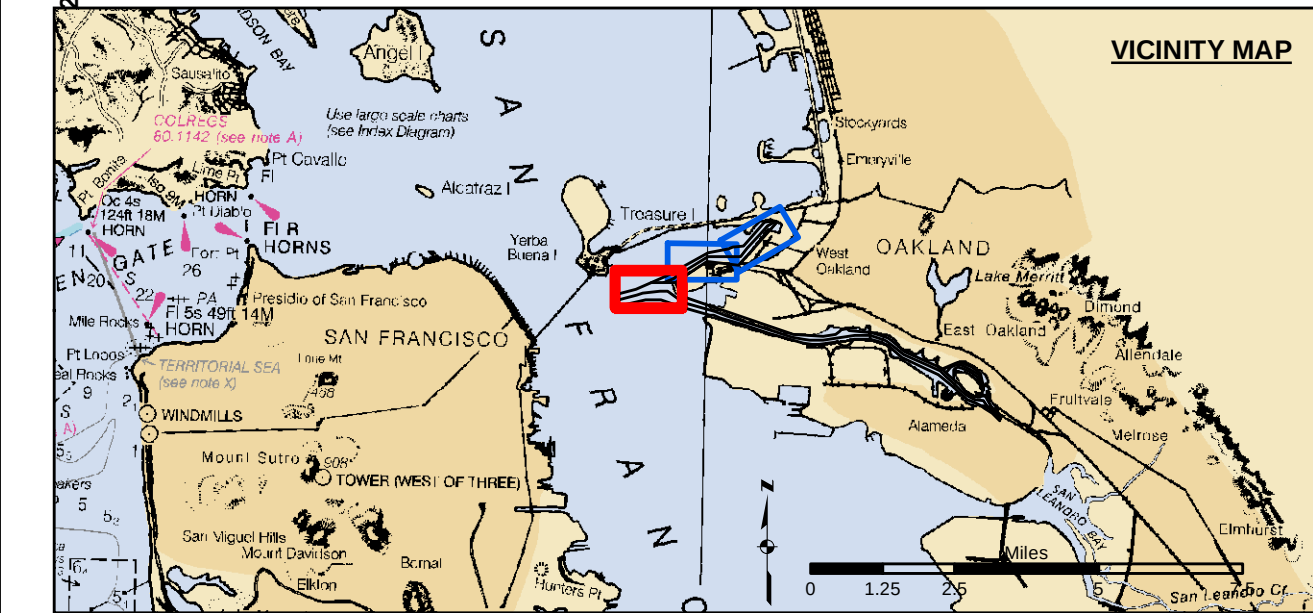
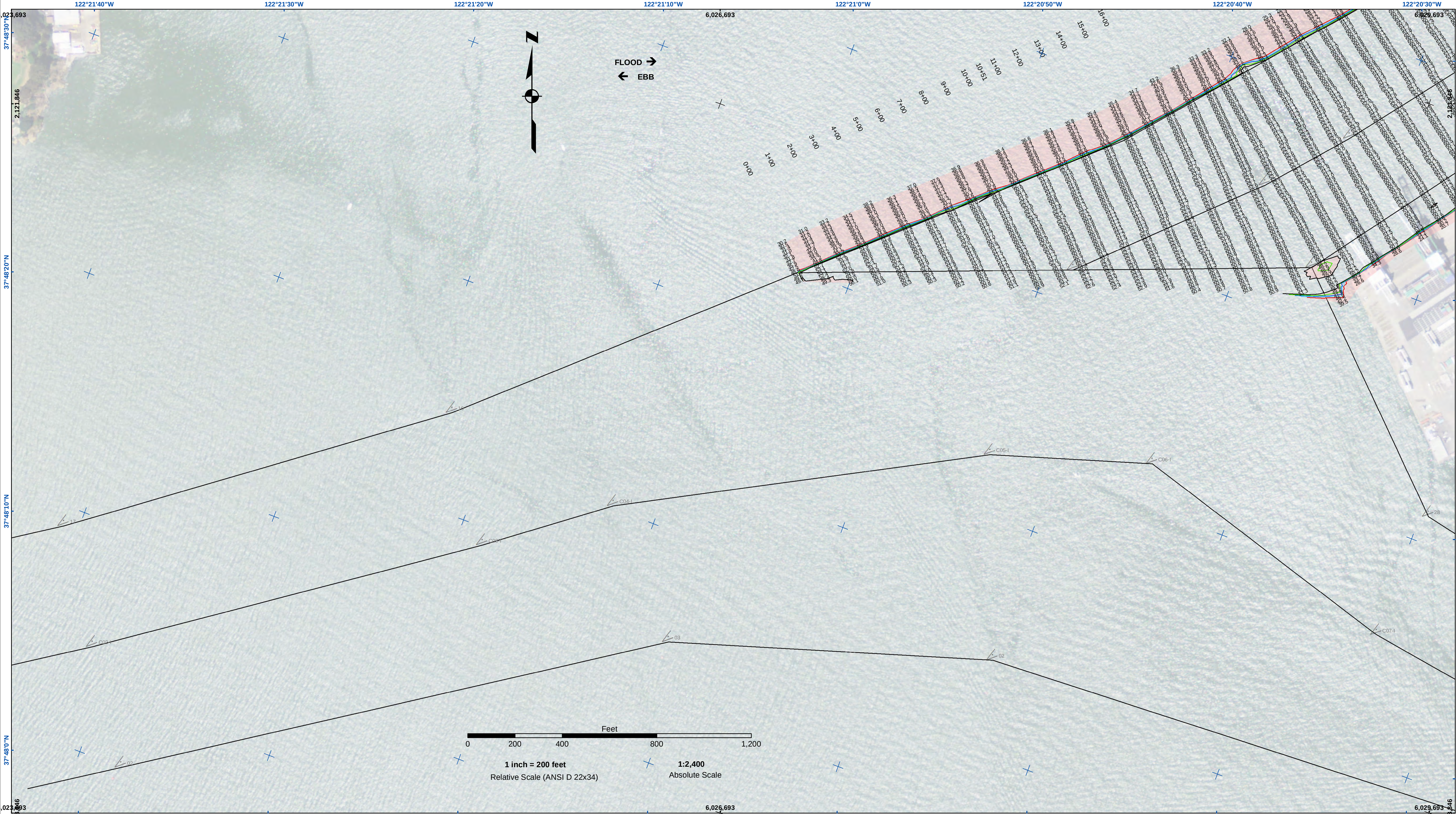




Federal Navigation Channel

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.
NEAR THE NORTHEAST END OF BERTH 40 OF THE OAKLAND MIDDLE HARBOR.
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 A55211, 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
of Engineers

San Francisco District
1455 Market Street
San Francisco, CA 94103

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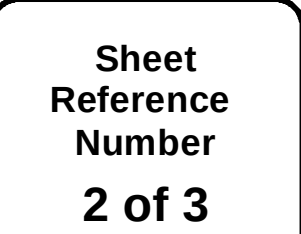
PREPARED UNDER THE DIRECTION OF LT COLONEL C.E. DISTRICT ENGINEER KEVIN P. ARNETT	Surveyed By:	Chart Date:
Submitted: Hydro Survey Team Leader	Floted By:	Designed By:
Recommended: Navigation Technical Manager	Checked By:	Drawn By:
Approved: Project Manager		

ALAMEDA COUNTY

OAKLAND HARBOR
OUTER HARBOR
POST-DREDGE SURVEY COMPOSITES
12 JULY 2021 TO 08 JANUARY 2022

Sheet
Reference
Number

1 of 3



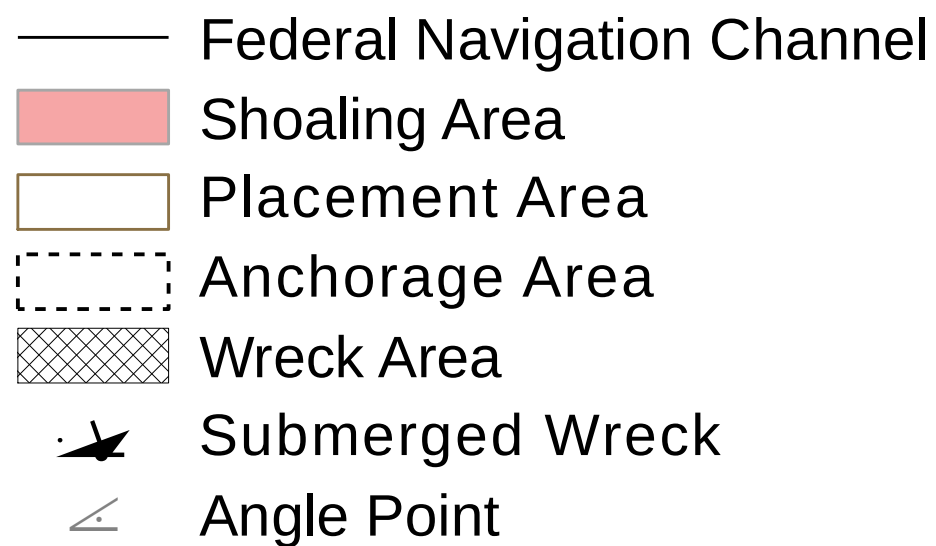


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PREPARED UNDER THE DIRECTION OF KEVIN P. ARNETT LT COLONEL, C-6 DISTRICT ENGINEER	Submitted: _____	Plotted by: _____	Designed by: _____ Drawn by: _____	Chart Date: Jan 13, 2022
	Reviewed by: _____			
	Non-person Technical Manager _____			
	Approved Project Manager _____			

ALAMEDA COUNTY
OAKLAND HARBOR
OUTER HARBOR
POST-DREDGE SURVEY COMPOSITES
12 JULY 2021 TO 08 JANUARY 2022
CALIFORNIA

Sheet
Reference
Number
3 of 3



- | | | |
|---|--------------------|----------|
|  | Beacon, General | Contours |
|  | Obstruction Point | — -50 |
|  | Navigation Buoy | — -49 |
|  | Navigation Buoy | — -48 |
|  | Navigation Buoy | — -47 |
|  | Shoalest Sounding* | — -46 |

NOTES:
DRAWING NOT TO BE USED FOR NAVIGATION. ONLY CHANNEL CONDITION AT DATE OF SURVEY.
ACQUISITION 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 NAPP 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: PCDP 1 139B/PID H07654.
 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 MLW - 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 MLW.
 LPCP 1: 941 4777 TIDALPIPING AES211, CHISEL INNER REACH 3 DISK SET IN BALLARD FOUNDATION
 DEPTH TO THE TOP OF THE CURB OF BERTH 40 OF THE OAKLAND MIDWATER HARBOUR.
 ELEVATION: 13.48 FEET MLW - DERIVED FROM WGS-84 ELLIPSOID ELEVATION, GEODIODOR AND VDUTUM MODELS
 TIDE GAUGE LOCATION IS IN FACE OF PILING AT BERTH 37; NAIL ELEVATION 9.7 FEET MLW.
 LPCP 2: OAK OUTER 1 2021/NO PND, OAKLAND OUTER REACH 7 DISK SET IN PARKING LOT AT PIER 6 AMNAVY TUG
 TERMINAL AT THE EDGE OF THE PIER. ELEVATION: 14.04 FEET MLW - DERIVED FROM WGS-84 ELLIPSOID ELEVATION,
 GEODIODOR AND DATUM MODELS. TIDE GAUGE LOCATION IS IN FACE OF PILING AT PIER 6, 10' EAST OF BENCHMARK;
 NAIL ELEVATION 10.1 FEET MLW.
 HORIZONTAL CONTROL:
 PRIMARY: RTK POSITIONING
 SECONDARY: COAST GUARD DGPS D-BEACON