HSDRRRS

Hurricane Storm Damage Risk Reduction System
New Orleans Topography

City of New Orleans Ground Elevations

From Canal St. at Mississippi River to the Lakefront at U.N.O.

ELEVATIONS IN FEET NGVD

-20 -10 0 10 20 30

FLOODWALL ALONG MISSISSIPPI RIVER

LONDON AVENUE CANAL FLOODWALL

HURRICANE LEVEE / FLOODWALL (14.0 FEET)

MR&T PROJECT DESIGN FLOWLINE (18 FEET)

LAKE PONCHARTRAIN

NEW ORLEANS

GENTILLY BLVD AT ALLEN
DIALLRD UNIV CAMPUS
ST ANTHONY AT FILMORE AVE
WAINRIGHT DR AT L. C. SIMON
UNO SIDE OF WAINRIGHT DR

WAINRIGHT DR

UNO SIDE OF WAINWRIGHT DR

DILLARD UNIV CAMPUS
ST ANTHONY AT FILMORE AVE
WAINRIGHT DR AT L. C. SIMON

ST LOUIS CATHEDRAL
ESPLANADE AT ST. CLAUDE
DERBIGNY AT 1-10

MISSISSIPPI

CANAL ST AT RIVER

RIVER BANK

23 FT
Lesson Learned:

**PROTECT THE PERIMETER**
Permanent Canal Closures & Pump Stations

INTERIM PUMPS: 9,200 cfs
PERMANENT PUMPS: 12,600 cfs

37%↑
INTERIM PUMPS: 2,200 cfs
PERMANENT PUMPS: 2,700 cfs

23% increase
INTERIM PUMPS: 5,200 cfs  
PERMANENT PUMPS: 9,000 cfs  
73%
Navigable Width: 95’
2 Lift Gates: 50’ wide each
Height: 16’ above sea level
Sill Depth: 18’ below sea level
Canal (normal water level)

Wall

Levee

Steel Sheet Pile

Canal

T-Wall

Levee

Sheet Piling
LPV
LAKE PONTCHARTRAIN AND VICINITY
LPV
LAKE PONTCHARTRAIN AND VICINITY

WBV
WESTBANK AND VICINITY
PERIMETER: 133 Miles

TOTAL: 350 miles with interior levees/floodwalls

75 Pump Stations

Total Pumping Capacity: 8 Million cfs

TOTAL COST: $14+ Billion
SECTOR GATE
BARGE GATE
Each 150' wide

LIFT GATE
56' wide

COST:
$1.1 Billion
Largest continuous surge barrier in the world: 1.8 miles

647 Battery Piles
248’ long – 3’ diameter

1,271 Concrete Cylinder Piles (144’ long - 66” diameter)
2,512 Closure Piles (60’ long - 18” X 18”)

[Image of a bridge with structural details]
26' ABOVE Sea Level
Steel Batter Piles

- 3’ diameter
- 26’ ABOVE Sea Level
- 129’ below waterline
- 190’ below waterline
VIDEO OF SURGE BARRIER

https://www.floodauthority.org/videos/
Removed more than 25 miles of levees and floodwalls from direct surge impact

WEST CLOSURE COMPLEX

11 PUMPS
Total HP: 60,000

-- 225' --
32' Tall

5 Sluice Gates
16' X 16'

WCC COST:
~ $1 Billion
Largest Pump Station in the World

CAPACITY:
19,426 cfs
1,165,560 cf/minute