CALIFORNIA COASTAL COMMISSION
CENTRAL COAST DISTRICT
725 FRONT STREET, SUITE 300
SANTA CRUZ, CA 95060
PHONE: (831) 427-4863
FAX: (831) 427-4877
WEB: WWW.COASTAL.CA.GOV

Th16b

CDP 3-20-0546 (AVILA PIER REHABILITATION)
SEPTEMBER 9, 2021 HEARING
EXHIBITS

Table of Contents

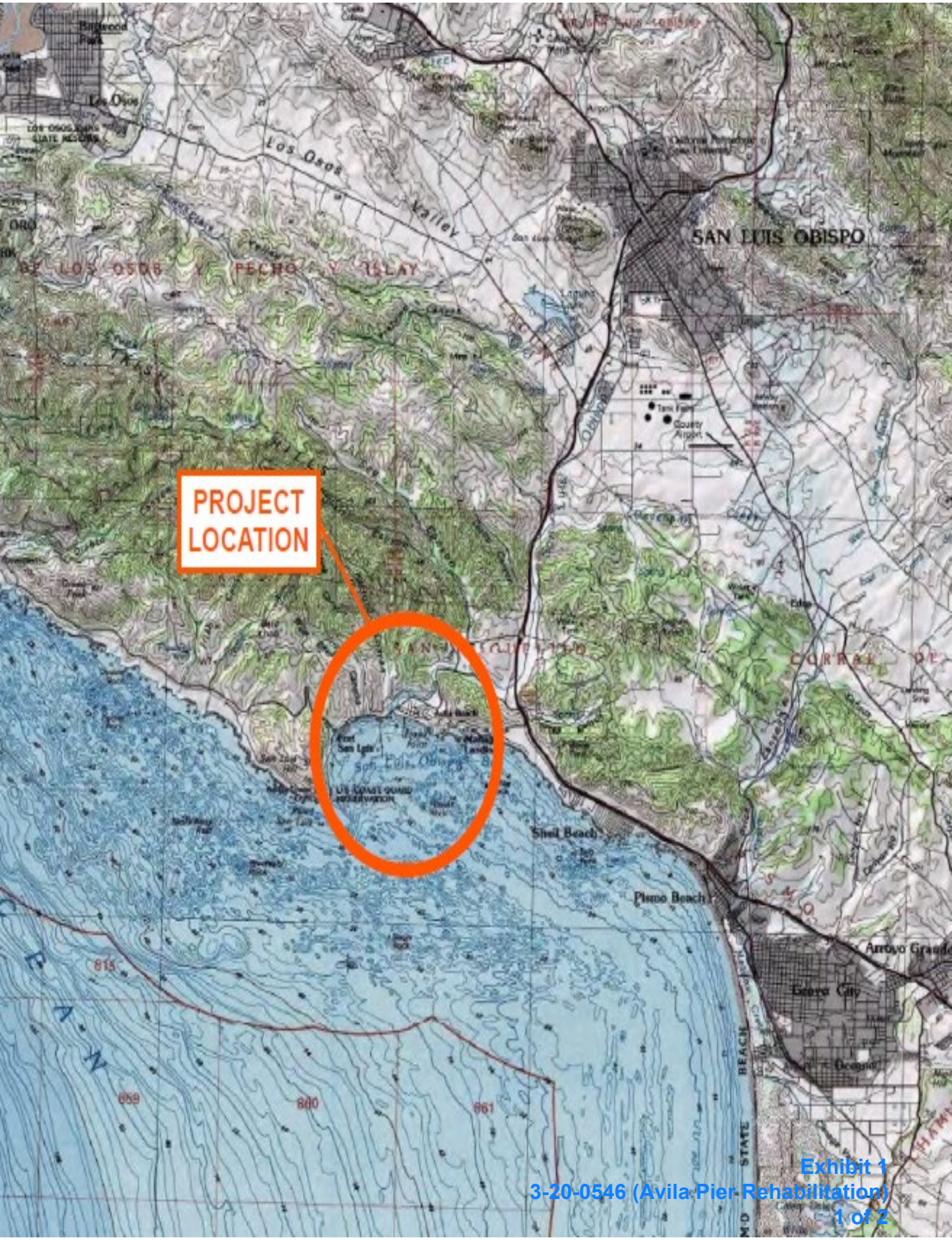
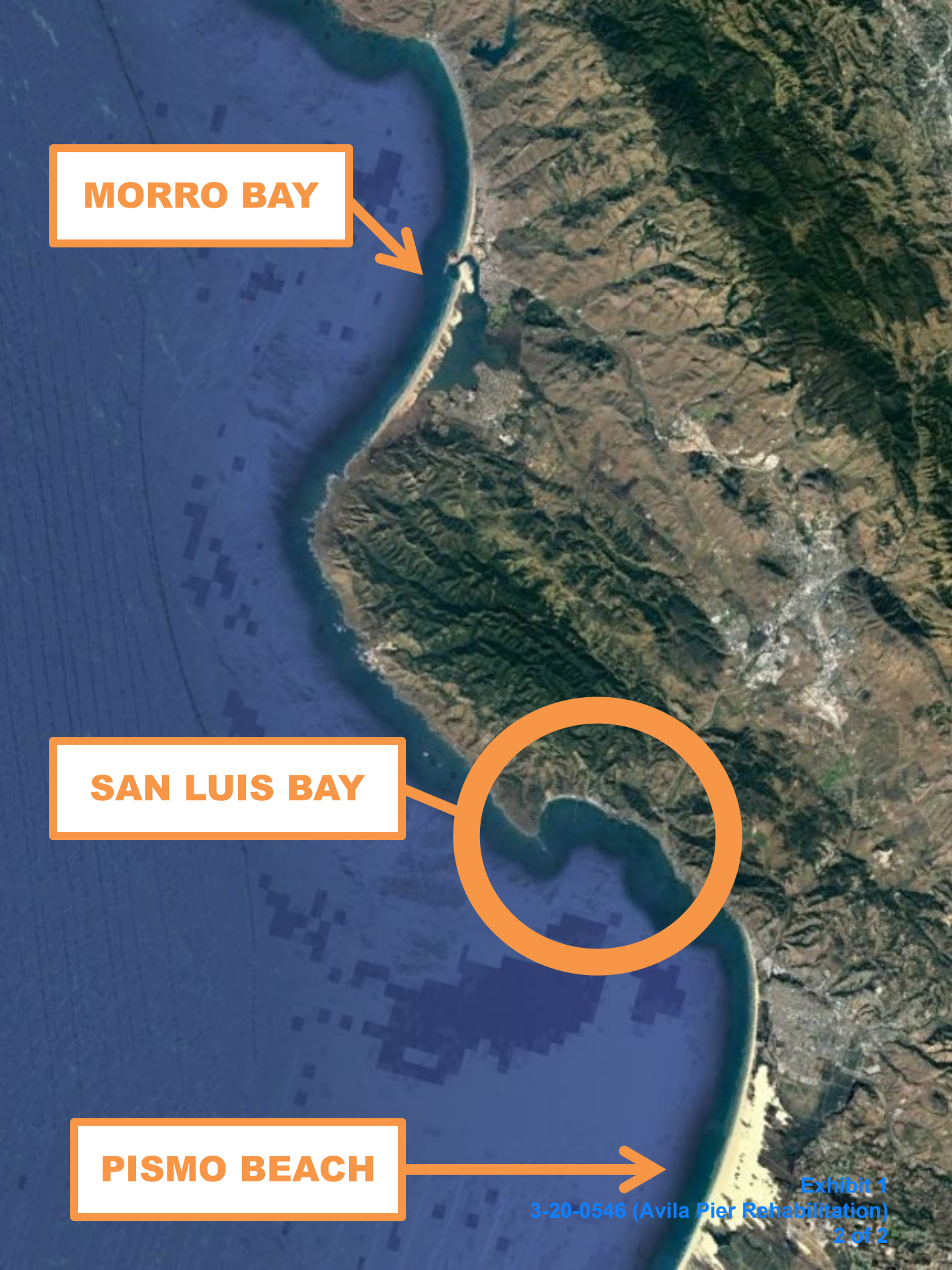


Exhibit 1
3-20-0546 (Avila Pier Rehabilitation)
1 of 2


MORRO BAY
SAN LUIS BAY
PISMO BEACH

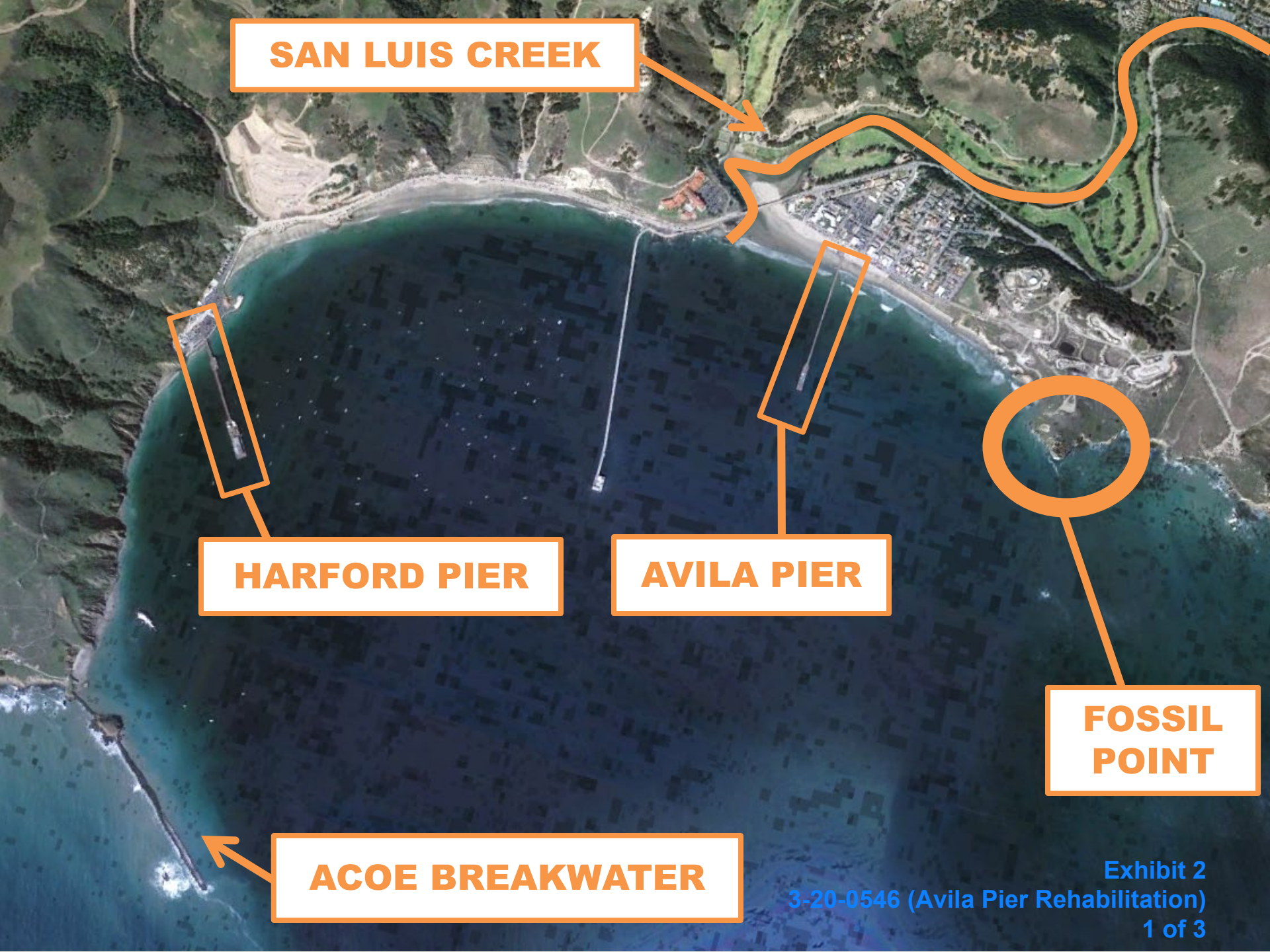
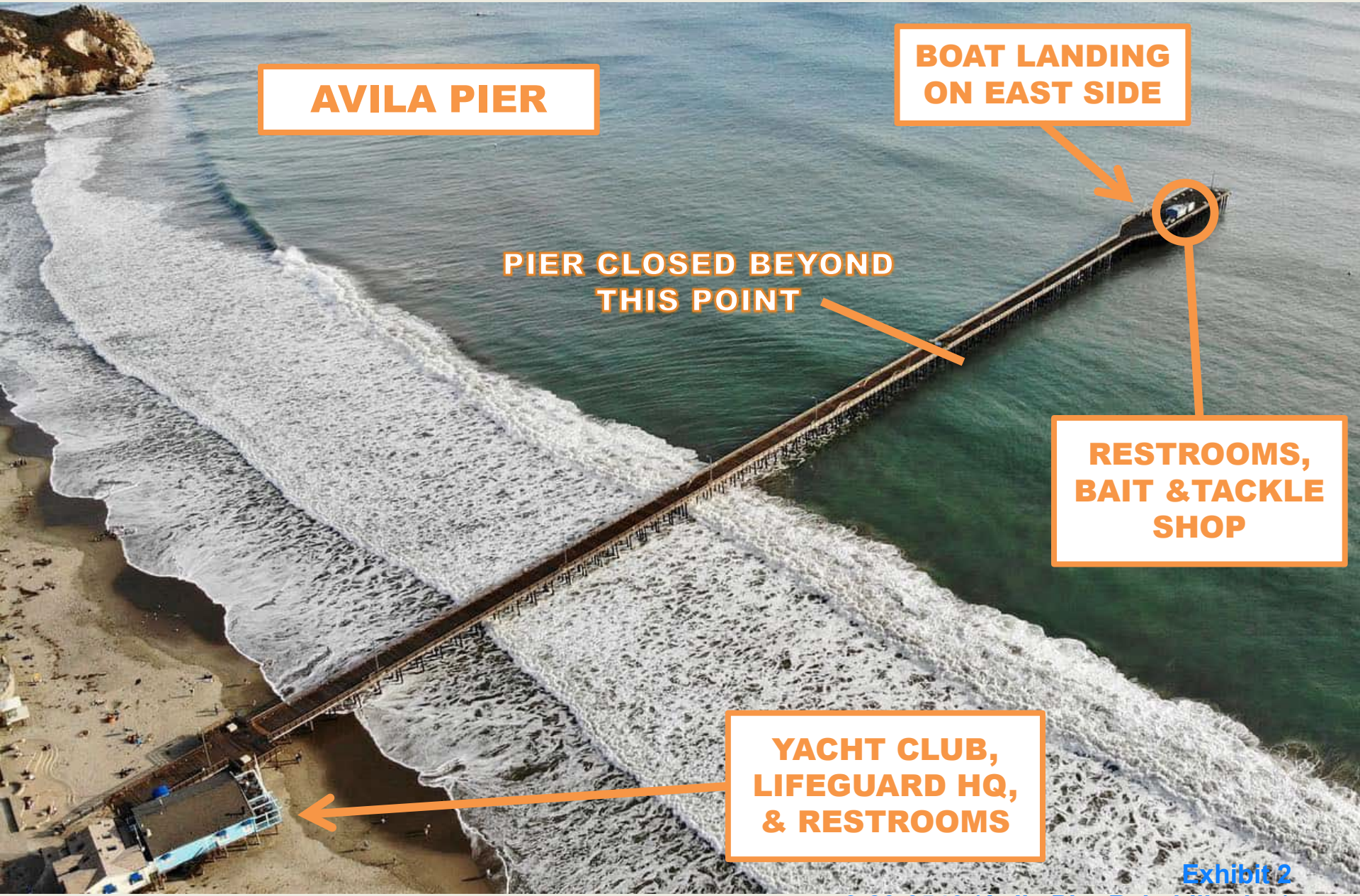
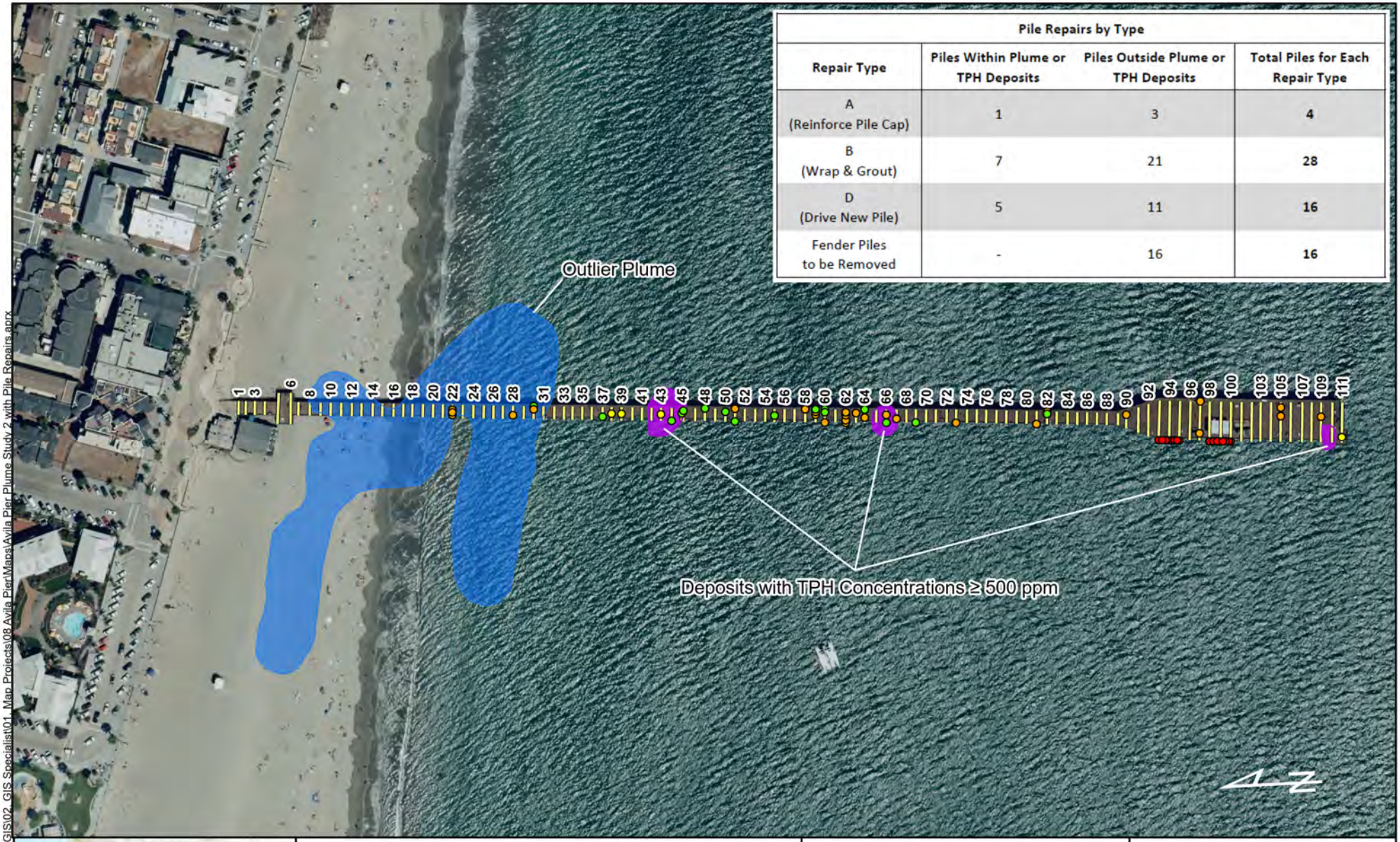


Exhibit 2
3-20-0546 (Avila Pier Rehabilitation)
1 of 3

Exhibit 2
3-20-0546 (Avila Pier Rehabilitation)
2 of 3


AVILA PIER
BOAT LANDING ON EAST SIDE
PIER CLOSED BEYOND THIS POINT
RESTROOMS, BAIT &TACKLE SHOP
YACHT CLUB, LIFEGUARD HQ, & RESTROOMS



Pile Repairs by Type			
Repair Type	**Piles Within Plume or TPH Deposits**	**Piles Outside Plume or TPH Deposits**	**Total Piles for Each Repair Type**
A (Reinforce Pile Cap)	1	3	**4**
B (Wrap & Grout)	7	21	**28**
D (Drive New Pile)	5	11	**16**
Fender Piles to be Removed	-	16	**16**

Avila Pier Rehabilitation

Extent of Outlier Plume & Deposits

Date: 6/14/21, Revised 7/29/21
Data Source: San Luis Obispo County, SLOCOG 2014, CH2M Hill 2001
Created by: Chris Munson, Natalie Teeter

Legend

- Bents (Pile Rows)
- Avila Outlier Plume
- TPH Deposits (≥500 ppm)

Repair Type
- A
- B
- D
- Remove

0 50 100 200 Feet

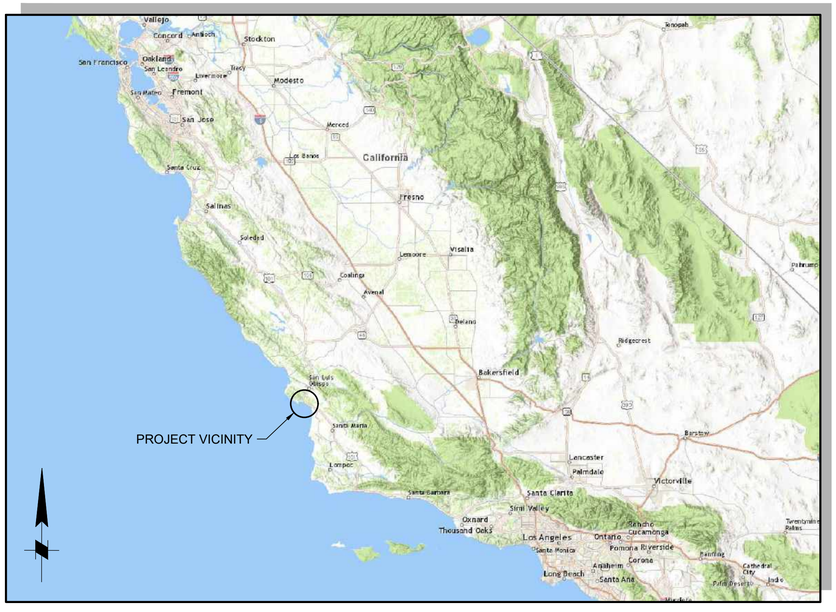
PORT SAN LUIS HARBOR DISTRICT

Document Path: Z:\Facilities Department\06. GIS\02. GIS Specialist\01. Map Projects\08 Avila Pier\Maps\Avila Pier Plume Study 2 with Pile Repairs.aprx

Exhibit 3
3-20-0546 (Avila Pier Rehabilitation)
1 of 1

AVILA PIER REPAIRS

AVILA BEACH, CA



VICINITY MAP
SCALE: NTS

INDEX OF DRAWINGS	
SHEET NO.	SHEET TITLE
G-001	TITLE SHEET
G-002	GENERAL NOTES
S-001	PIER PLAN AND ELEVATION
S-002	CONDITION PLAN
S-003	REPAIR PLAN
S-004	PILE REPAIR 1 OF 3
S-005	PILE REPAIR 2 OF 3
S-006	PILE REPAIR 3 OF 3

LOCATION PLAN
SCALE: NTS

Exhibit 4
3-20-0546 (Avila Pier Rehabilitation)
1 of 8

Rev.	Date	Description	Appr
-			

AVILA PIER REPAIRS

TITLE SHEET

Date: 09/25/2020
M&N Project No. 10338-03
Drawing scale:
Drawing Scale: Plot scale: 1:1 (D SHEET)
Designed by: CD
Drawn by: CD
Chkd by: SH
Reviewed by: BP
Submitted by: MOFFATT & NICHOL

moffatt & nichol
2185 N. CALIFORNIA BLVD.
SUITE 500
WALNUT CREEK, CA 94596

PORT SAN LUIS HARBOR DISTRICT
3950 AVILA BEACH DRIVE P.O. BOX 249
AVILA BEACH, CA 93424

REGISTERED PROFESSIONAL ENGINEER
BRADFORD A. PORTER
No. 042795
Exp. 3-31-22
CIVIL
STATE OF CALIFORNIA

SEAL

Sheet Reference No.
G-001
INDEX: 1 OF 8

File: Q:\WC\10338-03 Avila Pier Repair Dwgs\4_CADD_Active_SheetSet\10338G-001 - Plotted: 9/28/2020 8:52 AM by CANEPA, ALLISON ; Saved: 9/25/2020 2:25 PM by ACANEPA

DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING

GENERAL NOTES

1. REPAIRS BASED UPON STRUCTURAL EVALUATION DATED FEBRUARY 13, 2019 AND CONDITION ASSESSMENT DATED NOVEMBER 1, 2019 CONDUCTED BY MOFFATT AND NICHOL.
2. SITE PLAN AND CONDITIONS ARE BASED UPON SHORELINE ENGINEERING REPAIR DESIGN INSPECTION DATED SEPTEMBER 1, 2015, DIVE INSPECTION BY ADVANTAGE TECHNICAL SERVICES INC. DATED APRIL 4, 2019, AND SUPPLEMENTED WITH FIELD OBSERVATIONS IN 2019.
3. ELEVATIONS ARE IN FEET REFERENCED TO MLLW, BASED ON STATION 9412110, PORT SAN LUIS.

WATER LEVEL	ELEVATION (FT)
MEAN HIGHER HIGH WATER (MHHW)	5.33
MEAN HIGH WATER (MHW)	4.62
MEAN TIDE LEVEL (MTL)	2.83
MEAN LOW WATER (MLW)	1.04
MEAN LOWER LOW WATER (MLLW)	0.00

4. PROTECT ALL EXISTING SITE FEATURES NOT CALLED OUT TO BE DEMOLISHED. CONTRACTOR TO REPAIR ANY DAMAGE DONE TO EXISTING FEATURES TO REMAIN.
5. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR JOBSITE SAFETY.
6. VERIFY ALL LEVELS, DIMENSIONS, AND EXISTING CONDITIONS IN THE FIELD BEFORE PROCEEDING. NOTIFY OWNER OF ANY DISCREPANCIES OR FIELD CHANGES PRIOR TO INSTALLATION OF FABRICATION. IN CASE OF DISCREPANCIES BETWEEN THE EXISTING CONDITIONS AND THE DRAWINGS THE CONTRACTOR SHALL OBTAIN WRITTEN DIRECTION FROM OWNER BEFORE PROCEEDING.
7. NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS.
8. PROVIDE CATCHMENT TO PREVENT ANY MATERIAL FROM FALLING INTO THE WATER DURING DEMOLITION AND CONSTRUCTION.

CODES AND STANDARDS

1. 2016 CALIFORNIA BUILDING CODE (CBC).
2. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), STEEL CONSTRUCTION MANUAL, 14TH EDITION.
3. AMERICAN FOREST & PAPER ASSOCIATION, NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION, NDS 2015 EDITION.
4. AMERICAN SOCIETY OF CIVIL ENGINEERS, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ASCE 7-10.
5. AMERICAN CONCRETE INSTITUTE (ACI), BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY, ACI 318-14.

PILE REPAIR

1. TIMBER PILES INDICATED SHALL BE REPAIRED WITH A FIBERGLASS JACKET ENCASING A STEEL REINFORCED EPOXY GROUT FILL, SIMPSON FX-70 SYSTEM OR ENGINEER APPROVED EQUAL.
2. FIBERGLASS JACKET AND GROUT PORT SHALL BE INSTALLED PER MANUFACTURES SPECIFICATIONS.
3. MONITOR PRESSURE-INJECTION OR GRAVITY-FEED GROUT APPLICATION TO ENSURE MATERIAL DOES NOT LEAK INTO WATER.
4. EXCESS GROUT PUMPED OUT THROUGH PORTS OR JACKET OPENINGS SHALL BE COLLECTED AND REMOVED FROM THE WATER.
5. IF THE COST TO REPAIR ALL PILES INDICATED ON THE DRAWINGS EXCEEDS THE PROJECT BUDGET, PILES WILL BE SELECTED FOR REPAIR IN THE PRIORITY ORDER INDICATED.

LUMBER

1. STRUCTURAL LUMBER SHALL BE DOUGLAS FIR-LARCH NO. 1 OR BETTER AS SPECIFIED IN THE WEST COAST LUMBER INSPECTION BUREAU, VISUALLY GRADED LUMBER.
2. PILE TOP REPLACEMENTS SHALL BE TREATED DOUGLAS FIR ROUND TIMBER PILES CONFORMING TO ASTM D25. TREATMENT SHALL BE FOR SALTWATER SEVER BORER HAZARD TO A MINIMUM NET RETENTION OF 2.5 PCF.
3. STRUCTURAL LUMBER SHALL BE CHEMICALLY TREATED WITH ACZA FOR MARINE EXPOSURE, SALTWATER SPLASH PER AWPA STANDARD 4B, 4C. LUMBER SHALL BE COATED WITH A 250 MIL THICK MARINE GRADE POLYUREA COATING.

HARDWARE

1. ALL STEEL PLATES, BOLTS, LAG BOLTS, NUTS, AND WASHERS SHALL BE HOT DIP GALVANIZED. BOLTS SHALL HAVE FLAT WASHERS AT THE NUT AND HEAD.
2. BOLTS SHALL CONFORM TO ASTM A307A.

REINFORCEMENT

1. ALL REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE 60.
2. REINFORCING BARS SHALL NOT BE WELDED WITHOUT THE ENGINEER'S APPROVAL.

GROUT

1. CEMENTITIOUS UNDERWATER GROUT SHALL BE SIMPSON FX-225 NON-SHRINK CEMENTITIOUS UNDERWATER GROUT OR ENGINEER APPROVED EQUAL.
2. MARINE EPOXY GROUT SHALL BE SIMPSON FX-70-6MP MULTI-PURPOSE MARINE EPOXY GROUT OR ENGINEER APPROVED EQUAL.
3. TOP SEAL EPOXY SHALL BE FX-763 TROWEL-GRADE EPOXY MIXED WITH FX-702 SILICA FILLER OR ENGINEER APPROVED EQUAL.
4. ALL GROUT SHALL BE PLACED TO OBTAIN UNIFORM COVERAGE WITHOUT VOIDS. THE CONTRACTOR SHALL SUBMIT A GROUTING PROCEDURE FOR APPROVAL BY THE ENGINEER.

CONDUITS

1. CONDUITS SHALL BE RELOCATED AS NECESSARY TO ACCOMMODATE REPAIRS. NO NEW ELECTRICAL WORK IS PLANNED AS PART OF THIS CONSTRUCTION.

REMOVAL NOTES

1. THE SITE SHALL BE CLEANED OF DEBRIS AT THE END OF EACH DAY AND AT THE CONCLUSION OF REMOVAL WORK.

SURFACE PREPARATION OF TIMBER PILES

1. MECHANICALLY (WATER BLAST/WIRE BRUSH) REMOVE GREASE, RUST, MARINE GROWTH, LOOSE AND UNSOUND TIMBER, AND OTHER BOND INHIBITING MATERIALS.
2. THE EXTENT OF (E) PILE CLEANING SHALL BE LIMITED TO EXTENT OF (N) JACKETS.

PERMITS

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE REGULATORY WORK WINDOW AND PERMIT CONDITIONS PER PERMITS FROM THE FOLLOWING AGENCIES:
   - US ARMY CORPS OF ENGINEERS
   - REGIONAL WATER QUALITY CONTROL BOARD
   - CALIFORNIA COASTAL COMMISSION

LEGEND

ABBREVIATIONS

CLR	CLEAR
DIA	DIAMETER
(E)	EXISTING
EL	ELEVATION
FT	FEET
MAX	MAXIMUM
MIN	MINIMUM
MHHW	MEAN HIGHER HIGH WATER
MLLW	MEAN LOWER LOW WATER
NTS	NOT TO SCALE
OC	ON CENTER
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VIF	VERIFY IN FIELD

Exhibit 4
3-20-0546 (Avila Pier Rehabilitation)
2 of 8

PORT SAN LUIS HARBOR DISTRICT

Mark	Description	Date	Appr

AVILA PIER REPAIRS

GENERAL NOTES

moffatt & nichol
2185 N. CALIFORNIA BLVD.
SUITE 500
WALNUT CREEK, CA 94596

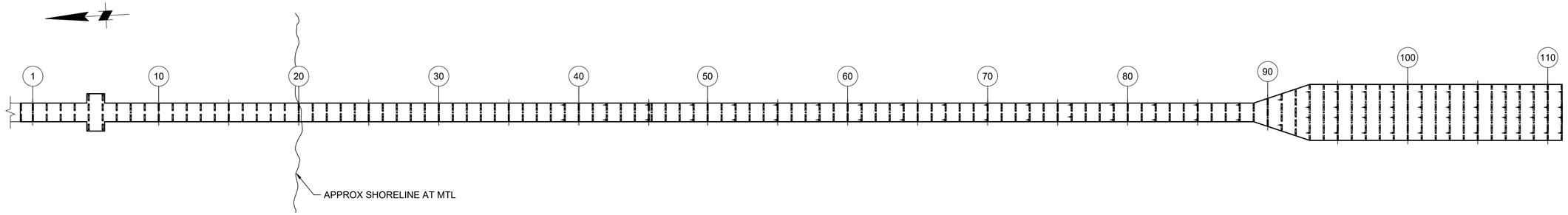
PORT SAN LUIS HARBOR DISTRICT
3950 AVILA BEACH DRIVE P.O. BOX 249
AVILA BEACH, CA 93424

REGISTERED PROFESSIONAL ENGINEER
BRADFORD A. PORTER
No. 042795
Exp. 3-31-22
CIVIL
STATE OF CALIFORNIA
SEAL

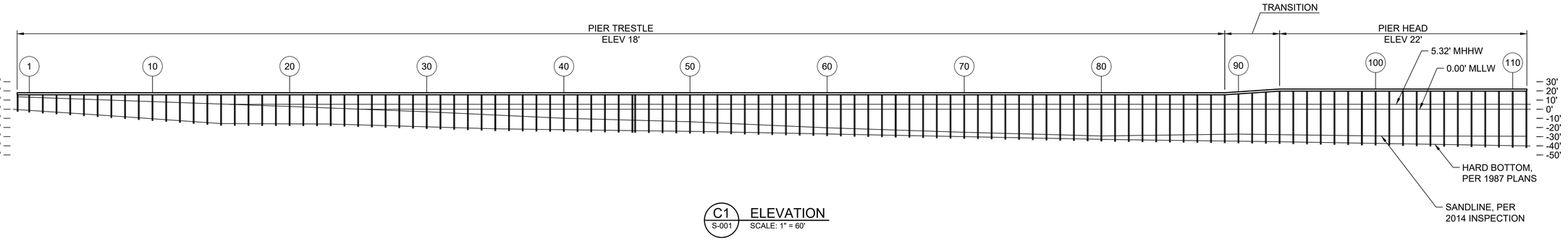
Rev:	-
Date:	09/25/2020
M&N Project No.	10338-03
Drawing code:	
Drawing Scale:	
Plot scale:	1:1 (D SHEET)
Designed by:	CD
Dwn by:	CD
Ckd by:	SH
Reviewed by:	BP
Submitted by:	MOFFATT & NICHOL

Sheet Reference No.
G-002
INDEX: 2 OF 8

DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING



D1 S-001 PLAN
SCALE: 1" = 60'



C1 S-001 ELEVATION
SCALE: 1" = 60'

NOTES

1. BATTER PILES NOT SHOWN IN ELEVATION FOR CLARITY.

60' 0' 60' 120'
SCALE: 1"=60'

~~Exhibit 4~~

3-20-0546 (Avila Pier Rehabilitation)

3 of 8

AVILA PIER REPAIRS

PIER PLAN AND ELEVATION

Rev.	Description	Date	Appr
-			

Date: 09/25/2020
M&N Project No. 10338-03
Drawing code:
Drawing Scale: Plot scale: 1:1 (D SHEET)
Designed by: CD
Cad by: SH
Dwn by: CD
Reviewed by: BP
Submitted by: MOFFATT & NICHOL

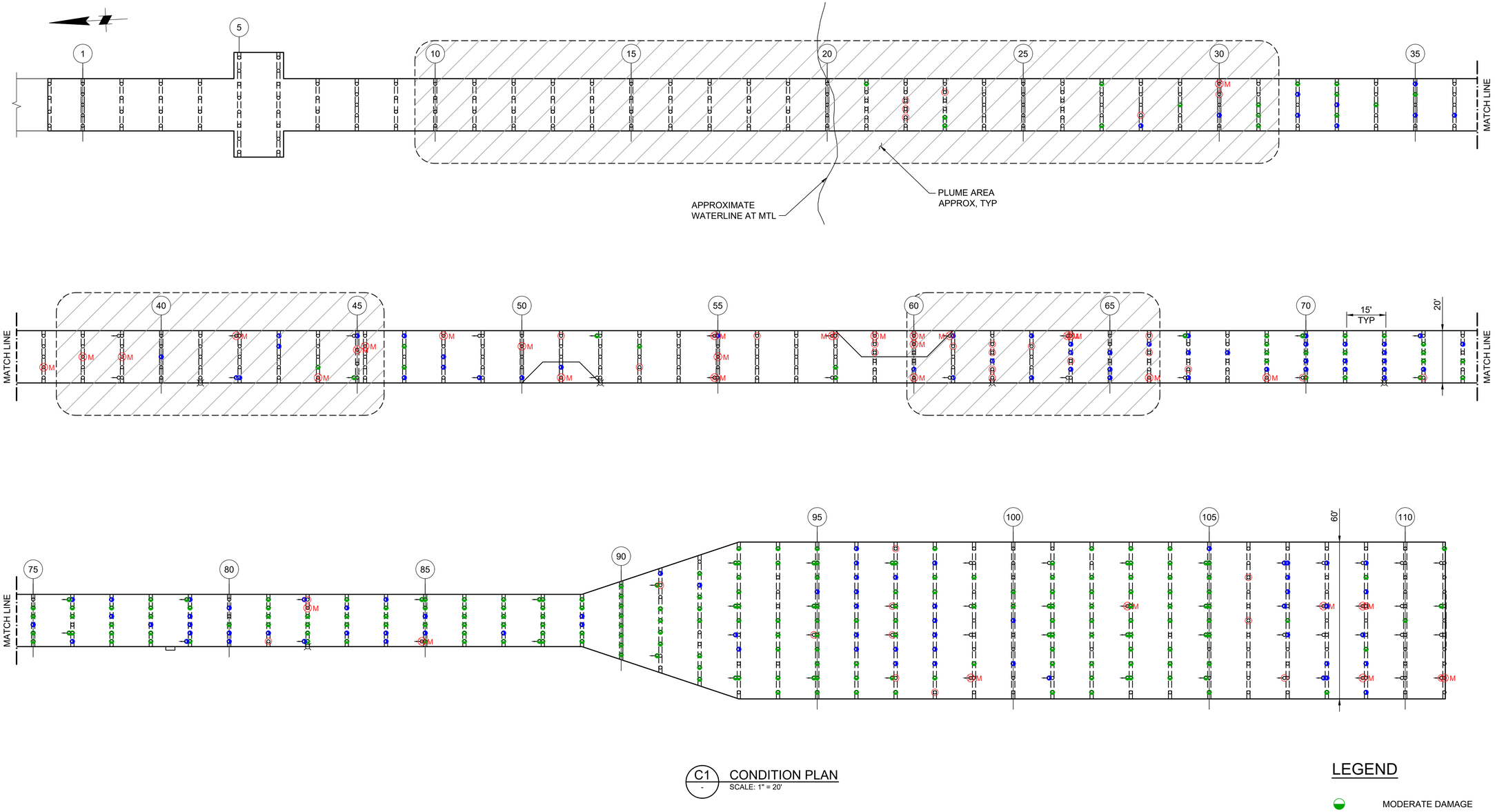
moffatt & nichol
2185 N. CALIFORNIA BLVD.
SUITE 500
WALNUT CREEK, CA 94596

PORT SAN LUIS HARBOR DISTRICT
3950 AVILA BEACH DRIVE P.O. BOX 249
AVILA BEACH, CA 93424

REGISTERED PROFESSIONAL ENGINEER
BRADFORD A. PORTER
No. 042795
Exp. 3-31-22
CIVIL
STATE OF CALIFORNIA
SEAL

Sheet Reference No.
S-001
INDEX: 3 OF 8

DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING



C1 CONDITION PLAN
SCALE: 1" = 20'

LEGEND

- MODERATE DAMAGE
- MAJOR DAMAGE
- SEVERE DAMAGE
- M MISSING
- BATTER PILE

20' 0' 20' 40'
SCALE: 1"=20'

~~Exhibit 4~~

3-20-0546 (Avila Pier Rehabilitation)

4 of 8

PORT SAN LUIS HARBOR DISTRICT

Mark	Description	Date	Appr

AVILA PIER REPAIRS

CONDITION PLAN

Designed by: CD	Drawn by: CD	Checked by: SH	Reviewed by: BP
Date: 09/25/2020	M&N Project No. 10338-03	Drawing code:	Submitted by: MOFFATT & NICHOL
Rev: -			Drawing Scale: Plot scale: 1:1 (D SHEET)

moffatt & nichol
2185 N. CALIFORNIA BLVD.
SUITE 500
WALNUT CREEK, CA 94596

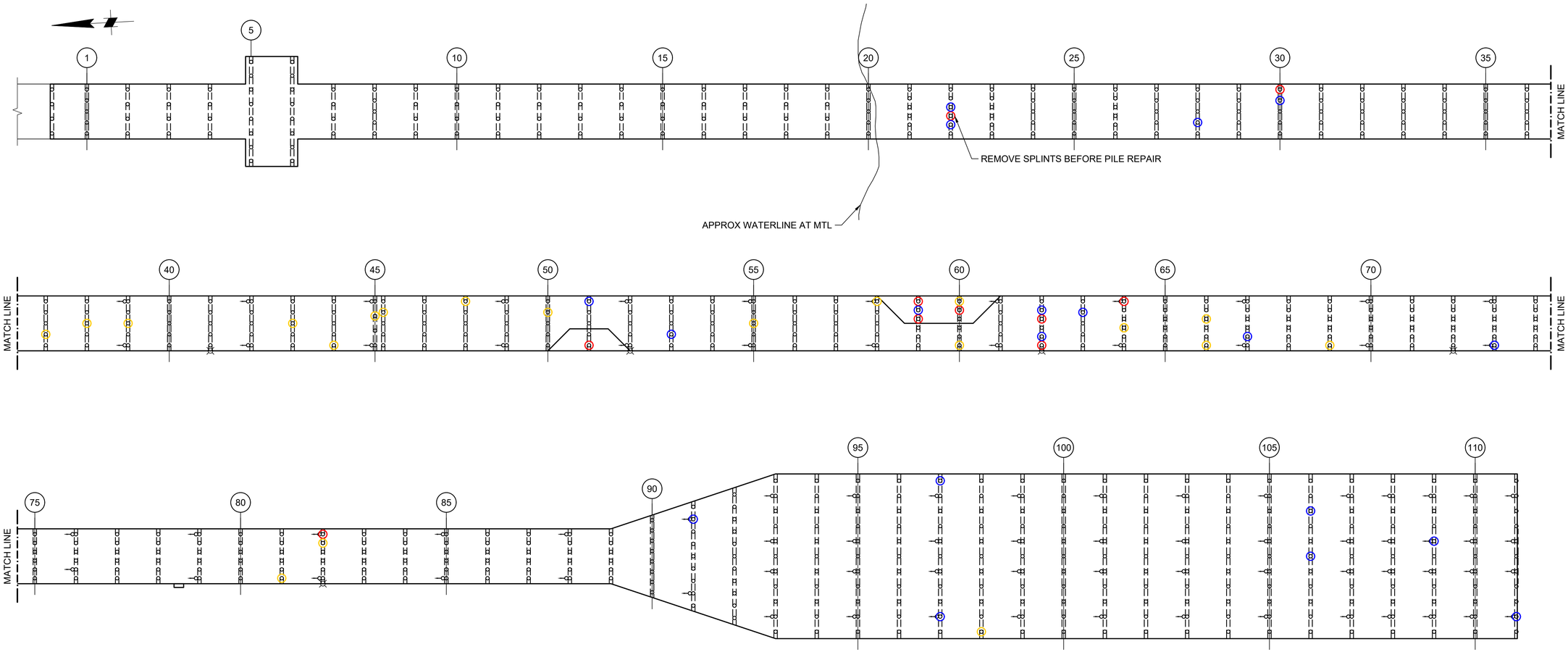
PORT SAN LUIS HARBOR DISTRICT
3950 AVILA BEACH DRIVE P.O. BOX 249
AVILA BEACH, CA 93424

REGISTERED PROFESSIONAL ENGINEER
BRADFORD A. PORTER
No. 042795
Exp. 3-31-22
CIVIL
STATE OF CALIFORNIA
SEAL

Sheet Reference No.
S-002
INDEX: 4 OF 8

File: Q:\WC\10338-03 Avila Pier Repair Dwgs\4_CADD_Active_SheetSet\10338035-002 ; Plotted: 9/28/2020 8:54 AM by CANEPA, ALLISON ; Saved: 9/25/2020 2:28 PM by ACANEPA

DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING



C1 — REPAIR PHASING PLAN
SCALE: 1" = 20'

PHASE A - PILE REPAIR TABLE				
PRIORITY	BENT	PILE	REPAIR TYPE	APPROX MUDLINE ELEV
1	22	3	B	1.8
2	60	5	C	-20.3
3	30	5	C	-2.8
4	59	6	C	-19.7
5	62	1	B	-21.3
6	82	6	B	-28.8
7	62	4	B	-21.3
8	59	4	B	-19.7
9	64	6	A	-22.3
10	51	1	A	-14.4

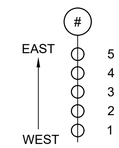
PHASE B - PILE REPAIR TABLE				
PRIORITY	BENT	PILE	REPAIR TYPE	APPROX MUDLINE ELEV
11	44	1	A	-11.6
12	48	5	C	-12.9
13	58	5	B	-19.0
14	60	1	B	-20.3
15	69	1	C	-24.7
16	81	1	B	-29.0
17	98	1	B	-28.8
18	45	3	C	-12.0
19	43	3	A	-11.1
20	66	1	C	-23.2
21	64	3	B	-22.3
22	82	5	C	-28.8
23	66	4	B	-23.2
24	39	3	A	-9.2
25	38	3	A	-8.8
26	50	4	C	-13.7
27	55	3	C	-17.0
28	37	2	A	-7.8
29	46	4	C	-12.1
30	60	6	A	-20.3

PHASE C - PILE REPAIR TABLE				
PRIORITY	BENT	PILE	REPAIR TYPE	APPROX MUDLINE ELEV
31	22	2	B	1.8
32	63	4	B	-21.8
33	51	5	B	-14.4
34	53	2	B	-15.7
35	62	2	B	-21.3
36	67	2	B	-23.7
37	28	2	B	-1.6
38	62	5	B	-21.3
39	97	11	B	-28.6
40	22	4	B	1.8
41	73	1	B	-26.4
42	91	8	B	-27.4
43	59	5	B	-19.7
44	30	4	B	-2.8
45	111	2	A	-29.5
46	106	9	B	-29.4
47	106	6	B	-29.4
48	97	7	B	-28.6
49	109	7	B	-29.5

NOTES

1. APPROXIMATE MUDLINE ELEVATION IS BASED ON AVILA PIER SAND ELEVATION DRAWINGS DATED 08/22/2014.
2. A TYPE D REPAIR CAN BE USED IN LIEU OF ALL OTHER REPAIR TYPES AT CONTRACTORS OPTION.

PILE CONVENTION



REPAIR LEGEND

PHASE A
PHASE B
PHASE C

20' 0' 20' 40'
SCALE: 1"=20'

~~Exhibit 4~~
~~3-20-0546 (Avila Pier Rehabilitation)~~
~~5 of 8~~

AVILA PIER REPAIRS

REPAIR PLAN

Mark	Description	Date	Appr

Designed by: CD	Dwn by: CD	Ckd by: SH	Date: 09/25/2020
Reviewed by: BP	Submitted by: MOFFATT & NICHOL	Drawing code:	M&N Project No. 10338-03
		Drawing Scale: Plot scale: 1:1 (D SHEET)	Rev. -

moffatt & nichol
2185 N. CALIFORNIA BLVD.
SUITE 500
WALNUT CREEK, CA 94596

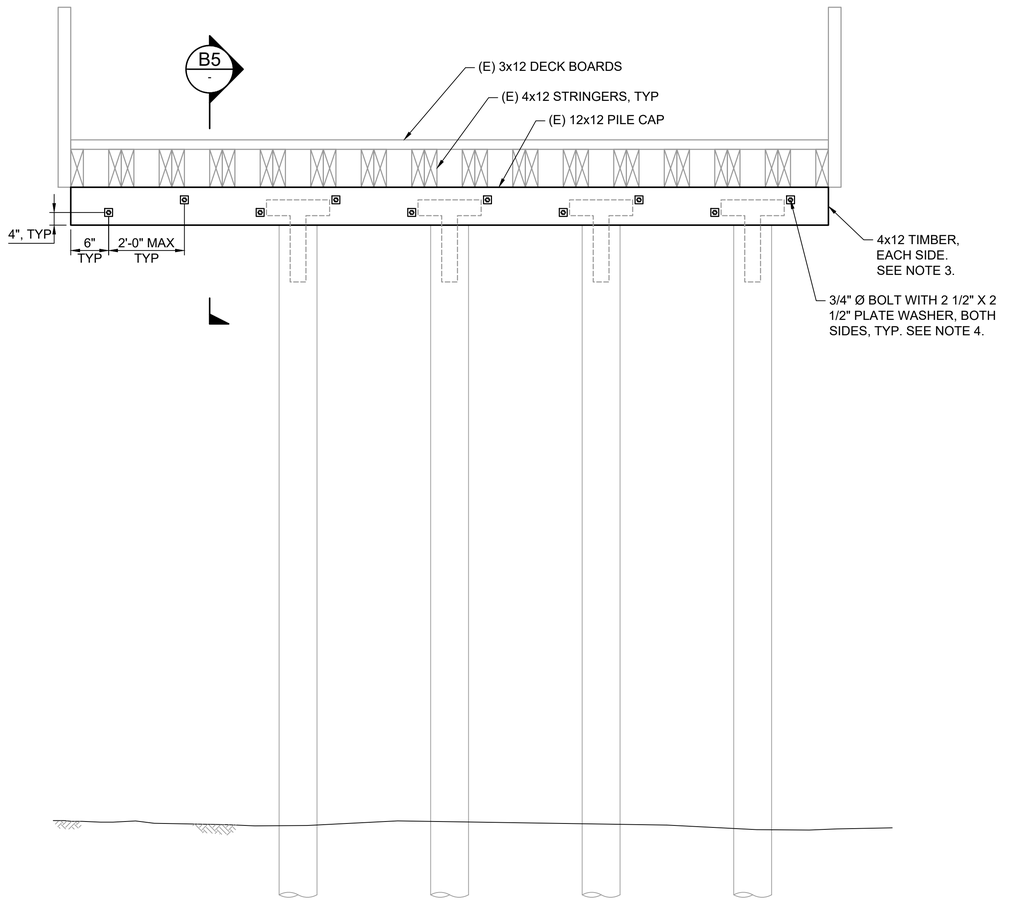
PORT SAN LUIS HARBOR DISTRICT
3950 AVILA BEACH DRIVE P.O. BOX 249
AVILA BEACH, CA 93424

REGISTERED PROFESSIONAL ENGINEER
BRADFORD A. PORTER
No. 042795
Exp. 3-31-22
CIVIL
STATE OF CALIFORNIA
SEAL

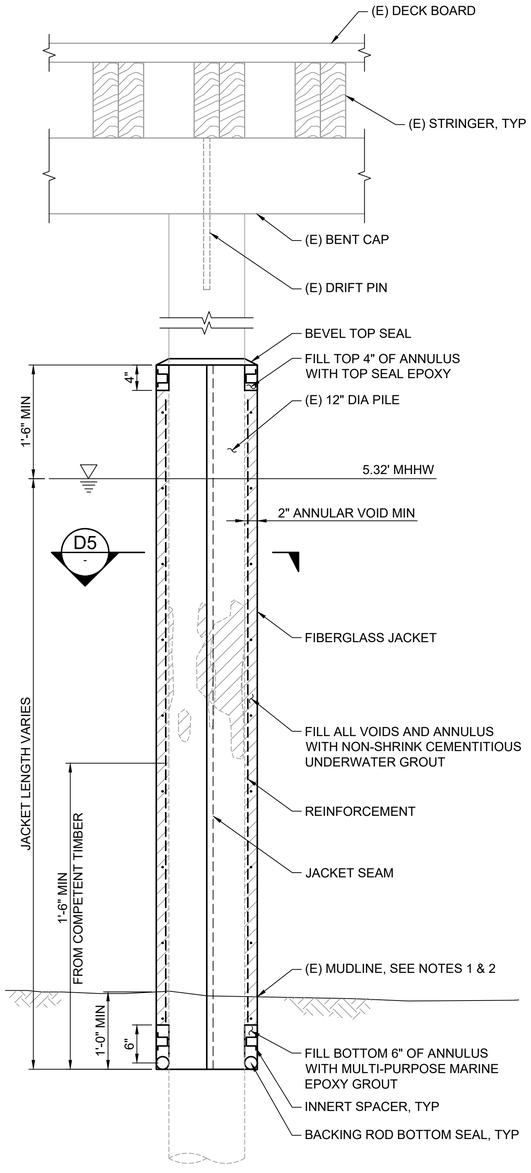
Sheet Reference No.
S-003
INDEX: 5 OF 8

File: Q:\WC\10338-03 Avila Pier Repair Dwgs\4_CADD_Active_SheetSet\10338035-003 - Plotted: 9/28/2020 8:54 AM by CANEPA, ALLISON - Saved: 9/25/2020 2:28 PM by ACANEPA

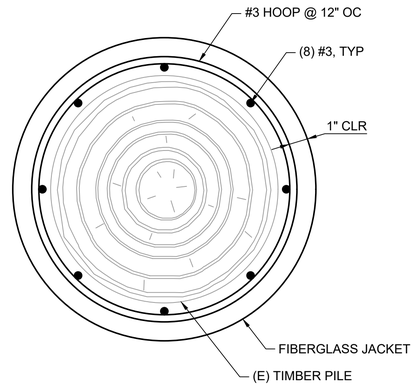
DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING



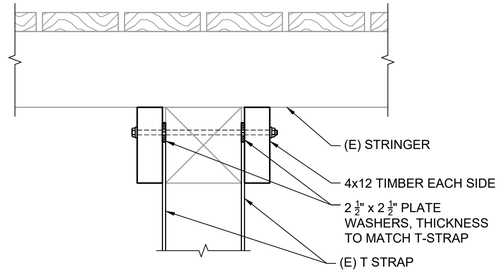
B2 - TYPE A- PILE CAP SUPPORT - SECTION
SCALE: 1/2" = 1'-0"



A4 - TYPE B - PILE REPAIR
SCALE: 1" = 1'-0"



D5 - SECTION
SCALE: 3" = 1'-0"



B5 - SECTION
SCALE: 1" = 1'-0"

NOTES

1. EXCAVATE THE AREA AROUND THE PILE TO EXTEND THE PILE JACKET BELOW THE MUDLINE FOR THE MUDLINE SEAL.
2. AFTER INSTALLATION OF JACKET IS COMPLETE, BACKFILL THE EXCAVATED AREA AROUND THE PILE WITH NATIVE MATERIAL TO PROVIDE A STABLE MUDLINE SEAL 1 FT IN DEPTH OVER THE BOTTOM OF THE JACKET.
3. WHERE CROSS BRACING INTERFERES WITH THE INSTALLATION OF TYPE C REPAIR, BRACING TO BE REMOVED, TRIMMED AND REINSTALLED AFTER TYPE C REPAIR HAS BEEN COMPLETED.
4. INSTALL BOLTS AVOIDING DOWELS FROM STRINGERS AND PILES AND BOLTS AND HARDWARE FROM STRAPPING WHILE MAINTAINING SPACING REQUIREMENTS.

2'-0" 0'-0" 2'-0" 4'-0"
SCALE: 1/2"=1'-0"

1'-0" 0'-0" 1'-0" 2'-0"
SCALE: 1"=1'-0"

6" 0'-0" 6"
SCALE: 3"=1'-0"

~~Exhibit 4~~
3-20-0546 (Avila Pier Rehabilitation)
6 of 8

PORT SAN LUIS HARBOR DISTRICT

AVILA PIER REPAIRS

PILE REPAIR 1 OF 3

Mark	Description	Date	Appr

Designed by: CD
Drawn by: CD
Checked by: SH
Reviewed by: BP
Submitted by: MOFFATT & NICHOL
Drawing code:
Drawing Scale:
Plot scale: 1:1 (D SHEET)
Date: 09/25/2020
Rev. -
M&N Project No. 10338-03

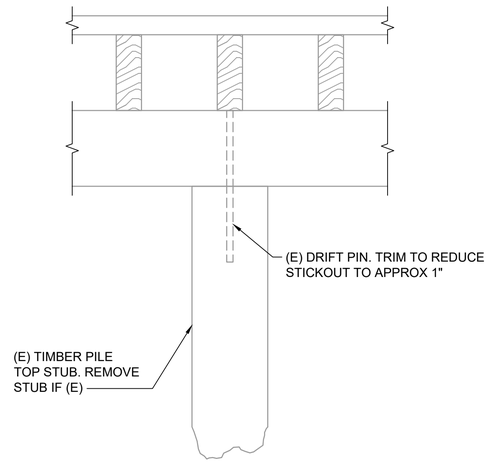
moffatt & nichol
2185 N. CALIFORNIA BLVD.
SUITE 500
WALNUT CREEK, CA 94596
PORT SAN LUIS HARBOR DISTRICT
3950 AVILA BEACH DRIVE P.O. BOX 249
AVILA BEACH, CA 93424

REGISTERED PROFESSIONAL ENGINEER
BRADFORD A. PORTER
No. 042795
Exp. 3-31-22
CIVIL
STATE OF CALIFORNIA
SEAL

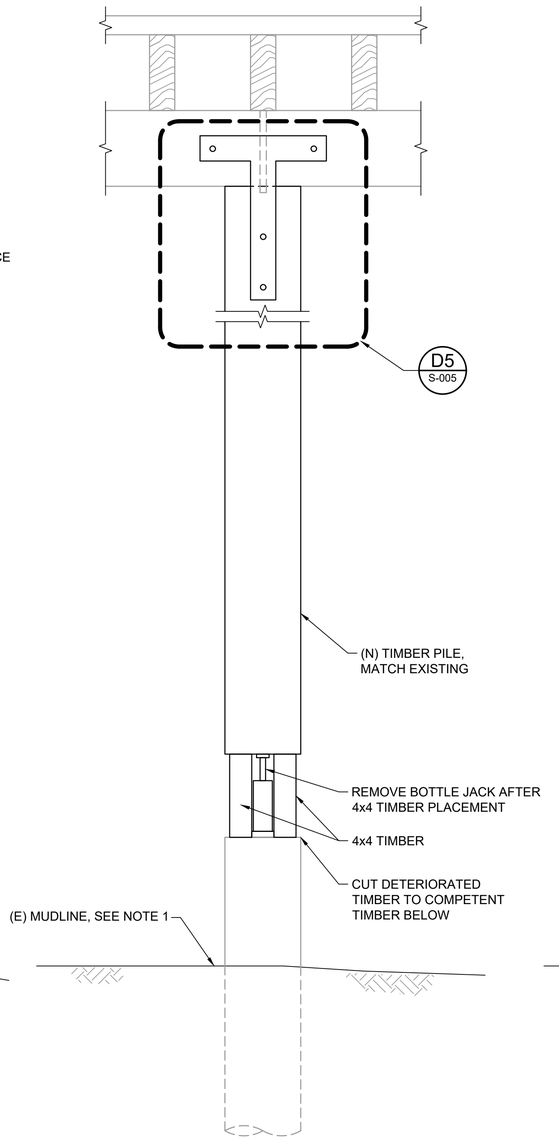
Sheet Reference No.
S-004
INDEX: 6 OF 8

File: Q:\WC\10338-03 Avila Pier Repair Dwgs\4_CADD_Active_SheetSet\10338035-004 ; Plotted: 9/28/2020 8:59 AM by CANEPA, ALLISON ; Saved: 9/25/2020 2:28 PM by ACANEPA

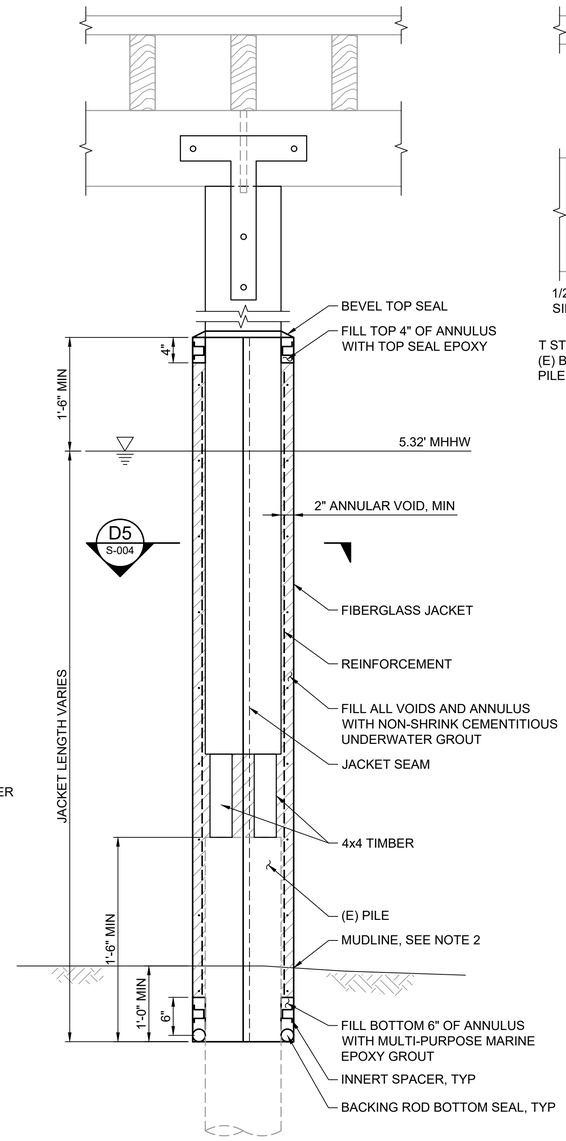
DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING



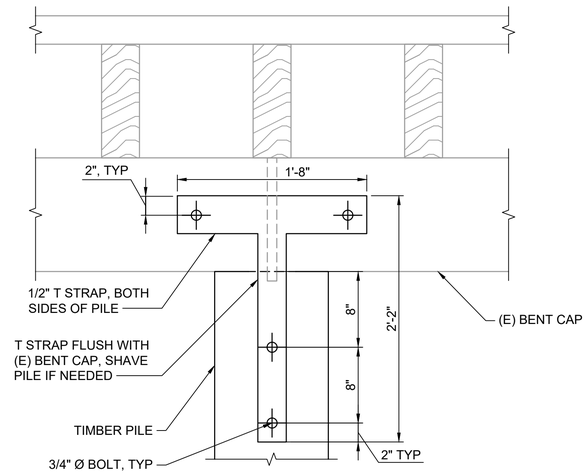
A1 TYPE C - EXISTING CONDITION
SCALE: 1" = 1'-0"



A3 TYPE C - PILE PREPARATION
SCALE: 1" = 1'-0"



A4 TYPE C - PILE REPAIR
SCALE: 1" = 1'-0"



D5 DETAIL
SCALE: 1 1/2" = 1'-0"

NOTES

1. EXCAVATE THE AREA AROUND THE PILE TO EXTEND THE PILE JACKET BELOW THE MUDLINE FOR THE MUDLINE SEAL.
2. AFTER INSTALLATION OF JACKET IS COMPLETE, BACKFILL THE EXCAVATED ARE AROUND THE PILE WITH NATIVE MAERIAL TO PROVIDE A STABLE MUDLINE SEAL 1 FT IN DEPTH OVER THE BOTTOM OF THE JACKET.

1'-0" 0'-0" 1'-0" 2'-0"
SCALE: 1"=1'-0"

1'-0" 0'-0" 6" 1'-0"
SCALE: 1 1/2"=1'-0"

~~Exhibit 4~~
3-20-0546 (Avila Pier Rehabilitation)
7 of 8

PORT SAN LUIS HARBOR DISTRICT

Rev.	Description	Date	Appr
-			

AVILA PIER REPAIRS

PILE REPAIR 2 OF 3

moffatt & nichol
2185 N. CALIFORNIA BLVD.
SUITE 500
WALNUT CREEK, CA 94596

PORT SAN LUIS HARBOR DISTRICT
3950 AVILA BEACH DRIVE P.O. BOX 249
AVILA BEACH, CA 93424

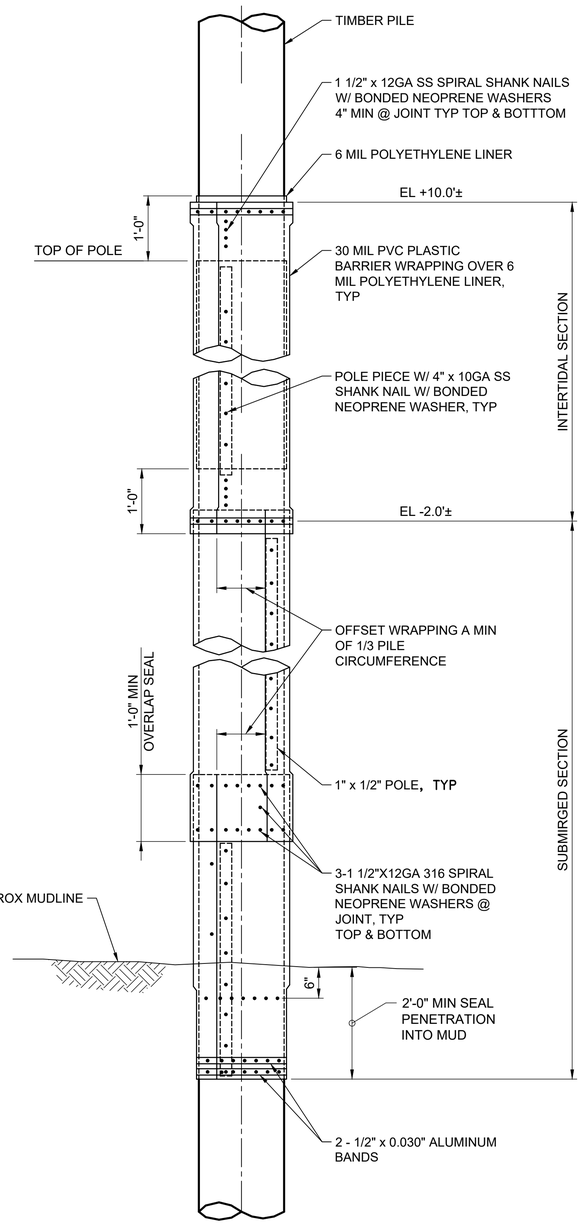
Designed by: CD
Drawn by: CD
Checked by: SH
Reviewed by: BP
Submitted by: MOFFATT & NICHOL
Date: 09/25/2020
M&N Project No. 10338-03
Drawing code:
Drawing Scale:
Plot scale: 1:1 (D SHEET)

REGISTERED PROFESSIONAL ENGINEER
BRADFORD A. PORTER
No. 042795
Exp. 3-31-22
CIVIL
STATE OF CALIFORNIA
SEAL

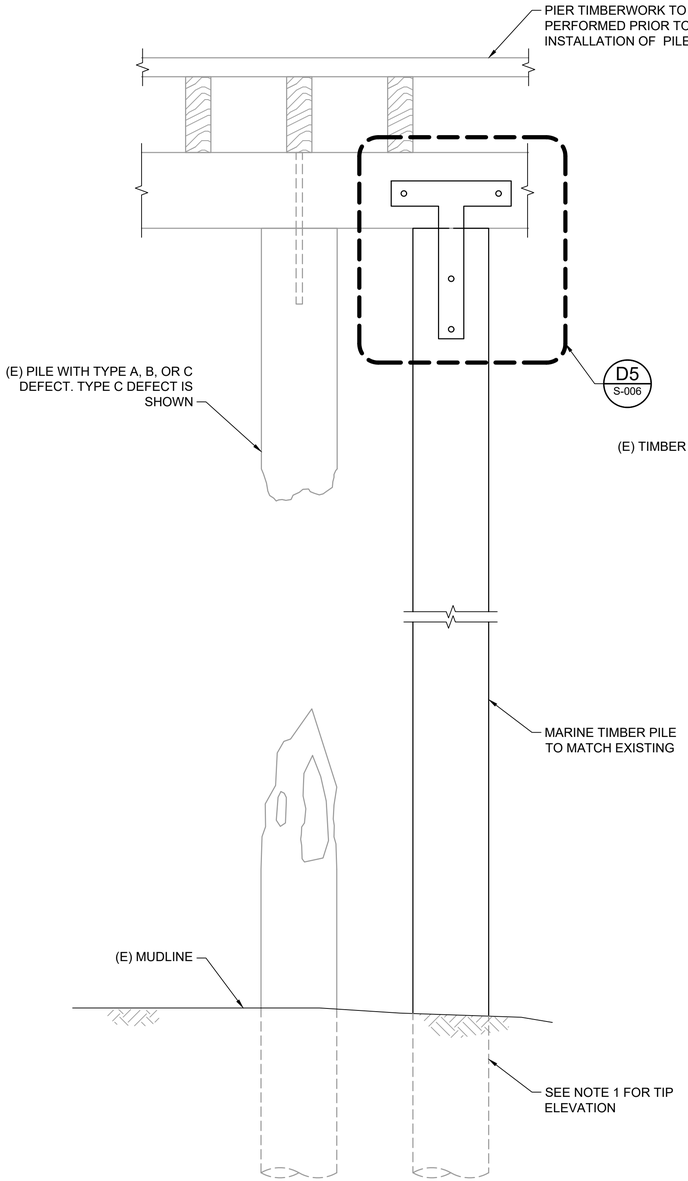
Sheet Reference No.
S-005
INDEX: 7 OF 8

File: Q:\WC\10338-03 Avila Pier Repair Dwgs\4_CADD_Active_SheetSet\10338035-005 ; Plotted: 9/28/2020 8:59 AM by CANEPA, ALLISON ; Saved: 9/25/2020 2:27 PM by SHART

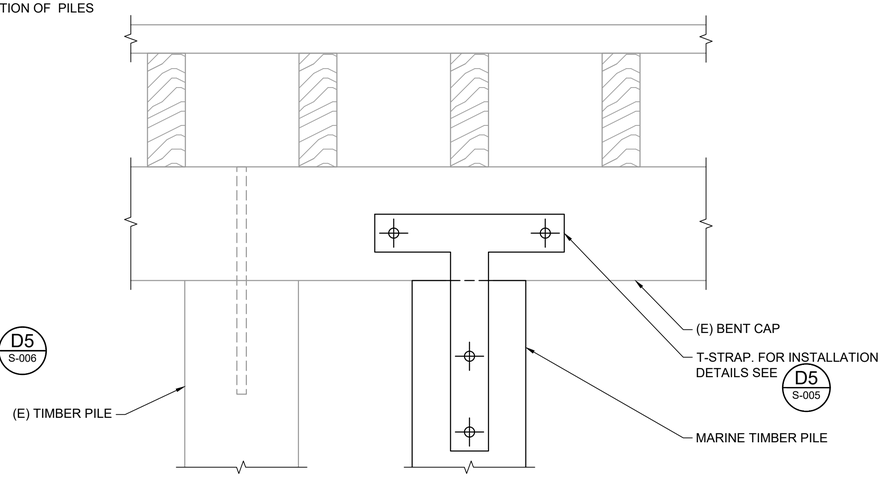
DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING



B1 PILE WRAP ELEVATION
SCALE: 1" = 1'-0"



B3 TYPE D - NEW PILE
SCALE: 1" = 1'-0"



D5 DETAIL
SCALE: 1 1/2" = 1'-0"

PILE SCHEDULE

BENT RANGE	TIP ELEV (FT)	PIER DECK ELEV (FT)	NOM PILE LENGTH (FT)
0 - 35	17	18	35
36 - 43	19	18	40
44 - 45	26	18	45
46 - 57	36	18	55
58 - 60	46	18	65
61 - 80	55	18	75
81 - 89	52	18	70
81 - 93	52	20	75
93 - 111	52	22	75

NOTES

1. PILES TO BE DRIVEN TO DEPTH INDICATED IN PILE SCHEDULE OR TO REFUSAL WHICHEVER COMES FIRST. IF REFUSAL IS USED AS DRIVING CRITERIA, IT IS ASSUMED THAT A HAMMER CAPABLE OF DELIVERING A MINIMUM OF 8,750 FT-LB OF ENERGY PER BLOW (SUCH AS THE MKT 9B3) IS USED. CONTACT THE ENGINEER FOR FURTHER EVALUATION IF A HAMMER WITH A LOWER ENERGY PER BLOW IS TO BE USED.

2. PILES SHALL BE FURNISHED WITH COATING OR WRAPPING.

1'-0" 0'-0" 1'-0" 2'-0"
SCALE: 1"=1'-0"

1'-0" 0'-0" 6" 1'-0"
SCALE: 1 1/2"=1'-0"

Exhibit 4

3-20-0546 (Avila Pier Rehabilitation)
8 of 8

PORT SAN LUIS HARBOR DISTRICT

AVILA PIER REPAIRS

PILE REPAIR 3 OF 3

Rev:	Date	Appr
-		

Date: 09/25/2020
M&N Project No. 10338-03
Drawing code:
Drawing Scale:
Plot scale: 1:1 (0 SHEET)

Designed by: CD
Dwn by: CD
Cad by: SH
Reviewed by: BP
Submitted by: MOFFATT & NICHOL

moffatt & nichol
2185 N. CALIFORNIA BLVD.
SUITE 500
WALNUT CREEK, CA 94596

PORT SAN LUIS HARBOR DISTRICT
3950 AVILA BEACH DRIVE P.O. BOX 249
AVILA BEACH, CA 93424

REGISTERED PROFESSIONAL ENGINEER
BRADFORD A. PORTER
No. 042795
Exp. 3-31-22
CIVIL
STATE OF CALIFORNIA
SEAL

Sheet Reference No.
S-006
INDEX: 8 OF 8

DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING

Avila Pier Rehabilitation
Proposed Best Management Practices (BMPs)

Overwater or waterfront structures generally have both above-water and submerged components, including piles, a structural framework, floating docks, decking, railings, ramps, stairs, walls, and bulkheads. The materials used to construct these structures have the potential to adversely impact water quality, and the construction practices used in or over water must also be carefully considered in order to protect coastal waters.

1. District-Wide BMPs.

Applicable to all Port repair and maintenance activities, including those taking place on Avila Pier.

A. All construction equipment shall be in proper operating condition and fitted with factory standard silencing features. Hydraulics and lubricated parts shall be are properly contained during all hoist related repairs to prevent oils and fluids from dropping in the water.

B. Whenever practical, the noisiest construction operations shall be scheduled to occur together in the construction program to avoid continuous periods of noise generation.

C. All repair and maintenance activities shall utilize methods and materials as described in the PSLHD Maintenance Manual (CDP 3-18-1230) and implement all relevant BMPs during construction. All persons involved with the construction shall be briefed on its content and meaning prior to commencement of construction to ensure that workers understand how the task will be completed, minimizing or avoiding any impacts to coastal resources. A copy of the maintenance manuals shall be kept at the construction job site at all times.

D. When feasible, work over water shall be scheduled during favorable tidal, ocean, wind, and weather conditions that will enhance the ability to contain and remove, construction and demolition debris.

E. All construction materials shall be properly stored and contained so that these products will not spill or otherwise enter the coastal environment.

F. Tarps or other devices shall be used to capture debris, sawdust, particulates, oil, grease, rust, dirt, and spills to protect the quality of coastal waters.

G. Prevent construction debris from entering coastal waters. Any discharged materials which can be recovered safely are to be removed as soon as possible but no later than the end of each day.

H. Unless specifically authorized, lighting of tidelands and water areas is prohibited.

I. Construction work or equipment operations below the Mean High Water Line (MHWL) shall be minimized to the maximum extent feasible, and, where possible, limited to times when tidal waters have receded from the authorized work areas.

J. Equipment washing, refueling, and/or servicing shall take place a minimum of 50 feet from coastal waters, drainage courses, and storm drain inlets. Equipment washing, refueling, and/or servicing shall not take place on the tidelands or over-water structures to eliminate the possibility that pollutants may enter coastal waters.

K. Construction activities shall maintain good construction site housekeeping controls and procedures (e.g., clean up all leaks, drips, and other spills immediately; keep materials covered and out of the rain (including covering exposed piles of soil and wastes); dispose of all wastes properly, place trash receptacles on site for that purpose, and cover open trash receptacles during wet weather; remove all construction debris from the tidelands).

L. During clearing, grading, earth moving, excavation, or transportation of cut or fill materials, water trucks or sprinklers systems are to be used when necessary to prevent dust from leaving the site and to create a crust after each day's activities cease. During construction, water trucks or sprinkler systems shall be used to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this would include wetting down such areas in the morning and after work is completed for the day and whenever wind exceeds 15 miles per hour.

M. A construction coordinator shall be designated to be contacted during construction should questions arise regarding the construction (in case of both regular inquiries and emergencies), and their contact information (i.e., address, phone numbers, etc.) including, at a minimum, a telephone number that will be made available 24 hours a day for the duration of construction, shall be conspicuously posted at the job site where such contact information is readily visible from public viewing areas, along with indication that the construction coordinator should be contacted in the case of questions regarding the construction (in case of both regular inquiries and emergencies). The construction coordinator shall record the name, phone number, and nature of all complaints received regarding the construction, and shall investigate complaints and take remedial action, if necessary, within 24 hours of receipt of the complaint or inquiry.

2. Responsibilities for Use of Preservative-Treated Wood for Piles and Over-water Structures.

The Port shall comply with the following best management practices for the use of preservative-treated wood ("treated wood") in over-water structures:

A. The wood preservative selected for use shall minimize the impact on coastal water quality and the aquatic environment.

B. Preservative-treated Douglas fir piles shall only be used for repair and replacement, or to visibly blend, and/or structurally integrate with, existing over-water structures.

C. Decking shall consist of wood-alternative materials or ACZA-preserved lumber sealed with a penetrating coating. Alternatives to preserved woods, such as concrete, steel, fiberglass, or naturally decay resistant wood species, shall be prioritized over the use of chemically-treated wood when economically feasible and where the historical character of piers and structures is not impaired. Creosote shall not to be used as a lumber preservative.

D. All treated wood piles, and, where feasible, treated wood structural members, shall be wrapped in, or coated with, water-tight, UV resistant material to prevent leaching of wood-preservative chemicals into the water column, and to prolong the life of the piles and structural timbers. For piles, protection shall extend two feet below the mudline and two feet above Ordinary High Water (OHW), at a minimum, and wrappings shall be secured with corrosive resistant banding or self-tapping screws. Coatings and/or sealants used shall be products that are inert after they have cured and dried. No coal-tar sealants or coal tar-treated wood shall be used unless coated or wrapped with an inert material or product to isolate it from the marine environment.

E. Design features, such as protective wearing surfaces or bumpers, shall be installed on fender piles and floating dock pilings, where appropriate, to resist abrasion and preserve the pile-wrap or coating.

F. The amount of preservative used for treating piles shall be the minimum specified by the American Wood Protection Association to effectively protect the piles. Wood treated to the standards for a higher Use Category (i.e., with a higher preservative retention level) than is necessary for that component shall not be used.

G. Handling, storage, and field treatment shall be in accordance with American Wood Protection Association (AWPA) Standard M4 (Care of Pressure-Treated Wood Products). Treated wood and treated wood debris shall be stored a minimum of 50 feet from coastal waters, drainage courses, and storm drain inlets. The treated wood and treated wood debris shall be stored on impervious pavement or an impervious tarp, and covered during rain events. During rain events, treated wood and treated wood debris shall be covered and placed on skids or support timbers to keep them off the ground.

H. If treated wood is sanded or sawcut during demolition, installation, or maintenance, all sawdust and debris generated shall be contained and removed.

3. Responsibilities for Repair and Maintenance of Bulkheads, Over-Water Structures, and Boat Launching Facilities.

The Port shall comply with the following best management practices for the use of corrosion coatings, and repair of bulkheads and over-water structures:

A. Maximum prefabrication shall occur before any structures and/or materials are placed over-water to minimize cutting and boring discharges of debris into the waterway. If prefabrication is done on-site, construction debris must be salvaged and disposed of properly.

B. Coatings, and sealants shall be composed of products that are inert after they have cured and dried. Fusion Bonded Epoxy, HDPE, and polyurea products are recommended to coat or seal piles. No coal tar-based sealants shall be used unless they are themselves coated or wrapped with an inert product to isolate them from the marine environment.

C. Fiberglass jacket and marine grade cementitious grout systems are recommended for structural repair of deteriorated wood piles.

D. Installation and application of epoxy, resin, or cementitious grout/fill shall be conducted when predicted weather and ocean conditions allow effective control and full containment and will remain dry until cured, in order to prevent any leaching of uncured treatment materials into coastal waters. It is preferable to perform the work in dry conditions (low tide) or off-site in a controlled-environment manufacturing facility, wherever feasible.

E. All cleaning and preparation of surfaces shall use wet vacuum techniques, containment booms or heavy mesh containment netting so that any debris, chips, dust, dirt, and fine particles are collected and disposed of in a location where they will not enter coastal waters.

F. For decking replacement projects over 30 square feet, heavy-duty mesh containment netting or a floating boom shall be installed below all work areas (prior to the commencement of such decking replacement activities) where construction discards or other materials could fall into the water. Debris in the netting or the floating boom shall be cleared daily.

G. Methods to contain any leaks or spills of treatment materials during application shall be planned in advance, and any necessary equipment or supplies shall be readily accessible onsite. Any leaks or spills of anti-corrosion coatings, epoxy fillers, and waterproofing sealants shall be immediately cleaned up.

H. All pressure-injection and gravity-feed applications of epoxy, resin, or cementitious materials shall be closely monitored visually to ensure that these materials do not leak or spill into coastal waters during application.

I. Coatings and waterproofing sealants used in the field shall be carefully applied by brush or roller to limit application to the immediate surfaces intended for protection, and to prevent drips or spills into coastal waters.

J. All anti-corrosion coatings, epoxy fillers, and waterproofing sealants shall be properly stored and contained so that these products will not leak or spill, or otherwise enter the coastal environment.

K. The facilities manager and/or construction contractor shall have a spill contingency plan for hazardous waste spills into the San Luis Bay. The plan shall include maintaining floating booms and absorbent materials in an on-site spill response kit, to enable rapid recovery of hazardous wastes.

L. All wooden pile jacket repair activities shall be performed by a trained professional that is trained to work with the materials.

M. Piles installations shall prioritize driven or hammered methods, if feasible, in order to minimize water quality impacts. Vibratory hammer method shall be prioritized over impact hammer methods. However, if an impact hammer is used, pile driving shall use a soft-start/ramping up BMP with hammer strikes with no less than a one-minute interval between each strike for a five-minute period.

N. Removal of existing piles shall observe the following conditions, where applicable:

   a. Work shall occur during favorable tidal, ocean, and weather conditions that will enhance the ability to remove, to the maximum extent, the full length of the pile and any associated debris generated during demolition.

   b. Piles shall be removed slowly and handled carefully to minimize turbidity and sediment disturbance. Vibratory extraction shall be prioritized over direct-pull methods, where feasible, in order to limit disturbance.

   c. Piles and debris shall be placed directly into a vessel/container suitable for transport off-site.

   d. All used piles and debris shall be removed to an offsite, authorized disposal site. Sediment adhered to the removed pile shall be removed from coastal waters.

4. Responsibilities for Reducing Potential Impacts to Marine Wildlife During Pile Driving and Construction Activities.

The Port shall comply with the following best management practices to reduce potential impacts on marine wildlife for the duration of rehabilitation construction activities performed on Avila Pier:

A. A qualified representative from the Harbor District will provide an environmental orientation to all project personnel prior to the start of construction. This briefing will provide an overview of wildlife identification and mitigation measures to be implemented during construction activities. At minimum, the orientation will include the following:

   a. Identification of wildlife expected to occur in the Project area and periods of occurrence along the central California coast;

   b. Overview of the MMPA and ESA, regulatory agencies responsible for enforcement of the regulations, and penalties associated with violations;

   c. Procedures to be followed during activities that are most likely to affect marine wildlife (i.e., ramp-up and shut-down of impact hammer); and

   d. Reporting requirements in the event of an inadvertent harassment and/or injury to a marine mammal or sensitive habitats.

B. If an impact hammer is used, an initial ramp up period or "soft start" procedure at the commencement of pile driving activities, consisting of hammer strikes with no less than a one-minute interval between each strike for a five-minute period, shall be implemented to avoid potential impacts to marine mammals that may be present, but undetected, in the Exclusion Zone.

C. For all pile driving activities, at least one Marine Mammal Observer (MMO) will be stationed on the Avila Pier to monitor for marine wildlife within or surrounding the Exclusion Zone. The MMO may be a trained member of Harbor District staff, a biologist, or graduate or other student with experience identifying marine species. The MMO will be located at the best vantage point to observe the entire Exclusion Zone without obstruction. During pile driving activities, the MMO shall not be assigned additional duties outside of the following tasks:

   a. Monitor the Exclusion Zone area for the presence of marine mammals starting at least 15 minutes prior to initiating ramp up of the impact hammer. If no marine mammals are observed in the Exclusion Zone during this time period, the MMO may provide clearance to the pile-driving crew field supervisor to begin ramp up;

   b. Monitor the Exclusion Zone area during all active pile driving activities;

   c. Maintain a daily log of observed marine mammals, their relative locations, and their behaviors; and

   d. Immediately notify the pile-driving crew field supervisor and construction crew to stop or delay pile driving operations if a marine mammal is observed entering the Exclusion Zone and displays abnormal behaviors or signs of distress. Pile driving may resume once the marine

mammal is observed exiting the Exclusion Zone or 30 minutes have passed without the animal being sighted again.

D. During pile driving activities, the Exclusion Zone will be centered on the radial distance from the pier bent where pile driving is actively occurring. The following Exclusion Zones and Monitoring Zones will be observed for each respective species group:

Species Group	Marine Mammal Hearing Group		Exclusion Zone
Cetaceans & Sea Turtles	Low Frequency	Grey whales, humpback whales	500 feet (152 meters)
	Mid Frequency	Dolphins, toothed whales, beaked whales, bottlenose whales	
	High Frequency	True porpoises, *Kogia*, river dolphins, cehalorhynchid, *Lagenorhynchus cruciger, L. australis*	
Pinnipeds *	Phocid	True Seals, including harbor seals	Monitoring Zone: 100 feet (30 meters)
	Otariid	Sea lions, fur seals	
Fissipeds	Sea Otter	Southern sea otters	100 feet (30 meters)

(*) Pinnipeds (e.g., seals and sea lions) shall be exempt from the Exclusion Zone requirements as set forth in CDP No. 3-18-1230 Special Condition 4(c). However, pinnipeds will continue to be monitored if present within the 100-foot Monitoring Zone and observations will be recorded in MMO daily logs.

E. Nighttime work is not anticipated during the project, however, if working in low light conditions, lighting will be low-intensity and directed downward to conduct specific tasks. Direct illumination of wildlife will be avoided, and when possible, green lighting will be used to reduce wildlife attraction to lights and equipment.

F. Contact information for marine wildlife rescue organizations will be made available to project personnel at all times and will be maintained on site by the construction coordinator.

G. In the event a marine animal is observed to be injured, in distress, or deceased, the MMO will immediately notify the pile-driving crew field supervisor to stop pile driving activities. The MMO in consultation with the Harbor District will notify the National Marine Fisheries Service (NMFS) West Coast Stranding Coordinator in Long Beach to obtain further instruction. The Harbor District's project manager will also contact the Marine Mammal Center in Morro Bay for assistance. The MMO will document the conditions under which the incident occurred.

H. In the event of a petroleum release and subsequent oiling of marine wildlife, the Harbor District will stop all pile driving activities immediately and if safe to do so, and will notify the following organizations: NMFS West Coast Stranding Coordinator in Long Beach, California Department of Fish and Wildlife (CDFW) Office of Spill Prevention and Response (OSPR), and the Oiled Wildlife Care Network (OWCN).

5. Responsibilities for Preventing and Responding to Potential Release of Petroleum Contamination from Outlier Plume.

The Port shall comply with the following best management practices to minimize the extent and severity of impacts to the environment in the event there is a release of petroleum contamination:

A. The Harbor District will coordinate and contract with an Oil Spill Response Organization (OSRO) prior to construction to ensure availability during the construction phase in the event there is a release of petroleum beyond the response capabilities of the Harbor District's personnel.

B. Prior to construction, inventory and equipment stored in the Port's Oil Spill Response Trailer will be verified to be in working order. The trailer will be staged at the base of Avila Pier during construction work to ensure quick response and deployment.

C. All Port employees involved in pier repair work and those responsible for initiating spill response shall be trained on spill response and reporting activities.

D. A full-time project oversight manager who is trained in early detection and reporting of potential release(s) will be designated prior to construction commencement.

E. If release detection indicators are observed around the Avila Pier during construction activities, Harbor District staff trained in spill response will immediately deploy appropriate oil spill response equipment to contain and prevent further spread of sheens or oils. Response personnel shall secure the surrounding vicinity affected by the release (e.g., beaches, docks, pier, etc.). Repair contactor or Harbor District staff will notify the designated project manager of the release immediately.

F. The Harbor District's project manager will coordinate with repair contractors to report the spill to Cal OES, National Response Center (NRC), and the local San Luis Obispo County Environmental Health Department (CUPA), per spill reporting requirements. Cleanup contractors and OWCN may be contacted if the type or extent of the spill exceeds the Harbor District's response capabilities or if marine wildlife is observed to be oiled and/or affected by the release.

G. If marine wildlife is or may be affected by the release, CDFW-OSPR will be notified and consulted to determine if wildlife hazing is warranted in order to keep wildlife away from contamination. Wildlife hazing measures may include engineering controls, such as noise makers (Zon Guns), cracker shell shotguns, or pistol-launched bird whistles; or, operational controls, such as flushing birds from the area.

Exhibit 6
3-20-0546 (Avila Pier Rehabilitation)
1 of 1

MARINE WILDLIFE CONTINGENCY PLAN

AVILA PIER REHABILITATION PROJECT
AVILA BEACH, CALIFORNIA

Project No. 2002-4521

Prepared for:

Port San Luis Harbor District
3950 Avila Beach Drive
Avila Beach, California 93424

Prepared by:

Padre Associates, Inc.
369 Pacific Street
San Luis Obispo, California 93401

JULY 2020

padre associates, inc.
ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1.0 INTRODUCTION

This Marine Wildlife Contingency Plan (MWCP) has been prepared in support of the Port San Luis Harbor District (Harbor District) Avila Pier Rehabilitation Project (Project). The purpose of the MWCP is to list measures that are designed to reduce or eliminate potential impacts of the proposed pile driving and construction activities on marine mammals, reptiles, and birds (marine wildlife). Additional mitigation and contingency measures may be incorporated into this MWCP after the issuance of applicable Project permits.

1.1 PROJECT DESCRIPTION AND LOCATION

The Port San Luis Harbor District (Harbor District) is proposing to conduct repairs to the existing Avila Pier, which extends out from the public board walk along Front Street and over the city-owned beach, in Avila Beach, San Luis Obispo County, California (Project area) (Figure 1-1). The Project objective is the replacement of piles, decking, and other wood components and hardware, as necessary, to restore the load capacity of the entire pier for full public access, as well as replacing the transient boating landing which provides the only access point for transient boaters who use the Harbor District's main anchorages to access land on foot.

The Avila Pier is a wooden pier that is 1,635 feet (ft) (498 meters [m]) long with an average width of 20 ft (6 m) and is approximately 120 ft (36.5 m) wide at the terminus where the hoist is located. The Avila Pier has approximately 700 piles contained in 111 bents. As the pier is a historic wooden pier, use of wooden piles will be prioritized for replacement.

The Harbor District proposes to repair or replace approximately 50 piles of the Avila Pier. Each damaged pile will be wrapped and grouted in-place to restore structural stability or replaced using conventional pile driving methods. When feasible, wooden pier piles will be repaired in place using the FX-70 Fiberglass Jacket Structural Pile Repair and Protection System or a comparable system. When the repair with wrapping or grouting is not feasible, the piles will be replaced in-kind utilizing impact pile driving equipment (diesel or air hammer). No jetting is planned for the Avila Pier due to the hydrocarbon plume located in some areas under the pier. In the event of pile driving, new piles will be driven next to old piles. Old pile stubs will be left in place or cut at the mudline for removal. In the event a stub must be removed, they will be removed by direct pull or vibratory extraction. When a pile is missing on the edge of the pier, the preferred repair will be to reinforce the pile cap with 4 inch by 12 inch planks rather than remove and replace the pile stub with a new pile. Sections of the upper pier (pile caps, stringers, decking, and hardware) which are in poor quality will also be removed and replaced, as needed.

Project operations have been proposed to take place in Summer 2020 through Summer 2021 to take advantage of low swell and wind conditions during that time of year. It is expected that Project activities will be conducted during daylight hours (approximately 10 hours/day) and night work is not anticipated.

LEGEND:

Project Location

MAP EXTENT:

Source: Esri Online Topo Basemap
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
Notes: This map was created for informational and display purposes only.

padre associates, inc.
ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS

PROJECT NAME:
AVILA PIER REHABILIATION PROJECT, AVILA BEACH
SAN LUIS OBISPO COUNTY, CA

PROJECT NUMBER: 2002-4521

DATE: March 2020

PROJECT LOCATION

FIGURE 1-1

Z:\GIS Projects\GIS Maps\Map Project\Avila Pier Rehabilitation Project\Project Location.mxd 3/3/2020

2.0 REGULATORY BASIS

2.1 GENERAL REGULATORY REQUIREMENTS

The United States (U.S.) Marine Mammal Protection Act (MMPA) of 1972, amended 1994, protects all marine mammals, including cetaceans (whales, dolphins, and porpoises), pinnipeds (seals and sea lions), sirenians (manatees and dugongs), sea otters, and polar bears within the waters of the U.S. Specifically, the MMPA prohibits the intentional killing or harassment of these marine mammals; however, incidental harassment, with authorization from the appropriate federal agency, may be permitted. National Oceanic and Atmospheric Administration (NOAA) Fisheries (or National Marine Fisheries Service [NMFS]) is responsible for enforcing the MMPA.

Special status species are protected by the Endangered Species Act of 1973 (Section 9 and implementing regulations 50 Code of Federal Regulations [CFR] Part 17). The Endangered Species Act (ESA) makes it unlawful to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect an endangered species, or to attempt to engage in any such conduct. Anyone violating the provisions of the ESA and regulations is subject to a fine and imprisonment. An "endangered species" is any species, which the Secretaries of the Department of the Interior and/or the Department of Commerce determine is in danger of extinction throughout all or a portion of its range. A "threatened species" is any species, which the Secretaries determine is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. The U.S. Fish and Wildlife Service (USFWS) and NOAA Fisheries are responsible for implementation of the Federal ESA.

3.0 MARINE WILDLIFE

Multiple species of marine turtles, cetaceans (whales, dolphins, and porpoises), and pinnipeds (seals and sea lions) have been recorded within southern California State waters. Most of the recorded species can occur within the Project region, although seasonal abundances of these taxa vary; pinnipeds and some dolphins are year-round residents. California sea lions are year-round residents within San Luis Bay and utilized several floating docks and pier loading decks as haul-out areas.

Other marine species are migratory, such as the gray whale (*Eschrichtius robustus*), or seasonal, such as the humpback whales (*Megaptera novaeangliae*) and are more abundant during specific months. Resident, seasonal, and migrant taxa are all expected to occur along the coastline of California. In addition, humpback whales are frequently observed using San Luis Bay for refuge and foraging within the opening of the bay during seasonal migrations. Harbor porpoise are found in coastal waters year-round off of central California and are observed regularly within San Luis Bay.

Five separate marine mammal hearing groups are identified in NOAA's *Technical Guidance on Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing* (Guidance); hearing groups were created based on the known hearing sensitivity ranges of cetacean and pinnipeds (low- [LF], mid- [MF], and high- [HF] frequency cetaceans, and otariid [OW] and phocid [PW] pinnipeds) (Table 3-1) (NOAA, 2018). Outside the generalized hearing range, the risk of auditory impacts from sound is considered unlikely or very low. The Guidance excludes species protected by the U.S. Fish and Wildlife Service (USFWS) (i.e. Sea otter, sea turtles) and avian species. Table 3-2 provides a list of marine mammal species that could be present in the Project area during the Project activities. Larger whale and dolphin species may be encountered during seasonal or daily migrations throughout the region; however, due to water depths, larger marine mammals are not expected to occur within the immediate Project area. Table 3-3 provides information on the seasonal distributions in the marine wildlife community within the Project region. It is important to note that where seasonal differences occur individuals may also be found within the area during the "off" season. Also, depending on the species, the numbers of abundant animals present in their "off" season may be greater than the numbers of less common animals in their "on" season.

Table 3-1. Marine Mammal Hearing Groups

Hearing Group	Generalized Hearing Range*
Low-Frequency (LF) cetacean (mysticetes)	7 Hz to 35 kHz
Mid-Frequency (MF) cetacean (dolphins, toothed whales, beaked whales, bottlenose whales)	150 Hz to 160 kHz

Table 3-1. Marine Mammal Hearing Groups

Hearing Group	Generalized Hearing Range*
High-Frequency (HF) cetaceans (true porpoises, *Kogia*, river dolphins, cephalorhynchid, *Lagenorhynchus cruciger,* and *Lagenorhynchus australis*)	275 Hz to 160 kHz
Phocid pinnipeds (PW) (underwater) (true seals)	50 Hz to 86 kHz
Otariid pinnipeds (OW) (underwater) (sea lions and fur seals)	60 Hz to 39 kHz

* Represents the generalized hearing range for the entire group as a composite (i.e., all species within the group), where individual species' hearing ranges are typically not as broad. Generalized hearing range chosen based on ~65 decibel (dB) threshold from normalized composite audiogram, with the exception for lower limits for LF cetaceans and PW pinniped (approximation).

Table 3-1. Population Status of Marine Mammals Expected to Occur in the Project Area

Common Name *Scientific Name*	Status[1,2]	Minimum Population Estimate	Current Population Trend	Source
MYSTICETI CETACEANS (LOW-FREQUENCY)				
California gray whale *Eschrichtius robustus*		20,125 (Eastern North Pacific Stock)	Fluctuating annually	NMFS, 2015a
Humpback whale *Megaptera novaeangliae*	FE (Central America DPS) FT (Mexico DPS) [3]	1,876 (California/Oregon/Washington Stock)	Increasing	NMFS, 2016a
Minke whale *Balaenoptera acutorostrata*		369 (California/Oregon/Washington Stock)	No long-term trends suggested	NMFS, 2016b
ODONTOCETI CEATACEANS (MID-FREQUENCY)				
Long-beaked common dolphin *Delphinus capensis*		68,432 (California Stock)	Unable to determine	NMFS, 2017a
Short-beaked common dolphin *Delphinus delphis*		839,325 (California/Oregon/Washington Stock)	Unable to determine	NMFS, 2017b
Bottlenose dolphin *Tursiops truncatus*		1,255 (California/Oregon/Washington Offshore Stock)	No long-term trends suggested	NMFS, 2017c
		346 (California Coastal Stock)	No long-term trends suggested	NMFS, 2017d
ODONTOCETI CEATACEANS (HIGH-FREQUENCY)				
Harbor porpoise *Phocoena phocoena*		2,102 (Morro Bay Stock)	Unable to determine	NMFS, 2013
OTARIID PINNIPEDS				
California sea lion *Zalophus californianus*		153,337 (U.S. Stock)	Increasing	NMFS, 2015b
PHOCID PINNIPEDS				
Pacific harbor seal *Phoca vitulina richardsi*		27,348 (California Stock)	Decreasing	NMFS, 2015c
FISSIPEDS				
Southern sea otter *Enhydra lutris nereis*	FT	2,962 (mainland and San Nicolas Island)	Increasing	Hatfield et al., 2019

Notes DPS = Distinct Population Segment

[1] **Status Codes:**

FE Federally listed Endangered Species

FT Federally listed Threatened Species

[2] All marine mammals are Federally protected under the Marine Mammal Protection Act (MMPA).

[3] Individuals from both the Central America and Mexico DPS are known to feed along the California coast.

Table 3-2. Periods of Occurrence of Marine Mammals Expected to Occur in the Project Area

Family / Common Name	Month of Occurrence (1)											
	J	F	M	A	M	J	J	A	S	O	N	D
Mysticeti												
California gray whale												
Humpback whale (E - Central America DPS) (T – Mexico DPS)												
Minke whale												
Odontoceti												
Short-beaked common dolphin												
Long-beaked common dolphin												
Bottlenose dolphin												
Harbor porpoise												
Pinnipedia												
California sea lion												
Pacific harbor seal												
Fissiped												
Southern Sea otter												

Rare with uniform distribution | Not expected to occur | More likely to occur due to seasonal distribution | Present Year Round

Notes:

(E) Federally listed endangered species.

(T) Federally listed threatened species.

(1) Where seasonal differences occur, individuals may also be found in the “off” season. Also, depending on the species, the numbers of abundant animals present in their “off” season may be greater than the numbers of less common animals in their “on” season.

4.0 MARINE PROTECTED AREAS AND SENSITIVE HABITATS

4.1 MARINE PROTECTED AREAS

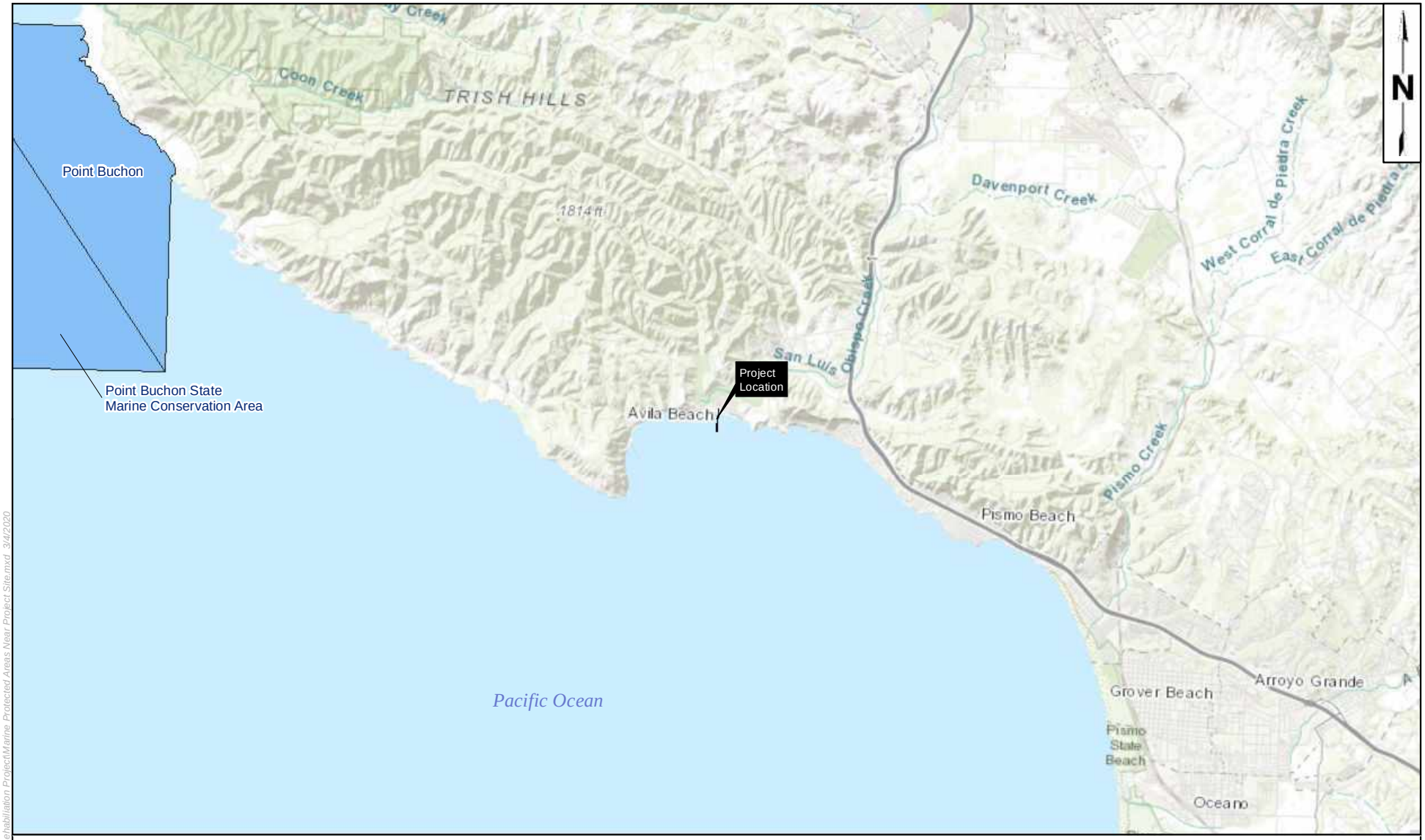
Marine Protected Areas (MPAs) are named, discrete geographic marine or estuarine areas designed to protect or conserve marine life and habitat. There are different marine managed areas classifications used in California's MPA network including:

1. State Marine Reserves (SMR);
2. State Marine Conservation Areas (SMCA),
3. State Marine Parks;
4. Marine recreational management areas (State Marine Recreational Management Area); and
5. Special closure areas.

The MPA network spans the California coastline and includes 29 protected regions within the Central Coast Project region encompassing approximately 204 square miles (528 square kilometers). The closest MPA to the Project site is the Point Buchon SMCA, which is located approximately 7.8 miles (mi) (12.5 kilometers [km]) northwest of the Project area. Project activities will not occur within an MPA.

4.2 PINNIPED HAUL-OUTS AND ROOKERIES

The closest haul-out/rookery is located at the base of the California Polytechnic University Pier approximately 1,277 feet (389 meters) west of the Project area (refer to Figure 4-2). This haul-out is adjacent to San Luis Bay Drive, a heavily trafficked route, and seals and sea lions at this haul-out are habituated to vehicle and foot traffic. Other adjacent haul-outs are either located under piers with high human activity or protected by rocky points; therefore, it is unlikely that Project activities will disturb or harass pinnipeds hauled-out on land.



LEGEND:

Project Location

MAP EXTENT:

Source: ESRI Online Topo Map, NOAA 2012
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
Notes: This map was created for informational and display purposes only.

0 1 2
MILES

padre associates, inc.
ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS

PROJECT NAME:
AVILA PIER REHABILIATION PROJECT, AVILA BEACH
SAN LUIS OBISPO COUNTY, CA

PROJECT NUMBER: 2002-4521

DATE: March 2020

MARINE PROTECTED AREAS NEAR PROJECT SITE

FIGURE 4-1

Z:\GIS Projects\GIS Maps\Map Project\Avila Pier Rehabilitation Project\Marine Protected Areas Near Project Site.mxd 3/4/2020

LEGEND:

Project Location

Pinniped Haul Outs by Species:

California sea lion

Harbor seal

Steller sea lion

MAP EXTENT:

Source: ESRI Online Topo Map, NOAA 2012
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
Notes: This map was created for informational and display purposes only.

0 1 2
MILES

padre associates, inc.
ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS

PROJECT NAME:
AVILA PIER REHABILIATION PROJECT, AVILA BEACH
SAN LUIS OBISPO COUNTY, CA

PROJECT NUMBER: 2002-4521

DATE: March 2020

PINNIPED HAUL-OUTS NEAR PROJECT SITE

FIGURE 4-2

Z:\GIS Projects\GIS Maps\Map Project\Avila Pier Rehabilitation Project\Pinniped Haul Outs Near Project Site.mxd 3/4/2020

5.0 MITIGATIONS AND MONITORING

5.1 PRE-ACTIVITY ENVIRONMENTAL ORIENTATION

The Harbor District will provide an environmental orientation for all Project personnel prior to conducting work. The purpose of the orientation is to educate Project personnel on identification of wildlife likely to be encountered in the Project area and to provide an overview of the wildlife mitigation measures that will be implemented during the Project. Specifically, the orientation will include, but not be limited to, the following:

- Identification of wildlife expected to occur in the Project area and periods of occurrence along the central California coast;
- Overview of the MMPA and ESA, regulatory agencies responsible for enforcement of the regulations, and penalties associated with violations;
- Procedures to be followed during activities that are most likely to affect marine wildlife (i.e., ramp-up and shut-down of impact hammer); and
- Reporting requirements in the event of an inadvertent harassment and/or injury to a marine mammal or sensitive habitats.

5.2 MONITORING AND MITIGATIONS

5.2.1 Marine Wildlife Monitor

Marine wildlife monitoring will be conducted by a Marine Wildlife Monitor (MWM) who will be stationed on the Avila Pier during all pile driving activities. The MWM will be experienced in marine wildlife identification and will be present for the duration of any Project activities that may cause harassment or injury of marine mammals. The MWM will be placed at the best vantage point practical to monitor for marine wildlife and will be in direct communication with field supervisor and/or pile driving operator in case shutdown/delay procedures need to be implemented. The MWM may be a member of the construction crew but will not be responsible for any other task other than marine wildlife monitoring during pile driving activities. MWM will have the appropriate safety and monitoring equipment to conduct their observations, including binoculars or a spotting scope, and hearing protection, as necessary. One MWM will be present during all pile driving activities; however, if conditions change that reduce the MWMs ability to monitor the entire offshore Project area then additional MWMs will be retained to provide complete coverage. The MWM will be authorized to stop or pause work to avoid marine wildlife conflicts.

5.2.2 Pile Driving Monitoring

During active pile driving operations, the MWM shall establish a 500-foot (152-meter) radius Exclusion Zone for the protection of large marine mammals (i.e., whales, dolphins and porpoise) and a 100-foot (30-meter) Exclusion Zone for the protection of smaller marine mammals

(i.e., seals, sea lions, sea otters). The Exclusion Zone will be centered on the radial distance from the pier bent where pile driving is actively occurring. There are no existing hydroacoustic studies that analyze the specific sound source levels from impact pile driving at Avila Pier or in San Luis Bay; therefore, the proposed Exclusion Zones are a conservative estimate, based noise levels from surrogate hydroacoustic studies for impact pile driving of wooden piles in shallow water (CalTrans, 2015). In accordance with the NMFS *Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing* and *Manual for Optional User Spreadsheet Tool*, the surrogate data was used to determine the distance at which the cumulative sound level for a permanent threshold shift (PTS) in marine mammal hearing would be exceeded (NMFS, 2018b). Due to uncertainties regarding the effects of sound attenuation and sea floor conditions on sound levels at the Projects site, the Harbor District has proposed a to extend the Exclusion Zones beyond the resulting isopleth of the maximum PTS for cetaceans (155 dB for high-frequency cetaceans) from 120 ft (36.6 m) to 500 ft (152 m) , and the maximum PTS for pinnipeds from 52 ft (16 m) to 100 ft (30 m) to ensure the protection of marine wildlife.

NMFS also has thresholds for behavioral harassment of Pacific harbor seals (90 dB_{rms}) and California sea lions (100 dB_{rms}) from airborne noise. The acoustic thresholds presented in the Guidance for PTS onset were used to inform the prosed Exclusion Zone radii. Due to the potential for pinnipeds to be hauled out near the Project area, their respective in-air thresholds were also considered.

There are no underwater or aerial acoustic thresholds established for sea otters; however, a recent study by the Bureau of Ocean Energy Management and University of California Santa Cruz, concludes that sea otters retain acute aerial hearing sensitivity that is comparable to other terrestrial carnivores and is estimated to be less sensitive at lower frequencies (Reichmuth and Ghoul 2012). The USFWS recently used NMFS's acoustic thresholds for otariids to determine underwater acoustic impacts to sea otters for pile driving activities in Elkhorn Slough, Monterey County (USFWS, 2017). The in-air thresholds for both PTS and temporary threshold shift (TTS) were 149 dB_{peak} re 20 µPa and 144 dB (cumulative SEL) (Grebner and Kim 2015). Southern sea otters inhabit and are frequently observed foraging in the Project area. An in-air hearing test on a sea otter showed similar hearing thresholds to sea lions, with their best hearing threshold around 70 dB at 8 kHz. In contrast, underwater hearing sensitivity of the sea otter was greatly reduced compared to underwater hearing in sea lions and other pinnipeds, indicating that sea otters are better adapted for airborne hearing (Grebner and Kim 2015). In addition, during previous pile driving projects in the region, sea otters have been observed displaying normal diving and foraging behaviors within the potential ensonfication zone during active pile driving activities (Padre, 2018).

Prior to engaging the impact hammer, the MWM will monitor the Exclusion Zones for a minimum of 15 minutes for the presence of marine wildlife. The pile-driving crew field supervisor will request clearance of the Exclusion Zones prior to initiating the impact hammer. Prior to the hammer being operated at full power, pile-driving will be "ramped-up," which is defined as a slow increase in the intensity of pile-driving with initial hammer strikes at no less than a one-minute interval between each strike for a five minute period (PSLHD, 2020). This method should allow adequate time for any marine mammals within the safe zone to leave the area prior to the start of sustained pile-driving activities.

If the MWM should observe marine wildlife approaching their respective Exclusion Zone, the Project Field Supervisor or Project Manager will be alerted of the potential for an imminent shut down. If the marine animal enters the Exclusion Zone and displays abnormal behaviors or distress, the monitor will immediately report that observation to the Project Field Supervisor who will shut-down operations, if deemed necessary by the MWM, unless those actions will jeopardize the safety of the Project crew. Distress can be defined as any abnormal behavior that appears to be related to Project operations such as sudden change in direction (startle response), rapid breathing, and sudden or erratic changes in behavior. The MWM will have the authority to stop any work that is perceived to be harming marine wildlife.

5.2.3 General Overwater Construction Activities

All Project operations will be conducted per the procedures outlined in the Harbor District's Maintenance Manual, and which integrates measures to minimize environmental impacts and protect water quality during all operations and maintenance activities (PSLHD, 2020). Further, every effort to avoid approaching and disturbing marine wildlife in the water or at rest should be conducted.

5.3 PROJECT LIGHTING

Nighttime work is not anticipated during the Project; however, if lighting is required for work in low light conditions, specific impact avoidance measures will be implemented, as necessary. To minimize potential impacts on marine wildlife and resting shore birds, lighting will be low intensity and directed downward to conduct specific tasks. Direct illumination of wildlife will be avoided, and when possible, green lighting will be used to reduce attraction to the lights and equipment.

6.0 PROCEDURE FOR INJURED OR DECEASED WILDLIFE

If marine wildlife is observed to be oiled, injured or in distress, the MWM in consultation with the Harbor District and NMFS, shall contact the Marine Mammal Center in Morro Bay for assistance. In the unlikely event of a petroleum release and subsequent oiling of marine wildlife, the California Department of Fish and Wildlife (CDFW) Office of Spill Prevention and Response (OSPR) and Oiled Wildlife Care Network (OWCN) will be notified and dispatched, as needed. Notification and response contact information is provided in Table 6-1.

6.1 REPORTING

In the event a marine animal is observed injured or in distress, the MWM will document the conditions under which the incident occurred, including the following:

- Species of marine wildlife contacted (if known);
- Location (latitude and longitude) of the distress, injured or deceased animal;
- Date and time of the observation; and
- Observation conditions (e.g., wind speed and direction, swell height, visibility in miles or kilometers, and presence of rain or fog) at the time of the observation.

In the event an oiled, injured or distressed animal is observed, pile driving activities will stop, if safe to do so. The MWM will then communicate by radio or telephone all details to the Harbor District Project Manager. The Harbor District will immediately notify the National Marine Fisheries Service (NMFS) West Coast (California) Stranding Coordinator in Long Beach (Table 6-1) to obtain instructions. Additional notification contacts may be added after final Project permits are acquired and in accordance with the Project's Oil Spill Contingency Plan.

Table 6-1. Marine Wildlife Rescue Contact Information

National Marine Fisheries Service	Morro Bay Marine Mammal Center	Oiled Wildlife Care Network
Justin Viezbicke Stranding Coordinator NOAA Fisheries Service Long Beach, California (562) 506-4315	1385 Main St. Morro Bay, California, 93442 Rescue Line: (805) 771-8300	Oiled Wildlife Care Network (877) 823-6926

7.0 OBSERVATION RECORDING AND MONITORING REPORT

The MWM will record observations on data forms and will photo-document observations whenever possible. Throughout the Project, observers will prepare a regular summary reports, or at such other intervals as required by regulatory agencies, providing the recent results of the monitoring program. The reports will summarize the species, number of marine wildlife sighted, and any required actions taken. Following the completion of the Project, a Project comprehensive monitoring report will be prepared and provided to the appropriate agencies, if requested. The report will document Project activities, evaluate the effectiveness of monitoring protocols, report marine wildlife sightings (species and numbers), any wildlife behavioral changes, and any Project delays or cessation of operations due to the presence of marine wildlife in the Project area. The report will be submitted to the appropriate agencies no more than 90 days following completion of the Project.

8.0 REFERENCES

Caltrans. 2015. Technical Guidance for Assessment and Mitigation of the Hydroacoustic Effects of Pile Driving on Fish. California Department of Transportation Division of Environmental Analysis. November 2015.

Hatfield, B.B., Yee, J.L., Kenner, M.C., and Tomoleoni, J.A.. 2019. California sea otter (*Enhydra lutris nereis*) census results, spring 2019: U.S. Geological Survey Data Series 1118, 12 p., https://doi.org/10.3133/ds1118.

National Marine Fisheries Service (NMFS). 2018a. 2018 Revisions to: Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0): Underwater Thresholds for Onset of Permanent and Temporary Threshold Shifts. U.S. Dept. of Commerce., NOAA. NOAA Technical Memorandum NMFS-OPR-59, 167 p.

_____2018b. Manual for Optional User Spreadsheet Tool (Version 2.0) for: 2018 Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0): Underwater Thresholds for Onset of Permanent and Temporary Threshold Shifts. Silver Spring, Maryland: Office of Protected Resources, National Marine Fisheries Service.

_____2017a. Long-beaked common dolphin (*Delphinus capensis*) California Stock. Revised February 10, 2017.

_____2017b. Marine Mammal Stock Assessment Report Short-beaked common dolphin (*Delphinus delphis*) California/Oregon/Washington Stock. Revised February 7, 2017.

_____2017c. Marine Mammal Stock Assessment Report Common Bottlenose dolphin (*Tursiops truncatus truncatus*) California/Oregon/Washington Offshore Stock. February 7, 2017.

_____2017d. Marine Mammal Stock Assessment Report Common Bottlenose dolphin (*Tursiops truncatus*) California Coastal Stock. February 9, 2017.

_____2016a. Marine Mammal Stock Assessment Report Humpback whale (*Megaptera novaeangliae*) California/Oregon/Washington Stock. Revised September 21, 2016.

_____2016b. Marine Mammal Stock Assessment Report Minke whale (*Balaenoptera acutorostrata scammoni*) California/Oregon/Washington Stock. Revised August 16, 2016.

_____2015a. Marine Mammal Stock Assessment Report Gray Whale (*Eschrichtius robustus*) Eastern North Pacific Stock. Revised July 31, 2015.

_____2015b. Marine Mammal Stock Assessment Report California sea lion (*Zalophus californianus*): U.S. Stock. Revised June 30, 2015.

_____2015c. Marine Mammal Stock Assessment Report Harbor Seal (*Phoca vitulina richardii*) California Stock. Revised July 31, 2015.

_____2013. Marine Mammal Stock Assessment Report Harbor Porpoise (*Phocoena phocoena*) Morro Bay Stock. Revised June 2014.

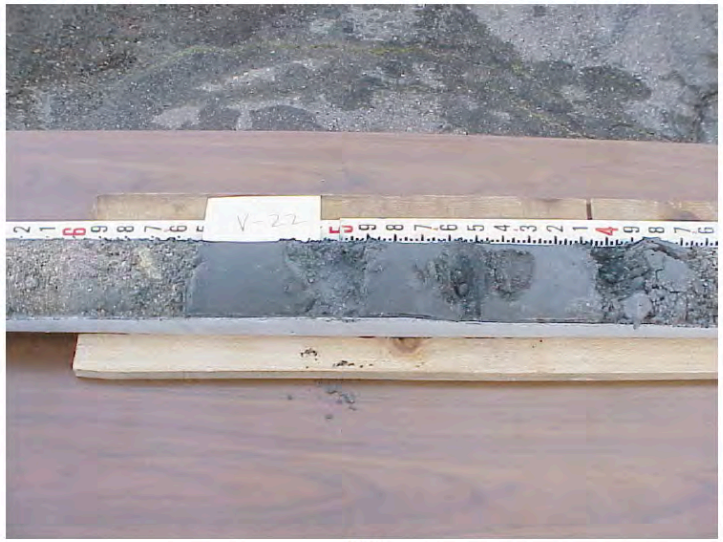
Port San Luis Harbor District (PSLHD). 2020. Maintenance Manual, prepared for the California Coastal Commission, January 28, 2020.

U.S. Fish and Wildlife Service (USFWS). 2019. Southern Sea Otter (*Enhydra lutris nereis*) Draft Revised Stock Assessment Report. Revised March 2019.

910.0001002040401

V-22
0 TO 2'

V-22
2 TO 4'



V-22
4 TO 6'

V-22
6 TO 8'

AVILA PIER OUTLIER CORE PHOTOS

AVILA BEACH, CALIFORNIA

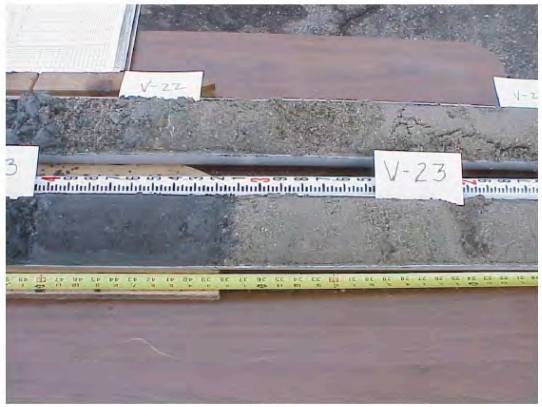
PREPARED FOR

UNOCAL CORPORATION
CENTRAL COAST GROUP
SAN LUIS OBISPO, CALIFORNIA

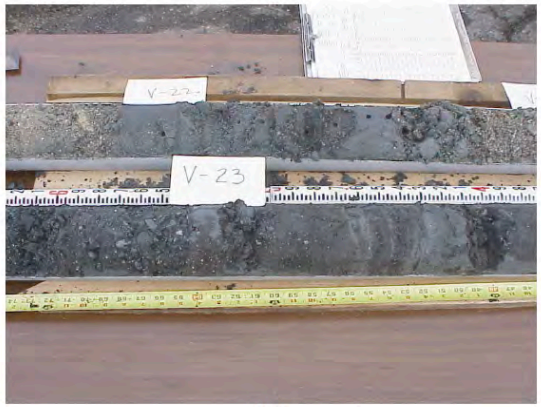
ENGLAND GEOSYSTEM
ENVIRONMENTAL ENGINEERING

Exhibit 8
3-20-0546 (Avila Pier Rehabilitation)
1 of 3

V-23
0 TO 2'



V-23
2 TO 4'



V-23
4 TO 6'

V-23
6 TO 8'

V-23
8 TO 8.9'

AVILA PIER OUTLIER CORE PHOTOS

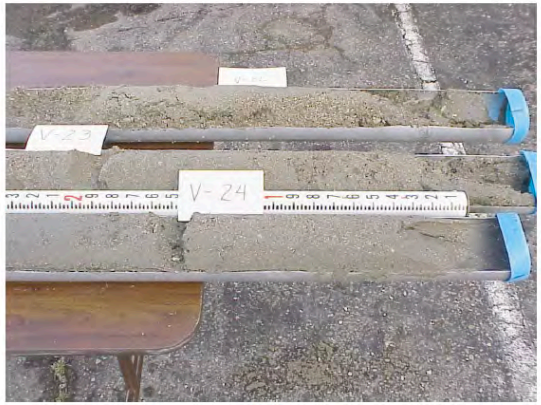
AVILA BEACH, CALIFORNIA

PREPARED FOR

UNOCAL CORPORATION
CENTRAL COAST GROUP
SAN LUIS OBISPO, CALIFORNIA

ENGLAND GEOSYSTEM
ENVIRONMENTAL ENGINEERING

Exhibit 8
3-20-0546 (Avila Pier Rehabilitation)
2 of 3

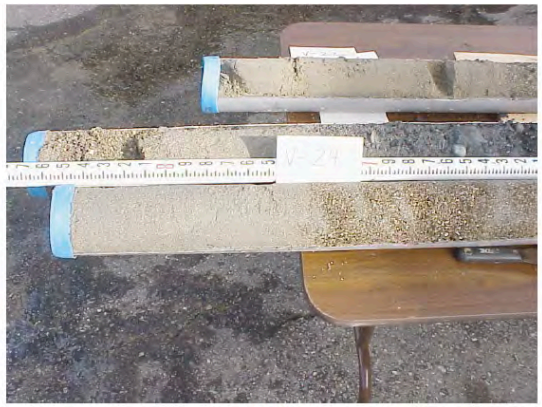


V-24
0 TO 2'

V-24
2 TO 4'

V-24
4 TO 6'

V-24
6 TO 8'



V-24
8 TO 8.5'

AVILA PIER OUTLIER CORE PHOTOS

AVILA BEACH, CALIFORNIA

PREPARED FOR

UNOCAL CORPORATION
CENTRAL COAST GROUP
SAN LUIS OBISPO, CALIFORNIA

ENGLAND GEOSYSTEM
ENVIRONMENTAL ENGINEERING

Exhibit 8
3-20-0546 (Avila Pier Rehabilitation)
3 of 3

August 17, 2020 (rev. July 23, 2021)

Oil Spill Contingency Plan for Avila Pier Repair Project

BACKGROUND: Port San Luis Harbor District (PSLHD) is planning to implement repairs to the Avila Pier. There is known petroleum contamination under Avila Pier. This subsurface petroleum contamination under Avila Pier, the "Outlier Plume" has been studied for many years by Unocal, Chevron and many agencies. Delineation of the Outlier Plume and locations of elevated Total Petroleum Hydrocarbons (TPH) were completed in May 2000. The delineation showed hydrocarbon contamination (primarily in the crude oil range) present at depths ranging from 4-8 feet beneath the beach surface, sea floor, and Avila Pier. The average plume thickness is 4 feet. After a number of years of studies, the involved agencies determined leaving the Outlier Plume in place was appropriate due to its low risks to human health and the environment. Samples recovered during the plume studies suggest the plume is solid in nature, which limits the potential for releases.

This Plan addresses response procedures should the Avila Beach Outlier Plume cause a release or releases of contamination during the pier repair project.

The primary focus of this Spill Contingency Plan is to describe the procedures and resources that would be used to reduce potential impacts.

SCOPE: The scope of the Oil Spill Contingency Plan includes driving or removing piles within 50-feet of the delineated extent of plume and areas of elevated TPH. The scope does not include repair to the pier structure above the piles or repairs made to the piles (ie jacketing/grouting or splicing) within the plume which do not extend below the surface (2-feet below the mudline).

PRE-PROJECT PLANNING: A number of preliminary activities will be implemented prior to construction phase. These include the following:

- Coordination and contracting with Oil Spill Response Organization (ORSRO)/contractor, such as Marine Spill Response Corporation (MSRC), to ensure availability during the construction phase in the event of a release of petroleum beyond the capabilities of the PSLHD.
- Verifying the PSLHD oil spill response trailer has response equipment in working order and available to deploy quickly. The PSLHD trailer will be located at the base of Avila Pier during the project and will be deployed by PSLHD staff if needed.
- Training of all employees who may be involved in pier repair project regarding spill response activities, including those who may only be required to initiate initial spill response procedures.
- Designating/identifying a full-time project oversight manager trained and responsible for early detection and reporting of potential release(s).

CONTINGENCY PLAN PROTOCOLS:

- **Release Detections** – Petroleum sheens, free product, and/or tar occurrence; and other relevant and appropriate release identification indicators.
- **Notifications** - Following the initial discovery and response, the release will be reported by the contractors performing the pier repair work or by the PSLHD to CalOES, National Response Center (NRC), and the local CUPA SLO Co. Health Department per spill reporting requirements. This notification to CalOES will notify other oil spill response agencies e.g. CDFW-OSPR and U.S. Coast Guard. Notification is essential to activate response organizations, alert company

management, obtain assistance from and cooperation of agencies, mobilize resources, and comply with local, State and Federal regulations.

- CalOES spill reporting 800-852-7550
- NRC 800-424-8802
- SLO Co. Env. Health (CUPA) 805-781-5544

The notification process encompasses the following categories:

- Spill notifications noted above
- Other agency notifications
- Cleanup contractors/OSRO (if needed)
- Oiled Wildlife Care Network (OWCN) hotline if needed for oiled wildlife 877-823-6926
- Notification of other interested parties
- Periodic progress updates and reports (if necessary)

- **Initial Response** - If above release detection indicators are observed around the Avila Pier during the Pier repair project the release will be responded to immediately by the PSLHD. The Harbor District will maintain their oil spill emergency response trailer at the base of the Avila Pier; and PSLHD staff will deploy the equipment as needed if there is a petroleum release from the pier repair project for the initial response. Equipment included in the oil spill emergency response trailer includes:
  - 1,000 feet of 6”x12” Oil Containment Boom
  - PPE Gear
  - Decontamination Equipment
  - Absorbent boom and pads
  - Boom anchors and floating lights
  - Tool box

  - Account for all personnel and ensure safety; use appropriate personal protective equipment
  - Assess the spill size and type of material released (sheen, free product, tar balls)
  - Notify and activate MSRC/other OSRO/contractor if beyond local response capability (estimate spill volume, estimate speed and direction of oil slick movement and determine resource needs)
  - Secure the area
  - Deploy appropriate spill response equipment to contain spill/release (e.g. containment or sorbent boom) to prevent the oil/sheen from spreading
  - Recover oil/sheen with sorbents, pompoms/snare, skimmer, vac truck (as needed)
  - Maintain surveillance of released contamination
  - Dispose of contaminated materials per laws and regulations.

If the petroleum release exceeds the response capability of the PSLHD equipment and staff, the PSLHD will activate Marine Spill Response Corporation (MSRC) or other OSRO/cleanup contractor for spill response assistance.

If multi-agency response is required, the Incident Command System will be used. Response priorities and specific response tactics will be determined based on an assessment of site conditions and issues of response personnel safety.

Additionally, the U.S. Coast Guard Area Contingency Plan (ACP) Los Angeles/Long Beach (Northern Sector) can be used as a reference for response options.

To minimize impacts to wildlife the CDFW-OSPR representative, in consultation with U.S. Fish and Wildlife Service, will determine if wildlife hazing is warranted in order to keep wildlife away from contamination. Wildlife hazing measures may include engineering controls for example noise makers such as Zon Guns, cracker shell shotguns or pistol launched bird whistles, and/or operational controls such as flushing birds from the area.

If oiled wildlife need to be captured for cleaning and rehabilitation the Oiled Wildlife Care Network (OWCN) should be activated by calling 877-823-6926.

OTHER CONTACTS

MSRC (oil spill response, offshore waters and San Luis Obispo Creek) (800) 645-7745

Phillips Services Corp. (onshore beach cleanup) (805) 239-1060

Pacific Petroleum Corp. (onshore beach cleanup) (805) 925-1947

U.S. Fish and Wildlife Service, (sensitive species consultation) (805) 644-1766

California Coastal Commission, Jonathan Bishop (response assistance/permits) Office/voicemail: 8 3 1 - 4 2 7 - 4 8 7 3

Oiled Wildlife Care Network (OWCN) hotline for oiled wildlife 877-823-6926

PREPARED BY:

Melissa Boggs
Senior Environmental Scientist Supervisor
California Department Fish and Wildlife, Office of Spill Prevention and Response

Dan Niles
Engineering Geologist
Central Coast Regional Water Quality Control Board

Jonathan Bishop
Oil Spill Program Coordinator
California Coastal Commission