH, 0 to -9 SG	42,34,35,36,37,38,58,39,40,75,70	538.2795

Points

	X (ft)	Y (ft)
Point 1	-200	-80
Point 2	500	-80
Point 3	-200	-42
Point 4	500	-42
Point 5	-200	-34
Point 6	500	-34
Point 7	-200	-30
Point 8	500	-30
Point 9	-200	-14
Point 10	500	-14
Point 11	-200	-9
Point 12	500	-9
Point 13	-191.42	-2.12
Point 14	-156.88	-2.03
Point 15	-119.75	-2.26
Point 16	-200	-2.13
Point 17	-92.12	-1.99
Point 18	-71.42	-1.72
Point 19	-45.06	-0.68
Point 20	-33.33	-0.27
Point 21	-19.05	1.53
Point 22	-16.9	1.81
Point 23	-6.83	6.48
Point 24	-6.79	6.72
Point 25	-0.92	7.16
Point 26	3.42	6.91
Point 27	20.53	0.36
Point 28	38.18	-3.47
Point 29	56.55	-4.85
Point 30	70.54	-8.43
Point 31	109.16	-11.38
Point 32	127.67	-11.01
Point 33	135.55	-10.86
Point 34	159.82	-8.55
Point 35	177.04	-4.54
Point 36	180.67	-4.21
Point 37	200.3	-4.33
Point 38	220.54	-4.34

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Point 39	240.61	-4.57
Point 40	250	-4.5
Point 41	500	-4.5
Point 42	154	-9
Point 43	73	-9
Point 44	22	0
Point 45	-32	0
Point 46	117.71	14
Point 47	127.71	14
Point 48	329.57	-4.85
Point 49	343.56	-8.43
Point 50	382.18	-11.38
Point 51	400.69	-11.01
Point 52	408.57	-10.86
Point 53	432.84	-8.55
Point 54	450.06	-4.54
Point 55	346.02	-9
Point 56	427.02	-9
Point 57	35.99	-3
Point 58	226.87	-4.54
Point 59	94.84	8
Point 60	167.4	4
Point 61	292.4	0.875
Point 62	46	-4.06
Point 63	-5.16	5.5
Point 64	8	5.2
Point 65	0	0
Point 66	0	-9
Point 67	0	-14
Point 68	0	-30
Point 69	0	-34
Point 70	285.84	-9
Point 71	285.84	-14
Point 72	285.84	-30
Point 73	285.84	-34
Point 74	-194	-2
Point 75	285.84	-4.64
Point 76	309.25	-4.74

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	1.59	(201.577, 2.933)	127.4803	(21.855, 5.64673)	(362.764, -10.102)
2	945	1.94	(201.577, 2.933)	134.225	(22.6806, 5.67335)	(379.934, -11.2322)
3	937	1.94	(193.896, 2.681)	126.26	(22.6806, 5.67335)	(364.644, -10.2258)
4	881	1.96	(202.006, 2.933)	134.018	(23.5379, 5.70099)	(379.934, -11.2322)
5	873	1.96	(194.325, 2.681)	126.028	(23.5379, 5.70099)	(364.644, -10.2258)
6	49	1.97	(198.008, 5.983)	137.549	(15.3026, 5.43546)	(379.934, -11.2322)

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7	817	1.97	(202.342, 2.933)	133.857	(24.2091, 5.72263)	(379.934, -11.2322)
8	41	1.98	(190.323, 5.731)	129.839	(15.3026, 5.43546)	(364.644, -10.2258)
9	6001	1.98	(209.131, 2.905)	139.228	(22.5114, 5.66789)	(395.245, -11.1188)
10	113	1.98	(197.609, 6.361)	137.875	(14.4716, 5.40867)	(379.934, -11.2322)
11	953	1.98	(210.827, 2.889)	142.82	(22.6806, 5.67335)	(398.477, -11.0542)
12	5993	1.98	(200.192, 2.89)	131.734	(22.5114, 5.66789)	(377.347, -11.0619)
13	929	1.98	(186.217, 2.43)	118.981	(22.6806, 5.67335)	(349.354, -9.21943)
14	809	1.98	(194.661, 2.681)	125.847	(24.2091, 5.72263)	(364.644, -10.2258)
15	105	1.98	(189.923, 6.11)	130.187	(14.4716, 5.40867)	(364.644, -10.2258)
16	5289	1.98	(199.888, 2.936)	131.105	(21.8992, 5.64816)	(377.347, -11.0619)
17	6002	1.98	(199.651, 2.873)	132.411	(22.5114, 5.66789)	(376.268, -10.9909)
18	946	1.98	(193.188, 2.658)	127.219	(22.6806, 5.67335)	(363.234, -10.133)
19	5297	1.98	(208.827, 2.951)	139.003	(21.8992, 5.64816)	(395.245, -11.1188)
20	177	1.98	(197.06, 6.883)	138.328	(13.326, 5.37173)	(379.934, -11.2322)
21	753	1.98	(202.614, 2.933)	133.727	(24.7527, 5.74016)	(379.934, -11.2322)
22	169	1.99	(189.373, 6.631)	130.67	(13.326, 5.37173)	(364.644, -10.2258)
23	11699	1.99	(197.892, 4.512)	134.609	(18.4171, 5.53588)	(376.72, -11.0206)
24	11698	1.99	(204.914, 4.559)	139.425	(18.4171, 5.53588)	(390.77, -11.2083)
25	5298	1.99	(199.346, 2.919)	132.12	(21.8992, 5.64816)	(376.268, -10.9909)
26	11707	1.99	(204.086, 4.567)	140.619	(18.4171, 5.53588)	(389.107, -11.2415)
27	889	1.99	(211.257, 2.889)	142.618	(23.5379, 5.70099)	(398.477, -11.0542)
28	745	1.99	(194.934, 2.681)	125.701	(24.7527, 5.74016)	(364.644, -10.2258)
29	689	1.99	(202.841, 2.933)	133.62	(25.2051, 5.75475)	(379.934, -11.2322)
30	241	2.00	(196.246, 7.655)	139.008	(11.6293, 5.31702)	(379.934, -11.2322)
31	6010	2.00	(206.933, 2.927)	138.649	(22.5114, 5.66789)	(390.835, -11.207)
32	938	2.00	(186.615, 2.443)	120.667	(22.6806, 5.67335)	(350.147, -9.27163)
33	5361	2.00	(207.018, 4.654)	142.013	(18.1585, 5.52754)	(395.245, -11.1188)
34	954	2.00	(199.762, 2.874)	133.6	(22.6806, 5.67335)	(376.322, -10.9944)
35	11122	2.00	(205.785, 3.737)	138.653	(20.2204, 5.59403)	(390.77, -11.2083)
36	5994	2.00	(193.076, 2.657)	125.927	(22.5114, 5.66789)	(363.181, -10.1295)
37	11123	2.00	(198.761, 3.69)	133.863	(20.2204, 5.59403)	(376.72, -11.0206)
38	5353	2.00	(198.082, 4.64)	133.85	(18.1585, 5.52754)	(377.347, -11.0619)
39	882	2.00	(193.617, 2.658)	126.991	(23.5379, 5.70099)	(363.234, -10.133)
40	11706	2.00	(212.772, 4.481)	146.655	(18.4171, 5.53588)	(406.542, -10.8986)
41	625	2.00	(203.034, 2.933)	133.528	(25.5903, 5.76717)	(379.934, -11.2322)
42	11131	2.00	(204.956, 3.746)	139.945	(20.2204, 5.59403)	(389.107, -11.2415)
43	11708	2.00	(197.767, 4.508)	135.521	(18.4171, 5.53588)	(376.471, -11.0043)
44	233	2.00	(188.559, 7.404)	131.222	(11.6293, 5.31702)	(364.644, -10.2258)
45	825	2.00	(211.593, 2.889)	142.46	(24.2091, 5.72263)	(398.477, -11.0542)
46	681	2.00	(195.16, 2.681)	125.58	(25.2051, 5.75475)	(364.644, -10.2258)
47	11700	2.00	(192.763, 4.344)	130.787	(18.4171, 5.53588)	(366.513, -10.3488)
48	5290	2.01	(192.772, 2.703)	126.179	(21.8992, 5.64816)	(363.181, -10.1295)
49	57	2.01	(207.252, 5.938)	146.065	(15.3026, 5.43546)	(398.477, -11.0542)
50	865	2.01	(186.646, 2.43)	118.723	(23.5379, 5.70099)	(349.354, -9.21943)
51	5362	2.01	(197.54, 4.622)	134.516	(18.1585, 5.52754)	(376.268, -10.9909)
52	5306	2.01	(206.629, 2.973)	138.958	(21.8992, 5.64816)	(390.835, -11.207)
53	121	2.01	(206.852, 6.317)	146.385	(14.4716, 5.40867)	(398.477, -11.0542)
54	561	2.01	(203.201, 2.933)	133.448	(25.9245, 5.77794)	(379.934, -11.2322)

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55	6009	2.01	(219.502, 2.65)	148.013	(22.5114, 5.66789)	(416.096, -10.1013)
56	761	2.01	(211.865, 2.889)	142.333	(24.7527, 5.74016)	(398.477, -11.0542)
57	11130	2.01	(213.644, 3.66)	146.051	(20.2204, 5.59403)	(406.542, -10.8986)
58	50	2.01	(189.615, 5.708)	130.578	(15.3026, 5.43546)	(363.234, -10.133)
59	11132	2.01	(198.637, 3.686)	134.805	(20.2204, 5.59403)	(376.471, -11.0043)
60	33	2.01	(182.639, 5.48)	122.36	(15.3026, 5.43546)	(349.354, -9.21943)
61	185	2.01	(206.301, 6.838)	146.829	(13.326, 5.37173)	(398.477, -11.0542)
62	617	2.01	(195.353, 2.681)	125.477	(25.5903, 5.76717)	(364.644, -10.2258)
63	5233	2.02	(209.588, 2.905)	139.036	(23.4239, 5.69732)	(395.245, -11.1188)
64	818	2.02	(193.953, 2.658)	126.813	(24.2091, 5.72263)	(363.234, -10.133)
65	890	2.02	(200.192, 2.874)	133.374	(23.5379, 5.70099)	(376.322, -10.9944)
66	11690	2.02	(197.638, 4.503)	133.11	(18.4171, 5.53588)	(376.214, -10.9873)
67	6003	2.02	(193.2, 2.661)	127.23	(22.5114, 5.66789)	(363.426, -10.1457)
68	11124	2.02	(193.634, 3.523)	130.032	(20.2204, 5.59403)	(366.513, -10.3488)
69	11697	2.02	(215.415, 4.388)	146.896	(18.4171, 5.53588)	(411.87, -10.5273)
70	114	2.02	(189.215, 6.086)	130.932	(14.4716, 5.40867)	(363.234, -10.133)
71	305	2.02	(194.907, 8.931)	139.848	(8.82898, 5.22673)	(379.934, -11.2322)
72	5225	2.02	(200.649, 2.89)	131.525	(23.4239, 5.69732)	(377.347, -11.0619)
73	874	2.02	(187.044, 2.443)	120.408	(23.5379, 5.70099)	(350.147, -9.27163)
74	5281	2.02	(192.207, 2.685)	124.571	(21.8992, 5.64816)	(362.057, -10.0555)
75	5370	2.02	(204.822, 4.676)	141.705	(18.1585, 5.52754)	(390.835, -11.207)
76	5985	2.02	(192.512, 2.639)	124.324	(22.5114, 5.66789)	(362.057, -10.0555)
77	97	2.02	(182.239, 5.858)	122.75	(14.4716, 5.40867)	(349.354, -9.21943)
78	6011	2.02	(198.906, 2.848)	132.961	(22.5114, 5.66789)	(374.786, -10.8933)
79	697	2.02	(212.091, 2.889)	142.227	(25.2051, 5.75475)	(398.477, -11.0542)
80	5234	2.02	(200.108, 2.873)	132.227	(23.4239, 5.69732)	(376.268, -10.9909)
81	553	2.02	(195.52, 2.681)	125.388	(25.9245, 5.77794)	(364.644, -10.2258)
82	5305	2.02	(219.197, 2.696)	148.262	(21.8992, 5.64816)	(416.096, -10.1013)
83	11691	2.02	(192.183, 4.325)	129.074	(18.4171, 5.53588)	(365.36, -10.2729)
84	5299	2.02	(192.895, 2.707)	127.473	(21.8992, 5.64816)	(363.426, -10.1457)
85	5354	2.02	(190.964, 4.407)	127.995	(18.1585, 5.52754)	(363.181, -10.1295)
86	249	2.02	(205.486, 7.611)	147.493	(11.6293, 5.31702)	(398.477, -11.0542)
87	178	2.02	(188.665, 6.608)	131.424	(13.326, 5.37173)	(363.234, -10.133)
88	11689	2.03	(205.533, 4.552)	138.359	(18.4171, 5.53588)	(392.013, -11.1835)
89	11114	2.03	(198.508, 3.682)	132.246	(20.2204, 5.59403)	(376.214, -10.9873)
90	801	2.03	(186.982, 2.43)	118.523	(24.2091, 5.72263)	(349.354, -9.21943)
91	754	2.03	(194.226, 2.658)	126.67	(24.7527, 5.74016)	(363.234, -10.133)
92	826	2.03	(200.528, 2.874)	133.198	(24.2091, 5.72263)	(376.322, -10.9944)
93	11121	2.03	(216.289, 3.567)	147.133	(20.2204, 5.59403)	(411.87, -10.5273)
94	633	2.03	(212.284, 2.889)	142.137	(25.5903, 5.76717)	(398.477, -11.0542)
95	58	2.03	(196.193, 5.923)	137.785	(15.3026, 5.43546)	(376.322, -10.9944)
96	11709	2.03	(192.906, 4.348)	131.722	(18.4171, 5.53588)	(366.797, -10.3675)
97	6577	2.03	(210.53, 2.905)	137.882	(25.3053, 5.75798)	(395.245, -11.1188)
98	297	2.03	(187.219, 8.679)	132.487	(8.82898, 5.22673)	(364.644, -10.2258)
99	161	2.03	(181.688, 6.38)	123.292	(13.326, 5.37173)	(349.354, -9.21943)
100	5307	2.03	(198.601, 2.894)	133.226	(21.8992, 5.64816)	(374.786, -10.8933)
101	11701	2.03	(188.489, 4.204)	127.441	(18.4171, 5.53588)	(358.007, -9.789)

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Slices of Slip Surface: Optimized

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	28.92248	-2.7358117	607.51323	965.54578	0	204.43
2	Optimized	37.085	-6.072009	815.68578	1334.7778	0	177.46
3	Optimized	39.081385	-6.8879745	866.63309	1421.0256	0	170.86
4	Optimized	42.991385	-7.475276	903.26189	1544.388	0	157.94
5	Optimized	51.275	-8.077935	940.85961	1629.1544	0	151.44
6	Optimized	60.24944	-8.730854	981.60865	1741.2028	0	157.29
7	Optimized	65.12931	-9.08588	1003.7599	1821.596	0	155.72
8	Optimized	68.42487	-9.5070055	1030.0332	1883.9775	0	157.74
9	Optimized	71.77	-10.037205	1063.1114	1972.0096	0	159.79
10	Optimized	74	-10.39066	1085.154	2024.5772	0	161.16
11	Optimized	80.778935	-11.46511	1119.6243	2164.5614	0	165.31
12	Optimized	89.28271	-12.812945	1155.7327	2340.4629	0	170.52
13	Optimized	93.423775	-13.5939	1181.0898	2420.0772	0	173.06
14	Optimized	102	-15.707775	1264.5963	2856.4784	0	221.13
15	Optimized	112.5418	-18.306125	1367.2727	3435.2649	0	253.91
16	Optimized	116.8168	-19.443365	1414.1386	3642.5345	0	268.08
17	Optimized	122.71	-21.447055	1505.9377	3860.3737	0	292.19
18	Optimized	131.63	-24.479845	1644.7766	4039.7258	0	317.8
19	Optimized	137.85785	-26.5973	1741.7929	4060.799	0	335.69
20	Optimized	143.14805	-28.69098	1842.6342	4062.6069	0	353.97
21	Optimized	150.0652	-31.72704	1992.9678	4172.3401	0	374.36
22	Optimized	154.6219	-33.72704	2092.1232	4258.2342	0	392.4
23	Optimized	156.73305	-34.653665	2138.0237	4304.5766	0	344.75
24	Optimized	159.02115	-35.482085	2176.7789	4406.8155	0	351.91
25	Optimized	161.85615	-36.10228	2199.503	4371.9945	0	356.59
26	Optimized	165.64615	-36.54898	2205.9844	4368.0659	0	358.87
27	Optimized	172.22	-36.553705	2169.1904	4248.9618	0	354.82
28	Optimized	178.855	-36.55847	2132.0655	4184.8473	0	351.86
29	Optimized	185.5775	-36.5633	2094.4466	4161.9957	0	351.91
30	Optimized	195.3925	-36.570355	2039.5307	4136.015	0	351.99
31	Optimized	205.36	-36.577515	2012.0553	4110.0791	0	352.06
32	Optimized	215.48	-36.584785	2012.253	4083.1028	0	352.14

33	Optimized	222.3707	-36.589735	2008.7721	4066.2142	0	352.19
34	Optimized	225.5357	-36.67795	2008.0291	4044.1033	0	353.12
35	Optimized	230.14155	-36.977915	2023.6629	4064.2545	0	356.27
36	Optimized	237.01155	-37.44347	2051.8019	4092.5153	0	361.16
37	Optimized	245.305	-38.02539	2089.7504	4129.6765	0	367.27
38	Optimized	257.011	-38.84675	2141.5065	4183.13	0	375.89
39	Optimized	268.532	-39.46812	2177.48	4234.9431	0	382.42
40	Optimized	279.441	-40.127015	2215.9804	4252.2341	0	389.33
41	Optimized	289.12	-40.92786	2263.4546	4310.2715	0	397.74
42	Optimized	293.8	-41.315085	2286.4013	4288.9156	0	401.81
43	Optimized	297.6879	-41.63677	2305.309	4174.9928	0	405.19
44	Optimized	304.7129	-39.92257	2196.2228	3936.1508	0	387.19
45	Optimized	313.979	-36.00126	1948.6836	3326.8712	0	346.01
46	Optimized	323.07565	-32.15165	1705.5829	2862.9503	0	290.59
47	Optimized	327.74185	-30.15165	1579.3368	2630.2871	0	269.59
48	Optimized	328.8052	-29.61157	1545.3425	2569.1006	0	263.92
49	Optimized	330.415	-28.793965	1480.0434	2462.958	0	255.34
50	Optimized	337.41	-25.24121	1244.3152	2027.8293	0	218.03
51	Optimized	344.40545	-21.688215	1022.6464	1608.0251	0	180.73
52	Optimized	345.63545	-21.01383	980.5415	1552.7717	0	173.65
53	Optimized	351.3325	-17.38443	754.06653	1145.6617	0	135.54
54	Optimized	359.7043	-12.05102	421.26946	560.72314	0	100

Slices of Slip Surface: 945

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	945	23.23482	-0.1418253	445.64774	563.76726	0	600
2	945	26.11221	-1.3972168	523.98811	832.12358	0	213.72
3	945	32.212665	-3.2288655	638.28136	1073.8154	0	193.56
4	945	37.085	-4.2840995	704.13201	1203.4686	0	177.46
5	945	42.09	-5.368065	771.76219	1324.5349	0	160.92
6	945	51.275	-7.3573205	895.89322	1541.4203	0	151.44
7	945	57.704875	-8.749881	982.77873	1699.3195	0	155.63
8	945	61.34273	-9.537755	1031.9626	1806.6972	0	153.4
9	945	67.182855	-10.80259	1110.8816	1988.3699	0	156.98
10	945	71.77	-11.79606	1172.8889	2135.1329	0	159.79
11	945	74	-12.279025	1203.0094	2200.2885	0	161.16
12	945	78.473135	-13.2478	1243.8591	2317.4712	0	163.9

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13	945	84.25207	-14.49938	1289.3482	2468.1531	0	199.19
14	945	90.698935	-15.89562	1340.076	2639.794	0	217.21
15	945	102	-18.34317	1429.0892	3127.971	0	248.8
16	945	113.435	-20.819725	1519.0514	3722.4703	0	280.77
17	945	122.71	-22.82847	1592.089	4043.3588	0	306.7
18	945	131.63	-24.76033	1662.353	4117.4246	0	320.75
19	945	140.1625	-26.60827	1729.4439	4042.2203	0	334.19
20	945	149.3875	-28.60619	1802.1221	3953.1207	0	348.72
21	945	154.91155	-29.802575	1845.5937	3899.7736	0	357.42
22	945	157.82155	-30.43281	1868.4856	3878.2105	0	355.73
23	945	163.61	-31.686445	1914.0677	3821.1728	0	365.13
24	945	170.8462	-33.253635	1971.0276	3825.4951	0	376.88
25	945	175.6662	-34.297535	2008.9751	3894.9481	0	329
26	945	178.855	-34.98816	2034.0815	3941.9432	0	335.38
27	945	185.5775	-36.444095	2087.0197	4069.9822	0	350.66
28	945	195.3925	-38.56979	2164.2909	4262.6624	0	372.98
29	945	205.7654	-40.81632	2276.6004	4466.5609	0	396.57
30	945	215.8854	-43.008075	2413.0133	4665.922	0	419.58
31	945	223.705	-44.701615	2512.3696	4823.7126	0	437.37
32	945	233.74	-46.874965	2640.7418	5025.5538	0	460.19
33	945	245.305	-49.379675	2798.2773	5254.0166	0	486.49
34	945	257	-51.912535	2956.8057	5485.3964	0	513.08
35	945	269.46	-51.441295	2924.4064	5700.8886	0	508.13
36	945	280.38	-47.46674	2673.7356	5234.2262	0	466.4
37	945	289.12	-44.28564	2472.996	4860.7608	0	433
38	945	293.8	-42.58226	2365.4746	4610.1988	0	415.11
39	945	302.225	-39.51581	2171.5925	3949.3168	0	382.92
40	945	313.3148	-35.47946	1916.2442	3235.9306	0	340.53
41	945	322.87455	-32	1696.2486	2814.9107	0	289
42	945	328.96975	-29.78152	1555.9153	2536.7571	0	265.71
43	945	330.415	-29.255485	1508.8465	2462.7181	0	260.18
44	945	337.41	-26.709515	1335.9675	2139.6719	0	233.45
45	945	344.79	-24.023415	1168.3513	1815.2495	0	205.25
46	945	352.5973	-21.1818	991.01493	1494.8446	0	175.41
47	945	365.75185	-16.393935	692.26033	964.44119	0	125.14

48	945	376.1314	-12.616075	456.52565	549.00468	0	100

Slices of Slip Surface: 937

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	937	23.23482	-0.1418253	445.64774	564.66022	0	600
2	937	26.11221	-1.3972168	523.98811	832.30112	0	213.72
3	937	32.212665	-3.123491	631.70113	1068.1232	0	193.56
4	937	37.085	-4.0428035	689.07464	1185.072	0	177.46
5	937	42.09	-4.9871475	748.00398	1293.1675	0	160.92
6	937	51.275	-6.720174	856.13558	1486.6596	0	151.44
7	937	59.95401	-8.3577305	958.32248	1687.1753	0	157.1
8	937	63.591865	-9.044122	1001.1516	1785.428	0	154.78
9	937	67.182855	-9.721672	1043.4298	1888.111	0	156.98
10	937	71.77	-10.587175	1097.4253	2022.5653	0	159.79
11	937	74	-11.00793	1123.6733	2081.67	0	161.16
12	937	80.778935	-12.28698	1170.9092	2241.1536	0	165.31
13	937	88.20789	-13.688675	1216.46	2416.8403	0	169.86
14	937	92.348955	-14.47001	1241.8348	2513.4132	0	203.1
15	937	102	-16.29097	1300.997	2932.0639	0	227.26
16	937	113.435	-18.448525	1371.1288	3496.436	0	255.87
17	937	122.71	-20.198535	1428.0043	3792.7802	0	279.08
18	937	131.63	-21.881565	1482.6407	3842.7832	0	290.52
19	937	140.1625	-23.491475	1534.9758	3744.4462	0	301.46
20	937	149.3875	-25.232045	1591.5388	3630.2551	0	313.29
21	937	156.91	-26.65139	1637.6846	3536.0616	0	322.94
22	937	163.61	-27.91555	1678.8214	3430.1108	0	331.53
23	937	171.02875	-29.315325	1724.3037	3388.4903	0	341.04
24	937	175.84875	-30.22476	1753.8035	3428.9928	0	341.83
25	937	178.855	-30.791975	1772.2288	3471.8002	0	345.83
26	937	188.2637	-32.567215	1829.9082	3649.0112	0	358.36
27	937	198.0787	-34.41911	1890.092	3837.9153	0	329.4
28	937	205.36	-35.79294	1963.09	3960.1653	0	343.83
29	937	215.48	-37.702385	2081.9416	4129.8978	0	363.88

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30	937	223.705	-39.25428	2172.4116	4270.6191	0	380.17
31	937	232.56365	-40.925725	2269.7266	4422.2648	0	397.72
32	937	239.43365	-42.22196	2349.6225	4537.9423	0	411.33
33	937	245.305	-43.32977	2420.7589	4636.6135	0	422.96
34	937	257	-45.53638	2558.9913	4834.6953	0	446.13
35	937	270.67245	-44.42857	2486.5259	4924.7465	0	434.5
36	937	281.59245	-40.454015	2235.8754	4459.8043	0	392.77
37	937	289.12	-37.71421	2063.0264	4140.9505	0	364
38	937	293.8	-36.01083	1955.4331	3892.3408	0	346.11
39	937	297.26235	-34.750635	1875.7814	3620.9762	0	332.88
40	937	304.28735	-32.193745	1714.0255	3036.8472	0	291.03
41	937	309.7823	-30.193745	1587.5454	2592.2729	0	270.03
42	937	315.12845	-28.247905	1464.5354	2383.3715	0	249.6
43	937	324.75615	-24.74371	1242.8786	2014.7244	0	212.81
44	937	330.415	-22.684055	1098.829	1779.3557	0	191.18
45	937	337.41	-20.138085	925.86438	1456.4468	0	164.45
46	937	344.79	-17.451985	758.2862	1132.0624	0	136.25
47	937	350.14715	-15.50215	636.61217	910.53072	0	115.77
48	937	359.45905	-12.112895	425.12759	539.39089	0	100

Slices of Slip Surface: 881

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	881	24.258405	-0.26940175	453.60882	570.38412	0	600
2	881	26.70714	-1.5247932	531.93448	837.94935	0	211.75
3	881	32.212665	-3.2288655	638.28136	1074.2035	0	193.56
4	881	37.085	-4.2840995	704.13201	1204.1827	0	177.46
5	881	42.09	-5.368065	771.76219	1325.0348	0	160.92
6	881	51.275	-7.3573205	895.89322	1541.8835	0	151.44
7	881	57.704875	-8.749881	982.77873	1700.0811	0	155.63
8	881	61.34273	-9.537755	1031.9626	1807.2679	0	153.4
9	881	67.182855	-10.80259	1110.8816	1988.9522	0	156.98
10	881	71.77	-11.79606	1172.8889	2135.9672	0	159.79
11	881	74	-12.279025	1203.0094	2201.217	0	161.16
12	881	78.473135	-13.2478	1243.8591	2318.034	0	163.9
13	881	84.25207	-14.49938	1289.3482	2468.7889	0	199.19
14	881	90.698935	-15.89562	1340.076	2640.5021	0	217.21
15	881	102	-18.34317	1429.0892	3128.7218	0	248.8
16	881	113.435	-20.819725	1519.0514	3723.3847	0	280.77

17	881	122.71	-22.82847	1592.089	4044.3361	0	306.7
18	881	131.63	-24.76033	1662.353	4118.4219	0	320.75
19	881	140.1625	-26.60827	1729.4439	4043.1738	0	334.19
20	881	149.3875	-28.60619	1802.1221	3954.0742	0	348.72
21	881	154.91155	-29.802575	1845.5937	3901.1137	0	357.42
22	881	157.82155	-30.43281	1868.4856	3879.1886	0	355.73
23	881	163.61	-31.686445	1914.0677	3822.0754	0	365.13
24	881	170.8462	-33.253635	1971.0276	3826.4877	0	376.88
25	881	175.6662	-34.297535	2008.9751	3896.0152	0	329
26	881	178.855	-34.98816	2034.0815	3943.0202	0	335.38
27	881	185.5775	-36.444095	2087.0197	4070.8784	0	350.66
28	881	195.3925	-38.56979	2164.2909	4263.6581	0	372.98
29	881	205.7654	-40.81632	2276.6004	4467.5445	0	396.57
30	881	215.8854	-43.008075	2413.0133	4666.9718	0	419.58
31	881	223.705	-44.701615	2512.3696	4824.639	0	437.37
32	881	233.74	-46.874965	2640.7418	5026.6208	0	460.19
33	881	245.305	-49.379675	2798.2773	5255.1616	0	486.49
34	881	257	-51.912535	2956.8057	5486.5832	0	513.08
35	881	269.46	-51.441295	2924.4064	5697.7907	0	508.13
36	881	280.38	-47.46674	2673.7356	5231.3864	0	466.4
37	881	289.12	-44.28564	2472.996	4858.1823	0	433
38	881	293.8	-42.58226	2365.4746	4607.8495	0	415.11
39	881	302.225	-39.51581	2171.5925	3947.1097	0	382.92
40	881	313.3148	-35.47946	1916.2442	3234.0812	0	340.53
41	881	322.87455	-32	1696.2486	2813.3716	0	289
42	881	328.96975	-29.78152	1555.9153	2535.3482	0	265.71
43	881	330.415	-29.255485	1508.8465	2461.2724	0	260.18
44	881	337.41	-26.709515	1335.9675	2138.4495	0	233.45
45	881	344.79	-24.023415	1168.3513	1814.1418	0	205.25
46	881	352.5973	-21.1818	991.01493	1493.9159	0	175.41
47	881	365.75185	-16.393935	692.26033	963.79827	0	125.14
48	881	376.1314	-12.616075	456.52565	548.57219	0	100

Slices of Slip Surface: 873

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	873	24.258405	-0.26940175	453.60882	571.48944	0	600
2	873	26.70714	-1.5247932	531.93448	838.33553	0	211.75
3	873	32.212665	-3.123491	631.70113	1068.5004	0	193.56
4	873	37.085	-4.0428035	689.07464	1185.7899	0	177.46
5	873	42.09	-4.9871475	748.00398	1293.5445	0	160.92
6	873	51.275	-6.720174	856.13558	1487.0321	0	151.44
7	873	59.95401	-8.3577305	958.32248	1687.6083	0	157.1
8	873	63.591865	-9.044122	1001.1516	1787.8443	0	154.78
9	873	67.182855	-9.721672	1043.4298	1888.5501	0	156.98
10	873	71.77	-10.587175	1097.4253	2023.3642	0	159.79
11	873	74	-11.00793	1123.6733	2082.6035	0	161.16
12	873	80.778935	-12.28698	1170.9092	2241.6637	0	165.31

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13	873	88.20789	-13.688675	1216.46	2417.6146	0	169.86
14	873	92.348955	-14.47001	1241.8348	2514.2022	0	203.1
15	873	102	-16.29097	1300.997	2932.6815	0	227.26
16	873	113.435	-18.448525	1371.1288	3497.3554	0	255.87
17	873	122.71	-20.198535	1428.0043	3793.6646	0	279.08
18	873	131.63	-21.881565	1482.6407	3843.6606	0	290.52
19	873	140.1625	-23.491475	1534.9758	3745.2984	0	301.46
20	873	149.3875	-25.232045	1591.5388	3631.1073	0	313.29
21	873	156.91	-26.65139	1637.6846	3537.0746	0	322.94
22	873	163.61	-27.91555	1678.8214	3431.0183	0	331.53
23	873	171.02875	-29.315325	1724.3037	3389.3027	0	341.04
24	873	175.84875	-30.22476	1753.8035	3430.1065	0	341.83
25	873	178.855	-30.791975	1772.2288	3472.883	0	345.83
26	873	188.2637	-32.567215	1829.9082	3649.8523	0	358.36
27	873	198.0787	-34.41911	1890.092	3838.8	0	329.4
28	873	205.36	-35.79294	1963.09	3960.9421	0	343.83
29	873	215.48	-37.702385	2081.9416	4130.7717	0	363.88
30	873	223.705	-39.25428	2172.4116	4271.5505	0	380.17
31	873	232.56365	-40.925725	2269.7266	4423.1277	0	397.72
32	873	239.43365	-42.22196	2349.6225	4538.7776	0	411.33
33	873	245.305	-43.32977	2420.7589	4637.66	0	422.96
34	873	257	-45.53638	2558.9913	4835.6779	0	446.13
35	873	270.67245	-44.42857	2486.5259	4921.7187	0	434.5
36	873	281.59245	-40.454015	2235.8754	4457.0389	0	392.77
37	873	289.12	-37.71421	2063.0264	4138.5153	0	364
38	873	293.8	-36.01083	1955.4331	3889.9915	0	346.11
39	873	297.26235	-34.750635	1875.7814	3618.698	0	332.88
40	873	304.28735	-32.193745	1714.0255	3034.9537	0	291.03
41	873	309.7823	-30.193745	1587.5454	2590.5958	0	270.03
42	873	315.12845	-28.247905	1464.5354	2381.8099	0	249.6
43	873	324.75615	-24.74371	1242.8786	2013.4556	0	212.81
44	873	330.415	-22.684055	1098.829	1778.188	0	191.18
45	873	337.41	-20.138085	925.86438	1455.4536	0	164.45
46	873	344.79	-17.451985	758.2862	1131.222	0	136.25
47	873	350.14715	-15.50215	636.61217	909.85904	0	115.77
48	873	359.45905	-12.112895	425.12759	538.90154	0	100

Slices of Slip Surface: 49

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	49	15.4334	2.408961	286.46914	61.880469	0	600
2	49	16.703285	1.1390755	365.72825	282.24363	0	600
3	49	18.405025	-0.562665	471.90719	623.03914	0	239.18
4	49	19.748845	-1.292071	517.42561	816.52327	0	234.74
5	49	21.265	-1.615701	537.61652	856.02176	0	229.73
6	49	28.995	-3.265704	640.58004	1057.87	0	204.19
7	49	37.085	-4.9925505	748.34683	1269.93	0	177.46
8	49	42.09	-6.06089	815.00309	1389.7911	0	160.92

9	49	50.92963	-7.9477485	932.74122	1595.7172	0	151.21
10	49	56.20463	-9.073721	1002.9974	1719.0925	0	150.25
11	49	60.187855	-9.923961	1056.0487	1834.9058	0	152.69
12	49	67.182855	-11.417075	1149.2318	2049.0732	0	156.98
13	49	71.77	-12.39622	1210.3356	2194.3073	0	159.79
14	49	74	-12.872225	1240.0155	2258.7168	0	161.16
15	49	77.14173	-13.54284	1269.7853	2340.4361	0	163.08
16	49	82.920665	-14.77638	1314.1605	2489.8212	0	201.4
17	49	90.698935	-16.436685	1373.881	2694.8614	0	222.89
18	49	102	-18.848945	1460.6013	3179.7632	0	254.11
19	49	113.435	-21.2898	1548.3933	3770.9558	0	285.71
20	49	122.71	-23.26959	1619.6134	4089.179	0	311.33
21	49	131.63	-25.1736	1688.1186	4160.3584	0	325.09
22	49	140.1625	-26.9949	1753.5587	4082.5552	0	338.25
23	49	149.3875	-28.96402	1824.4813	3990.536	0	352.48
24	49	156.91	-30.56973	1882.1696	3924.6453	0	357.76
25	49	163.61	-31.999875	1933.6168	3859.4925	0	368.42
26	49	170.19015	-33.404435	1984.0644	3852.2851	0	378.89
27	49	175.01015	-34.433285	2021.1495	3918.1423	0	330.84
28	49	178.855	-35.25399	2050.6631	3971.4153	0	338.17
29	49	185.5775	-36.68894	2102.3086	4097.6036	0	353.23
30	49	195.3925	-38.783995	2177.6366	4287.1192	0	375.23
31	49	205.3795	-40.91576	2282.7674	4480.5315	0	397.62
32	49	215.4995	-43.07592	2417.3153	4676.891	0	420.3
33	49	223.705	-44.827425	2520.1619	4839.6317	0	438.69
34	49	233.74	-46.96944	2646.6366	5038.3892	0	461.18
35	49	245.305	-49.43804	2801.9478	5263.2209	0	487.1
36	49	257	-51.93439	2958.2149	5490.9437	0	513.31
37	49	269.46	-51.441295	2924.4064	5696.3278	0	508.13
38	49	280.38	-47.46674	2673.7356	5230.0096	0	466.4
39	49	289.12	-44.28564	2472.996	4856.8931	0	433
40	49	293.8	-42.58226	2365.4746	4606.5071	0	415.11
41	49	302.225	-39.51581	2171.5925	3946.0396	0	382.92
42	49	313.3148	-35.47946	1916.2442	3233.1565	0	340.53
43	49	322.87455	-32	1696.2486	2812.5166	0	289
44	49	328.96975	-29.78152	1555.9153	2534.6437	0	265.71
45	49	330.415	-29.255485	1508.8465	2460.6052	0	260.18
46	49	337.41	-	1335.9675	2137.8384	0	233.45

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			26.709515				
47	49	344.79	-24.023415	1168.3513	1813.5688	0	205.25
48	49	352.5973	-21.1818	991.01493	1493.4873	0	175.41
49	49	365.75185	-16.393935	692.26033	963.4411	0	125.14
50	49	376.1314	-12.616075	456.52565	548.33741	0	100

Slices of Slip Surface: 817

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	817	24.96466	-0.34888145	458.56851	558.27785	0	600
2	817	27.07778	-1.6042729	536.90595	837.3719	0	210.53
3	817	32.212665	-3.2288655	638.28136	1074.5011	0	193.56
4	817	37.085	-4.2840995	704.13201	1204.7628	0	177.46
5	817	42.09	-5.368065	771.76219	1325.2848	0	160.92
6	817	51.275	-7.3573205	895.89322	1542.254	0	151.44
7	817	57.704875	-8.749881	982.77873	1700.6735	0	155.63
8	817	61.34273	-9.537755	1031.9626	1807.7206	0	153.4
9	817	67.182855	-10.80259	1110.8816	1989.3889	0	156.98
10	817	71.77	-11.79606	1172.8889	2136.6029	0	159.79
11	817	74	-12.279025	1203.0094	2201.95	0	161.16
12	817	78.473135	-13.2478	1243.8591	2318.5968	0	163.9
13	817	84.25207	-14.49938	1289.3482	2469.4247	0	199.19
14	817	90.698935	-15.89562	1340.076	2640.9741	0	217.21
15	817	102	-18.34317	1429.0892	3129.2678	0	248.8
16	817	113.435	-20.819725	1519.0514	3724.0706	0	280.77
17	817	122.71	-22.82847	1592.089	4045.118	0	306.7
18	817	131.63	-24.76033	1662.353	4119.1698	0	320.75
19	817	140.1625	-26.60827	1729.4439	4043.9154	0	334.19
20	817	149.3875	-28.60619	1802.1221	3954.7098	0	348.72
21	817	154.91155	-29.802575	1845.5937	3902.1859	0	357.42
22	817	157.82155	-30.43281	1868.4856	3879.9222	0	355.73
23	817	163.61	-31.686445	1914.0677	3822.849	0	365.13
24	817	170.8462	-33.253635	1971.0276	3827.1967	0	376.88
25	817	175.6662	-34.297535	2008.9751	3897.0823	0	329
26	817	178.855	-34.98816	2034.0815	3943.8279	0	335.38
27	817	185.5775	-36.444095	2087.0197	4071.675	0	350.66
28	817	195.3925	-38.56979	2164.2909	4264.4547	0	372.98
29	817	205.7654	-40.81632	2276.6004	4468.2597	0	396.57
30	817	215.8854	-43.008075	2413.0133	4667.7067	0	419.58
31	817	223.705	-44.701615	2512.3696	4825.411	0	437.37
32	817	233.74	-46.874965	2640.7418	5027.4744	0	460.19
33	817	245.305	-49.379675	2798.2773	5255.9942	0	486.49
34	817	257	-51.912535	2956.8057	5487.4907	0	513.08
35	817	269.46	-51.441295	2924.4064	5695.4673	0	508.13
36	817	280.38	-47.46674	2673.7356	5229.3212	0	466.4

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37	817	289.12	-44.28564	2472.996	4856.1769	0	433
38	817	293.8	-42.58226	2365.4746	4605.8359	0	415.11
39	817	302.225	-39.51581	2171.5925	3945.5045	0	382.92
40	817	313.3148	-35.47946	1916.2442	3232.5785	0	340.53
41	817	322.87455	-32	1696.2486	2812.1745	0	289
42	817	328.96975	-29.78152	1555.9153	2534.2524	0	265.71
43	817	330.415	-29.255485	1508.8465	2460.216	0	260.18
44	817	337.41	-26.709515	1335.9675	2137.4564	0	233.45
45	817	344.79	-24.023415	1168.3513	1813.3014	0	205.25
46	817	352.5973	-21.1818	991.01493	1493.2016	0	175.41
47	817	365.75185	-16.393935	692.26033	963.29823	0	125.14
48	817	376.1314	-12.616075	456.52565	548.23855	0	100

Slices of Slip Surface: 41

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	41	15.4334	2.408961	286.46914	63.350789	0	600
2	41	16.703285	1.1390755	365.72825	282.63782	0	600
3	41	18.405025	-0.562665	471.90719	623.49156	0	239.18
4	41	19.748845	-1.2711215	516.11823	818.669	0	234.74
5	41	21.265	-1.5540905	533.7763	854.36306	0	229.73
6	41	28.995	-2.9967855	623.79625	1036.7092	0	204.19
7	41	37.085	-4.5066695	718.01262	1228.5575	0	177.46
8	41	42.09	-5.440782	776.30119	1335.8842	0	160.92
9	41	51.275	-7.155032	883.26965	1527.5569	0	151.44
10	41	58.855195	-8.569768	971.55692	1697.5913	0	156.38
11	41	62.49305	-9.2487225	1013.9233	1793.9778	0	154.11
12	41	67.182855	-10.124008	1068.5448	1927.9016	0	156.98
13	41	71.77	-10.980135	1121.9679	2061.2369	0	159.79
14	41	74	-11.396335	1147.9282	2119.8947	0	161.16
15	41	80.778935	-12.661525	1194.3076	2278.5572	0	165.31
16	41	87.2542	-13.87004	1233.1414	2430.2132	0	169.28
17	41	91.395265	-14.64291	1258.0121	2526.5259	0	204.42
18	41	102	-16.622135	1321.6615	2966.1014	0	230.73
19	41	113.435	-18.756315	1390.3778	3528.3151	0	259.1
20	41	122.71	-20.48736	1446.0314	3822.8902	0	282.12
21	41	131.63	-22.152155	1499.6158	3871.0401	0	293.36
22	41	140.1625	-	1550.7829	3770.9824	0	304.12

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			23.744625				
23	41	149.3875	-25.46634	1606.1947	3654.8309	0	315.75
24	41	156.91	-26.87031	1651.3312	3559.1613	0	325.24
25	41	163.61	-28.12077	1691.5045	3451.743	0	333.69
26	41	170.5395	-29.41406	1733.1031	3404.9917	0	342.42
27	41	175.3595	-30.313645	1762.1161	3445.9653	0	343.08
28	41	178.855	-30.966035	1783.0947	3493.3968	0	347.66
29	41	187.89055	-32.65239	1837.3186	3661.4994	0	359.5
30	41	197.70555	-34.48422	1896.174	3846.9087	0	330.08
31	41	205.36	-35.912815	1970.6161	3974.2587	0	345.08
32	41	215.48	-37.80157	2088.1517	4142.0141	0	364.92
33	41	223.705	-39.33665	2177.5649	4281.0534	0	381.03
34	41	232.42265	-40.963675	2272.0976	4428.5012	0	398.12
35	41	239.29265	-42.245865	2351.1687	4542.9463	0	411.58
36	41	245.305	-43.367985	2423.2264	4642.7288	0	423.36
37	41	257	-45.55069	2559.8698	4838.3133	0	446.28
38	41	270.67245	-44.42857	2486.5259	4920.8737	0	434.5
39	41	281.59245	-40.454015	2235.8754	4456.2646	0	392.77
40	41	289.12	-37.71421	2063.0264	4137.7991	0	364
41	41	293.8	-36.01083	1955.4331	3889.3203	0	346.11
42	41	297.26235	-34.750635	1875.7814	3618.2424	0	332.88
43	41	304.28735	-32.193745	1714.0255	3034.3856	0	291.03
44	41	309.7823	-30.193745	1587.5454	2590.1545	0	270.03
45	41	315.12845	-28.247905	1464.5354	2381.3219	0	249.6
46	41	324.75615	-24.74371	1242.8786	2013.0652	0	212.81
47	41	330.415	-22.684055	1098.829	1777.8544	0	191.18
48	41	337.41	-20.138085	925.86438	1455.148	0	164.45
49	41	344.79	-17.451985	758.2862	1130.9928	0	136.25
50	41	350.14715	-15.50215	636.61217	909.66551	0	115.77
51	41	359.45905	-12.112895	425.12759	538.73842	0	100

Slices of Slip Surface: 6001

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	6001	22.86291	-0.08020975	441.80673	508.98151	0	600
2	6001	29.60221	-3.5352477	657.40267	1044.3244	0	202.18
3	6001	37.085	-7.3714495	896.77936	1448.6217	0	177.46
4	6001	39.220805	-8.4664115	965.10844	1560.6918	0	170.4
5	6001	42.03324	-9.90826	1055.0846	1707.9105	0	157.45
6	6001	44.902435	-11.015375	1124.1803	1874.0222	0	147.72
7	6001	51.275	-12.16994	1196.1656	2008.1591	0	147.23
8	6001	58.962955	-13.562825	1283.1142	2183.9243	0	151.94
9	6001	62.60081	-14.221925	1324.2613	2279.2797	0	184.99
10	6001	67.182855	-15.05209	1376.0488	2410.0199	0	196.09
11	6001	71.77	-15.883175	1427.892	2543.3901	0	207.21
12	6001	74	-16.2872	1453.1428	2601.8912	0	212.62
13	6001	80.778935	-17.51539	1497.1867	2759.2301	0	229.05
14	6001	90.698935	-19.31267	1553.2911	2989.5567	0	253.09
15	6001	102	-21.36017	1617.3153	3439.1914	0	280.48
16	6001	113.435	-23.431935	1682.0891	3995.0766	0	308.2
17	6001	122.71	-25.112355	1734.6597	4284.3508	0	330.68
18	6001	131.63	-26.728455	1785.0966	4327.2559	0	341.42
19	6001	142.61855	-28.719335	1847.3212	4189.7254	0	354.64
20	6001	151.84355	-30.390695	1899.5998	4075.2156	0	359.17
21	6001	156.91	-31.30862	1928.2303	4023.1624	0	365.52
22	6001	163.61	-32.52251	1966.2739	3933.1968	0	373.91
23	6001	169.58245	-33.604585	2000.0442	3895.3995	0	381.39
24	6001	174.40245	-34.47786	2027.4433	3942.2198	0	331.69
25	6001	178.855	-35.28456	2052.5619	3987.4256	0	338.49
26	6001	185.5775	-36.502525	2090.6708	4091.4149	0	351.28
27	6001	195.3925	-38.28078	2146.2108	4248.9119	0	369.95
28	6001	208.1103	-40.584955	2262.0672	4453.3306	0	394.14
29	6001	218.2303	-42.41847	2376.108	4615.8906	0	413.39
30	6001	223.705	-43.410365	2431.8158	4707.4072	0	423.81
31	6001	233.74	-45.22848	2538.0111	4872.9956	0	442.9
32	6001	245.305	-47.3238	2670.0563	5059.6938	0	464.9
33	6001	257.25	-49.487965	2805.4989	5252.8288	0	487.62
34	6001	271.75	-52.115035	2965.8538	5489.1199	0	515.21
35	6001	282.42	-52.183795	2967.5877	5736.109	0	515.93
36	6001	289.12	-49.745195	2813.6346	5450.3606	0	490.32
37	6001	293.8	-48.04181	2706.1467	5200.527	0	472.44
38	6001	302.225	-44.97536	2512.2896	4538.0793	0	440.24
39	6001	309.82485	-42.209235	2337.3354	3962.6327	0	411.2
40	6001	315.1923	-40.25565	2213.7628	3747.9363	0	390.68
41	6001	324.77745	-36.76695	1993.0825	3364.3194	0	354.05
42	6001	330.415	-34.715045	1849.5268	3119.7247	0	332.51
43	6001	331.29425	-34.39502	1815.4891	3065.1293	0	329.15
44	6001	331.85405	-34.191275	1802.7796	3038.905	0	327.01
45	6001	337.9698	-31.965325	1663.8973	2721.3046	0	288.64
46	6001	344.79	-29.48297	1509.009	2377.2698	0	262.57
47	6001	352.04665	-26.84176	1344.2074	2079.7715	0	234.84
48	6001	364.1	-22.454705	1070.4855	1594.7747	0	188.77
49	6001	376.15335	-18.06765	796.68571	1109.7	0	142.71

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50	6001	384.75455	-14.93706	601.36128	770.66294	0	109.84
51	6001	391.28705	-12.55942	452.98243	532.25644	0	100

Slices of Slip Surface: 113

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	113	14.61498	2.7159575	267.33612	81.926598	0	600
2	113	16.225445	1.294715	356.00911	300.07285	0	600
3	113	18.330115	-0.562665	471.91129	639.50101	0	239.43
4	113	19.748845	-1.292071	517.42561	816.52327	0	234.74
5	113	21.265	-1.615701	537.61652	856.08829	0	229.73
6	113	28.995	-3.265704	640.58004	1057.87	0	204.19
7	113	37.085	-4.9925505	748.34683	1269.9747	0	177.46
8	113	42.09	-6.06089	815.00309	1389.7911	0	160.92
9	113	50.92963	-7.9477485	932.74122	1595.8164	0	151.21
10	113	56.20463	-9.073721	1002.9974	1719.2341	0	150.25
11	113	60.187855	-9.923961	1056.0487	1834.9058	0	152.69
12	113	67.182855	-11.417075	1149.2318	2049.2188	0	156.98
13	113	71.77	-12.39622	1210.3356	2194.4265	0	159.79
14	113	74	-12.872225	1240.0155	2258.8146	0	161.16
15	113	77.14173	-13.54284	1269.7853	2340.4361	0	163.08
16	113	82.920665	-14.77638	1314.1605	2489.9557	0	201.4
17	113	90.698935	-16.436685	1373.881	2694.9795	0	222.89
18	113	102	-18.848945	1460.6013	3179.8997	0	254.11
19	113	113.435	-21.2898	1548.3933	3771.1846	0	285.71
20	113	122.71	-23.26959	1619.6134	4089.3746	0	311.33
21	113	131.63	-25.1736	1688.1186	4160.6079	0	325.09
22	113	140.1625	-26.9949	1753.5587	4082.7672	0	338.25
23	113	149.3875	-28.96402	1824.4813	3990.748	0	352.48
24	113	156.91	-30.56973	1882.1696	3924.8134	0	357.76
25	113	163.61	-31.999875	1933.6168	3859.7505	0	368.42
26	113	170.19015	-33.404435	1984.0644	3852.6356	0	378.89
27	113	175.01015	-34.433285	2021.1495	3918.3832	0	330.84
28	113	178.855	-35.25399	2050.6631	3971.6847	0	338.17
29	113	185.5775	-36.68894	2102.3086	4097.8028	0	353.23
30	113	195.3925	-38.783995	2177.6366	4287.3185	0	375.23
31	113	205.3795	-40.91576	2282.7674	4480.7241	0	397.62
32	113	215.4995	-43.07592	2417.3153	4677.085	0	420.3
33	113	223.705	-44.827425	2520.1619	4839.7862	0	438.69

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34	113	233.74	-46.96944	2646.6366	5038.6739	0	461.18
35	113	245.305	-49.43804	2801.9478	5263.5334	0	487.1
36	113	257	-51.93439	2958.2149	5491.2231	0	513.31
37	113	269.46	-51.441295	2924.4064	5695.6394	0	508.13
38	113	280.38	-47.46674	2673.7356	5229.4072	0	466.4
39	113	289.12	-44.28564	2472.996	4856.3201	0	433
40	113	293.8	-42.58226	2365.4746	4606.1715	0	415.11
41	113	302.225	-39.51581	2171.5925	3945.5714	0	382.92
42	113	313.3148	-35.47946	1916.2442	3232.6941	0	340.53
43	113	322.87455	-32	1696.2486	2812.1745	0	289
44	113	328.96975	-29.78152	1555.9153	2534.2524	0	265.71
45	113	330.415	-29.255485	1508.8465	2460.2716	0	260.18
46	113	337.41	-26.709515	1335.9675	2137.5328	0	233.45
47	113	344.79	-24.023415	1168.3513	1813.3396	0	205.25
48	113	352.5973	-21.1818	991.01493	1493.273	0	175.41
49	113	365.75185	-16.393935	692.26033	963.36967	0	125.14
50	113	376.1314	-12.616075	456.52565	548.23855	0	100

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SWL Case.BS.Thru Fabric

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 215
Last Edited By: Cox, Lane MVK
Date: 4/20/2011
Time: 11:09:12 AM
File Name: 5c(2) Typical 1.2nd SC.80%SG.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\2nd Stage Constuction\80%SG,1 Layer of Fabric\Slope W\
Last Solved Date: 4/20/2011
Last Solved Time: 11:51:36 AM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

SWL Case.BS.Thru Fabric

Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

SlipSurface
- Direction of movement: Left to Right
- Use Passive Mode: No
- Slip Surface Option: Block
- Critical slip surfaces saved: 100
- Optimize Critical Slip Surface Location: Yes
- Tension Crack
  - Tension Crack Option: Tension Crack Line
  - Percentage Wet: 1
  - Tension Crack Fluid Unit Weight: 62.4 pcf

FOS Distribution
- FOS Calculation Option: Constant

Restrict Block Crossing: Yes
Advanced
- Number of Slices: 30
- Optimization Tolerance: 0.01
- Minimum Slip Surface Depth: 0.1 ft
- Optimization Maximum Iterations: 2000
- Optimization Convergence Tolerance: 1e-007
- Starting Optimization Points: 8
- Ending Optimization Points: 16
- Complete Passes per Insertion: 1
- Driving Side Maximum Convex Angle: 5 °
- Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH

Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH above 0

Model: Mohr-Coulomb
Unit Weight: 102 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH, 0 to -9

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -9 (2)
Cohesion Spatial Fn: CH, 0 to -9
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH, -9 to -14

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -9 to -14 (2)

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Cohesion Spatial Fn: CH, -9 to -14
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -14 to -30
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -14 to -30 (2)
Cohesion Spatial Fn: CH, -14 to -30
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -30 to -34
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -30 to -34 (2)
Cohesion Spatial Fn: CH, 30 to -34
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sand Fill
Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -34 to -42
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -34 to -42 (2)
Cohesion Spatial Fn: CH, -34 to -42
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -42 to -80
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -42 to -80 (2)
Cohesion Spatial Fn: CH, -42 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure

Piezometric Line: 1

CH, 0 to -9 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -9 (2)
Cohesion Spatial Fn: CH, 0 to -9 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -9 to -14 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -9 to -14 (2)
Cohesion Spatial Fn: CH, -9 to -14 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -14 to -30 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -14 to -30 (2)
Cohesion Spatial Fn: CH, -14 to -30 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -30 to -34 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -30 to -34 (2)
Cohesion Spatial Fn: CH, 30 to -34 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Limits
Left Coordinate: (-200, -2.13) ft
Right Coordinate: (500, -4.5) ft

Slip Surface Block
Left Grid
Upper Left: (77, -14) ft
Lower Left: (142, -14) ft

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Lower Right: (142, -60) ft
X Increments: 7
Y Increments: 7
Starting Angle: 115 °
Ending Angle: 135 °
Angle Increments: 7

Right Grid
Upper Left: (261, -14) ft
Lower Left: (314, -14) ft
Lower Right: (314, -60) ft
X Increments: 7
Y Increments: 7
Starting Angle: 0 °
Ending Angle: 45 °
Angle Increments: 7

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	7
	75	7
	200.3	-4.33
	220.54	-4.34
	226.87	-4.54
	240.61	-4.57
	250	-4.5
	285.84	-4.64
	295.2	-4.68
	329.57	-4.85
	331.26	-5.3
	447.66	-5.3
	450.06	-4.54
	500	-4.5

Reinforcements

Reinforcement 1

Type: Fabric
Outside Point: (209, 0) ft
Inside Point: (22, 0) ft
Slip Surface Intersection: (105.66, 0) ft
Total Length: 187 ft

Reinforcement Direction: 0 °
Applied Load Option: Variable
F of S Dependent: No
Contact Cohesion: 265 psf
Contact Phi: 19 °
Interface Factor: 2
Bond Safety Factor: 1
Fabric Capacity: 27000 lbs
Fabric Safety Factor: 1
Fabric Load: 27000 lbs
Load Distribution: Even along reinf.
Load Orientation: 0
Applied Load: 27000 lbs
Fabric Load Used: 27000 lbs
Resisting Force Used: 1229.8 lbs/ft
Available Bond Length: 83.657 ft
Required Bond Length: 21.954 ft
Governing Component: Fabric

Tension Crack Line

	X (ft)	Y (ft)
	-1	5.40517
	8	5.2
	22	0.1
	96	0.1
	118	11
	127	11
	166	2
	167.4	4

Spatial Functions

CH, 0 to -9

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -2.5, 50)
Data Point: (-300, -9, 75)
Data Point: (-33.33, 0, 50)
Data Point: (-33.33, -9, 75)
Data Point: (0, 0, 300)
Data Point: (0, -9, 300)
Data Point: (285.84, -4.62, 100)
Data Point: (285.84, -9, 100)
Data Point: (500, 0, 100)
Data Point: (500, -9, 100)

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CH, -34 to -42 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -38, 105)
Data Point: (0, -38, 116)
Data Point: (177.04, -38, 106)

CH, -42 to -80 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -61, 105)
Data Point: (0, -61, 105)
Data Point: (177.04, -61, 106)

CH, 0 to -9 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, 0, 300)
Data Point: (0, -9, 300)
Data Point: (46, 0, 148)
Data Point: (46, -9, 148)
Data Point: (122.71, 0, 198)
Data Point: (122.71, -9, 198)
Data Point: (285.84, 0, 100)
Data Point: (285.84, -9, 100)

CH, -9 to -14 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -9, 300)
Data Point: (0, -14, 300)
Data Point: (46, -9, 144)
Data Point: (46, -14, 144)
Data Point: (122.71, -9, 191)
Data Point: (122.71, -14, 191)
Data Point: (285.84, -9, 100)
Data Point: (285.84, -14, 100)

CH, -14 to -30 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -14, 300)
Data Point: (0, -30, 375)

Data Point: (46, -14, 174)
Data Point: (46, -30, 342)
Data Point: (122.71, -14, 214)
Data Point: (122.71, -30, 382)
Data Point: (285.84, -14, 100)
Data Point: (285.84, -30, 268)

CH, 30 to -34 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -30, 400)
Data Point: (0, -34, 438)
Data Point: (46, -30, 341)
Data Point: (46, -34, 383)
Data Point: (122.71, -30, 374)
Data Point: (122.71, -34, 416)
Data Point: (285.84, -30, 268)
Data Point: (285.84, -34, 310)

CH, -9 to -14

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -9, 75)
Data Point: (-300, -14, 115)
Data Point: (-33.33, -9, 75)
Data Point: (-33.33, -14, 115)
Data Point: (0, -9, 300)
Data Point: (0, -14, 300)
Data Point: (285.84, -9, 100)
Data Point: (285.84, -14, 100)
Data Point: (500, -9, 100)
Data Point: (500, -14, 100)

CH, -14 to -30

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -14, 115)
Data Point: (-300, -30, 291)
Data Point: (-33.33, -14, 115)
Data Point: (-33.33, -30, 291)
Data Point: (0, -14, 300)
Data Point: (0, -30, 375)
Data Point: (285.84, -14, 100)
Data Point: (285.84, -30, 268)
Data Point: (500, -14, 100)

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Data Point: (500, -30, 268)

CH, 30 to -34

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -30, 291)
Data Point: (-300, -34, 335)
Data Point: (-33.33, -30, 291)
Data Point: (-33.33, -34, 335)
Data Point: (0, -30, 400)
Data Point: (0, -34, 438)
Data Point: (285.84, -30, 268)
Data Point: (285.84, -34, 310)
Data Point: (500, -30, 268)
Data Point: (500, -34, 310)

CH, 0 to -9 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -4.5, 90)
Data Point: (0, -4.5, 96)
Data Point: (177.04, -4.54, 87)

CH, -9 to -14 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -11.5, 90)
Data Point: (0, -11.5, 97)
Data Point: (177.04, -11.5, 100)

CH, -14 to -30 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -22, 100)
Data Point: (0, -22, 102)
Data Point: (177.04, -22, 100)

CH, -30 to -34 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -32, 122)
Data Point: (0, -32, 113)
Data Point: (177.04, -32, 118)

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CH, -34 to -42

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -34, 335)
Data Point: (-300, -42, 423)
Data Point: (-33.33, -34, 335)
Data Point: (-33.33, -42, 423)
Data Point: (0, -34, 438)
Data Point: (0, -42, 514)
Data Point: (177.04, -34, 325)
Data Point: (177.04, -42, 409)
Data Point: (500, -34, 325)
Data Point: (500, -42, 409)

CH, -42 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -42, 423)
Data Point: (-300, -80, 841)
Data Point: (-33.33, -42, 423)
Data Point: (-33.33, -80, 841)
Data Point: (0, -42, 514)
Data Point: (0, -80, 875)
Data Point: (177.04, -42, 409)
Data Point: (177.04, -80, 808)
Data Point: (500, -42, 409)
Data Point: (500, -80, 808)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -42 to -80	1,3,4,2	26600
Region 2	CH, -34 to -42	3,5,69,73,6,4	5600
Region 3	CH above 0	45,21,22,63,64,27,44,65	161.91095
Region 4	Sand Fill	29,30,43,31,32,33,42,34,35,62	606.7023
Region 5	CH, 0 to -9	56,53,54,41,12	267.3158
Region 6	EMBANKMENT FILL CH	59,46,47,60,37,36,35,62	1502.7397
Region 7	EMBANKMENT FILL CH	64,27,44,57,28,62,59	499.34315
Region 8	EMBANKMENT FILL CH	60,61,76,75,40,39,58,38,37	772.15003
Region 9	CH, 0 to -9	16,11,66,65,45,20,19,18,17,15,14,74	1498.6738
Region 10	CH, -9 to -14	11,9,67,66	1000
Region 11	CH, -14 to -30	9,7,68,67	3200
Region 12	CH, -30 to -34	7,5,69,68	800
Region 13	CH, -30 to -34	6,8,72,73	856.64
Region 14	CH, -14 to -30	8,10,71,72	3426.56
Region 15	CH, -9 to -14	10,71,70,55,50,51,52,56,12	954.73385

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Region 16	CH, 0 to -9	55,49,48,76,75,70	220.0602
Region 17	CH, -30 to -34 SG	69,68,72,73	1143.36
Region 18	CH, -14 to -30 SG	68,67,71,72	4573.44
Region 19	CH, -9 to -14 SG	67,66,43,31,32,33,42,70,71	1313.1338
Region 20	CH, 0 to -9 SG	66,65,44,57,28,62,29,30,43	438.1553
Region 21	CH, 0 to -9 SG	42,34,35,36,37,38,58,39,40,75,70	538.2795

Points

	X (ft)	Y (ft)
Point 1	-200	-80
Point 2	500	-80
Point 3	-200	-42
Point 4	500	-42
Point 5	-200	-34
Point 6	500	-34
Point 7	-200	-30
Point 8	500	-30
Point 9	-200	-14
Point 10	500	-14
Point 11	-200	-9
Point 12	500	-9
Point 13	-191.42	-2.12
Point 14	-156.88	-2.03
Point 15	-119.75	-2.26
Point 16	-200	-2.13
Point 17	-92.12	-1.99
Point 18	-71.42	-1.72
Point 19	-45.06	-0.68
Point 20	-33.33	-0.27
Point 21	-19.05	1.53
Point 22	-16.9	1.81
Point 23	-6.83	6.48
Point 24	-6.79	6.72
Point 25	-0.92	7.16
Point 26	3.42	6.91
Point 27	20.53	0.36
Point 28	38.18	-3.47
Point 29	56.55	-4.85
Point 30	70.54	-8.43
Point 31	109.16	-11.38
Point 32	127.67	-11.01
Point 33	135.55	-10.86
Point 34	159.82	-8.55
Point 35	177.04	-4.54
Point 36	180.67	-4.21
Point 37	200.3	-4.33
Point 38	220.54	-4.34

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Point 39	240.61	-4.57
Point 40	250	-4.5
Point 41	500	-4.5
Point 42	154	-9
Point 43	73	-9
Point 44	22	0
Point 45	-32	0
Point 46	117.71	14
Point 47	127.71	14
Point 48	329.57	-4.85
Point 49	343.56	-8.43
Point 50	382.18	-11.38
Point 51	400.69	-11.01
Point 52	408.57	-10.86
Point 53	432.84	-8.55
Point 54	450.06	-4.54
Point 55	346.02	-9
Point 56	427.02	-9
Point 57	35.99	-3
Point 58	226.87	-4.54
Point 59	94.84	8
Point 60	167.4	4
Point 61	292.4	0.875
Point 62	46	-4.06
Point 63	-5.16	5.5
Point 64	8	5.2
Point 65	0	0
Point 66	0	-9
Point 67	0	-14
Point 68	0	-30
Point 69	0	-34
Point 70	285.84	-9
Point 71	285.84	-14
Point 72	285.84	-30
Point 73	285.84	-34
Point 74	-194	-2
Point 75	285.84	-4.64
Point 76	309.25	-4.74

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	1.76	(226.636, 5.8)	95.88782	(102.802, 10.0889)	(345.698, -8.92548)
2	31573	1.84	(226.636, 5.8)	97.762	(101.398, 9.72044)	(350.994, -9.32739)
3	31583	1.84	(223.723, 5.672)	96.957	(101.398, 9.72044)	(345.223, -8.8152)
4	31574	1.85	(222.951, 5.585)	95.355	(101.398, 9.72044)	(343.722, -8.46747)
5	31582	1.85	(227.464, 5.827)	99.469	(101.398, 9.72044)	(352.639, -9.43567)
6	31518	1.85	(229.036, 7.628)	99.087	(104.307, 10.4836)	(352.639, -9.43567)

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7	31581	1.85	(232.675, 5.997)	103.122	(101.398, 9.72044)	(362.999, -10.1175)
8	31572	1.85	(232.529, 5.993)	101.565	(101.398, 9.72044)	(362.71, -10.0985)
9	31575	1.85	(220.489, 5.28)	93.79	(101.398, 9.72044)	(338.946, -7.24924)
10	31517	1.85	(234.248, 7.799)	102.544	(104.307, 10.4836)	(362.999, -10.1175)
11	31637	1.85	(225.043, 3.957)	98.175	(98.4215, 8.9396)	(350.994, -9.32739)
12	31590	1.85	(232.226, 5.983)	103.697	(101.398, 9.72044)	(362.106, -10.0588)
13	31509	1.85	(228.208, 7.601)	97.395	(104.307, 10.4836)	(350.994, -9.32739)
14	31638	1.85	(221.363, 3.742)	95.961	(98.4215, 8.9396)	(343.722, -8.46747)
15	31647	1.85	(222.133, 3.828)	97.309	(98.4215, 8.9396)	(345.223, -8.8152)
16	31510	1.86	(224.518, 7.386)	95.028	(104.307, 10.4836)	(343.722, -8.46747)
17	31646	1.86	(225.87, 3.984)	99.774	(98.4215, 8.9396)	(352.639, -9.43567)
18	31519	1.86	(225.293, 7.473)	96.71	(104.307, 10.4836)	(345.223, -8.8152)
19	31589	1.86	(238.714, 6.195)	108.171	(101.398, 9.72044)	(375.004, -10.9077)
20	31070	1.86	(229.534, 8.196)	98.013	(105.223, 10.7241)	(352.639, -9.43567)
21	31576	1.86	(218.42, 5.023)	92.36	(101.398, 9.72044)	(334.923, -6.21983)
22	31584	1.86	(221.112, 5.358)	95.192	(101.398, 9.72044)	(340.156, -7.5588)
23	31639	1.86	(218.912, 3.437)	94.119	(98.4215, 8.9396)	(338.946, -7.24924)
24	31006	1.86	(230.976, 9.828)	97.803	(107.858, 11.4153)	(352.639, -9.43567)
25	31591	1.86	(227.485, 5.828)	100.608	(101.398, 9.72044)	(352.681, -9.43844)
26	31526	1.86	(233.799, 7.784)	103.406	(104.307, 10.4836)	(362.106, -10.0588)
27	31508	1.86	(234.103, 7.794)	101.276	(104.307, 10.4836)	(362.71, -10.0985)
28	31645	1.86	(231.08, 4.154)	103.368	(98.4215, 8.9396)	(362.999, -10.1175)
29	31636	1.86	(230.934, 4.149)	101.892	(98.4215, 8.9396)	(362.71, -10.0985)
30	31511	1.86	(222.046, 7.082)	93.341	(104.307, 10.4836)	(338.946, -7.24924)
31	31654	1.86	(230.631, 4.139)	104.024	(98.4215, 8.9396)	(362.106, -10.0588)
32	31005	1.86	(236.19, 9.998)	101.582	(107.858, 11.4153)	(362.999, -10.1175)
33	31069	1.86	(234.747, 8.366)	101.747	(105.223, 10.7241)	(362.999, -10.1175)
34	31527	1.86	(229.057, 7.629)	100.263	(104.307, 10.4836)	(352.681, -9.43844)
35	31134	1.86	(228.072, 6.526)	98.282	(102.527, 10.0168)	(352.639, -9.43567)
36	31580	1.87	(240.481, 6.253)	107.943	(101.398, 9.72044)	(378.517, -11.1389)
37	31525	1.87	(240.289, 7.996)	107.719	(104.307, 10.4836)	(375.004, -10.9077)
38	31071	1.87	(225.791, 8.041)	95.62	(105.223, 10.7241)	(345.223, -8.8152)
39	31078	1.87	(234.298, 8.352)	102.298	(105.223, 10.7241)	(362.106, -10.0588)
40	31062	1.87	(225.015, 7.954)	93.878	(105.223, 10.7241)	(343.722, -8.46747)
41	31655	1.87	(225.891, 3.984)	100.993	(98.4215, 8.9396)	(352.681, -9.43844)
42	32094	1.87	(225.419, 3.458)	100.952	(97.5724, 8.71684)	(352.639, -9.43567)
43	31640	1.87	(216.852, 3.18)	92.809	(98.4215, 8.9396)	(334.923, -6.21983)
44	32102	1.87	(230.178, 3.613)	105.142	(97.5724, 8.71684)	(362.106, -10.0588)
45	31007	1.87	(227.231, 9.673)	95.193	(107.858, 11.4153)	(345.223, -8.8152)
46	31653	1.87	(237.117, 4.352)	108.343	(98.4215, 8.9396)	(375.004, -10.9077)
47	31133	1.87	(233.284, 6.697)	101.693	(102.527, 10.0168)	(362.999, -10.1175)
48	32093	1.87	(230.627, 3.628)	104.271	(97.5724, 8.71684)	(362.999, -10.1175)
49	31512	1.87	(219.969, 6.824)	91.959	(104.307, 10.4836)	(334.923, -6.21983)
50	31135	1.87	(224.331, 6.371)	95.724	(102.527, 10.0168)	(345.223, -8.8152)
51	31142	1.87	(232.835, 6.682)	102.559	(102.527, 10.0168)	(362.106, -10.0588)
52	31592	1.87	(223.827, 5.683)	98.318	(101.398, 9.72044)	(345.424, -8.86187)
53	31598	1.87	(236.988, 6.138)	108.128	(101.398, 9.72044)	(371.573, -10.6818)
54	31516	1.87	(242.057, 8.054)	107.668	(104.307, 10.4836)	(378.517, -11.1389)

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55	31125	1.87	(227.245, 6.499)	96.606	(102.527, 10.0168)	(350.994, -9.32739)
56	31061	1.87	(228.707, 8.169)	96.359	(105.223, 10.7241)	(350.994, -9.32739)
57	31126	1.87	(223.558, 6.284)	94.118	(102.527, 10.0168)	(343.722, -8.46747)
58	32030	1.87	(227.118, 5.429)	100.743	(100.755, 9.55189)	(352.639, -9.43567)
59	31063	1.87	(222.54, 7.649)	92.23	(105.223, 10.7241)	(338.946, -7.24924)
60	31648	1.87	(219.532, 3.514)	95.586	(98.4215, 8.9396)	(340.156, -7.5588)
61	31077	1.87	(240.788, 8.564)	106.697	(105.223, 10.7241)	(375.004, -10.9077)
62	32038	1.87	(231.88, 5.585)	104.846	(100.755, 9.55189)	(362.106, -10.0588)
63	32085	1.87	(224.592, 3.431)	99.71	(97.5724, 8.71684)	(350.994, -9.32739)
64	30997	1.87	(230.148, 9.801)	96.142	(107.858, 11.4153)	(350.994, -9.32739)
65	31079	1.87	(229.555, 8.197)	99.142	(105.223, 10.7241)	(352.681, -9.43844)
66	32103	1.87	(225.44, 3.458)	102.117	(97.5724, 8.71684)	(352.681, -9.43844)
67	32086	1.87	(220.913, 3.216)	97.123	(97.5724, 8.71684)	(343.722, -8.46747)
68	31454	1.87	(230.595, 9.398)	98.962	(107.164, 11.2333)	(352.639, -9.43567)
69	31565	1.87	(221.403, 5.394)	93.442	(101.398, 9.72044)	(340.721, -7.70343)
70	32095	1.87	(221.682, 3.303)	98.677	(97.5724, 8.71684)	(345.223, -8.8152)
71	32029	1.87	(232.329, 5.599)	103.887	(100.755, 9.55189)	(362.999, -10.1175)
72	32021	1.87	(226.291, 5.402)	99.001	(100.755, 9.55189)	(350.994, -9.32739)
73	31564	1.87	(224.578, 5.732)	95.372	(101.398, 9.72044)	(346.903, -9.05813)
74	31520	1.87	(222.672, 7.159)	95.032	(104.307, 10.4836)	(340.156, -7.5588)
75	31566	1.87	(219.12, 5.11)	91.827	(101.398, 9.72044)	(336.286, -6.56849)
76	32022	1.88	(222.607, 5.187)	96.536	(100.755, 9.55189)	(343.722, -8.46747)
77	31453	1.88	(235.809, 9.569)	102.715	(107.164, 11.2333)	(362.999, -10.1175)
78	31072	1.88	(223.167, 7.727)	93.685	(105.223, 10.7241)	(340.156, -7.5588)
79	31014	1.88	(235.74, 9.984)	102.066	(107.858, 11.4153)	(362.106, -10.0588)
80	32037	1.88	(238.368, 5.797)	109.015	(100.755, 9.55189)	(375.004, -10.9077)
81	31571	1.88	(242.804, 6.308)	108.274	(101.398, 9.72044)	(383.146, -11.3607)
82	30998	1.88	(226.453, 9.586)	93.647	(107.858, 11.4153)	(343.722, -8.46747)
83	31445	1.88	(229.768, 9.371)	97.304	(107.164, 11.2333)	(350.994, -9.32739)
84	31143	1.88	(228.093, 6.527)	99.455	(102.527, 10.0168)	(352.681, -9.43844)
85	31446	1.88	(226.073, 9.156)	95.086	(107.164, 11.2333)	(343.722, -8.46747)
86	31462	1.88	(235.359, 9.554)	103.451	(107.164, 11.2333)	(362.106, -10.0588)
87	31141	1.88	(239.324, 6.894)	106.961	(102.527, 10.0168)	(375.004, -10.9077)
88	31644	1.88	(238.883, 4.409)	108.253	(98.4215, 8.9396)	(378.517, -11.1389)
89	31015	1.88	(230.997, 9.828)	98.863	(107.858, 11.4153)	(352.681, -9.43844)
90	31567	1.88	(217.283, 4.881)	90.908	(101.398, 9.72044)	(332.707, -5.65283)
91	31534	1.88	(238.562, 7.94)	107.817	(104.307, 10.4836)	(371.573, -10.6818)
92	32087	1.88	(218.464, 2.911)	95.401	(97.5724, 8.71684)	(338.946, -7.24924)
93	31662	1.88	(235.391, 4.295)	108.474	(98.4215, 8.9396)	(371.573, -10.6818)
94	32101	1.88	(236.664, 3.826)	109.374	(97.5724, 8.71684)	(375.004, -10.9077)
95	31461	1.88	(241.85, 9.766)	107.744	(107.164, 11.2333)	(375.004, -10.9077)
96	31597	1.88	(245.168, 6.284)	113.654	(101.398, 9.72044)	(387.907, -11.2655)
97	32031	1.88	(223.379, 5.274)	98.582	(100.755, 9.55189)	(345.223, -8.8152)
98	31599	1.88	(231.314, 5.953)	104.258	(101.398, 9.72044)	(360.293, -9.93945)
99	31127	1.88	(221.092, 5.98)	92.431	(102.527, 10.0168)	(338.946, -7.24924)
100	31198	1.88	(226.582, 4.809)	98.64	(99.7542, 9.28926)	(352.639, -9.43567)
101	31068	1.88	(242.556, 8.622)	107.01	(105.223, 10.7241)	(378.517, -11.1389)

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Slices of Slip Surface: Optimized

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	105.99425	-0.410606	287.53863	882.00936	0	600
2	Optimized	110.46415	-5.8451855	601.4375	1646.963	603.63442	0
3	Optimized	113.0865	-9.33678	804.51956	1997.8372	688.96228	0
4	Optimized	115.3763	-12.63732	997.55443	2840.9605	0	186.51
5	Optimized	117.01585	-15.00057	1135.751	3095.5805	0	221.54
6	Optimized	121.37735	-21.28731	1503.4778	3679.9689	0	289.82
7	Optimized	126.37735	-27.953935	1891.2357	4382.8116	0	357.95
8	Optimized	128.0313	-29.667195	1988.8508	4543.8755	0	374.79
9	Optimized	130.2833	-32	2121.6781	4722.5145	0	390.08
10	Optimized	133.882	-35.727845	2334.0758	5046.6503	0	370.27
11	Optimized	137.78935	-39.775395	2564.4739	5339.3846	0	409.41
12	Optimized	143.52155	-43.365945	2756.2451	5717.638	0	442.96
13	Optimized	150.5072	-45.907635	2875.4326	5760.5509	0	465.18
14	Optimized	154.1992	-47.250965	2938.3233	5803.7663	0	477
15	Optimized	157.1092	-46.87815	2898.6763	5816.8275	0	471.49
16	Optimized	163.61	-45.81027	2795.3844	5472.5642	0	456.68
17	Optimized	172.22	-44.39591	2658.5596	5122.4256	0	436.95
18	Optimized	178.855	-43.30598	2553.1098	4940.1261	0	422.71
19	Optimized	182.4757	-42.71121	2495.5728	4860.4267	0	416.47
20	Optimized	185.64255	-42.207295	2446.2536	4794.2402	0	411.18
21	Optimized	190.32775	-41.49377	2375.2355	4702.2911	0	403.68
22	Optimized	196.9759	-40.48131	2274.5634	4575.7447	0	393.05
23	Optimized	202.0272	-39.712035	2207.7796	4481.8961	0	384.98
24	Optimized	207.9508	-38.882625	2155.8957	4370.8311	0	376.27
25	Optimized	216.3436	-37.749895	2084.9299	4227.7187	0	364.37
26	Optimized	221.0257	-37.117975	2044.3422	4148.365	0	357.74
27	Optimized	224.1907	-36.719745	2013.2455	4097.6055	0	353.56
28	Optimized	232.7693	-35.654575	1940.753	3963.9337	0	342.37
29	Optimized	239.6393	-34.813115	1887.2908	3853.6154	0	333.54
30	Optimized	243.74635	-34.352075	1859.9107	3792.8554	0	328.7
			-				

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31	Optimized	248.44135	33.825035	1829.1622	3721.2538	0	332.46
32	Optimized	251.7039	-33.4588	1806.6158	3667.6471	0	326.5
33	Optimized	257.1265	-32.89512	1770.1213	3582.1176	0	317.06
34	Optimized	264.5639	-32.150295	1721.8246	3471.6104	0	304.4
35	Optimized	272.00135	-31.40547	1673.5279	3360.7019	0	291.75
36	Optimized	280.78005	-30.60798	1621.6669	3236.441	0	277.67
37	Optimized	286.92855	-30.09145	1587.8763	3156.4831	0	268.96
38	Optimized	289.08755	-29.910075	1575.9672	3130.3368	0	267.06
39	Optimized	291.279	-29.743145	1564.9933	3104.8452	0	265.3
40	Optimized	293.8	-29.569965	1553.5173	3030.8213	0	263.48
41	Optimized	299.97615	-29.145695	1525.1538	2752.1282	0	259.03
42	Optimized	307.00115	-27.887525	1444.5001	2411.6436	0	245.82
43	Optimized	309.66025	-26.78778	1375.0385	2212.2927	0	234.27
44	Optimized	314.94535	-24.37206	1222.6556	1967.6138	0	208.91
45	Optimized	324.6951	-19.879955	939.37212	1499.6046	0	161.74
46	Optimized	330.415	-17.244575	759.37041	1206.6089	0	134.07
47	Optimized	334.26985	-15.468495	634.51585	984.50668	0	115.42
48	Optimized	340.41985	-12.15846	427.96174	618.9545	0	100
49	Optimized	344.56835	-9.61759	269.41679	338.16006	0	100
50	Optimized	345.63755	-8.9627375	228.55605	266.76553	0	100

Slices of Slip Surface: 31573

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31573	104.28495	-0.754865	318.67141	887.27085	0	600
2	31573	110.04385	-7.794502	725.44125	1853.511	651.29137	0
3	31573	114.018	-12.652465	1006.1706	2834.5952	0	185.67
4	31573	116.4152	-15.58273	1175.4744	3166.6949	0	227.34
5	31573	122.71	-23.277375	1620.1379	3910.5052	0	311.41
6	31573	127.9598	-29.694645	1990.9195	4521.4873	0	375.13
7	31573	129.84575	-32	2124.0444	4696.4273	0	390.36
8	31573	133.51595	-36.486385	2383.4253	5094.488	0	378.28
9	31573	136.78825	-40.486385	2614.5723	5401.4721	0	417.32
10	31573	140.01325	-44.42857	2842.3713	5689.6826	0	455.95
11	31573	148	-	2905.8903	6014.7849	0	469.32

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			46.169435				
12	31573	156.91	-45.14819	2791.8585	5622.9788	0	453.64
13	31573	163.61	-44.38025	2706.1608	5304.9769	0	441.78
14	31573	172.22	-43.39339	2595.9705	5000.8683	0	426.45
15	31573	178.855	-42.6329	2511.1077	4854.9907	0	415.65
16	31573	182.5234	-42.212435	2464.1652	4793.785	0	411.23
17	31573	188.3576	-41.54373	2389.527	4703.184	0	404.21
18	31573	196.3192	-40.63119	2287.7016	4583.2647	0	394.63
19	31573	205.36	-39.59495	2200.4151	4447.7561	0	383.75
20	31573	215.48	-38.435015	2127.67	4297.2592	0	371.57
21	31573	223.705	-37.492285	2062.4838	4177.5459	0	361.67
22	31573	230.305	-36.735805	2008.5383	4082.2973	0	353.73
23	31573	237.175	-35.94838	1958.502	3980.4893	0	345.46
24	31573	245.305	-35.01654	1902.0306	3858.55	0	335.67
25	31573	252.08695	-34.239205	1855.2137	3756.7471	0	327.51
26	31573	258.13215	-33.54631	1810.5373	3660.7314	0	323.24
27	31573	266.0487	-32.638935	1751.9304	3529.2111	0	308.57
28	31573	273.96525	-31.73156	1693.4491	3397.1889	0	293.9
29	31573	281.88175	-30.824185	1634.8422	3264.9156	0	279.23
30	31573	287.45625	-30.18525	1593.6062	3171.5375	0	269.95
31	31573	290.73625	-29.8093	1569.2728	3120.6316	0	266
32	31573	293.8	-29.458135	1546.5176	3027.1097	0	262.31
33	31573	298.7125	-28.895075	1509.9716	2782.4942	0	256.4
34	31573	305.7375	-28.089885	1457.5037	2432.7556	0	247.94
35	31573	311.625	-27.415075	1413.608	2229.1946	0	240.86
36	31573	317.8925	-25.26833	1277.6746	2059.7873	0	218.32
37	31573	325.6775	-21.51927	1041.3626	1669.1939	0	178.95
38	31573	330.415	-19.23781	883.7494	1412.9754	0	155
39	31573	336.2757	-16.41544	693.60268	1070.1417	0	125.36
40	31573	342.4257	-13.453755	508.79115	727.34378	0	100
41	31573	344.79	-12.315175	437.73902	598.8513	0	100
42	31573	348.5071	-10.525117	326.0499	405.61977	0	100

Slices of Slip Surface: 31583

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31583	104.28495	-0.754865	318.67141	883.15875	0	600

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2	31583	110.04385	-7.794502	725.44125	1847.6681	647.91799	0
3	31583	114.018	-12.652465	1006.1706	2822.447	0	185.67
4	31583	116.4152	-15.58273	1175.4744	3152.5131	0	227.34
5	31583	122.71	-23.277375	1620.1379	3890.3065	0	311.41
6	31583	127.9598	-29.694645	1990.9195	4510.7146	0	375.13
7	31583	129.84575	-32	2124.0444	4673.4008	0	390.36
8	31583	133.51595	-36.486385	2383.4253	5068.9618	0	378.28
9	31583	136.78825	-40.486385	2614.5723	5375.3929	0	417.32
10	31583	140.01325	-44.42857	2842.3713	5660.9991	0	455.95
11	31583	148	-46.39867	2920.1544	6031.3353	0	471.69
12	31583	156.91	-45.71784	2827.4963	5676.7506	0	459.55
13	31583	163.61	-45.20588	2757.6602	5385.8823	0	450.38
14	31583	172.22	-44.547975	2668.0521	5117.0333	0	438.54
15	31583	178.855	-44.04098	2598.9526	4999.4754	0	430.43
16	31583	185.5775	-43.5273	2528.9497	4915.98	0	425.04
17	31583	195.3925	-42.77732	2426.8531	4806.3658	0	417.16
18	31583	202.9326	-42.201165	2363.0043	4726.766	0	411.11
19	31583	209.3089	-41.713935	2332.4666	4653.7469	0	406
20	31583	216.7963	-41.14181	2296.5108	4572.7797	0	399.99
21	31583	223.705	-40.613905	2257.2428	4500.7815	0	394.45
22	31583	230.305	-40.109585	2219.0044	4432.3484	0	389.15
23	31583	237.175	-39.584635	2185.3325	4358.3283	0	383.64
24	31583	245.305	-38.963405	2148.3698	4269.4497	0	377.12
25	31583	254.48	-38.262325	2105.6919	4169.5415	0	369.75
26	31583	263.44	-37.577675	2060.7337	4073.3932	0	362.57
27	31583	272.4	-36.893025	2015.8867	3977.3562	0	355.38
28	31583	281.36	-36.208375	1970.9285	3881.2079	0	348.19
29	31583	289.12	-35.615415	1932.0204	3798.0746	0	341.96
30	31583	293.8	-35.257805	1908.4369	3698.1485	0	338.21
31	31583	298.7125	-34.882435	1883.4773	3471.3041	0	334.27
32	31583	305.7375	-34.34564	1847.8517	3146.6988	0	328.63
33	31583	309.75545	-34.03862	1827.4519	2980.2252	0	325.41

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34	31583	312.13045	-33.857145	1815.425	2957.0422	0	308.5
35	31583	316.3288	-31.857145	1689.3695	2849.8039	0	287.5
36	31583	324.1138	-25.648815	1299.5136	2148.661	0	222.31
37	31583	330.415	-20.623765	970.25756	1595.769	0	169.55
38	31583	334.99045	-16.97495	728.52137	1166.418	0	131.24
39	31583	341.14045	-12.070485	422.48037	618.13746	0	100
40	31583	344.27535	-9.570485	266.47861	346.11345	0	100
41	31583	345.1066	-8.907602	225.11271	275.59362	0	100

Slices of Slip Surface: 31574

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31574	104.28495	-0.754865	318.67141	887.63272	0	600
2	31574	110.04385	-7.794502	725.44125	1854.0622	651.60962	0
3	31574	114.018	-12.652465	1006.1706	2835.3706	0	185.67
4	31574	116.4152	-15.58273	1175.4744	3167.9175	0	227.34
5	31574	122.71	-23.277375	1620.1379	3912.2148	0	311.41
6	31574	127.9598	-29.694645	1990.9195	4521.2339	0	375.13
7	31574	129.84575	-32	2124.0444	4698.3623	0	390.36
8	31574	133.51595	-36.486385	2383.4253	5096.5114	0	378.28
9	31574	136.78825	-40.486385	2614.5723	5403.5175	0	417.32
10	31574	140.01325	-44.42857	2842.3713	5691.9135	0	455.95
11	31574	148	-46.169435	2905.8903	6014.2881	0	469.32
12	31574	156.91	-45.14819	2791.8585	5622.4667	0	453.64
13	31574	163.61	-44.38025	2706.1608	5304.4526	0	441.78
14	31574	172.22	-43.39339	2595.9705	5000.456	0	426.45
15	31574	178.855	-42.6329	2511.1077	4854.4433	0	415.65
16	31574	182.5234	-42.212435	2464.1652	4793.2489	0	411.23
17	31574	188.3576	-41.54373	2389.527	4702.6849	0	404.21
18	31574	196.3192	-40.63119	2287.7016	4582.7656	0	394.63
19	31574	203.67335	-39.788275	2212.5399	4474.2637	0	385.78
20	31574	210.42	-39.014985	2164.0923	4372.2144	0	377.66
21	31574	217.16665	-38.241695	2115.4974	4271.785	0	369.54
22	31574	223.705	-37.492285	2062.4838	4177.389	0	361.67
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23	31574	230.305	36.735805	2008.5383	4082.0081	0	353.73
24	31574	237.175	-35.94838	1958.502	3980.2001	0	345.46
25	31574	245.305	-35.01654	1902.0306	3858.3383	0	335.67
26	31574	252.08695	-34.239205	1855.2137	3756.5091	0	327.51
27	31574	258.13215	-33.54631	1810.5373	3660.4804	0	323.24
28	31574	266.0487	-32.638935	1751.9304	3528.9601	0	308.57
29	31574	273.96525	-31.73156	1693.4491	3397.0634	0	293.9
30	31574	281.88175	-30.824185	1634.8422	3264.6646	0	279.23
31	31574	287.45625	-30.18525	1593.6062	3171.2301	0	269.95
32	31574	290.73625	-29.8093	1569.2728	3120.333	0	266
33	31574	293.8	-29.458135	1546.5176	3026.9322	0	262.31
34	31574	298.7125	-28.895075	1509.9716	2782.3528	0	256.4
35	31574	305.7375	-28.089885	1457.5037	2432.4727	0	247.94
36	31574	311.625	-27.415075	1413.608	2229.1946	0	240.86
37	31574	317.8925	-24.69704	1242.0797	2019.8478	0	212.32
38	31574	325.6775	-19.8054	934.42026	1506.5926	0	160.96
39	31574	330.415	-16.82863	733.44366	1175.8446	0	129.7
40	31574	333.08835	-15.14884	614.56164	969.36847	0	112.06
41	31574	338.89545	-11.5	386.88307	561.88969	0	100
42	31574	343.2171	-8.784539	217.43191	264.57035	0	100
43	31574	343.64085	-8.5182735	200.81945	238.63443	0	100

Slices of Slip Surface: 31582

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31582	104.28495	-0.754865	318.67141	884.88035	0	600
2	31582	110.04385	-7.794502	725.44125	1849.1013	648.74543	0
3	31582	114.018	-12.652465	1006.1706	2823.7106	0	185.67
4	31582	116.4152	-15.58273	1175.4744	3153.9802	0	227.34
5	31582	122.71	-23.277375	1620.1379	3892.396	0	311.41
6	31582	127.9598	-29.694645	1990.9195	4512.3622	0	375.13
7	31582	129.84575	-32	2124.0444	4675.9163	0	390.36
8	31582	133.51595	-36.486385	2383.4253	5071.4522	0	378.28
9	31582	136.78825	-40.486385	2614.5723	5378.2053	0	417.32
10	31582	140.01325	-44.42857	2842.3713	5664.0268	0	455.95
11	31582	148	-46.39867	2920.1544	6031.003	0	471.69
12	31582	156.91	-45.71784	2827.4963	5676.4079	0	459.55

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13	31582	163.61	-45.20588	2757.6602	5385.4877	0	450.38
14	31582	172.22	-44.547975	2668.0521	5116.723	0	438.54
15	31582	178.855	-44.04098	2598.9526	4999.2007	0	430.43
16	31582	185.5775	-43.5273	2528.9497	4915.6753	0	425.04
17	31582	195.3925	-42.77732	2426.8531	4806.061	0	417.16
18	31582	202.9326	-42.201165	2363.0043	4726.3873	0	411.11
19	31582	209.3089	-41.713935	2332.4666	4653.6137	0	406
20	31582	216.7963	-41.14181	2296.5108	4572.5134	0	399.99
21	31582	223.705	-40.613905	2257.2428	4500.624	0	394.45
22	31582	230.305	-40.109585	2219.0044	4432.0581	0	389.15
23	31582	237.175	-39.584635	2185.3325	4358.0381	0	383.64
24	31582	245.305	-38.963405	2148.3698	4269.2373	0	377.12
25	31582	254.48	-38.262325	2105.6919	4169.3189	0	369.75
26	31582	263.44	-37.577675	2060.7337	4073.1706	0	362.57
27	31582	272.4	-36.893025	2015.8867	3977.1336	0	355.38
28	31582	281.36	-36.208375	1970.9285	3880.9853	0	348.19
29	31582	289.12	-35.615415	1932.0204	3797.7706	0	341.96
30	31582	293.8	-35.257805	1908.4369	3698.1485	0	338.21
31	31582	298.7125	-34.882435	1883.4773	3471.0202	0	334.27
32	31582	305.7375	-34.34564	1847.8517	3146.5568	0	328.63
33	31582	309.75545	-34.03862	1827.4519	2980.0279	0	325.41
34	31582	312.13045	-33.857145	1815.425	2956.7756	0	308.5
35	31582	316.95565	-31.857145	1689.0791	2815.657	0	287.5
36	31582	324.74065	-26.965505	1381.4959	2259.8885	0	236.14
37	31582	330.415	-23.40006	1143.4787	1866.1003	0	198.7
38	31582	337.41	-19.00481	855.19156	1348.0815	0	152.55
39	31582	344.46755	-14.570255	578.44454	840.84378	0	105.99
40	31582	345.69755	-13.797395	530.24149	753.83967	0	100
41	31582	349.3296	-11.515228	387.82601	513.22539	0	100

Slices of Slip Surface: 31518

SWL Case.BS.Thru Fabric

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31518	107.44775	-0.0405155	256.24375	853.21635	0	600
2	31518	113.1544	-7.7727295	706.54047	1869.6415	671.51669	0
3	31518	116.71495	-12.597115	987.48266	2871.4995	0	187.33
4	31518	122.71	-20.72012	1460.5605	3617.9099	0	284.56
5	31518	128.63445	-28.74744	1928.02	4333.0587	0	364.71
6	31518	131.03495	-32	2117.5002	4592.8454	0	389.59
7	31518	134.0305	-36.05885	2353.7844	4964.9101	0	373.57
8	31518	136.98265	-40.05885	2586.6607	5273.6294	0	412.81
9	31518	140.20765	-44.42857	2841.2715	5598.5571	0	455.84
10	31518	148	-46.39867	2920.1544	6033.4957	0	471.69
11	31518	156.91	-45.71784	2827.4963	5679.1491	0	459.55
12	31518	163.61	-45.20588	2757.6602	5387.987	0	450.38
13	31518	172.22	-44.547975	2668.0521	5118.9985	0	438.54
14	31518	178.855	-44.04098	2598.9526	5002.2222	0	430.43
15	31518	185.5775	-43.5273	2528.9497	4917.9102	0	425.04
16	31518	195.3925	-42.77732	2426.8531	4808.296	0	417.16
17	31518	202.9326	-42.201165	2363.0043	4729.0385	0	411.11
18	31518	209.3089	-41.713935	2332.4666	4655.2118	0	406
19	31518	216.7963	-41.14181	2296.5108	4574.1114	0	399.99
20	31518	223.705	-40.613905	2257.2428	4502.0417	0	394.45
21	31518	230.305	-40.109585	2219.0044	4433.5095	0	389.15
22	31518	237.175	-39.584635	2185.3325	4359.4894	0	383.64
23	31518	245.305	-38.963405	2148.3698	4270.6177	0	377.12
24	31518	254.48	-38.262325	2105.6919	4170.7656	0	369.75
25	31518	263.44	-37.577675	2060.7337	4074.6173	0	362.57
26	31518	272.4	-36.893025	2015.8867	3978.469	0	355.38
27	31518	281.36	-36.208375	1970.9285	3882.3207	0	348.19
28	31518	289.12	-35.615415	1932.0204	3799.1386	0	341.96
29	31518	293.8	-35.257805	1908.4369	3699.2168	0	338.21
30	31518	298.7125	-34.882435	1883.4773	3472.2976	0	334.27
31	31518	305.7375	-34.34564	1847.8517	3147.6923	0	328.63
32	31518	309.75545	-34.03862	1827.4519	2981.1129	0	325.41

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33	31518	312.13045	-33.857145	1815.425	2957.8422	0	308.5
34	31518	316.95565	-31.857145	1689.0791	2821.1001	0	287.5
35	31518	324.74065	-26.965505	1381.4959	2264.0964	0	236.14
36	31518	330.415	-23.40006	1143.4787	1869.6075	0	198.7
37	31518	337.41	-19.00481	855.19156	1350.7662	0	152.55
38	31518	344.46755	-14.570255	578.44454	842.61644	0	105.99
39	31518	345.69755	-13.797395	530.24149	755.44149	0	100
40	31518	349.3296	-11.515228	387.82601	514.28713	0	100

Slices of Slip Surface: 31581

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31581	104.28495	-0.754865	318.67141	885.31898	0	600
2	31581	110.04385	-7.794502	725.44125	1849.3218	648.87272	0
3	31581	114.018	-12.652465	1006.1706	2823.1937	0	185.67
4	31581	116.4152	-15.58273	1175.4744	3153.2467	0	227.34
5	31581	122.71	-23.277375	1620.1379	3891.5729	0	311.41
6	31581	127.9598	-29.694645	1990.9195	4512.1088	0	375.13
7	31581	129.84575	-32	2124.0444	4674.9488	0	390.36
8	31581	133.51595	-36.486385	2383.4253	5070.5183	0	378.28
9	31581	136.78825	-40.486385	2614.5723	5377.1826	0	417.32
10	31581	140.01325	-44.42857	2842.3713	5662.752	0	455.95
11	31581	148	-46.39867	2920.1544	6031.2522	0	471.69
12	31581	156.91	-45.71784	2827.4963	5676.5792	0	459.55
13	31581	163.61	-45.20588	2757.6602	5385.7508	0	450.38
14	31581	172.22	-44.547975	2668.0521	5116.8264	0	438.54
15	31581	178.855	-44.04098	2598.9526	4999.4754	0	430.43
16	31581	185.5775	-43.5273	2528.9497	4915.8784	0	425.04
17	31581	195.3925	-42.77732	2426.8531	4806.2642	0	417.16
18	31581	202.9326	-42.201165	2363.0043	4726.5767	0	411.11
19	31581	209.3089	-41.713935	2332.4666	4653.7469	0	406
20	31581	216.7963	-41.14181	2296.5108	4572.6466	0	399.99
21	31581	223.705	-40.613905	2257.2428	4500.624	0	394.45
22	31581	230.305	-40.109585	2219.0044	4432.2032	0	389.15
			-				

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23	31581	237.175	39.584635	2185.3325	4358.1832	0	383.64
24	31581	245.305	-38.963405	2148.3698	4269.3435	0	377.12
25	31581	254.48	-38.262325	2105.6919	4169.4302	0	369.75
26	31581	263.44	-37.577675	2060.7337	4073.2819	0	362.57
27	31581	272.4	-36.893025	2015.8867	3977.2449	0	355.38
28	31581	281.36	-36.208375	1970.9285	3881.0966	0	348.19
29	31581	289.12	-35.615415	1932.0204	3797.9226	0	341.96
30	31581	293.8	-35.257805	1908.4369	3698.1485	0	338.21
31	31581	298.7125	-34.882435	1883.4773	3471.1621	0	334.27
32	31581	305.7375	-34.34564	1847.8517	3146.5568	0	328.63
33	31581	309.75545	-34.03862	1827.4519	2980.1266	0	325.41
34	31581	312.13045	-33.857145	1815.425	2957.0422	0	308.5
35	31581	317.8564	-31.857145	1688.9092	2787.3193	0	287.5
36	31581	325.6414	-28.108085	1452.4975	2354.7041	0	248.13
37	31581	330.415	-25.80924	1293.8236	2096.1126	0	224
38	31581	337.41	-22.440625	1069.5892	1688.987	0	188.63
39	31581	344.79	-18.886605	847.78973	1275.6034	0	151.31
40	31581	350.47855	-16.147135	676.86314	973.61152	0	122.54
41	31581	358.9681	-12.05877	421.75198	535.02679	0	100

Slices of Slip Surface: 31572

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31572	104.28495	-0.754865	318.67141	887.46823	0	600
2	31572	110.04385	-7.794502	725.44125	1853.7315	651.41867	0
3	31572	114.018	-12.652465	1006.1706	2834.6813	0	185.67
4	31572	116.4152	-15.58273	1175.4744	3166.9394	0	227.34
5	31572	122.71	-23.277375	1620.1379	3910.6319	0	311.41
6	31572	127.9598	-29.694645	1990.9195	4521.6141	0	375.13
7	31572	129.84575	-32	2124.0444	4696.6208	0	390.36
8	31572	133.51595	-36.486385	2383.4253	5094.6436	0	378.28
9	31572	136.78825	-40.486385	2614.5723	5401.7278	0	417.32

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10	31572	140.01325	-44.42857	2842.3713	5689.8419	0	455.95
11	31572	148	-46.169435	2905.8903	6014.7849	0	469.32
12	31572	156.91	-45.14819	2791.8585	5622.9788	0	453.64
13	31572	163.61	-44.38025	2706.1608	5304.8458	0	441.78
14	31572	172.22	-43.39339	2595.9705	5000.8683	0	426.45
15	31572	178.855	-42.6329	2511.1077	4854.9907	0	415.65
16	31572	182.5234	-42.212435	2464.1652	4793.785	0	411.23
17	31572	188.3576	-41.54373	2389.527	4703.184	0	404.21
18	31572	196.3192	-40.63119	2287.7016	4583.2647	0	394.63
19	31572	205.36	-39.59495	2200.4151	4447.7561	0	383.75
20	31572	215.48	-38.435015	2127.67	4297.1611	0	371.57
21	31572	223.705	-37.492285	2062.4838	4177.5459	0	361.67
22	31572	230.305	-36.735805	2008.5383	4082.2973	0	353.73
23	31572	237.175	-35.94838	1958.502	3980.4893	0	345.46
24	31572	245.305	-35.01654	1902.0306	3858.55	0	335.67
25	31572	252.08695	-34.239205	1855.2137	3756.7471	0	327.51
26	31572	258.13215	-33.54631	1810.5373	3660.7314	0	323.24
27	31572	266.0487	-32.638935	1751.9304	3529.2111	0	308.57
28	31572	273.96525	-31.73156	1693.4491	3397.1889	0	293.9
29	31572	281.88175	-30.824185	1634.8422	3264.7901	0	279.23
30	31572	287.45625	-30.18525	1593.6062	3171.5375	0	269.95
31	31572	290.73625	-29.8093	1569.2728	3120.6316	0	266
32	31572	293.8	-29.458135	1546.5176	3027.0742	0	262.31
33	31572	298.7125	-28.895075	1509.9716	2782.4942	0	256.4
34	31572	305.7375	-28.089885	1457.5037	2432.7556	0	247.94
35	31572	311.625	-27.415075	1413.608	2229.1946	0	240.86
36	31572	317.8925	-25.780815	1309.6761	2094.245	0	223.7
37	31572	325.6775	-23.056725	1137.3037	1811.8681	0	195.1
38	31572	330.415	-21.399	1018.6118	1621.4683	0	177.69
39	31572	337.41	-18.951345	851.87399	1312.3817	0	151.99
40	31572	344.79	-16.36897	690.68479	1002.4349	0	124.87
41	31572	348.79005	-14.969285	603.35582	844.99459	0	110.18
42	31572	357.135	-12.049255	421.15653	529.44667	0	100

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Slices of Slip Surface: 31575

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31575	104.28495	-0.754865	318.67141	889.09114	0	600
2	31575	110.04385	-7.794502	725.44125	1855.4954	652.43705	0
3	31575	114.018	-12.652465	1006.1706	2836.8927	0	185.67
4	31575	116.4152	-15.58273	1175.4744	3169.6291	0	227.34
5	31575	122.71	-23.277375	1620.1379	3915.0642	0	311.41
6	31575	127.9598	-29.694645	1990.9195	4522.2478	0	375.13
7	31575	129.84575	-32	2124.0444	4701.4583	0	390.36
8	31575	133.51595	-36.486385	2383.4253	5100.0913	0	378.28
9	31575	136.78825	-40.486385	2614.5723	5407.097	0	417.32
10	31575	140.01325	-44.42857	2842.3713	5696.0567	0	455.95
11	31575	145	-46.51329	2944.2237	6146.425	0	474.58
12	31575	151	-45.825585	2867.5589	5882.652	0	464.05
13	31575	156.91	-45.14819	2791.8585	5621.7838	0	453.64
14	31575	163.61	-44.38025	2706.1608	5303.6662	0	441.78
15	31575	172.22	-43.39339	2595.9705	4999.8377	0	426.45
16	31575	178.855	-42.6329	2511.1077	4853.6223	0	415.65
17	31575	182.5234	-42.212435	2464.1652	4792.4449	0	411.23
18	31575	188.3576	-41.54373	2389.527	4702.061	0	404.21
19	31575	196.3192	-40.63119	2287.7016	4582.1416	0	394.63
20	31575	203.67335	-39.788275	2212.5399	4473.6747	0	385.78
21	31575	210.42	-39.014985	2164.0923	4371.7727	0	377.66
22	31575	217.16665	-38.241695	2115.4974	4271.3432	0	369.54
23	31575	223.705	-37.492285	2062.4838	4176.9181	0	361.67
24	31575	230.305	-36.735805	2008.5383	4081.7188	0	353.73
25	31575	237.175	-35.94838	1958.502	3979.7662	0	345.46
26	31575	245.305	-35.01654	1902.0306	3857.9151	0	335.67
27	31575	252.08695	-34.239205	1855.2137	3756.2711	0	327.51
28	31575	258.13215	-33.54631	1810.5373	3660.1039	0	323.24
29	31575	266.0487	-32.638935	1751.9304	3528.5836	0	308.57
30	31575	273.96525	-31.73156	1693.4491	3396.6869	0	293.9
31	31575	281.88175	-30.824185	1634.8422	3264.2881	0	279.23
32	31575	287.45625	-30.18525	1593.6062	3170.9228	0	269.95

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33	31575	290.73625	-29.8093	1569.2728	3120.0344	0	266
34	31575	293.8	-29.458135	1546.5176	3026.6129	0	262.31
35	31575	298.7125	-28.895075	1509.9716	2782.07	0	256.4
36	31575	305.7375	-28.089885	1457.5037	2432.3313	0	247.94
37	31575	311.625	-27.415075	1413.608	2228.7763	0	240.86
38	31575	317.8925	-24.038695	1201.0177	1971.7016	0	205.41
39	31575	325.6775	-17.830365	811.1765	1314.9029	0	140.22
40	31575	330.0253	-14.3631	586.05049	938.07229	0	103.81
41	31575	330.8703	-13.689235	529.96281	849.68597	0	100
42	31575	334.0052	-11.189235	367.48943	571.03474	0	100
43	31575	337.8481	-8.1246205	176.25719	249.95023	0	100

Slices of Slip Surface: 31517

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31517	107.44775	-0.0405155	256.24375	853.24471	0	600
2	31517	113.1544	-7.7727295	706.54047	1869.41	671.38305	0
3	31517	116.71495	-12.597115	987.48266	2870.4552	0	187.33
4	31517	122.71	-20.72012	1460.5605	3616.3065	0	284.56
5	31517	128.63445	-28.74744	1928.02	4331.4528	0	364.71
6	31517	131.03495	-32	2117.5002	4591.035	0	389.59
7	31517	134.0305	-36.05885	2353.7844	4962.7607	0	373.57
8	31517	136.98265	-40.05885	2586.6607	5271.3496	0	412.81
9	31517	140.20765	-44.42857	2841.2715	5596.238	0	455.84
10	31517	148	-46.39867	2920.1544	6033.745	0	471.69
11	31517	156.91	-45.71784	2827.4963	5679.4917	0	459.55
12	31517	163.61	-45.20588	2757.6602	5388.3817	0	450.38
13	31517	172.22	-44.547975	2668.0521	5119.3088	0	438.54
14	31517	178.855	-44.04098	2598.9526	5002.7715	0	430.43
15	31517	185.5775	-43.5273	2528.9497	4918.215	0	425.04
16	31517	195.3925	-42.77732	2426.8531	4808.6007	0	417.16
17	31517	202.9326	-42.201165	2363.0043	4729.4173	0	411.11
18	31517	209.3089	-41.713935	2332.4666	4655.3449	0	406
19	31517	216.7963	-41.14181	2296.5108	4574.3778	0	399.99
20	31517	223.705	-40.613905	2257.2428	4502.3567	0	394.45

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21	31517	230.305	-40.109585	2219.0044	4433.7998	0	389.15
22	31517	237.175	-39.584635	2185.3325	4359.7797	0	383.64
23	31517	245.305	-38.963405	2148.3698	4270.8301	0	377.12
24	31517	254.48	-38.262325	2105.6919	4170.8769	0	369.75
25	31517	263.44	-37.577675	2060.7337	4074.7286	0	362.57
26	31517	272.4	-36.893025	2015.8867	3978.6916	0	355.38
27	31517	281.36	-36.208375	1970.9285	3882.5433	0	348.19
28	31517	289.12	-35.615415	1932.0204	3799.2906	0	341.96
29	31517	293.8	-35.257805	1908.4369	3699.5729	0	338.21
30	31517	298.7125	-34.882435	1883.4773	3472.4396	0	334.27
31	31517	305.7375	-34.34564	1847.8517	3147.8342	0	328.63
32	31517	309.75545	-34.03862	1827.4519	2981.3102	0	325.41
33	31517	312.13045	-33.857145	1815.425	2958.1089	0	308.5
34	31517	317.8564	-31.857145	1688.9092	2791.7582	0	287.5
35	31517	325.6414	-28.108085	1452.4975	2358.4881	0	248.13
36	31517	330.415	-25.80924	1293.8236	2099.4179	0	224
37	31517	337.41	-22.440625	1069.5892	1691.6972	0	188.63
38	31517	344.79	-18.886605	847.78973	1277.7643	0	151.31
39	31517	350.47855	-16.147135	676.86314	975.21802	0	122.54
40	31517	358.9681	-12.05877	421.75198	535.98789	0	100

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PG Case.EE

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 215
Last Edited By: Cox, Lane MVK
Date: 4/20/2011
Time: 11:09:12 AM
File Name: 5c(2) Typical 1.2nd SC.80%SG.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\2nd Stage Constuction\80%SG,1 Layer of Fabric\Slope W\
Last Solved Date: 4/20/2011
Last Solved Time: 11:44:08 AM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

PG Case.EE

Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

SlipSurface
- Direction of movement: Left to Right
- Use Passive Mode: No
- Slip Surface Option: Entry and Exit
- Critical slip surfaces saved: 100
- Optimize Critical Slip Surface Location: Yes
- Tension Crack
  - Tension Crack Option: Tension Crack Line
  - Percentage Wet: 1
  - Tension Crack Fluid Unit Weight: 62.4 pcf

FOS Distribution
- FOS Calculation Option: Constant

Advanced
- Number of Slices: 30
- Optimization Tolerance: 0.01
- Minimum Slip Surface Depth: 0.1 ft
- Optimization Maximum Iterations: 2000
- Optimization Convergence Tolerance: 1e-007
- Starting Optimization Points: 8
- Ending Optimization Points: 16
- Complete Passes per Insertion: 1
- Driving Side Maximum Convex Angle: 5 °
- Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH

Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH above 0

Model: Mohr-Coulomb
Unit Weight: 102 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH, 0 to -9

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -9 (2)
Cohesion Spatial Fn: CH, 0 to -9
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH, -9 to -14

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -9 to -14 (2)
Cohesion Spatial Fn: CH, -9 to -14

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Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -14 to -30
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -14 to -30 (2)
Cohesion Spatial Fn: CH, -14 to -30
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -30 to -34
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -30 to -34 (2)
Cohesion Spatial Fn: CH, 30 to -34
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sand Fill
Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -34 to -42
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -34 to -42 (2)
Cohesion Spatial Fn: CH, -34 to -42
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -42 to -80
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -42 to -80 (2)
Cohesion Spatial Fn: CH, -42 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

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CH, 0 to -9 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -9 (2)
Cohesion Spatial Fn: CH, 0 to -9 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -9 to -14 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -9 to -14 (2)
Cohesion Spatial Fn: CH, -9 to -14 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -14 to -30 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -14 to -30 (2)
Cohesion Spatial Fn: CH, -14 to -30 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -30 to -34 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -30 to -34 (2)
Cohesion Spatial Fn: CH, 30 to -34 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Entry and Exit
Left Projection: Range
Left-Zone Left Coordinate: (-13, 3.03581) ft
Left-Zone Right Coordinate: (13, 5.36122) ft
Left-Zone Increment: 30
Right Projection: Range
Right-Zone Left Coordinate: (320.00469, -4.79822) ft
Right-Zone Right Coordinate: (393, -11.16372) ft
Right-Zone Increment: 30
Radius Increments: 30

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Slip Surface Limits

Left Coordinate: (-200, -2.13) ft
Right Coordinate: (500, -4.5) ft

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	11
	105	11
	200.3	-4.33
	220.54	-4.34
	226.87	-4.54
	240.61	-4.57
	250	-4.5
	285.84	-4.64
	295.2	-4.68
	329.57	-4.85
	331.26	-5.3
	447.66	-5.3
	450.06	-4.54
	500	-4.5

Reinforcements

Reinforcement 1

Type: Fabric
Outside Point: (209, 0) ft
Inside Point: (22, 0) ft
Slip Surface Intersection: (22.263, 0) ft
Total Length: 187 ft
Reinforcement Direction: 0 °
Applied Load Option: Variable
F of S Dependent: No
Contact Cohesion: 265 psf
Contact Phi: 19 °
Interface Factor: 2
Bond Safety Factor: 1
Fabric Capacity: 27000 lbs
Fabric Safety Factor: 1
Fabric Load: 27000 lbs
Load Distribution: Even along reinf.

Load Orientation: 0
Applied Load: 27000 lbs
Fabric Load Used: 215.7 lbs
Resisting Force Used: 820.32 lbs/ft
Available Bond Length: 0.26295 ft
Required Bond Length: 0.26295 ft
Governing Component: Bond

Tension Crack Line

	X (ft)	Y (ft)
	-1	5.40517
	8	5.2
	22	0.1
	96	0.1
	118	11
	127	11
	166	2
	167.4	4

Spatial Functions

CH, 0 to -9

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
- Data Point: (-300, -2.5, 50)
- Data Point: (-300, -9, 75)
- Data Point: (-33.33, 0, 50)
- Data Point: (-33.33, -9, 75)
- Data Point: (0, 0, 300)
- Data Point: (0, -9, 300)
- Data Point: (285.84, -4.62, 100)
- Data Point: (285.84, -9, 100)
- Data Point: (500, 0, 100)
- Data Point: (500, -9, 100)

CH, -34 to -42 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
- Data Point: (-33.33, -38, 105)
- Data Point: (0, -38, 116)
- Data Point: (177.04, -38, 106)

CH, -42 to -80 (2)

Model: Linear Interpolation

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Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -61, 105)
Data Point: (0, -61, 105)
Data Point: (177.04, -61, 106)

CH, 0 to -9 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, 0, 300)
Data Point: (0, -9, 300)
Data Point: (46, 0, 148)
Data Point: (46, -9, 148)
Data Point: (122.71, 0, 198)
Data Point: (122.71, -9, 198)
Data Point: (285.84, 0, 100)
Data Point: (285.84, -9, 100)

CH, -9 to -14 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -9, 300)
Data Point: (0, -14, 300)
Data Point: (46, -9, 144)
Data Point: (46, -14, 144)
Data Point: (122.71, -9, 191)
Data Point: (122.71, -14, 191)
Data Point: (285.84, -9, 100)
Data Point: (285.84, -14, 100)

CH, -14 to -30 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -14, 300)
Data Point: (0, -30, 375)
Data Point: (46, -14, 174)
Data Point: (46, -30, 342)
Data Point: (122.71, -14, 214)
Data Point: (122.71, -30, 382)
Data Point: (285.84, -14, 100)
Data Point: (285.84, -30, 268)

CH, 30 to -34 SG

Model: Linear Interpolation
Limit Range By: Data Values

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Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -30, 400)
Data Point: (0, -34, 438)
Data Point: (46, -30, 341)
Data Point: (46, -34, 383)
Data Point: (122.71, -30, 374)
Data Point: (122.71, -34, 416)
Data Point: (285.84, -30, 268)
Data Point: (285.84, -34, 310)

CH, -9 to -14

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -9, 75)
Data Point: (-300, -14, 115)
Data Point: (-33.33, -9, 75)
Data Point: (-33.33, -14, 115)
Data Point: (0, -9, 300)
Data Point: (0, -14, 300)
Data Point: (285.84, -9, 100)
Data Point: (285.84, -14, 100)
Data Point: (500, -9, 100)
Data Point: (500, -14, 100)

CH, -14 to -30

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -14, 115)
Data Point: (-300, -30, 291)
Data Point: (-33.33, -14, 115)
Data Point: (-33.33, -30, 291)
Data Point: (0, -14, 300)
Data Point: (0, -30, 375)
Data Point: (285.84, -14, 100)
Data Point: (285.84, -30, 268)
Data Point: (500, -14, 100)
Data Point: (500, -30, 268)

CH, 30 to -34

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -30, 291)
Data Point: (-300, -34, 335)
Data Point: (-33.33, -30, 291)
Data Point: (-33.33, -34, 335)

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Data Point: (0, -30, 400)
Data Point: (0, -34, 438)
Data Point: (285.84, -30, 268)
Data Point: (285.84, -34, 310)
Data Point: (500, -30, 268)
Data Point: (500, -34, 310)

CH, 0 to -9 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -4.5, 90)
Data Point: (0, -4.5, 96)
Data Point: (177.04, -4.54, 87)

CH, -9 to -14 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -11.5, 90)
Data Point: (0, -11.5, 97)
Data Point: (177.04, -11.5, 100)

CH, -14 to -30 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -22, 100)
Data Point: (0, -22, 102)
Data Point: (177.04, -22, 100)

CH, -30 to -34 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -32, 122)
Data Point: (0, -32, 113)
Data Point: (177.04, -32, 118)

CH, -34 to -42

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -34, 335)
Data Point: (-300, -42, 423)
Data Point: (-33.33, -34, 335)
Data Point: (-33.33, -42, 423)
Data Point: (0, -34, 438)
Data Point: (0, -42, 514)

Data Point: (177.04, -34, 325)
Data Point: (177.04, -42, 409)
Data Point: (500, -34, 325)
Data Point: (500, -42, 409)

CH, -42 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -42, 423)
Data Point: (-300, -80, 841)
Data Point: (-33.33, -42, 423)
Data Point: (-33.33, -80, 841)
Data Point: (0, -42, 514)
Data Point: (0, -80, 875)
Data Point: (177.04, -42, 409)
Data Point: (177.04, -80, 808)
Data Point: (500, -42, 409)
Data Point: (500, -80, 808)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -42 to -80	1,3,4,2	26600
Region 2	CH, -34 to -42	3,5,69,73,6,4	5600
Region 3	CH above 0	45,21,22,63,64,27,44,65	161.91095
Region 4	Sand Fill	29,30,43,31,32,33,42,34,35,62	606.7023
Region 5	CH, 0 to -9	56,53,54,41,12	267.3158
Region 6	EMBANKMENT FILL CH	59,46,47,60,37,36,35,62	1502.7397
Region 7	EMBANKMENT FILL CH	64,27,44,57,28,62,59	499.34315
Region 8	EMBANKMENT FILL CH	60,61,76,75,40,39,58,38,37	772.15003
Region 9	CH, 0 to -9	16,11,66,65,45,20,19,18,17,15,14,74	1498.6738
Region 10	CH, -9 to -14	11,9,67,66	1000
Region 11	CH, -14 to -30	9,7,68,67	3200
Region 12	CH, -30 to -34	7,5,69,68	800
Region 13	CH, -30 to -34	6,8,72,73	856.64
Region 14	CH, -14 to -30	8,10,71,72	3426.56
Region 15	CH, -9 to -14	10,71,70,55,50,51,52,56,12	954.73385
Region 16	CH, 0 to -9	55,49,48,76,75,70	220.0602
Region 17	CH, -30 to -34 SG	69,68,72,73	1143.36
Region 18	CH, -14 to -30 SG	68,67,71,72	4573.44
Region 19	CH, -9 to -14 SG	67,66,43,31,32,33,42,70,71	1313.1338
Region 20	CH, 0 to -9 SG	66,65,44,57,28,62,29,30,43	438.1553
Region 21	CH, 0 to -9 SG	42,34,35,36,37,38,58,39,40,75,70	538.2795

Points

	X (ft)	Y (ft)

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Point 1	-200	-80
Point 2	500	-80
Point 3	-200	-42
Point 4	500	-42
Point 5	-200	-34
Point 6	500	-34
Point 7	-200	-30
Point 8	500	-30
Point 9	-200	-14
Point 10	500	-14
Point 11	-200	-9
Point 12	500	-9
Point 13	-191.42	-2.12
Point 14	-156.88	-2.03
Point 15	-119.75	-2.26
Point 16	-200	-2.13
Point 17	-92.12	-1.99
Point 18	-71.42	-1.72
Point 19	-45.06	-0.68
Point 20	-33.33	-0.27
Point 21	-19.05	1.53
Point 22	-16.9	1.81
Point 23	-6.83	6.48
Point 24	-6.79	6.72
Point 25	-0.92	7.16
Point 26	3.42	6.91
Point 27	20.53	0.36
Point 28	38.18	-3.47
Point 29	56.55	-4.85
Point 30	70.54	-8.43
Point 31	109.16	-11.38
Point 32	127.67	-11.01
Point 33	135.55	-10.86
Point 34	159.82	-8.55
Point 35	177.04	-4.54
Point 36	180.67	-4.21
Point 37	200.3	-4.33
Point 38	220.54	-4.34
Point 39	240.61	-4.57
Point 40	250	-4.5
Point 41	500	-4.5
Point 42	154	-9
Point 43	73	-9
Point 44	22	0
Point 45	-32	0
Point 46	117.71	14
Point 47	127.71	14
Point 48	329.57	-4.85

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Point 49	343.56	-8.43
Point 50	382.18	-11.38
Point 51	400.69	-11.01
Point 52	408.57	-10.86
Point 53	432.84	-8.55
Point 54	450.06	-4.54
Point 55	346.02	-9
Point 56	427.02	-9
Point 57	35.99	-3
Point 58	226.87	-4.54
Point 59	94.84	8
Point 60	167.4	4
Point 61	292.4	0.875
Point 62	46	-4.06
Point 63	-5.16	5.5
Point 64	8	5.2
Point 65	0	0
Point 66	0	-9
Point 67	0	-14
Point 68	0	-30
Point 69	0	-34
Point 70	285.84	-9
Point 71	285.84	-14
Point 72	285.84	-30
Point 73	285.84	-34
Point 74	-194	-2
Point 75	285.84	-4.64
Point 76	309.25	-4.74

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	1.40	(212.59, 459.281)	123.329	(22.0016, 5.65146)	(350.892, -9.32064)
2	24744	1.74	(212.59, 459.281)	497.776	(11.5643, 5.31492)	(375.844, -10.963)
3	24713	1.74	(211.16, 456.209)	494.388	(11.5696, 5.31509)	(373.397, -10.8019)
4	24775	1.74	(214.019, 462.352)	501.164	(11.5592, 5.31476)	(378.292, -11.1241)
5	24806	1.74	(215.449, 465.424)	504.552	(11.5541, 5.31459)	(380.74, -11.2852)
6	24682	1.74	(209.73, 453.137)	491	(11.5749, 5.31527)	(370.949, -10.6408)
7	24837	1.74	(216.766, 468.425)	507.829	(11.5558, 5.31465)	(383.19, -11.3598)
8	24651	1.74	(208.3, 450.065)	487.612	(11.5803, 5.31544)	(368.501, -10.4797)
9	24868	1.74	(217.921, 471.323)	510.946	(11.5669, 5.31501)	(385.642, -11.3108)
10	24620	1.74	(206.871, 446.993)	484.224	(11.5859, 5.31562)	(366.053, -10.3186)
11	24899	1.74	(219.077, 474.222)	514.064	(11.578, 5.31536)	(388.095, -11.2618)
12	24930	1.74	(220.232, 477.12)	517.181	(11.589, 5.31572)	(390.547, -11.2127)
13	24589	1.75	(205.441, 443.921)	480.836	(11.5915, 5.3158)	(363.606, -10.1575)
14	24961	1.75	(221.388, 480.019)	520.299	(11.5999, 5.31607)	(393, -11.1637)
15	24558	1.75	(204.011, 440.85)	477.449	(11.5973, 5.31599)	(361.158, -9.99635)
16	24527	1.75	(202.581, 437.778)	474.061	(11.6031, 5.31618)	(358.71, -9.83524)

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17	24745	1.76	(209.716, 394.072)	437.781	(10.2008, 5.27096)	(375.844, -10.963)
18	24714	1.76	(208.315, 391.444)	434.803	(10.2021, 5.271)	(373.397, -10.8019)
19	24683	1.76	(206.915, 388.815)	431.825	(10.2035, 5.27105)	(370.949, -10.6408)
20	24776	1.76	(211.117, 396.701)	440.759	(10.1994, 5.27092)	(378.292, -11.1241)
21	24652	1.76	(205.514, 386.187)	428.846	(10.2049, 5.27109)	(368.501, -10.4797)
22	24621	1.76	(204.113, 383.558)	425.868	(10.2063, 5.27114)	(366.053, -10.3186)
23	24807	1.76	(212.518, 399.33)	443.738	(10.1981, 5.27088)	(380.74, -11.2852)
24	24590	1.76	(202.712, 380.93)	422.89	(10.2077, 5.27118)	(363.606, -10.1575)
25	24838	1.76	(213.822, 401.9)	446.62	(10.1987, 5.27089)	(383.19, -11.3598)
26	24496	1.76	(201.152, 434.706)	470.673	(11.6091, 5.31637)	(356.262, -9.67414)
27	24559	1.76	(201.312, 378.301)	419.912	(10.2092, 5.27123)	(361.158, -9.99635)
28	24869	1.76	(214.987, 404.389)	449.366	(10.2018, 5.27099)	(385.642, -11.3108)
29	24900	1.76	(216.152, 406.878)	452.112	(10.2049, 5.27109)	(388.095, -11.2618)
30	24528	1.76	(199.911, 375.673)	416.934	(10.2106, 5.27128)	(358.71, -9.83524)
31	25645	1.77	(205.192, 337.994)	386.033	(12.1776, 5.3347)	(370.949, -10.6408)
32	25614	1.77	(203.814, 335.71)	383.366	(12.1794, 5.33476)	(368.501, -10.4797)
33	25707	1.77	(207.948, 342.561)	391.367	(12.174, 5.33458)	(375.844, -10.963)
34	25583	1.77	(202.435, 333.427)	380.699	(12.1812, 5.33481)	(366.053, -10.3186)
35	25676	1.77	(206.57, 340.278)	388.7	(12.1758, 5.33464)	(373.397, -10.8019)
36	24931	1.77	(217.317, 409.366)	454.858	(10.208, 5.27119)	(390.547, -11.2127)
37	25738	1.77	(209.327, 344.845)	394.034	(12.1723, 5.33453)	(378.292, -11.1241)
38	25552	1.77	(201.057, 331.143)	378.032	(12.1831, 5.33488)	(363.606, -10.1575)
39	24497	1.77	(198.51, 373.044)	413.955	(10.2121, 5.27133)	(356.262, -9.67414)
40	25769	1.77	(210.705, 347.128)	396.702	(12.1706, 5.33447)	(380.74, -11.2852)
41	24465	1.77	(199.722, 431.634)	467.285	(11.6152, 5.31656)	(353.815, -9.51303)
42	25521	1.77	(199.679, 328.86)	375.365	(12.185, 5.33494)	(361.158, -9.99635)
43	24962	1.77	(218.483, 411.855)	457.604	(10.211, 5.27129)	(393, -11.1637)
44	25800	1.77	(211.999, 349.365)	399.285	(12.171, 5.33448)	(383.19, -11.3598)
45	25490	1.77	(198.301, 326.576)	372.698	(12.1869, 5.335)	(358.71, -9.83524)
46	25831	1.77	(213.171, 351.534)	401.749	(12.1743, 5.33459)	(385.642, -11.3108)
47	24466	1.77	(197.11, 370.416)	410.977	(10.2137, 5.27137)	(353.815, -9.51303)
48	23814	1.77	(213.56, 463.382)	502.287	(7.72584, 5.20625)	(378.292, -11.1241)
49	23783	1.77	(212.13, 460.31)	498.899	(7.72584, 5.20625)	(375.844, -10.963)
50	23845	1.77	(214.99, 466.454)	505.675	(7.72584, 5.20625)	(380.74, -11.2852)
51	25459	1.77	(196.923, 324.293)	370.031	(12.1888, 5.33506)	(356.262, -9.67414)
52	23752	1.77	(210.7, 457.238)	495.511	(7.72584, 5.20625)	(373.397, -10.8019)
53	23876	1.77	(216.307, 469.454)	508.952	(7.72584, 5.20625)	(383.19, -11.3598)
54	25862	1.77	(214.344, 353.703)	404.213	(12.1776, 5.3347)	(388.095, -11.2618)
55	23721	1.78	(209.271, 454.166)	492.123	(7.72584, 5.20625)	(370.949, -10.6408)
56	23907	1.78	(217.462, 472.353)	512.069	(7.72584, 5.20625)	(385.642, -11.3108)
57	25893	1.78	(215.517, 355.872)	406.678	(12.1809, 5.33481)	(390.547, -11.2127)
58	25428	1.78	(195.545, 322.009)	367.364	(12.1908, 5.33513)	(353.815, -9.51303)
59	24435	1.78	(195.709, 367.787)	407.999	(10.2152, 5.27142)	(351.367, -9.35192)
60	24434	1.78	(198.293, 428.562)	463.897	(11.6214, 5.31676)	(351.367, -9.35192)
61	23938	1.78	(218.617, 475.251)	515.187	(7.72584, 5.20625)	(388.095, -11.2618)
62	23690	1.78	(207.841, 451.094)	488.735	(7.72584, 5.20625)	(368.501, -10.4797)
63	23784	1.78	(209.26, 394.954)	438.77	(7.72584, 5.20625)	(375.844, -10.963)
64	25924	1.78	(216.69, 358.041)	409.142	(12.1841, 5.33491)	(393, -11.1637)

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65	23753	1.78	(207.859, 392.326)	435.792	(7.72584, 5.20625)	(373.397, -10.8019)
66	23722	1.78	(206.458, 389.697)	432.814	(7.72584, 5.20625)	(370.949, -10.6408)
67	23969	1.78	(219.773, 478.15)	518.304	(7.72584, 5.20625)	(390.547, -11.2127)
68	23815	1.78	(210.66, 397.583)	441.748	(7.72584, 5.20625)	(378.292, -11.1241)
69	22853	1.78	(213.145, 464.473)	503.454	(6.84659, 5.22629)	(378.292, -11.1241)
70	23846	1.78	(212.061, 400.211)	444.727	(7.72584, 5.20625)	(380.74, -11.2852)
71	25397	1.78	(194.167, 319.726)	364.697	(12.1929, 5.33519)	(351.367, -9.35192)
72	22884	1.78	(214.574, 467.545)	506.842	(6.84659, 5.22629)	(380.74, -11.2852)
73	23659	1.78	(206.411, 448.023)	485.347	(7.72584, 5.20625)	(366.053, -10.3186)
74	22822	1.78	(211.715, 461.401)	500.066	(6.84659, 5.22629)	(375.844, -10.963)
75	23691	1.78	(205.057, 387.069)	429.835	(7.72584, 5.20625)	(368.501, -10.4797)
76	22791	1.78	(210.285, 458.329)	496.678	(6.84659, 5.22629)	(373.397, -10.8019)
77	22915	1.78	(215.891, 470.545)	510.119	(6.84659, 5.22629)	(383.19, -11.3598)
78	23877	1.78	(213.365, 402.782)	447.609	(7.72584, 5.20625)	(383.19, -11.3598)
79	23660	1.78	(203.657, 384.44)	426.857	(7.72584, 5.20625)	(366.053, -10.3186)
80	24000	1.78	(220.929, 481.048)	521.422	(7.72584, 5.20625)	(393, -11.1637)
81	24404	1.78	(194.308, 365.159)	405.021	(10.2168, 5.27148)	(348.919, -9.19081)
82	22760	1.78	(208.855, 455.257)	493.29	(6.84659, 5.22629)	(370.949, -10.6408)
83	22946	1.78	(217.046, 473.444)	513.236	(6.84659, 5.22629)	(385.642, -11.3108)
84	23908	1.78	(214.53, 405.271)	450.355	(7.72584, 5.20625)	(385.642, -11.3108)
85	23629	1.78	(202.256, 381.812)	423.879	(7.72584, 5.20625)	(363.606, -10.1575)
86	23628	1.78	(204.982, 444.951)	481.96	(7.72584, 5.20625)	(363.606, -10.1575)
87	22977	1.79	(218.202, 476.342)	516.354	(6.84659, 5.22629)	(388.095, -11.2618)
88	25366	1.79	(192.788, 317.442)	362.03	(12.1949, 5.33526)	(348.919, -9.19081)
89	23939	1.79	(215.695, 407.759)	453.101	(7.72584, 5.20625)	(388.095, -11.2618)
90	22729	1.79	(207.426, 452.186)	489.903	(6.84659, 5.22629)	(368.501, -10.4797)
91	23598	1.79	(200.855, 379.183)	420.901	(7.72584, 5.20625)	(361.158, -9.99635)
92	23008	1.79	(219.358, 479.241)	519.472	(6.84659, 5.22629)	(390.547, -11.2127)
93	24684	1.79	(204.723, 338.737)	386.906	(9.68755, 5.25441)	(370.949, -10.6408)
94	22823	1.79	(208.841, 395.892)	439.797	(6.84659, 5.22629)	(375.844, -10.963)
95	24715	1.79	(206.101, 341.021)	389.573	(9.68696, 5.25439)	(373.397, -10.8019)
96	24746	1.79	(207.479, 343.304)	392.24	(9.68638, 5.25437)	(375.844, -10.963)
97	24403	1.79	(196.863, 425.491)	460.509	(11.6277, 5.31697)	(348.919, -9.19081)
98	22792	1.79	(207.44, 393.264)	436.819	(6.84659, 5.22629)	(373.397, -10.8019)
99	23970	1.79	(216.861, 410.248)	455.847	(7.72584, 5.20625)	(390.547, -11.2127)
100	22854	1.79	(210.241, 398.521)	442.775	(6.84659, 5.22629)	(378.292, -11.1241)
101	24777	1.79	(208.857, 345.588)	394.907	(9.6858, 5.25436)	(378.292, -11.1241)

Slices of Slip Surface: **Optimized**

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	28.995795	-2.57615	847.14303	1189.2585	0	204.19
2	Optimized	36.779835	-5.55451	1033.0179	1527.9465	0	178.47
3	Optimized	37.874835	-5.9060565	1054.937	1611.2125	0	174.85
4	Optimized	42.09	-6.5875305	1097.4634	1689.4442	0	160.92
5	Optimized	51.506	-8.109834	1192.4708	1863.2917	0	151.59
6	Optimized	63.776	-10.09355	1316.2187	2134.6867	0	154.89

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7	Optimized	71.77	-11.385955	1396.9025	2332.2373	0	159.79
8	Optimized	74.29042	-11.793435	1422.3033	2386.5196	0	161.33
9	Optimized	79.612965	-13.00103	1497.7021	2501.5464	0	164.59
10	Optimized	89.024	-15.33264	1643.1368	2755.9151	0	210.43
11	Optimized	94.621455	-16.73794	1730.8445	2887.8888	0	228.1
12	Optimized	99.92	-18.499515	1840.7945	3134.3661	0	249.36
13	Optimized	105.3952	-20.31982	1950.373	3390.8516	0	271.33
14	Optimized	106.9916	-20.85056	1967.476	3481.5359	0	277.73
15	Optimized	108.6764	-21.45538	1988.2674	3559.5648	0	284.96
16	Optimized	113.22175	-23.3865	2063.1697	3877.0822	0	307.61
17	Optimized	117.49675	-25.225285	2135.1205	4134.1682	0	329.15
18	Optimized	122.1037	-27.66921	2241.3086	4367.7117	0	357.21
19	Optimized	127.1037	-30.32163	2356.6301	4624.7445	0	374.52
20	Optimized	130.87385	-32.32163	2443.5531	4754.479	0	393.07
21	Optimized	134.79385	-34.401125	2533.9503	4888.0433	0	356.08
22	Optimized	139.0959	-36.6833	2633.1862	4991.7058	0	376.82
23	Optimized	148.3209	-38.74753	2669.3758	5171.2941	0	392.41
24	Optimized	156.94005	-39.02554	2600.282	4928.7736	0	390.03
25	Optimized	163.64005	-38.874575	2523.5204	4726.3094	0	384.37
26	Optimized	172.22	-38.31368	2402.4445	4469.8158	0	373.25
27	Optimized	178.855	-37.87993	2308.7636	4357.641	0	365.74
28	Optimized	187.10575	-37.34056	2192.2766	4271.9856	0	360.08
29	Optimized	196.92075	-36.736185	2056.1351	4176.0951	0	353.73
30	Optimized	206.4854	-36.216365	1989.5004	4095.0711	0	348.27
31	Optimized	216.6054	-35.695065	1956.7333	4008.7962	0	342.8
32	Optimized	223.705	-35.36101	1929.461	3956.6022	0	339.29
33	Optimized	231.244	-35.00628	1900.5079	3901.2709	0	335.57
34	Optimized	238.114	-34.722815	1881.8745	3846.0807	0	332.59
35	Optimized	245.305	-34.49909	1869.8089	3801.6751	0	330.24
36	Optimized	253.7272	-34.23706	1854.6485	3750.0585	0	327.49
37	Optimized	261.49865	-34.06055	1841.7968	3704.238	0	325.64
38	Optimized	270.61715	-33.92403	1830.9919	3664.2498	0	319.09
39	Optimized	280.7657	-33.772085	1819.0703	3618.5342	0	310.9
40	Optimized	289.12	-33.647005	1809.0961	3581.0012	0	306.29
41	Optimized	293.8	-33.57694	1803.5477	3510.392	0	305.56
42	Optimized	298.86705	-33.501075	1797.2827	3307.9926	0	304.76
43	Optimized	305.89205	-32.02567	1703.0869	2999.9782	0	289.27

44	Optimized	309.9653	-30.302585	1594.2677	2648.9798	0	271.18
45	Optimized	311.90425	-29.482355	1542.5032	2554.7698	0	262.56
46	Optimized	321.34895	-25.034835	1262.0651	2094.8085	0	215.87
47	Optimized	330.415	-20.70103	975.08814	1611.1777	0	170.36
48	Optimized	332.60255	-19.655315	895.78547	1471.326	0	159.38
49	Optimized	338.3278	-16.506765	699.30659	1114.5926	0	126.32
50	Optimized	343.13525	-13.75705	527.72384	790.1961	0	100
51	Optimized	344.79	-12.810575	468.67099	683.10508	0	100
52	Optimized	348.4558	-10.713846	337.81924	452.83707	0	100

Slices of Slip Surface: 24744

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	24744	12.30024	3.578118	463.12318	394.72358	0	600
2	24744	16.84081	1.627331	584.85227	640.04731	0	600
3	24744	21.322725	-0.2818767	704.00408	941.05764	0	229.54
4	24744	28.995	-3.3397747	894.79929	1278.9491	0	204.19
5	24744	37.085	-6.528363	1093.7543	1631.4231	0	177.46
6	24744	40.983225	-7.970465	1183.7538	1783.9772	0	164.58
7	24744	44.893225	-9.396013	1272.7038	1933.7051	0	147.75
8	24744	51.275	-11.599143	1410.162	2170.8389	0	147.23
9	24744	57.45512	-13.70313	1541.4745	2403.0457	0	151.02
10	24744	64.45012	-15.89855	1678.4868	2679.0417	0	203.56
11	24744	71.77	-18.159885	1819.5777	2970.6746	0	231.12
12	24744	78.46	-20.05052	1937.5668	3188.4178	0	254.46
13	24744	89.38	-22.97333	2119.9103	3517.5977	0	290.84
14	24744	99.92	-25.548835	2280.6627	3871.7291	0	323.38
15	24744	105.3952	-26.816525	2355.7814	4080.4551	0	339.54
16	24744	107.4752	-27.26766	2363.0553	4181.4618	0	345.37
17	24744	113.435	-28.500655	2380.2098	4485.9167	0	361.42
18	24744	119.36305	-29.68483	2394.5613	4732.2535	0	376.95
19	24744	124.36305	-30.60278	2401.6341	4834.4372	0	379.26
20	24744	131.63	-31.85174	2406.6787	4867.8517	0	387.65
21	24744	140.69515	-33.24896	2402.8332	4762.3947	0	396.43
22	24744	149.92015	-34.517785	2389.3902	4628.6305	0	347.67
23	24744	156.91	-35.36313	2371.9615	4505.5659	0	352.01

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24	24744	163.61	-36.065445	2348.5732	4353.44	0	355.1
25	24744	172.22	-36.83241	2309.9999	4246.9589	0	357.74
26	24744	178.855	-37.34791	2275.5826	4242.0153	0	360.15
27	24744	185.5775	-37.737915	2232.4669	4264.5164	0	364.25
28	24744	195.3925	-38.17428	2161.1135	4290.5598	0	368.83
29	24744	205.36	-38.41743	2126.8502	4297.2729	0	371.38
30	24744	215.48	-38.46155	2129.3121	4282.0427	0	371.85
31	24744	223.705	-38.361475	2116.6916	4258.0216	0	370.8
32	24744	233.74	-37.99858	2086.9054	4202.9694	0	366.99
33	24744	245.305	-37.39713	2050.6149	4115.5757	0	360.67
34	24744	257.3347	-36.42581	1990.3565	3988.1812	0	350.47
35	24744	272.0041	-34.88187	1890.4869	3795.593	0	334.26
36	24744	282.5894	-33.538285	1804.0071	3622.7862	0	307.26
37	24744	289.12	-32.566205	1741.6948	3489.8664	0	294.95
38	24744	293.8	-31.824335	1694.1711	3338.7655	0	287.16
39	24744	299.6815	-30.796415	1628.282	2989.303	0	276.36
40	24744	306.7065	-29.51025	1545.8607	2574.3111	0	262.86
41	24744	314.33	-27.95975	1446.7494	2319.3659	0	246.58
42	24744	324.49	-25.726945	1304.3174	2090.744	0	223.13
43	24744	330.415	-24.349025	1202.6921	1930.5164	0	208.66
44	24744	337.41	-22.549975	1076.4189	1690.3011	0	189.77
45	24744	344.79	-20.617955	955.85809	1448.8755	0	169.49
46	24744	351.2197	-18.771255	840.60854	1239.0248	0	150.1
47	24744	361.61915	-15.631695	644.69367	891.57792	0	117.13
48	24744	371.33165	-12.4815	448.12252	546.52802	0	100

Slices of Slip Surface: 24713

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	24713	12.309345	3.574659	463.34237	395.30662	0	600
2	24713	16.850395	1.624828	585.00751	640.46276	0	600
3	24713	21.32583	-0.28035865	703.90321	941.04853	0	229.53
4	24713	28.995	-3.3335687	894.40683	1278.4835	0	204.19
5	24713	37.085	-6.5183515	1093.1517	1630.6243	0	177.46
6	24713	41.00301	-7.9651415	1183.419	1783.676	0	164.51
7	24713	44.91301	-9.3881225	1272.2193	1933.1946	0	147.69
8	24713	51.275	-11.579183	1408.9788	2169.1223	0	147.23

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9	24713	57.494725	-13.69106	1540.7113	2402.5196	0	151.04
10	24713	64.489725	-15.87972	1677.2814	2677.8259	0	203.38
11	24713	71.77	-18.120895	1817.1458	2967.1754	0	230.71
12	24713	78.46	-20.003815	1934.6262	3184.1807	0	253.97
13	24713	89.38	-22.913065	2116.1387	3512.1352	0	290.21
14	24713	99.92	-25.474025	2276.0206	3864.9099	0	322.59
15	24713	105.3952	-26.733745	2350.5996	4072.8566	0	338.68
16	24713	107.4752	-27.181675	2357.6849	4173.5074	0	344.46
17	24713	113.435	-28.405135	2374.1964	4477.1282	0	360.42
18	24713	119.6554	-29.633605	2388.4305	4728.0124	0	376.56
19	24713	124.6554	-30.54286	2395.0179	4828.3922	0	378.44
20	24713	131.63	-31.724655	2398.7031	4854.0567	0	386.31
21	24713	141.2802	-33.181795	2392.7557	4737.8291	0	395.34
22	24713	150.5052	-34.43204	2378.1606	4602.69	0	346.41
23	24713	156.91	-35.185345	2360.9138	4487.5123	0	350.16
24	24713	163.61	-35.872835	2336.61	4333.9033	0	353.09
25	24713	172.22	-36.6199	2296.7835	4225.4198	0	355.51
26	24713	178.855	-37.119595	2261.3273	4218.7876	0	357.76
27	24713	185.5775	-37.49274	2217.0968	4239.7525	0	361.67
28	24713	195.3925	-37.90363	2144.2982	4263.24	0	365.99
29	24713	205.36	-38.1196	2108.3522	4266.9973	0	368.26
30	24713	215.48	-38.13475	2108.9108	4248.7493	0	368.41
31	24713	223.705	-38.01019	2094.7439	4222.1787	0	367.11
32	24713	233.74	-37.615715	2062.9822	4163.6979	0	362.96
33	24713	245.305	-36.976525	2024.3341	4072.2539	0	356.25
34	24713	256.3273	-36.07093	1968.4869	3953.6566	0	346.74
35	24713	268.98185	-34.745195	1882.6656	3788.1689	0	332.82
36	24713	280.57455	-33.253265	1786.7233	3593.1904	0	305.58
37	24713	289.12	-31.98274	1705.3739	3419.1776	0	288.82
38	24713	293.8	-31.22159	1656.5738	3265.5413	0	280.83
39	24713	297.9594	-30.492115	1609.8232	3018.1063	0	273.17
40	24713	304.9844	-29.175455	1525.4625	2606.5787	0	259.34
41	24713	314.33	-27.266875	1403.5375	2249.4525	0	239.3
42	24713	324.49	-24.98641	1258.0978	2015.6199	0	215.36
43	24713	330.415	-23.579945	1154.6879	1852.3931	0	200.59
44	24713	337.41	-21.745405	1026.1856	1608.2541	0	181.33
45	24713	344.79	-19.775585	903.28898	1362.7609	0	160.64
46	24713	354.95005	-16.715135	712.31321	1019.1056	0	128.51
47	24713	368.6384	-12.400945	443.0949	545.02117	0	100

Slices of Slip Surface: 24775

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	24775	12.29132	3.581508	462.91405	394.23649	0	600
2	24775	16.831415	1.6297815	584.69974	639.68472	0	600
3	24775	21.31967	-0.28337485	704.08298	941.12922	0	229.55
4	24775	28.995	-3.3458993	895.19342	1279.4171	0	204.19
5	24775	37.085	-6.5382435	1094.4017	1632.2251	0	177.46

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6	24775	40.963775	-7.975719	1184.0926	1784.2469	0	164.64
7	24775	44.873775	-9.403801	1273.2092	1934.2617	0	147.82
8	24775	51.275	-11.618846	1411.4369	2172.5586	0	147.23
9	24775	57.41626	-13.715045	1542.2329	2403.7078	0	150.99
10	24775	64.41126	-15.91714	1679.645	2680.2531	0	203.73
11	24775	71.77	-18.198375	1821.9741	2974.2188	0	231.52
12	24775	78.46	-20.09663	1940.4243	3192.6636	0	254.94
13	24775	89.38	-23.032835	2123.6833	3523.0631	0	291.47
14	24775	99.92	-25.622695	2285.2126	3878.5552	0	324.15
15	24775	105.3952	-26.89825	2360.8405	4087.9324	0	340.4
16	24775	107.4752	-27.35255	2368.3401	4189.1297	0	346.26
17	24775	113.435	-28.594965	2386.1087	4494.5924	0	362.41
18	24775	119.08145	-29.73541	2400.533	4736.415	0	377.33
19	24775	124.08145	-30.66194	2408.1984	4840.3906	0	380.06
20	24775	131.63	-31.97722	2414.5253	4881.6416	0	388.96
21	24775	140.14415	-33.31528	2412.5429	4785.903	0	397.48
22	24775	149.36915	-34.60244	2400.2779	4653.5497	0	348.89
23	24775	156.91	-35.538665	2383.0004	4523.2625	0	353.83
24	24775	163.61	-36.25562	2360.395	4372.8277	0	357.08
25	24775	172.22	-37.042225	2323.1007	4268.2698	0	359.94
26	24775	178.855	-37.573325	2289.632	4264.6695	0	362.52
27	24775	185.5775	-37.97996	2247.5177	4289.051	0	366.79
28	24775	195.3925	-38.441465	2177.8114	4317.5443	0	371.64
29	24775	205.36	-38.711445	2145.2333	4327.1212	0	374.47
30	24775	215.48	-38.78414	2149.4974	4314.9039	0	375.23
31	24775	223.705	-38.70821	2138.305	4293.3524	0	374.44
32	24775	233.74	-38.376465	2110.4457	4241.6904	0	370.95
33	24775	245.305	-37.812225	2076.4529	4158.3266	0	365.03
34	24775	255.55005	-37.057005	2030.1729	4057.2934	0	357.1
35	24775	266.6502	-36.00933	1962.1264	3924.7008	0	346.1
36	24775	277.75035	-34.7116	1878.4721	3764.897	0	332.47
37	24775	284.5702	-33.81945	1821.0936	3651.9334	0	308.93
38	24775	289.12	-33.14176	1777.5642	3559.3485	0	300.99
39	24775	293.8	-32.418875	1731.2803	3410.8358	0	293.4
40	24775	301.3929	-31.096565	1646.4589	2960.446	0	279.51
41	24775	308.4179	-29.840415	1565.9044	2542.0128	0	266.32
42	24775	314.33	-28.642985	1489.4111	2388.2652	0	253.75
43	24775	324.49	-26.45706	1349.8166	2164.6027	0	230.8
44	24775	330.415	-25.10721	1250.0065	2007.4118	0	216.63
45	24775	337.41	-23.34304	1125.862	1770.9003	0	198.1
46	24775	344.79	-21.44817	1007.6597	1533.5436	0	178.21
47	24775	351.95405	-19.41673	880.8453	1303.3659	0	156.88
48	24775	363.82215	-15.85888	658.8758	909.55946	0	119.52
49	24775	374.0242	-12.562055	453.14747	547.99126	0	100

Slices of Slip Surface: 24806

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)

1	24806	12.28257	3.584831	462.70526	393.78637	0	600
2	24806	16.82219	1.6321815	584.54954	639.36236	0	600
3	24806	21.31666	-0.2848535	704.20728	941.19427	0	229.56
4	24806	28.995	-3.351945	895.5892	1279.954	0	204.19
5	24806	37.085	-6.547997	1095.009	1633.0737	0	177.46
6	24806	40.944655	-7.9809055	1184.405	1784.6595	0	164.7
7	24806	44.854655	-9.411489	1273.6839	1934.8475	0	147.88
8	24806	51.275	-11.638294	1412.6253	2174.3729	0	147.23
9	24806	57.37812	-13.726805	1542.9657	2404.3545	0	150.97
10	24806	64.37312	-15.93549	1680.7522	2681.5297	0	203.9
11	24806	71.77	-18.236375	1824.3344	2977.69	0	231.92
12	24806	78.46	-20.142155	1943.2835	3196.8243	0	255.42
13	24806	89.38	-23.09158	2127.2841	3528.5376	0	292.08
14	24806	99.92	-25.69562	2289.764	3885.2886	0	324.92
15	24806	105.3952	-26.978945	2365.9014	4095.4135	0	341.25
16	24806	107.4752	-27.436375	2373.5967	4197.0899	0	347.14
17	24806	113.435	-28.68809	2391.8932	4503.2698	0	363.39
18	24806	118.8099	-29.78535	2406.3708	4740.4635	0	377.71
19	24806	123.8099	-30.720355	2414.4957	4846.3892	0	380.85
20	24806	131.63	-32.10112	2422.2431	4895.1749	0	390.27
21	24806	139.6235	-33.380765	2421.7817	4808.372	0	398.51
22	24806	148.8485	-34.686035	2410.6377	4677.4415	0	350.09
23	24806	156.91	-35.711995	2393.6898	4540.9452	0	355.63
24	24806	163.61	-36.4434	2372.207	4391.8046	0	359.04
25	24806	172.22	-37.24939	2335.9835	4289.251	0	362.11
26	24806	178.855	-37.795885	2303.5319	4287.302	0	364.86
27	24806	185.5775	-38.21894	2262.4529	4313.2553	0	369.3
28	24806	195.3925	-38.705255	2194.2905	4344.1943	0	374.41
29	24806	205.36	-39.00171	2163.4022	4356.5415	0	377.52
30	24806	215.48	-39.10261	2169.3676	4347.2332	0	378.58
31	24806	223.705	-39.050505	2159.7423	4328.3301	0	378.03
32	24806	233.74	-38.749475	2133.749	4279.8624	0	374.87
33	24806	245.305	-38.22192	2102.0607	4200.4005	0	369.33
34	24806	255.97335	-37.462255	2055.4191	4098.1562	0	361.35

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35	24806	267.92	-36.35628	1983.4646	3957.7716	0	349.74
36	24806	279.86665	-34.96267	1893.6095	3786.2228	0	335.11
37	24806	286.5207	-34.096845	1837.9348	3680.742	0	326.02
38	24806	289.8007	-33.61273	1806.8435	3614.7143	0	305.93
39	24806	293.8	-33.005385	1767.8627	3481.8513	0	299.56
40	24806	302.225	-31.55871	1675.085	2984.948	0	284.37
41	24806	310.1193	-30.166055	1585.7161	2546.287	0	269.74
42	24806	315.63395	-29.058825	1514.9546	2429.7716	0	258.12
43	24806	324.92465	-27.085075	1388.9184	2227.9011	0	237.39
44	24806	330.415	-25.85476	1296.6848	2083.1305	0	224.48
45	24806	337.41	-24.12488	1174.6645	1850.353	0	206.31
46	24806	344.79	-22.26653	1058.7243	1616.9465	0	186.8
47	24806	352.68805	-20.05535	920.72194	1366.7959	0	163.58
48	24806	366.02415	-16.08519	672.99366	927.36389	0	121.89
49	24806	376.7161	-12.64261	458.18053	549.46342	0	100

Slices of Slip Surface: 24682

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	24682	12.318635	3.5711285	463.56381	395.9519	0	600
2	24682	16.86016	1.622271	585.16626	640.96844	0	600
3	24682	21.328975	-0.2788203	703.78245	940.96842	0	229.52
4	24682	28.995	-3.3272803	894.01544	1278.0194	0	204.19
5	24682	37.085	-6.5082075	1092.5084	1629.8287	0	177.46
6	24682	41.02314	-7.9597475	1183.0845	1783.5039	0	164.45
7	24682	44.93314	-9.3801275	1271.7213	1932.6578	0	147.62
8	24682	51.275	-11.558958	1407.7102	2167.3229	0	147.23
9	24682	57.535095	-13.67883	1539.9619	2401.8716	0	151.07
10	24682	64.530095	-15.860645	1676.1135	2676.6158	0	203.2
11	24682	71.77	-18.0814	1814.6792	2963.6054	0	230.29
12	24682	78.46	-19.956505	1931.6889	3179.8612	0	253.47
13	24682	89.38	-22.852015	2112.3703	3506.5898	0	289.57
14	24682	99.92	-25.398245	2271.2818	3857.8981	0	321.8
15	24682	105.3952	-26.6499	2345.4194	4065.1381	0	337.8
16	24682	107.4752	-27.09458	2352.2572	4165.5552	0	343.55
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17	24682	113.435	28.308375	2368.1827	4468.2261	0	359.4
18	24682	119.9592	-29.581715	2382.2215	4723.5738	0	376.17
19	24682	124.9592	-30.48217	2388.1723	4822.357	0	377.6
20	24682	131.63	-31.59593	2390.724	4840.13	0	384.96
21	24682	141.9035	-33.11376	2382.3015	4711.9921	0	394.22
22	24682	151.1285	-34.34519	2366.5617	4575.2835	0	345.11
23	24682	156.91	-35.00526	2349.6863	4469.2724	0	348.29
24	24682	163.61	-35.67773	2324.3737	4314.0858	0	351.06
25	24682	172.22	-36.40464	2283.3485	4203.5498	0	353.26
26	24682	178.855	-36.88832	2246.8945	4195.2624	0	355.33
27	24682	185.5775	-37.244385	2201.6105	4214.5552	0	359.07
28	24682	195.3925	-37.62946	2127.1616	4235.4826	0	363.11
29	24682	205.36	-37.81787	2089.4431	4236.3938	0	365.09
30	24682	215.48	-37.803645	2088.2964	4214.93	0	364.94
31	24682	223.705	-37.65426	2072.6195	4185.665	0	363.37
32	24682	233.74	-37.22776	2038.7512	4123.8807	0	358.89
33	24682	245.305	-36.550295	1997.717	4028.361	0	351.78
34	24682	255.30075	-35.715075	1946.5694	3919.0604	0	343.01
35	24682	265.90225	-34.61047	1874.9836	3781.0779	0	331.41
36	24682	278.5215	-32.964305	1769.2099	3563.3135	0	303.88
37	24682	289.12	-31.391185	1668.4531	3347.4364	0	282.61
38	24682	293.8	-30.610455	1618.4202	3191.3086	0	274.41
39	24682	296.22575	-30.183575	1591.1157	3046.7316	0	269.93
40	24682	303.25075	-28.835925	1504.8784	2638.794	0	255.78
41	24682	314.33	-26.564145	1359.6853	2178.5353	0	231.92
42	24682	324.49	-24.23521	1211.1631	1939.5261	0	207.47
43	24682	330.415	-22.79971	1106.0019	1773.056	0	192.4
44	24682	337.41	-20.92906	975.24787	1525.0858	0	172.76
45	24682	344.79	-18.920765	849.9218	1275.3321	0	151.67
46	24682	353.4799	-16.284425	685.41611	978.48838	0	123.99
47	24682	365.94435	-12.320395	438.07422	543.52232	0	100

Slices of Slip Surface: 24837

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	24837	12.284745	3.58401	462.75497	393.99685	0	600

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2	24837	16.823075	1.6316635	584.58167	639.4914	0	600
3	24837	21.316205	-0.28513875	704.17878	941.26714	0	229.56
4	24837	28.995	-3.3543297	895.70874	1280.1721	0	204.19
5	24837	37.085	-6.5526135	1095.2981	1633.4659	0	177.46
6	24837	40.934375	-7.9834225	1184.5601	1784.7506	0	164.74
7	24837	44.844375	-9.415781	1273.9512	1935.191	0	147.92
8	24837	51.275	-11.649956	1413.3579	2175.417	0	147.23
9	24837	57.35402	-13.734175	1543.4149	2404.7514	0	150.96
10	24837	64.34902	-15.948105	1681.5993	2682.4082	0	204.02
11	24837	71.77	-18.26266	1825.9713	2980.1083	0	232.2
12	24837	78.46	-20.17465	1945.2712	3199.8245	0	255.76
13	24837	89.38	-23.13513	2130.0059	3532.5759	0	292.54
14	24837	99.92	-25.751215	2293.2643	3890.3693	0	325.5
15	24837	105.3952	-27.04119	2369.8244	4101.2109	0	341.9
16	24837	107.4752	-27.501315	2377.6443	4202.9008	0	347.82
17	24837	113.435	-28.76109	2396.3946	4509.9443	0	364.16
18	24837	118.5993	-29.824785	2410.9777	4744.0112	0	378.02
19	24837	123.5993	-30.767195	2419.6133	4851.0639	0	381.48
20	24837	131.63	-32.201025	2428.4007	4905.968	0	391.31
21	24837	139.21385	-33.43383	2429.2428	4826.2522	0	399.33
22	24837	148.43885	-34.755155	2419.107	4696.5581	0	351.06
23	24837	156.91	-35.855715	2402.7211	4555.4787	0	357.12
24	24837	163.61	-36.60003	2381.9608	4407.7098	0	360.68
25	24837	172.22	-37.4234	2346.9342	4306.8804	0	363.93
26	24837	178.855	-37.983735	2315.2566	4306.4065	0	366.83
27	24837	185.5775	-38.42159	2275.065	4333.6267	0	371.43
28	24837	195.3925	-38.93031	2208.3318	4366.886	0	376.77
29	24837	205.36	-39.25073	2178.8976	4381.7022	0	380.13
30	24837	215.48	-39.377225	2186.456	4375.0858	0	381.46
31	24837	223.705	-39.346785	2178.1537	4358.5188	0	381.14
32	24837	233.74	-39.073755	2153.9634	4313.0186	0	378.27
33	24837	245.305	-38.5797	2124.4326	4237.1692	0	373.09
34	24837	255.97335	-37.85283	2079.7934	4138.3892	0	365.45
35	24837	267.92	-36.78542	2010.2017	4002.1653	0	354.25
36	24837	279.86665	-35.43253	1922.9252	3834.97	0	340.04
37	24837	288.2471	-34.34223	1852.7723	3702.3365	0	328.59
38	24837	291.5271	-33.87008	1822.4516	3641.6738	0	308.64
39	24837	293.8	-33.5253	1800.315	3544.5721	0	305.02
40	24837	302.225	-32.111025	1709.4977	3052.063	0	290.17
41	24837	311.6466	-30.455805	1603.3319	2581.1862	0	272.79
42	24837	321.8066	-28.358495	1469.3085	2357.2705	0	250.76
43	24837	330.415	-26.522965	1338.3661	2150.6592	0	231.49
44	24837	337.41	-24.82471	1218.3141	1921.3304	0	213.66
45	24837	344.79	-23.000045	1104.4771	1691.5489	0	194.5
46	24837	353.35845	-20.629985	956.58205	1423.8157	0	169.61
47	24837	368.03535	-16.29018	685.78728	943.47783	0	124.05
48	24837	378.7769	-12.854435	471.39538	565.70788	0	100

49	24837	382.68485	-11.534345	389.02118	423.08312	0	100

Slices of Slip Surface: 24651

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	24651	12.32812	3.567525	463.78538	396.66266	0	600
2	24651	16.87012	1.619658	585.32895	641.52877	0	600
3	24651	21.33217	-0.27726125	703.71016	940.9539	0	229.51
4	24651	28.995	-3.3209077	893.6263	1277.5586	0	204.19
5	24651	37.085	-6.497928	1091.8677	1629.0369	0	177.46
6	24651	41.04362	-7.9542815	1182.7472	1783.125	0	164.38
7	24651	44.95362	-9.3720265	1271.2198	1932.1551	0	147.55
8	24651	51.275	-11.538466	1406.4436	2165.5266	0	147.23
9	24651	57.57626	-13.66644	1539.1929	2401.2966	0	151.09
10	24651	64.57126	-15.841315	1674.9102	2675.4217	0	203.02
11	24651	71.77	-18.04138	1812.1763	2960.0402	0	229.87
12	24651	78.46	-19.90857	1928.665	3175.5447	0	252.97
13	24651	89.38	-22.79017	2108.5164	3500.9614	0	288.92
14	24651	99.92	-25.321485	2266.4504	3850.8929	0	320.99
15	24651	105.3952	-26.56496	2340.1166	4057.4223	0	336.9
16	24651	107.4752	-27.00635	2346.7429	4157.3148	0	342.62
17	24651	113.435	-28.21036	2362.0543	4459.2107	0	358.37
18	24651	120.27535	-29.52915	2375.7609	4719.3159	0	375.79
19	24651	125.27535	-30.42069	2381.0931	4816.2191	0	376.75
20	24651	131.63	-31.46553	2382.4891	4825.945	0	383.59
21	24651	142.57035	-33.04484	2371.264	4684.7301	0	393.07
22	24651	151.79535	-34.25721	2354.2604	4546.5543	0	343.78
23	24651	156.91	-34.822835	2338.279	4450.6753	0	346.39
24	24651	163.61	-35.480085	2311.9952	4294.1183	0	349
25	24651	172.22	-36.18657	2269.6941	4181.451	0	350.98
26	24651	178.855	-36.65402	2232.2822	4171.4364	0	352.87
27	24651	185.5775	-36.99277	2185.9058	4189.0252	0	356.42
28	24651	195.3925	-37.35168	2109.8054	4207.2871	0	360.19
29	24651	205.36	-37.512155	2070.4177	4205.36	0	361.88
30	24651	215.48	-37.46815	2067.3642	4180.6721	0	361.42
31	24651	223.705	-37.29359	2050.0032	4148.7971	0	359.58
32	24651	233.74	-36.834605	2014.2833	4083.4408	0	354.76
33	24651	245.305	-36.11831	1970.764	3983.7913	0	347.24
34	24651	258.5049	-34.88048	1893.6685	3825.4641	0	334.25
35	24651	271.71735	-33.382475	1797.0088	3629.8229	0	312.69
36	24651	281.13245	-32.053795	1711.7296	3447.1938	0	292.62
37	24651	289.12	-30.791355	1630.9351	3274.7987	0	276.31
38	24651	293.07985	-30.120035	1588.0166	3159.1587	0	269.26
39	24651	294.47985	-29.87069	1572.0771	3078.1385	0	266.64
40	24651	302.225	-28.362235	1475.6055	2630.3604	0	250.8
41	24651	314.33	-25.85131	1315.1954	2106.4261	0	224.44
42	24651	324.49	-23.473075	1163.6143	1862.0888	0	199.47
43	24651	330.415	-22.00804	1056.6404	1692.5151	0	184.08

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44	24651	337.41	-20.10064	923.53549	1440.4959	0	164.06
45	24651	344.79	-18.053185	795.80586	1186.4891	0	142.56
46	24651	352.009	-15.847275	658.15171	937.15097	0	119.4
47	24651	363.2496	-12.23984	433.04229	542.01151	0	100

Slices of Slip Surface: 24868

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	24868	12.30228	3.5773585	463.17562	395.11996	0	600
2	24868	16.83817	1.6270415	584.87517	640.27982	0	600
3	24868	21.319335	-0.28375405	704.12126	941.22401	0	229.55
4	24868	28.995	-3.3516005	895.50772	1279.9704	0	204.19
5	24868	37.085	-6.5500615	1095.1246	1633.2274	0	177.46
6	24868	40.936335	-7.982215	1184.4826	1784.5687	0	164.73
7	24868	44.846335	-9.41534	1273.9056	1935.1213	0	147.91
8	24868	51.275	-11.650775	1413.3965	2175.4694	0	147.23
9	24868	57.349205	-13.735435	1543.4971	2404.8099	0	150.95
10	24868	64.344205	-15.952755	1681.8177	2682.7036	0	204.07
11	24868	71.77	-18.272685	1826.6117	2980.9911	0	232.3
12	24868	78.46	-20.189075	1946.1619	3201.1107	0	255.91
13	24868	89.38	-23.157625	2131.4499	3534.5429	0	292.78
14	24868	99.92	-25.78283	2295.2754	3893.1961	0	325.84
15	24868	105.3952	-27.077925	2372.0345	4104.5329	0	342.29
16	24868	107.4752	-27.54016	2380.061	4206.3459	0	348.23
17	24868	113.435	-28.806295	2399.1948	4514.0033	0	364.63
18	24868	118.46735	-29.84971	2413.8165	4745.9745	0	378.21
19	24868	123.46735	-30.798085	2422.8286	4854.112	0	381.89
20	24868	131.63	-32.267865	2432.6575	4913.2138	0	392.02
21	24868	138.93875	-33.46978	2434.2821	4838.0974	0	399.89
22	24868	148.16375	-34.80439	2424.9589	4709.5447	0	351.75
23	24868	156.91	-35.958765	2409.0992	4565.7224	0	358.19
24	24868	163.61	-36.713915	2389.0258	4419.1468	0	361.86
25	24868	172.22	-37.551955	2354.9412	4319.7513	0	365.28
26	24868	178.855	-38.124015	2324.0036	4320.374	0	368.3
27	24868	185.5775	-38.57449	2284.6595	4348.9773	0	373.03
28	24868	195.3925	-39.10238	2219.0316	4384.1167	0	378.57
29	24868	205.36	-39.44342	2190.9383	4401.0408	0	382.16
30	24868	215.48	-39.592035	2199.8751	4396.7858	0	383.72
31	24868	223.705	-39.58038	2192.7504	4382.1834	0	383.59
32	24868	233.74	-39.331735	2170.0654	4339.258	0	380.98
33	24868	245.305	-38.866925	2142.2838	4266.4893	0	376.1
34	24868	255.97335	-38.1688	2099.5097	4170.8055	0	368.77
35	24868	267.92	-37.13529	2032.1069	4038.223	0	357.92
36	24868	279.86665	-35.818285	1946.9966	3874.9661	0	344.09
37	24868	289.12	-34.62709	1870.2917	3729.8659	0	331.58
38	24868	292.95745	-34.08276	1835.3508	3644.3504	0	325.87
39	24868	294.35745	-33.87252	1821.8495	3565.3683	0	308.66
40	24868	302.225	-32.56972	1738.1196	3107.7662	0	294.98

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41	24868	312.9338	-30.6972	1617.9391	2610.4138	0	275.32
42	24868	323.0938	-28.63766	1486.342	2384.9621	0	253.7
43	24868	330.415	-27.084595	1373.3815	2207.3729	0	237.39
44	24868	337.41	-25.414505	1255.1726	1981.0527	0	219.85
45	24868	344.79	-23.619855	1143.1634	1754.5359	0	201.01
46	24868	351.299	-21.876955	1034.4474	1556.0598	0	182.71
47	24868	361.857	-18.89936	848.59947	1226.2284	0	151.44
48	24868	372.41495	-15.67469	647.37842	869.37052	0	117.58
49	24868	379.93695	-13.250045	496.09179	602.70523	0	100
50	24868	383.91115	-11.90544	412.17114	461.47652	0	100

Slices of Slip Surface: 24620

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	24620	12.337805	3.563845	464.01637	397.44125	0	600
2	24620	16.88028	1.616987	585.49633	642.14474	0	600
3	24620	21.335415	-0.275681	703.61998	941.0092	0	229.5
4	24620	28.995	-3.314449	893.23822	1277.0993	0	204.19
5	24620	37.085	-6.48751	1091.2291	1628.2483	0	177.46
6	24620	41.064465	-7.948742	1182.4034	1783.0268	0	164.31
7	24620	44.974465	-9.363817	1270.7248	1931.612	0	147.48
8	24620	51.275	-11.517702	1405.0917	2163.7371	0	147.23
9	24620	57.618235	-13.653885	1538.4191	2400.6907	0	151.12
10	24620	64.613235	-15.821735	1673.6756	2674.1715	0	202.83
11	24620	71.77	-18.000835	1809.6386	2956.404	0	229.45
12	24620	78.46	-19.860005	1925.646	3171.2367	0	252.46
13	24620	89.38	-22.72751	2104.5768	3495.3387	0	288.26
14	24620	99.92	-25.24371	2261.6225	3843.7983	0	320.18
15	24620	105.3952	-26.47891	2334.6912	4049.5857	0	336
16	24620	107.4752	-26.91697	2341.1718	4149.368	0	341.68
17	24620	113.435	-28.111065	2355.8107	4450.1963	0	357.33
18	24620	120.60475	-29.4759	2369.1269	4714.7989	0	375.4
19	24620	125.60475	-30.358405	2373.8599	4809.9987	0	375.88
20	24620	131.63	-31.333425	2374.2503	4811.5014	0	382.2
21	24620	143.2872	-32.97502	2359.6972	4655.9079	0	391.87
22	24620	152.5122	-34.16808	2341.5673	4516.2949	0	342.4
23	24620	156.91	-34.63802	2326.6907	4431.8894	0	344.48
24	24620	163.61	-35.279845	2299.606	4273.7379	0	346.91
25	24620	172.22	-35.96563	2255.9233	4158.9156	0	348.66
26	24620	178.855	-36.416635	2217.4638	4147.3109	0	350.37

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27	24620	185.5775	-36.73784	2169.9823	4163.1618	0	353.75
28	24620	195.3925	-37.070225	2092.229	4178.754	0	357.24
29	24620	205.36	-37.202375	2051.0768	4173.7936	0	358.62
30	24620	215.48	-37.128175	2046.1192	4145.9848	0	357.85
31	24620	223.705	-36.92809	2027.2098	4111.4151	0	355.74
32	24620	233.74	-36.436145	1989.3599	4042.4498	0	350.58
33	24620	245.305	-35.680445	1943.4756	3938.5451	0	342.64
34	24620	256.3583	-34.653295	1879.9957	3806.692	0	331.86
35	24620	268.49745	-33.25819	1789.9869	3622.5251	0	313.48
36	24620	280.05915	-31.632405	1685.7756	3398.9107	0	288.9
37	24620	288.04075	-30.374215	1605.2273	3226.8498	0	271.93
38	24620	291.32075	-29.80885	1569.082	3154.0853	0	265.99
39	24620	293.8	-29.362215	1540.5582	3053.1146	0	261.3
40	24620	302.225	-27.695565	1433.9874	2563.2437	0	243.8
41	24620	314.33	-25.12814	1270.0759	2033.2346	0	216.85
42	24620	324.49	-22.699755	1115.363	1783.5115	0	191.35
43	24620	330.415	-21.20466	1006.496	1610.611	0	175.65
44	24620	337.41	-19.25984	871.0575	1354.5782	0	155.23
45	24620	344.79	-17.172515	740.83368	1096.2094	0	133.31
46	24620	350.5373	-15.40352	630.45758	895.13454	0	114.74
47	24620	360.554	-12.159285	428.01791	540.4972	0	100

PG Case.BS.Thru Fabric

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 215
Last Edited By: Cox, Lane MVK
Date: 4/20/2011
Time: 11:09:12 AM
File Name: 5c(2) Typical 1.2nd SC.80%SG.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\2nd Stage Constuction\80%SG,1 Layer of Fabric\Slope W\
Last Solved Date: 4/20/2011
Last Solved Time: 11:41:30 AM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

PG Case.BS.Thru Fabric

Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

SlipSurface
- Direction of movement: Left to Right
- Use Passive Mode: No
- Slip Surface Option: Block
- Critical slip surfaces saved: 100
- Optimize Critical Slip Surface Location: Yes
- Tension Crack
  - Tension Crack Option: Tension Crack Line
  - Percentage Wet: 1
  - Tension Crack Fluid Unit Weight: 62.4 pcf

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FOS Distribution
FOS Calculation Option: Constant
Restrict Block Crossing: Yes
Advanced
Number of Slices: 30
Optimization Tolerance: 0.01
Minimum Slip Surface Depth: 0.1 ft
Optimization Maximum Iterations: 2000
Optimization Convergence Tolerance: 1e-007
Starting Optimization Points: 8
Ending Optimization Points: 16
Complete Passes per Insertion: 1
Driving Side Maximum Convex Angle: 5 °
Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH
Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH above 0
Model: Mohr-Coulomb
Unit Weight: 102 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, 0 to -9
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -9 (2)
Cohesion Spatial Fn: CH, 0 to -9
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -9 to -14
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -9 to -14 (2)

Cohesion Spatial Fn: CH, -9 to -14
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -14 to -30
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -14 to -30 (2)
Cohesion Spatial Fn: CH, -14 to -30
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -30 to -34
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -30 to -34 (2)
Cohesion Spatial Fn: CH, 30 to -34
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sand Fill
Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -34 to -42
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -34 to -42 (2)
Cohesion Spatial Fn: CH, -34 to -42
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -42 to -80
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -42 to -80 (2)
Cohesion Spatial Fn: CH, -42 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure

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Piezometric Line: 1

CH, 0 to -9 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -9 (2)
Cohesion Spatial Fn: CH, 0 to -9 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -9 to -14 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -9 to -14 (2)
Cohesion Spatial Fn: CH, -9 to -14 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -14 to -30 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -14 to -30 (2)
Cohesion Spatial Fn: CH, -14 to -30 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -30 to -34 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -30 to -34 (2)
Cohesion Spatial Fn: CH, 30 to -34 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Limits

Left Coordinate: (-200, -2.13) ft
Right Coordinate: (500, -4.5) ft

Slip Surface Block

Left Grid
Upper Left: (78, -14) ft
Lower Left: (138, -14) ft

Lower Right: (138, -60) ft
X Increments: 7
Y Increments: 7
Starting Angle: 115 °
Ending Angle: 135 °
Angle Increments: 7
Right Grid
Upper Left: (251, -14) ft
Lower Left: (319, -14) ft
Lower Right: (319, -60) ft
X Increments: 7
Y Increments: 7
Starting Angle: 0 °
Ending Angle: 45 °
Angle Increments: 7

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	11
	105	11
	200.3	-4.33
	220.54	-4.34
	226.87	-4.54
	240.61	-4.57
	250	-4.5
	285.84	-4.64
	295.2	-4.68
	329.57	-4.85
	331.26	-5.3
	447.66	-5.3
	450.06	-4.54
	500	-4.5

Reinforcements

Reinforcement 1

Type: Fabric
Outside Point: (209, 0) ft
Inside Point: (22, 0) ft
Slip Surface Intersection: (101.99, 0) ft
Total Length: 187 ft

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Reinforcement Direction: 0 °
Applied Load Option: Variable
F of S Dependent: No
Contact Cohesion: 265 psf
Contact Phi: 19 °
Interface Factor: 2
Bond Safety Factor: 1
Fabric Capacity: 27000 lbs
Fabric Safety Factor: 1
Fabric Load: 27000 lbs
Load Distribution: Even along reinf.
Load Orientation: 0
Applied Load: 27000 lbs
Fabric Load Used: 27000 lbs
Resisting Force Used: 912.39 lbs/ft
Available Bond Length: 79.986 ft
Required Bond Length: 29.593 ft
Governing Component: Fabric

Tension Crack Line

	X (ft)	Y (ft)
	-1	5.40517
	8	5.2
	22	0.1
	96	0.1
	118	11
	127	11
	166	2
	167.4	4

Spatial Functions

CH, 0 to -9

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -2.5, 50)
Data Point: (-300, -9, 75)
Data Point: (-33.33, 0, 50)
Data Point: (-33.33, -9, 75)
Data Point: (0, 0, 300)
Data Point: (0, -9, 300)
Data Point: (285.84, -4.62, 100)
Data Point: (285.84, -9, 100)
Data Point: (500, 0, 100)
Data Point: (500, -9, 100)

PG Case.BS.Thru Fabric

CH, -34 to -42 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -38, 105)
Data Point: (0, -38, 116)
Data Point: (177.04, -38, 106)

CH, -42 to -80 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -61, 105)
Data Point: (0, -61, 105)
Data Point: (177.04, -61, 106)

CH, 0 to -9 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, 0, 300)
Data Point: (0, -9, 300)
Data Point: (46, 0, 148)
Data Point: (46, -9, 148)
Data Point: (122.71, 0, 198)
Data Point: (122.71, -9, 198)
Data Point: (285.84, 0, 100)
Data Point: (285.84, -9, 100)

CH, -9 to -14 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -9, 300)
Data Point: (0, -14, 300)
Data Point: (46, -9, 144)
Data Point: (46, -14, 144)
Data Point: (122.71, -9, 191)
Data Point: (122.71, -14, 191)
Data Point: (285.84, -9, 100)
Data Point: (285.84, -14, 100)

CH, -14 to -30 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -14, 300)
Data Point: (0, -30, 375)

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Data Point: (46, -14, 174)
Data Point: (46, -30, 342)
Data Point: (122.71, -14, 214)
Data Point: (122.71, -30, 382)
Data Point: (285.84, -14, 100)
Data Point: (285.84, -30, 268)

CH, 30 to -34 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -30, 400)
Data Point: (0, -34, 438)
Data Point: (46, -30, 341)
Data Point: (46, -34, 383)
Data Point: (122.71, -30, 374)
Data Point: (122.71, -34, 416)
Data Point: (285.84, -30, 268)
Data Point: (285.84, -34, 310)

CH, -9 to -14

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -9, 75)
Data Point: (-300, -14, 115)
Data Point: (-33.33, -9, 75)
Data Point: (-33.33, -14, 115)
Data Point: (0, -9, 300)
Data Point: (0, -14, 300)
Data Point: (285.84, -9, 100)
Data Point: (285.84, -14, 100)
Data Point: (500, -9, 100)
Data Point: (500, -14, 100)

CH, -14 to -30

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -14, 115)
Data Point: (-300, -30, 291)
Data Point: (-33.33, -14, 115)
Data Point: (-33.33, -30, 291)
Data Point: (0, -14, 300)
Data Point: (0, -30, 375)
Data Point: (285.84, -14, 100)
Data Point: (285.84, -30, 268)
Data Point: (500, -14, 100)

Data Point: (500, -30, 268)

CH, 30 to -34

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -30, 291)
Data Point: (-300, -34, 335)
Data Point: (-33.33, -30, 291)
Data Point: (-33.33, -34, 335)
Data Point: (0, -30, 400)
Data Point: (0, -34, 438)
Data Point: (285.84, -30, 268)
Data Point: (285.84, -34, 310)
Data Point: (500, -30, 268)
Data Point: (500, -34, 310)

CH, 0 to -9 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -4.5, 90)
Data Point: (0, -4.5, 96)
Data Point: (177.04, -4.54, 87)

CH, -9 to -14 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -11.5, 90)
Data Point: (0, -11.5, 97)
Data Point: (177.04, -11.5, 100)

CH, -14 to -30 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -22, 100)
Data Point: (0, -22, 102)
Data Point: (177.04, -22, 100)

CH, -30 to -34 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -32, 122)
Data Point: (0, -32, 113)
Data Point: (177.04, -32, 118)

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CH, -34 to -42

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -34, 335)
Data Point: (-300, -42, 423)
Data Point: (-33.33, -34, 335)
Data Point: (-33.33, -42, 423)
Data Point: (0, -34, 438)
Data Point: (0, -42, 514)
Data Point: (177.04, -34, 325)
Data Point: (177.04, -42, 409)
Data Point: (500, -34, 325)
Data Point: (500, -42, 409)

CH, -42 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -42, 423)
Data Point: (-300, -80, 841)
Data Point: (-33.33, -42, 423)
Data Point: (-33.33, -80, 841)
Data Point: (0, -42, 514)
Data Point: (0, -80, 875)
Data Point: (177.04, -42, 409)
Data Point: (177.04, -80, 808)
Data Point: (500, -42, 409)
Data Point: (500, -80, 808)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -42 to -80	1,3,4,2	26600
Region 2	CH, -34 to -42	3,5,69,73,6,4	5600
Region 3	CH above 0	45,21,22,63,64,27,44,65	161.91095
Region 4	Sand Fill	29,30,43,31,32,33,42,34,35,62	606.7023
Region 5	CH, 0 to -9	56,53,54,41,12	267.3158
Region 6	EMBANKMENT FILL CH	59,46,47,60,37,36,35,62	1502.7397
Region 7	EMBANKMENT FILL CH	64,27,44,57,28,62,59	499.34315
Region 8	EMBANKMENT FILL CH	60,61,76,75,40,39,58,38,37	772.15003
Region 9	CH, 0 to -9	16,11,66,65,45,20,19,18,17,15,14,74	1498.6738
Region 10	CH, -9 to -14	11,9,67,66	1000
Region 11	CH, -14 to -30	9,7,68,67	3200
Region 12	CH, -30 to -34	7,5,69,68	800
Region 13	CH, -30 to -34	6,8,72,73	856.64
Region 14	CH, -14 to -30	8,10,71,72	3426.56
Region 15	CH, -9 to -14	10,71,70,55,50,51,52,56,12	954.73385

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Region 16	CH, 0 to -9	55,49,48,76,75,70	220.0602
Region 17	CH, -30 to -34 SG	69,68,72,73	1143.36
Region 18	CH, -14 to -30 SG	68,67,71,72	4573.44
Region 19	CH, -9 to -14 SG	67,66,43,31,32,33,42,70,71	1313.1338
Region 20	CH, 0 to -9 SG	66,65,44,57,28,62,29,30,43	438.1553
Region 21	CH, 0 to -9 SG	42,34,35,36,37,38,58,39,40,75,70	538.2795

Points

	X (ft)	Y (ft)
Point 1	-200	-80
Point 2	500	-80
Point 3	-200	-42
Point 4	500	-42
Point 5	-200	-34
Point 6	500	-34
Point 7	-200	-30
Point 8	500	-30
Point 9	-200	-14
Point 10	500	-14
Point 11	-200	-9
Point 12	500	-9
Point 13	-191.42	-2.12
Point 14	-156.88	-2.03
Point 15	-119.75	-2.26
Point 16	-200	-2.13
Point 17	-92.12	-1.99
Point 18	-71.42	-1.72
Point 19	-45.06	-0.68
Point 20	-33.33	-0.27
Point 21	-19.05	1.53
Point 22	-16.9	1.81
Point 23	-6.83	6.48
Point 24	-6.79	6.72
Point 25	-0.92	7.16
Point 26	3.42	6.91
Point 27	20.53	0.36
Point 28	38.18	-3.47
Point 29	56.55	-4.85
Point 30	70.54	-8.43
Point 31	109.16	-11.38
Point 32	127.67	-11.01
Point 33	135.55	-10.86
Point 34	159.82	-8.55
Point 35	177.04	-4.54
Point 36	180.67	-4.21
Point 37	200.3	-4.33
Point 38	220.54	-4.34

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Point 39	240.61	-4.57
Point 40	250	-4.5
Point 41	500	-4.5
Point 42	154	-9
Point 43	73	-9
Point 44	22	0
Point 45	-32	0
Point 46	117.71	14
Point 47	127.71	14
Point 48	329.57	-4.85
Point 49	343.56	-8.43
Point 50	382.18	-11.38
Point 51	400.69	-11.01
Point 52	408.57	-10.86
Point 53	432.84	-8.55
Point 54	450.06	-4.54
Point 55	346.02	-9
Point 56	427.02	-9
Point 57	35.99	-3
Point 58	226.87	-4.54
Point 59	94.84	8
Point 60	167.4	4
Point 61	292.4	0.875
Point 62	46	-4.06
Point 63	-5.16	5.5
Point 64	8	5.2
Point 65	0	0
Point 66	0	-9
Point 67	0	-14
Point 68	0	-30
Point 69	0	-34
Point 70	285.84	-9
Point 71	285.84	-14
Point 72	285.84	-30
Point 73	285.84	-34
Point 74	-194	-2
Point 75	285.84	-4.64
Point 76	309.25	-4.74

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	1.73	(223.455, 3.983)	96.40169	(100.007, 9.35568)	(345.951, -8.98408)
2	31574	1.81	(223.455, 3.983)	98.25	(98.5514, 8.9737)	(347.698, -9.11047)
3	31573	1.81	(227.324, 4.109)	103.132	(98.5514, 8.9737)	(355.393, -9.61692)
4	31575	1.82	(220.923, 3.76)	97.744	(98.5514, 8.9737)	(342.731, -8.2179)
5	31582	1.82	(228.215, 4.139)	102.507	(98.5514, 8.9737)	(357.165, -9.73356)
6	31510	1.82	(224.967, 5.733)	97.025	(101.378, 9.71517)	(347.698, -9.11047)

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7	31576	1.82	(218.959, 3.515)	95.11	(98.5514, 8.9737)	(338.904, -7.23861)
8	31509	1.82	(228.838, 5.86)	101.154	(101.378, 9.71517)	(355.393, -9.61692)
9	31638	1.82	(221.855, 2.403)	97.676	(95.5071, 8.17502)	(347.698, -9.11047)
10	31518	1.82	(229.729, 5.889)	101.476	(101.378, 9.71517)	(357.165, -9.73356)
11	31637	1.83	(225.723, 2.529)	101.569	(95.5071, 8.17502)	(355.393, -9.61692)
12	31646	1.83	(226.613, 2.558)	102.034	(95.5071, 8.17502)	(357.165, -9.73356)
13	31581	1.83	(233.361, 4.307)	106.622	(98.5514, 8.9737)	(367.398, -10.4071)
14	31583	1.83	(224.456, 4.016)	99.601	(98.5514, 8.9737)	(349.688, -9.24142)
15	31511	1.83	(222.429, 5.51)	95.705	(101.378, 9.71517)	(342.731, -8.2179)
16	31572	1.83	(233.12, 4.299)	108.13	(98.5514, 8.9737)	(366.918, -10.3755)
17	31639	1.83	(219.329, 2.179)	96.594	(95.5071, 8.17502)	(342.731, -8.2179)
18	31647	1.83	(222.855, 2.435)	99.367	(95.5071, 8.17502)	(349.688, -9.24142)
19	31645	1.83	(231.757, 2.727)	105.854	(95.5071, 8.17502)	(367.398, -10.4071)
20	31519	1.83	(225.968, 5.766)	98.733	(101.378, 9.71517)	(349.688, -9.24142)
21	31590	1.83	(232.976, 4.294)	106.216	(98.5514, 8.9737)	(366.632, -10.3566)
22	31508	1.83	(234.636, 6.049)	105.905	(101.378, 9.71517)	(366.918, -10.3755)
23	31654	1.83	(231.372, 2.714)	106.114	(95.5071, 8.17502)	(366.632, -10.3566)
24	31512	1.83	(220.457, 5.265)	94.194	(101.378, 9.71517)	(338.904, -7.23861)
25	31517	1.83	(234.877, 6.057)	105.381	(101.378, 9.71517)	(367.398, -10.4071)
26	31636	1.83	(231.516, 2.719)	106.263	(95.5071, 8.17502)	(366.918, -10.3755)
27	31134	1.84	(228.864, 4.89)	100.087	(99.7655, 9.29222)	(357.165, -9.73356)
28	31070	1.84	(230.268, 6.508)	99.855	(102.377, 9.97731)	(357.165, -9.73356)
29	31640	1.84	(217.372, 1.935)	94.561	(95.5071, 8.17502)	(338.904, -7.23861)
30	31591	1.84	(228.283, 4.141)	102.715	(98.5514, 8.9737)	(357.3, -9.74244)
31	31589	1.84	(239.399, 4.504)	111.225	(98.5514, 8.9737)	(379.403, -11.1972)
32	31655	1.84	(226.681, 2.561)	103.073	(95.5071, 8.17502)	(357.3, -9.74244)
33	31135	1.84	(225.104, 4.767)	97.534	(99.7655, 9.29222)	(349.688, -9.24142)
34	31584	1.84	(221.651, 3.847)	97.467	(98.5514, 8.9737)	(344.148, -8.56625)
35	31071	1.84	(226.506, 6.385)	97.261	(102.377, 9.97731)	(349.688, -9.24142)
36	31133	1.84	(234.011, 5.059)	103.76	(99.7655, 9.29222)	(367.398, -10.4071)
37	31653	1.84	(237.792, 2.924)	111.497	(95.5071, 8.17502)	(379.403, -11.1972)
38	31069	1.84	(235.416, 6.676)	103.576	(102.377, 9.97731)	(367.398, -10.4071)
39	31565	1.84	(221.575, 3.838)	95.932	(98.5514, 8.9737)	(344, -8.53199)
40	31580	1.84	(241.137, 4.547)	113.098	(98.5514, 8.9737)	(382.867, -11.3663)
41	31526	1.84	(234.492, 6.045)	105.522	(101.378, 9.71517)	(366.632, -10.3566)
42	31062	1.84	(225.505, 6.352)	95.566	(102.377, 9.97731)	(347.698, -9.11047)
43	31007	1.84	(227.889, 7.965)	97.018	(104.929, 10.6469)	(349.688, -9.24142)
44	31566	1.84	(219.438, 3.575)	95.803	(98.5514, 8.9737)	(339.839, -7.47769)
45	31648	1.84	(220.054, 2.267)	97.422	(95.5071, 8.17502)	(344.148, -8.56625)
46	31061	1.84	(229.376, 6.479)	98.599	(102.377, 9.97731)	(355.393, -9.61692)
47	31710	1.84	(224.377, 2.558)	104.074	(91.0429, 7.87757)	(357.165, -9.73356)
48	31564	1.84	(225.171, 4.039)	98.762	(98.5514, 8.9737)	(351.111, -9.33512)
49	31126	1.84	(224.103, 4.735)	95.825	(99.7655, 9.29222)	(347.698, -9.11047)
50	31198	1.84	(227.432, 3.227)	100.349	(97.0795, 8.58753)	(357.165, -9.73356)
51	30998	1.84	(226.888, 7.933)	95.571	(104.929, 10.6469)	(347.698, -9.11047)
52	31520	1.84	(223.159, 5.597)	96.721	(101.378, 9.71517)	(344.148, -8.56625)
53	31125	1.85	(227.973, 4.861)	98.778	(99.7655, 9.29222)	(355.393, -9.61692)
54	30997	1.85	(230.76, 8.059)	98.443	(104.929, 10.6469)	(355.393, -9.61692)

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55	31006	1.85	(231.651, 8.088)	99.648	(104.929, 10.6469)	(357.165, -9.73356)
56	31064	1.85	(220.99, 5.884)	92.488	(102.377, 9.97731)	(338.904, -7.23861)
57	31702	1.85	(219.619, 2.403)	101.285	(91.0429, 7.87757)	(347.698, -9.11047)
58	31644	1.85	(239.53, 2.967)	111.957	(95.5071, 8.17502)	(382.867, -11.3663)
59	31567	1.85	(217.723, 3.361)	93.32	(98.5514, 8.9737)	(336.493, -6.62149)
60	31527	1.85	(229.797, 5.891)	102.174	(101.378, 9.71517)	(357.3, -9.74244)
61	31142	1.85	(233.625, 5.046)	104.541	(99.7655, 9.29222)	(366.632, -10.3566)
62	31701	1.85	(223.486, 2.529)	104.477	(91.0429, 7.87757)	(355.393, -9.61692)
63	31525	1.85	(240.916, 6.255)	110.33	(101.378, 9.71517)	(379.403, -11.1972)
64	31629	1.85	(219.979, 2.258)	95.371	(95.5071, 8.17502)	(344, -8.53199)
65	31711	1.85	(220.618, 2.435)	101.256	(91.0429, 7.87757)	(349.688, -9.24142)
66	31063	1.85	(222.965, 6.129)	93.913	(102.377, 9.97731)	(342.731, -8.2179)
67	31199	1.85	(223.673, 3.104)	97.842	(97.0795, 8.58753)	(349.688, -9.24142)
68	31709	1.85	(229.52, 2.727)	108.084	(91.0429, 7.87757)	(367.398, -10.4071)
69	32094	1.85	(225.963, 2.558)	103.621	(94.2096, 7.97968)	(357.165, -9.73356)
70	31501	1.85	(223.083, 5.588)	94.672	(101.378, 9.71517)	(344, -8.53199)
71	31191	1.85	(220.145, 2.848)	94.427	(97.0795, 8.58753)	(342.731, -8.2179)
72	31078	1.85	(235.031, 6.663)	104.349	(102.377, 9.97731)	(366.632, -10.3566)
73	31127	1.85	(221.568, 4.512)	94.159	(99.7655, 9.29222)	(342.731, -8.2179)
74	31197	1.85	(232.577, 3.395)	103.758	(97.0795, 8.58753)	(367.398, -10.4071)
75	31718	1.85	(229.135, 2.714)	108.923	(91.0429, 7.87757)	(366.632, -10.3566)
76	31630	1.85	(217.849, 1.994)	94.587	(95.5071, 8.17502)	(339.839, -7.47769)
77	32093	1.85	(231.107, 2.727)	106.838	(94.2096, 7.97968)	(367.398, -10.4071)
78	31502	1.85	(220.938, 5.325)	94.52	(101.378, 9.71517)	(339.839, -7.47769)
79	31005	1.85	(236.8, 8.257)	103.413	(104.929, 10.6469)	(367.398, -10.4071)
80	31628	1.85	(223.571, 2.459)	97.874	(95.5071, 8.17502)	(351.111, -9.33512)
81	31516	1.85	(242.654, 6.297)	111.577	(101.378, 9.71517)	(382.867, -11.3663)
82	31500	1.85	(226.684, 5.789)	97.269	(101.378, 9.71517)	(351.111, -9.33512)
83	30999	1.85	(224.342, 7.709)	93.695	(104.929, 10.6469)	(342.731, -8.2179)
84	31445	1.85	(230.339, 7.579)	101.031	(104.154, 10.4436)	(355.393, -9.61692)
85	31592	1.85	(224.624, 4.021)	100.085	(98.5514, 8.9737)	(350.022, -9.26342)
86	31446	1.85	(226.467, 7.453)	96.807	(104.154, 10.4436)	(347.698, -9.11047)
87	31568	1.85	(216.28, 3.18)	93.16	(98.5514, 8.9737)	(333.672, -5.89964)
88	31703	1.85	(217.093, 2.179)	99.2	(91.0429, 7.87757)	(342.731, -8.2179)
89	31454	1.85	(231.23, 7.608)	101.295	(104.154, 10.4436)	(357.165, -9.73356)
90	32085	1.85	(225.072, 2.529)	103.467	(94.2096, 7.97968)	(355.393, -9.61692)
91	31143	1.85	(228.932, 4.893)	101.208	(99.7655, 9.29222)	(357.3, -9.74244)
92	32095	1.85	(222.205, 2.435)	100.979	(94.2096, 7.97968)	(349.688, -9.24142)
93	32086	1.85	(221.205, 2.403)	99.554	(94.2096, 7.97968)	(347.698, -9.11047)
94	31656	1.85	(223.023, 2.441)	100.436	(95.5071, 8.17502)	(350.022, -9.26342)
95	31190	1.85	(222.673, 3.071)	96.118	(97.0795, 8.58753)	(347.698, -9.11047)
96	31598	1.85	(237.737, 4.45)	110.851	(98.5514, 8.9737)	(376.099, -10.9797)
97	31453	1.85	(236.379, 7.777)	105.235	(104.154, 10.4436)	(367.398, -10.4071)
98	31719	1.85	(224.444, 2.561)	105.231	(91.0429, 7.87757)	(357.3, -9.74244)
99	31206	1.85	(232.192, 3.383)	104.659	(97.0795, 8.58753)	(366.632, -10.3566)
100	31503	1.85	(219.216, 5.111)	93.131	(101.378, 9.71517)	(336.493, -6.62149)
101	31662	1.85	(236.131, 2.87)	110.628	(95.5071, 8.17502)	(376.099, -10.9797)

Slices of Slip Surface: Optimized

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	102.5037	-0.545834	720.46541	900.35085	0	600
2	Optimized	105.3952	-3.5937145	906.65905	1299.5562	0	600
3	Optimized	108.5027	-6.8692945	1079.8817	1853.3863	446.58309	0
4	Optimized	111.84725	-10.52098	1274.1674	2257.6799	567.83118	0
5	Optimized	113.5508	-12.656825	1390.3577	2803.2988	0	185.39
6	Optimized	116.16605	-15.935795	1568.7074	3169.8851	0	230.91
7	Optimized	122.3484	-23.6871	1990.3276	3920.5643	0	315.53
8	Optimized	127.2315	-29.751305	2319.6689	4560.5204	0	376.23
9	Optimized	127.5731	-30.09848	2337.9479	4633.6272	0	371.87
10	Optimized	127.69	-30.217285	2344.2064	4868.669	0	373.05
11	Optimized	129.5611	-32.118805	2444.0855	4746.6523	0	391.8
12	Optimized	133.4811	-36.1025	2653.3139	5085.0805	0	374.36
13	Optimized	136.8623	-39.538605	2833.7954	5334.3446	0	407.54
14	Optimized	139.5439	-41.436105	2925.2887	5624.3604	0	425.44
15	Optimized	147.03	-44.518935	3042.495	5704.4986	0	452.82
16	Optimized	153.5734	-46.96835	3129.6562	5955.2074	0	474.43
17	Optimized	156.91	-46.424645	3062.1885	5778.5941	0	466.89
18	Optimized	163.61	-45.332875	2926.8321	5425.1472	0	451.71
19	Optimized	172.1978	-43.93349	2753.3118	5076.5729	0	432.12
20	Optimized	178.8328	-42.87861	2620.909	4893.914	0	418.23
21	Optimized	182.70695	-42.302765	2545.9768	4815.1642	0	412.18
22	Optimized	189.97825	-41.221985	2405.685	4676.2563	0	400.83
23	Optimized	197.7563	-40.111045	2258.3144	4532.4157	0	389.17
24	Optimized	203.5324	-39.355065	2185.4613	4436.4143	0	381.23
25	Optimized	209.975	-38.5573	2135.5281	4328.7606	0	372.85
26	Optimized	216.39535	-37.80788	2088.4982	4231.6067	0	364.98
27	Optimized	220.07275	-37.38094	2061.7263	4175.1393	0	360.5
28	Optimized	223.705	-36.97492	2030.1676	4124.8621	0	356.24
29	Optimized	227.69525	-36.528885	1995.9657	4069.4867	0	351.55
30	Optimized	234.56525	-35.833495	1951.6756	3974.3826	0	344.25

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31	Optimized	245.305	-34.761885	1886.1612	3830.712	0	333
32	Optimized	251.47035	-34.14671	1849.5935	3747.8454	0	326.54
33	Optimized	254.44105	-33.850295	1830.3729	3706.7066	0	328.83
34	Optimized	259.869	-33.374225	1799.3459	3630.662	0	320.31
35	Optimized	267.72425	-32.721495	1756.7187	3530.1839	0	308.35
36	Optimized	275.5795	-32.068765	1714.0916	3429.5788	0	296.39
37	Optimized	282.67355	-31.532	1678.7869	3341.5027	0	286.14
38	Optimized	289.12	-31.103655	1650.4763	3271.7486	0	279.59
39	Optimized	293.8	-30.792685	1629.7992	3171.3643	0	276.32
40	Optimized	296.8079	-30.59282	1616.452	3032.0886	0	274.22
41	Optimized	301.9364	-30.307375	1597.1031	2798.3345	0	271.23
42	Optimized	305.58365	-30.064385	1580.7727	2713.1337	0	268.68
43	Optimized	307.48015	-29.100285	1520.0329	2539.0126	0	258.55
44	Optimized	314.33	-25.61812	1300.6418	2107.489	0	221.99
45	Optimized	324.49	-20.45322	975.21814	1567.1927	0	167.76
46	Optimized	330.415	-17.44121	771.63888	1233.5462	0	136.13
47	Optimized	331.29425	-16.994235	729.72151	1167.5544	0	131.44
48	Optimized	331.4643	-16.907795	724.34129	1156.9568	0	130.53
49	Optimized	334.19345	-15.419385	631.4523	988.47924	0	114.9
50	Optimized	340.1734	-12.146435	427.21682	616.93699	0	100
51	Optimized	344.75565	-9.638474	270.72078	336.69611	0	100

Slices of Slip Surface: 31574

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31574	100.85572	-1.45263	777.04891	938.51219	0	600
2	31574	104.08	-5.393941	1022.9684	1618.008	343.54628	0
3	31574	105.3952	-7.001579	1119.3217	1801.3132	393.74798	0
4	31574	107.37855	-9.4259615	1250.6982	2075.626	476.27227	0
5	31574	109.06335	-11.485445	1362.3155	2625.5989	0	182.64
6	31574	110.1402	-12.80181	1433.6386	2727.9087	0	183.3
7	31574	114.4152	-18.027495	1716.8269	3320.8449	0	251.96
8	31574	120.9598	-26.027495	2150.3397	4152.6992	0	339.38

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9	31574	125.84575	-32	2473.8916	4740.7387	0	392.96
10	31574	127.57595	-34.114965	2588.5676	5067.5966	0	357.75
11	31574	127.69	-34.254375	2596.0704	5324.1606	0	359.1
12	31574	130.86825	-38.13941	2806.6184	5317.6186	0	396.85
13	31574	134.78825	-42.93115	3066.3102	5688.0807	0	443.61
14	31574	136.775	-45.35972	3197.9862	5862.0271	0	467.39
15	31574	142	-46.421465	3211.7553	6233.6335	0	475.33
16	31574	150	-45.550115	3077.0519	5886.5611	0	461.77
17	31574	156.91	-44.79749	2960.669	5586.3775	0	449.99
18	31574	163.61	-44.067735	2847.9327	5272.2494	0	438.52
19	31574	172.22	-43.129945	2702.9976	4973.3877	0	423.69
20	31574	178.855	-42.40727	2591.2866	4831.4815	0	413.28
21	31574	181.6321	-42.10479	2544.5047	4788.8414	0	410.1
22	31574	187.02065	-41.517875	2453.8318	4704.9742	0	403.94
23	31574	195.87355	-40.55363	2304.8186	4576.6231	0	393.81
24	31574	205.36	-39.52038	2195.7102	4440.5369	0	382.96
25	31574	215.48	-38.41812	2126.6522	4296.0358	0	371.39
26	31574	223.705	-37.522265	2064.4099	4181.2742	0	361.98
27	31574	230.305	-36.803405	2012.6964	4090.0757	0	354.44
28	31574	237.175	-36.05513	1965.0886	3992.2554	0	346.58
29	31574	245.305	-35.16962	1911.5912	3875.3764	0	337.28
30	31574	253.02175	-34.329125	1860.6005	3764.4632	0	328.46
31	31574	259.76805	-33.594325	1813.1139	3662.661	0	322.68
32	31574	267.21715	-32.782975	1760.6663	3544.0199	0	309.32
33	31574	274.6663	-31.971625	1708.2186	3424.9784	0	295.96
34	31574	282.11545	-31.160275	1655.771	3305.5365	0	282.6
35	31574	289.12	-30.397345	1606.3534	3193.1578	0	272.17
36	31574	292.58405	-30.020045	1581.9095	3131.0341	0	268.21
37	31574	293.98405	-29.86756	1572.0279	3061.7672	0	266.61
38	31574	298.7125	-29.352545	1538.5166	2828.963	0	261.2
39	31574	305.7375	-28.58739	1488.5629	2483.1081	0	253.17
40	31574	314.125	-27.673835	1428.9847	2254.4616	0	243.58
41	31574	324.285	-	1185.4943	1930.4837	0	203.13

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			23.822075				
42	31574	330.415	-19.97034	929.49291	1506.8687	0	162.69
43	31574	335.58835	-16.719695	712.59219	1120.2293	0	128.56
44	31574	341.73835	-12.855395	471.46329	682.28078	0	100
45	31574	344.79	-10.93793	351.80363	470.72365	0	100
46	31574	346.8592	-9.6377695	270.67822	330.31885	0	100

Slices of Slip Surface: 31573

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31573	100.85572	-1.45263	777.04891	938.34732	0	600
2	31573	104.08	-5.393941	1022.9684	1617.9048	343.48667	0
3	31573	105.3952	-7.001579	1119.3217	1801.2331	393.70173	0
4	31573	107.37855	-9.4259615	1250.6982	2075.4266	476.15717	0
5	31573	109.06335	-11.485445	1362.3155	2625.9918	0	182.64
6	31573	110.1402	-12.80181	1433.6386	2727.5857	0	183.3
7	31573	114.4152	-18.027495	1716.8269	3320.2684	0	251.96
8	31573	120.9598	-26.027495	2150.3397	4152.0172	0	339.38
9	31573	125.84575	-32	2473.8916	4740.1582	0	392.96
10	31573	127.57595	-34.114965	2588.5676	5067.5966	0	357.75
11	31573	127.69	-34.254375	2596.0704	5327.3265	0	359.1
12	31573	130.86825	-38.13941	2806.6184	5316.8167	0	396.85
13	31573	134.78825	-42.93115	3066.3102	5687.2495	0	443.61
14	31573	136.775	-45.35972	3197.9862	5861.2517	0	467.39
15	31573	142	-46.421465	3211.7553	6233.882	0	475.33
16	31573	150	-45.550115	3077.0519	5886.6854	0	461.77
17	31573	156.91	-44.79749	2960.669	5586.5483	0	449.99
18	31573	163.61	-44.067735	2847.9327	5272.3805	0	438.52
19	31573	172.22	-43.129945	2702.9976	4973.4908	0	423.69
20	31573	178.855	-42.40727	2591.2866	4831.7553	0	413.28
21	31573	181.6321	-42.10479	2544.5047	4789.0481	0	410.1
22	31573	187.02065	-41.517875	2453.8318	4705.0865	0	403.94
23	31573	195.87355	-40.55363	2304.8186	4576.7354	0	393.81
24	31573	205.36	-39.52038	2195.7102	4440.6352	0	382.96
25	31573	215.48	-38.41812	2126.6522	4296.134	0	371.39
26	31573	223.705	-37.522265	2064.4099	4181.4312	0	361.98

27	31573	230.305	-36.803405	2012.6964	4090.0757	0	354.44
28	31573	237.175	-36.05513	1965.0886	3992.4001	0	346.58
29	31573	245.305	-35.16962	1911.5912	3875.3764	0	337.28
30	31573	253.02175	-34.329125	1860.6005	3764.4632	0	328.46
31	31573	261.0096	-33.4591	1804.3394	3642.9099	0	320.46
32	31573	270.94175	-32.3773	1734.4759	3484.5661	0	302.64
33	31573	280.8739	-31.2955	1664.5124	3325.6217	0	284.83
34	31573	289.12	-30.397345	1606.3534	3193.3093	0	272.17
35	31573	292.58405	-30.020045	1581.9095	3131.0341	0	268.21
36	31573	293.98405	-29.86756	1572.0279	3061.8081	0	266.61
37	31573	298.7125	-29.352545	1538.5166	2829.1045	0	261.2
38	31573	305.7375	-28.58739	1488.5629	2483.2496	0	253.17
39	31573	314.125	-27.673835	1428.9847	2254.4616	0	243.58
40	31573	324.285	-24.597735	1233.9102	1991.2528	0	211.28
41	31573	330.415	-21.64568	1034.0353	1664.5537	0	180.28
42	31573	337.41	-18.277065	809.77324	1257.6207	0	144.91
43	31573	344.79	-14.723045	588.01038	844.42026	0	107.59
44	31573	350.7065	-11.873814	410.20914	536.88133	0	100

Slices of Slip Surface: 31575

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31575	100.85572	-1.45263	777.04891	940.31203	0	600
2	31575	104.08	-5.393941	1022.9684	1618.9372	344.08273	0
3	31575	105.3952	-7.001579	1119.3217	1802.0342	394.16426	0
4	31575	107.37855	-9.4259615	1250.6982	2077.0214	477.07793	0
5	31575	109.06335	-11.485445	1362.3155	2624.3544	0	182.64
6	31575	110.1402	-12.80181	1433.6386	2729.7174	0	183.3
7	31575	114.4152	-18.027495	1716.8269	3323.3433	0	251.96
8	31575	120.9598	-26.027495	2150.3397	4155.914	0	339.38
9	31575	125.84575	-32	2473.8916	4744.4152	0	392.96
10	31575	127.57595	-34.114965	2588.5676	5067.9332	0	357.75
11	31575	127.69	-34.254375	2596.0704	5312.2883	0	359.1
12	31575	130.86825	-38.13941	2806.6184	5321.7286	0	396.85
13	31575	134.78825	-42.93115	3066.3102	5692.2368	0	443.61

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14	31575	136.775	-45.35972	3197.9862	5866.4206	0	467.39
15	31575	142	-46.421465	3211.7553	6233.0122	0	475.33
16	31575	150	-45.550115	3077.0519	5885.9398	0	461.77
17	31575	156.91	-44.79749	2960.669	5585.6942	0	449.99
18	31575	163.61	-44.067735	2847.9327	5271.7248	0	438.52
19	31575	172.22	-43.129945	2702.9976	4972.8721	0	423.69
20	31575	178.855	-42.40727	2591.2866	4830.9338	0	413.28
21	31575	181.6321	-42.10479	2544.5047	4788.0148	0	410.1
22	31575	187.02065	-41.517875	2453.8318	4704.4128	0	403.94
23	31575	195.87355	-40.55363	2304.8186	4576.0616	0	393.81
24	31575	205.36	-39.52038	2195.7102	4440.0458	0	382.96
25	31575	215.48	-38.41812	2126.6522	4295.5446	0	371.39
26	31575	223.705	-37.522265	2064.4099	4180.9601	0	361.98
27	31575	230.305	-36.803405	2012.6964	4089.6416	0	354.44
28	31575	237.175	-36.05513	1965.0886	3991.8213	0	346.58
29	31575	245.305	-35.16962	1911.5912	3874.953	0	337.28
30	31575	253.02175	-34.329125	1860.6005	3763.9697	0	328.46
31	31575	259.76805	-33.594325	1813.1139	3662.2606	0	322.68
32	31575	267.21715	-32.782975	1760.6663	3543.6195	0	309.32
33	31575	274.6663	-31.971625	1708.2186	3424.578	0	295.96
34	31575	282.11545	-31.160275	1655.771	3305.2696	0	282.6
35	31575	289.12	-30.397345	1606.3534	3192.8547	0	272.17
36	31575	292.58405	-30.020045	1581.9095	3130.764	0	268.21
37	31575	293.98405	-29.86756	1572.0279	3061.4401	0	266.61
38	31575	298.7125	-29.352545	1538.5166	2828.68	0	261.2
39	31575	305.7375	-28.58739	1488.5629	2482.9666	0	253.17
40	31575	314.125	-27.673835	1428.9847	2254.1558	0	243.58
41	31575	324.285	-22.92821	1129.6982	1857.6815	0	193.75
42	31575	330.415	-18.039695	808.98745	1320.3238	0	142.42
43	31575	333.3703	-15.682915	647.89831	1038.2193	0	117.67
44	31575	338.6155	-11.5	386.87544	575.53099	0	100
45	31575	342.24075	-8.6089495	206.48234	266.35193	0	100

Slices of Slip Surface: 31582

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31582	100.85572	-1.45263	777.04891	937.15201	0	600
2	31582	104.08	-5.393941	1022.9684	1616.0121	342.3939	0
3	31582	105.3952	-7.001579	1119.3217	1801.4734	393.84049	0
4	31582	107.37855	-9.4259615	1250.6982	2072.0377	474.20057	0
5	31582	109.06335	-11.485445	1362.3155	2638.6001	0	182.64
6	31582	110.1402	-12.80181	1433.6386	2718.3483	0	183.3
7	31582	114.4152	-18.027495	1716.8269	3307.2003	0	251.96
8	31582	120.9598	-26.027495	2150.3397	4135.6507	0	339.38
9	31582	125.84575	-32	2473.8916	4721.9692	0	392.96
10	31582	127.57595	-34.114965	2588.5676	5070.6262	0	357.75
11	31582	127.69	-34.254375	2596.0704	5418.9804	0	359.1
12	31582	130.86825	-38.13941	2806.6184	5295.3646	0	396.85
13	31582	134.78825	-42.93115	3066.3102	5666.8844	0	443.61
14	31582	136.775	-45.35972	3197.9862	5838.7671	0	467.39
15	31582	142	-46.56669	3220.7701	6240.5694	0	476.83
16	31582	150	-45.98579	3104.202	5924.6511	0	466.28
17	31582	156.91	-45.48404	3003.6041	5651.6152	0	457.13
18	31582	163.61	-44.99754	2905.9375	5363.583	0	448.21
19	31582	172.22	-44.372345	2780.5425	5098.1958	0	436.7
20	31582	178.855	-43.89056	2683.8431	4983.024	0	428.85
21	31582	185.5775	-43.402425	2585.8562	4902.5281	0	423.73
22	31582	195.3925	-42.689735	2442.8806	4796.9477	0	416.24
23	31582	202.59565	-42.166695	2360.8678	4724.1252	0	410.75
24	31582	208.8035	-41.715925	2332.584	4655.4802	0	406.02
25	31582	216.62785	-41.14778	2296.8922	4574.0265	0	400.05
26	31582	223.705	-40.63389	2258.5086	4502.9942	0	394.66
27	31582	230.305	-40.154645	2221.9522	4437.2262	0	389.62
28	31582	237.175	-39.6558	2189.8678	4365.9437	0	384.39
29	31582	245.305	-39.065465	2154.7105	4280.3176	0	378.19
30	31582	254.48	-38.399245	2114.1882	4184.0734	0	371.19
31	31582	263.44	-37.748635	2071.4436	4091.5714	0	364.36
32	31582	272.4	-	2028.699	3999.0694	0	357.53

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			37.098025				
33	31582	281.36	-36.44742	1985.8431	3906.5674	0	350.7
34	31582	289.12	-35.88395	1948.6805	3826.511	0	344.78
35	31582	293.8	-35.54412	1926.2855	3728.3979	0	341.21
36	31582	298.7125	-35.18741	1902.6063	3503.5159	0	337.47
37	31582	305.7375	-34.67731	1868.5323	3181.8006	0	332.11
38	31582	312.1576	-34.21113	1837.5694	2997.6702	0	327.22
39	31582	317.0326	-33.857145	1813.9271	2955.2802	0	308.5
40	31582	321.95565	-31.857145	1687.6467	2818.8083	0	287.5
41	31582	327.24065	-28.536355	1478.7485	2427.4434	0	252.63
42	31582	330.415	-26.541765	1339.5279	2198.5774	0	231.69
43	31582	337.41	-22.146515	1051.2461	1679.6808	0	185.54
44	31582	344.79	-17.50935	761.87978	1148.5161	0	136.85
45	31582	348.19755	-15.368245	628.25218	911.36811	0	114.37
46	31582	353.7701	-11.866778	409.76917	538.93499	0	100

Slices of Slip Surface: 31510

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31510	103.1888	0.310325	667.04032	730.67882	0	600
2	31510	105.3952	-2.679195	849.58039	1115.9195	0	600
3	31510	106.1842	-3.7482785	908.38155	1250.278	0	600
4	31510	109.17805	-7.804784	1131.4755	1914.8364	452.27359	0
5	31510	112.7642	-12.663835	1398.6875	2773.0775	0	184.91
6	31510	115.73015	-16.682585	1619.6425	3213.6407	0	238.53
7	31510	121.63445	-24.682585	2059.607	3997.6335	0	325.61
8	31510	126.63445	-31.457345	2432.1885	4649.5001	0	386.75
9	31510	128.1105	-33.457345	2542.1681	4863.4876	0	406.79
10	31510	131.46315	-38	2791.9543	5249.4977	0	395.06
11	31510	134.98265	-42.768755	3054.2057	5629.7903	0	441.83
12	31510	136.775	-45.197325	3187.7238	5803.6835	0	465.73
13	31510	142	-46.421465	3211.7553	6234.2548	0	475.33
14	31510	150	-45.550115	3077.0519	5887.0582	0	461.77
15	31510	156.91	-44.79749	2960.669	5587.0607	0	449.99

16	31510	163.61	-44.067735	2847.9327	5272.774	0	438.52
17	31510	172.22	-43.129945	2702.9976	4973.8002	0	423.69
18	31510	178.855	-42.40727	2591.2866	4832.3031	0	413.28
19	31510	181.6321	-42.10479	2544.5047	4790.0813	0	410.1
20	31510	187.02065	-41.517875	2453.8318	4705.3111	0	403.94
21	31510	195.87355	-40.55363	2304.8186	4577.0722	0	393.81
22	31510	205.36	-39.52038	2195.7102	4440.7334	0	382.96
23	31510	215.48	-38.41812	2126.6522	4296.2323	0	371.39
24	31510	223.705	-37.522265	2064.4099	4181.5883	0	361.98
25	31510	230.305	-36.803405	2012.6964	4090.2204	0	354.44
26	31510	237.175	-36.05513	1965.0886	3992.4001	0	346.58
27	31510	245.305	-35.16962	1911.5912	3875.4823	0	337.28
28	31510	253.02175	-34.329125	1860.6005	3764.6277	0	328.46
29	31510	259.76805	-33.594325	1813.1139	3662.7944	0	322.68
30	31510	267.21715	-32.782975	1760.6663	3544.1533	0	309.32
31	31510	274.6663	-31.971625	1708.2186	3425.1118	0	295.96
32	31510	282.11545	-31.160275	1655.771	3305.8034	0	282.6
33	31510	289.12	-30.397345	1606.3534	3193.3093	0	272.17
34	31510	292.58405	-30.020045	1581.9095	3131.3041	0	268.21
35	31510	293.98405	-29.86756	1572.0279	3061.8898	0	266.61
36	31510	298.7125	-29.352545	1538.5166	2829.1045	0	261.2
37	31510	305.7375	-28.58739	1488.5629	2483.2496	0	253.17
38	31510	314.125	-27.673835	1428.9847	2254.5636	0	243.58
39	31510	324.285	-23.822075	1185.4943	1930.6439	0	203.13
40	31510	330.415	-19.97034	929.49291	1507.019	0	162.69
41	31510	335.58835	-16.719695	712.59219	1120.3271	0	128.56
42	31510	341.73835	-12.855395	471.46329	682.30402	0	100
43	31510	344.79	-10.93793	351.80363	470.65481	0	100
44	31510	346.8592	-9.6377695	270.67822	330.17759	0	100

Slices of Slip Surface: 31576

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)

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1	31576	100.85572	-1.45263	777.04891	942.86753	0	600
2	31576	104.08	-5.393941	1022.9684	1620.1761	344.79799	0
3	31576	105.3952	-7.001579	1119.3217	1802.7552	394.58053	0
4	31576	107.37855	-9.4259615	1250.6982	2079.0149	478.22887	0
5	31576	109.06335	-11.485445	1362.3155	2619.9988	0	182.64
6	31576	110.1402	-12.80181	1433.6386	2732.2367	0	183.3
7	31576	114.4152	-18.027495	1716.8269	3327.1868	0	251.96
8	31576	120.9598	-26.027495	2150.3397	4160.785	0	339.38
9	31576	125.84575	-32	2473.8916	4749.8332	0	392.96
10	31576	127.57595	-34.114965	2588.5676	5066.5867	0	357.75
11	31576	127.69	-34.254375	2596.0704	5282.3701	0	359.1
12	31576	130.86825	-38.13941	2806.6184	5327.9437	0	396.85
13	31576	134.78825	-42.93115	3066.3102	5698.471	0	443.61
14	31576	136.775	-45.35972	3197.9862	5873.1402	0	467.39
15	31576	142	-46.421465	3211.7553	6231.8938	0	475.33
16	31576	150	-45.550115	3077.0519	5884.8214	0	461.77
17	31576	156.91	-44.79749	2960.669	5584.6694	0	449.99
18	31576	163.61	-44.067735	2847.9327	5270.6756	0	438.52
19	31576	172.22	-43.129945	2702.9976	4971.9439	0	423.69
20	31576	178.855	-42.40727	2591.2866	4829.5644	0	413.28
21	31576	181.6321	-42.10479	2544.5047	4786.5165	0	410.1
22	31576	187.02065	-41.517875	2453.8318	4703.5144	0	403.94
23	31576	195.87355	-40.55363	2304.8186	4575.1633	0	393.81
24	31576	203.67335	-39.70409	2207.3016	4464.9968	0	384.89
25	31576	210.42	-38.96925	2161.1811	4367.1565	0	377.18
26	31576	217.16665	-38.23441	2115.0605	4270.7896	0	369.46
27	31576	223.705	-37.522265	2064.4099	4180.3319	0	361.98
28	31576	230.305	-36.803405	2012.6964	4088.9181	0	354.44
29	31576	237.175	-36.05513	1965.0886	3991.2425	0	346.58
30	31576	245.305	-35.16962	1911.5912	3874.3177	0	337.28
31	31576	253.02175	-34.329125	1860.6005	3763.4762	0	328.46
32	31576	259.76805	-33.594325	1813.1139	3661.7268	0	322.68
33	31576	267.21715	-32.782975	1760.6663	3543.0857	0	309.32
34	31576	274.6663	-31.971625	1708.2186	3424.0442	0	295.96

35	31576	282.11545	-31.160275	1655.771	3304.7358	0	282.6
36	31576	289.12	-30.397345	1606.3534	3192.4001	0	272.17
37	31576	292.58405	-30.020045	1581.9095	3130.2239	0	268.21
38	31576	293.98405	-29.86756	1572.0279	3060.9496	0	266.61
39	31576	298.7125	-29.352545	1538.5166	2828.2554	0	261.2
40	31576	305.7375	-28.58739	1488.5629	2482.542	0	253.17
41	31576	314.125	-27.673835	1428.9847	2253.7479	0	243.58
42	31576	324.285	-21.85786	1062.9345	1766.8301	0	182.51
43	31576	330.415	-15.72786	664.72219	1090.618	0	118.14
44	31576	331.29425	-14.8486	595.8332	976.94272	0	108.91
45	31576	331.7357	-14.40717	568.29046	926.41235	0	104.28
46	31576	334.6429	-11.5	386.88639	612.28375	0	100
47	31576	338.02355	-8.1193035	175.92632	261.27004	0	100

Slices of Slip Surface: 31509

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31509	103.1888	0.310325	667.04032	730.58046	0	600
2	31509	105.3952	-2.679195	849.58039	1115.9946	0	600
3	31509	106.1842	-3.7482785	908.38155	1250.3534	0	600
4	31509	109.17805	-7.804784	1131.4755	1914.7222	452.20766	0
5	31509	112.7642	-12.663835	1398.6875	2772.6861	0	184.91
6	31509	115.73015	-16.682585	1619.6425	3213.0409	0	238.53
7	31509	121.63445	-24.682585	2059.607	3996.9525	0	325.61
8	31509	126.63445	-31.457345	2432.1885	4648.6719	0	386.75
9	31509	128.1105	-33.457345	2542.1681	4862.8203	0	406.79
10	31509	131.46315	-38	2791.9543	5248.5926	0	395.06
11	31509	134.98265	-42.768755	3054.2057	5629.267	0	441.83
12	31509	136.775	-45.197325	3187.7238	5802.9564	0	465.73
13	31509	142	-46.421465	3211.7553	6234.3791	0	475.33
14	31509	150	-45.550115	3077.0519	5887.3067	0	461.77
15	31509	156.91	-44.79749	2960.669	5587.0607	0	449.99
16	31509	163.61	-44.067735	2847.9327	5272.9051	0	438.52
17	31509	172.22	-	2702.9976	4974.0064	0	423.69

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			43.129945				
18	31509	178.855	-42.40727	2591.2866	4832.3031	0	413.28
19	31509	181.6321	-42.10479	2544.5047	4790.288	0	410.1
20	31509	187.02065	-41.517875	2453.8318	4705.5357	0	403.94
21	31509	195.87355	-40.55363	2304.8186	4577.1845	0	393.81
22	31509	205.36	-39.52038	2195.7102	4440.8316	0	382.96
23	31509	215.48	-38.41812	2126.6522	4296.3305	0	371.39
24	31509	223.705	-37.522265	2064.4099	4181.5883	0	361.98
25	31509	230.305	-36.803405	2012.6964	4090.3651	0	354.44
26	31509	237.175	-36.05513	1965.0886	3992.5448	0	346.58
27	31509	245.305	-35.16962	1911.5912	3875.5882	0	337.28
28	31509	253.02175	-34.329125	1860.6005	3764.6277	0	328.46
29	31509	259.76805	-33.594325	1813.1139	3662.9279	0	322.68
30	31509	267.21715	-32.782975	1760.6663	3544.1533	0	309.32
31	31509	274.6663	-31.971625	1708.2186	3425.1118	0	295.96
32	31509	282.11545	-31.160275	1655.771	3305.8034	0	282.6
33	31509	289.12	-30.397345	1606.3534	3193.4609	0	272.17
34	31509	292.58405	-30.020045	1581.9095	3131.3041	0	268.21
35	31509	293.98405	-29.86756	1572.0279	3061.9716	0	266.61
36	31509	298.7125	-29.352545	1538.5166	2829.1045	0	261.2
37	31509	305.7375	-28.58739	1488.5629	2483.3911	0	253.17
38	31509	314.125	-27.673835	1428.9847	2254.5636	0	243.58
39	31509	324.285	-24.597735	1233.9102	1991.3381	0	211.28
40	31509	330.415	-21.64568	1034.0353	1664.7137	0	180.28
41	31509	337.41	-18.277065	809.77324	1257.6939	0	144.91
42	31509	344.79	-14.723045	588.01038	844.49351	0	107.59
43	31509	350.7065	-11.873814	410.20914	536.84288	0	100

Slices of Slip Surface: 31638

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31638	97.47796	-2.0778915	816.05368	1006.5383	0	600
2	31638	102.2244	-7.3229865	1143.3582	1821.1684	391.3339	0

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3	31638	105.3445	-10.770865	1355.0758	2225.3473	502.45149	0
4	31638	106.9778	-12.57577	1451.2646	2628.582	0	181.36
5	31638	108.7133	-14.49362	1553.492	2861.9883	0	211.88
6	31638	113.435	-19.711365	1831.7399	3476.4682	0	269.13
7	31638	120.22775	-27.217745	2231.9483	4300.6646	0	351.49
8	31638	124.55535	-32	2486.9042	4781.7666	0	393.8
9	31638	127.0376	-34.74304	2633.1821	5114.1861	0	364.51
10	31638	130.6573	-38.74304	2846.4143	5428.2894	0	403.16
11	31638	134.5773	-43.074875	3077.3752	5753.8245	0	445.21
12	31638	136.775	-45.503445	3206.7433	5925.7243	0	468.87
13	31638	142	-46.421465	3211.7553	6231.7695	0	475.33
14	31638	150	-45.550115	3077.0519	5884.8214	0	461.77
15	31638	156.91	-44.79749	2960.669	5584.6694	0	449.99
16	31638	163.61	-44.067735	2847.9327	5270.6756	0	438.52
17	31638	172.22	-43.129945	2702.9976	4971.8408	0	423.69
18	31638	178.855	-42.40727	2591.2866	4829.8383	0	413.28
19	31638	181.6321	-42.10479	2544.5047	4786.9815	0	410.1
20	31638	187.02065	-41.517875	2453.8318	4703.4021	0	403.94
21	31638	195.87355	-40.55363	2304.8186	4575.1633	0	393.81
22	31638	205.36	-39.52038	2195.7102	4439.1617	0	382.96
23	31638	215.48	-38.41812	2126.6522	4294.7588	0	371.39
24	31638	223.705	-37.522265	2064.4099	4180.1748	0	361.98
25	31638	230.305	-36.803405	2012.6964	4088.7734	0	354.44
26	31638	237.175	-36.05513	1965.0886	3991.0978	0	346.58
27	31638	245.305	-35.16962	1911.5912	3874.2119	0	337.28
28	31638	253.02175	-34.329125	1860.6005	3763.3117	0	328.46
29	31638	259.76805	-33.594325	1813.1139	3661.5933	0	322.68
30	31638	267.21715	-32.782975	1760.6663	3542.9522	0	309.32
31	31638	274.6663	-31.971625	1708.2186	3423.9107	0	295.96
32	31638	282.11545	-31.160275	1655.771	3304.6023	0	282.6
33	31638	289.12	-30.397345	1606.3534	3192.2485	0	272.17
34	31638	292.58405	-30.020045	1581.9095	3130.2239	0	268.21

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35	31638	293.98405	-29.86756	1572.0279	3060.827	0	266.61
36	31638	298.7125	-29.352545	1538.5166	2828.1139	0	261.2
37	31638	305.7375	-28.58739	1488.5629	2482.4005	0	253.17
38	31638	314.125	-27.673835	1428.9847	2253.646	0	243.58
39	31638	324.285	-23.822075	1185.4943	1927.7601	0	203.13
40	31638	330.415	-19.97034	929.49291	1504.7144	0	162.69
41	31638	335.58835	-16.719695	712.59219	1118.4687	0	128.56
42	31638	341.73835	-12.855395	471.46329	681.11874	0	100
43	31638	344.79	-10.93793	351.80363	469.7599	0	100
44	31638	346.8592	-9.6377695	270.67822	329.55202	0	100

Slices of Slip Surface: 31518

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31518	103.1888	0.310325	667.04032	725.81003	0	600
2	31518	105.3952	-2.679195	849.58039	1117.4972	0	600
3	31518	106.1842	-3.7482785	908.38155	1250.9565	0	600
4	31518	109.17805	-7.804784	1131.4755	1907.4136	447.98808	0
5	31518	112.7642	-12.663835	1398.6875	2758.4147	0	184.91
6	31518	115.73015	-16.682585	1619.6425	3194.595	0	238.53
7	31518	121.63445	-24.682585	2059.607	3972.818	0	325.61
8	31518	126.63445	-31.457345	2432.1885	4622.4472	0	386.75
9	31518	128.1105	-33.457345	2542.1681	4840.135	0	406.79
10	31518	131.46315	-38	2791.9543	5216.9115	0	395.06
11	31518	134.98265	-42.768755	3054.2057	5599.4382	0	441.83
12	31518	136.775	-45.197325	3187.7238	5769.2662	0	465.73
13	31518	142	-46.56669	3220.7701	6241.9408	0	476.83
14	31518	150	-45.98579	3104.202	5926.0225	0	466.28
15	31518	156.91	-45.48404	3003.6041	5653.1575	0	457.13
16	31518	163.61	-44.99754	2905.9375	5364.8988	0	448.21
17	31518	172.22	-44.372345	2780.5425	5099.4374	0	436.7
18	31518	178.855	-43.89056	2683.8431	4984.9473	0	428.85
19	31518	185.5775	-43.402425	2585.8562	4903.7476	0	423.73
20	31518	195.3925	-42.689735	2442.8806	4798.1671	0	416.24

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21	31518	202.59565	-42.166695	2360.8678	4725.6458	0	410.75
22	31518	208.8035	-41.715925	2332.584	4656.3725	0	406.02
23	31518	216.62785	-41.14778	2296.8922	4574.7913	0	400.05
24	31518	223.705	-40.63389	2258.5086	4503.782	0	394.66
25	31518	230.305	-40.154645	2221.9522	4437.9521	0	389.62
26	31518	237.175	-39.6558	2189.8678	4366.6696	0	384.39
27	31518	245.305	-39.065465	2154.7105	4281.0611	0	378.19
28	31518	254.48	-38.399245	2114.1882	4184.8526	0	371.19
29	31518	263.44	-37.748635	2071.4436	4092.2393	0	364.36
30	31518	272.4	-37.098025	2028.699	3999.7373	0	357.53
31	31518	281.36	-36.44742	1985.8431	3907.2353	0	350.7
32	31518	289.12	-35.88395	1948.6805	3827.1192	0	344.78
33	31518	293.8	-35.54412	1926.2855	3729.1104	0	341.21
34	31518	298.7125	-35.18741	1902.6063	3504.2257	0	337.47
35	31518	305.7375	-34.67731	1868.5323	3182.3685	0	332.11
36	31518	312.1576	-34.21113	1837.5694	2998.1847	0	327.22
37	31518	317.0326	-33.857145	1813.9271	2955.7871	0	308.5
38	31518	321.95565	-31.857145	1687.6467	2821.6731	0	287.5
39	31518	327.24065	-28.536355	1478.7485	2429.8062	0	252.63
40	31518	330.415	-26.541765	1339.5279	2200.7819	0	231.69
41	31518	337.41	-22.146515	1051.2461	1681.4017	0	185.54
42	31518	344.79	-17.50935	761.87978	1149.7552	0	136.85
43	31518	348.19755	-15.368245	628.25218	912.32077	0	114.37
44	31518	353.7701	-11.866778	409.76917	539.53356	0	100

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CG Case.EE

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 215
Last Edited By: Cox, Lane MVK
Date: 4/20/2011
Time: 11:09:12 AM
File Name: 5c(2) Typical 1.2nd SC.80%SG.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\2nd Stage Constuction\80%SG,1 Layer of Fabric\Slope W\
Last Solved Date: 4/20/2011
Last Solved Time: 11:15:58 AM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

CG Case.EE

Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

SlipSurface
- Direction of movement: Left to Right
- Use Passive Mode: No
- Slip Surface Option: Entry and Exit
- Critical slip surfaces saved: 100
- Optimize Critical Slip Surface Location: Yes
- Tension Crack
  - Tension Crack Option: Tension Crack Line
  - Percentage Wet: 1
  - Tension Crack Fluid Unit Weight: 62.4 pcf

FOS Distribution
- FOS Calculation Option: Constant

Advanced
- Number of Slices: 30
- Optimization Tolerance: 0.01
- Minimum Slip Surface Depth: 0.1 ft
- Optimization Maximum Iterations: 2000
- Optimization Convergence Tolerance: 1e-007
- Starting Optimization Points: 8
- Ending Optimization Points: 16
- Complete Passes per Insertion: 1
- Driving Side Maximum Convex Angle: 5 °
- Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH

Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH above 0

Model: Mohr-Coulomb
Unit Weight: 102 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH, 0 to -9

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -9 (2)
Cohesion Spatial Fn: CH, 0 to -9
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH, -9 to -14

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -9 to -14 (2)
Cohesion Spatial Fn: CH, -9 to -14

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Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -14 to -30
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -14 to -30 (2)
Cohesion Spatial Fn: CH, -14 to -30
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -30 to -34
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -30 to -34 (2)
Cohesion Spatial Fn: CH, 30 to -34
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sand Fill
Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -34 to -42
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -34 to -42 (2)
Cohesion Spatial Fn: CH, -34 to -42
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -42 to -80
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -42 to -80 (2)
Cohesion Spatial Fn: CH, -42 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

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CH, 0 to -9 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -9 (2)
Cohesion Spatial Fn: CH, 0 to -9 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -9 to -14 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -9 to -14 (2)
Cohesion Spatial Fn: CH, -9 to -14 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -14 to -30 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -14 to -30 (2)
Cohesion Spatial Fn: CH, -14 to -30 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -30 to -34 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -30 to -34 (2)
Cohesion Spatial Fn: CH, 30 to -34 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Entry and Exit
Left Projection: Range
Left-Zone Left Coordinate: (-0.96651, 5.4044) ft
Left-Zone Right Coordinate: (51.01023, 6.58679) ft
Left-Zone Increment: 30
Right Projection: Range
Right-Zone Left Coordinate: (324, -4.81985) ft
Right-Zone Right Coordinate: (401.06713, -11.00282) ft
Right-Zone Increment: 30
Radius Increments: 30

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Slip Surface Limits

Left Coordinate: (-200, -2.13) ft
Right Coordinate: (500, -4.5) ft

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	14
	117.71	14
	200.3	-4.33
	220.54	-4.34
	226.87	-4.54
	240.61	-4.57
	250	-4.5
	285.84	-4.64
	295.2	-4.68
	329.57	-4.85
	331.26	-5.3
	447.66	-5.3
	450.06	-4.54
	500	-4.5

Reinforcements

Reinforcement 1

Type: Fabric
Outside Point: (209, 0) ft
Inside Point: (22, 0) ft
Slip Surface Intersection: (22.201, 0) ft
Total Length: 187 ft
Reinforcement Direction: 0 °
Applied Load Option: Variable
F of S Dependent: No
Contact Cohesion: 265 psf
Contact Phi: 19 °
Interface Factor: 2
Bond Safety Factor: 1
Fabric Capacity: 27000 lbs
Fabric Safety Factor: 1
Fabric Load: 27000 lbs
Load Distribution: Even along reinf.

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Load Orientation: 0
Applied Load: 27000 lbs
Fabric Load Used: 166.62 lbs
Resisting Force Used: 830.64 lbs/ft
Available Bond Length: 0.20059 ft
Required Bond Length: 0.20059 ft
Governing Component: Bond

Tension Crack Line

	X (ft)	Y (ft)
	-1	5.40517
	8	5.2
	22	0.1
	96	0.1
	118	11
	127	11
	166	2
	167.4	4

Spatial Functions

CH, 0 to -9

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -2.5, 50)
Data Point: (-300, -9, 75)
Data Point: (-33.33, 0, 50)
Data Point: (-33.33, -9, 75)
Data Point: (0, 0, 300)
Data Point: (0, -9, 300)
Data Point: (285.84, -4.62, 100)
Data Point: (285.84, -9, 100)
Data Point: (500, 0, 100)
Data Point: (500, -9, 100)

CH, -34 to -42 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -38, 105)
Data Point: (0, -38, 116)
Data Point: (177.04, -38, 106)

CH, -42 to -80 (2)

Model: Linear Interpolation

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Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -61, 105)
Data Point: (0, -61, 105)
Data Point: (177.04, -61, 106)

CH, 0 to -9 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, 0, 300)
Data Point: (0, -9, 300)
Data Point: (46, 0, 148)
Data Point: (46, -9, 148)
Data Point: (122.71, 0, 198)
Data Point: (122.71, -9, 198)
Data Point: (285.84, 0, 100)
Data Point: (285.84, -9, 100)

CH, -9 to -14 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -9, 300)
Data Point: (0, -14, 300)
Data Point: (46, -9, 144)
Data Point: (46, -14, 144)
Data Point: (122.71, -9, 191)
Data Point: (122.71, -14, 191)
Data Point: (285.84, -9, 100)
Data Point: (285.84, -14, 100)

CH, -14 to -30 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -14, 300)
Data Point: (0, -30, 375)
Data Point: (46, -14, 174)
Data Point: (46, -30, 342)
Data Point: (122.71, -14, 214)
Data Point: (122.71, -30, 382)
Data Point: (285.84, -14, 100)
Data Point: (285.84, -30, 268)

CH, 30 to -34 SG

Model: Linear Interpolation
Limit Range By: Data Values

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Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -30, 400)
Data Point: (0, -34, 438)
Data Point: (46, -30, 341)
Data Point: (46, -34, 383)
Data Point: (122.71, -30, 374)
Data Point: (122.71, -34, 416)
Data Point: (285.84, -30, 268)
Data Point: (285.84, -34, 310)

CH, -9 to -14

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -9, 75)
Data Point: (-300, -14, 115)
Data Point: (-33.33, -9, 75)
Data Point: (-33.33, -14, 115)
Data Point: (0, -9, 300)
Data Point: (0, -14, 300)
Data Point: (285.84, -9, 100)
Data Point: (285.84, -14, 100)
Data Point: (500, -9, 100)
Data Point: (500, -14, 100)

CH, -14 to -30

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -14, 115)
Data Point: (-300, -30, 291)
Data Point: (-33.33, -14, 115)
Data Point: (-33.33, -30, 291)
Data Point: (0, -14, 300)
Data Point: (0, -30, 375)
Data Point: (285.84, -14, 100)
Data Point: (285.84, -30, 268)
Data Point: (500, -14, 100)
Data Point: (500, -30, 268)

CH, 30 to -34

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -30, 291)
Data Point: (-300, -34, 335)
Data Point: (-33.33, -30, 291)
Data Point: (-33.33, -34, 335)

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Data Point: (0, -30, 400)
Data Point: (0, -34, 438)
Data Point: (285.84, -30, 268)
Data Point: (285.84, -34, 310)
Data Point: (500, -30, 268)
Data Point: (500, -34, 310)

CH, 0 to -9 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -4.5, 90)
Data Point: (0, -4.5, 96)
Data Point: (177.04, -4.54, 87)

CH, -9 to -14 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -11.5, 90)
Data Point: (0, -11.5, 97)
Data Point: (177.04, -11.5, 100)

CH, -14 to -30 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -22, 100)
Data Point: (0, -22, 102)
Data Point: (177.04, -22, 100)

CH, -30 to -34 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -32, 122)
Data Point: (0, -32, 113)
Data Point: (177.04, -32, 118)

CH, -34 to -42

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -34, 335)
Data Point: (-300, -42, 423)
Data Point: (-33.33, -34, 335)
Data Point: (-33.33, -42, 423)
Data Point: (0, -34, 438)
Data Point: (0, -42, 514)

Data Point: (177.04, -34, 325)
Data Point: (177.04, -42, 409)
Data Point: (500, -34, 325)
Data Point: (500, -42, 409)

CH, -42 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -42, 423)
Data Point: (-300, -80, 841)
Data Point: (-33.33, -42, 423)
Data Point: (-33.33, -80, 841)
Data Point: (0, -42, 514)
Data Point: (0, -80, 875)
Data Point: (177.04, -42, 409)
Data Point: (177.04, -80, 808)
Data Point: (500, -42, 409)
Data Point: (500, -80, 808)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -42 to -80	1,3,4,2	26600
Region 2	CH, -34 to -42	3,5,69,73,6,4	5600
Region 3	CH above 0	45,21,22,63,64,27,44,65	161.91095
Region 4	Sand Fill	29,30,43,31,32,33,42,34,35,62	606.7023
Region 5	CH, 0 to -9	56,53,54,41,12	267.3158
Region 6	EMBANKMENT FILL CH	59,46,47,60,37,36,35,62	1502.7397
Region 7	EMBANKMENT FILL CH	64,27,44,57,28,62,59	499.34315
Region 8	EMBANKMENT FILL CH	60,61,76,75,40,39,58,38,37	772.15003
Region 9	CH, 0 to -9	16,11,66,65,45,20,19,18,17,15,14,74	1498.6738
Region 10	CH, -9 to -14	11,9,67,66	1000
Region 11	CH, -14 to -30	9,7,68,67	3200
Region 12	CH, -30 to -34	7,5,69,68	800
Region 13	CH, -30 to -34	6,8,72,73	856.64
Region 14	CH, -14 to -30	8,10,71,72	3426.56
Region 15	CH, -9 to -14	10,71,70,55,50,51,52,56,12	954.73385
Region 16	CH, 0 to -9	55,49,48,76,75,70	220.0602
Region 17	CH, -30 to -34 SG	69,68,72,73	1143.36
Region 18	CH, -14 to -30 SG	68,67,71,72	4573.44
Region 19	CH, -9 to -14 SG	67,66,43,31,32,33,42,70,71	1313.1338
Region 20	CH, 0 to -9 SG	66,65,44,57,28,62,29,30,43	438.1553
Region 21	CH, 0 to -9 SG	42,34,35,36,37,38,58,39,40,75,70	538.2795

Points

	X (ft)	Y (ft)

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Point 1	-200	-80
Point 2	500	-80
Point 3	-200	-42
Point 4	500	-42
Point 5	-200	-34
Point 6	500	-34
Point 7	-200	-30
Point 8	500	-30
Point 9	-200	-14
Point 10	500	-14
Point 11	-200	-9
Point 12	500	-9
Point 13	-191.42	-2.12
Point 14	-156.88	-2.03
Point 15	-119.75	-2.26
Point 16	-200	-2.13
Point 17	-92.12	-1.99
Point 18	-71.42	-1.72
Point 19	-45.06	-0.68
Point 20	-33.33	-0.27
Point 21	-19.05	1.53
Point 22	-16.9	1.81
Point 23	-6.83	6.48
Point 24	-6.79	6.72
Point 25	-0.92	7.16
Point 26	3.42	6.91
Point 27	20.53	0.36
Point 28	38.18	-3.47
Point 29	56.55	-4.85
Point 30	70.54	-8.43
Point 31	109.16	-11.38
Point 32	127.67	-11.01
Point 33	135.55	-10.86
Point 34	159.82	-8.55
Point 35	177.04	-4.54
Point 36	180.67	-4.21
Point 37	200.3	-4.33
Point 38	220.54	-4.34
Point 39	240.61	-4.57
Point 40	250	-4.5
Point 41	500	-4.5
Point 42	154	-9
Point 43	73	-9
Point 44	22	0
Point 45	-32	0
Point 46	117.71	14
Point 47	127.71	14
Point 48	329.57	-4.85

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Point 49	343.56	-8.43
Point 50	382.18	-11.38
Point 51	400.69	-11.01
Point 52	408.57	-10.86
Point 53	432.84	-8.55
Point 54	450.06	-4.54
Point 55	346.02	-9
Point 56	427.02	-9
Point 57	35.99	-3
Point 58	226.87	-4.54
Point 59	94.84	8
Point 60	167.4	4
Point 61	292.4	0.875
Point 62	46	-4.06
Point 63	-5.16	5.5
Point 64	8	5.2
Point 65	0	0
Point 66	0	-9
Point 67	0	-14
Point 68	0	-30
Point 69	0	-34
Point 70	285.84	-9
Point 71	285.84	-14
Point 72	285.84	-30
Point 73	285.84	-34
Point 74	-194	-2
Point 75	285.84	-4.64
Point 76	309.25	-4.74

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	1.33	(200.376, 371.468)	122.3251	(21.9652, 5.65028)	(346.034, -9.0009)
2	7137	1.49	(200.376, 371.468)	412.164	(20.3326, 5.59764)	(357.115, -9.73025)
3	7106	1.49	(198.898, 368.694)	409.021	(20.3508, 5.59823)	(354.532, -9.56022)
4	7168	1.49	(201.854, 374.242)	415.307	(20.3148, 5.59707)	(359.698, -9.90027)
5	7075	1.49	(197.42, 365.92)	405.878	(20.3694, 5.59883)	(351.948, -9.3902)
6	7199	1.49	(203.333, 377.016)	418.45	(20.2974, 5.59651)	(362.281, -10.0703)
7	7044	1.49	(195.942, 363.146)	402.735	(20.3883, 5.59944)	(349.365, -9.22017)
8	7230	1.50	(204.811, 379.79)	421.593	(20.2803, 5.59596)	(364.865, -10.2403)
9	7013	1.50	(194.463, 360.372)	399.592	(20.4077, 5.60006)	(346.782, -9.05014)
10	7261	1.50	(206.289, 382.564)	424.736	(20.2635, 5.59542)	(367.448, -10.4103)
11	7260	1.50	(209.079, 445.829)	482.944	(23.1748, 5.68928)	(367.448, -10.4103)
12	7229	1.50	(207.571, 442.587)	479.368	(23.1816, 5.6895)	(364.865, -10.2403)
13	7291	1.50	(210.588, 449.071)	486.52	(23.168, 5.68907)	(370.031, -10.5804)
14	7198	1.50	(206.062, 439.345)	475.793	(23.1885, 5.68973)	(362.281, -10.0703)
15	6982	1.50	(192.677, 357.441)	396.168	(20.478, 5.60233)	(344.242, -8.58797)
16	7322	1.50	(212.097, 452.313)	490.095	(23.1614, 5.68885)	(372.614, -10.7504)

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17	7292	1.50	(207.768, 385.338)	427.879	(20.2471, 5.59489)	(370.031, -10.5804)
18	7167	1.50	(204.553, 436.103)	472.217	(23.1956, 5.68996)	(359.698, -9.90027)
19	7353	1.50	(213.606, 455.555)	493.671	(23.1549, 5.68864)	(375.198, -10.9204)
20	8098	1.50	(201.31, 369.78)	410.248	(23.4332, 5.69762)	(357.115, -9.73025)
21	8129	1.50	(202.788, 372.554)	413.391	(23.4277, 5.69744)	(359.698, -9.90027)
22	8067	1.50	(199.831, 367.006)	407.105	(23.4388, 5.6978)	(354.532, -9.56022)
23	8160	1.50	(204.266, 375.329)	416.535	(23.4222, 5.69726)	(362.281, -10.0703)
24	7323	1.50	(209.246, 388.112)	431.023	(20.231, 5.59437)	(372.614, -10.7504)
25	8036	1.50	(198.353, 364.232)	403.962	(23.4446, 5.69798)	(351.948, -9.3902)
26	7136	1.50	(203.044, 432.862)	468.642	(23.2028, 5.69019)	(357.115, -9.73025)
27	8191	1.50	(205.745, 378.103)	419.678	(23.4169, 5.69709)	(364.865, -10.2403)
28	7384	1.50	(215.115, 458.797)	497.246	(23.1485, 5.68844)	(377.781, -11.0905)
29	8005	1.51	(196.875, 361.458)	400.819	(23.4504, 5.69817)	(349.365, -9.22017)
30	8222	1.51	(207.223, 380.877)	422.821	(23.4116, 5.69692)	(367.448, -10.4103)
31	6951	1.51	(190.721, 354.428)	392.594	(20.58, 5.60562)	(341.73, -7.9617)
32	7354	1.51	(210.725, 390.886)	434.166	(20.2153, 5.59386)	(375.198, -10.9204)
33	7415	1.51	(216.624, 462.039)	500.822	(23.1422, 5.68823)	(380.364, -11.2605)
34	7974	1.51	(195.397, 358.684)	397.676	(23.4563, 5.69836)	(346.782, -9.05014)
35	7105	1.51	(201.535, 429.62)	465.067	(23.2101, 5.69042)	(354.532, -9.56022)
36	8253	1.51	(208.701, 383.651)	425.964	(23.4064, 5.69675)	(370.031, -10.5804)
37	8037	1.51	(196.315, 317.384)	361.944	(22.1489, 5.65621)	(351.948, -9.3902)
38	7385	1.51	(212.203, 393.66)	437.309	(20.1998, 5.59336)	(377.781, -11.0905)
39	8068	1.51	(197.77, 319.794)	364.759	(22.1444, 5.65606)	(354.532, -9.56022)
40	8006	1.51	(194.861, 314.975)	359.129	(22.1534, 5.65635)	(349.365, -9.22017)
41	7446	1.51	(218.047, 465.226)	504.313	(23.1398, 5.68816)	(382.949, -11.3646)
42	8099	1.51	(199.224, 322.204)	367.573	(22.14, 5.65592)	(357.115, -9.73025)
43	8284	1.51	(210.18, 386.425)	429.107	(23.4013, 5.69659)	(372.614, -10.7504)
44	7975	1.51	(193.406, 312.565)	356.315	(22.1581, 5.6565)	(346.782, -9.05014)
45	6268	1.51	(206.626, 444.561)	481.543	(17.0752, 5.49261)	(364.865, -10.2403)
46	8130	1.51	(200.679, 324.614)	370.388	(22.1357, 5.65578)	(359.698, -9.90027)
47	6299	1.51	(208.135, 447.803)	485.118	(17.0519, 5.49186)	(367.448, -10.4103)
48	6237	1.51	(205.117, 441.319)	477.967	(17.0991, 5.49339)	(362.281, -10.0703)
49	6330	1.51	(209.644, 451.044)	488.694	(17.0292, 5.49113)	(370.031, -10.5804)
50	8161	1.51	(202.133, 327.024)	373.203	(22.1314, 5.65564)	(362.281, -10.0703)
51	7416	1.51	(213.681, 396.434)	440.452	(20.1846, 5.59287)	(380.364, -11.2605)
52	7943	1.51	(193.61, 355.754)	394.252	(23.4766, 5.69902)	(344.242, -8.58797)
53	6920	1.51	(188.752, 351.408)	389.008	(20.6891, 5.60914)	(339.222, -7.3199)
54	8315	1.51	(211.658, 389.199)	432.251	(23.3963, 5.69643)	(375.198, -10.9204)
55	6206	1.51	(203.609, 438.077)	474.392	(17.1236, 5.49417)	(359.698, -9.90027)
56	6361	1.51	(211.153, 454.286)	492.269	(17.0069, 5.49041)	(372.614, -10.7504)
57	7944	1.51	(191.685, 310.028)	353.256	(22.1735, 5.657)	(344.242, -8.58797)
58	7074	1.51	(200.026, 426.378)	461.491	(23.2175, 5.69066)	(351.948, -9.3902)
59	7477	1.51	(219.266, 468.285)	507.602	(23.1465, 5.68837)	(385.537, -11.3129)
60	8192	1.51	(203.588, 329.434)	376.017	(22.1272, 5.65551)	(364.865, -10.2403)
61	6392	1.52	(212.662, 457.528)	495.845	(16.9852, 5.48971)	(375.198, -10.9204)
62	6175	1.52	(202.1, 434.835)	470.816	(17.1487, 5.49498)	(357.115, -9.73025)
63	8346	1.52	(213.137, 391.973)	435.394	(23.3913, 5.69627)	(377.781, -11.0905)
64	8223	1.52	(205.042, 331.844)	378.832	(22.123, 5.65537)	(367.448, -10.4103)

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65	7447	1.52	(215.086, 399.164)	443.522	(20.1791, 5.59269)	(382.949, -11.3646)
66	7913	1.52	(189.818, 307.425)	350.066	(22.1952, 5.6577)	(341.73, -7.9617)
67	6423	1.52	(214.171, 460.77)	499.42	(16.9639, 5.48902)	(377.781, -11.0905)
68	7508	1.52	(220.485, 471.344)	510.892	(23.1531, 5.68858)	(388.125, -11.2612)
69	6144	1.52	(200.591, 431.593)	467.241	(17.1744, 5.49581)	(354.532, -9.56022)
70	8254	1.52	(206.497, 334.254)	381.647	(22.119, 5.65524)	(370.031, -10.5804)
71	8377	1.52	(214.615, 394.747)	438.537	(23.3865, 5.69611)	(380.364, -11.2605)
72	7478	1.52	(216.315, 401.791)	446.42	(20.1958, 5.59323)	(385.537, -11.3129)
73	7912	1.52	(191.653, 352.74)	390.677	(23.5055, 5.69995)	(341.73, -7.9617)
74	6454	1.52	(215.68, 464.012)	502.996	(16.9431, 5.48836)	(380.364, -11.2605)
75	7043	1.52	(198.517, 423.136)	457.916	(23.2251, 5.6909)	(349.365, -9.22017)
76	8285	1.52	(207.952, 336.664)	384.462	(22.115, 5.65511)	(372.614, -10.7504)
77	7539	1.52	(221.705, 474.403)	514.182	(23.1596, 5.68879)	(390.714, -11.2094)
78	7882	1.52	(187.939, 304.818)	346.867	(22.2179, 5.65843)	(339.222, -7.3199)
79	6889	1.52	(186.784, 348.39)	385.425	(20.803, 5.61281)	(336.714, -6.67811)
80	8408	1.52	(216.02, 397.477)	441.607	(23.3845, 5.69605)	(382.949, -11.3646)
81	6113	1.52	(199.082, 428.351)	463.666	(17.2007, 5.49666)	(351.948, -9.3902)
82	6485	1.52	(217.103, 467.2)	506.487	(16.938, 5.48819)	(382.949, -11.3646)
83	7509	1.53	(217.545, 404.417)	449.317	(20.2124, 5.59377)	(388.125, -11.2612)
84	8316	1.53	(209.406, 339.074)	387.277	(22.111, 5.65498)	(375.198, -10.9204)
85	9090	1.53	(203.722, 370.867)	411.476	(25.272, 5.7569)	(359.698, -9.90027)
86	7570	1.53	(222.924, 477.462)	517.472	(23.166, 5.689)	(393.302, -11.1577)
87	9121	1.53	(205.2, 373.641)	414.619	(25.2664, 5.75673)	(362.281, -10.0703)
88	9059	1.53	(202.243, 368.093)	408.333	(25.2776, 5.75709)	(357.115, -9.73025)
89	8439	1.53	(217.249, 400.103)	444.505	(23.3892, 5.6962)	(385.537, -11.3129)
90	6516	1.53	(218.322, 470.258)	509.776	(16.9688, 5.48918)	(385.537, -11.3129)
91	9029	1.53	(198.695, 318.33)	363.039	(23.9756, 5.7151)	(354.532, -9.56022)
92	9060	1.53	(200.149, 320.74)	365.854	(23.9711, 5.71496)	(357.115, -9.73025)
93	8998	1.53	(197.24, 315.92)	360.224	(23.9801, 5.71525)	(351.948, -9.3902)
94	9152	1.53	(206.678, 376.415)	417.762	(25.261, 5.75655)	(364.865, -10.2403)
95	9028	1.53	(200.765, 365.319)	405.19	(25.2833, 5.75727)	(354.532, -9.56022)
96	8347	1.53	(210.861, 341.484)	390.091	(22.1071, 5.65486)	(377.781, -11.0905)
97	8967	1.53	(195.786, 313.51)	357.409	(23.9848, 5.7154)	(349.365, -9.22017)
98	7540	1.53	(218.774, 407.043)	452.215	(20.2287, 5.59429)	(390.714, -11.2094)
99	9091	1.53	(201.604, 323.15)	368.668	(23.9667, 5.71482)	(359.698, -9.90027)
100	9183	1.53	(208.157, 379.189)	420.906	(25.2556, 5.75638)	(367.448, -10.4103)
101	7851	1.53	(186.062, 302.211)	343.669	(22.241, 5.65918)	(336.714, -6.67811)

Slices of Slip Surface: **Optimized**

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	28.68269	-3.1027323	1067.2131	1387.7932	0	205.22
2	Optimized	35.695115	-6.378308	1271.6115	1815.7097	0	182.05
3	Optimized	37.085	-6.661804	1289.2982	1850.4384	0	177.46
4	Optimized	42.09	-7.682677	1352.9609	1965.665	0	160.92
5	Optimized	47.274195	-8.740101	1418.9895	2081.6536	0	148.83
6	Optimized	52.549195	-9.816045	1486.0966	2203.4297	0	148.01
7	Optimized	63.396025	-12.02848	1624.1626	2492.3483	0	154.66

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8	Optimized	70.391025	-13.46759	1713.9648	2675.0574	0	158.94
9	Optimized	71.393775	-13.755155	1731.9473	2710.5093	0	159.56
10	Optimized	80.53026	-16.37528	1895.4189	2999.4551	0	216.95
11	Optimized	91.826485	-19.793695	2108.6875	3346.5556	0	258.73
12	Optimized	98.634	-22.15013	2255.7438	3636.9868	0	287.02
13	Optimized	105.794	-24.75891	2418.5537	3980.5074	0	318.15
14	Optimized	111.3362	-26.891945	2551.6697	4264.7192	0	343.43
15	Optimized	115.6112	-28.54518	2654.8399	4477.4333	0	363.02
16	Optimized	118.5323	-29.68043	2714.2602	4613.4489	0	376.47
17	Optimized	123.5323	-31.62363	2766.3144	4823.7035	0	390.51
18	Optimized	128.6784	-33.62363	2819.8098	5017.8611	0	408.17
19	Optimized	132.5984	-35.1471	2860.5981	5080.2971	0	365.12
20	Optimized	139.61405	-37.873655	2933.5941	5152.9977	0	388.74
21	Optimized	148.83905	-39.66636	2917.7085	5249.5908	0	401.59
22	Optimized	156.91	-39.99985	2826.6259	5029.9006	0	400.16
23	Optimized	163.61	-40.276695	2751.2144	4825.4339	0	399
24	Optimized	168.60745	-40.48319	2694.8829	4691.8618	0	398.15
25	Optimized	173.42745	-40.3401	2619.2012	4672.4361	0	393.75
26	Optimized	178.855	-40.05016	2525.93	4589.0488	0	388.53
27	Optimized	187.0844	-39.610545	2384.5181	4512.9462	0	383.91
28	Optimized	196.8994	-39.025745	2212.0798	4432.226	0	377.77
29	Optimized	205.19445	-38.43509	2128.0487	4346.991	0	371.57
30	Optimized	214.98335	-37.738065	2084.2324	4245.8057	0	364.25
31	Optimized	220.2089	-37.35876	2060.4233	4201.742	0	360.27
32	Optimized	223.705	-37.033625	2033.8775	4160.2469	0	356.85
33	Optimized	233.74	-36.100375	1968.4346	4036.0048	0	347.05
34	Optimized	243.68855	-35.175165	1911.1569	3909.4786	0	337.34
35	Optimized	248.38355	-34.763795	1887.7165	3844.5146	0	333.02
36	Optimized	254.1277	-34.319365	1859.7557	3781.4669	0	328.35
37	Optimized	262.3546	-33.682845	1817.9886	3686.9329	0	321.93
38	Optimized	273.9557	-32.89535	1766.0198	3552.7937	0	306.12
39	Optimized	283.6488	-32.299535	1726.4785	3451.0889	0	293.57
40	Optimized	289.12	-31.98624	1705.5902	3397.7877	0	288.86
41	Optimized	293.8	-31.71825	1687.5568	3302.554	0	286.04
42	Optimized	298.84695	-31.429245	1667.9695	3073.9586	0	283.01

43	Optimized	303.75905	-30.610205	1615.4088	2938.2784	0	274.41
44	Optimized	307.1371	-28.98089	1512.7017	2618.2563	0	257.3
45	Optimized	317.2425	-24.106775	1205.4255	2010.6202	0	206.12
46	Optimized	327.4025	-19.07928	888.57129	1479.8565	0	153.33
47	Optimized	330.415	-17.449695	772.19012	1283.9476	0	136.22
48	Optimized	334.0261	-15.4963	636.24201	1035.7495	0	115.71
49	Optimized	340.1761	-12.169505	428.65444	647.78376	0	100
50	Optimized	344.79	-9.6736495	272.91697	362.58544	0	100
51	Optimized	346.02685	-9.004594	231.16453	284.68401	0	100

Slices of Slip Surface: 7137

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7137	20.95925	0.4044117	848.34336	793.75056	0	600
2	7137	21.6913	0.0507059	870.41983	966.73415	0	600
3	7137	28.89335	-3.247674	1076.2415	1430.3332	0	204.53
4	7137	37.085	-6.9678295	1308.3741	1833.4511	0	177.46
5	7137	40.026575	-8.2201555	1386.5338	1964.9588	0	167.74
6	7137	43.936575	-9.84655	1488.0319	2135.8513	0	151
7	7137	50.226575	-12.34655	1644.0517	2401.5737	0	146.59
8	7137	55.501575	-14.39364	1771.7827	2614.1877	0	183.09
9	7137	63.545	-17.249565	1949.9792	2963.2996	0	217.27
10	7137	71.77	-20.115815	2128.8198	3322.6289	0	251.65
11	7137	78.46	-22.21066	2259.5163	3560.8158	0	277.14
12	7137	89.38	-25.428485	2460.3602	3920.6314	0	316.62
13	7137	100.96435	-28.477715	2650.5818	4338.1944	0	354.68
14	7137	108.12435	-30.23784	2760.4191	4632.8515	0	370.22
15	7137	113.435	-31.398255	2832.7971	4843.6966	0	384.69
16	7137	122.0471	-33.160415	2882.7877	5110.3552	0	406.9
17	7137	127.0471	-34.119855	2873.3824	5228.6296	0	358.13
18	7137	131.63	-34.90286	2858.7437	5203.4895	0	363.23
19	7137	140.1625	-36.24721	2824.4319	5099.6985	0	371.67
20	7137	149.3875	-37.503475	2775.1543	4957.4998	0	378.89
21	7137	156.91	-38.387155	2726.1211	4824.4911	0	383.41
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22	7137	163.61	39.035215	2673.7304	4668.6476	0	386.06
23	7137	172.22	-39.704725	2596.3056	4554.1686	0	387.82
24	7137	178.855	-40.12969	2530.8951	4541.4543	0	389.36
25	7137	185.5775	-40.40092	2454.7582	4553.4548	0	392.21
26	7137	195.3925	-40.636595	2333.5022	4561.2557	0	394.68
27	7137	205.36	-40.63475	2265.2494	4546.5055	0	394.66
28	7137	215.48	-40.387995	2249.5754	4504.6806	0	392.07
29	7137	223.705	-40.022995	2220.4469	4456.0355	0	388.24
30	7137	233.74	-39.28554	2167.1714	4364.9553	0	380.5
31	7137	245.305	-38.212625	2101.4582	4231.3931	0	369.23
32	7137	256.09205	-36.86649	2018.2142	4069.4445	0	355.1
33	7137	268.27615	-35.017625	1899.8731	3851.9606	0	335.69
34	7137	280.1041	-32.868985	1762.8993	3581.3035	0	301.85
35	7137	289.12	-31.01476	1644.9403	3334.3908	0	278.66
36	7137	293.03185	-30.145775	1589.6123	3196.265	0	269.53
37	7137	294.43185	-29.81996	1568.9108	3106.6411	0	266.11
38	7137	302.225	-27.848135	1443.5362	2607.9652	0	245.41
39	7137	314.33	-24.59475	1236.7376	2004.981	0	211.24
40	7137	324.49	-21.528815	1042.3637	1687.4354	0	179.05
41	7137	330.415	-19.64353	909.05824	1472.461	0	159.26
42	7137	337.41	-17.194225	742.20239	1161.2367	0	133.54
43	7137	344.79	-14.56573	578.18345	843.21276	0	105.94
44	7137	351.56745	-11.917919	412.95712	550.68495	0	100

Slices of Slip Surface: 7106

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7106	20.973975	0.39971914	848.63862	793.73393	0	600
2	7106	21.69979	0.049325785	870.52103	967.13336	0	600
3	7106	28.896205	-3.242377	1075.9423	1430.0596	0	204.52
4	7106	37.085	-6.95643	1307.6758	1832.5997	0	177.46
5	7106	40.0448	-8.214053	1386.1518	1964.7075	0	167.68
6	7106	43.9548	-9.837155	1487.4419	2135.2535	0	150.94
7	7106	50.262755	-12.337155	1643.3907	2401.1053	0	146.61
8	7106	55.537755	-14.37882	1770.8511	2613.2764	0	182.95
9	7106	63.545	-17.21108	1947.5811	2959.9536	0	216.87
10	7106	71.77	-20.06674	2125.7721	3318.3821	0	251.14
11	7106	78.46	-22.151445	2255.8569	3555.7072	0	276.52

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12	7106	89.38	-25.35144	2455.5494	3913.915	0	315.81
13	7106	101.2039	-28.434475	2647.9218	4338.7405	0	354.35
14	7106	108.3639	-30.180695	2756.9041	4631.344	0	369.73
15	7106	113.435	-31.274845	2825.1159	4830.8339	0	383.4
16	7106	122.71	-33.13631	2872.0319	5109.4697	0	406.93
17	7106	131.63	-34.73794	2848.4304	5187.1881	0	361.54
18	7106	140.1625	-36.060895	2812.8146	5081.1962	0	369.75
19	7106	149.3875	-37.29273	2761.9767	4936.4362	0	376.71
20	7106	156.91	-38.15555	2711.5431	4801.3028	0	381.01
21	7106	163.61	-38.78409	2657.9934	4643.5696	0	383.44
22	7106	172.22	-39.42738	2578.9358	4526.4391	0	384.92
23	7106	178.855	-39.831495	2512.2951	4511.3783	0	386.23
24	7106	185.5775	-40.08046	2434.673	4521.2882	0	388.84
25	7106	195.3925	-40.282445	2311.377	4525.7632	0	390.97
26	7106	205.36	-40.24455	2240.9265	4507.1463	0	390.57
27	7106	215.48	-39.95927	2222.7751	4461.2488	0	387.57
28	7106	223.705	-39.56163	2191.5346	4408.9298	0	383.4
29	7106	233.74	-38.78188	2135.7289	4313.3717	0	375.21
30	7106	245.305	-37.65826	2066.8634	4174.2514	0	363.41
31	7106	255.14035	-36.40841	1989.8297	4023.9785	0	350.29
32	7106	265.421	-34.847375	1889.9306	3840.3252	0	333.9
33	7106	278.20065	-32.48992	1739.7262	3539.8724	0	299.11
34	7106	288.03405	-30.48992	1612.4466	3273.0232	0	273.14
35	7106	291.31405	-29.74812	1565.2766	3179.9348	0	265.36
36	7106	293.8	-29.16229	1528.0578	3064.4879	0	259.2
37	7106	302.225	-26.993885	1390.249	2521.2897	0	236.44
38	7106	314.33	-23.66489	1178.7845	1909.9066	0	201.48
39	7106	324.49	-20.531175	980.06523	1584.7963	0	168.58
40	7106	330.415	-18.60506	844.24971	1365.0982	0	148.35
41	7106	337.41	-16.104365	674.18876	1048.07	0	122.1
42	7106	344.79	-13.420995	506.75926	725.58022	0	100
43	7106	350.2758	-11.255801	371.64318	486.71275	0	100

Slices of Slip Surface: 7168

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7168	20.94481	0.4090105	848.09935	793.80727	0	600
2	7168	21.682955	0.0520612	870.34345	966.4233	0	600
3	7168	28.89054	-3.252894	1076.55	1430.6834	0	204.54
4	7168	37.085	-6.9790635	1309.0765	1834.2664	0	177.46
5	7168	40.00869	-8.2261695	1386.907	1965.2235	0	167.8
6	7168	43.91869	-9.855805	1488.6073	2136.4056	0	151.06
7	7168	50.19113	-12.355805	1644.5635	2402.0978	0	146.57
8	7168	55.46613	-14.40825	1772.6591	2615.1277	0	183.22
9	7168	63.545	-17.28751	1952.3173	2966.5895	0	217.67
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10	7168	71.77	20.164205	2131.8355	3326.8091	0	252.16
11	7168	78.46	-22.269045	2263.1805	3565.9324	0	277.75
12	7168	89.38	-25.50445	2465.0895	3927.359	0	317.42
13	7168	100.7334	-28.52035	2653.2572	4337.669	0	355
14	7168	107.8934	-30.294195	2763.9703	4634.6231	0	370.72
15	7168	113.435	-31.51995	2840.477	4856.4431	0	385.97
16	7168	121.6431	-33.225755	2892.4222	5116.2781	0	407.41
17	7168	126.6431	-34.196465	2883.7392	5235.327	0	359.17
18	7168	131.63	-35.06548	2868.9234	5219.6528	0	364.9
19	7168	140.1625	-36.430925	2835.9305	5117.9674	0	373.56
20	7168	149.3875	-37.711275	2788.1015	4978.215	0	381.04
21	7168	156.91	-38.61552	2740.3391	4847.3068	0	385.79
22	7168	163.61	-39.282825	2689.1834	4693.427	0	388.64
23	7168	172.22	-39.978175	2613.3413	4581.6507	0	390.68
24	7168	178.855	-40.42368	2549.2501	4570.9363	0	392.45
25	7168	185.5775	-40.71685	2474.4089	4585.1647	0	395.53
26	7168	195.3925	-40.98572	2355.2931	4596.2852	0	398.35
27	7168	205.36	-41.019375	2289.2466	4585.2124	0	398.7
28	7168	215.48	-40.81055	2275.9482	4547.551	0	396.51
29	7168	223.705	-40.477685	2248.6977	4502.2859	0	393.02
30	7168	233.74	-39.781845	2198.1483	4415.7441	0	385.71
31	7168	245.305	-38.758815	2135.6043	4287.6249	0	374.97
32	7168	257.0332	-37.321925	2046.4014	4114.6458	0	359.88
33	7168	271.09955	-35.18949	1909.9083	3863.7668	0	337.49
34	7168	281.98635	-33.242185	1785.7725	3622.0869	0	304.55
35	7168	289.12	-31.779405	1692.5971	3427.6694	0	286.68
36	7168	293.8	-30.7566	1627.5484	3241.5487	0	275.94
37	7168	296.14105	-30.21938	1593.3868	3086.1844	0	270.3
38	7168	303.16605	-28.469445	1482.0288	2634.8949	0	251.93
39	7168	314.33	-25.50956	1293.8557	2098.4414	0	220.85
40	7168	324.49	-22.51001	1103.5068	1788.2734	0	189.36
41	7168	330.415	-20.664705	972.82449	1577.7874	0	169.98
42	7168	337.41	-18.26567	809.0452	1272.2789	0	144.79

43	7168	344.79	-15.690845	648.38037	960.39529	0	117.75
44	7168	347.67335	-14.619985	581.56311	835.95803	0	106.51
45	7168	354.5124	-11.950137	414.97158	546.68397	0	100

Slices of Slip Surface: 7075

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7075	20.989005	0.3949298	848.99045	793.61677	0	600
2	7075	21.70843	0.047920205	870.61789	967.5088	0	600
3	7075	28.899105	-3.237002	1075.5882	1429.6701	0	204.51
4	7075	37.085	-6.9448625	1306.9395	1831.712	0	177.46
5	7075	40.063375	-8.2078605	1385.7793	1964.4109	0	167.62
6	7075	43.973375	-9.827625	1486.8436	2134.6439	0	150.87
7	7075	50.2997	-12.327625	1642.7923	2400.679	0	146.63
8	7075	55.5747	-14.363785	1769.8958	2612.2618	0	182.81
9	7075	63.545	-17.17203	1945.1215	2956.617	0	216.46
10	7075	71.77	-20.016945	2122.6535	3314.0298	0	250.62
11	7075	78.46	-22.09137	2252.1166	3550.4347	0	275.89
12	7075	89.38	-25.273285	2450.6546	3906.9417	0	314.99
13	7075	101.45265	-28.390615	2645.1376	4339.4539	0	354.02
14	7075	108.61265	-30.12273	2753.2152	4629.9334	0	369.22
15	7075	113.435	-31.149675	2817.3195	4817.6266	0	382.08
16	7075	122.71	-32.99031	2862.9224	5093.9318	0	405.4
17	7075	127.9208	-33.963365	2851.4198	5204.1157	0	412.23
18	7075	131.8408	-34.607315	2837.3574	5168.5427	0	360.07
19	7075	140.1625	-35.871935	2801.0781	5062.3522	0	367.8
20	7075	149.3875	-37.07899	2748.6757	4915.0231	0	374.5
21	7075	156.91	-37.920645	2696.9463	4777.9118	0	378.57
22	7075	163.61	-38.52937	2642.1036	4617.9296	0	380.79
23	7075	172.22	-39.14605	2561.438	4498.1502	0	381.97
24	7075	178.855	-39.529015	2493.4208	4481.2556	0	383.05
25	7075	185.5775	-39.755375	2414.458	4488.6636	0	385.43
26	7075	195.3925	-39.923145	2289.0189	4489.7048	0	387.19
27	7075	205.36	-39.848645	2216.176	4467.1278	0	386.41
28	7075	215.48	-39.524235	2195.6478	4417.0605	0	383
29	7075	223.705	-39.09343	2162.4333	4361.2829	0	378.48
30	7075	233.74	-38.270685	2103.8233	4260.9254	0	369.84
31	7075	245.305	-37.095505	2031.8209	4116.2007	0	357.5
32	7075	254.17695	-35.94773	1961.2814	3978.1525	0	345.45
33	7075	262.53085	-34.6789	1880.0621	3828.8898	0	332.13
34	7075	271.49085	-33.11214	1780.1548	3630.9196	0	310
35	7075	281.05695	-31.21697	1659.5891	3378.7122	0	283.89
36	7075	286.30705	-30.10483	1588.8995	3230.2365	0	269.1
37	7075	289.58705	-29.344075	1540.5327	3143.4179	0	261.11
38	7075	293.8	-28.345915	1477.1125	2982.0486	0	250.63
39	7075	302.225	-26.12569	1336.0718	2433.0658	0	227.32

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40	7075	314.33	-22.71954	1119.7248	1813.0493	0	191.56
41	7075	324.49	-19.51661	916.75936	1480.1036	0	157.92
42	7075	330.415	-17.548775	778.36217	1255.7889	0	137.26
43	7075	335.75	-15.627855	644.46284	1008.7745	0	117.09
44	7075	341.9	-13.36767	503.42078	737.49667	0	100
45	7075	344.79	-12.256025	434.06066	607.53341	0	100
46	7075	348.9842	-10.583453	329.68292	421.69182	0	100

Slices of Slip Surface: 7199

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7199	20.930655	0.41351835	847.82976	793.96998	0	600
2	7199	21.674755	0.05339235	870.27754	966.18004	0	600
3	7199	28.887775	-3.2580385	1076.9325	1431.0469	0	204.54
4	7199	37.085	-6.9901355	1309.7835	1835.13	0	177.46
5	7199	39.99113	-8.232097	1387.2774	1965.5109	0	167.86
6	7199	43.90113	-9.864935	1489.1622	2137.0185	0	151.12
7	7199	50.15641	-12.364935	1645.1542	2402.579	0	146.55
8	7199	55.43141	-14.42265	1773.5778	2616.0858	0	183.36
9	7199	63.545	-17.32492	1954.6614	2969.8214	0	218.06
10	7199	71.77	-20.21192	2134.8182	3330.9601	0	252.66
11	7199	78.46	-22.326615	2266.7641	3570.9728	0	278.36
12	7199	89.38	-25.57936	2469.733	3934.003	0	318.2
13	7199	100.5106	-28.562395	2655.9111	4337.2872	0	355.33
14	7199	107.6706	-30.349765	2767.4288	4636.1295	0	371.2
15	7199	113.435	-31.63996	2847.9276	4869.0744	0	387.23
16	7199	121.25845	-33.290195	2901.8271	5122.0662	0	407.92
17	7199	126.25845	-34.272015	2893.774	5241.7087	0	360.19
18	7199	131.63	-35.22585	2878.9697	5235.5527	0	366.54
19	7199	140.1625	-36.612105	2847.204	5136.0046	0	375.42
20	7199	149.3875	-37.91621	2800.819	4998.5832	0	383.16
21	7199	156.91	-38.840725	2754.3689	4869.7515	0	388.13
22	7199	163.61	-39.526995	2704.3536	4717.9097	0	391.19
23	7199	172.22	-40.24782	2630.1467	4608.6792	0	393.51
24	7199	178.855	-40.713575	2567.3315	4599.8228	0	395.49
25	7199	185.5775	-41.02836	2493.829	4616.3169	0	398.8
26	7199	195.3925	-41.329935	2376.7497	4630.7502	0	401.96
27	7199	205.36	-41.398565	2312.9172	4623.463	0	402.68
28	7199	215.48	-41.22709	2301.8944	4589.6642	0	400.88
29	7199	223.705	-40.925855	2276.7595	4547.8386	0	397.72
30	7199	233.74	-40.27097	2228.6616	4465.7433	0	390.85
31	7199	245.305	-39.297015	2169.1953	4342.9469	0	380.62
32	7199	255.30975	-38.158925	2099.054	4204.7421	0	368.67
33	7199	265.9293	-36.690775	2004.8583	4031.0379	0	353.25
34	7199	276.54885	-34.943685	1893.2037	3826.4594	0	334.91
35	7199	283.8493	-33.60966	1808.1946	3662.1351	0	307.19
36	7199	289.12	-32.532265	1739.5337	3519.2024	0	294.59
37	7199	293.8	-31.5352	1676.1483	3336.6053	0	284.12

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38	7199	297.8422	-30.612595	1617.3849	3069.1896	0	274.43
39	7199	304.8672	-28.90371	1508.5759	2613.5294	0	256.49
40	7199	314.33	-26.409725	1350.0305	2190.2645	0	230.3
41	7199	324.49	-23.47522	1163.7591	1887.3755	0	199.49
42	7199	330.415	-21.669065	1035.4729	1681.2128	0	180.53
43	7199	337.41	-19.31922	874.79476	1381.3116	0	155.85
44	7199	344.79	-16.796905	717.39931	1075.3721	0	129.37
45	7199	349.18635	-15.177545	616.358	890.33271	0	112.36
46	7199	357.31705	-12.03515	420.27415	548.35958	0	100

Slices of Slip Surface: 7044

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7044	21.00434	0.39004067	849.25938	793.768	0	600
2	7044	21.71723	0.04648842	870.67906	968.06223	0	600
3	7044	28.90206	-3.231547	1075.2447	1429.4233	0	204.5
4	7044	37.085	-6.933123	1306.2077	1830.9147	0	177.46
5	7044	40.08231	-8.201576	1385.3845	1964.2053	0	167.55
6	7044	43.99231	-9.81795	1486.2434	2134.1238	0	150.81
7	7044	50.337435	-12.31795	1642.2467	2400.1736	0	146.66
8	7044	55.612435	-14.34853	1768.9569	2611.3958	0	182.67
9	7044	63.545	-17.132415	1942.6691	2953.2242	0	216.04
10	7044	71.77	-19.96643	2119.5027	3309.7266	0	250.09
11	7044	78.46	-22.03043	2248.2953	3545.1731	0	275.25
12	7044	89.38	-25.194005	2445.6757	3900.0641	0	314.16
13	7044	102	-28.41006	2646.4091	4350.9704	0	354.51
14	7044	113.435	-31.02271	2809.4065	4804.4159	0	380.75
15	7044	122.71	-32.84221	2853.7125	5078.2925	0	403.84
16	7044	128.39515	-33.88344	2839.9685	5183.1547	0	411.08
17	7044	132.31515	-34.51758	2825.2295	5147.1039	0	358.85
18	7044	140.1625	-35.680255	2789.1143	5043.2726	0	365.83
19	7044	149.3875	-36.862165	2735.1429	4893.4746	0	372.26
20	7044	156.91	-37.68235	2682.159	4753.9747	0	376.09
21	7044	163.61	-38.27098	2626.0604	4592.121	0	378.09
22	7044	172.22	-38.860655	2543.6047	4469.5078	0	378.98
23	7044	178.855	-39.222145	2474.2718	4450.2598	0	379.83
24	7044	185.5775	-39.42556	2393.807	4455.4774	0	381.97
25	7044	195.3925	-39.55859	2266.2231	4452.976	0	383.37
26	7044	205.36	-39.446905	2191.0999	4426.4564	0	382.19
27	7044	215.48	-39.082735	2168.0963	4372.1186	0	378.37
28	7044	223.705	-38.61823	2132.6706	4312.6219	0	373.49
29	7044	233.74	-37.75178	2071.4531	4207.6119	0	364.39
30	7044	245.305	-36.52416	1996.1208	4057.1373	0	351.5
31	7044	256.4014	-34.97214	1899.9116	3872.1037	0	335.21
32	7044	267.9272	-33.068975	1778.3068	3633.8938	0	311.86
33	7044	278.17605	-31.068975	1651.0833	3367.6903	0	284.2
34	7044	284.57025	-29.713545	1564.8852	3192.9588	0	265.88
35	7044	289.12	-28.64702	1497.115	3074.1651	0	253.79

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36	7044	293.8	-27.51626	1425.3545	2898.0326	0	241.92
37	7044	302.225	-25.243165	1280.9467	2343.1734	0	218.05
38	7044	314.33	-21.758255	1059.7635	1714.2486	0	181.46
39	7044	324.49	-18.484605	852.36314	1373.4854	0	147.09
40	7044	330.415	-16.474135	711.3065	1144.3484	0	125.98
41	7044	334.23405	-15.087405	610.72822	961.82708	0	111.42
42	7044	340.38405	-12.779705	466.72846	687.24109	0	100
43	7044	344.79	-11.070165	360.05832	487.25949	0	100
44	7044	347.69255	-9.900545	287.07209	355.52412	0	100

Slices of Slip Surface: 7230

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7230	20.91677	0.41793805	847.53191	794.30492	0	600
2	7230	21.6667	0.05470005	870.17017	966.02628	0	600
3	7230	28.88506	-3.26311	1077.1963	1431.4867	0	204.55
4	7230	37.085	-7.0010505	1310.452	1836.0404	0	177.46
5	7230	39.973895	-8.2379405	1387.6518	1965.8572	0	167.91
6	7230	43.883895	-9.87393	1489.7351	2137.6586	0	151.18
7	7230	50.12238	-12.37393	1645.7209	2403.1407	0	146.53
8	7230	55.39738	-14.43685	1774.4636	2617.0955	0	183.49
9	7230	63.545	-17.361805	1956.9443	2973.1302	0	218.45
10	7230	71.77	-20.25896	2137.7699	3335.1617	0	253.16
11	7230	78.46	-22.383385	2270.3525	3576.1088	0	278.95
12	7230	89.38	-25.65324	2474.3833	3940.5704	0	318.98
13	7230	100.2954	-28.60386	2658.4849	4337.0747	0	355.65
14	7230	107.4554	-30.40457	2770.8514	4637.9682	0	371.69
15	7230	113.435	-31.75832	2855.2635	4881.5905	0	388.47
16	7230	120.89155	-33.35375	2910.8037	5127.9429	0	408.43
17	7230	125.89155	-34.34653	2903.5707	5248.3053	0	361.19
18	7230	131.63	-35.384025	2888.7575	5251.1901	0	368.16
19	7230	140.1625	-36.790795	2858.3597	5153.8098	0	377.26
20	7230	149.3875	-38.118315	2813.5223	5018.82	0	385.25
21	7230	156.91	-39.062825	2768.2105	4891.9961	0	390.43
22	7230	163.61	-39.767805	2719.5045	4741.9661	0	393.7
23	7230	172.22	-40.51374	2646.7229	4635.2557	0	396.29
24	7230	178.855	-40.99945	2585.1694	4628.6685	0	398.49
25	7230	185.5775	-41.335545	2513.0198	4647.0154	0	402.02
26	7230	195.3925	-41.66935	2397.9748	4664.7546	0	405.53
27	7230	205.36	-41.77243	2336.2625	4661.0626	0	406.61
28	7230	215.48	-41.63774	2327.5157	4631.2248	0	405.2
29	7230	223.705	-41.367655	2304.3173	4592.6948	0	402.36
30	7230	233.74	-40.753085	2258.7815	4514.8764	0	395.91
31	7230	245.305	-39.827425	2202.2297	4397.3571	0	386.19
32	7230	255.92485	-38.65061	2129.5435	4254.2284	0	373.83
33	7230	267.77455	-37.031885	2025.6807	4062.5428	0	356.83
34	7230	279.7697	-35.040015	1898.4002	3828.8984	0	335.92
35	7230	289.12	-33.27366	1785.8933	3609.2758	0	302.37

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36	7230	293.8	-32.30187	1723.976	3430.0434	0	292.17
37	7230	299.5357	-30.999775	1640.9827	3051.4884	0	278.5
38	7230	306.5607	-29.33116	1534.7326	2591.6271	0	260.98
39	7230	314.33	-27.29564	1405.345	2280.4303	0	239.6
40	7230	324.49	-24.424885	1223.0121	1984.5281	0	209.46
41	7230	330.415	-22.657085	1097.0992	1782.7085	0	190.9
42	7230	337.41	-20.355395	939.43779	1488.2213	0	166.73
43	7230	344.79	-17.884475	785.25339	1188.1372	0	140.79
44	7230	350.6987	-15.72576	650.57211	943.65341	0	118.12
45	7230	360.121	-12.120165	425.57612	550.00544	0	100

Slices of Slip Surface: 7013

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7013	21.02	0.38504849	849.59617	794.19732	0	600
2	7013	21.72619	0.045029685	870.81405	968.63783	0	600
3	7013	28.90506	-3.2260095	1074.9118	1429.1908	0	204.49
4	7013	37.085	-6.9212065	1305.4805	1830.1658	0	177.46
5	7013	40.101615	-8.195197	1384.9856	1964.0789	0	167.49
6	7013	44.011615	-9.808135	1485.6258	2133.6376	0	150.74
7	7013	50.375985	-12.308135	1641.6371	2399.8979	0	146.68
8	7013	55.650985	-14.333045	1767.9786	2610.5065	0	182.53
9	7013	63.545	-17.092215	1940.155	2949.9081	0	215.62
10	7013	71.77	-19.915175	2116.3194	3305.4337	0	249.55
11	7013	78.46	-21.968595	2244.4804	3539.9223	0	274.6
12	7013	89.38	-25.113575	2440.7009	3893.1057	0	313.31
13	7013	101.98035	-28.300985	2639.6138	4341.4522	0	353.35
14	7013	113.41535	-30.889615	2801.0761	4790.2163	0	379.34
15	7013	122.71	-32.691975	2844.298	5062.5415	0	402.27
16	7013	128.8982	-33.80236	2827.9354	5161.3235	0	409.9
17	7013	132.8182	-34.42655	2812.5888	5124.6152	0	357.6
18	7013	140.1625	-35.48581	2776.9228	5023.9567	0	363.83
19	7013	149.3875	-36.64221	2721.3777	4871.4664	0	369.98
20	7013	156.91	-37.4406	2667.0092	4729.8317	0	373.58
21	7013	163.61	-38.008825	2609.7314	4565.7476	0	375.36
22	7013	172.22	-38.57109	2525.5381	4440.4065	0	375.95
23	7013	178.855	-38.91078	2454.8472	4418.9396	0	376.56
24	7013	185.5775	-39.090895	2372.9229	4421.8302	0	378.45
25	7013	195.3925	-39.18865	2243.193	4415.6781	0	379.48
26	7013	205.36	-39.039195	2165.6952	4385.2241	0	377.91
27	7013	215.48	-38.634625	2140.116	4326.5118	0	373.66
28	7013	223.705	-38.13586	2102.5622	4263.2619	0	368.43
29	7013	233.74	-37.224965	2038.6213	4153.3641	0	358.86
30	7013	245.305	-35.94401	1959.8707	3997.063	0	345.41
31	7013	254.4201	-34.670855	1881.5702	3844.8944	0	332.04
32	7013	264.08165	-33.07255	1779.4978	3643.0672	0	314.4
33	7013	274.5645	-31.07255	1652.1372	3376.8906	0	286.59
34	7013	282.82295	-29.315905	1540.5107	3157.3074	0	262.93

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35	7013	289.12	-27.83204	1446.3151	2991.6202	0	245.24
36	7013	293.8	-26.672955	1372.7238	2812.4545	0	233.07
37	7013	302.225	-24.345895	1224.9525	2251.5604	0	208.63
38	7013	314.33	-20.780565	998.72589	1613.7164	0	171.2
39	7013	324.49	-17.43464	786.84918	1264.7884	0	136.06
40	7013	330.415	-15.38057	643.05014	1030.7053	0	114.5
41	7013	332.71735	-14.53742	576.4276	913.81173	0	105.64
42	7013	338.86735	-12.181095	429.37983	635.84378	0	100
43	7013	344.79	-9.862771	284.71812	364.65268	0	100
44	7013	346.40095	-9.206748	243.7819	288.22618	0	100

Slices of Slip Surface: 7261

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7261	20.903155	0.4222721	847.27167	794.87544	0	600
2	7261	21.658775	0.05598485	870.0905	965.94333	0	600
3	7261	28.88238	-3.2681095	1077.5326	1431.9379	0	204.56
4	7261	37.085	-7.0118105	1311.1246	1836.9984	0	177.46
5	7261	39.95697	-8.243701	1388.0101	1966.2462	0	167.97
6	7261	43.86697	-9.8828	1490.2764	2138.3601	0	151.23
7	7261	50.089025	-12.3828	1646.2704	2403.6822	0	146.51
8	7261	55.364025	-14.45085	1775.331	2618.1501	0	183.62
9	7261	63.545	-17.39818	1959.2333	2976.4485	0	218.83
10	7261	71.77	-20.30536	2140.6503	3339.3728	0	253.64
11	7261	78.46	-22.439375	2273.8606	3581.1688	0	279.54
12	7261	89.38	-25.7261	2478.9481	3947.1425	0	319.74
13	7261	100.08745	-28.644755	2661.0746	4336.9317	0	355.97
14	7261	107.24745	-30.45863	2774.3218	4639.8009	0	372.16
15	7261	113.435	-31.875065	2862.5989	4893.8777	0	389.7
16	7261	120.54095	-33.416435	2919.5787	5133.9126	0	408.94
17	7261	125.54095	-34.42003	2912.8734	5254.9856	0	362.16
18	7261	131.63	-35.54004	2898.5391	5266.8178	0	369.76
19	7261	140.1625	-36.96705	2869.3982	5171.3844	0	379.07
20	7261	149.3875	-38.317675	2825.8896	5038.7118	0	387.31
21	7261	156.91	-39.281905	2781.8655	4913.8724	0	392.71
22	7261	163.61	-40.005325	2734.2423	4765.7275	0	396.17
23	7261	172.22	-40.776015	2663.0705	4661.485	0	399.04
24	7261	178.855	-41.2814	2602.7629	4656.9218	0	401.45
25	7261	187.4322	-41.69944	2510.0847	4680.3799	0	405.84
26	7261	197.2472	-42.065005	2396.9435	4702.0244	0	409.68
27	7261	204.8211	-42.145645	2359.5847	4699.4842	0	410.53
28	7261	213.8633	-42.08064	2355.243	4678.6404	0	409.85
29	7261	219.4622	-41.966555	2347.9475	4657.7796	0	408.65
30	7261	223.705	-41.803225	2331.5288	4636.6976	0	406.93
31	7261	233.74	-41.228345	2288.4364	4563.2913	0	400.9
32	7261	245.305	-40.350215	2234.9185	4450.8548	0	391.68
33	7261	255.97335	-39.213445	2164.6368	4312.0655	0	379.74
34	7261	267.92	-37.6337	2063.1944	4124.5669	0	363.15

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35	7261	279.86665	-35.70683	1940.05	3898.7313	0	342.92
36	7261	287.52345	-34.328035	1852.0727	3737.9036	0	328.44
37	7261	290.80345	-33.67584	1810.5016	3654.1503	0	306.6
38	7261	293.8	-33.056905	1771.0954	3521.7113	0	300.1
39	7261	301.222	-31.381065	1664.2833	3033.5034	0	282.5
40	7261	308.247	-29.75198	1560.4781	2569.4221	0	265.4
41	7261	314.33	-28.167695	1459.6949	2368.9225	0	248.76
42	7261	324.49	-25.35944	1281.3471	2079.9911	0	219.27
43	7261	330.415	-23.629235	1157.7991	1882.4138	0	201.11
44	7261	337.41	-21.374695	1003.0321	1593.2056	0	177.43
45	7261	344.79	-18.95409	851.99674	1298.881	0	152.02
46	7261	352.2104	-16.264905	684.21288	995.94416	0	123.78
47	7261	362.92435	-12.205175	430.88746	551.62923	0	100

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CG Case.BS.Thru Fabric

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 215
Last Edited By: Cox, Lane MVK
Date: 4/20/2011
Time: 11:09:12 AM
File Name: 5c(2) Typical 1.2nd SC.80%SG.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\2nd Stage Constuction\80%SG,1 Layer of Fabric\Slope W\
Last Solved Date: 4/20/2011
Last Solved Time: 11:13:34 AM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

CG Case.BS.Thru Fabric

Kind: SLOPE/W
Method: Spencer
Settings
    Apply Phreatic Correction: No
    PWP Conditions Source: Piezometric Line
    Use Staged Rapid Drawdown: No
SlipSurface
    Direction of movement: Left to Right
    Use Passive Mode: No
    Slip Surface Option: Block
    Critical slip surfaces saved: 100
    Optimize Critical Slip Surface Location: Yes
    Tension Crack
        Tension Crack Option: Tension Crack Line
        Percentage Wet: 1
        Tension Crack Fluid Unit Weight: 62.4 pcf

FOS Distribution
    FOS Calculation Option: Constant
Restrict Block Crossing: Yes
Advanced
    Number of Slices: 30
    Optimization Tolerance: 0.01
    Minimum Slip Surface Depth: 0.1 ft
    Optimization Maximum Iterations: 2000
    Optimization Convergence Tolerance: 1e-007
    Starting Optimization Points: 8
    Ending Optimization Points: 16
    Complete Passes per Insertion: 1
    Driving Side Maximum Convex Angle: 5 °
    Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH

Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH above 0

Model: Mohr-Coulomb
Unit Weight: 102 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH, 0 to -9

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -9 (2)
Cohesion Spatial Fn: CH, 0 to -9
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH, -9 to -14

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -9 to -14 (2)

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Cohesion Spatial Fn: CH, -9 to -14
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -14 to -30

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -14 to -30 (2)
Cohesion Spatial Fn: CH, -14 to -30
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -30 to -34

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -30 to -34 (2)
Cohesion Spatial Fn: CH, 30 to -34
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sand Fill

Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -34 to -42

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -34 to -42 (2)
Cohesion Spatial Fn: CH, -34 to -42
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -42 to -80

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -42 to -80 (2)
Cohesion Spatial Fn: CH, -42 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure

Piezometric Line: 1

CH, 0 to -9 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -9 (2)
Cohesion Spatial Fn: CH, 0 to -9 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -9 to -14 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -9 to -14 (2)
Cohesion Spatial Fn: CH, -9 to -14 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -14 to -30 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -14 to -30 (2)
Cohesion Spatial Fn: CH, -14 to -30 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -30 to -34 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -30 to -34 (2)
Cohesion Spatial Fn: CH, 30 to -34 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Limits

Left Coordinate: (-200, -2.13) ft
Right Coordinate: (500, -4.5) ft

Slip Surface Block

Left Grid
Upper Left: (94, -14) ft
Lower Left: (161, -14) ft

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Lower Right: (161, -64) ft
X Increments: 7
Y Increments: 7
Starting Angle: 115 °
Ending Angle: 135 °
Angle Increments: 7

Right Grid
Upper Left: (263, -14) ft
Lower Left: (339, -14) ft
Lower Right: (339, -65) ft
X Increments: 7
Y Increments: 7
Starting Angle: 0 °
Ending Angle: 45 °
Angle Increments: 7

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	14
	117.71	14
	200.3	-4.33
	220.54	-4.34
	226.87	-4.54
	240.61	-4.57
	250	-4.5
	285.84	-4.64
	295.2	-4.68
	329.57	-4.85
	331.26	-5.3
	447.66	-5.3
	450.06	-4.54
	500	-4.5

Reinforcements

Reinforcement 1

Type: Fabric
Outside Point: (209, 0) ft
Inside Point: (22, 0) ft
Slip Surface Intersection: (96.778, 0) ft
Total Length: 187 ft

Reinforcement Direction: 0 °
Applied Load Option: Variable
F of S Dependent: No
Contact Cohesion: 265 psf
Contact Phi: 19 °
Interface Factor: 2
Bond Safety Factor: 1
Fabric Capacity: 27000 lbs
Fabric Safety Factor: 1
Fabric Load: 27000 lbs
Load Distribution: Even along reinf.
Load Orientation: 0
Applied Load: 27000 lbs
Fabric Load Used: 27000 lbs
Resisting Force Used: 929.15 lbs/ft
Available Bond Length: 74.778 ft
Required Bond Length: 29.059 ft
Governing Component: Fabric

Tension Crack Line

	X (ft)	Y (ft)
	-1	5.40517
	8	5.2
	22	0.1
	96	0.1
	118	11
	127	11
	166	2
	167.4	4

Spatial Functions

CH, 0 to -9

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -2.5, 50)
Data Point: (-300, -9, 75)
Data Point: (-33.33, 0, 50)
Data Point: (-33.33, -9, 75)
Data Point: (0, 0, 300)
Data Point: (0, -9, 300)
Data Point: (285.84, -4.62, 100)
Data Point: (285.84, -9, 100)
Data Point: (500, 0, 100)
Data Point: (500, -9, 100)

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CH, -34 to -42 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -38, 105)
Data Point: (0, -38, 116)
Data Point: (177.04, -38, 106)

CH, -42 to -80 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -61, 105)
Data Point: (0, -61, 105)
Data Point: (177.04, -61, 106)

CH, 0 to -9 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, 0, 300)
Data Point: (0, -9, 300)
Data Point: (46, 0, 148)
Data Point: (46, -9, 148)
Data Point: (122.71, 0, 198)
Data Point: (122.71, -9, 198)
Data Point: (285.84, 0, 100)
Data Point: (285.84, -9, 100)

CH, -9 to -14 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -9, 300)
Data Point: (0, -14, 300)
Data Point: (46, -9, 144)
Data Point: (46, -14, 144)
Data Point: (122.71, -9, 191)
Data Point: (122.71, -14, 191)
Data Point: (285.84, -9, 100)
Data Point: (285.84, -14, 100)

CH, -14 to -30 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -14, 300)
Data Point: (0, -30, 375)

Data Point: (46, -14, 174)
Data Point: (46, -30, 342)
Data Point: (122.71, -14, 214)
Data Point: (122.71, -30, 382)
Data Point: (285.84, -14, 100)
Data Point: (285.84, -30, 268)

CH, 30 to -34 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -30, 400)
Data Point: (0, -34, 438)
Data Point: (46, -30, 341)
Data Point: (46, -34, 383)
Data Point: (122.71, -30, 374)
Data Point: (122.71, -34, 416)
Data Point: (285.84, -30, 268)
Data Point: (285.84, -34, 310)

CH, -9 to -14

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -9, 75)
Data Point: (-300, -14, 115)
Data Point: (-33.33, -9, 75)
Data Point: (-33.33, -14, 115)
Data Point: (0, -9, 300)
Data Point: (0, -14, 300)
Data Point: (285.84, -9, 100)
Data Point: (285.84, -14, 100)
Data Point: (500, -9, 100)
Data Point: (500, -14, 100)

CH, -14 to -30

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -14, 115)
Data Point: (-300, -30, 291)
Data Point: (-33.33, -14, 115)
Data Point: (-33.33, -30, 291)
Data Point: (0, -14, 300)
Data Point: (0, -30, 375)
Data Point: (285.84, -14, 100)
Data Point: (285.84, -30, 268)
Data Point: (500, -14, 100)

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Data Point: (500, -30, 268)

CH, 30 to -34

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -30, 291)
Data Point: (-300, -34, 335)
Data Point: (-33.33, -30, 291)
Data Point: (-33.33, -34, 335)
Data Point: (0, -30, 400)
Data Point: (0, -34, 438)
Data Point: (285.84, -30, 268)
Data Point: (285.84, -34, 310)
Data Point: (500, -30, 268)
Data Point: (500, -34, 310)

CH, 0 to -9 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -4.5, 90)
Data Point: (0, -4.5, 96)
Data Point: (177.04, -4.54, 87)

CH, -9 to -14 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -11.5, 90)
Data Point: (0, -11.5, 97)
Data Point: (177.04, -11.5, 100)

CH, -14 to -30 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -22, 100)
Data Point: (0, -22, 102)
Data Point: (177.04, -22, 100)

CH, -30 to -34 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -32, 122)
Data Point: (0, -32, 113)
Data Point: (177.04, -32, 118)

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CH, -34 to -42

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -34, 335)
Data Point: (-300, -42, 423)
Data Point: (-33.33, -34, 335)
Data Point: (-33.33, -42, 423)
Data Point: (0, -34, 438)
Data Point: (0, -42, 514)
Data Point: (177.04, -34, 325)
Data Point: (177.04, -42, 409)
Data Point: (500, -34, 325)
Data Point: (500, -42, 409)

CH, -42 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -42, 423)
Data Point: (-300, -80, 841)
Data Point: (-33.33, -42, 423)
Data Point: (-33.33, -80, 841)
Data Point: (0, -42, 514)
Data Point: (0, -80, 875)
Data Point: (177.04, -42, 409)
Data Point: (177.04, -80, 808)
Data Point: (500, -42, 409)
Data Point: (500, -80, 808)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -42 to -80	1,3,4,2	26600
Region 2	CH, -34 to -42	3,5,69,73,6,4	5600
Region 3	CH above 0	45,21,22,63,64,27,44,65	161.91095
Region 4	Sand Fill	29,30,43,31,32,33,42,34,35,62	606.7023
Region 5	CH, 0 to -9	56,53,54,41,12	267.3158
Region 6	EMBANKMENT FILL CH	59,46,47,60,37,36,35,62	1502.7397
Region 7	EMBANKMENT FILL CH	64,27,44,57,28,62,59	499.34315
Region 8	EMBANKMENT FILL CH	60,61,76,75,40,39,58,38,37	772.15003
Region 9	CH, 0 to -9	16,11,66,65,45,20,19,18,17,15,14,74	1498.6738
Region 10	CH, -9 to -14	11,9,67,66	1000
Region 11	CH, -14 to -30	9,7,68,67	3200
Region 12	CH, -30 to -34	7,5,69,68	800
Region 13	CH, -30 to -34	6,8,72,73	856.64
Region 14	CH, -14 to -30	8,10,71,72	3426.56
Region 15	CH, -9 to -14	10,71,70,55,50,51,52,56,12	954.73385

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Region 16	CH, 0 to -9	55,49,48,76,75,70	220.0602
Region 17	CH, -30 to -34 SG	69,68,72,73	1143.36
Region 18	CH, -14 to -30 SG	68,67,71,72	4573.44
Region 19	CH, -9 to -14 SG	67,66,43,31,32,33,42,70,71	1313.1338
Region 20	CH, 0 to -9 SG	66,65,44,57,28,62,29,30,43	438.1553
Region 21	CH, 0 to -9 SG	42,34,35,36,37,38,58,39,40,75,70	538.2795

Points

	X (ft)	Y (ft)
Point 1	-200	-80
Point 2	500	-80
Point 3	-200	-42
Point 4	500	-42
Point 5	-200	-34
Point 6	500	-34
Point 7	-200	-30
Point 8	500	-30
Point 9	-200	-14
Point 10	500	-14
Point 11	-200	-9
Point 12	500	-9
Point 13	-191.42	-2.12
Point 14	-156.88	-2.03
Point 15	-119.75	-2.26
Point 16	-200	-2.13
Point 17	-92.12	-1.99
Point 18	-71.42	-1.72
Point 19	-45.06	-0.68
Point 20	-33.33	-0.27
Point 21	-19.05	1.53
Point 22	-16.9	1.81
Point 23	-6.83	6.48
Point 24	-6.79	6.72
Point 25	-0.92	7.16
Point 26	3.42	6.91
Point 27	20.53	0.36
Point 28	38.18	-3.47
Point 29	56.55	-4.85
Point 30	70.54	-8.43
Point 31	109.16	-11.38
Point 32	127.67	-11.01
Point 33	135.55	-10.86
Point 34	159.82	-8.55
Point 35	177.04	-4.54
Point 36	180.67	-4.21
Point 37	200.3	-4.33
Point 38	220.54	-4.34

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Point 39	240.61	-4.57
Point 40	250	-4.5
Point 41	500	-4.5
Point 42	154	-9
Point 43	73	-9
Point 44	22	0
Point 45	-32	0
Point 46	117.71	14
Point 47	127.71	14
Point 48	329.57	-4.85
Point 49	343.56	-8.43
Point 50	382.18	-11.38
Point 51	400.69	-11.01
Point 52	408.57	-10.86
Point 53	432.84	-8.55
Point 54	450.06	-4.54
Point 55	346.02	-9
Point 56	427.02	-9
Point 57	35.99	-3
Point 58	226.87	-4.54
Point 59	94.84	8
Point 60	167.4	4
Point 61	292.4	0.875
Point 62	46	-4.06
Point 63	-5.16	5.5
Point 64	8	5.2
Point 65	0	0
Point 66	0	-9
Point 67	0	-14
Point 68	0	-30
Point 69	0	-34
Point 70	285.84	-9
Point 71	285.84	-14
Point 72	285.84	-30
Point 73	285.84	-34
Point 74	-194	-2
Point 75	285.84	-4.64
Point 76	309.25	-4.74

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	1.63	(220.374, 2.411)	98.23082	(96.444, 8.42082)	(346.411, -9.02573)
2	23510	1.70	(220.374, 2.411)	99.782	(92.0429, 7.90981)	(348.205, -9.14379)
3	23509	1.70	(224.541, 2.547)	102.669	(92.0429, 7.90981)	(356.495, -9.68942)
4	22998	1.70	(223.486, 3.73)	96.808	(98.1303, 8.86321)	(348.205, -9.14379)
5	23511	1.70	(217.624, 2.183)	98.24	(92.0429, 7.90981)	(342.789, -8.23283)
6	22997	1.70	(227.654, 3.867)	99.588	(98.1303, 8.86321)	(356.495, -9.68942)

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7	23446	1.70	(222.641, 2.744)	98.225	(96.5377, 8.44539)	(348.205, -9.14379)
8	23445	1.70	(226.808, 2.88)	100.979	(96.5377, 8.44539)	(356.495, -9.68942)
9	23508	1.71	(230.782, 2.752)	109.583	(92.0429, 7.90981)	(368.912, -10.5067)
10	23518	1.71	(225.649, 2.584)	104.286	(92.0429, 7.90981)	(358.7, -9.8346)
11	23447	1.71	(219.889, 2.516)	96.434	(96.5377, 8.44539)	(342.789, -8.23283)
12	22999	1.71	(220.73, 3.503)	95.004	(98.1303, 8.86321)	(342.789, -8.23283)
13	23512	1.71	(215.521, 1.92)	96.477	(92.0429, 7.90981)	(338.677, -7.18039)
14	23517	1.71	(231.231, 2.766)	108.133	(92.0429, 7.90981)	(369.804, -10.5655)
15	22934	1.71	(225.019, 5.508)	96.481	(101.001, 9.61623)	(348.205, -9.14379)
16	23437	1.71	(220.429, 2.582)	96.257	(96.5377, 8.44539)	(343.844, -8.49584)
17	23501	1.71	(218.164, 2.249)	97.148	(92.0429, 7.90981)	(343.844, -8.49584)
18	23006	1.71	(228.763, 3.903)	101.523	(98.1303, 8.86321)	(358.7, -9.8346)
19	23444	1.71	(233.05, 3.085)	106.055	(96.5377, 8.44539)	(368.912, -10.5067)
20	23519	1.71	(221.571, 2.45)	101.619	(92.0429, 7.90981)	(350.587, -9.30057)
21	22933	1.71	(229.189, 5.644)	99.316	(101.001, 9.61623)	(356.495, -9.68942)
22	22996	1.71	(233.898, 4.071)	104.023	(98.1303, 8.86321)	(368.912, -10.5067)
23	23436	1.71	(224.24, 2.796)	98.345	(96.5377, 8.44539)	(351.387, -9.35323)
24	23438	1.71	(218.168, 2.301)	94.169	(96.5377, 8.44539)	(339.428, -7.37268)
25	23502	1.71	(215.905, 1.968)	95.653	(92.0429, 7.90981)	(339.428, -7.37268)
26	23454	1.71	(227.917, 2.917)	103.066	(96.5377, 8.44539)	(358.7, -9.8346)
27	23500	1.71	(221.973, 2.463)	99.786	(92.0429, 7.90981)	(351.387, -9.35323)
28	23005	1.72	(234.347, 4.086)	105.213	(98.1303, 8.86321)	(369.804, -10.5655)
29	23453	1.72	(233.499, 3.099)	106.492	(96.5377, 8.44539)	(369.804, -10.5655)
30	23007	1.72	(224.683, 3.769)	98.977	(98.1303, 8.86321)	(350.587, -9.30057)
31	23503	1.72	(214.09, 1.741)	94.452	(92.0429, 7.90981)	(335.873, -6.4629)
32	23439	1.72	(216.351, 2.074)	93.031	(96.5377, 8.44539)	(335.873, -6.4629)
33	23000	1.72	(218.62, 3.239)	93.635	(98.1303, 8.86321)	(338.677, -7.18039)
34	23381	1.72	(228.456, 4.797)	100.668	(99.6329, 9.25742)	(356.495, -9.68942)
35	22935	1.72	(222.258, 5.28)	94.727	(101.001, 9.61623)	(342.789, -8.23283)
36	23448	1.72	(217.784, 2.253)	95.074	(96.5377, 8.44539)	(338.677, -7.18039)
37	23382	1.72	(224.287, 4.661)	97.858	(99.6329, 9.25742)	(348.205, -9.14379)
38	23455	1.72	(223.838, 2.783)	100.699	(96.5377, 8.44539)	(350.587, -9.30057)
39	22942	1.72	(230.299, 5.681)	101.179	(101.001, 9.61623)	(358.7, -9.8346)
40	23504	1.72	(212.564, 1.549)	94.044	(92.0429, 7.90981)	(332.875, -5.69588)
41	23440	1.72	(214.823, 1.882)	91.951	(96.5377, 8.44539)	(332.875, -5.69588)
42	22932	1.72	(235.435, 5.849)	103.819	(101.001, 9.61623)	(368.912, -10.5067)
43	23383	1.73	(221.528, 4.433)	96.023	(99.6329, 9.25742)	(342.789, -8.23283)
44	22941	1.73	(235.884, 5.863)	104.939	(101.001, 9.61623)	(369.804, -10.5655)
45	23499	1.73	(229.065, 2.695)	104.886	(92.0429, 7.90981)	(365.497, -10.2819)
46	23526	1.73	(230.925, 2.756)	109.18	(92.0429, 7.90981)	(369.196, -10.5254)
47	23520	1.73	(218.497, 2.287)	99.666	(92.0429, 7.90981)	(344.496, -8.64687)
48	18846	1.73	(221.525, 2.422)	99.118	(93.6711, 7.96231)	(348.873, -9.18776)
49	23516	1.73	(240.122, 2.943)	113.72	(92.0429, 7.90981)	(387.544, -11.2728)
50	22943	1.73	(226.218, 5.547)	98.579	(101.001, 9.61623)	(350.587, -9.30057)
51	18845	1.73	(227.245, 2.609)	103.169	(93.6711, 7.96231)	(360.253, -9.93678)
52	22936	1.73	(220.139, 5.017)	93.228	(101.001, 9.61623)	(338.677, -7.18039)
53	22989	1.73	(221.272, 3.568)	94.196	(98.1303, 8.86321)	(343.844, -8.49584)
54	18782	1.73	(223.211, 3.029)	98.207	(96.9801, 8.56145)	(348.873, -9.18776)

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55	23435	1.73	(231.333, 3.028)	102.474	(96.5377, 8.44539)	(365.497, -10.2819)
56	23380	1.73	(234.701, 5.002)	105.121	(99.6329, 9.25742)	(368.912, -10.5067)
57	18781	1.73	(228.932, 3.216)	102.049	(96.9801, 8.56145)	(360.253, -9.93678)
58	23525	1.73	(238.003, 2.964)	113.675	(92.0429, 7.90981)	(383.288, -11.3578)
59	22990	1.73	(219.005, 3.287)	92.711	(98.1303, 8.86321)	(339.428, -7.37268)
60	22869	1.73	(230.696, 7.372)	99.077	(103.791, 10.3483)	(356.495, -9.68942)
61	23527	1.73	(225.813, 2.589)	105.572	(92.0429, 7.90981)	(359.026, -9.85604)
62	23462	1.73	(233.193, 3.089)	108.311	(96.5377, 8.44539)	(369.196, -10.5254)
63	22870	1.73	(226.525, 7.236)	96.193	(103.791, 10.3483)	(348.205, -9.14379)
64	18910	1.73	(219.493, 2.422)	100.468	(89.6143, 7.83151)	(348.873, -9.18776)
65	22988	1.73	(225.086, 3.783)	96.683	(98.1303, 8.86321)	(351.387, -9.35323)
66	18854	1.73	(226.801, 2.595)	104.064	(93.6711, 7.96231)	(359.368, -9.87857)
67	23390	1.73	(229.565, 4.834)	102.603	(99.6329, 9.25742)	(358.7, -9.8346)
68	23452	1.73	(242.39, 3.276)	112.329	(96.5377, 8.44539)	(387.544, -11.2728)
69	23008	1.73	(221.606, 3.606)	97.117	(98.1303, 8.86321)	(344.496, -8.64687)
70	23456	1.73	(220.763, 2.62)	98.964	(96.5377, 8.44539)	(344.496, -8.64687)
71	18909	1.74	(225.213, 2.609)	104.427	(89.6143, 7.83151)	(360.253, -9.93678)
72	23384	1.74	(219.414, 4.17)	94.625	(99.6329, 9.25742)	(338.677, -7.18039)
73	23014	1.74	(234.041, 4.076)	107.173	(98.1303, 8.86321)	(369.196, -10.5254)
74	27606	1.74	(229.294, 4.898)	101.377	(99.7542, 9.28926)	(358.032, -9.79063)
75	23389	1.74	(235.15, 5.016)	106.108	(99.6329, 9.25742)	(369.804, -10.5655)
76	22991	1.74	(217.185, 3.06)	91.587	(98.1303, 8.86321)	(335.873, -6.4629)
77	23507	1.74	(243.14, 2.913)	116.984	(92.0429, 7.90981)	(393.607, -11.1516)
78	18837	1.74	(220.556, 2.39)	97.932	(93.6711, 7.96231)	(346.943, -9.06075)
79	24021	1.74	(220.962, 2.547)	106.296	(84.9, 7.6795)	(356.495, -9.68942)
80	23373	1.74	(222.07, 4.499)	95.8	(99.6329, 9.25742)	(343.844, -8.49584)
81	23004	1.74	(243.237, 4.263)	111.138	(98.1303, 8.86321)	(387.544, -11.2728)
82	18847	1.74	(217.772, 2.1)	96.532	(93.6711, 7.96231)	(341.486, -7.89939)
83	24022	1.74	(216.796, 2.411)	103.521	(84.9, 7.6795)	(348.205, -9.14379)
84	27607	1.74	(226.349, 4.801)	99.51	(99.7542, 9.28926)	(352.176, -9.40521)
85	18918	1.74	(224.768, 2.595)	105.335	(89.6143, 7.83151)	(359.368, -9.87857)
86	18790	1.74	(228.487, 3.202)	103.059	(96.9801, 8.56145)	(359.368, -9.87857)
87	23461	1.74	(240.272, 3.297)	112.482	(96.5377, 8.44539)	(383.288, -11.3578)
88	27605	1.74	(233.325, 5.03)	104.036	(99.7542, 9.28926)	(366.046, -10.3181)
89	23957	1.74	(223.675, 2.547)	104.191	(90.315, 7.8541)	(356.495, -9.68942)
90	24030	1.74	(222.071, 2.584)	108.144	(84.9, 7.6795)	(358.7, -9.8346)
91	18853	1.74	(233.936, 2.828)	108.945	(93.6711, 7.96231)	(373.563, -10.8128)
92	23372	1.74	(225.887, 4.713)	97.797	(99.6329, 9.25742)	(351.387, -9.35323)
93	18773	1.74	(222.241, 2.997)	96.36	(96.9801, 8.56145)	(346.943, -9.06075)
94	23374	1.74	(219.799, 4.218)	93.855	(99.6329, 9.25742)	(339.428, -7.37268)
95	23958	1.74	(219.508, 2.411)	101.527	(90.315, 7.8541)	(348.205, -9.14379)
96	18838	1.74	(216.988, 2.002)	96.393	(93.6711, 7.96231)	(339.953, -7.50688)
97	23391	1.74	(225.485, 4.7)	100.176	(99.6329, 9.25742)	(350.587, -9.30057)
98	22871	1.74	(223.757, 7.008)	94.476	(103.791, 10.3483)	(342.789, -8.23283)
99	23463	1.74	(228.08, 2.922)	104.55	(96.5377, 8.44539)	(359.026, -9.85604)
100	18783	1.74	(219.454, 2.707)	95.757	(96.9801, 8.56145)	(341.486, -7.89939)
101	22925	1.74	(222.801, 5.346)	93.829	(101.001, 9.61623)	(343.844, -8.49584)

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Slices of Slip Surface: Optimized

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	98.834265	-1.9711462	996.59345	1190.1012	0	600
2	Optimized	101.80575	-4.819439	1174.3132	1742.5913	328.09554	0
3	Optimized	104.9762	-8.325815	1393.1665	2096.6933	406.18138	0
4	Optimized	108.3627	-12.18323	1633.822	2743.2818	0	182.21
5	Optimized	109.55885	-13.54571	1718.8759	2904.1079	0	182.94
6	Optimized	112.03435	-16.365445	1894.7294	3159.9474	0	233.27
7	Optimized	115.9105	-20.79127	2171.0244	3613.4999	0	281.76
8	Optimized	120.8316	-26.425825	2479.3262	4145.978	0	343.49
9	Optimized	125.7	-32	2759.6528	4691.937	0	393.06
10	Optimized	127.5584	-34.1278	2866.7813	5038.9532	0	357.89
11	Optimized	127.69	-34.2785	2874.3189	5456.8971	0	359.35
12	Optimized	128.48	-35.183005	2919.8736	5046.5053	0	368.09
13	Optimized	132.4	-38.35385	3063.4301	5383.0238	0	398.11
14	Optimized	136.48355	-41.321545	3192.0517	5574.2626	0	426.09
15	Optimized	139.9512	-43.8416	3301.2882	5713.2095	0	449.95
16	Optimized	148.24265	-47.263265	3400.0223	5979.2253	0	480.49
17	Optimized	155.268	-49.19133	3423.0073	5964.282	0	496.54
18	Optimized	158.178	-49.26436	3387.1133	6063.0469	0	495.69
19	Optimized	163.61	-48.354705	3255.1988	5766.5344	0	483.21
20	Optimized	172.22	-46.912845	3046.069	5412.0849	0	463.31
21	Optimized	178.855	-45.801725	2884.8965	5229.1126	0	448.92
22	Optimized	183.44005	-45.033895	2773.4029	5125.606	0	440.86
23	Optimized	189.7326	-44.03428	2623.9331	4992.4613	0	430.36
24	Optimized	196.77755	-42.962815	2459.4636	4856.9004	0	419.11
25	Optimized	201.70405	-42.21354	2363.8763	4767.677	0	411.24
26	Optimized	204.2043	-41.83328	2340.1016	4722.2307	0	407.25
27	Optimized	209.11035	-41.14421	2296.9561	4620.9567	0	400.01
28	Optimized	216.7301	-40.099505	2231.5554	4488.9851	0	389.04
29	Optimized	222.1945	-39.350315	2181.3794	4395.634	0	381.18
30	Optimized	225.3595	-38.93907	2149.4802	4341.4118	0	376.86
31	Optimized	232.3659	-38.08371	2092.4054	4232.7636	0	367.88
32	Optimized	239.2359	-37.26584	2040.4183	4122.8064	0	359.29
33	Optimized	245.305	-36.61693	2001.9018	4036.2068	0	352.48
34	Optimized	254.11845	-35.674595	1944.2702	3911.356	0	342.58

35	Optimized	262.35535	-34.793905	1887.2917	3796.0711	0	333.34
36	Optimized	268.4446	-34.17678	1847.3377	3709.6849	0	326.86
37	Optimized	274.27155	-33.65411	1813.3196	3632.9674	0	313.89
38	Optimized	281.98385	-32.96233	1768.2482	3527.7145	0	301.61
39	Optimized	288.89105	-32.342765	1727.8726	3433.3838	0	292.6
40	Optimized	292.17105	-32.052545	1708.8601	3385.0029	0	289.55
41	Optimized	293.8	-31.93484	1701.0651	3316.425	0	288.32
42	Optimized	299.2181	-31.54334	1675.0315	3061.6239	0	284.21
43	Optimized	304.53605	-30.6265	1616.1935	2838.119	0	274.58
44	Optimized	307.54295	-29.17721	1524.8164	2557.4732	0	259.36
45	Optimized	313.1658	-26.46704	1353.9437	2207.3044	0	230.9
46	Optimized	323.3258	-21.646	1050.0072	1698.3621	0	180.28
47	Optimized	330.3562	-18.34296	828.91707	1333.8306	0	145.6
48	Optimized	331.2012	-17.93913	789.67472	1285.8907	0	141.36
49	Optimized	334.59145	-15.95234	664.70977	1053.7153	0	120.5
50	Optimized	340.74145	-12.34825	439.8099	642.772	0	100
51	Optimized	344.79	-9.9756845	291.76165	377.96794	0	100
52	Optimized	346.2155	-9.140302	239.63623	285.22448	0	100

Slices of Slip Surface: 23510

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	23510	93.44143	-1.2985715	954.63397	1048.6236	0	600
2	23510	95.613715	-3.470856	1090.1612	1345.9654	0	600
3	23510	99.756565	-7.6136995	1348.6768	2005.0707	378.96916	0
4	23510	104.6343	-12.491415	1653.0647	2740.3822	0	179.93
5	23510	107.65145	-15.50857	1841.3437	3057.5005	0	221.99
6	23510	113.435	-21.29214	2202.2027	3666.12	0	285.73
7	23510	119.92645	-27.78357	2576.6441	4323.9703	0	357.28
8	23510	124.1429	-32	2781.2279	4748.399	0	394.07
9	23510	126.92645	-34.78357	2916.4702	5086.0114	0	364.99
10	23510	130.92645	-38.78357	3110.6574	5384.0457	0	403.41
11	23510	134.84645	-42.70357	3301.0034	5677.8866	0	441.24
12	23510	138.70355	-46.560715	3488.2546	5923.3286	0	478.64
13	23510	147.92855	-48.98255	3511.6465	6335.0266	0	498.43
14	23510	156.91	-47.900095	3319.6204	5935.0583	0	482.22
15	23510	163.61	-47.092605	3176.4855	5611.6339	0	470.05
16	23510	172.22	-46.05492	2992.5559	5301.2639	0	454.32
17	23510	178.855	-45.25526	2850.721	5153.3422	0	443.18

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18	23510	185.5775	-44.445055	2707.0534	5036.4019	0	434.67
19	23510	195.3925	-43.26214	2497.3635	4880.0195	0	422.25
20	23510	203.08245	-42.33534	2371.3969	4762.4187	0	412.52
21	23510	209.53365	-41.557835	2322.7947	4656.9551	0	404.36
22	23510	216.8712	-40.673505	2267.3193	4542.8923	0	395.07
23	23510	223.705	-39.84989	2209.6026	4439.438	0	386.42
24	23510	230.305	-39.05445	2153.2679	4339.7741	0	378.07
25	23510	237.175	-38.22647	2100.6646	4233.4113	0	369.38
26	23510	245.305	-37.24663	2041.2455	4106.0691	0	359.09
27	23510	253.7072	-36.233985	1979.3604	3974.7892	0	348.46
28	23510	261.1216	-35.34039	1921.7819	3860.1679	0	339.07
29	23510	268.536	-34.446795	1864.2035	3745.6804	0	329.69
30	23510	275.6424	-33.590325	1808.9616	3628.7299	0	312.32
31	23510	282.4408	-32.770975	1756.2422	3510.1478	0	299.3
32	23510	289.12	-31.96599	1704.2829	3393.5828	0	288.64
33	23510	293.8	-31.40195	1667.8238	3262.0374	0	282.72
34	23510	300.3162	-30.61661	1616.8469	2916.4176	0	274.47
35	23510	307.3412	-29.76995	1561.8722	2548.5587	0	265.58
36	23510	313.26785	-29.055665	1515.4688	2401.325	0	258.08
37	23510	323.42785	-24.712065	1241.3143	2041.6997	0	212.48
38	23510	330.415	-20.32175	951.3875	1557.3215	0	166.38
39	23510	335.868	-16.8954	723.55528	1147.3396	0	130.4
40	23510	342.018	-13.0311	482.42026	705.55095	0	100
41	23510	344.79	-11.28934	373.72897	512.37147	0	100
42	23510	347.1123	-9.8301345	282.67995	354.12317	0	100

Slices of Slip Surface: 23509

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	23509	93.44143	-1.2985715	954.63397	1048.573	0	600
2	23509	95.613715	-3.470856	1090.1612	1346.1025	0	600
3	23509	99.756565	-7.6136995	1348.6768	2004.9657	378.90857	0
4	23509	104.6343	-12.491415	1653.0647	2740.3822	0	179.93
5	23509	107.65145	-15.50857	1841.3437	3057.2661	0	221.99
6	23509	113.435	-21.29214	2202.2027	3665.8719	0	285.73
7	23509	119.92645	-27.78357	2576.6441	4323.6513	0	357.28
8	23509	124.1429	-32	2781.2279	4748.0455	0	394.07

9	23509	126.92645	-34.78357	2916.4702	5085.5602	0	364.99
10	23509	130.92645	-38.78357	3110.6574	5383.606	0	403.41
11	23509	134.84645	-42.70357	3301.0034	5677.3841	0	441.24
12	23509	138.70355	-46.560715	3488.2546	5922.9922	0	478.64
13	23509	147.92855	-48.98255	3511.6465	6335.1901	0	498.43
14	23509	156.91	-47.900095	3319.6204	5935.2288	0	482.22
15	23509	163.61	-47.092605	3176.4855	5611.7649	0	470.05
16	23509	172.22	-46.05492	2992.5559	5301.3669	0	454.32
17	23509	178.855	-45.25526	2850.721	5153.3422	0	443.18
18	23509	185.5775	-44.445055	2707.0534	5036.503	0	434.67
19	23509	195.3925	-43.26214	2497.3635	4880.1207	0	422.25
20	23509	203.08245	-42.33534	2371.3969	4762.4187	0	412.52
21	23509	209.53365	-41.557835	2322.7947	4657.0904	0	404.36
22	23509	216.8712	-40.673505	2267.3193	4543.0277	0	395.07
23	23509	223.705	-39.84989	2209.6026	4439.5949	0	386.42
24	23509	230.305	-39.05445	2153.2679	4339.9186	0	378.07
25	23509	237.175	-38.22647	2100.6646	4233.4113	0	369.38
26	23509	245.305	-37.24663	2041.2455	4106.1748	0	359.09
27	23509	253.7072	-36.233985	1979.3604	3974.7892	0	348.46
28	23509	261.1216	-35.34039	1921.7819	3860.3018	0	339.07
29	23509	268.536	-34.446795	1864.2035	3745.6804	0	329.69
30	23509	275.6424	-33.590325	1808.9616	3628.7299	0	312.32
31	23509	282.4408	-32.770975	1756.2422	3510.1478	0	299.3
32	23509	289.12	-31.96599	1704.2829	3393.5828	0	288.64
33	23509	293.8	-31.40195	1667.8238	3262.1083	0	282.72
34	23509	300.3162	-30.61661	1616.8469	2916.5147	0	274.47
35	23509	307.3412	-29.76995	1561.8722	2548.6107	0	265.58
36	23509	313.26785	-29.055665	1515.4688	2401.4485	0	258.08
37	23509	323.42785	-25.61353	1297.5145	2111.0372	0	221.94
38	23509	330.415	-22.2487	1071.6201	1738.8704	0	186.61
39	23509	337.41	-18.880085	847.42349	1329.5517	0	151.24
40	23509	344.79	-15.326065	625.62399	913.89741	0	113.92
41	23509	346.7818	-14.366865	565.77331	804.34472	0	103.85
42	23509	352.0191	-11.844711	408.39005	535.5181	0	100

Slices of Slip Surface: 22998

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	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	22998	100.84338	-1.5576905	970.79484	1179.0327	0	600
2	22998	107.09635	-7.81066	1360.9465	2104.9425	429.54632	0
3	22998	111.96095	-12.675245	1664.545	2869.2517	0	184.41
4	22998	115.49785	-16.212145	1885.2832	3232.2793	0	233.47
5	22998	122.71	-23.42429	2266.0644	3924.2293	0	312.95
6	22998	128.49785	-29.212145	2547.0327	4452.1241	0	369.68
7	22998	131.2857	-32	2682.4097	4657.5358	0	389.43
8	22998	134.41785	-35.132145	2834.4717	4936.3185	0	363.82
9	22998	138.41785	-39.132145	3028.6537	5211.9669	0	402.42
10	22998	141.5714	-42.285715	3181.8216	5470.4611	0	432.98
11	22998	145.4373	-42.285715	3128.1693	5682.6321	0	430.69
12	22998	151.50875	-41.801185	3013.9958	5439.1971	0	422.08
13	22998	156.91	-41.37014	2912.2186	5219.4877	0	414.4
14	22998	163.61	-40.83545	2785.9974	4925.3699	0	404.83
15	22998	172.22	-40.148335	2623.919	4653.152	0	392.47
16	22998	178.855	-39.618835	2499.0245	4534.8933	0	384
17	22998	185.5775	-39.082345	2372.4877	4448.9222	0	378.36
18	22998	195.3925	-38.29906	2187.6449	4338.0165	0	370.14
19	22998	205.36	-37.50361	2069.9023	4224.614	0	361.79
20	22998	215.48	-36.69599	2019.1742	4111.3378	0	353.31
21	22998	223.705	-36.039595	1971.7722	4022.1255	0	346.42
22	22998	230.305	-35.512885	1932.2846	3951.1933	0	340.89
23	22998	237.175	-34.96463	1897.0255	3874.581	0	335.13
24	22998	244.9362	-34.34525	1860.0447	3786.9104	0	328.63
25	22998	249.6312	-33.97057	1838.762	3733.3382	0	333.22
26	22998	254.48	-33.583615	1813.7647	3673.3657	0	326.01
27	22998	263.44	-32.868565	1766.927	3562.5573	0	312.68
28	22998	272.4	-32.153515	1720.0893	3451.1926	0	299.35
29	22998	281.36	-31.438465	1673.3628	3339.6054	0	286.01
30	22998	289.12	-30.81918	1632.7663	3242.7392	0	276.6
31	22998	293.8	-30.445695	1608.1373	3134.7124	0	272.68

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32	22998	297.2924	-30.166985	1589.7498	2967.0247	0	269.75
33	22998	304.3174	-29.60636	1552.5652	2638.2998	0	263.87
34	22998	313.26785	-28.892075	1505.2234	2375.8067	0	256.37
35	22998	323.42785	-24.712065	1241.3143	2037.7019	0	212.48
36	22998	330.415	-20.32175	951.3875	1554.2653	0	166.38
37	22998	335.868	-16.8954	723.55528	1144.9509	0	130.4
38	22998	342.018	-13.0311	482.42026	703.98599	0	100
39	22998	344.79	-11.28934	373.72897	511.13236	0	100
40	22998	347.1123	-9.8301345	282.67995	353.22785	0	100

Slices of Slip Surface: 23511

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	23511	93.44143	-1.2985715	954.63397	1050.6712	0	600
2	23511	95.613715	-3.470856	1090.1612	1347.1078	0	600
3	23511	99.756565	-7.6136995	1348.6768	2006.225	379.63561	0
4	23511	104.6343	-12.491415	1653.0647	2742.0228	0	179.93
5	23511	107.65145	-15.50857	1841.3437	3059.3754	0	221.99
6	23511	113.435	-21.29214	2202.2027	3668.4357	0	285.73
7	23511	119.92645	-27.78357	2576.6441	4326.682	0	357.28
8	23511	124.1429	-32	2781.2279	4751.4042	0	394.07
9	23511	126.92645	-34.78357	2916.4702	5088.7187	0	364.99
10	23511	130.92645	-38.78357	3110.6574	5387.3433	0	403.41
11	23511	134.84645	-42.70357	3301.0034	5680.9017	0	441.24
12	23511	138.70355	-46.560715	3488.2546	5927.1404	0	478.64
13	23511	147.92855	-48.98255	3511.6465	6334.2908	0	498.43
14	23511	156.91	-47.900095	3319.6204	5934.3759	0	482.22
15	23511	163.61	-47.092605	3176.4855	5610.979	0	470.05
16	23511	172.22	-46.05492	2992.5559	5300.543	0	454.32
17	23511	178.855	-45.25526	2850.721	5152.5216	0	443.18
18	23511	185.5775	-44.445055	2707.0534	5035.6938	0	434.67
19	23511	195.3925	-43.26214	2497.3635	4879.4126	0	422.25
20	23511	203.08245	-42.33534	2371.3969	4761.7051	0	412.52
21	23511	209.53365	-41.557835	2322.7947	4656.4139	0	404.36
22	23511	216.8712	-40.673505	2267.3193	4542.3511	0	395.07
23	23511	223.705	-39.84989	2209.6026	4438.9675	0	386.42

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24	23511	230.305	-39.05445	2153.2679	4339.3406	0	378.07
25	23511	237.175	-38.22647	2100.6646	4232.8333	0	369.38
26	23511	245.305	-37.24663	2041.2455	4105.6461	0	359.09
27	23511	253.7072	-36.233985	1979.3604	3974.2536	0	348.46
28	23511	261.1216	-35.34039	1921.7819	3859.7662	0	339.07
29	23511	268.536	-34.446795	1864.2035	3745.2787	0	329.69
30	23511	275.6424	-33.590325	1808.9616	3628.2918	0	312.32
31	23511	282.4408	-32.770975	1756.2422	3509.7096	0	299.3
32	23511	289.12	-31.96599	1704.2829	3393.1288	0	288.64
33	23511	293.8	-31.40195	1667.8238	3261.6828	0	282.72
34	23511	300.3162	-30.61661	1616.8469	2916.1266	0	274.47
35	23511	307.3412	-29.76995	1561.8722	2548.2466	0	265.58
36	23511	313.26785	-29.055665	1515.4688	2401.0779	0	258.08
37	23511	323.42785	-23.673235	1176.4751	1958.0339	0	201.57
38	23511	330.415	-18.101175	812.82722	1341.6044	0	143.06
39	23511	333.40885	-15.713655	649.81194	1053.1065	0	117.99
40	23511	338.6926	-11.5	386.87544	583.07522	0	100
41	23511	342.3085	-8.6164165	206.94223	272.47976	0	100

Slices of Slip Surface: 22997

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	22997	100.84338	-1.5576905	970.79484	1179.0978	0	600
2	22997	107.09635	-7.81066	1360.9465	2104.8426	429.48865	0
3	22997	111.96095	-12.675245	1664.545	2869.2517	0	184.41
4	22997	115.49785	-16.212145	1885.2832	3231.9597	0	233.47
5	22997	122.71	-23.42429	2266.0644	3923.9464	0	312.95
6	22997	128.49785	-29.212145	2547.0327	4451.8549	0	369.68
7	22997	131.2857	-32	2682.4097	4657.1822	0	389.43
8	22997	134.41785	-35.132145	2834.4717	4936.0062	0	363.82
9	22997	138.41785	-39.132145	3028.6537	5211.5971	0	402.42
10	22997	141.5714	-42.285715	3181.8216	5470.3374	0	432.98
11	22997	145.4373	-42.285715	3128.1693	5682.7713	0	430.69
12	22997	151.50875	-41.801185	3013.9958	5439.3972	0	422.08

13	22997	156.91	-41.37014	2912.2186	5219.4877	0	414.4
14	22997	163.61	-40.83545	2785.9974	4925.3699	0	404.83
15	22997	172.22	-40.148335	2623.919	4653.2554	0	392.47
16	22997	178.855	-39.618835	2499.0245	4534.8933	0	384
17	22997	185.5775	-39.082345	2372.4877	4449.0238	0	378.36
18	22997	195.3925	-38.29906	2187.6449	4338.1181	0	370.14
19	22997	205.36	-37.50361	2069.9023	4224.7125	0	361.79
20	22997	215.48	-36.69599	2019.1742	4111.4363	0	353.31
21	22997	223.705	-36.039595	1971.7722	4022.1255	0	346.42
22	22997	230.305	-35.512885	1932.2846	3951.1933	0	340.89
23	22997	237.175	-34.96463	1897.0255	3874.581	0	335.13
24	22997	244.9362	-34.34525	1860.0447	3787.0256	0	328.63
25	22997	249.6312	-33.97057	1838.762	3733.4733	0	333.22
26	22997	254.48	-33.583615	1813.7647	3673.477	0	326.01
27	22997	263.44	-32.868565	1766.927	3562.5573	0	312.68
28	22997	272.4	-32.153515	1720.0893	3451.3039	0	299.35
29	22997	281.36	-31.438465	1673.3628	3339.6054	0	286.01
30	22997	289.12	-30.81918	1632.7663	3242.8912	0	276.6
31	22997	293.8	-30.445695	1608.1373	3134.748	0	272.68
32	22997	297.2924	-30.166985	1589.7498	2967.2629	0	269.75
33	22997	304.3174	-29.60636	1552.5652	2638.4009	0	263.87
34	22997	313.26785	-28.892075	1505.2234	2375.8067	0	256.37
35	22997	323.42785	-25.61353	1297.5145	2107.8101	0	221.94
36	22997	330.415	-22.2487	1071.6201	1736.2048	0	186.61
37	22997	337.41	-18.880085	847.42349	1327.3542	0	151.24
38	22997	344.79	-15.326065	625.62399	912.28592	0	113.92
39	22997	346.7818	-14.366865	565.77331	803.04376	0	103.85
40	22997	352.0191	-11.844711	408.39005	534.5518	0	100

Slices of Slip Surface: 23446

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	23446	98.63119	-1.9470298	995.10022	1143.7843	0	600

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2	23446	103.8829	-7.7504985	1357.264	2040.1983	394.29225	0
3	23446	108.10055	-12.411275	1648.0792	2770.5172	0	182.05
4	23446	113.435	-18.306135	2015.9262	3363.6177	0	254.38
5	23446	120.86355	-26.51513	2484.5117	4170.4987	0	344.45
6	23446	125.86355	-32.04043	2759.958	4715.7307	0	393.38
7	23446	131.29315	-38.04043	3059.1923	5258.0131	0	395.58
8	23446	135.21315	-42.37226	3275.2453	5619.9134	0	437.63
9	23446	138.70355	-46.229405	3467.5986	5844.2254	0	475.23
10	23446	147.92855	-48.98255	3511.6465	6336.9071	0	498.43
11	23446	156.91	-47.900095	3319.6204	5937.4465	0	482.22
12	23446	163.61	-47.092605	3176.4855	5613.7296	0	470.05
13	23446	172.22	-46.05492	2992.5559	5303.0147	0	454.32
14	23446	178.855	-45.25526	2850.721	5156.0772	0	443.18
15	23446	185.5775	-44.445055	2707.0534	5038.1215	0	434.67
16	23446	195.3925	-43.26214	2497.3635	4881.7391	0	422.25
17	23446	203.08245	-42.33534	2371.3969	4764.5596	0	412.52
18	23446	209.53365	-41.557835	2322.7947	4657.9023	0	404.36
19	23446	216.8712	-40.673505	2267.3193	4543.8395	0	395.07
20	23446	223.705	-39.84989	2209.6026	4440.3791	0	386.42
21	23446	230.305	-39.05445	2153.2679	4340.6412	0	378.07
22	23446	237.175	-38.22647	2100.6646	4234.1339	0	369.38
23	23446	245.305	-37.24663	2041.2455	4106.9149	0	359.09
24	23446	253.7072	-36.233985	1979.3604	3975.5926	0	348.46
25	23446	261.1216	-35.34039	1921.7819	3860.9713	0	339.07
26	23446	268.536	-34.446795	1864.2035	3746.4839	0	329.69
27	23446	275.6424	-33.590325	1808.9616	3629.4601	0	312.32
28	23446	282.4408	-32.770975	1756.2422	3510.8779	0	299.3
29	23446	289.12	-31.96599	1704.2829	3394.1882	0	288.64
30	23446	293.8	-31.40195	1667.8238	3262.7111	0	282.72
31	23446	300.3162	-30.61661	1616.8469	2917.0968	0	274.47
32	23446	307.3412	-29.76995	1561.8722	2549.1048	0	265.58
33	23446	313.26785	-29.055665	1515.4688	2401.8192	0	258.08
34	23446	323.42785	-24.712065	1241.3143	2043.2851	0	212.48
35	23446	330.415	-20.32175	951.3875	1558.5239	0	166.38
36	23446	335.868	-16.8954	723.55528	1148.2584	0	130.4
37	23446	342.018	-13.0311	482.42026	706.15497	0	100

38	23446	344.79	-11.28934	373.72897	512.81892	0	100
39	23446	347.1123	-9.8301345	282.67995	354.36735	0	100

Slices of Slip Surface: 23445

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	23445	98.63119	-1.9470298	995.10022	1143.7683	0	600
2	23445	103.8829	-7.7504985	1357.264	2040.1983	394.29225	0
3	23445	108.10055	-12.411275	1648.0792	2770.3906	0	182.05
4	23445	113.435	-18.306135	2015.9262	3363.3823	0	254.38
5	23445	120.86355	-26.51513	2484.5117	4170.1796	0	344.45
6	23445	125.86355	-32.04043	2759.958	4715.549	0	393.38
7	23445	131.29315	-38.04043	3059.1923	5257.7322	0	395.58
8	23445	135.21315	-42.37226	3275.2453	5619.7142	0	437.63
9	23445	138.70355	-46.229405	3467.5986	5843.9063	0	475.23
10	23445	147.92855	-48.98255	3511.6465	6336.9889	0	498.43
11	23445	156.91	-47.900095	3319.6204	5937.6171	0	482.22
12	23445	163.61	-47.092605	3176.4855	5613.7296	0	470.05
13	23445	172.22	-46.05492	2992.5559	5303.1177	0	454.32
14	23445	178.855	-45.25526	2850.721	5156.3507	0	443.18
15	23445	185.5775	-44.445055	2707.0534	5038.2226	0	434.67
16	23445	195.3925	-43.26214	2497.3635	4881.8403	0	422.25
17	23445	203.08245	-42.33534	2371.3969	4764.738	0	412.52
18	23445	209.53365	-41.557835	2322.7947	4658.0376	0	404.36
19	23445	216.8712	-40.673505	2267.3193	4543.9748	0	395.07
20	23445	223.705	-39.84989	2209.6026	4440.3791	0	386.42
21	23445	230.305	-39.05445	2153.2679	4340.7857	0	378.07
22	23445	237.175	-38.22647	2100.6646	4234.2784	0	369.38
23	23445	245.305	-37.24663	2041.2455	4106.9149	0	359.09
24	23445	253.7072	-36.233985	1979.3604	3975.5926	0	348.46
25	23445	261.1216	-35.34039	1921.7819	3861.1052	0	339.07
26	23445	268.536	-34.446795	1864.2035	3746.4839	0	329.69
27	23445	275.6424	-33.590325	1808.9616	3629.4601	0	312.32
28	23445	282.4408	-32.770975	1756.2422	3510.8779	0	299.3
29	23445	289.12	-31.96599	1704.2829	3394.1882	0	288.64
30	23445	293.8	-31.40195	1667.8238	3262.7465	0	282.72

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31	23445	300.3162	-30.61661	1616.8469	2917.0968	0	274.47
32	23445	307.3412	-29.76995	1561.8722	2549.1308	0	265.58
33	23445	313.26785	-29.055665	1515.4688	2401.9427	0	258.08
34	23445	323.42785	-25.61353	1297.5145	2112.3574	0	221.94
35	23445	330.415	-22.2487	1071.6201	1739.9366	0	186.61
36	23445	337.41	-18.880085	847.42349	1330.3575	0	151.24
37	23445	344.79	-15.326065	625.62399	914.4834	0	113.92
38	23445	346.7818	-14.366865	565.77331	804.87692	0	103.85
39	23445	352.0191	-11.844711	408.39005	535.85026	0	100

Slices of Slip Surface: 23508

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	23508	93.44143	-1.2985715	954.63397	1050.8482	0	600
2	23508	95.613715	-3.470856	1090.1612	1347.976	0	600
3	23508	99.756565	-7.6136995	1348.6768	2006.12	379.57502	0
4	23508	104.6343	-12.491415	1653.0647	2741.3197	0	179.93
5	23508	107.65145	-15.50857	1841.3437	3058.6723	0	221.99
6	23508	113.435	-21.29214	2202.2027	3667.5259	0	285.73
7	23508	119.92645	-27.78357	2576.6441	4325.5654	0	357.28
8	23508	124.1429	-32	2781.2279	4750.3436	0	394.07
9	23508	126.92645	-34.78357	2916.4702	5087.3651	0	364.99
10	23508	130.92645	-38.78357	3110.6574	5386.0242	0	403.41
11	23508	134.84645	-42.70357	3301.0034	5679.8966	0	441.24
12	23508	138.70355	-46.560715	3488.2546	5925.6829	0	478.64
13	23508	147.92855	-48.98255	3511.6465	6334.6996	0	498.43
14	23508	156.91	-47.900095	3319.6204	5934.7171	0	482.22
15	23508	163.61	-47.092605	3176.4855	5611.241	0	470.05
16	23508	172.22	-46.05492	2992.5559	5300.8519	0	454.32
17	23508	178.855	-45.25526	2850.721	5152.7951	0	443.18
18	23508	185.5775	-44.445055	2707.0534	5035.9973	0	434.67
19	23508	195.3925	-43.26214	2497.3635	4879.7161	0	422.25
20	23508	203.08245	-42.33534	2371.3969	4762.0619	0	412.52
21	23508	209.53365	-41.557835	2322.7947	4656.6845	0	404.36
22	23508	216.8712	-40.673505	2267.3193	4542.6217	0	395.07
23	23508	223.705	-39.84989	2209.6026	4439.1243	0	386.42

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24	23508	233.74	-38.64046	2126.9662	4286.3037	0	373.72
25	23508	245.305	-37.24663	2041.2455	4105.8576	0	359.09
26	23508	255.5608	-36.010585	1964.8994	3945.8673	0	346.11
27	23508	266.6824	-34.670195	1878.5763	3774.1138	0	332.04
28	23508	279.0416	-33.18065	1782.6019	3569.2198	0	305.81
29	23508	289.12	-31.96599	1704.2829	3393.2801	0	288.64
30	23508	293.8	-31.40195	1667.8238	3261.8246	0	282.72
31	23508	300.3162	-30.61661	1616.8469	2916.2236	0	274.47
32	23508	307.3412	-29.76995	1561.8722	2548.3766	0	265.58
33	23508	313.26785	-29.055665	1515.4688	2401.2014	0	258.08
34	23508	323.42785	-26.4222	1348.0225	2171.02	0	230.43
35	23508	330.415	-23.97729	1179.5187	1897.3725	0	204.76
36	23508	337.41	-21.529635	1012.7179	1586.7218	0	179.06
37	23508	344.79	-18.947265	851.60541	1275.2402	0	151.95
38	23508	352.47425	-16.258435	683.80824	974.56038	0	123.71
39	23508	363.9201	-12.25335	433.89264	537.66684	0	100

Slices of Slip Surface: 23518

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	23518	93.44143	-1.2985715	954.63397	1043.6182	0	600
2	23518	95.613715	-3.470856	1090.1612	1348.3873	0	600
3	23518	99.756565	-7.6136995	1348.6768	2001.2928	376.78804	0
4	23518	104.6343	-12.491415	1653.0647	2732.8827	0	179.93
5	23518	107.65145	-15.50857	1841.3437	3048.8291	0	221.99
6	23518	113.435	-21.29214	2202.2027	3654.0454	0	285.73
7	23518	119.92645	-27.78357	2576.6441	4310.571	0	357.28
8	23518	124.1429	-32	2781.2279	4733.7266	0	394.07
9	23518	126.92645	-34.78357	2916.4702	5072.4752	0	364.99
10	23518	130.92645	-38.78357	3110.6574	5366.2384	0	403.41
11	23518	134.84645	-42.70357	3301.0034	5662.8112	0	441.24
12	23518	138.70355	-46.560715	3488.2546	5903.9332	0	478.64
13	23518	147.92855	-49.234705	3527.3072	6348.1678	0	501.04
14	23518	156.91	-48.52526	3358.6103	5989.2476	0	488.71
15	23518	163.61	-47.996025	3232.9376	5695.5833	0	479.47
16	23518	172.22	-47.315915	3071.2427	5423.7698	0	467.53
17	23518	178.855	-46.791815	2946.7441	5306.8857	0	459.31

file:///C|/Documents%20and%20Settings/b4edgslc/Desktop/2nd.cg.thru.bs.html[5/5/2011 10:11:52 AM]

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18	23518	185.5775	-46.260805	2820.3539	5218.7922	0	453.74
19	23518	195.3925	-45.485515	2636.1086	5106.3559	0	445.6
20	23518	205.36	-44.69818	2518.8346	4992.0603	0	437.33
21	23518	215.48	-43.8988	2468.5958	4878.8753	0	428.94
22	23518	223.705	-43.249105	2421.6827	4789.5048	0	422.12
23	23518	233.1942	-42.49955	2367.7845	4686.388	0	414.25
24	23518	240.0642	-41.95689	2332.9872	4609.9009	0	408.55
25	23518	245.305	-41.54292	2309.3136	4550.5751	0	404.2
26	23518	254.48	-40.81818	2265.1542	4447.9756	0	396.59
27	23518	263.44	-40.110425	2218.8698	4349.2875	0	389.16
28	23518	272.4	-39.402675	2172.4742	4250.5993	0	381.73
29	23518	281.36	-38.694925	2126.0785	4151.9112	0	374.3
30	23518	289.12	-38.08196	2085.8807	4066.4491	0	367.86
31	23518	293.8	-37.712285	2061.5782	3965.1486	0	363.98
32	23518	298.7125	-37.324245	2035.9359	3736.6881	0	359.9
33	23518	305.7375	-36.76934	1999.182	3409.8769	0	354.08
34	23518	313.26785	-36.174515	1959.6204	3211.3657	0	347.83
35	23518	318.7635	-34.92857	1880.2461	3227.7564	0	334.75
36	23518	323.4243	-32	1696.1182	2861.1354	0	289
37	23518	328.08865	-29.069205	1511.7419	2504.7656	0	258.23
38	23518	330.415	-27.607465	1406.0133	2330.6464	0	242.88
39	23518	337.41	-23.212215	1117.7449	1807.6531	0	196.73
40	23518	344.79	-18.57505	828.37862	1272.1517	0	148.04
41	23518	349.0456	-15.901095	661.50791	974.28816	0	119.96
42	23518	355.38575	-11.917302	412.91459	546.23563	0	100

LWL Case.BS

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 217
Last Edited By: Cox, Lane MVK
Date: 4/20/2011
Time: 1:13:51 PM
File Name: 5c(2) Typical 1.2nd SC.80%SG.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\2nd Stage Constuction\80%SG,1 Layer of Fabric\Slope W\
Last Solved Date: 4/20/2011
Last Solved Time: 1:16:18 PM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

LWL Case.BS

Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

SlipSurface
- Direction of movement: Right to Left
- Use Passive Mode: No
- Slip Surface Option: Block
- Critical slip surfaces saved: 100
- Optimize Critical Slip Surface Location: Yes
- Tension Crack
  - Tension Crack Option: Tension Crack Line
  - Percentage Wet: 0
  - Tension Crack Fluid Unit Weight: 62.4 pcf

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FOS Distribution
FOS Calculation Option: Constant
Restrict Block Crossing: Yes
Advanced
Number of Slices: 30
Optimization Tolerance: 0.01
Minimum Slip Surface Depth: 0.1 ft
Optimization Maximum Iterations: 2000
Optimization Convergence Tolerance: 1e-007
Starting Optimization Points: 8
Ending Optimization Points: 16
Complete Passes per Insertion: 1
Driving Side Maximum Convex Angle: 5 °
Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH
Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH above 0
Model: Mohr-Coulomb
Unit Weight: 102 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, 0 to -9
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -9 (2)
Cohesion Spatial Fn: CH, 0 to -9
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -9 to -14
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -9 to -14 (2)

Cohesion Spatial Fn: CH, -9 to -14
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -14 to -30
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -14 to -30 (2)
Cohesion Spatial Fn: CH, -14 to -30
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -30 to -34
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -30 to -34 (2)
Cohesion Spatial Fn: CH, 30 to -34
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sand Fill
Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -34 to -42
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -34 to -42 (2)
Cohesion Spatial Fn: CH, -34 to -42
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -42 to -80
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -42 to -80 (2)
Cohesion Spatial Fn: CH, -42 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure

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Piezometric Line: 1

CH, 0 to -9 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -9 (2)
Cohesion Spatial Fn: CH, 0 to -9 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -9 to -14 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -9 to -14 (2)
Cohesion Spatial Fn: CH, -9 to -14 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -14 to -30 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -14 to -30 (2)
Cohesion Spatial Fn: CH, -14 to -30 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -30 to -34 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -30 to -34 (2)
Cohesion Spatial Fn: CH, 30 to -34 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Limits

Left Coordinate: (-200, -2.13) ft
Right Coordinate: (500, -4.5) ft

Slip Surface Block

Left Grid
Upper Left: (-45, -35) ft
Lower Left: (13, -35) ft

Lower Right: (13, -70) ft
X Increments: 7
Y Increments: 5
Starting Angle: 135 °
Ending Angle: 160 °
Angle Increments: 7
Right Grid
Upper Left: (139, -14) ft
Lower Left: (202, -14) ft
Lower Right: (202, -65) ft
X Increments: 7
Y Increments: 3
Starting Angle: 20 °
Ending Angle: 45 °
Angle Increments: 7

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	-2.13
	-191.42	-2.12
	-156.88	-2.03
	-119.75	-2.26
	-92.12	-1.99
	-71.42	-1.72
	-45.06	-0.68
	-33.33	-0.27
	-32	0
	22	0
	35.99	-3
	38.18	-3.47
	56.55	-4.85
	177.04	-4.54
	180.67	-4.21
	200.3	-4.33
	220.54	-4.34
	226.87	-4.54
	240.61	-4.57
	250	-4.5
	285.84	-4.64
	295.2	-4.68
	329.57	-4.85
	331.26	-5.3
	447.66	-5.3

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	450.06	-4.54
	500	-4.5

Reinforcements

Reinforcement 1

Type: Fabric
Outside Point: (22, 0) ft
Inside Point: (209, 0) ft
Slip Surface Intersection: (209.11, 0) ft
Total Length: 187 ft
Reinforcement Direction: 180 °
Applied Load Option: Variable
F of S Dependent: No
Contact Cohesion: 265 psf
Contact Phi: 19 °
Interface Factor: 2
Bond Safety Factor: 1
Fabric Capacity: 27000 lbs
Fabric Safety Factor: 1
Fabric Load: 27000 lbs
Load Distribution: Even along reinf.
Load Orientation: 0
Applied Load: 27000 lbs
Fabric Load Used: 0 lbs
Resisting Force Used: 924.63 lbs/ft
Available Bond Length: 0 ft
Required Bond Length: 0 ft
Governing Component: Bond

Tension Crack Line

	X (ft)	Y (ft)
	94.84	8
	98	4
	118	9
	127	9
	166.85564	1.5
	267	-1

Spatial Functions

CH, 0 to -9

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)

Data Point: (-300, -2.5, 50)
Data Point: (-300, -9, 75)
Data Point: (-33.33, 0, 50)
Data Point: (-33.33, -9, 75)
Data Point: (0, 0, 300)
Data Point: (0, -9, 300)
Data Point: (285.84, -4.62, 100)
Data Point: (285.84, -9, 100)
Data Point: (500, 0, 100)
Data Point: (500, -9, 100)

CH, -34 to -42 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -38, 105)
Data Point: (0, -38, 116)
Data Point: (177.04, -38, 106)

CH, -42 to -80 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -61, 105)
Data Point: (0, -61, 105)
Data Point: (177.04, -61, 106)

CH, 0 to -9 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, 0, 300)
Data Point: (0, -9, 300)
Data Point: (46, 0, 148)
Data Point: (46, -9, 148)
Data Point: (122.71, 0, 198)
Data Point: (122.71, -9, 198)
Data Point: (285.84, 0, 100)
Data Point: (285.84, -9, 100)

CH, -9 to -14 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -9, 300)
Data Point: (0, -14, 300)
Data Point: (46, -9, 144)
Data Point: (46, -14, 144)

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Data Point: (122.71, -9, 191)
Data Point: (122.71, -14, 191)
Data Point: (285.84, -9, 100)
Data Point: (285.84, -14, 100)

CH, -14 to -30 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -14, 300)
Data Point: (0, -30, 375)
Data Point: (46, -14, 174)
Data Point: (46, -30, 342)
Data Point: (122.71, -14, 214)
Data Point: (122.71, -30, 382)
Data Point: (285.84, -14, 100)
Data Point: (285.84, -30, 268)

CH, 30 to -34 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -30, 400)
Data Point: (0, -34, 438)
Data Point: (46, -30, 341)
Data Point: (46, -34, 383)
Data Point: (122.71, -30, 374)
Data Point: (122.71, -34, 416)
Data Point: (285.84, -30, 268)
Data Point: (285.84, -34, 310)

CH, -9 to -14

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -9, 75)
Data Point: (-300, -14, 115)
Data Point: (-33.33, -9, 75)
Data Point: (-33.33, -14, 115)
Data Point: (0, -9, 300)
Data Point: (0, -14, 300)
Data Point: (285.84, -9, 100)
Data Point: (285.84, -14, 100)
Data Point: (500, -9, 100)
Data Point: (500, -14, 100)

CH, -14 to -30

Model: Linear Interpolation

Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -14, 115)
Data Point: (-300, -30, 291)
Data Point: (-33.33, -14, 115)
Data Point: (-33.33, -30, 291)
Data Point: (0, -14, 300)
Data Point: (0, -30, 375)
Data Point: (285.84, -14, 100)
Data Point: (285.84, -30, 268)
Data Point: (500, -14, 100)
Data Point: (500, -30, 268)

CH, 30 to -34

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -30, 291)
Data Point: (-300, -34, 335)
Data Point: (-33.33, -30, 291)
Data Point: (-33.33, -34, 335)
Data Point: (0, -30, 400)
Data Point: (0, -34, 438)
Data Point: (285.84, -30, 268)
Data Point: (285.84, -34, 310)
Data Point: (500, -30, 268)
Data Point: (500, -34, 310)

CH, 0 to -9 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -4.5, 90)
Data Point: (0, -4.5, 96)
Data Point: (177.04, -4.54, 87)

CH, -9 to -14 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -11.5, 90)
Data Point: (0, -11.5, 97)
Data Point: (177.04, -11.5, 100)

CH, -14 to -30 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)

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Data Point: (-33.33, -22, 100)
Data Point: (0, -22, 102)
Data Point: (177.04, -22, 100)

CH, -30 to -34 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -32, 122)
Data Point: (0, -32, 113)
Data Point: (177.04, -32, 118)

CH, -34 to -42

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -34, 335)
Data Point: (-300, -42, 423)
Data Point: (-33.33, -34, 335)
Data Point: (-33.33, -42, 423)
Data Point: (0, -34, 438)
Data Point: (0, -42, 514)
Data Point: (177.04, -34, 325)
Data Point: (177.04, -42, 409)
Data Point: (500, -34, 325)
Data Point: (500, -42, 409)

CH, -42 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -42, 423)
Data Point: (-300, -80, 841)
Data Point: (-33.33, -42, 423)
Data Point: (-33.33, -80, 841)
Data Point: (0, -42, 514)
Data Point: (0, -80, 875)
Data Point: (177.04, -42, 409)
Data Point: (177.04, -80, 808)
Data Point: (500, -42, 409)
Data Point: (500, -80, 808)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -42 to -80	1,3,4,2	26600
Region 2	CH, -34 to -42	3,5,69,73,6,4	5600
Region 3	CH above 0	45,21,22,63,64,27,44,65	161.91095

Region 4	Sand Fill	29,30,43,31,32,33,42,34,35,62	606.7023
Region 5	CH, 0 to -9	56,53,54,41,12	267.3158
Region 6	EMBANKMENT FILL CH	59,46,47,60,37,36,35,62	1502.7397
Region 7	EMBANKMENT FILL CH	64,27,44,57,28,62,59	499.34315
Region 8	EMBANKMENT FILL CH	60,61,76,75,40,39,58,38,37	772.15003
Region 9	CH, 0 to -9	16,11,66,65,45,20,19,18,17,15,14,74	1498.6738
Region 10	CH, -9 to -14	11,9,67,66	1000
Region 11	CH, -14 to -30	9,7,68,67	3200
Region 12	CH, -30 to -34	7,5,69,68	800
Region 13	CH, -30 to -34	6,8,72,73	856.64
Region 14	CH, -14 to -30	8,10,71,72	3426.56
Region 15	CH, -9 to -14	10,71,70,55,50,51,52,56,12	954.73385
Region 16	CH, 0 to -9	55,49,48,76,75,70	220.0602
Region 17	CH, -30 to -34 SG	69,68,72,73	1143.36
Region 18	CH, -14 to -30 SG	68,67,71,72	4573.44
Region 19	CH, -9 to -14 SG	67,66,43,31,32,33,42,70,71	1313.1338
Region 20	CH, 0 to -9 SG	66,65,44,57,28,62,29,30,43	438.1553
Region 21	CH, 0 to -9 SG	42,34,35,36,37,38,58,39,40,75,70	538.2795

Points

	X (ft)	Y (ft)
Point 1	-200	-80
Point 2	500	-80
Point 3	-200	-42
Point 4	500	-42
Point 5	-200	-34
Point 6	500	-34
Point 7	-200	-30
Point 8	500	-30
Point 9	-200	-14
Point 10	500	-14
Point 11	-200	-9
Point 12	500	-9
Point 13	-191.42	-2.12
Point 14	-156.88	-2.03
Point 15	-119.75	-2.26
Point 16	-200	-2.13
Point 17	-92.12	-1.99
Point 18	-71.42	-1.72
Point 19	-45.06	-0.68
Point 20	-33.33	-0.27
Point 21	-19.05	1.53
Point 22	-16.9	1.81
Point 23	-6.83	6.48
Point 24	-6.79	6.72
Point 25	-0.92	7.16
Point 26	3.42	6.91

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Point 27	20.53	0.36
Point 28	38.18	-3.47
Point 29	56.55	-4.85
Point 30	70.54	-8.43
Point 31	109.16	-11.38
Point 32	127.67	-11.01
Point 33	135.55	-10.86
Point 34	159.82	-8.55
Point 35	177.04	-4.54
Point 36	180.67	-4.21
Point 37	200.3	-4.33
Point 38	220.54	-4.34
Point 39	240.61	-4.57
Point 40	250	-4.5
Point 41	500	-4.5
Point 42	154	-9
Point 43	73	-9
Point 44	22	0
Point 45	-32	0
Point 46	117.71	14
Point 47	127.71	14
Point 48	329.57	-4.85
Point 49	343.56	-8.43
Point 50	382.18	-11.38
Point 51	400.69	-11.01
Point 52	408.57	-10.86
Point 53	432.84	-8.55
Point 54	450.06	-4.54
Point 55	346.02	-9
Point 56	427.02	-9
Point 57	35.99	-3
Point 58	226.87	-4.54
Point 59	94.84	8
Point 60	167.4	4
Point 61	292.4	0.875
Point 62	46	-4.06
Point 63	-5.16	5.5
Point 64	8	5.2
Point 65	0	0
Point 66	0	-9
Point 67	0	-14
Point 68	0	-30
Point 69	0	-34
Point 70	285.84	-9
Point 71	285.84	-14
Point 72	285.84	-30
Point 73	285.84	-34
Point 74	-194	-2

Point 75	285.84	-4.64
Point 76	309.25	-4.74

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	2.02	(43.161, 0.962)	121.7193	(209.768, 2.94079)	(-105.394, -2.11972)
2	11522	2.37	(43.161, 0.962)	130.114	(213.838, 2.83905)	(-127.487, -2.21207)
3	11523	2.37	(40.827, 1.107)	128.563	(209.173, 2.95567)	(-127.487, -2.21207)
4	11010	2.38	(47.403, 0.972)	125.677	(213.838, 2.83905)	(-119.002, -2.25269)
5	11458	2.38	(49.951, 0.96)	125.611	(213.838, 2.83905)	(-113.906, -2.2029)
6	11011	2.38	(45.069, 1.118)	124.351	(209.173, 2.95567)	(-119.002, -2.25269)
7	11459	2.38	(47.617, 1.105)	123.456	(209.173, 2.95567)	(-113.906, -2.2029)
8	10946	2.38	(53.567, 0.942)	121.273	(213.838, 2.83905)	(-106.676, -2.13225)
9	11074	2.39	(39.603, 0.951)	131.496	(213.838, 2.83905)	(-134.606, -2.16798)
10	10947	2.39	(51.233, 1.088)	119.842	(209.173, 2.95567)	(-106.676, -2.13225)
11	12034	2.39	(38.91, 0.949)	134.75	(213.838, 2.83905)	(-135.992, -2.15939)
12	11586	2.39	(34.668, 0.936)	136.439	(213.838, 2.83905)	(-144.478, -2.10683)
13	11075	2.39	(37.269, 1.096)	130.411	(209.173, 2.95567)	(-134.606, -2.16798)
14	12035	2.39	(36.576, 1.094)	133.251	(209.173, 2.95567)	(-135.992, -2.15939)
15	11521	2.39	(46.217, 0.771)	132.057	(219.945, 2.68638)	(-127.487, -2.21207)
16	11587	2.39	(32.334, 1.081)	134.861	(209.173, 2.95567)	(-144.478, -2.10683)
17	11970	2.39	(46.32, 0.972)	130.018	(213.838, 2.83905)	(-121.169, -2.25121)
18	11971	2.39	(43.986, 1.117)	127.601	(209.173, 2.95567)	(-121.169, -2.25121)
19	11457	2.40	(53.006, 0.769)	127.695	(219.945, 2.68638)	(-113.906, -2.2029)
20	11009	2.40	(50.458, 0.782)	127.471	(219.945, 2.68638)	(-119.002, -2.25269)
21	10498	2.40	(51.543, 0.952)	122.828	(213.838, 2.83905)	(-110.722, -2.17178)
22	10499	2.40	(49.209, 1.097)	120.811	(209.173, 2.95567)	(-110.722, -2.17178)
23	11394	2.40	(55.539, 0.932)	122.129	(213.838, 2.83905)	(-102.732, -2.0937)
24	10562	2.40	(44.538, 0.966)	127.206	(213.838, 2.83905)	(-124.733, -2.22913)
25	12033	2.40	(41.965, 0.758)	136.763	(219.945, 2.68638)	(-135.992, -2.15939)
26	10882	2.40	(58.716, 0.917)	117.726	(213.838, 2.83905)	(-96.3787, -2.03162)
27	10945	2.40	(56.622, 0.751)	123.209	(219.945, 2.68638)	(-106.676, -2.13225)
28	12098	2.41	(29.733, 0.92)	141.074	(213.838, 2.83905)	(-154.35, -2.04567)
29	11395	2.41	(53.205, 1.078)	119.478	(209.173, 2.95567)	(-102.732, -2.0937)
30	10883	2.41	(56.382, 1.062)	116.221	(209.173, 2.95567)	(-96.3787, -2.03162)
31	10563	2.41	(42.204, 1.112)	125.685	(209.173, 2.95567)	(-124.733, -2.22913)
32	10434	2.41	(57.182, 0.924)	118.99	(213.838, 2.83905)	(-99.4464, -2.06159)
33	11073	2.41	(42.658, 0.76)	133.358	(219.945, 2.68638)	(-134.606, -2.16798)
34	11585	2.41	(37.723, 0.745)	138.37	(219.945, 2.68638)	(-144.478, -2.10683)
35	11969	2.41	(49.375, 0.781)	132.168	(219.945, 2.68638)	(-121.169, -2.25121)
36	12099	2.41	(27.399, 1.066)	139.701	(209.173, 2.95567)	(-154.35, -2.04567)
37	10435	2.41	(54.848, 1.07)	117.305	(209.173, 2.95567)	(-99.4464, -2.06159)
38	11906	2.41	(52.363, 0.948)	125.184	(213.838, 2.83905)	(-109.084, -2.15578)
39	11907	2.42	(50.029, 1.093)	123.602	(209.173, 2.95567)	(-109.084, -2.15578)
40	11393	2.42	(58.595, 0.742)	122.929	(219.945, 2.68638)	(-102.732, -2.0937)
41	11138	2.42	(29.589, 0.92)	138.971	(213.838, 2.83905)	(-154.637, -2.0439)
42	10497	2.42	(54.599, 0.761)	125.044	(219.945, 2.68638)	(-110.722, -2.17178)

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43	12097	2.42	(32.788, 0.73)	142.917	(219.945, 2.68638)	(-154.35, -2.04567)
44	10881	2.43	(61.771, 0.726)	119.761	(219.945, 2.68638)	(-96.3787, -2.03162)
45	11139	2.43	(27.255, 1.065)	138.704	(209.173, 2.95567)	(-154.637, -2.0439)
46	10561	2.43	(47.593, 0.776)	129.261	(219.945, 2.68638)	(-124.733, -2.22913)
47	11905	2.43	(55.418, 0.757)	127.307	(219.945, 2.68638)	(-109.084, -2.15578)
48	11650	2.43	(23.835, 0.915)	144.269	(213.838, 2.83905)	(-166.146, -2.02251)
49	10433	2.43	(60.237, 0.734)	121.257	(219.945, 2.68638)	(-99.4464, -2.06159)
50	10370	2.43	(61.889, 0.9)	116.322	(213.838, 2.83905)	(-90.0345, -1.9628)
51	10626	2.43	(35.401, 0.938)	133.592	(213.838, 2.83905)	(-143.012, -2.11591)
52	11651	2.44	(21.502, 1.06)	142.957	(209.173, 2.95567)	(-166.146, -2.02251)
53	10371	2.44	(59.555, 1.045)	114.559	(209.173, 2.95567)	(-90.0345, -1.9628)
54	10627	2.44	(33.067, 1.083)	132.107	(209.173, 2.95567)	(-143.012, -2.11591)
55	11137	2.45	(32.644, 0.729)	140.627	(219.945, 2.68638)	(-154.637, -2.0439)
56	11524	2.45	(38.973, 1.223)	127.574	(205.468, 3.04831)	(-127.487, -2.21207)
57	10818	2.45	(63.106, 0.892)	115.027	(213.838, 2.83905)	(-87.6001, -1.93104)
58	9986	2.45	(55.684, 0.932)	118.793	(213.838, 2.83905)	(-102.442, -2.09087)
59	11330	2.45	(60.312, 0.909)	117.804	(213.838, 2.83905)	(-93.1872, -2.00043)
60	10050	2.45	(49.399, 0.962)	122.649	(213.838, 2.83905)	(-115.011, -2.21369)
61	10819	2.45	(60.772, 1.037)	113.32	(209.173, 2.95567)	(-87.6001, -1.93104)
62	11331	2.45	(57.978, 1.055)	116.255	(209.173, 2.95567)	(-93.1872, -2.00043)
63	11649	2.45	(26.89, 0.724)	146.035	(219.945, 2.68638)	(-166.146, -2.02251)
64	11460	2.45	(45.763, 1.221)	122.388	(205.468, 3.04831)	(-113.906, -2.2029)
65	9987	2.45	(53.35, 1.077)	117.121	(209.173, 2.95567)	(-102.442, -2.09087)
66	10051	2.45	(47.065, 1.108)	120.87	(209.173, 2.95567)	(-115.011, -2.21369)
67	12036	2.45	(34.722, 1.21)	132.084	(205.468, 3.04831)	(-135.992, -2.15939)
68	12162	2.46	(18.095, 0.912)	150.145	(213.838, 2.83905)	(-177.627, -2.01323)
69	11972	2.46	(42.131, 1.233)	126.441	(205.468, 3.04831)	(-121.169, -2.25121)
70	9922	2.46	(60.798, 0.907)	114.441	(213.838, 2.83905)	(-92.2164, -1.99094)
71	10369	2.46	(64.944, 0.709)	118.686	(219.945, 2.68638)	(-90.0345, -1.9628)
72	12163	2.46	(15.761, 1.058)	148.507	(209.173, 2.95567)	(-177.627, -2.01323)
73	11842	2.46	(57.51, 0.923)	122.032	(213.838, 2.83905)	(-98.7908, -2.05519)
74	10625	2.46	(38.456, 0.747)	135.534	(219.945, 2.68638)	(-143.012, -2.11591)
75	11012	2.46	(43.215, 1.233)	123.323	(205.468, 3.04831)	(-119.002, -2.25269)
76	9923	2.46	(58.464, 1.052)	112.872	(209.173, 2.95567)	(-92.2164, -1.99094)
77	11843	2.46	(55.176, 1.068)	119.15	(209.173, 2.95567)	(-98.7908, -2.05519)
78	11588	2.47	(30.48, 1.197)	133.84	(205.468, 3.04831)	(-144.478, -2.10683)
79	11329	2.47	(63.367, 0.718)	119.891	(219.945, 2.68638)	(-93.1872, -2.00043)
80	10817	2.47	(66.161, 0.701)	117.187	(219.945, 2.68638)	(-87.6001, -1.93104)
81	10948	2.47	(49.379, 1.203)	118.734	(205.468, 3.04831)	(-106.676, -2.13225)
82	10114	2.47	(41.212, 0.956)	128.559	(213.838, 2.83905)	(-131.387, -2.18792)
83	10306	2.47	(65.898, 0.873)	114.162	(213.838, 2.83905)	(-82.017, -1.85822)
84	10307	2.47	(63.565, 1.019)	112.337	(209.173, 2.95567)	(-82.017, -1.85822)
85	11076	2.47	(35.415, 1.212)	129.472	(205.468, 3.04831)	(-134.606, -2.16798)
86	10115	2.47	(38.878, 1.101)	126.768	(209.173, 2.95567)	(-131.387, -2.18792)
87	12161	2.47	(21.15, 0.722)	152.075	(219.945, 2.68638)	(-177.627, -2.01323)
88	11841	2.47	(60.565, 0.732)	124.251	(219.945, 2.68638)	(-98.7908, -2.05519)
89	9985	2.47	(58.739, 0.741)	121.048	(219.945, 2.68638)	(-102.442, -2.09087)
90	12100	2.48	(25.545, 1.182)	138.719	(205.468, 3.04831)	(-154.35, -2.04567)
91	10049	2.48	(52.454, 0.772)	124.747	(219.945, 2.68638)	(-115.011, -2.21369)
92	11908	2.48	(48.174, 1.209)	122.37	(205.468, 3.04831)	(-109.084, -2.15578)
93	11396	2.48	(51.351, 1.194)	118.339	(205.468, 3.04831)	(-102.732, -2.0937)
94	9858	2.48	(65.053, 0.879)	113.605	(213.838, 2.83905)	(-83.708, -1.88028)
95	9921	2.49	(63.853, 0.716)	116.57	(219.945, 2.68638)	(-92.2164, -1.99094)
96	9859	2.49	(62.719, 1.025)	110.179	(209.173, 2.95567)	(-83.708, -1.88028)
97	11266	2.49	(64.455, 0.883)	113.989	(213.838, 2.83905)	(-84.9041, -1.89588)
98	11267	2.49	(62.121, 1.028)	112.597	(209.173, 2.95567)	(-84.9041, -1.89588)
99	10884	2.49	(54.528, 1.178)	115.055	(205.468, 3.04831)	(-96.3787, -2.03162)
100	10305	2.49	(68.954, 0.683)	116.601	(219.945, 2.68638)	(-82.017, -1.85822)
101	11202	2.50	(16.346, 0.912)	148.889	(213.838, 2.83905)	(-181.125, -2.01041)

Slices of Slip Surface: Optimized

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	-100.98381	-5.559858	217.35127	336.33802	0	64.72
2	Optimized	-94.35606	-10.72944	543.97719	817.13045	0	88.836
3	Optimized	-92.1294	-12.465405	653.67502	977.60701	0	102.72
4	Optimized	-91.019635	-13.235965	702.63039	1051.9114	0	108.89
5	Optimized	-82.1932	-19.364555	1092.2423	1703.1899	0	174.01
6	Optimized	-72.943565	-25.644615	1491.6435	2361.8133	0	243.09
7	Optimized	-68.5577	-28.28006	1664.4184	2650.8514	0	272.08
8	Optimized	-62.367035	-32	1911.7738	3108.5157	0	313
9	Optimized	-52.049335	-38.19986	2324.0413	3862.9575	0	381.2
10	Optimized	-44.705585	-42.612685	2617.4262	4383.2971	0	429.74
11	Optimized	-38.840585	-45.576435	2815.0651	4700.2722	0	462.34
12	Optimized	-32.665	-48.65918	3027.92	5079.99	0	497.87
13	Optimized	-28.587865	-50.694415	3163.3853	5380.6918	0	529.73
14	Optimized	-22.112865	-53.143235	3316.1527	5650.9578	0	570.58
15	Optimized	-17.975	-54.15045	3378.9653	5833.3913	0	590.18
16	Optimized	-14.52193	-54.990975	3431.4509	6033.4863	0	606.26
17	Optimized	-8.65193	-55.243935	3447.2882	6119.5781	0	621.35
18	Optimized	-2.58	-54.67726	3411.9176	6197.1012	0	628.86
19	Optimized	4	-54.06317	3373.5901	6127.7469	0	626.5
20	Optimized	14.13467	-53.117325	3314.5441	6064.8431	0	612.12
21	Optimized	20.39967	-52.53014	3277.8998	6044.1758	0	603.15

LWL Case.BS

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22	Optimized	21.265	52.432855	3271.8364	6039.367	0	601.75
23	Optimized	27.50557	-51.73125	3154.3674	6010.4634	0	591.65
24	Optimized	34.50057	-50.90735	3009.3544	5964.5671	0	579.89
25	Optimized	37.085	-50.55176	2952.5493	5946.7157	0	575.04
26	Optimized	42.10779	-49.86068	2876.3177	5901.193	0	565.57
27	Optimized	51.29279	-48.596925	2754.4217	5815.0578	0	548.16
28	Optimized	60.619205	-47.31371	2650.3692	5751.2512	0	530.35
29	Optimized	67.614205	-46.07535	2574.2209	5657.5259	0	514.17
30	Optimized	71.77	-45.11164	2514.7726	5601.3635	0	502.26
31	Optimized	79.09414	-43.413205	2409.9843	5467.2027	0	481.15
32	Optimized	90.01414	-40.880905	2253.6698	5250.9932	0	449.41
33	Optimized	96.335235	-39.41507	2163.2511	5161.5337	0	430.9
34	Optimized	99.907885	-38.142605	2084.4252	5060.7999	0	415.92
35	Optimized	105.2408	-35.60844	1927.08	4940.8705	0	387.06
36	Optimized	108.82815	-33.83603	1817.1486	4854.6896	0	408.31
37	Optimized	112.8761	-31.83603	1693.0275	4748.9211	0	389.05
38	Optimized	117.1511	-29.72387	1561.8207	4638.6204	0	376.2
39	Optimized	122.40185	-27.12963	1400.8463	4400.2167	0	351.7
40	Optimized	127.38185	-24.698205	1249.893	4190.4245	0	323.07
41	Optimized	127.69	-24.577025	1242.3904	4178.2937	0	321.58
42	Optimized	131.63	-23.02765	1146.336	3913.3916	0	302.56
43	Optimized	138.3135	-20.399415	983.41621	3458.1632	0	270.29
44	Optimized	147.5385	-17.39894	797.67679	2900.6024	0	232.34
45	Optimized	156.5073	-14.742595	633.3427	2362.3914	0	198.18
46	Optimized	159.4173	-13.88072	580.03708	2189.4391	0	170.52
47	Optimized	163.2558	-12.743845	509.71143	1938.7146	0	168.38
48	Optimized	167.0458	-11.65331	442.27044	1703.55	0	166.27
49	Optimized	172.22	-10.587875	376.61123	1531.866	0	163.38
50	Optimized	178.4857	-9.29769	305.08175	1342.4708	0	159.89
51	Optimized	180.3007	-8.92396	292.05798	1296.2186	0	163.4
52	Optimized	185.5775	-7.837407	224.48039	1187.3161	0	160.23
53	Optimized	195.3925	-5.8163815	94.622051	986.64594	0	154.34
54	Optimized	201.3684	-4.5858745	15.933653	864.27036	0	150.75
55	Optimized	202.4634	-4.348481	1.0865163	797.58601	0	150.09
56	Optimized	206.1292	-1.9511777	-148.62063	380.15836	0	600

Slices of Slip Surface: 11522

LWL Case.BS

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	11522	-123.61845	-4.5102915	141.91176	216.76241	0	61.234
2	11522	-117.9056	-7.9042545	353.32477	518.35727	0	71.662
3	11522	-111.8531	-11.5	581.39505	854.5072	0	95
4	11522	-99.8825	-18.61166	1032.4436	1579.1779	0	165.73
5	11522	-86.416625	-26.61166	1541.0125	2426.7593	0	253.73
6	11522	-77.34678	-32	1884.6945	3043.7305	0	313
7	11522	-72.700155	-34.76053	2060.6731	3385.43	0	343.37
8	11522	-65.96721	-38.76053	2324.7216	3843.2916	0	387.37
9	11522	-52.78721	-46.59069	2845.7928	4745.4914	0	473.5
10	11522	-39.195	-54.66574	3381.5112	5690.3818	0	562.32
11	11522	-32.665	-58.54517	3644.7822	6158.6057	0	606.32
12	11522	-26.9	-61.97012	3866.9078	6640.8693	0	654.45
13	11522	-20.425	-64.654215	4034.384	6667.6659	0	694.27
14	11522	-17.975	-64.03809	3995.9981	6646.9909	0	692.11
15	11522	-11.03	-62.291565	3886.9807	6702.2206	0	686.73
16	11522	-2.58	-60.166565	3754.4193	6705.5553	0	681.65
17	11522	4	-58.511835	3651.1911	6528.9634	0	668.86
18	11522	14.265	-55.9304	3490.0551	6299.1577	0	639
19	11522	21.265	-54.170045	3380.1962	6170.8571	0	618.47
20	11522	28.995	-52.22611	3165.2756	6024.8447	0	595.63
21	11522	37.085	-50.19164	2930.0926	5874.1788	0	571.54
22	11522	42.10779	-48.928515	2818.2132	5769.6334	0	556.5
23	11522	51.29279	-46.61868	2631.0207	5575.7347	0	528.79
24	11522	63.10441	-43.6483	2422.0647	5363.92	0	492.82
25	11522	70.09941	-41.8892	2313.4164	5255.2633	0	471.33
26	11522	71.77	-41.46908	2287.4759	5226.2975	0	466.18
27	11522	78.46	-39.786685	2183.5682	5080.1021	0	445.46
28	11522	89.38	-37.040535	2013.9414	4833.7435	0	411.37
29	11522	98.1553	-34.83373	1877.7134	4725.2912	0	383.73
30	11522	105.3153	-33.033135	1766.4647	4746.223	0	398.36
31	11522	113.435	-30.991195	1640.3867	4759.6395	0	380.42
32	11522	122.71	-28.658725	1496.3109	4633.9183	0	367.92
33	11522	131.63	-26.41553	1357.7256	4294.475	0	338.13
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34	11522	140.1625	24.269785	1225.2646	3824.1292	0	309.64
35	11522	149.3875	-21.94989	1081.9754	3308.3721	0	278.83
36	11522	156.91	-20.058135	965.10489	2887.4163	0	253.71
37	11522	163.61	-18.373225	861.04013	2490.7843	0	231.34
38	11522	172.22	-16.20799	727.31275	2085.3804	0	202.58
39	11522	178.855	-14.539425	634.27325	1858.3637	0	180.43
40	11522	186.56505	-11.541495	455.23263	1519.1816	0	155.38
41	11522	196.38005	-7.289748	186.17959	1093.6838	0	153.74
42	11522	201.7303	-4.9554545	38.983688	878.61485	0	150.53
43	11522	208.49935	-2.0021411	-145.50827	462.90359	0	600

Slices of Slip Surface: 11523

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	11523	-123.61845	-4.5102915	141.91176	216.72908	0	61.234
2	11523	-117.9056	-7.9042545	353.32477	518.28735	0	71.662
3	11523	-111.8531	-11.5	581.39505	854.40505	0	95
4	11523	-99.8825	-18.61166	1032.4436	1579.0118	0	165.73
5	11523	-86.416625	-26.61166	1541.0125	2426.4578	0	253.73
6	11523	-77.34678	-32	1884.6945	3043.3475	0	313
7	11523	-72.700155	-34.76053	2060.6731	3385.0942	0	343.37
8	11523	-65.96721	-38.76053	2324.7216	3842.8974	0	387.37
9	11523	-52.78721	-46.59069	2845.7928	4744.9351	0	473.5
10	11523	-39.195	-54.66574	3381.5112	5689.6489	0	562.32
11	11523	-32.665	-58.54517	3644.7822	6157.8947	0	606.32
12	11523	-26.9	-61.97012	3866.9078	6640.1107	0	654.45
13	11523	-20.425	-64.654215	4034.384	6668.0185	0	694.27
14	11523	-17.975	-64.03809	3995.9981	6646.9909	0	692.11
15	11523	-11.03	-62.291565	3886.9807	6702.4685	0	686.73
16	11523	-2.58	-60.166565	3754.4193	6705.9312	0	681.65
17	11523	4	-58.511835	3651.1911	6529.2058	0	668.86
18	11523	14.265	-55.9304	3490.0551	6299.3899	0	639
19	11523	21.265	-54.170045	3380.1962	6171.1209	0	618.47
20	11523	28.995	-52.22611	3165.2756	6025.122	0	595.63
21	11523	37.085	-50.19164	2930.0926	5874.6216	0	571.54

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22	11523	42.10779	-48.928515	2818.2132	5769.8803	0	556.5
23	11523	51.29279	-46.61868	2631.0207	5576.0114	0	528.79
24	11523	63.10441	-43.6483	2422.0647	5364.142	0	492.82
25	11523	70.09941	-41.8892	2313.4164	5256.1437	0	471.33
26	11523	71.77	-41.46908	2287.4759	5226.6917	0	466.18
27	11523	78.46	-39.786685	2183.5682	5080.3685	0	445.46
28	11523	89.38	-37.040535	2013.9414	4834.0099	0	411.37
29	11523	98.1553	-34.83373	1877.7134	4725.5837	0	383.73
30	11523	105.3153	-33.033135	1766.4647	4746.4752	0	398.36
31	11523	113.435	-30.991195	1640.3867	4759.8663	0	380.42
32	11523	122.71	-28.658725	1496.3109	4634.2093	0	367.92
33	11523	131.63	-26.41553	1357.7256	4294.7224	0	338.13
34	11523	140.1625	-24.269785	1225.2646	3824.2343	0	309.64
35	11523	149.3875	-21.94989	1081.9754	3308.5824	0	278.83
36	11523	156.91	-20.058135	965.10489	2887.5829	0	253.71
37	11523	163.61	-18.373225	861.04013	2490.9122	0	231.34
38	11523	172.22	-16.20799	727.31275	2085.5816	0	202.58
39	11523	178.855	-14.539425	634.27325	1858.6042	0	180.43
40	11523	185.71145	-11.541495	455.55867	1514.2189	0	155.86
41	11523	195.31005	-6.663677	147.52546	1035.9001	0	154.39
42	11523	199.937	-4.291562	-2.2600217	731.75706	0	600
43	11523	200.1534	-4.1806185	-9.2654844	716.35556	0	600
44	11523	204.73665	-1.8309411	-156.07661	434.3529	0	600

Slices of Slip Surface: 11010

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	11010	-113.32365	-5.626347	213.97535	319.35445	0	64.777
2	11010	-103.43693	-11.5	586.52306	861.26963	0	95
3	11010	-95.674425	-16.11166	879.02094	1321.3613	0	138.23
4	11010	-87.16427	-21.16749	1200.7487	1857.0274	0	193.84
5	11010	-77.252805	-27.05583	1576.2484	2482.1662	0	258.61
6	11010	-	-30.26053	1780.5699	2828.2292	0	293.87

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		71.858535					
7	11010	-68.492065	-32.26053	1912.9894	3091.9076	0	315.87
8	11010	-58.831185	-38	2294.8959	3782.8592	0	379
9	11010	-48.57912	-44.09069	2700.1366	4486.3431	0	446
10	11010	-39.195	-49.66574	3069.5036	5140.6856	0	507.32
11	11010	-32.665	-53.54517	3332.8248	5608.7048	0	551.47
12	11010	-26.9	-56.97012	3554.9626	6091.0668	0	600.89
13	11010	-20.425	-59.688115	3724.6583	6165.2084	0	642.53
14	11010	-17.975	-59.132395	3689.8523	6150.7366	0	641.54
15	11010	-11.03	-57.5571	3591.5609	6223.5945	0	639.4
16	11010	-2.58	-55.640435	3471.8843	6248.4467	0	638.12
17	11010	4	-54.14793	3378.7968	6088.222	0	627.31
18	11010	14.265	-51.819575	3233.5042	5883.8958	0	599.62
19	11010	21.265	-50.231805	3134.46	5773.0799	0	580.58
20	11010	28.995	-48.47845	2931.4685	5646.3514	0	559.41
21	11010	37.085	-46.64344	2708.6831	5515.6014	0	537.09
22	11010	42.10779	-45.50415	2604.5536	5423.8775	0	523.15
23	11010	51.29279	-43.420765	2431.4776	5252.9748	0	497.49
24	11010	57.05326	-42.11415	2325.3809	5149.7497	0	481.28
25	11010	64.04826	-40.527515	2227.4734	5048.1136	0	461.49
26	11010	71.77	-38.776035	2119.4146	4937.187	0	439.5
27	11010	77.95652	-37.37278	2032.8878	4819.9432	0	421.77
28	11010	87.869565	-35.12426	1894.1745	4623.777	0	393.15
29	11010	93.833045	-33.7716	1810.6883	4503.6224	0	401.18
30	11010	102	-31.919135	1696.432	4522.2068	0	385.24
31	11010	109.81045	-30.147535	1587.1338	4563.1128	0	370
32	11010	114.08545	-29.17786	1527.3218	4589.4991	0	368.87
33	11010	122.71	-27.2216	1406.5703	4498.5284	0	352.83
34	11010	131.63	-25.198325	1281.7272	4180.5404	0	325.35
35	11010	140.1625	-23.262945	1162.344	3730.3895	0	299.06
36	11010	149.3875	-21.17049	1033.3074	3236.5915	0	270.65
37	11010	156.91	-19.4642	928.04097	2833.3534	0	247.47
38	11010	163.61	-17.944475	834.28251	2452.6066	0	226.83
39	11010	172.22	-15.991515	713.79752	2067.7042	0	200.31
			-				

40	11010	178.855	14.486535	630.96941	1856.3708	0	179.87
41	11010	186.56505	-11.537425	454.98067	1519.3289	0	155.38
42	11010	196.38005	-7.289748	186.17959	1094.0579	0	153.74
43	11010	201.7303	-4.9554545	38.983688	878.93526	0	150.53
44	11010	208.49935	-2.0021411	-145.50827	463.08386	0	600

Slices of Slip Surface: 11458

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	11458	-108.92165	-5.6014485	215.1059	324.39511	0	64.753
2	11458	-100.27008	-11.5	588.45539	870.28441	0	95
3	11458	-94.36163	-15.52832	843.42205	1270.579	0	131.81
4	11458	-87.373895	-20.29248	1145.9325	1778.1321	0	184.22
5	11458	-77.88168	-26.76416	1557.4759	2468.39	0	255.41
6	11458	-72.277785	-30.58483	1800.4559	2888.9939	0	297.43
7	11458	-69.344325	-32.58483	1931.0779	3151.8216	0	319.43
8	11458	-61.401725	-38	2288.5578	3800.0158	0	379
9	11458	-50.2974	-45.5708	2788.2818	4671.9831	0	462.28
10	11458	-39.195	-53.14029	3286.2901	5558.2713	0	545.54
11	11458	-32.665	-57.59237	3585.3175	6092.4244	0	595.87
12	11458	-26.9	-61.52288	3839.013	6633.4011	0	649.66
13	11458	-20.425	-64.654215	4034.384	6666.6079	0	694.27
14	11458	-17.975	-64.03809	3995.9981	6646.0888	0	692.11
15	11458	-11.03	-62.291565	3886.9807	6701.2294	0	686.73
16	11458	-2.58	-60.166565	3754.4193	6704.6156	0	681.65
17	11458	4	-58.511835	3651.1911	6528.1148	0	668.86
18	11458	14.265	-55.9304	3490.0551	6298.229	0	639
19	11458	21.265	-54.170045	3380.1962	6169.9994	0	618.47
20	11458	28.995	-52.22611	3165.2756	6023.9435	0	595.63
21	11458	37.085	-50.19164	2930.0926	5873.2931	0	571.54
22	11458	42.10779	-48.928515	2818.2132	5768.7692	0	556.5
23	11458	51.29279	-46.61868	2631.0207	5574.9045	0	528.79
24	11458	63.10441	-43.6483	2422.0647	5363.1063	0	492.82
25	11458	70.09941	-41.8892	2313.4164	5254.4929	0	471.33
26	11458	71.77	-41.46908	2287.4759	5225.1148	0	466.18

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27	11458	78.46	-39.786685	2183.5682	5079.3028	0	445.46
28	11458	89.38	-37.040535	2013.9414	4833.033	0	411.37
29	11458	98.1553	-34.83373	1877.7134	4724.5599	0	383.73
30	11458	105.3153	-33.033135	1766.4647	4745.4663	0	398.36
31	11458	113.435	-30.991195	1640.3867	4758.8455	0	380.42
32	11458	122.71	-28.658725	1496.3109	4633.2395	0	367.92
33	11458	131.63	-26.41553	1357.7256	4293.8565	0	338.13
34	11458	140.1625	-24.269785	1225.2646	3823.4984	0	309.64
35	11458	149.3875	-21.94989	1081.9754	3307.8465	0	278.83
36	11458	156.91	-20.058135	965.10489	2886.9164	0	253.71
37	11458	163.61	-18.373225	861.04013	2490.4005	0	231.34
38	11458	172.22	-16.20799	727.31275	2085.0786	0	202.58
39	11458	178.855	-14.539425	634.27325	1858.0966	0	180.43
40	11458	186.56505	-11.541495	455.23263	1518.7142	0	155.38
41	11458	196.38005	-7.289748	186.17959	1093.4149	0	153.74
42	11458	201.7303	-4.9554545	38.983688	878.45465	0	150.53
43	11458	208.49935	-2.0021411	-145.50827	463.25554	0	600

Slices of Slip Surface: 11011

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	11011	-113.32365	-5.626347	213.97535	319.27118	0	64.777
2	11011	-103.43693	-11.5	586.52306	861.07554	0	95
3	11011	-95.674425	-16.11166	879.02094	1320.9985	0	138.23
4	11011	-87.16427	-21.16749	1200.7487	1856.6804	0	193.84
5	11011	-77.252805	-27.05583	1576.2484	2481.6457	0	258.61
6	11011	-71.858535	-30.26053	1780.5699	2827.641	0	293.87
7	11011	-68.492065	-32.26053	1912.9894	3091.3204	0	315.87
8	11011	-58.831185	-38	2294.8959	3782.0293	0	379
9	11011	-48.57912	-44.09069	2700.1366	4485.3659	0	446
10	11011	-39.195	-49.66574	3069.5036	5139.5129	0	507.32
11	11011	-32.665	-53.54517	3332.8248	5607.4766	0	551.47

LWL Case.BS

12	11011	-26.9	-56.97012	3554.9626	6089.7182	0	600.89
13	11011	-20.425	-59.688115	3724.6583	6165.5631	0	642.53
14	11011	-17.975	-59.132395	3689.8523	6151.1902	0	641.54
15	11011	-11.03	-57.5571	3591.5609	6224.0099	0	639.4
16	11011	-2.58	-55.640435	3471.8843	6248.8247	0	638.12
17	11011	4	-54.14793	3378.7968	6088.5877	0	627.31
18	11011	14.265	-51.819575	3233.5042	5884.285	0	599.62
19	11011	21.265	-50.231805	3134.46	5773.4779	0	580.58
20	11011	28.995	-48.47845	2931.4685	5646.7697	0	559.41
21	11011	37.085	-46.64344	2708.6831	5516.492	0	537.09
22	11011	42.10779	-45.50415	2604.5536	5424.2499	0	523.15
23	11011	51.29279	-43.420765	2431.4776	5253.3458	0	497.49
24	11011	57.05326	-42.11415	2325.3809	5150.6217	0	481.28
25	11011	64.04826	-40.527515	2227.4734	5048.4891	0	461.49
26	11011	71.77	-38.776035	2119.4146	4937.5835	0	439.5
27	11011	77.95652	-37.37278	2032.8878	4820.3367	0	421.77
28	11011	87.869565	-35.12426	1894.1745	4624.1705	0	393.15
29	11011	93.833045	-33.7716	1810.6883	4504.2035	0	401.18
30	11011	102	-31.919135	1696.432	4522.5474	0	385.24
31	11011	109.81045	-30.147535	1587.1338	4563.7875	0	370
32	11011	114.08545	-29.17786	1527.3218	4589.7682	0	368.87
33	11011	122.71	-27.2216	1406.5703	4498.9185	0	352.83
34	11011	131.63	-25.198325	1281.7272	4180.7892	0	325.35
35	11011	140.1625	-23.262945	1162.344	3730.7066	0	299.06
36	11011	149.3875	-21.17049	1033.3074	3236.9086	0	270.65
37	11011	156.91	-19.4642	928.04097	2833.6886	0	247.47
38	11011	163.61	-17.944475	834.28251	2452.8639	0	226.83
39	11011	172.22	-15.991515	713.79752	2067.8054	0	200.31
40	11011	178.855	-14.486535	630.96941	1856.6394	0	179.87
41	11011	185.71145	-11.537425	455.30773	1514.6213	0	155.86
42	11011	195.31005	-6.663677	147.52546	1036.4859	0	154.39
43	11011	199.937	-4.291562	-2.2600217	731.88452	0	600
44	11011	200.1534	-4.1806185	-9.2654844	716.65908	0	600

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45	11011	204.73665	-1.8309411	-156.07661	434.66379	0	600

Slices of Slip Surface: 11459

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	11459	-108.92165	-5.6014485	215.1059	324.31223	0	64.753
2	11459	-100.27008	-11.5	588.45539	870.08161	0	95
3	11459	-94.36163	-15.52832	843.42205	1270.2841	0	131.81
4	11459	-87.373895	-20.29248	1145.9325	1777.6969	0	184.22
5	11459	-77.88168	-26.76416	1557.4759	2467.7807	0	255.41
6	11459	-72.277785	-30.58483	1800.4559	2888.3196	0	297.43
7	11459	-69.344325	-32.58483	1931.0779	3151.2245	0	319.43
8	11459	-61.401725	-38	2288.5578	3799.1004	0	379
9	11459	-50.2974	-45.5708	2788.2818	4670.8788	0	462.28
10	11459	-39.195	-53.14029	3286.2901	5557.0035	0	545.54
11	11459	-32.665	-57.59237	3585.3175	6090.9956	0	595.87
12	11459	-26.9	-61.52288	3839.013	6631.862	0	649.66
13	11459	-20.425	-64.654215	4034.384	6667.3132	0	694.27
14	11459	-17.975	-64.03809	3995.9981	6646.5399	0	692.11
15	11459	-11.03	-62.291565	3886.9807	6701.725	0	686.73
16	11459	-2.58	-60.166565	3754.4193	6704.9915	0	681.65
17	11459	4	-58.511835	3651.1911	6528.4785	0	668.86
18	11459	14.265	-55.9304	3490.0551	6298.616	0	639
19	11459	21.265	-54.170045	3380.1962	6170.3952	0	618.47
20	11459	28.995	-52.22611	3165.2756	6024.3595	0	595.63
21	11459	37.085	-50.19164	2930.0926	5873.7359	0	571.54
22	11459	42.10779	-48.928515	2818.2132	5769.2631	0	556.5
23	11459	51.29279	-46.61868	2631.0207	5575.3657	0	528.79
24	11459	63.10441	-43.6483	2422.0647	5363.4762	0	492.82
25	11459	70.09941	-41.8892	2313.4164	5255.4834	0	471.33
26	11459	71.77	-41.46908	2287.4759	5225.9032	0	466.18
27	11459	78.46	-39.786685	2183.5682	5079.7468	0	445.46
28	11459	89.38	-37.040535	2013.9414	4833.3882	0	411.37
29	11459	98.1553	-34.83373	1877.7134	4724.9986	0	383.73
30	11459	105.3153	-33.033135	1766.4647	4745.9707	0	398.36

31	11459	113.435	-30.991195	1640.3867	4759.2992	0	380.42
32	11459	122.71	-28.658725	1496.3109	4633.6274	0	367.92
33	11459	131.63	-26.41553	1357.7256	4294.1039	0	338.13
34	11459	140.1625	-24.269785	1225.2646	3823.8138	0	309.64
35	11459	149.3875	-21.94989	1081.9754	3308.1619	0	278.83
36	11459	156.91	-20.058135	965.10489	2887.2496	0	253.71
37	11459	163.61	-18.373225	861.04013	2490.6564	0	231.34
38	11459	172.22	-16.20799	727.31275	2085.2798	0	202.58
39	11459	178.855	-14.539425	634.27325	1858.3904	0	180.43
40	11459	185.71145	-11.541495	455.55867	1513.8647	0	155.86
41	11459	195.31005	-6.663677	147.52546	1035.7049	0	154.39
42	11459	199.937	-4.291562	-2.2600217	732.20317	0	600
43	11459	200.1534	-4.1806185	-9.2654844	716.78049	0	600
44	11459	204.73665	-1.8309411	-156.07661	434.81422	0	600

Slices of Slip Surface: 10946

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	10946	-101.63983	-5.5661225	217.3469	327.24251	0	64.731
2	10946	-94.36163	-10.52832	531.43053	783.45275	0	87.227
3	10946	-90.694805	-13.02832	689.94504	1021.5836	0	107.23
4	10946	-84.807205	-17.042415	945.21896	1438.6584	0	148.47
5	10946	-75.8824	-23.127245	1332.194	2087.0731	0	215.4
6	10946	-68.61096	-28.08483	1652.0123	2621.9243	0	269.93
7	10946	-62.86846	-32	1910.5	3097.2745	0	313
8	10946	-54.068075	-38	2306.5841	3822.2669	0	379
9	10946	-46.630575	-43.0708	2641.4172	4410.8669	0	434.78
10	10946	-39.195	-48.14029	2974.3197	5003.6417	0	490.54
11	10946	-32.665	-52.59237	3273.3347	5537.3535	0	541.01
12	10946	-26.9	-56.52288	3527.0674	6078.2821	0	596.1
13	10946	-20.425	-59.688115	3724.6583	6164.8538	0	642.53
14	10946	-17.975	-59.132395	3689.8523	6150.283	0	641.54
15	10946	-11.03	-57.5571	3591.5609	6223.1792	0	639.4

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16	10946	-2.58	-55.640435	3471.8843	6247.8797	0	638.12
17	10946	4	-54.14793	3378.7968	6087.8563	0	627.31
18	10946	14.265	-51.819575	3233.5042	5883.5067	0	599.62
19	10946	21.265	-50.231805	3134.46	5772.6818	0	580.58
20	10946	28.995	-48.47845	2931.4685	5645.9331	0	559.41
21	10946	37.085	-46.64344	2708.6831	5515.6014	0	537.09
22	10946	42.10779	-45.50415	2604.5536	5423.505	0	523.15
23	10946	51.29279	-43.420765	2431.4776	5252.6038	0	497.49
24	10946	57.05326	-42.11415	2325.3809	5149.3621	0	481.28
25	10946	64.04826	-40.527515	2227.4734	5047.738	0	461.49
26	10946	71.77	-38.776035	2119.4146	4936.7906	0	439.5
27	10946	77.95652	-37.37278	2032.8878	4819.6481	0	421.77
28	10946	87.869565	-35.12426	1894.1745	4623.4819	0	393.15
29	10946	93.833045	-33.7716	1810.6883	4503.2834	0	401.18
30	10946	102	-31.919135	1696.432	4521.8663	0	385.24
31	10946	109.81045	-30.147535	1587.1338	4562.7379	0	370
32	10946	114.08545	-29.17786	1527.3218	4589.0955	0	368.87
33	10946	122.71	-27.2216	1406.5703	4498.2358	0	352.83
34	10946	131.63	-25.198325	1281.7272	4180.1673	0	325.35
35	10946	140.1625	-23.262945	1162.344	3730.0723	0	299.06
36	10946	149.3875	-21.17049	1033.3074	3236.3801	0	270.65
37	10946	156.91	-19.4642	928.04097	2833.1859	0	247.47
38	10946	163.61	-17.944475	834.28251	2452.4779	0	226.83
39	10946	172.22	-15.991515	713.79752	2067.5019	0	200.31
40	10946	178.855	-14.486535	630.96941	1856.2364	0	179.87
41	10946	186.56505	-11.537425	454.98067	1519.0952	0	155.38
42	10946	196.38005	-7.289748	186.17959	1093.9293	0	153.74
43	10946	201.7303	-4.9554545	38.983688	878.83913	0	150.53
44	10946	208.49935	-2.0021411	-145.50827	463.41005	0	600

Slices of Slip Surface: 11074

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	11074	-127.94235	-5.583989	210.58269	311.48022	0	64.474

LWL Case.BS

2	11074	-120.5146	-9.3919825	445.33143	646.6957	0	78.136
3	11074	-115.63815	-11.891983	603.54348	881.87727	0	98.136
4	11074	-106.67475	-16.48726	895.75385	1342.9017	0	142.36
5	11074	-96.9716	-21.46178	1212.124	1866.6544	0	197.08
6	11074	-86.21858	-26.97452	1563.8383	2448.822	0	257.72
7	11074	-76.41602	-32	1885.4047	3025.247	0	313
8	11074	-71.96744	-34.280655	2031.3319	3312.486	0	338.09
9	11074	-64.16515	-38.280655	2299.2411	3772.9878	0	382.09
10	11074	-50.98515	-45.037645	2753.3518	4552.9502	0	456.41
11	11074	-39.195	-51.0821	3157.87	5265.1144	0	522.9
12	11074	-32.665	-54.42984	3388.0036	5672.7666	0	561.17
13	11074	-26.9	-57.385385	3580.8601	6101.2901	0	605.34
14	11074	-20.425	-59.688115	3724.6583	6166.2723	0	642.53
15	11074	-17.975	-59.132395	3689.8523	6151.6438	0	641.54
16	11074	-11.03	-57.5571	3591.5609	6224.5913	0	639.4
17	11074	-2.58	-55.640435	3471.8843	6249.3917	0	638.12
18	11074	4	-54.14793	3378.7968	6089.1972	0	627.31
19	11074	14.265	-51.819575	3233.5042	5884.8298	0	599.62
20	11074	21.265	-50.231805	3134.46	5774.0087	0	580.58
21	11074	28.995	-48.47845	2931.4685	5647.2576	0	559.41
22	11074	37.085	-46.64344	2708.6831	5516.492	0	537.09
23	11074	42.10779	-45.50415	2604.5536	5424.7465	0	523.15
24	11074	51.29279	-43.420765	2431.4776	5253.8095	0	497.49
25	11074	57.05326	-42.11415	2325.3809	5150.6217	0	481.28
26	11074	64.04826	-40.527515	2227.4734	5048.9398	0	461.49
27	11074	71.77	-38.776035	2119.4146	4937.9799	0	439.5
28	11074	77.95652	-37.37278	2032.8878	4820.7303	0	421.77
29	11074	87.869565	-35.12426	1894.1745	4624.5641	0	393.15
30	11074	93.833045	-33.7716	1810.6883	4504.3488	0	401.18
31	11074	102	-31.919135	1696.432	4522.956	0	385.24
32	11074	109.81045	-30.147535	1587.1338	4563.7875	0	370
33	11074	114.08545	-29.17786	1527.3218	4590.1718	0	368.87
34	11074	122.71	-27.2216	1406.5703	4499.3086	0	352.83
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35	11074	131.63	25.198325	1281.7272	4181.1624	0	325.35
36	11074	140.1625	-23.262945	1162.344	3731.0238	0	299.06
37	11074	149.3875	-21.17049	1033.3074	3237.1201	0	270.65
38	11074	156.91	-19.4642	928.04097	2833.8561	0	247.47
39	11074	163.61	-17.944475	834.28251	2452.9926	0	226.83
40	11074	172.22	-15.991515	713.79752	2068.0077	0	200.31
41	11074	178.855	-14.486535	630.96941	1856.6663	0	179.87
42	11074	186.56505	-11.537425	454.98067	1519.7964	0	155.38
43	11074	196.38005	-7.289748	186.17959	1094.4437	0	153.74
44	11074	201.7303	-4.9554545	38.983688	879.25566	0	150.53
45	11074	208.49935	-2.0021411	-145.50827	463.48731	0	600

Slices of Slip Surface: 10947

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	10947	-101.63983	-5.5661225	217.3469	327.13588	0	64.731
2	10947	-94.36163	-10.52832	531.43053	783.23159	0	87.227
3	10947	-90.694805	-13.02832	689.94504	1021.2937	0	107.23
4	10947	-84.807205	-17.042415	945.21896	1438.1955	0	148.47
5	10947	-75.8824	-23.127245	1332.194	2086.5176	0	215.4
6	10947	-68.61096	-28.08483	1652.0123	2621.189	0	269.93
7	10947	-62.86846	-32	1910.5	3096.4296	0	313
8	10947	-54.068075	-38	2306.5841	3821.2107	0	379
9	10947	-46.630575	-43.0708	2641.4172	4409.5517	0	434.78
10	10947	-39.195	-48.14029	2974.3197	5002.3033	0	490.54
11	10947	-32.665	-52.59237	3273.3347	5535.8625	0	541.01
12	10947	-26.9	-56.52288	3527.0674	6076.662	0	596.1
13	10947	-20.425	-59.688115	3724.6583	6165.2084	0	642.53
14	10947	-17.975	-59.132395	3689.8523	6150.7366	0	641.54
15	10947	-11.03	-57.5571	3591.5609	6223.5945	0	639.4
16	10947	-2.58	-55.640435	3471.8843	6248.4467	0	638.12
17	10947	4	-54.14793	3378.7968	6088.222	0	627.31
18	10947	14.265	-51.819575	3233.5042	5883.8958	0	599.62
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19	10947	21.265	50.231805	3134.46	5773.0799	0	580.58
20	10947	28.995	-48.47845	2931.4685	5646.3514	0	559.41
21	10947	37.085	-46.64344	2708.6831	5516.0467	0	537.09
22	10947	42.10779	-45.50415	2604.5536	5423.8775	0	523.15
23	10947	51.29279	-43.420765	2431.4776	5252.9748	0	497.49
24	10947	57.05326	-42.11415	2325.3809	5150.331	0	481.28
25	10947	64.04826	-40.527515	2227.4734	5048.1136	0	461.49
26	10947	71.77	-38.776035	2119.4146	4937.187	0	439.5
27	10947	77.95652	-37.37278	2032.8878	4819.9432	0	421.77
28	10947	87.869565	-35.12426	1894.1745	4623.8754	0	393.15
29	10947	93.833045	-33.7716	1810.6883	4503.8645	0	401.18
30	10947	102	-31.919135	1696.432	4522.2068	0	385.24
31	10947	109.81045	-30.147535	1587.1338	4563.4876	0	370
32	10947	114.08545	-29.17786	1527.3218	4589.4991	0	368.87
33	10947	122.71	-27.2216	1406.5703	4498.5284	0	352.83
34	10947	131.63	-25.198325	1281.7272	4180.5404	0	325.35
35	10947	140.1625	-23.262945	1162.344	3730.3895	0	299.06
36	10947	149.3875	-21.17049	1033.3074	3236.5915	0	270.65
37	10947	156.91	-19.4642	928.04097	2833.521	0	247.47
38	10947	163.61	-17.944475	834.28251	2452.7352	0	226.83
39	10947	172.22	-15.991515	713.79752	2067.7042	0	200.31
40	10947	178.855	-14.486535	630.96941	1856.5051	0	179.87
41	10947	185.71145	-11.537425	455.30773	1514.4441	0	155.86
42	10947	195.31005	-6.663677	147.52546	1036.2907	0	154.39
43	10947	199.937	-4.291562	-2.2600217	732.2669	0	600
44	10947	200.1534	-4.1806185	-9.2654844	716.99296	0	600
45	10947	204.73665	-1.8309411	-156.07661	435.04488	0	600

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LWL Case.BS.Thru Fabric

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 215
Last Edited By: Cox, Lane MVK
Date: 4/20/2011
Time: 11:09:12 AM
File Name: 5c(2) Typical 1.2nd SC.80%SG.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\2nd Stage Constuction\80%SG,1 Layer of Fabric\Slope W\
Last Solved Date: 4/20/2011
Last Solved Time: 11:29:18 AM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

LWL Case.BS.Thru Fabric

Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

SlipSurface
- Direction of movement: Right to Left
- Use Passive Mode: No
- Slip Surface Option: Block
- Critical slip surfaces saved: 100
- Optimize Critical Slip Surface Location: Yes
- Tension Crack
  - Tension Crack Option: Tension Crack Line
  - Percentage Wet: 0
  - Tension Crack Fluid Unit Weight: 62.4 pcf

FOS Distribution
- FOS Calculation Option: Constant

Restrict Block Crossing: Yes
Advanced
- Number of Slices: 30
- Optimization Tolerance: 0.01
- Minimum Slip Surface Depth: 0.1 ft
- Optimization Maximum Iterations: 2000
- Optimization Convergence Tolerance: 1e-007
- Starting Optimization Points: 8
- Ending Optimization Points: 16
- Complete Passes per Insertion: 1
- Driving Side Maximum Convex Angle: 5 °
- Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH

Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH above 0

Model: Mohr-Coulomb
Unit Weight: 102 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH, 0 to -9

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -9 (2)
Cohesion Spatial Fn: CH, 0 to -9
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH, -9 to -14

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -9 to -14 (2)

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Cohesion Spatial Fn: CH, -9 to -14
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -14 to -30
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -14 to -30 (2)
Cohesion Spatial Fn: CH, -14 to -30
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -30 to -34
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -30 to -34 (2)
Cohesion Spatial Fn: CH, 30 to -34
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sand Fill
Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -34 to -42
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -34 to -42 (2)
Cohesion Spatial Fn: CH, -34 to -42
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -42 to -80
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -42 to -80 (2)
Cohesion Spatial Fn: CH, -42 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure

Piezometric Line: 1

CH, 0 to -9 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -9 (2)
Cohesion Spatial Fn: CH, 0 to -9 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -9 to -14 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -9 to -14 (2)
Cohesion Spatial Fn: CH, -9 to -14 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -14 to -30 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -14 to -30 (2)
Cohesion Spatial Fn: CH, -14 to -30 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -30 to -34 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -30 to -34 (2)
Cohesion Spatial Fn: CH, 30 to -34 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Limits
Left Coordinate: (-200, -2.13) ft
Right Coordinate: (500, -4.5) ft

Slip Surface Block
Left Grid
Upper Left: (-45, -35) ft
Lower Left: (13, -35) ft

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Lower Right: (13, -70) ft
X Increments: 7
Y Increments: 5
Starting Angle: 135 °
Ending Angle: 160 °
Angle Increments: 7

Right Grid
Upper Left: (72, -13) ft
Lower Left: (133, -13) ft
Lower Right: (133, -54) ft
X Increments: 7
Y Increments: 7
Starting Angle: 65 °
Ending Angle: 85 °
Angle Increments: 7

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	-2.13
	-191.42	-2.12
	-156.88	-2.03
	-119.75	-2.26
	-92.12	-1.99
	-71.42	-1.72
	-45.06	-0.68
	-33.33	-0.27
	-32	0
	22	0
	35.99	-3
	38.18	-3.47
	56.55	-4.85
	177.04	-4.54
	180.67	-4.21
	200.3	-4.33
	220.54	-4.34
	226.87	-4.54
	240.61	-4.57
	250	-4.5
	285.84	-4.64
	295.2	-4.68
	329.57	-4.85
	331.26	-5.3
	447.66	-5.3

	450.06	-4.54
	500	-4.5

Reinforcements

Reinforcement 1

Type: Fabric
Outside Point: (22, 0) ft
Inside Point: (209, 0) ft
Slip Surface Intersection: (132.42, 0) ft
Total Length: 187 ft
Reinforcement Direction: 180 °
Applied Load Option: Variable
F of S Dependent: No
Contact Cohesion: 265 psf
Contact Phi: 19 °
Interface Factor: 2
Bond Safety Factor: 1
Fabric Capacity: 27000 lbs
Fabric Safety Factor: 1
Fabric Load: 27000 lbs
Load Distribution: Even along reinf.
Load Orientation: 0
Applied Load: 27000 lbs
Fabric Load Used: 27000 lbs
Resisting Force Used: 1435.3 lbs/ft
Available Bond Length: 76.576 ft
Required Bond Length: 18.812 ft
Governing Component: Fabric

Tension Crack Line

	X (ft)	Y (ft)
	94.84	8
	98	4
	118	9
	127	9
	166.85564	1.5
	267	-1

Spatial Functions

CH, 0 to -9

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)

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Data Point: (-300, -2.5, 50)
Data Point: (-300, -9, 75)
Data Point: (-33.33, 0, 50)
Data Point: (-33.33, -9, 75)
Data Point: (0, 0, 300)
Data Point: (0, -9, 300)
Data Point: (285.84, -4.62, 100)
Data Point: (285.84, -9, 100)
Data Point: (500, 0, 100)
Data Point: (500, -9, 100)

CH, -34 to -42 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -38, 105)
Data Point: (0, -38, 116)
Data Point: (177.04, -38, 106)

CH, -42 to -80 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -61, 105)
Data Point: (0, -61, 105)
Data Point: (177.04, -61, 106)

CH, 0 to -9 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, 0, 300)
Data Point: (0, -9, 300)
Data Point: (46, 0, 148)
Data Point: (46, -9, 148)
Data Point: (122.71, 0, 198)
Data Point: (122.71, -9, 198)
Data Point: (285.84, 0, 100)
Data Point: (285.84, -9, 100)

CH, -9 to -14 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -9, 300)
Data Point: (0, -14, 300)
Data Point: (46, -9, 144)
Data Point: (46, -14, 144)

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Data Point: (122.71, -9, 191)
Data Point: (122.71, -14, 191)
Data Point: (285.84, -9, 100)
Data Point: (285.84, -14, 100)

CH, -14 to -30 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -14, 300)
Data Point: (0, -30, 375)
Data Point: (46, -14, 174)
Data Point: (46, -30, 342)
Data Point: (122.71, -14, 214)
Data Point: (122.71, -30, 382)
Data Point: (285.84, -14, 100)
Data Point: (285.84, -30, 268)

CH, 30 to -34 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -30, 400)
Data Point: (0, -34, 438)
Data Point: (46, -30, 341)
Data Point: (46, -34, 383)
Data Point: (122.71, -30, 374)
Data Point: (122.71, -34, 416)
Data Point: (285.84, -30, 268)
Data Point: (285.84, -34, 310)

CH, -9 to -14

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -9, 75)
Data Point: (-300, -14, 115)
Data Point: (-33.33, -9, 75)
Data Point: (-33.33, -14, 115)
Data Point: (0, -9, 300)
Data Point: (0, -14, 300)
Data Point: (285.84, -9, 100)
Data Point: (285.84, -14, 100)
Data Point: (500, -9, 100)
Data Point: (500, -14, 100)

CH, -14 to -30

Model: Linear Interpolation

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Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -14, 115)
Data Point: (-300, -30, 291)
Data Point: (-33.33, -14, 115)
Data Point: (-33.33, -30, 291)
Data Point: (0, -14, 300)
Data Point: (0, -30, 375)
Data Point: (285.84, -14, 100)
Data Point: (285.84, -30, 268)
Data Point: (500, -14, 100)
Data Point: (500, -30, 268)

CH, 30 to -34

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -30, 291)
Data Point: (-300, -34, 335)
Data Point: (-33.33, -30, 291)
Data Point: (-33.33, -34, 335)
Data Point: (0, -30, 400)
Data Point: (0, -34, 438)
Data Point: (285.84, -30, 268)
Data Point: (285.84, -34, 310)
Data Point: (500, -30, 268)
Data Point: (500, -34, 310)

CH, 0 to -9 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -4.5, 90)
Data Point: (0, -4.5, 96)
Data Point: (177.04, -4.54, 87)

CH, -9 to -14 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -11.5, 90)
Data Point: (0, -11.5, 97)
Data Point: (177.04, -11.5, 100)

CH, -14 to -30 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)

Data Point: (-33.33, -22, 100)
Data Point: (0, -22, 102)
Data Point: (177.04, -22, 100)

CH, -30 to -34 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -32, 122)
Data Point: (0, -32, 113)
Data Point: (177.04, -32, 118)

CH, -34 to -42

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -34, 335)
Data Point: (-300, -42, 423)
Data Point: (-33.33, -34, 335)
Data Point: (-33.33, -42, 423)
Data Point: (0, -34, 438)
Data Point: (0, -42, 514)
Data Point: (177.04, -34, 325)
Data Point: (177.04, -42, 409)
Data Point: (500, -34, 325)
Data Point: (500, -42, 409)

CH, -42 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -42, 423)
Data Point: (-300, -80, 841)
Data Point: (-33.33, -42, 423)
Data Point: (-33.33, -80, 841)
Data Point: (0, -42, 514)
Data Point: (0, -80, 875)
Data Point: (177.04, -42, 409)
Data Point: (177.04, -80, 808)
Data Point: (500, -42, 409)
Data Point: (500, -80, 808)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -42 to -80	1,3,4,2	26600
Region 2	CH, -34 to -42	3,5,69,73,6,4	5600
Region 3	CH above 0	45,21,22,63,64,27,44,65	161.91095

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Region 4	Sand Fill	29,30,43,31,32,33,42,34,35,62	606.7023
Region 5	CH, 0 to -9	56,53,54,41,12	267.3158
Region 6	EMBANKMENT FILL CH	59,46,47,60,37,36,35,62	1502.7397
Region 7	EMBANKMENT FILL CH	64,27,44,57,28,62,59	499.34315
Region 8	EMBANKMENT FILL CH	60,61,76,75,40,39,58,38,37	772.15003
Region 9	CH, 0 to -9	16,11,66,65,45,20,19,18,17,15,14,74	1498.6738
Region 10	CH, -9 to -14	11,9,67,66	1000
Region 11	CH, -14 to -30	9,7,68,67	3200
Region 12	CH, -30 to -34	7,5,69,68	800
Region 13	CH, -30 to -34	6,8,72,73	856.64
Region 14	CH, -14 to -30	8,10,71,72	3426.56
Region 15	CH, -9 to -14	10,71,70,55,50,51,52,56,12	954.73385
Region 16	CH, 0 to -9	55,49,48,76,75,70	220.0602
Region 17	CH, -30 to -34 SG	69,68,72,73	1143.36
Region 18	CH, -14 to -30 SG	68,67,71,72	4573.44
Region 19	CH, -9 to -14 SG	67,66,43,31,32,33,42,70,71	1313.1338
Region 20	CH, 0 to -9 SG	66,65,44,57,28,62,29,30,43	438.1553
Region 21	CH, 0 to -9 SG	42,34,35,36,37,38,58,39,40,75,70	538.2795

Points

	X (ft)	Y (ft)
Point 1	-200	-80
Point 2	500	-80
Point 3	-200	-42
Point 4	500	-42
Point 5	-200	-34
Point 6	500	-34
Point 7	-200	-30
Point 8	500	-30
Point 9	-200	-14
Point 10	500	-14
Point 11	-200	-9
Point 12	500	-9
Point 13	-191.42	-2.12
Point 14	-156.88	-2.03
Point 15	-119.75	-2.26
Point 16	-200	-2.13
Point 17	-92.12	-1.99
Point 18	-71.42	-1.72
Point 19	-45.06	-0.68
Point 20	-33.33	-0.27
Point 21	-19.05	1.53
Point 22	-16.9	1.81
Point 23	-6.83	6.48
Point 24	-6.79	6.72
Point 25	-0.92	7.16
Point 26	3.42	6.91

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Point 27	20.53	0.36
Point 28	38.18	-3.47
Point 29	56.55	-4.85
Point 30	70.54	-8.43
Point 31	109.16	-11.38
Point 32	127.67	-11.01
Point 33	135.55	-10.86
Point 34	159.82	-8.55
Point 35	177.04	-4.54
Point 36	180.67	-4.21
Point 37	200.3	-4.33
Point 38	220.54	-4.34
Point 39	240.61	-4.57
Point 40	250	-4.5
Point 41	500	-4.5
Point 42	154	-9
Point 43	73	-9
Point 44	22	0
Point 45	-32	0
Point 46	117.71	14
Point 47	127.71	14
Point 48	329.57	-4.85
Point 49	343.56	-8.43
Point 50	382.18	-11.38
Point 51	400.69	-11.01
Point 52	408.57	-10.86
Point 53	432.84	-8.55
Point 54	450.06	-4.54
Point 55	346.02	-9
Point 56	427.02	-9
Point 57	35.99	-3
Point 58	226.87	-4.54
Point 59	94.84	8
Point 60	167.4	4
Point 61	292.4	0.875
Point 62	46	-4.06
Point 63	-5.16	5.5
Point 64	8	5.2
Point 65	0	0
Point 66	0	-9
Point 67	0	-14
Point 68	0	-30
Point 69	0	-34
Point 70	285.84	-9
Point 71	285.84	-14
Point 72	285.84	-30
Point 73	285.84	-34
Point 74	-194	-2

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Point 75	285.84	-4.64
Point 76	309.25	-4.74

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	2.12	(-0.636, 10.982)	101.7945	(137.716, 11.4791)	(-103.743, -2.10358)
2	19369	2.36	(-0.636, 10.982)	111.641	(130.468, 13.3052)	(-131.103, -2.18968)
3	19881	2.36	(-6.431, 10.964)	116.861	(130.468, 13.3052)	(-142.728, -2.11767)
4	19817	2.37	(4.402, 10.997)	108.627	(130.468, 13.3052)	(-120.994, -2.2523)
5	19889	2.37	(-5.146, 10.373)	117.773	(132.979, 12.6725)	(-142.728, -2.11767)
6	19305	2.38	(9.198, 10.979)	103.773	(130.468, 13.3052)	(-111.385, -2.17826)
7	19433	2.38	(-13.983, 10.942)	120.513	(130.468, 13.3052)	(-157.874, -2.0292)
8	20329	2.38	(-0.518, 10.982)	113.625	(130.468, 13.3052)	(-130.866, -2.19114)
9	20393	2.38	(-12.227, 10.946)	122.397	(130.468, 13.3052)	(-154.353, -2.04565)
10	19377	2.38	(0.65, 10.391)	113.338	(132.979, 12.6725)	(-131.103, -2.18968)
11	18857	2.38	(5.153, 10.999)	105.913	(130.468, 13.3052)	(-119.487, -2.25743)
12	20337	2.38	(0.768, 10.391)	114.766	(132.979, 12.6725)	(-130.866, -2.19114)
13	23977	2.38	(3.532, 9.097)	114.98	(138.479, 11.2867)	(-130.961, -2.19055)
14	19825	2.39	(5.69, 10.407)	109.784	(132.979, 12.6725)	(-120.994, -2.2523)
15	20401	2.39	(-10.944, 10.355)	123.503	(132.979, 12.6725)	(-154.353, -2.04565)
16	24041	2.39	(-10.966, 9.057)	124.536	(138.479, 11.2867)	(-160.016, -2.02747)
17	19945	2.39	(-20.854, 10.939)	127.532	(130.468, 13.3052)	(-171.641, -2.01807)
18	18921	2.39	(-7.022, 10.962)	114.942	(130.468, 13.3052)	(-143.913, -2.11032)
19	23521	2.39	(-5.295, 9.665)	118.488	(135.968, 11.9193)	(-146.088, -2.09685)
20	24489	2.39	(-2.268, 9.079)	120.625	(138.479, 11.2867)	(-142.586, -2.11854)
21	23969	2.39	(2.25, 9.688)	114.548	(135.968, 11.9193)	(-130.961, -2.19055)
22	24033	2.39	(-12.245, 9.647)	125.088	(135.968, 11.9193)	(-160.016, -2.02747)
23	23529	2.39	(-4.015, 9.074)	119.035	(138.479, 11.2867)	(-146.088, -2.09685)
24	19361	2.40	(-1.924, 11.572)	110.311	(127.957, 13.9378)	(-131.103, -2.18968)
25	23465	2.40	(9.324, 9.114)	109.58	(138.479, 11.2867)	(-119.35, -2.2561)
26	19441	2.40	(-12.7, 10.351)	121.341	(132.979, 12.6725)	(-157.874, -2.0292)
27	19953	2.40	(-19.572, 10.348)	129.27	(132.979, 12.6725)	(-171.641, -2.01807)
28	24553	2.40	(-17.841, 9.054)	131.371	(138.479, 11.2867)	(-173.784, -2.01634)
29	23513	2.40	(-6.577, 10.255)	117.857	(133.457, 12.552)	(-146.088, -2.09685)
30	19313	2.40	(10.486, 10.388)	104.94	(132.979, 12.6725)	(-111.385, -2.17826)
31	19873	2.40	(-7.717, 11.554)	116.054	(127.957, 13.9378)	(-142.728, -2.11767)
32	24481	2.40	(-3.548, 9.67)	119.98	(135.968, 11.9193)	(-142.586, -2.11854)
33	23457	2.40	(8.04, 9.704)	108.708	(135.968, 11.9193)	(-119.35, -2.2561)
34	18793	2.40	(13.975, 10.955)	99.149	(130.468, 13.3052)	(-101.815, -2.08474)
35	19753	2.40	(12.656, 10.962)	102.527	(130.468, 13.3052)	(-104.458, -2.11056)
36	24025	2.41	(-13.525, 10.238)	123.505	(133.457, 12.552)	(-160.016, -2.02747)
37	23961	2.41	(0.966, 10.279)	113.45	(133.457, 12.552)	(-130.961, -2.19055)
38	19809	2.41	(3.112, 11.588)	107.742	(127.957, 13.9378)	(-120.994, -2.2523)
39	23009	2.41	(1.676, 9.686)	112.062	(135.968, 11.9193)	(-132.112, -2.18342)
40	24545	2.41	(-19.118, 9.645)	132.028	(135.968, 11.9193)	(-173.784, -2.01634)
41	18929	2.41	(-5.737, 10.371)	116.641	(132.979, 12.6725)	(-143.913, -2.11032)
42	23985	2.41	(4.813, 8.507)	116.257	(140.99, 10.6541)	(-130.961, -2.19055)
43	24497	2.41	(-0.988, 8.489)	121.312	(140.99, 10.6541)	(-142.586, -2.11854)
44	18865	2.41	(6.441, 10.408)	107.619	(132.979, 12.6725)	(-119.487, -2.25743)
45	20265	2.41	(8.523, 10.982)	106.903	(130.468, 13.3052)	(-112.738, -2.19148)
46	20409	2.41	(-9.663, 9.764)	123.687	(135.49, 12.0399)	(-154.353, -2.04565)
47	18409	2.41	(-0.055, 10.984)	108.178	(130.468, 13.3052)	(-129.938, -2.19689)
48	24425	2.41	(9.427, 9.113)	111.818	(138.479, 11.2867)	(-119.143, -2.25407)
49	23449	2.41	(6.754, 10.295)	107.608	(133.457, 12.552)	(-119.35, -2.2561)
50	19425	2.41	(-15.267, 11.532)	119.983	(127.957, 13.9378)	(-157.874, -2.0292)
51	20457	2.42	(-27.725, 10.936)	133.833	(130.468, 13.3052)	(-185.409, -2.00694)
52	23017	2.42	(2.958, 9.096)	112.81	(138.479, 11.2867)	(-132.112, -2.18342)
53	19241	2.42	(16.789, 10.942)	98.279	(130.468, 13.3052)	(-96.1778, -2.02965)
54	19897	2.42	(-3.863, 9.782)	118.504	(135.49, 12.0399)	(-142.728, -2.11767)
55	20465	2.42	(-26.445, 10.345)	135.016	(132.979, 12.6725)	(-185.409, -2.00694)
56	19297	2.42	(7.907, 11.569)	102.96	(127.957, 13.9378)	(-111.385, -2.17826)
57	23913	2.42	(14.208, 9.09)	106.888	(138.479, 11.2867)	(-109.573, -2.16055)
58	20273	2.42	(9.811, 10.392)	107.828	(132.979, 12.6725)	(-112.738, -2.19148)
59	24049	2.42	(-9.688, 8.466)	126.092	(140.99, 10.6541)	(-160.016, -2.02747)
60	18849	2.42	(3.863, 11.589)	104.591	(127.957, 13.9378)	(-119.487, -2.25743)
61	18345	2.42	(10.749, 10.971)	100.402	(130.468, 13.3052)	(-108.278, -2.1479)
62	23001	2.42	(0.392, 10.277)	110.969	(133.457, 12.552)	(-132.112, -2.18342)
63	19761	2.42	(13.946, 10.371)	103.786	(132.979, 12.6725)	(-104.458, -2.11056)
64	20345	2.42	(2.053, 9.801)	115.382	(135.49, 12.0399)	(-130.866, -2.19114)
65	18913	2.42	(-8.308, 11.553)	114.142	(127.957, 13.9378)	(-143.913, -2.11032)
66	20385	2.42	(-13.512, 11.536)	121.92	(127.957, 13.9378)	(-154.353, -2.04565)
67	24561	2.42	(-16.564, 8.463)	132.995	(140.99, 10.6541)	(-173.784, -2.01634)
68	20321	2.42	(-1.806, 11.573)	112.762	(127.957, 13.9378)	(-130.866, -2.19114)
69	24473	2.43	(-4.831, 10.261)	119.346	(133.457, 12.552)	(-142.586, -2.11854)
70	19937	2.43	(-22.136, 11.529)	126.767	(127.957, 13.9378)	(-171.641, -2.01807)
71	23905	2.43	(12.924, 9.681)	106.068	(135.968, 11.9193)	(-109.573, -2.16055)
72	23537	2.43	(-2.736, 8.483)	119.662	(140.99, 10.6541)	(-146.088, -2.09685)
73	23970	2.43	(1.016, 10.256)	114.117	(133.556, 12.5272)	(-130.961, -2.19055)
74	24417	2.43	(8.143, 9.704)	111.009	(135.968, 11.9193)	(-119.143, -2.25407)
75	19833	2.43	(6.975, 9.816)	110.426	(135.49, 12.0399)	(-120.994, -2.2523)
76	23978	2.43	(2.148, 9.735)	114.905	(135.77, 11.9694)	(-130.961, -2.19055)
77	24490	2.43	(-3.65, 9.717)	120.103	(135.77, 11.9694)	(-142.586, -2.11854)
78	22953	2.43	(14.923, 9.086)	103.971	(138.479, 11.2867)	(-108.141, -2.14656)
79	24537	2.43	(-20.398, 10.235)	130.383	(133.457, 12.552)	(-173.784, -2.01634)
80	24433	2.43	(10.709, 8.523)	112.814	(140.99, 10.6541)	(-119.143, -2.25407)
81	24034	2.43	(-13.475, 10.215)	124.613	(133.556, 12.5272)	(-160.016, -2.02747)
82	24042	2.44	(-12.346, 9.694)	125.048	(135.77, 11.9694)	(-160.016, -2.02747)
83	23522	2.44	(-6.527, 10.232)	118.55	(133.556, 12.5272)	(-146.088, -2.09685)
84	22945	2.44	(13.639, 9.677)	102.789	(135.968, 11.9193)	(-108.141, -2.14656)
85	23473	2.44	(10.606, 8.523)	110.464	(140.99, 10.6541)	(-119.35, -2.2561)
86	19385	2.44	(1.935, 9.8)	113.518	(135.49, 12.0399)	(-131.103, -2.18968)
87	19961	2.44	(-18.293, 9.758)	128.733	(135.49, 12.0399)	(-171.641, -2.01807)
88	24482	2.44	(-4.781, 10.238)	119.505	(133.556, 12.5272)	(-142.586, -2.11854)
89	23514	2.44	(-7.659, 10.753)	117.464	(131.342, 13.085)	(-146.088, -2.09685)
90	18801	2.44	(15.265, 10.365)	100.637	(132.979, 12.6725)	(-101.815, -2.08474)

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91	19249	2.44	(18.079, 10.351)	99.562	(132.979, 12.6725)	(-96.1778, -2.02965)
92	23401	2.44	(18.989, 9.067)	102.101	(138.479, 11.2867)	(-100.002, -2.06703)
93	23530	2.44	(-5.396, 9.711)	118.61	(135.77, 11.9694)	(-146.088, -2.09685)
94	23962	2.44	(-0.117, 10.776)	113.053	(131.342, 13.085)	(-130.961, -2.19055)
95	24026	2.44	(-14.605, 10.736)	123.078	(131.342, 13.085)	(-160.016, -2.02747)
96	24554	2.45	(-19.22, 9.691)	131.991	(135.77, 11.9694)	(-173.784, -2.01634)
97	19353	2.45	(-3.263, 11.797)	109.265	(125.31, 14)	(-131.103, -2.18968)
98	19449	2.45	(-11.419, 9.76)	121.595	(135.49, 12.0399)	(-157.874, -2.0292)
99	20473	2.45	(-25.167, 9.755)	135.137	(135.49, 12.0399)	(-185.409, -2.00694)
100	23458	2.45	(6.805, 10.272)	108.264	(133.556, 12.5272)	(-119.35, -2.2561)
101	23505	2.45	(-7.861, 10.846)	117.234	(130.946, 13.1846)	(-146.088, -2.09685)

Slices of Slip Surface: Optimized

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	-99.325475	-5.55179	217.86282	332.21895	0	64.715
2	Optimized	-93.513975	-10.0881	504.47587	747.41146	0	83.705
3	Optimized	-91.11338	-11.961945	623.07211	926.28775	0	98.696
4	Optimized	-89.21402	-13.373845	712.74014	1055.9045	0	109.99
5	Optimized	-83.646185	-17.279035	960.96764	1464.9612	0	151.07
6	Optimized	-75.195545	-23.1689	1335.306	2091.2424	0	215.86
7	Optimized	-68.36851	-27.889865	1640.5556	2601.0617	0	267.79
8	Optimized	-65.009345	-30.21276	1793.7692	2860.9416	0	293.34
9	Optimized	-61.748925	-32.21276	1926.5475	3109.0731	0	315.34
10	Optimized	-56.916755	-35.13758	2120.9528	3476.2778	0	347.51
11	Optimized	-50.048665	-39.23306	2393.4203	3944.4622	0	392.56
12	Optimized	-39.195	-45.66846	2820.0711	4699.2386	0	463.35
13	Optimized	-32.665	-49.54025	3082.889	5165.9152	0	507.53
14	Optimized	-30.23293	-50.98228	3181.3214	5371.5679	0	529.01
15	Optimized	-23.75793	-53.47507	3336.8459	5656.6777	0	570.42
16	Optimized	-17.975	-55.25008	3447.6242	5950.2054	0	601.52
17	Optimized	-15.082715	-56.137835	3502.9605	6134.2577	0	616.73
18	Optimized	-9.212715	-56.407325	3519.8506	6233.5149	0	631.69
19	Optimized	-2.57816	-55.935355	3490.428	6341.8425	0	640.96
20	Optimized	4.00184	-55.37829	3455.5587	6269.4883	0	639.02
21	Optimized	11.1325	-54.712335	3414.034	6212.0735	0	628.96

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22	Optimized	17.3975	-54.127225	3377.4812	6200.4719	0	620.08
23	Optimized	21.265	-53.766025	3354.9919	6192.0337	0	614.58
24	Optimized	22.03794	-53.693835	3349.9448	6408.8526	0	613.48
25	Optimized	25.55441	-53.29924	3278.3008	6168.5076	0	607.82
26	Optimized	32.51147	-52.517145	3136.4615	6137.7972	0	596.56
27	Optimized	36.45069	-52.07431	3056.0284	6136.6473	0	590.16
28	Optimized	37.54569	-51.935675	3032.7501	6116.2634	0	588.23
29	Optimized	42.10779	-51.31108	2966.8841	6063.169	0	579.7
30	Optimized	51.29279	-50.053565	2845.3212	5977.0026	0	562.42
31	Optimized	59.995895	-48.86202	2746.949	5917.1249	0	545.93
32	Optimized	66.990895	-47.624675	2670.8094	5835.1829	0	529.83
33	Optimized	71.77	-46.593795	2607.2686	5782.8482	0	516.94
34	Optimized	77.888665	-45.273965	2525.8418	5676.7454	0	500.35
35	Optimized	87.666	-43.164935	2395.8705	5504.3835	0	473.65
36	Optimized	92.6884	-42.05521	2327.4235	5413.7782	0	459.58
37	Optimized	93.831065	-41.58346	2298.1761	5314.9703	0	454.17
38	Optimized	100.44065	-38.85468	2128.9132	5193.4292	0	422.77
39	Optimized	107.1795	-35.27122	1906.418	4844.7244	0	382.44
40	Optimized	108.73885	-33.52959	1797.9729	4703.0791	0	405.05
41	Optimized	110.5295	-31.52959	1673.4816	4524.8979	0	384.82
42	Optimized	113.5455	-28.161025	1463.7681	4268.6315	0	357.91
43	Optimized	116.451	-24.32015	1224.5606	3895.3202	0	319.1
44	Optimized	120.3257	-18.159125	840.73233	3367.7123	0	256.43
45	Optimized	123.8635	-12.53383	490.26485	2869.9388	0	190.36
46	Optimized	126.2478	-8.742673	254.09963	1898.5564	949.42756	0
47	Optimized	128.0718	-5.842443	73.410561	1606.6562	885.21978	0
48	Optimized	128.66215	-4.96554	18.786232	1599.2078	912.45679	0
49	Optimized	133.30315	1.1598315	-362.68852	927.7983	0	600

Slices of Slip Surface: 19369

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	19369	-125.42635	-4.6662355	152.33963	225.81692	0	61.684
2	19369	-117.6216	-8.0713975	363.93272	524.92698	0	72.172
3	19369	-109.76315	-11.5	582.66645	844.01178	0	95

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4	19369	-98.07655	-16.59882	907.93615	1351.71	0	143.59
5	19369	-86.945	-21.45547	1218.8945	1862.1703	0	197.01
6	19369	-76.595	-25.97113	1509.0948	2338.3397	0	246.68
7	19369	-69.390365	-29.11448	1714.4151	2674.54	0	281.26
8	19369	-62.77668	-32	1910.7841	3038.3796	0	313
9	19369	-54.909475	-35.432425	2144.3118	3470.0945	0	350.76
10	19369	-48.34316	-38.29728	2339.1731	3804.2621	0	382.27
11	19369	-42.45822	-40.864855	2513.1846	4109.5536	0	410.51
12	19369	-36.59322	-43.42373	2685.7431	4412.9944	0	438.66
13	19369	-32.665	-45.137595	2808.1959	4629.3297	0	459.24
14	19369	-25.525	-48.252745	3010.9959	5096.8654	0	510.89
15	19369	-17.975	-51.546775	3216.5363	5587.6187	0	563.34
16	19369	-11.03	-54.576845	3405.5679	6157.2849	0	609.61
17	19369	-2.58	-58.263545	3635.697	6785.0477	0	663.35
18	19369	0.7	-59.694595	3724.9738	6945.5765	0	681.75
19	19369	4.7	-59.44568	3709.3956	6665.556	0	677.41
20	19369	14.265	-57.83899	3609.1343	6537.778	0	657.29
21	19369	21.265	-56.663155	3535.7716	6469.4343	0	642.45
22	19369	25.4975	-55.952195	3444.6642	6428.3105	0	633.43
23	19369	32.4925	-54.7772	3277.7391	6357.3955	0	618.46
24	19369	37.085	-54.00577	3168.0808	6317.8789	0	608.58
25	19369	42.10779	-53.162065	3082.3672	6249.5991	0	597.72
26	19369	51.29279	-51.6192	2943.0496	6133.8076	0	577.75
27	19369	60.0475	-50.148615	2827.1539	6045.6797	0	558.56
28	19369	67.0425	-48.973625	2754.9701	5997.4631	0	543.13
29	19369	71.77	-48.17952	2706.1926	5970.4209	0	532.64
30	19369	76.64	-47.361475	2655.9227	5909.3806	0	521.8
31	19369	83.92	-46.138605	2580.7397	5816.8581	0	505.51
32	19369	91.2	-44.91574	2505.6922	5724.0647	0	489.11
33	19369	100.9152	-43.152155	2397.1958	5738.9251	0	465.75
34	19369	108.0752	-39.67361	2181.2417	5084.9541	0	426.38
35	19369	109.9404	-35.67361	1931.9569	4755.4322	0	384.77
36	19369	111.65345	-32	1702.9975	4395.3659	0	390.24
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37	19369	115.14805	24.505845	1235.9517	3789.6746	0	320.37
38	19369	118.8785	-16.505845	737.33427	3160.5207	0	238.31
39	19369	120.7148	-12.56784	491.8954	2827.8132	0	189.78
40	19369	122.88885	-7.905563	201.31654	1707.6132	869.66078	0
41	19369	126.05255	-1.121032	-221.52743	1163.8477	0	600
42	19369	129.0889	5.39041	-627.36009	395.05388	0	600

Slices of Slip Surface: 19881

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	19881	-138.7842	-3.8382485	105.84014	160.07685	0	58.892
2	19881	-130.897	-7.279416	317.51577	459.52223	0	69.68
3	19881	-123.3517	-10.5714	520.02071	752.19713	0	87.571
4	19881	-117.6216	-13.0714	675.93042	982.63127	0	107.57
5	19881	-111.5977	-15.699605	843.60264	1248.3046	0	133.7
6	19881	-103.80664	-19.09882	1060.4648	1604.6438	0	171.09
7	19881	-96.01554	-22.498035	1277.3623	1961.1006	0	208.48
8	19881	-85.470425	-27.09882	1572.1777	2445.3801	0	259.09
9	19881	-75.120425	-31.61448	1862.3886	2957.5543	0	308.76
10	19881	-70.536375	-33.61448	1992.403	3214.9903	0	330.76
11	19881	-65.068705	-36	2154.7182	3497.9556	0	357
12	19881	-55.90061	-40	2426.8448	3961.3304	0	401
13	19881	-48.18828	-43.364855	2655.8295	4353.8668	0	438.01
14	19881	-39.195	-47.288585	2921.2006	4820.1178	0	481.17
15	19881	-32.665	-50.137595	3120.1717	5171.2042	0	514.09
16	19881	-25.525	-53.252745	3322.981	5638.6635	0	564.14
17	19881	-17.975	-56.546775	3528.5085	6129.4561	0	614.89
18	19881	-11.03	-59.576845	3717.6207	6699.0248	0	659.59
19	19881	-2.58	-63.263545	3947.6124	7326.8141	0	711.43
20	19881	0.7	-64.694595	4036.9322	7487.0028	0	729.27
21	19881	4.7	-64.289215	4011.6368	7148.6348	0	723.55

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22	19881	14.265	-62.22902	3883.096	6974.5306	0	699.35
23	19881	21.265	-60.7213	3789.0234	6872.3266	0	681.49
24	19881	25.4975	-59.80967	3685.3193	6810.9229	0	670.63
25	19881	32.4925	-58.303025	3497.7691	6705.9674	0	652.6
26	19881	37.085	-57.31385	3374.5286	6645.3176	0	640.69
27	19881	42.10779	-56.232	3273.8784	6551.4902	0	627.62
28	19881	51.29279	-54.253655	3107.419	6390.9331	0	603.54
29	19881	60.0475	-52.367985	2965.7247	6260.2912	0	580.4
30	19881	67.0425	-50.86134	2872.7881	6177.9759	0	561.78
31	19881	71.77	-49.84309	2810.0282	6128.5574	0	549.12
32	19881	78.46	-48.40214	2721.2023	6009.885	0	531.12
33	19881	89.38	-46.050095	2576.1766	5817.5916	0	501.51
34	19881	100.9152	-43.437035	2414.9285	5754.1165	0	468.62
35	19881	108.0752	-39.67361	2181.2417	5075.4095	0	426.38
36	19881	109.9404	-35.67361	1931.9569	4747.0385	0	384.77
37	19881	111.65345	-32	1702.9975	4387.6623	0	390.24
38	19881	115.14805	-24.505845	1235.9517	3782.2515	0	320.37
39	19881	118.8785	-16.505845	737.33427	3154.9147	0	238.31
40	19881	120.7148	-12.56784	491.8954	2823.6998	0	189.78
41	19881	122.88885	-7.905563	201.31654	1706.7714	869.1748	0
42	19881	126.05255	-1.121032	-221.52743	1163.2612	0	600
43	19881	129.0889	5.39041	-627.36009	395.437	0	600

Slices of Slip Surface: 19817

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	19817	-120.37195	-2.571157	19.656292	40.193923	0	55.362
2	19817	-113.791	-5.9450095	233.57916	343.63009	0	65.738
3	19817	-102.95559	-11.5	586.8146	855.00258	0	95
4	19817	-95.09959	-15.527545	842.92603	1251.4125	0	131.8
5	19817	-86.945	-19.70816	1109.8033	1692.3039	0	177.79
6	19817	-76.595	-25.014295	1449.3302	2253.052	0	236.16
7	19817	-69.145015	-28.83368	1697.4939	2662.0031	0	278.17
8	19817	-62.968885	-32	1910.2682	3055.2429	0	313
		-	-				

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9	19817	55.565805	35.795335	2165.3869	3527.0281	0	354.75
10	19817	-48.561935	-39.38601	2406.663	3943.0039	0	394.25
11	19817	-44.26158	-41.590675	2554.5832	4203.2677	0	418.5
12	19817	-38.39658	-44.597485	2755.0208	4556.7791	0	451.57
13	19817	-32.665	-47.535895	2957.7873	4915.6395	0	485.54
14	19817	-28.7625	-49.53659	3091.1192	5206.8839	0	516.82
15	19817	-22.2875	-52.85613	3298.2291	5682.8107	0	567.17
16	19817	-17.975	-55.06702	3436.1887	6001.048	0	599.63
17	19817	-11.03	-58.62751	3658.3286	6630.6069	0	650.1
18	19817	-2.58	-62.95957	3928.7151	7331.0951	0	708.51
19	19817	0.7	-64.64113	4033.599	7519.4183	0	728.77
20	19817	4.7	-64.289215	4011.6368	7147.4499	0	723.55
21	19817	14.265	-62.22902	3883.096	6973.2823	0	699.35
22	19817	21.265	-60.7213	3789.0234	6870.9966	0	681.49
23	19817	25.4975	-59.80967	3685.3193	6809.8048	0	670.63
24	19817	32.4925	-58.303025	3497.7691	6704.8494	0	652.6
25	19817	37.085	-57.31385	3374.5286	6644.4248	0	640.69
26	19817	42.10779	-56.232	3273.8784	6550.2458	0	627.62
27	19817	51.29279	-54.253655	3107.419	6389.8174	0	603.54
28	19817	60.0475	-52.367985	2965.7247	6259.1731	0	580.4
29	19817	67.0425	-50.86134	2872.7881	6176.9976	0	561.78
30	19817	71.77	-49.84309	2810.0282	6127.7627	0	549.12
31	19817	76.64	-48.794145	2745.2835	6041.9334	0	536.03
32	19817	83.92	-47.226115	2648.5997	5913.8273	0	516.35
33	19817	91.2	-45.658085	2552.0501	5785.587	0	496.55
34	19817	100.9152	-43.437035	2414.9285	5752.9151	0	468.62
35	19817	108.0752	-39.67361	2181.2417	5064.5013	0	426.38
36	19817	109.9404	-35.67361	1931.9569	4737.0202	0	384.77
37	19817	111.65345	-32	1702.9975	4378.3726	0	390.24
38	19817	115.14805	-24.505845	1235.9517	3774.086	0	320.37
39	19817	118.8785	-16.505845	737.33427	3148.0428	0	238.31
40	19817	120.7148	-12.56784	491.8954	2817.688	0	189.78
41	19817	122.88885	-7.905563	201.31654	1705.6491	868.52682	0
42	19817	126.05255	-1.121032	-221.52743	1162.1776	0	600
43	19817	129.0889	5.39041	-	396.09596	0	600

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Slices of Slip Surface: 19889

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	19889	-138.7842	-3.8382485	105.84014	160.14657	0	58.892
2	19889	-130.897	-7.279416	317.51577	459.76627	0	69.68
3	19889	-123.3517	-10.5714	520.02071	752.6043	0	87.571
4	19889	-117.6216	-13.0714	675.93042	983.16957	0	107.57
5	19889	-111.5977	-15.699605	843.60264	1249.0105	0	133.7
6	19889	-103.80664	-19.09882	1060.4648	1605.5849	0	171.09
7	19889	-96.01554	-22.498035	1277.3623	1962.1593	0	208.48
8	19889	-85.470425	-27.09882	1572.1777	2446.6895	0	259.09
9	19889	-75.120425	-31.61448	1862.3886	2959.1643	0	308.76
10	19889	-70.536375	-33.61448	1992.403	3216.7018	0	330.76
11	19889	-65.068705	-36	2154.7182	3499.855	0	357
12	19889	-55.90061	-40	2426.8448	3963.4299	0	401
13	19889	-48.18828	-43.364855	2655.8295	4356.2108	0	438.01
14	19889	-39.195	-47.288585	2921.2006	4822.6964	0	481.17
15	19889	-32.665	-50.137595	3120.1717	5174.0297	0	514.09
16	19889	-25.525	-53.252745	3322.981	5641.7777	0	564.14
17	19889	-17.975	-56.546775	3528.5085	6132.8666	0	614.89
18	19889	-11.03	-59.576845	3717.6207	6702.6161	0	659.59
19	19889	-2.58	-63.263545	3947.6124	7330.8996	0	711.43
20	19889	0.7	-64.694595	4036.9322	7490.9309	0	729.27
21	19889	4.7	-64.4725	4023.0181	7190.6829	0	725.3
22	19889	14.265	-62.94355	3927.711	7071.125	0	706.19
23	19889	21.265	-61.824615	3857.8267	7008.9785	0	692.1
24	19889	25.4975	-61.14806	3768.8795	6971.5377	0	683.54
25	19889	32.4925	-60.02992	3605.408	6906.742	0	669.32
26	19889	37.085	-59.295815	3498.1933	6871.6684	0	659.94
27	19889	42.10779	-58.49293	3415.0805	6807.2831	0	649.63
28	19889	51.29279	-	3280.3621	6699.4368	0	630.67

			57.024725				
29	19889	60.0475	-55.6253	3168.9193	6619.0435	0	612.45
30	19889	67.0425	-54.50716	3100.3121	6576.9757	0	597.79
31	19889	71.77	-53.751475	3053.9131	6554.1921	0	587.84
32	19889	78.46	-52.68209	2988.2544	6474.491	0	573.68
33	19889	89.38	-50.93655	2881.0983	6345.0898	0	550.4
34	19889	100.84855	-49.10332	2768.5152	6366.9606	0	525.72
35	19889	108.00855	-45.67361	2555.687	5626.8792	0	487.08
36	19889	109.4408	-42.60218	2364.1909	5414.1529	0	455.19
37	19889	111.58685	-38	2077.3708	4999.4205	0	407.3
38	19889	114.3847	-32	1703.4507	4453.143	0	391.42
39	19889	116.51365	-27.434415	1418.8872	4073.2158	0	351.83
40	19889	120.2441	-19.434415	920.33058	3397.3098	0	269.78
41	19889	123.4589	-12.540285	490.61943	2810.7551	0	190.58
42	19889	125.6346	-7.8744905	199.81527	1702.8891	867.80008	0
43	19889	127.20205	-4.51306	-9.6822897	1468.8389	848.03454	0
44	19889	127.49225	-3.890735	-48.468799	1511.9874	0	600
45	19889	130.34435	2.225589	-429.67127	716.07333	0	600

Slices of Slip Surface: 19305

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	19305	-108.0589	-3.8836965	108.44748	165.86589	0	59.588
2	19305	-101.40574	-7.2945655	325.33844	473.16118	0	69.901
3	19305	-95.09959	-10.527545	530.92035	770.74093	0	87.22
4	19305	-90.22316	-13.027545	690.28349	1006.8784	0	107.22
5	19305	-84.09974	-16.16684	891.16031	1327.7819	0	138.84
6	19305	-75.64658	-20.50052	1168.507	1785.184	0	186.51
7	19305	-67.84429	-24.50052	1430.3565	2215.6527	0	230.51
8	19305	-60.69287	-28.16684	1676.7337	2619.3131	0	270.84
9	19305	-53.21602	-32	1934.3333	3085.5809	0	313
10	19305	-47.18744	-35.090675	2142.0285	3479.9075	0	347
11	19305	-39.195	-39.18816	2415.703	3961.7135	0	392.07
12	19305	-32.665	-42.535895	2645.7968	4368.2678	0	430.69
13	19305	-28.7625	-44.53659	2779.1487	4659.355	0	462.85
14	19305	-22.2875	-47.85613	2986.2586	5135.1444	0	514.66
15	19305	-17.975	-50.06702	3124.1955	5453.0524	0	548.09

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16	19305	-11.03	-53.62751	3346.3428	6082.3579	0	600.12
17	19305	-2.58	-57.95957	3616.7426	6782.6857	0	660.42
18	19305	0.7	-59.64113	3721.6353	6970.8758	0	681.25
19	19305	4.7	-59.44568	3709.3956	6665.556	0	677.41
20	19305	11.1325	-58.365175	3642.0322	6567.6842	0	663.9
21	19305	17.3975	-57.312805	3576.3915	6507.8677	0	650.66
22	19305	21.265	-56.663155	3535.7716	6469.4343	0	642.45
23	19305	25.4975	-55.952195	3444.6642	6428.4515	0	633.43
24	19305	32.4925	-54.7772	3277.7391	6357.3955	0	618.46
25	19305	37.085	-54.00577	3168.0808	6318.3292	0	608.58
26	19305	42.10779	-53.162065	3082.3672	6249.5991	0	597.72
27	19305	51.29279	-51.6192	2943.0496	6133.8076	0	577.75
28	19305	60.0475	-50.148615	2827.1539	6045.8207	0	558.56
29	19305	67.0425	-48.973625	2754.9701	5997.6041	0	543.13
30	19305	71.77	-48.17952	2706.1926	5970.8218	0	532.64
31	19305	76.64	-47.361475	2655.9227	5909.3806	0	521.8
32	19305	83.92	-46.138605	2580.7397	5816.8581	0	505.51
33	19305	91.2	-44.91574	2505.6922	5724.0647	0	489.11
34	19305	100.9152	-43.152155	2397.1958	5738.9251	0	465.75
35	19305	108.0752	-39.67361	2181.2417	5084.1749	0	426.38
36	19305	109.9404	-35.67361	1931.9569	4754.8907	0	384.77
37	19305	111.65345	-32	1702.9975	4394.9127	0	390.24
38	19305	115.14805	-24.505845	1235.9517	3789.0972	0	320.37
39	19305	118.8785	-16.505845	737.33427	3159.7974	0	238.31
40	19305	120.7148	-12.56784	491.8954	2827.3069	0	189.78
41	19305	122.88885	-7.905563	201.31654	1710.9802	871.60469	0
42	19305	126.05255	-1.121032	-221.52743	1167.4302	0	600
43	19305	129.0889	5.39041	-627.36009	399.08426	0	600

Slices of Slip Surface: 19433

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	19433	-157.86885	-2.030881	-0.10582149	8.6029349	0	52.756
2	19433	-157.3721	-2.211678	11.256606	24.478105	0	53.346
3	19433	-152.34035	-4.0430935	123.86648	183.13981	0	59.282

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4	19433	-143.261	-7.347698	326.55707	468.9911	0	69.817
5	19433	-131.85265	-11.5	581.25647	837.60745	0	95
6	19433	-122.367	-14.952505	793.01743	1159.3818	0	125.48
7	19433	-115.145	-17.58109	958.8436	1430.8632	0	154.39
8	19433	-105.935	-20.933255	1173.6465	1781.6409	0	191.27
9	19433	-96.725	-24.28542	1388.4188	2132.5207	0	228.14
10	19433	-86.57216	-27.98075	1626.302	2520.8824	0	268.79
11	19433	-76.22216	-31.747845	1869.831	2956.7418	0	310.23
12	19433	-70.727205	-33.747845	2000.2564	3213.4721	0	332.23
13	19433	-64.539455	-36	2156.009	3480.9093	0	357
14	19433	-53.549545	-40	2432.7033	3948.1942	0	401
15	19433	-46.557295	-42.54497	2608.6834	4250.6856	0	428.99
16	19433	-39.195	-45.224625	2792.4001	4572.9287	0	458.47
17	19433	-32.665	-47.60135	2961.8697	4871.5659	0	486.26
18	19433	-25.525	-50.2001	3132.4785	5281.1459	0	531.63
19	19433	-17.975	-52.948075	3303.9596	5710.7093	0	577.79
20	19433	-11.03	-55.47585	3461.6539	6224.1415	0	618.6
21	19433	-2.58	-58.5514	3653.6927	6783.8162	0	666.12
22	19433	0.7	-59.74522	3728.0959	6917.4796	0	682.23
23	19433	4.7	-59.44568	3709.3956	6666.7513	0	677.41
24	19433	14.265	-57.83899	3609.1343	6538.9586	0	657.29
25	19433	21.265	-56.663155	3535.7716	6470.6419	0	642.45
26	19433	28.995	-55.364695	3361.1307	6392.4996	0	625.96
27	19433	37.085	-54.00577	3168.0808	6320.1305	0	608.58
28	19433	42.10779	-53.162065	3082.3672	6250.98	0	597.72
29	19433	51.29279	-51.6192	2943.0496	6135.1207	0	577.75
30	19433	63.545	-49.56112	2791.0616	6021.2181	0	550.86
31	19433	71.77	-48.17952	2706.1926	5972.4253	0	532.64
32	19433	78.46	-47.05576	2637.1378	5886.4859	0	517.74
33	19433	89.38	-45.22146	2524.4311	5747.4991	0	493.22
34	19433	100.9152	-43.152155	2397.1958	5740.2998	0	465.75
35	19433	108.0752	-39.67361	2181.2417	5099.9528	0	426.38
36	19433	109.9404	-35.67361	1931.9569	4769.7827	0	384.77
37	19433	111.65345	-32	1702.9975	4408.9605	0	390.24
38	19433	115.14805	-24.505845	1235.9517	3800.6443	0	320.37
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39	19433	118.8785	16.505845	737.33427	3169.9243	0	238.31
40	19433	120.7148	-12.56784	491.8954	2836.8942	0	189.78
41	19433	122.88885	-7.905563	201.31654	1714.3471	873.54861	0
42	19433	126.05255	-1.121032	-221.52743	1170.9744	0	600
43	19433	129.0889	5.39041	-627.36009	399.83517	0	600

Slices of Slip Surface: 20329

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	20329	-125.30805	-5.0405805	175.65965	261.6923	0	62.836
2	20329	-118.66745	-8.4450095	386.60608	561.23089	0	73.308
3	20329	-112.70845	-11.5	580.86561	847.42036	0	95
4	20329	-103.90401	-16.013775	867.89459	1295.3854	0	137.15
5	20329	-96.04801	-20.04132	1124.0039	1719.1381	0	181.45
6	20329	-88.24572	-24.04132	1379.1562	2141.0283	0	225.45
7	20329	-80.497165	-28.013775	1633.305	2561.2409	0	269.15
8	20329	-74.021445	-31.33368	1845.8017	2942.1312	0	305.67
9	20329	-70.1203	-33.33368	1975.9015	3201.0919	0	327.67
10	20329	-64.919455	-36	2155.0252	3520.1216	0	357
11	20329	-57.117165	-40	2423.8473	3981.4646	0	401
12	20329	-49.13801	-44.090675	2698.7401	4454.6941	0	446
13	20329	-39.195	-49.18816	3039.6755	5055.8086	0	502.07
14	20329	-32.665	-52.535895	3269.8446	5463.2118	0	540.4
15	20329	-25.525	-56.19636	3506.6441	5992.5814	0	595.48
16	20329	-17.975	-60.06702	3748.182	6548.6296	0	651.18
17	20329	-11.03	-63.62751	3970.3902	7178.6285	0	700.08
18	20329	-2.58	-67.95957	4240.6876	7879.5045	0	756.59
19	20329	0.7	-69.64113	4345.6263	8067.3252	0	776.28
20	20329	4.7	-69.132755	4313.8239	7625.612	0	769.69
21	20329	14.265	-66.61906	4157.0086	7405.4434	0	741.4
22	20329	21.265	-64.77945	4042.2655	7269.4855	0	720.53
23	20329	25.4975	-63.667145	3926.0169	7188.0884	0	707.84
24	20329	32.4925	-61.82885	3717.6525	7049.4092	0	686.74
25	20329	37.085	-60.62193	3580.9629	6967.5224	0	672.81
26	20329	42.10779	-59.301935	3465.5132	6848.4145	0	657.51
27	20329	51.29279	-56.888105	3271.7807	6643.364	0	629.33

LWL Case.BS.Thru Fabric

28	20329	60.0475	-54.587355	3104.1735	6470.6345	0	602.24
29	20329	67.0425	-52.74906	2990.5202	6354.3542	0	580.42
30	20329	71.77	-51.506665	2913.8233	6282.9979	0	565.6
31	20329	76.64	-50.22682	2834.7866	6172.9478	0	550.26
32	20329	83.92	-48.313625	2716.5487	6009.5403	0	527.2
33	20329	91.2	-46.400435	2598.3108	5846.0001	0	503.98
34	20329	100.9152	-43.72192	2432.7342	5766.0939	0	471.49
35	20329	108.0752	-39.67361	2181.2417	5048.1391	0	426.38
36	20329	109.9404	-35.67361	1931.9569	4722.1282	0	384.77
37	20329	111.65345	-32	1702.9975	4364.5514	0	390.24
38	20329	115.14805	-24.505845	1235.9517	3761.5492	0	320.37
39	20329	118.8785	-16.505845	737.33427	3138.0967	0	238.31
40	20329	120.7148	-12.56784	491.8954	2809.5878	0	189.78
41	20329	122.88885	-7.905563	201.31654	1704.2462	867.71686	0
42	20329	126.05255	-1.121032	-221.52743	1160.8389	0	600
43	20329	129.0889	5.39041	-627.36009	396.92349	0	600

Slices of Slip Surface: 20393

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	20393	-150.36815	-3.78424	106.94767	161.6164	0	58.5
2	20393	-142.3984	-7.2614135	320.8407	464.42432	0	69.552
3	20393	-132.68345	-11.5	581.57874	843.45193	0	95
4	20393	-123.3517	-15.5714	832.02805	1230.8264	0	132.29
5	20393	-115.145	-19.15194	1056.8826	1601.4458	0	171.67
6	20393	-105.935	-23.17022	1313.2413	2023.0046	0	215.87
7	20393	-96.725	-27.1885	1569.6	2444.5634	0	260.07
8	20393	-91.200485	-29.59882	1723.551	2697.6649	0	286.59
9	20393	-85.696925	-32	1877.893	2995.4912	0	313
10	20393	-76.26644	-36.11448	2142.2661	3484.9294	0	358.26
11	20393	-67.09834	-40.11448	2406.4307	3937.3715	0	402.26
12	20393	-58.34751	-43.932425	2666.2887	4379.9397	0	444.26
13	20393	-49.48917	-47.79728	2929.203	4828.684	0	486.77
14	20393	-39.195	-52.288585	3233.2069	5362.9446	0	536.17
15	20393	-32.665	-55.137595	3432.1475	5714.2503	0	568.94

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16	20393	-25.525	-58.252745	3634.9661	6181.7356	0	617.38
17	20393	-17.975	-61.546775	3840.5233	6672.5725	0	666.43
18	20393	-11.03	-64.576845	4029.5954	7242.0919	0	709.57
19	20393	-2.58	-68.263545	4259.7054	7869.824	0	759.51
20	20393	0.7	-69.694595	4348.9561	8029.7385	0	776.79
21	20393	4.7	-69.132755	4313.8239	7628.1032	0	769.69
22	20393	14.265	-66.61906	4157.0086	7407.8362	0	741.4
23	20393	21.265	-64.77945	4042.2655	7271.4593	0	720.53
24	20393	28.995	-62.747995	3821.9044	7119.2337	0	697.31
25	20393	37.085	-60.62193	3580.9629	6970.6138	0	672.81
26	20393	42.10779	-59.301935	3465.5132	6850.8768	0	657.51
27	20393	51.29279	-56.888105	3271.7807	6645.8476	0	629.33
28	20393	63.545	-53.668205	3047.3473	6412.7026	0	591.35
29	20393	71.77	-51.506665	2913.8233	6285.75	0	565.6
30	20393	78.46	-49.748525	2805.2042	6133.1349	0	544.51
31	20393	89.38	-46.878735	2627.8917	5887.891	0	509.8
32	20393	100.9152	-43.72192	2432.7342	5768.3902	0	471.49
33	20393	108.0752	-39.67361	2181.2417	5064.3065	0	426.38
34	20393	109.9404	-35.67361	1931.9569	4737.8325	0	384.77
35	20393	111.65345	-32	1702.9975	4378.8258	0	390.24
36	20393	115.14805	-24.505845	1235.9517	3773.2612	0	320.37
37	20393	118.8785	-16.505845	737.33427	3148.5853	0	238.31
38	20393	120.7148	-12.56784	491.8954	2819.7763	0	189.78
39	20393	122.88885	-7.905563	201.31654	1708.1743	869.98476	0
40	20393	126.05255	-1.121032	-221.52743	1165.0588	0	600
41	20393	129.0889	5.39041	-627.36009	398.14946	0	600

Slices of Slip Surface: 19377

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	19377	-125.42635	-4.6662355	152.33963	225.85729	0	61.684
2	19377	-117.6216	-8.0713975	363.93272	525.12077	0	72.172

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3	19377	-109.76315	-11.5	582.66645	844.33169	0	95
4	19377	-98.07655	-16.59882	907.93615	1352.2486	0	143.59
5	19377	-86.945	-21.45547	1218.8945	1862.8788	0	197.01
6	19377	-76.595	-25.97113	1509.0948	2339.2253	0	246.68
7	19377	-69.390365	-29.11448	1714.4151	2675.4432	0	281.26
8	19377	-62.77668	-32	1910.7841	3039.5793	0	313
9	19377	-51.626315	-36.864855	2241.7425	3637.3877	0	366.51
10	19377	-42.45822	-40.864855	2513.1846	4111.1388	0	410.51
11	19377	-36.59322	-43.42373	2685.7431	4414.6796	0	438.66
12	19377	-32.665	-45.137595	2808.1959	4631.1904	0	459.24
13	19377	-25.525	-48.252745	3010.9959	5098.8472	0	510.89
14	19377	-17.975	-51.546775	3216.5363	5589.7502	0	563.34
15	19377	-11.03	-54.576845	3405.5679	6159.7051	0	609.61
16	19377	-2.58	-58.263545	3635.697	6787.8897	0	663.35
17	19377	0.7	-59.694595	3724.9738	6948.1953	0	681.75
18	19377	4.7	-59.62896	3720.7975	6706.2285	0	679.16
19	19377	14.265	-58.553515	3653.7539	6633.3834	0	664.13
20	19377	21.265	-57.76647	3604.6328	6605.3163	0	653.06
21	19377	25.4975	-57.290585	3528.1619	6588.5068	0	646.34
22	19377	32.4925	-56.504095	3385.3875	6557.8209	0	635.18
23	19377	37.085	-55.987735	3291.7703	6544.6077	0	627.82
24	19377	42.10779	-55.422995	3223.4992	6505.4419	0	619.74
25	19377	51.29279	-54.39027	3115.9623	6442.5916	0	604.88
26	19377	60.0475	-53.40593	3030.5114	6404.96	0	590.61
27	19377	67.0425	-52.619445	2982.4937	6397.2885	0	579.14
28	19377	71.77	-52.087905	2950.0695	6397.4929	0	571.36
29	19377	78.46	-51.33571	2904.2271	6351.0062	0	560.29
30	19377	89.38	-50.10791	2829.3327	6275.2018	0	542.11
31	19377	100.84855	-48.818435	2750.7141	6353.6665	0	522.85
32	19377	108.00855	-45.67361	2555.687	5641.3772	0	487.08
33	19377	109.4408	-42.60218	2364.1909	5426.2685	0	455.19
34	19377	111.58685	-38	2077.3708	5012.562	0	407.3
35	19377	114.3847	-32	1703.4507	4464.4718	0	391.42

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36	19377	116.51365	-27.434415	1418.8872	4083.6368	0	351.83
37	19377	120.2441	-19.434415	920.33058	3406.1487	0	269.78
38	19377	123.4589	-12.540285	490.61943	2817.2123	0	190.58
39	19377	125.6346	-7.8744905	199.81527	1706.564	869.92178	0
40	19377	127.20205	-4.51306	-9.6822897	1465.8636	846.31675	0
41	19377	127.49225	-3.890735	-48.468799	1513.8312	0	600
42	19377	130.34435	2.225589	-429.67127	718.87278	0	600

LWL Case.EE.L to R

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 217
Last Edited By: Cox, Lane MVK
Date: 4/20/2011
Time: 1:13:51 PM
File Name: 5c(2) Typical 1.2nd SC.80%SG.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\2nd Stage Constuction\80%SG,1 Layer of Fabric\Slope W\
Last Solved Date: 4/20/2011
Last Solved Time: 1:27:28 PM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

LWL Case.EE.L to R

Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

SlipSurface
- Direction of movement: Left to Right
- Use Passive Mode: No
- Slip Surface Option: Entry and Exit
- Critical slip surfaces saved: 100
- Optimize Critical Slip Surface Location: Yes
- Tension Crack
  - Tension Crack Option: Tension Crack Line
  - Percentage Wet: 0
  - Tension Crack Fluid Unit Weight: 62.4 pcf

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FOS Distribution
FOS Calculation Option: Constant
Advanced
Number of Slices: 30
Optimization Tolerance: 0.01
Minimum Slip Surface Depth: 0.1 ft
Optimization Maximum Iterations: 2000
Optimization Convergence Tolerance: 1e-007
Starting Optimization Points: 8
Ending Optimization Points: 16
Complete Passes per Insertion: 1
Driving Side Maximum Convex Angle: 5 °
Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH
Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH above 0
Model: Mohr-Coulomb
Unit Weight: 102 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, 0 to -9
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -9 (2)
Cohesion Spatial Fn: CH, 0 to -9
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -9 to -14
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -9 to -14 (2)
Cohesion Spatial Fn: CH, -9 to -14

LWL Case.EE.L to R

Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -14 to -30
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -14 to -30 (2)
Cohesion Spatial Fn: CH, -14 to -30
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -30 to -34
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -30 to -34 (2)
Cohesion Spatial Fn: CH, 30 to -34
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sand Fill
Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -34 to -42
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -34 to -42 (2)
Cohesion Spatial Fn: CH, -34 to -42
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -42 to -80
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -42 to -80 (2)
Cohesion Spatial Fn: CH, -42 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

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CH, 0 to -9 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -9 (2)
Cohesion Spatial Fn: CH, 0 to -9 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -9 to -14 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -9 to -14 (2)
Cohesion Spatial Fn: CH, -9 to -14 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -14 to -30 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -14 to -30 (2)
Cohesion Spatial Fn: CH, -14 to -30 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -30 to -34 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -30 to -34 (2)
Cohesion Spatial Fn: CH, 30 to -34 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Entry and Exit

Left Projection: Range
Left-Zone Left Coordinate: (-11, 3.66443) ft
Left-Zone Right Coordinate: (31.01489, 5.94207) ft
Left-Zone Increment: 30
Right Projection: Range
Right-Zone Left Coordinate: (327, -4.83609) ft
Right-Zone Right Coordinate: (369, -10.51251) ft
Right-Zone Increment: 30
Radius Increments: 30

LWL Case.EE.L to R

Slip Surface Limits

Left Coordinate: (-200, -2.13) ft
Right Coordinate: (500, -4.5) ft

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	-2.13
	-191.42	-2.12
	-156.88	-2.03
	-119.75	-2.26
	-92.12	-1.99
	-71.42	-1.72
	-45.06	-0.68
	-33.33	-0.27
	-32	0
	22	0
	35.99	-3
	38.18	-3.47
	56.55	-4.85
	177.04	-4.54
	180.67	-4.21
	200.3	-4.33
	220.54	-4.34
	226.87	-4.54
	240.61	-4.57
	250	-4.5
	285.84	-4.64
	295.2	-4.68
	329.57	-4.85
	331.26	-5.3
	447.66	-5.3
	450.06	-4.54
	500	-4.5

Reinforcements

Reinforcement 1

Type: Fabric
Outside Point: (209, 0) ft
Inside Point: (22, 0) ft

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Slip Surface Intersection: (21.998, 0) ft
Total Length: 187 ft
Reinforcement Direction: 0 °
Applied Load Option: Variable
F of S Dependent: No
Contact Cohesion: 19 psf
Contact Phi: 265 °
Interface Factor: 2
Bond Safety Factor: 1
Fabric Capacity: 27000 lbs
Fabric Safety Factor: 1
Fabric Load: 27000 lbs
Load Distribution: Even along reinf.
Load Orientation: 0
Applied Load: 27000 lbs
Fabric Load Used: 0 lbs
Resisting Force Used: 14667 lbs/ft
Available Bond Length: 0 ft
Required Bond Length: 0 ft
Governing Component: Bond

Tension Crack Line

	X (ft)	Y (ft)
	-1	5.40517
	8	5.2
	22	0.1
	96	0.1
	118	11
	127	11
	166	2
	167.4	4

Spatial Functions

CH, 0 to -9

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -2.5, 50)
Data Point: (-300, -9, 75)
Data Point: (-33.33, 0, 50)
Data Point: (-33.33, -9, 75)
Data Point: (0, 0, 300)
Data Point: (0, -9, 300)
Data Point: (285.84, -4.62, 100)
Data Point: (285.84, -9, 100)

LWL Case.EE.L to R

Data Point: (500, 0, 100)
Data Point: (500, -9, 100)

CH, -34 to -42 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -38, 105)
Data Point: (0, -38, 116)
Data Point: (177.04, -38, 106)

CH, -42 to -80 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -61, 105)
Data Point: (0, -61, 105)
Data Point: (177.04, -61, 106)

CH, 0 to -9 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, 0, 300)
Data Point: (0, -9, 300)
Data Point: (46, 0, 148)
Data Point: (46, -9, 148)
Data Point: (122.71, 0, 198)
Data Point: (122.71, -9, 198)
Data Point: (285.84, 0, 100)
Data Point: (285.84, -9, 100)

CH, -9 to -14 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -9, 300)
Data Point: (0, -14, 300)
Data Point: (46, -9, 144)
Data Point: (46, -14, 144)
Data Point: (122.71, -9, 191)
Data Point: (122.71, -14, 191)
Data Point: (285.84, -9, 100)
Data Point: (285.84, -14, 100)

CH, -14 to -30 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)

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Data Point: (0, -14, 300)
Data Point: (0, -30, 375)
Data Point: (46, -14, 174)
Data Point: (46, -30, 342)
Data Point: (122.71, -14, 214)
Data Point: (122.71, -30, 382)
Data Point: (285.84, -14, 100)
Data Point: (285.84, -30, 268)

CH, 30 to -34 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -30, 400)
Data Point: (0, -34, 438)
Data Point: (46, -30, 341)
Data Point: (46, -34, 383)
Data Point: (122.71, -30, 374)
Data Point: (122.71, -34, 416)
Data Point: (285.84, -30, 268)
Data Point: (285.84, -34, 310)

CH, -9 to -14

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -9, 75)
Data Point: (-300, -14, 115)
Data Point: (-33.33, -9, 75)
Data Point: (-33.33, -14, 115)
Data Point: (0, -9, 300)
Data Point: (0, -14, 300)
Data Point: (285.84, -9, 100)
Data Point: (285.84, -14, 100)
Data Point: (500, -9, 100)
Data Point: (500, -14, 100)

CH, -14 to -30

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -14, 115)
Data Point: (-300, -30, 291)
Data Point: (-33.33, -14, 115)
Data Point: (-33.33, -30, 291)
Data Point: (0, -14, 300)
Data Point: (0, -30, 375)
Data Point: (285.84, -14, 100)

LWL Case.EE.L to R

Data Point: (285.84, -30, 268)
Data Point: (500, -14, 100)
Data Point: (500, -30, 268)

CH, 30 to -34

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -30, 291)
Data Point: (-300, -34, 335)
Data Point: (-33.33, -30, 291)
Data Point: (-33.33, -34, 335)
Data Point: (0, -30, 400)
Data Point: (0, -34, 438)
Data Point: (285.84, -30, 268)
Data Point: (285.84, -34, 310)
Data Point: (500, -30, 268)
Data Point: (500, -34, 310)

CH, 0 to -9 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -4.5, 90)
Data Point: (0, -4.5, 96)
Data Point: (177.04, -4.54, 87)

CH, -9 to -14 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -11.5, 90)
Data Point: (0, -11.5, 97)
Data Point: (177.04, -11.5, 100)

CH, -14 to -30 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -22, 100)
Data Point: (0, -22, 102)
Data Point: (177.04, -22, 100)

CH, -30 to -34 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -32, 122)
Data Point: (0, -32, 113)

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Data Point: (177.04, -32, 118)

CH, -34 to -42

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -34, 335)
Data Point: (-300, -42, 423)
Data Point: (-33.33, -34, 335)
Data Point: (-33.33, -42, 423)
Data Point: (0, -34, 438)
Data Point: (0, -42, 514)
Data Point: (177.04, -34, 325)
Data Point: (177.04, -42, 409)
Data Point: (500, -34, 325)
Data Point: (500, -42, 409)

CH, -42 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -42, 423)
Data Point: (-300, -80, 841)
Data Point: (-33.33, -42, 423)
Data Point: (-33.33, -80, 841)
Data Point: (0, -42, 514)
Data Point: (0, -80, 875)
Data Point: (177.04, -42, 409)
Data Point: (177.04, -80, 808)
Data Point: (500, -42, 409)
Data Point: (500, -80, 808)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -42 to -80	1,3,4,2	26600
Region 2	CH, -34 to -42	3,5,69,73,6,4	5600
Region 3	CH above 0	45,21,22,63,64,27,44,65	161.91095
Region 4	Sand Fill	29,30,43,31,32,33,42,34,35,62	606.7023
Region 5	CH, 0 to -9	56,53,54,41,12	267.3158
Region 6	EMBANKMENT FILL CH	59,46,47,60,37,36,35,62	1502.7397
Region 7	EMBANKMENT FILL CH	64,27,44,57,28,62,59	499.34315
Region 8	EMBANKMENT FILL CH	60,61,76,75,40,39,58,38,37	772.15003
Region 9	CH, 0 to -9	16,11,66,65,45,20,19,18,17,15,14,74	1498.6738
Region 10	CH, -9 to -14	11,9,67,66	1000
Region 11	CH, -14 to -30	9,7,68,67	3200
Region 12	CH, -30 to -34	7,5,69,68	800
Region 13	CH, -30 to -34	6,8,72,73	856.64

Region 14	CH, -14 to -30	8,10,71,72	3426.56
Region 15	CH, -9 to -14	10,71,70,55,50,51,52,56,12	954.73385
Region 16	CH, 0 to -9	55,49,48,76,75,70	220.0602
Region 17	CH, -30 to -34 SG	69,68,72,73	1143.36
Region 18	CH, -14 to -30 SG	68,67,71,72	4573.44
Region 19	CH, -9 to -14 SG	67,66,43,31,32,33,42,70,71	1313.1338
Region 20	CH, 0 to -9 SG	66,65,44,57,28,62,29,30,43	438.1553
Region 21	CH, 0 to -9 SG	42,34,35,36,37,38,58,39,40,75,70	538.2795

Points

	X (ft)	Y (ft)
Point 1	-200	-80
Point 2	500	-80
Point 3	-200	-42
Point 4	500	-42
Point 5	-200	-34
Point 6	500	-34
Point 7	-200	-30
Point 8	500	-30
Point 9	-200	-14
Point 10	500	-14
Point 11	-200	-9
Point 12	500	-9
Point 13	-191.42	-2.12
Point 14	-156.88	-2.03
Point 15	-119.75	-2.26
Point 16	-200	-2.13
Point 17	-92.12	-1.99
Point 18	-71.42	-1.72
Point 19	-45.06	-0.68
Point 20	-33.33	-0.27
Point 21	-19.05	1.53
Point 22	-16.9	1.81
Point 23	-6.83	6.48
Point 24	-6.79	6.72
Point 25	-0.92	7.16
Point 26	3.42	6.91
Point 27	20.53	0.36
Point 28	38.18	-3.47
Point 29	56.55	-4.85
Point 30	70.54	-8.43
Point 31	109.16	-11.38
Point 32	127.67	-11.01
Point 33	135.55	-10.86
Point 34	159.82	-8.55
Point 35	177.04	-4.54
Point 36	180.67	-4.21

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Point 37	200.3	-4.33
Point 38	220.54	-4.34
Point 39	240.61	-4.57
Point 40	250	-4.5
Point 41	500	-4.5
Point 42	154	-9
Point 43	73	-9
Point 44	22	0
Point 45	-32	0
Point 46	117.71	14
Point 47	127.71	14
Point 48	329.57	-4.85
Point 49	343.56	-8.43
Point 50	382.18	-11.38
Point 51	400.69	-11.01
Point 52	408.57	-10.86
Point 53	432.84	-8.55
Point 54	450.06	-4.54
Point 55	346.02	-9
Point 56	427.02	-9
Point 57	35.99	-3
Point 58	226.87	-4.54
Point 59	94.84	8
Point 60	167.4	4
Point 61	292.4	0.875
Point 62	46	-4.06
Point 63	-5.16	5.5
Point 64	8	5.2
Point 65	0	0
Point 66	0	-9
Point 67	0	-14
Point 68	0	-30
Point 69	0	-34
Point 70	285.84	-9
Point 71	285.84	-14
Point 72	285.84	-30
Point 73	285.84	-34
Point 74	-194	-2
Point 75	285.84	-4.64
Point 76	309.25	-4.74

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	1.58	(207.24, 384.117)	126.0235	(21.814, 5.64541)	(352.97, -9.45745)
2	16313	1.97	(207.24, 384.117)	426.496	(20.7456, 5.61096)	(369, -10.5125)
3	16282	1.97	(206.43, 382.597)	424.773	(20.7553, 5.61127)	(367.584, -10.4193)
4	16251	1.97	(205.62, 381.077)	423.051	(20.7651, 5.61159)	(366.168, -10.3261)

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5	16220	1.98	(204.81, 379.556)	421.328	(20.775, 5.61191)	(364.753, -10.233)
6	16189	1.98	(203.999, 378.036)	419.606	(20.785, 5.61223)	(363.337, -10.1398)
7	15351	1.98	(209.281, 449.25)	486.715	(20.3386, 5.59784)	(369, -10.5125)
8	16158	1.98	(203.189, 376.516)	417.883	(20.7951, 5.61256)	(361.921, -10.0466)
9	16127	1.99	(202.379, 374.995)	416.16	(20.8054, 5.61289)	(360.505, -9.9534)
10	15320	1.99	(208.454, 447.473)	484.756	(20.3608, 5.59855)	(367.584, -10.4193)
11	16096	1.99	(201.569, 373.475)	414.438	(20.8157, 5.61322)	(359.089, -9.86021)
12	15289	1.99	(207.627, 445.697)	482.796	(20.3834, 5.59928)	(366.168, -10.3261)
13	16065	2.00	(200.759, 371.955)	412.715	(20.8262, 5.61356)	(357.674, -9.76703)
14	15258	2.00	(206.8, 443.92)	480.836	(20.4064, 5.60002)	(364.753, -10.233)
15	16034	2.00	(199.948, 370.434)	410.992	(20.8368, 5.6139)	(356.258, -9.67384)
16	16003	2.01	(199.138, 368.914)	409.27	(20.8475, 5.61425)	(354.842, -9.58066)
17	15227	2.01	(205.973, 442.143)	478.877	(20.4297, 5.60077)	(363.337, -10.1398)
18	15972	2.01	(198.328, 367.394)	407.547	(20.8584, 5.61459)	(353.426, -9.48747)
19	15352	2.01	(206.481, 385.49)	428.055	(15.0086, 5.42598)	(369, -10.5125)
20	15321	2.01	(205.671, 383.97)	426.332	(15.0122, 5.4261)	(367.584, -10.4193)
21	15196	2.01	(205.146, 440.366)	476.917	(20.4533, 5.60154)	(361.921, -10.0466)
22	15290	2.02	(204.86, 382.45)	424.609	(15.0159, 5.42622)	(366.168, -10.3261)
23	15941	2.02	(197.518, 365.873)	405.825	(20.8693, 5.61495)	(352.01, -9.39428)
24	16314	2.02	(205.053, 334.658)	382.127	(17.4242, 5.50387)	(369, -10.5125)
25	15259	2.02	(204.05, 380.929)	422.887	(15.0197, 5.42634)	(364.753, -10.233)
26	16283	2.02	(204.256, 333.337)	380.585	(17.4276, 5.50398)	(367.584, -10.4193)
27	15165	2.02	(204.319, 438.59)	474.958	(20.4773, 5.60231)	(360.505, -9.9534)
28	16252	2.02	(203.459, 332.017)	379.042	(17.431, 5.50409)	(366.168, -10.3261)
29	15228	2.02	(203.24, 379.409)	421.164	(15.0235, 5.42646)	(363.337, -10.1398)
30	15910	2.02	(196.708, 364.353)	404.102	(20.8804, 5.61531)	(350.595, -9.3011)
31	17275	2.02	(205.806, 333.467)	380.728	(21.7132, 5.64216)	(369, -10.5125)
32	16221	2.03	(202.662, 330.696)	377.499	(17.4345, 5.5042)	(364.753, -10.233)
33	15197	2.03	(202.43, 377.889)	419.442	(15.0273, 5.42658)	(361.921, -10.0466)
34	17244	2.03	(205.009, 332.146)	379.186	(21.7195, 5.64236)	(367.584, -10.4193)
35	16190	2.03	(201.865, 329.375)	375.957	(17.438, 5.50431)	(363.337, -10.1398)
36	15879	2.03	(195.898, 362.833)	402.379	(20.8917, 5.61567)	(349.179, -9.20791)
37	15166	2.03	(201.62, 376.368)	417.719	(15.0312, 5.42671)	(360.505, -9.9534)
38	17213	2.03	(204.212, 330.825)	377.643	(21.726, 5.64257)	(366.168, -10.3261)
39	15134	2.03	(203.492, 436.813)	472.998	(20.5018, 5.6031)	(359.089, -9.86021)
40	16159	2.03	(201.067, 328.054)	374.414	(17.4415, 5.50442)	(361.921, -10.0466)
41	15135	2.03	(200.809, 374.848)	415.996	(15.0351, 5.42683)	(359.089, -9.86021)
42	17182	2.03	(203.415, 329.504)	376.1	(21.7324, 5.64278)	(364.753, -10.233)
43	16128	2.04	(200.27, 326.733)	372.871	(17.4451, 5.50454)	(360.505, -9.9534)
44	15848	2.04	(195.087, 361.312)	400.657	(20.9031, 5.61604)	(347.763, -9.11473)
45	16097	2.04	(199.473, 325.412)	371.329	(17.4487, 5.50465)	(359.089, -9.86021)
46	17151	2.04	(202.617, 328.183)	374.558	(21.739, 5.64299)	(363.337, -10.1398)
47	15104	2.04	(199.999, 373.328)	414.274	(15.039, 5.42696)	(357.674, -9.76703)
48	15103	2.04	(202.665, 435.036)	471.039	(20.5266, 5.6039)	(357.674, -9.76703)
49	17276	2.04	(204.043, 293.856)	346.195	(19.2641, 5.56319)	(369, -10.5125)
50	16066	2.04	(198.676, 324.092)	369.786	(17.4523, 5.50477)	(357.674, -9.76703)
51	15817	2.04	(194.277, 359.792)	398.934	(20.9146, 5.61641)	(346.347, -9.02154)
52	17245	2.04	(203.256, 292.695)	344.793	(19.2671, 5.56329)	(367.584, -10.4193)

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53	17120	2.04	(201.82, 326.863)	373.015	(21.7456, 5.6432)	(361.921, -10.0466)
54	15073	2.04	(199.189, 371.807)	412.551	(15.043, 5.42709)	(356.258, -9.67384)
55	17214	2.05	(202.469, 291.535)	343.391	(19.2702, 5.56339)	(366.168, -10.3261)
56	16035	2.05	(197.879, 322.771)	368.244	(17.456, 5.50489)	(356.258, -9.67384)
57	15072	2.05	(201.839, 433.259)	469.079	(20.5518, 5.60471)	(356.258, -9.67384)
58	17183	2.05	(201.682, 290.374)	341.989	(19.2732, 5.56349)	(364.753, -10.233)
59	17089	2.05	(201.023, 325.542)	371.472	(21.7523, 5.64342)	(360.505, -9.9534)
60	15042	2.05	(198.379, 370.287)	410.829	(15.047, 5.42722)	(354.842, -9.58066)
61	14390	2.05	(208.513, 450.856)	488.484	(10.6963, 5.28694)	(369, -10.5125)
62	16004	2.05	(197.082, 321.45)	366.701	(17.4597, 5.50501)	(354.842, -9.58066)
63	17152	2.05	(200.896, 289.214)	340.587	(19.2764, 5.56359)	(363.337, -10.1398)
64	14359	2.05	(207.686, 449.079)	486.525	(10.6985, 5.28701)	(367.584, -10.4193)
65	15786	2.05	(193.283, 358.178)	397.044	(20.9578, 5.6178)	(344.957, -8.75376)
66	15353	2.05	(204.301, 335.85)	383.527	(13.2879, 5.3705)	(369, -10.5125)
67	17058	2.06	(200.226, 324.221)	369.93	(21.759, 5.64363)	(359.089, -9.86021)
68	15011	2.06	(197.569, 368.767)	409.106	(15.0511, 5.42735)	(353.426, -9.48747)
69	17121	2.06	(200.109, 288.053)	339.185	(19.2795, 5.56369)	(361.921, -10.0466)
70	15322	2.06	(203.503, 334.529)	381.984	(13.2893, 5.37054)	(367.584, -10.4193)
71	15973	2.06	(196.285, 320.129)	365.158	(17.4634, 5.50513)	(353.426, -9.48747)
72	14328	2.06	(206.859, 447.302)	484.565	(10.7008, 5.28708)	(366.168, -10.3261)
73	17090	2.06	(199.322, 286.893)	337.783	(19.2827, 5.56379)	(360.505, -9.9534)
74	15041	2.06	(201.012, 431.483)	467.119	(20.5774, 5.60553)	(354.842, -9.58066)
75	15291	2.06	(202.706, 333.208)	380.441	(13.2908, 5.37059)	(366.168, -10.3261)
76	17027	2.06	(199.429, 322.9)	368.387	(21.7659, 5.64386)	(357.674, -9.76703)
77	14980	2.06	(196.759, 367.246)	407.383	(15.0552, 5.42748)	(352.01, -9.39428)
78	17059	2.06	(198.536, 285.732)	336.381	(19.2859, 5.56389)	(359.089, -9.86021)
79	15260	2.06	(201.909, 331.887)	378.899	(13.2923, 5.37064)	(364.753, -10.233)
80	15942	2.06	(195.487, 318.808)	363.616	(17.4672, 5.50525)	(352.01, -9.39428)
81	14297	2.06	(206.032, 445.526)	482.606	(10.703, 5.28715)	(364.753, -10.233)
82	14391	2.07	(205.721, 386.863)	429.613	(9.67228, 5.25392)	(369, -10.5125)
83	16996	2.07	(198.631, 321.579)	366.844	(21.7727, 5.64408)	(356.258, -9.67384)
84	15755	2.07	(192.233, 356.536)	395.104	(21.0116, 5.61953)	(343.575, -8.43349)
85	15229	2.07	(201.112, 330.566)	377.356	(13.2938, 5.37069)	(363.337, -10.1398)
86	17028	2.07	(197.749, 284.572)	334.979	(19.2891, 5.564)	(357.674, -9.76703)
87	14360	2.07	(204.911, 385.343)	427.891	(9.67287, 5.25394)	(367.584, -10.4193)
88	14949	2.07	(195.948, 365.726)	405.661	(15.0593, 5.42762)	(350.595, -9.3011)
89	14266	2.07	(205.205, 443.749)	480.646	(10.7053, 5.28723)	(363.337, -10.1398)
90	15911	2.07	(194.69, 317.488)	362.073	(17.471, 5.50537)	(350.595, -9.3011)
91	15198	2.07	(200.315, 329.246)	375.813	(13.2953, 5.37074)	(361.921, -10.0466)
92	16315	2.07	(203.295, 294.901)	347.47	(15.8007, 5.45152)	(369, -10.5125)
93	15010	2.07	(200.185, 429.706)	465.16	(20.6034, 5.60637)	(353.426, -9.48747)
94	14329	2.07	(204.101, 383.823)	426.168	(9.67346, 5.25396)	(366.168, -10.3261)
95	16997	2.07	(196.962, 283.411)	333.577	(19.2923, 5.5641)	(356.258, -9.67384)
96	16965	2.07	(197.834, 320.259)	365.302	(21.7797, 5.6443)	(354.842, -9.58066)
97	14235	2.07	(204.378, 441.972)	478.686	(10.7076, 5.2873)	(361.921, -10.0466)
98	16284	2.07	(202.509, 293.74)	346.068	(15.8024, 5.45157)	(367.584, -10.4193)
99	14298	2.08	(203.291, 382.302)	424.445	(9.67406, 5.25398)	(364.753, -10.233)
100	15167	2.08	(199.518, 327.925)	374.271	(13.2968, 5.37078)	(360.505, -9.9534)

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101	15880	2.08	(193.893, 316.167)	360.531	(17.4749, 5.5055)	(349.179, -9.20791)

Slices of Slip Surface: Optimized

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	21.90589	0.08388475	-5.2345271	297.01562	0	600
2	Optimized	21.998905	-0.0010005725	0.06243482	506.85554	0	227.31
3	Optimized	22.209795	-0.19345557	9.2644085	526.52528	0	226.61
4	Optimized	29.204795	-1.7234405	11.135097	844.35011	0	203.5
5	Optimized	37.085	-3.2779835	2.6821437	1056.2192	0	177.46
6	Optimized	42.10779	-4.268838	31.435108	1179.8219	0	160.86
7	Optimized	50.99239	-6.02152	99.152076	1392.622	0	151.25
8	Optimized	56.2496	-7.0758295	140.29926	1511.0963	0	154.68
9	Optimized	60.179215	-8.0761495	201.89823	1644.0781	0	157.24
10	Optimized	67.174215	-9.85679	314.12619	1889.076	0	156.97
11	Optimized	71.40366	-10.933435	381.98907	2039.8259	0	159.56
12	Optimized	72.63366	-11.275815	403.5481	2071.9102	0	160.32
13	Optimized	76.88944	-12.69917	493.04955	2233.7307	0	162.93
14	Optimized	85.53076	-15.589275	674.77947	2554.9834	0	211.3
15	Optimized	92.56132	-18.130275	834.47866	2818.2434	0	241.65
16	Optimized	98.9083	-20.78118	1000.9022	3213.0664	0	272.79
17	Optimized	106.0683	-23.94637	1199.5569	3723.1711	0	309.76
18	Optimized	113.435	-27.43948	1418.7578	4278.3606	0	350.28
19	Optimized	118.2725	-29.73329	1562.6293	4622.0252	0	376.89
20	Optimized	119.03775	-30.09614	1585.4005	4659.9411	0	373.43
21	Optimized	122.5601	-32.09614	1710.8208	4838.6153	0	395.94
22	Optimized	126.79485	-34.524855	1862.9746	5120.9526	0	362.43
23	Optimized	131.63	-37.297905	2036.7638	5293.6163	0	387.77
24	Optimized	137.68935	-40.77305	2254.6728	5471.5502	0	419.73
25	Optimized	140.6175	-42.452395	2359.8745	5552.4519	0	435.26
26	Optimized	147.78	-43.66098	2436.4347	5670.4986	0	443.52
27	Optimized	156.98685	-44.20077	2471.6624	5529.6539	0	443.75
28	Optimized	163.61	-43.694885	2441.1743	5241.8556	0	434.63
29	Optimized	172.22	-43.03724	2401.4078	4972.7562	0	422.72
30	Optimized	178.855	-42.53045	2380.8889	4851.4341	0	414.57
31	Optimized	183.2349	-42.19591	2369.4075	4797.3214	0	411.06
32	Optimized	193.0499	-41.44623	2318.8009	4687.731	0	403.19
33	Optimized	201.90305	-40.770015	2273.8038	4591.8937	0	396.09
34	Optimized	207.7646	-40.39461	2250.2455	4528.9721	0	392.14
35	Optimized	216.28155	-39.888695	2218.3654	4451.9675	0	386.83
36	Optimized	223.705	-39.447735	2184.4591	4387.6844	0	382.2
37	Optimized	227.16225	-39.24237	2165.4245	4359.1998	0	380.04
38	Optimized	234.03225	-38.93838	2145.5059	4302.0233	0	376.85
39	Optimized	245.305	-38.44716	2116.0962	4218.361	0	371.7
40	Optimized	254.15925	-38.06133	2093.2281	4152.5879	0	367.64
41	Optimized	265.19885	-37.69797	2067.8388	4078.288	0	363.83
42	Optimized	278.9596	-37.33373	2041.7592	4003.3184	0	360
43	Optimized	289.12	-37.06479	2022.4623	3948.0072	0	357.18

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44	Optimized	293.8	-36.94091	2013.4374	3872.9288	0	355.88
45	Optimized	298.11185	-36.826775	2005.0637	3696.3481	0	354.68
46	Optimized	303.91875	-35.826995	1940.9143	3470.6081	0	344.18
47	Optimized	307.71485	-34.452145	1853.9248	3235.7511	0	329.75
48	Optimized	308.93295	-33.84092	1815.4426	3112.9927	0	308.33
49	Optimized	312.91875	-31.84092	1689.3884	2843.6637	0	287.33
50	Optimized	323.07875	-26.74283	1368.1079	2259.8703	0	233.8
51	Optimized	330.3766	-23.080925	1124.218	1852.015	0	195.35
52	Optimized	331.2216	-22.65289	1083.4547	1807.7431	0	190.86
53	Optimized	337.41	-18.89823	848.55149	1366.5933	0	151.43
54	Optimized	344.5216	-14.583435	579.27398	862.04291	0	106.13
55	Optimized	345.7516	-13.837165	532.71924	776.15885	0	100
56	Optimized	349.4951	-11.565892	390.98663	532.10347	0	100

Slices of Slip Surface: 16313

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	16313	21.266735	0.30445178	-18.997709	466.98564	0	600
2	16313	21.841655	0.025979725	-1.6211142	501.05874	0	600
3	16313	21.94774	-0.025208575	1.5729793	591.00039	0	227.48
4	16313	28.995	-3.2689781	110.38391	957.47437	0	204.19
5	16313	37.085	-6.963962	232.68774	1373.9434	0	177.46
6	16313	40.00949	-8.2201925	287.84354	1511.4489	0	167.79
7	16313	43.93728	-9.86972	372.34761	1691.9969	0	151
8	16313	50.15032	-12.36972	499.22756	1970.0911	0	146.54
9	16313	55.40753	-14.435235	603.4848	2196.4458	0	183.48
10	16313	63.545	-17.37401	782.62122	2571.5659	0	218.58
11	16313	71.77	-20.28958	965.8659	2952.7945	0	253.48
12	16313	78.46	-22.43115	1100.5905	3208.797	0	279.45
13	16313	89.38	-25.730825	1308.2439	3597.2527	0	319.79
14	16313	100.03605	-28.65048	1492.1509	4083.5999	0	356.01
15	16313	107.19605	-30.47392	1607.0578	4501.4745	0	372.3
16	16313	113.435	-31.91176	1697.8434	4857.8106	0	390.08
17	16313	120.41345	-33.43784	1794.1285	5162.8137	0	409.11
18	16313	125.41345	-34.44896	1858.0203	5282.4391	0	362.54
19	16313	131.63	-35.604085	1931.1601	5295.7522	0	370.42
20	16313	140.1625	-37.044875	2022.4231	5198.1155	0	379.87
21	16313	149.3875	-38.41105	2109.1024	5063.0056	0	388.28
22	16313	156.91	-39.38843	2171.3185	4936.3969	0	393.81
23	16313	163.61	-40.124035	2218.2473	4786.4955	0	397.41
24	16313	172.22	-40.910955	2268.7639	4680.508	0	400.45
25	16313	178.855	-41.42917	2312.1894	4674.4604	0	403.01
26	16313	184.9707	-41.77512	2342.4742	4692.7273	0	406.64
27	16313	194.7857	-42.161115	2362.7478	4711.7192	0	410.69
28	16313	205.36	-42.34454	2371.9133	4711.8111	0	412.62
29	16313	215.48	-42.26907	2366.9493	4684.4018	0	411.83

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30	16313	222.87475	-42.085645	2350.7119	4652.629	0	409.9
31	16313	226.03975	-41.96337	2336.8824	4636.3429	0	408.62
32	16313	233.74	-41.499	2305.2879	4573.5297	0	403.74
33	16313	245.305	-40.65053	2253.5894	4460.5074	0	394.83
34	16313	255.97335	-39.542695	2185.2007	4321.6714	0	383.2
35	16313	267.92	-37.996915	2085.8414	4134.8129	0	366.97
36	16313	279.86665	-36.105885	1964.9004	3910.4173	0	347.11
37	16313	288.60195	-34.536765	1864.8411	3725.9505	0	330.64
38	16313	291.88195	-33.895105	1823.8819	3647.3854	0	308.9
39	16313	293.8	-33.500035	1798.7329	3545.0092	0	304.75
40	16313	302.225	-31.60478	1677.9697	2992.6326	0	284.85
41	16313	314.33	-28.68183	1491.8562	2393.0292	0	254.16
42	16313	324.49	-25.911315	1315.7658	2109.4459	0	225.07
43	16313	330.415	-24.203765	1193.6189	1915.3986	0	207.14
44	16313	337.41	-21.97754	1040.6892	1631.0996	0	183.76
45	16313	344.79	-19.587135	891.50285	1342.1602	0	158.66
46	16313	353.1179	-16.584025	704.09856	1009.0513	0	127.13
47	16313	364.6079	-12.256255	434.07251	539.46669	0	100

Slices of Slip Surface: 16282

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	16282	21.27447	0.30198087	-18.843294	467.50682	0	600
2	16282	21.845995	0.025270825	-1.5769242	501.37264	0	600
3	16282	21.949185	-0.02449927	1.5287975	591.03516	0	227.47
4	16282	28.995	-3.2655813	110.17493	957.25226	0	204.19
5	16282	37.085	-6.958176	232.32607	1373.5458	0	177.46
6	16282	40.01864	-8.217094	287.60753	1511.3219	0	167.76
7	16282	43.94643	-9.86493	372.0064	1691.7081	0	150.96
8	16282	50.16832	-12.36493	498.84862	1969.8794	0	146.55
9	16282	55.42553	-14.42768	602.92214	2195.9881	0	183.41
10	16282	63.545	-17.35437	781.36885	2569.8069	0	218.37
11	16282	71.77	-20.26452	964.30357	2950.587	0	253.22
12	16282	78.46	-22.400895	1098.6564	3206.0299	0	279.14
13	16282	89.38	-25.69143	1305.7345	3593.6968	0	319.38
14	16282	100.14705	-28.628365	1490.7552	4085.4154	0	355.83
15	16282	107.30705	-30.444675	1605.2583	4502.1123	0	372.04
16	16282	113.435	-31.848595	1693.7903	4850.9597	0	389.42
17	16282	120.59905	-33.40392	1792.0928	5159.4917	0	408.83
18	16282	125.59905	-34.40918	1855.5831	5278.7118	0	362.01
19	16282	131.63	-35.51964	1925.8032	5287.2326	0	369.55
20	16282	140.1625	-36.949465	2016.411	5188.4678	0	378.89
21	16282	149.3875	-38.303125	2102.4063	5052.0268	0	387.16
22	16282	156.91	-39.269825	2163.8377	4924.2665	0	392.58
23	16282	163.61	-39.99544	2210.3181	4773.447	0	396.07
24	16282	172.22	-40.76895	2259.9575	4666.0155	0	398.97
25	16282	178.855	-41.276505	2302.6534	4659.0224	0	401.4

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26	16282	187.4297	-41.69729	2336.662	4679.6788	0	405.82
27	16282	197.2447	-42.066085	2355.8593	4697.975	0	409.69
28	16282	204.89275	-42.148795	2359.7995	4692.6001	0	410.56
29	16282	214.0782	-42.08271	2355.2962	4667.9232	0	409.87
30	16282	219.60545	-41.971	2348.2207	4645.4781	0	408.7
31	16282	223.705	-41.813175	2332.0344	4623.6599	0	407.04
32	16282	233.74	-41.241685	2289.2852	4546.9765	0	401.04
33	16282	245.305	-40.3675	2235.9431	4431.2694	0	391.86
34	16282	255.97335	-39.234425	2165.9719	4289.6287	0	379.96
35	16282	267.92	-37.65888	2064.7067	4099.5141	0	363.42
36	16282	279.86665	-35.7363	1941.9013	3871.6831	0	343.23
37	16282	287.60615	-34.343855	1853.0607	3707.8442	0	328.61
38	16282	290.88615	-33.69287	1811.538	3625.2771	0	306.78
39	16282	293.8	-33.091485	1773.2556	3495.0639	0	300.46
40	16282	301.3031	-31.398615	1665.381	3002.6368	0	282.69
41	16282	308.3281	-29.7722	1561.7003	2539.8428	0	265.61
42	16282	314.33	-28.21012	1462.4056	2345.3512	0	249.21
43	16282	324.49	-25.405895	1284.2259	2058.0894	0	219.76
44	16282	330.415	-23.678075	1160.8178	1861.9153	0	201.62
45	16282	337.41	-21.42644	1006.3255	1574.8391	0	177.98
46	16282	344.79	-19.008925	855.45244	1282.9865	0	152.59
47	16282	352.28965	-16.292585	685.93915	981.17566	0	124.07
48	16282	363.07175	-12.209665	431.16505	538.52631	0	100

Slices of Slip Surface: 16251

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	16251	21.282285	0.29948334	-18.687783	468.04734	0	600
2	16251	21.850385	0.02455509	-1.5322603	501.70182	0	600
3	16251	21.95065	-0.02378437	1.4841215	591.08395	0	227.47
4	16251	28.995	-3.2621579	109.95956	957.03134	0	204.19
5	16251	37.085	-6.952345	231.9603	1373.1074	0	177.46
6	16251	40.027875	-8.2139715	287.36047	1511.2258	0	167.73
7	16251	43.955665	-9.860105	371.67825	1691.4237	0	150.93
8	16251	50.186515	-12.360105	498.46195	1969.5823	0	146.57
9	16251	55.443725	-14.42007	602.36026	2195.5136	0	183.34
10	16251	63.545	-17.334585	780.18329	2568.0472	0	218.16
11	16251	71.77	-20.239265	962.74167	2948.3434	0	252.95
12	16251	78.46	-22.370405	1096.8107	3203.3545	0	278.82
13	16251	89.38	-25.651735	1303.313	3590.0542	0	318.96
14	16251	100.26015	-28.60608	1489.413	4087.1974	0	355.66
15	16251	107.42015	-30.41521	1603.4317	4502.646	0	371.78
16	16251	113.435	-31.784955	1689.8504	4844.2225	0	388.75
17	16251	120.78915	-33.369745	1790.007	5156.2128	0	408.56
18	16251	125.78915	-34.3691	1853.1148	5275.1132	0	361.48
19	16251	131.63	-35.43456	1920.5696	5278.5837	0	368.68

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20	16251	140.1625	-36.85334	2010.3962	5178.7086	0	377.9
21	16251	149.3875	-38.19439	2095.5993	5040.9343	0	386.04
22	16251	156.91	-39.150325	2156.5231	4912.1279	0	391.34
23	16251	163.61	-39.865875	2202.1213	4760.2576	0	394.72
24	16251	172.22	-40.625875	2250.9384	4651.512	0	397.47
25	16251	178.855	-41.12269	2293.0552	4643.296	0	399.79
26	16251	185.5775	-41.470525	2323.2158	4660.476	0	403.44
27	16251	195.3925	-41.821985	2341.3429	4676.167	0	407.13
28	16251	205.36	-41.943775	2346.9368	4670.6522	0	408.41
29	16251	215.48	-41.82891	2339.4828	4639.0556	0	407.2
30	16251	223.705	-41.57551	2317.3109	4599.2671	0	404.54
31	16251	233.74	-40.98236	2273.0541	4520.2557	0	398.31
32	16251	245.305	-40.08224	2218.1826	4401.6945	0	388.86
33	16251	255.97335	-38.9237	2146.5698	4257.4022	0	376.7
34	16251	267.92	-37.31812	2043.486	4064.0384	0	359.84
35	16251	279.86665	-35.3637	1918.5731	3832.6963	0	339.32
36	16251	286.6058	-34.14936	1841.1686	3689.8352	0	326.57
37	16251	289.8858	-33.48895	1799.0892	3602.6218	0	304.63
38	16251	293.8	-32.679535	1747.5391	3445.0238	0	296.14
39	16251	300.3798	-31.190585	1652.6243	3012.4857	0	280.5
40	16251	307.4048	-29.542615	1547.6618	2551.9863	0	263.2
41	16251	314.33	-27.734365	1432.6915	2297.1384	0	244.21
42	16251	324.49	-24.89606	1252.4359	2006.2211	0	214.41
43	16251	330.415	-23.14775	1127.7171	1807.8754	0	196.05
44	16251	337.41	-20.87042	971.62608	1518.045	0	172.14
45	16251	344.79	-18.42548	819.04282	1223.1899	0	146.47
46	16251	351.4612	-15.9985	667.58617	952.9675	0	120.98
47	16251	361.5354	-12.16307	428.25248	537.58543	0	100

Slices of Slip Surface: 16220

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	16220	21.29018	0.29695872	-18.530264	468.62496	0	600
2	16220	21.85481	0.02383242	-1.4871406	502.06026	0	600
3	16220	21.952125	-0.02306382	1.4391603	591.13208	0	227.46
4	16220	28.995	-3.2587078	109.74421	956.81099	0	204.19
5	16220	37.085	-6.9464685	231.59462	1372.712	0	177.46
6	16220	40.037205	-8.2108245	287.12698	1511.1086	0	167.7
7	16220	43.964995	-9.855245	371.31892	1691.1449	0	150.9
8	16220	50.20491	-12.355245	498.06739	1969.4227	0	146.58
9	16220	55.46212	-14.4124	601.8002	2195.0687	0	183.26
10	16220	63.545	-17.314645	778.93148	2566.292	0	217.95
11	16220	71.77	-20.21382	961.14163	2946.0636	0	252.68
12	16220	78.46	-22.33969	1094.8778	3200.5933	0	278.49
13	16220	89.38	-25.611745	1300.8047	3586.5044	0	318.54
14	16220	100.3753	-28.58363	1488.0168	4089.071	0	355.48

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15	16220	107.5353	-30.38552	1601.5961	4503.5253	0	371.52
16	16220	113.435	-31.72083	1685.9097	4837.3713	0	388.08
17	16220	120.984	-33.33531	1787.9018	5152.827	0	408.28
18	16220	125.984	-34.328725	1850.6245	5271.1154	0	360.94
19	16220	131.63	-35.348845	1915.2085	5269.9324	0	367.8
20	16220	140.1625	-36.756495	2004.3787	5168.8377	0	376.91
21	16220	149.3875	-38.08484	2088.7887	5029.8349	0	384.9
22	16220	156.91	-39.02993	2148.8629	4899.8102	0	390.09
23	16220	163.61	-39.735335	2194.0509	4746.9279	0	393.36
24	16220	172.22	-40.48171	2242.017	4636.7908	0	395.96
25	16220	178.855	-40.967705	2283.3963	4627.5585	0	398.16
26	16220	185.5775	-41.30399	2312.8181	4643.5493	0	401.69
27	16220	195.3925	-41.63797	2329.9322	4657.5217	0	405.2
28	16220	205.36	-41.741085	2334.2862	4649.9954	0	406.28
29	16220	215.48	-41.60628	2325.5377	4616.3041	0	404.87
30	16220	223.705	-41.335995	2302.2624	4574.697	0	402.03
31	16220	233.74	-40.721005	2256.7419	4493.3712	0	395.57
32	16220	245.305	-39.79472	2200.2018	4371.9948	0	385.84
33	16220	255.89355	-38.62139	2127.7044	4226.1029	0	373.52
34	16220	267.6807	-37.011945	2024.4718	4032.5855	0	356.63
35	16220	279.70715	-35.014475	1896.862	3795.6495	0	335.65
36	16220	289.12	-33.23658	1783.6049	3573.7815	0	301.98
37	16220	293.8	-32.264135	1721.6203	3394.4384	0	291.77
38	16220	299.4544	-30.980805	1639.8313	3022.104	0	278.3
39	16220	306.4794	-29.31106	1533.5028	2563.9526	0	260.77
40	16220	314.33	-27.2545	1402.7134	2248.5803	0	239.17
41	16220	324.49	-24.381755	1220.3961	1953.936	0	209.01
42	16220	330.415	-22.61272	1094.3758	1753.3961	0	190.43
43	16220	337.41	-20.309395	936.59375	1460.6449	0	166.25
44	16220	344.79	-17.83672	782.27743	1162.8531	0	140.29
45	16220	350.6326	-15.70173	649.06999	924.44904	0	117.87
46	16220	359.9989	-12.116475	425.34508	536.64394	0	100

Slices of Slip Surface: 16189

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	16189	21.298165	0.29440666	-18.370737	469.20638	0	600
2	16189	21.859275	0.02310271	-1.4415801	502.43457	0	600
3	16189	21.95361	-0.02233754	1.3938524	591.19036	0	227.46
4	16189	28.995	-3.25523	109.52888	956.65619	0	204.19
5	16189	37.085	-6.940545	231.22494	1372.2762	0	177.46
6	16189	40.04663	-8.2076525	286.88217	1511.0196	0	167.67
7	16189	43.97442	-9.850345	370.97293	1690.8499	0	150.87
8	16189	50.223505	-12.350345	497.6758	1969.1752	0	146.59
9	16189	55.480715	-14.40467	601.24412	2194.576	0	183.19
10	16189	63.545	-17.29455	777.68019	2564.5395	0	217.74

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11	16189	71.77	-20.18818	959.54236	2943.826	0	252.41
12	16189	78.46	-22.308735	1092.9458	3197.8365	0	278.17
13	16189	89.38	-25.571445	1298.2952	3582.8648	0	318.12
14	16189	100.49265	-28.56101	1486.6406	4090.9831	0	355.31
15	16189	107.65265	-30.355605	1599.7477	4504.3853	0	371.26
16	16189	113.435	-31.65622	1681.854	4830.4053	0	387.4
17	16189	121.18375	-33.300615	1785.682	5149.4808	0	408
18	16189	126.18375	-34.28804	1848.1075	5267.5682	0	360.4
19	16189	131.63	-35.26248	1909.8454	5261.1523	0	366.92
20	16189	140.1625	-36.658915	1998.2513	5158.9617	0	375.9
21	16189	149.3875	-37.97446	2081.8669	5018.6213	0	383.76
22	16189	156.91	-38.908625	2141.3693	4887.4851	0	388.83
23	16189	163.61	-39.603805	2185.8443	4733.5886	0	391.99
24	16189	172.22	-40.336455	2232.8828	4622.0582	0	394.44
25	16189	178.855	-40.81154	2273.6479	4611.8077	0	396.52
26	16189	185.5775	-41.13618	2302.3116	4626.5072	0	399.93
27	16189	195.3925	-41.45255	2318.3098	4638.6568	0	403.25
28	16189	205.36	-41.53683	2321.53	4629.1273	0	404.14
29	16189	215.48	-41.381915	2311.5849	4593.3391	0	402.51
30	16189	223.705	-41.09461	2287.205	4549.9505	0	399.49
31	16189	233.74	-40.45759	2240.3473	4466.1752	0	392.8
32	16189	245.305	-39.50491	2182.1068	4341.9581	0	382.8
33	16189	255.5569	-38.35239	2111.0505	4198.884	0	370.7
34	16189	266.6707	-36.824875	2013.0037	4015.3311	0	354.66
35	16189	277.78455	-34.99271	1895.9642	3798.5716	0	335.42
36	16189	284.59075	-33.755505	1817.0942	3647.543	0	308.24
37	16189	289.12	-32.831485	1758.2434	3524.5473	0	297.73
38	16189	293.8	-31.845235	1695.4995	3343.3784	0	287.37
39	16189	298.52685	-30.769255	1626.9817	3031.683	0	276.08
40	16189	305.55185	-29.07751	1519.2209	2575.8935	0	258.31
41	16189	314.33	-26.77046	1372.5714	2199.4948	0	234.09
42	16189	324.49	-23.8629	1188.0137	1901.1425	0	203.56
43	16189	330.415	-22.07292	1060.6839	1698.313	0	184.77
44	16189	337.41	-19.7433	901.23214	1402.7988	0	160.3
45	16189	344.79	-17.24256	745.19843	1101.8674	0	134.05
46	16189	349.8038	-15.40223	630.38296	895.65802	0	114.72
47	16189	358.4622	-12.069885	422.4424	535.70151	0	100

Slices of Slip Surface: 15351

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	15351	21.16929	0.35711587	-22.283804	482.00897	0	600
2	15351	22.02224	-0.00026804	-0.28085965	535.57158	0	600
3	15351	29.01724	-2.7901245	80.207973	921.306	0	204.12
4	15351	37.085	-5.984903	171.59555	1290.7464	0	177.46
5	15351	41.726555	-7.6995475	247.29564	1480.7559	0	162.12
6	15351	45.654345	-9.136086	318.532	1638.6092	0	145.17
7	15351	51.29279	-11.076496	413.18047	1858.417	0	147.24

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8	15351	58.264495	-13.44041	536.31693	2137.311	0	151.51
9	15351	65.259495	-15.6359	674.43545	2427.8663	0	201.22
10	15351	71.77	-17.63407	800.1619	2699.4156	0	225.6
11	15351	78.46	-19.52008	918.91692	2929.9848	0	248.89
12	15351	89.38	-22.43175	1102.3946	3279.8481	0	285.15
13	15351	102	-25.43786	1291.996	3837.2308	0	323.3
14	15351	113.435	-27.914745	1448.3799	4439.9708	0	355.27
15	15351	121.0364	-29.386725	1541.4844	4714.7722	0	374.69
16	15351	126.0364	-30.290525	1598.6347	4810.3273	0	374.89
17	15351	131.63	-31.21459	1657.1956	4804.9984	0	380.96
18	15351	143.42795	-32.924065	1765.7934	4650.803	0	391.24
19	15351	152.65295	-34.157795	1844.2451	4514.6677	0	342.2
20	15351	156.91	-34.630545	1874.4483	4434.0705	0	344.4
21	15351	163.61	-35.302725	1917.491	4278.0053	0	347.15
22	15351	172.22	-36.028055	1964.0938	4166.1874	0	349.32
23	15351	178.855	-36.509845	2005.2162	4157.1422	0	351.35
24	15351	185.5775	-36.86283	2035.6862	4175.0698	0	355.06
25	15351	195.3925	-37.24223	2055.6067	4194.2157	0	359.04
26	15351	205.36	-37.4231	2064.8536	4192.9463	0	360.94
27	15351	215.48	-37.399415	2063.0739	4169.0298	0	360.69
28	15351	223.705	-37.24112	2046.8098	4137.8339	0	359.03
29	15351	233.74	-36.80157	2012.1549	4073.229	0	354.42
30	15351	245.305	-36.10739	1970.087	3974.4779	0	347.13
31	15351	258.62815	-34.87946	1893.5518	3815.5832	0	334.23
32	15351	271.90225	-33.397215	1797.8102	3620.7012	0	312.73
33	15351	281.1941	-32.100335	1714.6402	3441.7338	0	293.07
34	15351	289.12	-30.8608	1635.3177	3271.9887	0	277.04
35	15351	293.2997	-30.15768	1590.3148	3144.0644	0	269.66
36	15351	294.6997	-29.910815	1574.4917	3062.4956	0	267.06
37	15351	302.225	-28.454825	1481.4028	2628.8542	0	251.78
38	15351	314.33	-25.96506	1322.3094	2107.7761	0	225.63
39	15351	324.49	-23.60438	1171.822	1865.6966	0	200.85
40	15351	330.415	-22.14952	1065.4448	1697.5709	0	185.57
41	15351	337.41	-20.25403	933.11268	1447.3168	0	165.67
42	15351	344.79	-18.21913	806.16225	1195.344	0	144.3
43	15351	352.3016	-15.93129	663.3941	938.40205	0	120.28
44	15351	363.7916	-12.256255	434.07176	537.13001	0	100

Slices of Slip Surface: 16158

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	16158	21.306235	0.29182661	-18.210034	469.82697	0	600
2	16158	21.863785	0.022365855	-1.3955943	502.83882	0	600
3	16158	21.95511	-0.02160547	1.348132	591.25304	0	227.45
4	16158	28.995	-3.2517255	109.30709	956.43699	0	204.19
5	16158	37.085	-6.9345755	230.85535	1371.8415	0	177.46
6	16158	40.05615	-8.2044555	286.62603	1510.9083	0	167.64

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7	16158	43.98394	-9.845405	370.61823	1690.5852	0	150.84
8	16158	50.24231	-12.345405	497.28687	1968.9503	0	146.6
9	16158	55.49952	-14.39688	600.649	2194.1276	0	183.12
10	16158	63.545	-17.2743	776.4289	2562.788	0	217.53
11	16158	71.77	-20.16234	957.94311	2941.551	0	252.14
12	16158	78.46	-22.277545	1091.014	3195.0811	0	277.84
13	16158	89.38	-25.53084	1295.7867	3579.2297	0	317.69
14	16158	100.61225	-28.538215	1485.183	4092.9652	0	355.13
15	16158	107.77225	-30.325465	1597.8807	4505.0891	0	370.99
16	16158	113.435	-31.591125	1677.7975	4823.4395	0	386.72
17	16158	121.3887	-33.26566	1783.5338	5146.0036	0	407.72
18	16158	126.3887	-34.24705	1845.576	5263.6689	0	359.85
19	16158	131.63	-35.175465	1904.3545	5252.3691	0	366.02
20	16158	140.1625	-36.5606	1992.1209	5148.9735	0	374.89
21	16158	149.3875	-37.863245	2074.9415	5007.2933	0	382.61
22	16158	156.91	-38.786395	2133.7003	4875.1508	0	387.56
23	16158	163.61	-39.47127	2177.5013	4720.1083	0	390.61
24	16158	172.22	-40.19009	2223.7427	4607.1074	0	392.9
25	16158	178.855	-40.654185	2263.8105	4595.7697	0	394.87
26	16158	185.5775	-40.967085	2291.7975	4609.349	0	398.15
27	16158	195.3925	-41.265695	2306.6794	4619.6745	0	401.29
28	16158	205.36	-41.33099	2308.6637	4608.1378	0	401.98
29	16158	215.48	-41.155805	2297.4246	4570.1564	0	400.14
30	16158	223.705	-40.85133	2272.1381	4524.8683	0	396.94
31	16158	233.74	-40.19208	2223.7255	4438.8134	0	390.02
32	16158	245.305	-39.21278	2163.8979	4311.6907	0	379.73
33	16158	255.21855	-38.08226	2094.2244	4171.527	0	367.86
34	16158	265.6556	-36.63836	2001.5764	3998.1318	0	352.7
35	16158	276.09265	-34.924675	1892.1397	3795.3176	0	334.71
36	16158	283.5756	-33.55611	1804.9148	3625.7776	0	306.81
37	16158	289.12	-32.42299	1732.738	3474.8743	0	293.44
38	16158	293.8	-31.42279	1669.1072	3291.8445	0	282.94
39	16158	297.597	-30.55591	1613.9179	3041.0948	0	273.84
40	16158	304.622	-28.841935	1504.8157	2587.6793	0	255.84
41	16158	314.33	-26.28219	1342.0737	2149.9745	0	228.96
42	16158	324.49	-23.33943	1155.293	1847.8472	0	198.06
43	16158	330.415	-21.528265	1026.7001	1642.7426	0	179.05
44	16158	337.41	-19.172045	865.62055	1344.2795	0	154.31
45	16158	344.79	-16.64291	707.80912	1040.3153	0	127.75
46	16158	348.97475	-15.099955	611.50964	866.58021	0	111.55
47	16158	356.92525	-12.02329	419.53499	534.74891	0	100

Slices of Slip Surface: 16127

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	16127	21.314385	0.28921811	-18.047259	470.4793	0	600
2	16127	21.868335	0.021621755	-1.3491991	503.259	0	600

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3	16127	21.956625	-0.02086754	1.3021261	591.33248	0	227.45
4	16127	28.995	-3.2481925	109.08531	956.21838	0	204.19
5	16127	37.085	-6.9285585	230.47757	1371.4503	0	177.46
6	16127	40.065765	-8.2012335	286.3829	1510.8224	0	167.61
7	16127	43.993555	-9.84043	370.25489	1690.3069	0	150.8
8	16127	50.261325	-12.34043	496.8781	1968.7457	0	146.61
9	16127	55.518535	-14.38903	600.0596	2193.6419	0	183.05
10	16127	63.545	-17.253895	775.11074	2561.0392	0	217.31
11	16127	71.77	-20.1363	956.30603	2939.241	0	251.87
12	16127	78.46	-22.24611	1088.9947	3192.2399	0	277.51
13	16127	89.38	-25.48992	1293.1901	3575.5079	0	317.26
14	16127	100.7342	-28.515245	1483.7982	4095.046	0	354.95
15	16127	107.8942	-30.295095	1596.0328	4506.2373	0	370.72
16	16127	113.435	-31.525535	1673.7403	4816.4736	0	386.03
17	16127	121.599	-33.23044	1781.3442	5142.616	0	407.44
18	16127	126.599	-34.205745	1843.0308	5259.8599	0	359.3
19	16127	131.63	-35.08778	1898.8612	5243.4563	0	365.13
20	16127	140.1625	-36.46153	1985.9876	5138.98	0	373.87
21	16127	149.3875	-37.75118	2067.9046	4995.9578	0	381.45
22	16127	156.91	-38.663235	2126.0265	4862.6366	0	386.28
23	16127	163.61	-39.33773	2169.2843	4706.4866	0	389.21
24	16127	172.22	-40.04261	2214.5964	4592.1449	0	391.36
25	16127	178.855	-40.49562	2253.9388	4579.4434	0	393.2
26	16127	185.5775	-40.796685	2281.1745	4591.9733	0	396.37
27	16127	195.3925	-41.077395	2294.9387	4600.5739	0	399.31
28	16127	205.36	-41.12355	2295.7908	4586.9375	0	399.8
29	16127	215.48	-40.92792	2283.2547	4546.7565	0	397.74
30	16127	223.705	-40.60613	2256.7466	4499.6094	0	394.36
31	16127	233.74	-39.924465	2207.0238	4411.1446	0	387.21
32	16127	245.305	-38.918305	2145.4688	4281.1922	0	376.64
33	16127	254.87835	-37.810985	2077.4178	4144.058	0	365.02
34	16127	264.63505	-36.45243	1990.2191	3980.9448	0	350.75
35	16127	274.39175	-34.857145	1888.3198	3792.0845	0	334
36	16127	282.55505	-33.35503	1792.5922	3603.8541	0	305.36
37	16127	289.12	-32.01103	1707.0894	3424.7642	0	289.12
38	16127	293.8	-30.996745	1642.5503	3239.8758	0	278.47
39	16127	296.6649	-30.340745	1600.7806	3050.3961	0	271.58
40	16127	303.6899	-28.60431	1490.2436	2599.335	0	253.35
41	16127	314.33	-25.789625	1311.3191	2100.0254	0	223.79
42	16127	324.49	-22.81127	1122.33	1794.0532	0	192.52
43	16127	330.415	-20.978685	992.37114	1586.634	0	173.28
44	16127	337.41	-18.59555	829.60876	1285.2476	0	148.25
45	16127	344.79	-16.037685	670.0371	978.16555	0	121.4
46	16127	348.14555	-14.794865	592.47528	837.19907	0	108.35
47	16127	355.38815	-11.976699	416.62313	533.79554	0	100

Slices of Slip Surface: 15320

	Slip	X (ft)	Y (ft)	PWP (psf)	Base Normal	Frictional	Cohesive

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	Surface				Stress (psf)	Strength (psf)	Strength (psf)
1	15320	21.18042	0.35384602	-22.079921	482.81644	0	600
2	15320	22.026135	-0.000320285	-0.32973425	535.95943	0	600
3	15320	29.021135	-2.7883591	80.047028	921.30731	0	204.1
4	15320	37.085	-5.979332	171.24734	1290.3777	0	177.46
5	15320	41.73863	-7.6965775	247.05643	1480.6762	0	162.08
6	15320	45.66642	-9.1316115	318.19197	1638.6102	0	145.13
7	15320	51.29279	-11.065102	412.46583	1857.5133	0	147.24
8	15320	58.288805	-13.43349	535.88092	2137.0986	0	151.53
9	15320	65.283805	-15.62499	673.76151	2427.2718	0	201.12
10	15320	71.77	-17.61147	798.74042	2697.465	0	225.36
11	15320	78.46	-19.492915	917.22885	2927.5983	0	248.6
12	15320	89.38	-22.39654	1100.2034	3276.7312	0	284.78
13	15320	102	-25.39211	1289.1051	3833.0472	0	322.82
14	15320	113.435	-27.858585	1444.8645	4434.8324	0	354.68
15	15320	121.2273	-29.35658	1539.5727	4712.267	0	374.47
16	15320	126.2273	-30.255205	1596.4756	4806.9078	0	374.39
17	15320	131.63	-31.139625	1652.5707	4796.7623	0	380.17
18	15320	143.84405	-32.88442	1763.351	4634.0392	0	390.55
19	15320	153.06905	-34.107065	1841.1569	4497.1673	0	341.41
20	15320	156.91	-34.525325	1867.8723	4423.4044	0	343.3
21	15320	163.61	-35.188645	1910.3739	4266.3221	0	345.96
22	15320	172.22	-35.90208	1956.2336	4153.2853	0	348
23	15320	178.855	-36.374425	1996.7631	4143.2188	0	349.93
24	15320	185.5775	-36.717325	2026.5727	4160.2089	0	353.53
25	15320	195.3925	-37.081475	2045.6146	4177.7999	0	357.36
26	15320	205.36	-37.24606	2053.8111	4174.8146	0	359.08
27	15320	215.48	-37.20501	2050.9709	4149.0713	0	358.65
28	15320	223.705	-37.032035	2033.7479	4116.2868	0	356.84
29	15320	233.74	-36.57353	1997.9315	4049.647	0	352.02
30	15320	245.305	-35.85669	1954.4978	3948.4975	0	344.5
31	15320	257.3851	-34.749365	1885.7567	3804.8556	0	332.87
32	15320	270.03765	-33.325315	1793.8098	3616.5247	0	313.18
33	15320	280.57255	-31.858105	1699.7263	3414.0018	0	290.93
34	15320	289.12	-30.51204	1613.6158	3230.0875	0	273.38
35	15320	293.8	-29.708105	1562.1396	3076.5017	0	264.94
36	15320	302.225	-28.07248	1457.5568	2590.3353	0	247.76
37	15320	314.33	-25.550205	1296.3687	2065.8145	0	221.28
38	15320	324.49	-23.160675	1144.1814	1820.6752	0	196.19
39	15320	330.415	-21.68853	1036.6694	1650.6993	0	180.73
40	15320	337.41	-19.771515	902.98796	1398.2128	0	160.6
41	15320	344.79	-17.713675	774.61289	1143.7214	0	138.99
42	15320	351.4503	-15.676595	647.49866	914.35278	0	117.6
43	15320	362.2324	-12.209665	431.16616	536.21994	0	100

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LWL Case.BS.L to R.Thru Fabric

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 217
Last Edited By: Cox, Lane MVK
Date: 4/20/2011
Time: 1:13:51 PM
File Name: 5c(2) Typical 1.2nd SC.80%SG.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\2nd Stage Constuction\80%SG,1 Layer of Fabric\Slope W\
Last Solved Date: 4/20/2011
Last Solved Time: 1:21:38 PM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

LWL Case.BS.L to R.Thru Fabric

Kind: SLOPE/W
Method: Spencer
Settings
    Apply Phreatic Correction: No
    PWP Conditions Source: Piezometric Line
    Use Staged Rapid Drawdown: No
SlipSurface
    Direction of movement: Left to Right
    Use Passive Mode: No
    Slip Surface Option: Block
    Critical slip surfaces saved: 100
    Optimize Critical Slip Surface Location: Yes
    Tension Crack
        Tension Crack Option: Tension Crack Line
        Percentage Wet: 0
        Tension Crack Fluid Unit Weight: 62.4 pcf

FOS Distribution
    FOS Calculation Option: Constant
Restrict Block Crossing: Yes
Advanced
    Number of Slices: 30
    Optimization Tolerance: 0.01
    Minimum Slip Surface Depth: 0.1 ft
    Optimization Maximum Iterations: 2000
    Optimization Convergence Tolerance: 1e-007
    Starting Optimization Points: 8
    Ending Optimization Points: 16
    Complete Passes per Insertion: 1
    Driving Side Maximum Convex Angle: 5 °
    Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH

Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH above 0

Model: Mohr-Coulomb
Unit Weight: 102 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH, 0 to -9

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -9 (2)
Cohesion Spatial Fn: CH, 0 to -9
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH, -9 to -14

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -9 to -14 (2)

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Cohesion Spatial Fn: CH, -9 to -14
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -14 to -30
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -14 to -30 (2)
Cohesion Spatial Fn: CH, -14 to -30
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -30 to -34
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -30 to -34 (2)
Cohesion Spatial Fn: CH, 30 to -34
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sand Fill
Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -34 to -42
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -34 to -42 (2)
Cohesion Spatial Fn: CH, -34 to -42
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -42 to -80
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -42 to -80 (2)
Cohesion Spatial Fn: CH, -42 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure

Piezometric Line: 1

CH, 0 to -9 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -9 (2)
Cohesion Spatial Fn: CH, 0 to -9 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -9 to -14 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -9 to -14 (2)
Cohesion Spatial Fn: CH, -9 to -14 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -14 to -30 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -14 to -30 (2)
Cohesion Spatial Fn: CH, -14 to -30 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -30 to -34 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -30 to -34 (2)
Cohesion Spatial Fn: CH, 30 to -34 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Limits
Left Coordinate: (-200, -2.13) ft
Right Coordinate: (500, -4.5) ft

Slip Surface Block
Left Grid
Upper Left: (83, -14) ft
Lower Left: (160, -14) ft

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Lower Right: (160, -63) ft
X Increments: 7
Y Increments: 7
Starting Angle: 115 °
Ending Angle: 135 °
Angle Increments: 7

Right Grid
Upper Left: (247, -13) ft
Lower Left: (322, -13) ft
Lower Right: (322, -63) ft
X Increments: 7
Y Increments: 7
Starting Angle: 0 °
Ending Angle: 45 °
Angle Increments: 7

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	-2.13
	-191.42	-2.12
	-156.88	-2.03
	-119.75	-2.26
	-92.12	-1.99
	-71.42	-1.72
	-45.06	-0.68
	-33.33	-0.27
	-32	0
	22	0
	35.99	-3
	38.18	-3.47
	56.55	-4.85
	177.04	-4.54
	180.67	-4.21
	200.3	-4.33
	220.54	-4.34
	226.87	-4.54
	240.61	-4.57
	250	-4.5
	285.84	-4.64
	295.2	-4.68
	329.57	-4.85
	331.26	-5.3
	447.66	-5.3

	450.06	-4.54
	500	-4.5

Reinforcements

Reinforcement 1

Type: Fabric
Outside Point: (209, 0) ft
Inside Point: (22, 0) ft
Slip Surface Intersection: (111.1, 0) ft
Total Length: 187 ft
Reinforcement Direction: 0 °
Applied Load Option: Variable
F of S Dependent: No
Contact Cohesion: 265 psf
Contact Phi: 19 °
Interface Factor: 2
Bond Safety Factor: 1
Fabric Capacity: 27000 lbs
Fabric Safety Factor: 1
Fabric Load: 27000 lbs
Load Distribution: Even along reinf.
Load Orientation: 0
Applied Load: 27000 lbs
Fabric Load Used: 27000 lbs
Resisting Force Used: 1464.6 lbs/ft
Available Bond Length: 89.098 ft
Required Bond Length: 18.435 ft
Governing Component: Fabric

Tension Crack Line

	X (ft)	Y (ft)
	-1	5.40517
	8	5.2
	22	0.1
	96	0.1
	118	11
	127	11
	166	2
	167.4	4

Spatial Functions

CH, 0 to -9

Model: Linear Interpolation

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Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -2.5, 50)
Data Point: (-300, -9, 75)
Data Point: (-33.33, 0, 50)
Data Point: (-33.33, -9, 75)
Data Point: (0, 0, 300)
Data Point: (0, -9, 300)
Data Point: (285.84, -4.62, 100)
Data Point: (285.84, -9, 100)
Data Point: (500, 0, 100)
Data Point: (500, -9, 100)

CH, -34 to -42 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -38, 105)
Data Point: (0, -38, 116)
Data Point: (177.04, -38, 106)

CH, -42 to -80 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -61, 105)
Data Point: (0, -61, 105)
Data Point: (177.04, -61, 106)

CH, 0 to -9 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, 0, 300)
Data Point: (0, -9, 300)
Data Point: (46, 0, 148)
Data Point: (46, -9, 148)
Data Point: (122.71, 0, 198)
Data Point: (122.71, -9, 198)
Data Point: (285.84, 0, 100)
Data Point: (285.84, -9, 100)

CH, -9 to -14 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -9, 300)
Data Point: (0, -14, 300)

LWL Case.BS.L to R.Thru Fabric

Data Point: (46, -9, 144)
Data Point: (46, -14, 144)
Data Point: (122.71, -9, 191)
Data Point: (122.71, -14, 191)
Data Point: (285.84, -9, 100)
Data Point: (285.84, -14, 100)

CH, -14 to -30 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -14, 300)
Data Point: (0, -30, 375)
Data Point: (46, -14, 174)
Data Point: (46, -30, 342)
Data Point: (122.71, -14, 214)
Data Point: (122.71, -30, 382)
Data Point: (285.84, -14, 100)
Data Point: (285.84, -30, 268)

CH, 30 to -34 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -30, 400)
Data Point: (0, -34, 438)
Data Point: (46, -30, 341)
Data Point: (46, -34, 383)
Data Point: (122.71, -30, 374)
Data Point: (122.71, -34, 416)
Data Point: (285.84, -30, 268)
Data Point: (285.84, -34, 310)

CH, -9 to -14

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -9, 75)
Data Point: (-300, -14, 115)
Data Point: (-33.33, -9, 75)
Data Point: (-33.33, -14, 115)
Data Point: (0, -9, 300)
Data Point: (0, -14, 300)
Data Point: (285.84, -9, 100)
Data Point: (285.84, -14, 100)
Data Point: (500, -9, 100)
Data Point: (500, -14, 100)

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CH, -14 to -30

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -14, 115)
Data Point: (-300, -30, 291)
Data Point: (-33.33, -14, 115)
Data Point: (-33.33, -30, 291)
Data Point: (0, -14, 300)
Data Point: (0, -30, 375)
Data Point: (285.84, -14, 100)
Data Point: (285.84, -30, 268)
Data Point: (500, -14, 100)
Data Point: (500, -30, 268)

CH, 30 to -34

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -30, 291)
Data Point: (-300, -34, 335)
Data Point: (-33.33, -30, 291)
Data Point: (-33.33, -34, 335)
Data Point: (0, -30, 400)
Data Point: (0, -34, 438)
Data Point: (285.84, -30, 268)
Data Point: (285.84, -34, 310)
Data Point: (500, -30, 268)
Data Point: (500, -34, 310)

CH, 0 to -9 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -4.5, 90)
Data Point: (0, -4.5, 96)
Data Point: (177.04, -4.54, 87)

CH, -9 to -14 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -11.5, 90)
Data Point: (0, -11.5, 97)
Data Point: (177.04, -11.5, 100)

CH, -14 to -30 (2)

Model: Linear Interpolation

LWL Case.BS.L to R.Thru Fabric

Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -22, 100)
Data Point: (0, -22, 102)
Data Point: (177.04, -22, 100)

CH, -30 to -34 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -32, 122)
Data Point: (0, -32, 113)
Data Point: (177.04, -32, 118)

CH, -34 to -42

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -34, 335)
Data Point: (-300, -42, 423)
Data Point: (-33.33, -34, 335)
Data Point: (-33.33, -42, 423)
Data Point: (0, -34, 438)
Data Point: (0, -42, 514)
Data Point: (177.04, -34, 325)
Data Point: (177.04, -42, 409)
Data Point: (500, -34, 325)
Data Point: (500, -42, 409)

CH, -42 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -42, 423)
Data Point: (-300, -80, 841)
Data Point: (-33.33, -42, 423)
Data Point: (-33.33, -80, 841)
Data Point: (0, -42, 514)
Data Point: (0, -80, 875)
Data Point: (177.04, -42, 409)
Data Point: (177.04, -80, 808)
Data Point: (500, -42, 409)
Data Point: (500, -80, 808)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -42 to -80	1,3,4,2	26600

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Region 2	CH, -34 to -42	3,5,69,73,6,4	5600
Region 3	CH above 0	45,21,22,63,64,27,44,65	161.91095
Region 4	Sand Fill	29,30,43,31,32,33,42,34,35,62	606.7023
Region 5	CH, 0 to -9	56,53,54,41,12	267.3158
Region 6	EMBANKMENT FILL CH	59,46,47,60,37,36,35,62	1502.7397
Region 7	EMBANKMENT FILL CH	64,27,44,57,28,62,59	499.34315
Region 8	EMBANKMENT FILL CH	60,61,76,75,40,39,58,38,37	772.15003
Region 9	CH, 0 to -9	16,11,66,65,45,20,19,18,17,15,14,74	1498.6738
Region 10	CH, -9 to -14	11,9,67,66	1000
Region 11	CH, -14 to -30	9,7,68,67	3200
Region 12	CH, -30 to -34	7,5,69,68	800
Region 13	CH, -30 to -34	6,8,72,73	856.64
Region 14	CH, -14 to -30	8,10,71,72	3426.56
Region 15	CH, -9 to -14	10,71,70,55,50,51,52,56,12	954.73385
Region 16	CH, 0 to -9	55,49,48,76,75,70	220.0602
Region 17	CH, -30 to -34 SG	69,68,72,73	1143.36
Region 18	CH, -14 to -30 SG	68,67,71,72	4573.44
Region 19	CH, -9 to -14 SG	67,66,43,31,32,33,42,70,71	1313.1338
Region 20	CH, 0 to -9 SG	66,65,44,57,28,62,29,30,43	438.1553
Region 21	CH, 0 to -9 SG	42,34,35,36,37,38,58,39,40,75,70	538.2795

Points

	X (ft)	Y (ft)
Point 1	-200	-80
Point 2	500	-80
Point 3	-200	-42
Point 4	500	-42
Point 5	-200	-34
Point 6	500	-34
Point 7	-200	-30
Point 8	500	-30
Point 9	-200	-14
Point 10	500	-14
Point 11	-200	-9
Point 12	500	-9
Point 13	-191.42	-2.12
Point 14	-156.88	-2.03
Point 15	-119.75	-2.26
Point 16	-200	-2.13
Point 17	-92.12	-1.99
Point 18	-71.42	-1.72
Point 19	-45.06	-0.68
Point 20	-33.33	-0.27
Point 21	-19.05	1.53
Point 22	-16.9	1.81
Point 23	-6.83	6.48
Point 24	-6.79	6.72

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Point 25	-0.92	7.16
Point 26	3.42	6.91
Point 27	20.53	0.36
Point 28	38.18	-3.47
Point 29	56.55	-4.85
Point 30	70.54	-8.43
Point 31	109.16	-11.38
Point 32	127.67	-11.01
Point 33	135.55	-10.86
Point 34	159.82	-8.55
Point 35	177.04	-4.54
Point 36	180.67	-4.21
Point 37	200.3	-4.33
Point 38	220.54	-4.34
Point 39	240.61	-4.57
Point 40	250	-4.5
Point 41	500	-4.5
Point 42	154	-9
Point 43	73	-9
Point 44	22	0
Point 45	-32	0
Point 46	117.71	14
Point 47	127.71	14
Point 48	329.57	-4.85
Point 49	343.56	-8.43
Point 50	382.18	-11.38
Point 51	400.69	-11.01
Point 52	408.57	-10.86
Point 53	432.84	-8.55
Point 54	450.06	-4.54
Point 55	346.02	-9
Point 56	427.02	-9
Point 57	35.99	-3
Point 58	226.87	-4.54
Point 59	94.84	8
Point 60	167.4	4
Point 61	292.4	0.875
Point 62	46	-4.06
Point 63	-5.16	5.5
Point 64	8	5.2
Point 65	0	0
Point 66	0	-9
Point 67	0	-14
Point 68	0	-30
Point 69	0	-34
Point 70	285.84	-9
Point 71	285.84	-14
Point 72	285.84	-30

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Point 73	285.84	-34
Point 74	-194	-2
Point 75	285.84	-4.64
Point 76	309.25	-4.74

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	1.85	(228.45, 7.426)	100.1128	(106.84, 11.1481)	(355.437, -9.61983)
2	22822	1.90	(228.45, 7.426)	99.401	(104.003, 10.4038)	(351.803, -9.38062)
3	22813	1.91	(228.796, 7.438)	98.339	(104.003, 10.4038)	(352.49, -9.42585)
4	27486	1.91	(228.766, 8.116)	99.041	(105.131, 10.7)	(351.211, -9.34168)
5	22757	1.91	(236.767, 9.249)	103.859	(106.58, 11.08)	(365.539, -10.2847)
6	27485	1.91	(234.152, 8.292)	102.609	(105.131, 10.7)	(361.916, -10.0463)
7	22821	1.91	(235.361, 7.652)	104.319	(104.003, 10.4038)	(365.539, -10.2847)
8	27550	1.91	(227.024, 6.124)	99.428	(101.916, 9.85632)	(351.211, -9.34168)
9	22758	1.91	(229.854, 9.023)	99.192	(106.58, 11.08)	(351.803, -9.38062)
10	27551	1.91	(223.276, 5.911)	97.08	(101.916, 9.85632)	(343.813, -8.48869)
11	23334	1.91	(226.41, 5.083)	101.034	(100.22, 9.41135)	(351.803, -9.38062)
12	27494	1.91	(233.944, 8.285)	103.712	(105.131, 10.7)	(361.501, -10.019)
13	27558	1.91	(232.2, 6.293)	104.03	(101.916, 9.85632)	(361.501, -10.019)
14	22814	1.91	(223.677, 7.115)	95.068	(104.003, 10.4038)	(342.414, -8.13686)
15	23269	1.91	(234.863, 7.083)	105.428	(103.084, 10.1628)	(365.539, -10.2847)
16	27541	1.91	(225.845, 6.086)	97.537	(101.916, 9.85632)	(348.867, -9.1874)
17	27549	1.91	(232.409, 6.3)	102.925	(101.916, 9.85632)	(361.916, -10.0463)
18	27542	1.92	(222.314, 5.793)	95.156	(101.916, 9.85632)	(341.95, -8.01802)
19	27477	1.92	(227.586, 8.077)	97.224	(105.131, 10.7)	(348.867, -9.1874)
20	27495	1.92	(228.993, 8.123)	100.426	(105.131, 10.7)	(351.663, -9.37143)
21	22749	1.92	(230.2, 9.034)	98.02	(106.58, 11.08)	(352.49, -9.42585)
22	27487	1.92	(225.013, 7.902)	96.639	(105.131, 10.7)	(343.813, -8.48869)
23	27478	1.92	(224.047, 7.785)	94.789	(105.131, 10.7)	(341.95, -8.01802)
24	22830	1.92	(233.627, 7.596)	104.298	(104.003, 10.4038)	(362.093, -10.0579)
25	23270	1.92	(227.952, 6.857)	100.543	(103.084, 10.1628)	(351.803, -9.38062)
26	23325	1.92	(226.756, 5.095)	100.475	(100.22, 9.41135)	(352.49, -9.42585)
27	22766	1.92	(235.033, 9.192)	104.06	(106.58, 11.08)	(362.093, -10.0579)
28	23333	1.92	(233.319, 5.309)	106.134	(100.22, 9.41135)	(365.539, -10.2847)
29	27493	1.92	(240.718, 8.507)	108.2	(105.131, 10.7)	(374.965, -10.9051)
30	22823	1.92	(223.709, 7.119)	96.159	(104.003, 10.4038)	(342.477, -8.15286)
31	27557	1.92	(238.974, 6.515)	108.517	(101.916, 9.85632)	(374.965, -10.9051)
32	27540	1.92	(231.832, 6.281)	101.683	(101.916, 9.85632)	(360.769, -9.97076)
33	27559	1.92	(227.251, 6.132)	100.803	(101.916, 9.85632)	(351.663, -9.37143)
34	23278	1.92	(233.129, 7.027)	105.467	(103.084, 10.1628)	(362.093, -10.0579)
35	23277	1.92	(241.428, 7.298)	110.97	(103.084, 10.1628)	(378.588, -11.1436)
36	22829	1.92	(241.927, 7.867)	110.025	(104.003, 10.4038)	(378.588, -11.1436)
37	23261	1.92	(228.298, 6.869)	99.867	(103.084, 10.1628)	(352.49, -9.42585)
38	27543	1.92	(219.777, 5.478)	93.562	(101.916, 9.85632)	(337.027, -6.7581)
39	22886	1.92	(227.033, 5.801)	99.649	(101.379, 9.7155)	(351.803, -9.38062)
40	22877	1.92	(227.378, 5.813)	98.583	(101.379, 9.7155)	(352.49, -9.42585)

LWL Case.BS.L to R.Thru Fabric

41	27476	1.92	(233.575, 8.273)	101.441	(105.131, 10.7)	(360.769, -9.97076)
42	22885	1.92	(233.942, 6.027)	104.507	(101.379, 9.7155)	(365.539, -10.2847)
43	27479	1.92	(221.498, 7.47)	93.237	(105.131, 10.7)	(337.027, -6.7581)
44	23342	1.92	(231.586, 5.253)	106.009	(100.22, 9.41135)	(362.093, -10.0579)
45	23326	1.92	(221.647, 4.772)	96.433	(100.22, 9.41135)	(342.414, -8.13686)
46	22750	1.93	(225.075, 8.712)	94.714	(106.58, 11.08)	(342.414, -8.13686)
47	22765	1.93	(243.333, 9.463)	110.038	(106.58, 11.08)	(378.588, -11.1436)
48	22748	1.93	(238.474, 9.304)	103.664	(106.58, 11.08)	(368.932, -10.5081)
49	22812	1.93	(237.069, 7.708)	103.868	(104.003, 10.4038)	(368.932, -10.5081)
50	22894	1.93	(232.209, 5.971)	104.552	(101.379, 9.7155)	(362.093, -10.0579)
51	23262	1.93	(223.182, 6.546)	96.163	(103.084, 10.1628)	(342.414, -8.13686)
52	23341	1.93	(239.883, 5.524)	111.77	(100.22, 9.41135)	(378.588, -11.1436)
53	27544	1.93	(217.643, 5.213)	92.077	(101.916, 9.85632)	(332.875, -5.69588)
54	22878	1.93	(222.266, 5.49)	95.144	(101.379, 9.7155)	(342.414, -8.13686)
55	27552	1.93	(220.568, 5.577)	95.382	(101.916, 9.85632)	(338.563, -7.15128)
56	27484	1.93	(242.221, 8.556)	107.883	(105.131, 10.7)	(377.95, -11.1016)
57	22693	1.93	(238.166, 10.825)	104.003	(109.125, 11.7478)	(365.539, -10.2847)
58	23335	1.93	(221.68, 4.776)	97.664	(100.22, 9.41135)	(342.477, -8.15286)
59	23324	1.93	(235.026, 5.365)	106.279	(100.22, 9.41135)	(368.932, -10.5081)
60	22310	1.93	(230.516, 9.769)	98.108	(107.786, 11.3963)	(351.803, -9.38062)
61	22831	1.93	(227.563, 7.397)	100.094	(104.003, 10.4038)	(350.04, -9.26458)
62	22815	1.93	(220.205, 6.686)	92.502	(104.003, 10.4038)	(335.696, -6.41763)
63	28006	1.93	(231.738, 5.761)	105.234	(101.057, 9.63092)	(361.501, -10.019)
64	23260	1.93	(236.57, 7.139)	106.125	(103.084, 10.1628)	(368.932, -10.5081)
65	27622	1.93	(230.426, 4.245)	104.502	(98.6079, 8.98852)	(361.501, -10.019)
66	27480	1.93	(219.354, 7.204)	92.093	(105.131, 10.7)	(332.875, -5.69588)
67	27615	1.93	(221.509, 3.862)	97.579	(98.6079, 8.98852)	(343.813, -8.48869)
68	27566	1.93	(237.377, 6.463)	108.802	(101.916, 9.85632)	(371.791, -10.6962)
69	27502	1.93	(239.121, 8.454)	108.467	(105.131, 10.7)	(371.791, -10.6962)
70	27038	1.93	(229.398, 8.833)	97.801	(106.289, 11.0038)	(351.211, -9.34168)
71	27614	1.93	(225.252, 4.076)	99.819	(98.6079, 8.98852)	(351.211, -9.34168)
72	27548	1.93	(240.476, 6.564)	108.183	(101.916, 9.85632)	(377.95, -11.1016)
73	27046	1.93	(234.576, 9.002)	102.49	(106.289, 11.0038)	(361.501, -10.019)
74	27430	1.93	(235.665, 10.231)	103.432	(108.274, 11.5245)	(361.501, -10.019)
75	28005	1.93	(238.511, 5.983)	109.623	(101.057, 9.63092)	(374.965, -10.9051)
76	22694	1.93	(231.254, 10.599)	98.978	(109.125, 11.7478)	(351.803, -9.38062)
77	22893	1.93	(240.507, 6.242)	110.274	(101.379, 9.7155)	(378.588, -11.1436)
78	23253	1.93	(222.48, 6.46)	95.007	(103.084, 10.1628)	(341.056, -7.78928)
79	27488	1.93	(222.293, 7.568)	94.894	(105.131, 10.7)	(338.563, -7.15128)
80	23268	1.93	(245.696, 7.332)	112.405	(103.084, 10.1628)	(387.137, -11.2809)
81	22685	1.93	(231.599, 10.61)	97.927	(109.125, 11.7478)	(352.49, -9.42585)
82	22820	1.93	(246.193, 7.901)	111.412	(104.003, 10.4038)	(387.137, -11.2809)
83	28062	1.93	(224.685, 3.415)	101.15	(97.5421, 8.7089)	(351.211, -9.34168)
84	22759	1.93	(225.108, 8.716)	96.116	(106.58, 11.08)	(342.477, -8.15286)
85	22876	1.93	(235.649, 6.083)	104.479	(101.379, 9.7155)	(368.932, -10.5081)
86	23252	1.93	(227.926, 6.857)	98.402	(103.084, 10.1628)	(351.751, -9.37721)
87	23343	1.93	(225.524, 5.054)	101.604	(100.22, 9.41135)	(350.04, -9.26458)
88	27998	1.93	(226.562, 5.592)	100.64	(101.057, 9.63092)	(351.211, -9.34168)

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89	27037	1.93	(234.784, 9.009)	101.39	(106.289, 11.0038)	(361.916, -10.0463)
90	27429	1.93	(242.441, 10.453)	107.92	(108.274, 11.5245)	(374.965, -10.9051)
91	23271	1.93	(223.214, 6.55)	97.393	(103.084, 10.1628)	(342.477, -8.15286)
92	27613	1.93	(230.635, 4.252)	103.509	(98.6079, 8.98852)	(361.916, -10.0463)
93	28061	1.93	(230.067, 3.592)	104.817	(97.5421, 8.7089)	(361.916, -10.0463)
94	26974	1.94	(231.001, 10.639)	97.494	(109.206, 11.769)	(351.211, -9.34168)
95	23317	1.94	(220.948, 4.686)	95.218	(100.22, 9.41135)	(341.056, -7.78928)
96	27997	1.94	(231.947, 5.768)	104.131	(101.057, 9.63092)	(361.916, -10.0463)
97	27421	1.94	(235.874, 10.238)	102.332	(108.274, 11.5245)	(361.916, -10.0463)
98	22301	1.94	(230.861, 9.78)	96.973	(107.786, 11.3963)	(352.49, -9.42585)
99	27623	1.94	(225.479, 4.083)	101.112	(98.6079, 8.98852)	(351.663, -9.37143)
100	27560	1.94	(223.508, 5.937)	98.245	(101.916, 9.85632)	(344.264, -8.59313)
101	27605	1.94	(224.073, 4.037)	97.898	(98.6079, 8.98852)	(348.867, -9.1874)

Slices of Slip Surface: Optimized

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	110.7977	0.3851675	-317.96182	930.37583	0	600
2	Optimized	114.7589	-4.7043335	0.25551455	3426.0423	1977.8789	0
3	Optimized	116.23605	-6.986761	142.916	1641.4279	865.16626	0
4	Optimized	118.3308	-10.224686	345.30083	2004.353	957.85422	0
5	Optimized	119.8624	-12.592135	493.26259	2872.2959	0	189.26
6	Optimized	122.72545	-17.01764	769.87863	3253.6902	0	245.67
7	Optimized	126.19385	-21.71564	1063.5943	3768.6638	0	292.58
8	Optimized	130.68935	-26.698	1375.1724	4142.9428	0	341.75
9	Optimized	134.60935	-31.04251	1646.9359	4461.0523	0	377.21
10	Optimized	136.41395	-33.04251	1772.0518	4626.5028	0	397.04
11	Optimized	140.81615	-37.921425	2077.1544	5015.2932	0	388.49
12	Optimized	149.1772	-41.85081	2323.7435	5486.5186	0	423.98
13	Optimized	156.91	-41.863575	2325.77	5242.9481	0	419.52
14	Optimized	163.58615	-41.874595	2327.5759	5009.0942	0	415.67
15	Optimized	167.37615	-41.879975	2328.4848	5247.0506	0	413.48
16	Optimized	172.22	-41.710475	2318.7054	4802.9733	0	408.83
17	Optimized	178.855	-41.4783	2315.2495	4714.7449	0	403.52
18	Optimized	182.78995	-41.340605	2316.1425	4682.6329	0	402.08
19	Optimized	188.39055	-41.190325	2304.6041	4644.5378	0	400.5
20	Optimized	195.3519	-41.038135	2292.5404	4607.9157	0	398.9
21	Optimized	199.5663	-40.95437	2285.6189	4594.4749	0	398.02
22	Optimized	203.57445	-40.91246	2282.6891	4569.8062	0	397.58

LWL Case.BS.L to R.Thru Fabric

23	Optimized	210.1234	-40.84398	2278.1085	4541.8643	0	396.86
24	Optimized	216.96895	-40.77955	2273.8903	4515.7185	0	396.19
25	Optimized	223.4012	-40.725175	2264.8622	4494.7755	0	395.61
26	Optimized	226.5662	-40.699615	2257.038	4485.108	0	395.35
27	Optimized	230.305	-40.682685	2254.8533	4473.4624	0	395.17
28	Optimized	237.175	-40.65157	2251.9421	4451.6286	0	394.84
29	Optimized	244.87535	-40.616695	2251.263	4426.0967	0	394.48
30	Optimized	249.57035	-40.601935	2252.5848	4406.3762	0	394.32
31	Optimized	255.0227	-40.65976	2255.1421	4397.8009	0	394.93
32	Optimized	265.06805	-40.7663	2259.3229	4382.3718	0	396.05
33	Optimized	271.9007	-40.82909	2261.6022	4372.3757	0	396.71
34	Optimized	279.77535	-41.359175	2292.7701	4384.5368	0	402.27
35	Optimized	286.54055	-41.93987	2327.3311	4427.2413	0	408.37
36	Optimized	289.82055	-42.22141	2343.9919	4448.3122	0	411.32
37	Optimized	293.8	-42.56299	2364.2705	4424.0891	0	414.91
38	Optimized	298.41915	-42.95948	2387.6564	4290.3226	0	419.07
39	Optimized	302.77195	-42.6179	2364.9909	4268.7562	0	415.49
40	Optimized	306.5778	-40.543545	2234.403	3895.9117	0	393.71
41	Optimized	314.10115	-36.443	1976.1354	3342.8508	0	350.65
42	Optimized	322.43905	-31.899455	1690.0545	2805.1303	0	287.94
43	Optimized	327.7479	-29.007405	1507.973	2459.8722	0	257.58
44	Optimized	330.3771	-27.575135	1404.6602	2291.8483	0	242.54
45	Optimized	331.2221	-27.108085	1361.4087	2253.0454	0	237.63
46	Optimized	337.41	-22.639145	1081.9689	1741.9198	0	190.71
47	Optimized	344.79	-17.30927	749.39001	1134.9601	0	134.75
48	Optimized	347.6961	-15.21048	618.40641	902.2528	0	112.71
49	Optimized	352.4047	-11.809912	406.2251	541.73595	0	100

Slices of Slip Surface: 22822

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	22822	107.2411	-0.323173	-274.33417	894.49461	0	600
2	22822	112.89515	-7.984149	204.62174	1750.9682	892.78354	0
3	22822	116.3229	-12.628525	494.97065	2874.2559	0	187.09
4	22822	117.52255	-14.254015	596.60693	3092.79	0	213.96

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5	22822	122.71	-21.28279	1036.0384	3686.4961	0	290.47
6	22822	128.4268	-29.028775	1520.3004	4386.9714	0	367.81
7	22822	130.61965	-32	1706.049	4626.035	0	389.86
8	22822	133.82285	-36.340185	1977.4703	5020.4331	0	376.59
9	22822	136.775	-40.340185	2227.4559	5333.2325	0	415.83
10	22822	142	-41.989455	2331.2418	5730.7299	0	429.67
11	22822	150	-41.968365	2331.2418	5474.6058	0	424.71
12	22822	156.91	-41.95015	2331.0916	5253.5902	0	420.42
13	22822	163.61	-41.93249	2331.1266	5015.5501	0	416.26
14	22822	172.22	-41.90979	2331.1124	4814.6101	0	410.91
15	22822	178.855	-41.892295	2341.066	4749.5698	0	407.87
16	22822	185.5775	-41.874575	2348.4381	4718.8833	0	407.68
17	22822	195.3925	-41.8487	2343.0382	4686.6878	0	407.41
18	22822	205.36	-41.822425	2339.4176	4655.2188	0	407.14
19	22822	215.48	-41.79575	2337.4414	4624.5865	0	406.86
20	22822	223.705	-41.774065	2329.6917	4602.5117	0	406.63
21	22822	230.305	-41.756665	2321.8259	4585.4279	0	406.44
22	22822	237.175	-41.738555	2319.7881	4564.904	0	406.25
23	22822	245.305	-41.717125	2320.1196	4539.4942	0	406.03
24	22822	254.48	-41.692935	2319.7464	4511.0335	0	405.78
25	22822	263.44	-41.66931	2316.0634	4484.8059	0	405.53
26	22822	272.4	-41.64569	2312.3804	4458.5783	0	405.28
27	22822	281.36	-41.62207	2308.809	4432.3507	0	405.03
28	22822	289.12	-41.601615	2305.4797	4409.5882	0	404.82
29	22822	293.8	-41.58928	2303.5275	4346.413	0	404.69
30	22822	297.8857	-41.57851	2301.6144	4189.5601	0	404.57
31	22822	304.9107	-38.844875	2128.8677	3789.1309	0	375.87
32	22822	310.93565	-35.05916	1890.8138	3207.5319	0	336.12
33	22822	315.8043	-32	1698.3793	2831.8736	0	289
34	22822	324.27865	-26.67521	1363.528	2227.7945	0	233.09
35	22822	330.415	-22.81947	1107.2549	1803.8235	0	192.6
36	22822	337.41	-18.42422	818.98204	1286.1949	0	146.45
37	22822	344.00555	-14.27996	560.34876	812.29286	0	102.94
38	22822	345.23555	-13.5071	512.12182	726.37526	0	100
39	22822	348.9114	-11.197409	367.99949	481.34386	0	100

LWL Case.BS.L to R.Thru Fabric

Slices of Slip Surface: 22813

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	22813	107.2411	-0.323173	-274.33417	899.43617	0	600
2	22813	112.89515	-7.984149	204.62174	1758.5891	897.18348	0
3	22813	116.3229	-12.628525	494.97065	2891.4159	0	187.09
4	22813	117.52255	-14.254015	596.60693	3092.3149	0	213.96
5	22813	122.71	-21.28279	1036.0384	3713.1586	0	290.47
6	22813	128.4268	-29.028775	1520.3004	4413.4813	0	367.81
7	22813	130.61965	-32	1706.049	4657.6155	0	389.86
8	22813	133.82285	-36.340185	1977.4703	5055.3307	0	376.59
9	22813	136.775	-40.340185	2227.4559	5369.3465	0	415.83
10	22813	142	-41.81371	2320.2352	5720.9242	0	427.86
11	22813	150	-41.441125	2298.259	5426.868	0	419.25
12	22813	156.91	-41.119305	2279.3165	5172.744	0	411.79
13	22813	163.61	-40.80727	2260.874	4903.7877	0	404.53
14	22813	172.22	-40.406275	2237.3052	4663.0991	0	395.17
15	22813	178.855	-40.09726	2229.0712	4566.1246	0	389.02
16	22813	185.5775	-39.784175	2217.9728	4506.3736	0	385.73
17	22813	195.3925	-39.327065	2185.7103	4429.7373	0	380.93
18	22813	205.36	-38.86285	2154.6802	4353.0876	0	376.06
19	22813	215.48	-38.39153	2124.9693	4275.6024	0	371.11
20	22813	223.705	-38.008465	2094.728	4215.3363	0	367.09
21	22813	230.305	-37.701085	2068.7909	4167.8256	0	363.86
22	22813	237.175	-37.38113	2047.8529	4115.4806	0	360.5
23	22813	245.305	-37.00249	2025.9191	4052.3701	0	356.53
24	22813	254.48	-36.575185	2000.3987	3981.5102	0	352.04
25	22813	263.44	-36.15789	1972.1926	3913.838	0	347.66
26	22813	272.4	-35.740595	1943.9866	3846.0544	0	343.28
27	22813	281.36	-35.323305	1915.7806	3778.3822	0	338.89
28	22813	289.12	-34.9619	1891.2426	3719.7483	0	335.1
29	22813	293.8	-34.743935	1876.359	3634.6317	0	332.81
30	22813	297.8857	-34.55365	1863.2197	3459.0165	0	330.81

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31	22813	301.0164	-34.214285	1841.1422	3389.4997	0	327.25
32	22813	305.3557	-32.124595	1709.3649	2962.6139	0	290.31
33	22813	309.50875	-30.124595	1583.3279	2563.6905	0	269.31
34	22813	314.7181	-27.6159	1425.1669	2300.0858	0	242.97
35	22813	324.61935	-22.8477	1124.6097	1803.9799	0	192.9
36	22813	330.415	-20.056665	934.87539	1495.1289	0	163.59
37	22813	337.41	-16.68805	710.61539	1089.2933	0	128.22
38	22813	344.79	-13.13403	488.83055	679.68213	0	100
39	22813	349.25505	-10.983772	354.67225	448.61096	0	100

Slices of Slip Surface: 27486

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	27486	108.94755	-0.040584	-291.6937	956.13478	0	600
2	27486	115.23685	-7.728506	189.03618	1822.7712	943.23734	0
3	27486	117.8941	-10.976685	392.1452	2257.8786	1077.1817	0
4	27486	119.2228	-12.600865	493.72922	2923.6515	0	188.86
5	27486	124.0387	-18.487735	861.83108	3450.3425	0	260.19
6	27486	130.5833	-26.487735	1362.1069	4107.2558	0	339.62
7	27486	134.5033	-31.279475	1661.7244	4468.9524	0	379.77
8	27486	136.13945	-33.279475	1786.7933	4645.9204	0	399.71
9	27486	140.0012	-38	2081.9587	5025.571	0	389.8
10	27486	146.13675	-45.5	2550.9871	5577.8725	0	463.47
11	27486	151.5	-48.77553	2756.1122	6180.9341	0	494.31
12	27486	156.91	-48.289775	2726.831	5955.7659	0	486.27
13	27486	163.61	-47.68819	2690.2327	5655.2177	0	476.26
14	27486	172.22	-46.915105	2643.4114	5373.9205	0	463.33
15	27486	178.855	-46.319355	2617.3221	5247.4851	0	454.35
16	27486	185.5775	-45.71575	2588.0602	5153.7955	0	448.02
17	27486	195.3925	-44.834475	2529.3052	5030.0954	0	438.76
18	27486	205.36	-43.93951	2471.4808	4905.6611	0	429.36
19	27486	215.48	-43.030845	2414.4966	4780.8667	0	419.82
20	27486	223.705	-42.29233	2362.0616	4682.1122	0	412.07
21	27486	230.3277	-41.69769	2318.2354	4603.777	0	405.83
22	27486	237.1977	-41.08084	2278.7298	4519.9526	0	399.35

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23	27486	245.305	-40.352895	2234.9918	4419.8127	0	391.71
24	27486	254.48	-39.529085	2184.7378	4306.7815	0	383.06
25	27486	263.44	-38.724575	2132.3815	4197.9559	0	374.61
26	27486	272.4	-37.92007	2079.914	4089.1303	0	366.16
27	27486	281.36	-37.115565	2027.5577	3980.3047	0	357.71
28	27486	289.12	-36.418805	1982.1177	3886.0438	0	350.4
29	27486	293.8	-35.998595	1954.6368	3779.4387	0	345.99
30	27486	298.7125	-35.557505	1925.6341	3545.594	0	341.35
31	27486	305.7375	-34.92674	1884.093	3210.997	0	334.73
32	27486	310.26785	-34.519965	1857.3769	3033.7041	0	330.46
33	27486	311.62675	-34.214285	1837.9049	3117.4243	0	327.25
34	27486	315.15075	-32	1698.6453	2834.4008	0	289
35	27486	323.95185	-26.469895	1350.8391	2208.3198	0	230.93
36	27486	330.415	-22.408845	1081.6528	1762.3891	0	188.29
37	27486	337.41	-18.013595	793.30496	1244.4094	0	142.14
38	27486	343.6788	-14.074645	547.52108	793.41378	0	100.78
39	27486	344.9088	-13.301785	499.2944	708.15604	0	100
40	27486	348.61565	-10.972626	353.97133	459.7778	0	100

Slices of Slip Surface: 22757

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	22757	109.9138	0.318915	-313.97655	853.26114	0	600
2	22757	115.47875	-8.0660785	210.14859	1761.8331	895.86546	0
3	22757	118.5635	-12.714015	500.66945	2898.8615	0	188.46
4	22757	123.5635	-20.24777	971.58784	3555.6874	0	279.01
5	22757	128.8729	-28.24777	1471.6204	4253.1652	0	359.29
6	22757	131.3632	-32	1706.1793	4557.588	0	389.38
7	22757	134.1203	-36.15423	1965.771	4945.6594	0	374.49
8	22757	136.775	-40.15423	2215.8543	5261.6243	0	413.92
9	22757	142	-41.989455	2331.2418	5731.7299	0	429.67
10	22757	150	-	2331.2418	5475.6058	0	424.71

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			41.968365				
11	22757	156.91	-41.95015	2331.0916	5254.6211	0	420.42
12	22757	163.61	-41.93249	2331.1266	5016.4736	0	416.26
13	22757	172.22	-41.90979	2331.1124	4815.4399	0	410.91
14	22757	178.855	-41.892295	2341.066	4751.2227	0	407.87
15	22757	185.5775	-41.874575	2348.4381	4719.6984	0	407.68
16	22757	195.3925	-41.8487	2343.0382	4687.5029	0	407.41
17	22757	205.36	-41.822425	2339.4176	4655.614	0	407.14
18	22757	215.48	-41.79575	2337.4414	4624.9817	0	406.86
19	22757	223.705	-41.774065	2329.6917	4602.8276	0	406.63
20	22757	230.305	-41.756665	2321.8259	4585.7191	0	406.44
21	22757	237.175	-41.738555	2319.7881	4565.3407	0	406.25
22	22757	245.305	-41.717125	2320.1196	4539.8137	0	406.03
23	22757	254.48	-41.692935	2319.7464	4511.4799	0	405.78
24	22757	263.44	-41.66931	2316.0634	4485.2523	0	405.53
25	22757	272.4	-41.64569	2312.3804	4458.9131	0	405.28
26	22757	281.36	-41.62207	2308.809	4432.6856	0	405.03
27	22757	289.12	-41.601615	2305.4797	4410.0455	0	404.82
28	22757	293.8	-41.58928	2303.5275	4346.7702	0	404.69
29	22757	297.8857	-41.57851	2301.6144	4189.9324	0	404.57
30	22757	304.9107	-39.48174	2168.5986	3824.9723	0	382.56
31	22757	312.77185	-35.696025	1929.9362	3246.5344	0	342.81
32	22757	320.4467	-32	1697.0279	2804.2992	0	289
33	22757	327.08485	-28.803225	1495.4417	2426.1479	0	255.43
34	22757	330.415	-27.19952	1380.5619	2240.0544	0	238.59
35	22757	337.41	-23.830905	1156.3166	1832.849	0	203.22
36	22757	344.79	-20.276885	934.55377	1419.5021	0	165.91
37	22757	351.92205	-16.842275	720.23539	1041.8615	0	129.84
38	22757	361.68155	-12.142355	426.95975	536.4441	0	100

Slices of Slip Surface: 27485

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	27485	108.94755	-0.040584	-291.6937	956.05181	0	600
2	27485	115.23685	-7.728506	189.03618	1822.5152	943.08953	0
			-				

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3	27485	117.8941	10.976685	392.1452	2258.9104	1077.7774	0
4	27485	119.2228	-12.600865	493.72922	2922.2685	0	188.86
5	27485	124.0387	-18.487735	861.83108	3448.5316	0	260.19
6	27485	130.5833	-26.487735	1362.1069	4105.1623	0	339.62
7	27485	134.5033	-31.279475	1661.7244	4466.8351	0	379.77
8	27485	136.13945	-33.279475	1786.7933	4644.0942	0	399.71
9	27485	140.0012	-38	2081.9587	5022.9587	0	389.8
10	27485	146.13675	-45.5	2550.9871	5574.9977	0	463.47
11	27485	151.5	-48.77553	2756.1122	6181.5317	0	494.31
12	27485	156.91	-48.289775	2726.831	5956.2793	0	486.27
13	27485	163.61	-47.68819	2690.2327	5655.6118	0	476.26
14	27485	172.22	-46.915105	2643.4114	5374.3338	0	463.33
15	27485	178.855	-46.319355	2617.3221	5248.0339	0	454.35
16	27485	185.5775	-45.71575	2588.0602	5154.2014	0	448.02
17	27485	195.3925	-44.834475	2529.3052	5030.5013	0	438.76
18	27485	205.36	-43.93951	2471.4808	4905.9564	0	429.36
19	27485	215.48	-43.030845	2414.4966	4781.1619	0	419.82
20	27485	223.705	-42.29233	2362.0616	4682.4269	0	412.07
21	27485	230.3277	-41.69769	2318.2354	4604.0651	0	405.83
22	27485	237.1977	-41.08084	2278.7298	4520.2445	0	399.35
23	27485	245.305	-40.352895	2234.9918	4420.0249	0	391.71
24	27485	254.48	-39.529085	2184.7378	4307.115	0	383.06
25	27485	263.44	-38.724575	2132.3815	4198.2894	0	374.61
26	27485	272.4	-37.92007	2079.914	4089.4638	0	366.16
27	27485	281.36	-37.115565	2027.5577	3980.527	0	357.71
28	27485	289.12	-36.418805	1982.1177	3886.3475	0	350.4
29	27485	293.8	-35.998595	1954.6368	3779.7944	0	345.99
30	27485	298.7125	-35.557505	1925.6341	3545.8776	0	341.35
31	27485	305.7375	-34.92674	1884.093	3211.2806	0	334.73
32	27485	310.26785	-34.519965	1857.3769	3033.8998	0	330.46
33	27485	311.7307	-34.214285	1837.8013	3086.186	0	327.25
34	27485	316.3287	-32	1698.221	2806.2517	0	289

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35	27485	325.02585	-27.81166	1434.1924	2324.6269	0	245.02
36	27485	330.415	-25.21639	1256.8252	2034.964	0	217.77
37	27485	337.41	-21.847775	1032.5982	1627.7504	0	182.4
38	27485	344.79	-18.293755	810.79873	1214.3669	0	145.08
39	27485	349.86305	-15.85071	658.35922	944.46017	0	119.43
40	27485	357.8111	-12.02313	419.52526	534.09388	0	100

Slices of Slip Surface: 22821

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	22821	107.2411	-0.323173	-274.33417	897.20834	0	600
2	22821	112.89515	-7.984149	204.62174	1754.0411	894.55771	0
3	22821	116.3229	-12.628525	494.97065	2876.6906	0	187.09
4	22821	117.52255	-14.254015	596.60693	3093.5819	0	213.96
5	22821	122.71	-21.28279	1036.0384	3690.2372	0	290.47
6	22821	128.4268	-29.028775	1520.3004	4391.1136	0	367.81
7	22821	130.61965	-32	1706.049	4630.6615	0	389.86
8	22821	133.82285	-36.340185	1977.4703	5025.2466	0	376.59
9	22821	136.775	-40.340185	2227.4559	5338.3224	0	415.83
10	22821	142	-41.989455	2331.2418	5730.4799	0	429.67
11	22821	150	-41.968365	2331.2418	5474.4808	0	424.71
12	22821	156.91	-41.95015	2331.0916	5253.2466	0	420.42
13	22821	163.61	-41.93249	2331.1266	5015.2862	0	416.26
14	22821	172.22	-41.90979	2331.1124	4814.4026	0	410.91
15	22821	178.855	-41.892295	2341.066	4749.2943	0	407.87
16	22821	185.5775	-41.874575	2348.4381	4718.6795	0	407.68
17	22821	195.3925	-41.8487	2343.0382	4686.484	0	407.41
18	22821	205.36	-41.822425	2339.4176	4655.0211	0	407.14
19	22821	215.48	-41.79575	2337.4414	4624.4877	0	406.86
20	22821	223.705	-41.774065	2329.6917	4602.3537	0	406.63
21	22821	230.305	-41.756665	2321.8259	4585.2824	0	406.44
22	22821	237.175	-41.738555	2319.7881	4564.7584	0	406.25
23	22821	245.305	-41.717125	2320.1196	4539.3877	0	406.03
24	22821	254.48	-41.692935	2319.7464	4510.9219	0	405.78

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25	22821	263.44	-41.66931	2316.0634	4484.6943	0	405.53
26	22821	272.4	-41.64569	2312.3804	4458.4667	0	405.28
27	22821	281.36	-41.62207	2308.809	4432.2391	0	405.03
28	22821	289.12	-41.601615	2305.4797	4409.5882	0	404.82
29	22821	293.8	-41.58928	2303.5275	4346.0559	0	404.69
30	22821	297.8857	-41.57851	2301.6144	4189.3739	0	404.57
31	22821	304.9107	-39.48174	2168.5986	3819.9892	0	382.56
32	22821	312.77185	-35.696025	1929.9362	3242.3133	0	342.81
33	22821	320.4467	-32	1697.0279	2800.7197	0	289
34	22821	327.08485	-28.803225	1495.4417	2423.0662	0	255.43
35	22821	330.415	-27.19952	1380.5619	2237.1756	0	238.59
36	22821	337.41	-23.830905	1156.3166	1830.4318	0	203.22
37	22821	344.79	-20.276885	934.55377	1417.5244	0	165.91
38	22821	351.92205	-16.842275	720.23539	1040.4876	0	129.84
39	22821	361.68155	-12.142355	426.95975	535.64997	0	100

Slices of Slip Surface: 27550

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	27550	105.22775	-0.6290655	-255.57435	953.4784	0	600
2	27550	108.7326	-4.5021655	-13.32732	1417.0119	818.1122	0
3	27550	111.8895	-7.9907185	204.86643	1824.8958	935.32439	0
4	27550	116.09055	-12.633095	495.22741	2905.6198	0	186.94
5	27550	117.51875	-14.21135	593.93398	3124.2972	0	213.51
6	27550	122.71	-19.947995	952.72667	3620.6163	0	276.45
7	27550	129.75815	-27.736645	1439.8825	4291.3921	0	353.31
8	27550	133.67815	-32.068475	1710.8219	4620.956	0	388.59
9	27550	139.10775	-38.068475	2086.0739	5110.6076	0	391.06
10	27550	145.83275	-45.5	2550.8829	5645.1604	0	463.64
11	27550	151.5	-48.77553	2756.1122	6176.7509	0	494.31
12	27550	156.91	-48.289775	2726.831	5952.001	0	486.27
13	27550	163.61	-47.68819	2690.2327	5651.6699	0	476.26
14	27550	172.22	-46.915105	2643.4114	5370.7177	0	463.33

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15	27550	178.855	-46.319355	2617.3221	5243.3694	0	454.35
16	27550	185.5775	-45.71575	2588.0602	5150.6497	0	448.02
17	27550	195.3925	-44.834475	2529.3052	5027.0511	0	438.76
18	27550	205.36	-43.93951	2471.4808	4903.2007	0	429.36
19	27550	215.48	-43.030845	2414.4966	4778.5047	0	419.82
20	27550	223.705	-42.29233	2362.0616	4679.9093	0	412.07
21	27550	230.3277	-41.69769	2318.2354	4601.4726	0	405.83
22	27550	237.1977	-41.08084	2278.7298	4517.6175	0	399.35
23	27550	245.305	-40.352895	2234.9918	4417.5853	0	391.71
24	27550	254.48	-39.529085	2184.7378	4304.6694	0	383.06
25	27550	263.44	-38.724575	2132.3815	4195.8438	0	374.61
26	27550	272.4	-37.92007	2079.914	4087.1294	0	366.16
27	27550	281.36	-37.115565	2027.5577	3978.3038	0	357.71
28	27550	289.12	-36.418805	1982.1177	3884.07	0	350.4
29	27550	293.8	-35.998595	1954.6368	3777.6602	0	345.99
30	27550	298.7125	-35.557505	1925.6341	3543.7509	0	341.35
31	27550	305.7375	-34.92674	1884.093	3209.2957	0	334.73
32	27550	310.26785	-34.519965	1857.3769	3032.0406	0	330.46
33	27550	311.62675	-34.214285	1837.9049	3109.4793	0	327.25
34	27550	315.15075	-32	1698.6453	2827.2183	0	289
35	27550	323.95185	-26.469895	1350.8391	2202.6681	0	230.93
36	27550	330.415	-22.408845	1081.6528	1757.8298	0	188.29
37	27550	337.41	-18.013595	793.30496	1241.1051	0	142.14
38	27550	343.6788	-14.074645	547.52108	791.16867	0	100.78
39	27550	344.9088	-13.301785	499.2944	706.09867	0	100
40	27550	348.61565	-10.972626	353.97133	458.39141	0	100

Slices of Slip Surface: 22758

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	22758	109.9138	0.318915	-313.97655	855.00283	0	600
2	22758	115.47875	-	210.14859	1764.0636	897.15322	0

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			8.0660785				
3	22758	118.5635	-12.714015	500.66945	2902.1335	0	188.46
4	22758	123.5635	-20.24777	971.58784	3560.6884	0	279.01
5	22758	128.8729	-28.24777	1471.6204	4258.6335	0	359.29
6	22758	131.3632	-32	1706.1793	4563.6287	0	389.38
7	22758	134.1203	-36.15423	1965.771	4952.428	0	374.49
8	22758	136.775	-40.15423	2215.8543	5268.6211	0	413.92
9	22758	142	-41.989455	2331.2418	5731.2299	0	429.67
10	22758	150	-41.968365	2331.2418	5475.2308	0	424.71
11	22758	156.91	-41.95015	2331.0916	5254.2775	0	420.42
12	22758	163.61	-41.93249	2331.1266	5016.0778	0	416.26
13	22758	172.22	-41.90979	2331.1124	4815.025	0	410.91
14	22758	178.855	-41.892295	2341.066	4750.6717	0	407.87
15	22758	185.5775	-41.874575	2348.4381	4719.2908	0	407.68
16	22758	195.3925	-41.8487	2343.0382	4687.0953	0	407.41
17	22758	205.36	-41.822425	2339.4176	4655.3176	0	407.14
18	22758	215.48	-41.79575	2337.4414	4624.7841	0	406.86
19	22758	223.705	-41.774065	2329.6917	4602.6696	0	406.63
20	22758	230.305	-41.756665	2321.8259	4585.5735	0	406.44
21	22758	237.175	-41.738555	2319.7881	4565.0496	0	406.25
22	22758	245.305	-41.717125	2320.1196	4539.6007	0	406.03
23	22758	254.48	-41.692935	2319.7464	4511.2567	0	405.78
24	22758	263.44	-41.66931	2316.0634	4485.0291	0	405.53
25	22758	272.4	-41.64569	2312.3804	4458.8015	0	405.28
26	22758	281.36	-41.62207	2308.809	4432.4623	0	405.03
27	22758	289.12	-41.601615	2305.4797	4409.7406	0	404.82
28	22758	293.8	-41.58928	2303.5275	4346.413	0	404.69
29	22758	297.8857	-41.57851	2301.6144	4189.7463	0	404.57
30	22758	304.9107	-38.844875	2128.8677	3790.4968	0	375.87
31	22758	310.93565	-35.05916	1890.8138	3208.7877	0	336.12
32	22758	315.8043	-32	1698.3793	2832.9377	0	289
33	22758	324.27865	-26.67521	1363.528	2228.5946	0	233.09
34	22758	330.415	-22.81947	1107.2549	1804.4748	0	192.6
35	22758	337.41	-18.42422	818.98204	1286.6768	0	146.45
36	22758	344.00555	-14.27996	560.34876	812.59692	0	102.94
37	22758	345.23555	-13.5071	512.12182	726.64511	0	100
38	22758	348.9114	-	367.99949	481.44636	0	100

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			11.197409				

Slices of Slip Surface: 27551

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	27551	105.22775	-0.6290655	-255.57435	952.11093	0	600
2	27551	108.7326	-4.5021655	-13.32732	1414.9588	816.92687	0
3	27551	111.8895	-7.9907185	204.86643	1823.198	934.34418	0
4	27551	116.09055	-12.633095	495.22741	2903.9925	0	186.94
5	27551	117.51875	-14.21135	593.93398	3121.666	0	213.51
6	27551	122.71	-19.947995	952.72667	3618.6705	0	276.45
7	27551	129.75815	-27.736645	1439.8825	4288.9351	0	353.31
8	27551	133.67815	-32.068475	1710.8219	4618.2675	0	388.59
9	27551	139.10775	-38.068475	2086.0739	5107.8729	0	391.06
10	27551	145.83275	-45.5	2550.8829	5642.0885	0	463.64
11	27551	151.5	-48.77553	2756.1122	6177.1493	0	494.31
12	27551	156.91	-48.289775	2726.831	5952.1721	0	486.27
13	27551	163.61	-47.68819	2690.2327	5651.9327	0	476.26
14	27551	172.22	-46.915105	2643.4114	5371.0276	0	463.33
15	27551	178.855	-46.319355	2617.3221	5243.6438	0	454.35
16	27551	185.5775	-45.71575	2588.0602	5150.9541	0	448.02
17	27551	195.3925	-44.834475	2529.3052	5027.3556	0	438.76
18	27551	203.67335	-44.09095	2481.0269	4926.7709	0	430.95
19	27551	210.42	-43.485175	2442.939	4841.147	0	424.59
20	27551	217.16665	-42.8794	2404.9988	4758.0327	0	418.23
21	27551	223.705	-42.29233	2362.0616	4680.0667	0	412.07
22	27551	230.3277	-41.69769	2318.2354	4601.7607	0	405.83
23	27551	237.1977	-41.08084	2278.7298	4517.9094	0	399.35
24	27551	245.305	-40.352895	2234.9918	4417.9035	0	391.71
25	27551	254.48	-39.529085	2184.7378	4305.0029	0	383.06
26	27551	263.44	-38.724575	2132.3815	4196.1773	0	374.61
27	27551	272.4	-37.92007	2079.914	4087.3517	0	366.16
28	27551	281.36	-37.115565	2027.5577	3978.5261	0	357.71
29	27551	289.12	-	1982.1177	3884.3737	0	350.4

LWL Case.BS.L to R.Thru Fabric

			36.418805				
30	27551	293.8	-35.998595	1954.6368	3778.0159	0	345.99
31	27551	298.7125	-35.557505	1925.6341	3544.0345	0	341.35
32	27551	305.7375	-34.92674	1884.093	3209.5792	0	334.73
33	27551	310.26785	-34.519965	1857.3769	3032.2853	0	330.46
34	27551	311.5544	-34.214285	1837.8609	3145.7347	0	327.25
35	27551	314.33105	-32	1698.8538	2859.6359	0	289
36	27551	320.02175	-27.461835	1413.9378	2334.6186	0	241.35
37	27551	326.38725	-22.385505	1095.1999	1796.6541	0	188.05
38	27551	330.415	-19.173475	879.72239	1437.691	0	154.32
39	27551	334.08115	-16.249805	683.2655	1091.7006	0	123.62
40	27551	340.0372	-11.5	386.87544	564.84438	0	100
41	27551	343.36605	-8.8453435	221.22605	278.06955	0	100
42	27551	343.68665	-8.589689	205.27641	253.63158	0	100

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LWL Case.BS

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 210
Last Edited By: Cox, Lane MVK
Date: 3/31/2011
Time: 10:34:43 AM
File Name: 5c(2) Typical 1.2nd SC.80%SG.S-Case.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\2nd Stage Constuction\80%SG,1 Layer of Fabric\Slope W\
Last Solved Date: 3/31/2011
Last Solved Time: 10:37:14 AM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

LWL Case.BS

Kind: SLOPE/W
Method: Spencer
Settings
    Apply Phreatic Correction: No
    PWP Conditions Source: Piezometric Line
    Use Staged Rapid Drawdown: No
SlipSurface
    Direction of movement: Right to Left
    Use Passive Mode: No
    Slip Surface Option: Block
    Critical slip surfaces saved: 100
    Optimize Critical Slip Surface Location: Yes
    Tension Crack
        Tension Crack Option: Tension Crack Line
        Percentage Wet: 0
        Tension Crack Fluid Unit Weight: 62.4 pcf

FOS Distribution
    FOS Calculation Option: Constant
Restrict Block Crossing: Yes
Advanced
    Number of Slices: 30
    Optimization Tolerance: 0.01
    Minimum Slip Surface Depth: 0.1 ft
    Optimization Maximum Iterations: 2000
    Optimization Convergence Tolerance: 1e-007
    Starting Optimization Points: 8
    Ending Optimization Points: 16
    Complete Passes per Insertion: 1
    Driving Side Maximum Convex Angle: 5 °
    Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH

Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH above 0

Model: Mohr-Coulomb
Unit Weight: 102 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH, 0 to -9

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -9 (2)
Cohesion Spatial Fn: CH, 0 to -9
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH, -9 to -14

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -9 to -14 (2)

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Cohesion Spatial Fn: CH, -9 to -14
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -14 to -30

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -14 to -30 (2)
Cohesion Spatial Fn: CH, -14 to -30
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -30 to -34

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -30 to -34 (2)
Cohesion Spatial Fn: CH, 30 to -34
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sand Fill

Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -34 to -42

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -34 to -42 (2)
Cohesion Spatial Fn: CH, -34 to -42
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -42 to -80

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -42 to -80 (2)
Cohesion Spatial Fn: CH, -42 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure

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Piezometric Line: 1

CH, 0 to -9 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -9 (2)
Cohesion Spatial Fn: CH, 0 to -9 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -9 to -14 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -9 to -14 (2)
Cohesion Spatial Fn: CH, -9 to -14 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -14 to -30 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -14 to -30 (2)
Cohesion Spatial Fn: CH, -14 to -30 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -30 to -34 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -30 to -34 (2)
Cohesion Spatial Fn: CH, 30 to -34 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Limits

Left Coordinate: (-200, -2.13) ft
Right Coordinate: (500, -4.5) ft

Slip Surface Block

Left Grid
Upper Left: (-83, -9) ft
Lower Left: (-20, -9) ft

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Lower Right: (-20, -53) ft
X Increments: 7
Y Increments: 7
Starting Angle: 135 °
Ending Angle: 160 °
Angle Increments: 7

Right Grid
Upper Left: (63, -11) ft
Lower Left: (107, -11) ft
Lower Right: (107, -56) ft
X Increments: 7
Y Increments: 7
Starting Angle: 20 °
Ending Angle: 45 °
Angle Increments: 7

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	-2.13
	-191.42	-2.12
	-156.88	-2.03
	-119.75	-2.26
	-92.12	-1.99
	-71.42	-1.72
	-45.06	-0.68
	-33.33	-0.27
	-32	0
	22	0
	35.99	-3
	38.18	-3.47
	56.55	-4.85
	177.04	-4.54
	180.67	-4.21
	200.3	-4.33
	220.54	-4.34
	226.87	-4.54
	240.61	-4.57
	250	-4.5
	285.84	-4.64
	295.2	-4.68
	329.57	-4.85
	331.26	-5.3
	447.66	-5.3
	450.06	-4.54
	500	-4.5

LWL Case.BS

Spatial Functions

CH, 0 to -9

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -2.5, 50)
Data Point: (-300, -9, 75)
Data Point: (-33.33, 0, 50)
Data Point: (-33.33, -9, 75)
Data Point: (0, 0, 300)
Data Point: (0, -9, 300)
Data Point: (285.84, -4.62, 100)
Data Point: (285.84, -9, 100)
Data Point: (500, 0, 100)
Data Point: (500, -9, 100)

CH, -34 to -42 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -38, 105)
Data Point: (0, -38, 116)
Data Point: (177.04, -38, 106)

CH, -42 to -80 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -61, 105)
Data Point: (0, -61, 105)
Data Point: (177.04, -61, 106)

CH, 0 to -9 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, 0, 300)
Data Point: (0, -9, 300)
Data Point: (46, 0, 148)
Data Point: (46, -9, 148)
Data Point: (122.71, 0, 198)
Data Point: (122.71, -9, 198)
Data Point: (285.84, 0, 100)

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Data Point: (285.84, -9, 100)

CH, -9 to -14 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -9, 300)
Data Point: (0, -14, 300)
Data Point: (46, -9, 144)
Data Point: (46, -14, 144)
Data Point: (122.71, -9, 191)
Data Point: (122.71, -14, 191)
Data Point: (285.84, -9, 100)
Data Point: (285.84, -14, 100)

CH, -14 to -30 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -14, 300)
Data Point: (0, -30, 375)
Data Point: (46, -14, 174)
Data Point: (46, -30, 342)
Data Point: (122.71, -14, 214)
Data Point: (122.71, -30, 382)
Data Point: (285.84, -14, 100)
Data Point: (285.84, -30, 268)

CH, 30 to -34 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -30, 400)
Data Point: (0, -34, 438)
Data Point: (46, -30, 341)
Data Point: (46, -34, 383)
Data Point: (122.71, -30, 374)
Data Point: (122.71, -34, 416)
Data Point: (285.84, -30, 268)
Data Point: (285.84, -34, 310)

CH, -9 to -14

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -9, 75)
Data Point: (-300, -14, 115)
Data Point: (-33.33, -9, 75)

Data Point: (-33.33, -14, 115)
Data Point: (0, -9, 300)
Data Point: (0, -14, 300)
Data Point: (285.84, -9, 100)
Data Point: (285.84, -14, 100)
Data Point: (500, -9, 100)
Data Point: (500, -14, 100)

CH, -14 to -30

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -14, 115)
Data Point: (-300, -30, 291)
Data Point: (-33.33, -14, 115)
Data Point: (-33.33, -30, 291)
Data Point: (0, -14, 300)
Data Point: (0, -30, 375)
Data Point: (285.84, -14, 100)
Data Point: (285.84, -30, 268)
Data Point: (500, -14, 100)
Data Point: (500, -30, 268)

CH, 30 to -34

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -30, 291)
Data Point: (-300, -34, 335)
Data Point: (-33.33, -30, 291)
Data Point: (-33.33, -34, 335)
Data Point: (0, -30, 400)
Data Point: (0, -34, 438)
Data Point: (285.84, -30, 268)
Data Point: (285.84, -34, 310)
Data Point: (500, -30, 268)
Data Point: (500, -34, 310)

CH, 0 to -9 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -4.5, 90)
Data Point: (0, -4.5, 96)
Data Point: (177.04, -4.54, 87)

CH, -9 to -14 (2)

Model: Linear Interpolation

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Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -11.5, 90)
Data Point: (0, -11.5, 97)
Data Point: (177.04, -11.5, 100)

CH, -14 to -30 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -22, 100)
Data Point: (0, -22, 102)
Data Point: (177.04, -22, 100)

CH, -30 to -34 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -32, 122)
Data Point: (0, -32, 113)
Data Point: (177.04, -32, 118)

CH, -34 to -42

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -34, 335)
Data Point: (-300, -42, 423)
Data Point: (-33.33, -34, 335)
Data Point: (-33.33, -42, 423)
Data Point: (0, -34, 438)
Data Point: (0, -42, 514)
Data Point: (177.04, -34, 325)
Data Point: (177.04, -42, 409)
Data Point: (500, -34, 325)
Data Point: (500, -42, 409)

CH, -42 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -42, 423)
Data Point: (-300, -80, 841)
Data Point: (-33.33, -42, 423)
Data Point: (-33.33, -80, 841)
Data Point: (0, -42, 514)
Data Point: (0, -80, 875)
Data Point: (177.04, -42, 409)

Data Point: (177.04, -80, 808)
Data Point: (500, -42, 409)
Data Point: (500, -80, 808)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -42 to -80	1,3,4,2	26600
Region 2	CH, -34 to -42	3,5,69,73,6,4	5600
Region 3	CH above 0	45,21,22,63,64,27,44,65	161.91095
Region 4	Sand Fill	29,30,43,31,32,33,42,34,35,62	606.7023
Region 5	CH, 0 to -9	56,53,54,41,12	267.3158
Region 6	EMBANKMENT FILL CH	59,46,47,60,37,36,35,62	1502.7397
Region 7	EMBANKMENT FILL CH	64,27,44,57,28,62,59	499.34315
Region 8	EMBANKMENT FILL CH	60,61,76,75,40,39,58,38,37	772.15003
Region 9	CH, 0 to -9	16,11,66,65,45,20,19,18,17,15,14,74	1498.6738
Region 10	CH, -9 to -14	11,9,67,66	1000
Region 11	CH, -14 to -30	9,7,68,67	3200
Region 12	CH, -30 to -34	7,5,69,68	800
Region 13	CH, -30 to -34	6,8,72,73	856.64
Region 14	CH, -14 to -30	8,10,71,72	3426.56
Region 15	CH, -9 to -14	10,71,70,55,50,51,52,56,12	954.73385
Region 16	CH, 0 to -9	55,49,48,76,75,70	220.0602
Region 17	CH, -30 to -34 SG	69,68,72,73	1143.36
Region 18	CH, -14 to -30 SG	68,67,71,72	4573.44
Region 19	CH, -9 to -14 SG	67,66,43,31,32,33,42,70,71	1313.1338
Region 20	CH, 0 to -9 SG	66,65,44,57,28,62,29,30,43	438.1553
Region 21	CH, 0 to -9 SG	42,34,35,36,37,38,58,39,40,75,70	538.2795

Points

	X (ft)	Y (ft)
Point 1	-200	-80
Point 2	500	-80
Point 3	-200	-42
Point 4	500	-42
Point 5	-200	-34
Point 6	500	-34
Point 7	-200	-30
Point 8	500	-30
Point 9	-200	-14
Point 10	500	-14
Point 11	-200	-9
Point 12	500	-9
Point 13	-191.42	-2.12
Point 14	-156.88	-2.03
Point 15	-119.75	-2.26
Point 16	-200	-2.13

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Point 17	-92.12	-1.99
Point 18	-71.42	-1.72
Point 19	-45.06	-0.68
Point 20	-33.33	-0.27
Point 21	-19.05	1.53
Point 22	-16.9	1.81
Point 23	-6.83	6.48
Point 24	-6.79	6.72
Point 25	-0.92	7.16
Point 26	3.42	6.91
Point 27	20.53	0.36
Point 28	38.18	-3.47
Point 29	56.55	-4.85
Point 30	70.54	-8.43
Point 31	109.16	-11.38
Point 32	127.67	-11.01
Point 33	135.55	-10.86
Point 34	159.82	-8.55
Point 35	177.04	-4.54
Point 36	180.67	-4.21
Point 37	200.3	-4.33
Point 38	220.54	-4.34
Point 39	240.61	-4.57
Point 40	250	-4.5
Point 41	500	-4.5
Point 42	154	-9
Point 43	73	-9
Point 44	22	0
Point 45	-32	0
Point 46	117.71	14
Point 47	127.71	14
Point 48	329.57	-4.85
Point 49	343.56	-8.43
Point 50	382.18	-11.38
Point 51	400.69	-11.01
Point 52	408.57	-10.86
Point 53	432.84	-8.55
Point 54	450.06	-4.54
Point 55	346.02	-9
Point 56	427.02	-9
Point 57	35.99	-3
Point 58	226.87	-4.54
Point 59	94.84	8
Point 60	167.4	4
Point 61	292.4	0.875
Point 62	46	-4.06
Point 63	-5.16	5.5
Point 64	8	5.2

Point 65	0	0
Point 66	0	-9
Point 67	0	-14
Point 68	0	-30
Point 69	0	-34
Point 70	285.84	-9
Point 71	285.84	-14
Point 72	285.84	-30
Point 73	285.84	-34
Point 74	-194	-2
Point 75	285.84	-4.64
Point 76	309.25	-4.74

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	1.59	(28.713, 13.654)	84.92891	(138.236, 11.3479)	(-71.413, -1.71972)
2	31064	1.63	(28.713, 13.654)	89.732	(141.406, 10.5492)	(-82.9498, -1.87039)
3	31128	1.64	(23.37, 13.688)	93.511	(141.406, 10.5492)	(-93.6606, -2.00506)
4	31000	1.64	(32.923, 13.627)	86.799	(141.406, 10.5492)	(-74.5075, -1.76027)
5	31056	1.64	(26.017, 15.271)	88.228	(136.272, 11.8429)	(-82.9498, -1.87039)
6	31120	1.64	(20.68, 15.305)	91.8	(136.272, 11.8429)	(-93.6606, -2.00506)
7	30992	1.65	(30.224, 15.244)	85.054	(136.272, 11.8429)	(-74.5075, -1.76027)
8	31576	1.65	(22.74, 13.691)	95.356	(141.406, 10.5492)	(-94.9238, -2.0174)
9	30616	1.65	(30.353, 13.643)	87.442	(141.406, 10.5492)	(-79.6606, -1.82749)
10	31192	1.65	(16.261, 13.723)	98.401	(141.406, 10.5492)	(-107.915, -2.14435)
11	30552	1.65	(34.666, 13.612)	84.454	(141.406, 10.5492)	(-71.0136, -1.70397)
12	31512	1.65	(27.76, 13.66)	91.688	(141.406, 10.5492)	(-84.8606, -1.89531)
13	31063	1.65	(30.573, 12.532)	90.467	(144.97, 9.65136)	(-82.9498, -1.87039)
14	30936	1.65	(36.293, 13.58)	84.456	(141.406, 10.5492)	(-67.767, -1.57587)
15	31575	1.65	(24.597, 12.569)	95.873	(144.97, 9.65136)	(-94.9238, -2.0174)
16	30680	1.65	(24.644, 13.681)	91.656	(141.406, 10.5492)	(-91.1057, -1.97677)
17	31055	1.65	(27.611, 14.316)	88.504	(139.303, 11.0791)	(-82.9498, -1.87039)
18	31184	1.65	(13.577, 15.34)	96.727	(136.272, 11.8429)	(-107.915, -2.14435)
19	31640	1.65	(16.342, 13.722)	99.883	(141.406, 10.5492)	(-107.752, -2.14276)
20	31127	1.66	(25.228, 12.565)	94.177	(144.97, 9.65136)	(-93.6606, -2.00506)
21	30999	1.66	(34.786, 12.504)	87.524	(144.97, 9.65136)	(-74.5075, -1.76027)
22	31072	1.66	(31.391, 12.037)	91.708	(146.541, 9.25544)	(-82.9498, -1.87039)
23	31639	1.66	(18.196, 12.6)	100.504	(144.97, 9.65136)	(-107.752, -2.14276)
24	31584	1.66	(25.414, 12.074)	97.167	(146.541, 9.25544)	(-94.9238, -2.0174)
25	30608	1.66	(27.656, 15.261)	85.485	(136.272, 11.8429)	(-79.6606, -1.82749)
26	30488	1.66	(37.95, 13.548)	82.381	(141.406, 10.5492)	(-64.4574, -1.4453)
27	31136	1.66	(26.044, 12.071)	95.294	(146.541, 9.25544)	(-93.6606, -2.00506)
28	31119	1.66	(22.27, 14.35)	92.375	(139.303, 11.0791)	(-93.6606, -2.00506)
29	30991	1.66	(31.82, 14.289)	85.446	(139.303, 11.0791)	(-74.5075, -1.76027)
30	31200	1.66	(18.93, 12.105)	100.121	(146.541, 9.25544)	(-107.915, -2.14435)
31	31568	1.66	(20.051, 15.308)	93.418	(136.272, 11.8429)	(-94.9238, -2.0174)
32	31008	1.66	(35.605, 12.009)	88.798	(146.541, 9.25544)	(-74.5075, -1.76027)

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33	30928	1.66	(33.59, 15.198)	82.504	(136.272, 11.8429)	(-67.767, -1.57587)
34	30544	1.66	(31.965, 15.23)	82.474	(136.272, 11.8429)	(-71.0136, -1.70397)
35	31448	1.66	(31.842, 13.634)	88.718	(141.406, 10.5492)	(-76.6745, -1.78854)
36	26904	1.66	(25.896, 15.236)	88.8	(136.386, 11.8142)	(-83.3142, -1.87514)
37	26912	1.66	(28.591, 13.619)	90.661	(141.52, 10.5204)	(-83.3142, -1.87514)
38	26968	1.66	(21.704, 15.264)	91.611	(136.386, 11.8142)	(-91.7265, -1.98487)
39	31648	1.66	(19.011, 12.105)	101.586	(146.541, 9.25544)	(-107.752, -2.14276)
40	31704	1.66	(7.766, 13.743)	105.96	(141.406, 10.5492)	(-124.956, -2.22775)
41	26976	1.66	(24.394, 13.647)	93.557	(141.52, 10.5204)	(-91.7265, -1.98487)
42	26975	1.67	(26.597, 12.316)	94.515	(145.747, 9.45561)	(-91.7265, -1.98487)
43	31504	1.67	(25.065, 15.277)	89.839	(136.272, 11.8429)	(-84.8606, -1.89531)
44	31632	1.67	(13.659, 15.339)	98.221	(136.272, 11.8429)	(-107.752, -2.14276)
45	30672	1.67	(21.953, 15.298)	89.483	(136.272, 11.8429)	(-91.1057, -1.97677)
46	31511	1.67	(29.62, 12.538)	92.437	(144.97, 9.65136)	(-84.8606, -1.89531)
47	30872	1.67	(39.09, 13.525)	82.562	(141.406, 10.5492)	(-62.1822, -1.35553)
48	26903	1.67	(27.836, 14.073)	89.394	(140.08, 10.8833)	(-83.3142, -1.87514)
49	26464	1.67	(30.358, 13.608)	88.614	(141.52, 10.5204)	(-79.7699, -1.82891)
50	26848	1.67	(32.01, 13.597)	88.407	(141.52, 10.5204)	(-76.4592, -1.78573)
51	26456	1.67	(27.662, 15.225)	86.29	(136.386, 11.8142)	(-79.7699, -1.82891)
52	30615	1.67	(32.215, 12.521)	88.127	(144.97, 9.65136)	(-79.6606, -1.82749)
53	31191	1.67	(18.115, 12.6)	99.098	(144.97, 9.65136)	(-107.915, -2.14435)
54	26840	1.67	(29.311, 15.214)	86.625	(136.386, 11.8142)	(-76.4592, -1.78573)
55	26967	1.67	(23.641, 14.1)	92.356	(140.08, 10.8833)	(-91.7265, -1.98487)
56	30935	1.67	(38.157, 12.458)	85.274	(144.97, 9.65136)	(-67.767, -1.57587)
57	26400	1.67	(33.754, 13.586)	86.183	(141.52, 10.5204)	(-72.9611, -1.7401)
58	27032	1.67	(16.354, 15.29)	95.301	(136.386, 11.8142)	(-102.464, -2.09108)
59	30424	1.67	(40.658, 13.494)	80.406	(141.406, 10.5492)	(-59.0519, -1.23203)
60	30551	1.67	(36.53, 12.49)	85.18	(144.97, 9.65136)	(-71.0136, -1.70397)
61	30480	1.67	(35.247, 15.165)	80.172	(136.272, 11.8429)	(-64.4574, -1.4453)
62	26392	1.67	(31.054, 15.203)	84.041	(136.386, 11.8142)	(-72.9611, -1.7401)
63	27040	1.67	(19.04, 13.673)	97.399	(141.52, 10.5204)	(-102.464, -2.09108)
64	27039	1.67	(21.239, 12.342)	98.019	(145.747, 9.45561)	(-102.464, -2.09108)
65	26520	1.67	(23.362, 15.253)	89.285	(136.386, 11.8142)	(-88.3993, -1.94147)
66	32096	1.67	(19.409, 12.103)	102.559	(146.541, 9.25544)	(-106.955, -2.13497)
67	31135	1.67	(28.167, 10.781)	96.358	(150.636, 8.22363)	(-93.6606, -2.00506)
68	31071	1.67	(33.516, 10.747)	92.518	(150.636, 8.22363)	(-82.9498, -1.87039)
69	26528	1.67	(26.054, 13.636)	91.622	(141.52, 10.5204)	(-88.3993, -1.94147)
70	30944	1.67	(38.977, 11.963)	86.568	(146.541, 9.25544)	(-67.767, -1.57587)
71	31520	1.67	(30.437, 12.043)	93.618	(146.541, 9.25544)	(-84.8606, -1.89531)
72	26455	1.67	(29.604, 14.061)	87.268	(140.08, 10.8833)	(-79.7699, -1.82891)
73	26839	1.67	(31.255, 14.051)	87.106	(140.08, 10.8833)	(-76.4592, -1.78573)
74	30927	1.67	(35.188, 14.243)	83.055	(139.303, 11.0791)	(-67.767, -1.57587)
75	32032	1.67	(25.261, 12.074)	98.403	(146.541, 9.25544)	(-95.2304, -2.02039)
76	26911	1.67	(30.796, 12.288)	91.571	(145.747, 9.45561)	(-83.3142, -1.87514)
77	30624	1.68	(33.033, 12.026)	89.382	(146.541, 9.25544)	(-79.6606, -1.82749)
78	26391	1.68	(32.998, 14.039)	84.753	(140.08, 10.8833)	(-72.9611, -1.7401)
79	31183	1.68	(15.163, 14.385)	97.303	(139.303, 11.0791)	(-107.915, -2.14435)
80	26336	1.68	(36.456, 13.542)	84.302	(141.52, 10.5204)	(-67.5595, -1.56769)

81	27031	1.68	(18.288, 14.127)	96.025	(140.08, 10.8833)	(-102.464, -2.09108)
82	27104	1.68	(11.948, 13.708)	102.212	(141.52, 10.5204)	(-116.68, -2.23)
83	26784	1.68	(34.859, 13.574)	86.403	(141.52, 10.5204)	(-70.7475, -1.69347)
84	30679	1.68	(26.502, 12.558)	92.268	(144.97, 9.65136)	(-91.1057, -1.97677)
85	31583	1.68	(27.536, 10.784)	97.859	(150.636, 8.22363)	(-94.9238, -2.0174)
86	31567	1.68	(21.64, 14.353)	93.97	(139.303, 11.0791)	(-94.9238, -2.0174)
87	31703	1.68	(9.615, 12.621)	106.589	(144.97, 9.65136)	(-124.956, -2.22775)
88	31447	1.68	(33.705, 12.511)	89.432	(144.97, 9.65136)	(-76.6745, -1.78854)
89	27488	1.68	(18.395, 13.676)	99.472	(141.52, 10.5204)	(-103.755, -2.1037)
90	26519	1.68	(25.3, 14.09)	90.332	(140.08, 10.8833)	(-88.3993, -1.94147)
91	30607	1.68	(29.251, 14.306)	86.121	(139.303, 11.0791)	(-79.6606, -1.82749)
92	26328	1.68	(33.754, 15.16)	82.148	(136.386, 11.8142)	(-67.5595, -1.56769)
93	30560	1.68	(37.35, 11.995)	86.475	(146.541, 9.25544)	(-71.0136, -1.70397)
94	31503	1.68	(26.658, 14.323)	90.32	(139.303, 11.0791)	(-84.8606, -1.89531)
95	30487	1.68	(39.815, 12.426)	82.956	(144.97, 9.65136)	(-64.4574, -1.4453)
96	31440	1.68	(29.144, 15.251)	86.805	(136.272, 11.8429)	(-76.6745, -1.78854)
97	26847	1.68	(34.217, 12.266)	89.373	(145.747, 9.45561)	(-76.4592, -1.78573)
98	26776	1.68	(32.158, 15.191)	84.441	(136.386, 11.8142)	(-70.7475, -1.69347)
99	32152	1.68	(9.276, 13.748)	106.25	(141.406, 10.5492)	(-121.921, -2.24655)
100	30864	1.68	(36.386, 15.143)	80.599	(136.272, 11.8429)	(-62.1822, -1.35553)
101	32088	1.68	(16.74, 13.72)	100.822	(141.406, 10.5492)	(-106.955, -2.13497)

Slices of Slip Surface: Optimized

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	-67.125405	-5.359861	237.69689	382.46814	0	64.52
2	Optimized	-62.2763	-9.476755	506.53274	782.20504	0	78.814
3	Optimized	-58.11423	-11.976755	672.77709	1010.4973	0	98.814
4	Optimized	-49.94935	-16.564855	979.15535	1506.7895	0	143.21
5	Optimized	-45.222495	-19.20979	1155.8537	1800.0769	0	172.31
6	Optimized	-40.381355	-21.5956	1315.2938	2076.038	0	198.55
7	Optimized	-34.516355	-24.41897	1504.3231	2388.9623	0	229.61
8	Optimized	-32.665	-25.22677	1565.7163	2495.1537	0	240.77
9	Optimized	-30.198135	-26.30314	1641.3181	2654.228	0	260.42
10	Optimized	-23.723135	-28.200675	1759.7728	2898.2228	0	298.69
11	Optimized	-17.975	-29.56765	1845.0108	3134.4459	0	326.2
12	Optimized	-16.57224	-29.901245	1865.8317	3199.7559	0	332.46
13	Optimized	-11.29641	-29.974805	1870.4255	3311.2897	0	346.36
14	Optimized	-5.75417	-29.96335	1869.7031	3504.0524	0	360.29
15	Optimized	-2.58	-29.92558	1867.3485	3524.9445	0	368.11

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16	Optimized	1.679405	-29.874895	1864.1889	3518.2587	0	373.18
17	Optimized	5.679405	-29.86231	1863.4133	3511.3658	0	370.18
18	Optimized	11.00362	-29.879295	1864.4073	3530.8878	0	366.37
19	Optimized	17.01086	-29.89846	1865.739	3581.9926	0	362.1
20	Optimized	20.27224	-29.894735	1865.4367	3586.745	0	359.69
21	Optimized	21.265	-29.843495	1862.2147	3588.3521	0	358.59
22	Optimized	25.4975	-29.62504	1801.7475	3597.0704	0	353.74
23	Optimized	32.4925	-29.264	1685.6762	3613.6317	0	345.22
24	Optimized	37.085	-29.026965	1609.4103	3625.2203	0	339.27
25	Optimized	41.847575	-28.78115	1562.1694	3626.9996	0	332.82
26	Optimized	45.76152	-28.57894	1531.2519	3625.7159	0	327.29
27	Optimized	48.65034	-28.42756	1508.2731	3625.94	0	326.87
28	Optimized	53.921395	-28.15135	1466.333	3626.9868	0	326.72
29	Optimized	60.338415	-27.81509	1433.5938	3648.5008	0	326.54
30	Optimized	67.28749	-27.32136	1403.9431	3659.5702	0	324.97
31	Optimized	71.724075	-26.88901	1377.6871	3659.6237	0	322.75
32	Optimized	76.64	-26.36063	1345.4921	3638.3845	0	319.76
33	Optimized	83.92	-25.57815	1297.827	3597.2751	0	315.34
34	Optimized	91.2	-24.79567	1250.1757	3556.3023	0	310.92
35	Optimized	97.40701	-24.12852	1209.5458	3588.9752	0	307.16
36	Optimized	104.56701	-21.71838	1060.2946	3453.5593	0	285.58
37	Optimized	110.01345	-19.187575	903.26255	3377.0469	0	261.85
38	Optimized	112.9927	-16.3955	729.50697	3011.0428	0	234.09
39	Optimized	116.41425	-12.53982	489.44392	2769.9299	0	187.14
40	Optimized	120.5504	-7.878835	199.2695	1814.0476	932.29258	0
41	Optimized	123.47705	-4.58085	-6.0503299	1481.1032	855.11533	0
42	Optimized	125.63665	-2.2466241	-151.3586	1409.2946	0	600
43	Optimized	130.3416	2.8297809	-467.37132	780.1318	0	600
44	Optimized	135.6048	8.5085	-820.88004	12.245653	0	600

Slices of Slip Surface: 31064

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31064	-80.067335	-3.3481315	94.556674	155.39482	0	58.497
2	31064	-74.302445	-6.303618	283.66848	428.41242	0	67.176
3	31064	-70.23148	-8.3906805	419.17192	623.98478	0	73.24
4	31064	-64.16653	-11.5	628.12903	937.60407	0	95

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5	31064	-55.732575	-15.823835	918.70667	1398.3962	0	135.06
6	31064	-48.617525	-19.471505	1163.8294	1812.8748	0	175.19
7	31064	-42.1275	-22.798745	1386.6069	2198.2034	0	211.79
8	31064	-36.2625	-25.805555	1587.0518	2545.5037	0	244.86
9	31064	-32.665	-27.64989	1716.9177	2770.9811	0	267.12
10	31064	-30.04047	-28.99541	1809.3037	2962.714	0	288.87
11	31064	-24.04047	-32.07143	2001.2074	3434.5268	0	343.3
12	31064	-19.525	-34.10439	2128.0846	3523.8303	0	378.75
13	31064	-18.643055	-34.03296	2123.6813	3529.3449	0	380.73
14	31064	-17.568055	-33.945895	2118.187	3536.3294	0	383.15
15	31064	-13.965	-33.654085	2099.9385	3614.0609	0	391.34
16	31064	-8.095	-33.178675	2070.393	3762.1281	0	404.88
17	31064	-2.58	-32.732015	2042.5371	3814.2555	0	417.83
18	31064	4	-32.1991	2009.1712	3744.4891	0	415.95
19	31064	11.1325	-31.62144	1973.1083	3694.0495	0	401.52
20	31064	17.3975	-31.11404	1941.4482	3688.3221	0	388.69
21	31064	21.265	-30.80081	1921.9386	3683.3144	0	380.7
22	31064	26.57639	-30.37064	1833.8739	3673.8462	0	369.65
23	31064	33.57139	-29.804115	1704.9446	3665.7277	0	349.17
24	31064	37.085	-29.51955	1640.1545	3664.1663	0	343.89
25	31064	42.10779	-29.112755	1581.7194	3651.0488	0	335.91
26	31064	51.29279	-28.36886	1492.2006	3624.1865	0	327.63
27	31064	60.0475	-27.65982	1423.9009	3619.4567	0	324.75
28	31064	67.0425	-27.093295	1389.6599	3638.8358	0	322.45
29	31064	71.77	-26.710415	1366.5417	3651.7825	0	320.9
30	31064	76.64	-26.315995	1342.7052	3643.7012	0	319.3
31	31064	83.92	-25.72639	1307.0801	3621.9319	0	316.9
32	31064	91.2	-25.136785	1271.455	3600.1625	0	314.51
33	31064	97.88	-24.59577	1238.7728	3660.3831	0	312.31
34	31064	103.96	-24.10335	1209.0182	3802.3524	0	310.31
35	31064	108.08	-22.77714	1126.9188	3486.757	0	298.53
36	31064	113.00855	-17.84857	820.17197	3181.0498	0	249.35
37	31064	117.28355	-13.57357	554.09818	2925.8234	0	187.68
38	31064	118.6988	-12.15835	466.01002	2803.0683	0	188.54
39	31064	122.93695	-7.920199	202.2396	1891.9364	975.54688	0

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40	31064	126.3443	-4.512859	9.8325611	1541.8557	890.1908	0
41	31064	127.10615	-3.7510115	-57.249482	1618.4445	0	600
42	31064	131.1341	0.276937	-307.94774	1080.5637	0	600
43	31064	137.98225	7.1250985	-734.1741	137.69056	0	600

Slices of Slip Surface: 31128

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31128	-92.890315	-2.341139	21.441239	47.002361	0	55.28
2	31128	-88.49701	-4.257917	144.4671	223.65142	0	61.024
3	31128	-81.25103	-7.4193055	347.63938	515.34316	0	70.378
4	31128	-74.52402	-10.35427	536.24738	792.31616	0	85.834
5	31128	-68.79396	-12.85427	701.25001	1040.5578	0	105.83
6	31128	-62.649935	-15.53488	883.63405	1331.5997	0	131.88
7	31128	-55.61396	-18.604645	1092.5188	1679.4153	0	165.65
8	31128	-48.577985	-21.67441	1301.3906	2029.3153	0	199.42
9	31128	-39.195	-25.768165	1578.3157	2505.5048	0	244.45
10	31128	-32.665	-28.617175	1777.3043	2848.7865	0	277.64
11	31128	-30.747765	-29.453655	1837.9036	2973.1806	0	291.77
12	31128	-24.747765	-32.07143	2001.2664	3392.4907	0	341.05
13	31128	-19.525	-34.10439	2128.0846	3523.9352	0	378.75
14	31128	-18.643055	-34.03296	2123.6813	3529.4674	0	380.73
15	31128	-17.568055	-33.945895	2118.187	3536.404	0	383.15
16	31128	-11.03	-33.41638	2085.1658	3687.9247	0	398.08
17	31128	-2.58	-32.732015	2042.5371	3814.2555	0	417.83
18	31128	4	-32.1991	2009.1712	3744.6137	0	415.95
19	31128	11.1325	-31.62144	1973.1083	3694.2086	0	401.52
20	31128	17.3975	-31.11404	1941.4482	3688.3221	0	388.69
21	31128	21.265	-30.80081	1921.9386	3683.3822	0	380.7
22	31128	26.57639	-30.37064	1833.8739	3673.9551	0	369.65
23	31128	33.57139	-29.804115	1704.9446	3665.7277	0	349.17
24	31128	37.085	-29.51955	1640.1545	3664.3029	0	343.89
25	31128	42.10779	-29.112755	1581.7194	3651.0488	0	335.91
26	31128	51.29279	-28.36886	1492.2006	3624.3761	0	327.63

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27	31128	60.0475	-27.65982	1423.9009	3619.5992	0	324.75
28	31128	67.0425	-27.093295	1389.6599	3638.9782	0	322.45
29	31128	71.77	-26.710415	1366.5417	3651.904	0	320.9
30	31128	76.64	-26.315995	1342.7052	3643.8382	0	319.3
31	31128	83.92	-25.72639	1307.0801	3622.0688	0	316.9
32	31128	91.2	-25.136785	1271.455	3600.2994	0	314.51
33	31128	97.88	-24.59577	1238.7728	3660.3831	0	312.31
34	31128	103.96	-24.10335	1209.0182	3802.5164	0	310.31
35	31128	108.08	-22.77714	1126.9188	3490.0306	0	298.53
36	31128	113.00855	-17.84857	820.17197	3184.1733	0	249.35
37	31128	117.28355	-13.57357	554.09818	2928.6424	0	187.68
38	31128	118.6988	-12.15835	466.01002	2805.7858	0	188.54
39	31128	122.93695	-7.920199	202.2396	1893.7861	976.61481	0
40	31128	126.3443	-4.512859	-9.8325611	1543.3551	891.0565	0
41	31128	127.10615	-3.7510115	-57.249482	1620.3181	0	600
42	31128	131.1341	0.276937	-307.94774	1082.0093	0	600
43	31128	137.98225	7.1250985	-734.1741	138.19651	0	600

Slices of Slip Surface: 31000

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31000	-72.963765	-2.677412	58.485867	106.52982	0	56.681
2	31000	-66.87068	-6.297276	296.81949	452.37735	0	67.221
3	31000	-58.11327	-11.5	643.03324	967.47651	0	95
4	31000	-49.48259	-16.627435	984.21715	1519.7728	0	143.9
5	31000	-42.1275	-20.99705	1274.1813	2024.4948	0	191.97
6	31000	-36.2625	-24.48141	1504.4088	2425.9929	0	230.3
7	31000	-32.665	-26.61866	1652.6116	2685.0575	0	255.91
8	31000	-29.486705	-28.506865	1778.7669	2946.2537	0	285.35
9	31000	-23.486705	-32.07143	2001.3056	3474.9461	0	345.06
10	31000	-19.525	-34.10439	2128.0846	3523.8303	0	378.75
11	31000	-18.643055	-34.03296	2123.6813	3529.3449	0	380.73
12	31000	-17.568055	-33.945895	2118.187	3536.3294	0	383.15
13	31000	-13.965	-33.654085	2099.9385	3613.8911	0	391.34
14	31000	-8.095	-33.178675	2070.393	3762.1281	0	404.88

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15	31000	-2.58	32.732015	2042.5371	3814.2555	0	417.83
16	31000	4	-32.1991	2009.1712	3744.4891	0	415.95
17	31000	11.1325	-31.62144	1973.1083	3694.0495	0	401.52
18	31000	17.3975	-31.11404	1941.4482	3688.3221	0	388.69
19	31000	21.265	-30.80081	1921.9386	3683.2466	0	380.7
20	31000	26.57639	-30.37064	1833.8739	3673.8462	0	369.65
21	31000	33.57139	-29.804115	1704.9446	3665.7277	0	349.17
22	31000	37.085	-29.51955	1640.1545	3664.1663	0	343.89
23	31000	42.10779	-29.112755	1581.7194	3650.9219	0	335.91
24	31000	51.29279	-28.36886	1492.2006	3624.1865	0	327.63
25	31000	60.0475	-27.65982	1423.9009	3619.4567	0	324.75
26	31000	67.0425	-27.093295	1389.6599	3638.8358	0	322.45
27	31000	71.77	-26.710415	1366.5417	3651.7825	0	320.9
28	31000	76.64	-26.315995	1342.7052	3643.7012	0	319.3
29	31000	83.92	-25.72639	1307.0801	3621.9319	0	316.9
30	31000	91.2	-25.136785	1271.455	3600.1625	0	314.51
31	31000	97.88	-24.59577	1238.7728	3660.2191	0	312.31
32	31000	103.96	-24.10335	1209.0182	3802.3524	0	310.31
33	31000	108.08	-22.77714	1126.9188	3486.1022	0	298.53
34	31000	113.00855	-17.84857	820.17197	3180.4068	0	249.35
35	31000	117.28355	-13.57357	554.09818	2925.2431	0	187.68
36	31000	118.6988	-12.15835	466.01002	2802.4605	0	188.54
37	31000	122.93695	-7.920199	202.2396	1892.698	975.98662	0
38	31000	126.3443	-4.512859	-9.8325611	1542.5271	890.57843	0
39	31000	127.10615	-3.7510115	-57.249482	1618.8544	0	600
40	31000	131.1341	0.276937	-307.94774	1081.1832	0	600
41	31000	137.98225	7.1250985	-734.1741	138.56822	0	600

Slices of Slip Surface: 31056

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31056	-80.067335	-3.3481315	94.556674	155.62636	0	58.497
2	31056	-74.302445	-6.303618	283.66848	428.99899	0	67.176
3	31056	-70.23148	-8.3906805	419.17192	624.80837	0	73.24
4	31056	-64.16653	-11.5	628.12903	938.79022	0	95
5	31056	-55.732575	-15.823835	918.70667	1400.1472	0	135.06
6	31056	-	-	1163.8294	1815.3762	0	175.19

		48.617525	19.471505				
7	31056	-42.1275	-22.798745	1386.6069	2201.0861	0	211.79
8	31056	-36.2625	-25.805555	1587.0518	2548.8417	0	244.86
9	31056	-32.665	-27.64989	1716.9177	2774.7279	0	267.12
10	31056	-30.04047	-28.99541	1809.3037	2966.5741	0	288.87
11	31056	-24.04047	-32.07143	2001.2074	3439.1519	0	343.3
12	31056	-19.525	-34.080345	2126.6091	3500.9681	0	378.5
13	31056	-18.982265	-34.008915	2122.1722	3501.1413	0	379.43
14	31056	-17.907265	-33.867435	2113.3401	3501.4484	0	381.29
15	31056	-13.965	-33.3486	2081.0328	3557.9056	0	388.25
16	31056	-8.095	-32.57606	2032.727	3671.7451	0	398.94
17	31056	-2.58	-31.85024	1987.5123	3692.9609	0	409.35
18	31056	4	-30.984255	1933.4524	3586.5721	0	404.31
19	31056	9.739315	-30.22891	1886.2918	3505.0718	0	389.73
20	31056	16.004315	-29.40438	1834.8373	3471.5239	0	359.52
21	31056	21.265	-28.71203	1791.6254	3443.4361	0	350.25
22	31056	25.4975	-28.155	1710.0573	3418.2721	0	342.12
23	31056	32.4925	-27.234395	1558.9657	3379.2944	0	327.37
24	31056	37.085	-26.62998	1459.8315	3354.2715	0	316.81
25	31056	42.10779	-25.96894	1385.531	3316.0359	0	304.45
26	31056	51.29279	-24.760115	1267.0331	3243.4425	0	289.74
27	31056	60.0475	-23.60792	1171.0597	3194.7528	0	282.21
28	31056	67.0425	-22.68732	1114.7334	3179.02	0	276.19
29	31056	71.77	-22.06514	1076.6508	3168.2488	0	272.12
30	31056	76.64	-21.424205	1037.4549	3135.8708	0	267.93
31	31056	83.92	-20.466095	978.83948	3077.8546	0	261.67
32	31056	91.2	-19.507985	920.22405	3019.8384	0	255.4
33	31056	97.88	-18.62884	866.44297	3046.5905	0	249.66
34	31056	103.96	-17.82866	817.47379	3158.1287	0	244.42
35	31056	108.08	-16.34857	725.79935	2898.6143	0	231.03
36	31056	109.7943	-14.634285	619.10859	2793.8759	0	213.93
37	31056	111.77825	-12.650345	495.59806	2678.2571	0	184.3
38	31056	115.41895	-9.0096305	269.00873	1953.0602	972.28757	0
39	31056	118.7256	-5.7029955	63.210144	1661.3507	922.68688	0
40	31056	123.7256	-0.7029955	-247.98463	1281.8499	0	600

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41	31056	131.99075	7.5621695	-762.41125	256.59556	0	600

Slices of Slip Surface: 31120

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31120	-92.890315	-2.341139	21.441239	47.108854	0	55.28
2	31120	-88.49701	-4.257917	144.4671	223.96765	0	61.024
3	31120	-81.25103	-7.4193055	347.63938	516.00092	0	70.378
4	31120	-74.52402	-10.35427	536.24738	793.2906	0	85.834
5	31120	-68.79396	-12.85427	701.25001	1041.8317	0	105.83
6	31120	-62.649935	-15.53488	883.63405	1333.1629	0	131.88
7	31120	-55.61396	-18.604645	1092.5188	1681.3694	0	165.65
8	31120	-48.577985	-21.67441	1301.3906	2031.7903	0	199.42
9	31120	-42.1275	-24.488725	1492.0664	2359.9328	0	230.38
10	31120	-36.2625	-27.0476	1664.502	2657.4834	0	258.52
11	31120	-32.665	-28.617175	1777.3043	2852.3011	0	277.64
12	31120	-30.747765	-29.453655	1837.9036	2976.8403	0	291.77
13	31120	-24.747765	-32.07143	2001.2664	3396.7378	0	341.05
14	31120	-19.525	-34.080345	2126.6091	3501.1769	0	378.5
15	31120	-18.982265	-34.008915	2122.1722	3501.3609	0	379.43
16	31120	-17.907265	-33.867435	2113.3401	3501.6945	0	381.29
17	31120	-13.965	-33.3486	2081.0328	3558.0745	0	388.25
18	31120	-8.095	-32.57606	2032.727	3672.0829	0	398.94
19	31120	-2.58	-31.85024	1987.5123	3693.153	0	409.35
20	31120	4	-30.984255	1933.4524	3586.82	0	404.31
21	31120	9.739315	-30.22891	1886.2918	3505.3568	0	389.73
22	31120	16.004315	-29.40438	1834.8373	3471.8525	0	359.52
23	31120	21.265	-28.71203	1791.6254	3443.7058	0	350.25
24	31120	25.4975	-28.155	1710.0573	3418.5556	0	342.12
25	31120	32.4925	-27.234395	1558.9657	3379.4361	0	327.37
26	31120	37.085	-26.62998	1459.8315	3354.4979	0	316.81
27	31120	42.10779	-25.96894	1385.531	3316.2883	0	304.45
28	31120	51.29279	-24.760115	1267.0331	3243.6311	0	289.74
29	31120	60.0475	-23.60792	1171.0597	3194.8945	0	282.21
30	31120	67.0425	-22.68732	1114.7334	3179.1617	0	276.19

31	31120	71.77	-22.06514	1076.6508	3168.4906	0	272.12
32	31120	76.64	-21.424205	1037.4549	3136.1432	0	267.93
33	31120	83.92	-20.466095	978.83948	3078.127	0	261.67
34	31120	91.2	-19.507985	920.22405	3020.1108	0	255.4
35	31120	97.88	-18.62884	866.44297	3046.7536	0	249.66
36	31120	103.96	-17.82866	817.47379	3158.2918	0	244.42
37	31120	108.08	-16.34857	725.79935	2901.0368	0	231.03
38	31120	109.7943	-14.634285	619.10859	2796.217	0	213.93
39	31120	111.77825	-12.650345	495.59806	2680.3527	0	184.3
40	31120	115.41895	-9.0096305	269.00873	1954.4491	973.08943	0
41	31120	118.7256	-5.7029955	63.210144	1662.6388	923.43056	0
42	31120	123.7256	-0.7029955	-247.98463	1283.0922	0	600
43	31120	131.99075	7.5621695	-762.41125	257.01678	0	600

Slices of Slip Surface: 30992

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	30992	-72.963765	-2.677412	58.485867	106.71638	0	56.681
2	30992	-66.87068	-6.297276	296.81949	453.12382	0	67.221
3	30992	-58.11327	-11.5	643.03324	969.04964	0	95
4	30992	-49.48259	-16.627435	984.21715	1522.2027	0	143.9
5	30992	-42.1275	-20.99705	1274.1813	2027.7196	0	191.97
6	30992	-36.2625	-24.48141	1504.4088	2429.9507	0	230.3
7	30992	-32.665	-26.61866	1652.6116	2689.3884	0	255.91
8	30992	-29.486705	-28.506865	1778.7669	2951.0427	0	285.35
9	30992	-23.486705	-32.07143	2001.3056	3480.494	0	345.06
10	30992	-19.525	-34.080345	2126.6091	3500.9681	0	378.5
11	30992	-18.982265	-34.008915	2122.1722	3501.0681	0	379.43
12	30992	-17.907265	-33.867435	2113.3401	3501.3992	0	381.29
13	30992	-13.965	-33.3486	2081.0328	3557.7367	0	388.25
14	30992	-8.095	-32.57606	2032.727	3671.7451	0	398.94
15	30992	-2.58	-31.85024	1987.5123	3692.7687	0	409.35
16	30992	4	-30.984255	1933.4524	3586.5721	0	404.31
17	30992	9.739315	-30.22891	1886.2918	3505.0718	0	389.73

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18	30992	16.004315	-29.40438	1834.8373	3471.5239	0	359.52
19	30992	21.265	-28.71203	1791.6254	3443.3686	0	350.25
20	30992	25.4975	-28.155	1710.0573	3418.2721	0	342.12
21	30992	32.4925	-27.234395	1558.9657	3379.1527	0	327.37
22	30992	37.085	-26.62998	1459.8315	3354.181	0	316.81
23	30992	42.10779	-25.96894	1385.531	3316.0359	0	304.45
24	30992	51.29279	-24.760115	1267.0331	3243.3482	0	289.74
25	30992	60.0475	-23.60792	1171.0597	3194.611	0	282.21
26	30992	67.0425	-22.68732	1114.7334	3178.8782	0	276.19
27	30992	71.77	-22.06514	1076.6508	3168.1682	0	272.12
28	30992	76.64	-21.424205	1037.4549	3135.7346	0	267.93
29	30992	83.92	-20.466095	978.83948	3077.7184	0	261.67
30	30992	91.2	-19.507985	920.22405	3019.7022	0	255.4
31	30992	97.88	-18.62884	866.44297	3046.4274	0	249.66
32	30992	103.96	-17.82866	817.47379	3157.9656	0	244.42
33	30992	108.08	-16.34857	725.79935	2897.6649	0	231.03
34	30992	109.7943	-14.634285	619.10859	2792.9283	0	213.93
35	30992	111.77825	-12.650345	495.59806	2677.2092	0	184.3
36	30992	115.41895	-9.0096305	269.00873	1953.8318	972.73305	0
37	30992	118.7256	-5.7029955	63.210144	1662.1862	923.16927	0
38	30992	123.7256	-0.7029955	-247.98463	1282.3823	0	600
39	30992	131.99075	7.5621695	-762.41125	257.71054	0	600

Slices of Slip Surface: 31576

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31576	-93.52188	-2.7361015	45.703375	84.827368	0	56.436
2	31576	-86.71185	-6.2274025	268.8134	407.07863	0	66.845
3	31576	-76.36185	-11.53354	608.34366	909.61638	0	95.268
4	31576	-67.026665	-16.31941	921.81743	1411.4731	0	140.51
5	31576	-58.24	-20.82407	1224.519	1920.9889	0	190.06
6	31576	-49.453335	-25.32873	1527.2307	2431.3149	0	239.62
7	31576	-42.70084	-28.79053	1759.2356	2832.3846	0	277.7
8	31576	-36.83584	-31.79734	1959.66	3220.1576	0	310.77
9	31576	-32.934695	-33.79734	2097.1331	3503.5134	0	334

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10	31576	-32.269695	-34.138265	2126.8793	3559.8667	0	339.79
11	31576	-29	-35.81454	2234.7648	3803.1639	0	367.99
12	31576	-23	-38.89056	2426.8288	4255.6637	0	418.45
13	31576	-19.525	-40.36659	2518.858	4183.275	0	443.74
14	31576	-17.975	-40.16434	2506.2424	4188.0782	0	446
15	31576	-11.03	-39.25813	2449.677	4319.2629	0	456.48
16	31576	-2.58	-38.155545	2380.9789	4409.5191	0	469.99
17	31576	4	-37.296965	2327.2714	4303.0227	0	466.84
18	31576	11.1325	-36.36629	2269.1916	4210.437	0	453.52
19	31576	17.3975	-35.54881	2218.227	4168.3358	0	441.76
20	31576	21.265	-35.044165	2186.7692	4141.2894	0	434.47
21	31576	25.63362	-34.47413	2102.5138	4108.8324	0	426.21
22	31576	32.62862	-33.561395	1951.99	4060.4754	0	394.51
23	31576	37.085	-32.97991	1856.0921	4029.947	0	383.15
24	31576	42.10779	-32.32452	1782.0882	3984.3896	0	370.2
25	31576	51.29279	-31.126025	1664.2524	3897.3703	0	355.1
26	31576	58.236205	-30.22002	1583.3569	3841.5149	0	348.57
27	31576	65.231205	-29.30729	1527.5146	3822.8023	0	344.75
28	31576	71.77	-28.454085	1475.3387	3808.4063	0	339.21
29	31576	76.64	-27.81863	1436.4495	3776.2304	0	335.07
30	31576	83.92	-26.86871	1378.4249	3718.4782	0	328.89
31	31576	91.2	-25.918785	1320.2505	3660.726	0	322.72
32	31576	97.88	-25.04715	1266.9409	3687.6537	0	317.05
33	31576	103.96	-24.25381	1218.405	3799.5342	0	311.89
34	31576	108.08	-22.77714	1126.9188	3486.1022	0	298.53
35	31576	113.00855	-17.84857	820.17197	3180.2231	0	249.35
36	31576	117.28355	-13.57357	554.09818	2924.8285	0	187.68
37	31576	118.6988	-12.15835	466.01002	2802.1744	0	188.54
38	31576	122.93695	-7.920199	202.2396	1894.8741	977.24301	0
39	31576	126.3443	-4.512859	-9.8325611	1544.5413	891.74132	0
40	31576	127.10615	-3.7510115	-57.249482	1620.4352	0	600
41	31576	131.1341	0.276937	-307.94774	1082.9386	0	600
42	31576	137.98225	7.1250985	-734.1741	140.69528	0	600

Slices of Slip Surface: 30616

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	30616	-75.540305	-3.625156	115.5295	181.83078	0	59.383

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2	30616	-67.320515	-7.211413	352.75315	522.1708	0	69.849
3	30616	-60.356	-10.25	559.51289	824.40135	0	85
4	30616	-54.62594	-12.75	729.61095	1079.8044	0	105
5	30616	-48.410455	-15.46179	914.14002	1375.4776	0	131.08
6	30616	-42.1275	-18.203015	1099.8278	1694.5071	0	161.23
7	30616	-36.2625	-20.761885	1272.2946	1991.4326	0	189.38
8	30616	-32.665	-22.33146	1385.0431	2185.9671	0	209.29
9	30616	-29	-23.930485	1493.2633	2419.7244	0	240.13
10	30616	-23	-26.548255	1656.6863	2795.515	0	285.82
11	30616	-19.525	-27.84218	1737.349	2841.3278	0	307.7
12	30616	-17.975	-27.793365	1734.3029	2861.8369	0	311.84
13	30616	-13.965	-27.667065	1726.4011	2971.4395	0	322.7
14	30616	-8.095	-27.48218	1714.8225	3161.124	0	338.94
15	30616	-2.58	-27.30848	1704.058	3250.7135	0	354.57
16	30616	4	-27.101235	1691.1614	3221.2776	0	357.08
17	30616	11.1325	-26.87659	1677.0614	3212.6127	0	347.98
18	30616	17.3975	-26.67927	1664.7769	3243.8821	0	339.65
19	30616	21.265	-26.55746	1657.2054	3261.7838	0	334.36
20	30616	25.4975	-26.42415	1602.0647	3279.2887	0	328.43
21	30616	32.4925	-26.203835	1494.7555	3310.2954	0	318.31
22	30616	37.085	-26.05919	1424.2252	3331.3617	0	311.46
23	30616	42.10779	-25.90099	1381.2634	3343.3548	0	303.77
24	30616	51.29279	-25.6117	1320.1973	3362.6626	0	298.68
25	30616	60.0475	-25.33596	1278.8797	3401.8869	0	300.35
26	30616	67.0425	-25.115645	1266.2627	3456.4703	0	301.69
27	30616	71.77	-24.96675	1257.7096	3493.2269	0	302.59
28	30616	76.64	-24.813365	1248.9411	3509.5234	0	303.52
29	30616	83.92	-24.584075	1235.802	3524.214	0	304.91
30	30616	91.2	-24.35478	1222.6629	3538.7672	0	306.29
31	30616	97.88	-24.144385	1210.6003	3632.2449	0	307.57
32	30616	103.96	-23.95289	1199.6354	3805.021	0	308.73
33	30616	108.08	-22.77714	1126.9188	3492.9769	0	298.53
34	30616	113.00855	-17.84857	820.17197	3186.7455	0	249.35
35	30616	117.28355	-13.57357	554.09818	2930.881	0	187.68
36	30616	118.6988	-12.15835	466.01002	2807.9311	0	188.54
37	30616	122.93695	-7.920199	202.2396	1896.7239	978.31095	0

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38	30616	126.3443	-4.512859	-9.8325611	1546.0183	892.5941	0
39	30616	127.10615	-3.7510115	-57.249482	1623.0113	0	600
40	30616	131.1341	0.276937	-307.94774	1084.3841	0	600
41	30616	137.98225	7.1250985	-734.1741	140.04477	0	600

Slices of Slip Surface: 31192

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31192	-103.9664	-3.5815935	92.091832	145.16142	0	58.753
2	31192	-96.0688	-6.4560805	276.27074	408.26054	0	67.439
3	31192	-90.599715	-8.446662	404.14686	590.87587	0	73.365
4	31192	-85.645085	-10.25	520.69147	762.7186	0	85
5	31192	-78.776395	-12.75	682.28914	1004.2669	0	105
6	31192	-73.381025	-14.713755	809.22374	1201.7961	0	122.85
7	31192	-67.026665	-17.02655	965.9406	1460.7658	0	148.29
8	31192	-58.24	-20.224635	1187.0928	1825.1284	0	183.47
9	31192	-49.453335	-23.42272	1408.3626	2190.3466	0	218.65
10	31192	-39.195	-27.156445	1664.9296	2629.456	0	259.72
11	31192	-32.665	-29.53317	1834.4501	2920.608	0	287.6
12	31192	-31.691205	-29.887605	1864.9503	2977.9561	0	293.93
13	31192	-25.691205	-32.07143	2001.2549	3348.4137	0	338.05
14	31192	-19.525	-34.10439	2128.0846	3524.0401	0	378.75
15	31192	-18.643055	-34.03296	2123.6813	3529.5898	0	380.73
16	31192	-17.568055	-33.945895	2118.187	3536.5532	0	383.15
17	31192	-11.03	-33.41638	2085.1658	3688.0945	0	398.08
18	31192	-2.58	-32.732015	2042.5371	3814.4486	0	417.83
19	31192	4	-32.1991	2009.1712	3744.7383	0	415.95
20	31192	11.1325	-31.62144	1973.1083	3694.3677	0	401.52
21	31192	17.3975	-31.11404	1941.4482	3688.4812	0	388.69
22	31192	21.265	-30.80081	1921.9386	3683.5178	0	380.7
23	31192	26.57639	-30.37064	1833.8739	3674.064	0	369.65
24	31192	33.57139	-29.804115	1704.9446	3665.9337	0	349.17

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25	31192	37.085	-29.51955	1640.1545	3664.4849	0	343.89
26	31192	42.10779	-29.112755	1581.7194	3651.3026	0	335.91
27	31192	51.29279	-28.36886	1492.2006	3624.5657	0	327.63
28	31192	60.0475	-27.65982	1423.9009	3619.7417	0	324.75
29	31192	67.0425	-27.093295	1389.6599	3639.1207	0	322.45
30	31192	71.77	-26.710415	1366.5417	3652.1066	0	320.9
31	31192	76.64	-26.315995	1342.7052	3644.112	0	319.3
32	31192	83.92	-25.72639	1307.0801	3622.3426	0	316.9
33	31192	91.2	-25.136785	1271.455	3600.4363	0	314.51
34	31192	100.92	-24.34956	1223.8705	3731.6944	0	311.31
35	31192	108.08	-22.77714	1126.9188	3495.2684	0	298.53
36	31192	113.00855	-17.84857	820.17197	3188.7666	0	249.35
37	31192	117.28355	-13.57357	554.09818	2932.7879	0	187.68
38	31192	118.6988	-12.15835	466.01002	2809.719	0	188.54
39	31192	122.93695	-7.920199	202.2396	1898.356	979.25324	0
40	31192	126.3443	-4.512859	-9.8325611	1547.3387	893.35644	0
41	31192	127.10615	-3.7510115	-57.249482	1624.5335	0	600
42	31192	131.1341	0.276937	-307.94774	1085.5199	0	600
43	31192	137.98225	7.1250985	-734.1741	140.71593	0	600

LWL Case.BS.L to R

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 211
Last Edited By: Cox, Lane MVK
Date: 3/31/2011
Time: 10:43:49 AM
File Name: 5c(2) Typical 1.2nd SC.80%SG.S-Case.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(2)\Stability\2nd Stage Constuction\80%SG,1 Layer of Fabric\Slope W\
Last Solved Date: 3/31/2011
Last Solved Time: 10:46:32 AM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

LWL Case.BS.L to R

Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

SlipSurface
- Direction of movement: Left to Right
- Use Passive Mode: No
- Slip Surface Option: Block
- Critical slip surfaces saved: 100
- Optimize Critical Slip Surface Location: Yes
- Tension Crack
  - Tension Crack Option: Tension Crack Line
  - Percentage Wet: 0
  - Tension Crack Fluid Unit Weight: 62.4 pcf

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FOS Distribution
FOS Calculation Option: Constant
Restrict Block Crossing: Yes
Advanced
Number of Slices: 30
Optimization Tolerance: 0.01
Minimum Slip Surface Depth: 0.1 ft
Optimization Maximum Iterations: 2000
Optimization Convergence Tolerance: 1e-007
Starting Optimization Points: 8
Ending Optimization Points: 16
Complete Passes per Insertion: 1
Driving Side Maximum Convex Angle: 5 °
Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH
Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH above 0
Model: Mohr-Coulomb
Unit Weight: 102 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, 0 to -9
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -9 (2)
Cohesion Spatial Fn: CH, 0 to -9
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -9 to -14
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -9 to -14 (2)

Cohesion Spatial Fn: CH, -9 to -14
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -14 to -30
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -14 to -30 (2)
Cohesion Spatial Fn: CH, -14 to -30
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -30 to -34
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -30 to -34 (2)
Cohesion Spatial Fn: CH, 30 to -34
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sand Fill
Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -34 to -42
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -34 to -42 (2)
Cohesion Spatial Fn: CH, -34 to -42
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -42 to -80
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -42 to -80 (2)
Cohesion Spatial Fn: CH, -42 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure

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Piezometric Line: 1

CH, 0 to -9 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -9 (2)
Cohesion Spatial Fn: CH, 0 to -9 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -9 to -14 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -9 to -14 (2)
Cohesion Spatial Fn: CH, -9 to -14 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -14 to -30 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -14 to -30 (2)
Cohesion Spatial Fn: CH, -14 to -30 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -30 to -34 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -30 to -34 (2)
Cohesion Spatial Fn: CH, 30 to -34 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Limits

Left Coordinate: (-200, -2.13) ft
Right Coordinate: (500, -4.5) ft

Slip Surface Block

Left Grid
Upper Left: (111, -12) ft
Lower Left: (167, -12) ft

Lower Right: (167, -62) ft
X Increments: 7
Y Increments: 7
Starting Angle: 135 °
Ending Angle: 160 °
Angle Increments: 7
Right Grid
Upper Left: (280, -12) ft
Lower Left: (319, -12) ft
Lower Right: (319, -62) ft
X Increments: 7
Y Increments: 7
Starting Angle: 20 °
Ending Angle: 45 °
Angle Increments: 7

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	-2.13
	-191.42	-2.12
	-156.88	-2.03
	-119.75	-2.26
	-92.12	-1.99
	-71.42	-1.72
	-45.06	-0.68
	-33.33	-0.27
	-32	0
	22	0
	35.99	-3
	38.18	-3.47
	56.55	-4.85
	177.04	-4.54
	180.67	-4.21
	200.3	-4.33
	220.54	-4.34
	226.87	-4.54
	240.61	-4.57
	250	-4.5
	285.84	-4.64
	295.2	-4.68
	329.57	-4.85
	331.26	-5.3
	447.66	-5.3

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	450.06	-4.54
	500	-4.5

Spatial Functions

CH, 0 to -9

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -2.5, 50)
Data Point: (-300, -9, 75)
Data Point: (-33.33, 0, 50)
Data Point: (-33.33, -9, 75)
Data Point: (0, 0, 300)
Data Point: (0, -9, 300)
Data Point: (285.84, -4.62, 100)
Data Point: (285.84, -9, 100)
Data Point: (500, 0, 100)
Data Point: (500, -9, 100)

CH, -34 to -42 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -38, 105)
Data Point: (0, -38, 116)
Data Point: (177.04, -38, 106)

CH, -42 to -80 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -61, 105)
Data Point: (0, -61, 105)
Data Point: (177.04, -61, 106)

CH, 0 to -9 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, 0, 300)
Data Point: (0, -9, 300)
Data Point: (46, 0, 148)
Data Point: (46, -9, 148)
Data Point: (122.71, 0, 198)
Data Point: (122.71, -9, 198)
Data Point: (285.84, 0, 100)

Data Point: (285.84, -9, 100)

CH, -9 to -14 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -9, 300)
Data Point: (0, -14, 300)
Data Point: (46, -9, 144)
Data Point: (46, -14, 144)
Data Point: (122.71, -9, 191)
Data Point: (122.71, -14, 191)
Data Point: (285.84, -9, 100)
Data Point: (285.84, -14, 100)

CH, -14 to -30 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -14, 300)
Data Point: (0, -30, 375)
Data Point: (46, -14, 174)
Data Point: (46, -30, 342)
Data Point: (122.71, -14, 214)
Data Point: (122.71, -30, 382)
Data Point: (285.84, -14, 100)
Data Point: (285.84, -30, 268)

CH, 30 to -34 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -30, 400)
Data Point: (0, -34, 438)
Data Point: (46, -30, 341)
Data Point: (46, -34, 383)
Data Point: (122.71, -30, 374)
Data Point: (122.71, -34, 416)
Data Point: (285.84, -30, 268)
Data Point: (285.84, -34, 310)

CH, -9 to -14

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -9, 75)
Data Point: (-300, -14, 115)
Data Point: (-33.33, -9, 75)

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Data Point: (-33.33, -14, 115)
Data Point: (0, -9, 300)
Data Point: (0, -14, 300)
Data Point: (285.84, -9, 100)
Data Point: (285.84, -14, 100)
Data Point: (500, -9, 100)
Data Point: (500, -14, 100)

CH, -14 to -30

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -14, 115)
Data Point: (-300, -30, 291)
Data Point: (-33.33, -14, 115)
Data Point: (-33.33, -30, 291)
Data Point: (0, -14, 300)
Data Point: (0, -30, 375)
Data Point: (285.84, -14, 100)
Data Point: (285.84, -30, 268)
Data Point: (500, -14, 100)
Data Point: (500, -30, 268)

CH, 30 to -34

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -30, 291)
Data Point: (-300, -34, 335)
Data Point: (-33.33, -30, 291)
Data Point: (-33.33, -34, 335)
Data Point: (0, -30, 400)
Data Point: (0, -34, 438)
Data Point: (285.84, -30, 268)
Data Point: (285.84, -34, 310)
Data Point: (500, -30, 268)
Data Point: (500, -34, 310)

CH, 0 to -9 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -4.5, 90)
Data Point: (0, -4.5, 96)
Data Point: (177.04, -4.54, 87)

CH, -9 to -14 (2)

Model: Linear Interpolation

LWL Case.BS.L to R

Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -11.5, 90)
Data Point: (0, -11.5, 97)
Data Point: (177.04, -11.5, 100)

CH, -14 to -30 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -22, 100)
Data Point: (0, -22, 102)
Data Point: (177.04, -22, 100)

CH, -30 to -34 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-33.33, -32, 122)
Data Point: (0, -32, 113)
Data Point: (177.04, -32, 118)

CH, -34 to -42

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -34, 335)
Data Point: (-300, -42, 423)
Data Point: (-33.33, -34, 335)
Data Point: (-33.33, -42, 423)
Data Point: (0, -34, 438)
Data Point: (0, -42, 514)
Data Point: (177.04, -34, 325)
Data Point: (177.04, -42, 409)
Data Point: (500, -34, 325)
Data Point: (500, -42, 409)

CH, -42 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -42, 423)
Data Point: (-300, -80, 841)
Data Point: (-33.33, -42, 423)
Data Point: (-33.33, -80, 841)
Data Point: (0, -42, 514)
Data Point: (0, -80, 875)
Data Point: (177.04, -42, 409)

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Data Point: (177.04, -80, 808)
Data Point: (500, -42, 409)
Data Point: (500, -80, 808)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -42 to -80	1,3,4,2	26600
Region 2	CH, -34 to -42	3,5,69,73,6,4	5600
Region 3	CH above 0	45,21,22,63,64,27,44,65	161.91095
Region 4	Sand Fill	29,30,43,31,32,33,42,34,35,62	606.7023
Region 5	CH, 0 to -9	56,53,54,41,12	267.3158
Region 6	EMBANKMENT FILL CH	59,46,47,60,37,36,35,62	1502.7397
Region 7	EMBANKMENT FILL CH	64,27,44,57,28,62,59	499.34315
Region 8	EMBANKMENT FILL CH	60,61,76,75,40,39,58,38,37	772.15003
Region 9	CH, 0 to -9	16,11,66,65,45,20,19,18,17,15,14,74	1498.6738
Region 10	CH, -9 to -14	11,9,67,66	1000
Region 11	CH, -14 to -30	9,7,68,67	3200
Region 12	CH, -30 to -34	7,5,69,68	800
Region 13	CH, -30 to -34	6,8,72,73	856.64
Region 14	CH, -14 to -30	8,10,71,72	3426.56
Region 15	CH, -9 to -14	10,71,70,55,50,51,52,56,12	954.73385
Region 16	CH, 0 to -9	55,49,48,76,75,70	220.0602
Region 17	CH, -30 to -34 SG	69,68,72,73	1143.36
Region 18	CH, -14 to -30 SG	68,67,71,72	4573.44
Region 19	CH, -9 to -14 SG	67,66,43,31,32,33,42,70,71	1313.1338
Region 20	CH, 0 to -9 SG	66,65,44,57,28,62,29,30,43	438.1553
Region 21	CH, 0 to -9 SG	42,34,35,36,37,38,58,39,40,75,70	538.2795

Points

	X (ft)	Y (ft)
Point 1	-200	-80
Point 2	500	-80
Point 3	-200	-42
Point 4	500	-42
Point 5	-200	-34
Point 6	500	-34
Point 7	-200	-30
Point 8	500	-30
Point 9	-200	-14
Point 10	500	-14
Point 11	-200	-9
Point 12	500	-9
Point 13	-191.42	-2.12
Point 14	-156.88	-2.03
Point 15	-119.75	-2.26
Point 16	-200	-2.13

Point 17	-92.12	-1.99
Point 18	-71.42	-1.72
Point 19	-45.06	-0.68
Point 20	-33.33	-0.27
Point 21	-19.05	1.53
Point 22	-16.9	1.81
Point 23	-6.83	6.48
Point 24	-6.79	6.72
Point 25	-0.92	7.16
Point 26	3.42	6.91
Point 27	20.53	0.36
Point 28	38.18	-3.47
Point 29	56.55	-4.85
Point 30	70.54	-8.43
Point 31	109.16	-11.38
Point 32	127.67	-11.01
Point 33	135.55	-10.86
Point 34	159.82	-8.55
Point 35	177.04	-4.54
Point 36	180.67	-4.21
Point 37	200.3	-4.33
Point 38	220.54	-4.34
Point 39	240.61	-4.57
Point 40	250	-4.5
Point 41	500	-4.5
Point 42	154	-9
Point 43	73	-9
Point 44	22	0
Point 45	-32	0
Point 46	117.71	14
Point 47	127.71	14
Point 48	329.57	-4.85
Point 49	343.56	-8.43
Point 50	382.18	-11.38
Point 51	400.69	-11.01
Point 52	408.57	-10.86
Point 53	432.84	-8.55
Point 54	450.06	-4.54
Point 55	346.02	-9
Point 56	427.02	-9
Point 57	35.99	-3
Point 58	226.87	-4.54
Point 59	94.84	8
Point 60	167.4	4
Point 61	292.4	0.875
Point 62	46	-4.06
Point 63	-5.16	5.5
Point 64	8	5.2

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Point 65	0	0
Point 66	0	-9
Point 67	0	-14
Point 68	0	-30
Point 69	0	-34
Point 70	285.84	-9
Point 71	285.84	-14
Point 72	285.84	-30
Point 73	285.84	-34
Point 74	-194	-2
Point 75	285.84	-4.64
Point 76	309.25	-4.74

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	1.38	(220.167, 12.354)	98.98776	(99.2537, 9.15794)	(346.035, -9.00099)
2	22611	1.44	(220.167, 12.354)	98.521	(95.7048, 8.22688)	(342.977, -8.28081)
3	22546	1.44	(225.128, 14.242)	99.004	(100.852, 9.57712)	(347.286, -9.08329)
4	22548	1.45	(221.14, 13.826)	96.265	(100.852, 9.57712)	(339.613, -7.41991)
5	22612	1.45	(218.412, 12.139)	97.307	(95.7048, 8.22688)	(339.613, -7.41991)
6	22545	1.45	(228.467, 14.351)	101.351	(100.852, 9.57712)	(353.921, -9.52)
7	18459	1.45	(222.837, 12.291)	102.068	(94.4414, 7.98715)	(349.49, -9.22838)
8	18458	1.45	(226.451, 12.409)	104.463	(94.4414, 7.98715)	(356.67, -9.70097)
9	22610	1.45	(222.388, 12.554)	99.983	(95.7048, 8.22688)	(347.286, -9.08329)
10	22547	1.45	(222.902, 14.042)	97.436	(100.852, 9.57712)	(342.977, -8.28081)
11	22549	1.45	(219.586, 13.636)	95.164	(100.852, 9.57712)	(336.643, -6.65993)
12	18460	1.45	(220.113, 12.125)	100.293	(94.4414, 7.98715)	(344.139, -8.56406)
13	22619	1.45	(225.983, 12.672)	103.501	(95.7048, 8.22688)	(354.428, -9.55337)
14	22613	1.45	(216.864, 11.949)	96.27	(95.7048, 8.22688)	(336.643, -6.65993)
15	22609	1.45	(225.727, 12.664)	102.31	(95.7048, 8.22688)	(353.921, -9.52)
16	22620	1.45	(223.091, 12.577)	101.586	(95.7048, 8.22688)	(348.681, -9.17517)
17	18451	1.45	(217.57, 11.816)	97.403	(94.4414, 7.98715)	(339.261, -7.3298)
18	18449	1.45	(222.692, 12.286)	100.867	(94.4414, 7.98715)	(349.202, -9.20946)
19	18457	1.45	(231.056, 12.56)	107.643	(94.4414, 7.98715)	(365.822, -10.3033)
20	22618	1.45	(229.547, 12.789)	105.939	(95.7048, 8.22688)	(361.511, -10.0196)
21	17426	1.45	(225.757, 15.698)	94.26	(105.831, 10.8835)	(343.34, -8.37378)
22	22550	1.45	(218.195, 13.466)	94.193	(100.852, 9.57712)	(333.982, -5.97912)
23	22557	1.45	(223.583, 14.121)	98.991	(100.852, 9.57712)	(344.279, -8.59659)
24	22614	1.46	(215.479, 11.778)	95.357	(95.7048, 8.22688)	(333.982, -5.97912)
25	22621	1.46	(220.846, 12.433)	100.44	(95.7048, 8.22688)	(344.279, -8.59659)
26	22555	1.46	(228.722, 14.36)	102.476	(100.852, 9.57712)	(354.428, -9.55337)
27	18450	1.46	(219.697, 12.077)	98.95	(94.4414, 7.98715)	(343.34, -8.37378)
28	18452	1.46	(215.726, 11.59)	96.089	(94.4414, 7.98715)	(335.719, -6.42342)
29	17425	1.46	(228.761, 15.907)	96.63	(105.831, 10.8835)	(349.202, -9.20946)
30	18461	1.46	(218.064, 11.877)	98.948	(94.4414, 7.98715)	(340.209, -7.57261)
31	22556	1.46	(225.831, 14.265)	100.509	(100.852, 9.57712)	(348.681, -9.17517)
32	17427	1.46	(223.612, 15.437)	92.529	(105.831, 10.8835)	(339.261, -7.3298)

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33	22551	1.46	(216.935, 13.312)	93.324	(100.852, 9.57712)	(331.568, -5.36116)
34	22554	1.46	(232.286, 14.476)	104.976	(100.852, 9.57712)	(361.511, -10.0196)
35	22617	1.46	(234.091, 12.937)	109.168	(95.7048, 8.22688)	(370.54, -10.6139)
36	18453	1.46	(214.1, 11.39)	94.952	(94.4414, 7.98715)	(332.592, -5.6233)
37	22615	1.46	(214.223, 11.624)	94.541	(95.7048, 8.22688)	(331.568, -5.36116)
38	22552	1.46	(215.756, 13.184)	92.666	(100.852, 9.57712)	(329.294, -4.84851)
39	22558	1.46	(221.812, 13.908)	97.801	(100.852, 9.57712)	(340.896, -7.74827)
40	18454	1.46	(212.646, 11.211)	94.915	(94.4414, 7.98715)	(329.791, -4.90653)
41	22616	1.46	(213.049, 11.496)	93.711	(95.7048, 8.22688)	(329.294, -4.84851)
42	22622	1.46	(219.081, 12.221)	98.943	(95.7048, 8.22688)	(340.896, -7.74827)
43	22553	1.46	(236.829, 14.625)	108.278	(100.852, 9.57712)	(370.54, -10.6139)
44	17489	1.46	(226.715, 14.656)	96.841	(102.016, 9.8827)	(349.202, -9.20946)
45	18455	1.46	(211.049, 11.192)	93.717	(94.4414, 7.98715)	(326.594, -4.83389)
46	18462	1.47	(216.239, 11.653)	97.547	(94.4414, 7.98715)	(336.704, -6.67567)
47	17490	1.47	(223.714, 14.447)	94.807	(102.016, 9.8827)	(343.34, -8.37378)
48	17937	1.47	(225.73, 14.051)	98.532	(100.172, 9.39898)	(349.202, -9.20946)
49	17955	1.47	(232.088, 14.259)	105.241	(100.172, 9.39898)	(361.837, -10.0411)
50	17417	1.47	(222.218, 15.267)	90.339	(105.831, 10.8835)	(336.607, -6.65082)
51	17428	1.47	(221.752, 15.21)	91.271	(105.831, 10.8835)	(335.719, -6.42342)
52	22538	1.47	(219.528, 13.629)	94.068	(100.852, 9.57712)	(336.533, -6.63177)
53	17956	1.47	(228.391, 14.138)	102.654	(100.172, 9.39898)	(354.49, -9.55745)
54	22602	1.47	(216.806, 11.942)	95.164	(95.7048, 8.22688)	(336.533, -6.63177)
55	18456	1.47	(209.634, 11.189)	92.673	(94.4414, 7.98715)	(323.753, -4.81851)
56	22559	1.47	(220.213, 13.713)	96.71	(100.852, 9.57712)	(337.842, -6.96678)
57	18523	1.47	(219.678, 12.04)	104.154	(88.2043, 7.78604)	(349.49, -9.22838)
58	18019	1.47	(229.75, 12.818)	106.064	(95.7771, 8.24586)	(361.837, -10.0411)
59	22539	1.47	(218.039, 13.447)	93.031	(100.852, 9.57712)	(333.683, -5.90257)
60	22603	1.47	(215.323, 11.759)	94.163	(95.7048, 8.22688)	(333.683, -5.90257)
61	18524	1.47	(216.955, 11.874)	102.438	(88.2043, 7.78604)	(344.139, -8.56406)
62	17954	1.47	(236.646, 14.408)	108.549	(100.172, 9.39898)	(370.896, -10.6373)
63	18522	1.47	(223.291, 12.158)	106.471	(88.2043, 7.78604)	(356.67, -9.70097)
64	17418	1.47	(220.337, 15.038)	89.097	(105.831, 10.8835)	(333.021, -5.73313)
65	17434	1.47	(232.517, 16.03)	99.994	(105.831, 10.8835)	(356.67, -9.70097)
66	17938	1.47	(222.731, 13.842)	96.375	(100.172, 9.39898)	(343.34, -8.37378)
67	22542	1.47	(214.251, 13.179)	90.696	(100.852, 9.57712)	(326.269, -4.83213)
68	22540	1.47	(216.748, 13.289)	92.145	(100.852, 9.57712)	(331.209, -5.26949)
69	17939	1.47	(220.594, 13.581)	94.841	(100.172, 9.39898)	(339.261, -7.3298)
70	22541	1.47	(215.524, 13.183)	91.556	(100.852, 9.57712)	(328.827, -4.84598)
71	22623	1.47	(217.488, 12.025)	97.905	(95.7048, 8.22688)	(337.842, -6.96678)
72	22543	1.47	(213.165, 13.176)	89.972	(100.852, 9.57712)	(324.087, -4.82032)
73	18020	1.47	(226.052, 12.697)	103.532	(95.7771, 8.24586)	(354.49, -9.55745)
74	17435	1.47	(228.905, 15.911)	97.624	(105.831, 10.8835)	(349.49, -9.22838)
75	22606	1.47	(211.541, 11.492)	91.756	(95.7048, 8.22688)	(326.269, -4.83213)
76	22604	1.47	(214.037, 11.601)	93.309	(95.7048, 8.22688)	(331.209, -5.26949)
77	22607	1.47	(210.455, 11.489)	91.11	(95.7048, 8.22688)	(324.087, -4.82032)
78	22605	1.47	(212.816, 11.495)	92.525	(95.7048, 8.22688)	(328.827, -4.84598)
79	22674	1.47	(218.852, 12.026)	102.203	(88.763, 7.80406)	(347.286, -9.08329)
80	17421	1.47	(215.415, 14.808)	85.754	(105.831, 10.8835)	(323.299, -4.81605)

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81	17422	1.47	(214.142, 14.805)	84.894	(105.831, 10.8835)	(320.736, -4.80218)
82	22544	1.47	(212.222, 13.174)	89.351	(100.852, 9.57712)	(322.19, -4.81005)
83	22537	1.47	(221.279, 13.843)	95.309	(100.852, 9.57712)	(339.879, -7.48797)
84	22608	1.47	(209.51, 11.486)	90.556	(95.7048, 8.22688)	(322.19, -4.81005)
85	22675	1.47	(216.633, 11.825)	100.699	(88.763, 7.80406)	(342.977, -8.28081)
86	18018	1.47	(234.308, 12.967)	109.309	(95.7771, 8.24586)	(370.896, -10.6373)
87	18514	1.47	(216.54, 11.826)	100.875	(88.2043, 7.78604)	(343.34, -8.37378)
88	22601	1.47	(218.55, 12.156)	96.329	(95.7048, 8.22688)	(339.879, -7.48797)
89	18513	1.47	(219.533, 12.035)	102.82	(88.2043, 7.78604)	(349.202, -9.20946)
90	17953	1.47	(242.486, 14.592)	112.722	(100.172, 9.39898)	(382.506, -11.3735)
91	17957	1.47	(225.309, 14.037)	100.565	(100.172, 9.39898)	(348.366, -9.15441)
92	17420	1.47	(216.942, 14.813)	86.718	(105.831, 10.8835)	(326.373, -4.83269)
93	18463	1.48	(214.584, 11.449)	96.431	(94.4414, 7.98715)	(333.523, -5.86155)
94	22673	1.48	(222.191, 12.135)	104.466	(88.763, 7.80406)	(353.921, -9.52)
95	17430	1.48	(218.646, 14.831)	88.976	(105.831, 10.8835)	(329.791, -4.90653)
96	17492	1.48	(219.721, 13.959)	91.934	(102.016, 9.8827)	(335.719, -6.42342)
97	17940	1.48	(218.743, 13.355)	93.539	(100.172, 9.39898)	(335.719, -6.42342)
98	18521	1.48	(227.897, 12.308)	109.554	(88.2043, 7.78604)	(365.822, -10.3033)
99	17429	1.48	(220.113, 15.01)	90.186	(105.831, 10.8835)	(332.592, -5.6233)
100	18467	1.48	(229.051, 12.494)	107.493	(94.4414, 7.98715)	(361.837, -10.0411)
101	17419	1.48	(218.738, 14.842)	87.882	(105.831, 10.8835)	(329.967, -4.95156)

Slices of Slip Surface: Optimized

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	102.3771	5.8699975	-661.56684	31.342947	0	600
2	Optimized	108.62385	-0.705894	-250.232	932.98962	0	600
3	Optimized	111.87695	-4.1478115	-34.934591	1340.7611	0	600
4	Optimized	112.17715	-4.5041125	-12.652752	1280.1108	739.07229	0
5	Optimized	115.0288	-7.888821	199.01307	1667.7543	847.97813	0
6	Optimized	118.94375	-12.5356	489.59295	2770.7044	0	188.69
7	Optimized	121.63345	-15.728055	689.23414	3039.9058	0	231.58
8	Optimized	125.3997	-19.7205	938.97301	3456.9094	0	272.19
9	Optimized	130.52295	-24.741905	1253.1252	3827.7348	0	321.33
10	Optimized	134.44295	-28.24188	1472.1473	4163.8649	0	355.34
11	Optimized	136.30635	-29.49242	1550.5119	4225.8392	0	367.17
12	Optimized	139.981	-31.95852	1705.0304	4378.4499	0	383.34
13	Optimized	148.44965	-35.451895	1924.3192	4696.4919	0	358.26
14	Optimized	156.07775	-37.56132	2057.1585	4680.7582	0	375.35
15	Optimized	158.98775	-38.072035	2089.5283	4815.0442	0	378.86
16	Optimized	163.61	-37.717375	2068.0638	4608.2228	0	372.32
17	Optimized	172.22	-37.05674	2028.2706	4340.2509	0	360.09

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18	Optimized	178.855	-36.547645	2007.57	4220.377	0	351.75
19	Optimized	181.2021	-36.367555	2006.3938	4189.6845	0	349.86
20	Optimized	185.83135	-36.0627	1985.6597	4139.0135	0	346.66
21	Optimized	194.0257	-35.534635	1949.6121	4060.7075	0	341.11
22	Optimized	199.21145	-35.21928	1927.921	4006.3354	0	337.8
23	Optimized	205.36	-34.929415	1909.2431	3958.8441	0	334.76
24	Optimized	215.48	-34.45232	1879.1382	3880.4727	0	329.75
25	Optimized	222.91325	-34.101885	1852.4614	3824.7107	0	326.07
26	Optimized	226.07825	-33.897595	1833.483	3827.163	0	347.76
27	Optimized	230.305	-33.404295	1800.7327	3756.165	0	339.83
28	Optimized	237.175	-32.602505	1749.6963	3639.3451	0	326.95
29	Optimized	242.3331	-32.00051	1712.4686	3551.1186	0	317.28
30	Optimized	247.0281	-31.5021	1683.6167	3469.1845	0	308.99
31	Optimized	256.02145	-30.602395	1627.2865	3333.3967	0	293.7
32	Optimized	265.21895	-29.68226	1567.7006	3201.6619	0	279.07
33	Optimized	272.75625	-28.99874	1523.2292	3105.2945	0	266.63
34	Optimized	281.47875	-28.267175	1475.3605	3006.3583	0	252.85
35	Optimized	286.686	-27.830435	1446.836	2947.3239	0	245.22
36	Optimized	289.966	-27.5971	1431.4231	2909.3333	0	242.77
37	Optimized	293.8	-27.34132	1414.4274	2823.0106	0	240.08
38	Optimized	300.1507	-26.917635	1386.1177	2536.8321	0	235.64
39	Optimized	307.1757	-25.67508	1306.3928	2240.4635	0	222.59
40	Optimized	313.25485	-23.00149	1137.6873	1874.8314	0	194.52
41	Optimized	323.41485	-18.65254	863.19417	1406.3318	0	148.85
42	Optimized	329.61585	-16.04564	697.84285	1127.1748	0	121.48
43	Optimized	330.46085	-15.68347	661.20948	1070.9294	0	117.68
44	Optimized	332.82215	-14.670285	584.71224	934.88072	0	107.04
45	Optimized	338.97215	-12.031475	420.04485	624.95944	0	100
46	Optimized	344.79	-9.5351905	264.27703	334.61617	0	100
47	Optimized	346.0275	-9.0042095	231.1457	271.71508	0	100

Slices of Slip Surface: 22611

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
				-			

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1	22611	99.251795	5.096651	613.81122	114.86699	0	600
2	22611	106.34575	-1.163809	-222.02897	1012.4952	0	600
3	22611	110.12925	-4.50279	-13.064075	1382.4019	798.13013	0
4	22611	114.0379	-7.9521855	202.80519	1823.5622	935.74451	0
5	22611	119.30045	-12.596415	493.44094	2858.4878	0	188.91
6	22611	124.30045	-17.00894	769.59598	3250.2189	0	244.48
7	22611	131.63	-23.4773	1174.4026	3727.6763	0	307.28
8	22611	137.28555	-28.46836	1486.7467	4019.2211	0	355.73
9	22611	141.2874	-32	1707.8111	4255.9632	0	382.93
10	22611	147.27685	-37.285715	2038.5966	4643.6826	0	377.94
11	22611	152.5	-40.434815	2235.913	5285.1266	0	407.34
12	22611	156.91	-40.033175	2211.4661	5100.369	0	400.51
13	22611	163.61	-39.422975	2174.5094	4798.3465	0	390.1
14	22611	172.22	-38.63882	2126.9854	4515.9571	0	376.66
15	22611	178.855	-38.03454	2100.3428	4385.1563	0	367.36
16	22611	185.5775	-37.42229	2070.5948	4295.7208	0	360.93
17	22611	195.3925	-36.528395	2011.0349	4173.2526	0	351.55
18	22611	205.36	-35.62061	1952.3946	4049.8412	0	342.02
19	22611	215.48	-34.698935	1894.5313	3923.8802	0	332.34
20	22611	221.84715	-34.11905	1855.6203	3845.559	0	326.25
21	22611	225.01215	-33.830795	1831.4204	3808.8035	0	347.75
22	22611	230.305	-33.34875	1797.2197	3737.3705	0	339.25
23	22611	237.175	-32.72307	1757.2107	3642.4214	0	328.21
24	22611	245.305	-31.982635	1712.7198	3528.4212	0	315.16
25	22611	254.26855	-31.16628	1662.8801	3402.6342	0	300.76
26	22611	262.8057	-30.38876	1612.3696	3283.882	0	287.05
27	22611	271.7657	-29.57273	1559.2744	3167.6907	0	273.35
28	22611	281.14855	-28.71819	1503.658	3054.4414	0	257.82
29	22611	289.12	-27.992195	1456.3051	2958.3355	0	246.92
30	22611	293.8	-27.565965	1428.4454	2852.3383	0	242.44
31	22611	298.3643	-27.150275	1401.1693	2635.031	0	238.08
32	22611	304.69285	-26.5739	1363.245	2333.8396	0	232.03
33	22611	308.55355	-25.928675	1321.784	2229.5722	0	225.25
34	22611	314.33	-22.967275	1135.2001	1884.3219	0	194.16

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35	22611	324.49	-17.758545	807.05977	1324.3856	0	139.46
36	22611	330.415	-14.720975	601.90085	978.96427	0	107.57
37	22611	331.29425	-14.270205	559.74498	910.85184	0	102.84
38	22611	331.5749	-14.12632	550.75754	893.20233	0	101.33
39	22611	336.69775	-11.5	386.87573	591.67781	0	100
40	22611	342.2756	-8.6404065	208.4384	268.72625	0	100

Slices of Slip Surface: 22546

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	22546	104.3237	6.10489	-675.91248	105.82484	0	600
2	22546	111.26815	-0.8395675	-241.4635	1065.5796	0	600
3	22546	114.93415	-4.5055425	-12.120849	1431.9945	826.76243	0
4	22546	116.41895	-5.990359	80.770688	1611.4978	883.7657	0
5	22546	119.63535	-9.2067745	281.98395	1966.6893	972.6651	0
6	22546	122.99465	-12.56606	492.15998	2812.5189	0	190.84
7	22546	126.0693	-15.640715	684.49596	3079.9624	0	228.88
8	22546	131.63	-21.20143	1032.3402	3467.5303	0	283.38
9	22546	137.9893	-27.560715	1430.2233	3854.1357	0	345.71
10	22546	142.4286	-32	1707.9458	4154.7829	0	382.19
11	22546	147.7143	-37.285715	2038.6504	4559.7937	0	377.67
12	22546	152.5	-40.434815	2235.913	5288.4462	0	407.34
13	22546	156.91	-40.033175	2211.4661	5103.6201	0	400.51
14	22546	163.61	-39.422975	2174.5094	4801.4997	0	390.1
15	22546	172.22	-38.63882	2126.9854	4518.8497	0	376.66
16	22546	178.855	-38.03454	2100.3428	4387.8998	0	367.36
17	22546	185.5775	-37.42229	2070.5948	4298.4603	0	360.93
18	22546	195.3925	-36.528395	2011.0349	4175.9921	0	351.55
19	22546	205.36	-35.62061	1952.3946	4052.4982	0	342.02
20	22546	215.48	-34.698935	1894.5313	3926.4388	0	332.34
21	22546	221.84715	-34.11905	1855.6203	3848.2256	0	326.25
22	22546	225.01215	-33.830795	1831.4204	3811.4837	0	347.75
23	22546	230.305	-33.34875	1797.2197	3739.9798	0	339.25

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24	22546	237.175	-32.72307	1757.2107	3644.8857	0	328.21
25	22546	245.305	-31.982635	1712.7198	3530.7545	0	315.16
26	22546	254.26855	-31.16628	1662.8801	3404.8506	0	300.76
27	22546	262.8057	-30.38876	1612.3696	3285.9818	0	287.05
28	22546	271.7657	-29.57273	1559.2744	3169.8135	0	273.35
29	22546	281.14855	-28.71819	1503.658	3056.3519	0	257.82
30	22546	289.12	-27.992195	1456.3051	2960.3091	0	246.92
31	22546	293.8	-27.565965	1428.4454	2854.1877	0	242.44
32	22546	298.3643	-27.150275	1401.1693	2636.762	0	238.08
33	22546	304.69285	-26.5739	1363.245	2335.4132	0	232.03
34	22546	308.55355	-25.981865	1325.1043	2220.0448	0	225.81
35	22546	314.33	-23.461635	1166.0908	1923.6078	0	199.35
36	22546	324.49	-19.02887	886.33186	1449.5395	0	152.8
37	22546	330.415	-16.44382	709.44103	1154.2179	0	125.66
38	22546	333.63815	-15.037575	607.6179	970.15367	0	110.89
39	22546	339.78815	-12.35436	440.19577	653.78123	0	100
40	22546	344.79	-10.172075	304.01924	399.97139	0	100
41	22546	346.65275	-9.359362	253.30409	306.34195	0	100

Slices of Slip Surface: 22548

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	22548	104.3237	6.10489	-675.91248	104.61314	0	600
2	22548	111.26815	-0.8395675	-241.4635	1065.1723	0	600
3	22548	114.93415	-4.5055425	-12.120849	1431.7208	826.6044	0
4	22548	116.41895	-5.990359	80.770688	1611.2513	883.6234	0
5	22548	119.63535	-9.2067745	281.98395	1966.5057	972.55908	0
6	22548	122.99465	-12.56606	492.15998	2814.2448	0	190.84
7	22548	126.0693	-15.640715	684.49596	3081.9018	0	228.88
8	22548	131.63	-21.20143	1032.3402	3469.7852	0	283.38
9	22548	137.9893	-27.560715	1430.2233	3856.5997	0	345.71
10	22548	142.4286	-32	1707.9458	4157.2577	0	382.19
11	22548	147.7143	-37.285715	2038.6504	4562.6989	0	377.67
12	22548	152.5	-40.434815	2235.913	5288.1143	0	407.34
			-				

13	22548	156.91	40.033175	2211.4661	5102.9357	0	400.51
14	22548	163.61	-39.422975	2174.5094	4800.9741	0	390.1
15	22548	172.22	-38.63882	2126.9854	4518.3332	0	376.66
16	22548	178.855	-38.03454	2100.3428	4387.6254	0	367.36
17	22548	185.5775	-37.42229	2070.5948	4297.953	0	360.93
18	22548	195.3925	-36.528395	2011.0349	4175.4848	0	351.55
19	22548	203.67335	-35.774225	1962.0378	4073.0146	0	343.63
20	22548	210.42	-35.159775	1923.5115	3989.0243	0	337.18
21	22548	217.16665	-34.545325	1884.9852	3904.8863	0	330.73
22	22548	221.84715	-34.11905	1855.6203	3847.8446	0	326.25
23	22548	225.01215	-33.830795	1831.4204	3810.9476	0	347.75
24	22548	230.305	-33.34875	1797.2197	3739.5449	0	339.25
25	22548	237.175	-32.72307	1757.2107	3644.4508	0	328.21
26	22548	245.305	-31.982635	1712.7198	3530.3302	0	315.16
27	22548	254.26855	-31.16628	1662.8801	3404.5006	0	300.76
28	22548	262.8057	-30.38876	1612.3696	3285.6318	0	287.05
29	22548	271.7657	-29.57273	1559.2744	3169.4951	0	273.35
30	22548	281.14855	-28.71819	1503.658	3056.0335	0	257.82
31	22548	289.12	-27.992195	1456.3051	2959.8537	0	246.92
32	22548	293.8	-27.565965	1428.4454	2853.8676	0	242.44
33	22548	298.3643	-27.150275	1401.1693	2636.6046	0	238.08
34	22548	304.69285	-26.5739	1363.245	2335.2559	0	232.03
35	22548	308.55355	-25.87197	1318.2365	2250.5754	0	224.66
36	22548	314.0717	-22.59367	1111.9828	1867.2717	0	190.23
37	22548	323.71515	-16.864555	751.5178	1244.7289	0	130.08
38	22548	329.05345	-13.69312	551.96656	901.58089	0	100
39	22548	330.415	-12.88423	487.29617	798.62851	0	100
40	22548	334.10655	-10.69111	336.41031	534.28185	0	100
41	22548	338.2829	-8.209954	181.57986	263.01507	0	100

Slices of Slip Surface: 22612

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	22612	99.251795	5.096651	-613.81122	115.62798	0	600
2	22612	106.34575	-1.163809	-222.02897	1013.5204	0	600
3	22612	110.12925	-4.50279	-13.064075	1383.4321	798.72489	0

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4	22612	114.0379	-7.9521855	202.80519	1824.7873	936.45183	0
5	22612	119.30045	-12.596415	493.44094	2859.6663	0	188.91
6	22612	124.30045	-17.00894	769.59598	3251.4284	0	244.48
7	22612	131.63	-23.4773	1174.4026	3729.1108	0	307.28
8	22612	137.28555	-28.46836	1486.7467	4020.7331	0	355.73
9	22612	141.2874	-32	1707.8111	4257.6175	0	382.93
10	22612	147.27685	-37.285715	2038.5966	4645.495	0	377.94
11	22612	152.5	-40.434815	2235.913	5284.7947	0	407.34
12	22612	156.91	-40.033175	2211.4661	5100.0267	0	400.51
13	22612	163.61	-39.422975	2174.5094	4798.0837	0	390.1
14	22612	172.22	-38.63882	2126.9854	4515.6472	0	376.66
15	22612	178.855	-38.03454	2100.3428	4384.882	0	367.36
16	22612	185.5775	-37.42229	2070.5948	4295.4164	0	360.93
17	22612	195.3925	-36.528395	2011.0349	4172.9482	0	351.55
18	22612	205.36	-35.62061	1952.3946	4049.6444	0	342.02
19	22612	215.48	-34.698935	1894.5313	3923.585	0	332.34
20	22612	221.84715	-34.11905	1855.6203	3845.559	0	326.25
21	22612	225.01215	-33.830795	1831.4204	3808.5355	0	347.75
22	22612	230.305	-33.34875	1797.2197	3737.2255	0	339.25
23	22612	237.175	-32.72307	1757.2107	3642.1315	0	328.21
24	22612	245.305	-31.982635	1712.7198	3528.103	0	315.16
25	22612	254.26855	-31.16628	1662.8801	3402.4009	0	300.76
26	22612	262.8057	-30.38876	1612.3696	3283.6487	0	287.05
27	22612	271.7657	-29.57273	1559.2744	3167.4784	0	273.35
28	22612	281.14855	-28.71819	1503.658	3054.2291	0	257.82
29	22612	289.12	-27.992195	1456.3051	2958.1837	0	246.92
30	22612	293.8	-27.565965	1428.4454	2852.1248	0	242.44
31	22612	298.3643	-27.150275	1401.1693	2634.8736	0	238.08
32	22612	304.69285	-26.5739	1363.245	2333.6823	0	232.03
33	22612	308.55355	-25.87197	1318.2365	2244.3413	0	224.66
34	22612	314.0717	-22.59367	1111.9828	1862.1009	0	190.23
35	22612	323.71515	-16.864555	751.5178	1241.252	0	130.08
36	22612	329.05345	-13.69312	551.96656	899.08436	0	100
37	22612	330.415	-12.88423	487.29617	796.39017	0	100
38	22612	334.10655	-10.69111	336.41031	532.60561	0	100
39	22612	338.2829	-8.209954	181.57986	261.92897	0	100

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Slices of Slip Surface: 22545

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	22545	104.3237	6.10489	-675.91248	106.7107	0	600
2	22545	111.26815	-0.8395675	-241.4635	1066.5979	0	600
3	22545	114.93415	-4.5055425	-12.120849	1433.0347	827.36296	0
4	22545	116.41895	-5.990359	80.770688	1612.6205	884.41393	0
5	22545	119.63535	-9.2067745	281.98395	1967.9747	973.40723	0
6	22545	122.99465	-12.56606	492.15998	2813.2586	0	190.84
7	22545	126.0693	-15.640715	684.49596	3080.6089	0	228.88
8	22545	131.63	-21.20143	1032.3402	3468.5225	0	283.38
9	22545	137.9893	-27.560715	1430.2233	3855.2952	0	345.71
10	22545	142.4286	-32	1707.9458	4156.0203	0	382.19
11	22545	147.7143	-37.285715	2038.6504	4561.0849	0	377.67
12	22545	152.5	-40.434815	2235.913	5288.4462	0	407.34
13	22545	156.91	-40.033175	2211.4661	5103.2779	0	400.51
14	22545	163.61	-39.422975	2174.5094	4801.2369	0	390.1
15	22545	172.22	-38.63882	2126.9854	4518.6431	0	376.66
16	22545	178.855	-38.03454	2100.3428	4387.8998	0	367.36
17	22545	185.5775	-37.42229	2070.5948	4298.2574	0	360.93
18	22545	195.3925	-36.528395	2011.0349	4175.7892	0	351.55
19	22545	205.36	-35.62061	1952.3946	4052.3013	0	342.02
20	22545	215.48	-34.698935	1894.5313	3926.242	0	332.34
21	22545	221.84715	-34.11905	1855.6203	3847.8446	0	326.25
22	22545	225.01215	-33.830795	1831.4204	3811.2156	0	347.75
23	22545	230.305	-33.34875	1797.2197	3739.6899	0	339.25
24	22545	237.175	-32.72307	1757.2107	3644.7408	0	328.21
25	22545	245.305	-31.982635	1712.7198	3530.5423	0	315.16
26	22545	254.26855	-31.16628	1662.8801	3404.7339	0	300.76
27	22545	262.8057	-30.38876	1612.3696	3285.8651	0	287.05
28	22545	271.7657	-29.57273	1559.2744	3169.7073	0	273.35
29	22545	281.14855	-28.71819	1503.658	3056.2457	0	257.82
30	22545	289.12	-27.992195	1456.3051	2960.1573	0	246.92
31	22545	293.8	-27.565965	1428.4454	2854.081	0	242.44
			-				

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32	22545	298.3643	27.150275	1401.1693	2636.762	0	238.08
33	22545	304.69285	-26.5739	1363.245	2335.4132	0	232.03
34	22545	308.55355	-26.032235	1328.2528	2205.299	0	226.34
35	22545	314.33	-23.92979	1195.2405	1955.1334	0	204.26
36	22545	324.49	-20.23185	961.4273	1562.3309	0	165.43
37	22545	330.415	-18.075325	811.19402	1314.5135	0	142.79
38	22545	336.43595	-15.883885	660.43465	1032.2043	0	119.78
39	22545	342.58595	-13.64547	520.75068	760.28827	0	100
40	22545	344.79	-12.843255	470.68674	665.3483	0	100
41	22545	349.9703	-10.957787	353.04983	454.51761	0	100

Slices of Slip Surface: 18459

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	18459	94.475735	7.952837	-792.81027	-373.37025	0	600
2	18459	94.675025	7.753548	-780.34858	-350.77433	0	600
3	18459	100.9942	1.434376	-385.00714	521.37425	0	600
4	18459	110.43295	-8.0043595	205.48794	1692.5575	858.56003	0
5	18459	115.07305	-12.64445	495.76495	2759.2053	0	186.32
6	18459	117.0693	-14.640715	620.67725	2985.7953	0	217.79
7	18459	122.71	-20.28143	973.54432	3504.9151	0	279.95
8	18459	130.0693	-27.640715	1433.9431	4097.5156	0	352.08
9	18459	133.9893	-31.560715	1679.1762	4368.0102	0	383.06
10	18459	135.9893	-33.560715	1804.283	4521.7338	0	402.76
11	18459	139.7143	-37.285715	2037.3592	4811.37	0	382.63
12	18459	148.5	-40.324795	2228.3978	5376.3265	0	408.61
13	18459	156.91	-39.947665	2206.202	5067.7592	0	399.62
14	18459	163.61	-39.647215	2188.5659	4800.1896	0	392.44
15	18459	172.22	-39.261115	2165.8731	4561.391	0	383.17
16	18459	178.855	-38.96358	2158.3268	4463.5584	0	377.12
17	18459	185.5775	-38.662125	2147.9178	4407.2875	0	373.95
18	18459	195.3925	-38.22199	2116.7723	4332.7826	0	369.33

LWL Case.BS.L to R

19	18459	205.36	-37.775015	2086.8357	4258.7637	0	364.64
20	18459	215.48	-37.321205	2058.2083	4182.8518	0	359.87
21	18459	223.705	-36.95237	2028.767	4123.9759	0	356
22	18459	230.305	-36.656405	2003.6633	4077.2708	0	352.89
23	18459	237.175	-36.348335	1983.4507	4026.085	0	349.66
24	18459	245.305	-35.98376	1962.3518	3964.174	0	345.83
25	18459	254.48	-35.572325	1937.7848	3894.7468	0	341.51
26	18459	263.44	-35.17053	1910.58	3828.4073	0	337.29
27	18459	272.4	-34.768735	1883.2637	3762.0677	0	333.07
28	18459	281.36	-34.366945	1856.0589	3695.7281	0	328.85
29	18459	287.69145	-34.083025	1836.7616	3648.9182	0	325.87
30	18459	290.97145	-33.93594	1826.7043	3622.7095	0	309.33
31	18459	293.8	-33.8091	1818.03	3549.8253	0	308
32	18459	298.74285	-33.587445	1802.6642	3334.0688	0	305.67
33	18459	305.76785	-31.64338	1679.2384	2987.0306	0	285.26
34	18459	314.33	-27.253825	1402.6873	2342.2207	0	239.17
35	18459	324.49	-22.045095	1074.5031	1782.0216	0	184.47
36	18459	330.415	-19.007525	869.38894	1436.4321	0	152.58
37	18459	335.72125	-16.28716	685.59398	1098.0594	0	124.02
38	18459	341.87125	-13.13424	488.84978	727.05668	0	100
39	18459	344.79	-11.637895	395.48654	555.95286	0	100
40	18459	347.75495	-10.117848	300.6397	387.03867	0	100

Slices of Slip Surface: 18458

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	18458	94.475735	7.952837	-792.81027	-373.32903	0	600
2	18458	94.675025	7.753548	-780.34858	-350.73147	0	600
3	18458	100.9942	1.434376	-385.00714	521.55235	0	600
4	18458	110.43295	-8.0043595	205.48794	1692.8805	858.74647	0
5	18458	115.07305	-12.64445	495.76495	2759.7269	0	186.32
6	18458	117.0693	-14.640715	620.67725	2986.2919	0	217.79

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7	18458	122.71	-20.28143	973.54432	3505.5515	0	279.95
8	18458	130.0693	-27.640715	1433.9431	4098.2648	0	352.08
9	18458	133.9893	-31.560715	1679.1762	4368.6898	0	383.06
10	18458	135.9893	-33.560715	1804.283	4522.4582	0	402.76
11	18458	139.7143	-37.285715	2037.3592	4812.1232	0	382.63
12	18458	148.5	-40.324795	2228.3978	5376.2357	0	408.61
13	18458	156.91	-39.947665	2206.202	5067.7592	0	399.62
14	18458	163.61	-39.647215	2188.5659	4800.1896	0	392.44
15	18458	172.22	-39.261115	2165.8731	4561.2874	0	383.17
16	18458	178.855	-38.96358	2158.3268	4463.5584	0	377.12
17	18458	185.5775	-38.662125	2147.9178	4407.1857	0	373.95
18	18458	195.3925	-38.22199	2116.7723	4332.6808	0	369.33
19	18458	205.36	-37.775015	2086.8357	4258.665	0	364.64
20	18458	215.48	-37.321205	2058.2083	4182.7531	0	359.87
21	18458	223.705	-36.95237	2028.767	4123.8181	0	356
22	18458	230.305	-36.656405	2003.6633	4077.2708	0	352.89
23	18458	237.175	-36.348335	1983.4507	4026.085	0	349.66
24	18458	245.305	-35.98376	1962.3518	3964.174	0	345.83
25	18458	254.48	-35.572325	1937.7848	3894.7468	0	341.51
26	18458	263.44	-35.17053	1910.58	3828.2958	0	337.29
27	18458	272.4	-34.768735	1883.2637	3761.9562	0	333.07
28	18458	281.36	-34.366945	1856.0589	3695.6166	0	328.85
29	18458	287.69145	-34.083025	1836.7616	3648.6484	0	325.87
30	18458	290.97145	-33.93594	1826.7043	3622.3599	0	309.33
31	18458	293.8	-33.8091	1818.03	3549.7539	0	308
32	18458	298.74285	-33.587445	1802.6642	3333.9278	0	305.67
33	18458	305.76785	-31.909325	1695.9128	2992.7873	0	288.05
34	18458	309.69705	-30.19504	1587.637	2637.8946	0	270.05
35	18458	315.00055	-27.88114	1441.6127	2386.4885	0	245.75
36	18458	324.7135	-23.64342	1174.1825	1934.1031	0	201.26
37	18458	330.415	-21.15589	1003.4461	1649.8124	0	175.14
38	18458	337.41	-18.104	798.97405	1268.7308	0	143.09

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39	18458	344.79	-14.88414	598.03826	883.02951	0	109.28
40	18458	346.41825	-14.17375	553.71904	798.17846	0	101.82
41	18458	351.74325	-11.850483	408.75346	547.01693	0	100

Slices of Slip Surface: 22610

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	22610	99.251795	5.096651	-613.81122	117.56216	0	600
2	22610	106.34575	-1.163809	-222.02897	1015.2644	0	600
3	22610	110.12925	-4.50279	-13.064075	1385.0487	799.65822	0
4	22610	114.0379	-7.9521855	202.80519	1826.625	937.5128	0
5	22610	119.30045	-12.596415	493.44094	2859.6663	0	188.91
6	22610	124.30045	-17.00894	769.59598	3251.5384	0	244.48
7	22610	131.63	-23.4773	1174.4026	3729.3977	0	307.28
8	22610	137.28555	-28.46836	1486.7467	4021.1651	0	355.73
9	22610	141.2874	-32	1707.8111	4258.1137	0	382.93
10	22610	147.27685	-37.285715	2038.5966	4645.6964	0	377.94
11	22610	152.5	-40.434815	2235.913	5285.1266	0	407.34
12	22610	156.91	-40.033175	2211.4661	5100.0267	0	400.51
13	22610	163.61	-39.422975	2174.5094	4798.0837	0	390.1
14	22610	172.22	-38.63882	2126.9854	4515.7505	0	376.66
15	22610	178.855	-38.03454	2100.3428	4384.882	0	367.36
16	22610	185.5775	-37.42229	2070.5948	4295.4164	0	360.93
17	22610	195.3925	-36.528395	2011.0349	4173.0497	0	351.55
18	22610	205.36	-35.62061	1952.3946	4049.6444	0	342.02
19	22610	215.48	-34.698935	1894.5313	3923.585	0	332.34
20	22610	221.84715	-34.11905	1855.6203	3845.559	0	326.25
21	22610	225.01215	-33.830795	1831.4204	3808.8035	0	347.75
22	22610	230.305	-33.34875	1797.2197	3737.2255	0	339.25
23	22610	237.175	-32.72307	1757.2107	3642.2764	0	328.21
24	22610	245.305	-31.982635	1712.7198	3528.2091	0	315.16
25	22610	254.26855	-31.16628	1662.8801	3402.4009	0	300.76
26	22610	262.8057	-30.38876	1612.3696	3283.6487	0	287.05
27	22610	271.7657	-29.57273	1559.2744	3167.5846	0	273.35
28	22610	281.14855	-28.71819	1503.658	3054.2291	0	257.82
29	22610	289.12	-27.992195	1456.3051	2958.1837	0	246.92

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30	22610	293.8	-27.565965	1428.4454	2852.196	0	242.44
31	22610	298.3643	-27.150275	1401.1693	2634.8736	0	238.08
32	22610	304.69285	-26.5739	1363.245	2333.6823	0	232.03
33	22610	308.55355	-25.981865	1325.1043	2214.5173	0	225.81
34	22610	314.33	-23.461635	1166.0908	1918.8265	0	199.35
35	22610	324.49	-19.02887	886.33186	1445.8407	0	152.8
36	22610	330.415	-16.44382	709.44103	1151.2892	0	125.66
37	22610	333.63815	-15.037575	607.6179	967.6485	0	110.89
38	22610	339.78815	-12.35436	440.19577	651.83723	0	100
39	22610	344.79	-10.172075	304.01924	398.48104	0	100
40	22610	346.65275	-9.359362	253.30409	305.20485	0	100

Slices of Slip Surface: 22547

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	22547	104.3237	6.10489	-675.91248	106.9958	0	600
2	22547	111.26815	-0.8395675	-241.4635	1067.9216	0	600
3	22547	114.93415	-4.5055425	-12.120849	1434.2938	828.08992	0
4	22547	116.41895	-5.990359	80.770688	1614.0445	885.23607	0
5	22547	119.63535	-9.2067745	281.98395	1969.6274	974.36141	0
6	22547	122.99465	-12.56606	492.15998	2816.2173	0	190.84
7	22547	126.0693	-15.640715	684.49596	3084.0567	0	228.88
8	22547	131.63	-21.20143	1032.3402	3472.4007	0	283.38
9	22547	137.9893	-27.560715	1430.2233	3859.4985	0	345.71
10	22547	142.4286	-32	1707.9458	4160.6165	0	382.19
11	22547	147.7143	-37.285715	2038.6504	4566.1422	0	377.67
12	22547	152.5	-40.434815	2235.913	5287.4503	0	407.34
13	22547	156.91	-40.033175	2211.4661	5102.5934	0	400.51
14	22547	163.61	-39.422975	2174.5094	4800.4486	0	390.1
15	22547	172.22	-38.63882	2126.9854	4517.92	0	376.66
16	22547	178.855	-38.03454	2100.3428	4387.0767	0	367.36
17	22547	185.5775	-37.42229	2070.5948	4297.5471	0	360.93
18	22547	195.3925	-36.528395	2011.0349	4175.079	0	351.55
19	22547	203.67335	-	1962.0378	4072.7194	0	343.63

LWL Case.BS.L to R

			35.774225				
20	22547	210.42	-35.159775	1923.5115	3988.5814	0	337.18
21	22547	217.16665	-34.545325	1884.9852	3904.5911	0	330.73
22	22547	221.84715	-34.11905	1855.6203	3847.4637	0	326.25
23	22547	225.01215	-33.830795	1831.4204	3810.6796	0	347.75
24	22547	230.305	-33.34875	1797.2197	3739.11	0	339.25
25	22547	237.175	-32.72307	1757.2107	3644.016	0	328.21
26	22547	245.305	-31.982635	1712.7198	3530.012	0	315.16
27	22547	254.26855	-31.16628	1662.8801	3404.1507	0	300.76
28	22547	262.8057	-30.38876	1612.3696	3285.2819	0	287.05
29	22547	271.7657	-29.57273	1559.2744	3169.1767	0	273.35
30	22547	281.14855	-28.71819	1503.658	3055.7151	0	257.82
31	22547	289.12	-27.992195	1456.3051	2959.7018	0	246.92
32	22547	293.8	-27.565965	1428.4454	2853.5831	0	242.44
33	22547	298.3643	-27.150275	1401.1693	2636.2899	0	238.08
34	22547	304.69285	-26.5739	1363.245	2334.9412	0	232.03
35	22547	308.55355	-25.928675	1321.784	2233.3416	0	225.25
36	22547	312.63665	-23.835395	1189.9102	1980.9283	0	203.27
37	22547	319.41	-20.36291	971.13833	1607.0245	0	166.81
38	22547	326.18335	-16.890425	752.36649	1233.0944	0	130.35
39	22547	330.415	-14.720975	601.90085	980.59658	0	107.57
40	22547	331.29425	-14.270205	559.74498	912.38433	0	102.84
41	22547	331.5749	-14.12632	550.75754	894.70112	0	101.33
42	22547	336.69775	-11.5	386.87573	592.73621	0	100
43	22547	342.2756	-8.6404065	208.4384	269.32253	0	100

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"Reach 5c(2)-2nd Stage"
"FS to PS; SWL = 7.0"
20 10 1 40 1 0
11 5 2 1
166.67 200 246 322.71 485.84
0 62.4 0 0 62.4 0 0 62.4 0 0 62.4 0 0 62.4 0 0
0 115 600 600 115 600 600 115 600 600 115 600 600 115 600 600
0 102 600 600 102 600 600 102 600 600 102 600 600 102 600 600
30 122 0 0 122 0 0 122 0 0 122 0 0 122 0 0
0 90 50 83 96 300 300 94 148 148 89 198 198 87 100 100
0 90 50 83 96 300 300 94 148 148 89 198 198 87 100 100
0 90 99 115 97 300 300 98 144 144 99 191 191 100 100 100
0 100 203 291 102 338 375 101 258 342 100 298 382 100 184 268
0 122 313 335 113 419 438 114 362 383 116 395 416 118 289 310
0 105 379 423 116 476 514 113 448 488 109 400 441 106 367 409
0 105 632 841 105 695 875 105 672 856 106 635 829 106 609 808

0 7 262.5 6.95 294.84 8 317.71 14.00 327.71 14.00 367.4 4
492.4 0.88 509.2 -4.74 535.91 -4.85 537.67 -5.31
653.14 -5.30 656.4 -4.54 700 -4.50 9999.9 0

0 -2.13 8.58 -2.12 43.12 -2.03 80.25 -2.26 107.88 -1.99
128.58 -1.72 154.94 -0.68 166.67 -0.27 168 0 180.95 1.53
183.1 1.81 194.84 5.5 208 5.2 294.84 8 317.71 14 327.71 14
367.4 4 492.4 0.875 509.2 -4.74 535.91 -4.85 549.9 -8.43
552.36 -9 588.58 -11.38 607.03 -11.01 614.91 -10.86
633.36 -9 639.18 -8.55 656.4 -4.54 700 -4.5 9999.9 0

0 -2.13 8.58 -2.12 43.12 -2.03 80.25 -2.26 107.88 -1.99
128.58 -1.72 154.94 -0.68 166.67 -0.27 168 0 180.95 1.53
183.1 1.81 194.84 5.5 208 5.2 220.53 0.36 222 0 235.99 -3
238.18 -3.47 246 -4.06 256.55 -4.85 377.04 -4.54
380.67 -4.21 400.3 -4.33 420.54 -4.34 426.87 -4.54
440.61 -4.57 450 -4.5 509.2 -4.74 535.91 -4.85 549.9 -8.43
552.36 -9 588.52 -11.38 607.03 -11.01 614.91 -10.86 633.36 -9
639.18 -8.55 656.4 -4.54 700 -4.5 9999.9 0

0 -2.13 8.58 -2.12 43.12 -2.03 80.25 -2.26 107.88 -1.99
128.58 -1.72 154.94 -0.68 166.67 -0.27 168 0 222 0 235.99 -3
238.18 -3.47 246 -4.06 256.55 -4.85 377.04 -4.54 380.67 -4.21
400.3 -4.33 420.54 -4.34 426.87 -4.54 440.61 -4.57 450 -4.5
509.2 -4.74 535.91 -4.85 549.9 -8.43 552.36 -9 588.52 -11.38
607.03 -11.01 614.91 -10.86 633.36 -9 639.18 -8.55 656.4 -4.54
700 -4.5 9999.9 0

0 -2.13 8.58 -2.12 43.12 -2.03 80.25 -2.26 107.88 -1.99
128.58 -1.72 154.94 -0.68 166.67 -0.27 168 0 222 0 235.99 -3
238.18 -3.47 246 -4.06 256.55 -4.85 270.54 -8.43 273 -9
309.16 -11.38 327.67 -11.01 335.55 -10.86 354 -9 359.82 -8.55
377.04 -4.54 380.67 -4.21 400.3 -4.33 420.54 -4.34 426.87 -4.54
440.61 -4.57 450 -4.5 509.2 -4.74 535.91 -4.85 549.9 -8.43
552.36 -9 588.52 -11.38 607.03 -11.01 614.91 -10.86 633.36 -9
639.18 -8.55 656.4 -4.54 700 -4.5 9999.9 0

0 -2.23 8.58 -2.22 43.12 -2.13 80.25 -2.36 107.88 -2.09
128.58 -1.82 154.94 -0.78 166.67 -0.37 168 -0.1 222 -0.1
235.99 -3.1 238.18 -3.57 246 -4.16 256.55 -4.95 270.54 -8.53
273 -9.1 309.16 -11.48 327.67 -11.11 335.55 -10.96 354 -9.1
359.82 -8.65 377.04 -4.64 380.67 -4.31 400.3 -4.43
420.54 -4.44 426.87 -4.64 440.61 -4.67 450 -4.6 509.2 -4.84
535.91 -4.95 549.9 -8.53 552.36 -9.1 588.52 -11.48 607.03 -11.11
614.91 -10.96 633.36 -9.1 639.18 -8.65 656.4 -4.64 700 -4.6
9999.9 0

0 -9 700 -9 9999.9 0
0 -14 700 -14 9999.9 0
0 -30 700 -30 9999.9 0
0 -34 700 -34 9999.9 0
0 -42 700 -42 9999.9 0
0 -80 700 -80 9999.9 0

0 7 262 7 400.3 -4.33 420.54 -4.34 426.87 -4.54 440.61 -4.57
450 -4.5 492.25 -4.62 509.2 -4.74 535.91 -4.85 537.6 -5.3
654 -5.3 656.4 -4.54 700 -4.5 9999.9 0
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1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

6 330 -9 380 -9 1
380
7 335 -14 510 -14 1
510
8 345 -30 510 -30 1
510
9 345 -34 500 -34 1
500
10 350 -42 510 -42 1
510
```

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**** STABILITY WITH UPLIFT ****

"Reach 5c(2)-2nd Stage"
"FS to PS; SWL = 7.0"
12 PROFILES
5VERTICALS
UPLIFT WITH 1 PIEZOMETRIC GRADE LINES

* * STRATUM 6 ACT. WEDGE LOC. 330.0 EL. -9.0 PASS.WEDGE LOC. 380.0 EL. -9.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-9.0	1188.	1000.	83.	115.	83.
8.6	-9.0	1188.	1000.	83.	115.	83.
43.1	-9.0	1190.	1000.	83.	115.	83.
80.3	-9.0	1183.	1000.	83.	115.	83.
107.9	-9.0	1191.	1000.	83.	115.	83.
128.6	-9.0	1198.	1000.	83.	115.	83.
154.9	-9.0	1226.	1000.	83.	115.	83.
166.7	-9.0	1237.	1000.	83.	115.	83.
168.0	-9.0	1247.	1000.	92.	122.	92.
180.9	-9.0	1328.	1000.	176.	194.	176.
183.1	-9.0	1343.	1000.	190.	206.	190.
194.8	-9.0	1508.	1000.	266.	271.	266.
SHEAR STRENGTHS ARE EQUAL 300.0 AT DIST. 200.0						
200.0	-9.0	1512.	1000.	300.	300.	300.
208.0	-9.0	1501.	1000.	274.	273.	273.
220.5	-9.0	1580.	1000.	232.	230.	230.
222.0	-9.0	1587.	1000.	227.	225.	225.
236.0	-9.0	1667.	1000.	181.	178.	178.
238.2	-9.0	1679.	1000.	174.	171.	171.
246.0	-9.0	1703.	1000.	148.	144.	144.
256.5	-9.0	1735.	1000.	155.	150.	150.
262.0	-9.0	1783.	1000.	158.	154.	154.
262.5	-9.0	1787.	997.	159.	154.	154.
270.5	-9.0	1877.	956.	164.	159.	159.
273.0	-9.0	1903.	944.	166.	161.	161.
FAILURE SURFACE IN STRATA 6 EL. -9.0 DIST. 273.0 STRENGTH 165.6						
294.8	-9.0	1985.	832.	180.	999999.	180.
309.2	-9.0	2417.	759.	189.	999999.	189.
317.7	-9.0	2675.	715.	195.	999999.	195.
322.7	-9.0	2675.	689.	198.	999999.	198.
327.7	-9.0	2675.	664.	195.	999999.	195.
327.7	-9.0	2675.	664.	195.	999999.	195.
335.5	-9.0	2448.	623.	190.	999999.	190.
SHEAR STRENGTHS ARE EQUAL 179.2 AT DIST. 354.0						
354.0	-9.0	1914.	529.	179.	174.	174.
359.8	-9.0	1730.	499.	176.	170.	170.
367.4	-9.0	1452.	460.	171.	166.	166.
377.0	-9.0	1348.	411.	165.	161.	161.
380.7	-9.0	1329.	392.	163.	159.	159.
400.3	-9.0	1275.	292.	151.	148.	148.
420.5	-9.0	1216.	291.	139.	136.	136.
426.9	-9.0	1202.	279.	135.	133.	133.
440.6	-9.0	1163.	277.	127.	125.	125.
450.0	-9.0	1134.	281.	122.	120.	120.
485.8	-9.0	1033.	275.	100.	100.	100.
492.3	-9.0	1015.	274.	100.	100.	100.
492.4	-9.0	1014.	274.	100.	100.	100.
509.2	-9.0	371.	266.	100.	100.	100.
535.9	-9.0	361.	259.	100.	100.	100.
537.6	-9.0	322.	231.	100.	100.	100.
537.7	-9.0	321.	231.	100.	100.	100.
549.9	-9.0	244.	231.	100.	100.	100.
552.4	-9.0	230.	231.	100.	100.	100.
FAILURE SURFACE IN STRATA 6 EL. -9.0 DIST. 552.4 STRENGTH 100.0						
588.5	-9.0	231.	231.	100.	999999.	100.

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588.6	-9.0	231.	231.	100.	999999.	100.
607.0	-9.0	231.	231.	100.	999999.	100.
614.9	-9.0	231.	231.	100.	999999.	100.
SHEAR STRENGTHS ARE EQUAL 100.0 AT DIST. 633.4						
633.4	-9.0	231.	231.	100.	100.	100.
639.2	-9.0	242.	231.	100.	100.	100.
653.1	-9.0	322.	231.	100.	100.	100.
654.0	-9.0	340.	231.	100.	100.	100.
656.4	-9.0	388.	279.	100.	100.	100.
700.0	-9.0	391.	281.	100.	100.	100.

ASSUMED CRIT. PASSIVE LOC. 380.0 EL. -9.0 DP 8722. RP 10678.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
330.0	-9.0	29381.	27505.	0.	8762.	2.27
335.0	-9.0	28997.	28084.	0.	7801.	2.30
340.0	-9.0	27436.	28038.	0.	6859.	2.44
345.0	-9.0	25078.	27280.	0.	5939.	2.68
350.0	-9.0	22072.	26062.	0.	5042.	3.13
355.0	-9.0	19039.	23504.	0.	4162.	3.72

CRIT. ACTIVE LOC 330.0 EL -9.0 DA 29381. RA 27505.

DIS.	EL.	DP	RP	DB	RB	FS
380.0	-9.0	8722.	10678.	0.	8762.	2.27

* * STRATUM 7 ACT. WEDGE LOC. 335.0 EL. -14.0 PASS.WEDGE LOC. 510.0 EL. -14.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-14.0	1638.	1313.	115.	291.	115.
8.6	-14.0	1638.	1313.	115.	291.	115.
43.1	-14.0	1640.	1313.	115.	291.	115.
80.3	-14.0	1633.	1313.	115.	291.	115.
107.9	-14.0	1641.	1313.	115.	291.	115.
128.6	-14.0	1648.	1313.	115.	291.	115.
154.9	-14.0	1676.	1313.	115.	291.	115.
166.7	-14.0	1687.	1313.	115.	291.	115.
168.0	-14.0	1698.	1313.	122.	294.	122.
180.9	-14.0	1793.	1313.	194.	327.	194.
183.1	-14.0	1810.	1313.	206.	332.	206.
194.8	-14.0	1987.	1313.	271.	362.	271.
200.0	-14.0	1997.	1313.	300.	375.	300.
208.0	-14.0	1987.	1313.	273.	369.	273.
220.5	-14.0	2068.	1313.	230.	360.	230.
222.0	-14.0	2074.	1313.	225.	359.	225.
236.0	-14.0	2156.	1313.	178.	349.	178.
238.2	-14.0	2169.	1313.	171.	348.	171.
246.0	-14.0	2193.	1313.	144.	342.	144.
256.5	-14.0	2225.	1313.	150.	348.	150.
262.0	-14.0	2274.	1313.	154.	350.	154.
262.5	-14.0	2278.	1310.	154.	351.	154.
270.5	-14.0	2368.	1269.	159.	355.	159.
273.0	-14.0	2394.	1256.	161.	356.	161.
294.8	-14.0	2511.	1144.	174.	367.	174.
309.2	-14.0	2966.	1071.	183.	375.	183.
317.7	-14.0	3220.	1027.	188.	379.	188.
322.7	-14.0	3218.	1002.	191.	382.	191.
327.7	-14.0	3216.	976.	188.	379.	188.
327.7	-14.0	3215.	976.	188.	379.	188.
336.6	-14.0	3196.	976.	184.	373.	184.

354.0	-14.0	2409.	841.	174.	360.	174.
359.8	-14.0	2226.	812.	170.	356.	170.
367.4	-14.0	1948.	773.	166.	351.	166.
377.0	-14.0	1845.	723.	161.	344.	161.
380.7	-14.0	1826.	705.	159.	341.	159.
400.3	-14.0	1772.	604.	148.	328.	148.
420.5	-14.0	1714.	604.	136.	314.	136.
426.9	-14.0	1701.	591.	133.	309.	133.
440.6	-14.0	1662.	589.	125.	300.	125.
450.0	-14.0	1633.	594.	120.	293.	120.
485.8	-14.0	1533.	587.	100.	268.	100.
492.3	-14.0	1515.	586.	100.	268.	100.
492.4	-14.0	1514.	586.	100.	268.	100.
509.2	-14.0	871.	579.	100.	268.	100.
535.9	-14.0	861.	572.	100.	268.	100.
537.6	-14.0	822.	544.	100.	268.	100.
537.7	-14.0	821.	544.	100.	268.	100.
549.9	-14.0	744.	544.	100.	268.	100.
552.4	-14.0	729.	544.	100.	268.	100.
588.5	-14.0	640.	544.	100.	268.	100.
588.6	-14.0	640.	544.	100.	268.	100.
607.0	-14.0	654.	544.	100.	268.	100.
614.9	-14.0	659.	544.	100.	268.	100.
633.4	-14.0	729.	544.	100.	268.	100.
639.2	-14.0	742.	544.	100.	268.	100.
653.1	-14.0	822.	544.	100.	268.	100.
654.0	-14.0	840.	544.	100.	268.	100.
656.4	-14.0	888.	591.	100.	268.	100.
700.0	-14.0	891.	594.	100.	268.	100.

ASSUMED CRIT. PASSIVE LOC. 510.0 EL. -14.0 DP 3874. RP 1844.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
335.0	-14.0	43537.	29387.	0.	23846.	1.39
340.0	-14.0	42396.	29935.	0.	22932.	1.42
345.0	-14.0	40047.	29855.	0.	22033.	1.49
350.0	-14.0	36902.	29063.	0.	21147.	1.58
355.0	-14.0	33111.	27811.	0.	20275.	1.71
360.0	-14.0	29293.	25221.	0.	19417.	1.83

CRIT. ACTIVE LOC 335.0 EL -14.0 DA 43537. RA 29387.

DIS.	EL.	DP	RP	DB	RB	FS
510.0	-14.0	3874.	1844.	0.	23846.	1.39

* * STRATUM 8 ACT. WEDGE LOC. 345.0 EL. -30.0 PASS.WEDGE LOC. 510.0 EL. -30.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-30.0	3238.	2313.	291.	335.	291.
8.6	-30.0	3238.	2313.	291.	335.	291.
43.1	-30.0	3240.	2313.	291.	335.	291.
80.3	-30.0	3233.	2313.	291.	335.	291.
107.9	-30.0	3241.	2313.	291.	335.	291.
128.6	-30.0	3248.	2313.	291.	335.	291.
154.9	-30.0	3276.	2313.	291.	335.	291.
166.7	-30.0	3287.	2313.	291.	335.	291.
168.0	-30.0	3300.	2313.	294.	339.	294.
180.9	-30.0	3407.	2313.	327.	379.	327.
183.1	-30.0	3426.	2313.	332.	386.	332.
194.8	-30.0	3615.	2313.	362.	421.	362.

200.0	-30.0	3629.	2313.	375.	438.	375.
208.0	-30.0	3616.	2313.	369.	428.	369.
220.5	-30.0	3692.	2313.	360.	413.	360.
222.0	-30.0	3699.	2313.	359.	412.	359.
236.0	-30.0	3775.	2313.	349.	395.	349.
238.2	-30.0	3787.	2313.	348.	392.	348.
246.0	-30.0	3809.	2313.	342.	383.	342.
256.5	-30.0	3839.	2313.	348.	388.	348.
262.0	-30.0	3887.	2313.	350.	390.	350.
262.5	-30.0	3891.	2310.	351.	390.	351.
270.5	-30.0	3979.	2269.	355.	394.	355.
273.0	-30.0	4004.	2256.	356.	395.	356.
294.8	-30.0	4117.	2144.	367.	404.	367.
309.2	-30.0	4569.	2071.	375.	410.	375.
317.7	-30.0	4821.	2027.	379.	414.	379.
322.7	-30.0	4818.	2002.	382.	416.	382.
327.7	-30.0	4816.	1976.	379.	413.	379.
327.7	-30.0	4815.	1976.	379.	413.	379.
335.5	-30.0	4585.	1936.	373.	408.	373.
354.0	-30.0	4009.	1841.	360.	396.	360.
359.8	-30.0	3826.	1812.	356.	392.	356.
367.4	-30.0	3548.	1773.	351.	387.	351.
377.0	-30.0	3445.	1723.	344.	381.	344.
380.7	-30.0	3426.	1705.	341.	378.	341.
400.3	-30.0	3372.	1604.	328.	366.	328.
420.5	-30.0	3314.	1604.	314.	352.	314.
426.9	-30.0	3301.	1591.	309.	348.	309.
440.6	-30.0	3262.	1589.	300.	339.	300.
450.0	-30.0	3233.	1594.	293.	333.	293.
485.8	-30.0	3133.	1587.	268.	310.	268.
492.3	-30.0	3115.	1586.	268.	310.	268.
492.4	-30.0	3114.	1586.	268.	310.	268.
509.2	-30.0	2471.	1579.	268.	310.	268.
535.9	-30.0	2461.	1572.	268.	310.	268.
537.6	-30.0	2422.	1544.	268.	310.	268.
537.7	-30.0	2421.	1544.	268.	310.	268.
549.9	-30.0	2344.	1544.	268.	310.	268.
552.4	-30.0	2329.	1544.	268.	310.	268.
588.5	-30.0	2240.	1544.	268.	310.	268.
588.6	-30.0	2240.	1544.	268.	310.	268.
607.0	-30.0	2254.	1544.	268.	310.	268.
614.9	-30.0	2259.	1544.	268.	310.	268.
633.4	-30.0	2329.	1544.	268.	310.	268.
639.2	-30.0	2342.	1544.	268.	310.	268.
653.1	-30.0	2422.	1544.	268.	310.	268.
654.0	-30.0	2440.	1544.	268.	310.	268.
656.4	-30.0	2488.	1591.	268.	310.	268.
700.0	-30.0	2491.	1594.	268.	310.	268.

ASSUMED CRIT. PASSIVE LOC. 510.0 EL. -30.0 DP 30498. RP 7718.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
345.0	-30.0	102700.	37423.	0.	51151.	1.33
350.0	-30.0	100938.	38363.	0.	49327.	1.35
355.0	-30.0	97560.	38869.	0.	47521.	1.40
360.0	-30.0	92929.	38903.	0.	45733.	1.48
365.0	-30.0	87345.	37985.	0.	43962.	1.58
370.0	-30.0	81036.	36996.	0.	42209.	1.72

CRIT. ACTIVE LOC 345.0 EL -30.0 DA 102700. RA 37423.

DIS.	EL.	DP	RP	DB	RB	FS
510.0	-30.0	30498.	7718.	0.	51151.	1.33

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* * STRATUM 9 ACT. WEDGE LOC. 345.0 EL. -34.0 PASS.WEDGE LOC. 500.0 EL. -34.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-34.0	3726.	2563.	335.	423.	335.
8.6	-34.0	3726.	2563.	335.	423.	335.
43.1	-34.0	3728.	2563.	335.	423.	335.
80.3	-34.0	3721.	2563.	335.	423.	335.
107.9	-34.0	3729.	2563.	335.	423.	335.
128.6	-34.0	3736.	2563.	335.	423.	335.
154.9	-34.0	3764.	2563.	335.	423.	335.
166.7	-34.0	3775.	2563.	335.	423.	335.
168.0	-34.0	3786.	2563.	339.	427.	339.
180.9	-34.0	3880.	2563.	379.	462.	379.
183.1	-34.0	3896.	2563.	386.	468.	386.
194.8	-34.0	4072.	2563.	422.	500.	422.
200.0	-34.0	4081.	2563.	438.	514.	438.
208.0	-34.0	4069.	2563.	428.	509.	428.
220.5	-34.0	4146.	2563.	413.	502.	413.
222.0	-34.0	4153.	2563.	412.	502.	412.
236.0	-34.0	4230.	2563.	395.	494.	395.
238.2	-34.0	4243.	2563.	392.	492.	392.
246.0	-34.0	4265.	2563.	383.	488.	383.
256.5	-34.0	4296.	2563.	388.	482.	388.
262.0	-34.0	4344.	2563.	390.	478.	390.
262.5	-34.0	4348.	2560.	390.	478.	390.
270.5	-34.0	4438.	2519.	394.	473.	394.
273.0	-34.0	4463.	2506.	395.	471.	395.
294.8	-34.0	4578.	2394.	404.	458.	404.
309.2	-34.0	5031.	2321.	410.	449.	410.
317.7	-34.0	5284.	2277.	414.	444.	414.
322.7	-34.0	5282.	2252.	416.	441.	416.
327.7	-34.0	5280.	2226.	413.	440.	413.
327.7	-34.0	5280.	2226.	413.	440.	413.
335.5	-34.0	5050.	2186.	408.	438.	408.
354.0	-34.0	4474.	2091.	396.	435.	396.
359.8	-34.0	4292.	2062.	392.	434.	392.
367.4	-34.0	4014.	2023.	387.	432.	387.
377.0	-34.0	3912.	1973.	381.	430.	381.
380.7	-34.0	3893.	1955.	378.	430.	378.
400.3	-34.0	3840.	1854.	366.	426.	366.
420.5	-34.0	3782.	1854.	352.	422.	352.
426.9	-34.0	3770.	1841.	348.	421.	348.
440.6	-34.0	3731.	1839.	339.	418.	339.
450.0	-34.0	3703.	1844.	333.	416.	333.
485.8	-34.0	3605.	1837.	310.	409.	310.
492.3	-34.0	3587.	1836.	310.	409.	310.
492.4	-34.0	3586.	1836.	310.	409.	310.
509.2	-34.0	2943.	1829.	310.	409.	310.
535.9	-34.0	2933.	1822.	310.	409.	310.
537.6	-34.0	2894.	1794.	310.	409.	310.
537.7	-34.0	2893.	1794.	310.	409.	310.
549.9	-34.0	2816.	1794.	310.	409.	310.
552.4	-34.0	2801.	1794.	310.	409.	310.
588.5	-34.0	2712.	1794.	310.	409.	310.
588.6	-34.0	2712.	1794.	310.	409.	310.
607.0	-34.0	2726.	1794.	310.	409.	310.
614.9	-34.0	2731.	1794.	310.	409.	310.
633.4	-34.0	2801.	1794.	310.	409.	310.
639.2	-34.0	2814.	1794.	310.	409.	310.
653.1	-34.0	2894.	1794.	310.	409.	310.
654.0	-34.0	2912.	1794.	310.	409.	310.
656.4	-34.0	2960.	1841.	310.	409.	310.
700.0	-34.0	2963.	1844.	310.	409.	310.

ASSUMED CRIT. PASSIVE LOC. 500.0 EL. -34.0 DP 42996. RP 10035.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
345.0	-34.0	121380.	39584.	0.	54494.	1.33
350.0	-34.0	120193.	40674.	0.	52495.	1.34
355.0	-34.0	117462.	41472.	0.	50512.	1.37
360.0	-34.0	113196.	41882.	0.	48545.	1.43
365.0	-34.0	107647.	41664.	0.	46594.	1.52
370.0	-34.0	101254.	40734.	0.	44660.	1.64

CRIT. ACTIVE LOC 345.0 EL -34.0 DA 121380. RA 39584.

DIS.	EL.	DP	RP	DB	RB	FS
500.0	-34.0	42996.	10035.	0.	54494.	1.33

* * STRATUM 10 ACT. WEDGE LOC. 350.0 EL. -42.0 PASS.WEDGE LOC. 510.0 EL. -42.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-42.0	4566.	3063.	423.	841.	423.
8.6	-42.0	4566.	3063.	423.	841.	423.
43.1	-42.0	4568.	3063.	423.	841.	423.
80.3	-42.0	4561.	3063.	423.	841.	423.
107.9	-42.0	4569.	3063.	423.	841.	423.
128.6	-42.0	4576.	3063.	423.	841.	423.
154.9	-42.0	4604.	3063.	423.	841.	423.
166.7	-42.0	4615.	3063.	423.	841.	423.
168.0	-42.0	4630.	3063.	427.	842.	427.
180.9	-42.0	4757.	3063.	462.	856.	462.
183.1	-42.0	4780.	3063.	468.	858.	468.
194.8	-42.0	4986.	3063.	500.	870.	500.
200.0	-42.0	5009.	3063.	514.	875.	514.
208.0	-42.0	4993.	3063.	509.	872.	509.
220.5	-42.0	5063.	3063.	502.	867.	502.
222.0	-42.0	5069.	3063.	502.	866.	502.
236.0	-42.0	5139.	3063.	494.	860.	494.
238.2	-42.0	5151.	3063.	492.	859.	492.
246.0	-42.0	5169.	3063.	488.	856.	488.
256.5	-42.0	5196.	3063.	482.	852.	482.
262.0	-42.0	5242.	3063.	478.	850.	478.
262.5	-42.0	5246.	3060.	478.	850.	478.
270.5	-42.0	5332.	3019.	473.	847.	473.
273.0	-42.0	5356.	3006.	471.	846.	471.
294.8	-42.0	5462.	2894.	458.	839.	458.
309.2	-42.0	5909.	2821.	449.	834.	449.
317.7	-42.0	6158.	2777.	444.	831.	444.
322.7	-42.0	6154.	2752.	441.	829.	441.
327.7	-42.0	6151.	2726.	440.	828.	440.
327.7	-42.0	6151.	2726.	440.	828.	440.
335.5	-42.0	5920.	2686.	438.	827.	438.
354.0	-42.0	5342.	2591.	435.	825.	435.
359.8	-42.0	5159.	2562.	434.	824.	434.
367.4	-42.0	4880.	2523.	432.	823.	432.
377.0	-42.0	4776.	2473.	430.	822.	430.
380.7	-42.0	4756.	2455.	430.	822.	430.
400.3	-42.0	4700.	2354.	426.	819.	426.
420.5	-42.0	4640.	2354.	422.	816.	422.
426.9	-42.0	4626.	2341.	421.	816.	421.
440.6	-42.0	4586.	2339.	418.	814.	418.
450.0	-42.0	4556.	2344.	416.	813.	416.
485.8	-42.0	4453.	2337.	409.	808.	409.
492.3	-42.0	4435.	2336.	409.	808.	409.
492.4	-42.0	4434.	2336.	409.	808.	409.
509.2	-42.0	3791.	2329.	409.	808.	409.
535.9	-42.0	3781.	2322.	409.	808.	409.
537.6	-42.0	3742.	2294.	409.	808.	409.
537.7	-42.0	3741.	2294.	409.	808.	409.
549.9	-42.0	3664.	2294.	409.	808.	409.

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552.4	-42.0	3649.	2294.	409.	808.	409.
588.5	-42.0	3560.	2294.	409.	808.	409.
588.6	-42.0	3560.	2294.	409.	808.	409.
607.0	-42.0	3574.	2294.	409.	808.	409.
614.9	-42.0	3579.	2294.	409.	808.	409.
633.4	-42.0	3649.	2294.	409.	808.	409.
639.2	-42.0	3662.	2294.	409.	808.	409.
653.1	-42.0	3742.	2294.	409.	808.	409.
654.0	-42.0	3760.	2294.	409.	808.	409.
656.4	-42.0	3808.	2341.	409.	808.	409.
700.0	-42.0	3811.	2344.	409.	808.	409.

ASSUMED CRIT. PASSIVE LOC. 510.0 EL. -42.0 DP 67533. RP 15443.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
350.0	-42.0	162645.	45149.	0.	67250.	1.34
355.0	-42.0	161081.	46329.	0.	65074.	1.36
360.0	-42.0	158081.	47375.	0.	62903.	1.39
365.0	-42.0	153345.	47947.	0.	60737.	1.45
370.0	-42.0	147201.	48213.	0.	58576.	1.53
375.0	-42.0	140421.	47527.	0.	56420.	1.64

CRIT. ACTIVE LOC 350.0 EL -42.0 DA 162645. RA 45149.

DIS.	EL.	DP	RP	DB	RB	FS
510.0	-42.0	67533.	15443.	0.	67250.	1.34

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```
"Reach 5c(2)-2nd Stage"
"FS to PS; PG = 11.0"
20 10 1 40 1 0
11 5 2 1
166.67 200 246 322.71 485.84
0 62.4 0 0 62.4 0 0 62.4 0 0 62.4 0 0 62.4 0 0
0 115 600 600 115 600 600 115 600 600 115 600 600 115 600 600
0 102 600 600 102 600 600 102 600 600 102 600 600 102 600 600
30 122 0 0 122 0 0 122 0 0 122 0 0 122 0 0
0 90 50 83 96 300 300 94 148 148 89 198 198 87 100 100
0 90 50 83 96 300 300 94 148 148 89 198 198 87 100 100
0 90 99 115 97 300 300 98 144 144 99 191 191 100 100 100
0 100 203 291 102 338 375 101 258 342 100 298 382 100 184 268
0 122 313 335 113 419 438 114 362 383 116 395 416 118 289 310
0 105 379 423 116 476 514 113 448 488 109 400 441 106 367 409
0 105 632 841 105 695 875 105 672 856 106 635 829 106 609 808

0 11 306 11 317.71 14.00 327.71 14.00 367.4 4
492.4 0.88 509.2 -4.74 535.91 -4.85 537.67 -5.31
653.14 -5.30 656.4 -4.54 700 -4.50 9999.9 0

0 -2.13 8.58 -2.12 43.12 -2.03 80.25 -2.26 107.88 -1.99
128.58 -1.72 154.94 -0.68 166.67 -0.27 168 0 180.95 1.53
183.1 1.81 194.84 5.5 208 5.2 294.84 8 306 11 317.71 14 327.71 14
367.4 4 492.4 0.875 509.2 -4.74 535.91 -4.85 549.9 -8.43
552.36 -9 588.58 -11.38 607.03 -11.01 614.91 -10.86
633.36 -9 639.18 -8.55 656.4 -4.54 700 -4.5 9999.9 0

0 -2.13 8.58 -2.12 43.12 -2.03 80.25 -2.26 107.88 -1.99
128.58 -1.72 154.94 -0.68 166.67 -0.27 168 0 180.95 1.53
183.1 1.81 194.84 5.5 208 5.2 220.53 0.36 222 0 235.99 -3
238.18 -3.47 246 -4.06 256.55 -4.85 377.04 -4.54
380.67 -4.21 400.3 -4.33 420.54 -4.34 426.87 -4.54
440.61 -4.57 450 -4.5 509.2 -4.74 535.91 -4.85 549.9 -8.43
552.36 -9 588.52 -11.38 607.03 -11.01 614.91 -10.86 633.36 -9
639.18 -8.55 656.4 -4.54 700 -4.5 9999.9 0

0 -2.13 8.58 -2.12 43.12 -2.03 80.25 -2.26 107.88 -1.99
128.58 -1.72 154.94 -0.68 166.67 -0.27 168 0 222 0 235.99 -3
238.18 -3.47 246 -4.06 256.55 -4.85 377.04 -4.54 380.67 -4.21
400.3 -4.33 420.54 -4.34 426.87 -4.54 440.61 -4.57 450 -4.5
509.2 -4.74 535.91 -4.85 549.9 -8.43 552.36 -9 588.52 -11.38
607.03 -11.01 614.91 -10.86 633.36 -9 639.18 -8.55 656.4 -4.54
700 -4.5 9999.9 0

0 -2.13 8.58 -2.12 43.12 -2.03 80.25 -2.26 107.88 -1.99
128.58 -1.72 154.94 -0.68 166.67 -0.27 168 0 222 0 235.99 -3
238.18 -3.47 246 -4.06 256.55 -4.85 270.54 -8.43 273 -9
309.16 -11.38 327.67 -11.01 335.55 -10.86 354 -9 359.82 -8.55
377.04 -4.54 380.67 -4.21 400.3 -4.33 420.54 -4.34 426.87 -4.54
440.61 -4.57 450 -4.5 509.2 -4.74 535.91 -4.85 549.9 -8.43
552.36 -9 588.52 -11.38 607.03 -11.01 614.91 -10.86 633.36 -9
639.18 -8.55 656.4 -4.54 700 -4.5 9999.9 0

0 -2.23 8.58 -2.22 43.12 -2.13 80.25 -2.36 107.88 -2.09
128.58 -1.82 154.94 -0.78 166.67 -0.37 168 -0.1 222 -0.1
235.99 -3.1 238.18 -3.57 246 -4.16 256.55 -4.95 270.54 -8.53
273 -9.1 309.16 -11.48 327.67 -11.11 335.55 -10.96 354 -9.1
359.82 -8.65 377.04 -4.64 380.67 -4.31 400.3 -4.43
420.54 -4.44 426.87 -4.64 440.61 -4.67 450 -4.6 509.2 -4.84
535.91 -4.95 549.9 -8.53 552.36 -9.1 588.52 -11.48 607.03 -11.11
614.91 -10.96 633.36 -9.1 639.18 -8.65 656.4 -4.64 700 -4.6
9999.9 0

0 -9 700 -9 9999.9 0
0 -14 700 -14 9999.9 0
0 -30 700 -30 9999.9 0
0 -34 700 -34 9999.9 0
0 -42 700 -42 9999.9 0
0 -80 700 -80 9999.9 0

0 11 306 11 400.3 -4.33 420.54 -4.34 426.87 -4.54 440.61 -4.57
450 -4.5 492.25 -4.62 509.2 -4.74 535.91 -4.85 537.6 -5.3
654 -5.3 656.4 -4.54 700 -4.5 9999.9 0
```



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1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

6 330 -9 380 -9 1
380
7 335 -14 510 -14 1
510
8 345 -30 500 -30 1
500
9 345 -34 500 -34 1
500
10 350 -42 500 -42 1
500
```

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**** STABILITY WITH UPLIFT ****

"Reach 5c(2)-2nd Stage"
"FS to PS; PG = 11.0"
12 PROFILES
5VERTICALS
UPLIFT WITH 1 PIEZOMETRIC GRADE LINES

* * STRATUM 6 ACT. WEDGE LOC. 330.0 EL. -9.0 PASS.WEDGE LOC. 380.0 EL. -9.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-9.0	1438.	1250.	83.	115.	83.
8.6	-9.0	1438.	1250.	83.	115.	83.
43.1	-9.0	1440.	1250.	83.	115.	83.
80.3	-9.0	1434.	1250.	83.	115.	83.
107.9	-9.0	1441.	1250.	83.	115.	83.
128.6	-9.0	1449.	1250.	83.	115.	83.
154.9	-9.0	1478.	1250.	83.	115.	83.
166.7	-9.0	1489.	1250.	83.	115.	83.
168.0	-9.0	1499.	1250.	92.	122.	92.
180.9	-9.0	1580.	1250.	176.	194.	176.
183.1	-9.0	1595.	1250.	190.	206.	190.
194.8	-9.0	1760.	1250.	266.	271.	266.
SHEAR STRENGTHS ARE EQUAL 300.0 AT DIST. 200.0						
200.0	-9.0	1764.	1250.	300.	300.	300.
208.0	-9.0	1753.	1250.	274.	273.	273.
220.5	-9.0	1833.	1250.	232.	230.	230.
222.0	-9.0	1839.	1250.	227.	225.	225.
236.0	-9.0	1919.	1250.	181.	178.	178.
238.2	-9.0	1932.	1250.	174.	171.	171.
246.0	-9.0	1956.	1250.	148.	144.	144.
256.5	-9.0	1987.	1250.	155.	150.	150.
270.5	-9.0	2113.	1250.	164.	159.	159.
273.0	-9.0	2135.	1250.	166.	161.	161.
FAILURE SURFACE IN STRATA 6 EL. -9.0 DIST. 273.0 STRENGTH 165.6						
294.8	-9.0	2172.	1250.	180.	999999.	180.
306.0	-9.0	2330.	1250.	187.	999999.	187.
309.2	-9.0	2423.	1218.	189.	999999.	189.
317.7	-9.0	2675.	1131.	195.	999999.	195.
322.7	-9.0	2675.	1080.	198.	999999.	198.
327.7	-9.0	2675.	1030.	195.	999999.	195.
327.7	-9.0	2675.	1029.	195.	999999.	195.
335.5	-9.0	2448.	950.	190.	999999.	190.
SHEAR STRENGTHS ARE EQUAL 179.2 AT DIST. 354.0						
354.0	-9.0	1914.	762.	179.	174.	174.
359.8	-9.0	1730.	703.	176.	170.	170.
367.4	-9.0	1452.	626.	171.	166.	166.
377.0	-9.0	1348.	528.	165.	161.	161.
380.7	-9.0	1329.	491.	163.	159.	159.
400.3	-9.0	1275.	292.	151.	148.	148.
420.5	-9.0	1216.	291.	139.	136.	136.
426.9	-9.0	1202.	279.	135.	133.	133.
440.6	-9.0	1163.	277.	127.	125.	125.
450.0	-9.0	1134.	281.	122.	120.	120.
485.8	-9.0	1033.	275.	100.	100.	100.
492.3	-9.0	1015.	274.	100.	100.	100.
492.4	-9.0	1014.	274.	100.	100.	100.
509.2	-9.0	371.	266.	100.	100.	100.
535.9	-9.0	361.	259.	100.	100.	100.
537.6	-9.0	322.	231.	100.	100.	100.
537.7	-9.0	321.	231.	100.	100.	100.
549.9	-9.0	244.	231.	100.	100.	100.
552.4	-9.0	230.	231.	100.	100.	100.
FAILURE SURFACE IN STRATA 6 EL. -9.0 DIST. 552.4 STRENGTH 100.0						
588.5	-9.0	231.	231.	100.	999999.	100.
588.6	-9.0	231.	231.	100.	999999.	100.

607.0	-9.0	231.	231.	100.	999999.	100.
614.9	-9.0	231.	231.	100.	999999.	100.
SHEAR STRENGTHS ARE EQUAL 100.0 AT DIST. 633.4						
633.4	-9.0	231.	231.	100.	100.	100.
639.2	-9.0	242.	231.	100.	100.	100.
653.1	-9.0	322.	231.	100.	100.	100.
654.0	-9.0	340.	231.	100.	100.	100.
656.4	-9.0	388.	279.	100.	100.	100.
700.0	-9.0	391.	281.	100.	100.	100.

ASSUMED CRIT. PASSIVE LOC. 380.0 EL. -9.0 DP 8722. RP 10678.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
330.0	-9.0	29396.	26065.	0.	8762.	2.20
335.0	-9.0	29000.	26763.	0.	7801.	2.23
340.0	-9.0	27436.	26889.	0.	6859.	2.37
345.0	-9.0	25078.	26303.	0.	5939.	2.62
350.0	-9.0	22072.	25244.	0.	5042.	3.07
355.0	-9.0	19039.	22827.	0.	4162.	3.65

CRIT. ACTIVE LOC 330.0 EL -9.0 DA 29396. RA 26065.

DIS.	EL.	DP	RP	DB	RB	FS
380.0	-9.0	8722.	10678.	0.	8762.	2.20

* * STRATUM 7 ACT. WEDGE LOC. 335.0 EL. -14.0 PASS.WEDGE LOC. 510.0 EL. -14.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-14.0	1888.	1563.	115.	291.	115.
8.6	-14.0	1888.	1563.	115.	291.	115.
43.1	-14.0	1890.	1563.	115.	291.	115.
80.3	-14.0	1884.	1563.	115.	291.	115.
107.9	-14.0	1891.	1563.	115.	291.	115.
128.6	-14.0	1899.	1563.	115.	291.	115.
154.9	-14.0	1928.	1563.	115.	291.	115.
166.7	-14.0	1939.	1563.	115.	291.	115.
168.0	-14.0	1950.	1563.	122.	294.	122.
180.9	-14.0	2045.	1563.	194.	327.	194.
183.1	-14.0	2062.	1563.	206.	332.	206.
194.8	-14.0	2239.	1563.	271.	362.	271.
200.0	-14.0	2249.	1563.	300.	375.	300.
208.0	-14.0	2239.	1563.	273.	369.	273.
220.5	-14.0	2320.	1563.	230.	360.	230.
222.0	-14.0	2327.	1563.	225.	359.	225.
236.0	-14.0	2408.	1563.	178.	349.	178.
238.2	-14.0	2421.	1563.	171.	348.	171.
246.0	-14.0	2446.	1563.	144.	342.	144.
256.5	-14.0	2478.	1563.	150.	348.	150.
270.5	-14.0	2605.	1563.	159.	355.	159.
273.0	-14.0	2626.	1563.	161.	356.	161.
294.8	-14.0	2698.	1563.	174.	367.	174.
306.0	-14.0	2874.	1563.	181.	373.	181.
309.2	-14.0	2972.	1530.	183.	375.	183.
317.7	-14.0	3220.	1444.	188.	379.	188.
322.7	-14.0	3218.	1393.	191.	382.	191.
327.7	-14.0	3216.	1342.	188.	379.	188.
327.7	-14.0	3215.	1342.	188.	379.	188.
335.5	-14.0	2985.	1262.	184.	373.	184.
354.0	-14.0	2409.	1075.	174.	360.	174.
356.6	-14.0	2352.	1057.	170.	356.	170.

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367.4	-14.0	1948.	939.	166.	351.	166.
377.0	-14.0	1845.	841.	161.	344.	161.
380.7	-14.0	1826.	804.	159.	341.	159.
400.3	-14.0	1772.	604.	148.	328.	148.
420.5	-14.0	1714.	604.	136.	314.	136.
426.9	-14.0	1701.	591.	133.	309.	133.
440.6	-14.0	1662.	589.	125.	300.	125.
450.0	-14.0	1633.	594.	120.	293.	120.
485.8	-14.0	1533.	587.	100.	268.	100.
492.3	-14.0	1515.	586.	100.	268.	100.
492.4	-14.0	1514.	586.	100.	268.	100.
509.2	-14.0	871.	579.	100.	268.	100.
535.9	-14.0	861.	572.	100.	268.	100.
537.6	-14.0	822.	544.	100.	268.	100.
537.7	-14.0	821.	544.	100.	268.	100.
549.9	-14.0	744.	544.	100.	268.	100.
552.4	-14.0	729.	544.	100.	268.	100.
588.5	-14.0	640.	544.	100.	268.	100.
588.6	-14.0	640.	544.	100.	268.	100.
607.0	-14.0	654.	544.	100.	268.	100.
614.9	-14.0	659.	544.	100.	268.	100.
633.4	-14.0	729.	544.	100.	268.	100.
639.2	-14.0	742.	544.	100.	268.	100.
653.1	-14.0	822.	544.	100.	268.	100.
654.0	-14.0	840.	544.	100.	268.	100.
656.4	-14.0	888.	591.	100.	268.	100.
700.0	-14.0	891.	594.	100.	268.	100.

ASSUMED CRIT. PASSIVE LOC. 510.0 EL. -14.0 DP 3874. RP 1844.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
335.0	-14.0	43552.	27948.	0.	23846.	1.35
340.0	-14.0	42398.	28614.	0.	22932.	1.39
345.0	-14.0	40047.	28705.	0.	22033.	1.45
350.0	-14.0	36902.	28086.	0.	21147.	1.55
355.0	-14.0	33111.	26993.	0.	20275.	1.68
360.0	-14.0	29293.	24544.	0.	19417.	1.80

CRIT. ACTIVE LOC 335.0 EL -14.0 DA 43552. RA 27948.

DIS.	EL.	DP	RP	DB	RB	FS
510.0	-14.0	3874.	1844.	0.	23846.	1.35

* * STRATUM 8 ACT. WEDGE LOC. 345.0 EL. -30.0 PASS.WEDGE LOC. 500.0 EL. -30.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-30.0	3488.	2563.	291.	335.	291.
8.6	-30.0	3488.	2563.	291.	335.	291.
43.1	-30.0	3490.	2563.	291.	335.	291.
80.3	-30.0	3484.	2563.	291.	335.	291.
107.9	-30.0	3491.	2563.	291.	335.	291.
128.6	-30.0	3499.	2563.	291.	335.	291.
154.9	-30.0	3528.	2563.	291.	335.	291.
166.7	-30.0	3539.	2563.	291.	335.	291.
168.0	-30.0	3551.	2563.	294.	339.	294.
180.9	-30.0	3659.	2563.	327.	379.	327.
183.1	-30.0	3678.	2563.	332.	386.	332.
194.8	-30.0	3866.	2563.	362.	422.	362.
200.0	-30.0	3881.	2563.	375.	438.	375.
208.0	-30.0	3868.	2563.	369.	431.	369.

220.5	-30.0	3945.	2563.	360.	413.	360.
222.0	-30.0	3951.	2563.	359.	412.	359.
236.0	-30.0	4027.	2563.	349.	395.	349.
238.2	-30.0	4040.	2563.	348.	392.	348.
246.0	-30.0	4062.	2563.	342.	383.	342.
256.5	-30.0	4092.	2563.	348.	388.	348.
270.5	-30.0	4216.	2563.	355.	394.	355.
273.0	-30.0	4236.	2563.	356.	395.	356.
294.8	-30.0	4304.	2563.	367.	404.	367.
306.0	-30.0	4477.	2563.	373.	409.	373.
309.2	-30.0	4575.	2530.	375.	410.	375.
317.7	-30.0	4821.	2444.	379.	414.	379.
322.7	-30.0	4818.	2393.	382.	416.	382.
327.7	-30.0	4816.	2342.	379.	413.	379.
327.7	-30.0	4815.	2342.	379.	413.	379.
335.5	-30.0	4585.	2262.	373.	408.	373.
354.0	-30.0	4009.	2075.	360.	396.	360.
359.8	-30.0	3826.	2016.	356.	392.	356.
367.4	-30.0	3548.	1939.	351.	387.	351.
377.0	-30.0	3445.	1841.	344.	381.	344.
380.7	-30.0	3426.	1804.	341.	378.	341.
400.3	-30.0	3372.	1604.	328.	366.	328.
420.5	-30.0	3314.	1604.	314.	352.	314.
426.9	-30.0	3301.	1591.	309.	348.	309.
440.6	-30.0	3262.	1589.	300.	339.	300.
450.0	-30.0	3233.	1594.	293.	333.	293.
485.8	-30.0	3133.	1587.	268.	310.	268.
492.3	-30.0	3115.	1586.	268.	310.	268.
492.4	-30.0	3114.	1586.	268.	310.	268.
509.2	-30.0	2471.	1579.	268.	310.	268.
535.9	-30.0	2461.	1572.	268.	310.	268.
537.6	-30.0	2422.	1544.	268.	310.	268.
537.7	-30.0	2421.	1544.	268.	310.	268.
549.9	-30.0	2344.	1544.	268.	310.	268.
552.4	-30.0	2329.	1544.	268.	310.	268.
588.5	-30.0	2240.	1544.	268.	310.	268.
588.6	-30.0	2240.	1544.	268.	310.	268.
607.0	-30.0	2254.	1544.	268.	310.	268.
614.9	-30.0	2259.	1544.	268.	310.	268.
633.4	-30.0	2329.	1544.	268.	310.	268.
639.2	-30.0	2342.	1544.	268.	310.	268.
653.1	-30.0	2422.	1544.	268.	310.	268.
654.0	-30.0	2440.	1544.	268.	310.	268.
656.4	-30.0	2488.	1591.	268.	310.	268.
700.0	-30.0	2491.	1594.	268.	310.	268.

ASSUMED CRIT. PASSIVE LOC. 500.0 EL. -30.0 DP 32196. RP 7727.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
345.0	-30.0	102744.	35862.	0.	48471.	1.30
350.0	-30.0	100956.	36903.	0.	46647.	1.33
355.0	-30.0	97564.	37513.	0.	44841.	1.38
360.0	-30.0	92929.	37717.	0.	43053.	1.46
365.0	-30.0	87345.	36974.	0.	41282.	1.56
370.0	-30.0	81036.	36147.	0.	39529.	1.71

CRIT. ACTIVE LOC 345.0 EL -30.0 DA 102744. RA 35862.

DIS.	EL.	DP	RP	DB	RB	FS
500.0	-30.0	32196.	7727.	0.	48471.	1.30

* * STRATUM 9 ACT. WEDGE LOC. 345.0 EL. -34.0 PASS.WEDGE LOC. 500.0 EL. -34.0

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ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-34.0	3976.	2813.	335.	423.	335.
8.6	-34.0	3976.	2813.	335.	423.	335.
43.1	-34.0	3978.	2813.	335.	423.	335.
80.3	-34.0	3972.	2813.	335.	423.	335.
107.9	-34.0	3979.	2813.	335.	423.	335.
128.6	-34.0	3987.	2813.	335.	423.	335.
154.9	-34.0	4016.	2813.	335.	423.	335.
166.7	-34.0	4027.	2813.	335.	423.	335.
168.0	-34.0	4038.	2813.	339.	427.	339.
180.9	-34.0	4131.	2813.	379.	462.	379.
183.1	-34.0	4148.	2813.	386.	468.	386.
194.8	-34.0	4324.	2813.	422.	500.	422.
200.0	-34.0	4333.	2813.	438.	514.	438.
208.0	-34.0	4321.	2813.	428.	509.	428.
220.5	-34.0	4398.	2813.	413.	502.	413.
222.0	-34.0	4405.	2813.	412.	502.	412.
236.0	-34.0	4483.	2813.	395.	494.	395.
238.2	-34.0	4495.	2813.	392.	492.	392.
246.0	-34.0	4518.	2813.	383.	488.	383.
256.5	-34.0	4549.	2813.	388.	482.	388.
270.5	-34.0	4675.	2813.	394.	473.	394.
273.0	-34.0	4695.	2813.	395.	471.	395.
294.8	-34.0	4765.	2813.	404.	458.	404.
306.0	-34.0	4939.	2813.	409.	451.	409.
309.2	-34.0	5037.	2780.	410.	449.	410.
317.7	-34.0	5284.	2694.	414.	444.	414.
322.7	-34.0	5282.	2643.	416.	441.	416.
327.7	-34.0	5280.	2592.	413.	440.	413.
327.7	-34.0	5280.	2592.	413.	440.	413.
335.5	-34.0	5050.	2512.	408.	438.	408.
354.0	-34.0	4474.	2325.	396.	435.	396.
359.8	-34.0	4292.	2266.	392.	434.	392.
367.4	-34.0	4014.	2189.	387.	432.	387.
377.0	-34.0	3912.	2091.	381.	430.	381.
380.7	-34.0	3893.	2054.	378.	430.	378.
400.3	-34.0	3840.	1854.	366.	426.	366.
420.5	-34.0	3782.	1854.	352.	422.	352.
426.9	-34.0	3770.	1841.	348.	421.	348.
440.6	-34.0	3731.	1839.	339.	418.	339.
450.0	-34.0	3703.	1844.	333.	416.	333.
485.8	-34.0	3605.	1837.	310.	409.	310.
492.3	-34.0	3587.	1836.	310.	409.	310.
492.4	-34.0	3586.	1836.	310.	409.	310.
509.2	-34.0	2943.	1829.	310.	409.	310.
535.9	-34.0	2933.	1822.	310.	409.	310.
537.6	-34.0	2894.	1794.	310.	409.	310.
537.7	-34.0	2893.	1794.	310.	409.	310.
549.9	-34.0	2816.	1794.	310.	409.	310.
552.4	-34.0	2801.	1794.	310.	409.	310.
588.5	-34.0	2712.	1794.	310.	409.	310.
588.6	-34.0	2712.	1794.	310.	409.	310.
607.0	-34.0	2726.	1794.	310.	409.	310.
614.9	-34.0	2731.	1794.	310.	409.	310.
633.4	-34.0	2801.	1794.	310.	409.	310.
639.2	-34.0	2814.	1794.	310.	409.	310.
653.1	-34.0	2894.	1794.	310.	409.	310.
654.0	-34.0	2912.	1794.	310.	409.	310.
656.4	-34.0	2960.	1841.	310.	409.	310.
700.0	-34.0	2963.	1844.	310.	409.	310.

ASSUMED CRIT. PASSIVE LOC. 500.0 EL. -34.0 DP 42996. RP 10035.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
345.0	-34.0	121518.	37907.	0.	54494.	1.30
350.0	-34.0	120231.	39134.	0.	52512.	1.31

355.0	-34.0	117476.	40033.	0.	50512.	1.35
360.0	-34.0	113198.	40561.	0.	48545.	1.41
365.0	-34.0	107647.	40515.	0.	46594.	1.50
370.0	-34.0	101254.	39757.	0.	44660.	1.62

CRIT. ACTIVE LOC 345.0 EL -34.0 DA 121518. RA 37907.

DIS.	EL.	DP	RP	DB	RB	FS
500.0	-34.0	42996.	10035.	0.	54494.	1.30

* * STRATUM 10 ACT. WEDGE LOC. 350.0 EL. -42.0 PASS.WEDGE LOC. 500.0 EL. -42.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-42.0	4816.	3313.	423.	841.	423.
8.6	-42.0	4816.	3313.	423.	841.	423.
43.1	-42.0	4818.	3313.	423.	841.	423.
80.3	-42.0	4812.	3313.	423.	841.	423.
107.9	-42.0	4819.	3313.	423.	841.	423.
128.6	-42.0	4827.	3313.	423.	841.	423.
154.9	-42.0	4856.	3313.	423.	841.	423.
166.7	-42.0	4867.	3313.	423.	841.	423.
168.0	-42.0	4881.	3313.	427.	842.	427.
180.9	-42.0	5009.	3313.	462.	856.	462.
183.1	-42.0	5031.	3313.	468.	858.	468.
194.8	-42.0	5238.	3313.	500.	870.	500.
200.0	-42.0	5261.	3313.	514.	875.	514.
208.0	-42.0	5245.	3313.	509.	872.	509.
220.5	-42.0	5316.	3313.	502.	867.	502.
222.0	-42.0	5321.	3313.	502.	866.	502.
236.0	-42.0	5392.	3313.	494.	860.	494.
238.2	-42.0	5403.	3313.	492.	859.	492.
246.0	-42.0	5422.	3313.	488.	856.	488.
256.5	-42.0	5449.	3313.	482.	852.	482.
270.5	-42.0	5568.	3313.	473.	847.	473.
273.0	-42.0	5588.	3313.	471.	846.	471.
294.8	-42.0	5649.	3313.	458.	839.	458.
306.0	-42.0	5818.	3313.	451.	835.	451.
309.2	-42.0	5915.	3280.	449.	834.	449.
317.7	-42.0	6158.	3194.	444.	831.	444.
322.7	-42.0	6154.	3143.	441.	829.	441.
327.7	-42.0	6151.	3092.	440.	828.	440.
327.7	-42.0	6151.	3092.	440.	828.	440.
335.5	-42.0	5920.	3012.	438.	827.	438.
354.0	-42.0	5342.	2825.	435.	825.	435.
359.8	-42.0	5159.	2766.	434.	824.	434.
367.4	-42.0	4880.	2689.	432.	823.	432.
377.0	-42.0	4776.	2591.	430.	822.	430.
380.7	-42.0	4756.	2554.	430.	822.	430.
400.3	-42.0	4700.	2354.	426.	819.	426.
420.5	-42.0	4640.	2354.	422.	816.	422.
426.9	-42.0	4626.	2341.	421.	816.	421.
440.6	-42.0	4586.	2339.	418.	814.	418.
450.0	-42.0	4556.	2344.	416.	813.	416.
485.8	-42.0	4453.	2337.	409.	808.	409.
492.3	-42.0	4435.	2336.	409.	808.	409.
492.4	-42.0	4434.	2336.	409.	808.	409.
509.2	-42.0	3791.	2329.	409.	808.	409.
535.9	-42.0	3781.	2322.	409.	808.	409.
537.6	-42.0	3742.	2294.	409.	808.	409.
537.7	-42.0	3741.	2294.	409.	808.	409.
549.9	-42.0	3664.	2294.	409.	808.	409.
552.4	-42.0	3649.	2294.	409.	808.	409.
588.5	-42.0	3560.	2294.	409.	808.	409.
588.6	-42.0	3560.	2294.	409.	808.	409.
607.0	-42.0	3574.	2294.	409.	808.	409.
614.9	-42.0	3579.	2294.	409.	808.	409.

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633.4	-42.0	3649.	2294.	409.	808.	409.
639.2	-42.0	3662.	2294.	409.	808.	409.
653.1	-42.0	3742.	2294.	409.	808.	409.
654.0	-42.0	3760.	2294.	409.	808.	409.
656.4	-42.0	3808.	2341.	409.	808.	409.
700.0	-42.0	3811.	2344.	409.	808.	409.

ASSUMED CRIT. PASSIVE LOC. 500.0 EL. -42.0 DP 69845. RP 15850.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
350.0	-42.0	162986.	43382.	0.	63160.	1.31
355.0	-42.0	161149.	44714.	0.	60984.	1.33
360.0	-42.0	158108.	45876.	0.	58813.	1.37
365.0	-42.0	153353.	46548.	0.	56647.	1.43
370.0	-42.0	147201.	46960.	0.	54486.	1.52
375.0	-42.0	140421.	46449.	0.	52330.	1.62

CRIT. ACTIVE LOC 350.0 EL -42.0 DA 162986. RA 43382.

DIS.	EL.	DP	RP	DB	RB	FS
500.0	-42.0	69845.	15850.	0.	63160.	1.31

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"Reach 5c(2)-2nd Stage"
"PS to FS; LWL = GS"
20 10 1 40 1 0
11 5 2 1
214.16 377.29 454 500 533.33
0 62.4 0 0 62.4 0 0 62.4 0 0 62.4 0 0 62.4 0 0
0 115 600 600 115 600 600 115 600 600 115 600 600 115 600 600
0 102 600 600 102 600 600 102 600 600 102 600 600 102 600 600
30 122 0 0 122 0 0 122 0 0 122 0 0 122 0 0
0 87 100 100 89 198 198 94 148 148 96 300 300 90 50 83
0 87 100 100 89 198 198 94 148 148 96 300 300 90 50 83
0 100 100 100 99 191 191 98 144 144 97 300 300 90 99 115
0 100 184 268 100 298 382 101 258 342 102 338 375 100 203 291
0 118 289 310 116 395 416 114 362 383 113 419 438 122 313 335
0 106 367 409 109 400 441 113 448 488 116 476 514 105 379 423
0 106 609 808 106 635 829 105 672 856 105 695 875 105 632 841

0 -4.5 43.6 -4.54 46.8 -5.29 162.33 -5.3 164.09 -4.85
190.8 -4.74 207.6 0.88 332.6 4 372.29 14 382.29 14
405.16 8 492 5.2 505.16 5.5 516.9 1.81 519.05 1.53 532 0
533.33 -0.27 545.06 -0.68 571.42 -1.72 592.12 -1.99
619.75 -2.26 656.88 -2.03 691.42 -2.12 700 -2.13 9999.9 0

0 -4.5 43.6 -4.54 60.82 -8.55 66.64 -9 85.09 -10.86
92.97 -11.01 111.48 -11.38 147.64 -9 150.1 -8.43 164.09 -4.85
190.8 -4.74 207.6 0.88 332.6 4 372.29 14 382.29 14 405.16 8
492 5.2 505.16 5.5 516.9 1.81 519.05 1.53 532 0 533.33 -0.27
545.06 -0.68 571.42 -1.72 592.12 -1.99 619.75 -2.26
656.88 -2.03 691.42 -2.12 700 -2.13 9999.9 0

0 -4.5 43.6 -4.54 60.82 -8.55 66.64 -9 85.09 -10.86
92.97 -11.01 111.48 -11.38 147.64 -9 150.1 -8.43 164.09 -4.85
190.8 -4.74 250 -4.5 259.39 -4.57 273.13 -4.54 279.46 -4.34
299.7 -4.33 319.33 -4.21 322.96 -4.54 443.45 -4.85 454 -4.06
461.82 -3.47 464.01 -3 478 0 479.47 0.36 492 5.2 505.16 5.5
516.9 1.81 519.05 1.53 532 0 533.33 -0.27 545.06 -0.68
571.42 -1.72 592.12 -1.99 619.75 -2.26 656.88 -2.03
691.42 -2.12 700 -2.13 9999.9 0

0 -4.5 43.6 -4.54 60.82 -8.55 66.64 -9 85.09 -10.86
92.97 -11.01 111.48 -11.38 147.64 -9 150.1 -8.43 164.09 -4.85
190.8 -4.74 250 -4.5 259.39 -4.57 273.13 -4.54 279.46 -4.34
299.7 -4.33 319.33 -4.21 322.96 -4.54 443.45 -4.85 454 -4.06
461.82 -3.47 464.01 -3 478 0 532 0 533.33 -0.27 545.06 -0.68
571.42 -1.72 592.12 -1.99 619.75 -2.26 656.88 -2.03
691.42 -2.12 700 -2.13 9999.9 0

0 -4.5 43.6 -4.54 60.82 -8.55 66.64 -9 85.09 -10.86
92.97 -11.01 111.48 -11.38 147.64 -9 150.1 -8.43 164.09 -4.85
190.8 -4.74 250 -4.5 259.39 -4.57 273.13 -4.54 279.46 -4.34
299.7 -4.33 319.33 -4.21 322.96 -4.54 340.18 -8.55 346 -9
364.45 -10.86 372.33 -11.01 390.84 -11.38 427 -9
429.46 -8.43 443.45 -4.85 454 -4.06 461.82 -3.47 464.01 -3
478 0 532 0 533.33 -0.27 545.06 -0.68 571.42 -1.72
592.12 -1.99 619.75 -2.26 656.88 -2.03 691.42 -2.12 700 -2.13
9999.9 0

0 -4.6 43.6 -4.64 60.82 -8.65 66.64 -9.1 85.09 -10.96
92.97 -11.11 111.48 -11.48 147.64 -9.1 150.1 -8.53
164.09 -4.95 190.8 -4.84 250 -4.6 259.39 -4.67 273.13 -4.64
279.46 -4.44 299.7 -4.43 319.33 -4.31 322.96 -4.64
340.18 -8.65 346 -9.1 364.45 -10.96 372.33 -11.11
390.84 -11.48 427 -9.1 429.46 -8.53 443.45 -4.95 454 -4.16
461.82 -3.57 464.01 -3.1 478 -0.1 532 -0.1 533.33 -0.37
545.06 -0.78 571.42 -1.82 592.12 -2.09 619.75 -2.36
656.88 -2.13 691.42 -2.22 700 -2.23 9999.9 0

0 -9 700 -9 9999.9 0
0 -14 700 -14 9999.9 0
0 -30 700 -30 9999.9 0
0 -34 700 -34 9999.9 0
0 -42 700 -42 9999.9 0
0 -80 700 -80 9999.9 0

0 -4.5 43.6 -4.54 46 -5.3 162.4 -5.3 164.09 -4.85 190.8 -4.74 207.6 0.88
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207.75 -4.62 250 -4.5 259.39 -4.57 273.13 -4.54 279.46 -4.34
299.7 -4.33 319.33 -4.21 322.96 -4.54 443.45 -4.85 461.82 -3.47
464.01 -3 478 0 532 0 533.33 -0.27 545.06 -0.68 571.42 -1.72
592.12 -1.99 619.75 -2.26 656.88 -2.03 691.42 -2.12 700 -2.13
9999.9 0

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

6 400 -9 530 -9 1
530
7 405 -14 530 -14 1
530
8 410 -30 530 -30 1
530
9 420 -34 530 -34 1
530
10 420 -42 530 -42 1
530
```

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**** STABILITY WITH UPLIFT ****

"Reach 5c(2)-2nd Stage"
"PS to FS; LWL = GS"
12 PROFILES
5VERTICALS
UPLIFT WITH 1 PIEZOMETRIC GRADE LINES

* * STRATUM 6 ACT. WEDGE LOC. 400.0 EL. -9.0 PASS.WEDGE LOC. 530.0 EL. -9.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-9.0	391.	0.	100.	100.	100.
43.6	-9.0	388.	569454.	100.	100.	100.
46.0	-9.0	339.	0.	100.	100.	100.
46.8	-9.0	323.	231.	100.	100.	100.
60.8	-9.0	242.	231.	100.	100.	100.
66.6	-9.0	231.	231.	100.	100.	100.
FAILURE SURFACE IN STRATA 6 EL. -9.0 DIST. 66.6 STRENGTH 100.0						
85.1	-9.0	231.	231.	100.	999999.	100.
93.0	-9.0	231.	231.	100.	999999.	100.
111.5	-9.0	231.	231.	100.	999999.	100.
SHEAR STRENGTHS ARE EQUAL 100.0 AT DIST. 147.6						
147.6	-9.0	231.	231.	100.	100.	100.
150.1	-9.0	245.	231.	100.	100.	100.
162.3	-9.0	322.	231.	100.	100.	100.
162.4	-9.0	324.	231.	100.	100.	100.
164.1	-9.0	361.	259.	100.	100.	100.
189.1	-9.0	370.	271.	100.	100.	100.
190.8	-9.0	371.	271.	100.	100.	100.
207.6	-9.0	1015.	274.	100.	100.	100.
207.8	-9.0	1015.	274.	100.	100.	100.
214.2	-9.0	1033.	275.	100.	100.	100.
250.0	-9.0	1134.	281.	122.	120.	120.
259.4	-9.0	1163.	277.	127.	125.	125.
273.1	-9.0	1203.	279.	135.	133.	133.
279.5	-9.0	1216.	291.	139.	136.	136.
299.7	-9.0	1275.	292.	151.	148.	148.
319.3	-9.0	1329.	299.	163.	159.	159.
323.0	-9.0	1348.	279.	165.	161.	161.
332.6	-9.0	1452.	277.	171.	166.	166.
340.2	-9.0	1731.	276.	176.	170.	170.
346.0	-9.0	1914.	275.	179.	174.	174.
FAILURE SURFACE IN STRATA 6 EL. -9.0 DIST. 346.0 STRENGTH 179.2						
364.5	-9.0	2449.	272.	190.	999999.	190.
372.3	-9.0	2675.	271.	195.	999999.	195.
372.3	-9.0	2675.	271.	195.	999999.	195.
377.3	-9.0	2675.	270.	198.	999999.	198.
382.3	-9.0	2675.	269.	195.	999999.	195.
390.8	-9.0	2417.	268.	189.	999999.	189.
405.2	-9.0	1985.	266.	180.	999999.	180.
SHEAR STRENGTHS ARE EQUAL 165.6 AT DIST. 427.0						
427.0	-9.0	1903.	262.	166.	161.	161.
429.5	-9.0	1877.	262.	164.	159.	159.
443.5	-9.0	1723.	259.	155.	150.	150.
454.0	-9.0	1670.	309.	148.	144.	144.
461.8	-9.0	1631.	346.	174.	171.	171.
464.0	-9.0	1613.	375.	181.	178.	178.
478.0	-9.0	1505.	563.	227.	225.	225.
479.5	-9.0	1496.	563.	232.	230.	230.
492.0	-9.0	1391.	563.	274.	273.	273.
SHEAR STRENGTHS ARE EQUAL 299.9 AT DIST. 500.0						
500.0	-9.0	1413.	563.	300.	300.	300.
505.2	-9.0	1416.	563.	266.	271.	266.
516.9	-9.0	1021.	563.	190.	206.	190.
519.0	-9.0	989.	563.	176.	194.	176.
532.0	-9.0	812.	563.	92.	176.	92.

533.3	-9.0	786.	546.	83.	115.	83.
533.3	-9.0	786.	546.	83.	115.	83.
545.1	-9.0	749.	520.	83.	115.	83.
571.4	-9.0	655.	455.	83.	115.	83.
592.1	-9.0	631.	438.	83.	115.	83.
619.8	-9.0	607.	421.	83.	115.	83.
656.9	-9.0	627.	436.	83.	115.	83.
691.4	-9.0	619.	430.	83.	115.	83.
700.0	-9.0	618.	429.	83.	115.	83.

ASSUMED CRIT. PASSIVE LOC. 530.0 EL. -9.0 DP 3473. RP 855.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
400.0	-9.0	24360.	28982.	0.	25053.	2.63
405.0	-9.0	21159.	27294.	0.	24145.	2.96
410.0	-9.0	18594.	24845.	0.	23256.	3.24
415.0	-9.0	16942.	22469.	0.	22390.	3.39
420.0	-9.0	16166.	20100.	0.	21545.	3.35
425.0	-9.0	15863.	19543.	0.	20722.	3.32

CRIT. ACTIVE LOC 400.0 EL -9.0 DA 24360. RA 28982.

DIS.	EL.	DP	RP	DB	RB	FS
530.0	-9.0	3473.	855.	0.	25053.	2.63

* * STRATUM 7 ACT. WEDGE LOC. 405.0 EL. -14.0 PASS.WEDGE LOC. 530.0 EL. -14.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-14.0	891.	0.	100.	268.	100.
43.6	-14.0	888.	569767.	100.	268.	100.
46.0	-14.0	839.	286.	100.	268.	100.
46.8	-14.0	823.	544.	100.	268.	100.
60.8	-14.0	742.	544.	100.	268.	100.
66.6	-14.0	730.	544.	100.	268.	100.
85.1	-14.0	660.	544.	100.	268.	100.
93.0	-14.0	654.	544.	100.	268.	100.
111.5	-14.0	640.	544.	100.	268.	100.
147.6	-14.0	730.	544.	100.	268.	100.
150.1	-14.0	745.	544.	100.	268.	100.
162.3	-14.0	822.	544.	100.	268.	100.
162.4	-14.0	824.	544.	100.	268.	100.
164.1	-14.0	861.	572.	100.	268.	100.
189.1	-14.0	870.	583.	100.	268.	100.
190.8	-14.0	871.	583.	100.	268.	100.
207.6	-14.0	1515.	586.	100.	268.	100.
207.8	-14.0	1515.	586.	100.	268.	100.
214.2	-14.0	1533.	587.	100.	268.	100.
250.0	-14.0	1633.	594.	120.	293.	120.
259.4	-14.0	1662.	589.	125.	300.	125.
273.1	-14.0	1701.	591.	133.	309.	133.
279.5	-14.0	1714.	604.	136.	314.	136.
299.7	-14.0	1772.	604.	148.	328.	148.
319.3	-14.0	1826.	612.	159.	341.	159.
323.0	-14.0	1845.	591.	161.	344.	161.
332.6	-14.0	1948.	590.	166.	351.	166.
340.2	-14.0	2227.	588.	170.	356.	170.
346.0	-14.0	2409.	588.	174.	360.	174.
364.5	-14.0	2986.	585.	184.	373.	184.
372.3	-14.0	3216.	583.	188.	379.	188.
372.3	-14.0	3216.	583.	188.	379.	188.

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377.3	-14.0	3218.	583.	191.	382.	191.
382.3	-14.0	3220.	582.	188.	379.	188.
390.8	-14.0	2965.	580.	183.	375.	183.
405.2	-14.0	2511.	578.	174.	367.	174.
427.0	-14.0	2394.	575.	161.	356.	161.
429.5	-14.0	2369.	574.	159.	355.	159.
443.5	-14.0	2214.	572.	150.	347.	150.
454.0	-14.0	2160.	621.	144.	342.	144.
461.8	-14.0	2120.	658.	171.	348.	171.
464.0	-14.0	2102.	688.	178.	349.	178.
478.0	-14.0	1993.	875.	225.	359.	225.
479.5	-14.0	1983.	875.	230.	360.	230.
492.0	-14.0	1877.	875.	273.	369.	273.
500.0	-14.0	1898.	875.	300.	375.	300.
505.2	-14.0	1896.	875.	271.	362.	271.
516.9	-14.0	1488.	875.	206.	332.	206.
519.0	-14.0	1454.	875.	194.	327.	194.
532.0	-14.0	1263.	875.	122.	294.	122.
533.3	-14.0	1236.	858.	115.	291.	115.
533.3	-14.0	1236.	858.	115.	291.	115.
545.1	-14.0	1199.	832.	115.	291.	115.
571.4	-14.0	1105.	767.	115.	291.	115.
592.1	-14.0	1081.	751.	115.	291.	115.
619.8	-14.0	1057.	734.	115.	291.	115.
656.9	-14.0	1077.	748.	115.	291.	115.
691.4	-14.0	1069.	742.	115.	291.	115.
700.0	-14.0	1068.	1762573.	115.	291.	115.

ASSUMED CRIT. PASSIVE LOC. 530.0 EL. -14.0 DP 8415. RP 1878.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
405.0	-14.0	36116.	30759.	0.	24506.	2.06
410.0	-14.0	32429.	29036.	0.	23643.	2.27
415.0	-14.0	29725.	26553.	0.	22796.	2.40
420.0	-14.0	27939.	24142.	0.	21964.	2.46
425.0	-14.0	27029.	21738.	0.	21148.	2.40
430.0	-14.0	26569.	21147.	0.	20347.	2.39

CRIT. ACTIVE LOC 405.0 EL -14.0 DA 36116. RA 30759.

DIS.	EL.	DP	RP	DB	RB	FS
530.0	-14.0	8415.	1878.	0.	24506.	2.06

* * STRATUM 8 ACT. WEDGE LOC. 410.0 EL. -30.0 PASS.WEDGE LOC. 530.0 EL. -30.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-30.0	2491.	0.	268.	310.	268.
43.6	-30.0	2488.	570767.	268.	310.	268.
46.0	-30.0	2439.	1286.	268.	310.	268.
46.8	-30.0	2423.	1544.	268.	310.	268.
60.8	-30.0	2342.	1544.	268.	310.	268.
66.6	-30.0	2330.	1544.	268.	310.	268.
85.1	-30.0	2260.	1544.	268.	310.	268.
93.0	-30.0	2254.	1544.	268.	310.	268.
111.5	-30.0	2240.	1544.	268.	310.	268.
147.6	-30.0	2330.	1544.	268.	310.	268.
150.1	-30.0	2345.	1544.	268.	310.	268.
162.3	-30.0	2422.	1544.	268.	310.	268.
162.4	-30.0	2424.	1544.	268.	310.	268.
164.1	-30.0	2461.	1572.	268.	310.	268.

189.1	-30.0	2470.	1583.	268.	310.	268.
190.8	-30.0	2471.	1583.	268.	310.	268.
207.6	-30.0	3115.	1586.	268.	310.	268.
207.8	-30.0	3115.	1586.	268.	310.	268.
214.2	-30.0	3133.	1587.	268.	310.	268.
250.0	-30.0	3233.	1594.	293.	333.	293.
259.4	-30.0	3262.	1589.	300.	339.	300.
273.1	-30.0	3301.	1591.	309.	348.	309.
279.5	-30.0	3314.	1604.	314.	352.	314.
299.7	-30.0	3372.	1604.	328.	366.	328.
319.3	-30.0	3426.	1612.	341.	378.	341.
323.0	-30.0	3445.	1591.	344.	381.	344.
332.6	-30.0	3548.	1590.	351.	387.	351.
340.2	-30.0	3827.	1588.	356.	392.	356.
346.0	-30.0	4009.	1588.	360.	396.	360.
364.5	-30.0	4586.	1585.	373.	408.	373.
372.3	-30.0	4816.	1583.	379.	413.	379.
372.3	-30.0	4816.	1583.	379.	413.	379.
377.3	-30.0	4818.	1583.	382.	416.	382.
382.3	-30.0	4821.	1582.	379.	414.	379.
390.8	-30.0	4568.	1580.	375.	410.	375.
405.2	-30.0	4116.	1578.	367.	404.	367.
427.0	-30.0	4005.	1575.	356.	395.	356.
429.5	-30.0	3980.	1574.	355.	394.	355.
443.5	-30.0	3827.	1572.	347.	388.	347.
454.0	-30.0	3776.	1621.	342.	383.	342.
461.8	-30.0	3738.	1658.	348.	392.	348.
464.0	-30.0	3722.	1688.	349.	395.	349.
478.0	-30.0	3617.	1875.	359.	412.	359.
479.5	-30.0	3608.	1875.	360.	413.	360.
492.0	-30.0	3506.	1875.	369.	428.	369.
500.0	-30.0	3530.	1875.	375.	438.	375.
505.2	-30.0	3523.	1875.	362.	422.	362.
516.9	-30.0	3104.	1875.	332.	386.	332.
519.0	-30.0	3068.	1875.	327.	379.	327.
532.0	-30.0	2865.	1875.	294.	339.	294.
533.3	-30.0	2836.	1858.	291.	335.	291.
533.3	-30.0	2836.	1858.	291.	335.	291.
545.1	-30.0	2799.	1832.	291.	335.	291.
571.4	-30.0	2705.	1767.	291.	335.	291.
592.1	-30.0	2681.	1751.	291.	335.	291.
619.8	-30.0	2657.	1734.	291.	335.	291.
656.9	-30.0	2677.	1748.	291.	335.	291.
691.4	-30.0	2669.	1742.	291.	335.	291.
700.0	-30.0	2668.	1875467.	291.	335.	291.

ASSUMED CRIT. PASSIVE LOC. 530.0 EL. -30.0 DP 40043. RP 8264.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
410.0	-30.0	97399.	41139.	0.	42159.	1.60
415.0	-30.0	93455.	40906.	0.	40341.	1.68
420.0	-30.0	89314.	39895.	0.	38536.	1.76
425.0	-30.0	85143.	38469.	0.	36744.	1.85
430.0	-30.0	81775.	35826.	0.	34965.	1.89
435.0	-30.0	79241.	33330.	0.	33199.	1.91

CRIT. ACTIVE LOC 410.0 EL -30.0 DA 97399. RA 41139.

DIS.	EL.	DP	RP	DB	RB	FS
530.0	-30.0	40043.	8264.	0.	42159.	1.60

* * STRATUM 9 ACT. WEDGE LOC. 420.0 EL. -34.0 PASS.WEDGE LOC. 530.0 EL. -34.0

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ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-34.0	2963.	0.	310.	409.	310.
43.6	-34.0	2960.	571017.	310.	409.	310.
46.0	-34.0	2911.	1536.	310.	409.	310.
46.8	-34.0	2895.	1794.	310.	409.	310.
60.8	-34.0	2814.	1794.	310.	409.	310.
66.6	-34.0	2802.	1794.	310.	409.	310.
85.1	-34.0	2732.	1794.	310.	409.	310.
93.0	-34.0	2726.	1794.	310.	409.	310.
111.5	-34.0	2712.	1794.	310.	409.	310.
147.6	-34.0	2802.	1794.	310.	409.	310.
150.1	-34.0	2817.	1794.	310.	409.	310.
162.3	-34.0	2894.	1794.	310.	409.	310.
162.4	-34.0	2896.	1794.	310.	409.	310.
164.1	-34.0	2933.	1822.	310.	409.	310.
189.1	-34.0	2942.	1833.	310.	409.	310.
190.8	-34.0	2943.	1833.	310.	409.	310.
207.6	-34.0	3587.	1836.	310.	409.	310.
207.8	-34.0	3587.	1836.	310.	409.	310.
214.2	-34.0	3605.	1837.	310.	409.	310.
250.0	-34.0	3703.	1844.	333.	416.	333.
259.4	-34.0	3732.	1839.	339.	418.	339.
273.1	-34.0	3770.	1841.	348.	421.	348.
279.5	-34.0	3783.	1854.	352.	422.	352.
299.7	-34.0	3840.	1854.	366.	426.	366.
319.3	-34.0	3893.	1862.	378.	430.	378.
323.0	-34.0	3912.	1841.	381.	430.	381.
332.6	-34.0	4015.	1840.	387.	432.	387.
340.2	-34.0	4293.	1838.	392.	434.	392.
346.0	-34.0	4475.	1838.	396.	435.	396.
364.5	-34.0	5050.	1835.	408.	438.	408.
372.3	-34.0	5280.	1833.	413.	440.	413.
372.3	-34.0	5280.	1833.	413.	440.	413.
377.3	-34.0	5282.	1833.	416.	441.	416.
382.3	-34.0	5284.	1832.	414.	444.	414.
390.8	-34.0	5031.	1830.	410.	449.	410.
405.2	-34.0	4578.	1828.	404.	458.	404.
427.0	-34.0	4464.	1825.	395.	471.	395.
429.5	-34.0	4438.	1824.	394.	473.	394.
443.5	-34.0	4285.	1822.	388.	482.	388.
454.0	-34.0	4232.	1871.	383.	488.	383.
461.8	-34.0	4194.	1908.	392.	492.	392.
464.0	-34.0	4177.	1938.	395.	494.	395.
478.0	-34.0	4071.	2125.	412.	502.	412.
479.5	-34.0	4062.	2125.	413.	502.	413.
492.0	-34.0	3959.	2125.	428.	509.	428.
500.0	-34.0	3982.	2125.	438.	514.	438.
505.2	-34.0	3981.	2125.	422.	500.	422.
516.9	-34.0	3574.	2125.	386.	468.	386.
519.0	-34.0	3540.	2125.	379.	462.	379.
532.0	-34.0	3351.	2125.	339.	427.	339.
533.3	-34.0	3324.	2108.	335.	423.	335.
533.3	-34.0	3324.	2108.	335.	423.	335.
545.1	-34.0	3287.	2082.	335.	423.	335.
571.4	-34.0	3193.	2017.	335.	423.	335.
592.1	-34.0	3169.	2001.	335.	423.	335.
619.8	-34.0	3145.	1984.	335.	423.	335.
656.9	-34.0	3165.	1998.	335.	423.	335.
691.4	-34.0	3157.	1992.	335.	423.	335.
700.0	-34.0	3156.	2530429.	335.	423.	335.

ASSUMED CRIT. PASSIVE LOC. 530.0 EL. -34.0 DP 52008. RP 10787.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
420.0	-34.0	109754.	43719.	0.	43903.	1.70
425.0	-34.0	105498.	42702.	0.	41[illegible]	1.[illegible]

430.0	-34.0	101267.	40878.	0.	39948.	1.86
435.0	-34.0	97889.	38294.	0.	37987.	1.90
440.0	-34.0	95279.	35782.	0.	36036.	1.91
445.0	-34.0	93415.	33279.	0.	34097.	1.89

CRIT. ACTIVE LOC 420.0 EL -34.0 DA 109754. RA 43719.

DIS.	EL.	DP	RP	DB	RB	FS
530.0	-34.0	52008.	10787.	0.	43903.	1.70

* * STRATUM 10 ACT. WEDGE LOC. 420.0 EL. -42.0 PASS.WEDGE LOC. 530.0 EL. -42.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-42.0	3811.	0.	409.	808.	409.
43.6	-42.0	3808.	571517.	409.	808.	409.
46.0	-42.0	3759.	2036.	409.	808.	409.
46.8	-42.0	3743.	2294.	409.	808.	409.
60.8	-42.0	3662.	2294.	409.	808.	409.
66.6	-42.0	3650.	2294.	409.	808.	409.
85.1	-42.0	3580.	2294.	409.	808.	409.
93.0	-42.0	3574.	2294.	409.	808.	409.
111.5	-42.0	3560.	2294.	409.	808.	409.
147.6	-42.0	3650.	2294.	409.	808.	409.
150.1	-42.0	3665.	2294.	409.	808.	409.
162.3	-42.0	3742.	2294.	409.	808.	409.
162.4	-42.0	3744.	2294.	409.	808.	409.
164.1	-42.0	3781.	2322.	409.	808.	409.
189.1	-42.0	3790.	2333.	409.	808.	409.
190.8	-42.0	3791.	2333.	409.	808.	409.
207.6	-42.0	4435.	2336.	409.	808.	409.
207.8	-42.0	4435.	2336.	409.	808.	409.
214.2	-42.0	4453.	2337.	409.	808.	409.
250.0	-42.0	4556.	2344.	416.	813.	416.
259.4	-42.0	4586.	2339.	418.	814.	418.
273.1	-42.0	4627.	2341.	421.	816.	421.
279.5	-42.0	4640.	2354.	422.	816.	422.
299.7	-42.0	4700.	2354.	426.	819.	426.
319.3	-42.0	4756.	2362.	430.	822.	430.
323.0	-42.0	4776.	2341.	430.	822.	430.
332.6	-42.0	4880.	2340.	432.	823.	432.
340.2	-42.0	5159.	2338.	434.	824.	434.
346.0	-42.0	5342.	2338.	435.	825.	435.
364.5	-42.0	5920.	2335.	438.	827.	438.
372.3	-42.0	6151.	2333.	440.	828.	440.
372.3	-42.0	6151.	2333.	440.	828.	440.
377.3	-42.0	6154.	2333.	441.	829.	441.
382.3	-42.0	6158.	2332.	444.	831.	444.
390.8	-42.0	5908.	2330.	449.	834.	449.
405.2	-42.0	5461.	2328.	458.	839.	458.
427.0	-42.0	5356.	2325.	471.	846.	471.
429.5	-42.0	5332.	2324.	473.	847.	473.
443.5	-42.0	5184.	2322.	482.	852.	482.
454.0	-42.0	5136.	2371.	488.	856.	488.
461.8	-42.0	5102.	2408.	492.	859.	492.
464.0	-42.0	5086.	2438.	494.	860.	494.
478.0	-42.0	4987.	2625.	502.	866.	502.
479.5	-42.0	4979.	2625.	502.	867.	502.
492.0	-42.0	4883.	2625.	509.	872.	509.
500.0	-42.0	4910.	2625.	514.	875.	514.
505.2	-42.0	4895.	2625.	500.	870.	500.
516.9	-42.0	4458.	2625.	468.	858.	468.
519.0	-42.0	4418.	2625.	462.	856.	462.
532.0	-42.0	4195.	2625.	427.	842.	427.
533.3	-42.0	4164.	2608.	423.	841.	423.
533.3	-42.0	4164.	2608.	423.	841.	423.
545.1	-42.0	4127.	2582.	423.	841.	423.

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571.4	-42.0	4033.	2517.	423.	841.	423.
592.1	-42.0	4009.	2501.	423.	841.	423.
619.8	-42.0	3985.	2484.	423.	841.	423.
656.9	-42.0	4005.	2498.	423.	841.	423.
691.4	-42.0	3997.	2492.	423.	841.	423.
700.0	-42.0	3996.	2693928.	423.	841.	423.

ASSUMED CRIT. PASSIVE LOC. 530.0 EL. -42.0 DP 81037. RP 16786.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
420.0	-42.0	155830.	50803.	0.	53475.	1.62
425.0	-42.0	151796.	51060.	0.	51132.	1.68
430.0	-42.0	147354.	50193.	0.	48773.	1.75
435.0	-42.0	142722.	49249.	0.	46399.	1.82
440.0	-42.0	138313.	46793.	0.	44009.	1.88
445.0	-42.0	134846.	44326.	0.	41604.	1.91

CRIT. ACTIVE LOC 420.0 EL -42.0 DA 155830. RA 50803.

DIS.	EL.	DP	RP	DB	RB	FS
530.0	-42.0	81037.	16786.	0.	53475.	1.62

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```
"Reach 5c(2)-2nd Stage"
"FS to PS; LWL = GS"
20 10 1 240 1 0
11 5 2 1
166.67 200 246 322.71 485.84
0 62.4 0 0 62.4 0 0 62.4 0 0 62.4 0 0 62.4 0 0
0 115 600 600 115 600 600 115 600 600 115 600 600 115 600 600
0 102 600 600 102 600 600 102 600 600 102 600 600 102 600 600
30 122 0 0 122 0 0 122 0 0 122 0 0 122 0 0
0 90 50 83 96 300 300 94 148 148 89 198 198 87 100 100
0 90 50 83 96 300 300 94 148 148 89 198 198 87 100 100
0 90 99 115 97 300 300 98 144 144 99 191 191 100 100 100
0 100 203 291 102 338 375 101 258 342 100 298 382 100 184 268
0 122 313 335 113 419 438 114 362 383 116 395 416 118 289 310
0 105 379 423 116 476 514 113 448 488 109 400 441 106 367 409
0 105 632 841 105 695 875 105 672 856 106 635 829 106 609 808

0 -2.13 8.58 -2.12 43.12 -2.03 80.25 -2.26 107.88 -1.99
128.58 -1.72 154.94 -0.68 166.67 -0.27 168 0 180.95 1.53
183.1 1.81 194.84 5.5 208 5.2 294.84 8 317.71 14 327.71 14
367.4 4 492.4 0.875 509.2 -4.74 535.91 -4.85 537.67 -5.3
653.14 -5.3 656.4 -4.54 700 -4.5 9999.9 0

0 -2.13 8.58 -2.12 43.12 -2.03 80.25 -2.26 107.88 -1.99
128.58 -1.72 154.94 -0.68 166.67 -0.27 168 0 180.95 1.53
183.1 1.81 194.84 5.5 208 5.2 294.84 8 317.71 14
327.71 14 367.4 4 492.4 0.875 509.2 -4.74 535.91 -4.85
549.9 -8.43 552.36 -9 588.58 -11.38 607.03 -11.01
614.91 -10.86 633.36 -9 639.18 -8.55 656.4 -4.54 700 -4.5
9999.9 0

0 -2.13 8.58 -2.12 43.12 -2.03 80.25 -2.26 107.88 -1.99
128.58 -1.72 154.94 -0.68 166.67 -0.27 168 0 180.95 1.53
183.1 1.81 194.84 5.5 208 5.2 220.53 0.36 222 0 235.99 -3
238.18 -3.47 246 -4.06 256.55 -4.85 377.04 -4.54
380.67 -4.21 400.3 -4.33 420.54 -4.34 426.87 -4.54
440.61 -4.57 450 -4.5 509.2 -4.74 535.91 -4.85 549.9 -8.43
552.36 -9 588.52 -11.38 607.03 -11.01 614.91 -10.86
633.36 -9 639.18 -8.55 656.4 -4.54 700 -4.5 9999.9 0

0 -2.13 8.58 -2.12 43.12 -2.03 80.25 -2.26 107.88 -1.99
128.58 -1.72 154.94 -0.68 166.67 -0.27 168 0 222 0 235.99 -3
238.18 -3.47 246 -4.06 256.55 -4.85 377.04 -4.54 380.67 -4.21
400.3 -4.33 420.54 -4.34 426.87 -4.54 440.61 -4.57 450 -4.5
509.2 -4.74 535.91 -4.85 549.9 -8.43 552.36 -9 588.52 -11.38
607.03 -11.01 614.91 -10.86 633.36 -9 639.18 -8.55
656.4 -4.54 700 -4.5 9999.9 0

0 -2.13 8.58 -2.12 43.12 -2.03 80.25 -2.26 107.88 -1.99
128.58 -1.72 154.94 -0.68 166.67 -0.27 168 0 222 0 235.99 -3
238.18 -3.47 246 -4.06 256.55 -4.85 270.54 -8.43 273 -9
309.16 -11.38 327.67 -11.01 335.55 -10.86 354 -9
359.82 -8.55 377.04 -4.54 380.67 -4.21 400.3 -4.33
420.54 -4.34 426.87 -4.54 440.61 -4.57 450 -4.5 509.2 -4.74
535.91 -4.85 549.9 -8.43 552.36 -9 588.52 -11.38 607.03 -11.01
614.91 -10.86 633.36 -9 639.18 -8.55 656.4 -4.54 700 -4.5
9999.9 0

0 -2.23 8.58 -2.22 43.12 -2.13 80.25 -2.36 107.88 -2.09
128.58 -1.82 154.94 -0.78 166.67 -0.37 168 -0.1 222 -0.1
235.99 -3.1 238.18 -3.57 246 -4.16 256.55 -4.95 270.54 -8.53
273 -9.1 309.16 -11.48 327.67 -11.11 335.55 -10.96 354 -9.1
359.82 -8.65 377.04 -4.64 380.67 -4.31 400.3 -4.43
420.54 -4.44 426.87 -4.64 440.61 -4.67 450 -4.6 509.2 -4.84
535.91 -4.95 549.9 -8.53 552.36 -9.1 588.52 -11.48
607.03 -11.11 614.91 -10.96 633.36 -9.1 639.18 -8.65
656.4 -4.64 700 -4.6 9999.9 0

0 -9 700 -9 9999.9 0
0 -14 700 -14 9999.9 0
0 -30 700 -30 9999.9 0
0 -34 700 -34 9999.9 0
0 -42 700 -42 9999.9 0
0 -80 700 -80 9999.9 0
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0 -2.13 8.58 -2.12 43.12 -2.03 80.25 -2.26 107.88 -1.99
128.58 -1.72 154.94 -0.68 166.67 -0.27 168 0 222 0 235.99 -3
238.18 -3.47 256.55 -4.85 377.04 -4.54 380.67 -4.21
400.3 -4.33 420.54 -4.34 426.87 -4.54 440.61 -4.57 450 -4.5
492.25 -4.62 510.91 -4.67 535.91 -4.85 537.6 -5.3 654 -5.3
656.4 -4.54 700 -4.5 9999.9 0

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

6 330 -9 510 -9 1
510
7 335 -14 510 -14 1
510
8 345 -30 500 -30 1
500
9 345 -34 500 -34 1
500
10 350 -42 500 -42 1
500
```

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**** STABILITY WITH UPLIFT ****

"Reach 5c(2)-2nd Stage"
"FS to PS; LWL = GS"
12 PROFILES
5VERTICALS
UPLIFT WITH 1 PIEZOMETRIC GRADE LINES

* * STRATUM 6 ACT. WEDGE LOC. 330.0 EL. -9.0 PASS.WEDGE LOC. 510.0 EL. -9.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-9.0	618.	0.	83.	115.	83.
8.6	-9.0	619.	570059.	83.	115.	83.
43.1	-9.0	627.	418.	83.	115.	83.
80.3	-9.0	607.	421.	83.	115.	83.
107.9	-9.0	631.	438.	83.	115.	83.
128.6	-9.0	655.	455.	83.	115.	83.
154.9	-9.0	749.	520.	83.	115.	83.
166.7	-9.0	786.	546.	83.	115.	83.
166.7	-9.0	786.	546.	83.	115.	83.
168.0	-9.0	812.	563.	92.	122.	92.
180.9	-9.0	989.	563.	176.	194.	176.
183.1	-9.0	1022.	563.	190.	206.	190.
194.8	-9.0	1417.	563.	266.	271.	266.
SHEAR STRENGTHS ARE EQUAL 300.0 AT DIST. 200.0						
200.0	-9.0	1413.	563.	300.	300.	300.
208.0	-9.0	1391.	563.	274.	273.	273.
220.5	-9.0	1496.	563.	232.	230.	230.
222.0	-9.0	1505.	563.	227.	225.	225.
236.0	-9.0	1613.	375.	181.	178.	178.
238.2	-9.0	1631.	346.	174.	171.	171.
246.0	-9.0	1670.	309.	148.	144.	144.
256.5	-9.0	1723.	259.	155.	150.	150.
270.5	-9.0	1877.	262.	164.	159.	159.
273.0	-9.0	1903.	262.	166.	161.	161.
FAILURE SURFACE IN STRATA 6 EL. -9.0 DIST. 273.0 STRENGTH 165.6						
294.8	-9.0	1985.	266.	180.	999999.	180.
309.2	-9.0	2417.	268.	189.	999999.	189.
317.7	-9.0	2675.	269.	195.	999999.	195.
322.7	-9.0	2675.	270.	198.	999999.	198.
327.7	-9.0	2675.	271.	195.	999999.	195.
327.7	-9.0	2675.	271.	195.	999999.	195.
335.5	-9.0	2448.	272.	190.	999999.	190.
SHEAR STRENGTHS ARE EQUAL 179.2 AT DIST. 354.0						
354.0	-9.0	1914.	275.	179.	174.	174.
359.8	-9.0	1730.	276.	176.	170.	170.
367.4	-9.0	1452.	277.	171.	166.	166.
377.0	-9.0	1348.	279.	165.	161.	161.
380.7	-9.0	1329.	299.	163.	159.	159.
400.3	-9.0	1275.	292.	151.	148.	148.
420.5	-9.0	1215.	291.	139.	136.	136.
426.9	-9.0	1202.	279.	135.	133.	133.
440.6	-9.0	1163.	277.	127.	125.	125.
450.0	-9.0	1133.	281.	122.	120.	120.
485.8	-9.0	1033.	275.	100.	100.	100.
492.3	-9.0	1015.	274.	100.	100.	100.
492.4	-9.0	1014.	274.	100.	100.	100.
509.2	-9.0	371.	271.	100.	100.	100.
510.9	-9.0	370.	271.	100.	100.	100.
535.9	-9.0	361.	259.	100.	100.	100.
537.6	-9.0	323.	231.	100.	100.	100.
537.7	-9.0	322.	231.	100.	100.	100.
549.9	-9.0	245.	231.	100.	100.	100.
552.4	-9.0	231.	231.	100.	100.	100.
FAILURE SURFACE IN STRATA 6 EL. -9.0 DIST. 552.4 STRENGTH 100.0						
588.5	-9.0	231.	231.	100.	999999.	100.

588.6	-9.0	231.	231.	100.	999999.	100.
607.0	-9.0	231.	231.	100.	999999.	100.
614.9	-9.0	231.	231.	100.	999999.	100.
SHEAR STRENGTHS ARE EQUAL 100.0 AT DIST. 633.4						
633.4	-9.0	231.	231.	100.	100.	100.
639.2	-9.0	242.	231.	100.	100.	100.
653.1	-9.0	322.	231.	100.	100.	100.
654.0	-9.0	340.	231.	100.	100.	100.
656.4	-9.0	388.	279.	100.	100.	100.
700.0	-9.0	391.	281.	100.	100.	100.

ASSUMED CRIT. PASSIVE LOC. 510.0 EL. -9.0 DP 785. RP 848.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
330.0	-9.0	29381.	29091.	0.	24886.	1.92
335.0	-9.0	28997.	29522.	0.	23926.	1.92
340.0	-9.0	27436.	29278.	0.	22983.	1.99
345.0	-9.0	25078.	28336.	0.	22063.	2.11
350.0	-9.0	22072.	26950.	0.	21166.	2.30
355.0	-9.0	19039.	24241.	0.	20286.	2.49

CRIT. ACTIVE LOC 330.0 EL -9.0 DA 29381. RA 29091.

DIS.	EL.	DP	RP	DB	RB	FS
510.0	-9.0	785.	848.	0.	24886.	1.92

* * STRATUM 7 ACT. WEDGE LOC. 335.0 EL. -14.0 PASS.WEDGE LOC. 510.0 EL. -14.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-14.0	1068.	0.	115.	291.	115.
8.6	-14.0	1069.	570372.	115.	291.	115.
43.1	-14.0	1077.	730.	115.	291.	115.
80.3	-14.0	1057.	734.	115.	291.	115.
107.9	-14.0	1081.	751.	115.	291.	115.
128.6	-14.0	1105.	768.	115.	291.	115.
154.9	-14.0	1199.	833.	115.	291.	115.
166.7	-14.0	1236.	858.	115.	291.	115.
166.7	-14.0	1236.	858.	115.	291.	115.
168.0	-14.0	1264.	875.	122.	294.	122.
180.9	-14.0	1454.	875.	194.	327.	194.
183.1	-14.0	1489.	875.	206.	332.	206.
194.8	-14.0	1896.	875.	271.	362.	271.
200.0	-14.0	1898.	875.	300.	375.	300.
208.0	-14.0	1877.	875.	273.	369.	273.
220.5	-14.0	1983.	875.	230.	360.	230.
222.0	-14.0	1993.	875.	225.	359.	225.
236.0	-14.0	2102.	687.	178.	349.	178.
238.2	-14.0	2120.	658.	171.	348.	171.
246.0	-14.0	2160.	621.	144.	342.	144.
256.5	-14.0	2214.	572.	150.	348.	150.
270.5	-14.0	2369.	574.	159.	355.	159.
273.0	-14.0	2395.	575.	161.	356.	161.
294.8	-14.0	2511.	578.	174.	367.	174.
309.2	-14.0	2966.	580.	183.	375.	183.
317.7	-14.0	3220.	582.	188.	379.	188.
322.7	-14.0	3218.	583.	191.	382.	191.
327.7	-14.0	3216.	583.	188.	379.	188.
327.7	-14.0	3215.	583.	188.	379.	188.
335.5	-14.0	2985.	585.	184.	373.	184.
344.0	-14.0	2966.	585.	174.	360.	174.

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359.8	-14.0	2226.	588.	170.	356.	170.
367.4	-14.0	1948.	590.	166.	351.	166.
377.0	-14.0	1845.	591.	161.	344.	161.
380.7	-14.0	1826.	612.	159.	341.	159.
400.3	-14.0	1772.	604.	148.	328.	148.
420.5	-14.0	1713.	604.	136.	314.	136.
426.9	-14.0	1701.	591.	133.	309.	133.
440.6	-14.0	1662.	589.	125.	300.	125.
450.0	-14.0	1632.	594.	120.	293.	120.
485.8	-14.0	1533.	587.	100.	268.	100.
492.3	-14.0	1515.	586.	100.	268.	100.
492.4	-14.0	1514.	586.	100.	268.	100.
509.2	-14.0	871.	583.	100.	268.	100.
510.9	-14.0	870.	583.	100.	268.	100.
535.9	-14.0	861.	572.	100.	268.	100.
537.6	-14.0	823.	544.	100.	268.	100.
537.7	-14.0	822.	544.	100.	268.	100.
549.9	-14.0	745.	544.	100.	268.	100.
552.4	-14.0	730.	544.	100.	268.	100.
588.5	-14.0	640.	544.	100.	268.	100.
588.6	-14.0	640.	544.	100.	268.	100.
607.0	-14.0	654.	544.	100.	268.	100.
614.9	-14.0	660.	544.	100.	268.	100.
633.4	-14.0	730.	544.	100.	268.	100.
639.2	-14.0	742.	544.	100.	268.	100.
653.1	-14.0	822.	544.	100.	268.	100.
654.0	-14.0	840.	544.	100.	268.	100.
656.4	-14.0	888.	591.	100.	268.	100.
700.0	-14.0	891.	1764115.	100.	268.	100.

ASSUMED CRIT. PASSIVE LOC. 510.0 EL. -14.0 DP 3874. RP 1844.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
335.0	-14.0	43537.	30973.	0.	23846.	1.43
340.0	-14.0	42396.	31373.	0.	22932.	1.46
345.0	-14.0	40047.	31094.	0.	22033.	1.52
350.0	-14.0	36902.	30119.	0.	21147.	1.61
355.0	-14.0	33111.	28699.	0.	20275.	1.74
360.0	-14.0	29293.	25958.	0.	19417.	1.86

CRIT. ACTIVE LOC 335.0 EL -14.0 DA 43537. RA 30973.

DIS.	EL.	DP	RP	DB	RB	FS
510.0	-14.0	3874.	1844.	0.	23846.	1.43

* * STRATUM 8 ACT. WEDGE LOC. 345.0 EL. -30.0 PASS.WEDGE LOC. 500.0 EL. -30.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-30.0	2668.	0.	291.	335.	291.
8.6	-30.0	2669.	571372.	291.	335.	291.
43.1	-30.0	2677.	1730.	291.	335.	291.
80.3	-30.0	2657.	1734.	291.	335.	291.
107.9	-30.0	2681.	1751.	291.	335.	291.
128.6	-30.0	2705.	1768.	291.	335.	291.
154.9	-30.0	2799.	1833.	291.	335.	291.
166.7	-30.0	2836.	1858.	291.	335.	291.
166.7	-30.0	2836.	1858.	291.	335.	291.
168.0	-30.0	2865.	1875.	294.	339.	294.
180.9	-30.0	3068.	1875.	327.	379.	327.
183.1	-30.0	3105.	1875.	332.	384.	332.

194.8	-30.0	3523.	1875.	362.	422.	362.
200.0	-30.0	3530.	1875.	375.	438.	375.
208.0	-30.0	3506.	1875.	369.	428.	369.
220.5	-30.0	3608.	1875.	360.	413.	360.
222.0	-30.0	3617.	1875.	359.	412.	359.
236.0	-30.0	3722.	1687.	349.	395.	349.
238.2	-30.0	3739.	1658.	348.	392.	348.
246.0	-30.0	3776.	1621.	342.	383.	342.
256.5	-30.0	3828.	1572.	348.	388.	348.
270.5	-30.0	3980.	1574.	355.	394.	355.
273.0	-30.0	4005.	1575.	356.	395.	356.
294.8	-30.0	4117.	1578.	367.	404.	367.
309.2	-30.0	4569.	1580.	375.	410.	375.
317.7	-30.0	4821.	1582.	379.	414.	379.
322.7	-30.0	4818.	1583.	382.	416.	382.
327.7	-30.0	4816.	1583.	379.	413.	379.
327.7	-30.0	4815.	1583.	379.	413.	379.
335.5	-30.0	4585.	1585.	373.	408.	373.
354.0	-30.0	4009.	1588.	360.	396.	360.
359.8	-30.0	3826.	1588.	356.	392.	356.
367.4	-30.0	3548.	1590.	351.	387.	351.
377.0	-30.0	3445.	1591.	344.	381.	344.
380.7	-30.0	3426.	1612.	341.	378.	341.
400.3	-30.0	3372.	1604.	328.	366.	328.
420.5	-30.0	3313.	1604.	314.	352.	314.
426.9	-30.0	3301.	1591.	309.	348.	309.
440.6	-30.0	3262.	1589.	300.	339.	300.
450.0	-30.0	3232.	1594.	293.	333.	293.
485.8	-30.0	3133.	1587.	268.	310.	268.
492.3	-30.0	3115.	1586.	268.	310.	268.
492.4	-30.0	3114.	1586.	268.	310.	268.
509.2	-30.0	2471.	1583.	268.	310.	268.
510.9	-30.0	2470.	1583.	268.	310.	268.
535.9	-30.0	2461.	1572.	268.	310.	268.
537.6	-30.0	2423.	1544.	268.	310.	268.
537.7	-30.0	2422.	1544.	268.	310.	268.
549.9	-30.0	2345.	1544.	268.	310.	268.
552.4	-30.0	2330.	1544.	268.	310.	268.
588.5	-30.0	2240.	1544.	268.	310.	268.
588.6	-30.0	2240.	1544.	268.	310.	268.
607.0	-30.0	2254.	1544.	268.	310.	268.
614.9	-30.0	2260.	1544.	268.	310.	268.
633.4	-30.0	2330.	1544.	268.	310.	268.
639.2	-30.0	2342.	1544.	268.	310.	268.
653.1	-30.0	2422.	1544.	268.	310.	268.
654.0	-30.0	2440.	1544.	268.	310.	268.
656.4	-30.0	2488.	1591.	268.	310.	268.
700.0	-30.0	2491.	1882942.	268.	310.	268.

ASSUMED CRIT. PASSIVE LOC. 500.0 EL. -30.0 DP 32196. RP 7727.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
345.0	-30.0	102700.	39167.	0.	48471.	1.35
350.0	-30.0	100938.	39975.	0.	46647.	1.37
355.0	-30.0	97560.	40348.	0.	44841.	1.42
360.0	-30.0	92929.	40181.	0.	43053.	1.50
365.0	-30.0	87345.	39076.	0.	41282.	1.60
370.0	-30.0	81036.	37917.	0.	39529.	1.74

CRIT. ACTIVE LOC 345.0 EL -30.0 DA 102700. RA 39167.

DIS.	EL.	DP	RP	DB	RB	FS
500.0	-30.0	32196.	7727.	0.	48471.	1.35

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* * STRATUM 9 ACT. WEDGE LOC. 345.0 EL. -34.0 PASS.WEDGE LOC. 500.0 EL. -34.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-34.0	3156.	0.	335.	423.	335.
8.6	-34.0	3157.	571622.	335.	423.	335.
43.1	-34.0	3165.	1980.	335.	423.	335.
80.3	-34.0	3145.	1984.	335.	423.	335.
107.9	-34.0	3169.	2001.	335.	423.	335.
128.6	-34.0	3193.	2018.	335.	423.	335.
154.9	-34.0	3287.	2083.	335.	423.	335.
166.7	-34.0	3324.	2108.	335.	423.	335.
166.7	-34.0	3324.	2108.	335.	423.	335.
168.0	-34.0	3351.	2125.	339.	427.	339.
180.9	-34.0	3541.	2125.	379.	462.	379.
183.1	-34.0	3575.	2125.	386.	468.	386.
194.8	-34.0	3981.	2125.	422.	500.	422.
200.0	-34.0	3982.	2125.	438.	514.	438.
208.0	-34.0	3959.	2125.	428.	509.	428.
220.5	-34.0	4062.	2125.	413.	502.	413.
222.0	-34.0	4071.	2125.	412.	502.	412.
236.0	-34.0	4177.	1937.	395.	494.	395.
238.2	-34.0	4194.	1908.	392.	492.	392.
246.0	-34.0	4232.	1871.	383.	488.	383.
256.5	-34.0	4285.	1822.	388.	482.	388.
270.5	-34.0	4438.	1824.	394.	473.	394.
273.0	-34.0	4464.	1825.	395.	471.	395.
294.8	-34.0	4578.	1828.	404.	458.	404.
309.2	-34.0	5031.	1830.	410.	449.	410.
317.7	-34.0	5284.	1832.	414.	444.	414.
322.7	-34.0	5282.	1833.	416.	441.	416.
327.7	-34.0	5280.	1833.	413.	440.	413.
327.7	-34.0	5280.	1833.	413.	440.	413.
335.5	-34.0	5050.	1835.	408.	438.	408.
354.0	-34.0	4474.	1838.	396.	435.	396.
359.8	-34.0	4292.	1838.	392.	434.	392.
367.4	-34.0	4014.	1840.	387.	432.	387.
377.0	-34.0	3912.	1841.	381.	430.	381.
380.7	-34.0	3892.	1862.	378.	430.	378.
400.3	-34.0	3840.	1854.	366.	426.	366.
420.5	-34.0	3782.	1854.	352.	422.	352.
426.9	-34.0	3770.	1841.	348.	421.	348.
440.6	-34.0	3731.	1839.	339.	418.	339.
450.0	-34.0	3703.	1844.	333.	416.	333.
485.8	-34.0	3605.	1837.	310.	409.	310.
492.3	-34.0	3587.	1836.	310.	409.	310.
492.4	-34.0	3586.	1836.	310.	409.	310.
509.2	-34.0	2943.	1833.	310.	409.	310.
510.9	-34.0	2942.	1833.	310.	409.	310.
535.9	-34.0	2933.	1822.	310.	409.	310.
537.6	-34.0	2895.	1794.	310.	409.	310.
537.7	-34.0	2894.	1794.	310.	409.	310.
549.9	-34.0	2817.	1794.	310.	409.	310.
552.4	-34.0	2802.	1794.	310.	409.	310.
588.5	-34.0	2712.	1794.	310.	409.	310.
588.6	-34.0	2712.	1794.	310.	409.	310.
607.0	-34.0	2726.	1794.	310.	409.	310.
614.9	-34.0	2732.	1794.	310.	409.	310.
633.4	-34.0	2802.	1794.	310.	409.	310.
639.2	-34.0	2814.	1794.	310.	409.	310.
653.1	-34.0	2894.	1794.	310.	409.	310.
654.0	-34.0	2912.	1794.	310.	409.	310.
656.4	-34.0	2960.	1841.	310.	409.	310.
700.0	-34.0	2963.	2396161.	310.	409.	310.

ASSUMED CRIT. PASSIVE LOC. 500.0 EL. -34.0 DP 42996. RP 10035.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
345.0	-34.0	121380.	41435.	0.	54494.	1.35
350.0	-34.0	120193.	42391.	0.	52495.	1.36
355.0	-34.0	117462.	43058.	0.	50512.	1.39
360.0	-34.0	113196.	43320.	0.	48545.	1.45
365.0	-34.0	107647.	42903.	0.	46594.	1.54
370.0	-34.0	101254.	41790.	0.	44660.	1.66

CRIT. ACTIVE LOC 345.0 EL -34.0 DA 121380. RA 41435.

DIS.	EL.	DP	RP	DB	RB	FS
500.0	-34.0	42996.	10035.	0.	54494.	1.35

* * STRATUM 10 ACT. WEDGE LOC. 350.0 EL. -42.0 PASS.WEDGE LOC. 500.0 EL. -42.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-42.0	3996.	0.	423.	841.	423.
8.6	-42.0	3997.	572122.	423.	841.	423.
43.1	-42.0	4005.	2480.	423.	841.	423.
80.3	-42.0	3985.	2484.	423.	841.	423.
107.9	-42.0	4009.	2501.	423.	841.	423.
128.6	-42.0	4033.	2518.	423.	841.	423.
154.9	-42.0	4127.	2583.	423.	841.	423.
166.7	-42.0	4164.	2608.	423.	841.	423.
166.7	-42.0	4164.	2608.	423.	841.	423.
168.0	-42.0	4195.	2625.	427.	842.	427.
180.9	-42.0	4418.	2625.	462.	856.	462.
183.1	-42.0	4458.	2625.	468.	858.	468.
194.8	-42.0	4895.	2625.	500.	870.	500.
200.0	-42.0	4910.	2625.	514.	875.	514.
208.0	-42.0	4883.	2625.	509.	872.	509.
220.5	-42.0	4979.	2625.	502.	867.	502.
222.0	-42.0	4988.	2625.	502.	866.	502.
236.0	-42.0	5086.	2437.	494.	860.	494.
238.2	-42.0	5102.	2408.	492.	859.	492.
246.0	-42.0	5136.	2371.	488.	856.	488.
256.5	-42.0	5184.	2322.	482.	852.	482.
270.5	-42.0	5332.	2324.	473.	847.	473.
273.0	-42.0	5356.	2325.	471.	846.	471.
294.8	-42.0	5462.	2328.	458.	839.	458.
309.2	-42.0	5909.	2330.	449.	834.	449.
317.7	-42.0	6158.	2332.	444.	831.	444.
322.7	-42.0	6154.	2333.	441.	829.	441.
327.7	-42.0	6151.	2333.	440.	828.	440.
327.7	-42.0	6151.	2333.	440.	828.	440.
335.5	-42.0	5920.	2335.	438.	827.	438.
354.0	-42.0	5342.	2338.	435.	825.	435.
359.8	-42.0	5159.	2338.	434.	824.	434.
367.4	-42.0	4880.	2340.	432.	823.	432.
377.0	-42.0	4776.	2341.	430.	822.	430.
380.7	-42.0	4756.	2362.	430.	822.	430.
400.3	-42.0	4700.	2354.	426.	819.	426.
420.5	-42.0	4640.	2354.	422.	816.	422.
426.9	-42.0	4626.	2341.	421.	816.	421.
440.6	-42.0	4586.	2339.	418.	814.	418.
450.0	-42.0	4556.	2344.	416.	813.	416.
485.8	-42.0	4453.	2337.	409.	808.	409.
492.3	-42.0	4435.	2336.	409.	808.	409.
492.4	-42.0	4434.	2336.	409.	808.	409.
509.2	-42.0	3791.	2333.	409.	808.	409.
510.9	-42.0	3790.	2333.	409.	808.	409.
535.9	-42.0	3781.	2322.	409.	808.	409.
537.6	-42.0	3743.	2294.	409.	808.	409.
537.7	-42.0	3742.	2294.	409.	808.	409.
549.9	-42.0	3665.	2294.	409.	808.	409.

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552.4	-42.0	3650.	2294.	409.	808.	409.
588.5	-42.0	3560.	2294.	409.	808.	409.
588.6	-42.0	3560.	2294.	409.	808.	409.
607.0	-42.0	3574.	2294.	409.	808.	409.
614.9	-42.0	3580.	2294.	409.	808.	409.
633.4	-42.0	3650.	2294.	409.	808.	409.
639.2	-42.0	3662.	2294.	409.	808.	409.
653.1	-42.0	3742.	2294.	409.	808.	409.
654.0	-42.0	3760.	2294.	409.	808.	409.
656.4	-42.0	3808.	2341.	409.	808.	409.
700.0	-42.0	3811.	2538743.	409.	808.	409.

ASSUMED CRIT. PASSIVE LOC. 500.0 EL. -42.0 DP 69845. RP 15851.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
350.0	-42.0	162645.	47082.	0.	63160.	1.36
355.0	-42.0	161081.	48126.	0.	60984.	1.37
360.0	-42.0	158081.	49040.	0.	58813.	1.40
365.0	-42.0	153345.	49482.	0.	56647.	1.46
370.0	-42.0	147201.	49570.	0.	54486.	1.55
375.0	-42.0	140421.	48692.	0.	52330.	1.66

CRIT. ACTIVE LOC 350.0 EL -42.0 DA 162645. RA 47082.

DIS.	EL.	DP	RP	DB	RB	FS
500.0	-42.0	69845.	15851.	0.	63160.	1.36

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```
"Reach 5c(2)-2nd Stage"
"PS to FS; LWL = GS"
20 10 1 40 1 0
11 5 2 1
214.16 377.29 454 500 533.33
0 62.4 0 0 62.4 0 0 62.4 0 0 62.4 0 0 62.4 0 0
23 115 0 0 115 0 0 115 0 0 115 0 0 115 0 0
23 102 0 0 102 0 0 102 0 0 102 0 0 102 0 0
30 122 0 0 122 0 0 122 0 0 122 0 0 122 0 0
23 87 0 0 89 0 0 94 0 0 96 0 0 90 0 0
23 87 0 0 89 0 0 94 0 0 96 0 0 90 0 0
23 100 0 0 99 0 0 98 0 0 97 0 0 90 0 0
23 100 0 0 100 0 0 101 0 0 102 0 0 100 0 0
23 118 0 0 116 0 0 114 0 0 113 0 0 122 0 0
23 106 0 0 109 0 0 113 0 0 116 0 0 105 0 0
23 106 0 0 106 0 0 105 0 0 105 0 0 105 0 0

0 -4.5 43.6 -4.54 46.8 -5.29 162.33 -5.3 164.09 -4.85
190.8 -4.74 207.6 0.88 332.6 4 372.29 14 382.29 14
405.16 8 492 5.2 505.16 5.5 516.9 1.81 519.05 1.53 532 0
533.33 -0.27 545.06 -0.68 571.42 -1.72 592.12 -1.99
619.75 -2.26 656.88 -2.03 691.42 -2.12 700 -2.13 9999.9 0

0 -4.5 43.6 -4.54 60.82 -8.55 66.64 -9 85.09 -10.86
92.97 -11.01 111.48 -11.38 147.64 -9 150.1 -8.43 164.09 -4.85
190.8 -4.74 207.6 0.88 332.6 4 372.29 14 382.29 14 405.16 8
492 5.2 505.16 5.5 516.9 1.81 519.05 1.53 532 0 533.33 -0.27
545.06 -0.68 571.42 -1.72 592.12 -1.99 619.75 -2.26
656.88 -2.03 691.42 -2.12 700 -2.13 9999.9 0

0 -4.5 43.6 -4.54 60.82 -8.55 66.64 -9 85.09 -10.86
92.97 -11.01 111.48 -11.38 147.64 -9 150.1 -8.43 164.09 -4.85
190.8 -4.74 250 -4.5 259.39 -4.57 273.13 -4.54 279.46 -4.34
299.7 -4.33 319.33 -4.21 322.96 -4.54 443.45 -4.85 454 -4.06
461.82 -3.47 464.01 -3 478 0 479.47 0.36 492 5.2 505.16 5.5
516.9 1.81 519.05 1.53 532 0 533.33 -0.27 545.06 -0.68
571.42 -1.72 592.12 -1.99 619.75 -2.26 656.88 -2.03
691.42 -2.12 700 -2.13 9999.9 0

0 -4.5 43.6 -4.54 60.82 -8.55 66.64 -9 85.09 -10.86
92.97 -11.01 111.48 -11.38 147.64 -9 150.1 -8.43 164.09 -4.85
190.8 -4.74 250 -4.5 259.39 -4.57 273.13 -4.54 279.46 -4.34
299.7 -4.33 319.33 -4.21 322.96 -4.54 443.45 -4.85 454 -4.06
461.82 -3.47 464.01 -3 478 0 532 0 533.33 -0.27 545.06 -0.68
571.42 -1.72 592.12 -1.99 619.75 -2.26 656.88 -2.03
691.42 -2.12 700 -2.13 9999.9 0

0 -4.5 43.6 -4.54 60.82 -8.55 66.64 -9 85.09 -10.86
92.97 -11.01 111.48 -11.38 147.64 -9 150.1 -8.43 164.09 -4.85
190.8 -4.74 250 -4.5 259.39 -4.57 273.13 -4.54 279.46 -4.34
299.7 -4.33 319.33 -4.21 322.96 -4.54 340.18 -8.55 346 -9
364.45 -10.86 372.33 -11.01 390.84 -11.38 427 -9
429.46 -8.43 443.45 -4.85 454 -4.06 461.82 -3.47 464.01 -3
478 0 532 0 533.33 -0.27 545.06 -0.68 571.42 -1.72
592.12 -1.99 619.75 -2.26 656.88 -2.03 691.42 -2.12 700 -2.13
9999.9 0

0 -4.6 43.6 -4.64 60.82 -8.65 66.64 -9.1 85.09 -10.96
92.97 -11.11 111.48 -11.48 147.64 -9.1 150.1 -8.53
164.09 -4.95 190.8 -4.84 250 -4.6 259.39 -4.67 273.13 -4.64
279.46 -4.44 299.7 -4.43 319.33 -4.31 322.96 -4.64
340.18 -8.65 346 -9.1 364.45 -10.96 372.33 -11.11
390.84 -11.48 427 -9.1 429.46 -8.53 443.45 -4.95 454 -4.16
461.82 -3.57 464.01 -3.1 478 -0.1 532 -0.1 533.33 -0.37
545.06 -0.78 571.42 -1.82 592.12 -2.09 619.75 -2.36
656.88 -2.13 691.42 -2.22 700 -2.23 9999.9 0

0 -9 700 -9 9999.9 0
0 -14 700 -14 9999.9 0
0 -30 700 -30 9999.9 0
0 -34 700 -34 9999.9 0
0 -42 700 -42 9999.9 0
0 -80 700 -80 9999.9 0

0 -4.5 43.6 -4.54 46 -5.3 162.4 -5.3 164.09 -4.85 190.8 -4.74 207.6 0.88
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207.75 -4.62 250 -4.5 259.39 -4.57 273.13 -4.54 279.46 -4.34
299.7 -4.33 319.33 -4.21 322.96 -4.54 443.45 -4.85 461.82 -3.47
464.01 -3 478 0 532 0 533.33 -0.27 545.06 -0.68 571.42 -1.72
592.12 -1.99 619.75 -2.26 656.88 -2.03 691.42 -2.12 700 -2.13
9999.9 0

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

6 390 -9 560 -9 1
560
7 390 -14 540 -14 1
540
8 395 -30 530 -30 1
530
9 400 -34 530 -34 1
530
10 400 -42 530 -42 1
520
```

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**** STABILITY WITH UPLIFT ****

"Reach 5c(2)-2nd Stage"
"PS to FS; LWL = GS"
12 PROFILES
5VERTICALS
UPLIFT WITH 1 PIEZOMETRIC GRADE LINES

* * STRATUM 6 ACT. WEDGE LOC. 390.0 EL. -9.0 PASS.WEDGE LOC. 560.0 EL. -9.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-9.0	391.	0.	166.	166.	166.
43.6	-9.0	388.	569454.	0.	0.	0.
46.0	-9.0	339.	0.	144.	144.	144.
46.8	-9.0	323.	231.	39.	39.	39.
60.8	-9.0	242.	231.	5.	5.	5.
66.6	-9.0	231.	231.	0.	0.	0.
FAILURE SURFACE IN STRATA 6 EL. -9.0 DIST. 66.6 STRENGTH .1						
85.1	-9.0	231.	231.	0.	999999.	0.
93.0	-9.0	231.	231.	0.	999999.	0.
111.5	-9.0	231.	231.	0.	999999.	0.
147.6	-9.0	231.	231.	0.	0.	0.
150.1	-9.0	245.	231.	6.	6.	6.
162.3	-9.0	322.	231.	39.	39.	39.
162.4	-9.0	324.	231.	39.	39.	39.
164.1	-9.0	361.	259.	43.	43.	43.
189.1	-9.0	370.	271.	42.	42.	42.
190.8	-9.0	371.	271.	42.	42.	42.
207.6	-9.0	1015.	274.	315.	315.	315.
207.8	-9.0	1015.	274.	315.	315.	315.
214.2	-9.0	1033.	275.	322.	322.	322.
250.0	-9.0	1134.	281.	362.	362.	362.
259.4	-9.0	1163.	277.	376.	376.	376.
273.1	-9.0	1203.	279.	392.	392.	392.
279.5	-9.0	1216.	291.	392.	392.	392.
299.7	-9.0	1275.	292.	417.	417.	417.
319.3	-9.0	1329.	299.	437.	437.	437.
323.0	-9.0	1348.	279.	454.	454.	454.
332.6	-9.0	1452.	277.	499.	499.	499.
340.2	-9.0	1731.	276.	618.	618.	618.
346.0	-9.0	1914.	275.	696.	696.	696.
FAILURE SURFACE IN STRATA 6 EL. -9.0 DIST. 346.0 STRENGTH 695.8						
364.5	-9.0	2449.	272.	924.	999999.	924.
372.3	-9.0	2675.	271.	1021.	999999.	1021.
372.3	-9.0	2675.	271.	1021.	999999.	1021.
377.3	-9.0	2675.	270.	1021.	999999.	1021.
382.3	-9.0	2675.	269.	1021.	999999.	1021.
390.8	-9.0	2417.	268.	912.	999999.	912.
405.2	-9.0	1985.	266.	730.	999999.	730.
SHEAR STRENGTHS ARE EQUAL 696.7 AT DIST. 427.0						
427.0	-9.0	1903.	262.	697.	697.	697.
429.5	-9.0	1877.	262.	686.	686.	686.
443.5	-9.0	1723.	259.	621.	621.	621.
454.0	-9.0	1670.	309.	578.	578.	578.
461.8	-9.0	1631.	346.	545.	545.	545.
464.0	-9.0	1613.	375.	526.	526.	526.
478.0	-9.0	1505.	563.	400.	400.	400.
479.5	-9.0	1496.	563.	396.	396.	396.
492.0	-9.0	1391.	563.	352.	352.	352.
500.0	-9.0	1413.	563.	361.	361.	361.
505.2	-9.0	1416.	563.	362.	362.	362.
516.9	-9.0	1021.	563.	195.	195.	195.
519.0	-9.0	989.	563.	181.	181.	181.
532.0	-9.0	812.	563.	106.	106.	106.
533.3	-9.0	786.	546.	102.	102.	102.
533.3	-9.0	786.	546.	102.	102.	102.

545.1	-9.0	749.	520.	97.	97.	97.
571.4	-9.0	655.	455.	85.	85.	85.
592.1	-9.0	631.	438.	82.	82.	82.
619.8	-9.0	607.	421.	79.	79.	79.
656.9	-9.0	627.	436.	81.	81.	81.
691.4	-9.0	619.	430.	80.	80.	80.
700.0	-9.0	618.	429.	80.	80.	80.

ASSUMED CRIT. PASSIVE LOC. 560.0 EL. -9.0 DP 2538. RP 995.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
390.0	-9.0	28846.	16423.	0.	75538.	3.53
395.0	-9.0	26428.	15038.	0.	71083.	3.65
400.0	-9.0	23133.	13163.	0.	66946.	3.94
405.0	-9.0	19960.	11361.	0.	63128.	4.33
410.0	-9.0	17565.	10056.	0.	59497.	4.69
415.0	-9.0	16405.	9453.	0.	55904.	4.78

CRIT. ACTIVE LOC 390.0 EL -9.0 DA 28846. RA 16423.

DIS.	EL.	DP	RP	DB	RB	FS
560.0	-9.0	2538.	995.	0.	75538.	3.53

* * STRATUM 7 ACT. WEDGE LOC. 390.0 EL. -14.0 PASS.WEDGE LOC. 540.0 EL. -14.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-14.0	891.	0.	378.	378.	378.
43.6	-14.0	888.	569767.	0.	0.	0.
46.0	-14.0	839.	286.	235.	235.	235.
46.8	-14.0	823.	544.	118.	118.	118.
60.8	-14.0	742.	544.	84.	84.	84.
66.6	-14.0	730.	544.	79.	79.	79.
85.1	-14.0	660.	544.	49.	49.	49.
93.0	-14.0	654.	544.	47.	47.	47.
111.5	-14.0	640.	544.	41.	41.	41.
147.6	-14.0	730.	544.	79.	79.	79.
150.1	-14.0	745.	544.	85.	85.	85.
162.3	-14.0	822.	544.	118.	118.	118.
162.4	-14.0	824.	544.	119.	119.	119.
164.1	-14.0	861.	572.	123.	123.	123.
189.1	-14.0	870.	583.	122.	122.	122.
190.8	-14.0	871.	583.	122.	122.	122.
207.6	-14.0	1515.	586.	394.	394.	394.
207.8	-14.0	1515.	586.	394.	394.	394.
214.2	-14.0	1533.	587.	401.	401.	401.
250.0	-14.0	1633.	594.	441.	441.	441.
259.4	-14.0	1662.	589.	455.	455.	455.
273.1	-14.0	1701.	591.	471.	471.	471.
279.5	-14.0	1714.	604.	471.	471.	471.
299.7	-14.0	1772.	604.	496.	496.	496.
319.3	-14.0	1826.	612.	515.	515.	515.
323.0	-14.0	1845.	591.	532.	532.	532.
332.6	-14.0	1948.	590.	577.	577.	577.
340.2	-14.0	2227.	588.	695.	695.	695.
346.0	-14.0	2409.	588.	773.	773.	773.
364.5	-14.0	2986.	585.	1019.	1019.	1019.
372.3	-14.0	3216.	583.	1117.	1117.	1117.
372.3	-14.0	3216.	583.	1117.	1117.	1117.
377.3	-14.0	3218.	583.	1119.	1119.	1119.
382.3	-14.0	3220.	582.	1120.	1120.	1120.

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390.8	-14.0	2965.	580.	1012.	1012.	1012.
405.2	-14.0	2511.	578.	820.	820.	820.
427.0	-14.0	2394.	575.	773.	773.	773.
429.5	-14.0	2369.	574.	762.	762.	762.
443.5	-14.0	2214.	572.	697.	697.	697.
454.0	-14.0	2160.	621.	653.	653.	653.
461.8	-14.0	2120.	658.	620.	620.	620.
464.0	-14.0	2102.	688.	601.	601.	601.
478.0	-14.0	1993.	875.	474.	474.	474.
479.5	-14.0	1983.	875.	470.	470.	470.
492.0	-14.0	1877.	875.	425.	425.	425.
500.0	-14.0	1898.	875.	434.	434.	434.
505.2	-14.0	1896.	875.	433.	433.	433.
516.9	-14.0	1488.	875.	260.	260.	260.
519.0	-14.0	1454.	875.	246.	246.	246.
532.0	-14.0	1263.	875.	165.	165.	165.
533.3	-14.0	1236.	858.	160.	160.	160.
533.3	-14.0	1236.	858.	160.	160.	160.
545.1	-14.0	1199.	832.	155.	155.	155.
571.4	-14.0	1105.	767.	143.	143.	143.
592.1	-14.0	1081.	751.	140.	140.	140.
619.8	-14.0	1057.	734.	137.	137.	137.
656.9	-14.0	1077.	748.	140.	140.	140.
691.4	-14.0	1069.	742.	139.	139.	139.
700.0	-14.0	1068.	973153.	0.	0.	0.

ASSUMED CRIT. PASSIVE LOC. 540.0 EL. -14.0 DP 7758. RP 3042.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
390.0	-14.0	43833.	24659.	0.	84952.	3.12
395.0	-14.0	41371.	23149.	0.	80003.	3.16
400.0	-14.0	37775.	20961.	0.	75387.	3.31
405.0	-14.0	33655.	18488.	0.	71107.	3.58
410.0	-14.0	30250.	16442.	0.	67031.	3.85
415.0	-14.0	28144.	15191.	0.	63010.	3.99

CRIT. ACTIVE LOC 390.0 EL -14.0 DA 43833. RA 24659.

DIS.	EL.	DP	RP	DB	RB	FS
540.0	-14.0	7758.	3042.	0.	84952.	3.12

* * STRATUM 8 ACT. WEDGE LOC. 395.0 EL. -30.0 PASS.WEDGE LOC. 530.0 EL. -30.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-30.0	2491.	0.	1058.	1058.	1058.
43.6	-30.0	2488.	570767.	0.	0.	0.
46.0	-30.0	2439.	1286.	489.	489.	489.
46.8	-30.0	2423.	1544.	373.	373.	373.
60.8	-30.0	2342.	1544.	339.	339.	339.
66.6	-30.0	2330.	1544.	334.	334.	334.
85.1	-30.0	2260.	1544.	304.	304.	304.
93.0	-30.0	2254.	1544.	302.	302.	302.
111.5	-30.0	2240.	1544.	296.	296.	296.
147.6	-30.0	2330.	1544.	334.	334.	334.
150.1	-30.0	2345.	1544.	340.	340.	340.
162.3	-30.0	2422.	1544.	373.	373.	373.
162.4	-30.0	2424.	1544.	373.	373.	373.
164.1	-30.0	2461.	1572.	377.	377.	377.
189.1	-30.0	2470.	1583.	376.	376.	376.
190.8	-30.0	2471.	1583.	377.	377.	377.

207.6	-30.0	3115.	1586.	649.	649.	649.
207.8	-30.0	3115.	1586.	649.	649.	649.
214.2	-30.0	3133.	1587.	656.	656.	656.
250.0	-30.0	3233.	1594.	696.	696.	696.
259.4	-30.0	3262.	1589.	710.	710.	710.
273.1	-30.0	3301.	1591.	726.	726.	726.
279.5	-30.0	3314.	1604.	726.	726.	726.
299.7	-30.0	3372.	1604.	750.	750.	750.
319.3	-30.0	3426.	1612.	770.	770.	770.
323.0	-30.0	3445.	1591.	787.	787.	787.
332.6	-30.0	3548.	1590.	831.	831.	831.
340.2	-30.0	3827.	1588.	950.	950.	950.
346.0	-30.0	4009.	1588.	1028.	1028.	1028.
364.5	-30.0	4586.	1585.	1274.	1274.	1274.
372.3	-30.0	4816.	1583.	1372.	1372.	1372.
372.3	-30.0	4816.	1583.	1372.	1372.	1372.
377.3	-30.0	4818.	1583.	1373.	1373.	1373.
382.3	-30.0	4821.	1582.	1375.	1375.	1375.
390.8	-30.0	4568.	1580.	1268.	1268.	1268.
405.2	-30.0	4116.	1578.	1078.	1078.	1078.
427.0	-30.0	4005.	1575.	1032.	1032.	1032.
429.5	-30.0	3980.	1574.	1021.	1021.	1021.
443.5	-30.0	3827.	1572.	957.	957.	957.
454.0	-30.0	3776.	1621.	915.	915.	915.
461.8	-30.0	3738.	1658.	883.	883.	883.
464.0	-30.0	3722.	1688.	863.	863.	863.
478.0	-30.0	3617.	1875.	739.	739.	739.
479.5	-30.0	3608.	1875.	736.	736.	736.
492.0	-30.0	3506.	1875.	692.	692.	692.
500.0	-30.0	3530.	1875.	703.	703.	703.
505.2	-30.0	3523.	1875.	700.	700.	700.
516.9	-30.0	3104.	1875.	522.	522.	522.
519.0	-30.0	3068.	1875.	506.	506.	506.
532.0	-30.0	2865.	1875.	420.	420.	420.
533.3	-30.0	2836.	1858.	415.	415.	415.
533.3	-30.0	2836.	1858.	415.	415.	415.
545.1	-30.0	2799.	1832.	410.	410.	410.
571.4	-30.0	2705.	1767.	398.	398.	398.
592.1	-30.0	2681.	1751.	395.	395.	395.
619.8	-30.0	2657.	1734.	392.	392.	392.
656.9	-30.0	2677.	1748.	394.	394.	394.
691.4	-30.0	2669.	1742.	393.	393.	393.
700.0	-30.0	2668.	1491512.	0.	0.	0.

ASSUMED CRIT. PASSIVE LOC. 530.0 EL. -30.0 DP 39299. RP 16493.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
395.0	-30.0	105319.	49545.	0.	113706.	2.72
400.0	-30.0	102340.	47836.	0.	107809.	2.73
405.0	-30.0	97498.	45008.	0.	102244.	2.81
410.0	-30.0	91973.	41741.	0.	96881.	2.94
415.0	-30.0	86778.	38671.	0.	91570.	3.09
420.0	-30.0	82803.	36305.	0.	86313.	3.20

CRIT. ACTIVE LOC 395.0 EL -30.0 DA 105319. RA 49545.

DIS.	EL.	DP	RP	DB	RB	FS
530.0	-30.0	39299.	16493.	0.	113706.	2.72

* * STRATUM 9 ACT. WEDGE LOC. 400.0 EL. -34.0 PASS.WEDGE LOC. 530.0 EL. -34.0

ASSUMED FAILURE SURFACE DATA

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DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-34.0	2963.	0.	1258.	1258.	1258.
43.6	-34.0	2960.	571017.	0.	0.	0.
46.0	-34.0	2911.	1536.	584.	584.	584.
46.8	-34.0	2895.	1794.	467.	467.	467.
60.8	-34.0	2814.	1794.	433.	433.	433.
66.6	-34.0	2802.	1794.	428.	428.	428.
85.1	-34.0	2732.	1794.	398.	398.	398.
93.0	-34.0	2726.	1794.	396.	396.	396.
111.5	-34.0	2712.	1794.	390.	390.	390.
147.6	-34.0	2802.	1794.	428.	428.	428.
150.1	-34.0	2817.	1794.	434.	434.	434.
162.3	-34.0	2894.	1794.	467.	467.	467.
162.4	-34.0	2896.	1794.	468.	468.	468.
164.1	-34.0	2933.	1822.	472.	472.	472.
189.1	-34.0	2942.	1833.	471.	471.	471.
190.8	-34.0	2943.	1833.	471.	471.	471.
207.6	-34.0	3587.	1836.	743.	743.	743.
207.8	-34.0	3587.	1836.	743.	743.	743.
214.2	-34.0	3605.	1837.	750.	750.	750.
250.0	-34.0	3703.	1844.	789.	789.	789.
259.4	-34.0	3732.	1839.	803.	803.	803.
273.1	-34.0	3770.	1841.	819.	819.	819.
279.5	-34.0	3783.	1854.	819.	819.	819.
299.7	-34.0	3840.	1854.	843.	843.	843.
319.3	-34.0	3893.	1862.	862.	862.	862.
323.0	-34.0	3912.	1841.	879.	879.	879.
332.6	-34.0	4015.	1840.	923.	923.	923.
340.2	-34.0	4293.	1838.	1042.	1042.	1042.
346.0	-34.0	4475.	1838.	1119.	1119.	1119.
364.5	-34.0	5050.	1835.	1365.	1365.	1365.
372.3	-34.0	5280.	1833.	1463.	1463.	1463.
372.3	-34.0	5280.	1833.	1463.	1463.	1463.
377.3	-34.0	5282.	1833.	1464.	1464.	1464.
382.3	-34.0	5284.	1832.	1465.	1465.	1465.
390.8	-34.0	5031.	1830.	1358.	1358.	1358.
405.2	-34.0	4578.	1828.	1167.	1167.	1167.
427.0	-34.0	4464.	1825.	1120.	1120.	1120.
429.5	-34.0	4438.	1824.	1110.	1110.	1110.
443.5	-34.0	4285.	1822.	1045.	1045.	1045.
454.0	-34.0	4232.	1871.	1002.	1002.	1002.
461.8	-34.0	4194.	1908.	970.	970.	970.
464.0	-34.0	4177.	1938.	951.	951.	951.
478.0	-34.0	4071.	2125.	826.	826.	826.
479.5	-34.0	4062.	2125.	822.	822.	822.
492.0	-34.0	3959.	2125.	779.	779.	779.
500.0	-34.0	3982.	2125.	788.	788.	788.
505.2	-34.0	3981.	2125.	788.	788.	788.
516.9	-34.0	3574.	2125.	615.	615.	615.
519.0	-34.0	3540.	2125.	601.	601.	601.
532.0	-34.0	3351.	2125.	521.	521.	521.
533.3	-34.0	3324.	2108.	516.	516.	516.
533.3	-34.0	3324.	2108.	516.	516.	516.
545.1	-34.0	3287.	2082.	511.	511.	511.
571.4	-34.0	3193.	2017.	499.	499.	499.
592.1	-34.0	3169.	2001.	496.	496.	496.
619.8	-34.0	3145.	1984.	493.	493.	493.
656.9	-34.0	3165.	1998.	495.	495.	495.
691.4	-34.0	3157.	1992.	494.	494.	494.
700.0	-34.0	3156.	3061926.	0.	0.	0.

ASSUMED CRIT. PASSIVE LOC. 530.0 EL. -34.0 DP 51080. RP 21975.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
400.0	-34.0	122409.	55316.	0.	119357.	2.76
405.0	-34.0	117791.	52656.	0.	113344.	2.82
410.0	-34.0	112229.	49381.	0.	107533.	2.93
415.0	-34.0	106597.	46061.	0.	101859.	3.03

420.0	-34.0	101859.	43254.	0.	96073.	3.18
425.0	-34.0	98396.	41213.	0.	90424.	3.25

CRIT. ACTIVE LOC 400.0 EL -34.0 DA 122409. RA 55316.

DIS.	EL.	DP	RP	DB	RB	FS
530.0	-34.0	51080.	21975.	0.	119357.	2.76

* * STRATUM 10 ACT. WEDGE LOC. 400.0 EL. -42.0 PASS.WEDGE LOC. 530.0 EL. -42.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-42.0	3811.	0.	1618.	1618.	1618.
43.6	-42.0	3808.	571517.	0.	0.	0.
46.0	-42.0	3759.	2036.	731.	731.	731.
46.8	-42.0	3743.	2294.	615.	615.	615.
60.8	-42.0	3662.	2294.	581.	581.	581.
66.6	-42.0	3650.	2294.	576.	576.	576.
85.1	-42.0	3580.	2294.	546.	546.	546.
93.0	-42.0	3574.	2294.	544.	544.	544.
111.5	-42.0	3560.	2294.	538.	538.	538.
147.6	-42.0	3650.	2294.	576.	576.	576.
150.1	-42.0	3665.	2294.	582.	582.	582.
162.3	-42.0	3742.	2294.	615.	615.	615.
162.4	-42.0	3744.	2294.	615.	615.	615.
164.1	-42.0	3781.	2322.	619.	619.	619.
189.1	-42.0	3790.	2333.	618.	618.	618.
190.8	-42.0	3791.	2333.	619.	619.	619.
207.6	-42.0	4435.	2336.	891.	891.	891.
207.8	-42.0	4435.	2336.	891.	891.	891.
214.2	-42.0	4453.	2337.	898.	898.	898.
250.0	-42.0	4556.	2344.	939.	939.	939.
259.4	-42.0	4586.	2339.	954.	954.	954.
273.1	-42.0	4627.	2341.	970.	970.	970.
279.5	-42.0	4640.	2354.	971.	971.	971.
299.7	-42.0	4700.	2354.	996.	996.	996.
319.3	-42.0	4756.	2362.	1016.	1016.	1016.
323.0	-42.0	4776.	2341.	1033.	1033.	1033.
332.6	-42.0	4880.	2340.	1078.	1078.	1078.
340.2	-42.0	5159.	2338.	1197.	1197.	1197.
346.0	-42.0	5342.	2338.	1275.	1275.	1275.
364.5	-42.0	5920.	2335.	1522.	1522.	1522.
372.3	-42.0	6151.	2333.	1621.	1621.	1621.
372.3	-42.0	6151.	2333.	1621.	1621.	1621.
377.3	-42.0	6154.	2333.	1622.	1622.	1622.
382.3	-42.0	6158.	2332.	1624.	1624.	1624.
390.8	-42.0	5908.	2330.	1519.	1519.	1519.
405.2	-42.0	5461.	2328.	1330.	1330.	1330.
427.0	-42.0	5356.	2325.	1287.	1287.	1287.
429.5	-42.0	5332.	2324.	1277.	1277.	1277.
443.5	-42.0	5184.	2322.	1215.	1215.	1215.
454.0	-42.0	5136.	2371.	1174.	1174.	1174.
461.8	-42.0	5102.	2408.	1143.	1143.	1143.
464.0	-42.0	5086.	2438.	1124.	1124.	1124.
478.0	-42.0	4987.	2625.	1003.	1003.	1003.
479.5	-42.0	4979.	2625.	999.	999.	999.
492.0	-42.0	4883.	2625.	958.	958.	958.
500.0	-42.0	4910.	2625.	970.	970.	970.
505.2	-42.0	4895.	2625.	964.	964.	964.
516.9	-42.0	4458.	2625.	778.	778.	778.
519.0	-42.0	4418.	2625.	761.	761.	761.
532.0	-42.0	4195.	2625.	666.	666.	666.
533.3	-42.0	4164.	2608.	660.	660.	660.
533.3	-42.0	4164.	2608.	660.	660.	660.
545.1	-42.0	4127.	2582.	656.	656.	656.
571.4	-42.0	4033.	2517.	643.	643.	643.
592.1	-42.0	4009.	2501.	640.	640.	640.

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619.8	-42.0	3985.	2484.	637.	637.	637.
656.9	-42.0	4005.	2498.	640.	640.	640.
691.4	-42.0	3997.	2492.	639.	639.	639.
700.0	-42.0	3996.	3427983.	0.	0.	0.

ASSUMED CRIT. PASSIVE LOC. 530.0 EL. -42.0 DP 79857. RP 35693.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
400.0	-42.0	167005.	71008.	0.	141428.	2.85
405.0	-42.0	163476.	69050.	0.	134603.	2.86
410.0	-42.0	158182.	66016.	0.	127976.	2.93
415.0	-42.0	152427.	62642.	0.	121398.	3.03
420.0	-42.0	146582.	59206.	0.	114870.	3.14
425.0	-42.0	141569.	56247.	0.	108391.	3.25

CRIT. ACTIVE LOC 400.0 EL -42.0 DA 167005. RA 71008.

DIS.	EL.	DP	RP	DB	RB	FS
520.0	-42.0	81775.	37161.	0.	134252.	2.84

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```
"Reach 5c(2)-2nd Stage"
"FS to PS; LWL = GS"
20 10 1 240 1 0
11 5 2 1
166.67 200 246 322.71 485.84
0 62.4 0 0 62.4 0 0 62.4 0 0 62.4 0 0 62.4 0 0
23 115 0 0 115 0 0 115 0 0 115 0 0 115 0 0
23 102 0 0 102 0 0 102 0 0 102 0 0 102 0 0
30 122 0 0 122 0 0 122 0 0 122 0 0 122 0 0
23 90 0 0 96 0 0 94 0 0 89 0 0 87 0 0
23 90 0 0 96 0 0 94 0 0 89 0 0 87 0 0
23 90 0 0 97 0 0 98 0 0 99 0 0 100 0 0
23 100 0 0 102 0 0 101 0 0 100 0 0 100 0 0
23 122 0 0 113 0 0 114 0 0 116 0 0 118 0 0
23 105 0 0 116 0 0 113 0 0 109 0 0 106 0 0
23 105 0 0 105 0 0 105 0 0 106 0 0 106 0 0

0 -2.13 8.58 -2.12 43.12 -2.03 80.25 -2.26 107.88 -1.99
128.58 -1.72 154.94 -0.68 166.67 -0.27 168 0 180.95 1.53
183.1 1.81 194.84 5.5 208 5.2 294.84 8 317.71 14 327.71 14
367.4 4 492.4 0.875 509.2 -4.74 535.91 -4.85 537.67 -5.3
653.14 -5.3 656.4 -4.54 700 -4.5 9999.9 0

0 -2.13 8.58 -2.12 43.12 -2.03 80.25 -2.26 107.88 -1.99
128.58 -1.72 154.94 -0.68 166.67 -0.27 168 0 180.95 1.53
183.1 1.81 194.84 5.5 208 5.2 294.84 8 317.71 14
327.71 14 367.4 4 492.4 0.875 509.2 -4.74 535.91 -4.85
549.9 -8.43 552.36 -9 588.58 -11.38 607.03 -11.01
614.91 -10.86 633.36 -9 639.18 -8.55 656.4 -4.54 700 -4.5
9999.9 0

0 -2.13 8.58 -2.12 43.12 -2.03 80.25 -2.26 107.88 -1.99
128.58 -1.72 154.94 -0.68 166.67 -0.27 168 0 180.95 1.53
183.1 1.81 194.84 5.5 208 5.2 220.53 0.36 222 0 235.99 -3
238.18 -3.47 246 -4.06 256.55 -4.85 377.04 -4.54
380.67 -4.21 400.3 -4.33 420.54 -4.34 426.87 -4.54
440.61 -4.57 450 -4.5 509.2 -4.74 535.91 -4.85 549.9 -8.43
552.36 -9 588.52 -11.38 607.03 -11.01 614.91 -10.86
633.36 -9 639.18 -8.55 656.4 -4.54 700 -4.5 9999.9 0

0 -2.13 8.58 -2.12 43.12 -2.03 80.25 -2.26 107.88 -1.99
128.58 -1.72 154.94 -0.68 166.67 -0.27 168 0 222 0 235.99 -3
238.18 -3.47 246 -4.06 256.55 -4.85 377.04 -4.54 380.67 -4.21
400.3 -4.33 420.54 -4.34 426.87 -4.54 440.61 -4.57 450 -4.5
509.2 -4.74 535.91 -4.85 549.9 -8.43 552.36 -9 588.52 -11.38
607.03 -11.01 614.91 -10.86 633.36 -9 639.18 -8.55
656.4 -4.54 700 -4.5 9999.9 0

0 -2.13 8.58 -2.12 43.12 -2.03 80.25 -2.26 107.88 -1.99
128.58 -1.72 154.94 -0.68 166.67 -0.27 168 0 222 0 235.99 -3
238.18 -3.47 246 -4.06 256.55 -4.85 270.54 -8.43 273 -9
309.16 -11.38 327.67 -11.01 335.55 -10.86 354 -9
359.82 -8.55 377.04 -4.54 380.67 -4.21 400.3 -4.33
420.54 -4.34 426.87 -4.54 440.61 -4.57 450 -4.5 509.2 -4.74
535.91 -4.85 549.9 -8.43 552.36 -9 588.52 -11.38 607.03 -11.01
614.91 -10.86 633.36 -9 639.18 -8.55 656.4 -4.54 700 -4.5
9999.9 0

0 -2.23 8.58 -2.22 43.12 -2.13 80.25 -2.36 107.88 -2.09
128.58 -1.82 154.94 -0.78 166.67 -0.37 168 -0.1 222 -0.1
235.99 -3.1 238.18 -3.57 246 -4.16 256.55 -4.95 270.54 -8.53
273 -9.1 309.16 -11.48 327.67 -11.11 335.55 -10.96 354 -9.1
359.82 -8.65 377.04 -4.64 380.67 -4.31 400.3 -4.43
420.54 -4.44 426.87 -4.64 440.61 -4.67 450 -4.6 509.2 -4.84
535.91 -4.95 549.9 -8.53 552.36 -9.1 588.52 -11.48
607.03 -11.11 614.91 -10.96 633.36 -9.1 639.18 -8.65
656.4 -4.64 700 -4.6 9999.9 0

0 -9 700 -9 9999.9 0
0 -14 700 -14 9999.9 0
0 -30 700 -30 9999.9 0
0 -34 700 -34 9999.9 0
0 -42 700 -42 9999.9 0
0 -80 700 -80 9999.9 0
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0 -2.13 8.58 -2.12 43.12 -2.03 80.25 -2.26 107.88 -1.99
128.58 -1.72 154.94 -0.68 166.67 -0.27 168 0 222 0 235.99 -3
238.18 -3.47 256.55 -4.85 377.04 -4.54 380.67 -4.21
400.3 -4.33 420.54 -4.34 426.87 -4.54 440.61 -4.57 450 -4.5
492.25 -4.62 510.91 -4.67 535.91 -4.85 537.6 -5.3 654 -5.3
656.4 -4.54 700 -4.5 9999.9 0

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

6 335 -9 510 -9 1
510
7 335 -14 510 -14 1
510
8 345 -30 510 -30 1
510
9 345 -34 510 -34 1
510
10 350 -42 510 -42 1
510
```

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**** STABILITY WITH UPLIFT ****

"Reach 5c(2)-2nd Stage"
"FS to PS; LWL = GS"
12 PROFILES
5VERTICALS
UPLIFT WITH 1 PIEZOMETRIC GRADE LINES

* * STRATUM 6 ACT. WEDGE LOC. 335.0 EL. -9.0 PASS.WEDGE LOC. 510.0 EL. -9.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-9.0	618.	0.	262.	262.	262.
8.6	-9.0	619.	570059.	0.	0.	0.
43.1	-9.0	627.	418.	89.	89.	89.
80.3	-9.0	607.	421.	79.	79.	79.
107.9	-9.0	631.	438.	82.	82.	82.
128.6	-9.0	655.	455.	85.	85.	85.
154.9	-9.0	749.	520.	97.	97.	97.
166.7	-9.0	786.	546.	102.	102.	102.
166.7	-9.0	786.	546.	102.	102.	102.
168.0	-9.0	812.	563.	106.	106.	106.
180.9	-9.0	989.	563.	181.	181.	181.
183.1	-9.0	1022.	563.	195.	195.	195.
194.8	-9.0	1417.	563.	363.	363.	363.
200.0	-9.0	1413.	563.	361.	361.	361.
208.0	-9.0	1391.	563.	352.	352.	352.
220.5	-9.0	1496.	563.	396.	396.	396.
222.0	-9.0	1505.	563.	400.	400.	400.
236.0	-9.0	1613.	375.	526.	526.	526.
238.2	-9.0	1631.	346.	545.	545.	545.
246.0	-9.0	1670.	309.	578.	578.	578.
256.5	-9.0	1723.	259.	621.	621.	621.
270.5	-9.0	1877.	262.	686.	686.	686.
273.0	-9.0	1903.	262.	697.	697.	697.
FAILURE SURFACE IN STRATA 6 EL. -9.0 DIST. 273.0 STRENGTH 696.7						
294.8	-9.0	1985.	266.	730.	999999.	730.
309.2	-9.0	2417.	268.	912.	999999.	912.
317.7	-9.0	2675.	269.	1021.	999999.	1021.
322.7	-9.0	2675.	270.	1021.	999999.	1021.
327.7	-9.0	2675.	271.	1021.	999999.	1021.
327.7	-9.0	2675.	271.	1021.	999999.	1021.
335.5	-9.0	2448.	272.	924.	999999.	924.
SHEAR STRENGTHS ARE EQUAL 695.6 AT DIST. 354.0						
354.0	-9.0	1914.	275.	696.	696.	696.
359.8	-9.0	1730.	276.	617.	617.	617.
367.4	-9.0	1452.	277.	499.	499.	499.
377.0	-9.0	1348.	279.	454.	454.	454.
380.7	-9.0	1329.	299.	437.	437.	437.
400.3	-9.0	1275.	292.	417.	417.	417.
420.5	-9.0	1215.	291.	392.	392.	392.
426.9	-9.0	1202.	279.	392.	392.	392.
440.6	-9.0	1163.	277.	376.	376.	376.
450.0	-9.0	1133.	281.	362.	362.	362.
485.8	-9.0	1033.	275.	322.	322.	322.
492.3	-9.0	1015.	274.	315.	315.	315.
492.4	-9.0	1014.	274.	314.	314.	314.
509.2	-9.0	371.	271.	42.	42.	42.
510.9	-9.0	370.	271.	42.	42.	42.
535.9	-9.0	361.	259.	43.	43.	43.
537.6	-9.0	323.	231.	39.	39.	39.
537.7	-9.0	322.	231.	38.	38.	38.
549.9	-9.0	245.	231.	6.	6.	6.
552.4	-9.0	231.	231.	0.	0.	0.
588.5	-9.0	231.	231.	0.	999999.	0.
588.6	-9.0	231.	231.	0.	999999.	0.
607.0	-9.0	231.	231.	0.	999999.	0.

614.9	-9.0	231.	231.	0.	999999.	0.
633.4	-9.0	231.	231.	0.	0.	0.
639.2	-9.0	242.	231.	5.	5.	5.
653.1	-9.0	322.	231.	39.	39.	39.
654.0	-9.0	340.	231.	46.	46.	46.
656.4	-9.0	388.	279.	46.	46.	46.
700.0	-9.0	391.	281.	47.	47.	47.

ASSUMED CRIT. PASSIVE LOC. 510.0 EL. -9.0 DP 783. RP 260.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
335.0	-9.0	29109.	16693.	0.	74863.	3.24
340.0	-9.0	26899.	15453.	0.	70366.	3.30
345.0	-9.0	23771.	13697.	0.	66177.	3.49
350.0	-9.0	20694.	11969.	0.	62297.	3.74
355.0	-9.0	17823.	10354.	0.	58727.	4.07
360.0	-9.0	15157.	8741.	0.	55485.	4.49

CRIT. ACTIVE LOC 335.0 EL -9.0 DA 29109. RA 16693.

DIS.	EL.	DP	RP	DB	RB	FS
510.0	-9.0	783.	260.	0.	74863.	3.24

* * STRATUM 7 ACT. WEDGE LOC. 335.0 EL. -14.0 PASS.WEDGE LOC. 510.0 EL. -14.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-14.0	1068.	0.	453.	453.	453.
8.6	-14.0	1069.	570372.	0.	0.	0.
43.1	-14.0	1077.	730.	147.	147.	147.
80.3	-14.0	1057.	734.	137.	137.	137.
107.9	-14.0	1081.	751.	140.	140.	140.
128.6	-14.0	1105.	768.	143.	143.	143.
154.9	-14.0	1199.	833.	155.	155.	155.
166.7	-14.0	1236.	858.	160.	160.	160.
166.7	-14.0	1236.	858.	160.	160.	160.
168.0	-14.0	1264.	875.	165.	165.	165.
180.9	-14.0	1454.	875.	246.	246.	246.
183.1	-14.0	1489.	875.	261.	261.	261.
194.8	-14.0	1896.	875.	433.	433.	433.
200.0	-14.0	1898.	875.	434.	434.	434.
208.0	-14.0	1877.	875.	425.	425.	425.
220.5	-14.0	1983.	875.	470.	470.	470.
222.0	-14.0	1993.	875.	474.	474.	474.
236.0	-14.0	2102.	687.	601.	601.	601.
238.2	-14.0	2120.	658.	620.	620.	620.
246.0	-14.0	2160.	621.	653.	653.	653.
256.5	-14.0	2214.	572.	697.	697.	697.
270.5	-14.0	2369.	574.	762.	762.	762.
273.0	-14.0	2395.	575.	773.	773.	773.
294.8	-14.0	2511.	578.	821.	821.	821.
309.2	-14.0	2966.	580.	1013.	1013.	1013.
317.7	-14.0	3220.	582.	1120.	1120.	1120.
322.7	-14.0	3218.	583.	1119.	1119.	1119.
327.7	-14.0	3216.	583.	1117.	1117.	1117.
327.7	-14.0	3215.	583.	1117.	1117.	1117.
335.5	-14.0	2985.	585.	1019.	1019.	1019.
354.0	-14.0	2409.	588.	773.	773.	773.
359.8	-14.0	2226.	588.	695.	695.	695.
367.4	-14.0	1948.	590.	577.	577.	577.
377.0	-14.0	1844.	591.	532.	532.	532.

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380.7	-14.0	1826.	612.	515.	515.	515.
400.3	-14.0	1772.	604.	496.	496.	496.
420.5	-14.0	1713.	604.	471.	471.	471.
426.9	-14.0	1701.	591.	471.	471.	471.
440.6	-14.0	1662.	589.	455.	455.	455.
450.0	-14.0	1632.	594.	441.	441.	441.
485.8	-14.0	1533.	587.	401.	401.	401.
492.3	-14.0	1515.	586.	394.	394.	394.
492.4	-14.0	1514.	586.	394.	394.	394.
509.2	-14.0	871.	583.	122.	122.	122.
510.9	-14.0	870.	583.	122.	122.	122.
535.9	-14.0	861.	572.	123.	123.	123.
537.6	-14.0	823.	544.	119.	119.	119.
537.7	-14.0	822.	544.	118.	118.	118.
549.9	-14.0	745.	544.	85.	85.	85.
552.4	-14.0	730.	544.	79.	79.	79.
588.5	-14.0	640.	544.	41.	41.	41.
588.6	-14.0	640.	544.	41.	41.	41.
607.0	-14.0	654.	544.	47.	47.	47.
614.9	-14.0	660.	544.	49.	49.	49.
633.4	-14.0	730.	544.	79.	79.	79.
639.2	-14.0	742.	544.	84.	84.	84.
653.1	-14.0	822.	544.	118.	118.	118.
654.0	-14.0	840.	544.	126.	126.	126.
656.4	-14.0	888.	591.	126.	126.	126.
700.0	-14.0	891.	988383.	0.	0.	0.

ASSUMED CRIT. PASSIVE LOC. 510.0 EL. -14.0 DP 3866. RP 1504.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
335.0	-14.0	44014.	24659.	0.	88811.	2.86
340.0	-14.0	41748.	23225.	0.	83846.	2.87
345.0	-14.0	38384.	21141.	0.	79215.	2.95
350.0	-14.0	34397.	18722.	0.	74916.	3.12
355.0	-14.0	30606.	16427.	0.	70951.	3.32
360.0	-14.0	27020.	14272.	0.	67320.	3.59

CRIT. ACTIVE LOC 335.0 EL -14.0 DA 44014. RA 24659.

DIS.	EL.	DP	RP	DB	RB	FS
510.0	-14.0	3866.	1504.	0.	88811.	2.86

* * STRATUM 8 ACT. WEDGE LOC. 345.0 EL. -30.0 PASS.WEDGE LOC. 510.0 EL. -30.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-30.0	2668.	0.	1133.	1133.	1133.
8.6	-30.0	2669.	571372.	0.	0.	0.
43.1	-30.0	2677.	1730.	402.	402.	402.
80.3	-30.0	2657.	1734.	392.	392.	392.
107.9	-30.0	2681.	1751.	395.	395.	395.
128.6	-30.0	2705.	1768.	398.	398.	398.
154.9	-30.0	2799.	1833.	410.	410.	410.
166.7	-30.0	2836.	1858.	415.	415.	415.
166.7	-30.0	2836.	1858.	415.	415.	415.
168.0	-30.0	2865.	1875.	420.	420.	420.
180.9	-30.0	3068.	1875.	506.	506.	506.
183.1	-30.0	3105.	1875.	522.	522.	522.
194.8	-30.0	3523.	1875.	700.	700.	700.
200.0	-30.0	3530.	1875.	702.	702.	702.
208.0	-30.0	3506.	1875.	693.	693.	693.

220.5	-30.0	3608.	1875.	736.	736.	736.
222.0	-30.0	3617.	1875.	739.	739.	739.
236.0	-30.0	3722.	1687.	864.	864.	864.
238.2	-30.0	3739.	1658.	883.	883.	883.
246.0	-30.0	3776.	1621.	915.	915.	915.
256.5	-30.0	3828.	1572.	958.	958.	958.
270.5	-30.0	3980.	1574.	1021.	1021.	1021.
273.0	-30.0	4005.	1575.	1032.	1032.	1032.
294.8	-30.0	4117.	1578.	1078.	1078.	1078.
309.2	-30.0	4569.	1580.	1268.	1268.	1268.
317.7	-30.0	4821.	1582.	1375.	1375.	1375.
322.7	-30.0	4818.	1583.	1373.	1373.	1373.
327.7	-30.0	4816.	1583.	1372.	1372.	1372.
327.7	-30.0	4815.	1583.	1372.	1372.	1372.
335.5	-30.0	4585.	1585.	1274.	1274.	1274.
354.0	-30.0	4009.	1588.	1028.	1028.	1028.
359.8	-30.0	3826.	1588.	950.	950.	950.
367.4	-30.0	3548.	1590.	831.	831.	831.
377.0	-30.0	3445.	1591.	787.	787.	787.
380.7	-30.0	3426.	1612.	770.	770.	770.
400.3	-30.0	3372.	1604.	750.	750.	750.
420.5	-30.0	3313.	1604.	726.	726.	726.
426.9	-30.0	3301.	1591.	726.	726.	726.
440.6	-30.0	3262.	1589.	710.	710.	710.
450.0	-30.0	3232.	1594.	696.	696.	696.
485.8	-30.0	3133.	1587.	656.	656.	656.
492.3	-30.0	3115.	1586.	649.	649.	649.
492.4	-30.0	3114.	1586.	649.	649.	649.
509.2	-30.0	2471.	1583.	377.	377.	377.
510.9	-30.0	2470.	1583.	376.	376.	376.
535.9	-30.0	2461.	1572.	377.	377.	377.
537.6	-30.0	2423.	1544.	373.	373.	373.
537.7	-30.0	2422.	1544.	373.	373.	373.
549.9	-30.0	2345.	1544.	340.	340.	340.
552.4	-30.0	2330.	1544.	334.	334.	334.
588.5	-30.0	2240.	1544.	296.	296.	296.
588.6	-30.0	2240.	1544.	296.	296.	296.
607.0	-30.0	2254.	1544.	301.	301.	301.
614.9	-30.0	2260.	1544.	304.	304.	304.
633.4	-30.0	2330.	1544.	334.	334.	334.
639.2	-30.0	2342.	1544.	339.	339.	339.
653.1	-30.0	2422.	1544.	373.	373.	373.
654.0	-30.0	2440.	1544.	380.	380.	380.
656.4	-30.0	2488.	1591.	381.	381.	381.
700.0	-30.0	2491.	1487720.	0.	0.	0.

ASSUMED CRIT. PASSIVE LOC. 510.0 EL. -30.0 DP 30037. RP 13277.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
345.0	-30.0	102667.	47873.	0.	121238.	2.51
350.0	-30.0	98056.	45125.	0.	115666.	2.56
355.0	-30.0	92320.	41699.	0.	110428.	2.66
360.0	-30.0	85841.	37870.	0.	105523.	2.81
365.0	-30.0	79411.	34084.	0.	100983.	3.00
370.0	-30.0	73115.	30395.	0.	96798.	3.26

CRIT. ACTIVE LOC 345.0 EL -30.0 DA 102667. RA 47873.

DIS.	EL.	DP	RP	DB	RB	FS
510.0	-30.0	30037.	13277.	0.	121238.	2.51

* * STRATUM 9 ACT. WEDGE LOC. 345.0 EL. -34.0 PASS.WEDGE LOC. 510.0 EL. -34.0

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ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-34.0	3156.	0.	1340.	1340.	1340.
8.6	-34.0	3157.	571622.	0.	0.	0.
43.1	-34.0	3165.	1980.	503.	503.	503.
80.3	-34.0	3145.	1984.	493.	493.	493.
107.9	-34.0	3169.	2001.	496.	496.	496.
128.6	-34.0	3193.	2018.	499.	499.	499.
154.9	-34.0	3287.	2083.	511.	511.	511.
166.7	-34.0	3324.	2108.	516.	516.	516.
166.7	-34.0	3324.	2108.	516.	516.	516.
168.0	-34.0	3351.	2125.	521.	521.	521.
180.9	-34.0	3541.	2125.	601.	601.	601.
183.1	-34.0	3575.	2125.	615.	615.	615.
194.8	-34.0	3981.	2125.	788.	788.	788.
200.0	-34.0	3982.	2125.	788.	788.	788.
208.0	-34.0	3959.	2125.	779.	779.	779.
220.5	-34.0	4062.	2125.	822.	822.	822.
222.0	-34.0	4071.	2125.	826.	826.	826.
236.0	-34.0	4177.	1937.	951.	951.	951.
238.2	-34.0	4194.	1908.	970.	970.	970.
246.0	-34.0	4232.	1871.	1002.	1002.	1002.
256.5	-34.0	4285.	1822.	1045.	1045.	1045.
270.5	-34.0	4438.	1824.	1110.	1110.	1110.
273.0	-34.0	4464.	1825.	1120.	1120.	1120.
294.8	-34.0	4578.	1828.	1167.	1167.	1167.
309.2	-34.0	5031.	1830.	1359.	1359.	1359.
317.7	-34.0	5284.	1832.	1466.	1466.	1466.
322.7	-34.0	5282.	1833.	1464.	1464.	1464.
327.7	-34.0	5280.	1833.	1463.	1463.	1463.
327.7	-34.0	5280.	1833.	1463.	1463.	1463.
335.5	-34.0	5050.	1835.	1365.	1365.	1365.
354.0	-34.0	4474.	1838.	1119.	1119.	1119.
359.8	-34.0	4292.	1838.	1041.	1041.	1041.
367.4	-34.0	4014.	1840.	923.	923.	923.
377.0	-34.0	3912.	1841.	879.	879.	879.
380.7	-34.0	3892.	1862.	862.	862.	862.
400.3	-34.0	3840.	1854.	843.	843.	843.
420.5	-34.0	3782.	1854.	819.	819.	819.
426.9	-34.0	3770.	1841.	819.	819.	819.
440.6	-34.0	3731.	1839.	803.	803.	803.
450.0	-34.0	3703.	1844.	789.	789.	789.
485.8	-34.0	3605.	1837.	750.	750.	750.
492.3	-34.0	3587.	1836.	743.	743.	743.
492.4	-34.0	3586.	1836.	743.	743.	743.
509.2	-34.0	2943.	1833.	471.	471.	471.
510.9	-34.0	2942.	1833.	471.	471.	471.
535.9	-34.0	2933.	1822.	472.	472.	472.
537.6	-34.0	2895.	1794.	468.	468.	468.
537.7	-34.0	2894.	1794.	467.	467.	467.
549.9	-34.0	2817.	1794.	434.	434.	434.
552.4	-34.0	2802.	1794.	428.	428.	428.
588.5	-34.0	2712.	1794.	390.	390.	390.
588.6	-34.0	2712.	1794.	390.	390.	390.
607.0	-34.0	2726.	1794.	396.	396.	396.
614.9	-34.0	2732.	1794.	398.	398.	398.
633.4	-34.0	2802.	1794.	428.	428.	428.
639.2	-34.0	2814.	1794.	433.	433.	433.
653.1	-34.0	2894.	1794.	467.	467.	467.
654.0	-34.0	2912.	1794.	474.	474.	474.
656.4	-34.0	2960.	1841.	475.	475.	475.
700.0	-34.0	2963.	2941495.	0.	0.	0.

ASSUMED CRIT. PASSIVE LOC. 510.0 EL. -34.0 DP 40438. RP 18275.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
345.0	-34.0	122636.	55309.	0.	136580.	2.56

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350.0	-34.0	118285.	52742.	0.	130551.	2.59
355.0	-34.0	112497.	49293.	0.	124856.	2.67
360.0	-34.0	105650.	45247.	0.	119493.	2.81
365.0	-34.0	98486.	41039.	0.	114495.	2.99
370.0	-34.0	91456.	36921.	0.	109851.	3.24

CRIT. ACTIVE LOC 345.0 EL -34.0 DA 122636. RA 55309.

DIS.	EL.	DP	RP	DB	RB	FS
510.0	-34.0	40438.	18275.	0.	136580.	2.56

* * STRATUM 10 ACT. WEDGE LOC. 350.0 EL. -42.0 PASS.WEDGE LOC. 510.0 EL. -42.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-42.0	3996.	0.	1696.	1696.	1696.
8.6	-42.0	3997.	572122.	0.	0.	0.
43.1	-42.0	4005.	2480.	647.	647.	647.
80.3	-42.0	3985.	2484.	637.	637.	637.
107.9	-42.0	4009.	2501.	640.	640.	640.
128.6	-42.0	4033.	2518.	643.	643.	643.
154.9	-42.0	4127.	2583.	656.	656.	656.
166.7	-42.0	4164.	2608.	660.	660.	660.
166.7	-42.0	4164.	2608.	660.	660.	660.
168.0	-42.0	4195.	2625.	666.	666.	666.
180.9	-42.0	4418.	2625.	761.	761.	761.
183.1	-42.0	4458.	2625.	778.	778.	778.
194.8	-42.0	4895.	2625.	964.	964.	964.
200.0	-42.0	4910.	2625.	970.	970.	970.
208.0	-42.0	4883.	2625.	958.	958.	958.
220.5	-42.0	4979.	2625.	999.	999.	999.
222.0	-42.0	4988.	2625.	1003.	1003.	1003.
236.0	-42.0	5086.	2437.	1124.	1124.	1124.
238.2	-42.0	5102.	2408.	1143.	1143.	1143.
246.0	-42.0	5136.	2371.	1174.	1174.	1174.
256.5	-42.0	5184.	2322.	1215.	1215.	1215.
270.5	-42.0	5332.	2324.	1277.	1277.	1277.
273.0	-42.0	5356.	2325.	1287.	1287.	1287.
294.8	-42.0	5462.	2328.	1330.	1330.	1330.
309.2	-42.0	5909.	2330.	1519.	1519.	1519.
317.7	-42.0	6158.	2332.	1624.	1624.	1624.
322.7	-42.0	6154.	2333.	1622.	1622.	1622.
327.7	-42.0	6151.	2333.	1621.	1621.	1621.
327.7	-42.0	6151.	2333.	1620.	1620.	1620.
335.5	-42.0	5920.	2335.	1522.	1522.	1522.
354.0	-42.0	5342.	2338.	1275.	1275.	1275.
359.8	-42.0	5159.	2338.	1197.	1197.	1197.
367.4	-42.0	4880.	2340.	1078.	1078.	1078.
377.0	-42.0	4776.	2341.	1033.	1033.	1033.
380.7	-42.0	4756.	2362.	1016.	1016.	1016.
400.3	-42.0	4700.	2354.	996.	996.	996.
420.5	-42.0	4640.	2354.	970.	970.	970.
426.9	-42.0	4626.	2341.	970.	970.	970.
440.6	-42.0	4586.	2339.	954.	954.	954.
450.0	-42.0	4556.	2344.	939.	939.	939.
485.8	-42.0	4453.	2337.	898.	898.	898.
492.3	-42.0	4435.	2336.	891.	891.	891.
492.4	-42.0	4434.	2336.	890.	890.	890.
509.2	-42.0	3791.	2333.	619.	619.	619.
510.9	-42.0	3790.	2333.	618.	618.	618.
535.9	-42.0	3781.	2322.	619.	619.	619.
537.6	-42.0	3743.	2294.	615.	615.	615.
537.7	-42.0	3742.	2294.	615.	615.	615.
549.9	-42.0	3665.	2294.	582.	582.	582.
552.4	-42.0	3650.	2294.	576.	576.	576.
588.5	-42.0	3560.	2294.	538.	538.	538.
588.6	-42.0	3560.	2294.	538.	538.	538.

607.0	-42.0	3574.	2294.	543.	543.	543.
614.9	-42.0	3580.	2294.	546.	546.	546.
633.4	-42.0	3650.	2294.	576.	576.	576.
639.2	-42.0	3662.	2294.	581.	581.	581.
653.1	-42.0	3742.	2294.	615.	615.	615.
654.0	-42.0	3760.	2294.	622.	622.	622.
656.4	-42.0	3808.	2341.	623.	623.	623.
700.0	-42.0	3811.	3407973.	0.	0.	0.

ASSUMED CRIT. PASSIVE LOC. 510.0 EL. -42.0 DP 66233. RP 30094.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
350.0	-42.0	163750.	69037.	0.	154762.	2.60
355.0	-42.0	158265.	65832.	0.	148286.	2.65
360.0	-42.0	151290.	61716.	0.	142145.	2.75
365.0	-42.0	143132.	56930.	0.	136370.	2.91
370.0	-42.0	134630.	51965.	0.	130950.	3.11
375.0	-42.0	127001.	47506.	0.	125678.	3.35

CRIT. ACTIVE LOC 350.0 EL -42.0 DA 163750. RA 69037.

DIS.	EL.	DP	RP	DB	RB	FS
510.0	-42.0	66233.	30094.	0.	154762.	2.60

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Seepage Analysis

Project:	New Orleans to Venice - Plaquemines Parish, LA - Non-Federal 05										Design of Landside Seepage Berms													
Levee Station		Riverside Conditions									Landside Conditions												Berm Width	Berm Thickness (at levee toe)
From	To	EL RS Borrow Pit	Z_{bR} ft.	Soil Type	X_1 ft. RS Blanket	L_1 ft. River Entry	X_1 ft.	L_2 ft.	S ft.	EL Flow Line	EL LS Ground	H ft.	Z_{bl} ft.	K_{bL}	K_f	D ft.	X_3 ft.	Z_t ft.	h_o ft.	$i_o = \frac{h_o}{Z_t}$	F.S. Levee Toe	h'$_o$ ft.	X ft.	t ft.
649+50	728+00	5b	13.95	Clay	2500		2500	187.6	2687.6	10	-4.59	14.59	13.95	1.89	1250	4	192	13.95	1.0	0.07	9.78		No Berm Required	
728+00	771+00	5c(1)	4	Clay	600		600	189.7	789.7	11	-4.39	15.39	4	3.8	1250	2	51	4	0.9	0.23	1.82		No Berm Required	
771+00	819+00	5c(2)	13.7	Clay	2500		2500	192.3	2692.3	11	-4.54	15.54	13.7	1.89	1250	4	190	13.7	1.0	0.07	6.12		No Berm Required	
819+00	846+00	5d(1)		Clay											1250									
846+00	916+00	5d(2)	5.7	Clay	1300		1300	175	1475	11.5	-3.86	15.36	5.7	3.57	1250	4	89	5.7	0.9	0.15	2.98		No Berm Required	
846+00	916+00	5d(2)	16.3	Clay	4000		4000	175	4175	11.5	-3.86	15.36	16.3	1.41	1250	8	340	21.25	1.2	0.05	10.78		No Berm Required	
931+00	974+00	NL5d(2)		Clay											1250									

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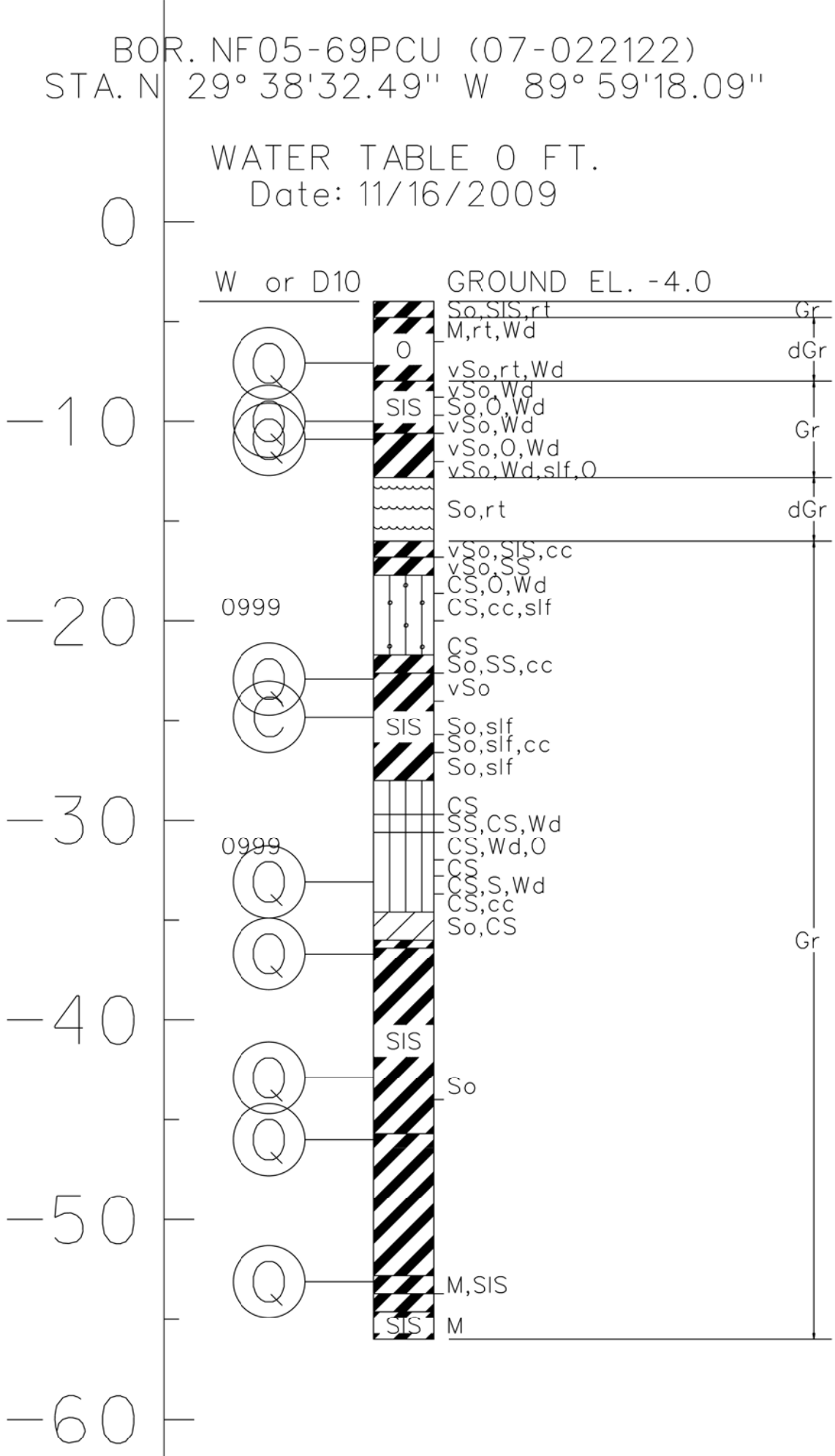

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Overall Bearing Capacity

Reach 5c(2) - Overall Bearing Capacity Check

Cohesion, C_{uo}	100
Assumed, N_c	5.14
Width of Geotextile, b	187
Crown Width, B	10
Height of Levee, H	18.5

	@ 14'	@34'
Varying Depths, D	10.4	30.4
Slope, p_c	1	6.9
$x_{min}(D,d)$	10.4	30.4

	PS	FS
Height of berm, h	5.6	10.0
geotextile to end of berm toe, nh	100.3	40.1

@ 14'		
	$\frac{p_c b}{c_{uo}}$	1.9
	d/b (off graph)	0.40
	d	467.5
	PS	FS
q_s	610.60	1000.87
q_u	1124.60	1514.87
q_A	878.53	709.68
FS	1.28	2.13

@ 34'		
	$\frac{p_c b}{c_{uo}}$	12.9
	d/b (off graph)	0.19
	d	984.2
	PS	FS
q_s	546.36	714.09
q_u	1060.36	1228.09
q_A	878.53	709.68
FS	1.21	1.73

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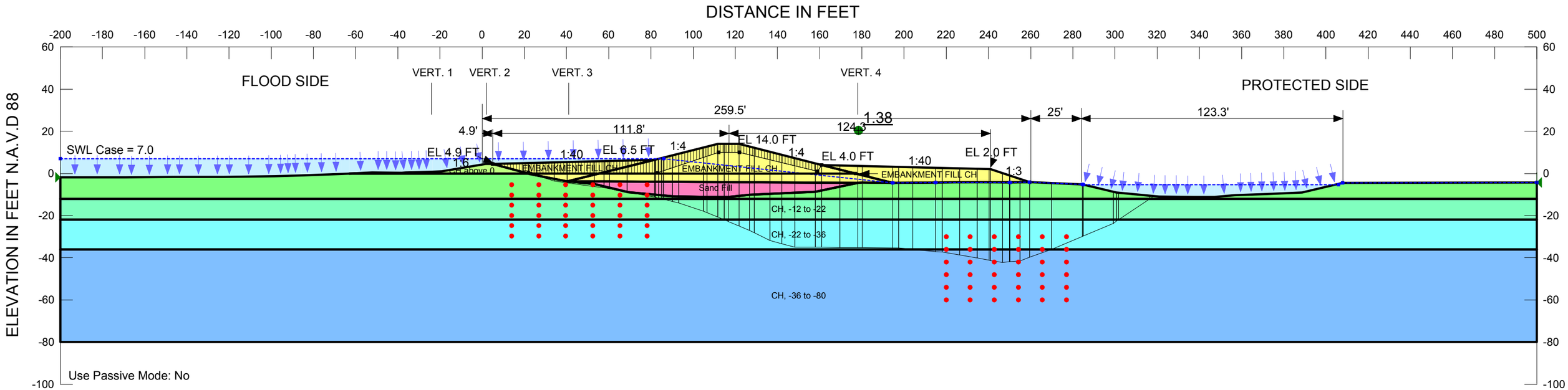
Appendix K – Reach 5c(1)

Station 728+00 – Station 771+00



Type: Fabric Fabric Capacity: 27000 lbs @ 5% strain Total Length: 154 ft Inside Point: (23, 0) Outside Point: (177, 0) Contact Cohesion: 265 psf Contact Phi: 19 ° Interface Factor: 2
Governing Component: Bond

Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 108 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -12 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -12 (2) Cohesion Spatial Fn: CH, 0 to -12 Phi: 0 ° Piezometric Line: 1
Name: CH, -12 to -22 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -12 to -22 (2) Cohesion Spatial Fn: CH, -12 to -22 Phi: 0 ° Piezometric Line: 1
Name: CH, -22 to -36 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -22 to -36 (2) Cohesion Spatial Fn: CH, -22 to -36 Phi: 0 ° Piezometric Line: 1
Name: CH, -36 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -36 to -80 (2) Cohesion Spatial Fn: CH, -36 to -80 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

US Army Corps of Engineers®
Vicksburg District

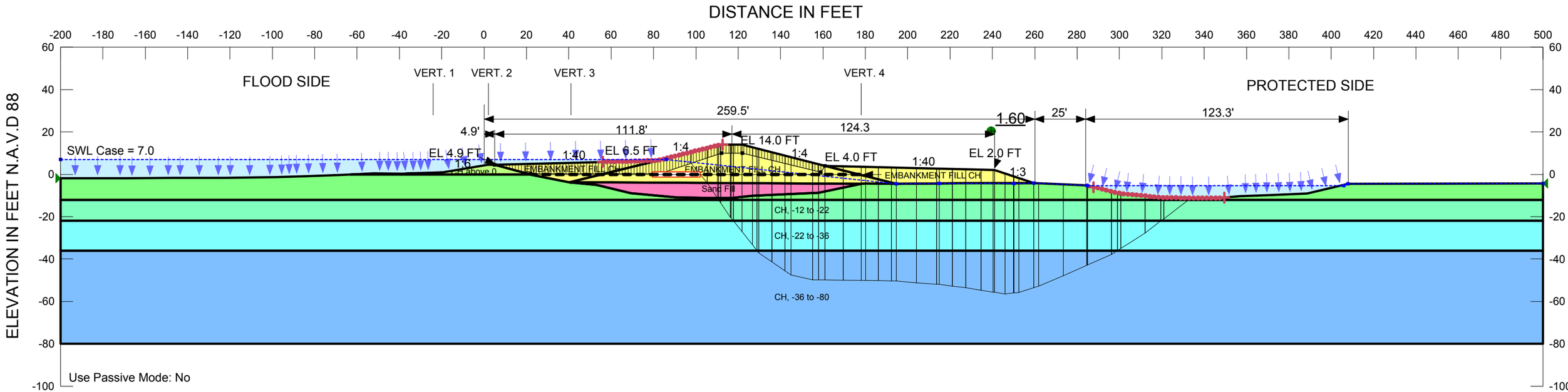
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 728+00 TO 771+00
Reach 5c (1)
SWL Case
Block Specified
Around Geotextile
1st Stage Construction

Name: SWL Case.BS
File Name: 5c(1) Typical 1.1st SC.80%SG.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\1st Stage Construction\80%SG, 1 Layer of Fabric\Slope W\
Last Edited By: Cox, Lane MVK

Figure K-1

"Confidential Information: Privileged & Confidential Work Product"



Type: Fabric Fabric Capacity: 27000 lbs @ 5% strain Total Length: 154 ft Inside Point: (23, 0) Outside Point: (177, 0) Contact Cohesion: 265 psf Contact Phi: 19 ° Interface Factor: 2
Governing Component: Fabric

Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 108 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -12 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -12 (2) Cohesion Spatial Fn: CH, 0 to -12 Phi: 0 ° Piezometric Line: 1
Name: CH, -12 to -22 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -12 to -22 (2) Cohesion Spatial Fn: CH, -12 to -22 Phi: 0 ° Piezometric Line: 1
Name: CH, -22 to -36 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -22 to -36 (2) Cohesion Spatial Fn: CH, -22 to -36 Phi: 0 ° Piezometric Line: 1
Name: CH, -36 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -36 to -80 (2) Cohesion Spatial Fn: CH, -36 to -80 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

US Army Corps of Engineers®
Vicksburg District

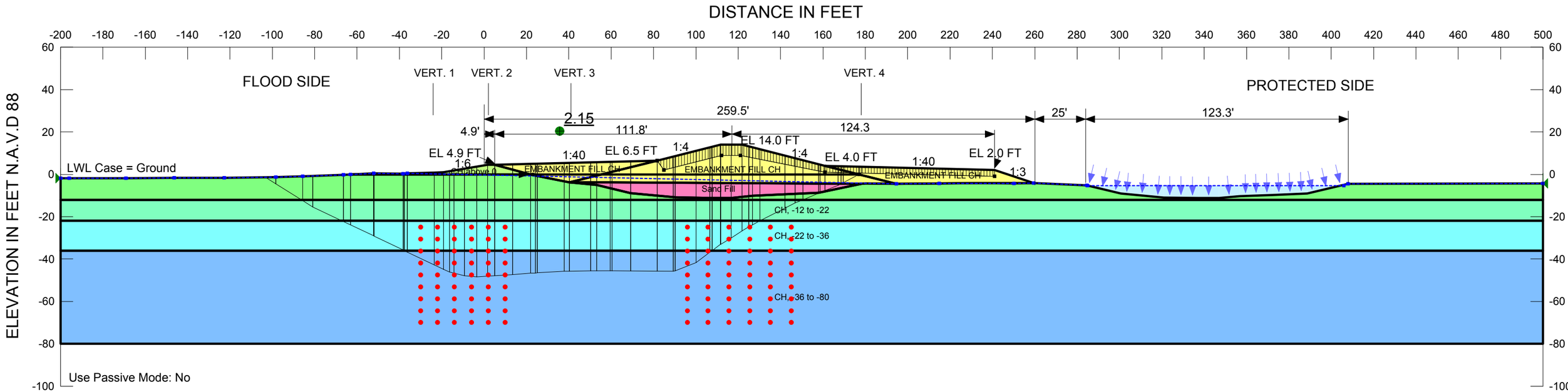
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 728+00 TO 771+00
Reach 5c (1)
SWL Case
Entry and Exit
Through Geotextile
1st Stage Construction

Figure K-2

Name: SWL Case.EE.Thru Fabric
File Name: 5c(1) Typical 1.1st SC.80%SG.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\1st Stage Construction\80%SG, 1 Layer of Fabric\Slope W\
Last Edited By: Cox, Lane MVK

“Confidential Information: Privileged & Confidential Work Product”



Type: Fabric Fabric Capacity: 27000 lbs @ 5% strain Total Length: 154 ft Inside Point: (177, 0) Outside Point: (23, 0) Contact Cohesion: 265 psf Contact Phi: 19 ° Interface Factor: 2
Governing Component: Bond

Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 108 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -12 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -12 (2) Cohesion Spatial Fn: CH, 0 to -12 Phi: 0 ° Piezometric Line: 1
Name: CH, -12 to -22 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -12 to -22 (2) Cohesion Spatial Fn: CH, -12 to -22 Phi: 0 ° Piezometric Line: 1
Name: CH, -22 to -36 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -22 to -36 (2) Cohesion Spatial Fn: CH, -22 to -36 Phi: 0 ° Piezometric Line: 1
Name: CH, -36 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -36 to -80 (2) Cohesion Spatial Fn: CH, -36 to -80 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

US Army Corps of Engineers®
Vicksburg District

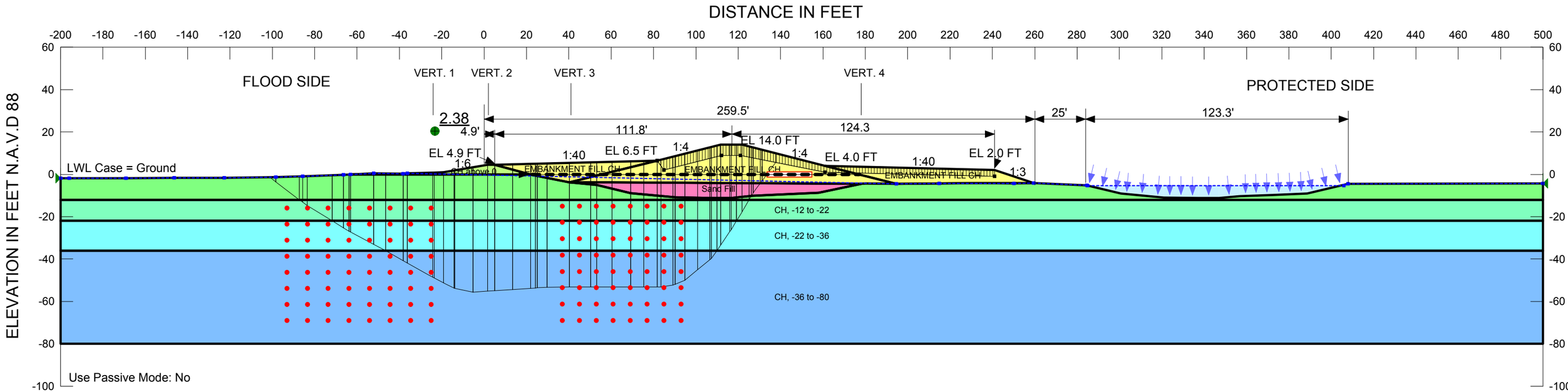
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 728+00 TO 771+00
Reach 5c (1)
LWL Case
PS to FS
Block Specified
Around Geotextile
1st Stage Construction

Name: LWL Case.BS.R to L
File Name: 5c(1) Typical 1.1st SC.80%SG.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\1st Stage Construction\80%SG, 1 Layer of Fabric\Slope W\
Last Edited By: Cox, Lane MVK

Figure K-3

"Confidential Information: Privileged & Confidential Work Product"



Type: Fabric Fabric Capacity: 27000 lbs @ 5% strain Total Length: 154 ft Inside Point: (177, 0) Outside Point: (23, 0) Contact Cohesion: 265 psf Contact Phi: 19 ° Interface Factor: 2
Governing Component: Fabric

Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 108 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -12 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -12 (2) Cohesion Spatial Fn: CH, 0 to -12 Phi: 0 ° Piezometric Line: 1
Name: CH, -12 to -22 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -12 to -22 (2) Cohesion Spatial Fn: CH, -12 to -22 Phi: 0 ° Piezometric Line: 1
Name: CH, -22 to -36 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -22 to -36 (2) Cohesion Spatial Fn: CH, -22 to -36 Phi: 0 ° Piezometric Line: 1
Name: CH, -36 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -36 to -80 (2) Cohesion Spatial Fn: CH, -36 to -80 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

US Army Corps of Engineers®
Vicksburg District

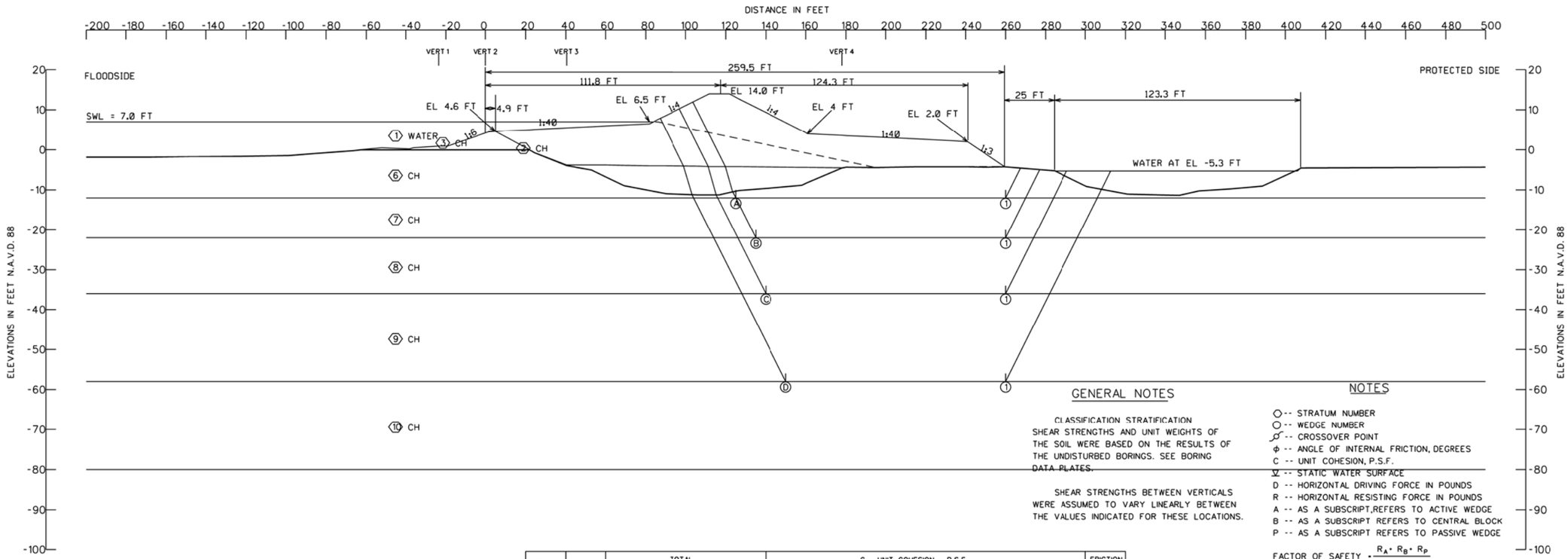
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 728+00 TO 771+00
Reach 5c (1)
LWL Case
PS to FS
Block Specified
Through Geotextile
1st Stage Construction

Name: LWL Case.BS.R to L.Thru Fabric
File Name: 5c(1) Typical 1.1st SC.80%SG.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\1st Stage Construction\80%SG, 1 Layer of Fabric\Slope W\
Last Edited By: Cox, Lane MVK

Figure K-4

"Confidential Information: Privileged & Confidential Work Product"



GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF THE UNDISTURBED BORINGS. SEE BORING DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

NOTES

○-- STRATUM NUMBER
○-- WEDGE NUMBER
ℴ-- CROSSOVER POINT
Φ -- ANGLE OF INTERNAL FRICTION, DEGREES
C -- UNIT COHESION, P.S.F.
▽ -- STATIC WATER SURFACE
D -- HORIZONTAL DRIVING FORCE IN POUNDS
R -- HORIZONTAL RESISTING FORCE IN POUNDS
A -- AS A SUBSCRIPT, REFERS TO ACTIVE WEDGE
B -- AS A SUBSCRIPT REFERS TO CENTRAL BLOCK
P -- AS A SUBSCRIPT REFERS TO PASSIVE WEDGE

FACTOR OF SAFETY $= \frac{R_A \cdot R_B \cdot R_P}{D_A - D_P}$

ASSUMED FAILURE SURFACE NO.	ASSUMED FAILURE SURFACE ELEV.	RESISTING FORCES R_A	RESISTING FORCES R_B	RESISTING FORCES R_P	DRIVING FORCES D_A	DRIVING FORCES $-D_P$	SUMMATION OF FORCES RESISTING	SUMMATION OF FORCES DRIVING	FACTOR OF SAFETY
Ⓐ ①	-12.0	27410	20250	2252	37709	3257	49912	34452	1.45
Ⓑ ①	-22.0	31345	30067	6032	70506	16366	67444	54140	1.25
Ⓒ ①	-36.0	38437	44046	14054	131728	50832	96537	80896	1.19
Ⓓ ①	-58.0	55086	62272	33494	262586	142663	150852	119923	1.26

STRATUM NO.	SOIL TYPE	TOTAL UNIT WEIGHT P.C.F. VERT. 1	VERT. 2	VERT. 3	VERT. 4	C - UNIT COHESION - P.S.F. CENTER OF STRATUM VERT. 1	VERT. 2	VERT. 3	VERT. 4	BOTTOM OF STRATUM VERT. 1	VERT. 2	VERT. 3	VERT. 4	FRICTION ANGLE DEGREES
①	WATER	62	62	62	62	0	0	0	0	0	0	0	0	0
②	CH	115	115	115	115	600	600	600	600	600	600	600	600	0
③	CH	112	112	112	112	600	600	600	600	600	600	600	600	0
④	SM	122	122	122	122	0	0	0	0	0	0	0	0	30
⑤	CH	100	101	111	111	75	250	150	150	75	250	150	150	0
⑥	CH	100	101	111	111	75	250	150	150	75	250	150	150	0
⑦	CH	100	109	100	100	175	350	200	195	225	350	250	240	0
⑧	CH	102	104	102	102	295	413	320	303	365	476	390	366	0
⑨	CH	105	106	105	105	475	575	535	465	585	674	645	564	0
⑩	CH	105	106	105	105	695	773	755	663	805	872	865	762	0

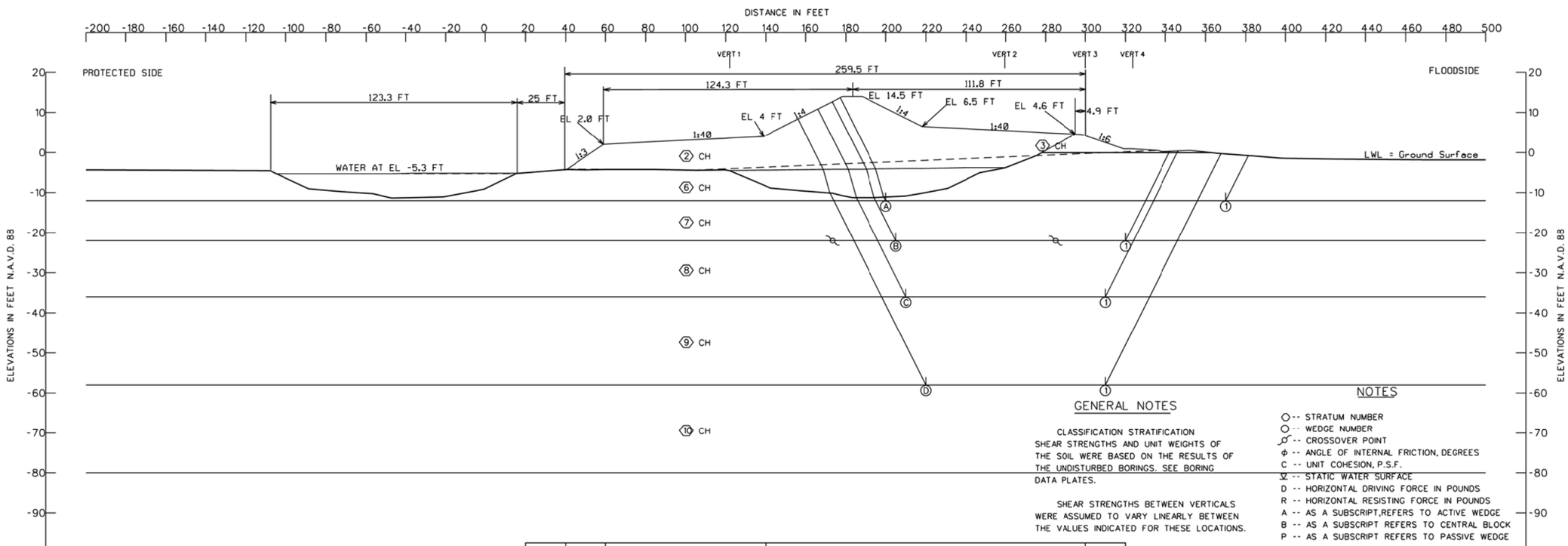
FS = (T+R)/D
FS = (27000 + 96537) / 80896
FS = 1.53

"Reach 5c(1)-1st Stage"
"FS to PS: SWL+7.0"

U.S. ARMY ENGINEER DISTRICT NEW ORLEANS
CORPS OF ENGINEERS 01-APR-11

Figure K-5

"Confidential Information: Privileged & Confidential Work Product"



GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF THE UNDISTURBED BORINGS. SEE BORING DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

NOTES

○-- STRATUM NUMBER
○ -- WEDGE NUMBER
ơ -- CROSSOVER POINT
Φ -- ANGLE OF INTERNAL FRICTION, DEGREES
C -- UNIT COHESION, P.S.F.
▽ -- STATIC WATER SURFACE
D -- HORIZONTAL DRIVING FORCE IN POUNDS
R -- HORIZONTAL RESISTING FORCE IN POUNDS
A -- AS A SUBSCRIPT,REFERS TO ACTIVE WEDGE
B -- AS A SUBSCRIPT REFERS TO CENTRAL BLOCK
P -- AS A SUBSCRIPT REFERS TO PASSIVE WEDGE

FACTOR OF SAFETY = $\frac{R_A + R_B + R_P}{D_A - D_P}$

ASSUMED FAILURE SURFACE		RESISTING FORCES			DRIVING FORCES		SUMMATION OF FORCES		FACTOR OF SAFETY
NO.	ELEV.	R_A	R_B	R_P	D_A	$-D_P$	RESISTING	DRIVING	
Ⓐ ①	-12.0	30683	24334	1684	36334	6530	56701	29804	1.90
Ⓑ ①	-22.0	34252	21057	5671	69609	25633	60980	43976	1.39
Ⓒ ①	-36.0	41369	19776	14952	131392	68828	76097	62564	1.22
Ⓓ ①	-58.0	58424	58274	34908	262355	174441	151606	87914	1.72

STRATUM NO.	SOIL TYPE	TOTAL UNIT WEIGHT P.C.F.				C - UNIT COHESION - P.S.F.								FRICTION ANGLE DEGREES
						CENTER OF STRATUM				BOTTOM OF STRATUM				
		VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 1	VERT. 2	VERT. 3	VERT. 4	
①	WATER	62	62	62	62	0	0	0	0	0	0	0	0	0
②	CH	115	115	115	115	600	600	600	600	600	600	600	600	0
③	CH	108	108	108	108	600	600	600	600	600	600	600	600	0
④	SM	122	122	122	122	0	0	0	0	0	0	0	0	30
⑤	CH	111	111	101	100	150	150	250	75	150	150	250	75	0
⑥	CH	111	111	101	100	150	150	250	75	150	150	250	75	0
⑦	CH	100	100	109	100	195	200	350	175	240	250	350	225	0
⑧	CH	102	102	104	102	303	320	413	295	366	39	476	365	0
⑨	CH	105	105	106	105	465	535	575	475	564	645	674	585	0
⑩	CH	105	105	106	105	564	645	674	585	762	865	872	805	0

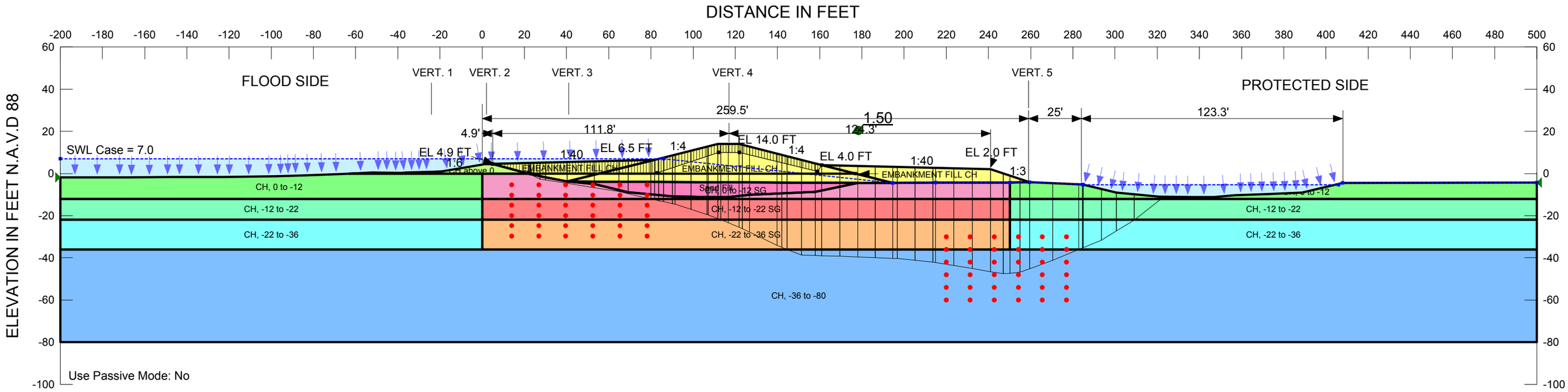
FS = (T+R)/D
FS = (27000 + 76097) / 62564
FS = 1.65

"Reach 5c(1)-1st Stage"
"PS to FS: LWL = GS"

U.S. ARMY ENGINEER DISTRICT NEW ORLEANS
CORPS OF ENGINEERS 01-APR-11

Figure K-6

"Confidential Information: Privileged & Confidential Work Product"



Type: Fabric Fabric Capacity: 27000 lbs @ 5% strain Total Length: 154 ft Inside Point: (23, 0) Outside Point: (177, 0) Contact Cohesion: 265 psf Contact Phi: 19 ° Interface Factor: 2
Governing Component: Bond

Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 108 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -12 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -12 (2) Cohesion Spatial Fn: CH, 0 to -12 Phi: 0 ° Piezometric Line: 1
Name: CH, -12 to -22 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -12 to -22 (2) Cohesion Spatial Fn: CH, -12 to -22 Phi: 0 ° Piezometric Line: 1
Name: CH, -22 to -36 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -22 to -36 (2) Cohesion Spatial Fn: CH, -22 to -36 Phi: 0 ° Piezometric Line: 1
Name: CH, -36 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -36 to -80 (2) Cohesion Spatial Fn: CH, -36 to -80 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1
Name: CH, 0 to -12 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -12 (2) Cohesion Spatial Fn: CH, 0 to -12 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -12 to -22 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -12 to -22 (2) Cohesion Spatial Fn: CH, -12 to -22 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -22 to -36 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -22 to -36 (2) Cohesion Spatial Fn: CH, -22 to -36 SG Phi: 0 ° Piezometric Line: 1

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

US Army Corps of Engineers
Vicksburg District

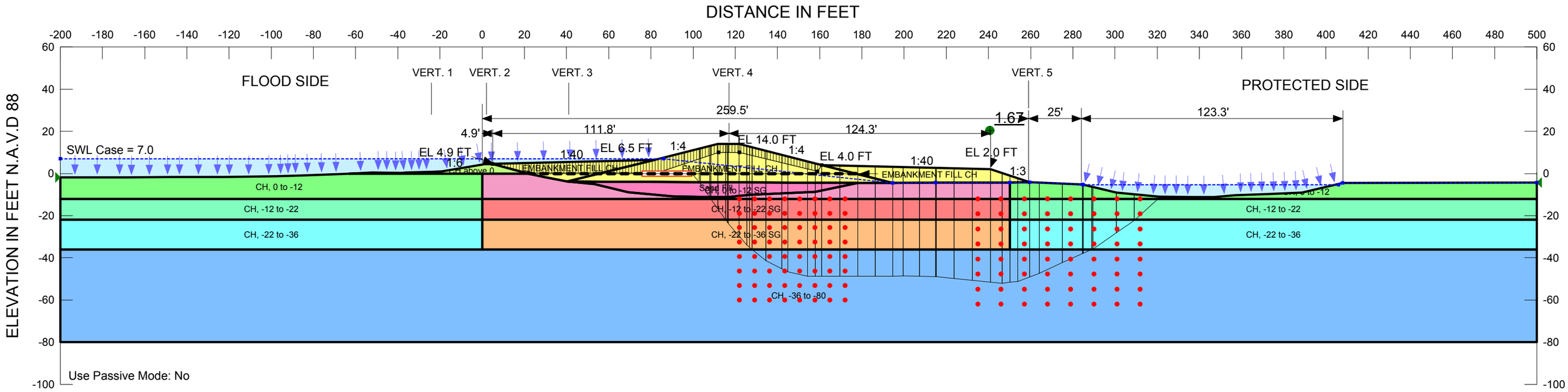
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 728+00 TO 771+00
Reach 5c (1)
SWL Case
Block Specified
Around Geotextile
2nd Stage Construction

Name: SWL Case.BS
File Name: 5c(1) Typical 1.2nd SC.80%SG.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\2nd Stage Construction\80%SG,1 Layer of Fabric\Slope W\
Last Edited By: Cox, Lane MVK

Figure K-7

"Confidential Information: Privileged & Confidential Work Product"



Type: Fabric Fabric Capacity: 27000 lbs @ 5% strain Total Length: 154 ft Inside Point: (23, 0) Outside Point: (177, 0) Contact Cohesion: 265 psf Contact Phi: 19 ° Interface Factor: 2
Governing Component: Fabric

Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 108 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -12 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -12 (2) Cohesion Spatial Fn: CH, 0 to -12 Phi: 0 ° Piezometric Line: 1
Name: CH, -12 to -22 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -12 to -22 (2) Cohesion Spatial Fn: CH, -12 to -22 Phi: 0 ° Piezometric Line: 1
Name: CH, -22 to -36 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -22 to -36 (2) Cohesion Spatial Fn: CH, -22 to -36 Phi: 0 ° Piezometric Line: 1
Name: CH, -36 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -36 to -80 (2) Cohesion Spatial Fn: CH, -36 to -80 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1
Name: CH, 0 to -12 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -12 (2) Cohesion Spatial Fn: CH, 0 to -12 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -12 to -22 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -12 to -22 (2) Cohesion Spatial Fn: CH, -12 to -22 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -22 to -36 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -22 to -36 (2) Cohesion Spatial Fn: CH, -22 to -36 SG Phi: 0 ° Piezometric Line: 1

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

US Army Corps of Engineers
Vicksburg District

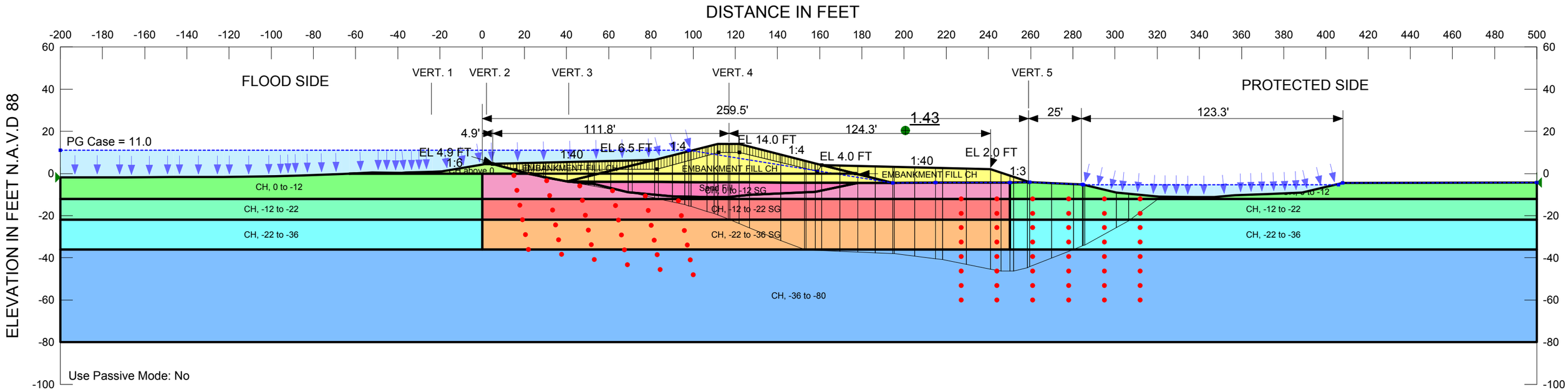
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 728+00 TO 771+00
Reach 5c (1)
SWL Case
Block Specified
Through Geotextile
2nd Stage Construction

Name: SWL Case.BS.Thru Fabric
File Name: 5c(1) Typical 1.2nd SC.80%SG.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\2nd Stage Construction\80%SG,1 Layer of Fabric\Slope W\
Last Edited By: Cox, Lane MVK

Figure K-8

"Confidential Information: Privileged & Confidential Work Product"



Type: Fabric Fabric Capacity: 27000 lbs @ 5% strain Total Length: 154 ft Inside Point: (23, 0) Outside Point: (177, 0) Contact Cohesion: 265 psf Contact Phi: 19 ° Interface Factor: 2
Governing Component: Bond

Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 108 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -12 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -12 (2) Cohesion Spatial Fn: CH, 0 to -12 Phi: 0 ° Piezometric Line: 1
Name: CH, -12 to -22 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -12 to -22 (2) Cohesion Spatial Fn: CH, -12 to -22 Phi: 0 ° Piezometric Line: 1
Name: CH, -22 to -36 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -22 to -36 (2) Cohesion Spatial Fn: CH, -22 to -36 Phi: 0 ° Piezometric Line: 1
Name: CH, -36 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -36 to -80 (2) Cohesion Spatial Fn: CH, -36 to -80 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1
Name: CH, 0 to -12 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -12 (2) Cohesion Spatial Fn: CH, 0 to -12 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -12 to -22 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -12 to -22 (2) Cohesion Spatial Fn: CH, -12 to -22 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -22 to -36 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -22 to -36 (2) Cohesion Spatial Fn: CH, -22 to -36 SG Phi: 0 ° Piezometric Line: 1

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

US Army Corps of Engineers
Vicksburg District

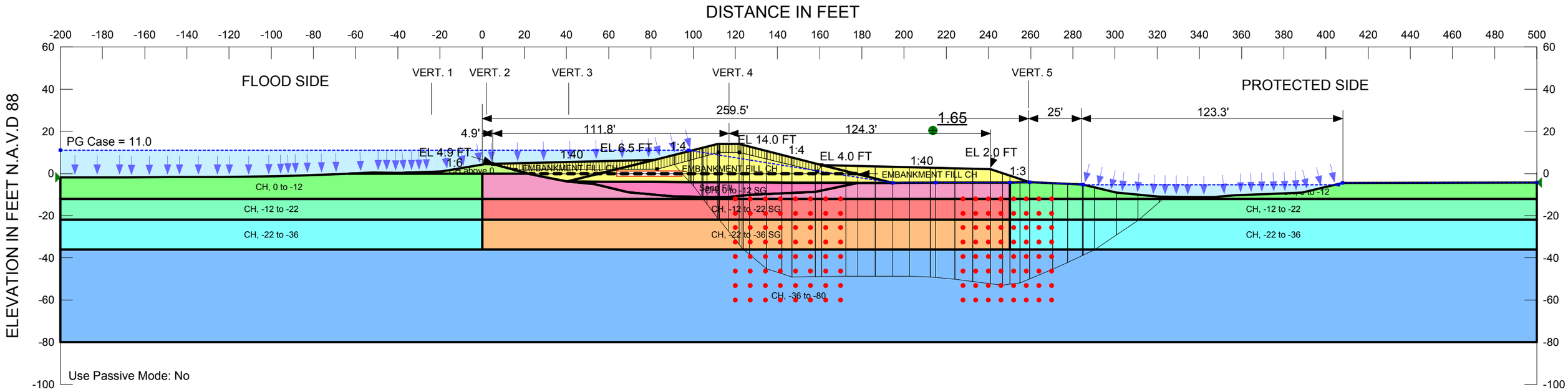
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 728+00 TO 771+00
Reach 5c (1)
PG Case
Block Specified
Around Geotextile
2nd Stage Construction

Name: PG Case.BS
File Name: 5c(1) Typical 1.2nd SC.80%SG.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\2nd Stage Construction\80%SG,1 Layer of Fabric\Slope W\
Last Edited By: Cox, Lane MVK

Figure K-9

"Confidential Information: Privileged & Confidential Work Product"



Type: Fabric Fabric Capacity: 27000 lbs @ 5% strain Total Length: 154 ft Inside Point: (23, 0) Outside Point: (177, 0) Contact Cohesion: 265 psf Contact Phi: 19 ° Interface Factor: 2
Governing Component: Fabric

Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 108 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -12 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -12 (2) Cohesion Spatial Fn: CH, 0 to -12 Phi: 0 ° Piezometric Line: 1
Name: CH, -12 to -22 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -12 to -22 (2) Cohesion Spatial Fn: CH, -12 to -22 Phi: 0 ° Piezometric Line: 1
Name: CH, -22 to -36 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -22 to -36 (2) Cohesion Spatial Fn: CH, -22 to -36 Phi: 0 ° Piezometric Line: 1
Name: CH, -36 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -36 to -80 (2) Cohesion Spatial Fn: CH, -36 to -80 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1
Name: CH, 0 to -12 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -12 (2) Cohesion Spatial Fn: CH, 0 to -12 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -12 to -22 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -12 to -22 (2) Cohesion Spatial Fn: CH, -12 to -22 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -22 to -36 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -22 to -36 (2) Cohesion Spatial Fn: CH, -22 to -36 SG Phi: 0 ° Piezometric Line: 1

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

US Army Corps of Engineers
Vicksburg District

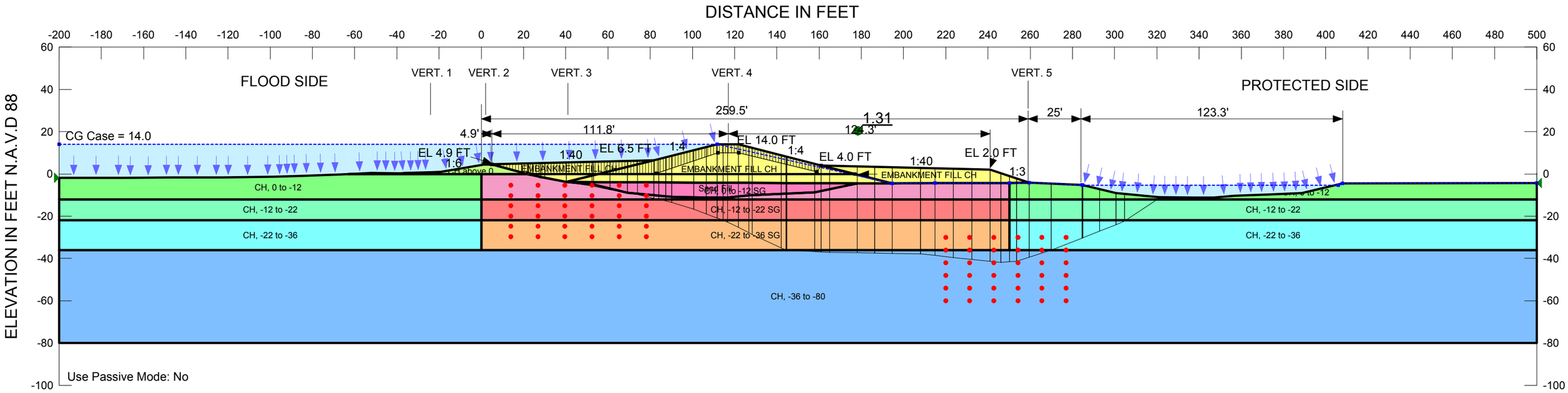
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 728+00 TO 771+00
Reach 5c (1)
PG Case
Entry and Exit
Around Geotextile
2nd Stage Construction

Figure K-10

Name: PG Case.BS.Thru Fabric
File Name: 5c(1) Typical 1.2nd SC.80%SG.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\2nd Stage Construction\80%SG,1 Layer of Fabric\Slope W\
Last Edited By: Cox, Lane MVK

“Confidential Information: Privileged & Confidential Work Product”



Type: Fabric Fabric Capacity: 27000 lbs @ 5% strain Total Length: 154 ft Inside Point: (23, 0) Outside Point: (177, 0) Contact Cohesion: 265 psf Contact Phi: 19 ° Interface Factor: 2
Governing Component: Bond

Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 108 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -12 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -12 (2) Cohesion Spatial Fn: CH, 0 to -12 Phi: 0 ° Piezometric Line: 1
Name: CH, -12 to -22 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -12 to -22 (2) Cohesion Spatial Fn: CH, -12 to -22 Phi: 0 ° Piezometric Line: 1
Name: CH, -22 to -36 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -22 to -36 (2) Cohesion Spatial Fn: CH, -22 to -36 Phi: 0 ° Piezometric Line: 1
Name: CH, -36 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -36 to -80 (2) Cohesion Spatial Fn: CH, -36 to -80 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1
Name: CH, 0 to -12 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -12 (2) Cohesion Spatial Fn: CH, 0 to -12 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -12 to -22 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -12 to -22 (2) Cohesion Spatial Fn: CH, -12 to -22 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -22 to -36 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -22 to -36 (2) Cohesion Spatial Fn: CH, -22 to -36 SG Phi: 0 ° Piezometric Line: 1

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

US Army Corps of Engineers
Vicksburg District

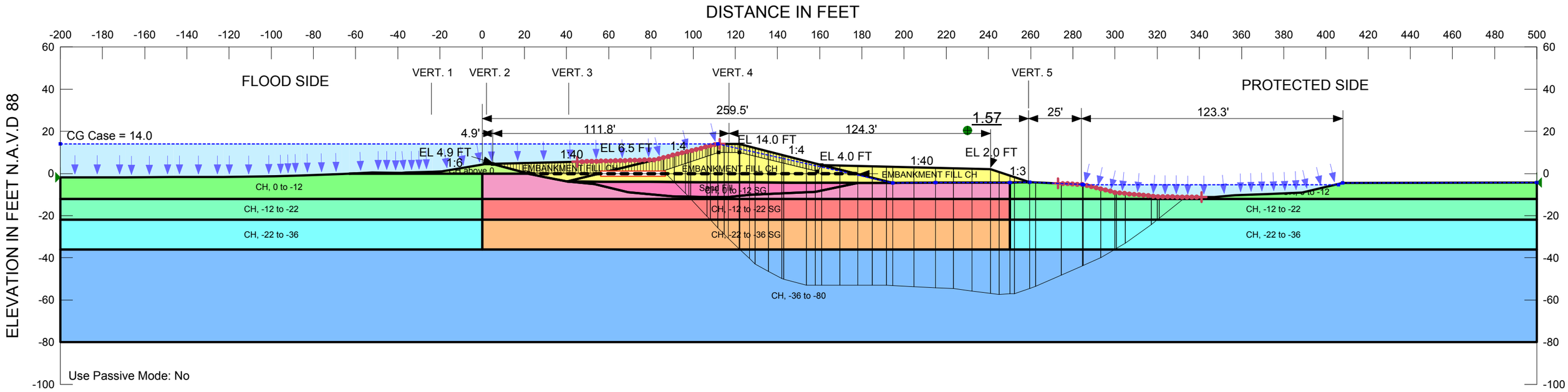
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 728+00 TO 771+00
Reach 5c (1)
CG Case
Block Specified
Around Geotextile
2nd Stage Construction

Name: CG Case.BS
File Name: 5c(1) Typical 1.2nd SC.80%SG.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\2nd Stage Construction\80%SG,1 Layer of Fabric\Slope W\
Last Edited By: Cox, Lane MVK

Figure K-11

"Confidential Information: Privileged & Confidential Work Product"



Type: Fabric Fabric Capacity: 27000 lbs @ 5% strain Total Length: 154 ft Inside Point: (23, 0) Outside Point: (177, 0) Contact Cohesion: 265 psf Contact Phi: 19 ° Interface Factor: 2
Governing Component: Fabric

Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 108 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -12 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -12 (2) Cohesion Spatial Fn: CH, 0 to -12 Phi: 0 ° Piezometric Line: 1
Name: CH, -12 to -22 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -12 to -22 (2) Cohesion Spatial Fn: CH, -12 to -22 Phi: 0 ° Piezometric Line: 1
Name: CH, -22 to -36 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -22 to -36 (2) Cohesion Spatial Fn: CH, -22 to -36 Phi: 0 ° Piezometric Line: 1
Name: CH, -36 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -36 to -80 (2) Cohesion Spatial Fn: CH, -36 to -80 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1
Name: CH, 0 to -12 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -12 (2) Cohesion Spatial Fn: CH, 0 to -12 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -12 to -22 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -12 to -22 (2) Cohesion Spatial Fn: CH, -12 to -22 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -22 to -36 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -22 to -36 (2) Cohesion Spatial Fn: CH, -22 to -36 SG Phi: 0 ° Piezometric Line: 1

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

US Army Corps of Engineers
Vicksburg District

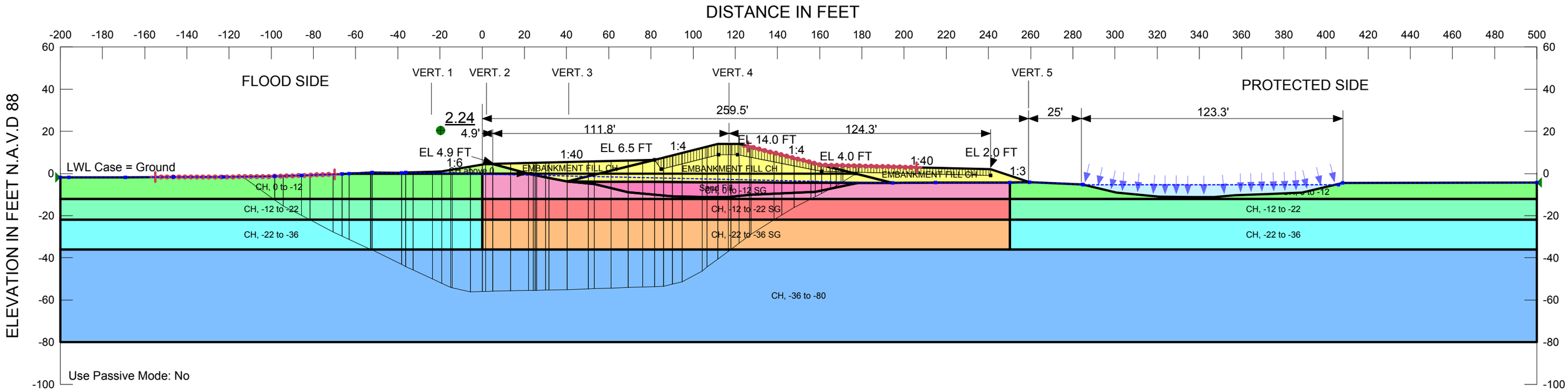
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 728+00 TO 771+00
Reach 5c (1)
CG Case
Entry and Exit
Through Geotextile
2nd Stage Construction

Figure K-12

Name: CG Case.EE.Thru Fabric
File Name: 5c(1) Typical 1.2nd SC.80%SG.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\2nd Stage Construction\80%SG,1 Layer of Fabric\Slope W\
Last Edited By: Cox, Lane MVK

“Confidential Information: Privileged & Confidential Work Product”



Type: Fabric Fabric Capacity: 27000 lbs @ 5% strain Total Length: 154 ft Inside Point: (177, 0) Outside Point: (23, 0) Contact Cohesion: 19 psf Contact Phi: 265 ° Interface Factor: 2
Governing Component: Bond

Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 108 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -12 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -12 (2) Cohesion Spatial Fn: CH, 0 to -12 Phi: 0 ° Piezometric Line: 1
Name: CH, -12 to -22 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -12 to -22 (2) Cohesion Spatial Fn: CH, -12 to -22 Phi: 0 ° Piezometric Line: 1
Name: CH, -22 to -36 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -22 to -36 (2) Cohesion Spatial Fn: CH, -22 to -36 Phi: 0 ° Piezometric Line: 1
Name: CH, -36 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -36 to -80 (2) Cohesion Spatial Fn: CH, -36 to -80 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1
Name: CH, 0 to -12 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -12 (2) Cohesion Spatial Fn: CH, 0 to -12 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -12 to -22 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -12 to -22 (2) Cohesion Spatial Fn: CH, -12 to -22 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -22 to -36 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -22 to -36 (2) Cohesion Spatial Fn: CH, -22 to -36 SG Phi: 0 ° Piezometric Line: 1

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

US Army Corps of Engineers
Vicksburg District

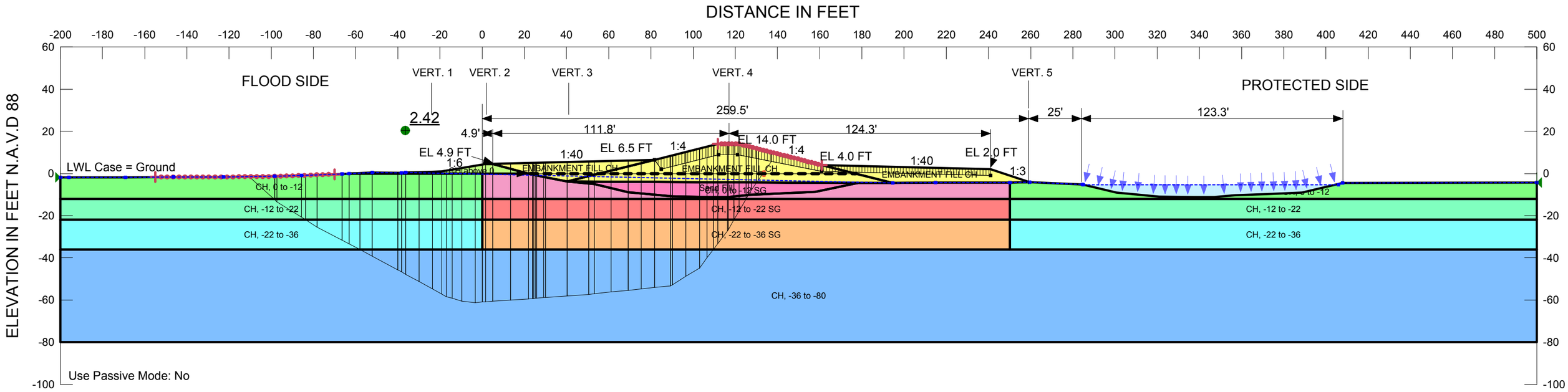
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 728+00 TO 771+00
Reach 5c (1)
LWL Case
PS to FS
Entry and Exit
Around Geotextile
2nd Stage Construction

Name: LWL Case.EE.RtoL
File Name: 5c(1) Typical 1.2nd SC.80%SG.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\2nd Stage Construction\80%SG,1 Layer of Fabric\Slope W\
Last Edited By: Cox, Lane MVK

Figure K-13

"Confidential Information: Privileged & Confidential Work Product"



Type: Fabric Fabric Capacity: 27000 lbs @ 5% strain Total Length: 154 ft Inside Point: (177, 0) Outside Point: (23, 0) Contact Cohesion: 19 psf Contact Phi: 265 ° Interface Factor: 2
Governing Component: Fabric

Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 108 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -12 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -12 (2) Cohesion Spatial Fn: CH, 0 to -12 Phi: 0 ° Piezometric Line: 1
Name: CH, -12 to -22 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -12 to -22 (2) Cohesion Spatial Fn: CH, -12 to -22 Phi: 0 ° Piezometric Line: 1
Name: CH, -22 to -36 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -22 to -36 (2) Cohesion Spatial Fn: CH, -22 to -36 Phi: 0 ° Piezometric Line: 1
Name: CH, -36 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -36 to -80 (2) Cohesion Spatial Fn: CH, -36 to -80 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1
Name: CH, 0 to -12 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -12 (2) Cohesion Spatial Fn: CH, 0 to -12 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -12 to -22 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -12 to -22 (2) Cohesion Spatial Fn: CH, -12 to -22 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -22 to -36 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -22 to -36 (2) Cohesion Spatial Fn: CH, -22 to -36 SG Phi: 0 ° Piezometric Line: 1

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

US Army Corps of Engineers
Vicksburg District

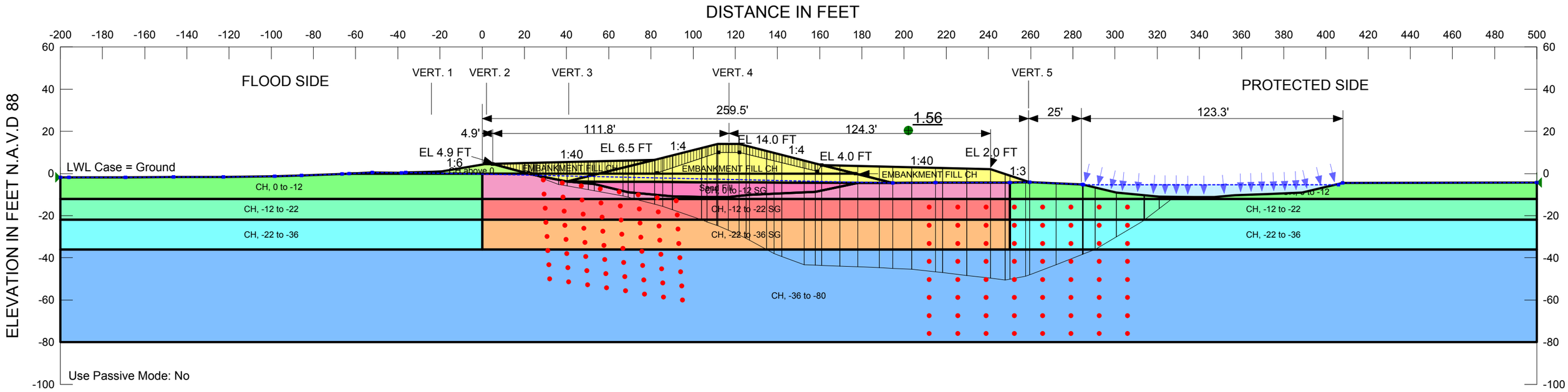
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 728+00 TO 771+00
Reach 5c (1)
LWL Case
PS to FS
Entry and Exit
Through Geotextile
2nd Stage Construction

Name: LWL Case.EE.RtoL.Thru Fabric
File Name: 5c(1) Typical 1.2nd SC.80%SG.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\2nd Stage Construction\80%SG,1 Layer of Fabric\Slope W\
Last Edited By: Cox, Lane MVK

Figure K-14

"Confidential Information: Privileged & Confidential Work Product"



Type: Fabric Fabric Capacity: 27000 lbs @ 5% strain Total Length: 154 ft Inside Point: (23, 0) Outside Point: (177, 0) Contact Cohesion: 265 psf Contact Phi: 19 ° Interface Factor: 2
Governing Component: Bond

Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 108 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -12 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -12 (2) Cohesion Spatial Fn: CH, 0 to -12 Phi: 0 ° Piezometric Line: 1
Name: CH, -12 to -22 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -12 to -22 (2) Cohesion Spatial Fn: CH, -12 to -22 Phi: 0 ° Piezometric Line: 1
Name: CH, -22 to -36 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -22 to -36 (2) Cohesion Spatial Fn: CH, -22 to -36 Phi: 0 ° Piezometric Line: 1
Name: CH, -36 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -36 to -80 (2) Cohesion Spatial Fn: CH, -36 to -80 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1
Name: CH, 0 to -12 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -12 (2) Cohesion Spatial Fn: CH, 0 to -12 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -12 to -22 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -12 to -22 (2) Cohesion Spatial Fn: CH, -12 to -22 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -22 to -36 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -22 to -36 (2) Cohesion Spatial Fn: CH, -22 to -36 SG Phi: 0 ° Piezometric Line: 1

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

US Army Corps of Engineers
Vicksburg District

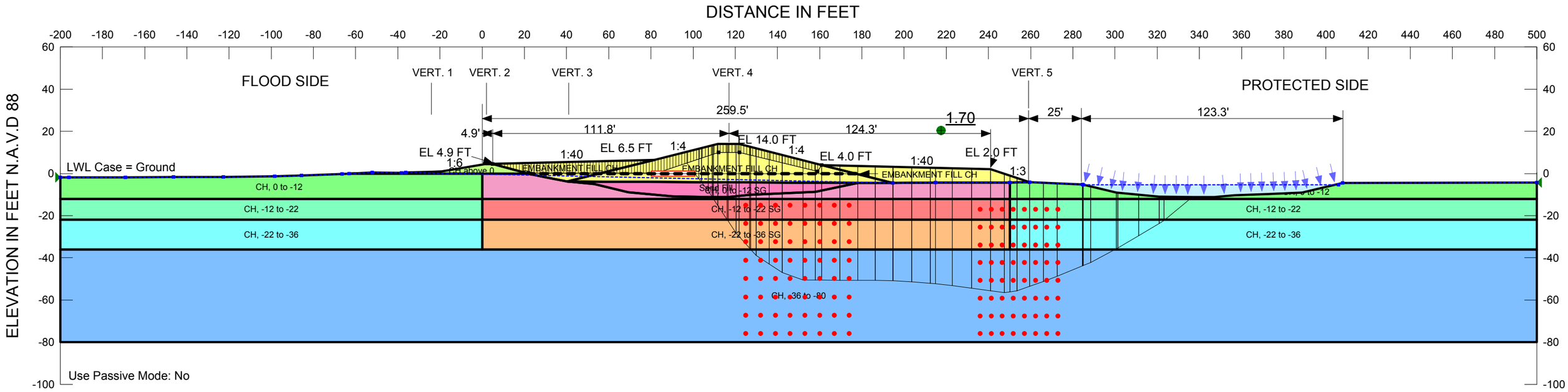
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 728+00 TO 771+00
Reach 5c (1)
LWL Case
FS to PS
Block Specified
Around Geotextile
2nd Stage Construction

Name: LWL Case.BS.LtoR
File Name: 5c(1) Typical 1.2nd SC.80%SG.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\2nd Stage Construction\80%SG,1 Layer of Fabric\Slope W\
Last Edited By: Cox, Lane MVK

Figure K-15

"Confidential Information: Privileged & Confidential Work Product"



Type: Fabric Fabric Capacity: 27000 lbs @ 5% strain Total Length: 154 ft Inside Point: (23, 0) Outside Point: (177, 0) Contact Cohesion: 265 psf Contact Phi: 19 ° Interface Factor: 2
Governing Component: Fabric

Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 108 pcf Cohesion: 600 psf Phi: 0 ° Piezometric Line: 1
Name: CH, 0 to -12 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -12 (2) Cohesion Spatial Fn: CH, 0 to -12 Phi: 0 ° Piezometric Line: 1
Name: CH, -12 to -22 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -12 to -22 (2) Cohesion Spatial Fn: CH, -12 to -22 Phi: 0 ° Piezometric Line: 1
Name: CH, -22 to -36 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -22 to -36 (2) Cohesion Spatial Fn: CH, -22 to -36 Phi: 0 ° Piezometric Line: 1
Name: CH, -36 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -36 to -80 (2) Cohesion Spatial Fn: CH, -36 to -80 Phi: 0 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1
Name: CH, 0 to -12 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -12 (2) Cohesion Spatial Fn: CH, 0 to -12 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -12 to -22 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -12 to -22 (2) Cohesion Spatial Fn: CH, -12 to -22 SG Phi: 0 ° Piezometric Line: 1
Name: CH, -22 to -36 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -22 to -36 (2) Cohesion Spatial Fn: CH, -22 to -36 SG Phi: 0 ° Piezometric Line: 1

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

US Army Corps of Engineers
Vicksburg District

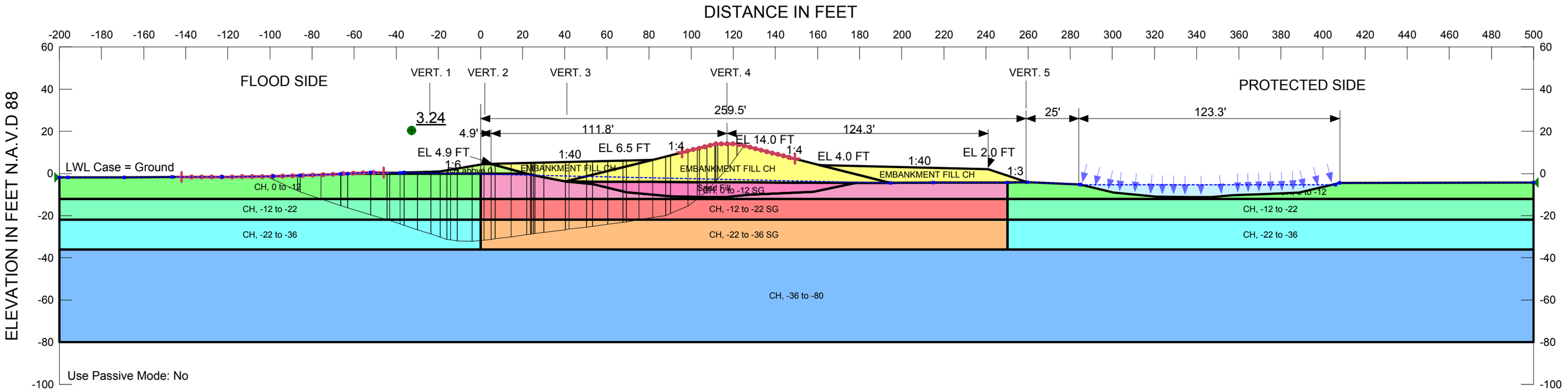
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 728+00 TO 771+00
Reach 5c (1)
LWL Case
FS to PS
Block Specified
Through Geotextile
2nd Stage Construction

Name: LWL Case.BS.LtoRThru Fabric
File Name: 5c(1) Typical 1.2nd SC.80%SG.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\2nd Stage Construction\80%SG,1 Layer of Fabric\Slope W\
Last Edited By: Cox, Lane MVK

Figure K-16

"Confidential Information: Privileged & Confidential Work Product"



Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 0 psf Phi: 23 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 108 pcf Cohesion: 0 psf Phi: 23 ° Piezometric Line: 1
Name: CH, 0 to -12 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -12 (2) Cohesion: 0 psf Phi: 23 ° Piezometric Line: 1
Name: CH, -12 to -22 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -12 to -22 (2) Cohesion: 0 psf Phi: 23 ° Piezometric Line: 1
Name: CH, -22 to -36 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -22 to -36 (2) Cohesion: 0 psf Phi: 23 ° Piezometric Line: 1
Name: CH, -36 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -36 to -80 (2) Cohesion: 0 psf Phi: 23 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1
Name: CH, 0 to -12 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -12 (2) Cohesion: 0 psf Phi: 23 ° Piezometric Line: 1
Name: CH, -12 to -22 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -12 to -22 (2) Cohesion: 0 psf Phi: 23 ° Piezometric Line: 1
Name: CH, -22 to -36 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -22 to -36 (2) Cohesion: 0 psf Phi: 23 ° Piezometric Line: 1

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

US Army Corps of Engineers
Vicksburg District

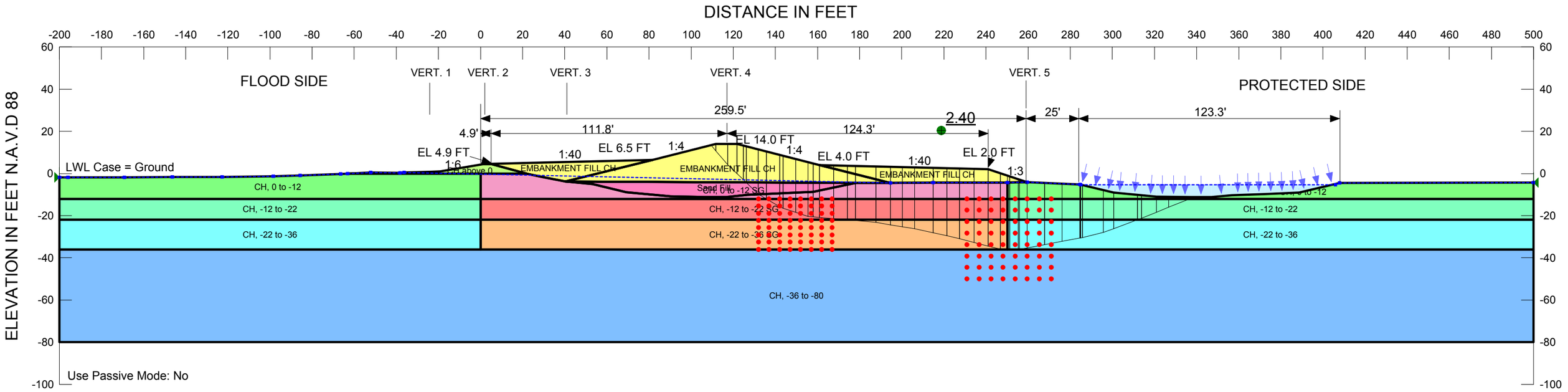
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 728+00 TO 771+00
Reach 5c (1)
LWL Case
S-Case
PS to FS
Entry and Exit
2nd Stage Construction

Name: LWL Case.EE.RtoL
File Name: 5c(1) Typical 1.2nd SC.80%SG.S Case.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\2nd Stage Construction\80%SG,1 Layer of Fabric\Slope W\
Last Edited By: Cox, Lane MVK

Figure K-17

“Confidential Information: Privileged & Confidential Work Product”



Name: EMBANKMENT FILL CH Model: Mohr-Coulomb Unit Weight: 115 pcf Cohesion: 0 psf Phi: 23 ° Piezometric Line: 1
Name: CH above 0 Model: Mohr-Coulomb Unit Weight: 108 pcf Cohesion: 0 psf Phi: 23 ° Piezometric Line: 1
Name: CH, 0 to -12 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -12 (2) Cohesion: 0 psf Phi: 23 ° Piezometric Line: 1
Name: CH, -12 to -22 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -12 to -22 (2) Cohesion: 0 psf Phi: 23 ° Piezometric Line: 1
Name: CH, -22 to -36 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -22 to -36 (2) Cohesion: 0 psf Phi: 23 ° Piezometric Line: 1
Name: CH, -36 to -80 Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -36 to -80 (2) Cohesion: 0 psf Phi: 23 ° Piezometric Line: 1
Name: Sand Fill Model: Mohr-Coulomb Unit Weight: 122 pcf Cohesion: 0 psf Phi: 30 ° Piezometric Line: 1
Name: CH, 0 to -12 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, 0 to -12 (2) Cohesion: 0 psf Phi: 23 ° Piezometric Line: 1
Name: CH, -12 to -22 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -12 to -22 (2) Cohesion: 0 psf Phi: 23 ° Piezometric Line: 1
Name: CH, -22 to -36 SG Model: Spatial Mohr-Coulomb Weight Spatial Fn: CH, -22 to -36 (2) Cohesion: 0 psf Phi: 23 ° Piezometric Line: 1

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF UNDISTURBED BORINGS AND CPT DATA. SEE BOTH BORING AND CPT DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

US Army Corps of Engineers
Vicksburg District

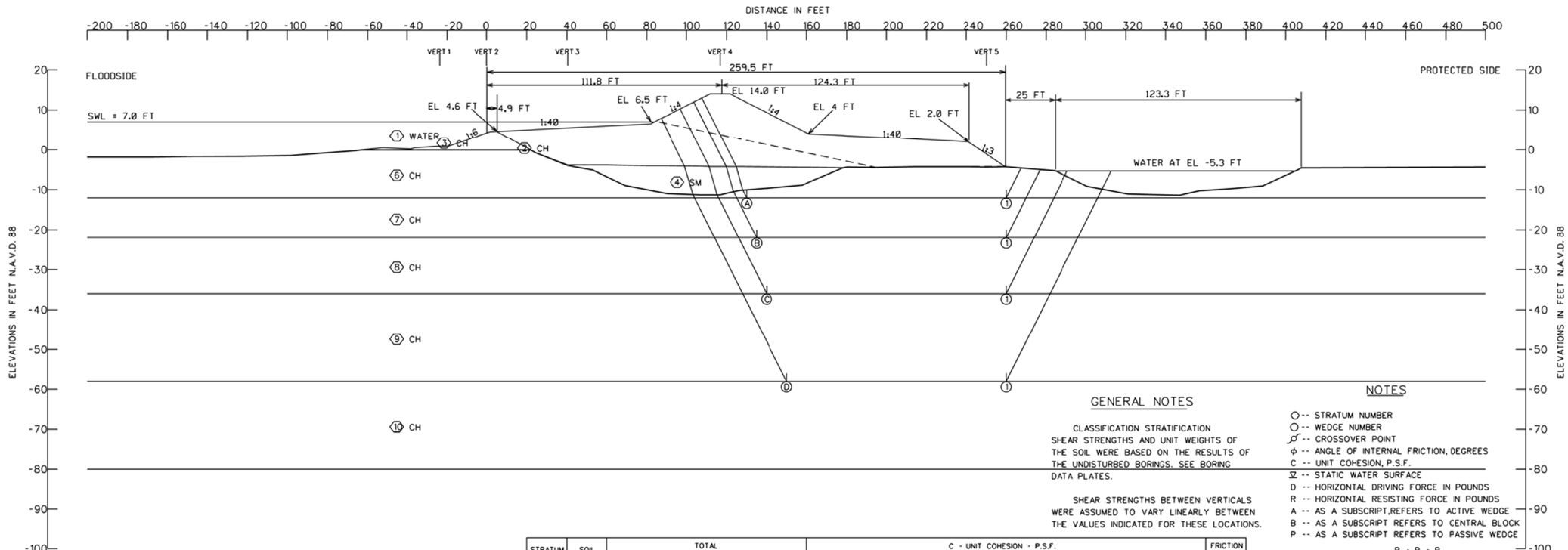
New Orleans to Venice
Plaquemines Parish, LA
Non-Federal 05

STA. 728+00 TO 771+00
Reach 5c (1)
LWL Case
S-Case
FS to PS
Block Specified
2nd Stage Construction

Name: LWL Case.BS.LtoR
File Name: 5c(1) Typical 1.2nd SC.80%SG.S Case.gsz Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\2nd Stage Construction\80%SG,1 Layer of Fabric\Slope W\
Last Edited By: Cox, Lane MVK

Figure K-18

“Confidential Information: Privileged & Confidential Work Product”



GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF THE UNDISTURBED BORINGS. SEE BORING DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

NOTES

◇-- STRATUM NUMBER
○-- WEDGE NUMBER
ơ -- CROSSOVER POINT
Φ -- ANGLE OF INTERNAL FRICTION, DEGREES
C -- UNIT COHESION, P.S.F.
▽ -- STATIC WATER SURFACE
D -- HORIZONTAL DRIVING FORCE IN POUNDS
R -- HORIZONTAL RESISTING FORCE IN POUNDS
A -- AS A SUBSCRIPT, REFERS TO ACTIVE WEDGE
B -- AS A SUBSCRIPT REFERS TO CENTRAL BLOCK
P -- AS A SUBSCRIPT REFERS TO PASSIVE WEDGE

FACTOR OF SAFETY = $\frac{R_A + R_B + R_P}{D_A - D_P}$

ASSUMED FAILURE SURFACE NO.		ELEV.	RESISTING FORCES R_A	R_B	R_P	DRIVING FORCES D_A	$-D_P$	SUMMATION OF FORCES RESISTING	DRIVING	FACTOR OF SAFETY
A	1	-12.0	28048	23236	2252	37399	3257	53536	34142	1.57
B	1	-22.0	33131	34724	5132	70506	16366	72987	54140	1.35
C	1	-36.0	42301	47879	13154	131728	50832	103334	80896	1.28
D	1	-58.0	60363	64260	32594	262586	142663	157217	119923	1.31

STRATUM NO.	SOIL TYPE	TOTAL UNIT WEIGHT P.C.F. VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	C - UNIT COHESION - P.S.F. CENTER OF STRATUM VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	BOTTOM OF STRATUM VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	FRICTION ANGLE DEGREES
1	WATER	62	62	62	62	62	0	0	0	0	0	0	0	0	0	0	0
2	CH	115	115	115	115	115	600	600	600	600	600	600	600	600	600	600	0
3	CH	108	108	108	108	108	600	600	600	600	600	600	600	600	600	600	0
4	SM	122	122	122	122	122	0	0	0	0	0	0	0	0	0	0	30
5	CH	100	101	111	111	111	75	250	171	219	150	75	250	171	219	150	0
6	CH	100	101	111	111	111	75	250	171	219	150	75	250	171	219	150	0
7	CH	100	109	100	100	100	175	350	245	290	150	225	350	290	335	240	0
8	CH	102	104	102	102	102	295	413	353	390	303	365	476	416	453	366	0
9	CH	105	106	106	105	105	475	575	557	523	465	585	674	656	623	564	0
10	CH	105	106	106	105	105	695	773	755	722	663	805	872	854	820	762	0

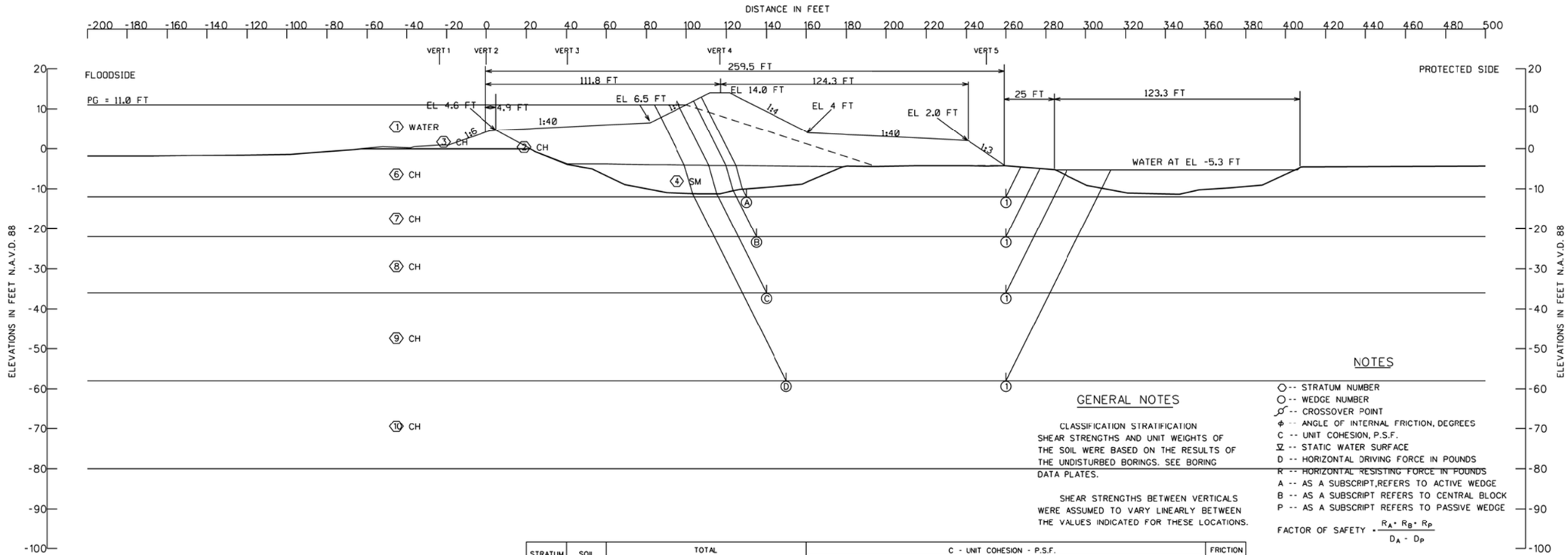
FS = (T+R)/D
FS = (27000 + 103334) / 80896
FS = 1.61

"Reach 5c(1)-2nd Stage"
"FS to PS: SWL=7.0"

U.S. ARMY ENGINEER DISTRICT NEW ORLEANS
CORPS OF ENGINEERS 01-APR-11

Figure K-19

"Confidential Information: Privileged & Confidential Work Product"



NOTES

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF THE UNDISTURBED BORINGS. SEE BORING DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

○ -- STRATUM NUMBER
○ -- WEDGE NUMBER
𝒻 -- CROSSOVER POINT
Φ -- ANGLE OF INTERNAL FRICTION, DEGREES
C -- UNIT COHESION, P.S.F.
▽ -- STATIC WATER SURFACE
D -- HORIZONTAL DRIVING FORCE IN POUNDS
R -- HORIZONTAL RESISTING FORCE IN POUNDS
A -- AS A SUBSCRIPT, REFERS TO ACTIVE WEDGE
B -- AS A SUBSCRIPT REFERS TO CENTRAL BLOCK
P -- AS A SUBSCRIPT REFERS TO PASSIVE WEDGE

FACTOR OF SAFETY $= \frac{R_A + R_B + R_P}{D_A - D_P}$

STRATUM NO.	SOIL TYPE	TOTAL UNIT WEIGHT P.C.F.					C - UNIT COHESION - P.S.F. CENTER OF STRATUM					C - UNIT COHESION - P.S.F. BOTTOM OF STRATUM					FRICTION ANGLE
		VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	DEGREES
1	WATER	62	62	62	62	62	0	0	0	0	0	0	0	0	0	0	0
2	CH	115	115	115	115	115	600	600	600	600	600	600	600	600	600	600	0
3	CH	108	108	108	108	108	600	600	600	600	600	600	600	600	600	600	0
4	SM	122	122	122	122	122	0	0	0	0	0	0	0	0	0	0	30
5	CH	100	101	111	111	111	75	250	171	219	150	75	250	171	219	150	0
6	CH	100	101	111	111	111	75	250	171	219	150	75	250	171	219	150	0
7	CH	100	109	100	100	100	175	350	245	290	150	225	350	290	335	240	0
8	CH	102	104	102	102	102	295	413	353	390	303	365	476	416	453	366	0
9	CH	105	106	106	105	105	475	575	557	523	465	585	674	656	623	564	0
10	CH	105	106	106	105	105	695	773	755	722	663	805	872	854	820	762	0

ASSUMED FAILURE SURFACE NO.		ELEV.	RESISTING FORCES R_A	R_B	R_P	DRIVING FORCES D_A	$-D_P$	SUMMATION OF FORCES RESISTING	DRIVING	FACTOR OF SAFETY
A	1	-12.0	27064	23236	2252	37394	3257	52552	34137	1.54
B	1	-22.0	31985	34724	5132	70484	16366	71841	54118	1.33
C	1	-36.0	40877	47879	13154	131760	50832	101910	80928	1.26
D	1	-58.0	58770	64260	32594	264052	142663	155624	121389	1.28

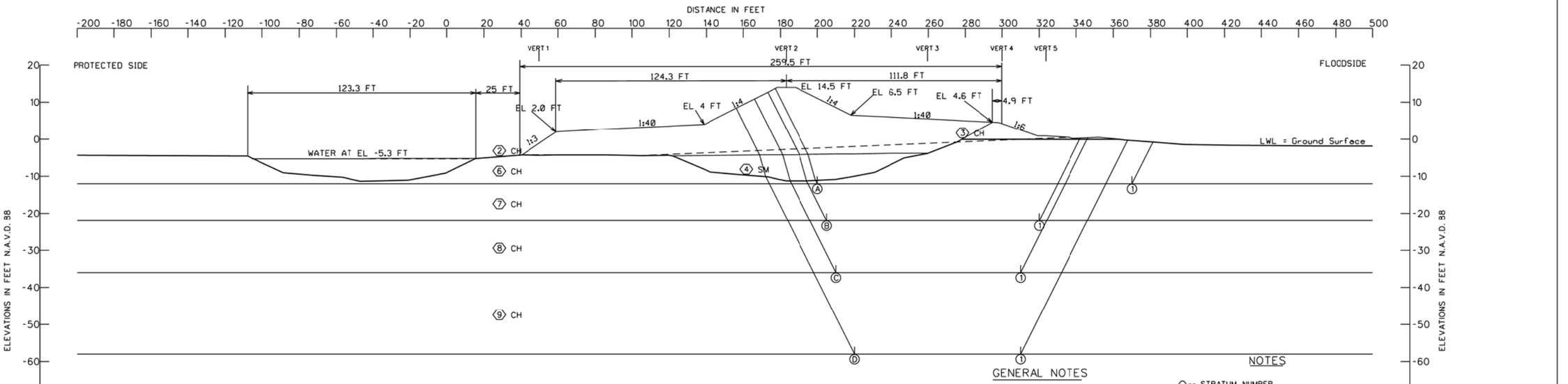
FS = (T+R)/D
FS = (27000 +101910) / 80928
FS = 1.59

"Reach 5c(1)-2nd Stage"
"FS to PS: PG=11.0"

U.S. ARMY ENGINEER DISTRICT NEW ORLEANS
CORPS OF ENGINEERS 01-APR-11

Figure K-20

"Confidential Information: Privileged & Confidential Work Product"



GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF THE UNDISTURBED BORINGS. SEE BORING DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

NOTES

○-- STRATUM NUMBER
○-- WEDGE NUMBER
ơ-- CROSSOVER POINT
ϕ -- ANGLE OF INTERNAL FRICTION, DEGREES
C -- UNIT COHESION, P.S.F.
▽ -- STATIC WATER SURFACE
D -- HORIZONTAL DRIVING FORCE IN POUNDS
R -- HORIZONTAL RESISTING FORCE IN POUNDS
A -- AS A SUBSCRIPT,REFERS TO ACTIVE WEDGE
B -- AS A SUBSCRIPT REFERS TO CENTRAL BLOCK
P -- AS A SUBSCRIPT REFERS TO PASSIVE WEDGE

FACTOR OF SAFETY $= \frac{R_A + R_B + R_P}{D_A - D_P}$

ASSUMED FAILURE SURFACE NO.		ELEV.	RESISTING FORCES R_A	R_B	R_P	DRIVING FORCES D_A	$-D_P$	SUMMATION OF FORCES RESISTING	DRIVING	FACTOR OF SAFETY
A	1	-12.0	30790	27129	1684	36334	6530	59603	29804	2.00
B	1	-22.0	35997	35582	5671	69609	25633	77250	43976	1.76
C	1	-36.0	45126	43772	14952	131392	68828	103850	62564	1.66
D	1	-58.0	63638	59055	34908	262436	174441	157601	87995	1.79

STRATUM NO.	SOIL TYPE	TOTAL UNIT WEIGHT P.C.F. VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	C - UNIT COHESION - P.S.F. CENTER OF STRATUM VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	BOTTOM OF STRATUM VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	FRICTION ANGLE DEGREES
1	WATER	62	62	62	62	62	0	0	0	0	0	0	0	0	0	0	0
2	CH	115	115	115	115	115	600	600	600	600	600	600	600	600	600	600	0
3	CH	108	108	108	108	108	600	600	600	600	600	600	600	600	600	600	0
4	SM	122	122	122	122	122	0	0	0	0	0	0	0	0	0	0	30
5	CH	111	111	111	101	100	150	219	171	250	75	150	219	171	250	75	0
6	CH	111	111	111	101	100	150	219	171	250	75	150	219	171	250	75	0
7	CH	100	100	100	109	100	150	290	245	350	175	240	335	290	350	225	0
8	CH	102	102	102	104	102	303	390	353	413	295	366	453	416	476	365	0
9	CH	105	105	106	106	105	465	523	557	575	475	564	623	656	674	585	0
10	CH	105	105	106	106	105	663	722	755	773	695	762	820	854	872	805	0

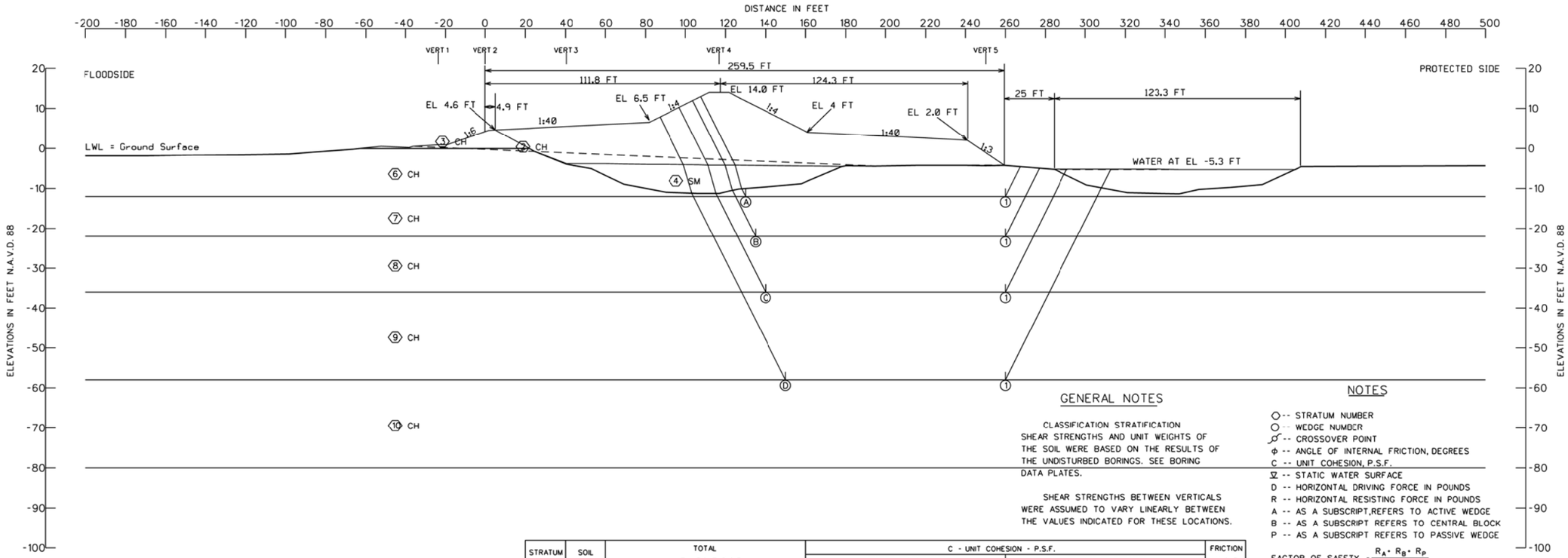
FS = (T+R)/D
FS = (27000 + 103850) / 62564
FS =2.09

"Reach 5c(1)-2nd Stage"
"PS to FS: LWL + GS"

U.S. ARMY ENGINEER DISTRICT NEW ORLEANS
CORPS OF ENGINEERS 01-APR-11

Figure K-21

"Confidential Information: Privileged & Confidential Work Product"



GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF THE UNDISTURBED BORINGS. SEE BORING DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

NOTES

- ○-- STRATUM NUMBER
- ○-- WEDGE NUMBER
- -- CROSSOVER POINT
- ϕ -- ANGLE OF INTERNAL FRICTION, DEGREES
- C -- UNIT COHESION, P.S.F.
- ▽ -- STATIC WATER SURFACE
- D -- HORIZONTAL DRIVING FORCE IN POUNDS
- R -- HORIZONTAL RESISTING FORCE IN POUNDS
- A -- AS A SUBSCRIPT, REFERS TO ACTIVE WEDGE
- B -- AS A SUBSCRIPT REFERS TO CENTRAL BLOCK
- P -- AS A SUBSCRIPT REFERS TO PASSIVE WEDGE

FACTOR OF SAFETY $= \frac{R_A + R_B + R_P}{D_A - D_P}$

ASSUMED FAILURE SURFACE		RESISTING FORCES			DRIVING FORCES		SUMMATION OF FORCES		FACTOR OF SAFETY
NO.	ELEV.	R_A	R_B	R_P	D_A	$-D_P$	RESISTING	DRIVING	
Ⓐ ①	-12.0	29442	23236	2252	37399	3257	54930	34142	1.61
Ⓑ ①	-22.0	34729	34724	5132	70506	16367	74585	54139	1.38
Ⓒ ①	-36.0	44303	47879	13154	131728	50873	105336	80855	1.30
Ⓓ ①	-58.0	62670	64260	32594	262586	142834	159524	119752	1.33

STRATUM NO.	SOIL TYPE	TOTAL UNIT WEIGHT P.C.F.					C - UNIT COHESION - P.S.F. CENTER OF STRATUM					C - UNIT COHESION - P.S.F. BOTTOM OF STRATUM					FRICTION ANGLE DEGREES
		VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	
①	WATER	62	62	62	62	62	0	0	0	0	0	0	0	0	0	0	0
②	CH	115	115	115	115	115	600	600	600	600	600	600	600	600	600	600	0
③	CH	108	108	108	108	108	600	600	600	600	600	600	600	600	600	600	0
④	SM	122	122	122	122	122	0	0	0	0	0	0	0	0	0	0	30
⑤	CH	100	101	111	111	111	75	250	171	219	150	75	250	171	219	150	0
⑥	CH	100	101	111	111	111	75	250	171	219	150	75	250	171	219	150	0
⑦	CH	100	109	100	100	100	175	350	245	290	150	225	350	290	335	240	0
⑧	CH	102	104	102	102	102	295	413	353	390	303	365	476	416	453	366	0
⑨	CH	105	106	106	105	105	475	575	557	523	465	585	674	656	623	564	0
⑩	CH	105	106	106	105	105	695	773	755	722	663	805	872	854	820	762	0

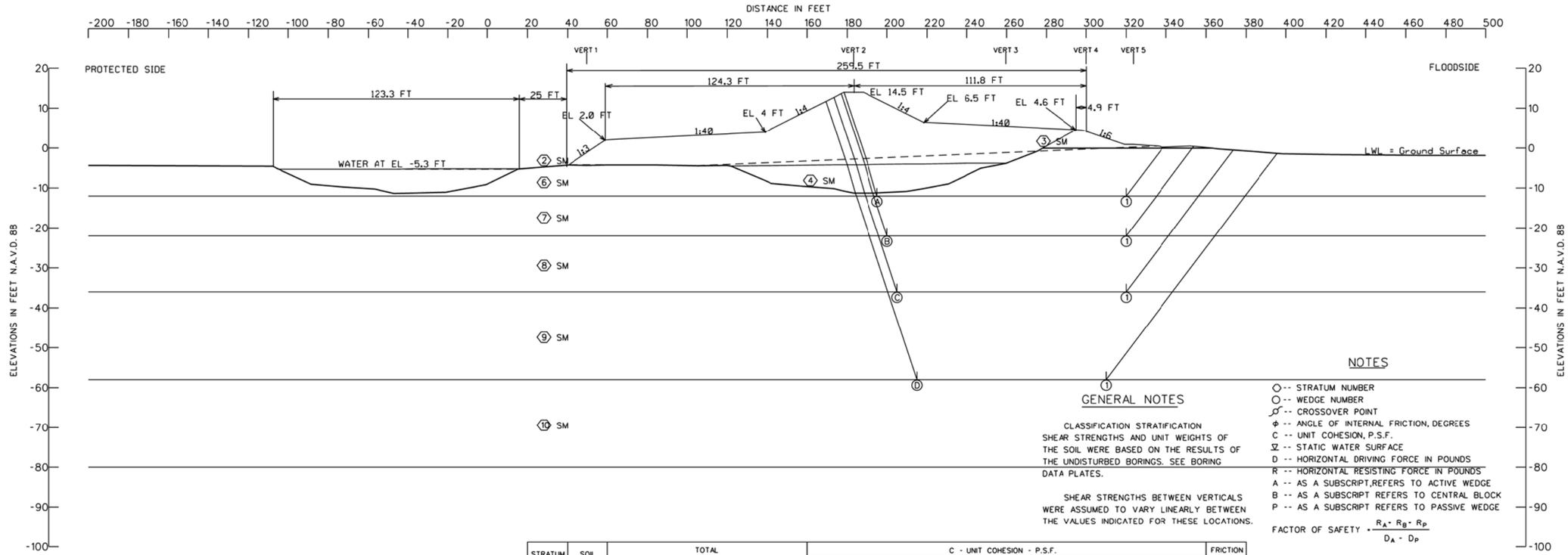
FS = (T+R)/D
FS = (27000 + 105336) / 80855
FS = 1.64

"Reach 5c(1)-2nd Stage"
"FS to PS: LWL - GS"

U.S. ARMY ENGINEER DISTRICT NEW ORLEANS
CORPS OF ENGINEERS 06-APR-11

Figure K-22

"Confidential Information: Privileged & Confidential Work Product"



GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF THE UNDISTURBED BORINGS. SEE BORING DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

NOTES

◇ -- STRATUM NUMBER
○ -- WEDGE NUMBER
-- CROSSOVER POINT
Φ -- ANGLE OF INTERNAL FRICTION, DEGREES
C -- UNIT COHESION, P.S.F.
▽ -- STATIC WATER SURFACE
D -- HORIZONTAL DRIVING FORCE IN POUNDS
R -- HORIZONTAL RESISTING FORCE IN POUNDS
A -- AS A SUBSCRIPT, REFERS TO ACTIVE WEDGE
B -- AS A SUBSCRIPT REFERS TO CENTRAL BLOCK
P -- AS A SUBSCRIPT REFERS TO PASSIVE WEDGE

FACTOR OF SAFETY = $\frac{R_A + R_B + R_P}{D_A - D_P}$

ASSUMED FAILURE SURFACE		RESISTING FORCES			DRIVING FORCES		SUMMATION OF FORCES		FACTOR OF SAFETY
NO.	ELEV.	R_A	R_B	R_P	D_A	$-D_P$	RESISTING	DRIVING	
Ⓐ ①	-12.0	21317	69234	4400	37987	8075	94951	29912	3.17
Ⓑ ①	-22.0	35005	84934	12624	71337	25483	132563	45854	2.89
Ⓒ ①	-36.0	57364	107217	32608	134213	66212	197189	68001	2.90
Ⓓ ①	-58.0	98631	127304	85713	269012	171247	311648	97765	3.19

STRATUM NO.	SOIL TYPE	TOTAL UNIT WEIGHT P.C.F.					C - UNIT COHESION - P.S.F. CENTER OF STRATUM					C - UNIT COHESION - P.S.F. BOTTOM OF STRATUM					FRICTION ANGLE
		VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	DEGREES
◇1	WATER	62	62	62	62	62	0	0	0	0	0	0	0	0	0	0	0
◇2	CH	115	115	115	115	115	0	0	0	0	0	0	0	0	0	0	23
◇3	CH	108	108	108	108	108	0	0	0	0	0	0	0	0	0	0	23
◇4	SM	122	122	122	122	122	0	0	0	0	0	0	0	0	0	0	30
◇5	CH	111	111	111	101	100	0	0	0	0	0	0	0	0	0	0	23
◇6	CH	111	111	111	101	100	0	0	0	0	0	0	0	0	0	0	23
◇7	CH	100	100	100	109	100	0	0	0	0	0	0	0	0	0	0	23
◇8	CH	102	102	102	104	102	0	0	0	0	0	0	0	0	0	0	23
◇9	CH	105	105	106	106	105	0	0	0	0	0	0	0	0	0	0	23
◇10	CH	105	105	106	106	105	0	0	0	0	0	0	0	0	0	0	23

"Reach 5c(1)-2nd Stage"
"PS to FS: S-Case: LWL + GS"

U.S. ARMY ENGINEER DISTRICT NEW ORLEANS
CORPS OF ENGINEERS 04-APR-11

Figure K-23

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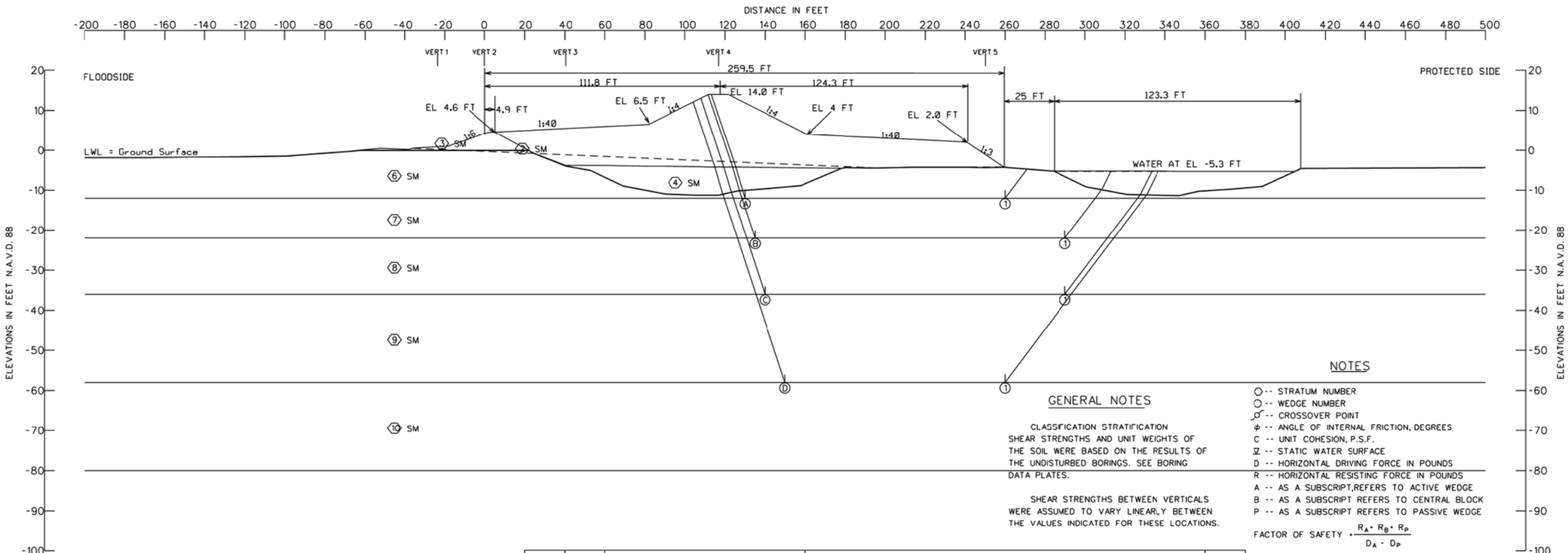

NOTES

GENERAL NOTES

CLASSIFICATION STRATIFICATION SHEAR STRENGTHS AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF THE UNDISTURBED BORINGS. SEE BORING DATA PLATES.

SHEAR STRENGTHS BETWEEN VERTICALS WERE ASSUMED TO VARY LINEARLY BETWEEN THE VALUES INDICATED FOR THESE LOCATIONS.

○-- STRATUM NUMBER
○-- WEDGE NUMBER
ơ-- CROSSOVER POINT
Φ -- ANGLE OF INTERNAL FRICTION, DEGREES
C -- UNIT COHESION, P.S.F.
▽ -- STATIC WATER SURFACE
D -- HORIZONTAL DRIVING FORCE IN POUNDS
R -- HORIZONTAL RESISTING FORCE IN POUNDS
A -- AS A SUBSCRIPT,REFERS TO ACTIVE WEDGE
B -- AS A SUBSCRIPT REFERS TO CENTRAL BLOCK
P -- AS A SUBSCRIPT REFERS TO PASSIVE WEDGE

FACTOR OF SAFETY = $\frac{R_A + R_B + R_P}{D_A - D_P}$

ASSUMED FAILURE SURFACE NO.		ASSUMED FAILURE SURFACE ELEV.	RESISTING FORCES R_A	RESISTING FORCES R_B	RESISTING FORCES R_P	DRIVING FORCES D_A	DRIVING FORCES $-D_P$	SUMMATION OF FORCES RESISTING	SUMMATION OF FORCES DRIVING	FACTOR OF SAFETY
Ⓐ	①	-12.0	20840	70304	1789	37425	3192	92933	34233	2.71
Ⓑ	①	-22.0	34447	94812	4956	70288	12601	134215	57687	2.33
Ⓒ	①	-36.0	56977	124970	17915	132828	43441	199862	89387	2.24
Ⓓ	①	-58.0	98432	140871	66015	266683	139047	305318	127636	2.39

STRATUM NO.	SOIL TYPE	TOTAL UNIT WEIGHT P.C.F. VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	C - UNIT COHESION - P.S.F. CENTER OF STRATUM VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	BOTTOM OF STRATUM VERT. 1	VERT. 2	VERT. 3	VERT. 4	VERT. 5	FRICTION ANGLE DEGREES
①	WATER	62	62	62	62	62	0	0	0	0	0	0	0	0	0	0	0
②	CH	115	115	115	115	115	0	0	0	0	0	0	0	0	0	0	23
③	CH	108	108	108	108	108	0	0	0	0	0	0	0	0	0	0	23
④	SM	122	122	122	122	122	0	0	0	0	0	0	0	0	0	0	30
⑤	CH	100	101	111	111	111	0	0	0	0	0	0	0	0	0	0	23
⑥	CH	100	101	111	111	111	0	0	0	0	0	0	0	0	0	0	23
⑦	CH	100	109	100	100	100	0	0	0	0	0	0	0	0	0	0	23
⑧	CH	102	104	102	102	102	0	0	0	0	0	0	0	0	0	0	23
⑨	CH	105	106	106	105	105	0	0	0	0	0	0	0	0	0	0	23
⑩	CH	105	106	106	105	105	0	0	0	0	0	0	0	0	0	0	23

"Reach 5c(1)-2nd Stage"
"FS to PS:S-Case:LWL • GS"

U.S. ARMY ENGINEER DISTRICT NEW ORLEANS
CORPS OF ENGINEERS 06-APR-11

Figure K-24

"Confidential Information: Privileged & Confidential Work Product"

Settlement Analysis

```
100 TITLE
110 SECTION 5c(1), Two Stage, Elev. 14, Year 1
120 2DSO  1  4  0  0.1  115
130  40.33 -3.85
150  111.73  14
160  121.73  14
170  193.13 -3.85
180 SOIL 1 -3.85 N 59.6
190 SOIL  2 -8.85 S 48.6  0.15  24.0  0.32
200 INDEX  0.70  998.69  1.38
210 SOIL  3 -12 s 37.6  .13  9.86  0.32
220 INDEX  .64  639.09  1.88
230 SOIL  4 -22 s 39.6  .16  12.41  0.32
240 INDEX  .99  1104.29 2.11
250 SOIL  5 -36 s 42.6  .08  11.32  0.32
260 INDEX  .46  2744.69  1.89
270 SOIL  6 -100 s 42.6  .08  11.32  0.32
280 INDEX  .46  5172.89  1.89
320 SOIL  7 -150 N 42.6
340 BOUS  150
350 TIMS 0.5  1 2 3 4 5 6 7 8 9 10 11 12
360 OUTPUT  116.73 193.13 76.4
370 END
```

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PROGRAM CSETT - VERTICAL STRESS INDUCTION AND SETTLEMENT PROGRAM
DATE: 26-JAN-2011 TIME: 14.10.52

I. INPUT DATA

1. TITLE - SECTION 5c(1), Two Stage, Elev.

2. BOUSSINESQ SOLUTION WILL BE USED TO COMPUTE INDUCED STRESSES.
THE MAXIMUM DEPTH TO WHICH THE ANALYSIS WILL BE EXTENDED
IS 150.00 FEET.

3. 2-DIMENSIONAL PRESSURE LOAD DATA
NONE

4. 2-DIMENSIONAL SOIL LOAD DATA

PROFILE NUMBER 1 :NUMBER OF POINTS= 4
BEGINNING TIME OF APPLICATION = 0.0000 YRS.
ENDING TIME OF APPLICATION = 0.1000 YRS.
EFFECTIVE UNIT WEIGHT OF SOIL LOAD= 115.00 PCF

POINT NO.	X (FT.)	Y (FT.)
1	40.33	-3.85
2	111.73	14.00
3	121.73	14.00
4	193.13	-3.85

5. 3-DIMENSIONAL RECTANGULAR LOAD DATA
NONE

6. 3-DIMENSIONAL IRREGULAR LOAD DATA
NONE

7. EXCAVATION DATA
NONE

8. SOIL DATA

STRATA NO.	EL. OF TOP OF STRATUM (FEET NGVD)	DRAINAGE CONDITION	EFF UNIT WEIGHT (PCF)	RECOMPR. INDEX	COEF.OF CONSOL. (SQFT/YR)	POISSON'S RATIO
1	-3.85	N	59.60			
2	-8.85	S	48.60	0.15000	24.00000	0.32000
3	-12.00	S	37.60	0.13000	9.86000	0.32000
4	-22.00	S	39.60	0.16000	12.41000	0.32000
5	-36.00	S	42.60	0.08000	11.32000	0.32000
6	-100.00	S	42.60	0.08000	11.32000	0.32000

9. STRESS-STRAIN DATA

STRATUM NO. 1
INCOMPRESSIBLE STRATUM

STRATUM NO. 2
COMPRESSION INDEX= 0.70000
RECOMPRESSION INDEX= 0.15000
INSITU VOID RATIO= 1.38000
INSITU OVERBURDEN= 998.69 PSF

STRATUM NO. 3
COMPRESSION INDEX= 0.64000
RECOMPRESSION INDEX= 0.13000
INSITU VOID RATIO= 1.88000
INSITU OVERBURDEN= 639.09 PSF

STRATUM NO. 4
COMPRESSION INDEX= 0.99000
RECOMPRESSION INDEX= 0.16000
INSITU VOID RATIO= 2.11000
INSITU OVERBURDEN= 1104.29 PSF

STRATUM NO. 5
COMPRESSION INDEX= 0.46000
RECOMPRESSION INDEX= 0.08000
INSITU VOID RATIO= 1.89000
INSITU OVERBURDEN= 2744.69 PSF

STRATUM NO. 6
COMPRESSION INDEX= 0.46000
RECOMPRESSION INDEX= 0.08000
INSITU VOID RATIO= 1.89000
INSITU OVERBURDEN= 5172.89 PSF

10. TIME SEQUENCE FOR CONSOLIDATION CALCULATIONS

TIME RATE OF CONSOLIDATION CALCULATIONS WILL BE MADE
AT TIMES (YRS):
0.50
1.00
2.00
3.00
4.00

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5.00
6.00
7.00
8.00
9.00
10.00
11.00
12.00

11. OUTPUT CONTROL DATA

XXL= 116.7300 FT.
XUL= 193.1300 FT.
DELX= 76.4000 FT.

.
1
PROGRAM CSETT - VERTICAL STRESS INDUCTION AND SETTLEMENT PROGRAM
DATE: 26-JAN-2011 TIME: 14.10.52

II. OUTPUT SUMMARY.

1. TITLE- SECTION 5c(1), Two Stage, Elev.

POSITION: X= 116.7
****

2. SUMMARY OF ULTIMATE SETTLEMENTS.

STRATA NO.	MID-DEPTH OF STRATA (FEET)	IN-SITU OVERBURDEN (LB/SQ FT)	DELTA SIGMA (LB/SQ FT)	ULTIMATE SETTLEMENT (FEET)
1	2.50	149.00	2047.70	0.000
2	6.57	374.55	2016.60	0.425
3	13.15	639.09	1923.95	1.297
4	25.15	1104.29	1734.42	1.749
5	64.15	2744.69	1235.30	1.245
6	121.15	5172.89	789.36	0.351

3. TIME-SETTLEMENT SUMMARY.

STRATA NO	ULT	(SETTLEMENT IN FEET AT SPECIFIED TIMES) 0.50 (YRS.)	1.00 (YRS.)	2.00 (YRS.)	3.00 (YRS.)	4.00 (YRS.)	5.00 (YRS.)
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.425	0.401	0.423	0.425	0.425	0.425	0.425
3	1.297	0.325	0.459	0.649	0.791	0.899	0.985
4	1.749	0.351	0.497	0.702	0.860	0.989	1.101
5	1.245	0.053	0.075	0.106	0.127	0.147	0.167
6	0.351	0.016	0.029	0.037	0.045	0.052	0.059
TOTALS:	5.067	1.146	1.483	1.919	2.248	2.512	2.737

STRATA NO	(SETTLEMENT IN FEET AT SPECIFIED TIMES) 6.00 (YRS.)	7.00 (YRS.)	8.00 (YRS.)	9.00 (YRS.)	10.00 (YRS.)	11.00 (YRS.)	12.00 (YRS.)
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.425	0.425	0.425	0.425	0.425	0.425	0.425
3	1.053	1.105	1.147	1.179	1.205	1.225	1.240
4	1.193	1.275	1.343	1.402	1.451	1.494	1.531
5	0.180	0.195	0.209	0.222	0.234	0.244	0.256
6	0.064	0.070	0.076	0.080	0.084	0.087	0.092
TOTALS:	2.915	3.070	3.200	3.308	3.399	3.475	3.544

POSITION: X= 193.1
****

2. SUMMARY OF ULTIMATE SETTLEMENTS.

STRATA NO.	MID-DEPTH OF STRATA (FEET)	IN-SITU OVERBURDEN (LB/SQ FT)	DELTA SIGMA (LB/SQ FT)	ULTIMATE SETTLEMENT (FEET)
1	2.50	149.00	22.85	0.000
2	6.57	374.55	59.90	0.012
3	13.15	639.09	118.02	0.118
4	25.15	1104.29	215.54	0.255
5	64.15	2744.69	402.52	0.379
6	121.15	5172.89	467.71	0.193

3. TIME-SETTLEMENT SUMMARY.

STRATA NO	ULT	(SETTLEMENT IN FEET AT SPECIFIED TIMES) 0.50 (YRS.)	1.00 (YRS.)	2.00 (YRS.)	3.00 (YRS.)	4.00 (YRS.)	5.00 (YRS.)
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.012	0.012	0.012	0.012	0.012	0.012	0.012
3	0.118	0.029	0.042	0.060	0.073	0.082	0.090
4	0.255	0.051	0.073	0.102	0.125	0.145	0.161
5	0.379	0.013	0.021	0.029	0.044	0.047	0.051
6	0.193	0.011	0.011	0.022	0.022	0.032	0.036
TOTALS:	0.957	0.116	0.159	0.225	0.276	0.318	0.350

STRATA NO	(SETTLEMENT IN FEET AT SPECIFIED TIMES) 6.00 (YRS.)	7.00 (YRS.)	8.00 (YRS.)	9.00 (YRS.)	10.00 (YRS.)	11.00 (YRS.)	12.00 (YRS.)
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.012	0.012	0.012	0.012	0.012	0.012	0.012
3	0.097	0.104	0.107	0.109	0.111	0.112	0.112

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4	0.175	0.185	0.197	0.205	0.212	0.218	0.225
5	0.058	0.061	0.064	0.067	0.070	0.074	0.077
6	0.038	0.039	0.042	0.044	0.048	0.050	0.052
TOTALS:	0.379	0.399	0.420	0.435	0.452	0.466	0.478

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```
100 TITLE
110 SECTION 5c(1), Two Stage, Elev. 14, Year 1
120 2DSO  1  4  0  0.1  52.6
130  40.33 -3.85
150  111.73  -1.9
160  121.73  -1.9
170  193.13 -3.85
180 SOIL 1 -3.85 N 59.6
190 SOIL  2 -8.85 S 48.6  0.15  24.0  0.32
200 INDEX  0.70  998.69  1.38
210 SOIL  3 -12 s 37.6  .13  9.86  0.32
220 INDEX  .64  639.09  1.88
230 SOIL  4 -22 s 39.6  .16  12.41  0.32
240 INDEX  .99  1104.29 2.11
250 SOIL  5 -36 s 42.6  .08  11.32  0.32
260 INDEX  .46  2744.69  1.89
270 SOIL  6 -100 s 42.6  .08  11.32  0.32
280 INDEX  .46  5172.89  1.89
320 SOIL  7 -150 N 42.6
340 BOUS  150
350 TIMS 0.5  1 2 3 4 5 6 7 8 9 10 11 12
360 OUTPUT  116.73 193.13 76.4
370 END
```

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PROGRAM CSETT - VERTICAL STRESS INDUCTION AND SETTLEMENT PROGRAM
DATE: 26-JAN-2011 TIME: 14.14.39

I. INPUT DATA

1. TITLE - SECTION 5c(1), Two Stage, Elev.

2. BOUSSINESQ SOLUTION WILL BE USED TO COMPUTE INDUCED STRESSES.
THE MAXIMUM DEPTH TO WHICH THE ANALYSIS WILL BE EXTENDED
IS 150.00 FEET.

3. 2-DIMENSIONAL PRESSURE LOAD DATA
NONE

4. 2-DIMENSIONAL SOIL LOAD DATA

PROFILE NUMBER 1 :NUMBER OF POINTS= 4
BEGINNING TIME OF APPLICATION = 0.0000 YRS.
ENDING TIME OF APPLICATION = 0.1000 YRS.
EFFECTIVE UNIT WEIGHT OF SOIL LOAD= 52.60 PCF

POINT NO.	X (FT.)	Y (FT.)
1	40.33	-3.85
2	111.73	-1.90
3	121.73	-1.90
4	193.13	-3.85

5. 3-DIMENSIONAL RECTANGULAR LOAD DATA
NONE

6. 3-DIMENSIONAL IRREGULAR LOAD DATA
NONE

7. EXCAVATION DATA
NONE

8. SOIL DATA

STRATA NO.	EL. OF TOP OF STRATUM (FEET NGVD)	DRAINAGE CONDITION	EFF UNIT WEIGHT (PCF)	RECOMPR. INDEX	COEF.OF CONSOL. (SQFT/YR)	POISSON'S RATIO
1	-3.85	N	59.60			
2	-8.85	S	48.60	0.15000	24.00000	0.32000
3	-12.00	S	37.60	0.13000	9.86000	0.32000
4	-22.00	S	39.60	0.16000	12.41000	0.32000
5	-36.00	S	42.60	0.08000	11.32000	0.32000
6	-100.00	S	42.60	0.08000	11.32000	0.32000

9. STRESS-STRAIN DATA

STRATUM NO. 1
INCOMPRESSIBLE STRATUM

STRATUM NO. 2
COMPRESSION INDEX= 0.70000
RECOMPRESSION INDEX= 0.15000
INSITU VOID RATIO= 1.38000
INSITU OVERBURDEN= 998.69 PSF

STRATUM NO. 3
COMPRESSION INDEX= 0.64000
RECOMPRESSION INDEX= 0.13000
INSITU VOID RATIO= 1.88000
INSITU OVERBURDEN= 639.09 PSF

STRATUM NO. 4
COMPRESSION INDEX= 0.99000
RECOMPRESSION INDEX= 0.16000
INSITU VOID RATIO= 2.11000
INSITU OVERBURDEN= 1104.29 PSF

STRATUM NO. 5
COMPRESSION INDEX= 0.46000
RECOMPRESSION INDEX= 0.08000
INSITU VOID RATIO= 1.89000
INSITU OVERBURDEN= 2744.69 PSF

STRATUM NO. 6
COMPRESSION INDEX= 0.46000
RECOMPRESSION INDEX= 0.08000
INSITU VOID RATIO= 1.89000
INSITU OVERBURDEN= 5172.89 PSF

10. TIME SEQUENCE FOR CONSOLIDATION CALCULATIONS

TIME RATE OF CONSOLIDATION CALCULATIONS WILL BE MADE
AT TIMES (YRS):
0.50
1.00
2.00
3.00
4.00

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5.00
6.00
7.00
8.00
9.00
10.00
11.00
12.00

11. OUTPUT CONTROL DATA

XXL= 116.7300 FT.
XUL= 193.1300 FT.
DELX= 76.4000 FT.

.
1
PROGRAM CSETT - VERTICAL STRESS INDUCTION AND SETTLEMENT PROGRAM
DATE: 26-JAN-2011 TIME: 14.14.39

II. OUTPUT SUMMARY.

1. TITLE- SECTION 5c(1), Two Stage, Elev.

POSITION: X= 116.7
****

2. SUMMARY OF ULTIMATE SETTLEMENTS.

STRATA NO.	MID-DEPTH OF STRATA (FEET)	IN-SITU OVERBURDEN (LB/SQ FT)	DELTA SIGMA (LB/SQ FT)	ULTIMATE SETTLEMENT (FEET)
1	2.50	149.00	102.30	0.000
2	6.57	374.55	100.75	0.020
3	13.15	639.09	96.12	0.091
4	25.15	1104.29	86.66	0.090
5	64.15	2744.69	61.73	0.050
6	121.15	5172.89	39.45	0.010

3. TIME-SETTLEMENT SUMMARY.

STRATA NO	ULT	(SETTLEMENT IN FEET AT SPECIFIED TIMES) 0.50 (YRS.)	1.00 (YRS.)	2.00 (YRS.)	3.00 (YRS.)	4.00 (YRS.)	5.00 (YRS.)
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.020	0.019	0.020	0.020	0.020	0.020	0.020
3	0.091	0.022	0.032	0.045	0.054	0.062	0.069
4	0.090	0.018	0.026	0.037	0.045	0.052	0.057
5	0.050	0.000	0.000	0.000	0.000	0.001	0.002
6	0.010	0.000	0.000	0.000	0.000	0.000	0.000

TOTALS:	0.261	0.059	0.078	0.102	0.119	0.135	0.148

STRATA NO	(SETTLEMENT IN FEET AT SPECIFIED TIMES) 6.00 (YRS.)	7.00 (YRS.)	8.00 (YRS.)	9.00 (YRS.)	10.00 (YRS.)	11.00 (YRS.)	12.00 (YRS.)
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.020	0.020	0.020	0.020	0.020	0.020	0.020
3	0.074	0.078	0.080	0.082	0.083	0.085	0.086
4	0.062	0.065	0.069	0.072	0.075	0.078	0.080
5	0.004	0.005	0.006	0.007	0.008	0.009	0.010
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTALS:	0.160	0.168	0.175	0.181	0.186	0.192	0.196

POSITION: X= 193.1
****

2. SUMMARY OF ULTIMATE SETTLEMENTS.

STRATA NO.	MID-DEPTH OF STRATA (FEET)	IN-SITU OVERBURDEN (LB/SQ FT)	DELTA SIGMA (LB/SQ FT)	ULTIMATE SETTLEMENT (FEET)
1	2.50	149.00	1.15	0.000
2	6.57	374.55	2.95	0.000
3	13.15	639.09	5.90	0.004
4	25.15	1104.29	10.76	0.014
5	64.15	2744.69	20.11	0.012
6	121.15	5172.89	23.36	0.009

3. TIME-SETTLEMENT SUMMARY.

STRATA NO	ULT	(SETTLEMENT IN FEET AT SPECIFIED TIMES) 0.50 (YRS.)	1.00 (YRS.)	2.00 (YRS.)	3.00 (YRS.)	4.00 (YRS.)	5.00 (YRS.)
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.004	0.002	0.002	0.002	0.002	0.004	0.004
4	0.014	0.003	0.003	0.006	0.006	0.006	0.006
5	0.012	0.000	0.000	0.000	0.000	0.000	0.000
6	0.009	0.000	0.000	0.000	0.000	0.000	0.000
TOTALS:	0.039	0.005	0.005	0.008	0.008	0.010	0.010

STRATA NO	(SETTLEMENT IN FEET AT SPECIFIED TIMES) 6.00 (YRS.)	7.00 (YRS.)	8.00 (YRS.)	9.00 (YRS.)	10.00 (YRS.)	11.00 (YRS.)	12.00 (YRS.)
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.004	0.004	0.004	0.004	0.004	0.004	0.004

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4	0.009	0.009	0.009	0.009	0.011	0.011	0.011
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTALS:	0.013	0.013	0.013	0.013	0.015	0.015	0.015

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Reach 5c(1),Second Run, Split Shrinkage									
New Levee EL 14.0 (1 year hold)				New Levee EL 14.0					
Time	Settlement of Center	Shrinkage	Elevation of Center	Remaining Settlement	Time	Settlement of Center	Shrinkage	Remaining Settlement	Elevation of Center
ULT	5.067	0.500	8.433		ULT	0.261	0.500		13.239
0.5	1.146	0.500	12.354		0.5	0.059	0.500		13.441
1	1.483	0.500	12.017		1	0.078	0.500	0.436	12.986
2	1.919	0.500	11.581	0.436	3	0.119	0.500	1.029	12.352
3	2.248	0.500	11.252	0.765	5	0.148	0.500	1.432	11.920
4	2.512	0.500	10.988	1.029	7	0.168	0.500	1.717	11.615
5	2.737	0.500	10.763	1.254	9	0.181	0.500	1.916	11.403
6	2.915	0.500	10.585	1.432	10	0.186	0.500	1.992	11.322
7	3.070	0.500	10.430	1.587	20	0.209	0.500	2.387	10.904
8	3.200	0.500	10.300	1.717	30	0.221	0.500	2.536	10.743
9	3.308	0.500	10.192	1.825	40	0.226	0.500	2.626	10.648
10	3.399	0.500	10.101	1.916	Notes:				
11	3.475	0.500	10.025	1.992	1. Elevation 14'				
12	3.544	0.500	9.956	2.061	2. Half of shrinkage occurring in first stage and				
20	3.849	0.500	9.651	2.366	half of shrinkage occurring in second stage				
30	4.003	0.500	9.497	2.520	3. Assuming complete sumbergence in the second stage				
40	4.104	0.500	9.396	2.621					
21	3.870	0.500	9.630	2.387					
31	4.019	0.500	9.481	2.536					
41	4.109	0.500	9.391	2.626					

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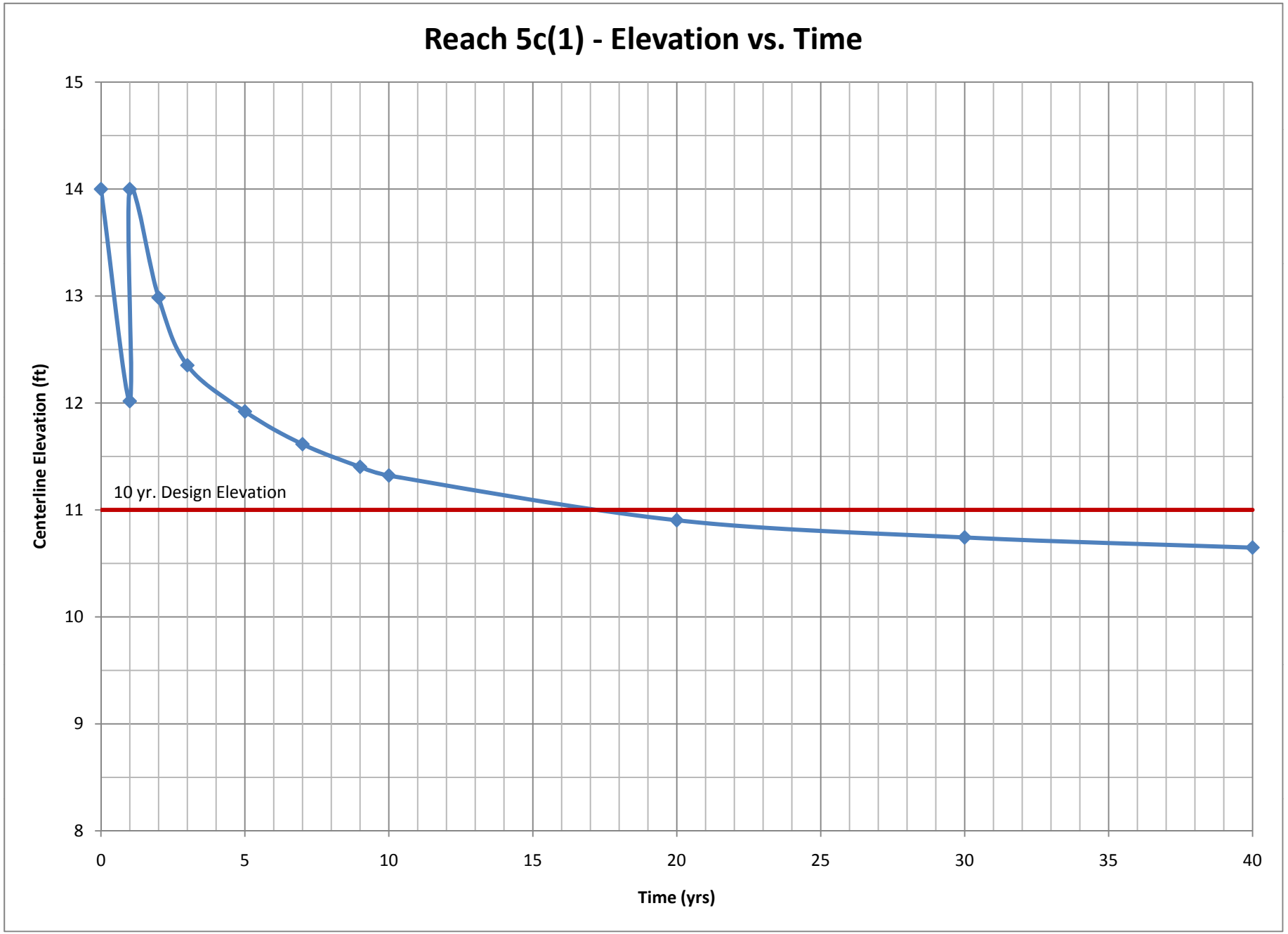

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Strength Gain

```
100 TITLE
110 5c(1), Levee Raise to El. 14 w/ Strength Gain
120 2DSO  1  8  0  0.1  115
130 -140.05 -3.85 -115 4.5 -35 6.5 -5 14 5 14 45 4 115 2.25 133.3 -3.85
180 SOIL 1 -3.85 N 59.6
190 SOIL  2 -8.85 S 48.6  0.15  24.0  0.32
200 INDEX  0.70  998.69  1.38
210 SOIL  3 -12 s 37.6  .13  9.86  0.32
220 INDEX  .64  639.09  1.88
230 SOIL  4 -22 s 39.6  .16  12.41  0.32
240 INDEX  .99  1104.29 2.11
250 SOIL  5 -36 s 42.6  .08  11.32  0.32
260 INDEX  .46  2744.69  1.89
270 SOIL  6 -100 s 42.6  .08  11.32  0.32
280 INDEX  .46  5172.89  1.89
320 SOIL  7 -150 N 42.6
340 BOUS  150
350 TIMS 1 2
360 OUTPUT  -76.4 76.4 76.4
370 END
```

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PROGRAM CSETT - VERTICAL STRESS INDUCTION AND SETTLEMENT PROGRAM
DATE: 21-MAR-2011 TIME: 08.07.27

I. INPUT DATA

1. TITLE - 5c(1), Levee Raise to El.

2. BOUSSINESQ SOLUTION WILL BE USED TO COMPUTE INDUCED STRESSES.
THE MAXIMUM DEPTH TO WHICH THE ANALYSIS WILL BE EXTENDED
IS 150.00 FEET.

3. 2-DIMENSIONAL PRESSURE LOAD DATA
NONE

4. 2-DIMENSIONAL SOIL LOAD DATA

PROFILE NUMBER 1 :NUMBER OF POINTS= 8
BEGINNING TIME OF APPLICATION = 0.0000 YRS.
ENDING TIME OF APPLICATION = 0.1000 YRS.
EFFECTIVE UNIT WEIGHT OF SOIL LOAD= 115.00 PCF

POINT NO.	X (FT.)	Y (FT.)
1	-140.05	-3.85
2	-115.00	4.50
3	-35.00	6.50
4	-5.00	14.00
5	5.00	14.00
6	45.00	4.00
7	115.00	2.25
8	133.30	-3.85

5. 3-DIMENSIONAL RECTANGULAR LOAD DATA
NONE

6. 3-DIMENSIONAL IRREGULAR LOAD DATA
NONE

7. EXCAVATION DATA
NONE

8. SOIL DATA

STRATA NO.	EL. OF TOP OF STRATUM (FEET NGVD)	DRAINAGE CONDITION	EFF UNIT WEIGHT (PCF)	RECOMPR. INDEX	COEF.OF CONSOL. (SQFT/YR)	POISSON'S RATIO
1	-3.85	N	59.60			
2	-8.85	S	48.60	0.15000	24.00000	0.32000
3	-12.00	S	37.60	0.13000	9.86000	0.32000
4	-22.00	S	39.60	0.16000	12.41000	0.32000
5	-36.00	S	42.60	0.08000	11.32000	0.32000
6	-100.00	S	42.60	0.08000	11.32000	0.32000

9. STRESS-STRAIN DATA

STRATUM NO. 1
INCOMPRESSIBLE STRATUM

STRATUM NO. 2
COMPRESSION INDEX= 0.70000
RECOMPRESSION INDEX= 0.15000
INSITU VOID RATIO= 1.38000
INSITU OVERBURDEN= 998.69 PSF

STRATUM NO. 3
COMPRESSION INDEX= 0.64000
RECOMPRESSION INDEX= 0.13000
INSITU VOID RATIO= 1.88000
INSITU OVERBURDEN= 639.09 PSF

STRATUM NO. 4
COMPRESSION INDEX= 0.99000
RECOMPRESSION INDEX= 0.16000
INSITU VOID RATIO= 2.11000
INSITU OVERBURDEN= 1104.29 PSF

STRATUM NO. 5
COMPRESSION INDEX= 0.46000
RECOMPRESSION INDEX= 0.08000
INSITU VOID RATIO= 1.89000
INSITU OVERBURDEN= 2744.69 PSF

STRATUM NO. 6
COMPRESSION INDEX= 0.46000
RECOMPRESSION INDEX= 0.08000
INSITU VOID RATIO= 1.89000
INSITU OVERBURDEN= 5172.89 PSF

10. TIME SEQUENCE FOR CONSOLIDATION CALCULATIONS

TIME RATE OF CONSOLIDATION CALCULATIONS WILL BE MADE
AT TIMES.(YRS): 1.00

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2.00

11. OUTPUT CONTROL DATA

XXL= -76.4000 FT.
XUL= 76.4000 FT.
DELX= 76.4000 FT.

.
1
PROGRAM CSETT - VERTICAL STRESS INDUCTION AND SETTLEMENT PROGRAM
DATE: 21-MAR-2011 TIME: 08.07.27

II. OUTPUT SUMMARY.

1. TITLE- 5c(1), Levee Raise to El.

POSITION: X= -76.4
****

2. SUMMARY OF ULTIMATE SETTLEMENTS.

STRATA NO.	MID-DEPTH OF STRATA (FEET)	IN-SITU OVERBURDEN (LB/SQ FT)	DELTA SIGMA (LB/SQ FT)	ULTIMATE SETTLEMENT (FEET)
1	2.50	149.00	1071.20	0.000
2	6.57	374.55	1071.00	0.228
3	13.15	639.09	1069.38	0.902
4	25.15	1104.29	1061.12	1.220
5	64.15	2744.69	991.86	0.946
6	121.15	5172.89	856.11	0.384

3. TIME-SETTLEMENT SUMMARY.

STRATA NO	ULT	(SETTLEMENT IN FEET AT SPECIFIED TIMES) 1.00 (YRS.)	2.00 (YRS.)
1	0.000	0.000	0.000
2	0.228	0.227	0.228
3	0.902	0.320	0.451
4	1.220	0.346	0.489
5	0.946	0.058	0.080
6	0.384	0.029	0.042
TOTALS:	3.680	0.980	1.290

POSITION: X= 0.0
****

2. SUMMARY OF ULTIMATE SETTLEMENTS.

STRATA NO.	MID-DEPTH OF STRATA (FEET)	IN-SITU OVERBURDEN (LB/SQ FT)	DELTA SIGMA (LB/SQ FT)	ULTIMATE SETTLEMENT (FEET)
1	2.50	149.00	2047.75	0.000
2	6.57	374.55	2017.25	0.425
3	13.15	639.09	1929.50	1.298
4	25.15	1104.29	1763.52	1.769
5	64.15	2744.69	1397.48	1.413
6	121.15	5172.89	1061.64	0.498

3. TIME-SETTLEMENT SUMMARY.

STRATA NO	ULT	(SETTLEMENT IN FEET AT SPECIFIED TIMES) 1.00 (YRS.)	2.00 (YRS.)
1	0.000	0.000	0.000
2	0.425	0.424	0.425
3	1.298	0.461	0.650
4	1.769	0.503	0.710
5	1.413	0.085	0.118
6	0.498	0.038	0.054
TOTALS:	5.403	1.511	1.957

POSITION: X= 76.4
****

2. SUMMARY OF ULTIMATE SETTLEMENTS.

STRATA NO.	MID-DEPTH OF STRATA (FEET)	IN-SITU OVERBURDEN (LB/SQ FT)	DELTA SIGMA (LB/SQ FT)	ULTIMATE SETTLEMENT (FEET)
1	2.50	149.00	812.50	0.000
2	6.57	374.55	812.65	0.150
3	13.15	639.09	813.80	0.745
4	25.15	1104.29	817.96	0.985
5	64.15	2744.69	814.55	0.764
6	121.15	5172.89	755.48	0.332

3. TIME-SETTLEMENT SUMMARY.

STRATA NO	ULT	(SETTLEMENT IN FEET AT SPECIFIED TIMES) 1.00 (YRS.)	2.00 (YRS.)
1	0.000	0.000	0.000
2	0.150	0.150	0.150
3	0.745	0.264	0.372

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4	0.985	0.279	0.395
5	0.764	0.047	0.063
6	0.332	0.026	0.038
TOTALS:	2.976	0.765	1.018

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Reach 5c(1) - Strength Gain Analysis													
x=-76.4													
Strata #	Start EL	End EL	In-Situ/Preconsol Pressure	Delta Sigma	Ult. Sett	Sett. @ 1yr	% Sett	% Delt. Sig.	Cohesion @ Mid-Depth	ΔC	New Cohesion Mid-Depth	80% ΔC	Final Cohesion Mid-Depth
1	-3.85	-8.85	547.60	672.60	3.68	0.98				0	0	0	0
2	-8.85	-12	998.69	446.86	3.68	0.98	26.6%	119.0008	150	26	176	21	171
3	-12	-22	639.09	1069.38	3.68	0.98	26.6%	284.7805	195	63	258	50	245
4	-22	-36	1104.29	1061.12	3.68	0.98	26.6%	282.5809	303	62	365	50	353
5	-36	-100	2744.69	991.86	3.68	0.98	26.6%	264.1366	654	58	712	46	700
6	-100	-150	5172.89	856.11	3.68	0.98	26.6%	227.9858	1167	50	1217	40	1207

x=0													
Strata #	Start EL	End EL	In-Situ/Preconsol Pressure	Delta Sigma	Ult. Sett	Sett. @ 1yr	% Sett	% Delt. Sig.	Cohesion @ Mid-Depth	ΔC	New Cohesion Mid-Depth	80% ΔC	Final Cohesion Mid-Depth
1	-3.85	-8.85	547.60	1649.15	5.403	1.511				0	0	0	0
2	-8.85	-12	998.69	1393.11	5.403	1.511	28.0%	389.5964	150	86	236	69	219
3	-12	-22	639.09	1929.50	5.403	1.511	28.0%	539.6029	195	119	314	95	290
4	-22	-36	1104.29	1763.52	5.403	1.511	28.0%	493.185	303	109	412	87	390
5	-36	-100	2744.69	1397.48	5.403	1.511	28.0%	390.8185	654	86	740	69	723
6	-100	-150	5172.89	1061.64	5.403	1.511	28.0%	296.8977	1167	65	1232	52	1219

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Stability Analysis

SWL Case.BS

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 152
Last Edited By: Cox, Lane MVK
Date: 3/21/2011
Time: 10:42:47 AM
File Name: 5c(1) Typical 1.1st SC.80%SG.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\1st Stage Construction\80%SG, 1 Layer of Fabric\Slope W\
Last Solved Date: 3/21/2011
Last Solved Time: 10:50:14 AM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

SWL Case.BS

Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

SlipSurface
- Direction of movement: Left to Right
- Use Passive Mode: No
- Slip Surface Option: Block
- Critical slip surfaces saved: 100
- Optimize Critical Slip Surface Location: Yes
- Tension Crack
  - Tension Crack Option: Tension Crack Line
  - Percentage Wet: 1
  - Tension Crack Fluid Unit Weight: 62.4 pcf

FOS Distribution
- FOS Calculation Option: Constant

Restrict Block Crossing: Yes
Advanced
- Number of Slices: 30
- Optimization Tolerance: 0.01
- Minimum Slip Surface Depth: 0.1 ft
- Optimization Maximum Iterations: 2000
- Optimization Convergence Tolerance: 1e-007
- Starting Optimization Points: 8
- Ending Optimization Points: 16
- Complete Passes per Insertion: 1

Driving Side Maximum Convex Angle: 5 °
Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH

Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH above 0

Model: Mohr-Coulomb
Unit Weight: 108 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH, 0 to -12

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -12 (2)
Cohesion Spatial Fn: CH, 0 to -12
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH, -12 to -22

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -12 to -22 (2)
Cohesion Spatial Fn: CH, -12 to -22
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH, -22 to -36

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -22 to -36 (2)
Cohesion Spatial Fn: CH, -22 to -36
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH, -36 to -80

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -36 to -80 (2)
Cohesion Spatial Fn: CH, -36 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

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Sand Fill

Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Limits

Left Coordinate: (-200, -1.79) ft
Right Coordinate: (500, -4.27) ft

Slip Surface Block

Left Grid
Upper Left: (14.0275, -5.34558) ft
Lower Left: (78.1383, -5.34558) ft
Lower Right: (78.1383, -29.6829) ft
X Increments: 5
Y Increments: 5
Starting Angle: 135 °
Ending Angle: 160 °
Angle Increments: 7
Right Grid
Upper Left: (220, -30) ft
Lower Left: (277, -30) ft
Lower Right: (277, -60) ft
X Increments: 5
Y Increments: 5
Starting Angle: 20 °
Ending Angle: 45 °
Angle Increments: 7

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	7
	86	7
	194.59	-4.39
	214.93	-4.22
	250.23	-4.22
	259.47	-4.16
	284.55	-5.2
	285	-5.3
	406	-5.3
	407.82	-4.54
	500	-4.27

Reinforcements

Reinforcement 1

Type: Fabric

Outside Point: (177, 0) ft
Inside Point: (23, 0) ft
Slip Surface Intersection: (22.647, 0) ft
Total Length: 154 ft
Reinforcement Direction: 0 °
Applied Load Option: Variable
F of S Dependent: No
Contact Cohesion: 265 psf
Contact Phi: 19 °
Interface Factor: 2
Bond Safety Factor: 1
Fabric Capacity: 27000 lbs
Fabric Safety Factor: 1
Fabric Load: 27000 lbs
Load Distribution: Even along reinf.
Load Orientation: 0
Applied Load: 27000 lbs
Fabric Load Used: 0 lbs
Resisting Force Used: 726.14 lbs/ft
Available Bond Length: 0 ft
Required Bond Length: 0 ft
Governing Component: Bond

Tension Crack Line

	X (ft)	Y (ft)
	4.93	4.58
	22	0.2
	83	0.2
	112	10
	122	10
	159	1
	161	4

Spatial Functions

CH, 0 to -12

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -1.5, 75)
Data Point: (-300, -12, 75)
Data Point: (-23.63, 0, 75)
Data Point: (-23.63, -12, 75)
Data Point: (0, 0, 250)
Data Point: (0, -12, 250)
Data Point: (40.33, -4.5, 150)
Data Point: (40.33, -12, 150)
Data Point: (178.08, -4.5, 150)
Data Point: (178.08, -12, 150)

CH, -12 to -22

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -12, 125)
Data Point: (-300, -22, 225)
Data Point: (-23.63, -12, 125)
Data Point: (-23.63, -22, 225)

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Data Point: (0, -12, 350)
Data Point: (0, -22, 350)
Data Point: (40.33, -12, 150)
Data Point: (40.33, -22, 250)
Data Point: (178.08, -12, 150)
Data Point: (178.08, -22, 240)
Data Point: (500, -12, 150)
Data Point: (500, -22, 240)

CH, -22 to -36

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -22, 225)
Data Point: (-300, -36, 365)
Data Point: (-23.63, -22, 225)
Data Point: (-23.63, -36, 365)
Data Point: (0, -22, 350)
Data Point: (0, -36, 476)
Data Point: (40.33, -22, 250)
Data Point: (40.33, -36, 390)
Data Point: (178.08, -22, 240)
Data Point: (178.08, -36, 366)
Data Point: (500, -22, 240)
Data Point: (500, -36, 366)

CH, -36 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -36, 365)
Data Point: (-300, -80, 805)
Data Point: (-23.63, -36, 365)
Data Point: (-23.63, -80, 805)
Data Point: (0, -36, 476)
Data Point: (0, -80, 872)
Data Point: (40.33, -36, 425)
Data Point: (40.33, -80, 865)
Data Point: (178.08, -36, 366)
Data Point: (178.08, -80, 762)
Data Point: (500, -36, 366)
Data Point: (500, -80, 762)

CH, 0 to -12 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -6, 100)
Data Point: (0, -6, 101)
Data Point: (40.33, -6, 111)
Data Point: (178.08, -6, 111)

CH, -12 to -22 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -17, 100)
Data Point: (0, -17, 109)
Data Point: (40.33, -17, 100)
Data Point: (178.08, -17, 100)

CH, -22 to -36 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -29, 102)
Data Point: (0, -29, 104)
Data Point: (40.33, -29, 102)
Data Point: (178.08, -29, 102)

CH, -36 to -80 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -58, 105)
Data Point: (0, -58, 106)
Data Point: (40.33, -58, 105)
Data Point: (178.08, -58, 105)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -36 to -80	34,36,37,35	30800
Region 2	CH, -22 to -36	38,36,37,39	9800
Region 3	CH, -12 to -22	40,38,39,41	7000
Region 4	CH, 0 to -12	2,40,41,33,59,58,57,56,55,54,53,52,51,49,32,31,30,46,29,28,27,26,25,24,23,22,21,20,19,18,42,43,8,7,6,5,4,3,1	4936.9353
Region 5	CH above 0	43,9,10,11,12,13,61,17,42	131.35445
Region 6	Sand Fill	60,19,20,21,22,23,24,25,26,27,28	636.18815
Region 7	EMBANKMENT FILL CH	19,50,44,45,47,46,29,28,60	1491.7594
Region 8	EMBANKMENT FILL CH	47,48,49,31,30,46	500.71165
Region 9	EMBANKMENT FILL CH	50,19,18,42,17	368.43335

Points

	X (ft)	Y (ft)
Point 1	-195.89	-1.8
Point 2	-200	-1.79
Point 3	-169.15	-1.8
Point 4	-146.39	-1.65
Point 5	-122.74	-1.62
Point 6	-98.28	-1.36
Point 7	-85.7	-0.94
Point 8	-66.38	-0.23
Point 9	-52.15	0.5
Point 10	-38.25	0.23
Point 11	-36.18	0.46
Point 12	-23.63	0.86
Point 13	-19.22	0.94
Point 14	-5.71	4.75
Point 15	-0.42	4.91
Point 16	-0.22	4.77
Point 17	4.93	4.58
Point 18	24.3	-0.66

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Point 19	40.33	-3.85
Point 20	53.08	-5.02
Point 21	69.13	-8.93
Point 22	90.17	-10.85
Point 23	106.69	-11.22
Point 24	116.58	-11.18
Point 25	126.69	-10.14
Point 26	142.13	-9.46
Point 27	157.98	-8.78
Point 28	178.08	-4.54
Point 29	180.18	-4.26
Point 30	214.93	-4.22
Point 31	234.63	-4.19
Point 32	250	-4.27
Point 33	500	-4.27
Point 34	-200	-80
Point 35	500	-80
Point 36	-200	-36
Point 37	500	-36
Point 38	-200	-22
Point 39	500	-22
Point 40	-200	-12
Point 41	500	-12
Point 42	22	0
Point 43	-63	0
Point 44	111.73	14
Point 45	121.73	14
Point 46	194.59	-4.39
Point 47	161	4
Point 48	241	2
Point 49	259.47	-4.16
Point 50	81.73	6.5
Point 51	284.55	-5.2
Point 52	300.6	-9.14
Point 53	320.9	-11
Point 54	337.4	-11.22
Point 55	347.09	-11.26
Point 56	356.8	-10.22
Point 57	372.41	-9.68
Point 58	388.59	-9
Point 59	407.82	-4.54
Point 60	60.33	-3.85
Point 61	1.73	4.5

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	1.38	(175.374, 3.018)	112.0423	(22.0015, 5.00679)	(318.311, -10.7628)
2	7659	1.58	(175.374, 3.018)	113.296	(23.8844, 5.05386)	(326.233, -11.0711)
3	4970	1.58	(176.236, 3.022)	113.305	(24.4355, 5.06764)	(327.406, -11.0868)
4	7658	1.58	(181.499, 3.056)	117.498	(23.8844, 5.05386)	(338.49, -11.2245)
5	7667	1.58	(181.076, 3.055)	118.477	(23.8844, 5.05386)	(337.644, -11.221)
6	7660	1.59	(170.778, 2.912)	109.637	(23.8844, 5.05386)	(317.07, -10.6491)
7	7668	1.59	(175.484, 3.019)	114.61	(23.8844, 5.05386)	(326.455, -11.0741)
8	4978	1.59	(182.938, 3.059)	119.667	(24.4355, 5.06764)	(340.82, -11.2341)
9	4969	1.59	(184.415, 3.062)	119.386	(24.4355, 5.06764)	(343.78, -11.2463)
10	4971	1.60	(170.45, 2.885)	109.028	(24.4355, 5.06764)	(315.87, -10.5391)
11	4979	1.60	(175.797, 3.019)	114.212	(24.4355, 5.06764)	(326.528, -11.075)
12	4962	1.60	(170.049, 2.867)	107.642	(24.4355, 5.06764)	(315.076, -10.4664)
13	5210	1.60	(175.088, 3.022)	114.806	(22.1442, 5.01035)	(327.406, -11.0868)

14	7666	1.60	(189.11, 2.885)	124.927	(23.8844, 5.05386)	(353.811, -10.5401)
15	7650	1.60	(174.819, 3.014)	111.701	(23.8844, 5.05386)	(325.124, -11.0563)
16	4961	1.60	(176.394, 3.023)	112.168	(24.4355, 5.06764)	(327.722, -11.091)
17	7651	1.60	(170.044, 2.879)	107.97	(23.8844, 5.05386)	(315.613, -10.5155)
18	5218	1.61	(181.79, 3.059)	120.87	(22.1442, 5.01035)	(340.82, -11.2341)
19	7661	1.61	(167.186, 2.749)	106.836	(23.8844, 5.05386)	(309.942, -9.99594)
20	7675	1.61	(187.152, 2.991)	123.948	(23.8844, 5.05386)	(349.847, -10.9647)
21	5209	1.61	(183.268, 3.062)	120.61	(22.1442, 5.01035)	(343.78, -11.2463)
22	7669	1.61	(171.096, 2.927)	111.133	(23.8844, 5.05386)	(317.7, -10.7068)
23	7676	1.61	(180.421, 3.051)	119.15	(23.8844, 5.05386)	(336.332, -11.2058)
24	5219	1.61	(174.649, 3.019)	115.582	(22.1442, 5.01035)	(326.528, -11.075)
25	5201	1.61	(175.246, 3.023)	114.132	(22.1442, 5.01035)	(327.722, -11.091)
26	5211	1.61	(169.302, 2.885)	110.417	(22.1442, 5.01035)	(315.87, -10.5391)
27	7652	1.62	(166.369, 2.712)	105.514	(23.8844, 5.05386)	(308.32, -9.84739)
28	5202	1.62	(168.901, 2.867)	108.997	(22.1442, 5.01035)	(315.076, -10.4664)
29	4987	1.62	(181.502, 3.056)	119.985	(24.4355, 5.06764)	(337.945, -11.2223)
30	4963	1.62	(165.446, 2.657)	105.793	(24.4355, 5.06764)	(305.941, -9.62939)
31	7955	1.62	(180.476, 3.055)	119.264	(22.6883, 5.02396)	(337.644, -11.221)
32	7649	1.62	(181.629, 3.056)	116.264	(23.8844, 5.05386)	(338.752, -11.2256)
33	7657	1.62	(191.247, 2.794)	124.844	(23.8844, 5.05386)	(358.126, -10.1741)
34	7947	1.62	(174.774, 3.018)	114.32	(22.6883, 5.02396)	(326.233, -11.0711)
35	4980	1.62	(170.487, 2.886)	110.267	(24.4355, 5.06764)	(315.944, -10.5459)
36	4972	1.62	(166.077, 2.686)	105.739	(24.4355, 5.06764)	(307.194, -9.74414)
37	5258	1.62	(172.447, 4.717)	116.908	(16.7156, 4.87464)	(327.406, -11.0868)
38	4977	1.62	(194.319, 2.745)	128.335	(24.4355, 5.06764)	(363.745, -9.97976)
39	7956	1.62	(174.885, 3.019)	115.292	(22.6883, 5.02396)	(326.455, -11.0741)
40	4986	1.62	(190.915, 2.804)	126.731	(24.4355, 5.06764)	(356.905, -10.2164)
41	7946	1.63	(180.899, 3.056)	118.403	(22.6883, 5.02396)	(338.49, -11.2245)
42	4930	1.63	(184.203, 3.059)	118.986	(26.9612, 5.13078)	(340.82, -11.2341)
43	5266	1.63	(179.147, 4.753)	122.982	(16.7156, 4.87464)	(340.82, -11.2341)
44	7677	1.63	(175.243, 3.017)	115.091	(23.8844, 5.05386)	(325.971, -11.0676)
45	4922	1.63	(177.502, 3.022)	112.55	(26.9612, 5.13078)	(327.406, -11.0868)
46	5227	1.63	(180.354, 3.056)	121.24	(22.1442, 5.01035)	(337.945, -11.2223)
47	5162	1.63	(176.218, 3.022)	114.256	(24.3987, 5.06672)	(327.406, -11.0868)
48	2329	1.63	(177.169, 3.339)	117.248	(21.0639, 4.98335)	(332.627, -11.1564)
49	7948	1.63	(170.179, 2.912)	110.631	(22.6883, 5.02396)	(317.07, -10.6491)
50	5257	1.63	(180.624, 4.756)	122.849	(16.7156, 4.87464)	(343.78, -11.2463)
51	5170	1.63	(182.919, 3.059)	120.157	(24.3987, 5.06672)	(340.82, -11.2341)
52	4931	1.63	(177.063, 3.019)	113.465	(26.9612, 5.13078)	(326.528, -11.075)
53	2377	1.63	(176.641, 3.688)	117.853	(19.9778, 4.9562)	(332.627, -11.1564)
54	5267	1.63	(172.008, 4.714)	117.881	(16.7156, 4.87464)	(326.528, -11.075)
55	7954	1.63	(188.511, 2.885)	125.033	(22.6883, 5.02396)	(353.811, -10.5401)
56	7653	1.63	(163.277, 2.571)	103.559	(23.8844, 5.05386)	(302.184, -9.28513)
57	5220	1.64	(169.339, 2.886)	111.559	(22.1442, 5.01035)	(315.944, -10.5459)
58	7662	1.64	(164.099, 2.609)	104.588	(23.8844, 5.05386)	(303.816, -9.43466)
59	7963	1.64	(186.553, 2.991)	124.863	(22.6883, 5.02396)	(349.847, -10.9647)
60	5226	1.64	(189.768, 2.804)	127.901	(22.1442, 5.01035)	(356.905, -10.2164)
61	7674	1.64	(196.802, 2.697)	131.302	(23.8844, 5.05386)	(369.287, -9.78803)
62	5217	1.64	(193.172, 2.745)	129.489	(22.1442, 5.01035)	(363.745, -9.97976)
63	5259	1.64	(166.66, 4.58)	112.995	(16.7156, 4.87464)	(315.87, -10.5391)
64	5203	1.64	(164.298, 2.657)	105.459	(22.1442, 5.01035)	(305.941, -9.62939)
65	7964	1.64	(179.821, 3.051)	119.899	(22.6883, 5.02396)	(336.332, -11.2058)
66	2425	1.64	(175.965, 4.133)	118.381	(18.589, 4.92148)	(332.627, -11.1564)
67	4988	1.64	(175.125, 3.014)	115.031	(24.4355, 5.06764)	(325.182, -11.0571)
68	4953	1.64	(169.195, 2.828)	105.78	(24.4355, 5.06764)	(313.38, -10.311)
69	5161	1.64	(184.397, 3.062)	119.895	(24.3987, 5.06672)	(343.78, -11.2463)
70	5171	1.64	(175.779, 3.019)	115.314	(24.3987, 5.06672)	(326.528, -11.075)
71	4921	1.64	(185.681, 3.062)	118.575	(26.9612, 5.13078)	(343.78, -11.2463)
72	5212	1.64	(164.929, 2.686)	107.1	(22.1442, 5.01035)	(307.194, -9.74414)
73	10347	1.64	(180.65, 3.055)	117.148	(23.3333, 5.04008)	(337.344, -11.2193)

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74	10348	1.64	(175.844, 3.023)	113.622	(23.3333, 5.04008)	(327.726, -11.091)
75	7670	1.64	(167.578, 2.767)	109.675	(23.8844, 5.05386)	(310.721, -10.0674)
76	2321	1.64	(169.566, 3.221)	110.256	(21.0639, 4.98335)	(317.442, -10.6832)
77	7642	1.64	(168.793, 2.822)	105.958	(23.8844, 5.05386)	(313.132, -10.2883)
78	5249	1.64	(172.604, 4.718)	115.896	(16.7156, 4.87464)	(327.722, -11.091)
79	10356	1.64	(180.782, 3.055)	118.363	(23.3333, 5.04008)	(337.607, -11.2209)
80	4923	1.64	(171.715, 2.885)	108.309	(26.9612, 5.13078)	(315.87, -10.5391)
81	7957	1.64	(170.496, 2.927)	112.006	(22.6883, 5.02396)	(317.7, -10.7068)
82	4913	1.64	(177.659, 3.023)	111.424	(26.9612, 5.13078)	(327.722, -11.091)
83	7938	1.64	(174.22, 3.014)	112.757	(22.6883, 5.02396)	(325.124, -11.0563)
84	2369	1.64	(169.038, 3.569)	110.698	(19.9778, 4.9562)	(317.442, -10.6832)
85	7641	1.64	(173.667, 3.006)	109.741	(23.8844, 5.05386)	(322.817, -11.0256)
86	5163	1.65	(170.431, 2.885)	109.794	(24.3987, 5.06672)	(315.87, -10.5391)
87	10355	1.65	(186.687, 3.001)	122.56	(23.3333, 5.04008)	(349.463, -11.0058)
88	5250	1.65	(166.259, 4.562)	111.686	(16.7156, 4.87464)	(315.076, -10.4664)
89	2473	1.65	(175.064, 4.728)	119.096	(16.7339, 4.8751)	(332.627, -11.1564)
90	2337	1.65	(185.606, 3.299)	124.883	(21.0639, 4.98335)	(349.551, -10.9964)
91	5275	1.65	(177.711, 4.75)	123.186	(16.7156, 4.87464)	(337.945, -11.2223)
92	7939	1.65	(169.444, 2.879)	109.028	(22.6883, 5.02396)	(315.613, -10.5155)
93	4939	1.65	(182.768, 3.056)	119.182	(26.9612, 5.13078)	(337.945, -11.2223)
94	2330	1.65	(169.353, 3.211)	111.43	(21.0639, 4.98335)	(317.02, -10.6445)
95	4914	1.65	(171.315, 2.867)	107.542	(26.9612, 5.13078)	(315.076, -10.4664)
96	5228	1.65	(173.977, 3.014)	116.2	(22.1442, 5.01035)	(325.182, -11.0571)
97	2385	1.65	(185.077, 3.648)	125.303	(19.9778, 4.9562)	(349.551, -10.9964)
98	7643	1.65	(165.04, 2.651)	103.514	(23.8844, 5.05386)	(305.684, -9.60581)
99	2338	1.65	(175.701, 3.33)	117.497	(21.0639, 4.98335)	(329.688, -11.1172)
100	4964	1.65	(161.854, 2.427)	102.338	(24.4355, 5.06764)	(298.839, -8.70767)
101	5153	1.65	(176.376, 3.023)	112.751	(24.3987, 5.06672)	(327.722, -11.091)

Slices of Slip Surface: Optimized

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	23.816945	-0.36257795	459.42141	603.97711	0	600
2	Optimized	29.902815	-2.2484529	577.09989	914.6856	0	200.03
3	Optimized	37.2516	-3.999727	686.38831	1158.2018	0	161.12
4	Optimized	46.705	-5.313993	768.38999	1325.7586	0	150
5	Optimized	55.433045	-6.527416	844.11763	1483.6619	0	150
6	Optimized	59.058045	-7.0847315	878.87731	1552.125	0	150
7	Optimized	64.54977	-8.0785495	940.90723	1683.1813	0	150
8	Optimized	75.24977	-10.014893	1061.7289	1927.8762	0	150
9	Optimized	81.987185	-11.23414	1137.8073	2080.445	0	150
10	Optimized	82.987185	-11.465215	1152.2178	2106.4328	0	150
11	Optimized	84.434935	-11.824875	1174.693	2177.1573	0	150
12	Optimized	85.569935	-12.10684	1192.2879	2240.1519	0	151.03
13	Optimized	88.085	-12.73165	1217.6174	2375.0498	0	157.06
14	Optimized	91.6777	-13.624175	1249.8005	2566.4166	0	165.64
15	Optimized	99.0352	-15.908945	1344.209	2979.1324	0	187.42
16	Optimized	105.7875	-18.20057	1442.9954	3364.6758	0	209.06
17	Optimized	109.21	-19.646995	1510.8688	3599.4824	0	222.65
18	Optimized	113.2538	-21.356005	1591.0384	3833.6526	0	238.61
19	Optimized	115.6788	-22.38087	1639.0921	3932.3287	0	248.13
20	Optimized	119.155	-23.85	1708.0364	4072.7664	0	261.72
21	Optimized	124.21	-25.986365	1808.2673	4204.0808	0	281.35
22	Optimized	127.8721	-27.53405	1880.8674	4246.416	0	295.47
23	Optimized	132.70245	-29.913695	1997.7082	4299.2513	0	317.12
24	Optimized	139.24035	-32.566605	2120.543	4473.7673	0	340.9
25	Optimized	145.14395	-34.14554	2180.373	4456.7434	0	354.6
26	Optimized	153.06895	-34.99232	2181.3302	4425.4756	0	361.11
27	Optimized	159.49	-35.04552	2142.6414	4236.9402	0	360.52
28	Optimized	165.27	-35.09341	2107.7731	4171.6367	0	359.99
29	Optimized	173.81	-35.16417	2056.3697	4134.1673	0	359.2

30	Optimized	179.13	-35.20825	2024.2639	4112.6685	0	358.87
31	Optimized	187.385	-35.276645	1974.4644	4095.6276	0	359.49
32	Optimized	196.03335	-35.3483	1932.5557	4078.2195	0	360.13
33	Optimized	200.83455	-35.68013	1955.8042	4059.5463	0	363.12
34	Optimized	209.5612	-36.511435	2012.1933	4119.9714	0	370.6
35	Optimized	216.4967	-37.172115	2056.2122	4168.9767	0	376.55
36	Optimized	222.20505	-38.03667	2110.1697	4206.5397	0	384.33
37	Optimized	230.48835	-39.46729	2199.3921	4330.7373	0	397.21
38	Optimized	237.51185	-40.68033	2275.0579	4434.0291	0	408.12
39	Optimized	240.69685	-41.230415	2309.3971	4479.4957	0	413.07
40	Optimized	243.87255	-41.77889	2343.6766	4423.7238	0	418.01
41	Optimized	248.37255	-42.107845	2364.1934	4420.8097	0	420.97
42	Optimized	250.115	-41.92887	2353.0546	4333.7207	0	419.36
43	Optimized	252.5964	-41.673995	2338.1139	4213.8176	0	417.07
44	Optimized	257.2164	-40.62597	2274.4975	4051.514	0	407.63
45	Optimized	264.68325	-37.95891	2095.5342	3650.1367	0	383.63
46	Optimized	277.22325	-32.98687	1752.8805	3083.1199	0	338.88
47	Optimized	284.775	-29.781425	1530.7651	2699.5453	0	310.03
48	Optimized	292.1378	-26.65618	1332.6309	2273.3457	0	281.91
49	Optimized	299.9378	-23.17895	1115.6691	1875.4852	0	250.61
50	Optimized	301.1412	-22.36573	1064.8689	1773.7864	0	243.29
51	Optimized	309.0812	-17	730.07986	1157.4669	0	195
52	Optimized	317.3954	-11.38138	379.47748	508.85426	0	150

Slices of Slip Surface: 7659

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7659	26.240255	-0.657469	477.82841	637.65633	0	600
2	7659	34.463065	-3.6503275	664.58342	1079.93	0	168.88
3	7659	46.705	-8.0542735	939.3928	1594.2264	0	150
4	7659	56.705	-11.001925	1123.3137	1975.5636	0	150
5	7659	61.18136	-11.84051	1175.638	2086.5467	0	150
6	7659	65.58136	-12.66479	1227.0886	2185.784	0	156.53
7	7659	75.43	-14.509805	1342.2065	2395.3151	0	174.46
8	7659	82.73	-15.877365	1427.5661	2558.7382	0	187.58
9	7659	84.865	-16.277325	1452.4858	2645.5636	0	191.39
10	7659	88.085	-16.88055	1476.4969	2799.5009	0	197.11
11	7659	94.3	-18.04485	1508.5035	3093.7589	0	208.08
12	7659	102.56	-19.59225	1550.9848	3483.2305	0	222.49
13	7659	109.21	-20.83804	1585.1817	3796.261	0	233.96
14	7659	113.57125	-21.655065	1607.6266	3948.1351	0	241.42
15	7659	115.99625	-22.109355	1620.0634	3994.1303	0	245.54
16	7659	119.155	-22.701105	1636.3491	4049.171	0	250.89
17	7659	124.21	-23.648095	1662.3516	4066.3577	0	259.39
18	7659	130.55	-24.83581	1694.9953	3996.2828	0	269.95
19	7659	138.27	-26.28205	1734.7188	3913.1436	0	282.67
20	7659	146.0925	-27.74749	1774.9274	3829.036	0	295.38
21	7659	154.0175	-29.232135	1815.7318	3743.8305	0	308.1
22	7659	159.49	-30.257335	1843.8509	3682.6245	0	316.78
23	7659	165.27	-31.34014	1873.6123	3721.3284	0	325.86
24	7659	173.81	-32.939995	1917.5781	3837.4581	0	339.11
25	7659	179.13	-33.936625	1944.8808	3911.8066	0	347.43
26	7659	185.1621	-35.066665	1975.9154	4007.6626	0	357.6
27	7659	192.3671	-36.416425	2012.9995	4124.1617	0	369.75
28	7659	199.675	-37.78546	2086.5146	4244.6448	0	382.07
29	7659	209.845	-39.690675	2210.7062	4412.2309	0	399.22
30	7659	219.855	-41.565915	2330.4245	4577.2276	0	416.09
31	7659	229.705	-43.411185	2445.5787	4739.7806	0	432.7
32	7659	237.51185	-44.8737	2536.8276	4866.6298	0	445.86
33	7659	240.69685	-45.470365	2573.9446	4916.8567	0	451.23
34	7659	245.615	-46.39171	2631.4705	4832.2961	0	459.53

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35	7659	252.215	-47.628135	2709.5393	4708.2702	0	470.65
36	7659	256.835	-46.649115	2650.1971	4782.0059	0	461.84
37	7659	264.0042	-42.97367	2410.2321	4253.8702	0	428.76
38	7659	273.07265	-38.324555	2096.7115	3696.991	0	386.92
39	7659	281.07845	-34.22023	1819.8251	3210.9359	0	349.98
40	7659	284.775	-32.32511	1689.4909	2984.8279	0	332.93
41	7659	288.9	-30.210345	1554.4236	2704.5259	0	313.89
42	7659	296.7	-26.21152	1304.9172	2180.7565	0	277.9
43	7659	302.75745	-23.106055	1111.1033	1788.4771	0	249.95
44	7659	308.91115	-19.951225	914.23673	1425.5653	0	221.56
45	7659	316.9037	-15.85368	658.55016	957.13506	0	184.68
46	7659	322.6603	-12.902455	474.38287	625.35734	0	158.12
47	7659	325.32655	-11.53555	389.0977	475.67409	0	150

Slices of Slip Surface: 4970

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	4970	27.12373	-0.7784485	485.3725	654.25927	0	600
2	4970	34.74191	-3.5512385	658.39672	1069.6099	0	171.08
3	4970	40.00091	-5.414685	774.68133	1315.9769	0	150.82
4	4970	46.705	-6.8224615	862.52223	1482.6448	0	150
5	4970	56.705	-8.9223385	993.55842	1742.8173	0	150
6	4970	64.73	-10.607492	1098.7081	1959.7586	0	150
7	4970	70.245695	-11.76572	1170.98	2107.843	0	150
8	4970	76.545695	-13.08864	1253.5454	2253.6634	0	160.6
9	4970	82.73	-14.38727	1334.5443	2407.6895	0	173.14
10	4970	84.865	-14.835595	1362.5303	2499.1076	0	177.44
11	4970	88.085	-15.511755	1391.0761	2659.738	0	183.9
12	4970	94.3	-16.81683	1431.8471	2967.3654	0	196.28
13	4970	102.56	-18.551325	1485.9931	3374.5858	0	212.55
14	4970	109.21	-19.94774	1529.6354	3701.9993	0	225.5
15	4970	114.155	-20.98613	1562.0558	3875.2753	0	235.05
16	4970	117.7816	-21.747675	1585.8601	3948.9111	0	242
17	4970	120.3566	-22.288395	1602.7121	3999.3872	0	246.91
18	4970	124.21	-23.09756	1628.0019	4003.61	0	254.22
19	4970	130.55	-24.42888	1669.5464	3947.8371	0	266.15
20	4970	138.27	-26.049985	1720.254	3882.1708	0	280.51
21	4970	146.0925	-27.692615	1771.4598	3815.5849	0	294.88
22	4970	154.0175	-29.356765	1823.449	3748.283	0	309.24
23	4970	159.49	-30.505925	1859.3814	3699.773	0	319.05
24	4970	165.27	-31.719655	1897.2631	3751.2087	0	329.31
25	4970	173.81	-33.51295	1953.3009	3886.2036	0	344.28
26	4970	179.13	-34.630085	1988.1629	3972.5044	0	353.67
27	4970	182.9169	-35.425285	2012.988	4040.8154	0	360.83
28	4970	190.1219	-36.938245	2060.2123	4174.9634	0	374.44
29	4970	199.675	-38.94428	2158.8175	4354.5873	0	392.5
30	4970	209.845	-41.079855	2297.3883	4545.4108	0	411.72
31	4970	219.855	-43.18183	2431.2407	4733.5173	0	430.64
32	4970	229.705	-45.25021	2560.3041	4918.6175	0	449.25
33	4970	237.51185	-46.88956	2662.5554	5063.2868	0	464.01
34	4970	240.69685	-47.55837	2704.238	5120.9732	0	470.03
35	4970	241.9	-47.81101	2720.0658	5111.14	0	472.3
36	4970	246.515	-46.37916	2630.768	5111.9008	0	459.41
37	4970	254.85	-42.742635	2405.6779	4389.9754	0	426.68
38	4970	264.88715	-38.363475	2120.2869	3708.5352	0	387.27
39	4970	277.42715	-32.89233	1746.4327	3058.5091	0	338.03
40	4970	284.775	-29.686495	1524.8337	2676.9729	0	309.18
41	4970	288.9	-27.886775	1409.3908	2432.2978	0	292.98
42	4970	296.7	-24.48367	1197.0538	1975.4267	0	262.35
43	4970	301.4963	-22.39106	1066.457	1699.6946	0	243.52
44	4970	307.01945	-19.98133	916.11794	1421.6409	0	221.83

45	4970	316.27315	-15.94399	664.18848	957.17348	0	185.5
46	4970	323.10645	-12.96266	478.15029	621.46453	0	158.66
47	4970	326.3595	-11.543375	389.58781	466.86432	0	150

Slices of Slip Surface: 7658

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7658	26.240255	-0.657469	477.82841	638.23469	0	600
2	7658	34.463065	-3.6503275	664.58342	1080.4105	0	168.88
3	7658	46.705	-8.0542735	939.3928	1594.9653	0	150
4	7658	56.705	-11.001925	1123.3137	1975.9703	0	150
5	7658	61.18136	-11.84051	1175.638	2087.0085	0	150
6	7658	65.58136	-12.66479	1227.0886	2186.338	0	156.53
7	7658	75.43	-14.509805	1342.2065	2395.7832	0	174.46
8	7658	82.73	-15.877365	1427.5661	2559.2788	0	187.58
9	7658	84.865	-16.277325	1452.4858	2646.1265	0	191.39
10	7658	88.085	-16.88055	1476.4969	2799.9723	0	197.11
11	7658	94.3	-18.04485	1508.5035	3094.3539	0	208.08
12	7658	102.56	-19.59225	1550.9848	3483.9445	0	222.49
13	7658	109.21	-20.83804	1585.1817	3797.041	0	233.96
14	7658	113.57125	-21.655065	1607.6266	3949.2027	0	241.42
15	7658	115.99625	-22.109355	1620.0634	3994.9722	0	245.54
16	7658	119.155	-22.701105	1636.3491	4049.9344	0	250.89
17	7658	124.21	-23.648095	1662.3516	4067.1504	0	259.39
18	7658	134.41	-25.55893	1714.8568	3955.413	0	276.33
19	7658	146.0925	-27.74749	1774.9274	3829.7801	0	295.38
20	7658	154.0175	-29.232135	1815.7318	3744.5747	0	308.1
21	7658	159.49	-30.257335	1843.8509	3683.2754	0	316.78
22	7658	165.27	-31.34014	1873.6123	3722.1341	0	325.86
23	7658	173.81	-32.939995	1917.5781	3838.2637	0	339.11
24	7658	179.13	-33.936625	1944.8808	3912.6023	0	347.43
25	7658	185.1621	-35.066665	1975.9154	4008.4517	0	357.6
26	7658	192.3671	-36.416425	2012.9995	4124.825	0	369.75
27	7658	199.675	-37.78546	2086.5146	4245.5146	0	382.07
28	7658	209.845	-39.690675	2210.7062	4413.1007	0	399.22
29	7658	219.855	-41.565915	2330.4245	4578.1257	0	416.09
30	7658	229.705	-43.411185	2445.5787	4740.7784	0	432.7
31	7658	237.51185	-44.8737	2536.8276	4867.4825	0	445.86
32	7658	240.69685	-45.470365	2573.9446	4917.8295	0	451.23
33	7658	245.615	-46.39171	2631.4705	4833.2545	0	459.53
34	7658	252.215	-47.628135	2709.5393	4709.2605	0	470.65
35	7658	256.835	-46.85036	2662.7263	4761.7756	0	463.65
36	7658	265.02855	-43.27554	2426.4625	4243.6504	0	431.48
37	7658	276.1457	-38.42518	2095.0303	3659.4395	0	387.83
38	7658	283.12715	-35.379215	1886.8757	3294.2944	0	360.41
39	7658	284.775	-34.660265	1835.2021	3205.1165	0	353.94
40	7658	292.8	-31.158995	1613.6196	2732.3544	0	322.43
41	7658	307.1963	-24.877945	1221.6541	1937.5973	0	265.9
42	7658	317.3463	-20.449545	945.33743	1422.6809	0	226.05
43	7658	324.8532	-17.174315	740.95301	1060.2482	0	196.57
44	7658	332.75965	-13.72477	525.7015	694.17685	0	165.52
45	7658	337.05645	-11.850105	408.72394	493.96091	0	150
46	7658	337.94515	-11.462355	384.53359	449.64807	0	150

Slices of Slip Surface: 7667

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7667	26.240255	-0.657469	477.82841	638.03525	0	600
2	7667	34.463065	-3.6503275	664.58342	1079.85	0	168.88
3	7667	46.705	-8.0629885	939.94639	1594.7181	0	150
4	7667	56.705	-11.127185	1131.1304	1983.997	0	150
5	7667	64.73	-12.869275	1239.8718	2196.6775	0	158.54

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6	7667	75.43	-15.192065	1384.8095	2455.6617	0	181.11
7	7667	82.73	-16.77677	1483.6926	2640.0591	0	196.3
8	7667	84.865	-17.24024	1512.6109	2732.9111	0	200.71
9	7667	88.085	-17.93925	1542.5609	2895.8608	0	207.33
10	7667	94.3	-19.28842	1586.061	3207.615	0	220.03
11	7667	102.56	-21.081525	1643.9145	3620.3978	0	236.71
12	7667	109.21	-22.52513	1690.4487	3953.1639	0	249.99
13	7667	114.155	-23.598605	1725.0783	4132.0074	0	259.77
14	7667	119.155	-24.68402	1760.0736	4237.2319	0	269.58
15	7667	124.21	-25.781375	1795.4596	4269.312	0	279.42
16	7667	134.41	-27.99562	1866.8803	4187.8222	0	299.03
17	7667	146.0925	-30.531695	1948.6822	4096.8814	0	321.09
18	7667	154.0175	-32.25208	2004.1721	4035.226	0	335.81
19	7667	159.49	-33.440065	2042.4613	3990.1758	0	345.85
20	7667	166.1412	-34.88393	2089.0694	4060.3845	0	357.94
21	7667	174.6812	-36.73782	2148.8224	4203.6239	0	374.11
22	7667	179.13	-37.703575	2179.9404	4282.0739	0	381.33
23	7667	187.385	-39.495595	2237.7477	4442.9434	0	397.46
24	7667	199.675	-42.163545	2359.6912	4682.9642	0	421.47
25	7667	209.845	-44.37128	2502.7698	4881.1026	0	441.34
26	7667	219.855	-46.544285	2641.025	5076.2842	0	460.9
27	7667	229.705	-48.68255	2774.4652	5268.5571	0	480.14
28	7667	237.51185	-50.37729	2880.1313	5418.7906	0	495.4
29	7667	240.69685	-51.0687	2923.4153	5478.8245	0	501.62
30	7667	245.615	-52.13634	2989.9484	5409.1174	0	511.23
31	7667	252.215	-53.56909	3080.1489	5305.3982	0	524.12
32	7667	256.835	-52.649115	3024.72	5447.1302	0	515.84
33	7667	265.74	-48.08379	2724.611	4812.3322	0	474.75
34	7667	278.28	-41.654905	2291.0292	4042.0326	0	416.89
35	7667	284.775	-38.32511	2063.9094	3638.1916	0	386.93
36	7667	287.15515	-37.10488	1984.6275	3471.2918	0	375.94
37	7667	294.95515	-33.106055	1735.0996	2943.9862	0	339.95
38	7667	304.6046	-28.15908	1426.3896	2324.1329	0	295.43
39	7667	312.61375	-24.053025	1170.1772	1846.1512	0	258.48
40	7667	318.75915	-20.902455	973.58831	1481.7164	0	230.12
41	7667	328.512	-15.902455	661.61565	938.15101	0	185.12
42	7667	336.762	-11.672925	397.66926	483.77131	0	150
43	7667	337.52175	-11.28343	373.35563	438.94958	0	150

Slices of Slip Surface: 7660

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7660	26.240255	-0.657469	477.82841	638.33441	0	600
2	7660	34.463065	-3.6503275	664.58342	1080.2504	0	168.88
3	7660	46.705	-8.0542735	939.3928	1594.5958	0	150
4	7660	56.705	-11.001925	1123.3137	1975.8347	0	150
5	7660	61.18136	-11.84051	1175.638	2086.7199	0	150
6	7660	65.58136	-12.66479	1227.0886	2186.061	0	156.53
7	7660	75.43	-14.509805	1342.2065	2395.5492	0	174.46
8	7660	82.73	-15.877365	1427.5661	2558.9348	0	187.58
9	7660	84.865	-16.277325	1452.4858	2645.7801	0	191.39
10	7660	88.085	-16.88055	1476.4969	2799.7366	0	197.11
11	7660	94.3	-18.04485	1508.5035	3093.9969	0	208.08
12	7660	102.56	-19.59225	1550.9848	3483.5875	0	222.49
13	7660	109.21	-20.83804	1585.1817	3796.651	0	233.96
14	7660	113.57125	-21.655065	1607.6266	3948.6689	0	241.42
15	7660	115.99625	-22.109355	1620.0634	3994.467	0	245.54
16	7660	119.155	-22.701105	1636.3491	4049.5527	0	250.89
17	7660	124.21	-23.648095	1662.3516	4066.7541	0	259.39
18	7660	130.55	-24.83581	1694.9953	3996.6648	0	269.95
19	7660	138.27	-26.28205	1734.7188	3913.5256	0	282.67

20	7660	146.0925	-27.74749	1774.9274	3829.408	0	295.38
21	7660	154.0175	-29.232135	1815.7318	3744.2026	0	308.1
22	7660	159.49	-30.257335	1843.8509	3682.95	0	316.78
23	7660	165.27	-31.34014	1873.6123	3721.7888	0	325.86
24	7660	173.81	-32.939995	1917.5781	3837.8033	0	339.11
25	7660	179.13	-33.936625	1944.8808	3912.2279	0	347.43
26	7660	185.1621	-35.066665	1975.9154	4008.0571	0	357.6
27	7660	192.3671	-36.416425	2012.9995	4124.6039	0	369.75
28	7660	199.675	-37.78546	2086.5146	4245.0314	0	382.07
29	7660	209.845	-39.690675	2210.7062	4412.6175	0	399.22
30	7660	219.855	-41.565915	2330.4245	4577.7266	0	416.09
31	7660	229.705	-43.411185	2445.5787	4740.2795	0	432.7
32	7660	237.51185	-44.8737	2536.8276	4867.1414	0	445.86
33	7660	240.69685	-45.470365	2573.9446	4917.3431	0	451.23
34	7660	245.615	-46.39171	2631.4705	4832.722	0	459.53
35	7660	252.215	-47.628135	2709.5393	4708.7654	0	470.65
36	7660	256.835	-46.434565	2636.9251	4797.1677	0	459.91
37	7660	263.2022	-42.651845	2392.2153	4257.4982	0	425.87
38	7660	270.6666	-38.21728	2096.2117	3728.2623	0	385.96
39	7660	279.4744	-32.984625	1746.8617	3112.8625	0	338.86
40	7660	284.775	-29.83558	1534.1315	2741.7585	0	310.52
41	7660	291.48205	-25.850955	1282.4126	2225.8858	0	274.66
42	7660	299.28205	-21.217025	993.23373	1631.3078	0	232.95
43	7660	307.69825	-16.217025	681.22787	1050.0926	0	187.95
44	7660	315.93345	-11.324555	375.93345	487.50739	0	150

Slices of Slip Surface: 7668

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7668	26.240255	-0.657469	477.82841	638.29452	0	600
2	7668	34.463065	-3.6503275	664.58342	1079.7699	0	168.88
3	7668	46.705	-8.0629885	939.94639	1594.4965	0	150
4	7668	56.705	-11.127185	1131.1304	1983.7274	0	150
5	7668	64.73	-12.869275	1239.8718	2196.4554	0	158.54
6	7668	75.43	-15.192065	1384.8095	2455.429	0	181.11
7	7668	82.73	-16.77677	1483.6926	2639.717	0	196.3
8	7668	84.865	-17.24024	1512.6109	2732.5667	0	200.71
9	7668	88.085	-17.93925	1542.5609	2895.3921	0	207.33
10	7668	94.3	-19.28842	1586.061	3207.2601	0	220.03
11	7668	102.56	-21.081525	1643.9145	3619.9246	0	236.71
12	7668	109.21	-22.52513	1690.4487	3952.7761	0	249.99
13	7668	114.155	-23.598605	1725.0783	4131.403	0	259.77
14	7668	119.155	-24.68402	1760.0736	4236.8523	0	269.58
15	7668	124.21	-25.781375	1795.4596	4268.918	0	279.42
16	7668	130.55	-27.15768	1839.7913	4217.5703	0	291.65
17	7668	138.27	-28.83356	1893.8433	4157.4423	0	306.37
18	7668	146.0925	-30.531695	1948.6822	4096.5115	0	321.09
19	7668	154.0175	-32.25208	2004.1721	4034.7327	0	335.81
20	7668	159.49	-33.440065	2042.4613	3989.8522	0	345.85
21	7668	166.1412	-34.88393	2089.0694	4060.0043	0	357.94
22	7668	174.6812	-36.73782	2148.8224	4203.1926	0	374.11
23	7668	179.13	-37.703575	2179.9404	4281.7016	0	381.33
24	7668	187.385	-39.495595	2237.7477	4442.5365	0	397.46
25	7668	199.675	-42.163545	2359.6912	4682.4838	0	421.47
26	7668	209.845	-44.37128	2502.7698	4880.6221	0	441.34
27	7668	219.855	-46.544285	2641.025	5075.7881	0	460.9
28	7668	229.705	-48.68255	2774.4652	5268.0611	0	480.14
29	7668	237.51185	-50.37729	2880.1313	5418.282	0	495.4
30	7668	240.69685	-51.0687	2923.4153	5478.1797	0	501.62
31	7668	245.615	-52.13634	2989.9484	5408.6939	0	511.23
32	7668	252.215	-53.56909	3080.1489	5304.9059	0	524.12

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33	7668	256.835	-52.434565	3011.3215	5472.5494	0	513.91
34	7668	265.72705	-47.151845	2666.4679	4752.9672	0	466.37
35	7668	278.26705	-39.701905	2169.1744	3862.6424	0	399.32
36	7668	284.775	-35.83558	1908.5321	3396.1047	0	364.52
37	7668	288.9	-33.384945	1752.5163	3077.2643	0	342.46
38	7668	296.7	-28.751015	1463.296	2480.3065	0	300.76
39	7668	304.33175	-24.217025	1180.4661	1922.7497	0	259.95
40	7668	314.48175	-18.18697	804.17175	1230.2683	0	205.68
41	7668	322.89795	-13.18697	492.13782	666.38912	0	160.68
42	7668	325.6752	-11.53703	389.18801	485.43834	0	150

Slices of Slip Surface: 4978

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	4978	27.12373	-0.7784485	485.3725	654.92342	0	600
2	4978	34.74191	-3.5512385	658.39672	1069.6099	0	171.08
3	4978	40.00091	-5.4244055	775.28371	1312.8006	0	150.82
4	4978	46.705	-7.0302075	875.47147	1500.7646	0	150
5	4978	56.705	-9.425467	1024.9528	1793.1409	0	150
6	4978	63.891735	-11.146875	1132.3597	2010.5205	0	150
7	4978	68.291735	-12.200785	1198.1213	2142.2908	0	151.97
8	4978	75.43	-13.910585	1304.8368	2325.4899	0	168.62
9	4978	82.73	-15.659125	1413.9062	2525.7565	0	185.46
10	4978	84.865	-16.17051	1445.8425	2623.0716	0	190.36
11	4978	88.085	-16.94178	1480.3097	2792.7072	0	197.7
12	4978	94.3	-18.43043	1532.5578	3117.6254	0	211.78
13	4978	102.56	-20.408915	1601.9037	3547.8294	0	230.29
14	4978	107.9463	-21.69908	1647.1986	3828.7818	0	242.23
15	4978	110.4663	-22.302685	1668.3578	3959.8391	0	247.78
16	4978	114.155	-23.18622	1699.3344	4083.263	0	255.87
17	4978	119.155	-24.383845	1741.3459	4199.6543	0	266.75
18	4978	124.21	-25.594645	1783.8166	4242.6916	0	277.67
19	4978	134.41	-28.03781	1869.5274	4183.8564	0	299.42
20	4978	146.0925	-30.83607	1967.6855	4118.9481	0	323.9
21	4978	154.0175	-32.73431	2034.1954	4074.8945	0	340.23
22	4978	159.49	-34.045115	2080.199	4042.2821	0	351.38
23	4978	164.32575	-35.2034	2120.8737	4092.9091	0	361.15
24	4978	172.86575	-37.24895	2192.5698	4256.2636	0	379.52
25	4978	179.13	-38.7494	2245.206	4380.1962	0	390.74
26	4978	187.385	-40.726685	2314.5449	4559.7128	0	408.54
27	4978	199.675	-43.670455	2453.7971	4827.4616	0	435.03
28	4978	209.845	-46.10643	2611.0979	5048.7346	0	456.96
29	4978	219.855	-48.504085	2763.3577	5266.5615	0	478.54
30	4978	229.705	-50.863415	2910.5643	5481.0033	0	499.77
31	4978	237.51185	-52.73336	3027.2736	5648.9311	0	516.6
32	4978	240.69685	-53.496245	3074.7588	5716.0869	0	523.47
33	4978	241.9	-53.784425	3092.7946	5709.6085	0	526.06
34	4978	246.515	-52.37916	3005.1646	5771.6282	0	513.41
35	4978	254.85	-48.742635	2780.04	5049.4239	0	480.68
36	4978	265.6166	-44.045215	2472.9521	4329.5301	0	438.41
37	4978	278.1566	-38.57407	2099.0911	3670.2555	0	389.17
38	4978	284.775	-35.686495	1899.2393	3317.9555	0	363.18
39	4978	292.8	-32.185225	1677.6615	2844.6333	0	331.67
40	4978	308.3724	-25.39106	1253.6653	1989.0483	0	270.52
41	4978	318.5224	-20.96266	977.35108	1472.5608	0	230.66
42	4978	325.025	-18.1256	800.31996	1160.7567	0	205.13
43	4978	333.275	-14.52616	575.71221	778.43357	0	172.74
44	4978	338.2325	-12.36322	440.74766	548.90055	0	153.27
45	4978	339.9427	-11.61706	394.18489	467.18441	0	150

Slices of Slip Surface: 4969

SWL Case.BS

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	4969	27.12373	-0.7784485	485.3725	655.23802	0	600
2	4969	34.74191	-3.5512385	658.39672	1070.2771	0	171.08
3	4969	40.00091	-5.414685	774.68133	1316.5717	0	150.82
4	4969	46.705	-6.8224615	862.52223	1483.1053	0	150
5	4969	56.705	-8.9223385	993.55842	1743.3573	0	150
6	4969	64.73	-10.607492	1098.7081	1960.4258	0	150
7	4969	70.245695	-11.76572	1170.98	2108.5447	0	150
8	4969	76.545695	-13.08864	1253.5454	2254.4185	0	160.6
9	4969	82.73	-14.38727	1334.5443	2408.4724	0	173.14
10	4969	84.865	-14.835595	1362.5303	2499.9267	0	177.44
11	4969	88.085	-15.511755	1391.0761	2660.4421	0	183.9
12	4969	94.3	-16.81683	1431.8471	2968.3132	0	196.28
13	4969	102.56	-18.551325	1485.9931	3375.6521	0	212.55
14	4969	109.21	-19.94774	1529.6354	3702.9701	0	225.5
15	4969	114.155	-20.98613	1562.0558	3876.486	0	235.05
16	4969	117.7816	-21.747675	1585.8601	3950.1735	0	242
17	4969	120.3566	-22.288395	1602.7121	4000.8123	0	246.91
18	4969	124.21	-23.09756	1628.0019	4004.7938	0	254.22
19	4969	134.41	-25.239435	1694.9002	3916.0181	0	273.35
20	4969	150.055	-28.52469	1797.5164	3782.9224	0	302.08
21	4969	159.49	-30.505925	1859.3814	3700.7452	0	319.05
22	4969	165.27	-31.719655	1897.2631	3752.3547	0	329.31
23	4969	173.81	-33.51295	1953.3009	3887.4642	0	344.28
24	4969	179.13	-34.630085	1988.1629	3973.6695	0	353.67
25	4969	182.9169	-35.425285	2012.988	4042.067	0	360.83
26	4969	190.1219	-36.938245	2060.2123	4176.1681	0	374.44
27	4969	199.675	-38.94428	2158.8175	4355.8383	0	392.5
28	4969	209.845	-41.079855	2297.3883	4546.758	0	411.72
29	4969	219.855	-43.18183	2431.2407	4734.9083	0	430.64
30	4969	229.705	-45.25021	2560.3041	4920.1079	0	449.25
31	4969	237.51185	-46.88956	2662.5554	5064.815	0	464.01
32	4969	240.69685	-47.55837	2704.238	5122.5874	0	470.03
33	4969	241.9	-47.81101	2720.0658	5112.608	0	472.3
34	4969	246.515	-46.64785	2647.4543	5099.5081	0	461.83
35	4969	254.85	-43.61416	2460.0826	4447.4714	0	434.53
36	4969	263.54495	-40.449465	2253.9161	3909.1861	0	406.05
37	4969	271.6948	-37.483155	2047.7568	3547.9462	0	379.35
38	4969	280.15985	-34.40212	1833.5214	3177.6256	0	351.62
39	4969	284.775	-32.72235	1714.2708	2973.3963	0	336.5
40	4969	292.8	-29.80149	1528.8681	2564.8795	0	310.21
41	4969	307.4172	-24.48126	1196.9449	1876.02	0	262.33
42	4969	317.5672	-20.78696	966.38128	1441.6279	0	229.08
43	4969	325.025	-18.072545	797.00738	1140.8437	0	204.65
44	4969	333.275	-15.069795	609.63838	823.5238	0	177.63
45	4969	339.5546	-12.78421	467.01286	582.82838	0	157.06
46	4969	342.74455	-11.62317	394.56481	458.257	0	150

Slices of Slip Surface: 4971

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	4971	27.12373	-0.7784485	485.3725	655.22054	0	600
2	4971	34.74191	-3.5512385	658.39672	1069.8006	0	171.08
3	4971	40.00091	-5.414685	774.68133	1316.0661	0	150.82
4	4971	46.705	-6.8224615	862.52223	1482.6448	0	150
5	4971	56.705	-8.9223385	993.55842	1742.8173	0	150
6	4971	64.73	-10.607492	1098.7081	1959.7586	0	150
7	4971	70.245695	-11.76572	1170.98	2107.7991	0	150
8	4971	76.545695	-13.08864	1253.5454	2253.6634	0	160.6
9	4971	82.73	-14.38727	1334.5443	2407.6406	0	173.14
10	4971	84.865	-14.835595	1362.5303	2499.0645	0	177.44

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11	4971	88.085	-15.511755	1391.0761	2659.738	0	183.9
12	4971	94.3	-16.81683	1431.8471	2967.2469	0	196.28
13	4971	102.56	-18.551325	1485.9931	3374.4673	0	212.55
14	4971	109.21	-19.94774	1529.6354	3701.8051	0	225.5
15	4971	114.155	-20.98613	1562.0558	3875.0735	0	235.05
16	4971	117.7816	-21.747675	1585.8601	3948.7889	0	242
17	4971	120.3566	-22.288395	1602.7121	3999.3872	0	246.91
18	4971	124.21	-23.09756	1628.0019	4003.4127	0	254.22
19	4971	130.55	-24.42888	1669.5464	3947.7104	0	266.15
20	4971	138.27	-26.049985	1720.254	3882.0441	0	280.51
21	4971	146.0925	-27.692615	1771.4598	3815.5849	0	294.88
22	4971	154.0175	-29.356765	1823.449	3748.283	0	309.24
23	4971	159.49	-30.505925	1859.3814	3699.773	0	319.05
24	4971	165.27	-31.719655	1897.2631	3751.0941	0	329.31
25	4971	173.81	-33.51295	1953.3009	3886.2036	0	344.28
26	4971	179.13	-34.630085	1988.1629	3972.4578	0	353.67
27	4971	182.9169	-35.425285	2012.988	4040.8154	0	360.83
28	4971	190.1219	-36.938245	2060.2123	4174.8539	0	374.44
29	4971	199.675	-38.94428	2158.8175	4354.491	0	392.5
30	4971	209.845	-41.079855	2297.3883	4545.4108	0	411.72
31	4971	219.855	-43.18183	2431.2407	4733.5173	0	430.64
32	4971	229.705	-45.25021	2560.3041	4918.6175	0	449.25
33	4971	237.51185	-46.88956	2662.5554	5063.2868	0	464.01
34	4971	240.69685	-47.55837	2704.238	5120.9732	0	470.03
35	4971	241.9	-47.81101	2720.0658	5111.14	0	472.3
36	4971	246.515	-46.09543	2613.0853	5120.6555	0	456.86
37	4971	254.85	-41.822325	2348.2403	4324.0635	0	418.4
38	4971	262.83845	-37.726895	2085.8312	3679.3635	0	381.54
39	4971	270.79265	-33.649005	1810.7779	3198.0416	0	344.84
40	4971	279.9642	-28.947015	1493.7002	2649.2681	0	302.52
41	4971	284.775	-26.48067	1324.8016	2356.3806	0	280.33
42	4971	289.25745	-24.18266	1178.3265	2052.117	0	259.64
43	4971	297.05745	-20.183835	928.75372	1531.9092	0	223.65
44	4971	306.8103	-15.183835	616.75457	932.02768	0	178.65
45	4971	314.44535	-11.269565	372.49693	478.61234	0	150

SWL Case.EE.Thru Fabric

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 154
Last Edited By: Cox, Lane MVK
Date: 3/24/2011
Time: 5:21:06 PM
File Name: 5c(1) Typical 1.1st SC.80%SG.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\1st Stage Construction\80%SG, 1 Layer of Fabric\Slope W\
Last Solved Date: 3/24/2011
Last Solved Time: 5:45:56 PM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

SWL Case.EE.Thru Fabric

Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

SlipSurface
- Direction of movement: Left to Right
- Use Passive Mode: No
- Slip Surface Option: Entry and Exit
- Critical slip surfaces saved: 100
- Optimize Critical Slip Surface Location: Yes
- Tension Crack
  - Tension Crack Option: Tension Crack Line
  - Percentage Wet: 1
  - Tension Crack Fluid Unit Weight: 62.4 pcf

FOS Distribution
- FOS Calculation Option: Constant

Advanced
- Number of Slices: 30
- Optimization Tolerance: 0.01
- Minimum Slip Surface Depth: 0.1 ft
- Optimization Maximum Iterations: 2000
- Optimization Convergence Tolerance: 1e-007
- Starting Optimization Points: 8
- Ending Optimization Points: 16
- Complete Passes per Insertion: 1
- Driving Side Maximum Convex Angle: 5 °

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Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH

Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH above 0

Model: Mohr-Coulomb
Unit Weight: 108 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, 0 to -12

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -12 (2)
Cohesion Spatial Fn: CH, 0 to -12
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -12 to -22

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -12 to -22 (2)
Cohesion Spatial Fn: CH, -12 to -22
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -22 to -36

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -22 to -36 (2)
Cohesion Spatial Fn: CH, -22 to -36
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -36 to -80

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -36 to -80 (2)
Cohesion Spatial Fn: CH, -36 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sand Fill

Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Entry and Exit

Left Projection: Range
Left-Zone Left Coordinate: (56, 5.85675) ft
Left-Zone Right Coordinate: (112.63951, 14) ft
Left-Zone Increment: 30
Right Projection: Range
Right-Zone Left Coordinate: (287.80888, -6) ft
Right-Zone Right Coordinate: (349.5175, -11) ft
Right-Zone Increment: 30
Radius Increments: 30

Slip Surface Limits

Left Coordinate: (-200, -1.79) ft
Right Coordinate: (500, -4.27) ft

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	7
	86	7
	194.59	-4.39
	214.93	-4.22
	250.23	-4.22
	259.47	-4.16
	284.55	-5.2
	285	-5.3
	406	-5.3
	407.82	-4.54
	500	-4.27

Reinforcements

Reinforcement 1

Type: Fabric
Outside Point: (177, 0) ft
Inside Point: (23, 0) ft
Slip Surface Intersection: (102.08, 0) ft
Total Length: 154 ft
Reinforcement Direction: 0 °
Applied Load Option: Variable
F of S Dependent: No
Contact Cohesion: 265 psf
Contact Phi: 19 °
Interface Factor: 2

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Bond Safety Factor: 1
Fabric Capacity: 27000 lbs
Fabric Safety Factor: 1
Fabric Load: 27000 lbs
Load Distribution: Even along reinf.
Load Orientation: 0
Applied Load: 27000 lbs
Fabric Load Used: 27000 lbs
Resisting Force Used: 1189.3 lbs/ft
Available Bond Length: 79.085 ft
Required Bond Length: 22.703 ft
Governing Component: Fabric

Tension Crack Line

	X (ft)	Y (ft)
	4.93	4.58
	22	0.2
	83	0.2
	112	10
	122	10
	159	1
	161	4

Spatial Functions

CH, 0 to -12

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -1.5, 75)
Data Point: (-300, -12, 75)
Data Point: (-23.63, 0, 75)
Data Point: (-23.63, -12, 75)
Data Point: (0, 0, 250)
Data Point: (0, -12, 250)
Data Point: (40.33, -4.5, 150)
Data Point: (40.33, -12, 150)
Data Point: (178.08, -4.5, 150)
Data Point: (178.08, -12, 150)

CH, -12 to -22

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -12, 125)
Data Point: (-300, -22, 225)
Data Point: (-23.63, -12, 125)
Data Point: (-23.63, -22, 225)
Data Point: (0, -12, 350)
Data Point: (0, -22, 350)
Data Point: (40.33, -12, 150)
Data Point: (40.33, -22, 250)
Data Point: (178.08, -12, 150)
Data Point: (178.08, -22, 240)
Data Point: (500, -12, 150)
Data Point: (500, -22, 240)

CH, -22 to -36

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -22, 225)
Data Point: (-300, -36, 365)
Data Point: (-23.63, -22, 225)
Data Point: (-23.63, -36, 365)
Data Point: (0, -22, 350)
Data Point: (0, -36, 476)
Data Point: (40.33, -22, 250)
Data Point: (40.33, -36, 390)
Data Point: (178.08, -22, 240)
Data Point: (178.08, -36, 366)
Data Point: (500, -22, 240)
Data Point: (500, -36, 366)

CH, -36 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -36, 365)
Data Point: (-300, -80, 805)
Data Point: (-23.63, -36, 365)
Data Point: (-23.63, -80, 805)
Data Point: (0, -36, 476)
Data Point: (0, -80, 872)
Data Point: (40.33, -36, 425)
Data Point: (40.33, -80, 865)
Data Point: (178.08, -36, 366)
Data Point: (178.08, -80, 762)
Data Point: (500, -36, 366)
Data Point: (500, -80, 762)

CH, 0 to -12 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -6, 100)
Data Point: (0, -6, 101)
Data Point: (40.33, -6, 111)
Data Point: (178.08, -6, 111)

CH, -12 to -22 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -17, 100)
Data Point: (0, -17, 109)
Data Point: (40.33, -17, 100)
Data Point: (178.08, -17, 100)

CH, -22 to -36 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -29, 102)
Data Point: (0, -29, 104)
Data Point: (40.33, -29, 102)
Data Point: (178.08, -29, 102)

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CH, -36 to -80 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -58, 105)
Data Point: (0, -58, 106)
Data Point: (40.33, -58, 105)
Data Point: (178.08, -58, 105)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -36 to -80	34,36,37,35	30800
Region 2	CH, -22 to -36	38,36,37,39	9800
Region 3	CH, -12 to -22	40,38,39,41	7000
Region 4	CH, 0 to -12	2,40,41,33,59,58,57,56,55,54,53,52,51,49,32,31,30,46,29,28,27,26,25,24,23,22,21,20,19,18,42,43,8,7,6,5,4,3,1	4936.9353
Region 5	CH above 0	43,9,10,11,12,13,61,17,42	131.35445
Region 6	Sand Fill	60,19,20,21,22,23,24,25,26,27,28	636.18815
Region 7	EMBANKMENT FILL CH	19,50,44,45,47,46,29,28,60	1491.7594
Region 8	EMBANKMENT FILL CH	47,48,49,31,30,46	500.71165
Region 9	EMBANKMENT FILL CH	50,19,18,42,17	368.43335

Points

	X (ft)	Y (ft)
Point 1	-195.89	-1.8
Point 2	-200	-1.79
Point 3	-169.15	-1.8
Point 4	-146.39	-1.65
Point 5	-122.74	-1.62
Point 6	-98.28	-1.36
Point 7	-85.7	-0.94
Point 8	-66.38	-0.23
Point 9	-52.15	0.5
Point 10	-38.25	0.23
Point 11	-36.18	0.46
Point 12	-23.63	0.86
Point 13	-19.22	0.94
Point 14	-5.71	4.75
Point 15	-0.42	4.91
Point 16	-0.22	4.77
Point 17	4.93	4.58
Point 18	24.3	-0.66
Point 19	40.33	-3.85
Point 20	53.08	-5.02
Point 21	69.13	-8.93
Point 22	90.17	-10.85
Point 23	106.69	-11.22
Point 24	116.58	-11.18
Point 25	126.69	-10.14
Point 26	142.13	-9.46
Point 27	157.98	-8.78
Point 28	178.08	-4.54
Point 29	180.18	-4.26
Point 30	214.93	-4.22
Point 31	234.63	-4.19
Point 32	250	-4.27
Point 33	500	-4.27
Point 34	-200	-80
Point 35	500	-80
Point 36	-200	-36
Point 37	500	-36
Point 38	-200	-22
Point 39	500	-22
Point 40	-200	-12
Point 41	500	-12
Point 42	22	0
Point 43	-63	0
Point 44	111.73	14
Point 45	121.73	14
Point 46	194.59	-4.39
Point 47	161	4
Point 48	241	2
Point 49	259.47	-4.16
Point 50	81.73	6.5
Point 51	284.55	-5.2
Point 52	300.6	-9.14
Point 53	320.9	-11
Point 54	337.4	-11.22
Point 55	347.09	-11.26
Point 56	356.8	-10.22
Point 57	372.41	-9.68
Point 58	388.59	-9
Point 59	407.82	-4.54
Point 60	60.33	-3.85
Point 61	1.73	4.5

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	1.60	(218.283, 92.583)	99.59426	(97.8662, 10.5341)	(333.557, -11.1688)
2	17966	1.71	(218.283, 92.583)	153.082	(93.5914, 9.46534)	(330.875, -11.133)
3	17997	1.71	(219.323, 93.287)	154.337	(93.5912, 9.46529)	(332.948, -11.1606)
4	17935	1.71	(217.243, 91.878)	151.826	(93.5916, 9.46539)	(328.803, -11.1054)
5	17005	1.71	(217.139, 92.685)	153.994	(91.8262, 9.02404)	(330.875, -11.133)
6	18927	1.71	(219.428, 92.48)	152.172	(95.3568, 9.9067)	(330.875, -11.133)
7	18028	1.71	(220.363, 93.991)	155.593	(93.591, 9.46524)	(335.021, -11.1883)
8	17036	1.71	(218.18, 93.39)	155.25	(91.8259, 9.02398)	(332.948, -11.1606)
9	18958	1.71	(220.468, 93.185)	153.427	(95.3567, 9.90666)	(332.948, -11.1606)
10	17904	1.71	(216.204, 91.174)	150.57	(93.5918, 9.46545)	(326.73, -11.0777)
11	16974	1.71	(216.099, 91.981)	152.738	(91.8264, 9.0241)	(328.803, -11.1054)
12	18896	1.71	(218.389, 91.776)	150.916	(95.3569, 9.90674)	(328.803, -11.1054)
13	18928	1.71	(218.732, 84.269)	147.233	(95.1139, 9.84598)	(330.875, -11.133)
14	18897	1.71	(217.694, 83.633)	146.016	(95.1142, 9.84605)	(328.803, -11.1054)
15	18865	1.71	(217.35, 91.072)	149.661	(95.3571, 9.90677)	(326.73, -11.0777)
16	17067	1.71	(219.22, 94.094)	156.507	(91.8256, 9.02391)	(335.021, -11.1883)
17	18989	1.71	(221.507, 93.889)	154.682	(95.3565, 9.90663)	(335.021, -11.1883)
18	18059	1.71	(221.403, 94.696)	156.849	(93.5908, 9.46519)	(337.094, -11.2159)
19	17873	1.71	(215.164, 90.47)	149.315	(93.592, 9.4655)	(324.657, -11.0501)
20	18866	1.71	(216.656, 82.997)	144.798	(95.1144, 9.84611)	(326.73, -11.0777)
21	17967	1.71	(217.604, 84.32)	148.127	(93.3412, 9.4028)	(330.875, -11.133)
22	16943	1.71	(215.059, 91.276)	151.482	(91.8267, 9.02417)	(326.73, -11.0777)

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23	17936	1.71	(216.565, 83.684)	146.909	(93.3415, 9.40287)	(328.803, -11.1054)
24	17035	1.71	(218.906, 102.574)	161.063	(92.0958, 9.09145)	(332.948, -11.1606)
25	17905	1.71	(215.526, 83.048)	145.691	(93.3418, 9.40295)	(326.73, -11.0777)
26	17842	1.71	(214.125, 89.765)	148.06	(93.5922, 9.46555)	(322.584, -11.0225)
27	18835	1.71	(215.617, 82.361)	143.581	(95.1147, 9.84618)	(324.657, -11.0501)
28	18834	1.71	(216.311, 90.368)	148.406	(95.3572, 9.90681)	(324.657, -11.0501)
29	17098	1.71	(220.26, 94.799)	157.763	(91.8254, 9.02385)	(337.094, -11.2159)
30	18959	1.71	(219.771, 84.905)	148.451	(95.1137, 9.84592)	(332.948, -11.1606)
31	19889	1.71	(219.863, 84.219)	146.341	(96.8869, 10.2892)	(330.875, -11.133)
32	16912	1.71	(214.019, 90.572)	150.226	(91.8269, 9.02424)	(324.657, -11.0501)
33	19858	1.71	(218.825, 83.583)	145.124	(96.8871, 10.2893)	(328.803, -11.1054)
34	17998	1.71	(218.643, 84.956)	149.346	(93.3409, 9.40272)	(332.948, -11.1606)
35	19020	1.71	(222.547, 94.593)	155.938	(95.3564, 9.90659)	(337.094, -11.2159)
36	17066	1.71	(219.947, 103.353)	162.363	(92.0957, 9.09142)	(335.021, -11.1883)
37	18804	1.71	(214.579, 81.726)	142.363	(95.115, 9.84624)	(322.584, -11.0225)
38	18090	1.71	(222.436, 95.398)	158.098	(93.5907, 9.46517)	(339.167, -11.2273)
39	18803	1.71	(215.272, 89.664)	147.151	(95.3574, 9.90685)	(322.584, -11.0225)
40	17874	1.71	(214.487, 82.412)	144.473	(93.3421, 9.40303)	(324.657, -11.0501)
41	17004	1.71	(217.865, 101.795)	159.763	(92.096, 9.09149)	(330.875, -11.133)
42	17996	1.71	(220.067, 102.416)	160.13	(93.8534, 9.53084)	(332.948, -11.1606)
43	19827	1.71	(217.787, 82.947)	143.907	(96.8873, 10.2893)	(326.73, -11.0777)
44	18027	1.71	(221.108, 103.195)	161.43	(93.8533, 9.53082)	(335.021, -11.1883)
45	16881	1.71	(212.979, 89.868)	148.97	(91.8272, 9.0243)	(322.584, -11.0225)
46	16044	1.71	(215.998, 92.789)	154.908	(90.0611, 8.58279)	(330.875, -11.133)
47	19888	1.71	(220.576, 92.379)	151.263	(97.1225, 10.3481)	(330.875, -11.133)
48	17843	1.71	(213.449, 81.776)	143.256	(93.3424, 9.40311)	(322.584, -11.0225)
49	16074	1.71	(217.746, 102.733)	161.998	(90.3385, 8.65213)	(332.948, -11.1606)
50	17097	1.71	(220.988, 104.133)	163.664	(92.0955, 9.09138)	(337.094, -11.2159)
51	17965	1.71	(219.027, 101.637)	158.831	(93.8534, 9.53086)	(330.875, -11.133)
52	19919	1.71	(221.615, 93.083)	152.518	(97.1224, 10.3481)	(332.948, -11.1606)
53	19920	1.71	(220.901, 84.855)	147.558	(96.8867, 10.2892)	(332.948, -11.1606)
54	16075	1.71	(217.039, 93.493)	156.165	(90.0608, 8.58271)	(332.948, -11.1606)
55	18773	1.71	(213.529, 81.087)	141.135	(95.1154, 9.84634)	(320.513, -10.9645)
56	17129	1.71	(221.294, 95.501)	159.013	(91.8252, 9.02381)	(339.167, -11.2273)
57	19796	1.71	(216.749, 82.311)	142.69	(96.8875, 10.2894)	(324.657, -11.0501)
58	16973	1.71	(216.824, 101.016)	158.463	(92.0961, 9.09153)	(328.803, -11.1054)
59	16105	1.71	(218.788, 103.512)	163.299	(90.3383, 8.65208)	(335.021, -11.1883)
60	16013	1.71	(214.957, 92.084)	153.652	(90.0615, 8.58287)	(328.803, -11.1054)
61	18990	1.71	(220.81, 85.541)	149.669	(95.1134, 9.84586)	(335.021, -11.1883)
62	18029	1.71	(219.682, 85.593)	150.564	(93.3406, 9.40264)	(335.021, -11.1883)
63	19051	1.71	(223.579, 95.295)	157.186	(95.3563, 9.90658)	(339.167, -11.2273)
64	18058	1.71	(222.149, 103.974)	162.73	(93.8532, 9.5308)	(337.094, -11.2159)
65	19857	1.71	(219.537, 91.675)	150.009	(97.1225, 10.3481)	(328.803, -11.1054)
66	16043	1.71	(216.705, 101.954)	160.697	(90.3387, 8.65218)	(330.875, -11.133)
67	17006	1.71	(216.478, 84.372)	149.024	(91.5686, 8.95966)	(330.875, -11.133)
68	17811	1.71	(213.073, 89.058)	146.792	(93.5926, 9.46564)	(320.513, -10.9645)
69	17812	1.71	(212.398, 81.137)	142.026	(93.3429, 9.40323)	(320.513, -10.9645)
70	16975	1.71	(215.438, 83.736)	147.805	(91.569, 8.95975)	(328.803, -11.1054)
71	19765	1.71	(215.712, 81.676)	141.473	(96.8877, 10.2894)	(322.584, -11.0225)
72	16106	1.71	(218.079, 94.198)	157.422	(90.0605, 8.58263)	(335.021, -11.1883)
73	19950	1.71	(222.654, 93.787)	153.773	(97.1223, 10.3481)	(335.021, -11.1883)
74	17934	1.71	(217.986, 100.858)	157.531	(93.8535, 9.53088)	(328.803, -11.1054)
75	16136	1.71	(219.829, 104.292)	164.599	(90.3381, 8.65203)	(337.094, -11.2159)
76	17128	1.71	(222.022, 104.909)	164.956	(92.0955, 9.09137)	(339.167, -11.2273)
77	19826	1.71	(218.499, 90.97)	148.754	(97.1226, 10.3482)	(326.73, -11.0777)
78	19951	1.71	(221.939, 85.491)	148.776	(96.8865, 10.2891)	(335.021, -11.1883)
79	16944	1.71	(214.399, 83.099)	146.587	(91.5694, 8.95984)	(326.73, -11.0777)
80	16137	1.71	(219.12, 94.903)	158.679	(90.0602, 8.58255)	(337.094, -11.2159)
81	18121	1.71	(223.468, 96.1)	159.346	(93.5906, 9.46514)	(341.24, -11.2358)
82	18772	1.71	(214.221, 88.956)	145.884	(95.3577, 9.90693)	(320.513, -10.9645)

83	15982	1.71	(213.917, 91.38)	152.395	(90.0618, 8.58295)	(326.73, -11.0777)
84	18060	1.71	(220.722, 86.229)	151.782	(93.3403, 9.40257)	(337.094, -11.2159)
85	16012	1.71	(215.663, 101.175)	159.397	(90.3389, 8.65223)	(328.803, -11.1054)
86	19021	1.71	(221.849, 86.177)	150.887	(95.1132, 9.8458)	(337.094, -11.2159)
87	17037	1.71	(217.517, 85.008)	150.242	(91.5683, 8.95957)	(332.948, -11.1606)
88	16942	1.71	(215.783, 100.237)	157.163	(92.0962, 9.09156)	(326.73, -11.0777)
89	16850	1.71	(211.927, 89.16)	147.702	(91.8277, 9.02441)	(320.513, -10.9645)
90	19734	1.71	(214.662, 81.037)	140.245	(96.888, 10.2895)	(320.513, -10.9645)
91	18089	1.71	(223.182, 104.751)	164.022	(93.8532, 9.5308)	(339.167, -11.2273)
92	16913	1.71	(213.359, 82.463)	145.368	(91.5697, 8.95994)	(324.657, -11.0501)
93	17903	1.71	(216.946, 100.079)	156.232	(93.8536, 9.5309)	(326.73, -11.0777)
94	19981	1.71	(223.693, 94.491)	155.028	(97.1222, 10.348)	(337.094, -11.2159)
95	17160	1.71	(222.326, 96.204)	160.261	(91.8251, 9.02377)	(341.24, -11.2358)
96	17068	1.71	(218.557, 85.644)	151.461	(91.5679, 8.95948)	(335.021, -11.1883)
97	19982	1.71	(222.978, 86.127)	149.993	(96.8863, 10.2891)	(337.094, -11.2159)
98	19795	1.71	(217.46, 90.266)	147.5	(97.1227, 10.3482)	(324.657, -11.0501)
99	16167	1.71	(220.863, 105.069)	165.893	(90.338, 8.652)	(339.167, -11.2273)
100	17159	1.71	(223.054, 105.686)	166.248	(92.0955, 9.09137)	(341.24, -11.2358)
101	19082	1.71	(224.611, 95.997)	158.434	(95.3563, 9.90657)	(341.24, -11.2358)

Slices of Slip Surface: Optimized

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	101.64802	0.5407065	300.63777	779.37558	0	600
2	Optimized	107.8056	-7.674115	772.9488	1800.4265	593.21451	0
3	Optimized	110.44845	-11.60294	1000.8084	2783.3727	0	150
4	Optimized	111.22275	-12.754025	1067.563	2880.0487	0	157.15
5	Optimized	114.04275	-16.94607	1310.7242	3233.369	0	196.81
6	Optimized	116.46775	-20.524115	1518.0783	3763.6464	0	230.53
7	Optimized	117.11555	-21.33207	1564.263	3702.1593	0	238.12
8	Optimized	119.69055	-24.54355	1747.7383	3966.7648	0	268.21
9	Optimized	124.21	-30.180095	2070.0114	4407.5237	0	320.73
10	Optimized	127.78325	-34.636545	2324.6526	4722.1472	0	361.99
11	Optimized	129.288	-36.51326	2431.9228	4872.3579	0	391.7
12	Optimized	132.80715	-39.16077	2574.0592	5197.589	0	414.88
13	Optimized	139.0224	-43.429275	2799.7934	5440.8302	0	451.7
14	Optimized	143.51385	-46.513925	2962.8257	5624.6571	0	478.07
15	Optimized	150.04175	-48.6258	3051.9116	5843.848	0	494.21
16	Optimized	156.5829	-49.804695	3082.6302	5881.4751	0	501.6
17	Optimized	159.49	-49.840935	3065.8873	5794.9133	0	500.4
18	Optimized	165.27	-49.912985	3032.5515	5723.9116	0	498
19	Optimized	173.81	-50.019435	2983.2579	5685.8583	0	494.44
20	Optimized	179.13	-50.08575	2952.5803	5666.703	0	492.77
21	Optimized	183.1989	-50.136475	2929.1434	5660.0518	0	493.23
22	Optimized	189.2367	-50.21174	2894.3654	5650.7776	0	493.91
23	Optimized	193.4228	-50.33673	2874.7063	5623.4781	0	495.03
24	Optimized	199.3424	-50.7798	2897.1649	5652.6925	0	499.02
25	Optimized	208.8472	-51.49122	2946.5806	5699.4853	0	505.42
26	Optimized	214.2648	-51.927875	2976.6142	5707.5213	0	509.35
27	Optimized	218.0432	-52.38765	3005.5989	5744.6287	0	513.49
28	Optimized	224.26955	-53.14531	3052.95	5805.5314	0	520.31
29	Optimized	231.00635	-54.10183	3112.6389	5867.5893	0	528.92
30	Optimized	237.51185	-55.138955	3177.3989	5954.5604	0	538.25
31	Optimized	240.69685	-55.646715	3208.9619	5995.872	0	542.82
32	Optimized	243.46425	-56.087895	3236.6091	5944.6368	0	546.79
33	Optimized	247.96425	-56.252675	3246.7715	5921.416	0	548.27
34	Optimized	250.115	-56.011715	3231.8235	5811.8986	0	546.11
35	Optimized	251.3282	-55.875795	3223.7893	5752.2258	0	544.88
36	Optimized	255.9482	-54.620105	3147.338	5547.0025	0	533.58
37	Optimized	260.6495	-53.10812	3051.3175	5246.2806	0	519.97
38	Optimized	267.609	-50.321945	2859.4816	4955.519	0	494.9

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39	Optimized	278.9695	-45.42952	2524.785	4382.6071	0	450.87
40	Optimized	284.775	-42.843725	2345.8325	4069.0734	0	427.59
41	Optimized	290.6136	-40.2432	2180.4717	3712.717	0	404.19
42	Optimized	297.615	-36.871445	1970.0638	3320.8157	0	373.84
43	Optimized	299.8014	-35.498565	1884.3973	3144.427	0	361.49
44	Optimized	306.37305	-31.37215	1626.869	2664.3831	0	324.35
45	Optimized	315.85725	-24.873585	1221.4424	1955.7353	0	265.86
46	Optimized	320.2342	-21.48446	1009.8977	1568.5241	0	235.36
47	Optimized	326.69155	-16.48446	697.90397	1027.6063	0	190.36
48	Optimized	333.01985	-11.58438	392.1469	498.00734	0	150

Slices of Slip Surface: 17966

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	17966	96.5857	-0.150423	376.90237	719.48569	0	600
2	17966	102.66556	-7.639485	804.43029	1819.7014	586.16704	0
3	17966	106.1231	-11.599485	1028.9212	2734.4297	0	150
4	17966	109.11255	-14.66438	1200.5759	3055.7242	0	175.31
5	17966	114.25005	-19.66438	1478.9244	3609.3439	0	222.53
6	17966	119.25005	-24.10475	1723.3259	4042.3067	0	264.11
7	17966	124.21	-28.142005	1942.7252	4370.4956	0	301.59
8	17966	130.9517	-33.037255	2204.0797	4664.2102	0	346.53
9	17966	138.6717	-38.106665	2469.8577	4962.9287	0	402.44
10	17966	146.0925	-42.333565	2685.0844	5197.6086	0	438.17
11	17966	154.0175	-46.28754	2879.9418	5394.2368	0	470.69
12	17966	159.49	-48.749425	2997.7541	5511.3575	0	490.43
13	17966	165.27	-50.954615	3097.4841	5676.5057	0	507.47
14	17966	173.81	-53.828685	3220.9619	5950.735	0	528.84
15	17966	179.13	-55.40351	3284.421	6105.6368	0	540.63
16	17966	183.7825	-56.51491	3323.2933	6222.2673	0	550.63
17	17966	190.9875	-58.00151	3368.9737	6380.2782	0	564.01
18	17966	197.98	-59.10824	3416.145	6498.8329	0	573.97
19	17966	204.76	-59.862685	3466.7705	6580.6495	0	580.76
20	17966	211.54	-60.3129	3498.3696	6630.7232	0	584.82
21	17966	219.855	-60.41179	3506.4139	6645.0299	0	585.71
22	17966	229.705	-59.99248	3480.2107	6605.5767	0	581.93
23	17966	237.51185	-59.258825	3434.379	6529.6748	0	575.33
24	17966	240.69685	-58.849	3408.7998	6485.384	0	571.64
25	17966	245.615	-57.96628	3353.7369	6226.069	0	563.7
26	17966	254.85	-55.99135	3232.4321	5692.3551	0	545.92
27	17966	263.65	-53.55664	3071.5468	5267.9078	0	524.01
28	17966	272.01	-50.691525	2871.1523	4947.9917	0	498.22
29	17966	280.37	-47.26832	2635.8873	4566.1746	0	467.41
30	17966	284.775	-45.3041	2499.4546	4341.7689	0	449.74
31	17966	288.9	-43.16681	2362.8718	4069.9401	0	430.5
32	17966	296.7	-38.810445	2091.0387	3524.8434	0	391.29
33	17966	300.9761	-36.241435	1930.784	3206.4506	0	368.17
34	17966	305.96305	-32.77499	1714.3954	2827.1129	0	336.97
35	17966	315.18475	-25.77499	1277.6344	2056.9519	0	273.97
36	17966	320.3478	-21.50599	1011.2264	1584.221	0	235.55
37	17966	325.48525	-16.50599	699.2511	1053.7843	0	190.55
38	17966	330.47295	-11.566505	391.03392	524.04412	0	150

Slices of Slip Surface: 17997

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	17997	96.58257	-0.1504395	376.91955	718.93033	0	600
2	17997	102.65299	-7.6392525	804.49454	1818.5403	585.45962	0
3	17997	106.1032	-11.59927	1029	2733.5959	0	150
4	17997	109.1022	-14.682565	1201.779	3055.7765	0	175.49
5	17997	114.2209	-19.682565	1480.353	3609.5454	0	222.7
6	17997	119.2209	-24.138915	1725.6401	4043.7817	0	264.44

7	17997	124.21	-28.219125	1947.642	4376.1616	0	302.31
8	17997	130.8609	-33.08021	2207.38	4668.8193	0	346.95
9	17997	138.5809	-38.179715	2475.0306	4970.2293	0	403.16
10	17997	146.0925	-42.49647	2695.2241	5211.7513	0	439.68
11	17997	154.0175	-46.484895	2892.3042	5411.9241	0	472.5
12	17997	159.49	-48.97137	3011.6194	5531.6393	0	492.46
13	17997	165.27	-51.20383	3113.073	5699.3858	0	509.74
14	17997	173.81	-54.119585	3239.1658	5977.8726	0	531.47
15	17997	179.13	-55.721195	3304.2413	6135.4827	0	543.49
16	17997	183.7825	-56.857155	3344.6343	6254.7794	0	553.71
17	17997	190.9875	-58.382915	3392.7918	6416.8078	0	567.45
18	17997	197.98	-59.52939	3442.4006	6539.4802	0	577.76
19	17997	204.76	-60.32422	3495.5368	6625.603	0	584.92
20	17997	211.54	-60.816805	3529.867	6680.2767	0	589.35
21	17997	219.855	-60.971015	3541.2986	6700.4675	0	590.74
22	17997	229.705	-60.62179	3519.5139	6668.4994	0	587.6
23	17997	237.51185	-59.947475	3477.4734	6598.9986	0	581.53
24	17997	240.69685	-59.563	3453.4087	6557.5559	0	578.07
25	17997	245.615	-58.722375	3400.964	6302.8381	0	570.5
26	17997	254.85	-56.830755	3284.8041	5778.2642	0	553.48
27	17997	263.65	-54.483475	3129.3413	5363.4065	0	532.35
28	17997	272.01	-51.71071	2934.7477	5053.8506	0	507.4
29	17997	280.37	-48.39072	2705.9036	4683.5904	0	477.52
30	17997	284.775	-46.48424	2572.972	4465.7214	0	460.36
31	17997	288.9	-44.40821	2440.3749	4200.8273	0	441.67
32	17997	296.7	-40.176455	2176.3302	3669.9924	0	403.59
33	17997	302.10675	-36.957685	1975.4309	3279.222	0	374.62
34	17997	307.9351	-32.96682	1726.3781	2840.1429	0	338.7
35	17997	316.57835	-26.42261	1318.0415	2120.1988	0	279.8
36	17997	321.41675	-22.45579	1070.5013	1681.5839	0	244.1
37	17997	327.05215	-17	730.0688	1105.5847	0	195
38	17997	332.5595	-11.58032	391.89514	524.68302	0	150

Slices of Slip Surface: 17935

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	17935	96.58889	-0.150407	376.88277	719.71224	0	600
2	17935	102.67835	-7.639723	804.36158	1820.5078	586.67228	0
3	17935	106.14335	-11.599705	1028.8256	2730.4643	0	150
4	17935	109.1231	-14.64596	1199.3601	3054.5662	0	175.14
5	17935	114.155	-19.535705	1471.5568	3597.8115	0	221.32
6	17935	116.70475	-21.889745	1601.7448	4009.2419	0	243.41
7	17935	119.27975	-24.07017	1721.0215	4039.8256	0	263.78
8	17935	124.21	-28.063955	1937.9786	4363.7576	0	300.86
9	17935	131.045	-32.993785	2200.7572	4658.7041	0	346.11
10	17935	138.765	-38.03277	2464.6816	4954.6726	0	401.71
11	17935	146.0925	-42.16879	2674.8196	5182.5674	0	436.65
12	17935	154.0175	-46.087935	2867.5527	5375.715	0	468.86
13	17935	159.49	-48.52495	2983.7597	5489.4931	0	488.38
14	17935	165.27	-50.702555	3081.848	5652.6767	0	505.18
15	17935	173.81	-53.53444	3202.5815	5923.0478	0	526.18
16	17935	179.13	-55.08215	3264.3888	6075.2109	0	537.74
17	17935	183.7825	-56.168675	3301.7307	6189.3406	0	547.52
18	17935	190.9875	-57.6156	3344.9169	6343.162	0	560.54
19	17935	197.98	-58.682035	3389.6262	6457.3922	0	570.14
20	17935	204.76	-59.395505	3437.5783	6535.0148	0	576.56
21	17935	211.54	-59.80271	3466.5769	6580.6006	0	580.22
22	17935	218.21335	-59.909185	3475.0558	6594.8397	0	581.18
23	17935	224.78	-59.72497	3463.5395	6578.6262	0	579.52
24	17935	231.34665	-59.255345	3434.1658	6532.0263	0	575.3
25	17935	237.51185	-58.56067	3390.9187	6459.4414	0	569.05

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26	17935	240.69685	-58.124995	3363.6688	6412.3196	0	565.12
27	17935	245.615	-57.19929	3305.8845	6148.3641	0	556.79
28	17935	254.85	-55.13919	3179.2362	5605.236	0	538.25
29	17935	263.65	-52.61491	3012.7823	5170.9521	0	515.53
30	17935	272.01	-49.65495	2806.4283	4840.5505	0	488.89
31	17935	280.37	-46.12543	2564.5276	4446.6969	0	457.13
32	17935	284.775	-44.101635	2424.3729	4215.6344	0	438.91
33	17935	288.52155	-42.116595	2297.2982	3963.3315	0	421.05
34	17935	295.5647	-38.12165	2048.0115	3464.1069	0	385.09
35	17935	299.84315	-35.509235	1885.0302	3140.4976	0	361.58
36	17935	304.8642	-32.002405	1666.1832	2750.5186	0	330.02
37	17935	313.39255	-25.49317	1260.0911	2034.2688	0	271.44
38	17935	319.27835	-20.527975	950.2269	1486.1136	0	226.75
39	17935	324.43505	-15.527975	638.22732	950.65336	0	181.75
40	17935	328.38635	-11.552685	390.16671	523.43807	0	150

Slices of Slip Surface: 17005

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	17005	94.580445	-0.4421055	408.23046	694.27405	0	600
2	17005	100.37527	-7.6067565	817.37583	1770.9363	550.53841	0
3	17005	103.8083	-11.573335	1042.4339	2652.6135	0	150
4	17005	105.4454	-13.31148	1140.162	2831.8075	0	162.49
5	17005	109.21	-17.10035	1351.9519	3289.9275	0	198.45
6	17005	113.05035	-20.78887	1556.9771	3723.8855	0	233.25
7	17005	115.47535	-22.971025	1677.2778	3941.1168	0	253.73
8	17005	119.155	-26.066725	1846.3968	4235.5696	0	282.62
9	17005	124.21	-30.06885	2063.0117	4561.9661	0	319.69
10	17005	129.6234	-33.97315	2271.2038	4797.7709	0	355.49
11	17005	137.3434	-38.90264	2528.2469	5080.9671	0	410.43
12	17005	146.0925	-43.86693	2780.7721	5358.4881	0	452.33
13	17005	154.0175	-47.710125	2968.7626	5544.2758	0	483.74
14	17005	159.49	-50.101325	3082.1135	5652.9979	0	502.78
15	17005	165.27	-52.239235	3177.6653	5812.9125	0	519.15
16	17005	173.81	-55.020095	3295.3294	6078.7412	0	539.6
17	17005	179.13	-56.540145	3355.3433	6228.2798	0	550.86
18	17005	183.7825	-57.60715	3391.4491	6340.3703	0	560.46
19	17005	190.9875	-59.0277	3432.9235	6491.4931	0	573.25
20	17005	197.98	-60.07387	3476.4505	6603.8657	0	582.66
21	17005	204.76	-60.77252	3523.5095	6679.7755	0	588.95
22	17005	211.54	-61.169365	3551.9256	6724.4563	0	592.52
23	17005	219.855	-61.20583	3555.8929	6732.251	0	592.85
24	17005	229.705	-60.715495	3525.3498	6685.2231	0	588.44
25	17005	237.51185	-59.927365	3476.0832	6603.5779	0	581.35
26	17005	240.69685	-59.495735	3449.2275	6556.9554	0	577.46
27	17005	245.615	-58.58004	3392.0982	6294.1048	0	569.22
28	17005	254.85	-56.543785	3266.893	5753.7609	0	550.89
29	17005	263.65	-54.051375	3102.4278	5323.0901	0	528.46
30	17005	272.01	-51.131655	2898.5893	4997.3172	0	502.18
31	17005	280.37	-47.65353	2659.9437	4609.4785	0	470.88
32	17005	284.775	-45.6602	2521.665	4381.9196	0	452.94
33	17005	288.9	-43.495085	2383.3213	4106.9844	0	433.46
34	17005	296.7	-39.085225	2108.2161	3556.0575	0	393.77
35	17005	301.161	-36.36524	1938.4581	3220.8791	0	369.29
36	17005	306.2685	-32.76994	1714.1494	2827.0018	0	336.93
37	17005	315.36155	-25.76994	1277.2986	2056.9011	0	273.93
38	17005	320.40405	-21.551665	1014.1009	1589.6556	0	235.97
39	17005	325.48895	-16.551665	702.10236	1059.4196	0	190.97
40	17005	330.47665	-11.566505	391.02816	524.68724	0	150

Slices of Slip Surface: 18927

SWL Case.EE.Thru Fabric

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	18927	98.59265	0.1412855	345.56165	743.73815	0	600
2	18927	104.9428	-7.653823	790.4124	1865.7876	620.86816	0
3	18927	108.4254	-11.607235	1014.3399	2796.8404	0	150
4	18927	110.26185	-13.51212	1121.1573	2985.3876	0	164.35
5	18927	114.155	-17.34865	1335.0769	3386.7753	0	200.62
6	18927	117.8783	-20.83653	1528.3394	3730.7911	0	233.39
7	18927	120.4533	-23.093355	1652.3267	3950.2589	0	254.48
8	18927	124.21	-26.176825	1820.0979	4174.0388	0	283.14
9	18927	132.28855	-32.08347	2135.8199	4528.7929	0	337.43
10	18927	140.00855	-37.29824	2410.79	4844.8999	0	394.35
11	18927	146.0925	-40.77717	2587.9293	5033.6939	0	423.8
12	18927	154.0175	-44.845275	2790.0128	5241.3416	0	457.46
13	18927	159.49	-47.379815	2912.3022	5365.1517	0	477.92
14	18927	165.27	-49.653965	3016.429	5537.5058	0	495.64
15	18927	173.81	-52.623415	3145.7444	5821.543	0	517.95
16	18927	179.13	-54.254205	3212.7107	5981.8455	0	530.29
17	18927	183.7825	-55.41087	3254.4766	6103.358	0	540.7
18	18927	190.9875	-56.96476	3304.1945	6268.0709	0	554.68
19	18927	197.98	-58.13311	3355.3808	6392.8773	0	565.2
20	18927	204.76	-58.944255	3409.5567	6480.4332	0	572.5
21	18927	211.54	-59.448655	3444.4752	6536.328	0	577.04
22	18927	218.21335	-59.65089	3458.8745	6560.5015	0	578.86
23	18927	224.78	-59.561545	3453.3438	6554.2155	0	578.05
24	18927	231.34665	-59.18797	3429.9846	6517.9272	0	574.69
25	18927	237.51185	-58.58498	3392.3071	6455.0649	0	569.26
26	18927	240.69685	-58.197215	3368.1786	6413.1283	0	565.77
27	18927	245.615	-57.34783	3315.1848	6157.3664	0	558.13
28	18927	254.85	-55.434865	3197.6842	5630.3112	0	540.91
29	18927	263.65	-53.058415	3040.4947	5212.0804	0	519.53
30	18927	272.01	-50.248405	2843.4435	4898.1577	0	494.24
31	18927	280.37	-46.880595	2611.6846	4522.2804	0	463.93
32	18927	284.775	-44.94572	2477.1059	4301.1694	0	446.51
33	18927	288.9	-42.83647	2342.2924	4032.2056	0	427.53
34	18927	296.7	-38.53401	2073.8571	3493.091	0	388.81
35	18927	305.46245	-32.89721	1722.0256	2839.6888	0	338.07
36	18927	315.0025	-25.780305	1277.968	2056.7869	0	274.02
37	18927	320.29005	-21.46008	1008.3761	1578.3652	0	235.14
38	18927	325.4815	-16.46008	696.38595	1047.9454	0	190.14
39	18927	330.4692	-11.566505	391.02656	523.20076	0	150

Slices of Slip Surface: 18028

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	18028	96.57949	-0.1504555	376.9445	718.61313	0	600
2	18028	102.6406	-7.639025	804.56529	1817.5562	584.85055	0
3	18028	106.08365	-11.59906	1029.1564	2732.7234	0	150
4	18028	109.09205	-14.700525	1202.9674	3055.7945	0	175.66
5	18028	114.1924	-19.700525	1481.5906	3609.7011	0	222.88
6	18028	119.1924	-24.172665	1727.9558	4045.0182	0	264.76
7	18028	124.21	-28.295325	1952.4106	4381.5523	0	303.03
8	18028	130.7725	-33.12266	2210.5976	4673.1685	0	347.36
9	18028	138.4925	-38.251935	2480.1515	4977.2496	0	403.87
10	18028	146.0925	-42.65753	2705.3512	5225.6671	0	441.16
11	18028	154.0175	-46.68003	2904.4129	5429.24	0	474.29
12	18028	159.49	-49.19083	3025.2981	5551.5704	0	494.46
13	18028	165.27	-51.450245	3128.5062	5721.9797	0	511.98
14	18028	173.81	-54.4072	3257.0826	6004.5757	0	534.06
15	18028	179.13	-56.035275	3323.8485	6165.2066	0	546.32
16	18028	183.7825	-57.195485	3365.7566	6286.7476	0	556.76
17	18028	190.9875	-58.759905	3416.2385	6452.895	0	570.84

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18	18028	197.98	-59.945595	3468.3959	6579.633	0	581.51
19	18028	204.76	-60.78025	3524.0266	6670.0282	0	589.02
20	18028	211.54	-61.314575	3560.9256	6729.1215	0	593.83
21	18028	219.855	-61.523225	3575.7172	6755.0912	0	595.71
22	18028	229.705	-61.2429	3558.232	6730.5632	0	593.19
23	18028	237.51185	-60.62686	3519.8602	6667.4208	0	587.64
24	18028	240.69685	-60.26726	3497.3332	6628.6778	0	584.41
25	18028	245.615	-59.46788	3447.4608	6378.4653	0	577.21
26	18028	254.85	-57.6578	3336.3497	5862.8577	0	560.92
27	18028	263.65	-55.395915	3186.2732	5457.4392	0	540.56
28	18028	272.01	-52.71312	2997.3124	5157.8821	0	516.42
29	18028	280.37	-49.49341	2774.77	4798.7939	0	487.44
30	18028	284.775	-47.642945	2645.2913	4587.2348	0	470.79
31	18028	288.9	-45.626135	2516.3612	4329.085	0	452.64
32	18028	296.7	-41.51458	2259.7988	3812.091	0	415.63
33	18028	303.23505	-37.658755	2019.1471	3350.204	0	380.93
34	18028	309.6276	-33.366395	1751.3316	2875.989	0	342.3
35	18028	317.14255	-27.745635	1400.5757	2258.0455	0	291.71
36	18028	322.4852	-23.37924	1128.1357	1779.9268	0	252.41
37	18028	329.1707	-17	730.08081	1105.0969	0	195
38	18028	334.64595	-11.59414	392.7516	525.30662	0	150

Slices of Slip Surface: 17036

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	17036	94.57756	-0.442133	408.24556	693.73288	0	600
2	17036	100.36361	-7.6065405	817.43665	1769.8276	549.86318	0
3	17036	103.7897	-11.573135	1042.5684	2651.6449	0	150
4	17036	105.4357	-13.325175	1141.0884	2831.4841	0	162.63
5	17036	109.21	-17.134895	1354.1038	3291.7613	0	198.78
6	17036	113.02265	-20.80972	1558.4634	3724.7191	0	233.45
7	17036	115.44765	-22.99949	1679.2204	3941.7402	0	254
8	17036	119.155	-26.132375	1850.5056	4240.0442	0	283.24
9	17036	124.21	-30.15213	2068.2711	4568.0404	0	320.47
10	17036	129.537	-34.019245	2274.6286	4802.6985	0	355.93
11	17036	137.257	-38.979065	2533.5859	5088.5324	0	411.18
12	17036	146.0925	-44.03666	2791.3353	5373.2646	0	453.9
13	17036	154.0175	-47.914445	2981.4807	5562.5583	0	485.62
14	17036	159.49	-50.330325	3096.4706	5673.6441	0	504.87
15	17036	165.27	-52.49559	3193.6372	5836.4347	0	521.48
16	17036	173.81	-55.318255	3313.9494	6106.5807	0	542.29
17	17036	179.13	-56.865165	3375.6252	6258.7538	0	553.79
18	17036	183.7825	-57.956805	3413.3028	6373.4835	0	563.61
19	17036	190.9875	-59.41663	3457.2756	6528.8002	0	576.75
20	17036	197.98	-60.502665	3503.1374	6645.3588	0	586.52
21	17036	204.76	-61.24183	3552.87	6725.6054	0	593.18
22	17036	211.54	-61.681175	3583.7371	6774.7662	0	597.13
23	17036	219.855	-61.773145	3591.3643	6788.5384	0	597.96
24	17036	229.705	-61.35315	3565.1505	6749.1232	0	594.18
25	17036	237.51185	-60.624595	3519.7235	6673.8062	0	587.62
26	17036	240.69685	-60.218425	3494.367	6630.011	0	583.97
27	17036	245.615	-59.345005	3439.8535	6371.8013	0	576.11
28	17036	254.85	-57.392435	3319.7915	5840.6837	0	558.53
29	17036	263.65	-54.98789	3160.8889	5419.6469	0	536.89
30	17036	272.01	-52.161	2962.8338	5104.2102	0	511.45
31	17036	280.37	-48.78667	2730.5831	4728.1083	0	481.08
32	17036	284.775	-46.851425	2595.9568	4507.1928	0	463.66
33	17036	288.9	-44.747955	2461.5518	4239.1871	0	444.73
34	17036	296.7	-40.463535	2194.1804	3702.638	0	406.17
35	17036	302.28765	-37.08787	1983.5706	3294.2886	0	375.79
36	17036	308.20645	-32.98581	1727.6144	2842.7197	0	338.87

37	17036	316.6688	-26.495585	1322.6076	2128.7728	0	280.46
38	17036	321.472	-22.509775	1073.8865	1688.291	0	244.59
39	17036	327.11095	-17	730.06287	1106.4028	0	195
40	17036	332.56305	-11.58032	391.89456	525.32621	0	150

Slices of Slip Surface: 18958

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	18958	98.58928	0.1412805	345.58847	743.12643	0	600
2	18958	104.92955	-7.6538435	790.50869	1864.6319	620.1453	0
3	18958	108.40445	-11.607275	1014.4519	2795.9965	0	150
4	18958	110.25085	-13.52772	1122.1977	2985.2536	0	164.5
5	18958	114.155	-17.387035	1337.4726	3388.902	0	200.98
6	18958	117.84765	-20.859315	1529.97	3732.1277	0	233.61
7	18958	120.42265	-23.12452	1654.4578	3951.1561	0	254.78
8	18958	124.21	-26.24782	1824.5305	4179.1685	0	283.8
9	18958	132.19305	-32.1233	2138.9862	4533.1919	0	337.81
10	18958	139.91305	-37.36791	2415.7473	4851.8402	0	395.04
11	18958	146.0925	-40.93323	2597.7678	5047.2241	0	425.25
12	18958	154.0175	-45.035635	2801.8009	5258.3378	0	459.21
13	18958	159.49	-47.594675	2925.716	5384.7832	0	479.88
14	18958	165.27	-49.896005	3031.5326	5559.758	0	497.84
15	18958	173.81	-52.90701	3163.4267	5847.9891	0	520.52
16	18958	179.13	-54.564505	3232.0727	6011.0683	0	533.08
17	18958	183.7825	-55.74566	3275.3101	6135.0074	0	543.71
18	18958	190.9875	-57.338595	3327.62	6303.8316	0	558.05
19	18958	197.98	-58.546575	3381.2086	6432.8315	0	568.92
20	18958	204.76	-59.397985	3437.7314	6524.662	0	576.58
21	18958	211.54	-59.94461	3475.5142	6584.9833	0	581.5
22	18958	219.855	-60.16193	3490.7334	6611.7236	0	583.46
23	18958	229.705	-59.8844	3473.4777	6587.2038	0	580.96
24	18958	237.51185	-59.26499	3434.8559	6523.4847	0	575.38
25	18958	240.69685	-58.90247	3412.2572	6484.4169	0	572.12
26	18958	245.615	-58.094995	3361.778	6233.1029	0	564.85
27	18958	254.85	-56.264965	3249.5297	5715.1011	0	548.38
28	18958	263.65	-53.97552	3097.6219	5306.5197	0	527.78
29	18958	272.01	-51.25737	2906.3882	5002.7551	0	503.32
30	18958	280.37	-47.992185	2681.077	4638.4791	0	473.93
31	18958	284.775	-46.11471	2550.0487	4423.7967	0	457.03
32	18958	288.9	-44.066325	2419.0656	4161.7704	0	438.6
33	18958	296.7	-39.88764	2158.2518	3636.9118	0	400.99
34	18958	301.9196	-36.826735	1967.2804	3263.5489	0	373.44
35	18958	307.6544	-32.948085	1725.2558	2837.2633	0	338.53
36	18958	316.4848	-26.34962	1313.4777	2111.3467	0	279.15
37	18958	321.36	-22.401535	1067.1357	1674.4827	0	243.61
38	18958	326.9918	-17	730.09494	1104.5953	0	195
39	18958	332.5559	-11.58032	391.89387	523.83655	0	150

Slices of Slip Surface: 17904

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	17904	96.592125	-0.150391	376.86066	720.6923	0	600
2	17904	102.69139	-7.6399615	804.28793	1821.8068	587.4648	0
3	17904	106.16395	-11.599925	1028.6228	2731.4858	0	150
4	17904	109.1338	-14.6273	1198.1331	3054.4548	0	174.96
5	17904	114.155	-19.490795	1468.7459	3595.0913	0	220.89
6	17904	116.73515	-21.863495	1599.908	3969.0999	0	243.16
7	17904	119.31015	-24.03517	1718.5793	4038.3768	0	263.45
8	17904	124.21	-27.98496	1932.9241	4358.0161	0	300.12
9	17904	131.1409	-32.94979	2197.3776	4653.9406	0	345.69
10	17904	138.8609	-37.958015	2459.4284	4947.0673	0	400.98
11	17904	146.0925	-42.002105	2664.4291	5168.0746	0	435.11

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12	17904	154.0175	-45.886025	2854.9067	5357.6183	0	467.01
13	17904	159.49	-48.29788	2969.5748	5468.8003	0	486.3
14	17904	165.27	-50.447575	3065.9424	5629.1033	0	502.86
15	17904	173.81	-53.236775	3184.0214	5895.2539	0	523.49
16	17904	179.13	-54.75704	3244.092	6044.6539	0	534.81
17	17904	183.7825	-55.818365	3279.8092	6155.9955	0	544.37
18	17904	190.9875	-57.22508	3320.4826	6305.5919	0	557.03
19	17904	197.98	-58.25066	3362.6949	6415.5909	0	566.26
20	17904	204.76	-58.922555	3408.1031	6488.6906	0	572.3
21	17904	211.54	-59.286085	3434.3389	6529.755	0	575.57
22	17904	218.21335	-59.34732	3439.9472	6539.1126	0	576.13
23	17904	224.78	-59.116115	3425.5437	6517.8225	0	574.05
24	17904	231.34665	-58.596775	3393.1062	6465.9166	0	569.37
25	17904	237.51185	-57.85274	3346.7471	6387.9486	0	562.67
26	17904	240.69685	-57.390705	3317.8502	6338.0282	0	558.52
27	17904	245.615	-56.42109	3257.3006	6069.1875	0	549.79
28	17904	254.85	-54.273885	3125.219	5516.489	0	530.46
29	17904	263.65	-51.65779	2953.0555	5071.9812	0	506.92
30	17904	272.01	-48.600345	2740.5922	4730.6599	0	479.4
31	17904	280.37	-44.961215	2491.9629	4324.5527	0	446.65
32	17904	284.775	-42.875905	2347.7694	4086.5867	0	427.88
33	17904	287.95385	-41.15926	2237.6042	3868.2264	0	412.43
34	17904	293.8615	-37.778855	2026.6213	3446.0973	0	382.01
35	17904	298.70765	-34.760255	1838.3167	3074.9856	0	354.84
36	17904	304.3292	-30.826765	1592.9226	2629.4744	0	319.44
37	17904	311.7876	-25.06651	1233.4073	1995.1993	0	267.6
38	17904	318.2084	-19.51968	887.31433	1384.5076	0	217.68
39	17904	323.3847	-14.51968	575.30665	843.99126	0	172.68
40	17904	326.2996	-11.538865	389.30191	522.72679	0	150

LWL Case.BS.R to L

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 154
Last Edited By: Cox, Lane MVK
Date: 3/24/2011
Time: 5:21:06 PM
File Name: 5c(1) Typical 1.1st SC.80%SG.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\1st Stage Construction\80%SG, 1 Layer of Fabric\Slope W\
Last Solved Date: 3/24/2011
Last Solved Time: 5:25:20 PM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

LWL Case.BS.R to L

Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

SlipSurface
- Direction of movement: Right to Left
- Use Passive Mode: No
- Slip Surface Option: Block
- Critical slip surfaces saved: 100
- Optimize Critical Slip Surface Location: Yes
- Tension Crack
  - Tension Crack Option: Tension Crack Line
  - Percentage Wet: 0
  - Tension Crack Fluid Unit Weight: 62.4 pcf

FOS Distribution
- FOS Calculation Option: Constant

Restrict Block Crossing: Yes
Advanced
- Number of Slices: 30
- Optimization Tolerance: 0.01
- Minimum Slip Surface Depth: 0.1 ft
- Optimization Maximum Iterations: 2000
- Optimization Convergence Tolerance: 1e-007
- Starting Optimization Points: 8
- Ending Optimization Points: 16
- Complete Passes per Insertion: 1

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Driving Side Maximum Convex Angle: 5 °
Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH

Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH above 0

Model: Mohr-Coulomb
Unit Weight: 108 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, 0 to -12

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -12 (2)
Cohesion Spatial Fn: CH, 0 to -12
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -12 to -22

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -12 to -22 (2)
Cohesion Spatial Fn: CH, -12 to -22
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -22 to -36

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -22 to -36 (2)
Cohesion Spatial Fn: CH, -22 to -36
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -36 to -80

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -36 to -80 (2)
Cohesion Spatial Fn: CH, -36 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

LWL Case.BS.R to L

Sand Fill

Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Limits

Left Coordinate: (-200, -1.79) ft
Right Coordinate: (500, -4.27) ft

Slip Surface Block

Left Grid
Upper Left: (-30, -25) ft
Lower Left: (10, -25) ft
Lower Right: (10, -70) ft
X Increments: 8
Y Increments: 5
Starting Angle: 135 °
Ending Angle: 160 °
Angle Increments: 7
Right Grid
Upper Left: (96, -25) ft
Lower Left: (145, -25) ft
Lower Right: (145, -70) ft
X Increments: 8
Y Increments: 5
Starting Angle: 20 °
Ending Angle: 45 °
Angle Increments: 7

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	-1.79
	-195.89	-1.8
	-169.15	-1.8
	-146.39	-1.65
	-122.74	-1.62
	-98.28	-1.36
	-85.7	-0.94
	-66.38	-0.23
	-63	0
	-52.15	0.5
	-38.25	0.23
	-36.18	0.46
	194.59	-4.39
	214.93	-4.22
	250.23	-4.22
	259.47	-4.16
	284.55	-5.22

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	285	-5.3
	406	-5.3
	407.82	-4.54
	500	-4.27

Reinforcements

Reinforcement 1

Type: Fabric
Outside Point: (23, 0) ft
Inside Point: (177, 0) ft
Slip Surface Intersection: (177.01, 0) ft
Total Length: 154 ft
Reinforcement Direction: 180 °
Applied Load Option: Variable
F of S Dependent: No
Contact Cohesion: 265 psf
Contact Phi: 19 °
Interface Factor: 2
Bond Safety Factor: 1
Fabric Capacity: 27000 lbs
Fabric Safety Factor: 1
Fabric Load: 27000 lbs
Load Distribution: Even along reinf.
Load Orientation: 0
Applied Load: 27000 lbs
Fabric Load Used: 0 lbs
Resisting Force Used: 791.33 lbs/ft
Available Bond Length: 0 ft
Required Bond Length: 0 ft
Governing Component: Bond

Tension Crack Line

	X (ft)	Y (ft)
	81.73	6.5
	85	2
	112	9
	121	9
	161	1
	241	-1

Spatial Functions

CH, 0 to -12

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -1.5, 75)
Data Point: (-300, -12, 75)
Data Point: (-23.63, 0, 75)
Data Point: (-23.63, -12, 75)
Data Point: (0, 0, 250)
Data Point: (0, -12, 250)
Data Point: (40.33, -4.5, 150)
Data Point: (40.33, -12, 150)
Data Point: (178.08, -4.5, 150)
Data Point: (178.08, -12, 150)

LWL Case.BS.R to L

CH, -12 to -22

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -12, 125)
Data Point: (-300, -22, 225)
Data Point: (-23.63, -12, 125)
Data Point: (-23.63, -22, 225)
Data Point: (0, -12, 350)
Data Point: (0, -22, 350)
Data Point: (40.33, -12, 150)
Data Point: (40.33, -22, 250)
Data Point: (178.08, -12, 150)
Data Point: (178.08, -22, 240)
Data Point: (500, -12, 150)
Data Point: (500, -22, 240)

CH, -22 to -36

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -22, 225)
Data Point: (-300, -36, 365)
Data Point: (-23.63, -22, 225)
Data Point: (-23.63, -36, 365)
Data Point: (0, -22, 350)
Data Point: (0, -36, 476)
Data Point: (40.33, -22, 250)
Data Point: (40.33, -36, 390)
Data Point: (178.08, -22, 240)
Data Point: (178.08, -36, 366)
Data Point: (500, -22, 240)
Data Point: (500, -36, 366)

CH, -36 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -36, 365)
Data Point: (-300, -80, 805)
Data Point: (-23.63, -36, 365)
Data Point: (-23.63, -80, 805)
Data Point: (0, -36, 476)
Data Point: (0, -80, 872)
Data Point: (40.33, -36, 425)
Data Point: (40.33, -80, 865)
Data Point: (178.08, -36, 366)
Data Point: (178.08, -80, 762)
Data Point: (500, -36, 366)
Data Point: (500, -80, 762)

CH, 0 to -12 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -6, 100)
Data Point: (0, -6, 101)
Data Point: (40.33, -6, 111)
Data Point: (178.08, -6, 111)

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CH, -12 to -22 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -17, 100)
Data Point: (0, -17, 109)
Data Point: (40.33, -17, 100)
Data Point: (178.08, -17, 100)

CH, -22 to -36 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -29, 102)
Data Point: (0, -29, 104)
Data Point: (40.33, -29, 102)
Data Point: (178.08, -29, 102)

CH, -36 to -80 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -58, 105)
Data Point: (0, -58, 106)
Data Point: (40.33, -58, 105)
Data Point: (178.08, -58, 105)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -36 to -80	34,36,37,35	30800
Region 2	CH, -22 to -36	38,36,37,39	9800
Region 3	CH, -12 to -22	40,38,39,41	7000
Region 4	CH, 0 to -12	2,40,41,33,59,58,57,56,55,54,53,52,51,49,32,31,30,46,29,28,27,26,25,24,23,22,21,20,19,18,42,43,8,7,6,5,4,3,1	4936.9353
Region 5	CH above 0	43,9,10,11,12,13,61,17,42	131.35445
Region 6	Sand Fill	60,19,20,21,22,23,24,25,26,27,28	636.18815
Region 7	EMBANKMENT FILL CH	19,50,44,45,47,46,29,28,60	1491.7594
Region 8	EMBANKMENT FILL CH	47,48,49,31,30,46	500.71165
Region 9	EMBANKMENT FILL CH	50,19,18,42,17	368.43335

Points

	X (ft)	Y (ft)
Point 1	-195.89	-1.8
Point 2	-200	-1.79
Point 3	-169.15	-1.8
Point 4	-146.39	-1.65
Point 5	-122.74	-1.62
Point 6	-98.28	-1.36
Point 7	-85.7	-0.94
Point 8	-66.38	-0.23
Point 9	-52.15	0.5
Point 10	-38.25	0.23
Point 11	-36.18	0.46
Point 12	-23.63	0.86
Point 13	-19.22	0.94
Point 14	-5.71	4.75
Point 15	-0.42	4.91
Point 16	-0.22	4.77
Point 17	4.93	4.58
Point 18	24.3	-0.66
Point 19	40.33	-3.85
Point 20	53.08	-5.02
Point 21	69.13	-8.93
Point 22	90.17	-10.85
Point 23	106.69	-11.22
Point 24	116.58	-11.18
Point 25	126.69	-10.14
Point 26	142.13	-9.46
Point 27	157.98	-8.78
Point 28	178.08	-4.54
Point 29	180.18	-4.26
Point 30	214.93	-4.22
Point 31	234.63	-4.19
Point 32	250	-4.27
Point 33	500	-4.27
Point 34	-200	-80
Point 35	500	-80
Point 36	-200	-36
Point 37	500	-36
Point 38	-200	-22
Point 39	500	-22
Point 40	-200	-12
Point 41	500	-12
Point 42	22	0
Point 43	-63	0
Point 44	111.73	14
Point 45	121.73	14
Point 46	194.59	-4.39
Point 47	161	4
Point 48	241	2
Point 49	259.47	-4.16
Point 50	81.73	6.5
Point 51	284.55	-5.2
Point 52	300.6	-9.14
Point 53	320.9	-11
Point 54	337.4	-11.22
Point 55	347.09	-11.26
Point 56	356.8	-10.22
Point 57	372.41	-9.68
Point 58	388.59	-9
Point 59	407.82	-4.54
Point 60	60.33	-3.85
Point 61	1.73	4.5

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	2.15	(29.592, 1.091)	110.9644	(178.106, 3.57236)	(-103.187, -1.41216)
2	2691	2.31	(29.592, 1.091)	115.963	(178.765, 3.55589)	(-119.558, -1.58618)
3	2619	2.31	(35.622, 1.059)	111.199	(178.765, 3.55589)	(-107.5, -1.458)
4	2115	2.31	(34.967, 1.063)	110.289	(178.765, 3.55589)	(-108.809, -1.47192)

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5	2043	2.32	(40.272, 1.034)	107.017	(178.765, 3.55589)	(-98.2007, -1.35735)
6	2187	2.32	(28.232, 1.099)	116.458	(178.765, 3.55589)	(-122.277, -1.61508)
7	2763	2.32	(21.81, 1.104)	121.001	(178.765, 3.55589)	(-135.122, -1.63571)
8	2547	2.32	(40.521, 1.03)	107.495	(178.765, 3.55589)	(-97.7032, -1.34074)
9	3195	2.33	(30.97, 1.084)	114.808	(178.765, 3.55589)	(-116.801, -1.55687)
10	3267	2.33	(24.148, 1.102)	119.947	(178.765, 3.55589)	(-130.445, -1.62977)
11	2700	2.33	(28.691, 1.148)	116.593	(176.965, 3.60087)	(-119.558, -1.58618)
12	1971	2.33	(44.456, 0.964)	103.952	(178.765, 3.55589)	(-89.838, -1.07815)
13	2628	2.33	(34.722, 1.116)	111.846	(176.965, 3.60087)	(-107.5, -1.458)
14	3204	2.34	(30.07, 1.14)	115.312	(176.965, 3.60087)	(-116.801, -1.55687)
15	1539	2.34	(40.338, 1.033)	106.307	(178.765, 3.55589)	(-98.0692, -1.35296)
16	3276	2.34	(23.248, 1.159)	120.453	(176.965, 3.60087)	(-130.445, -1.62977)
17	3123	2.34	(36.468, 1.055)	111.199	(178.765, 3.55589)	(-105.808, -1.44002)
18	1611	2.34	(34.526, 1.065)	110.772	(178.765, 3.55589)	(-109.691, -1.48129)
19	7867	2.34	(32.952, 1.105)	111.686	(177.647, 3.58382)	(-111.721, -1.50287)
20	8443	2.34	(27.576, 1.134)	115.969	(177.647, 3.58382)	(-122.47, -1.61713)
21	2124	2.34	(34.067, 1.119)	110.785	(176.965, 3.60087)	(-108.809, -1.47192)
22	2772	2.34	(20.909, 1.16)	121.502	(176.965, 3.60087)	(-135.122, -1.63571)
23	2259	2.34	(19.102, 1.106)	122.421	(178.765, 3.55589)	(-140.538, -1.64258)
24	8371	2.34	(34.341, 1.098)	111.351	(177.647, 3.58382)	(-108.942, -1.47333)
25	2475	2.34	(44.511, 0.963)	104.692	(178.765, 3.55589)	(-89.7283, -1.07449)
26	2556	2.34	(39.621, 1.086)	108.146	(176.965, 3.60087)	(-97.7032, -1.34074)
27	7795	2.34	(38.993, 1.073)	107.002	(177.647, 3.58382)	(-99.6402, -1.37446)
28	2682	2.35	(30.347, 1.044)	115.263	(180.274, 3.51816)	(-119.558, -1.58618)
29	1467	2.35	(44.757, 0.959)	102.869	(178.765, 3.55589)	(-89.2363, -1.05807)
30	2106	2.35	(35.722, 1.016)	109.707	(180.274, 3.51816)	(-108.809, -1.47192)
31	2052	2.35	(39.372, 1.09)	107.668	(176.965, 3.60087)	(-98.2007, -1.35735)
32	1899	2.35	(47.976, 0.903)	101.473	(178.765, 3.55589)	(-82.8016, -0.833485)
33	3339	2.35	(15.392, 1.11)	125.671	(178.765, 3.55589)	(-147.958, -1.66034)
34	2196	2.35	(27.332, 1.155)	117.078	(176.965, 3.60087)	(-122.277, -1.61508)
35	7939	2.35	(25.239, 1.136)	117.987	(177.647, 3.58382)	(-127.145, -1.62559)
36	2034	2.35	(41.027, 0.987)	106.284	(180.274, 3.51816)	(-98.2007, -1.35735)
37	2610	2.35	(36.377, 1.012)	110.473	(180.274, 3.51816)	(-107.5, -1.458)
38	3132	2.35	(35.568, 1.111)	111.849	(176.965, 3.60087)	(-105.808, -1.44002)
39	7858	2.35	(32.803, 1.115)	110.634	(177.349, 3.59129)	(-111.721, -1.50287)
40	2178	2.35	(28.987, 1.051)	115.773	(180.274, 3.51816)	(-122.277, -1.61508)
41	1395	2.35	(48.382, 0.896)	100.514	(178.765, 3.55589)	(-81.9902, -0.803667)
42	1683	2.35	(26.802, 1.101)	115.539	(178.765, 3.55589)	(-125.137, -1.62304)
43	8452	2.36	(27.395, 1.145)	116.75	(177.284, 3.59291)	(-122.47, -1.61713)
44	7282	2.36	(38.178, 1.086)	105.335	(177.349, 3.59129)	(-100.972, -1.38861)
45	1980	2.36	(43.556, 1.021)	104.596	(176.965, 3.60087)	(-89.838, -1.07815)
46	7786	2.36	(38.844, 1.083)	105.898	(177.349, 3.59129)	(-99.6402, -1.37446)
47	2835	2.36	(11.47, 1.123)	127.579	(178.765, 3.55589)	(-155.801, -1.71203)
48	8380	2.36	(34.16, 1.109)	112.256	(177.284, 3.59291)	(-108.942, -1.47333)
49	3348	2.36	(14.492, 1.166)	125.954	(176.965, 3.60087)	(-147.958, -1.66034)
50	7723	2.36	(43.777, 1.001)	103.551	(177.647, 3.58382)	(-90.0767, -1.08612)
51	8515	2.36	(18.812, 1.14)	122.045	(177.647, 3.58382)	(-140, -1.6419)
52	2754	2.36	(22.565, 1.057)	120.426	(180.274, 3.51816)	(-135.122, -1.63571)
53	8299	2.36	(39.842, 1.067)	107.155	(177.647, 3.58382)	(-97.9419, -1.34871)
54	3771	2.36	(26.293, 1.101)	119.098	(178.765, 3.55589)	(-126.156, -1.62433)
55	2484	2.36	(43.611, 1.02)	105.382	(176.965, 3.60087)	(-89.7283, -1.07449)
56	7354	2.36	(31.429, 1.122)	110.131	(177.349, 3.59129)	(-114.467, -1.53206)
57	3051	2.36	(41.039, 1.021)	107.778	(178.765, 3.55589)	(-96.6671, -1.30615)
58	7930	2.36	(25.09, 1.146)	117.014	(177.349, 3.59129)	(-127.145, -1.62559)
59	7876	2.36	(32.77, 1.117)	112.576	(177.284, 3.59291)	(-111.721, -1.50287)
60	3780	2.36	(25.392, 1.157)	119.606	(176.965, 3.60087)	(-126.156, -1.62433)
61	1026	2.36	(41.547, 0.978)	104.868	(180.274, 3.51816)	(-97.1617, -1.32266)
62	7291	2.36	(38.327, 1.077)	106.725	(177.647, 3.58382)	(-100.972, -1.38861)
63	1827	2.36	(51, 0.848)	99.435	(178.765, 3.55589)	(-76.7574, -0.611363)
64	2538	2.36	(41.276, 0.983)	106.761	(180.274, 3.51816)	(-97.7032, -1.34074)

65	954	2.36	(46.246, 0.9)	101.315	(180.274, 3.51816)	(-87.7681, -1.00905)
66	8434	2.36	(27.427, 1.143)	115.007	(177.349, 3.59129)	(-122.47, -1.61713)
67	1962	2.37	(45.211, 0.917)	103.221	(180.274, 3.51816)	(-89.838, -1.07815)
68	9019	2.37	(22.107, 1.138)	122.009	(177.647, 3.58382)	(-133.41, -1.63354)
69	3843	2.37	(18.676, 1.106)	125.023	(178.765, 3.55589)	(-141.39, -1.64366)
70	8947	2.37	(29.69, 1.123)	115.32	(177.647, 3.58382)	(-118.244, -1.57221)
71	7804	2.37	(38.811, 1.085)	107.927	(177.284, 3.59291)	(-99.6402, -1.37446)
72	1323	2.37	(51.433, 0.84)	98.499	(178.765, 3.55589)	(-75.8915, -0.579543)
73	7210	2.37	(43.353, 1.015)	101.678	(177.349, 3.59129)	(-90.6264, -1.10448)
74	3852	2.37	(17.776, 1.162)	125.521	(176.965, 3.60087)	(-141.39, -1.64366)
75	7363	2.37	(31.579, 1.113)	111.108	(177.647, 3.58382)	(-114.467, -1.53206)
76	8362	2.37	(34.192, 1.107)	110.278	(177.349, 3.59129)	(-108.942, -1.47333)
77	2403	2.37	(47.938, 0.904)	102.214	(178.765, 3.55589)	(-82.8765, -0.836237)
78	9028	2.37	(21.925, 1.15)	122.839	(177.284, 3.59291)	(-133.41, -1.63354)
79	1530	2.37	(41.093, 0.986)	105.574	(180.274, 3.51816)	(-98.0692, -1.35296)
80	3060	2.37	(40.139, 1.078)	108.427	(176.965, 3.60087)	(-96.6671, -1.30615)
81	882	2.37	(49.982, 0.833)	98.629	(180.274, 3.51816)	(-80.3008, -0.741583)
82	8956	2.37	(29.508, 1.134)	116.109	(177.284, 3.59291)	(-118.244, -1.57221)
83	3258	2.37	(24.903, 1.055)	119.363	(180.274, 3.51816)	(-130.445, -1.62977)
84	3186	2.37	(31.725, 1.037)	114.22	(180.274, 3.51816)	(-116.801, -1.55687)
85	1602	2.37	(35.281, 1.018)	110.056	(180.274, 3.51816)	(-109.691, -1.48129)
86	8524	2.37	(18.63, 1.152)	122.619	(177.284, 3.59291)	(-140, -1.6419)
87	7948	2.37	(25.057, 1.148)	118.819	(177.284, 3.59291)	(-127.145, -1.62559)
88	2268	2.37	(18.202, 1.162)	122.911	(176.965, 3.60087)	(-140.538, -1.64258)
89	8308	2.37	(39.661, 1.078)	108.232	(177.284, 3.59291)	(-97.9419, -1.34871)
90	7714	2.37	(43.628, 1.011)	102.393	(177.349, 3.59129)	(-90.0767, -1.08612)
91	3699	2.37	(32.405, 1.076)	114.582	(178.765, 3.55589)	(-113.932, -1.52637)
92	3708	2.37	(31.505, 1.133)	115.082	(176.965, 3.60087)	(-113.932, -1.52637)
93	7219	2.37	(43.502, 1.006)	102.856	(177.647, 3.58382)	(-90.6264, -1.10448)
94	1908	2.37	(47.076, 0.959)	102.104	(176.965, 3.60087)	(-82.8016, -0.833485)
95	1098	2.37	(35.096, 1.019)	109.576	(180.274, 3.51816)	(-110.061, -1.48523)
96	2844	2.38	(10.57, 1.179)	127.869	(176.965, 3.60087)	(-155.801, -1.71203)
97	1548	2.38	(39.438, 1.089)	106.957	(176.965, 3.60087)	(-98.0692, -1.35296)
98	1620	2.38	(33.626, 1.121)	111.413	(176.965, 3.60087)	(-109.691, -1.48129)
99	7138	2.38	(47.555, 0.942)	98.715	(177.349, 3.59129)	(-82.2278, -0.812398)
100	810	2.38	(53.053, 0.777)	96.872	(180.274, 3.51816)	(-74.1618, -0.515978)
101	2250	2.38	(19.857, 1.058)	121.862	(180.274, 3.51816)	(-140.538, -1.64258)

Slices of Slip Surface: Optimized

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	-100.73355	-2.9484515	97.491761	181.58046	0	75
2	Optimized	-91.99	-8.423186	453.84997	761.25631	0	75
3	Optimized	-83.316805	-13.853855	811.28862	1363.7772	0	143.54
4	Optimized	-73.656805	-18.815225	1143.034	1898.172	0	193.15
5	Optimized	-64.69	-23.09006	1433.6395	2381.5208	0	235.9
6	Optimized	-57.575	-26.48206	1668.0643	2778.3879	0	269.82
7	Optimized	-52.07599	-29.103655	1847.1697	3082.1939	0	296.04
8	Optimized	-45.12599	-32.425325	2046.0583	3418.1888	0	329.25
9	Optimized	-37.98238	-35.83962	2252.5734	3767.1564	0	363.4
10	Optimized	-36.94738	-36.333235	2290.5895	3832.5305	0	368.33
11	Optimized	-29.905	-39.689355	2497.076	4227.9457	0	401.89
12	Optimized	-21.425	-43.730585	2738.0789	4708.1201	0	451.94
13	Optimized	-17.76979	-45.47251	2842.0388	4954.0296	0	484.9
14	Optimized	-15.30606	-46.40703	2897.1311	5034.3386	0	504.51
15	Optimized	-11.77643	-47.25472	2945.3319	5213.2163	0	527.58
16	Optimized	-6.369785	-48.092865	2990.5379	5376.4164	0	558.17
17	Optimized	-0.874625	-48.161925	2987.7379	5461.2669	0	581.8
18	Optimized	3.33	-47.89588	2965.601	5489.6474	0	579.83
19	Optimized	9.1975	-47.52462	2934.7288	5473.6468	0	570.72
20	Optimized	17.7325	-46.984575	2889.8273	5455.5226	0	557.27

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21	Optimized	23.15	-46.641785	2861.3642	5444.7626	0	548.61
22	Optimized	24.72443	-46.542165	2853.085	5441.5186	0	546.08
23	Optimized	31.496405	-46.113675	2817.4251	5421.808	0	535.09
24	Optimized	39.086975	-45.703455	2781.8973	5422.932	0	523.31
25	Optimized	45.31497	-45.66043	2771.0628	5440.7231	0	519.12
26	Optimized	51.68997	-45.616385	2759.9139	5460.9095	0	515.51
27	Optimized	56.28486	-45.58464	2751.8486	5480.7638	0	512.9
28	Optimized	59.90986	-45.56634	2745.9937	5504.8398	0	510.92
29	Optimized	64.73	-45.610415	2742.499	5536.0185	0	508.95
30	Optimized	75.43	-45.70826	2734.5675	5594.6853	0	504.58
31	Optimized	85.52334	-45.80056	2727.0342	5741.2702	0	500.43
32	Optimized	89.74334	-45.67177	2713.4622	5709.2575	0	497.08
33	Optimized	95.17155	-43.591905	2576.5901	5652.6098	0	474.41
34	Optimized	103.43155	-39.23098	2293.6095	5324.9153	0	428.8
35	Optimized	107.21415	-36.39322	2111.5701	5149.2033	0	400.09
36	Optimized	109.6512	-34.564905	1994.3008	5045.3931	0	364.29
37	Optimized	111.64705	-33.077725	1898.9083	4991.0224	0	349.86
38	Optimized	114.155	-31.5028	1797.2717	4839.171	0	334.58
39	Optimized	119.155	-28.36292	1594.8334	4528.8297	0	304.27
40	Optimized	123.362	-25.72103	1424.4727	4218.2576	0	278.94
41	Optimized	125.842	-24.261005	1330.1131	4025.7483	0	265
42	Optimized	128.46895	-22.912915	1242.5408	3814.8927	0	252.15
43	Optimized	136.18895	-18.951225	985.22758	3202.701	0	214.67
44	Optimized	144.5022	-14.685105	708.11067	2545.4554	0	174.82
45	Optimized	148.67	-12.73388	580.88672	2247.0181	0	156.76
46	Optimized	154.2228	-10.464407	431.97861	1842.8722	0	150
47	Optimized	158.35625	-8.77504	321.14169	1534.4831	0	150
48	Optimized	159.86625	-8.1578915	280.6557	1335.5732	609.05688	0
49	Optimized	164.05225	-6.4470485	168.41001	1099.7601	537.71523	0
50	Optimized	167.78675	-4.84163	63.332386	879.29018	471.09345	0
51	Optimized	169.05785	-4.174728	20.050723	767.83283	0	600
52	Optimized	173.3307	-1.9329329	-125.43714	501.03948	0	600
53	Optimized	177.5602	0.28613334	-269.45955	236.97929	0	600

Slices of Slip Surface: 2691

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	2691	-114.48	-4.189634	165.82277	286.4793	0	75
2	2691	-104.32356	-9.3965445	497.46832	824.25993	0	75
3	2691	-98.762655	-12.247445	679.05263	1131.0169	0	127.47
4	2691	-91.99	-15.719585	909.11213	1512.2159	0	162.2
5	2691	-82.719795	-20.47214	1225.6396	2036.5617	0	209.72
6	2691	-73.059795	-25.42453	1556.7903	2592.1638	0	259.25
7	2691	-64.69	-29.715475	1847.0632	3081.6418	0	302.15
8	2691	-57.575	-33.363125	2097.4725	3505.5201	0	338.63
9	2691	-45.2	-39.707415	2500.5394	4199.0419	0	402.07
10	2691	-37.215	-43.801085	2754.7333	4641.5193	0	443.01
11	2691	-33.09	-45.91585	2889.7793	4894.2946	0	464.16
12	2691	-26.815	-47.357815	2971.6088	4892.9292	0	478.58
13	2691	-21.425	-47.11719	2949.4435	4896.031	0	485.49
14	2691	-16.75627	-46.90876	2930.4359	4951.3703	0	503.2
15	2691	-10.286904	-46.61995	2903.8886	5077.7835	0	527.88
16	2691	-2.275634	-46.262305	2870.9678	5234.1573	0	558.66
17	2691	3.33	-46.01205	2848.0385	5298.1609	0	562.72
18	2691	9.1975	-45.75011	2824.0179	5294.0826	0	554.34
19	2691	17.7325	-45.369085	2789.0206	5292.9121	0	542.02
20	2691	23.15	-45.12723	2766.8527	5292.9886	0	534.11
21	2691	24.72443	-45.056945	2760.3831	5292.8036	0	531.8
22	2691	28.944145	-44.868565	2743.0426	5289.3264	0	525.58
23	2691	36.534715	-44.5297	2711.9824	5278.9291	0	514.29
24	2691	45.31497	-44.137725	2675.9857	5267.6016	0	503.95

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25	2691	51.68997	-43.853125	2649.8971	5262.6378	0	498.02
26	2691	56.705	-43.62924	2629.3811	5264.5496	0	493.37
27	2691	64.73	-43.27098	2596.5047	5271.4541	0	485.97
28	2691	75.43	-42.7933	2552.6162	5269.8304	0	476.17
29	2691	85.95	-42.32366	2509.5858	5370.0071	0	466.6
30	2691	93.085	-42.005135	2480.3767	5546.2766	0	460.16
31	2691	101.345	-39.13478	2290.3578	5340.6443	0	428.83
32	2691	107.0748	-36.19728	2099.5391	5206.066	0	398.29
33	2691	109.5948	-34.90535	2015.6157	5153.0763	0	367.54
34	2691	114.155	-32.567475	1863.777	4982.5484	0	344.65
35	2691	119.155	-30.004125	1697.2535	4725.9972	0	319.74
36	2691	124.21	-27.41258	1528.9109	4392.3064	0	294.74
37	2691	130.7288	-24.07058	1311.8457	3868.4466	0	262.78
38	2691	138.4488	-20.112765	1054.7255	3253.5097	0	225.35
39	2691	148.20165	-15.112765	729.93375	2481.7953	0	178.69
40	2691	156.12665	-11.049855	466.00757	1842.4716	0	150
41	2691	159.49	-9.325577	354.004	1551.471	0	150
42	2691	161.67695	-8.2043975	281.18246	1377.7152	0	150
43	2691	165.64155	-6.1718645	149.15269	1046.3154	517.97714	0
44	2691	169.52475	-4.1810545	19.833099	779.96593	0	600
45	2691	173.7912	-1.9937851	-122.24957	519.25158	0	600
46	2691	178.1133	0.2220241	-266.17957	255.09075	0	600

Slices of Slip Surface: 2619

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	2619	-102.88975	-4.1966365	173.94905	302.89551	0	75
2	2619	-94.017435	-9.4676365	514.79849	856.65623	0	75
3	2619	-87.727435	-13.204485	761.07702	1273.5573	0	137.04
4	2619	-79.311255	-18.204485	1091.9575	1824.6839	0	187.04
5	2619	-69.651255	-23.943435	1472.272	2461.89	0	244.43
6	2619	-64.69	-26.890885	1670.8169	2798.4301	0	273.91
7	2619	-57.575	-31.11786	1957.3196	3286.0498	0	316.18
8	2619	-50.753605	-35.17041	2224.126	3740.5336	0	356.7
9	2619	-43.803605	-39.299365	2473.3948	4173.9264	0	397.99
10	2619	-37.215	-43.213615	2718.0597	4601.8124	0	437.14
11	2619	-33.09	-45.66425	2874.0965	4892.7806	0	461.64
12	2619	-26.815	-47.357815	2971.6088	4892.9292	0	478.58
13	2619	-21.425	-47.11719	2949.4435	4896.031	0	485.49
14	2619	-16.75627	-46.90876	2930.4359	4951.3703	0	503.2
15	2619	-10.286904	-46.61995	2903.8886	5077.7835	0	527.88
16	2619	-2.275634	-46.262305	2870.9678	5234.1573	0	558.66
17	2619	3.33	-46.01205	2848.0385	5298.1609	0	562.72
18	2619	9.1975	-45.75011	2824.0179	5294.0826	0	554.34
19	2619	17.7325	-45.369085	2789.0206	5292.9121	0	542.02
20	2619	23.15	-45.12723	2766.8527	5292.9886	0	534.11
21	2619	24.72443	-45.056945	2760.3831	5292.8036	0	531.8
22	2619	28.944145	-44.868565	2743.0426	5289.3264	0	525.58
23	2619	36.534715	-44.5297	2711.9824	5278.9291	0	514.29
24	2619	45.31497	-44.137725	2675.9857	5267.6016	0	503.95
25	2619	51.68997	-43.853125	2649.8971	5262.6378	0	498.02
26	2619	56.705	-43.62924	2629.3811	5264.5496	0	493.37
27	2619	64.73	-43.27098	2596.5047	5271.4541	0	485.97
28	2619	75.43	-42.7933	2552.6162	5269.8304	0	476.17
29	2619	85.95	-42.32366	2509.5858	5370.0071	0	466.6
30	2619	93.085	-42.005135	2480.3767	5546.2766	0	460.16
31	2619	101.345	-39.13478	2290.3578	5340.5611	0	428.83
32	2619	107.0748	-36.19728	2099.5391	5205.9504	0	398.29
33	2619	109.5948	-34.90535	2015.6157	5152.8679	0	367.54
34	2619	114.155	-32.567475	1863.777	4982.3649	0	344.65
35	2619	119.155	-30.004125	1697.2535	4725.9972	0	319.74

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36	2619	124.21	-27.41258	1528.9109	4392.3064	0	294.74
37	2619	130.7288	-24.07058	1311.8457	3868.3364	0	262.78
38	2619	138.4488	-20.112765	1054.7255	3253.5097	0	225.35
39	2619	148.20165	-15.112765	729.93375	2481.722	0	178.69
40	2619	156.12665	-11.049855	466.00757	1842.4236	0	150
41	2619	159.49	-9.325577	354.004	1551.4415	0	150
42	2619	161.67695	-8.2043975	281.18246	1377.7152	0	150
43	2619	165.64155	-6.1718645	149.15269	1046.4102	518.03184	0
44	2619	169.52475	-4.1810545	19.833099	780.11535	0	600
45	2619	173.7912	-1.9937851	-122.24957	519.40915	0	600
46	2619	178.1133	0.2220241	-266.17957	255.26155	0	600

Slices of Slip Surface: 2115

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	2115	-103.54455	-4.170903	171.91253	296.06548	0	75
2	2115	-93.27667	-9.434943	514.2974	850.87216	0	75
3	2115	-86.98667	-12.65964	728.60841	1211.385	0	131.6
4	2115	-81.466905	-15.48946	917.59021	1524.1842	0	159.89
5	2115	-73.000715	-19.82982	1207.8064	2004.637	0	203.3
6	2115	-67.57381	-22.61203	1393.9059	2313.8465	0	231.12
7	2115	-64.69	-24.090475	1496.064	2485.8489	0	245.9
8	2115	-57.575	-27.738125	1746.4448	2909.5111	0	282.38
9	2115	-46.804805	-33.25968	2100.1548	3507.8329	0	337.6
10	2115	-39.854805	-36.822735	2314.0297	3871.2718	0	373.23
11	2115	-37.215	-38.176085	2403.7283	4027.3358	0	386.76
12	2115	-33.09	-40.29085	2538.8703	4280.1679	0	407.91
13	2115	-26.815	-41.875	2629.3564	4330.7692	0	423.75
14	2115	-21.425	-41.875	2622.449	4358.7302	0	433.56
15	2115	-16.75627	-41.875	2616.1531	4435.3444	0	454.33
16	2115	-10.286904	-41.875	2607.7021	4591.5328	0	483.11
17	2115	-2.275634	-41.875	2597.2168	4785.0103	0	518.75
18	2115	3.33	-41.875	2589.875	4875.625	0	525.15
19	2115	9.1975	-41.875	2582.191	4899.5899	0	518.58
20	2115	17.7325	-41.875	2570.9432	4939.3087	0	509.03
21	2115	23.15	-41.875	2563.913	4965.2174	0	502.97
22	2115	24.72443	-41.875	2561.8026	4972.4606	0	501.21
23	2115	28.944145	-41.875	2556.3291	4989.0838	0	496.49
24	2115	36.534715	-41.875	2546.3167	5014.6418	0	488
25	2115	45.31497	-41.875	2534.8187	5044.5619	0	481.4
26	2115	51.68997	-41.875	2526.4599	5069.3223	0	478.4
27	2115	56.705	-41.875	2519.8621	5094.8966	0	476.04
28	2115	64.73	-41.875	2509.3182	5139.2045	0	472.26
29	2115	75.43	-41.875	2495.3175	5187.619	0	467.22
30	2115	85.95	-41.875	2481.5166	5337.0853	0	462.26
31	2115	93.085	-41.875	2472.2127	5546.8268	0	458.9
32	2115	101.345	-39.13478	2290.3578	5344.2238	0	428.83
33	2115	107.0748	-36.19728	2099.5391	5209.5348	0	398.29
34	2115	109.5948	-34.90535	2015.6157	5156.6188	0	367.54
35	2115	114.155	-32.567475	1863.777	4985.851	0	344.65
36	2115	119.155	-30.004125	1697.2535	4729.2802	0	319.74
37	2115	124.21	-27.41258	1528.9109	4395.3564	0	294.74
38	2115	130.7288	-24.07058	1311.8457	3871.0906	0	262.78
39	2115	138.4488	-20.112765	1054.7255	3255.6853	0	225.35
40	2115	148.20165	-15.112765	729.93375	2483.4807	0	178.69
41	2115	156.12665	-11.049855	466.00757	1843.696	0	150
42	2115	159.49	-9.325577	354.004	1552.5023	0	150
43	2115	161.67695	-8.2043975	281.18246	1378.6354	0	150
44	2115	165.64155	-6.1718645	149.15269	1046.8297	518.27406	0
45	2115	169.52475	-4.1810545	19.833099	780.33948	0	600
46	2115	173.7912	-1.9937851	-122.24957	519.44551	0	600

47	2115	178.1133	0.2220241	-266.17957	255.10441	0	600

Slices of Slip Surface: 2043

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	2043	-91.950375	-5.0706635	244.73175	417.34724	0	75
2	2043	-82.993335	-10.391987	596.00561	987.4559	0	75
3	2043	-76.81	-14.065465	839.41869	1401.4834	0	145.65
4	2043	-69.856665	-18.1964	1113.1252	1856.8573	0	186.96
5	2043	-64.917155	-21.130935	1310.4413	2184.9211	0	216.31
6	2043	-63.227155	-22.13495	1380.2568	2301.1219	0	226.35
7	2043	-57.575	-25.49286	1606.3777	2685.9858	0	259.93
8	2043	-46.019505	-32.35791	2042.9084	3427.8931	0	328.58
9	2043	-39.069505	-36.486865	2292.1304	3852.2143	0	369.87
10	2043	-37.215	-37.588615	2367.0676	3983.1843	0	380.89
11	2043	-33.09	-40.03925	2523.1117	4273.7231	0	405.39
12	2043	-26.815	-41.875	2629.3564	4330.6122	0	423.75
13	2043	-21.425	-41.875	2622.449	4358.7302	0	433.56
14	2043	-16.75627	-41.875	2616.1531	4435.3444	0	454.33
15	2043	-10.286904	-41.875	2607.7021	4591.5328	0	483.11
16	2043	-2.275634	-41.875	2597.2168	4784.8855	0	518.75
17	2043	3.33	-41.875	2589.875	4875.625	0	525.15
18	2043	9.1975	-41.875	2582.191	4899.4728	0	518.58
19	2043	17.7325	-41.875	2570.9432	4939.1916	0	509.03
20	2043	23.15	-41.875	2563.913	4964.7826	0	502.97
21	2043	24.72443	-41.875	2561.8026	4972.4606	0	501.21
22	2043	28.944145	-41.875	2556.3291	4989.0838	0	496.49
23	2043	36.534715	-41.875	2546.3167	5014.5101	0	488
24	2043	45.31497	-41.875	2534.8187	5044.4616	0	481.4
25	2043	51.68997	-41.875	2526.4599	5069.3223	0	478.4
26	2043	56.705	-41.875	2519.8621	5094.7586	0	476.04
27	2043	64.73	-41.875	2509.3182	5139.0909	0	472.26
28	2043	75.43	-41.875	2495.3175	5187.5397	0	467.22
29	2043	85.95	-41.875	2481.5166	5337.0853	0	462.26
30	2043	93.085	-41.875	2472.2127	5546.8268	0	458.9
31	2043	101.345	-39.13478	2290.3578	5345.2227	0	428.83
32	2043	107.0748	-36.19728	2099.5391	5210.4598	0	398.29
33	2043	109.5948	-34.90535	2015.6157	5157.4523	0	367.54
34	2043	114.155	-32.567475	1863.777	4986.7684	0	344.65
35	2043	119.155	-30.004125	1697.2535	4730.1442	0	319.74
36	2043	124.21	-27.41258	1528.9109	4396.074	0	294.74
37	2043	130.7288	-24.07058	1311.8457	3871.7515	0	262.78
38	2043	138.4488	-20.112765	1054.7255	3256.2896	0	225.35
39	2043	148.20165	-15.112765	729.93375	2483.9204	0	178.69
40	2043	156.12665	-11.049855	466.00757	1844.0321	0	150
41	2043	159.49	-9.325577	354.004	1552.797	0	150
42	2043	161.67695	-8.2043975	281.18246	1378.8983	0	150
43	2043	165.64155	-6.1718645	149.15269	1047.0733	518.4147	0
44	2043	169.52475	-4.1810545	19.833099	780.63832	0	600
45	2043	173.7912	-1.9937851	-122.24957	519.63944	0	600
46	2043	178.1133	0.2220241	-266.17957	255.25472	0	600

Slices of Slip Surface: 2187

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	2187	-116.3261	-4.211307	165.94967	283.38054	0	75
2	2187	-104.32775	-9.446139	500.56189	824.68399	0	75
3	2187	-91.99	-14.82904	853.53947	1411.2727	0	153.29
4	2187	-80.62699	-19.78667	1187.6628	1961.5814	0	202.87
5	2187	-70.96699	-24.001285	1472.8568	2435.279	0	245.01
6	2187	-64.69	-26.73991	1661.391	2751.3136	0	272.4
7	2187	-57.575	-29.84415	1877.897	3115.9743	0	303.44

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8	2187	-47.80782	-34.105525	2154.1072	3581.2428	0	346.06
9	2187	-40.85782	-37.13778	2334.9684	3888.2751	0	376.38
10	2187	-37.215	-38.727125	2438.0999	4066.8798	0	392.27
11	2187	-33.09	-40.526845	2553.4713	4284.4096	0	410.27
12	2187	-26.815	-41.875	2629.3564	4330.7692	0	423.75
13	2187	-21.425	-41.875	2622.449	4358.7302	0	433.56
14	2187	-16.75627	-41.875	2616.1531	4435.3444	0	454.33
15	2187	-10.286904	-41.875	2607.7021	4591.5328	0	483.11
16	2187	-2.275634	-41.875	2597.2168	4784.8855	0	518.75
17	2187	3.33	-41.875	2589.875	4875.625	0	525.15
18	2187	9.1975	-41.875	2582.191	4899.5899	0	518.58
19	2187	17.7325	-41.875	2570.9432	4939.1916	0	509.03
20	2187	23.15	-41.875	2563.913	4964.7826	0	502.97
21	2187	24.72443	-41.875	2561.8026	4972.4606	0	501.21
22	2187	28.944145	-41.875	2556.3291	4989.0838	0	496.49
23	2187	36.534715	-41.875	2546.3167	5014.6418	0	488
24	2187	45.31497	-41.875	2534.8187	5044.5619	0	481.4
25	2187	51.68997	-41.875	2526.4599	5069.3223	0	478.4
26	2187	56.705	-41.875	2519.8621	5094.7586	0	476.04
27	2187	64.73	-41.875	2509.3182	5139.2045	0	472.26
28	2187	75.43	-41.875	2495.3175	5187.5397	0	467.22
29	2187	85.95	-41.875	2481.5166	5337.0853	0	462.26
30	2187	93.085	-41.875	2472.2127	5546.8268	0	458.9
31	2187	101.345	-39.13478	2290.3578	5344.8065	0	428.83
32	2187	107.0748	-36.19728	2099.5391	5210.1129	0	398.29
33	2187	109.5948	-34.90535	2015.6157	5157.0356	0	367.54
34	2187	114.155	-32.567475	1863.777	4986.218	0	344.65
35	2187	119.155	-30.004125	1697.2535	4729.6258	0	319.74
36	2187	124.21	-27.41258	1528.9109	4395.7152	0	294.74
37	2187	130.7288	-24.07058	1311.8457	3871.4211	0	262.78
38	2187	138.4488	-20.112765	1054.7255	3256.0479	0	225.35
39	2187	148.20165	-15.112765	729.93375	2483.7006	0	178.69
40	2187	156.12665	-11.049855	466.00757	1843.8881	0	150
41	2187	159.49	-9.325577	354.004	1552.6791	0	150
42	2187	161.67695	-8.2043975	281.18246	1378.7668	0	150
43	2187	165.64155	-6.1718645	149.15269	1047.141	518.45377	0
44	2187	169.52475	-4.1810545	19.833099	780.71303	0	600
45	2187	173.7912	-1.9937851	-122.24957	519.79701	0	600
46	2187	178.1133	0.2220241	-266.17957	255.45286	0	600

Slices of Slip Surface: 2763

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	2763	-128.93105	-4.3368295	169.03961	288.55763	0	75
2	2763	-117.05345	-9.518976	496.66881	818.87614	0	75
3	2763	-104.82345	-14.85487	837.71005	1386.5183	0	153.55
4	2763	-93.36331	-19.85487	1164.2777	1925.1455	0	203.55
5	2763	-87.07331	-22.59917	1348.6704	2230.1867	0	230.99
6	2763	-80.87	-25.305645	1531.4943	2536.9614	0	258.06
7	2763	-71.21	-29.52026	1816.6154	3015.3576	0	300.2
8	2763	-64.69	-32.36491	2012.3964	3343.5538	0	328.65
9	2763	-59.67914	-34.551125	2165.5076	3601.5433	0	350.51
10	2763	-54.25414	-36.918025	2328.9325	3880.1021	0	374.18
11	2763	-45.2	-40.868305	2572.9689	4302.7663	0	413.68
12	2763	-37.215	-44.352125	2789.0946	4677.1243	0	448.52
13	2763	-33.09	-46.151845	2904.5236	4894.7095	0	466.52
14	2763	-26.815	-47.357815	2971.6088	4893.0861	0	478.58
15	2763	-21.425	-47.11719	2949.4435	4896.2575	0	485.49
16	2763	-16.75627	-46.90876	2930.4359	4951.3703	0	503.2
17	2763	-10.286904	-46.61995	2903.8886	5077.9082	0	527.88
18	2763	-2.275634	-46.262305	2870.9678	5234.282	0	558.66

LWL Case.BS.R to L

19	2763	3.33	-46.01205	2848.0385	5298.1609	0	562.72
20	2763	9.1975	-45.75011	2824.0179	5294.0826	0	554.34
21	2763	17.7325	-45.369085	2789.0206	5292.9121	0	542.02
22	2763	23.15	-45.12723	2766.8527	5292.9886	0	534.11
23	2763	24.72443	-45.056945	2760.3831	5292.8036	0	531.8
24	2763	32.73943	-44.699135	2727.579	5284.853	0	519.95
25	2763	45.31497	-44.137725	2675.9857	5267.6016	0	503.95
26	2763	51.68997	-43.853125	2649.8971	5262.6378	0	498.02
27	2763	56.705	-43.62924	2629.3811	5264.6874	0	493.37
28	2763	64.73	-43.27098	2596.5047	5271.4541	0	485.97
29	2763	75.43	-42.7933	2552.6162	5269.8304	0	476.17
30	2763	85.95	-42.32366	2509.5858	5370.1254	0	466.6
31	2763	93.085	-42.005135	2480.3767	5546.2766	0	460.16
32	2763	101.345	-39.13478	2290.3578	5341.6432	0	428.83
33	2763	107.0748	-36.19728	2099.5391	5206.991	0	398.29
34	2763	109.5948	-34.90535	2015.6157	5153.9098	0	367.54
35	2763	114.155	-32.567475	1863.777	4983.2823	0	344.65
36	2763	119.155	-30.004125	1697.2535	4726.8612	0	319.74
37	2763	124.21	-27.41258	1528.9109	4393.2035	0	294.74
38	2763	130.7288	-24.07058	1311.8457	3869.1076	0	262.78
39	2763	138.4488	-20.112765	1054.7255	3254.114	0	225.35
40	2763	148.20165	-15.112765	729.93375	2482.2349	0	178.69
41	2763	156.12665	-11.049855	466.00757	1842.8077	0	150
42	2763	159.49	-9.325577	354.004	1551.7951	0	150
43	2763	161.67695	-8.2043975	281.18246	1378.0438	0	150
44	2763	165.64155	-6.1718645	149.15269	1046.9515	518.34438	0
45	2763	169.52475	-4.1810545	19.833099	780.78774	0	600
46	2763	173.7912	-1.9937851	-122.24957	520.01518	0	600
47	2763	178.1133	0.2220241	-266.17957	255.8423	0	600

Slices of Slip Surface: 2547

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	2547	-91.7016	-5.432563	267.82979	459.04632	0	75
2	2547	-83.88447	-10.762192	617.06286	1027.5127	0	75
3	2547	-78.40211	-14.5	862.88238	1450.7744	0	150
4	2547	-71.068455	-19.5	1191.6472	2001.3635	0	200
5	2547	-66.890815	-22.34827	1378.9908	2315.679	0	228.48
6	2547	-64.69	-23.84876	1480.9964	2489.4722	0	243.49
7	2547	-57.575	-28.699685	1806.4546	3045.9648	0	292
8	2547	-49.5087	-34.199195	2162.023	3654.4648	0	346.99
9	2547	-42.5587	-38.937625	2449.2602	4154.1064	0	394.38
10	2547	-37.215	-42.5809	2678.5704	4557.4853	0	430.81
11	2547	-33.09	-45.393275	2857.2086	4889.3816	0	458.93
12	2547	-26.815	-47.357815	2971.6088	4893.0861	0	478.58
13	2547	-21.425	-47.11719	2949.4435	4896.031	0	485.49
14	2547	-16.75627	-46.90876	2930.4359	4951.3703	0	503.2
15	2547	-10.286904	-46.61995	2903.8886	5077.9082	0	527.88
16	2547	-2.275634	-46.262305	2870.9678	5234.282	0	558.66
17	2547	3.33	-46.01205	2848.0385	5298.1609	0	562.72
18	2547	9.1975	-45.75011	2824.0179	5294.0826	0	554.34
19	2547	17.7325	-45.369085	2789.0206	5292.9121	0	542.02
20	2547	23.15	-45.12723	2766.8527	5292.9886	0	534.11
21	2547	24.72443	-45.056945	2760.3831	5292.8036	0	531.8
22	2547	28.944145	-44.868565	2743.0426	5289.3264	0	525.58
23	2547	36.534715	-44.5297	2711.9824	5278.9291	0	514.29
24	2547	45.31497	-44.137725	2675.9857	5267.6016	0	503.95
25	2547	51.68997	-43.853125	2649.8971	5262.6378	0	498.02
26	2547	56.705	-43.62924	2629.3811	5264.6874	0	493.37
27	2547	64.73	-43.27098	2596.5047	5271.4541	0	485.97
28	2547	75.43	-42.7933	2552.6162	5269.8304	0	476.17

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29	2547	85.95	-42.32366	2509.5858	5370.1254	0	466.6
30	2547	93.085	-42.005135	2480.3767	5546.2766	0	460.16
31	2547	101.345	-39.13478	2290.3578	5341.56	0	428.83
32	2547	107.0748	-36.19728	2099.5391	5206.8754	0	398.29
33	2547	109.5948	-34.90535	2015.6157	5153.9098	0	367.54
34	2547	114.155	-32.567475	1863.777	4983.2823	0	344.65
35	2547	119.155	-30.004125	1697.2535	4726.6884	0	319.74
36	2547	124.21	-27.41258	1528.9109	4393.0241	0	294.74
37	2547	130.7288	-24.07058	1311.8457	3868.9974	0	262.78
38	2547	138.4488	-20.112765	1054.7255	3253.9931	0	225.35
39	2547	148.20165	-15.112765	729.93375	2482.1617	0	178.69
40	2547	156.12665	-11.049855	466.00757	1842.7597	0	150
41	2547	159.49	-9.325577	354.004	1551.7656	0	150
42	2547	161.67695	-8.2043975	281.18246	1377.9781	0	150
43	2547	165.64155	-6.1718645	149.15269	1046.9786	518.36001	0
44	2547	169.52475	-4.1810545	19.833099	780.86245	0	600
45	2547	173.7912	-1.9937851	-122.24957	520.07579	0	600
46	2547	178.1133	0.2220241	-266.17957	255.91062	0	600

Slices of Slip Surface: 3195

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	3195	-112.40675	-4.1676555	165.82903	289.88045	0	75
2	3195	-103.61764	-9.3892185	497.48708	829.22339	0	75
3	3195	-98.751535	-12.280135	681.10007	1142.0799	0	127.8
4	3195	-91.99	-16.29712	945.15052	1582.2899	0	167.97
5	3195	-84.045355	-21.016985	1256.5864	2101.4809	0	215.17
6	3195	-78.388035	-24.377965	1479.3482	2477.4653	0	248.78
7	3195	-70.38268	-29.1339	1794.4414	3012.3933	0	296.34
8	3195	-64.69	-32.515885	2021.8034	3398.2027	0	330.16
9	3195	-60.912705	-34.75995	2174.9589	3658.7747	0	352.6
10	3195	-55.487705	-37.98291	2391.7551	4034.4688	0	384.83
11	3195	-45.2	-44.094775	2774.3141	4704.1804	0	445.95
12	3195	-37.215	-48.838615	3069.0517	5220.2329	0	493.39
13	3195	-33.09	-51.28925	3225.0813	5511.2817	0	517.89
14	3195	-26.815	-52.840625	3313.6628	5451.4694	0	533.41
15	3195	-21.425	-52.359375	3276.5351	5429.8739	0	537.43
16	3195	-16.75627	-51.942525	3244.3473	5463.8446	0	552.08
17	3195	-10.286904	-51.364905	3199.8709	5560.7657	0	572.65
18	3195	-2.275634	-50.64961	3144.7929	5680.3707	0	598.57
19	3195	3.33	-50.149105	3106.2056	5717.8786	0	600.3
20	3195	9.1975	-49.625225	3065.8355	5685.7588	0	590.1
21	3195	17.7325	-48.86317	3007.0185	5643.8634	0	575
22	3195	23.15	-48.379465	2969.7941	5618.0846	0	565.25
23	3195	24.72443	-48.238895	2958.9354	5610.6775	0	562.39
24	3195	28.944145	-47.862135	2929.8884	5587.2322	0	554.67
25	3195	36.534715	-47.184405	2877.6627	5540.9114	0	540.59
26	3195	45.31497	-46.40045	2817.1955	5488.6309	0	526.49
27	3195	51.68997	-45.83125	2773.3351	5454.0908	0	517.64
28	3195	56.705	-45.38348	2738.7602	5432.733	0	510.71
29	3195	64.73	-44.666965	2683.5293	5402.2594	0	499.68
30	3195	75.43	-43.71161	2609.9357	5350.9374	0	485.12
31	3195	85.95	-42.772325	2537.5358	5402.0883	0	470.94
32	3195	93.085	-42.13527	2488.3858	5545.0086	0	461.41
33	3195	101.345	-39.13478	2290.3578	5337.2313	0	428.83
34	3195	107.0748	-36.19728	2099.5391	5202.7128	0	398.29
35	3195	109.5948	-34.90535	2015.6157	5149.7422	0	367.54
36	3195	114.155	-32.567475	1863.777	4979.0623	0	344.65
37	3195	119.155	-30.004125	1697.2535	4722.887	0	319.74
38	3195	124.21	-27.41258	1528.9109	4389.4359	0	294.74
39	3195	130.7288	-24.07058	1311.8457	3865.9128	0	262.78

LWL Case.BS.R to L

40	3195	138.4488	-20.112765	1054.7255	3251.334	0	225.35
41	3195	148.20165	-15.112765	729.93375	2480.1831	0	178.69
42	3195	156.12665	-11.049855	466.00757	1841.2953	0	150
43	3195	159.49	-9.325577	354.004	1550.5281	0	150
44	3195	161.67695	-8.2043975	281.18246	1376.9265	0	150
45	3195	165.64155	-6.1718645	149.15269	1046.6538	518.17248	0
46	3195	169.52475	-4.1810545	19.833099	780.78774	0	600
47	3195	173.7912	-1.9937851	-122.24957	520.26972	0	600
48	3195	178.1133	0.2220241	-266.17957	256.33423	0	600

Slices of Slip Surface: 3267

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	3267	-126.5926	-3.604875	123.55169	217.98824	0	75
2	3267	-116.47865	-8.789988	451.56156	750.25759	0	75
3	3267	-104.24865	-15.059945	850.9379	1417.1116	0	155.6
4	3267	-94.49578	-20.059945	1174.7551	1954.2411	0	205.6
5	3267	-88.20578	-23.28464	1389.0822	2312.2369	0	237.85
6	3267	-80.87	-27.045475	1640.0903	2735.8482	0	275.45
7	3267	-71.21	-31.997865	1971.2588	3294.8275	0	324.98
8	3267	-64.891775	-35.23703	2190.7672	3665.0811	0	357.37
9	3267	-63.201775	-36.103445	2252.0874	3768.5473	0	366.03
10	3267	-57.575	-38.988125	2448.4182	4110.7968	0	394.88
11	3267	-45.2	-45.332415	2851.4945	4812.6692	0	458.32
12	3267	-37.215	-49.426085	3105.6953	5255.4018	0	499.26
13	3267	-33.09	-51.54085	3240.8323	5508.4213	0	520.41
14	3267	-26.815	-52.840625	3313.6628	5451.4694	0	533.41
15	3267	-21.425	-52.359375	3276.5351	5429.8739	0	537.43
16	3267	-16.75627	-51.942525	3244.3473	5464.0468	0	552.08
17	3267	-10.286904	-51.364905	3199.8709	5560.89	0	572.65
18	3267	-2.275634	-50.64961	3144.7929	5680.4951	0	598.57
19	3267	3.33	-50.149105	3106.2056	5717.8786	0	600.3
20	3267	9.1975	-49.625225	3065.8355	5685.7588	0	590.1
21	3267	17.7325	-48.86317	3007.0185	5643.9801	0	575
22	3267	23.15	-48.379465	2969.7941	5618.0846	0	565.25
23	3267	24.72443	-48.238895	2958.9354	5610.6775	0	562.39
24	3267	32.73943	-47.52327	2903.7748	5564.8576	0	547.66
25	3267	45.31497	-46.40045	2817.1955	5488.7308	0	526.49
26	3267	51.68997	-45.83125	2773.3351	5454.0908	0	517.64
27	3267	56.705	-45.38348	2738.7602	5432.8704	0	510.71
28	3267	64.73	-44.666965	2683.5293	5402.3726	0	499.68
29	3267	75.43	-43.71161	2609.9357	5351.0164	0	485.12
30	3267	85.95	-42.772325	2537.5358	5402.2063	0	470.94
31	3267	93.085	-42.13527	2488.3858	5545.0086	0	461.41
32	3267	101.345	-39.13478	2290.3578	5337.8973	0	428.83
33	3267	107.0748	-36.19728	2099.5391	5203.4066	0	398.29
34	3267	109.5948	-34.90535	2015.6157	5150.3673	0	367.54
35	3267	114.155	-32.567475	1863.777	4979.7962	0	344.65
36	3267	119.155	-30.004125	1697.2535	4723.4054	0	319.74
37	3267	124.21	-27.41258	1528.9109	4389.9741	0	294.74
38	3267	130.7288	-24.07058	1311.8457	3866.3535	0	262.78
39	3267	138.4488	-20.112765	1054.7255	3251.8175	0	225.35
40	3267	148.20165	-15.112765	729.93375	2480.4762	0	178.69
41	3267	156.12665	-11.049855	466.00757	1841.5353	0	150
42	3267	159.49	-9.325577	354.004	1550.7343	0	150
43	3267	161.67695	-8.2043975	281.18246	1377.1237	0	150
44	3267	165.64155	-6.1718645	149.15269	1046.7756	518.2428	0
45	3267	169.52475	-4.1810545	19.833099	780.93715	0	600
46	3267	173.7912	-1.9937851	-122.24957	520.34244	0	600
47	3267	178.1133	0.2220241	-266.17957	256.37522	0	600

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LWL Case.BS.R to L.Thru Fabric

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 154
Last Edited By: Cox, Lane MVK
Date: 3/24/2011
Time: 5:21:06 PM
File Name: 5c(1) Typical 1.1st SC.80%SG.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\1st Stage Construction\80%SG, 1 Layer of Fabric\Slope W\
Last Solved Date: 3/24/2011
Last Solved Time: 5:27:20 PM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

LWL Case.BS.R to L.Thru Fabric

Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

SlipSurface
- Direction of movement: Right to Left
- Use Passive Mode: No
- Slip Surface Option: Block
- Critical slip surfaces saved: 100
- Optimize Critical Slip Surface Location: Yes
- Tension Crack
  - Tension Crack Option: Tension Crack Line
  - Percentage Wet: 0
  - Tension Crack Fluid Unit Weight: 62.4 pcf

FOS Distribution
- FOS Calculation Option: Constant

Restrict Block Crossing: Yes
Advanced
- Number of Slices: 30
- Optimization Tolerance: 0.01
- Minimum Slip Surface Depth: 0.1 ft
- Optimization Maximum Iterations: 2000
- Optimization Convergence Tolerance: 1e-007
- Starting Optimization Points: 8
- Ending Optimization Points: 16
- Complete Passes per Insertion: 1

Driving Side Maximum Convex Angle: 5 °
Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH

Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH above 0

Model: Mohr-Coulomb
Unit Weight: 108 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH, 0 to -12

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -12 (2)
Cohesion Spatial Fn: CH, 0 to -12
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH, -12 to -22

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -12 to -22 (2)
Cohesion Spatial Fn: CH, -12 to -22
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH, -22 to -36

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -22 to -36 (2)
Cohesion Spatial Fn: CH, -22 to -36
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH, -36 to -80

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -36 to -80 (2)
Cohesion Spatial Fn: CH, -36 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

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Sand Fill

Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Limits

Left Coordinate: (-200, -1.79) ft
Right Coordinate: (500, -4.27) ft

Slip Surface Block

Left Grid
Upper Left: (-93, -16) ft
Lower Left: (-25, -16) ft
Lower Right: (-25, -69) ft
X Increments: 7
Y Increments: 7
Starting Angle: 135 °
Ending Angle: 180 °
Angle Increments: 7
Right Grid
Upper Left: (37, -15) ft
Lower Left: (93, -15) ft
Lower Right: (93, -69) ft
X Increments: 7
Y Increments: 7
Starting Angle: 45 °
Ending Angle: 65 °
Angle Increments: 7

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	-1.79
	-195.89	-1.8
	-169.15	-1.8
	-146.39	-1.65
	-122.74	-1.62
	-98.28	-1.36
	-85.7	-0.94
	-66.38	-0.23
	-63	0
	-52.15	0.5
	-38.25	0.23
	-36.18	0.46
	194.59	-4.39
	214.93	-4.22
	250.23	-4.22
	259.47	-4.16
	284.55	-5.22

	285	-5.3
	406	-5.3
	407.82	-4.54
	500	-4.27

Reinforcements

Reinforcement 1

Type: Fabric
Outside Point: (23, 0) ft
Inside Point: (177, 0) ft
Slip Surface Intersection: (133.58, 0) ft
Total Length: 154 ft
Reinforcement Direction: 180 °
Applied Load Option: Variable
F of S Dependent: No
Contact Cohesion: 265 psf
Contact Phi: 19 °
Interface Factor: 2
Bond Safety Factor: 1
Fabric Capacity: 27000 lbs
Fabric Safety Factor: 1
Fabric Load: 27000 lbs
Load Distribution: Even along reinf.
Load Orientation: 0
Applied Load: 27000 lbs
Fabric Load Used: 27000 lbs
Resisting Force Used: 1277.9 lbs/ft
Available Bond Length: 43.424 ft
Required Bond Length: 21.128 ft
Governing Component: Fabric

Tension Crack Line

	X (ft)	Y (ft)
	81.73	6.5
	85	2
	112	9
	121	9
	161	1
	241	-1

Spatial Functions

CH, 0 to -12

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -1.5, 75)
Data Point: (-300, -12, 75)
Data Point: (-23.63, 0, 75)
Data Point: (-23.63, -12, 75)
Data Point: (0, 0, 250)
Data Point: (0, -12, 250)
Data Point: (40.33, -4.5, 150)
Data Point: (40.33, -12, 150)
Data Point: (178.08, -4.5, 150)
Data Point: (178.08, -12, 150)

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CH, -12 to -22

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -12, 125)
Data Point: (-300, -22, 225)
Data Point: (-23.63, -12, 125)
Data Point: (-23.63, -22, 225)
Data Point: (0, -12, 350)
Data Point: (0, -22, 350)
Data Point: (40.33, -12, 150)
Data Point: (40.33, -22, 250)
Data Point: (178.08, -12, 150)
Data Point: (178.08, -22, 240)
Data Point: (500, -12, 150)
Data Point: (500, -22, 240)

CH, -22 to -36

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -22, 225)
Data Point: (-300, -36, 365)
Data Point: (-23.63, -22, 225)
Data Point: (-23.63, -36, 365)
Data Point: (0, -22, 350)
Data Point: (0, -36, 476)
Data Point: (40.33, -22, 250)
Data Point: (40.33, -36, 390)
Data Point: (178.08, -22, 240)
Data Point: (178.08, -36, 366)
Data Point: (500, -22, 240)
Data Point: (500, -36, 366)

CH, -36 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -36, 365)
Data Point: (-300, -80, 805)
Data Point: (-23.63, -36, 365)
Data Point: (-23.63, -80, 805)
Data Point: (0, -36, 476)
Data Point: (0, -80, 872)
Data Point: (40.33, -36, 425)
Data Point: (40.33, -80, 865)
Data Point: (178.08, -36, 366)
Data Point: (178.08, -80, 762)
Data Point: (500, -36, 366)
Data Point: (500, -80, 762)

CH, 0 to -12 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -6, 100)
Data Point: (0, -6, 101)
Data Point: (40.33, -6, 111)
Data Point: (178.08, -6, 111)

LWL Case.BS.R to L.Thru Fabric

CH, -12 to -22 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -17, 100)
Data Point: (0, -17, 109)
Data Point: (40.33, -17, 100)
Data Point: (178.08, -17, 100)

CH, -22 to -36 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -29, 102)
Data Point: (0, -29, 104)
Data Point: (40.33, -29, 102)
Data Point: (178.08, -29, 102)

CH, -36 to -80 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -58, 105)
Data Point: (0, -58, 106)
Data Point: (40.33, -58, 105)
Data Point: (178.08, -58, 105)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -36 to -80	34,36,37,35	30800
Region 2	CH, -22 to -36	38,36,37,39	9800
Region 3	CH, -12 to -22	40,38,39,41	7000
Region 4	CH, 0 to -12	2,40,41,33,59,58,57,56,55,54,53,52,51,49,32,31,30,46,29,28,27,26,25,24,23,22,21,20,19,18,42,43,8,7,6,5,4,3,1	4936.9353
Region 5	CH above 0	43,9,10,11,12,13,61,17,42	131.35445
Region 6	Sand Fill	60,19,20,21,22,23,24,25,26,27,28	636.18815
Region 7	EMBANKMENT FILL CH	19,50,44,45,47,46,29,28,60	1491.7594
Region 8	EMBANKMENT FILL CH	47,48,49,31,30,46	500.71165
Region 9	EMBANKMENT FILL CH	50,19,18,42,17	368.43335

Points

	X (ft)	Y (ft)
Point 1	-195.89	-1.8
Point 2	-200	-1.79
Point 3	-169.15	-1.8
Point 4	-146.39	-1.65
Point 5	-122.74	-1.62
Point 6	-98.28	-1.36
Point 7	-85.7	-0.94
Point 8	-66.38	-0.23
Point 9	-52.15	0.5

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Point 10	-38.25	0.23
Point 11	-36.18	0.46
Point 12	-23.63	0.86
Point 13	-19.22	0.94
Point 14	-5.71	4.75
Point 15	-0.42	4.91
Point 16	-0.22	4.77
Point 17	4.93	4.58
Point 18	24.3	-0.66
Point 19	40.33	-3.85
Point 20	53.08	-5.02
Point 21	69.13	-8.93
Point 22	90.17	-10.85
Point 23	106.69	-11.22
Point 24	116.58	-11.18
Point 25	126.69	-10.14
Point 26	142.13	-9.46
Point 27	157.98	-8.78
Point 28	178.08	-4.54
Point 29	180.18	-4.26
Point 30	214.93	-4.22
Point 31	234.63	-4.19
Point 32	250	-4.27
Point 33	500	-4.27
Point 34	-200	-80
Point 35	500	-80
Point 36	-200	-36
Point 37	500	-36
Point 38	-200	-22
Point 39	500	-22
Point 40	-200	-12
Point 41	500	-12
Point 42	22	0
Point 43	-63	0
Point 44	111.73	14
Point 45	121.73	14
Point 46	194.59	-4.39
Point 47	161	4
Point 48	241	2
Point 49	259.47	-4.16
Point 50	81.73	6.5
Point 51	284.55	-5.2
Point 52	300.6	-9.14
Point 53	320.9	-11
Point 54	337.4	-11.22
Point 55	347.09	-11.26
Point 56	356.8	-10.22
Point 57	372.41	-9.68
Point 58	388.59	-9
Point 59	407.82	-4.54
Point 60	60.33	-3.85
Point 61	1.73	4.5

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	2.38	(16.148, 6.635)	101.2191	(137.729, 9.92581)	(-101.053, -1.38948)
2	31403	2.50	(16.148, 6.635)	104.057	(140.928, 9.11138)	(-108.378, -1.46734)
3	31404	2.51	(14.069, 7.656)	103.241	(136.842, 10.1519)	(-108.378, -1.46734)
4	30891	2.51	(22.043, 6.594)	99.189	(140.928, 9.11138)	(-96.5887, -1.30354)

LWL Case.BS.R to L.Thru Fabric

5	30955	2.52	(11.41, 6.66)	106.486	(140.928, 9.11138)	(-117.857, -1.5681)
6	31467	2.52	(3.621, 6.676)	112.829	(140.928, 9.11138)	(-133.443, -1.63358)
7	31394	2.52	(15.334, 7.036)	102.11	(139.325, 9.51943)	(-108.378, -1.46734)
8	31339	2.52	(24.778, 6.548)	98.181	(140.928, 9.11138)	(-91.1287, -1.12125)
9	30892	2.52	(19.963, 7.616)	97.551	(136.842, 10.1519)	(-96.5887, -1.30354)
10	31915	2.52	(10.225, 6.666)	109.293	(140.928, 9.11138)	(-120.227, -1.59329)
11	31395	2.52	(13.387, 7.991)	101.294	(135.504, 10.4925)	(-108.378, -1.46734)
12	30956	2.52	(9.331, 7.682)	104.754	(136.842, 10.1519)	(-117.857, -1.5681)
13	31340	2.53	(22.697, 7.57)	97.357	(136.842, 10.1519)	(-91.1287, -1.12125)
14	30882	2.53	(21.228, 6.995)	96.841	(139.325, 9.51943)	(-96.5887, -1.30354)
15	30883	2.53	(19.281, 7.95)	95.616	(135.504, 10.4925)	(-96.5887, -1.30354)
16	31402	2.53	(18.336, 5.558)	104.5	(145.236, 8.01419)	(-108.378, -1.46734)
17	31468	2.53	(1.544, 7.698)	111.792	(136.842, 10.1519)	(-133.443, -1.63358)
18	30947	2.53	(8.649, 8.016)	103.359	(135.504, 10.4925)	(-117.857, -1.5681)
19	30827	2.53	(29.334, 6.469)	93.209	(140.928, 9.11138)	(-82.0308, -0.805159)
20	31916	2.53	(8.146, 7.688)	108.401	(136.842, 10.1519)	(-120.227, -1.59329)
21	30828	2.54	(27.254, 7.491)	92.268	(136.842, 10.1519)	(-82.0308, -0.805159)
22	31459	2.54	(0.864, 8.032)	110.567	(135.504, 10.4925)	(-133.443, -1.63358)
23	31458	2.54	(2.807, 7.077)	111.51	(139.325, 9.51943)	(-133.443, -1.63358)
24	30946	2.54	(10.595, 7.061)	104.201	(139.325, 9.51943)	(-117.857, -1.5681)
25	30890	2.54	(24.231, 5.517)	99.347	(145.236, 8.01419)	(-96.5887, -1.30354)
26	31914	2.54	(12.411, 5.589)	110.167	(145.236, 8.01419)	(-120.227, -1.59329)
27	31979	2.54	(-4.199, 6.685)	120.364	(140.928, 9.11138)	(-149.095, -1.66782)
28	31330	2.54	(23.963, 6.949)	96.104	(139.325, 9.51943)	(-91.1287, -1.12125)
29	31851	2.54	(20.188, 6.613)	102.304	(140.928, 9.11138)	(-100.297, -1.38144)
30	31338	2.54	(26.966, 5.471)	99.072	(145.236, 8.01419)	(-91.1287, -1.12125)
31	31396	2.54	(11.537, 8.897)	100.539	(131.88, 11.4152)	(-108.378, -1.46734)
32	31331	2.55	(22.015, 7.904)	95.28	(135.504, 10.4925)	(-91.1287, -1.12125)
33	30884	2.55	(17.429, 8.856)	95.321	(131.88, 11.4152)	(-96.5887, -1.30354)
34	31460	2.55	(-0.984, 8.938)	109.883	(131.88, 11.4152)	(-133.443, -1.63358)
35	30818	2.55	(28.519, 6.87)	91.571	(139.325, 9.51943)	(-82.0308, -0.805159)
36	30954	2.55	(13.596, 5.583)	106.487	(145.236, 8.01419)	(-117.857, -1.5681)
37	30948	2.55	(6.8, 8.922)	102.733	(131.88, 11.4152)	(-117.857, -1.5681)
38	30379	2.55	(27.772, 6.498)	93.741	(140.928, 9.11138)	(-85.1496, -0.919774)
39	31906	2.55	(9.41, 7.067)	107.869	(139.325, 9.51943)	(-120.227, -1.59329)
40	31393	2.55	(17.395, 6.022)	103	(143.381, 8.48664)	(-108.378, -1.46734)
41	30819	2.55	(26.572, 7.825)	90.613	(135.504, 10.4925)	(-82.0308, -0.805159)
42	30763	2.55	(34.915, 6.367)	89.662	(140.928, 9.11138)	(-70.89, -0.395739)
43	31980	2.55	(-6.274, 7.707)	119.354	(136.842, 10.1519)	(-149.095, -1.66782)
44	31466	2.55	(5.806, 5.599)	113.676	(145.236, 8.01419)	(-133.443, -1.63358)
45	31412	2.55	(16.593, 6.416)	105.452	(141.803, 8.88856)	(-108.378, -1.46734)
46	30315	2.55	(33.881, 6.386)	90.369	(140.928, 9.11138)	(-72.9548, -0.47162)
47	30826	2.55	(31.522, 5.392)	94.233	(145.236, 8.01419)	(-82.0308, -0.805159)
48	31907	2.55	(7.465, 8.022)	107.002	(135.504, 10.4925)	(-120.227, -1.59329)
49	31852	2.55	(18.108, 7.635)	101.445	(136.842, 10.1519)	(-100.297, -1.38144)
50	30380	2.55	(25.692, 7.52)	92.097	(136.842, 10.1519)	(-85.1496, -0.919774)
51	30443	2.56	(19.1, 6.619)	98.559	(140.928, 9.11138)	(-102.474, -1.40459)
52	30764	2.56	(32.836, 7.389)	88.742	(136.842, 10.1519)	(-70.89, -0.395739)
53	30893	2.56	(17.972, 8.59)	96.751	(132.942, 11.1448)	(-96.5887, -1.30354)
54	31924	2.56	(10.669, 6.448)	110.486	(141.803, 8.88856)	(-120.227, -1.59329)
55	30251	2.56	(38.536, 6.279)	86.843	(140.928, 9.11138)	(-63.6688, -0.0455085)
56	31929	2.56	(21.345, 1.587)	116.967	(162.951, 3.95122)	(-120.227, -1.59329)
57	31405	2.56	(12.079, 8.631)	101.827	(132.942, 11.1448)	(-108.378, -1.46734)
58	30316	2.56	(31.801, 7.408)	88.372	(136.842, 10.1519)	(-72.9548, -0.47162)
59	31275	2.56	(31.257, 6.434)	93.391	(140.928, 9.11138)	(-78.193, -0.664122)
60	30444	2.56	(17.019, 7.641)	97.655	(136.842, 10.1519)	(-102.474, -1.40459)
61	30881	2.56	(23.29, 5.981)	97.702	(143.381, 8.48664)	(-96.5887, -1.30354)
62	31411	2.56	(18.901, 5.279)	106.398	(146.351, 7.7303)	(-108.378, -1.46734)
63	31341	2.56	(20.707, 8.545)	96.589	(132.942, 11.1448)	(-91.1287, -1.12125)
64	31469	2.56	(-0.442, 8.673)	111.043	(132.942, 11.1448)	(-133.443, -1.63358)

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65	31348	2.56	(25.223, 6.33)	99.743	(141.803, 8.88856)	(-91.1287, -1.12125)
66	30371	2.57	(25.01, 7.854)	90.207	(135.504, 10.4925)	(-85.1496, -0.919774)
67	30252	2.57	(36.457, 7.301)	85.056	(136.842, 10.1519)	(-63.6688, -0.0455085)
68	31850	2.57	(22.376, 5.536)	103.234	(145.236, 8.01419)	(-100.297, -1.38144)
69	31923	2.57	(12.976, 5.311)	111.515	(146.351, 7.7303)	(-120.227, -1.59329)
70	30754	2.57	(34.1, 6.768)	87.777	(139.325, 9.51943)	(-70.89, -0.395739)
71	30435	2.57	(16.337, 7.975)	96.224	(135.504, 10.4925)	(-102.474, -1.40459)
72	30370	2.57	(26.957, 6.899)	91.402	(139.325, 9.51943)	(-85.1496, -0.919774)
73	31332	2.57	(20.164, 8.81)	94.518	(131.88, 11.4152)	(-91.1287, -1.12125)
74	30945	2.57	(12.655, 6.047)	105.032	(143.381, 8.48664)	(-117.857, -1.5681)
75	32441	2.57	(15.351, 1.597)	122.637	(162.951, 3.95122)	(-132.215, -1.63202)
76	30434	2.57	(18.285, 7.02)	97.064	(139.325, 9.51943)	(-102.474, -1.40459)
77	31329	2.57	(26.024, 5.935)	97.003	(143.381, 8.48664)	(-91.1287, -1.12125)
78	32427	2.57	(4.235, 6.676)	115.207	(140.928, 9.11138)	(-132.215, -1.63202)
79	30762	2.57	(37.101, 5.29)	90.662	(145.236, 8.01419)	(-70.89, -0.395739)
80	30900	2.57	(22.488, 6.375)	99.84	(141.803, 8.88856)	(-96.5887, -1.30354)
81	31276	2.57	(29.177, 7.456)	92.21	(136.842, 10.1519)	(-78.193, -0.664122)
82	30820	2.57	(24.721, 8.731)	89.73	(131.88, 11.4152)	(-82.0308, -0.805159)
83	31908	2.57	(5.616, 8.928)	106.364	(131.88, 11.4152)	(-120.227, -1.59329)
84	31993	2.57	(6.912, 1.606)	126.842	(162.951, 3.95122)	(-149.095, -1.66782)
85	31971	2.57	(-6.954, 8.041)	118.174	(135.504, 10.4925)	(-149.095, -1.66782)
86	31457	2.57	(4.866, 6.063)	112.29	(143.381, 8.48664)	(-133.443, -1.63358)
87	31978	2.57	(-2.015, 5.608)	120.929	(145.236, 8.01419)	(-149.095, -1.66782)
88	31917	2.57	(6.158, 8.663)	107.61	(132.942, 11.1448)	(-120.227, -1.59329)
89	30307	2.57	(31.119, 7.742)	86.258	(135.504, 10.4925)	(-72.9548, -0.47162)
90	31970	2.57	(-5.012, 7.086)	118.87	(139.325, 9.51943)	(-149.095, -1.66782)
91	31347	2.57	(27.531, 5.193)	100.7	(146.351, 7.7303)	(-91.1287, -1.12125)
92	30755	2.57	(32.154, 7.723)	86.843	(135.504, 10.4925)	(-70.89, -0.395739)
93	31476	2.57	(4.065, 6.458)	114.021	(141.803, 8.88856)	(-133.443, -1.63358)
94	31413	2.58	(14.385, 7.501)	104.572	(137.462, 9.99386)	(-108.378, -1.46734)
95	31925	2.58	(8.462, 7.533)	109.639	(137.462, 9.99386)	(-120.227, -1.59329)
96	30306	2.58	(33.066, 6.787)	87.508	(139.325, 9.51943)	(-72.9548, -0.47162)
97	30957	2.58	(7.342, 8.656)	103.98	(132.942, 11.1448)	(-117.857, -1.5681)
98	31860	2.58	(20.633, 6.395)	103.729	(141.803, 8.88856)	(-100.297, -1.38144)
99	31019	2.58	(-5.875, 6.691)	118.69	(140.928, 9.11138)	(-152.447, -1.68992)
100	30829	2.58	(25.264, 8.466)	91.394	(132.942, 11.1448)	(-82.0308, -0.805159)
101	31865	2.58	(31.312, 1.534)	110.346	(162.951, 3.95122)	(-100.297, -1.38144)

Slices of Slip Surface: Optimized

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	-99.6667	-2.448002	66.971713	132.62503	0	75
2	Optimized	-92.716595	-7.753262	410.5289	687.00332	0	75
3	Optimized	-86.426595	-12.554635	723.23294	1209.7824	0	130.55
4	Optimized	-84.62946	-13.92645	812.8225	1358.8251	0	144.26
5	Optimized	-77.617695	-18.371815	1106.3053	1832.1588	0	188.72
6	Optimized	-69.028235	-23.61722	1453.2923	2408.3231	0	241.17
7	Optimized	-65.052415	-26.04517	1616.4928	2682.6048	0	265.45
8	Optimized	-63.362415	-27.050745	1686.3886	2789.6255	0	275.51
9	Optimized	-57.575	-30.162195	1897.6933	3145.3147	0	306.62
10	Optimized	-49.31315	-34.60396	2187.0054	3631.969	0	351.04
11	Optimized	-42.36315	-38.43364	2417.6286	4030.6536	0	389.34
12	Optimized	-37.215	-41.31805	2599.7572	4345.5722	0	418.18
13	Optimized	-30.21058	-45.24249	2843.9835	4802.4739	0	457.42
14	Optimized	-23.93558	-48.74248	3054.1837	5188.8454	0	492.42
15	Optimized	-21.425	-50.019525	3130.5215	5347.292	0	514.24
16	Optimized	-16.75627	-52.394345	3272.616	5686.0166	0	556.46
17	Optimized	-14.04491	-53.77352	3355.1962	5904.1231	0	580.55
18	Optimized	-9.54132	-54.779475	3411.9998	6034.0751	0	607.78
19	Optimized	-1.77768	-55.420175	3441.8586	6207.0639	0	643.89
20	Optimized	3.33	-55.071725	3413.3162	6248.6009	0	645.01

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21	Optimized	9.1975	-54.67144	3380.6602	6228.6393	0	636.67
22	Optimized	17.7325	-54.08918	3333.2016	6204.4424	0	624.33
23	Optimized	23.15	-53.719595	3303.0183	6189.9602	0	616.37
24	Optimized	24.72443	-53.612185	3294.2013	6195.844	0	614.04
25	Optimized	27.443435	-53.426695	3279.0406	6178.2839	0	609.99
26	Optimized	35.034005	-53.2364	3257.2995	6201.0666	0	601.8
27	Optimized	45.31497	-53.17086	3239.6717	6227.291	0	593.95
28	Optimized	51.68997	-53.130215	3228.7896	6250.1057	0	590.02
29	Optimized	56.74769	-53.09797	3220.0813	6270.4408	0	586.91
30	Optimized	64.77269	-53.082055	3208.6262	6315.4696	0	582.32
31	Optimized	72.28	-53.094915	3199.5192	6353.3243	0	578.3
32	Optimized	78.58	-53.105705	3192.0589	6378.5623	0	574.92
33	Optimized	82.58292	-53.11256	3187.1632	6420.286	0	572.78
34	Optimized	86.326855	-52.699755	3156.4314	6441.7771	0	566.72
35	Optimized	89.693935	-52.085305	3113.7148	6404.2166	0	558.95
36	Optimized	92.44284	-50.9294	3037.9974	6357.8729	0	546.33
37	Optimized	97.70924	-47.548575	2820.1606	6057.1806	0	511.1
38	Optimized	103.6964	-42.69836	2509.5925	5740.2532	0	461.76
39	Optimized	107.045	-39.98567	2336.0326	5573.4268	0	434.35
40	Optimized	108.65985	-37.849045	2200.5433	5250.626	0	413.31
41	Optimized	110.82485	-34.671515	1999.4177	5016.9731	0	365.11
42	Optimized	113.8789	-30.18917	1715.778	4614.4943	0	322.18
43	Optimized	116.3039	-26.581185	1487.4389	4257.607	0	287.77
44	Optimized	117.8347	-24.06353	1328.2789	4007.1759	0	263.85
45	Optimized	120.4097	-19.82859	1060.6569	3609.9599	0	223.73
46	Optimized	123.4499	-14.82859	744.66269	3095.373	0	176.58
47	Optimized	125.72225	-11.09136	508.49872	2672.3101	0	150
48	Optimized	126.70495	-9.475175	406.34246	1955.7525	894.55232	0
49	Optimized	128.7905	-6.51425	218.8453	1672.5089	839.27305	0
50	Optimized	130.88675	-3.6606555	38.031817	1413.7478	0	600
51	Optimized	134.52855	1.296843	-276.08823	736.79324	0	600

Slices of Slip Surface: 31403

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31403	-103.32895	-4.639802	201.31077	343.76614	0	75
2	31403	-94.94763	-9.9061335	540.22231	890.14336	0	75
3	31403	-88.65763	-13.8584	799.95087	1326.4283	0	143.58
4	31403	-80.700175	-18.8584	1129.5704	1870.6498	0	193.58
5	31403	-71.040175	-24.928185	1530.4964	2538.4418	0	254.28
6	31403	-64.69	-28.918265	1797.3348	2986.8319	0	294.18
7	31403	-58.20974	-32.99008	2072.3282	3450.6987	0	334.9
8	31403	-52.78474	-36.398835	2300.6315	3837.5651	0	368.99
9	31403	-48.675	-38.981155	2459.3987	4112.7647	0	394.81
10	31403	-41.725	-43.34813	2723.5279	4570.6049	0	438.48
11	31403	-37.215	-46.18195	2903.282	4882.3667	0	466.82
12	31403	-30.59	-50.34471	3162.8702	5364.5798	0	508.45
13	31403	-24.315	-53.855485	3373.7128	5594.7282	0	543.55
14	31403	-21.425	-53.84849	3369.6046	5614.4959	0	552.18
15	31403	-16.75627	-53.837185	3362.5721	5692.1614	0	570.47
16	31403	-10.286904	-53.82152	3353.2669	5849.7431	0	595.83
17	31403	-2.275634	-53.80212	3341.5334	6044.8427	0	627.24
18	31403	3.33	-53.788545	3333.4281	6134.3577	0	633.35
19	31403	9.1975	-53.77434	3324.7706	6154.9908	0	628.39
20	31403	17.7325	-53.753675	3312.234	6190.0229	0	621.17
21	31403	23.15	-53.740555	3304.2943	6213.0246	0	616.57
22	31403	24.72443	-53.736745	3301.9661	6232.0207	0	615.24
23	31403	28.944145	-53.72653	3295.7891	6235.2161	0	611.66
24	31403	36.534715	-53.70815	3284.7227	6256.69	0	605.21
25	31403	45.31497	-53.68689	3271.9246	6282.9659	0	599.09
26	31403	51.68997	-53.671455	3262.5496	6308.8453	0	595.39

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27	31403	56.705	-53.65931	3255.3009	6330.7403	0	592.48
28	31403	64.73	-53.63988	3243.5131	6372.8221	0	587.82
29	31403	72.28	-53.6216	3232.5304	6407.7595	0	583.44
30	31403	78.58	-53.606345	3223.1654	6430.2991	0	579.79
31	31403	85.95	-53.5885	3212.4312	6565.5019	0	575.52
32	31403	91.585	-53.574855	3204.2312	6732.8432	0	572.26
33	31403	96.4225	-49.387825	2936.622	6102.5607	0	529.4
34	31403	103.2675	-41.020615	2405.5584	5469.928	0	445.96
35	31403	107.03235	-36.418505	2113.3598	5135.5365	0	400.41
36	31403	109.55235	-33.3381	1917.911	4904.9789	0	352.66
37	31403	114.155	-27.71192	1560.7755	4424.8735	0	298.7
38	31403	117.7039	-23.37382	1285.4342	4008.2492	0	257.35
39	31403	120.2789	-20.226185	1085.6292	3704.5788	0	227.49
40	31403	124.21	-15.42086	780.62108	3173.4713	0	182.13
41	31403	126.84925	-12.194675	575.84668	2820.6886	0	151.82
42	31403	127.8037	-11.027965	501.80633	2640.9728	0	150
43	31403	130.9624	-7.1668385	256.71869	1748.8751	861.49693	0
44	31403	133.7985	-3.700025	36.669402	1386.6997	0	600
45	31403	137.59935	0.9460865	-258.2315	738.89957	0	600

Slices of Slip Surface: 31404

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31404	-103.32895	-4.639802	201.31077	344.25248	0	75
2	31404	-94.94763	-9.9061335	540.22231	891.38841	0	75
3	31404	-88.65763	-13.8584	799.95087	1328.3035	0	143.58
4	31404	-80.700175	-18.8584	1129.5704	1873.2747	0	193.58
5	31404	-71.040175	-24.928185	1530.4964	2541.9849	0	254.28
6	31404	-64.69	-28.918265	1797.3348	2991.0906	0	294.18
7	31404	-58.20974	-32.99008	2072.3282	3455.5596	0	334.9
8	31404	-52.78474	-36.398835	2300.6315	3842.9677	0	368.99
9	31404	-48.675	-38.981155	2459.3987	4118.6125	0	394.81
10	31404	-41.725	-43.34813	2723.5279	4577.0619	0	438.48
11	31404	-37.215	-46.18195	2903.282	4889.3205	0	466.82
12	31404	-30.59	-50.34471	3162.8702	5372.0776	0	508.45
13	31404	-24.315	-53.855485	3373.7128	5595.1661	0	543.55
14	31404	-21.425	-53.84849	3369.6046	5614.9494	0	552.18
15	31404	-16.75627	-53.837185	3362.5721	5692.5673	0	570.47
16	31404	-10.286904	-53.82152	3353.2669	5850.2424	0	595.83
17	31404	-2.275634	-53.80212	3341.5334	6045.4668	0	627.24
18	31404	3.33	-53.788545	3333.4281	6134.6702	0	633.35
19	31404	9.1975	-53.77434	3324.7706	6155.5766	0	628.39
20	31404	17.7325	-53.753675	3312.234	6190.6087	0	621.17
21	31404	23.15	-53.740555	3304.2943	6213.4594	0	616.57
22	31404	24.72443	-53.736745	3301.9661	6236.1439	0	615.24
23	31404	28.944145	-53.72653	3295.7891	6236.1383	0	611.66
24	31404	36.534715	-53.70815	3284.7227	6257.4805	0	605.21
25	31404	45.31497	-53.68689	3271.9246	6283.7683	0	599.09
26	31404	51.68997	-53.671455	3262.5496	6310.2841	0	595.39
27	31404	56.705	-53.65931	3255.3009	6331.7058	0	592.48
28	31404	64.73	-53.63988	3243.5131	6373.6175	0	587.82
29	31404	72.28	-53.6216	3232.5304	6408.7118	0	583.44
30	31404	78.58	-53.606345	3223.1654	6431.2515	0	579.79
31	31404	85.95	-53.5885	3212.4312	6566.3313	0	575.52
32	31404	91.585	-53.574855	3204.2312	6734.2566	0	572.26
33	31404	96.242075	-49.17857	2923.7897	6025.6113	0	527.49
34	31404	102.72623	-40.392855	2367.0736	5348.1925	0	440.21
35	31404	106.32915	-35.51107	2057.689	4999.3253	0	373.85
36	31404	109.21	-31.60766	1810.3268	4692.4754	0	336.27
37	31404	114.0154	-25.09659	1397.7743	4142.7853	0	273.96
38	31404	116.4404	-21.81083	1189.5531	3874.7936	0	242.69

39	31404	119.155	-18.13266	956.4656	3482.4383	0	207.82
40	31404	122.70555	-13.32183	651.61292	3004.7847	0	162.43
41	31404	124.30025	-11.16107	514.68702	2745.6848	0	150
42	31404	127.1584	-7.288433	269.29064	1809.3276	889.14074	0
43	31404	129.8461	-3.64673	38.527656	1462.9089	0	600
44	31404	133.56815	1.3964825	-281.05124	771.70494	0	600

Slices of Slip Surface: 30891

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	30891	-91.144365	-4.7244555	224.80857	380.59601	0	75
2	30891	-82.6327	-10.072688	576.91437	946.94397	0	75
3	30891	-76.26905	-14.071235	841.02169	1389.6515	0	145.71
4	30891	-69.67635	-18.213705	1114.6238	1840.1965	0	187.14
5	30891	-65.015245	-21.14247	1310.7363	2163.1042	0	216.42
6	30891	-63.325245	-22.204365	1384.1911	2284.2929	0	227.04
7	30891	-57.575	-25.817485	1626.6469	2692.661	0	263.17
8	30891	-46.75981	-32.61312	2059.7131	3421.3356	0	331.13
9	30891	-39.80981	-36.980095	2323.8077	3867.7202	0	374.8
10	30891	-37.215	-38.61052	2430.8345	4052.9452	0	391.11
11	30891	-30.59	-42.77328	2690.4315	4533.9875	0	432.73
12	30891	-24.315	-46.328005	2904.0317	4817.3223	0	468.28
13	30891	-21.425	-46.506445	2911.4625	4856.0587	0	479.44
14	30891	-16.75627	-46.79471	2923.1208	4964.5047	0	502.1
15	30891	-10.286904	-47.19415	2939.6287	5164.7513	0	533.3
16	30891	-2.275634	-47.68879	2960.0609	5413.1776	0	571.64
17	30891	3.33	-48.0349	2974.2734	5540.6984	0	581.1
18	30891	9.1975	-48.39718	2989.1526	5602.2199	0	578.77
19	30891	17.7325	-48.92416	3010.9038	5696.2412	0	575.58
20	30891	23.15	-49.258655	3024.6314	5756.4291	0	573.66
21	30891	24.72443	-49.355865	3028.6715	5781.4961	0	573.12
22	30891	28.944145	-49.616405	3039.3054	5817.8623	0	571.72
23	30891	36.534715	-50.085075	3058.6348	5891.2348	0	569.32
24	30891	45.31497	-50.627195	3081.011	5977.2174	0	568.61
25	30891	51.68997	-51.020805	3097.1691	6045.2008	0	569.1
26	30891	56.705	-51.33045	3109.9399	6101.6222	0	569.47
27	30891	64.73	-51.825945	3130.2889	6197.9698	0	570.01
28	30891	72.28	-52.29211	3149.5579	6283.5898	0	570.46
29	30891	78.58	-52.68109	3165.5592	6348.7039	0	570.8
30	30891	85.95	-53.136135	3184.2208	6533.7665	0	571.15
31	30891	91.585	-53.48406	3198.5382	6738.4052	0	571.38
32	30891	96.4225	-49.387825	2936.622	6129.0167	0	529.4
33	30891	103.2675	-41.020615	2405.5584	5493.6089	0	445.96
34	30891	107.03235	-36.418505	2113.3598	5152.3665	0	400.41
35	30891	109.55235	-33.3381	1917.911	4925.7689	0	352.66
36	30891	114.155	-27.71192	1560.7755	4443.5428	0	298.7
37	30891	117.7039	-23.37382	1285.4342	4024.0241	0	257.35
38	30891	120.2789	-20.226185	1085.6292	3719.6328	0	227.49
39	30891	124.21	-15.42086	780.62108	3186.6201	0	182.13
40	30891	126.84925	-12.194675	575.84668	2820.291	0	151.82
41	30891	127.8037	-11.027965	501.80633	2650.1298	0	150
42	30891	130.9624	-7.1668385	256.71869	1754.5011	864.74509	0
43	30891	133.7985	-3.700025	36.669402	1388.7093	0	600
44	30891	137.59935	0.9460865	-258.2315	741.74376	0	600

Slices of Slip Surface: 30955

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	30955	-112.9628	-3.925054	150.32487	256.28494	0	75
2	30955	-103.17425	-8.6389705	450.96539	739.65872	0	75
3	30955	-97.23751	-11.497965	634.78921	1035.1947	0	75
4	30955	-90.94751	-14.527065	836.89957	1374.8445	0	150.27

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5	30955	-80.564905	-19.527065	1171.5878	1922.7024	0	200.27
6	30955	-70.904905	-24.17908	1484.0913	2438.4416	0	246.79
7	30955	-64.69	-27.17202	1688.357	2778.8759	0	276.72
8	30955	-57.575	-30.59842	1924.9181	3174.7323	0	310.98
9	30955	-49.254255	-34.60548	2187.1248	3613.6796	0	351.05
10	30955	-42.304255	-37.952425	2387.5076	3953.8823	0	384.52
11	30955	-37.215	-40.40328	2542.6905	4220.7556	0	409.03
12	30955	-30.59	-43.59371	2741.5895	4594.8621	0	440.94
13	30955	-24.315	-46.328005	2904.0317	4817.7595	0	468.28
14	30955	-21.425	-46.506445	2911.4625	4856.5113	0	479.44
15	30955	-16.75627	-46.79471	2923.1208	4964.9098	0	502.1
16	30955	-10.286904	-47.19415	2939.6287	5165.2496	0	533.3
17	30955	-2.275634	-47.68879	2960.0609	5413.676	0	571.64
18	30955	3.33	-48.0349	2974.2734	5541.3222	0	581.1
19	30955	9.1975	-48.39718	2989.1526	5602.8046	0	578.77
20	30955	17.7325	-48.92416	3010.9038	5696.709	0	575.58
21	30955	23.15	-49.258655	3024.6314	5756.863	0	573.66
22	30955	24.72443	-49.355865	3028.6715	5783.6126	0	573.12
23	30955	28.944145	-49.616405	3039.3054	5818.6513	0	571.72
24	30955	36.534715	-50.085075	3058.6348	5891.8923	0	569.32
25	30955	45.31497	-50.627195	3081.011	5977.9182	0	568.61
26	30955	51.68997	-51.020805	3097.1691	6045.9188	0	569.1
27	30955	56.705	-51.33045	3109.9399	6102.4482	0	569.47
28	30955	64.73	-51.825945	3130.2889	6198.6503	0	570.01
29	30955	75.43	-52.4866	3157.4803	6316.3073	0	570.63
30	30955	85.95	-53.136135	3184.2208	6534.4761	0	571.15
31	30955	91.585	-53.48406	3198.5382	6739.4633	0	571.38
32	30955	96.4225	-49.387825	2936.622	6122.819	0	529.4
33	30955	103.2675	-41.020615	2405.5584	5487.9662	0	445.96
34	30955	107.03235	-36.418505	2113.3598	5149.0375	0	400.41
35	30955	109.55235	-33.3381	1917.911	4920.8258	0	352.66
36	30955	114.155	-27.71192	1560.7755	4439.1039	0	298.7
37	30955	117.7039	-23.37382	1285.4342	4020.3621	0	257.35
38	30955	120.2789	-20.226185	1085.6292	3716.142	0	227.49
39	30955	124.21	-15.42086	780.62108	3183.4287	0	182.13
40	30955	126.84925	-12.194675	575.84668	2821.6825	0	151.82
41	30955	127.8037	-11.027965	501.80633	2648.0994	0	150
42	30955	130.9624	-7.1668385	256.71869	1753.9653	864.43574	0
43	30955	133.7985	-3.700025	36.669402	1389.3792	0	600
44	30955	137.59935	0.9460865	-258.2315	741.90547	0	600

Slices of Slip Surface: 31467

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31467	-128.0917	-4.2108085	161.23982	274.49911	0	75
2	31467	-117.32865	-9.39402	488.68913	802.00028	0	75
3	31467	-105.09865	-15.283675	864.28505	1423.4078	0	157.84
4	31467	-94.71602	-20.283675	1188.2666	1955.1434	0	207.84
5	31467	-88.42602	-23.31278	1390.3773	2289.2575	0	238.13
6	31467	-80.87	-26.951565	1634.242	2696.5647	0	274.52
7	31467	-71.21	-31.60358	1946.5966	3218.3992	0	321.04
8	31467	-64.69	-34.74345	2160.8059	3575.8868	0	352.43
9	31467	-62.54037	-35.778655	2233.9464	3697.9247	0	362.79
10	31467	-57.11537	-38.391195	2412.5658	4005.3383	0	388.91
11	31467	-48.675	-42.455865	2676.2016	4459.8607	0	429.56
12	31467	-41.725	-45.80281	2876.6186	4805.0809	0	463.03
13	31467	-37.215	-47.97471	3015.155	5043.6839	0	484.75
14	31467	-30.59	-51.16514	3214.0745	5418.5477	0	516.65
15	31467	-24.315	-53.855485	3373.7128	5595.0202	0	543.55
16	31467	-21.425	-53.84849	3369.6046	5614.7227	0	552.18
17	31467	-16.75627	-53.837185	3362.5721	5692.3643	0	570.47

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18	31467	-10.286904	-53.82152	3353.2669	5849.9927	0	595.83
19	31467	-2.275634	-53.80212	3341.5334	6045.2172	0	627.24
20	31467	3.33	-53.788545	3333.4281	6134.6702	0	633.35
21	31467	9.1975	-53.77434	3324.7706	6155.3423	0	628.39
22	31467	17.7325	-53.753675	3312.234	6190.3744	0	621.17
23	31467	23.15	-53.740555	3304.2943	6213.0246	0	616.57
24	31467	24.72443	-53.736745	3301.9661	6235.4371	0	615.24
25	31467	28.944145	-53.72653	3295.7891	6235.8748	0	611.66
26	31467	36.534715	-53.70815	3284.7227	6257.3487	0	605.21
27	31467	45.31497	-53.68689	3271.9246	6283.5677	0	599.09
28	31467	51.68997	-53.671455	3262.5496	6309.9244	0	595.39
29	31467	56.705	-53.65931	3255.3009	6331.4299	0	592.48
30	31467	64.73	-53.63988	3243.5131	6373.3903	0	587.82
31	31467	75.43	-53.613975	3227.8469	6418.6304	0	581.62
32	31467	85.95	-53.5885	3212.4312	6566.0943	0	575.52
33	31467	91.585	-53.574855	3204.2312	6733.9032	0	572.26
34	31467	99.845	-45.20422	2671.0452	5777.7829	0	487.57
35	31467	107.03235	-36.418505	2113.3598	5132.2075	0	400.41
36	31467	109.55235	-33.3381	1917.911	4898.7274	0	352.66
37	31467	114.155	-27.71192	1560.7755	4419.1291	0	298.7
38	31467	117.7039	-23.37382	1285.4342	4003.742	0	257.35
39	31467	120.2789	-20.226185	1085.6292	3700.2154	0	227.49
40	31467	124.21	-15.42086	780.62108	3169.3862	0	182.13
41	31467	126.84925	-12.194675	575.84668	2824.4657	0	151.82
42	31467	127.8037	-11.027965	501.80633	2638.7831	0	150
43	31467	130.9624	-7.1668385	256.71869	1749.0091	861.57427	0
44	31467	133.7985	-3.700025	36.669402	1388.8433	0	600
45	31467	137.59935	0.9460865	-258.2315	739.80325	0	600

Slices of Slip Surface: 31394

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31394	-103.32895	-4.639802	201.31077	343.48105	0	75
2	31394	-94.94763	-9.9061335	540.22231	889.58436	0	75
3	31394	-88.65763	-13.8584	799.95087	1325.5695	0	143.58
4	31394	-80.700175	-18.8584	1129.5704	1869.4643	0	193.58
5	31394	-71.040175	-24.928185	1530.4964	2536.8066	0	254.28
6	31394	-64.69	-28.918265	1797.3348	2985.0784	0	294.18
7	31394	-58.20974	-32.99008	2072.3282	3448.4892	0	334.9
8	31394	-52.78474	-36.398835	2300.6315	3835.0973	0	368.99
9	31394	-48.675	-38.981155	2459.3987	4110.2062	0	394.81
10	31394	-41.725	-43.34813	2723.5279	4567.6809	0	438.48
11	31394	-37.215	-46.18195	2903.282	4879.0943	0	466.82
12	31394	-30.59	-50.34471	3162.8702	5361.1717	0	508.45
13	31394	-24.315	-53.8107	3370.9477	5572.6089	0	543.11
14	31394	-21.425	-53.61477	3354.884	5572.2431	0	549.86
15	31394	-16.75627	-53.298245	3328.9632	5617.3849	0	565.24
16	31394	-10.286904	-52.859645	3293.1664	5729.5093	0	586.75
17	31394	-2.275634	-52.31651	3248.8308	5868.1204	0	613.73
18	31394	3.33	-51.936465	3217.6136	5918.6006	0	616.53
19	31394	9.1975	-51.53867	3185.1895	5899.1702	0	607.76
20	31394	17.7325	-50.960025	3137.9634	5876.1416	0	594.79
21	31394	23.15	-50.592735	3107.8654	5862.1946	0	586.44
22	31394	24.72443	-50.485995	3099.1862	5870.6823	0	583.99
23	31394	28.944145	-50.199915	3075.711	5845.4282	0	577.39
24	31394	36.534715	-49.6853	3033.65	5815.5911	0	565.36
25	31394	45.31497	-49.090025	2985.0403	5782.3459	0	553.29
26	31394	51.68997	-48.65782	2949.7157	5764.7075	0	545.67
27	31394	56.705	-48.31782	2921.982	5752.3123	0	539.7
28	31394	64.73	-47.773755	2877.4854	5739.5517	0	530.2
29	31394	72.28	-47.26189	2835.5543	5722.8945	0	521.32

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30	31394	78.58	-46.83477	2800.7137	5702.3069	0	513.96
31	31394	85.95	-46.33511	2759.8969	5787.0712	0	505.39
32	31394	91.585	-45.953075	2728.613	5916.1021	0	498.87
33	31394	97.46	-40.92857	2407.4055	5324.741	0	447.77
34	31394	104.305	-33.36444	1926.4397	4783.816	0	353.72
35	31394	109.21	-27.944135	1581.7323	4398.6562	0	301.47
36	31394	113.1595	-23.579695	1304.2394	4048.8614	0	259.67
37	31394	115.5845	-20.899925	1133.838	3792.7157	0	234.14
38	31394	119.155	-16.95432	882.94644	3411.7127	0	196.71
39	31394	122.68415	-13.054395	634.97343	3012.9857	0	159.91
40	31394	124.40965	-11.147615	513.70801	2768.3951	0	150
41	31394	127.9108	-7.2786205	267.69784	1868.4281	924.18208	0
42	31394	131.18055	-3.665354	37.939431	1488.7711	0	600
43	31394	135.52285	1.13313	-267.17641	807.87315	0	600

Slices of Slip Surface: 31339

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31339	-88.41436	-3.2858765	140.72817	251.12337	0	75
2	31339	-81.5936	-8.725254	495.21304	822.91803	0	75
3	31339	-71.9336	-16.428845	998.05443	1664.3626	0	169.29
4	31339	-65.663795	-21.428845	1325.8433	2209.1384	0	219.29
5	31339	-63.973795	-22.776575	1417.1042	2362.2819	0	232.77
6	31339	-57.575	-27.879445	1755.2658	2936.4439	0	283.79
7	31339	-49.771075	-34.10287	2156.266	3617.6038	0	346.03
8	31339	-42.821075	-39.64531	2493.7464	4200.7141	0	401.45
9	31339	-37.215	-44.116005	2774.3691	4690.6119	0	446.16
10	31339	-30.59	-49.399265	3103.8982	5297.6414	0	498.99
11	31339	-24.315	-53.855485	3373.7128	5594.4362	0	543.55
12	31339	-21.425	-53.84849	3369.6046	5614.2692	0	552.18
13	31339	-16.75627	-53.837185	3362.5721	5691.7555	0	570.47
14	31339	-10.286904	-53.82152	3353.2669	5849.3686	0	595.83
15	31339	-2.275634	-53.80212	3341.5334	6044.5931	0	627.24
16	31339	3.33	-53.788545	3333.4281	6134.0452	0	633.35
17	31339	9.1975	-53.77434	3324.7706	6154.7564	0	628.39
18	31339	17.7325	-53.753675	3312.234	6189.7885	0	621.17
19	31339	23.15	-53.740555	3304.2943	6212.5898	0	616.57
20	31339	24.72443	-53.736745	3301.9661	6229.9002	0	615.24
21	31339	28.944145	-53.72653	3295.7891	6234.6891	0	611.66
22	31339	36.534715	-53.70815	3284.7227	6256.1631	0	605.21
23	31339	45.31497	-53.68689	3271.9246	6282.4644	0	599.09
24	31339	51.68997	-53.671455	3262.5496	6308.1259	0	595.39
25	31339	56.705	-53.65931	3255.3009	6330.1886	0	592.48
26	31339	64.73	-53.63988	3243.5131	6372.3675	0	587.82
27	31339	72.28	-53.6216	3232.5304	6407.1246	0	583.44
28	31339	78.58	-53.606345	3223.1654	6429.8229	0	579.79
29	31339	85.95	-53.5885	3212.4312	6565.0279	0	575.52
30	31339	91.585	-53.574855	3204.2312	6732.1364	0	572.26
31	31339	96.4225	-49.387825	2936.622	6113.6611	0	529.4
32	31339	103.2675	-41.020615	2405.5584	5479.8259	0	445.96
33	31339	107.03235	-36.418505	2113.3598	5142.8418	0	400.41
34	31339	109.55235	-33.3381	1917.911	4913.702	0	352.66
35	31339	114.155	-27.71192	1560.7755	4432.5762	0	298.7
36	31339	117.7039	-23.37382	1285.4342	4014.7282	0	257.35
37	31339	120.2789	-20.226185	1085.6292	3710.6877	0	227.49
38	31339	124.21	-15.42086	780.62108	3178.8329	0	182.13
39	31339	126.84925	-12.194675	575.84668	2820.8874	0	151.82
40	31339	127.8037	-11.027965	501.80633	2644.755	0	150
41	31339	130.9624	-7.1668385	256.71869	1752.6258	863.66237	0
42	31339	133.7985	-3.700025	36.669402	1388.9103	0	600
43	31339	137.59935	0.9460865	-258.2315	741.45839	0	600

LWL Case.BS.R to L.Thru Fabric

Slices of Slip Surface: 30892

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	30892	-91.144365	-4.7244555	224.80857	381.2181	0	75
2	30892	-82.6327	-10.072688	576.91437	948.46224	0	75
3	30892	-76.26905	-14.071235	841.02169	1391.9633	0	145.71
4	30892	-69.67635	-18.213705	1114.6238	1843.1505	0	187.14
5	30892	-65.015245	-21.14247	1310.7363	2166.5786	0	216.42
6	30892	-63.325245	-22.204365	1384.1911	2288.0677	0	227.04
7	30892	-57.575	-25.817485	1626.6469	2697.0312	0	263.17
8	30892	-46.75981	-32.61312	2059.7131	3426.9122	0	331.13
9	30892	-39.80981	-36.980095	2323.8077	3873.9628	0	374.8
10	30892	-37.215	-38.61052	2430.8345	4059.4899	0	391.11
11	30892	-30.59	-42.77328	2690.4315	4541.2581	0	432.73
12	30892	-24.315	-46.328005	2904.0317	4818.488	0	468.28
13	30892	-21.425	-46.506445	2911.4625	4857.4166	0	479.44
14	30892	-16.75627	-46.79471	2923.1208	4965.72	0	502.1
15	30892	-10.286904	-47.19415	2939.6287	5166.1217	0	533.3
16	30892	-2.275634	-47.68879	2960.0609	5414.5481	0	571.64
17	30892	3.33	-48.0349	2974.2734	5542.258	0	581.1
18	30892	9.1975	-48.39718	2989.1526	5603.6232	0	578.77
19	30892	17.7325	-48.92416	3010.9038	5697.6445	0	575.58
20	30892	23.15	-49.258655	3024.6314	5757.7309	0	573.66
21	30892	24.72443	-49.355865	3028.6715	5786.7873	0	573.12
22	30892	28.944145	-49.616405	3039.3054	5819.7032	0	571.72
23	30892	36.534715	-50.085075	3058.6348	5893.0757	0	569.32
24	30892	45.31497	-50.627195	3081.011	5979.0194	0	568.61
25	30892	51.68997	-51.020805	3097.1691	6047.7139	0	569.1
26	30892	56.705	-51.33045	3109.9399	6103.5496	0	569.47
27	30892	64.73	-51.825945	3130.2889	6199.7845	0	570.01
28	30892	72.28	-52.29211	3149.5579	6285.6494	0	570.46
29	30892	78.58	-52.68109	3165.5592	6350.7635	0	570.8
30	30892	85.95	-53.136135	3184.2208	6535.6586	0	571.15
31	30892	91.585	-53.48406	3198.5382	6740.874	0	571.38
32	30892	96.242075	-49.17857	2923.7897	6052.078	0	527.49
33	30892	102.72623	-40.392855	2367.0736	5371.6371	0	440.21
34	30892	106.32915	-35.51107	2057.689	5016.4398	0	373.85
35	30892	109.21	-31.60766	1810.3268	4712.8585	0	336.27
36	30892	114.0154	-25.09659	1397.7743	4160.4539	0	273.96
37	30892	116.4404	-21.81083	1189.5531	3878.4089	0	242.69
38	30892	119.155	-18.13266	956.4656	3497.1973	0	207.82
39	30892	122.70555	-13.32183	651.61292	3016.2587	0	162.43
40	30892	124.30025	-11.16107	514.68702	2754.8919	0	150
41	30892	127.1584	-7.288433	269.29064	1815.4276	892.66261	0
42	30892	129.8461	-3.64673	38.527656	1465.5556	0	600
43	30892	133.56815	1.3964825	-281.05124	774.97941	0	600

Slices of Slip Surface: 31915

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	31915	-116.08675	-4.1949685	165.08946	285.85445	0	75
2	31915	-107.80565	-9.398323	495.26838	819.16927	0	75
3	31915	-100.97255	-13.69185	767.72652	1276.3471	0	141.92
4	31915	-93.015105	-18.69185	1092.4814	1813.6992	0	191.92
5	31915	-86.725105	-22.644115	1352.1818	2244.6193	0	231.44
6	31915	-80.87	-26.32312	1595.015	2653.5959	0	268.23
7	31915	-71.21	-32.3929	1995.8505	3328.8718	0	328.93
8	31915	-65.92467	-35.713895	2216.1579	3699.8261	0	362.14
9	31915	-64.23467	-36.775795	2289.5782	3825.6791	0	372.76
10	31915	-57.575	-40.960345	2571.5443	4314.8597	0	414.6
11	31915	-48.675	-46.552585	2931.8586	4940.8487	0	470.53
12	31915	-41.725	-50.919555	3195.9878	5399.5417	0	514.2

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13	31915	-37.215	-53.753375	3375.7295	5711.9109	0	542.53
14	31915	-30.59	-57.91614	3635.3088	6194.945	0	584.16
15	31915	-24.315	-61.38296	3843.4591	6365.1738	0	618.83
16	31915	-21.425	-61.190525	3827.5791	6365.9493	0	624.91
17	31915	-16.75627	-60.87965	3802.0604	6413.0407	0	638.85
18	31915	-10.286904	-60.448885	3766.7169	6528.3283	0	658.36
19	31915	-2.275634	-59.91545	3723.0004	6670.5625	0	682.85
20	31915	3.33	-59.54219	3692.4485	6721.6782	0	685.61
21	31915	9.1975	-59.151495	3660.2018	6702.0891	0	678.01
22	31915	17.7325	-58.583185	3613.5564	6678.3572	0	666.75
23	31915	23.15	-58.222455	3583.9769	6663.9394	0	659.48
24	31915	24.72443	-58.11762	3575.3785	6677.1666	0	657.35
25	31915	28.944145	-57.83665	3552.3395	6647.4914	0	651.6
26	31915	36.534715	-57.331225	3510.8009	6617.1262	0	641.1
27	31915	45.31497	-56.74658	3462.863	6584.1535	0	629.58
28	31915	51.68997	-56.322095	3427.9516	6568.4162	0	621.68
29	31915	56.705	-55.988165	3400.6078	6555.6903	0	615.49
30	31915	64.73	-55.453815	3356.6578	6543.8046	0	605.64
31	31915	75.43	-54.741345	3298.1731	6517.2356	0	592.6
32	31915	85.95	-54.04086	3240.6913	6594.0478	0	579.89
33	31915	91.585	-53.66565	3209.8882	6724.3317	0	573.13
34	31915	96.4225	-49.387825	2936.622	6083.7824	0	529.4
35	31915	103.2675	-41.020615	2405.5584	5452.9998	0	445.96
36	31915	107.03235	-36.418505	2113.3598	5124.7173	0	400.41
37	31915	109.55235	-33.3381	1917.911	4890.0043	0	352.66
38	31915	114.155	-27.71192	1560.7755	4411.1653	0	298.7
39	31915	117.7039	-23.37382	1285.4342	3996.6997	0	257.35
40	31915	120.2789	-20.226185	1085.6292	3693.6702	0	227.49
41	31915	124.21	-15.42086	780.62108	3163.6415	0	182.13
42	31915	126.84925	-12.194675	575.84668	2823.4717	0	151.82
43	31915	127.8037	-11.027965	501.80633	2634.6823	0	150
44	31915	130.9624	-7.1668385	256.71869	1747.8035	860.87823	0
45	31915	133.7985	-3.700025	36.669402	1388.6423	0	600
46	31915	137.59935	0.9460865	-258.2315	739.63202	0	600

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"Reach 5c(1)-1st Stage"
"FS to PS; SWL=7.0"
20 10 1 40 1 0
10 4 2 1
176.37 200 240.33 378.08
0 62.4 0 0 62.4 0 0 62.4 0 0 62.4 0 0
0 115 600 600 115 600 600 115 600 600 115 600 600
0 112 600 600 112 600 600 112 600 600 112 600 600
30 122 0 0 122 0 0 122 0 0 122 0 0
0 100 75 75 101 250 250 111 150 150 111 150 150
0 100 75 75 101 250 250 111 150 150 111 150 150
0 100 175 225 109 350 350 100 200 250 100 195 240
0 102 295 365 104 413 476 102 320 390 102 303 366
0 105 475 585 106 575 674 105 535 645 105 465 564
0 105 695 805 106 773 872 105 755 865 105 663 762

0 7 283.73 7 311.73 14 321.73 14 361 4 441 2 459.47 -4.16
484.55 -5.2 485 -5.31 604.54 -5.3 607.82 -4.54 700 -4.27
9999.9 0

0 -1.79 4.11 -1.8 30.85 -1.8 53.61 -1.65 77.26 -1.62
101.72 -1.36 114.3 -0.94 133.62 -0.23 137 0 147.85 0.5
161.75 0.23 163.82 0.46 176.37 0.86 180.78 0.94 201.73 4.5
204.93 4.58 281.73 6.5 311.73 14 321.73 14 361 4 441 2
459.47 -4.16 484.55 -5.2 500.6 -9.14 520.9 -11.0 537.4 -11.22
547.09 -11.26 556.8 -10.22 572.41 -9.68 588.59 -9.0
607.82 -4.54 700 -4.27 9999.9 0

0 -1.79 4.11 -1.8 30.85 -1.8 53.61 -1.65 77.26 -1.62
101.72 -1.36 114.3 -0.94 133.62 -0.23 137 0 147.85 0.5
161.75 0.23 163.82 0.46 176.37 0.86 180.78 0.94 201.73 4.5
204.93 4.58 222 0 224.3 -0.66 240.33 -3.85 260.33 -3.85
378.08 -4.54 380.18 -4.26 394.59 -4.39 414.93 -4.22
434.63 -4.19 450 -4.27 459.47 -4.16 484.55 -5.2 500.6 -9.14
520.9 -11.0 537.4 -11.22 547.09 -11.26 556.8 -10.22
572.41 -9.68 588.59 -9.0 607.82 -4.54 700 -4.27 9999.9 0

0 -1.79 4.11 -1.8 30.85 -1.8 53.61 -1.65 77.26 -1.62
101.72 -1.36 114.3 -0.94 133.62 -0.23 137 0 222 0 224.3 -0.66
240.33 -3.85 260.33 -3.85 378.08 -4.54 380.18 -4.26 394.59 -4.39
414.93 -4.22 434.63 -4.19 450 -4.27 459.47 -4.16 484.55 -5.2
500.6 -9.14 520.9 -11.0 537.4 -11.22 547.09 -11.26 556.8 -10.22
572.41 -9.68 588.59 -9.0 607.82 -4.54 700 -4.27 9999.9 0

0 -1.79 4.11 -1.8 30.85 -1.8 53.61 -1.65 77.26 -1.62
101.72 -1.36 114.3 -0.94 133.62 -0.23 137 0 222 0 224.3 -0.66
240.33 -3.85 253.08 -5.02 269.13 -8.93 290.17 -10.85
306.69 -11.22 316.58 -11.18 326.69 -10.14 342.13 -9.46
357.98 -8.78 378.08 -4.54 380.18 -4.26 394.59 -4.39
414.93 -4.22 434.63 -4.19 450 -4.27 459.47 -4.16 484.55 -5.2
500.6 -9.14 520.9 -11.0 537.4 -11.22 547.09 -11.26 556.8 -10.22
572.41 -9.68 588.59 -9.0 607.82 -4.54 700 -4.27 9999.9 0

0 -1.89 4.11 -1.9 30.85 -1.9 53.61 -1.75 77.26 -1.72
101.72 -1.46 114.3 -1.04 133.62 -0.33 137 -0.1 222 -0.1
224.3 -0.76 240.33 -3.95 253.08 -5.12 269.13 -9.03 290.17 -10.95
306.69 -11.32 316.58 -11.28 326.69 -10.24 342.13 -9.56
357.98 -8.88 378.08 -4.64 380.18 -4.36 394.59 -4.49 414.93 -4.32
434.63 -4.29 450 -4.37 459.47 -4.26 484.55 -5.3 500.6 -9.24
520.9 -11.1 537.4 -11.32 547.09 -11.36 556.8 -10.32 572.41 -9.78
588.59 -9.1 607.82 -4.64 700 -4.37 9999.9 0

0 -12 700 -12 9999.9 0
0 -22 700 -22 9999.9 0
0 -36 700 -36 9999.9 0
0 -58 700 -58 9999.9 0
0 -80 700 -80 9999.9 0

0 7 286 7 394.59 -4.39 414.93 -4.22 450.23 -4.22 459.47 -4.16
484.55 -5.2 485 -5.3 606 -5.3 607.82 -4.54 700 -4.27 9999.9 0

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

6 325 -12 460 -12 1
460
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7 335 -22 460 -22 1
460
8 340 -36 460 -36 1
460
9 350 -58 460 -58 1
460
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**** STABILITY WITH UPLIFT ****

"Reach 5c(1)-1st Stage"
"FS to PS; SWL=7.0"
11 PROFILES
4VERTICALS
UPLIFT WITH 1 PIEZOMETRIC GRADE LINES

* * STRATUM 6 ACT. WEDGE LOC. 325.0 EL. -12.0 PASS.WEDGE LOC. 460.0 EL. -12.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-12.0	1569.	1188.	75.	225.	75.
4.1	-12.0	1569.	1188.	75.	225.	75.
30.9	-12.0	1569.	1188.	75.	225.	75.
53.6	-12.0	1575.	1188.	75.	225.	75.
77.3	-12.0	1576.	1188.	75.	225.	75.
101.7	-12.0	1586.	1188.	75.	225.	75.
114.3	-12.0	1601.	1188.	75.	225.	75.
133.6	-12.0	1628.	1188.	75.	225.	75.
137.0	-12.0	1637.	1188.	75.	225.	75.
147.9	-12.0	1662.	1188.	75.	225.	75.
161.8	-12.0	1648.	1188.	75.	225.	75.
163.8	-12.0	1660.	1188.	75.	225.	75.
176.4	-12.0	1679.	1188.	75.	225.	75.
180.8	-12.0	1686.	1188.	108.	248.	108.
200.0	-12.0	1857.	1188.	250.	350.	250.
201.7	-12.0	1877.	1188.	246.	346.	246.
204.9	-12.0	1891.	1188.	238.	338.	238.
222.0	-12.0	1978.	1188.	195.	295.	195.
224.3	-12.0	1993.	1188.	190.	290.	190.
240.3	-12.0	2072.	1188.	150.	250.	150.
253.1	-12.0	2101.	1188.	150.	249.	150.
260.3	-12.0	2130.	1188.	150.	249.	150.
269.1	-12.0	2165.	1188.	150.	248.	150.
281.7	-12.0	2194.	1188.	150.	247.	150.
283.7	-12.0	2222.	1188.	150.	247.	150.
286.0	-12.0	2290.	1188.	150.	247.	150.
290.2	-12.0	2414.	1160.	150.	246.	150.
306.7	-12.0	2892.	1052.	150.	245.	150.
311.7	-12.0	3036.	1019.	150.	245.	150.
316.6	-12.0	3036.	987.	150.	244.	150.
321.7	-12.0	3029.	953.	150.	244.	150.
326.7	-12.0	2878.	921.	150.	244.	150.
342.1	-12.0	2418.	820.	150.	243.	150.
358.0	-12.0	1946.	716.	150.	241.	150.
361.0	-12.0	1850.	696.	150.	241.	150.
378.1	-12.0	1761.	584.	150.	240.	150.
380.2	-12.0	1754.	570.	150.	240.	150.
394.6	-12.0	1713.	476.	150.	240.	150.
414.9	-12.0	1654.	486.	150.	240.	150.
434.6	-12.0	1597.	486.	150.	240.	150.
441.0	-12.0	1579.	486.	150.	240.	150.
450.0	-12.0	1234.	486.	150.	240.	150.
450.2	-12.0	1225.	486.	150.	240.	150.
459.5	-12.0	870.	490.	150.	240.	150.
484.5	-12.0	755.	425.	150.	240.	150.
485.0	-12.0	742.	419.	150.	240.	150.
500.6	-12.0	556.	419.	150.	240.	150.
520.9	-12.0	466.	419.	150.	240.	150.
537.4	-12.0	456.	419.	150.	240.	150.
547.1	-12.0	454.	419.	150.	240.	150.
556.8	-12.0	504.	419.	150.	240.	150.
572.4	-12.0	531.	419.	150.	240.	150.
588.6	-12.0	564.	419.	150.	240.	150.
604.5	-12.0	744.	419.	150.	240.	150.
606.0	-12.0	781.	419.	150.	240.	150.

607.8	-12.0	828.	466.	150.	240.	150.
700.0	-12.0	858.	483.	150.	240.	150.

ASSUMED CRIT. PASSIVE LOC. 460.0 EL. -12.0 DP 3257. RP 2252.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
325.0	-12.0	37709.	27410.	0.	20250.	1.45
330.0	-12.0	37399.	27807.	0.	19500.	1.45
335.0	-12.0	35807.	28374.	0.	18750.	1.52
340.0	-12.0	33196.	27889.	0.	18000.	1.61
345.0	-12.0	29881.	27354.	0.	17250.	1.76
350.0	-12.0	26231.	25080.	0.	16500.	1.91

CRIT. ACTIVE LOC 325.0 EL -12.0 DA 37709. RA 27410.

DIS.	EL.	DP	RP	DB	RB	FS
460.0	-12.0	3257.	2252.	0.	20250.	1.45

* * STRATUM 7 ACT. WEDGE LOC. 335.0 EL. -22.0 PASS.WEDGE LOC. 460.0 EL. -22.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-22.0	2569.	1813.	225.	365.	225.
4.1	-22.0	2569.	1813.	225.	365.	225.
30.9	-22.0	2569.	1813.	225.	365.	225.
53.6	-22.0	2575.	1813.	225.	365.	225.
77.3	-22.0	2576.	1813.	225.	365.	225.
101.7	-22.0	2586.	1813.	225.	365.	225.
114.3	-22.0	2601.	1813.	225.	365.	225.
133.6	-22.0	2628.	1813.	225.	365.	225.
137.0	-22.0	2637.	1813.	225.	365.	225.
147.9	-22.0	2662.	1813.	225.	365.	225.
161.8	-22.0	2648.	1813.	225.	365.	225.
163.8	-22.0	2660.	1813.	225.	365.	225.
176.4	-22.0	2679.	1813.	225.	365.	225.
180.8	-22.0	2703.	1813.	248.	386.	248.
200.0	-22.0	2947.	1813.	350.	476.	350.
201.7	-22.0	2963.	1813.	346.	472.	346.
204.9	-22.0	2970.	1813.	338.	465.	338.
222.0	-22.0	3019.	1813.	295.	429.	295.
224.3	-22.0	3029.	1813.	290.	424.	290.
240.3	-22.0	3072.	1813.	250.	390.	250.
253.1	-22.0	3101.	1813.	249.	388.	249.
260.3	-22.0	3130.	1813.	249.	387.	249.
269.1	-22.0	3165.	1813.	248.	385.	248.
281.7	-22.0	3194.	1813.	247.	383.	247.
283.7	-22.0	3222.	1813.	247.	382.	247.
286.0	-22.0	3290.	1813.	247.	382.	247.
290.2	-22.0	3414.	1785.	246.	381.	246.
306.7	-22.0	3892.	1677.	245.	378.	245.
311.7	-22.0	4036.	1644.	245.	378.	245.
316.6	-22.0	4036.	1612.	244.	377.	244.
321.7	-22.0	4029.	1578.	244.	376.	244.
326.7	-22.0	3878.	1546.	244.	375.	244.
342.1	-22.0	3418.	1445.	243.	372.	243.
358.0	-22.0	2946.	1341.	241.	370.	241.
361.0	-22.0	2850.	1321.	241.	369.	241.
378.1	-22.0	2761.	1209.	240.	366.	240.
380.2	-22.0	2754.	1195.	240.	366.	240.
394.6	-22.0	2713.	1101.	240.	366.	240.
414.9	-22.0	2654.	1101.	240.	366.	240.

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434.6	-22.0	2597.	1111.	240.	366.	240.
441.0	-22.0	2579.	1111.	240.	366.	240.
450.0	-22.0	2234.	1111.	240.	366.	240.
450.2	-22.0	2225.	1111.	240.	366.	240.
459.5	-22.0	1870.	1115.	240.	366.	240.
484.5	-22.0	1755.	1050.	240.	366.	240.
485.0	-22.0	1742.	1044.	240.	366.	240.
500.6	-22.0	1556.	1044.	240.	366.	240.
520.9	-22.0	1466.	1044.	240.	366.	240.
537.4	-22.0	1456.	1044.	240.	366.	240.
547.1	-22.0	1454.	1044.	240.	366.	240.
556.8	-22.0	1504.	1044.	240.	366.	240.
572.4	-22.0	1531.	1044.	240.	366.	240.
588.6	-22.0	1564.	1044.	240.	366.	240.
604.5	-22.0	1744.	1044.	240.	366.	240.
606.0	-22.0	1781.	1044.	240.	366.	240.
607.8	-22.0	1828.	1091.	240.	366.	240.
700.0	-22.0	1858.	1108.	240.	366.	240.

ASSUMED CRIT. PASSIVE LOC. 460.0 EL. -22.0 DP 16366. RP 6032.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
335.0	-22.0	70506.	31345.	0.	30067.	1.25
340.0	-22.0	68704.	31738.	0.	28853.	1.27
345.0	-22.0	65621.	32301.	0.	27640.	1.34
350.0	-22.0	61521.	31813.	0.	26429.	1.42
355.0	-22.0	56715.	31274.	0.	25219.	1.55
360.0	-22.0	51572.	28996.	0.	24012.	1.68

CRIT. ACTIVE LOC 335.0 EL -22.0 DA 70506. RA 31345.

DIS.	EL.	DP	RP	DB	RB	FS
460.0	-22.0	16366.	6032.	0.	30067.	1.25

* * STRATUM 8 ACT. WEDGE LOC. 340.0 EL. -36.0 PASS.WEDGE LOC. 460.0 EL. -36.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-36.0	3997.	2688.	365.	585.	365.
4.1	-36.0	3997.	2688.	365.	585.	365.
30.9	-36.0	3997.	2688.	365.	585.	365.
53.6	-36.0	4003.	2688.	365.	585.	365.
77.3	-36.0	4004.	2688.	365.	585.	365.
101.7	-36.0	4014.	2688.	365.	585.	365.
114.3	-36.0	4029.	2688.	365.	585.	365.
133.6	-36.0	4056.	2688.	365.	585.	365.
137.0	-36.0	4065.	2688.	365.	585.	365.
147.9	-36.0	4090.	2688.	365.	585.	365.
161.8	-36.0	4076.	2688.	365.	585.	365.
163.8	-36.0	4088.	2688.	365.	585.	365.
176.4	-36.0	4107.	2688.	365.	585.	365.
180.8	-36.0	4136.	2688.	386.	602.	386.
200.0	-36.0	4403.	2688.	476.	674.	476.
201.7	-36.0	4418.	2688.	472.	673.	472.
204.9	-36.0	4422.	2688.	465.	670.	465.
222.0	-36.0	4459.	2688.	429.	658.	429.
224.3	-36.0	4468.	2688.	424.	657.	424.
240.3	-36.0	4500.	2688.	390.	645.	390.
253.1	-36.0	4529.	2688.	388.	637.	388.
260.3	-36.0	4558.	2688.	387.	633.	387.
269.1	-36.0	4593.	2688.	385.	629.	385.

281.7	-36.0	4622.	2688.	383.	621.	383.
283.7	-36.0	4650.	2688.	382.	619.	382.
286.0	-36.0	4718.	2688.	382.	618.	382.
290.2	-36.0	4842.	2660.	381.	616.	381.
306.7	-36.0	5320.	2552.	378.	606.	378.
311.7	-36.0	5464.	2519.	378.	603.	378.
316.6	-36.0	5464.	2487.	377.	600.	377.
321.7	-36.0	5457.	2453.	376.	597.	376.
326.7	-36.0	5306.	2421.	375.	594.	375.
342.1	-36.0	4846.	2320.	372.	585.	372.
358.0	-36.0	4374.	2216.	370.	576.	370.
361.0	-36.0	4278.	2196.	369.	574.	369.
378.1	-36.0	4189.	2084.	366.	564.	366.
380.2	-36.0	4182.	2070.	366.	564.	366.
394.6	-36.0	4141.	1976.	366.	564.	366.
414.9	-36.0	4082.	1986.	366.	564.	366.
434.6	-36.0	4025.	1986.	366.	564.	366.
441.0	-36.0	4007.	1986.	366.	564.	366.
450.0	-36.0	3662.	1986.	366.	564.	366.
450.2	-36.0	3653.	1986.	366.	564.	366.
459.5	-36.0	3298.	1990.	366.	564.	366.
484.5	-36.0	3183.	1925.	366.	564.	366.
485.0	-36.0	3170.	1919.	366.	564.	366.
500.6	-36.0	2984.	1919.	366.	564.	366.
520.9	-36.0	2894.	1919.	366.	564.	366.
537.4	-36.0	2884.	1919.	366.	564.	366.
547.1	-36.0	2882.	1919.	366.	564.	366.
556.8	-36.0	2932.	1919.	366.	564.	366.
572.4	-36.0	2959.	1919.	366.	564.	366.
588.6	-36.0	2992.	1919.	366.	564.	366.
604.5	-36.0	3172.	1919.	366.	564.	366.
606.0	-36.0	3209.	1919.	366.	564.	366.
607.8	-36.0	3256.	1966.	366.	564.	366.
700.0	-36.0	3286.	1983.	366.	564.	366.

ASSUMED CRIT. PASSIVE LOC. 460.0 EL. -36.0 DP 50832. RP 14054.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
340.0	-36.0	131728.	38437.	0.	44046.	1.19
345.0	-36.0	130412.	39379.	0.	42185.	1.20
350.0	-36.0	127747.	40041.	0.	40329.	1.23
355.0	-36.0	123587.	40436.	0.	38476.	1.28
360.0	-36.0	118168.	40840.	0.	36628.	1.36
365.0	-36.0	112009.	40256.	0.	34785.	1.46

CRIT. ACTIVE LOC 340.0 EL -36.0 DA 131728. RA 38437.

DIS.	EL.	DP	RP	DB	RB	FS
460.0	-36.0	50832.	14054.	0.	44046.	1.19

* * STRATUM 9 ACT. WEDGE LOC. 350.0 EL. -58.0 PASS.WEDGE LOC. 460.0 EL. -58.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-58.0	6307.	4063.	585.	805.	585.
4.1	-58.0	6307.	4063.	585.	805.	585.
30.9	-58.0	6307.	4063.	585.	805.	585.
53.6	-58.0	6313.	4063.	585.	805.	585.
77.3	-58.0	6314.	4063.	585.	805.	585.
101.7	-58.0	6324.	4063.	585.	805.	585.
114.3	-58.0	6339.	4063.	585.	805.	585.

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133.6	-58.0	6366.	4063.	585.	805.	585.
137.0	-58.0	6375.	4063.	585.	805.	585.
147.9	-58.0	6400.	4063.	585.	805.	585.
161.8	-58.0	6386.	4063.	585.	805.	585.
163.8	-58.0	6398.	4063.	585.	805.	585.
176.4	-58.0	6417.	4063.	585.	805.	585.
180.8	-58.0	6450.	4063.	602.	818.	602.
200.0	-58.0	6735.	4063.	674.	872.	674.
201.7	-58.0	6749.	4063.	673.	872.	673.
204.9	-58.0	6752.	4063.	670.	871.	670.
222.0	-58.0	6779.	4063.	658.	868.	658.
224.3	-58.0	6786.	4063.	657.	868.	657.
240.3	-58.0	6810.	4063.	645.	865.	645.
253.1	-58.0	6839.	4063.	637.	855.	637.
260.3	-58.0	6868.	4063.	633.	850.	633.
269.1	-58.0	6903.	4063.	628.	843.	628.
281.7	-58.0	6932.	4063.	621.	834.	621.
283.7	-58.0	6960.	4063.	619.	833.	619.
286.0	-58.0	7028.	4063.	618.	831.	618.
290.2	-58.0	7152.	4035.	616.	828.	616.
306.7	-58.0	7630.	3927.	606.	815.	606.
311.7	-58.0	7774.	3894.	603.	812.	603.
316.6	-58.0	7774.	3862.	600.	808.	600.
321.7	-58.0	7767.	3828.	597.	804.	597.
326.7	-58.0	7616.	3796.	594.	800.	594.
342.1	-58.0	7156.	3695.	585.	789.	585.
358.0	-58.0	6684.	3591.	576.	777.	576.
361.0	-58.0	6588.	3571.	574.	775.	574.
378.1	-58.0	6499.	3459.	564.	762.	564.
380.2	-58.0	6492.	3445.	564.	762.	564.
394.6	-58.0	6451.	3351.	564.	762.	564.
414.9	-58.0	6392.	3361.	564.	762.	564.
434.6	-58.0	6335.	3361.	564.	762.	564.
441.0	-58.0	6317.	3361.	564.	762.	564.
450.0	-58.0	5972.	3361.	564.	762.	564.
450.2	-58.0	5963.	3361.	564.	762.	564.
459.5	-58.0	5608.	3365.	564.	762.	564.
484.5	-58.0	5493.	3300.	564.	762.	564.
485.0	-58.0	5480.	3294.	564.	762.	564.
500.6	-58.0	5294.	3294.	564.	762.	564.
520.9	-58.0	5204.	3294.	564.	762.	564.
537.4	-58.0	5194.	3294.	564.	762.	564.
547.1	-58.0	5192.	3294.	564.	762.	564.
556.8	-58.0	5242.	3294.	564.	762.	564.
572.4	-58.0	5269.	3294.	564.	762.	564.
588.6	-58.0	5302.	3294.	564.	762.	564.
604.5	-58.0	5482.	3294.	564.	762.	564.
606.0	-58.0	5519.	3294.	564.	762.	564.
607.8	-58.0	5566.	3341.	564.	762.	564.
700.0	-58.0	5596.	3358.	564.	762.	564.

ASSUMED CRIT. PASSIVE LOC. 460.0 EL. -58.0 DP 142663. RP 33494.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
350.0	-58.0	262586.	55086.	0.	62272.	1.26
355.0	-58.0	261637.	57072.	0.	59377.	1.26
360.0	-58.0	259319.	58917.	0.	56496.	1.28
365.0	-58.0	255506.	60062.	0.	53630.	1.30
370.0	-58.0	250901.	60724.	0.	50779.	1.34
375.0	-58.0	245412.	61000.	0.	47943.	1.39

CRIT. ACTIVE LOC 350.0 EL -58.0 DA 262586. RA 55086.

DIS.	EL.	DP	RP	DB	RB	FS
460.0	-58.0	142663.	33494.	0.	62272.	1.26

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```
"Reach 5c(1)-1st Stage"
"PS to FS; LWL = GS"
20 10 1 40 1 0
10 4 2 1
321.92 459.67 500 523.63
0 62.4 0 0 62.4 0 0 62.4 0 0 62.4 0 0
0 115 600 600 115 600 600 115 600 600 115 600 600
0 108 600 600 108 600 600 108 600 600 108 600 600
30 122 0 0 122 0 0 122 0 0 122 0 0
0 111 150 150 111 150 150 101 250 250 100 75 75
0 111 150 150 111 150 150 101 250 250 100 75 75
0 100 195 240 100 200 250 109 350 350 100 175 225
0 102 303 366 102 320 39 104 413 476 102 295 365
0 105 465 564 105 535 645 106 575 674 105 475 585
0 105 564 762 105 645 865 106 674 872 105 585 805

0 -4.27 92.18 -4.54 95.45 -5.30 215.45 -5.20 240.53 -4.16
259 2 339 4 378.27 14 388.27 14 418.27 6.5 495.07 4.58
498.27 4.5 519.22 0.94 523.63 0.86 536.18 0.46 538.25 0.23
552.15 0.5 563 0 566.38 -0.23 585.7 -0.94 598.28 -1.36
622.74 -1.62 646.39 -1.65 669.15 -1.8 695.89 -1.8 700 -1.79
9999.9 0

0 -4.27 92.18 -4.54 111.41 -9 127.59 -9.68 143.2 -10.22
152.91 -11.26 162.6 -11.22 179.1 -11 199.4 -9.14 215.45 -5.2
240.53 -4.16 259 2 339 4 378.27 14 388.27 14 418.27 6.5
495.07 4.58 498.27 4.5 519.22 0.94 523.63 0.86 536.18 0.46
538.25 0.23 552.15 0.5 563 0 566.38 -0.23 585.7 -0.94
598.28 -1.36 622.74 -1.62 646.39 -1.65 669.15 -1.8 695.89 -1.8
700 -1.79 9999.9 0

0 -4.27 92.18 -4.54 111.41 -9 127.59 -9.68 143.2 -10.22
152.91 -11.26 162.6 -11.22 179.1 -11 199.4 -9.14 215.45 -5.2
240.53 -4.16 250 -4.27 265.37 -4.19 285.07 -4.22 305.41 -4.39
319.82 -4.26 321.92 -4.54 439.67 -3.85 459.67 -3.85 475.7 -0.66
478 0 495.07 4.58 498.27 4.5 519.22 0.94 523.63 0.86
536.18 0.46 538.25 0.23 552.15 0.5 563 0 566.38 -0.23
585.7 -0.94 598.28 -1.36 622.74 -1.62 646.39 -1.65 669.15 -1.8
695.89 -1.8 700 -1.79 9999.9 0

0 -4.27 92.18 -4.54 111.41 -9 127.59 -9.68 143.2 -10.22
152.91 -11.26 162.6 -11.22 179.1 -11 199.4 -9.14 215.45 -5.2
240.53 -4.16 250 -4.27 265.37 -4.19 285.07 -4.22 305.41 -4.39
319.82 -4.26 321.92 -4.54 439.67 -3.85 459.67 -3.85 475.7 -0.66
478 0 563 0 566.38 -0.23 585.7 -0.94 598.28 -1.36 622.74 -1.62
646.39 -1.65 669.15 -1.8 695.89 -1.8 700 -1.79 9999.9 0

0 -4.27 92.18 -4.54 111.41 -9 127.59 -9.68 143.2 -10.22
152.91 -11.26 162.6 -11.22 179.1 -11 199.4 -9.14 215.45 -5.2
240.53 -4.16 250 -4.27 265.37 -4.19 285.07 -4.22 305.41 -4.39
319.82 -4.26 321.92 -4.54 342.02 -8.78 357.87 -9.46 373.31 -10.14
383.42 -11.18 393.31 -11.22 409.83 -10.85 430.87 -8.93
446.92 -5.02 459.67 -3.85 475.7 -0.66 478 0 563 0 566.38 -0.23
585.7 -0.94 598.28 -1.36 622.74 -1.62 646.39 -1.65 669.15 -1.8
695.89 -1.8 700 -1.79 9999.9 0

0 -4.37 92.18 -4.64 111.41 -9.1 127.59 -9.78 143.2 -10.32
152.91 -11.36 162.6 -11.32 179.1 -11.1 199.4 -9.24 215.45 -5.3
240.53 -4.26 250 -4.37 265.37 -4.29 285.07 -4.32 305.41 -4.49
319.82 -4.36 321.92 -4.64 342.02 -8.88 357.87 -9.56 373.31 -10.24
383.42 -11.28 393.31 -11.32 409.83 -10.95 430.87 -9.03
446.92 -5.12 459.67 -3.95 475.7 -0.76 478 -0.1 563 -0.1
566.38 -0.33 585.7 -1.04 598.28 -1.46 622.74 -1.72 646.39 -1.75
669.15 -1.9 695.89 -1.9 700 -1.89 9999.9 0

0 -12 700 -12 9999.9 0
0 -22 700 -22 9999.9 0
0 -36 700 -36 9999.9 0
0 -58 700 -58 9999.9 0
0 -80 700 -80 9999.9 0

0 -4.27 92.18 -4.54 94 -5.3 215 -5.3 215.45 -5.22 240.53 -4.16
249.77 -4.22 285.07 -4.22 305.41 -4.39 536.18 0.46 538.25 0.23
552.15 0.5 563 0 566.38 -0.23 585.7 -0.94 598.28 -1.36
622.74 -1.62 646.39 -1.65 669.15 -1.8 695.89 -1.8 700 -1.79
```



```
9999.9 0

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

6 400 -12 570 -12 1
570
7 405 -22 520 -22 1
520
8 410 -36 510 -36 1
510
9 420 -58 510 -58 1
510
```

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**** STABILITY WITH UPLIFT ****

"Reach 5c(1)-1st Stage"
"PS to FS; LWL = GS"
11 PROFILES
4VERTICALS
UPLIFT WITH 1 PIEZOMETRIC GRADE LINES

* * STRATUM 6 ACT. WEDGE LOC. 400.0 EL. -12.0 PASS.WEDGE LOC. 570.0 EL. -12.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-12.0	858.	483.	150.	240.	150.
92.2	-12.0	828.	466.	150.	240.	150.
94.0	-12.0	781.	419.	150.	240.	150.
95.4	-12.0	744.	419.	150.	240.	150.
111.4	-12.0	565.	419.	150.	240.	150.
127.6	-12.0	532.	419.	150.	240.	150.
143.2	-12.0	507.	419.	150.	240.	150.
152.9	-12.0	457.	419.	150.	240.	150.
162.6	-12.0	459.	419.	150.	240.	150.
179.1	-12.0	471.	419.	150.	240.	150.
199.4	-12.0	563.	419.	150.	240.	150.
215.0	-12.0	750.	419.	150.	240.	150.
215.4	-12.0	755.	424.	150.	240.	150.
240.5	-12.0	871.	490.	150.	240.	150.
249.8	-12.0	1225.	486.	150.	240.	150.
250.0	-12.0	1234.	486.	150.	240.	150.
259.0	-12.0	1579.	486.	150.	240.	150.
265.4	-12.0	1597.	486.	150.	240.	150.
285.1	-12.0	1654.	486.	150.	240.	150.
305.4	-12.0	1713.	476.	150.	240.	150.
319.8	-12.0	1754.	495.	150.	240.	150.
321.9	-12.0	1761.	497.	150.	240.	150.
339.0	-12.0	1851.	520.	150.	241.	150.
342.0	-12.0	1946.	524.	150.	241.	150.
357.9	-12.0	2419.	545.	150.	243.	150.
373.3	-12.0	2879.	565.	150.	244.	150.
378.3	-12.0	3030.	571.	150.	244.	150.
383.4	-12.0	3036.	578.	150.	244.	150.
388.3	-12.0	3036.	584.	150.	245.	150.
393.3	-12.0	2891.	591.	150.	245.	150.
409.8	-12.0	2413.	613.	150.	246.	150.
418.3	-12.0	2163.	624.	150.	247.	150.
430.9	-12.0	2114.	640.	150.	248.	150.
439.7	-12.0	2066.	652.	150.	249.	150.
446.9	-12.0	2025.	662.	150.	249.	150.
459.7	-12.0	1976.	678.	150.	250.	150.
475.7	-12.0	1872.	699.	190.	290.	190.
478.0	-12.0	1853.	702.	195.	295.	195.
495.1	-12.0	1721.	725.	238.	338.	238.
498.3	-12.0	1703.	729.	246.	346.	246.
500.0	-12.0	1666.	731.	250.	350.	250.
519.2	-12.0	1304.	756.	108.	248.	108.
523.6	-12.0	1293.	762.	75.	225.	75.
523.6	-12.0	1293.	762.	75.	225.	75.
536.2	-12.0	1250.	779.	75.	225.	75.
538.3	-12.0	1225.	764.	75.	225.	75.
552.2	-12.0	1254.	781.	75.	225.	75.
563.0	-12.0	1200.	750.	75.	225.	75.
566.4	-12.0	1177.	736.	75.	225.	75.
585.7	-12.0	1106.	691.	75.	225.	75.
598.3	-12.0	1064.	665.	75.	225.	75.
622.7	-12.0	1038.	649.	75.	225.	75.
646.4	-12.0	1035.	647.	75.	225.	75.
669.2	-12.0	1020.	637.	75.	225.	75.
695.9	-12.0	1020.	638.	75.	225.	75.

700.0	-12.0	1021.	638.	75.	225.	75.

ASSUMED CRIT. PASSIVE LOC. 570.0 EL. -12.0 DP 6530. RP 1684.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
400.0	-12.0	36334.	30683.	0.	24334.	1.90
405.0	-12.0	33905.	30201.	0.	23584.	2.03
410.0	-12.0	30745.	29412.	0.	22834.	2.23
415.0	-12.0	27191.	27073.	0.	22084.	2.46
420.0	-12.0	23878.	24220.	0.	21334.	2.72
425.0	-12.0	21464.	21718.	0.	20584.	2.95

CRIT. ACTIVE LOC 400.0 EL -12.0 DA 36334. RA 30683.

DIS.	EL.	DP	RP	DB	RB	FS
570.0	-12.0	6530.	1684.	0.	24334.	1.90

* * STRATUM 7 ACT. WEDGE LOC. 405.0 EL. -22.0 PASS.WEDGE LOC. 520.0 EL. -22.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-22.0	1858.	1108.	240.	366.	240.
92.2	-22.0	1828.	1091.	240.	366.	240.
94.0	-22.0	1781.	1044.	240.	366.	240.
95.4	-22.0	1744.	1044.	240.	366.	240.
111.4	-22.0	1565.	1044.	240.	366.	240.
127.6	-22.0	1532.	1044.	240.	366.	240.
143.2	-22.0	1507.	1044.	240.	366.	240.
152.9	-22.0	1457.	1044.	240.	366.	240.
162.6	-22.0	1459.	1044.	240.	366.	240.
179.1	-22.0	1471.	1044.	240.	366.	240.
199.4	-22.0	1563.	1044.	240.	366.	240.
215.0	-22.0	1750.	1044.	240.	366.	240.
215.4	-22.0	1755.	1049.	240.	366.	240.
240.5	-22.0	1871.	1115.	240.	366.	240.
249.8	-22.0	2225.	1111.	240.	366.	240.
250.0	-22.0	2234.	1111.	240.	366.	240.
259.0	-22.0	2579.	1111.	240.	366.	240.
265.4	-22.0	2597.	1111.	240.	366.	240.
285.1	-22.0	2654.	1111.	240.	366.	240.
305.4	-22.0	2713.	1101.	240.	366.	240.
319.8	-22.0	2754.	1120.	240.	366.	240.
321.9	-22.0	2761.	1122.	240.	366.	240.
339.0	-22.0	2851.	1145.	241.	325.	241.
342.0	-22.0	2946.	1149.	241.	318.	241.
357.9	-22.0	3419.	1170.	243.	281.	243.
373.3	-22.0	3879.	1190.	244.	244.	244.
SHEAR STRENGTHS ARE EQUAL 243.7 AT DIST. 373.4						
378.3	-22.0	4030.	1196.	244.	232.	232.
383.4	-22.0	4036.	1203.	244.	220.	220.
388.3	-22.0	4036.	1209.	245.	208.	208.
393.3	-22.0	3891.	1216.	245.	197.	197.
409.8	-22.0	3413.	1238.	246.	157.	157.
418.3	-22.0	3163.	1249.	247.	137.	137.
430.9	-22.0	3114.	1265.	248.	107.	107.
439.7	-22.0	3066.	1277.	249.	86.	86.
446.9	-22.0	3025.	1287.	249.	69.	69.
459.7	-22.0	2976.	1303.	250.	39.	39.
475.7	-22.0	2908.	1324.	290.	213.	213.
478.0	-22.0	2894.	1327.	295.	238.	238.
SHEAR STRENGTHS ARE EQUAL 238.0 AT DIST. 478.0						

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495.1	-22.0	2800.	1350.	338.	423.	338.
498.3	-22.0	2789.	1354.	346.	457.	346.
500.0	-22.0	2756.	1356.	350.	476.	350.
519.2	-22.0	2321.	1381.	248.	386.	248.
523.6	-22.0	2293.	1387.	225.	365.	225.
523.6	-22.0	2293.	1387.	225.	365.	225.
536.2	-22.0	2250.	1404.	225.	365.	225.
538.3	-22.0	2225.	1389.	225.	365.	225.
552.2	-22.0	2254.	1406.	225.	365.	225.
563.0	-22.0	2200.	1375.	225.	365.	225.
566.4	-22.0	2177.	1361.	225.	365.	225.
585.7	-22.0	2106.	1316.	225.	365.	225.
598.3	-22.0	2064.	1290.	225.	365.	225.
622.7	-22.0	2038.	1274.	225.	365.	225.
646.4	-22.0	2035.	1272.	225.	365.	225.
669.2	-22.0	2020.	1262.	225.	365.	225.
695.9	-22.0	2020.	1263.	225.	365.	225.
700.0	-22.0	2021.	1263.	225.	365.	225.

ASSUMED CRIT. PASSIVE LOC. 520.0 EL. -22.0 DP 25633. RP 5671.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
405.0	-22.0	69609.	34252.	0.	21057.	1.39
410.0	-22.0	66861.	34644.	0.	20242.	1.47
415.0	-22.0	62975.	34165.	0.	19487.	1.59
420.0	-22.0	58379.	33380.	0.	18792.	1.77
425.0	-22.0	53887.	31043.	0.	18156.	1.94
430.0	-22.0	50243.	28194.	0.	17579.	2.09

CRIT. ACTIVE LOC 405.0 EL -22.0 DA 69609. RA 34252.

DIS.	EL.	DP	RP	DB	RB	FS
520.0	-22.0	25633.	5671.	0.	21057.	1.39

* * STRATUM 8 ACT. WEDGE LOC. 410.0 EL. -36.0 PASS.WEDGE LOC. 510.0 EL. -36.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-36.0	3286.	1983.	366.	564.	366.
92.2	-36.0	3256.	1966.	366.	564.	366.
94.0	-36.0	3209.	1919.	366.	564.	366.
95.4	-36.0	3172.	1919.	366.	564.	366.
111.4	-36.0	2993.	1919.	366.	564.	366.
127.6	-36.0	2960.	1919.	366.	564.	366.
143.2	-36.0	2935.	1919.	366.	564.	366.
152.9	-36.0	2885.	1919.	366.	564.	366.
162.6	-36.0	2887.	1919.	366.	564.	366.
179.1	-36.0	2899.	1919.	366.	564.	366.
199.4	-36.0	2991.	1919.	366.	564.	366.
215.0	-36.0	3178.	1919.	366.	564.	366.
215.4	-36.0	3183.	1924.	366.	564.	366.
240.5	-36.0	3299.	1990.	366.	564.	366.
249.8	-36.0	3653.	1986.	366.	564.	366.
250.0	-36.0	3662.	1986.	366.	564.	366.
259.0	-36.0	4007.	1986.	366.	564.	366.
265.4	-36.0	4025.	1986.	366.	564.	366.
285.1	-36.0	4082.	1986.	366.	564.	366.
305.4	-36.0	4141.	1976.	366.	564.	366.
319.8	-36.0	4182.	1995.	366.	564.	366.
321.9	-36.0	4189.	1997.	366.	564.	366.
339.0	-36.0	4279.	2020.	325.	564.	366.

342.0	-36.0	4374.	2024.	318.	576.	318.
357.9	-36.0	4847.	2045.	281.	585.	281.
373.3	-36.0	5307.	2065.	244.	594.	244.
378.3	-36.0	5458.	2071.	232.	597.	232.
383.4	-36.0	5464.	2078.	220.	600.	220.
388.3	-36.0	5464.	2084.	208.	603.	208.
393.3	-36.0	5319.	2091.	197.	606.	197.
409.8	-36.0	4841.	2113.	157.	616.	157.
418.3	-36.0	4591.	2124.	137.	621.	137.
430.9	-36.0	4542.	2140.	107.	628.	107.
439.7	-36.0	4494.	2152.	86.	633.	86.
446.9	-36.0	4453.	2162.	69.	638.	69.
459.7	-36.0	4404.	2178.	39.	645.	39.
475.7	-36.0	4347.	2199.	213.	657.	213.
478.0	-36.0	4335.	2202.	238.	658.	238.
495.1	-36.0	4253.	2225.	423.	670.	423.
498.3	-36.0	4244.	2229.	457.	673.	457.
500.0	-36.0	4212.	2231.	476.	674.	476.
519.2	-36.0	3754.	2256.	386.	602.	386.
523.6	-36.0	3721.	2262.	365.	585.	365.
523.6	-36.0	3721.	2262.	365.	585.	365.
536.2	-36.0	3678.	2279.	365.	585.	365.
538.3	-36.0	3653.	2264.	365.	585.	365.
552.2	-36.0	3682.	2281.	365.	585.	365.
563.0	-36.0	3628.	2250.	365.	585.	365.
566.4	-36.0	3605.	2236.	365.	585.	365.
585.7	-36.0	3534.	2191.	365.	585.	365.
598.3	-36.0	3492.	2165.	365.	585.	365.
622.7	-36.0	3466.	2149.	365.	585.	365.
646.4	-36.0	3463.	2147.	365.	585.	365.
669.2	-36.0	3448.	2137.	365.	585.	365.
695.9	-36.0	3448.	2138.	365.	585.	365.
700.0	-36.0	3449.	2138.	365.	585.	365.

ASSUMED CRIT. PASSIVE LOC. 510.0 EL. -36.0 DP 68828. RP 14952.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
410.0	-36.0	131392.	41369.	0.	19776.	1.22
415.0	-36.0	129341.	42550.	0.	19021.	1.26
420.0	-36.0	125656.	43128.	0.	18326.	1.34
425.0	-36.0	121124.	43540.	0.	17689.	1.46
430.0	-36.0	116188.	42841.	0.	17113.	1.58
435.0	-36.0	111155.	42074.	0.	16595.	1.74

CRIT. ACTIVE LOC 410.0 EL -36.0 DA 131392. RA 41369.

DIS.	EL.	DP	RP	DB	RB	FS
510.0	-36.0	68828.	14952.	0.	19776.	1.22

* * STRATUM 9 ACT. WEDGE LOC. 420.0 EL. -58.0 PASS.WEDGE LOC. 510.0 EL. -58.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-58.0	5596.	3358.	564.	762.	564.
92.2	-58.0	5566.	3341.	564.	762.	564.
94.0	-58.0	5519.	3294.	564.	762.	564.
95.4	-58.0	5482.	3294.	564.	762.	564.
111.4	-58.0	5303.	3294.	564.	762.	564.
127.6	-58.0	5270.	3294.	564.	762.	564.
143.2	-58.0	5245.	3294.	564.	762.	564.
152.9	-58.0	5195.	3294.	564.	762.	564.

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162.6	-58.0	5197.	3294.	564.	762.	564.
179.1	-58.0	5209.	3294.	564.	762.	564.
199.4	-58.0	5301.	3294.	564.	762.	564.
215.0	-58.0	5488.	3294.	564.	762.	564.
215.4	-58.0	5493.	3299.	564.	762.	564.
240.5	-58.0	5609.	3365.	564.	762.	564.
249.8	-58.0	5963.	3361.	564.	762.	564.
250.0	-58.0	5972.	3361.	564.	762.	564.
259.0	-58.0	6317.	3361.	564.	762.	564.
265.4	-58.0	6335.	3361.	564.	762.	564.
285.1	-58.0	6392.	3361.	564.	762.	564.
305.4	-58.0	6451.	3351.	564.	762.	564.
319.8	-58.0	6492.	3370.	564.	762.	564.
321.9	-58.0	6499.	3372.	564.	762.	564.
339.0	-58.0	6589.	3395.	574.	775.	574.
342.0	-58.0	6684.	3399.	576.	777.	576.
357.9	-58.0	7157.	3420.	585.	789.	585.
373.3	-58.0	7617.	3440.	594.	800.	594.
378.3	-58.0	7768.	3446.	597.	804.	597.
383.4	-58.0	7774.	3453.	600.	808.	600.
388.3	-58.0	7774.	3459.	603.	812.	603.
393.3	-58.0	7629.	3466.	606.	815.	606.
409.8	-58.0	7151.	3488.	616.	828.	616.
418.3	-58.0	6901.	3499.	621.	834.	621.
430.9	-58.0	6852.	3515.	628.	843.	628.
439.7	-58.0	6804.	3527.	633.	850.	633.
446.9	-58.0	6763.	3537.	638.	855.	638.
459.7	-58.0	6714.	3553.	645.	865.	645.
475.7	-58.0	6666.	3574.	657.	868.	657.
478.0	-58.0	6655.	3577.	658.	868.	658.
495.1	-58.0	6582.	3600.	670.	871.	670.
498.3	-58.0	6575.	3604.	673.	872.	673.
500.0	-58.0	6544.	3606.	674.	872.	674.
519.2	-58.0	6068.	3631.	602.	817.	602.
523.6	-58.0	6031.	3637.	585.	805.	585.
523.6	-58.0	6031.	3637.	585.	805.	585.
536.2	-58.0	5988.	3654.	585.	805.	585.
538.3	-58.0	5963.	3639.	585.	805.	585.
552.2	-58.0	5992.	3656.	585.	805.	585.
563.0	-58.0	5938.	3625.	585.	805.	585.
566.4	-58.0	5915.	3611.	585.	805.	585.
585.7	-58.0	5844.	3566.	585.	805.	585.
598.3	-58.0	5802.	3540.	585.	805.	585.
622.7	-58.0	5776.	3524.	585.	805.	585.
646.4	-58.0	5773.	3522.	585.	805.	585.
669.2	-58.0	5758.	3512.	585.	805.	585.
695.9	-58.0	5758.	3513.	585.	805.	585.
700.0	-58.0	5759.	3513.	585.	805.	585.

ASSUMED CRIT. PASSIVE LOC. 510.0 EL. -58.0 DP 174441. RP 34908.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
420.0	-58.0	262355.	58424.	0.	58274.	1.72
425.0	-58.0	261397.	61021.	0.	55158.	1.74
430.0	-58.0	259516.	63465.	0.	52028.	1.77
435.0	-58.0	256603.	64858.	0.	48883.	1.81
440.0	-58.0	252707.	65819.	0.	45723.	1.87
445.0	-58.0	247918.	66339.	0.	42548.	1.96

CRIT. ACTIVE LOC 420.0 EL -58.0 DA 262355. RA 58424.

DIS.	EL.	DP	RP	DB	RB	FS
510.0	-58.0	174441.	34908.	0.	58274.	1.72

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SWL Case.BS

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 170
Last Edited By: Cox, Lane MVK
Date: 3/21/2011
Time: 9:15:58 AM
File Name: 5c(1) Typical 1.2nd SC.80%SG.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\2nd Stage Construction\80%SG,1 Layer of Fabric\Slope W\
Last Solved Date: 3/21/2011
Last Solved Time: 9:45:36 AM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

SWL Case.BS

Kind: SLOPE/W
Method: Spencer
Settings
    Apply Phreatic Correction: No
    PWP Conditions Source: Piezometric Line
    Use Staged Rapid Drawdown: No
SlipSurface
    Direction of movement: Left to Right
    Use Passive Mode: No
    Slip Surface Option: Block
    Critical slip surfaces saved: 100
    Optimize Critical Slip Surface Location: Yes
    Tension Crack
        Tension Crack Option: Tension Crack Line
        Percentage Wet: 1
        Tension Crack Fluid Unit Weight: 62.4 pcf

FOS Distribution
    FOS Calculation Option: Constant
Restrict Block Crossing: Yes
Advanced
    Number of Slices: 30
    Optimization Tolerance: 0.01
    Minimum Slip Surface Depth: 0.1 ft
    Optimization Maximum Iterations: 2000
    Optimization Convergence Tolerance: 1e-007
    Starting Optimization Points: 8
    Ending Optimization Points: 16
    Complete Passes per Insertion: 1
    Driving Side Maximum Convex Angle: 5 °
    Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH

Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH above 0

Model: Mohr-Coulomb
Unit Weight: 108 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH, 0 to -12

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -12 (2)
Cohesion Spatial Fn: CH, 0 to -12
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH, -12 to -22

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -12 to -22 (2)

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Cohesion Spatial Fn: CH, -12 to -22
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -22 to -36

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -22 to -36 (2)
Cohesion Spatial Fn: CH, -22 to -36
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -36 to -80

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -36 to -80 (2)
Cohesion Spatial Fn: CH, -36 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sand Fill

Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, 0 to -12 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -12 (2)
Cohesion Spatial Fn: CH, 0 to -12 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -12 to -22 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -12 to -22 (2)
Cohesion Spatial Fn: CH, -12 to -22 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure

Piezometric Line: 1

CH, -22 to -36 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -22 to -36 (2)
Cohesion Spatial Fn: CH, -22 to -36 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Limits

Left Coordinate: (-200, -1.79) ft
Right Coordinate: (500, -4.27) ft

Slip Surface Block

Left Grid
Upper Left: (14.0275, -5.34558) ft
Lower Left: (78.1383, -5.34558) ft
Lower Right: (78.1383, -29.6829) ft
X Increments: 5
Y Increments: 5
Starting Angle: 135 °
Ending Angle: 160 °
Angle Increments: 7
Right Grid
Upper Left: (220, -30) ft
Lower Left: (277, -30) ft
Lower Right: (277, -60) ft
X Increments: 5
Y Increments: 5
Starting Angle: 20 °
Ending Angle: 45 °
Angle Increments: 7

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	7
	86	7
	194.59	-4.39

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	214.93	-4.22
	250.23	-4.22
	259.47	-4.16
	284.55	-5.2
	285	-5.3
	406	-5.3
	407.82	-4.54
	500	-4.27

Reinforcements

Reinforcement 1

Type: Fabric
Outside Point: (177, 0) ft
Inside Point: (23, 0) ft
Slip Surface Intersection: (22.366, 0) ft
Total Length: 154 ft
Reinforcement Direction: 0 °
Applied Load Option: Variable
F of S Dependent: No
Contact Cohesion: 265 psf
Contact Phi: 19 °
Interface Factor: 2
Bond Safety Factor: 1
Fabric Capacity: 27000 lbs
Fabric Safety Factor: 1
Fabric Load: 27000 lbs
Load Distribution: Conc. in 1 slice
Load Orientation: 0
Applied Load: 27000 lbs
Fabric Load Used: 0 lbs
Resisting Force Used: 710.51 lbs/ft
Available Bond Length: 0 ft
Required Bond Length: 0 ft
Governing Component: Bond

Tension Crack Line

	X (ft)	Y (ft)
	4.93	4.58
	22	0.2
	83	0.2
	112	10
	122	10
	159	1
	161	4

Spatial Functions

CH, 0 to -12

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -1.5, 75)
Data Point: (-300, -12, 75)
Data Point: (-23.63, 0, 75)
Data Point: (-23.63, -12, 75)
Data Point: (0, 0, 250)
Data Point: (0, -12, 250)
Data Point: (250.26, -4.13, 150)
Data Point: (250.26, -12, 150)
Data Point: (500, -4.27, 150)
Data Point: (500, -12, 150)

CH, -22 to -36 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -22, 350)
Data Point: (0, -36, 476)
Data Point: (40.33, -22, 290)
Data Point: (40.33, -36, 416)
Data Point: (116.73, -22, 327)
Data Point: (116.73, -36, 453)
Data Point: (250.23, -22, 240)
Data Point: (250.23, -36, 366)

CH, -12 to -22

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -12, 125)
Data Point: (-300, -22, 225)
Data Point: (-23.63, -12, 125)
Data Point: (-23.63, -22, 225)
Data Point: (0, -12, 350)
Data Point: (0, -22, 350)
Data Point: (250.26, -12, 150)
Data Point: (250.26, -22, 240)
Data Point: (500, -12, 150)
Data Point: (500, -22, 240)

CH, -22 to -36

Model: Linear Interpolation

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Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -22, 225)
Data Point: (-300, -36, 365)
Data Point: (-23.63, -22, 225)
Data Point: (-23.63, -36, 365)
Data Point: (0, -22, 350)
Data Point: (0, -36, 476)
Data Point: (250.26, -22, 240)
Data Point: (250.26, -36, 366)
Data Point: (500, -22, 240)
Data Point: (500, -36, 366)

CH, -36 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -36, 365)
Data Point: (-300, -80, 805)
Data Point: (-23.63, -36, 365)
Data Point: (-23.63, -80, 805)
Data Point: (0, -36, 476)
Data Point: (0, -80, 872)
Data Point: (250.26, -36, 366)
Data Point: (250.26, -80, 762)
Data Point: (500, -36, 366)
Data Point: (500, -80, 762)

CH, 0 to -12 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -6, 100)
Data Point: (0, -6, 101)
Data Point: (178.08, -6, 111)

CH, -12 to -22 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -17, 100)
Data Point: (0, -17, 109)
Data Point: (178.08, -17, 100)

CH, -22 to -36 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)

Data Point: (-23.63, -29, 102)
Data Point: (0, -29, 104)
Data Point: (178.08, -29, 102)

CH, -36 to -80 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -58, 105)
Data Point: (0, -58, 106)
Data Point: (178.08, -58, 105)

CH, 0 to -12 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, 0, 250)
Data Point: (0, -12, 250)
Data Point: (40.33, 0, 171)
Data Point: (40.33, -12, 171)
Data Point: (116.73, 0, 219)
Data Point: (116.73, -12, 219)
Data Point: (250.23, -4.13, 150)
Data Point: (250.23, -12, 150)

CH, -12 to -22 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -12, 350)
Data Point: (0, -22, 350)
Data Point: (40.33, -12, 200)
Data Point: (40.33, -22, 290)
Data Point: (116.73, -12, 245)
Data Point: (116.73, -22, 335)
Data Point: (250.23, -12, 150)
Data Point: (250.23, -22, 240)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -36 to -80	31,33,60,63,34,32	30800
Region 2	CH above 0	40,9,10,11,12,13,64,17,39,57	130.54365
Region 3	Sand Fill	19,20,21,22,23,24,25,26,27,28	629.28815
Region 4	EMBANKMENT FILL CH	19,46,41,42,43,66,28	1500.8133
Region 5	EMBANKMENT FILL CH	43,44,45,65,29,66	501.84775
Region 6	CH, -22 to -36	35,33,60,59	2800
Region 7	CH, -12 to -22	37,35,59,58	2000

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Region 8	CH, 0 to -12	57,58,37,2,1,3,4,5,6,7,8,40	2203.9585
Region 9	CH, -22 to -36	63,62,36,34	3496.78
Region 10	CH, -12 to -22	62,61,38,36	2497.7
Region 11	CH, 0 to -12	61,65,45,47,48,49,50,51,52,53,54,55,30,38	1282.4538
Region 12	CH, -12 to -22 SG	58,59,62,61	2502.3
Region 13	CH, -22 to -36 SG	60,59,62,63	3503.22
Region 14	CH, 0 to -12 SG	57,58,61,65,29,66,28,27,26,25,24,23,22,21,20,19,18,39	1448.4571
Region 15	EMBANKMENT FILL CH	64,17,39,56,19,46	368.6281

Points

	X (ft)	Y (ft)
Point 1	-195.89	-1.8
Point 2	-200	-1.79
Point 3	-169.15	-1.8
Point 4	-146.39	-1.65
Point 5	-122.74	-1.62
Point 6	-98.28	-1.36
Point 7	-85.7	-0.94
Point 8	-66.38	-0.23
Point 9	-52.15	0.5
Point 10	-38.25	0.23
Point 11	-36.18	0.46
Point 12	-23.63	0.86
Point 13	-19.22	0.94
Point 14	-5.71	4.75
Point 15	-0.42	4.91
Point 16	-0.22	4.77
Point 17	4.93	4.5
Point 18	24.3	-0.66
Point 19	40.33	-3.85
Point 20	53.08	-5.02
Point 21	69.13	-8.93
Point 22	90.17	-10.85
Point 23	106.69	-11.22
Point 24	116.58	-11.18
Point 25	126.69	-10.14
Point 26	142.13	-9.46
Point 27	157.98	-8.78
Point 28	178.08	-4.54
Point 29	214.93	-4.22
Point 30	500	-4.27
Point 31	-200	-80
Point 32	500	-80
Point 33	-200	-36
Point 34	500	-36
Point 35	-200	-22
Point 36	500	-22

SWL Case.BS

Point 37	-200	-12
Point 38	500	-12
Point 39	22	0
Point 40	-63	0
Point 41	111.73	14
Point 42	121.73	14
Point 43	161	4
Point 44	241	2
Point 45	259.47	-4.16
Point 46	81.73	6.5
Point 47	284.55	-5.2
Point 48	300.6	-9.14
Point 49	320.9	-11
Point 50	337.4	-11.22
Point 51	347.09	-11.26
Point 52	356.8	-10.22
Point 53	372.41	-9.68
Point 54	388.59	-9
Point 55	407.82	-4.54
Point 56	30	-1.79
Point 57	0	0
Point 58	0	-12
Point 59	0	-22
Point 60	0	-36
Point 61	250.23	-12
Point 62	250.23	-22
Point 63	250.23	-36
Point 64	1.73	4.5
Point 65	250.23	-4.22
Point 66	194.59	-4.39

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	1.50	(181.076, 3.055)	116.1819	(21.9921, 5.00655)	(323.053, -11.0287)
2	7667	1.72	(181.076, 3.055)	118.233	(23.8844, 5.05386)	(337.644, -11.221)
3	7675	1.72	(187.152, 2.991)	124.071	(23.8844, 5.05386)	(349.847, -10.9647)
4	7676	1.72	(180.421, 3.051)	118.887	(23.8844, 5.05386)	(336.332, -11.2058)
5	4978	1.72	(182.938, 3.059)	119.667	(24.4355, 5.06764)	(340.82, -11.2341)
6	7668	1.73	(175.484, 3.019)	114.263	(23.8844, 5.05386)	(326.455, -11.0741)
7	7666	1.73	(189.11, 2.885)	124.112	(23.8844, 5.05386)	(353.811, -10.5401)
8	4987	1.73	(181.502, 3.056)	119.985	(24.4355, 5.06764)	(337.945, -11.2223)
9	4979	1.74	(175.797, 3.019)	114.212	(24.4355, 5.06764)	(326.528, -11.075)
10	4986	1.74	(190.915, 2.804)	126.723	(24.4355, 5.06764)	(356.905, -10.2164)
11	4970	1.74	(176.236, 3.022)	113.59	(24.4355, 5.06764)	(327.406, -11.0868)
12	5218	1.74	(181.79, 3.059)	121.472	(22.1442, 5.01035)	(340.82, -11.2341)
13	7677	1.74	(175.243, 3.017)	115.08	(23.8844, 5.05386)	(325.971, -11.0676)
14	5227	1.75	(180.354, 3.056)	121.431	(22.1442, 5.01035)	(337.945, -11.2223)

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15	4969	1.75	(184.415, 3.062)	119.555	(24.4355, 5.06764)	(343.78, -11.2463)
16	7674	1.75	(196.802, 2.697)	131.202	(23.8844, 5.05386)	(369.287, -9.78803)
17	7659	1.75	(175.374, 3.018)	112.89	(23.8844, 5.05386)	(326.233, -11.0711)
18	7658	1.75	(181.499, 3.056)	117.484	(23.8844, 5.05386)	(338.49, -11.2245)
19	5226	1.75	(189.768, 2.804)	128.162	(22.1442, 5.01035)	(356.905, -10.2164)
20	4977	1.75	(194.319, 2.745)	128.335	(24.4355, 5.06764)	(363.745, -9.97976)
21	5219	1.75	(174.649, 3.019)	115.664	(22.1442, 5.01035)	(326.528, -11.075)
22	7669	1.75	(171.096, 2.927)	110.844	(23.8844, 5.05386)	(317.7, -10.7068)
23	4988	1.76	(175.125, 3.014)	115.031	(24.4355, 5.06764)	(325.182, -11.0571)
24	7660	1.76	(170.778, 2.912)	109.709	(23.8844, 5.05386)	(317.07, -10.6491)
25	4971	1.76	(170.45, 2.885)	109.141	(24.4355, 5.06764)	(315.87, -10.5391)
26	5266	1.76	(179.147, 4.753)	123.418	(16.7156, 4.87464)	(340.82, -11.2341)
27	5275	1.76	(177.711, 4.75)	123.414	(16.7156, 4.87464)	(337.945, -11.2223)
28	4980	1.76	(170.487, 2.886)	110.267	(24.4355, 5.06764)	(315.944, -10.5459)
29	4939	1.77	(182.768, 3.056)	119.182	(26.9612, 5.13078)	(337.945, -11.2223)
30	5210	1.77	(175.088, 3.022)	115.039	(22.1442, 5.01035)	(327.406, -11.0868)
31	5274	1.77	(187.116, 4.499)	130.802	(16.7156, 4.87464)	(356.905, -10.2164)
32	4930	1.77	(184.203, 3.059)	118.986	(26.9612, 5.13078)	(340.82, -11.2341)
33	4938	1.77	(192.18, 2.804)	126.149	(26.9612, 5.13078)	(356.905, -10.2164)
34	5209	1.77	(183.268, 3.062)	120.723	(22.1442, 5.01035)	(343.78, -11.2463)
35	5217	1.77	(193.172, 2.745)	130.912	(22.1442, 5.01035)	(363.745, -9.97976)
36	5228	1.77	(173.977, 3.014)	116.29	(22.1442, 5.01035)	(325.182, -11.0571)
37	5179	1.77	(181.484, 3.056)	120.619	(24.3987, 5.06672)	(337.945, -11.2223)
38	5170	1.77	(182.919, 3.059)	120.913	(24.3987, 5.06672)	(340.82, -11.2341)
39	5267	1.77	(172.008, 4.714)	117.767	(16.7156, 4.87464)	(326.528, -11.075)
40	7657	1.77	(191.247, 2.794)	124.525	(23.8844, 5.05386)	(358.126, -10.1741)
41	10364	1.78	(185.847, 3.047)	123.223	(23.3333, 5.04008)	(347.762, -11.188)
42	5178	1.78	(190.897, 2.804)	127.57	(24.3987, 5.06672)	(356.905, -10.2164)
43	4985	1.78	(203.496, 2.567)	136.656	(24.4355, 5.06764)	(382.181, -9.26934)
44	10356	1.78	(180.782, 3.055)	118.259	(23.3333, 5.04008)	(337.607, -11.2209)
45	10355	1.78	(186.687, 3.001)	122.7	(23.3333, 5.04008)	(349.463, -11.0058)
46	7665	1.78	(200.359, 2.628)	132.35	(23.8844, 5.05386)	(376.433, -9.51094)
47	4931	1.78	(177.063, 3.019)	113.465	(26.9612, 5.13078)	(326.528, -11.075)
48	7661	1.78	(167.186, 2.749)	106.88	(23.8844, 5.05386)	(309.942, -9.99594)
49	5220	1.78	(169.339, 2.886)	112.023	(22.1442, 5.01035)	(315.944, -10.5459)
50	2337	1.78	(185.606, 3.299)	125.523	(21.0639, 4.98335)	(349.551, -10.9964)
51	5171	1.78	(175.779, 3.019)	114.96	(24.3987, 5.06672)	(326.528, -11.075)
52	2385	1.78	(185.077, 3.648)	125.904	(19.9778, 4.9562)	(349.551, -10.9964)
53	10365	1.79	(180.554, 3.054)	119.767	(23.3333, 5.04008)	(337.152, -11.2167)
54	7678	1.79	(171.059, 2.925)	111.856	(23.8844, 5.05386)	(317.626, -10.7)
55	5211	1.79	(169.302, 2.885)	111.038	(22.1442, 5.01035)	(315.87, -10.5391)
56	5276	1.79	(171.336, 4.709)	119.285	(16.7156, 4.87464)	(325.182, -11.0571)
57	2346	1.79	(182.425, 3.361)	124.07	(21.0639, 4.98335)	(343.151, -11.2437)
58	8011	1.79	(180.858, 6.518)	129.889	(11.0035, 4.73184)	(349.847, -10.9647)
59	2433	1.79	(184.401, 4.093)	126.714	(18.589, 4.92148)	(349.551, -10.9964)
60	4961	1.79	(176.394, 3.023)	112.641	(24.4355, 5.06764)	(327.722, -11.091)
61	10363	1.79	(193.46, 2.75)	129.312	(23.3333, 5.04008)	(363.126, -10.0012)
62	5258	1.79	(172.447, 4.717)	117.065	(16.7156, 4.87464)	(327.406, -11.0868)

63	5265	1.79	(190.518, 4.44)	132.672	(16.7156, 4.87464)	(363.745, -9.97976)
64	7650	1.79	(174.819, 3.014)	111.344	(23.8844, 5.05386)	(325.124, -11.0563)
65	7670	1.79	(167.578, 2.767)	108.185	(23.8844, 5.05386)	(310.721, -10.0674)
66	4922	1.79	(177.502, 3.022)	112.929	(26.9612, 5.13078)	(327.406, -11.0868)
67	2394	1.79	(181.896, 3.71)	124.472	(19.9778, 4.9562)	(343.151, -11.2437)
68	4929	1.79	(195.584, 2.745)	127.497	(26.9612, 5.13078)	(363.745, -9.97976)
69	5225	1.79	(202.35, 2.567)	139.917	(22.1442, 5.01035)	(382.181, -9.26934)
70	2338	1.79	(175.701, 3.33)	117.652	(21.0639, 4.98335)	(329.688, -11.1172)
71	10357	1.79	(176.241, 3.025)	115.202	(23.3333, 5.04008)	(328.52, -11.1016)
72	5257	1.79	(180.624, 4.756)	123.746	(16.7156, 4.87464)	(343.78, -11.2463)
73	4882	1.79	(185.152, 3.059)	118.267	(28.8548, 5.17812)	(340.82, -11.2341)
74	4890	1.79	(193.128, 2.804)	125.561	(28.8548, 5.17812)	(356.905, -10.2164)
75	7627	1.79	(189.528, 2.991)	122.504	(28.627, 5.17243)	(349.847, -10.9647)
76	2442	1.79	(181.22, 4.155)	124.99	(18.589, 4.92148)	(343.151, -11.2437)
77	4972	1.79	(166.077, 2.686)	105.728	(24.4355, 5.06764)	(307.194, -9.74414)
78	2386	1.79	(175.172, 3.678)	118.06	(19.9778, 4.9562)	(329.688, -11.1172)
79	7628	1.79	(182.797, 3.051)	117.635	(28.627, 5.17243)	(336.332, -11.2058)
80	4921	1.80	(185.681, 3.062)	118.883	(26.9612, 5.13078)	(343.78, -11.2463)
81	4891	1.80	(183.716, 3.056)	119.237	(28.8548, 5.17812)	(337.945, -11.2223)
82	2481	1.80	(183.498, 4.688)	127.356	(16.7339, 4.8751)	(349.551, -10.9964)
83	2329	1.80	(177.169, 3.339)	117.444	(21.0639, 4.98335)	(332.627, -11.1564)
84	5180	1.80	(175.107, 3.014)	115.678	(24.3987, 5.06672)	(325.182, -11.0571)
85	4940	1.80	(176.391, 3.014)	114.251	(26.9612, 5.13078)	(325.182, -11.0571)
86	7651	1.80	(170.044, 2.879)	107.962	(23.8844, 5.05386)	(315.613, -10.5155)
87	5131	1.80	(182.424, 3.056)	119.751	(26.275, 5.11362)	(337.945, -11.2223)
88	2377	1.80	(176.641, 3.688)	118.089	(19.9778, 4.9562)	(332.627, -11.1564)
89	2434	1.80	(174.497, 4.123)	118.587	(18.589, 4.92148)	(329.688, -11.1172)
90	8012	1.80	(174.135, 6.578)	124.764	(11.0035, 4.73184)	(336.332, -11.2058)
91	5169	1.80	(194.301, 2.745)	129.233	(24.3987, 5.06672)	(363.745, -9.97976)
92	2490	1.80	(180.318, 4.75)	125.689	(16.7339, 4.8751)	(343.151, -11.2437)
93	4962	1.80	(170.049, 2.867)	107.642	(24.4355, 5.06764)	(315.076, -10.4664)
94	4989	1.80	(170.217, 2.874)	111.168	(24.4355, 5.06764)	(315.408, -10.4968)
95	10347	1.80	(180.65, 3.055)	117.945	(23.3333, 5.04008)	(337.344, -11.2193)
96	5162	1.80	(176.218, 3.022)	114.198	(24.3987, 5.06672)	(327.406, -11.0868)
97	5130	1.80	(191.836, 2.804)	126.693	(26.275, 5.11362)	(356.905, -10.2164)
98	5268	1.80	(166.697, 4.581)	114.016	(16.7156, 4.87464)	(315.944, -10.5459)
99	7619	1.80	(183.452, 3.055)	117.374	(28.627, 5.17243)	(337.644, -11.221)
100	7649	1.80	(181.629, 3.056)	117.418	(23.8844, 5.05386)	(338.752, -11.2256)
101	2345	1.80	(195.439, 2.997)	134.936	(21.0639, 4.98335)	(369.363, -9.78539)

Slices of Slip Surface: Optimized

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	22.308275	0.03115325	434.86033	392.65412	0	600
2	Optimized	22.70235	-0.1571508	446.60352	641.29035	0	600
3	Optimized	23.54011	-0.63454215	476.39694	677.16	0	203.89
4	Optimized	25.833855	-1.874108	553.7412	810.78105	0	199.4
5	Optimized	28.683855	-2.908838	618.32817	1000.5326	0	193.81

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6	Optimized	35.165	-3.922355	681.55255	1133.4661	0	181.12
7	Optimized	46.705	-5.726972	794.19076	1357.6175	0	175.01
8	Optimized	58.985865	-7.647445	913.98947	1607.9925	0	182.72
9	Optimized	67.010865	-9.0534525	1001.7438	1783.3677	0	187.76
10	Optimized	74.54167	-10.767953	1108.7098	1987.876	0	192.49
11	Optimized	80.84167	-12.20224	1198.2203	2151.3963	0	225.68
12	Optimized	82.73	-12.632145	1225.0527	2212.3395	0	230.66
13	Optimized	84.865	-13.11821	1255.3665	2310.7404	0	236.3
14	Optimized	88.085	-13.85129	1287.4637	2481.8184	0	244.79
15	Optimized	90.790245	-14.46718	1308.1734	2624.6785	0	251.93
16	Optimized	95.230365	-15.825905	1363.9826	2862.4054	0	266.77
17	Optimized	102.87012	-18.260935	1465.8728	3324.4658	0	293.18
18	Optimized	106.88255	-19.53983	1519.4173	3566.1939	0	307.06
19	Optimized	109.40255	-20.52645	1564.4873	3705.5958	0	317.42
20	Optimized	112.41965	-21.725845	1619.5939	3888.6692	0	329.99
21	Optimized	114.84465	-22.689875	1663.8621	3984.2835	0	332.3
22	Optimized	119.155	-24.40341	1742.5767	4147.5829	0	347.05
23	Optimized	122.56275	-25.758125	1804.8096	4251.3008	0	357.02
24	Optimized	125.04275	-26.900005	1859.8298	4247.3357	0	365.68
25	Optimized	133.26305	-30.946305	2058.5052	4398.3981	0	396.74
26	Optimized	140.98305	-34.62059	2237.2551	4582.0796	0	424.78
27	Optimized	143.3593	-35.5297	2278.4291	4600.8494	0	431.41
28	Optimized	148.02845	-37.316025	2359.3547	4646.893	0	422.78
29	Optimized	154.72415	-38.752425	2405.0831	4766.2756	0	432.76
30	Optimized	159.49	-38.928625	2384.9602	4637.2296	0	432.25
31	Optimized	165.27	-39.14232	2360.4481	4586.0937	0	431.64
32	Optimized	173.81	-39.45806	2324.2901	4570.6476	0	430.73
33	Optimized	182.2075	-39.76853	2288.6847	4567.5638	0	429.83
34	Optimized	190.4625	-40.07373	2253.6995	4575.5535	0	428.95
35	Optimized	195.6687	-40.26621	2239.2381	4580.6113	0	428.39
36	Optimized	200.9932	-40.7268	2270.7854	4582.47	0	430.2
37	Optimized	209.4848	-41.56822	2327.7396	4645.7524	0	434.04
38	Optimized	214.3303	-42.089445	2362.7389	4651.5548	0	436.6
39	Optimized	219.275	-42.91824	2414.7615	4723.2949	0	441.88
40	Optimized	227.965	-44.374795	2505.6683	4849.4976	0	451.17
41	Optimized	236.655	-45.831345	2596.5751	4975.8138	0	460.46
42	Optimized	244.00935	-47.06402	2673.4384	4976.7084	0	468.32
43	Optimized	248.62435	-47.419235	2695.6174	4978.6662	0	469.49
44	Optimized	252.5802	-47.05169	2673.581	4786.856	0	465.47
45	Optimized	257.2002	-46.00902	2610.5136	4639.0035	0	456.08
46	Optimized	264.97265	-43.186355	2420.9741	4216.0787	0	430.68
47	Optimized	276.69055	-38.594	2104.1284	3683.0043	0	389.35
48	Optimized	283.7279	-35.65688	1902.6243	3328.1753	0	362.91
49	Optimized	284.775	-35.219855	1870.1239	3271.8093	0	358.98
50	Optimized	289.27235	-33.342845	1749.8618	3014.0349	0	342.09
51	Optimized	297.07235	-29.401045	1503.963	2563.5074	0	306.61
52	Optimized	304.81395	-24.663705	1208.3261	1983.2782	0	263.97
53	Optimized	314.96395	-17.405435	755.40841	1189.0737	0	198.65

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54	Optimized	321.36035	-12.362905	440.72301	610.56715	0	153.27
55	Optimized	322.43675	-11.51435	387.77512	514.34796	0	150

Slices of Slip Surface: 7667

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7667	26.100995	-0.606783	474.65423	650.2888	0	600
2	7667	28.45687	-1.444725	526.93633	803.5963	0	600
3	7667	29.298065	-1.7704215	547.27447	860.12609	0	192.61
4	7667	35.165	-3.905811	680.52645	1102.5238	0	181.12
5	7667	46.705	-8.0629885	939.94639	1566.5035	0	175.01
6	7667	56.902825	-11.17013	1133.8202	1952.1387	0	181.41
7	7667	64.927825	-12.91222	1242.544	2175.6729	0	222.7
8	7667	75.43	-15.192065	1384.8095	2452.4818	0	249.4
9	7667	82.73	-16.77677	1483.6926	2646.7531	0	267.96
10	7667	84.865	-17.24024	1512.6109	2742.5974	0	273.39
11	7667	88.085	-17.93925	1542.5609	2909.9218	0	281.58
12	7667	94.3	-19.28842	1586.061	3227.6093	0	297.38
13	7667	102.56	-21.081525	1643.9145	3645.2429	0	318.39
14	7667	109.21	-22.52513	1690.4487	3979.7277	0	328.08
15	7667	114.155	-23.598605	1725.0783	4156.791	0	340.14
16	7667	119.155	-24.68402	1760.0736	4259.8127	0	349.58
17	7667	124.21	-25.781375	1795.4596	4289.0144	0	356.16
18	7667	134.41	-27.99562	1866.8803	4203.7087	0	369.44
19	7667	146.0925	-30.531695	1948.6822	4108.226	0	384.65
20	7667	154.0175	-32.25208	2004.1721	4043.6111	0	394.97
21	7667	159.49	-33.440065	2042.4613	3996.0004	0	402.09
22	7667	166.1412	-34.88393	2089.0694	4063.4257	0	410.75
23	7667	174.6812	-36.73782	2148.8224	4205.7803	0	405.86
24	7667	182.2075	-38.37165	2201.5397	4344.2438	0	417.26
25	7667	190.4625	-40.16367	2259.3098	4505.5977	0	429.76
26	7667	199.675	-42.163545	2359.6912	4685.7509	0	443.71
27	7667	209.845	-44.37128	2502.7698	4884.5618	0	459.11
28	7667	221.4475	-46.88999	2662.5733	5111.7059	0	476.67
29	7667	234.4825	-49.719665	2839.2035	5366.98	0	496.41
30	7667	245.615	-52.13634	2989.9484	5422.7754	0	513.27
31	7667	252.215	-53.56909	3080.1489	5319.9214	0	524.12
32	7667	256.835	-52.649115	3024.72	5429.9069	0	515.84
33	7667	265.74	-48.08379	2724.611	4793.669	0	474.75

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34	7667	278.28	-41.654905	2291.0292	4025.8531	0	416.89
35	7667	284.775	-38.32511	2063.9094	3623.3604	0	386.93
36	7667	287.15515	-37.10488	1984.6275	3456.8401	0	375.94
37	7667	294.95515	-33.106055	1735.0996	2931.0595	0	339.95
38	7667	304.6046	-28.15908	1426.3896	2313.1333	0	295.43
39	7667	312.61375	-24.053025	1170.1772	1836.7072	0	258.48
40	7667	318.75915	-20.902455	973.58831	1473.4447	0	230.12
41	7667	328.512	-15.902455	661.61565	931.77976	0	185.12
42	7667	336.762	-11.672925	397.66926	478.91037	0	150
43	7667	337.52175	-11.28343	373.35563	434.12595	0	150

Slices of Slip Surface: 7675

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7675	26.100995	-0.606783	474.65423	650.50077	0	600
2	7675	28.45687	-1.444725	526.93633	803.80653	0	600
3	7675	29.298065	-1.7704215	547.27447	860.12609	0	192.61
4	7675	35.165	-3.905811	680.52645	1102.4328	0	181.12
5	7675	46.705	-8.0717035	940.49881	1566.932	0	175.01
6	7675	56.40681	-11.178845	1134.3568	1944.4616	0	181.1
7	7675	64.43181	-13.15965	1257.9583	2191.8955	0	224.63
8	7675	75.43	-15.874325	1427.3221	2515.3046	0	255.54
9	7675	82.73	-17.67618	1539.7879	2731.0361	0	276.06
10	7675	84.865	-18.20316	1572.6691	2833.0796	0	282.06
11	7675	88.085	-18.99795	1608.6283	3009.6737	0	291.11
12	7675	95.20875	-20.756295	1671.6924	3393.867	0	311.13
13	7675	103.46875	-22.795105	1744.9022	3834.8969	0	327.73
14	7675	109.21	-24.21222	1795.7297	4138.6869	0	343.27
15	7675	114.155	-25.43279	1839.5342	4330.0468	0	356.65
16	7675	119.155	-26.666935	1883.8125	4447.6811	0	367.42
17	7675	124.21	-27.91466	1928.5911	4491.6096	0	375.36
18	7675	134.41	-30.43232	2018.9406	4436.4126	0	391.37
19	7675	149.5484	-34.16892	2152.9778	4357.3883	0	415.13
20	7675	157.4734	-36.12504	2223.1783	4318.6252	0	407.91
21	7675	159.49	-36.622795	2241.053	4306.5148	0	411.5
22	7675	165.27	-38.04947	2292.2133	4380.7045	0	421.8
23	7675	173.81	-40.15739	2367.9269	4549.9802	0	437.02

SWL Case.BS

24	7675	182.2075	-42.23014	2442.269	4728.2355	0	451.98
25	7675	190.4625	-44.26772	2515.4218	4914.4106	0	466.69
26	7675	199.675	-46.541635	2632.8803	5122.2791	0	483.11
27	7675	209.845	-49.051885	2794.8816	5351.773	0	501.23
28	7675	221.4475	-51.91572	2976.1936	5613.7212	0	521.91
29	7675	234.4825	-55.13314	3176.9948	5908.2943	0	545.13
30	7675	245.615	-57.88097	3348.4762	5997.7842	0	564.97
31	7675	252.215	-59.510045	3450.8411	5914.9241	0	577.59
32	7675	256.835	-58.649115	3399.0741	6093.0049	0	569.84
33	7675	265.74	-54.08379	3099.0099	5456.6021	0	528.75
34	7675	278.28	-47.654905	2665.4281	4688.6443	0	470.89
35	7675	284.775	-44.32511	2438.2488	4286.0183	0	440.93
36	7675	292.8	-40.210935	2178.4182	3732.4429	0	403.9
37	7675	305.77845	-33.55728	1763.2705	2887.2029	0	344.02
38	7675	315.92845	-28.35368	1438.5605	2283.3143	0	297.18
39	7675	324.61085	-23.902455	1160.7944	1779.9254	0	257.12
40	7675	332.86085	-19.672925	896.87466	1325.7516	0	219.06
41	7675	342.245	-14.861965	596.66404	815.56881	0	175.76
42	7675	347.45875	-12.18904	429.87442	533.63555	0	151.7
43	7675	348.83715	-11.482365	385.78146	462.39132	0	150

Slices of Slip Surface: 7676

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7676	26.100995	-0.606783	474.65423	650.77632	0	600
2	7676	28.45687	-1.444725	526.93633	804.12187	0	600
3	7676	29.298065	-1.7704215	547.27447	859.92529	0	192.61
4	7676	35.165	-3.905811	680.52645	1102.1599	0	181.12
5	7676	46.705	-8.0717035	940.49881	1566.4152	0	175.01
6	7676	56.40681	-11.178845	1134.3568	1944.0238	0	181.1
7	7676	64.43181	-13.15965	1257.9583	2191.4822	0	224.63
8	7676	75.43	-15.874325	1427.3221	2514.7652	0	255.54
9	7676	82.73	-17.67618	1539.7879	2730.4536	0	276.06
10	7676	84.865	-18.20316	1572.6691	2832.4809	0	282.06
11	7676	88.085	-18.99795	1608.6283	3008.9752	0	291.11
12	7676	95.20875	-20.756295	1671.6924	3393.0963	0	311.13

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13	7676	103.46875	-22.795105	1744.9022	3833.9927	0	327.73
14	7676	109.21	-24.21222	1795.7297	4137.7238	0	343.27
15	7676	114.155	-25.43279	1839.5342	4329.0459	0	356.65
16	7676	119.155	-26.666935	1883.8125	4446.55	0	367.42
17	7676	124.21	-27.91466	1928.5911	4490.6309	0	375.36
18	7676	134.41	-30.43232	2018.9406	4435.3437	0	391.37
19	7676	149.5484	-34.16892	2152.9778	4356.4067	0	415.13
20	7676	157.4734	-36.12504	2223.1783	4317.667	0	407.91
21	7676	159.49	-36.622795	2241.053	4305.5504	0	411.5
22	7676	165.27	-38.04947	2292.2133	4379.6814	0	421.8
23	7676	173.81	-40.15739	2367.9269	4548.9571	0	437.02
24	7676	182.2075	-42.23014	2442.269	4727.1771	0	451.98
25	7676	190.4625	-44.26772	2515.4218	4913.3521	0	466.69
26	7676	199.675	-46.541635	2632.8803	5121.1335	0	483.11
27	7676	209.845	-49.051885	2794.8816	5350.532	0	501.23
28	7676	219.275	-51.379485	2942.7524	5563.4108	0	518.03
29	7676	227.965	-53.524435	3076.5951	5759.7061	0	533.52
30	7676	236.655	-55.66938	3210.4379	5956.0013	0	549
31	7676	245.615	-57.88097	3348.4762	5996.4167	0	564.97
32	7676	252.215	-59.510045	3450.8411	5913.7013	0	577.59
33	7676	256.835	-58.434565	3385.7178	6123.1345	0	567.91
34	7676	265.74	-53.14416	3040.3687	5401.4587	0	520.3
35	7676	278.28	-45.69422	2543.0445	4513.7618	0	453.25
36	7676	284.775	-41.83558	2282.8564	4049.1136	0	418.52
37	7676	289.79885	-38.850955	2093.5824	3653.2887	0	391.66
38	7676	297.59885	-34.217025	1804.4318	3049.2578	0	349.95
39	7676	304.99075	-29.825535	1530.405	2516.5724	0	310.43
40	7676	313.77225	-24.60851	1204.8806	1912.6146	0	263.48
41	7676	319.5315	-21.18697	991.35482	1518.1132	0	232.68
42	7676	327.94765	-16.18697	679.34725	975.59339	0	187.68
43	7676	335.66375	-11.60288	393.30066	481.13238	0	150

Slices of Slip Surface: 4978

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	4978	27.12373	-0.773967	485.09004	675.31388	0	600
2	4978	34.74191	-3.5512385	658.39672	1065.1306	0	181.95

SWL Case.BS

3	4978	40.00091	-5.4244055	775.28371	1295.5133	0	171.64
4	4978	46.705	-7.0302075	875.47147	1480.3995	0	175.01
5	4978	60.266735	-10.278592	1078.2109	1875.0288	0	183.53
6	4978	68.291735	-12.200785	1198.1213	2115.6658	0	218.28
7	4978	75.43	-13.910585	1304.8368	2314.7616	0	237.87
8	4978	82.73	-15.659125	1413.9062	2525.8537	0	257.91
9	4978	84.865	-16.17051	1445.8425	2626.5846	0	263.77
10	4978	88.085	-16.94178	1480.3097	2801.336	0	272.6
11	4978	94.3	-18.43043	1532.5578	3132.9309	0	289.66
12	4978	102.56	-20.408915	1601.9037	3569.1395	0	312.33
13	4978	107.9463	-21.69908	1647.1986	3852.1202	0	327.12
14	4978	110.4663	-22.302685	1668.3578	3984.0806	0	326.69
15	4978	114.155	-23.18622	1699.3344	4106.7231	0	336.43
16	4978	119.155	-24.383845	1741.3459	4220.9925	0	346.87
17	4978	124.21	-25.594645	1783.8166	4261.514	0	354.48
18	4978	134.41	-28.03781	1869.5274	4198.9728	0	369.82
19	4978	146.0925	-30.83607	1967.6855	4129.7467	0	387.39
20	4978	154.0175	-32.73431	2034.1954	4082.8708	0	399.31
21	4978	159.49	-34.045115	2080.199	4047.4344	0	407.54
22	4978	164.32575	-35.2034	2120.8737	4096.418	0	414.81
23	4978	172.86575	-37.24895	2192.5698	4259.0612	0	411.26
24	4978	182.2075	-39.48654	2271.0718	4449.3122	0	427.29
25	4978	190.4625	-41.463825	2340.4598	4629.4382	0	441.46
26	4978	199.675	-43.670455	2453.7971	4830.5215	0	457.27
27	4978	209.845	-46.10643	2611.0979	5052.4639	0	474.72
28	4978	221.4475	-48.88553	2787.1388	5305.8444	0	494.63
29	4978	234.4825	-52.007745	2981.9356	5590.7655	0	517
30	4978	241.9	-53.784425	3092.7946	5721.4945	0	529.73
31	4978	246.515	-52.37916	3005.1646	5764.1033	0	515.06
32	4978	254.85	-48.742635	2780.04	5039.6036	0	480.68
33	4978	265.6166	-44.045215	2472.9521	4315.7368	0	438.41
34	4978	278.1566	-38.57407	2099.0911	3658.1415	0	389.17
35	4978	284.775	-35.686495	1899.2393	3306.5493	0	363.18

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36	4978	292.8	-32.185225	1677.6615	2834.4101	0	331.67
37	4978	308.3724	-25.39106	1253.6653	1980.9704	0	270.52
38	4978	318.5224	-20.96266	977.35108	1465.8146	0	230.66
39	4978	325.025	-18.1256	800.31996	1154.9796	0	205.13
40	4978	333.275	-14.52616	575.71221	773.63411	0	172.74
41	4978	338.2325	-12.36322	440.74766	544.74443	0	153.27
42	4978	339.9427	-11.61706	394.18489	463.16921	0	150

Slices of Slip Surface: 7668

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7668	26.100995	-0.606783	474.65423	650.83991	0	600
2	7668	28.45687	-1.444725	526.93633	804.01676	0	600
3	7668	29.298065	-1.7704215	547.27447	860.19303	0	192.61
4	7668	35.165	-3.905811	680.52645	1102.5238	0	181.12
5	7668	46.705	-8.0629885	939.94639	1566.2819	0	175.01
6	7668	56.902825	-11.17013	1133.8202	1952.0109	0	181.41
7	7668	64.927825	-12.91222	1242.544	2175.5566	0	222.7
8	7668	75.43	-15.192065	1384.8095	2452.3266	0	249.4
9	7668	82.73	-16.77677	1483.6926	2646.5577	0	267.96
10	7668	84.865	-17.24024	1512.6109	2742.4252	0	273.39
11	7668	88.085	-17.93925	1542.5609	2909.6874	0	281.58
12	7668	94.3	-19.28842	1586.061	3227.3727	0	297.38
13	7668	102.56	-21.081525	1643.9145	3645.0063	0	318.39
14	7668	109.21	-22.52513	1690.4487	3979.3399	0	328.08
15	7668	114.155	-23.598605	1725.0783	4156.5895	0	340.14
16	7668	119.155	-24.68402	1760.0736	4259.4332	0	349.58
17	7668	124.21	-25.781375	1795.4596	4288.6204	0	356.16
18	7668	130.55	-27.15768	1839.7913	4234.9125	0	364.41
19	7668	138.27	-28.83356	1893.8433	4171.7464	0	374.46
20	7668	146.0925	-30.531695	1948.6822	4107.9794	0	384.65
21	7668	154.0175	-32.25208	2004.1721	4043.3645	0	394.97
22	7668	159.49	-33.440065	2042.4613	3995.6769	0	402.09
23	7668	166.1412	-34.88393	2089.0694	4063.1406	0	410.75
24	7668	174.6812	-36.73782	2148.8224	4205.4928	0	405.86
25	7668	182.2075	-38.37165	2201.5397	4343.8886	0	417.26
26	7668	190.4625	-40.16367	2259.3098	4505.2425	0	429.76
27	7668	199.675	-42.163545	2359.6912	4685.3665	0	443.71
28	7668	209.845	-44.37128	2502.7698	4884.1775	0	459.11
29	7668	219.275	-46.418375	2633.1471	5068.7098	0	473.38

SWL Case.BS

30	7668	227.965	-48.304825	2750.8881	5238.9675	0	486.54
31	7668	236.655	-50.191275	2868.6291	5409.1128	0	499.7
32	7668	245.615	-52.13634	2989.9484	5422.3519	0	513.27
33	7668	252.215	-53.56909	3080.1489	5319.4291	0	524.12
34	7668	256.835	-52.434565	3011.3215	5451.668	0	513.91
35	7668	265.72705	-47.151845	2666.4679	4731.464	0	466.37
36	7668	278.26705	-39.701905	2169.1744	3844.4434	0	399.32
37	7668	284.775	-35.83558	1908.5321	3379.6744	0	364.52
38	7668	288.9	-33.384945	1752.5163	3061.9435	0	342.46
39	7668	296.7	-28.751015	1463.296	2467.08	0	300.76
40	7668	304.33175	-24.217025	1180.4661	1911.5763	0	259.95
41	7668	314.48175	-18.18697	804.17175	1221.7624	0	205.68
42	7668	322.89795	-13.18697	492.13782	660.14972	0	160.68
43	7668	325.6752	-11.53703	389.18801	479.77883	0	150

Slices of Slip Surface: 7666

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7666	26.100995	-0.606783	474.65423	651.13666	0	600
2	7666	28.45687	-1.444725	526.93633	803.8766	0	600
3	7666	29.298065	-1.7704215	547.27447	860.72852	0	192.61
4	7666	35.165	-3.905811	680.52645	1103.2515	0	181.12
5	7666	46.705	-8.0629885	939.94639	1567.3898	0	175.01
6	7666	56.902825	-11.17013	1133.8202	1952.7777	0	181.41
7	7666	64.927825	-12.91222	1242.544	2176.3705	0	222.7
8	7666	75.43	-15.192065	1384.8095	2453.2573	0	249.4
9	7666	82.73	-16.77677	1483.6926	2647.5838	0	267.96
10	7666	84.865	-17.24024	1512.6109	2743.4584	0	273.39
11	7666	88.085	-17.93925	1542.5609	2910.8592	0	281.58
12	7666	94.3	-19.28842	1586.061	3228.5558	0	297.38
13	7666	102.56	-21.081525	1643.9145	3646.426	0	318.39
14	7666	109.21	-22.52513	1690.4487	3980.8911	0	328.08
15	7666	114.155	-23.598605	1725.0783	4158.2015	0	340.14
16	7666	119.155	-24.68402	1760.0736	4261.141	0	349.58
17	7666	124.21	-25.781375	1795.4596	4290.3936	0	356.16
18	7666	134.41	-27.99562	1866.8803	4204.9746	0	369.44

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19	7666	150.055	-31.391885	1976.4267	4077.2123	0	389.81
20	7666	159.49	-33.440065	2042.4613	3997.2948	0	402.09
21	7666	166.1412	-34.88393	2089.0694	4064.7563	0	410.75
22	7666	174.6812	-36.73782	2148.8224	4207.0742	0	405.86
23	7666	182.2075	-38.37165	2201.5397	4345.546	0	417.26
24	7666	190.4625	-40.16367	2259.3098	4507.0182	0	429.76
25	7666	199.675	-42.163545	2359.6912	4687.1922	0	443.71
26	7666	209.845	-44.37128	2502.7698	4886.0993	0	459.11
27	7666	221.4475	-46.88999	2662.5733	5113.2803	0	476.67
28	7666	234.4825	-49.719665	2839.2035	5368.7044	0	496.41
29	7666	245.615	-52.13634	2989.9484	5424.4694	0	513.27
30	7666	252.215	-53.56909	3080.1489	5321.3984	0	524.12
31	7666	256.835	-52.85036	3037.1776	5405.804	0	517.65
32	7666	265.74	-48.96515	2779.5807	4848.4968	0	482.69
33	7666	278.28	-43.494005	2405.7929	4191.1887	0	433.45
34	7666	284.775	-40.660265	2209.5261	3845.8953	0	407.94
35	7666	290.2282	-38.28105	2058.0594	3517.0823	0	386.53
36	7666	298.0282	-34.877945	1845.5764	3054.6365	0	355.9
37	7666	305.675	-31.54169	1637.4405	2644.6656	0	325.88
38	7666	315.825	-27.11329	1361.1174	2127.9593	0	286.02
39	7666	324.2224	-23.449545	1132.5334	1712.2144	0	253.05
40	7666	332.4724	-19.850105	907.93007	1328.3583	0	220.65
41	7666	342.245	-15.58636	641.86808	879.25684	0	182.28
42	7666	348.7775	-12.736255	464.03542	588.2797	0	156.63
43	7666	352.13805	-11.270065	372.53579	446.93337	0	150

Slices of Slip Surface: 4987

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	4987	27.12373	-0.773967	485.09004	676.13577	0	600
2	4987	34.74191	-3.5512385	658.39672	1064.6541	0	181.95
3	4987	40.00091	-5.434126	775.8936	1291.5715	0	171.64
4	4987	46.705	-7.2379535	888.47923	1496.3502	0	175.01
5	4987	58.74179	-10.476618	1090.5391	1880.6428	0	182.57
6	4987	66.76679	-12.635855	1225.2703	2145.0555	0	221.29
7	4987	75.43	-14.96681	1370.6955	2415.5204	0	247.38

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8	4987	82.73	-16.930975	1493.2911	2647.6368	0	269.35
9	4987	84.865	-17.505425	1529.1401	2754.4175	0	275.78
10	4987	88.085	-18.37181	1569.5503	2938.1885	0	285.47
11	4987	95.86975	-20.466405	1649.3109	3374.607	0	308.91
12	4987	104.12975	-22.68887	1733.9207	3833.586	0	327.1
13	4987	109.21	-24.05578	1785.9658	4113.0438	0	341.86
14	4987	114.155	-25.3863	1836.6185	4314.9903	0	356.23
15	4987	119.155	-26.73162	1887.811	4443.5186	0	368
16	4987	124.21	-28.091735	1939.6258	4498.6735	0	376.95
17	4987	134.41	-30.836185	2044.1387	4465.9716	0	395
18	4987	147.8659	-34.45668	2181.9409	4425.4991	0	418.82
19	4987	155.7909	-36.58901	2263.163	4405.9004	0	412.82
20	4987	159.49	-37.584305	2301.0436	4394.3753	0	420.16
21	4987	165.27	-39.13949	2360.3171	4481.4816	0	431.61
22	4987	173.81	-41.437295	2447.7237	4669.7507	0	448.54
23	4987	182.2075	-43.69676	2533.7509	4866.7669	0	465.18
24	4987	190.4625	-45.91788	2618.3262	5071.3621	0	481.54
25	4987	199.675	-48.39663	2748.6541	5299.7142	0	499.8
26	4987	209.845	-51.133005	2924.694	5551.9052	0	519.96
27	4987	221.4475	-54.254815	3122.1779	5839.721	0	542.96
28	4987	234.4825	-57.762065	3341.0156	6163.3104	0	568.79
29	4987	241.9	-59.757845	3465.58	6315.9295	0	583.5
30	4987	246.515	-58.09543	3361.8711	6444.0853	0	566.5
31	4987	254.85	-53.822325	3097.023	5644.5213	0	526.4
32	4987	265.74	-48.23935	2734.3329	4817.1576	0	476.15
33	4987	278.28	-41.810465	2300.7511	4048.3483	0	418.29
34	4987	284.775	-38.48067	2073.5991	3645.3105	0	388.33
35	4987	287.30685	-37.18266	1989.5018	3468.2716	0	376.64
36	4987	295.10685	-33.183835	1739.9299	2941.4623	0	340.65
37	4987	304.68045	-28.27575	1433.6747	2328.3584	0	296.48
38	4987	312.8413	-24.091915	1172.6299	1842.2524	0	258.83
39	4987	318.91085	-20.980235	978.43756	1482.8892	0	230.82
40	4987	328.66375	-15.980235	666.45271	941.02275	0	185.82
			-				

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41	4987	336.91375	11.750705	402.52723	488.16217	0	150
42	4987	337.67225	-11.36183	378.25534	443.4605	0	150

Slices of Slip Surface: 4979

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	4979	27.12373	-0.773967	485.09004	676.22321	0	600
2	4979	34.74191	-3.5512385	658.39672	1064.8447	0	181.95
3	4979	40.00091	-5.4244055	775.28371	1295.2621	0	171.64
4	4979	46.705	-7.0302075	875.47147	1480.0944	0	175.01
5	4979	60.266735	-10.278592	1078.2109	1874.5551	0	183.53
6	4979	68.291735	-12.200785	1198.1213	2115.2018	0	218.28
7	4979	75.43	-13.910585	1304.8368	2314.1441	0	237.87
8	4979	82.73	-15.659125	1413.9062	2525.2702	0	257.91
9	4979	84.865	-16.17051	1445.8425	2625.942	0	263.77
10	4979	88.085	-16.94178	1480.3097	2800.6364	0	272.6
11	4979	94.3	-18.43043	1532.5578	3132.1068	0	289.66
12	4979	102.56	-20.408915	1601.9037	3568.1976	0	312.33
13	4979	107.9463	-21.69908	1647.1986	3851.0752	0	327.12
14	4979	110.4663	-22.302685	1668.3578	3982.9262	0	326.69
15	4979	114.155	-23.18622	1699.3344	4105.7205	0	336.43
16	4979	119.155	-24.383845	1741.3459	4219.8595	0	346.87
17	4979	124.21	-25.594645	1783.8166	4260.3376	0	354.48
18	4979	130.55	-27.11324	1837.027	4220.7657	0	364.01
19	4979	138.27	-28.96238	1901.9018	4175.0385	0	375.62
20	4979	146.0925	-30.83607	1967.6855	4128.765	0	387.39
21	4979	154.0175	-32.73431	2034.1954	4081.8891	0	399.31
22	4979	159.49	-34.045115	2080.199	4046.4684	0	407.54
23	4979	164.32575	-35.2034	2120.8737	4095.3946	0	414.81
24	4979	172.86575	-37.24895	2192.5698	4257.9421	0	411.26
25	4979	182.2075	-39.48654	2271.0718	4448.1341	0	427.29
26	4979	190.4625	-41.463825	2340.4598	4628.2601	0	441.46
27	4979	199.675	-43.670455	2453.7971	4829.2784	0	457.27
28	4979	209.845	-46.10643	2611.0979	5051.1252	0	474.72
29	4979	219.275	-48.36516	2754.6477	5257.0518	0	490.91
30	4979	227.965	-50.44664	2884.5744	5446.9619	0	505.82

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31	4979	236.655	-52.528115	3014.3892	5636.872	0	520.73
32	4979	241.9	-53.784425	3092.7946	5719.8737	0	529.73
33	4979	246.515	-52.09543	2987.4782	5779.8553	0	512.5
34	4979	254.85	-47.822325	2722.6798	4980.4883	0	472.4
35	4979	264.08005	-43.09034	2417.2852	4255.1015	0	429.81
36	4979	273.3002	-38.363445	2098.5001	3690.013	0	387.27
37	4979	281.23015	-34.29801	1824.3193	3209.1777	0	350.68
38	4979	284.775	-32.48067	1699.2004	2992.5401	0	334.33
39	4979	288.9	-30.36591	1564.1209	2712.8542	0	315.29
40	4979	296.7	-26.367085	1314.6145	2189.8834	0	279.3
41	4979	302.90915	-23.183835	1115.9455	1789.2201	0	250.65
42	4979	309.13875	-19.990115	916.66205	1422.3929	0	221.91
43	4979	316.9796	-15.97035	665.83379	963.7725	0	185.73
44	4979	322.812	-12.980235	479.25631	628.74612	0	158.82
45	4979	325.6261	-11.53752	389.22247	471.19623	0	150

Slices of Slip Surface: 4986

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	4986	27.12373	-0.773967	485.09004	676.11829	0	600
2	4986	34.74191	-3.5512385	658.39672	1065.3212	0	181.95
3	4986	40.00091	-5.434126	775.8936	1292.1437	0	171.64
4	4986	46.705	-7.2379535	888.47923	1497.0318	0	175.01
5	4986	58.74179	-10.476618	1090.5391	1881.5808	0	182.57
6	4986	66.76679	-12.635855	1225.2703	2146.0771	0	221.29
7	4986	75.43	-14.96681	1370.6955	2416.67	0	247.38
8	4986	82.73	-16.930975	1493.2911	2648.9404	0	269.35
9	4986	84.865	-17.505425	1529.1401	2755.7362	0	275.78
10	4986	88.085	-18.37181	1569.5503	2939.5779	0	285.47
11	4986	95.86975	-20.466405	1649.3109	3376.3013	0	308.91
12	4986	104.12975	-22.68887	1733.9207	3835.4719	0	327.1
13	4986	109.21	-24.05578	1785.9658	4115.1514	0	341.86
14	4986	114.155	-25.3863	1836.6185	4317.1805	0	356.23
15	4986	119.155	-26.73162	1887.811	4445.7687	0	368
16	4986	124.21	-28.091735	1939.6258	4500.8151	0	376.95

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17	4986	134.41	-30.836185	2044.1387	4468.1606	0	395
18	4986	147.8659	-34.45668	2181.9409	4427.6035	0	418.82
19	4986	155.7909	-36.58901	2263.163	4407.8855	0	412.82
20	4986	159.49	-37.584305	2301.0436	4396.6136	0	420.16
21	4986	165.27	-39.13949	2360.3171	4483.63	0	431.61
22	4986	173.81	-41.437295	2447.7237	4672.0122	0	448.54
23	4986	186.335	-44.80732	2576.0973	4971.4631	0	473.36
24	4986	199.675	-48.39663	2748.6541	5302.2779	0	499.8
25	4986	209.845	-51.133005	2924.694	5554.5638	0	519.96
26	4986	221.4475	-54.254815	3122.1779	5842.5361	0	542.96
27	4986	234.4825	-57.762065	3341.0156	6166.2737	0	568.79
28	4986	241.9	-59.757845	3465.58	6319.1484	0	583.5
29	4986	246.515	-58.37916	3379.5611	6420.2533	0	569.06
30	4986	254.85	-54.742635	3154.5012	5695.7788	0	534.68
31	4986	265.74	-49.99138	2843.6816	4965.5156	0	491.92
32	4986	278.28	-44.520235	2469.8207	4307.6228	0	442.68
33	4986	284.775	-41.686495	2273.6855	3961.9932	0	417.18
34	4986	291.4043	-38.794165	2090.0076	3562.609	0	391.15
35	4986	299.2043	-35.39106	1877.6711	3098.2805	0	360.52
36	4986	305.675	-32.56792	1701.5547	2756.5494	0	335.11
37	4986	315.825	-28.13952	1425.1413	2239.3916	0	295.26
38	4986	325.39845	-23.96266	1164.5337	1767.7359	0	257.66
39	4986	333.64845	-20.36322	939.94641	1382.4646	0	225.27
40	4986	342.245	-16.61259	705.9045	987.31474	0	191.51
41	4986	349.9536	-13.24937	496.03651	648.66436	0	161.24
42	4986	354.8086	-11.131155	363.85586	445.85058	0	150
43	4986	356.85265	-10.239335	308.21298	356.68536	0	150

SWL Case.BS.Thru Fabric

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 172
Last Edited By: Cox, Lane MVK
Date: 3/21/2011
Time: 10:18:45 AM
File Name: 5c(1) Typical 1.2nd SC.80%SG.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\2nd Stage Construction\80%SG,1 Layer of Fabric\Slope W\
Last Solved Date: 3/21/2011
Last Solved Time: 10:22:26 AM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

SWL Case.BS.Thru Fabric

Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

SlipSurface
- Direction of movement: Left to Right
- Use Passive Mode: No
- Slip Surface Option: Block
- Critical slip surfaces saved: 100
- Optimize Critical Slip Surface Location: Yes
- Tension Crack
  - Tension Crack Option: Tension Crack Line
  - Percentage Wet: 1
  - Tension Crack Fluid Unit Weight: 62.4 pcf

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FOS Distribution
FOS Calculation Option: Constant
Restrict Block Crossing: Yes
Advanced
Number of Slices: 30
Optimization Tolerance: 0.01
Minimum Slip Surface Depth: 0.1 ft
Optimization Maximum Iterations: 2000
Optimization Convergence Tolerance: 1e-007
Starting Optimization Points: 8
Ending Optimization Points: 16
Complete Passes per Insertion: 1
Driving Side Maximum Convex Angle: 5 °
Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH
Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH above 0
Model: Mohr-Coulomb
Unit Weight: 108 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, 0 to -12
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -12 (2)
Cohesion Spatial Fn: CH, 0 to -12
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -12 to -22
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -12 to -22 (2)

Cohesion Spatial Fn: CH, -12 to -22
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -22 to -36
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -22 to -36 (2)
Cohesion Spatial Fn: CH, -22 to -36
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -36 to -80
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -36 to -80 (2)
Cohesion Spatial Fn: CH, -36 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sand Fill
Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, 0 to -12 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -12 (2)
Cohesion Spatial Fn: CH, 0 to -12 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -12 to -22 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -12 to -22 (2)
Cohesion Spatial Fn: CH, -12 to -22 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure

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Piezometric Line: 1

CH, -22 to -36 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -22 to -36 (2)
Cohesion Spatial Fn: CH, -22 to -36 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Limits

Left Coordinate: (-200, -1.79) ft
Right Coordinate: (500, -4.27) ft

Slip Surface Block

Left Grid
Upper Left: (122, -12) ft
Lower Left: (172, -12) ft
Lower Right: (172, -60) ft
X Increments: 7
Y Increments: 7
Starting Angle: 115 °
Ending Angle: 135 °
Angle Increments: 7
Right Grid
Upper Left: (235, -12) ft
Lower Left: (312, -12) ft
Lower Right: (312, -62) ft
X Increments: 7
Y Increments: 7
Starting Angle: 0 °
Ending Angle: 45 °
Angle Increments: 7

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	7
	86	7
	194.59	-4.39

	214.93	-4.22
	250.23	-4.22
	259.47	-4.16
	284.55	-5.2
	285	-5.3
	406	-5.3
	407.82	-4.54
	500	-4.27

Reinforcements

Reinforcement 1

Type: Fabric
Outside Point: (177, 0) ft
Inside Point: (23, 0) ft
Slip Surface Intersection: (99.396, 0) ft
Total Length: 154 ft
Reinforcement Direction: 0 °
Applied Load Option: Variable
F of S Dependent: No
Contact Cohesion: 265 psf
Contact Phi: 19 °
Interface Factor: 2
Bond Safety Factor: 1
Fabric Capacity: 27000 lbs
Fabric Safety Factor: 1
Fabric Load: 27000 lbs
Load Distribution: Conc. in 1 slice
Load Orientation: 0
Applied Load: 27000 lbs
Fabric Load Used: 27000 lbs
Resisting Force Used: 1145 lbs/ft
Available Bond Length: 76.396 ft
Required Bond Length: 23.58 ft
Governing Component: Fabric

Tension Crack Line

	X (ft)	Y (ft)
	4.93	4.58
	22	0.2
	83	0.2
	112	10
	122	10
	159	1
	161	4

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Spatial Functions

CH, 0 to -12

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -1.5, 75)
Data Point: (-300, -12, 75)
Data Point: (-23.63, 0, 75)
Data Point: (-23.63, -12, 75)
Data Point: (0, 0, 250)
Data Point: (0, -12, 250)
Data Point: (250.26, -4.13, 150)
Data Point: (250.26, -12, 150)
Data Point: (500, -4.27, 150)
Data Point: (500, -12, 150)

CH, -22 to -36 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -22, 350)
Data Point: (0, -36, 476)
Data Point: (40.33, -22, 290)
Data Point: (40.33, -36, 416)
Data Point: (116.73, -22, 327)
Data Point: (116.73, -36, 453)
Data Point: (250.23, -22, 240)
Data Point: (250.23, -36, 366)

CH, -12 to -22

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -12, 125)
Data Point: (-300, -22, 225)
Data Point: (-23.63, -12, 125)
Data Point: (-23.63, -22, 225)
Data Point: (0, -12, 350)
Data Point: (0, -22, 350)
Data Point: (250.26, -12, 150)
Data Point: (250.26, -22, 240)
Data Point: (500, -12, 150)
Data Point: (500, -22, 240)

CH, -22 to -36

Model: Linear Interpolation

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Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -22, 225)
Data Point: (-300, -36, 365)
Data Point: (-23.63, -22, 225)
Data Point: (-23.63, -36, 365)
Data Point: (0, -22, 350)
Data Point: (0, -36, 476)
Data Point: (250.26, -22, 240)
Data Point: (250.26, -36, 366)
Data Point: (500, -22, 240)
Data Point: (500, -36, 366)

CH, -36 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -36, 365)
Data Point: (-300, -80, 805)
Data Point: (-23.63, -36, 365)
Data Point: (-23.63, -80, 805)
Data Point: (0, -36, 476)
Data Point: (0, -80, 872)
Data Point: (250.26, -36, 366)
Data Point: (250.26, -80, 762)
Data Point: (500, -36, 366)
Data Point: (500, -80, 762)

CH, 0 to -12 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -6, 100)
Data Point: (0, -6, 101)
Data Point: (178.08, -6, 111)

CH, -12 to -22 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -17, 100)
Data Point: (0, -17, 109)
Data Point: (178.08, -17, 100)

CH, -22 to -36 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)

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Data Point: (-23.63, -29, 102)
Data Point: (0, -29, 104)
Data Point: (178.08, -29, 102)

CH, -36 to -80 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -58, 105)
Data Point: (0, -58, 106)
Data Point: (178.08, -58, 105)

CH, 0 to -12 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, 0, 250)
Data Point: (0, -12, 250)
Data Point: (40.33, 0, 171)
Data Point: (40.33, -12, 171)
Data Point: (116.73, 0, 219)
Data Point: (116.73, -12, 219)
Data Point: (250.23, -4.13, 150)
Data Point: (250.23, -12, 150)

CH, -12 to -22 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -12, 350)
Data Point: (0, -22, 350)
Data Point: (40.33, -12, 200)
Data Point: (40.33, -22, 290)
Data Point: (116.73, -12, 245)
Data Point: (116.73, -22, 335)
Data Point: (250.23, -12, 150)
Data Point: (250.23, -22, 240)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -36 to -80	31,33,60,63,34,32	30800
Region 2	CH above 0	40,9,10,11,12,13,64,17,39,57	130.54365
Region 3	Sand Fill	19,20,21,22,23,24,25,26,27,28	629.28815
Region 4	EMBANKMENT FILL CH	19,46,41,42,43,66,28	1500.8133
Region 5	EMBANKMENT FILL CH	43,44,45,65,29,66	501.84775
Region 6	CH, -22 to -36	35,33,60,59	2800
Region 7	CH, -12 to -22	37,35,59,58	2000

Region 8	CH, 0 to -12	57,58,37,2,1,3,4,5,6,7,8,40	2203.9585
Region 9	CH, -22 to -36	63,62,36,34	3496.78
Region 10	CH, -12 to -22	62,61,38,36	2497.7
Region 11	CH, 0 to -12	61,65,45,47,48,49,50,51,52,53,54,55,30,38	1282.4538
Region 12	CH, -12 to -22 SG	58,59,62,61	2502.3
Region 13	CH, -22 to -36 SG	60,59,62,63	3503.22
Region 14	CH, 0 to -12 SG	57,58,61,65,29,66,28,27,26,25,24,23,22,21,20,19,18,39	1448.4571
Region 15	EMBANKMENT FILL CH	64,17,39,56,19,46	368.6281

Points

	X (ft)	Y (ft)
Point 1	-195.89	-1.8
Point 2	-200	-1.79
Point 3	-169.15	-1.8
Point 4	-146.39	-1.65
Point 5	-122.74	-1.62
Point 6	-98.28	-1.36
Point 7	-85.7	-0.94
Point 8	-66.38	-0.23
Point 9	-52.15	0.5
Point 10	-38.25	0.23
Point 11	-36.18	0.46
Point 12	-23.63	0.86
Point 13	-19.22	0.94
Point 14	-5.71	4.75
Point 15	-0.42	4.91
Point 16	-0.22	4.77
Point 17	4.93	4.5
Point 18	24.3	-0.66
Point 19	40.33	-3.85
Point 20	53.08	-5.02
Point 21	69.13	-8.93
Point 22	90.17	-10.85
Point 23	106.69	-11.22
Point 24	116.58	-11.18
Point 25	126.69	-10.14
Point 26	142.13	-9.46
Point 27	157.98	-8.78
Point 28	178.08	-4.54
Point 29	214.93	-4.22
Point 30	500	-4.27
Point 31	-200	-80
Point 32	500	-80
Point 33	-200	-36
Point 34	500	-36
Point 35	-200	-22
Point 36	500	-22

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Point 37	-200	-12
Point 38	500	-12
Point 39	22	0
Point 40	-63	0
Point 41	111.73	14
Point 42	121.73	14
Point 43	161	4
Point 44	241	2
Point 45	259.47	-4.16
Point 46	81.73	6.5
Point 47	284.55	-5.2
Point 48	300.6	-9.14
Point 49	320.9	-11
Point 50	337.4	-11.22
Point 51	347.09	-11.26
Point 52	356.8	-10.22
Point 53	372.41	-9.68
Point 54	388.59	-9
Point 55	407.82	-4.54
Point 56	30	-1.79
Point 57	0	0
Point 58	0	-12
Point 59	0	-22
Point 60	0	-36
Point 61	250.23	-12
Point 62	250.23	-22
Point 63	250.23	-36
Point 64	1.73	4.5
Point 65	250.23	-4.22
Point 66	194.59	-4.39

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	1.67	(209.775, 6.649)	95.48317	(95.6795, 9.98737)	(321.487, -11.0078)
2	11190	1.73	(209.775, 6.649)	98.178	(91.592, 8.9655)	(326.676, -11.077)
3	11125	1.73	(222.012, 8.099)	104.948	(94.9526, 9.80565)	(347.656, -11.1993)
4	11126	1.73	(211.573, 8.068)	97.8	(94.9526, 9.80565)	(326.676, -11.077)
5	11189	1.74	(220.223, 6.679)	105.383	(91.592, 8.9655)	(347.656, -11.1993)
6	11198	1.74	(215.328, 6.685)	103.595	(91.592, 8.9655)	(337.813, -11.2217)
7	10678	1.74	(212.321, 8.656)	96.503	(96.344, 10.1535)	(326.676, -11.077)
8	10742	1.74	(210.638, 7.331)	96.992	(93.2077, 9.36942)	(326.676, -11.077)
9	11134	1.74	(217.121, 8.104)	103.041	(94.9526, 9.80565)	(337.813, -11.2217)
10	11262	1.74	(213.466, 5.202)	104.199	(88.0825, 8.08812)	(337.813, -11.2217)
11	11117	1.74	(214.677, 8.089)	98.394	(94.9526, 9.80565)	(332.906, -11.1601)
12	11254	1.74	(207.91, 5.166)	98.732	(88.0825, 8.08812)	(326.676, -11.077)
13	11061	1.74	(223.745, 9.466)	104.404	(98.1894, 10.6149)	(347.656, -11.1993)
14	10614	1.74	(213.943, 9.925)	96.056	(99.3473, 10.9043)	(326.676, -11.077)

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15	10677	1.74	(222.755, 8.687)	103.88	(96.344, 10.1535)	(347.656, -11.1993)
16	10605	1.75	(217.042, 9.945)	97.205	(99.3473, 10.9043)	(332.906, -11.1601)
17	10613	1.75	(224.367, 9.955)	103.454	(99.3473, 10.9043)	(347.656, -11.1993)
18	11181	1.75	(212.881, 6.669)	98.899	(91.592, 8.9655)	(332.906, -11.1601)
19	11062	1.75	(213.316, 9.435)	97.148	(98.1894, 10.6149)	(326.676, -11.077)
20	11253	1.75	(218.367, 5.197)	105.94	(88.0825, 8.08812)	(347.656, -11.1993)
21	11182	1.75	(204.483, 6.52)	93.184	(91.592, 8.9655)	(316.127, -10.5626)
22	10670	1.75	(207.031, 8.527)	91.469	(96.344, 10.1535)	(316.127, -10.5626)
23	6453	1.75	(217.376, 8.765)	100.395	(96.523, 10.1982)	(336.635, -11.2098)
24	10669	1.75	(215.423, 8.677)	97.275	(96.344, 10.1535)	(332.906, -11.1601)
25	10741	1.75	(221.082, 7.362)	104.343	(93.2077, 9.36942)	(347.656, -11.1993)
26	11133	1.75	(230.594, 7.782)	112.655	(94.9526, 9.80565)	(365.12, -9.93219)
27	11646	1.75	(214.778, 6.248)	104.567	(90.5579, 8.70697)	(337.813, -11.2217)
28	11637	1.75	(219.675, 6.242)	106.339	(90.5579, 8.70697)	(347.656, -11.1993)
29	11118	1.75	(206.283, 7.94)	92.63	(94.9526, 9.80565)	(316.127, -10.5626)
30	11710	1.75	(212.81, 4.677)	105.215	(86.84, 7.77749)	(337.813, -11.2217)
31	10686	1.75	(217.867, 8.692)	102.024	(96.344, 10.1535)	(337.813, -11.2217)
32	10549	1.75	(225.927, 11.177)	103.061	(102.24, 11.6275)	(347.656, -11.1993)
33	10750	1.75	(216.189, 7.367)	102.529	(93.2077, 9.36942)	(337.813, -11.2217)
34	11638	1.75	(209.224, 6.212)	99.407	(90.5579, 8.70697)	(326.676, -11.077)
35	11070	1.75	(218.859, 9.472)	102.531	(98.1894, 10.6149)	(337.813, -11.2217)
36	6517	1.76	(215.892, 7.594)	100.79	(93.7515, 9.50537)	(336.635, -11.2098)
37	11053	1.76	(216.417, 9.456)	97.93	(98.1894, 10.6149)	(332.906, -11.1601)
38	11702	1.76	(207.252, 4.641)	99.97	(86.84, 7.77749)	(326.676, -11.077)
39	10606	1.76	(208.655, 9.796)	90.983	(99.3473, 10.9043)	(316.127, -10.5626)
40	6461	1.76	(225.252, 8.63)	107.967	(96.523, 10.1982)	(352.585, -10.6715)
41	11197	1.76	(228.822, 6.362)	112.922	(91.592, 8.9655)	(365.12, -9.93219)
42	10733	1.76	(213.743, 7.352)	97.733	(93.2077, 9.36942)	(332.906, -11.1601)
43	11246	1.76	(202.617, 5.038)	93.754	(88.0825, 8.08812)	(316.127, -10.5626)
44	10550	1.76	(215.514, 11.146)	95.645	(102.24, 11.6275)	(326.676, -11.077)
45	15862	1.76	(213.397, 5.292)	103.398	(88.296, 8.14151)	(337.448, -11.2202)
46	10622	1.76	(219.483, 9.961)	101.559	(99.3473, 10.9043)	(337.813, -11.2217)
47	6389	1.76	(218.822, 9.899)	100.027	(99.2072, 10.8693)	(336.635, -11.2098)
48	10734	1.76	(205.347, 7.203)	92.01	(93.2077, 9.36942)	(316.127, -10.5626)
49	10541	1.76	(218.61, 11.167)	96.87	(102.24, 11.6275)	(332.906, -11.1601)
50	6973	1.76	(223.1, 6.919)	109.087	(92.4724, 9.1856)	(352.585, -10.6715)
51	11701	1.76	(217.712, 4.672)	106.939	(86.84, 7.77749)	(347.656, -11.1993)
52	7037	1.76	(221.454, 5.603)	109.345	(89.3568, 8.40669)	(352.585, -10.6715)
53	11245	1.76	(211.018, 5.187)	99.538	(88.0825, 8.08812)	(332.906, -11.1601)
54	6525	1.76	(223.778, 7.459)	108.075	(93.7515, 9.50537)	(352.585, -10.6715)
55	15342	1.76	(210.573, 7.42)	96.308	(93.4212, 9.4228)	(326.315, -11.0722)
56	11582	1.76	(216.686, 7.761)	103.979	(94.1388, 9.60221)	(337.813, -11.2217)
57	11645	1.76	(228.279, 5.926)	113.719	(90.5579, 8.70697)	(365.12, -9.93219)
58	11573	1.76	(221.578, 7.755)	105.787	(94.1388, 9.60221)	(347.656, -11.1993)
59	11574	1.76	(211.137, 7.724)	98.892	(94.1388, 9.60221)	(326.676, -11.077)
60	11054	1.76	(208.027, 9.307)	92.088	(98.1894, 10.6149)	(316.127, -10.5626)
61	11127	1.76	(204.657, 7.866)	92.962	(94.9526, 9.80565)	(312.913, -10.2682)
62	15798	1.76	(215.528, 6.988)	102.821	(92.31, 9.14501)	(337.448, -11.2202)

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63	11069	1.76	(232.309, 9.149)	111.905	(98.1894, 10.6149)	(365.12, -9.93219)
64	11191	1.76	(202.858, 6.446)	93.57	(91.592, 8.9655)	(312.913, -10.2682)
65	6965	1.76	(215.209, 7.054)	101.796	(92.4724, 9.1856)	(336.635, -11.2098)
66	6581	1.76	(214.358, 6.379)	101.227	(90.8739, 8.78598)	(336.635, -11.2098)
67	11774	1.76	(210.762, 3.055)	105.739	(82.9429, 6.80321)	(337.813, -11.2217)
68	15350	1.76	(216.121, 7.457)	101.396	(93.4212, 9.4228)	(337.448, -11.2202)
69	7029	1.77	(213.553, 5.738)	102.241	(89.3568, 8.40669)	(336.635, -11.2098)
70	10997	1.77	(225.433, 10.79)	103.969	(101.324, 11.3986)	(347.656, -11.1993)
71	15286	1.77	(218.071, 8.995)	100.812	(97.0621, 10.333)	(337.448, -11.2202)
72	6397	1.77	(226.687, 9.764)	107.299	(99.2072, 10.8693)	(352.585, -10.6715)
73	11261	1.77	(226.981, 4.88)	113.495	(88.0825, 8.08812)	(365.12, -9.93219)
74	10998	1.77	(215.016, 10.76)	96.692	(101.324, 11.3986)	(326.676, -11.077)
75	6589	1.77	(222.254, 6.244)	108.507	(90.8739, 8.78598)	(352.585, -10.6715)
76	15870	1.77	(219.184, 5.248)	108.748	(88.296, 8.14151)	(349.094, -11.0454)
77	10621	1.77	(232.925, 9.638)	111.109	(99.3473, 10.9043)	(365.12, -9.93219)
78	6909	1.77	(224.702, 8.194)	108.423	(95.49, 9.94)	(352.585, -10.6715)
79	11255	1.77	(200.993, 4.964)	93.925	(88.0825, 8.08812)	(312.913, -10.2682)
80	11135	1.77	(208.723, 8.049)	97.12	(94.9526, 9.80565)	(320.951, -11.0007)
81	10542	1.77	(210.228, 11.018)	90.591	(102.24, 11.6275)	(316.127, -10.5626)
82	11766	1.77	(205.201, 3.019)	100.85	(82.9429, 6.80321)	(326.676, -11.077)
83	6901	1.77	(216.822, 8.328)	101.554	(95.49, 9.94)	(336.635, -11.2098)
84	11581	1.77	(230.164, 7.438)	113.149	(94.1388, 9.60221)	(365.12, -9.93219)
85	11199	1.77	(206.922, 6.63)	97.683	(91.592, 8.9655)	(320.951, -11.0007)
86	5941	1.77	(219.56, 10.476)	99.119	(100.574, 11.2109)	(336.635, -11.2098)
87	11709	1.77	(226.332, 4.355)	114.335	(86.84, 7.77749)	(365.12, -9.93219)
88	6509	1.77	(208.701, 7.546)	94.199	(93.7515, 9.50537)	(322.202, -11.0174)
89	15278	1.77	(212.529, 8.958)	95.743	(97.0621, 10.333)	(326.315, -11.0722)
90	15277	1.77	(221.192, 9.002)	101.616	(97.0621, 10.333)	(343.727, -11.2461)
91	15854	1.77	(207.843, 5.255)	98.477	(88.296, 8.14151)	(326.315, -11.0722)
92	6526	1.77	(211.109, 7.562)	98.849	(93.7515, 9.50537)	(327.036, -11.0818)
93	6518	1.77	(205.8, 7.44)	93.597	(93.7515, 9.50537)	(316.447, -10.592)
94	10685	1.77	(231.33, 8.37)	111.554	(96.344, 10.1535)	(365.12, -9.93219)
95	15806	1.77	(221.307, 6.944)	108.211	(92.31, 9.14501)	(349.094, -11.0454)
96	11629	1.77	(212.331, 6.233)	100.383	(90.5579, 8.70697)	(332.906, -11.1601)
97	11006	1.77	(220.553, 10.796)	102.058	(101.324, 11.3986)	(337.813, -11.2217)
98	10558	1.77	(221.049, 11.183)	101.13	(102.24, 11.6275)	(337.813, -11.2217)
99	6445	1.77	(210.191, 8.717)	93.753	(96.523, 10.1982)	(322.202, -11.0174)
100	15790	1.78	(209.979, 6.951)	97.886	(92.31, 9.14501)	(326.315, -11.0722)
101	15341	1.78	(219.245, 7.464)	102.166	(93.4212, 9.4228)	(343.727, -11.2461)

Slices of Slip Surface: Optimized

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	99.26253	0.1608185	339.96367	865.65995	0	600
2	Optimized	103.1424	-4.5213475	606.73499	1483.4381	506.16477	0
3	Optimized	105.64555	-8.047425	810.37682	1827.4892	587.23009	0
4	Optimized	108.12515	-11.60765	1016.3104	2618.4219	0	213.59
5	Optimized	110.0642	-14.39175	1177.3354	2911.9885	0	262.6

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6	Optimized	113.54655	-19.39175	1466.5536	3418.744	0	309.65
7	Optimized	115.80235	-22.63065	1653.8652	3722.2214	0	332.23
8	Optimized	116.4108	-23.45924	1701.6153	3873.705	0	339.98
9	Optimized	119.155	-26.669625	1883.9213	4171.0715	0	367.45
10	Optimized	123.5742	-31.83957	2177.7178	4597.1301	0	411.1
11	Optimized	126.0542	-34.516905	2328.5009	4902.418	0	433.58
12	Optimized	127.27905	-35.51837	2382.9785	4962.2386	0	441.79
13	Optimized	131.1383	-38.67376	2554.6189	5171.1442	0	442.42
14	Optimized	138.26925	-43.263535	2794.288	5545.885	0	480.6
15	Optimized	143.5338	-45.87622	2922.9249	5652.9513	0	501.8
16	Optimized	149.61745	-47.665935	2994.8138	5767.6045	0	515.23
17	Optimized	156.13865	-48.75496	3020.0348	5788.6263	0	522.17
18	Optimized	159.49	-48.74764	2997.6421	5682.7683	0	520.63
19	Optimized	165.27	-48.735015	2959.0095	5607.3639	0	517.97
20	Optimized	173.81	-48.716365	2901.9838	5556.3102	0	514.05
21	Optimized	182.2075	-48.698025	2845.9047	5518.3391	0	510.19
22	Optimized	190.4625	-48.679995	2790.6656	5492.4155	0	506.4
23	Optimized	197.12125	-48.66545	2764.0265	5471.362	0	503.35
24	Optimized	203.4719	-48.71767	2770.6919	5451.065	0	501.02
25	Optimized	211.11065	-48.833165	2781.8181	5440.8551	0	498.71
26	Optimized	215.0646	-48.892945	2787.606	5435.7517	0	497.51
27	Optimized	219.4993	-49.331305	2814.9876	5432.1603	0	499.5
28	Optimized	228.09955	-50.20396	2869.3578	5498.677	0	503.58
29	Optimized	236.69985	-51.076615	2923.8437	5565.3094	0	507.65
30	Optimized	243.7035	-51.78726	2968.2823	5523.6694	0	510.97
31	Optimized	248.3185	-51.8363	2971.3498	5447.0416	0	509.38
32	Optimized	252.0988	-51.390775	2944.1243	5254.2522	0	504.52
33	Optimized	256.7188	-50.121825	2866.8803	5051.2589	0	493.1
34	Optimized	261.83175	-48.172875	2740.2518	4723.0371	0	475.56
35	Optimized	269.65445	-44.77173	2507.8312	4347.3737	0	444.95
36	Optimized	279.8327	-40.1354	2192.207	3794.0447	0	403.22
37	Optimized	284.775	-37.898115	2037.2099	3522.958	0	383.08
38	Optimized	286.984	-36.89813	1971.7234	3384.5446	0	374.08
39	Optimized	289.20385	-35.893255	1909.0254	3249.0926	0	365.04

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40	Optimized	295.01985	-31.95993	1663.5716	2825.9731	0	329.64
41	Optimized	304.86245	-25.210385	1242.4541	2012.8086	0	268.89
42	Optimized	315.01245	-16.91543	724.7777	1115.5541	0	194.24
43	Optimized	321.1935	-11.275635	372.88189	480.79125	0	150

Slices of Slip Surface: 11190

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	11190	94.869235	-0.518054	411.07554	879.4576	0	600
2	11190	101.32799	-7.6553835	814.17553	1808.6697	574.17147	0
3	11190	104.88455	-11.58558	1036.122	2590.8418	0	211.56
4	11190	105.9748	-12.79035	1104.1666	2723.8988	0	245.78
5	11190	109.21	-16.36545	1306.0973	3154.2785	0	279.86
6	11190	113.01945	-20.5751	1543.8305	3623.0687	0	319.99
7	11190	115.44445	-23.254865	1695.1711	3880.0032	0	337.67
8	11190	119.155	-27.35526	1926.8242	4262.6214	0	373.62
9	11190	124.21	-32.941335	2242.2413	4711.8859	0	420.6
10	11190	131.48785	-40.983795	2696.4529	5285.1512	0	463.06
11	11190	139.20785	-46.4932	2989.7593	6033.6235	0	509.25
12	11190	146.0925	-46.982055	2975.2221	5875.554	0	510.62
13	11190	154.0175	-47.54478	2958.3561	5693.9292	0	512.21
14	11190	159.49	-47.933355	2946.8517	5565.457	0	513.3
15	11190	165.27	-48.34377	2934.6486	5534.6597	0	514.45
16	11190	173.81	-48.950165	2916.5443	5549.2599	0	516.15
17	11190	182.2075	-49.546435	2898.819	5575.7859	0	517.83
18	11190	190.4625	-50.132585	2881.298	5613.2446	0	519.48
19	11190	197.98	-50.66637	2889.4803	5647.2863	0	520.98
20	11190	204.76	-51.14779	2923.0242	5678.0348	0	522.33
21	11190	211.54	-51.62921	2956.5681	5708.7833	0	523.68
22	11190	219.275	-52.178445	2992.5806	5743.9962	0	525.23
23	11190	227.965	-52.79549	3031.1486	5783.7121	0	526.96
24	11190	236.655	-53.41253	3069.6019	5823.428	0	528.69
25	11190	245.615	-54.04874	3109.2896	5700.8146	0	530.48
26	11190	253.615	-54.616785	3146.1409	5453.9199	0	533.55
27	11190	258.235	-54.08114	3114.5734	5525.9888	0	528.73
28	11190	263.65	-50.67867	2891.9277	5083.9913	0	498.11
29	11190	272.01	-45.425735	2542.5021	4466.9765	0	450.83

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30	11190	280.37	-40.1728	2193.0764	3849.8604	0	403.56
31	11190	284.775	-37.404955	2006.5484	3519.9269	0	378.64
32	11190	286.0055	-36.63179	1955.115	3416.8407	0	371.69
33	11190	290.40825	-33.86536	1782.4226	3065.9961	0	346.79
34	11190	297.20275	-29.596085	1516.1122	2527.5183	0	308.36
35	11190	304.9459	-24.730725	1212.4388	1945.6887	0	264.58
36	11190	315.0959	-18.353055	814.54525	1224.9909	0	207.18
37	11190	323.0534	-13.353055	502.51958	671.95282	0	162.18
38	11190	325.94125	-11.538505	389.28063	476.0321	0	150

Slices of Slip Surface: 11125

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	11125	98.38736	0.0405705	353.19091	874.89365	0	600
2	11125	104.70925	-7.6871745	794.01989	1840.9322	604.4351	0
3	11125	107.91695	-11.608165	1017.6881	2651.2828	0	213.46
4	11125	109.98375	-14.134615	1161.8235	2932.1159	0	260.24
5	11125	114.155	-19.23351	1452.6766	3458.2502	0	308.58
6	11125	119.155	-25.345425	1801.3273	4030.6404	0	355.53
7	11125	124.21	-31.52457	2153.8601	4530.3571	0	407.85
8	11125	127.2806	-35.27804	2367.9484	4789.7685	0	439.63
9	11125	132.07845	-41.142855	2702.5217	5228.2816	0	464.23
10	11125	139.20785	-46.4932	2989.7593	6033.4528	0	509.25
11	11125	146.0925	-46.982055	2975.2221	5875.4281	0	510.62
12	11125	154.0175	-47.54478	2958.3561	5693.8033	0	512.21
13	11125	159.49	-47.933355	2946.8517	5565.457	0	513.3
14	11125	165.27	-48.34377	2934.6486	5534.5429	0	514.45
15	11125	173.81	-48.950165	2916.5443	5549.0263	0	516.15
16	11125	182.2075	-49.546435	2898.819	5575.6651	0	517.83
17	11125	190.4625	-50.132585	2881.298	5613.1238	0	519.48
18	11125	199.675	-50.786725	2897.8158	5654.7867	0	521.31
19	11125	209.845	-51.508855	2948.1316	5700.9831	0	523.34
20	11125	219.275	-	2992.5806	5743.8814	0	525.23

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			52.178445				
21	11125	227.965	-52.79549	3031.1486	5783.4825	0	526.96
22	11125	236.655	-53.41253	3069.6019	5823.1984	0	528.69
23	11125	245.615	-54.04874	3109.2896	5700.7065	0	530.48
24	11125	253.615	-54.616785	3146.1409	5453.7726	0	533.55
25	11125	258.235	-54.262395	3125.888	5485.697	0	530.36
26	11125	263.65	-51.65467	2952.8285	5134.1215	0	506.89
27	11125	272.01	-47.62871	2679.9513	4656.4787	0	470.66
28	11125	280.37	-43.602745	2407.1819	4178.7281	0	434.42
29	11125	284.775	-41.481405	2260.8313	3922.218	0	415.33
30	11125	290.57865	-38.686525	2083.3148	3545.0026	0	390.18
31	11125	298.37865	-34.930245	1848.9297	3045.3843	0	356.37
32	11125	305.675	-31.4165	1629.6441	2622.8402	0	324.75
33	11125	315.825	-26.528515	1324.6462	2059.4462	0	280.76
34	11125	323.0643	-23.04226	1107.1242	1665.1822	0	249.38
35	11125	331.3143	-19.06927	859.18717	1244.848	0	213.62
36	11125	341.6969	-14.06927	547.20041	720.3432	0	168.62
37	11125	346.5419	-11.736045	401.61286	474.68643	0	150
38	11125	347.3732	-11.335715	376.62072	430.02371	0	150

Slices of Slip Surface: 11126

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	11126	98.38736	0.0405705	353.19091	875.69557	0	600
2	11126	104.70925	-7.6871745	794.01989	1841.6998	604.87827	0
3	11126	107.91695	-11.608165	1017.6881	2651.8754	0	213.46
4	11126	109.98375	-14.134615	1161.8235	2932.8411	0	260.24
5	11126	114.155	-19.23351	1452.6766	3459.1641	0	308.58
6	11126	119.155	-25.345425	1801.3273	4031.624	0	355.53
7	11126	124.21	-31.52457	2153.8601	4531.3784	0	407.85
8	11126	127.2806	-35.27804	2367.9484	4790.8942	0	439.63
9	11126	132.07845	-41.142855	2702.5217	5229.4856	0	464.23
10	11126	139.20785	-46.4932	2989.7593	6033.6235	0	509.25
11	11126	146.0925	-46.982055	2975.2221	5875.554	0	510.62
12	11126	154.0175	-47.54478	2958.3561	5693.9292	0	512.21
			-				

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13	11126	159.49	47.933355	2946.8517	5565.457	0	513.3
14	11126	165.27	-48.34377	2934.6486	5534.6597	0	514.45
15	11126	173.81	-48.950165	2916.5443	5549.1431	0	516.15
16	11126	182.2075	-49.546435	2898.819	5575.7859	0	517.83
17	11126	190.4625	-50.132585	2881.298	5613.1238	0	519.48
18	11126	197.98	-50.66637	2889.4803	5647.2863	0	520.98
19	11126	204.76	-51.14779	2923.0242	5678.0348	0	522.33
20	11126	211.54	-51.62921	2956.5681	5708.7833	0	523.68
21	11126	219.275	-52.178445	2992.5806	5743.8814	0	525.23
22	11126	227.965	-52.79549	3031.1486	5783.5973	0	526.96
23	11126	236.655	-53.41253	3069.6019	5823.3132	0	528.69
24	11126	245.615	-54.04874	3109.2896	5700.8146	0	530.48
25	11126	253.615	-54.616785	3146.1409	5453.9199	0	533.55
26	11126	258.235	-54.08114	3114.5734	5531.4736	0	528.73
27	11126	263.65	-50.67867	2891.9277	5089.0554	0	498.11
28	11126	272.01	-45.425735	2542.5021	4471.4329	0	450.83
29	11126	280.37	-40.1728	2193.0764	3853.7092	0	403.56
30	11126	284.775	-37.404955	2006.5484	3523.3138	0	378.64
31	11126	286.0055	-36.63179	1955.115	3420.2512	0	371.69
32	11126	290.40825	-33.86536	1782.4226	3069.1116	0	346.79
33	11126	297.20275	-29.596085	1516.1122	2530.1353	0	308.36
34	11126	304.9459	-24.730725	1212.4388	1947.637	0	264.58
35	11126	312.19385	-20.17653	928.29128	1430.9212	0	223.59
36	11126	317.99795	-16.529585	700.72629	1021.5697	0	190.77
37	11126	323.0534	-13.353055	502.51958	672.60161	0	162.18
38	11126	325.94125	-11.538505	389.28063	476.48171	0	150

Slices of Slip Surface: 11189

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	11189	94.869235	-0.518054	411.07554	878.16774	0	600
2	11189	101.32799	-7.6553835	814.17553	1811.5168	575.81527	0
3	11189	104.88455	-11.58558	1036.122	2594.5097	0	211.56
4	11189	105.9748	-12.79035	1104.1666	2727.839	0	245.78
5	11189	109.21	-16.36545	1306.0973	3158.8049	0	279.86
6	11189	113.01945	-20.5751	1543.8305	3628.2724	0	319.99
7	11189	115.44445	-	1695.1711	3885.6166	0	337.67

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			23.254865				
8	11189	119.155	-27.35526	1926.8242	4268.7449	0	373.62
9	11189	124.21	-32.941335	2242.2413	4718.6498	0	420.6
10	11189	131.48785	-40.983795	2696.4529	5292.773	0	463.06
11	11189	139.20785	-46.4932	2989.7593	6033.9648	0	509.25
12	11189	146.0925	-46.982055	2975.2221	5875.8057	0	510.62
13	11189	154.0175	-47.54478	2958.3561	5694.1809	0	512.21
14	11189	159.49	-47.933355	2946.8517	5565.7873	0	513.3
15	11189	165.27	-48.34377	2934.6486	5534.8933	0	514.45
16	11189	173.81	-48.950165	2916.5443	5549.3767	0	516.15
17	11189	182.2075	-49.546435	2898.819	5576.0276	0	517.83
18	11189	190.4625	-50.132585	2881.298	5613.4863	0	519.48
19	11189	199.675	-50.786725	2897.8158	5655.179	0	521.31
20	11189	209.845	-51.508855	2948.1316	5701.2773	0	523.34
21	11189	219.275	-52.178445	2992.5806	5744.2258	0	525.23
22	11189	227.965	-52.79549	3031.1486	5783.9417	0	526.96
23	11189	236.655	-53.41253	3069.6019	5823.6576	0	528.69
24	11189	245.615	-54.04874	3109.2896	5701.0307	0	530.48
25	11189	253.615	-54.616785	3146.1409	5454.0673	0	533.55
26	11189	258.235	-54.262395	3125.888	5476.9427	0	530.36
27	11189	263.65	-51.65467	2952.8285	5125.8231	0	506.89
28	11189	272.01	-47.62871	2679.9513	4648.8269	0	470.66
29	11189	280.37	-43.602745	2407.1819	4171.9385	0	434.42
30	11189	284.775	-41.481405	2260.8313	3915.8111	0	415.33
31	11189	290.57865	-38.686525	2083.3148	3539.0269	0	390.18
32	11189	298.37865	-34.930245	1848.9297	3040.3144	0	356.37
33	11189	305.675	-31.4165	1629.6441	2618.3132	0	324.75
34	11189	315.825	-26.528515	1324.6462	2055.8068	0	280.76
35	11189	323.0643	-23.04226	1107.1242	1662.2266	0	249.38
36	11189	331.3143	-19.06927	859.18717	1242.5533	0	213.62
37	11189	341.6969	-14.06927	547.20041	718.89642	0	168.62
38	11189	346.5419	-11.736045	401.61286	473.61798	0	150
39	11189	347.3732	-	376.62072	429.13287	0	150

			11.335715				

Slices of Slip Surface: 11198

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	11198	94.869235	-0.518054	411.07554	892.19238	0	600
2	11198	101.32799	-7.6553835	814.17553	1805.928	572.58856	0
3	11198	104.88455	-11.58558	1036.122	2582.5221	0	211.56
4	11198	105.9748	-12.79035	1104.1666	2715.2208	0	245.78
5	11198	109.21	-16.36545	1306.0973	3144.1605	0	279.86
6	11198	113.01945	-20.5751	1543.8305	3611.3604	0	319.99
7	11198	115.44445	-23.254865	1695.1711	3867.5948	0	337.67
8	11198	119.155	-27.35526	1926.8242	4248.9412	0	373.62
9	11198	124.21	-32.941335	2242.2413	4696.8699	0	420.6
10	11198	131.48785	-40.983795	2696.4529	5268.2992	0	463.06
11	11198	139.20785	-46.66611	3000.5445	6024.3345	0	510.81
12	11198	146.0925	-47.56234	3011.4365	5909.0072	0	515.85
13	11198	154.0175	-48.593995	3023.8241	5776.4975	0	521.65
14	11198	159.49	-49.30639	3032.5259	5682.1894	0	525.65
15	11198	165.27	-50.058815	3041.6662	5686.7953	0	529.89
16	11198	173.81	-51.17053	3055.1357	5753.7944	0	536.14
17	11198	182.2075	-52.2637	3068.3565	5831.9555	0	542.29
18	11198	190.4625	-53.338315	3081.33	5920.1274	0	548.33
19	11198	199.675	-54.537575	3131.8833	6018.4422	0	555.07
20	11198	209.845	-55.86148	3219.7359	6127.0636	0	562.52
21	11198	219.275	-57.08905	3298.9773	6227.8894	0	569.42
22	11198	227.965	-58.220295	3369.6126	6321.0048	0	575.78
23	11198	236.655	-59.35154	3440.2479	6414.1201	0	582.14
24	11198	245.615	-60.51793	3512.9382	6346.8816	0	588.7
25	11198	253.615	-61.55935	3579.3999	6149.5898	0	596.03
26	11198	258.235	-61.224	3560.3548	6325.7488	0	593.02
27	11198	263.65	-57.82153	3337.6733	5882.7074	0	562.39
28	11198	272.01	-52.56859	2988.2477	5264.376	0	515.12
29	11198	280.37	-47.315655	2638.822	4645.9432	0	467.84
30	11198	284.775	-44.54781	2452.1135	4315.2832	0	442.93
31	11198	288.3447	-42.304825	2309.1508	4021.7424	0	422.74
32	11198	295.0341	-38.10161	2046.8825	3477.713	0	384.91
33	11198	299.4894	-35.30215	1872.1244	3117.5262	0	359.72
34	11198	305.6149	-	1631.936	2667.7776	0	325.08

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			31.453225				
35	11198	315.7649	-25.07556	1234.0356	1938.2801	0	267.68
36	11198	324.81865	-19.386725	879.00897	1306.9372	0	216.48
37	11198	332.6559	-14.46224	571.72694	783.78417	0	172.16
38	11198	336.98725	-11.740665	401.89496	492.64444	0	150
39	11198	337.6066	-11.35152	377.61058	448.28833	0	150

Slices of Slip Surface: 10678

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	10678	100.36201	0.269264	325.99947	933.16856	0	600
2	10678	107.56205	-7.6872155	775.35219	1930.4468	666.89417	0
3	10678	111.10445	-11.6018	996.39503	2762.1984	0	215.47
4	10678	111.5974	-12.14653	1027.2169	2815.5544	0	243.3
5	10678	114.155	-14.972825	1186.8209	3086.6529	0	270.24
6	10678	118.54705	-19.826295	1460.9438	3543.1188	0	314.14
7	10678	121.12205	-22.671825	1621.6294	3813.5827	0	330.18
8	10678	124.21	-26.084195	1814.3554	4060.5198	0	358.88
9	10678	129.93655	-32.41237	2171.743	4488.5719	0	412.1
10	10678	134.7344	-37.714285	2471.2408	4867.8707	0	432.21
11	10678	139.20785	-39.80205	2572.2072	5310.2374	0	449.03
12	10678	146.0925	-40.68198	2582.0246	5193.4628	0	453.92
13	10678	154.0175	-41.69488	2593.4146	5059.161	0	459.56
14	10678	159.49	-42.394325	2601.1909	4963.5958	0	463.45
15	10678	165.27	-43.13307	2609.4521	4967.0886	0	467.55
16	10678	173.81	-44.224575	2621.648	5032.3655	0	473.62
17	10678	182.2075	-45.297865	2633.6938	5108.6546	0	479.59
18	10678	190.4625	-46.35294	2645.4696	5194.8102	0	485.46
19	10678	197.98	-47.31376	2680.2619	5273.1812	0	490.8
20	10678	204.76	-48.180315	2737.7588	5343.9916	0	495.62
21	10678	211.54	-49.04687	2795.4019	5414.802	0	500.44
22	10678	219.275	-50.035485	2858.9072	5495.5717	0	505.94
23	10678	227.965	-51.14616	2928.194	5586.5463	0	512.12
24	10678	236.655	-52.256835	2997.4808	5677.5208	0	518.29
25	10678	245.615	-53.402015	3068.9678	5608.1176	0	524.66
26	10678	253.615	-54.4245	3134.1794	5408.7341	0	531.82

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27	10678	258.235	-54.08114	3114.5734	5529.4168	0	528.73
28	10678	263.65	-50.67867	2891.9277	5086.9285	0	498.11
29	10678	272.01	-45.425735	2542.5021	4469.5086	0	450.83
30	10678	280.37	-40.1728	2193.0764	3852.0886	0	403.56
31	10678	284.775	-37.404955	2006.5484	3521.8085	0	378.64
32	10678	286.0055	-36.63179	1955.115	3418.7775	0	371.69
33	10678	290.40825	-33.86536	1782.4226	3067.7408	0	346.79
34	10678	297.20275	-29.596085	1516.1122	2529.0137	0	308.36
35	10678	304.9459	-24.730725	1212.4388	1946.7602	0	264.58
36	10678	312.19385	-20.17653	928.29128	1430.221	0	223.59
37	10678	317.99795	-16.529585	700.72629	1021.03	0	190.77
38	10678	323.0534	-13.353055	502.51958	672.22807	0	162.18
39	10678	325.94125	-11.538505	389.28063	476.18197	0	150

Slices of Slip Surface: 10742

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	10742	97.10938	-0.2522355	379.82988	935.50676	0	600
2	10742	104.54135	-7.684183	794.93296	1906.5612	641.79885	0
3	10742	108.46435	-11.607205	1014.0514	2714.4283	0	213.81
4	10742	110.29355	-13.43643	1116.2405	2929.9745	0	254.14
5	10742	114.155	-17.29786	1331.9121	3339.1476	0	291.16
6	10742	117.71855	-20.86143	1530.944	3677.5323	0	324.05
7	10742	120.29355	-23.43643	1674.7669	3923.862	0	337.61
8	10742	124.21	-27.35286	1893.5066	4220.2586	0	370.3
9	10742	129.77355	-32.91643	2204.283	4585.1379	0	416.75
10	10742	134.5714	-37.714285	2472.1927	4919.2242	0	432.28
11	10742	139.20785	-39.80205	2572.2072	5311.086	0	449.03
12	10742	146.0925	-40.68198	2582.0246	5194.2138	0	453.92
13	10742	154.0175	-41.69488	2593.4146	5059.912	0	459.56
14	10742	159.49	-42.394325	2601.1909	4964.2527	0	463.45
15	10742	165.27	-43.13307	2609.4521	4967.7855	0	467.55
16	10742	173.81	-44.224575	2621.648	5033.0624	0	473.62
17	10742	182.2075	-45.297865	2633.6938	5109.3756	0	479.59
18	10742	190.4625	-46.35294	2645.4696	5195.5312	0	485.46
19	10742	197.98	-47.31376	2680.2619	5273.9127	0	490.8
20	10742	204.76	-48.180315	2737.7588	5344.7231	0	495.62

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21	10742	211.54	-49.04687	2795.4019	5415.5335	0	500.44
22	10742	219.275	-50.035485	2858.9072	5496.3707	0	505.94
23	10742	227.965	-51.14616	2928.194	5587.3453	0	512.12
24	10742	236.655	-52.256835	2997.4808	5678.3199	0	518.29
25	10742	245.615	-53.402015	3068.9678	5608.9774	0	524.66
26	10742	253.615	-54.4245	3134.1794	5409.4667	0	531.82
27	10742	258.235	-54.08114	3114.5734	5521.8751	0	528.73
28	10742	263.65	-50.67867	2891.9277	5080.1425	0	498.11
29	10742	272.01	-45.425735	2542.5021	4463.5329	0	450.83
30	10742	280.37	-40.1728	2193.0764	3846.8219	0	403.56
31	10742	284.775	-37.404955	2006.5484	3517.1045	0	378.64
32	10742	286.0055	-36.63179	1955.115	3414.1038	0	371.69
33	10742	290.40825	-33.86536	1782.4226	3063.5037	0	346.79
34	10742	297.20275	-29.596085	1516.1122	2525.3998	0	308.36
35	10742	304.9459	-24.730725	1212.4388	1944.0326	0	264.58
36	10742	315.0959	-18.353055	814.54525	1223.8238	0	207.18
37	10742	323.0534	-13.353055	502.51958	671.18607	0	162.18
38	10742	325.94125	-11.538505	389.28063	475.39227	0	150

Slices of Slip Surface: 11134

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	11134	98.38736	0.0405705	353.19091	886.49831	0	600
2	11134	104.70925	-7.6871745	794.01989	1838.9583	603.2955	0
3	11134	107.91695	-11.608165	1017.6881	2643.184	0	213.46
4	11134	109.98375	-14.134615	1161.8235	2923.4136	0	260.24
5	11134	114.155	-19.23351	1452.6766	3447.9364	0	308.58
6	11134	119.155	-25.345425	1801.3273	4018.5914	0	355.53
7	11134	124.21	-31.52457	2153.8601	4516.8253	0	407.85
8	11134	127.2806	-35.27804	2367.9484	4775.5635	0	439.63
9	11134	132.07845	-41.142855	2702.5217	5212.7049	0	464.23
10	11134	139.20785	-46.66611	3000.5445	6023.8255	0	510.81
11	11134	146.0925	-47.56234	3011.4365	5908.6319	0	515.85
12	11134	154.0175	-48.593995	3023.8241	5776.1222	0	521.65
13	11134	159.49	-49.30639	3032.5259	5681.5327	0	525.65

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14	11134	165.27	-50.058815	3041.6662	5686.3309	0	529.89
15	11134	173.81	-51.17053	3055.1357	5753.33	0	536.14
16	11134	182.2075	-52.2637	3068.3565	5831.475	0	542.29
17	11134	190.4625	-53.338315	3081.33	5919.6469	0	548.33
18	11134	197.98	-54.31692	3117.209	5999.8192	0	553.83
19	11134	204.76	-55.199525	3175.8587	6072.2172	0	558.79
20	11134	211.54	-56.08213	3234.3621	6144.6152	0	563.76
21	11134	219.275	-57.08905	3298.9773	6227.4329	0	569.42
22	11134	227.965	-58.220295	3369.6126	6320.5483	0	575.78
23	11134	236.655	-59.35154	3440.2479	6413.5496	0	582.14
24	11134	245.615	-60.51793	3512.9382	6346.4519	0	588.7
25	11134	253.615	-61.55935	3579.3999	6149.1504	0	596.03
26	11134	258.235	-61.224	3560.3548	6330.8909	0	593.02
27	11134	263.65	-57.82153	3337.6733	5887.4677	0	562.39
28	11134	272.01	-52.56859	2988.2477	5268.5285	0	515.12
29	11134	280.37	-47.315655	2638.822	4649.6907	0	467.84
30	11134	284.775	-44.54781	2452.1135	4318.6701	0	442.93
31	11134	288.3447	-42.304825	2309.1508	4024.9069	0	422.74
32	11134	295.0341	-38.10161	2046.8825	3480.4977	0	384.91
33	11134	299.4894	-35.30215	1872.1244	3120.0802	0	359.72
34	11134	305.6149	-31.453225	1631.936	2669.9726	0	325.08
35	11134	315.7649	-25.07556	1234.0356	1939.8465	0	267.68
36	11134	324.81865	-19.386725	879.00897	1308.0176	0	216.48
37	11134	332.6559	-14.46224	571.72694	784.38918	0	172.16
38	11134	336.98725	-11.740665	401.89496	493.02397	0	150
39	11134	337.6066	-11.35152	377.61058	448.6367	0	150

Slices of Slip Surface: 11262

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	11262	91.100955	-1.1009545	472.11425	892.78519	0	600
2	11262	97.60707	-7.6070575	835.51228	1759.6455	533.54856	0
3	11262	101.54735	-11.54734	1055.6004	2509.3844	0	209.46
4	11262	104.345	-14.345	1211.8513	2846.2177	0	258.81
5	11262	109.21	-19.21	1483.6616	3448.2681	0	305.46
6	11262	111.865	-21.865	1631.8975	3771.4977	0	330.92
7	11262	114.29	-24.29	1767.3038	4004.7256	0	346.43
8	11262	119.155	-29.155	2039.0762	4461.9123	0	389.81
9	11262	123.865	-33.865	2302.1542	4841.6114	0	429.14

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10	11262	126.345	-36.345	2440.6456	5017.8959	0	423.57
11	11262	131.48785	-41.487855	2727.9245	5368.674	0	467.6
12	11262	139.20785	-46.66611	3000.5445	6025.3526	0	510.81
13	11262	146.0925	-47.56234	3011.4365	5910.0083	0	515.85
14	11262	154.0175	-48.593995	3023.8241	5777.3734	0	521.65
15	11262	159.49	-49.30639	3032.5259	5682.8462	0	525.65
16	11262	165.27	-50.058815	3041.6662	5687.6082	0	529.89
17	11262	173.81	-51.17053	3055.1357	5754.6073	0	536.14
18	11262	182.2075	-52.2637	3068.3565	5832.7964	0	542.29
19	11262	190.4625	-53.338315	3081.33	5920.9682	0	548.33
20	11262	199.675	-54.537575	3131.8833	6019.3198	0	555.07
21	11262	209.845	-55.86148	3219.7359	6127.9411	0	562.52
22	11262	219.275	-57.08905	3298.9773	6228.8023	0	569.42
23	11262	227.965	-58.220295	3369.6126	6321.9176	0	575.78
24	11262	236.655	-59.35154	3440.2479	6415.033	0	582.14
25	11262	245.615	-60.51793	3512.9382	6347.8486	0	588.7
26	11262	253.615	-61.55935	3579.3999	6150.4687	0	596.03
27	11262	258.235	-61.224	3560.3548	6317.1787	0	593.02
28	11262	263.65	-57.82153	3337.6733	5874.7061	0	562.39
29	11262	272.01	-52.56859	2988.2477	5257.1849	0	515.12
30	11262	280.37	-47.315655	2638.822	4639.5624	0	467.84
31	11262	284.775	-44.54781	2452.1135	4309.2621	0	442.93
32	11262	288.3447	-42.304825	2309.1508	4016.173	0	422.74
33	11262	295.0341	-38.10161	2046.8825	3472.7764	0	384.91
34	11262	299.4894	-35.30215	1872.1244	3113.0281	0	359.72
35	11262	305.6149	-31.453225	1631.936	2663.9787	0	325.08
36	11262	315.7649	-25.07556	1234.0356	1935.3945	0	267.68
37	11262	324.81865	-19.386725	879.00897	1304.9925	0	216.48
38	11262	332.6559	-14.46224	571.72694	782.47691	0	172.16
39	11262	336.98725	-11.740665	401.89496	491.73151	0	150
40	11262	337.6066	-11.35152	377.61058	447.42766	0	150

PG Case.BS

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 170
Last Edited By: Cox, Lane MVK
Date: 3/21/2011
Time: 9:15:58 AM
File Name: 5c(1) Typical 1.2nd SC.80%SG.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\2nd Stage Construction\80%SG,1 Layer of Fabric\Slope W\
Last Solved Date: 3/21/2011
Last Solved Time: 9:42:28 AM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

PG Case.BS

Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

SlipSurface
- Direction of movement: Left to Right
- Use Passive Mode: No
- Slip Surface Option: Block
- Critical slip surfaces saved: 100
- Optimize Critical Slip Surface Location: Yes
- Tension Crack
  - Tension Crack Option: Tension Crack Line
  - Percentage Wet: 1
  - Tension Crack Fluid Unit Weight: 62.4 pcf

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FOS Distribution
FOS Calculation Option: Constant
Restrict Block Crossing: Yes
Advanced
Number of Slices: 30
Optimization Tolerance: 0.01
Minimum Slip Surface Depth: 0.1 ft
Optimization Maximum Iterations: 2000
Optimization Convergence Tolerance: 1e-007
Starting Optimization Points: 8
Ending Optimization Points: 16
Complete Passes per Insertion: 1
Driving Side Maximum Convex Angle: 5 °
Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH
Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH above 0
Model: Mohr-Coulomb
Unit Weight: 108 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, 0 to -12
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -12 (2)
Cohesion Spatial Fn: CH, 0 to -12
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -12 to -22
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -12 to -22 (2)

Cohesion Spatial Fn: CH, -12 to -22
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -22 to -36
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -22 to -36 (2)
Cohesion Spatial Fn: CH, -22 to -36
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -36 to -80
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -36 to -80 (2)
Cohesion Spatial Fn: CH, -36 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sand Fill
Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, 0 to -12 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -12 (2)
Cohesion Spatial Fn: CH, 0 to -12 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -12 to -22 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -12 to -22 (2)
Cohesion Spatial Fn: CH, -12 to -22 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure

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Piezometric Line: 1

CH, -22 to -36 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -22 to -36 (2)
Cohesion Spatial Fn: CH, -22 to -36 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Limits

Left Coordinate: (-200, -1.79) ft
Right Coordinate: (500, -4.27) ft

Slip Surface Block

Left Grid
Upper Left: (15, -1) ft
Lower Left: (93, -13) ft
Lower Right: (100, -48) ft
X Increments: 5
Y Increments: 5
Starting Angle: 135 °
Ending Angle: 160 °
Angle Increments: 7
Right Grid
Upper Left: (227, -12) ft
Lower Left: (312, -12) ft
Lower Right: (312, -60) ft
X Increments: 7
Y Increments: 5
Starting Angle: 20 °
Ending Angle: 45 °
Angle Increments: 7

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	11
	98	11
	194.59	-4.39

	214.93	-4.22
	250.23	-4.22
	259.47	-4.16
	284.55	-5.2
	285	-5.3
	406	-5.3
	407.82	-4.54
	500	-4.27

Reinforcements

Reinforcement 1

Type: Fabric
Outside Point: (177, 0) ft
Inside Point: (23, 0) ft
Slip Surface Intersection: (21.839, 0) ft
Total Length: 154 ft
Reinforcement Direction: 0 °
Applied Load Option: Variable
F of S Dependent: No
Contact Cohesion: 265 psf
Contact Phi: 19 °
Interface Factor: 2
Bond Safety Factor: 1
Fabric Capacity: 27000 lbs
Fabric Safety Factor: 1
Fabric Load: 27000 lbs
Load Distribution: Even along reinf.
Load Orientation: 0
Applied Load: 27000 lbs
Fabric Load Used: 0 lbs
Resisting Force Used: 704.61 lbs/ft
Available Bond Length: 0 ft
Required Bond Length: 0 ft
Governing Component: Bond

Tension Crack Line

	X (ft)	Y (ft)
	4.93	4.58
	16	1.60984
	83	2
	112	10
	122	10
	159	1
	161	4

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Spatial Functions

CH, 0 to -12

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -1.5, 75)
Data Point: (-300, -12, 75)
Data Point: (-23.63, 0, 75)
Data Point: (-23.63, -12, 75)
Data Point: (0, 0, 250)
Data Point: (0, -12, 250)
Data Point: (250.26, -4.13, 150)
Data Point: (250.26, -12, 150)
Data Point: (500, -4.27, 150)
Data Point: (500, -12, 150)

CH, -22 to -36 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -22, 350)
Data Point: (0, -36, 476)
Data Point: (40.33, -22, 290)
Data Point: (40.33, -36, 416)
Data Point: (116.73, -22, 327)
Data Point: (116.73, -36, 453)
Data Point: (250.23, -22, 240)
Data Point: (250.23, -36, 366)

CH, -12 to -22

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -12, 125)
Data Point: (-300, -22, 225)
Data Point: (-23.63, -12, 125)
Data Point: (-23.63, -22, 225)
Data Point: (0, -12, 350)
Data Point: (0, -22, 350)
Data Point: (250.26, -12, 150)
Data Point: (250.26, -22, 240)
Data Point: (500, -12, 150)
Data Point: (500, -22, 240)

CH, -22 to -36

Model: Linear Interpolation

Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -22, 225)
Data Point: (-300, -36, 365)
Data Point: (-23.63, -22, 225)
Data Point: (-23.63, -36, 365)
Data Point: (0, -22, 350)
Data Point: (0, -36, 476)
Data Point: (250.26, -22, 240)
Data Point: (250.26, -36, 366)
Data Point: (500, -22, 240)
Data Point: (500, -36, 366)

CH, -36 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -36, 365)
Data Point: (-300, -80, 805)
Data Point: (-23.63, -36, 365)
Data Point: (-23.63, -80, 805)
Data Point: (0, -36, 476)
Data Point: (0, -80, 872)
Data Point: (250.26, -36, 366)
Data Point: (250.26, -80, 762)
Data Point: (500, -36, 366)
Data Point: (500, -80, 762)

CH, 0 to -12 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -6, 100)
Data Point: (0, -6, 101)
Data Point: (178.08, -6, 111)

CH, -12 to -22 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -17, 100)
Data Point: (0, -17, 109)
Data Point: (178.08, -17, 100)

CH, -22 to -36 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)

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Data Point: (-23.63, -29, 102)
Data Point: (0, -29, 104)
Data Point: (178.08, -29, 102)

CH, -36 to -80 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -58, 105)
Data Point: (0, -58, 106)
Data Point: (178.08, -58, 105)

CH, 0 to -12 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, 0, 250)
Data Point: (0, -12, 250)
Data Point: (40.33, 0, 171)
Data Point: (40.33, -12, 171)
Data Point: (116.73, 0, 219)
Data Point: (116.73, -12, 219)
Data Point: (250.23, -4.13, 150)
Data Point: (250.23, -12, 150)

CH, -12 to -22 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -12, 350)
Data Point: (0, -22, 350)
Data Point: (40.33, -12, 200)
Data Point: (40.33, -22, 290)
Data Point: (116.73, -12, 245)
Data Point: (116.73, -22, 335)
Data Point: (250.23, -12, 150)
Data Point: (250.23, -22, 240)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -36 to -80	31,33,60,63,34,32	30800
Region 2	CH above 0	40,9,10,11,12,13,64,17,39,57	130.54365
Region 3	Sand Fill	19,20,21,22,23,24,25,26,27,28	629.28815
Region 4	EMBANKMENT FILL CH	19,46,41,42,43,66,28	1500.8133
Region 5	EMBANKMENT FILL CH	43,44,45,65,29,66	501.84775
Region 6	CH, -22 to -36	35,33,60,59	2800
Region 7	CH, -12 to -22	37,35,59,58	2000

Region 8	CH, 0 to -12	57,58,37,2,1,3,4,5,6,7,8,40	2203.9585
Region 9	CH, -22 to -36	63,62,36,34	3496.78
Region 10	CH, -12 to -22	62,61,38,36	2497.7
Region 11	CH, 0 to -12	61,65,45,47,48,49,50,51,52,53,54,55,30,38	1282.4538
Region 12	CH, -12 to -22 SG	58,59,62,61	2502.3
Region 13	CH, -22 to -36 SG	60,59,62,63	3503.22
Region 14	CH, 0 to -12 SG	57,58,61,65,29,66,28,27,26,25,24,23,22,21,20,19,18,39	1448.4571
Region 15	EMBANKMENT FILL CH	64,17,39,56,19,46	368.6281

Points

	X (ft)	Y (ft)
Point 1	-195.89	-1.8
Point 2	-200	-1.79
Point 3	-169.15	-1.8
Point 4	-146.39	-1.65
Point 5	-122.74	-1.62
Point 6	-98.28	-1.36
Point 7	-85.7	-0.94
Point 8	-66.38	-0.23
Point 9	-52.15	0.5
Point 10	-38.25	0.23
Point 11	-36.18	0.46
Point 12	-23.63	0.86
Point 13	-19.22	0.94
Point 14	-5.71	4.75
Point 15	-0.42	4.91
Point 16	-0.22	4.77
Point 17	4.93	4.5
Point 18	24.3	-0.66
Point 19	40.33	-3.85
Point 20	53.08	-5.02
Point 21	69.13	-8.93
Point 22	90.17	-10.85
Point 23	106.69	-11.22
Point 24	116.58	-11.18
Point 25	126.69	-10.14
Point 26	142.13	-9.46
Point 27	157.98	-8.78
Point 28	178.08	-4.54
Point 29	214.93	-4.22
Point 30	500	-4.27
Point 31	-200	-80
Point 32	500	-80
Point 33	-200	-36
Point 34	500	-36
Point 35	-200	-22
Point 36	500	-22

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Point 37	-200	-12
Point 38	500	-12
Point 39	22	0
Point 40	-63	0
Point 41	111.73	14
Point 42	121.73	14
Point 43	161	4
Point 44	241	2
Point 45	259.47	-4.16
Point 46	81.73	6.5
Point 47	284.55	-5.2
Point 48	300.6	-9.14
Point 49	320.9	-11
Point 50	337.4	-11.22
Point 51	347.09	-11.26
Point 52	356.8	-10.22
Point 53	372.41	-9.68
Point 54	388.59	-9
Point 55	407.82	-4.54
Point 56	30	-1.79
Point 57	0	0
Point 58	0	-12
Point 59	0	-22
Point 60	0	-36
Point 61	250.23	-12
Point 62	250.23	-22
Point 63	250.23	-36
Point 64	1.73	4.5
Point 65	250.23	-4.22
Point 66	194.59	-4.39

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	1.43	(178.826, 4.826)	116.7523	(16.5057, 4.86939)	(321.867, -11.0129)
2	3570	1.57	(178.826, 4.826)	122.202	(16.8224, 4.87731)	(340.063, -11.231)
3	3562	1.58	(171.181, 4.781)	115.017	(16.8224, 4.87731)	(324.758, -11.0514)
4	3571	1.58	(171.836, 4.786)	116.722	(16.8224, 4.87731)	(326.068, -11.0689)
5	3561	1.58	(178.948, 4.826)	121.048	(16.8224, 4.87731)	(340.309, -11.232)
6	3563	1.59	(165.799, 4.611)	111.231	(16.8224, 4.87731)	(314.051, -10.3725)
7	3579	1.59	(178.362, 4.825)	123.114	(16.8224, 4.87731)	(339.135, -11.2272)
8	3378	1.60	(181.476, 4.865)	120.526	(22.1074, 5.00943)	(340.063, -11.231)
9	3578	1.60	(187.821, 4.561)	130.781	(16.8224, 4.87731)	(358.209, -10.1713)
10	3379	1.60	(174.487, 4.824)	115.282	(22.1074, 5.00943)	(326.068, -11.0689)
11	3569	1.60	(189.939, 4.524)	131.434	(16.8224, 4.87731)	(362.468, -10.0239)
12	3370	1.60	(173.832, 4.82)	113.418	(22.1074, 5.00943)	(324.758, -11.0514)
13	3314	1.60	(182.02, 4.872)	120.067	(23.1905, 5.03651)	(340.063, -11.231)
14	3572	1.60	(166.648, 4.65)	113.085	(16.8224, 4.87731)	(315.733, -10.5266)

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15	3553	1.61	(169.835, 4.772)	112.515	(16.8224, 4.87731)	(322.064, -11.0155)
16	3369	1.61	(181.599, 4.865)	119.064	(22.1074, 5.00943)	(340.309, -11.232)
17	3250	1.61	(182.473, 4.879)	119.811	(24.094, 5.0591)	(340.063, -11.231)
18	3315	1.61	(175.03, 4.832)	114.944	(23.1905, 5.03651)	(326.068, -11.0689)
19	3306	1.61	(174.375, 4.827)	113.125	(23.1905, 5.03651)	(324.758, -11.0514)
20	3387	1.61	(181.013, 4.864)	121.782	(22.1074, 5.00943)	(339.135, -11.2272)
21	3580	1.61	(171.979, 4.786)	118.208	(16.8224, 4.87731)	(326.356, -11.0727)
22	3554	1.61	(164.36, 4.546)	108.423	(16.8224, 4.87731)	(311.197, -10.1109)
23	3186	1.62	(182.859, 4.885)	119.593	(24.8647, 5.07837)	(340.063, -11.231)
24	3251	1.62	(175.483, 4.838)	114.664	(24.094, 5.0591)	(326.068, -11.0689)
25	3305	1.62	(182.142, 4.873)	118.765	(23.1905, 5.03651)	(340.309, -11.232)
26	3564	1.62	(161.605, 4.421)	107.745	(16.8224, 4.87731)	(305.733, -9.61034)
27	3371	1.62	(168.45, 4.65)	109.268	(22.1074, 5.00943)	(314.051, -10.3725)
28	3323	1.62	(181.556, 4.871)	121.437	(23.1905, 5.03651)	(339.135, -11.2272)
29	3242	1.62	(174.829, 4.834)	112.883	(24.094, 5.0591)	(324.758, -11.0514)
30	3386	1.62	(190.47, 4.6)	128.498	(22.1074, 5.00943)	(358.209, -10.1713)
31	3122	1.62	(183.195, 4.889)	119.405	(25.5346, 5.09512)	(340.063, -11.231)
32	3187	1.62	(175.87, 4.844)	114.426	(24.8647, 5.07837)	(326.068, -11.0689)
33	3377	1.62	(192.588, 4.563)	128.589	(22.1074, 5.00943)	(362.468, -10.0239)
34	3259	1.62	(182.01, 4.878)	121.151	(24.094, 5.0591)	(339.135, -11.2272)
35	3380	1.62	(169.299, 4.688)	111.295	(22.1074, 5.00943)	(315.733, -10.5266)
36	3241	1.62	(182.596, 4.879)	119.253	(24.094, 5.0591)	(340.309, -11.232)
37	3322	1.63	(191.013, 4.607)	128.187	(23.1905, 5.03651)	(358.209, -10.1713)
38	3307	1.63	(168.994, 4.658)	108.951	(23.1905, 5.03651)	(314.051, -10.3725)
39	3178	1.63	(175.215, 4.84)	112.677	(24.8647, 5.07837)	(324.758, -11.0514)
40	3123	1.63	(176.206, 4.849)	114.221	(25.5346, 5.09512)	(326.068, -11.0689)
41	3195	1.63	(182.396, 4.884)	120.908	(24.8647, 5.07837)	(339.135, -11.2272)
42	3313	1.63	(193.131, 4.571)	128.291	(23.1905, 5.03651)	(362.468, -10.0239)
43	7027	1.63	(181.476, 4.848)	122.151	(19.4533, 4.94308)	(342.731, -11.242)
44	3258	1.63	(191.465, 4.614)	127.93	(24.094, 5.0591)	(358.209, -10.1713)
45	3388	1.63	(174.63, 4.825)	116.68	(22.1074, 5.00943)	(326.356, -11.0727)
46	3316	1.63	(169.842, 4.696)	110.991	(23.1905, 5.03651)	(315.733, -10.5266)
47	3177	1.63	(182.982, 4.885)	119.067	(24.8647, 5.07837)	(340.309, -11.232)
48	3555	1.63	(160.078, 4.351)	105.298	(16.8224, 4.87731)	(302.704, -9.33278)
49	7028	1.63	(175.966, 4.823)	118.525	(19.4533, 4.94308)	(331.694, -11.1439)
50	3114	1.63	(175.552, 4.845)	112.5	(25.5346, 5.09512)	(324.758, -11.0514)
51	3243	1.63	(169.447, 4.664)	108.688	(24.094, 5.0591)	(314.051, -10.3725)
52	3131	1.63	(182.732, 4.888)	120.698	(25.5346, 5.09512)	(339.135, -11.2272)
53	3194	1.64	(191.852, 4.62)	127.711	(24.8647, 5.07837)	(358.209, -10.1713)
54	3361	1.64	(172.487, 4.811)	111.468	(22.1074, 5.00943)	(322.064, -11.0155)
55	3698	1.64	(179.605, 4.837)	122.59	(18.3755, 4.91614)	(340.063, -11.231)
56	3249	1.64	(193.584, 4.577)	128.044	(24.094, 5.0591)	(362.468, -10.0239)
57	3634	1.64	(180.403, 4.849)	122.176	(19.9671, 4.95593)	(340.063, -11.231)
58	3324	1.64	(175.174, 4.833)	116.379	(23.1905, 5.03651)	(326.356, -11.0727)
59	3762	1.64	(178.686, 4.824)	123.071	(16.5448, 4.87037)	(340.063, -11.231)
60	3252	1.64	(170.295, 4.703)	110.739	(24.094, 5.0591)	(315.733, -10.5266)
61	3113	1.64	(183.318, 4.89)	118.906	(25.5346, 5.09512)	(340.309, -11.232)
62	3573	1.64	(162.546, 4.464)	109.778	(16.8224, 4.87731)	(307.6, -9.78135)

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63	7036	1.64	(181.645, 4.848)	123.968	(19.4533, 4.94308)	(343.069, -11.2434)
64	3130	1.64	(192.188, 4.625)	127.522	(25.5346, 5.09512)	(358.209, -10.1713)
65	3577	1.64	(200.42, 4.321)	141.687	(16.8224, 4.87731)	(383.538, -9.21232)
66	3179	1.64	(169.834, 4.67)	108.465	(24.8647, 5.07837)	(314.051, -10.3725)
67	3260	1.64	(175.627, 4.839)	116.129	(24.094, 5.0591)	(326.356, -11.0727)
68	3185	1.64	(193.97, 4.583)	127.834	(24.8647, 5.07837)	(362.468, -10.0239)
69	3699	1.64	(172.615, 4.797)	117.187	(18.3755, 4.91614)	(326.068, -11.0689)
70	3372	1.64	(164.255, 4.459)	106.191	(22.1074, 5.00943)	(305.733, -9.61034)
71	3707	1.64	(179.141, 4.836)	123.325	(18.3755, 4.91614)	(339.135, -11.2272)
72	7019	1.64	(174.92, 4.816)	116.349	(19.4533, 4.94308)	(329.601, -11.116)
73	3635	1.64	(173.413, 4.808)	116.748	(19.9671, 4.95593)	(326.068, -11.0689)
74	3643	1.64	(179.94, 4.848)	122.855	(19.9671, 4.95593)	(339.135, -11.2272)
75	3188	1.64	(170.682, 4.708)	110.525	(24.8647, 5.07837)	(315.733, -10.5266)
76	3763	1.65	(171.696, 4.783)	117.642	(16.5448, 4.87037)	(326.068, -11.0689)
77	3771	1.65	(178.223, 4.823)	123.87	(16.5448, 4.87037)	(339.135, -11.2272)
78	3362	1.65	(167.011, 4.584)	107.137	(22.1074, 5.00943)	(311.197, -10.1109)
79	7029	1.65	(171.51, 4.794)	114.984	(19.4533, 4.94308)	(322.776, -11.025)
80	3581	1.65	(167.017, 4.667)	114.434	(16.8224, 4.87731)	(316.466, -10.5937)
81	3297	1.65	(173.03, 4.819)	111.082	(23.1905, 5.03651)	(322.064, -11.0155)
82	7035	1.65	(189.132, 4.58)	130.115	(19.4533, 4.94308)	(358.193, -10.1718)
83	3196	1.65	(176.014, 4.845)	115.917	(24.8647, 5.07837)	(326.356, -11.0727)
84	3826	1.65	(177.122, 5.713)	124.045	(13.3367, 4.79017)	(340.063, -11.231)
85	3121	1.65	(194.306, 4.588)	127.653	(25.5346, 5.09512)	(362.468, -10.0239)
86	3115	1.65	(170.17, 4.675)	108.273	(25.5346, 5.09512)	(314.051, -10.3725)
87	7018	1.65	(180.78, 4.846)	120.392	(19.4533, 4.94308)	(341.334, -11.2362)
88	3706	1.65	(188.599, 4.572)	130.452	(18.3755, 4.91614)	(358.209, -10.1713)
89	3124	1.65	(171.018, 4.713)	110.34	(25.5346, 5.09512)	(315.733, -10.5266)
90	7020	1.65	(170.352, 4.777)	112.817	(19.4533, 4.94308)	(320.462, -10.9598)
91	3642	1.65	(189.397, 4.584)	130.028	(19.9671, 4.95593)	(358.209, -10.1713)
92	7091	1.65	(177.946, 6.066)	125.035	(12.292, 4.76405)	(342.731, -11.242)
93	3770	1.65	(187.682, 4.559)	130.797	(16.5448, 4.87037)	(358.209, -10.1713)
94	7026	1.65	(189.832, 4.568)	128.609	(19.4533, 4.94308)	(359.602, -10.123)
95	3308	1.65	(164.799, 4.467)	105.852	(23.1905, 5.03651)	(305.733, -9.61034)
96	3132	1.65	(176.35, 4.85)	115.734	(25.5346, 5.09512)	(326.356, -11.0727)
97	3835	1.65	(176.659, 5.712)	125.675	(13.3367, 4.79017)	(339.135, -11.2272)
98	3565	1.65	(158.219, 4.208)	105.634	(16.8224, 4.87731)	(299.043, -8.75785)
99	7092	1.65	(172.437, 6.042)	120.874	(12.292, 4.76405)	(331.694, -11.1439)
100	3827	1.65	(170.133, 5.673)	118.908	(13.3367, 4.79017)	(326.068, -11.0689)
101	7037	1.66	(176.438, 4.827)	119.983	(19.4533, 4.94308)	(332.64, -11.1565)

Slices of Slip Surface: **Optimized**

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	18.62365	0.9722651	625.7385	698.02688	0	600
2	Optimized	21.29005	0.1658726	676.05113	811.36432	0	600
3	Optimized	21.91926	-0.024417815	687.89978	901.29394	0	207.06
4	Optimized	23.15	-0.39662722	711.14633	936.87536	0	204.65
5	Optimized	26.7225	-1.4770494	778.56919	1060.3311	0	197.65

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6	Optimized	29.5725	-2.2767725	828.46736	1188.6088	0	192.07
7	Optimized	35.165	-3.1544705	883.23559	1301.3033	0	181.12
8	Optimized	45.380285	-4.757678	983.25445	1500.2626	0	174.17
9	Optimized	51.755285	-5.78884	1047.6411	1620.3277	0	178.18
10	Optimized	57.04428	-6.7413035	1107.0617	1744.5166	0	181.5
11	Optimized	65.13825	-8.1988975	1198.0121	1939.0541	0	186.59
12	Optimized	70.21656	-9.113419	1255.0856	2059.1807	0	189.78
13	Optimized	76.44759	-10.443485	1338.0818	2205.297	0	193.69
14	Optimized	82.635155	-11.80136	1422.8013	2371.5513	0	197.58
15	Optimized	86.855155	-12.72745	1480.525	2525.5409	0	233.95
16	Optimized	93.14046	-14.106775	1566.6624	2754.7177	0	250.07
17	Optimized	97.05546	-15.047075	1625.3618	2875.0131	0	260.84
18	Optimized	98.5283	-15.49682	1648.1408	2934.7551	0	265.75
19	Optimized	102.8733	-16.823615	1687.6819	3178.5302	0	280.25
20	Optimized	108.3504	-18.496115	1737.6511	3500.9343	0	298.53
21	Optimized	110.8704	-19.349985	1765.9031	3617.9517	0	307.7
22	Optimized	114.155	-20.67533	1815.9263	3771.548	0	321.56
23	Optimized	117.00895	-21.826915	1859.3603	3883.1348	0	333.24
24	Optimized	119.58395	-22.865945	1898.6476	3982.8474	0	332.93
25	Optimized	124.21	-24.732585	1969.1259	4087.2638	0	346.72
26	Optimized	134.1534	-28.7448	2120.6326	4185.3513	0	376.35
27	Optimized	147.242	-33.87816	2310.8475	4314.9792	0	414.02
28	Optimized	153.1609	-36.11079	2391.2497	4364.2339	0	409.68
29	Optimized	155.7173	-36.317835	2378.8587	4478.4361	0	410.42
30	Optimized	159.49	-36.47832	2351.2843	4378.16	0	410.2
31	Optimized	165.27	-36.724195	2309.153	4330.276	0	409.87
32	Optimized	173.81	-37.08748	2246.9142	4319.8639	0	409.39
33	Optimized	182.2075	-37.4447	2185.6671	4321.8332	0	408.91
34	Optimized	190.4625	-37.79586	2125.5156	4334.5413	0	408.45
35	Optimized	194.9347	-37.9861	2096.5722	4341.5537	0	408.19
36	Optimized	200.19205	-38.60187	2137.7775	4350.313	0	411.42
37	Optimized	210.01735	-39.80409	2217.8898	4446.9934	0	417.93
38	Optimized	216.60175	-40.609755	2270.7207	4511.8728	0	422.28
39	Optimized	223.95515	-41.938325	2353.6105	4588.9491	0	431.01
40	Optimized	235.3184	-44.18636	2493.8965	4788.8027	0	446.24
41	Optimized	243.5036	-45.805675	2594.8984	4844.79	0	457.22
42	Optimized	248.1186	-46.27299	2624.0945	4836.4132	0	459.4
43	Optimized	251.08145	-46.233725	2622.0142	4718.4513	0	458.1
44	Optimized	255.1777	-45.42625	2573.3117	4603.5267	0	450.84
45	Optimized	258.94625	-44.42364	2512.1964	4428.9829	0	441.81
46	Optimized	264.6825	-42.162915	2357.8726	4135.3128	0	421.47
47	Optimized	275.10755	-38.054305	2074.5281	3634.3954	0	384.49
48	Optimized	282.43505	-35.16647	1875.3831	3284.8787	0	358.5
49	Optimized	284.775	-34.244265	1809.2497	3170.4407	0	350.2
50	Optimized	285.34355	-34.020185	1792.0902	3136.4286	0	348.18
51	Optimized	293.14355	-29.784195	1527.8057	2645.7796	0	310.06
52	Optimized	303.5202	-24.077665	1171.7304	1919.4774	0	258.7
53	Optimized	313.6702	-17.101395	736.38855	1161.4886	0	195.91

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54	Optimized	321.3834	-11.37198	378.88827	498.87412	0	150

Slices of Slip Surface: 3570

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	3570	18.066635	1.1617722	613.90491	646.90933	0	600
2	3570	20.284715	0.35445765	664.29299	772.12179	0	600
3	3570	21.62929	-0.134928	694.82353	903.85866	0	207.63
4	3570	23.15	-0.688422	729.36486	958.56814	0	204.65
5	3570	27.15	-2.144303	820.20333	1122.636	0	196.82
6	3570	30.3	-3.290809	891.75258	1259.2194	0	190.65
7	3570	35.465	-4.534016	969.31799	1430.4104	0	180.53
8	3570	46.705	-7.154024	1132.8465	1736.5832	0	175.01
9	3570	60.28727	-10.320008	1330.3867	2122.1596	0	183.54
10	3570	68.31227	-12.19061	1447.091	2357.0535	0	218.2
11	3570	75.43	-13.84973	1550.6524	2550.3603	0	237.32
12	3570	85.95	-16.30191	1703.619	2876.9052	0	265.59
13	3570	94.085	-18.19815	1821.9121	3183.1222	0	287.45
14	3570	98.5283	-19.233865	1881.3351	3341.9945	0	299.38
15	3570	102.8733	-20.246675	1901.3687	3554.7161	0	311.06
16	3570	108.5426	-21.56817	1927.4265	3848.0716	0	326.29
17	3570	111.0626	-22.15557	1939.0665	3978.4534	0	325.66
18	3570	114.155	-22.8764	1953.2664	4067.8576	0	333.64
19	3570	119.155	-24.041885	1976.3391	4178.6591	0	343.8
20	3570	124.21	-25.22019	1999.6207	4215.8145	0	351.11
21	3570	134.41	-27.59778	2046.4983	4146.9265	0	365.86
22	3570	150.055	-31.24458	2118.5384	4044.4488	0	388.48
23	3570	159.49	-33.443845	2161.9441	3979.7366	0	402.13
24	3570	165.72805	-34.89791	2190.6256	4050.1341	0	411.15
25	3570	174.26805	-36.88856	2229.9801	4206.2659	0	407.4
26	3570	182.2075	-38.739225	2266.5555	4364.0514	0	420.56
27	3570	190.4625	-40.663435	2304.5438	4538.42	0	434.25
28	3570	199.675	-42.81084	2400.0659	4733.0031	0	449.53
29	3570	209.845	-45.181435	2553.3798	4947.7957	0	466.4
30	3570	221.4475	-47.88594	2724.7311	5193.1198	0	485.64
31	3570	234.4825	-50.92436	2914.3543	5468.8878	0	507.25
32	3570	242.5	-52.793215	3030.9798	5585.9212	0	520.55
33	3570	247.115	-51.7838	2968.0139	5714.9053	0	509.44
34	3570	254.85	-48.409055	2759.3082	5038.8101	0	477.68
35	3570	265.42545	-43.795025	2457.8287	4320.7459	0	436.16
36	3570	277.33635	-38.59834	2102.6978	3691.7449	0	389.39
37	3570	283.9209	-35.725535	1906.4055	3344.8242	0	363.53
38	3570	284.775	-35.352905	1878.4231	3295.958	0	360.18
39	3570	292.8	-31.851635	1656.8038	2821.1904	0	328.66
40	3570	307.9901	-25.224265	1243.2964	1981.8079	0	269.02
41	3570	318.1401	-20.795865	966.93954	1463.7265	0	229.16
42	3570	325.025	-17.79201	779.50011	1131.2045	0	202.13
43	3570	333.275	-14.19257	554.89236	747.35933	0	169.73

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44	3570	337.8502	-12.196425	430.3341	534.5076	0	151.77
45	3570	339.1817	-11.615495	394.08498	469.92336	0	150

Slices of Slip Surface: 3562

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	3562	18.066635	1.1617722	613.90491	647.06038	0	600
2	3562	20.284715	0.35445765	664.29299	772.36302	0	600
3	3562	21.62929	-0.134928	694.82353	903.90936	0	207.63
4	3562	23.15	-0.688422	729.36486	958.60899	0	204.65
5	3562	27.15	-2.144303	820.20333	1122.669	0	196.82
6	3562	30.3	-3.290809	891.75258	1259.235	0	190.65
7	3562	35.465	-4.37769	959.57131	1420.5198	0	180.53
8	3562	46.705	-6.636525	1100.5066	1689.822	0	175.01
9	3562	57.0925	-8.724038	1230.7208	1946.5033	0	181.53
10	3562	65.1175	-10.336773	1331.3873	2158.0984	0	186.57
11	3562	71.26187	-11.57157	1408.4669	2314.3336	0	190.43
12	3562	77.56187	-12.837645	1487.4867	2460.7979	0	229.47
13	3562	85.95	-14.523355	1592.683	2704.2272	0	249.58
14	3562	94.085	-16.158195	1694.7247	2985.2697	0	269.09
15	3562	98.5283	-17.05114	1745.1641	3130.4948	0	279.74
16	3562	102.8733	-17.92433	1756.4813	3330.1991	0	290.16
17	3562	109.21	-19.19778	1772.8872	3638.7566	0	305.35
18	3562	114.155	-20.191545	1785.7403	3808.9998	0	317.21
19	3562	119.155	-21.196365	1798.7171	3904.6512	0	326.04
20	3562	122.44195	-21.856925	1807.258	3944.7357	0	329.65
21	3562	124.92195	-22.355315	1813.7125	3919.2625	0	324.86
22	3562	130.55	-23.48635	1828.3416	3863.0495	0	331.37
23	3562	138.27	-25.03779	1848.4068	3787.8687	0	340.3
24	3562	146.0925	-26.60983	1868.757	3711.9061	0	349.35
25	3562	154.0175	-28.20247	1889.2928	3634.9587	0	358.52
26	3562	159.49	-29.302245	1903.4989	3578.7792	0	364.85
27	3562	165.27	-30.46382	1918.5502	3623.1119	0	371.54
28	3562	173.81	-32.180055	1940.7068	3748.0151	0	381.42
29	3562	185.44905	-34.519085	1970.9582	3938.5237	0	394.89
30	3562	193.70405	-36.17804	1992.3588	4082.9854	0	392.46
31	3562	199.675	-37.377985	2061.151	4189.7828	0	400.64
32	3562	209.845	-39.42179	2193.8953	4371.5952	0	414.56
33	3562	219.275	-41.31688	2314.8234	4540.2941	0	427.47
34	3562	227.965	-43.06326	2423.8067	4695.9845	0	439.37
35	3562	236.655	-44.809635	2532.79	4851.5621	0	451.27
36	3562	242.5	-45.984265	2606.0955	4903.6268	0	459.27
37	3562	247.115	-44.92665	2540.0396	4958.8518	0	447.72
38	3562	254.85	-41.551905	2331.3808	4282.8447	0	415.97
39	3562	263.52255	-37.76811	2086.6356	3665.1825	0	381.91
40	3562	271.81885	-34.148485	1839.2916	3232.799	0	349.34
41	3562	280.3063	-30.44545	1586.2702	2795.9781	0	316.01
42	3562	284.775	-28.495765	1450.5311	2561.0787	0	298.46

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43	3562	292.3317	-25.1988	1241.6937	2113.7233	0	268.79
44	3562	300.1317	-21.795695	1029.3509	1655.7889	0	238.16
45	3562	305.675	-19.37719	878.41871	1370.9602	0	216.39
46	3562	315.825	-14.94879	602.08651	859.45535	0	176.54
47	3562	321.74185	-12.367295	440.99939	563.0486	0	153.31
48	3562	323.67075	-11.52572	388.48319	469.34166	0	150

Slices of Slip Surface: 3571

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	3571	18.066635	1.1617722	613.90491	646.41842	0	600
2	3571	20.284715	0.35445765	664.29299	772.74898	0	600
3	3571	21.62929	-0.134928	694.82353	903.63053	0	207.63
4	3571	23.15	-0.688422	729.36486	958.323	0	204.65
5	3571	27.15	-2.144303	820.20333	1122.2403	0	196.82
6	3571	30.3	-3.290809	891.75258	1258.7025	0	190.65
7	3571	35.465	-4.534016	969.31799	1430.1101	0	180.53
8	3571	46.705	-7.154024	1132.8465	1736.0485	0	175.01
9	3571	60.28727	-10.320008	1330.3867	2121.484	0	183.54
10	3571	68.31227	-12.19061	1447.091	2356.339	0	218.2
11	3571	75.43	-13.84973	1550.6524	2549.6646	0	237.32
12	3571	85.95	-16.30191	1703.619	2875.9821	0	265.59
13	3571	94.085	-18.19815	1821.9121	3182.1272	0	287.45
14	3571	98.5283	-19.233865	1881.3351	3340.9806	0	299.38
15	3571	102.8733	-20.246675	1901.3687	3553.6955	0	311.06
16	3571	108.5426	-21.56817	1927.4265	3847.0202	0	326.29
17	3571	111.0626	-22.15557	1939.0665	3977.213	0	325.66
18	3571	114.155	-22.8764	1953.2664	4066.6528	0	333.64
19	3571	119.155	-24.041885	1976.3391	4177.3354	0	343.8
20	3571	124.21	-25.22019	1999.6207	4214.4401	0	351.11
21	3571	134.41	-27.59778	2046.4983	4145.665	0	365.86
22	3571	146.0925	-30.320935	2100.2891	4069.2104	0	382.75
23	3571	154.0175	-32.168225	2136.7871	4017.3514	0	394.21
24	3571	159.49	-33.443845	2161.9441	3978.4467	0	402.13
25	3571	165.72805	-34.89791	2190.6256	4049.0012	0	411.15
26	3571	174.26805	-36.88856	2229.9801	4204.9885	0	407.4
27	3571	182.2075	-38.739225	2266.5555	4362.8716	0	420.56
28	3571	190.4625	-40.663435	2304.5438	4537.1222	0	434.25
29	3571	199.675	-42.81084	2400.0659	4731.6624	0	449.53
30	3571	209.845	-45.181435	2553.3798	4946.3593	0	466.4
31	3571	219.275	-47.379535	2693.1649	5145.7146	0	482.04
32	3571	227.965	-49.40515	2819.5804	5329.5101	0	496.45
33	3571	236.655	-51.430765	2945.9958	5513.1935	0	510.86
34	3571	242.5	-52.793215	3030.9798	5584.298	0	520.55
35	3571	247.115	-51.54589	2953.1462	5742.4588	0	507.3
36	3571	254.85	-47.580385	2707.5597	4995.7047	0	470.22
37	3571	263.9621	-42.90889	2406.2876	4272.463	0	428.18
38	3571	272.9463	-38.302965	2095.6711	3717.5925	0	386.73

PG Case.BS

39	3571	280.9942	-34.177045	1817.3776	3226.0829	0	349.59
40	3571	284.775	-32.238735	1684.0923	2993.7266	0	332.15
41	3571	288.9	-30.12397	1549.0615	2711.9415	0	313.12
42	3571	296.7	-26.125145	1299.4411	2185.3199	0	277.13
43	3571	302.6732	-23.062865	1108.3934	1795.6291	0	249.57
44	3571	308.7848	-19.92963	912.88708	1433.1722	0	221.37
45	3571	316.8616	-15.788895	654.50182	957.06774	0	184.1
46	3571	322.57605	-12.859265	471.70663	625.1991	0	157.73
47	3571	325.1602	-11.534455	389.03025	479.19052	0	150

Slices of Slip Surface: 3561

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	3561	18.066635	1.1617722	613.90491	648.41983	0	600
2	3561	20.284715	0.35445765	664.29299	772.70074	0	600
3	3561	21.62929	-0.134928	694.82353	904.429	0	207.63
4	3561	23.15	-0.688422	729.36486	959.18098	0	204.65
5	3561	27.15	-2.144303	820.20333	1123.3284	0	196.82
6	3561	30.3	-3.290809	891.75258	1259.9868	0	190.65
7	3561	35.465	-4.37769	959.57131	1420.9229	0	180.53
8	3561	46.705	-6.636525	1100.5066	1690.2834	0	175.01
9	3561	61.105	-9.530405	1281.1154	2052.9122	0	184.05
10	3561	71.26187	-11.57157	1408.4669	2315.0235	0	190.43
11	3561	77.56187	-12.837645	1487.4867	2461.5036	0	229.47
12	3561	85.95	-14.523355	1592.683	2705.0404	0	249.58
13	3561	94.085	-16.158195	1694.7247	2986.1462	0	269.09
14	3561	98.5283	-17.05114	1745.1641	3131.4227	0	279.74
15	3561	102.8733	-17.92433	1756.4813	3331.0981	0	290.16
16	3561	109.21	-19.19778	1772.8872	3639.9238	0	305.35
17	3561	114.155	-20.191545	1785.7403	3810.0105	0	317.21
18	3561	119.155	-21.196365	1798.7171	3905.7934	0	326.04
19	3561	122.44195	-21.856925	1807.258	3945.8373	0	329.65
20	3561	124.92195	-22.355315	1813.7125	3920.3715	0	324.86
21	3561	134.41	-24.26207	1838.374	3826.5381	0	335.84
22	3561	150.055	-27.40615	1878.9626	3674.4212	0	353.94
23	3561	159.49	-29.302245	1903.4989	3579.7531	0	364.85
24	3561	165.27	-30.46382	1918.5502	3624.0303	0	371.54
25	3561	173.81	-32.180055	1940.7068	3749.0483	0	381.42
26	3561	185.44905	-34.519085	1970.9582	3939.5881	0	394.89
27	3561	193.70405	-36.17804	1992.3588	4084.0921	0	392.46
28	3561	199.675	-37.377985	2061.151	4190.9397	0	400.64
29	3561	209.845	-39.42179	2193.8953	4372.752	0	414.56
30	3561	221.4475	-41.753475	2342.1265	4580.4593	0	430.45
31	3561	234.4825	-44.37304	2505.5639	4814.0702	0	448.29
32	3561	242.5	-45.984265	2606.0955	4904.934	0	459.27
33	3561	247.115	-45.151945	2554.2141	4939.7963	0	449.75
34	3561	254.85	-42.336635	2380.3512	4329.3997	0	423.03
35	3561	265.8649	-38.327545	2115.4851	3680.5899	0	386.95

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36	3561	278.4049	-33.76336	1798.2275	3129.6759	0	345.87
37	3561	284.775	-31.444825	1634.564	2848.5216	0	325
38	3561	292.8	-28.523965	1449.175	2438.9847	0	298.72
39	3561	305.66225	-23.8425	1157.0211	1823.5195	0	256.58
40	3561	315.81225	-20.1482	926.52875	1389.0082	0	223.33
41	3561	325.025	-16.795025	717.28728	1012.4077	0	193.16
42	3561	333.275	-13.79227	529.91827	693.99429	0	166.13
43	3561	337.7996	-12.145445	427.1513	519.37742	0	151.31
44	3561	339.25425	-11.616005	394.12074	460.53048	0	150

Slices of Slip Surface: 3563

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	3563	18.066635	1.1617722	613.90491	647.77787	0	600
2	3563	20.284715	0.35445765	664.29299	773.47267	0	600
3	3563	21.62929	-0.134928	694.82353	904.12482	0	207.63
4	3563	23.15	-0.688422	729.36486	958.81327	0	204.65
5	3563	27.15	-2.144303	820.20333	1122.8173	0	196.82
6	3563	30.3	-3.290809	891.75258	1259.329	0	190.65
7	3563	35.465	-4.37769	959.57131	1420.5198	0	180.53
8	3563	46.705	-6.636525	1100.5066	1689.822	0	175.01
9	3563	57.0925	-8.724038	1230.7208	1946.5033	0	181.53
10	3563	65.1175	-10.336773	1331.3873	2157.9762	0	186.57
11	3563	71.26187	-11.57157	1408.4669	2314.3336	0	190.43
12	3563	77.56187	-12.837645	1487.4867	2460.7979	0	229.47
13	3563	85.95	-14.523355	1592.683	2704.1111	0	249.58
14	3563	94.085	-16.158195	1694.7247	2985.2697	0	269.09
15	3563	98.5283	-17.05114	1745.1641	3130.402	0	279.74
16	3563	102.8733	-17.92433	1756.4813	3330.0706	0	290.16
17	3563	109.21	-19.19778	1772.8872	3638.7566	0	305.35
18	3563	114.155	-20.191545	1785.7403	3808.7976	0	317.21
19	3563	119.155	-21.196365	1798.7171	3904.4608	0	326.04
20	3563	122.44195	-21.856925	1807.258	3944.598	0	329.65
21	3563	124.92195	-22.355315	1813.7125	3919.2625	0	324.86
22	3563	130.55	-23.48635	1828.3416	3862.9225	0	331.37
23	3563	138.27	-25.03779	1848.4068	3787.8687	0	340.3
24	3563	146.0925	-26.60983	1868.757	3711.7824	0	349.35
25	3563	154.0175	-28.20247	1889.2928	3634.835	0	358.52
26	3563	159.49	-29.302245	1903.4989	3578.7792	0	364.85
27	3563	165.27	-30.46382	1918.5502	3622.9971	0	371.54
28	3563	173.81	-32.180055	1940.7068	3748.0151	0	381.42
29	3563	185.44905	-34.519085	1970.9582	3938.4572	0	394.89
30	3563	193.70405	-36.17804	1992.3588	4082.9301	0	392.46
31	3563	199.675	-37.377985	2061.151	4189.6864	0	400.64
32	3563	209.845	-39.42179	2193.8953	4371.4988	0	414.56
33	3563	219.275	-41.31688	2314.8234	4540.1813	0	427.47
34	3563	227.965	-43.06326	2423.8067	4695.8717	0	439.37
35	3563	236.655	-44.809635	2532.79	4851.4493	0	451.27

PG Case.BS

36	3563	242.5	-45.984265	2606.0955	4903.6268	0	459.27
37	3563	247.115	-44.688745	2525.2078	4975.2836	0	445.58
38	3563	254.85	-40.723245	2279.6701	4229.1054	0	408.51
39	3563	261.7665	-37.177355	2054.2681	3641.8068	0	376.6
40	3563	269.18475	-33.374235	1797.8159	3192.1982	0	342.37
41	3563	279.42825	-28.122705	1443.6388	2576.1889	0	295.1
42	3563	284.775	-25.38159	1256.2024	2249.7937	0	270.43
43	3563	288.1855	-23.63312	1143.9903	2016.4813	0	254.7
44	3563	295.9855	-19.634295	894.45585	1495.1148	0	218.71
45	3563	305.7384	-14.634295	582.46122	884.09138	0	173.71
46	3563	312.46405	-11.186245	367.29224	481.37904	0	150

Slices of Slip Surface: 3579

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	3579	18.066635	1.1617722	613.90491	647.40024	0	600
2	3579	20.284715	0.35445765	664.29299	773.71389	0	600
3	3579	21.62929	-0.134928	694.82353	903.96006	0	207.63
4	3579	23.15	-0.688422	729.36486	958.64985	0	204.65
5	3579	27.15	-2.144303	820.20333	1122.5536	0	196.82
6	3579	30.3	-3.290809	891.75258	1259.0158	0	190.65
7	3579	35.465	-4.690342	979.07697	1440.1346	0	180.53
8	3579	46.705	-7.671523	1165.1267	1782.6765	0	175.01
9	3579	58.052365	-10.681181	1352.8592	2138.9735	0	182.13
10	3579	66.077365	-12.80965	1485.7296	2399.6423	0	222.45
11	3579	75.43	-15.290245	1640.5012	2688.5502	0	250.29
12	3579	85.95	-18.08046	1814.6278	3047.5899	0	281.59
13	3579	94.085	-20.238105	1949.2078	3378.5857	0	305.8
14	3579	98.5283	-21.4166	2017.5112	3550.999	0	319.03
15	3579	99.89225	-21.77836	2026.5386	3612.9075	0	323.09
16	3579	103.70895	-22.79066	2051.8048	3822.8159	0	327.81
17	3579	109.21	-24.2497	2088.1195	4122.7319	0	343.61
18	3579	114.155	-25.56126	2120.8954	4322.306	0	357.8
19	3579	119.155	-26.887405	2153.8776	4448.5193	0	369.41
20	3579	124.21	-28.22814	2187.2768	4501.6121	0	378.18
21	3579	134.41	-30.933485	2254.6224	4464.985	0	395.88
22	3579	147.8212	-34.49053	2343.2564	4419.4424	0	419.15
23	3579	155.7462	-36.592475	2395.6622	4396.9153	0	412.88
24	3579	159.49	-37.585445	2420.3868	4383.8564	0	420.17
25	3579	165.27	-39.11847	2458.5536	4468.4512	0	431.42
26	3579	173.81	-41.38353	2515.0318	4652.939	0	448.05
27	3579	182.2075	-43.610795	2570.4819	4846.1306	0	464.41
28	3579	190.4625	-45.800265	2625.0459	5047.0574	0	480.49
29	3579	199.675	-48.243695	2739.1193	5271.3315	0	498.43
30	3579	209.845	-50.941085	2912.7616	5518.8217	0	518.23
31	3579	221.4475	-54.01841	3107.442	5801.4088	0	540.83
32	3579	234.4825	-57.475675	3323.1522	6119.153	0	566.22
33	3579	242.5	-59.602155	3455.8452	6262.1487	0	581.83

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34	3579	247.115	-58.403035	3381.0846	6503.4921	0	569.01
35	3579	254.85	-54.43753	3135.4493	5756.911	0	531.94
36	3579	265.74	-48.85455	2772.7237	4923.9564	0	481.69
37	3579	278.28	-42.42567	2339.0709	4149.612	0	423.83
38	3579	284.775	-39.09588	2111.9625	3743.5919	0	393.86
39	3579	287.90685	-37.490265	2008.6561	3524.1406	0	379.41
40	3579	295.70685	-33.491435	1759.1447	2992.9829	0	343.42
41	3579	304.98045	-28.737155	1462.4544	2397.9459	0	300.63
42	3579	313.7413	-24.24572	1182.2133	1872.4049	0	260.21
43	3579	319.51085	-21.287835	997.63363	1527.7596	0	233.59
44	3579	325.025	-18.460905	821.23845	1217.3447	0	208.15
45	3579	333.275	-14.231375	557.31864	763.15409	0	170.08
46	3579	337.51375	-12.058305	421.72931	529.66541	0	150.52
47	3579	338.3812	-11.61358	393.96991	479.21593	0	150

Slices of Slip Surface: 3378

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	3378	24.472755	0.2814375	668.84604	686.42557	0	600
2	3378	28.41906	-2.1043175	817.72156	1089.7607	0	194.33
3	3378	30.3	-3.221772	887.43678	1218.0727	0	190.65
4	3378	35.465	-4.534016	969.31799	1431.4113	0	180.53
5	3378	46.705	-7.154024	1132.8465	1737.5762	0	175.01
6	3378	60.28727	-10.320008	1330.3867	2123.3758	0	183.54
7	3378	68.31227	-12.19061	1447.091	2360.0905	0	218.2
8	3378	75.43	-13.84973	1550.6524	2551.8288	0	237.32
9	3378	85.95	-16.30191	1703.619	2878.6361	0	265.59
10	3378	94.085	-18.19815	1821.9121	3184.9879	0	287.45
11	3378	98.5283	-19.233865	1881.3351	3346.5109	0	299.38
12	3378	102.8733	-20.246675	1901.3687	3556.7574	0	311.06
13	3378	108.5426	-21.56817	1927.4265	3850.7001	0	326.29
14	3378	111.0626	-22.15557	1939.0665	3982.6121	0	325.66
15	3378	114.155	-22.8764	1953.2664	4070.468	0	333.64
16	3378	119.155	-24.041885	1976.3391	4181.1175	0	343.8
17	3378	124.21	-25.22019	1999.6207	4218.3671	0	351.11
18	3378	134.41	-27.59778	2046.4983	4149.008	0	365.86
19	3378	150.055	-31.24458	2118.5384	4046.4765	0	388.48
20	3378	159.49	-33.443845	2161.9441	3982.6389	0	402.13
21	3378	165.72805	-34.89791	2190.6256	4052.2969	0	411.15
22	3378	174.26805	-36.88856	2229.9801	4208.0543	0	407.4
23	3378	182.2075	-38.739225	2266.5555	4366.057	0	420.56
24	3378	190.4625	-40.663435	2304.5438	4540.4255	0	434.25

PG Case.BS

25	3378	199.675	-42.81084	2400.0659	4735.1098	0	449.53
26	3378	209.845	-45.181435	2553.3798	4950.094	0	466.4
27	3378	221.4475	-47.88594	2724.7311	5195.4359	0	485.64
28	3378	234.4825	-50.92436	2914.3543	5471.3533	0	507.25
29	3378	242.5	-52.793215	3030.9798	5588.5182	0	520.55
30	3378	247.115	-51.7838	2968.0139	5707.5493	0	509.44
31	3378	254.85	-48.409055	2759.3082	5032.2632	0	477.68
32	3378	265.42545	-43.795025	2457.8287	4314.8976	0	436.16
33	3378	277.33635	-38.59834	2102.6978	3686.6661	0	389.39
34	3378	283.9209	-35.725535	1906.4055	3340.2346	0	363.53
35	3378	284.775	-35.352905	1878.4231	3291.477	0	360.18
36	3378	292.8	-31.851635	1656.8038	2817.1364	0	328.66
37	3378	307.9901	-25.224265	1243.2964	1978.7693	0	269.02
38	3378	318.1401	-20.795865	966.93954	1461.2856	0	229.16
39	3378	325.025	-17.79201	779.50011	1129.2047	0	202.13
40	3378	333.275	-14.19257	554.89236	745.8595	0	169.73
41	3378	337.8502	-12.196425	430.3341	533.26574	0	151.77
42	3378	339.1817	-11.615495	394.08498	468.74813	0	150

Slices of Slip Surface: 3578

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	3578	18.066635	1.1617722	613.90491	649.36389	0	600
2	3578	20.284715	0.35445765	664.29299	774.05161	0	600
3	3578	21.62929	-0.134928	694.82353	904.74586	0	207.63
4	3578	23.15	-0.688422	729.36486	959.46697	0	204.65
5	3578	27.15	-2.144303	820.20333	1123.5592	0	196.82
6	3578	30.3	-3.290809	891.75258	1260.1591	0	190.65
7	3578	35.465	-4.690342	979.07697	1441.0287	0	180.53
8	3578	46.705	-7.671523	1165.1267	1783.8894	0	175.01
9	3578	58.052365	-10.681181	1352.8592	2140.4314	0	182.13
10	3578	66.077365	-12.80965	1485.7296	2401.2255	0	222.45
11	3578	75.43	-15.290245	1640.5012	2690.3146	0	250.29
12	3578	85.95	-18.08046	1814.6278	3049.6513	0	281.59
13	3578	94.085	-20.238105	1949.2078	3380.8077	0	305.8
14	3578	98.5283	-21.4166	2017.5112	3553.286	0	319.03
15	3578	99.89225	-21.77836	2026.5386	3615.2786	0	323.09
16	3578	103.70895	-22.79066	2051.8048	3825.4098	0	327.81
17	3578	109.21	-24.2497	2088.1195	4125.4168	0	343.61

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18	3578	114.155	-25.56126	2120.8954	4325.0961	0	357.8
19	3578	119.155	-26.887405	2153.8776	4451.5223	0	369.41
20	3578	124.21	-28.22814	2187.2768	4504.5352	0	378.18
21	3578	134.41	-30.933485	2254.6224	4467.8647	0	395.88
22	3578	147.8212	-34.49053	2343.2564	4422.3296	0	419.15
23	3578	155.7462	-36.592475	2395.6622	4399.7279	0	412.88
24	3578	159.49	-37.585445	2420.3868	4386.737	0	420.17
25	3578	165.27	-39.11847	2458.5536	4471.394	0	431.42
26	3578	173.81	-41.38353	2515.0318	4655.8817	0	448.05
27	3578	186.335	-44.70553	2597.7645	4949.8151	0	472.45
28	3578	199.675	-48.243695	2739.1193	5274.658	0	498.43
29	3578	209.845	-50.941085	2912.7616	5522.3383	0	518.23
30	3578	221.4475	-54.01841	3107.442	5805.1905	0	540.83
31	3578	234.4825	-57.475675	3323.1522	6123.0831	0	566.22
32	3578	242.5	-59.602155	3455.8452	6266.015	0	581.83
33	3578	247.115	-58.64094	3395.841	6464.7797	0	571.15
34	3578	254.85	-55.266195	3187.1364	5789.2205	0	539.4
35	3578	265.74	-50.514935	2876.3533	5055.0522	0	496.63
36	3578	278.28	-45.04379	2502.4924	4393.4317	0	447.39
37	3578	284.775	-42.21005	2306.2744	4045.9096	0	421.89
38	3578	292.0043	-39.05594	2106.3438	3608.3887	0	393.5
39	3578	299.8043	-35.652835	1894.0406	3141.0112	0	362.88
40	3578	305.675	-33.09147	1734.1536	2832.3125	0	339.82
41	3578	315.825	-28.66307	1457.8305	2312.1747	0	299.97
42	3578	325.99845	-24.224435	1180.9237	1809.1376	0	260.02
43	3578	334.24845	-20.625	956.27877	1421.0254	0	227.62
44	3578	342.245	-17.136145	738.57536	1051.3511	0	196.23
45	3578	350.5536	-13.511145	512.37322	686.00905	0	163.6
46	3578	355.4086	-11.39293	380.18393	484.42738	0	150
47	3578	357.50435	-10.478565	323.14441	390.45532	0	150

Slices of Slip Surface: 3379

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	3379	24.472755	0.2814375	668.84604	686.49881	0	600
2	3379	28.41906	-2.1043175	817.72156	1089.0265	0	194.33
3	3379	30.3	-3.221772	887.43678	1216.9407	0	190.65
4	3379	35.465	-4.534016	969.31799	1431.111	0	180.53
5	3379	46.705	-7.154024	1132.8465	1737.1179	0	175.01
6	3379	60.28727	-10.320008	1330.3867	2122.7001	0	183.54
7	3379	68.31227	-12.19061	1447.091	2359.3164	0	218.2
8	3379	75.43	-13.84973	1550.6524	2551.0559	0	237.32
9	3379	85.95	-16.30191	1703.619	2877.713	0	265.59
10	3379	94.085	-18.19815	1821.9121	3183.9928	0	287.45
11	3379	98.5283	-19.233865	1881.3351	3345.4049	0	299.38
			-				

PG Case.BS

12	3379	102.8733	20.246675	1901.3687	3555.7368	0	311.06
13	3379	108.5426	-21.56817	1927.4265	3849.6487	0	326.29
14	3379	111.0626	-22.15557	1939.0665	3981.2988	0	325.66
15	3379	114.155	-22.8764	1953.2664	4069.2632	0	333.64
16	3379	119.155	-24.041885	1976.3391	4179.7937	0	343.8
17	3379	124.21	-25.22019	1999.6207	4216.9926	0	351.11
18	3379	130.55	-26.698025	2028.7737	4173.2287	0	360.28
19	3379	138.27	-28.497535	2064.2224	4122.6418	0	371.44
20	3379	146.0925	-30.320935	2100.2891	4071.4224	0	382.75
21	3379	154.0175	-32.168225	2136.7871	4019.5634	0	394.21
22	3379	159.49	-33.443845	2161.9441	3981.349	0	402.13
23	3379	165.72805	-34.89791	2190.6256	4051.267	0	411.15
24	3379	174.26805	-36.88856	2229.9801	4206.9046	0	407.4
25	3379	182.2075	-38.739225	2266.5555	4364.8772	0	420.56
26	3379	190.4625	-40.663435	2304.5438	4539.2458	0	434.25
27	3379	199.675	-42.81084	2400.0659	4733.8649	0	449.53
28	3379	209.845	-45.181435	2553.3798	4948.6576	0	466.4
29	3379	219.275	-47.379535	2693.1649	5148.068	0	482.04
30	3379	227.965	-49.40515	2819.5804	5331.8636	0	496.45
31	3379	236.655	-51.430765	2945.9958	5515.7712	0	510.86
32	3379	242.5	-52.793215	3030.9798	5586.895	0	520.55
33	3379	247.115	-51.54589	2953.1462	5733.7458	0	507.3
34	3379	254.85	-47.580385	2707.5597	4987.9039	0	470.22
35	3379	263.9621	-42.90889	2406.2876	4265.6286	0	428.18
36	3379	272.9463	-38.302965	2095.6711	3711.5506	0	386.73
37	3379	280.9942	-34.177045	1817.3776	3220.8275	0	349.59
38	3379	284.775	-32.238735	1684.0923	2988.7829	0	332.15
39	3379	288.9	-30.12397	1549.0615	2707.264	0	313.12
40	3379	296.7	-26.125145	1299.4411	2181.441	0	277.13
41	3379	302.6732	-23.062865	1108.3934	1792.3025	0	249.57
42	3379	308.7848	-19.92963	912.88708	1430.4178	0	221.37
43	3379	316.8616	-15.788895	654.50182	954.95236	0	184.1

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44	3379	322.57605	-12.859265	471.70663	623.63285	0	157.73
45	3379	325.1602	-11.534455	389.03025	477.79899	0	150

PG Case.BS.Thru Fabric

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 172
Last Edited By: Cox, Lane MVK
Date: 3/21/2011
Time: 10:18:45 AM
File Name: 5c(1) Typical 1.2nd SC.80%SG.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\2nd Stage Construction\80%SG,1 Layer of Fabric\Slope W\
Last Solved Date: 3/21/2011
Last Solved Time: 10:20:40 AM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

PG Case.BS.Thru Fabric

Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

SlipSurface
- Direction of movement: Left to Right
- Use Passive Mode: No
- Slip Surface Option: Block
- Critical slip surfaces saved: 100
- Optimize Critical Slip Surface Location: Yes
- Tension Crack
  - Tension Crack Option: Tension Crack Line
  - Percentage Wet: 1
  - Tension Crack Fluid Unit Weight: 62.4 pcf

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FOS Distribution
FOS Calculation Option: Constant
Restrict Block Crossing: Yes
Advanced
Number of Slices: 30
Optimization Tolerance: 0.01
Minimum Slip Surface Depth: 0.1 ft
Optimization Maximum Iterations: 2000
Optimization Convergence Tolerance: 1e-007
Starting Optimization Points: 8
Ending Optimization Points: 16
Complete Passes per Insertion: 1
Driving Side Maximum Convex Angle: 5 °
Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH
Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH above 0
Model: Mohr-Coulomb
Unit Weight: 108 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, 0 to -12
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -12 (2)
Cohesion Spatial Fn: CH, 0 to -12
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -12 to -22
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -12 to -22 (2)

Cohesion Spatial Fn: CH, -12 to -22
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -22 to -36
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -22 to -36 (2)
Cohesion Spatial Fn: CH, -22 to -36
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -36 to -80
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -36 to -80 (2)
Cohesion Spatial Fn: CH, -36 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sand Fill
Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, 0 to -12 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -12 (2)
Cohesion Spatial Fn: CH, 0 to -12 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -12 to -22 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -12 to -22 (2)
Cohesion Spatial Fn: CH, -12 to -22 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure

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Piezometric Line: 1

CH, -22 to -36 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -22 to -36 (2)
Cohesion Spatial Fn: CH, -22 to -36 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Limits

Left Coordinate: (-200, -1.79) ft
Right Coordinate: (500, -4.27) ft

Slip Surface Block

Left Grid
Upper Left: (120, -12) ft
Lower Left: (120, -60) ft
Lower Right: (170, -60) ft
X Increments: 7
Y Increments: 7
Starting Angle: 115 °
Ending Angle: 135 °
Angle Increments: 7
Right Grid
Upper Left: (228, -12) ft
Lower Left: (270, -12) ft
Lower Right: (270, -60) ft
X Increments: 7
Y Increments: 7
Starting Angle: 0 °
Ending Angle: 45 °
Angle Increments: 7

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	11
	98	11
	194.59	-4.39

	214.93	-4.22
	250.23	-4.22
	259.47	-4.16
	284.55	-5.2
	285	-5.3
	406	-5.3
	407.82	-4.54
	500	-4.27

Reinforcements

Reinforcement 1

Type: Fabric
Outside Point: (177, 0) ft
Inside Point: (23, 0) ft
Slip Surface Intersection: (94.813, 0) ft
Total Length: 154 ft
Reinforcement Direction: 0 °
Applied Load Option: Variable
F of S Dependent: No
Contact Cohesion: 265 psf
Contact Phi: 19 °
Interface Factor: 2
Bond Safety Factor: 1
Fabric Capacity: 27000 lbs
Fabric Safety Factor: 1
Fabric Load: 27000 lbs
Load Distribution: Even along reinf.
Load Orientation: 0
Applied Load: 27000 lbs
Fabric Load Used: 27000 lbs
Resisting Force Used: 869.24 lbs/ft
Available Bond Length: 71.813 ft
Required Bond Length: 31.062 ft
Governing Component: Fabric

Tension Crack Line

	X (ft)	Y (ft)
	4.93	4.58
	16	1.60984
	83	2
	112	10
	122	10
	159	1
	161	4

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Spatial Functions

CH, 0 to -12

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -1.5, 75)
Data Point: (-300, -12, 75)
Data Point: (-23.63, 0, 75)
Data Point: (-23.63, -12, 75)
Data Point: (0, 0, 250)
Data Point: (0, -12, 250)
Data Point: (250.26, -4.13, 150)
Data Point: (250.26, -12, 150)
Data Point: (500, -4.27, 150)
Data Point: (500, -12, 150)

CH, -22 to -36 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -22, 350)
Data Point: (0, -36, 476)
Data Point: (40.33, -22, 290)
Data Point: (40.33, -36, 416)
Data Point: (116.73, -22, 327)
Data Point: (116.73, -36, 453)
Data Point: (250.23, -22, 240)
Data Point: (250.23, -36, 366)

CH, -12 to -22

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -12, 125)
Data Point: (-300, -22, 225)
Data Point: (-23.63, -12, 125)
Data Point: (-23.63, -22, 225)
Data Point: (0, -12, 350)
Data Point: (0, -22, 350)
Data Point: (250.26, -12, 150)
Data Point: (250.26, -22, 240)
Data Point: (500, -12, 150)
Data Point: (500, -22, 240)

CH, -22 to -36

Model: Linear Interpolation

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Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -22, 225)
Data Point: (-300, -36, 365)
Data Point: (-23.63, -22, 225)
Data Point: (-23.63, -36, 365)
Data Point: (0, -22, 350)
Data Point: (0, -36, 476)
Data Point: (250.26, -22, 240)
Data Point: (250.26, -36, 366)
Data Point: (500, -22, 240)
Data Point: (500, -36, 366)

CH, -36 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -36, 365)
Data Point: (-300, -80, 805)
Data Point: (-23.63, -36, 365)
Data Point: (-23.63, -80, 805)
Data Point: (0, -36, 476)
Data Point: (0, -80, 872)
Data Point: (250.26, -36, 366)
Data Point: (250.26, -80, 762)
Data Point: (500, -36, 366)
Data Point: (500, -80, 762)

CH, 0 to -12 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -6, 100)
Data Point: (0, -6, 101)
Data Point: (178.08, -6, 111)

CH, -12 to -22 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -17, 100)
Data Point: (0, -17, 109)
Data Point: (178.08, -17, 100)

CH, -22 to -36 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)

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Data Point: (-23.63, -29, 102)
Data Point: (0, -29, 104)
Data Point: (178.08, -29, 102)

CH, -36 to -80 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -58, 105)
Data Point: (0, -58, 106)
Data Point: (178.08, -58, 105)

CH, 0 to -12 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, 0, 250)
Data Point: (0, -12, 250)
Data Point: (40.33, 0, 171)
Data Point: (40.33, -12, 171)
Data Point: (116.73, 0, 219)
Data Point: (116.73, -12, 219)
Data Point: (250.23, -4.13, 150)
Data Point: (250.23, -12, 150)

CH, -12 to -22 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -12, 350)
Data Point: (0, -22, 350)
Data Point: (40.33, -12, 200)
Data Point: (40.33, -22, 290)
Data Point: (116.73, -12, 245)
Data Point: (116.73, -22, 335)
Data Point: (250.23, -12, 150)
Data Point: (250.23, -22, 240)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -36 to -80	31,33,60,63,34,32	30800
Region 2	CH above 0	40,9,10,11,12,13,64,17,39,57	130.54365
Region 3	Sand Fill	19,20,21,22,23,24,25,26,27,28	629.28815
Region 4	EMBANKMENT FILL CH	19,46,41,42,43,66,28	1500.8133
Region 5	EMBANKMENT FILL CH	43,44,45,65,29,66	501.84775
Region 6	CH, -22 to -36	35,33,60,59	2800
Region 7	CH, -12 to -22	37,35,59,58	2000

Region 8	CH, 0 to -12	57,58,37,2,1,3,4,5,6,7,8,40	2203.9585
Region 9	CH, -22 to -36	63,62,36,34	3496.78
Region 10	CH, -12 to -22	62,61,38,36	2497.7
Region 11	CH, 0 to -12	61,65,45,47,48,49,50,51,52,53,54,55,30,38	1282.4538
Region 12	CH, -12 to -22 SG	58,59,62,61	2502.3
Region 13	CH, -22 to -36 SG	60,59,62,63	3503.22
Region 14	CH, 0 to -12 SG	57,58,61,65,29,66,28,27,26,25,24,23,22,21,20,19,18,39	1448.4571
Region 15	EMBANKMENT FILL CH	64,17,39,56,19,46	368.6281

Points

	X (ft)	Y (ft)
Point 1	-195.89	-1.8
Point 2	-200	-1.79
Point 3	-169.15	-1.8
Point 4	-146.39	-1.65
Point 5	-122.74	-1.62
Point 6	-98.28	-1.36
Point 7	-85.7	-0.94
Point 8	-66.38	-0.23
Point 9	-52.15	0.5
Point 10	-38.25	0.23
Point 11	-36.18	0.46
Point 12	-23.63	0.86
Point 13	-19.22	0.94
Point 14	-5.71	4.75
Point 15	-0.42	4.91
Point 16	-0.22	4.77
Point 17	4.93	4.5
Point 18	24.3	-0.66
Point 19	40.33	-3.85
Point 20	53.08	-5.02
Point 21	69.13	-8.93
Point 22	90.17	-10.85
Point 23	106.69	-11.22
Point 24	116.58	-11.18
Point 25	126.69	-10.14
Point 26	142.13	-9.46
Point 27	157.98	-8.78
Point 28	178.08	-4.54
Point 29	214.93	-4.22
Point 30	500	-4.27
Point 31	-200	-80
Point 32	500	-80
Point 33	-200	-36
Point 34	500	-36
Point 35	-200	-22
Point 36	500	-22

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Point 37	-200	-12
Point 38	500	-12
Point 39	22	0
Point 40	-63	0
Point 41	111.73	14
Point 42	121.73	14
Point 43	161	4
Point 44	241	2
Point 45	259.47	-4.16
Point 46	81.73	6.5
Point 47	284.55	-5.2
Point 48	300.6	-9.14
Point 49	320.9	-11
Point 50	337.4	-11.22
Point 51	347.09	-11.26
Point 52	356.8	-10.22
Point 53	372.41	-9.68
Point 54	388.59	-9
Point 55	407.82	-4.54
Point 56	30	-1.79
Point 57	0	0
Point 58	0	-12
Point 59	0	-22
Point 60	0	-36
Point 61	250.23	-12
Point 62	250.23	-22
Point 63	250.23	-36
Point 64	1.73	4.5
Point 65	250.23	-4.22
Point 66	194.59	-4.39

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	1.65	(207.719, 7.358)	98.42019	(91.0316, 8.8254)	(323.869, -11.0396)
2	21942	1.70	(207.719, 7.358)	98.627	(89.0742, 8.33606)	(324.983, -11.0544)
3	21950	1.70	(213.045, 7.394)	103.725	(89.0742, 8.33606)	(335.67, -11.1969)
4	22518	1.70	(208.712, 8.005)	97.976	(90.9498, 8.80495)	(324.983, -11.0544)
5	22006	1.71	(205.755, 6.074)	99.051	(85.3513, 7.40534)	(324.983, -11.0544)
6	22014	1.71	(211.085, 6.11)	104.034	(85.3513, 7.40534)	(335.67, -11.1969)
7	21941	1.71	(217.684, 7.407)	105.453	(89.0742, 8.33606)	(344.989, -11.2513)
8	21877	1.71	(219.553, 8.628)	104.885	(92.6146, 9.22116)	(344.989, -11.2513)
9	21878	1.71	(209.595, 8.579)	98.068	(92.6146, 9.22116)	(324.983, -11.0544)
10	22526	1.71	(214.036, 8.041)	102.92	(90.9498, 8.80495)	(335.67, -11.1969)
11	22005	1.71	(215.728, 6.124)	106.073	(85.3513, 7.40534)	(344.989, -11.2513)
12	17909	1.71	(215.595, 7.971)	102.218	(90.7259, 8.74897)	(339.04, -11.2268)
13	17845	1.71	(217.35, 9.114)	101.629	(94.0399, 9.57747)	(339.04, -11.2268)
14	22517	1.71	(218.673, 8.054)	104.782	(90.9498, 8.80495)	(344.989, -11.2513)

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15	26614	1.71	(208.803, 6.171)	103.326	(85.5753, 7.46132)	(330.859, -11.1328)
16	21886	1.71	(214.917, 8.615)	102.842	(92.6146, 9.22116)	(335.67, -11.1969)
17	17846	1.71	(207.513, 9.02)	94.561	(94.0399, 9.57747)	(319.303, -10.8537)
18	26622	1.71	(214.16, 6.197)	107.526	(85.5753, 7.46132)	(341.605, -11.2374)
19	17918	1.71	(210.99, 7.944)	100.174	(90.7259, 8.74897)	(329.794, -11.1186)
20	22454	1.71	(210.753, 9.329)	97.317	(94.7902, 9.76505)	(324.983, -11.0544)
21	17910	1.72	(205.751, 7.878)	95.156	(90.7259, 8.74897)	(319.303, -10.8537)
22	17854	1.72	(212.748, 9.086)	99.619	(94.0399, 9.57747)	(329.794, -11.1186)
23	17781	1.72	(219.027, 10.2)	101.021	(97.1914, 10.3653)	(339.04, -11.2268)
24	22453	1.72	(220.706, 9.378)	104.487	(94.7902, 9.76505)	(344.989, -11.2513)
25	22462	1.72	(216.072, 9.365)	102.369	(94.7902, 9.76505)	(335.67, -11.1969)
26	22510	1.72	(203.701, 7.857)	93.271	(90.9498, 8.80495)	(315.015, -10.4608)
27	21934	1.72	(202.708, 7.21)	93.828	(89.0742, 8.33606)	(315.015, -10.4608)
28	21933	1.72	(210.713, 7.378)	99.808	(89.0742, 8.33606)	(330.992, -11.1346)
29	22509	1.72	(211.705, 8.025)	98.972	(90.9498, 8.80495)	(330.992, -11.1346)
30	17342	1.72	(209.72, 7.115)	101.287	(88.3239, 8.14848)	(329.794, -11.1186)
31	21869	1.72	(212.588, 8.599)	98.698	(92.6146, 9.22116)	(330.992, -11.1346)
32	21949	1.72	(225.917, 7.107)	112.355	(89.0742, 8.33606)	(361.723, -10.0497)
33	26550	1.72	(211.043, 7.636)	101.84	(89.8246, 8.52364)	(330.859, -11.1328)
34	22445	1.72	(213.744, 9.349)	98.348	(94.7902, 9.76505)	(330.992, -11.1346)
35	17278	1.72	(211.328, 8.164)	100.869	(91.3637, 8.90843)	(329.794, -11.1186)
36	17782	1.72	(209.197, 10.107)	94.106	(97.1914, 10.3653)	(319.303, -10.8537)
37	21997	1.72	(208.752, 6.094)	100.386	(85.3513, 7.40534)	(330.992, -11.1346)
38	17917	1.72	(223.444, 7.768)	109.138	(90.7259, 8.74897)	(354.96, -10.4171)
39	17853	1.72	(225.187, 8.911)	108.559	(94.0399, 9.57747)	(354.96, -10.4171)
40	17205	1.73	(217.474, 9.194)	101.694	(94.2722, 9.63555)	(339.04, -11.2268)
41	21813	1.73	(221.349, 9.796)	103.909	(96.0021, 10.068)	(344.989, -11.2513)
42	26558	1.73	(216.396, 7.663)	106.887	(89.8246, 8.52364)	(341.605, -11.2374)
43	22013	1.73	(223.975, 5.823)	113.011	(85.3513, 7.40534)	(361.723, -10.0497)
44	26613	1.73	(219.336, 6.069)	110.594	(85.5753, 7.46132)	(352.081, -10.7255)
45	17837	1.73	(210.438, 9.071)	95.374	(94.0399, 9.57747)	(325.154, -11.0567)
46	17773	1.73	(212.12, 10.158)	94.859	(97.1914, 10.3653)	(325.154, -11.0567)
47	26046	1.73	(213.391, 5.692)	107.269	(84.1086, 7.09465)	(341.605, -11.2374)
48	17269	1.73	(215.932, 8.191)	102.76	(91.3637, 8.90843)	(339.04, -11.2268)
49	21814	1.73	(211.4, 9.747)	97.053	(96.0021, 10.068)	(324.983, -11.0544)
50	17901	1.73	(208.678, 7.928)	95.936	(90.7259, 8.74897)	(325.154, -11.0567)
51	26549	1.73	(221.563, 7.535)	109.993	(89.8246, 8.52364)	(352.081, -10.7255)
52	17270	1.73	(206.09, 8.097)	95.234	(91.3637, 8.90843)	(319.303, -10.8537)
53	17717	1.73	(220.638, 11.24)	100.455	(100.207, 11.1192)	(339.04, -11.2268)
54	17333	1.73	(214.328, 7.143)	103.197	(88.3239, 8.14848)	(339.04, -11.2268)
55	17790	1.73	(214.428, 10.173)	99.11	(97.1914, 10.3653)	(329.794, -11.1186)
56	21998	1.73	(200.744, 5.926)	94.484	(85.3513, 7.40534)	(315.015, -10.4608)
57	26038	1.73	(208.033, 5.665)	103.541	(84.1086, 7.09465)	(330.859, -11.1328)
58	21885	1.73	(227.771, 8.328)	111.75	(92.6146, 9.22116)	(361.723, -10.0497)
59	26110	1.73	(210.884, 5.281)	109.084	(79.1652, 6.43588)	(341.605, -11.2374)
60	21822	1.73	(216.717, 9.783)	102.134	(96.0021, 10.068)	(335.67, -11.1969)
61	26606	1.73	(203.509, 6.123)	98.42	(85.5753, 7.46132)	(320.252, -10.9406)
62	22007	1.73	(199.161, 5.854)	94.46	(85.3513, 7.40534)	(311.882, -10.1737)

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63	21870	1.73	(204.585, 8.431)	93.23	(92.6146, 9.22116)	(315.015, -10.4608)
64	21374	1.73	(211.839, 6.605)	104.199	(86.7869, 7.76424)	(335.67, -11.1969)
65	22525	1.73	(226.898, 7.754)	111.928	(90.9498, 8.80495)	(361.723, -10.0497)
66	21943	1.73	(201.124, 7.138)	93.782	(89.0742, 8.33606)	(311.882, -10.1737)
67	17789	1.73	(226.852, 9.998)	108.026	(97.1914, 10.3653)	(354.96, -10.4171)
68	17406	1.73	(208.037, 6.013)	101.74	(85.1274, 7.34935)	(329.794, -11.1186)
69	22446	1.73	(205.743, 9.181)	92.561	(94.7902, 9.76505)	(315.015, -10.4608)
70	17214	1.73	(212.872, 9.167)	99.927	(94.2722, 9.63555)	(329.794, -11.1186)
71	17334	1.73	(204.479, 7.049)	95.736	(88.3239, 8.14848)	(319.303, -10.8537)
72	17277	1.73	(223.779, 7.988)	109.357	(91.3637, 8.90843)	(354.96, -10.4171)
73	17838	1.73	(202.694, 8.802)	89.938	(94.0399, 9.57747)	(309.779, -9.981)
74	18421	1.73	(218.565, 9.901)	101.055	(96.3243, 10.1486)	(339.04, -11.2268)
75	17341	1.73	(222.184, 6.94)	109.827	(88.3239, 8.14848)	(354.96, -10.4171)
76	26605	1.73	(211.782, 6.191)	104.923	(85.5753, 7.46132)	(336.83, -11.2124)
77	25982	1.73	(215.454, 7.047)	106.58	(88.0378, 8.07696)	(341.605, -11.2374)
78	22015	1.73	(203.059, 6.031)	98.43	(85.3513, 7.40534)	(319.594, -10.8804)
79	18422	1.73	(208.733, 9.808)	94.039	(96.3243, 10.1486)	(319.303, -10.8537)
80	22389	1.74	(222.648, 10.638)	103.433	(98.4423, 10.6781)	(344.989, -11.2513)
81	21951	1.74	(205.024, 7.315)	97.731	(89.0742, 8.33606)	(319.594, -10.8804)
82	25974	1.74	(210.1, 7.02)	102.121	(88.0378, 8.07696)	(330.859, -11.1328)
83	17206	1.74	(207.637, 9.1)	94.769	(94.2722, 9.63555)	(319.303, -10.8537)
84	21438	1.74	(210.039, 5.423)	104.741	(83.3583, 6.90707)	(335.67, -11.1969)
85	17397	1.74	(212.647, 6.04)	103.669	(85.1274, 7.34935)	(339.04, -11.2268)
86	22519	1.74	(202.116, 7.785)	93.35	(90.9498, 8.80495)	(311.882, -10.1737)
87	21310	1.74	(213.569, 7.736)	103.697	(90.0675, 8.58437)	(335.67, -11.1969)
88	26615	1.74	(201.999, 6.055)	97.534	(85.5753, 7.46132)	(317.263, -10.6668)
89	22461	1.74	(228.914, 9.078)	111.293	(94.7902, 9.76505)	(361.723, -10.0497)
90	21366	1.74	(206.511, 6.569)	99.063	(86.7869, 7.76424)	(324.983, -11.0544)
91	26541	1.74	(214.019, 7.656)	104.344	(89.8246, 8.52364)	(336.83, -11.2124)
92	17213	1.74	(225.31, 8.991)	108.918	(94.2722, 9.63555)	(354.96, -10.4171)
93	21821	1.74	(229.553, 9.496)	111.056	(96.0021, 10.068)	(361.723, -10.0497)
94	17141	1.74	(218.963, 10.159)	101.431	(97.0713, 10.3353)	(339.04, -11.2268)
95	27126	1.74	(211.757, 8.102)	101.136	(91.1737, 8.86094)	(330.859, -11.1328)
96	22390	1.74	(212.705, 10.589)	96.553	(98.4423, 10.6781)	(324.983, -11.0544)
97	17902	1.74	(200.934, 7.659)	90.509	(90.7259, 8.74897)	(309.779, -9.981)
98	26623	1.74	(206.065, 6.153)	101.986	(85.5753, 7.46132)	(325.369, -11.0596)
99	26542	1.74	(205.753, 7.588)	97.783	(89.8246, 8.52364)	(320.252, -10.9406)
100	26102	1.74	(205.524, 5.255)	104.758	(79.1652, 6.43588)	(330.859, -11.1328)
101	17725	1.74	(228.451, 11.038)	107.629	(100.207, 11.1192)	(354.96, -10.4171)

Slices of Slip Surface: Optimized

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	94.5158	0.3312755	665.73145	740.25205	0	600
2	Optimized	98.263915	-3.8472905	923.84906	1309.5557	0	600
3	Optimized	98.792215	-4.436261	955.35059	1546.6847	341.40693	0
4	Optimized	99.63775	-5.3788825	1005.7737	1632.666	361.93641	0

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5	Optimized	102.16315	-8.59446	1181.3063	1951.4049	444.61662	0
6	Optimized	104.4246	-11.58108	1345.1818	2578.7488	0	211.27
7	Optimized	105.7159	-13.28642	1438.766	2727.5572	0	250.09
8	Optimized	109.21	-17.900875	1691.9513	3245.921	0	293.68
9	Optimized	112.02195	-21.614455	1895.7695	3704.4841	0	328.76
10	Optimized	112.33465	-22.027395	1918.3689	4395.1951	0	325.12
11	Optimized	114.4677	-24.64904	2060.7096	3974.5033	0	349.75
12	Optimized	119.155	-30.40578	2373.3321	4505.1379	0	401.07
13	Optimized	122.44285	-34.443785	2592.6703	4871.4426	0	435.27
14	Optimized	123.5558	-35.65965	2657.5157	5110.5632	0	445.49
15	Optimized	125.32295	-37.16295	2733.7166	5191.6908	0	431.38
16	Optimized	130.72395	-41.75757	2966.6973	5477.1177	0	470.36
17	Optimized	138.44395	-46.38477	3178.7559	5935.9743	0	508.61
18	Optimized	144.4398	-48.32945	3240.4308	5957.4344	0	523.48
19	Optimized	152.3648	-48.99333	3203.0656	5937.1032	0	525.97
20	Optimized	159.49	-48.885125	3125.4677	5712.9178	0	521.86
21	Optimized	166.70935	-48.77549	3046.8316	5611.7043	0	517.7
22	Optimized	175.24935	-48.691525	2956.7607	5544.1692	0	513.19
23	Optimized	182.2075	-48.698245	2887.9453	5517.1385	0	510.2
24	Optimized	190.4625	-48.706215	2806.419	5493.8798	0	506.64
25	Optimized	198.56415	-48.714035	2767.9	5471.006	0	503.15
26	Optimized	207.47595	-48.932505	2786.1364	5449.7597	0	501.2
27	Optimized	213.6718	-49.25492	2809.5213	5447.3624	0	501.38
28	Optimized	219.4954	-49.75379	2841.3577	5482.8087	0	503.31
29	Optimized	228.2956	-50.67657	2898.8737	5536.7374	0	507.74
30	Optimized	236.7652	-51.73995	2965.2976	5623.4283	0	513.59
31	Optimized	243.8562	-52.630245	3020.7246	5594.88	0	518.49
32	Optimized	248.4712	-52.763385	3028.9829	5544.488	0	517.66
33	Optimized	252.61205	-52.232555	2997.0003	5328.8102	0	512.09
34	Optimized	257.23205	-50.987975	2921.0713	5142.7254	0	500.89
35	Optimized	265.01015	-47.723665	2704.0162	4676.1264	0	471.51
36	Optimized	274.05025	-43.77205	2434.0552	4221.8965	0	435.95
37	Optimized	281.0501	-40.51901	2212.907	3835.3082	0	406.67
38	Optimized	284.775	-38.787925	2092.8192	3624.7991	0	391.09
39	Optimized	287.5885	-37.4804	2008.1401	3445.5789	0	379.32

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40	Optimized	295.3885	-32.765245	1713.8156	2906.35	0	336.89
41	Optimized	305.77145	-25.76785	1277.216	2067.2779	0	273.91
42	Optimized	315.92145	-17.952475	789.53171	1219.8754	0	203.57
43	Optimized	321.8326	-12.81115	468.68401	645.66421	0	157.3
44	Optimized	323.3173	-11.519795	388.11818	503.47604	0	150

Slices of Slip Surface: 21942

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	21942	92.6058	-0.2269465	700.55925	793.49533	0	600
2	21942	97.068685	-5.1586985	1008.2958	1592.4518	337.2626	0
3	21942	98.5283	-6.771655	1103.7002	1779.3197	390.06908	0
4	21942	100.7624	-9.240448	1235.5321	2049.7796	470.10603	0
5	21942	102.8639	-11.56272	1359.5776	2573.4135	0	210.29
6	21942	104.9748	-13.89541	1484.1342	2808.3871	0	255.13
7	21942	109.21	-18.57557	1734.0344	3368.0872	0	299.75
8	21942	112.01945	-21.68016	1899.8077	3785.1263	0	329.35
9	21942	114.44445	-24.359925	2042.8878	3989.0038	0	347.13
10	21942	119.155	-29.56538	2320.9444	4473.2965	0	393.51
11	21942	123.35395	-34.205455	2568.7525	4862.3257	0	432.53
12	21942	125.83395	-36.946	2715.0793	5074.7058	0	429.2
13	21942	130.48785	-42.088855	2989.7618	5420.1744	0	473.44
14	21942	138.20785	-46.503105	3188.386	6076.3772	0	509.78
15	21942	146.0925	-46.94013	3137.2667	5882.3277	0	510.25
16	21942	154.0175	-47.37939	3085.9889	5687.6738	0	510.72
17	21942	159.49	-47.682715	3050.4507	5557.6954	0	511.04
18	21942	165.27	-48.003085	3012.9399	5509.6931	0	511.38
19	21942	173.81	-48.476435	2957.6383	5506.1856	0	511.89
20	21942	182.2075	-48.941885	2903.115	5519.0875	0	512.39
21	21942	190.4625	-49.39944	2849.6538	5543.0362	0	512.88
22	21942	197.98	-49.816115	2836.3543	5564.9094	0	513.32
23	21942	204.76	-50.19191	2863.3041	5584.6432	0	513.73
24	21942	211.54	-50.56771	2890.4011	5604.3769	0	514.13
25	21942	219.275	-50.99644	2918.8801	5626.9215	0	514.59
26	21942	227.965	-51.4781	2948.8686	5652.429	0	515.1
27	21942	236.655	-51.95976	2978.972	5678.0513	0	515.62
28	21942	245.615	-52.45639	3009.898	5540.8995	0	516.15

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29	21942	254.115	-52.927525	3040.8924	5264.5065	0	518.35
30	21942	258.735	-52.681025	3027.4125	5356.5946	0	516.13
31	21942	263.65	-49.592725	2824.1695	4968.4276	0	488.33
32	21942	272.01	-44.33979	2474.7439	4350.9064	0	441.06
33	21942	280.37	-39.086855	2125.3182	3733.4865	0	393.78
34	21942	284.775	-36.31901	1938.6223	3403.2671	0	368.87
35	21942	288.9707	-33.68269	1771.1013	3066.4544	0	345.14
36	21942	296.7707	-28.781625	1465.2239	2447.9731	0	301.03
37	21942	304.0818	-24.18775	1178.5922	1893.4516	0	259.69
38	21942	310.8977	-19.90504	911.35495	1408.453	0	221.15
39	21942	317.5659	-15.715125	649.90482	938.33802	0	183.44
40	21942	322.18925	-12.810085	468.6324	616.66651	0	157.29
41	21942	324.2309	-11.52722	388.5772	476.94954	0	150

Slices of Slip Surface: 21950

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	21950	92.6058	-0.2269465	700.55925	792.65935	0	600
2	21950	97.068685	-5.1586985	1008.2958	1591.0829	336.47227	0
3	21950	98.5283	-6.771655	1103.7002	1779.0021	389.88576	0
4	21950	100.7624	-9.240448	1235.5321	2046.8295	468.40274	0
5	21950	102.8639	-11.56272	1359.5776	2571.2091	0	210.29
6	21950	104.9748	-13.89541	1484.1342	2801.3456	0	255.13
7	21950	109.21	-18.57557	1734.0344	3358.7681	0	299.75
8	21950	112.01945	-21.68016	1899.8077	3781.4171	0	329.35
9	21950	114.44445	-24.359925	2042.8878	3978.0071	0	347.13
10	21950	119.155	-29.56538	2320.9444	4460.5283	0	393.51
11	21950	123.35395	-34.205455	2568.7525	4848.8973	0	432.53
12	21950	125.83395	-36.946	2715.0793	5062.165	0	429.2
13	21950	130.48785	-42.088855	2989.7618	5404.1854	0	473.44
14	21950	138.20785	-46.7205	3201.9667	6073.993	0	511.74
15	21950	146.0925	-47.59455	3178.1347	5925.846	0	516.14
16	21950	154.0175	-48.47307	3154.1805	5777.355	0	520.56
17	21950	159.49	-49.07972	3137.6018	5680.1072	0	523.61
18	21950	165.27	-49.72046	3120.1145	5664.5981	0	526.84
19	21950	173.81	-50.66716	3094.2774	5709.7548	0	531.61
20	21950	182.2075	-51.59806	3068.9055	5771.069	0	536.29
21	21950	190.4625	-	3043.9824	5842.7077	0	540.9

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22	21950	199.675	-53.534415	3069.3002	5922.6176	0	546.04
23	21950	209.845	-54.661805	3144.943	6010.8675	0	551.72
24	21950	219.275	-55.70716	3212.7711	6092.8277	0	556.98
25	21950	227.965	-56.670485	3272.9319	6168.5434	0	561.83
26	21950	236.655	-57.63381	3332.9784	6244.2591	0	566.68
27	21950	245.615	-58.627065	3395.0215	6159.1299	0	571.69
28	21950	254.115	-59.56933	3455.4101	5932.2585	0	578.12
29	21950	258.735	-59.53817	3455.3249	6124.0606	0	577.84
30	21950	263.65	-56.44987	3252.0893	5735.341	0	550.05
31	21950	272.01	-51.196935	2902.6637	5116.6044	0	502.77
32	21950	280.37	-45.944	2553.238	4497.8677	0	455.5
33	21950	284.775	-43.176155	2366.5003	4167.0124	0	430.59
34	21950	290.5979	-39.51739	2135.1533	3690.0065	0	397.66
35	21950	298.3979	-34.616325	1829.3447	3059.7061	0	353.55
36	21950	305.06915	-30.424485	1567.7753	2562.2468	0	315.82
37	21950	314.0075	-24.80816	1217.2757	1919.3169	0	265.27
38	21950	319.68835	-21.238655	994.57517	1512.2504	0	233.15
39	21950	324.2729	-18.357985	814.81958	1200.6024	0	207.22
40	21950	331.0187	-14.11933	550.3258	750.02664	0	169.07
41	21950	335.0306	-11.598465	393.02603	478.99157	0	150

Slices of Slip Surface: 22518

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	22518	94.474905	0.6679535	644.72329	756.84428	0	600
2	22518	98.5283	-3.385441	892.41916	1296.6345	0	600
3	22518	102.8733	-7.7304395	1120.3065	1951.5046	479.89247	0
4	22518	106.91645	-11.77357	1332.419	2772.3271	0	212.83
5	22518	109.43645	-14.29357	1464.6072	2988.6546	0	261.35
6	22518	114.155	-19.01214	1712.0731	3501.5635	0	306.59
7	22518	116.86145	-21.71857	1854.1453	3822.7377	0	332.37
8	22518	119.43645	-24.29357	1989.1479	4003.8846	0	345.88
9	22518	124.21	-29.06714	2239.6468	4378.7874	0	385.73
10	22518	128.91645	-33.77357	2486.466	4686.936	0	425.02
11	22518	136.28575	-41.142855	2873.0528	5192.4901	0	462.38
12	22518	141.7793	-46.30634	3140.5792	6001.2146	0	506.44

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13	22518	146.0925	-46.56006	3113.6084	5841.7632	0	506.83
14	22518	154.0175	-47.02624	3063.8522	5649.9182	0	507.54
15	22518	159.49	-47.34815	3029.5648	5523.2347	0	508.03
16	22518	165.27	-47.68815	2993.3036	5476.0144	0	508.55
17	22518	173.81	-48.190505	2939.7662	5474.7286	0	509.32
18	22518	182.2075	-48.684475	2887.0747	5490.6902	0	510.07
19	22518	190.4625	-49.170065	2835.3168	5517.5366	0	510.81
20	22518	197.98	-49.61227	2823.5852	5542.0424	0	511.49
21	22518	204.76	-50.01109	2852.0021	5564.1281	0	512.1
22	22518	211.54	-50.409915	2880.4191	5586.361	0	512.71
23	22518	219.275	-50.864915	2910.6187	5611.7032	0	513.4
24	22518	227.965	-51.37609	2942.5543	5640.3074	0	514.18
25	22518	236.655	-51.88727	2974.4899	5668.9116	0	514.97
26	22518	245.615	-52.41433	3007.3692	5534.961	0	515.77
27	22518	254.115	-52.91433	3040.0475	5261.6899	0	518.23
28	22518	258.735	-52.681025	3027.4125	5360.7418	0	516.13
29	22518	263.65	-49.592725	2824.1695	4972.2764	0	488.33
30	22518	272.01	-44.33979	2474.7439	4354.2487	0	441.06
31	22518	280.37	-39.086855	2125.3182	3736.3224	0	393.78
32	22518	284.775	-36.31901	1938.6223	3405.9014	0	368.87
33	22518	288.9707	-33.68269	1771.1013	3068.8001	0	345.14
34	22518	296.7707	-28.781625	1465.2239	2449.8526	0	301.03
35	22518	304.0818	-24.18775	1178.5922	1894.9108	0	259.69
36	22518	310.8977	-19.90504	911.35495	1409.5958	0	221.15
37	22518	317.5659	-15.715125	649.90482	939.0872	0	183.44
38	22518	322.18925	-12.810085	468.6324	617.12625	0	157.29
39	22518	324.2309	-11.52722	388.5772	477.30965	0	150

Slices of Slip Surface: 22006

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	22006	88.73036	-0.730359	731.97627	840.18701	0	600
2	22006	95.054685	-7.0546835	1126.6156	1783.7821	379.41522	0
3	22006	98.52443	-10.52443	1337.8835	2198.7268	497.00809	0
4	22006	99.52443	-11.52443	1390.3654	2491.313	0	208.19
5	22006	103.345	-15.345	1590.8317	2925.139	0	267.22
6	22006	108.345	-20.345	1853.0683	3550.7014	0	315.17
7	22006	110.865	-22.865	1985.2538	3874.9459	0	331.94

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8	22006	114.155	-26.155	2157.9149	4197.7356	0	363.15
9	22006	119.155	-31.155	2420.0901	4668.0031	0	407.81
10	22006	122.865	-34.865	2614.7686	4991.7997	0	438.79
11	22006	125.345	-37.345	2744.8364	5168.9775	0	433.01
12	22006	130.48785	-42.487855	3014.6268	5511.1916	0	477.04
13	22006	138.20785	-46.503105	3188.386	6076.3772	0	509.78
14	22006	146.0925	-46.94013	3137.2667	5882.3277	0	510.25
15	22006	154.0175	-47.37939	3085.9889	5687.6738	0	510.72
16	22006	159.49	-47.682715	3050.4507	5557.6954	0	511.04
17	22006	165.27	-48.003085	3012.9399	5509.6931	0	511.38
18	22006	173.81	-48.476435	2957.6383	5506.1856	0	511.89
19	22006	182.2075	-48.941885	2903.115	5519.2085	0	512.39
20	22006	190.4625	-49.39944	2849.6538	5543.1572	0	512.88
21	22006	197.98	-49.816115	2836.3543	5564.9094	0	513.32
22	22006	204.76	-50.19191	2863.3041	5584.6432	0	513.73
23	22006	211.54	-50.56771	2890.4011	5604.3769	0	514.13
24	22006	219.275	-50.99644	2918.8801	5627.0364	0	514.59
25	22006	227.965	-51.4781	2948.8686	5652.5439	0	515.1
26	22006	236.655	-51.95976	2978.972	5678.1662	0	515.62
27	22006	245.615	-52.45639	3009.898	5540.8995	0	516.15
28	22006	254.115	-52.927525	3040.8924	5264.635	0	518.35
29	22006	258.735	-52.681025	3027.4125	5349.337	0	516.13
30	22006	263.65	-49.592725	2824.1695	4961.6417	0	488.33
31	22006	272.01	-44.33979	2474.7439	4344.9307	0	441.06
32	22006	280.37	-39.086855	2125.3182	3728.3211	0	393.78
33	22006	284.775	-36.31901	1938.6223	3398.5631	0	368.87
34	22006	288.9707	-33.68269	1771.1013	3062.0829	0	345.14
35	22006	296.7707	-28.781625	1465.2239	2444.3247	0	301.03
36	22006	304.0818	-24.18775	1178.5922	1890.655	0	259.69
37	22006	310.8977	-19.90504	911.35495	1406.2944	0	221.15
38	22006	317.5659	-15.715125	649.90482	936.73809	0	183.44
39	22006	322.18925	-12.810085	468.6324	615.51718	0	157.29
40	22006	324.2309	-11.52722	388.5772	475.99301	0	150

Slices of Slip Surface: 22014

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)

PG Case.BS.Thru Fabric

1	22014	88.73036	-0.730359	731.97627	838.56521	0	600
2	22014	95.054685	-7.0546835	1126.6156	1780.6611	377.6133	0
3	22014	98.52443	-10.52443	1337.8835	2197.9178	496.54101	0
4	22014	99.52443	-11.52443	1390.3654	2489.0827	0	208.19
5	22014	103.345	-15.345	1590.8317	2917.0004	0	267.22
6	22014	108.345	-20.345	1853.0683	3541.5154	0	315.17
7	22014	110.865	-22.865	1985.2538	3866.0764	0	331.94
8	22014	114.155	-26.155	2157.9149	4185.9262	0	363.15
9	22014	119.155	-31.155	2420.0901	4654.6848	0	407.81
10	22014	122.865	-34.865	2614.7686	4978.7167	0	438.79
11	22014	125.345	-37.345	2744.8364	5155.0457	0	433.01
12	22014	130.48785	-42.487855	3014.6268	5494.9935	0	477.04
13	22014	138.20785	-46.7205	3201.9667	6074.6266	0	511.74
14	22014	146.0925	-47.59455	3178.1347	5926.4731	0	516.14
15	22014	154.0175	-48.47307	3154.1805	5777.8566	0	520.56
16	22014	159.49	-49.07972	3137.6018	5680.7654	0	523.61
17	22014	165.27	-49.72046	3120.1145	5665.18	0	526.84
18	22014	173.81	-50.66716	3094.2774	5710.3367	0	531.61
19	22014	182.2075	-51.59806	3068.9055	5771.671	0	536.29
20	22014	190.4625	-52.513165	3043.9824	5843.3097	0	540.9
21	22014	199.675	-53.534415	3069.3002	5923.3017	0	546.04
22	22014	209.845	-54.661805	3144.943	6011.5517	0	551.72
23	22014	219.275	-55.70716	3212.7711	6093.5139	0	556.98
24	22014	227.965	-56.670485	3272.9319	6169.2297	0	561.83
25	22014	236.655	-57.63381	3332.9784	6244.9454	0	566.68
26	22014	245.615	-58.627065	3395.0215	6159.6683	0	571.69
27	22014	254.115	-59.56933	3455.4101	5932.898	0	578.12
28	22014	258.735	-59.53817	3455.3249	6117.1486	0	577.84
29	22014	263.65	-56.44987	3252.0893	5728.7576	0	550.05
30	22014	272.01	-51.196935	2902.6637	5110.73	0	502.77
31	22014	280.37	-45.944	2553.238	4492.7023	0	455.5
32	22014	284.775	-43.176155	2366.5003	4162.1202	0	430.59
33	22014	290.5979	-39.51739	2135.1533	3685.6956	0	397.66
34	22014	298.3979	-34.616325	1829.3447	3055.861	0	353.55
35	22014	305.06915	-30.424485	1567.7753	2559.1208	0	315.82
36	22014	314.0075	-24.80816	1217.2757	1916.9486	0	265.27
37	22014	319.68835	-21.238655	994.57517	1510.2938	0	233.15
38	22014	324.2729	-	814.81958	1199.0209	0	207.22

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			18.357985				
39	22014	331.0187	-14.11933	550.3258	748.95973	0	169.07
40	22014	335.0306	-11.598465	393.02603	478.21645	0	150

Slices of Slip Surface: 21941

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	21941	92.6058	-0.2269465	700.55925	796.52575	0	600
2	21941	97.068685	-5.1586985	1008.2958	1594.0368	338.17772	0
3	21941	98.5283	-6.771655	1103.7002	1780.7167	390.87569	0
4	21941	100.7624	-9.240448	1235.5321	2052.3364	471.5822	0
5	21941	102.8639	-11.56272	1359.5776	2575.1091	0	210.29
6	21941	104.9748	-13.89541	1484.1342	2812.2991	0	255.13
7	21941	109.21	-18.57557	1734.0344	3372.88	0	299.75
8	21941	112.01945	-21.68016	1899.8077	3788.0241	0	329.35
9	21941	114.44445	-24.359925	2042.8878	3994.6593	0	347.13
10	21941	119.155	-29.56538	2320.9444	4479.8109	0	393.51
11	21941	123.35395	-34.205455	2568.7525	4869.1432	0	432.53
12	21941	125.83395	-36.946	2715.0793	5081.3681	0	429.2
13	21941	130.48785	-42.088855	2989.7618	5428.0364	0	473.44
14	21941	138.20785	-46.503105	3188.386	6076.2499	0	509.78
15	21941	146.0925	-46.94013	3137.2667	5882.2018	0	510.25
16	21941	154.0175	-47.37939	3085.9889	5687.5478	0	510.72
17	21941	159.49	-47.682715	3050.4507	5557.3648	0	511.04
18	21941	165.27	-48.003085	3012.9399	5509.5762	0	511.38
19	21941	173.81	-48.476435	2957.6383	5506.1856	0	511.89
20	21941	182.2075	-48.941885	2903.115	5519.2085	0	512.39
21	21941	190.4625	-49.39944	2849.6538	5543.1572	0	512.88
22	21941	199.675	-49.910065	2843.1287	5569.9168	0	513.42
23	21941	209.845	-50.47376	2883.5779	5599.4683	0	514.03
24	21941	219.275	-50.99644	2918.8801	5627.0364	0	514.59
25	21941	227.965	-51.4781	2948.8686	5652.5439	0	515.1
26	21941	236.655	-51.95976	2978.972	5678.1662	0	515.62
27	21941	245.615	-52.45639	3009.898	5540.8995	0	516.15
28	21941	254.115	-52.927525	3040.8924	5264.635	0	518.35
29	21941	258.735	-52.7889	3034.1198	5300.1483	0	517.1
30	21941	263.65	-50.42196	2875.8797	4994.5575	0	495.8

PG Case.BS.Thru Fabric

31	21941	272.01	-46.395995	2603.1103	4517.3458	0	459.56
32	21941	280.37	-42.37003	2330.2331	4040.2418	0	423.33
33	21941	284.775	-40.248695	2183.9486	3784.0694	0	404.24
34	21941	289.29875	-38.07017	2044.8485	3489.5409	0	384.63
35	21941	297.09875	-34.31389	1810.432	2992.3401	0	350.83
36	21941	305.675	-30.18379	1552.7733	2489.6921	0	313.65
37	21941	315.825	-25.295805	1247.7753	1926.9194	0	269.66
38	21941	321.7844	-22.425905	1068.6471	1599.2013	0	243.83
39	21941	326.3516	-20.22646	931.41521	1367.0624	0	224.04
40	21941	333.7172	-16.679375	710.07489	994.08039	0	192.11
41	21941	340.417	-13.452915	508.74537	656.07428	0	163.08
42	21941	344.21135	-11.625665	394.72205	462.48721	0	150

Slices of Slip Surface: 21877

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	21877	95.307315	1.3608175	601.48108	611.61608	0	600
2	21877	98.5283	-2.5764585	841.9164	1119.7386	0	600
3	21877	99.43525	-3.6851	902.07371	1269.1238	0	600
4	21877	102.69645	-7.6715395	1118.4116	1892.9416	447.17508	0
5	21877	105.90825	-11.59756	1331.4703	2649.8625	0	212.2
6	21877	106.46375	-12.27659	1368.305	2739.7161	0	241.44
7	21877	109.21	-15.633585	1550.431	3060.6597	0	273.27
8	21877	113.0741	-20.356995	1806.8085	3579.5574	0	318.06
9	21877	115.4991	-23.321275	1967.66	3864.2043	0	338.3
10	21877	119.155	-27.790185	2210.133	4267.8092	0	377.53
11	21877	123.8006	-33.46891	2518.3875	4734.6481	0	425.61
12	21877	126.2806	-36.50042	2682.8172	4997.7534	0	425
13	21877	130.48785	-41.643275	2961.9064	5329.6977	0	469.43
14	21877	138.20785	-46.503105	3188.386	6076.5045	0	509.78
15	21877	146.0925	-46.94013	3137.2667	5882.4537	0	510.25
16	21877	154.0175	-47.37939	3085.9889	5687.7998	0	510.72
17	21877	159.49	-47.682715	3050.4507	5558.026	0	511.04
18	21877	165.27	-48.003085	3012.9399	5509.81	0	511.38

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19	21877	173.81	-48.476435	2957.6383	5506.1856	0	511.89
20	21877	182.2075	-48.941885	2903.115	5519.0875	0	512.39
21	21877	190.4625	-49.39944	2849.6538	5543.0362	0	512.88
22	21877	199.675	-49.910065	2843.1287	5569.8186	0	513.42
23	21877	209.845	-50.47376	2883.5779	5599.3701	0	514.03
24	21877	219.275	-50.99644	2918.8801	5626.9215	0	514.59
25	21877	227.965	-51.4781	2948.8686	5652.5439	0	515.1
26	21877	236.655	-51.95976	2978.972	5678.0513	0	515.62
27	21877	245.615	-52.45639	3009.898	5540.8995	0	516.15
28	21877	254.115	-52.927525	3040.8924	5264.635	0	518.35
29	21877	258.735	-52.7889	3034.1198	5304.745	0	517.1
30	21877	263.65	-50.42196	2875.8797	4998.8684	0	495.8
31	21877	272.01	-46.395995	2603.1103	4521.3333	0	459.56
32	21877	280.37	-42.37003	2330.2331	4043.7983	0	423.33
33	21877	284.775	-40.248695	2183.9486	3787.2728	0	404.24
34	21877	289.29875	-38.07017	2044.8485	3492.6847	0	384.63
35	21877	297.09875	-34.31389	1810.432	2995.0421	0	350.83
36	21877	305.675	-30.18379	1552.7733	2492	0	313.65
37	21877	315.825	-25.295805	1247.7753	1928.7835	0	269.66
38	21877	321.7844	-22.425905	1068.6471	1600.7294	0	243.83
39	21877	326.3516	-20.22646	931.41521	1368.4079	0	224.04
40	21877	333.7172	-16.679375	710.07489	995.05896	0	192.11
41	21877	340.417	-13.452915	508.74537	656.76112	0	163.08
42	21877	344.21135	-11.625665	394.72205	463.00879	0	150

Slices of Slip Surface: 21878

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	21878	95.307315	1.3608175	601.48108	612.30978	0	600
2	21878	98.5283	-2.5764585	841.9164	1120.218	0	600
3	21878	99.43525	-3.6851	902.07371	1269.4583	0	600
4	21878	102.69645	-7.6715395	1118.4116	1893.6005	447.55555	0
5	21878	105.90825	-11.59756	1331.4703	2650.2472	0	212.2
6	21878	106.46375	-12.27659	1368.305	2739.856	0	241.44
7	21878	109.21	-15.633585	1550.431	3061.7903	0	273.27
8	21878	113.0741	-20.356995	1806.8085	3580.7351	0	318.06

PG Case.BS.Thru Fabric

9	21878	115.4991	-23.321275	1967.66	3865.3758	0	338.3
10	21878	119.155	-27.790185	2210.133	4269.5305	0	377.53
11	21878	123.8006	-33.46891	2518.3875	4736.4829	0	425.61
12	21878	126.2806	-36.50042	2682.8172	4999.3001	0	425
13	21878	130.48785	-41.643275	2961.9064	5331.7817	0	469.43
14	21878	138.20785	-46.503105	3188.386	6076.5045	0	509.78
15	21878	146.0925	-46.94013	3137.2667	5882.4537	0	510.25
16	21878	154.0175	-47.37939	3085.9889	5687.7998	0	510.72
17	21878	159.49	-47.682715	3050.4507	5558.026	0	511.04
18	21878	165.27	-48.003085	3012.9399	5509.81	0	511.38
19	21878	173.81	-48.476435	2957.6383	5506.3025	0	511.89
20	21878	182.2075	-48.941885	2903.115	5519.2085	0	512.39
21	21878	190.4625	-49.39944	2849.6538	5543.1572	0	512.88
22	21878	197.98	-49.816115	2836.3543	5565.0567	0	513.32
23	21878	204.76	-50.19191	2863.3041	5584.6432	0	513.73
24	21878	211.54	-50.56771	2890.4011	5604.3769	0	514.13
25	21878	219.275	-50.99644	2918.8801	5627.0364	0	514.59
26	21878	227.965	-51.4781	2948.8686	5652.5439	0	515.1
27	21878	236.655	-51.95976	2978.972	5678.1662	0	515.62
28	21878	245.615	-52.45639	3009.898	5540.8995	0	516.15
29	21878	254.115	-52.927525	3040.8924	5264.635	0	518.35
30	21878	258.735	-52.681025	3027.4125	5356.0186	0	516.13
31	21878	263.65	-49.592725	2824.1695	4967.8199	0	488.33
32	21878	272.01	-44.33979	2474.7439	4350.4	0	441.06
33	21878	280.37	-39.086855	2125.3182	3732.9801	0	393.78
34	21878	284.775	-36.31901	1938.6223	3402.8908	0	368.87
35	21878	288.9707	-33.68269	1771.1013	3065.9213	0	345.14
36	21878	296.7707	-28.781625	1465.2239	2447.5309	0	301.03
37	21878	304.0818	-24.18775	1178.5922	1893.0869	0	259.69
38	21878	310.8977	-19.90504	911.35495	1408.0721	0	221.15
39	21878	317.5659	-15.715125	649.90482	938.02057	0	183.44
40	21878	322.18925	-12.810085	468.6324	616.37097	0	157.29
41	21878	324.2309	-11.52722	388.5772	476.65695	0	150

Slices of Slip Surface: 22526

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	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	22526	94.474905	0.6679535	644.72329	757.27555	0	600
2	22526	98.5283	-3.385441	892.41916	1299.9807	0	600
3	22526	102.8733	-7.7304395	1120.3065	1949.2814	478.6089	0
4	22526	106.91645	-11.77357	1332.419	2775.9184	0	212.83
5	22526	109.43645	-14.29357	1464.6072	2982.1803	0	261.35
6	22526	114.155	-19.01214	1712.0731	3493.6906	0	306.59
7	22526	116.86145	-21.71857	1854.1453	3821.7327	0	332.37
8	22526	119.43645	-24.29357	1989.1479	3994.7897	0	345.88
9	22526	124.21	-29.06714	2239.6468	4368.8081	0	385.73
10	22526	128.91645	-33.77357	2486.466	4676.2965	0	425.02
11	22526	136.28575	-41.142855	2873.0528	5179.9783	0	462.38
12	22526	141.7793	-46.326975	3141.8753	5983.0141	0	506.62
13	22526	146.0925	-46.834415	3130.7114	5843.9863	0	509.3
14	22526	154.0175	-47.766765	3110.1591	5701.123	0	514.2
15	22526	159.49	-48.41059	3095.8673	5609.3275	0	517.59
16	22526	165.27	-49.09059	3080.8603	5596.2992	0	521.17
17	22526	173.81	-50.095295	3058.6481	5646.7707	0	526.46
18	22526	182.2075	-51.083235	3036.7188	5713.9543	0	531.66
19	22526	190.4625	-52.05441	3015.3038	5791.4333	0	536.77
20	22526	199.675	-53.138235	3044.5873	5877.8493	0	542.48
21	22526	209.845	-54.334705	3124.469	5973.2582	0	548.78
22	22526	219.275	-55.444115	3196.3677	6061.8757	0	554.62
23	22526	227.965	-56.46647	3260.1396	6143.7049	0	560
24	22526	236.655	-57.488825	3324.0258	6225.4198	0	565.38
25	22526	245.615	-58.54294	3389.7317	6146.6661	0	570.93
26	22526	254.115	-59.54294	3453.7866	5925.9263	0	577.89
27	22526	258.735	-59.53817	3455.3249	6128.0926	0	577.84
28	22526	263.65	-56.44987	3252.0893	5738.6833	0	550.05
29	22526	272.01	-51.196935	2902.6637	5119.5416	0	502.77
30	22526	280.37	-45.944	2553.238	4500.3998	0	455.5
31	22526	284.775	-43.176155	2366.5003	4169.4585	0	430.59
32	22526	290.5979	-39.51739	2135.1533	3692.1241	0	397.66
33	22526	298.3979	-34.616325	1829.3447	3061.4364	0	353.55
34	22526	305.06915	-30.424485	1567.7753	2563.6678	0	315.82

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35	22526	314.0075	-24.80816	1217.2757	1920.3589	0	265.27
36	22526	319.68835	-21.238655	994.57517	1513.054	0	233.15
37	22526	324.2729	-18.357985	814.81958	1201.2049	0	207.22
38	22526	331.0187	-14.11933	550.3258	750.36554	0	169.07
39	22526	335.0306	-11.598465	393.02603	479.1572	0	150

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CG Case.BS

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 174
Last Edited By: Cox, Lane MVK
Date: 3/29/2011
Time: 8:21:42 AM
File Name: 5c(1) Typical 1.2nd SC.80%SG.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\2nd Stage Construction\80%SG,1 Layer of Fabric\Slope W\
Last Solved Date: 3/29/2011
Last Solved Time: 8:23:12 AM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

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Kind: SLOPE/W
Method: Spencer
Settings
    Apply Phreatic Correction: No
    PWP Conditions Source: Piezometric Line
    Use Staged Rapid Drawdown: No
SlipSurface
    Direction of movement: Left to Right
    Use Passive Mode: No
    Slip Surface Option: Block
    Critical slip surfaces saved: 100
    Optimize Critical Slip Surface Location: Yes
    Tension Crack
        Tension Crack Option: Tension Crack Line
        Percentage Wet: 1
        Tension Crack Fluid Unit Weight: 62.4 pcf

FOS Distribution
    FOS Calculation Option: Constant
Restrict Block Crossing: Yes
Advanced
    Number of Slices: 30
    Optimization Tolerance: 0.01
    Minimum Slip Surface Depth: 0.1 ft
    Optimization Maximum Iterations: 2000
    Optimization Convergence Tolerance: 1e-007
    Starting Optimization Points: 8
    Ending Optimization Points: 16
    Complete Passes per Insertion: 1
    Driving Side Maximum Convex Angle: 5 °
    Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH

Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH above 0

Model: Mohr-Coulomb
Unit Weight: 108 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH, 0 to -12

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -12 (2)
Cohesion Spatial Fn: CH, 0 to -12
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH, -12 to -22

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -12 to -22 (2)

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Cohesion Spatial Fn: CH, -12 to -22
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -22 to -36

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -22 to -36 (2)
Cohesion Spatial Fn: CH, -22 to -36
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -36 to -80

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -36 to -80 (2)
Cohesion Spatial Fn: CH, -36 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sand Fill

Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, 0 to -12 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -12 (2)
Cohesion Spatial Fn: CH, 0 to -12 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -12 to -22 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -12 to -22 (2)
Cohesion Spatial Fn: CH, -12 to -22 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure

Piezometric Line: 1

CH, -22 to -36 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -22 to -36 (2)
Cohesion Spatial Fn: CH, -22 to -36 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Limits

Left Coordinate: (-200, -1.79) ft
Right Coordinate: (500, -4.27) ft

Slip Surface Block

Left Grid
Upper Left: (14.0275, -5.34558) ft
Lower Left: (78.1383, -5.34558) ft
Lower Right: (78.1383, -29.6829) ft
X Increments: 5
Y Increments: 5
Starting Angle: 135 °
Ending Angle: 160 °
Angle Increments: 7
Right Grid
Upper Left: (220, -30) ft
Lower Left: (277, -30) ft
Lower Right: (277, -60) ft
X Increments: 5
Y Increments: 5
Starting Angle: 20 °
Ending Angle: 45 °
Angle Increments: 7

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	14
	111.73	14
	194.59	-4.39

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	214.93	-4.22
	250.23	-4.22
	259.47	-4.16
	284.55	-5.2
	285	-5.3
	406	-5.3
	407.82	-4.54
	500	-4.27

Reinforcements

Reinforcement 1

Type: Fabric
Outside Point: (177, 0) ft
Inside Point: (23, 0) ft
Slip Surface Intersection: (22.029, 0) ft
Total Length: 154 ft
Reinforcement Direction: 0 °
Applied Load Option: Variable
F of S Dependent: No
Contact Cohesion: 265 psf
Contact Phi: 19 °
Interface Factor: 2
Bond Safety Factor: 1
Fabric Capacity: 27000 lbs
Fabric Safety Factor: 1
Fabric Load: 27000 lbs
Load Distribution: Conc. in 1 slice
Load Orientation: 0
Applied Load: 27000 lbs
Fabric Load Used: 0 lbs
Resisting Force Used: 693.45 lbs/ft
Available Bond Length: 0 ft
Required Bond Length: 0 ft
Governing Component: Bond

Tension Crack Line

	X (ft)	Y (ft)
	4.93	4.58
	22	0.2
	83	0.2
	112	10
	122	10
	159	1
	161	4

Spatial Functions

CH, 0 to -12

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -1.5, 75)
Data Point: (-300, -12, 75)
Data Point: (-23.63, 0, 75)
Data Point: (-23.63, -12, 75)
Data Point: (0, 0, 250)
Data Point: (0, -12, 250)
Data Point: (250.26, -4.13, 150)
Data Point: (250.26, -12, 150)
Data Point: (500, -4.27, 150)
Data Point: (500, -12, 150)

CH, -22 to -36 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -22, 350)
Data Point: (0, -36, 476)
Data Point: (40.33, -22, 290)
Data Point: (40.33, -36, 416)
Data Point: (116.73, -22, 327)
Data Point: (116.73, -36, 453)
Data Point: (250.23, -22, 240)
Data Point: (250.23, -36, 366)

CH, -12 to -22

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -12, 125)
Data Point: (-300, -22, 225)
Data Point: (-23.63, -12, 125)
Data Point: (-23.63, -22, 225)
Data Point: (0, -12, 350)
Data Point: (0, -22, 350)
Data Point: (250.26, -12, 150)
Data Point: (250.26, -22, 240)
Data Point: (500, -12, 150)
Data Point: (500, -22, 240)

CH, -22 to -36

Model: Linear Interpolation

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Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -22, 225)
Data Point: (-300, -36, 365)
Data Point: (-23.63, -22, 225)
Data Point: (-23.63, -36, 365)
Data Point: (0, -22, 350)
Data Point: (0, -36, 476)
Data Point: (250.26, -22, 240)
Data Point: (250.26, -36, 366)
Data Point: (500, -22, 240)
Data Point: (500, -36, 366)

CH, -36 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -36, 365)
Data Point: (-300, -80, 805)
Data Point: (-23.63, -36, 365)
Data Point: (-23.63, -80, 805)
Data Point: (0, -36, 476)
Data Point: (0, -80, 872)
Data Point: (250.26, -36, 366)
Data Point: (250.26, -80, 762)
Data Point: (500, -36, 366)
Data Point: (500, -80, 762)

CH, 0 to -12 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -6, 100)
Data Point: (0, -6, 101)
Data Point: (178.08, -6, 111)

CH, -12 to -22 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -17, 100)
Data Point: (0, -17, 109)
Data Point: (178.08, -17, 100)

CH, -22 to -36 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)

Data Point: (-23.63, -29, 102)
Data Point: (0, -29, 104)
Data Point: (178.08, -29, 102)

CH, -36 to -80 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -58, 105)
Data Point: (0, -58, 106)
Data Point: (178.08, -58, 105)

CH, 0 to -12 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, 0, 250)
Data Point: (0, -12, 250)
Data Point: (40.33, 0, 171)
Data Point: (40.33, -12, 171)
Data Point: (116.73, 0, 219)
Data Point: (116.73, -12, 219)
Data Point: (250.23, -4.13, 150)
Data Point: (250.23, -12, 150)

CH, -12 to -22 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -12, 350)
Data Point: (0, -22, 350)
Data Point: (40.33, -12, 200)
Data Point: (40.33, -22, 290)
Data Point: (116.73, -12, 245)
Data Point: (116.73, -22, 335)
Data Point: (250.23, -12, 150)
Data Point: (250.23, -22, 240)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -36 to -80	31,33,60,63,34,32	30800
Region 2	CH above 0	40,9,10,11,12,13,64,17,39,57	130.54365
Region 3	Sand Fill	19,20,21,22,23,24,25,26,27,28	629.28815
Region 4	EMBANKMENT FILL CH	19,46,41,42,43,66,28	1500.8133
Region 5	EMBANKMENT FILL CH	43,44,45,65,29,66	501.84775
Region 6	CH, -22 to -36	35,33,60,59	2800
Region 7	CH, -12 to -22	37,35,59,58	2000

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Region 8	CH, 0 to -12	57,58,37,2,1,3,4,5,6,7,8,40	2203.9585
Region 9	CH, -22 to -36	63,62,36,34	3496.78
Region 10	CH, -12 to -22	62,61,38,36	2497.7
Region 11	CH, 0 to -12	61,65,45,47,48,49,50,51,52,53,54,55,30,38	1282.4538
Region 12	CH, -12 to -22 SG	58,59,62,61	2502.3
Region 13	CH, -22 to -36 SG	60,59,62,63	3503.22
Region 14	CH, 0 to -12 SG	57,58,61,65,29,66,28,27,26,25,24,23,22,21,20,19,18,39	1448.4571
Region 15	EMBANKMENT FILL CH	64,17,39,56,19,46	368.6281

Points

	X (ft)	Y (ft)
Point 1	-195.89	-1.8
Point 2	-200	-1.79
Point 3	-169.15	-1.8
Point 4	-146.39	-1.65
Point 5	-122.74	-1.62
Point 6	-98.28	-1.36
Point 7	-85.7	-0.94
Point 8	-66.38	-0.23
Point 9	-52.15	0.5
Point 10	-38.25	0.23
Point 11	-36.18	0.46
Point 12	-23.63	0.86
Point 13	-19.22	0.94
Point 14	-5.71	4.75
Point 15	-0.42	4.91
Point 16	-0.22	4.77
Point 17	4.93	4.5
Point 18	24.3	-0.66
Point 19	40.33	-3.85
Point 20	53.08	-5.02
Point 21	69.13	-8.93
Point 22	90.17	-10.85
Point 23	106.69	-11.22
Point 24	116.58	-11.18
Point 25	126.69	-10.14
Point 26	142.13	-9.46
Point 27	157.98	-8.78
Point 28	178.08	-4.54
Point 29	214.93	-4.22
Point 30	500	-4.27
Point 31	-200	-80
Point 32	500	-80
Point 33	-200	-36
Point 34	500	-36
Point 35	-200	-22
Point 36	500	-22

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Point 37	-200	-12
Point 38	500	-12
Point 39	22	0
Point 40	-63	0
Point 41	111.73	14
Point 42	121.73	14
Point 43	161	4
Point 44	241	2
Point 45	259.47	-4.16
Point 46	81.73	6.5
Point 47	284.55	-5.2
Point 48	300.6	-9.14
Point 49	320.9	-11
Point 50	337.4	-11.22
Point 51	347.09	-11.26
Point 52	356.8	-10.22
Point 53	372.41	-9.68
Point 54	388.59	-9
Point 55	407.82	-4.54
Point 56	30	-1.79
Point 57	0	0
Point 58	0	-12
Point 59	0	-22
Point 60	0	-36
Point 61	250.23	-12
Point 62	250.23	-22
Point 63	250.23	-36
Point 64	1.73	4.5
Point 65	250.23	-4.22
Point 66	194.59	-4.39

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	1.31	(175.374, 3.018)	117.0348	(19.1155, 4.93464)	(321.606, -11.0094)
2	7659	1.48	(175.374, 3.018)	113.296	(23.8844, 5.05386)	(326.233, -11.0711)
3	5210	1.48	(175.088, 3.022)	114.806	(22.1442, 5.01035)	(327.406, -11.0868)
4	7658	1.48	(181.499, 3.056)	117.412	(23.8844, 5.05386)	(338.49, -11.2245)
5	7667	1.48	(181.076, 3.055)	118.359	(23.8844, 5.05386)	(337.644, -11.221)
6	5218	1.49	(181.79, 3.059)	121.305	(22.1442, 5.01035)	(340.82, -11.2341)
7	4970	1.49	(176.236, 3.022)	113.305	(24.4355, 5.06764)	(327.406, -11.0868)
8	7660	1.49	(170.778, 2.912)	109.564	(23.8844, 5.05386)	(317.07, -10.6491)
9	7668	1.49	(175.484, 3.019)	114.166	(23.8844, 5.05386)	(326.455, -11.0741)
10	5219	1.49	(174.649, 3.019)	115.582	(22.1442, 5.01035)	(326.528, -11.075)
11	5209	1.49	(183.268, 3.062)	120.554	(22.1442, 5.01035)	(343.78, -11.2463)
12	4978	1.49	(182.938, 3.059)	119.632	(24.4355, 5.06764)	(340.82, -11.2341)
13	7650	1.49	(174.819, 3.014)	111.701	(23.8844, 5.05386)	(325.124, -11.0563)
14	5211	1.49	(169.302, 2.885)	110.417	(22.1442, 5.01035)	(315.87, -10.5391)

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15	4969	1.49	(184.415, 3.062)	119.338	(24.4355, 5.06764)	(343.78, -11.2463)
16	7651	1.49	(170.044, 2.879)	107.97	(23.8844, 5.05386)	(315.613, -10.5155)
17	4979	1.50	(175.797, 3.019)	114.785	(24.4355, 5.06764)	(326.528, -11.075)
18	7666	1.50	(189.11, 2.885)	124.246	(23.8844, 5.05386)	(353.811, -10.5401)
19	4971	1.50	(170.45, 2.885)	109.028	(24.4355, 5.06764)	(315.87, -10.5391)
20	5201	1.50	(175.246, 3.023)	114.132	(22.1442, 5.01035)	(327.722, -11.091)
21	4961	1.50	(176.394, 3.023)	112.168	(24.4355, 5.06764)	(327.722, -11.091)
22	5258	1.50	(172.447, 4.717)	116.911	(16.7156, 4.87464)	(327.406, -11.0868)
23	5266	1.50	(179.147, 4.753)	123.29	(16.7156, 4.87464)	(340.82, -11.2341)
24	5202	1.50	(168.901, 2.867)	108.997	(22.1442, 5.01035)	(315.076, -10.4664)
25	4962	1.50	(170.049, 2.867)	108.474	(24.4355, 5.06764)	(315.076, -10.4664)
26	2329	1.50	(177.169, 3.339)	117.248	(21.0639, 4.98335)	(332.627, -11.1564)
27	5227	1.50	(180.354, 3.056)	121.211	(22.1442, 5.01035)	(337.945, -11.2223)
28	7675	1.50	(187.152, 2.991)	123.903	(23.8844, 5.05386)	(349.847, -10.9647)
29	7649	1.51	(181.629, 3.056)	116.494	(23.8844, 5.05386)	(338.752, -11.2256)
30	5267	1.51	(172.008, 4.714)	117.726	(16.7156, 4.87464)	(326.528, -11.075)
31	7652	1.51	(166.369, 2.712)	105.514	(23.8844, 5.05386)	(308.32, -9.84739)
32	5217	1.51	(193.172, 2.745)	129.157	(22.1442, 5.01035)	(363.745, -9.97976)
33	7661	1.51	(167.186, 2.749)	106.836	(23.8844, 5.05386)	(309.942, -9.99594)
34	5170	1.51	(182.919, 3.059)	120.734	(24.3987, 5.06672)	(340.82, -11.2341)
35	7676	1.51	(180.421, 3.051)	119.15	(23.8844, 5.05386)	(336.332, -11.2058)
36	5162	1.51	(176.218, 3.022)	113.892	(24.3987, 5.06672)	(327.406, -11.0868)
37	7669	1.51	(171.096, 2.927)	111.133	(23.8844, 5.05386)	(317.7, -10.7068)
38	5257	1.51	(180.624, 4.756)	123.413	(16.7156, 4.87464)	(343.78, -11.2463)
39	5220	1.51	(169.339, 2.886)	111.559	(22.1442, 5.01035)	(315.944, -10.5459)
40	5259	1.51	(166.66, 4.58)	112.587	(16.7156, 4.87464)	(315.87, -10.5391)
41	5226	1.51	(189.768, 2.804)	127.887	(22.1442, 5.01035)	(356.905, -10.2164)
42	4987	1.51	(181.502, 3.056)	120.764	(24.4355, 5.06764)	(337.945, -11.2223)
43	5171	1.51	(175.779, 3.019)	114.836	(24.3987, 5.06672)	(326.528, -11.075)
44	2337	1.51	(185.606, 3.299)	124.883	(21.0639, 4.98335)	(349.551, -10.9964)
45	2377	1.51	(176.641, 3.688)	117.853	(19.9778, 4.9562)	(332.627, -11.1564)
46	5161	1.52	(184.397, 3.062)	119.859	(24.3987, 5.06672)	(343.78, -11.2463)
47	2330	1.52	(169.353, 3.211)	111.43	(21.0639, 4.98335)	(317.02, -10.6445)
48	2321	1.52	(169.566, 3.221)	110.383	(21.0639, 4.98335)	(317.442, -10.6832)
49	5275	1.52	(177.711, 4.75)	123.259	(16.7156, 4.87464)	(337.945, -11.2223)
50	5212	1.52	(164.929, 2.686)	107.068	(22.1442, 5.01035)	(307.194, -9.74414)
51	7657	1.52	(191.247, 2.794)	124.844	(23.8844, 5.05386)	(358.126, -10.1741)
52	2425	1.52	(175.965, 4.133)	118.381	(18.589, 4.92148)	(332.627, -11.1564)
53	4922	1.52	(177.502, 3.022)	112.55	(26.9612, 5.13078)	(327.406, -11.0868)
54	5249	1.52	(172.604, 4.718)	116.115	(16.7156, 4.87464)	(327.722, -11.091)
55	4980	1.52	(170.487, 2.886)	110.211	(24.4355, 5.06764)	(315.944, -10.5459)
56	4986	1.52	(190.915, 2.804)	127.656	(24.4355, 5.06764)	(356.905, -10.2164)
57	4930	1.52	(184.203, 3.059)	118.847	(26.9612, 5.13078)	(340.82, -11.2341)
58	2369	1.52	(169.038, 3.569)	110.807	(19.9778, 4.9562)	(317.442, -10.6832)
59	5163	1.52	(170.431, 2.885)	109.669	(24.3987, 5.06672)	(315.87, -10.5391)
60	10347	1.52	(180.65, 3.055)	117.22	(23.3333, 5.04008)	(337.344, -11.2193)
61	2338	1.52	(175.701, 3.33)	117.497	(21.0639, 4.98335)	(329.688, -11.1172)
62	10348	1.52	(175.844, 3.023)	114.006	(23.3333, 5.04008)	(327.726, -11.091)

63	5228	1.52	(173.977, 3.014)	116.2	(22.1442, 5.01035)	(325.182, -11.0571)
64	5203	1.52	(164.298, 2.657)	105.455	(22.1442, 5.01035)	(305.941, -9.62939)
65	2386	1.52	(175.172, 3.678)	117.921	(19.9778, 4.9562)	(329.688, -11.1172)
66	5250	1.52	(166.259, 4.562)	111.15	(16.7156, 4.87464)	(315.076, -10.4664)
67	4977	1.52	(194.319, 2.745)	129.523	(24.4355, 5.06764)	(363.745, -9.97976)
68	4972	1.52	(166.077, 2.686)	105.739	(24.4355, 5.06764)	(307.194, -9.74414)
69	4963	1.52	(165.446, 2.657)	105.793	(24.4355, 5.06764)	(305.941, -9.62939)
70	5179	1.52	(181.484, 3.056)	120.292	(24.3987, 5.06672)	(337.945, -11.2223)
71	5274	1.52	(187.116, 4.499)	130.201	(16.7156, 4.87464)	(356.905, -10.2164)
72	2473	1.52	(175.064, 4.728)	119.096	(16.7339, 4.8751)	(332.627, -11.1564)
73	7653	1.52	(163.277, 2.571)	103.559	(23.8844, 5.05386)	(302.184, -9.28513)
74	2385	1.52	(185.077, 3.648)	125.303	(19.9778, 4.9562)	(349.551, -10.9964)
75	2417	1.52	(168.363, 4.015)	111.355	(18.589, 4.92148)	(317.442, -10.6832)
76	7677	1.52	(175.243, 3.017)	115.091	(23.8844, 5.05386)	(325.971, -11.0676)
77	2434	1.52	(174.497, 4.123)	118.466	(18.589, 4.92148)	(329.688, -11.1172)
78	10356	1.53	(180.782, 3.055)	118.363	(23.3333, 5.04008)	(337.607, -11.2209)
79	4931	1.53	(177.063, 3.019)	113.929	(26.9612, 5.13078)	(326.528, -11.075)
80	5268	1.53	(166.697, 4.581)	113.751	(16.7156, 4.87464)	(315.944, -10.5459)
81	4921	1.53	(185.681, 3.062)	118.575	(26.9612, 5.13078)	(343.78, -11.2463)
82	2433	1.53	(184.401, 4.093)	126.396	(18.589, 4.92148)	(349.551, -10.9964)
83	8003	1.53	(174.789, 6.582)	124.069	(11.0035, 4.73184)	(337.644, -11.221)
84	7642	1.53	(168.793, 2.822)	105.958	(23.8844, 5.05386)	(313.132, -10.2883)
85	5193	1.53	(168.047, 2.828)	107.221	(22.1442, 5.01035)	(313.38, -10.311)
86	5153	1.53	(176.376, 3.023)	113.236	(24.3987, 5.06672)	(327.722, -11.091)
87	2378	1.53	(168.825, 3.56)	111.862	(19.9778, 4.9562)	(317.02, -10.6445)
88	10355	1.53	(186.687, 3.001)	122.555	(23.3333, 5.04008)	(349.463, -11.0058)
89	5122	1.53	(183.859, 3.059)	119.634	(26.275, 5.11362)	(340.82, -11.2341)
90	2482	1.53	(173.596, 4.718)	119.203	(16.7339, 4.8751)	(329.688, -11.1172)
91	5178	1.53	(190.897, 2.804)	127.232	(24.3987, 5.06672)	(356.905, -10.2164)
92	7641	1.53	(173.667, 3.006)	109.741	(23.8844, 5.05386)	(322.817, -11.0256)
93	5265	1.53	(190.518, 4.44)	131.282	(16.7156, 4.87464)	(363.745, -9.97976)
94	2426	1.53	(168.15, 4.005)	112.419	(18.589, 4.92148)	(317.02, -10.6445)
95	5154	1.53	(170.031, 2.867)	108.209	(24.3987, 5.06672)	(315.076, -10.4664)
96	7674	1.53	(196.802, 2.697)	131.302	(23.8844, 5.05386)	(369.287, -9.78803)
97	4923	1.53	(171.715, 2.885)	108.309	(26.9612, 5.13078)	(315.87, -10.5391)
98	2481	1.53	(183.498, 4.688)	127.061	(16.7339, 4.8751)	(349.551, -10.9964)
99	2521	1.53	(173.788, 5.571)	120.335	(14.1055, 4.80939)	(332.627, -11.1564)
100	10339	1.53	(174.95, 3.017)	111.948	(23.3333, 5.04008)	(325.937, -11.0672)
101	8004	1.53	(169.201, 6.546)	120.409	(11.0035, 4.73184)	(326.455, -11.0741)

Slices of Slip Surface: Optimized

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	20.604745	0.45955105	844.91282	890.09327	0	600
2	Optimized	22.17703	-0.03961127	876.07233	1051.8154	0	600
3	Optimized	23.28005	-0.4037798	898.81832	1112.4895	0	204.4
4	Optimized	26.23792	-1.3582956	958.36769	1219.917	0	198.6
5	Optimized	29.08792	-2.126238	1006.2774	1353.8355	0	193.02

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6	Optimized	35.165	-3.076152	1065.5697	1477.0301	0	181.12
7	Optimized	46.355975	-4.825424	1174.6728	1693.5161	0	174.79
8	Optimized	52.730975	-5.8330365	1237.5817	1808.0975	0	178.79
9	Optimized	57.04434	-6.64481	1288.1959	1914.7552	0	181.5
10	Optimized	65.124395	-8.1654725	1383.1283	2115.3447	0	186.58
11	Optimized	71.644745	-9.392599	1459.6946	2271.6986	0	190.67
12	Optimized	77.88969	-10.66765	1539.3126	2414.1911	0	194.6
13	Optimized	82.92025	-11.745075	1606.498	2548.3387	0	197.76
14	Optimized	85.725085	-12.345805	1643.9857	2648.2853	0	229.85
15	Optimized	88.754835	-13.106615	1691.4605	2743.631	0	238.48
16	Optimized	95.37605	-15.048315	1812.6287	3029.5266	0	259.86
17	Optimized	103.63605	-17.767125	1982.2206	3372.2304	0	289.19
18	Optimized	109.21	-19.942915	2117.9701	3658.9002	0	312.06
19	Optimized	113.10495	-21.463295	2193.8748	3839.8399	0	328.03
20	Optimized	115.5416	-22.414445	2219.4721	3933.7909	0	330.15
21	Optimized	119.16665	-24.09619	2274.1738	4042.8397	0	344.28
22	Optimized	124.21	-26.589595	2359.9906	4205.2581	0	363.43
23	Optimized	127.5302	-28.231095	2416.389	4264.809	0	376.04
24	Optimized	135.2502	-31.812625	2532.9543	4403.5878	0	403.24
25	Optimized	143.23955	-35.48938	2651.7553	4525.55	0	431.13
26	Optimized	144.49445	-36.0669	2670.4078	4551.4977	0	413.09
27	Optimized	151.3099	-36.465035	2600.8826	4624.2987	0	413.68
28	Optimized	159.49	-36.871255	2512.9303	4416.4128	0	413.74
29	Optimized	163.0143	-37.04627	2475.0507	4374.2844	0	413.76
30	Optimized	171.5543	-37.25742	2369.979	4366.0291	0	411.91
31	Optimized	182.2075	-37.43882	2233.7161	4336.7424	0	408.86
32	Optimized	190.4625	-37.579385	2128.2196	4327.4161	0	406.5
33	Optimized	201.3493	-37.764765	2086.0838	4315.0611	0	403.38
34	Optimized	211.5193	-38.23511	2120.7842	4286.4775	0	403.14
35	Optimized	219.275	-39.042925	2172.9399	4348.2834	0	407.01
36	Optimized	227.965	-39.94806	2229.481	4417.758	0	411.33
37	Optimized	236.655	-40.853195	2285.9076	4487.2325	0	415.66
38	Optimized	243.5596	-41.57236	2330.7397	4452.2257	0	419.1
39	Optimized	248.1746	-41.709295	2339.3288	4386.0139	0	418.3
40	Optimized	251.845	-41.47775	2325.5297	4220.1459	0	415.3
41	Optimized	256.465	-40.4177	2261.1968	4069.6469	0	405.76
42	Optimized	264.7047	-37.79041	2084.9505	3639.6314	0	382.11
43	Optimized	277.2447	-33.23355	1768.225	3124.1188	0	341.1
44	Optimized	284.775	-30.25687	1560.4205	2763.4814	0	314.31
45	Optimized	288.9	-28.626285	1455.535	2535.3827	0	299.64
46	Optimized	296.7	-25.54299	1263.2203	2110.0965	0	271.89
47	Optimized	302.65855	-23.18761	1116.1977	1798.4528	0	250.69
48	Optimized	312.80855	-16.929145	725.63888	1147.6722	0	194.36
49	Optimized	321.25295	-11.24691	371.08676	485.69313	0	150

Slices of Slip Surface: 7659

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)

1	7659	26.100995	-0.606783	911.47263	1034.8153	0	600
2	7659	28.45687	-1.444725	963.75495	1227.7312	0	600
3	7659	29.298065	-1.7704215	984.09135	1278.9439	0	192.61
4	7659	35.165	-3.905811	1117.3515	1520.2457	0	181.12
5	7659	46.705	-8.0542735	1376.1702	1981.4959	0	175.01
6	7659	57.55636	-11.161415	1570.079	2385.8042	0	181.82
7	7659	65.58136	-12.66479	1663.8161	2584.773	0	220.86
8	7659	75.43	-14.509805	1778.9736	2813.0483	0	243.26
9	7659	85.95	-16.48059	1901.9838	3088.2198	0	267.2
10	7659	94.3	-18.04485	1999.5971	3364.3542	0	286.19
11	7659	102.56	-19.59225	2096.1023	3631.4987	0	304.98
12	7659	109.21	-20.83804	2173.8889	3844.4309	0	320.11
13	7659	113.57125	-21.655065	2199.3664	3958.2777	0	330.04
14	7659	115.99625	-22.109355	2194.1534	4003.4754	0	327.63
15	7659	119.155	-22.701105	2187.3845	4057.9503	0	331.73
16	7659	124.21	-23.648095	2176.4526	4072.1045	0	336.96
17	7659	130.55	-24.83581	2162.7646	3999.5931	0	343.52
18	7659	138.27	-26.28205	2146.0859	3913.9075	0	351.5
19	7659	146.0925	-27.74749	2129.1439	3827.1756	0	359.59
20	7659	154.0175	-29.232135	2112.0284	3739.3656	0	367.79
21	7659	159.49	-30.257335	2100.2188	3675.7897	0	373.45
22	7659	165.27	-31.34014	2087.6868	3712.1209	0	379.43
23	7659	173.81	-32.939995	2069.2717	3825.2581	0	388.26
24	7659	184.1121	-34.86996	2047.0731	3978.6184	0	398.92
25	7659	192.3671	-36.416425	2029.2273	4112.4441	0	395.19
26	7659	199.675	-37.78546	2086.5146	4232.8538	0	404.3
27	7659	209.845	-39.690675	2210.7062	4400.3433	0	416.98
28	7659	219.275	-41.45726	2323.5605	4555.8434	0	428.73
29	7659	227.965	-43.08522	2425.2438	4699.3764	0	439.57
30	7659	236.655	-44.713175	2526.814	4842.7963	0	450.4
31	7659	245.615	-46.39171	2631.4705	4828.7819	0	461.57
32	7659	252.215	-47.628135	2709.5393	4705.7944	0	470.65
33	7659	256.835	-46.649115	2650.1971	4837.2218	0	461.84
34	7659	264.0042	-42.97367	2410.2321	4300.8737	0	428.76
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35	7659	273.07265	38.324555	2096.7115	3738.3031	0	386.92
36	7659	281.07845	-34.22023	1819.8251	3247.2068	0	349.98
37	7659	284.775	-32.32511	1689.4909	3018.8408	0	332.93
38	7659	288.9	-30.210345	1554.4236	2736.0137	0	313.89
39	7659	296.7	-26.21152	1304.9172	2207.4526	0	277.9
40	7659	302.75745	-23.106055	1111.1033	1810.9565	0	249.95
41	7659	308.91115	-19.951225	914.23673	1444.3814	0	221.56
42	7659	316.9037	-15.85368	658.55016	971.16359	0	184.68
43	7659	322.6603	-12.902455	474.38287	635.54363	0	158.12
44	7659	325.32655	-11.53555	389.0977	484.47023	0	150

Slices of Slip Surface: 5210

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	5210	22.457795	0.013702	872.73822	581.41424	0	600
2	5210	22.85075	-0.19035545	885.4791	1078.3862	0	600
3	5210	23.61506	-0.67382285	915.65724	1090.1907	0	203.74
4	5210	27.15	-2.773908	1046.6926	1317.521	0	196.82
5	5210	34.83591	-7.3400575	1331.6563	1813.4383	0	181.76
6	5210	40.00091	-10.27426	1514.7772	2226.234	0	171.64
7	5210	44.803905	-11.16774	1570.4326	2333.729	0	173.81
8	5210	51.178905	-12.35365	1644.4559	2474.4151	0	209.57
9	5210	57.0925	-13.45373	1713.1643	2618.75	0	222.96
10	5210	65.1175	-14.946585	1806.2711	2819.1746	0	241.12
11	5210	75.43	-16.864965	1926.0059	3056.4537	0	264.46
12	5210	85.95	-18.82195	2048.0401	3328.9096	0	288.27
13	5210	96.602	-20.80349	2171.7034	3677.0539	0	312.38
14	5210	104.862	-22.340055	2267.6186	3941.9191	0	324.31
15	5210	109.21	-23.148895	2318.1671	4079.225	0	333.7
16	5210	114.155	-24.06879	2341.8857	4202.3399	0	344.37
17	5210	119.155	-24.998915	2330.6953	4289.7087	0	352.41
18	5210	124.21	-25.939275	2319.2842	4303.1929	0	357.58
19	5210	130.55	-27.118675	2305.1431	4229.6402	0	364.06
20	5210	138.27	-28.55479	2287.8236	4142.7882	0	371.96
21	5210	146.0925	-30.00997	2270.3257	4054.729	0	379.95
22	5210	154.0175	-31.484215	2252.5859	3965.7817	0	388.06
23	5210	159.49	-32.50224	2240.3078	3901.283	0	393.65
24	5210	165.27	-33.57747	2227.3622	3936.7949	0	399.56
25	5210	173.81	-35.166125	2208.2522	4048.6925	0	408.3
26	5210	182.26065	-36.738155	2189.2487	4174.7288	0	402.53
27	5210	190.51565	-38.273795	2170.72	4309.468	0	412.72
28	5210	199.675	-39.977665	2223.3135	4459.1941	0	424.03
29	5210	209.845	-41.86954	2346.6644	4625.3699	0	436.59

CG Case.BS

30	5210	219.275	-43.62376	2458.7395	4779.5687	0	448.23
31	5210	227.965	-45.24032	2559.655	4921.8912	0	458.96
32	5210	236.655	-46.856875	2660.5704	5064.2137	0	469.69
33	5210	241.9	-47.832575	2721.4236	5118.5222	0	476.17
34	5210	246.515	-46.37916	2630.768	5170.0032	0	461.06
35	5210	254.85	-42.742635	2405.6779	4438.3825	0	426.68
36	5210	264.88715	-38.363475	2120.2869	3745.5893	0	387.27
37	5210	277.42715	-32.89233	1746.4327	3089.6494	0	338.03
38	5210	284.775	-29.686495	1524.8337	2704.6734	0	309.18
39	5210	288.9	-27.886775	1409.3908	2458.032	0	292.98
40	5210	296.7	-24.48367	1197.0538	1997.6357	0	262.35
41	5210	301.4963	-22.39106	1066.457	1719.0726	0	243.52
42	5210	307.01945	-19.98133	916.11794	1438.4791	0	221.83
43	5210	316.27315	-15.94399	664.18848	969.86157	0	185.5
44	5210	323.10645	-12.96266	478.15029	630.66572	0	158.66
45	5210	326.3595	-11.543375	389.58781	474.74611	0	150

Slices of Slip Surface: 7658

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7658	26.100995	-0.606783	911.47263	1036.0447	0	600
2	7658	28.45687	-1.444725	963.75495	1227.7312	0	600
3	7658	29.298065	-1.7704215	984.09135	1279.6133	0	192.61
4	7658	35.165	-3.905811	1117.3515	1521.0644	0	181.12
5	7658	46.705	-8.0542735	1376.1702	1982.6782	0	175.01
6	7658	57.55636	-11.161415	1570.079	2386.463	0	181.82
7	7658	65.58136	-12.66479	1663.8161	2585.4655	0	220.86
8	7658	75.43	-14.509805	1778.9736	2813.7503	0	243.26
9	7658	85.95	-16.48059	1901.9838	3089.1515	0	267.2
10	7658	94.3	-18.04485	1999.5971	3365.3062	0	286.19
11	7658	102.56	-19.59225	2096.1023	3632.4506	0	304.98
12	7658	109.21	-20.83804	2173.8889	3845.406	0	320.11
13	7658	113.57125	-21.655065	2199.3664	3959.3453	0	330.04
14	7658	115.99625	-22.109355	2194.1534	4004.4856	0	327.63
15	7658	119.155	-22.701105	2187.3845	4058.9046	0	331.73
16	7658	124.21	-23.648095	2176.4526	4073.0954	0	336.96
17	7658	134.41	-25.55893	2154.3613	3957.7047	0	347.51
18	7658	146.0925	-27.74749	2129.1439	3828.0438	0	359.59
19	7658	154.0175	-29.232135	2112.0284	3740.2338	0	367.79
20	7658	159.49	-30.257335	2100.2188	3676.4407	0	373.45

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21	7658	165.27	-31.34014	2087.6868	3712.9266	0	379.43
22	7658	173.81	-32.939995	2069.2717	3826.1789	0	388.26
23	7658	184.1121	-34.86996	2047.0731	3979.5146	0	398.92
24	7658	192.3671	-36.416425	2029.2273	4113.3284	0	395.19
25	7658	199.675	-37.78546	2086.5146	4233.8203	0	404.3
26	7658	209.845	-39.690675	2210.7062	4401.4064	0	416.98
27	7658	221.4475	-41.86425	2349.0095	4592.8293	0	431.44
28	7658	234.4825	-44.306185	2501.4025	4808.1099	0	447.69
29	7658	245.615	-46.39171	2631.4705	4829.8468	0	461.57
30	7658	252.215	-47.628135	2709.5393	4707.0323	0	470.65
31	7658	256.835	-46.85036	2662.7263	4808.7342	0	463.65
32	7658	265.02855	-43.27554	2426.4625	4283.2244	0	431.48
33	7658	276.1457	-38.42518	2095.0303	3694.0667	0	387.83
34	7658	283.12715	-35.379215	1886.8757	3325.8588	0	360.41
35	7658	284.775	-34.660265	1835.2021	3235.8722	0	353.94
36	7658	292.8	-31.158995	1613.6196	2759.6163	0	322.43
37	7658	307.1963	-24.877945	1221.6541	1958.162	0	265.9
38	7658	317.3463	-20.449545	945.33743	1438.9298	0	226.05
39	7658	324.8532	-17.174315	740.95301	1072.9073	0	196.57
40	7658	332.75965	-13.72477	525.7015	703.60164	0	165.52
41	7658	337.05645	-11.850105	408.72394	501.67092	0	150
42	7658	337.94515	-11.462355	384.53359	457.02872	0	150

Slices of Slip Surface: 7667

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7667	26.100995	-0.606783	911.47263	1035.324	0	600
2	7667	28.45687	-1.444725	963.75495	1227.8363	0	600
3	7667	29.298065	-1.7704215	984.09135	1279.1447	0	192.61
4	7667	35.165	-3.905811	1117.3515	1520.5186	0	181.12
5	7667	46.705	-8.0629885	1376.7563	1982.4109	0	175.01
6	7667	56.902825	-11.17013	1570.6069	2375.5941	0	181.41
7	7667	64.927825	-12.91222	1679.2832	2598.2262	0	222.7
8	7667	75.43	-15.192065	1821.6198	2873.9354	0	249.4
9	7667	85.95	-17.47578	1964.0881	3179.9632	0	276.15

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10	7667	94.3	-19.28842	2077.165	3480.2007	0	297.38
11	7667	102.56	-21.081525	2189.086	3770.8879	0	318.39
12	7667	109.21	-22.52513	2279.2545	4003.1892	0	328.08
13	7667	114.155	-23.598605	2312.5298	4141.4776	0	340.14
14	7667	119.155	-24.68402	2311.0276	4244.063	0	349.58
15	7667	124.21	-25.781375	2309.5148	4273.0555	0	356.16
16	7667	134.41	-27.99562	2306.4479	4187.8855	0	369.44
17	7667	146.0925	-30.531695	2302.8311	4092.6889	0	384.65
18	7667	154.0175	-32.25208	2300.4882	4028.1973	0	394.97
19	7667	159.49	-33.440065	2298.8409	3980.7918	0	402.09
20	7667	166.1412	-34.88393	2296.8263	4047.9343	0	410.75
21	7667	174.6812	-36.73782	2294.1666	4189.8227	0	405.86
22	7667	182.2075	-38.37165	2291.9831	4327.6704	0	417.26
23	7667	190.4625	-40.16367	2289.4971	4488.4324	0	429.76
24	7667	199.675	-42.163545	2359.6912	4667.9741	0	443.71
25	7667	209.845	-44.37128	2502.7698	4866.1125	0	459.11
26	7667	221.4475	-46.88999	2662.5733	5092.3635	0	476.67
27	7667	234.4825	-49.719665	2839.2035	5346.738	0	496.41
28	7667	245.615	-52.13634	2989.9484	5402.2354	0	513.27
29	7667	252.215	-53.56909	3080.1489	5299.4905	0	524.12
30	7667	256.835	-52.649115	3024.72	5505.8922	0	515.84
31	7667	265.74	-48.08379	2724.611	4862.006	0	474.75
32	7667	278.28	-41.654905	2291.0292	4084.3973	0	416.89
33	7667	284.775	-38.32511	2063.9094	3676.7527	0	386.93
34	7667	287.15515	-37.10488	1984.6275	3508.4532	0	375.94
35	7667	294.95515	-33.106055	1735.0996	2976.5395	0	339.95
36	7667	304.6046	-28.15908	1426.3896	2350.6874	0	295.43
37	7667	312.61375	-24.053025	1170.1772	1868.1504	0	258.48
38	7667	318.75915	-20.902455	973.58831	1500.2342	0	230.12
39	7667	328.512	-15.902455	661.61565	951.0104	0	185.12
40	7667	336.762	-11.672925	397.66926	492.25179	0	150
41	7667	337.52175	-11.28343	373.35563	447.06203	0	150

Slices of Slip Surface: 5218

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	5218	22.457795	0.013702	872.73822	585.56778	0	600

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2	5218	22.85075	-0.19035545	885.4791	1078.3862	0	600
3	5218	23.61506	-0.67382285	915.65724	1090.6927	0	203.74
4	5218	27.15	-2.773908	1046.6926	1318.0942	0	196.82
5	5218	34.83591	-7.3400575	1331.6563	1814.2383	0	181.76
6	5218	40.00091	-10.28398	1515.3756	2220.4122	0	171.64
7	5218	44.145765	-11.17746	1571.0612	2325.5293	0	173.4
8	5218	50.520765	-12.551675	1656.824	2484.8922	0	210.97
9	5218	57.0925	-13.9683	1745.2086	2663.7971	0	227.59
10	5218	65.1175	-15.698195	1853.1345	2887.8104	0	247.88
11	5218	75.43	-17.92119	1991.8662	3155.2234	0	273.96
12	5218	85.95	-20.188915	2133.3433	3458.1264	0	300.57
13	5218	92.26082	-21.549295	2218.2751	3684.4626	0	316.53
14	5218	100.52082	-23.32985	2329.388	3972.5807	0	331.12
15	5218	109.21	-25.202915	2446.1923	4272.8843	0	352.18
16	5218	114.155	-26.268875	2479.137	4410.2436	0	364.17
17	5218	119.155	-27.346695	2477.2721	4511.8962	0	373.54
18	5218	124.21	-28.436365	2475.2012	4540.0696	0	380.05
19	5218	134.41	-30.635105	2471.1516	4453.0873	0	393.19
20	5218	150.055	-34.00759	2464.8962	4322.8505	0	413.35
21	5218	158.6389	-35.857965	2461.5227	4250.1565	0	424.41
22	5218	160.1489	-36.183465	2460.9186	4237.1193	0	407.26
23	5218	165.27	-37.287385	2458.8598	4299.1414	0	414.94
24	5218	173.81	-39.128295	2455.4258	4440.8512	0	427.76
25	5218	182.2075	-40.93849	2452.0946	4592.0377	0	440.36
26	5218	190.4625	-42.717965	2448.7789	4751.5476	0	452.75
27	5218	199.675	-44.70384	2518.2629	4929.5436	0	466.57
28	5218	209.845	-46.896115	2660.3291	5126.1102	0	481.83
29	5218	221.4475	-49.397185	2819.0224	5350.5929	0	499.24
30	5218	234.4825	-52.207055	2994.3582	5602.9476	0	518.8
31	5218	241.9	-53.805995	3094.1496	5714.8412	0	529.93
32	5218	246.515	-52.37916	3005.1646	5832.4445	0	515.06
33	5218	254.85	-48.742635	2780.04	5101.0053	0	480.68
34	5218	265.6166	-44.045215	2472.9521	4369.7916	0	438.41
35	5218	278.1566	-38.57407	2099.0911	3704.9488	0	389.17
36	5218	284.775	-35.686495	1899.2393	3349.5259	0	363.18
37	5218	292.8	-32.185225	1677.6615	2872.894	0	331.67
38	5218	308.3724	-25.39106	1253.6653	2010.098	0	270.52
39	5218	318.5224	-20.96266	977.35108	1489.2721	0	230.66
40	5218	325.025	-18.1256	800.31996	1174.4218	0	205.13
41	5218	333.275	-14.52616	575.71221	788.68795	0	172.74
42	5218	338.2325	-12.36322	440.74766	557.0862	0	153.27
43	5218	339.9427	-11.61706	394.18489	474.77102	0	150

Slices of Slip Surface: 4970

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	4970	27.12373	-0.773967	921.89841	1065.6942	0	600

2	4970	34.74191	-3.5512385	1095.1517	1482.8532	0	181.95
3	4970	40.00091	-5.414685	1211.4767	1724.8183	0	171.64
4	4970	46.705	-6.8224615	1299.3483	1889.1517	0	175.01
5	4970	57.0925	-9.0037085	1435.484	2155.1162	0	181.53
6	4970	65.1175	-10.688862	1540.6056	2373.7741	0	186.57
7	4970	70.245695	-11.76572	1607.7675	2510.5962	0	189.8
8	4970	76.545695	-13.08864	1690.3655	2662.3564	0	231.13
9	4970	85.95	-15.06343	1813.5282	2934.8082	0	254.44
10	4970	94.3	-16.81683	1922.9523	3230.157	0	275.14
11	4970	102.56	-18.551325	2031.2442	3516.171	0	295.62
12	4970	109.21	-19.94774	2118.2853	3744.33	0	312.1
13	4970	114.155	-20.98613	2149.6125	3880.1181	0	324.36
14	4970	117.7816	-21.747675	2146.8546	3953.3091	0	331.98
15	4970	120.3566	-22.288395	2144.9186	4003.6627	0	327.23
16	4970	124.21	-23.09756	2141.9935	4006.175	0	332
17	4970	130.55	-24.42888	2137.3237	3948.2174	0	339.85
18	4970	138.27	-26.049985	2131.6191	3880.1425	0	349.41
19	4970	146.0925	-27.692615	2125.7518	3811.1393	0	359.1
20	4970	154.0175	-29.356765	2119.8243	3741.2441	0	368.91
21	4970	159.49	-30.505925	2115.7439	3690.0512	0	375.69
22	4970	165.27	-31.719655	2111.4444	3739.4052	0	382.84
23	4970	173.81	-33.51295	2105.027	3871.6499	0	393.42
24	4970	181.8669	-35.2048	2098.9852	4007.1183	0	403.39
25	4970	190.1219	-36.938245	2092.848	4161.0549	0	400.88
26	4970	199.675	-38.94428	2158.8175	4340.249	0	414.73
27	4970	209.845	-41.079855	2297.3883	4531.0726	0	429.48
28	4970	219.275	-43.06004	2423.6657	4708.2473	0	443.16
29	4970	227.965	-44.884835	2537.5231	4871.5444	0	455.76
30	4970	236.655	-46.709625	2651.3806	5034.8414	0	468.37
31	4970	241.9	-47.81101	2720.0658	5101.9515	0	475.97
32	4970	246.515	-46.37916	2630.768	5168.8929	0	461.06
33	4970	254.85	-42.742635	2405.6779	4437.2914	0	426.68
34	4970	264.88715	-38.363475	2120.2869	3744.6587	0	387.27

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35	4970	277.42715	-32.89233	1746.4327	3088.8774	0	338.03
36	4970	284.775	-29.686495	1524.8337	2704.0624	0	309.18
37	4970	288.9	-27.886775	1409.3908	2457.327	0	292.98
38	4970	296.7	-24.48367	1197.0538	1997.0482	0	262.35
39	4970	301.4963	-22.39106	1066.457	1718.5613	0	243.52
40	4970	307.01945	-19.98133	916.11794	1438.0829	0	221.83
41	4970	316.27315	-15.94399	664.18848	969.52481	0	185.5
42	4970	323.10645	-12.96266	478.15029	630.41647	0	158.66
43	4970	326.3595	-11.543375	389.58781	474.52717	0	150

Slices of Slip Surface: 7660

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7660	26.100995	-0.606783	911.47263	1035.4512	0	600
2	7660	28.45687	-1.444725	963.75495	1228.0815	0	600
3	7660	29.298065	-1.7704215	984.09135	1279.1447	0	192.61
4	7660	35.165	-3.905811	1117.3515	1520.4276	0	181.12
5	7660	46.705	-8.0542735	1376.1702	1981.7176	0	175.01
6	7660	57.55636	-11.161415	1570.079	2385.914	0	181.82
7	7660	65.58136	-12.66479	1663.8161	2584.9115	0	220.86
8	7660	75.43	-14.509805	1778.9736	2813.1263	0	243.26
9	7660	85.95	-16.48059	1901.9838	3088.3363	0	267.2
10	7660	94.3	-18.04485	1999.5971	3364.4732	0	286.19
11	7660	102.56	-19.59225	2096.1023	3631.6177	0	304.98
12	7660	109.21	-20.83804	2173.8889	3844.6259	0	320.11
13	7660	113.57125	-21.655065	2199.3664	3958.2777	0	330.04
14	7660	115.99625	-22.109355	2194.1534	4003.6437	0	327.63
15	7660	119.155	-22.701105	2187.3845	4058.1412	0	331.73
16	7660	124.21	-23.648095	2176.4526	4072.3027	0	336.96
17	7660	130.55	-24.83581	2162.7646	3999.7204	0	343.52
18	7660	138.27	-26.28205	2146.0859	3914.0348	0	351.5
19	7660	146.0925	-27.74749	2129.1439	3827.2996	0	359.59
20	7660	154.0175	-29.232135	2112.0284	3739.4896	0	367.79
21	7660	159.49	-30.257335	2100.2188	3675.7897	0	373.45
22	7660	165.27	-31.34014	2087.6868	3712.236	0	379.43
23	7660	173.81	-32.939995	2069.2717	3825.4883	0	388.26
24	7660	184.1121	-34.86996	2047.0731	3978.7814	0	398.92

CG Case.BS

25	7660	192.3671	-36.416425	2029.2273	4112.6652	0	395.19
26	7660	199.675	-37.78546	2086.5146	4233.0471	0	404.3
27	7660	209.845	-39.690675	2210.7062	4400.5366	0	416.98
28	7660	219.275	-41.45726	2323.5605	4556.0697	0	428.73
29	7660	227.965	-43.08522	2425.2438	4699.6026	0	439.57
30	7660	236.655	-44.713175	2526.814	4843.0225	0	450.4
31	7660	245.615	-46.39171	2631.4705	4828.9949	0	461.57
32	7660	252.215	-47.628135	2709.5393	4706.042	0	470.65
33	7660	256.835	-46.434565	2636.9251	4861.4432	0	459.91
34	7660	263.2022	-42.651845	2392.2153	4312.4374	0	425.87
35	7660	270.6666	-38.21728	2096.2117	3776.7516	0	385.96
36	7660	279.4744	-32.984625	1746.8617	3154.1077	0	338.86
37	7660	284.775	-29.83558	1534.1315	2778.6311	0	310.52
38	7660	291.48205	-25.850955	1282.4126	2256.9878	0	274.66
39	7660	299.28205	-21.217025	993.23373	1655.8027	0	232.95
40	7660	307.69825	-16.217025	681.22787	1067.1702	0	187.95
41	7660	315.93345	-11.324555	375.93345	498.09387	0	150

Slices of Slip Surface: 7668

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7668	26.100995	-0.606783	911.47263	1035.1545	0	600
2	7668	28.45687	-1.444725	963.75495	1228.2217	0	600
3	7668	29.298065	-1.7704215	984.09135	1278.877	0	192.61
4	7668	35.165	-3.905811	1117.3515	1520.1547	0	181.12
5	7668	46.705	-8.0629885	1376.7563	1981.82	0	175.01
6	7668	56.902825	-11.17013	1570.6069	2375.2107	0	181.41
7	7668	64.927825	-12.91222	1679.2832	2597.7611	0	222.7
8	7668	75.43	-15.192065	1821.6198	2873.4701	0	249.4
9	7668	85.95	-17.47578	1964.0881	3179.3842	0	276.15
10	7668	94.3	-19.28842	2077.165	3479.6092	0	297.38
11	7668	102.56	-21.081525	2189.086	3770.2963	0	318.39
12	7668	109.21	-22.52513	2279.2545	4002.6075	0	328.08
13	7668	114.155	-23.598605	2312.5298	4140.6716	0	340.14
14	7668	119.155	-24.68402	2311.0276	4243.304	0	349.58

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15	7668	124.21	-25.781375	2309.5148	4272.4644	0	356.16
16	7668	130.55	-27.15768	2307.6507	4218.7096	0	364.41
17	7668	138.27	-28.83356	2305.2456	4155.7967	0	374.46
18	7668	146.0925	-30.531695	2302.8311	4092.0723	0	384.65
19	7668	154.0175	-32.25208	2300.4882	4027.704	0	394.97
20	7668	159.49	-33.440065	2298.8409	3980.1446	0	402.09
21	7668	166.1412	-34.88393	2296.8263	4047.364	0	410.75
22	7668	174.6812	-36.73782	2294.1666	4189.2476	0	405.86
23	7668	182.2075	-38.37165	2291.9831	4327.0785	0	417.26
24	7668	190.4625	-40.16367	2289.4971	4487.8405	0	429.76
25	7668	199.675	-42.163545	2359.6912	4667.3015	0	443.71
26	7668	209.845	-44.37128	2502.7698	4865.3438	0	459.11
27	7668	219.275	-46.418375	2633.1471	5049.1425	0	473.38
28	7668	227.965	-48.304825	2750.8881	5218.7255	0	486.54
29	7668	236.655	-50.191275	2868.6291	5388.3085	0	499.7
30	7668	245.615	-52.13634	2989.9484	5401.3884	0	513.27
31	7668	252.215	-53.56909	3080.1489	5298.752	0	524.12
32	7668	256.835	-52.434565	3011.3215	5540.9033	0	513.91
33	7668	265.72705	-47.151845	2666.4679	4810.332	0	466.37
34	7668	278.26705	-39.701905	2169.1744	3909.9873	0	399.32
35	7668	284.775	-35.83558	1908.5321	3438.3268	0	364.52
36	7668	288.9	-33.384945	1752.5163	3116.0621	0	342.46
37	7668	296.7	-28.751015	1463.296	2513.0422	0	300.76
38	7668	304.33175	-24.217025	1180.4661	1948.8978	0	259.95
39	7668	314.48175	-18.18697	804.17175	1248.6864	0	205.68
40	7668	322.89795	-13.18697	492.13782	678.02882	0	160.68
41	7668	325.6752	-11.53703	389.18801	495.16873	0	150

Slices of Slip Surface: 5219

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	5219	22.457795	0.013702	872.73822	575.2456	0	600
2	5219	22.85075	-0.19035545	885.4791	1078.878	0	600
3	5219	23.61506	-0.67382285	915.65724	1089.8769	0	203.74
4	5219	27.15	-2.773908	1046.6926	1316.963	0	196.82
5	5219	34.83591	-7.3400575	1331.6563	1812.4606	0	181.76
6	5219	40.00091	-10.28398	1515.3756	2219.6696	0	171.64
7	5219	44.145765	-11.17746	1571.0612	2324.6326	0	173.4
8	5219	50.520765	-12.551675	1656.824	2484.1283	0	210.97
9	5219	57.0925	-13.9683	1745.2086	2662.9444	0	227.59
10	5219	65.1175	-15.698195	1853.1345	2886.9577	0	247.88
11	5219	75.43	-17.92119	1991.8662	3154.2924	0	273.96
12	5219	85.95	-20.188915	2133.3433	3456.8524	0	300.57
13	5219	92.26082	-21.549295	2218.2751	3683.2938	0	316.53
14	5219	100.52082	-23.32985	2329.388	3971.3131	0	331.12
15	5219	109.21	-25.202915	2446.1923	4271.5266	0	352.18
16	5219	114.155	-26.268875	2479.137	4408.8327	0	364.17
17	5219	119.155	-27.346695	2477.2721	4510.5675	0	373.54
18	5219	124.21	-28.436365	2475.2012	4538.69	0	380.05
19	5219	130.55	-29.803035	2472.6085	4483.9217	0	388.22
20	5219	138.27	-31.46718	2469.5695	4419.5961	0	398.17
21	5219	146.0925	-33.15342	2466.4992	4354.4886	0	408.25
22	5219	154.0175	-34.86176	2463.2921	4288.7432	0	418.46
23	5219	158.6389	-35.857965	2461.5227	4248.9696	0	424.41
24	5219	160.1489	-36.183465	2460.9186	4235.9133	0	407.26
25	5219	165.27	-37.287385	2458.8598	4297.8823	0	414.94
26	5219	173.81	-39.128295	2455.4258	4439.5921	0	427.76
27	5219	182.2075	-40.93849	2452.0946	4590.7351	0	440.36
28	5219	190.4625	-42.717965	2448.7789	4750.1266	0	452.75
29	5219	199.675	-44.70384	2518.2629	4928.1979	0	466.57
30	5219	209.845	-46.896115	2660.3291	5124.6684	0	481.83
31	5219	219.275	-48.928875	2789.8865	5306.9826	0	495.98
32	5219	227.965	-50.80212	2906.7645	5475.1564	0	509.02
33	5219	236.655	-52.675365	3023.6425	5643.3303	0	522.06
34	5219	241.9	-53.805995	3094.1496	5713.212	0	529.93
35	5219	246.515	-52.09543	2987.4782	5860.9378	0	512.5
36	5219	254.85	-47.822325	2722.6798	5052.3329	0	472.4
37	5219	264.08005	-43.09034	2417.2852	4318.2215	0	429.81
38	5219	273.3002	-38.363445	2098.5001	3745.7015	0	387.27
39	5219	281.23015	-34.29801	1824.3193	3258.4981	0	350.68
40	5219	284.775	-32.48067	1699.2004	3039.0112	0	334.33
41	5219	288.9	-30.36591	1564.1209	2755.9788	0	315.29
42	5219	296.7	-26.367085	1314.6145	2226.8473	0	279.3
43	5219	302.90915	-23.183835	1115.9455	1820.6468	0	250.65
44	5219	309.13875	-19.990115	916.66205	1448.95	0	221.91
45	5219	316.9796	-15.97035	665.83379	984.28048	0	185.73
46	5219	322.812	-12.980235	479.25631	644.33736	0	158.82
47	5219	325.6261	-11.53752	389.22247	484.90292	0	150

CG Case.BS

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CG Case.EE.Thru Fabric

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 174
Last Edited By: Cox, Lane MVK
Date: 3/29/2011
Time: 8:21:42 AM
File Name: 5c(1) Typical 1.2nd SC.80%SG.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\2nd Stage Construction\80%SG,1 Layer of Fabric\Slope W\
Last Solved Date: 3/29/2011
Last Solved Time: 8:29:02 AM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

CG Case.EE.Thru Fabric

Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

SlipSurface
- Direction of movement: Left to Right
- Use Passive Mode: No
- Slip Surface Option: Entry and Exit
- Critical slip surfaces saved: 100
- Optimize Critical Slip Surface Location: Yes
- Tension Crack
  - Tension Crack Option: Tension Crack Line
  - Percentage Wet: 1
  - Tension Crack Fluid Unit Weight: 62.4 pcf

FOS Distribution
- FOS Calculation Option: Constant

Advanced
- Number of Slices: 30
- Optimization Tolerance: 0.01
- Minimum Slip Surface Depth: 0.1 ft
- Optimization Maximum Iterations: 2000
- Optimization Convergence Tolerance: 1e-007
- Starting Optimization Points: 8
- Ending Optimization Points: 16
- Complete Passes per Insertion: 1
- Driving Side Maximum Convex Angle: 5 °
- Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH

Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH above 0

Model: Mohr-Coulomb
Unit Weight: 108 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH, 0 to -12

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -12 (2)
Cohesion Spatial Fn: CH, 0 to -12
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH, -12 to -22

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -12 to -22 (2)
Cohesion Spatial Fn: CH, -12 to -22

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Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -22 to -36

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -22 to -36 (2)
Cohesion Spatial Fn: CH, -22 to -36
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -36 to -80

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -36 to -80 (2)
Cohesion Spatial Fn: CH, -36 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sand Fill

Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, 0 to -12 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -12 (2)
Cohesion Spatial Fn: CH, 0 to -12 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -12 to -22 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -12 to -22 (2)
Cohesion Spatial Fn: CH, -12 to -22 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CG Case.EE.Thru Fabric

CH, -22 to -36 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -22 to -36 (2)
Cohesion Spatial Fn: CH, -22 to -36 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Entry and Exit

Left Projection: Range
Left-Zone Left Coordinate: (45, 5.58175) ft
Left-Zone Right Coordinate: (112.63951, 14) ft
Left-Zone Increment: 30
Right Projection: Range
Right-Zone Left Coordinate: (273, -4.72105) ft
Right-Zone Right Coordinate: (341, -11.23486) ft
Right-Zone Increment: 30
Radius Increments: 30

Slip Surface Limits

Left Coordinate: (-200, -1.79) ft
Right Coordinate: (500, -4.27) ft

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	14
	111.73	14
	194.59	-4.39
	214.93	-4.22
	250.23	-4.22
	259.47	-4.16
	284.55	-5.2
	285	-5.3
	406	-5.3
	407.82	-4.54
	500	-4.27

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Reinforcements

Reinforcement 1

Type: Fabric
Outside Point: (177, 0) ft
Inside Point: (23, 0) ft
Slip Surface Intersection: (86.916, 0) ft
Total Length: 154 ft
Reinforcement Direction: 0 °
Applied Load Option: Variable
F of S Dependent: No
Contact Cohesion: 265 psf
Contact Phi: 19 °
Interface Factor: 2
Bond Safety Factor: 1
Fabric Capacity: 27000 lbs
Fabric Safety Factor: 1
Fabric Load: 27000 lbs
Load Distribution: Even along reinf.
Load Orientation: 0
Applied Load: 27000 lbs
Fabric Load Used: 27000 lbs
Resisting Force Used: 879.64 lbs/ft
Available Bond Length: 63.916 ft
Required Bond Length: 30.694 ft
Governing Component: Fabric

Tension Crack Line

	X (ft)	Y (ft)
	4.93	4.58
	22	0.2
	83	0.2
	112	10
	122	10
	159	1
	161	4

Spatial Functions

CH, 0 to -12

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -1.5, 75)
Data Point: (-300, -12, 75)

Data Point: (-23.63, 0, 75)
Data Point: (-23.63, -12, 75)
Data Point: (0, 0, 250)
Data Point: (0, -12, 250)
Data Point: (250.26, -4.13, 150)
Data Point: (250.26, -12, 150)
Data Point: (500, -4.27, 150)
Data Point: (500, -12, 150)

CH, -22 to -36 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -22, 350)
Data Point: (0, -36, 476)
Data Point: (40.33, -22, 290)
Data Point: (40.33, -36, 416)
Data Point: (116.73, -22, 327)
Data Point: (116.73, -36, 453)
Data Point: (250.23, -22, 240)
Data Point: (250.23, -36, 366)

CH, -12 to -22

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -12, 125)
Data Point: (-300, -22, 225)
Data Point: (-23.63, -12, 125)
Data Point: (-23.63, -22, 225)
Data Point: (0, -12, 350)
Data Point: (0, -22, 350)
Data Point: (250.26, -12, 150)
Data Point: (250.26, -22, 240)
Data Point: (500, -12, 150)
Data Point: (500, -22, 240)

CH, -22 to -36

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -22, 225)
Data Point: (-300, -36, 365)
Data Point: (-23.63, -22, 225)
Data Point: (-23.63, -36, 365)
Data Point: (0, -22, 350)
Data Point: (0, -36, 476)
Data Point: (250.26, -22, 240)

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Data Point: (250.26, -36, 366)
Data Point: (500, -22, 240)
Data Point: (500, -36, 366)

CH, -36 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -36, 365)
Data Point: (-300, -80, 805)
Data Point: (-23.63, -36, 365)
Data Point: (-23.63, -80, 805)
Data Point: (0, -36, 476)
Data Point: (0, -80, 872)
Data Point: (250.26, -36, 366)
Data Point: (250.26, -80, 762)
Data Point: (500, -36, 366)
Data Point: (500, -80, 762)

CH, 0 to -12 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -6, 100)
Data Point: (0, -6, 101)
Data Point: (178.08, -6, 111)

CH, -12 to -22 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -17, 100)
Data Point: (0, -17, 109)
Data Point: (178.08, -17, 100)

CH, -22 to -36 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -29, 102)
Data Point: (0, -29, 104)
Data Point: (178.08, -29, 102)

CH, -36 to -80 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -58, 105)
Data Point: (0, -58, 106)

Data Point: (178.08, -58, 105)

CH, 0 to -12 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, 0, 250)
Data Point: (0, -12, 250)
Data Point: (40.33, 0, 171)
Data Point: (40.33, -12, 171)
Data Point: (116.73, 0, 219)
Data Point: (116.73, -12, 219)
Data Point: (250.23, -4.13, 150)
Data Point: (250.23, -12, 150)

CH, -12 to -22 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -12, 350)
Data Point: (0, -22, 350)
Data Point: (40.33, -12, 200)
Data Point: (40.33, -22, 290)
Data Point: (116.73, -12, 245)
Data Point: (116.73, -22, 335)
Data Point: (250.23, -12, 150)
Data Point: (250.23, -22, 240)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -36 to -80	31,33,60,63,34,32	30800
Region 2	CH above 0	40,9,10,11,12,13,64,17,39,57	130.54365
Region 3	Sand Fill	19,20,21,22,23,24,25,26,27,28	629.28815
Region 4	EMBANKMENT FILL CH	19,46,41,42,43,66,28	1500.8133
Region 5	EMBANKMENT FILL CH	43,44,45,65,29,66	501.84775
Region 6	CH, -22 to -36	35,33,60,59	2800
Region 7	CH, -12 to -22	37,35,59,58	2000
Region 8	CH, 0 to -12	57,58,37,2,1,3,4,5,6,7,8,40	2203.9585
Region 9	CH, -22 to -36	63,62,36,34	3496.78
Region 10	CH, -12 to -22	62,61,38,36	2497.7
Region 11	CH, 0 to -12	61,65,45,47,48,49,50,51,52,53,54,55,30,38	1282.4538
Region 12	CH, -12 to -22 SG	58,59,62,61	2502.3
Region 13	CH, -22 to -36 SG	60,59,62,63	3503.22
Region 14	CH, 0 to -12 SG	57,58,61,65,29,66,28,27,26,25,24,23,22,21,20,19,18,39	1448.4571
Region 15	EMBANKMENT FILL CH	64,17,39,56,19,46	368.6281

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Points

	X (ft)	Y (ft)
Point 1	-195.89	-1.8
Point 2	-200	-1.79
Point 3	-169.15	-1.8
Point 4	-146.39	-1.65
Point 5	-122.74	-1.62
Point 6	-98.28	-1.36
Point 7	-85.7	-0.94
Point 8	-66.38	-0.23
Point 9	-52.15	0.5
Point 10	-38.25	0.23
Point 11	-36.18	0.46
Point 12	-23.63	0.86
Point 13	-19.22	0.94
Point 14	-5.71	4.75
Point 15	-0.42	4.91
Point 16	-0.22	4.77
Point 17	4.93	4.5
Point 18	24.3	-0.66
Point 19	40.33	-3.85
Point 20	53.08	-5.02
Point 21	69.13	-8.93
Point 22	90.17	-10.85
Point 23	106.69	-11.22
Point 24	116.58	-11.18
Point 25	126.69	-10.14
Point 26	142.13	-9.46
Point 27	157.98	-8.78
Point 28	178.08	-4.54
Point 29	214.93	-4.22
Point 30	500	-4.27
Point 31	-200	-80
Point 32	500	-80
Point 33	-200	-36
Point 34	500	-36
Point 35	-200	-22
Point 36	500	-22
Point 37	-200	-12
Point 38	500	-12
Point 39	22	0
Point 40	-63	0
Point 41	111.73	14
Point 42	121.73	14
Point 43	161	4
Point 44	241	2
Point 45	259.47	-4.16
Point 46	81.73	6.5

Point 47	284.55	-5.2
Point 48	300.6	-9.14
Point 49	320.9	-11
Point 50	337.4	-11.22
Point 51	347.09	-11.26
Point 52	356.8	-10.22
Point 53	372.41	-9.68
Point 54	388.59	-9
Point 55	407.82	-4.54
Point 56	30	-1.79
Point 57	0	0
Point 58	0	-12
Point 59	0	-22
Point 60	0	-36
Point 61	250.23	-12
Point 62	250.23	-22
Point 63	250.23	-36
Point 64	1.73	4.5
Point 65	250.23	-4.22
Point 66	194.59	-4.39

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	1.57	(212.942, 103.584)	102.6948	(85.7735, 7.51088)	(333.481, -11.1677)
2	15237	1.64	(212.942, 103.584)	165.239	(83.8194, 7.02236)	(331.858, -11.1461)
3	15206	1.64	(211.793, 102.724)	163.803	(83.82, 7.02251)	(329.572, -11.1156)
4	15268	1.64	(214.092, 104.444)	166.674	(83.8188, 7.02221)	(334.143, -11.1766)
5	14306	1.64	(213.639, 115.821)	175.07	(82.1804, 6.61259)	(334.143, -11.1766)
6	15267	1.64	(214.818, 114.943)	173.622	(84.1687, 7.10968)	(334.143, -11.1766)
7	14275	1.64	(212.488, 114.87)	173.578	(82.1811, 6.61278)	(331.858, -11.1461)
8	15236	1.64	(213.667, 113.993)	172.13	(84.1692, 7.1098)	(331.858, -11.1461)
9	16198	1.64	(214.119, 102.795)	163.844	(85.6563, 7.48157)	(331.858, -11.1461)
10	15175	1.65	(210.643, 101.865)	162.368	(83.8207, 7.02266)	(327.286, -11.0852)
11	14337	1.65	(214.79, 116.771)	176.562	(82.1796, 6.61241)	(336.429, -11.2071)
12	14276	1.65	(211.766, 104.373)	166.633	(81.7101, 6.4995)	(331.858, -11.1461)
13	15298	1.65	(215.969, 115.893)	175.115	(84.1683, 7.10957)	(336.429, -11.2071)
14	16167	1.65	(212.969, 101.935)	162.409	(85.6567, 7.48168)	(329.572, -11.1156)
15	15299	1.65	(215.242, 105.303)	168.11	(83.8183, 7.02206)	(336.429, -11.2071)
16	15205	1.65	(212.516, 113.042)	170.638	(84.1697, 7.10991)	(329.572, -11.1156)
17	14244	1.65	(211.337, 113.92)	172.085	(82.1819, 6.61297)	(329.572, -11.1156)
18	16229	1.65	(215.268, 103.654)	165.28	(85.6559, 7.48147)	(334.143, -11.1766)
19	14307	1.65	(212.916, 105.233)	168.069	(81.7093, 6.49948)	(334.143, -11.1766)
20	14245	1.65	(210.616, 103.513)	165.198	(81.711, 6.49953)	(329.572, -11.1156)
21	16136	1.65	(211.82, 101.076)	160.974	(85.6571, 7.48178)	(327.286, -11.0852)
22	15144	1.65	(209.494, 101.005)	160.933	(83.8213, 7.02282)	(325.001, -11.0547)
23	14368	1.65	(215.935, 117.719)	178.049	(82.179, 6.61226)	(338.714, -11.2254)
24	15329	1.65	(217.114, 116.842)	176.601	(84.1679, 7.10949)	(338.714, -11.2254)

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25	14214	1.65	(209.467, 102.654)	163.762	(81.7119, 6.49955)	(327.286, -11.0852)
26	15330	1.65	(216.386, 106.161)	169.54	(83.8178, 7.02194)	(338.714, -11.2254)
27	13345	1.65	(212.46, 116.698)	176.518	(79.8453, 6.45288)	(334.143, -11.1766)
28	14213	1.65	(210.186, 112.97)	170.593	(82.1826, 6.61316)	(327.286, -11.0852)
29	15174	1.65	(211.366, 112.092)	169.146	(84.1701, 7.11003)	(327.286, -11.0852)
30	14338	1.65	(214.066, 106.092)	169.504	(81.7084, 6.49946)	(336.429, -11.2071)
31	16260	1.65	(216.418, 104.514)	166.715	(85.6555, 7.48137)	(336.429, -11.2071)
32	15113	1.65	(208.344, 100.146)	159.498	(83.8219, 7.02298)	(322.715, -11.0242)
33	16228	1.65	(215.997, 114.066)	172.175	(85.972, 7.56051)	(334.143, -11.1766)
34	16105	1.65	(210.67, 100.216)	159.539	(85.6576, 7.48189)	(325.001, -11.0547)
35	13314	1.65	(211.309, 115.748)	175.025	(79.8461, 6.4529)	(331.858, -11.1461)
36	912	1.65	(201.082, 158.381)	218.424	(50.4568, 5.71817)	(338.714, -11.2254)
37	13376	1.65	(213.612, 117.649)	178.011	(79.8446, 6.45287)	(336.429, -11.2071)
38	16197	1.65	(214.846, 113.115)	170.683	(85.9723, 7.56058)	(331.858, -11.1461)
39	943	1.65	(202.225, 159.541)	220.052	(50.4568, 5.71817)	(341, -11.2349)
40	14399	1.65	(217.076, 118.666)	179.531	(82.1786, 6.61214)	(341, -11.2349)
41	881	1.65	(199.934, 157.219)	216.791	(50.4568, 5.71817)	(336.429, -11.2071)
42	15143	1.65	(210.215, 111.142)	167.654	(84.1706, 7.11015)	(325.001, -11.0547)
43	14183	1.65	(208.317, 101.794)	162.327	(81.7128, 6.49957)	(325.001, -11.0547)
44	16259	1.65	(217.148, 115.016)	173.667	(85.9718, 7.56044)	(336.429, -11.2071)
45	16074	1.65	(209.521, 99.357)	158.104	(85.658, 7.482)	(322.715, -11.0242)
46	14369	1.65	(215.211, 106.95)	170.935	(81.7077, 6.49944)	(338.714, -11.2254)
47	14182	1.65	(209.036, 112.019)	169.101	(82.1834, 6.61336)	(325.001, -11.0547)
48	17159	1.65	(215.48, 102.56)	162.705	(87.73, 8.00001)	(331.858, -11.1461)
49	16291	1.65	(217.562, 105.372)	168.145	(85.6552, 7.48129)	(338.714, -11.2254)
50	13283	1.65	(210.158, 114.797)	173.533	(79.8468, 6.45292)	(329.572, -11.1156)
51	16166	1.65	(213.696, 112.165)	169.191	(85.9726, 7.56065)	(329.572, -11.1156)
52	15360	1.65	(218.254, 117.789)	178.083	(84.1677, 7.10942)	(341, -11.2349)
53	13407	1.65	(214.757, 118.597)	179.497	(79.8441, 6.45285)	(338.714, -11.2254)
54	13315	1.65	(210.59, 105.162)	168.028	(79.3793, 6.44123)	(331.858, -11.1461)
55	17128	1.65	(214.331, 101.7)	161.27	(87.7304, 8.00009)	(329.572, -11.1156)
56	17190	1.65	(216.629, 103.419)	164.14	(87.7297, 7.99993)	(334.143, -11.1766)
57	13346	1.65	(211.74, 106.022)	169.464	(79.3785, 6.44121)	(334.143, -11.1766)
58	14152	1.65	(207.167, 100.935)	160.892	(81.7137, 6.49959)	(322.715, -11.0242)
59	15361	1.65	(217.527, 107.018)	170.966	(83.8174, 7.02184)	(341, -11.2349)
60	850	1.65	(198.778, 156.055)	215.151	(50.4571, 5.71818)	(334.143, -11.1766)
61	13284	1.65	(209.44, 104.303)	166.592	(79.3802, 6.44125)	(329.572, -11.1156)
62	15082	1.65	(207.179, 99.281)	158.047	(83.8229, 7.02321)	(320.432, -10.9571)
63	16290	1.65	(218.292, 115.964)	175.153	(85.9716, 7.56039)	(338.714, -11.2254)
64	17097	1.65	(213.182, 100.841)	159.835	(87.7307, 8.00017)	(327.286, -11.0852)
65	16135	1.65	(212.545, 111.215)	167.699	(85.9729, 7.56072)	(327.286, -11.0852)
66	12384	1.65	(211.282, 117.576)	177.966	(77.5104, 6.39451)	(334.143, -11.1766)
67	13252	1.65	(209.007, 113.847)	172.04	(79.8475, 6.45294)	(327.286, -11.0852)
68	13438	1.65	(215.898, 119.544)	180.98	(79.8436, 6.45284)	(341, -11.2349)
69	15207	1.65	(211.137, 93.376)	157.941	(83.4881, 6.93952)	(329.572, -11.1156)
70	15238	1.65	(212.286, 94.153)	159.328	(83.4873, 6.93933)	(331.858, -11.1461)
71	13377	1.65	(212.89, 106.882)	170.899	(79.3777, 6.44119)	(336.429, -11.2071)
72	16168	1.65	(212.311, 92.667)	156.592	(85.3567, 7.40667)	(329.572, -11.1156)

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73	16199	1.65	(213.46, 93.445)	157.979	(85.3561, 7.40654)	(331.858, -11.1461)
74	12415	1.65	(212.433, 118.526)	179.459	(77.5097, 6.39449)	(336.429, -11.2071)
75	15112	1.65	(209.065, 110.192)	166.162	(84.1711, 7.11027)	(322.715, -11.0242)
76	13253	1.65	(208.29, 103.443)	165.157	(79.381, 6.44128)	(327.286, -11.0852)
77	14400	1.65	(216.351, 107.807)	172.361	(81.7071, 6.49943)	(341, -11.2349)
78	17221	1.65	(217.778, 104.279)	165.575	(87.7294, 7.99985)	(336.429, -11.2071)
79	12353	1.65	(210.131, 116.625)	176.473	(77.5111, 6.39453)	(331.858, -11.1461)
80	14151	1.65	(207.885, 111.069)	167.609	(82.1842, 6.61356)	(322.715, -11.0242)
81	15176	1.65	(209.988, 92.599)	156.554	(83.4888, 6.9397)	(327.286, -11.0852)
82	16137	1.65	(211.163, 91.89)	155.205	(85.3572, 7.4068)	(327.286, -11.0852)
83	17066	1.65	(212.033, 99.982)	158.401	(87.731, 8.00026)	(325.001, -11.0547)
84	16104	1.65	(211.395, 110.265)	166.207	(85.9732, 7.56079)	(325.001, -11.0547)
85	16043	1.65	(208.356, 98.492)	156.653	(85.6587, 7.48217)	(320.432, -10.9571)
86	16322	1.65	(218.703, 106.228)	169.571	(85.6549, 7.48122)	(341, -11.2349)
87	13408	1.65	(214.035, 107.74)	172.33	(79.377, 6.44118)	(338.714, -11.2254)
88	15145	1.65	(208.84, 91.822)	155.167	(83.4896, 6.93989)	(325.001, -11.0547)
89	16106	1.65	(210.014, 91.113)	153.819	(85.3578, 7.40694)	(325.001, -11.0547)
90	13221	1.65	(207.857, 112.897)	170.548	(79.8483, 6.45296)	(325.001, -11.0547)
91	819	1.65	(197.623, 154.89)	213.51	(50.4573, 5.71818)	(331.858, -11.1461)
92	12446	1.65	(213.579, 119.475)	180.946	(77.5091, 6.39448)	(338.714, -11.2254)
93	17129	1.65	(213.652, 92.5)	155.479	(87.4413, 7.92783)	(329.572, -11.1156)
94	17160	1.65	(214.8, 93.277)	156.865	(87.4409, 7.92772)	(331.858, -11.1461)
95	15269	1.65	(213.435, 94.931)	160.715	(83.4866, 6.93915)	(334.143, -11.1766)
96	16075	1.65	(208.866, 90.336)	152.432	(85.3583, 7.40708)	(322.715, -11.0242)
97	15114	1.65	(207.691, 91.044)	153.781	(83.4903, 6.94008)	(322.715, -11.0242)
98	14305	1.65	(214.444, 127.607)	183.272	(82.7007, 6.74266)	(334.143, -11.1766)
99	12322	1.65	(208.98, 115.675)	174.981	(77.5118, 6.39454)	(329.572, -11.1156)
100	17035	1.65	(210.884, 99.122)	156.966	(87.7314, 8.00034)	(322.715, -11.0242)
101	14121	1.65	(206.002, 100.07)	159.44	(81.715, 6.49963)	(320.432, -10.9571)

Slices of Slip Surface: **Optimized**

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	88.406195	-1.48337	966.16205	1054.8246	0	600
2	Optimized	93.712875	-6.765822	1295.7914	1901.1283	349.49146	0
3	Optimized	97.13752	-10.22525	1511.6364	2291.0333	449.98499	0
4	Optimized	98.347925	-11.51143	1591.9034	2622.467	0	207.45
5	Optimized	102.74885	-16.187875	1883.7608	3068.9147	0	274.46
6	Optimized	107.4543	-21.187875	2195.7048	3622.2202	0	322.23
7	Optimized	109.9743	-23.865635	2362.7323	3893.063	0	340.52
8	Optimized	113.2189	-27.31338	2557.3847	4237.9123	0	373.12
9	Optimized	115.6439	-29.79153	2678.4054	4516.4208	0	396.6
10	Optimized	119.155	-33.152365	2839.5072	4814.5238	0	425.79
11	Optimized	121.93	-35.80858	2966.8504	5151.4392	0	447.89
12	Optimized	124.41	-	3080.6081	5226.8634	0	440.96

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			38.182445				
13	Optimized	128.04205	-41.659095	3247.141	5462.0357	0	470.65
14	Optimized	132.5781	-44.66254	3371.8502	5815.5768	0	495.69
15	Optimized	138.94605	-48.081025	3496.9283	5969.4339	0	523.66
16	Optimized	142.53775	-50.00916	3567.5009	6101.3773	0	539.43
17	Optimized	148.3423	-51.58083	3585.159	6192.5637	0	551.02
18	Optimized	155.85955	-52.935505	3565.5235	6249.157	0	559.91
19	Optimized	159.49	-52.93875	3515.5617	6140.0642	0	558.35
20	Optimized	165.27	-52.943915	3435.8302	6057.2578	0	555.85
21	Optimized	173.81	-52.951545	3318.0316	6003.6279	0	552.17
22	Optimized	181.48665	-52.958405	3212.089	5970.3613	0	548.85
23	Optimized	188.29995	-52.964495	3118.1554	5951.1343	0	545.91
24	Optimized	193.1483	-53.040395	3055.7606	5918.5207	0	544.47
25	Optimized	199.675	-53.37022	3059.0259	5934.0193	0	544.57
26	Optimized	209.845	-53.884155	3096.3431	5958.3737	0	544.72
27	Optimized	219.14315	-54.35403	3128.3587	5980.7904	0	544.86
28	Optimized	227.7672	-55.144915	3177.7124	5995.5395	0	548.19
29	Optimized	236.58905	-56.30086	3249.8693	6090.7372	0	554.72
30	Optimized	243.01965	-57.14347	3302.536	6088.8513	0	559.47
31	Optimized	247.63465	-57.24651	3308.7586	6028.7551	0	558.37
32	Optimized	251.28075	-57.019485	3295.1016	5864.4174	0	555.18
33	Optimized	255.90075	-55.743515	3217.3477	5698.1493	0	543.69
34	Optimized	260.8924	-54.050545	3109.5008	5369.5306	0	528.45
35	Optimized	268.46465	-50.90466	2893.6062	5039.2094	0	500.14
36	Optimized	279.58225	-46.01722	2559.8792	4460.1756	0	456.15
37	Optimized	284.775	-43.692515	2398.8063	4176.9693	0	435.23
38	Optimized	289.13	-41.74286	2274.053	3908.5424	0	417.69
39	Optimized	296.55505	-37.946965	2037.2146	3455.9751	0	383.52
40	Optimized	300.22505	-35.778445	1901.857	3172.6318	0	364.01
41	Optimized	302.7053	-34.312935	1810.4078	2999.7959	0	350.82
42	Optimized	310.9805	-28.66538	1458.0119	2388.0684	0	299.99
43	Optimized	318.5608	-23.13089	1112.6461	1771.2893	0	250.18
44	Optimized	320.4356	-21.627625	1018.8671	1598.773	0	236.65

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45	Optimized	326.67145	-16.627625	706.8523	1054.3982	0	191.65
46	Optimized	332.96185	-11.58387	392.11678	505.24646	0	150

Slices of Slip Surface: 15237

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	15237	85.70953	-1.804931	986.21995	981.47811	0	600
2	15237	90.710225	-7.5092735	1342.2025	1933.896	341.61438	0
3	15237	94.33894	-11.465885	1589.0497	2581.6934	0	204.93
4	15237	100.20507	-17	1934.4295	3149.7225	0	280.27
5	15237	106.12155	-22.48169	2276.4592	3823.5576	0	326.2
6	15237	109.21	-24.99639	2433.4195	4077.7304	0	350.33
7	15237	114.155	-28.838455	2639.6134	4498.1842	0	387.3
8	15237	119.155	-32.423175	2793.9105	4859.3709	0	419.23
9	15237	123.1205	-35.09942	2906.0445	5098.8425	0	440.73
10	15237	125.6005	-36.678445	2970.2311	5204.5757	0	426.9
11	15237	130.55	-39.578385	3082.6674	5348.9186	0	450.82
12	15237	138.27	-43.75614	3236.4565	5570.9894	0	485.03
13	15237	146.0925	-47.466075	3359.6275	5743.7676	0	514.98
14	15237	154.0175	-50.732805	3453.6907	5869.7889	0	540.9
15	15237	159.49	-52.762105	3504.4899	5942.4368	0	556.76
16	15237	165.27	-54.565495	3537.0579	6063.9762	0	570.45
17	15237	173.81	-56.893875	3564.0673	6280.2623	0	587.65
18	15237	182.2075	-58.716735	3561.417	6464.1587	0	600.36
19	15237	190.4625	-60.06534	3531.3447	6610.8452	0	608.87
20	15237	199.675	-61.042125	3537.7934	6719.9061	0	613.61
21	15237	209.845	-61.547305	3574.5921	6780.4192	0	613.69
22	15237	219.275	-61.47598	3572.7456	6779.8224	0	608.9
23	15237	227.965	-60.912475	3537.6373	6726.5532	0	600.01
24	15237	236.655	-59.88539	3473.5414	6623.6554	0	586.95
25	15237	245.615	-58.32381	3376.0409	6298.2825	0	568.96
26	15237	254.85	-56.180645	3244.249	5743.9883	0	547.63
27	15237	263.65	-53.620485	3075.5412	5300.5728	0	524.58

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28	15237	272.01	-50.67158	2869.8775	4971.5425	0	498.04
29	15237	280.37	-47.201775	2631.7482	4583.9657	0	466.82
30	15237	284.775	-45.22397	2494.365	4357.5339	0	449.02
31	15237	288.9	-43.095755	2358.4318	4085.9295	0	429.86
32	15237	296.7	-38.78167	2089.2218	3543.5112	0	391.04
33	15237	300.98685	-36.243595	1930.8908	3226.9008	0	368.19
34	15237	306.1132	-32.7613	1713.567	2843.6345	0	336.85
35	15237	315.59215	-25.7613	1276.8113	2068.2178	0	273.85
36	15237	320.6158	-21.755875	1026.8511	1620.8872	0	237.8
37	15237	325.9638	-16.755875	714.84916	1087.8093	0	192.8
38	15237	331.44255	-11.57305	391.43854	527.99019	0	150

Slices of Slip Surface: 15206

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	15206	85.71194	-1.8048394	986.22943	982.18114	0	600
2	15206	90.72008	-7.509459	1342.1462	1934.5268	342.01113	0
3	15206	94.35551	-11.46606	1589.0706	2582.3656	0	204.94
4	15206	100.241	-17	1934.3747	3151.1302	0	280.29
5	15206	106.14865	-22.45685	2274.8754	3825.176	0	325.99
6	15206	109.21	-24.938625	2429.8127	4073.4549	0	349.81
7	15206	114.155	-28.76425	2634.8688	4492.371	0	386.63
8	15206	119.155	-32.331205	2788.2731	4852.1365	0	418.4
9	15206	123.2095	-35.04873	2901.7485	5092.2729	0	440.22
10	15206	125.6895	-36.618225	2965.2518	5200.2867	0	426.32
11	15206	130.55	-39.44229	3074.1225	5337.2588	0	449.6
12	15206	138.27	-43.587805	3225.967	5556.0893	0	483.51
13	15206	146.0925	-47.2632	3346.9838	5725.5175	0	513.15
14	15206	154.0175	-50.4931	3438.7266	5847.9014	0	538.74
15	15206	159.49	-52.496085	3487.7843	5918.0937	0	554.36
16	15206	165.27	-54.270235	3518.5517	6036.5503	0	567.79
17	15206	173.81	-56.553835	3542.8131	6248.3313	0	584.59
18	15206	182.2075	-58.330295	3537.4194	6427.5233	0	596.88
19	15206	190.4625	-59.63077	3504.2298	6569.2298	0	604.96
20	15206	199.675	-60.55043	3507.0705	6672.3083	0	609.19
21	15206	209.845	-60.988315	3539.6707	6725.7775	0	608.66

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22	15206	219.275	-60.85006	3533.7042	6718.0613	0	603.27
23	15206	227.965	-60.220065	3494.4535	6657.7378	0	593.78
24	15206	236.655	-59.12135	3425.8662	6547.1352	0	580.07
25	15206	245.615	-57.47956	3323.384	6212.9928	0	561.36
26	15206	254.85	-55.245985	3185.9391	5648.6934	0	539.21
27	15206	263.65	-52.591095	3011.2311	5194.7707	0	515.32
28	15206	272.01	-49.542385	2799.4413	4854.5007	0	487.88
29	15206	280.37	-45.961395	2554.322	4454.4221	0	455.65
30	15206	284.775	-43.9215	2413.0168	4220.8397	0	437.29
31	15206	288.4741	-41.9684	2288.1459	3971.7319	0	419.72
32	15206	295.42225	-38.06364	2044.4128	3481.3918	0	384.57
33	15206	299.74815	-35.457785	1881.8577	3156.7475	0	361.12
34	15206	304.9445	-31.909655	1660.4171	2758.9386	0	329.19
35	15206	313.6335	-25.45187	1257.461	2043.3853	0	271.07
36	15206	319.439	-20.726035	962.58287	1517.3874	0	228.53
37	15206	324.8053	-15.726035	650.58627	978.66302	0	183.53
38	15206	329.14125	-11.557815	390.4859	527.46055	0	150

Slices of Slip Surface: 15268

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	15268	85.70716	-1.8050212	986.23675	980.83456	0	600
2	15268	90.70054	-7.509093	1342.1275	1933.2306	341.27352	0
3	15268	94.32268	-11.465715	1589.066	2580.9042	0	204.92
4	15268	100.16987	-17	1934.3985	3147.8275	0	280.25
5	15268	106.095	-22.50619	2277.9596	3821.9875	0	326.41
6	15268	109.21	-25.05338	2436.9	4081.5955	0	350.84
7	15268	114.155	-28.911685	2644.0535	4503.2232	0	387.96
8	15268	119.155	-32.513945	2799.5698	4866.0139	0	420.05
9	15268	123.0339	-35.14945	2910.389	5105.0723	0	441.24
10	15268	125.5139	-36.737895	2975.1466	5208.4421	0	427.47
11	15268	130.55	-39.712755	3090.9951	5360.041	0	452.03
12	15268	138.27	-43.922365	3246.8244	5585.1977	0	486.53
13	15268	146.0925	-	3372.1356	5761.418	0	516.78

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			47.666415				
14	15268	154.0175	-50.96952	3468.4993	5891.0347	0	543.03
15	15268	159.49	-53.02481	3520.8315	5966.3922	0	559.12
16	15268	165.27	-54.85706	3555.1646	6090.7453	0	573.07
17	15268	173.81	-57.229625	3585.0109	6311.4917	0	590.67
18	15268	182.2075	-59.09824	3585.3118	6500.1464	0	603.8
19	15268	190.4625	-60.494275	3558.0988	6651.7693	0	612.73
20	15268	199.675	-61.52731	3567.979	6766.7486	0	617.98
21	15268	209.845	-62.098695	3608.9532	6834.2555	0	618.65
22	15268	219.275	-62.093145	3611.2552	6840.6469	0	614.46
23	15268	227.965	-61.59489	3580.1603	6794.5066	0	606.15
24	15268	236.655	-60.637995	3520.4346	6699.167	0	593.72
25	15268	245.615	-59.15489	3427.9522	6382.3827	0	576.44
26	15268	254.85	-57.100015	3301.6225	5837.9419	0	555.9
27	15268	263.65	-54.632155	3138.6555	5404.7961	0	533.69
28	15268	272.01	-51.780255	2939.0877	5086.5677	0	508.02
29	15268	280.37	-48.41821	2707.6424	4711.2671	0	477.76
30	15268	284.775	-46.50048	2573.9881	4491.6997	0	460.5
31	15268	288.9	-44.43547	2442.002	4227.2513	0	441.92
32	15268	296.7	-40.249235	2180.8818	3699.8613	0	404.24
33	15268	302.22325	-37.011325	1978.7984	3304.8383	0	375.1
34	15268	308.10985	-33.08546	1733.7946	2870.2297	0	339.77
35	15268	316.6366	-26.840845	1344.1372	2178.9201	0	283.57
36	15268	321.79215	-22.755385	1089.2313	1725.208	0	246.8
37	15268	328.0144	-17	730.06883	1113.0625	0	195
38	15268	333.74375	-11.588285	392.39037	528.56051	0	150

Slices of Slip Surface: 14306

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	14306	84.12577	-1.9395605	994.63528	1020.7785	0	600
2	14306	89.463	-7.4946255	1341.2162	1940.567	346.03535	0
3	14306	93.431805	-11.455065	1588.3886	2585.6361	0	204.36
4	14306	99.84479	-17	1934.424	3169.6264	0	280.05
5	14306	106.1854	-22.39231	2270.9121	3849.4424	0	325.42

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6	14306	109.21	-24.65794	2412.2458	4071.1524	0	347.28
7	14306	114.155	-28.206285	2600.043	4462.2817	0	381.61
8	14306	119.155	-31.53242	2738.4134	4797.0047	0	411.21
9	14306	124.21	-34.657395	2863.353	5041.2414	0	436.04
10	14306	130.55	-38.21342	2997.5338	5231.6901	0	438.54
11	14306	138.27	-42.137365	3135.4577	5424.8563	0	470.46
12	14306	146.0925	-45.63688	3245.4187	5573.0871	0	498.52
13	14306	154.0175	-48.73034	3328.6797	5678.2591	0	522.88
14	14306	159.49	-50.657215	3373.0764	5738.5123	0	537.81
15	14306	165.27	-52.3763	3400.363	5848.9035	0	550.74
16	14306	173.81	-54.60217	3421.0467	6051.2264	0	567.02
17	14306	182.2075	-56.3536	3413.9596	6224.5656	0	579.09
18	14306	190.4625	-57.65853	3381.1043	6363.57	0	587.21
19	14306	199.675	-58.61702	3386.4149	6467.1214	0	591.79
20	14306	209.845	-59.13435	3423.9741	6525.0153	0	591.97
21	14306	219.275	-59.10463	3424.8052	6525.1528	0	587.56
22	14306	227.965	-58.60778	3393.7513	6475.6642	0	579.27
23	14306	236.655	-57.67451	3335.5639	6379.323	0	567.05
24	14306	245.615	-56.24044	3246.0467	6064.4214	0	550.21
25	14306	254.85	-54.263365	3124.6305	5524.9804	0	530.37
26	14306	263.65	-51.89754	2967.9904	5099.643	0	509.08
27	14306	272.01	-49.172335	2776.3535	4792.0853	0	484.55
28	14306	280.37	-45.96948	2554.8535	4431.074	0	455.73
29	14306	284.775	-44.145365	2427.0613	4220.1992	0	439.31
30	14306	288.9	-42.1877	2301.84	3966.1512	0	421.69
31	14306	296.7	-38.22725	2054.711	3461.231	0	386.05
32	14306	305.72925	-32.949345	1725.3398	2842.7161	0	338.54
33	14306	315.87925	-26.15881	1301.5907	2089.689	0	277.43
34	14306	321.2486	-22.27167	1059.0279	1655.6325	0	242.45
35	14306	327.4332	-17	730.06093	1098.377	0	195
36	14306	333.7061	-11.588285	392.38501	517.50245	0	150

Slices of Slip Surface: 15267

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	15267	86.295995	-1.7479752	982.67571	1028.4323	0	600
2	15267	91.845885	-7.5275465	1343.3316	1967.1133	360.14053	0
3	15267	95.818745	-11.482095	1590.0723	2619.0205	0	205.86

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4	15267	101.52948	-16.44946	1900.0258	3136.6972	0	276.09
5	15267	107.38895	-21.44946	2212.0296	3748.756	0	324.54
6	15267	109.90895	-23.38112	2332.5026	3954.8848	0	336.13
7	15267	114.155	-26.488215	2492.8507	4287.5688	0	366.15
8	15267	119.155	-29.9147	2637.3775	4631.4922	0	396.65
9	15267	124.21	-33.132725	2768.2352	4884.1802	0	422.32
10	15267	127.8562	-35.32512	2854.5633	5013.7804	0	439.68
11	15267	132.2993	-37.77067	2945.606	5135.3122	0	433.78
12	15267	138.8531	-41.13623	3064.822	5302.6263	0	461.19
13	15267	146.0925	-44.439735	3170.7835	5444.9647	0	487.74
14	15267	154.0175	-47.630275	3260.1008	5559.8051	0	512.98
15	15267	159.49	-49.619875	3308.4148	5625.6548	0	528.48
16	15267	165.27	-51.39944	3339.4301	5742.9174	0	541.95
17	15267	173.81	-53.709575	3365.2963	5954.2658	0	558.99
18	15267	182.2075	-55.53735	3363.1311	6135.4	0	571.75
19	15267	190.4625	-56.91183	3334.5779	6281.3891	0	580.49
20	15267	199.675	-57.94217	3344.3237	6392.3385	0	585.71
21	15267	209.845	-58.533325	3386.5137	6457.916	0	586.56
22	15267	219.275	-58.567475	3391.2862	6464.8407	0	582.73
23	15267	227.965	-58.12579	3363.726	6421.085	0	574.93
24	15267	236.655	-57.24468	3308.7108	6330.4224	0	563.18
25	15267	245.615	-55.861525	3222.4681	6021.003	0	546.8
26	15267	254.85	-53.934245	3104.0242	5487.0125	0	527.41
27	15267	263.65	-51.61356	2950.3323	5066.633	0	506.52
28	15267	272.01	-48.9292	2761.1899	4763.5579	0	482.36
29	15267	280.37	-45.765355	2542.1112	4406.8282	0	453.89
30	15267	284.775	-43.961295	2415.6014	4198.2693	0	437.65
31	15267	288.9	-42.02157	2291.4525	3946.3904	0	420.19
32	15267	296.7	-38.094215	2046.3925	3445.1696	0	384.85
33	15267	305.6783	-32.88624	1721.4002	2834.833	0	337.98
34	15267	315.8283	-26.13364	1300.0057	2086.1973	0	277.2
35	15267	321.22385	-22.251165	1057.7562	1652.6564	0	242.26
36	15267	327.40715	-17	730.05636	1097.8433	0	195
37	15267	333.7048	-11.588285	392.39199	517.18804	0	150

Slices of Slip Surface: 14275

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	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	14275	84.128165	-1.9395705	994.63165	1021.4043	0	600
2	14275	89.47283	-7.4948105	1341.2932	1941.056	346.27317	0
3	14275	93.44855	-11.45524	1588.3787	2586.2612	0	204.37
4	14275	99.882025	-17	1934.4248	3171.0306	0	280.08
5	14275	106.2137	-22.36883	2269.3941	3851.9607	0	325.23
6	14275	109.21	-24.60368	2408.8955	4067.074	0	346.79
7	14275	114.155	-28.13715	2595.8554	4456.9066	0	380.99
8	14275	119.155	-31.447145	2733.0576	4790.1766	0	410.44
9	14275	124.21	-34.554835	2857.008	5032.7014	0	435.12
10	14275	130.55	-38.087745	2989.6402	5220.7661	0	437.41
11	14275	138.27	-41.981955	3125.7724	5411.0895	0	469.06
12	14275	146.0925	-45.44945	3233.7151	5556.2356	0	496.83
13	14275	154.0175	-48.50861	3314.8661	5657.9163	0	520.88
14	14275	159.49	-50.41091	3357.7606	5715.6659	0	535.6
15	14275	165.27	-52.10261	3383.3609	5823.3876	0	548.28
16	14275	173.81	-54.286465	3401.3287	6021.5287	0	564.18
17	14275	182.2075	-55.994285	3391.6096	6190.3972	0	575.86
18	14275	190.4625	-57.253925	3355.9184	6324.6848	0	583.57
19	14275	199.675	-58.158645	3357.7666	6422.6283	0	587.66
20	14275	209.845	-58.61267	3391.4452	6473.8801	0	587.28
21	14275	219.275	-58.52007	3388.3142	6467.3142	0	582.3
22	14275	227.965	-57.960905	3353.4397	6411.1697	0	573.45
23	14275	236.655	-56.960715	3290.9708	6307.77	0	560.63
24	14275	245.615	-55.45202	3196.8663	5984.6061	0	543.11
25	14275	254.85	-53.39128	3070.2105	5435.8909	0	522.52
26	14275	263.65	-50.93836	2908.1277	5000.8412	0	500.45
27	14275	272.01	-48.122115	2710.7874	4683.1476	0	475.1
28	14275	280.37	-44.81878	2483.0531	4310.7766	0	445.37
29	14275	284.775	-42.938845	2351.6862	4093.6311	0	428.45
30	14275	288.3303	-41.217595	2241.2375	3870.3445	0	412.96
31	14275	294.99095	-37.799705	2028.004	3434.9532	0	382.2
32	14275	299.46065	-35.340305	1874.5034	3125.1851	0	360.06

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33	14275	305.2597	-31.731905	1649.3466	2717.5682	0	327.59
34	14275	314.57905	-25.3916	1253.7088	2013.9503	0	270.52
35	14275	320.06935	-21.343975	1001.1356	1562.5236	0	234.1
36	14275	325.92475	-16.343975	689.14381	1029.711	0	189.1
37	14275	331.4035	-11.57305	391.43715	517.01411	0	150

Slices of Slip Surface: 15236

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	15236	86.298305	-1.7479086	982.66315	1029.0167	0	600
2	15236	91.85604	-7.527737	1343.3653	1967.6187	360.41288	0
3	15236	95.83597	-11.482275	1590.1245	2619.6858	0	205.87
4	15236	101.53864	-16.42882	1898.7407	3135.6674	0	275.91
5	15236	107.418	-21.42882	2210.7705	3746.6492	0	324.37
6	15236	109.938	-23.35338	2330.7444	3954.1163	0	335.89
7	15236	114.155	-26.42532	2488.8841	4282.6639	0	365.58
8	15236	119.155	-29.83595	2632.5872	4625.3241	0	395.94
9	15236	124.21	-33.03692	2762.3515	4876.5717	0	421.46
10	15236	127.95625	-35.27291	2849.9077	5006.044	0	439.14
11	15236	132.44935	-37.72739	2940.8659	5128.8931	0	433.33
12	15236	138.9031	-41.01122	3056.4066	5290.6538	0	460.05
13	15236	146.0925	-44.25967	3159.4733	5428.7564	0	486.12
14	15236	154.0175	-47.41604	3246.714	5540.1623	0	511.05
15	15236	159.49	-49.38114	3293.5006	5603.5711	0	526.33
16	15236	165.27	-51.133375	3322.8654	5718.1242	0	539.56
17	15236	173.81	-53.40157	3346.1518	5925.2232	0	556.22
18	15236	182.2075	-55.185795	3341.1493	6101.9385	0	568.58
19	15236	190.4625	-56.515035	3309.7698	6243.3585	0	576.92
20	15236	199.675	-57.491655	3316.2155	6348.7132	0	581.66
21	15236	209.845	-58.019545	3354.4327	6407.6614	0	581.94
22	15236	219.275	-57.99085	3355.2937	6407.8714	0	577.54
23	15236	227.965	-57.486885	3323.9088	6357.5705	0	569.18
24	15236	236.655	-56.538885	3264.7173	6259.6081	0	556.83
25	15236	245.615	-55.081125	3173.7397	5942.0855	0	539.77
26	15236	254.85	-53.070195	3050.1414	5398.7723	0	519.63
27	15236	263.65	-50.662425	2890.9091	4968.8109	0	497.96

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28	15236	272.01	-47.88703	2696.1461	4655.5473	0	472.98
29	15236	280.37	-44.622695	2470.7949	4287.6143	0	443.6
30	15236	284.775	-42.762805	2340.8592	4072.5729	0	426.87
31	15236	288.2779	-41.083665	2232.9602	3854.5196	0	411.75
32	15236	294.8337	-37.753295	2025.1018	3429.8682	0	381.78
33	15236	299.3558	-35.2858	1871.122	3118.9782	0	359.57
34	15236	305.247	-31.64956	1644.1837	2707.6065	0	326.85
35	15236	314.541	-25.36376	1251.9425	2010.133	0	270.27
36	15236	320.044	-21.327095	1000.079	1560.1379	0	233.94
37	15236	325.9234	-16.327095	688.09021	1027.437	0	188.94
38	15236	331.40215	-11.57305	391.4361	516.70815	0	150

Slices of Slip Surface: 16198

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	16198	87.80142	-1.500446	967.2254	979.23113	0	600
2	16198	93.085785	-7.5420715	1344.1884	1960.7532	355.97383	0
3	16198	96.718755	-11.492805	1590.7662	2622.08	0	206.43
4	16198	101.95125	-16.457225	1900.5209	3119.4735	0	276.41
5	16198	107.3215	-21.457225	2212.5281	3730.9803	0	324.57
6	16198	109.8415	-23.55856	2343.5908	3946.1438	0	337.69
7	16198	114.155	-26.984995	2523.8686	4311.534	0	370.62
8	16198	119.155	-30.684845	2685.4445	4683.2709	0	403.58
9	16198	124.21	-34.14508	2831.3773	4961.3146	0	431.43
10	16198	130.64005	-38.11349	2989.9424	5192.6223	0	437.6
11	16198	138.36005	-42.42041	3151.8362	5427.4046	0	472.97
12	16198	146.0925	-46.196375	3280.3155	5608.7219	0	503.55
13	16198	154.0175	-49.568615	3381.0377	5745.3225	0	530.42
14	16198	159.49	-51.66571	3436.1268	5825.5258	0	546.89
15	16198	165.27	-53.534025	3472.589	5952.8021	0	561.16
16	16198	173.81	-55.95252	3505.2755	6177.7289	0	579.18
17	16198	182.2075	-57.856625	3507.8439	6369.9156	0	592.62
18	16198	190.4625	-59.27895	3482.1821	6524.087	0	601.79
19	16198	199.675	-60.33164	3493.4117	6640.9789	0	607.22
20	16198	209.845	-60.91463	3535.0805	6709.615	0	608

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21	16198	219.275	-60.910525	3537.4864	6716.0024	0	603.81
22	16198	227.965	-60.40503	3505.9315	6668.9064	0	595.44
23	16198	236.655	-59.432795	3445.2813	6571.7599	0	582.88
24	16198	245.615	-57.9248	3351.2071	6252.2553	0	565.36
25	16198	254.85	-55.83412	3222.6245	5703.7194	0	544.51
26	16198	263.65	-53.32165	3056.8913	5265.5012	0	521.89
27	16198	272.01	-50.416035	2853.902	4941.3179	0	495.74
28	16198	280.37	-46.98773	2618.3417	4558.3322	0	464.89
29	16198	284.775	-45.031305	2482.3548	4334.3466	0	447.28
30	16198	288.9	-42.922305	2347.6208	4064.8218	0	428.3
31	16198	296.7	-38.64377	2080.6709	3526.5007	0	389.79
32	16198	300.89365	-36.183345	1927.1613	3218.6757	0	367.65
33	16198	305.9616	-32.765365	1713.8339	2842.7776	0	336.89
34	16198	315.51025	-25.765365	1277.0384	2067.7661	0	273.89
35	16198	320.5923	-21.73692	1025.6683	1617.9487	0	237.63
36	16198	325.96255	-16.73692	713.6655	1085.0877	0	192.63
37	16198	331.4413	-11.57305	391.44177	527.54365	0	150

Slices of Slip Surface: 15175

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	15175	85.71439	-1.8047466	986.21454	983.23021	0	600
2	15175	90.73013	-7.509645	1342.174	1935.338	342.46342	0
3	15175	94.37241	-11.466235	1589.0627	2583.3253	0	204.95
4	15175	100.27774	-17	1934.3693	3153.1397	0	280.31
5	15175	106.1764	-22.431665	2273.3303	3827.4135	0	325.77
6	15175	109.21	-24.88007	2426.0783	4069.6956	0	349.28
7	15175	114.155	-28.68905	2630.1495	4487.2717	0	385.95
8	15175	119.155	-32.238015	2782.4972	4845.2696	0	417.56
9	15175	123.3011	-34.99737	2897.1028	5085.9594	0	439.69
10	15175	125.7811	-36.55722	2960.1733	5196.4132	0	425.73
11	15175	130.55	-39.304435	3065.5842	5325.9597	0	448.36
12	15175	138.27	-43.41731	3215.2391	5541.5367	0	481.98
13	15175	146.0925	-47.05774	3334.0863	5707.4722	0	511.31
14	15175	154.0175	-50.25035	3423.6058	5826.0781	0	536.56
15	15175	159.49	-52.226675	3471.0263	5893.3595	0	551.94
16	15175	165.27	-53.97119	3499.8681	6008.9126	0	565.1

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17	15175	173.81	-56.2094	3521.3597	6216.1498	0	581.49
18	15175	182.2075	-57.93881	3512.9588	6390.4721	0	593.36
19	15175	190.4625	-59.190445	3476.7497	6527.1543	0	601
20	15175	197.98	-59.97288	3470.0722	6614.4438	0	604.74
21	15175	204.76	-60.36107	3497.8481	6660.2235	0	605.25
22	15175	211.54	-60.46528	3507.9113	6676.1523	0	603.21
23	15175	219.275	-60.215145	3494.1277	6655.3555	0	597.56
24	15175	227.965	-59.51737	3450.606	6587.5934	0	587.46
25	15175	236.655	-58.34554	3377.4075	6469.0291	0	573.09
26	15175	245.615	-56.621725	3269.8758	6125.9785	0	553.64
27	15175	254.85	-54.29551	3126.5932	5551.3301	0	530.66
28	15175	263.65	-51.543335	2945.8504	5086.3857	0	505.89
29	15175	272.01	-48.39185	2727.5777	4734.6965	0	477.53
30	15175	280.37	-44.696025	2475.4013	4321.5017	0	444.26
31	15175	284.775	-42.591905	2330.1926	4080.5061	0	425.33
32	15175	290.70695	-39.23822	2117.7503	3657.6761	0	395.14
33	15175	298.50695	-34.65291	1831.6163	3086.5084	0	353.88
34	15175	304.35585	-30.649735	1581.8081	2628.7383	0	317.85
35	15175	311.8675	-24.996825	1229.0528	2001.9066	0	266.97
36	15175	318.26165	-19.66364	896.2962	1409.9998	0	218.97
37	15175	323.6467	-14.66364	584.29393	865.64677	0	173.97
38	15175	326.83985	-11.542575	389.53938	526.79379	0	150

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 174
Last Edited By: Cox, Lane MVK
Date: 3/29/2011
Time: 8:21:42 AM
File Name: 5c(1) Typical 1.2nd SC.80%SG.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\2nd Stage Construction\80%SG,1 Layer of Fabric\Slope W\
Last Solved Date: 3/29/2011
Last Solved Time: 8:47:24 AM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

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Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

SlipSurface
- Direction of movement: Right to Left
- Use Passive Mode: No
- Slip Surface Option: Entry and Exit
- Critical slip surfaces saved: 100
- Optimize Critical Slip Surface Location: Yes
- Tension Crack
  - Tension Crack Option: Tension Crack Line
  - Percentage Wet: 0
  - Tension Crack Fluid Unit Weight: 62.4 pcf

FOS Distribution
- FOS Calculation Option: Constant

Advanced
- Number of Slices: 30
- Optimization Tolerance: 0.01
- Minimum Slip Surface Depth: 0.1 ft
- Optimization Maximum Iterations: 2000
- Optimization Convergence Tolerance: 1e-007
- Starting Optimization Points: 8
- Ending Optimization Points: 16
- Complete Passes per Insertion: 1
- Driving Side Maximum Convex Angle: 5 °
- Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH

Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH above 0

Model: Mohr-Coulomb
Unit Weight: 108 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH, 0 to -12

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -12 (2)
Cohesion Spatial Fn: CH, 0 to -12
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH, -12 to -22

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -12 to -22 (2)
Cohesion Spatial Fn: CH, -12 to -22

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Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -22 to -36

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -22 to -36 (2)
Cohesion Spatial Fn: CH, -22 to -36
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -36 to -80

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -36 to -80 (2)
Cohesion Spatial Fn: CH, -36 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sand Fill

Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, 0 to -12 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -12 (2)
Cohesion Spatial Fn: CH, 0 to -12 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -12 to -22 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -12 to -22 (2)
Cohesion Spatial Fn: CH, -12 to -22 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -22 to -36 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -22 to -36 (2)
Cohesion Spatial Fn: CH, -22 to -36 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Entry and Exit

Left Projection: Range
Left-Zone Left Coordinate: (-155, -1.70674) ft
Left-Zone Right Coordinate: (-70, -0.36303) ft
Left-Zone Increment: 30
Right Projection: Range
Right-Zone Left Coordinate: (126.08254, 12.89164) ft
Right-Zone Right Coordinate: (206, 2.875) ft
Right-Zone Increment: 30
Radius Increments: 30

Slip Surface Limits

Left Coordinate: (-200, -1.79) ft
Right Coordinate: (500, -4.27) ft

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	-1.79
	-195.89	-1.8
	-169.15	-1.8
	-146.39	-1.65
	-122.74	-1.62
	-98.28	-1.36
	-85.7	-0.94
	-66.38	-0.23
	-63	0
	-52.15	0.5
	-38.25	0.23
	-36.18	0.46
	194.59	-4.39

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	214.93	-4.22
	250.23	-4.22
	259.47	-4.16
	284.55	-5.22
	285	-5.3
	406	-5.3
	407.82	-4.54
	500	-4.27

Reinforcements

Reinforcement 1

Type: Fabric
Outside Point: (23, 0) ft
Inside Point: (177, 0) ft
Slip Surface Intersection: (177.31, 0) ft
Total Length: 154 ft
Reinforcement Direction: 180 °
Applied Load Option: Variable
F of S Dependent: No
Contact Cohesion: 19 psf
Contact Phi: 265 °
Interface Factor: 2
Bond Safety Factor: 1
Fabric Capacity: 27000 lbs
Fabric Safety Factor: 1
Fabric Load: 27000 lbs
Load Distribution: Even along reinf.
Load Orientation: 0
Applied Load: 27000 lbs
Fabric Load Used: 0 lbs
Resisting Force Used: 8774.8 lbs/ft
Available Bond Length: 0 ft
Required Bond Length: 0 ft
Governing Component: Bond

Tension Crack Line

	X (ft)	Y (ft)
	81.73	6.5
	85	2
	112	9
	121	9
	161	1
	241	-1

Spatial Functions

CH, 0 to -12

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -1.5, 75)
Data Point: (-300, -12, 75)
Data Point: (-23.63, 0, 75)
Data Point: (-23.63, -12, 75)
Data Point: (0, 0, 250)
Data Point: (0, -12, 250)
Data Point: (250.26, -4.13, 150)
Data Point: (250.26, -12, 150)
Data Point: (500, -4.27, 150)
Data Point: (500, -12, 150)

CH, -22 to -36 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -22, 350)
Data Point: (0, -36, 476)
Data Point: (40.33, -22, 290)
Data Point: (40.33, -36, 416)
Data Point: (116.73, -22, 327)
Data Point: (116.73, -36, 453)
Data Point: (250.23, -22, 240)
Data Point: (250.23, -36, 366)

CH, -12 to -22

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -12, 125)
Data Point: (-300, -22, 225)
Data Point: (-23.63, -12, 125)
Data Point: (-23.63, -22, 225)
Data Point: (0, -12, 350)
Data Point: (0, -22, 350)
Data Point: (250.26, -12, 150)
Data Point: (250.26, -22, 240)
Data Point: (500, -12, 150)
Data Point: (500, -22, 240)

CH, -22 to -36

Model: Linear Interpolation
Limit Range By: Data Values

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Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -22, 225)
Data Point: (-300, -36, 365)
Data Point: (-23.63, -22, 225)
Data Point: (-23.63, -36, 365)
Data Point: (0, -22, 350)
Data Point: (0, -36, 476)
Data Point: (250.26, -22, 240)
Data Point: (250.26, -36, 366)
Data Point: (500, -22, 240)
Data Point: (500, -36, 366)

CH, -36 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -36, 365)
Data Point: (-300, -80, 805)
Data Point: (-23.63, -36, 365)
Data Point: (-23.63, -80, 805)
Data Point: (0, -36, 476)
Data Point: (0, -80, 872)
Data Point: (250.26, -36, 366)
Data Point: (250.26, -80, 762)
Data Point: (500, -36, 366)
Data Point: (500, -80, 762)

CH, 0 to -12 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -6, 100)
Data Point: (0, -6, 101)
Data Point: (178.08, -6, 111)

CH, -12 to -22 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -17, 100)
Data Point: (0, -17, 109)
Data Point: (178.08, -17, 100)

CH, -22 to -36 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -29, 102)

Data Point: (0, -29, 104)
Data Point: (178.08, -29, 102)

CH, -36 to -80 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -58, 105)
Data Point: (0, -58, 106)
Data Point: (178.08, -58, 105)

CH, 0 to -12 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, 0, 250)
Data Point: (0, -12, 250)
Data Point: (40.33, 0, 171)
Data Point: (40.33, -12, 171)
Data Point: (116.73, 0, 219)
Data Point: (116.73, -12, 219)
Data Point: (250.23, -4.13, 150)
Data Point: (250.23, -12, 150)

CH, -12 to -22 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -12, 350)
Data Point: (0, -22, 350)
Data Point: (40.33, -12, 200)
Data Point: (40.33, -22, 290)
Data Point: (116.73, -12, 245)
Data Point: (116.73, -22, 335)
Data Point: (250.23, -12, 150)
Data Point: (250.23, -22, 240)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -36 to -80	31,33,60,63,34,32	30800
Region 2	CH above 0	40,9,10,11,12,13,64,17,39,57	130.54365
Region 3	Sand Fill	19,20,21,22,23,24,25,26,27,28	629.28815
Region 4	EMBANKMENT FILL CH	19,46,41,42,43,66,28	1500.8133
Region 5	EMBANKMENT FILL CH	43,44,45,65,29,66	501.84775
Region 6	CH, -22 to -36	35,33,60,59	2800
Region 7	CH, -12 to -22	37,35,59,58	2000
Region 8	CH, 0 to -12	57,58,37,2,1,3,4,5,6,7,8,40	2203.9585

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Region 9	CH, -22 to -36	63,62,36,34	3496.78
Region 10	CH, -12 to -22	62,61,38,36	2497.7
Region 11	CH, 0 to -12	61,65,45,47,48,49,50,51,52,53,54,55,30,38	1282.4538
Region 12	CH, -12 to -22 SG	58,59,62,61	2502.3
Region 13	CH, -22 to -36 SG	60,59,62,63	3503.22
Region 14	CH, 0 to -12 SG	57,58,61,65,29,66,28,27,26,25,24,23,22,21,20,19,18,39	1448.4571
Region 15	EMBANKMENT FILL CH	64,17,39,56,19,46	368.6281

Points

	X (ft)	Y (ft)
Point 1	-195.89	-1.8
Point 2	-200	-1.79
Point 3	-169.15	-1.8
Point 4	-146.39	-1.65
Point 5	-122.74	-1.62
Point 6	-98.28	-1.36
Point 7	-85.7	-0.94
Point 8	-66.38	-0.23
Point 9	-52.15	0.5
Point 10	-38.25	0.23
Point 11	-36.18	0.46
Point 12	-23.63	0.86
Point 13	-19.22	0.94
Point 14	-5.71	4.75
Point 15	-0.42	4.91
Point 16	-0.22	4.77
Point 17	4.93	4.5
Point 18	24.3	-0.66
Point 19	40.33	-3.85
Point 20	53.08	-5.02
Point 21	69.13	-8.93
Point 22	90.17	-10.85
Point 23	106.69	-11.22
Point 24	116.58	-11.18
Point 25	126.69	-10.14
Point 26	142.13	-9.46
Point 27	157.98	-8.78
Point 28	178.08	-4.54
Point 29	214.93	-4.22
Point 30	500	-4.27
Point 31	-200	-80
Point 32	500	-80
Point 33	-200	-36
Point 34	500	-36
Point 35	-200	-22
Point 36	500	-22
Point 37	-200	-12

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Point 38	500	-12
Point 39	22	0
Point 40	-63	0
Point 41	111.73	14
Point 42	121.73	14
Point 43	161	4
Point 44	241	2
Point 45	259.47	-4.16
Point 46	81.73	6.5
Point 47	284.55	-5.2
Point 48	300.6	-9.14
Point 49	320.9	-11
Point 50	337.4	-11.22
Point 51	347.09	-11.26
Point 52	356.8	-10.22
Point 53	372.41	-9.68
Point 54	388.59	-9
Point 55	407.82	-4.54
Point 56	30	-1.79
Point 57	0	0
Point 58	0	-12
Point 59	0	-22
Point 60	0	-36
Point 61	250.23	-12
Point 62	250.23	-22
Point 63	250.23	-36
Point 64	1.73	4.5
Point 65	250.23	-4.22
Point 66	194.59	-4.39

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	2.24	(21.41, 201.877)	116.8034	(178.219, 3.56953)	(-113.556, -1.52237)
2	8350	2.49	(21.41, 201.877)	255.052	(178.026, 3.57436)	(-132.328, -1.63216)
3	10272	2.49	(24.247, 198.323)	250.504	(178.025, 3.57437)	(-126.661, -1.62497)
4	9311	2.50	(22.828, 200.1)	252.778	(178.025, 3.57436)	(-129.494, -1.62857)
5	11233	2.50	(25.666, 196.545)	248.23	(178.025, 3.57437)	(-123.827, -1.62138)
6	7389	2.50	(19.991, 203.654)	257.326	(178.026, 3.57435)	(-135.162, -1.63576)
7	6428	2.50	(18.572, 205.431)	259.6	(178.026, 3.57435)	(-137.996, -1.63935)
8	12194	2.50	(27.095, 194.763)	245.945	(178.025, 3.57438)	(-120.993, -1.60143)
9	5467	2.50	(17.153, 207.209)	261.874	(178.026, 3.57434)	(-140.83, -1.64295)
10	13155	2.50	(28.531, 192.978)	243.654	(178.024, 3.5744)	(-118.159, -1.5713)
11	4506	2.51	(15.735, 208.986)	264.148	(178.027, 3.57434)	(-143.664, -1.64654)
12	14116	2.51	(29.967, 191.193)	241.363	(178.024, 3.57441)	(-115.325, -1.54118)
13	3545	2.51	(14.315, 210.763)	266.422	(178.027, 3.57433)	(-146.498, -1.65071)
14	10273	2.51	(24.578, 178.369)	235.097	(178.385, 3.56538)	(-126.661, -1.62497)
15	15077	2.51	(31.403, 189.407)	239.072	(178.023, 3.57442)	(-112.491, -1.51106)

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16	9312	2.51	(23.159, 179.965)	237.233	(178.385, 3.56538)	(-129.494, -1.62857)
17	11234	2.51	(25.996, 176.773)	232.962	(178.384, 3.56539)	(-123.827, -1.62138)
18	8351	2.51	(21.741, 181.561)	239.368	(178.385, 3.56537)	(-132.328, -1.63216)
19	12195	2.51	(27.424, 175.173)	230.818	(178.384, 3.5654)	(-120.993, -1.60143)
20	7390	2.52	(20.322, 183.157)	241.503	(178.385, 3.56536)	(-135.162, -1.63576)
21	13156	2.52	(28.858, 173.57)	228.667	(178.384, 3.56541)	(-118.159, -1.5713)
22	2584	2.52	(12.887, 212.545)	268.706	(178.027, 3.57432)	(-149.332, -1.66939)
23	6429	2.52	(18.903, 184.753)	243.638	(178.386, 3.56536)	(-137.996, -1.63935)
24	16038	2.52	(32.839, 187.622)	236.781	(178.023, 3.57444)	(-109.657, -1.48094)
25	14117	2.52	(30.292, 171.967)	226.516	(178.383, 3.56542)	(-115.325, -1.54118)
26	5468	2.52	(17.485, 186.349)	245.774	(178.386, 3.56535)	(-140.83, -1.64295)
27	1623	2.52	(11.458, 214.327)	270.99	(178.027, 3.57431)	(-152.166, -1.68807)
28	15078	2.53	(31.726, 170.365)	224.366	(178.383, 3.56543)	(-112.491, -1.51106)
29	16999	2.53	(34.275, 185.837)	234.489	(178.022, 3.57445)	(-106.824, -1.45082)
30	4507	2.53	(16.066, 187.945)	247.909	(178.386, 3.56535)	(-143.664, -1.64654)
31	662	2.53	(10.03, 216.109)	273.273	(178.028, 3.57431)	(-155, -1.70674)
32	16039	2.53	(33.16, 168.762)	222.215	(178.382, 3.56545)	(-109.657, -1.48094)
33	3546	2.53	(14.647, 189.541)	250.044	(178.386, 3.56534)	(-146.498, -1.65071)
34	17960	2.54	(35.711, 184.051)	232.198	(178.022, 3.57446)	(-103.99, -1.42069)
35	2585	2.54	(13.22, 191.141)	252.189	(178.387, 3.56534)	(-149.332, -1.66939)
36	17000	2.54	(34.594, 167.159)	220.064	(178.382, 3.56546)	(-106.824, -1.45082)
37	6458	2.54	(19.586, 231.345)	281.272	(180.311, 3.51723)	(-137.996, -1.63935)
38	7419	2.54	(21.005, 229.357)	278.83	(180.31, 3.51724)	(-135.162, -1.63576)
39	8380	2.54	(22.424, 227.369)	276.387	(180.31, 3.51724)	(-132.328, -1.63216)
40	11235	2.54	(26.284, 159.565)	220.259	(178.7, 3.55751)	(-123.827, -1.62138)
41	9341	2.54	(23.843, 225.38)	273.944	(180.31, 3.51725)	(-129.494, -1.62857)
42	10274	2.54	(24.865, 161.003)	222.279	(178.7, 3.5575)	(-126.661, -1.62497)
43	12196	2.55	(27.71, 158.123)	218.23	(178.699, 3.55752)	(-120.993, -1.60143)
44	9313	2.55	(23.447, 162.441)	224.299	(178.7, 3.5575)	(-129.494, -1.62857)
45	5497	2.55	(18.167, 233.334)	283.715	(180.311, 3.51723)	(-140.83, -1.64295)
46	10302	2.55	(25.262, 223.392)	271.501	(180.31, 3.51725)	(-126.661, -1.62497)
47	8352	2.55	(22.029, 163.879)	226.318	(178.7, 3.55749)	(-132.328, -1.63216)
48	8381	2.55	(22.805, 203.481)	257.172	(180.726, 3.50685)	(-132.328, -1.63216)
49	4536	2.55	(16.748, 235.322)	286.158	(180.311, 3.51722)	(-143.664, -1.64654)
50	9342	2.55	(24.223, 201.704)	254.898	(180.726, 3.50686)	(-129.494, -1.62857)
51	13157	2.55	(29.143, 156.679)	216.197	(178.699, 3.55753)	(-118.159, -1.5713)
52	7420	2.55	(21.386, 205.258)	259.446	(180.726, 3.50685)	(-135.162, -1.63576)
53	1624	2.55	(11.793, 192.741)	254.333	(178.387, 3.56533)	(-152.166, -1.68807)
54	6459	2.55	(19.967, 207.035)	261.72	(180.726, 3.50684)	(-137.996, -1.63935)
55	7391	2.55	(20.61, 165.317)	228.338	(178.701, 3.55748)	(-135.162, -1.63576)
56	18921	2.55	(37.147, 182.266)	229.907	(178.021, 3.57448)	(-101.156, -1.39057)
57	10303	2.55	(25.642, 199.927)	252.624	(180.726, 3.50686)	(-126.661, -1.62497)
58	17961	2.55	(36.028, 165.556)	217.914	(178.381, 3.56547)	(-103.99, -1.42069)
59	11263	2.55	(26.681, 221.403)	269.059	(180.31, 3.51726)	(-123.827, -1.62138)
60	14118	2.55	(30.575, 155.235)	214.163	(178.699, 3.55754)	(-115.325, -1.54118)
61	3575	2.55	(15.328, 237.311)	288.601	(180.311, 3.51722)	(-146.498, -1.65071)
62	11264	2.55	(27.061, 198.149)	250.35	(180.725, 3.50687)	(-123.827, -1.62138)
63	5498	2.55	(18.548, 208.813)	263.994	(180.727, 3.50684)	(-140.83, -1.64295)

64	6430	2.55	(19.192, 166.755)	230.358	(178.701, 3.55748)	(-137.996, -1.63935)
65	12224	2.56	(28.112, 219.409)	266.604	(180.309, 3.51727)	(-120.993, -1.60143)
66	15079	2.56	(32.007, 153.791)	212.129	(178.698, 3.55755)	(-112.491, -1.51106)
67	12225	2.56	(28.49, 196.367)	248.066	(180.725, 3.50688)	(-120.993, -1.60143)
68	2614	2.56	(13.899, 239.305)	291.055	(180.312, 3.51721)	(-149.332, -1.66939)
69	4537	2.56	(17.13, 210.59)	266.268	(180.727, 3.50683)	(-143.664, -1.64654)
70	663	2.56	(10.365, 194.341)	256.477	(178.387, 3.56532)	(-155, -1.70674)
71	13186	2.56	(29.926, 194.582)	245.775	(180.724, 3.50689)	(-118.159, -1.5713)
72	6457	2.56	(19.134, 260.193)	305.362	(179.822, 3.52944)	(-137.996, -1.63935)
73	18922	2.56	(37.462, 163.953)	215.763	(178.381, 3.56548)	(-101.156, -1.39057)
74	7418	2.56	(20.553, 257.954)	302.711	(179.822, 3.52944)	(-135.162, -1.63576)
75	5469	2.56	(17.773, 168.194)	232.378	(178.701, 3.55747)	(-140.83, -1.64295)
76	13185	2.56	(29.55, 217.411)	264.142	(180.309, 3.51728)	(-118.159, -1.5713)
77	3576	2.56	(15.71, 212.367)	268.543	(180.727, 3.50683)	(-146.498, -1.65071)
78	5496	2.56	(17.714, 262.432)	308.013	(179.822, 3.52944)	(-140.83, -1.64295)
79	16040	2.56	(33.44, 152.347)	210.095	(178.698, 3.55756)	(-109.657, -1.48094)
80	8379	2.56	(21.972, 255.715)	300.06	(179.822, 3.52945)	(-132.328, -1.63216)
81	1653	2.56	(12.469, 241.299)	293.509	(180.312, 3.5172)	(-152.166, -1.68807)
82	4535	2.56	(16.295, 264.671)	310.664	(179.823, 3.52943)	(-143.664, -1.64654)
83	9340	2.56	(23.391, 253.476)	297.409	(179.822, 3.52945)	(-129.494, -1.62857)
84	19882	2.56	(38.583, 180.48)	227.616	(178.02, 3.57449)	(-98.3221, -1.36045)
85	10301	2.57	(24.811, 251.237)	294.759	(179.822, 3.52946)	(-126.661, -1.62497)
86	4508	2.57	(16.355, 169.632)	234.398	(178.701, 3.55747)	(-143.664, -1.64654)
87	3574	2.57	(14.875, 266.91)	313.315	(179.823, 3.52943)	(-146.498, -1.65071)
88	2615	2.57	(14.282, 214.149)	270.827	(180.727, 3.50682)	(-149.332, -1.66939)
89	14146	2.57	(30.988, 215.413)	261.68	(180.308, 3.5173)	(-115.325, -1.54118)
90	14147	2.57	(31.362, 192.796)	243.484	(180.724, 3.5069)	(-115.325, -1.54118)
91	692	2.57	(11.039, 243.293)	295.962	(180.312, 3.51719)	(-155, -1.70674)
92	2613	2.57	(13.444, 269.156)	315.978	(179.823, 3.52942)	(-149.332, -1.66939)
93	9343	2.57	(24.55, 181.4)	239.226	(181.085, 3.49787)	(-129.494, -1.62857)
94	17001	2.57	(34.872, 150.903)	208.061	(178.697, 3.55757)	(-106.824, -1.45082)
95	8382	2.57	(23.131, 182.996)	241.361	(181.086, 3.49786)	(-132.328, -1.63216)
96	10304	2.57	(25.968, 179.804)	237.091	(181.085, 3.49787)	(-126.661, -1.62497)
97	7421	2.57	(21.712, 184.592)	243.496	(181.086, 3.49785)	(-135.162, -1.63576)
98	11262	2.57	(26.23, 248.998)	292.108	(179.821, 3.52946)	(-123.827, -1.62138)
99	3547	2.57	(14.936, 171.07)	236.418	(178.702, 3.55746)	(-146.498, -1.65071)
100	11265	2.57	(27.387, 178.208)	234.955	(181.085, 3.49788)	(-123.827, -1.62138)
101	19883	2.57	(38.896, 162.351)	213.612	(178.38, 3.5655)	(-98.3221, -1.36045)

Slices of Slip Surface: **Optimized**

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	-105.9178	-7.0230465	348.30667	593.52588	0	75
2	Optimized	-96.276605	-13.96655	790.82546	1338.8886	0	144.67
3	Optimized	-89.986605	-17.632785	1032.7043	1720.6734	0	181.33
4	Optimized	-83.63342	-20.928095	1252.0009	2084.6779	0	214.28
5	Optimized	-76.07186	-24.85017	1514.0929	2525.4536	0	253.5

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6	Optimized	-68.47844	-28.67891	1770.3902	2947.8791	0	291.79
7	Optimized	-64.69	-30.44558	1892.6378	3153.5473	0	309.46
8	Optimized	-57.90802	-33.60823	2111.7999	3524.1162	0	341.08
9	Optimized	-52.79837	-35.99139	2275.2111	3806.4764	0	364.91
10	Optimized	-52.46535	-36.153675	2286.3305	3825.6591	0	366.54
11	Optimized	-45.2	-39.69415	2499.7106	4196.9036	0	401.94
12	Optimized	-37.215	-43.585315	2741.2579	4617.1845	0	440.85
13	Optimized	-34.49628	-44.910175	2828.8872	4779.5032	0	454.1
14	Optimized	-28.22128	-47.87452	3005.6373	5116.1946	0	483.75
15	Optimized	-21.425	-51.04797	3194.7326	5496.3208	0	524.43
16	Optimized	-17.098095	-53.06837	3315.1424	5790.3434	0	561.65
17	Optimized	-14.634365	-54.134485	3378.4686	5869.2875	0	581.7
18	Optimized	-9.97406	-55.161275	3436.4121	6096.6013	0	609.69
19	Optimized	-2.82779	-56.051635	3482.6489	6265.4446	0	645.58
20	Optimized	0.865	-55.97183	3472.7728	6342.4495	0	655.37
21	Optimized	3.33	-55.91856	3466.0659	6357.266	0	653.8
22	Optimized	9.1975	-55.79175	3450.6295	6367.8159	0	650.08
23	Optimized	17.7325	-55.607295	3427.9049	6387.7293	0	644.67
24	Optimized	23.15	-55.490215	3413.5074	6394.1593	0	641.24
25	Optimized	24.72443	-55.45619	3409.3254	6392.8826	0	640.24
26	Optimized	25.455585	-55.44039	3407.2891	6397.0399	0	639.77
27	Optimized	27.881155	-55.387965	3400.8221	6410.9566	0	638.24
28	Optimized	30.83137	-55.324205	3393.0642	6425.2421	0	636.37
29	Optimized	35.99637	-55.163705	3376.2891	6429.9286	0	632.65
30	Optimized	45.31497	-54.857215	3344.9503	6440.1847	0	625.8
31	Optimized	51.68997	-54.647545	3323.4588	6444.5851	0	621.11
32	Optimized	57.0925	-54.469855	3305.2534	6458.8131	0	617.13
33	Optimized	65.1175	-54.20591	3278.3521	6484.2199	0	611.23
34	Optimized	72.59335	-53.96003	3253.1822	6497.4183	0	605.73
35	Optimized	78.89335	-53.769025	3232.9027	6503.3359	0	601.24
36	Optimized	83.81681	-53.63521	3218.0795	6561.1841	0	597.88
37	Optimized	88.03681	-53.05666	3176.5554	6532.7483	0	590.81
38	Optimized	92.486925	-51.96805	3102.8298	6547.7633	0	579.06
39	Optimized	99.558675	-48.797445	2895.6327	6298.1741	0	547.42
40	Optimized	105.50175	-45.30069	2669.6444	6032.8629	0	513.33
41	Optimized	109.21	-42.514065	2490.9433	5855.3981	0	486.62
42	Optimized	114.155	-38.79806	2252.5986	5549.9046	0	451.01
43	Optimized	117.22925	-36.487875	2104.3332	5314.7973	0	428.86
44	Optimized	119.80425	-34.55285	1980.2338	5110.2004	0	437.97
45	Optimized	124.21	-31.24206	1767.7868	4706.8452	0	405.3
46	Optimized	127.08365	-29.08259	1629.3547	4408.2032	0	384
47	Optimized	132.9238	-25.39338	1391.5208	3905.8263	0	346.99
48	Optimized	140.25015	-20.82876	1097.0306	3237.4097	0	307.72
49	Optimized	145.02355	-17.85471	905.19372	2805.4845	0	277.56
50	Optimized	151.9012	-14.02595	657.26821	2248.6169	0	238.21
51	Optimized	156.93265	-11.467425	491.03507	1849.1583	0	198.22
52	Optimized	159.49	-10.167003	406.51942	1630.2099	0	196.9

53	Optimized	163.11085	-8.3257785	286.87828	1371.8934	0	195.03
54	Optimized	166.5123	-6.5961255	174.48384	1090.0146	528.58194	0
55	Optimized	168.9548	-5.2199555	85.407888	902.5195	471.75961	0
56	Optimized	170.59015	-4.1979135	19.488003	743.35228	0	600
57	Optimized	174.1486	-1.9740273	-123.94941	481.36898	0	600
58	Optimized	177.7211	0.25862281	-267.95067	218.36458	0	600

Slices of Slip Surface: 8350

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	8350	-127.5342	-5.0824395	215.67972	374.16144	0	75
2	8350	-120.1418	-10.266358	541.25258	902.00226	0	75
3	8350	-113.35285	-14.60874	816.7218	1367.4998	0	151.09
4	8350	-104.97135	-19.60874	1134.3044	1890.4728	0	201.09
5	8350	-99.5303	-22.673395	1329.1238	2210.9226	0	231.73
6	8350	-91.99	-26.470465	1579.9685	2627.1817	0	269.7
7	8350	-78.15033	-32.79707	2005.1847	3327.2203	0	332.97
8	8350	-68.49033	-36.794895	2276.8669	3773.2711	0	372.95
9	8350	-64.69	-38.19589	2376.2406	3938.6788	0	386.96
10	8350	-57.575	-40.569355	2547.1333	4223.8981	0	410.69
11	8350	-45.2	-44.21785	2781.983	4611.6849	0	447.18
12	8350	-37.215	-46.343425	2913.3736	4826.1595	0	468.43
13	8350	-29.905	-47.877135	3008.0041	5014.3809	0	483.77
14	8350	-21.425	-49.54207	3100.673	5220.4683	0	509.51
15	8350	-16.75627	-50.29063	3141.3148	5373.4442	0	536.04
16	8350	-7.14627	-51.46901	3202.3133	5723.5466	0	586.33
17	8350	0.865	-52.344405	3246.4105	5997.7876	0	622.72
18	8350	3.33	-52.528015	3254.6048	6033.5342	0	623.29
19	8350	9.1975	-52.846315	3266.781	6082.7617	0	623.57
20	8350	17.7325	-53.11245	3272.1848	6137.3821	0	622.22
21	8350	23.15	-53.16614	3268.445	6153.7686	0	620.32
22	8350	24.72443	-53.152775	3265.5336	6152.2362	0	619.51
23	8350	25.455585	-53.142395	3263.898	6155.8502	0	619.09
24	8350	27.881155	-53.083745	3257.0931	6165.5236	0	617.5
25	8350	35.165	-52.75094	3226.7575	6162.7482	0	611.3
26	8350	45.31497	-52.002535	3166.7539	6115.5138	0	600.1
27	8350	51.68997	-51.366945	3118.7642	6065.6626	0	591.58
28	8350	57.0925	-50.63372	3065.9874	6013.7722	0	582.61
29	8350	65.1175	-49.36867	2976.4799	5922.6363	0	567.7
30	8350	75.43	-47.304855	2834.1642	5741.9359	0	544.59
31	8350	85.95	-44.83511	2666.202	5617.3645	0	517.74
32	8350	94.3	-42.49929	2509.5129	5603.5076	0	493.04
33	8350	102.56	-39.88112	2335.3821	5553.8206	0	465.85
34	8350	109.21	-37.57078	2182.5064	5492.4052	0	442.13
35	8350	112.57495	-36.323375	2100.2106	5428.4593	0	429.43

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36	8350	114.99995	-35.376705	2037.9532	5323.6051	0	446.55
37	8350	119.155	-33.684925	1926.9108	5141.3582	0	430.58
38	8350	124.21	-31.524135	1785.4754	4836.1661	0	407.84
39	8350	134.41	-26.613895	1465.7201	4024.5039	0	357
40	8350	142.8649	-22.39798	1191.521	3342.8519	0	313.55
41	8350	150.7899	-17.764655	891.99208	2642.4224	0	272.64
42	8350	159.1714	-12.764655	569.02787	1898.7257	0	221.68
43	8350	160.6814	-11.79232	506.37028	1758.1042	0	196.28
44	8350	164.67585	-9.088394	332.41018	1433.1673	0	194.22
45	8350	169.8097	-5.5490125	104.82115	932.21767	477.6976	0
46	8350	171.67165	-4.211351	18.907976	731.51514	0	600
47	8350	174.6471	-1.9839208	-123.98546	465.60216	0	600
48	8350	177.62215	0.26167056	-268.01533	197.77467	0	600

Slices of Slip Surface: 10272

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	10272	-124.70025	-3.0747025	90.6184	171.00744	0	75
2	10272	-117.28415	-8.262216	418.09054	702.21822	0	75
3	10272	-105.05415	-16.085245	914.33469	1527.8099	0	165.85
4	10272	-96.619455	-21.085245	1234.3107	2053.3691	0	215.85
5	10272	-90.329455	-24.38175	1453.0738	2415.291	0	248.82
6	10272	-80.87	-28.996985	1761.8467	2925.5432	0	294.97
7	10272	-71.21	-33.2217	2047.6212	3394.3903	0	337.22
8	10272	-65.352545	-35.606465	2211.876	3662.4199	0	361.06
9	10272	-63.662545	-36.2483	2259.0805	3739.9061	0	367.48
10	10272	-57.575	-38.371945	2410.0195	3992.7735	0	388.72
11	10272	-45.2	-42.253545	2659.398	4406.2717	0	427.54
12	10272	-37.215	-44.52175	2799.6941	4636.465	0	450.22
13	10272	-29.905	-46.173515	2901.711	4837.5076	0	466.74
14	10272	-21.425	-47.972215	3002.7767	5057.9887	0	493.96
15	10272	-16.75627	-48.789905	3047.7477	5218.3896	0	521.47
16	10272	-7.14627	-50.101785	3116.9913	5582.5964	0	573.61
17	10272	0.865	-51.08595	3167.9008	5868.4865	0	611.39
18	10272	3.33	-51.301115	3177.9249	5907.7327	0	612.25
19	10272	9.1975	-51.69207	3194.803	5964.4821	0	613.19
20	10272	17.7325	-52.05998	3206.5307	6030.0627	0	612.75
21	10272	23.15	-52.176045	3206.665	6052.9856	0	611.41
22	10272	24.72443	-52.180275	3204.8983	6053.4349	0	610.76
23	10272	25.455585	-52.17799	3203.7938	6058.0947	0	610.41
24	10272	27.881155	-52.145765	3198.5745	6070.3545	0	609.06

25	10272	35.165	-51.889645	3173.0696	6075.8252	0	603.55
26	10272	45.31497	-51.24345	3119.4124	6039.3327	0	593.27
27	10272	51.68997	-50.669425	3075.236	5995.9434	0	585.3
28	10272	57.0925	-49.98546	3025.4841	5949.2992	0	576.77
29	10272	65.1175	-48.791065	2940.3669	5865.4891	0	562.5
30	10272	75.43	-46.81202	2803.4326	5693.6447	0	540.15
31	10272	85.95	-44.42394	2640.5567	5577.4942	0	514.04
32	10272	94.3	-42.148135	2487.6339	5569.8032	0	489.88
33	10272	102.56	-39.585515	2316.9276	5525.7596	0	463.19
34	10272	109.21	-37.317415	2166.6394	5468.4872	0	439.85
35	10272	112.27455	-36.2044	2093.1328	5419.1079	0	428.49
36	10272	114.69955	-35.27186	2031.8019	5315.9308	0	445.46
37	10272	119.155	-33.48947	1914.6743	5123.8878	0	428.82
38	10272	124.21	-31.35585	1774.9612	4821.4095	0	406.33
39	10272	130.55	-28.467185	1586.4426	4331.5771	0	376.2
40	10272	138.27	-24.68428	1340.2796	3713.8235	0	337.12
41	10272	142.7915	-22.355335	1188.9478	3342.2385	0	313.21
42	10272	150.7165	-17.74856	891.13164	2644.047	0	272.55
43	10272	159.1512	-12.74856	568.06593	1898.4812	0	221.55
44	10272	160.6612	-11.780025	505.62938	1758.0059	0	196.29
45	10272	164.6657	-9.0782405	331.78602	1432.6379	0	194.22
46	10272	169.79555	-5.551134	104.97124	932.89861	478.00409	0
47	10272	171.6644	-4.2112625	18.912667	731.93438	0	600
48	10272	174.6435	-1.983767	-123.99004	465.83824	0	600
49	10272	177.62155	0.26176145	-268.02135	197.84557	0	600

Slices of Slip Surface: 9311

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	9311	-126.1172	-4.092045	153.98667	273.95609	0	75
2	9311	-118.7131	-9.277761	480.51454	803.49092	0	75
3	9311	-110.58465	-14.54927	814.85133	1364.0907	0	150.49
4	9311	-102.38155	-19.43779	1125.3294	1875.2667	0	199.38
5	9311	-91.99	-24.98563	1487.3745	2473.0566	0	254.86
6	9311	-81.14202	-30.25149	1839.5222	3054.4388	0	307.51
7	9311	-72.02606	-34.15438	2103.9283	3487.7705	0	346.54
8	9311	-66.92404	-36.206635	2243.7071	3716.2284	0	367.07
9	9311	-64.69	-37.036985	2303.9299	3816.707	0	375.37
10	9311	-57.575	-39.481325	2479.2262	4109.5878	0	399.81
11	9311	-45.2	-43.24486	2721.277	4510.0337	0	437.45
12	9311	-37.215	-45.440865	2857.0262	4732.0684	0	459.41
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13	9311	-29.905	47.032925	2955.3019	4926.7759	0	475.33
14	9311	-21.425	-48.763985	3052.1211	5140.0033	0	501.81
15	9311	-16.75627	-49.546735	3094.9948	5296.6282	0	528.82
16	9311	-7.14627	-50.791175	3160.0272	5653.7434	0	580.02
17	9311	0.865	-51.7204	3207.4759	5933.5425	0	617.1
18	9311	3.33	-51.91963	3216.6373	5971.2179	0	617.81
19	9311	9.1975	-52.27391	3231.1429	6024.1429	0	618.42
20	9311	17.7325	-52.59046	3239.6461	6084.1762	0	617.52
21	9311	23.15	-52.675055	3237.8233	6103.9077	0	615.9
22	9311	24.72443	-52.67041	3235.4423	6103.2234	0	615.17
23	9311	25.455585	-52.66404	3234.1396	6107.3908	0	614.79
24	9311	27.881155	-52.618485	3227.9991	6118.3818	0	613.31
25	9311	35.165	-52.32369	3200.1493	6119.6075	0	607.46
26	9311	45.31497	-51.625955	3143.2699	6077.7411	0	596.72
27	9311	51.68997	-51.02089	3097.1745	6031.0389	0	588.47
28	9311	57.0925	-50.312095	3045.8863	5981.7696	0	579.71
29	9311	65.1175	-49.08209	2958.5683	5894.2857	0	565.12
30	9311	75.43	-47.06033	2818.9306	5717.9719	0	542.39
31	9311	85.95	-44.631105	2653.561	5597.6151	0	515.9
32	9311	94.3	-42.32506	2498.6367	5586.8342	0	491.48
33	9311	102.56	-39.734455	2326.1566	5539.9014	0	464.53
34	9311	109.21	-37.44508	2174.5726	5480.4375	0	441
35	9311	112.42735	-36.26435	2096.738	5423.8027	0	428.96
36	9311	114.85235	-35.32469	2034.8912	5319.8501	0	446.01
37	9311	119.155	-33.587955	1920.8795	5132.6978	0	429.71
38	9311	124.21	-31.440645	1780.2516	4828.7712	0	407.09
39	9311	130.55	-28.536125	1590.707	4337.6208	0	376.82
40	9311	138.27	-24.735575	1343.3731	3718.1866	0	337.58
41	9311	142.82865	-22.37683	1190.2602	3342.5047	0	313.38
42	9311	150.75365	-17.756675	891.57541	2643.2231	0	272.6
43	9311	159.1614	-12.756675	568.55482	1898.5803	0	221.62
44	9311	160.6714	-11.786225	506.00444	1758.0635	0	196.29
45	9311	164.6708	-9.083359	332.09853	1432.8781	0	194.22
46	9311	169.8027	-	104.89412	932.56234	477.85447	0

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47	9311	171.6681	-4.211307	18.909942	731.74949	0	600
48	9311	174.6453	-1.9838446	-123.9874	465.76068	0	600
49	9311	177.62185	0.2617156	-268.01357	197.84449	0	600

Slices of Slip Surface: 11233

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	11233	-123.28325	-2.0288655	25.470021	65.136929	0	75
2	11233	-115.85505	-7.2181765	353.89315	598.08306	0	75
3	11233	-103.62505	-15.262705	863.99624	1444.465	0	157.63
4	11233	-95.162685	-20.262705	1186.0233	1973.81	0	207.63
5	11233	-88.872685	-23.650325	1410.5593	2343.8018	0	241.5
6	11233	-80.87	-27.59637	1674.419	2780.4762	0	280.96
7	11233	-71.21	-31.939965	1967.6109	3262.4504	0	324.4
8	11233	-64.69	-34.64833	2154.8844	3568.235	0	351.48
9	11233	-62.085535	-35.65441	2227.4687	3686.7724	0	361.54
10	11233	-56.660535	-37.58601	2363.6086	3914.2496	0	380.86
11	11233	-45.2	-41.24326	2596.3621	4300.4963	0	417.43
12	11233	-37.215	-43.585525	2741.2452	4538.8014	0	440.86
13	11233	-29.905	-45.298415	2847.0807	4746.584	0	457.98
14	11233	-21.425	-47.166335	2952.6424	4974.6525	0	485.98
15	11233	-16.75627	-48.019745	2999.5743	5138.5281	0	513.99
16	11233	-7.14627	-49.400495	3073.2005	5510.2339	0	567.09
17	11233	0.865	-50.440745	3127.6241	5802.036	0	605.59
18	11233	3.33	-50.67216	3138.7779	5843.0754	0	606.59
19	11233	9.1975	-51.100505	3157.8759	5903.8905	0	607.86
20	11233	17.7325	-51.520765	3172.9533	5975.0358	0	607.89
21	11233	23.15	-51.668895	3175.0545	6001.4312	0	606.84
22	11233	24.72443	-51.68216	3173.7804	6002.8638	0	606.27
23	11233	25.455585	-51.68403	3173.0212	6007.7933	0	605.97
24	11233	27.881155	-51.66538	3168.5804	6021.6713	0	604.73
25	11233	35.165	-51.448625	3145.5137	6031.1988	0	599.58
26	11233	45.31497	-50.85486	3095.1852	6000.296	0	589.78
27	11233	51.68997	-50.3124	3052.948	5960.3743	0	582.09
28	11233	57.0925	-49.653675	3004.7781	5916.2323	0	573.79
29	11233	65.1175	-48.49547	2921.9974	5836.2441	0	559.84
30	11233	75.43	-46.559825	2787.6697	5668.7981	0	537.88
31	11233	85.95	-44.213545	2627.418	5557.0005	0	512.14
32	11233	94.3	-41.96845	2476.3874	5552.5293	0	488.27
33	11233	102.56	-39.434245	2307.4641	5511.3929	0	461.83

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34	11233	109.21	-37.187745	2158.5198	5456.3673	0	438.69
35	11233	112.11625	-36.143505	2089.55	5414.2642	0	428.01
36	11233	114.54125	-35.21819	2028.6617	5312.0929	0	444.9
37	11233	119.155	-33.38941	1908.4745	5114.9276	0	427.92
38	11233	124.21	-31.26969	1769.5851	4813.7098	0	405.55
39	11233	130.55	-28.39713	1582.0691	4325.4493	0	375.57
40	11233	138.27	-24.632145	1336.964	3709.3767	0	336.65
41	11233	142.7534	-22.333485	1187.6246	3341.8694	0	313.04
42	11233	150.6784	-17.740305	890.65809	2644.8842	0	272.5
43	11233	159.1408	-12.740305	567.56401	1898.3324	0	221.48
44	11233	160.6508	-11.773715	505.2498	1757.9026	0	196.3
45	11233	164.66045	-9.073035	331.47293	1432.3351	0	194.23
46	11233	169.78825	-5.552228	105.04962	933.28121	478.17973	0
47	11233	171.6607	-4.2112165	18.914144	732.21933	0	600
48	11233	174.64165	-1.9836877	-123.99333	466.03656	0	600
49	11233	177.62125	0.26180818	-268.01933	197.96415	0	600

Slices of Slip Surface: 7389

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	7389	-128.9512	-6.047304	275.77168	471.67793	0	75
2	7389	-121.5703	-11.229425	600.41065	997.78112	0	75
3	7389	-116.22265	-14.60738	814.73591	1364.4248	0	151.07
4	7389	-107.8668	-19.60738	1132.3009	1887.4105	0	201.07
5	7389	-100.98445	-23.44068	1376.0347	2289.4751	0	239.41
6	7389	-91.99	-27.922935	1670.6516	2777.74	0	284.23
7	7389	-79.7117	-33.482255	2044.3931	3392.364	0	339.82
8	7389	-70.0517	-37.371675	2309.1934	3828.6278	0	378.72
9	7389	-64.69	-39.332315	2447.1598	4058.2515	0	398.32
10	7389	-57.575	-41.636775	2613.7237	4335.6723	0	421.37
11	7389	-45.2	-45.173115	2841.5777	4711.1412	0	456.73
12	7389	-37.215	-47.22996	2968.683	4918.2104	0	477.3
13	7389	-29.905	-48.70663	3059.7321	5100.1528	0	492.07
14	7389	-21.425	-50.30689	3148.4313	5299.3818	0	517.09
15	7389	-16.75627	-51.02197	3186.9082	5448.6368	0	543.14
16	7389	-7.14627	-52.13562	3243.9164	5792.0718	0	592.53
17	7389	0.865	-52.95825	3284.7052	6060.648	0	628.24
18	7389	3.33	-53.126535	3292.1397	6094.9959	0	628.68
19	7389	9.1975	-53.40953	3301.9531	6140.2256	0	628.64
20	7389	17.7325	-53.62617	3304.2663	6189.6852	0	626.84
21	7389	23.15	-53.64951	3298.6215	6202.5769	0	624.67
22	7389	24.72443	-53.62758	3295.1743	6200.3599	0	623.78
23	7389	25.455585	-53.613255	3293.3969	6203.6398	0	623.33
24	7389	27.881155	-53.541735	3285.6215	6212.0181	0	621.62
25	7389	35.165	-53.171565	3253.0892	6205.1544	0	615.09

26	7389	45.31497	-52.37333	3189.9667	6152.7559	0	603.44
27	7389	51.68997	-51.70771	3140.0438	6099.8203	0	594.65
28	7389	57.0925	-50.95045	3085.6654	6045.4332	0	585.46
29	7389	65.1175	-49.650905	2994.1038	5950.7905	0	570.24
30	7389	75.43	-47.54568	2849.2135	5765.7746	0	546.76
31	7389	85.95	-45.036035	2678.8257	5637.0895	0	519.55
32	7389	94.3	-42.67088	2520.2636	5620.2898	0	494.59
33	7389	102.56	-40.025555	2344.3747	5567.8613	0	467.15
34	7389	109.21	-37.694565	2190.255	5504.2044	0	443.25
35	7389	112.71755	-36.3815	2103.6286	5433.5788	0	429.89
36	7389	115.14255	-35.42792	2040.9614	5327.7461	0	447.08
37	7389	119.155	-33.780395	1932.9478	5150.2272	0	431.44
38	7389	124.21	-31.606325	1790.5959	4843.7777	0	408.58
39	7389	134.41	-26.672645	1469.3574	4029.886	0	357.53
40	7389	142.9003	-22.418795	1192.8115	3343.4878	0	313.71
41	7389	150.8253	-17.772505	892.44565	2641.899	0	272.69
42	7389	159.18115	-12.772505	569.51839	1899.0482	0	221.74
43	7389	160.69115	-11.79832	506.73461	1758.294	0	196.28
44	7389	164.68075	-9.0933555	332.7094	1433.6158	0	194.22
45	7389	169.81655	-5.5479835	104.74694	932.03378	477.63428	0
46	7389	171.6752	-4.2113935	18.905771	731.4715	0	600
47	7389	174.64885	-1.9839954	-123.98267	465.61137	0	600
48	7389	177.6224	0.26162625	-268.00703	197.84176	0	600

Slices of Slip Surface: 6428

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	6428	-130.3682	-6.9879415	334.35447	566.6852	0	75
2	6428	-118.7039	-14.851755	828.33432	1386.9706	0	153.52
3	6428	-110.63165	-19.68349	1135.2384	1892.2789	0	201.83
4	6428	-102.43775	-24.191125	1421.8696	2365.9527	0	246.91
5	6428	-91.99	-29.34438	1759.3482	2924.6718	0	298.44
6	6428	-81.268415	-34.153255	2082.6983	3455.8544	0	346.53
7	6428	-71.608415	-37.937395	2340.9113	3882.7473	0	384.37
8	6428	-64.69	-40.447075	2516.7183	4175.1015	0	409.47
9	6428	-57.575	-42.6843	2679.0655	4445.1376	0	431.84
10	6428	-45.2	-46.111235	2900.1203	4808.5915	0	466.11
11	6428	-37.215	-48.10097	3023.043	5008.2094	0	486.01
12	6428	-29.905	-49.52185	3110.6432	5184.327	0	500.22
13	6428	-21.425	-51.058835	3195.395	5376.7416	0	524.54
14	6428	-16.75627	-51.74113	3231.9743	5522.6047	0	550.12
15	6428	-7.14627	-52.79133	3284.8415	5859.3285	0	598.63
16	6428	0.865	-53.56222	3322.4166	6122.123	0	633.68

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17	6428	3.33	-53.71547	3328.6227	6155.3004	0	633.98
18	6428	9.1975	-53.963805	3336.5447	6196.7746	0	633.63
19	6428	17.7325	-54.131835	3335.7762	6241.0919	0	631.39
20	6428	23.15	-54.12536	3328.308	6250.7662	0	628.95
21	6428	24.72443	-54.095015	3324.3673	6247.7189	0	627.99
22	6428	25.455585	-54.076815	3322.3133	6250.6029	0	627.5
23	6428	27.881155	-53.99265	3313.8235	6257.6363	0	625.68
24	6428	35.165	-53.585745	3278.8564	6246.9267	0	618.82
25	6428	45.31497	-52.738495	3212.7176	6189.3849	0	606.73
26	6428	51.68997	-52.043325	3160.9809	6133.5182	0	597.67
27	6428	57.0925	-51.2624	3105.1695	6076.6335	0	588.27
28	6428	65.1175	-49.9289	3011.4426	5978.3848	0	572.74
29	6428	75.43	-47.7829	2864.0038	5789.3376	0	548.89
30	6428	85.95	-45.23395	2691.0892	5656.6766	0	521.33
31	6428	94.3	-42.839895	2530.7731	5636.9483	0	496.11
32	6428	102.56	-40.16782	2353.2498	5581.7944	0	468.43
33	6428	109.21	-37.81649	2197.819	5516.2076	0	444.35
34	6428	112.85555	-36.43875	2107.0159	5438.168	0	430.34
35	6428	115.28055	-35.47836	2043.9229	5331.9107	0	447.6
36	6428	119.155	-33.87442	1938.8115	5159.1254	0	432.29
37	6428	124.21	-31.68726	1795.6499	4851.4205	0	409.31
38	6428	134.41	-26.730485	1472.9456	4035.3586	0	358.05
39	6428	142.9349	-22.439285	1194.036	3344.3151	0	313.88
40	6428	150.8599	-17.78023	892.87818	2641.4816	0	272.73
41	6428	159.19075	-12.78023	569.98848	1899.464	0	221.81
42	6428	160.70075	-11.80422	507.09197	1758.6795	0	196.27
43	6428	164.6856	-9.0982375	333.00719	1434.1096	0	194.21
44	6428	169.82335	-5.5469755	104.67442	931.87264	477.58312	0
45	6428	171.6787	-4.2114365	18.904338	731.43904	0	600
46	6428	174.65055	-1.9840692	-123.98061	465.63303	0	600
47	6428	177.62265	0.26158277	-268.00852	197.88927	0	600

Slices of Slip Surface: 12194

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	12194	-113.5408	-6.800713	329.37868	558.19994	0	75
2	12194	-102.1845	-14.413155	811.92874	1358.2617	0	149.13
3	12194	-93.69312	-19.413155	1136.0518	1891.2675	0	199.13
4	12194	-87.40312	-22.895915	1366.5109	2269.8362	0	233.96
5	12194	-80.87	-26.15233	1584.3711	2630.6978	0	266.52
6	12194	-71.21	-30.619525	1885.208	3126.1357	0	311.2
7	12194	-64.69	-33.406055	2077.3628	3440.633	0	339.06
8	12194	-60.488835	-35.042945	2193.9756	3631.2603	0	355.43
9	12194	-55.063835	-37.032795	2333.6889	3863.2263	0	375.33
10	12194	-45.2	-40.203975	2531.515	4191.5497	0	407.04

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11	12194	-37.215	-42.62275	2681.1793	4438.2304	0	431.23
12	12194	-29.905	-44.398675	2790.9911	4652.8662	0	448.99
13	12194	-21.425	-46.337955	2900.8001	4888.6119	0	477.77
14	12194	-16.75627	-47.228155	2950.2495	5056.6007	0	506.3
15	12194	-7.14627	-48.67976	3028.2224	5435.724	0	560.38
16	12194	0.865	-49.777695	3086.2268	5733.4113	0	599.62
17	12194	3.33	-50.025815	3098.4947	5776.28	0	600.77
18	12194	9.1975	-50.49257	3119.8818	5841.5256	0	602.39
19	12194	17.7325	-50.966585	3138.3204	5918.4941	0	602.91
20	12194	23.15	-51.14763	3142.5086	5948.3649	0	602.15
21	12194	24.72443	-51.17017	3141.8498	5950.6785	0	601.66
22	12194	25.455585	-51.176305	3141.3283	5956.1515	0	601.4
23	12194	27.881155	-51.171575	3137.7774	5971.6172	0	600.29
24	12194	35.165	-50.9952	3117.1962	5985.3496	0	595.5
25	12194	45.31497	-50.455215	3070.1903	5960.1341	0	586.18
26	12194	51.68997	-49.94512	3030.0319	5923.6316	0	578.79
27	12194	57.0925	-49.312265	2983.4088	5882.0969	0	570.72
28	12194	65.1175	-48.19116	2902.9824	5806.0879	0	557.1
29	12194	75.43	-46.300005	2771.4271	5643.315	0	535.55
30	12194	85.95	-43.99657	2613.9352	5535.947	0	510.19
31	12194	94.3	-41.78296	2464.8019	5534.5953	0	486.6
32	12194	102.56	-39.2779	2297.6737	5496.5111	0	460.42
33	12194	109.21	-37.053565	2150.2364	5443.7619	0	437.48
34	12194	111.9489	-36.08046	2085.8618	5409.3781	0	427.52
35	12194	114.3739	-35.16257	2025.4062	5308.0911	0	444.32
36	12194	119.155	-33.285655	1901.9424	5105.6971	0	426.99
37	12194	124.21	-31.180215	1764.0159	4805.7323	0	404.75
38	12194	130.55	-28.32422	1577.4895	4319.1765	0	374.91
39	12194	138.27	-24.577705	1333.5593	3704.7808	0	336.16
40	12194	142.7132	-22.310615	1186.2466	3341.559	0	312.86
41	12194	150.6382	-17.73151	890.13941	2645.8082	0	272.45
42	12194	159.1296	-12.73151	567.00863	1898.2239	0	221.41
43	12194	160.6396	-11.76695	504.8474	1757.9258	0	196.31
44	12194	164.65465	-9.067496	331.1392	1432.0636	0	194.23
45	12194	169.7801	-5.553442	105.13474	933.75265	478.40278	0
46	12194	171.6564	-4.211164	18.916501	732.59047	0	600
47	12194	174.63945	-1.9835838	-123.99719	466.32216	0	600
48	12194	177.6208	0.26187641	-268.02361	198.16572	0	600

Slices of Slip Surface: 5467

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	5467	-133.4719	-6.821474	323.72374	549.39736	0	75
2	5467	-124.42675	-13.084075	715.22742	1199.9422	0	135.84
3	5467	-116.1203	-18.084075	1031.7629	1722.3569	0	185.84
4	5467	-103.8903	-24.92544	1466.7556	2440.7995	0	254.25

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5	5467	-91.99	-30.736055	1846.2054	3068.3628	0	312.36
6	5467	-82.82071	-34.810615	2120.1981	3517.988	0	353.11
7	5467	-73.16071	-38.492435	2371.9994	3935.6836	0	389.92
8	5467	-64.69	-41.540915	2584.9793	4289.7504	0	420.41
9	5467	-57.575	-43.71261	2743.2327	4552.4448	0	442.13
10	5467	-45.2	-47.03277	2957.6025	4904.2302	0	475.33
11	5467	-37.215	-48.956945	3076.4483	5097.0909	0	494.57
12	5467	-29.905	-50.32323	3160.6547	5266.9739	0	508.23
13	5467	-21.425	-51.79828	3241.5642	5452.7716	0	531.87
14	5467	-16.75627	-52.44846	3276.1121	5595.3499	0	556.99
15	5467	-7.14627	-53.43645	3325.0874	5925.4548	0	604.63
16	5467	0.865	-54.156595	3359.4945	6183.3807	0	639.03
17	5467	3.33	-54.29508	3364.9891	6214.4481	0	639.19
18	5467	9.1975	-54.509385	3370.5577	6252.4132	0	638.54
19	5467	17.7325	-54.62967	3366.8341	6291.6072	0	635.87
20	5467	23.15	-54.59389	3357.5545	6298.3487	0	633.17
21	5467	24.72443	-54.555275	3353.1148	6294.3176	0	632.13
22	5467	25.455585	-54.53327	3350.813	6296.7456	0	631.61
23	5467	27.881155	-54.436665	3341.4662	6302.3843	0	629.68
24	5467	35.165	-53.99363	3304.3508	6288.0691	0	622.49
25	5467	45.31497	-53.098165	3235.2026	6225.5936	0	609.97
26	5467	51.68997	-52.37392	3181.6111	6166.7559	0	600.65
27	5467	57.0925	-51.569705	3124.3785	6107.2547	0	591.03
28	5467	65.1175	-50.20277	3028.4971	6005.7882	0	575.2
29	5467	75.43	-48.016605	2878.5334	5812.4663	0	550.99
30	5467	85.95	-45.428935	2703.337	5676.0132	0	523.08
31	5467	94.3	-43.006405	2541.1586	5653.3693	0	497.61
32	5467	102.56	-40.307965	2362.0084	5595.5073	0	469.69
33	5467	109.21	-37.93658	2205.199	5528.0432	0	445.43
34	5467	112.9891	-36.495135	2110.3806	5443.2705	0	430.79
35	5467	115.4141	-35.52804	2046.8578	5335.8785	0	448.12
36	5467	119.155	-33.96702	1944.5024	5167.8732	0	433.12
37	5467	124.21	-31.766965	1800.6191	4858.9098	0	410.03
38	5467	134.41	-26.78744	1476.5421	4040.8035	0	358.57
39	5467	142.9687	-22.459455	1195.2229	3345.1078	0	314.04
40	5467	150.8937	-17.78783	893.35265	2641.1796	0	272.78
41	5467	159.20015	-12.78783	570.43652	1899.9288	0	221.87
42	5467	160.71015	-11.81002	507.43581	1759.0223	0	196.27
43	5467	164.6903	-9.10304	333.30337	1434.6473	0	194.21
44	5467	169.8299	-5.545987	104.60368	931.81925	477.59313	0
45	5467	171.6821	-4.2114775	18.902679	731.5482	0	600
46	5467	174.65225	-1.9841414	-123.97777	465.79183	0	600
47	5467	177.6229	0.26153999	-268.00975	198.09331	0	600

Slices of Slip Surface: 13155

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)

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1	13155	-114.4175	-4.282521	171.66237	302.43007	0	75
2	13155	-106.93485	-9.496869	502.00396	837.83956	0	75
3	13155	-100.73675	-13.537805	758.26998	1269.4531	0	140.38
4	13155	-91.99	-18.657605	1092.5029	1819.4566	0	191.58
5	13155	-80.87	-24.667435	1491.6234	2476.6665	0	251.67
6	13155	-71.21	-29.26296	1800.5808	2986.3292	0	297.63
7	13155	-64.69	-32.130505	1997.7804	3309.6797	0	326.31
8	13155	-58.877075	-34.41518	2159.3688	3574.5727	0	349.15
9	13155	-53.452075	-36.46525	2302.889	3811.0274	0	369.65
10	13155	-45.2	-39.138145	2465.0311	4080.0444	0	396.38
11	13155	-37.215	-41.63583	2619.6167	4335.3575	0	421.36
12	13155	-29.905	-43.47664	2733.383	4557.0823	0	439.77
13	13155	-21.425	-45.48933	2847.9305	4800.778	0	469.37
14	13155	-16.75627	-46.41732	2899.5836	4972.8228	0	498.43
15	13155	-7.14627	-47.94167	2982.1987	5359.6246	0	553.52
16	13155	0.865	-49.098805	3043.886	5663.5967	0	593.51
17	13155	3.33	-49.364045	3057.2015	5708.2806	0	594.81
18	13155	9.1975	-49.87017	3081.054	5777.7355	0	596.79
19	13155	17.7325	-50.39926	3102.8641	5860.5494	0	597.8
20	13155	23.15	-50.61401	3109.1981	5893.7798	0	597.35
21	13155	24.72443	-50.646045	3109.1019	5897.3402	0	596.95
22	13155	25.455585	-50.65655	3108.8738	5903.3232	0	596.72
23	13155	27.881155	-50.66607	3106.1609	5920.1828	0	595.74
24	13155	35.165	-50.53101	3088.3032	5938.3597	0	591.32
25	13155	45.31497	-50.046025	3044.7206	5918.9337	0	582.5
26	13155	51.68997	-49.569025	3006.5886	5885.702	0	575.4
27	13155	57.0925	-48.962615	2961.6151	5847.1231	0	567.57
28	13155	65.1175	-47.87943	2883.5578	5775.0002	0	554.29
29	13155	75.43	-46.03374	2754.8486	5616.8601	0	533.15
30	13155	85.95	-43.77408	2600.0979	5513.967	0	508.19
31	13155	94.3	-41.59264	2452.9841	5515.9794	0	484.88
32	13155	102.56	-39.11737	2287.661	5480.8592	0	458.98
33	13155	109.21	-36.9157	2141.5926	5430.4603	0	436.24
34	13155	114.155	-35.12103	2023.1829	5305.3296	0	443.84
35	13155	119.155	-33.178895	1895.4288	5095.8123	0	426.03
36	13155	124.21	-31.08807	1758.2628	4797.268	0	403.92
37	13155	130.55	-28.249035	1572.8129	4312.1493	0	374.24
38	13155	138.27	-24.521435	1330.0593	3699.5562	0	335.66
39	13155	142.67115	-22.28694	1184.8544	3340.8569	0	312.68
40	13155	150.59615	-17.72231	889.61674	2646.4677	0	272.4
41	13155	159.1178	-12.72231	566.44738	1897.8658	0	221.34
42	13155	160.6278	-11.759845	504.41994	1757.591	0	196.31
43	13155	164.6484	-9.0617045	330.7797	1431.6397	0	194.23
44	13155	169.7713	-5.554743	105.22826	934.24167	478.63112	0
45	13155	171.65175	-4.2111075	18.919021	733.04853	0	600

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46	13155	174.63705	-1.9834634	-124.00163	466.73186	0	600
47	13155	177.62025	0.26195896	-268.03183	198.55624	0	600

LWL Case.EE.RtoL.Thru Fabric

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 174
Last Edited By: Cox, Lane MVK
Date: 3/29/2011
Time: 8:21:42 AM
File Name: 5c(1) Typical 1.2nd SC.80%SG.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\2nd Stage Construction\80%SG,1 Layer of Fabric\Slope W\
Last Solved Date: 3/29/2011
Last Solved Time: 8:49:54 AM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

LWL Case.EE.RtoL.Thru Fabric

Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

SlipSurface
- Direction of movement: Right to Left
- Use Passive Mode: No
- Slip Surface Option: Entry and Exit
- Critical slip surfaces saved: 100
- Optimize Critical Slip Surface Location: Yes
- Tension Crack
  - Tension Crack Option: Tension Crack Line
  - Percentage Wet: 0
  - Tension Crack Fluid Unit Weight: 62.4 pcf

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FOS Distribution
FOS Calculation Option: Constant
Advanced
Number of Slices: 30
Optimization Tolerance: 0.01
Minimum Slip Surface Depth: 0.1 ft
Optimization Maximum Iterations: 2000
Optimization Convergence Tolerance: 1e-007
Starting Optimization Points: 8
Ending Optimization Points: 16
Complete Passes per Insertion: 1
Driving Side Maximum Convex Angle: 5 °
Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH
Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH above 0
Model: Mohr-Coulomb
Unit Weight: 108 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, 0 to -12
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -12 (2)
Cohesion Spatial Fn: CH, 0 to -12
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -12 to -22
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -12 to -22 (2)
Cohesion Spatial Fn: CH, -12 to -22

LWL Case.EE.RtoL.Thru Fabric

Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -22 to -36
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -22 to -36 (2)
Cohesion Spatial Fn: CH, -22 to -36
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -36 to -80
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -36 to -80 (2)
Cohesion Spatial Fn: CH, -36 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sand Fill
Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, 0 to -12 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -12 (2)
Cohesion Spatial Fn: CH, 0 to -12 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -12 to -22 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -12 to -22 (2)
Cohesion Spatial Fn: CH, -12 to -22 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

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CH, -22 to -36 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -22 to -36 (2)
Cohesion Spatial Fn: CH, -22 to -36 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Entry and Exit

Left Projection: Range
Left-Zone Left Coordinate: (-155, -1.70674) ft
Left-Zone Right Coordinate: (-70, -0.36303) ft
Left-Zone Increment: 30
Right Projection: Range
Right-Zone Left Coordinate: (111.73, 14) ft
Right-Zone Right Coordinate: (161, 4) ft
Right-Zone Increment: 30
Radius Increments: 30

Slip Surface Limits

Left Coordinate: (-200, -1.79) ft
Right Coordinate: (500, -4.27) ft

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	-1.79
	-195.89	-1.8
	-169.15	-1.8
	-146.39	-1.65
	-122.74	-1.62
	-98.28	-1.36
	-85.7	-0.94
	-66.38	-0.23
	-63	0
	-52.15	0.5
	-38.25	0.23
	-36.18	0.46
	194.59	-4.39

	214.93	-4.22
	250.23	-4.22
	259.47	-4.16
	284.55	-5.22
	285	-5.3
	406	-5.3
	407.82	-4.54
	500	-4.27

Reinforcements

Reinforcement 1

Type: Fabric
Outside Point: (23, 0) ft
Inside Point: (177, 0) ft
Slip Surface Intersection: (133.11, 0) ft
Total Length: 154 ft
Reinforcement Direction: 180 °
Applied Load Option: Variable
F of S Dependent: No
Contact Cohesion: 19 psf
Contact Phi: 265 °
Interface Factor: 2
Bond Safety Factor: 1
Fabric Capacity: 27000 lbs
Fabric Safety Factor: 1
Fabric Load: 27000 lbs
Load Distribution: Even along reinf.
Load Orientation: 0
Applied Load: 27000 lbs
Fabric Load Used: 27000 lbs
Resisting Force Used: 25019 lbs/ft
Available Bond Length: 43.889 ft
Required Bond Length: 1.0792 ft
Governing Component: Fabric

Tension Crack Line

	X (ft)	Y (ft)
	81.73	6.5
	85	2
	112	9
	121	9
	161	1
	241	-1

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Spatial Functions

CH, 0 to -12

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -1.5, 75)
Data Point: (-300, -12, 75)
Data Point: (-23.63, 0, 75)
Data Point: (-23.63, -12, 75)
Data Point: (0, 0, 250)
Data Point: (0, -12, 250)
Data Point: (250.26, -4.13, 150)
Data Point: (250.26, -12, 150)
Data Point: (500, -4.27, 150)
Data Point: (500, -12, 150)

CH, -22 to -36 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -22, 350)
Data Point: (0, -36, 476)
Data Point: (40.33, -22, 290)
Data Point: (40.33, -36, 416)
Data Point: (116.73, -22, 327)
Data Point: (116.73, -36, 453)
Data Point: (250.23, -22, 240)
Data Point: (250.23, -36, 366)

CH, -12 to -22

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -12, 125)
Data Point: (-300, -22, 225)
Data Point: (-23.63, -12, 125)
Data Point: (-23.63, -22, 225)
Data Point: (0, -12, 350)
Data Point: (0, -22, 350)
Data Point: (250.26, -12, 150)
Data Point: (250.26, -22, 240)
Data Point: (500, -12, 150)
Data Point: (500, -22, 240)

CH, -22 to -36

Model: Linear Interpolation
Limit Range By: Data Values

Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -22, 225)
Data Point: (-300, -36, 365)
Data Point: (-23.63, -22, 225)
Data Point: (-23.63, -36, 365)
Data Point: (0, -22, 350)
Data Point: (0, -36, 476)
Data Point: (250.26, -22, 240)
Data Point: (250.26, -36, 366)
Data Point: (500, -22, 240)
Data Point: (500, -36, 366)

CH, -36 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -36, 365)
Data Point: (-300, -80, 805)
Data Point: (-23.63, -36, 365)
Data Point: (-23.63, -80, 805)
Data Point: (0, -36, 476)
Data Point: (0, -80, 872)
Data Point: (250.26, -36, 366)
Data Point: (250.26, -80, 762)
Data Point: (500, -36, 366)
Data Point: (500, -80, 762)

CH, 0 to -12 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -6, 100)
Data Point: (0, -6, 101)
Data Point: (178.08, -6, 111)

CH, -12 to -22 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -17, 100)
Data Point: (0, -17, 109)
Data Point: (178.08, -17, 100)

CH, -22 to -36 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -29, 102)

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Data Point: (0, -29, 104)
Data Point: (178.08, -29, 102)

CH, -36 to -80 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -58, 105)
Data Point: (0, -58, 106)
Data Point: (178.08, -58, 105)

CH, 0 to -12 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, 0, 250)
Data Point: (0, -12, 250)
Data Point: (40.33, 0, 171)
Data Point: (40.33, -12, 171)
Data Point: (116.73, 0, 219)
Data Point: (116.73, -12, 219)
Data Point: (250.23, -4.13, 150)
Data Point: (250.23, -12, 150)

CH, -12 to -22 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -12, 350)
Data Point: (0, -22, 350)
Data Point: (40.33, -12, 200)
Data Point: (40.33, -22, 290)
Data Point: (116.73, -12, 245)
Data Point: (116.73, -22, 335)
Data Point: (250.23, -12, 150)
Data Point: (250.23, -22, 240)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -36 to -80	31,33,60,63,34,32	30800
Region 2	CH above 0	40,9,10,11,12,13,64,17,39,57	130.54365
Region 3	Sand Fill	19,20,21,22,23,24,25,26,27,28	629.28815
Region 4	EMBANKMENT FILL CH	19,46,41,42,43,66,28	1500.8133
Region 5	EMBANKMENT FILL CH	43,44,45,65,29,66	501.84775
Region 6	CH, -22 to -36	35,33,60,59	2800
Region 7	CH, -12 to -22	37,35,59,58	2000
Region 8	CH, 0 to -12	57,58,37,2,1,3,4,5,6,7,8,40	2203.9585

Region 9	CH, -22 to -36	63,62,36,34	3496.78
Region 10	CH, -12 to -22	62,61,38,36	2497.7
Region 11	CH, 0 to -12	61,65,45,47,48,49,50,51,52,53,54,55,30,38	1282.4538
Region 12	CH, -12 to -22 SG	58,59,62,61	2502.3
Region 13	CH, -22 to -36 SG	60,59,62,63	3503.22
Region 14	CH, 0 to -12 SG	57,58,61,65,29,66,28,27,26,25,24,23,22,21,20,19,18,39	1448.4571
Region 15	EMBANKMENT FILL CH	64,17,39,56,19,46	368.6281

Points

	X (ft)	Y (ft)
Point 1	-195.89	-1.8
Point 2	-200	-1.79
Point 3	-169.15	-1.8
Point 4	-146.39	-1.65
Point 5	-122.74	-1.62
Point 6	-98.28	-1.36
Point 7	-85.7	-0.94
Point 8	-66.38	-0.23
Point 9	-52.15	0.5
Point 10	-38.25	0.23
Point 11	-36.18	0.46
Point 12	-23.63	0.86
Point 13	-19.22	0.94
Point 14	-5.71	4.75
Point 15	-0.42	4.91
Point 16	-0.22	4.77
Point 17	4.93	4.5
Point 18	24.3	-0.66
Point 19	40.33	-3.85
Point 20	53.08	-5.02
Point 21	69.13	-8.93
Point 22	90.17	-10.85
Point 23	106.69	-11.22
Point 24	116.58	-11.18
Point 25	126.69	-10.14
Point 26	142.13	-9.46
Point 27	157.98	-8.78
Point 28	178.08	-4.54
Point 29	214.93	-4.22
Point 30	500	-4.27
Point 31	-200	-80
Point 32	500	-80
Point 33	-200	-36
Point 34	500	-36
Point 35	-200	-22
Point 36	500	-22
Point 37	-200	-12

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Point 38	500	-12
Point 39	22	0
Point 40	-63	0
Point 41	111.73	14
Point 42	121.73	14
Point 43	161	4
Point 44	241	2
Point 45	259.47	-4.16
Point 46	81.73	6.5
Point 47	284.55	-5.2
Point 48	300.6	-9.14
Point 49	320.9	-11
Point 50	337.4	-11.22
Point 51	347.09	-11.26
Point 52	356.8	-10.22
Point 53	372.41	-9.68
Point 54	388.59	-9
Point 55	407.82	-4.54
Point 56	30	-1.79
Point 57	0	0
Point 58	0	-12
Point 59	0	-22
Point 60	0	-36
Point 61	250.23	-12
Point 62	250.23	-22
Point 63	250.23	-36
Point 64	1.73	4.5
Point 65	250.23	-4.22
Point 66	194.59	-4.39

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	2.42	(20.667, 67.776)	105.3179	(137.173, 10.0675)	(-110.555, -1.49048)
2	21689	2.57	(20.667, 67.776)	132.651	(137.859, 9.89288)	(-92.6573, -1.17228)
3	19767	2.58	(17.785, 69.194)	135.863	(137.86, 9.8925)	(-98.3221, -1.36045)
4	21658	2.58	(19.724, 67.816)	131.867	(136.185, 10.3192)	(-92.6573, -1.17228)
5	20728	2.58	(19.226, 68.485)	134.257	(137.859, 9.89269)	(-95.4897, -1.26684)
6	17845	2.58	(14.939, 70.603)	139.038	(137.861, 9.89221)	(-103.99, -1.42069)
7	19736	2.58	(16.842, 69.234)	135.079	(136.186, 10.3188)	(-98.3221, -1.36045)
8	21659	2.58	(20.017, 61.66)	129.009	(136.366, 10.2729)	(-92.6573, -1.17228)
9	18806	2.58	(16.362, 69.899)	137.45	(137.861, 9.89236)	(-101.156, -1.39057)
10	20697	2.58	(18.283, 68.525)	133.473	(136.185, 10.319)	(-95.4897, -1.26684)
11	17814	2.58	(13.997, 70.643)	138.254	(136.187, 10.3185)	(-103.99, -1.42069)
12	18775	2.58	(15.419, 69.938)	136.666	(136.187, 10.3186)	(-101.156, -1.39057)
13	21628	2.58	(19.084, 61.738)	128.233	(134.696, 10.6983)	(-92.6573, -1.17228)
14	16883	2.58	(13.206, 78.362)	144.143	(137.675, 9.93973)	(-106.824, -1.45082)
15	20698	2.58	(18.578, 62.294)	130.581	(136.367, 10.2727)	(-95.4897, -1.26684)

LWL Case.EE.RtoL.Thru Fabric

16	22620	2.58	(21.456, 61.027)	127.437	(136.366, 10.2731)	(-89.8249, -1.07772)
17	17844	2.58	(14.63, 77.577)	142.518	(137.674, 9.93986)	(-103.99, -1.42069)
18	18805	2.58	(16.053, 76.793)	140.892	(137.674, 9.93999)	(-101.156, -1.39057)
19	19737	2.58	(17.14, 62.928)	132.153	(136.368, 10.2725)	(-98.3221, -1.36045)
20	16914	2.58	(14.16, 78.362)	144.938	(139.352, 9.51249)	(-106.824, -1.45082)
21	19766	2.58	(17.477, 76.008)	139.267	(137.673, 9.94013)	(-98.3221, -1.36045)
22	21720	2.58	(21.609, 67.736)	133.436	(139.533, 9.46658)	(-92.6573, -1.17228)
23	16884	2.58	(13.517, 71.308)	140.626	(137.862, 9.89208)	(-106.824, -1.45082)
24	20667	2.58	(17.645, 62.372)	129.805	(134.697, 10.6981)	(-95.4897, -1.26684)
25	17875	2.58	(15.583, 77.577)	143.312	(139.352, 9.51262)	(-103.99, -1.42069)
26	21690	2.58	(20.949, 61.583)	129.787	(138.037, 9.84752)	(-92.6573, -1.17228)
27	19798	2.58	(18.727, 69.154)	136.648	(139.534, 9.46622)	(-98.3221, -1.36045)
28	18836	2.58	(17.007, 76.793)	141.687	(139.351, 9.51274)	(-101.156, -1.39057)
29	19705	2.58	(15.898, 69.274)	134.296	(134.512, 10.7451)	(-98.3221, -1.36045)
30	22589	2.58	(20.522, 61.104)	126.661	(134.695, 10.6985)	(-89.8249, -1.07772)
31	21627	2.58	(18.779, 67.856)	131.084	(134.51, 10.7455)	(-92.6573, -1.17228)
32	16853	2.58	(12.574, 71.348)	139.841	(136.188, 10.3184)	(-106.824, -1.45082)
33	19797	2.58	(18.431, 76.008)	140.061	(139.351, 9.51287)	(-98.3221, -1.36045)
34	19706	2.58	(16.207, 63.006)	131.377	(134.697, 10.6979)	(-98.3221, -1.36045)
35	22650	2.58	(22.108, 67.067)	131.045	(137.858, 9.89307)	(-89.8249, -1.07772)
36	17876	2.58	(15.881, 70.564)	139.824	(139.535, 9.46594)	(-103.99, -1.42069)
37	16852	2.58	(12.252, 78.362)	143.349	(135.997, 10.367)	(-106.824, -1.45082)
38	20759	2.58	(20.168, 68.445)	135.042	(139.534, 9.4664)	(-95.4897, -1.26684)
39	23581	2.58	(22.894, 60.393)	125.865	(136.365, 10.2733)	(-86.9925, -0.983152)
40	20666	2.58	(17.338, 68.565)	132.69	(134.511, 10.7453)	(-95.4897, -1.26684)
41	18837	2.58	(17.304, 69.859)	138.236	(139.535, 9.46608)	(-101.156, -1.39057)
42	18744	2.58	(14.476, 69.978)	135.883	(134.513, 10.7449)	(-101.156, -1.39057)
43	24542	2.58	(24.334, 59.759)	124.292	(136.364, 10.2735)	(-84.1603, -0.883417)
44	22619	2.58	(21.165, 67.107)	130.261	(136.184, 10.3194)	(-89.8249, -1.07772)
45	17813	2.58	(13.675, 77.577)	141.724	(135.996, 10.3671)	(-103.99, -1.42069)
46	15922	2.58	(11.783, 79.146)	145.768	(137.675, 9.9396)	(-109.657, -1.48094)
47	22651	2.58	(22.387, 60.949)	128.214	(138.036, 9.84772)	(-89.8249, -1.07772)
48	18774	2.58	(15.098, 76.793)	140.099	(135.996, 10.3672)	(-101.156, -1.39057)
49	20729	2.58	(19.51, 62.217)	131.359	(138.037, 9.84733)	(-95.4897, -1.26684)
50	18776	2.58	(15.718, 63.559)	133.708	(136.369, 10.2723)	(-101.156, -1.39057)
51	15953	2.58	(12.736, 79.147)	146.564	(139.353, 9.51237)	(-109.657, -1.48094)
52	19735	2.58	(16.522, 76.008)	138.474	(135.995, 10.3674)	(-98.3221, -1.36045)
53	23550	2.58	(21.961, 60.47)	125.09	(134.694, 10.6987)	(-86.9925, -0.983152)
54	20758	2.59	(19.874, 75.219)	138.416	(139.35, 9.51305)	(-95.4897, -1.26684)
55	18807	2.59	(16.65, 63.481)	134.486	(138.039, 9.84699)	(-101.156, -1.39057)
56	25503	2.59	(25.775, 59.124)	122.717	(136.363, 10.2738)	(-81.3282, -0.77934)
57	17783	2.59	(13.053, 70.683)	137.47	(134.513, 10.7448)	(-103.99, -1.42069)
58	19768	2.59	(18.071, 62.851)	132.931	(138.038, 9.84714)	(-98.3221, -1.36045)
59	17815	2.59	(14.297, 64.189)	135.264	(136.369, 10.2722)	(-103.99, -1.42069)
60	24511	2.59	(23.401, 59.836)	123.516	(134.693, 10.699)	(-84.1603, -0.883417)
61	23611	2.59	(23.549, 66.358)	129.439	(137.857, 9.89327)	(-86.9925, -0.983152)
62	18745	2.59	(14.786, 63.636)	132.932	(134.698, 10.6977)	(-101.156, -1.39057)
63	16915	2.59	(14.458, 71.269)	141.412	(139.536, 9.46581)	(-106.824, -1.45082)

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64	23580	2.59	(22.606, 66.398)	128.655	(136.183, 10.3196)	(-86.9925, -0.983152)
65	16822	2.59	(11.631, 71.388)	139.057	(134.514, 10.7446)	(-106.824, -1.45082)
66	15923	2.59	(12.094, 72.013)	142.214	(137.862, 9.89194)	(-109.657, -1.48094)
67	22590	2.59	(20.805, 55.452)	124.236	(134.872, 10.6534)	(-89.8249, -1.07772)
68	17784	2.59	(13.364, 64.266)	134.487	(134.699, 10.6976)	(-103.99, -1.42069)
69	15891	2.59	(10.828, 79.146)	144.974	(135.997, 10.3668)	(-109.657, -1.48094)
70	14961	2.59	(10.359, 79.931)	147.394	(137.676, 9.93948)	(-112.491, -1.51106)
71	24572	2.59	(24.992, 65.649)	127.831	(137.856, 9.89348)	(-84.1603, -0.883417)
72	23612	2.59	(23.826, 60.315)	126.642	(138.035, 9.84792)	(-86.9925, -0.983152)
73	20696	2.59	(17.965, 75.219)	136.829	(135.994, 10.3676)	(-95.4897, -1.26684)
74	20727	2.59	(18.92, 75.219)	137.622	(137.672, 9.94031)	(-95.4897, -1.26684)
75	21719	2.59	(21.318, 74.429)	136.77	(139.35, 9.51324)	(-92.6573, -1.17228)
76	14992	2.59	(11.312, 79.931)	148.189	(139.353, 9.51225)	(-112.491, -1.51106)
77	16945	2.59	(15.112, 78.363)	145.734	(141.03, 9.08526)	(-106.824, -1.45082)
78	24541	2.59	(24.049, 65.689)	127.047	(136.182, 10.3198)	(-84.1603, -0.883417)
79	21597	2.59	(18.15, 61.816)	127.459	(133.025, 11.1237)	(-92.6573, -1.17228)
80	15892	2.59	(11.152, 72.053)	141.429	(136.188, 10.3182)	(-109.657, -1.48094)
81	24573	2.59	(25.266, 59.681)	125.069	(138.034, 9.84813)	(-84.1603, -0.883417)
82	22681	2.59	(23.05, 67.027)	131.83	(139.532, 9.46677)	(-89.8249, -1.07772)
83	17906	2.59	(16.536, 77.578)	144.108	(141.03, 9.08538)	(-103.99, -1.42069)
84	14962	2.59	(10.671, 72.718)	143.802	(137.863, 9.89181)	(-112.491, -1.51106)
85	17846	2.59	(15.228, 64.112)	136.042	(138.04, 9.84684)	(-103.99, -1.42069)
86	21629	2.59	(19.369, 56.015)	125.779	(134.873, 10.6532)	(-92.6573, -1.17228)
87	18867	2.59	(17.96, 76.793)	142.482	(141.029, 9.0855)	(-101.156, -1.39057)
88	22588	2.59	(20.22, 67.147)	129.478	(134.51, 10.7457)	(-89.8249, -1.07772)
89	22621	2.59	(21.727, 55.339)	125.007	(136.539, 10.2289)	(-89.8249, -1.07772)
90	25534	2.59	(26.707, 59.047)	123.494	(138.034, 9.84835)	(-81.3282, -0.77934)
91	19828	2.59	(19.384, 76.009)	140.857	(141.029, 9.08563)	(-98.3221, -1.36045)
92	21721	2.59	(21.879, 61.506)	130.565	(139.707, 9.42215)	(-92.6573, -1.17228)
93	24512	2.59	(23.678, 54.324)	121.149	(134.87, 10.6538)	(-84.1603, -0.883417)
94	23551	2.59	(22.241, 54.888)	122.693	(134.871, 10.6536)	(-86.9925, -0.983152)
95	14000	2.59	(8.935, 80.715)	149.019	(137.676, 9.93936)	(-115.325, -1.54118)
96	21688	2.59	(20.364, 74.429)	135.976	(137.672, 9.9405)	(-92.6573, -1.17228)
97	20636	2.59	(16.711, 62.45)	129.031	(133.026, 11.1235)	(-95.4897, -1.26684)
98	25473	2.59	(25.117, 53.76)	119.604	(134.869, 10.6541)	(-81.3282, -0.77934)
99	25472	2.59	(24.842, 59.202)	121.942	(134.692, 10.6992)	(-81.3282, -0.77934)
100	14031	2.59	(9.888, 80.716)	149.815	(139.354, 9.51213)	(-115.325, -1.54118)
101	14931	2.59	(9.729, 72.757)	143.016	(136.189, 10.3181)	(-112.491, -1.51106)

Slices of Slip Surface: Optimized

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	-104.4177	-6.981706	346.72118	589.78238	0	75
2	Optimized	-97.7488	-12.94818	724.22034	1223.4722	0	134.48
3	Optimized	-91.4588	-17.101225	996.4869	1656.2991	0	176.01
4	Optimized	-84.74408	-21.38951	1278.224	2122.8058	0	218.9
5	Optimized	-81.044985	-23.7519	1434.1442	2384.4285	0	242.52
6	Optimized	-72.340905	-28.598885	1756.5592	2909.3104	0	290.99
7	Optimized	-64.69	-32.57147	2025.2768	3359.3569	0	330.71
8	Optimized	-60.44725	-34.774435	2177.2381	3614.4761	0	352.74
9	Optimized	-55.02225	-37.639045	2371.6891	3950.2579	0	381.39
10	Optimized	-46.093155	-42.423855	2671.1159	4468.2799	0	429.24
11	Optimized	-39.143155	-46.16526	2896.1552	4862.2162	0	466.65
12	Optimized	-37.215	-47.235465	2969.0244	4988.4307	0	477.35
13	Optimized	-33.0425	-49.551375	3116.5809	5261.9735	0	500.51
14	Optimized	-26.7675	-53.03426	3325.7278	5659.9239	0	535.34
15	Optimized	-21.425	-55.999565	3503.7367	6011.589	0	573.49
16	Optimized	-18.11139	-57.838755	3614.1656	6259.8216	0	604.21
17	Optimized	-15.64766	-58.8489	3673.8385	6345.1736	0	623.27
18	Optimized	-11.93984	-59.929185	3736.5531	6554.7299	0	647.37
19	Optimized	-6.46578	-60.919675	3791.1778	6730.6958	0	676.72
20	Optimized	-1.67221	-61.1061	3796.5045	6809.1914	0	695.88
21	Optimized	0.865	-60.926155	3781.8867	6847.5379	0	699.96
22	Optimized	3.33	-60.75133	3767.7234	6849.0461	0	697.3
23	Optimized	9.1975	-60.33519	3734.1469	6829.126	0	690.97
24	Optimized	17.7325	-59.729865	3685.1779	6804.5831	0	681.77
25	Optimized	22.968645	-59.3585	3655.1132	6784.213	0	676.13
26	Optimized	24.118645	-59.272785	3648.3367	6795.1678	0	674.85
27	Optimized	24.72443	-59.21595	3643.8664	6775.6421	0	674.08
28	Optimized	25.455585	-59.14735	3638.7409	6779.0619	0	673.14
29	Optimized	27.487665	-58.95669	3624.2014	6761.0788	0	670.53
30	Optimized	29.60651	-58.76813	3609.5925	6777.7478	0	667.9
31	Optimized	35.165	-58.39123	3578.7137	6755.06	0	662.06
32	Optimized	45.39297	-57.697705	3522.0545	6728.9114	0	651.33
33	Optimized	51.76797	-57.217505	3483.7519	6695.5867	0	644.2
34	Optimized	57.0925	-56.661955	3442.1247	6666.8625	0	636.86
35	Optimized	65.1175	-55.824645	3379.2882	6632.036	0	625.8
36	Optimized	72.28	-55.07733	3323.23	6591.8358	0	615.93
37	Optimized	78.58	-54.420005	3273.9736	6546.3684	0	607.24

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38	Optimized	85.52488	-53.69539	3219.6469	6593.6649	0	597.67
39	Optimized	89.74488	-53.03588	3172.9816	6496.0055	0	589.88
40	Optimized	93.381885	-50.78104	3027.5923	6357.5073	0	567.98
41	Optimized	99.805685	-46.79848	2770.6512	6131.2615	0	529.32
42	Optimized	104.8538	-42.376495	2488.0848	5636.4747	0	487.3
43	Optimized	108.1804	-37.972895	2208.8474	5294.5201	0	446.21
44	Optimized	110.7004	-34.637035	1997.4206	5027.36	0	437.81
45	Optimized	114.0316	-30.22735	1717.8893	4625.56	0	399.74
46	Optimized	116.4566	-26.96891	1511.3897	4271.4475	0	371.59
47	Optimized	117.96655	-24.378595	1347.7828	3985.8704	0	347.6
48	Optimized	120.54155	-19.961275	1068.7646	3559.5822	0	313.94
49	Optimized	123.45625	-14.961275	752.92855	3031.9319	0	266.87
50	Optimized	125.7111	-11.09316	508.58914	2612.7296	0	214.36
51	Optimized	126.97385	-8.9269	371.7634	1874.2857	867.48167	0
52	Optimized	128.89455	-5.983525	185.59062	1602.1429	817.84685	0
53	Optimized	130.52035	-3.676138	39.478265	1414.9394	0	600
54	Optimized	134.0663	1.35635	-279.20024	733.01419	0	600

Slices of Slip Surface: 21689

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	21689	-89.178655	-6.3287045	329.00544	580.60066	0	75
2	21689	-81.34409	-16.742565	996.04686	1701.3573	0	172.43
3	21689	-71.68409	-27.159685	1668.2411	2820.9214	0	276.6
4	21689	-64.69	-33.740355	2098.2261	3533.2752	0	342.4
5	21689	-62.47874	-35.58067	2221.7123	3736.5366	0	360.81
6	21689	-57.05374	-39.551035	2485.1081	4179.4775	0	400.51
7	21689	-48.675	-45.234295	2849.6377	4788.9268	0	457.34
8	21689	-41.725	-49.219685	3089.8218	5185.0402	0	497.2
9	21689	-37.215	-51.574795	3239.7804	5431.2202	0	520.75
10	21689	-33.0425	-53.466625	3360.8499	5646.2453	0	539.67
11	21689	-26.7675	-56.058325	3514.3456	5928.7746	0	565.58
12	21689	-21.425	-57.99807	3628.5004	6152.3661	0	593.29
13	21689	-16.75627	-59.46064	3713.6571	6378.2849	0	625.07

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14	21689	-10.719404	-61.05578	3805.1556	6685.3979	0	662.51
15	21689	-3.573134	-62.59066	3891.5896	7010.4194	0	702.55
16	21689	0.865	-63.38563	3935.4026	7189.0512	0	722.09
17	21689	3.33	-63.72716	3953.6015	7238.3036	0	724.08
18	21689	9.1975	-64.30866	3982.0864	7307.7092	0	726.74
19	21689	17.7325	-64.773695	3999.8402	7372.3005	0	727.17
20	21689	23.15	-64.84664	3997.3431	7383.4889	0	725.44
21	21689	24.72443	-64.812125	3993.1573	7393.6759	0	724.44
22	21689	25.455585	-64.78806	3990.6942	7401.1193	0	723.9
23	21689	27.881155	-64.66156	3979.5249	7381.7606	0	721.7
24	21689	35.165	-63.977785	3927.3119	7330.5845	0	712.34
25	21689	45.31497	-62.466035	3819.685	7190.1692	0	694.28
26	21689	51.68997	-61.18826	3731.6017	7068.36	0	679.97
27	21689	57.0925	-59.707395	3632.0912	6928.0996	0	664.27
28	21689	65.1175	-57.13301	3460.9079	6690.0712	0	637.58
29	21689	72.28	-54.37411	3279.4229	6421.259	0	609.6
30	21689	78.58	-51.513845	3092.7339	6130.2073	0	581.09
31	21689	85.95	-47.59671	2838.5707	5839.1422	0	542.59
32	21689	93.450335	-43.054615	2545.3281	5566.2648	0	498.42
33	21689	100.01099	-38.450195	2249.4177	5259.2655	0	454.09
34	21689	104.99065	-34.60032	2002.6304	4991.0188	0	434.72
35	21689	109.21	-30.940335	1768.7453	4729.3074	0	403.82
36	21689	114.155	-26.2694	1470.7594	4318.2537	0	364.18
37	21689	117.451	-22.929385	1258.0226	3979.2109	0	334.89
38	21689	120.026	-20.07275	1076.3959	3677.7168	0	315.31
39	21689	124.1891	-15.07275	758.92869	3095.1972	0	267.35
40	21689	127.35765	-11.039675	503.12285	2606.9502	0	213.51
41	21689	130.04455	-7.194321	259.64316	1716.1351	840.90601	0
42	21689	132.4115	-3.700349	38.508893	1354.0677	0	600
43	21689	135.32985	1.2684295	-275.36879	656.42888	0	600

Slices of Slip Surface: 19767

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	19767	-98.30106	-1.3950835	2.175213	52.87735	0	75
2	19767	-94.713845	-6.7148595	341.5755	602.48598	0	75

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3	19767	-88.423845	-15.419055	897.82141	1542.2924	0	159.19
4	19767	-84.31237	-20.419055	1218.6811	2077.232	0	209.19
5	19767	-79.242975	-25.7621	1563.6651	2654.1082	0	262.62
6	19767	-71.879445	-32.7621	2017.4393	3408.5271	0	332.62
7	19767	-67.28884	-36.729945	2275.4968	3836.1745	0	372.3
8	19767	-64.69	-38.751125	2410.8684	4064.0353	0	392.51
9	19767	-57.575	-43.66483	2740.271	4616.4035	0	441.65
10	19767	-48.675	-49.23736	3099.4292	5213.3551	0	497.37
11	19767	-41.725	-52.88143	3318.3615	5571.5156	0	533.81
12	19767	-37.215	-55.03367	3455.6467	5795.1181	0	555.34
13	19767	-33.0425	-56.758025	3566.3005	5992.0114	0	572.58
14	19767	-26.7675	-59.113585	3705.0681	6248.5294	0	596.14
15	19767	-21.425	-60.867765	3807.6067	6451.7418	0	621.71
16	19767	-16.75627	-62.18028	3883.2722	6661.5243	0	651.48
17	19767	-10.719404	-63.59505	3963.7124	6949.0497	0	686.52
18	19767	-3.573134	-64.931035	4037.696	7252.7346	0	723.97
19	19767	0.865	-65.60859	4074.103	7418.6699	0	742.1
20	19767	3.33	-65.88837	4088.2226	7461.1538	0	743.53
21	19767	9.1975	-66.329985	4108.2226	7515.0983	0	744.93
22	19767	17.7325	-66.602035	4114.0007	7558.5228	0	743.62
23	19767	23.15	-66.558225	4104.143	7556.7079	0	740.85
24	19767	24.72443	-66.491065	4097.8163	7565.4889	0	739.55
25	19767	25.455585	-66.452015	4094.506	7572.0205	0	738.88
26	19767	27.881155	-66.276755	4080.2985	7544.7517	0	736.24
27	19767	35.165	-65.452135	4019.317	7478.038	0	725.61
28	19767	45.31497	-63.75316	3900.0301	7317.1235	0	705.86
29	19767	51.68997	-62.362645	3804.7302	7183.4616	0	690.54
30	19767	57.0925	-60.79101	3699.7071	7032.9979	0	674.02
31	19767	65.1175	-58.08545	3520.3437	6780.8167	0	646.15
32	19767	72.28	-55.213455	3331.8261	6499.7943	0	617.15
33	19767	78.58	-	3138.9997	6198.5131	0	587.77

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			52.256815				
34	19767	85.95	-48.23027	2878.0574	5895.6782	0	548.29
35	19767	93.569305	-43.494455	2572.5491	5605.3668	0	502.32
36	19767	100.36791	-38.604185	2258.5464	5275.0013	0	455.32
37	19767	105.2286	-34.77084	2012.9589	5005.8207	0	436.37
38	19767	109.21	-31.247895	1787.9063	4751.1208	0	406.59
39	19767	114.155	-26.51228	1485.8826	4333.7153	0	366.36
40	19767	117.53715	-23.035225	1264.5232	3980.7816	0	335.79
41	19767	120.11215	-20.14697	1080.9129	3677.1648	0	315.92
42	19767	124.21	-15.165235	764.67894	3096.6379	0	268.16
43	19767	127.4073	-11.056675	504.09477	2601.9574	0	213.48
44	19767	130.0861	-7.19312	259.50767	1710.2188	837.56845	0
45	19767	132.43465	-3.7006305	38.496299	1350.8081	0	600
46	19767	135.34095	1.268064	-275.36072	653.76202	0	600

Slices of Slip Surface: 21658

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	21658	-89.178655	-6.2847095	326.2615	576.29829	0	75
2	21658	-85.47216	-11.69857	671.85364	1133.8093	0	75
3	21658	-81.035485	-17	1012.8343	1729.6752	0	175
4	21658	-71.603325	-27.029565	1660.2815	2807.8878	0	275.3
5	21658	-64.69	-33.467645	2081.2017	3505.2225	0	339.68
6	21658	-62.292575	-35.43808	2213.3648	3722.701	0	359.38
7	21658	-56.867575	-39.370985	2474.3907	4161.1226	0	398.71
8	21658	-48.675	-44.851595	2825.6673	4748.1886	0	453.52
9	21658	-41.725	-48.79243	3063.1583	5139.4205	0	492.92
10	21658	-37.215	-51.119135	3211.3486	5382.6036	0	516.19
11	21658	-33.0425	-52.9851	3330.8458	5594.8805	0	534.85
12	21658	-26.7675	-55.538075	3481.8676	5873.2003	0	560.38
13	21658	-21.425	-57.444935	3593.8188	6093.033	0	587.81
14	21658	-16.75627	-58.87869	3677.3109	6315.7464	0	619.42
15	21658	-	-	3766.5919	6618.3915	0	656.66

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		10.719404	60.436245				
16	21658	-3.573134	-61.926005	3850.1147	6938.3049	0	696.47
17	21658	0.865	-62.692605	3892.1171	7113.3985	0	715.85
18	21658	3.33	-63.018085	3909.1194	7161.1892	0	717.7
19	21658	9.1975	-63.560495	3935.3673	7226.2855	0	720
20	21658	17.7325	-63.966905	3949.52	7284.4645	0	719.91
21	21658	23.15	-64.001495	3944.5805	7291.4498	0	717.84
22	21658	24.72443	-63.955495	3939.6496	7302.2311	0	716.73
23	21658	25.455585	-63.926045	3936.92	7309.7013	0	716.15
24	21658	27.881155	-63.78136	3924.5612	7286.2165	0	713.78
25	21658	35.165	-63.040545	3868.898	7228.8392	0	703.91
26	21658	45.31497	-61.444135	3755.906	7079.2821	0	685.08
27	21658	51.68997	-60.109855	3664.2359	6951.928	0	670.27
28	21658	57.0925	-58.57619	3561.4941	6805.7232	0	654.09
29	21658	65.1175	-55.917815	3385.1181	6558.8419	0	626.64
30	21658	72.28	-53.076345	3198.4456	6281.4548	0	597.92
31	21658	78.58	-50.135115	3006.6327	5982.1608	0	568.68
32	21658	85.95	-46.110175	2745.8356	5679.9441	0	529.21
33	21658	95.60135	-39.828525	2341.197	5281.8578	0	468.44
34	21658	103.86135	-33.65455	1945.1398	4860.4684	0	425.66
35	21658	109.21	-28.979385	1646.3164	4527.8073	0	386.17
36	21658	114.0021	-24.324835	1349.6249	4119.8122	0	346.6
37	21658	116.4271	-21.8351	1191.075	3906.1371	0	333.34
38	21658	119.155	-18.711175	992.5676	3539.2757	0	303.67
39	21658	123.21095	-13.876075	685.53744	3005.855	0	257.27
40	21658	125.36135	-11.103905	509.72127	2673.9916	0	214.54
41	21658	128.0774	-7.2537975	265.92289	1769.3409	867.99882	0
42	21658	130.52655	-3.6759245	39.456662	1408.9212	0	600
43	21658	133.55685	1.4555105	-284.7193	687.98939	0	600

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Slices of Slip Surface: 20728

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	20728	-91.86075	-6.633421	342.43848	603.22086	0	75
2	20728	-86.965895	-13.636925	789.66203	1358.8392	0	141.37
3	20728	-82.82902	-18.636925	1110.869	1895.5852	0	191.37
4	20728	-76.56353	-25.46111	1551.0885	2629.8061	0	259.61
5	20728	-69.77451	-31.930835	1970.3883	3327.1177	0	324.31
6	20728	-65.73115	-35.469725	2201.6845	3708.6561	0	359.7
7	20728	-64.04115	-36.823235	2293.352	3861.6191	0	373.23
8	20728	-57.575	-41.43684	2601.2508	4379.4396	0	419.37
9	20728	-48.675	-47.265685	2976.3397	5004.9966	0	477.66
10	20728	-41.725	-51.07568	3205.7424	5381.4889	0	515.76
11	20728	-37.215	-53.32676	3349.1175	5616.271	0	538.27
12	20728	-33.0425	-55.132925	3464.9163	5821.9283	0	556.33
13	20728	-26.7675	-57.60399	3610.7871	6091.0886	0	581.04
14	20728	-21.425	-59.44908	3719.0379	6304.3625	0	607.66
15	20728	-16.75627	-60.83522	3799.2869	6521.8615	0	638.42
16	20728	-10.719404	-62.33861	3885.235	6819.0424	0	674.64
17	20728	-3.573134	-63.772435	3965.2941	7133.1165	0	713.37
18	20728	0.865	-64.5078	4005.4191	7305.2761	0	732.19
19	20728	3.33	-64.818015	4021.5089	7351.0451	0	733.9
20	20728	9.1975	-65.32862	4045.7141	7412.6054	0	735.91
21	20728	17.7325	-65.69592	4057.394	7466.4391	0	735.47
22	20728	23.15	-65.709785	4051.1816	7471.1547	0	733.21
23	20728	24.72443	-65.65876	4045.9372	7480.6228	0	732.06
24	20728	25.455585	-65.62711	4043.0571	7487.6916	0	731.46
25	20728	27.881155	-65.47596	4030.3514	7463.98	0	729.03
26	20728	35.165	-64.72102	3973.6863	7404.9688	0	719.03
27	20728	45.31497	-63.114725	3860.2042	7254.1536	0	700.11
28	20728	51.68997	-61.78005	3768.4693	7126.4802	0	685.3
29	20728	57.0925	-60.2534	3666.2507	6980.7957	0	669.19
30	20728	65.1175	-57.61287	3490.8914	6735.5282	0	641.89
31	20728	72.28	-54.79697	3305.769	6460.4871	0	613.4
32	20728	78.58	-51.888145	3116.0653	6164.223	0	584.45
33	20728	85.95	-47.915895	2858.4565	5867.1959	0	545.46

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34	20728	93.51093	-43.276225	2559.0662	5585.5247	0	500.38
35	20728	100.19278	-38.52779	2253.9919	5266.6742	0	454.71
36	20728	105.11185	-34.68626	2007.8212	4998.0642	0	435.55
37	20728	109.21	-31.095355	1778.3274	4739.6546	0	405.22
38	20728	114.155	-26.39185	1478.3913	4325.4204	0	365.28
39	20728	117.49475	-22.982755	1261.2958	3979.6289	0	335.35
40	20728	120.06975	-20.11019	1078.6615	3676.966	0	315.62
41	20728	124.2066	-15.11019	761.24589	3094.2317	0	267.67
42	20728	127.38975	-11.039035	503.04426	2602.9187	0	213.49
43	20728	130.06565	-7.1937135	259.56698	1713.0762	839.18394	0
44	20728	132.42325	-3.7004915	38.502124	1352.5284	0	600
45	20728	135.33545	1.2682445	-275.36157	655.14497	0	600

Slices of Slip Surface: 17845

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	17845	-101.13485	-5.760166	272.68063	491.94751	0	75
2	17845	-97.59054	-11.04982	606.06448	1031.417	0	75
3	17845	-92.83695	-17	987.29238	1695.4611	0	175
4	17845	-87.23641	-23.665285	1414.8581	2409.7715	0	241.65
5	17845	-80.010255	-30.665285	1867.8738	3166.8015	0	311.65
6	17845	-70.350255	-39.08707	2415.5881	4079.8654	0	395.87
7	17845	-64.69	-43.35504	2698.2515	4553.9967	0	438.55
8	17845	-57.575	-47.85681	3001.8591	5060.1936	0	483.57
9	17845	-48.675	-52.96663	3332.1423	5605.6799	0	534.67
10	17845	-41.725	-56.307135	3532.1186	5930.3961	0	568.07
11	17845	-37.215	-58.277525	3658.0615	6134.1616	0	587.78
12	17845	-33.0425	-59.85036	3759.2039	6314.2482	0	603.5
13	17845	-26.7675	-61.991245	3884.5569	6547.1803	0	624.91
14	17845	-21.425	-63.575715	3976.5073	6732.2013	0	648.54
15	17845	-16.75627	-64.75023	4043.6606	6927.219	0	676.43
16	17845	-10.719404	-65.998325	4113.6009	7196.9793	0	709.24
17	17845	-3.573134	-67.149685	4176.1251	7480.8835	0	744.27
18	17845	0.865	-67.717895	4205.74	7635.1418	0	761.08

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19	17845	3.33	-67.93998	4216.4726	7671.5511	0	762
20	17845	9.1975	-68.250525	4228.0212	7711.0434	0	762.21
21	17845	17.7325	-68.34121	4222.4629	7734.8172	0	759.28
22	17845	23.15	-68.18739	4205.7776	7721.2838	0	755.51
23	17845	24.72443	-68.089415	4197.5855	7727.6937	0	753.94
24	17845	25.455585	-68.036205	4193.3287	7733.2277	0	753.14
25	17845	27.881155	-67.814835	4176.286	7699.6382	0	750.08
26	17845	35.165	-66.856765	4106.9913	7618.3626	0	738.25
27	17845	45.31497	-64.979985	3976.5726	7438.3215	0	716.9
28	17845	51.68997	-63.482185	3874.6445	7293.4486	0	700.62
29	17845	57.0925	-61.82398	3764.1834	7133.4368	0	683.32
30	17845	65.1175	-58.99317	3577.0018	6867.9086	0	654.32
31	17845	72.28	-56.013045	3381.6156	6575.5485	0	624.35
32	17845	78.58	-52.964175	3183.1139	6264.6256	0	594.14
33	17845	85.95	-48.83285	2915.6583	5950.88	0	553.72
34	17845	93.67734	-43.912305	2598.5508	5644.1918	0	506.04
35	17845	100.69204	-38.750375	2267.2669	5291.4113	0	456.49
36	17845	105.4447	-34.932035	2022.7212	5021.8297	0	437.92
37	17845	109.21	-31.538265	1806.0777	4773.6323	0	409.2
38	17845	114.155	-26.74084	1500.1778	4350.3569	0	368.42
39	17845	117.61585	-23.13461	1270.597	3984.5085	0	336.63
40	17845	120.19085	-20.216255	1085.1189	3678.6786	0	316.48
41	17845	124.25495	-15.216255	767.79633	3095.519	0	268.59
42	17845	127.4783	-11.03726	502.82099	2594.5243	0	213.44
43	17845	130.12355	-7.1920275	259.39	1705.5486	834.94004	0
44	17845	132.45525	-3.7008815	38.484825	1348.0486	0	600
45	17845	135.3507	1.2677585	-275.35427	651.68932	0	600

Slices of Slip Surface: 19736

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	19736	-98.30106	-1.394783	2.1564196	52.461871	0	75

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2	19736	-94.680545	-6.714559	341.61991	602.59466	0	75
3	19736	-88.390545	-15.34747	893.42304	1535.0251	0	158.47
4	19736	-84.235425	-20.34747	1214.3762	2070.1684	0	208.47
5	19736	-79.03981	-25.765695	1564.4071	2655.1344	0	262.66
6	19736	-71.57773	-32.765695	2018.3272	3409.7497	0	332.66
7	19736	-67.113345	-36.58184	2266.682	3820.5861	0	370.82
8	19736	-64.69	-38.44333	2391.721	4030.781	0	389.43
9	19736	-57.575	-43.310135	2718.1409	4578.3099	0	438.1
10	19736	-48.675	-48.825735	3073.6748	5169.0477	0	493.26
11	19736	-41.725	-52.427025	3289.9987	5522.6135	0	529.27
12	19736	-37.215	-54.551855	3425.5781	5743.3862	0	550.52
13	19736	-33.0425	-56.2511	3534.6134	5937.3745	0	567.51
14	19736	-26.7675	-58.56895	3671.0504	6189.8072	0	590.69
15	19736	-21.425	-60.290985	3771.4981	6389.561	0	616
16	19736	-16.75627	-61.57524	3845.5763	6596.095	0	645.6
17	19736	-10.719404	-62.953055	3923.588	6879.3612	0	680.45
18	19736	-3.573134	-64.244555	3994.8161	7177.9432	0	717.69
19	19736	0.865	-64.89409	4029.4909	7340.5922	0	735.67
20	19736	3.33	-65.157995	4042.7433	7381.5355	0	736.96
21	19736	9.1975	-65.56087	4060.1428	7431.1762	0	738.01
22	19736	17.7325	-65.77473	4062.3602	7468.2614	0	736.18
23	19736	23.15	-65.692815	4050.1418	7462.719	0	733.06
24	19736	24.72443	-65.61424	4043.1398	7472.6172	0	731.66
25	19736	25.455585	-65.56983	4039.5045	7479.5336	0	730.94
26	19736	27.881155	-65.376465	4024.0663	7447.2273	0	728.13
27	19736	35.165	-64.495	3959.6145	7374.1766	0	717
28	19736	45.31497	-62.71157	3835.0145	7204.3171	0	696.49
29	19736	51.68997	-61.264645	3736.2657	7065.2295	0	680.66
30	19736	57.0925	-59.640245	3627.9173	6908.7554	0	663.67
31	19736	65.1175	-56.850715	3443.3349	6647.7577	0	635.03
32	19736	72.28	-53.89613	3249.6202	6358.412	0	605.3
33	19736	78.58	-	3051.77	6048.7668	0	575.19

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			50.858485				
34	19736	85.95	-46.724075	2784.1607	5734.9334	0	534.74
35	19736	95.85015	-40.104525	2358.1042	5307.9641	0	470.81
36	19736	104.11015	-33.815235	1954.81	4874.6752	0	427.23
37	19736	109.21	-29.26737	1664.2757	4548.3545	0	388.76
38	19736	114.155	-24.38353	1353.0851	4117.1341	0	347.2
39	19736	119.155	-18.872575	1002.6384	3548.1522	0	305.13
40	19736	123.2474	-13.94118	689.54741	3005.0378	0	257.83
41	19736	125.4302	-11.100575	509.42815	2667.2244	0	214.5
42	19736	128.12355	-7.250536	265.65994	1763.1061	864.55096	0
43	19736	130.5514	-3.6762265	39.442889	1406.4765	0	600
44	19736	133.5687	1.455123	-284.71174	685.3859	0	600

Slices of Slip Surface: 21659

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	21659	-89.178655	-6.7267395	353.84491	626.66886	0	75
2	21659	-81.944405	-17.1406	1019.5359	1752.2535	0	176.41
3	21659	-75.236605	-25.23612	1540.0394	2621.9022	0	257.36
4	21659	-69.3322	-31.309465	1932.5682	3276.0609	0	318.09
5	21659	-65.32971	-35.073345	2178.6818	3682.6009	0	355.73
6	21659	-63.63971	-36.54494	2277.6792	3846.9639	0	370.45
7	21659	-57.575	-41.182865	2585.4128	4365.3305	0	416.83
8	21659	-48.675	-47.463315	2988.6731	5038.3934	0	479.63
9	21659	-41.725	-51.54602	3235.0351	5443.095	0	520.46
10	21659	-37.215	-53.95361	3388.2543	5693.7046	0	544.54
11	21659	-33.0425	-55.882245	3511.7004	5911.66	0	563.82
12	21659	-26.7675	-58.519915	3667.9686	6197.4843	0	590.2
13	21659	-21.425	-60.48939	3783.8517	6423.1639	0	617.97
14	21659	-16.75627	-61.970305	3870.2012	6650.498	0	649.44
15	21659	-10.719404	-63.58004	3962.7187	6958.0987	0	686.38
16	21659	-3.573134	-65.121795	4049.5694	7282.7865	0	725.72

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17	21659	0.865	-65.916495	4093.3242	7460.3361	0	744.87
18	21659	3.33	-66.255075	4111.1036	7509.1862	0	746.83
19	21659	9.1975	-66.82316	4138.9538	7575.4144	0	749.37
20	21659	17.7325	-67.258135	4154.9423	7634.6537	0	749.53
21	21659	23.15	-67.305815	4150.7746	7641.6571	0	747.58
22	21659	24.72443	-67.26238	4146.0001	7651.6818	0	746.49
23	21659	25.455585	-67.23394	4143.3299	7658.8085	0	745.92
24	21659	27.881155	-67.09158	4131.1111	7635.9252	0	743.57
25	21659	35.165	-66.350965	4075.4388	7576.8573	0	733.7
26	21659	45.31497	-64.74208	3961.7768	7423.537	0	714.76
27	21659	51.68997	-63.39233	3869.114	7292.9452	0	699.81
28	21659	57.0925	-61.83565	3764.9576	7142.9884	0	683.43
29	21659	65.1175	-59.13288	3585.7541	6889.4669	0	655.57
30	21659	72.28	-56.238375	3395.7584	6604.613	0	626.38
31	21659	78.58	-53.23646	3200.1826	6297.2704	0	596.59
32	21659	85.95	-49.11927	2933.5916	5983.3539	0	556.29
33	21659	93.70581	-44.145105	2613.0051	5669.982	0	508.12
34	21659	100.77741	-38.841285	2272.8425	5302.1969	0	457.28
35	21659	105.5016	-34.948455	2023.6719	5022.6286	0	438.1
36	21659	109.21	-31.48381	1802.6399	4764.7647	0	408.71
37	21659	114.155	-26.480715	1483.912	4319.41	0	366.08
38	21659	117.4013	-22.94536	1259.0813	3961.6243	0	335.07
39	21659	119.9763	-19.849365	1062.521	3635.3101	0	313.33
40	21659	123.82995	-14.849365	745.46559	3065.1769	0	265.59
41	21659	126.30995	-11.447465	529.92995	2674.4407	0	214.05
42	21659	126.95255	-10.5059	470.33965	2560.6659	0	213.72
43	21659	129.05105	-7.2102385	261.93209	1706.4127	833.97125	0
44	21659	131.2504	-3.6850305	39.075519	1351.9306	0	600
45	21659	133.99005	1.4301415	-283.70788	636.47973	0	600

Slices of Slip Surface: 18806

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	18806	-99.71795	-3.659782	142.55186	280.75971	0	75
2	18806	-96.15237	-8.964497	478.95868	825.39408	0	75

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3	18806	-89.86237	-17.083205	998.63698	1712.9493	0	175.83
4	18806	-82.090705	-25.87661	1564.287	2658.2447	0	263.77
5	18806	-74.872115	-32.793405	2012.4421	3404.1258	0	332.93
6	18806	-68.82141	-37.928715	2346.7396	3960.6754	0	384.29
7	18806	-64.69	-41.091575	2557.0351	4313.6528	0	415.92
8	18806	-57.575	-45.79278	2873.0611	4842.3059	0	462.93
9	18806	-48.675	-51.127245	3217.385	5412.7099	0	516.27
10	18806	-41.725	-54.61577	3426.6215	5753.7615	0	551.16
11	18806	-37.215	-56.674995	3558.0441	5967.1467	0	571.75
12	18806	-33.0425	-58.32201	3663.8115	6155.3758	0	588.22
13	18806	-26.7675	-60.568115	3795.7406	6399.9218	0	610.68
14	18806	-21.425	-62.235885	3892.9228	6593.9433	0	635.27
15	18806	-16.75627	-63.47822	3964.2733	6796.0096	0	664.08
16	18806	-10.719404	-64.808325	4039.3708	7074.5237	0	697.99
17	18806	-3.573134	-66.050625	4107.4719	7368.0295	0	734.22
18	18806	0.865	-66.672735	4140.4811	7527.9909	0	751.67
19	18806	3.33	-66.923285	4152.7673	7567.3133	0	752.85
20	18806	9.1975	-67.298535	4168.6606	7614.1122	0	753.64
21	18806	17.7325	-67.478825	4168.6266	7647.4224	0	751.52
22	18806	23.15	-67.379395	4155.358	7639.7966	0	748.24
23	18806	24.72443	-67.29666	4148.1329	7647.5358	0	746.8
24	18806	25.455585	-67.250455	4144.2746	7653.5459	0	746.07
25	18806	27.881155	-67.0519	4128.7149	7623.0026	0	743.21
26	18806	35.165	-66.15989	4063.5087	7548.6806	0	731.98
27	18806	45.31497	-64.37118	3938.5828	7378.102	0	711.42
28	18806	51.68997	-62.926555	3840.1521	7238.8274	0	695.62
29	18806	57.0925	-61.31128	3732.2261	7083.3869	0	678.71
30	18806	65.1175	-58.542595	3548.9292	6824.4336	0	650.26
31	18806	72.28	-55.616125	3356.8578	6537.6952	0	620.77
32	18806	78.58	-52.613035	3161.249	6231.4973	0	590.98

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33	18806	85.95	-48.53373	2896.9953	5923.1137	0	551.02
34	18806	93.624265	-43.7049	2585.6766	5624.502	0	504.19
35	18806	100.53282	-38.67782	2262.9303	5282.84	0	455.91
36	18806	105.33855	-34.852045	2017.8693	5013.5151	0	437.15
37	18806	109.21	-31.394185	1796.993	4761.8999	0	407.91
38	18806	114.155	-26.627455	1493.172	4341.6269	0	367.4
39	18806	117.57705	-23.085315	1267.5938	3982.2863	0	336.22
40	18806	120.15205	-20.1819	1083.0311	3677.4663	0	316.2
41	18806	124.21	-15.221625	768.19413	3099.3319	0	268.67
42	18806	127.4205	-11.07755	505.38858	2601.5031	0	213.47
43	18806	130.10505	-7.192564	259.45385	1707.7757	836.189	0
44	18806	132.44505	-3.7007575	38.490007	1349.4811	0	600
45	18806	135.34585	1.2679095	-275.35886	652.73928	0	600

Slices of Slip Surface: 20697

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	20697	-91.8266	-6.633421	342.50444	603.38618	0	75
2	20697	-86.931745	-13.578465	786.06583	1352.9712	0	140.78
3	20697	-82.7502	-18.578465	1107.3495	1889.965	0	190.78
4	20697	-76.4453	-25.384355	1546.5126	2622.2516	0	258.84
5	20697	-69.7351	-31.71474	1956.9082	3304.6272	0	322.15
6	20697	-65.55046	-35.330385	2193.7929	3695.1399	0	358.3
7	20697	-63.86046	-36.671895	2284.6695	3846.2085	0	371.72
8	20697	-57.575	-41.09783	2580.098	4343.1107	0	415.98
9	20697	-48.675	-46.868265	2951.6044	4962.3592	0	473.68
10	20697	-41.725	-50.63464	3178.1659	5334.1681	0	511.35
11	20697	-37.215	-52.85784	3319.8453	5565.6606	0	533.58
12	20697	-33.0425	-54.63853	3434.0695	5768.7071	0	551.39
13	20697	-26.7675	-57.071395	3577.612	6033.7889	0	575.71
14	20697	-21.425	-58.88399	3683.7484	6243.4946	0	602.06
15	20697	-16.75627	-60.2416	3762.3609	6457.8742	0	632.65
16	20697	-10.719404	-61.70773	3845.888	6750.5531	0	668.68
17	20697	-3.573134	-63.09677	3923.1824	7059.5196	0	707.18
18	20697	0.865	-63.803945	3961.4951	7228.4033	0	725.86

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19	20697	3.33	-64.098195	3976.6802	7272.6731	0	727.42
20	20697	9.1975	-64.569895	3998.3111	7329.8669	0	729.09
21	20697	17.7325	-64.8788	4006.4098	7377.3241	0	728.11
22	20697	23.15	-64.85443	3997.8171	7377.6977	0	725.51
23	20697	24.72443	-64.791955	3991.9006	7388.8698	0	724.26
24	20697	25.455585	-64.75494	3988.5028	7396.2205	0	723.61
25	20697	27.881155	-64.585645	3974.8676	7367.6741	0	721.02
26	20697	35.165	-63.773765	3914.6246	7302.1586	0	710.51
27	20697	45.31497	-62.082915	3795.8011	7142.345	0	690.83
28	20697	51.68997	-60.691785	3700.5501	7009.3141	0	675.51
29	20697	57.0925	-59.112355	3594.9939	6857.5993	0	658.92
30	20697	65.1175	-56.38785	3414.4885	6603.5535	0	630.87
31	20697	72.28	-53.489365	3224.2468	6320.0346	0	601.63
32	20697	78.58	-50.499555	3029.3256	6015.4641	0	571.96
33	20697	85.95	-46.419475	2765.0865	5707.4261	0	532
34	20697	95.72815	-39.967585	2349.6989	5294.7301	0	469.63
35	20697	103.98815	-33.735545	1950.0413	4867.2315	0	426.45
36	20697	109.21	-29.12456	1655.3693	4537.7447	0	387.48
37	20697	114.155	-24.272675	1346.1678	4109.5582	0	346.21
38	20697	119.155	-18.792585	997.65557	3543.3395	0	304.41
39	20697	123.2294	-13.908925	687.56751	3005.0696	0	257.56
40	20697	125.39625	-11.102215	509.57424	2670.5158	0	214.52
41	20697	128.1008	-7.2521425	265.7994	1766.2808	866.30334	0
42	20697	130.5391	-3.676078	39.450044	1408.1934	0	600
43	20697	133.56285	1.455314	-284.71771	686.79902	0	600

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LWL Case.BS.LtoR

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 176
Last Edited By: Cox, Lane MVK
Date: 3/29/2011
Time: 9:23:38 AM
File Name: 5c(1) Typical 1.2nd SC.80%SG.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\2nd Stage Construction\80%SG,1 Layer of Fabric\Slope W\
Last Solved Date: 3/29/2011
Last Solved Time: 9:26:30 AM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

LWL Case.BS.LtoR

Kind: SLOPE/W
Method: Spencer
Settings
    Apply Phreatic Correction: No
    PWP Conditions Source: Piezometric Line
    Use Staged Rapid Drawdown: No
SlipSurface
    Direction of movement: Left to Right
    Use Passive Mode: No
    Slip Surface Option: Block
    Critical slip surfaces saved: 100
    Optimize Critical Slip Surface Location: Yes
    Tension Crack
        Tension Crack Option: Tension Crack Line
        Percentage Wet: 0
        Tension Crack Fluid Unit Weight: 62.4 pcf

FOS Distribution
    FOS Calculation Option: Constant
Restrict Block Crossing: Yes
Advanced
    Number of Slices: 30
    Optimization Tolerance: 0.01
    Minimum Slip Surface Depth: 0.1 ft
    Optimization Maximum Iterations: 2000
    Optimization Convergence Tolerance: 1e-007
    Starting Optimization Points: 8
    Ending Optimization Points: 16
    Complete Passes per Insertion: 1
    Driving Side Maximum Convex Angle: 5 °
    Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH

Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH above 0

Model: Mohr-Coulomb
Unit Weight: 108 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH, 0 to -12

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -12 (2)
Cohesion Spatial Fn: CH, 0 to -12
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH, -12 to -22

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -12 to -22 (2)

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Cohesion Spatial Fn: CH, -12 to -22
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -22 to -36

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -22 to -36 (2)
Cohesion Spatial Fn: CH, -22 to -36
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -36 to -80

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -36 to -80 (2)
Cohesion Spatial Fn: CH, -36 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sand Fill

Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, 0 to -12 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -12 (2)
Cohesion Spatial Fn: CH, 0 to -12 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -12 to -22 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -12 to -22 (2)
Cohesion Spatial Fn: CH, -12 to -22 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure

Piezometric Line: 1

CH, -22 to -36 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -22 to -36 (2)
Cohesion Spatial Fn: CH, -22 to -36 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Limits

Left Coordinate: (-200, -1.79) ft
Right Coordinate: (500, -4.27) ft

Slip Surface Block

Left Grid
Upper Left: (29, -3) ft
Lower Left: (92, -13) ft
Lower Right: (95, -60) ft
X Increments: 7
Y Increments: 7
Starting Angle: 135 °
Ending Angle: 160 °
Angle Increments: 7
Right Grid
Upper Left: (212, -16) ft
Lower Left: (306, -16) ft
Lower Right: (306, -76) ft
X Increments: 7
Y Increments: 7
Starting Angle: 20 °
Ending Angle: 45 °
Angle Increments: 7

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	-1.79
	-195.89	-1.8
	-169.15	-1.8

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	-146.39	-1.65
	-122.74	-1.62
	-98.28	-1.36
	-85.7	-0.94
	-66.38	-0.23
	-63	0
	-52.15	0.5
	-38.25	0.23
	-36.18	0.46
	194.59	-4.39
	214.93	-4.22
	250.23	-4.22
	259.47	-4.16
	284.55	-5.22
	285	-5.3
	406	-5.3
	407.82	-4.54
	500	-4.27

Reinforcements

Reinforcement 1

Type: Fabric
Outside Point: (177, 0) ft
Inside Point: (23, 0) ft
Slip Surface Intersection: (21.978, 0) ft
Total Length: 154 ft
Reinforcement Direction: 0 °
Applied Load Option: Variable
F of S Dependent: No
Contact Cohesion: 265 psf
Contact Phi: 19 °
Interface Factor: 2
Bond Safety Factor: 1
Fabric Capacity: 27000 lbs
Fabric Safety Factor: 1
Fabric Load: 27000 lbs
Load Distribution: Even along reinf.
Load Orientation: 0
Applied Load: 27000 lbs
Fabric Load Used: 0 lbs
Resisting Force Used: 896.96 lbs/ft
Available Bond Length: 0 ft
Required Bond Length: 0 ft
Governing Component: Bond

Tension Crack Line

	X (ft)	Y (ft)
	4.93	4.58
	22	0.2
	83	0.2
	112	10
	122	10
	159	1
	161	4

Spatial Functions

CH, 0 to -12

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -1.5, 75)
Data Point: (-300, -12, 75)
Data Point: (-23.63, 0, 75)
Data Point: (-23.63, -12, 75)
Data Point: (0, 0, 250)
Data Point: (0, -12, 250)
Data Point: (250.26, -4.13, 150)
Data Point: (250.26, -12, 150)
Data Point: (500, -4.27, 150)
Data Point: (500, -12, 150)

CH, -22 to -36 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -22, 350)
Data Point: (0, -36, 476)
Data Point: (40.33, -22, 290)
Data Point: (40.33, -36, 416)
Data Point: (116.73, -22, 327)
Data Point: (116.73, -36, 453)
Data Point: (250.23, -22, 240)
Data Point: (250.23, -36, 366)

CH, -12 to -22

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -12, 125)
Data Point: (-300, -22, 225)
Data Point: (-23.63, -12, 125)

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Data Point: (-23.63, -22, 225)
Data Point: (0, -12, 350)
Data Point: (0, -22, 350)
Data Point: (250.26, -12, 150)
Data Point: (250.26, -22, 240)
Data Point: (500, -12, 150)
Data Point: (500, -22, 240)

CH, -22 to -36

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -22, 225)
Data Point: (-300, -36, 365)
Data Point: (-23.63, -22, 225)
Data Point: (-23.63, -36, 365)
Data Point: (0, -22, 350)
Data Point: (0, -36, 476)
Data Point: (250.26, -22, 240)
Data Point: (250.26, -36, 366)
Data Point: (500, -22, 240)
Data Point: (500, -36, 366)

CH, -36 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -36, 365)
Data Point: (-300, -80, 805)
Data Point: (-23.63, -36, 365)
Data Point: (-23.63, -80, 805)
Data Point: (0, -36, 476)
Data Point: (0, -80, 872)
Data Point: (250.26, -36, 366)
Data Point: (250.26, -80, 762)
Data Point: (500, -36, 366)
Data Point: (500, -80, 762)

CH, 0 to -12 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -6, 100)
Data Point: (0, -6, 101)
Data Point: (178.08, -6, 111)

CH, -12 to -22 (2)

Model: Linear Interpolation

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Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -17, 100)
Data Point: (0, -17, 109)
Data Point: (178.08, -17, 100)

CH, -22 to -36 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -29, 102)
Data Point: (0, -29, 104)
Data Point: (178.08, -29, 102)

CH, -36 to -80 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -58, 105)
Data Point: (0, -58, 106)
Data Point: (178.08, -58, 105)

CH, 0 to -12 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, 0, 250)
Data Point: (0, -12, 250)
Data Point: (40.33, 0, 171)
Data Point: (40.33, -12, 171)
Data Point: (116.73, 0, 219)
Data Point: (116.73, -12, 219)
Data Point: (250.23, -4.13, 150)
Data Point: (250.23, -12, 150)

CH, -12 to -22 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -12, 350)
Data Point: (0, -22, 350)
Data Point: (40.33, -12, 200)
Data Point: (40.33, -22, 290)
Data Point: (116.73, -12, 245)
Data Point: (116.73, -22, 335)
Data Point: (250.23, -12, 150)
Data Point: (250.23, -22, 240)

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Regions

	Material	Points	Area (ft²)
Region 1	CH, -36 to -80	31,33,60,63,34,32	30800
Region 2	CH above 0	40,9,10,11,12,13,64,17,39,57	130.54365
Region 3	Sand Fill	19,20,21,22,23,24,25,26,27,28	629.28815
Region 4	EMBANKMENT FILL CH	19,46,41,42,43,66,28	1500.8133
Region 5	EMBANKMENT FILL CH	43,44,45,65,29,66	501.84775
Region 6	CH, -22 to -36	35,33,60,59	2800
Region 7	CH, -12 to -22	37,35,59,58	2000
Region 8	CH, 0 to -12	57,58,37,2,1,3,4,5,6,7,8,40	2203.9585
Region 9	CH, -22 to -36	63,62,36,34	3496.78
Region 10	CH, -12 to -22	62,61,38,36	2497.7
Region 11	CH, 0 to -12	61,65,45,47,48,49,50,51,52,53,54,55,30,38	1282.4538
Region 12	CH, -12 to -22 SG	58,59,62,61	2502.3
Region 13	CH, -22 to -36 SG	60,59,62,63	3503.22
Region 14	CH, 0 to -12 SG	57,58,61,65,29,66,28,27,26,25,24,23,22,21,20,19,18,39	1448.4571
Region 15	EMBANKMENT FILL CH	64,17,39,56,19,46	368.6281

Points

	X (ft)	Y (ft)
Point 1	-195.89	-1.8
Point 2	-200	-1.79
Point 3	-169.15	-1.8
Point 4	-146.39	-1.65
Point 5	-122.74	-1.62
Point 6	-98.28	-1.36
Point 7	-85.7	-0.94
Point 8	-66.38	-0.23
Point 9	-52.15	0.5
Point 10	-38.25	0.23
Point 11	-36.18	0.46
Point 12	-23.63	0.86
Point 13	-19.22	0.94
Point 14	-5.71	4.75
Point 15	-0.42	4.91
Point 16	-0.22	4.77
Point 17	4.93	4.5
Point 18	24.3	-0.66
Point 19	40.33	-3.85
Point 20	53.08	-5.02
Point 21	69.13	-8.93
Point 22	90.17	-10.85
Point 23	106.69	-11.22
Point 24	116.58	-11.18
Point 25	126.69	-10.14
Point 26	142.13	-9.46

Point 27	157.98	-8.78
Point 28	178.08	-4.54
Point 29	214.93	-4.22
Point 30	500	-4.27
Point 31	-200	-80
Point 32	500	-80
Point 33	-200	-36
Point 34	500	-36
Point 35	-200	-22
Point 36	500	-22
Point 37	-200	-12
Point 38	500	-12
Point 39	22	0
Point 40	-63	0
Point 41	111.73	14
Point 42	121.73	14
Point 43	161	4
Point 44	241	2
Point 45	259.47	-4.16
Point 46	81.73	6.5
Point 47	284.55	-5.2
Point 48	300.6	-9.14
Point 49	320.9	-11
Point 50	337.4	-11.22
Point 51	347.09	-11.26
Point 52	356.8	-10.22
Point 53	372.41	-9.68
Point 54	388.59	-9
Point 55	407.82	-4.54
Point 56	30	-1.79
Point 57	0	0
Point 58	0	-12
Point 59	0	-22
Point 60	0	-36
Point 61	250.23	-12
Point 62	250.23	-22
Point 63	250.23	-36
Point 64	1.73	4.5
Point 65	250.23	-4.22
Point 66	194.59	-4.39

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	1.56	(184.819, 3.063)	120.1494	(20.0307, 4.95752)	(328.017, -11.0949)
2	13227	1.81	(184.819, 3.063)	122.51	(23.8818, 5.0538)	(345.143, -11.252)
3	13228	1.81	(178.543, 3.039)	117.987	(23.8818, 5.0538)	(332.579, -11.1557)
4	13236	1.82	(185.662, 3.065)	125.148	(23.8818, 5.0538)	(346.832, -11.2589)

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5	13235	1.82	(194.362, 2.739)	131.559	(23.8818, 5.0538)	(364.387, -9.95754)
6	13226	1.83	(194.35, 2.74)	130.104	(23.8818, 5.0538)	(364.363, -9.95838)
7	13229	1.83	(173.482, 3.005)	114.022	(23.8818, 5.0538)	(322.449, -11.0207)
8	13237	1.84	(179.643, 3.046)	120.271	(23.8818, 5.0538)	(334.78, -11.1851)
9	13291	1.84	(176.328, 8.048)	129.57	(6.4568, 4.61817)	(345.143, -11.252)
10	13300	1.84	(177.17, 8.05)	132.962	(6.4568, 4.61817)	(346.832, -11.2589)
11	13292	1.85	(170.059, 8.024)	124.899	(6.4568, 4.61817)	(332.579, -11.1557)
12	13219	1.85	(176.611, 3.026)	114.855	(23.8818, 5.0538)	(328.712, -11.1042)
13	13218	1.85	(183.141, 3.06)	119.497	(23.8818, 5.0538)	(341.784, -11.2381)
14	13299	1.85	(185.841, 7.725)	138.526	(6.4568, 4.61817)	(364.387, -9.95754)
15	13234	1.85	(205.096, 2.528)	139.679	(23.8818, 5.0538)	(385.951, -9.1109)
16	13244	1.86	(193.867, 2.748)	133.499	(23.8818, 5.0538)	(363.393, -9.99193)
17	9130	1.86	(180.871, 6.028)	129.086	(12.6677, 4.77344)	(348.231, -11.1378)
18	13220	1.86	(171.621, 2.951)	111.548	(23.8818, 5.0538)	(318.745, -10.8026)
19	13301	1.86	(171.158, 8.032)	127.796	(6.4568, 4.61817)	(334.78, -11.1851)
20	13293	1.86	(165.002, 7.99)	120.973	(6.4568, 4.61817)	(322.449, -11.0207)
21	13290	1.86	(185.829, 7.725)	137.934	(6.4568, 4.61817)	(364.363, -9.95838)
22	9139	1.86	(181.136, 6.013)	132.368	(12.6677, 4.77344)	(348.769, -11.0802)
23	13243	1.87	(203.364, 2.564)	140.844	(23.8818, 5.0538)	(382.473, -9.2571)
24	13620	1.87	(184.422, 3.26)	127.015	(21.39, 4.9915)	(346.832, -11.2589)
25	13619	1.87	(193.121, 2.935)	133.903	(21.39, 4.9915)	(364.387, -9.95754)
26	13245	1.87	(185.88, 3.06)	126.72	(23.8818, 5.0538)	(347.27, -11.2407)
27	13230	1.87	(169.531, 2.856)	111.012	(23.8818, 5.0538)	(314.599, -10.4226)
28	9138	1.87	(192.209, 5.674)	139.89	(12.6677, 4.77344)	(371.116, -9.72478)
29	425	1.87	(182.321, 3.321)	124.696	(21.1879, 4.98645)	(342.82, -11.2424)
30	13238	1.88	(174.665, 3.013)	116.388	(23.8818, 5.0538)	(324.816, -11.0522)
31	13611	1.88	(183.579, 3.259)	124.717	(21.39, 4.9915)	(345.143, -11.252)
32	9131	1.88	(172.737, 6.03)	123.926	(12.6677, 4.77344)	(331.919, -11.1469)
33	13298	1.88	(196.554, 7.513)	147.594	(6.4568, 4.61817)	(385.951, -9.1109)
34	13308	1.88	(185.347, 7.733)	139.283	(6.4568, 4.61817)	(363.393, -9.99193)
35	13283	1.88	(168.129, 8.011)	121.834	(6.4568, 4.61817)	(328.712, -11.1042)
36	13221	1.88	(167.823, 2.778)	108.286	(23.8818, 5.0538)	(311.21, -10.1121)
37	13612	1.88	(177.304, 3.235)	119.883	(21.39, 4.9915)	(332.579, -11.1557)
38	13172	1.88	(188.091, 3.065)	123.386	(28.7305, 5.17501)	(346.832, -11.2589)
39	13225	1.89	(207.326, 2.392)	138.87	(23.8818, 5.0538)	(390.456, -8.56713)
40	13282	1.89	(174.653, 8.045)	128.813	(6.4568, 4.61817)	(341.784, -11.2381)
41	13217	1.89	(193.646, 2.752)	127.276	(23.8818, 5.0538)	(362.95, -10.0073)
42	9129	1.89	(193.73, 5.645)	139.456	(12.6677, 4.77344)	(374.174, -9.60587)
43	13163	1.89	(187.248, 3.063)	120.979	(28.7305, 5.17501)	(345.143, -11.252)
44	13621	1.89	(178.404, 3.242)	122.121	(21.39, 4.9915)	(334.78, -11.1851)
45	13307	1.89	(194.825, 7.55)	146.382	(6.4568, 4.61817)	(382.473, -9.2571)
46	13309	1.89	(177.387, 8.045)	133.16	(6.4568, 4.61817)	(347.27, -11.2407)
47	13610	1.89	(193.109, 2.935)	133.101	(21.39, 4.9915)	(364.363, -9.95838)
48	489	1.89	(179.761, 5.009)	126.626	(15.9262, 4.8549)	(342.82, -11.2424)
49	4585	1.89	(192.529, 2.783)	128.185	(25.2831, 5.08883)	(359.295, -10.1337)
50	13628	1.89	(192.626, 2.944)	134.778	(21.39, 4.9915)	(363.393, -9.99193)
51	13284	1.90	(163.141, 7.936)	118.287	(6.4568, 4.61817)	(318.745, -10.8026)
52	13164	1.90	(180.973, 3.039)	116.326	(28.7305, 5.17501)	(332.579, -11.1557)

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53	13302	1.90	(166.184, 7.998)	123.634	(6.4568, 4.61817)	(324.816, -11.0522)
54	13171	1.90	(196.789, 2.739)	129.824	(28.7305, 5.17501)	(364.387, -9.95754)
55	9002	1.90	(187.38, 3.034)	123.826	(25.9312, 5.10503)	(348.231, -11.1378)
56	13294	1.90	(161.047, 7.841)	117.979	(6.4568, 4.61817)	(314.599, -10.4226)
57	13684	1.90	(178.942, 6.877)	131.194	(10.1128, 4.70957)	(346.832, -11.2589)
58	9140	1.90	(173.554, 6.035)	127.656	(12.6677, 4.77344)	(333.556, -11.1687)
59	9011	1.90	(187.646, 3.02)	126.166	(25.9312, 5.10503)	(348.769, -11.0802)
60	9147	1.90	(190.618, 5.702)	139.942	(12.6677, 4.77344)	(367.916, -9.83547)
61	4586	1.90	(180.304, 3.046)	119.433	(25.2831, 5.08883)	(334.697, -11.184)
62	13613	1.90	(172.242, 3.201)	115.893	(21.39, 4.9915)	(322.449, -11.0207)
63	13683	1.90	(187.619, 6.552)	138.147	(10.1128, 4.70957)	(364.387, -9.95754)
64	13173	1.90	(182.073, 3.046)	118.751	(28.7305, 5.17501)	(334.78, -11.1851)
65	9010	1.91	(198.737, 2.681)	134.082	(25.9312, 5.10503)	(371.116, -9.72478)
66	9121	1.91	(179.811, 6.057)	126.762	(12.6677, 4.77344)	(346.091, -11.2559)
67	17780	1.91	(192.535, 2.757)	131.378	(22.2758, 5.01365)	(362.332, -10.0286)
68	13618	1.91	(203.855, 2.723)	143.185	(21.39, 4.9915)	(385.951, -9.1109)
69	17781	1.91	(185.577, 3.033)	126.484	(22.2758, 5.01365)	(348.286, -11.1319)
70	13627	1.91	(202.123, 2.76)	141.357	(21.39, 4.9915)	(382.473, -9.2571)
71	417	1.91	(170.982, 3.243)	113.764	(21.1879, 4.98645)	(320.13, -10.9295)
72	9122	1.91	(171.111, 6.019)	120.371	(12.6677, 4.77344)	(328.664, -11.1035)
73	433	1.91	(196.055, 2.947)	137.901	(21.1879, 4.98645)	(370.479, -9.74678)
74	4594	1.91	(191.125, 2.814)	129.199	(25.2831, 5.08883)	(356.471, -10.2552)
75	13629	1.91	(184.64, 3.256)	128.326	(21.39, 4.9915)	(347.27, -11.2407)
76	17772	1.91	(184.362, 3.064)	124.294	(22.2758, 5.01365)	(345.84, -11.2548)
77	13246	1.91	(180.082, 3.049)	122.683	(23.8818, 5.0538)	(335.658, -11.1968)
78	9003	1.91	(179.241, 3.037)	118.016	(25.9312, 5.10503)	(331.919, -11.1469)
79	13222	1.91	(164.56, 2.63)	105.859	(23.8818, 5.0538)	(304.734, -9.51878)
80	17771	1.91	(191.801, 2.77)	130.496	(22.2758, 5.01365)	(360.858, -10.0796)
81	4841	1.91	(190.722, 2.891)	130.78	(21.6659, 4.9984)	(359.295, -10.1337)
82	13675	1.92	(178.099, 6.876)	129.159	(10.1128, 4.70957)	(345.143, -11.252)
83	9203	1.92	(175.353, 8.221)	137.634	(0.908667, 4.36043)	(348.769, -11.0802)
84	13162	1.92	(196.777, 2.74)	128.165	(28.7305, 5.17501)	(364.363, -9.95838)
85	9132	1.92	(166.583, 5.964)	118.672	(12.6677, 4.77344)	(319.611, -10.8819)
86	9194	1.92	(175.089, 8.235)	134.109	(0.908667, 4.36043)	(348.231, -11.1378)
87	17773	1.92	(179.259, 3.049)	120.401	(22.2758, 5.01365)	(335.62, -11.1963)
88	9202	1.92	(186.414, 7.882)	145.362	(0.908667, 4.36043)	(371.116, -9.72478)
89	13289	1.92	(198.774, 7.377)	147.897	(6.4568, 4.61817)	(390.456, -8.56713)
90	4577	1.92	(179.419, 3.04)	116.426	(25.2831, 5.08883)	(332.925, -11.1603)
91	13685	1.92	(172.928, 6.859)	126.524	(10.1128, 4.70957)	(334.78, -11.1851)
92	4850	1.92	(189.318, 2.921)	131.214	(21.6659, 4.9984)	(356.471, -10.2552)
93	13165	1.92	(175.911, 3.005)	113.111	(28.7305, 5.17501)	(322.449, -11.0207)
94	13556	1.92	(186.814, 3.065)	125.47	(26.1815, 5.11129)	(346.832, -11.2589)
95	169	1.92	(184.161, 3.061)	123.234	(24.8831, 5.07883)	(342.82, -11.2424)
96	13180	1.92	(196.294, 2.748)	133.143	(28.7305, 5.17501)	(363.393, -9.99193)
97	497	1.92	(193.483, 4.635)	141.696	(15.9262, 4.8549)	(370.479, -9.74678)
98	13676	1.92	(171.828, 6.852)	125.59	(10.1128, 4.70957)	(332.579, -11.1557)
99	4842	1.92	(178.496, 3.153)	122.779	(21.6659, 4.9984)	(334.697, -11.184)
100	13231	1.92	(166.139, 2.701)	108.448	(23.8818, 5.0538)	(307.868, -9.80589)

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101	4905	1.92	(188.595, 4.288)	132.606	(17.3104, 4.88951)	(359.295, -10.1337)

Slices of Slip Surface: Optimized

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	21.01537	0.348586	-68.054331	403.54203	0	600
2	Optimized	23.10565	-0.40867035	-23.544473	566.0878	0	204.74
3	Optimized	24.25565	-0.82528725	0.94445945	607.67793	0	202.49
4	Optimized	24.72443	-0.995115	10.926938	628.40446	0	201.57
5	Optimized	25.455585	-1.2599945	26.49631	661.35024	0	200.14
6	Optimized	27.881155	-2.13872	78.148192	770.72137	0	195.39
7	Optimized	33.157575	-4.050238	190.5077	1000.2696	0	185.05
8	Optimized	38.322575	-5.5513935	277.39564	1211.7913	0	174.93
9	Optimized	45.31497	-6.795768	345.88149	1373.414	0	174.13
10	Optimized	51.68997	-7.93027	408.32429	1519.4055	0	178.14
11	Optimized	59.922335	-9.3953105	488.93931	1726.7304	0	183.31
12	Optimized	67.947335	-10.92788	574.03973	1925.2045	0	188.35
13	Optimized	70.551955	-11.62139	613.89843	2011.6242	0	189.99
14	Optimized	76.851955	-13.298835	710.32092	2208.0032	0	233.2
15	Optimized	83.693935	-15.12059	815.01329	2473.7257	0	253.63
16	Optimized	87.913935	-16.42861	891.10788	2709.5557	0	267.88
17	Optimized	97.04695	-19.606855	1077.4662	3291.7962	0	301.87
18	Optimized	105.30695	-22.481305	1245.9839	3814.125	0	325.8
19	Optimized	108.9438	-23.74692	1320.1881	4041.5033	0	338.95
20	Optimized	111.4638	-24.650065	1373.2416	4162.4139	0	348.3
21	Optimized	114.155	-25.85144	1444.6702	4286.5083	0	360.42
22	Optimized	119.155	-28.083485	1577.3998	4499.9416	0	380.17
23	Optimized	123.39505	-29.976285	1689.9474	4630.8344	0	394.44
24	Optimized	125.87505	-31.163455	1760.8005	4628.0821	0	403.51
25	Optimized	130.72245	-33.803665	1919.1925	4741.4126	0	424.11
26	Optimized	136.596	-37.002795	2111.0939	4889.5872	0	424.99
27	Optimized	140.28355	-38.692455	2211.6964	5032.5585	0	438.57
28	Optimized	147.37945	-41.33207	2367.128	5089.2003	0	459.21
29	Optimized	155.30445	-43.38547	2484.8247	5234.2665	0	474.21
30	Optimized	159.49	-43.54293	2489.1666	5120.8814	0	473.78
31	Optimized	165.27	-43.76037	2495.1905	5069.8329	0	473.2
32	Optimized	173.81	-44.081635	2503.9665	5054.7382	0	472.34
33	Optimized	183.1638	-44.43352	2513.6538	5053.1557	0	471.39
34	Optimized	191.4188	-44.798375	2525.7181	5058.5207	0	471.05
35	Optimized	199.08255	-45.217925	2549.9652	5080.2607	0	471.46
36	Optimized	209.25255	-46.03783	2606.464	5112.6018	0	474.37
37	Optimized	216.63105	-46.78376	2655.9741	5169.2357	0	477.84
38	Optimized	223.9991	-47.63994	2709.3836	5227.0229	0	482.3
39	Optimized	235.33305	-49.008365	2794.7881	5337.2167	0	489.64
40	Optimized	244.44985	-50.109105	2863.52	5304.0085	0	495.54
41	Optimized	249.06485	-50.319865	2876.6487	5310.3329	0	495.4
42	Optimized	253.9558	-49.456115	2824.2745	5028.48	0	487.11

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43	Optimized	258.5758	-48.451155	2763.396	4851.1516	0	478.06
44	Optimized	265.74	-45.67124	2573.794	4483.1744	0	453.04
45	Optimized	278.28	-40.80536	2237.0894	3892.8077	0	409.25
46	Optimized	284.6977	-38.315105	2063.4802	3587.0969	0	386.84
47	Optimized	284.9227	-38.227795	2055.5718	3571.8033	0	386.05
48	Optimized	287.8251	-37.101575	1984.4246	3413.1377	0	375.91
49	Optimized	295.6251	-33.038705	1730.9276	2957.3898	0	339.35
50	Optimized	307.11895	-26.18465	1303.2219	2122.981	0	277.66
51	Optimized	313.82865	-22.14862	1051.351	1697.3834	0	241.34
52	Optimized	317.4597	-19.319715	874.8283	1374.0669	0	215.88
53	Optimized	323.8775	-14.319715	562.82439	813.62945	0	170.88
54	Optimized	327.43585	-11.547445	389.84302	508.09352	0	150

Slices of Slip Surface: 13227

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	13227	25.0886	-0.32650985	-31.271504	482.82357	0	600
2	13227	26.5496	-0.96393785	6.5879321	562.26178	0	600
3	13227	26.97958	-1.114181	15.39909	656.72469	0	600
4	13227	28.577665	-1.8487745	59.140483	744.48379	0	194.02
5	13227	35.165	-4.7227985	229.84161	1076.5396	0	181.12
6	13227	45.31497	-9.1511875	492.8596	1579.1254	0	174.13
7	13227	51.07223	-11.663055	642.06524	1863.2354	0	177.75
8	13227	52.46226	-12.269515	678.07562	1926.0401	0	209.57
9	13227	54.754285	-13.269515	737.47681	2042.753	0	219.92
10	13227	62.779285	-15.454505	863.29555	2368.4029	0	244.31
11	13227	75.43	-18.351895	1027.5223	2739.0796	0	277.84
12	13227	85.95	-20.76129	1164.0544	3137.7151	0	305.72
13	13227	90.764255	-21.8639	1226.5425	3393.6394	0	318.48
14	13227	99.024255	-23.755685	1333.7606	3818.047	0	334.23
15	13227	109.21	-26.088525	1465.9522	4340.9762	0	360.15
16	13227	114.155	-27.22108	1530.1542	4523.8974	0	372.74
17	13227	119.155	-28.36623	1595.0501	4632.6712	0	382.72
18	13227	124.21	-29.523975	1660.6514	4667.8491	0	389.84
19	13227	134.41	-31.86008	1793.0816	4593.8798	0	404.22
20	13227	147.30795	-34.814095	1960.4613	4503.47	0	422.4
21	13227	155.23295	-36.629155	2063.3892	4451.9883	0	413.43
22	13227	159.49	-37.604145	2118.5891	4422.2537	0	420.33
23	13227	165.27	-38.92794	2193.6696	4485.5001	0	429.71
24	13227	173.81	-40.88386	2304.5001	4639.3617	0	443.56
25	13227	182.2075	-42.80714	2413.4641	4802.7215	0	457.18
26	13227	190.4625	-44.69778	2520.5639	4974.2937	0	470.56
27	13227	199.675	-46.807715	2649.4922	5165.8532	0	485.5
28	13227	209.845	-49.13695	2800.1633	5377.2912	0	502
29	13227	221.4475	-51.79427	2968.6297	5618.7699	0	520.81
30	13227	234.4825	-54.779675	3154.9075	5890.2225	0	541.95
31	13227	245.615	-57.32935	3313.9772	5959.6673	0	560.01

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32	13227	251.25785	-58.62173	3395.0689	5878.7799	0	569.6
33	13227	255.87785	-57.015555	3296.7547	5923.4072	0	555.14
34	13227	265.74	-51.95953	2966.1678	5198.298	0	509.64
35	13227	278.28	-45.53065	2531.9474	4433.4626	0	451.78
36	13227	284.6977	-42.24049	2308.435	4038.7822	0	422.16
37	13227	284.9227	-42.12514	2298.7401	4020.1043	0	421.13
38	13227	290.9351	-39.042755	2105.5157	3608.4488	0	393.38
39	13227	298.7351	-35.043925	1856.0293	3078.4706	0	357.4
40	13227	305.675	-31.48605	1634.0322	2651.9927	0	325.37
41	13227	315.825	-26.28245	1309.2948	2050.5622	0	278.54
42	13227	322.5391	-22.840325	1094.5087	1658.0907	0	247.56
43	13227	330.7891	-18.610795	830.59296	1208.0312	0	209.5
44	13227	340.542	-13.610795	518.59073	679.33247	0	164.5
45	13227	344.41355	-11.62598	394.7431	467.55026	0	150

Slices of Slip Surface: 13228

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	13228	25.0886	-0.32650985	-31.271504	483.31726	0	600
2	13228	26.5496	-0.96393785	6.5879321	562.64034	0	600
3	13228	26.97958	-1.114181	15.39909	656.91903	0	600
4	13228	28.577665	-1.8487745	59.140483	744.41935	0	194.02
5	13228	35.165	-4.7227985	229.84161	1076.3622	0	181.12
6	13228	45.31497	-9.1511875	492.8596	1578.7577	0	174.13
7	13228	51.07223	-11.663055	642.06524	1862.7606	0	177.75
8	13228	52.46226	-12.269515	678.07562	1925.5208	0	209.57
9	13228	54.754285	-13.269515	737.47681	2042.2603	0	219.92
10	13228	62.779285	-15.454505	863.29555	2368.1726	0	244.31
11	13228	75.43	-18.351895	1027.5223	2738.7701	0	277.84
12	13228	85.95	-20.76129	1164.0544	3137.2531	0	305.72
13	13228	90.764255	-21.8639	1226.5425	3393.2293	0	318.48
14	13228	99.024255	-23.755685	1333.7606	3817.5384	0	334.23
15	13228	109.21	-26.088525	1465.9522	4340.396	0	360.15
16	13228	114.155	-27.22108	1530.1542	4523.2945	0	372.74
17	13228	119.155	-28.36623	1595.0501	4632.1033	0	382.72
18	13228	124.21	-29.523975	1660.6514	4667.2595	0	389.84
19	13228	130.55	-30.976025	1742.9542	4620.5205	0	398.78
20	13228	138.27	-32.744135	1843.2081	4566.353	0	409.66
21	13228	147.30795	-34.814095	1960.4613	4502.9052	0	422.4
22	13228	155.23295	-36.629155	2063.3892	4451.4561	0	413.43
23	13228	159.49	-37.604145	2118.5891	4421.6082	0	420.33
24	13228	165.27	-38.92794	2193.6696	4485.0435	0	429.71
25	13228	173.81	-40.88386	2304.5001	4638.791	0	443.56
26	13228	182.2075	-42.80714	2413.4641	4802.1311	0	457.18
27	13228	190.4625	-44.69778	2520.5639	4973.7033	0	470.56
28	13228	199.675	-46.807715	2649.4922	5165.2782	0	485.5
29	13228	209.845	-49.13695	2800.1633	5376.7161	0	502

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30	13228	219.275	-51.296705	2937.6322	5572.8529	0	517.29
31	13228	227.965	-53.286975	3061.8049	5753.7838	0	531.38
32	13228	236.655	-55.277245	3185.9776	5934.7148	0	545.48
33	13228	245.615	-57.32935	3313.9772	5959.0336	0	560.01
34	13228	251.25785	-58.62173	3395.0689	5877.8316	0	569.6
35	13228	255.87785	-56.72307	3278.5284	5937.419	0	552.51
36	13228	265.74	-50.864035	2897.7668	5118.7915	0	499.78
37	13228	278.28	-43.4141	2399.8256	4235.7566	0	432.73
38	13228	284.6977	-39.601385	2143.7627	3780.303	0	398.41
39	13228	284.9227	-39.467715	2132.946	3759.626	0	397.21
40	13228	287.87985	-37.710895	2022.4081	3528.8029	0	381.4
41	13228	295.67985	-33.07696	1733.2844	2931.0932	0	339.69
42	13228	307.4625	-26.07696	1296.5114	2086.4575	0	276.69
43	13228	317.6125	-20.04691	920.20958	1395.9528	0	222.42
44	13228	326.02865	-15.04691	608.20806	849.05225	0	177.42
45	13228	331.8679	-11.577855	391.73992	475.80474	0	150

Slices of Slip Surface: 13236

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	13236	25.0886	-0.32650985	-31.271504	483.88689	0	600
2	13236	26.5496	-0.96393785	6.5879321	563.28929	0	600
3	13236	26.97958	-1.114181	15.39909	657.55757	0	600
4	13236	28.577665	-1.8487745	59.140483	744.32269	0	194.02
5	13236	35.165	-4.7227985	229.84161	1076.0073	0	181.12
6	13236	45.31497	-9.1511875	492.8596	1578.1142	0	174.13
7	13236	51.07223	-11.663055	642.06524	1862.0485	0	177.75
8	13236	52.46226	-12.269515	678.07562	1924.8531	0	209.57
9	13236	54.754285	-13.269515	737.47681	2041.5213	0	219.92
10	13236	62.779285	-15.732435	880.63165	2386.7594	0	246.81
11	13236	75.43	-19.18347	1079.3689	2812.6988	0	285.33
12	13236	83.742385	-21.451035	1209.9691	3130.0322	0	310.63
13	13236	87.962385	-22.602225	1276.2861	3371.7465	0	318.49
14	13236	94.3	-24.331085	1375.8749	3727.1259	0	337.12
15	13236	102.56	-26.58436	1505.6369	4186.9578	0	361.4
16	13236	109.21	-28.398435	1610.0949	4555.9443	0	380.94
17	13236	114.155	-29.747395	1687.791	4759.8853	0	395.48
18	13236	119.155	-31.111365	1766.3498	4890.0525	0	407.42
19	13236	124.21	-32.49034	1845.7606	4947.0546	0	416.54
20	13236	131.8828	-34.583435	1966.3488	4924.1393	0	430.38
21	13236	139.6028	-36.6894	2087.5886	4908.5151	0	420.84
22	13236	150.055	-39.54069	2251.7875	4887.8915	0	441.91
23	13236	159.49	-42.114495	2400.0496	4867.1843	0	460.93
24	13236	165.27	-43.69124	2490.8338	4956.2497	0	472.58
25	13236	173.81	-46.0209	2625.0399	5147.5047	0	489.79
26	13236	182.2075	-48.311685	2756.9226	5347.8923	0	506.72
27	13236	190.4625	-50.563595	2886.6464	5556.0347	0	523.36

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28	13236	199.675	-53.076705	3040.7091	5788.1995	0	541.92
29	13236	209.845	-55.851015	3219.1447	6044.6117	0	562.42
30	13236	221.4475	-59.016105	3419.2835	6337.2834	0	585.81
31	13236	234.4825	-62.57197	3641.1717	6666.341	0	612.08
32	13236	245.615	-65.608845	3830.6647	6785.3219	0	634.52
33	13236	251.25785	-67.14818	3927.1533	6729.7688	0	646.33
34	13236	255.87785	-65.2945	3813.3222	6890.4503	0	629.65
35	13236	265.74	-59.43546	3432.661	6071.2077	0	576.92
36	13236	278.28	-51.985525	2934.7199	5187.4872	0	509.87
37	13236	284.6977	-48.17281	2678.6047	4731.7088	0	475.56
38	13236	284.9227	-48.03914	2667.7952	4711.0435	0	474.35
39	13236	292.8	-43.359285	2374.8797	4097.1401	0	432.23
40	13236	302.8937	-37.362675	2000.7852	3327.458	0	378.26
41	13236	313.0437	-31.332625	1624.4535	2628.2125	0	323.99
42	13236	324.82635	-24.332625	1187.653	1835.5633	0	260.99
43	13236	333.07635	-19.43135	881.79794	1307.7887	0	216.88
44	13236	341.49255	-14.43135	569.798	776.11974	0	171.88
45	13236	346.2088	-11.62947	394.95875	476.36967	0	150

Slices of Slip Surface: 13235

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	13235	25.0886	-0.32650985	-31.271504	483.65904	0	600
2	13235	26.5496	-0.96393785	6.5879321	563.12705	0	600
3	13235	26.97958	-1.114181	15.39909	657.25218	0	600
4	13235	28.577665	-1.8487745	59.140483	744.61267	0	194.02
5	13235	35.165	-4.7227985	229.84161	1076.5396	0	181.12
6	13235	45.31497	-9.1511875	492.8596	1578.9416	0	174.13
7	13235	51.07223	-11.663055	642.06524	1863.0573	0	177.75
8	13235	52.46226	-12.269515	678.07562	1925.8917	0	209.57
9	13235	54.754285	-13.269515	737.47681	2042.5614	0	219.92
10	13235	62.779285	-15.732435	880.63165	2387.443	0	246.81
11	13235	75.43	-19.18347	1079.3689	2813.4645	0	285.33
12	13235	83.742385	-21.451035	1209.9691	3130.9911	0	310.63
13	13235	87.962385	-22.602225	1276.2861	3372.6205	0	318.49
14	13235	98.43	-25.457725	1440.7559	3958.2098	0	349.26
15	13235	109.21	-28.398435	1610.0949	4557.2842	0	380.94
16	13235	114.155	-29.747395	1687.791	4761.2777	0	395.48
17	13235	119.155	-31.111365	1766.3498	4891.5511	0	407.42
18	13235	124.21	-32.49034	1845.7606	4948.4162	0	416.54
19	13235	131.8828	-34.583435	1966.3488	4925.6256	0	430.38
20	13235	139.6028	-36.6894	2087.5886	4910.0421	0	420.84
21	13235	150.055	-39.54069	2251.7875	4889.3523	0	441.91
22	13235	159.49	-42.114495	2400.0496	4868.7815	0	460.93
23	13235	165.27	-43.69124	2490.8338	4957.7183	0	472.58
24	13235	173.81	-46.0209	2625.0399	5149.0863	0	489.79
25	13235	186.335	-49.43764	2821.7852	5453.6009	0	515.04

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26	13235	199.675	-53.076705	3040.7091	5789.9071	0	541.92
27	13235	209.845	-55.851015	3219.1447	6046.4141	0	562.42
28	13235	221.4475	-59.016105	3419.2835	6339.2077	0	585.81
29	13235	234.4825	-62.57197	3641.1717	6668.3393	0	612.08
30	13235	245.615	-65.608845	3830.6647	6787.3079	0	634.52
31	13235	251.25785	-67.14818	3927.1533	6731.646	0	646.33
32	13235	255.87785	-65.586985	3831.598	6865.8856	0	632.28
33	13235	265.74	-60.53096	3501.0133	6140.6111	0	586.78
34	13235	278.28	-54.10208	3066.7929	5375.6337	0	528.92
35	13235	284.6977	-50.81192	2843.2942	4980.7731	0	499.31
36	13235	284.9227	-50.69657	2833.5798	4962.175	0	498.27
37	13235	292.8	-46.65811	2580.7431	4423.0634	0	461.92
38	13235	307.0947	-39.32964	2123.4573	3493.6065	0	395.97
39	13235	317.2447	-34.12604	1798.7109	2881.93	0	349.13
40	13235	329.15	-28.02255	1417.8622	2207.2053	0	294.2
41	13235	339.1487	-22.89651	1098.0209	1653.9393	0	248.07
42	13235	343.9937	-20.412625	943.02939	1390.9701	0	225.71
43	13235	351.945	-16.336235	688.66572	987.74891	0	189.03
44	13235	358.60155	-12.92361	475.71559	660.12885	0	158.31
45	13235	362.3951	-10.978769	354.3655	454.3428	0	150

Slices of Slip Surface: 13226

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	13226	25.0886	-0.32650985	-31.271504	483.73499	0	600
2	13226	26.5496	-0.96393785	6.5879321	563.05494	0	600
3	13226	26.97958	-1.114181	15.39909	656.58588	0	600
4	13226	28.577665	-1.8487745	59.140483	745.25708	0	194.02
5	13226	35.165	-4.7227985	229.84161	1077.6044	0	181.12
6	13226	45.31497	-9.1511875	492.8596	1580.5963	0	174.13
7	13226	51.07223	-11.663055	642.06524	1864.8969	0	177.75
8	13226	52.46226	-12.269515	678.07562	1927.7464	0	209.57
9	13226	54.754285	-13.269515	737.47681	2044.6417	0	219.92
10	13226	62.779285	-15.454505	863.29555	2369.4006	0	244.31
11	13226	75.43	-18.351895	1027.5223	2740.24	0	277.84
12	13226	85.95	-20.76129	1164.0544	3138.9855	0	305.72
13	13226	90.764255	-21.8639	1226.5425	3395.0336	0	318.48
14	13226	99.024255	-23.755685	1333.7606	3819.6365	0	334.23
15	13226	109.21	-26.088525	1465.9522	4342.9102	0	360.15
16	13226	114.155	-27.22108	1530.1542	4525.9072	0	372.74
17	13226	119.155	-28.36623	1595.0501	4634.7532	0	382.72
18	13226	124.21	-29.523975	1660.6514	4669.8143	0	389.84
19	13226	134.41	-31.86008	1793.0816	4595.9001	0	404.22
20	13226	147.30795	-34.814095	1960.4613	4505.3525	0	422.4
21	13226	155.23295	-36.629155	2063.3892	4453.9399	0	413.43
22	13226	159.49	-37.604145	2118.5891	4423.8676	0	420.33
23	13226	165.27	-38.92794	2193.6696	4487.4405	0	429.71

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24	13226	173.81	-40.88386	2304.5001	4641.3021	0	443.56
25	13226	186.335	-43.75246	2467.014	4890.6331	0	463.87
26	13226	199.675	-46.807715	2649.4922	5168.0577	0	485.5
27	13226	209.845	-49.13695	2800.1633	5379.5915	0	502
28	13226	221.4475	-51.79427	2968.6297	5621.1628	0	520.81
29	13226	234.4825	-54.779675	3154.9075	5892.765	0	541.95
30	13226	245.615	-57.32935	3313.9772	5962.3075	0	560.01
31	13226	251.25785	-58.62173	3395.0689	5881.1508	0	569.6
32	13226	255.87785	-57.289905	3313.8584	5905.3659	0	557.61
33	13226	265.74	-52.987095	3030.2831	5267.1625	0	518.88
34	13226	278.28	-47.51595	2655.8375	4612.2664	0	469.64
35	13226	284.6977	-44.71594	2462.9068	4273.792	0	444.44
36	13226	284.9227	-44.617775	2454.3042	4257.1192	0	443.56
37	13226	292.8	-41.180945	2238.9971	3787.3411	0	412.63
38	13226	302.6374	-36.88892	1971.1462	3215.6272	0	374
39	13226	312.7874	-32.46052	1694.8186	2698.0842	0	334.14
40	13226	329.15	-25.3216	1249.3577	1899.1726	0	269.89
41	13226	342.245	-19.60831	892.83975	1291.9843	0	218.47
42	13226	351.945	-15.376245	628.75628	875.55798	0	180.39
43	13226	358.2417	-12.629015	457.32323	619.15214	0	155.66
44	13226	362.02315	-10.979188	354.38676	445.19188	0	150

Slices of Slip Surface: 13229

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	13229	25.0886	-0.32650985	-31.271504	484.72236	0	600
2	13229	26.5496	-0.96393785	6.5879321	563.93824	0	600
3	13229	26.97958	-1.114181	15.39909	657.41875	0	600
4	13229	28.577665	-1.8487745	59.140483	744.806	0	194.02
5	13229	35.165	-4.7227985	229.84161	1076.7171	0	181.12
6	13229	45.31497	-9.1511875	492.8596	1579.0335	0	174.13
7	13229	51.07223	-11.663055	642.06524	1862.998	0	177.75
8	13229	52.46226	-12.269515	678.07562	1925.8176	0	209.57
9	13229	54.754285	-13.269515	737.47681	2042.6162	0	219.92
10	13229	62.779285	-15.454505	863.29555	2368.3261	0	244.31
11	13229	75.43	-18.351895	1027.5223	2739.0022	0	277.84
12	13229	85.95	-20.76129	1164.0544	3137.4841	0	305.72
13	13229	90.764255	-21.8639	1226.5425	3393.3933	0	318.48
14	13229	95.19138	-22.877845	1284.042	3620.6982	0	324.47
15	13229	102.85713	-24.63353	1383.4796	4015.0153	0	343.98
16	13229	109.21	-26.088525	1465.9522	4340.5894	0	360.15
17	13229	114.155	-27.22108	1530.1542	4523.4955	0	372.74
18	13229	119.155	-28.36623	1595.0501	4632.4819	0	382.72
19	13229	124.21	-29.523975	1660.6514	4667.456	0	389.84
20	13229	130.55	-30.976025	1742.9542	4620.8993	0	398.78
21	13229	138.27	-32.744135	1843.2081	4566.7318	0	409.66
22	13229	147.30795	-34.814095	1960.4613	4503.2817	0	422.4

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23	13229	155.23295	-36.629155	2063.3892	4451.8109	0	413.43
24	13229	159.49	-37.604145	2118.5891	4421.931	0	420.33
25	13229	165.27	-38.92794	2193.6696	4485.2718	0	429.71
26	13229	173.81	-40.88386	2304.5001	4639.1334	0	443.56
27	13229	182.2075	-42.80714	2413.4641	4802.4854	0	457.18
28	13229	190.4625	-44.69778	2520.5639	4974.0575	0	470.56
29	13229	199.675	-46.807715	2649.4922	5165.6616	0	485.5
30	13229	209.845	-49.13695	2800.1633	5377.0995	0	502
31	13229	219.275	-51.296705	2937.6322	5573.3015	0	517.29
32	13229	227.965	-53.286975	3061.8049	5754.2325	0	531.38
33	13229	236.655	-55.277245	3185.9776	5935.1635	0	545.48
34	13229	245.615	-57.32935	3313.9772	5959.4561	0	560.01
35	13229	251.25785	-58.62173	3395.0689	5878.3057	0	569.6
36	13229	255.87785	-56.40806	3258.8211	5948.2455	0	549.67
37	13229	263.65	-51.109105	2918.6194	5196.6073	0	501.98
38	13229	272.01	-45.409355	2540.882	4522.0762	0	450.68
39	13229	280.37	-39.709605	2163.1446	3847.6439	0	399.39
40	13229	284.6977	-36.75903	1966.3948	3494.8869	0	372.83
41	13229	284.9227	-36.605625	1954.3114	3471.9383	0	371.45
42	13229	285.4055	-36.27646	1932.8833	3428.596	0	368.49
43	13229	293.2055	-30.95851	1601.0771	2757.2182	0	320.63
44	13229	303.4726	-23.95851	1164.2845	1894.8853	0	257.63
45	13229	313.6226	-17.038355	732.47119	1109.2939	0	195.35
46	13229	320.95625	-12.038355	420.47647	543.68514	0	150.35
47	13229	321.73075	-11.510325	387.52346	483.29419	0	150

Slices of Slip Surface: 13237

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	13237	25.0886	-0.32650985	-31.271504	485.32997	0	600
2	13237	26.5496	-0.96393785	6.5879321	564.64127	0	600
3	13237	26.97958	-1.114181	15.39909	658.2794	0	600
4	13237	28.577665	-1.8487745	59.140483	744.51601	0	194.02
5	13237	35.165	-4.7227985	229.84161	1076.0073	0	181.12
6	13237	45.31497	-9.1511875	492.8596	1577.9303	0	174.13
7	13237	51.07223	-11.663055	642.06524	1861.6925	0	177.75
8	13237	52.46226	-12.269515	678.07562	1924.5564	0	209.57
9	13237	54.754285	-13.269515	737.47681	2041.1655	0	219.92
10	13237	62.779285	-15.732435	880.63165	2386.4556	0	246.81
11	13237	75.43	-19.18347	1079.3689	2812.3926	0	285.33
12	13237	83.742385	-21.451035	1209.9691	3129.7925	0	310.63
13	13237	87.962385	-22.602225	1276.2861	3371.3095	0	318.49
14	13237	94.3	-24.331085	1375.8749	3726.6587	0	337.12
15	13237	102.56	-26.58436	1505.6369	4186.4906	0	361.4
16	13237	109.21	-28.398435	1610.0949	4555.37	0	380.94
17	13237	114.155	-29.747395	1687.791	4759.2885	0	395.48
18	13237	119.155	-31.111365	1766.3498	4889.4905	0	407.42

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19	13237	124.21	-32.49034	1845.7606	4946.2766	0	416.54
20	13237	131.8828	-34.583435	1966.3488	4923.582	0	430.38
21	13237	139.6028	-36.6894	2087.5886	4907.9424	0	420.84
22	13237	146.0925	-38.459745	2189.5205	4895.0744	0	433.92
23	13237	154.0175	-40.621635	2314.0551	4879.8576	0	449.9
24	13237	159.49	-42.114495	2400.0496	4866.8648	0	460.93
25	13237	165.27	-43.69124	2490.8338	4955.6849	0	472.58
26	13237	173.81	-46.0209	2625.0399	5146.9399	0	489.79
27	13237	182.2075	-48.311685	2756.9226	5347.308	0	506.72
28	13237	190.4625	-50.563595	2886.6464	5555.3335	0	523.36
29	13237	199.675	-53.076705	3040.7091	5787.5355	0	541.92
30	13237	209.845	-55.851015	3219.1447	6043.8528	0	562.42
31	13237	219.275	-58.42346	3382.2786	6281.7394	0	581.43
32	13237	227.965	-60.794035	3530.2658	6501.0002	0	598.95
33	13237	236.655	-63.16461	3678.142	6720.3721	0	616.46
34	13237	245.615	-65.608845	3830.6647	6784.4857	0	634.52
35	13237	251.25785	-67.14818	3927.1533	6728.8302	0	646.33
36	13237	255.87785	-64.97949	3793.7158	6913.6092	0	626.82
37	13237	265.74	-58.255595	3359.0495	5991.9445	0	566.3
38	13237	278.28	-49.705965	2792.4764	4978.7148	0	489.35
39	13237	284.6977	-45.33045	2501.2426	4456.7849	0	449.97
40	13237	284.9227	-45.17705	2489.1711	4433.5955	0	448.59
41	13237	291.6915	-40.562175	2200.3464	3835.8507	0	407.06
42	13237	299.4915	-35.244225	1868.5271	3150.349	0	359.2
43	13237	305.1793	-31.366335	1626.5693	2693.808	0	324.3
44	13237	314.3379	-25.12211	1236.9324	1974.6172	0	268.1
45	13237	319.9086	-21.32407	999.91583	1538.5853	0	233.92
46	13237	327.24225	-16.32407	687.91892	996.54119	0	188.92
47	13237	334.18215	-11.59253	392.65456	485.17073	0	150

Slices of Slip Surface: 13291

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	13291	6.908882	4.023693	-278.8828	-37.212781	0	600
2	13291	12.662428	1.929574	-155.75106	213.2781	0	600
3	13291	18.952245	-0.359732	-21.151166	553.05927	0	212.88
4	13291	20.9703	-1.0942445	22.035811	637.30597	0	208.92
5	13291	23.15	-1.8875905	68.683356	722.29674	0	204.65
6	13291	24.72443	-2.460635	102.3753	783.50943	0	201.57
7	13291	25.455585	-2.7267535	118.02278	816.68372	0	200.14
8	13291	27.881155	-3.60959	169.93088	926.83324	0	195.39
9	13291	35.165	-6.260693	325.80852	1243.978	0	181.12
10	13291	45.31497	-9.9549795	543.01735	1673.7372	0	174.13

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11	13291	50.61678	-11.88468	656.47825	1896.3708	0	177.46
12	13291	52.00681	-12.39061	686.21193	1950.1045	0	210.39
13	13291	54.754285	-13.39061	745.03118	2070.8157	0	221.01
14	13291	62.779285	-15.454505	863.29555	2369.6308	0	244.31
15	13291	75.43	-18.351895	1027.5223	2740.4721	0	277.84
16	13291	85.95	-20.76129	1164.0544	3139.2165	0	305.72
17	13291	90.764255	-21.8639	1226.5425	3393.8854	0	318.48
18	13291	99.024255	-23.755685	1333.7606	3820.0816	0	334.23
19	13291	109.21	-26.088525	1465.9522	4343.1036	0	360.15
20	13291	114.155	-27.22108	1530.1542	4526.1082	0	372.74
21	13291	119.155	-28.36623	1595.0501	4634.9424	0	382.72
22	13291	124.21	-29.523975	1660.6514	4670.0109	0	389.84
23	13291	134.41	-31.86008	1793.0816	4596.4051	0	404.22
24	13291	147.30795	-34.814095	1960.4613	4505.8231	0	422.4
25	13291	155.23295	-36.629155	2063.3892	4454.1174	0	413.43
26	13291	159.49	-37.604145	2118.5891	4423.8676	0	420.33
27	13291	165.27	-38.92794	2193.6696	4487.897	0	429.71
28	13291	173.81	-40.88386	2304.5001	4641.9869	0	443.56
29	13291	186.335	-43.75246	2467.014	4891.3416	0	463.87
30	13291	199.675	-46.807715	2649.4922	5168.8245	0	485.5
31	13291	209.845	-49.13695	2800.1633	5380.3583	0	502
32	13291	221.4475	-51.79427	2968.6297	5621.9854	0	520.81
33	13291	234.4825	-54.779675	3154.9075	5893.5876	0	541.95
34	13291	245.615	-57.32935	3313.9772	5963.1523	0	560.01
35	13291	251.25785	-58.62173	3395.0689	5882.0991	0	569.6
36	13291	255.87785	-57.015555	3296.7547	5912.5072	0	555.14
37	13291	265.74	-51.95953	2966.1678	5188.5761	0	509.64
38	13291	278.28	-45.53065	2531.9474	4425.089	0	451.78
39	13291	284.6977	-42.24049	2308.435	4030.9498	0	422.16
40	13291	284.9227	-42.12514	2298.7401	4012.4489	0	421.13
41	13291	290.9351	-39.042755	2105.5157	3601.4019	0	393.38
42	13291	298.7351	-35.043925	1856.0293	3072.2674	0	357.4
43	13291	305.675	-31.48605	1634.0322	2646.557	0	325.37
44	13291	315.825	-26.28245	1309.2948	2046.1786	0	278.54
45	13291	322.5391	-22.840325	1094.5087	1654.4261	0	247.56
46	13291	330.7891	-18.610795	830.59296	1205.1371	0	209.5

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47	13291	340.542	-13.610795	518.59073	677.40657	0	164.5
48	13291	344.41355	-11.62598	394.7431	465.97677	0	150

Slices of Slip Surface: 13300

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	13300	6.908882	4.023693	-278.8828	-36.155824	0	600
2	13300	12.662428	1.929574	-155.75106	214.12005	0	600
3	13300	18.952245	-0.359732	-21.151166	552.9642	0	212.88
4	13300	20.9703	-1.0942445	22.035811	637.12345	0	208.92
5	13300	23.15	-1.8875905	68.683356	722.0516	0	204.65
6	13300	24.72443	-2.460635	102.3753	783.17732	0	201.57
7	13300	25.455585	-2.7267535	118.02278	816.33141	0	200.14
8	13300	27.881155	-3.60959	169.93088	926.36757	0	195.39
9	13300	35.165	-6.260693	325.80852	1243.1593	0	181.12
10	13300	45.31497	-9.9549795	543.01735	1672.6061	0	174.13
11	13300	50.61678	-11.88468	656.47825	1895.0361	0	177.46
12	13300	52.00681	-12.39061	686.21193	1948.7473	0	210.39
13	13300	54.754285	-13.39061	745.03118	2069.4126	0	221.01
14	13300	62.779285	-15.732435	880.63165	2387.9747	0	246.81
15	13300	75.43	-19.18347	1079.3689	2814.1536	0	285.33
16	13300	83.742385	-21.451035	1209.9691	3131.4705	0	310.63
17	13300	87.962385	-22.602225	1276.2861	3373.276	0	318.49
18	13300	98.43	-25.457725	1440.7559	3959.2026	0	349.26
19	13300	109.21	-28.398435	1610.0949	4558.2413	0	380.94
20	13300	114.155	-29.747395	1687.791	4762.2723	0	395.48
21	13300	119.155	-31.111365	1766.3498	4892.4878	0	407.42
22	13300	124.21	-32.49034	1845.7606	4949.3887	0	416.54
23	13300	131.8828	-34.583435	1966.3488	4926.8332	0	430.38
24	13300	139.6028	-36.6894	2087.5886	4910.9964	0	420.84
25	13300	150.055	-39.54069	2251.7875	4890.6305	0	441.91
26	13300	159.49	-42.114495	2400.0496	4869.4204	0	460.93
27	13300	165.27	-43.69124	2490.8338	4958.848	0	472.58
28	13300	173.81	-46.0209	2625.0399	5150.5549	0	489.79
29	13300	186.335	-49.43764	2821.7852	5455.1787	0	515.04

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30	13300	199.675	-53.076705	3040.7091	5791.6146	0	541.92
31	13300	209.845	-55.851015	3219.1447	6048.1216	0	562.42
32	13300	221.4475	-59.016105	3419.2835	6340.984	0	585.81
33	13300	234.4825	-62.57197	3641.1717	6670.1896	0	612.08
34	13300	245.615	-65.608845	3830.6647	6789.2938	0	634.52
35	13300	251.25785	-67.14818	3927.1533	6733.5232	0	646.33
36	13300	255.87785	-65.2945	3813.3222	6878.4836	0	629.65
37	13300	265.74	-59.43546	3432.661	6060.5811	0	576.92
38	13300	278.28	-51.985525	2934.7199	5178.3004	0	509.87
39	13300	284.6977	-48.17281	2678.6047	4723.2687	0	475.56
40	13300	284.9227	-48.03914	2667.7952	4702.6466	0	474.35
41	13300	292.8	-43.359285	2374.8797	4089.6451	0	432.23
42	13300	302.8937	-37.362675	2000.7852	3321.0861	0	378.26
43	13300	313.0437	-31.332625	1624.4535	2623.1239	0	323.99
44	13300	324.82635	-24.332625	1187.653	1831.7314	0	260.99
45	13300	333.07635	-19.43135	881.79794	1305.0049	0	216.88
46	13300	341.49255	-14.43135	569.798	774.17658	0	171.88
47	13300	346.2088	-11.62947	394.95875	474.90163	0	150

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LWL Case.BS.LtoRThru Fabric

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 176
Last Edited By: Cox, Lane MVK
Date: 3/29/2011
Time: 9:23:38 AM
File Name: 5c(1) Typical 1.2nd SC.80%SG.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\2nd Stage Construction\80%SG,1 Layer of Fabric\Slope W\
Last Solved Date: 3/29/2011
Last Solved Time: 9:28:32 AM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

LWL Case.BS.LtoRThru Fabric

Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

SlipSurface
- Direction of movement: Left to Right
- Use Passive Mode: No
- Slip Surface Option: Block
- Critical slip surfaces saved: 100
- Optimize Critical Slip Surface Location: Yes
- Tension Crack
  - Tension Crack Option: Tension Crack Line
  - Percentage Wet: 0
  - Tension Crack Fluid Unit Weight: 62.4 pcf

LWL Case.BS.LtoRThru Fabric

FOS Distribution
- FOS Calculation Option: Constant

Restrict Block Crossing: Yes
Advanced
- Number of Slices: 30
- Optimization Tolerance: 0.01
- Minimum Slip Surface Depth: 0.1 ft
- Optimization Maximum Iterations: 2000
- Optimization Convergence Tolerance: 1e-007
- Starting Optimization Points: 8
- Ending Optimization Points: 16
- Complete Passes per Insertion: 1
- Driving Side Maximum Convex Angle: 5 °
- Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH

Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH above 0

Model: Mohr-Coulomb
Unit Weight: 108 pcf
Cohesion: 600 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH, 0 to -12

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -12 (2)
Cohesion Spatial Fn: CH, 0 to -12
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
- Piezometric Line: 1

CH, -12 to -22

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -12 to -22 (2)

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Cohesion Spatial Fn: CH, -12 to -22
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -22 to -36

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -22 to -36 (2)
Cohesion Spatial Fn: CH, -22 to -36
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -36 to -80

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -36 to -80 (2)
Cohesion Spatial Fn: CH, -36 to -80
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sand Fill

Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, 0 to -12 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -12 (2)
Cohesion Spatial Fn: CH, 0 to -12 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -12 to -22 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -12 to -22 (2)
Cohesion Spatial Fn: CH, -12 to -22 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure

Piezometric Line: 1

CH, -22 to -36 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -22 to -36 (2)
Cohesion Spatial Fn: CH, -22 to -36 SG
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Limits

Left Coordinate: (-200, -1.79) ft
Right Coordinate: (500, -4.27) ft

Slip Surface Block

Left Grid
Upper Left: (125, -15) ft
Lower Left: (174, -15) ft
Lower Right: (174, -76) ft
X Increments: 7
Y Increments: 7
Starting Angle: 115 °
Ending Angle: 135 °
Angle Increments: 7
Right Grid
Upper Left: (236, -17) ft
Lower Left: (273, -17) ft
Lower Right: (273, -76) ft
X Increments: 7
Y Increments: 7
Starting Angle: 0 °
Ending Angle: 45 °
Angle Increments: 7

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	-1.79
	-195.89	-1.8
	-169.15	-1.8

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	-146.39	-1.65
	-122.74	-1.62
	-98.28	-1.36
	-85.7	-0.94
	-66.38	-0.23
	-63	0
	-52.15	0.5
	-38.25	0.23
	-36.18	0.46
	194.59	-4.39
	214.93	-4.22
	250.23	-4.22
	259.47	-4.16
	284.55	-5.22
	285	-5.3
	406	-5.3
	407.82	-4.54
	500	-4.27

Reinforcements

Reinforcement 1

Type: Fabric
Outside Point: (177, 0) ft
Inside Point: (23, 0) ft
Slip Surface Intersection: (100.79, 0) ft
Total Length: 154 ft
Reinforcement Direction: 0 °
Applied Load Option: Variable
F of S Dependent: No
Contact Cohesion: 265 psf
Contact Phi: 19 °
Interface Factor: 2
Bond Safety Factor: 1
Fabric Capacity: 27000 lbs
Fabric Safety Factor: 1
Fabric Load: 27000 lbs
Load Distribution: Even along reinf.
Load Orientation: 0
Applied Load: 27000 lbs
Fabric Load Used: 27000 lbs
Resisting Force Used: 1305.1 lbs/ft
Available Bond Length: 77.792 ft
Required Bond Length: 20.688 ft
Governing Component: Fabric

LWL Case.BS.LtoRThru Fabric

Tension Crack Line

	X (ft)	Y (ft)
	4.93	4.58
	22	0.2
	83	0.2
	112	10
	122	10
	159	1
	161	4

Spatial Functions

CH, 0 to -12

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -1.5, 75)
Data Point: (-300, -12, 75)
Data Point: (-23.63, 0, 75)
Data Point: (-23.63, -12, 75)
Data Point: (0, 0, 250)
Data Point: (0, -12, 250)
Data Point: (250.26, -4.13, 150)
Data Point: (250.26, -12, 150)
Data Point: (500, -4.27, 150)
Data Point: (500, -12, 150)

CH, -22 to -36 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -22, 350)
Data Point: (0, -36, 476)
Data Point: (40.33, -22, 290)
Data Point: (40.33, -36, 416)
Data Point: (116.73, -22, 327)
Data Point: (116.73, -36, 453)
Data Point: (250.23, -22, 240)
Data Point: (250.23, -36, 366)

CH, -12 to -22

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -12, 125)
Data Point: (-300, -22, 225)
Data Point: (-23.63, -12, 125)

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Data Point: (-23.63, -22, 225)
Data Point: (0, -12, 350)
Data Point: (0, -22, 350)
Data Point: (250.26, -12, 150)
Data Point: (250.26, -22, 240)
Data Point: (500, -12, 150)
Data Point: (500, -22, 240)

CH, -22 to -36

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -22, 225)
Data Point: (-300, -36, 365)
Data Point: (-23.63, -22, 225)
Data Point: (-23.63, -36, 365)
Data Point: (0, -22, 350)
Data Point: (0, -36, 476)
Data Point: (250.26, -22, 240)
Data Point: (250.26, -36, 366)
Data Point: (500, -22, 240)
Data Point: (500, -36, 366)

CH, -36 to -80

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (-300, -36, 365)
Data Point: (-300, -80, 805)
Data Point: (-23.63, -36, 365)
Data Point: (-23.63, -80, 805)
Data Point: (0, -36, 476)
Data Point: (0, -80, 872)
Data Point: (250.26, -36, 366)
Data Point: (250.26, -80, 762)
Data Point: (500, -36, 366)
Data Point: (500, -80, 762)

CH, 0 to -12 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -6, 100)
Data Point: (0, -6, 101)
Data Point: (178.08, -6, 111)

CH, -12 to -22 (2)

Model: Linear Interpolation

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Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -17, 100)
Data Point: (0, -17, 109)
Data Point: (178.08, -17, 100)

CH, -22 to -36 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -29, 102)
Data Point: (0, -29, 104)
Data Point: (178.08, -29, 102)

CH, -36 to -80 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -58, 105)
Data Point: (0, -58, 106)
Data Point: (178.08, -58, 105)

CH, 0 to -12 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, 0, 250)
Data Point: (0, -12, 250)
Data Point: (40.33, 0, 171)
Data Point: (40.33, -12, 171)
Data Point: (116.73, 0, 219)
Data Point: (116.73, -12, 219)
Data Point: (250.23, -4.13, 150)
Data Point: (250.23, -12, 150)

CH, -12 to -22 SG

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Cohesion (psf)
Data Point: (0, -12, 350)
Data Point: (0, -22, 350)
Data Point: (40.33, -12, 200)
Data Point: (40.33, -22, 290)
Data Point: (116.73, -12, 245)
Data Point: (116.73, -22, 335)
Data Point: (250.23, -12, 150)
Data Point: (250.23, -22, 240)

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Regions

	Material	Points	Area (ft²)
Region 1	CH, -36 to -80	31,33,60,63,34,32	30800
Region 2	CH above 0	40,9,10,11,12,13,64,17,39,57	130.54365
Region 3	Sand Fill	19,20,21,22,23,24,25,26,27,28	629.28815
Region 4	EMBANKMENT FILL CH	19,46,41,42,43,66,28	1500.8133
Region 5	EMBANKMENT FILL CH	43,44,45,65,29,66	501.84775
Region 6	CH, -22 to -36	35,33,60,59	2800
Region 7	CH, -12 to -22	37,35,59,58	2000
Region 8	CH, 0 to -12	57,58,37,2,1,3,4,5,6,7,8,40	2203.9585
Region 9	CH, -22 to -36	63,62,36,34	3496.78
Region 10	CH, -12 to -22	62,61,38,36	2497.7
Region 11	CH, 0 to -12	61,65,45,47,48,49,50,51,52,53,54,55,30,38	1282.4538
Region 12	CH, -12 to -22 SG	58,59,62,61	2502.3
Region 13	CH, -22 to -36 SG	60,59,62,63	3503.22
Region 14	CH, 0 to -12 SG	57,58,61,65,29,66,28,27,26,25,24,23,22,21,20,19,18,39	1448.4571
Region 15	EMBANKMENT FILL CH	64,17,39,56,19,46	368.6281

Points

	X (ft)	Y (ft)
Point 1	-195.89	-1.8
Point 2	-200	-1.79
Point 3	-169.15	-1.8
Point 4	-146.39	-1.65
Point 5	-122.74	-1.62
Point 6	-98.28	-1.36
Point 7	-85.7	-0.94
Point 8	-66.38	-0.23
Point 9	-52.15	0.5
Point 10	-38.25	0.23
Point 11	-36.18	0.46
Point 12	-23.63	0.86
Point 13	-19.22	0.94
Point 14	-5.71	4.75
Point 15	-0.42	4.91
Point 16	-0.22	4.77
Point 17	4.93	4.5
Point 18	24.3	-0.66
Point 19	40.33	-3.85
Point 20	53.08	-5.02
Point 21	69.13	-8.93
Point 22	90.17	-10.85
Point 23	106.69	-11.22
Point 24	116.58	-11.18
Point 25	126.69	-10.14
Point 26	142.13	-9.46
Point 27	157.98	-8.78
Point 28	178.08	-4.54
Point 29	214.93	-4.22
Point 30	500	-4.27
Point 31	-200	-80
Point 32	500	-80
Point 33	-200	-36
Point 34	500	-36
Point 35	-200	-22
Point 36	500	-22
Point 37	-200	-12
Point 38	500	-12
Point 39	22	0
Point 40	-63	0
Point 41	111.73	14
Point 42	121.73	14
Point 43	161	4
Point 44	241	2
Point 45	259.47	-4.16
Point 46	81.73	6.5
Point 47	284.55	-5.2
Point 48	300.6	-9.14
Point 49	320.9	-11
Point 50	337.4	-11.22
Point 51	347.09	-11.26
Point 52	356.8	-10.22
Point 53	372.41	-9.68
Point 54	388.59	-9
Point 55	407.82	-4.54
Point 56	30	-1.79
Point 57	0	0
Point 58	0	-12
Point 59	0	-22
Point 60	0	-36
Point 61	250.23	-12
Point 62	250.23	-22
Point 63	250.23	-36
Point 64	1.73	4.5
Point 65	250.23	-4.22
Point 66	194.59	-4.39

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	1.70	(219.199, 6.526)	101.0748	(97.0317, 10.3254)	(336.503, -11.2081)
2	10669	1.77	(219.199, 6.526)	106.396	(91.1956, 8.8664)	(346.01, -11.2555)
3	10605	1.77	(221.112, 8.044)	105.838	(94.7901, 9.76503)	(346.01, -11.2555)
4	14830	1.78	(211.172, 7.111)	99.867	(92.6738, 9.23595)	(328.319, -11.0989)

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5	14765	1.78	(225.222, 8.647)	107.968	(96.5563, 10.2066)	(352.487, -10.6819)
6	14821	1.78	(213.985, 7.13)	100.173	(92.6738, 9.23595)	(333.963, -11.1742)
7	14829	1.79	(223.159, 7.007)	108.247	(92.6738, 9.23595)	(352.487, -10.6819)
8	10093	1.79	(224.109, 10.403)	104.175	(100.375, 11.1613)	(346.01, -11.2555)
9	10157	1.79	(222.42, 9.077)	104.965	(97.2347, 10.3762)	(346.01, -11.2555)
10	10661	1.79	(210.633, 6.488)	98.857	(91.1956, 8.8664)	(328.82, -11.1056)
11	10670	1.79	(207.803, 6.469)	98.539	(91.1956, 8.8664)	(323.143, -11.0299)
12	10541	1.79	(222.966, 9.507)	105.324	(98.2522, 10.6305)	(346.01, -11.2555)
13	14766	1.79	(213.254, 8.751)	99.264	(96.5563, 10.2066)	(328.319, -11.0989)
14	14757	1.79	(216.064, 8.77)	99.602	(96.5563, 10.2066)	(333.963, -11.1742)
15	10221	1.79	(220.666, 7.691)	105.114	(93.9551, 9.55627)	(346.01, -11.2555)
16	10597	1.79	(212.554, 8.007)	98.078	(94.7901, 9.76503)	(328.82, -11.1056)
17	10733	1.79	(217.213, 4.94)	107.006	(87.4418, 7.92796)	(346.01, -11.2555)
18	10606	1.79	(209.727, 7.988)	97.944	(94.7901, 9.76503)	(323.143, -11.0299)
19	10085	1.79	(215.566, 10.366)	96.226	(100.375, 11.1613)	(328.82, -11.1056)
20	10149	1.79	(213.868, 9.039)	96.677	(97.2347, 10.3762)	(328.82, -11.1056)
21	5997	1.79	(218.559, 8.081)	103.481	(94.8911, 9.79028)	(340.77, -11.2339)
22	10734	1.80	(205.808, 4.884)	99.035	(87.4418, 7.92796)	(323.143, -11.0299)
23	5933	1.80	(220.117, 9.309)	102.966	(97.7971, 10.5168)	(340.77, -11.2339)
24	10678	1.80	(214.352, 6.513)	104.765	(91.1956, 8.8664)	(336.278, -11.205)
25	10677	1.80	(229.223, 6.184)	115.443	(91.1956, 8.8664)	(366.349, -9.88968)
26	15277	1.80	(222.018, 6.096)	109.504	(90.5172, 8.69681)	(352.487, -10.6819)
27	14822	1.80	(204.898, 6.97)	93.994	(92.6738, 9.23595)	(315.805, -10.5332)
28	14838	1.80	(217.745, 7.146)	106.83	(92.6738, 9.23595)	(341.513, -11.237)
29	10613	1.80	(231.117, 7.703)	114.877	(94.7901, 9.76503)	(366.349, -9.88968)
30	10614	1.80	(216.27, 8.032)	104.277	(94.7901, 9.76503)	(336.278, -11.205)
31	10158	1.80	(211.043, 9.02)	96.915	(97.2347, 10.3762)	(323.143, -11.0299)
32	10222	1.80	(209.279, 7.635)	97.042	(93.9551, 9.55627)	(323.143, -11.0299)
33	10213	1.80	(212.107, 7.654)	97.171	(93.9551, 9.55627)	(328.82, -11.1056)
34	14701	1.80	(227.212, 10.217)	106.998	(100.274, 11.136)	(352.487, -10.6819)
35	15341	1.80	(219.726, 4.256)	110.193	(86.1605, 7.60763)	(352.487, -10.6819)
36	15278	1.80	(210.022, 6.2)	101.584	(90.5172, 8.69681)	(328.319, -11.0989)
37	10029	1.80	(225.746, 11.681)	103.96	(103.4, 11.9175)	(346.01, -11.2555)
38	15342	1.80	(207.713, 4.36)	102.244	(86.1605, 7.60763)	(328.319, -11.0989)
39	15286	1.80	(216.599, 6.235)	107.649	(90.5172, 8.69681)	(341.513, -11.237)
40	15350	1.81	(214.296, 4.394)	108.392	(86.1605, 7.60763)	(341.513, -11.237)
41	14702	1.81	(215.262, 10.322)	98.717	(100.274, 11.136)	(328.319, -11.0989)
42	10533	1.81	(214.417, 9.469)	97.56	(98.2522, 10.6305)	(328.82, -11.1056)
43	6445	1.81	(217.362, 7.135)	104.539	(92.6495, 9.22988)	(340.77, -11.2339)
44	10542	1.81	(211.593, 9.45)	97.399	(98.2522, 10.6305)	(323.143, -11.0299)
45	10742	1.81	(212.362, 4.928)	105.325	(87.4418, 7.92796)	(336.278, -11.205)
46	14774	1.81	(219.82, 8.786)	106.934	(96.5563, 10.2066)	(341.513, -11.237)
47	14758	1.81	(206.983, 8.61)	93.323	(96.5563, 10.2066)	(315.805, -10.5332)
48	6509	1.81	(215.587, 5.722)	105.119	(89.3062, 8.39405)	(340.77, -11.2339)
49	14245	1.81	(219.329, 11.321)	97.597	(102.595, 11.7163)	(333.963, -11.1742)
50	10094	1.81	(212.744, 10.347)	96.377	(100.375, 11.1613)	(323.143, -11.0299)
51	6061	1.81	(216.949, 6.807)	103.805	(91.874, 9.03599)	(340.77, -11.2339)
52	5869	1.81	(221.635, 10.498)	102.595	(100.612, 11.2204)	(340.77, -11.2339)

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53	14253	1.81	(228.461, 11.198)	105.867	(102.595, 11.7163)	(352.487, -10.6819)
54	10725	1.81	(208.64, 4.903)	99.405	(87.4418, 7.92796)	(328.82, -11.1056)
55	10021	1.81	(217.212, 11.644)	95.797	(103.4, 11.9175)	(328.82, -11.1056)
56	14318	1.81	(214.673, 9.862)	97.681	(99.187, 10.8643)	(328.319, -11.0989)
57	11117	1.81	(218.144, 5.685)	107.569	(89.2052, 8.36879)	(346.01, -11.2555)
58	10662	1.81	(201.777, 6.24)	92.751	(91.1956, 8.8664)	(311.192, -10.1105)
59	15213	1.81	(224.228, 7.858)	108.679	(94.6891, 9.73978)	(352.487, -10.6819)
60	10549	1.81	(232.951, 9.165)	114.352	(98.2522, 10.6305)	(366.349, -9.88968)
61	14309	1.81	(217.481, 9.881)	98.049	(99.187, 10.8643)	(333.963, -11.1742)
62	14693	1.81	(218.069, 10.34)	99.084	(100.274, 11.136)	(333.963, -11.1742)
63	10598	1.81	(203.699, 7.758)	92.235	(94.7901, 9.76503)	(311.192, -10.1105)
64	5989	1.81	(210.047, 8.032)	95.438	(94.8911, 9.79028)	(323.676, -11.037)
65	14317	1.81	(226.629, 9.758)	106.395	(99.187, 10.8643)	(352.487, -10.6819)
66	5925	1.81	(211.612, 9.26)	94.984	(97.7971, 10.5168)	(323.676, -11.037)
67	10150	1.81	(205.015, 8.791)	90.432	(97.2347, 10.3762)	(311.192, -10.1105)
68	15285	1.82	(231.692, 5.849)	117.965	(90.5172, 8.69681)	(372.044, -9.69267)
69	15214	1.82	(212.25, 7.962)	100.986	(94.6891, 9.73978)	(328.319, -11.0989)
70	15222	1.82	(218.82, 7.997)	107.236	(94.6891, 9.73978)	(341.513, -11.237)
71	10550	1.82	(218.129, 9.494)	103.779	(98.2522, 10.6305)	(336.278, -11.205)
72	10741	1.82	(227.257, 4.599)	116.059	(87.4418, 7.92796)	(366.349, -9.88968)
73	10214	1.82	(203.251, 7.405)	90.945	(93.9551, 9.55627)	(311.192, -10.1105)
74	14773	1.82	(234.87, 8.4)	117.043	(96.5563, 10.2066)	(372.044, -9.69267)
75	11181	1.82	(216.01, 3.975)	108.246	(85.1565, 7.35664)	(346.01, -11.2555)
76	6381	1.82	(219.092, 8.502)	104.025	(95.8877, 10.0394)	(340.77, -11.2339)
77	11125	1.82	(228.179, 5.344)	116.385	(89.2052, 8.36879)	(366.349, -9.88968)
78	6453	1.82	(227.165, 6.848)	113.587	(92.6495, 9.22988)	(360.654, -10.0867)
79	14310	1.82	(208.405, 9.721)	91.69	(99.187, 10.8643)	(315.805, -10.5332)
80	14837	1.82	(232.824, 6.76)	117.146	(92.6738, 9.23595)	(372.044, -9.69267)
81	6517	1.82	(225.406, 5.435)	113.933	(89.3062, 8.39405)	(360.654, -10.0867)
82	14254	1.82	(216.524, 11.302)	97.2	(102.595, 11.7163)	(328.319, -11.0989)
83	10477	1.82	(224.774, 10.923)	104.849	(101.605, 11.4688)	(346.01, -11.2555)
84	11118	1.82	(206.743, 5.629)	99.975	(89.2052, 8.36879)	(323.143, -11.0299)
85	10165	1.82	(232.41, 8.735)	114.419	(97.2347, 10.3762)	(366.349, -9.88968)
86	11126	1.82	(213.295, 5.672)	106.179	(89.2052, 8.36879)	(336.278, -11.205)
87	10596	1.82	(229.409, 7.733)	109.294	(94.7901, 9.76503)	(362.901, -10.009)
88	6005	1.82	(228.35, 7.795)	112.755	(94.8911, 9.79028)	(360.654, -10.0867)
89	10086	1.82	(206.715, 10.117)	89.965	(100.375, 11.1613)	(311.192, -10.1105)
90	15269	1.82	(212.837, 6.219)	102.164	(90.5172, 8.69681)	(333.963, -11.1742)
91	14710	1.82	(221.821, 10.356)	105.491	(100.274, 11.136)	(341.513, -11.237)
92	10030	1.82	(214.392, 11.625)	96.369	(103.4, 11.9175)	(323.143, -11.0299)
93	14831	1.82	(203.541, 6.908)	94.743	(92.6738, 9.23595)	(313.12, -10.2872)
94	11053	1.82	(220.213, 7.332)	106.948	(93.1046, 9.34365)	(346.01, -11.2555)
95	11189	1.82	(226.065, 3.633)	117.065	(85.1565, 7.35664)	(366.349, -9.88968)
96	5941	1.82	(229.892, 9.022)	112.298	(97.7971, 10.5168)	(360.654, -10.0867)
97	10726	1.82	(199.785, 4.654)	93.758	(87.4418, 7.92796)	(311.192, -10.1105)
98	15349	1.83	(229.417, 4.008)	118.662	(86.1605, 7.60763)	(372.044, -9.69267)
99	19438	1.83	(213.069, 6.587)	103.034	(91.3925, 8.91562)	(333.495, -11.1679)
100	11190	1.83	(211.157, 3.962)	106.803	(85.1565, 7.35664)	(336.278, -11.205)

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101	11062	1.83	(215.369, 7.32)	105.705	(93.1046, 9.34365)	(336.278, -11.205)

Slices of Slip Surface: Optimized

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	99.8467	1.2418835	-227.17774	654.62423	0	600
2	Optimized	103.3125	-3.313362	52.520617	1278.5444	0	600
3	Optimized	105.52105	-6.216152	230.75545	1547.0702	759.97467	0
4	Optimized	108.0543	-9.73705	447.13669	1887.0396	831.32835	0
5	Optimized	109.29115	-11.60527	562.09824	2702.9174	0	214.33
6	Optimized	110.64125	-13.64459	687.58673	2867.6699	0	256.21
7	Optimized	113.9514	-18.64459	995.24278	3350.8168	0	303.16
8	Optimized	116.3764	-22.30756	1220.6241	3758.8216	0	329.6
9	Optimized	118.45565	-25.44831	1413.8842	3979.7775	0	356.91
10	Optimized	121.03065	-29.064885	1636.1807	4443.8847	0	387.78
11	Optimized	124.21	-32.626315	1854.2057	4689.489	0	417.76
12	Optimized	126.95585	-35.70218	2042.5689	4947.3026	0	443.66
13	Optimized	128.5293	-37.46472	2150.4933	5043.4018	0	432.69
14	Optimized	132.91015	-40.92934	2360.983	5422.1883	0	461.94
15	Optimized	139.10345	-44.95958	2604.2982	5642.0416	0	495.49
16	Optimized	147.172	-48.74788	2830.0701	5906.9287	0	526.04
17	Optimized	155.05025	-50.525445	2930.7306	6008.5695	0	538.58
18	Optimized	159.49	-50.555155	2926.7222	5878.3445	0	536.89
19	Optimized	165.27	-50.59384	2921.5974	5801.8609	0	534.7
20	Optimized	173.81	-50.650995	2913.9863	5755.1406	0	531.46
21	Optimized	182.2075	-50.70719	2906.4158	5725.008	0	528.28
22	Optimized	190.4625	-50.762435	2899.0265	5706.7164	0	525.15
23	Optimized	194.70315	-50.790815	2895.4578	5697.4895	0	523.54
24	Optimized	199.24045	-51.10642	2917.4804	5689.5377	0	524.38
25	Optimized	208.0887	-51.73612	2961.4455	5729.7827	0	526.16
26	Optimized	213.7214	-52.184665	2992.3578	5743.2578	0	527.72
27	Optimized	218.9301	-52.76086	3028.9511	5788.5516	0	530.62
28	Optimized	227.44765	-53.808	3094.2988	5863.3265	0	536.3
29	Optimized	236.48255	-55.01728	3169.7748	5963.5955	0	543.21
30	Optimized	244.2698	-56.059565	3234.8186	5934.3151	0	549.17
31	Optimized	248.8848	-56.30936	3250.3646	5906.8089	0	549.39
32	Optimized	251.90485	-55.887625	3224.8021	5745.6294	0	544.99
33	Optimized	256.52485	-54.589705	3145.6603	5526.1816	0	533.31

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34	Optimized	262.7652	-52.335155	2997.4254	5153.8764	0	513.02
35	Optimized	269.3556	-49.95413	2831.4568	4866.4637	0	491.59
36	Optimized	278.6004	-46.309	2579.6122	4449.2386	0	458.78
37	Optimized	284.6977	-43.793445	2405.337	4145.1795	0	436.14
38	Optimized	284.9227	-43.700615	2397.0639	4129.343	0	435.31
39	Optimized	286.75235	-42.94576	2349.1076	4024.8184	0	428.51
40	Optimized	294.55235	-38.999355	2102.847	3542.1248	0	392.99
41	Optimized	300.9881	-35.569055	1888.7799	3093.4698	0	362.12
42	Optimized	306.25715	-32.445305	1693.8615	2754.9542	0	334.01
43	Optimized	316.01905	-26.61152	1329.8172	2088.8585	0	281.5
44	Optimized	322.0769	-22.991315	1103.9547	1679.4363	0	248.92
45	Optimized	329.4051	-17.144	739.08673	1094.5068	0	196.3
46	Optimized	336.0299	-11.604025	393.37174	497.78378	0	150

Slices of Slip Surface: 10669

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	10669	93.587825	0.3259965	-161.82535	674.81688	0	600
2	10669	96.803285	-3.2272785	55.688568	1178.3644	0	600
3	10669	100.80386	-7.6481665	326.29881	1685.08	784.49268	0
4	10669	104.3616	-11.579665	566.96184	2631.2865	0	211.23
5	10669	105.716	-13.07634	658.57297	2772.3442	0	248.2
6	10669	109.21	-16.93743	894.93482	3227.7669	0	285.01
7	10669	112.76065	-20.86109	1135.1182	3680.9716	0	322.41
8	10669	115.18565	-23.54086	1299.1425	3934.3603	0	340.12
9	10669	119.155	-27.927245	1567.6211	4339.6214	0	378.76
10	10669	124.21	-33.513315	1909.5915	4791.0238	0	425.75
11	10669	132.845	-43.0555	2493.6963	5469.2346	0	481.11
12	10669	140.565	-49.992235	2916.4385	6364.5103	0	540.15
13	10669	146.0925	-50.46938	2938.9761	6239.3841	0	542.01
14	10669	154.0175	-51.153475	2971.285	6070.2968	0	544.68
15	10669	159.49	-51.625865	2993.5363	5957.9755	0	546.53
16	10669	165.27	-52.124805	3017.1174	5928.5388	0	548.48

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17	10669	173.81	-52.86199	3051.8827	5952.3379	0	551.36
18	10669	182.2075	-53.586875	3086.1612	5992.2532	0	554.19
19	10669	190.4625	-54.29946	3119.713	6042.8222	0	556.98
20	10669	199.675	-55.094695	3166.5919	6099.3434	0	560.09
21	10669	209.845	-55.972585	3226.7419	6161.6486	0	563.52
22	10669	219.275	-56.786595	3280.2068	6219.6784	0	566.7
23	10669	227.965	-57.536725	3326.9833	6273.2192	0	569.63
24	10669	236.655	-58.286855	3373.7599	6326.76	0	572.56
25	10669	243.7857	-58.90239	3412.1063	6272.0097	0	574.97
26	10669	248.4007	-58.26192	3372.3183	6286.3422	0	567.17
27	10669	254.85	-55.156105	3180.3019	5698.5285	0	538.4
28	10669	263.65	-50.91825	2906.7023	5039.3904	0	500.26
29	10669	272.01	-46.892285	2633.394	4562.9331	0	464.03
30	10669	280.37	-42.86632	2360.1936	4086.5835	0	427.8
31	10669	284.6977	-40.78221	2217.4479	3836.6061	0	409.04
32	10669	284.9227	-40.673855	2208.1723	3818.9475	0	408.06
33	10669	289.81405	-38.318315	2060.3854	3503.5349	0	386.86
34	10669	297.61405	-34.562035	1825.9457	3006.3307	0	353.06
35	10669	305.675	-30.68008	1583.7524	2536.8265	0	318.12
36	10669	315.825	-25.792095	1278.6657	1974.9415	0	274.13
37	10669	322.2997	-22.67405	1084.1432	1621.21	0	246.07
38	10669	327.12455	-20.35053	939.14756	1375.9855	0	225.15
39	10669	333.97485	-17.05159	733.30214	1029.6085	0	195.46
40	10669	340.9323	-13.70106	524.22545	679.38241	0	165.31
41	10669	345.23755	-11.62777	394.8544	460.49154	0	150

Slices of Slip Surface: 10605

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	10605	97.485715	0.8891995	-202.07031	679.93343	0	600
2	10605	100.8976	-3.281413	53.694242	1261.2047	0	600
3	10605	104.50175	-7.6870725	323.88625	1722.2627	807.35303	0
4	10605	107.7098	-11.608585	564.38042	2715.2193	0	213.33
5	10605	109.88	-14.26138	727.06295	2963.357	0	261.32
6	10605	113.9704	-19.26138	1033.6951	3483.3333	0	308.73
7	10605	116.3954	-22.22566	1215.4897	3860.7556	0	328.87

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8	10605	119.155	-25.598955	1422.3982	4077.8528	0	357.81
9	10605	124.21	-31.7781	1801.2663	4580.0164	0	410.13
10	10605	127.1769	-35.404805	2023.7624	4863.0766	0	440.84
11	10605	133.3319	-42.92857	2485.1243	5387.9362	0	479.75
12	10605	140.565	-49.992235	2916.4385	6365.1469	0	540.15
13	10605	146.0925	-50.46938	2938.9761	6239.3841	0	542.01
14	10605	154.0175	-51.153475	2971.285	6070.4225	0	544.68
15	10605	159.49	-51.625865	2993.5363	5958.6353	0	546.53
16	10605	165.27	-52.124805	3017.1174	5928.5388	0	548.48
17	10605	173.81	-52.86199	3051.8827	5951.9879	0	551.36
18	10605	182.2075	-53.586875	3086.1612	5991.8911	0	554.19
19	10605	190.4625	-54.29946	3119.713	6042.4602	0	556.98
20	10605	199.675	-55.094695	3166.5919	6098.9516	0	560.09
21	10605	209.845	-55.972585	3226.7419	6161.3547	0	563.52
22	10605	219.275	-56.786595	3280.2068	6219.3344	0	566.7
23	10605	227.965	-57.536725	3326.9833	6272.8752	0	569.63
24	10605	236.655	-58.286855	3373.7599	6326.4161	0	572.56
25	10605	243.7857	-58.90239	3412.1063	6271.8308	0	574.97
26	10605	248.4007	-58.26192	3372.3183	6292.2525	0	567.17
27	10605	254.85	-55.156105	3180.3019	5703.8914	0	538.4
28	10605	263.65	-50.91825	2906.7023	5044.1324	0	500.26
29	10605	272.01	-46.892285	2633.394	4567.3517	0	464.03
30	10605	280.37	-42.86632	2360.1936	4090.4633	0	427.8
31	10605	284.6977	-40.78221	2217.4479	3840.2662	0	409.04
32	10605	284.9227	-40.673855	2208.1723	3822.6189	0	408.06
33	10605	289.81405	-38.318315	2060.3854	3506.9037	0	386.86
34	10605	297.61405	-34.562035	1825.9457	3009.1972	0	353.06
35	10605	305.675	-30.68008	1583.7524	2539.312	0	318.12
36	10605	315.825	-25.792095	1278.6657	1976.8944	0	274.13
37	10605	322.2997	-22.67405	1084.1432	1622.8192	0	246.07
38	10605	327.12455	-20.35053	939.14756	1377.3007	0	225.15
39	10605	333.97485	-17.05159	733.30214	1030.6476	0	195.46
40	10605	340.9323	-13.70106	524.22545	680.0966	0	165.31

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41	10605	345.23755	-11.62777	394.8544	460.99859	0	150

Slices of Slip Surface: 14830

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	14830	95.59372	0.549135	-178.37878	742.57492	0	600
2	14830	99.40343	-3.260581	54.353462	1292.658	0	600
3	14830	103.82665	-7.683825	324.55996	1790.6481	846.44636	0
4	14830	107.7515	-11.608645	564.32262	2746.0882	0	213.36
5	14830	109.93645	-13.79357	697.79416	2969.6514	0	257.14
6	14830	114.155	-18.01214	955.51263	3421.0846	0	297.59
7	14830	117.36145	-21.21857	1151.3817	3741.9454	0	327.52
8	14830	119.93645	-23.79357	1308.677	3975.3707	0	341.05
9	14830	124.21	-28.06714	1569.7486	4303.0871	0	376.73
10	14830	129.41645	-33.27357	1887.8286	4644.489	0	420.19
11	14830	137.13645	-40.99357	2359.3966	5177.1636	0	460.66
12	14830	144.065	-47.92214	2782.7486	5657.5856	0	519.98
13	14830	148.995	-50.11986	2913.3539	6115.7482	0	537.59
14	14830	154.985	-50.6453	2938.2999	5988.8565	0	539.69
15	14830	159.49	-51.040475	2957.0223	5896.5621	0	541.26
16	14830	165.27	-51.547495	2981.0588	5867.6326	0	543.28
17	14830	173.81	-52.29662	3016.6365	5892.5953	0	546.27
18	14830	182.2075	-53.03324	3051.5167	5933.7258	0	549.21
19	14830	190.4625	-53.75736	3085.9091	5985.4956	0	552.1
20	14830	197.98	-54.41679	3123.4044	6032.7342	0	554.73
21	14830	204.76	-55.01153	3164.1036	6075.1965	0	557.1
22	14830	211.54	-55.606265	3204.8028	6117.8057	0	559.48
23	14830	219.275	-56.28477	3248.8595	6166.5396	0	562.18
24	14830	227.965	-57.047055	3296.4328	6221.3349	0	565.22
25	14830	236.655	-57.80934	3344.0062	6276.1302	0	568.26
26	14830	245.615	-58.595305	3393.038	6169.2679	0	571.4
27	14830	251.04355	-59.071495	3423.0628	6011.298	0	573.64
28	14830	255.66355	-56.75112	3280.1862	5908.2725	0	552.76
29	14830	263.65	-51.732915	2957.559	5189.4267	0	507.6
30	14830	272.01	-46.47998	2607.7282	4573.4247	0	460.32
31	14830	280.37	-41.22704	2257.8974	3957.4227	0	413.04
32	14830	284.6977	-38.507765	2075.5147	3635.1389	0	388.57
33	14830	284.9227	-38.36639	2064.2158	3613.7742	0	387.3
34	14830	286.8444	-37.15891	1987.9992	3457.1005	0	376.43
35	14830	291.6666	-34.128925	1798.9104	3072.2086	0	349.16

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36	14830	297.6222	-30.38677	1565.463	2601.0485	0	315.48
37	14830	305.78485	-25.257845	1245.3865	1993.337	0	269.32
38	14830	315.93485	-18.880175	847.403	1272.8567	0	211.92
39	14830	323.8923	-13.880175	535.4058	724.10373	0	166.92
40	14830	327.6016	-11.54946	389.96473	473.97775	0	150

Slices of Slip Surface: 14765

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	14765	99.83604	1.156783	-221.85065	757.18503	0	600
2	14765	103.8871	-3.3198745	52.173202	1394.5621	0	600
3	14765	107.83935	-7.687358	319.51817	1833.6831	874.20351	0
4	14765	111.37515	-11.59463	558.69593	2837.8671	0	215.64
5	14765	114.155	-14.666535	746.74007	3072.5415	0	267.48
6	14765	118.68565	-19.67315	1053.2199	3545.7326	0	312.67
7	14765	121.26065	-22.51868	1227.4061	3854.3352	0	328.72
8	14765	124.21	-25.777905	1426.9177	4048.2095	0	356.13
9	14765	130.07515	-32.259225	1823.6687	4485.1885	0	410.64
10	14765	137.79515	-40.79028	2345.8765	5090.8717	0	458.55
11	14765	144.065	-47.71885	2769.9222	5585.9636	0	518.15
12	14765	151.99	-50.38258	2925.8274	6049.393	0	538.64
13	14765	159.49	-51.040475	2957.0223	5899.201	0	541.26
14	14765	165.27	-51.547495	2981.0588	5868.3325	0	543.28
15	14765	173.81	-52.29662	3016.6365	5892.1287	0	546.27
16	14765	182.2075	-53.03324	3051.5167	5933.2431	0	549.21
17	14765	190.4625	-53.75736	3085.9091	5985.0129	0	552.1
18	14765	199.675	-54.565475	3133.5923	6042.8737	0	555.32
19	14765	209.845	-55.45758	3194.6165	6106.7386	0	558.88
20	14765	219.275	-56.28477	3248.8595	6166.081	0	562.18
21	14765	227.965	-57.047055	3296.4328	6220.8764	0	565.22
22	14765	236.655	-57.80934	3344.0062	6275.6717	0	568.26
23	14765	245.615	-58.595305	3393.038	6168.8362	0	571.4
24	14765	251.04355	-59.071495	3423.0628	6010.8694	0	573.64
25	14765	255.66355	-57.30978	3315.0548	5909.4867	0	557.79
26	14765	263.65	-53.463715	3065.5573	5323.6914	0	523.17

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27	14765	272.01	-49.43775	2792.2491	4846.5874	0	486.94
28	14765	280.37	-45.41179	2518.9408	4369.4835	0	450.71
29	14765	284.6977	-43.32768	2376.2924	4119.037	0	431.95
30	14765	284.9227	-43.219325	2367.0353	4101.4742	0	430.97
31	14765	288.72845	-41.386575	2251.7907	3855.6041	0	414.48
32	14765	296.18535	-37.795525	2027.6628	3375.4509	0	382.16
33	14765	300.2569	-35.834765	1905.3479	3113.7837	0	364.51
34	14765	305.675	-33.22554	1742.5537	2809.8689	0	341.03
35	14765	315.825	-28.33756	1437.5558	2247.185	0	297.04
36	14765	324.94255	-23.946785	1163.6145	1756.454	0	257.52
37	14765	333.19255	-19.973795	915.64581	1334.8172	0	221.76
38	14765	342.245	-15.61436	643.61154	878.65374	0	182.53
39	14765	348.42015	-12.640565	458.05472	575.09998	0	155.77
40	14765	351.1188	-11.340955	376.9405	448.86566	0	150

Slices of Slip Surface: 14821

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	14821	95.59372	0.549135	-178.37878	743.91893	0	600
2	14821	99.40343	-3.260581	54.353462	1294.4063	0	600
3	14821	103.82665	-7.683825	324.55996	1794.4503	848.64158	0
4	14821	107.7515	-11.608645	564.32262	2750.6053	0	213.36
5	14821	109.93645	-13.79357	697.79416	2979.1133	0	257.14
6	14821	114.155	-18.01214	955.51263	3432.4566	0	297.59
7	14821	117.36145	-21.21857	1151.3817	3752.6683	0	327.52
8	14821	119.93645	-23.79357	1308.677	3988.3808	0	341.05
9	14821	124.21	-28.06714	1569.7486	4317.6284	0	376.73
10	14821	129.41645	-33.27357	1887.8286	4660.3095	0	420.19
11	14821	137.13645	-40.99357	2359.3966	5195.2181	0	460.66
12	14821	144.065	-47.92214	2782.7486	5676.7707	0	519.98
13	14821	151.99	-49.905645	2896.066	6032.4413	0	534.34
14	14821	159.49	-49.966375	2890.0046	5816.0345	0	531.59
15	14821	165.27	-50.013175	2885.3855	5739.6245	0	529.48
16	14821	173.81	-50.082325	2878.4771	5693.8414	0	526.34
17	14821	182.2075	-50.15032	2871.741	5664.9866	0	523.26
18	14821	190.4625	-50.21716	2865.0786	5648.0278	0	520.24
19	14821	197.98	-50.27803	2865.2454	5632.4114	0	517.48

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20	14821	204.76	-50.33293	2872.1773	5618.5476	0	515
21	14821	211.54	-50.38783	2879.1093	5604.5363	0	512.51
22	14821	219.275	-50.45046	2884.8306	5588.7695	0	509.67
23	14821	227.965	-50.520825	2889.2033	5571.1637	0	506.49
24	14821	236.655	-50.59119	2893.576	5553.5578	0	503.3
25	14821	245.615	-50.66374	2898.063	5371.6546	0	500.02
26	14821	251.04355	-50.7077	2901.1871	5168.0928	0	498.37
27	14821	255.66355	-48.88121	2789.1149	4976.5469	0	481.93
28	14821	263.2936	-45.206775	2551.1977	4412.8157	0	448.86
29	14821	270.9408	-41.524065	2301.309	3977.7195	0	415.72
30	14821	278.58805	-37.841355	2051.3025	3542.6233	0	382.57
31	14821	283.48085	-35.48512	1891.3652	3265.8272	0	361.37
32	14821	284.6977	-34.89911	1850.3489	3194.8843	0	356.09
33	14821	284.9227	-34.790755	1841.0857	3177.7261	0	355.12
34	14821	288.9	-32.875385	1720.735	2927.2247	0	337.88
35	14821	296.7	-29.1191	1486.3676	2437.6983	0	304.07
36	14821	306.0415	-24.62048	1205.6272	1891.5176	0	263.58
37	14821	316.1915	-19.7325	900.58371	1335.0414	0	219.59
38	14821	326.5741	-14.7325	588.58929	792.44717	0	174.59
39	14821	333.1056	-11.587085	392.31664	459.25179	0	150

Slices of Slip Surface: 14829

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	14829	95.59372	0.549135	-178.37878	744.59699	0	600
2	14829	99.40343	-3.260581	54.353462	1295.4792	0	600
3	14829	103.82665	-7.683825	324.55996	1793.2496	847.94835	0
4	14829	107.7515	-11.608645	564.32262	2750.0632	0	213.36
5	14829	109.93645	-13.79357	697.79416	2973.3967	0	257.14
6	14829	114.155	-18.01214	955.51263	3425.1668	0	297.59
7	14829	117.36145	-21.21857	1151.3817	3746.7865	0	327.52
8	14829	119.93645	-23.79357	1308.677	3980.2988	0	341.05
9	14829	124.21	-28.06714	1569.7486	4308.3619	0	376.73
10	14829	129.41645	-33.27357	1887.8286	4650.0651	0	420.19
11	14829	137.13645	-40.99357	2359.3966	5183.3234	0	460.66
12	14829	144.065	-47.92214	2782.7486	5664.5288	0	519.98
13	14829	151.99	-50.38258	2925.8274	6049.4761	0	538.64
14	14829	159.49	-51.040475	2957.0223	5897.2218	0	541.26
15	14829	165.27	-51.547495	2981.0588	5867.9826	0	543.28

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16	14829	173.81	-52.29662	3016.6365	5892.8286	0	546.27
17	14829	182.2075	-53.03324	3051.5167	5933.9672	0	549.21
18	14829	190.4625	-53.75736	3085.9091	5985.8576	0	552.1
19	14829	199.675	-54.565475	3133.5923	6043.6573	0	555.32
20	14829	209.845	-55.45758	3194.6165	6107.5222	0	558.88
21	14829	219.275	-56.28477	3248.8595	6166.7688	0	562.18
22	14829	227.965	-57.047055	3296.4328	6221.6788	0	565.22
23	14829	236.655	-57.80934	3344.0062	6276.4741	0	568.26
24	14829	245.615	-58.595305	3393.038	6169.5917	0	571.4
25	14829	251.04355	-59.071495	3423.0628	6011.6041	0	573.64
26	14829	255.66355	-57.30978	3315.0548	5899.3088	0	557.79
27	14829	263.65	-53.463715	3065.5573	5314.423	0	523.17
28	14829	272.01	-49.43775	2792.2491	4838.1812	0	486.94
29	14829	280.37	-45.41179	2518.9408	4361.9395	0	450.71
30	14829	284.6977	-43.32768	2376.2924	4112.0219	0	431.95
31	14829	284.9227	-43.219325	2367.0353	4094.3061	0	430.97
32	14829	288.72845	-41.386575	2251.7907	3848.7172	0	414.48
33	14829	296.18535	-37.795525	2027.6628	3369.2888	0	382.16
34	14829	300.2569	-35.834765	1905.3479	3108.0068	0	364.51
35	14829	305.675	-33.22554	1742.5537	2804.8093	0	341.03
36	14829	315.825	-28.33756	1437.5558	2243.0131	0	297.04
37	14829	324.94255	-23.946785	1163.6145	1753.2223	0	257.52
38	14829	333.19255	-19.973795	915.64581	1332.3546	0	221.76
39	14829	342.245	-15.61436	643.61154	876.88713	0	182.53
40	14829	348.42015	-12.640565	458.05472	573.94849	0	155.77
41	14829	351.1188	-11.340955	376.9405	447.91104	0	150

Slices of Slip Surface: 10093

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	10093	103.90505	1.756641	-264.625	762.80703	0	600
2	10093	108.10355	-3.375565	50.122975	1477.2664	0	600
3	10093	110.25105	-6.000653	211.10874	1668.9701	841.69662	0
4	10093	113.11255	-9.498452	425.6126	2059.387	943.26009	0
5	10093	114.82705	-11.594215	554.15202	2820.8774	0	217.8
6	10093	115.8695	-12.868515	632.28757	2896.3138	0	252.31

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7	10093	119.155	-16.884665	878.59428	3251.6349	0	287.24
8	10093	122.53485	-21.01615	1131.95	3629.8554	0	322.01
9	10093	125.01485	-24.04766	1317.8853	3832.8311	0	340.03
10	10093	130.7414	-31.04766	1747.1596	4314.37	0	399.3
11	10093	136.8964	-38.57143	2208.5819	4867.0072	0	438.97
12	10093	140.565	-41.40473	2380.5765	5434.9796	0	462.86
13	10093	146.0925	-42.32965	2431.0588	5356.1948	0	468.75
14	10093	154.0175	-43.655745	2503.3658	5254.3925	0	477.2
15	10093	159.49	-44.57146	2553.342	5189.4407	0	483.04
16	10093	165.27	-45.538635	2606.155	5207.9213	0	489.2
17	10093	173.81	-46.96764	2684.1109	5303.2008	0	498.31
18	10093	182.2075	-48.372795	2760.7688	5413.7688	0	507.27
19	10093	190.4625	-49.75411	2836.1592	5533.6049	0	516.07
20	10093	199.675	-51.295645	2929.5759	5667.3252	0	525.9
21	10093	209.845	-52.9974	3041.1031	5814.9289	0	536.74
22	10093	219.275	-54.57533	3142.16	5952.0013	0	546.8
23	10093	227.965	-56.02943	3232.9575	6078.4368	0	556.06
24	10093	236.655	-57.483535	3323.6415	6204.8722	0	565.33
25	10093	243.7857	-58.676725	3398.0133	6210.2477	0	572.94
26	10093	248.4007	-58.26192	3372.3183	6293.4838	0	567.17
27	10093	254.85	-55.156105	3180.3019	5705.0615	0	538.4
28	10093	263.65	-50.91825	2906.7023	5045.2101	0	500.26
29	10093	272.01	-46.892285	2633.394	4568.2139	0	464.03
30	10093	280.37	-42.86632	2360.1936	4091.2177	0	427.8
31	10093	284.6977	-40.78221	2217.4479	3840.8762	0	409.04
32	10093	284.9227	-40.673855	2208.1723	3823.3182	0	408.06
33	10093	289.81405	-38.318315	2060.3854	3507.5587	0	386.86
34	10093	297.61405	-34.562035	1825.9457	3009.8006	0	353.06
35	10093	305.675	-30.68008	1583.7524	2539.7558	0	318.12
36	10093	315.825	-25.792095	1278.6657	1977.1607	0	274.13
37	10093	322.2997	-22.67405	1084.1432	1623.0445	0	246.07
38	10093	327.12455	-20.35053	939.14756	1377.4322	0	225.15
39	10093	333.97485	-17.05159	733.30214	1030.7265	0	195.46
40	10093	340.9323	-13.70106	524.22545	680.0966	0	165.31
41	10093	345.23755	-11.62777	394.8544	460.95197	0	150

Slices of Slip Surface: 10157

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	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	10157	100.62668	1.2619145	-229.44976	769.00633	0	600
2	10157	104.78345	-3.3315915	51.73087	1420.9319	0	600
3	10157	108.6391	-7.5922865	312.54701	1843.8049	884.07213	0
4	10157	111.81645	-11.103405	527.47272	2434.7433	1101.1632	0
5	10157	112.26535	-11.59946	557.83405	2844.2428	0	216.19
6	10157	114.6039	-14.183715	716.01983	3035.3808	0	263.4
7	10157	119.155	-19.21296	1023.8786	3508.1255	0	308.19
8	10157	124.21	-24.799035	1365.7719	3965.419	0	347.32
9	10157	130.51805	-31.76979	1792.508	4437.0554	0	405.94
10	10157	136.67305	-38.57143	2208.9132	4925.3243	0	439.07
11	10157	140.565	-41.40473	2380.5765	5435.9249	0	462.86
12	10157	146.0925	-42.32965	2431.0588	5357.4393	0	468.75
13	10157	154.0175	-43.655745	2503.3658	5255.637	0	477.2
14	10157	159.49	-44.57146	2553.342	5190.4205	0	483.04
15	10157	165.27	-45.538635	2606.155	5209.1917	0	489.2
16	10157	173.81	-46.96764	2684.1109	5304.5867	0	498.31
17	10157	182.2075	-48.372795	2760.7688	5415.2026	0	507.27
18	10157	190.4625	-49.75411	2836.1592	5535.0386	0	516.07
19	10157	199.675	-51.295645	2929.5759	5668.7799	0	525.9
20	10157	209.845	-52.9974	3041.1031	5816.4806	0	536.74
21	10157	219.275	-54.57533	3142.16	5953.5902	0	546.8
22	10157	227.965	-56.02943	3232.9575	6080.0257	0	556.06
23	10157	236.655	-57.483535	3323.6415	6206.4612	0	565.33
24	10157	243.7857	-58.676725	3398.0133	6211.8409	0	572.94
25	10157	248.4007	-58.26192	3372.3183	6286.0959	0	567.17
26	10157	254.85	-55.156105	3180.3019	5698.236	0	538.4
27	10157	263.65	-50.91825	2906.7023	5039.0671	0	500.26
28	10157	272.01	-46.892285	2633.394	4562.7176	0	464.03
29	10157	280.37	-42.86632	2360.1936	4086.2602	0	427.8
30	10157	284.6977	-40.78221	2217.4479	3836.3011	0	409.04
31	10157	284.9227	-40.673855	2208.1723	3818.6561	0	408.06
32	10157	289.81405	-38.318315	2060.3854	3503.2542	0	386.86
			-				

33	10157	297.61405	34.562035	1825.9457	3006.029	0	353.06
34	10157	305.675	-30.68008	1583.7524	2536.5603	0	318.12
35	10157	315.825	-25.792095	1278.6657	1974.5865	0	274.13
36	10157	322.2997	-22.67405	1084.1432	1620.9203	0	246.07
37	10157	327.12455	-20.35053	939.14756	1375.5909	0	225.15
38	10157	333.97485	-17.05159	733.30214	1029.3192	0	195.46
39	10157	340.9323	-13.70106	524.22545	679.10184	0	165.31
40	10157	345.23755	-11.62777	394.8544	460.21761	0	150

Slices of Slip Surface: 10661

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	10661	93.587825	0.3259965	-161.82535	677.6638	0	600
2	10661	96.803285	-3.2272785	55.688568	1179.9945	0	600
3	10661	100.80386	-7.6481665	326.29881	1691.9432	788.45517	0
4	10661	104.3616	-11.579665	566.96184	2632.9623	0	211.23
5	10661	105.716	-13.07634	658.57297	2782.7464	0	248.2
6	10661	109.21	-16.93743	894.93482	3243.7427	0	285.01
7	10661	112.76065	-20.86109	1135.1182	3696.9221	0	322.41
8	10661	115.18565	-23.54086	1299.1425	3952.6462	0	340.12
9	10661	119.155	-27.927245	1567.6211	4361.7703	0	378.76
10	10661	124.21	-33.513315	1909.5915	4815.7798	0	425.75
11	10661	129.7675	-39.65468	2285.4794	5258.9465	0	451.85
12	10661	135.9225	-46.45632	2701.9131	5742.6418	0	510.36
13	10661	140.565	-49.86961	2908.7898	6381.5873	0	539.04
14	10661	146.0925	-49.913655	2904.261	6212.7993	0	537.01
15	10661	154.0175	-49.976805	2897.8258	5978.2326	0	534.09
16	10661	159.49	-50.02041	2893.3848	5818.6892	0	532.08
17	10661	165.27	-50.066465	2888.6671	5743.8458	0	529.95
18	10661	173.81	-50.134515	2881.7587	5698.8824	0	526.81
19	10661	182.2075	-50.201425	2874.8936	5669.9594	0	523.72
20	10661	190.4625	-50.2672	2868.1101	5652.7582	0	520.69
21	10661	197.98	-50.3271	2868.1981	5637.1369	0	517.92
22	10661	204.76	-50.381125	2875.1301	5623.1255	0	515.43
23	10661	211.54	-50.43515	2882.062	5609.1142	0	512.94
24	10661	219.275	-50.496785	2887.7104	5593.148	0	510.09

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25	10661	227.965	-50.56603	2891.968	5575.4271	0	506.89
26	10661	236.655	-50.63527	2896.3407	5557.7061	0	503.7
27	10661	243.7857	-50.69209	2899.8825	5444.3917	0	501.07
28	10661	248.4007	-49.83335	2846.3017	5354.9775	0	491.32
29	10661	254.85	-46.727535	2654.3469	4768.6978	0	462.55
30	10661	263.884	-42.376995	2373.0606	4098.0507	0	423.39
31	10661	272.712	-38.125665	2084.5417	3596.3319	0	385.13
32	10661	280.838	-34.212385	1818.9177	3140.0238	0	349.91
33	10661	284.6977	-32.35364	1691.5044	2922.915	0	333.18
34	10661	284.9227	-32.245285	1682.2227	2905.6892	0	332.21
35	10661	288.9	-30.32992	1561.9104	2655.4324	0	314.97
36	10661	296.7	-26.57364	1327.4274	2166.4836	0	281.16
37	10661	303.39865	-23.34775	1126.1834	1766.7643	0	252.13
38	10661	309.87295	-20.229885	931.62408	1412.9703	0	224.07
39	10661	317.2243	-16.68965	710.71341	1014.1791	0	192.21
40	10661	323.93125	-13.459765	509.16689	661.54097	0	163.14
41	10661	327.8911	-11.5528	390.17362	458.07926	0	150

LWL Case.EE.RtoL

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 182
Last Edited By: Cox, Lane MVK
Date: 3/31/2011
Time: 10:17:55 AM
File Name: 5c(1) Typical 1.2nd SC.80%SG.S Case.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\2nd Stage Construction\80%SG,1 Layer of Fabric\Slope W\
Last Solved Date: 3/31/2011
Last Solved Time: 10:23:56 AM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

LWL Case.EE.RtoL

Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

SlipSurface
- Direction of movement: Right to Left
- Use Passive Mode: No
- Slip Surface Option: Entry and Exit
- Critical slip surfaces saved: 100
- Optimize Critical Slip Surface Location: Yes
- Tension Crack
  - Tension Crack Option: Tension Crack Line
  - Percentage Wet: 0
  - Tension Crack Fluid Unit Weight: 62.4 pcf

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FOS Distribution
FOS Calculation Option: Constant
Advanced
Number of Slices: 30
Optimization Tolerance: 0.01
Minimum Slip Surface Depth: 0.1 ft
Optimization Maximum Iterations: 2000
Optimization Convergence Tolerance: 1e-007
Starting Optimization Points: 8
Ending Optimization Points: 16
Complete Passes per Insertion: 1
Driving Side Maximum Convex Angle: 5 °
Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH
Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 0 psf
Phi: 23 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH above 0
Model: Mohr-Coulomb
Unit Weight: 108 pcf
Cohesion: 0 psf
Phi: 23 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, 0 to -12
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -12 (2)
Cohesion: 0 psf
Phi: 23 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -12 to -22
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -12 to -22 (2)
Cohesion: 0 psf

Phi: 23 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -22 to -36
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -22 to -36 (2)
Cohesion: 0 psf
Phi: 23 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -36 to -80
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -36 to -80 (2)
Cohesion: 0 psf
Phi: 23 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sand Fill
Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, 0 to -12 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -12 (2)
Cohesion: 0 psf
Phi: 23 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -12 to -22 SG
Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -12 to -22 (2)
Cohesion: 0 psf
Phi: 23 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

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CH, -22 to -36 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -22 to -36 (2)
Cohesion: 0 psf
Phi: 23 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Entry and Exit

Left Projection: Range
Left-Zone Left Coordinate: (-142, -1.64443) ft
Left-Zone Right Coordinate: (-46, 0.38054) ft
Left-Zone Increment: 20
Right Projection: Range
Right-Zone Left Coordinate: (95.73, 10) ft
Right-Zone Right Coordinate: (149.219, 7) ft
Right-Zone Increment: 20
Radius Increments: 20

Slip Surface Limits

Left Coordinate: (-200, -1.79) ft
Right Coordinate: (500, -4.27) ft

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	-1.79
	-195.89	-1.8
	-169.15	-1.8
	-146.39	-1.65
	-122.74	-1.62
	-98.28	-1.36
	-85.7	-0.94
	-66.38	-0.23
	-63	0
	-52.15	0.5
	-38.25	0.23
	-36.18	0.46
	194.59	-4.39

	214.93	-4.22
	250.23	-4.22
	259.47	-4.16
	284.55	-5.22
	285	-5.3
	406	-5.3
	407.82	-4.54
	500	-4.27

Spatial Functions

CH, 0 to -12 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -6, 100)
Data Point: (0, -6, 101)
Data Point: (178.08, -6, 111)

CH, -12 to -22 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -17, 100)
Data Point: (0, -17, 109)
Data Point: (178.08, -17, 100)

CH, -22 to -36 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -29, 102)
Data Point: (0, -29, 104)
Data Point: (178.08, -29, 102)

CH, -36 to -80 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -58, 105)
Data Point: (0, -58, 106)
Data Point: (178.08, -58, 105)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -36 to -80	31,33,60,63,34,32	30800

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Region 2	CH above 0	40,9,10,11,12,13,64,17,39,57	130.54365
Region 3	Sand Fill	19,20,21,22,23,24,25,26,27,28	629.28815
Region 4	EMBANKMENT FILL CH	19,46,41,42,43,66,28	1500.8133
Region 5	EMBANKMENT FILL CH	43,44,45,65,29,66	501.84775
Region 6	CH, -22 to -36	35,33,60,59	2800
Region 7	CH, -12 to -22	37,35,59,58	2000
Region 8	CH, 0 to -12	57,58,37,2,1,3,4,5,6,7,8,40	2203.9585
Region 9	CH, -22 to -36	63,62,36,34	3496.78
Region 10	CH, -12 to -22	62,61,38,36	2497.7
Region 11	CH, 0 to -12	61,65,45,47,48,49,50,51,52,53,54,55,30,38	1282.4538
Region 12	CH, -12 to -22 SG	58,59,62,61	2502.3
Region 13	CH, -22 to -36 SG	60,59,62,63	3503.22
Region 14	CH, 0 to -12 SG	57,58,61,65,29,66,28,27,26,25,24,23,22,21,20,19,18,39	1448.4571
Region 15	EMBANKMENT FILL CH	64,17,39,56,19,46	368.6281

Points

	X (ft)	Y (ft)
Point 1	-195.89	-1.8
Point 2	-200	-1.79
Point 3	-169.15	-1.8
Point 4	-146.39	-1.65
Point 5	-122.74	-1.62
Point 6	-98.28	-1.36
Point 7	-85.7	-0.94
Point 8	-66.38	-0.23
Point 9	-52.15	0.5
Point 10	-38.25	0.23
Point 11	-36.18	0.46
Point 12	-23.63	0.86
Point 13	-19.22	0.94
Point 14	-5.71	4.75
Point 15	-0.42	4.91
Point 16	-0.22	4.77
Point 17	4.93	4.5
Point 18	24.3	-0.66
Point 19	40.33	-3.85
Point 20	53.08	-5.02
Point 21	69.13	-8.93
Point 22	90.17	-10.85
Point 23	106.69	-11.22
Point 24	116.58	-11.18
Point 25	126.69	-10.14
Point 26	142.13	-9.46
Point 27	157.98	-8.78
Point 28	178.08	-4.54
Point 29	214.93	-4.22
Point 30	500	-4.27

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Point 31	-200	-80
Point 32	500	-80
Point 33	-200	-36
Point 34	500	-36
Point 35	-200	-22
Point 36	500	-22
Point 37	-200	-12
Point 38	500	-12
Point 39	22	0
Point 40	-63	0
Point 41	111.73	14
Point 42	121.73	14
Point 43	161	4
Point 44	241	2
Point 45	259.47	-4.16
Point 46	81.73	6.5
Point 47	284.55	-5.2
Point 48	300.6	-9.14
Point 49	320.9	-11
Point 50	337.4	-11.22
Point 51	347.09	-11.26
Point 52	356.8	-10.22
Point 53	372.41	-9.68
Point 54	388.59	-9
Point 55	407.82	-4.54
Point 56	30	-1.79
Point 57	0	0
Point 58	0	-12
Point 59	0	-22
Point 60	0	-36
Point 61	250.23	-12
Point 62	250.23	-22
Point 63	250.23	-36
Point 64	1.73	4.5
Point 65	250.23	-4.22
Point 66	194.59	-4.39

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	3.24	(8.228, 148.188)	91.84988	(125.139, 13.1318)	(-101.659, -1.39592)
2	4670	3.40	(8.228, 148.188)	181.021	(127.954, 12.415)	(-93.9828, -1.21653)
3	4229	3.40	(5.74, 151.079)	184.835	(127.954, 12.415)	(-98.7825, -1.36534)
4	5111	3.41	(10.724, 145.294)	177.2	(127.954, 12.415)	(-89.1834, -1.0563)
5	3788	3.41	(3.318, 153.94)	188.583	(127.954, 12.415)	(-103.584, -1.41638)
6	4649	3.41	(6.419, 147.502)	179.438	(125.296, 13.0919)	(-93.9828, -1.21653)
7	4691	3.41	(10.031, 148.876)	182.61	(130.612, 11.7382)	(-93.9828, -1.21653)
8	4208	3.41	(3.932, 150.393)	183.25	(125.296, 13.0919)	(-98.7825, -1.36534)

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9	4250	3.41	(7.542, 151.767)	186.425	(130.612, 11.7382)	(-98.7825, -1.36534)
10	5552	3.42	(13.222, 142.399)	173.376	(127.954, 12.415)	(-84.3841, -0.891643)
11	3347	3.42	(0.895, 156.802)	192.332	(127.954, 12.415)	(-108.386, -1.46742)
12	5112	3.42	(11.944, 125.631)	162.099	(127.954, 12.415)	(-89.1834, -1.0563)
13	3809	3.42	(5.119, 154.629)	190.174	(130.612, 11.7382)	(-103.584, -1.41638)
14	4671	3.42	(9.462, 128.099)	165.6	(127.954, 12.415)	(-93.9828, -1.21653)
15	5090	3.42	(8.914, 144.609)	175.617	(125.296, 13.0919)	(-89.1834, -1.0563)
16	5132	3.42	(12.528, 145.981)	178.788	(130.612, 11.7382)	(-89.1834, -1.0563)
17	5553	3.42	(14.428, 123.161)	158.596	(127.954, 12.415)	(-84.3841, -0.891643)
18	3767	3.42	(1.511, 153.254)	186.997	(125.296, 13.0919)	(-103.584, -1.41638)
19	5091	3.42	(10.199, 125.127)	160.621	(125.296, 13.0919)	(-89.1834, -1.0563)
20	4650	3.42	(7.718, 127.596)	164.121	(125.296, 13.0919)	(-93.9828, -1.21653)
21	4230	3.42	(6.986, 130.566)	169.094	(127.954, 12.415)	(-98.7825, -1.36534)
22	5532	3.42	(12.683, 122.658)	157.119	(125.296, 13.0919)	(-84.3841, -0.891643)
23	3368	3.42	(2.695, 157.491)	193.924	(130.612, 11.7382)	(-108.386, -1.46742)
24	5994	3.42	(16.919, 120.688)	155.087	(127.954, 12.415)	(-79.5853, -0.715287)
25	4209	3.43	(5.244, 130.062)	167.614	(125.296, 13.0919)	(-98.7825, -1.36534)
26	5531	3.43	(11.412, 141.714)	171.794	(125.296, 13.0919)	(-84.3841, -0.891643)
27	3326	3.43	(-0.909, 156.115)	190.744	(125.296, 13.0919)	(-108.386, -1.46742)
28	5993	3.43	(15.729, 139.5)	169.544	(127.954, 12.415)	(-79.5853, -0.715287)
29	5573	3.43	(15.027, 143.086)	174.963	(130.612, 11.7382)	(-84.3841, -0.891643)
30	4692	3.43	(11.2, 128.604)	167.084	(130.612, 11.7382)	(-93.9828, -1.21653)
31	2906	3.43	(-1.528, 159.664)	196.081	(127.954, 12.415)	(-113.188, -1.51847)
32	5133	3.43	(13.683, 126.135)	163.582	(130.612, 11.7382)	(-89.1834, -1.0563)
33	5973	3.43	(15.173, 120.186)	153.61	(125.296, 13.0919)	(-79.5853, -0.715287)
34	3789	3.43	(4.568, 133.01)	172.532	(127.954, 12.415)	(-103.584, -1.41638)
35	5574	3.43	(16.168, 123.665)	160.079	(130.612, 11.7382)	(-84.3841, -0.891643)
36	6435	3.43	(19.41, 118.216)	151.577	(127.954, 12.415)	(-74.7864, -0.538931)
37	4228	3.43	(4.183, 176.686)	205.68	(127.954, 12.415)	(-98.7825, -1.36534)
38	3787	3.43	(1.757, 180.067)	209.841	(127.954, 12.415)	(-103.584, -1.41638)
39	4251	3.43	(8.724, 131.071)	170.579	(130.612, 11.7382)	(-98.7825, -1.36534)
40	3768	3.43	(2.827, 132.505)	171.051	(125.296, 13.0919)	(-103.584, -1.41638)
41	2927	3.43	(0.271, 160.353)	197.675	(130.612, 11.7382)	(-113.188, -1.51847)
42	5972	3.43	(13.917, 138.815)	167.963	(125.296, 13.0919)	(-79.5853, -0.715287)
43	3346	3.44	(-0.67, 183.449)	214.002	(127.954, 12.415)	(-108.386, -1.46742)
44	6414	3.44	(17.663, 117.713)	150.102	(125.296, 13.0919)	(-74.7864, -0.538931)
45	4271	3.44	(9.339, 152.456)	188.02	(133.27, 11.0613)	(-98.7825, -1.36534)
46	3830	3.44	(6.915, 155.319)	191.77	(133.27, 11.0613)	(-103.584, -1.41638)
47	6014	3.44	(17.534, 140.187)	171.13	(130.612, 11.7382)	(-79.5853, -0.715287)
48	6015	3.44	(18.66, 121.192)	156.568	(130.612, 11.7382)	(-79.5853, -0.715287)
49	4669	3.44	(6.687, 173.266)	201.441	(127.954, 12.415)	(-93.9828, -1.21653)
50	2885	3.44	(-3.331, 158.976)	194.492	(125.296, 13.0919)	(-113.188, -1.51847)
51	4712	3.44	(11.829, 149.565)	184.204	(133.27, 11.0613)	(-93.9828, -1.21653)
52	3808	3.44	(3.638, 180.979)	211.577	(130.612, 11.7382)	(-103.584, -1.41638)
53	6434	3.44	(18.235, 136.601)	165.712	(127.954, 12.415)	(-74.7864, -0.538931)
54	4249	3.44	(6.066, 177.597)	207.415	(130.612, 11.7382)	(-98.7825, -1.36534)
55	3810	3.44	(6.304, 133.515)	174.017	(130.612, 11.7382)	(-103.584, -1.41638)
56	4628	3.44	(4.605, 146.819)	177.859	(122.638, 13.7688)	(-93.9828, -1.21653)

57	3367	3.44	(1.21, 184.362)	215.74	(130.612, 11.7382)	(-108.386, -1.46742)
58	4187	3.44	(2.119, 149.708)	181.671	(122.638, 13.7688)	(-98.7825, -1.36534)
59	3348	3.44	(2.149, 135.453)	175.97	(127.954, 12.415)	(-108.386, -1.46742)
60	4207	3.44	(2.294, 175.776)	203.95	(125.296, 13.0919)	(-98.7825, -1.36534)
61	3766	3.44	(-0.131, 179.158)	208.11	(125.296, 13.0919)	(-103.584, -1.41638)
62	3389	3.44	(4.49, 158.181)	195.522	(133.27, 11.0613)	(-108.386, -1.46742)
63	2905	3.44	(-3.097, 186.831)	218.164	(127.954, 12.415)	(-113.188, -1.51847)
64	2465	3.44	(-3.951, 162.526)	199.83	(127.954, 12.415)	(-117.99, -1.56951)
65	5153	3.44	(14.327, 146.67)	180.381	(133.27, 11.0613)	(-89.1834, -1.0563)
66	5069	3.45	(7.099, 143.925)	174.04	(122.638, 13.7688)	(-89.1834, -1.0563)
67	3327	3.45	(0.409, 134.949)	174.487	(125.296, 13.0919)	(-108.386, -1.46742)
68	6876	3.45	(21.901, 115.743)	148.068	(127.954, 12.415)	(-69.9876, -0.362576)
69	5070	3.45	(8.45, 124.626)	159.149	(122.638, 13.7688)	(-89.1834, -1.0563)
70	3325	3.45	(-2.556, 182.539)	212.27	(125.296, 13.0919)	(-108.386, -1.46742)
71	4629	3.45	(5.97, 127.094)	162.647	(122.638, 13.7688)	(-93.9828, -1.21653)
72	4690	3.45	(8.572, 174.177)	203.176	(130.612, 11.7382)	(-93.9828, -1.21653)
73	3746	3.45	(-0.3, 152.569)	185.416	(122.638, 13.7688)	(-103.584, -1.41638)
74	5110	3.45	(9.201, 169.842)	197.194	(127.954, 12.415)	(-89.1834, -1.0563)
75	4648	3.45	(4.797, 172.357)	199.713	(125.296, 13.0919)	(-93.9828, -1.21653)
76	6456	3.45	(21.152, 118.72)	153.058	(130.612, 11.7382)	(-74.7864, -0.538931)
77	5511	3.45	(10.932, 122.157)	155.647	(122.638, 13.7688)	(-84.3841, -0.891643)
78	2926	3.45	(-1.219, 187.745)	219.904	(130.612, 11.7382)	(-113.188, -1.51847)
79	6413	3.45	(16.423, 135.917)	164.132	(125.296, 13.0919)	(-74.7864, -0.538931)
80	6855	3.45	(20.153, 115.241)	146.593	(125.296, 13.0919)	(-69.9876, -0.362576)
81	2486	3.45	(-2.154, 163.215)	201.425	(130.612, 11.7382)	(-117.99, -1.56951)
82	4188	3.45	(3.496, 129.56)	166.14	(122.638, 13.7688)	(-98.7825, -1.36534)
83	5510	3.45	(9.596, 141.031)	170.218	(122.638, 13.7688)	(-84.3841, -0.891643)
84	3369	3.45	(3.885, 135.959)	177.457	(130.612, 11.7382)	(-108.386, -1.46742)
85	6455	3.45	(20.042, 137.288)	167.298	(130.612, 11.7382)	(-74.7864, -0.538931)
86	5594	3.45	(16.827, 143.775)	176.556	(133.27, 11.0613)	(-84.3841, -0.891643)
87	4713	3.45	(12.934, 129.111)	168.572	(133.27, 11.0613)	(-93.9828, -1.21653)
88	5154	3.45	(15.418, 126.642)	165.07	(133.27, 11.0613)	(-89.1834, -1.0563)
89	3305	3.45	(-2.719, 155.429)	189.162	(122.638, 13.7688)	(-108.386, -1.46742)
90	5952	3.45	(13.421, 119.685)	152.14	(122.638, 13.7688)	(-79.5853, -0.715287)
91	2948	3.45	(2.065, 161.044)	199.273	(133.27, 11.0613)	(-113.188, -1.51847)
92	2464	3.45	(-5.525, 190.214)	222.327	(127.954, 12.415)	(-117.99, -1.56951)
93	2444	3.46	(-5.753, 161.837)	198.24	(125.296, 13.0919)	(-117.99, -1.56951)
94	2884	3.46	(-4.982, 185.92)	216.43	(125.296, 13.0919)	(-113.188, -1.51847)
95	5131	3.46	(11.086, 170.753)	198.928	(130.612, 11.7382)	(-89.1834, -1.0563)
96	5595	3.46	(17.903, 124.171)	161.566	(133.27, 11.0613)	(-84.3841, -0.891643)
97	5089	3.46	(7.31, 168.934)	195.467	(125.296, 13.0919)	(-89.1834, -1.0563)
98	4272	3.46	(10.457, 131.578)	172.068	(133.27, 11.0613)	(-98.7825, -1.36534)
99	3747	3.46	(1.081, 132.003)	169.574	(122.638, 13.7688)	(-103.584, -1.41638)
100	2485	3.46	(-3.648, 191.127)	224.067	(130.612, 11.7382)	(-117.99, -1.56951)
101	5551	3.46	(11.717, 166.416)	192.944	(127.954, 12.415)	(-84.3841, -0.891643)

Slices of Slip Surface: Optimized

	Slip	X (ft)	Y (ft)	PWP (psf)	Base Normal	Frictional	Cohesive

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	Surface				Stress (psf)	Strength (psf)	Strength (psf)
1	Optimized	-99.96955	-2.1772725	49.877582	84.938818	14.882612	0
2	Optimized	-92.621395	-5.5755535	274.83667	468.03798	82.009088	0
3	Optimized	-86.331395	-8.4072655	464.64571	778.72033	133.31677	0
4	Optimized	-80.735	-10.311026	596.13951	999.1591	171.07167	0
5	Optimized	-71.075	-13.59713	823.34537	1379.9552	236.26685	0
6	Optimized	-66.319245	-15.214925	935.34692	1567.6118	268.38053	0
7	Optimized	-64.629245	-15.737265	975.07881	1627.5266	276.94767	0
8	Optimized	-57.575	-17.909405	1133.1205	1893.4669	322.74791	0
9	Optimized	-48.220195	-20.789935	1323.7231	2213.0958	377.51631	0
10	Optimized	-43.75569	-22.164645	1404.0817	2346.8388	400.17667	0
11	Optimized	-40.735495	-23.13981	1461.2828	2449.5924	419.51251	0
12	Optimized	-37.215	-24.287845	1537.0992	2579.4075	442.4336	0
13	Optimized	-33.0425	-25.6485	1625.0976	2749.3027	477.19676	0
14	Optimized	-26.7675	-27.69478	1744.4876	2991.1129	529.16105	0
15	Optimized	-21.425	-29.436975	1846.2195	3205.0895	576.80609	0
16	Optimized	-17.594425	-30.68613	1919.1438	3396.5464	627.12022	0
17	Optimized	-15.130695	-31.354815	1957.6546	3457.1184	636.48463	0
18	Optimized	-12.63045	-31.76822	1980.168	3561.8569	671.38708	0
19	Optimized	-7.442825	-32.144655	1996.8818	3663.7379	707.53846	0
20	Optimized	-1.958645	-32.01622	1981.6349	3711.5088	734.28793	0
21	Optimized	0.865	-31.684575	1957.2396	3738.4637	756.08477	0
22	Optimized	3.33	-31.39505	1935.9422	3729.0538	761.13069	0
23	Optimized	5.92735	-31.08998	1913.5018	3706.9087	761.25608	0
24	Optimized	10.693525	-30.475445	1868.8648	3659.3397	760.01148	0
25	Optimized	18.231175	-29.480655	1796.9197	3592.7871	762.30051	0
26	Optimized	22.81447	-28.87577	1753.1869	3548.0033	761.85436	0
27	Optimized	23.96447	-28.72586	1742.3066	3534.4356	760.71363	0
28	Optimized	24.72443	-28.629775	1735.364	3527.7631	760.82829	0
29	Optimized	25.455585	-28.53733	1728.6701	3524.294	762.19714	0
30	Optimized	27.881155	-28.230665	1706.2916	3512.4093	766.65149	0

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31	Optimized	35.165	-27.30976	1639.2246	3462.1753	773.79666	0
32	Optimized	41.224735	-26.543615	1583.5087	3414.0075	777.00065	0
33	Optimized	46.209705	-25.912435	1537.6261	3371.0381	778.23722	0
34	Optimized	51.68997	-25.21832	1487.0822	3323.596	779.55383	0
35	Optimized	56.72166	-24.58102	1440.7114	3289.5131	784.76977	0
36	Optimized	64.004985	-23.65854	1373.559	3244.6995	794.25199	0
37	Optimized	68.388325	-23.07922	1331.7302	3200.0005	793.03372	0
38	Optimized	72.148545	-22.48057	1289.4238	3155.8364	792.24511	0
39	Optimized	78.448545	-21.47757	1218.5719	3077.5407	789.08545	0
40	Optimized	84.80081	-20.46625	1147.1357	3075.4299	818.51233	0
41	Optimized	89.02081	-19.486585	1080.467	2981.1976	806.81224	0
42	Optimized	94.337895	-17.21587	931.80646	2897.9115	834.56207	0
43	Optimized	100.70229	-13.717965	705.18994	2583.4312	797.26612	0
44	Optimized	103.4363	-11.579585	568.17308	2446.7088	797.39111	0
45	Optimized	105.74245	-9.775835	452.5968	2255.5242	1040.9206	0
46	Optimized	109.3906	-6.298922	230.85314	1845.5811	932.26363	0
47	Optimized	111.50005	-3.949218	81.461857	1709.1911	690.93009	0
48	Optimized	112.1902	-3.1805	32.588979	1636.1267	680.6614	0
49	Optimized	115.1114	0.073411	-174.28301	1323.267	561.6935	0
50	Optimized	119.6512	5.6490105	-528.15173	762.58237	323.69701	0
51	Optimized	123.4347	10.807546	-855.01814	251.89122	106.92148	0

Slices of Slip Surface: 4670

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	4670	-89.84141	-3.8872155	175.27884	305.27435	55.17982	0
2	4670	-80.892145	-9.278949	531.37368	915.74644	163.15656	0
3	4670	-71.232145	-14.37175	871.31778	1486.358	261.06908	0
4	4670	-64.69	-17.48731	1084.0299	1837.6138	319.87737	0
5	4670	-58.22749	-20.11556	1268.9336	2140.5825	369.99299	0
6	4670	-52.80249	-22.233665	1416.673	2381.2976	409.45887	0
7	4670	-48.675	-23.61826	1500.8315	2516.5016	431.12637	0
8	4670	-41.725	-25.767065	1626.4977	2715.1628	462.11091	0
9	4670	-37.215	-27.033365	1708.4089	2844.9166	482.41887	0
10	4670	-33.0425	-28.036565	1773.9936	2966.121	506.02806	0
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11	4670	-26.7675	29.389645	1850.3089	3117.4124	537.85353	0
12	4670	-21.425	-30.37412	1904.7091	3235.9564	565.08096	0
13	4670	-16.75627	-31.08365	1942.8412	3375.6207	608.17883	0
14	4670	-10.719404	-31.80314	1979.8899	3582.6447	680.32904	0
15	4670	-3.573134	-32.41275	2008.5155	3800.4566	760.63384	0
16	4670	0.865	-32.68144	2019.4255	3918.5461	806.12885	0
17	4670	3.33	-32.75996	2021.1035	3940.7442	814.83913	0
18	4670	9.1975	-32.7804	2014.7337	3952.0227	822.3304	0
19	4670	17.7325	-32.533085	1988.1134	3943.4661	829.99795	0
20	4670	23.15	-32.213515	1960.9984	3914.934	829.39645	0
21	4670	24.72443	-32.07955	1950.6046	3899.4494	827.23555	0
22	4670	25.455585	-32.011385	1945.3138	3896.3071	828.14751	0
23	4670	27.881155	-31.750635	1925.9217	3882.5737	830.54949	0
24	4670	35.165	-30.741635	1853.4597	3802.7418	827.42116	0
25	4670	45.31497	-28.920185	1726.4551	3636.8848	810.9293	0
26	4670	51.68997	-27.532505	1631.4865	3505.7947	795.59662	0
27	4670	57.0925	-26.06349	1532.7727	3376.0594	782.42877	0
28	4670	65.1175	-23.609565	1369.1283	3161.1557	760.67048	0
29	4670	69.52023	-22.140425	1271.6844	3029.9556	746.34185	0
30	4670	72.865345	-20.87023	1188.0042	2905.4854	729.02751	0
31	4670	78.775115	-18.48979	1031.7063	2672.7627	696.58708	0
32	4670	85.95	-15.232095	819.02076	2457.4368	695.46633	0
33	4670	91.354885	-12.612535	648.46292	2331.9025	714.57771	0
34	4670	93.525085	-11.473605	574.56191	2270.408	719.84395	0
35	4670	97.3747	-9.32613	435.50793	2088.4388	954.32007	0
36	4670	103.1033	-5.941917	216.81578	1833.0856	933.15382	0
37	4670	107.1927	-3.3788685	51.520233	1677.3465	690.12231	0
38	4670	110.0739	-1.4517812	-72.507428	1542.3209	654.67639	0
39	4670	116.73	3.4229193	-385.41927	1072.3339	455.17875	0
40	4670	124.8421	9.792744	-793.53456	340.87081	144.69107	0

Slices of Slip Surface: 4229

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	4229	-98.53125	-1.537	10.878111	19.034477	3.4621717	0
2	4229	-95.135	-3.7575995	156.15859	272.07533	49.20374	0
3	4229	-88.845	-7.680251	414.0433	715.98146	128.16514	0
4	4229	-83.48132	-10.776981	618.92119	1063.9681	188.91123	0
5	4229	-77.54198	-13.87844	826.06468	1411.4837	248.49565	0
6	4229	-70.10066	-17.43141	1064.8344	1806.6879	314.89815	0
7	4229	-64.69	-19.802485	1228.5042	2074.3591	359.0441	0
8	4229	-61.064025	-21.249515	1331.543	2242.1792	386.54215	0
9	4229	-55.639025	-23.228585	1470.6618	2470.117	424.24359	0
10	4229	-48.675	-25.527855	1619.9575	2711.3422	463.2653	0
11	4229	-41.725	-27.52205	1736.0005	2892.8244	491.04258	0
12	4229	-37.215	-28.69286	1811.9412	3011.9299	509.36499	0
13	4229	-33.0425	-29.613565	1872.4179	3124.0724	531.29584	0
14	4229	-26.7675	-30.847585	1941.2069	3262.2755	560.76036	0
15	4229	-21.425	-31.73584	1989.6739	3370.7016	586.21147	0
16	4229	-16.75627	-32.36561	2022.8121	3501.9507	627.85707	0
17	4229	-10.719404	-32.987245	2053.7212	3698.9282	698.34894	0
18	4229	-3.573134	-33.48704	2075.5073	3905.4644	776.7707	0
19	4229	0.865	-33.69015	2082.3968	4016.7526	821.08532	0
20	4229	3.33	-33.73383	2081.8855	4035.282	829.1676	0
21	4229	9.1975	-33.674815	2070.5219	4038.1913	835.22611	0
22	4229	17.7325	-33.317385	2037.0552	4018.3406	841.00579	0
23	4229	23.15	-32.93102	2005.7811	3982.9942	839.27716	0
24	4229	24.72443	-32.778385	1994.214	3965.5774	836.79411	0
25	4229	25.455585	-32.701655	1988.4173	3961.599	837.56592	0
26	4229	27.881155	-32.41307	1967.2564	3945.0084	839.50592	0
27	4229	35.165	-31.324165	1889.7984	3857.2951	835.1528	0
28	4229	45.31497	-29.39782	1756.275	3681.0645	817.0247	0
29	4229	51.68997	-27.947925	1657.4285	3544.0422	800.81998	0
30	4229	57.0925	-26.43034	1555.6486	3409.5947	786.95347	0
31	4229	65.1175	-23.907975	1387.704	3188.179	764.25633	0
32	4229	69.86853	-22.27321	1279.4561	3041.1686	747.80262	0
33	4229	76.16853	-19.70654	1111.0732	2789.8178	712.58479	0
34	4229	85.95	-15.37961	828.22069	2470.6581	697.17331	0
35	4229	91.455825	-12.67307	652.12531	2339.0934	716.07549	0

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36	4229	93.710815	-11.475505	574.41642	2273.8905	721.38393	0
37	4229	97.51854	-9.326864	435.36238	2090.4305	955.55402	0
38	4229	103.1957	-5.940918	216.63467	1834.0987	933.84329	0
39	4229	107.2509	-3.379558	51.486501	1678.2655	690.52673	0
40	4229	110.09875	-1.4640052	-71.776974	1543.8386	655.32063	0
41	4229	116.73	3.4100824	-384.61292	1073.6451	455.73532	0
42	4229	124.8421	9.7916085	-793.46556	341.10432	144.7902	0

Slices of Slip Surface: 5111

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	5111	-87.4417	-2.2153735	75.954002	132.80538	24.13198	0
2	5111	-81.99388	-5.650923	302.46402	525.12471	94.513857	0
3	5111	-74.58164	-9.9636985	588.57429	1012.9371	180.13132	0
4	5111	-68.62776	-13.12589	799.55163	1367.1595	240.93524	0
5	5111	-64.69	-15.04664	931.73331	1586.7738	278.04819	0
6	5111	-57.575	-18.109025	1145.6133	1939.9403	337.17182	0
7	5111	-49.921665	-21.188275	1350.6422	2272.9616	391.50134	0
8	5111	-42.971665	-23.502	1486.6367	2488.7945	425.39075	0
9	5111	-37.215	-25.29485	1599.9111	2669.7275	454.11013	0
10	5111	-33.0425	-26.38554	1671.0181	2800.7813	479.55605	0
11	5111	-26.7675	-27.86469	1755.188	2965.8611	513.90027	0
12	5111	-21.425	-28.95083	1815.8817	3095.1516	543.01784	0
13	5111	-16.75627	-29.74445	1859.29	3243.302	587.47824	0
14	5111	-10.719404	-30.56692	1902.7127	3461.2203	661.54722	0
15	5111	-3.573134	-31.291885	1938.5881	3690.9746	743.84396	0
16	5111	0.865	-31.62937	1953.7896	3816.2181	790.55398	0
17	5111	3.33	-31.74439	1957.7312	3842.2762	799.94189	0
18	5111	9.1975	-31.847975	1956.4593	3862.1881	808.93391	0
19	5111	17.7325	-31.715765	1937.0878	3865.3952	818.51792	0
20	5111	23.15	-31.465945	1914.3618	3843.9035	819.04187	0
21	5111	24.72443	-31.35146	1905.1869	3830.3382	817.17823	0
22	5111	25.455585	-31.29223	1900.4714	3828.0716	818.21772	0
23	5111	27.881155	-31.0605	1882.871	3817.0843	821.02484	0
24	5111	35.165	-30.13475	1815.5704	3745.7166	819.29844	0
25	5111	45.31497	-28.422505	1695.4104	3590.5124	804.42305	0

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26	5111	51.68997	-27.099555	1604.4952	3465.7907	790.0731	0
27	5111	57.0925	-25.68104	1508.86	3340.755	777.5933	0
28	5111	65.1175	-23.298265	1349.6848	3132.5828	756.79528	0
29	5111	72.28264	-20.83548	1186.603	2903.0803	728.60138	0
30	5111	78.58264	-18.36224	1024.0089	2661.1317	694.91741	0
31	5111	85.95	-15.07771	809.38342	2443.1464	693.49123	0
32	5111	91.246375	-12.549105	644.64178	2323.88	712.79435	0
33	5111	93.325625	-11.47157	574.68375	2266.2274	718.01766	0
34	5111	97.2204	-9.32535	435.66486	2085.9041	952.76608	0
35	5111	103.00425	-5.942993	217.01697	1831.7448	932.26357	0
36	5111	107.13035	-3.3781295	51.555818	1675.9805	689.52737	0
37	5111	110.04725	-1.4387749	-73.284166	1540.3626	653.84515	0
38	5111	116.73	3.4366571	-386.27263	1070.5986	454.44216	0
39	5111	124.8421	9.7940355	-793.61081	340.5104	144.53809	0

Slices of Slip Surface: 3788

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	3788	-100.93215	-3.176142	111.56886	194.54095	35.219563	0
2	3788	-95.27973	-6.776521	344.24537	596.2431	106.96669	0
3	3788	-89.27919	-10.308571	577.14318	993.10262	176.56431	0
4	3788	-85.98946	-12.155635	699.25931	1199.141	212.1872	0
5	3788	-82.48	-13.956735	819.63348	1400.6929	246.64508	0
6	3788	-76.04	-17.096215	1030.2937	1750.14	305.55663	0
7	3788	-69.6	-19.94055	1222.5525	2065.0577	357.62222	0
8	3788	-65.47501	-21.645435	1340.1628	2255.9818	388.74212	0
9	3788	-63.78501	-22.29889	1388.1233	2334.1544	401.56636	0
10	3788	-57.575	-24.44958	1541.2541	2585.8527	443.40583	0
11	3788	-48.675	-27.298265	1730.3505	2890.6023	492.49767	0
12	3788	-41.725	-29.15004	1837.5837	3056.3521	517.33651	0
13	3788	-37.215	-30.232715	1908.0582	3165.8801	533.91371	0
14	3788	-33.0425	-31.077085	1963.8704	3269.5728	554.23782	0
15	3788	-26.7675	-32.20077	2025.665	3395.9308	581.64332	0
16	3788	-21.425	-32.999715	2068.5365	3495.1429	605.55848	0

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17	3788	-16.75627	-33.55533	2097.0114	3618.9186	646.01129	0
18	3788	-10.719404	-34.08585	2122.3379	3806.3653	714.82724	0
19	3788	-3.573134	-34.48327	2137.7295	4002.3521	791.48533	0
20	3788	0.865	-34.62519	2140.7442	4107.3412	834.77092	0
21	3788	3.33	-34.636335	2138.1875	4122.5	842.29068	0
22	3788	9.1975	-34.50307	2122.2243	4117.7381	847.04537	0
23	3788	17.7325	-34.04267	2082.2291	4087.4728	851.17543	0
24	3788	23.15	-33.59381	2047.1492	4045.7864	848.37114	0
25	3788	24.72443	-33.4237	2034.463	4026.673	845.64298	0
26	3788	25.455585	-33.33895	2028.2518	4021.8602	846.23659	0
27	3788	27.881155	-33.024315	2005.4004	4002.7056	847.80574	0
28	3788	35.165	-31.860625	1923.2586	3907.4867	842.25485	0
29	3788	45.31497	-29.83612	1783.619	3721.7316	822.67999	0
30	3788	51.68997	-28.328025	1681.1216	3579.2586	805.71134	0
31	3788	57.0925	-26.765065	1576.5345	3440.4282	791.17594	0
32	3788	65.1175	-24.178835	1404.5883	3212.9766	767.61529	0
33	3788	70.16751	-22.39333	1286.5818	3051.548	749.1837	0
34	3788	76.46751	-19.784125	1115.503	2796.5072	713.54392	0
35	3788	85.95	-15.51037	836.38506	2482.7336	698.83349	0
36	3788	91.541965	-12.726245	655.30715	2345.6743	717.51828	0
37	3788	93.86911	-11.47712	574.3242	2277.2313	722.84116	0
38	3788	100.45635	-7.5668145	321.68416	1956.0929	943.62632	0
39	3788	107.2977	-3.380109	51.460159	1679.3969	691.01815	0
40	3788	110.1185	-1.4734075	-71.216019	1545.3748	655.9727	0
41	3788	116.73	3.4008875	-384.04093	1074.8961	456.26632	0
42	3788	124.8421	9.7914005	-793.45182	341.36338	144.90016	0

Slices of Slip Surface: 4649

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	4649	-89.84141	-3.850477	172.98116	300.99536	54.338807	0
2	4649	-80.7405	-9.2422105	529.43027	911.32812	162.10602	0
3	4649	-71.0805	-14.2521	864.19943	1472.6126	258.25608	0
4	4649	-64.69	-17.2337	1068.1935	1809.1246	314.50659	0
5	4649	-57.575	-20.03538	1265.8239	2132.4078	367.84306	0
6	4649	-48.675	-23.22893	1476.5367	2472.7163	422.85315	0
7	4649	-41.725	-25.31836	1598.4159	2665.1353	452.79554	0

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8	4649	-37.215	-26.545895	1677.9753	2790.8306	472.37905	0
9	4649	-33.0425	-27.512805	1741.4607	2908.1865	495.24573	0
10	4649	-26.7675	-28.810795	1814.1979	3053.7849	526.17348	0
11	4649	-21.425	-29.747735	1865.6019	3167.2805	552.52978	0
12	4649	-16.75627	-30.415045	1901.132	3302.0117	594.63814	0
13	4649	-10.719404	-31.078885	1934.6428	3502.9446	665.70461	0
14	4649	-3.573134	-31.62113	1959.097	3713.0911	744.52629	0
15	4649	0.865	-31.847245	1967.3809	3826.4323	789.12048	0
16	4649	3.33	-31.90158	1967.5523	3846.3053	797.48332	0
17	4649	9.1975	-31.86303	1957.4687	3851.559	803.99362	0
18	4649	17.7325	-31.527255	1925.2752	3834.1801	810.28203	0
19	4649	23.15	-31.149885	1894.6661	3799.9813	808.75831	0
20	4649	24.72443	-30.998665	1883.1436	3782.8112	806.36104	0
21	4649	25.455585	-30.922415	1877.5086	3778.8446	807.06927	0
22	4649	27.881155	-30.63441	1856.2733	3762.3552	809.08377	0
23	4649	35.165	-29.540505	1778.4522	3674.4358	804.79732	0
24	4649	45.31497	-27.594525	1643.6942	3496.6322	786.52551	0
25	4649	51.68997	-26.12474	1543.6472	3357.9522	770.12677	0
26	4649	56.134745	-24.881325	1460.2369	3247.4696	758.63531	0
27	4649	62.24423	-23.00017	1334.8432	3083.0878	742.08579	0
28	4649	67.214485	-21.310155	1222.8704	2932.0501	725.50371	0
29	4649	72.28	-19.37713	1095.6035	2747.2771	701.09383	0
30	4649	78.58	-16.750065	923.40348	2491.4353	665.59003	0
31	4649	85.1747	-13.68309	723.37643	2277.1875	659.55366	0
32	4649	89.3947	-11.595655	587.5999	2175.9952	674.2338	0
33	4649	90.478795	-11.02757	550.726	2145.7972	677.06755	0
34	4649	93.66977	-9.259669	436.22489	1989.6754	896.88507	0
35	4649	99.434125	-5.908001	219.5179	1739.7661	877.71572	0
36	4649	103.60125	-3.3326125	53.344656	1582.3488	649.02374	0
37	4649	108.3081	-0.1433055	-151.84184	1360.6357	577.55558	0
38	4649	116.73	6.11925	-553.67299	794.80213	337.37349	0

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39	4649	123.51305	11.556145	-901.81913	197.99906	84.045614	0

Slices of Slip Surface: 4691

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	4691	-89.84141	-3.9234395	177.54106	309.31234	55.93359	0
2	4691	-81.03625	-9.315173	533.30534	919.5099	163.93411	0
3	4691	-71.37625	-14.489705	878.35205	1499.2257	263.54521	0
4	4691	-64.69	-17.737325	1099.6288	1864.9471	324.85835	0
5	4691	-58.68719	-20.24762	1275.8771	2154.0294	372.75353	0
6	4691	-53.26219	-22.410975	1426.4648	2400.0722	413.27183	0
7	4691	-48.675	-24.001995	1524.7028	2558.9284	439.00274	0
8	4691	-41.725	-26.209265	1653.9964	2763.7898	471.07934	0
9	4691	-37.215	-27.513715	1738.3826	2897.5687	492.04533	0
10	4691	-33.0425	-28.55262	1806.3384	3022.6433	516.29084	0
11	4691	-26.7675	-29.959895	1885.9074	3179.6006	549.14017	0
12	4691	-21.425	-30.99111	1943.2057	3303.1549	577.26418	0
13	4691	-16.75627	-31.742125	1983.9361	3447.4521	621.22568	0
14	4691	-10.719404	-32.51627	2024.3644	3660.7059	694.58577	0
15	4691	-3.573134	-33.192005	2057.1604	3886.166	776.36683	0
16	4691	0.865	-33.502465	2070.6807	4009.0429	822.78594	0
17	4691	3.33	-33.604695	2073.8209	4033.8434	831.98022	0
18	4691	9.1975	-33.68293	2070.9802	4050.8072	840.38672	0
19	4691	17.7325	-33.522225	2049.8431	4051.1062	849.48578	0
20	4691	23.15	-33.259205	2026.2719	4028.2156	849.77467	0
21	4691	24.72443	-33.142105	2016.8698	4014.3647	847.88627	0
22	4691	25.455585	-33.08184	2012.1718	4012.1614	848.94522	0
23	4691	27.881155	-32.847715	1994.3937	4000.8586	851.69381	0
24	4691	35.165	-31.92156	1927.0635	3929.3953	849.93946	0
25	4691	45.31497	-30.22144	1807.6913	3775.2003	835.15802	0
26	4691	51.68997	-28.913645	1717.6848	3652.0853	821.10428	0
27	4691	57.0925	-27.517405	1623.4618	3529.0188	808.86096	0

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28	4691	65.1175	-25.17694	1466.854	3324.8057	788.65371	0
29	4691	71.783185	-22.953505	1319.4144	3120.6118	764.56293	0
30	4691	78.083185	-20.535075	1160.2406	2884.8256	732.04289	0
31	4691	85.95	-17.140345	938.09324	2655.2065	728.87135	0
32	4691	93.302245	-13.60527	707.87119	2484.6309	754.18974	0
33	4691	97.32541	-11.515105	572.15305	2373.1511	764.4783	0
34	4691	101.06392	-9.392344	434.79439	2187.5184	1011.9357	0
35	4691	106.75905	-5.975745	214.13535	1926.9054	988.86824	0
36	4691	110.6683	-3.4957805	54.260498	1777.9666	731.66982	0
37	4691	111.8354	-2.723772	4.5547599	1719.3086	727.86984	0
38	4691	116.8354	0.879292	-226.83615	1337.2929	567.64714	0
39	4691	126.17115	8.0748695	-688.08108	480.35227	203.89744	0

Slices of Slip Surface: 4208

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	4208	-98.53125	-1.5347885	10.740218	18.774263	3.4102497	0
2	4208	-95.135	-3.7258335	154.18459	268.35527	48.462581	0
3	4208	-88.845	-7.5943145	408.67067	706.03651	126.22431	0
4	4208	-83.338035	-10.720599	615.71823	1057.3251	187.45101	0
5	4208	-77.327055	-13.805835	822.0248	1402.9538	246.58972	0
6	4208	-70.02902	-17.221825	1051.9185	1783.0125	310.33102	0
7	4208	-64.69	-19.514535	1210.5306	2042.1309	352.99337	0
8	4208	-60.604585	-21.098545	1323.4449	2225.8958	383.06768	0
9	4208	-55.179585	-23.032625	1459.7265	2448.499	419.70899	0
10	4208	-48.675	-25.1069	1593.6821	2664.1766	454.39798	0
11	4208	-41.725	-27.042725	1706.0093	2839.4471	481.11582	0
12	4208	-37.215	-28.17539	1779.692	2954.6512	498.74058	0
13	4208	-33.0425	-29.06033	1837.8881	3062.9908	520.02523	0
14	4208	-26.7675	-30.240015	1903.3835	3195.6105	548.5178	0
15	4208	-21.425	-31.08135	1948.8228	3299.0167	573.1233	0
16	4208	-16.75627	-31.66941	1979.4018	3425.7714	613.94747	0

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17	4208	-10.719404	-32.236025	2006.9106	3616.4284	683.19977	0
18	4208	-3.573134	-32.66917	2024.5318	3815.4315	760.19182	0
19	4208	0.865	-32.830135	2028.7336	3921.9947	803.64169	0
20	4208	3.33	-32.84987	2026.708	3938.1041	811.33951	0
21	4208	9.1975	-32.73242	2011.7051	3935.2216	816.48434	0
22	4208	17.7325	-32.28732	1972.7034	3906.7356	820.94794	0
23	4208	23.15	-31.843655	1937.9493	3865.7376	818.29757	0
24	4208	24.72443	-31.67391	1925.2715	3846.6805	815.58975	0
25	4208	25.455585	-31.589165	1918.9651	3841.9773	816.27024	0
26	4208	27.881155	-31.27356	1896.1682	3822.5633	817.70617	0
27	4208	35.165	-30.10046	1813.4176	3726.8017	812.18334	0
28	4208	45.31497	-28.05062	1672.1807	3538.801	792.3333	0
29	4208	51.68997	-26.519305	1568.2875	3394.2173	775.06122	0
30	4208	56.32826	-25.17465	1478.245	3274.5	762.46501	0
31	4208	62.82478	-23.10262	1340.4655	3092.8773	743.85468	0
32	4208	67.60152	-21.433625	1230.0622	2943.671	727.38377	0
33	4208	72.28	-19.600755	1109.549	2767.8344	703.90039	0
34	4208	78.58	-16.92893	934.57537	2507.7792	667.7854	0
35	4208	85.28497	-13.7618	728.15002	2286.5272	661.49185	0
36	4208	89.50497	-11.6488	590.75893	2183.0516	675.88815	0
37	4208	90.570405	-11.08277	554.04061	2152.5178	678.51331	0
38	4208	93.82556	-9.2605545	436.07335	1992.1133	898.38011	0
39	4208	99.535055	-5.9070155	219.32269	1740.9551	878.51487	0
40	4208	103.6653	-3.33337	53.308866	1583.4805	649.51932	0
41	4208	108.3354	-0.151686	-151.3533	1361.8771	578.08252	0
42	4208	116.73	6.111473	-553.18116	795.77352	337.78582	0
43	4208	123.51305	11.556175	-901.82622	198.09623	84.086861	0

Slices of Slip Surface: 4250

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	4250	-98.53125	-1.5391815	11.014291	19.279878	3.5085334	0
2	4250	-95.135	-3.7889305	158.11983	275.58521	49.861093	0
3	4250	-88.845	-7.765008	419.32675	725.41242	129.92566	0
4	4250	-83.61772	-10.832589	622.06639	1069.9961	190.13487	0
5	4250	-77.74658	-13.949995	830.05727	1419.1972	250.07505	0

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6	4250	-70.16886	-17.63805	1077.5726	1829.3197	319.09772	0
7	4250	-64.69	-20.086435	1246.2279	2105.3757	364.68659	0
8	4250	-61.49087	-21.39838	1339.5998	2257.6259	389.67896	0
9	4250	-56.06587	-23.421785	1481.5185	2490.8809	428.44895	0
10	4250	-48.675	-25.942855	1645.8007	2757.1312	471.73179	0
11	4250	-41.725	-27.99453	1765.4009	2944.6477	500.56055	0
12	4250	-37.215	-29.202895	1843.7727	3067.7646	519.55375	0
13	4250	-33.0425	-30.158795	1906.4447	3183.5775	542.11073	0
14	4250	-26.7675	-31.446265	1978.6723	3327.4964	572.54189	0
15	4250	-21.425	-32.38066	2029.9142	3440.9085	598.93152	0
16	4250	-16.75627	-33.05142	2065.6493	3576.7564	641.42693	0
17	4250	-10.719404	-33.727095	2099.9009	3779.9331	713.13133	0
18	4250	-3.573134	-34.29232	2125.7132	3993.8489	792.97654	0
19	4250	0.865	-34.53678	2135.2184	4109.8462	838.1798	0
20	4250	3.33	-34.60394	2136.1734	4130.8203	846.67742	0
21	4250	9.1975	-34.60219	2128.3284	4139.6139	853.74007	0
22	4250	17.7325	-34.330595	2100.1927	4128.32	860.88895	0
23	4250	23.15	-34.000285	2072.5236	4098.6021	860.01932	0
24	4250	24.72443	-33.864375	2061.9739	4082.8914	857.82857	0
25	4250	25.455585	-33.79548	2056.7742	4079.6366	858.65414	0
26	4250	27.881155	-33.533295	2037.159	4065.5451	860.99882	0
27	4250	35.165	-32.526555	1964.7902	3986.0647	857.9801	0
28	4250	45.31497	-30.72055	1838.7668	3821.4252	841.58855	0
29	4250	51.68997	-29.349885	1744.9165	3692.1776	826.5633	0
30	4250	57.0925	-27.904475	1647.6491	3564.3806	813.60425	0
31	4250	65.1175	-25.4946	1486.7789	3353.5189	792.38414	0
32	4250	72.0978	-23.095655	1327.8748	3132.5182	766.02567	0
33	4250	78.3978	-20.63045	1165.7885	2892.7165	733.03745	0
34	4250	85.95	-17.303835	948.29409	2669.7643	730.72075	0
35	4250	93.394645	-13.673385	711.99096	2492.1679	755.64029	0
36	4250	97.49627	-11.516865	572.03239	2376.1691	765.8106	0
37	4250	104.02013	-7.615522	320.04896	2050.4888	999.06993	0
38	4250	110.6985	-	55.233941	1779.8814	732.06943	0

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			3.5120585				
39	4250	111.858	-2.7403745	5.5610569	1720.5319	727.96193	0
40	4250	116.858	0.8756685	-226.63883	1337.4766	567.72514	0
41	4250	126.17115	8.0717215	-687.88494	480.79277	204.08442	0

Slices of Slip Surface: 5552

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	5552	-81.38344	-2.8461522	128.84188	225.05686	40.840838	0
2	5552	-75.382065	-6.585245	375.92488	651.49906	116.9743	0
3	5552	-69.38069	-9.996299	602.53866	1036.7427	184.30867	0
4	5552	-66.01291	-11.811385	724.23455	1241.4238	219.53381	0
5	5552	-64.32291	-12.661585	784.45504	1342.1868	236.74309	0
6	5552	-60.2875	-14.59327	918.42394	1565.8581	274.81948	0
7	5552	-54.8625	-17.021815	1085.5674	1842.8438	321.44476	0
8	5552	-46.996595	-20.09013	1278.5837	2154.2325	371.69085	0
9	5552	-40.046595	-22.58009	1425.5341	2386.9075	408.07882	0
10	5552	-37.215	-23.474895	1486.3791	2485.279	424.00788	0
11	5552	-33.0425	-24.65851	1563.3092	2626.7096	451.38669	0
12	5552	-26.7675	-26.271275	1655.6178	2806.6576	488.58738	0
13	5552	-21.425	-27.4649	1723.1592	2947.474	519.69083	0
14	5552	-16.75627	-28.347225	1772.0952	3105.0394	565.80125	0
15	5552	-10.719404	-29.278095	1822.207	3334.1067	641.76332	0
16	5552	-3.573134	-30.12425	1865.7246	3576.5758	726.21321	0
17	5552	0.865	-30.53391	1885.4239	3709.3284	774.20152	0
18	5552	3.33	-30.687165	1891.7566	3739.5226	784.3301	0
19	5552	9.1975	-30.877735	1895.9151	3768.4036	794.82422	0
20	5552	17.7325	-30.865775	1884.0718	3784.0727	806.5025	0
21	5552	23.15	-30.68873	1865.89	3769.978	808.23743	0
22	5552	24.72443	-30.59455	1857.9346	3758.421	806.7086	0
23	5552	25.455585	-30.544635	1853.8639	3757.1599	807.90121	0
24	5552	27.881155	-30.343135	1838.101	3749.4222	811.30772	0

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25	5552	35.165	-29.50404	1776.1974	3686.4474	810.85303	0
26	5552	45.31497	-27.905365	1663.115	3542.3866	797.70348	0
27	5552	51.68997	-26.649675	1576.3953	3424.2273	784.35815	0
28	5552	56.881965	-25.343805	1488.1759	3309.4192	773.0719	0
29	5552	64.485895	-23.17712	1342.9589	3120.9662	754.7193	0
30	5552	68.70893	-21.85776	1255.0426	3004.2949	742.51353	0
31	5552	72.28	-20.57403	1170.2914	2878.8692	725.24822	0
32	5552	78.58	-18.15021	1010.7733	2641.5682	692.2314	0
33	5552	85.95	-14.91696	799.35214	2428.5137	691.53804	0
34	5552	91.130245	-12.48302	640.67378	2315.6917	711.00294	0
35	5552	93.112435	-11.469395	574.82469	2261.9122	716.12614	0
36	5552	97.055885	-9.3245335	435.82377	2083.3976	951.2272	0
37	5552	102.8989	-5.9441615	217.23284	1830.4854	931.41183	0
38	5552	107.0642	-3.3773465	51.59326	1674.7191	688.97604	0
39	5552	110.019	-1.4251218	-74.098533	1538.507	653.05749	0
40	5552	116.73	3.4511052	-387.17821	1068.9904	453.75949	0
41	5552	124.8421	9.7954235	-793.69918	340.17962	144.39768	0

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LWL Case.BS.LtoR

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File Information

Created By: Sibley, Heather M MVK
Revision Number: 182
Last Edited By: Cox, Lane MVK
Date: 3/31/2011
Time: 10:17:55 AM
File Name: 5c(1) Typical 1.2nd SC.80%SG.S Case.gsz
Directory: C:\Documents and Settings\b4edgslc\Desktop\NF05\Reach 5c\2nd Round Analysis - Strength Gain\Reach 5c(1)\Stability\2nd Stage Construction\80%SG,1 Layer of Fabric\Slope W\
Last Solved Date: 3/31/2011
Last Solved Time: 10:19:54 AM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

LWL Case.BS.LtoR

Kind: SLOPE/W
Method: Spencer
Settings
    Apply Phreatic Correction: No
    PWP Conditions Source: Piezometric Line
    Use Staged Rapid Drawdown: No
SlipSurface
    Direction of movement: Left to Right
    Use Passive Mode: No
    Slip Surface Option: Block
    Critical slip surfaces saved: 100
    Optimize Critical Slip Surface Location: Yes
    Tension Crack
        Tension Crack Option: Tension Crack Line
        Percentage Wet: 0
        Tension Crack Fluid Unit Weight: 62.4 pcf

FOS Distribution
    FOS Calculation Option: Constant
Restrict Block Crossing: Yes
Advanced
    Number of Slices: 30
    Optimization Tolerance: 0.01
    Minimum Slip Surface Depth: 0.1 ft
    Optimization Maximum Iterations: 2000
    Optimization Convergence Tolerance: 1e-007
    Starting Optimization Points: 8
    Ending Optimization Points: 16
    Complete Passes per Insertion: 1
    Driving Side Maximum Convex Angle: 5 °
    Resisting Side Maximum Convex Angle: 1 °

Materials

EMBANKMENT FILL CH

Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 0 psf
Phi: 23 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH above 0

Model: Mohr-Coulomb
Unit Weight: 108 pcf
Cohesion: 0 psf
Phi: 23 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH, 0 to -12

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -12 (2)
Cohesion: 0 psf
Phi: 23 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

CH, -12 to -22

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -12 to -22 (2)

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Cohesion: 0 psf
Phi: 23 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -22 to -36

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -22 to -36 (2)
Cohesion: 0 psf
Phi: 23 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -36 to -80

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -36 to -80 (2)
Cohesion: 0 psf
Phi: 23 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sand Fill

Model: Mohr-Coulomb
Unit Weight: 122 pcf
Cohesion: 0 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, 0 to -12 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, 0 to -12 (2)
Cohesion: 0 psf
Phi: 23 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

CH, -12 to -22 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -12 to -22 (2)
Cohesion: 0 psf
Phi: 23 °
Phi-B: 0 °
Pore Water Pressure

Piezometric Line: 1

CH, -22 to -36 SG

Model: Spatial Mohr-Coulomb
Weight Spatial Fn: CH, -22 to -36 (2)
Cohesion: 0 psf
Phi: 23 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Limits

Left Coordinate: (-200, -1.79) ft
Right Coordinate: (500, -4.27) ft

Slip Surface Block

Left Grid
Upper Left: (132, -12) ft
Lower Left: (167, -12) ft
Lower Right: (167, -36) ft
X Increments: 7
Y Increments: 7
Starting Angle: 135 °
Ending Angle: 160 °
Angle Increments: 7
Right Grid
Upper Left: (231, -12) ft
Lower Left: (271, -12) ft
Lower Right: (271, -50) ft
X Increments: 7
Y Increments: 7
Starting Angle: 20 °
Ending Angle: 45 °
Angle Increments: 7

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	-200	-1.79
	-195.89	-1.8
	-169.15	-1.8

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	-146.39	-1.65
	-122.74	-1.62
	-98.28	-1.36
	-85.7	-0.94
	-66.38	-0.23
	-63	0
	-52.15	0.5
	-38.25	0.23
	-36.18	0.46
	194.59	-4.39
	214.93	-4.22
	250.23	-4.22
	259.47	-4.16
	284.55	-5.22
	285	-5.3
	406	-5.3
	407.82	-4.54
	500	-4.27

Spatial Functions

CH, 0 to -12 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -6, 100)
Data Point: (0, -6, 101)
Data Point: (178.08, -6, 111)

CH, -12 to -22 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -17, 100)
Data Point: (0, -17, 109)
Data Point: (178.08, -17, 100)

CH, -22 to -36 (2)

Model: Linear Interpolation
Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -29, 102)
Data Point: (0, -29, 104)
Data Point: (178.08, -29, 102)

CH, -36 to -80 (2)

Model: Linear Interpolation

Limit Range By: Data Values
Data Points: X (ft), Y (ft), Unit Weight (pcf)
Data Point: (-23.63, -58, 105)
Data Point: (0, -58, 106)
Data Point: (178.08, -58, 105)

Regions

	Material	Points	Area (ft²)
Region 1	CH, -36 to -80	31,33,60,63,34,32	30800
Region 2	CH above 0	40,9,10,11,12,13,64,17,39,57	130.54365
Region 3	Sand Fill	19,20,21,22,23,24,25,26,27,28	629.28815
Region 4	EMBANKMENT FILL CH	19,46,41,42,43,66,28	1500.8133
Region 5	EMBANKMENT FILL CH	43,44,45,65,29,66	501.84775
Region 6	CH, -22 to -36	35,33,60,59	2800
Region 7	CH, -12 to -22	37,35,59,58	2000
Region 8	CH, 0 to -12	57,58,37,2,1,3,4,5,6,7,8,40	2203.9585
Region 9	CH, -22 to -36	63,62,36,34	3496.78
Region 10	CH, -12 to -22	62,61,38,36	2497.7
Region 11	CH, 0 to -12	61,65,45,47,48,49,50,51,52,53,54,55,30,38	1282.4538
Region 12	CH, -12 to -22 SG	58,59,62,61	2502.3
Region 13	CH, -22 to -36 SG	60,59,62,63	3503.22
Region 14	CH, 0 to -12 SG	57,58,61,65,29,66,28,27,26,25,24,23,22,21,20,19,18,39	1448.4571
Region 15	EMBANKMENT FILL CH	64,17,39,56,19,46	368.6281

Points

	X (ft)	Y (ft)
Point 1	-195.89	-1.8
Point 2	-200	-1.79
Point 3	-169.15	-1.8
Point 4	-146.39	-1.65
Point 5	-122.74	-1.62
Point 6	-98.28	-1.36
Point 7	-85.7	-0.94
Point 8	-66.38	-0.23
Point 9	-52.15	0.5
Point 10	-38.25	0.23
Point 11	-36.18	0.46
Point 12	-23.63	0.86
Point 13	-19.22	0.94
Point 14	-5.71	4.75
Point 15	-0.42	4.91
Point 16	-0.22	4.77
Point 17	4.93	4.5
Point 18	24.3	-0.66
Point 19	40.33	-3.85
Point 20	53.08	-5.02

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Point 21	69.13	-8.93
Point 22	90.17	-10.85
Point 23	106.69	-11.22
Point 24	116.58	-11.18
Point 25	126.69	-10.14
Point 26	142.13	-9.46
Point 27	157.98	-8.78
Point 28	178.08	-4.54
Point 29	214.93	-4.22
Point 30	500	-4.27
Point 31	-200	-80
Point 32	500	-80
Point 33	-200	-36
Point 34	500	-36
Point 35	-200	-22
Point 36	500	-22
Point 37	-200	-12
Point 38	500	-12
Point 39	22	0
Point 40	-63	0
Point 41	111.73	14
Point 42	121.73	14
Point 43	161	4
Point 44	241	2
Point 45	259.47	-4.16
Point 46	81.73	6.5
Point 47	284.55	-5.2
Point 48	300.6	-9.14
Point 49	320.9	-11
Point 50	337.4	-11.22
Point 51	347.09	-11.26
Point 52	356.8	-10.22
Point 53	372.41	-9.68
Point 54	388.59	-9
Point 55	407.82	-4.54
Point 56	30	-1.79
Point 57	0	0
Point 58	0	-12
Point 59	0	-22
Point 60	0	-36
Point 61	250.23	-12
Point 62	250.23	-22
Point 63	250.23	-36
Point 64	1.73	4.5
Point 65	250.23	-4.22
Point 66	194.59	-4.39

LWL Case.BS.LtoR

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	Optimized	2.40	(220.245, 18.472)	95.46992	(109.443, 13.4283)	(338.646, -11.2251)
2	17641	2.50	(220.245, 18.472)	95.415	(105.933, 12.5508)	(330.816, -11.1322)
3	18089	2.50	(220.763, 18.767)	94.879	(106.878, 12.7869)	(330.816, -11.1322)
4	17577	2.51	(222.599, 19.81)	94.341	(110.215, 13.6213)	(330.816, -11.1322)
5	17129	2.51	(222.266, 19.621)	93.382	(109.613, 13.4706)	(330.816, -11.1322)
6	18153	2.52	(218.235, 17.322)	96.032	(102.254, 11.6309)	(330.816, -11.1322)
7	13481	2.52	(217.798, 18.609)	92.075	(106.432, 12.6755)	(325.303, -11.0587)
8	22249	2.52	(222.956, 18.483)	95.36	(105.912, 12.5455)	(336.328, -11.2057)
9	17193	2.52	(219.849, 18.245)	95.858	(105.209, 12.3697)	(330.816, -11.1322)
10	18601	2.52	(218.937, 17.724)	95.312	(103.54, 11.9525)	(330.816, -11.1322)
11	21737	2.52	(224.973, 19.633)	94.259	(109.592, 13.4654)	(336.328, -11.2057)
12	17121	2.52	(215.508, 19.503)	86.635	(109.613, 13.4706)	(317.197, -10.6607)
13	18025	2.52	(223.071, 20.077)	93.884	(111.07, 13.8351)	(330.816, -11.1322)
14	18097	2.52	(227.955, 18.797)	100.423	(106.878, 12.7869)	(345.399, -11.253)
15	17633	2.52	(213.477, 18.354)	88.606	(105.933, 12.5508)	(317.197, -10.6607)
16	13417	2.53	(219.876, 19.787)	91.286	(110.201, 13.6178)	(325.303, -11.0587)
17	13929	2.53	(218.206, 18.841)	92.057	(107.174, 12.861)	(325.303, -11.0587)
18	17569	2.53	(215.842, 19.692)	86.868	(110.215, 13.6213)	(317.197, -10.6607)
19	21801	2.53	(222.276, 18.094)	95.219	(104.666, 12.2341)	(336.328, -11.2057)
20	12969	2.53	(219.637, 19.652)	90.889	(109.769, 13.5099)	(325.303, -11.0587)
21	18537	2.53	(221.403, 19.131)	94.281	(108.043, 13.0782)	(330.816, -11.1322)
22	13993	2.53	(215.969, 17.566)	93.745	(103.094, 11.8411)	(325.303, -11.0587)
23	18609	2.53	(226.139, 17.754)	101.378	(103.54, 11.9525)	(345.399, -11.253)
24	17705	2.53	(217.633, 16.976)	96.675	(101.147, 11.3543)	(330.816, -11.1322)
25	17065	2.53	(224.664, 20.283)	92.333	(114.139, 14)	(330.816, -11.1322)
26	17649	2.53	(227.441, 18.502)	100.575	(105.933, 12.5508)	(345.399, -11.253)
27	17513	2.53	(224.985, 20.283)	92.859	(114.768, 14)	(330.816, -11.1322)
28	13033	2.53	(217.536, 18.46)	92.479	(105.954, 12.556)	(325.303, -11.0587)
29	22185	2.53	(225.561, 19.967)	94.451	(110.661, 13.7327)	(336.328, -11.2057)
30	18161	2.53	(225.441, 17.352)	102.588	(102.254, 11.6309)	(345.399, -11.253)
31	21289	2.53	(224.499, 19.363)	94.883	(108.728, 13.2495)	(336.328, -11.2057)
32	17585	2.53	(229.78, 19.84)	99.046	(110.215, 13.6213)	(345.399, -11.253)
33	18081	2.53	(213.998, 18.649)	88.651	(106.878, 12.7869)	(317.197, -10.6607)
34	22697	2.53	(223.729, 18.924)	95.427	(107.323, 12.8983)	(336.328, -11.2057)
35	13937	2.53	(225.333, 18.884)	98.998	(107.174, 12.861)	(339.748, -11.2297)
36	17185	2.53	(213.079, 18.127)	88.511	(105.209, 12.3697)	(317.197, -10.6607)
37	18545	2.54	(228.591, 19.161)	100.421	(108.043, 13.0782)	(345.399, -11.253)
38	21729	2.54	(217.882, 19.585)	88.279	(109.592, 13.4654)	(321.94, -11.0139)
39	22761	2.54	(220.95, 17.333)	96.417	(102.232, 11.6256)	(336.328, -11.2057)
40	13545	2.54	(215.521, 17.31)	92.991	(102.275, 11.6361)	(325.303, -11.0587)
41	14001	2.54	(223.108, 17.609)	99.904	(103.094, 11.8411)	(339.748, -11.2297)
42	13489	2.54	(224.927, 18.652)	98.098	(106.432, 12.6755)	(339.748, -11.2297)
43	21281	2.54	(217.405, 19.315)	88.034	(108.728, 13.2495)	(321.94, -11.0139)
44	16681	2.54	(222.078, 19.515)	93.62	(109.271, 13.3852)	(330.816, -11.1322)
45	16673	2.54	(215.319, 19.397)	87.227	(109.271, 13.3852)	(317.197, -10.6607)
46	18033	2.54	(230.249, 20.107)	99.562	(111.07, 13.8351)	(345.399, -11.253)

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47	17057	2.54	(217.914, 20.165)	85.369	(114.139, 14)	(317.197, -10.6607)
48	21793	2.54	(215.169, 18.046)	88.869	(104.666, 12.2341)	(321.94, -11.0139)
49	22241	2.54	(215.853, 18.435)	89.475	(105.912, 12.5455)	(321.94, -11.0139)
50	22313	2.54	(220.066, 16.825)	96.443	(100.604, 11.2186)	(336.328, -11.2057)
51	16617	2.54	(224.524, 20.283)	93.349	(113.865, 14)	(330.816, -11.1322)
52	18665	2.54	(216.236, 16.172)	95.711	(98.5739, 10.711)	(330.816, -11.1322)
53	14449	2.54	(223.681, 17.938)	99.844	(104.147, 12.1041)	(339.748, -11.2297)
54	18145	2.55	(211.459, 17.204)	89.822	(102.254, 11.6309)	(317.197, -10.6607)
55	13425	2.55	(226.992, 19.83)	97.392	(110.201, 13.6178)	(339.748, -11.2297)
56	14441	2.55	(216.544, 17.895)	93.19	(104.147, 12.1041)	(325.303, -11.0587)
57	13473	2.55	(211.442, 18.405)	85.901	(106.432, 12.6755)	(312.631, -10.2424)
58	21673	2.55	(227.678, 20.301)	93.149	(114.728, 14)	(336.328, -11.2057)
59	22257	2.55	(230.973, 18.345)	102.614	(105.912, 12.5455)	(352.763, -10.6524)
60	12521	2.55	(219.562, 19.61)	91.585	(109.634, 13.4759)	(325.303, -11.0587)
61	17137	2.55	(229.45, 19.652)	99.39	(109.613, 13.4706)	(345.399, -11.253)
62	12961	2.55	(213.286, 19.448)	84.531	(109.769, 13.5099)	(312.631, -10.2424)
63	19057	2.55	(226.941, 18.215)	101.3	(105.015, 12.3213)	(345.399, -11.253)
64	18673	2.55	(223.452, 16.202)	101.725	(98.5739, 10.711)	(345.399, -11.253)
65	18090	2.55	(214.81, 18.686)	89.702	(106.878, 12.7869)	(318.802, -10.8078)
66	13865	2.55	(220.272, 20.011)	91.931	(110.917, 13.7969)	(325.303, -11.0587)
67	17642	2.55	(214.29, 18.39)	90.757	(105.933, 12.5508)	(318.802, -10.8078)
68	12905	2.55	(221.704, 20.265)	90.519	(113.653, 14)	(325.303, -11.0587)
69	19121	2.55	(224.331, 16.711)	102.358	(100.203, 11.1182)	(345.399, -11.253)
70	21225	2.55	(227.224, 20.301)	93.753	(113.836, 14)	(336.328, -11.2057)
71	16609	2.55	(217.774, 20.165)	85.868	(113.865, 14)	(317.197, -10.6607)
72	22705	2.55	(231.738, 18.786)	102.485	(107.323, 12.8983)	(352.763, -10.6524)
73	13025	2.55	(211.179, 18.256)	85.625	(105.954, 12.556)	(312.631, -10.2424)
74	17697	2.55	(210.854, 16.858)	88.914	(101.147, 11.3543)	(317.197, -10.6607)
75	19049	2.55	(219.743, 18.185)	95.073	(105.015, 12.3213)	(330.816, -11.1322)
76	22769	2.55	(228.984, 17.195)	103.533	(102.232, 11.6256)	(352.763, -10.6524)
77	13873	2.55	(227.386, 20.053)	98.202	(110.917, 13.7969)	(339.748, -11.2297)
78	16745	2.55	(219.575, 18.089)	95.981	(104.709, 12.2447)	(330.816, -11.1322)
79	13553	2.55	(222.663, 17.353)	98.915	(102.275, 11.6361)	(339.748, -11.2297)
80	19113	2.55	(217.119, 16.681)	95.663	(100.203, 11.1182)	(330.816, -11.1322)
81	14513	2.55	(221.298, 16.566)	100.851	(99.7569, 11.0067)	(339.748, -11.2297)
82	13353	2.56	(221.953, 20.265)	91.075	(114.143, 14)	(325.303, -11.0587)
83	21353	2.56	(221.681, 17.753)	96.065	(103.574, 11.9611)	(336.328, -11.2057)
84	17713	2.56	(224.842, 17.006)	101.646	(101.147, 11.3543)	(345.399, -11.253)
85	23209	2.56	(221.905, 17.881)	96.469	(103.986, 12.0639)	(336.328, -11.2057)
86	22250	2.56	(216.86, 18.442)	91.888	(105.912, 12.5455)	(323.981, -11.0411)
87	18217	2.56	(215.43, 15.707)	96.377	(97.0852, 10.3388)	(330.816, -11.1322)
88	12977	2.56	(226.755, 19.695)	98.236	(109.769, 13.5099)	(339.748, -11.2297)
89	14385	2.56	(225.88, 19.196)	98.96	(108.175, 13.1111)	(339.748, -11.2297)
90	14505	2.56	(214.149, 16.523)	94.193	(99.7569, 11.0067)	(325.303, -11.0587)
91	13409	2.56	(213.526, 19.583)	85.144	(110.201, 13.6178)	(312.631, -10.2424)
92	14057	2.56	(213.518, 16.16)	94.865	(98.595, 10.7163)	(325.303, -11.0587)
93	17201	2.56	(227.046, 18.275)	100.313	(105.209, 12.3697)	(345.399, -11.253)
94	22177	2.56	(218.474, 19.919)	88.486	(110.661, 13.7327)	(321.94, -11.0139)

95	18017	2.56	(216.317, 19.959)	87.645	(111.07, 13.8351)	(317.197, -10.6607)
96	18154	2.56	(212.271, 17.241)	90.735	(102.254, 11.6309)	(318.802, -10.8078)
97	17505	2.56	(218.236, 20.165)	85.519	(114.768, 14)	(317.197, -10.6607)
98	17001	2.56	(226.967, 20.283)	90.748	(118.653, 14)	(330.816, -11.1322)
99	13041	2.56	(224.666, 18.502)	99.074	(105.954, 12.556)	(339.748, -11.2297)
100	22193	2.56	(233.554, 19.829)	101.648	(110.661, 13.7327)	(352.763, -10.6524)
101	21217	2.56	(220.143, 20.253)	86.724	(113.836, 14)	(321.94, -11.0139)

Slices of Slip Surface: **Optimized**

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	Optimized	110.5866	12.099445	-918.79028	143.52283	60.921828	0
2	Optimized	114.5925	7.44393	-633.52791	582.73813	247.35766	0
3	Optimized	119.5925	2.0549635	-303.81808	1106.7105	469.77076	0
4	Optimized	123.2406	-1.46478	-88.963165	1397.1895	593.07176	0
5	Optimized	125.4548	-3.601074	41.437473	1548.0177	639.50536	0
6	Optimized	129.01865	-7.0394955	251.31811	1756.5975	869.07344	0
7	Optimized	133.797	-10.899535	485.92225	2271.2247	757.81593	0
8	Optimized	138.92255	-13.840195	662.69795	2421.0089	746.35873	0
9	Optimized	142.86055	-16.09954	798.49739	2530.1878	735.05896	0
10	Optimized	146.5794	-17.46234	878.67753	2687.361	767.74057	0
11	Optimized	152.556	-19.349635	988.60995	2702.6781	727.57877	0
12	Optimized	156.76215	-20.40489	1048.936	2804.3176	745.11526	0
13	Optimized	159.49	-20.65488	1060.9515	2744.9545	714.81685	0
14	Optimized	164.29195	-21.094945	1082.1275	2722.5236	696.30682	0
15	Optimized	170.87585	-21.698315	1111.1375	2746.5725	694.20099	0
16	Optimized	176.1239	-22.17926	1134.2619	2766.4179	692.80913	0
17	Optimized	182.90695	-22.80088	1164.1768	2805.0203	696.49675	0
18	Optimized	191.16195	-23.78258	1214.5863	2845.0859	692.10603	0
19	Optimized	197.47125	-24.775235	1273.5359	2926.6127	701.68945	0
20	Optimized	203.23375	-25.681865	1333.1242	3001.1837	708.04926	0
21	Optimized	210.5225	-27.086145	1424.5024	3088.5287	706.33728	0
22	Optimized	218.18845	-28.740155	1530.0958	3231.4854	722.19707	0
23	Optimized	224.47375	-30.19892	1621.1334	3339.2302	729.28884	0
24	Optimized	230.87545	-31.812425	1721.7744	3478.4409	745.66069	0
25	Optimized	237.62515	-33.528	1828.7481	3629.3528	764.31135	0

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26	Optimized	243.89235	-35.120935	1928.2521	3671.8718	740.12266	0
27	Optimized	248.50735	-35.910665	1977.4943	3717.1033	738.4202	0
28	Optimized	250.77835	-35.982625	1982.2102	3636.695	702.28713	0
29	Optimized	253.284	-36.06202	1988.1861	3547.9889	662.09698	0
30	Optimized	255.57085	-36.06202	1989.1062	3593.9313	681.20781	0
31	Optimized	257.6852	-35.66407	1965.1374	3464.7316	636.53997	0
32	Optimized	263.65	-34.541395	1884.7302	3252.3439	580.51758	0
33	Optimized	272.01	-32.96791	1764.5908	3045.5678	543.74249	0
34	Optimized	280.37	-31.39443	1644.3339	2838.9094	507.06719	0
35	Optimized	284.6977	-30.57989	1580.8148	2728.3751	487.11047	0
36	Optimized	284.9227	-30.53754	1575.6841	2717.8453	484.81866	0
37	Optimized	285.41215	-30.445415	1569.0199	2701.1081	480.54293	0
38	Optimized	290.76135	-29.16385	1489.0657	2523.3632	439.03325	0
39	Optimized	298.1492	-27.05935	1357.7843	2253.5267	380.22009	0
40	Optimized	306.2593	-24.07942	1171.8744	1863.505	293.57977	0
41	Optimized	312.91865	-21.632545	1019.1674	1563.5493	231.07641	0
42	Optimized	317.40935	-19.81446	905.69739	1357.3821	191.72878	0
43	Optimized	323.8293	-17.146485	739.2256	1046.3024	130.34635	0
44	Optimized	331.72315	-13.96457	540.66861	694.41089	65.259725	0
45	Optimized	337.04385	-11.85906	409.2892	461.93522	22.34691	0
46	Optimized	338.0229	-11.47163	385.10858	414.606	12.520914	0

Slices of Slip Surface: 17641

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	17641	108.83155	10.574624	-821.33004	267.24405	113.43837	0
2	17641	116.73	5.189536	-495.65233	871.84707	370.07713	0
3	17641	125.24055	-0.612848	-144.74631	1357.5556	576.24818	0
4	17641	129.70165	-3.65436	39.192993	1549.4833	641.08021	0
5	17641	134.5533	-6.9621555	239.23455	1741.0718	867.08613	0
6	17641	140.1984	-10.810941	471.99968	2055.0676	671.97245	0
7	17641	146.9712	-15.42857	751.25301	2316.818	664.54291	0
8	17641	154.99	-19.452625	991.84215	2704.5768	727.01271	0
9	17641	159.49	-20.34884	1041.8568	2659.362	686.59023	0
10	17641	164.39035	-21.324785	1096.3355	2690.1071	676.51595	0
11	17641	172.93035	-23.0256	1191.2482	2812.7169	688.27265	0
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12	17641	182.2075	24.873225	1294.3854	2958.0182	706.17021	0
13	17641	190.4625	-26.517275	1386.1032	3098.2086	726.74562	0
14	17641	197.98	-28.01445	1475.8821	3226.0239	742.89113	0
15	17641	204.76	-29.364745	1563.6857	3341.456	754.61873	0
16	17641	211.54	-30.71504	1651.4893	3456.8881	766.34633	0
17	17641	218.78775	-32.15849	1743.3557	3580.3937	779.77637	0
18	17641	226.50325	-33.695095	1839.1989	3711.8286	794.88413	0
19	17641	234.21875	-35.2317	1935.1693	3843.3906	809.99189	0
20	17641	239.53825	-36.291125	2001.2365	3934.9779	820.82453	0
21	17641	245.615	-37.501365	2076.7654	3884.0667	767.15386	0
22	17641	252.04355	-38.78167	2157.3788	3777.3326	687.62961	0
23	17641	256.66355	-38.1214	2118.0035	3894.6419	754.13828	0
24	17641	260.98105	-36.54997	2017.1504	3588.9058	667.17059	0
25	17641	266.1684	-34.66193	1885.6111	3355.35	623.86715	0
26	17641	273.52105	-31.985785	1699.2738	3026.6397	563.43341	0
27	17641	280.8737	-29.30964	1512.9365	2697.9294	502.99967	0
28	17641	284.6977	-27.91781	1414.6982	2523.4065	470.61876	0
29	17641	284.9227	-27.835915	1407.0964	2508.1569	467.37246	0
30	17641	288.9	-26.3883	1315.931	2297.3074	416.56956	0
31	17641	296.7	-23.549335	1138.7628	1885.6498	317.0347	0
32	17641	300.7784	-22.064925	1046.1434	1668.082	263.99729	0
33	17641	304.28065	-20.79021	966.58565	1514.195	232.44638	0
34	17641	310.9284	-18.37063	815.60435	1222.4665	172.70274	0
35	17641	317.57615	-15.951045	664.62305	930.70975	112.9471	0
36	17641	324.66575	-13.370625	503.61284	632.62277	54.761466	0
37	17641	329.62365	-11.566105	391.00632	430.62405	16.816728	0

Slices of Slip Surface: 18089

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	18089	109.3038	10.901094	-842.31782	241.30379	102.42738	0
2	18089	116.73	5.128886	-491.86968	858.86519	364.56664	0
3	18089	124.4415	-0.8651045	-127.95841	1372.3837	582.54233	0
4	18089	128.0026	-3.633059	40.091763	1556.5065	643.67986	0
5	18089	132.3535	-	245.41222	1759.3551	874.07532	0

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			7.0148925				
6	18089	137.3109	-10.868185	479.35137	2095.5525	686.03669	0
7	18089	140.4485	-13.30699	627.43402	2247.1177	687.51492	0
8	18089	147.065	-18.449845	939.69234	2551.4963	684.17019	0
9	18089	154.99	-22.78055	1199.5033	3052.9543	786.74325	0
10	18089	159.49	-23.525295	1240.0856	2992.3435	743.78937	0
11	18089	165.27	-24.481875	1292.143	3017.1567	732.22488	0
12	18089	173.81	-25.895225	1369.1979	3112.349	739.92374	0
13	18089	182.2075	-27.28499	1444.9128	3217.0523	752.2286	0
14	18089	190.4625	-28.651175	1519.3694	3330.1117	768.61448	0
15	18089	197.98	-29.89531	1593.3709	3433.2413	780.97867	0
16	18089	204.76	-31.017385	1666.8551	3526.2243	789.25541	0
17	18089	211.54	-32.13946	1740.3393	3619.3529	797.59392	0
18	18089	218.2528	-33.250415	1811.4595	3711.5471	806.53936	0
19	18089	224.8984	-34.35025	1880.1946	3802.996	816.18078	0
20	18089	231.544	-35.450085	1948.7812	3894.4449	825.88522	0
21	18089	237.9334	-36.507515	2014.7679	3983.6908	835.75817	0
22	18089	245.615	-37.7788	2094.0513	3933.8151	780.93338	0
23	18089	252.04355	-38.842715	2161.1977	3803.3663	697.05921	0
24	18089	256.66355	-38.1214	2118.0035	3896.9858	755.13318	0
25	18089	260.98105	-36.54997	2017.1504	3591.3933	668.22649	0
26	18089	266.1684	-34.66193	1885.6111	3357.3949	624.73514	0
27	18089	273.52105	-31.985785	1699.2738	3028.5568	564.24715	0
28	18089	280.8737	-29.30964	1512.9365	2699.7187	503.75916	0
29	18089	284.6977	-27.91781	1414.6982	2524.9971	471.29391	0
30	18089	284.9227	-27.835915	1407.0964	2509.7372	468.04327	0
31	18089	288.9	-26.3883	1315.931	2298.7531	417.18321	0
32	18089	296.7	-23.549335	1138.7628	1886.8545	317.54607	0
33	18089	300.7784	-22.064925	1046.1434	1669.1356	264.44452	0
34	18089	304.28065	-20.79021	966.58565	1515.1845	232.86639	0
35	18089	310.9284	-18.37063	815.60435	1223.2581	173.03875	0
36	18089	317.57615	-15.951045	664.62305	931.31757	113.20511	0
37	18089	324.66575	-13.370625	503.61284	632.99707	54.920348	0
			-				

38	18089	329.62365	11.566105	391.00632	430.86052	16.917106	0

Slices of Slip Surface: 17577

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	17577	110.9726	13.03257	-977.52806	75.330382	31.97585	0
2	17577	116.73	8.5574585	-705.81222	526.94119	223.67327	0
3	17577	126.7083	0.801541	-234.92953	1155.1402	490.32794	0
4	17577	132.4892	-3.6918185	37.874752	1451.322	599.97275	0
5	17577	136.6605	-6.9340865	234.72627	1647.3026	815.55134	0
6	17577	141.0796	-10.368966	443.25898	1951.5572	640.23462	0
7	17577	142.654	-11.592705	517.56195	2031.5544	642.65167	0
8	17577	147.589	-15.42857	750.44256	2261.3245	641.33134	0
9	17577	154.99	-19.452625	991.84215	2704.2488	726.87348	0
10	17577	159.49	-20.34884	1041.8568	2659.0373	686.45238	0
11	17577	164.39035	-21.324785	1096.3355	2689.8179	676.39316	0
12	17577	172.93035	-23.0256	1191.2482	2812.336	688.11097	0
13	17577	182.2075	-24.873225	1294.3854	2957.6618	706.01893	0
14	17577	190.4625	-26.517275	1386.1032	3097.8522	726.59433	0
15	17577	197.98	-28.01445	1475.8821	3225.5899	742.70693	0
16	17577	204.76	-29.364745	1563.6857	3341.0221	754.43453	0
17	17577	211.54	-30.71504	1651.4893	3456.4542	766.16212	0
18	17577	218.78775	-32.15849	1743.3557	3579.8852	779.56054	0
19	17577	226.50325	-33.695095	1839.1989	3711.3201	794.66831	0
20	17577	234.21875	-35.2317	1935.1693	3842.8822	809.77607	0
21	17577	239.53825	-36.291125	2001.2365	3934.307	820.53974	0
22	17577	245.615	-37.501365	2076.7654	3883.4291	766.88325	0
23	17577	252.04355	-38.78167	2157.3788	3776.5214	687.28529	0
24	17577	256.66355	-38.1214	2118.0035	3897.1532	755.20425	0
25	17577	260.98105	-36.54997	2017.1504	3591.3933	668.22649	0
26	17577	266.1684	-34.66193	1885.6111	3357.5227	624.78939	0
27	17577	273.52105	-31.985785	1699.2738	3028.6846	564.3014	0
28	17577	280.8737	-29.30964	1512.9365	2699.8465	503.81341	0
29	17577	284.6977	-27.91781	1414.6982	2525.0925	471.33442	0

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30	17577	284.9227	-27.835915	1407.0964	2509.8588	468.09487	0
31	17577	288.9	-26.3883	1315.931	2298.8736	417.23435	0
32	17577	296.7	-23.549335	1138.7628	1886.975	317.59721	0
33	17577	300.7784	-22.064925	1046.1434	1669.2146	264.47806	0
34	17577	304.28065	-20.79021	966.58565	1515.1845	232.86639	0
35	17577	310.9284	-18.37063	815.60435	1223.3005	173.05675	0
36	17577	317.57615	-15.951045	664.62305	931.35998	113.22311	0
37	17577	324.66575	-13.370625	503.61284	633.02203	54.93094	0
38	17577	329.62365	-11.566105	391.00632	430.86052	16.917106	0

Slices of Slip Surface: 17129

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	17129	110.6713	12.74885	-959.42791	97.64414	41.447478	0
2	17129	116.73	8.6181075	-709.59858	532.7174	226.12512	0
3	17129	124.78245	3.128039	-377.57207	999.20312	424.13656	0
4	17129	130.88735	-1.034213	-125.85961	1257.3239	533.70235	0
5	17129	134.829	-3.7215725	36.663029	1427.1318	590.21898	0
6	17129	139.44895	-6.8713865	227.148	1611.1751	799.0684	0
7	17129	145.07545	-10.707484	459.14903	1919.6221	619.93405	0
8	17129	149.4856	-13.714285	640.99015	2093.532	616.56744	0
9	17129	154.99	-16.1247	784.17794	2360.6121	669.15659	0
10	17129	159.49	-17.172385	843.66169	2331.5507	631.5714	0
11	17129	165.27	-18.51808	920.04243	2394.6216	625.92172	0
12	17129	173.81	-20.506355	1032.9136	2544.2498	641.52414	0
13	17129	179.15275	-21.750245	1103.5235	2640.2579	652.30506	0
14	17129	183.8166	-22.836085	1165.1602	2734.2067	666.02075	0
15	17129	190.99885	-24.508255	1260.0838	2879.5754	687.43343	0
16	17129	197.98	-26.133595	1358.5624	3020.9749	705.65222	0
17	17129	204.76	-27.712105	1460.6406	3158.4486	720.67673	0
18	17129	211.54	-29.29062	1562.6327	3296.066	735.79881	0

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19	17129	219.168	-31.066565	1675.2293	3450.8874	753.72214	0
20	17129	227.644	-33.03994	1798.4097	3622.9032	774.45157	0
21	17129	236.12	-35.013315	1921.4751	3795.0339	795.27855	0
22	17129	240.679	-36.074735	1987.6614	3887.788	806.5559	0
23	17129	245.615	-37.22393	2059.4387	3834.7114	753.55854	0
24	17129	252.04355	-38.720625	2153.5652	3751.1915	678.15213	0
25	17129	256.66355	-38.1214	2118.0035	3893.9723	753.85402	0
26	17129	260.98105	-36.54997	2017.1504	3588.2839	666.90662	0
27	17129	266.1684	-34.66193	1885.6111	3354.711	623.59591	0
28	17129	273.52105	-31.985785	1699.2738	3026.1285	563.21642	0
29	17129	280.8737	-29.30964	1512.9365	2697.546	502.83692	0
30	17129	284.6977	-27.91781	1414.6982	2522.9612	470.42972	0
31	17129	284.9227	-27.835915	1407.0964	2507.7314	467.19186	0
32	17129	288.9	-26.3883	1315.931	2296.946	416.41614	0
33	17129	296.7	-23.549335	1138.7628	1885.2884	316.88128	0
34	17129	300.7784	-22.064925	1046.1434	1667.8186	263.88548	0
35	17129	304.28065	-20.79021	966.58565	1514.0537	232.38638	0
36	17129	310.9284	-18.37063	815.60435	1222.2828	172.62474	0
37	17129	317.57615	-15.951045	664.62305	930.58253	112.8931	0
38	17129	324.66575	-13.370625	503.61284	632.54791	54.729689	0
39	17129	329.62365	-11.566105	391.00632	430.58463	16.799998	0

Slices of Slip Surface: 18153

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	18153	106.99175	8.4003935	-683.24173	437.29249	185.61965	0
2	18153	116.73	1.7609645	-281.71435	1212.2574	514.57274	0
3	18153	122.64615	-2.272609	-37.775547	1588.6436	674.33921	0
4	18153	124.5742	-3.587147	41.723959	1673.7758	692.7649	0
5	18153	129.6584	-7.0534855	251.35469	1873.3163	936.43997	0
6	18153	135.32215	-10.914959	484.87803	2193.0224	725.06428	0
7	18153	139.5218	-13.77823	658.04531	2357.8439	721.5217	0
8	18153	147.065	-18.921085	969.05163	2640.7829	709.60782	0
9	18153	154.99	-22.78055	1199.5033	3053.4492	786.95333	0

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10	18153	159.49	-23.525295	1240.0856	2992.8989	744.02511	0
11	18153	165.27	-24.481875	1292.143	3017.7343	732.47007	0
12	18153	173.81	-25.895225	1369.1979	3112.9266	740.16893	0
13	18153	182.2075	-27.28499	1444.9128	3217.6499	752.48225	0
14	18153	190.4625	-28.651175	1519.3694	3330.8287	768.91886	0
15	18153	197.98	-29.89531	1593.3709	3433.9689	781.2875	0
16	18153	204.76	-31.017385	1666.8551	3526.9519	789.56425	0
17	18153	211.54	-32.13946	1740.3393	3620.0804	797.90276	0
18	18153	218.2528	-33.250415	1811.4595	3712.4379	806.91746	0
19	18153	224.8984	-34.35025	1880.1946	3803.8867	816.55888	0
20	18153	231.544	-35.450085	1948.7812	3895.1871	826.20029	0
21	18153	237.9334	-36.507515	2014.7679	3984.6559	836.16786	0
22	18153	245.615	-37.7788	2094.0513	3934.6702	781.29636	0
23	18153	252.04355	-38.842715	2161.1977	3804.1823	697.40558	0
24	18153	256.66355	-38.1214	2118.0035	3891.6284	752.85911	0
25	18153	260.98105	-36.54997	2017.1504	3586.4183	666.11469	0
26	18153	266.1684	-34.66193	1885.6111	3352.794	622.78217	0
27	18153	273.52105	-31.985785	1699.2738	3024.3393	562.45692	0
28	18153	280.8737	-29.30964	1512.9365	2695.8846	502.13168	0
29	18153	284.6977	-27.91781	1414.6982	2521.4979	469.80858	0
30	18153	284.9227	-27.835915	1407.0964	2506.2727	466.57265	0
31	18153	288.9	-26.3883	1315.931	2295.6208	415.85363	0
32	18153	296.7	-23.549335	1138.7628	1884.2041	316.42104	0
33	18153	300.7784	-22.064925	1046.1434	1666.844	263.4718	0
34	18153	304.28065	-20.79021	966.58565	1513.0642	231.96637	0
35	18153	310.9284	-18.37063	815.60435	1221.5901	172.33073	0
36	18153	317.57615	-15.951045	664.62305	930.05951	112.67109	0
37	18153	324.66575	-13.370625	503.61284	632.23599	54.597287	0
38	18153	329.62365	-11.566105	391.00632	430.38757	16.716349	0

Slices of Slip Surface: 13481

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	13481	109.081	10.616474	-824.26311	263.44826	111.82715	0

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2	13481	116.73	4.671067	-463.304	903.15857	383.36807	0
3	13481	124.13885	-1.0876525	-113.67421	1401.2531	594.79667	0
4	13481	127.4035	-3.625213	40.388274	1570.3732	649.44007	0
5	13481	131.7783	-7.0256825	246.83644	1774.3998	881.93913	0
6	13481	136.73765	-10.88046	480.87952	2110.6349	691.79012	0
7	13481	140.154	-13.5359	642.08437	2274.9353	693.10412	0
8	13481	144.565	-16.96447	850.2588	2477.9017	690.89342	0
9	13481	149.745	-19.40769	995.92219	2851.2325	787.53248	0
10	13481	155.235	-20.508795	1057.4295	2800.5121	739.89467	0
11	13481	159.49	-21.3622	1105.111	2757.9564	701.59122	0
12	13481	161.835	-21.832525	1131.3479	2752.8096	688.26965	0
13	13481	166.5225	-22.772675	1183.8873	2820.5365	694.71638	0
14	13481	174.2275	-24.318025	1270.2149	2933.2816	705.92994	0
15	13481	182.2075	-25.918535	1359.5986	3060.6705	722.0622	0
16	13481	190.4625	-27.5742	1452.123	3201.892	742.73288	0
17	13481	197.98	-29.081945	1542.5834	3330.7192	759.0186	0
18	13481	204.76	-30.441775	1630.9418	3446.9878	770.8658	0
19	13481	211.54	-31.801605	1719.3001	3563.401	782.77438	0
20	13481	219.3157	-33.36114	1818.446	3696.8064	797.31669	0
21	13481	228.0871	-35.12038	1928.2145	3847.4866	814.68267	0
22	13481	236.7364	-36.855125	2036.454	3998.5144	832.84522	0
23	13481	244.57145	-38.426555	2134.4919	4015.4529	798.42056	0
24	13481	249.18645	-38.76303	2155.4722	4294.0609	907.77702	0
25	13481	253.5039	-37.1916	2058.6942	3930.391	794.48815	0
26	13481	258.1239	-35.510055	1955.7109	3542.7648	673.66443	0
27	13481	263.65	-33.498715	1819.6991	3244.1877	604.65954	0
28	13481	272.01	-30.455925	1607.8186	2869.9967	535.7628	0
29	13481	280.37	-27.413135	1395.8257	2495.9181	466.96149	0
30	13481	284.6977	-25.83798	1284.9094	2298.6619	430.31242	0
31	13481	284.9227	-25.756085	1277.3275	2283.3862	427.04659	0
32	13481	290.12125	-23.863975	1158.3688	2007.9249	360.61517	0
33	13481	297.92125	-21.02501	981.23888	1598.0562	261.82341	0
34	13481	303.98335	-	843.557	1306.233	196.39429	0

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			18.818585				
35	13481	310.75	-16.35572	689.88254	1008.9522	135.43702	0
36	13481	317.51665	-13.892855	536.19418	711.68526	74.491542	0
37	13481	321.8086	-12.33071	438.71592	524.02668	36.212268	0
38	13481	324.0103	-11.529355	388.71541	430.79173	17.860337	0

Slices of Slip Surface: 22249

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	22249	108.821	10.562175	-820.52899	268.53444	113.98611	0
2	22249	116.73	5.169907	-494.4295	874.82153	371.33971	0
3	22249	125.2257	-0.62235	-144.13225	1360.4875	577.49266	0
4	22249	129.6723	-3.653975	39.207628	1551.9523	642.12202	0
5	22249	134.52525	-6.9626785	239.30152	1743.9166	868.6899	0
6	22249	140.17045	-10.811536	472.07026	2058.0642	673.2145	0
7	22249	145.63455	-14.53688	697.36636	2270.9289	667.93767	0
8	22249	152.9682	-19.53688	999.74717	2544.7652	655.82126	0
9	22249	156.79045	-22.142855	1157.341	2686.3324	649.01834	0
10	22249	157.49	-22.36624	1170.4216	2939.1437	750.77799	0
11	22249	159.49	-22.694935	1188.2652	2910.3627	730.98701	0
12	22249	165.27	-23.644855	1239.9241	2934.6372	719.36305	0
13	22249	173.81	-25.048365	1316.3	3028.9228	726.96524	0
14	22249	182.2075	-26.428455	1391.3893	3132.6581	739.12474	0
15	22249	190.4625	-27.785125	1465.2621	3244.9016	755.41217	0
16	22249	197.98	-29.02059	1538.6514	3347.1344	767.6555	0
17	22249	204.76	-30.13485	1611.7126	3439.5525	775.87199	0
18	22249	211.54	-31.24911	1684.9194	3531.825	783.96493	0
19	22249	219.183	-32.5052	1764.9476	3636.0426	794.23272	0
20	22249	227.689	-33.90312	1852.1857	3752.0507	806.44486	0
21	22249	236.19495	-35.30104	1939.4238	3868.1749	818.70625	0
22	22249	240.72395	-36.045365	1985.83	3930.013	825.25671	0
23	22249	245.615	-36.849185	2036.067	3839.8224	765.64875	0
24	22249	254.85	-38.366915	2132.6466	3651.2361	644.60304	0
25	22249	263.8382	-37.563095	2072.7791	3681.4919	682.85807	0
26	22249	272.2923	-34.51285	1860.2228	3305.7851	613.60479	0

LWL Case.BS.LtoR

27	22249	280.4641	-31.53855	1653.0076	2940.8011	546.63591	0
28	22249	284.6977	-29.99764	1544.487	2748.0557	510.8846	0
29	22249	284.9227	-29.915745	1536.8653	2732.8669	507.67253	0
30	22249	288.9	-28.46813	1445.6809	2522.2313	456.96852	0
31	22249	296.7	-25.629165	1268.585	2110.935	357.55639	0
32	22249	303.6355	-23.10484	1111.0153	1765.9167	277.98916	0
33	22249	310.22825	-20.70527	961.29068	1474.4281	217.81392	0
34	22249	317.34275	-18.11581	799.70192	1162.4643	153.98351	0
35	22249	324.21145	-15.61581	643.70482	872.46634	97.103505	0
36	22249	330.83435	-13.20527	493.29231	610.00708	49.542482	0
37	22249	335.23695	-11.602855	393.29921	430.64063	15.850493	0

Slices of Slip Surface: 17193

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	17193	108.46945	10.432659	-811.98773	278.13777	118.06248	0
2	17193	116.73	5.525118	-516.5914	856.45778	363.54476	0
3	17193	126.4531	-0.251304	-168.89315	1318.6899	559.75066	0
4	17193	132.2353	-3.686461	37.873472	1519.8418	629.05825	0
5	17193	137.63005	-6.891451	230.79196	1695.5942	845.70394	0
6	17193	144.0973	-10.733619	462.06389	1982.1579	645.24163	0
7	17193	149.11445	-13.714285	641.46864	2138.775	635.56885	0
8	17193	154.99	-16.1247	784.17794	2361.1007	669.36399	0
9	17193	159.49	-17.172385	843.66169	2332.1634	631.8315	0
10	17193	165.27	-18.51808	920.04243	2395.3059	626.21218	0
11	17193	173.81	-20.506355	1032.9136	2544.9341	641.8146	0
12	17193	179.15275	-21.750245	1103.5235	2640.9842	652.61336	0
13	17193	183.8166	-22.836085	1165.1602	2734.8847	666.30855	0
14	17193	190.99885	-24.508255	1260.0838	2880.3891	687.77879	0
15	17193	197.98	-26.133595	1358.5624	3021.8368	706.01808	0
16	17193	204.76	-27.712105	1460.6406	3159.4542	721.10357	0
17	17193	211.54	-29.29062	1562.6327	3296.9279	736.16467	0
18	17193	219.168	-31.066565	1675.2293	3451.8067	754.11234	0
19	17193	227.644	-33.03994	1798.4097	3623.9374	774.89054	0
20	17193	236.12	-35.013315	1921.4751	3796.183	795.7663	0

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21	17193	240.679	-36.074735	1987.6614	3889.0017	807.07106	0
22	17193	245.615	-37.22393	2059.4387	3835.8721	754.05124	0
23	17193	252.04355	-38.720625	2153.5652	3752.2656	678.60805	0
24	17193	256.66355	-38.1214	2118.0035	3889.9542	752.14847	0
25	17193	260.98105	-36.54997	2017.1504	3584.8635	665.45475	0
26	17193	266.1684	-34.66193	1885.6111	3351.3881	622.18542	0
27	17193	273.52105	-31.985785	1699.2738	3023.189	561.96868	0
28	17193	280.8737	-29.30964	1512.9365	2694.8621	501.69769	0
29	17193	284.6977	-27.91781	1414.6982	2520.4799	469.37649	0
30	17193	284.9227	-27.835915	1407.0964	2505.2394	466.13405	0
31	17193	288.9	-26.3883	1315.931	2294.657	415.44452	0
32	17193	296.7	-23.549335	1138.7628	1883.4813	316.11421	0
33	17193	300.7784	-22.064925	1046.1434	1666.2119	263.20346	0
34	17193	304.28065	-20.79021	966.58565	1512.4988	231.72636	0
35	17193	310.9284	-18.37063	815.60435	1221.1236	172.13273	0
36	17193	317.57615	-15.951045	664.62305	929.70613	112.52109	0
37	17193	324.66575	-13.370625	503.61284	632.02388	54.507254	0
38	17193	329.62365	-11.566105	391.00632	430.22992	16.64943	0

Slices of Slip Surface: 18601

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	18601	107.63505	8.7696175	-707.12836	407.78217	173.09326	0
2	18601	116.73	1.7003145	-277.92713	1192.2893	506.09679	0
3	18601	122.1747	-2.53175	-20.986495	1591.5188	675.55964	0
4	18601	123.516	-3.5743	42.30933	1663.6116	688.20198	0
5	18601	128.04645	-7.095698	256.10067	1873.7696	933.96156	0
6	18601	133.01815	-10.96011	490.71275	2215.3482	732.06433	0
7	18601	138.243	-15.021275	737.29086	2463.0867	732.55687	0
8	18601	144.6757	-20.021275	1040.852	2759.0643	729.33783	0
9	18601	149.6107	-23.857145	1273.74	2985.7903	726.72222	0
10	18601	154.99	-26.10848	1407.1713	3408.1342	849.35836	0
11	18601	159.49	-26.701745	1438.283	3331.438	803.59662	0
12	18601	165.27	-27.463765	1478.3088	3336.3529	788.6929	0

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13	18601	173.81	-28.589655	1537.2833	3402.7572	791.84669	0
14	18601	182.2075	-29.69676	1595.4014	3479.4019	799.71076	0
15	18601	190.4625	-30.78508	1652.4487	3565.1529	811.89479	0
16	18601	197.98	-31.776165	1710.7133	3643.2533	820.3146	0
17	18601	204.76	-32.67002	1769.9353	3713.8811	825.15604	0
18	18601	211.54	-33.56388	1829.3036	3784.3627	829.87335	0
19	18601	218.70205	-34.508105	1890.031	3858.9119	835.74034	0
20	18601	226.24615	-35.5027	1952.0596	3937.6303	842.82477	0
21	18601	235.5091	-36.723905	2028.2049	4036.4582	852.45295	0
22	18601	245.615	-38.056235	2111.4155	3985.0189	795.29744	0
23	18601	252.04355	-38.90376	2164.9958	3830.7746	707.08114	0
24	18601	256.66355	-38.1214	2118.0035	3893.9723	753.85402	0
25	18601	260.98105	-36.54997	2017.1504	3588.5949	667.0386	0
26	18601	266.1684	-34.66193	1885.6111	3354.8388	623.65015	0
27	18601	273.52105	-31.985785	1699.2738	3026.1285	563.21642	0
28	18601	280.8737	-29.30964	1512.9365	2697.546	502.83692	0
29	18601	284.6977	-27.91781	1414.6982	2523.0248	470.45673	0
30	18601	284.9227	-27.835915	1407.0964	2507.7922	467.21766	0
31	18601	288.9	-26.3883	1315.931	2296.946	416.41614	0
32	18601	296.7	-23.549335	1138.7628	1885.4088	316.93242	0
33	18601	300.7784	-22.064925	1046.1434	1667.8976	263.91903	0
34	18601	304.28065	-20.79021	966.58565	1514.0537	232.38638	0
35	18601	310.9284	-18.37063	815.60435	1222.3676	172.66074	0
36	18601	317.57615	-15.951045	664.62305	930.66734	112.9291	0
37	18601	324.66575	-13.370625	503.61284	632.61029	54.75617	0
38	18601	329.62365	-11.566105	391.00632	430.62405	16.816728	0

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```
"Reach 5c(1)-2nd Stage"
"FS to PS; SWL=7.0"
20 10 1 40 1 0
10 5 2 1
176.37 200 240.33 316.73 450.23
0 62.4 0 0 62.4 0 0 62.4 0 0 62.4 0 0 62.4 0 0
0 115 600 600 115 600 600 115 600 600 115 600 600 115 600 600
0 108 600 600 108 600 600 108 600 600 108 600 600 108 600 600
30 122 0 0 122 0 0 122 0 0 122 0 0 122 0 0
0 100 75 75 101 250 250 111 171 171 111 219 219 111 150 150
0 100 75 75 101 250 250 111 171 171 111 219 219 111 150 150
0 100 175 225 109 350 350 100 245 290 100 290 335 100 150 240
0 102 295 365 104 413 476 102 353 416 102 390 453 102 303 366
0 105 475 585 106 575 674 106 557 656 105 523 623 105 465 564
0 105 695 805 106 773 872 106 755 854 105 722 820 105 663 762

0 7 283.73 7 311.73 14 321.73 14 361 4 441 2 459.47 -4.16
484.55 -5.2 485 -5.31 604.54 -5.3 607.82 -4.54 700 -4.27
9999.9 0

0 -1.79 4.11 -1.8 30.85 -1.8 53.61 -1.65 77.26 -1.62
101.72 -1.36 114.3 -0.94 133.62 -0.23 137 0 147.85 0.5
161.75 0.23 163.82 0.46 176.37 0.86 180.78 0.94 201.73 4.5
204.93 4.58 281.73 6.5 311.73 14 321.73 14 361 4 441 2
459.47 -4.16 484.55 -5.2 500.6 -9.14 520.9 -11.0 537.4 -11.22
547.09 -11.26 556.8 -10.22 572.41 -9.68 588.59 -9.0
607.82 -4.54 700 -4.27 9999.9 0

0 -1.79 4.11 -1.8 30.85 -1.8 53.61 -1.65 77.26 -1.62
101.72 -1.36 114.3 -0.94 133.62 -0.23 137 0 147.85 0.5
161.75 0.23 163.82 0.46 176.37 0.86 180.78 0.94 201.73 4.5
204.93 4.58 222 0 224.3 -0.66 240.33 -3.85 260.33 -3.85
378.08 -4.54 380.18 -4.26 394.59 -4.39 414.93 -4.22
434.63 -4.19 450 -4.27 459.47 -4.16 484.55 -5.2 500.6 -9.14
520.9 -11.0 537.4 -11.22 547.09 -11.26 556.8 -10.22
572.41 -9.68 588.59 -9.0 607.82 -4.54 700 -4.27 9999.9 0

0 -1.79 4.11 -1.8 30.85 -1.8 53.61 -1.65 77.26 -1.62
101.72 -1.36 114.3 -0.94 133.62 -0.23 137 0 222 0 224.3 -0.66
240.33 -3.85 260.33 -3.85 378.08 -4.54 380.18 -4.26 394.59 -4.39
414.93 -4.22 434.63 -4.19 450 -4.27 459.47 -4.16 484.55 -5.2
500.6 -9.14 520.9 -11.0 537.4 -11.22 547.09 -11.26 556.8 -10.22
572.41 -9.68 588.59 -9.0 607.82 -4.54 700 -4.27 9999.9 0

0 -1.79 4.11 -1.8 30.85 -1.8 53.61 -1.65 77.26 -1.62
101.72 -1.36 114.3 -0.94 133.62 -0.23 137 0 222 0 224.3 -0.66
240.33 -3.85 253.08 -5.02 269.13 -8.93 290.17 -10.85
306.69 -11.22 316.58 -11.18 326.69 -10.14 342.13 -9.46
357.98 -8.78 378.08 -4.54 380.18 -4.26 394.59 -4.39
414.93 -4.22 434.63 -4.19 450 -4.27 459.47 -4.16 484.55 -5.2
500.6 -9.14 520.9 -11.0 537.4 -11.22 547.09 -11.26 556.8 -10.22
572.41 -9.68 588.59 -9.0 607.82 -4.54 700 -4.27 9999.9 0

0 -1.89 4.11 -1.9 30.85 -1.9 53.61 -1.75 77.26 -1.72
101.72 -1.46 114.3 -1.04 133.62 -0.33 137 -0.1 222 -0.1
224.3 -0.76 240.33 -3.95 253.08 -5.12 269.13 -9.03 290.17 -10.95
306.69 -11.32 316.58 -11.28 326.69 -10.24 342.13 -9.56
357.98 -8.88 378.08 -4.64 380.18 -4.36 394.59 -4.49 414.93 -4.32
434.63 -4.29 450 -4.37 459.47 -4.26 484.55 -5.3 500.6 -9.24
520.9 -11.1 537.4 -11.32 547.09 -11.36 556.8 -10.32 572.41 -9.78
588.59 -9.1 607.82 -4.64 700 -4.37 9999.9 0

0 -12 700 -12 9999.9 0
0 -22 700 -22 9999.9 0
0 -36 700 -36 9999.9 0
0 -58 700 -58 9999.9 0
0 -80 700 -80 9999.9 0

0 7 286 7 394.59 -4.39 414.93 -4.22 450.23 -4.22 459.47 -4.16
484.55 -5.2 485 -5.3 606 -5.3 607.82 -4.54 700 -4.27 9999.9 0

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

6 330 -12 460 -12 1
460
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7 335 -22 460 -22 1
460
8 340 -36 480 -36 1
460
9 350 -58 460 -58 1
460
```

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**** STABILITY WITH UPLIFT ****

"Reach 5c(1)-2nd Stage"
"FS to PS; SWL=7.0"
11 PROFILES
5VERTICALS
UPLIFT WITH 1 PIEZOMETRIC GRADE LINES

* * STRATUM 6 ACT. WEDGE LOC. 330.0 EL. -12.0 PASS.WEDGE LOC. 460.0 EL. -12.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-12.0	1569.	1188.	75.	225.	75.
4.1	-12.0	1569.	1188.	75.	225.	75.
30.9	-12.0	1569.	1188.	75.	225.	75.
53.6	-12.0	1575.	1188.	75.	225.	75.
77.3	-12.0	1576.	1188.	75.	225.	75.
101.7	-12.0	1586.	1188.	75.	225.	75.
114.3	-12.0	1601.	1188.	75.	225.	75.
133.6	-12.0	1628.	1188.	75.	225.	75.
137.0	-12.0	1637.	1188.	75.	225.	75.
147.9	-12.0	1660.	1188.	75.	225.	75.
161.8	-12.0	1647.	1188.	75.	225.	75.
163.8	-12.0	1658.	1188.	75.	225.	75.
176.4	-12.0	1676.	1188.	75.	225.	75.
180.8	-12.0	1682.	1188.	108.	248.	108.
200.0	-12.0	1841.	1188.	250.	350.	250.
201.7	-12.0	1859.	1188.	247.	347.	247.
204.9	-12.0	1872.	1188.	240.	343.	240.
222.0	-12.0	1978.	1188.	207.	317.	207.
224.3	-12.0	1993.	1188.	202.	314.	202.
240.3	-12.0	2072.	1188.	171.	290.	171.
253.1	-12.0	2101.	1188.	179.	298.	179.
260.3	-12.0	2130.	1188.	184.	302.	184.
269.1	-12.0	2165.	1188.	189.	307.	189.
281.7	-12.0	2194.	1188.	197.	314.	197.
283.7	-12.0	2222.	1188.	198.	316.	198.
286.0	-12.0	2290.	1188.	200.	317.	200.
290.2	-12.0	2414.	1160.	202.	319.	202.
306.7	-12.0	2892.	1052.	213.	329.	213.
311.7	-12.0	3036.	1019.	216.	332.	216.
316.6	-12.0	3036.	987.	219.	335.	219.
316.7	-12.0	3036.	986.	219.	335.	219.
321.7	-12.0	3029.	953.	216.	331.	216.
326.7	-12.0	2878.	921.	214.	328.	214.
342.1	-12.0	2418.	820.	206.	317.	206.
358.0	-12.0	1946.	716.	198.	306.	198.
361.0	-12.0	1850.	696.	196.	303.	196.
378.1	-12.0	1761.	584.	187.	291.	187.
380.2	-12.0	1754.	570.	186.	290.	186.
394.6	-12.0	1713.	476.	179.	280.	179.
414.9	-12.0	1654.	486.	168.	265.	168.
434.6	-12.0	1597.	486.	158.	251.	158.
441.0	-12.0	1579.	486.	155.	247.	155.
450.0	-12.0	1234.	486.	150.	240.	150.
450.2	-12.0	1225.	486.	150.	240.	150.
459.5	-12.0	870.	490.	150.	240.	150.
484.5	-12.0	755.	425.	150.	240.	150.
485.0	-12.0	742.	419.	150.	240.	150.
500.6	-12.0	556.	419.	150.	240.	150.
520.9	-12.0	466.	419.	150.	240.	150.
537.4	-12.0	456.	419.	150.	240.	150.
547.1	-12.0	454.	419.	150.	240.	150.
556.8	-12.0	504.	419.	150.	240.	150.
572.4	-12.0	531.	419.	150.	240.	150.
588.6	-12.0	564.	419.	150.	240.	150.
604.5	-12.0	744.	419.	150.	240.	150.

606.0	-12.0	781.	419.	150.	240.	150.
607.8	-12.0	828.	466.	150.	240.	150.
700.0	-12.0	858.	483.	150.	240.	150.

ASSUMED CRIT. PASSIVE LOC. 460.0 EL. -12.0 DP 3257. RP 2252.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
330.0	-12.0	37399.	28048.	0.	23236.	1.57
335.0	-12.0	35807.	28630.	0.	22181.	1.63
340.0	-12.0	33196.	28159.	0.	21140.	1.72
345.0	-12.0	29881.	27635.	0.	20112.	1.88
350.0	-12.0	26231.	25370.	0.	19096.	2.03
355.0	-12.0	22815.	22910.	0.	18094.	2.21

CRIT. ACTIVE LOC 330.0 EL -12.0 DA 37399. RA 28048.

DIS.	EL.	DP	RP	DB	RB	FS
460.0	-12.0	3257.	2252.	0.	23236.	1.57

* * STRATUM 7 ACT. WEDGE LOC. 335.0 EL. -22.0 PASS.WEDGE LOC. 460.0 EL. -22.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-22.0	2569.	1813.	225.	365.	225.
4.1	-22.0	2569.	1813.	225.	365.	225.
30.9	-22.0	2569.	1813.	225.	365.	225.
53.6	-22.0	2575.	1813.	225.	365.	225.
77.3	-22.0	2576.	1813.	225.	365.	225.
101.7	-22.0	2586.	1813.	225.	365.	225.
114.3	-22.0	2601.	1813.	225.	365.	225.
133.6	-22.0	2628.	1813.	225.	365.	225.
137.0	-22.0	2637.	1813.	225.	365.	225.
147.9	-22.0	2660.	1813.	225.	365.	225.
161.8	-22.0	2647.	1813.	225.	365.	225.
163.8	-22.0	2658.	1813.	225.	365.	225.
176.4	-22.0	2676.	1813.	225.	365.	225.
180.8	-22.0	2699.	1813.	248.	386.	248.
200.0	-22.0	2931.	1813.	350.	476.	350.
201.7	-22.0	2945.	1813.	347.	473.	347.
204.9	-22.0	2951.	1813.	343.	469.	343.
222.0	-22.0	3019.	1813.	317.	443.	317.
224.3	-22.0	3029.	1813.	314.	440.	314.
240.3	-22.0	3072.	1813.	290.	416.	290.
253.1	-22.0	3101.	1813.	298.	422.	298.
260.3	-22.0	3130.	1813.	302.	426.	302.
269.1	-22.0	3165.	1813.	307.	430.	307.
281.7	-22.0	3194.	1813.	314.	436.	314.
283.7	-22.0	3222.	1813.	316.	437.	316.
286.0	-22.0	3290.	1813.	317.	438.	317.
290.2	-22.0	3414.	1785.	319.	440.	319.
306.7	-22.0	3892.	1677.	329.	448.	329.
311.7	-22.0	4036.	1644.	332.	451.	332.
316.6	-22.0	4036.	1612.	335.	453.	335.
316.7	-22.0	4036.	1611.	335.	453.	335.
321.7	-22.0	4029.	1578.	331.	450.	331.
326.7	-22.0	3878.	1546.	328.	447.	328.
342.1	-22.0	3418.	1445.	317.	436.	317.
358.0	-22.0	2946.	1341.	306.	426.	306.
361.0	-22.0	2850.	1321.	303.	424.	303.
378.1	-22.0	2761.	1209.	291.	413.	291.
380.2	-22.0	2754.	1195.	290.	412.	290.

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394.6	-22.0	2713.	1101.	280.	402.	280.
414.9	-22.0	2654.	1111.	265.	389.	265.
434.6	-22.0	2597.	1111.	251.	376.	251.
441.0	-22.0	2579.	1111.	247.	372.	247.
450.0	-22.0	2234.	1111.	240.	366.	240.
450.2	-22.0	2225.	1111.	240.	366.	240.
459.5	-22.0	1870.	1115.	240.	366.	240.
484.5	-22.0	1755.	1050.	240.	366.	240.
485.0	-22.0	1742.	1044.	240.	366.	240.
500.6	-22.0	1556.	1044.	240.	366.	240.
520.9	-22.0	1466.	1044.	240.	366.	240.
537.4	-22.0	1456.	1044.	240.	366.	240.
547.1	-22.0	1454.	1044.	240.	366.	240.
556.8	-22.0	1504.	1044.	240.	366.	240.
572.4	-22.0	1531.	1044.	240.	366.	240.
588.6	-22.0	1564.	1044.	240.	366.	240.
604.5	-22.0	1744.	1044.	240.	366.	240.
606.0	-22.0	1781.	1044.	240.	366.	240.
607.8	-22.0	1828.	1091.	240.	366.	240.
700.0	-22.0	1858.	1108.	240.	366.	240.

ASSUMED CRIT. PASSIVE LOC. 460.0 EL. -22.0 DP 16366. RP 5132.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
335.0	-22.0	70506.	33131.	0.	34724.	1.35
340.0	-22.0	68704.	33465.	0.	33123.	1.37
345.0	-22.0	65621.	33942.	0.	31540.	1.43
350.0	-22.0	61521.	33366.	0.	29974.	1.52
355.0	-22.0	56715.	32737.	0.	28427.	1.64
360.0	-22.0	51572.	30367.	0.	26897.	1.77

CRIT. ACTIVE LOC 335.0 EL -22.0 DA 70506. RA 33131.

DIS.	EL.	DP	RP	DB	RB	FS
460.0	-22.0	16366.	5132.	0.	34724.	1.35

* * STRATUM 8 ACT. WEDGE LOC. 340.0 EL. -36.0 PASS.WEDGE LOC. 480.0 EL. -36.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-36.0	3997.	2688.	365.	585.	365.
4.1	-36.0	3997.	2688.	365.	585.	365.
30.9	-36.0	3997.	2688.	365.	585.	365.
53.6	-36.0	4003.	2688.	365.	585.	365.
77.3	-36.0	4004.	2688.	365.	585.	365.
101.7	-36.0	4014.	2688.	365.	585.	365.
114.3	-36.0	4029.	2688.	365.	585.	365.
133.6	-36.0	4056.	2688.	365.	585.	365.
137.0	-36.0	4065.	2688.	365.	585.	365.
147.9	-36.0	4088.	2688.	365.	585.	365.
161.8	-36.0	4075.	2688.	365.	585.	365.
163.8	-36.0	4086.	2688.	365.	585.	365.
176.4	-36.0	4104.	2688.	365.	585.	365.
180.8	-36.0	4132.	2688.	386.	602.	386.
200.0	-36.0	4387.	2688.	476.	674.	476.
201.7	-36.0	4400.	2688.	473.	673.	473.
204.9	-36.0	4404.	2688.	469.	672.	469.
222.0	-36.0	4459.	2688.	443.	664.	443.
224.3	-36.0	4468.	2688.	440.	663.	440.
240.3	-36.0	4500.	2688.	416.	656.	416.
253.1	-36.0	4529.	2688.	422.	656.	422.

260.3	-36.0	4558.	2688.	426.	647.	426.
269.1	-36.0	4593.	2688.	430.	644.	430.
281.7	-36.0	4622.	2688.	436.	638.	436.
283.7	-36.0	4650.	2688.	437.	637.	437.
286.0	-36.0	4718.	2688.	438.	636.	438.
290.2	-36.0	4842.	2660.	440.	634.	440.
306.7	-36.0	5320.	2552.	448.	627.	448.
311.7	-36.0	5464.	2519.	451.	625.	451.
316.6	-36.0	5464.	2487.	453.	623.	453.
316.7	-36.0	5464.	2486.	453.	623.	453.
321.7	-36.0	5457.	2453.	450.	621.	450.
326.7	-36.0	5306.	2421.	447.	619.	447.
342.1	-36.0	4846.	2320.	436.	612.	436.
358.0	-36.0	4374.	2216.	426.	605.	426.
361.0	-36.0	4278.	2196.	424.	603.	424.
378.1	-36.0	4189.	2084.	413.	596.	413.
380.2	-36.0	4182.	2070.	412.	595.	412.
394.6	-36.0	4141.	1976.	402.	589.	402.
414.9	-36.0	4082.	1986.	389.	580.	389.
434.6	-36.0	4025.	1986.	376.	571.	376.
441.0	-36.0	4007.	1986.	372.	568.	372.
450.0	-36.0	3662.	1986.	366.	564.	366.
450.2	-36.0	3653.	1986.	366.	564.	366.
459.5	-36.0	3298.	1990.	366.	564.	366.
484.5	-36.0	3183.	1925.	366.	564.	366.
485.0	-36.0	3170.	1919.	366.	564.	366.
500.6	-36.0	2984.	1919.	366.	564.	366.
520.9	-36.0	2894.	1919.	366.	564.	366.
537.4	-36.0	2884.	1919.	366.	564.	366.
547.1	-36.0	2882.	1919.	366.	564.	366.
556.8	-36.0	2932.	1919.	366.	564.	366.
572.4	-36.0	2959.	1919.	366.	564.	366.
588.6	-36.0	2992.	1919.	366.	564.	366.
604.5	-36.0	3172.	1919.	366.	564.	366.
606.0	-36.0	3209.	1919.	366.	564.	366.
607.8	-36.0	3256.	1966.	366.	564.	366.
700.0	-36.0	3286.	1983.	366.	564.	366.

ASSUMED CRIT. PASSIVE LOC. 480.0 EL. -36.0 DP 46353. RP 12184.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
340.0	-36.0	131728.	42301.	0.	55199.	1.28
345.0	-36.0	130412.	43111.	0.	53018.	1.29
350.0	-36.0	127747.	43653.	0.	50853.	1.31
355.0	-36.0	123587.	43907.	0.	48705.	1.36
360.0	-36.0	118168.	44151.	0.	46573.	1.43
365.0	-36.0	112009.	43405.	0.	44457.	1.52

CRIT. ACTIVE LOC 340.0 EL -36.0 DA 131728. RA 42301.

DIS.	EL.	DP	RP	DB	RB	FS
460.0	-36.0	50832.	13154.	0.	47879.	1.28

* * STRATUM 9 ACT. WEDGE LOC. 350.0 EL. -58.0 PASS.WEDGE LOC. 460.0 EL. -58.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-58.0	6307.	4063.	585.	805.	585.
4.1	-58.0	6307.	4063.	585.	805.	585.
30.9	-58.0	6307.	4063.	585.	805.	585.
53.6	-58.0	6307.	4063.	585.	805.	585.

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77.3	-58.0	6314.	4063.	585.	805.	585.
101.7	-58.0	6324.	4063.	585.	805.	585.
114.3	-58.0	6339.	4063.	585.	805.	585.
133.6	-58.0	6366.	4063.	585.	805.	585.
137.0	-58.0	6375.	4063.	585.	805.	585.
147.9	-58.0	6398.	4063.	585.	805.	585.
161.8	-58.0	6385.	4063.	585.	805.	585.
163.8	-58.0	6396.	4063.	585.	805.	585.
176.4	-58.0	6414.	4063.	585.	805.	585.
180.8	-58.0	6446.	4063.	602.	818.	602.
200.0	-58.0	6719.	4063.	674.	872.	674.
201.7	-58.0	6732.	4063.	673.	871.	673.
204.9	-58.0	6736.	4063.	672.	870.	672.
222.0	-58.0	6791.	4063.	664.	862.	664.
224.3	-58.0	6800.	4063.	663.	861.	663.
240.3	-58.0	6832.	4063.	656.	854.	656.
253.1	-58.0	6858.	4063.	650.	848.	650.
260.3	-58.0	6885.	4063.	647.	845.	647.
269.1	-58.0	6917.	4063.	644.	841.	644.
281.7	-58.0	6942.	4063.	638.	836.	638.
283.7	-58.0	6970.	4063.	637.	835.	637.
286.0	-58.0	7037.	4063.	636.	834.	636.
290.2	-58.0	7159.	4035.	634.	832.	634.
306.7	-58.0	7633.	3927.	627.	824.	627.
311.7	-58.0	7776.	3894.	625.	822.	625.
316.6	-58.0	7774.	3862.	623.	820.	623.
316.7	-58.0	7774.	3861.	623.	820.	623.
321.7	-58.0	7767.	3828.	621.	818.	621.
326.7	-58.0	7616.	3796.	619.	816.	619.
342.1	-58.0	7156.	3695.	612.	809.	612.
358.0	-58.0	6684.	3591.	605.	802.	605.
361.0	-58.0	6588.	3571.	603.	801.	603.
378.1	-58.0	6499.	3459.	596.	793.	596.
380.2	-58.0	6492.	3445.	595.	792.	595.
394.6	-58.0	6451.	3351.	589.	786.	589.
414.9	-58.0	6392.	3361.	580.	777.	580.
434.6	-58.0	6335.	3361.	571.	769.	571.
441.0	-58.0	6317.	3361.	568.	766.	568.
450.0	-58.0	5972.	3361.	564.	762.	564.
450.2	-58.0	5963.	3361.	564.	762.	564.
459.5	-58.0	5608.	3365.	564.	762.	564.
484.5	-58.0	5493.	3300.	564.	762.	564.
485.0	-58.0	5480.	3294.	564.	762.	564.
500.6	-58.0	5294.	3294.	564.	762.	564.
520.9	-58.0	5204.	3294.	564.	762.	564.
537.4	-58.0	5194.	3294.	564.	762.	564.
547.1	-58.0	5192.	3294.	564.	762.	564.
556.8	-58.0	5242.	3294.	564.	762.	564.
572.4	-58.0	5269.	3294.	564.	762.	564.
588.6	-58.0	5302.	3294.	564.	762.	564.
604.5	-58.0	5482.	3294.	564.	762.	564.
606.0	-58.0	5519.	3294.	564.	762.	564.
607.8	-58.0	5566.	3341.	564.	762.	564.
700.0	-58.0	5596.	3358.	564.	762.	564.

ASSUMED CRIT. PASSIVE LOC. 460.0 EL. -58.0 DP 142663. RP 32594.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
350.0	-58.0	262586.	60363.	0.	64260.	1.31
355.0	-58.0	261637.	62349.	0.	61224.	1.31
360.0	-58.0	259319.	64132.	0.	58199.	1.33
365.0	-58.0	255505.	65143.	0.	55185.	1.36
370.0	-58.0	250901.	65702.	0.	52182.	1.39
375.0	-58.0	245412.	65868.	0.	49190.	1.44

CRIT. ACTIVE LOC 350.0 EL -58.0 DA 262586. RA 60363.

DIS.	EL.	DP	RP	DB	RB	FS
460.0	-58.0	142663.	32594.	0.	64260.	1.31

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"Reach 5c(1)-2nd Stage"
"FS to PS; PG=11.0"
20 10 1 40 1 0
10 5 2 1
176.37 200 240.33 316.73 450.23
0 62.4 0 0 62.4 0 0 62.4 0 0 62.4 0 0 62.4 0 0
0 115 600 600 115 600 600 115 600 600 115 600 600 115 600 600
0 108 600 600 108 600 600 108 600 600 108 600 600 108 600 600
30 122 0 0 122 0 0 122 0 0 122 0 0 122 0 0
0 100 75 75 101 250 250 111 171 171 111 219 219 111 150 150
0 100 75 75 101 250 250 111 171 171 111 219 219 111 150 150
0 100 175 225 109 350 350 100 245 290 100 290 335 100 150 240
0 102 295 365 104 413 476 102 353 416 102 390 453 102 303 366
0 105 475 585 106 575 674 106 557 656 105 523 623 105 465 564
0 105 695 805 106 773 872 106 755 854 105 722 820 105 663 762

0 11 300 11 311.73 14 321.73 14 361 4 441 2 459.47 -4.16
484.55 -5.2 485 -5.31 604.54 -5.3 607.82 -4.54 700 -4.27
9999.9 0

0 -1.79 4.11 -1.8 30.85 -1.8 53.61 -1.65 77.26 -1.62
101.72 -1.36 114.3 -0.94 133.62 -0.23 137 0 147.85 0.5
161.75 0.23 163.82 0.46 176.37 0.86 180.78 0.94 201.73 4.5
204.93 4.58 281.73 6.5 311.73 14 321.73 14 361 4 441 2
459.47 -4.16 484.55 -5.2 500.6 -9.14 520.9 -11.0 537.4 -11.22
547.09 -11.26 556.8 -10.22 572.41 -9.68 588.59 -9.0
607.82 -4.54 700 -4.27 9999.9 0

0 -1.79 4.11 -1.8 30.85 -1.8 53.61 -1.65 77.26 -1.62
101.72 -1.36 114.3 -0.94 133.62 -0.23 137 0 147.85 0.5
161.75 0.23 163.82 0.46 176.37 0.86 180.78 0.94 201.73 4.5
204.93 4.58 222 0 224.3 -0.66 240.33 -3.85 260.33 -3.85
378.08 -4.54 380.18 -4.26 394.59 -4.39 414.93 -4.22
434.63 -4.19 450 -4.27 459.47 -4.16 484.55 -5.2 500.6 -9.14
520.9 -11.0 537.4 -11.22 547.09 -11.26 556.8 -10.22
572.41 -9.68 588.59 -9.0 607.82 -4.54 700 -4.27 9999.9 0

0 -1.79 4.11 -1.8 30.85 -1.8 53.61 -1.65 77.26 -1.62
101.72 -1.36 114.3 -0.94 133.62 -0.23 137 0 222 0 224.3 -0.66
240.33 -3.85 260.33 -3.85 378.08 -4.54 380.18 -4.26 394.59 -4.39
414.93 -4.22 434.63 -4.19 450 -4.27 459.47 -4.16 484.55 -5.2
500.6 -9.14 520.9 -11.0 537.4 -11.22 547.09 -11.26 556.8 -10.22
572.41 -9.68 588.59 -9.0 607.82 -4.54 700 -4.27 9999.9 0

0 -1.79 4.11 -1.8 30.85 -1.8 53.61 -1.65 77.26 -1.62
101.72 -1.36 114.3 -0.94 133.62 -0.23 137 0 222 0 224.3 -0.66
240.33 -3.85 253.08 -5.02 269.13 -8.93 290.17 -10.85
306.69 -11.22 316.58 -11.18 326.69 -10.14 342.13 -9.46
357.98 -8.78 378.08 -4.54 380.18 -4.26 394.59 -4.39
414.93 -4.22 434.63 -4.19 450 -4.27 459.47 -4.16 484.55 -5.2
500.6 -9.14 520.9 -11.0 537.4 -11.22 547.09 -11.26 556.8 -10.22
572.41 -9.68 588.59 -9.0 607.82 -4.54 700 -4.27 9999.9 0

0 -1.89 4.11 -1.9 30.85 -1.9 53.61 -1.75 77.26 -1.72
101.72 -1.46 114.3 -1.04 133.62 -0.33 137 -0.1 222 -0.1
224.3 -0.76 240.33 -3.95 253.08 -5.12 269.13 -9.03 290.17 -10.95
306.69 -11.32 316.58 -11.28 326.69 -10.24 342.13 -9.56
357.98 -8.88 378.08 -4.64 380.18 -4.36 394.59 -4.49 414.93 -4.32
434.63 -4.29 450 -4.37 459.47 -4.26 484.55 -5.3 500.6 -9.24
520.9 -11.1 537.4 -11.32 547.09 -11.36 556.8 -10.32 572.41 -9.78
588.59 -9.1 607.82 -4.64 700 -4.37 9999.9 0

0 -12 700 -12 9999.9 0
0 -22 700 -22 9999.9 0
0 -36 700 -36 9999.9 0
0 -58 700 -58 9999.9 0
0 -80 700 -80 9999.9 0

0 11 300 11 394.59 -4.39 414.93 -4.22 450.23 -4.22 459.47 -4.16
484.55 -5.2 485 -5.3 606 -5.3 607.82 -4.54 700 -4.27 9999.9 0

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

6 330 -12 460 -12 1
460
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7 335 -22 460 -22 1
460
8 340 -36 480 -36 1
460
9 350 -58 460 -58 1
460
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**** STABILITY WITH UPLIFT ****

"Reach 5c(1)-2nd Stage"
"FS to PS; PG=11.0"
11 PROFILES
5VERTICALS
UPLIFT WITH 1 PIEZOMETRIC GRADE LINES

* * STRATUM 6 ACT. WEDGE LOC. 330.0 EL. -12.0 PASS.WEDGE LOC. 460.0 EL. -12.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-12.0	1819.	1438.	75.	225.	75.
4.1	-12.0	1819.	1438.	75.	225.	75.
30.9	-12.0	1819.	1438.	75.	225.	75.
53.6	-12.0	1824.	1438.	75.	225.	75.
77.3	-12.0	1825.	1438.	75.	225.	75.
101.7	-12.0	1835.	1438.	75.	225.	75.
114.3	-12.0	1851.	1438.	75.	225.	75.
133.6	-12.0	1878.	1438.	75.	225.	75.
137.0	-12.0	1886.	1438.	75.	225.	75.
147.9	-12.0	1909.	1438.	75.	225.	75.
161.8	-12.0	1897.	1438.	75.	225.	75.
163.8	-12.0	1907.	1438.	75.	225.	75.
176.4	-12.0	1926.	1438.	75.	225.	75.
180.8	-12.0	1932.	1438.	108.	248.	108.
200.0	-12.0	2090.	1438.	250.	350.	250.
201.7	-12.0	2109.	1438.	247.	347.	247.
204.9	-12.0	2122.	1438.	240.	343.	240.
222.0	-12.0	2227.	1438.	207.	317.	207.
224.3	-12.0	2242.	1438.	202.	314.	202.
240.3	-12.0	2321.	1438.	171.	290.	171.
253.1	-12.0	2351.	1438.	179.	298.	179.
260.3	-12.0	2380.	1438.	184.	302.	184.
269.1	-12.0	2415.	1438.	189.	307.	189.
281.7	-12.0	2443.	1438.	197.	314.	197.
290.2	-12.0	2563.	1438.	202.	319.	202.
300.0	-12.0	2690.	1438.	208.	325.	208.
306.7	-12.0	2889.	1369.	213.	329.	213.
311.7	-12.0	3036.	1318.	216.	332.	216.
316.6	-12.0	3036.	1269.	219.	335.	219.
316.7	-12.0	3036.	1267.	219.	335.	219.
321.7	-12.0	3029.	1217.	216.	331.	216.
326.7	-12.0	2878.	1166.	214.	328.	214.
342.1	-12.0	2418.	1009.	206.	317.	206.
358.0	-12.0	1946.	848.	198.	306.	198.
361.0	-12.0	1850.	817.	196.	303.	196.
378.1	-12.0	1761.	644.	187.	291.	187.
380.2	-12.0	1754.	622.	186.	290.	186.
394.6	-12.0	1713.	476.	179.	280.	179.
414.9	-12.0	1654.	486.	168.	265.	168.
434.6	-12.0	1597.	486.	158.	251.	158.
441.0	-12.0	1579.	486.	155.	247.	155.
450.0	-12.0	1234.	486.	150.	240.	150.
450.2	-12.0	1225.	486.	150.	240.	150.
459.5	-12.0	870.	490.	150.	240.	150.
484.5	-12.0	755.	425.	150.	240.	150.
485.0	-12.0	742.	419.	150.	240.	150.
500.6	-12.0	556.	419.	150.	240.	150.
520.9	-12.0	466.	419.	150.	240.	150.
537.4	-12.0	456.	419.	150.	240.	150.
547.1	-12.0	454.	419.	150.	240.	150.
556.8	-12.0	504.	419.	150.	240.	150.
572.4	-12.0	531.	419.	150.	240.	150.
588.6	-12.0	564.	419.	150.	240.	150.
604.5	-12.0	744.	419.	150.	240.	150.
606.0	-12.0	781.	419.	150.	240.	150.

607.8	-12.0	828.	466.	150.	240.	150.
700.0	-12.0	858.	483.	150.	240.	150.

ASSUMED CRIT. PASSIVE LOC. 460.0 EL. -12.0 DP 3257. RP 2252.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
330.0	-12.0	37394.	27064.	0.	23236.	1.54
335.0	-12.0	35807.	27772.	0.	22181.	1.60
340.0	-12.0	33196.	27403.	0.	21140.	1.70
345.0	-12.0	29881.	26972.	0.	20112.	1.85
350.0	-12.0	26231.	24795.	0.	19096.	2.01
355.0	-12.0	22815.	22417.	0.	18094.	2.19

CRIT. ACTIVE LOC 330.0 EL -12.0 DA 37394. RA 27064.

DIS.	EL.	DP	RP	DB	RB	FS
460.0	-12.0	3257.	2252.	0.	23236.	1.54

* * STRATUM 7 ACT. WEDGE LOC. 335.0 EL. -22.0 PASS.WEDGE LOC. 460.0 EL. -22.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-22.0	2819.	2063.	225.	365.	225.
4.1	-22.0	2819.	2063.	225.	365.	225.
30.9	-22.0	2819.	2063.	225.	365.	225.
53.6	-22.0	2824.	2063.	225.	365.	225.
77.3	-22.0	2825.	2063.	225.	365.	225.
101.7	-22.0	2835.	2063.	225.	365.	225.
114.3	-22.0	2851.	2063.	225.	365.	225.
133.6	-22.0	2878.	2063.	225.	365.	225.
137.0	-22.0	2886.	2063.	225.	365.	225.
147.9	-22.0	2909.	2063.	225.	365.	225.
161.8	-22.0	2897.	2063.	225.	365.	225.
163.8	-22.0	2907.	2063.	225.	365.	225.
176.4	-22.0	2926.	2063.	225.	365.	225.
180.8	-22.0	2948.	2063.	248.	386.	248.
200.0	-22.0	3180.	2063.	350.	476.	350.
201.7	-22.0	3195.	2063.	347.	473.	347.
204.9	-22.0	3201.	2063.	343.	469.	343.
222.0	-22.0	3268.	2063.	317.	443.	317.
224.3	-22.0	3278.	2063.	314.	440.	314.
240.3	-22.0	3321.	2063.	290.	416.	290.
253.1	-22.0	3351.	2063.	298.	422.	298.
260.3	-22.0	3380.	2063.	302.	426.	302.
269.1	-22.0	3415.	2063.	307.	430.	307.
281.7	-22.0	3443.	2063.	314.	436.	314.
290.2	-22.0	3563.	2063.	319.	440.	319.
300.0	-22.0	3690.	2063.	325.	445.	325.
306.7	-22.0	3889.	1994.	329.	448.	329.
311.7	-22.0	4036.	1943.	332.	451.	332.
316.6	-22.0	4036.	1894.	335.	453.	335.
316.7	-22.0	4036.	1892.	335.	453.	335.
321.7	-22.0	4029.	1842.	331.	450.	331.
326.7	-22.0	3878.	1791.	328.	447.	328.
342.1	-22.0	3418.	1634.	317.	436.	317.
358.0	-22.0	2946.	1473.	306.	426.	306.
361.0	-22.0	2850.	1442.	303.	424.	303.
378.1	-22.0	2761.	1269.	291.	413.	291.
380.2	-22.0	2754.	1247.	290.	412.	290.
394.6	-22.0	2713.	1101.	280.	402.	280.
414.9	-22.0	2654.	921.	265.	389.	265.

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434.6	-22.0	2597.	1111.	251.	376.	251.
441.0	-22.0	2579.	1111.	247.	372.	247.
450.0	-22.0	2234.	1111.	240.	366.	240.
450.2	-22.0	2225.	1111.	240.	366.	240.
459.5	-22.0	1870.	1115.	240.	366.	240.
484.5	-22.0	1755.	1050.	240.	366.	240.
485.0	-22.0	1742.	1044.	240.	366.	240.
500.6	-22.0	1556.	1044.	240.	366.	240.
520.9	-22.0	1466.	1044.	240.	366.	240.
537.4	-22.0	1456.	1044.	240.	366.	240.
547.1	-22.0	1454.	1044.	240.	366.	240.
556.8	-22.0	1504.	1044.	240.	366.	240.
572.4	-22.0	1531.	1044.	240.	366.	240.
588.6	-22.0	1564.	1044.	240.	366.	240.
604.5	-22.0	1744.	1044.	240.	366.	240.
606.0	-22.0	1781.	1044.	240.	366.	240.
607.8	-22.0	1828.	1091.	240.	366.	240.
700.0	-22.0	1858.	1108.	240.	366.	240.

ASSUMED CRIT. PASSIVE LOC. 460.0 EL. -22.0 DP 16366. RP 5132.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
335.0	-22.0	70484.	31985.	0.	34724.	1.33
340.0	-22.0	68699.	32480.	0.	33123.	1.35
345.0	-22.0	65621.	33084.	0.	31540.	1.42
350.0	-22.0	61521.	32610.	0.	29974.	1.50
355.0	-22.0	56715.	32074.	0.	28427.	1.63
360.0	-22.0	51572.	29792.	0.	26897.	1.76

CRIT. ACTIVE LOC 335.0 EL -22.0 DA 70484. RA 31985.

DIS.	EL.	DP	RP	DB	RB	FS
460.0	-22.0	16366.	5132.	0.	34724.	1.33

* * STRATUM 8 ACT. WEDGE LOC. 340.0 EL. -36.0 PASS.WEDGE LOC. 480.0 EL. -36.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-36.0	4247.	2938.	365.	585.	365.
4.1	-36.0	4247.	2938.	365.	585.	365.
30.9	-36.0	4247.	2938.	365.	585.	365.
53.6	-36.0	4252.	2938.	365.	585.	365.
77.3	-36.0	4253.	2938.	365.	585.	365.
101.7	-36.0	4263.	2938.	365.	585.	365.
114.3	-36.0	4279.	2938.	365.	585.	365.
133.6	-36.0	4306.	2938.	365.	585.	365.
137.0	-36.0	4314.	2938.	365.	585.	365.
147.9	-36.0	4337.	2938.	365.	585.	365.
161.8	-36.0	4325.	2938.	365.	585.	365.
163.8	-36.0	4335.	2938.	365.	585.	365.
176.4	-36.0	4354.	2938.	365.	585.	365.
180.8	-36.0	4382.	2938.	386.	602.	386.
200.0	-36.0	4636.	2938.	476.	674.	476.
201.7	-36.0	4650.	2938.	473.	673.	473.
204.9	-36.0	4654.	2938.	469.	672.	469.
222.0	-36.0	4709.	2938.	443.	664.	443.
224.3	-36.0	4717.	2938.	440.	663.	440.
240.3	-36.0	4749.	2938.	416.	656.	416.
253.1	-36.0	4779.	2938.	422.	650.	422.
260.3	-36.0	4808.	2938.	426.	647.	426.
269.1	-36.0	4843.	2938.	430.	644.	430.

281.7	-36.0	4871.	2938.	436.	638.	436.
290.2	-36.0	4991.	2938.	440.	634.	440.
300.0	-36.0	5118.	2938.	445.	630.	445.
306.7	-36.0	5317.	2869.	448.	627.	448.
311.7	-36.0	5464.	2818.	451.	625.	451.
316.6	-36.0	5464.	2769.	453.	623.	453.
316.7	-36.0	5464.	2767.	453.	623.	453.
321.7	-36.0	5457.	2717.	450.	621.	450.
326.7	-36.0	5306.	2666.	447.	619.	447.
342.1	-36.0	4846.	2509.	436.	612.	436.
358.0	-36.0	4374.	2348.	426.	605.	426.
361.0	-36.0	4278.	2317.	424.	603.	424.
378.1	-36.0	4189.	2144.	413.	596.	413.
380.2	-36.0	4182.	2122.	412.	595.	412.
394.6	-36.0	4141.	1976.	402.	589.	402.
414.9	-36.0	4082.	1986.	389.	580.	389.
434.6	-36.0	4025.	1986.	376.	571.	376.
441.0	-36.0	4007.	1986.	372.	568.	372.
450.0	-36.0	3662.	1986.	366.	564.	366.
450.2	-36.0	3653.	1986.	366.	564.	366.
459.5	-36.0	3298.	1990.	366.	564.	366.
484.5	-36.0	3183.	1925.	366.	564.	366.
485.0	-36.0	3170.	1919.	366.	564.	366.
500.6	-36.0	2984.	1919.	366.	564.	366.
520.9	-36.0	2894.	1919.	366.	564.	366.
537.4	-36.0	2884.	1919.	366.	564.	366.
547.1	-36.0	2882.	1919.	366.	564.	366.
556.8	-36.0	2932.	1919.	366.	564.	366.
572.4	-36.0	2959.	1919.	366.	564.	366.
588.6	-36.0	2992.	1919.	366.	564.	366.
604.5	-36.0	3172.	1919.	366.	564.	366.
606.0	-36.0	3209.	1919.	366.	564.	366.
607.8	-36.0	3256.	1966.	366.	564.	366.
700.0	-36.0	3286.	1983.	366.	564.	366.

ASSUMED CRIT. PASSIVE LOC. 480.0 EL. -36.0 DP 46353. RP 12184.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
340.0	-36.0	131760.	40877.	0.	55199.	1.27
345.0	-36.0	130371.	41819.	0.	53018.	1.27
350.0	-36.0	127730.	42542.	0.	50853.	1.30
355.0	-36.0	123583.	42948.	0.	48705.	1.34
360.0	-36.0	118168.	43315.	0.	46573.	1.42
365.0	-36.0	112009.	42667.	0.	44457.	1.51

CRIT. ACTIVE LOC 340.0 EL -36.0 DA 131760. RA 40877.

DIS.	EL.	DP	RP	DB	RB	FS
460.0	-36.0	50832.	13154.	0.	47879.	1.26

* * STRATUM 9 ACT. WEDGE LOC. 350.0 EL. -58.0 PASS.WEDGE LOC. 460.0 EL. -58.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-58.0	6557.	4313.	585.	805.	585.
4.1	-58.0	6557.	4313.	585.	805.	585.
30.9	-58.0	6557.	4313.	585.	805.	585.
53.6	-58.0	6562.	4313.	585.	805.	585.
77.3	-58.0	6563.	4313.	585.	805.	585.
101.7	-58.0	6573.	4313.	585.	805.	585.
114.3	-58.0	6589.	4313.	585.	805.	585.

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133.6	-58.0	6616.	4313.	585.	805.	585.
137.0	-58.0	6624.	4313.	585.	805.	585.
147.9	-58.0	6647.	4313.	585.	805.	585.
161.8	-58.0	6635.	4313.	585.	805.	585.
163.8	-58.0	6645.	4313.	585.	805.	585.
176.4	-58.0	6664.	4313.	585.	805.	585.
180.8	-58.0	6696.	4313.	602.	818.	602.
200.0	-58.0	6968.	4313.	674.	872.	674.
201.7	-58.0	6982.	4313.	673.	871.	673.
204.9	-58.0	6986.	4313.	672.	870.	672.
222.0	-58.0	7041.	4313.	664.	862.	664.
224.3	-58.0	7049.	4313.	663.	861.	663.
240.3	-58.0	7081.	4313.	656.	854.	656.
253.1	-58.0	7107.	4313.	650.	848.	650.
260.3	-58.0	7134.	4313.	647.	845.	647.
269.1	-58.0	7166.	4313.	644.	841.	644.
281.7	-58.0	7192.	4313.	638.	836.	638.
290.2	-58.0	7308.	4313.	634.	832.	634.
300.0	-58.0	7433.	4313.	630.	827.	630.
306.7	-58.0	7629.	4244.	627.	824.	627.
311.7	-58.0	7776.	4193.	625.	822.	625.
316.6	-58.0	7774.	4144.	623.	820.	623.
316.7	-58.0	7774.	4142.	623.	820.	623.
321.7	-58.0	7767.	4092.	621.	818.	621.
326.7	-58.0	7616.	4041.	619.	816.	619.
342.1	-58.0	7156.	3884.	612.	809.	612.
358.0	-58.0	6684.	3723.	605.	802.	605.
361.0	-58.0	6588.	3692.	603.	801.	603.
378.1	-58.0	6499.	3519.	596.	793.	596.
380.2	-58.0	6492.	3497.	595.	792.	595.
394.6	-58.0	6451.	3351.	589.	786.	589.
414.9	-58.0	6392.	3361.	580.	777.	580.
434.6	-58.0	6335.	3361.	571.	769.	571.
441.0	-58.0	6317.	3361.	568.	766.	568.
450.0	-58.0	5972.	3361.	564.	762.	564.
450.2	-58.0	5963.	3361.	564.	762.	564.
459.5	-58.0	5608.	3365.	564.	762.	564.
484.5	-58.0	5493.	3300.	564.	762.	564.
485.0	-58.0	5480.	3294.	564.	762.	564.
500.6	-58.0	5294.	3294.	564.	762.	564.
520.9	-58.0	5204.	3294.	564.	762.	564.
537.4	-58.0	5194.	3294.	564.	762.	564.
547.1	-58.0	5192.	3294.	564.	762.	564.
556.8	-58.0	5242.	3294.	564.	762.	564.
572.4	-58.0	5269.	3294.	564.	762.	564.
588.6	-58.0	5302.	3294.	564.	762.	564.
604.5	-58.0	5482.	3294.	564.	762.	564.
606.0	-58.0	5519.	3294.	564.	762.	564.
607.8	-58.0	5566.	3341.	564.	762.	564.
700.0	-58.0	5596.	3358.	564.	762.	564.

ASSUMED CRIT. PASSIVE LOC. 460.0 EL. -58.0 DP 142663. RP 32594.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
350.0	-58.0	264052.	58770.	0.	64260.	1.28
355.0	-58.0	262280.	60812.	0.	61224.	1.29
360.0	-58.0	259465.	62679.	0.	58199.	1.31
365.0	-58.0	255461.	63785.	0.	55185.	1.34
370.0	-58.0	250875.	64520.	0.	52182.	1.38
375.0	-58.0	245404.	64858.	0.	49190.	1.43

CRIT. ACTIVE LOC 350.0 EL -58.0 DA 264052. RA 58770.

DIS.	EL.	DP	RP	DB	RB	FS
460.0	-58.0	142663.	32594.	0.	64260.	1.28

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```
"Reach 5c(1)-2nd Stage"
"PS to FS; LWL = GS"
20 10 1 40 1 0
10 5 2 1
249.77 383.27 459.67 500 523.63
0 62.4 0 0 62.4 0 0 62.4 0 0 62.4 0 0 62.4 0 0
0 115 600 600 115 600 600 115 600 600 115 600 600 115 600 600
0 108 600 600 108 600 600 108 600 600 108 600 600 108 600 600
30 122 0 0 122 0 0 122 0 0 122 0 0 122 0 0
0 111 150 150 111 219 219 111 171 171 101 250 250 100 75 75
0 111 150 150 111 219 219 111 171 171 101 250 250 100 75 75
0 100 150 240 100 290 335 100 245 290 109 350 350 100 175 225
0 102 303 366 102 390 453 102 353 416 104 413 476 102 295 365
0 105 465 564 105 523 623 106 557 656 106 575 674 105 475 585
0 105 663 762 105 722 820 106 755 854 106 773 872 105 695 805

0 -4.27 92.18 -4.54 95.45 -5.30 215.45 -5.20 240.53 -4.16
259 2 339 4 378.27 14 388.27 14 418.27 6.5 495.07 4.58
498.27 4.5 519.22 0.94 523.63 0.86 536.18 0.46 538.25 0.23
552.15 0.5 563 0 566.38 -0.23 585.7 -0.94 598.28 -1.36
622.74 -1.62 646.39 -1.65 669.15 -1.8 695.89 -1.8 700 -1.79
9999.9 0

0 -4.27 92.18 -4.54 111.41 -9 127.59 -9.68 143.2 -10.22
152.91 -11.26 162.6 -11.22 179.1 -11 199.4 -9.14 215.45 -5.2
240.53 -4.16 259 2 339 4 378.27 14 388.27 14 418.27 6.5
495.07 4.58 498.27 4.5 519.22 0.94 523.63 0.86 536.18 0.46
538.25 0.23 552.15 0.5 563 0 566.38 -0.23 585.7 -0.94
598.28 -1.36 622.74 -1.62 646.39 -1.65 669.15 -1.8 695.89 -1.8
700 -1.79 9999.9 0

0 -4.27 92.18 -4.54 111.41 -9 127.59 -9.68 143.2 -10.22
152.91 -11.26 162.6 -11.22 179.1 -11 199.4 -9.14 215.45 -5.2
240.53 -4.16 250 -4.27 265.37 -4.19 285.07 -4.22 305.41 -4.39
319.82 -4.26 321.92 -4.54 439.67 -3.85 459.67 -3.85 475.7 -0.66
478 0 495.07 4.58 498.27 4.5 519.22 0.94 523.63 0.86
536.18 0.46 538.25 0.23 552.15 0.5 563 0 566.38 -0.23
585.7 -0.94 598.28 -1.36 622.74 -1.62 646.39 -1.65 669.15 -1.8
695.89 -1.8 700 -1.79 9999.9 0

0 -4.27 92.18 -4.54 111.41 -9 127.59 -9.68 143.2 -10.22
152.91 -11.26 162.6 -11.22 179.1 -11 199.4 -9.14 215.45 -5.2
240.53 -4.16 250 -4.27 265.37 -4.19 285.07 -4.22 305.41 -4.39
319.82 -4.26 321.92 -4.54 439.67 -3.85 459.67 -3.85 475.7 -0.66
478 0 563 0 566.38 -0.23 585.7 -0.94 598.28 -1.36 622.74 -1.62
646.39 -1.65 669.15 -1.8 695.89 -1.8 700 -1.79 9999.9 0

0 -4.27 92.18 -4.54 111.41 -9 127.59 -9.68 143.2 -10.22
152.91 -11.26 162.6 -11.22 179.1 -11 199.4 -9.14 215.45 -5.2
240.53 -4.16 250 -4.27 265.37 -4.19 285.07 -4.22 305.41 -4.39
319.82 -4.26 321.92 -4.54 342.02 -8.78 357.87 -9.46 373.31 -10.14
383.42 -11.18 393.31 -11.22 409.83 -10.85 430.87 -8.93
446.92 -5.02 459.67 -3.85 475.7 -0.66 478 0 563 0 566.38 -0.23
585.7 -0.94 598.28 -1.36 622.74 -1.62 646.39 -1.65 669.15 -1.8
695.89 -1.8 700 -1.79 9999.9 0

0 -4.37 92.18 -4.64 111.41 -9.1 127.59 -9.78 143.2 -10.32
152.91 -11.36 162.6 -11.32 179.1 -11.1 199.4 -9.24 215.45 -5.3
240.53 -4.26 250 -4.37 265.37 -4.29 285.07 -4.32 305.41 -4.49
319.82 -4.36 321.92 -4.64 342.02 -8.88 357.87 -9.56 373.31 -10.24
383.42 -11.28 393.31 -11.32 409.83 -10.95 430.87 -9.03
446.92 -5.12 459.67 -3.95 475.7 -0.76 478 -0.1 563 -0.1
566.38 -0.33 585.7 -1.04 598.28 -1.46 622.74 -1.72 646.39 -1.75
669.15 -1.9 695.89 -1.9 700 -1.89 9999.9 0

0 -12 700 -12 9999.9 0
0 -22 700 -22 9999.9 0
0 -36 700 -36 9999.9 0
0 -58 700 -58 9999.9 0
0 -80 700 -80 9999.9 0

0 -4.27 92.18 -4.54 94 -5.3 215 -5.3 215.45 -5.22 240.53 -4.16
249.77 -4.22 285.07 -4.22 305.41 -4.39 536.18 0.46 538.25 0.23
552.15 0.5 563 0 566.38 -0.23 585.7 -0.94 598.28 -1.36
622.74 -1.62 646.39 -1.65 669.15 -1.8 695.89 -1.8 700 -1.79
```



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9999.9 0

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

6 400 -12 570 -12 1
570
7 405 -22 520 -22 1
520
8 410 -36 510 -36 1
510
9 420 -58 510 -58 1
510
```

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**** STABILITY WITH UPLIFT ****

"Reach 5c(1)-2nd Stage"
"PS to FS; LWL = GS"
11 PROFILES
5VERTICALS
UPLIFT WITH 1 PIEZOMETRIC GRADE LINES

* * STRATUM 6 ACT. WEDGE LOC. 400.0 EL. -12.0 PASS.WEDGE LOC. 570.0 EL. -12.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-12.0	858.	483.	150.	240.	150.
92.2	-12.0	828.	466.	150.	240.	150.
94.0	-12.0	781.	419.	150.	240.	150.
95.4	-12.0	744.	419.	150.	240.	150.
111.4	-12.0	565.	419.	150.	240.	150.
127.6	-12.0	532.	419.	150.	240.	150.
143.2	-12.0	507.	419.	150.	240.	150.
152.9	-12.0	457.	419.	150.	240.	150.
162.6	-12.0	459.	419.	150.	240.	150.
179.1	-12.0	471.	419.	150.	240.	150.
199.4	-12.0	563.	419.	150.	240.	150.
215.0	-12.0	750.	419.	150.	240.	150.
215.4	-12.0	755.	424.	150.	240.	150.
240.5	-12.0	871.	490.	150.	240.	150.
249.8	-12.0	1225.	486.	150.	240.	150.
250.0	-12.0	1234.	486.	150.	240.	150.
259.0	-12.0	1579.	486.	155.	247.	155.
265.4	-12.0	1597.	486.	158.	251.	158.
285.1	-12.0	1654.	486.	168.	265.	168.
305.4	-12.0	1713.	476.	179.	280.	179.
319.8	-12.0	1754.	495.	186.	290.	186.
321.9	-12.0	1761.	497.	187.	291.	187.
339.0	-12.0	1851.	520.	196.	303.	196.
342.0	-12.0	1946.	524.	198.	306.	198.
357.9	-12.0	2419.	545.	206.	317.	206.
373.3	-12.0	2879.	565.	214.	328.	214.
378.3	-12.0	3030.	571.	216.	331.	216.
383.3	-12.0	3036.	578.	219.	335.	219.
383.4	-12.0	3036.	578.	219.	335.	219.
388.3	-12.0	3036.	584.	216.	332.	216.
393.3	-12.0	2891.	591.	213.	329.	213.
409.8	-12.0	2413.	613.	202.	319.	202.
418.3	-12.0	2163.	624.	197.	314.	197.
430.9	-12.0	2114.	640.	189.	307.	189.
439.7	-12.0	2066.	652.	184.	302.	184.
446.9	-12.0	2025.	662.	179.	298.	179.
459.7	-12.0	1976.	678.	171.	290.	171.
475.7	-12.0	1872.	699.	202.	314.	202.
478.0	-12.0	1853.	702.	207.	317.	207.
495.1	-12.0	1721.	725.	240.	343.	240.
498.3	-12.0	1703.	729.	247.	347.	247.
500.0	-12.0	1666.	731.	250.	350.	250.
519.2	-12.0	1304.	756.	108.	248.	108.
523.6	-12.0	1293.	762.	75.	225.	75.
523.6	-12.0	1293.	762.	75.	225.	75.
536.2	-12.0	1250.	779.	75.	225.	75.
538.3	-12.0	1225.	764.	75.	225.	75.
552.2	-12.0	1254.	781.	75.	225.	75.
563.0	-12.0	1200.	750.	75.	225.	75.
566.4	-12.0	1177.	736.	75.	225.	75.
585.7	-12.0	1106.	691.	75.	225.	75.
598.3	-12.0	1064.	665.	75.	225.	75.
622.7	-12.0	1038.	649.	75.	225.	75.
646.4	-12.0	1035.	647.	75.	225.	75.
669.2	-12.0	1020.	637.	75.	225.	75.

695.9	-12.0	1020.	638.	75.	225.	75.
700.0	-12.0	1021.	638.	75.	225.	75.

ASSUMED CRIT. PASSIVE LOC. 570.0 EL. -12.0 DP 6530. RP 1684.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
400.0	-12.0	36334.	30790.	0.	27129.	2.00
405.0	-12.0	33905.	30315.	0.	26094.	2.12
410.0	-12.0	30745.	29531.	0.	25076.	2.32
415.0	-12.0	27191.	27220.	0.	24072.	2.56
420.0	-12.0	23878.	24397.	0.	23085.	2.83
425.0	-12.0	21464.	21920.	0.	22113.	3.06

CRIT. ACTIVE LOC 400.0 EL -12.0 DA 36334. RA 30790.

DIS.	EL.	DP	RP	DB	RB	FS
570.0	-12.0	6530.	1684.	0.	27129.	2.00

* * STRATUM 7 ACT. WEDGE LOC. 405.0 EL. -22.0 PASS.WEDGE LOC. 520.0 EL. -22.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-22.0	1858.	1108.	240.	366.	240.
92.2	-22.0	1828.	1091.	240.	366.	240.
94.0	-22.0	1781.	1044.	240.	366.	240.
95.4	-22.0	1744.	1044.	240.	366.	240.
111.4	-22.0	1565.	1044.	240.	366.	240.
127.6	-22.0	1532.	1044.	240.	366.	240.
143.2	-22.0	1507.	1044.	240.	366.	240.
152.9	-22.0	1457.	1044.	240.	366.	240.
162.6	-22.0	1459.	1044.	240.	366.	240.
179.1	-22.0	1471.	1044.	240.	366.	240.
199.4	-22.0	1563.	1044.	240.	366.	240.
215.0	-22.0	1750.	1044.	240.	366.	240.
215.4	-22.0	1755.	1049.	240.	366.	240.
240.5	-22.0	1871.	1115.	240.	366.	240.
249.8	-22.0	2225.	1111.	240.	366.	240.
250.0	-22.0	2234.	1111.	240.	366.	240.
259.0	-22.0	2579.	1111.	247.	372.	247.
265.4	-22.0	2597.	1111.	251.	376.	251.
285.1	-22.0	2654.	1111.	265.	389.	265.
305.4	-22.0	2713.	1101.	280.	402.	280.
319.8	-22.0	2754.	1120.	290.	412.	290.
321.9	-22.0	2761.	1122.	291.	413.	291.
339.0	-22.0	2851.	1145.	303.	424.	303.
342.0	-22.0	2946.	1149.	306.	426.	306.
357.9	-22.0	3419.	1170.	317.	436.	317.
373.3	-22.0	3879.	1190.	328.	447.	328.
378.3	-22.0	4030.	1196.	331.	450.	331.
383.3	-22.0	4036.	1203.	335.	453.	335.
383.4	-22.0	4036.	1203.	335.	453.	335.
388.3	-22.0	4036.	1209.	332.	451.	332.
393.3	-22.0	3891.	1216.	329.	448.	329.
409.8	-22.0	3413.	1238.	319.	440.	319.
418.3	-22.0	3163.	1249.	314.	436.	314.
430.9	-22.0	3114.	1265.	307.	430.	307.
439.7	-22.0	3066.	1277.	302.	426.	302.
446.9	-22.0	3025.	1287.	298.	422.	298.
459.7	-22.0	2976.	1303.	290.	416.	290.
475.7	-22.0	2908.	1324.	314.	440.	314.
478.0	-22.0	2888.	1327.	317.	443.	317.

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495.1	-22.0	2800.	1350.	343.	469.	343.
498.3	-22.0	2789.	1354.	347.	473.	347.
500.0	-22.0	2756.	1356.	350.	476.	350.
519.2	-22.0	2321.	1381.	248.	386.	248.
523.6	-22.0	2293.	1387.	225.	365.	225.
523.6	-22.0	2293.	1387.	225.	365.	225.
536.2	-22.0	2250.	1404.	225.	365.	225.
538.3	-22.0	2225.	1389.	225.	365.	225.
552.2	-22.0	2254.	1406.	225.	365.	225.
563.0	-22.0	2200.	1375.	225.	365.	225.
566.4	-22.0	2177.	1361.	225.	365.	225.
585.7	-22.0	2106.	1316.	225.	365.	225.
598.3	-22.0	2064.	1290.	225.	365.	225.
622.7	-22.0	2038.	1274.	225.	365.	225.
646.4	-22.0	2035.	1272.	225.	365.	225.
669.2	-22.0	2020.	1262.	225.	365.	225.
695.9	-22.0	2020.	1263.	225.	365.	225.
700.0	-22.0	2021.	1263.	225.	365.	225.

ASSUMED CRIT. PASSIVE LOC. 520.0 EL. -22.0 DP 25633. RP 5671.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
405.0	-22.0	69609.	35997.	0.	35582.	1.76
410.0	-22.0	66861.	36334.	0.	33978.	1.84
415.0	-22.0	62975.	35800.	0.	32389.	1.98
420.0	-22.0	58379.	34957.	0.	30815.	2.18
425.0	-22.0	53887.	32587.	0.	29256.	2.39
430.0	-22.0	50243.	29705.	0.	27711.	2.56

CRIT. ACTIVE LOC 405.0 EL -22.0 DA 69609. RA 35997.

DIS.	EL.	DP	RP	DB	RB	FS
520.0	-22.0	25633.	5671.	0.	35582.	1.76

* * STRATUM 8 ACT. WEDGE LOC. 410.0 EL. -36.0 PASS.WEDGE LOC. 510.0 EL. -36.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-36.0	3286.	1983.	366.	564.	366.
92.2	-36.0	3256.	1966.	366.	564.	366.
94.0	-36.0	3209.	1919.	366.	564.	366.
95.4	-36.0	3172.	1919.	366.	564.	366.
111.4	-36.0	2993.	1919.	366.	564.	366.
127.6	-36.0	2960.	1919.	366.	564.	366.
143.2	-36.0	2935.	1919.	366.	564.	366.
152.9	-36.0	2885.	1919.	366.	564.	366.
162.6	-36.0	2887.	1919.	366.	564.	366.
179.1	-36.0	2899.	1919.	366.	564.	366.
199.4	-36.0	2991.	1919.	366.	564.	366.
215.0	-36.0	3178.	1919.	366.	564.	366.
215.4	-36.0	3183.	1924.	366.	564.	366.
240.5	-36.0	3299.	1990.	366.	564.	366.
249.8	-36.0	3653.	1986.	366.	564.	366.
250.0	-36.0	3662.	1986.	366.	564.	366.
259.0	-36.0	4007.	1986.	372.	568.	372.
265.4	-36.0	4025.	1986.	376.	571.	376.
285.1	-36.0	4082.	1986.	389.	580.	389.
305.4	-36.0	4141.	1976.	402.	589.	402.
319.8	-36.0	4182.	1995.	412.	595.	412.
321.9	-36.0	4189.	1997.	413.	596.	413.
339.0	-36.0	4279.	2020.	424.	609.	424.

342.0	-36.0	4374.	2024.	426.	605.	426.
357.9	-36.0	4847.	2045.	436.	612.	436.
373.3	-36.0	5307.	2065.	447.	619.	447.
378.3	-36.0	5458.	2071.	450.	621.	450.
383.3	-36.0	5464.	2078.	453.	623.	453.
383.4	-36.0	5464.	2078.	453.	623.	453.
388.3	-36.0	5464.	2084.	451.	625.	451.
393.3	-36.0	5319.	2091.	448.	627.	448.
409.8	-36.0	4841.	2113.	440.	634.	440.
418.3	-36.0	4591.	2124.	436.	638.	436.
430.9	-36.0	4542.	2140.	430.	644.	430.
439.7	-36.0	4494.	2152.	426.	647.	426.
446.9	-36.0	4453.	2162.	422.	650.	422.
459.7	-36.0	4404.	2178.	416.	656.	416.
475.7	-36.0	4347.	2199.	440.	663.	440.
478.0	-36.0	4335.	2202.	443.	664.	443.
495.1	-36.0	4253.	2225.	469.	672.	469.
498.3	-36.0	4244.	2229.	473.	673.	473.
500.0	-36.0	4212.	2231.	476.	674.	476.
519.2	-36.0	3754.	2256.	386.	602.	386.
523.6	-36.0	3721.	2262.	365.	585.	365.
523.6	-36.0	3721.	2262.	365.	585.	365.
536.2	-36.0	3678.	2279.	365.	585.	365.
538.3	-36.0	3653.	2264.	365.	585.	365.
552.2	-36.0	3682.	2281.	365.	585.	365.
563.0	-36.0	3628.	2250.	365.	585.	365.
566.4	-36.0	3605.	2236.	365.	585.	365.
585.7	-36.0	3534.	2191.	365.	585.	365.
598.3	-36.0	3492.	2165.	365.	585.	365.
622.7	-36.0	3466.	2149.	365.	585.	365.
646.4	-36.0	3463.	2147.	365.	585.	365.
669.2	-36.0	3448.	2137.	365.	585.	365.
695.9	-36.0	3448.	2138.	365.	585.	365.
700.0	-36.0	3449.	2138.	365.	585.	365.

ASSUMED CRIT. PASSIVE LOC. 510.0 EL. -36.0 DP 68828. RP 14952.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
410.0	-36.0	131392.	45126.	0.	43772.	1.66
415.0	-36.0	129341.	46152.	0.	41578.	1.70
420.0	-36.0	125656.	46581.	0.	39396.	1.78
425.0	-36.0	121124.	46853.	0.	37226.	1.89
430.0	-36.0	116188.	46012.	0.	35068.	2.03
435.0	-36.0	111155.	45103.	0.	32922.	2.20

CRIT. ACTIVE LOC 410.0 EL -36.0 DA 131392. RA 45126.

DIS.	EL.	DP	RP	DB	RB	FS
510.0	-36.0	68828.	14952.	0.	43772.	1.66

* * STRATUM 9 ACT. WEDGE LOC. 420.0 EL. -58.0 PASS.WEDGE LOC. 510.0 EL. -58.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-58.0	5596.	3358.	564.	762.	564.
92.2	-58.0	5566.	3341.	564.	762.	564.
94.0	-58.0	5519.	3294.	564.	762.	564.
95.4	-58.0	5482.	3294.	564.	762.	564.
111.4	-58.0	5303.	3294.	564.	762.	564.
127.6	-58.0	5270.	3294.	564.	762.	564.
143.2	-58.0	5245.	3294.	564.	762.	564.

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152.9	-58.0	5195.	3294.	564.	762.	564.
162.6	-58.0	5197.	3294.	564.	762.	564.
179.1	-58.0	5209.	3294.	564.	762.	564.
199.4	-58.0	5301.	3294.	564.	762.	564.
215.0	-58.0	5488.	3294.	564.	762.	564.
215.4	-58.0	5493.	3299.	564.	762.	564.
240.5	-58.0	5609.	3365.	564.	762.	564.
249.8	-58.0	5963.	3361.	564.	762.	564.
250.0	-58.0	5972.	3361.	564.	762.	564.
259.0	-58.0	6317.	3361.	568.	766.	568.
265.4	-58.0	6335.	3361.	571.	769.	571.
285.1	-58.0	6392.	3361.	580.	777.	580.
305.4	-58.0	6451.	3351.	589.	786.	589.
319.8	-58.0	6492.	3370.	595.	792.	595.
321.9	-58.0	6499.	3372.	596.	793.	596.
339.0	-58.0	6589.	3395.	603.	801.	603.
342.0	-58.0	6684.	3399.	605.	802.	605.
357.9	-58.0	7157.	3420.	612.	809.	612.
373.3	-58.0	7617.	3440.	619.	816.	619.
378.3	-58.0	7768.	3446.	621.	818.	621.
383.3	-58.0	7774.	3453.	623.	820.	623.
383.4	-58.0	7774.	3453.	623.	820.	623.
388.3	-58.0	7775.	3459.	625.	822.	625.
393.3	-58.0	7632.	3466.	627.	824.	627.
409.8	-58.0	7159.	3488.	634.	832.	634.
418.3	-58.0	6911.	3499.	638.	836.	638.
430.9	-58.0	6866.	3515.	644.	841.	644.
439.7	-58.0	6820.	3527.	647.	845.	647.
446.9	-58.0	6782.	3537.	650.	848.	650.
459.7	-58.0	6736.	3553.	656.	854.	656.
475.7	-58.0	6679.	3574.	663.	861.	663.
478.0	-58.0	6667.	3577.	664.	862.	664.
495.1	-58.0	6585.	3600.	672.	870.	672.
498.3	-58.0	6576.	3604.	673.	871.	673.
500.0	-58.0	6544.	3606.	674.	872.	674.
519.2	-58.0	6068.	3631.	602.	817.	602.
523.6	-58.0	6031.	3637.	585.	805.	585.
523.6	-58.0	6031.	3637.	585.	805.	585.
536.2	-58.0	5988.	3654.	585.	805.	585.
538.3	-58.0	5963.	3639.	585.	805.	585.
552.2	-58.0	5992.	3656.	585.	805.	585.
563.0	-58.0	5938.	3625.	585.	805.	585.
566.4	-58.0	5915.	3611.	585.	805.	585.
585.7	-58.0	5844.	3566.	585.	805.	585.
598.3	-58.0	5802.	3540.	585.	805.	585.
622.7	-58.0	5776.	3524.	585.	805.	585.
646.4	-58.0	5773.	3522.	585.	805.	585.
669.2	-58.0	5758.	3512.	585.	805.	585.
695.9	-58.0	5758.	3513.	585.	805.	585.
700.0	-58.0	5759.	3513.	585.	805.	585.

ASSUMED CRIT. PASSIVE LOC. 510.0 EL. -58.0 DP 174441. RP 34908.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
420.0	-58.0	262436.	63638.	0.	59055.	1.79
425.0	-58.0	261494.	66158.	0.	55855.	1.80
430.0	-58.0	259630.	68370.	0.	52644.	1.83
435.0	-58.0	256732.	69589.	0.	49423.	1.87
440.0	-58.0	252852.	70380.	0.	46191.	1.93
445.0	-58.0	248079.	70747.	0.	42948.	2.02

CRIT. ACTIVE LOC 420.0 EL -58.0 DA 262436. RA 63638.

DIS.	EL.	DP	RP	DB	RB	FS
510.0	-58.0	174441.	34908.	0.	59055.	1.79

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```
"Reach 5c(1)-2nd Stage"
"FS to PS; LWL = GS"
20 10 1 240 1 0
10 5 2 1
176.37 200 240.33 316.73 450.23
0 62.4 0 0 62.4 0 0 62.4 0 0 62.4 0 0 62.4 0 0
0 115 600 600 115 600 600 115 600 600 115 600 600 115 600 600
0 108 600 600 108 600 600 108 600 600 108 600 600 108 600 600
30 122 0 0 122 0 0 122 0 0 122 0 0 122 0 0
0 100 75 75 101 250 250 111 171 171 111 219 219 111 150 150
0 100 75 75 101 250 250 111 171 171 111 219 219 111 150 150
0 100 175 225 109 350 350 100 245 290 100 290 335 100 150 240
0 102 295 365 104 413 476 102 353 416 102 390 453 102 303 366
0 105 475 585 106 575 674 106 557 656 105 523 623 105 465 564
0 105 695 805 106 773 872 106 755 854 105 722 820 105 663 762

0 -1.79 4.11 -1.80 30.85 -1.80 53.61 -1.65 77.26 -1.62
101.72 -1.36 114.3 -0.94 133.62 -0.23 137 0 147.85 0.5
161.75 0.23 163.82 0.46 176.37 0.86 180.78 0.94 201.73 4.5
204.93 4.58 281.73 6.5 311.73 14 321.73 14 361 4 441 2
459.47 -4.16 484.55 -5.2 604.55 -5.3 607.82 -4.54
700 -4.27 9999.9 0

0 -1.79 4.11 -1.8 30.85 -1.8 53.61 -1.65 77.26 -1.62
101.72 -1.36 114.3 -0.94 133.62 -0.23 137 0 147.85 0.5
161.75 0.23 163.82 0.46 176.37 0.86 180.78 0.94 201.73 4.5
204.93 4.58 281.73 6.5 311.73 14 321.73 14 361 4 441 2
459.47 -4.16 484.55 -5.2 500.6 -9.14 520.9 -11.0
537.4 -11.22 547.09 -11.26 556.8 -10.22 572.41 -9.68
588.59 -9.0 607.82 -4.54 700 -4.27 9999.9 0

0 -1.79 4.11 -1.8 30.85 -1.8 53.61 -1.65 77.26 -1.62
101.72 -1.36 114.3 -0.94 133.62 -0.23 137 0 147.85 0.5
161.75 0.23 163.82 0.46 176.37 0.86 180.78 0.94 201.73 4.5
204.93 4.58 222 0 224.3 -0.66 240.33 -3.85 260.33 -3.85
378.08 -4.54 380.18 -4.26 394.59 -4.39 414.93 -4.22
434.63 -4.19 450 -4.27 459.47 -4.16 484.55 -5.2 500.6 -9.14
520.9 -11.0 537.4 -11.22 547.09 -11.26 556.8 -10.22
572.41 -9.68 588.59 -9.0 607.82 -4.54 700 -4.27 9999.9 0

0 -1.79 4.11 -1.8 30.85 -1.8 53.61 -1.65 77.26 -1.62
101.72 -1.36 114.3 -0.94 133.62 -0.23 137 0 222 0 224.3 -0.66
240.33 -3.85 260.33 -3.85 378.08 -4.54 380.18 -4.26
394.59 -4.39 414.93 -4.22 434.63 -4.19 450 -4.27 459.47 -4.16
484.55 -5.2 500.6 -9.14 520.9 -11.0 537.4 -11.22 547.09 -11.26
556.8 -10.22 572.41 -9.68 588.59 -9.0 607.82 -4.54 700 -4.27
9999.9 0

0 -1.79 4.11 -1.8 30.85 -1.8 53.61 -1.65 77.26 -1.62
101.72 -1.36 114.3 -0.94 133.62 -0.23 137 0 222 0 224.3 -0.66
240.33 -3.85 253.08 -5.02 269.13 -8.93 290.17 -10.85
306.69 -11.22 316.58 -11.18 326.69 -10.14 342.13 -9.46
357.98 -8.78 378.08 -4.54 380.18 -4.26 394.59 -4.39
414.93 -4.22 434.63 -4.19 450 -4.27 459.47 -4.16 484.55 -5.2
500.6 -9.14 520.9 -11.0 537.4 -11.22 547.09 -11.26 556.8 -10.22
572.41 -9.68 588.59 -9.0 607.82 -4.54 700 -4.27 9999.9 0

0 -1.89 4.11 -1.9 30.85 -1.9 53.61 -1.75 77.26 -1.72
101.72 -1.46 114.3 -1.04 133.62 -0.33 137 -0.1 222 -0.1
224.3 -0.76 240.33 -3.95 253.08 -5.12 269.13 -9.03 290.17 -10.95
306.69 -11.32 316.58 -11.28 326.69 -10.24 342.13 -9.56
357.98 -8.88 378.08 -4.64 380.18 -4.36 394.59 -4.49 414.93 -4.32
434.63 -4.29 450 -4.37 459.47 -4.26 484.55 -5.3 500.6 -9.24
520.9 -11.1 537.4 -11.32 547.09 -11.36 556.8 -10.32 572.41 -9.78
588.59 -9.1 607.82 -4.64 700 -4.37 9999.9 0

0 -12 700 -12 9999.9 0
0 -22 700 -22 9999.9 0
0 -36 700 -36 9999.9 0
0 -58 700 -58 9999.9 0
0 -80 700 -80 9999.9 0

0 -1.79 4.11 -1.8 30.85 -1.8 53.61 -1.65 77.26 -1.62
101.72 -1.36 114.3 -0.94 133.62 -0.23 137 0 147.85 0.5 161.75 0.23
163.82 0.46 394.59 -4.39 414.93 -4.22 450.23 -4.27 9999.9 0
```



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484.55 -5.2 485 -5.3 606 -5.3 607.82 -4.54 700 -4.27 9999.9 0

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

6 330 -12 460 -12 1
460
7 335 -22 460 -22 1
460
8 340 -36 460 -36 1
460
9 350 -58 460 -58 1
460
```

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**** STABILITY WITH UPLIFT ****

"Reach 5c(1)-2nd Stage"
"FS to PS; LWL = GS"
11 PROFILES
5VERTICALS
UPLIFT WITH 1 PIEZOMETRIC GRADE LINES

* * STRATUM 6 ACT. WEDGE LOC. 330.0 EL. -12.0 PASS.WEDGE LOC. 460.0 EL. -12.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-12.0	1021.	638.	75.	225.	75.
4.1	-12.0	1020.	638.	75.	225.	75.
30.9	-12.0	1020.	638.	75.	225.	75.
53.6	-12.0	1035.	647.	75.	225.	75.
77.3	-12.0	1038.	649.	75.	225.	75.
101.7	-12.0	1064.	665.	75.	225.	75.
114.3	-12.0	1106.	691.	75.	225.	75.
133.6	-12.0	1177.	736.	75.	225.	75.
137.0	-12.0	1200.	750.	75.	225.	75.
147.9	-12.0	1254.	781.	75.	225.	75.
161.8	-12.0	1225.	764.	75.	225.	75.
163.8	-12.0	1250.	779.	75.	225.	75.
176.4	-12.0	1293.	762.	75.	225.	75.
176.4	-12.0	1293.	762.	75.	225.	75.
180.8	-12.0	1304.	756.	108.	248.	108.
200.0	-12.0	1666.	731.	250.	350.	250.
201.7	-12.0	1703.	729.	247.	347.	247.
204.9	-12.0	1721.	725.	240.	343.	240.
222.0	-12.0	1853.	702.	207.	317.	207.
224.3	-12.0	1872.	699.	202.	314.	202.
240.3	-12.0	1976.	678.	171.	290.	171.
253.1	-12.0	2025.	662.	179.	298.	179.
260.3	-12.0	2066.	652.	184.	302.	184.
269.1	-12.0	2114.	640.	189.	307.	189.
281.7	-12.0	2163.	624.	197.	314.	197.
290.2	-12.0	2414.	613.	202.	319.	202.
306.7	-12.0	2892.	591.	213.	329.	213.
311.7	-12.0	3036.	584.	216.	332.	216.
316.6	-12.0	3036.	578.	219.	335.	219.
316.7	-12.0	3036.	578.	219.	335.	219.
321.7	-12.0	3029.	571.	216.	331.	216.
326.7	-12.0	2878.	565.	214.	328.	214.
342.1	-12.0	2418.	545.	206.	317.	206.
358.0	-12.0	1946.	524.	198.	306.	198.
361.0	-12.0	1850.	520.	196.	303.	196.
378.1	-12.0	1761.	497.	187.	291.	187.
380.2	-12.0	1754.	495.	186.	290.	186.
394.6	-12.0	1713.	476.	179.	280.	179.
414.9	-12.0	1654.	486.	168.	265.	168.
434.6	-12.0	1597.	486.	158.	251.	158.
441.0	-12.0	1579.	486.	155.	247.	155.
450.0	-12.0	1234.	486.	150.	240.	150.
450.2	-12.0	1225.	486.	150.	240.	150.
459.5	-12.0	870.	490.	150.	240.	150.
484.5	-12.0	755.	425.	150.	240.	150.
485.0	-12.0	749.	419.	150.	240.	150.
500.6	-12.0	562.	419.	150.	240.	150.
520.9	-12.0	471.	419.	150.	240.	150.
537.4	-12.0	459.	419.	150.	240.	150.
547.1	-12.0	457.	419.	150.	240.	150.
556.8	-12.0	507.	419.	150.	240.	150.
572.4	-12.0	533.	419.	150.	240.	150.
588.6	-12.0	565.	419.	150.	240.	150.
604.5	-12.0	744.	419.	150.	240.	150.
606.0	-12.0	781.	419.	150.	240.	150.

607.8	-12.0	828.	466.	150.	240.	150.
700.0	-12.0	858.	483.	150.	240.	150.

ASSUMED CRIT. PASSIVE LOC. 460.0 EL. -12.0 DP 3257. RP 2252.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
330.0	-12.0	37399.	29442.	0.	23236.	1.61
335.0	-12.0	35807.	29872.	0.	22181.	1.67
340.0	-12.0	33196.	29257.	0.	21140.	1.76
345.0	-12.0	29881.	28597.	0.	20112.	1.91
350.0	-12.0	26231.	26204.	0.	19096.	2.07
355.0	-12.0	22815.	23625.	0.	18094.	2.25

CRIT. ACTIVE LOC 330.0 EL -12.0 DA 37399. RA 29442.

DIS.	EL.	DP	RP	DB	RB	FS
460.0	-12.0	3257.	2252.	0.	23236.	1.61

* * STRATUM 7 ACT. WEDGE LOC. 335.0 EL. -22.0 PASS.WEDGE LOC. 460.0 EL. -22.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-22.0	2021.	1263.	225.	365.	225.
4.1	-22.0	2020.	1263.	225.	365.	225.
30.9	-22.0	2020.	1263.	225.	365.	225.
53.6	-22.0	2035.	1272.	225.	365.	225.
77.3	-22.0	2038.	1274.	225.	365.	225.
101.7	-22.0	2064.	1290.	225.	365.	225.
114.3	-22.0	2106.	1316.	225.	365.	225.
133.6	-22.0	2177.	1361.	225.	365.	225.
137.0	-22.0	2200.	1375.	225.	365.	225.
147.9	-22.0	2254.	1406.	225.	365.	225.
161.8	-22.0	2225.	1389.	225.	365.	225.
163.8	-22.0	2250.	1404.	225.	365.	225.
176.4	-22.0	2293.	1387.	225.	365.	225.
176.4	-22.0	2293.	1387.	225.	365.	225.
180.8	-22.0	2321.	1381.	248.	386.	248.
200.0	-22.0	2756.	1356.	350.	476.	350.
201.7	-22.0	2789.	1354.	347.	473.	347.
204.9	-22.0	2800.	1350.	343.	469.	343.
222.0	-22.0	2894.	1327.	317.	443.	317.
224.3	-22.0	2908.	1324.	314.	440.	314.
240.3	-22.0	2976.	1303.	290.	416.	290.
253.1	-22.0	3025.	1287.	298.	422.	298.
260.3	-22.0	3066.	1277.	302.	426.	302.
269.1	-22.0	3114.	1265.	307.	430.	307.
281.7	-22.0	3163.	1249.	314.	436.	314.
290.2	-22.0	3414.	1238.	319.	440.	319.
306.7	-22.0	3892.	1216.	329.	448.	329.
311.7	-22.0	4036.	1209.	332.	451.	332.
316.6	-22.0	4036.	1203.	335.	453.	335.
316.7	-22.0	4036.	1203.	335.	453.	335.
321.7	-22.0	4029.	1196.	331.	450.	331.
326.7	-22.0	3878.	1190.	328.	447.	328.
342.1	-22.0	3418.	1170.	317.	436.	317.
358.0	-22.0	2946.	1149.	306.	426.	306.
361.0	-22.0	2850.	1145.	303.	424.	303.
378.1	-22.0	2761.	1122.	291.	413.	291.
380.2	-22.0	2754.	1120.	290.	412.	290.
394.6	-22.0	2713.	1101.	280.	402.	280.
414.9	-22.0	2654.	1101.	265.	389.	265.

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434.6	-22.0	2597.	1111.	251.	376.	251.
441.0	-22.0	2579.	1111.	247.	372.	247.
450.0	-22.0	2234.	1111.	240.	366.	240.
450.2	-22.0	2225.	1111.	240.	366.	240.
459.5	-22.0	1870.	1115.	240.	366.	240.
484.5	-22.0	1755.	1050.	240.	366.	240.
485.0	-22.0	1749.	1044.	240.	366.	240.
500.6	-22.0	1562.	1044.	240.	366.	240.
520.9	-22.0	1471.	1044.	240.	366.	240.
537.4	-22.0	1459.	1044.	240.	366.	240.
547.1	-22.0	1457.	1044.	240.	366.	240.
556.8	-22.0	1507.	1044.	240.	366.	240.
572.4	-22.0	1533.	1044.	240.	366.	240.
588.6	-22.0	1565.	1044.	240.	366.	240.
604.5	-22.0	1744.	1044.	240.	366.	240.
606.0	-22.0	1781.	1044.	240.	366.	240.
607.8	-22.0	1828.	1091.	240.	366.	240.
700.0	-22.0	1858.	1108.	240.	366.	240.

ASSUMED CRIT. PASSIVE LOC. 460.0 EL. -22.0 DP 16367. RP 5132.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
335.0	-22.0	70506.	34729.	0.	34724.	1.38
340.0	-22.0	68704.	34859.	0.	33123.	1.40
345.0	-22.0	65621.	35184.	0.	31540.	1.46
350.0	-22.0	61521.	34464.	0.	29974.	1.54
355.0	-22.0	56715.	33699.	0.	28427.	1.67
360.0	-22.0	51572.	31201.	0.	26897.	1.80

CRIT. ACTIVE LOC 335.0 EL -22.0 DA 70506. RA 34729.

DIS.	EL.	DP	RP	DB	RB	FS
460.0	-22.0	16367.	5132.	0.	34724.	1.38

* * STRATUM 8 ACT. WEDGE LOC. 340.0 EL. -36.0 PASS.WEDGE LOC. 460.0 EL. -36.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-36.0	3449.	2138.	365.	585.	365.
4.1	-36.0	3448.	2138.	365.	585.	365.
30.9	-36.0	3448.	2138.	365.	585.	365.
53.6	-36.0	3463.	2147.	365.	585.	365.
77.3	-36.0	3466.	2149.	365.	585.	365.
101.7	-36.0	3492.	2165.	365.	585.	365.
114.3	-36.0	3534.	2191.	365.	585.	365.
133.6	-36.0	3605.	2236.	365.	585.	365.
137.0	-36.0	3628.	2250.	365.	585.	365.
147.9	-36.0	3682.	2281.	365.	585.	365.
161.8	-36.0	3653.	2264.	365.	585.	365.
163.8	-36.0	3678.	2279.	365.	585.	365.
176.4	-36.0	3721.	2262.	365.	585.	365.
176.4	-36.0	3721.	2262.	365.	585.	365.
180.8	-36.0	3754.	2256.	386.	602.	386.
200.0	-36.0	4212.	2231.	476.	674.	476.
201.7	-36.0	4244.	2229.	473.	673.	473.
204.9	-36.0	4253.	2225.	469.	672.	469.
222.0	-36.0	4335.	2202.	443.	664.	443.
224.3	-36.0	4347.	2199.	440.	663.	440.
240.3	-36.0	4404.	2178.	416.	656.	416.
253.1	-36.0	4453.	2162.	422.	650.	422.
260.3	-36.0	4494.	2152.	426.	647.	426.

269.1	-36.0	4542.	2140.	430.	644.	430.
281.7	-36.0	4591.	2124.	436.	638.	436.
290.2	-36.0	4842.	2113.	440.	634.	440.
306.7	-36.0	5320.	2091.	448.	627.	448.
311.7	-36.0	5464.	2084.	451.	625.	451.
316.6	-36.0	5464.	2078.	453.	623.	453.
316.7	-36.0	5464.	2078.	453.	623.	453.
321.7	-36.0	5457.	2071.	450.	621.	450.
326.7	-36.0	5306.	2065.	447.	619.	447.
342.1	-36.0	4846.	2045.	436.	612.	436.
358.0	-36.0	4374.	2024.	426.	605.	426.
361.0	-36.0	4278.	2020.	424.	603.	424.
378.1	-36.0	4189.	1997.	413.	596.	413.
380.2	-36.0	4182.	1995.	412.	595.	412.
394.6	-36.0	4141.	1976.	402.	589.	402.
414.9	-36.0	4082.	1986.	389.	580.	389.
434.6	-36.0	4025.	1986.	376.	571.	376.
441.0	-36.0	4007.	1986.	372.	568.	372.
450.0	-36.0	3662.	1986.	366.	564.	366.
450.2	-36.0	3653.	1986.	366.	564.	366.
459.5	-36.0	3298.	1990.	366.	564.	366.
484.5	-36.0	3183.	1925.	366.	564.	366.
485.0	-36.0	3177.	1919.	366.	564.	366.
500.6	-36.0	2990.	1919.	366.	564.	366.
520.9	-36.0	2899.	1919.	366.	564.	366.
537.4	-36.0	2887.	1919.	366.	564.	366.
547.1	-36.0	2885.	1919.	366.	564.	366.
556.8	-36.0	2935.	1919.	366.	564.	366.
572.4	-36.0	2961.	1919.	366.	564.	366.
588.6	-36.0	2993.	1919.	366.	564.	366.
604.5	-36.0	3172.	1919.	366.	564.	366.
606.0	-36.0	3209.	1919.	366.	564.	366.
607.8	-36.0	3256.	1966.	366.	564.	366.
700.0	-36.0	3286.	1983.	366.	564.	366.

ASSUMED CRIT. PASSIVE LOC. 460.0 EL. -36.0 DP 50873. RP 13154.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
340.0	-36.0	131728.	44303.	0.	47879.	1.30
345.0	-36.0	130412.	44898.	0.	45698.	1.30
350.0	-36.0	127747.	45206.	0.	43533.	1.33
355.0	-36.0	123587.	45270.	0.	41385.	1.37
360.0	-36.0	118168.	45363.	0.	39253.	1.45
365.0	-36.0	112009.	44474.	0.	37137.	1.55

CRIT. ACTIVE LOC 340.0 EL -36.0 DA 131728. RA 44303.

DIS.	EL.	DP	RP	DB	RB	FS
460.0	-36.0	50873.	13154.	0.	47879.	1.30

* * STRATUM 9 ACT. WEDGE LOC. 350.0 EL. -58.0 PASS.WEDGE LOC. 460.0 EL. -58.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-58.0	5759.	3513.	585.	805.	585.
4.1	-58.0	5758.	3513.	585.	805.	585.
30.9	-58.0	5758.	3513.	585.	805.	585.
53.6	-58.0	5773.	3522.	585.	805.	585.
77.3	-58.0	5776.	3524.	585.	805.	585.
101.7	-58.0	5802.	3540.	585.	805.	585.
114.3	-58.0	5844.	3566.	585.	805.	585.

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133.6	-58.0	5915.	3611.	585.	805.	585.
137.0	-58.0	5938.	3625.	585.	805.	585.
147.9	-58.0	5992.	3656.	585.	805.	585.
161.8	-58.0	5963.	3639.	585.	805.	585.
163.8	-58.0	5988.	3654.	585.	805.	585.
176.4	-58.0	6031.	3637.	585.	805.	585.
176.4	-58.0	6031.	3637.	585.	805.	585.
180.8	-58.0	6068.	3631.	602.	818.	602.
200.0	-58.0	6544.	3606.	674.	872.	674.
201.7	-58.0	6576.	3604.	673.	871.	673.
204.9	-58.0	6585.	3600.	672.	870.	672.
222.0	-58.0	6667.	3577.	664.	862.	664.
224.3	-58.0	6679.	3574.	663.	861.	663.
240.3	-58.0	6736.	3553.	656.	854.	656.
253.1	-58.0	6782.	3537.	650.	848.	650.
260.3	-58.0	6820.	3527.	647.	845.	647.
269.1	-58.0	6866.	3515.	644.	841.	644.
281.7	-58.0	6911.	3499.	638.	836.	638.
290.2	-58.0	7159.	3488.	634.	832.	634.
306.7	-58.0	7633.	3466.	627.	824.	627.
311.7	-58.0	7776.	3459.	625.	822.	625.
316.6	-58.0	7774.	3453.	623.	820.	623.
316.7	-58.0	7774.	3453.	623.	820.	623.
321.7	-58.0	7767.	3446.	621.	818.	621.
326.7	-58.0	7616.	3440.	619.	816.	619.
342.1	-58.0	7156.	3420.	612.	809.	612.
358.0	-58.0	6684.	3399.	605.	802.	605.
361.0	-58.0	6588.	3395.	603.	801.	603.
378.1	-58.0	6499.	3372.	596.	793.	596.
380.2	-58.0	6492.	3370.	595.	792.	595.
394.6	-58.0	6451.	3351.	589.	786.	589.
414.9	-58.0	6392.	3361.	580.	777.	580.
434.6	-58.0	6335.	3361.	571.	769.	571.
441.0	-58.0	6317.	3361.	568.	766.	568.
450.0	-58.0	5972.	3361.	564.	762.	564.
450.2	-58.0	5963.	3361.	564.	762.	564.
459.5	-58.0	5608.	3365.	564.	762.	564.
484.5	-58.0	5493.	3300.	564.	762.	564.
485.0	-58.0	5487.	3294.	564.	762.	564.
500.6	-58.0	5300.	3294.	564.	762.	564.
520.9	-58.0	5209.	3294.	564.	762.	564.
537.4	-58.0	5197.	3294.	564.	762.	564.
547.1	-58.0	5195.	3294.	564.	762.	564.
556.8	-58.0	5245.	3294.	564.	762.	564.
572.4	-58.0	5271.	3294.	564.	762.	564.
588.6	-58.0	5303.	3294.	564.	762.	564.
604.5	-58.0	5482.	3294.	564.	762.	564.
606.0	-58.0	5519.	3294.	564.	762.	564.
607.8	-58.0	5566.	3341.	564.	762.	564.
700.0	-58.0	5596.	3358.	564.	762.	564.

ASSUMED CRIT. PASSIVE LOC. 460.0 EL. -58.0 DP 142834. RP 32594.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
350.0	-58.0	262586.	62670.	0.	64260.	1.33
355.0	-58.0	261637.	64545.	0.	61224.	1.33
360.0	-58.0	259319.	66190.	0.	58199.	1.35
365.0	-58.0	255505.	67027.	0.	55185.	1.37
370.0	-58.0	250901.	67346.	0.	52182.	1.41
375.0	-58.0	245412.	67294.	0.	49190.	1.45

CRIT. ACTIVE LOC 350.0 EL -58.0 DA 262586. RA 62670.

DIS.	EL.	DP	RP	DB	RB	FS
460.0	-58.0	142834.	32594.	0.	64260.	1.33

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```
"Reach 5c(1)-2nd Stage"
"PS to FS; LWL = GS"
20 10 1 40 1 0
10 5 2 1
249.77 383.27 459.67 500 523.63
0 62.4 0 0 62.4 0 0 62.4 0 0 62.4 0 0 62.4 0 0
23 115 0 0 115 0 0 115 0 0 115 0 0 115 0 0
23 108 0 0 108 0 0 108 0 0 108 0 0 108 0 0
30 122 0 0 122 0 0 122 0 0 122 0 0 122 0 0
23 111 0 0 111 0 0 111 0 0 101 0 0 100 0 0
23 111 0 0 111 0 0 111 0 0 101 0 0 100 0 0
23 100 0 0 100 0 0 100 0 0 109 0 0 100 0 0
23 102 0 0 102 0 0 102 0 0 104 0 0 102 0 0
23 105 0 0 105 0 0 106 0 0 106 0 0 105 0 0
23 105 0 0 105 0 0 106 0 0 106 0 0 105 0 0

0 -4.27 92.18 -4.54 95.45 -5.30 215.45 -5.20 240.53 -4.16
259 2 339 4 378.27 14 388.27 14 418.27 6.5 495.07 4.58
498.27 4.5 519.22 0.94 523.63 0.86 536.18 0.46 538.25 0.23
552.15 0.5 563 0 566.38 -0.23 585.7 -0.94 598.28 -1.36
622.74 -1.62 646.39 -1.65 669.15 -1.8 695.89 -1.8 700 -1.79
9999.9 0

0 -4.27 92.18 -4.54 111.41 -9 127.59 -9.68 143.2 -10.22
152.91 -11.26 162.6 -11.22 179.1 -11 199.4 -9.14 215.45 -5.2
240.53 -4.16 259 2 339 4 378.27 14 388.27 14 418.27 6.5
495.07 4.58 498.27 4.5 519.22 0.94 523.63 0.86 536.18 0.46
538.25 0.23 552.15 0.5 563 0 566.38 -0.23 585.7 -0.94
598.28 -1.36 622.74 -1.62 646.39 -1.65 669.15 -1.8 695.89 -1.8
700 -1.79 9999.9 0

0 -4.27 92.18 -4.54 111.41 -9 127.59 -9.68 143.2 -10.22
152.91 -11.26 162.6 -11.22 179.1 -11 199.4 -9.14 215.45 -5.2
240.53 -4.16 250 -4.27 265.37 -4.19 285.07 -4.22 305.41 -4.39
319.82 -4.26 321.92 -4.54 439.67 -3.85 459.67 -3.85 475.7 -0.66
478 0 495.07 4.58 498.27 4.5 519.22 0.94 523.63 0.86
536.18 0.46 538.25 0.23 552.15 0.5 563 0 566.38 -0.23
585.7 -0.94 598.28 -1.36 622.74 -1.62 646.39 -1.65 669.15 -1.8
695.89 -1.8 700 -1.79 9999.9 0

0 -4.27 92.18 -4.54 111.41 -9 127.59 -9.68 143.2 -10.22
152.91 -11.26 162.6 -11.22 179.1 -11 199.4 -9.14 215.45 -5.2
240.53 -4.16 250 -4.27 265.37 -4.19 285.07 -4.22 305.41 -4.39
319.82 -4.26 321.92 -4.54 439.67 -3.85 459.67 -3.85 475.7 -0.66
478 0 563 0 566.38 -0.23 585.7 -0.94 598.28 -1.36 622.74 -1.62
646.39 -1.65 669.15 -1.8 695.89 -1.8 700 -1.79 9999.9 0

0 -4.27 92.18 -4.54 111.41 -9 127.59 -9.68 143.2 -10.22
152.91 -11.26 162.6 -11.22 179.1 -11 199.4 -9.14 215.45 -5.2
240.53 -4.16 250 -4.27 265.37 -4.19 285.07 -4.22 305.41 -4.39
319.82 -4.26 321.92 -4.54 342.02 -8.78 357.87 -9.46 373.31 -10.14
383.42 -11.18 393.31 -11.22 409.83 -10.85 430.87 -8.93
446.92 -5.02 459.67 -3.85 475.7 -0.66 478 0 563 0 566.38 -0.23
585.7 -0.94 598.28 -1.36 622.74 -1.62 646.39 -1.65 669.15 -1.8
695.89 -1.8 700 -1.79 9999.9 0

0 -4.37 92.18 -4.64 111.41 -9.1 127.59 -9.78 143.2 -10.32
152.91 -11.36 162.6 -11.32 179.1 -11.1 199.4 -9.24 215.45 -5.3
240.53 -4.26 250 -4.37 265.37 -4.29 285.07 -4.32 305.41 -4.49
319.82 -4.36 321.92 -4.64 342.02 -8.88 357.87 -9.56 373.31 -10.24
383.42 -11.28 393.31 -11.32 409.83 -10.95 430.87 -9.03
446.92 -5.12 459.67 -3.95 475.7 -0.76 478 -0.1 563 -0.1
566.38 -0.33 585.7 -1.04 598.28 -1.46 622.74 -1.72 646.39 -1.75
669.15 -1.9 695.89 -1.9 700 -1.89 9999.9 0

0 -12 700 -12 9999.9 0
0 -22 700 -22 9999.9 0
0 -36 700 -36 9999.9 0
0 -58 700 -58 9999.9 0
0 -80 700 -80 9999.9 0

0 -4.27 92.18 -4.54 94 -5.3 215 -5.3 215.45 -5.22 240.53 -4.16
249.77 -4.22 285.07 -4.22 305.41 -4.39 536.18 0.46 538.25 0.23
552.15 0.5 563 0 566.38 -0.23 585.7 -0.94 598.28 -1.36
622.74 -1.62 646.39 -1.65 669.15 -1.8 695.89 -1.8 700 -1.79
```



```
9999.9 0

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

6 395 -12 520 -12 1
520
7 400 -22 520 -22 1
520
8 405 -36 520 -36 1
520
9 415 -58 510 -58 1
510
```

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**** STABILITY WITH UPLIFT ****

"Reach 5c(1)-2nd Stage"
"PS to FS; LWL = GS"
11 PROFILES
5VERTICALS
UPLIFT WITH 1 PIEZOMETRIC GRADE LINES

* * STRATUM 6 ACT. WEDGE LOC. 395.0 EL. -12.0 PASS.WEDGE LOC. 520.0 EL. -12.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-12.0	858.	483.	159.	159.	159.
92.2	-12.0	828.	466.	153.	153.	153.
94.0	-12.0	781.	419.	154.	154.	154.
95.4	-12.0	744.	419.	138.	138.	138.
111.4	-12.0	565.	419.	62.	62.	62.
127.6	-12.0	532.	419.	48.	48.	48.
143.2	-12.0	507.	419.	37.	37.	37.
152.9	-12.0	457.	419.	16.	16.	16.
162.6	-12.0	459.	419.	17.	17.	17.
179.1	-12.0	471.	419.	22.	22.	22.
199.4	-12.0	563.	419.	61.	61.	61.
215.0	-12.0	750.	419.	140.	140.	140.
215.4	-12.0	755.	424.	141.	141.	141.
240.5	-12.0	871.	490.	162.	162.	162.
249.8	-12.0	1225.	486.	314.	314.	314.
250.0	-12.0	1234.	486.	318.	318.	318.
259.0	-12.0	1579.	486.	464.	464.	464.
265.4	-12.0	1597.	486.	472.	472.	472.
285.1	-12.0	1654.	486.	496.	496.	496.
305.4	-12.0	1713.	476.	525.	525.	525.
319.8	-12.0	1754.	495.	535.	535.	535.
321.9	-12.0	1761.	497.	536.	536.	536.
339.0	-12.0	1851.	520.	565.	565.	565.
342.0	-12.0	1946.	524.	604.	604.	604.
357.9	-12.0	2419.	545.	796.	796.	796.
373.3	-12.0	2879.	565.	982.	982.	982.
378.3	-12.0	3030.	571.	1044.	1044.	1044.
383.3	-12.0	3036.	578.	1043.	1043.	1043.
383.4	-12.0	3036.	578.	1043.	1043.	1043.
388.3	-12.0	3036.	584.	1041.	1041.	1041.
393.3	-12.0	2891.	591.	976.	976.	976.
409.8	-12.0	2413.	613.	764.	764.	764.
418.3	-12.0	2163.	624.	653.	653.	653.
430.9	-12.0	2114.	640.	626.	626.	626.
439.7	-12.0	2066.	652.	600.	600.	600.
446.9	-12.0	2025.	662.	579.	579.	579.
459.7	-12.0	1976.	678.	551.	551.	551.
475.7	-12.0	1872.	699.	498.	498.	498.
478.0	-12.0	1853.	702.	489.	489.	489.
495.1	-12.0	1721.	725.	423.	423.	423.
498.3	-12.0	1703.	729.	413.	413.	413.
500.0	-12.0	1666.	731.	397.	397.	397.
519.2	-12.0	1304.	756.	232.	232.	232.
523.6	-12.0	1293.	762.	225.	225.	225.
523.6	-12.0	1293.	762.	225.	225.	225.
536.2	-12.0	1250.	779.	200.	200.	200.
538.3	-12.0	1225.	764.	195.	195.	195.
552.2	-12.0	1254.	781.	201.	201.	201.
563.0	-12.0	1200.	750.	191.	191.	191.
566.4	-12.0	1177.	736.	187.	187.	187.
585.7	-12.0	1106.	691.	176.	176.	176.
598.3	-12.0	1064.	665.	169.	169.	169.
622.7	-12.0	1038.	649.	165.	165.	165.
646.4	-12.0	1035.	647.	165.	165.	165.
669.2	-12.0	1020.	637.	162.	162.	162.

695.9	-12.0	1020.	638.	162.	162.	162.
700.0	-12.0	1021.	638.	162.	162.	162.

ASSUMED CRIT. PASSIVE LOC. 520.0 EL. -12.0 DP 8075. RP 4400.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
395.0	-12.0	37987.	21317.	0.	69234.	3.17
400.0	-12.0	35855.	19955.	0.	64621.	3.20
405.0	-12.0	32642.	17988.	0.	60330.	3.37
410.0	-12.0	29022.	15795.	0.	56359.	3.65
415.0	-12.0	25628.	13683.	0.	52714.	4.03
420.0	-12.0	22506.	11731.	0.	49381.	4.54

CRIT. ACTIVE LOC 395.0 EL -12.0 DA 37987. RA 21317.

DIS.	EL.	DP	RP	DB	RB	FS
520.0	-12.0	8075.	4400.	0.	69234.	3.17

* * STRATUM 7 ACT. WEDGE LOC. 400.0 EL. -22.0 PASS.WEDGE LOC. 520.0 EL. -22.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-22.0	1858.	1108.	318.	318.	318.
92.2	-22.0	1828.	1091.	313.	313.	313.
94.0	-22.0	1781.	1044.	313.	313.	313.
95.4	-22.0	1744.	1044.	297.	297.	297.
111.4	-22.0	1565.	1044.	221.	221.	221.
127.6	-22.0	1532.	1044.	207.	207.	207.
143.2	-22.0	1507.	1044.	197.	197.	197.
152.9	-22.0	1457.	1044.	175.	175.	175.
162.6	-22.0	1459.	1044.	176.	176.	176.
179.1	-22.0	1471.	1044.	181.	181.	181.
199.4	-22.0	1563.	1044.	220.	220.	220.
215.0	-22.0	1750.	1044.	300.	300.	300.
215.4	-22.0	1755.	1049.	300.	300.	300.
240.5	-22.0	1871.	1115.	321.	321.	321.
249.8	-22.0	2225.	1111.	473.	473.	473.
250.0	-22.0	2234.	1111.	477.	477.	477.
259.0	-22.0	2579.	1111.	623.	623.	623.
265.4	-22.0	2597.	1111.	631.	631.	631.
285.1	-22.0	2654.	1111.	655.	655.	655.
305.4	-22.0	2713.	1101.	684.	684.	684.
319.8	-22.0	2754.	1120.	694.	694.	694.
321.9	-22.0	2761.	1122.	696.	696.	696.
339.0	-22.0	2851.	1145.	724.	724.	724.
342.0	-22.0	2946.	1149.	763.	763.	763.
357.9	-22.0	3419.	1170.	955.	955.	955.
373.3	-22.0	3879.	1190.	1141.	1141.	1141.
378.3	-22.0	4030.	1196.	1203.	1203.	1203.
383.3	-22.0	4036.	1203.	1202.	1202.	1202.
383.4	-22.0	4036.	1203.	1202.	1202.	1202.
388.3	-22.0	4036.	1209.	1200.	1200.	1200.
393.3	-22.0	3891.	1216.	1136.	1136.	1136.
409.8	-22.0	3413.	1238.	923.	923.	923.
418.3	-22.0	3163.	1249.	812.	812.	812.
430.9	-22.0	3114.	1265.	785.	785.	785.
439.7	-22.0	3066.	1277.	759.	759.	759.
446.9	-22.0	3025.	1287.	738.	738.	738.
459.7	-22.0	2976.	1303.	710.	710.	710.
475.7	-22.0	2908.	1324.	672.	672.	672.
478.0	-22.0	2898.	1327.	665.	665.	665.

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495.1	-22.0	2800.	1350.	616.	616.	616.
498.3	-22.0	2789.	1354.	609.	609.	609.
500.0	-22.0	2756.	1356.	594.	594.	594.
519.2	-22.0	2321.	1381.	399.	399.	399.
523.6	-22.0	2293.	1387.	384.	384.	384.
523.6	-22.0	2293.	1387.	384.	384.	384.
536.2	-22.0	2250.	1404.	359.	359.	359.
538.3	-22.0	2225.	1389.	355.	355.	355.
552.2	-22.0	2254.	1406.	360.	360.	360.
563.0	-22.0	2200.	1375.	350.	350.	350.
566.4	-22.0	2177.	1361.	347.	347.	347.
585.7	-22.0	2106.	1316.	335.	335.	335.
598.3	-22.0	2064.	1290.	329.	329.	329.
622.7	-22.0	2038.	1274.	324.	324.	324.
646.4	-22.0	2035.	1272.	324.	324.	324.
669.2	-22.0	2020.	1262.	322.	322.	322.
695.9	-22.0	2020.	1263.	322.	322.	322.
700.0	-22.0	2021.	1263.	322.	322.	322.

ASSUMED CRIT. PASSIVE LOC. 520.0 EL. -22.0 DP 25483. RP 12624.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
400.0	-22.0	71337.	35005.	0.	84934.	2.89
405.0	-22.0	68151.	33016.	0.	79846.	2.94
410.0	-22.0	63839.	30394.	0.	75080.	3.08
415.0	-22.0	58747.	27336.	0.	70639.	3.32
420.0	-22.0	53856.	24362.	0.	66510.	3.65
425.0	-22.0	49947.	21926.	0.	62495.	3.97

CRIT. ACTIVE LOC 400.0 EL -22.0 DA 71337. RA 35005.

DIS.	EL.	DP	RP	DB	RB	FS
520.0	-22.0	25483.	12624.	0.	84934.	2.89

* * STRATUM 8 ACT. WEDGE LOC. 405.0 EL. -36.0 PASS.WEDGE LOC. 520.0 EL. -36.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-36.0	3286.	1983.	553.	553.	553.
92.2	-36.0	3256.	1966.	547.	547.	547.
94.0	-36.0	3209.	1919.	548.	548.	548.
95.4	-36.0	3172.	1919.	532.	532.	532.
111.4	-36.0	2993.	1919.	456.	456.	456.
127.6	-36.0	2960.	1919.	442.	442.	442.
143.2	-36.0	2935.	1919.	431.	431.	431.
152.9	-36.0	2885.	1919.	410.	410.	410.
162.6	-36.0	2887.	1919.	411.	411.	411.
179.1	-36.0	2899.	1919.	416.	416.	416.
199.4	-36.0	2991.	1919.	455.	455.	455.
215.0	-36.0	3178.	1919.	534.	534.	534.
215.4	-36.0	3183.	1924.	534.	534.	534.
240.5	-36.0	3299.	1990.	555.	555.	555.
249.8	-36.0	3653.	1986.	708.	708.	708.
250.0	-36.0	3662.	1986.	711.	711.	711.
259.0	-36.0	4007.	1986.	858.	858.	858.
265.4	-36.0	4025.	1986.	865.	865.	865.
285.1	-36.0	4082.	1986.	890.	890.	890.
305.4	-36.0	4141.	1976.	919.	919.	919.
319.8	-36.0	4182.	1995.	928.	928.	928.
321.9	-36.0	4189.	1997.	930.	930.	930.
339.0	-36.0	4279.	2020.	959.	959.	959.

342.0	-36.0	4374.	2024.	998.	998.	998.
357.9	-36.0	4847.	2045.	1189.	1189.	1189.
373.3	-36.0	5307.	2065.	1376.	1376.	1376.
378.3	-36.0	5458.	2071.	1437.	1437.	1437.
383.3	-36.0	5464.	2078.	1437.	1437.	1437.
383.4	-36.0	5464.	2078.	1437.	1437.	1437.
388.3	-36.0	5464.	2084.	1434.	1434.	1434.
393.3	-36.0	5319.	2091.	1370.	1370.	1370.
409.8	-36.0	4841.	2113.	1158.	1158.	1158.
418.3	-36.0	4591.	2124.	1047.	1047.	1047.
430.9	-36.0	4542.	2140.	1019.	1019.	1019.
439.7	-36.0	4494.	2152.	994.	994.	994.
446.9	-36.0	4453.	2162.	973.	973.	973.
459.7	-36.0	4404.	2178.	945.	945.	945.
475.7	-36.0	4347.	2199.	912.	912.	912.
478.0	-36.0	4335.	2202.	905.	905.	905.
495.1	-36.0	4253.	2225.	861.	861.	861.
498.3	-36.0	4244.	2229.	855.	855.	855.
500.0	-36.0	4212.	2231.	841.	841.	841.
519.2	-36.0	3754.	2256.	636.	636.	636.
523.6	-36.0	3721.	2262.	619.	619.	619.
523.6	-36.0	3721.	2262.	619.	619.	619.
536.2	-36.0	3678.	2279.	594.	594.	594.
538.3	-36.0	3653.	2264.	589.	589.	589.
552.2	-36.0	3682.	2281.	595.	595.	595.
563.0	-36.0	3628.	2250.	585.	585.	585.
566.4	-36.0	3605.	2236.	581.	581.	581.
585.7	-36.0	3534.	2191.	570.	570.	570.
598.3	-36.0	3492.	2165.	563.	563.	563.
622.7	-36.0	3466.	2149.	559.	559.	559.
646.4	-36.0	3463.	2147.	559.	559.	559.
669.2	-36.0	3448.	2137.	556.	556.	556.
695.9	-36.0	3448.	2138.	556.	556.	556.
700.0	-36.0	3449.	2138.	556.	556.	556.

ASSUMED CRIT. PASSIVE LOC. 520.0 EL. -36.0 DP 66212. RP 32608.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
405.0	-36.0	134213.	57364.	0.	107217.	2.90
410.0	-36.0	130549.	55117.	0.	101277.	2.94
415.0	-36.0	125131.	51819.	0.	95663.	3.06
420.0	-36.0	118649.	47927.	0.	90360.	3.26
425.0	-36.0	112289.	44104.	0.	85171.	3.51
430.0	-36.0	107095.	40901.	0.	80037.	3.76

CRIT. ACTIVE LOC 405.0 EL -36.0 DA 134213. RA 57364.

DIS.	EL.	DP	RP	DB	RB	FS
520.0	-36.0	66212.	32608.	0.	107217.	2.90

* * STRATUM 9 ACT. WEDGE LOC. 415.0 EL. -58.0 PASS.WEDGE LOC. 510.0 EL. -58.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-58.0	5596.	3358.	950.	950.	950.
92.2	-58.0	5566.	3341.	944.	944.	944.
94.0	-58.0	5519.	3294.	945.	945.	945.
95.4	-58.0	5482.	3294.	929.	929.	929.
111.4	-58.0	5303.	3294.	853.	853.	853.
127.6	-58.0	5270.	3294.	839.	839.	839.
143.2	-58.0	5245.	3294.	828.	828.	828.

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152.9	-58.0	5195.	3294.	807.	807.	807.
162.6	-58.0	5197.	3294.	808.	808.	808.
179.1	-58.0	5209.	3294.	813.	813.	813.
199.4	-58.0	5301.	3294.	852.	852.	852.
215.0	-58.0	5488.	3294.	931.	931.	931.
215.4	-58.0	5493.	3299.	931.	931.	931.
240.5	-58.0	5609.	3365.	952.	952.	952.
249.8	-58.0	5963.	3361.	1105.	1105.	1105.
250.0	-58.0	5972.	3361.	1108.	1108.	1108.
259.0	-58.0	6317.	3361.	1255.	1255.	1255.
265.4	-58.0	6335.	3361.	1262.	1262.	1262.
285.1	-58.0	6392.	3361.	1286.	1286.	1286.
305.4	-58.0	6451.	3351.	1316.	1316.	1316.
319.8	-58.0	6492.	3370.	1325.	1325.	1325.
321.9	-58.0	6499.	3372.	1327.	1327.	1327.
339.0	-58.0	6589.	3395.	1356.	1356.	1356.
342.0	-58.0	6684.	3399.	1395.	1395.	1395.
357.9	-58.0	7157.	3420.	1586.	1586.	1586.
373.3	-58.0	7617.	3440.	1773.	1773.	1773.
378.3	-58.0	7768.	3446.	1834.	1834.	1834.
383.3	-58.0	7774.	3453.	1834.	1834.	1834.
383.4	-58.0	7774.	3453.	1834.	1834.	1834.
388.3	-58.0	7775.	3459.	1832.	1832.	1832.
393.3	-58.0	7632.	3466.	1768.	1768.	1768.
409.8	-58.0	7159.	3488.	1558.	1558.	1558.
418.3	-58.0	6911.	3499.	1448.	1448.	1448.
430.9	-58.0	6866.	3515.	1422.	1422.	1422.
439.7	-58.0	6820.	3527.	1398.	1398.	1398.
446.9	-58.0	6782.	3537.	1378.	1378.	1378.
459.7	-58.0	6736.	3553.	1351.	1351.	1351.
475.7	-58.0	6679.	3574.	1318.	1318.	1318.
478.0	-58.0	6667.	3577.	1311.	1311.	1311.
495.1	-58.0	6585.	3600.	1267.	1267.	1267.
498.3	-58.0	6576.	3604.	1262.	1262.	1262.
500.0	-58.0	6544.	3606.	1247.	1247.	1247.
519.2	-58.0	6068.	3631.	1034.	1034.	1034.
523.6	-58.0	6031.	3637.	1016.	1016.	1016.
523.6	-58.0	6031.	3637.	1016.	1016.	1016.
536.2	-58.0	5988.	3654.	991.	991.	991.
538.3	-58.0	5963.	3639.	986.	986.	986.
552.2	-58.0	5992.	3656.	991.	991.	991.
563.0	-58.0	5938.	3625.	982.	982.	982.
566.4	-58.0	5915.	3611.	978.	978.	978.
585.7	-58.0	5844.	3566.	967.	967.	967.
598.3	-58.0	5802.	3540.	960.	960.	960.
622.7	-58.0	5776.	3524.	956.	956.	956.
646.4	-58.0	5773.	3522.	956.	956.	956.
669.2	-58.0	5758.	3512.	953.	953.	953.
695.9	-58.0	5758.	3513.	953.	953.	953.
700.0	-58.0	5759.	3513.	953.	953.	953.

ASSUMED CRIT. PASSIVE LOC. 510.0 EL. -58.0 DP 171247. RP 85713.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
415.0	-58.0	269012.	98631.	0.	127304.	3.19
420.0	-58.0	264144.	95697.	0.	119996.	3.24
425.0	-58.0	257876.	91895.	0.	112799.	3.35
430.0	-58.0	250906.	87644.	0.	105653.	3.50
435.0	-58.0	243776.	83306.	0.	98565.	3.69
440.0	-58.0	237014.	79177.	0.	91546.	3.90

CRIT. ACTIVE LOC 415.0 EL -58.0 DA 269012. RA 98631.

DIS.	EL.	DP	RP	DB	RB	FS
510.0	-58.0	171247.	85713.	0.	127304.	3.19

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**** STABILITY WITH UPLIFT ****

"Reach 5c(1)-2nd Stage"
"FS to PS;S-Case;LWL = GS"
11 PROFILES
5VERTICALS
UPLIFT WITH 1 PIEZOMETRIC GRADE LINES

* * STRATUM 6 ACT. WEDGE LOC. 330.0 EL. -12.0 PASS.WEDGE LOC. 460.0 EL. -12.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-12.0	1021.	638.	163.	163.	163.
4.1	-12.0	1020.	638.	162.	162.	162.
30.9	-12.0	1020.	638.	162.	162.	162.
53.6	-12.0	1035.	647.	165.	165.	165.
77.3	-12.0	1038.	649.	165.	165.	165.
101.7	-12.0	1064.	665.	169.	169.	169.
114.3	-12.0	1106.	691.	176.	176.	176.
133.6	-12.0	1177.	736.	187.	187.	187.
137.0	-12.0	1200.	750.	191.	191.	191.
147.9	-12.0	1254.	781.	201.	201.	201.
161.8	-12.0	1225.	764.	196.	196.	196.
163.8	-12.0	1250.	779.	200.	200.	200.
176.4	-12.0	1293.	762.	225.	225.	225.
176.4	-12.0	1293.	762.	225.	225.	225.
180.8	-12.0	1304.	756.	232.	232.	232.
200.0	-12.0	1666.	731.	397.	397.	397.
201.7	-12.0	1703.	729.	414.	414.	414.
204.9	-12.0	1721.	725.	423.	423.	423.
222.0	-12.0	1853.	702.	489.	489.	489.
224.3	-12.0	1872.	699.	498.	498.	498.
240.3	-12.0	1976.	678.	551.	551.	551.
253.1	-12.0	2025.	662.	579.	579.	579.
260.3	-12.0	2066.	652.	600.	600.	600.
269.1	-12.0	2114.	640.	626.	626.	626.
281.7	-12.0	2163.	624.	653.	653.	653.
290.2	-12.0	2414.	613.	764.	764.	764.
306.7	-12.0	2892.	591.	977.	977.	977.
311.7	-12.0	3036.	584.	1041.	1041.	1041.
316.6	-12.0	3036.	578.	1043.	1043.	1043.
316.7	-12.0	3036.	578.	1043.	1043.	1043.
321.7	-12.0	3029.	571.	1043.	1043.	1043.
326.7	-12.0	2878.	565.	982.	982.	982.
342.1	-12.0	2418.	545.	795.	795.	795.
358.0	-12.0	1946.	524.	604.	604.	604.
361.0	-12.0	1850.	520.	565.	565.	565.
378.1	-12.0	1761.	497.	536.	536.	536.
380.2	-12.0	1754.	495.	535.	535.	535.
394.6	-12.0	1713.	476.	525.	525.	525.
414.9	-12.0	1654.	486.	496.	496.	496.
434.6	-12.0	1597.	486.	472.	472.	472.
441.0	-12.0	1579.	486.	464.	464.	464.
450.0	-12.0	1234.	486.	317.	317.	317.
450.2	-12.0	1225.	486.	313.	313.	313.
459.5	-12.0	870.	490.	161.	161.	161.
484.5	-12.0	755.	425.	140.	140.	140.
485.0	-12.0	749.	419.	140.	140.	140.
500.6	-12.0	562.	419.	61.	61.	61.
520.9	-12.0	471.	419.	22.	22.	22.
537.4	-12.0	459.	419.	17.	17.	17.
547.1	-12.0	457.	419.	16.	16.	16.
556.8	-12.0	507.	419.	37.	37.	37.
572.4	-12.0	533.	419.	48.	48.	48.
588.6	-12.0	565.	419.	62.	62.	62.
604.5	-12.0	744.	419.	138.	138.	138.
606.0	-12.0	781.	419.	154.	154.	154.

607.8	-12.0	828.	466.	154.	154.	154.
700.0	-12.0	858.	483.	159.	159.	159.

ASSUMED CRIT. PASSIVE LOC. 460.0 EL. -12.0 DP 3192. RP 1789.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
330.0	-12.0	37425.	20840.	0.	70304.	2.71
335.0	-12.0	34936.	19339.	0.	65745.	2.74
340.0	-12.0	31412.	17263.	0.	61489.	2.85
345.0	-12.0	27790.	15139.	0.	57535.	3.03
350.0	-12.0	24391.	13148.	0.	53883.	3.25
355.0	-12.0	21212.	11288.	0.	50534.	3.53

CRIT. ACTIVE LOC 330.0 EL -12.0 DA 37425. RA 20840.

DIS.	EL.	DP	RP	DB	RB	FS
460.0	-12.0	3192.	1789.	0.	70304.	2.71

* * STRATUM 7 ACT. WEDGE LOC. 335.0 EL. -22.0 PASS.WEDGE LOC. 490.0 EL. -22.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-22.0	2021.	1263.	322.	322.	322.
4.1	-22.0	2020.	1263.	322.	322.	322.
30.9	-22.0	2020.	1263.	322.	322.	322.
53.6	-22.0	2035.	1272.	324.	324.	324.
77.3	-22.0	2038.	1274.	324.	324.	324.
101.7	-22.0	2064.	1290.	329.	329.	329.
114.3	-22.0	2106.	1316.	335.	335.	335.
133.6	-22.0	2177.	1361.	347.	347.	347.
137.0	-22.0	2200.	1375.	350.	350.	350.
147.9	-22.0	2254.	1406.	360.	360.	360.
161.8	-22.0	2225.	1389.	355.	355.	355.
163.8	-22.0	2250.	1404.	359.	359.	359.
176.4	-22.0	2293.	1387.	384.	384.	384.
176.4	-22.0	2293.	1387.	384.	384.	384.
180.8	-22.0	2321.	1381.	399.	399.	399.
200.0	-22.0	2756.	1356.	594.	594.	594.
201.7	-22.0	2789.	1354.	609.	609.	609.
204.9	-22.0	2800.	1350.	616.	616.	616.
222.0	-22.0	2894.	1327.	665.	665.	665.
224.3	-22.0	2908.	1324.	672.	672.	672.
240.3	-22.0	2976.	1303.	710.	710.	710.
253.1	-22.0	3025.	1287.	738.	738.	738.
260.3	-22.0	3066.	1277.	759.	759.	759.
269.1	-22.0	3114.	1265.	785.	785.	785.
281.7	-22.0	3163.	1249.	812.	812.	812.
290.2	-22.0	3414.	1238.	924.	924.	924.
306.7	-22.0	3892.	1216.	1136.	1136.	1136.
311.7	-22.0	4036.	1209.	1200.	1200.	1200.
316.6	-22.0	4036.	1203.	1202.	1202.	1202.
316.7	-22.0	4036.	1203.	1202.	1202.	1202.
321.7	-22.0	4029.	1196.	1203.	1203.	1203.
326.7	-22.0	3878.	1190.	1141.	1141.	1141.
342.1	-22.0	3418.	1170.	954.	954.	954.
358.0	-22.0	2946.	1149.	763.	763.	763.
361.0	-22.0	2850.	1145.	724.	724.	724.
378.1	-22.0	2761.	1122.	696.	696.	696.
380.2	-22.0	2754.	1120.	694.	694.	694.
394.6	-22.0	2713.	1101.	684.	684.	684.
414.9	-22.0	2654.	1101.	655.	655.	655.

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434.6	-22.0	2597.	1111.	631.	631.	631.
441.0	-22.0	2579.	1111.	623.	623.	623.
450.0	-22.0	2234.	1111.	476.	476.	476.
450.2	-22.0	2225.	1111.	473.	473.	473.
459.5	-22.0	1870.	1115.	321.	321.	321.
484.5	-22.0	1755.	1050.	299.	299.	299.
485.0	-22.0	1749.	1044.	299.	299.	299.
500.6	-22.0	1562.	1044.	220.	220.	220.
520.9	-22.0	1471.	1044.	181.	181.	181.
537.4	-22.0	1459.	1044.	176.	176.	176.
547.1	-22.0	1457.	1044.	175.	175.	175.
556.8	-22.0	1507.	1044.	197.	197.	197.
572.4	-22.0	1533.	1044.	207.	207.	207.
588.6	-22.0	1565.	1044.	221.	221.	221.
604.5	-22.0	1744.	1044.	297.	297.	297.
606.0	-22.0	1781.	1044.	313.	313.	313.
607.8	-22.0	1828.	1091.	313.	313.	313.
700.0	-22.0	1858.	1108.	318.	318.	318.

ASSUMED CRIT. PASSIVE LOC. 490.0 EL. -22.0 DP 12601. RP 4956.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
335.0	-22.0	70288.	34447.	0.	94812.	2.33
340.0	-22.0	66663.	32343.	0.	89760.	2.35
345.0	-22.0	61943.	29630.	0.	85010.	2.42
350.0	-22.0	56759.	26663.	0.	80562.	2.54
355.0	-22.0	51798.	23829.	0.	76417.	2.68
360.0	-22.0	47053.	21123.	0.	72576.	2.86

CRIT. ACTIVE LOC 335.0 EL -22.0 DA 70288. RA 34447.

DIS.	EL.	DP	RP	DB	RB	FS
490.0	-22.0	12601.	4956.	0.	94812.	2.33

* * STRATUM 8 ACT. WEDGE LOC. 340.0 EL. -36.0 PASS.WEDGE LOC. 490.0 EL. -36.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-36.0	3449.	2138.	556.	556.	556.
4.1	-36.0	3448.	2138.	556.	556.	556.
30.9	-36.0	3448.	2138.	556.	556.	556.
53.6	-36.0	3463.	2147.	559.	559.	559.
77.3	-36.0	3466.	2149.	559.	559.	559.
101.7	-36.0	3492.	2165.	563.	563.	563.
114.3	-36.0	3534.	2191.	570.	570.	570.
133.6	-36.0	3605.	2236.	581.	581.	581.
137.0	-36.0	3628.	2250.	585.	585.	585.
147.9	-36.0	3682.	2281.	595.	595.	595.
161.8	-36.0	3653.	2264.	589.	589.	589.
163.8	-36.0	3678.	2279.	594.	594.	594.
176.4	-36.0	3721.	2262.	619.	619.	619.
176.4	-36.0	3721.	2262.	619.	619.	619.
180.8	-36.0	3754.	2256.	636.	636.	636.
200.0	-36.0	4212.	2231.	841.	841.	841.
201.7	-36.0	4244.	2229.	855.	855.	855.
204.9	-36.0	4253.	2225.	861.	861.	861.
222.0	-36.0	4335.	2202.	905.	905.	905.
224.3	-36.0	4347.	2199.	912.	912.	912.
240.3	-36.0	4404.	2178.	945.	945.	945.
253.1	-36.0	4453.	2162.	973.	973.	973.
260.3	-36.0	4494.	2152.	994.	994.	994.

269.1	-36.0	4542.	2140.	1020.	1020.	1020.
281.7	-36.0	4591.	2124.	1047.	1047.	1047.
290.2	-36.0	4842.	2113.	1158.	1158.	1158.
306.7	-36.0	5320.	2091.	1371.	1371.	1371.
311.7	-36.0	5464.	2084.	1435.	1435.	1435.
316.6	-36.0	5464.	2078.	1437.	1437.	1437.
316.7	-36.0	5464.	2078.	1437.	1437.	1437.
321.7	-36.0	5457.	2071.	1437.	1437.	1437.
326.7	-36.0	5306.	2065.	1376.	1376.	1376.
342.1	-36.0	4846.	2045.	1189.	1189.	1189.
358.0	-36.0	4374.	2024.	998.	998.	998.
361.0	-36.0	4278.	2020.	959.	959.	959.
378.1	-36.0	4189.	1997.	930.	930.	930.
380.2	-36.0	4182.	1995.	928.	928.	928.
394.6	-36.0	4141.	1976.	919.	919.	919.
414.9	-36.0	4082.	1986.	890.	890.	890.
434.6	-36.0	4025.	1986.	865.	865.	865.
441.0	-36.0	4007.	1986.	858.	858.	858.
450.0	-36.0	3662.	1986.	711.	711.	711.
450.2	-36.0	3653.	1986.	707.	707.	707.
459.5	-36.0	3298.	1990.	555.	555.	555.
484.5	-36.0	3183.	1925.	534.	534.	534.
485.0	-36.0	3177.	1919.	534.	534.	534.
500.6	-36.0	2990.	1919.	455.	455.	455.
520.9	-36.0	2899.	1919.	416.	416.	416.
537.4	-36.0	2887.	1919.	411.	411.	411.
547.1	-36.0	2885.	1919.	410.	410.	410.
556.8	-36.0	2935.	1919.	431.	431.	431.
572.4	-36.0	2961.	1919.	442.	442.	442.
588.6	-36.0	2993.	1919.	456.	456.	456.
604.5	-36.0	3172.	1919.	532.	532.	532.
606.0	-36.0	3209.	1919.	548.	548.	548.
607.8	-36.0	3256.	1966.	547.	547.	547.
700.0	-36.0	3286.	1983.	553.	553.	553.

ASSUMED CRIT. PASSIVE LOC. 490.0 EL. -36.0 DP 43441. RP 17915.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
340.0	-36.0	132828.	56977.	0.	124970.	2.24
345.0	-36.0	128407.	54434.	0.	119047.	2.25
350.0	-36.0	122537.	51120.	0.	113425.	2.31
355.0	-36.0	115580.	47203.	0.	108106.	2.40
360.0	-36.0	108338.	43133.	0.	103091.	2.53
365.0	-36.0	101581.	39343.	0.	98304.	2.68

CRIT. ACTIVE LOC 340.0 EL -36.0 DA 132828. RA 56977.

DIS.	EL.	DP	RP	DB	RB	FS
490.0	-36.0	43441.	17915.	0.	124970.	2.24

* * STRATUM 9 ACT. WEDGE LOC. 350.0 EL. -58.0 PASS.WEDGE LOC. 460.0 EL. -58.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
.0	-58.0	5759.	3513.	953.	953.	953.
4.1	-58.0	5758.	3513.	953.	953.	953.
30.9	-58.0	5758.	3513.	953.	953.	953.
53.6	-58.0	5773.	3522.	956.	956.	956.
77.3	-58.0	5776.	3524.	956.	956.	956.
101.7	-58.0	5802.	3540.	960.	960.	960.
114.3	-58.0	5844.	3566.	967.	967.	967.

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133.6	-58.0	5915.	3611.	978.	978.	978.
137.0	-58.0	5938.	3625.	982.	982.	982.
147.9	-58.0	5992.	3656.	991.	991.	991.
161.8	-58.0	5963.	3639.	986.	986.	986.
163.8	-58.0	5988.	3654.	991.	991.	991.
176.4	-58.0	6031.	3637.	1016.	1016.	1016.
176.4	-58.0	6031.	3637.	1016.	1016.	1016.
180.8	-58.0	6068.	3631.	1034.	1034.	1034.
200.0	-58.0	6544.	3606.	1247.	1247.	1247.
201.7	-58.0	6576.	3604.	1262.	1262.	1262.
204.9	-58.0	6585.	3600.	1267.	1267.	1267.
222.0	-58.0	6667.	3577.	1311.	1311.	1311.
224.3	-58.0	6679.	3574.	1318.	1318.	1318.
240.3	-58.0	6736.	3553.	1351.	1351.	1351.
253.1	-58.0	6782.	3537.	1378.	1378.	1378.
260.3	-58.0	6820.	3527.	1398.	1398.	1398.
269.1	-58.0	6866.	3515.	1422.	1422.	1422.
281.7	-58.0	6911.	3499.	1448.	1448.	1448.
290.2	-58.0	7159.	3488.	1558.	1558.	1558.
306.7	-58.0	7633.	3466.	1769.	1769.	1769.
311.7	-58.0	7776.	3459.	1832.	1832.	1832.
316.6	-58.0	7774.	3453.	1834.	1834.	1834.
316.7	-58.0	7774.	3453.	1834.	1834.	1834.
321.7	-58.0	7767.	3446.	1834.	1834.	1834.
326.7	-58.0	7616.	3440.	1773.	1773.	1773.
342.1	-58.0	7156.	3420.	1586.	1586.	1586.
358.0	-58.0	6684.	3399.	1394.	1394.	1394.
361.0	-58.0	6588.	3395.	1356.	1356.	1356.
378.1	-58.0	6499.	3372.	1327.	1327.	1327.
380.2	-58.0	6492.	3370.	1325.	1325.	1325.
394.6	-58.0	6451.	3351.	1316.	1316.	1316.
414.9	-58.0	6392.	3361.	1286.	1286.	1286.
434.6	-58.0	6335.	3361.	1262.	1262.	1262.
441.0	-58.0	6317.	3361.	1254.	1254.	1254.
450.0	-58.0	5972.	3361.	1108.	1108.	1108.
450.2	-58.0	5963.	3361.	1104.	1104.	1104.
459.5	-58.0	5608.	3365.	952.	952.	952.
484.5	-58.0	5493.	3300.	931.	931.	931.
485.0	-58.0	5487.	3294.	931.	931.	931.
500.6	-58.0	5300.	3294.	852.	852.	852.
520.9	-58.0	5209.	3294.	813.	813.	813.
537.4	-58.0	5197.	3294.	808.	808.	808.
547.1	-58.0	5195.	3294.	807.	807.	807.
556.8	-58.0	5245.	3294.	828.	828.	828.
572.4	-58.0	5271.	3294.	839.	839.	839.
588.6	-58.0	5303.	3294.	853.	853.	853.
604.5	-58.0	5482.	3294.	929.	929.	929.
606.0	-58.0	5519.	3294.	945.	945.	945.
607.8	-58.0	5566.	3341.	944.	944.	944.
700.0	-58.0	5596.	3358.	950.	950.	950.

ASSUMED CRIT. PASSIVE LOC. 460.0 EL. -58.0 DP 139047. RP 66015.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
350.0	-58.0	266683.	98432.	0.	140871.	2.39
355.0	-58.0	260880.	95243.	0.	133567.	2.42
360.0	-58.0	253009.	90846.	0.	126568.	2.49
365.0	-58.0	244021.	85862.	0.	119796.	2.59
370.0	-58.0	234875.	80797.	0.	113072.	2.71
375.0	-58.0	226476.	76157.	0.	106390.	2.84

CRIT. ACTIVE LOC 350.0 EL -58.0 DA 266683. RA 98432.

DIS.	EL.	DP	RP	DB	RB	FS
460.0	-58.0	139047.	66015.	0.	140871.	2.39

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```
"Reach 5c(1)-2nd Stage"
"FS to PS;S-Case;LWL = GS"
20 10 1 240 1 0
10 5 2 1
176.37 200 240.33 316.73 450.23
0 62.4 0 0 62.4 0 0 62.4 0 0 62.4 0 0 62.4 0 0
23 115 0 0 115 0 0 115 0 0 115 0 0 115 0 0
23 108 0 0 108 0 0 108 0 0 108 0 0 108 0 0
30 122 0 0 122 0 0 122 0 0 122 0 0 122 0 0
23 100 0 0 101 0 0 111 0 0 111 0 0 111 0 0
23 100 0 0 101 0 0 111 0 0 111 0 0 111 0 0
23 100 0 0 109 0 0 100 0 0 100 0 0 100 0 0
23 102 0 0 104 0 0 102 0 0 102 0 0 102 0 0
23 105 0 0 106 0 0 106 0 0 105 0 0 105 0 0
23 105 0 0 106 0 0 106 0 0 105 0 0 105 0 0

0 -1.79 4.11 -1.80 30.85 -1.80 53.61 -1.65 77.26 -1.62
101.72 -1.36 114.3 -0.94 133.62 -0.23 137 0 147.85 0.5
161.75 0.23 163.82 0.46 176.37 0.86 180.78 0.94 201.73 4.5
204.93 4.58 281.73 6.5 311.73 14 321.73 14 361 4 441 2
459.47 -4.16 484.55 -5.2 604.55 -5.3 607.82 -4.54
700 -4.27 9999.9 0

0 -1.79 4.11 -1.8 30.85 -1.8 53.61 -1.65 77.26 -1.62
101.72 -1.36 114.3 -0.94 133.62 -0.23 137 0 147.85 0.5
161.75 0.23 163.82 0.46 176.37 0.86 180.78 0.94 201.73 4.5
204.93 4.58 281.73 6.5 311.73 14 321.73 14 361 4 441 2
459.47 -4.16 484.55 -5.2 500.6 -9.14 520.9 -11.0
537.4 -11.22 547.09 -11.26 556.8 -10.22 572.41 -9.68
588.59 -9.0 607.82 -4.54 700 -4.27 9999.9 0

0 -1.79 4.11 -1.8 30.85 -1.8 53.61 -1.65 77.26 -1.62
101.72 -1.36 114.3 -0.94 133.62 -0.23 137 0 147.85 0.5
161.75 0.23 163.82 0.46 176.37 0.86 180.78 0.94 201.73 4.5
204.93 4.58 222 0 224.3 -0.66 240.33 -3.85 260.33 -3.85
378.08 -4.54 380.18 -4.26 394.59 -4.39 414.93 -4.22
434.63 -4.19 450 -4.27 459.47 -4.16 484.55 -5.2 500.6 -9.14
520.9 -11.0 537.4 -11.22 547.09 -11.26 556.8 -10.22
572.41 -9.68 588.59 -9.0 607.82 -4.54 700 -4.27 9999.9 0

0 -1.79 4.11 -1.8 30.85 -1.8 53.61 -1.65 77.26 -1.62
101.72 -1.36 114.3 -0.94 133.62 -0.23 137 0 222 0 224.3 -0.66
240.33 -3.85 260.33 -3.85 378.08 -4.54 380.18 -4.26
394.59 -4.39 414.93 -4.22 434.63 -4.19 450 -4.27 459.47 -4.16
484.55 -5.2 500.6 -9.14 520.9 -11.0 537.4 -11.22 547.09 -11.26
556.8 -10.22 572.41 -9.68 588.59 -9.0 607.82 -4.54 700 -4.27
9999.9 0

0 -1.79 4.11 -1.8 30.85 -1.8 53.61 -1.65 77.26 -1.62
101.72 -1.36 114.3 -0.94 133.62 -0.23 137 0 222 0 224.3 -0.66
240.33 -3.85 253.08 -5.02 269.13 -8.93 290.17 -10.85
306.69 -11.22 316.58 -11.18 326.69 -10.14 342.13 -9.46
357.98 -8.78 378.08 -4.54 380.18 -4.26 394.59 -4.39
414.93 -4.22 434.63 -4.19 450 -4.27 459.47 -4.16 484.55 -5.2
500.6 -9.14 520.9 -11.0 537.4 -11.22 547.09 -11.26 556.8 -10.22
572.41 -9.68 588.59 -9.0 607.82 -4.54 700 -4.27 9999.9 0

0 -1.89 4.11 -1.9 30.85 -1.9 53.61 -1.75 77.26 -1.72
101.72 -1.46 114.3 -1.04 133.62 -0.33 137 -0.1 222 -0.1
224.3 -0.76 240.33 -3.95 253.08 -5.12 269.13 -9.03 290.17 -10.95
306.69 -11.32 316.58 -11.28 326.69 -10.24 342.13 -9.56
357.98 -8.88 378.08 -4.64 380.18 -4.36 394.59 -4.49 414.93 -4.32
434.63 -4.29 450 -4.37 459.47 -4.26 484.55 -5.3 500.6 -9.24
520.9 -11.1 537.4 -11.32 547.09 -11.36 556.8 -10.32 572.41 -9.78
588.59 -9.1 607.82 -4.64 700 -4.37 9999.9 0

0 -12 700 -12 9999.9 0
0 -22 700 -22 9999.9 0
0 -36 700 -36 9999.9 0
0 -58 700 -58 9999.9 0
0 -80 700 -80 9999.9 0

0 -1.79 4.11 -1.8 30.85 -1.8 53.61 -1.65 77.26 -1.62
101.72 -1.36 114.3 -0.94 133.62 -0.23 137 0 147.85 0.5 161.75 0.23
163.82 0.46 394.59 -4.39 414.93 -4.22 450.23 -4.27 484.55 -5.2
```



```
484.55 -5.2 485 -5.3 606 -5.3 607.82 -4.54 700 -4.27 9999.9 0

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

6 330 -12 460 -12 1
460
7 335 -22 490 -22 1
490
8 340 -36 490 -36 1
490
9 350 -58 460 -58 1
460
```

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Seepage Analysis

Project:	New Orleans to Venice - Plaquemines Parish, LA - Non-Federal 05										Design of Landside Seepage Berms													
Levee Station		Riverside Conditions									Landside Conditions												Berm Width	Berm Thickness (at levee toe)
From	To	EL RS Borrow Pit	Z_{bR} ft.	Soil Type	X_1 ft. RS Blanket	L_1 ft. River Entry	X_1 ft.	L_2 ft.	S ft.	EL Flow Line	EL LS Ground	H ft.	Z_{bl} ft.	K_{bL}	K_f	D ft.	X_3 ft.	Z_t ft.	h_o ft.	$i_o = \frac{h_o}{Z_t}$	F.S. Levee Toe	h'$_o$ ft.	X ft.	t ft.
649+50	728+00	5b	13.95	Clay	2500		2500	187.6	2687.6	10	-4.59	14.59	13.95	1.89	1250	4	192	13.95	1.0	0.07	9.78		No Berm Required	
728+00	771+00	5c(1)	4	Clay	600		600	189.7	789.7	11	-4.39	15.39	4	3.8	1250	2	51	4	0.9	0.23	1.82		No Berm Required	
771+00	819+00	5c(2)	13.7	Clay	2500		2500	192.3	2692.3	11	-4.54	15.54	13.7	1.89	1250	4	190	13.7	1.0	0.07	6.12		No Berm Required	
819+00	846+00	5d(1)		Clay											1250									
846+00	916+00	5d(2)	5.7	Clay	1300		1300	175	1475	11.5	-3.86	15.36	5.7	3.57	1250	4	89	5.7	0.9	0.15	2.98		No Berm Required	
846+00	916+00	5d(2)	16.3	Clay	4000		4000	175	4175	11.5	-3.86	15.36	16.3	1.41	1250	8	340	21.25	1.2	0.05	10.78		No Berm Required	
931+00	974+00	NL5d(2)		Clay											1250									

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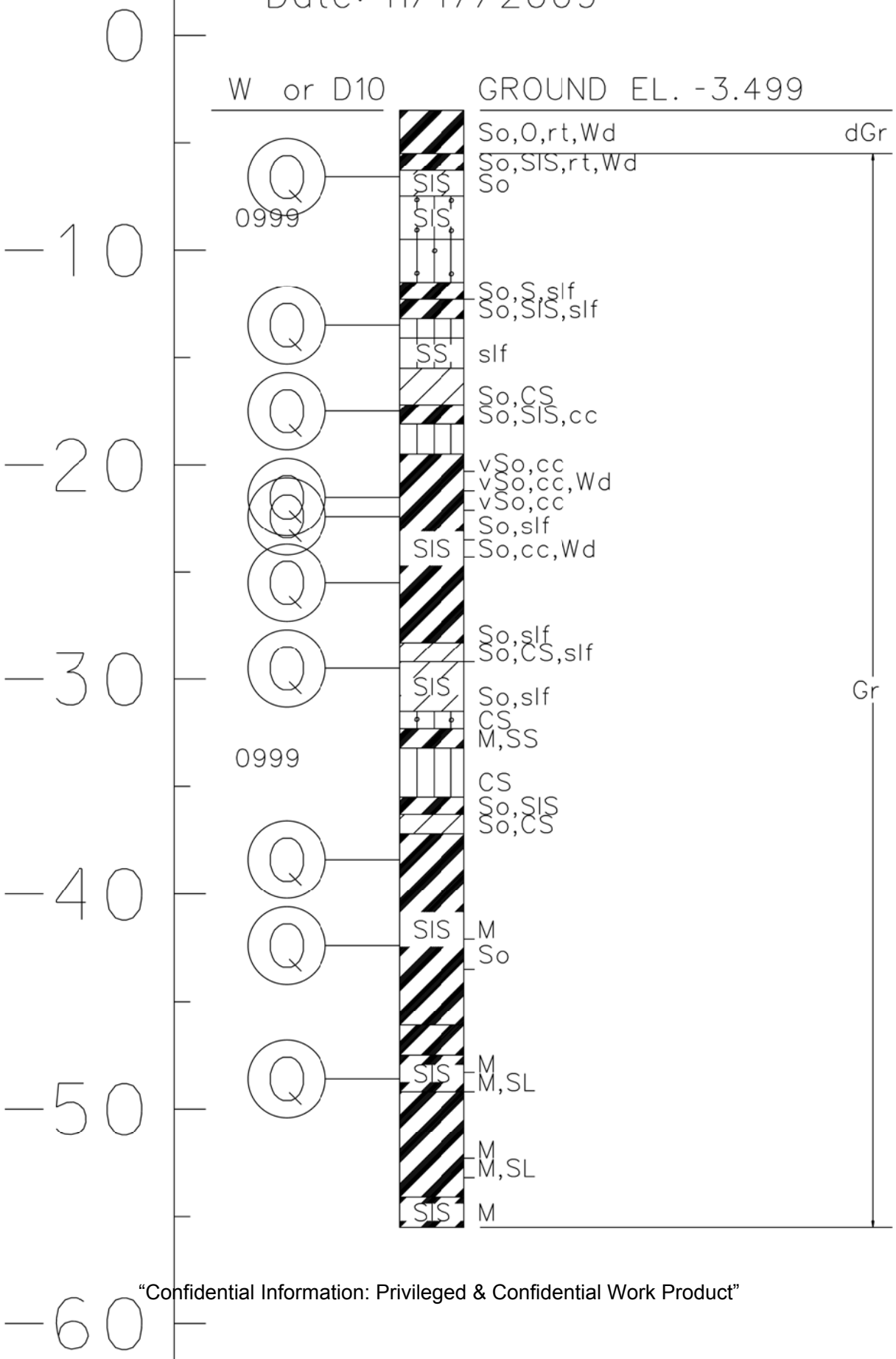
BOR. NF05-65PCU (07-022122)
STA. N 29° 38'45.18" W 89° 59'35.48"

WATER TABLE 0 FT.
Date: 11/17/2009



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Overall Bearing Capacity

Reach 5c(1) - Overall Bearing Capacity Check

Cohesion, C_{uo}	150
Assumed, N_c	5.14
Width of Geotextile, b	154
Crown Width, B	10
Height of Levee, H	17.9

	@ 12'	@36'
Varying Depths, D	8.3	32.3
Slope, p_c	1	6.7
$x_{min}(D,d)$	8.3	32.3

	PS	FS
Height of berm, h	6.2	9.4
geotextile to end of berm toe, nh	64.0	42.2

@ 12'		
	$\frac{p_c b}{c_{uo}}$	1.0
	d/b (off graph)	0.50
	d	308.0
	PS	FS
q_s	666.77	974.69
q_u	1437.77	1745.69
q_A	975.92	826.81
FS	1.47	2.11

@ 36'		
	$\frac{p_c b}{c_{uo}}$	6.9
	d/b (off graph)	0.21
	d	733.3
	PS	FS
q_s	533.08	667.30
q_u	1304.08	1438.30
q_A	975.92	826.81
FS	1.34	1.74

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APPENDIX E
Outfall Area Subsurface Information

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rev. March 2010
Cost figures as of: May 2013

Mississippi River Sediment Delivery System - Bayou Dupont (BA-39)

Project Status

Approved Date: 2003 **Project Area:** 471 acres
Approved Funds: $27.1 M **Total Est. Cost:** $27.3 M
Net Benefit After 20 Years: 326 acres
Status: Construction
Project Type: Marsh Creation
PPL #: 12

Location

The project is located adjacent to Bayou Dupont and southeast of Cheniere Traverse Bayou in the vicinity of Ironton in Plaquemines Parish and Lafitte in Jefferson Parish, Louisiana. The general area lies west of LA Hwy 23 and just north of the Myrtle Grove Marina within the Barataria Basin.

Problems

Marshes in the project area have degraded to open water with only scattered clumps of low-lying vegetation remaining. Marsh degradation has resulted from a combination of lack of natural fresh water and sediment input, subsidence and the dredging of oil and gas canals.

Restoration Strategy

The proposed project involves dredging sediment from the Mississippi River for marsh creation and pumping it via pipeline into an area of open water and broken marsh west of the Plaquemines Parish flood protection levee. The material will spread over the project area and be contained primarily with existing land features. Newly-constructed low containment dikes will be necessary only along a limited portion of the project area. Native intertidal marsh vegetation will be planted post construction.

The proximity of the project to the Mississippi River presents a prime opportunity to employ a pipeline delivery system that will utilize the sediment resources from the river to restore and create wetlands. Unlike most marsh creation projects that involve borrowing fill material from adjacent shallow water areas within the landscape, this project will utilize renewable river sediment, thus minimizing disruption of the adjacent water and marsh platform.

The Bayou Dupont project represents the first example of pipeline transport of sediment from the river to build marsh as a CWPPRA project. Results from this project should serve to demonstrate the value and efficacy of greater use of pipeline-conveyed river sediments for coastal restoration.

Aerial view of Bayou Dupont.

Progress to Date

The Louisiana Department of Natural Resources (LDNR) Coastal Engineering Division performed the engineering and design services. Construction activities began in April of 2009, construction completion is anticipated in the Spring/Summer 2010.

This project is on Priority Project List 12.

For more project information, please contact:

Federal Sponsor:
U.S. Environmental Protection Agency
Dallas, TX
(214) 665-6722

Local Sponsor:
Coastal Protection and Restoration Authority
Baton Rouge, LA
(225) 342-4736

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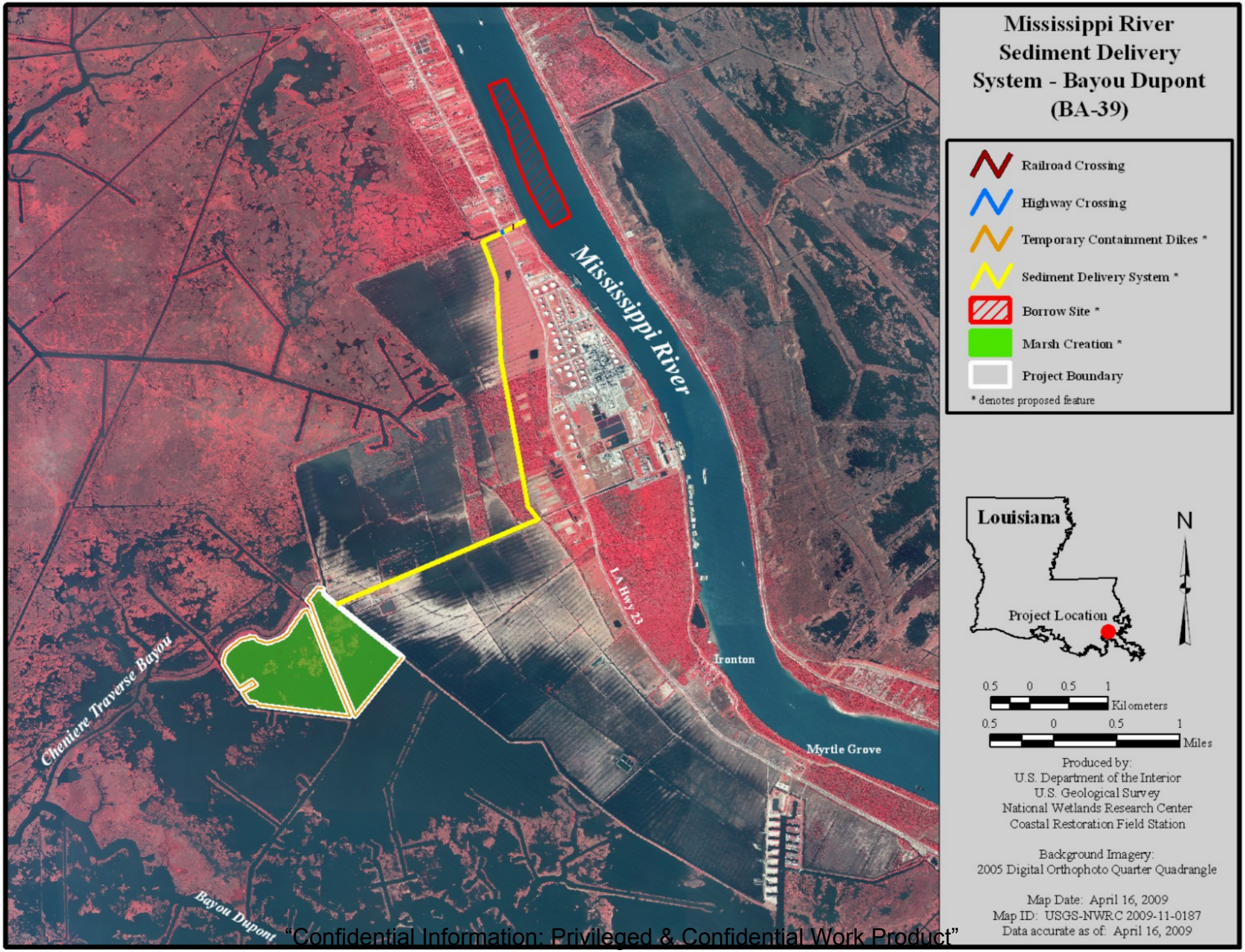

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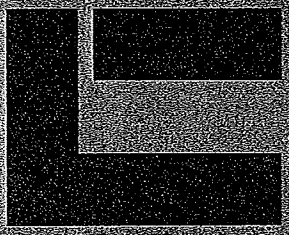
Geotechnical Engineering Report
Bayou Dupont Restoration Project
Plaquemines and Jefferson Parishes, LA
LDNR (2503-05-44)



For:

Sigma Consulting Group, Inc.

Baton Rouge, Louisiana

July 2007

LOUIS J. CAPOZZOLI & ASSOCIATES, INC.
Geotechnical Engineers

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Louis J
CAPOZZOLI
and Associates

a subsidiary of GeoEngineers

16 July 2007

Sigma Consulting Group
10305 Airline Highway
Baton Rouge, Louisiana 70816

Attention: Mr. Gregory P. Sepeda, P.E.

Re: Geotechnical Engineering Report
Bayou Dupont Restoration Project
Plaquemines and Jefferson Parish, Louisiana
LDNR Contract No. 2503-05-44
LJC&A File: 07-110/16715-001-00

Gentlemen:

The following report presents our work done for this project per Louisiana Department of Natural Resources (LDNR) request for geotechnical investigation and an analysis for marsh restoration at Bayou Dupont in Plaquemines Parish, Louisiana in a letter dated 20 February 2007. The following report and discussion present information requested by LDNR. This information was transmitted as preliminary results/data to Ms. Whitney Thompson, E.I. of LDNR, Coastal Engineering Division.

PROJECT DESCRIPTION

The Mississippi River sediment delivery into Bayou Dupont project has been approved for engineering and design by LDNR, in cooperation with the Environmental Protection Agency (EPA). The objective of this project is to dredge sediment from the Mississippi River near mile 65 and create 470 acres of marsh at Bayou Dupont. This project is funded through the coastal wetland planning, protection, and Restoration Act, see (WPPRA) on primary project list 12.

Location. The project site is located in Plaquemines and Jefferson Parishes, Louisiana approximately 2 miles west of Myrtle Grove and 1.4 miles west of Ironton. The approximate center coordinate of the project area is 29° 30'4.0"N Latitude and 90° 0'44.92" W Longitude. Refer to the geotechnical investigation data report presented under separate cover for site drawings.

DESCRIPTION

The major objective of this restoration project is to use dredged material from the Mississippi River to create marsh along Bayou Dupont. The project area encompasses two fill areas totaling approximately 470 acres of intermediate to brackish marsh. The geotechnical investigation data report and engineering services provided in this report were used to evaluate the design and construction of the marsh creation fill areas. Borings 1, 2, and 3 were done in the Mississippi River by us. Borings 5 and 6 were done by us next to the River Road (LA Highway 23) for two locations of jack-and-bore pits for the dredged disposal pipeline to go under the roadway. Borings done by Eustis Engineering Company, Inc. for the marsh area were extracted from data provided by LDNR and the borings 4 through 7 are applicable to this project.

Borrow Area. Borings 1, 2, and 3 were done in about 52 to 57 feet of water and the top materials were to 4 feet thick loose to firm sands at borings 1 and 3. Firm sand with an intermediate layer of dense to very dense sand then occurs to about elevation -80 to -82 feet, NAVD 88. The borings were terminated in dense to very dense sand (SP) at elevations ranging from -86 to -91 feet, NAVD 88. For a graphical presentation of the subsurface profile, refer to sheet 1. The average standard penetration test blow counts (N) obtained by our field methods of the river borings for the sands are depicted on the subsurface profile on sheet 1.

Jack-And-Bore Sites. Graphical subsurface profiles of each of the jack and bore sites (borings 5 and 6) are given on sheet 2. These materials were basically either fat clay (CH) or lean clay (CL). A surface crust exists in thickness of about 8 feet at boring 5 and 6 feet at boring 6 and is underlain by soft clay (CH and CL) to the final boring depth of 40 feet below existing ground surface. Some very loose to loose materials were encountered at boring 5.

Marsh Area. The graphical presentation by Eustis Engineering Company, Inc. of the marsh borings (applicable borings 4 through 7) are depicted on Figure 3. Refer to this sheet for the graphical and pictorial presentation of the soils encountered in the marsh area. The subsurface profile shows 2 to 4 feet of peat (Pt) and about 2 ½ feet of organic clay (OH) near the surface underlain predominately by very soft clay (CL) with some clayey silt (ML) and sandy silt (ML) layers.

General. The soil conditions can vary outside of the borings. For details, refer to the individual boring logs given in the geotechnical investigation data report. The logs of our borings 1, 2, 3, 5, and 6 are given in this report in Appendix A.

SOIL DATA

The design strengths of soils for the jack-and-bore sites at borings 5 and 6 as evaluated by us are presented on sheets 4 and 5. Other soil data consisting of moisture content and Atterberg limit plots are depicted on sheets 7 and 8 for the jack-and-bore sites (borings 5 and 6).

Our interpretation of the marsh soil data from the Eustis Engineering Company information is depicted on sheets 9 through 11.

HORIZONTAL SOIL PRESSURES

The active and passive soil pressures for the jack-and-bore sites are depicted on sheets 12 and 13. A braced excavation requires redistribution of pressures. The safety factor should be applied in the design by the structural engineers. Cuts in clay can be dewatered by using sump pumps. Sands and silts require wellpoint dewatering, or sheetpile cutoff.

SOIL BEARING PRESSURES

The allowable soil bearing pressure for dredged material placed on the marsh is 430 psf with a safety of 1.5 to 2. The safety factors are adequate. Refer to sheet 14.

The soil bearing pressure for the marsh borings were also considered as shown on sheet 15. The estimated dredged material weight for the fill is 86.4 pcf. The resulting safety factors are 1.6 to 2.1, which are adequate. The soil bearing pressure for a levee section is depicted on sheet 16. An average safety factor of 2 is computed by us. We also checked the soil bearing/sliding for the fill embankment; refer to sheets 17 and 18. The sliding stability is adequate.

The cross-section for the preliminary analyses of the levee was done for a crown elevation 4 feet, NAVD 88 with a crown width of 10 feet and side slopes of 1V:5H; refer to Sheet 16.

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FILL EMBANKMENT SLOPE STABILITY

We performed slope stability analyses for the levee or embankment for containing the hydraulically placed fill. The safety factors computed by hand for the long term and short term slope stability were 1.3, and 1.4, respectively. The weakest soil area indicated the safety factor was reduced to about 1.2. This is considered adequate for this type of construction. See sheet 19.

A summary of slope stability for embankment and borrow cut inside the levee is depicted on Sheet 20. The results indicate use of an embankment with a 10 foot crown at an elevation as high as 4 feet, NAVD 88 and side slopes of 1V:5H is adequate. The borrow area in the marsh for the marsh material fill for the embankment should be kept at a berm distance of 35 feet from the toe of the embankment (at the existing ground surface). This summary is shown on Sheet 20.

Analyses done by using a computer program "PCSTABL5M" for the Bishop method was done for the embankment and borrow cut section with berms of 25 and 35 feet. Results of analyses are given on Sheets 21 through 24. The results of analyses indicate safety factors ranging from 1.2 to 1.58. Considering the weak subsurface soils and the type of construction, these safety factors are considered adequate.

SETTLEMENT CAUSED BY FILL ON THE MARSH

The results of settlement for various fill heights over time for the sand fill is given as surface elevation versus time on Sheet 25. The various fill heights (2.5, 3.0, 3.5, and 4.0 feet) causing settlement versus time are depicted in two graphs on sheets 26 and 27. A table of settlement caused by filling material (run by the PSDDF computer program by the Corps of Engineers) is given on sheet 28. The computer program considered the self settlement of the sand fill by using the results of the 1D consolidation tests, and the developed constructed settlement curve data given in the geotechnical investigation data report.

Our hand calculations for preliminary purposes resulted in the development of sheets 29 and 30 which are percent primary consolidation versus the semi-log of time in days. Our summary of the rate of consolidation marsh fill for the preliminary hand calculations is given on sheet 31.

Levees. The fill embankment will have long term settlement of 20 inches and elastic (immediate) settlement of 4 inches. It will generally settle with the fill, but slightly less at the perimeter of the fill area.

BORING LOGS

The log of boring legend is given on sheet A-1 and the logs of borings 1, 2, 3, 5, and 6 done by us for this project are given in Appendix A.

ENGINEERING EVALUATION

The analyses and data developed for this project by us indicates the sand material dredged from the Mississippi River at the assigned borrow area can be hydraulically pumped onto the marsh up to elevation 2 feet, NAVD 88 (design elevation). The containment area should be constructed with sublevees. Fill from the marsh for levee construction will have to discard the peat (Pt) material. The effluent drainage will be controlled by weirs. Some of the finer grained materials will collect near the weir. The discharge particles from the water decanting from the containment dikes/weirs can be controlled by adjusting the weirs.

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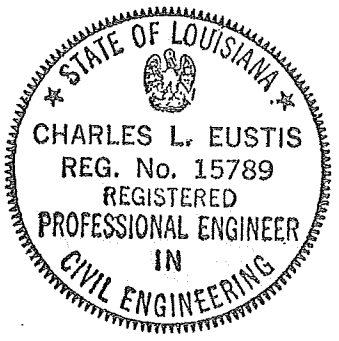
We estimate the cut to fill ratio to be 1.0. Considering the immediate settlements at the marsh, the ratio could be 1.5 because of settlement as the fill is placed. See Sheets 31 and 32. The losses due to the dredging operation could be another 30 percent.

The surface elevation settlement for fill heights of 2.5, 3.0, 3.5, and 4.0 by the surface of the marsh is depicted on sheet 25. This does not include elastic settlement since it will be "immediate" as fill is placed.



Very truly yours,

Louis J. Capozzoli & Associates, Inc. -
a subsidiary of GeoEngineers

Charles L. Eustis, P.E.

CLE/cc

Enclosures: Sheets 1 through 3, Subsurface Profiles
Sheets 4 through 11, Soil Data
Sheets 12 and 13, Soil Pressures
Sheets 14 through 17, Bearing Pressures
Sheet 18, Sliding Fill Embankment
Sheets 19 through24, Slope Stability
Sheet 25, Surface Elevation Settlement
Sheets 26 and 27, Settlement Caused by Filling Material per PSDDF Program
Sheet 28, Settlement Table, PSDDF Results
Sheets 29 and 30, Foundation Soil Consolidation Rate - Hand Calculations
Sheet 31, Summary of Rate of Consolidation Marsh Fill
Loads - Hand Calculations
Sheet 32, Sand Sediment Dredged from Mississippi River
Appendix A, LJC&A Logs of Borings 1, 2, 3, 5, and 6

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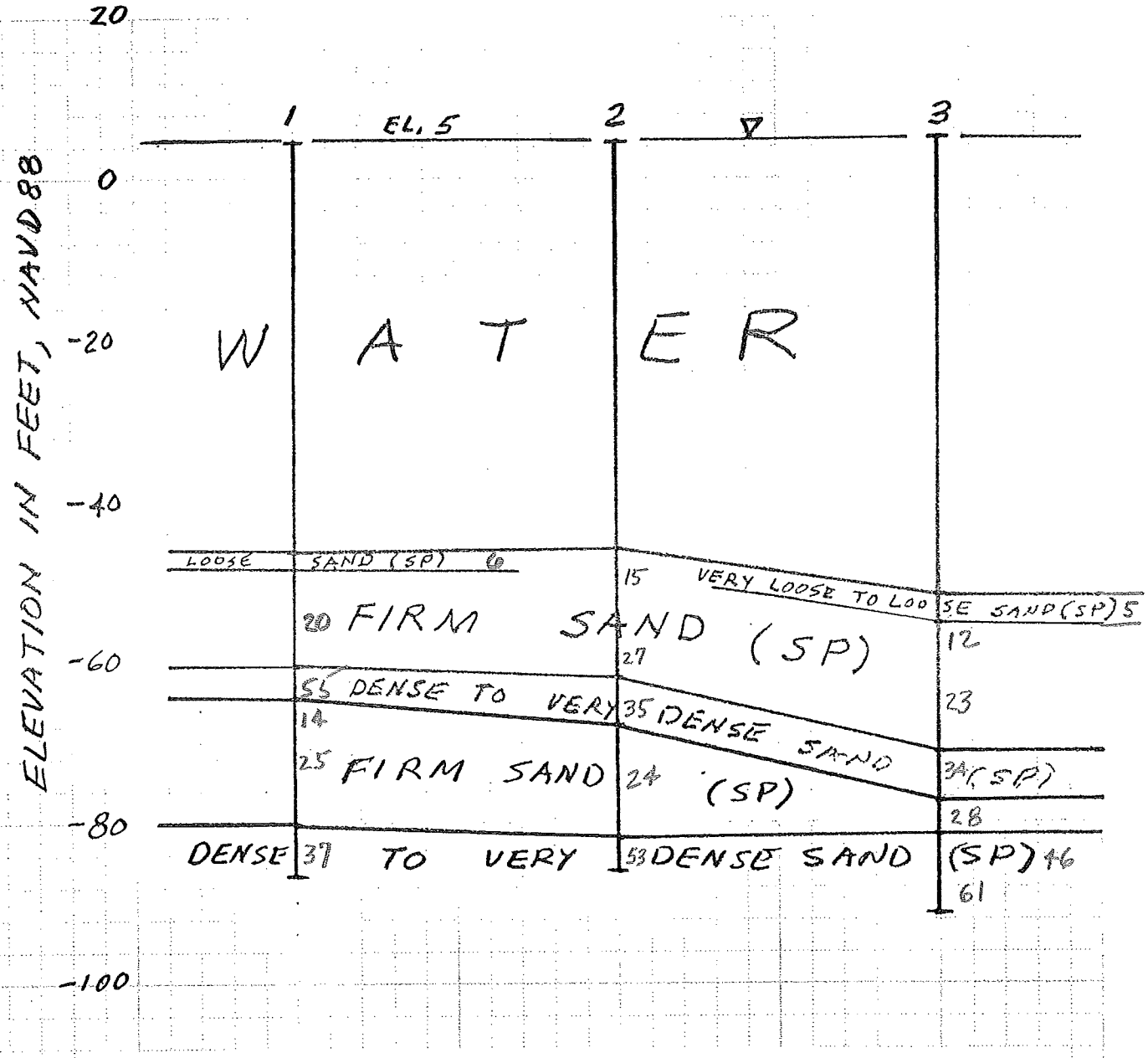
Subject SUBSURFACE PROFILE Sheet 1 Of _____

BAYOU DUPONT Made by GLG Date 11JUL07

File No. 07-110 Checked by _____ Date _____

LOUIS J. CAPOZZOLI & ASSOCIATES, INC. Geotechnical Engineers



NOTES:
1. SOIL CONDITIONS MAY VARY OUTSIDE OF THE BORINGS.
3. FOR DETAILS REFER TO THE INDIVIDUAL BORING LOGS.
3. ( ) GIVES UNIFIED SOIL CLASSIFICATION SYMBOL PER ASTM 2487.
4. NUMBERS TO THE RIGHT REFER TO AVERAGE SPT BLOW COUNT (N).
5. ▽ DENOTES FREE WATER LEVEL IN BOREHOLE AT TIME OF EXPLORATION.
   ▼ DENOTES WATER LEVEL AFTER 10 MINUTES.

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Subject SUBSURFACE PROFILE Sheet 2 Of
BAYOU DUPONT Made by CSE Date 11JUL07
File No. 07-110 Checked by Date

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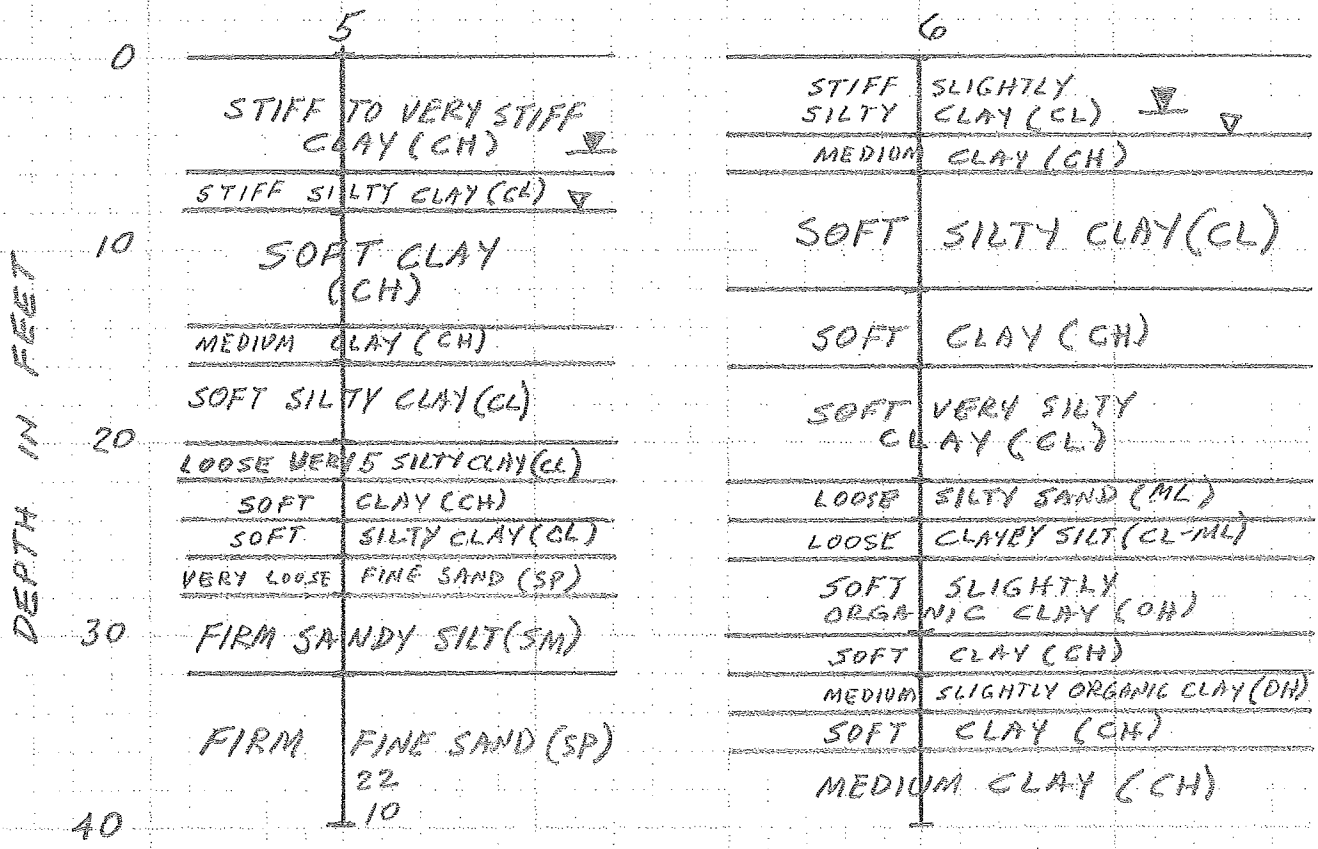

NOTES:
1. SOIL CONDITIONS MAY VARY OUTSIDE OF THE BORINGS.
2. FOR DETAILS REFER TO THE INDIVIDUAL BORING LOGS.
3. ( ) GIVES UNIFIED SOIL CLASSIFICATION SYMBOL PER ASTM 2487.
4. NUMBERS TO THE RIGHT REFER TO SPT BLOW COUNT (N).
5. ▽ DENOTES FREE WATER LEVEL IN BOREHOLE AT TIME OF EXPLORATION.
   ▼ DENOTES WATER LEVEL AFTER 10 MINUTES.

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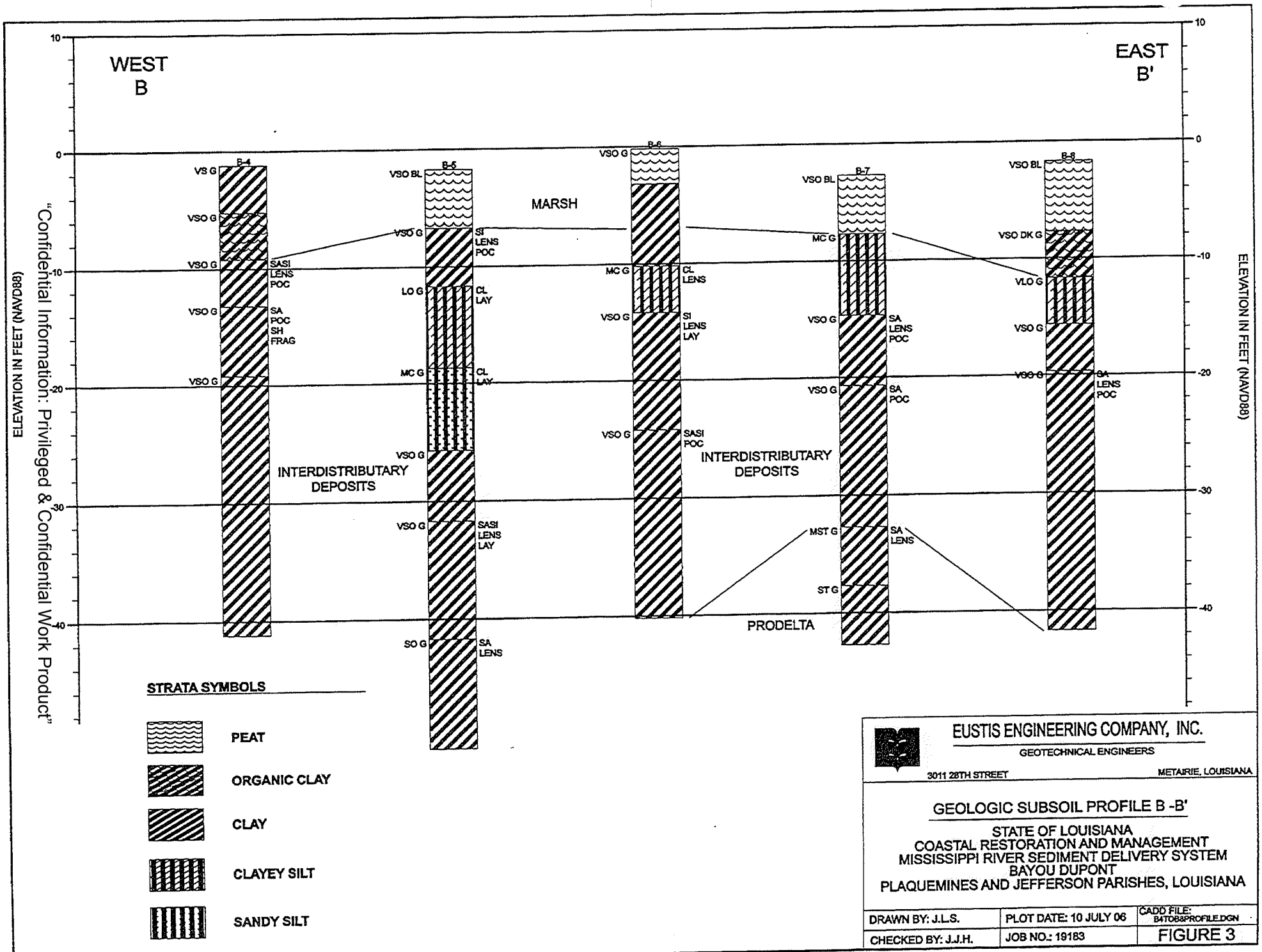

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EUSTIS ENGINEERING COMPANY, INC.
GEOTECHNICAL ENGINEERS
3011 28TH STREET METAIRIE, LOUISIANA

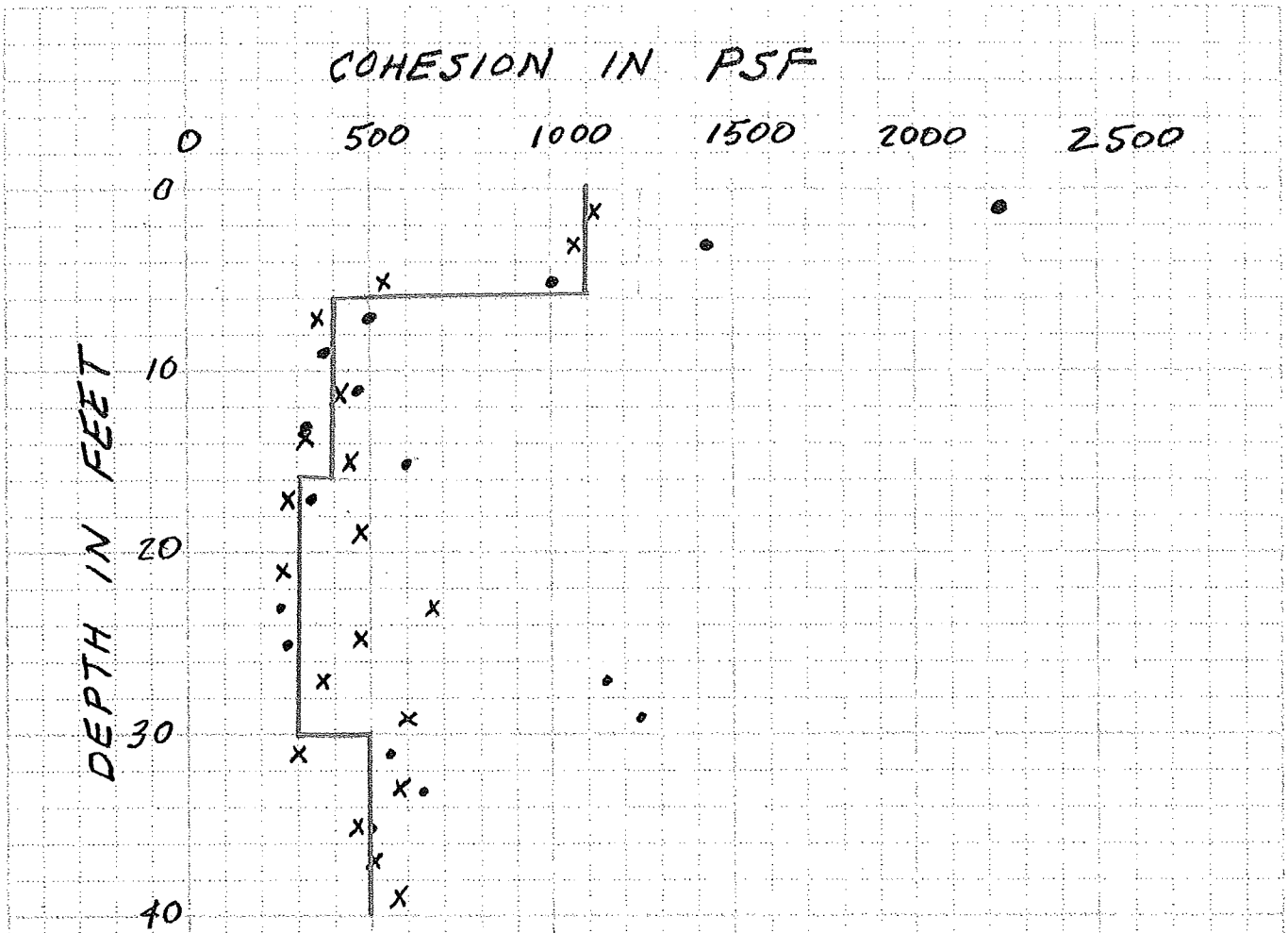
GEOLOGIC SUBSOIL PROFILE B -B'

STATE OF LOUISIANA
COASTAL RESTORATION AND MANAGEMENT
MISSISSIPPI RIVER SEDIMENT DELIVERY SYSTEM
BAYOU DUPONT
PLAQUEMINES AND JEFFERSON PARISHES, LOUISIANA

DRAWN BY: J.L.S.	PLOT DATE: 10 JULY 06	CADD FILE: B4TO88PROFILE.DGN
CHECKED BY: J.J.H.	JOB NO.: 19183	FIGURE 3

Subject DESIGN STRENGTH Sheet 4 Of
JACK & BORE SITES, B-516 Made by LJC Date 15JUN07
File No. 07-110 Checked by Date

LOUIS J. CAPOZZOLI & ASSOCIATES, INC. Geotechnical Engineers



LEGEND:

• = BORING 5 BY LJC & A
X = BORING 6 BY LJC & A

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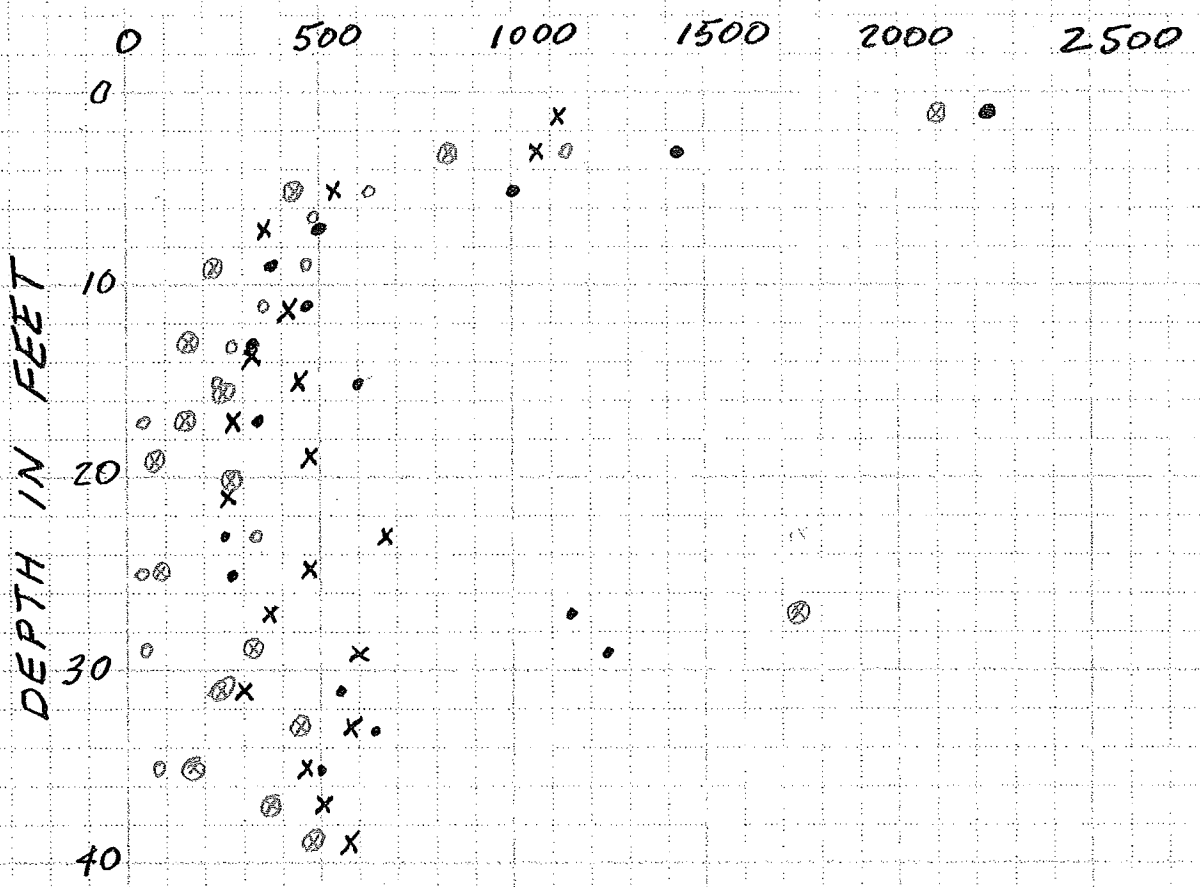
Subject DESIGN STRENGTH Sheet 5 Of
JACK & BORE SITES, B-5 & 6 Made by LJC Date 15JUN07
File No. 07-110 Checked by Date

LOUIS J. CAPOZZOLI & ASSOCIATES, INC. Geotechnical Engineers

COHESION IN PSF



LEGEND:

• = BORING 5 Shear Strengths
o = BORING 5 Mini-Vane Strength

x = BORING 6 Shear Strengths
⊗ = BORING 6 Mini-Vane Strength

NOTE: BORINGS 5 & 6 AND TESTS BY LJC&A.

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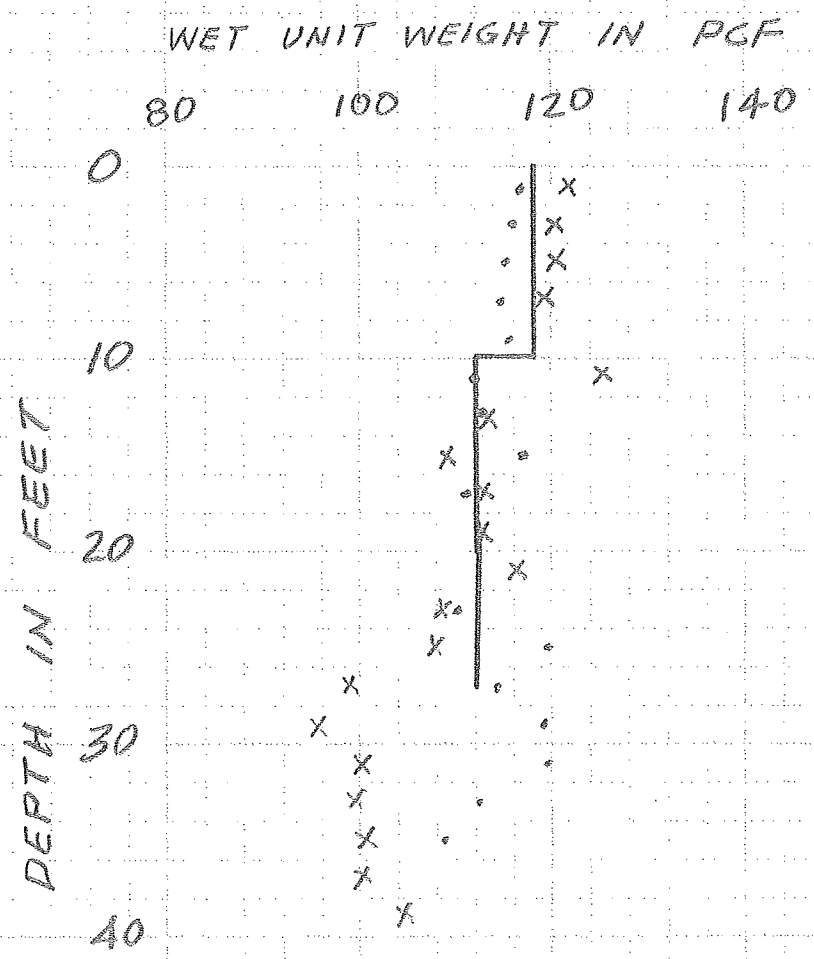
Subject SOIL DATA Sheet 6 Of
BORINGS 5 & 6 Made by GJE Date 1JUN07
File No. 07-110 Checked by Date

LOUIS J. CAPOZZOLI & ASSOCIATES, INC. Geotechnical Engineers



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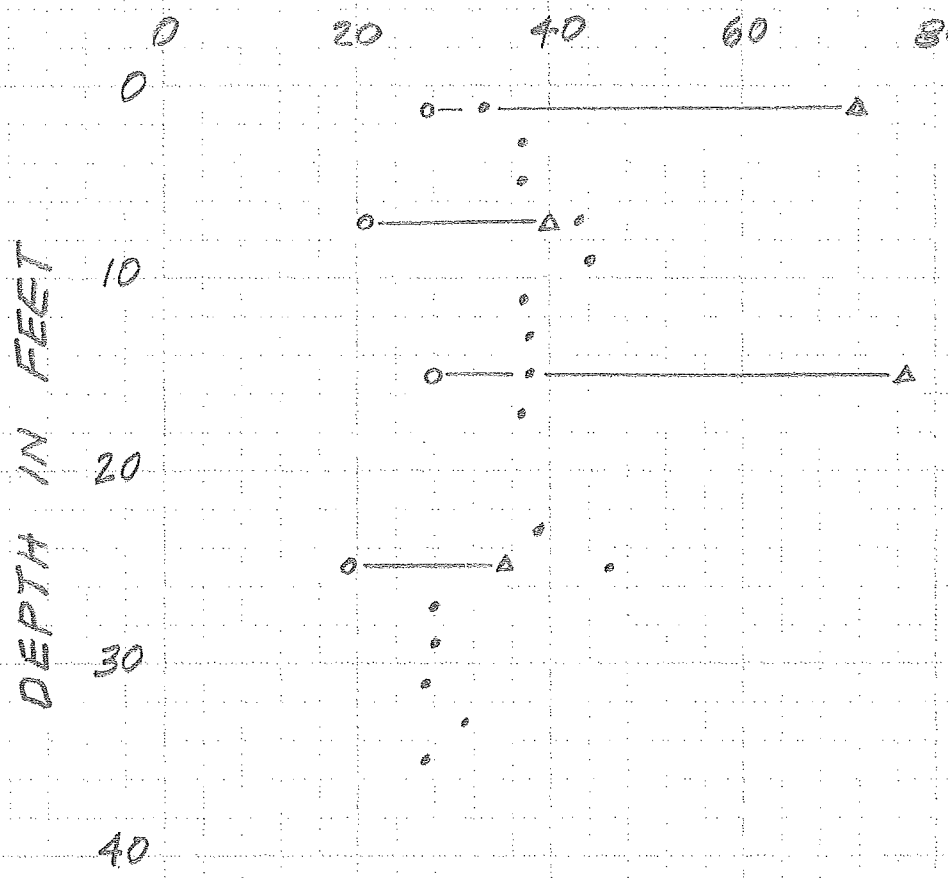
Subject SOIL DATA Sheet 7 Of
BORING 5 Made by GE Date 15JUN07
File No. 07-110 Checked by Date

LOUIS J. CAPOZZOLI & ASSOCIATES, INC. Geotechnical Engineers

JACK & BORE SITE

MOISTURE CONTENT IN PER CENT



LEGEND:

• = WATER CONTENT IN %
o = PLASTIC LIMIT IN %
Δ = LIQUID LIMIT IN %

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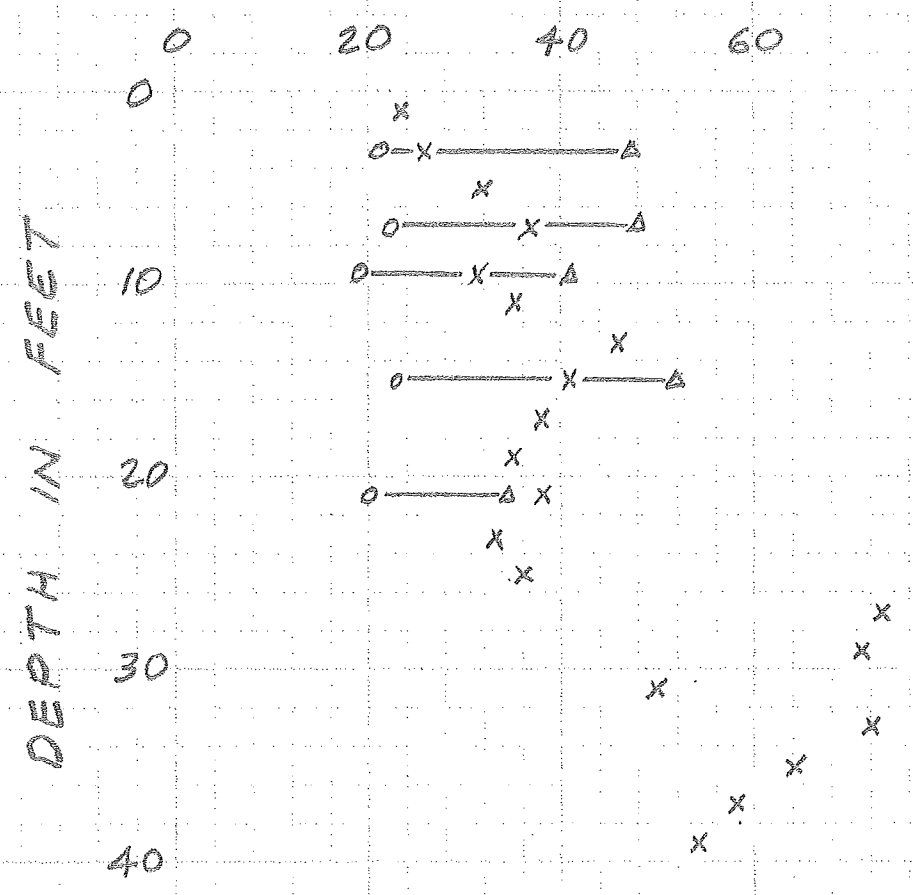
Subject SOIL DATA Sheet 8 Of
BORING 6 Made by EJC Date 13JUN07
File No. 07-110 Checked by Date

LOUIS J. CAPOZZOLI & ASSOCIATES, INC. Geotechnical Engineers

JACK & BORE SITE

MOISTURE CONTENT IN PER CENT



LEGEND:

• = WATER CONTENT IN %
o = PLASTIC LIMIT IN %
Δ = LIQUID LIMIT IN %

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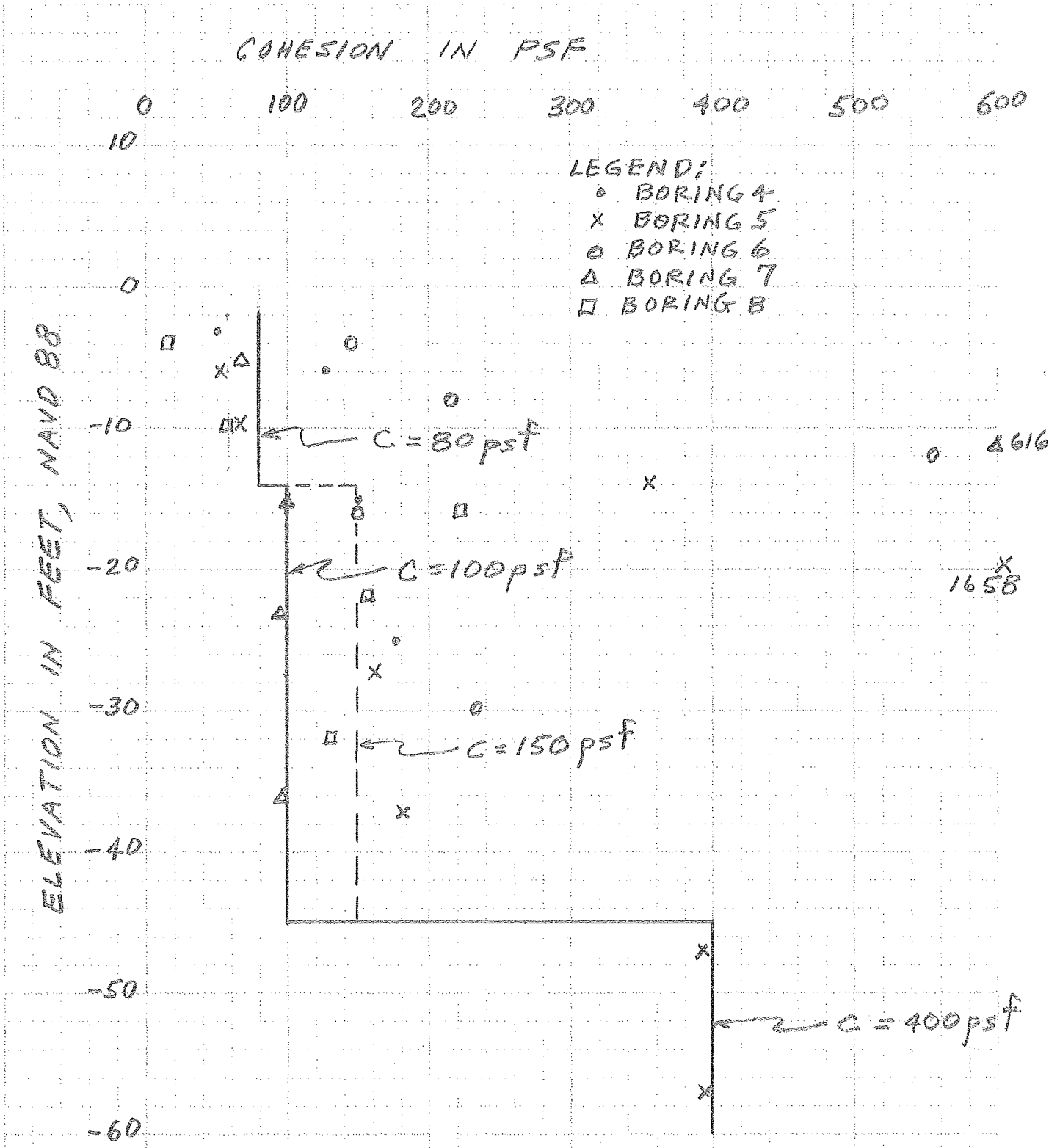
Subject SHEAR STRENGTH Sheet 9 Of
MARSH BORINGS Made by LEE Date 11MAY07
File No. 07-110 Checked by Date

LOUIS J. CAPOZZOLI & ASSOCIATES, INC. Geotechnical Engineers



NOTE: SHEAR STRENGTH DATA FROM BORINGS TAKEN BY EUSTIS ENGINEERING COMPANY, INC. (EECO)

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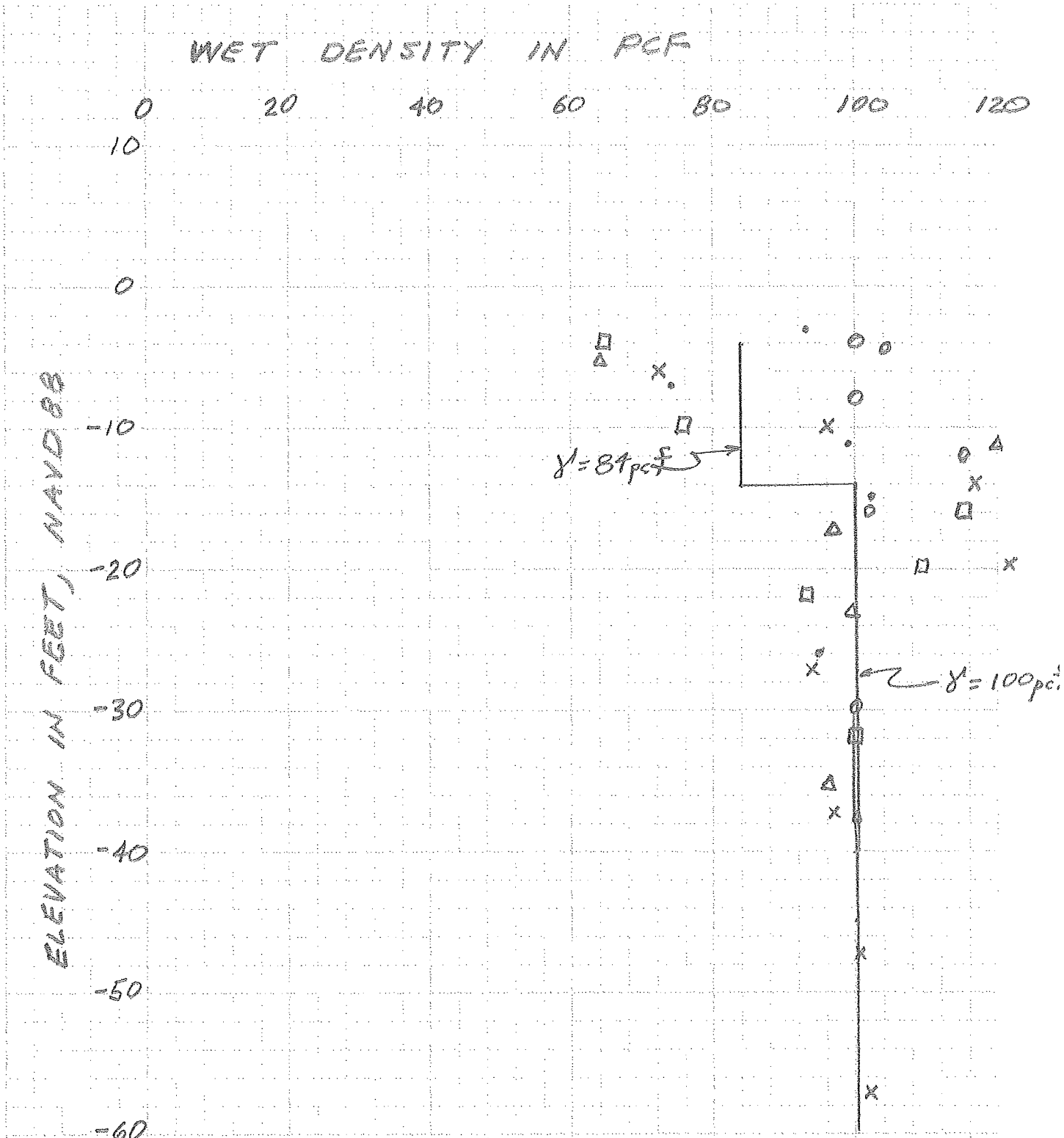
Subject WET DENSITY — Sheet 10 — Of
MARSH BORINGS — Made by GJC — Date 12MAY07
File No. 07-110 — Checked by — Date

LOUIS J. CAPOZZOLI & ASSOCIATES, INC. Geotechnical Engineers



FOR MARSH BORINGS "WET DENSITY" AND "SHEAR STRENGTH" SHEET FOR MARSH BORINGS

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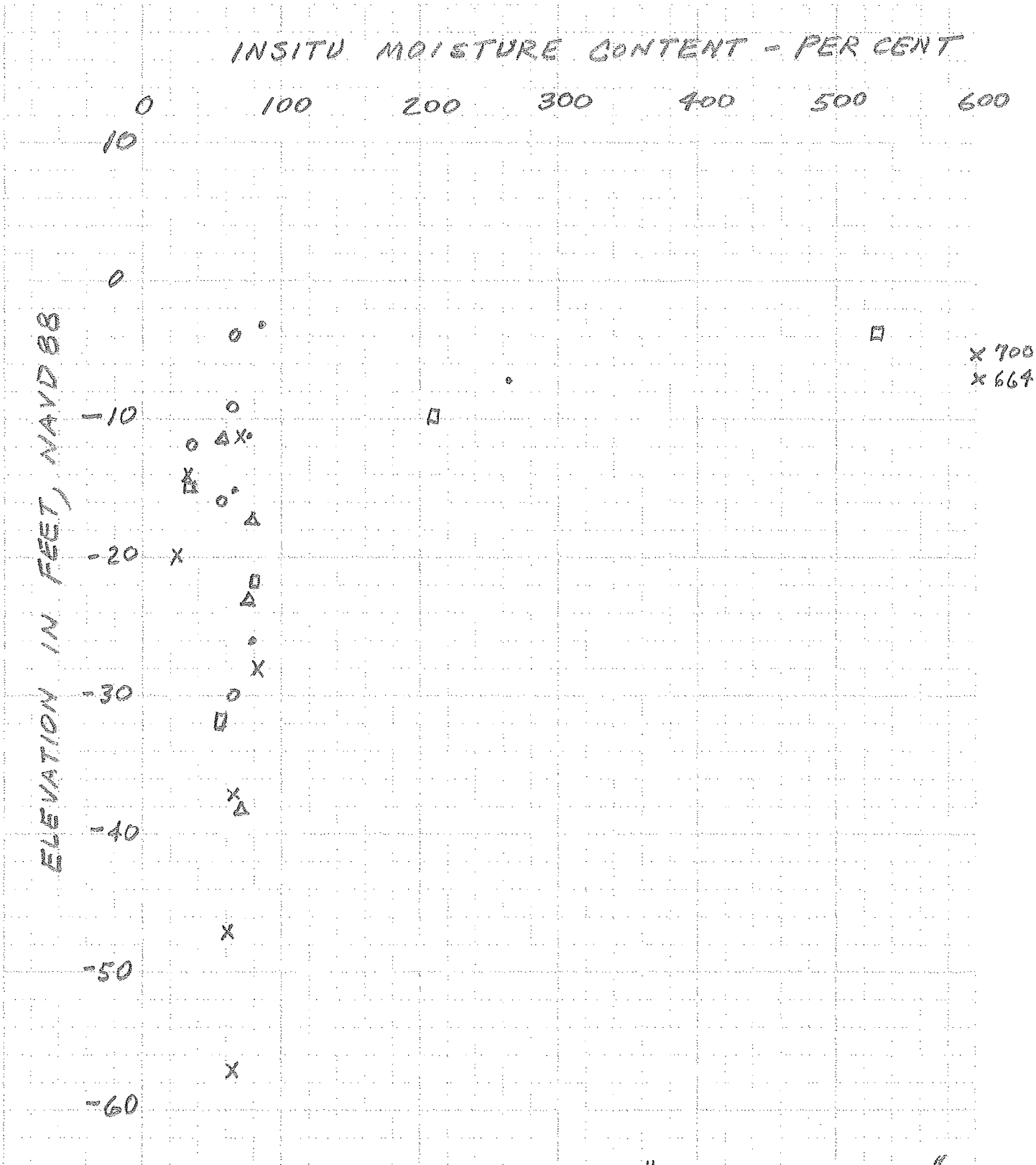
Subject MOISTURE CONTENT Sheet 11 Of
MARSH BORINGS Made by GJL Date 12 MAY 07
File No. 07-110 Checked by Date

LOUIS J. CAPOZZOLI & ASSOCIATES, INC. Geotechnical Engineers



FOR NOTES AND LEGEND SEE "LEGEND AND NOTES" SHEET FOR MARSH BORINGS

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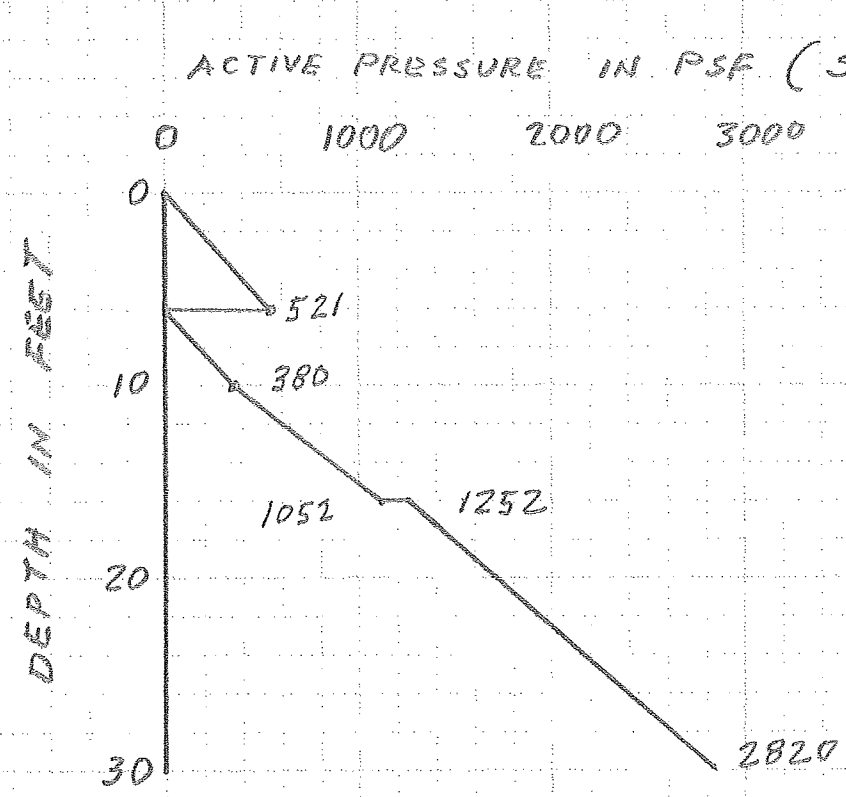
Subject ACTIVE SOIL PRESSURE Sheet 12 Of
JACK & BORE SITES Made by LJC Date 8 JUN 07
File No. 07-110 Checked by Date

LOUIS J. CAPOZZOLI & ASSOCIATES, INC. Geotechnical Engineers



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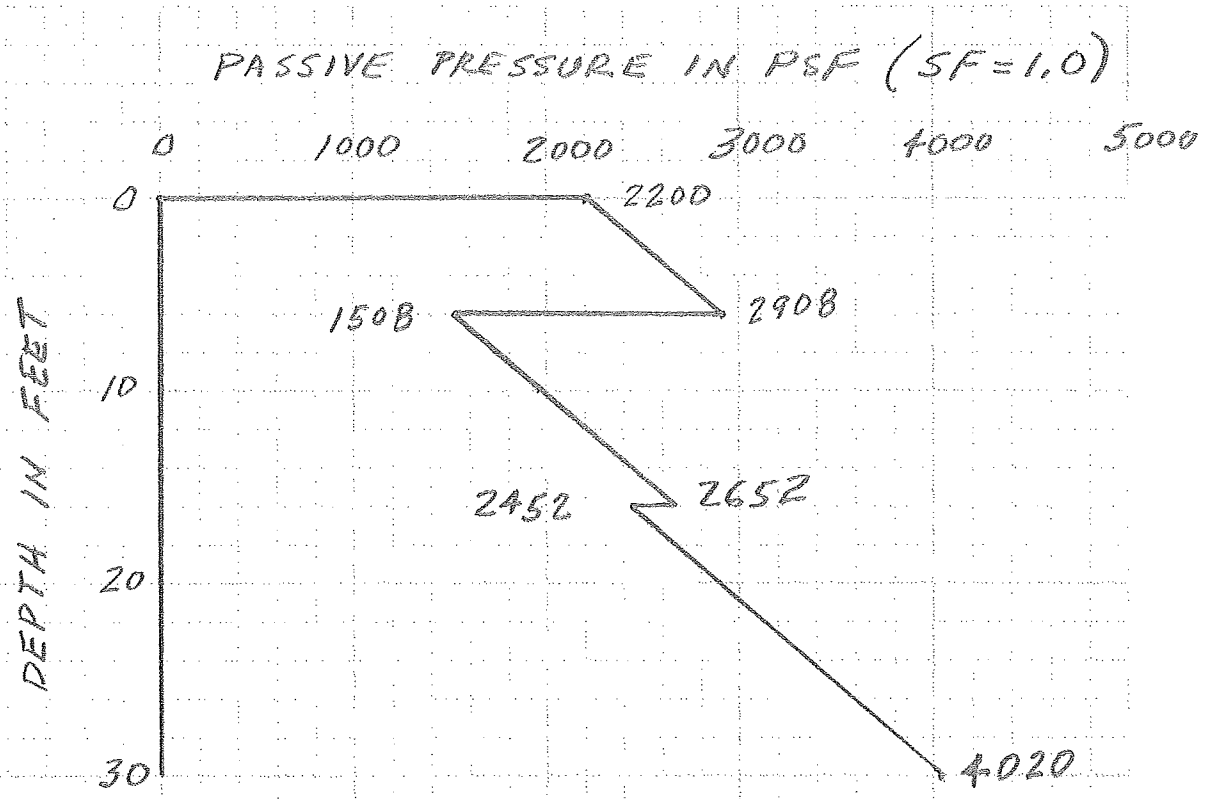
Subject PASSIVE SOIL PRESSURE Sheet 13 Of
JACK & BORE SITES Made by LJE Date 8JUN07
File No. 07-110 Checked by Date

LOUIS J. CAPOZZOLI & ASSOCIATES, INC. Geotechnical Engineers



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Subject BEARING PRESSURE Sheet 14 Of
MARSH BORINGS Made by LJC Date 12MAY07
File No. 07-110 Checked by Date

LOUIS J. CAPOZZOLI & ASSOCIATES, INC. Geotechnical Engineers

BORING 7

EL. - FT.	COHESION - PSF
-2 to -14	70
-14 to -38	100

$$\text{AVG. } C = \frac{12'(70\text{ psf}) + 24(100\text{ psf})}{36'} = \frac{3240}{36} = 90.0\text{ psf}$$

ULT. SBP = 7.2(90 psf) = 648 psf

USE SF = 1.5 ; ASBP = $\frac{648\text{ psf}}{1.5}$ = 432 psf

OTHER BORINGS

EL. - FT.	COHESION - PSF
-2 to -14	50
-14 to -42	150

$$\text{AVG. } C = \frac{12'(50\text{ psf}) + 28'(150\text{ psf})}{40'} = 120\text{ psf}$$

ULT. SBP = 7.2(120 psf) = 864 psf

IF USE SF = 2 : ASBP = 432 psf

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ESTIMATED DREDGED MATERIAL FOR FILL = 86.4 pcf

IF USE ESTIMATED WATER EL. 0.2 FT, NAVD 88
SAY EL. 0.0 FT, NAVD 88

B-7 GROUND EL. −2.7

4.0' (86.4 pcf) = 345.6
2.7' (86.4 pcf − 62.4 pcf) = 64.8 psf
410.4 psf

ULTIMATE SBP = 648 psf SF = $\frac{648 \text{ psf}}{410 \text{ psf}}$ = 1.58

Can Fill to EL. 4 FT, NAVD 88 w/ SF ≈ 1.6 OK

B-4 C_{AVG} = 110.8 psf (5 tests)

Ult. SBP = 110.8 psf (7.2) = 797.8 psf

w/ SF = 2 Ht. = $\frac{797.8 \div 2}{86.4}$ = 4.62' above el. 0.0

or AVG MUDLINE EL −1.5'

4(86.4) + 1.5'(86.4 − 62.4) = 382 psf

SF = $\frac{798}{382}$ = 2.09 OK

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Subject: So.1 Bearing Fill Embankment | Sheet 16 Of | Made by BE Date 13MAY07 | File No. 07-110 | Checked by Date

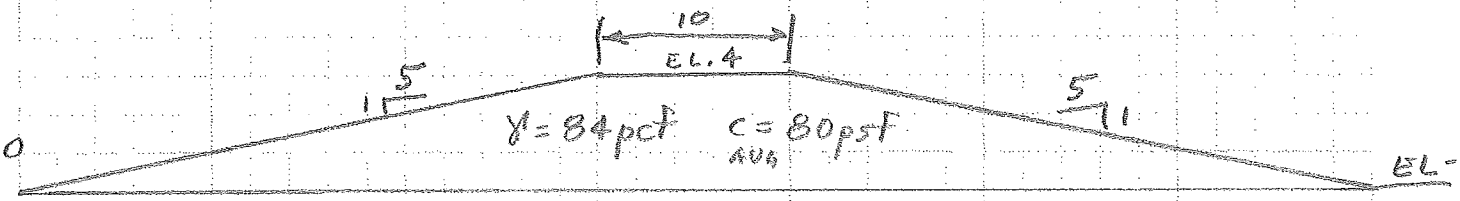
LOUIS J. CAPOZZOLI & ASSOCIATES, INC. Geotechnical Engineers

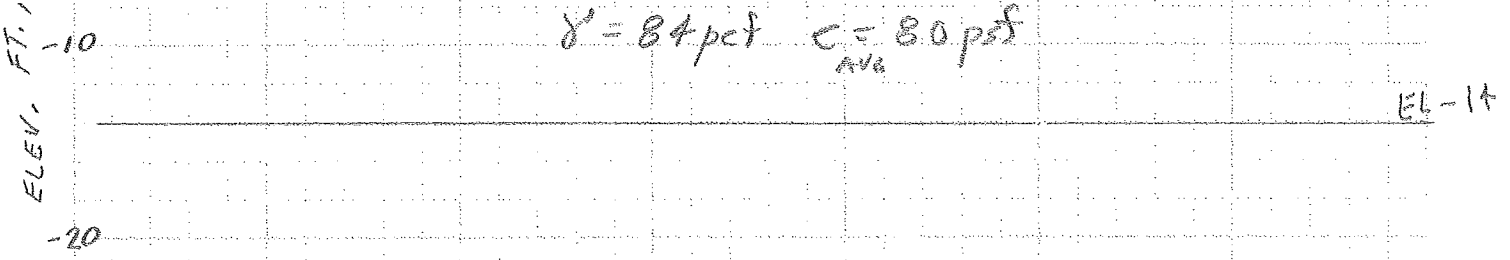
Boring No.	MARSH SURFACE EL. (Ft) NAVD88
4	-1.3
5	-1.8
6	-0.3
7	-2.7
8	-1.8

} = -1.58' = avg. el. marsh

4' Fill + 1' Freeboard + .42' settlement = 5.42' (Say 5.6')

USE EL. 4 TOP OF LEVEE





C = 80psf avg all borings

B = 10' + 2(30') = 70'

$N_c = 4.14 + .5\left(\frac{70'}{12'}\right) = 7.06$

ult. SBP = 7.06 (84psf) = 593 psf

1v:5h $A_E = 6'(30') + 6'(10') = 240\ ft^2$, $P_{AVG} = \frac{A_E \gamma}{B} = \frac{240(84)}{70} = 288$ psf

$SF = \frac{593}{288} = 2.06$ OK

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REFERENCE: FHWA HI-95-038 Revised April 1998, "Geosynthetic Design...

Sliding

$H = 6'$

$K_a = \tan^2(45 - \frac{20^\circ}{2}) = .49$

$b = 30'$ for 1V:5H

$\phi'_{sg} = \frac{2}{3}(20^\circ) = 13.3^\circ$

$FS = \frac{b \tan \phi'_{sg}}{K_a H} = \frac{30'(\tan 13.3^\circ)}{.49(6')} = 2.41$ OK

Lateral spreading

$T = FS(.5)(K_A)\gamma H^2 = 1.5(.5)(.49)(84)(6)^2 = 1111$ #/ft

$\frac{1.111 \text{ K/ft}(4.448)\frac{KN}{K}}{.3048 \text{ m/ft}} = 16.22 \text{ KN/m}$

$\times 3 = SF$

48.66 KN/m needed

Fabric = Mirafi Geotex #5600 provides
Creep limited strength 63.0 KN/m OK

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$H = 5.5'$ $\gamma = 84$ pcf $\phi_A = 20°$

$K_A = \tan^2 35° = .49$

$P_A = \frac{1}{2}(5.5')^2(84\text{pcf})(.49) = 623$ p/f dry

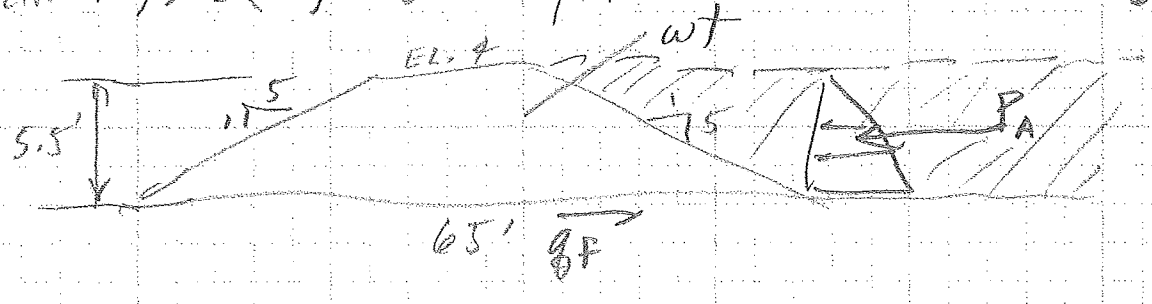
$B = 65'$, Area $= 2(\frac{1}{2})(27.5)(5.5) + 5.5'(10') = 206.25$ ft^2

206.25 ft^2 × 84 pcf

$\tan 20° = .364$ wt $= 17{,}325$ p/ft

$q_F = Bc = 65'(80\text{psf}) = 5200$ p/ft or $q_F = 17325(.364) = 6306$ p/ft

Friction $17{,}325(.3) = 5200$ p/ft



$\gamma_t = 21.6\text{pcf}(\tan^2 35°) + 62.4\text{pcf} = 73$ pcf W. Tes. in Fill

$P_A = \frac{1}{2}(5.5')^2(73\text{pcf}) = 1104$ p/f

$SF = \frac{5200}{1104} = 4.71$ OK

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Subject Slope Stability — Sheet 19 Of
Fill Embankment — Made by [illegible] Date 13MAY07
File No. 07-110 — Checked by Date

LOUIS J. CAPOZZOLI & ASSOCIATES, INC. Geotechnical Engineers

① Long Term slope stability: 1V:3H = 2 $\beta = 11.31^\circ$

$$SF = \frac{\tan 20^\circ}{\tan 11.31^\circ} = 1.34 \quad \underline{OK}$$

② short term slope stability: $\beta = 11.31^\circ$ for 1V:5h

$H = 6'$, $n_d H = 18'$ ∴ $\frac{n_d H}{H} = n_d = \frac{18}{6} = 3$

$N_s = 6.5$ $N_s = \frac{\gamma H}{C}$

Water table @ el 0.0 ±

Compute weighted avg γ: $\Sigma \gamma h = 4'(84\,pcf) + 2(84 - 62.4) = 379.2$ psf

$$H' = \frac{N_s C}{\gamma} = \frac{6.5(80\,psf)}{63.2\,pcf} \qquad \gamma'_{avg} = \frac{379.2}{6} = 63.2\,pcf$$

$H' = 8.2'$

$$SF = \frac{H'}{H} = \frac{8.2'}{6'} = 1.37 \quad \therefore \underline{OK}$$

check

For $C = 70$ psf, $SF = \frac{\frac{6.5(70)}{63.2}}{6} = 1.2$ OK

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REFERENCE: Lin & Evett, "Soils and Foundations 4th Ed. p. 477

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Summary of Slope Stability For Embankment and borrow cut inside levee.

crown el 4.0 Ft., NAVD88
embankment slope 1V:5H both sides
water at el. 0.0 Ft., NAVD88
marsh el -1.5 Ft, NAVD88
cut slope 1V:3H To EL-14

BERM DISTANCE:	Layer 2	MINIMUM
25',	C=100psf,	SF=1.17
35',	C=100psf,	SF=1.12
25',	C=150psf,	SF=1.58 (LEVEE)
35',	C=150psf,	SF=1.58 (LAYER 2)

NOTE: C=100psf for weakest boring
C=150psf for average other borings

CONCLUSION

USE A EMBANKMET 10' WIDE CROWN AT EL 4 & SIDE SLOPES OF 1V:5H MINIMUM
KEEP BORROW 35 FEET BERM WIDTH FROM EMBANKMENT INSIDE TOE. THE CUT CAN BE TO EL. -14 FT. NAVD88, BUT AT BORING 2 (WEAKEST) A SF OF 1.1 IS FOR A TEMPORARY CONDITION PRIOR TO FILL PLACEMENT INSIDE LEVEE

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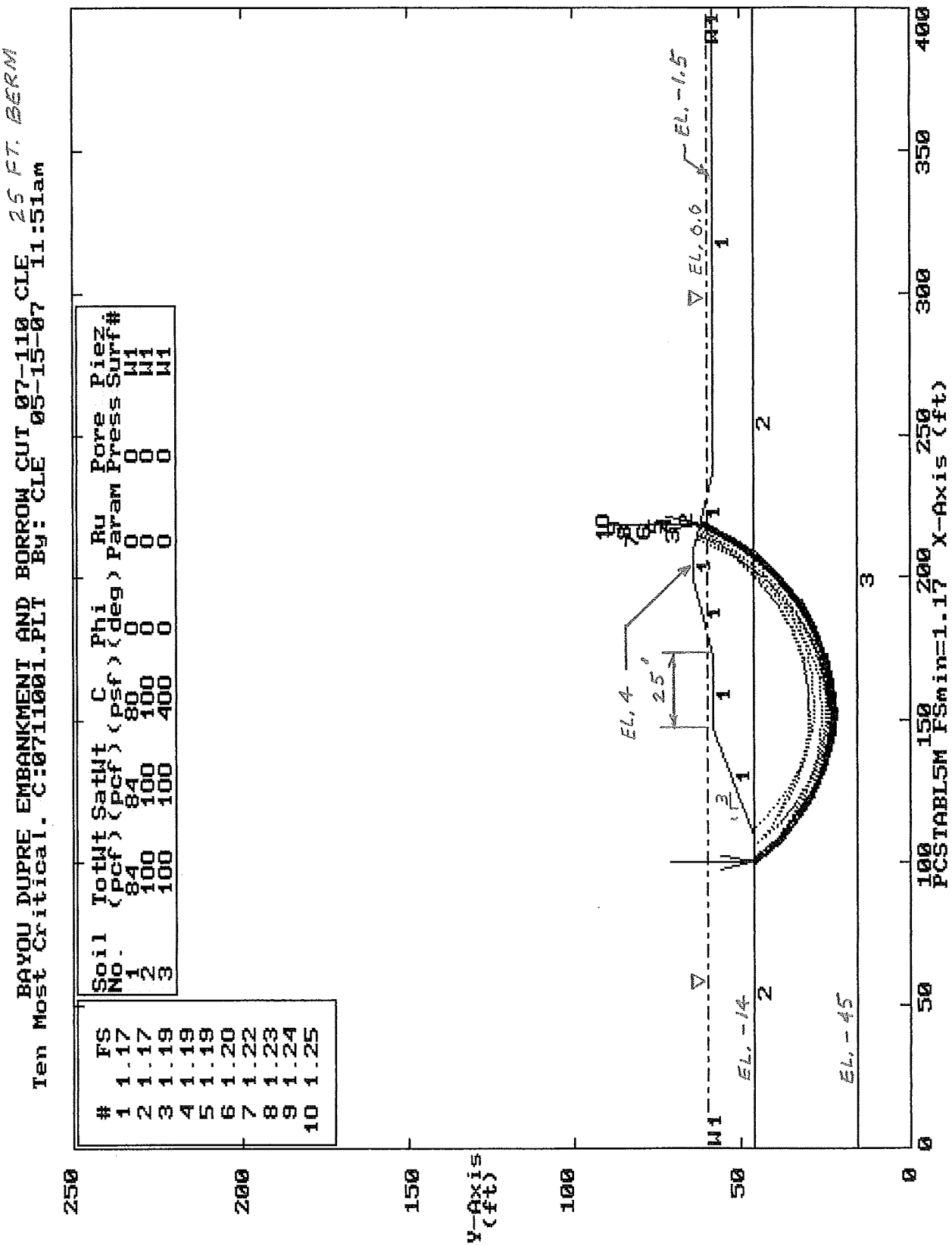
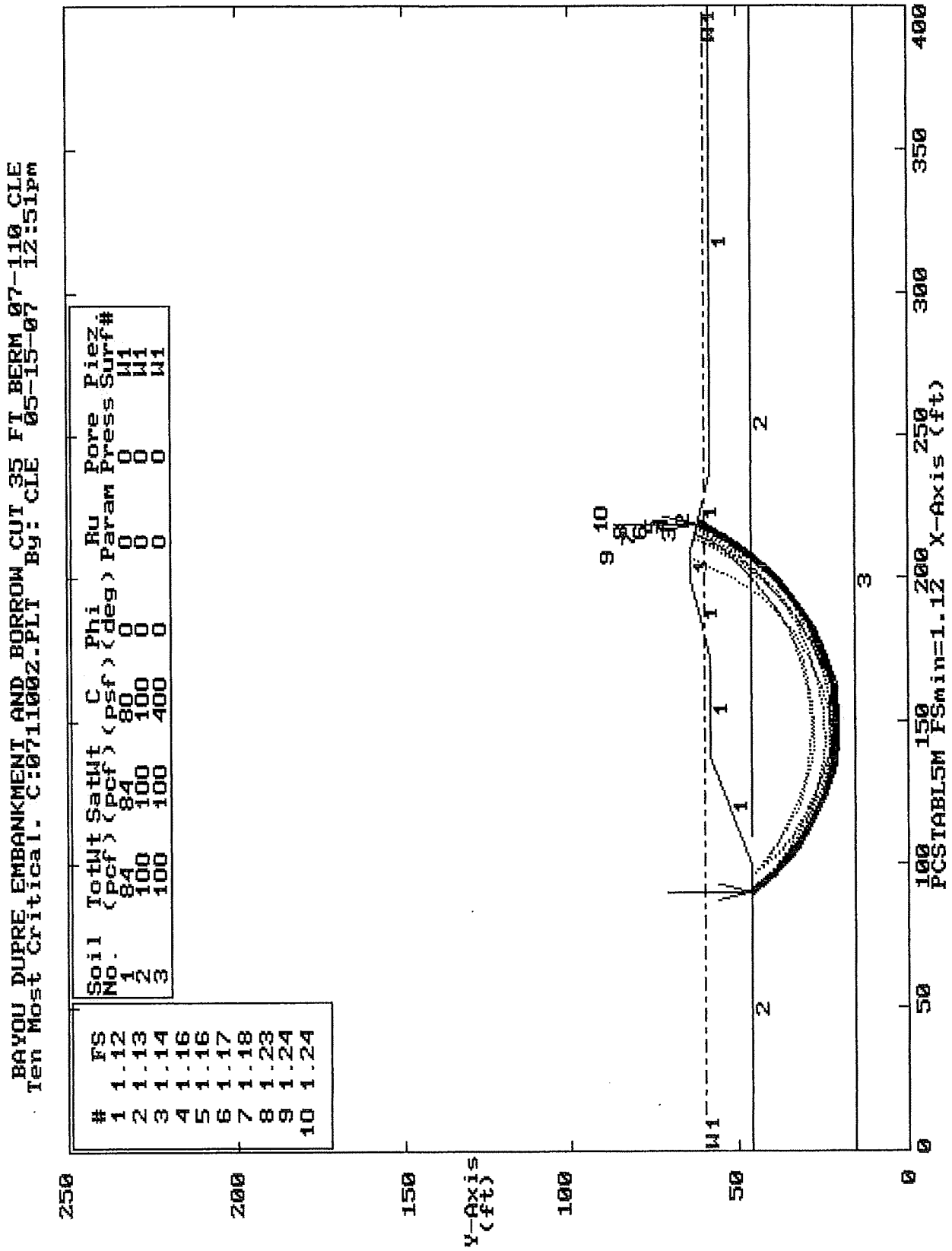


"Confidential Information: Privileged & Confidential Work Product"



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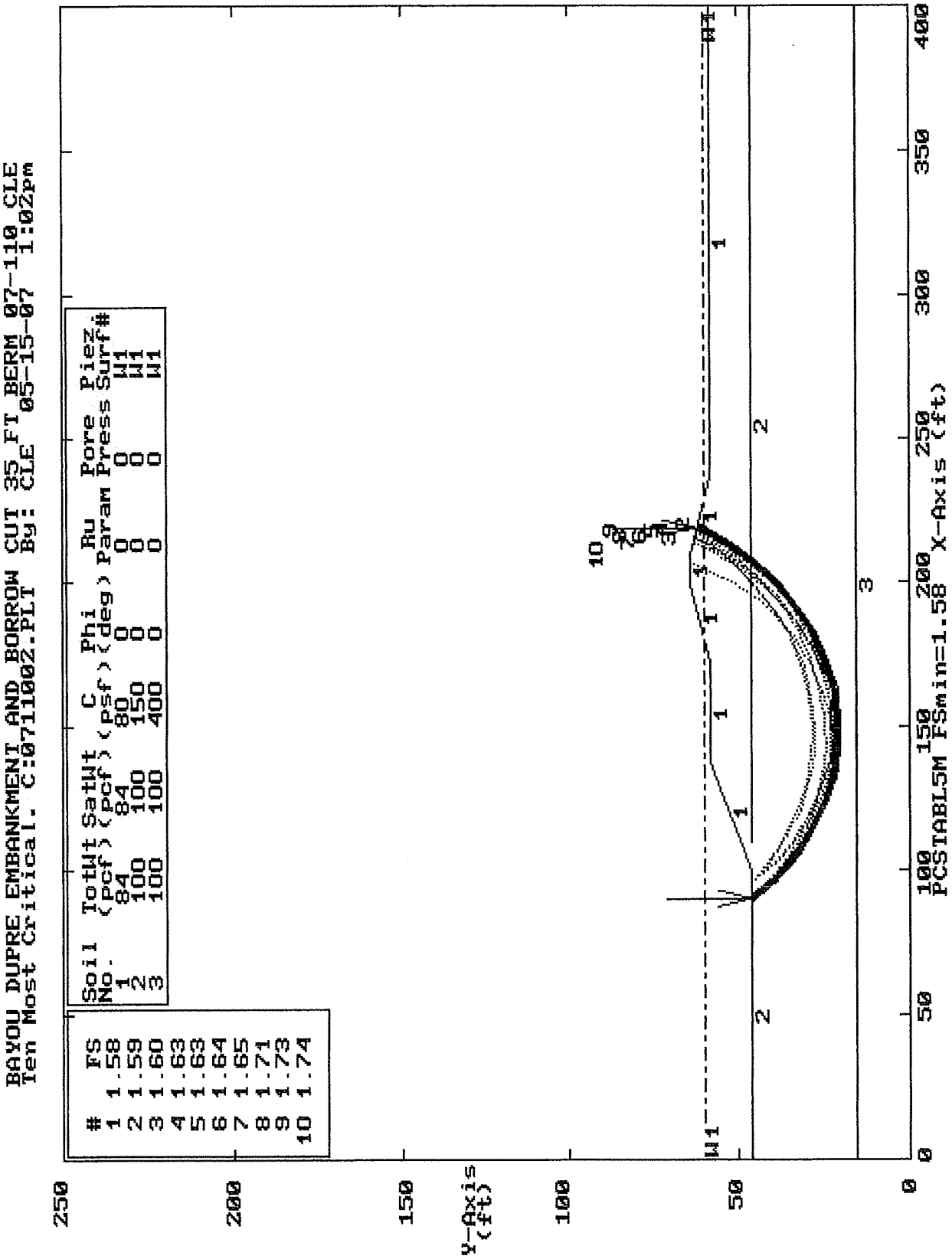

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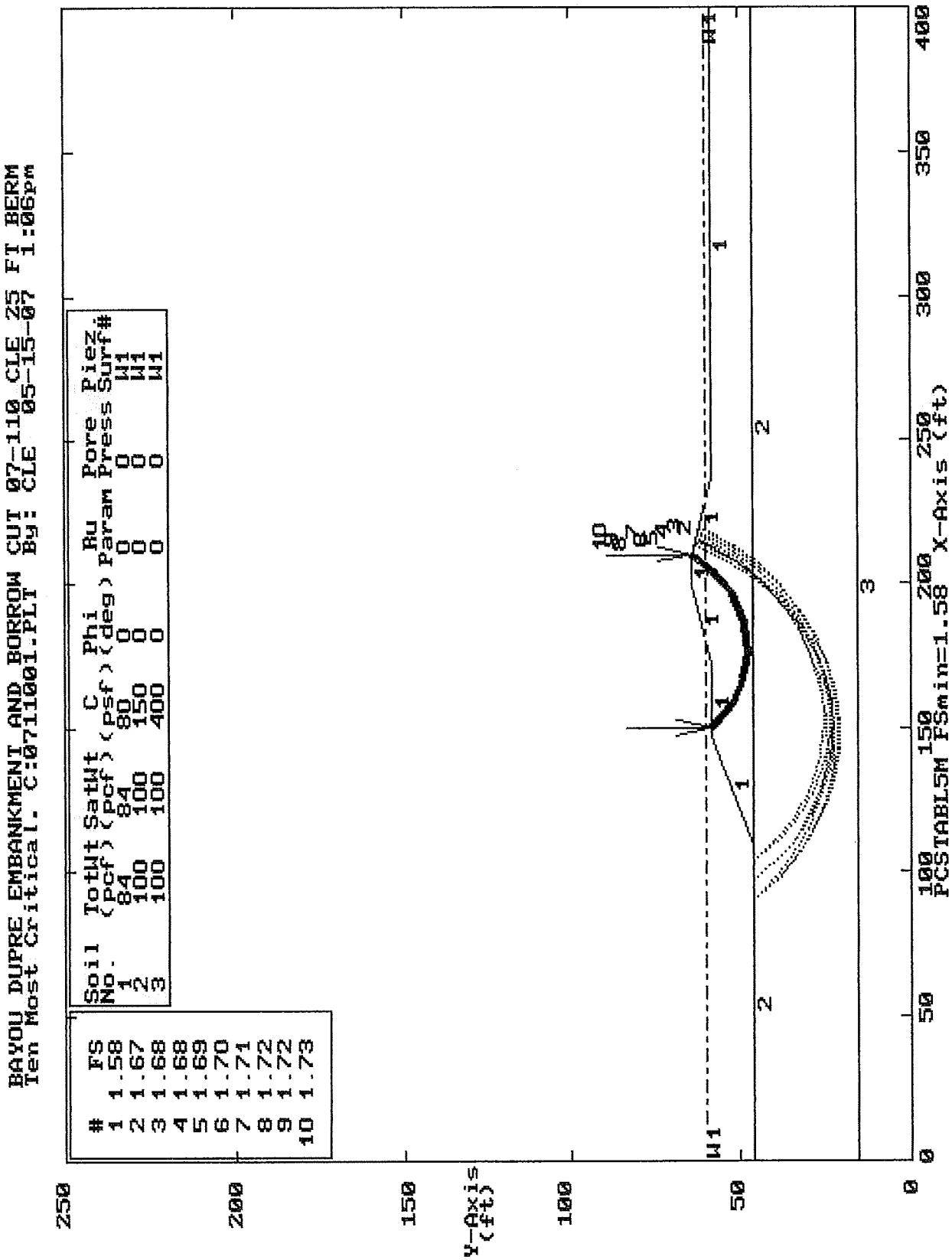
SHEET 24



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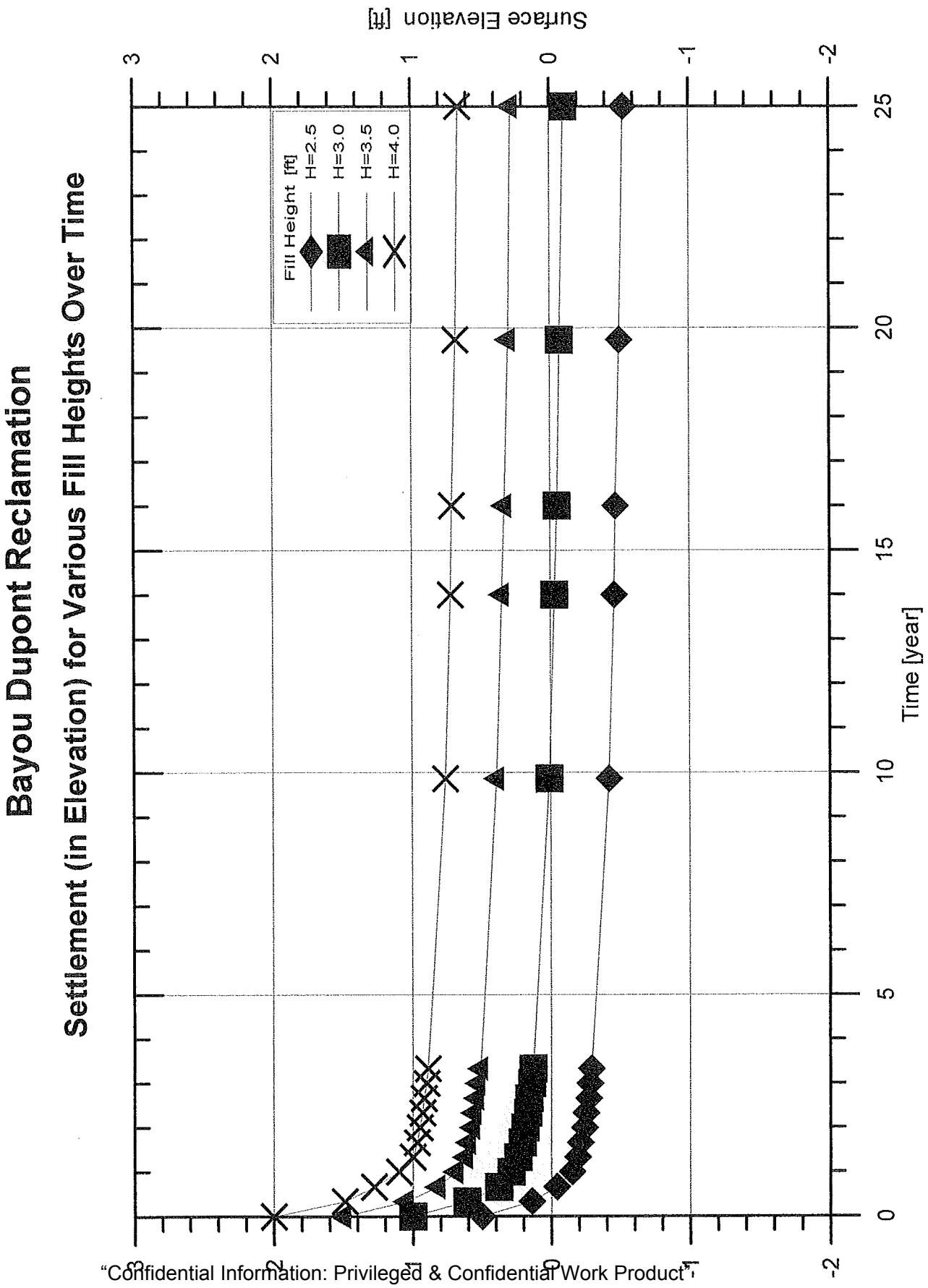
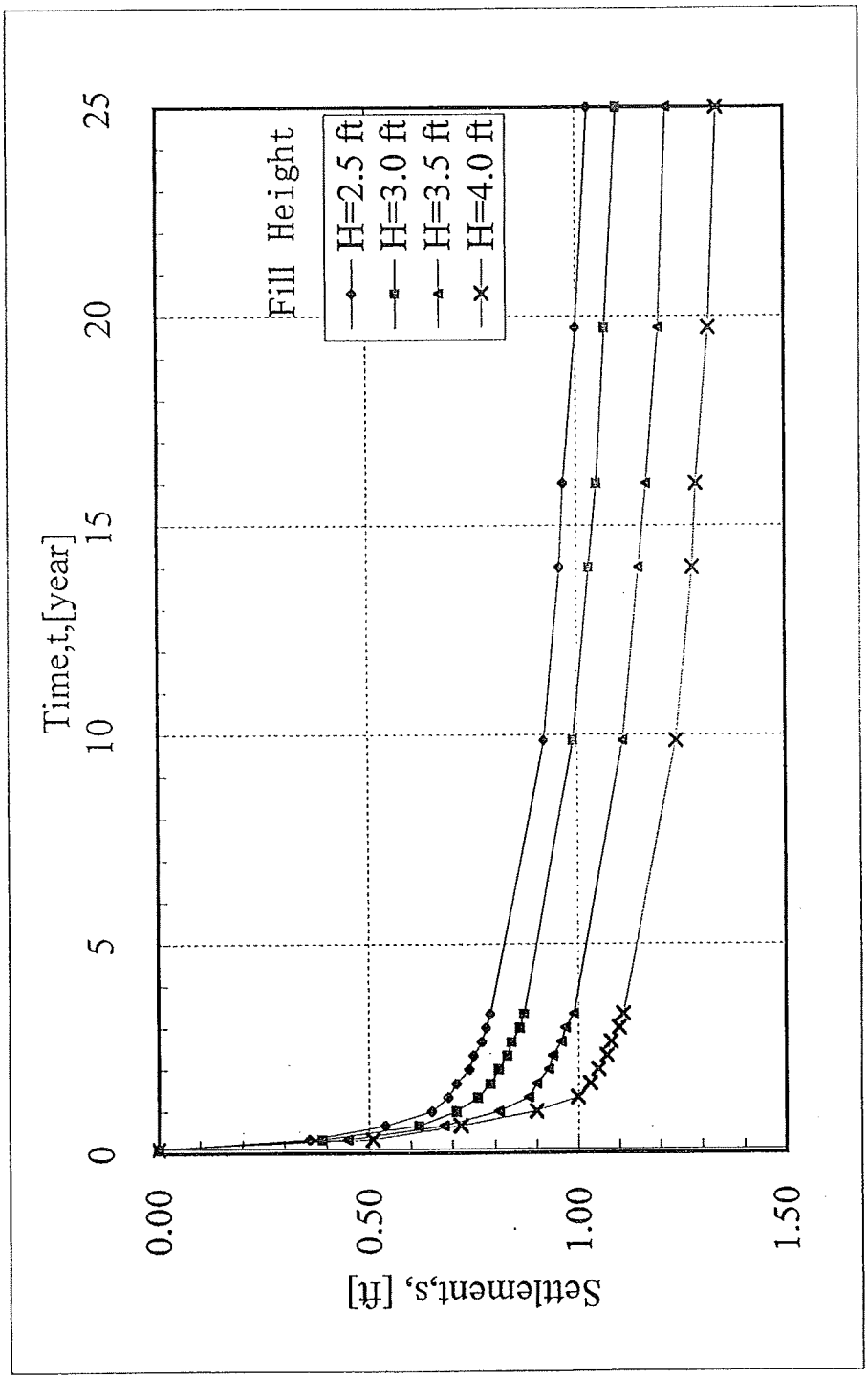

Bayou Dupont Reclamation
Settlement (in Elevation) for Various Fill Heights Over Time
Surface Elevation [ft]
3
2
1
0
-1
-2
Fill Height [ft]
H=2.5
H=3.0
H=3.5
H=4.0
0
5
10
15
20
25
Time [year]
Surface Elevation [ft]

Bayou Dupont Reclamation (Contract No. 2503-05-44)

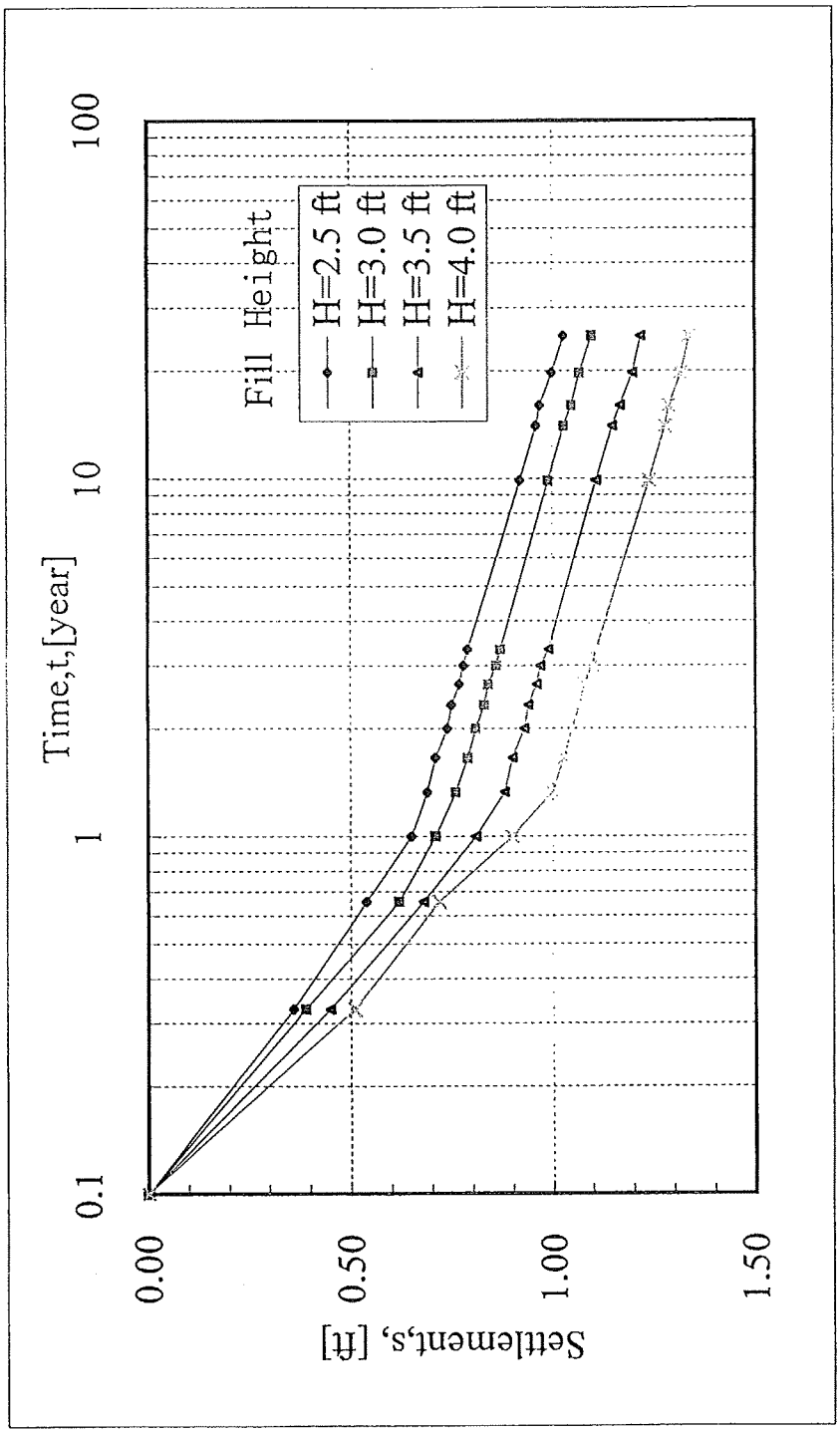
Settlement Analysis Caused by Filling Material



"Confidential Information: Privileged & Confidential Work Product"

Bayou Dupont Reclamation (Contract No. 2503-05-44)

Settlement Analysis Caused by Filling Material



"Confidential Information: Privileged & Confidential Work Product"

Bayou Dupont Reclamation (Contract No. 2503-05-44)

Settlement Analysis Caused by Filling Material

Day	Year	Top Surface Elevation (ft)				Settlement (ft)			
		H=2.5	H=3.0	H=3.5	H=4.0	H=2.5	H=3.0	H=3.5	H=4.0
0	0.00	0.50	1.00	1.50	2.00	0.00	0.00	0.00	0.00
120	0.33	0.14	0.61	1.05	1.49	0.36	0.39	0.45	0.51
240	0.66	-0.04	0.38	0.82	1.28	0.54	0.62	0.68	0.72
365	1.00	-0.15	0.29	0.69	1.10	0.65	0.71	0.81	0.90
485	1.33	-0.19	0.24	0.62	1.00	0.69	0.76	0.88	1.00
605	1.66	-0.21	0.21	0.60	0.97	0.71	0.79	0.90	1.03
730	2.00	-0.24	0.19	0.57	0.95	0.74	0.81	0.93	1.05
850	2.33	-0.25	0.17	0.56	0.93	0.75	0.83	0.94	1.07
970	2.66	-0.27	0.16	0.54	0.92	0.77	0.84	0.96	1.08
1095	3.00	-0.28	0.14	0.53	0.90	0.78	0.86	0.97	1.10
1215	3.33	-0.29	0.13	0.51	0.89	0.79	0.87	0.99	1.11
3600	9.86	-0.42	0.01	0.39	0.76	0.92	0.99	1.11	1.24
5110	14.00	-0.46	-0.03	0.35	0.72	0.96	1.03	1.15	1.28
5840	16.00	-0.47	-0.05	0.33	0.71	0.97	1.05	1.17	1.29
7200	19.73	-0.50	-0.07	0.30	0.68	1.00	1.07	1.20	1.32
9125	25.00	-0.53	-0.10	0.28	0.66	1.03	1.10	1.22	1.34

Note: The above results are obtained by using PSDDF.H is the thickness of filling material.

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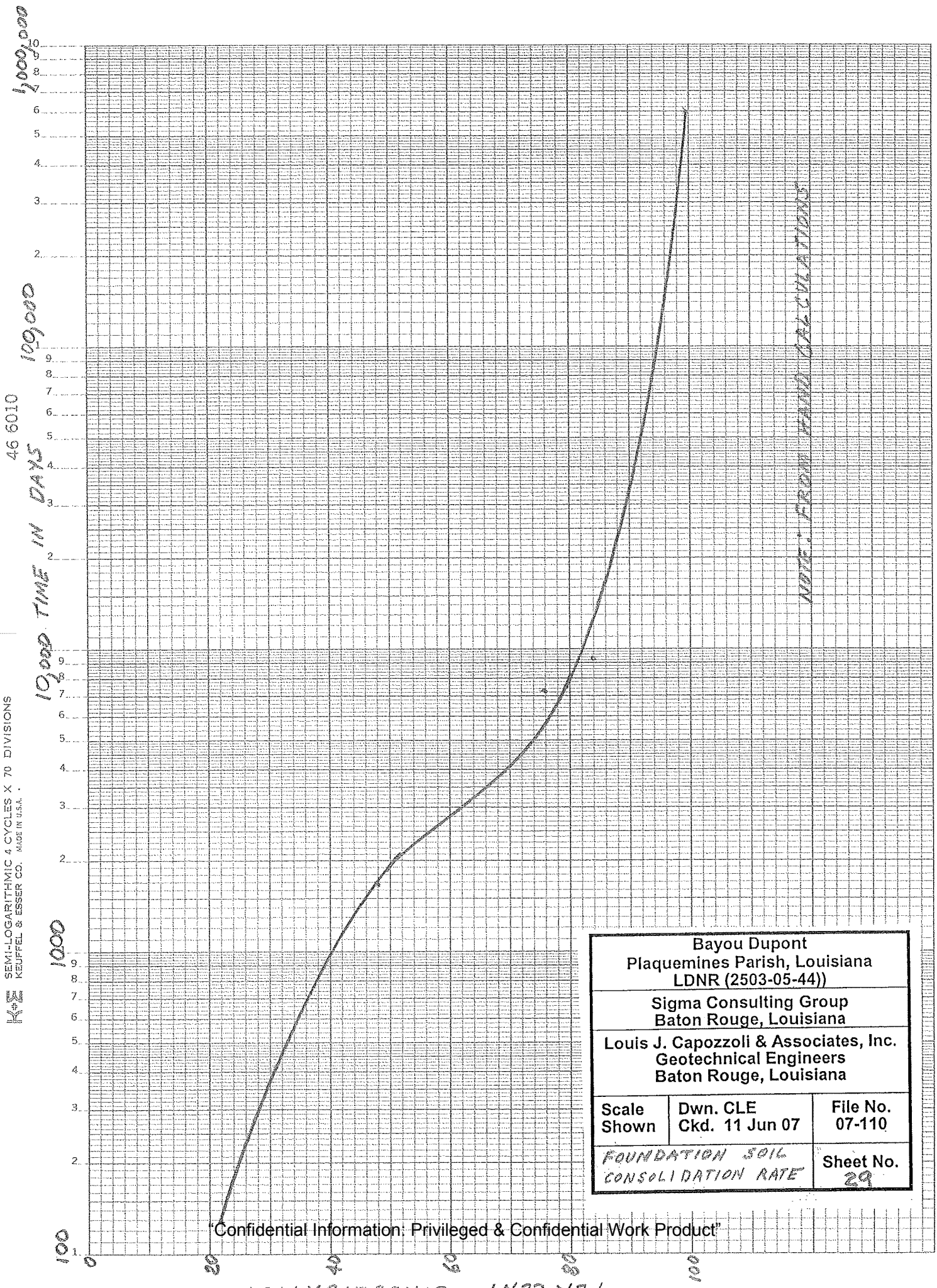

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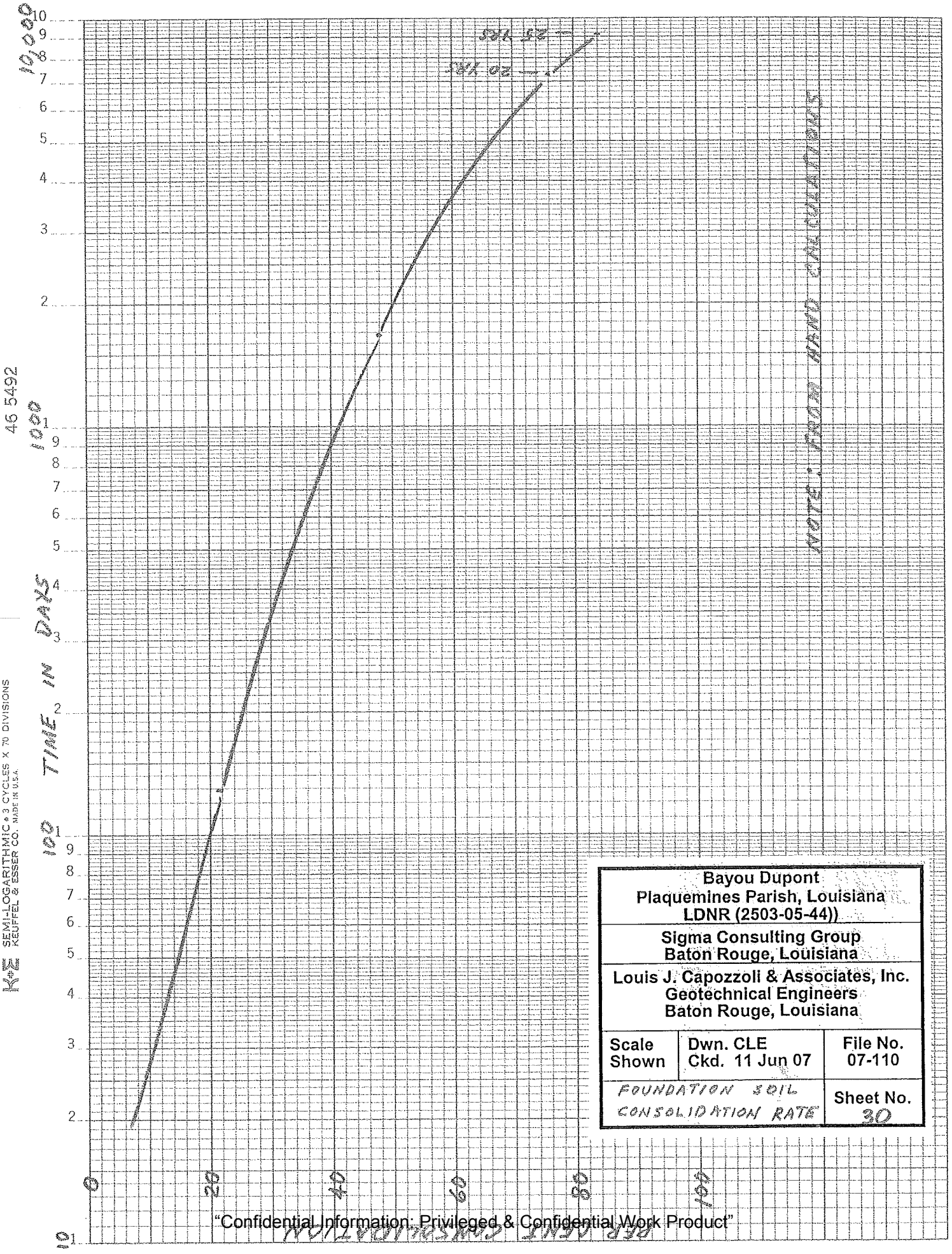

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Subject Summary of Rate of Consolidation - Marsh Fill Sheet 31 Of
Made by LJC Date 15MAY07
File No. 07-110 Checked by Date

LOUIS J. CAPOZZOLI & ASSOCIATES, INC. Geotechnical Engineers

PRELIMINARY HAND CALCULATION

ELAPSED TIME		SETTLEMENT IN INCHES FOR FILL THICKNESS				
DAYS	(YEARS)	2.5 Ft.	3.0 Ft.	3.5 Ft.	4.0 Ft.	6.0 Ft.
128	(0.35)	2.2	2.9	3.7	4.5	6.9
1658	(4.5)	4.7	6.4	8.1	9.8	15.1
7300	(20)	7.5	10.2	12.9	15.5	23.9
9125	(25)	8.3	11.2	14.2	17.2	26.4
Elastic (Immediate)		10.6	14.4	18.2	22.0	33.8

NOTES: 1. Design Fill weight (8') is 84 pcf for fill above water surface elev 0.0 NAVD88.
2. Thicknesses based on mudline elevation -1.5 feet, except for 6 feet is -2 ft, NAVD88
3. Estimated settlement computed by LJC+A based on soil borings and laboratory data by EEGO.

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Subject Sand Sediment Dredged For M.S. RV. Sheet ____ Of ____
Made by CAC Date 18 JAN 07
File No. 07-110 Checked by ____ Date ____

LOUIS J. CAPOZZOLI & ASSOCIATES, INC. Geotechnical Engineers

"Handbook of Dredging Engineering", Second Ed. Ivan by John B. Herbich

p. 16.2 Bulk Density: "... can range from 70 to 86 lb/ft³ (Lambe, 1962)."

p. 7.54 empirical relationship for the settling velocity

$V_t = 134.14 (d_{50} - 0.039)^{.972}$ $d_{50} = .3$ mm

$V_t = 134.14 (.2710) = 36.35 \frac{mm}{sec}$ spherical particles

$\times .039$

$V_t = 1.42 \frac{inches}{sec}$

p. 6-20 ... "Hydraulic dredging typically mixes 20 per cent of solids with 80 per cent of water; this process produces bulking. The sediment pumped into a disposal area has a larger volume than sediment in situ." ...

"... The bulking factor expressed by the ratio of the volume of soil in a containment area after dredging to the volume of soil insitu. "...

N_{avg} = say 20 bpf from p. 6.22 RD = 0.35 to 0.65 For N = 10 to 30 Medium dense SA

Use RD = 50 insitu, Use SG = 2.65 For FISA

p. 6.20 ... "In case of dense sand this expansion may be minimal..."

CONCLUSION: Use Bulking Factor = 1.0 + 0.5* = 1.5 without losses

With losses can be 30 to 50% increase

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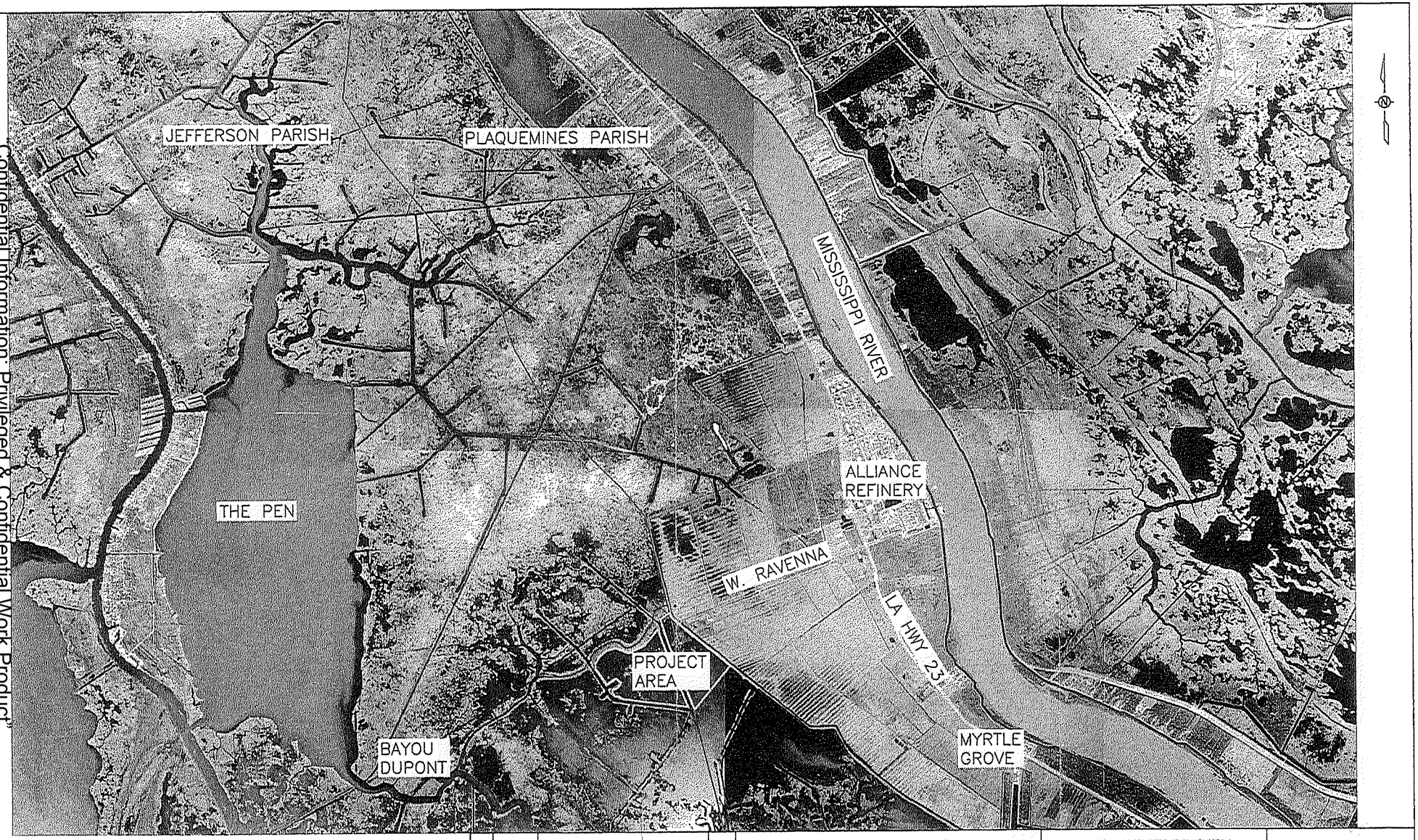
*Immediate Settlement (Elastic) ranges from 11 to 22 inches for 25 ft.



5000' 2500' 0' 5000' 10000'

REV.	DATE	DESCRIPTION	BY

LOUISIANA DEPARTMENT OF NATURAL RESOURCES
COASTAL ENGINEERING DIVISION
617 NORTH 3RD STREET
BATON ROUGE, LOUISIANA 70802

DRAWN BY: W. THOMPSON, E.I. DESIGNED BY: W. THOMPSON, E.I.

MISSISSIPPI RIVER SEDIMENT DELIVERY SYSTEM - BAYOU DUPONT

STATE PROJECT NUMBER: BA-39

FEDERAL PROJECT NUMBER: BA-39

APPROVED BY: LUKE LEBAS, P.E.

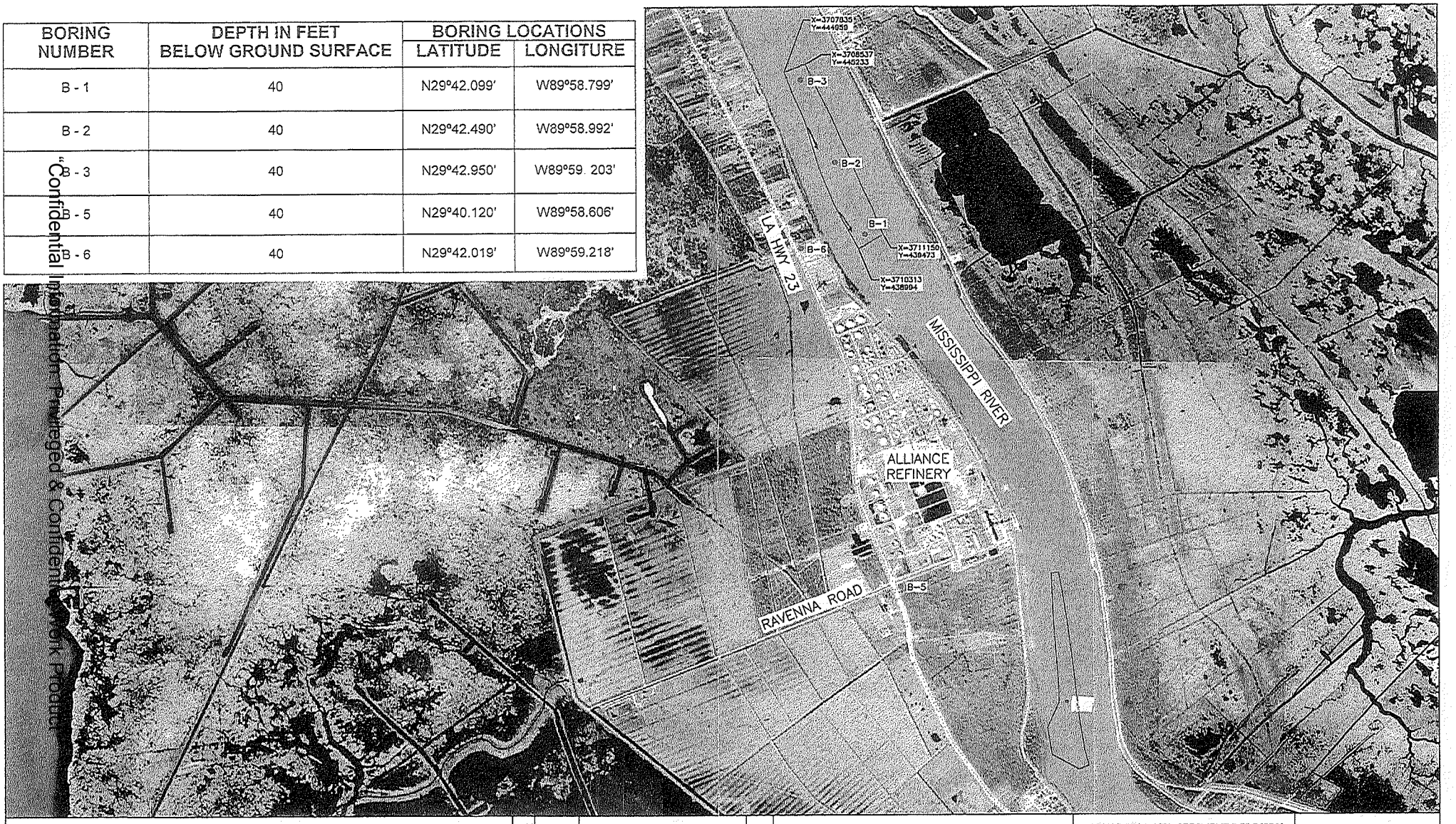
VICINITY MAP

DATE: FEBRUARY 2007

SHEET 2 OF 2

Confidential Information: Privileged & Confidential Work Product"

BORING NUMBER	DEPTH IN FEET BELOW GROUND SURFACE	BORING LOCATIONS	
		LATITUDE	LONGITURE
B - 1	40	N29°42.099'	W89°58.799'
B - 2	40	N29°42.490'	W89°58.992'
B - 3	40	N29°42.950'	W89°59. 203'
B - 5	40	N29°40.120'	W89°58.606'
B - 6	40	N29°42.019'	W89°59.218'



3000' 1500' 0' 3000' 6000'

REV.	DATE	DESCRIPTION	BY

LOUISIANA DEPARTMENT OF NATURAL RESOURCES
COASTAL ENGINEERING DIVISION
617 NORTH 3RD STREET
BATON ROUGE, LOUISIANA 70802

DRAWN BY: W. THOMPSON, E.I. | DESIGNED BY: W. THOMPSON, E.I.

MISSISSIPPI RIVER SEDIMENT DELIVERY SYSTEM-BAYOU DUPONT

STATE PROJECT NUMBER: BA-39

FEDERAL PROJECT NUMBER: BA-39

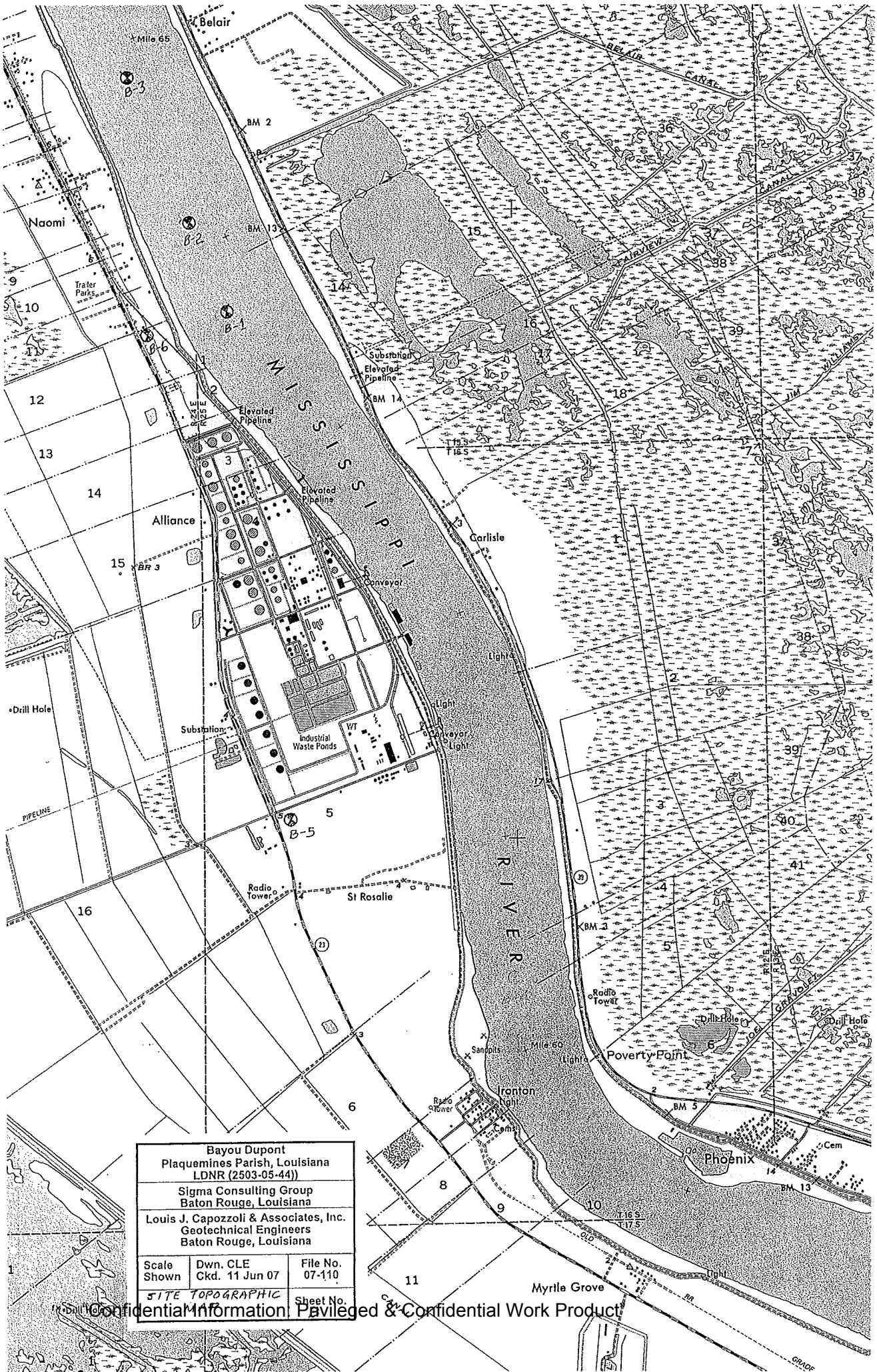
APPROVED BY: LUKE LEBAS, P.E.

BORING LAYOUT

DATE: MARCH 2007

SHEET 1 OF 2

"Confidential Information Privileged & Confidential Work Product"



Bayou Dupont Plaquemines Parish, Louisiana LDNR (2503-05-44))		
Sigma Consulting Group Baton Rouge, Louisiana		
Louis J. Capozzoli & Associates, Inc. Geotechnical Engineers Baton Rouge, Louisiana		
Scale Shown	Dwn. CLE Ckd. 11 Jun 07	File No. 07-110
SITE TOPOGRAPHIC MAP		Sheet No.

Confidential Information, Privileged & Confidential Work Product

APPENDIX A

"Confidential Information: Privileged & Confidential Work Product"

LOG OF BORING LEGEND

LJC&A: 07-110

1. SPT = Standard Penetration Test (4/6/9) where 4 is the blows to seat and 15 is blows (N) for 12 inch penetration.

2. QU (TSF) = Unconsolidated undrained triaxial, one point test

   0.05 @ 0.12 is the compressive strength in tsf which is twice the cohesion and @ means the confining pressure at tsf. Note: tests without @ values following are for unconfined Compression shear tests.

3. WC (%) = In situ water content

4. Dry Wt. (PCF) = The dry unit weight of soil

5. LL = Liquid Limit (%)

6. PI = Plasticity Index (%)

7. MV(KSF) = Miniature vane strength test done in end of sample in the Shelby tube and value is the cohesion in KSF.

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LOG OF BORING

Project: Bayou Dupont
Plaquemines Parish, Louisiana
Louisiana Department of Natural Resources (2503-05-44)
For: Sigma Consulting Group
Baton Rouge, Louisiana

Boring: 1
File: 07-110
Date: 24-May-07
Technician: CAL

Undisturbed Sample
Standard Penetration Test
Classification Sample
(SLS) Slickensided

N 29° 42.099'
W 89° 58.799'
Boring Depth: 98 Feet

Depth Feet	SAMPLES		(SPT) Recovery %	UU(TSF)	WC(%)	Dry Wt. (PCF)	LL	PI	MV(KSF)
0		Zero = top of casing, set 62 feet of 8 inch casing 74 feet of 4 inch casing; top of casing to water is 7 feet							
		Water surface El. 5.0 feet NAVD 88 (Estimated)							
		Water depth = 51.5 feet							
		Mudline El. -46.5 feet, NAVD 88							
	X	Loose brown sand (SP) 6 blows per foot (2/3/3)	66						
60	X	Firm brown sand (SP) 20 blows per foot (10/11/9)	61						
	X	Firm brown sand (SP) 23 blows per foot (9/11/12)	100						
65	X	Firm brown sand (SP) 20 blows per foot (10/10/10)	70						
	X	Firm gray sand (SP) 18 blows per foot (7/9/9)	72						
	X	Firm gray sand (SP) 20 blows per foot (5/9/11)	72						
70	X	Firm gray sand with clay layer (SP) 20 blows per foot (6/8/12)	100						
	X	Very dense gray sand with clay layer, shells, wood, and organic (SP) 58 blows per foot (15/32/26)	70						
75	X	Very dense gray sand with organic (SP) 51 blows per foot (19/27/24)	80						
	X	Firm gray sand (SP) 14 blows per foot (5/6/8)	53						
	X	Firm gray sand (SP) 14 blows per foot (5/6/8)	60						
80	X	Firm gray sand (SP) 25 blows per foot (13/12/13)	100						
	X	Firm gray sand (SP) 27 blows per foot (13/13/14)	100						
85	X	Firm gray sand (SP) 34 blows per foot (15/14/20)	100						
	X	Firm gray sand (SP) 15 blows per foot (5/6/9)	90						
	X	Firm gray sand (SP) 22 blows per foot (10/12/10)	100						
90	X	Firm gray sand (SP) 25 blows per foot (9/11/14)	100						
	X	Dense gray sand with organic (SP) 27 blows per foot (10/13/14)	100						
95	X	Dense gray sand with organic (SP) 37 blows per foot (11/14/23)	90						
	X	Dense gray sand with organic (SP) 46 blows per foot (11/22/24)	100						
100									

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LOG OF BORING

Project: Bayou Dupont
Plaquemines Parish, Louisiana
Louisiana Department of Natural Resources (2503-05-44)
For: Sigma Consulting Group
Baton Rouge, Louisiana

Boring: 2
File: 07-110
Date: 16-May-07
Technician: CAL

Undisturbed Sample
Standard Penetration Test
Classification Sample
(SLS) Slickensided

N 29° 42.490'
W 89° 58.992'
Boring Depth: 98 Feet

Depth Feet	SAMPLES		(SPT) Recovery %	UU(TSF)	WC(%)	Dry Wt. (PCF)	LL	PI	MV(KSF)
0		Zero = top of casing, set 62 feet of 8 inch casing; top of casing to water is 7 feet							
		Water surface El. 5.0 feet NAVD 88 (Estimated)							
		Water depth = 51.0 feet							
		Mudline El. -46.0 feet, NAVD 88							
	X	Firm brown sand (SP) 14 blows per foot (5/6/8)	44						
60	X	Firm brown sand with organic matter (SP) 17 blows per foot (8/9/8)	90						
	X	Firm brown sand (SP) 15 blows per foot (4/6/9)	20						
65	X	Firm gray sand with organic matter (SP) 23 blows per foot (8/8/15)	80						
	X	Firm gray sand (SP) 20 blows per foot (9/10/10)	55						
	X	Firm gray sand (SP) 23 blows per foot (9/11/12)	60						
70	X	Firm gray sand (SP) 27 blows per foot (13/13/14)	70						
	X	Firm gray sand (SP) 27 blows per foot (14/14/13)	80						
75	X	Dense gray sand 32 blows per foot (14/15/17)	80						
	X	Dense gray sand (SP) 37 blows per foot (17/18/19)	100						
	X	Dense gray sand (SP) 33 blows per foot (17/17/16)	100						
80	X	Firm gray sand (SP) 25 blows per foot (9/13/12)	70						
	X	Firm gray sand (SP) 27 blows per foot (14/14/13)	70						
85	X	Firm gray sand (SP) 29 blows per foot (12/14/15)	70						
	X	Firm gray sand (SP) 20 blows per foot (9/9/11)	55						
	X	Firm gray sand (SP) 13 blows per foot (7/8/5)	55						
90	X	Firm gray sand with organic matter (SP) 22 blows per foot (11/11/11)	80						
	X	Firm gray sand with organic matter (SP) 29 blows per foot (13/16/13)	100						
	X	Very dense gray sand (SP) 50 blows per foot (18/24/26)	90						
95	X	Very dense gray sand (SP) 56 blows per foot (19/27/29)	60						
100									

LOG OF BORING

Project: Bayou Dupont
Plaquemines Parish, Louisiana
Louisiana Department of Natural Resources (2503-05-44)
For: Sigma Consulting Group
Baton Rouge, Louisiana

Boring: 5
File: 07-110
Date: 24-May-07
Technician: CAL

Undisturbed Sample
Standard Penetration Test
Classification Sample
(SLS) Slickensided

N 29° 40.120'
W 89° 58.606'
Boring Depth: 40 Feet

Depth Feet	SAMPLES		(SPT)	Recovery %	UU(TSF)	WC(%)	Dry Wt. (PCF)	LL	PI	MV(KSF)
0		Very stiff tan and gray clay with grass roots and glass (CH)		95	2.22	33	87.5	72	45	--
		Stiff tan and gray clay with silt streaks and pockets (CH)		95	1.42	37	84.5	--	--	1.15
5		Stiff tan and gray clay with ferrous nodules (CH)		90	1.00	37	83.9	--	--	.63
		Medium gray silty clay with silt streaks (CL)		90	0.5	43	80.1	40	19	.49
		Free water encountered at 8 feet; rose to 5 feet in 10 minutes								
10		Soft gray clay (CH)		1.00	0.38 @.52	44	80.4	--	--	.46
		Soft gray clay (CH)		95	0.47@.65	37	81.4	--	--	.35
		Soft gray clay with silt streaks (CH)(SLS)		95	0.32@.75	38	82.0	--	--	.28
15		Medium gray clay with silt lenses (CH)		100	.60@.86	38	84.6	77	49	.22
		Soft gray silty clay (CH)		100	.34@.99	37	80.9	--	--	.06
		No sample recovered								
20		Loose gray very silty clay (CL) 5 blows per foot (1/2/3)		80	--	--	--	--	--	--
		Soft gray clay (CH)		100	.25@1.34	39	79.6	--	--	0.33
25		Soft gray silty clay (CL) with 3" silt layer		50	.27@1.45	46	82.1	35	16	.03
		Very loose gray fine sand (SP)		50	1.15@1.56	28	89.6	--	--	--
		Firm gray sandy silt (SM) with clay traces		40	1.24@1.68	28	93.3	--	--	0.05
30		Firm gray sandy silt (SM) with ½" clay layer		100	.55@1.80	27	94.4	--	--	--
		Firm gray fine sand (SP)		100	.64@1.92	31	85.8	--	--	--
35		Firm gray fine sand (SP) with ½" clay layer		65	.50@2.03	27	86.0	--	--	--
		Firm gray fine sand with silt traces (SP) 22 blows per foot (5/8/14)		75	--	--	--	--	--	--
		Firm gray fine sand with silt traces (SP) 10 blows per foot (6/7/3)		75	--	--	--	--	--	--
40		Clay encountered at 40 feet								

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LOG OF BORING

Project: Bayou Dupont
Plaquemines Parish, Louisiana
Louisiana Department of Natural Resources (2503-05-44)
For: Sigma Consulting Group
Baton Rouge, Louisiana

Boring: 6
File: 07-110
Date: 24-May-07
Technician: CAL

Undisturbed Sample
Standard Penetration Test
Classification Sample
(SLS) Slickensided

N 29° 42.019'
W 89° 59.218'

Free water encountered at 4 feet; rose to 3 feet in 10 minutes

Boring Depth: 40 Feet

Depth Feet	SAMPLES		(SPT) Recovery %	UU(TSF)	WC(%)	Dry Wt. (PCF)	LL	PI	MV(KSF)
0		Stiff brown, tan, and gray slightly silty clay with roots, shells, and sand pockets(CL)	95	1.13	23	99.1	--	--	2.1
		Stiff brown, tan, and gray slightly silty clay (CL)	90	1.06	26	96.1	47	26	.82
5		Medium tan and gray clay (CH) with silt streaks and pockets	90	.54@.32	32	91.5	--	--	.44
		Soft gray slightly silty clay (CL)	50	.35@.40	37	86.9	48	26	--
		Soft tan and gray silty clay with shells(CL) 2 blows per foot (2/1/1)	100	--	31	--	41	22	--
10		Soft gray silty clay (CL)	90	.42@.65	35	92.3	--	--	.23
		Soft gray clay with sand streaks and pockets (CH)	90	.32@.75	46	77.8	--		.16
15		Soft gray clay with organic matter traces (CH)	90	.45@.86	41	77.4	52	29	.25
		Soft gray very silty clay (CL)	100	.28 @ .99	38	81.6	--	--	.15
		Soft gray very silty clay with 3" sandy silt layer (CL)	90	.48@1.09	35	83.7	--	--	.08
20		Soft gray very silty clay with 2½" clayey silt layer (CL)	90	.26@1.22	38	84.1	34	14	.29
		Loose gray silty sand with clay traces (ML)	90	.69@1.34	33	82.0	--	--	--
25		Loose gray clayey silt with 1" clay layer (CL-ML)	95	.49@1.45	36	79.3	--	--	.09
		Soft gray slightly organic clay with silt pockets (OH)	100	.37@1.56	73	57.8	--	--	1.75
		Medium gray slightly organic clay with shells (OH)	100	.60@1.68	71	56.1	--	--	.32
30		Soft gray clay (CH)	90	.30@1.80	50	66.9	--	--	.25
		Medium gray slightly organic clay (OH)	100	.58@1.92	72	57.9	--	--	.45
35		Soft gray clay (CH) (SLS)	100	.46@2.03	64	61.3	93	69	.17
		Medium gray clay (CH)	100	.50@2.15	58	63.6	--	--	.38
		Medium gray clay with silt lenses (CH)	100	.57@2.26	54	68.0	--	--	.49
40									

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LOG OF BORING

Project: Bayou Dupont
Plaquemines Parish, Louisiana
Louisiana Department of Natural Resources (2503-05-44)
For: Sigma Consulting Group
Baton Rouge, Louisiana

Boring: 3
File: 07-110
Date: 17-May-07
Technician: CAL

Undisturbed Sample
Standard Penetration Test
Classification Sample
(SLS) Slickensided

N 29° 42.950'
W 89° 59.203'
Boring Depth: 104 Feet

Depth Feet	SAMPLES		(SPT) Recovery %	UU(TSF)	WC(%)	Dry Wt. (PCF)	LL	PI	MV(KSF)
0		Zero = top of casing, set 64 feet of 8 inch casing; top of casing to water is 7 feet							
		Water surface El. 5.0 feet NAVD 88 (Estimated)							
		Water depth = 57.0 feet							
		Mudline El. -52.0 feet, NAVD 88							
65	X	Loose brown sand with wood (SP) 7 blows per foot (3/3/4)	60						
	X	Very loose brown sand (SP) 3 blows per foot (2/2/1)	75						
	X	Firm gray sand with organic matter (SP) 10 blows per foot (5/5/5)	80						
70	X	Firm gray sand (SP) 10 blows per foot (3/4/6)	90						
	X	Firm gray sand (SP) 15 blows per foot (8/7/8)	90						
75	X	Firm gray sand (SP) 18 blows per foot (6/7/11)	90						
	X	Firm gray sand (SP) 26 blows per foot (12/12/14)	100						
	X	Firm gray sand (SP) 22 blows per foot (9/11/11)	60						
80	X	Firm gray sand (SP) 22 blows per foot (10/11/11)	90						
	X	Firm gray sand (SP) 25 blows per foot (13/12/13)	80						
85	X	Dense gray sand (SP) 32 blows per foot (16/15/17)	75						
	X	Dense gray sand (SP) 37 blows per foot (17/17/20)	60						
	X	Dense gray sand (SP) 32 blows per foot (16/15/17)	50						
90	X	Firm gray sand (SP) 29 blows per foot (9/13/16)	80						
	X	Firm gray sand (SP) 27 blows per foot (15/14/13)	80						
95	X	Dense gray sand (SP) 42 blows per foot (18/20/22)	60						
	X	Dense gray sand (SP) 49 blows per foot (22/23/26)	50						
	X	Very dense gray sand (SP) 56 blows per foot (20/27/29)	50						
100	X	Very dense gray sand (SP) 63 blows per foot (20/31/32)	55						
	X	Very dense gray sand (SP) 63 blows per foot (30/32/31)	80						
105									

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GeoEngineers

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APPENDIX F
Subsurface Information in the Vicinity of MBD Project Site

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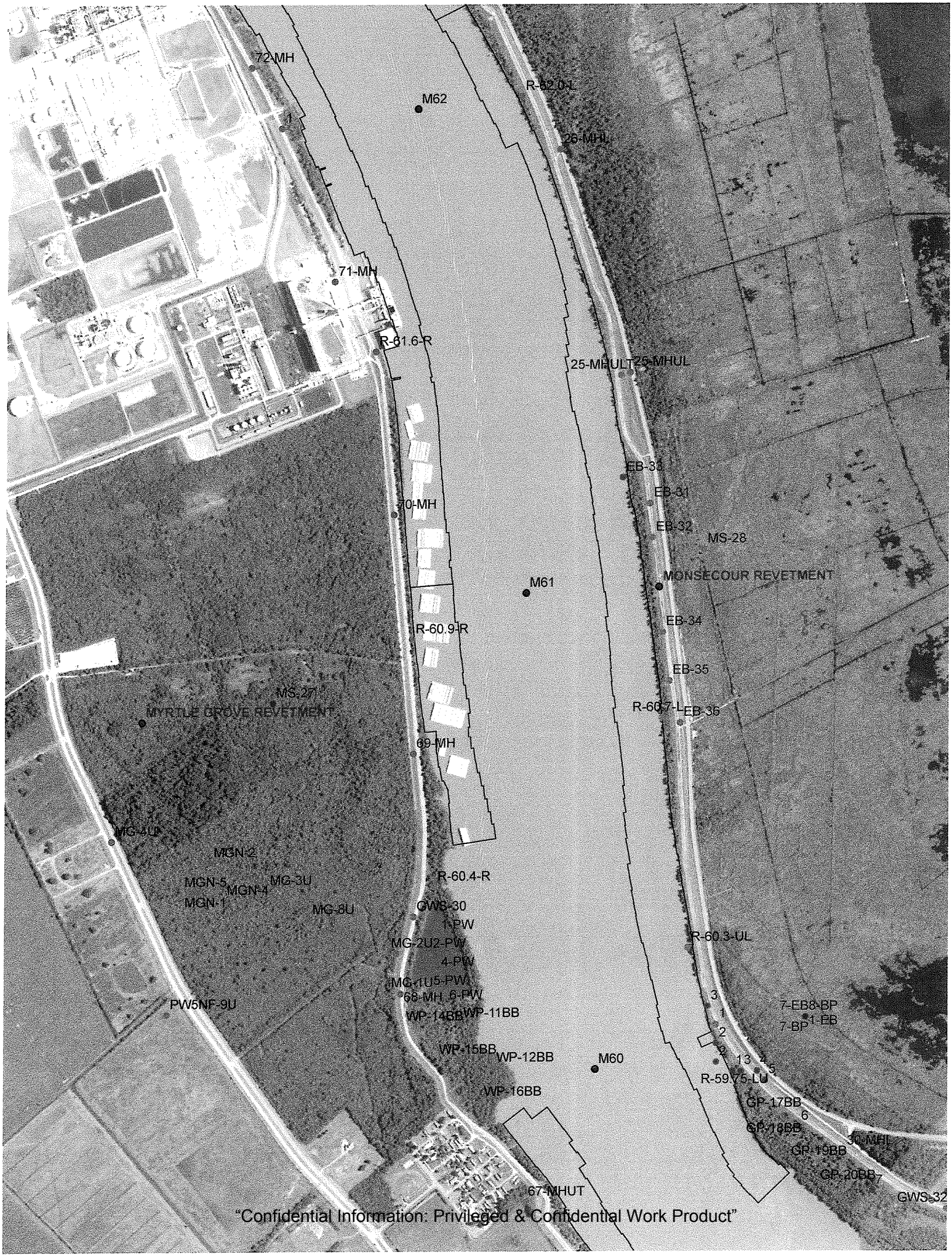

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R-61.6-R - MRCB MYRTLE GROVE REVETMENT

```
ZZ 29^40'22.454"    89^57'52.034" (G)
BOR. R-61.6-R (69-594)
STA. STA. 1067+50 3RD ORDER
84 FT. R.S.

Date: 9/24/1969

GROUND EL. 3.3
  0.0  1.5 24      ML         BR        RT CS
  3.5  4.0 35      ML         BRG       CS RT
  6.0  6.5 32      ML         GR        CS
  8.5  9.0 36      ML         GR
 11.0 11.5 29 12.5ML         GR        CS
 13.5 14.0 40 15.0CL  SISSO  GR
 16.0 16.5 39      ML         GR
 18.5 19.0 28      ML         GR
 21.0 21.5 30      ML         GR
 23.5 24.0 32      ML         GR        CS
 26.0 26.5 31 27.5ML         GR
 28.5 29.0 43 30.0CL     SO  GR
 31.0 31.5 35      ML         GR
 33.5 34.0 32      ML         GR
 36.0 36.5 31      ML         GR
 38.5 39.0 32 41.0ML         GR
 41.0 41.5 61 42.7CH  SISSO  GR        CC
 43.5 44.0 30      ML         GR
 46.0 46.5 32      ML         GR
 48.5 49.0 29      ML         GR
 51.0 51.5 29      ML         GR
 53.5 54.0 29      ML         GR
 56.0 56.5 34      ML         GR        CS
 58.5 59.0 31 60.0ML         GR
 61.0 61.5    62.0SM         GR        CS
 63.5 64.0    65.8SP   F     GR
 66.0 66.5 46 67.5CH  SIS M  GR
 68.5 69.0 38 70.0CL  SISSO  GR
 71.0 71.5 31 71.5ML         GR        CS
 73.5 74.0    74.5SM         GR         S
 76.0 76.5    77.5SP   F     GR
 78.5 79.0        SM         GR        CS
 81.0 81.5        SM         GR
 83.5 84.0        SM         GR
 86.0 86.5        SM         GR        CS
 88.0 89.0    90.0SM         GR
 91.0 91.5 48 92.0CH  SIS M  GR        WD
 93.5 94.0        SM         GR        CS
 96.0 96.5    97.5SM         GR         S WD RT
 98.5 99.0 28      ML         GR
101.0101.5 27102.5ML         GR        CS OX
103.5104.0   105.0SP   F     GR
106.0106.5   107.7SM         GR BR      S CS
108.5109.0 33110.0CH  SS  M  BR        OX WD
111.0111.5        SP   F     GR        CS
112.5113.5   114.7SP   F     BR                      101              .0750
116.0116.5 29117.5CL     ST GN GR      OX
118.5119.0 44      CH  SISST GR BR     OX
121.0121.5 39      CH  SISVSTGR BR     SL                 1939118 58 21
123.5124.0 32      CH  SISVSTGR  Y     CC
126.0126.5 37127.5CH  SISVSTGR  Y     OX
128.5129.0 34129.0CH     ST GR BR     OX                 1647121 74 21
999.9
```

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70-MH - MRL BELOW N.O. - RIGHT BANK GRADE INCREASE

```
ZZ 29^40'4.987"    89^57'49.921" (G)
BOR. 70-MH (66-528)
STA. STA. 1085+00 3RD ORDER
ON C/L LEVEE

Date: 8/23/1966

GROUND EL. 15.4
  0.0  2.0 21     CL     ST BR
  4.0  4.5 28  5.5CL     SO BR
  6.5  7.0 32  9.0CH     SO BR
  9.0  9.5 32     CH  SISST BR
 11.5 12.0 33 12.5CH  SIS M GR BR
 14.0 14.5 35 15.0CH      M GR                          687118 51 39
 16.5 17.0 37     CL     SO GR
 19.0 19.5 38 20.0CL     SO GR
 21.5 22.0 34 23.0ML        GR
 24.0 24.5 43 25.5CH     SO GR
 26.5 27.0 37 28.0CL     VSODGR
 29.0 29.5 32 31.5ML        GR
 31.5 32.0 60     CH  SISSO GR
 34.0 34.5 39 35.0CH  SIS M GR
 36.5 37.0 40     ML        GR
 39.0 39.5 33     ML        GR
 41.5 42.0 30 43.0ML        GR
 44.0 44.5 34 45.0CH      M GR
 46.5 47.0 33     ML        GR
 49.0 49.5 35     ML        GR
 51.5 52.0 32 53.0ML        GR
 54.0 54.5 35 55.5CL     VSOGR
 56.5 57.0 34     ML        GR
 59.0 59.5 34 59.5ML        GR
999.9
```

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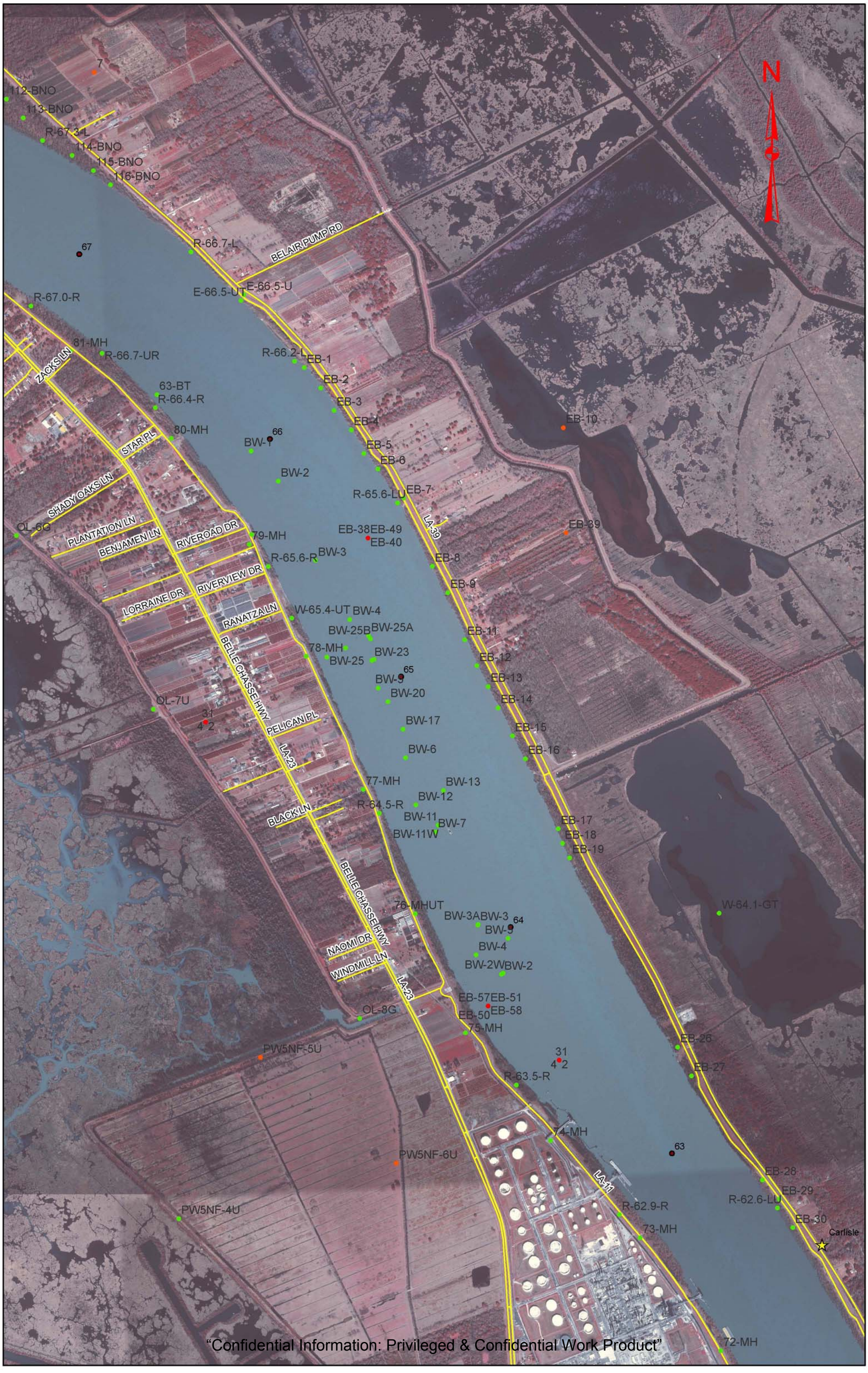
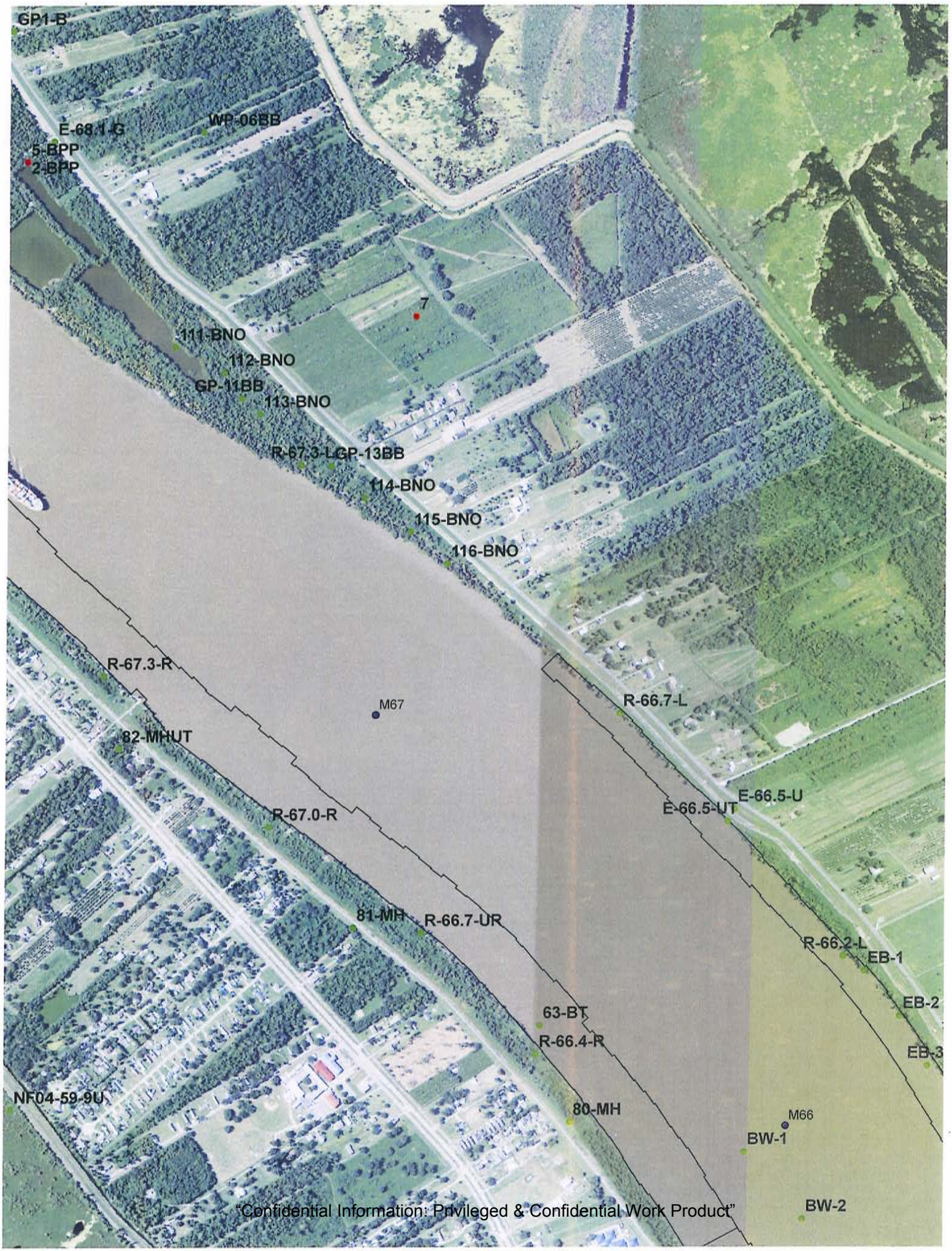


“Confidential Information: Privileged & Confidential Work Product”



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ENGINEERS USA ARMY CORPS OF ENGINEERS

E-66.5-UT - MRL - MILE 127-66 E/W BANKS

ZZ 29^44'15.997" 89^59'45.992" (U)
BOR. E-66.5-UT (72-548)
STA. STA. 1358+00 3RD ORDER
R.S. TOE

Date: 8/29/1972

GROUND EL. 5.3

0.0	1.7	15		ML		BR		CS WD SIFRT						
1.7	3.3	16	3.3	ML		BR		CS WD SIFRT						
3.3	5.7	46		CH	SIS M	GR		WD RT OX SL		270106	73	20	43	50
5.7	7.3	42	7.3	CH	SIS M	GR		WD RT OX						
7.3	8.8	40	8.8	CL	SISSO	GR								
8.8	10.3	37		ML		GR		CS WD RT OX						
10.3	11.6	36		ML		GR		CS RT						
11.6	13.1	33		ML		GR		CS						
13.1	14.8	36	14.8	ML		GR		CS RT						
14.8	15.8	46	15.8	CH	SISSO	GR								
15.8	16.8	37	16.8	ML		GR		CS						
16.8	17.8	57		CH	SISSO	GR								
17.8	18.8	31		ML		GR		CS RT						
18.8	19.8	60	19.8	CH	SISSO	GR								
19.8	20.8	50	20.8	CL	VSO	GR		RT						
20.8	23.5			SM		GR		S						
23.5	27.5			SM		GR		S CS						
27.5	31.5			SM		GR		S						
31.5	35.5			SM		GR		S CS						
35.5	40.5		40.5	SM		GR		S						
40.5	43.0			SP	F	GR						.0790		
43.0	46.3		46.3	SP	F	GR						.0850		
46.3	47.5	51	47.5	CH	SISSO	GR								
47.5	48.8	45	48.8	CL	SISSO	GR								
48.8	50.1	56		CH	SIS M	GR								
50.1	51.6	48		CH	SIS M	GR								
51.6	52.6	49		CH	SISSO	GR								
52.6	54.0	48		CH	SIS M	GR				691105	84	25	52	529
54.0	55.5	52		CH	SISSO	GR								
55.5	56.8	50		CH	SISSO	GR		WD						
56.8	59.0	42		CH	SIS M	GR								
59.0	61.7	42		CH	SIS M	GR				842110	62	19	40	615
61.7	63.6	45		CH	SIS M	GR								
63.6	64.6	45	64.6	CH	SISSO	GR								
64.6	66.4	49	66.4	CH	ST	GR				1104105	77	24	52	653
66.4	67.5	49		CH	SIS M	GR								
67.5	69.6	55		CH	SISST	GR								
69.6	71.5	50		CH	SISST	GR				1209105	82	25	50	703
71.5	73.1	54		CH	SIS M	GR								
73.1	75.7	55		CH	SISST	GR		SL		1174105	112	19	48	734
75.7	76.7	52		CH	SIS M	GR								
76.7	77.7	51		CH	SISST	GR	DGR							
77.7	79.7	50		CH	SISST	GR				1109105			45	784
79.7	81.7	56		CH	SISST	GR								
81.7	83.5	58		CH	SISST	GR		SL		1029104			47	819
83.5	85.7	56	85.7	CH	SISST	GR		SL SIF		1024103			51	850
85.7	87.0	27	87.0	ML		GR		CS						
87.0	89.7	52		CH	SISST	GR	DGR	SL		1565104	90	23	48	895
89.7	91.7	54		CH	SISST	GR	DGR							
91.7	93.5	51		CH	SISST	GR				1482108			42	933
93.5	94.5	42		CH	SISST	GR								
94.5	95.5	47		CH	SISST	GR								
95.5	96.5	45		CH	SISSO	GR								
96.5	98.3	47	98.3	CH	SISST	GR								

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```
 98.3 99.5 30 99.5ML        GR       CS SI SIF
 99.5100.9 33100.9CH     ST GN GR    SI SIF
100.9101.9 35101.9CH  SISST GNG
101.9103.5   103.5SM        GNG      SIF
103.5105.0 32105.0CL  SS  M GR
105.0106.5 37      CH  SISST GNG      OX
106.5107.5 34      CH  SISST GNG      OX
107.5109.6 43      CH  SISST GR  T    OX
109.6110.6 43      CH  SISST GR  T    OX SL              1538108            451104
110.6111.7 46111.7CH  SISST GR        OX
111.7113.6         SP   F    GR  T    TR  M SI CS                   .0850
113.6114.6         SP   F    GNG      CS SI SIFRT
116.0117.5         SP   F    GR                      58
120.0121.3         SP   F    GR        M             98              .1000
124.0125.3         SP   F    GR                      61
128.0129.5         SP   F    GR                      54
133.0134.5   134.5SM        GR        S             27
999.9
```

ENGINEERS US ARMY CORPS OF ENGINEERS

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ENGINEERS USARMY CORPS OF ENGINEERS

R-66.7-L - MRCB - BELAIR REVETMENT

```
ZZ 29^44'25.555"    89^59'56.674" (G)
BOR. R-66.7-L (69-628)
STA. STA. 1345+00 3RD ORDER
100 FT. R.S. OF LEVEE C/L

Date: 9/17/1969

GROUND EL. 6
  0.0  1.9 30  2.9ML         BR        CS WD RT
  3.9  4.4 37  5.4CH  SIS M BR        WD RT
  6.4  6.9 36  7.9CL  SISSO GR        OX WD RT
  8.9  9.4 30     ML         GR        CS
 11.4 11.9 34     ML         GR        CS
 13.9 14.4 33     ML         GR        CS
 16.4 16.9 33     ML         GR        CS
 18.9 19.4 33     ML         GR        CS WD
 21.4 21.9 33     ML         GR        OX RT
 23.9 24.4 32     ML         GR        CS
 26.4 26.9 34 27.9ML         GR        CS
 28.9 29.4 43 30.4CH  SISSO GR        OX WD RT
 31.4 31.9 28 32.9ML         GR        CS
 33.9 34.4 37 35.4CL  SISSO GR        CC
 36.4 36.9 29 37.9CH     VSTGR        WD RT OX
 38.9 39.4 31     ML         GR
 41.4 41.9 29 42.9ML         GR        CS
 43.9 44.4 43     CH  SISSO GR        WD
 46.4 46.9 58     CH  SIS M GR        WD
 48.9 49.4 56     CH  SIS M GR        WD SIFSL            531106 89 25
 51.4 51.9 49     CH  SISSO GR
 53.9 54.4 56     CH  SIS M GR
 56.4 56.9 55     CH  SIS M GR
 58.4 59.4 51     CH  SIS M GR                            597108 81 28
 61.4 61.9 53 62.9CH  SIS M GR
 63.9 64.4 55 65.4CH      M GR
 66.4 66.9 54     CH  SIS M GR                            696106 91 22
 68.9 69.4 55     CH  SIS M GR        WD
 71.4 71.9 57 72.9CH  SIS M GR
 73.9 74.4 54 75.4CH      M GR
 76.4 76.9 51 77.9CH  SIS M GR        WD                 671105 79 22
 78.9 79.4 54     CH      M GR
 81.4 81.9 57 82.9CH      M GR
 83.9 84.4 58 85.4CH  SIS M GR                           914105 96 18
 86.4 86.9 60 87.9CH  SS  M GR
 88.9 89.4 55 90.4CH      M GR
 91.4 91.9 50 92.9CH  SISST GR                         1181112 69 23
 93.9 94.4 51 95.4CH      M GR
 96.4 96.9 50 97.9CH  SISST GR
 98.9 99.4   100.4SM      GNG       CS SI SIF
101.4101.9 36     CH  SS ST GR LGR  WD
103.9104.4 38     CH  SS ST GR      OX
106.4106.9 40     CH  SS ST GR      OX WD
108.9109.4 43110.4CH  SS ST GR      OX WD
111.4111.9        SP   F    GNG     CS SI SIF
113.5114.0        SP   F     Y
116.0116.5        SP   F    LBR     WD
120.1120.8   123.0SP   F    GR                  101
125.2125.9   128.0SM        GR      CS          101
130.1130.8   130.8SP        GR                   50            .0770
999.9
```

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ENGINEERS · US ARMY CORPS OF ENGINEERS

R-67.3-L - MRCB BELAIR REVETMENT

```
ZZ 29^44'47.544"    90^0'28.508" (G)
BOR. R-67.3-L (70-565)
STA. STA. 1311+25 3RD ORDER
300 FT. R.S. OF C/L LEVEE

Date: 4/22/1970

GROUND EL. 8.7
  0.0  1.0 35  2.0CH  SIS M BR        RT
  3.0  3.5 36  4.8CL  SIS M BR        RT OX
  6.0  6.5 37      CH  SIS M GR        RT
  8.0  8.5 47  9.8CH  SISVSOGR
 11.0 11.5 41 12.5CL  SISVSOGR
 13.5 14.0 42      CH  SISSO GR        RT
 15.5 16.0 60 17.3CH  SISSO GR        OX
 18.5 19.0 34 20.0ML        GR        CS
 21.0 21.5 60      CH  SISSO GR        OX
 23.0 23.5 68      CH  SISSO GR        OX
 25.5 26.0 55      CH  SISSO GR        OX
 28.5 29.0 66      CH  SISSO GR        OX
 31.0 31.5 49 32.5CH  SISSO GR        OX
 33.5 34.0 47 34.8CL  SISSO GR
 35.5 36.0 67      CH  SISSO GR
 38.5 39.0 50      CH  SISSO GR
 40.5 41.0 57 42.0CH  SIS M GR        OX
 43.0 43.5 31 44.8ML        GR        CS
 46.0 46.5 56 47.3CH  SS     GR
 48.0 48.5 54 49.5CH  SIS M GR
 50.5 51.0 66 52.3CH  SS  M GR BR     OX
 53.5 54.0 47 55.2CH  SIS M GR
 55.5 56.0    58.0SM        GR
 58.5 59.0 43 60.3CH  SS SO GR
 60.5 61.0    62.0SM        GR        CS
 63.0 63.5 52 64.8CH  SIS M GR
 66.0 66.5 46      CH  SS SO GR
 68.0 68.5 53      CH  SS  M GR
 70.5 71.0 41 72.0CH  SS  M GR
 73.0 73.5         SM                 S CS
 75.5 76.0         SM                 S
 78.0 78.5         SM                 S
 80.5 81.0         SM                 S  O RT
 83.0 83.5    87.0SM                  S              44
 88.0 88.5 42 89.5CH  SS SO GR
 91.0 91.5 50      CH  SISST GR                        1018107 60 23
 93.5 94.0 50      CH  SISST GR
 95.5 96.0 46 96.4CH  SISST GR
 98.0 98.5 24 99.5CL     SO GR        S SI SIF
100.5101.0   101.6SM       GNG       S SI SIFCS
103.0103.5 35     CH  SISST GNG      OX
105.5106.0 37     CH  SISVSTGNG      OX
108.0108.5 45109.5CH  SISVSTGNG T    OX
110.5111.0         SP   F     T      CS
112.5113.0         SP   F    GR       M                                  .1650
115.5116.0         SP   F    GR      OX
118.0118.5         SP   F    GR      SIF            101
122.5123.0   128.0SP   F    GR      SI SIF         101
129.5130.0 33130.0CH  SS VSTGNG      OX             101
999.9
```

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29° 43'15.056" 89° 59'36.654" (U)
BOR. W-65.4-UT (82-47)
STA. STA. 868+14 2ND ORDER
125 FT. R.S. B/L
Date: 11/23/1982

W or D10 GROUND EL. 6.3

ELEVATIONS IN FEET - N.A.V.D.

TEST DATA

WATER CONTENT
% WATER, DRY WEIGHT

SHEAR STRENGTH
TONS / SQ.FT.

WET DENSITY
POUNDS / CU.FT.

NORMAL STRESS
TONS / SQ.FT.

PLASTICITY CHART

PLASTICITY INDEX

"U" LINE

"A" LINE

LIQUID LIMIT (PERCENT)

SHEAR STRENGTH DATA

SHEAR STRENGTH, T.S.F.

NORMAL STRESS, T.S.F.

TABULAR TEST DATA

ENVELOPE NO.	ENVELOPE EL.	TYPE	STRENGTH Φ	STRENGTH C - TSF	CLASS

NOTES

○ - (UC) UNCONFINED COMPRESSION TEST
■ - (Q) UNCONSOLIDATED - UNDRAINED TRIAXIAL SHEAR TEST
▲ - (R) CONSOLIDATED - UNDRAINED TRIAXIAL SHEAR TEST
⊡ - (S) CONSOLIDATED - DRAINED DIRECT SHEAR TEST
ω_P ω_N ω_L ATTERBERG LIMITS

BORING WAS TAKEN WITH A 5 INCH DIAMETER STEEL TUBE PISTON TYPE SAMPLER.
FOR SOIL BORING LEGEND SEE PLATE A.
FOR LOCATION OF BORINGS SEE PLATE
FOR DETAILED TEST DATA SEE

US ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
MISSISSIPPI VALLEY DIVISION

DESIGNED BY: DATE:
DRAWN BY: SOLICITATION NO.:
TRACED BY: CONTRACT NO.:
SUBMITTED BY: FILE NUMBER:
FILE NAME: PLOT DATE:
SIZE: PLOT SCALE:

SHEET IDENTIFICATION NUMBER

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ZZ 29^43'15.056" 89^59'36.654" (U)
BOR. W-65.4-UT (82-47)
STA. 868+14 2ND ORDER
125 FT. R.S. B/L
WATER TABLE N/A FT.
Date: 11/23/1982

GROUND EL. 6.3

0.0	1.0	20	1.0	ML	BR	CS	RT	WD	OX			
1.0	3.5		3.5	NS								
3.5	5.5	28		ML	GR	BR	CS	OX	RT	WD		
5.5	6.6	32		ML	GR	BR	CS	OX	RT	WD		
6.6	7.6	31		ML	GR	CS						
7.6	9.1	32		ML	GR	CS						
9.1	10.6	33		ML	GR	CS						
10.6	12.4	32	12.4	ML	GR	CS						
12.4	13.4	38	13.4	CL	SIS	M	GR					
13.4	14.5	32		ML	GR	CS						
14.5	15.5	31	15.5	ML	GR	CS						
15.5	16.5	54	16.5	CH	SIS	M	GR					
16.5	17.5	33	17.5	ML	GR	CS						
17.5	18.7	48	18.7	CH	SIS	M	GR	BR				
18.7	20.4	40	20.4	CL	SIS	M	BRG					
20.4	22.7	34	22.7	ML	GR	BR	CS					
22.7	24.3	56	24.3	CH	SIS	M	GR					
24.3	25.8	38	25.8	CL	SIS	M	GR	BR				
25.8	26.8	65		CH	SIS	M	GR					
26.8	28.6	64	28.6	CH	SIS	M	GR	BR				
28.6	29.6	33	29.6	ML	BRG	CS						
29.6	30.8	63		CH	SIS	M	GR	BR				
30.8	32.8	59		CH	SIS	M	GR					
32.8	34.6	61		CH	SIS	M	GR					
34.6	35.6	43		CH	SIS	M	GR	BR				
35.6	37.6	60		CH	SIS	M	GR	BR	695	98	94	25	66	367
37.6	38.6	43	38.6	CH	SIS	M	GR							
38.6	40.0	36	40.0	CL	SIS	M	GR							
40.0	41.8	52	41.8	CH	SIS	M	GR	BR						
41.8	42.8	46	42.8	CL	SIS	M	GR							
42.8	44.5	29	44.5	ML	GR	CS								
44.5	46.3		46.3	SM	GR	CS								
46.3	49.3	55		CH	SIS	M	GR							
49.3	50.7	57		CH	SIS	M	GR							
50.7	51.7	59	51.7	CH	SISSO	GR	BR							
51.7	53.7	31	53.7	ML	GR	CS								
53.7	54.8	60		CH	SIS	M	GR	BR						

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```
 54.8 55.8 52 55.8CH  SISSO GR BR
 55.8 57.4    57.4SM       GR       CS
 57.4 58.8 48 58.8CH  SIS M GR
 58.8 59.8 33 59.8ML       GR       CS
 59.8 60.9 37 60.9CL  SIS M GR
 60.9 62.6  5 62.6SM       GR       CS WD                    .1800
 62.6 63.6 41 63.6CH  SIS M GR
 63.6 64.6 42 64.6CL  SIS M GR
 64.6 67.0       SP   F    GR       WD                    .2000
 67.0 68.0    68.0SP   F    BRG      WD  M                 .2200
 68.0 70.0       SM       GR
 70.0 71.5       SM       GR       CS OX          47
 71.5 75.0       SM       GR
 75.0 76.5       SM       GR       CS OX          37
 76.5 78.5       SM       GR
 78.5 80.0       SM       GR
 80.0 81.5       SM       BR GR    CS OX          51          .0810
 81.5 83.5       SM       BR GR
 83.5 85.0       SM       BR GR
 85.0 86.5       SM       BR       OX            55
 86.5 88.5       SM       BR
 88.5 90.0       SM       BR
 90.0 91.5       SM       GR BR    CS WD          34
 91.5 93.0       SM       GR BR
 93.0 96.5       SM       BRG      CS OX          48
 96.5 98.0       SM       BRG
 98.0100.0       SM       BRG
100.0101.5   101.5SM       GYB      CS OX          53
999.9
*******************************************************************************
SHEAR STRENGTH DESIGN VALUES
Test Type:(Q)                 Classif  : CH
Depth/Ele: 17.60/-11.30         Water Con: 50.90
LL,PL,PI : 60, 19, 41           Dry Dens : 70.47
Cohesion :  0.207               Saturat  : 98.70
Shear Str:                    Frict Ang:
Toggles  :(     )(     )(     )(     )
*******************************************************************************
SHEAR STRENGTH DESIGN VALUES
Test Type:(Q)                 Classif  : CH
Depth/Ele: 24.90/-18.60         Water Con: 49.63
LL,PL,PI : 68, 20, 48           Dry Dens : 71.60
Cohesion :  0.253               Saturat  : 98.70
Shear Str:                    Frict Ang:
Toggles  :(     )(     )(     )(     )
```


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****

SHEAR STRENGTH DESIGN VALUES
Test Type:(Q) Classif : CH
Depth/Ele: 34.00/-27.70 Water Con: 62.20
LL,PL,PI : 85, 22, 63 Dry Dens : 62.83
Cohesion : 0.225 Saturat : 99.77
Shear Str: Frict Ang:
Toggles :( )( )( )( )

****

SHEAR STRENGTH DESIGN VALUES
Test Type:(Q) Classif : CH
Depth/Ele: 49.70/-43.40 Water Con: 48.27
LL,PL,PI : 64, 20, 44 Dry Dens : 73.17
Cohesion : 0.332 Saturat : 99.70
Shear Str: Frict Ang:
Toggles :( )( )( )( )

****

SHEAR STRENGTH DESIGN VALUES
Test Type:(Q) Classif : CH
Depth/Ele: 57.70/-51.40 Water Con: 48.97
LL,PL,PI : 63, 19, 44 Dry Dens : 71.70
Cohesion : 0.255 Saturat : 97.87
Shear Str: Frict Ang:
Toggles :( )( )( )( )

****

SHEAR STRENGTH DESIGN VALUES
Test Type:(R) Classif : CL
Depth/Ele: 21.60/-15.30 Water Con: 28.10
LL,PL,PI : 27, 20, 7 Dry Dens : 94.33
Cohesion : 0.400 Saturat : 97.77
Shear Str: Frict Ang: 24.00
Toggles :( )( )( )( )

****

SHEAR STRENGTH DESIGN VALUES
Test Type:(S) Classif : CH
Depth/Ele: 33.20/-26.90 Water Con: 65.87
LL,PL,PI : , , Dry Dens : 60.47
Cohesion : 0.000 Saturat : 99.23
Shear Str: Frict Ang: 22.00
Toggles :( )( )( )( )

****

SHEAR STRENGTH DESIGN VALUES
Test Type:(S) Classif : CH
Depth/Ele: 49.20/-42.90 Water Con: 48.83
LL,PL,PI : , , Dry Dens : 66.70

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Cohesion : 0.000 Saturat : 86.33
Shear Str: Frict Ang: 25.00
Toggles :( )( )( )( )
****

SHEAR STRENGTH DESIGN VALUES
Test Type:(C) Classif : CH
Depth/Ele: 19.00/-12.70 Water Con: 43.40
LL,PL,PI : , , Dry Dens : 76.80
Cohesion : Saturat : 97.90
Shear Str: Frict Ang:
Norm Str: 0.700, 1.120
Toggles :( )( )( )( )
Test Data:

Pressure	Void Ratio
0.125	1.182
0.250	1.165
0.500	1.132
1.000	1.070
2.000	0.975
4.000	0.875

****

SHEAR STRENGTH DESIGN VALUES
Test Type:(C) Classif : ML
Depth/Ele: 22.00/-15.70 Water Con: 33.50
LL,PL,PI : , , Dry Dens : 87.50
Cohesion : Saturat : 98.30
Shear Str: Frict Ang:
Norm Str: 1.400, 0.850
Toggles :( )( )( )( )
Test Data:

Pressure	Void Ratio
0.250	0.892
0.500	0.872
1.000	0.850
2.000	0.825
4.000	0.792
8.000	0.753

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ZZ 29^43'25.068" 89^59'41.514" (G)
BOR. R-65.6-R (69-628)
STA. STA.856+50 3RD ORDER
114 FT. R.S.

Date: 9/17/1969

GROUND EL. 4.1

0.0	1.5	25	2.7	ML		BR		OX	
3.5	4.0	34	5.0	CL	SISSO	GR			
6.0	6.5	32	7.5	CL	SO	GR			
8.5	9.0	41	9.0	CL	SISSO	GR			
11.0	11.5	43		CH	SISSO	GR			
13.5	14.0	47		CH	SISSO	GR			
16.0	16.5	63	17.5	CH	SISSO	GR			
18.5	19.0	30	20.0	ML		GR			
21.0	21.5	72		CH	SISVSO	GR			
23.5	24.0	63		CH	SISSO	GR			
26.0	26.5	63		CH	SISSO	GR			
28.5	29.0	62		CH	SISSO	GR			
31.0	31.5	62	32.7	CH	SISSO	GR			
33.5	34.0	28	34.0	ML		GR			
36.0	36.5	52		CH	SIS M	GR			
38.5	39.0	54		CH	SISSO	GR			
41.0	41.5	62		CH	SISSO	GR	BR		
43.5	44.0	60	45.0	CH	SISSO	GR			
46.0	46.5	62	47.0	CH	SO	GR			
48.5	49.0		49.0	SM		GR			
51.0	51.5	59		CH	SISSO	GR			
53.5	54.0	59	56.0	CH	SISSO	GR			
56.0	56.5	45	57.5	CH	SS SO	GR			
58.5	59.0	29	59.0	ML		GR		CS	
61.0	61.5		62.7	SP	F	GR			
63.5	64.0			SM		GR		O	
66.0	66.5			SM		GR		CS	
68.5	69.0		69.0	SM		GR		O	
71.0	71.5			SP	F	GR		M	
73.5	74.0			SP	F	GR		M	
76.0	76.5			SP	F	GR	TR	M	.1500
78.0	79.0			SP	F	GR		42	
83.0	84.0			SP	F	GR		92	
88.0	89.0			SP	F	GR		56	
93.0	94.0			SP	F	GR		57	
98.0	99.0			SP	F	GR	TR	M 61	.1220
103.0	104.0		105.0	SP	F	GR		25	

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106.0106.5 30 CH SISST GNG
108.5109.5 36 CH SISST BRG
111.0111.5 48112.2CH SISST GNG
113.5114.0 115.0SM GR CS
116.0116.5 30 CH SISST GR RT
118.5119.0 52120.7CH SISST GR BR WD RT
121.0121.5 SM GR
123.0124.0 SM GR 89
128.0129.0 SM GR 55
133.5134.0 SM GR
136.0136.5 137.0SM GR
138.5139.0 37139.0CL M GR
999.9

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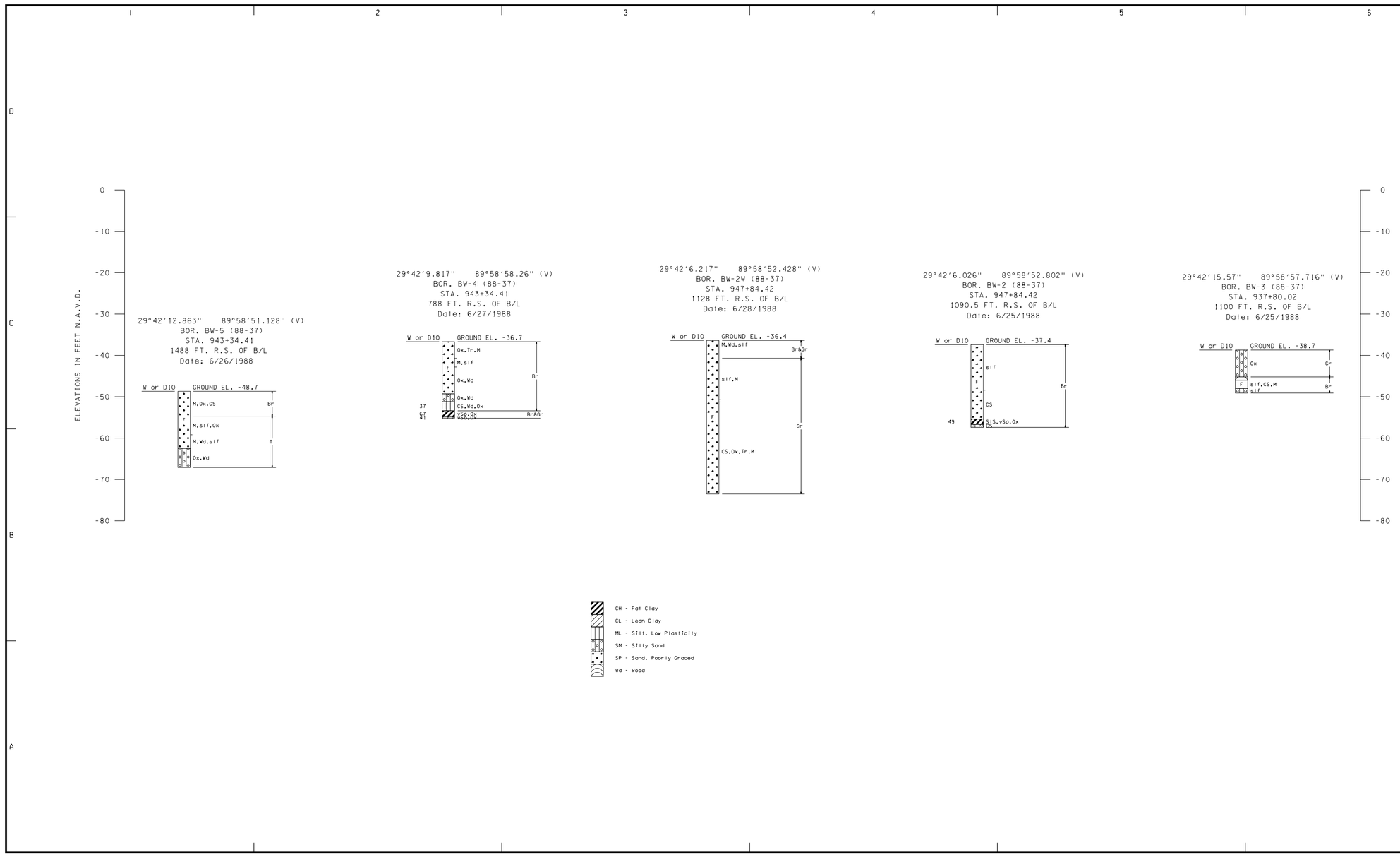
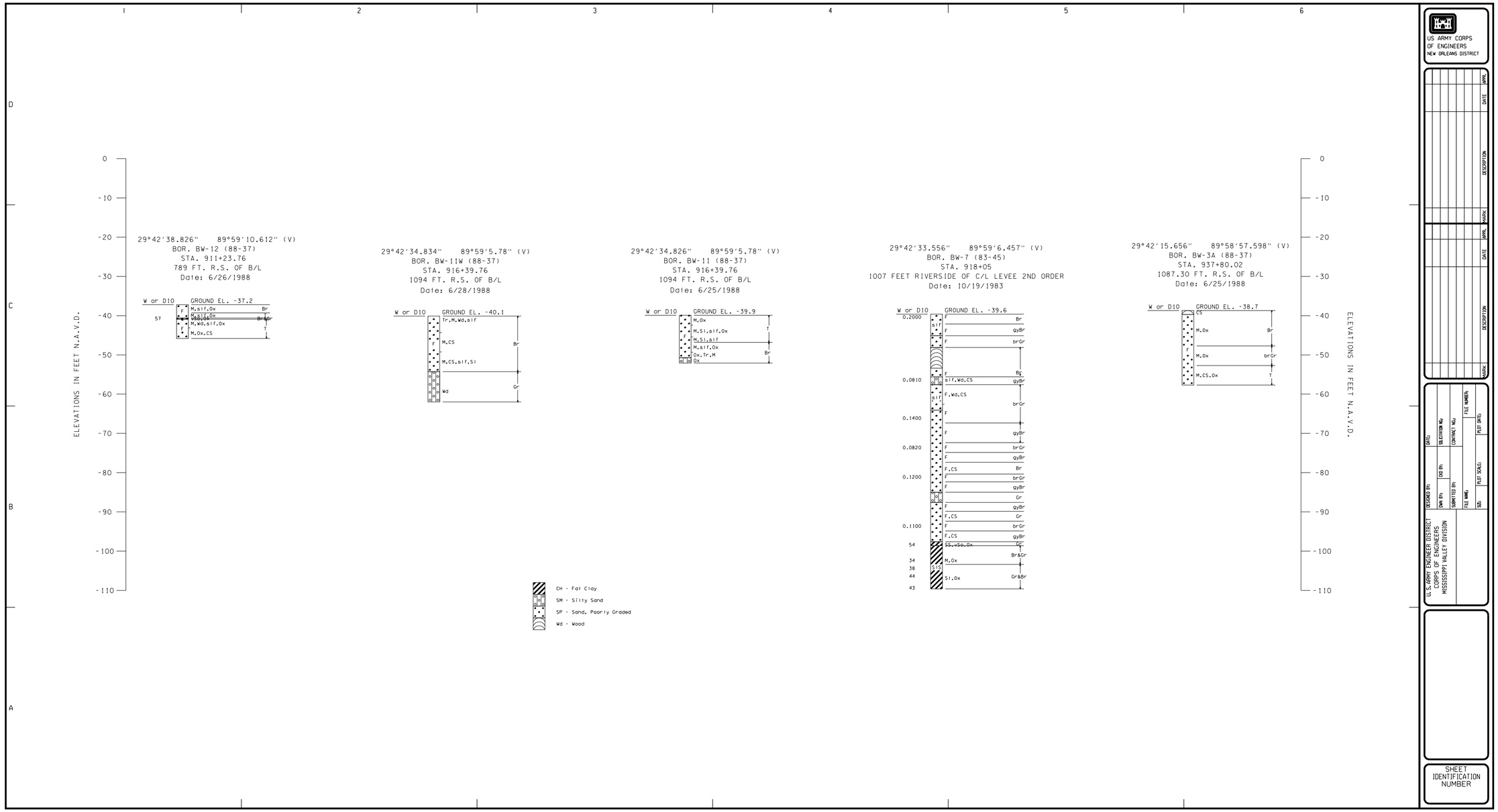
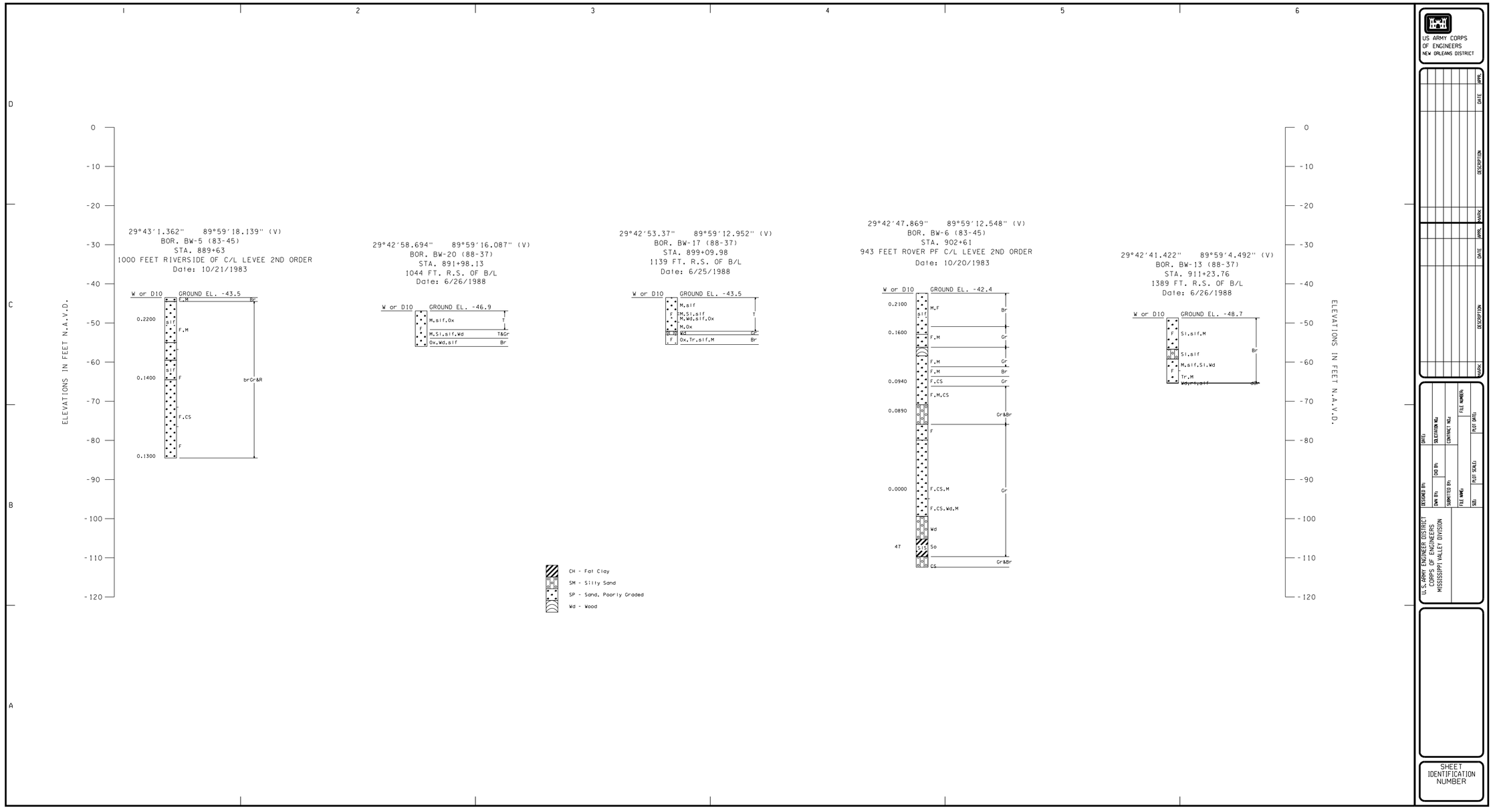


“Confidential Information: Privileged & Confidential Work Product”



“Confidential Information: Privileged & Confidential Work Product”



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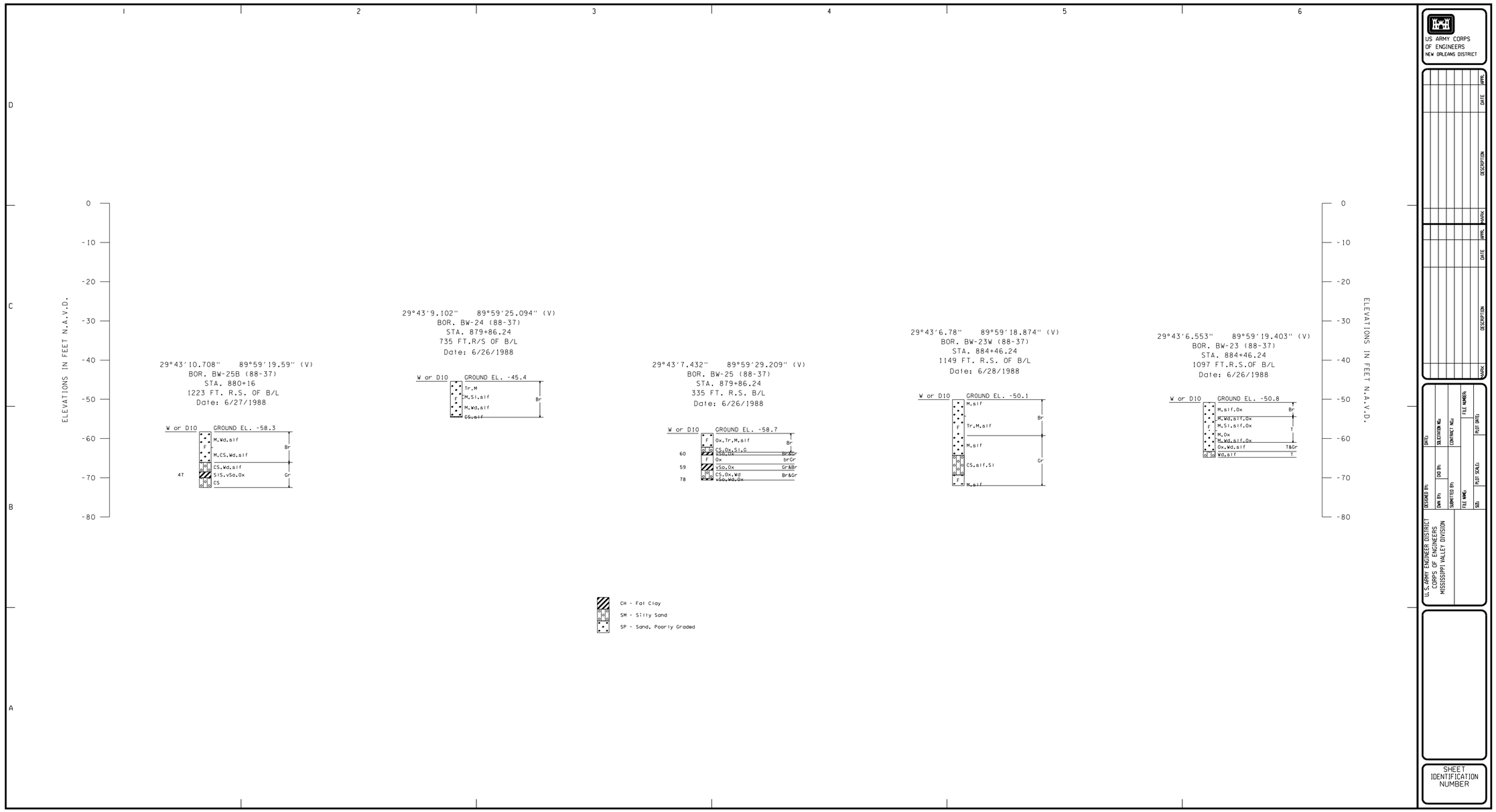
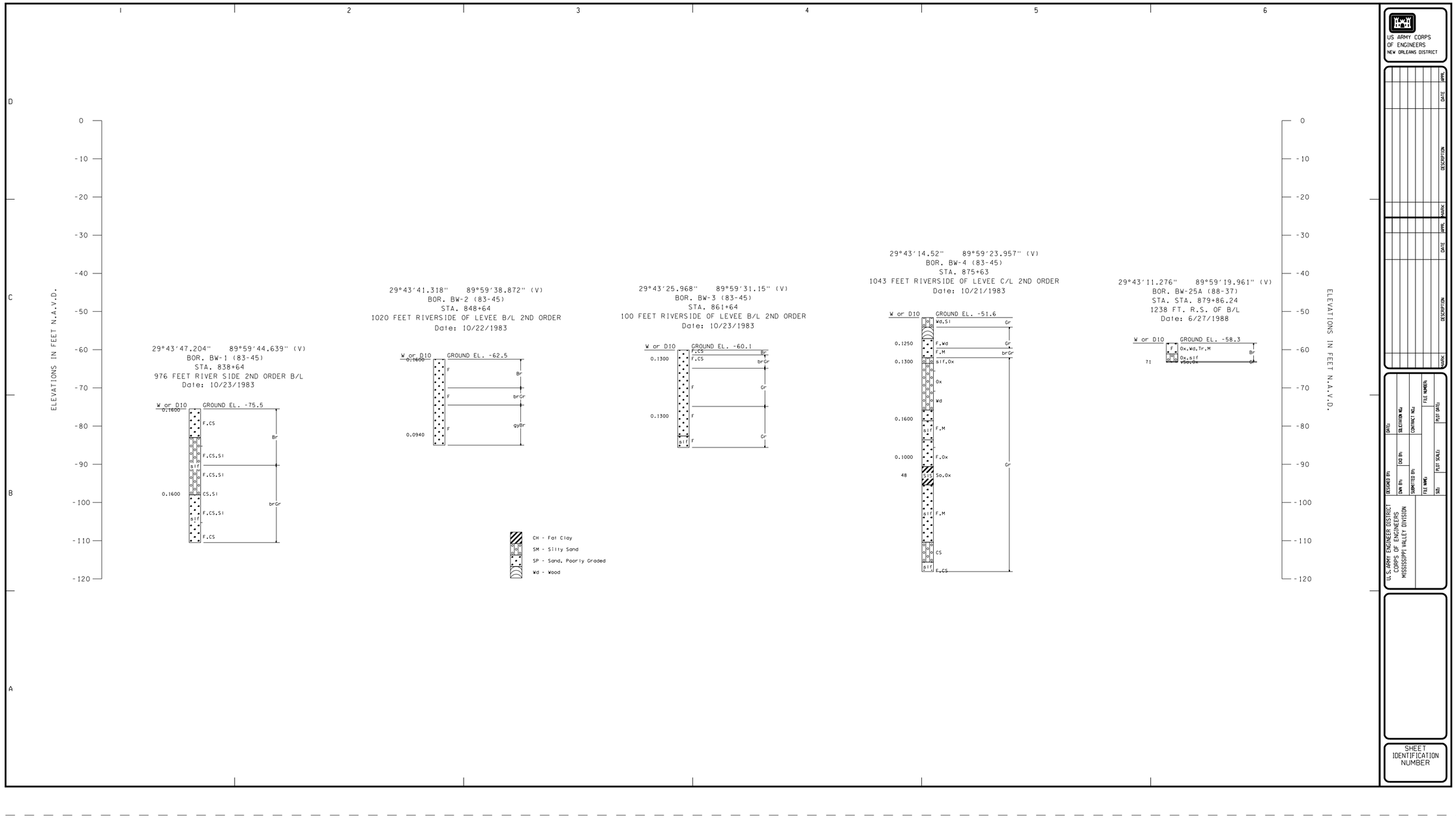


“Confidential Information: Privileged & Confidential Work Product”



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(76-MHUT)
For log see plate 39

BOR. 78-MH
STA. 877+00
ON C/L LEVEE
2-6 SEPT 1966

BOR. 77-MH
STA. 905+00
50 FT L.S. OF C/L
2 SEPT 1966

BOR. R-64.5-R
STA. 909+00
78 FT. R.S.
10 SEP 69

BOR. 75-MH
STA. 955+00
ON C/L LEVEE
26 AUG. 1966

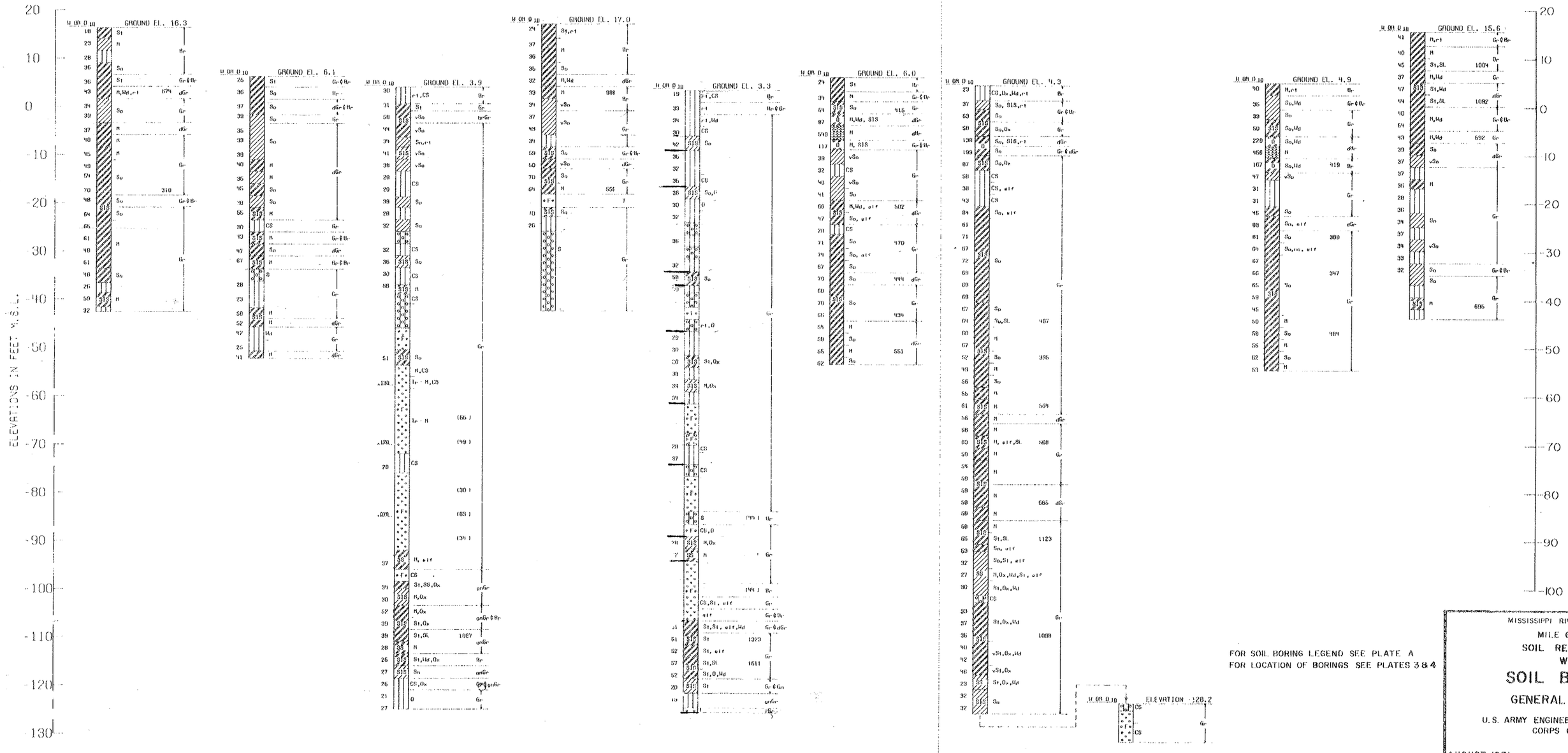
BOR. R 63.5-R
STA. 969+00
175 FT. R.S.
19 SEP 69

BOR. 74-MH
STA. 981+00
55 FT. L.S. OF C/L LEVEE
25 AUG 1966

BOR. R-62.9-R
STA. 1001+50
200 FT. R.S.
23 SEP 69

BOR. 73-MH
STA. 1007+00
47 FT. R.S. OF C/L LEVEE
25 AUG 1966

BOR. 72-MH
STA. 1033+00
ON C/L LEVEE
24 AUG 1966



FOR SOIL BORING LEGEND SEE PLATE A
FOR LOCATION OF BORINGS SEE PLATES 3 & 4

MISSISSIPPI RIVER LEVEES
MILE 66 TO MIL
SOIL REPORT -- F
WEST BAN
SOIL BORING
GENERAL TYPE
U.S. ARMY ENGINEER DISTRIC
CORPS OF ENGINE
AUGUST 1971

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GeoEngineers

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APPENDIX G
Report Limitations and Guidelines for Use

APPENDIX G
REPORT LIMITATIONS AND GUIDELINES FOR USE[1]

This appendix provides information to help you manage your risks with respect to the use of this report.

Geotechnical Services Are Performed for Specific Purposes, Persons and Projects

This report has been prepared for HDR, Inc. (HDR) and their authorized agents and regulatory agencies. The information contained herein is not applicable to other sites.

GeoEngineers structures our services to meet the specific needs of our clients. No party other than HDR, Inc. may rely on the product of our services unless we agree to such reliance in advance and in writing. This is to provide our firm with reasonable protection against open-ended liability claims by third parties with whom there would otherwise be no contractual limits to their actions. Within the limitations of scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and generally accepted geotechnical practices in this area at the time this report was prepared. Use of this report is not recommended for any purpose or project except the one originally contemplated.

A Geotechnical Data Report Is Based on a Unique Set of Project-Specific Factors

This report has been prepared for the Mid Barataria Diversion (BA-153) project in Myrtle Grove, Louisiana. GeoEngineers complied the data report based on information provided by other agencies/companies. Unless GeoEngineers specifically indicates otherwise, it is important not to rely on this report if it was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

For example, changes that can affect the applicability of this report include those that affect:

- the function of the proposed structure;
- elevation, configuration, location, orientation or weight of the proposed structure;
- composition of the design team; or
- project ownership.

If important changes are made after the date of this report, we recommend that GeoEngineers be given the opportunity to review our interpretations and recommendations. Based on that review, we can provide written modifications or confirmation, as appropriate.

[1] Developed based on material provided by ASFE, Professional Firms Practicing in the Geosciences; www.asfe.org.

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Subsurface Conditions Can Change

This geotechnical or geologic data report is based on information available at the time the study was performed. The findings and conclusions of this data report may be affected by the passage of time, by man-made events such as construction on or adjacent to the site, or by natural events such as floods, earthquakes, slope instability or groundwater fluctuations. If more than a few months have passed since issuance of our report or work product, or if any of the described events may have occurred, please contact GeoEngineers before applying this report for its intended purpose so that we may evaluate whether changed conditions affect the continued reliability or applicability of our data report.

Geotechnical Engineering Data Report is Not Final

The geotechnical data included in this report are those provided by others to GeoEngineers and should not be considered final. GeoEngineers is unable to assume responsibility for the data provided in this report.

A Geotechnical Data Report Could Be Subject to Misinterpretation

Misinterpretation of this data report by members of the design team or by contractors can result in costly problems. GeoEngineers can help reduce the risks of misinterpretation by conferring with appropriate members of the design team after submitting the data report.

Do Not Redraw the Exploration Logs

Geotechnical engineers and geologists complied the boring and testing logs based upon information provided by other agencies/companies. The logs included in this geotechnical data report should never be redrawn for inclusion in architectural or other design drawings. Photographic or electronic reproduction is acceptable, but separating logs from the report can create a risk of misinterpretation.

Read These Provisions Closely

It is important to recognize that the geoscience practices (geotechnical engineering, geology and environmental science) are less exact than other engineering and natural science disciplines. Without this understanding, there may be expectations that could lead to disappointments, claims and disputes. GeoEngineers includes these explanatory "limitations" provisions in our reports to help reduce such risks. Please confer with GeoEngineers if you need to know more how these "Report Limitations and Guidelines for Use" apply to your project or site.

Biological Pollutants

GeoEngineers' Scope of Work specifically excludes the investigation, detection, prevention or assessment of the presence of Biological Pollutants. Accordingly, this data report does not include any interpretations, recommendations, findings or conclusions regarding the detecting, assessing, preventing or abating of Biological Pollutants, and no conclusions or inferences should be drawn regarding Biological Pollutants as they may relate to this project. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria and viruses, and/or any of their byproducts.

A Client that desires these specialized services is advised to obtain them from a consultant who offers services in this specialized field.

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Have we delivered World Class Client Service?
Please let us know by visiting **www. geoengineers.com/feedback**.

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