

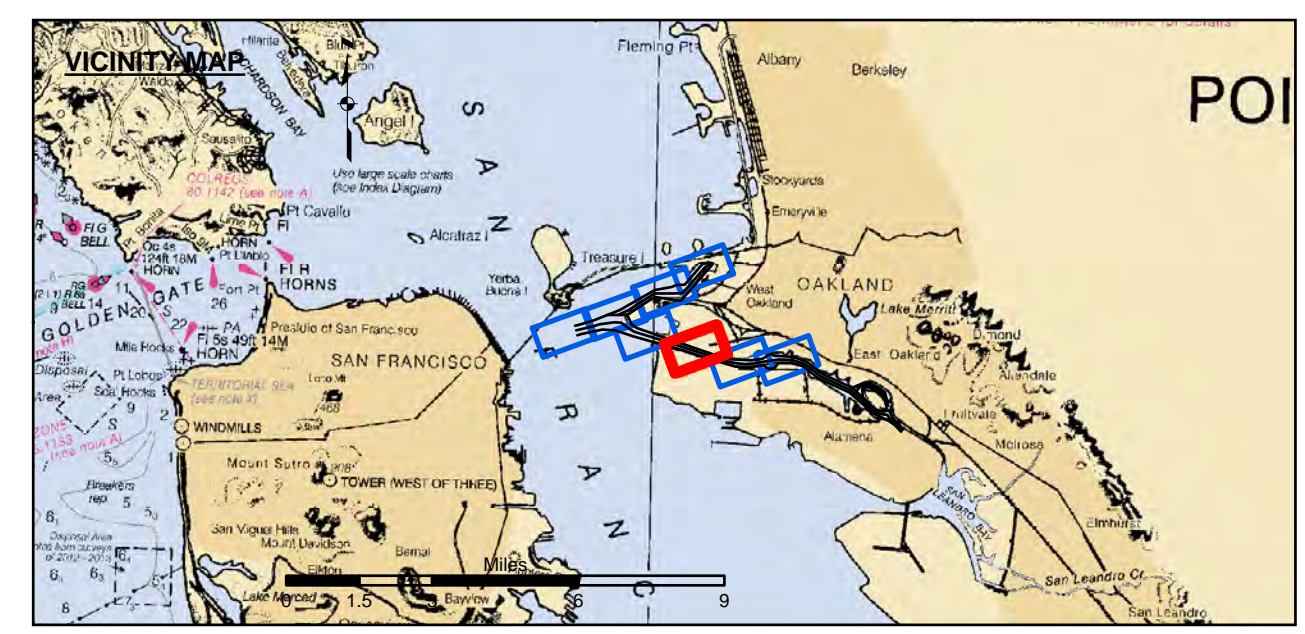
US Army Corps of Engineers
 San Francisco District
 1455 Market Street
 San Francisco, CA 94103

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Prepared Under the Direction of	Chart Date
TRAVIS J. RAYFIELD	Jan 25, 2019
Submittal	Designed by:
Hydro Survey Team Leader	
Recommended:	Checked By:
Navigation Technical Manager	
Approved:	Drawn by:
Project Manager	

ALAMEDA COUNTY
OAKLAND HARBOR
 REACH 3
 POST-DREDGE SURVEY
 22 JANUARY 2019

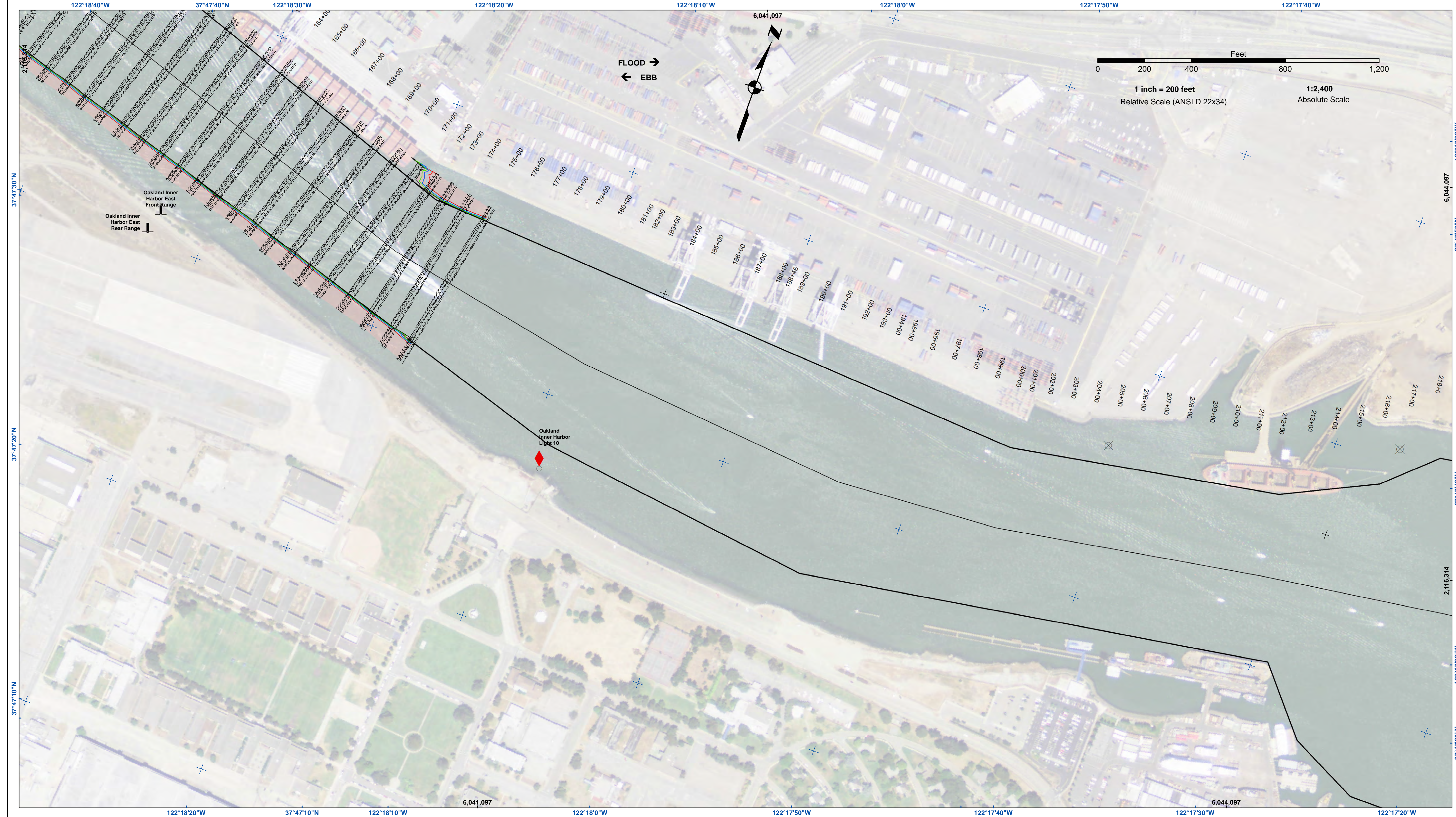
Sheet Reference Number
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Federal Navigation Channel	Beacon, General	Contours
Shoaling Area	Obstruction Point	-50
Placement Area	Navigation Buoy	-49
Anchorage Area	Navigation Buoy	-48
Wreck Area	Shoalest Sounding*	-47
Submerged Wreck		-46
Angle Point		

NOTES:
 HORIZONTAL COORDINATE SYSTEM: NORTH AMERICAN DATUM OF 1983 (NAD83), PROJECTED TO THE STATE PLANE COORDINATE SYSTEM (SPCS), CALIFORNIA ZONE III. DISTANCE UNITS IN U.S. SURVEY FEET.
 VERTICAL DATUM: SOUNDINGS ARE SHOWN IN FEET AND INDICATE DEPTHS BELOW MEAN LOWER LOW WATER. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY CONDUCTED ON THE DATE INDICATED AND CAN ONLY BE CONSIDERED TO REPRESENT THE GENERAL CONDITION EXISTING AT THAT TIME.
 SOUNDINGS WERE TAKEN BY FATHOMETER AND ARE SHOWN TO THE NEAREST TENTH OF A FOOT. SOUNDINGS ARE BASED ON THE DATUM OF MEAN LOWER LOW WATER AT THE LOCALITY.
 SURVEYED BY THE CORPS OF ENGINEERS. BASE MAPS ARE USDA NAIP 2010.
 *SHOALEST SOUNDING PER QUARTER PER REACH

THE LOCATION OF ALL NAVIGATION AIDS ARE BASED ON INFORMATION PROVIDED BY THE U.S. COAST GUARD. BUOY LOCATIONS REPRESENT THE POSITION OF THE SINKER ONLY. THE PROJECT DEPTHS ARE AS FOLLOWS:
 OUTER AND INNER HARBOR IS -50 FEET
 INNER HARBOR TURNING BASIN TO PARK STREET BRIDGE IS -35 FEET
 TIDAL CANAL PROJECT DEPTH IS -18 FEET
 PLANE GRID AND COORDINATES ARE BASED ON LAMBERT PROJECTION, NAD 83, ZONE III CALIFORNIA AS DESCRIBED IN SPECIAL PUBLICATION NO. 235, PUBLISHED BY THE NATIONAL OCEAN SERVICE.
 HORIZONTAL CONTROL: PRIMARY: RTK POSITIONING SECONDARY: COAST GUARD DGPS D-BEACON
 VERTICAL CONTROL: PCIP: PORT 1 1936/PID HT0854, SET AT SOUTH END OF CLAY STREET, AT THE PORT OF OAKLAND CLAY STREET PIER. ELEVATION: 9.56 FEET MLLW - PUBLISHED 21 APR 2003 ON NOAA STATION 941 4764 TIDE GAUGE LOCATION IS CHISEL MARK APPROX. 10 FEET WEST ON TOP OF CONCRETE CURB; CHISEL ELEVATION 11.0 FEET MLLW. LPOP 1: 941 4777 B TIDAL/PID AE211, OAKLAND INNER REACH 1-3 DISK SET IN BALLARD FOUNDATION NEAR THE NORTHEAST END OF BERTH 40 OF THE OAKLAND MIDDLE HARBOR. ELEVATION: 13.48 FEET MLLW - DERIVED FROM WGS-84 ELLIPSOID ELEVATION, GEOID09 AND VDUTUM MODELS. TIDE GAUGE LOCATION IS IN FACE OF PILING AT BERTH 37; NAIL ELEVATION 9.7 FEET MLLW. LPOP 2: OAK OUTER 1 2012/PID, OAKLAND OUTER REACH 7-10 DISK SET IN PARKING LOT AT PIER 6/ANNVY TUG TERMINAL AT THE EDGE OF THE PIER. ELEVATION: 14.04 FEET MLLW - DERIVED FROM WGS-84 ELLIPSOID ELEVATION, GEOID09 AND VDUTUM MODELS. TIDE GAUGE LOCATION IS IN FACE OF PILING AT PIER 6, 10' EAST OF BENCHMARK; NAIL ELEVATION 10.1 FEET MLLW.

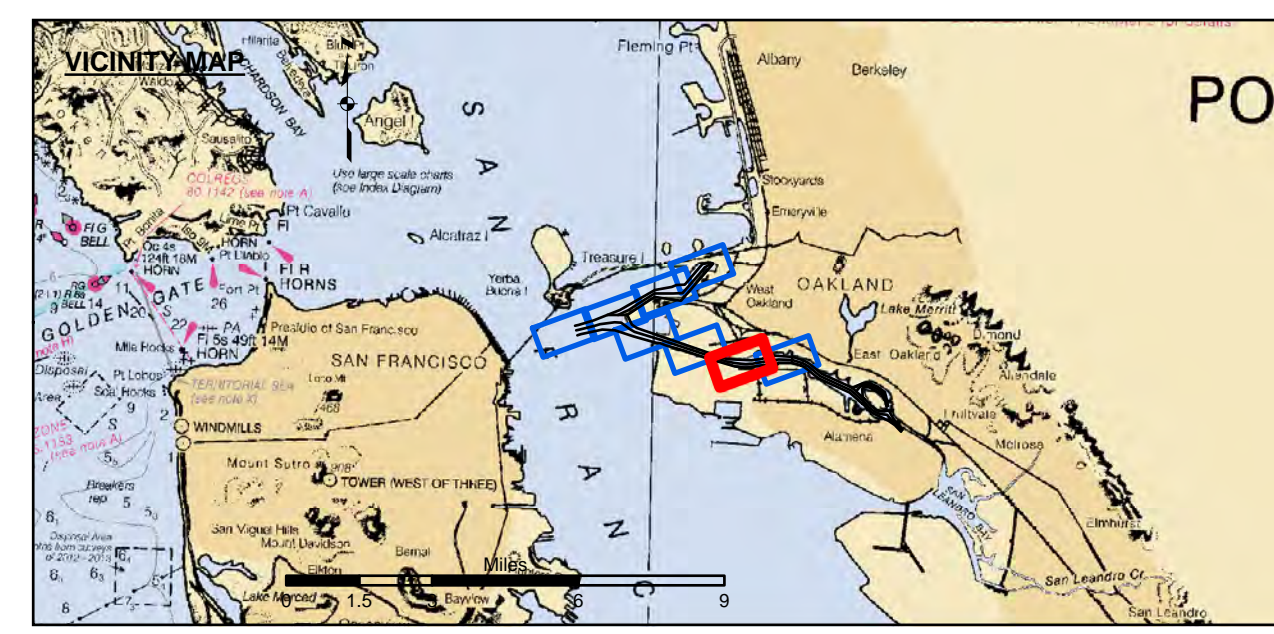


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Chart Date:	Jan 25, 2019
Designed by:	
Drawn by:	
Surveyed By:	
Plotted By:	
Checked By:	
Approved:	

ALAMEDA COUNTY
OAKLAND HARBOR
 REACH 3
 POST-DREDGE SURVEY
 22 JANUARY 2019

Sheet
Number
7 of 8



- | | | |
|----------------------------|--------------------|----------|
| Federal Navigation Channel | Beacon, General | Contours |
| Shoaling Area | Obstruction Point | -50 |
| Placement Area | Navigation Buoy | -49 |
| Anchorage Area | Navigation Buoy | -48 |
| Wreck Area | Shoalest Sounding* | -47 |
| Submerged Wreck | | -46 |
| Angle Point | | |

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 HORIZONTAL COORDINATE SYSTEM: NORTH AMERICAN DATUM OF 1983 (NAD83), PROJECTED TO THE STATE PLANE COORDINATE SYSTEM (SPCS), CALIFORNIA ZONE III. DISTANCE UNITS IN U.S. SURVEY FEET.
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 PLANE GRID AND COORDINATES ARE BASED ON LAMBERT PROJECTION, NAD 83, ZONE III CALIFORNIA AS DESCRIBED IN SPECIAL PUBLICATION NO. 235, PUBLISHED BY THE NATIONAL OCEAN SURVEY.
 HORIZONTAL CONTROL:
 PRIMARY: RTK POSITIONING
 SECONDARY: COAST GUARD DGPS D-BEACON
 VERTICAL CONTROL:
 PRCP: PORT 1 1936/PID HT0654
 OAKLAND INNER REACH #46 DISK - SET AT SOUTH END OF CLAY STREET, AT THE PORT OF OAKLAND CLAY STREET PIER. ELEVATION: 9.56 FEET MLLW - PUBLISHED 21 APR 2003 ON NOAA STATION 941 4764 TIDE GAUGE LOCATION IS CHISEL MARK APPROX. 10 FEET WEST ON TOP OF CONCRETE CURB; CHISEL ELEVATION 11.0 FEET MLLW.
 LPOC 1: 941 4777 B TIDAL/PID AE211, OAKLAND INNER REACH 1-3 DISK SET IN BALLARD FOUNDATION NEAR THE NORTHEAST END OF BERTH 40 OF THE OAKLAND MIDDLE HARBOR.
 ELEVATION: 13.48 FEET MLLW - DERIVED FROM WGS-84 ELLIPSOID ELEVATION, GEOID09 AND VDUTUM MODELS
 TIDE GAUGE LOCATION IS IN FACE OF PILING AT BERTH 37; NAIL ELEVATION 9.7 FEET MLLW.
 LPOC 2: OAK OUTER 1 2012/PID OAKLAND OUTER REACH 7-10 DISK SET IN PARKING LOT AT PIER 6 AMNAV TUG TERMINAL AT THE EDGE OF THE PIER. ELEVATION: 14.04 FEET MLLW - DERIVED FROM WGS-84 ELLIPSOID ELEVATION, GEOID09 AND VDUTUM MODELS TIDE GAUGE LOCATION IS IN FACE OF PILING AT PIER 6, 10' EAST OF BENCHMARK; NAIL ELEVATION 10.1 FEET MLLW.