—	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.

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:
PPCP: PORT 1 1936/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.

LPCP 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.

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
450 Golden Gate Ave
San Francisco, CA 94102

Chart Date: Mar 02, 2020
Designed by:
Drawn by:
Surveyed By:
Plotted By:
Checked By:

PREPARED UNDER THE DIRECTION OF
JOHN D. CUNNINGHAM
LT. COLONEL, C.E., DISTRICT ENGINEER

Submitted:
Hydro Survey Team Leader
Recommended:
Navigation Technical Manager
Approved:
Project Manager

ALAMEDA COUNTY CALIFORNIA

OAKLAND HARBOR
OUTER HARBOR
CONDITION SURVEY
26 FEBRUARY 2020

US Army Corps of Engineers®
San Francisco District
450 Golden Gate Ave
San Francisco, CA 94102

DISCLAIMER
Access Constraints: The United States Government furnishes these data and the recipient accepts and uses them with the express understanding that the US Government makes no warranties, expressed, or implied concerning the accuracy, completeness, readability, usability or suitability for any particular purpose of the information and the data furnished. The United States shall be under no liability whatsoever to any person by reason of any use made thereof. These data belong to the Government. Therefore the recipient fully agrees not to represent these data to anyone as other than Government provided data. The recipient may not transfer these data to others without also transferring this Disclaimer.

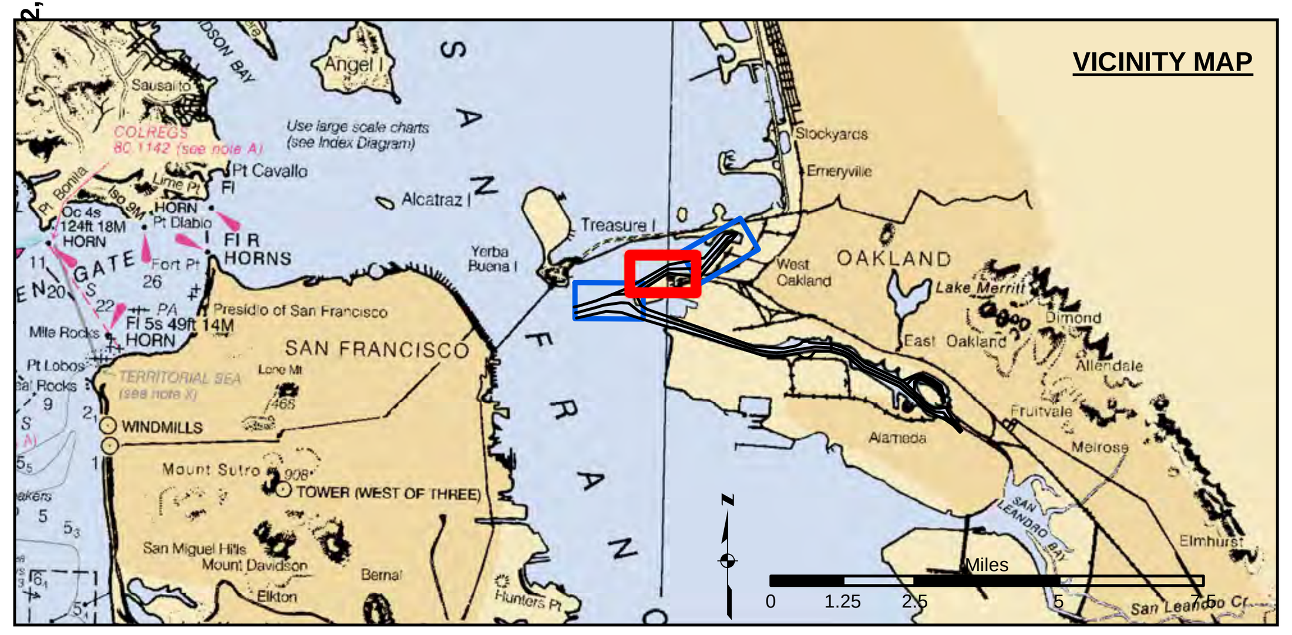
Distribution Liability: The data represents the results of data collection/processing for a specific US Army Corps of Engineers activity and indicates the general existing conditions. As such, it is only valid for its intended use, content, time and accuracy specifications. The user is responsible for the results of any of the application of the data for other than its intended purpose.

Chart Date: Mar 02, 2020
Designed by:
Drawn by:
Surveyed By:
Plotted By:
Checked By:

PREPARED UNDER THE DIRECTION OF
JOHN D. CUNNINGHAM
LT. COLONEL, C.E., DISTRICT ENGINEER

Submitted: Hydro Survey Team Leader
Recommended: Navigation Technical Manager
Approved: Project Manager

ALAMEDA COUNTY CALIFORNIA
OAKLAND HARBOR
OUTER HARBOR
CONDITION SURVEY
26 FEBRUARY 2020



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.

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:
PPCP: PORT 1 1936/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.

LPCP 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.

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

Sheet Reference Number
2 of 3

─	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.

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:
PPCP: PORT 1 1936/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.

LPCP 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.

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
450 Golden Gate Ave
San Francisco, CA 94102

Chart Date: Mar 02, 2020
Designed by:
Drawn by:
Surveyed By:
Plotted By:
Checked By:

PREPARED UNDER THE DIRECTION OF
JOHN D. CUNNINGHAM
LT. COLONEL, C.E., DISTRICT ENGINEER

Submitted: Hydro Survey Team Leader
Recommended: Navigation Technical Manager
Approved: Project Manager

ALAMEDA COUNTY CALIFORNIA

OAKLAND HARBOR
OUTER HARBOR
CONDITION SURVEY
26 FEBRUARY 2020