CALIFORNIA COASTAL COMMISSION
SOUTH COAST DISTRICT OFFICE
301 E. OCEAN BLVD., SUITE 300
LONG BEACH, CA 90802-4830
(562) 590-5071

F6a

5-23-0178 (Bartusick & Staub)
June 14, 2024

EXHIBITS

Exhibit 1 – Vicinity Map and Project Site

Exhibit 2 – Project Plans

Exhibit 3 – Eelgrass Mitigation and Monitoring Plan

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Exhibit 1
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Crystal Ave.
Crystal Ave
Crystal Ave
E. Bay Front
E Bay Front
Project Site

STRUCTURAL GENERAL NOTES

GENERAL REQUIREMENTS

1. CONSTRUCTION SHALL BE IN CONFORMITY WITH THE 2022 EDITION OF THE CALIFORNIA BUILDING CODE (CBC) AND ALL APPLICABLE LOCAL AND STATE CODES AND ORDINANCES.
2. SITE INSPECTION: THE CONTRACTOR SHALL EXAMINE THE PROJECT SITE & SHALL VERIFY ALL DIMENSIONS, LOCATIONS & ELEVATIONS OF THE EXISTING CONSTRUCTION.THE CONTRACTOR SHALL ALSO DILIGENTLY INVESTIGATE THE SITE FOR THE POSSIBLE EXISTENCE & LOCATION OF UNDERGROUND UTILITIES PRIOR TO ORDERING ANY MATERIAL AND/OR COMMENCING WORK AND SHALL REPORT ANY DISCREPANCIES TO "PMA CONSULTING, INC. "HEREINAFTER CALLED" THE ENGINEER".
3. CONTRACTOR SHALL PROVIDE BARRICADES AND PEDESTRIAN PROTECTION AS REQUIRED BY STATE AND LOCAL CODES.
4. CONTRACTOR SHALL CONSULT WITH REPRESENTATIVES OF CITY AND UTILITY COMPANIES CONCERNING AVAILABLE FACILITIES BEFORE COMMENCING WORK OR CONNECTING TO SEWER, PIPING OR WIRING, ETC., AND REPORT ANY PROBLEMS TO THE ENGINEER.
5. CONTRACTOR SHALL FULLY PROTECT ALL ADJACENT PROPERTIES BEFORE COMMENCING ANY WORK.
6. OMISSIONS OR CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE DRAWINGS, NOTES, AND DETAILS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND RESOLVED BEFORE PROCEEDING WITH THE WORK.
7. CONTRACTOR SHALL INSTALL TEMPORARY TOILETS BEFORE START OF JOB.
8. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER THESE GENERAL NOTES.
9. TYPICAL DETAILS SHOWN SHALL APPLY WHERE NO SPECIAL DETAIL IS SHOWN. WHERE A DETAIL, TYPICAL DETAIL, SECTION, TYPICAL SECTION, OR A NOTE IS SHOWN FOR ONE CONDITION, IT SHALL ALSO APPLY FOR ALL LIKE OR SIMILAR CONDITIONS UNLESS NOTED OTHERWISE.
10. DRAWINGS TAKE PRECEDENCE OVER SPECIFICATIONS. DETAILED DRAWINGS AND SPECIFICATIONS TAKE PRECEDENCE OVER GENERAL DRAWINGS AND SPECIFICATIONS.
11. WRITTEN DIMENSIONS (NOT SCALED DIMENSIONS) SHALL BE USED.
12. TEMPORARY ERECTION BRACING AND SHORING SHALL BE PROVIDED AS REQUIRED ON ALL STRUCTURES, ADEQUATE TO PROVIDE FULL STRUCTURAL STABILITY AND SAFETY. BRACING SHALL NOT BE REMOVED UNTIL THE ELEMENTS ARE FULLY CONNECTED AND ARE CAPABLE OF SUPPORTING THE DESIGN LOADING.
13. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
14. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION NOT TO UNDERMINE ANY ADJACENT STRUCTURE DURING THE COURSE OF CONSTRUCTION.
15. CLEAN UP: NO PAINT, PLASTER, CEMENT, SOIL, MORTAR OR OTHER RESIDUE SHALL BE ALLOWED TO ENTER THE BAY, STREETS, GUTTERS OR STORM DRAINS. ALL MATERIALS & WASTE SHALL BE REMOVED FROM THE SITE, NBMC 17.32.020.
16. DEMOLITION: ALL MATERIAL FROM THE EXISTING BULKHEAD THAT IS NOT USED AS FILL SHALL BE REMOVED FROM THE SITE & DISPOSED OF IN AN OFFICIAL DUMP SITE.
17. SEE THE LATEST "GENERAL GRADING SPECIFICATIONS" OF THE BUILDING DEPARTMENT FOR THE CITY'S: GENERAL NOTES, EROSION CONTROLS, REQUIRED INSPECTIONS, GRADING FILLS/CUTS & ALL NECESSARY DOCUMENTATION.
18. POOLS, SPAS, FENCES, PATIO COVERS AND OTHER FREESTANDING STRUCTURES REQUIRE SEPARATE REVIEWS AND PERMITS.
19. ALL A.S.T.M. SPECIFICATIONS NOTED ON THE DRAWINGS SHALL BE IN ACCORDANCE WITH THE LATEST ISSUE OF THE A.S.T.M.
20. OBSERVATION VISITS TO THE PROJECT SITE BY THE ENGINEER SHALL NOT BE CONSTRUED AS ANY INSPECTION AS REQUIRED BY CODE.

PILINGS AND ANCHORAGE

1. PILES SHALL BE THE PRODUCTS OF MANUFACTURERS AND CONTRACTORS REGULARLY ENGAGED IN THE PRODUCTION OF SUCH ITEMS FOR MARINE CONSTRUCTION. TYPICAL MATERIALS APPROVED FOR PILE MATERIALS INCLUDE:
   A) PRE-STRESSED CONCRETE
   B) STEEL
   C) HIGH-STRENGTH COMPOSITE MATERIALS
   TIMBER PILES ARE NOT ALLOWED.
2. UNLESS SUBSURFACE SOIL MATERIALS PREVENT THEIR USE, PILINGS SHALL BE PRE-STRESSED CONCRETE. IN ABSENCE OF SOIL REPORT RECOMMENDATIONS BASED ON SOIL TESTING, PORTLAND CEMENT SHALL BE ASTM C150 TYPE II CONCRETE MEETING EXPOSURE CLASS C2 AND HAVING MINIMUM 28-DAY COMPRESSIVE STRENGTH F'c=6,000 PSI AND A WATER CEMENT RATIO OF 0.4 SHALL BE USED IN COMPLIANCE WITH ACI 318-19 TABLE 19.3.2.1, MODIFIED, LOW ALKALI. WATER FOR MIXING AND CURING SHALL BE FRESH, CLEAN AND POTABLE. AGGREGATES SHALL CONFORM TO ASTM C33, SIZE NUMBER 67, AND BE FREE FROM ANY SUBSTANCE THAT IS DELETERIOUSLY REACTIVE WITH THE ALKALIS IN THE CEMENT. ADMIXTURES, IF USED, SHALL CONFORM TO THE REQUIREMENTS OF ASTM C494 AND NOT CONTAIN CHLORIDES. CORROSION INHIBITING CONCRETE ADMIXTURES ARE ENCOURAGED. PRE-STRESSING STEEL SHALL BE UNCOATED, SEVEN-WIRE STRESS RELIEVED STRAND WITH A MINIMUM ULTIMATE STRESS OF 270 KSI CONFORMING TO ASTM A416, GRADE 270. SPIRALS SHALL CONFORM TO ASTM A1064, AND TIES AND OTHER REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, OR ASTM A706, GRADE 60, PLAIN OR DEFORMED. PILES SHALL CURE AND REACH A STRENGTH OF NOT LESS THAN F'c=4,000 PSI BEFORE DE-TENSIONING, CUTOFF OF THE STRANDS, AND TRANSFER FROM FORMS. PILES SHALL HAVE A MINIMUM STRENGTH F'c=6,000 PSI AT TIME OF DRIVING.
3. GUIDE ROLLERS SHALL BE FABRICATED FROM POLYETHYLENE, UHMW, POLYOLEFIN OR POLYURETHANE ROLLER OR PLATE MATERIAL. AS AN OPTION TO THE USE OF ROLLERS, UHMW RUB BLOCKS OR SHEETS MAY BE USED. MINIMUM THICKNESS OF A RUB BLOCK OR SHEET SHALL BE 2 INCHES, WITH ATTACHMENT BOLTS COUNTERSUNK INTO THE UHMW MATERIAL.
4. ANY STRUCTURAL STEEL COMPONENTS USED IN THE MARINE ENVIRONMENT SHALL BE HOT-DIP GALVANIZED OR EPOXY COATED PER MANUFACTURERS RECOMMENDATIONS, OR AISI TYPE 316 STAINLESS STEEL.
5. STEEL PILES MUST BE COATED WITH A NON-TOXIC COATING THAT PREVENTS OR INHIBITS THE CORROSION OF THE PILE BASE MATERIAL. DESIGN OF STEEL PILES SHALL INCLUDE A 1/8-INCH ADDITIONAL CORROSION ALLOWANCE. COATINGS MUST BE MAINTAINED TO PREVENT GROWTH AND WEAR FROM THE GUIDE ROLLER ASSEMBLIES. ROLLERS SHOULD BE CLEANED PERIODICALLY TO PREVENT SHELL FRAGMENT BUILD-UP FROM FURTHER DETERIORATING THE COATINGS PROTECTING THE STEEL PILES. FOR ADDED STEEL PILE PROTECTION, SACRIFICIAL ANODES MAY ALSO BE DESIGNED AND INSTALLED TO LIMIT CORROSION, AND UHMW PLASTIC PILE WRAPS CAN BE INSTALLED TO LIMIT WEAR OF THE STEEL SURFACE FROM GUIDE ROLLER FRICTION.
6. INSTALLATION CRITERIA:
   A) PILING SHALL BE INSTALLED BY A CALIFORNIA-LICENSED CONTRACTOR REGULARLY ENGAGED IN THE BUSINESS OF PILE DRIVING. CARE SHALL BE TAKEN IN THE HANDLING AND DRIVING OF PILING, TO PREVENT SPALLING, CRACKING OR OTHER DAMAGE. CONTRACTOR SHALL INSTALL PILES PER APPROVED LOCAL, STATE AND FEDERAL REQUIREMENTS. PILES MAY BE JETTED AS PERMITTED BY THE LOCAL/COASTAL PERMIT, USACE PERMIT, RWQCB WATER QUALITY CERTIFICATE, AND LOCAL CEQA MITIGATION MEASURES, AS APPLICABLE. IF JETTING IS PERMITTED, DEPTH OF JETTING SHALL BE DETERMINED BY A CALIFORNIA-LICENSED GEOTECHNICAL ENGINEER AND A CALIFORNIA-LICENSED CIVIL OR STRUCTURAL ENGINEER
   B) TOLERANCES:
      1) THE INSTALLATION ELEVATION OF THE TOP OF PILES SHALL BE WITHIN ONE INCH OF DESIGNED TOP OF PILE ELEVATION. MINIMUM PILE TOP ELEVATION FOR DOCK SYSTEMS SHALL BE +12.0 MLLW, UNLESS NOTED OTHERWISE IN THOSE HARBOR DESIGN CRITERIA.
      2) PILING SHALL BE INSTALLED VERTICALLY PLUMB WITHIN TOLERANCES DEFINED IN THE CONSTRUCTION DOCUMENTS, BUT IN NO CASES MORE THAN 1.5% OUT OF VERTICAL PLUMB, AND 2 INCHES OUT OF HORIZONTAL LOCATION.

SOLID SAWN MEMBERS AND GLU-LAM BEAMS

1. ALL WOOD-CONSTRUCTION FINGERS SHALL HAVE FRAMING THAT INCLUDES CROSS-MEMBERS THAT PROVIDE RIGID CONNECTION TO THE FULL-LENGTH STRINGERS. ALL CONNECTIONS SHALL BE MADE USING THRU-BOLTS.
   A) COMMERCIAL DOCK FRAMING:
   FOR INDEPENDENT LONG DOCKS THAT FLOAT FREELY AND DO NOT HAVE DOCKS AND/OR FINGERS ATTACHED FOR STABILITY. ALL PRIMARY LOAD CARRYING FRAMING MEMBERS SHALL BE FABRICATED FROM GLUED-LAMINATED BEAM CONSTRUCTION, TO PREVENT WARPAGE OF THE MAJOR MEMBERS, CONTRIBUTING TO DOCK INSTABILITY.
2. ALLOWABLE STRESSES FOR HARBOR STRUCTURES SHALL NOT EXCEED THOSE STATED IN THE "CALIFORNIA BUILDING CODE".
3. TIMBER USED FOR WALKING DECKS SHALL HAVE A MINIMUM NET THICKNESS OF 1½ INCHES.
4. TIMBER FOR WALKING SURFACES SHALL BE DOUGLAS FIR, SELECT STRUCTURAL, SAWN TIMBER FOR OTHER FRAMING MEMBERS SHALL BE DOUGLASS FIR, NO.1 MINIMUM.
5. GLUED-LAMINATED TIMBER SHALL BE DOUGLASS FIR 24F-V8, INDUSTRIAL GRADE FOR APPLICATION IN WET ENVIRONMENT. FABRICATION SHALL COMPLY WITH PRODUCT STANDARD PS 56-73, "STRUCTURAL GLUED LAMINATED TIMBER".
6. WALKING SURFACES SHALL HAVE A NON-SKID FINISH AND BE MAINTAINED PERIODICALLY OR WHEN WORN AND UNSAFE. TREATED TIMBER DECKING REQUIRES NO FURTHER NON-SKID FINISH.
7. DIMENSIONAL LUMBER IS NOT REQUIRED TO BE PAINTED. HOWEVER, IF THE APPLICANT CHOOSES TO PAINT, SUCH PAINT SHALL BE MAINTAINED TO GOOD CONDITION AND APPEARANCE.
8. PLYWOOD UTILIZED WITHIN DOCK FRAMING SYSTEM SHALL BE EXTERIOR GRADE MATERIAL. PLYWOOD SHALL NOT BE USED AS THE WALKING SURFACE FOR A DOCK SYSTEM, UNLESS THE PRODUCT CAN BE DEMONSTRATED TO THE CITY OF NEWPORT BEACH BUILDING DEPARTMENT THAT IS PROVIDED WITH A FACTORY-APPLIED PROTECTIVE, NON-SKID WALKING SURFACE THAT WILL BE DURABLE AND HAS A PROVEN PROCESS FOR PATCHING AND TOUCH-UP. INTERNAL PLYWOOD MEMBERS SHALL BE PROVIDED IN SUCH A MANNER THAT WATER CAN BE EASILY CONVEYED OFF THE TOP SURFACE OF THE PLYWOOD AND NOT POND OR GET TRAPPED, LEADING TO EARLY DETERIORATION AND DRY ROT.
9. WEIGHT OF TREATED DOUGLAS FIR SHALL BE ASSUMED TO BE 35 POUNDS PER CUBIC FOOT.
10. ALL TIMBER SHALL BE MARKED WITH THE APPROPRIATE GRADE OF MATERIAL AND PRESERVATIVE TREATMENT. OR MAY BE SUBJECT TO REJECTION BY THE CITY INSPECTOR.
11. WOOD PRESERVATIVE FOR TIMBER:
    A) ALL TIMBER PRODUCTS SHALL BE COATED WITH PRESERVATIVE TREATMENT TO RETENTION LIMITS RECOMMENDED BY THE AMERICAN WOOD PRESERVERS ASSOCIATION STANDARD M4 "STANDARD FOR THE CARE OF PRESERVATIVE-TREATED WOOD PRODUCTS" AND AWPA STANDARD C2 "LUMBER, TIMBER, BRIDGE TIES & MINE TIES – PRESERVATIVE TREATMENT BY PRESSURE PROCESSES".
    B) CURRENT STATE AND FEDERAL ENVIRONMENTAL REQUIREMENTS AND GUIDELINES FOR THE TYPE AND APPLICATION OF PRESERVATIVE TREATMENTS WILL BE STRICTLY ENFORCED.
    C) ALL LUMBER MUST BEAR A STAMP BY THE AMERICAN LUMBER STANDARDS COMMITTEE FOR CONFORMANCE TO THE AMERICAN PRESERVERS ASSOCIATION STANDARDS.
    D) FIELD CUTS AND BORED SHALL RECEIVE FIELD-APPLIED PRESERVATIVE TREATMENT IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES. PRESERVATIVE TREATMENT CHEMICALS SHALL NOT BE ALLOWED TO ENTER HARBOR WATERS.
12. ALL BOLT HOLES IN WOOD MEMBERS SHALL BE A MINIMUM OF $\frac{1}{32}$" TO A MAXIMUM OF $\frac{1}{16}$" LARGER THAN THE BOLT DIAMETER. WOOD MEMBERS WITH HOLES NOT MEETING THE ABOVE CRITERIA SHALL BE REMOVED AND REPLACED.

STEEL

1. STRUCTURAL STEEL SHAPES AND PLATES SHALL CONFORM TO A.S.T.M. A572 GRADE 50 OR A992 WITH FY = 50 KSI.
2. STEEL PIPE COLUMNS AND OTHER STEEL PIPE STRUCTURAL MEMBERS SHALL CONFORM TO A.S.T.M. A53, GRADE B.
3. STRUCTURAL STEEL TUBING SHALL CONFORM TO A.S.T.M. A500, GRADE B, FY = 46 KSI.
4. BOLTS SHALL CONFORM TO A.S.T.M. A307, UNLESS NOTED OTHERWISE. WHERE HIGH STRENGTH (H.S.) BOLTS ARE SPECIFIED, THEY SHALL BE MINIMUM 3/4" DIAMETER AND CONFORM TO A.S.T.M. A325 SC CLASS A UNLESS NOTED OTHERWISE ON THE PLANS. THE INSTALLATION OF H.S. BOLTS SHALL BE INSPECTED BY A REGISTERED DEPUTY INSPECTOR APPROVED BY THE BUILDING DEPARTMENT.
5. ALL BOLTS HOLES IN STEEL MEMBERS SHALL BE STANDARD HOLES. U.N.O.
6. STRUCTURAL STEEL "NELSON" STUDS SHALL BE MANUFACTURED FROM C1015, C1017 AND C1020 COLD DRAWN STEEL CONFORMING TO A.S.T.M. A108-56T.
7. LIGHT GAUGE STEEL MEMBERS SHALL CONFORM TO A.S.T.M. STANDARDS AS FOLLOWS:
   A) FOR 18 GA. THICK AND LIGHTER STEEL – A446, GRADE A (GALVANIZED) OR A570, GRADE 33 OR A611, GRADE C – ALL HAVING MINIMUM OF 33 KSI YIELD STRENGTH.
   B) FOR 16 GA. THICK AND HEAVIER STEEL – A446, GRADE D (GALVANIZED) OR A570, GRADE 50 OR A607, GRADE 50 – ALL HAVING MINIMUM OF 50 KSI YIELD STRENGTH.
8. FABRICATION AND ERECTION SHALL CONFORM TO THE LATEST EDITION OF A.I.S.C. SPECIFICATIONS.
9. ALL HOLES FOR BOLTS IN STRUCTURAL STEEL SHALL BE DRILLED OR PUNCHED. BURNING OF HOLES SHALL NOT BE PERMITTED.
10. ALL STEEL SHALL BE STAINLESS, HOT DIP GALVANIZED OR EPOXY COATED.

WELDING

1. ALL WELDING SHALL BE DONE USING THE SHIELDED ELECTRIC ARC PROCESS BY CERTIFIED WELDERS, USING E70XX ELECTRODES.
2. WELDING OF STEEL REINFORCING BARS SHALL BE DONE WITH LOW HYDROGEN ELECTRODES, A233, CLASS E70XX SERIES.
3. WELDS REQUIRING CONTINUOUS OR PERIODIC SPECIAL INSPECTION NEED NOT HAVE SPECIAL INSPECTION WHEN WELDING IS DONE IN AN APPROVED FABRICATOR'S SHOP, HOWEVER, THE APPROVED FABRICATOR MUST SUBMIT A CERTIFICATE OF COMPLIANCE IN ACCORDANCE WITH THE SECTION 1704.2.2 OF THE CBC.
4. SPECIAL INSPECTION IS REQUIRED FOR ALL FIELD WELDINGS.

NAILING AND FASTENERS

1. ALL NAILS AND FASTENERS SHALL BE CORROSION RESISTANT MEETING ASTM A153 CLASS D. HOT DIP GALVANIZED AND BE ACRYLIC ADHESIVE OR THERMAL PLASTIC RESIN LATEX ADHESIVE COATED.
2. ALL NAILS SHALL BE 16D (0.148" DIAMETER) HELICAL THREAD NAILS, WITH MINIMUM BENDING YIELD STRENGTH OF FYB = 30,000 PSI, U.N.O.
3. NAILING OTHER THAN ROOF OR FLOOR DIAPHRAGM SHOWN ON THE DRAWINGS SHALL BE IN ACCORDANCE WITH TABLE 2304.9.1 OF THE CBC.
4. NAILS FOR ROOF AND FLOOR SHEATHING SHALL HAVE A MIN OF 1½" PENETRATION INTO THE FRAMING MEMBERS.
5. ALL HARDWARE SHALL BE CORROSION-RESISTANT COMPLYING WITH HDG G185 FINISH AND BE MANUFACTURED BY "SIMPSON STRONG-TIE CO., INC." (OR APPROVED EQUAL), AND SHALL HAVE A VALID ICC NUMBER ON THE PRODUCT. ANY DEVIATION FROM THE APPROVED PRODUCTS MUST BE APPROVED BY THE BUILDING DEPARTMENT. NOT BY THE FIELD INSPECTOR.
6. ALL HARDWARE SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. BLIND NAILING SHALL NOT BE ACCEPTABLE AND WILL BE REJECTED.
7. WHERE MECHANICAL OR ADHESIVE ANCHORS/DOWELS ARE INDICATED ON DRAWINGS:
   A) MECHANICAL ANCHORS SHALL BE HILTI KWIK BOLT KB-TZ AND BE INSTALLED IN ACCORDANCE WITH ICC ESR-1917
   B) ADHESIVE ANCHORS SHALL BE HILTI "HIT-HY 200 MAX-SD" ADHESIVE INSTALLED IN ACCORDANCE WITH ICC ESR-3187 OR SIMPSON STRONG-TIE "SET-XP EPOXY" ADHESIVE INSTALLED IN ACCORDANCE WITH ICC ESR-2508.
   C) HOLES SHALL BE DRILLED WITH NON-REBAR-CUTTING DRILL BITS.
   D) CONTINUOUS INSPECTION IS REQUIRED FOR THE INSTALLATION OF THE ALL ANCHORS/DOWELS BY A REGISTERED SPECIAL INSPECTOR APPROVED BY THE BUILDING DEPARTMENT. THE INSPECTOR SHALL VERIFY THE INSTALLATION OF ANCHORS/DOWELS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS INCLUDING CLEANLINESS OF DRILL HOLES AND PROPER EMBEDMENT.
   E) UNLESS NOTED OTHERWISE ON THE DRAWINGS, USE MINIMUM ⅝" DIAMETER AT 24" ON CENTER WITH A MINIMUM OF 5" EMBEDMENT.

SPECIAL INSPECTIONS NOTE

1. PERIODIC NON-CONTINUOUS SPECIAL INSPECTION BY A CITY CERTIFIED DEPUTY INSPECTOR IS REQUIRED FOR THE INSTALLATION OF PRE-STRESSED CONCRETE PILES.
2. SPECIAL INSPECTIONS SHALL BE DONE BY ONE OR MORE REGISTERED DEPUTY (SPECIAL) INSPECTORS, APPROVED BY THE BUILDING DEPARTMENT ONLY. HIRED AND PAID FOR BY THE OWNER.
3. SITE VISITS CONDUCTED BY THE ENGINEER ARE MERELY FOR OBSERVATION PURPOSE ONLY AND DO NOT CONSTITUTE AN INSPECTION.
4. AS A MINIMUM, THE INSPECTOR SHALL VERIFY PRIOR TO INSTALLATION PILE SIZE AND LENGTH, AND INSPECT PILE FOR DAMAGE. UPON PILE INSTALLATION THE INSPECTOR SHALL VERIFY PILE CUT-OFF ELEVATION AND VERTICALITY. A COPY OF THE INSPECTOR'S REPORT SHALL BE SUBMITTED TO THE CITY & THE ENGINEER OF RECORD.
5. PERIODIC NON-CONTINUOUS SPECIAL INSPECTION SHALL BE PROVIDED FOR THE INSTALLATION OF FLOATING DOCKS. THE INSPECTOR SHALL VERIFY COMPLIANCE WITH THE PERMITTED SET OF CONSTRUCTION DOCUMENTS AND THE APPLICABLE CITY STANDARDS, INCLUDING DOCK MATERIALS AND QUALITY OF ASSEMBLY OF THE FINAL DOCK.

FLOAT DRUMS NOTE

ALL FLOAT DRUMS SPECIFIED ON THE DRAWINGS SHALL BE RIGID BLOCK OF EXPANDED POLYSTYRENE (EPS) CORES SUPERFLOAT FLOAT DRUMS MANUFACTURED BY ACE ROTOMOLD AND SUPPLIED BY HENDERSON MARINE SUPPLY, INC. OR EQUIVALENT.

ABBREVIATIONS

A.B.	ANCHOR BOLT
A.C.	ASPHALT CONCRETE
A/C	AIR CONDITIONING
A.C.P.	ASPHALT CONCRETE PAVING
ADDL	ADDITIONAL
A.F.F.	ABOVE FINISH FLOOR
ALUM	ALUMINUM
ALT	ALTERNATE
ANOD	ANODIZED
ARCHT	ARCHITECTURAL
B.B.	BOTTOM OF BEAM
BET	BETWEEN
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
B.N.	BOUNDARY NAILING
BOT	BOTTOM
B.W.	BOTTOM OF WALL
C	CHANNEL
CANT	CANTILEVER
C.G.	CENTER OF GRAVITY
C.J.	CONSTRUCTION JOINT OR CEILING JOIST
CL	CENTER LINE
CLG	CEILING
CLR	CLEAR
C.M.U.	CONCRETE MASONRY UNIT
COL	COLUMN
COMPO	COMPOSITION
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUOUS
CONST	CONSTRUCTION
CORR	CORRIDOR
CTR	CENTER
DBL	DOUBLE
DET	DETAIL
DF	DOUGLAS FIR
D.F.	DRINKING FOUNTAIN
DIAG	DIAGONAL
DIAPH	DIAPHRAGM
DIA	DIAMETER
DIM	DIMENSION
DN	DOWN
DP	DEEP
D.S.	DOWNSPOUT
DWGS	DRAWINGS
(E)	EXISTING
EA	EACH
E.F.	EACH FACE
ELEC	ELECTRICAL
ELEV	ELEVATION
EMBED	EMBEDMENT, EMBEDDED
E.N.	EDGE NAILING
EQ	EQUAL
E.S.	EACH SIDE
E.W.	EACH WAY
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
F.D.	FLOOR DRAIN
FDN	FOUNDATION
F.F.	FINISH FLOOR
F.G.	FINISH GRADE
FIN	FINISH
F.J.	FLOOR JOIST
FLG	FLANGE
FLR	FLOOR
F.O.C.	FACE OF CONCRETE
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF STUD
F.N.	FIELD NAILING
F.S.	FAR SIDE
FT	FEET OR FOOT
FTG	FOOTING
GALV	GALVANIZED
GA	GAUGE
G.I.	GALVANIZED IRON
GLB	GLU-LAM BEAM
GLP	GLU-LAM PURLIN
GYP BD	GYPSUM BOARD
HDR	HEADER
HGR	HANGER
HK	HOOK
HORIZ	HORIZONTAL
H.P.	HIGH POINT
HT	HEIGHT
H.S.	HIGH STRENGTH
HVAC	HEATING/VENTILATING & AIR CONDITIONING
IN	INCH
INFO	INFORMATION
INT	INTERIOR
J.B.	JOIST BEARING
J.G.	JOIST GIRDER
JST	JOIST
JT	JOINT
K.S.	KNOCK OUT
L	ANGLE
LAT	LATERAL
LDR	LEDGER
LG	LONG
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LONGIT	LONGITUDINAL
L.P.	LOW POINT
LT	LIGHT
MATL	MATERIAL
MAX	MAXIMUM
M.S.	MACHINE BOLT
MATL	MATERIAL
MAX	MAXIMUM
M.B.	MACHINE BOLT
MECH	MECHANICAL
MEZZ	MEZZANINE
MFD	MANUFACTURED
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
M.F.O.	METAL FRAMED OPENING
MLM	MICROLLAM BEAM
M.P.H.	MILES PER HOUR
MTL	METAL
(N)	NEW
N.I.C.	NOT IN CONTRACT
NO.	NUMBER
N.S.	NELSON STUD OR NEAR SIDE
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
OFF	OFFICE
OPNG	OPENING
OPP HD	OPPOSITE HAND
O.S.F.	OUTSIDE FACE
P.C.	PIPE COLUMN
PEN	PENETRATION
PL	PLATE OR PROPERTY LINE
PLAS	PLASTER
PLYWD	PLYWOOD
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
P.T.	PRESERVATIVE TREATED
R.D.	ROOF DRAIN
REBAR	REINFORCING BAR
R.B.	ROOF BEAM
REQD	REQUIRED
REINF	REINFORCING
REF	REFERENCE
REV	REVISION
R.J.	ROOF JOIST
RM	ROOM
R.O.	ROUGH OPENING
SCH	SCHEDULE
SECT	SECTION
SHTG	SHEATHING
SHT	SHEET
SIM	SIMILAR
S.J.	SAWCUT JOINT
S.P.	SPLICE POINT
SPA	SPACING
SPECS	SPECIFICATIONS
SQ	SQUARE
STAGG	STAGGERED
STD	STANDARD
STIFF	STIFFENER
STL	STEEL
S.S.	SELECT STRUCTURAL OR STAINLESS STEEL
STRUCT	STRUCTURAL
SYM	SYMETRICAL
T & B	TOP & BOTTOM
T & G	TONGUE & GROVE
TEMP	TEMPERED
T.F.	TOP OF FOOTING
T.B.	TOP OF BEAM
TG	TAPERED GIRDER
T.G.	TOP OF GIRDER
THK	THICK
THRU	THROUGH
T.L.	TOP OF LEDGER
T.N.	TOP OF NAILER
T.O.	TOP OF
T.O.P.	TOP OF PARAPET/PANEL
T.O.S	TOP OF STEEL
TOT	TOTAL
TRANSF	TRANSFER
TRANSV	TRANSVERSE
TS	TUBE STEEL
T.S.	TOP OF SLAB
T.W.	TOP OF WALL
TYP	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
VERT	VERTICAL
V.I.F.	VERIFY IN FIELD
W/	WITH
WD	WOOD
W	WIDE FLANGE
W/O	WITHOUT
W.P.	WORK POINT
W.R.	WATER RESISTANT
WT	WEIGHT
W.W.F.	WELDED WIRE FABRIC
X	EXTRA STRONG
XX	DOUBLE EXTRA STRONG

SYMBOLS

@	AT
℄	CENTER LINE
⌀	DIAMETER
ℙ	PLATE OR PROPERTY LINE
$	STEP IN FOOTING

THE MAXIMUM TIME TO COMPLETE CONSTRUCTION ON A PROJECT IS LIMITED TO THREE YEARS FROM THE DATE OF THE PERMIT FOR ALL PERMITS ISSUED AFTER AUGUST 21, 2016 AS REQUIRED BY NBMC SECTION 15.02.05.

ISSUANCE OF A BUILDING PERMIT BY THE CITY OF NEWPORT BEACH DOES NOT RELIEVE APPLICANTS OF THE LEGAL REQUIREMENTS TO OBSERVE COVENANTS, CONDITIONS AND RESTRICTIONS WHICH MAY BE RECORDED AGAINST THE PROPERTY OR TO OBTAIN PLANS. YOU SHOULD CONTACT YOUR COMMUNITY ASSOCIATION PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION AUTHORIZED BY THIS PERMIT.

PRIOR TO PERFORMING ANY WORK IN THE CITY RIGHT-OF-WAY AN ENCROACHMENT PERMIT MUST BE OBTAINED FROM THE PUBLIC WORKS DEPARTMENT.

VICINITY MAP

SCOPE OF WORK:

1. TO REPLACE EXISTING FLOATING DOCK WITH A NEW FLOATING DOCK AS SHOWN ON S-2.
2. TO REPLACE EXISTING PIER DECKING WITH NEW PIER DECKING AS SHOWN ON S-4.
3. TO REPLACE ALL EXISTING CONCRETE PILES WITH NEW STEEL PIPES AS SHOWN ON S-3.
4. TO REPLACE EXISTING GANGWAY DECKING WITH NEW GANGWAY DECKING AS SHOWN ON S-4.

NOTE TO THE BIDDERS:

AFTER THOROUGHLY EXAMINING THE CONSTRUCTION DOCUMENTS AND THE SITE:

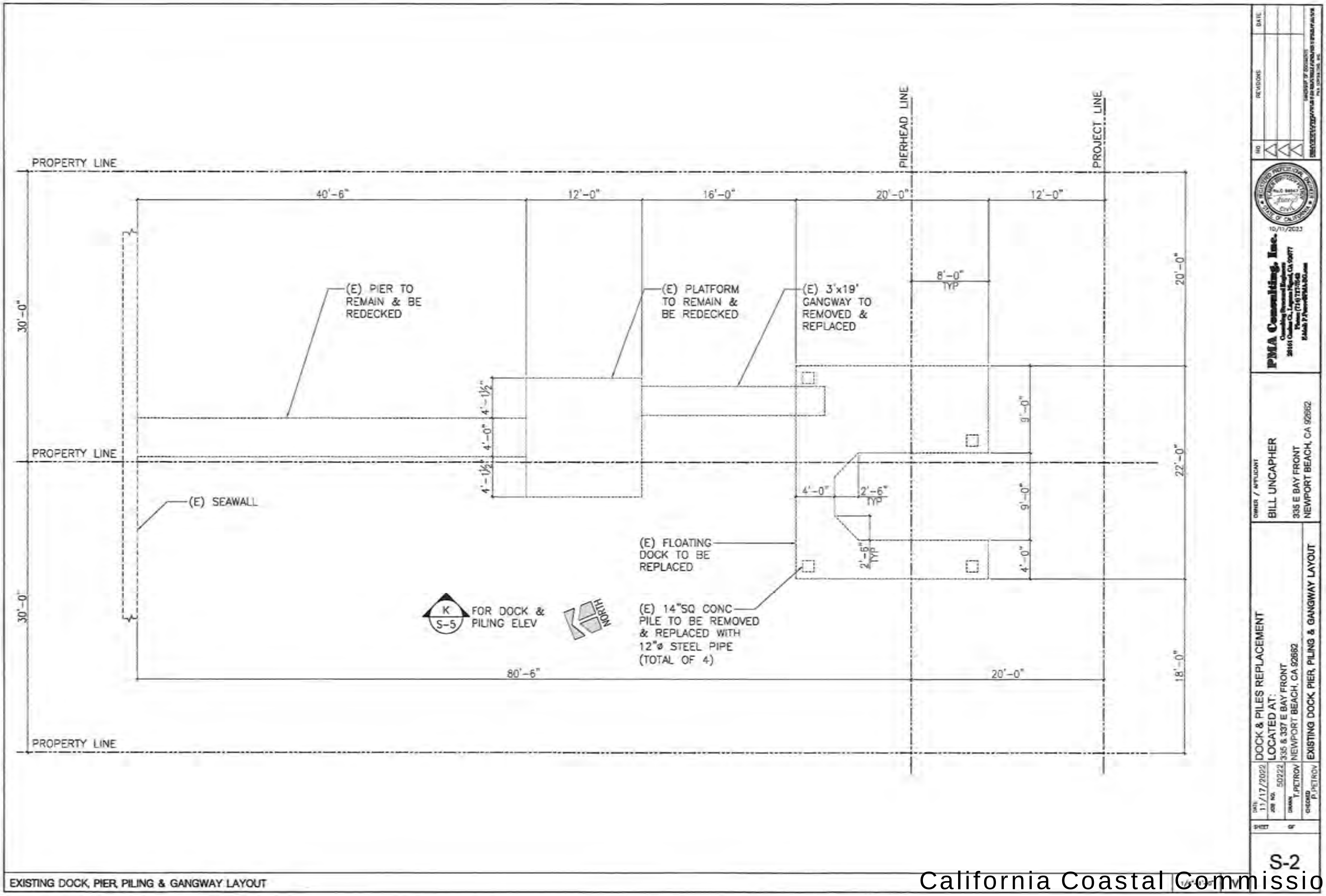
1. NOTIFY THE ARCHITECT AND/OR THE ENGINEER IN WRITING, REGARDING ALL DISCREPANCIES REQUIRING CLARIFICATION, PRIOR TO THE "BID SUBMITTAL".
2. IF THE ARCHITECT AND/OR THE ENGINEER IS NOT NOTIFIED, AS REQUIRED PER ITEM #1 ABOVE, IT SHALL MEAN THAT THE CONTRACTOR HAS CONSIDERED ADEQUATE CONTINGENCY IN HIS BID TO COVER ALL COSTS TO COMPLY WITH THE MOST STRINGENT CONDITIONS.
3. THE CONTRACTOR SHALL NOT BE ENTITLED TO ANY ADDITIONAL COMPENSATION FOR ANY DISCREPANCY DISCOVERED DURING THE COURSE OF THE WORK.

NO	REVISIONS / DATE
PMA Consulting, Inc. Consulting Structural Engineers	10/11/2023
OWNER / APPLICANT	BILL UNCAPHER, 335 E BAY FRONT, NEWPORT BEACH, CA 92662
DATE	11/17/2022
JOB NO.	50222
DRAWN	T.PETROV
CHECKED	P.PETROV
SHEET	S-1

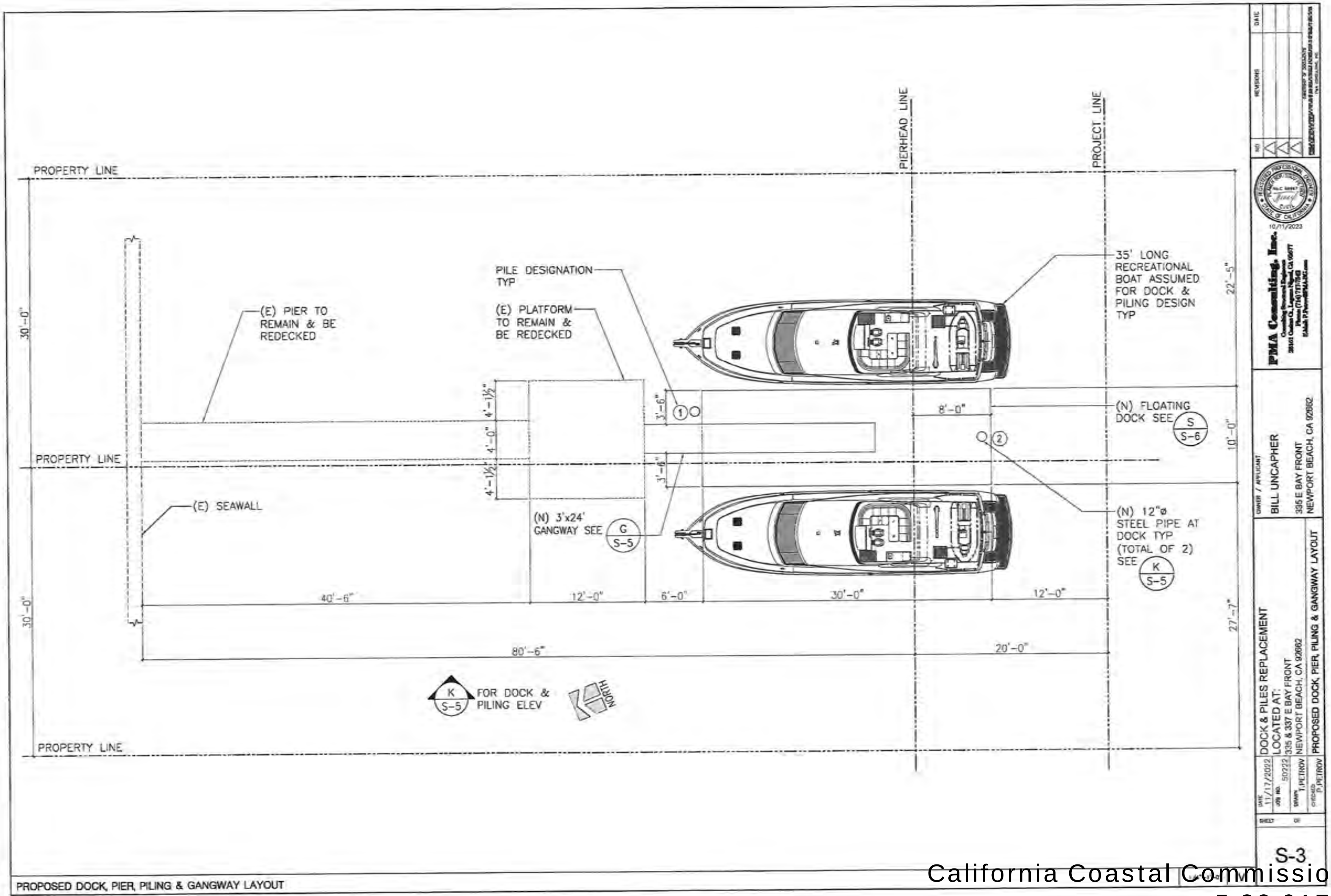
DOCK & PILES REPLACEMENT LOCATED AT: 335 & 337 E BAY FRONT NEWPORT BEACH, CA 92662

STRUCTURAL GENERAL NOTES & VICINITY MAP

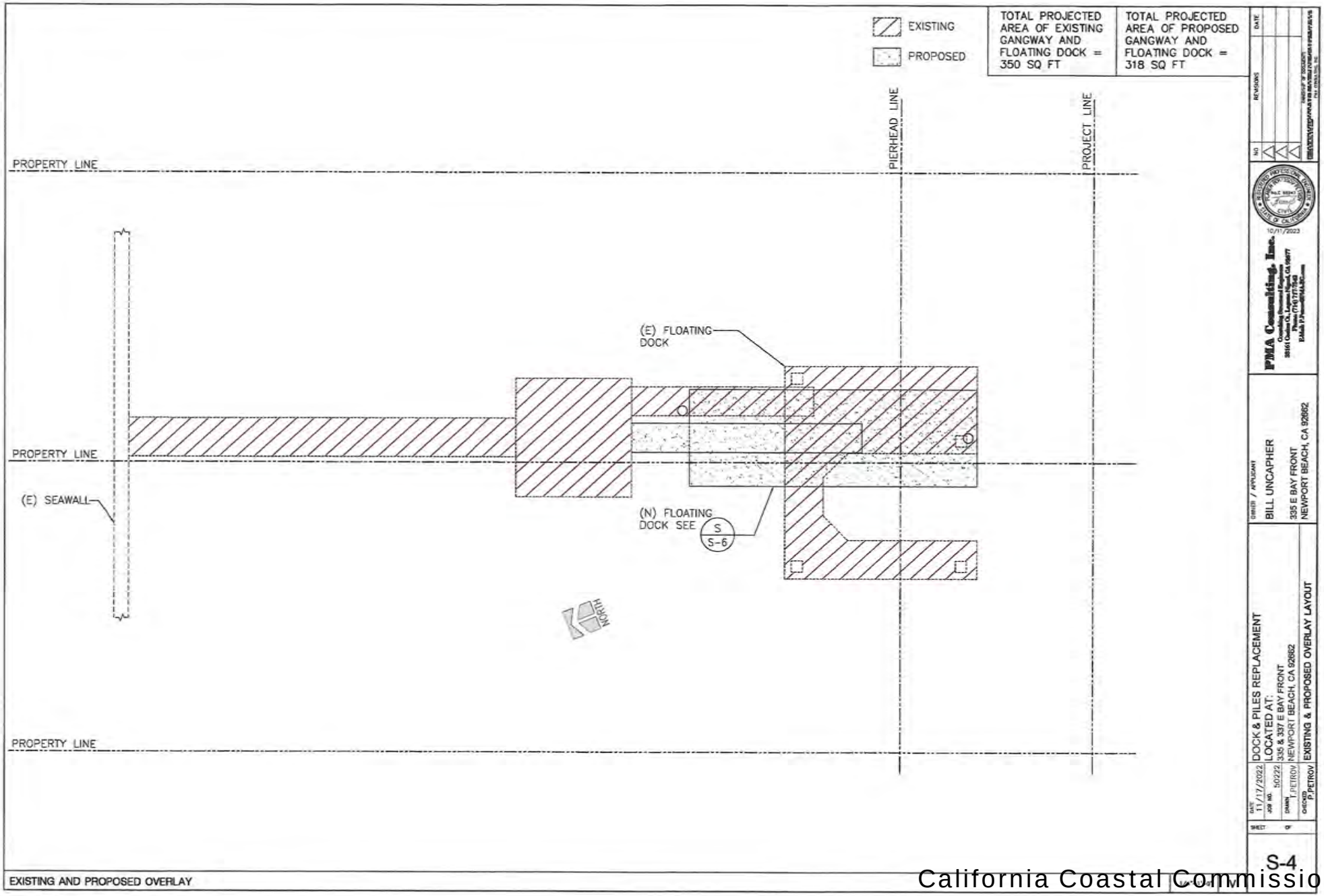
S-1

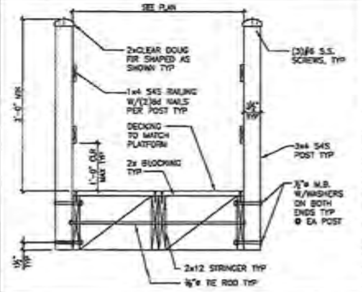

PROPERTY LINE
PIERHEAD LINE
PROJECT LINE
40'-6"
12'-0"
16'-0"
20'-0"
12'-0"
30'-0"
20'-0"
8'-0" TYP
(E) PIER TO REMAIN & BE REDECKED
(E) PLATFORM TO REMAIN & BE REDECKED
(E) 3'x19' GANGWAY TO REMOVED & REPLACED
4'-1½"
4'-0"
4'-0"
4'-1½"
9'-0"
PROPERTY LINE
22'-0"
4'-0"
2'-6" TYP
(E) SEAWALL
9'-0"
(E) FLOATING DOCK TO BE REPLACED
2'-6" TYP
4'-0"
K
S-5
FOR DOCK & PILING ELEV
NORTH
(E) 14"SQ CONC PILE TO BE REMOVED & REPLACED WITH 12"ø STEEL PIPE (TOTAL OF 4)
30'-0"
80'-6"
20'-0"
18'-0"
PROPERTY LINE
EXISTING DOCK, PIER, PILING & GANGWAY LAYOUT
NO
REVISIONS
DATE
10/11/2023
PMA Consulting, Inc.
OWNER / APPLICANT
BILL UNCAPHER
335 E BAY FRONT
NEWPORT BEACH, CA 92662
DOCK & PILES REPLACEMENT
LOCATED AT:
335 & 337 E BAY FRONT
NEWPORT BEACH, CA 92662
EXISTING DOCK, PIER, PILING & GANGWAY LAYOUT
DATE 11/17/2022
JOB NO. 50222
DRAWN T.PETROV
CHECKED P.PETROV
SHEET
OF
S-2

California Coastal Commission
5-23-0178
Exhibit 2
Page 2 of 6

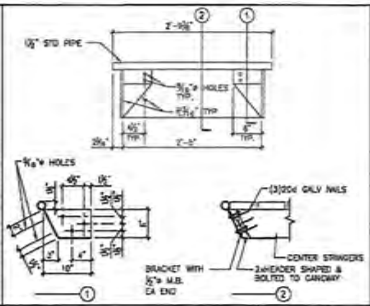

PROPERTY LINE
PIERHEAD LINE
PROJECT LINE
PILE DESIGNATION TYP
(E) PIER TO REMAIN & BE REDECKED
(E) PLATFORM TO REMAIN & BE REDECKED
35' LONG RECREATIONAL BOAT ASSUMED FOR DOCK & PILING DESIGN TYP
(N) FLOATING DOCK SEE S S-6
(N) 12"ø STEEL PIPE AT DOCK TYP (TOTAL OF 2) SEE K S-5
(E) SEAWALL
(N) 3'x24' GANGWAY SEE G S-5
30'-0"
22'-5"
10'-0"
27'-7"
4'-1½"
4'-0"
3'-6"
8'-0"
40'-6"
12'-0"
6'-0"
30'-0"
12'-0"
80'-6"
20'-0"
K S-5 FOR DOCK & PILING ELEV
NORTH
PMA Consulting, Inc.
10/11/2023
BILL UNCAPHER
335 E BAY FRONT
NEWPORT BEACH, CA 92662
DOCK & PILES REPLACEMENT
LOCATED AT:
335 & 337 E BAY FRONT
NEWPORT BEACH, CA 92662
PROPOSED DOCK, PIER, PILING & GANGWAY LAYOUT
11/17/2022
50222
T.PETROV
P.PETROV
S-3
PROPOSED DOCK, PIER, PILING & GANGWAY LAYOUT

California Coastal Commission
5-23-0178
Exhibit 2

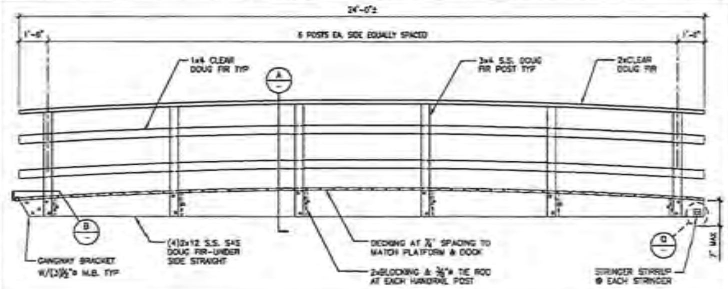

EXISTING
PROPOSED
TOTAL PROJECTED AREA OF EXISTING GANGWAY AND FLOATING DOCK = 350 SQ FT
TOTAL PROJECTED AREA OF PROPOSED GANGWAY AND FLOATING DOCK = 318 SQ FT
PIERHEAD LINE
PROJECT LINE
PROPERTY LINE
PROPERTY LINE
PROPERTY LINE
(E) FLOATING DOCK
(E) SEAWALL
(N) FLOATING DOCK SEE S S-6
NORTH
EXISTING AND PROPOSED OVERLAY
DOCK & PILES REPLACEMENT
LOCATED AT:
335 & 337 E BAY FRONT
NEWPORT BEACH, CA 92662
EXISTING & PROPOSED OVERLAY LAYOUT
BILL UNCAPHER
335 E BAY FRONT
NEWPORT BEACH, CA 92662
PMA Consulting, Inc.
11/17/2022
50222
T.PETROV
P.PETROV
S-4



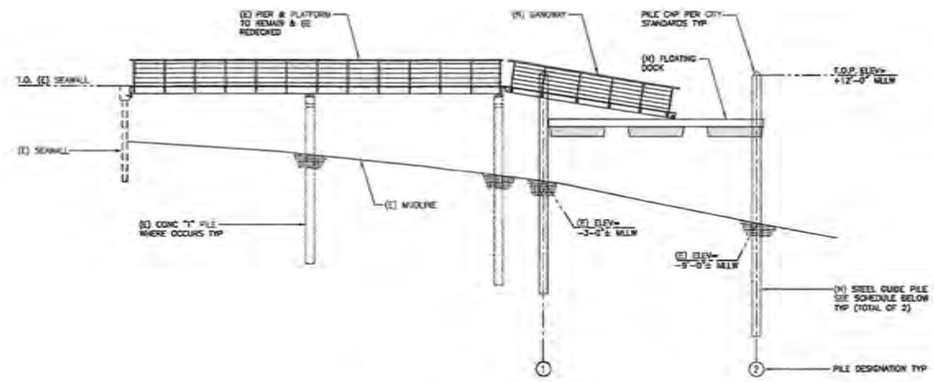
GANGWAY SECTION N.T.S. A



GANGWAY BRACKET N.T.S. B



GANGWAY ELEVATION N.T.S. ⅛" = 1'-0" G



STEEL PILE SCHEDULE						
PILE NO.	STEEL PILE SIZE	GRADE OF MATERIAL	MIN Fy (KSI)	PILE EMBED INTO DREDGE LINE D min (ft)	PILE LENGTH L MIN (FT)	PILE DESIGN LOAD (kips)
①	12.00x0.500	API 5L X42	42	15	36	5.1
②	12.00x0.500	API 5L X42	42	15	36	3.7

NOTE: VERIFY ALL ELEVATIONS WITH RESPECT TO M.L.L.W.

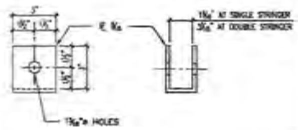
DOCK, PIER, PILING & GANGWAY ELEVATION 1/8"=1'-0" K

L

M

N

P



STRINGER STIRRUP N.T.S. Q

R

S

T

PMA Consulting, Inc.

OWNER / APPLICANT: BILL UNCAPHER
335 E BAY FRONT
NEWPORT BEACH, CA 92662

DOCK & PILES REPLACEMENT
LOCATED AT:
335 & 337 E BAY FRONT
NEWPORT BEACH, CA 92662

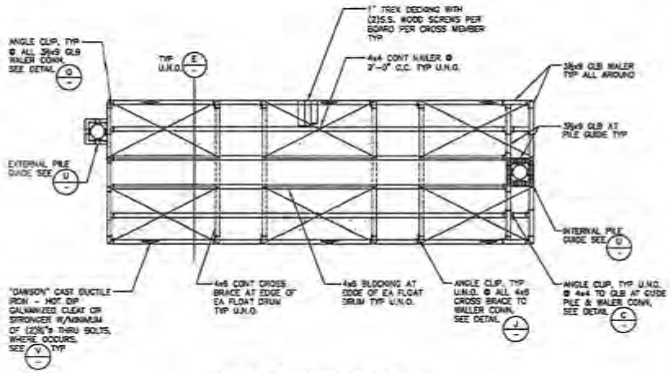
DETAILS

DATE 11/17/2022
JOB NO. 50222
DRAWN T.PETROV
CHECKED P.PETROV

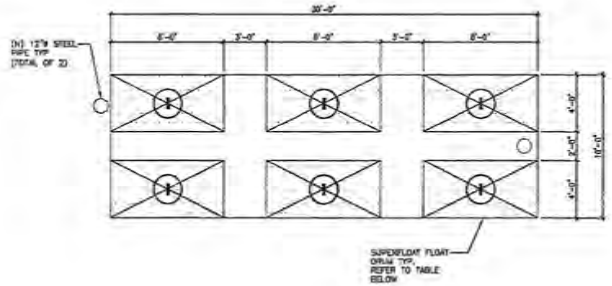
10/11/2023

S-5

California Coastal Commission
5-23-0178
Exhibit 2
Page 5 of 6



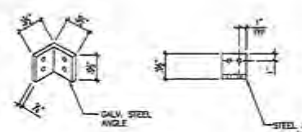
DOCK FRAMING PLAN



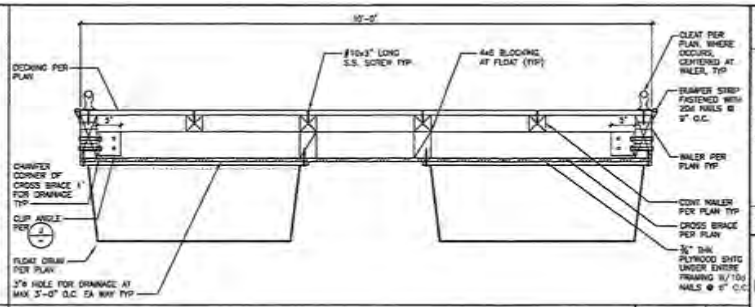
FLOAT DRUMS PLAN

FLOAT DRUM SCHEDULE			
FLOAT DRUM TYPE	WIDTH	LENGTH	DEPTH
①	48"	96"	15"

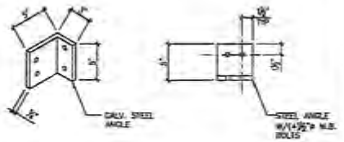
FLOAT DRUMS PLAN & DOCK FRAMING PLAN | 1/4"=1'-0" | S



CLIP ANGLE DETAIL | N.T.S. | C



SECTION AT FLOAT DRUM | N.T.S. | E



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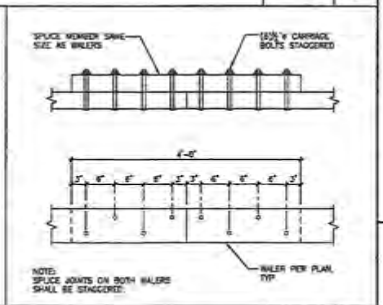
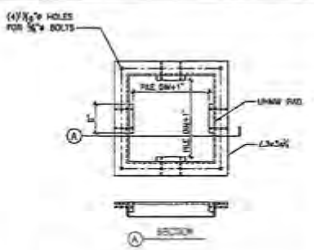
CLIP ANGLE DETAIL | N.T.S. | J



TYPICAL SPLICE DETAIL | N.T.S. | K



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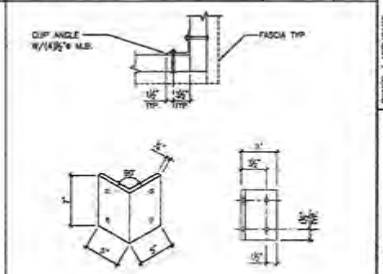
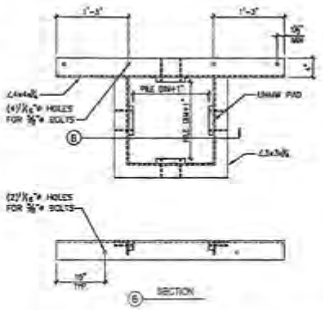
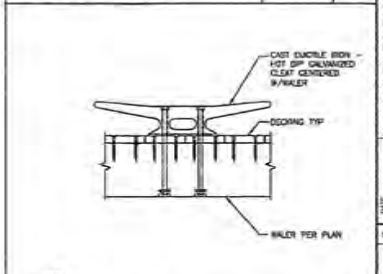


CLIP ANGLE DETAIL | N.T.S. | Q



T

PILE GUIDES DETAIL | N.T.S. | U



CLEAT DETAIL | N.T.S. | V

10/11/2023

PMA Consulting, Inc.
Coastal & Structural Engineers
30161 Calle C., Laguna Niguel, CA 92677
Phone: (949) 715-1820
FAX: (949) 715-1821

OWNER / APPLICANT
BILL UNCAPHER
335 E BAY FRONT
NEWPORT BEACH, CA 92662

DOCK & PILES REPLACEMENT
LOCATED AT:
335 & 337 E BAY FRONT
NEWPORT BEACH, CA 92662

DOCK PLANS & DETAILS

DATE 11/17/2022
JOB NO. 5022
DRAWN T.PETROV
CHECKED P.PETROV
SHEET OF

S-6

CPS CONSULTING
Coastal Permit Specialist
4010 Channel Place
Newport Beach, California, 92663
949-274-2545

Subject: Subject: Eelgrass Mitigation and Monitoring Plan
335 & 337 E. Bay Front, Newport Beach, CA

Eelgrass (zostera marina) was observed at this location.

The proposed project for this location requires the removal and replacement of the the existing U-shaped floating dock and 4 guide piles and to replace them with an I-shaped dock and 2 guide piles. Since construction of this project would result in placement of structures or consist of work in or affecting a navigable water of the U.S., a Department of the Army permit is required pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403). Because of this, an Eelgrass Monitoring Plan is required as per the California Eelgrass Mitigation Policy (CEMP, NOAA 2014). This policy has been set in place to protect marine habitats and sea grass beds that play a role in the life cycle chain for marine life to reproduce. This survey assists development projects by contractors like you to conduct activities in conjunction with best management practices (BMPs) concerning impact and management for promoting eelgrass and controlling the spread of Caulerpa. Responsible development by contractors like you helps protect these sensitive marine ecosystems, which in turn, protect our ocean resources.

Mitigation & Monitoring Plan

Bill Uncapher & Jason Bartusick
335 & 337 E. Bay Front
Newport Beach, CA
October 16, 2023

Prepared for:

SWIFT SLIP DOCK AND PIER BUILDERS, INC.
Westminster, CA

Prepared by:

SOLUTIONS PROVIDED INC.
Carson City, NV

Table of Contents

Figures

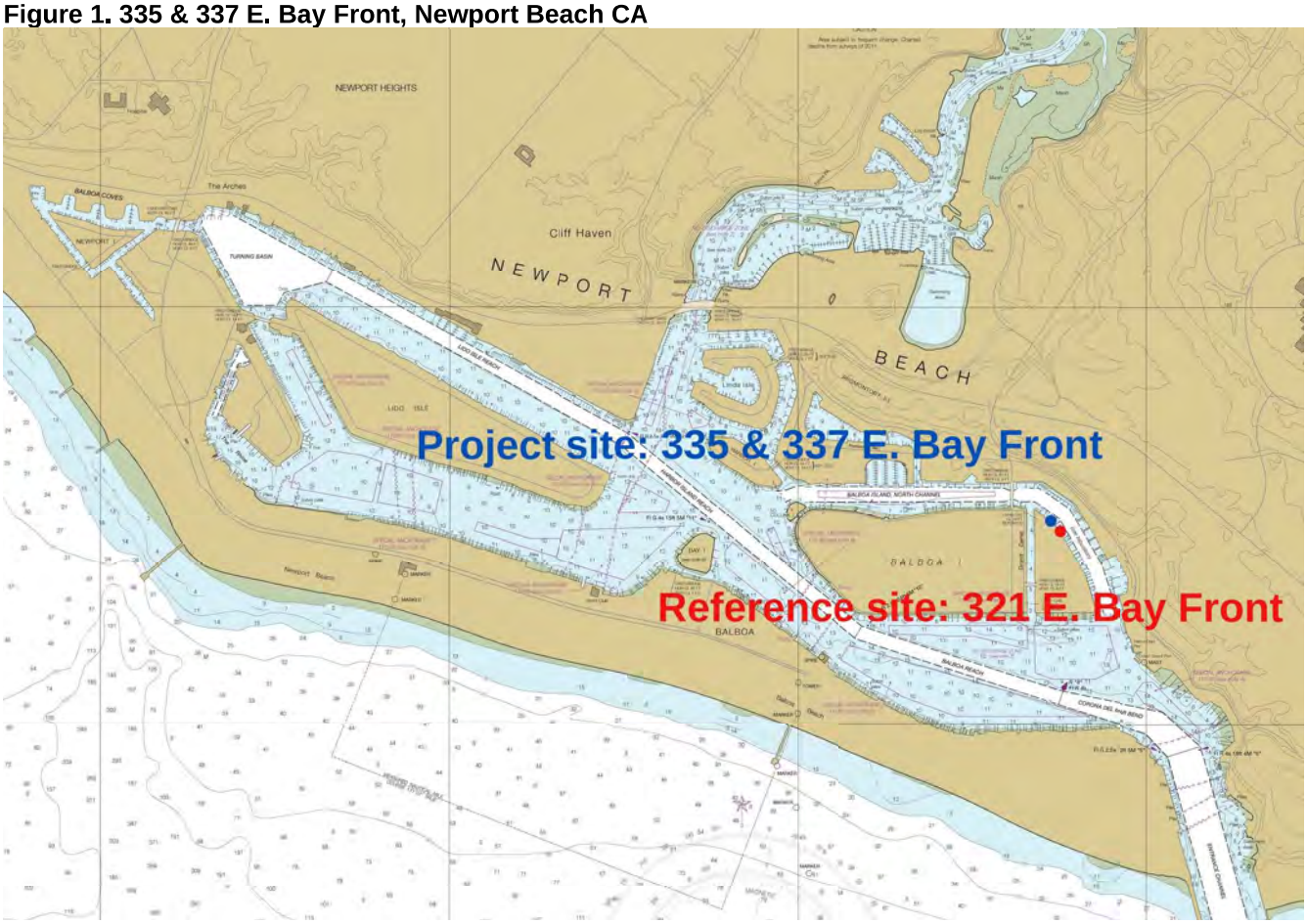
1. PROJECT DESCRIPTION

1.1 Location:

335 & 337 E. Bay Front, Newport Beach (Orange County), See Figure 1.

Action: Remove the existing U-shaped floating dock and 4 guide piles and to replace them with an I-shaped dock and 2 guide piles. See Figure 3.

Figure 1. 335 & 337 E. Bay Front, Newport Beach CA



1.2 Project:

The homeowners at 335 & 337 E. Bay Front propose to remove and replace the two existing dock systems (piers, gangways, floating docks, and piles) with a new singular dock system This will impact the existing eelgrass located at the project site. See Figures 2 & 3.

Figure 2. Eelgrass Survey Results of Project Site 08/27/22

Figure 3. Eelgrass at Project Site with Proposed Overlay

Figure 4. Eelgrass Survey Results of Reference Site 08/27/22

1.3 Historical Review:

On August 27, 2022, two divers (equipped with SCUBA and video gear) conducted an underwater eelgrass mapping survey of 335 & 337 E. Bay Front, Newport Beach (Figure 2). The divers use underwater video equipment to assist with data collection. Divers analyze the recorded footage to help determine eelgrass location and density. Density is determined by using a 1-foot-square, white, 1⁄2-inch pvc plumbers' pipe and line laid on top of a vegetated area and counting the turions located within the 1-foot square. The turions are counted within the 1-foot square and is considered a quadrat. Quadrats are sampled randomly along transects within the vegetated cover. The number given is then divided by .09290304 to convert the data from square feet to square meters, thus giving us the ability to determine mean (sum of the given turnion density values/the number of the given quadrats) turion density along with the standard deviation (square root of the average of the squared differences for each of the given turion densities from the mean).

The survey area includes approximately 585 square meters (Figure 2). The survey focused on the area of the project site and included any eelgrass patches within the project site that extended past the project area. Five-foot-wide transects (10) were swam perpendicular to the seawall. The divers swam these transects back and forth from the seawall to approximately 15 feet past the pier head line including where impacts could occur.

The conditions at the start of the survey included overcast skies, wind speeds of 4-5 knots from the southeast, a water temperature of 72° F, and an outdoor temperature of 75° F.

Field data collected and analyzed includes the spatial distribution (5m of continuous unvegetated area contiguous with the vegetated eelgrass cover), percent of vegetated eelgrass cover (the vegetated eelgrass cover divided by the total areal extent), the total areal extent (total area of the spatial distribution with the vegetated eelgrass cover), number of random quadrats used to measure turion density, and the mean density of eelgrass in the survey area along with the according standard deviation. "To encompass fluctuating eelgrass

distribution and functional influence around eelgrass cover, for the purposes of this policy and guidelines, eelgrass habitat is defined as areas of vegetated eelgrass cover (any eelgrass within 1 m^2 quadrat and within 1 m of another shoot) bounded by a 5 m wide perimeter of un-vegetated area (NOAA 2014)."

Reference for mapping eelgrass in the project site will be done using a smartphone + COMPASS APP to obtain a series of Latitude and Longitude points. This makes possible to create a KMZ file with Google Earth. These coordinates are also used in Google Earth and Google Maps to locate points that would outline eelgrass patch. Plotting eelgrass points via KMZ files, will allow the percentage of change in eelgrass vegetated cover to be calculated by comparing each yearly report to that of the previous year. The information on distribution of eelgrass will be digitally plotted, to scale, using LibreCAD® software.

The total areal extent for Figure 2 is 736.8 sqm. The areal extent of vegetated eelgrass cover is 197.7 sqm giving the total aeral extent 26.8% of vegetated eelgrass cover. The mean turion density for this cover is 64 with a standard deviation of 43.

The total aerial extent (vegetated habitat and 5m of unvegetated habitat) for Figure 4 is 852.6 sqm. The aerial extent of vegetated cover is 225.6 sqm giving the total aerial extent 26.5% of vegetated cover. The mean turion density for this cover is 64 with a standard deviation of 43.

According to these findings, the proposed project will impact approximately 54 square feet of eelgrass located within the project site.

Figure 5. Eelgrass Mitigation Ratio Table

Impact area	Mitigation Ratio Start	Mitigation Area Start	Mitigation Ratio Final	Mitigation Area Final
54 sqft	1.59:1	86 sqft	1.38:1	74.5 sqft

Figure 6. Proposed Eelgrass Harvest and Transplant Sites

1.4 In-Kind Mitigation:

"If NMFS (National Marine Fisheries Service concurs and In-kind mitigation is approved for this project site it is noted that CEMP, Implementing guidelines for California, (F). In-Kind Mitigation for Impacts to Eelgrass items 1 through 8 can be met and briefly described below". [1]

Donor material (as noted in CEMP), or eelgrass from the existing vegetated eelgrass cover, would be used for harvesting. Harvest sites include those areas within the project site that are currently considered vegetated eelgrass cover and which will be impacted by the proposed action. Donor material may also harvested from the surrounding vegetated cover not being impacted by the proposed action. These areas are identified in Section 2.2.

Transplant sites include those areas considered potential eelgrass habitat and which are part of total aerial extent of the project site. These proposed transplant sites have potential for a high rate of success since with the existing eelgrass patches/beds. Using these proposed transplant sites could connect the eelgrass patches/beds together and/or extend the reach of the current vegetated cover.

Harvesting and transplanting would occur over a 1 day period. It is recommended to start mitigation within 30 days of project completion and before the beginning of the low growth season. The technique for harvesting and transplanting eelgrass is depicted in Figures 8 & 9 and detailed in 2.6 Mitigation Technique.

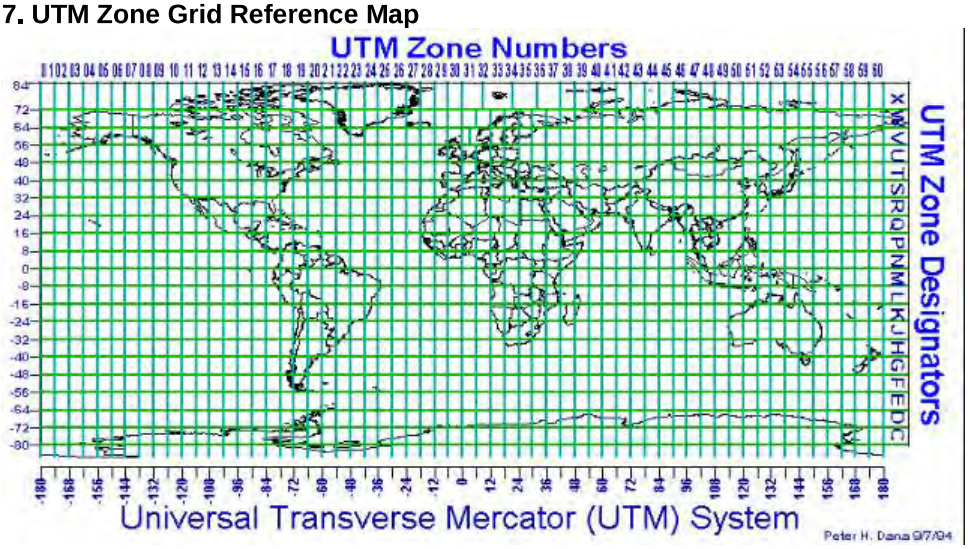
Milestones to success are outlined in Eelgrass Transplant Monitoring Report shown with Section 2.7. These milestones are measured over 5 years and within 30 days of the previous year.

EFH (Essential Fish Habitat) consultation and recommendations may also apply if milestones are not met. NMFS or other agencies may request and participate in solutions if milestones are not met. See Appendix A.

2. MITIGATION

2.1 Measurement Points using UTM Zone Coordinates:

Figure 7. UTM Zone Grid Reference Map



2.2 Eelgrass Harvest Site Areas:

Harvest Site 1

Decimal Degrees Latitude Longitude	Degrees, Minutes, Seconds Latitude Longitude	Standard UTM, NAD 83, Zone 11 Easting Northing
33.608365 -117.888003	33º 36’ 30.1140” N -117º 53’ 16.8108” W	417619 3719087

Proposed Alternative Donor Bed 1

Decimal Degrees Latitude Longitude	Degrees, Minutes, Seconds Latitude Longitude	Standard UTM, NAD 83, Zone 11 Easting Northing
33.608403 -117.888041	33º 36’ 30.2508” N -117º 53’ 16.9476” W	417616 3719091

Proposed Alternative Donor Bed 2

Decimal Degrees Latitude Longitude	Degrees, Minutes, Seconds Latitude Longitude	Standard UTM, NAD 83, Zone 11 Easting Northing
33.608351 -117.887901	33º 36’ 30.0636” N -117º 53’ 16.4436” W	417629 3719085

2.3 Potential Eelgrass Transplant Site Areas:

Proposed Transplant Site 1

Decimal Degrees Latitude Longitude	Degrees, Minutes, Seconds Latitude Longitude	Standard UTM, NAD 83, Zone 11 Easting Northing
33.608469 -117.887992	33^0 36’ 30.4884” N -117^0 53’ 16.7712” W	417620 3719099

Proposed Transplant Site 2

Decimal Degrees Latitude Longitude	Degrees, Minutes, Seconds Latitude Longitude	Standard UTM, NAD 83, Zone 11 Easting Northing
33.608381 -117.887931	33^0 36’ 30.1716” N -117^0 53’ 16.5516” W	417626 3719089

2.4 Mitigation Site:

The location of the eelgrass mitigation and transplant areas are located underneath and around where the proposed action would take place. Depths are similar to proposed impact area, within 1’-7’ feet. The distances between the harvest sites and the two proposed transplant sites varies from 13’ – 38’. Soil of both the mitigation and transplant sites is composed of sand, silt, and shell fragments The water quality is good with lots of tidal movement and exposure to the main channel of Newport Harbor near the jetty inlet from the sea (see Figure 1). The distance to the open ocean is approximately one kilometer. The current is swift and ranges from slack tide to more than 2 knot during an ebb or flow. The mitigation transplant site area was picked due to its immediate proximity to the proposed construction area and contains the same quality of tides, currents, water quality, soil, depth, and distance from the ocean.

2.5 Mitigation Size:

It was determined by NOAA that a final mitigation ratio of harvested and replanted eelgrass be 1.38:1. To achieve this end result, a starting ratio of 1.59:1 shall be used. With the impacted area equal to 54 sqft, the harvested eelgrass will be transplanted to an area equal to 86 sqft in hopes of ending up with a minimum of 74.5 sqft of new vegetated cover following five years of monitoring.

2.6 Mitigation Technique:

Eelgrass harvested for transplanting will be removed from the affected area and proposed alternative donor beds 1 & 2, Figure 6. Harvested plants would be bundled and planted immediately at ten shoots per bundle, shown in Figures 8 & 9. Preparation would be to isolate bunches of plants (10 shoots per bundle). Each bundle would include terminal shoots, as these shoots are capable of producing runners. The replanting site is close to harvest site so wave, current, tidal changes, water temperature and sunlight penetration is similar.

Bundles are tied together with either an “L” shaped anchor made from wire approximately 20 cm in length or a bamboo stake of similar length. A burlap collar overlayed with a paper twist tie is used to hold bundles together, and the “L” anchor/bamboo stake is attached to bundle underneath collar see Figure 8. Prepared bundles are planted in a grid fashion by divers using a grid design to ensure transplant area had complete coverage and space for root runners to spread out, Figure 9.

Labor requirements would be 1 diver to harvest and replant, and another 1 topside worker to assist with bundle preparation taking approximately 14 work hours total time to harvest, surface and inspect, bundle, and transplant.

Figure 8. Planting Unit (PU), bundle of 10 turions

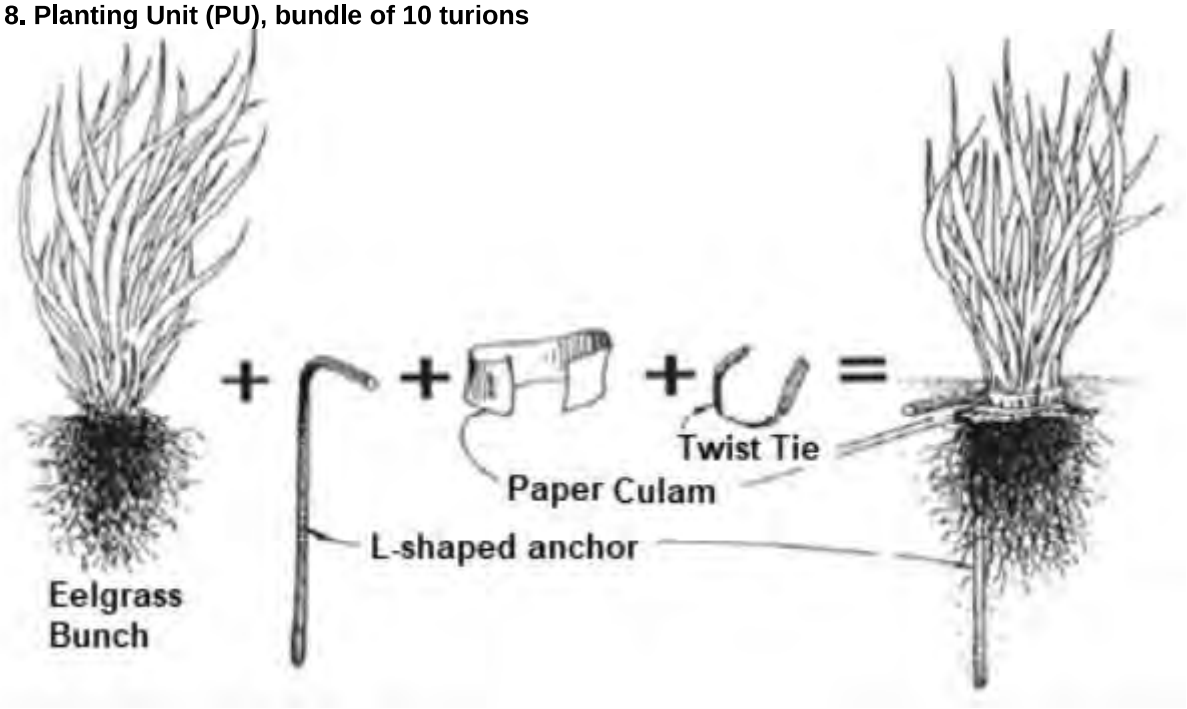


Figure 9. Eelgrass Bundles and Quadrats

Harvest Site 1' x 1' Patch to be transplanted

1 Planting Unit (P.U.) bundled and ready to plant

Location of Transplant Site

P.U. transplanted. Two total were transplanted to conform with 1.2:1 mitigation ratio

2.7 Mitigation Monitoring:

Success of the mitigation is to be monitored for a period of two years. Intervals for eelgrass monitoring surveys are dictated by CEMP [California Eelgrass Mitigation Policy].

Below survey periods are based from the date replanting was conducted.

Survey #	1st Survey	2nd Survey	3rd Survey	4th Survey	5th Survey	6th Survey	7th Survey
Monitoring Interval	Month 0	Month 6	Month 12	Month 24	Month 36	Month 48	Month 60

The monitoring methods used to record and report the changes in the eelgrass density and aerial extent will included seven eelgrass monitoring surveys conducted at the project site (Figure 2) and the reference site (shown in Figure 4). As per CEMP, monitoring should be completed at "an appropriate reference site(s) (Section II.B.4. Reference site selection). Monitoring at a reference site may account for any natural changes or fluctuations in habitat area or density (NOAA 2014)." 321 E. Bay Front will be used as the reference site. This site was chosen due to its similarities in environmental conditions with the project site. A pre-construction eelgrass survey shall be conducted within 60-15 days before the start of construction. A post-construction survey shall be conducted within 30 days following construction if construction ends during the current eelgrass growing season, or—if construction ends outside of the current eelgrass growing season—within the first 30 days of the subsequent eelgrass growing season. The second post-construction survey is 6 months after the first. Any changes in eelgrass habitat revealed by the postconstruction surveys shall be compared to the preconstruction surveys in order to determine the extent of these changes. "Where eelgrass at the impact site declines coincident with and similarly to decline at the reference site(s), the percentage of decline at the reference site

should be deducted from the decline at the impact site. However, if eelgrass expands within the reference site(s), the impact site should only be evaluated against the pre-construction condition of the reference site and not the expanded condition. (NOAA, 2014).” First, the percentage decrease must be calculated for each site: [(Starting percent of vegetated cover-the final percent of vegetated cover)/starting percent of vegetated cover] x 100. The percentage decrease at the reference site is then deducted from the percentage decrease at the project site. Eelgrass monitoring surveys shall be conducted during the normal eelgrass growing season, March through October (NOAA, 2014). The results of the pre-construction survey must be submitted to the CORPS and NMFS at least 15 calendar days prior to the scheduled for work in waters of the United States. The resutls of the pre-construction and annual monitoring surveys shall be submitted by the Permittee to the CORPS and NMFS within 30 calander days of each survey completion date.

2.8 Restrictions to Mitigation Surveys:

Monitoring is conducted during the active vegetative growth period and shall avoid winter months of November through February. For the 6 months surveys flexibility to shorten or extend that time is allowed to avoid the winter months. Mitigation surveys conducted beyond 60 months may be required in those instances where stability of the transplant site is questionable or where other factors may influence long term success of transplanting. Reports for monitoring surveys are due 30 days after mitigation survey was conducted.

2.9 Mitigation Success:

Criteria for success of the transplant area are based on area coverage and density of shoots.

First year: 70% area and 30% density as compared to adjusted project impact area.

Second year: 85% area and 70% density as compared to adjusted project impact area.

Third, Fourth, Fifth year: 100% area and 85% density as compared to adjusted project impact area.

If the required eelgrass transplant area fails to meet any of the established criteria above, then a supplementary transplant area (STA) shall be determined and planted. The size and density will be based on a formula:

$$STA = MTA \times (|At + Dt| - |Ac + Dc|)$$

MTA = mitigation transplant area.
At = transplant deficiency or excess in area of coverage criterion (%).
Dt = transplant deficiency in density criterion (%).
Ac = natural decline in area of control (%).
Dc = natural decline in density of control (%).

“Where development of the eelgrass habitat at the mitigation site falls short of achieving performance milestones during any interim survey, the monitoring period should be extended and supplemental mitigation may be recommended to ensure that adequate mitigation is achieved (NOAA 2014).”

2.10 Mitigation Bank:

After two years if the mitigation site exceeds requirement shall be used as a credit of any “mitigation bank”. Monitoring of any approved mitigation bank shall be conducted on an annual basis until all credits are exhausted by the agency maintaining a “mitigation bank”.

3. DISCUSSION

Eelgrass habitat has been identified as a sensitive marine resource by the California Department of Fish and Game, the National Marine Fisheries Service, and the U.S. Fish and Wildlife Service. Eelgrass beds serve as refuges, foraging areas, and nursery habitats for various coastal and bay invertebrates and fishes.

Factors affecting the establishment and success of eelgrass beds include depth range, substrate type and slope, available light, salinity, and temperature. Eelgrass requires soft silty sediments that comprise a generally flat substrate or with a gentle slope. The substrate type and slope throughout the survey area appears to be suitable. Salinity and temperature appear to be adequate. The amount of available light effects growth, and distribution of eelgrass. Available light is affected by various factors. The orientation of a seawall also affects the amount and duration of available light.. The sun orientation allows for sunlight under existing and future proposed gangways. Light penetration into the water column is affected by water clarity and depth. The light reaching the bottom decreases with increasing depths. Turbidity from factors such as suspended sediments limit light penetration.

Eelgrass exists at the project site (Figure 2). Since construction of this project would result in placement of structures or consist of work in or affecting a navigable water of the U.S., a monitoring plan should be put in place to record the fluctuation of eelgrass growth in order to determine whether or no the existing eelgrass has been adversely affected by the proposed construction.

Best Management Practices such as the use of silt curtains while removing/installing piles is recommended. Piles should be water jetted into place surrounded by silt curtains, not hammered or drilled, thus, maximizing reducing impact to environment

REFERENCE:

NOAA Fisheries West Coast Region, California Eelgrass Mitigation Policy and Implementing Guidelines, October 2014, II. Implementing Guidelines for California

Rivers and Harbors Appropriation Act of 1899, 1899, ch. 425, 30 Stat. 1121.