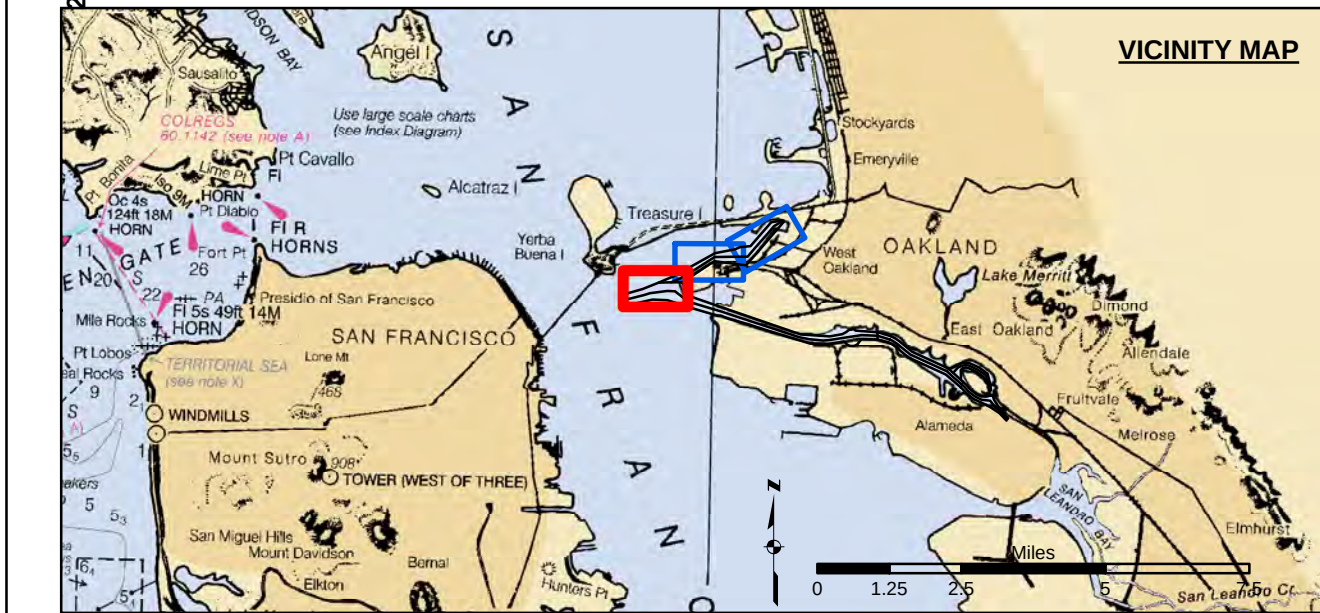
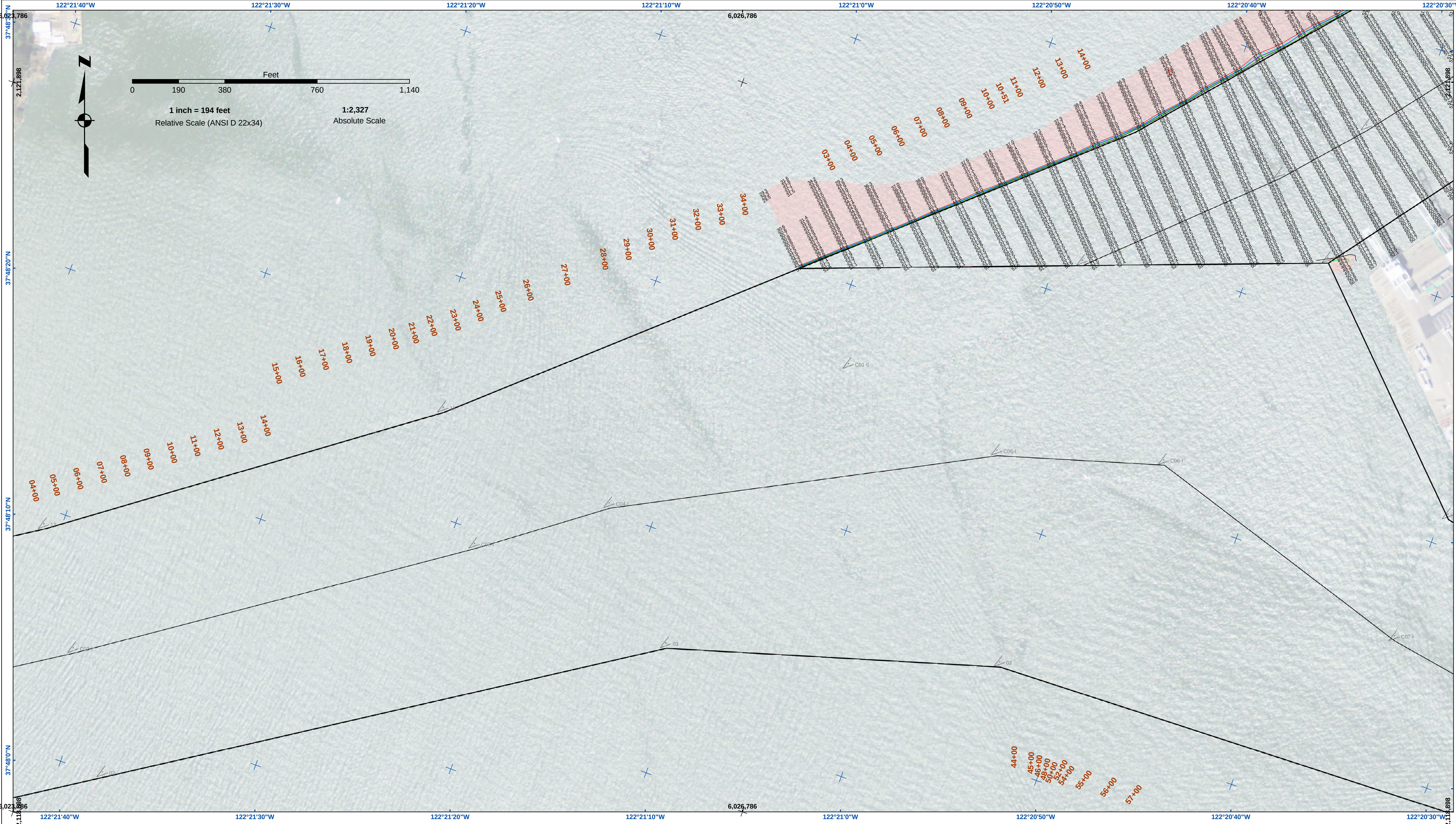




- Federal Navigation Channel

Shoaling Area

Placement Area

Anchorage Area

Wreck Area

Submerged Wreck

Angle Point
- Beacon, General

Obstruction Point

Navigation Buoy

Navigation Buoy

Shoalest Sounding*
- Contours

-50

-49

-48

-47

-46

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.
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:
PCP: PORT 1 1906PID 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 AES211, 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.

LPCP 2: 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
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San Francisco District
1455 Market Street
San Francisco, CA 94103

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PREPARED UNDER THE DIRECTION OF TRAVIS J. RAYFIELD LT COLONEL, C.E. DISTRICT ENGINEER	Surveyed By: BRIAN BECKER EMIL CAPATI	Chart Date: Sep 14, 2017
Submitted: Hydro Survey Team Leader PAUL CHEN	Plotted By: ELLEN CHOY	Designed by:
Recommended: Navigation Technical Manager DAVID DOAK	Checked By: PAUL CHEN	Drawn by:
Approved: Project Manager IRENE LEE		

CALIFORNIA
ALAMEDA COUNTY
OAKLAND HARBOR
POST-DREDGE SURVEY
11 SEPTEMBER 2017

**Sheet
Reference
Number**
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