

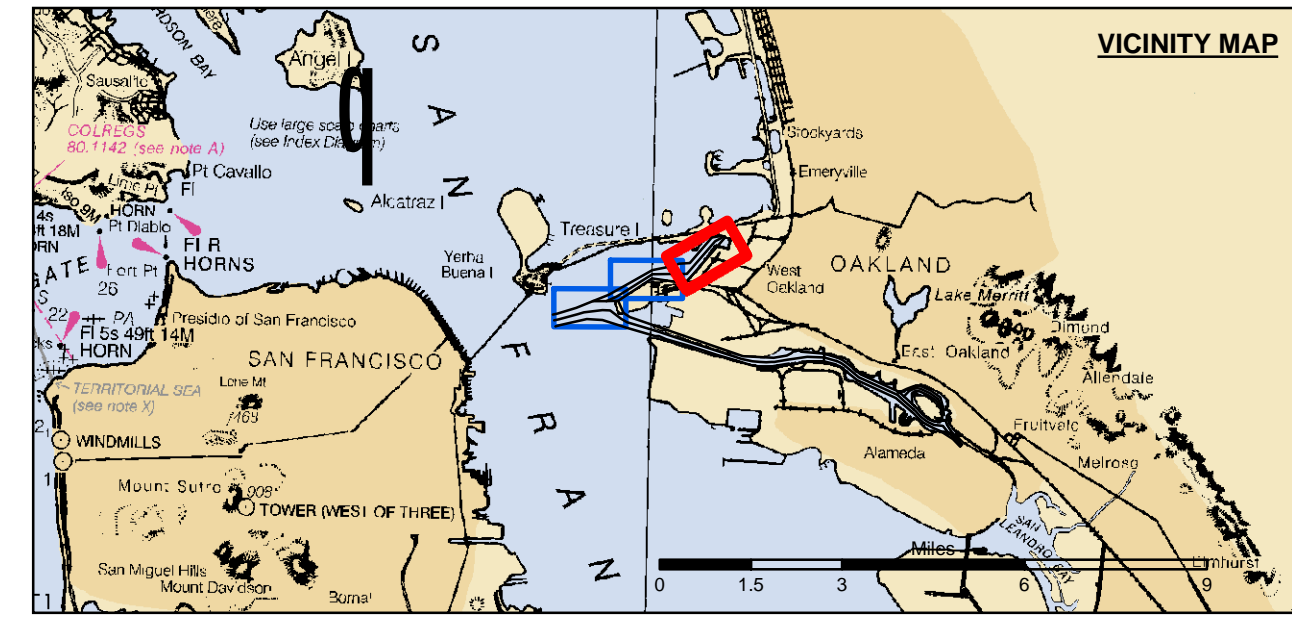
**US Army Corps of Engineers**  
 San Francisco District  
 1455 Market Street  
 San Francisco, CA 94103

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Prepared Under the Direction of	Chart Date	July 21, 2016
LT COLONEL C.E. MORROW	Designed by:	
Submittal: Hydro Survey Team Leader	Plotted by:	PDT
Recommendation: Chief, Hydro Survey Section	Checked by:	PDT
Approval: Chief, Construction Branch	Drawn by:	PDT

CALIFORNIA  
**OAKLAND OUTER HARBOR**  
 CONDITION SURVEY  
 18 JULY 2016

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



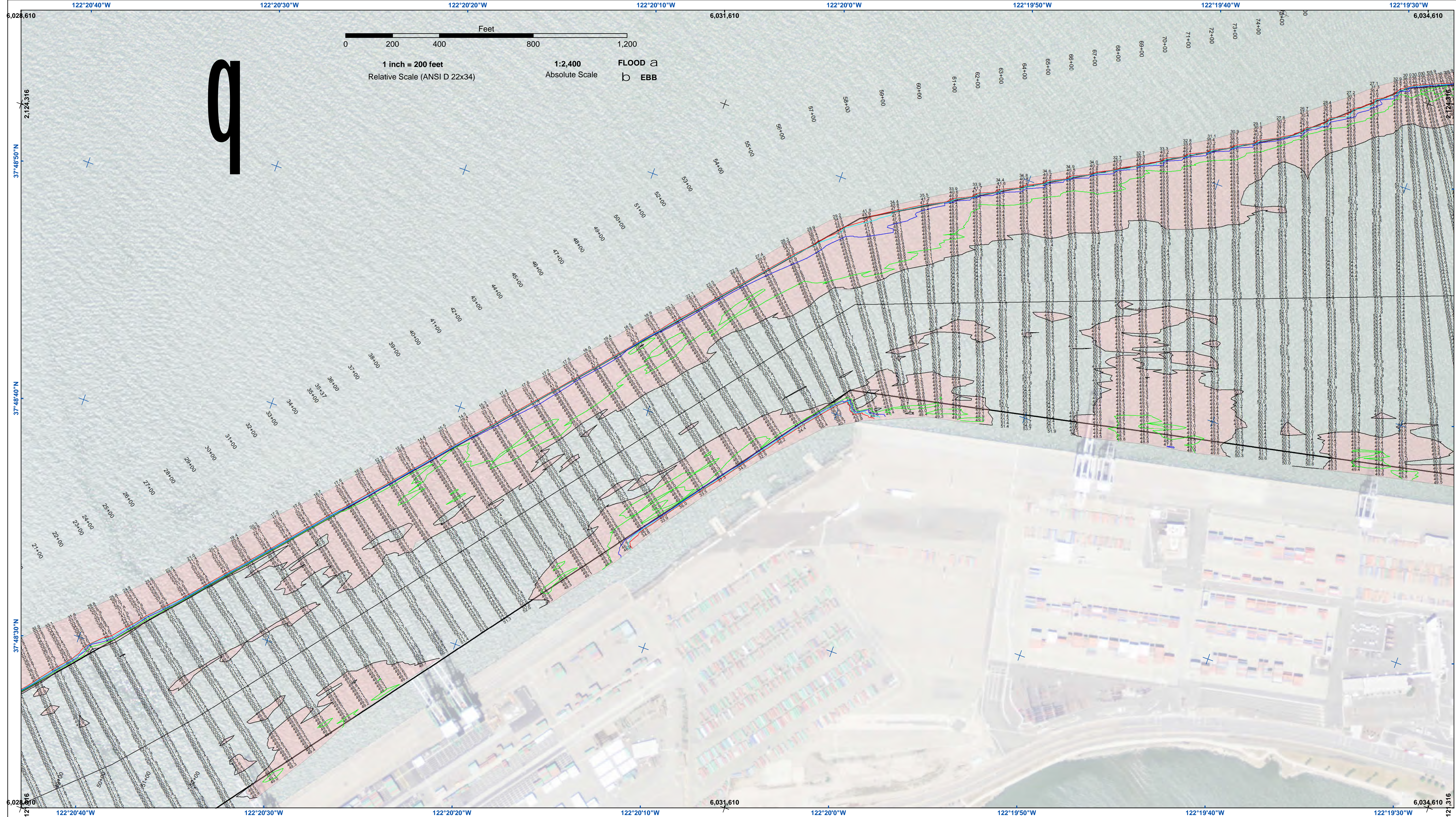
- |                            |                    |          |
|----------------------------|--------------------|----------|
| Federal Navigation Channel | Beacon, General    | Contours |
| Shoaling Area              | Obstruction Point  | -50      |
| Placement Area             | Navigation Buoy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

**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 1936PID 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 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, GEOID09 AND VDATUM MODELS TIDE GAUGE LOCATION IS IN FACE OF PILING AT BERTH 37; NAUL 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; NAUL ELEVATION 10.1 FEET MLLW.

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





0 200 400 800 1,200  
 Feet  
 1 inch = 200 feet  
 Relative Scale (ANSI D 22x34)  
 1:2,400  
 Absolute Scale  
 FLOOD a  
 b EBB

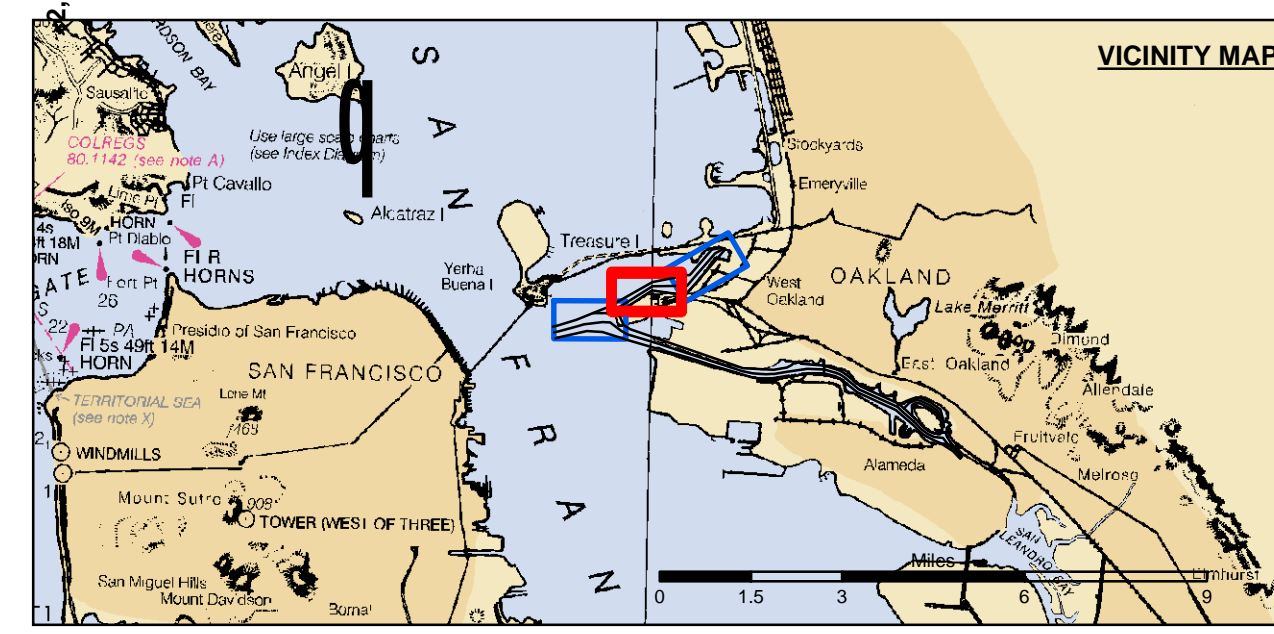
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Chart Date:	Jul 21, 2016
Surveyed By:	PDT
Plotted By:	PDT
Checked By:	PDT
Drawn by:	PDT

ALAMEDA COUNTY  
**OAKLAND OUTER HARBOR**  
 CONDITION SURVEY  
 18 JULY 2016



- Federal Navigation Channel
- Shoaling Area
- Placement Area
- Anchorage Area
- ⊗ Wreck Area
- ⊗ Submerged Wreck
- ⊗ Angle Point
- ⊥ Beacon, General
- 3/4 Obstruction Point
- ⊗ Navigation Buoy
- ⊗ Navigation Buoy
- ⊗ Shoalest Sounding\*
- Contours
- -50
- -49
- -48
- -47
- -46

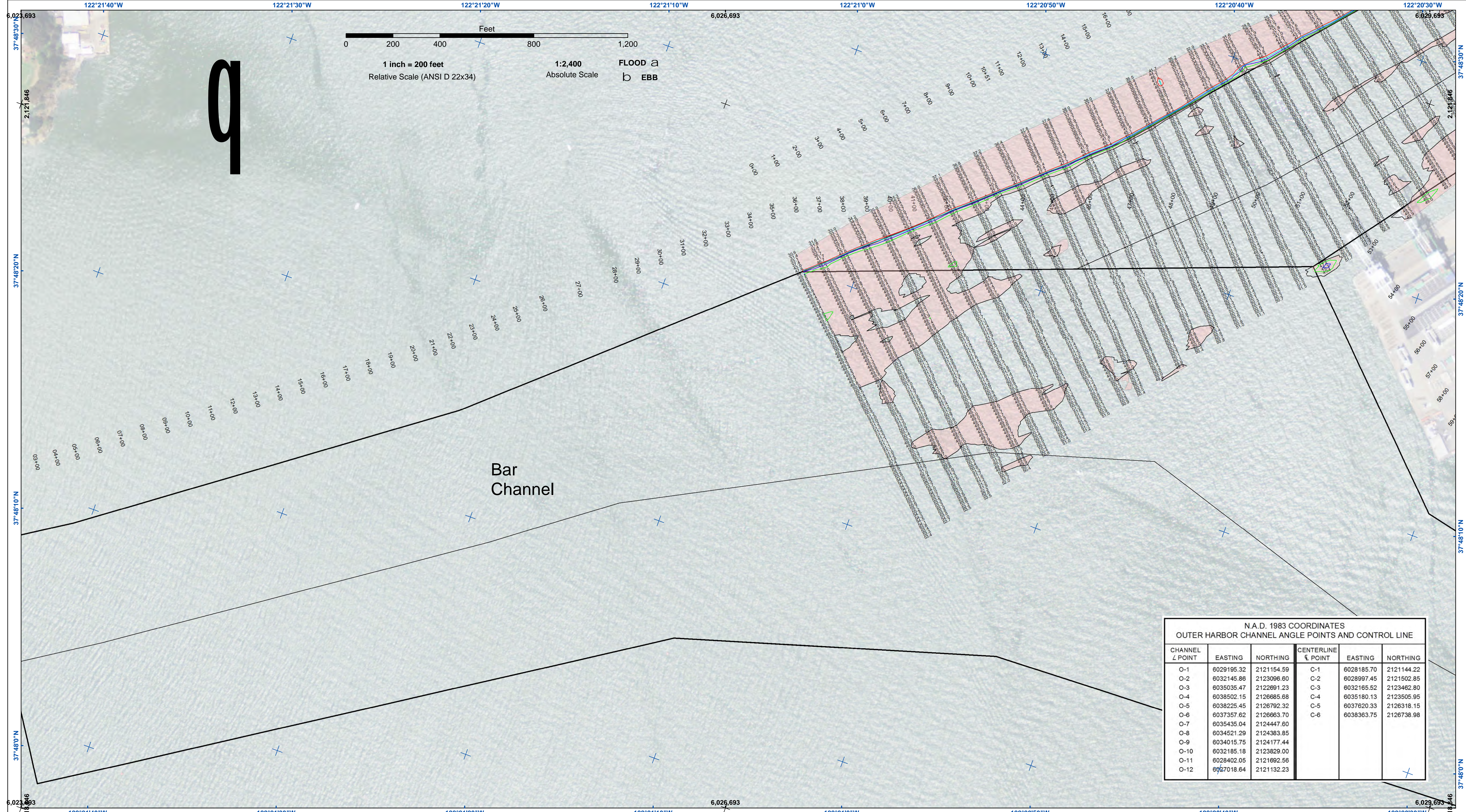
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 LCP2: OAK OUTER 1 2012NO PID, OAKLAND OUTER REACH 7-10 DISK SET IN PARKING LOT AT PIER 6 AMNAV TUG TERMINAL AT THE EDGE OF THE PIER. ELEVATION: 14.04 FEET MLLW - DERIVED FROM WGS-84 ELLIPSOID ELEVATION, GEOID09 AND DATUM MODELS TIDE GAUGE LOCATION 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

**Sheet**  
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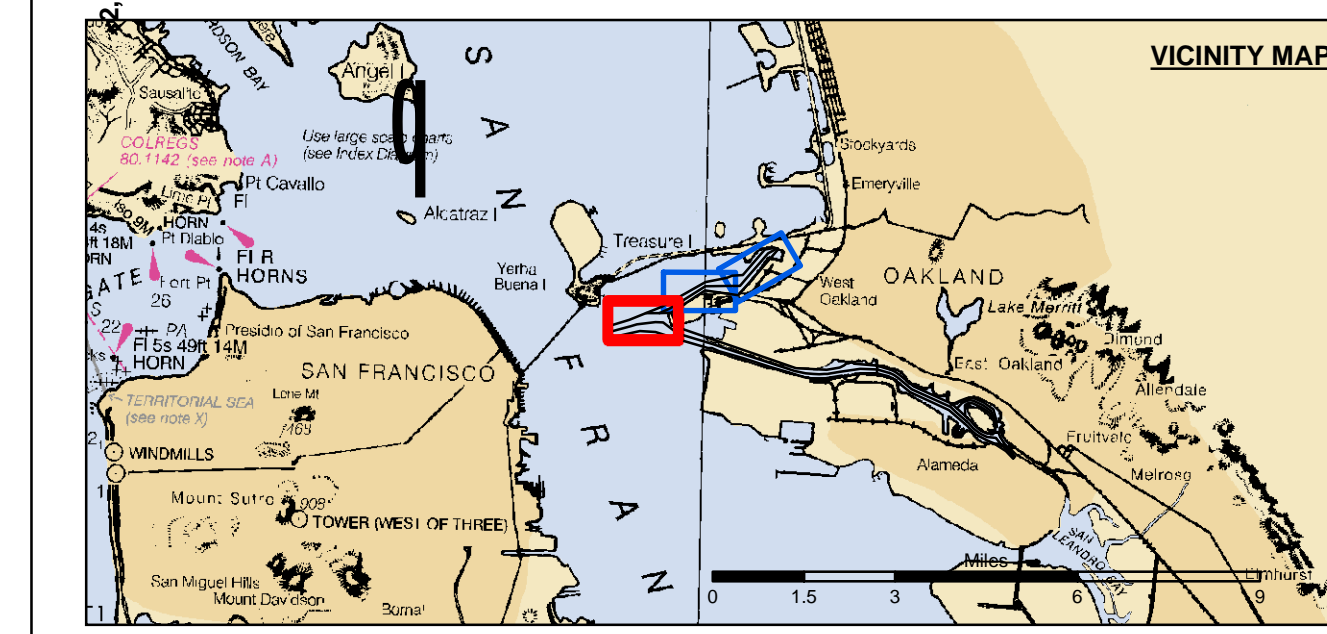




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Prepared Under the Direction of	John C. Morrow	Chart Date	Jul 21, 2016
Surveyed By	PDT	Designed by	PDT
Plotted By	PDT	Drawn by	PDT
Checked By	PDT		

CHANNEL Z POINT	EASTING	NORTHING	CENTERLINE Z POINT	EASTING	NORTHING
O-1	6029195.32	2121154.59	C-1	6028185.70	2121144.22
O-2	6032145.86	2123096.60	C-2	6028997.45	2121502.85
O-3	6035035.47	2122691.23	C-3	6032165.52	2123462.80
O-4	6038502.15	2126685.68	C-4	6035180.13	2123505.95
O-5	6038225.45	2126792.32	C-5	6037620.33	2126318.15
O-6	6037357.62	2126663.70	C-6	6038363.75	2126738.98
O-7	6035435.04	2124447.60			
O-8	6034521.29	2124383.85			
O-9	6034015.75	2124177.44			
O-10	6032185.18	2123829.00			
O-11	6028402.05	2121692.56			
O-12	6027018.64	2121132.23			



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