



US Army Corps
of Engineers®
San Francisco District

SAN FRANCISCO DISTRICT

Regulatory Division
450 Golden Gate Avenue
San Francisco, CA 94102-3404

PUBLIC NOTICE

PROJECT: Larkspur Ferry Terminal Maintenance Dredging

PUBLIC NOTICE NUMBER: 2009-00308

PUBLIC NOTICE DATE: February 15, 2022

COMMENTS DUE DATE: March 17, 2022

PERMIT MANAGER: Melissa France

TELEPHONE: 415-503-6763

E-MAIL: Melissa.M.France@usace.army.mil

1. **INTRODUCTION:** The Golden Gate Bridge Highway and Transportation District (GGBHTD) (Contact: Christine Boudreau, Boudreau Associates, 327 Jersey Street, San Francisco, CA 94114) has applied for a ten-year Department of the Army permit to conduct maintenance dredging within the berths, turning basin, and approach channel at the Larkspur Ferry Terminal located in Larkspur, Marin County, California. The purpose of the proposed dredging is to return the ferry berths, turning basin, and approach channel to the original design depths in order to facilitate safe navigation for the GGBHTD ferries operating to and from the terminal. This Department of the Army Permit application is being processed pursuant to the provisions of Section 404 of the Clean Water Act of 1972, as amended (33 U.S.C. § 1344 *et seq.*) and Section 10 of the Rivers and Harbors Act of 1899, as amended (33 U.S.C. § 403 *et seq.*).

2. PROPOSED PROJECT:

Project Site Location: The Larkspur Ferry Terminal is located in the city of Larkspur, Marin County, California.

Project Site Description: The site encompasses approximately 83 acres and is situated within the San Francisco Bay, south of the located at 101 East Sir Francis Drake Boulevard, Larkspur, Marin County, at the terminus of the Corte Madera Creek as depicted in Figures 1-3. Please note that the length of the channel has been extended to accommodate shoaling that has occurred over the last few years while ferry service was reduced due to the pandemic. This area comprises

approximately 2,000 ft extension where recent sedimentation has occurred.

Project Description: As shown in the attached drawings, the applicant plans to remove approximately 730,000 cubic yards (cys) of sediment from the 83-acre (approximately) basin in an initial episode and a total of 1,460,000 cys over the life of the permit. The design depth for the proposed project is -13/-15 feet MLLW plus an additional 2-foot overdredge allowance. The material would be removed using a clamshell or excavator and removed by barge to SF-11 or Montezuma Wetlands Restoration Project. Additionally, the applicant proposed to conduct knockdowns in instances when limited patchy areas within a berth or channel become navigation obstructions and dredging of the complete berth or channel area is unwarranted. Knockdowns would be conducted using an I-beam or a dredging bucket (clamshell). A tugboat would drag the beam over the sediment, flattening any mounded sediment. Sediments removed during future dredging episodes would be placed at locations previously approved for such use through separate authorizations, including in-Bay (e.g., SF-11), the San Francisco Deep Ocean Disposal Site (SF-DODS), permitted beneficial reuse sites (e.g., Montezuma Wetlands Restoration Project), or, if necessary, a licensed upland location.

Prior to each dredging episode, the Dredge Material Management Office (DMMO) will evaluate the sediments to be dredged for disposal or reuse suitability. The DMMO includes representatives from the U.S. Environmental Protection Agency, San Francisco Bay

Conservation and Development Commission (BCDC), San Francisco Bay Regional Water Quality Control Board (RWQCB), and the Corps. The DMMO is tasked with approving sampling and analysis plans in conformity with testing manuals, reviewing the test results and reaching consensus regarding a suitable disposition for the material.

Basic Project Purpose: The basic project purpose comprises the fundamental, essential, or irreducible purpose of the project, and is used by the Corps to determine whether the project is water dependent. Although the purpose of the project, as stated above, is for safe navigational depths, for consideration in Section 404(b)(1) (Clean Water Act), the basic purpose of the project is navigation.

Overall Project Purpose: The overall project purpose serves as the basis for the Section 404(b)(1) alternatives analysis and is determined by further defining the basic project purpose in a manner that more specifically describes the applicant's goals for the project, while allowing a reasonable range of alternatives to be analyzed. The overall project purpose is the disposal of dredged material from maintenance dredge projects in the San Francisco Bay Region consistent with the adopted LTMS (Long Term Management Strategy for the Placement of Dredged Material in the San Francisco Bay Region) EIR/EIS and LTMS Management Plan of 2001.

Project Impacts: The detrimental effects on erosion/sedimentation rates, substrate, water quality, fish habitat, air quality, and noise are all expected to be minor and short term. No permanent negative effects such as undesired substrate alteration, decreased water quality, loss of fish habitat, decrease air quality, and noise pollution are anticipated. The beneficial effects on economics, employment, safety and navigation, and of the removal of contaminants, are major and long term.

Proposed Mitigation: The proposed dredging would not result in a permanent loss of waters of the United States. Temporary impacts to aquatic resources would be mitigated by proposed minimization and

avoidance measures, including conducting work only within the permitted environmental work windows. Therefore, no compensatory mitigation is proposed or required.

3. STATE AND LOCAL APPROVALS:

Water Quality Certification: State water quality certification or a waiver is a prerequisite for the issuance of a Department of the Army Permit to conduct any activity which may result in a fill or pollutant discharge into waters of the United States, pursuant to Section 401 of the Clean Water Act of 1972, as amended (33 U.S.C. § 1341 *et seq.*). The applicant has recently submitted an application to the California Regional Water Quality Control Board (RWQCB) to obtain water quality certification for the project. No Department of the Army Permit will be issued until the applicant obtains the required certification or a waiver of certification. A waiver can be explicit, or it may be presumed if the RWQCB fails or refuses to act on a complete application for water quality certification within 60 days of receipt, unless the District Engineer determines a shorter or longer period is a reasonable time for the RWQCB to act.

Water quality issues should be directed to the Executive Officer, California Regional Water Quality Control Board, San Francisco Bay Region, 1515 Clay Street, Suite 1400, Oakland, California 94612 by the close of the comment period.

Coastal Zone Management: Section 307(c) of the Coastal Zone Management Act of 1972, as amended (16 U.S.C. § 1456(c) *et seq.*), requires an applicant seeking a federal license or permit to conduct any activity occurring in or affecting the coastal zone to obtain a Consistency Certification that indicates the activity conforms with the state's coastal zone management program. Generally, no federal license or permit will be granted until the appropriate state agency has issued a Consistency Certification or has waived its right to do so.

Coastal zone management issues should be directed to the Executive Director, San Francisco Bay Conservation and Development Commission, 375 Beale Street, Suite 510, San Francisco, California 94105, by the close of the comment period.

4. COMPLIANCE WITH VARIOUS FEDERAL LAWS:

National Environmental Policy Act (NEPA): Upon review of the Department of the Army Permit application and other supporting documentation, the Corps has made a *preliminary* determination that the project neither qualifies for a Categorical Exclusion nor requires the preparation of an Environmental Impact Statement for the purposes of NEPA. At the conclusion of the public comment period, the Corps will assess the environmental impacts of the project in accordance with the requirements of the National Environmental Policy Act of 1969 (42 U.S.C. §§ 4321-4347), the Council on Environmental Quality's Regulations at 40 C.F.R. Parts 1500-1508, and the Corps Regulations at 33 C.F.R. Part 325. The final NEPA analysis will normally address the direct, indirect, and cumulative impacts that result from regulated activities within the jurisdiction of the Corps and other non-regulated activities the Corps determines to be within its purview of federal control and responsibility to justify an expanded scope of analysis for NEPA purposes. The final NEPA analysis will be incorporated in the decision documentation that provides the rationale for issuing or denying a Department of the Army Permit for the project. The final NEPA analysis and supporting documentation will be on file with the San Francisco District, Regulatory Division.

Endangered Species Act (ESA): Section 7(a)(2) of the ESA of 1973, as amended (16 U.S.C. § 1531 *et seq.*), requires federal agencies to consult with either the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) to insure actions authorized, funded, or undertaken by the agency are not likely to jeopardize the continued existence of any federally-listed species or result in the adverse modification of designated critical habitat.

Based on this review, the Corps has made a preliminary determination that the following federally-listed species and designated critical habitat are present at the project location or in its vicinity, and may be affected by project implementation.

Sacramento River winter-run Chinook salmon (*Oncorhynchus tshawytscha*) were federally-listed as endangered on January 4, 1994 (59 Fed. Reg.442). Adult winter-run Chinook salmon migrate through San Francisco Bay, as well as Suisun Bay and Honker Bay, to spawning areas in the upper Sacramento River during the late fall and early winter. Juveniles travel downstream through San Francisco Bay to the Pacific Ocean in the late fall as well. The movements of adult and juvenile salmon through the Bay system are thought to be rapid during these migrations. Since impacts to the water column during disposal events would be short-term, localized and minor in magnitude, no potentially adverse effects to winter-run Chinook salmon that may be near the disposal site are anticipated, if the dredge work is conducted from June 1 through November 30.

Central Valley Spring-Run ESU Chinook salmon (*Oncorhynchus tshawytscha*) were listed as threatened on September 16, 1999 (64 FR 50394). Spring-run Chinook salmon typically migrate upstream through San Francisco Bay to spawning areas between March and July. Spawning usually occurs between late-August and early October with a peak in September. Juveniles travel downstream through San Francisco Bay in late fall to spring and then to the Pacific Ocean once they have undergone smoltification. Since impacts to the water column during disposal events would be short-term, localized and minor in magnitude, no potentially adverse effects to spring-run Chinook salmon that may be near the disposal site are anticipated, if the dredge work is conducted from June 1 through November 30.

Central California populations of steelhead trout (*Oncorhynchus mykiss*) were federally classified as threatened in August 1997. The steelhead that occur in San Francisco Bay are included in this distinct population segment and therefore receive protection under the Endangered Species Act. There is concern that steelhead migrating through the Bay to streams in the

North Bay might enter San Francisco Bay and Larkspur Ferry Terminal. If a permit is issued for this proposed project it will contain a condition that dredging is allowed only from June 1 through November 30 in any year, without consultation (pursuant to Section 7 of the ESA) with and approval from NMFS and the Corps.

The Central Valley California Distinct Population Segment (DPS) steelhead (*Oncorhynchus mykiss*) was federally-listed as threatened on March 19, 1998 (63 FR 13347), and were reconfirmed as threatened on January 5, 2006 (71 FR 834). Critical habitat for central valley California steelhead was designated on September 2, 2005 (70 FR 52488). The DPS includes all naturally spawned populations of steelhead (and their progeny) in the Sacramento and San Joaquin Rivers and their tributaries. Excluded are steelhead from San Francisco and San Pablo Bays and their tributaries. All Central Valley steelhead are currently considered winter steelhead. Juvenile steelheads live in freshwater between one and four years, then become smolts and migrate to the sea from November through May. To protect the Central Valley steelhead, dredging shall only occur from June 1 through November 30.

The North American green sturgeon (*Acipenser medirostris*) was listed as threatened under the Endangered Species Act on July 6, 2006 (71 Fed. Reg. 17757). Critical habitat for the North American green sturgeon southern DPS includes the Sacramento River, lower Feather River, lower Yuba River, Sacramento-San Joaquin Delta, Suisun Bay, San Pablo Bay, and San Francisco Bay in California and was designated on October 9, 2009 (74 FR 52300). The southern DPS consists of populations originating from coastal watersheds south of the Eel River with spawning confirmed in the Sacramento River system. Adult green sturgeon must travel through the San Francisco Estuary to pass between the ocean and the Upper Sacramento River Basin spawning area. Additionally, the San Francisco Estuary provides important rearing and holding areas for juvenile and sub-adult green sturgeon.

If a permit is issued for this proposed project it will contain a condition that dredging is allowed only from

June 1 through November 30. Dredging outside this environmental work window would require consultation with the National Marine Fisheries Service (NMFS) (pursuant to Section 7 of the Endangered Species Act) and approval from the NMFS and the Corps.

Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA): Section 305(b)(2) of the MSFCMA of 1966, as amended (16 U.S.C. § 1801 *et seq.*), requires federal agencies to consult with the National Marine Fisheries Service (NMFS) on all proposed actions authorized, funded, or undertaken by the agency that may adversely affect essential fish habitat (EFH). EFH is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. EFH is designated only for those species managed under a Federal Fisheries Management Plan (FMP), such as the *Pacific Groundfish FMP*, the *Coastal Pelagics FMP*, and the *Pacific Coast Salmon FMP*. As the federal lead agency for this project, the Corps has conducted a review of digital maps prepared by NMFS depicting EFH to determine the presence or absence of EFH in the project area. Based on this review, the Corps has made a preliminary determination that EFH is present at the project location or in its vicinity, and that the critical elements of EFH may be adversely affected by project implementation. The proposed project is located within an area managed under the Pacific Groundfish, the Coastal Pelagic and/or the Pacific Coast Salmon FMPs.

The Corps and NMFS completed a programmatic EFH consultation on June 9, 2011 for maintenance dredging. One of NMFS's key concerns with dredging is potential impacts to eelgrass beds. The "Baywide Eelgrass Inventory of San Francisco Bay," prepared by Merkel and Associates, dated October 2004, does not show the area in and around Larkspur Ferry Terminal as having any eelgrass beds. Therefore, eelgrass is not expected to be established in this area and the Corps does not anticipate that the proposed dredging would affect eelgrass. Therefore, eelgrass minimization measures are not required.

Marine Protection, Research, and Sanctuaries Act (MPRSA): Section 302 of the MPRSA of 1972, as amended (16 U.S.C. § 1432 *et seq.*), authorizes the Secretary of Commerce, in part, to designate areas of ocean waters, such as the Cordell Bank, Gulf of the Farallones, and Monterey Bay, as National Marine Sanctuaries for the purpose of preserving or restoring such areas for their conservation, recreational, ecological, or aesthetic values. After such designation, activities in sanctuary waters authorized under other authorities are valid only if the Secretary of Commerce certifies that the activities are consistent with Title III of the MPRSA. No Department of the Army Permit will be issued until the applicant obtains the required certification or permit. The project does not occur in sanctuary waters, and a preliminary review by the Corps indicates the project would not likely affect sanctuary resources. This presumption of effect, however, remains subject to a final determination by the Secretary of Commerce, or his designee, by the close of the comment period.

National Historic Preservation Act (NHPA): Section 106 of the NHPA of 1966, as amended (16 U.S.C. § 470 *et seq.*), requires federal agencies to consult with the appropriate State Historic Preservation Officer to take into account the effects of their undertakings on historic properties listed in or eligible for listing in the *National Register of Historic Places*. Section 106 of the NHPA further requires federal agencies to consult with the appropriate Tribal Historic Preservation Officer or any Indian tribe to take into account the effects of their undertakings on historic properties, including traditional cultural properties, trust resources, and sacred sites, to which Indian tribes attach historic, religious, and cultural significance.

Because the Larkspur Ferry Terminal has been previously dredged, historic or archeological resources are not expected to occur in the project vicinity. If unrecorded archaeological resources are discovered during project implementation, those operations affecting such resources will be temporarily suspended until the Corps concludes Section 106 consultation with the State Historic Preservation

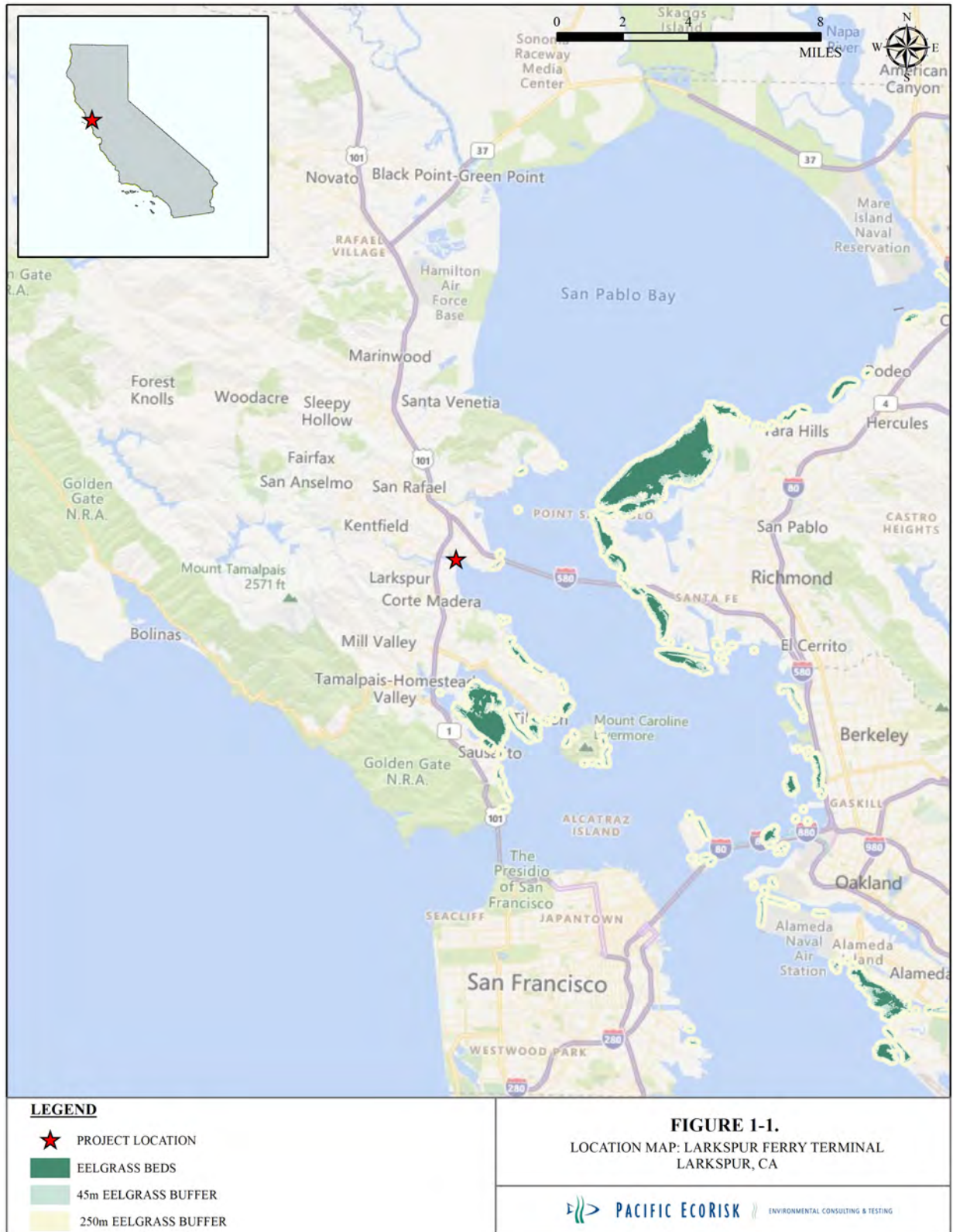
Officer or the Tribal Historic Preservation Officer to take into account any project related impacts to those resources.

5. COMPLIANCE WITH THE SECTION 404(b)(1) GUIDELINES: Projects resulting in discharges of dredged or fill material into waters of the United States must comply with the Guidelines promulgated by the Administrator of the Environmental Protection Agency under Section 404(b) of the Clean Water Act (33 U.S.C. § 1344(b)). An evaluation pursuant to the Guidelines indicates the disposal of dredged material is not dependent on location in or proximity to waters of the United States to achieve the basic project purpose. This conclusion raises the (rebuttable) presumption of the availability of a less environmentally damaging practicable alternative to the project that does not require the discharge of dredged or fill material into waters of the U.S.

6. PUBLIC INTEREST EVALUATION: The decision on whether to issue a Department of the Army Permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the project and its intended use on the public interest. Evaluation of the probable impacts requires a careful weighing of the public interest factors relevant in each particular case. The benefits that may accrue from the project must be balanced against any reasonably foreseeable detriments of project implementation. The decision on permit issuance will, therefore, reflect the national concern for both protection and utilization of important resources. Public interest factors which may be relevant to the decision process include conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

7. CONSIDERATION OF COMMENTS: The Corps is soliciting comments from the public; federal, state and local agencies and officials; Native American Nations or other tribal governments; and other interested parties in order to consider and evaluate the impacts of the project. All comments received by the Corps will be considered in the decision on whether to issue, modify, condition, or deny a Department of the Army Permit for the project. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, and other environmental or public interest factors addressed in a final environmental assessment or environmental impact statement. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the project.

8. SUBMITTING COMMENTS: During the specified comment period, interested parties may submit written comments to Melissa France, San Francisco District, Operations and Readiness Division, 450 Golden Gate Avenue, 4th Floor, Room 1111, San Francisco, California 94102-3404; comment letters should cite the project name, applicant name, and public notice number to facilitate review by the Permit Manager. Comments may include a request for a public hearing on the project prior to a determination on the Department of the Army permit application; such requests shall state, with particularity, the reasons for holding a public hearing. All substantive comments will be forwarded to the applicant for resolution or rebuttal. Additional project information or details on any subsequent project modifications of a minor nature may be obtained from the applicant and/or agent, or by contacting the Permit Manager by telephone or e-mail cited in the public notice letterhead. An electronic version of this public notice may be viewed under the *Current Public Notices* tab on the US Army Corps of Engineers, San Francisco District website: <http://www.spn.usace.army.mil/Missions/Regulatory>.



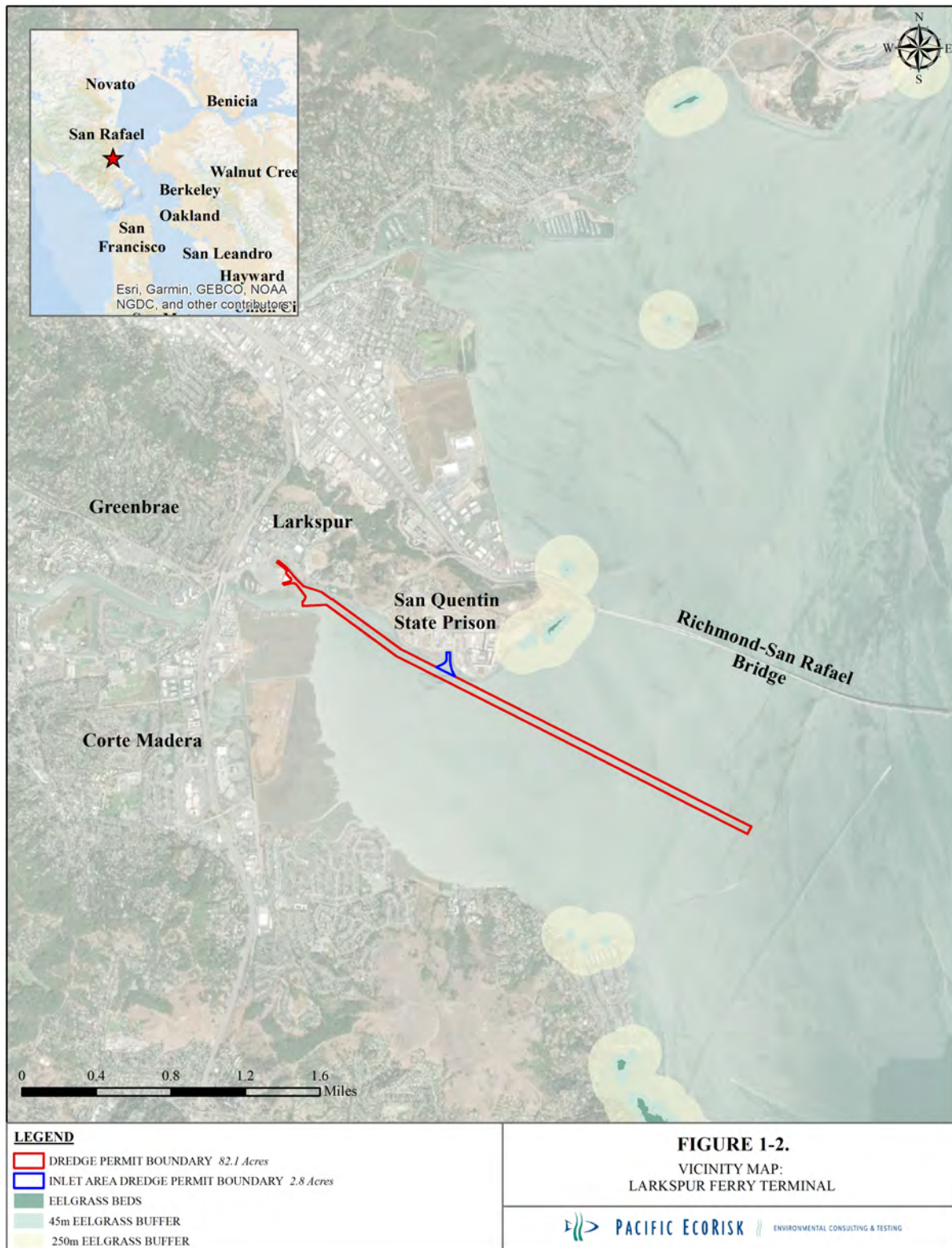
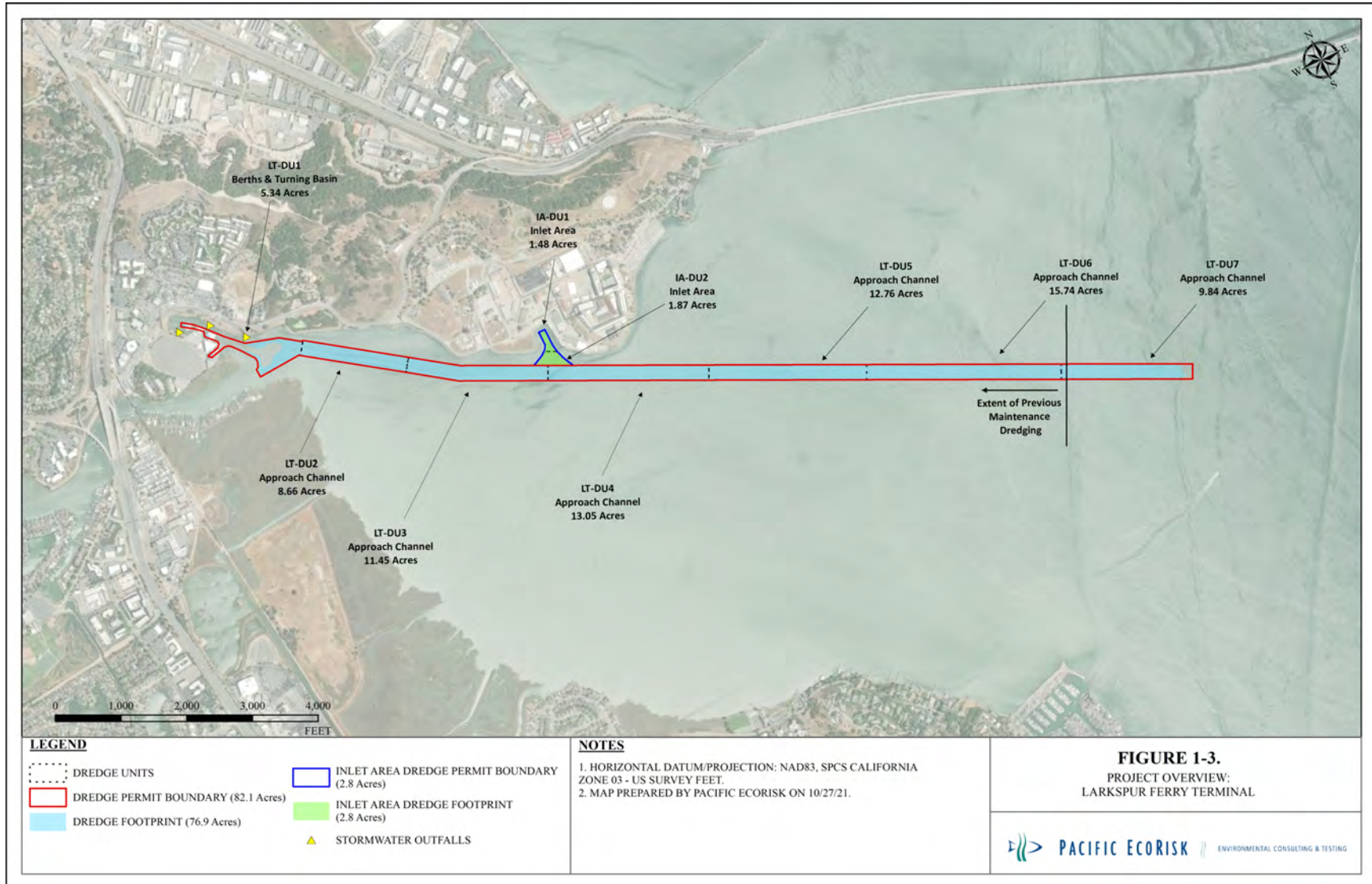


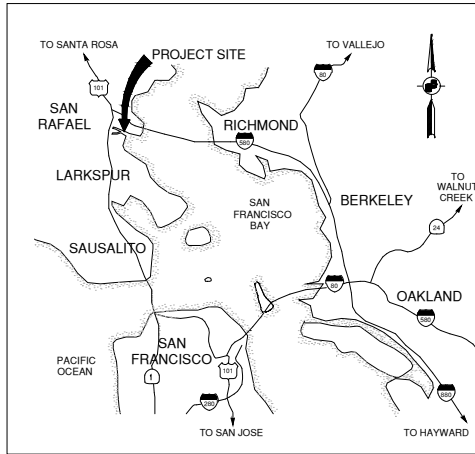
FIGURE 1-2.
VICINITY MAP:
LARKSPUR FERRY TERMINAL



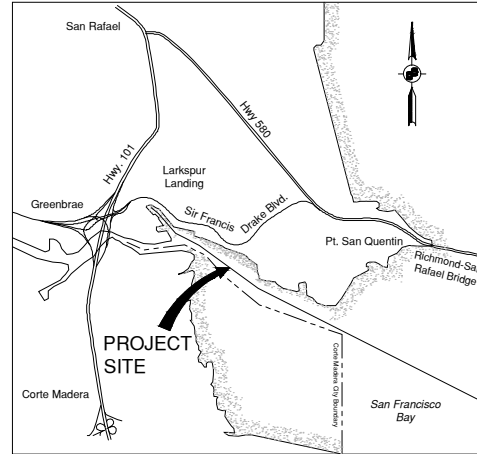
Golden Gate Bridge, Highway and Transportation District

LARKSPUR FERRY TERMINAL

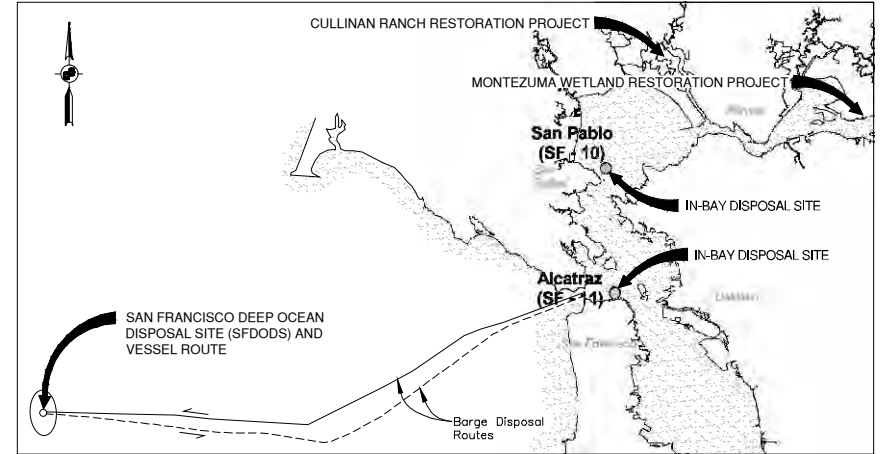
BERTH AND CHANNEL MAINTENANCE DREDGING



VICINITY MAP
NO SCALE



DREDGE LOCATION MAP
NO SCALE

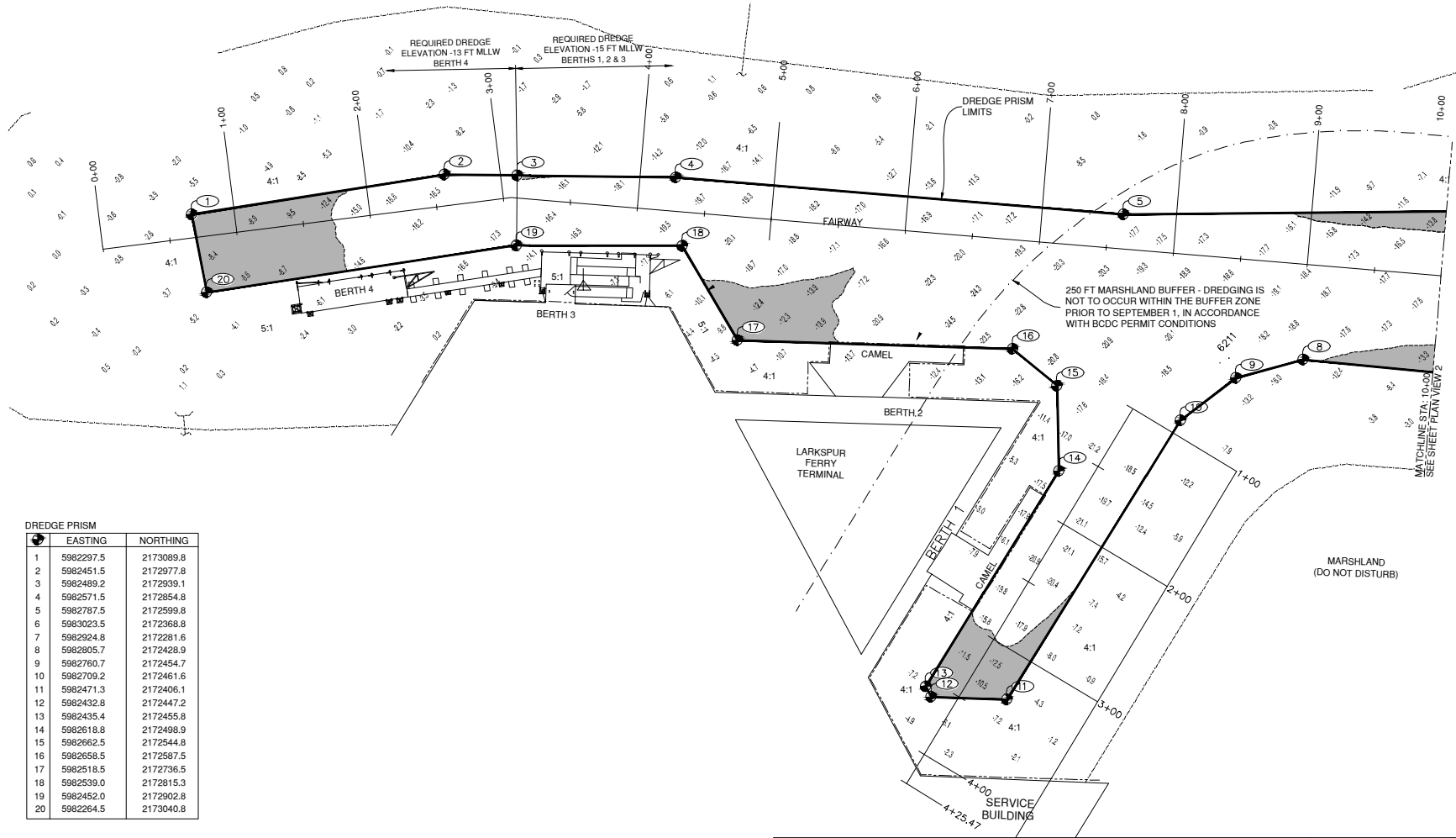


DISPOSAL SITE LOCATIONS MAP
NO SCALE

PROJECT TITLE		
LARKSPUR FERRY TERMINAL BERTHS AND CHANNEL MAINTENANCE DREDGING		
SHEET TITLE		
VICINITY AND LOCATION MAPS		
SCALE: AS SHOWN	SHEET 1 OF 10	DATE: DECEMBER 2021



KEY TO SHEETS

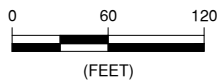


DREDGE PRISM

	EASTING	NORTHING
1	5982297.5	2173089.8
2	5982451.5	2172977.8
3	5982489.2	2172939.1
4	5982571.5	2172854.8
5	5982787.5	2172599.8
6	5983023.5	2172368.8
7	5982924.8	2172281.6
8	5982805.7	2172428.9
9	5982760.7	2172454.7
10	5982709.2	2172461.5
11	5982471.3	2172406.1
12	5982432.8	2172447.2
13	5982435.4	2172455.8
14	5982618.8	2172498.9
15	5982662.5	2172544.8
16	5982658.5	2172587.5
17	5982518.5	2172736.5
18	5982539.0	2172815.3
19	5982452.0	2172902.8
20	5982264.5	2173040.8

LEGEND

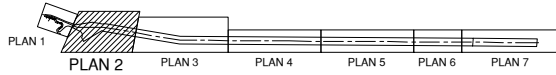
- AREAS ABOVE REQUIRED DREDGE ELEVATION BASED ON SEPTEMBER 2021 CONDITION SURVEY
- REQUIRED DREDGE FOOTPRINT
- PROJECT ALIGNMENT
- ELEVATION IN FEET (MLLW) BASED ON SEPTEMBER 2021 CONDITION SURVEY
- MARSH BUFFER ZONE - DO NOT DREDGE WITHIN BUFFER ZONE PRIOR TO SEPTEMBER 1.



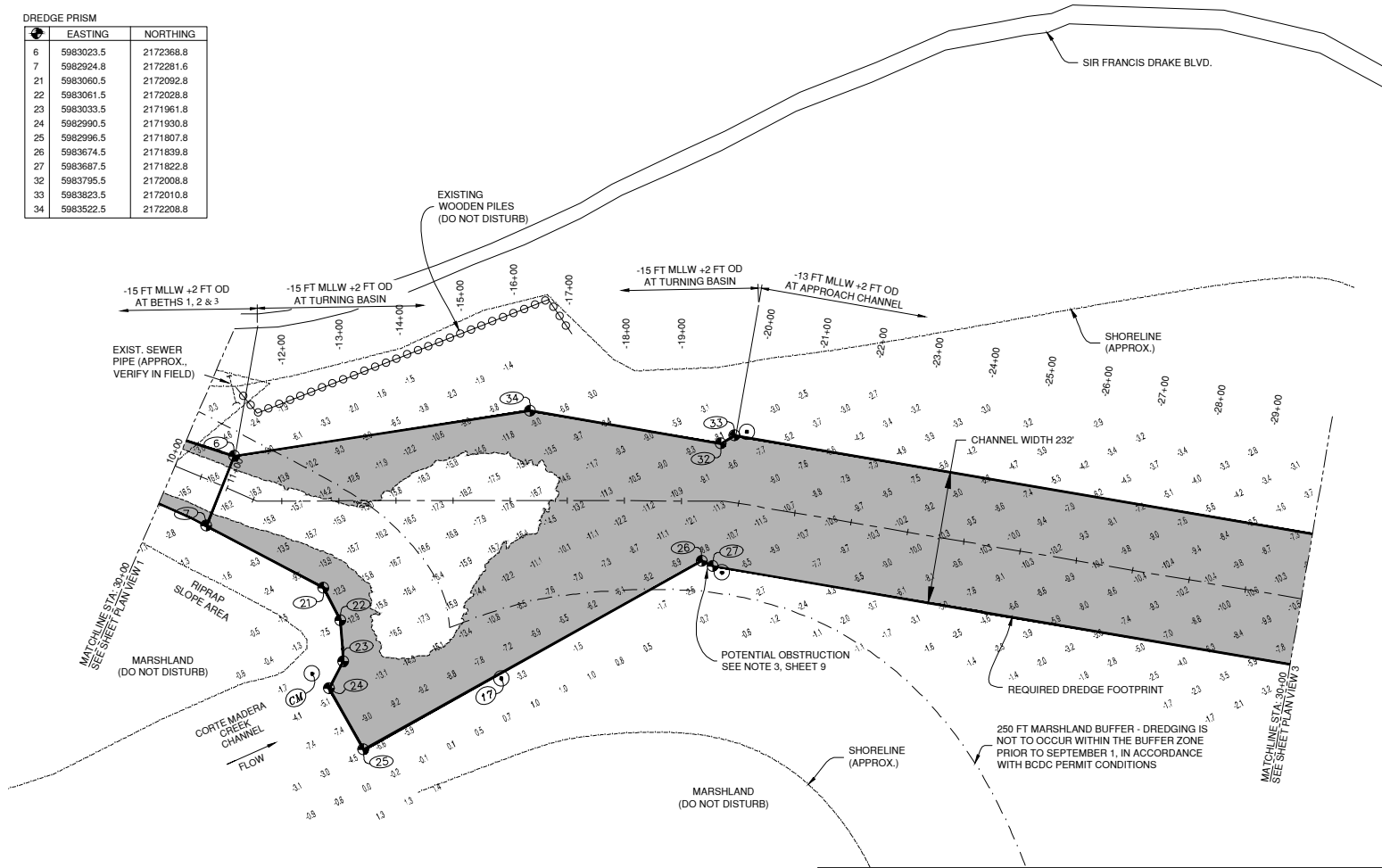
PROJECT TITLE		
LARKSPUR FERRY TERMINAL BERTHS AND CHANNEL MAINTENANCE DREDGING		
SHEET TITLE		
PLAN VIEW 1		
SCALE: AS SHOWN	SHEET 2 OF 10	DATE: DECEMBER 2021



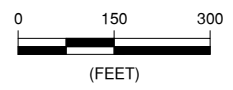
KEY TO SHEETS



DREDGE PRISM		
	EASTING	NORTHING
6	5983023.5	2172368.8
7	5982924.8	2172281.6
21	5983060.5	2172092.8
22	5983061.5	2172028.8
23	5983033.5	2171961.8
24	5982990.5	2171930.8
25	5982996.5	2171807.8
26	5983674.5	2171839.8
27	5983687.5	2171822.8
32	5983795.5	2172008.8
33	5983823.5	2172010.8
34	5983522.5	2172208.8



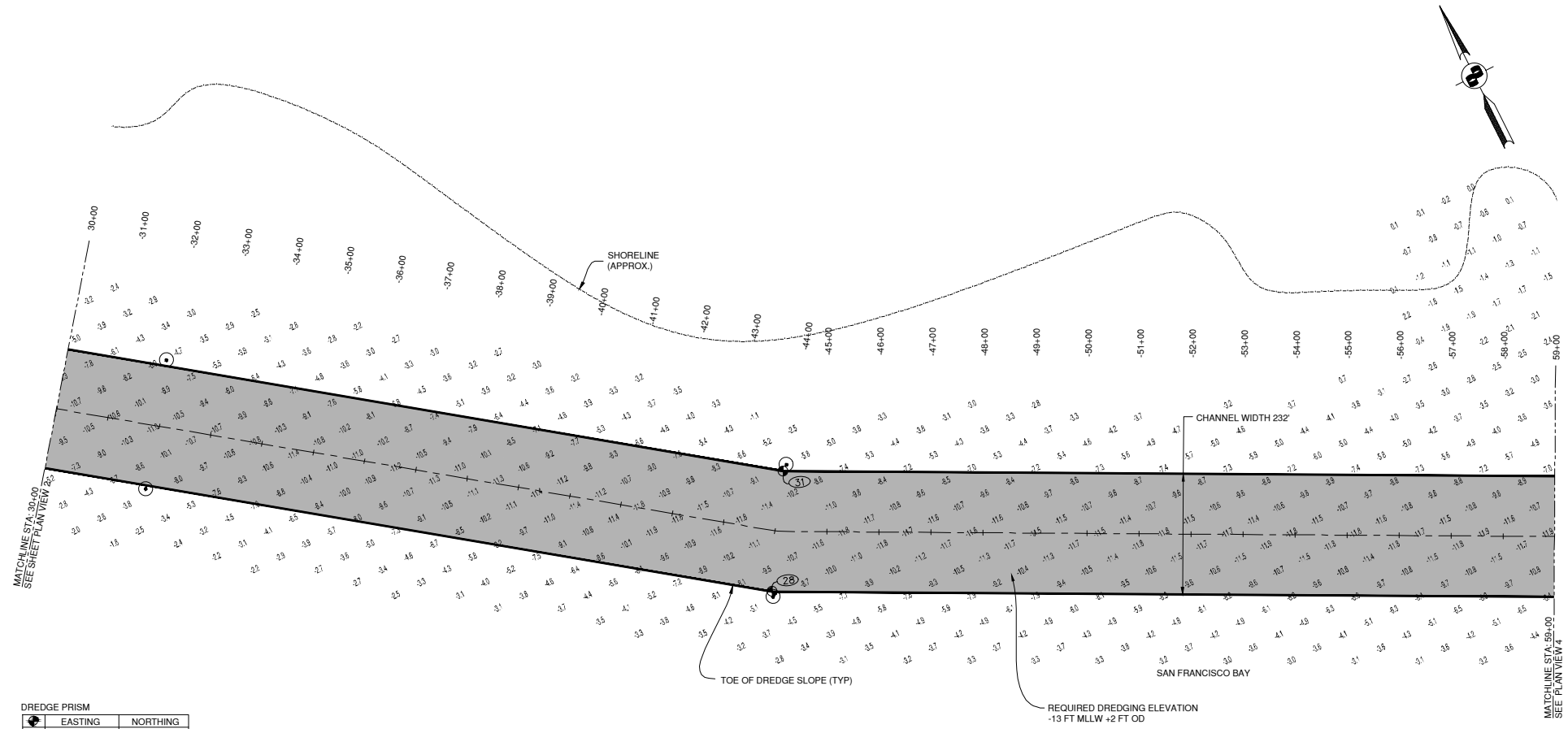
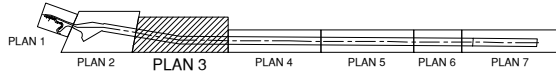
LEGEND	
	AREAS ABOVE REQUIRED DREDGE ELEVATION BASED ON SEPTEMBER 2021 CONDITION SURVEY
	CHANNEL MARKER PILE
	REQUIRED DREDGE FOOTPRINT
	PROJECT ALIGNMENT
	ELEVATION IN FEET (MLLW) BASED ON SEPTEMBER 2021 CONDITION SURVEY
	MARSH BUFFER ZONE - DO NOT DREDGE WITHIN BUFFER ZONE PRIOR TO SEPTEMBER 1.



PROJECT TITLE		
LARKSPUR FERRY TERMINAL BERTHS AND CHANNEL MAINTENANCE DREDGING		
SHEET TITLE		
PLAN VIEW 2		
SCALE: AS SHOWN	SHEET 3 OF 10	DATE: DECEMBER 2021



KEY TO SHEETS

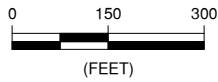


DREDGE PRISM

	EASTING	NORTHING
28	5985658.8	2170384.5
31	5985780.4	2170583.0

LEGEND

- AREAS ABOVE REQUIRED DREDGE ELEVATION BASED ON SEPTEMBER 2021 CONDITION SURVEY
- CHANNEL MARKER PILE
- REQUIRED DREDGE FOOTPRINT
- PROJECT ALIGNMENT
- ELEVATION IN FEET (MLLW) BASED ON SEPTEMBER 2021 CONDITION SURVEY



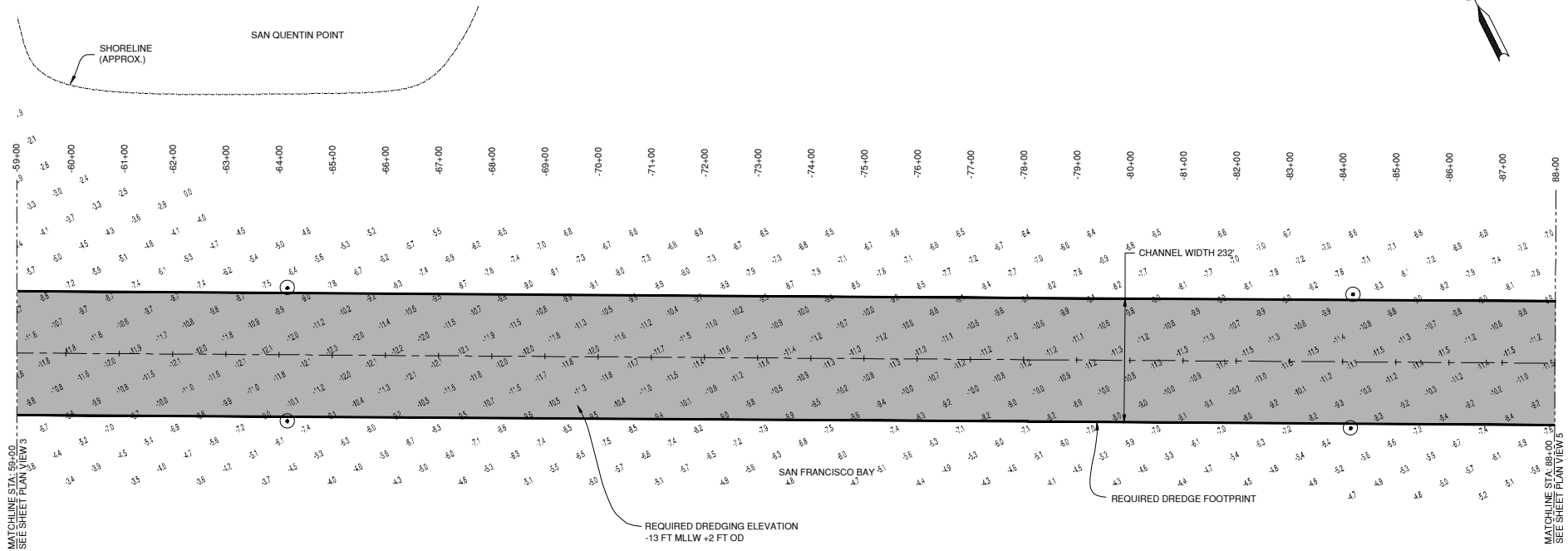
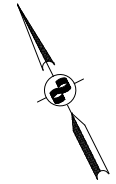
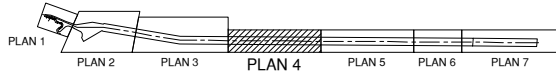
PROJECT TITLE
**LARKSPUR FERRY TERMINAL
 BERTHS AND CHANNEL
 MAINTENANCE DREDGING**

SHEET TITLE
PLAN VIEW 3

SCALE: AS SHOWN SHEET 4 OF 10 DATE: DECEMBER 2021



KEY TO SHEETS

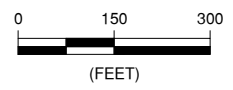


MATCHLINE STA: 59+00
SEE SHEET PLAN VIEW 3

MATCHLINE STA: 88+00
SEE SHEET PLAN VIEW 5

LEGEND

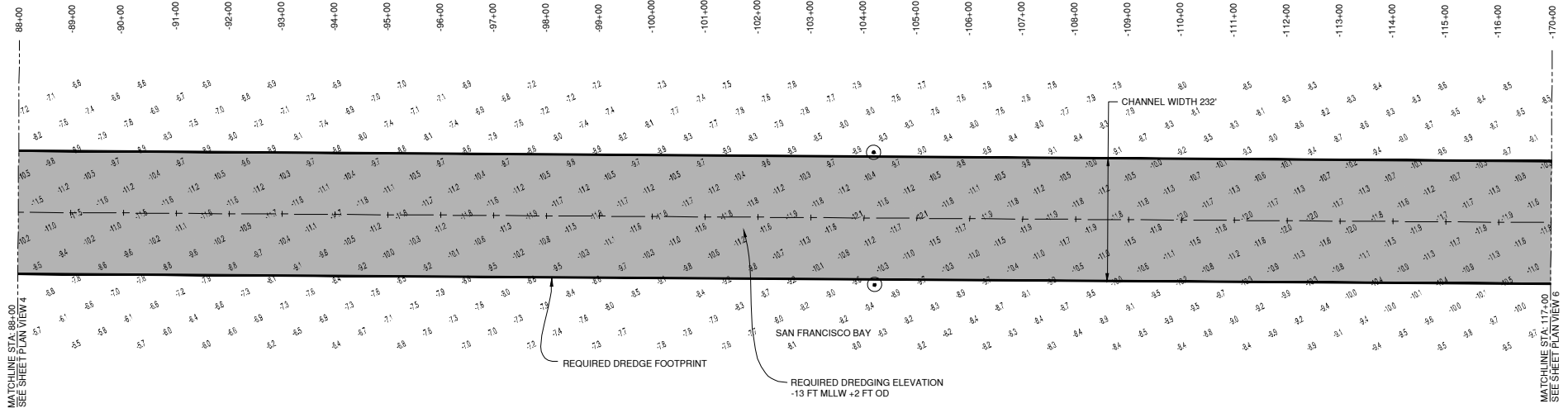
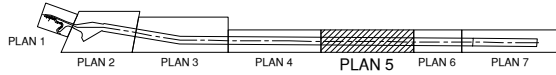
- AREAS ABOVE REQUIRED DREDGE ELEVATION BASED ON SEPTEMBER 2021 CONDITION SURVEY
- CHANNEL MARKER PILE
- REQUIRED DREDGE FOOTPRINT
- PROJECT ALIGNMENT
- ELEVATION IN FEET (MLLW) BASED ON SEPTEMBER 2021 CONDITION SURVEY








PROJECT TITLE		
LARKSPUR FERRY TERMINAL		
BERTHS AND CHANNEL		
MAINTENANCE DREDGING		
SHEET TITLE		
PLAN VIEW 4		
SCALE: AS SHOWN	SHEET 5 OF 10	DATE: DECEMBER 2021

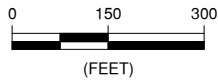


KEY TO SHEETS



LEGEND

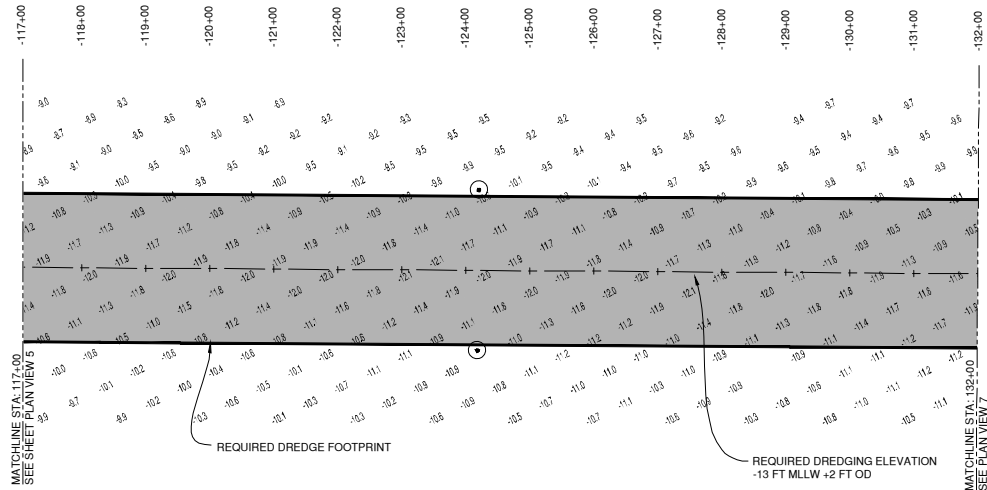
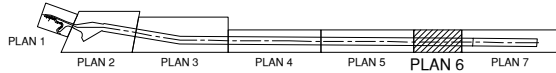
-  AREAS ABOVE REQUIRED DREDGE ELEVATION BASED ON SEPTEMBER 2021 CONDITION SURVEY
-  CHANNEL MARKER PILE
-  REQUIRED DREDGE FOOTPRINT
-  PROJECT ALIGNMENT
-  ELEVATION IN FEET (MLLW) BASED ON SEPTEMBER 2021 CONDITION SURVEY



PROJECT TITLE		
LARKSPUR FERRY TERMINAL BERTHS AND CHANNEL MAINTENANCE DREDGING		
SHEET TITLE		
PLAN VIEW 5		
SCALE: AS SHOWN	SHEET 6 OF 10	DATE: DECEMBER 2021



KEY TO SHEETS

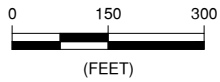


DREDGE PRISM

	EASTING	NORTHING
29	5993892.1	2166216.5
30	5993996.8	2166423.5

LEGEND

- AREAS ABOVE REQUIRED DREDGE ELEVATION BASED ON SEPTEMBER 2021 CONDITION SURVEY
- CHANNEL MARKER PILE
- REQUIRED DREDGE FOOTPRINT
- PROJECT ALIGNMENT
- ELEVATION IN FEET (MLLW) BASED ON SEPTEMBER 2021 CONDITION SURVEY



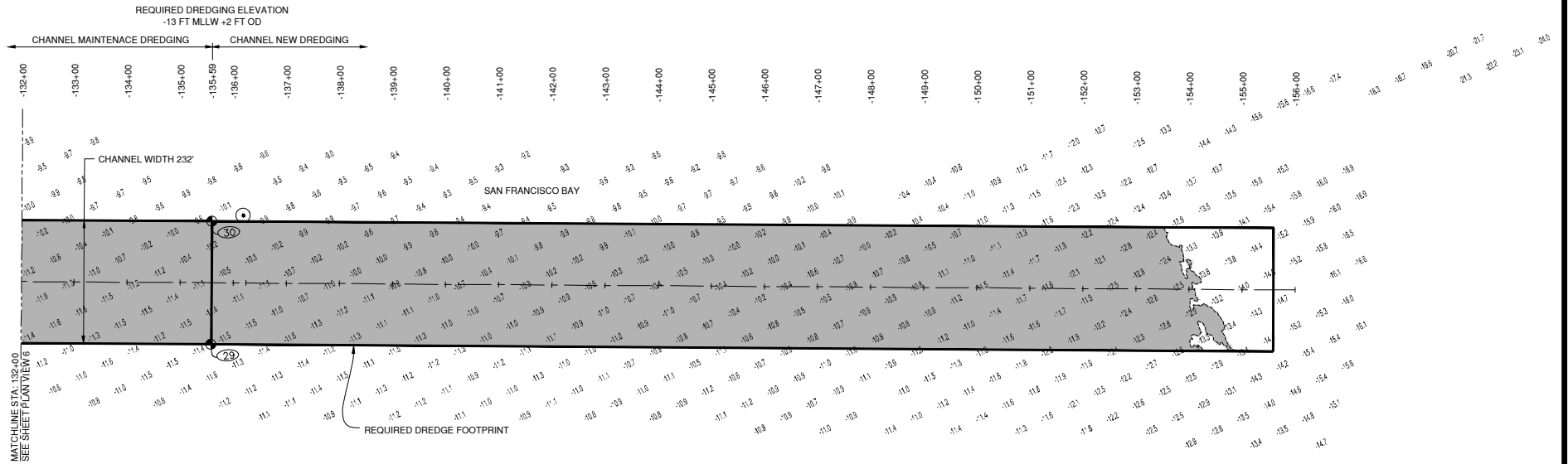
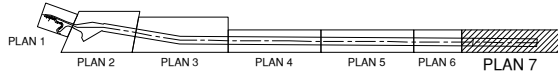
PROJECT TITLE
**LARKSPUR FERRY TERMINAL
 BERTHS AND CHANNEL
 MAINTENANCE DREDGING**

SHEET TITLE
PLAN VIEW 6

SCALE: AS SHOWN SHEET 7 OF 10 DATE: DECEMBER 2021



KEY TO SHEETS

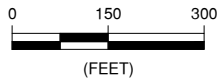


DREDGE PRISM

	EASTING	NORTHING
29	5993834.0	2166246.0
30	5993938.8	2166452.9

LEGEND

- AREAS ABOVE REQUIRED DREDGE ELEVATION BASED ON SEPTEMBER 2021 CONDITION SURVEY
- CHANNEL MARKER PILE
- REQUIRED DREDGE FOOTPRINT
- PROJECT ALIGNMENT
- ELEVATION IN FEET (MLLW) BASED ON SEPTEMBER 2021 CONDITION SURVEY

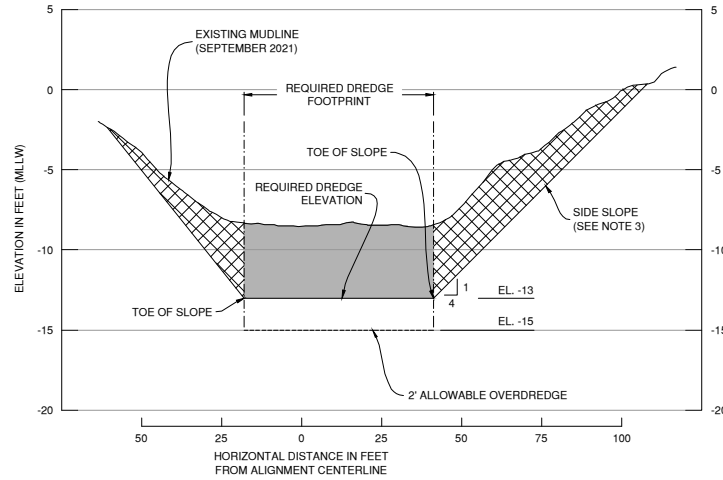


PROJECT TITLE
**LARKSPUR FERRY TERMINAL
 BERTHS AND CHANNEL
 MAINTENANCE DREDGING**

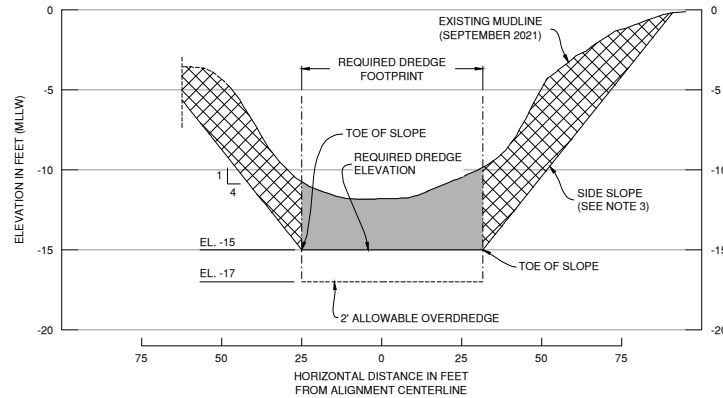
SHEET TITLE
PLAN VIEW 7

SCALE: AS SHOWN SHEET 8 OF 10 DATE: DECEMBER 2021





TYPICAL SECTION: BERTH 4



TYPICAL SECTION: BERTHS 1 TO 3

LEGEND

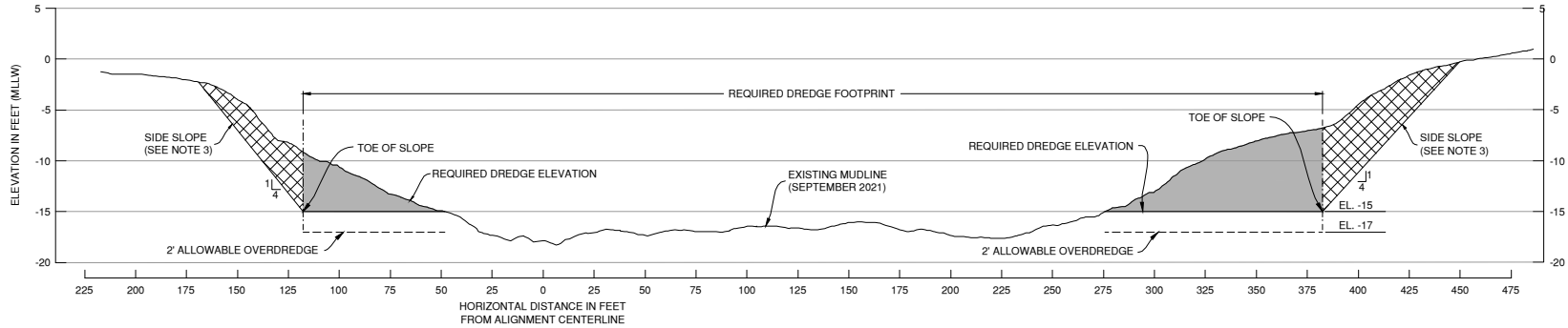
- REQUIRED DREDGE ELEVATION
- ALLOWABLE OVERDREDGE ELEVATION
- SEDIMENT TO BE DREDGED TO MEET REQUIRED ELEVATION
- XXXXX SIDE SLOPE

NOTES

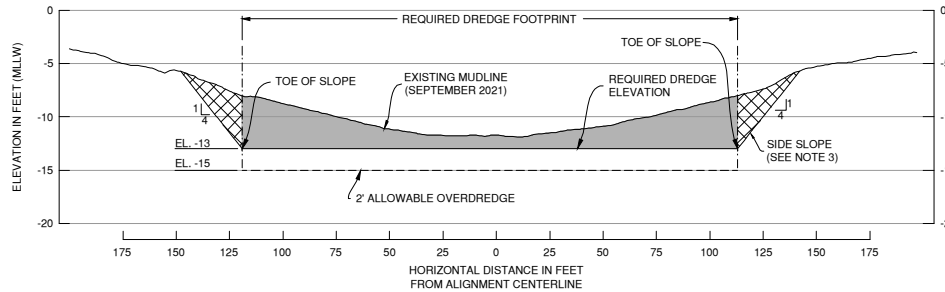
1. EXISTING MUDLINE IS BASED ON A BATHYMETRIC SURVEY PERFORMED SEPTEMBER 15-17, 2021. ACTUAL SITE CONDITIONS AT THE TIME OF DREDGING MAY VARY.
2. BERTH FACILITIES AND STRUCTURES NOT SHOWN FOR CLARITY.
3. SIDE SLOPE SHOWN TO PRESENT A 4H:1V SLOPE. ACTUAL ANGLE OF REPOSE MAY VARY.

PROJECT TITLE		
LARKSPUR FERRY TERMINAL BERTHS AND CHANNEL MAINTENANCE DREDGING		
SHEET TITLE		
TYPICAL DREDGE SECTIONS (SHEET 1 OF 2)		
SCALE: AS SHOWN	SHEET 9 OF 10	DATE: DECEMBER 2021





TYPICAL SECTION: TURNING BASIN



TYPICAL SECTION: CHANNEL

LEGEND

- REQUIRED DREDGE ELEVATION
- ALLOWABLE OVERDREDGE ELEVATION
- SEDIMENT TO BE DREDGED TO MEET REQUIRED ELEVATION
- XXXXX SIDE SLOPE

NOTES

1. EXISTING MUDLINE IS BASED ON A BATHYMETRIC SURVEY PERFORMED SEPTEMBER 15-17, 2021. ACTUAL SITE CONDITIONS AT THE TIME OF DREDGING MAY VARY.
2. BERTH FACILITIES AND STRUCTURES NOT SHOWN FOR CLARITY.
3. SIDE SLOPE SHOWN TO PRESENT A 4H:1V SLOPE. ACTUAL ANGLE OF REPOSE MAY VARY.

PROJECT TITLE <h2 style="text-align: center; margin: 0;">LARKSPUR FERRY TERMINAL BERTHS AND CHANNEL MAINTENANCE DREDGING</h2>		 GOLDEN GATE BRIDGE HIGHWAY & TRANSPORTATION DISTRICT
SHEET TITLE <h2 style="text-align: center; margin: 0;">TYPICAL DREDGE SECTION (SHEET 2 OF 2)</h2>		
SCALE: AS SHOWN	SHEET 10 OF 10	DATE: DECEMBER 2021