

PRELIMINARY ISSUE
THIS PLAN ISSUED FOR
ADVANCE INFORMATION ONLY

FLOOD a
b EBB

**N.A.D. 1983 COORDINATES
OUTER HARBOR CHANNEL ANGLE POINTS AND CONTROL LINE**

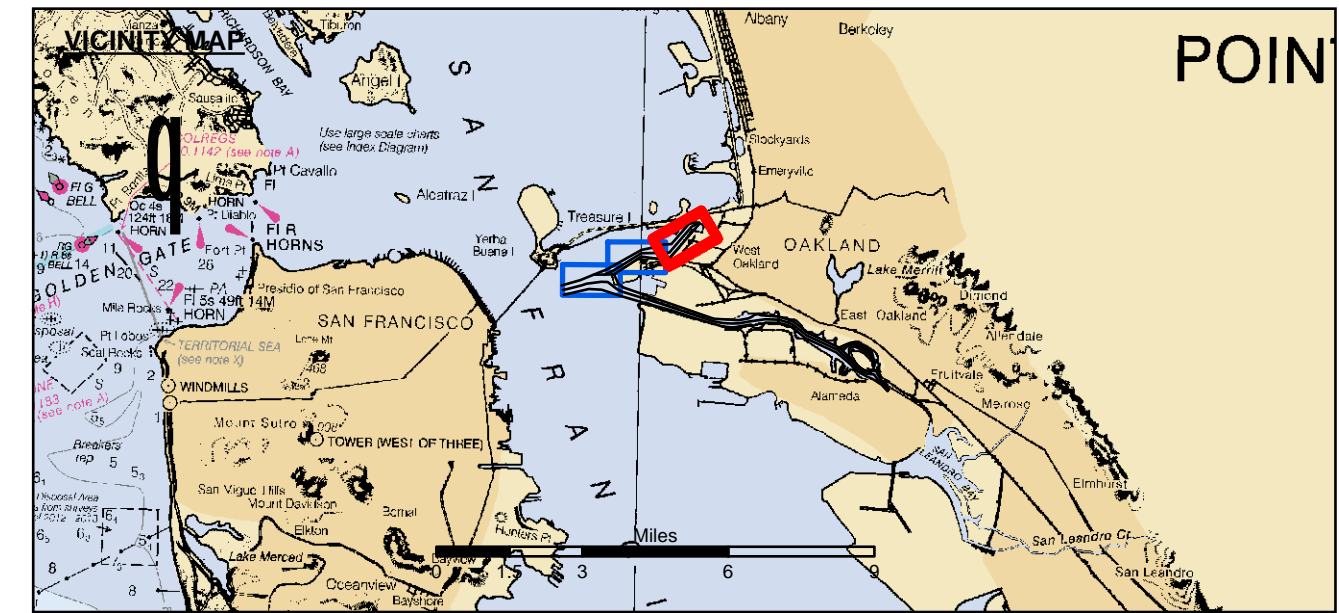
CHANNEL Z POINT	EASTING	NORTHING	CENTERLINE E POINT	EASTING	NORTHING
O-1	6029195.32	2121154.59	C-1	6028185.70	2121144.22
O-2	6032145.86	2123096.60	C-2	6028997.45	2121502.85
O-3	6035035.47	2122691.23	C-3	6032165.52	2123462.80
O-4	6038502.15	2126685.68	C-4	6035180.13	2123505.95
O-5	6038225.45	2126792.32	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			

**US Army Corps
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Prepared Under the Direction of JOHN C. BORROW LT Colonel, C.E. District Engineer	Chart Date: Jul 22, 2015
Submittal: Hydro Survey Team Leader	Designed by: PDT
Recommendation: Chief, Hydro Survey Station	Drawn by: PDT
Approval: Chief, Construction Branch	PDT

CALIFORNIA
ALAMEDA COUNTY
**OAKLAND OUTER HARBOR
CONDITION SURVEY**
8-10 JULY 2015



- | | | |
|----------------------------|--------------------|----------|
| 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 Points | | |

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:
PCRP: PORT 1 188PID 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.
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, GEOID09 AND VDATUM MODELS TIDE GAUGE LOCATION IS IN FACE OF PILING AT BERTH 37; NAIL 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, 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
Reference
Number**
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