

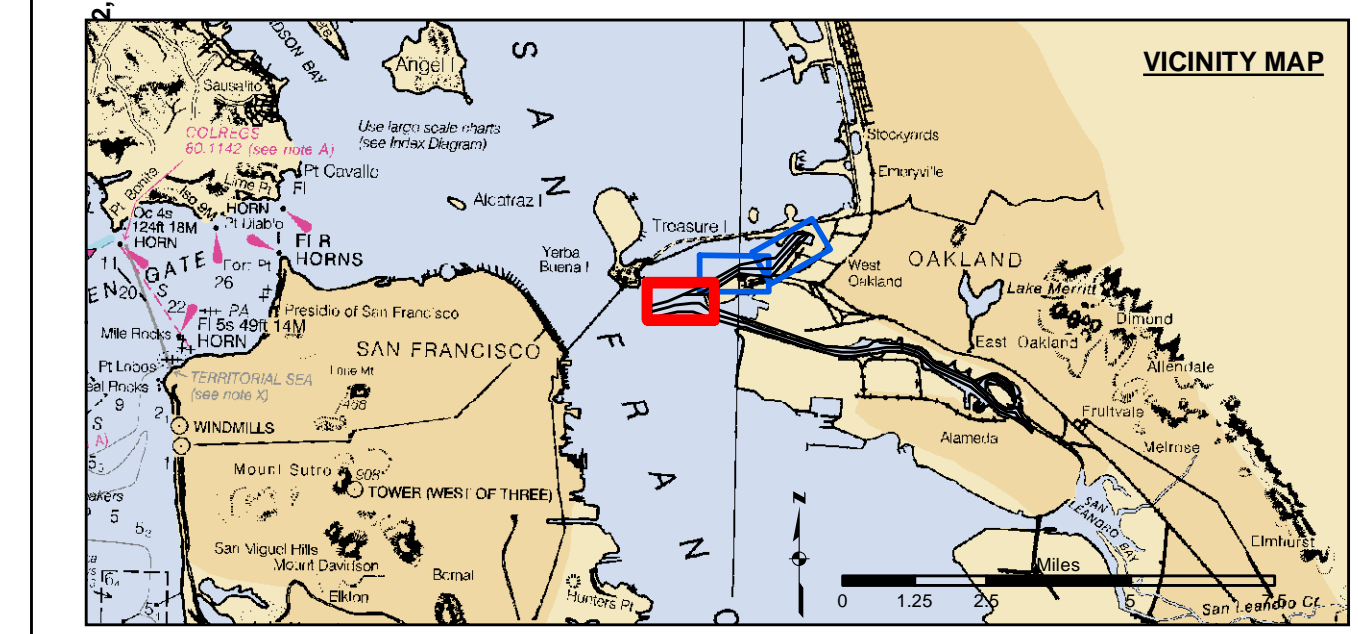
**US Army Corps of Engineers**  
 San Francisco District  
 1455 Market Street  
 San Francisco, CA 94103

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Prepared Under the Direction of <b>JOHN D. CUNNINGHAM</b> LT COLONEL, C.E., DISTRICT ENGINEER	Chart Date: Nov 23, 2020
Submittal: Hydro Survey Team Leader	Designed by:
Recommendation: Navigation Technical Manager	Drawn by:
Approved: Project Manager	

ALAMEDA COUNTY  
**OAKLAND HARBOR**  
 OUTER HARBOR  
 POST-DREDGE SURVEY  
 2, 4 AND 11 NOVEMBER 2020

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

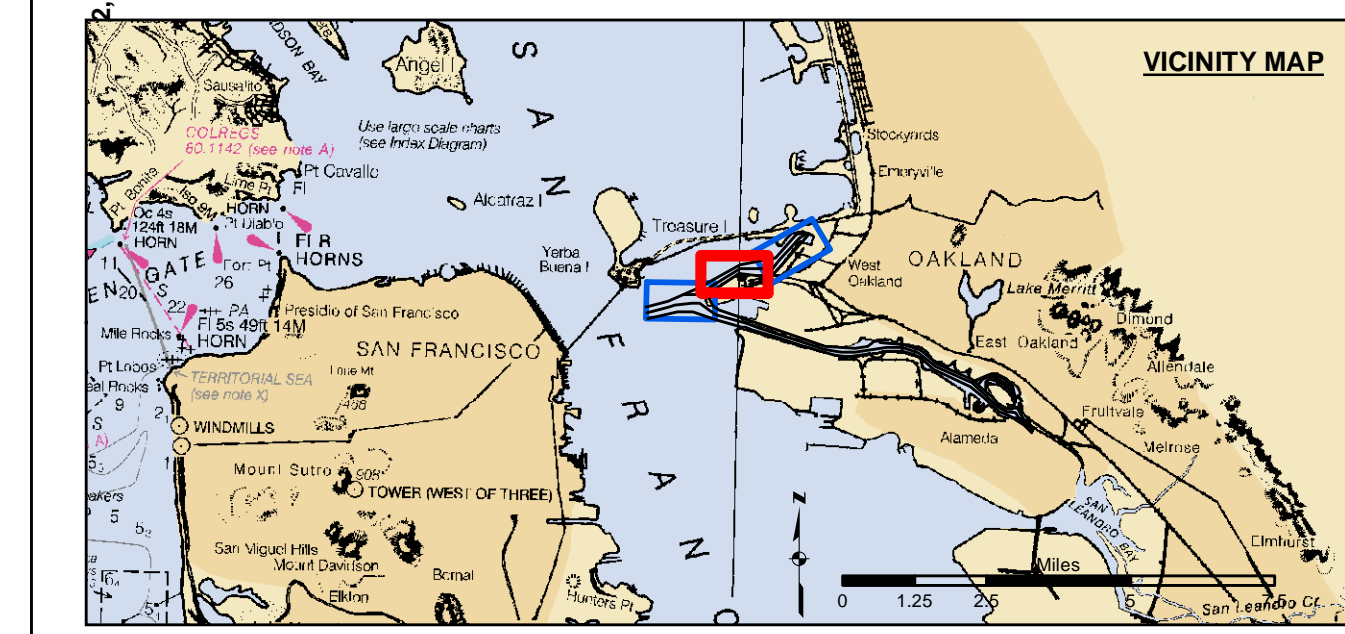


- |                            |                    |                 |
|----------------------------|--------------------|-----------------|
| Federal Navigation Channel | Beacon, General    | <b>Contours</b> |
| Shoaling Area              | Obstruction Point  | -50             |
| Placement Area  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

**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:**  
 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



	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				

Feet  
0 200 400 800 1,200

1 inch = 200 feet  
Relative Scale (ANSI D 22x34)

1:2,400  
Absolute Scale

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SURVEYED BY THE CORPS OF ENGINEERS.  
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TIDAL CANAL PROJECT DEPTH IS 18 FEET.

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OAKLAND INNER, REACH 4-6 DISK SET AT SOUTH END OF CLAY STREET, AT THE PORT OF OAKLAND CLAY STREET PIER.  
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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.  
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HORIZONTAL CONTROL:  
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SECONDARY: COAST GURAD DGPS D-BEACON

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Submittal: Hydro Survey Team Leader	Designed by:
Recommendation: Navigation Technical Manager	Drawn by:
Approved: Project Manager	

CALIFORNIA  
ALAMEDA COUNTY  
**OAKLAND HARBOR**  
OUTER HARBOR  
POST-DREDGE SURVEY  
2, 4 AND 11 NOVEMBER 2020

**Sheet**  
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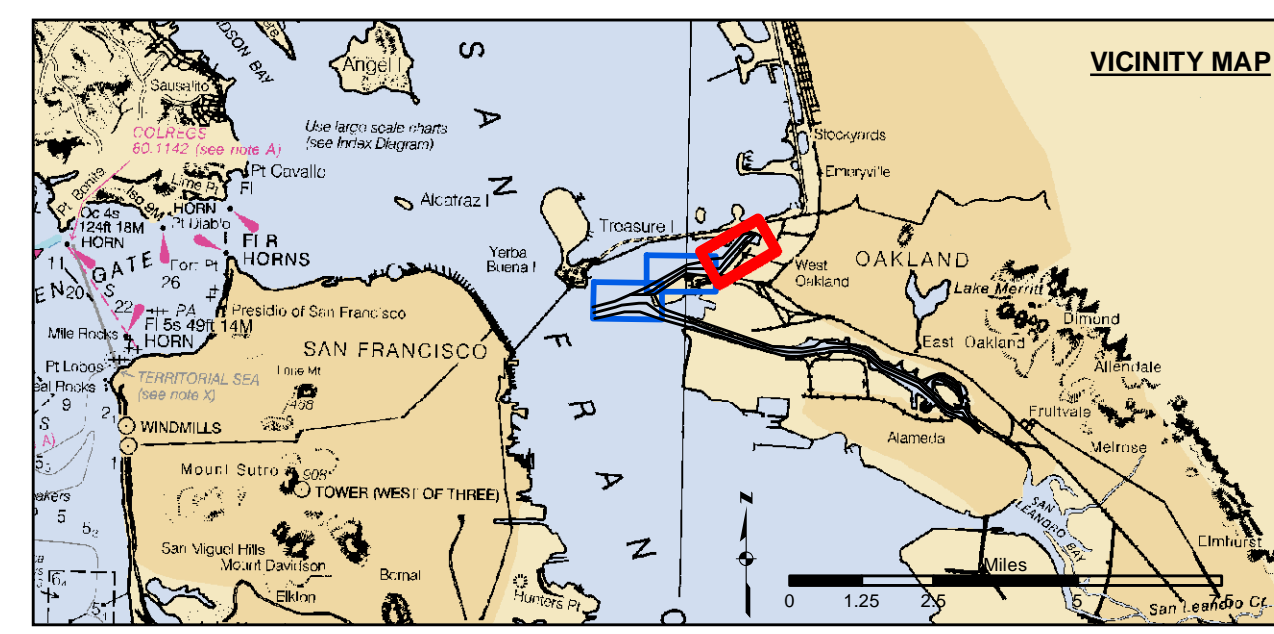


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Chart Date:	Nov 23, 2020
Designed by:	
Drawn by:	
Surveyed By:	
Plotted By:	
Checked By:	
Approved:	

ALAMEDA COUNTY  
**OAKLAND HARBOR**  
 OUTER HARBOR  
 POST-DREDGE SURVEY  
 2, 4 AND 11 NOVEMBER 2020



	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				

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