

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. NAVD 88.  
 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:**  
 PRCP: PORT 1 1836/PID 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.  
 LCP1: 941 4777 B TIDAL/PID 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, GEOID09 AND VDATUM MODELS TIDE GAUGE LOCATION IS IN FACE OF PILING AT BERTH 37; NAIL ELEVATION 9.7 FEET MLLW.  
 LCP2: OAK OUTER 1 2012/NO 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 DATUM MODELS TIDE GAUGE LOCATION IS IN FACE OF PILING AT PIER 6, 10' EAST OF BENCHMARK; NAIL ELEVATION 10.1 FEET MLLW.

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

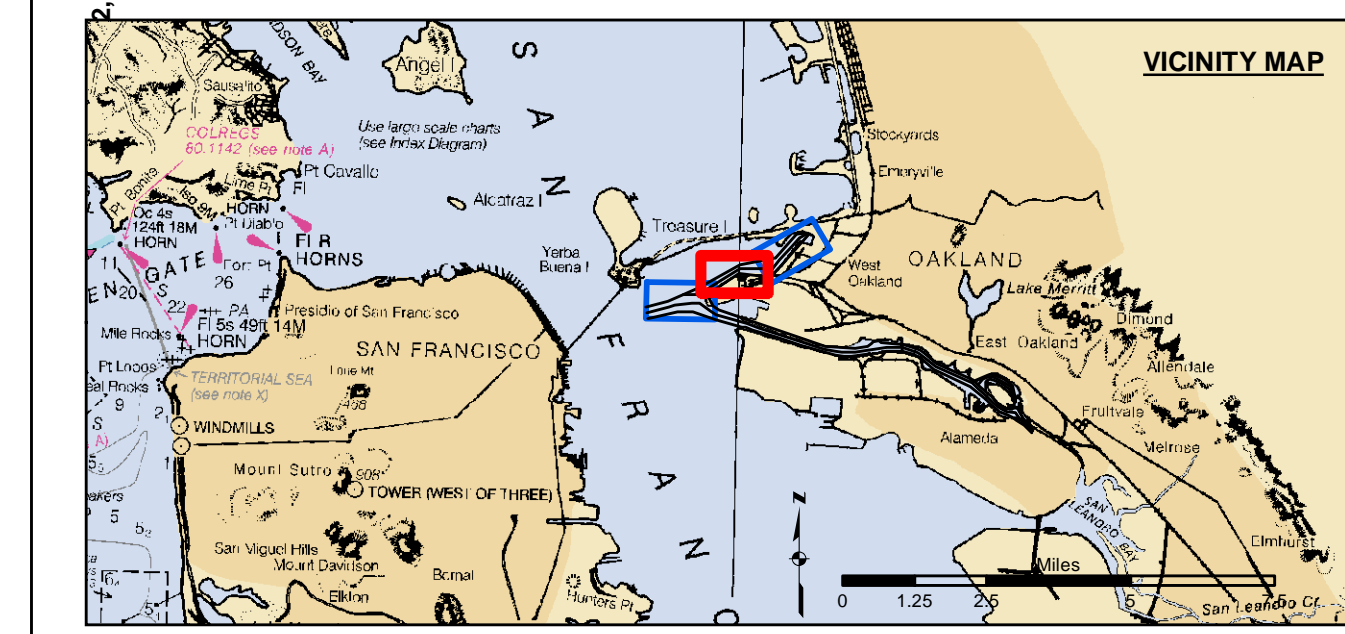
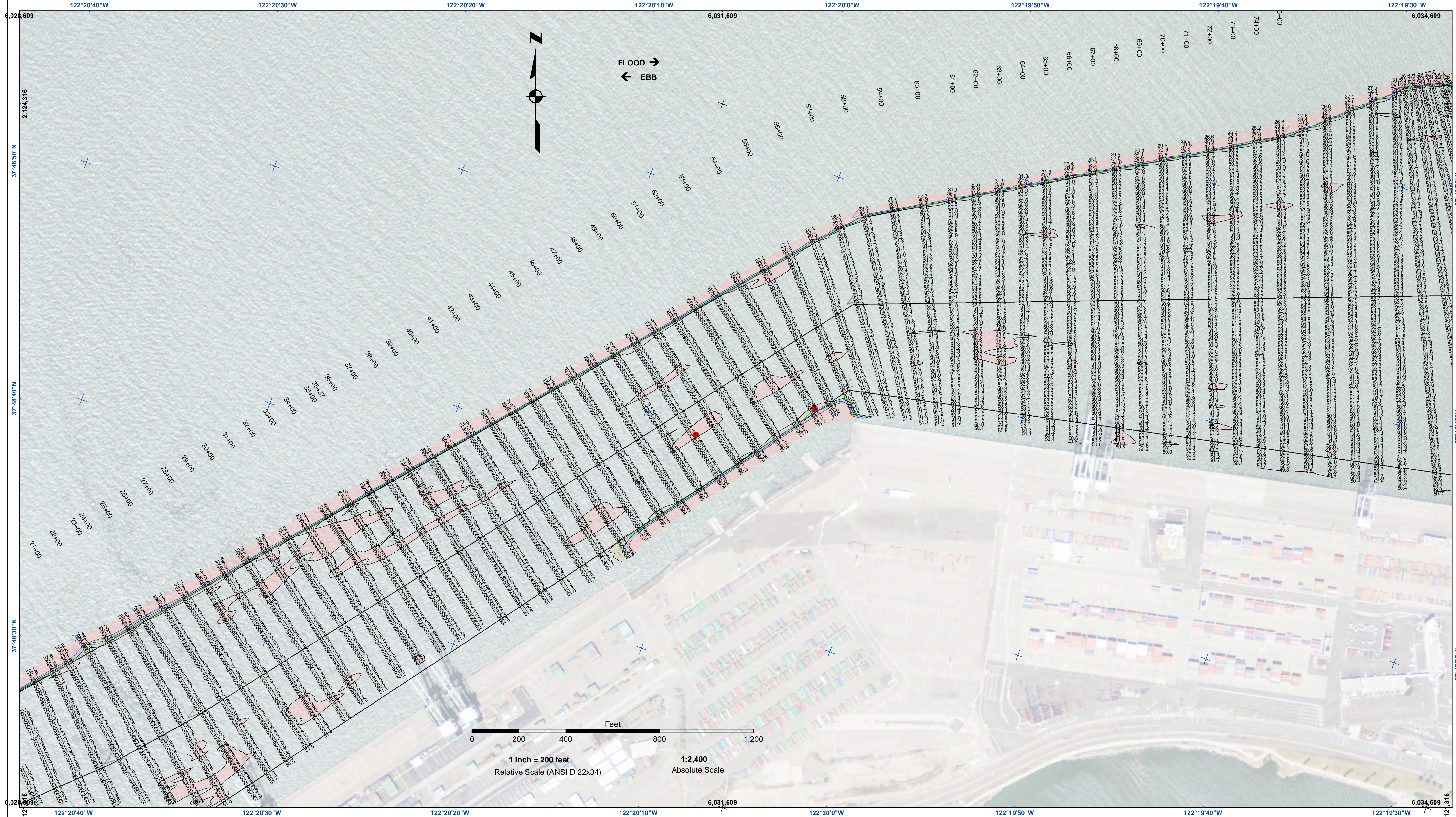
**US Army Corps of Engineers**  
 San Francisco District  
 1455 Market Street  
 San Francisco, CA 94103

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Prepared Under the Direction of:	Chart Date:
KEVIN P. ARNETT	Mar 02, 2022
Plotted By:	Designed by:
Hydro Survey Team Leader	
Navigation Technical Manager	Drawn by:
Project Manager	

ALAMEDA COUNTY  
 CALIFORNIA  
**OAKLAND HARBOR**  
 OUTER HARBOR  
 CONDITION SURVEY  
 01 MARCH 2022

**Sheet Number**  
 1 of 3



- |                            |                    |                 |
|----------------------------|--------------------|-----------------|
| Federal Navigation Channel | Beacon, General    | <b>Contours</b> |
| 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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**VERTICAL CONTROL:**  
 PROP. PORT 1 1836/PID HT8654.  
 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

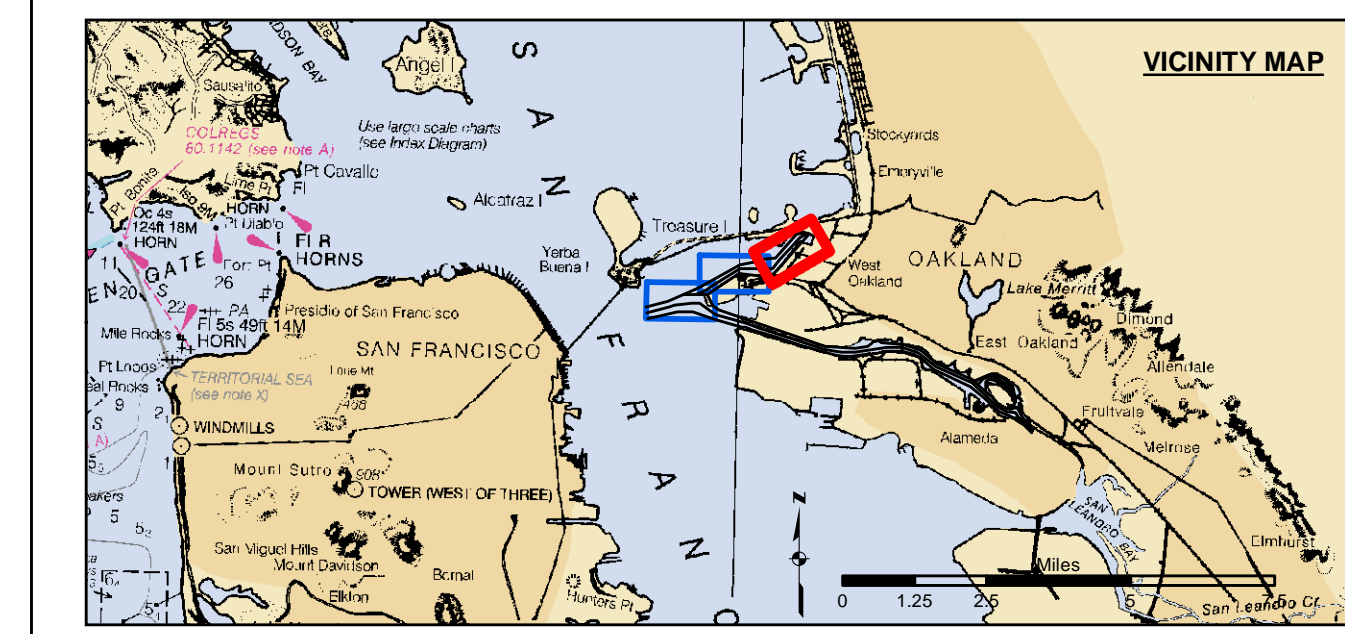
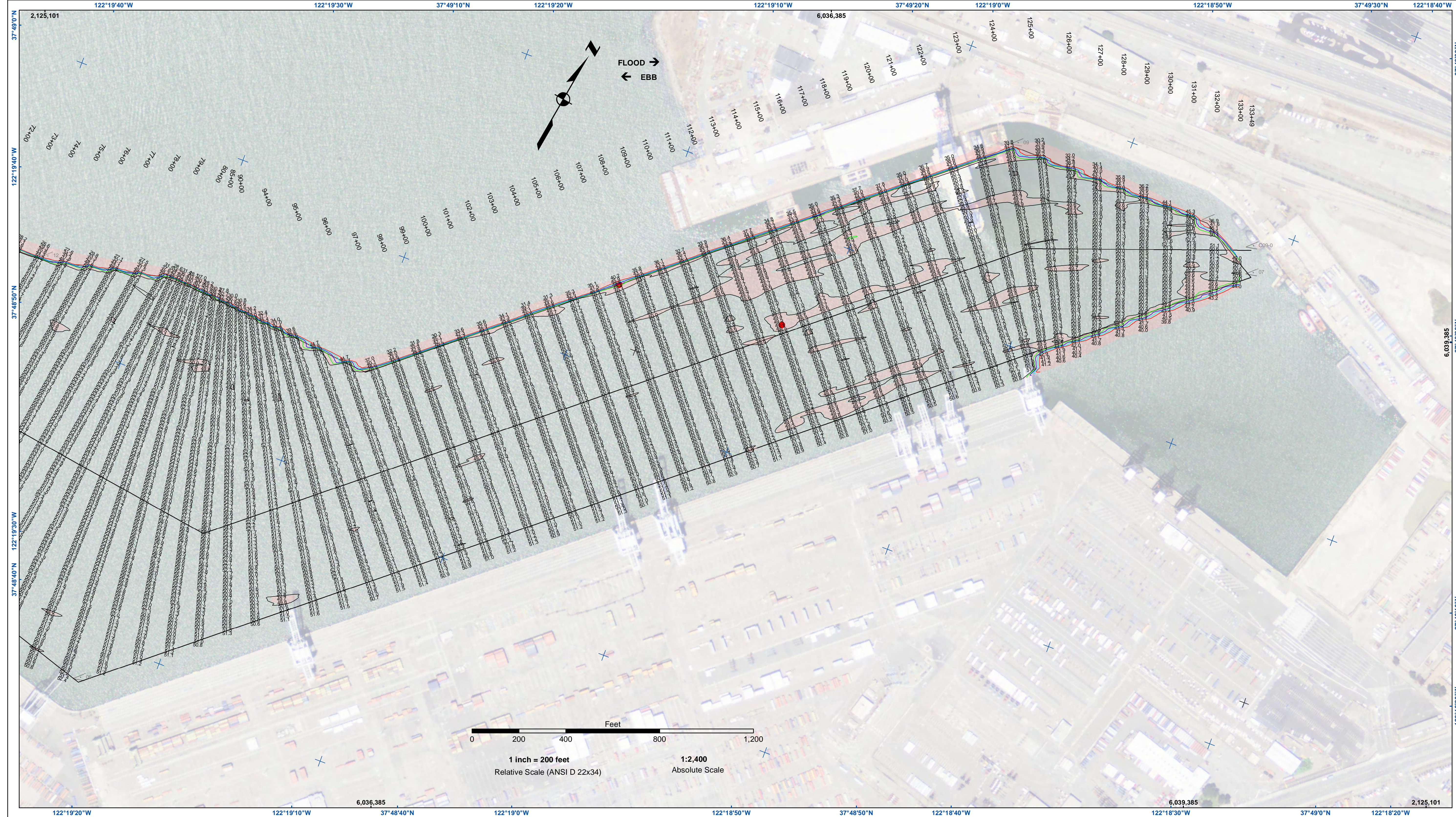


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Prepared Under the Direction of:	Chart Date:
KEVIN P. ARNETT	Mar 02, 2022
Surveyed By:	Designed by:
LT COLONEL C.E. DISTRICT ENGINEER	
Plotted By:	Drawn by:
Hydro Survey Team Leader	
Recommended:	Checked By:
Navigation Technical Manager	
Approved:	
Project Manager	

ALAMEDA COUNTY  
 OAKLAND HARBOR  
 OUTER HARBOR  
 CONDITION SURVEY  
 01 MARCH 2022

Sheet  
 Number  
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Shoaling Area	Obstruction Point	-50
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 PRIMARY: RTK POSITIONING  
 SECONDARY: COAST GUARD DGPS D-BEACON

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Prepared Under the Direction of <b>KEVIN P. ARNETT</b> LT COLONEL, C.E., DISTRICT ENGINEER	Chart Date: Mar 02, 2022
Submitted: Hydro Surveys Team Leader	Designed by:
Recommended: Navigation Technical Manager	Drawn by:
Approved: Project Manager	

CALIFORNIA  
 ALAMEDA COUNTY  
**OAKLAND HARBOR**  
 OUTER HARBOR  
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**Sheet**  
**Number**  
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