

- 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:
 HORIZONTAL COORDINATE SYSTEM:
 NORTH AMERICAN DATUM OF 1983 (NAD83), PROJECTED TO THE STATE PLANE COORDINATE SYSTEM (SPCS), CALIFORNIA ZONE III. DISTANCE UNITS IN U.S. SURVEY FEET.

VERTICAL DATUM:
 SOUNDINGS ARE SHOWN IN FEET AND INDICATE DEPTHS BELOW MEAN LOWER LOW WATER.

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SURVEYED BY THE CORPS OF ENGINEERS.
 BASE MAPS ARE USDA NAIP 2010.

*SHOALEST SOUNDING PER QUARTER PER REACH

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 OUTER AND INNER HARBOR IS -50 FEET
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 TIDAL CANAL PROJECT DEPTH IS -18 FEET.
 PLANE GRID AND COORDINATES ARE BASED ON LAMBERT PROJECTION, NAD 83, ZONE III CALIFORNIA AS DESCRIBED IN SPECIAL PUBLICATION NO. 238, PUBLISHED BY THE NATIONAL OCEAN SURVEY.

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

VERTICAL CONTROL:
 PRCP: PORT 1 1936/PID HT0654
 OAKLAND INNER REACH 4+8 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.
 LPOP 1: 941 4777 B TIDAL/PID AE5211, 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.
 LPOP 2: OAK OUTER 1 2012ND 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 VDATUM MODELS TIDE GAUGE LOCATION IS IN FACE OF PILING AT PIER 6, 10' EAST OF BENCHMARK; NAIL ELEVATION 10.1 FEET MLLW.

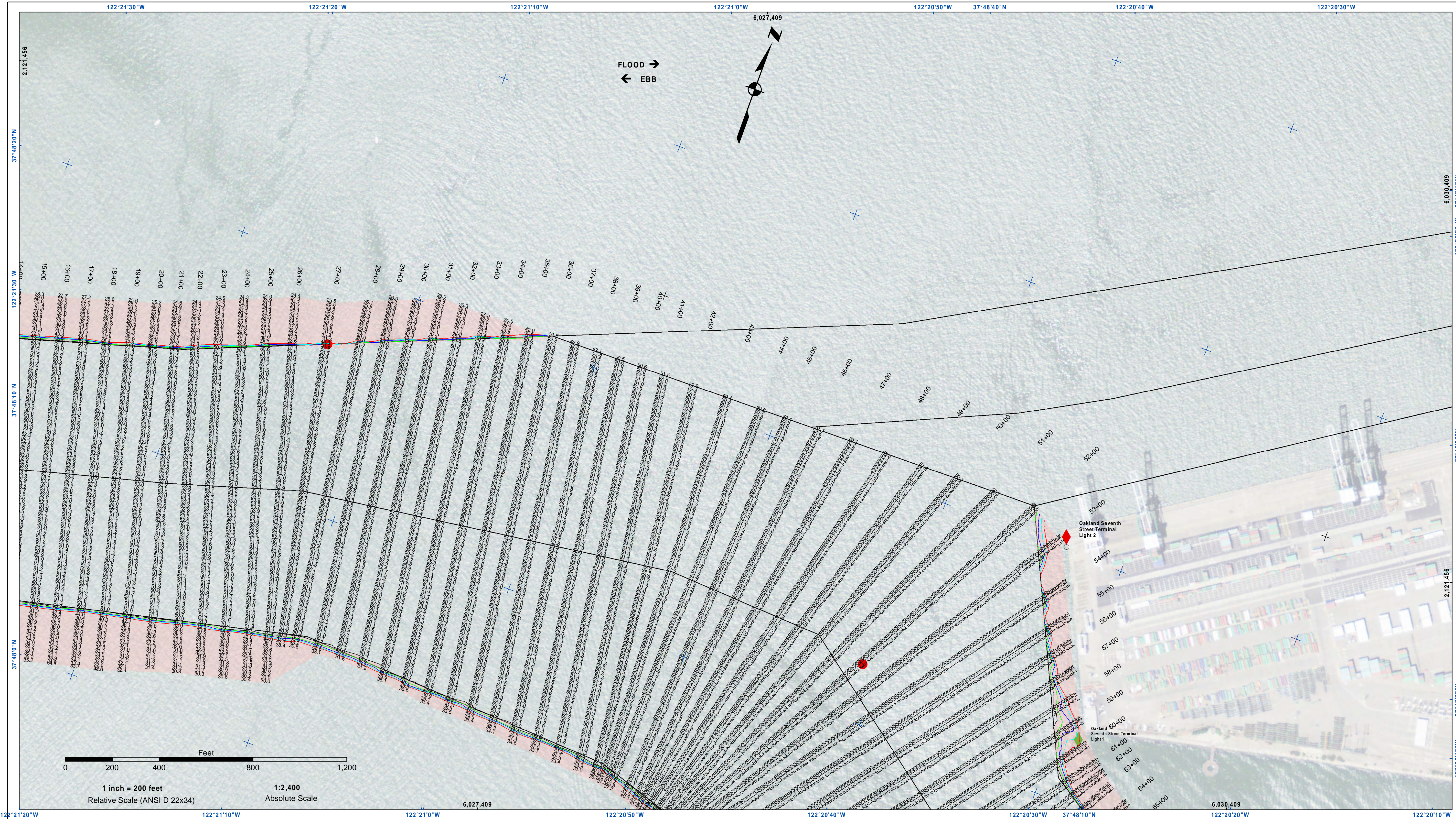
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Prepared Under the Direction of	Chart Date:
KEVIN P. ARNETT	Oct 28, 2021
LT Colonel, C.E., District Engineer	Designed by:
Submittal:	Hydro Surveys Team Leader
Recommended:	Navigation Technical Manager
Approved:	Project Manager
Surveyed By:	Plotted By:
Checked By:	Drawn by:

CALIFORNIA
 ALAMEDA COUNTY
OAKLAND HARBOR
 INNER HARBOR
 POST-DREDGE SURVEY
 6, 13, 17, 27 JULY, 1, 19, 25 AUGUST
 3, 6, 13, 30 SEPTEMBER
 AND 12 OCTOBER 2021

Sheet
Reference
Number
1 of 6

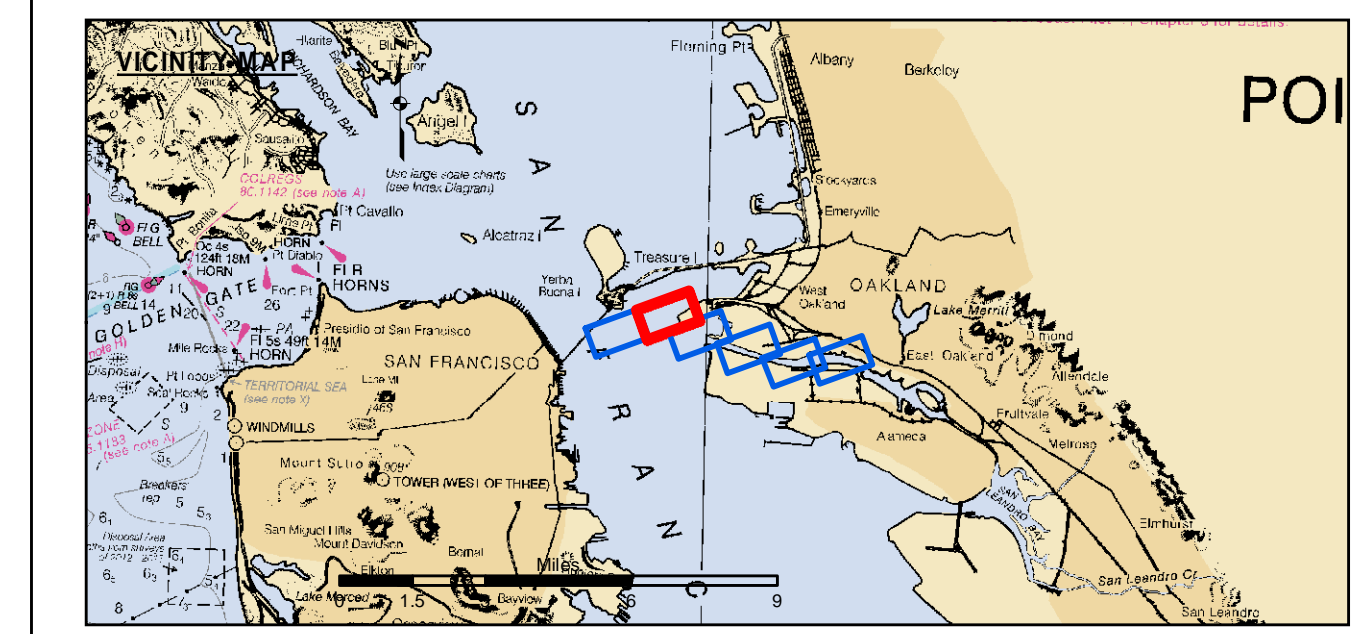


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Submittal:	Hydro Surveys Team Leader
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Checked By:	Drawn by:

ALAMEDA COUNTY CALIFORNIA
OAKLAND HARBOR
 INNER HARBOR
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 6, 13, 17, 27 JULY, 1, 19, 25 AUGUST
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Sheet
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Number
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- Federal Navigation Channel
 - Shoaling Area
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 - Wreck Area
 - Submerged Wreck
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 - Navigation Buoy
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 - 47
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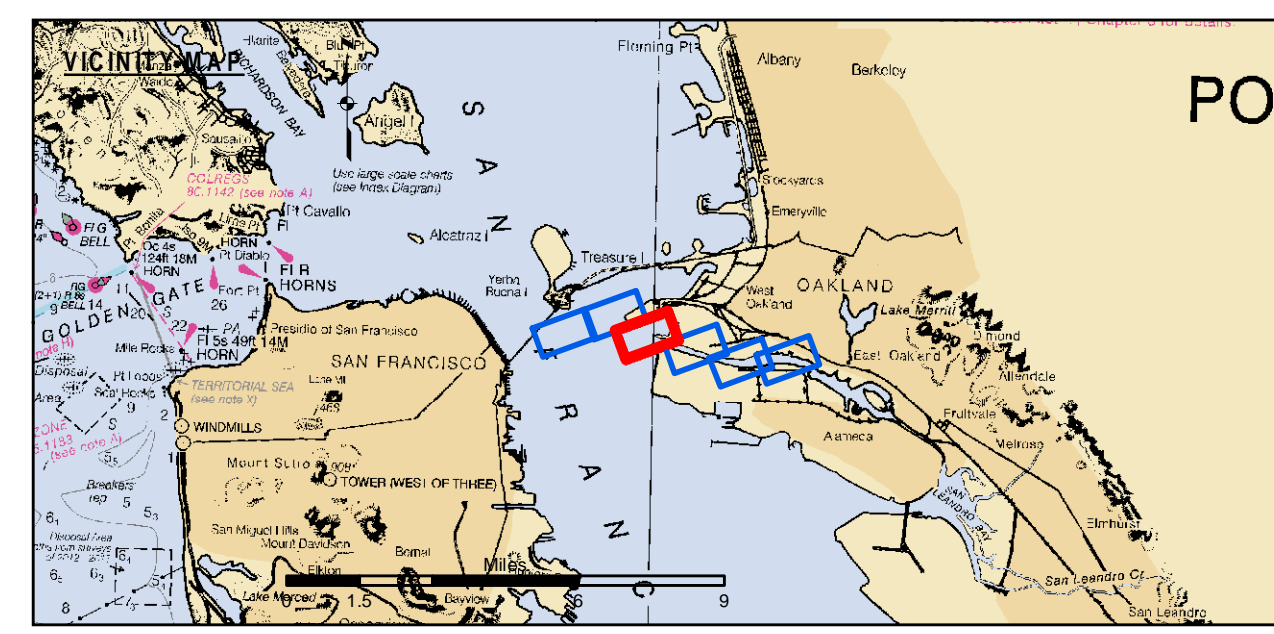
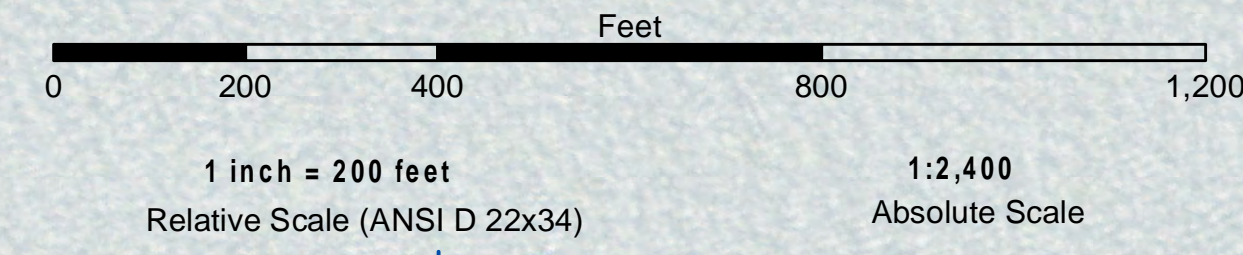
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 HORIZONTAL CONTROL:
 PRIMARY: RTK POSITIONING
 SECONDARY: COAST GUARD DGPS D-BEACON
 VERTICAL CONTROL:
 PCIP: PORT 1 1936/PID HT0854
 OAKLAND INNER REACH 449 DISK SET AT SOUTH END OF CLAY STREET, AT THE PORT OF OAKLAND CLAY STREET PIER. ELEVATION: 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.
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Chart Date:	Oct 28, 2021
Designed by:	
Drawn by:	
Checked by:	
Project Manager:	
Surveyed By:	KEVIN P. ARNETT
Plotted By:	
Hydro Survey Team Leader:	
Navigation Technical Manager:	
Project Manager:	



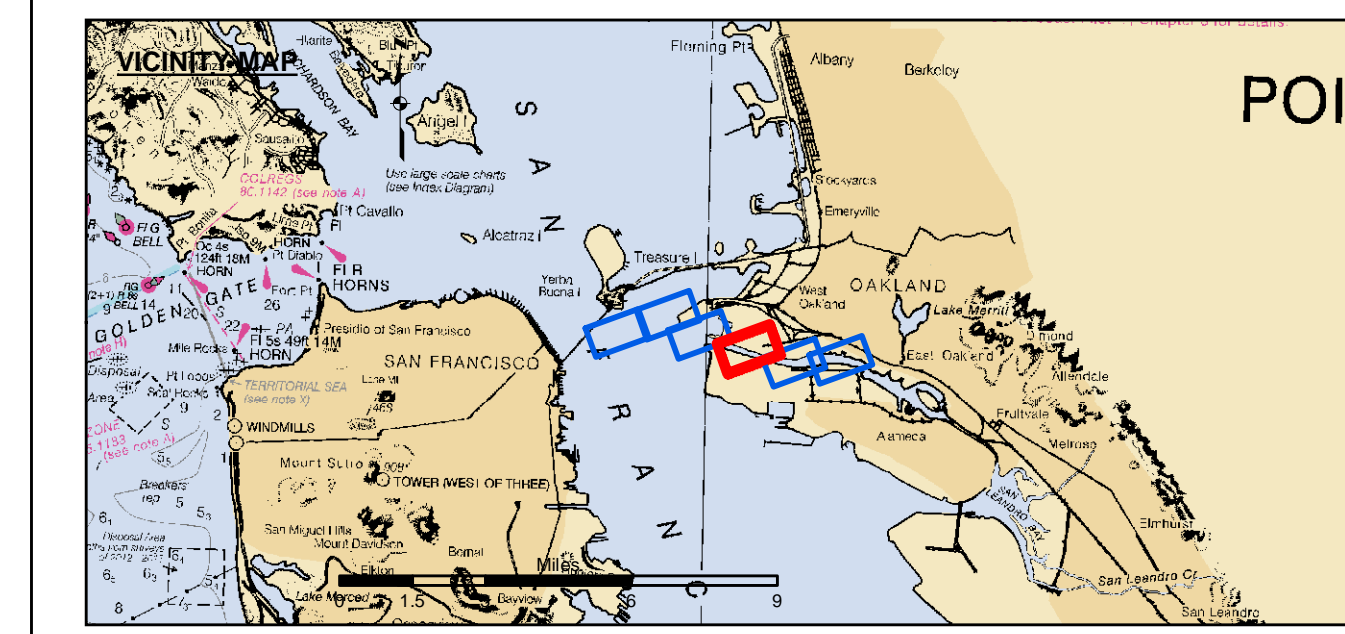
Federal Navigation Channel	Beacon, General	Contours
Shoaling Area	Obstruction Point	-50
Placement Area	Navigation Buoy	-49
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Wreck Area	Shoalest Sounding*	-47
Submerged Wreck		-46
Angle Point		

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ALAMEDA COUNTY CALIFORNIA
OAKLAND HARBOR
 INNER HARBOR
 POST-DREDGE SURVEY
 6,13,17,27 JULY, 1,19,25 AUGUST
 3,6,13,30 SEPTEMBER
 AND 12 OCTOBER 2021

Sheet Reference Number
 3 of 6



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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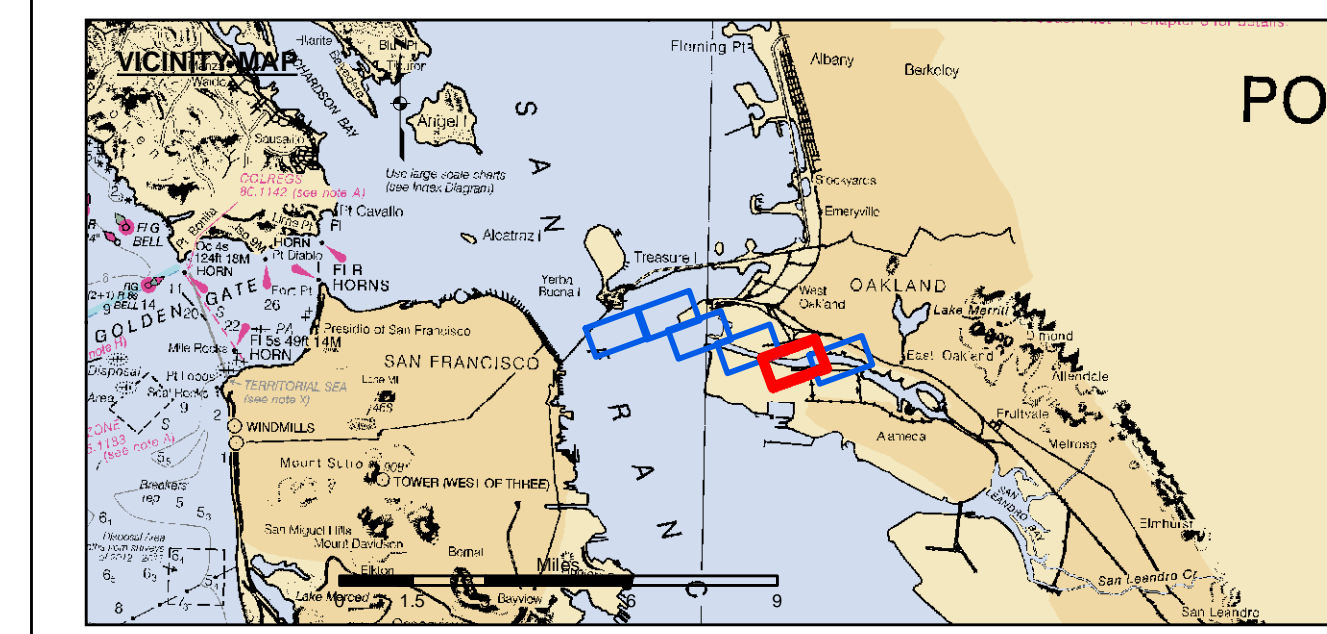
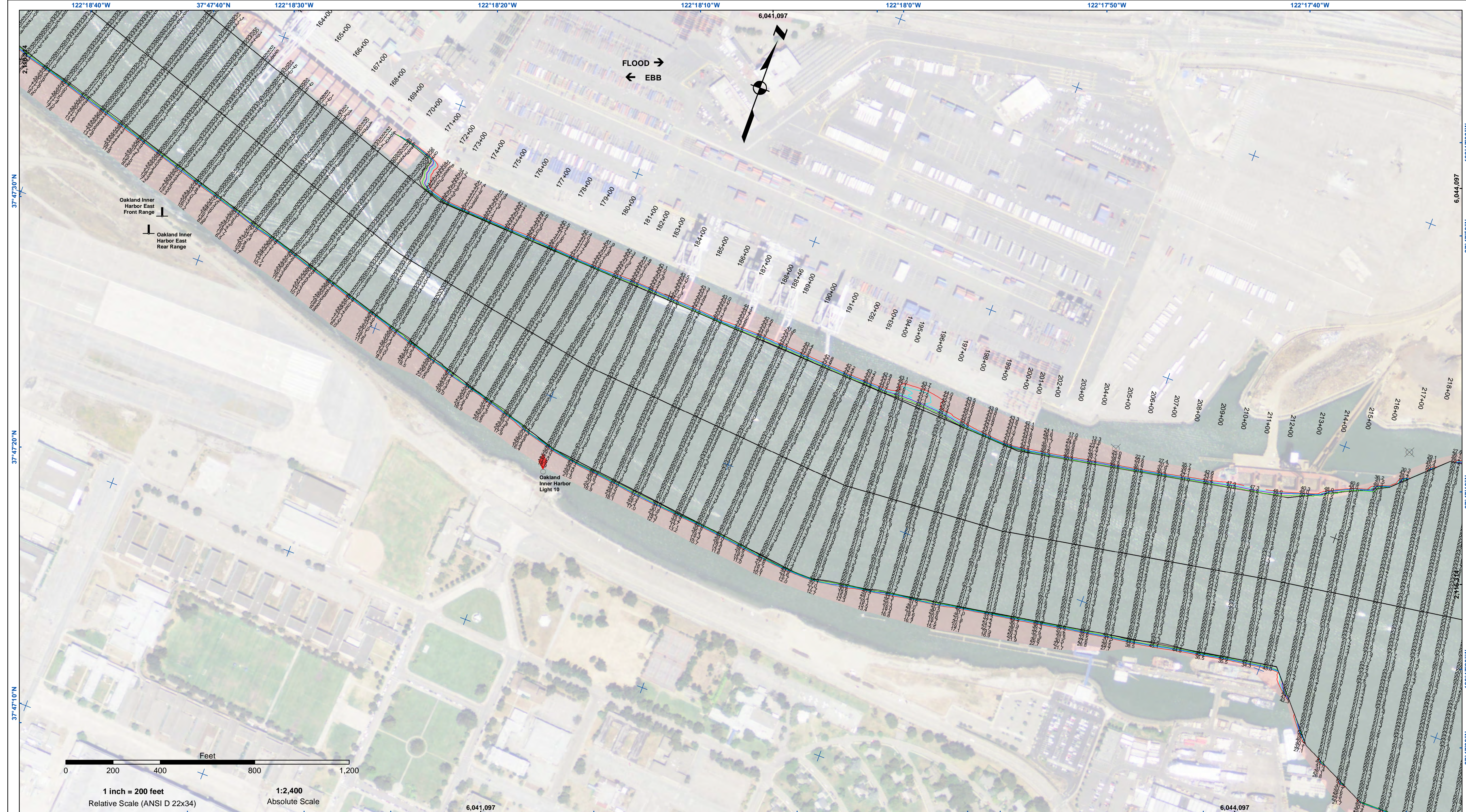
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Prepared Under the Direction of:	Chart Date:
KEVIN P. ARNETT	Oct 28, 2021
LT Colonel, C.E., District Engineer	Designed by:
Hydro Survey Team Leader	Plotted by:
Navigation Technical Manager	Checked by:
Project Manager	Drawn by:

ALAMEDA COUNTY CALIFORNIA
OAKLAND HARBOR
 INNER HARBOR
 POST-DREDGE SURVEY
 6, 13, 17, 27 JULY, 1, 19, 25 AUGUST
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Sheet Reference Number
4 of 6



	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
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	Angle Point				

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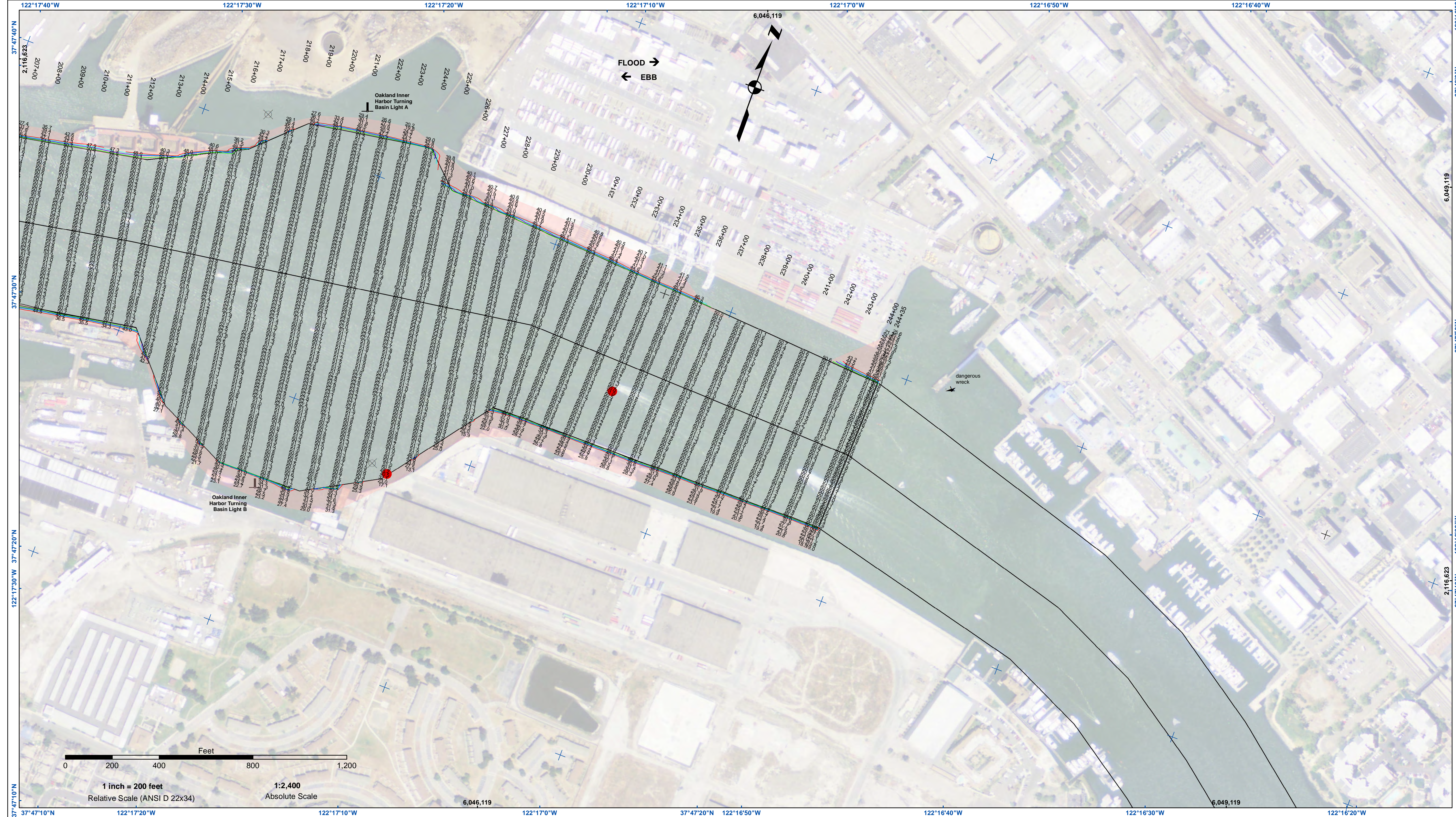
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Chart Date:	Oct 28, 2021
Designed by:	
Drawn by:	
Surveyed By:	KEVIN P. ARNETT
Plotted By:	
Checked By:	
Project Manager:	

CALIFORNIA
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 INNER HARBOR
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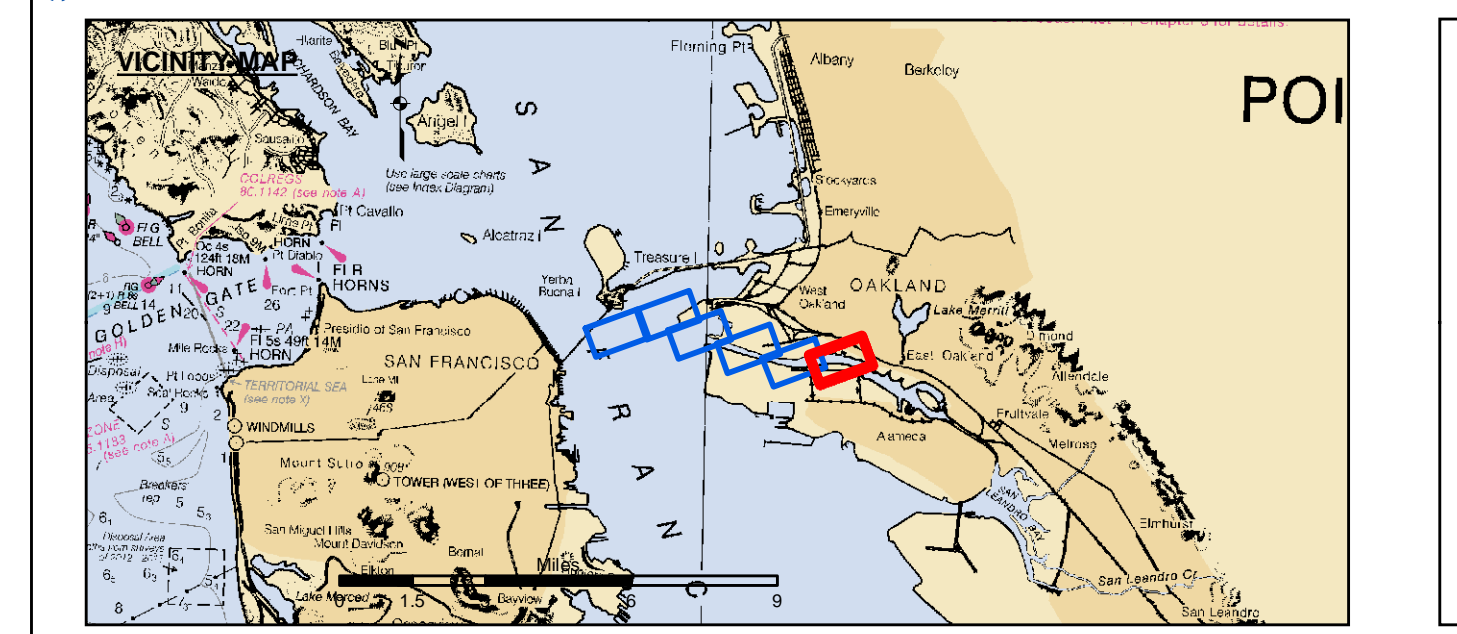
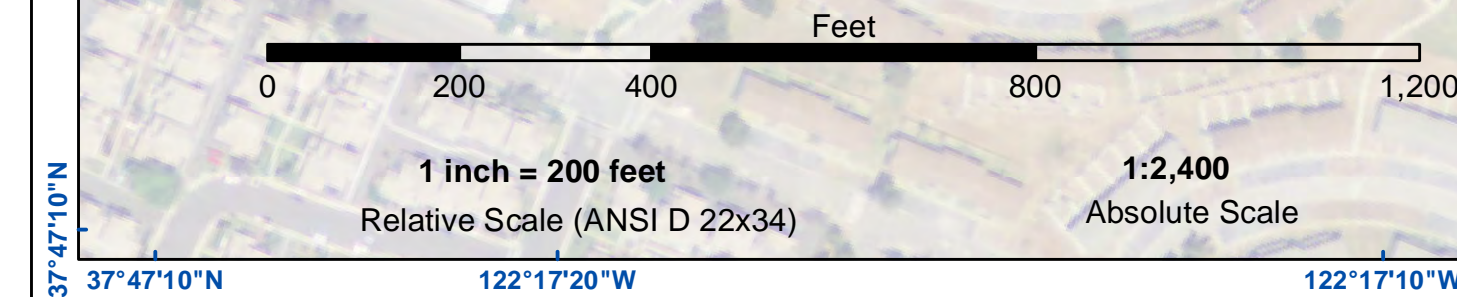
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KEVIN P. ARNETT	Oct 28, 2021
LT Colonel, C.E., District Engineer	Designed by:
Submittal:	Hydro Surveys Team Leader
Recommended:	Navigation Technical Manager
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Surveyed By:	Plotted By:
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	Federal Navigation Channel		Beacon, General		Contours
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 THE PROJECT DEPTHS ARE AS FOLLOWS:
 OUTER AND INNER HARBOR IS -50 FEET
 INNER HARBOR TURNING BASIN TO PARK STREET BRIDGE IS -35 FEET.
 TIDAL CANAL PROJECT DEPTH IS -18 FEET.
 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.
 HORIZONTAL CONTROL:
 PRIMARY: RTK POSITIONING
 SECONDARY: COAST GUARD DGPS D-BEACON
 VERTICAL CONTROL:
 PRCP: PORT 1 1936/PID HT0854
 OAKLAND INNER REACH 4+8 DISK SET AT SOUTH END OF CLAY STREET, AT THE PORT OF OAKLAND CLAY STREET PIER. ELEVATION: 956 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.
 LPOP 1: 941 4777 B TIDAL/PID AE211, 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.
 LPOP 2: OAK OUTER 1 2012ND 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 VDATUM MODELS TIDE GAUGE LOCATION IS IN FACE OF PILING AT PIER 6, 10' EAST OF BENCHMARK; NAIL ELEVATION 10.1 FEET MLLW.

CALIFORNIA
 ALAMEDA COUNTY
OAKLAND HARBOR
 INNER HARBOR
 POST-DREDGE SURVEY
 6, 13, 17, 27 JULY, 1, 19, 25 AUGUST
 3, 6, 13, 30 SEPTEMBER
 AND 12 OCTOBER 2021

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