

- |                            |                    |          |
|----------------------------|--------------------|----------|
| 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:**  
 DRAWING NOT TO BE USED FOR NAVIGATION. ONLY CHANNEL CONDITION AT DATE OF SURVEY.  
 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.  
 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.  
 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.  
 PROJECT DEPTH OF OUTER AND INNER HARBOR IS -50 FEET.  
 PROJECT DEPTH FROM INNER HARBOR TURNING BASIN TO PARK STREET BRIDGE IS 35 FEET.  
 TIDAL CANAL PROJECT DEPTH IS 18 FEET.

**VERTICAL CONTROL:**  
 FPCP, PORT 1 1836PID HT0604.  
 OAKLAND INNER, REACH 4-6 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.  
 LPCP 1: 941 4777 B TIDALPID A5211, 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, GEIOD09 AND VDUTUM MODELS TIDE GAUGE LOCATION IS IN FACE OF PILING AT BERTH 37; NAEL ELEVATION 9.7 FEET MLLW.  
 LPCP 2: OAK OUTER 1 2012NO 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, GEIOD09 AND DATUM MODELS TIDE GAUGE LOCATION IS IN FACE OF PILING AT PIER 6, 10' EAST OF BENCHMARK; NAEL ELEVATION 10.1 FEET MLLW.

**HORIZONTAL CONTROL:**  
 PRIMARY: RTK POSITIONING  
 SECONDARY: COAST GURAD DGPS D-BEACON

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

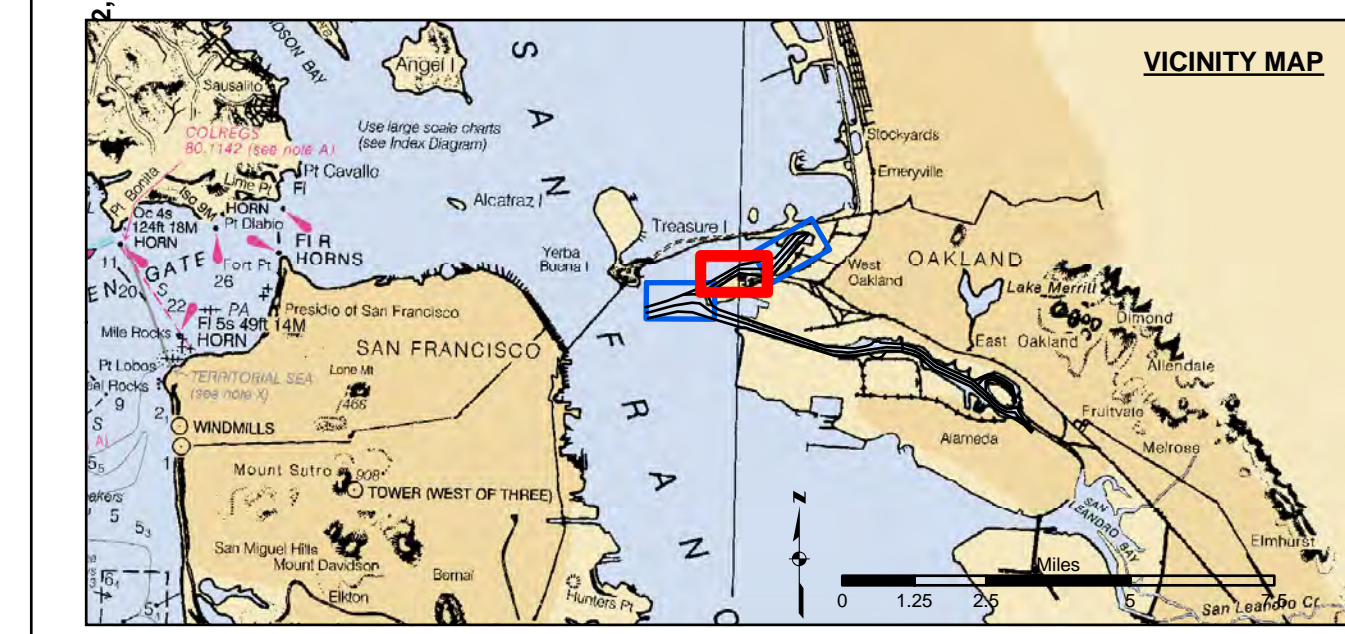
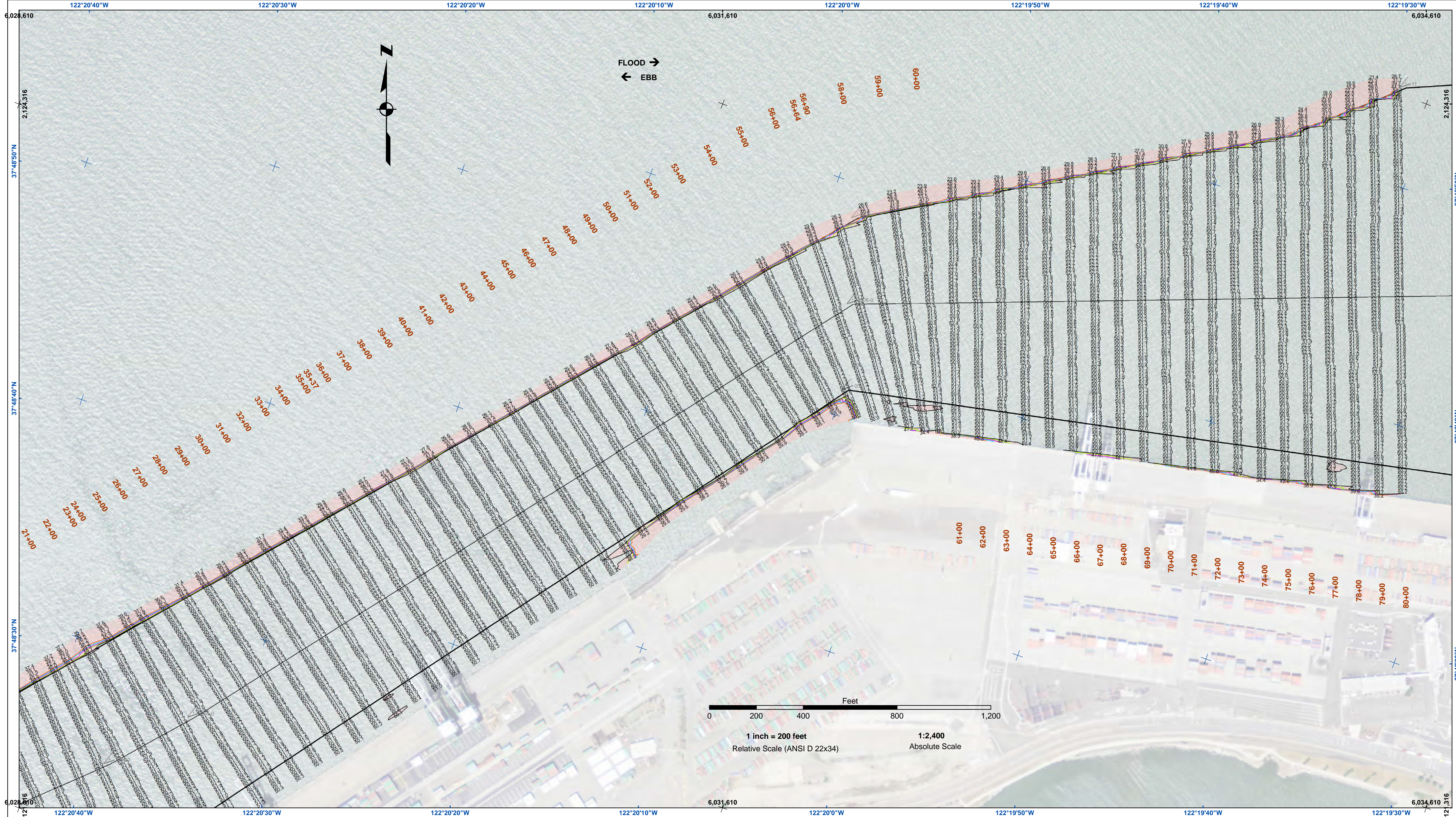
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Prepared Under the Direction of:	Chart Date:
TRAVIS J. RAYFIELD	Nov 28, 2018
Submittal:	Designed by:
Hydro Survey Team Leader	
Recommendation:	Checked by:
Navigation Technical Manager	
Approval:	Drawn by:
Project Manager	

ALAMEDA COUNTY CALIFORNIA  
**OAKLAND OUTER HARBOR**  
 REACH 7 & 8  
 POST-DREDEG SURVEY  
 5, 9, 22 & 26 OCTOBER 2018

**Sheet**  
**Reference**  
**Number**  
**1 of 3**





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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PCP: PORT 1 1836PID HT0654  
OAKLAND INNER, REACH 4-6 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.  
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**HORIZONTAL CONTROL:**  
PRIMARY: RTK POSITIONING  
SECONDARY: COAST GURAD DGPS D-BEACON



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