

CITY OF ROCKLAND DOWNTOWN WATERFRONT MARINE INFRASTRUCTURE AT HARBOR AND BUOY PARKS



SITE LOCATION MAP
SCALE: 1" = 200'



SHEET INDEX

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PRELIMINARY ENGINEERING DRAWINGS (NOT FOR CONSTRUCTION)

FEBRUARY 28, 2023

AS AMENDED JULY 4, 2023 (SEE SHEET C3)
AS AMENDED NOVEMBER 1, 2023 (SEE SHEET C4)

CIVIL ENGINEER



135 ROCKLAND STREET ROCKPORT, MAINE 04856 PHONE: (207) 236-6757 WWW.LANDMARKMAINE.COM

ELECTRICAL ENGINEER



STRUCTURAL ENGINEER



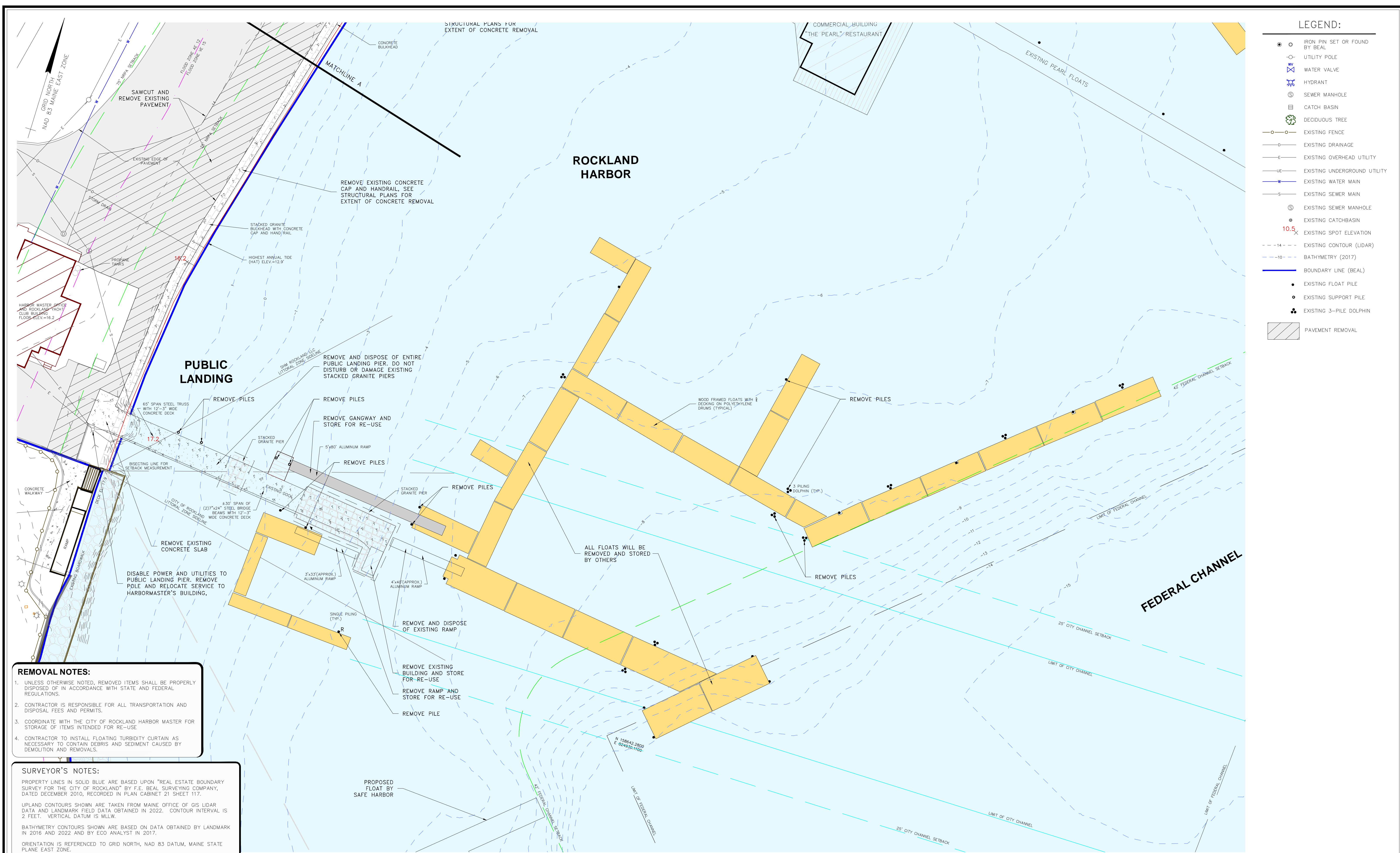
LANDSCAPE ARCHITECT



29 Bridge Street – Topsham, ME 04086
Tel. 207-450-9700 – www.rslld.com

SHEET DESIGNATION:

C0



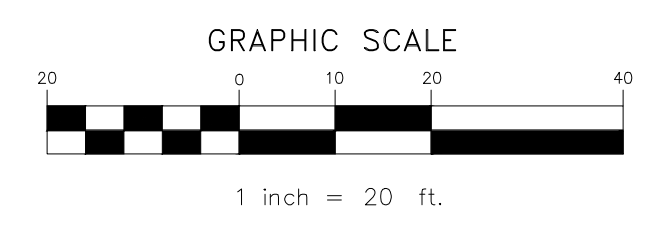
LEGEND:

- ○ IRON PIN SET OR FOUND BY BEAL
- ○ UTILITY POLE
- ⊗ WATER VALVE
- ⊗ HYDRANT
- ⊗ SEWER MANHOLE
- ⊗ CATCH BASIN
- ○ DECIDUOUS TREE
- ○ — EXISTING FENCE
- ○ — EXISTING DRAINAGE
- — — EXISTING OVERHEAD UTILITY
- — — EXISTING UNDERGROUND UTILITY
- — — EXISTING WATER MAIN
- — — EXISTING SEWER MAIN
- ⊗ EXISTING SEWER MANHOLE
- ⊗ EXISTING CATCHBASIN
- 10.5' EXISTING SPOT ELEVATION
- - - - EXISTING CONTOUR (LIDAR)
- - - - BATHYMETRY (2017)
- — — BOUNDARY LINE (BEAL)
- EXISTING FLOAT PILE
- EXISTING SUPPORT PILE
- EXISTING 3-PILE DOLPHIN
- ▨ PAVEMENT REMOVAL

LANDMARK CORPORATION
SURVEYORS & ENGINEERS

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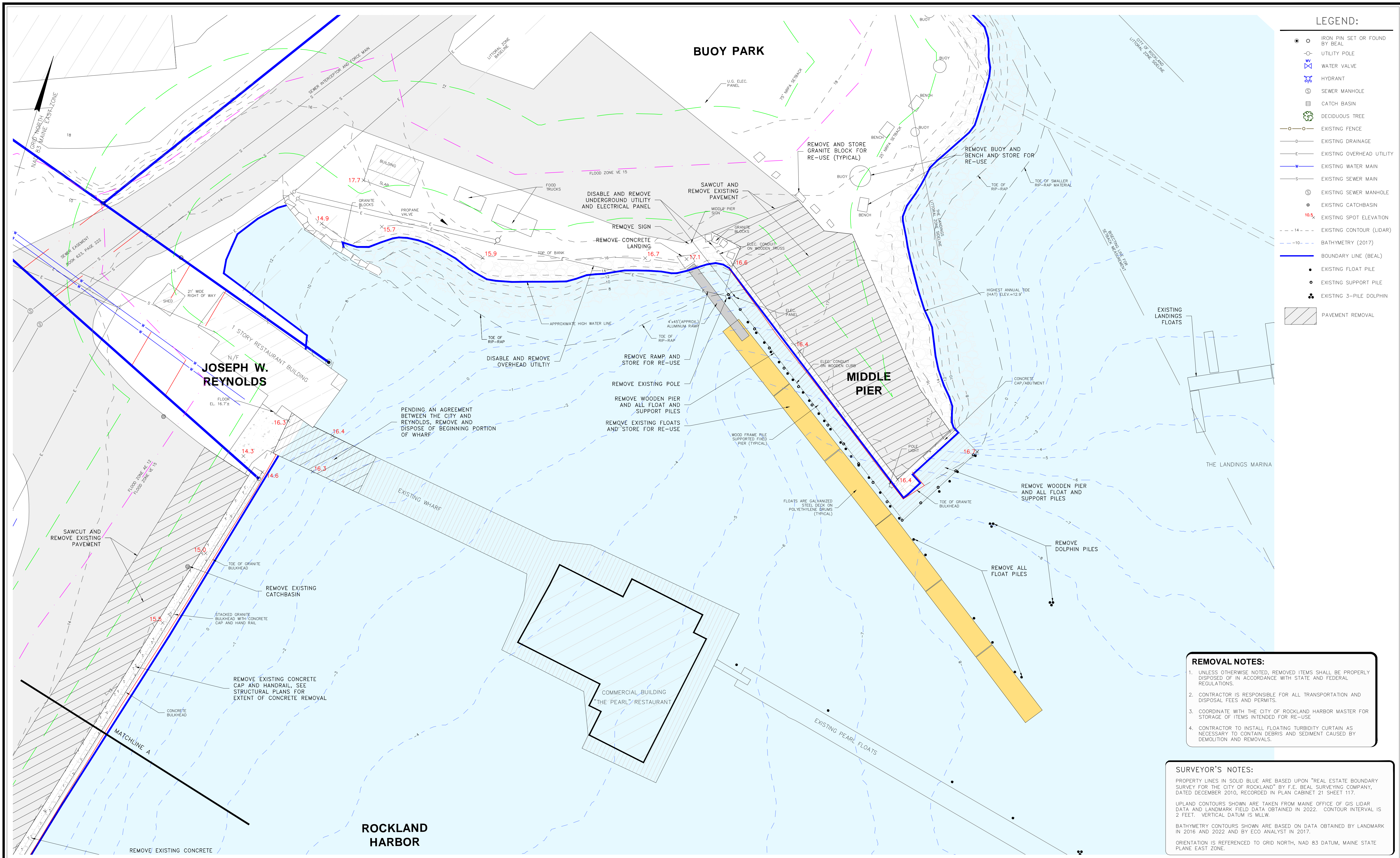
EXISTING CONDITIONS AND REMOVAL PLAN

MICHAEL J. SABATINI
9053
LICENSED PROFESSIONAL ENGINEER
2/28/23

CITY OF ROCKLAND
DOWNTOWN WATERFRONT MARINE INFRASTRUCTURE
AT HARBOR AND BUOY PARKS
ROCKLAND, MAINE
KNOX COUNTY

SCALE: **1" = 20'** JOB No.: **16-012**

SHEET DESIGNATION:
C1



LEGEND:

- IRON PIN SET OR FOUND BY BEAL
- UTILITY POLE
- ⊗ WATER VALVE
- ⊗ HYDRANT
- ⊗ SEWER MANHOLE
- ⊗ CATCH BASIN
- ⊗ DECIDUOUS TREE
- EXISTING FENCE
- EXISTING DRAINAGE
- EXISTING OVERHEAD UTILITY
- EXISTING WATER MAIN
- EXISTING SEWER MAIN
- ⊗ EXISTING SEWER MANHOLE
- ⊗ EXISTING CATCHBASIN
- 10.5' EXISTING SPOT ELEVATION
- - - 14' EXISTING CONTOUR (LIDAR)
- - - 10' BATHYMETRY (2017)
- BOUNDARY LINE (BEAL)
- EXISTING FLOAT PILE
- EXISTING SUPPORT PILE
- EXISTING 3-PILE DOLPHIN
- ▨ PAVEMENT REMOVAL

REMOVAL NOTES:

1. UNLESS OTHERWISE NOTED, REMOVED ITEMS SHALL BE PROPERLY DISPOSED OF IN ACCORDANCE WITH STATE AND FEDERAL REGULATIONS.
2. CONTRACTOR IS RESPONSIBLE FOR ALL TRANSPORTATION AND DISPOSAL FEES AND PERMITS.
3. COORDINATE WITH THE CITY OF ROCKLAND HARBOR MASTER FOR STORAGE OF ITEMS INTENDED FOR RE-USE.
4. CONTRACTOR TO INSTALL FLOATING TURBIDITY CURTAIN AS NECESSARY TO CONTAIN DEBRIS AND SEDIMENT CAUSED BY DEMOLITION AND REMOVALS.

SURVEYOR'S NOTES:

PROPERTY LINES IN SOLID BLUE ARE BASED UPON "REAL ESTATE BOUNDARY SURVEY FOR THE CITY OF ROCKLAND" BY F.E. BEAL SURVEYING COMPANY, DATED DECEMBER 2010, RECORDED IN PLAN CABINET 21 SHEET 117.

UPLAND CONTOURS SHOWN ARE TAKEN FROM MAINE OFFICE OF GIS LIDAR DATA AND LANDMARK FIELD DATA OBTAINED IN 2022. CONTOUR INTERVAL IS 2 FEET. VERTICAL DATUM IS MLLW.

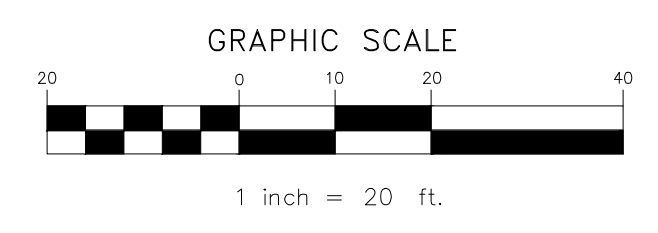
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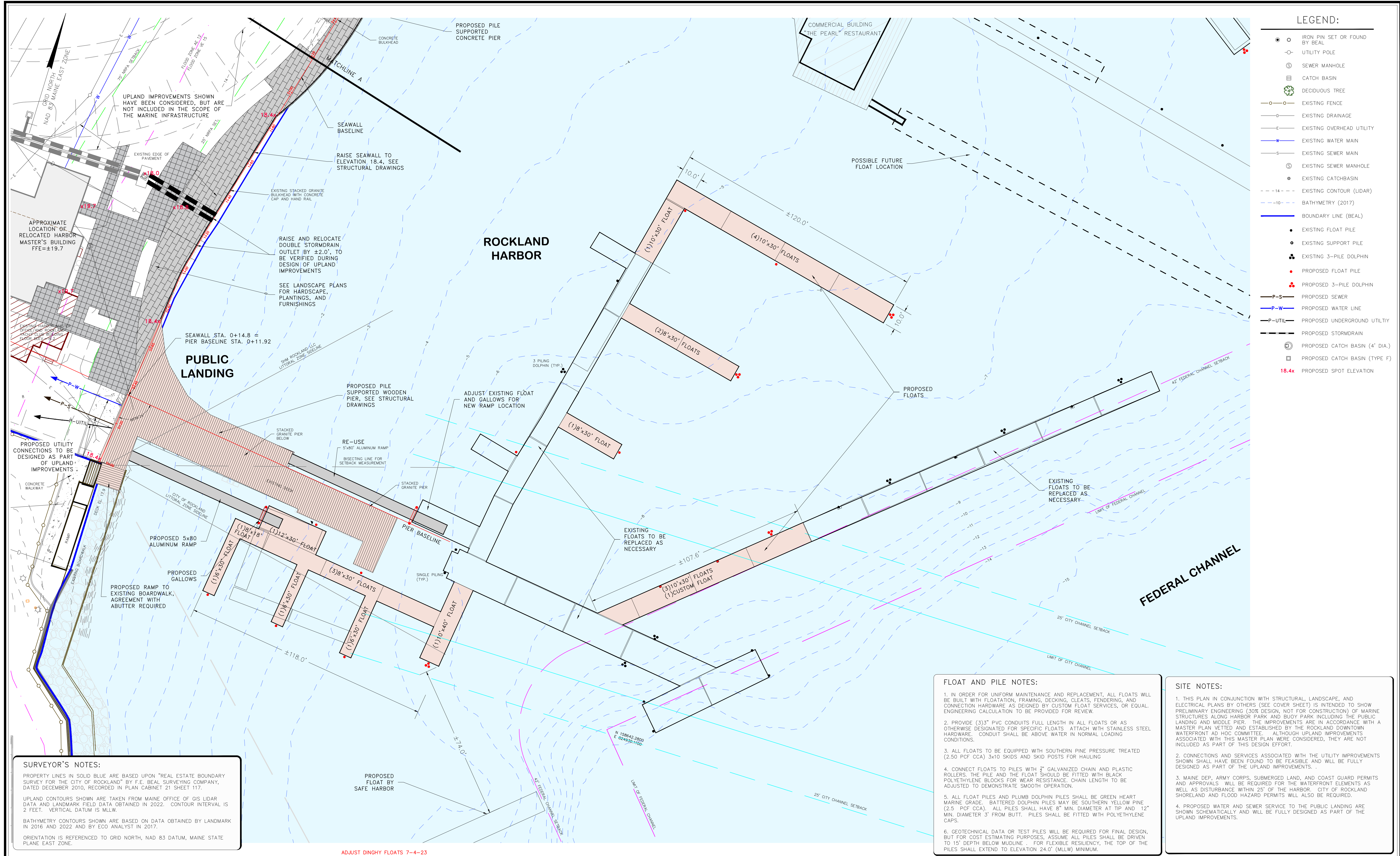
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MICHAEL J. SABATINI
9053
LICENSED PROFESSIONAL ENGINEER
2/28/23

CITY OF ROCKLAND
HARBOR AND BUOY PARK MARINE INFRASTRUCTURE
ROCKLAND, MAINE
KNOX COUNTY

SCALE: 1" = 20'
JOB No.: 16-012

SHEET DESIGNATION:
C2



LEGEND:

- ○ IRON PIN SET OR FOUND BY BEAL
- ○ UTILITY POLE
- ○ SEWER MANHOLE
- ○ CATCH BASIN
- ○ DECIDUOUS TREE
- ○ EXISTING FENCE
- ○ EXISTING DRAINAGE
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- ○ BOUNDARY LINE (BEAL)
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- ○ EXISTING SUPPORT PILE
- ○ EXISTING 3-PILE DOLPHIN
- ○ PROPOSED FLOAT PILE
- ○ PROPOSED 3-PILE DOLPHIN
- P-S — PROPOSED SEWER
- P-W — PROPOSED WATER LINE
- P-UTIL — PROPOSED UNDERGROUND UTILITY
- — PROPOSED STORMDRAIN
- ○ PROPOSED CATCH BASIN (4' DIA.)
- ○ PROPOSED CATCH BASIN (TYPE F)
- 18.4x PROPOSED SPOT ELEVATION

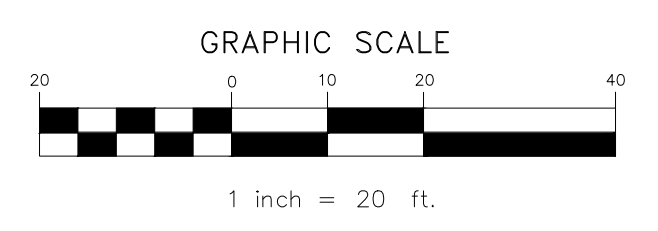
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FLOAT AND PILE NOTES:
 1. IN ORDER FOR UNIFORM MAINTENANCE AND REPLACEMENT, ALL FLOATS WILL BE BUILT WITH FLOATION, FRAMING, DECKING, CLEATS, FENDERING, AND CONNECTION HARDWARE AS DESIGNED BY CUSTOM FLOAT SERVICES, OR EQUAL. ENGINEERING CALCULATION TO BE PROVIDED FOR REVIEW.
 2. PROVIDE (3)3" PVC CONDUITS FULL LENGTH IN ALL FLOATS OR AS OTHERWISE DESIGNATED FOR SPECIFIC FLOATS. ATTACH WITH STAINLESS STEEL HARDWARE. CONDUIT SHALL BE ABOVE WATER IN NORMAL LOADING CONDITIONS.
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 4. CONNECT FLOATS TO PILES WITH 1" GALVANIZED CHAIN AND PLASTIC ROLLERS. THE PILE AND THE FLOAT SHOULD BE FITTED WITH BLACK POLYETHYLENE BLOCKS FOR WEAR RESISTANCE. CHAIN LENGTH TO BE ADJUSTED TO DEMONSTRATE SMOOTH OPERATION.
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SITE NOTES:
 1. THIS PLAN IN CONJUNCTION WITH STRUCTURAL, LANDSCAPE, AND ELECTRICAL PLANS BY OTHERS (SEE COVER SHEET) IS INTENDED TO SHOW PRELIMINARY ENGINEERING (30% DESIGN, NOT FOR CONSTRUCTION) OF MARINE STRUCTURES ALONG HARBOR PARK AND BUOY PARK INCLUDING THE PUBLIC LANDING AND MIDDLE PIER. THE IMPROVEMENTS ARE IN ACCORDANCE WITH A MASTER PLAN VETTED AND ESTABLISHED BY THE ROCKLAND DOWNTOWN WATERFRONT AD HOC COMMITTEE. ALTHOUGH UPLAND IMPROVEMENTS ASSOCIATED WITH THIS MASTER PLAN WERE CONSIDERED, THEY ARE NOT INCLUDED AS PART OF THIS DESIGN EFFORT.
 2. CONNECTIONS AND SERVICES ASSOCIATED WITH THE UTILITY IMPROVEMENTS SHOWN SHALL HAVE BEEN FOUND TO BE FEASIBLE AND WILL BE FULLY DESIGNED AS PART OF THE UPLAND IMPROVEMENTS.
 3. MAINE DEP, ARMY CORPS, SUBMERGED LAND, AND COAST GUARD PERMITS AND APPROVALS WILL BE REQUIRED FOR THE WATERFRONT ELEMENTS AS WELL AS DISTURBANCE WITHIN 25' OF THE HARBOR. CITY OF ROCKLAND SHORELAND AND FLOOD HAZARD PERMITS WILL ALSO BE REQUIRED.
 4. PROPOSED WATER AND SEWER SERVICE TO THE PUBLIC LANDING ARE SHOWN SCHEMATICALLY AND WILL BE FULLY DESIGNED AS PART OF THE UPLAND IMPROVEMENTS.

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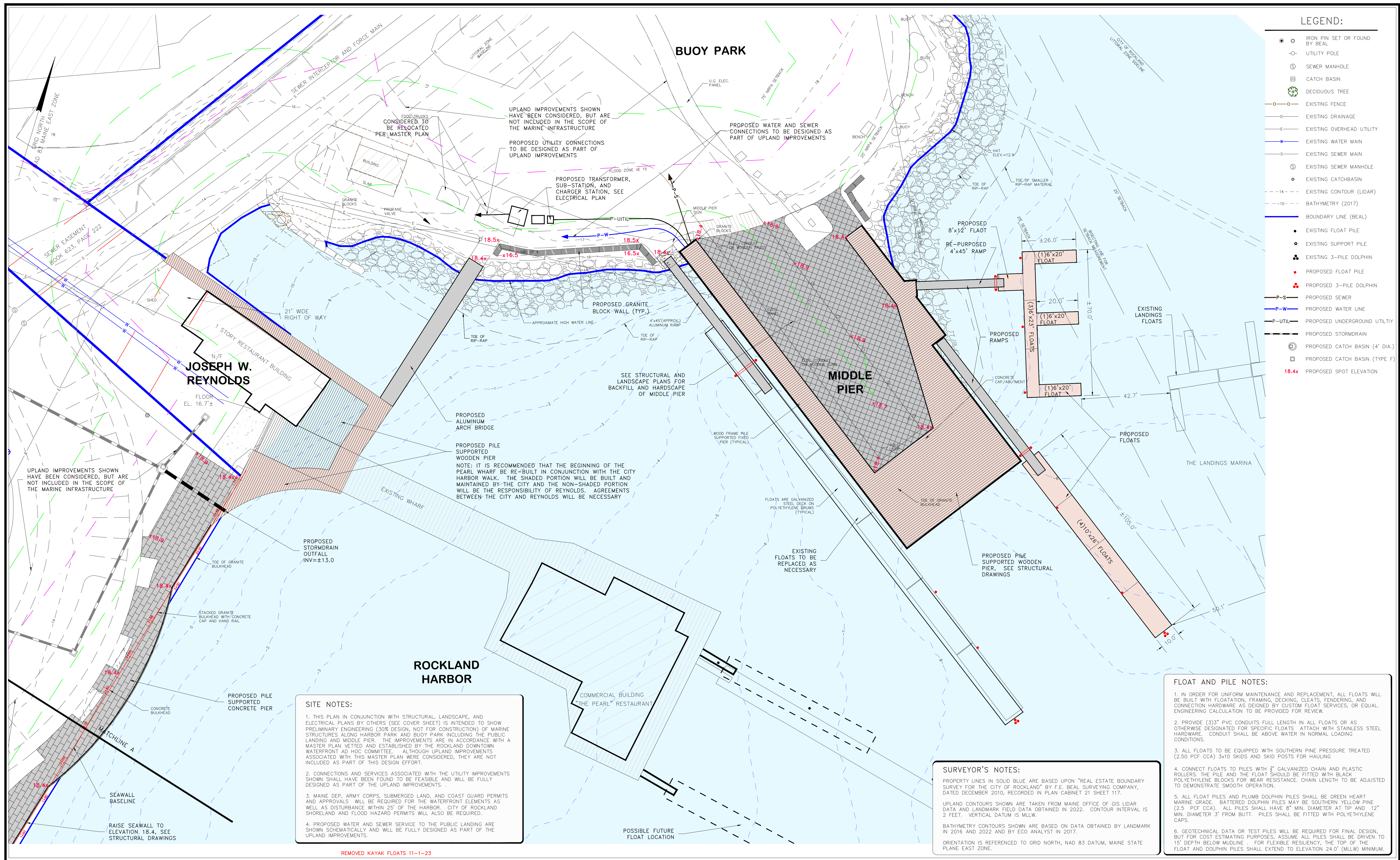
MARINE INFRASTRUCTURE SITE PLAN

MICHAEL J. SABATINI
 9053
 LICENSED PROFESSIONAL ENGINEER
 4/28/23

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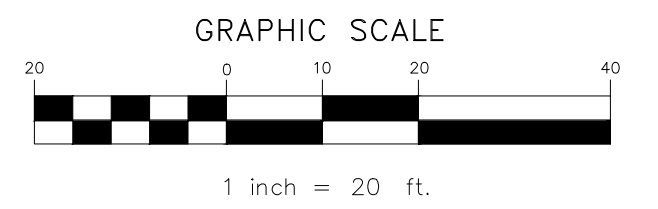
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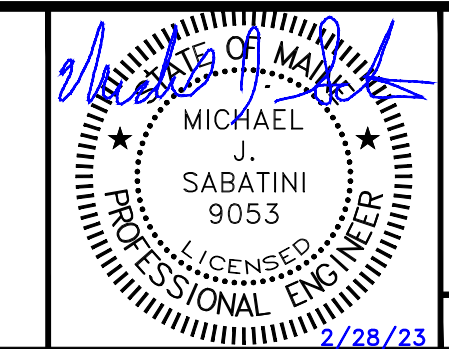
REMOVED KAYAK FLOATS 11-23



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 HARBOR AND BUOY PARK MARINE INFRASTRUCTURE
 ROCKLAND, MAINE
 KNOX COUNTY

SHEET DESIGNATION:
C4

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ELECTRICAL LEGEND

GENERAL

□ PANEL

— HOT LEG

— HOT LEG WITH NEUTRAL

— HOT LEG WITH GROUND

— SWITCH LEG

— THREE-WAY CIRCUIT

— CIRCUIT HOME RUN

POWER

□ NON-FUSED DISCONNECT

⊕ TRANSFORMER

⊕ 120V DUPLEX RECEPTACLE

⊕ RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER

⊕ RECEPTACLE, IN-FLOOR BOX & COVER

ELECTRICAL ABBREVIATIONS

A / AB	ABOVE
AF	AMPERE FRAME
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFI	ARC FAULT INTERRUPTER
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AVAILABLE FAULT CURRENT
AMP	AMPERE
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
BFG	BELOW FINISHED GRADE
BOD	BASIS OF DESIGN
CT	CIRCUIT
CT	CURRENT TRANSFORMER
DETD	DUAL ELEMENT TIME DELAY
DN	DOWN
DWG	DRAWING
EC	ELECTRICAL CONTRACTOR
ECB	ENCLOSED CIRCUIT BREAKER
EDP	ELECTRICAL DATUM PLANE
EMG	EMERGENCY
EQUIP	EQUIPMENT
ETB	ELECTRONIC TRIP BREAKER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFM	GROUND FAULT MONITOR
GFPE	GROUND FAULT PROTECTION OF EQUIPMENT
IPC	INTEGRATED POWER CENTER
KVA	KILOVOLT-AMPERE
KW	KILOWATT
LEUD	LOCAL ELECTRICAL AND UTILITY DEPARTMENT
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCS	MOLDED CASE SWITCH
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURING
MFG	MANUFACTURER
MIN	MINIMUM
MLO	MAIN LUG ONLY
MOCF	MAIN OVERCURRENT PROTECTION
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
OCF	OVERCURRENT PROTECTION
OH	OVERHEAD
PH / Ø	PHASE
PNL	PANEL
PPC	PORTABLE POWER CABLE
RECP	RECEPTACLE
SCH	SCHEDULE
SER	SERVICE ENTRANCE CONDUCTOR
SD	SURGE PROTECTIVE DEVICE
ST	SHUNT TRIP
TEL	TELEPHONE
TMB	THERMAL MAGNETIC BREAKER
TYP	TYPICAL
U / UC	UNDER / UNDER CABINET
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
US	UNDERSLAB
UV	UNDERWATER
V	VOLT
VA	VOLT-AMPERE
W	WATT
WR	WEATHER-RESISTANT
WRI	WEATHER-RESISTANT, IN-USE

WIRING COLOR CODE

CONDUCTOR	COLOR
120/208 (240)	
PHASE A	BLACK
PHASE B	RED
PHASE C (3Ø ONLY)	BLUE
NEUTRAL	WHITE
GROUND	GREEN
277/480	
PHASE A	BROWN
PHASE B	ORANGE
PHASE C (3Ø ONLY)	YELLOW
NEUTRAL	GRAY
GROUND	GREEN

CALL BEFORE YOU DIG

www.call811.com

THE CONTRACTOR SHALL NOTIFY ALL UTILITIES INCLUDING AND NOT LIMITED TO GAS, WATER, ELECTRIC, CABLE, AND TELEPHONE COMPANIES PRIOR TO ANY EXCAVATION. THE CONTRACTOR SHALL NOTIFY ONE-CALL SERVICE (CALL 811) SEVENTY-TWO (72) HOURS AS REQUIRED BY LAW BEFORE ANY EXCAVATION, AT ANY LOCATION.



ELECTRICAL MATERIALS SCHEDULE - MARINA

* ALL NONMETALLIC MATERIAL SHALL BE UV-RESISTANT

DESCRIPTION	MATERIAL	STANDARDS	REMARKS
BOXES			
PULL / JUNCTION / OUTLET BOX	GALVANIZED STEEL	UL 731A	* 1 1/2" MINIMUM DEPTH COORDINATE SIZE WITH NEC COORDINATE COVER MATERIAL & COLOR W/ ARCH/OWNER
WIRE / CABLE			
#10 & SMALLER	600-VOLT THWN-2 AS NOTED	UL 83	* SOLID OR STRANDED AS REQUIRED BY EQUIPMENT MANUFACTURER * TINNED SOFT * DRAWN COPPER
#8 & LARGER	600-VOLT THWN-2 AS NOTED	UL 83	* STRANDED * TINNED SOFT * DRAWN COPPER
TYPE "W" / "G" / "G-GC" MARINE CABLE	105°C 2000-VOLT	UL 83	* USE FOR UNDERWATER FEEDER * STRANDED * TINNED SOFT * DRAWN COPPER * EXTRA HARD USE * SUN LIGHT RESISTANT * OIL, GAS, AND CHEMICAL RESISTANT
WET-LISTED MC CABLE	600-VOLT		* PVC JACKET
CONDUIT			
RIGID	GALVANIZED STEEL	HH 9359	* USE ABOVE OR BELOW GROUND
PVC	SCHEDULE 40 / 80 PVC	NEMA TC-2	* USE SCHEDULE 40 IN PROTECTED DOCK STRUCTURE OR UNDERGROUND / UNDERWATER / UNDERDECK * USE SCHEDULE 80 ABOVE THE DECK AND ABOVE GROUND UP TO 6'
EMT	GALVANIZED DUCTILE STEEL	HE 8141	* ELECTRIC METALLIC TUBING - USE IN DRY OF FLOATING BUILDINGS
LFNC	LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT		* LISTED FOR DIRECT BURIAL - INSTALL WHERE NOT SUBJECT TO PHYSICAL DAMAGE AND NOT ABOVE THE DECK
HDPE	HIGH-DENSITY POLYETHYLENE		* INSTALL UNDERGROUND FOR SERVICE AND FEEDER CONDUCTORS WHERE NOT SUBJECT TO PHYSICAL DAMAGE
CONDUIT HANGERS / STRAPS			
UP TO 3/4"	GALVANIZED STEEL		* 4'-0" O/C MAXIMUM
1" TO 1-1/4"			* 6'-0" O/C MAXIMUM
1-1/2" & UP			* 8'-0" O/C MAXIMUM
CABLE SUPPORT			
"KELLEMS" CABLE GRIPS	STAINLESS STEEL		* COORDINATE SIZE AND STYLE FOR PROPER CABLE OR CONDUIT

ELECTRICAL NOTES

- APPLICABLE CODES INCLUDE, BUT ARE NOT RESTRICTED TO, THE LATEST ADOPTED VERSIONS OF THE FOLLOWING CODES AT THE TIME OF THE PLAN DATE:
 - NFPA 70 NATIONAL ELECTRIC CODE
 - INTERNATIONAL BUILDING CODE
 - UL UNDERWRITERS LABORATORY
 - NEMA
- ELECTRICAL SYSTEM(S) SHALL BE INSTALLED COMPLETE WITH ALL WORK, MATERIALS, AND EQUIPMENT CUSTOMARILY CONSIDERED PART OF SUCH WORK FOR A FULLY OPERATIONAL, COMPLETE, AND CODE COMPLIANT SYSTEM.
- PLANS ARE DIAGRAMMATIC AND ARE PROVIDED ONLY TO SHOW GENERAL SYSTEM. CONTRACTOR SHALL CONSIDER ACTUAL FIELD CONDITIONS DURING INSTALLATION. ANY GROSS INTERFERENCE SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE CONTINUING.
- ALL ELECTRICAL CONNECTIONS SHALL BE MOUNTED ABOVE ELECTRICAL DATUM PLANE.
- COORDINATE FINAL LOCATIONS OF ALL SWITCHES AND OUTLETS WITH OWNER. OWNER SHALL RETAIN RIGHT TO MAKE MINOR LOCATION ADJUSTMENTS PRIOR TO EQUIPMENT INSTALLATION WITHOUT ADDITIONAL COST.
- ALL 3Ø CIRCUITS SHALL HAVE A-B-C PHASE ROTATION. ALL 3Ø ELECTRICAL SWITCHGEAR, SWITCHBOARDS, MCC'S, AND SIMILAR EQUIPMENT SHALL HAVE A-B-C PHASE ROTATION FROM LEFT TO RIGHT. REFER TO THE POWER WIRING COLOR CODE ON THIS SHEET.
- VERIFY AVAILABLE CIRCUIT CURRENT WITH ELECTRICAL POWER SUPPLIER.
- PROVIDE COMPLETE AND COMPLIANT EQUIPMENT AND SYSTEM GROUNDING THROUGHOUT ELECTRICAL INSTALLATION. INSTALL BONDING JUMPERS TO OUTLET BOXES IN METALLIC CONDUIT SYSTEMS.
- UNLESS OTHERWISE NOTED, EACH CONDUIT OR RACEWAY SHALL CONTAIN ONLY A SINGLE CIRCUIT.
- ALL EXTERIOR EQUIPMENT SHALL BE NEMA 3R RAIN TIGHT.
- WITH ALL LIGHTING AND MOTOR LOADS OPERATING, CONTRACTOR SHALL VERIFY THAT THE PHASE BALANCE IN EACH PANEL IS WITHIN 5%.
- COMPLETE ELECTRICAL SYSTEMS SHALL BE TESTED FOR COMPLIANCE AND FUNCTION IN ACCORDANCE WITH LOCAL INSPECTIONS AND NATIONAL CODES.
- CONTRACTOR SHALL INSTALL EXPANSION AND DEFLECTION CONDUIT FITTINGS PER NEC 300.7(B), PLANS, AND SPECIFICATIONS.
- THE AMPACITY, VOLTAGE, AND PHASE OF ALL DISCONNECTS SHALL BE RATED PER THE SPECIFIED CIRCUIT AND UPSTREAM OVERCURRENT PROTECTION UON. THE ENCLOSURE NEMA RATING SHALL BE COORDINATED AS REQUIRED BY THE ENVIRONMENT.
- IF DISCREPANCIES EXIST WITHIN THE PLANS AND/OR SPECIFICATIONS, THE MOST STRINGENT SHALL APPLY AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BRING IT TO THE ATTENTION OF THE ENGINEER BEFORE WORK IS STARTED OR MATERIAL/EQUIPMENT IS ORDERED.
- THE PLANS AND SPECIFICATIONS FOR THIS WORK HAVE BEEN PREPARED WITH THE INTENT TO BE AS ACCURATE AND COMPLETE AS PRACTICAL, BUT ERRORS, OMISSIONS, AND CONFLICTS MAY EXIST. PRIOR TO SUBMITTING A BID FOR CONSTRUCTING THE WORK, THE CONTRACTOR SHALL REVIEW THE PLANS AND SPECIFICATIONS IN DETAIL. ANY QUESTIONS OR COMMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO SUBMITTING A BID. BY SUBMITTING A BID FOR THE WORK, THE CONTRACTOR ACKNOWLEDGES THAT HE HAS REVIEWED THE PLANS AND SPECIFICATIONS, UNDERSTANDS THE DESIGN INTENT, AND DOES NOT HAVE ANY FURTHER QUESTIONS OR COMMENTS.
- CONTRACTOR SHALL FIELD VERIFY THAT ALL PARALLEL CONDUCTOR RUNS OF SERVICE ENTRANCE OR FEEDER CONDUCTORS FOR EACH CIRCUIT FOLLOW THE SAME PATH AND ARE OF EQUAL LENGTH.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UTILITY FEES AND CHARGES FOR INSTALLATION AND UTILITY UPGRADES FOR PROJECT.
- CONTRACTOR SHALL COORDINATE AND PAY FOR ALL PERMITS, INSPECTION FEES, UTILITY FEES, AND UTILITY CHARGES FOR THIS PROJECT.
- CONTRACTOR SHALL WARRANTY ALL SYSTEMS FOR PARTS, EQUIPMENT, MATERIAL, AND LABOR FOR A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION.
- THE OWNER AND/OR OWNER'S REPRESENTATIVE SHALL INSPECT THE INSTALLATION AT SUBSTANTIAL COMPLETION AND AT ONE YEAR FROM SUBSTANTIAL COMPLETION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CORRECTIONS THAT DO NOT CONFORM TO THE CODE AND/OR THE CONTRACT DOCUMENTS.
- KELLEMS GRIPS SHALL BE INSTALLED SO THE GRIP IS ALIGNED WITH THE CABLE TO AVOID ANY PRESSURE POINTS ANYWHERE ALONG THE LENGTH OF THE GRIP. THIS INCLUDES INSTALLATION PROJECTS WHERE TIDAL ACTION MAY CHANGE THE ANGLE OF THE CABLE IN REFERENCE TO THE GRIP POSITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBSERVING AND MAKING ANY ADJUSTMENTS TO THE GRIP MOUNTING POSITION AND CABLE LENGTHS AS REQUIRED TO MITIGATE PRESSURE POINTS AT LOW AND HIGH TIDES. REFER TO PLANS AND DETAILS WHERE THE GRIPS ARE INDICATED TO BE INSTALLED. ALL KELLEMS GRIPS, SUPPORT CABLE, AND MOUNTING HARDWARE SHALL BE STAINLESS STEEL.
- LABEL REQUIREMENTS:
 - A. ALL ELECTRICAL EQUIPMENT SHALL BE AFFIXED WITH A PERMANENT LABEL STATING THE EQUIPMENT NAME, VOLTAGE AND PHASE CLASS, AMPACITY, AND WHERE THE EQUIPMENT IS FED FROM.
 - B. PANEL DIRECTORIES SHALL BE TYPED SHOWING EACH BRANCH BREAKER LOAD AS SHOWN IN THE PANEL SCHEDULES.
 - C. EACH SHORE POWER PEDESTAL SHALL BE LABELED WITH THE UPSTREAM CIRCUIT AND PANEL.
- CONTRACTOR SHALL CARRY CONTINGENCY IN THE AMOUNT OF 10% OF BID.
- SUBMITTAL REQUIREMENTS: CONTRACTOR SHALL PREPARE AND SUBMIT TO THE ENGINEER FOR REVIEW AND APPROVAL DETAILED PRODUCT INFORMATION ON ALL EQUIPMENT INCORPORATED IN THE PROJECT RELATED TO THE SPECIFIC CONTRACTOR TRADE. SUBMITTAL SHALL BE PROVIDED, AND ENGINEER SHALL REVIEW AND APPROVE, PRIOR TO EQUIPMENT PURCHASE. FOUR COPIES OF SUBMITTALS SHALL BE PROVIDED TO THE ENGINEER. TWO COPIES SHALL BE RETURNED TO THE CONTRACTOR. PRIOR TO SUBMITTAL, CONTRACTOR SHALL REVIEW AND CERTIFY BY SIGNATURE THE SUBMITTED EQUIPMENT MEETS SPECIFICATION. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DIMENSIONS, FITTINGS, AND CONSTRUCTION FEATURES RELATIVE TO EQUIPMENT. APPROVAL OF SUBMITTAL INFORMATION BY THE ENGINEER ONLY REFERS TO MATERIALS, DESIGN, AND ADHERENCE TO SPECIFICATIONS.

MARINA GROUND FAULT COMMISSIONING NOTES

PER THE CONTRACT WITH THE CLIENT, THE ENGINEER'S SCOPE FOR THIS PROJECT INCLUDES THE ENGINEER AND/OR ENGINEER'S TEAM PERFORMING GROUND FAULT DEVICE COMMISSIONING. THE COMMISSIONING EFFORTS INCLUDE ONE SITE VISIT AT THE END OF THE CONSTRUCTION ADMINISTRATION PHASE TO TEST THE PROPER FUNCTION OF ALL FEEDER BRANCH CIRCUIT, AND SHORE POWER RECEPTACLE GROUND FAULT DEVICES. THIS VISIT COMPLETED AND SHALL OCCUR AFTER SUBSTANTIAL COMPLETION OF THE CONSTRUCTION. THE SCHEDULE OF THIS VISIT SHALL BE COORDINATED WITH THE ENGINEER, THE CLIENT, AND THE CONTRACTOR.

- THE COMMISSIONING PROCESS SHALL CONSIST OF THE FOLLOWING:
- VERIFY PARAMETERS OF ALL GROUND FAULT MONITORING DEVICES ARE SET TO THE SPECIFIED VALUES PROVIDED IN THE DESIGN PLANS AND SCHEDULES
 - TEST ALL GFCL-PROTECTED RECEPTACLES.
 - TEST TRIP TIMES OF ALL GFCL DEVICES.
 - TEST THE TRIP LEVEL OF ALL GFPE DEVICES PROTECTING SHORE POWER RECEPTACLES BY SAFELY INDUCING LEAKAGE CURRENT AT EACH SHORE POWER RECEPTACLE. VERIFY THE GFPE DEVICES TRIPS POWER TO THE RECEPTACLE WHEN LEAKAGE CURRENT IS GREATER THAN 25MA AND LESS THAN OR EQUAL TO 30MA.
 - TEST THE TRIP TIMES OF ALL GFPE DEVICES PROTECTING THE SHORE POWER RECEPTACLE TO VERIFY THEY TRIP SLOWER THAN 100MS AND FASTER THAN 250MS.
 - INDUCE LEAKAGE CURRENT ON ALL BRANCH CIRCUITS AND FEEDER CIRCUITS REQUIRING GFPE PROTECTION TO TEST AND VERIFY THE GFPE DEVICES TRIPS POWER WHEN LEAKAGE CURRENT ON THE CIRCUIT IS GREATER THAN 90MA AND LESS THAN OR EQUAL TO 100MA.
 - TEST THE TRIP TIMES OF ALL GFPE DEVICES PROTECTING BRANCH CIRCUITS AND FEEDER CIRCUITS TO VERIFY THEY COORDINATE WITH THE DOWNSTREAM DEVICES.

IT IS RECOMMENDED FOR THE ELECTRICAL CONTRACTOR TO CHECK ALL WIRING METHODS AND THE INSTALLATION OF THE GFPE SYSTEM'S CT'S AND SHUNT-TRIP BREAKERS AND TO PRE-TEST ALL GFPE DEVICES BEFORE THE ENGINEER TRAVELS TO THE SITE TO PERFORM THE COMMISSIONING EFFORTS. IF DEFICIENCIES ARE FOUND IN THE ELECTRICAL AND/OR GFPE SYSTEMS THAT CANNOT BE REMEDIED WITHIN A REASONABLE TIME OF THE SAME-DAY VISIT, ADDITIONAL SITE VISITS SHALL BE REQUIRED AT THE EXPENSE OF THE CONTRACTOR. THE ADDITIONAL SITE VISIT SHALL BE QUOTED TO THE CONTRACTOR BASED ON THE EXPECTED EFFORTS TO RETEST THE DEFICIENCIES AND TRAVEL COST.

THE CONTRACTOR SHALL PROVIDE ASSISTANCE TO THE ENGINEER FOR THE ENTIRE DURATION OF THE TESTING AND COMMISSIONING BY PROVIDING EXPERIENCED STAFF THAT INSTALLED AND HAS KNOWLEDGE OF THE ELECTRICAL SYSTEMS OF THE PROJECT. THIS ASSISTANCE SHALL INCLUDE, BUT NOT BE LIMITED TO, OPENING AND CLOSING OF ELECTRICAL EQUIPMENT AND SHORE POWER PEDESTALS. TROUBLESHOOTING AND REPAIRING OF DEFICIENCIES SHALL ALSO BE THE RESPONSIBILITY OF THE CONTRACTOR.

A DETAILED COMMISSIONING REPORT BY THE ENGINEER SHALL BE GENERATED DESCRIBING THE FINDINGS OF THE COMMISSIONING. THE COMMISSIONING SHALL NOT GUARANTEE THE SAFETY OR CODE COMPLIANCE OF THE SYSTEM, BUT WILL HELP MITIGATE OPERATIONAL AND SAFETY ISSUES.

SERVICE ENTRANCE CONDUCTOR & CONDUIT LEGEND

ALL WIRE SIZED FOR THWN COPPER
ALL CONDUIT SIZED FOR RIGID PVC, SCHEDULE 40; RESIZE FOR DIFFERENT CONDUIT AS REQUIRED

LABEL	GROUNDING ELECTRIC CODE	CONDUCTORS PER CONDUIT	NUMBER OF RUNS	MINIMUM CONDUIT	CONDUCTOR AMPACITY 75 °C	Ø	VOLTAGE RANGE
1S60	#8	(3) #8	1	2"	65	1	208 - 480
1S100	#8	(3) #3	1	3"	100	1	208 - 480
1S150	#6	(3) #1/0	1	3"	150	1	208 - 480
1S200	#4	(3) #3/0	1	3"	200	1	208 - 480
1S225	#2	(3) #4/0	1	3"	230	1	208 - 480
1S400	#1/0	(3) #3/0	2	3"	400	1	208 - 480
1S400	#1/0	(3) #600 KCM	1	4"	420	1	208 - 480
1S600	#3/0	(3) #3/0	3	3"	600	1	208 - 480
1S600	#3/0	(3) #350 KCM	2	3"	620	1	208 - 480
1S800	#3/0	(3) #3/0	4	3"	800	1	208 - 480
1S800	#3/0	(3) #300 KCM	3	3"	855	1	208 - 480
1S1000	#3/0	(3) #250 KCM	4	3"	1020	1	208 - 480
1S1200	#3/0	(3) #350 KCM	4	3"	1240	1	208 - 480
3S200	#4	(4) #3/0	1	3"	200	3	208 - 480
3S225	#2	(4) #4/0	1	3"	230	3	208 - 480
3S400	#1/0	(4) #3/0	2	3"	400	3	208 - 480
3S600	#3/0	(4) #350 KCM	2	3"	620	3	208 - 480
3S800	#3/0	(4) #300 KCM	3	3"	855	3	208 - 480
3S1000	#3/0	(4) #400 KCM	3	3"	1005	3	208 - 480

BRANCH CIRCUIT AND FEEDER LEGEND W/ EQUIP. GND.

ALL WIRE SIZED FOR THWN COPPER
ALL CONDUIT SIZED FOR RIGID PVC, SCHEDULE 40; RESIZE FOR DIFFERENT CONDUIT AS REQUIRED
FEEDER LABEL WITH * IN THE PLANS INDICATES NEUTRAL IS NOT REQUIRED

LABEL	CONDUCTORS PER CONDUIT	NUMBER OF RUNS	MINIMUM CONDUIT	CONDUCTOR AMPACITY 75 °C	Ø	VOLTAGE RANGE
A20	(2) #12 & (1) #12 GND.	1	1/2"	20	1	120 OR 277
A30	(2) #10 & (1) #10 GND.	1	3/4"	30	1	120 OR 277
A50	(2) #8 & (1) #10 GND.	1	3/4"	50	1	120 OR 277
B20	(3) #12 & (1) #12 GND.	1	1/2"	30	1	208 - 480
B30	(3) #10 & (1) #10 GND.	1	3/4"	30	1	208 - 480
B50	(3) #8 & (1) #10 GND.	1	3/4"	50	1	208 - 480
B60	(3) #6 & (1) #10 GND.	1	3/4"	65	1	208 - 480
B80	(3) #4 & (1) #8 GND.	1	1"	85	1	208 - 480
B100	(3) #3 & (1) #8 GND.	1	1-1/2"	100	1	208 - 480
B110	(3) #2 & (1) #6 GND.	1	1-1/2"	115	1	208 - 480
B125	(3) #1 & (1) #6 GND.	1	1-1/2"	130	1	208 - 480
B150	(3) #1/0 & (1) #6 GND.	1	2"	150	1	208 - 480
B175	(3) #2/0 & (1) #6 GND.	1	2"	175	1	208 - 480
B200	(3) #3/0 & (1) #6 GND.	1	2"	200	1	208 - 480
B225	(3) #4/0 & (1) #4 GND.	1	2-1/2"	230	1	208 - 480
B250	(3) #250 KCM & (1) #4 GND.	1	2-1/2"	255	1	208 - 480
B275	(3) #300 KCM & (1) #4 GND.	1	2-1/2"	285	1	208 - 480
B300	(3) #350 KCM & (1) #4 GND.	1	3"	310	1	208 - 480
B350	(3) #500 KCM & (1) #3 GND.	1	3"	380	1	208 - 480
B400	(3) #3/0 & (1) #3 GND.	2	2"	400	1	208 - 480
B450	(3) #4/0 & (1) #2 GND.	2	2-1/2"	460	1	208 - 480
B500	(3) #250 KCM & (1) #2 GND.	2	2-1/2"	510	1	208 - 480
B600	(3) #350 KCM & (1) #1 GND.	2	3"	620	1	208 - 480
B800	(3) #500 KCM & (1) #1 GND.	3	2-1/2"	855	1	208 - 480
B1000	(3) #250 KCM & (1) #2/0 GND.	4	2-1/2"	1020	1	208 - 480
B1200	(3) #350 KCM & (1) #3/0 GND.	4	3"	1240	1	208 - 480
C20	(4) #12 & (1) #12 GND.	1	1/2"	20	3	208 - 480
C30	(4) #10 & (1) #10 GND.	1	3/4"	30	3	208 - 480
C50	(4) #8 & (1) #10 GND.	1	3/4"	50	3	208 - 480
C60	(4) #6 & (1) #10 GND.	1	1"	65	3	208 - 480
C80	(4) #4 & (1) #8 GND.	1	1-1/2"	85	3	208 - 480
C100	(4) #3 & (1) #8 GND.	1	1-1/2"	100	3	208 - 480
C110	(4) #2 & (1) #6 GND.	1	1-1/2"	115	3	208 - 480
C125	(4) #1 & (1) #6 GND.	1	1-1/2"	130	3	208 - 480
C150	(4) #1/0 & (1) #6 GND.	1	2"	150	3	208 - 480
C175	(4) #2/0 & (1) #6 GND.	1	2"	175	3	208 - 480
C200	(4) #3/0 & (1) #6 GND.	1	2"	200	3	208 - 480
C225	(4) #4/0 & (1) #4 GND.	1	3"	230	3	208 - 480
C250	(4) #250 KCM & (1) #4 GND.	1	3"	255	3	208 - 480
C300	(4) #350 KCM & (1) #4 GND.	1	3"	310	3	208 - 480
C350	(4) #500 KCM & (1) #3 GND.	1	3-1/2"	380	3	208 - 480
C400	(4) #3/0 & (1) #3 GND.	2	2"	400	3	208 - 480
C450	(4) #4/0 & (1) #2 GND.	2	3"	460	3	208 - 480
C500	(4) #250 KCM & (1) #2 GND.	2	3"	510	3	208 - 480
C600	(4) #350 KCM & (1) #1 GND.	2	3"	620	3	208 - 480
C800	(4) #300 KCM & (1) #1/0 GND.	3	3"	855	3	208 - 480
C1000	(4) #250 KCM & (1) #2/0 GND.	4	3"	1020	3	208 - 480
C1200	(4) #350 KCM & (1) #3/0 GND.	4	3"	1240	3	208 - 480
C1400	(4) #500 KCM & (1) #4/0 GND.	4	3-1/2"	1520	3	208 - 480
C1600	(4) #400 KCM & (1) #4/0 GND.	5	3"	1675	3	208 - 480
C2000	(4) #600 KCM & (1) #250 KCM GND.	5	4"	2100	3	208 - 480

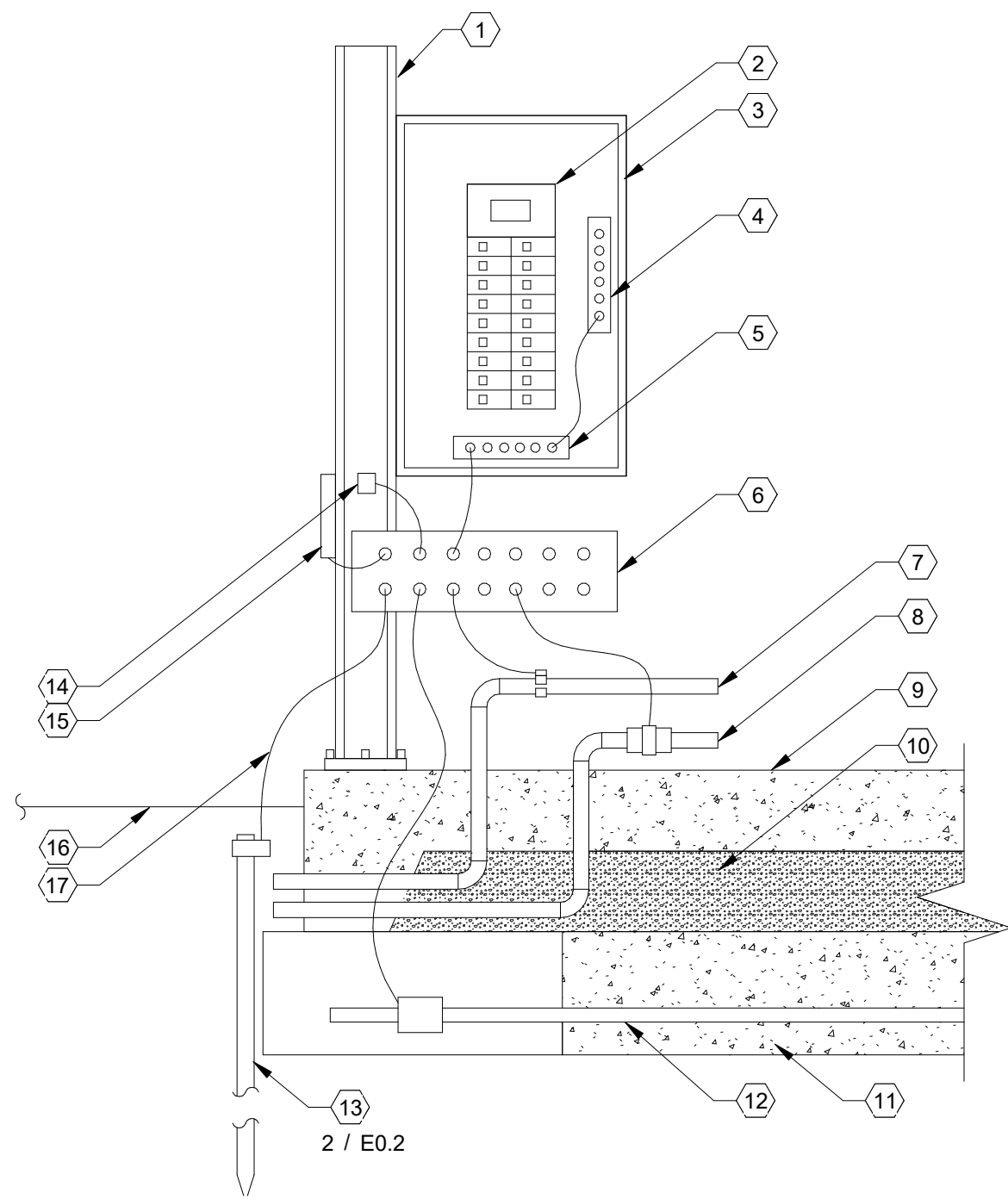
PORTABLE POWER CABLE & CORD BRANCH CIRCUIT AND FEEDER LEGEND

ALL WIRE SIZED USING NEC 400.5(A)(2), WITH GREEN INSULATED GROUND
ALL CONDUCTORS SHALL BE COPPER

- WET LISTED
- APPROVED FOR MARINA USE
- SUITABLE FOR CONTINUOUS SUBMERSION IN WATER

ALL CONDUIT SIZED FOR RIGID PVC, SCHEDULE 40; RESIZE FOR DIFFERENT CONDUIT AS REQUIRED
FEEDER LABEL WITH * IN THE PLANS INDICATES NEUTRAL IS NOT REQUIRED

LABEL	CABLE FOR MARINA / BOAT
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ELECTRICAL NOTES

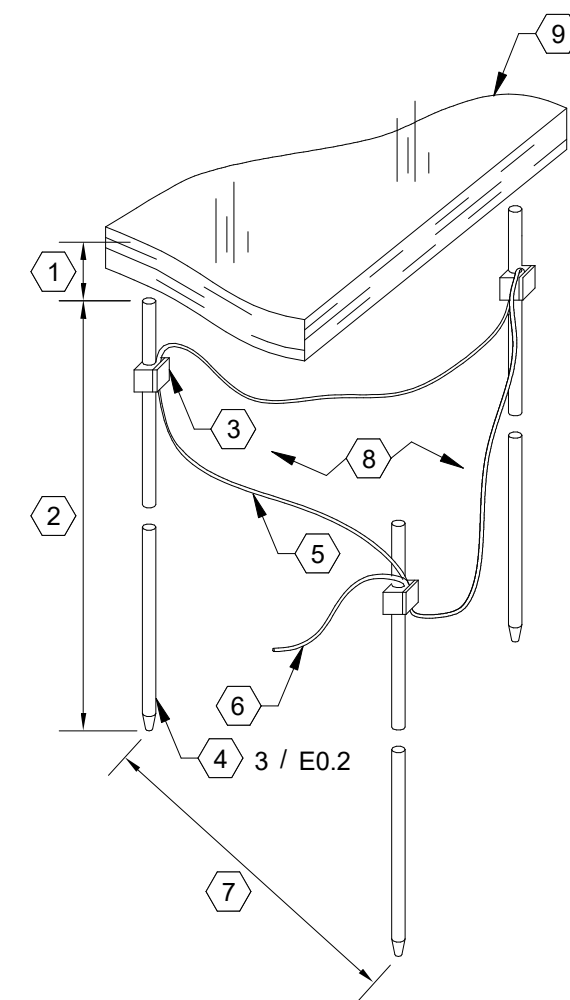
NUMBERED NOTES

- 1 METAL FRAME OF BUILDING OR MOUNTING STRUCTURE.
- 2 MAIN DISCONNECT.
- 3 SERVICE EQUIPMENT.
- 4 NEUTRAL BAR.
- 5 GROUNDING BAR.
- 6 GROUNDING PLATE OR BONDING POINT AS REQUIRED.
- 7 WATER PIPING ON LOAD SIDE OF METER.
- 8 GAS PIPING ON LOAD SIDE OF METER.
- 9 FINISHED FLOOR.
- 10 FILL GRAVEL.
- 11 CONCRETE FOOTER.
- 12 CONCRETE-ENCASED ELECTRODE, 1/2" x 20' FOR NEW CONSTRUCTION.
- 13 GROUND ROD, SEE REFERENCED DETAIL.
- 14 BONDING POINT.
- 15 GROUND BAR FOR LOW VOLTAGE UTILITIES.
- 16 FINISHED GRADE.
- 17 GROUNDING ELECTRODE CONDUCTOR.

GENERAL NOTES

- A SHALL BE PER NEC ARTICLE 250.
- B ALL PROJECTS MAY NOT INCLUDE METAL WATER PIPE, GAS LINE, OR METAL CONSTRUCTION.
- C CONFIGURATION OF SERVICE MAY DIFFER, COORDINATE INSTALLATION.

1 GROUNDING DTL
E0.2 NOT TO SCALE

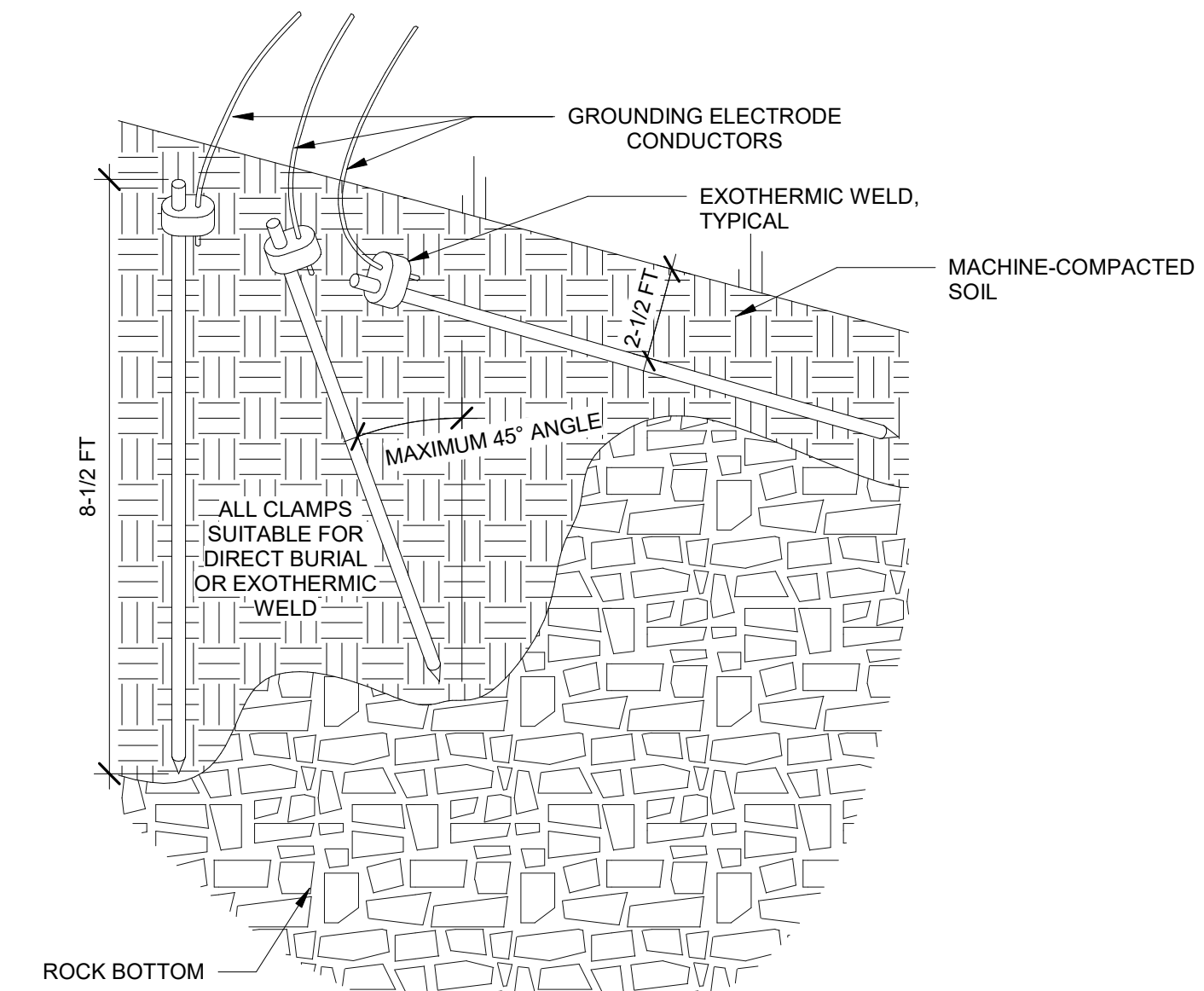


ELECTRICAL NOTES

NUMBERED NOTES

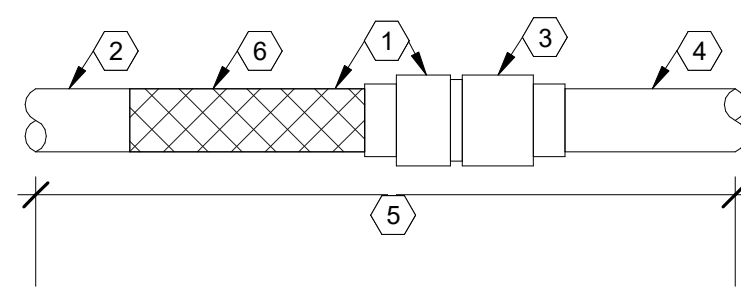
- 1 INSTALL GROUND ROD BELOW GROUND FREEZING DEPTH. COORDINATE DEPTH WITH AREA OF INSTALLATION.
- 2 GROUND ROD TO HAVE A MINIMUM OF 8' IN CONTACT WITH UNDISTURBED EARTH.
- 3 UL LISTED UNDERGROUND EXOTHERMIC WELD OR APPROVED CLAMP, TYP.
- 4 UL LISTED 5/8" Ø x 10' DRIVEN GROUND ROD, TYP. COORDINATE LOCATION WITH SITE. SEE REFERENCED DETAIL.
- 5 GROUNDING CONDUCTOR, TYP. SAME SIZE AS GROUNDING ELECTRODE CONDUCTOR.
- 6 GROUNDING ELECTRODE CONDUCTOR.
- 7 GROUND RODS TO BE INSTALLED IN A TRIANGULAR PATTERN WITH MIN. 6' APART, TYP.
- 8 VIRGIN EARTH.
- 9 FINISHED GRADE.

2 GROUND ROD DTL
E0.2 NOT TO SCALE



3 GND ROD INSTALL. DTL
E0.2 NOT TO SCALE

ELECTRICAL UPGRADES FOR
CITY OF ROCKLAND
DOWNTOWN WATERFRONT MARINA
INFRASTRUCTURE
ROCKLAND, MAINE



4 PVC TO LFNC CONNECTION DTL
E0.2 NOT TO SCALE

ELECTRICAL NOTES

NUMBERED NOTES

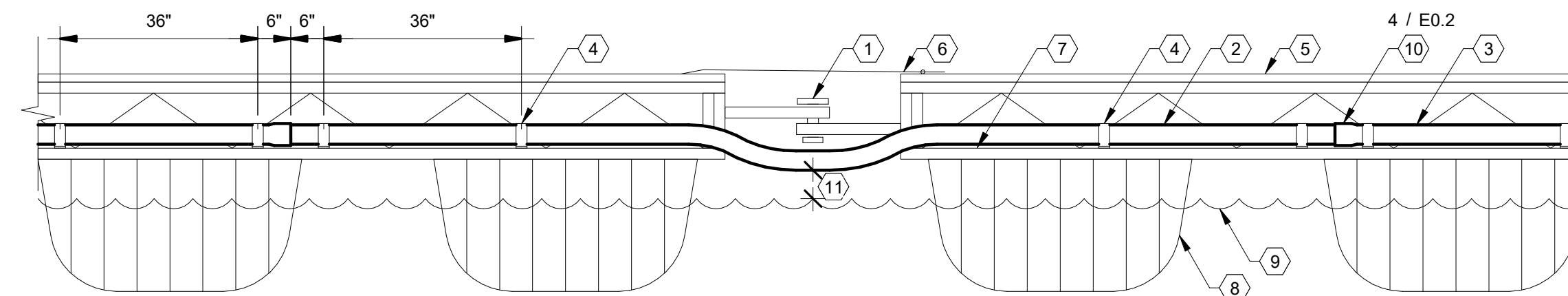
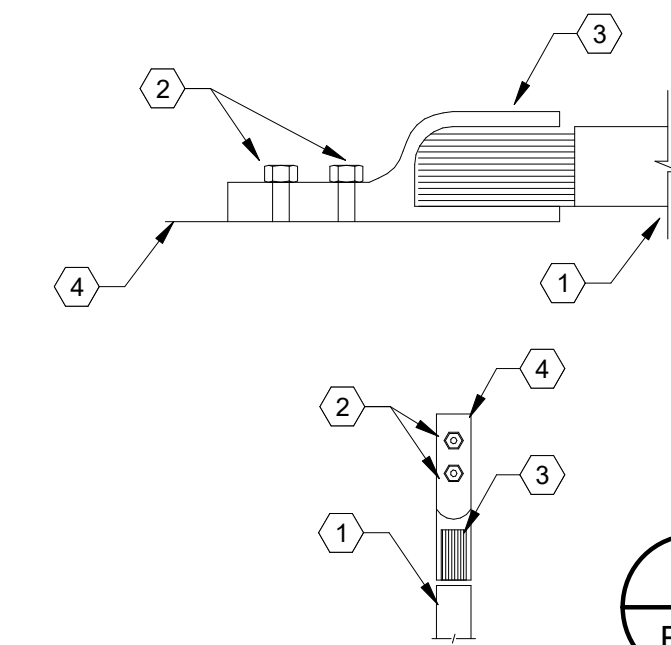
- 1 PVC FITTING WITH STAINLESS STEEL WIRE MESH STRAIN RELIEF. WET-LISTED, SHALL BE USED AT ALL CONNECTION POINTS.
- 2 LFNC CONDUIT WITH STRAIN RELIEF.
- 3 PVC FITTING AS REQUIRED.
- 4 PVC CONDUIT.
- 5 FINAL INSTALLATION OF CONDUITS ACROSS FITTINGS SHALL BE STRAIGHT SO THERE IS NO BEND AT CONNECTION POINT.
- 6 STAINLESS STEEL KELLEMS CABLE GRIP - SIZE FOR WIRE DIAMETER.

ELECTRICAL NOTES

NUMBERED NOTES

- 1 BONDING CONDUCTOR #3/0 GREEN INSULATION COPPER CABLE, MSHA ACCEPTED, WET LOCATIONS, RESISTANT TO OILS, ACIDS, ALKALINES, AND ABRASION-RESISTANT, OR 12" OF GREEN TAPE AT EACH END. CONDUCTOR STRANDS SHALL BE MINIMUM OF 448/24 STRANDS. ALLOW ENOUGH SLACK IN WIRE FOR STRUCTURE MOVEMENT AS PRACTICAL. INSTALLATION LOCATION SHALL BE SUCH THAT NO DAMAGE WILL OCCUR TO CONDUCTOR DURING STRUCTURE MOVEMENT.
- 2 (2) STAINLESS STEEL HEX BOLTS 5/16 - 18 MIN.
- 3 HEX STYLE CRIMP OR EQUAL, USING A MINIMUM OF 14 TON CRIMP TOOL.
- 4 CLEAN STRUCTURE METAL BEHIND CLAMP.

5 BONDING DTL
E0.2 NOT TO SCALE



6 DRY TRANSITION PVC TO LFNC DTL
E0.2 NOT TO SCALE

ELECTRICAL NOTES

NUMBERED NOTES

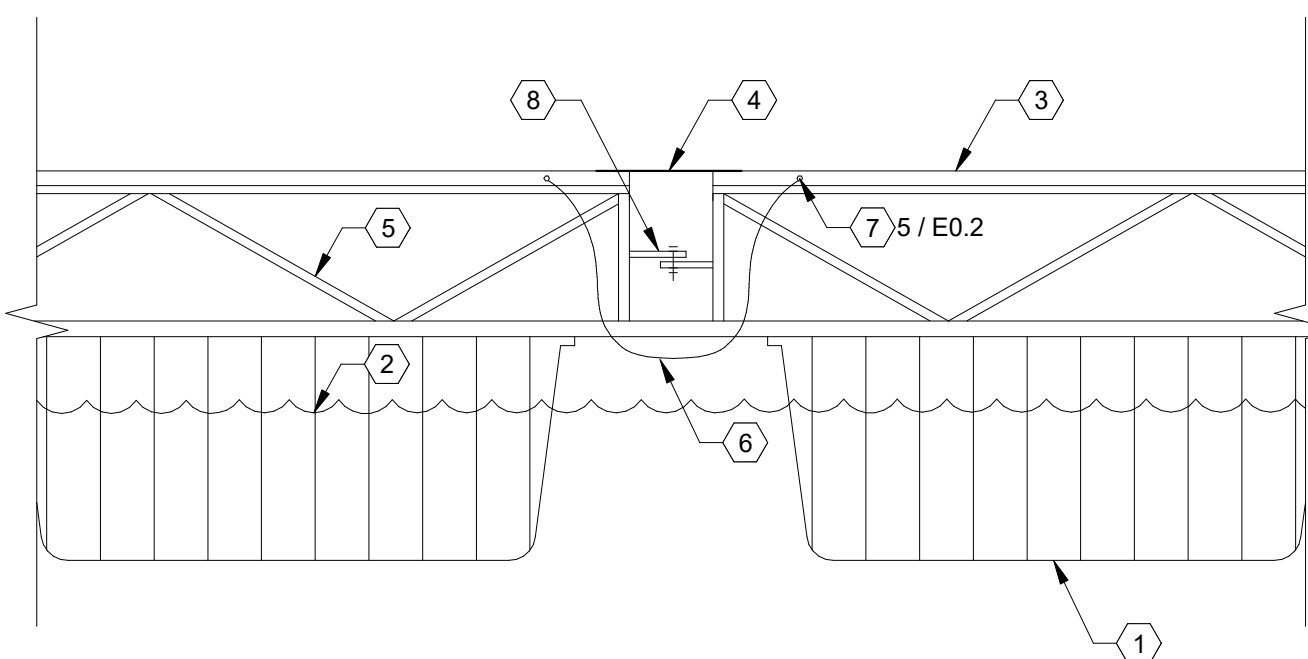
- 1 HINGE POINT/FIFTH-WHEEL/OTHER DOCK TRANSITION.
- 2 LFNC CONDUIT.
- 3 PVC CONDUIT.
- 4 GALVANIZED TWO-HOLE STRAPS BOLTED TO DOCK STRUCTURE, TYPICAL.
- 5 DECK.
- 6 COVER PLATE.
- 7 DOCK STRUCTURE.
- 8 FLOTATION.
- 9 WATER LINE.
- 10 PVC TO LFNC CONNECTION, SEE REFERENCED DETAIL.
- 11 CONDUIT SHALL MAINTAIN SEPARATION FROM WATER LINE. COORDINATE SLACK TO SATISFY REQUIREMENTS FOR FIFTH-WHEEL.

ELECTRICAL NOTES

NUMBERED NOTES

- 1 FLOTATION.
- 2 WATER LEVEL.
- 3 DECK.
- 4 TRANSITION COVER PLATE.
- 5 DOCK STRUCTURE.
- 6 BONDING CONDUCTOR #3/0 GREEN INSULATION COPPER CABLE, MSHA ACCEPTED, WET LOCATIONS, RESISTANT TO OILS, ACIDS, ALKALINES, AND ABRASION-RESISTANT, OR 12" OF GREEN TAPE AT EACH END. CONDUCTOR STRANDS SHALL BE MINIMUM OF 448/24 STRANDS. ALLOW ENOUGH SLACK IN WIRE FOR FULL DOCK MOVEMENT. INSTALLATION LOCATION SHALL BE SUCH THAT NO DAMAGE WILL OCCUR TO CONDUCTOR DURING DOCK MOVEMENT.
- 7 BOND TO DOCK STRUCTURE, SEE REFERENCED DETAIL.
- 8 HINGE OR FIFTH WHEEL.

7 TRANSITION BONDING DTL
E0.2 NOT TO SCALE

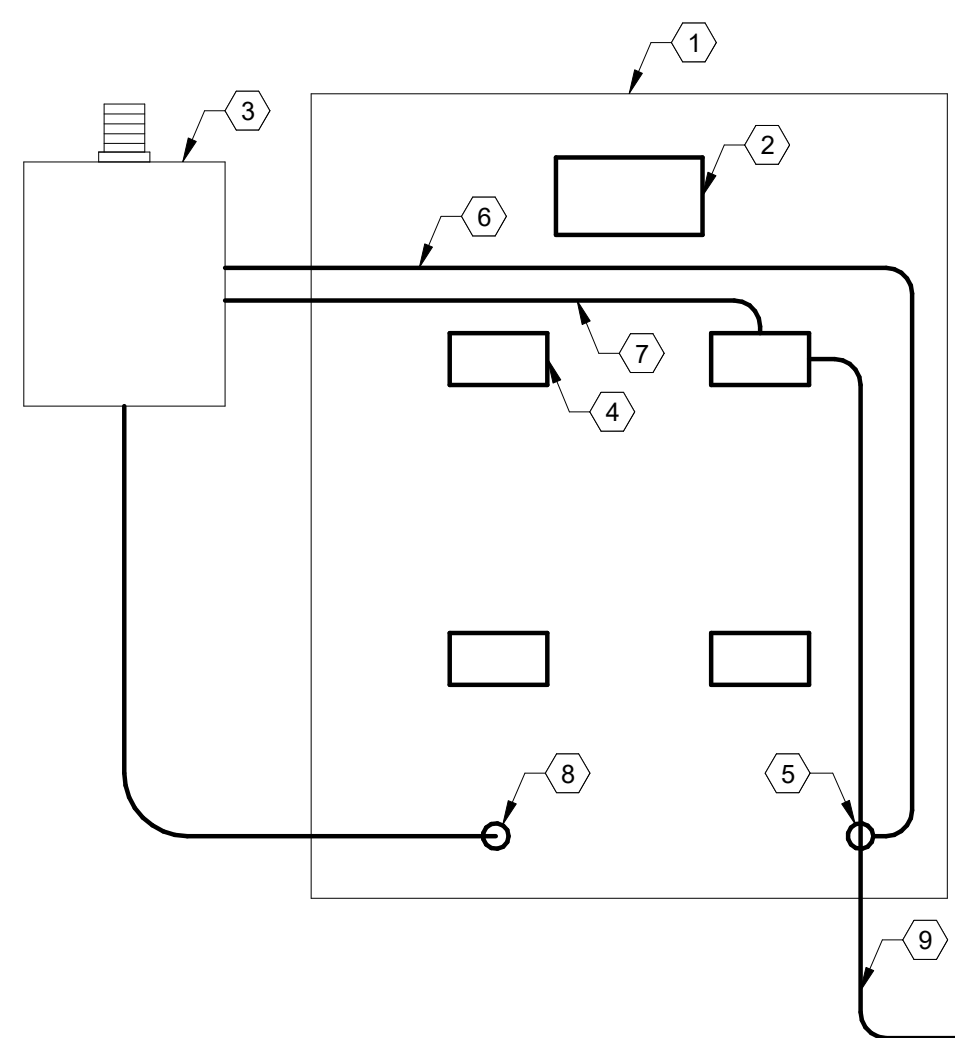


ELECTRICAL NOTES

NUMBERED NOTES

- 1 ELECTRICAL PANEL.
- 2 MAIN CIRCUIT BREAKER.
- 3 GROUND FAULT MONITOR (GFM), COORDINATE WITH MANUFACTURER FOR WIRING AND INSTALLATION REQUIREMENTS. RED BEACON SHALL FLASH UPON ALL CIRCUIT TRIPS DUE TO GROUND FAULT ALARMS.
- 4 SHUNT TRIP BRANCH BREAKER, TYPICAL. SEE PANEL SCHEDULE FOR SIZE.
- 5 GFM CURRENT SENSOR, TYPICAL. SIZE PER WIRE AS SHOWN IN PANEL SCHEDULE. HOT AND NEUTRAL CONDUCTORS ROUTED THROUGH CT.
- 6 CURRENT SENSOR CONTROL WIRE, TYPICAL.
- 7 SHUNT TRIP CONTROL WIRE, TYPICAL.
- 8 TAP BUS ON LOAD SIDE OF THE MAIN BREAKER AND RUN TO GFM. UTILIZE A SUB-FEED LUG BLOCK OR SIMILAR MEANS TO MAKE TAP. TERMINATE CIRCUIT ON MANUFACTURER'S SUPPLIED OVERCURRENT DEVICE. CIRCUIT CONDUCTORS SHALL NOT EXTEND LONGER THAN 10 FEET.
- 9 BRANCH CIRCUIT TO MARINA PEDESTAL, TYPICAL.

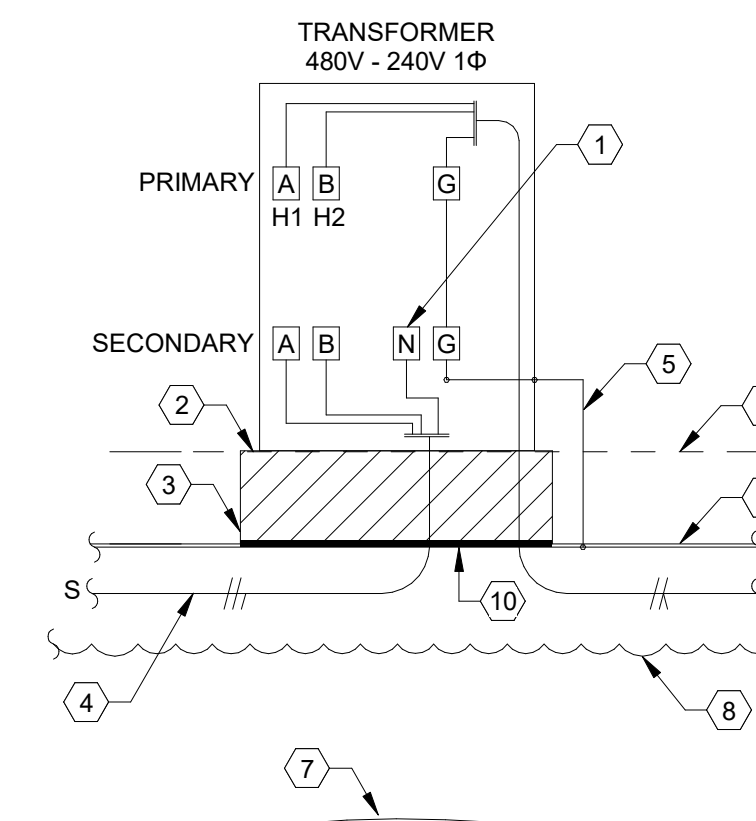
8 GFM WIRING DTL
E0.2 NOT TO SCALE



NUMBERED NOTES

- 1 TRANSFORMER 480V - 240V 1Ø
- 2 PRIMARY A B H1 H2
- 3 SECONDARY A B N G
- 4 S
- 5 P
- 6
- 7
- 8
- 9
- 10

9 MARINA TRANSFORMER DTL
E0.2 NOT TO SCALE

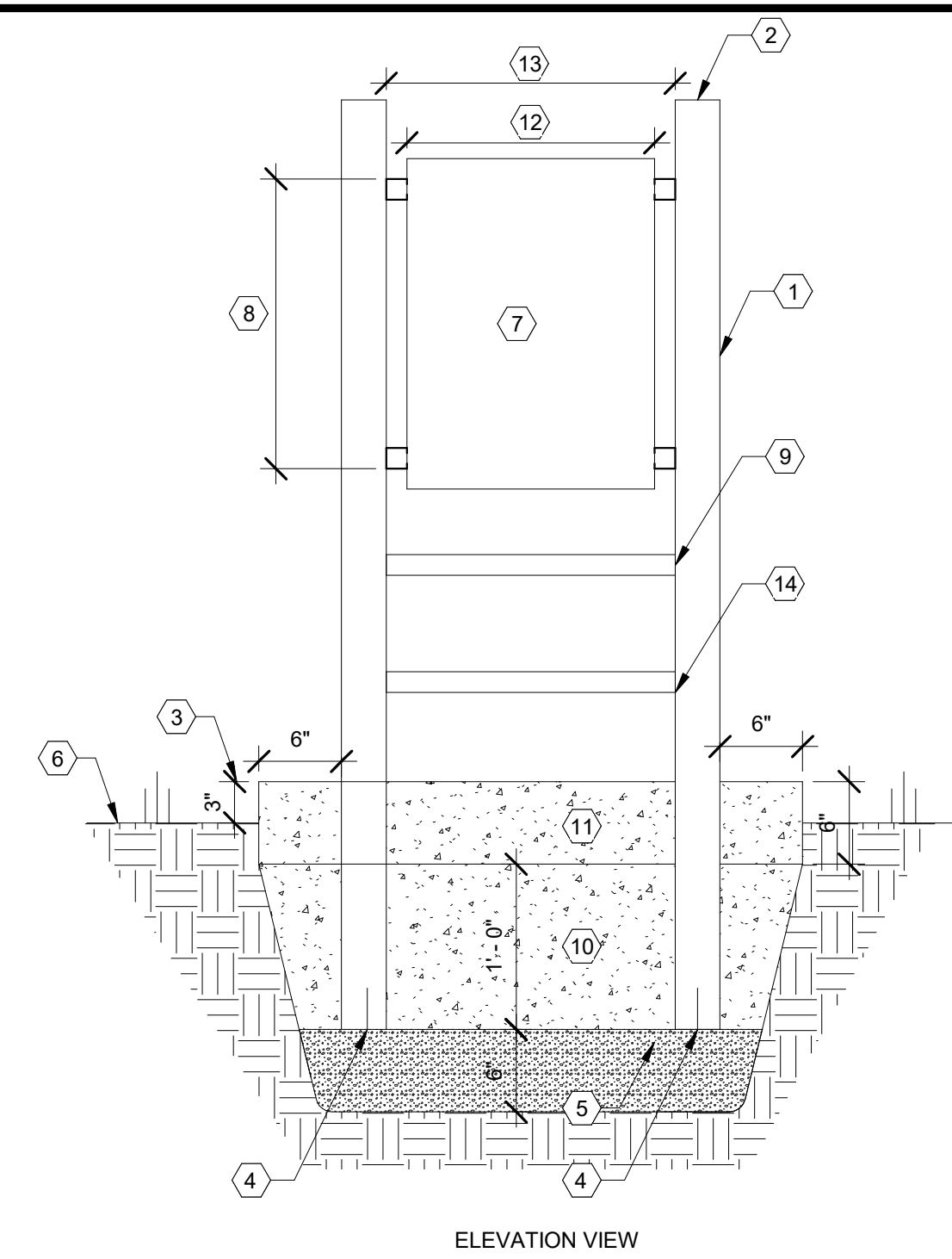
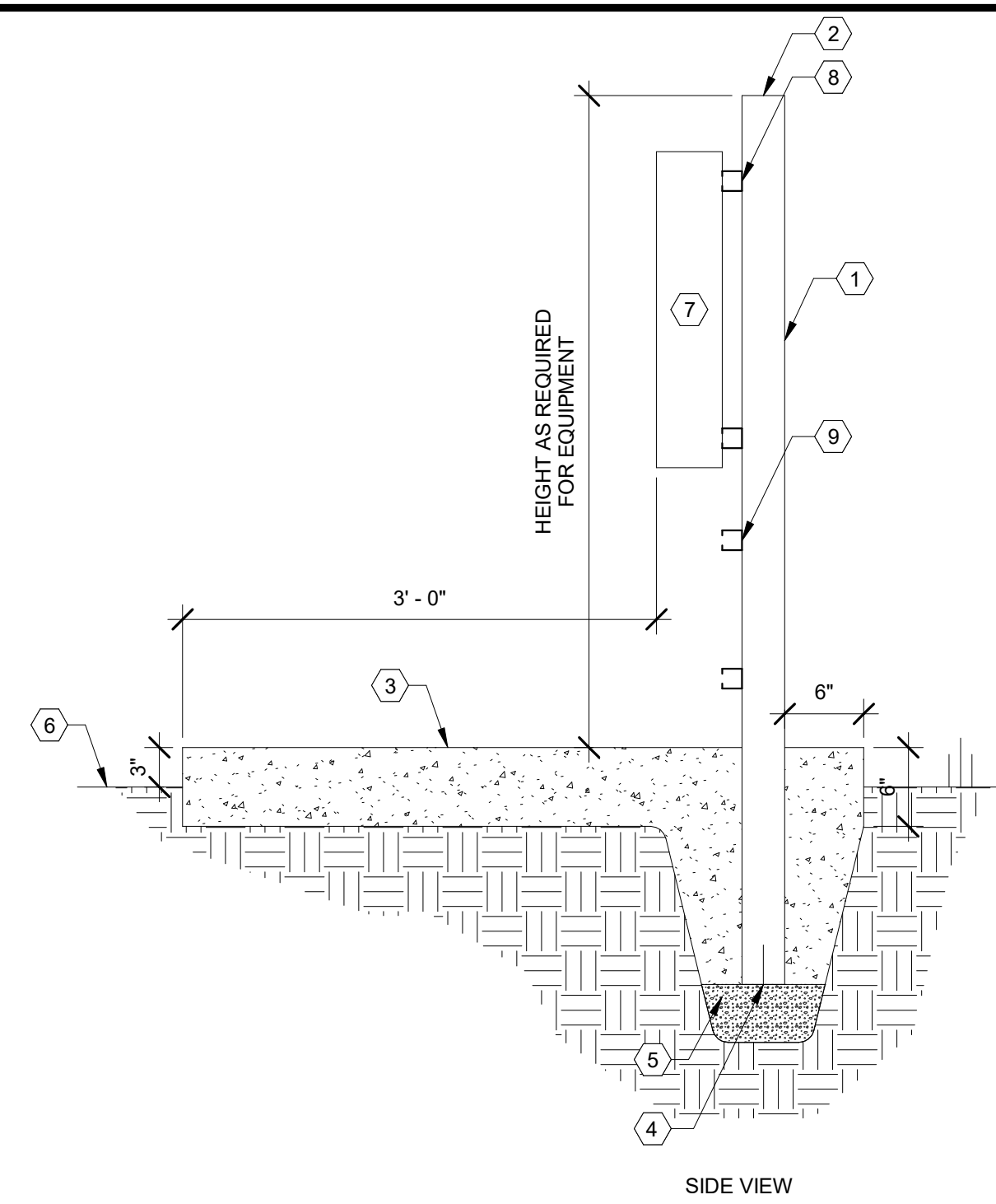


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ENGINEERS
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COOKEVILLE, TN 38501
TEL: (931) 526-5143
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No.	Date	Description

SHEET: E0.2	TITLE: ELECTRICAL DETAILS	JOB NO.: 23008	DATE: 2-28-23
	DWN BY: JIC		

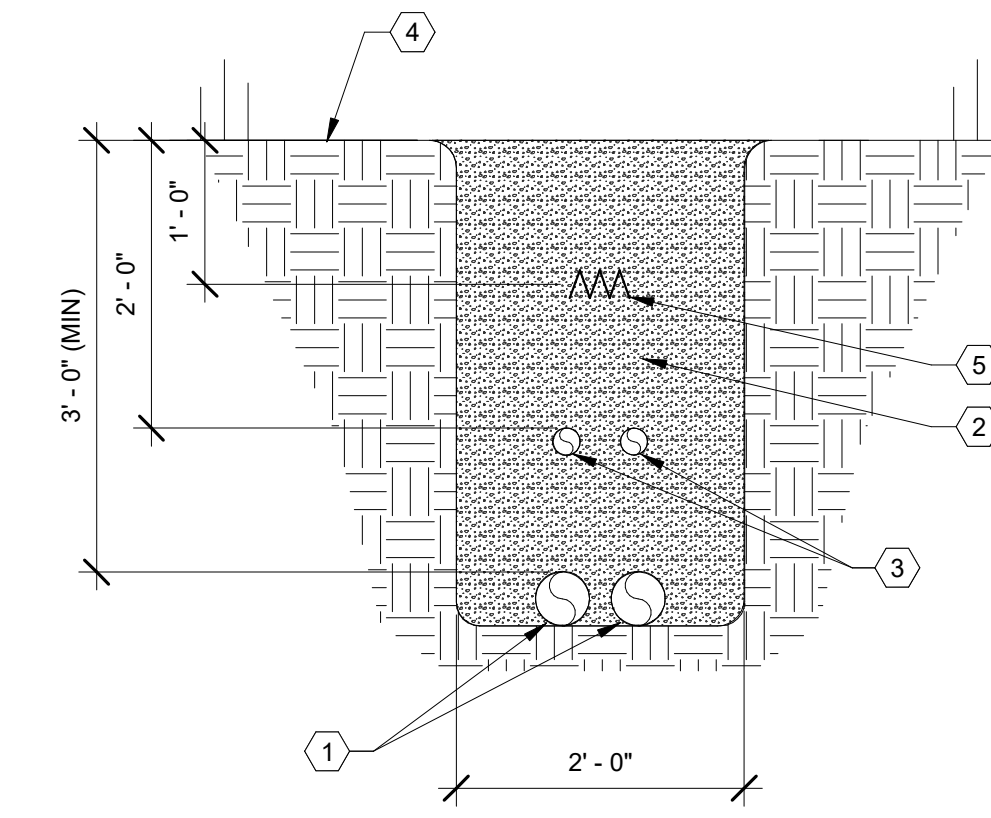
PRELIMINARY
SET NOT FOR
CONSTRUCTION



ELECTRICAL NOTES

- NUMBERED NOTES
- 3-1/4" GALVANIZED SQUARE POST.
 - PLASTIC CAP.
 - EQUIPMENT PAD.
 - OPEN BOTTOM.
 - 6" OF GRADE #57 GRAVEL.
 - FINISHED GRADE.
 - ELECTRICAL EQUIPMENT PER PLANS.
 - UNISTRUT FOR EQUIPMENT MOUNTING AS REQUIRED. COORDINATE UNISTRUT SPACING WITH EQUIPMENT MOUNTING HOLES.
 - UNISTRUT FOR CONDUIT SUPPORT INSTALLED WITHIN 12" OF EQUIPMENT.
 - POLE BASE SUPPORT.
 - SLAB.
 - EQUIPMENT WIDTH VARIES.
 - STRUCTURE WIDTH SHALL BE 4" WIDER THAN WIDTH OF EQUIPMENT.
 - IF SPACE BETWEEN FIRST UNISTRUT AND SLAB IS GREATER THAN 36", INSTALL SECOND UNISTRUT EQUIDISTANT.

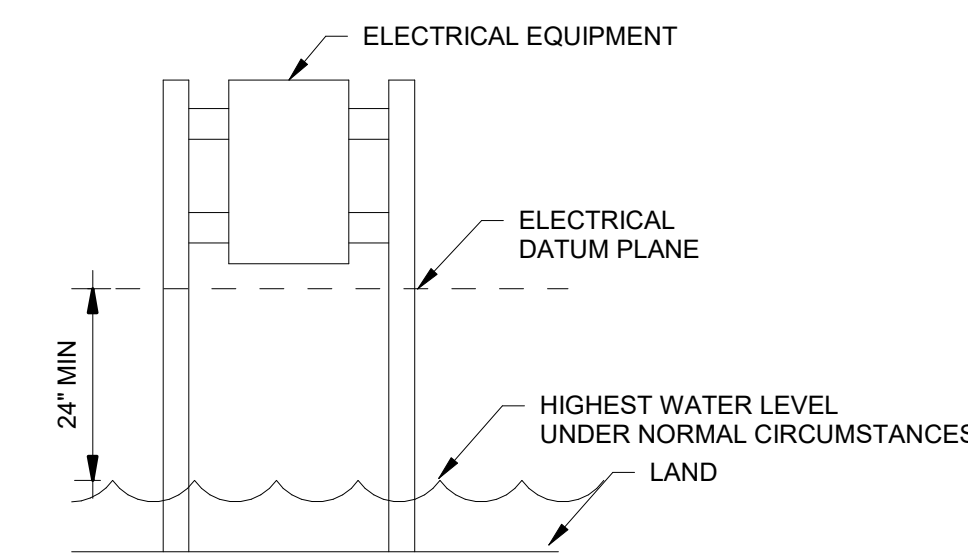
1 POST MOUNT DTL
E0.3 NOT TO SCALE



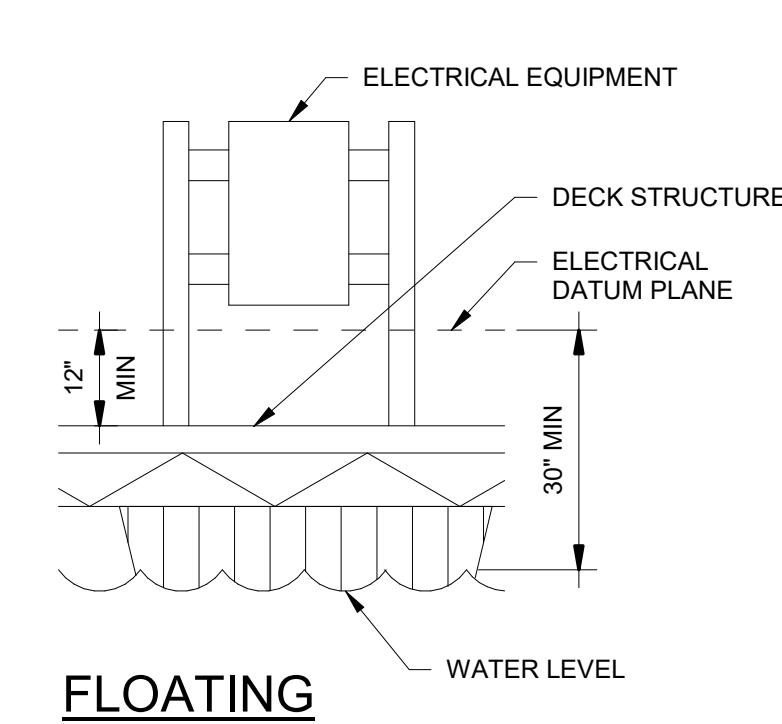
2 36" DITCH DTL
E0.3 NOT TO SCALE

ELECTRICAL NOTES

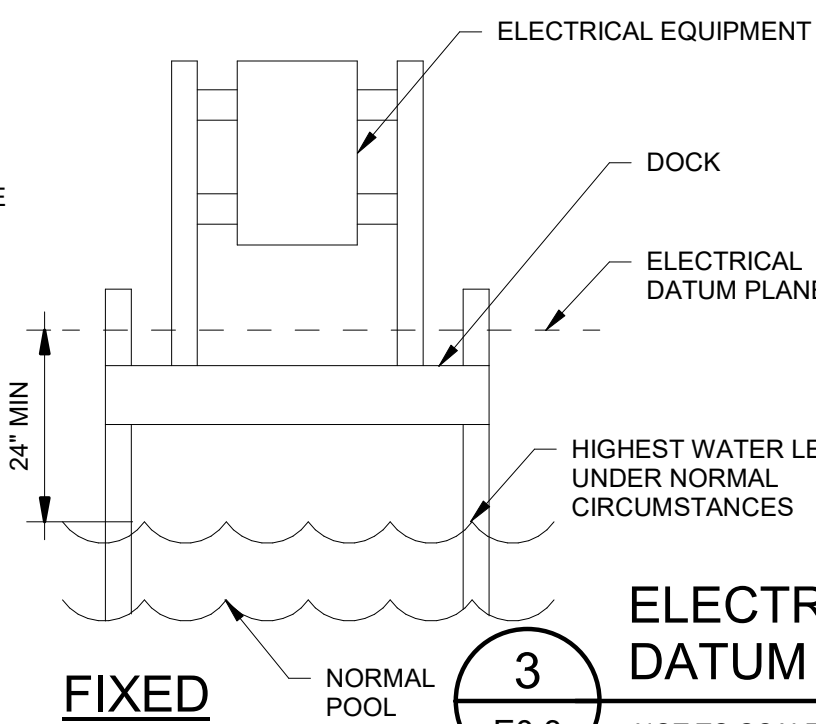
- NUMBERED NOTES
- SCHD 40 PVC SERVICE CONDUITS AS REQUIRED.
 - MACHINE COMPACTED GRAVEL FILL FOR AREAS WHEN CROSSING DRIVEWAYS, ROADS, AND PARKING LOTS. DIRT FILL AND COMPACT ALL OTHER AREAS.
 - COMMUNICATION CONDUITS AS REQUIRED.
 - FINISH GRADE.
 - WARNING TAPE.



LAND NOT SUBJECT TO TIDES



FLOATING

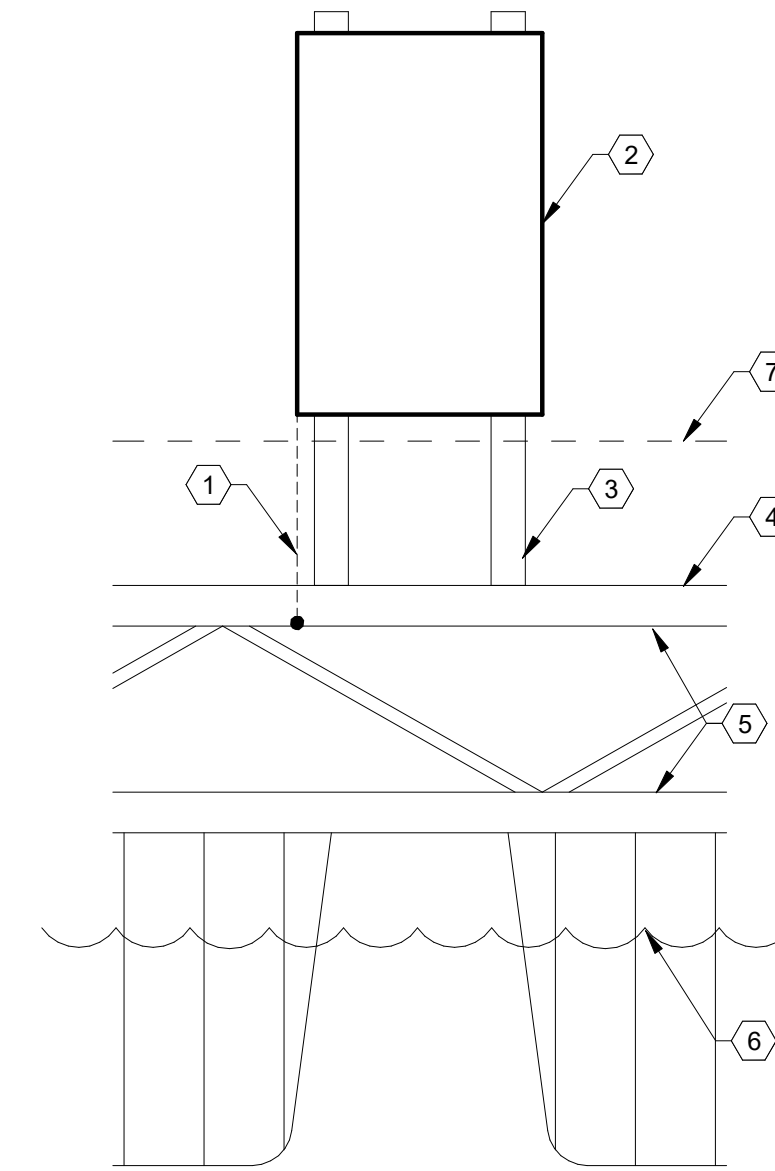


FIXED

3 ELECTRICAL DATUM PLANE DTL
E0.3 NOT TO SCALE

ELECTRICAL NOTES

- GENERAL NOTES
- A ALL ELECTRICAL CONNECTIONS (WITH EXCEPTION TO GROUND BONDING TO DOCK STRUCTURE), ON FLOATING OR FIXED PIERS, SHALL BE ABOVE THE ELECTRICAL DATUM PLANE. BOTTOMS OF TRANSFORMERS SHALL NOT BE BELOW THE ELECTRICAL DATUM PLANE.



4 EQUIPMENT BONDING DTL
E0.3 NOT TO SCALE

ELECTRICAL NOTES

- NUMBERED NOTES
- BOND METAL DOCK STRUCTURE TO GROUND BUS OF EQUIPMENT INCLUDING SHORE POWER PEDESTALS.
 - ELECTRICAL EQUIPMENT.
 - SUPPORT STRUCTURE.
 - DECK.
 - DOCK STRUCTURE.
 - WATER LEVEL.
 - ELECTRICAL DATUM PLANE, SEE REFERENCED DETAIL.

ELECTRICAL UPGRADES FOR
CITY OF ROCKLAND
DOWNTOWN WATERFRONT MARINA
INFRASTRUCTURE
ROCKLAND, MAINE



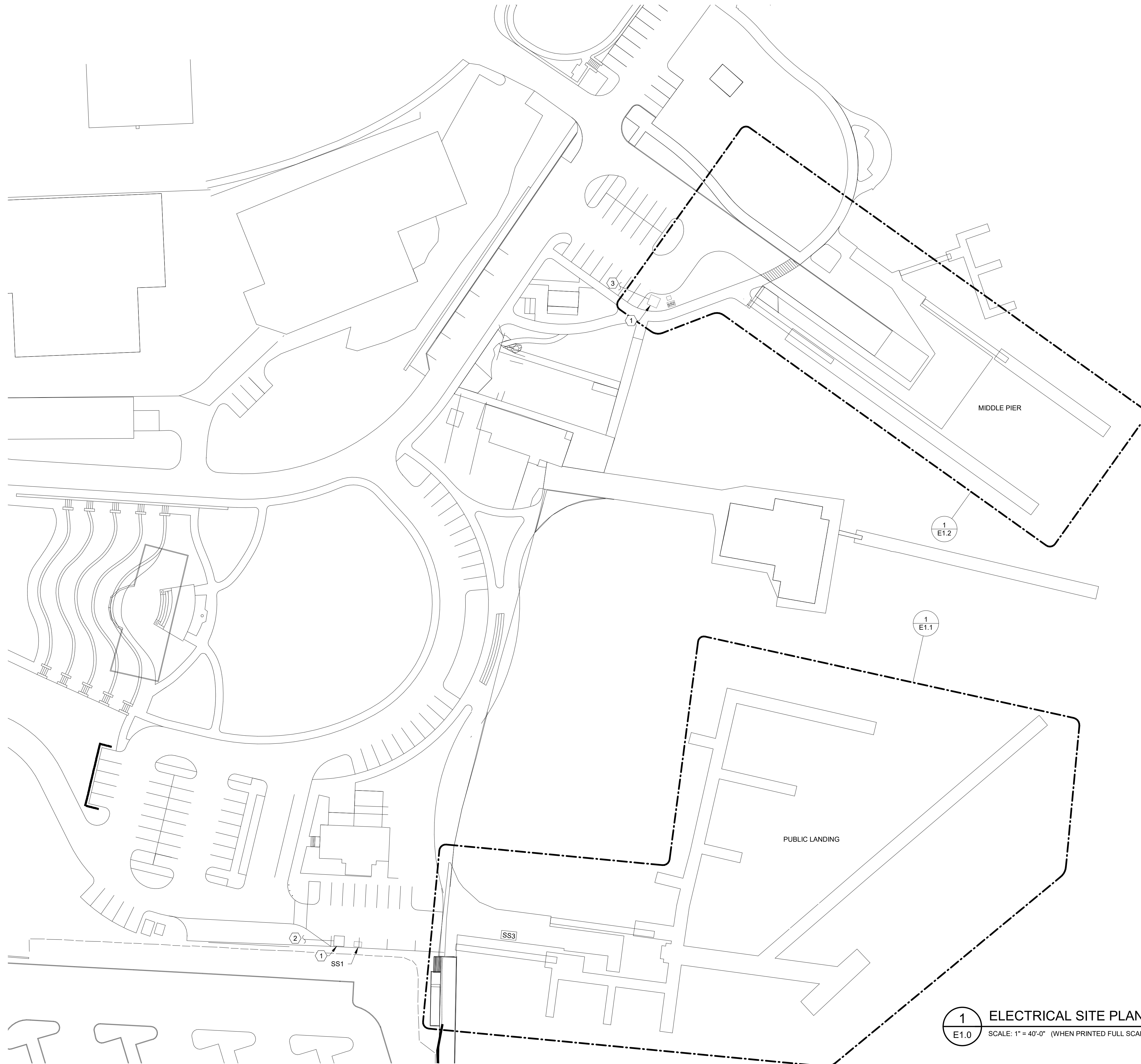
Revisions: Revisions indicated w/ Δ

E0.3	SHEET:	ELECTRICAL DETAILS
	TITLE:	
	JOB NO:	23008
	DATE:	2-28-23
DWN BY:		JJC

PRELIMINARY
SET NOT FOR
CONSTRUCTION

ELECTRICAL NOTES

- NUMBERED NOTES
 1 PROPOSED UTILITY TRANSFORMER LOCATION.
 2 TO 3Φ PRIMARY ON MAIN STREET.
 3 TO 3Φ PRIMARY IN HARBOR PARK.



1 ELECTRICAL SITE PLAN
 E1.0 SCALE: 1" = 40'-0" (WHEN PRINTED FULL SCALE ON 24"X36")

ELECTRICAL UPGRADES FOR
 CITY OF ROCKLAND
 DOWNTOWN WATERFRONT MARINA
 INFRASTRUCTURE
 ROCKLAND, MAINE



Revisions Indicated w/ Δ	
No.	Date

E1.0	SHEET: ELECTRICAL SITE PLAN
	TITLE: ELECTRICAL SITE PLAN
	JOB NO: 23008
	DATE: 2-28-23
DWN BY: JJC	

PRELIMINARY
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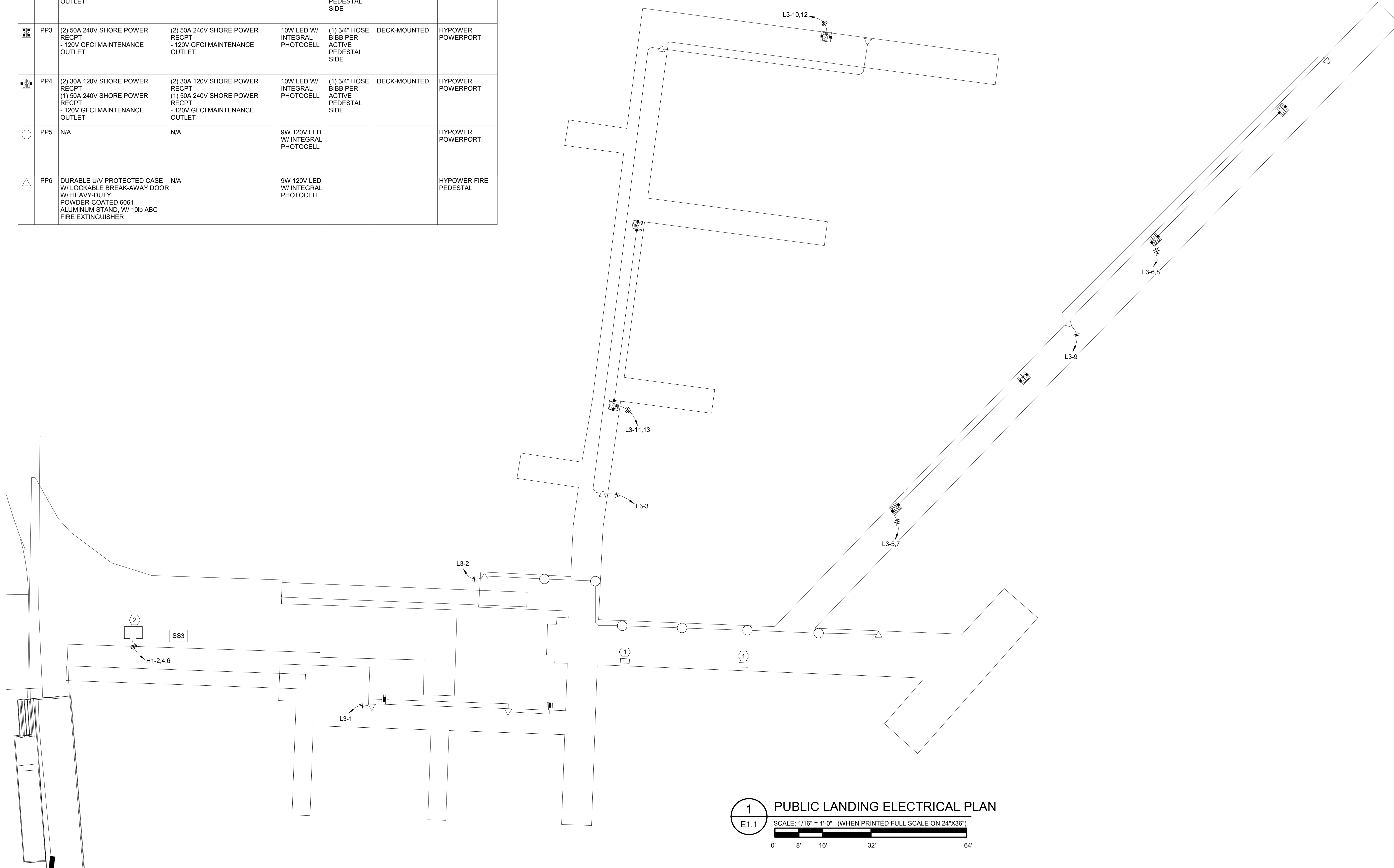
MARINA POWER PEDESTAL LEGEND

- OTHER NOTES:
- (1) KWH METER INCLUDED PER ACTIVE PEDESTAL SIDE UNLESS OTHERWISE NOTED
 - ALL SHORE POWER BREAKERS SHALL BE PROTECTED BY A LISTED INDIVIDUAL GFPE DEVICE SET TO TRIP BETWEEN 25mA - 30mA AND 250ms OR FASTER LOCATED IN THE SHORE POWER PEDESTAL
 - COORDINATE LIGHT COLOR AND/OR LENS COLOR WITH OWNER AND LOCAL REQUIREMENTS

LABEL	SIDE 1	SIDE 2	LIGHTING	OTHER UTILITIES	MOUNTING	MODEL #
PP1	(1) 50A 240V SHORE POWER RECPT (1) 30A 120V SHORE POWER RECPT - 120V GFCI MAINTENANCE OUTLET	(1) 50A 240V SHORE POWER RECPT (1) 30A 120V SHORE POWER RECPT - 120V GFCI MAINTENANCE OUTLET	10W LED W/ INTEGRAL PHOTOCELL	(1) 3/4" HOSE BIBB PER ACTIVE PEDESTAL SIDE	DECK-MOUNTED	HYPOWER POWERPORT
PP2	(1) 50A 240V RV RECPT (1) 30A 120V RV RECPT - 120V GFCI MAINTENANCE OUTLET	N/A	10W LED W/ INTEGRAL PHOTOCELL	(1) 3/4" HOSE BIBB PER ACTIVE PEDESTAL SIDE	PAD-MOUNTED	HYPOWER POWERPORT
PP3	(2) 50A 240V SHORE POWER RECPT - 120V GFCI MAINTENANCE OUTLET	(2) 50A 240V SHORE POWER RECPT - 120V GFCI MAINTENANCE OUTLET	10W LED W/ INTEGRAL PHOTOCELL	(1) 3/4" HOSE BIBB PER ACTIVE PEDESTAL SIDE	DECK-MOUNTED	HYPOWER POWERPORT
PP4	(2) 30A 120V SHORE POWER RECPT (1) 50A 240V SHORE POWER RECPT - 120V GFCI MAINTENANCE OUTLET	(2) 30A 120V SHORE POWER RECPT (1) 50A 240V SHORE POWER RECPT - 120V GFCI MAINTENANCE OUTLET	10W LED W/ INTEGRAL PHOTOCELL	(1) 3/4" HOSE BIBB PER ACTIVE PEDESTAL SIDE	DECK-MOUNTED	HYPOWER POWERPORT
PP5	N/A	N/A	9W 120V LED W/ INTEGRAL PHOTOCELL			HYPOWER POWERPORT
PP6	DURABLE UV PROTECTED CASE W/ LOCKABLE BREAK-AWAY DOOR W/ HEAVY-DUTY, POWDER-COATED 6061 ALUMINUM STAND, W/ 10lb ABC FIRE EXTINGUISHER	N/A	9W 120V LED W/ INTEGRAL PHOTOCELL			HYPOWER FIRE PEDESTAL

ELECTRICAL NOTES

- NUMBERED NOTES
- 100KW DC FAST CHARGING DISPENSER. ROUTE 2000V RATED DC CIRCUIT TO POWER BOX.
 - 200KW POWER BOX FOR DUAL DC CHARGING DISPENSERS.



1 PUBLIC LANDING ELECTRICAL PLAN
 E.1.1 SCALE: 1/16" = 1'-0" (WHEN PRINTED FULL SCALE ON 24"X36")
 0' 8' 16' 32' 64'

**ELECTRICAL UPGRADES FOR
 CITY OF ROCKLAND
 DOWNTOWN WATERFRONT MARINA
 INFRASTRUCTURE
 ROCKLAND, MAINE**

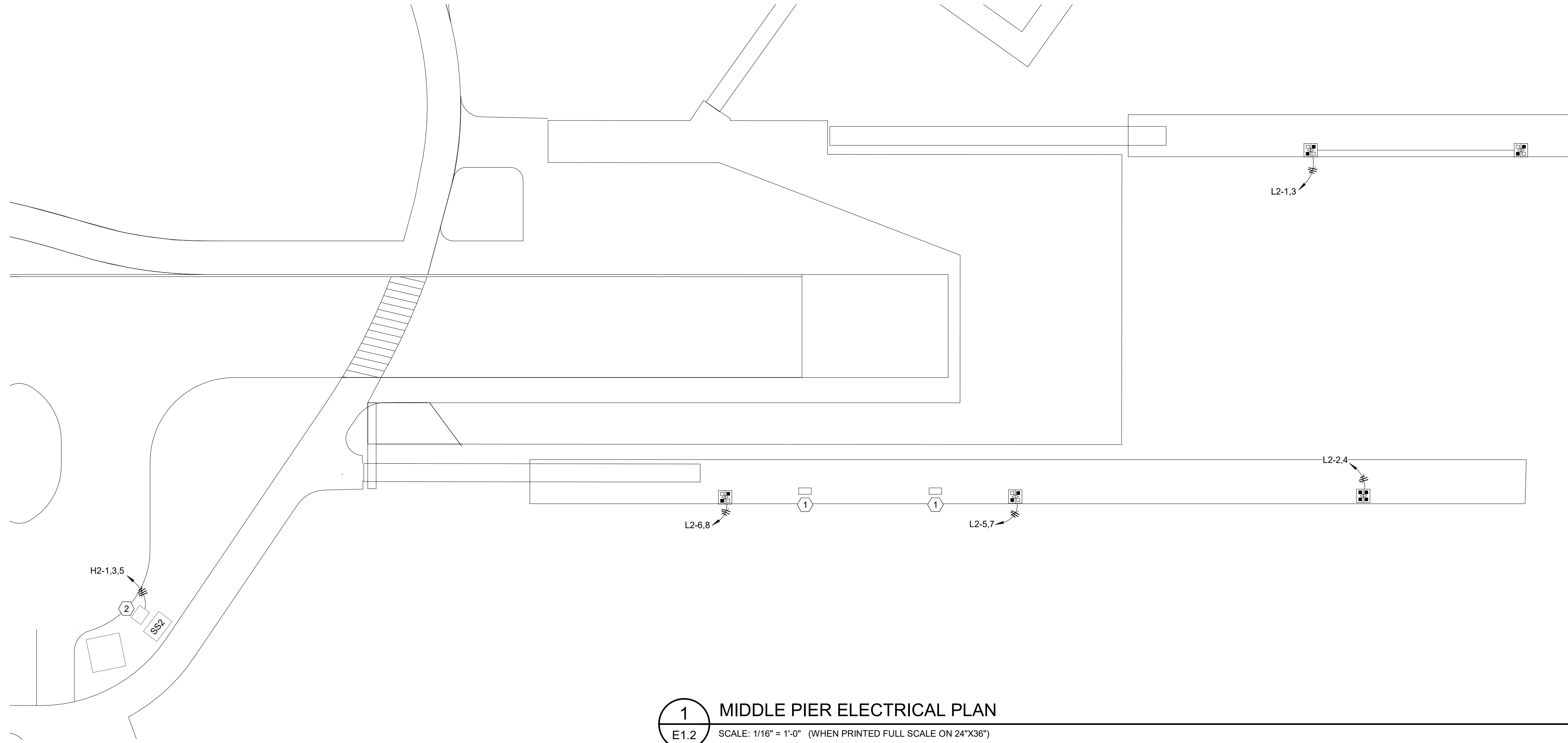


Revisions: Revisions indicated w/

No.	Date	Description

E1.1	SHEET:	PUBLIC LANDING - ELECTRICAL PLAN
	TITLE:	ELECTRICAL PLAN
	JOB NO:	23008
	DATE:	2-28-23
	DWN BY:	JLC

**PRELIMINARY
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 CONSTRUCTION**



ELECTRICAL NOTES

- NUMBERED NOTES
- 1 100kW DC FAST CHARGING DISPENSER. ROUTE 2000V RATED DC CIRCUIT TO POWER BOX.
 - 2 200kW POWER BOX FOR DUAL DC CHARGING DISPENSERS.

1 MIDDLE PIER ELECTRICAL PLAN
 E1.2 SCALE: 1/16" = 1'-0" (WHEN PRINTED FULL SCALE ON 24"x36")

ELECTRICAL UPGRADES FOR
 CITY OF ROCKLAND
 DOWNTOWN WATERFRONT MARINA
 INFRASTRUCTURE
 ROCKLAND, MAINE



Revisions Indicated w/ Δ	
No.	Description

E1.2	SHEET: MIDDLE PIER - ELECTRICAL PLAN
	TITLE: MIDDLE PIER - ELECTRICAL PLAN
JOB NO: 23008	DATE: 2-28-23
DWN BY: JJC	

PRELIMINARY
 SET NOT FOR
 CONSTRUCTION

BRANCH PANEL: H1

LOCATION:
SUPPLY FROM:
MOUNTING: SURFACE
ENCLOSURE: SS1

TYPE: SQUARE - D I-LINE SER
VOLTS: 277/480 Wye
PHASES: 3
WIRES: 4

A.I.C. RATING: COORDINATE
MAINS TYPE: MCB
MAINS RATING: 600 A
MCB RATING: 600 A

TRIP AMPS	POLES	FEED	NOTES	CIRCUIT DESCRIPTION	CKT	A	B	C	CKT	CIRCUIT DESCRIPTION	NOTES	FEED	POLES	TRIP AMPS
300 A	2	B300		T1	1	48.8	66.7		2					
					3				4	DC FAST CHARGER		C300	3	300 A
300 A	2	1G300	3	M3	5			85.8	66.7					
					7	85.4			8					
					9				10					
					11				12					
					13				14					
					15				16					
					17				18					
					19				20					
					21				22					
					23				24					
					25				26					
					27				28					
					29				30					
					31				32					
					33				34					
					35				36					
					37				38					
					39				40					
					41				42					

LOAD CLASSIFICATION	CONNECTED (kVA)	DEMAND FACTOR	EST. DEMAND (kVA)	PANEL TOTALS
Receptacle	0.4 kVA	100.00%	0.4 kVA	TOTAL CONN. LOAD (kVA): 468.6 kVA TOTAL EST. DEMAND (kVA): 471.6 kVA TOTAL CONN.: 564 A TOTAL EST. DEMAND: 567 A
Continuous	200.3 kVA	125.00%	250.3 kVA	
Non-Continuous	96.0 kVA	100.00%	96.0 kVA	
Metered Shore Power	168.0 kVA	72.00%	121.0 kVA	
Maint. Recept.	4.0 kVA	100.00%	4.0 kVA	

- BREAKER NOTES (REFERENCED IN NOTES COLUMN):**
- GFCI
 - COMBINATION AFCI
 - SHUNT TRIP - REFER TO GFM WIRING DETAIL
 - 30mA GFPE
 - TAP BLOCK
- CIRCUIT NOTES (REFERENCED IN NOTES COLUMN):**
A. CONTINUOUS METAL RACEWAY

CIRCUIT SCHEDULE

CKT #	DESCRIPTION	VD %	GFPE TRIP (mA)	GFPE TIME (ms)
1,3	T1	0.05%	N/A	N/A
2,4,6	DC FAST CHARGER	0.43%	90-100	400
5,7	M3	0.90%	90-100	400

BRANCH PANEL: L1

LOCATION:
SUPPLY FROM: T1
MOUNTING: SURFACE
ENCLOSURE: SS1

TYPE: SQUARE - D I-LINE
VOLTS: 120/240 Single
PHASES: 1
WIRES: 3

A.I.C. RATING: COORDINATE
MAINS TYPE: MCB
MAINS RATING: 600 A
MCB RATING: 600 A

TRIP AMPS	POLES	FEED	NOTES	CIRCUIT DESCRIPTION	CKT	A	B	CKT	CIRCUIT DESCRIPTION	NOTES	FEED	POLES	TRIP AMPS
20 A	1	A20		G1	1	0.1	12.2	2					
					3			4	RV PEDESTAL		B100	2	100 A
100 A	2	B100		RV PEDESTAL	5	12.2	12.2	6					
					7			8	RV PEDESTAL		B150	2	100 A
100 A	2	B175		RV PEDESTAL	9	12.2	12.2	10					
					11			12					
					13			14					
					15			16					
					17			18					
					19			20					
					21			22					
					23			24					
					25			26					
					27			28					
					29			30					
					31			32					
					33			34					
					35			36					
					37			38					
					39			40					
					41			42					

LOAD CLASSIFICATION	CONNECTED (kVA)	DEMAND FACTOR	EST. DEMAND (kVA)	PANEL TOTALS
Continuous	0.1 kVA	125.00%	0.1 kVA	TOTAL CONN. LOAD (kVA): 97.5 kVA TOTAL EST. DEMAND (kVA): 97.5 kVA TOTAL CONN.: 406 A TOTAL EST. DEMAND: 406 A
Non-Continuous	96.0 kVA	100.00%	96.0 kVA	
Maint. Recept.	1.4 kVA	100.00%	1.4 kVA	

- BREAKER NOTES (REFERENCED IN NOTES COLUMN):**
- GFCI
 - COMBINATION AFCI
 - SHUNT TRIP - REFER TO GFM WIRING DETAIL
 - 30mA GFPE
 - TAP BLOCK
- CIRCUIT NOTES (REFERENCED IN NOTES COLUMN):**
A. CONTINUOUS METAL RACEWAY

CIRCUIT SCHEDULE

CKT #	DESCRIPTION	VD %	GFPE TRIP (mA)	GFPE TIME (ms)
2,4	RV PEDESTAL	1.61%	90-100	400
3,5	RV PEDESTAL	3.36%	90-100	400
6,8	RV PEDESTAL	3.56%	90-100	400
7,9	RV PEDESTAL	3.72%	90-100	400

BRANCH PANEL: L3

LOCATION:
SUPPLY FROM: T3
MOUNTING: SURFACE
ENCLOSURE: SS3

TYPE: SQUARE - D I-LINE
VOLTS: 120/240 Single
PHASES: 1
WIRES: 3

A.I.C. RATING: COORDINATE
MAINS TYPE: MCB
MAINS RATING: 600 A
MCB RATING: 600 A

TRIP AMPS	POLES	FEED	NOTES	CIRCUIT DESCRIPTION	CKT	A	B	CKT	CIRCUIT DESCRIPTION	NOTES	FEED	POLES	TRIP AMPS
20 A	1	1G60		MAINT RECEPTS AND FIRE PEDESTALS	1	0.4	0.1	2	LIGHT BOLLARDS		1G60	1	20 A
20 A	1	1G60		FIRE PEDESTALS	3		0.0	0.1	4	G3	A20	1	20 A
200 A	2	1G250	3	METERED SHORE POWER	5	24.4	24.4	6	METERED SHORE POWER				
					7		24.4	24.4	8				
20 A	1	1G60	4	FIRE PEDESTALS	9	0.0	12.2	10					
					11			12	METERED SHORE POWER		1G175	2	100 A
200 A	2	1G175	3	METERED SHORE POWER	13	24.4	24.4	14					
					15			16					
					17			18					
					19			20					
					21			22					
					23			24					
					25			26					
					27			28					
					29			30					
					31			32					
					33			34					
					35			36					
					37			38					
					39			40					
					41			42					

LOAD CLASSIFICATION	CONNECTED (kVA)	DEMAND FACTOR	EST. DEMAND (kVA)	PANEL TOTALS
Receptacle	0.4 kVA	100.00%	0.4 kVA	TOTAL CONN. LOAD (kVA): 171.1 kVA TOTAL EST. DEMAND (kVA): 124.1 kVA TOTAL CONN.: 713 A TOTAL EST. DEMAND: 517 A
Continuous	0.2 kVA	125.00%	0.3 kVA	
Non-Continuous	0.0 kVA	0.00%	0.0 kVA	
Metered Shore Power	168.0 kVA	72.00%	121.0 kVA	
Maint. Recept.	2.5 kVA	100.00%	2.5 kVA	

- BREAKER NOTES (REFERENCED IN NOTES COLUMN):**
- GFCI
 - COMBINATION AFCI
 - SHUNT TRIP - REFER TO GFM WIRING DETAIL
 - 30mA GFPE
 - TAP BLOCK
- CIRCUIT NOTES (REFERENCED IN NOTES COLUMN):**
A. CONTINUOUS METAL RACEWAY

CIRCUIT SCHEDULE

DESCRIPTION	FEED	VD %	GFPE TRIP (mA)	GFPE TIME (ms)
MAINT RECEPTS AND FIRE PEDESTALS	1G60	1.76%	90-100	200
LIGHT BOLLARDS	1G60	0.59%	90-100	200
FIRE PEDESTALS	1G60	0.36%	90-100	200
METERED SHORE POWER	1G250	3.76%	90-100	400
METERED SHORE POWER	1G300	3.97%	90-100	400
FIRE PEDESTALS	1G60	0.31%	90-100	200
METERED SHORE POWER	1G175	3.58%	90-100	400
METERED SHORE POWER	1G175	3.87%	90-100	400

ELECTRICAL UPGRADES FOR
CITY OF ROCKLAND
DOWNTOWN WATERFRONT MARINA
INFRASTRUCTURE
ROCKLAND, MAINE



Revisions:	
No.	Description

E2.1	PANEL SCHEDULES	SHEET:	DATE: 2-28-23
		TITLE:	DWN BY: J.C
		JOB NO: 23008	

PRELIMINARY
SET NOT FOR
CONSTRUCTION

BRANCH PANEL: H2

LOCATION:
SUPPLY FROM:
MOUNTING: SURFACE
ENCLOSURE: SS2

TYPE: SQUARE-D I-LINE SER
VOLTS: 277/480 Wye
PHASES: 3
WIRES: 4

A.I.C. RATING: COORDINATE
MAINS TYPE: MCB
MAINS RATING: 600 A
MCB RATING: 600 A

TRIP AMPS	POLES	FEED	NOTES	CIRCUIT DESCRIPTION	CKT	A	B	C	CKT	CIRCUIT DESCRIPTION	NOTES	FEED	POLES	TRIP AMPS
300 A	3	3G300		DC FAST CHARGER	1	66.7	73.0		2					
					3			66.7	4	T2		C300	2	300 A
					5				6					
					7				8					
					9			66.7	10					
					11				12					
					13				14					
					15				16					
					17				18					
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					21				22					
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					35				36					
					37				38					
					39				40					
					41				42					

LOAD CLASSIFICATION	CONNECTED (kVA)	DEMAND FACTOR	EST. DEMAND (kVA)	PANEL TOTALS
Continuous	200.0 kVA	125.00%	250.1 kVA	
Non-Continuous	0.0 kVA	0.00%	0.0 kVA	
Metered Shore Power	144.0 kVA	72.00%	103.7 kVA	
Maint. Recept.	1.8 kVA	100.00%	1.8 kVA	
TOTAL LOAD:	345.8 kVA		355.6 kVA	TOTAL CONN. LOAD (kVA): 345.8 kVA
				TOTAL EST. DEMAND (kVA): 355.6 kVA
				TOTAL CONN.: 416 A
				TOTAL EST. DEMAND: 428 A

BREAKER NOTES (REFERENCED IN NOTES COLUMN):
 1. GFCI
 2. COMBINATION AFCI
 3. SHUNT TRIP - REFER TO GFM WIRING DETAIL
 4. 30mA GFPE
 5. TAP BLOCK

CIRCUIT NOTES (REFERENCED IN NOTES COLUMN):
 A. CONTINUOUS METAL RACEWAY

BRANCH PANEL: L2

LOCATION:
SUPPLY FROM: T2
MOUNTING: SURFACE
ENCLOSURE: SS2

TYPE: SQUARE - D I-LINE
VOLTS: 120/240 Single
PHASES: 1
WIRES: 3

A.I.C. RATING: COORDINATE
MAINS TYPE: MCB
MAINS RATING: 600 A
MCB RATING: 600 A

TRIP AMPS	POLES	FEED	NOTES	CIRCUIT DESCRIPTION	CKT	A	B	CKT	CIRCUIT DESCRIPTION	NOTES	FEED	POLES	TRIP AMPS
200 A	2	1G250	3	METERED SHORE POWER	1	24.4	24.2	2	METERED SHORE POWER	3	1G250	2	200 A
					3			4					
100 A	2	1G125	3	METERED SHORE POWER	5	12.2	12.2	6	METERED SHORE POWER	3	1G100	2	100 A
					7			8					
20 A	1	A20		G2	9	0.1		10					
					11			12					
					13			14					
					15			16					
					17			18					
					19			20					
					21			22					
					23			24					
					25			26					
					27			28					
					29			30					
					31			32					
					33			34					
					35			36					
					37			38					
					39			40					
					41			42					

LOAD CLASSIFICATION	CONNECTED (kVA)	DEMAND FACTOR	EST. DEMAND (kVA)	PANEL TOTALS
Continuous	0.0 kVA	125.00%	0.1 kVA	
Non-Continuous	0.0 kVA	0.00%	0.0 kVA	
Metered Shore Power	144.0 kVA	72.00%	103.7 kVA	
Maint. Recept.	1.8 kVA	100.00%	1.8 kVA	
TOTAL LOAD:	144.0 kVA		105.6 kVA	TOTAL CONN. LOAD (kVA): 145.8 kVA
				TOTAL EST. DEMAND (kVA): 105.6 kVA
				TOTAL CONN.: 608 A
				TOTAL EST. DEMAND: 440 A

BREAKER NOTES (REFERENCED IN NOTES COLUMN):
 1. GFCI
 2. COMBINATION AFCI
 3. SHUNT TRIP - REFER TO GFM WIRING DETAIL
 4. 30mA GFPE
 5. TAP BLOCK

CIRCUIT NOTES (REFERENCED IN NOTES COLUMN):
 A. CONTINUOUS METAL RACEWAY

CIRCUIT SCHEDULE

CKT #	DESCRIPTION	VD %	GFPE TRIP (mA)	GFPE TIME (ms)
1.3	METERED SHORE POWER	3.44%	90-100	400
2.4	METERED SHORE POWER	3.89%	90-100	400
5.7	METERED SHORE POWER	3.52%	90-100	400
6.8	METERED SHORE POWER	3.07%	90-100	400

GROUND FAULT MONITOR SCHEDULE

- MANUFACTURER SHALL PROGRAM ALL PARAMETERS PER THE DESIGN AND SHALL SET TIME AND DATE FOR THE PROJECT'S TIME ZONE
- SEE CIRCUIT SCHEDULES FOR TRIP SETTINGS
- CT SENSORS TO BE USED AS REQUIRED TO CONTROL SHUNT TRIP BREAKERS
- SPARE CHANNELS SHALL BE DISABLED
- USE SPECIFIED EQUIPMENT OR APPROVED EQUAL
- SHALL HAVE LOCKABLE DOOR
- SEE GROUND FAULT MONITOR WIRING DETAIL

LABEL	LOCATION	MANUFACTURER	RELAY MODEL	INPUTS / OUTPUTS	ENCLOSURE	NOTES
G1	SS1	BENDER	RCM420	1	SS1	LISTED ASSEMBLY
G3	SS2	BENDER	RCMS490	12	SS3	LISTED ASSEMBLY
G2	SS3	BENDER	RCMS490	12	SS2	LISTED ASSEMBLY

TRANSFORMER SCHEDULE

- USE SPECIFIED EQUIPMENT OR EQUAL

LABEL	LOCATION	MODEL	kVA	ENCLOSURE	TYPE	DOUBLE LUG	PRIMARY VOLTS	Φ WINDING	SECONDARY VOLTS	Φ WINDING
T1	PUBLIC LANDING	EE167S3H	167	SS1	DRY	N	480	1	240	1 CTR TAP
T2	MIDDLE PIER	EE167S3H	167	SS2	DRY	N	480	1	240	1 CTR TAP
T3	PUBLIC LANDING	EE167S3H	167	SS3	DRY	N	480	1	240	1 CTR TAP

SUB-STATION SCHEDULE

- NEMA 3R, ALUMINUM, WHITE
- USE AMERICAN MIDWEST POWER OR APPROVED EQUAL
- SEE ONE-LINE & SCHEDULES

SS1	TRANSFORMER	T1
	PANEL	H1
	PANEL	L1
	GFM	G1
SS2	TRANSFORMER	T2
	PANEL	H2
	PANEL	L2
	GFM	G2
SS3	TRANSFORMER	T3
	MCS	M3
	PANEL	L3
	GFM	G3

**ELECTRICAL UPGRADES FOR
 CITY OF ROCKLAND
 DOWNTOWN WATERFRONT MARINA
 INFRASTRUCTURE
 ROCKLAND, MAINE**

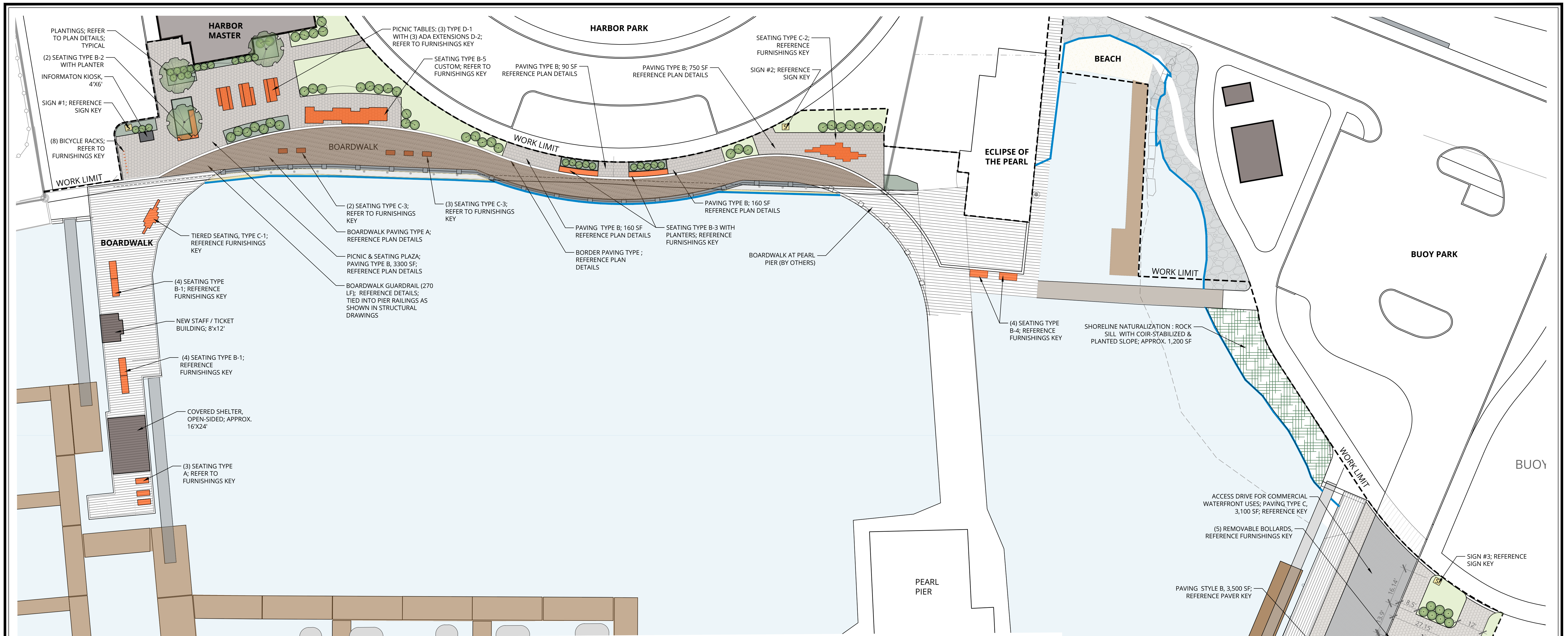


Revisions indicated w/

No.	Date	Description

E2.2
 SHEET: PANEL AND EQUIPMENT SCHEDULES
 TITLE:
 JOB NO.: 23008 DATE: 2-28-23
 DWN BY: JJC

**PRELIMINARY
 SET NOT FOR
 CONSTRUCTION**



FURNISHINGS KEY & NOTES:

KEY	TYPE/NAME	QTY.	MODEL NO.	NOTES / SPECIFICATIONS
BENCHES				
A	LOUNGER, ROUGH & READY	3	R&R-LNG-180-TH	FSC HARDWOOD, GALVANIZED STEEL
B-1	CLIFFHANGER BENCH, LOW BACK	8	CHP-FL18-264-TH	FREE-STANDING, LOW-BACK; FSC HARDWOOD, GALVANIZED STEEL BASE; BACK-TO-BACK
B-2	CLIFFHANGER BENCH W/PLANTER	2	CHP-FL18-264-TH	FREE-STANDING, LOW-BACK; FSC HARDWOOD, GALVANIZED STEEL BASE; W/CUSTOM PLANTER
B-3	CLIFFHANGER BENCH W/SHRUB TUB	4	CHP-FL18-264-TH	FREE-STANDING, LOW-BACK; FSC HARDWOOD, GALVANIZED STEEL BASE; W/SHRUB TUB
B-4	CLIFFHANGER FS BENCH, BACKLESS	4	CHP-FL13-264-TH	FREE-STANDING, BACKLESS; FSC HARDWOOD, GALVANIZED STEEL BASE; BACK-TO-BACK
B-5	CLIFFHANGER MULTILEVEL	1	CUSTOM	FREE-STANDING, BACKLESS; FSC HARDWOOD, GALVANIZED STEEL BASE; DESIGN TBD
C-1	DRIFTER STRUCTURE - SMALL	1	DB-STR-H1-500-160-TH	SMALL, SINGLE-LEVEL BENCH; FSC HARDWOOD, GALVANIZED STEEL BASE
C-2	DRIFTER BENCH - SHORT	5	DB-L2-120-TH	120CM (47") LONG BENCH; FSC HARDWOOD, GALVANIZED STEEL BASE
C-3	DRIFTER STRUCTURE - LARGE	2	DB-STR-H1-500-160-TH	SMALL, SINGLE-LEVEL BENCH; FSC HARDWOOD, GALVANIZED STEEL BASE
C-4	DRIFTER BENCH - LONG	6	DB-L2-300-TH	300CM (79") LONG BENCH; FSC HARDWOOD, GALVANIZED STEEL BASE; SEE PLANS
D-1	SOLID PICNIC TABLE	3	SOL-PS-6-300-TH	FREE-STANDING, 300 CM (118") LONG; FSC HARDWOOD, GALVANIZED STEEL BASE
D-2	SOLID PICNIC TABLE (ADA EXT)	3	SOL-PS-6-300-EXT-TH	EXTENSION FOR ADA SEATING
E-1	BICYCLE RACKS	8	ARC RACK MODEL	SURFACE MOUNTED, GALVANIZED STEEL FINISH
F-1	BOLLARDS	5	BOLLARD R-7551	DECORATIVE DUCTILE IRON, BLACK FINISH; REMOVABLE (PREMIUM RETRACTABLE) W/HARDWARE

1. MANUFACTURER FOR BENCHES & PICNIC TABLES (A-D): STREETLIFE AMERICA LLC; PHILADELPHIA, PA; US T 1-215-247-0148
2. MANUFACTURER FOR BICYCLE RACKS: DERO; NE REP: BOSTON, MA, T 1-617-869-5408
3. MANUFACTURER FOR BOLLARDS: RELIANCE FOUNDRY; SURRY, BC CANADA; T 1-877-789-3245
4. MANUFACTURER FOR FENCE: ATR TECHNOLOGIES, POMONA, CA; T 1-800-423-4148
5. SHOP DRAWINGS TO BE PREPARED FOR REVIEW & APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO ORDERING AND FABRICATION

PAVERS KEY & NOTES:

TYPE	PRODUCT	COLOR / FINISH	SIZE / DESCRIPTION
A	PROMENADE	CUSTOM	PLANK STYLE, RUNNING BOND; PEDESTRIAN & LIGHT VEHICLE RATED
B	LP UMBRIANO	FRENCH GRAY	SQUARE, RUNNING BOND AE; PEDESTRIAN RATED
C	LP UMBRIANO	FRENCH GRAY	SQUARE, CUT TO FIT CURVATURE; PEDESTRIAN RATED
D	IL CAMPO	GRANITE	RECTANGULAR, HERRING BONE; COMMERCIAL VEHICLE RATED

1. MANUFACTURER: UNILOCK NORTHEAST; T 1-508-277-4413
2. REFERENCE ELEVATIONS AND DETAILS FOR PRODUCT SPECIFICATIONS AND INSTALLATION REQUIREMENTS
3. A MINIMUM OF 3 SAMPLES IN EACH OF THE SPECIFIED COLORS & FINISHES TO BE PROVIDED FOR REVIEW AND APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.

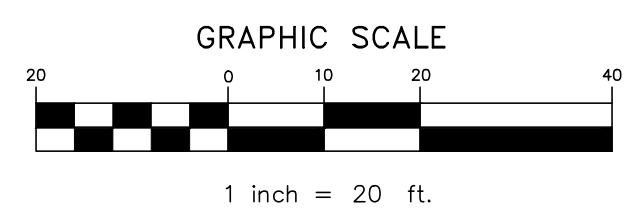
SIGN KEY & NOTES:

SIGN NO.	PANEL SIZE	SIGN LOCATION	DESCRIPTION
SIGN #1	1'-11" L X 11 1/2" W	PUBLIC LANDING	ENTRANCE & DIRECTIONAL SIGN: PUBLIC LANDING & HARBOR TRAIL
SIGN #2	1'-11" L X 11 1/2" W	HARBOR PARK	"BOARDWALK AT HARBOR PARK" ENTRANCE SIGN
SIGN #3	1'-11" L X 11 1/2" W	MIDDLE PIER	ENTRANCE & DIRECTIONAL SIGN: MIDDLE PIER & HARBOR TRAIL
SIGN #4	1'-11" L X 11 1/2" W	BUOY PARK (NIC)	PARK ENTRANCE & DIRECTIONAL SIGN: BUOY PARK & HARBOR TRAIL

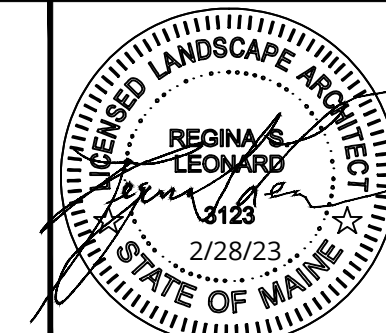
1. ALL SIGN PANELS SHALL BE MOUNTED ON GRANITE PIERS AT LOCATIONS SHOWN IN THE DRAWINGS.
2. REFERENCE ELEVATIONS AND DETAILS FOR SPECIFICATIONS, FABRICATION AND MOUNTING INFORMATION.
3. PANEL DESIGN AND CONTENTS ARE FOR GUIDANCE; CONTRACTOR SHALL WORK WITH A SIGN GRAPHICS COMPANY TO DEVELOP LAYOUT AND SHOP DRAWINGS FOR APPROVAL BY THE OWNER'S REPRESENTATIVE.



REVISIONS			
DRAFTED BY:	RSL	DATE:	XX
CHECKED BY:	MJS	DESCR.:	XX
PLAN DATE:	FEB 28, 2023		
		DESCR.:	



LANDSCAPE & MATERIALS PLAN

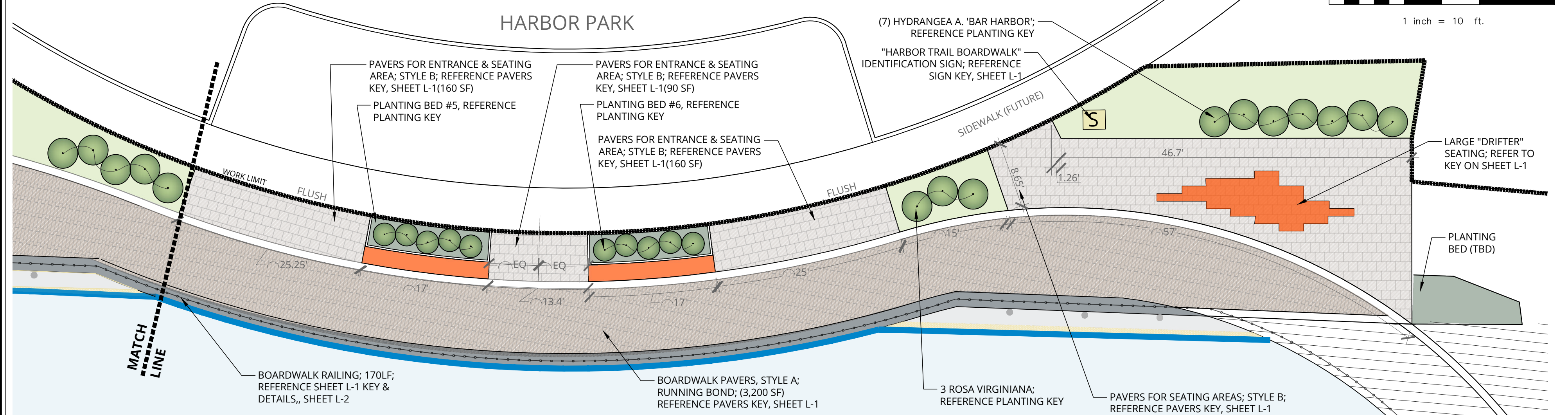
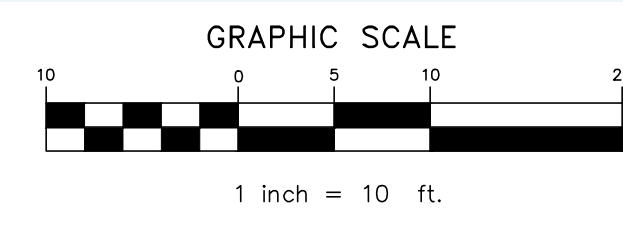


CITY OF ROCKLAND
 DOWNTOWN WATERFRONT MARINE INFRASTRUCTURE
 AT HARBOR AND BUOY PARKS
ROCKLAND, MAINE
 KNOX COUNTY

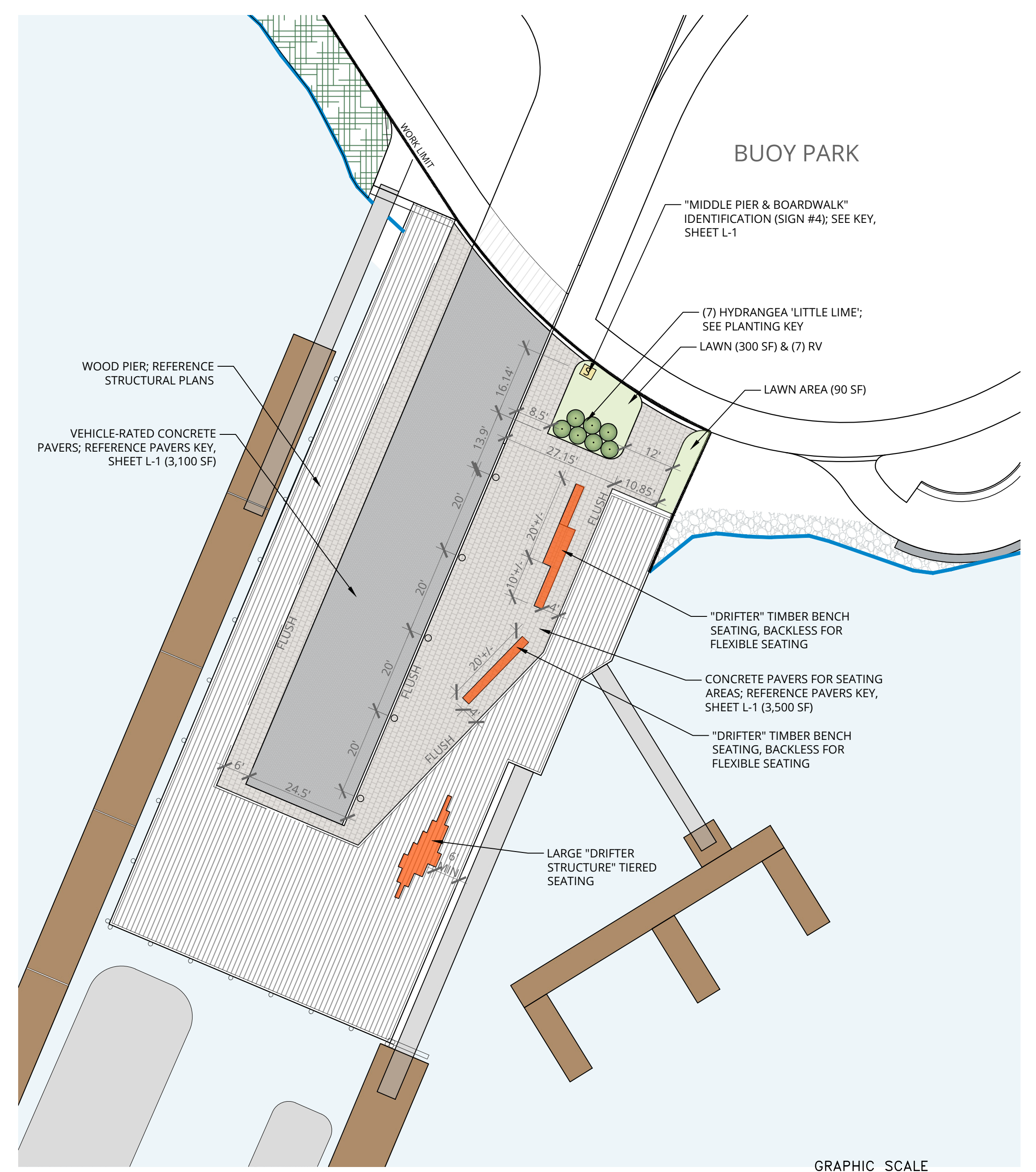
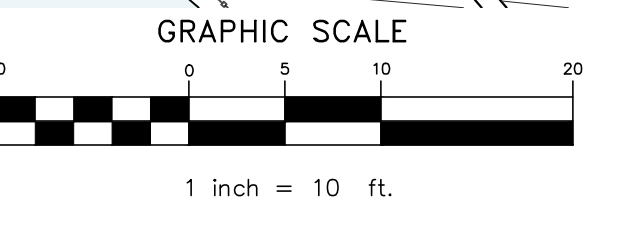
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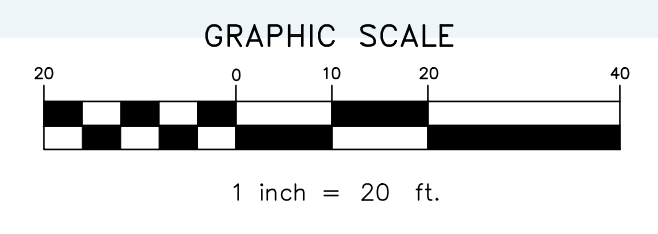
PLAN DETAIL - BOARDWALK (SOUTH)



PLAN DETAIL - BOARDWALK (NORTH)



PLAN DETAIL - MIDDLE PIER



PLANTING NOTES

1. ALL MATERIALS SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
2. IN THE CASE OF ANY DISCREPANCIES BETWEEN SPECIES AND QUANTITIES CALLED OUT IN THE PLANTING KEY AND THOSE SHOWN ON THE PLAN, QUANTITIES AND SPECIES SHOWN ON THE PLAN SHALL OVER-RIDE.
3. ALL PLANTING SHALL BE DONE IN ACCORDANCE WITH ACCEPTABLE HORTICULTURAL PRACTICES.
4. ALL PLANTS SUBJECT TO APPROVAL BY LANDSCAPE ARCHITECT. ALL SUBSTITUTIONS MUST BE SUBMITTED FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO ORDERING OR DELIVERY OF PLANT MATERIAL ON SITE. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY PLANTINGS THAT DO NOT CONFORM TO THE DRAWINGS OR SPECIFICATIONS OUTLINED HEREIN.
5. LANDSCAPE ARCHITECT SHALL APPROVE FINAL PLACEMENT OF ALL PLANT MATERIALS AND RESERVES THE RIGHT TO MAKE FIELD ADJUSTMENTS TO PLANTINGS AS NECESSARY BASED ON SITE CONDITIONS.
6. NO GRADING, SOIL DISTURBANCE, OR STORAGE OF MATERIALS OR EQUIPMENT SHALL OCCUR WITHIN THE DRIP-LINE OF EXISTING TREES UNLESS OTHERWISE SHOWN ON PLANS.
7. ANY EXCAVATION WITHIN SUCH AREAS SHALL BE PERFORMED WITH SPECIAL CARE.
8. PLANTING PITS AND BEDS SHALL CONSIST OF 3 PARTS FERTILE, FRIABLE LOAM AMENDED WITH 1 PART ORGANIC COMPOST, AS APPROVED BY THE LANDSCAPE ARCHITECT. PLANTING BEDS SHALL BE A MINIMUM DEPTH OF 12" OF PREPARED SOIL, AS NOTED.
9. FINISH GRADE OF PLANTINGS SHALL MATCH ADJACENT FINISH GRADES UNLESS OTHERWISE NOTED ON DRAWINGS OR DIRECTED AND/OR APPROVED BY THE LANDSCAPE ARCHITECT.
10. NO PLANT SHALL BE PUT INTO THE GROUND BEFORE ROUGH GRADING HAS BEEN FINISHED AND APPROVED BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE.
11. ALL PLANTINGS SHALL BE SET PLUMB UNLESS OTHERWISE SPECIFIED.
12. ALL PLANTINGS SHALL BE TOPPED WITH 3" OF SCREENED, COMPOSTED PINE BARK MULCH. SEE WRITTEN SPECIFICATIONS.
13. CONTRACTOR SHALL WATER ALL PLANTS THOROUGHLY TWICE DURING THE FIRST 24-HOUR PERIOD AFTER PLANTING. ALL PLANTS AND NEWLY GRASSED AREAS SHALL BE WATERED AS REQUIRED THEREAFTER TO ENSURE SURVIVAL AND GROWTH THROUGH THE FIRST GROWING SEASON.
14. PLANT MATERIAL SHALL BE GUARANTEED BY THE CONTRACTOR FOR A PERIOD OF ONE YEAR FROM THE DATE OF INSTALLATION. DURING THE ONE YEAR GUARANTEE, THE CONTRACTOR SHALL REPLACE, IN KIND, ANY DEAD, DISEASED, OR SUBSTANDARD PLANT MATERIAL AT NO COST TO THE OWNER. THE CONTRACTOR SHALL RECEIVE FINAL ACCEPTANCE FROM THE OWNER FOLLOWING THE ONE YEAR GUARANTEE, PROVIDED THE PROVISIONS OF THE PLANT GUARANTEE HAVE BEEN SATISFACTORILY MET.
15. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY TO ENSURE THAT ALL WORK IS PERFORMED IN COMPLIANCE WITH ALL STATE AND LOCAL REQUIREMENTS.
16. SPECIFIC DESIGN OF THE LIVING SHORELINE SEGMENT WILL BE DETERMINED DURING FINAL DESIGN IN CONSULTATION WITH THE MAINE STATE COASTAL PROGRAM AND GOVERNING AUTHORITIES.

PLANTING SCHEDULE (TOTAL SITE)

QTY.	KEY	BOTANICAL NAME	COMMON NAME	SIZE/COND.
3	CW	CRATAEGUS V. 'WINTER KING'	WINTER KING HAWTHORN	2-2.5" CAL
SHRUBS				
24	CX	CARYOPTERIS X. 'FIRST CHOICE'	FIRST CHOICE BLUE MIST SPIREA	#3 POT
12	HB	HYDRANGEA A. 'BAR HARBOR'	BAR HARBOR HYDRANGEA	#5 POT
9	HP	HYDRANGEA P. 'LITTLE LIME'	LITTLE LIME HYDRANGEA	#5 POT
6	HP	HYDRANGEA P. 'LITTLE QUICKFIRE'	LITTLE QUICKFIRE HYDRANGEA	#5 POT
10	PO	PHYSOCARPUS O. 'LITTLE DEVIL'	LITTLE DEVIL DWARF NINEBARK	#5 POT
10	SB	SPIRAEA B. 'PINK SPARKLER'	PINK SPARKLER BIRCHLEAF SPIREA	#3 POT
22	RV	ROSA VIRGINIANA	VIRGINIA ROSE	#5 POT
HERBACEOUS				
14	DG	DESCHAMPSIA C. 'GOLDTAU'	GOLDEN DEW TUFTED HAIR GRASS	#1 POT
36	NX	NEPETA G. 'SUMMER MAGIC'	SUMMER MAGIC CATMINT	#1 POT
15	HB	HEMEROCALLIS 'BIG TIME HAPPY'	BIG TIME HAPPY DAYLILY	#1 POT
10	SH	STACHYS M. 'HUMMELO'	HUMMELO LAMBS EARS	#1 POT

SEED MIXES

TURF AREAS: PARK MIX; ALLEN, STERLING, & LOTHURP, FALMOUTH, ME. TEL. 207-781-4142

PLANTING SCHEDULE FOR NUMBERED BEDS

QTY.	KEY	BOTANICAL NAME	COMMON NAME	SIZE/COND.
BED #1				
5	DG	DESCHAMPSIA C. 'GOLDTAU'	GOLDEN DEW TUFTED HAIR GRASS	#1 POT
9	NX	NEPETA G. 'SUMMER MAGIC'	SUMMER MAGIC CATMINT	#1 POT
3	SB	SPIRAEA B. 'PINK SPARKLER'	PINK SPARKLER BIRCHLEAF SPIREA	#3 POT
BED #2				
1	CW	CRATAEGUS V. 'WINTER KING'	WINTER KING HAWTHORN	2-2.5" CAL
9	DG	DESCHAMPSIA C. 'GOLDTAU'	GOLDEN DEW TUFTED HAIR GRASS	#1 POT
10	HB	HEMEROCALLIS 'BIG TIME HAPPY'	BIG TIME HAPPY DAYLILY	#1 POT
15	NX	NEPETA G. 'SUMMER MAGIC'	SUMMER MAGIC CATMINT	#1 POT
BED #3				
2	CW	CRATAEGUS V. 'WINTER KING'	WINTER KING HAWTHORN	2-2.5" CAL
24	CX	CARYOPTERIS X. 'FIRST CHOICE'	FIRST CHOICE BLUE MIST SPIREA	#3 POT
5	HB	HEMEROCALLIS 'BIG TIME HAPPY'	BIG TIME HAPPY DAYLILY	#1 POT
2	HP	HYDRANGEA P. 'LITTLE LIME'	LITTLE LIME HYDRANGEA	#5 POT
12	NX	NEPETA G. 'SUMMER MAGIC'	SUMMER MAGIC CATMINT	#1 POT
7	SB	SPIRAEA B. 'PINK SPARKLER'	PINK SPARKLER BIRCHLEAF SPIREA	#3 POT
10	SH	STACHYS M. 'HUMMELO'	HUMMELO LAMBS EARS	#1 POT

PLANTING SCHEDULE FOR NUMBERED BEDS, (CONT'D)

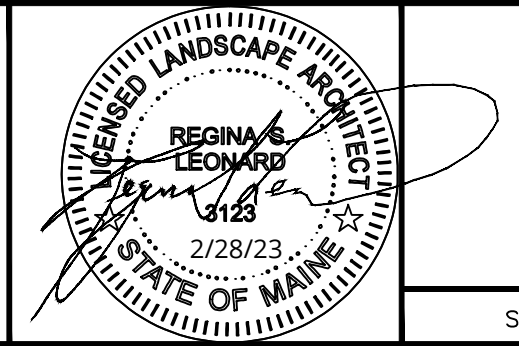
QTY.	KEY	BOTANICAL NAME	COMMON NAME	SIZE/COND.
BED #4				
7	CX	CARYOPTERIS X. 'FIRST CHOICE'	FIRST CHOICE BLUE MIST SPIREA	#3 POT
BED #5				
5	CX	CARYOPTERIS X. 'FIRST CHOICE'	FIRST CHOICE BLUE MIST SPIREA	#3 POT
BED #6				
5	CX	CARYOPTERIS X. 'FIRST CHOICE'	FIRST CHOICE BLUE MIST SPIREA	#3 POT



REVISIONS			
DRAFTED BY:	RSL	DATE:	XX
CHECKED BY:	MJS	DESCR.:	XX
PLAN DATE:		DATE:	
		DESCR.:	

DATE:	2/28/23
DESCR.:	

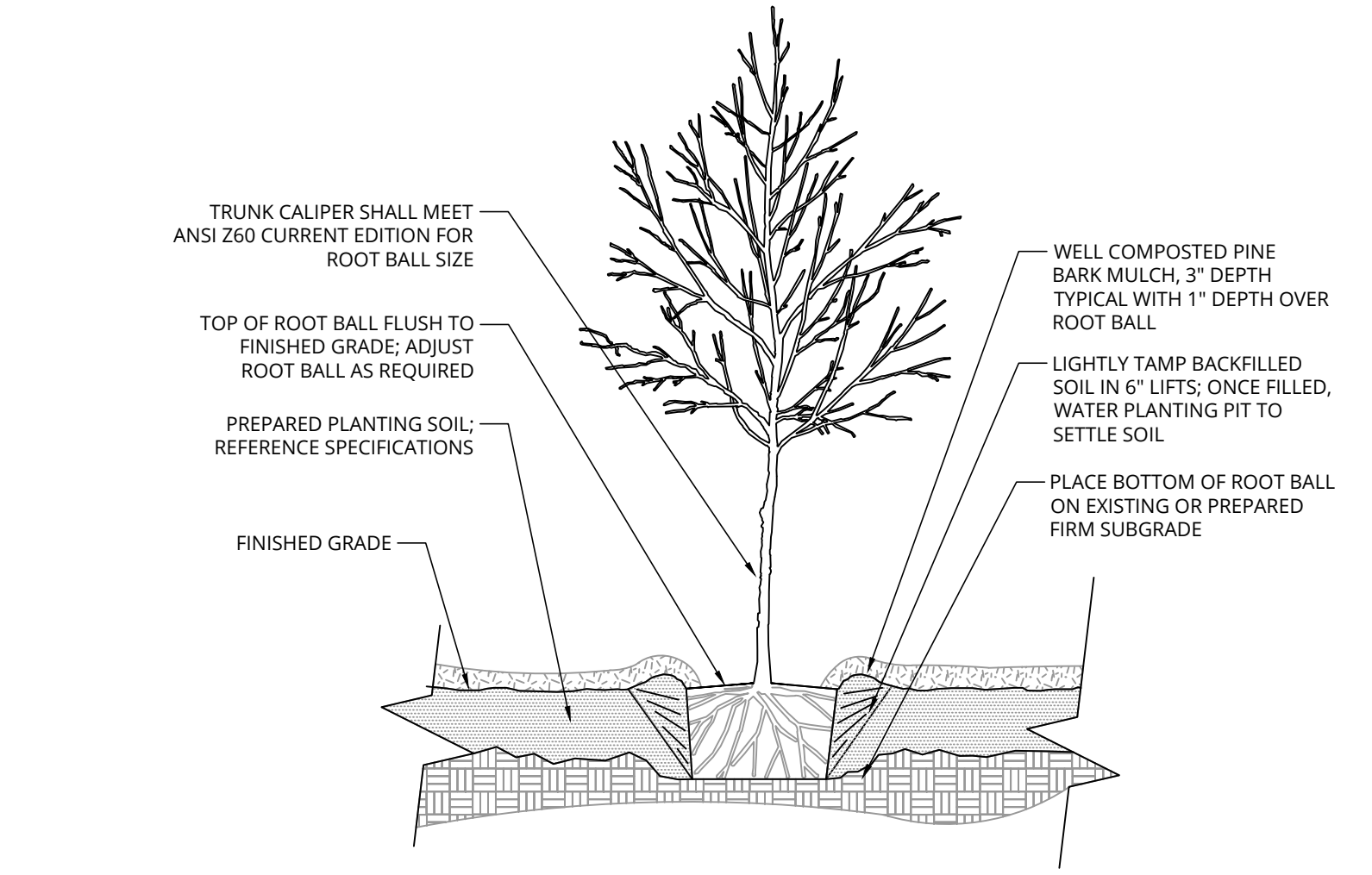
PLAN DETAILS



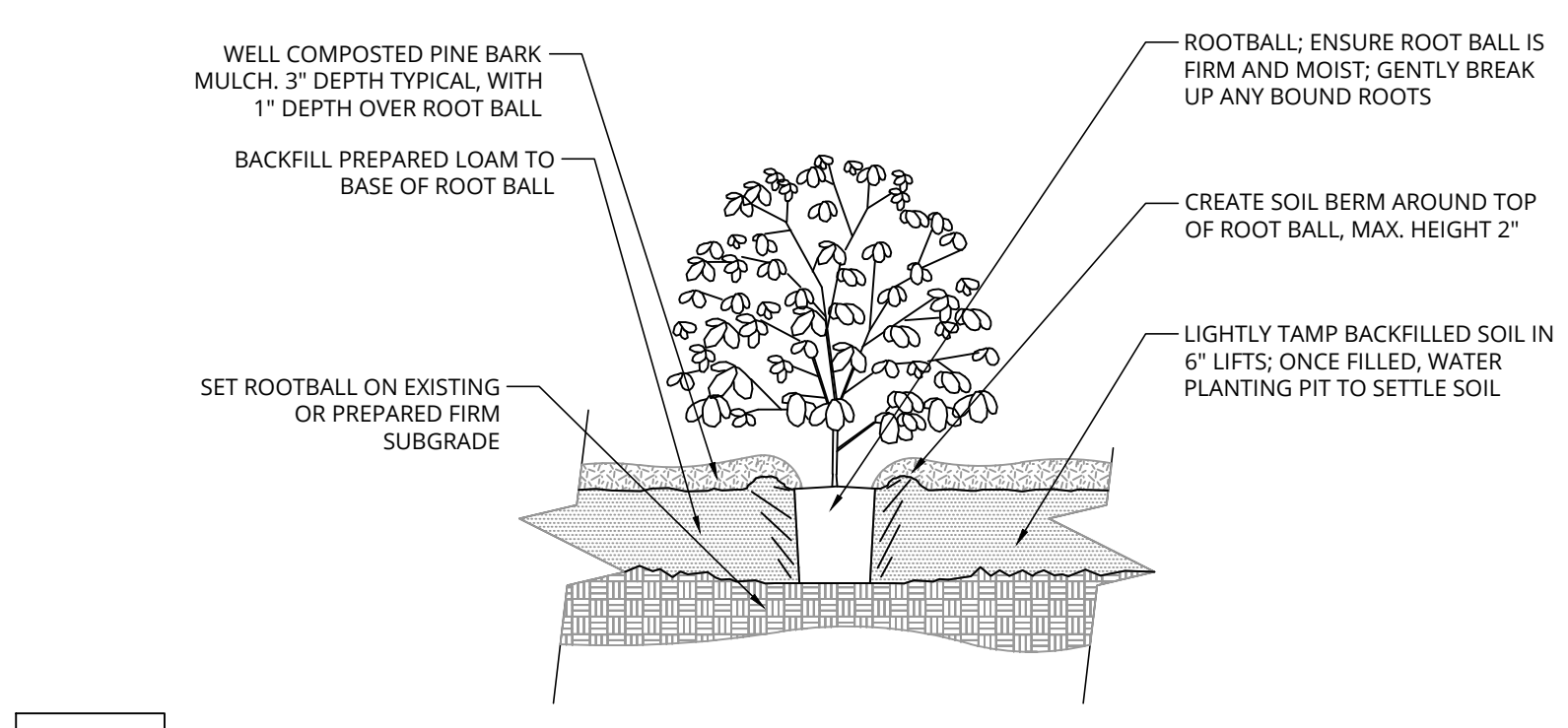
CITY OF ROCKLAND
 DOWNTOWN WATERFRONT MARINE INFRASTRUCTURE
 AT HARBOR AND BUOY PARKS
ROCKLAND, MAINE
 KNOX COUNTY

SCALE: AS SHOWN JOB No.: 16-012 SHEET 2 OF 3

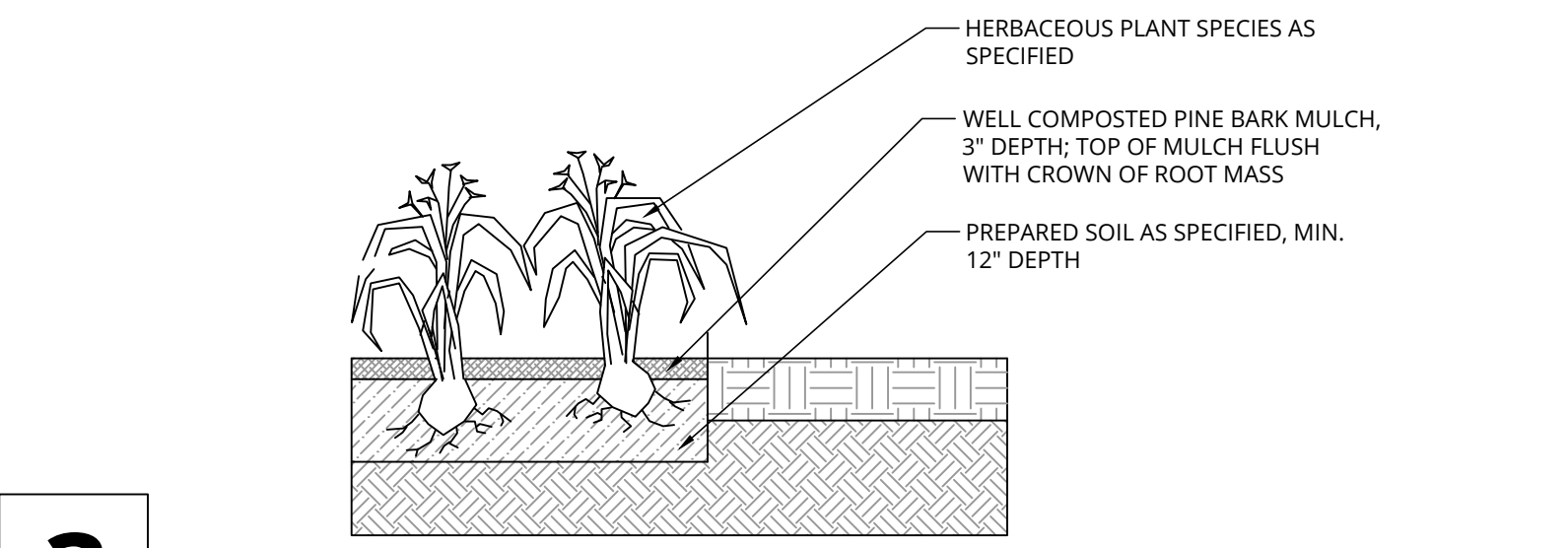
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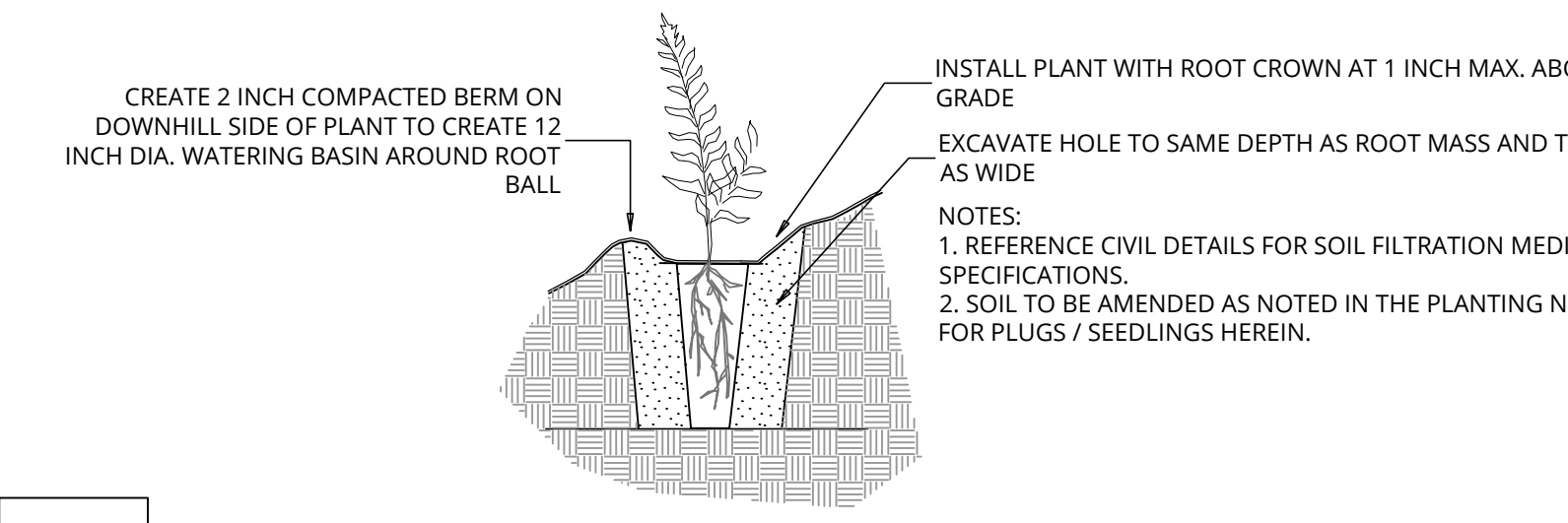
1 TREE INSTALLATION DETAIL N.T.S.



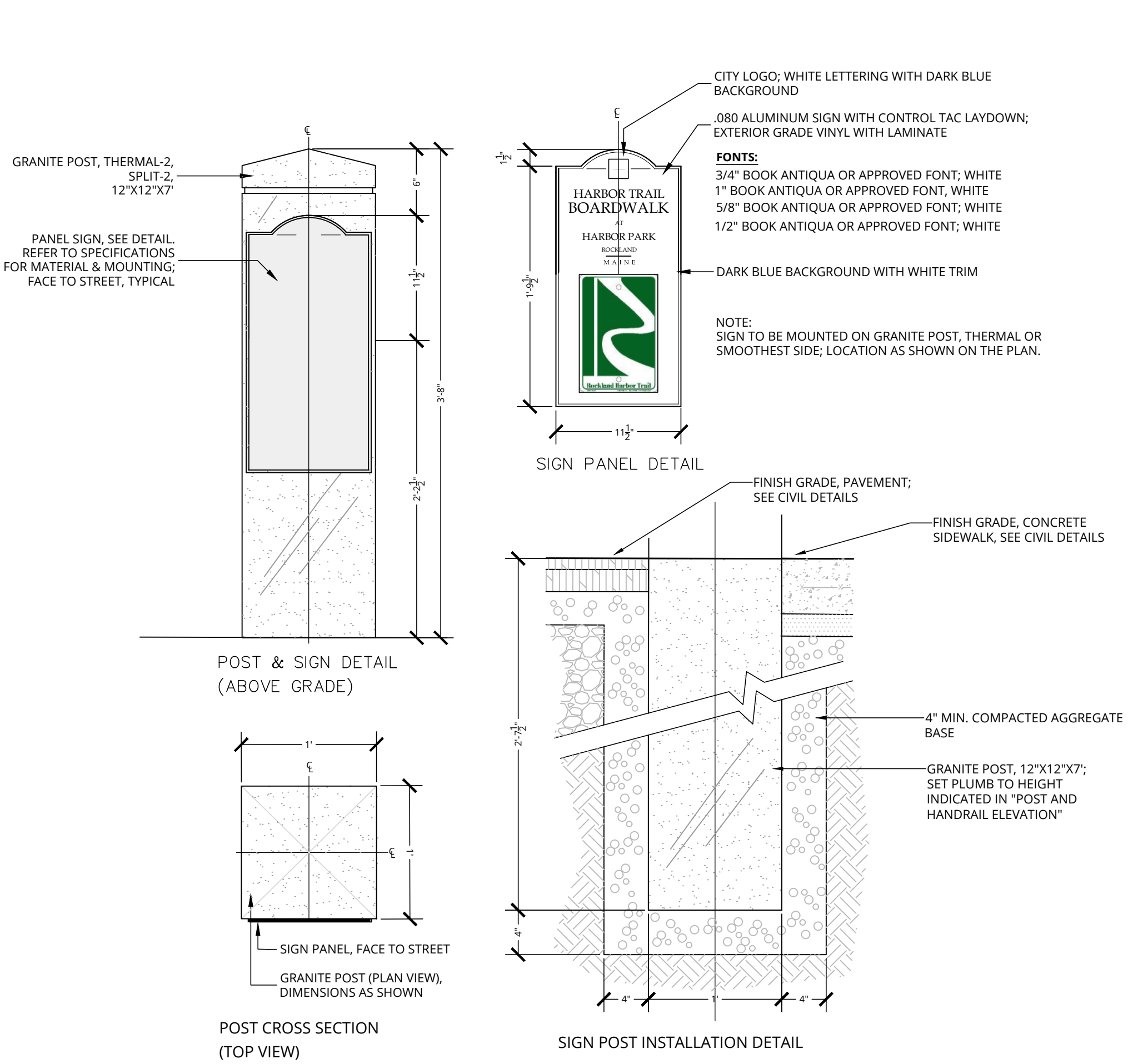
2 SHRUB INSTALLATION DETAIL N.T.S.



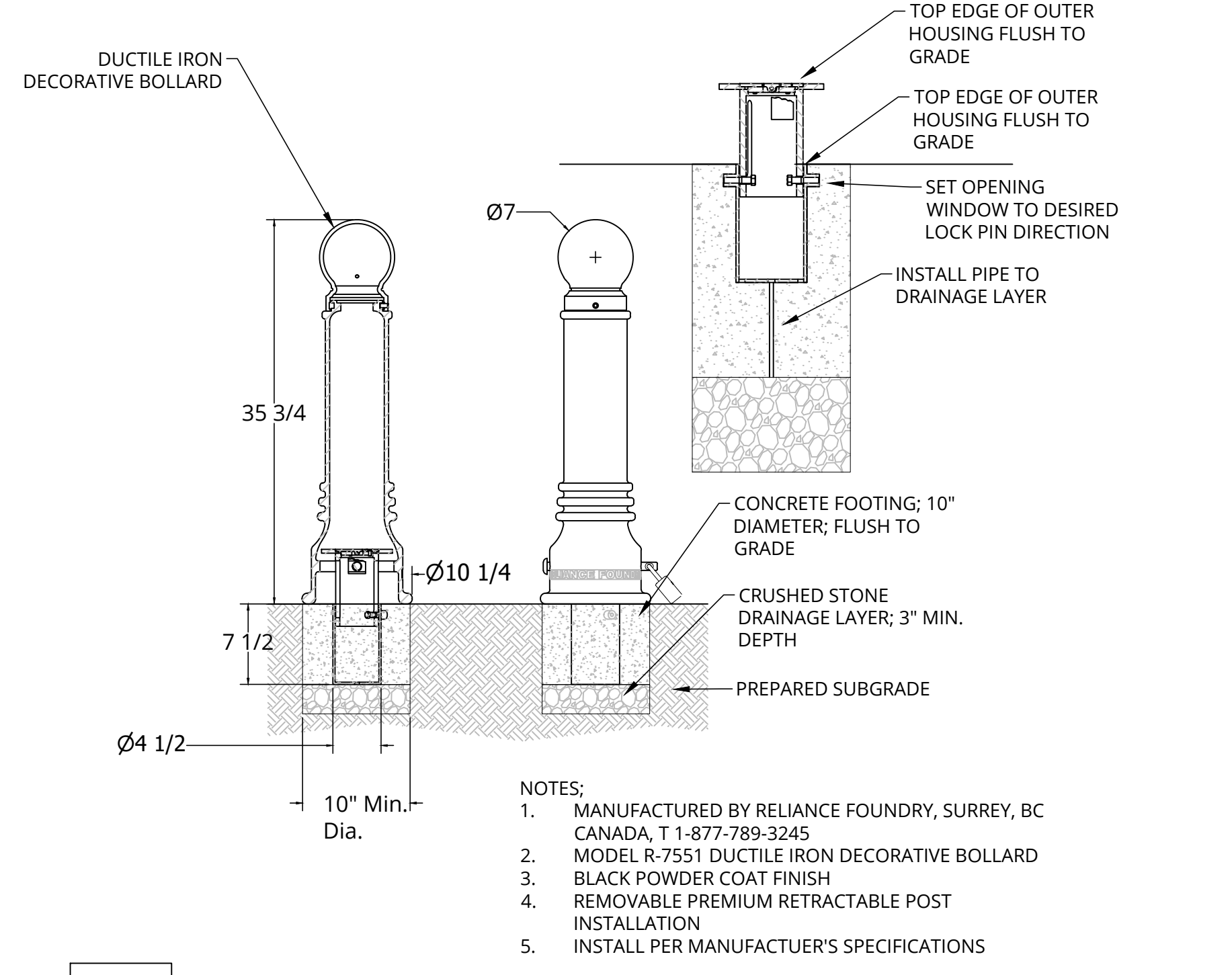
3 HERBACEOUS PLANT INSTALLATION DETAIL N.T.S.



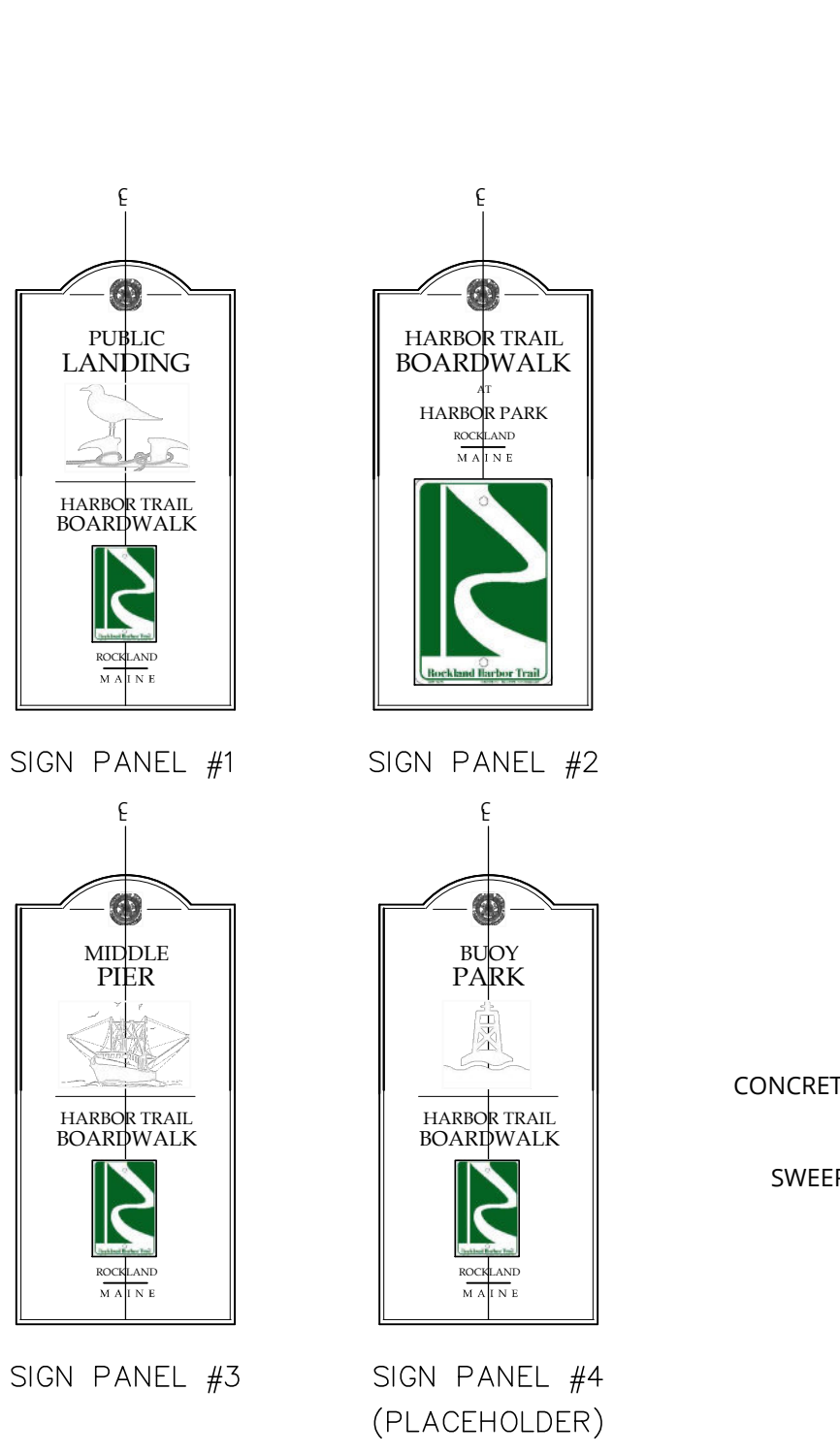
4 PLUG / SEEDLING INSTALLATION DETAIL N.T.S.



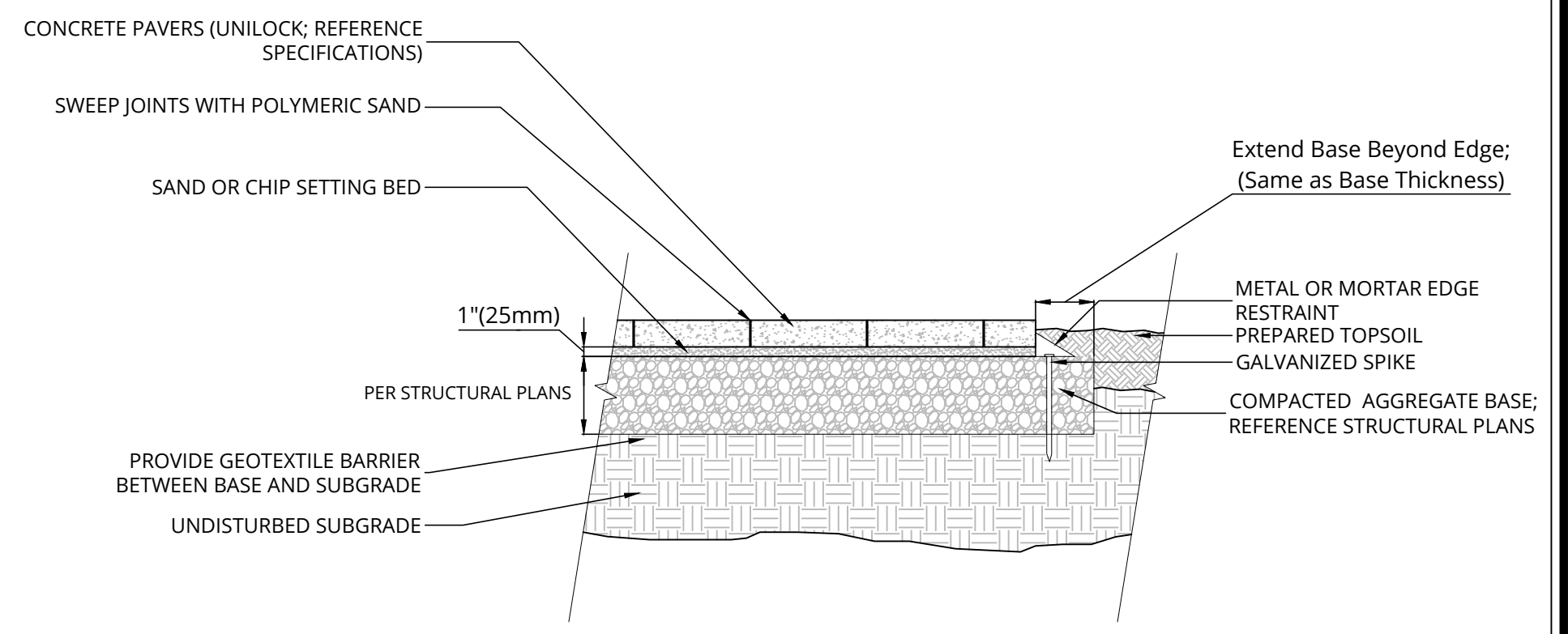
5 GRANITE SIGN POST & PANEL DETAILS N.T.S.



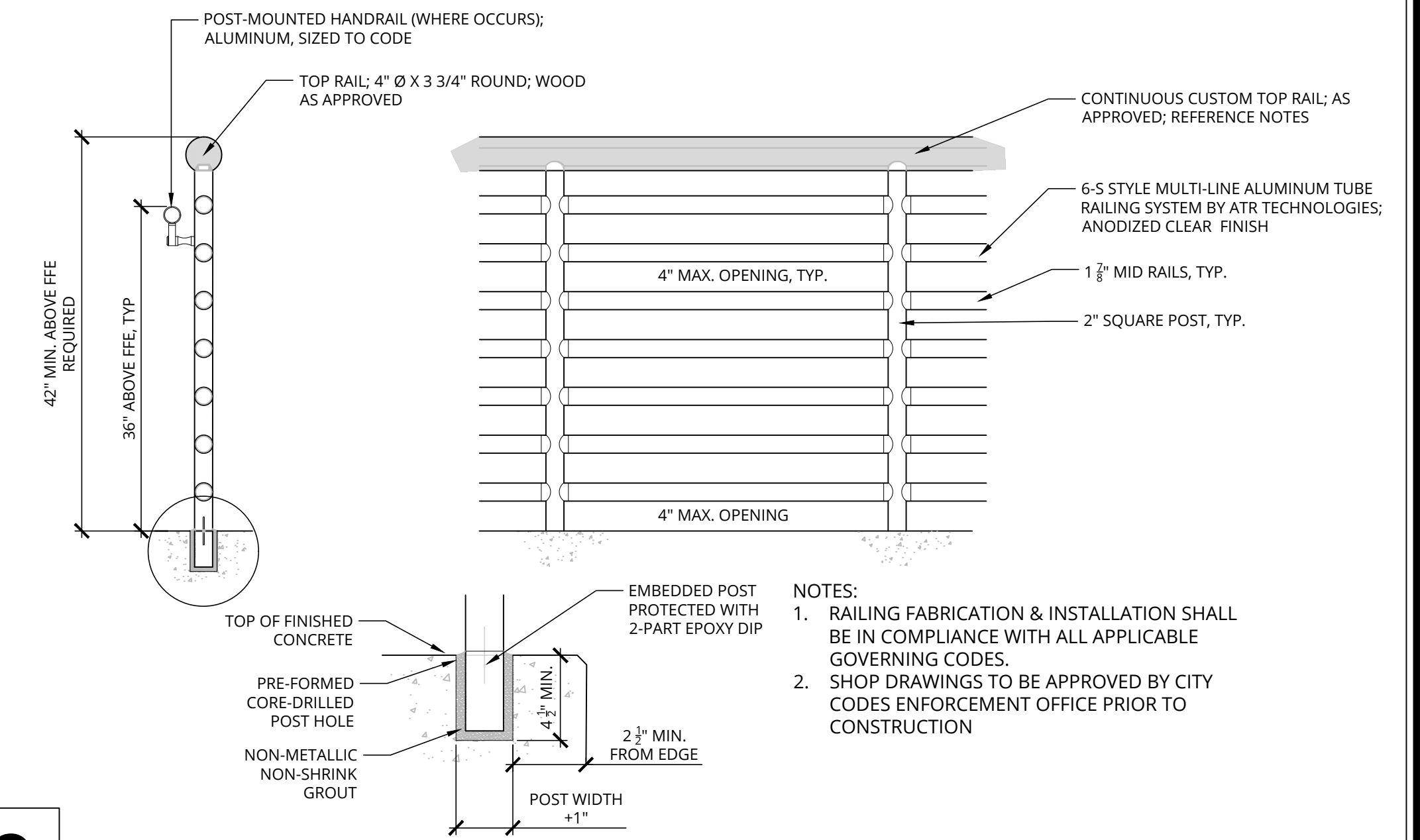
6 BOLLARD INSTALLATION DETAIL N.T.S.



7 CONCRETE PAVERS ON CONCRETE BASE DETAIL N.T.S.

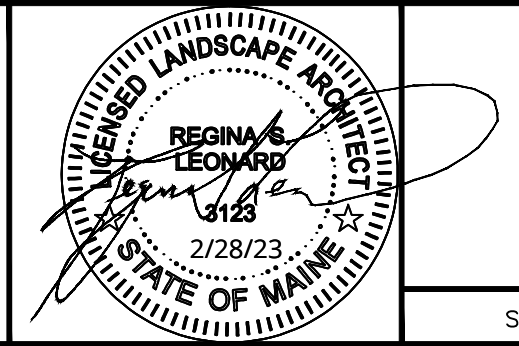


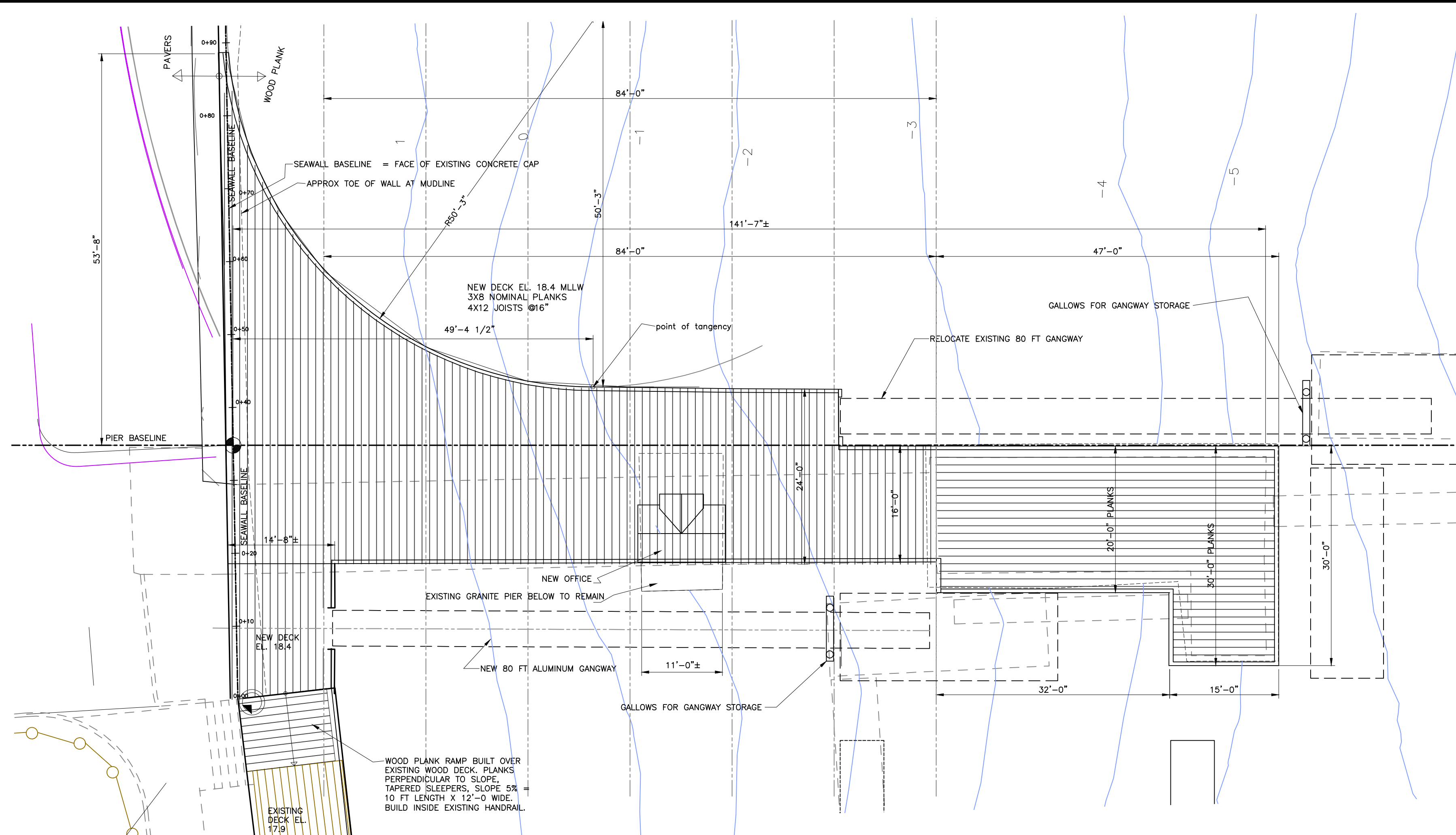
8 CONCRETE PAVERS ON AGGREGATE BASE DETAIL N.T.S.



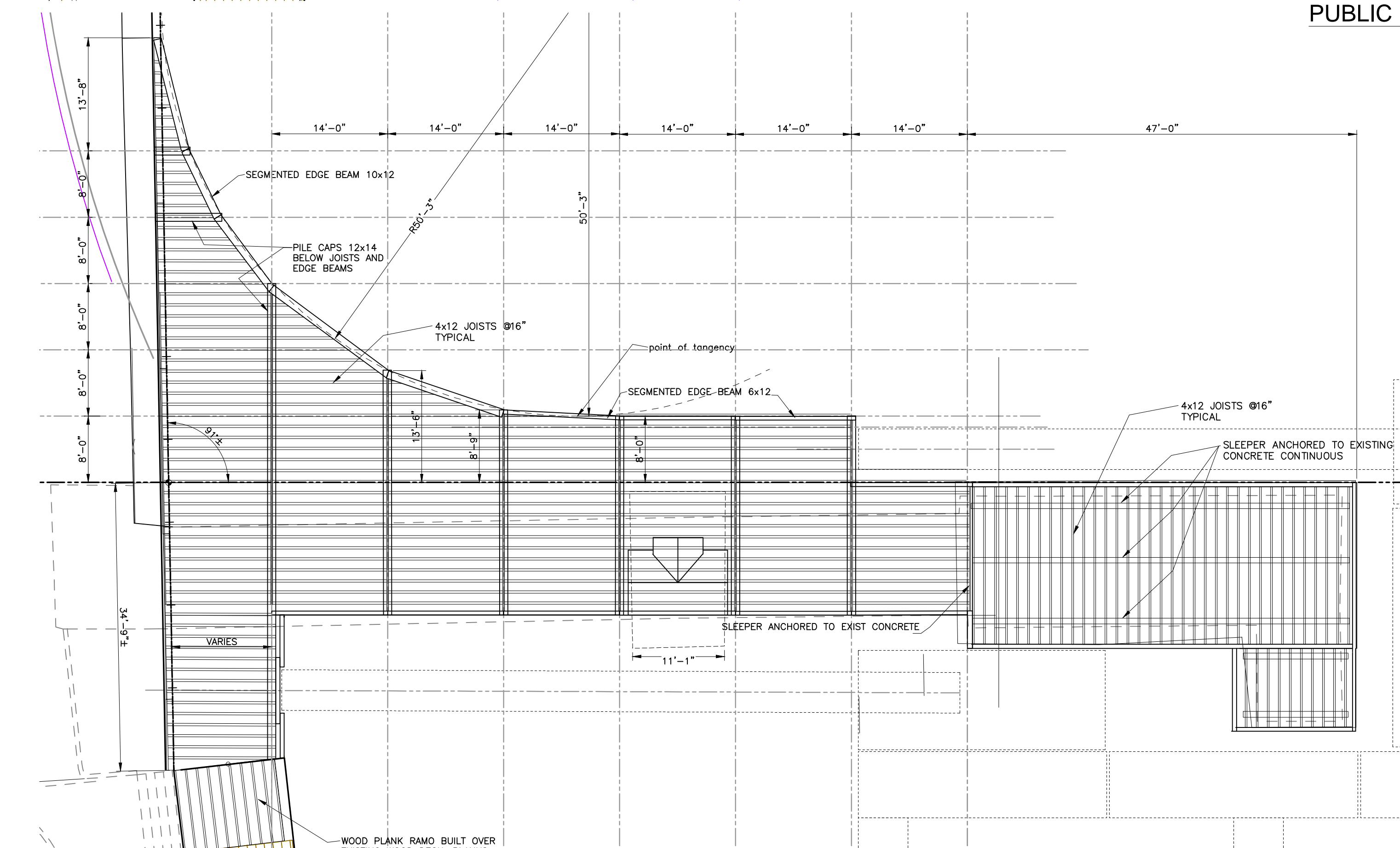
9 BOARDWALK RAILING DETAIL N.T.S.

REVISIONS	
DRAFTED BY: RSL	DATE: XX
CHECKED BY: MJS	DESCR: XX
PLAN DATE: FEB 28, 2023	DESCR:





PUBLIC LANDING PIER DECK PLAN



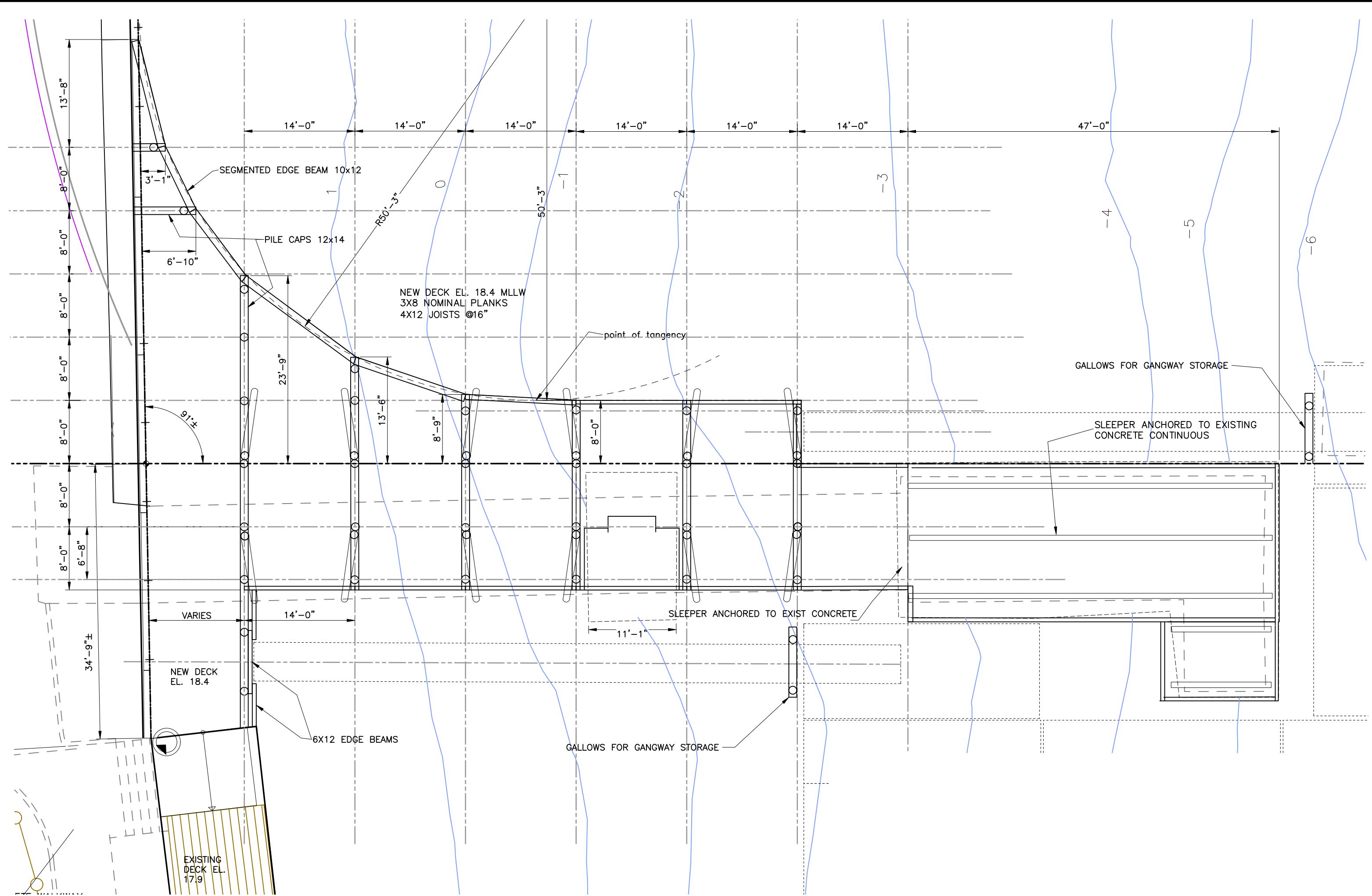
PUBLIC LANDING PIER DECK FRAMING PLAN

PRELIMINARY FOR REVIEW AND COMMENT

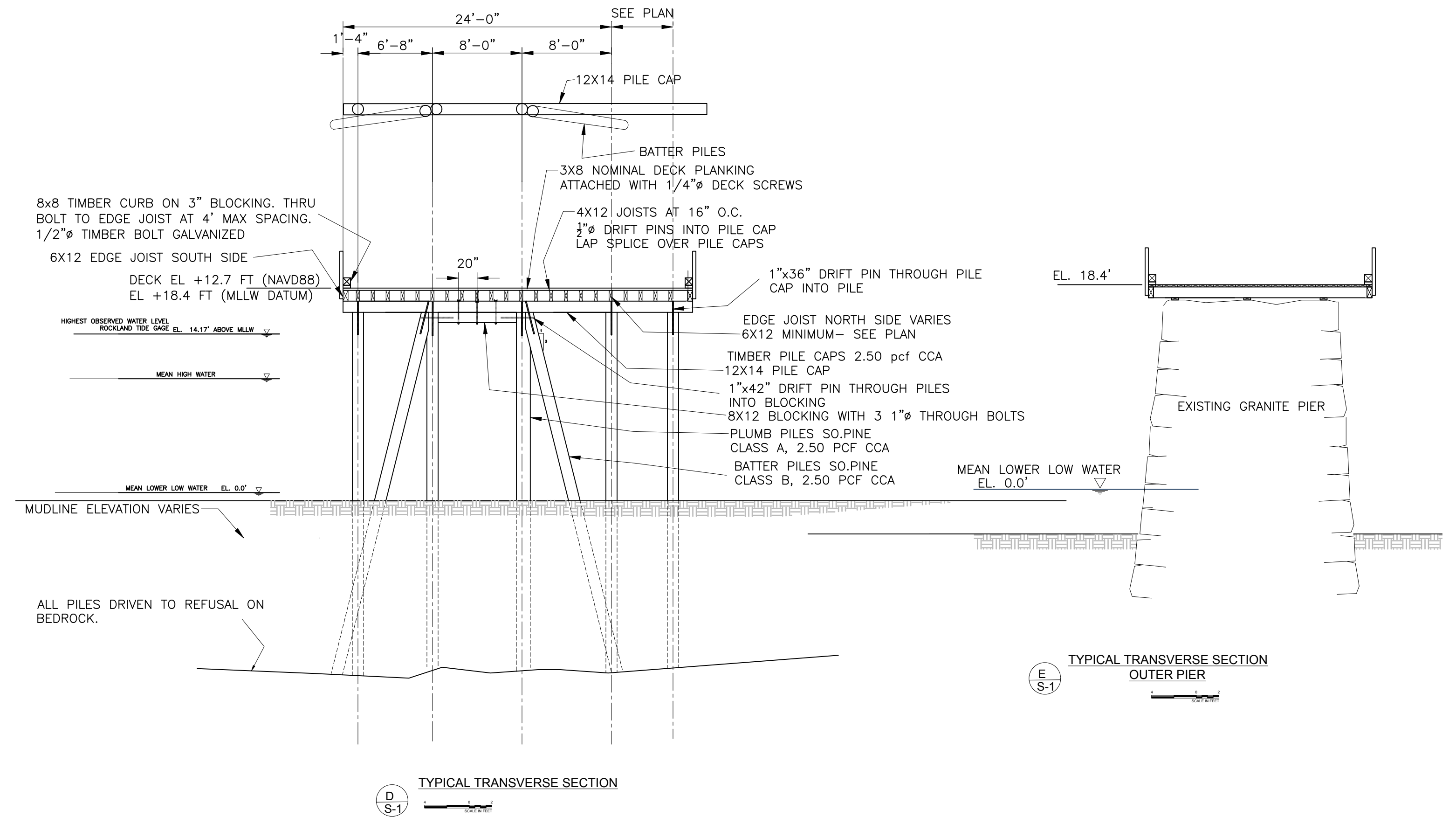
PRELIMINARY FOR REVIEW AND COMMENT

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NO.	REVISION	DATE	Designed By:
			Drawn By: STR
			Checked By: STR
			Scale: 1/8"=1'-0"
			Date of Revision:
			2-25-2023



PUBLIC LANDING PIER FOUNDATION PLAN

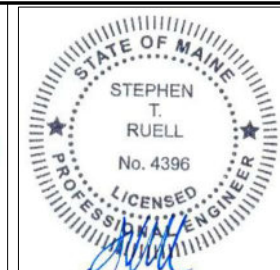


TYPICAL TRANSVERSE SECTION

TYPICAL TRANSVERSE SECTION OUTER PIER

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Pinnacle Hill Engineering
 33 Pinnacle Road
 Canaan, ME 04924
 PinnacleHillEngineering@gmail.com



PUBLIC LANDING CONCEPT
PUBLIC LANDING PIER STRUCTURES

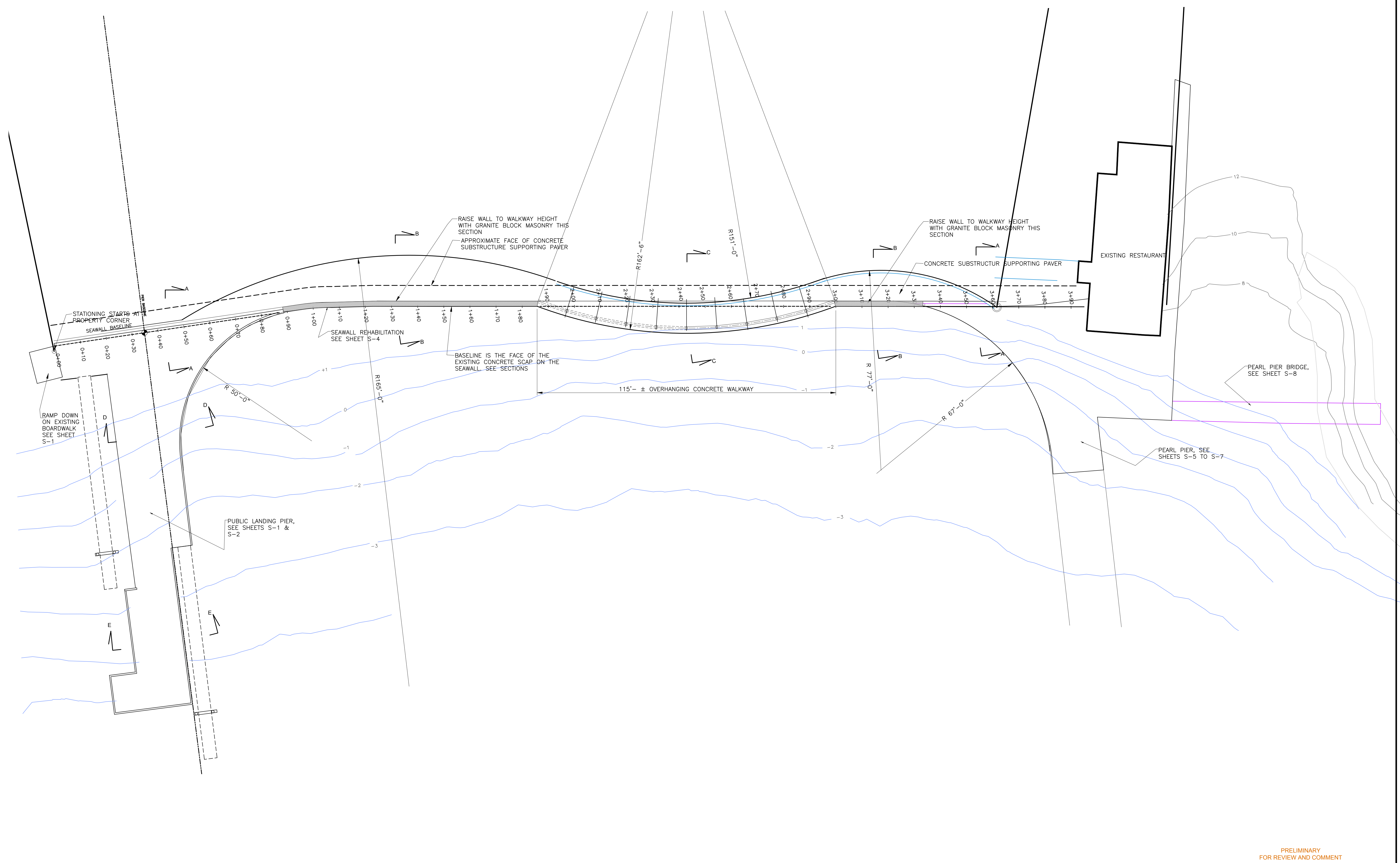
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PRELIMINARY
FOR REVIEW AND COMMENT

DOWNTOWN WATERFRONT MARINE INFRASTRUCTURE
AT HARBOR AND BUOY PARKS
ROCKLAND, MAINE

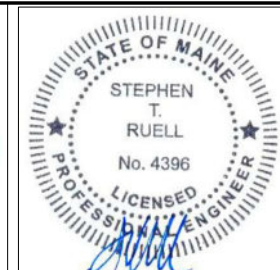
PUBLIC LANDING PIER
PILE AND PILE CAP PLAN

S-2
REV. 0



PRELIMINARY FOR REVIEW AND COMMENT

Pinnacle Hill Engineering
 33 Pinnacle Road
 Canaan, ME 04924
 PinnacleHillEngineering@gmail.com



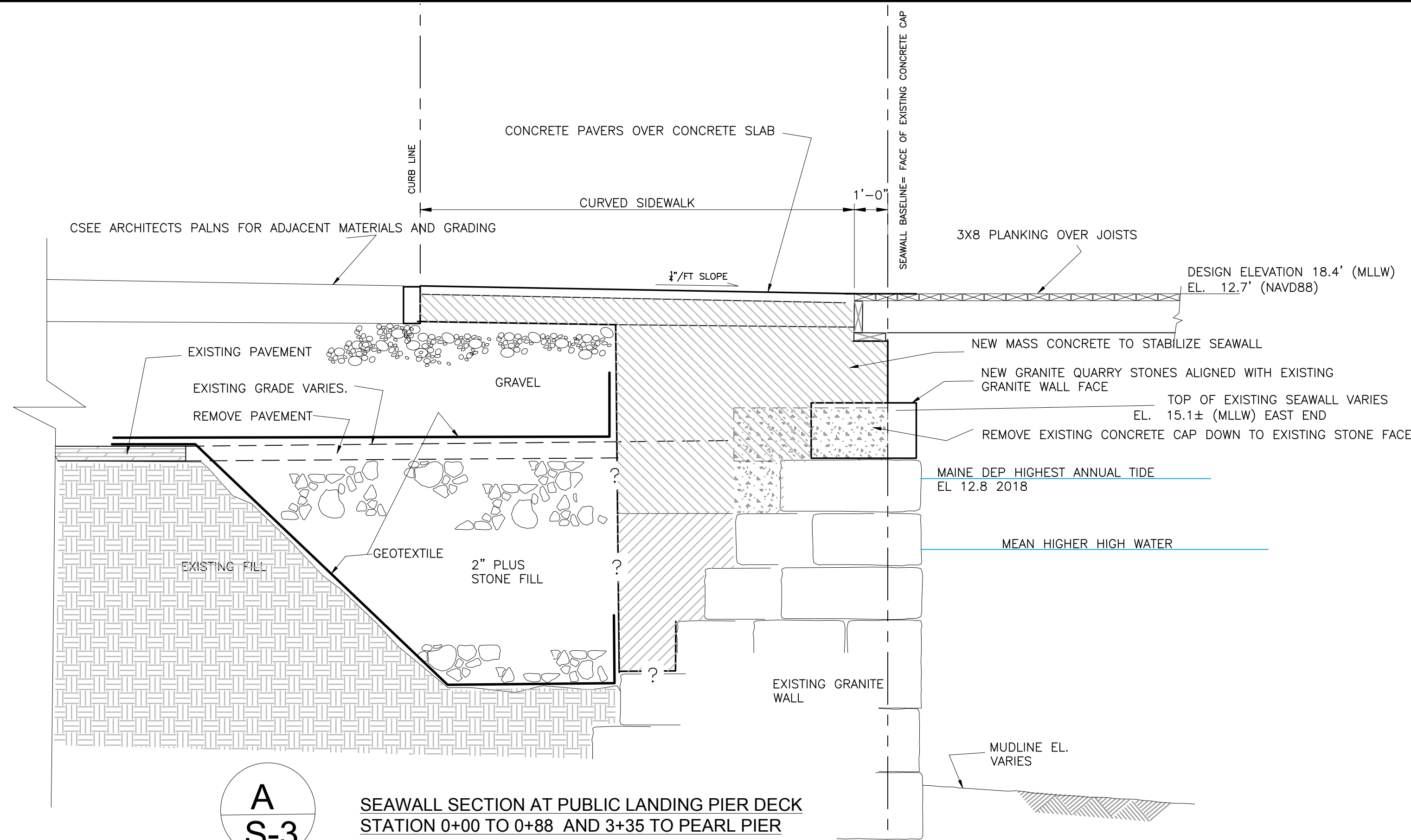
**PUBLIC LANDING CONCEPT
 SEAWALL REHABILITATION PLAN**

NO.	REVISION	DATE	Designed By:
			Drawn By: STR
			Checked By: STR
			Scale: 1/16" = 1'-0"
			Date of Revision:
			2-25-2023

DOWNTOWN WATERFRONT MARINE INFRASTRUCTURE
 AT HARBOR AND BUOY PARKS
 ROCKLAND, MAINE

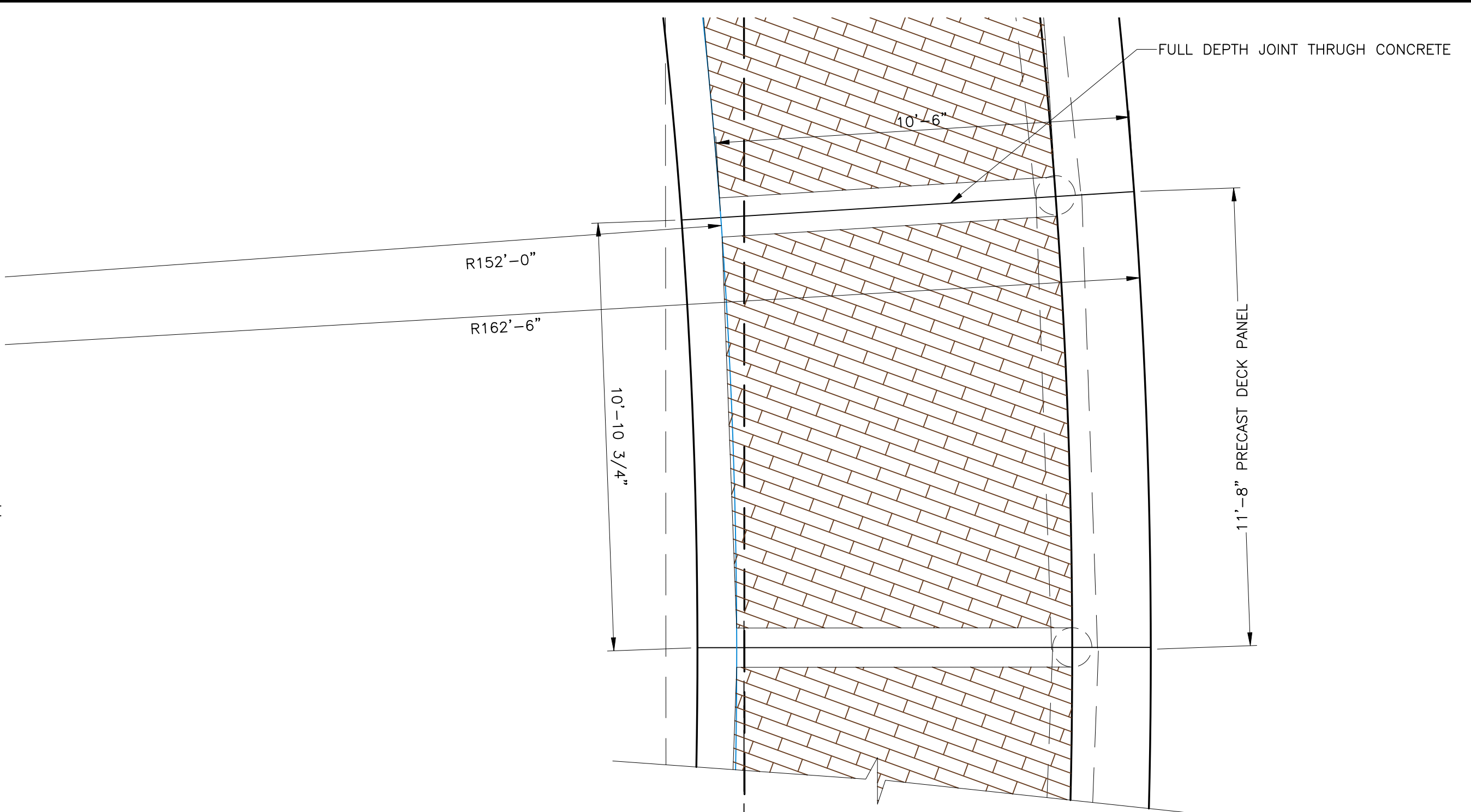
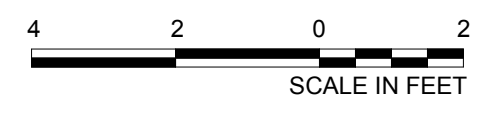
SEAWALL PLAN

S-3
 REV. 0



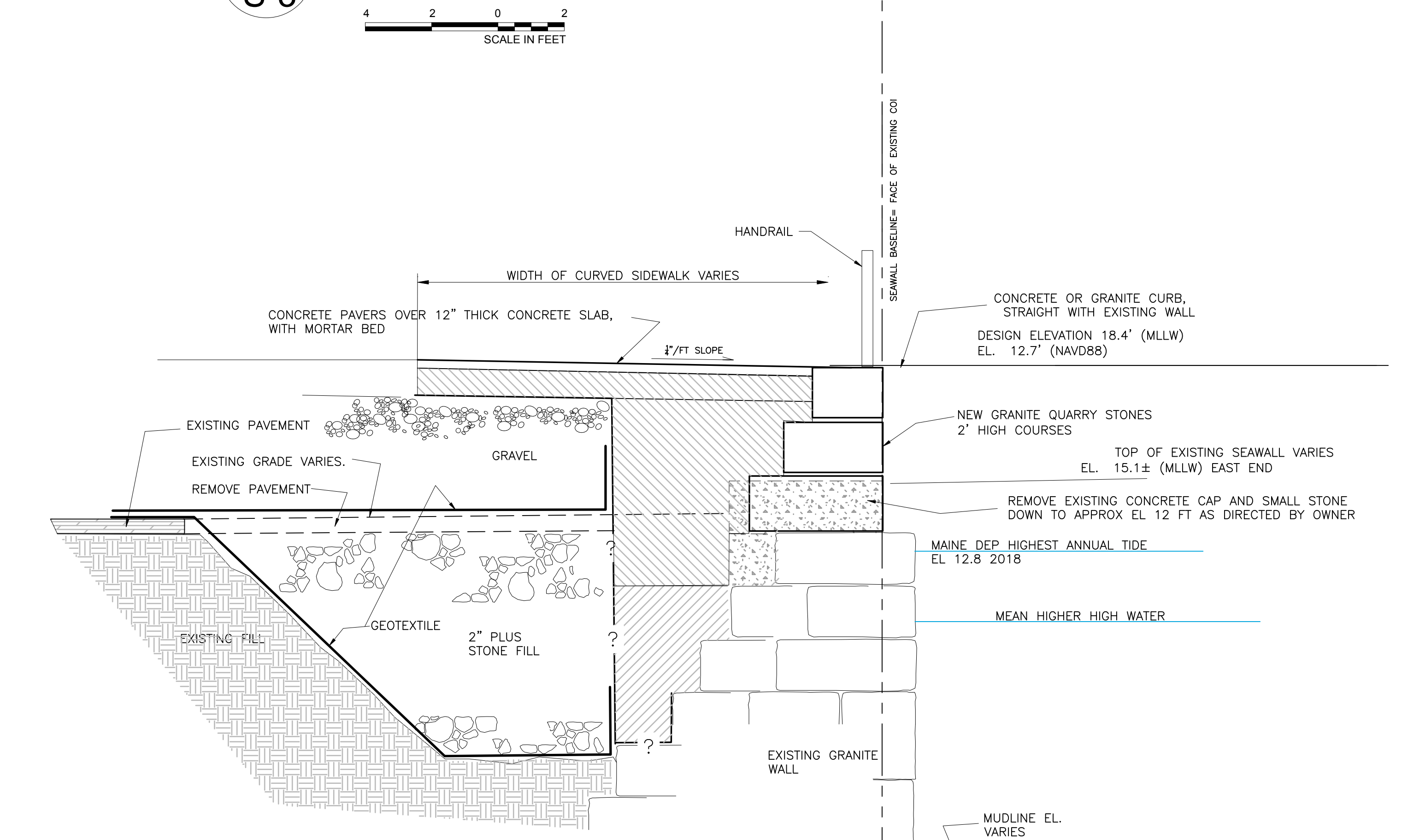
A
S-3

SEAWALL SECTION AT PUBLIC LANDING PIER DECK
STATION 0+00 TO 0+88 AND 3+35 TO PEARL PIER



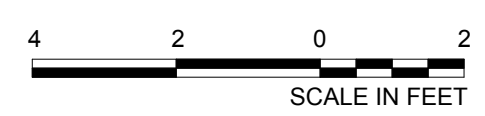
C
S-3

SEAWALL SECTION WITH CONCRETE DECK OVER WATER



B
S-3

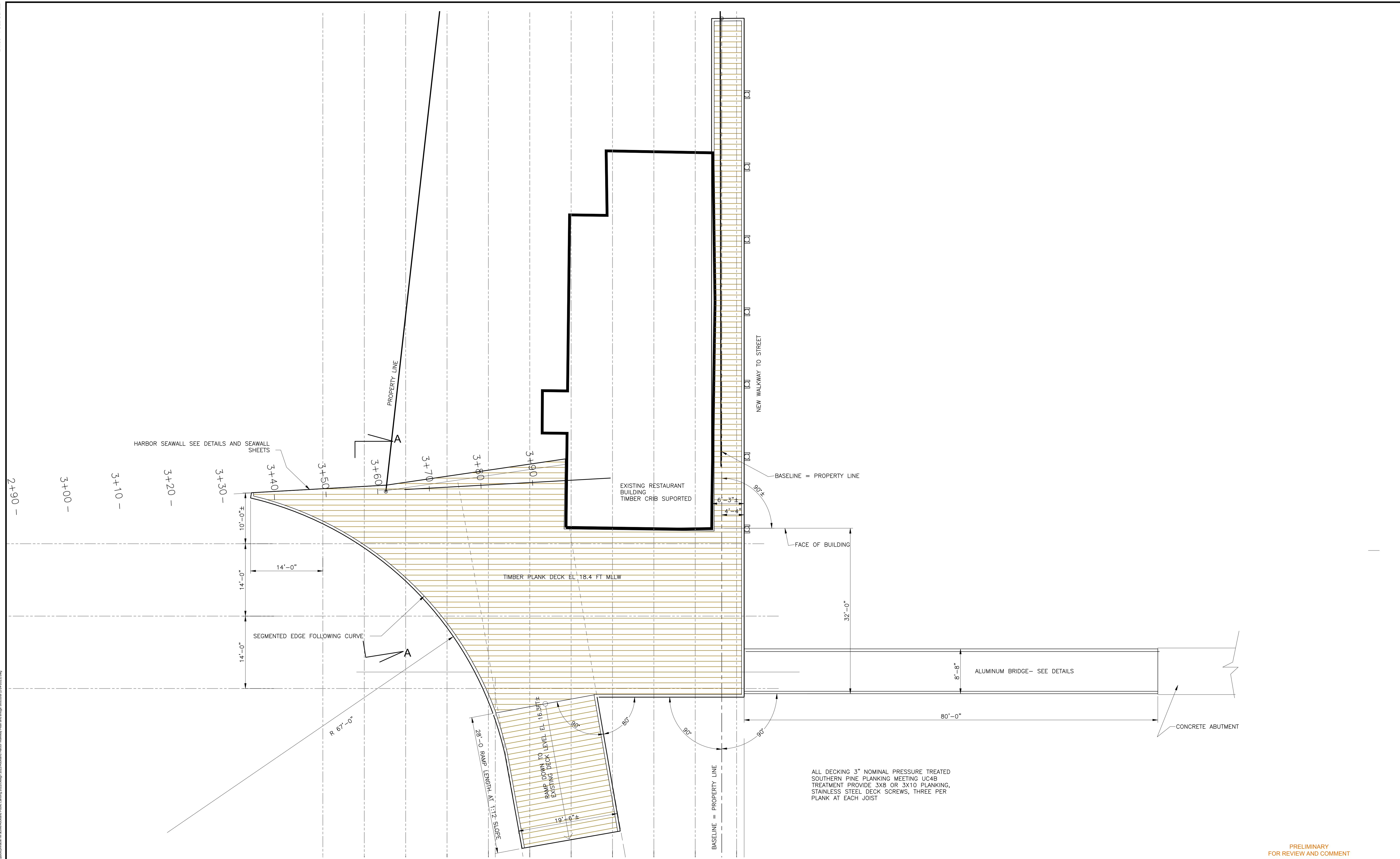
SEAWALL SECTION WITH GRANITE FACING
STATION 0+88 TO 1+85
AND 3+00 TO 3+35



PRELIMINARY
FOR REVIEW AND COMMENT

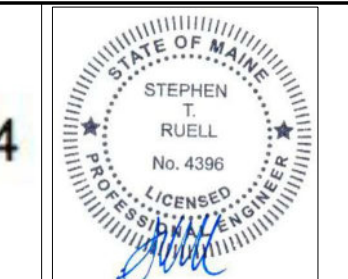


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			Date of Revision:
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PRELIMINARY FOR REVIEW AND COMMENT

Pinnacle Hill Engineering
33 Pinnacle Road
Canaan, ME 04924
PinnacleHillEngineering@gmail.com



PUBLIC LANDING CONCEPT
PEARL PIER AND BRIDGE

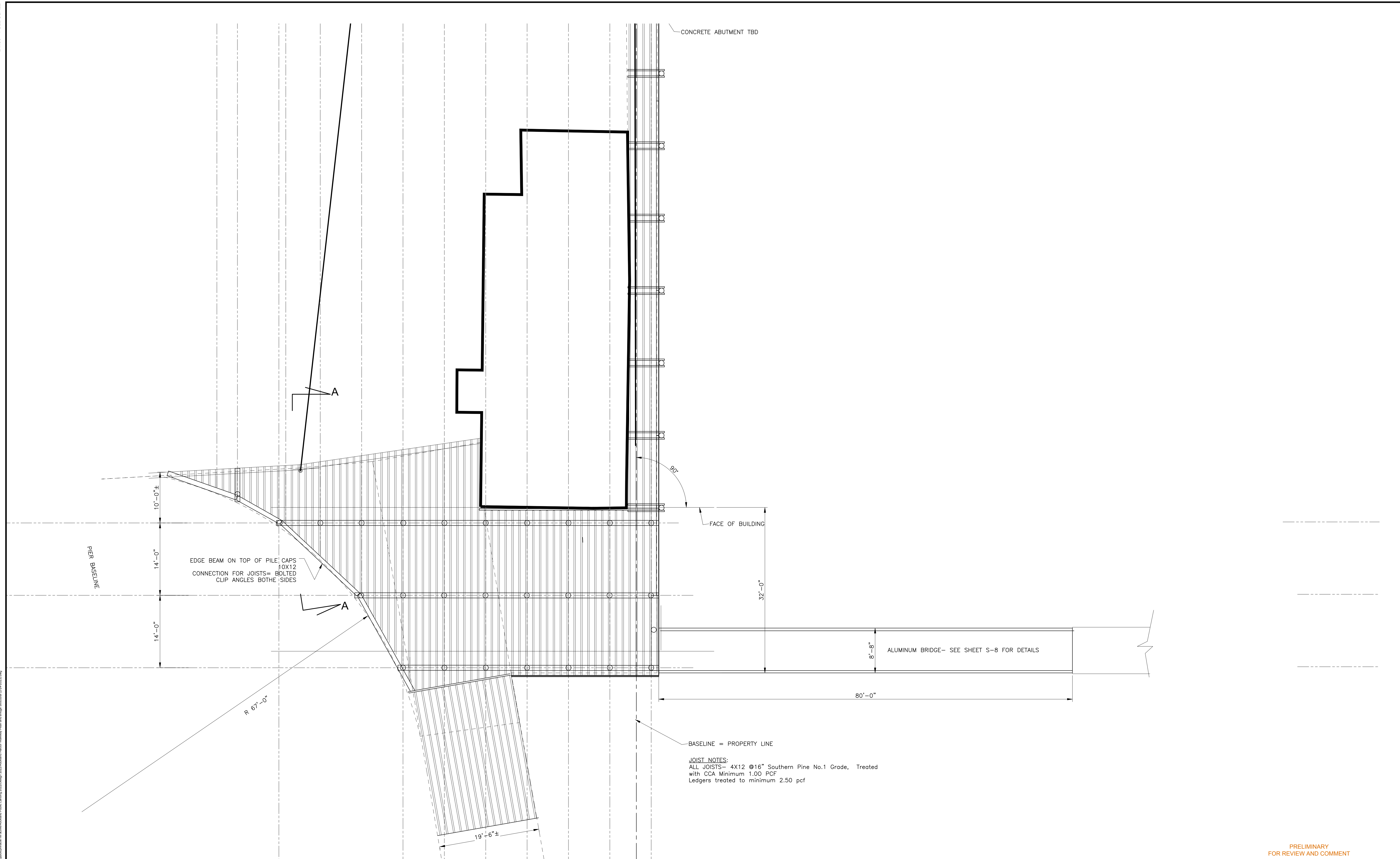
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DOWNTOWN WATERFRONT MARINE INFRASTRUCTURE
AT HARBOR AND BUOY PARKS
ROCKLAND, MAINE

PEARL PIER AND BRIDGE
DECK PLAN

S-5
REV. 0

2-25-2023



CONCRETE ABUTMENT TBD

FACE OF BUILDING

EDGE BEAM ON TOP OF PILE CAPS
10X12
CONNECTION FOR JOISTS= BOLTED
CLIP ANGLES BOTH SIDES

PIER BASELINE

R 67'-0"

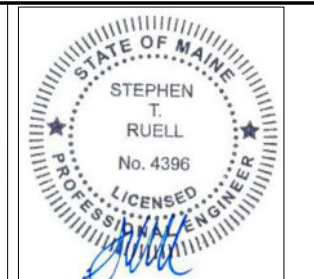
BASELINE = PROPERTY LINE

JOIST NOTES:
ALL JOISTS- 4X12 @16" Southern Pine No.1 Grade, Treated
with CCA Minimum 1.00 PCF
Ledgers treated to minimum 2.50 pcf

ALUMINUM BRIDGE- SEE SHEET S-8 FOR DETAILS

PRELIMINARY
FOR REVIEW AND COMMENT

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33 Pinnacle Road
Canaan, ME 04924
PinnacleHillEngineering@gmail.com



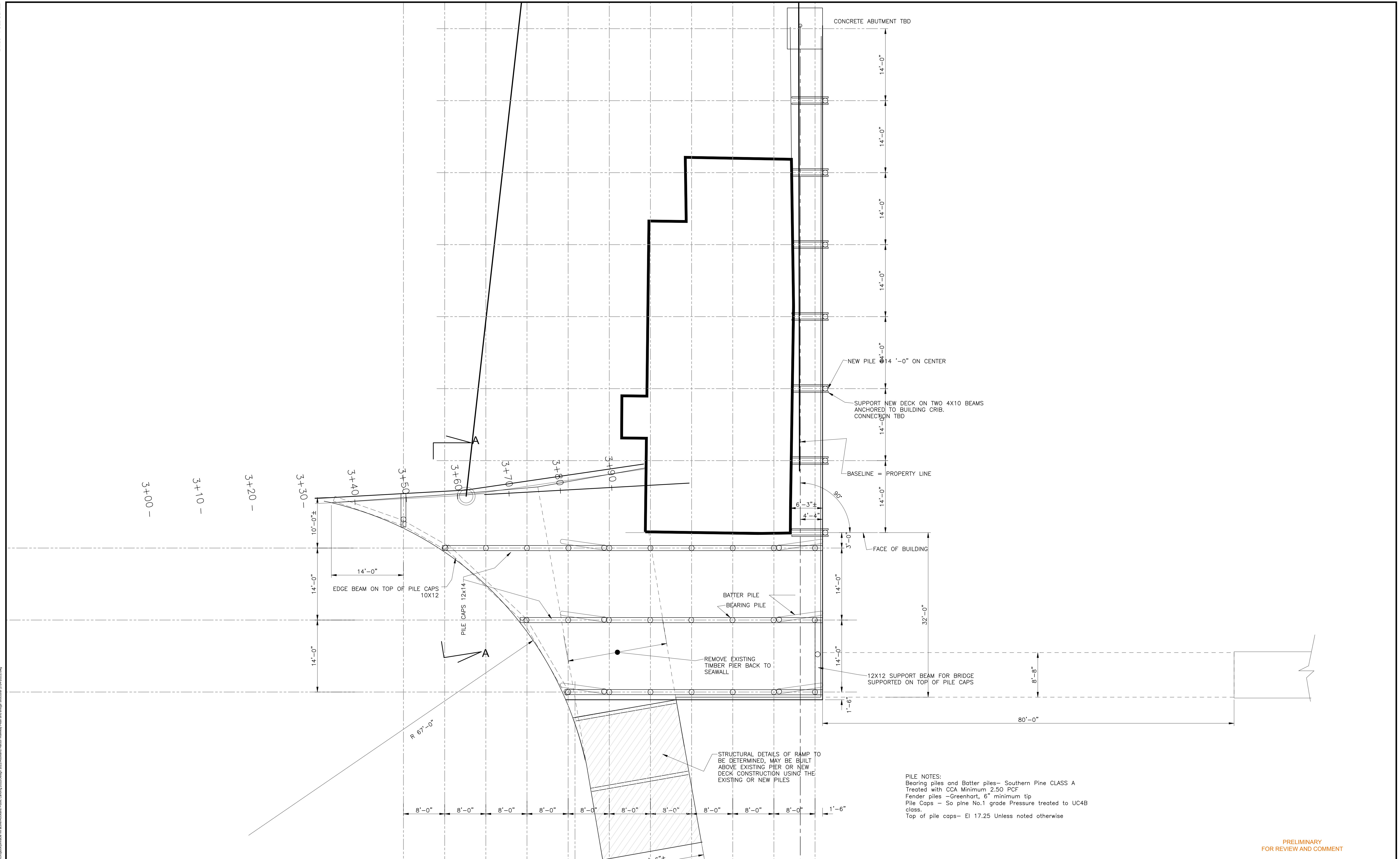
PUBLIC LANDING CONCEPT
PEARL PIER AND BRIDGE STRUCTURES

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DOWNTOWN WATERFRONT MARINE INFRASTRUCTURE
AT HARBOR AND BUOY PARKS
ROCKLAND, MAINE

**PEARL PIER AND BRIDGE
DECK FRAMING PLAN**

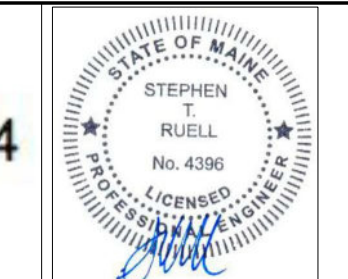
S-6
REV. 0



PILE NOTES:
 Bearing piles and Batter piles- Southern Pine CLASS A
 Treated with CCA Minimum 2.50 PCF
 Fender piles -Greenhart, 6" minimum tip
 Pile Caps - So pine No.1 grade Pressure treated to UC4B
 class.
 Top of pile caps- El 17.25 Unless noted otherwise

PRELIMINARY FOR REVIEW AND COMMENT

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 33 Pinnacle Road
 Canaan, ME 04924
 PinnacleHillEngineering@gmail.com



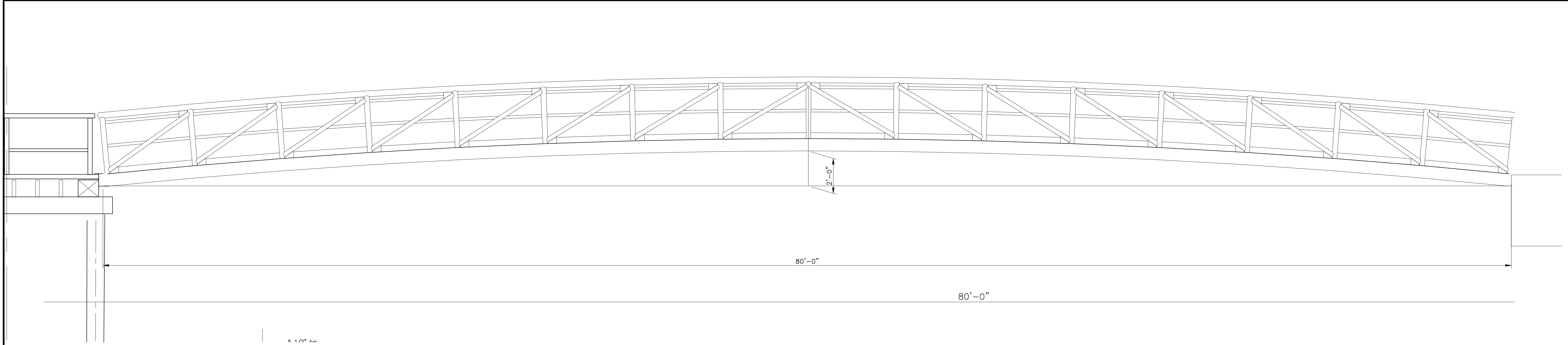
**PUBLIC LANDING CONCEPT
 PEARL PIER AND BRIDGE STRUCTURES**

NO.	REVISION	DATE

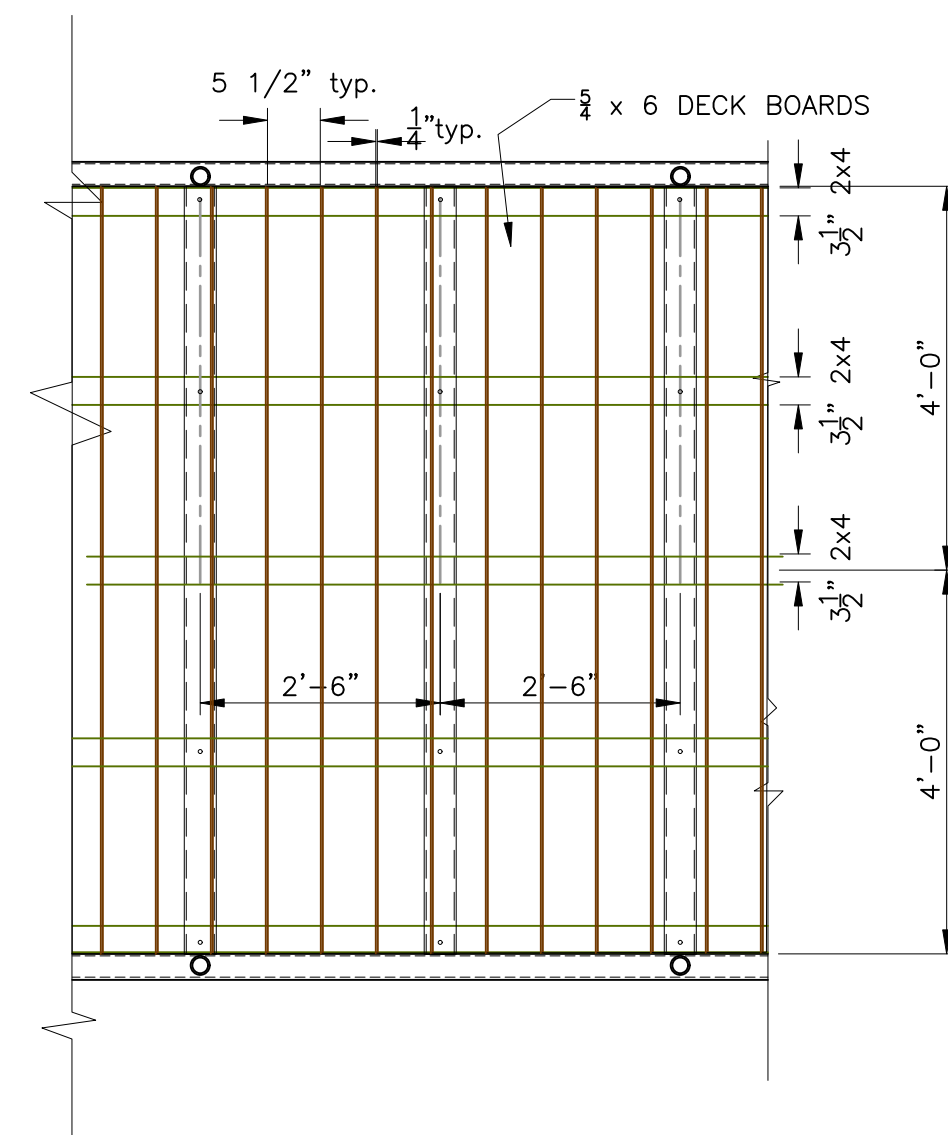
DOWNTOWN WATERFRONT MARINE INFRASTRUCTURE
 AT HARBOR AND BUOY PARKS
ROCKLAND, MAINE

**PEARL PIER AND BRIDGE
 PILE AND PILE CAP PLAN**

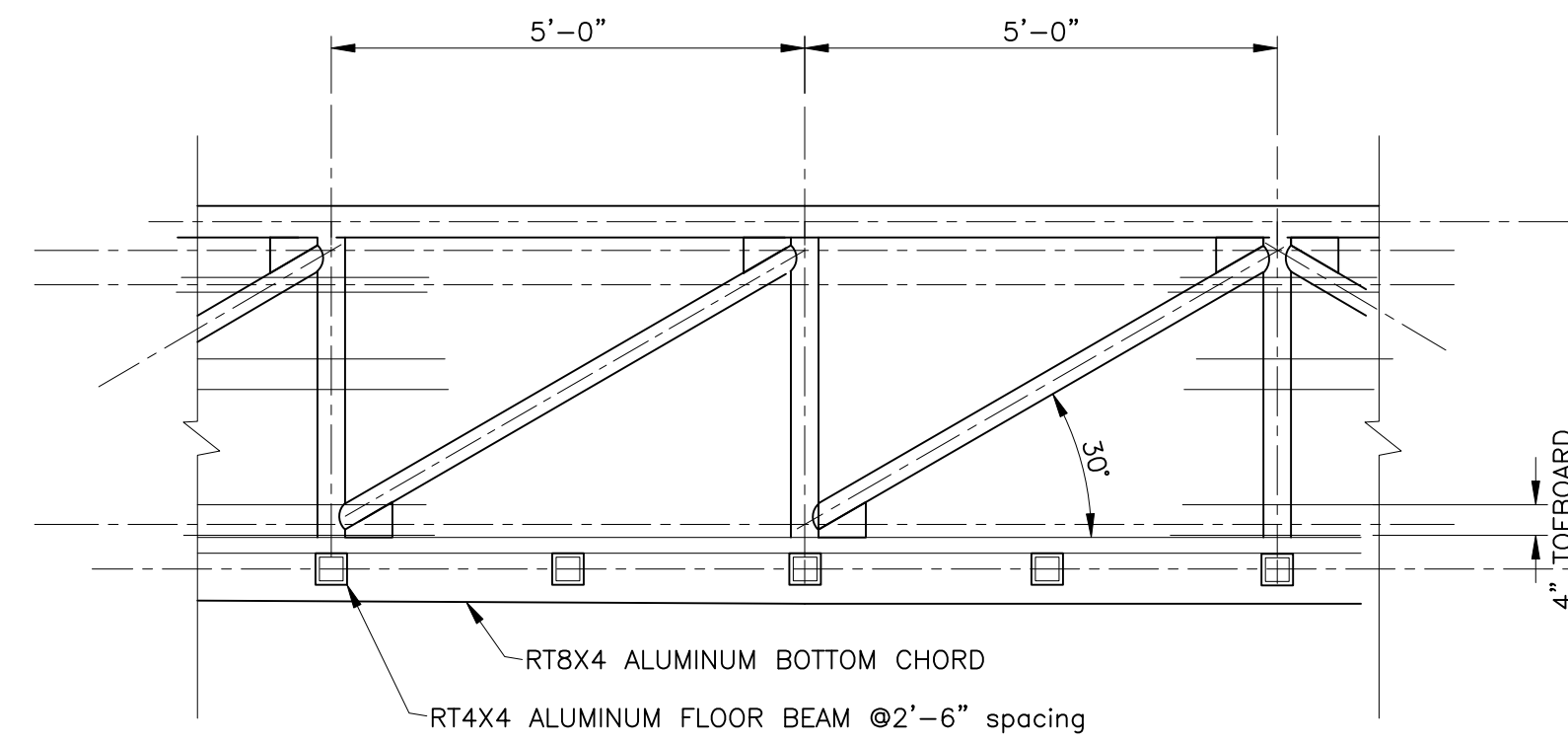
S-7
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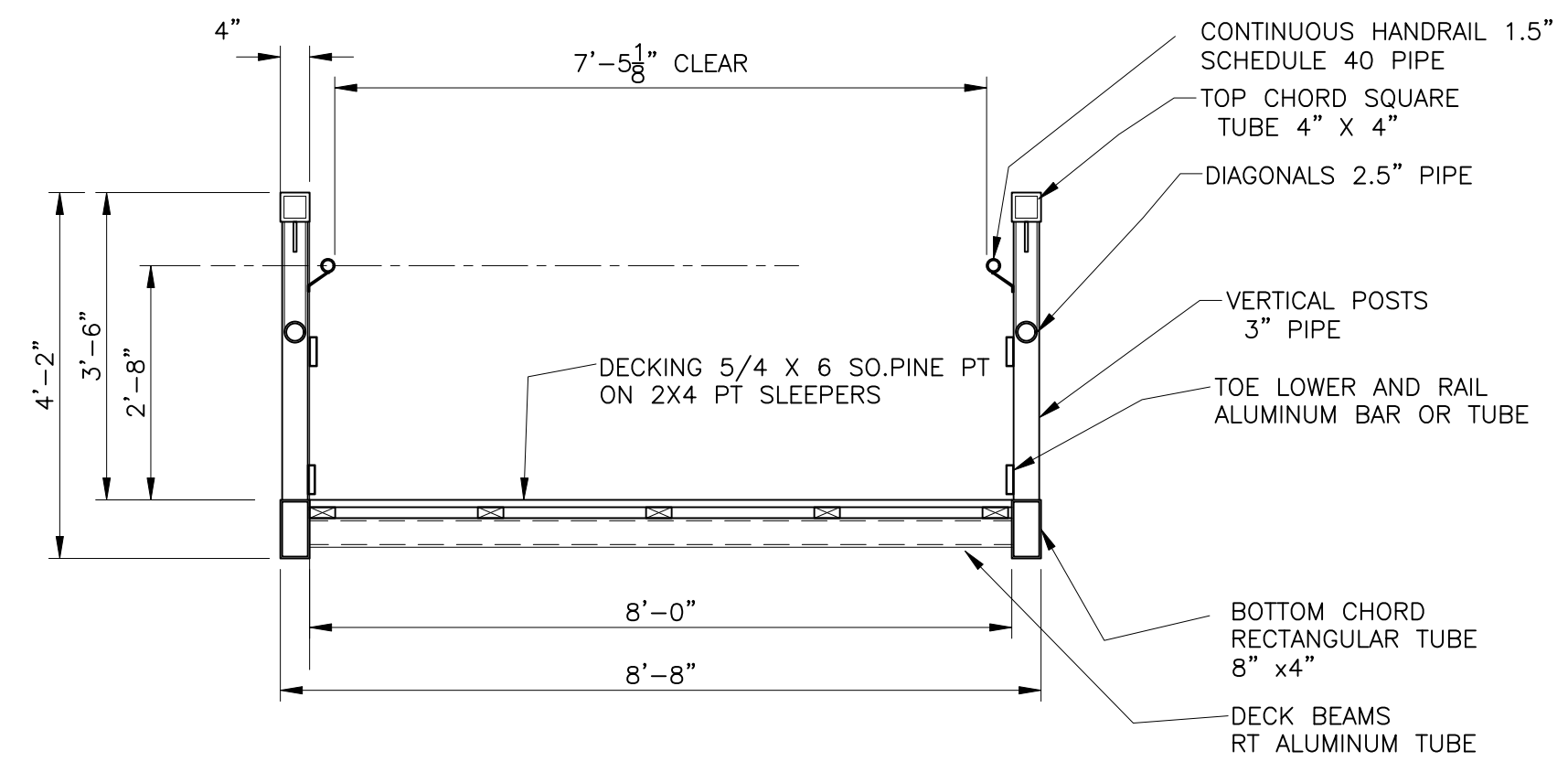
BRIDGE ELEVATION



BRIDGE DECK DETAIL



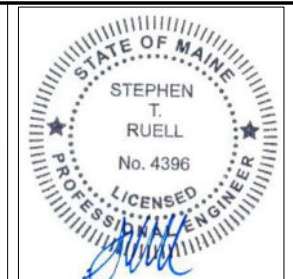
BRIDGE TRUSS DETAIL



BRIDGE CROSS SECTION

PRELIMINARY FOR REVIEW AND COMMENT

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 PinnacleHillEngineering@gmail.com



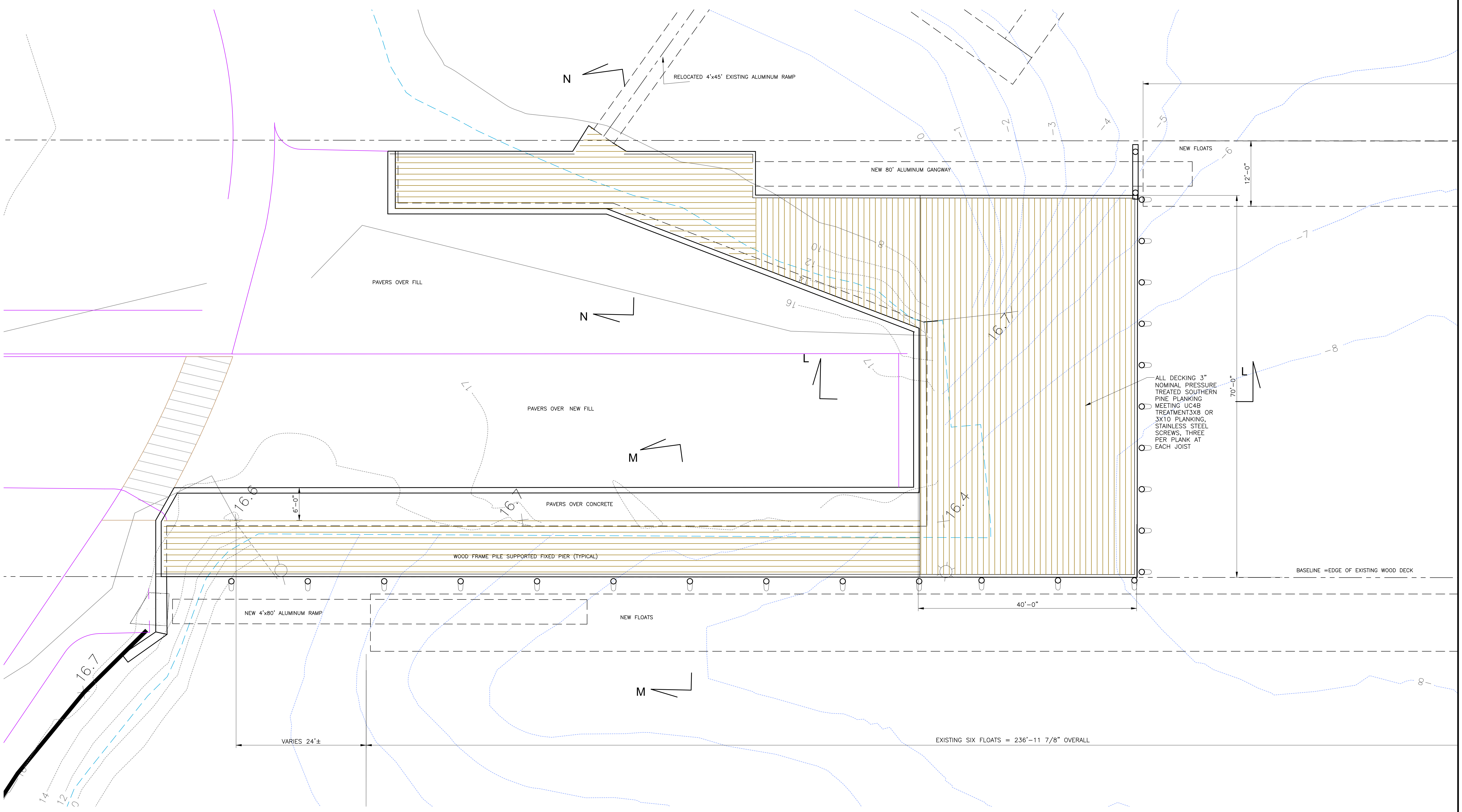
PUBLIC LANDING CONCEPT
 PEARL PIER AND BRIDGE STRUCTURES

NO.	REVISION	DATE

DOWNTOWN WATERFRONT MARINE INFRASTRUCTURE
 AT HARBOR AND BUOY PARKS
 ROCKLAND, MAINE

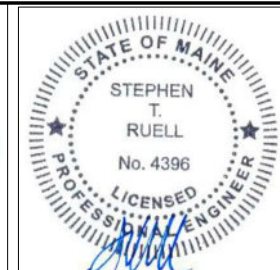
**PEARL PIER AND BRIDGE
 BRIDGE DETAILS**

S-8
 REV. 0



PRELIMINARY FOR REVIEW AND COMMENT

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 33 Pinnacle Road
 Canaan, ME 04924
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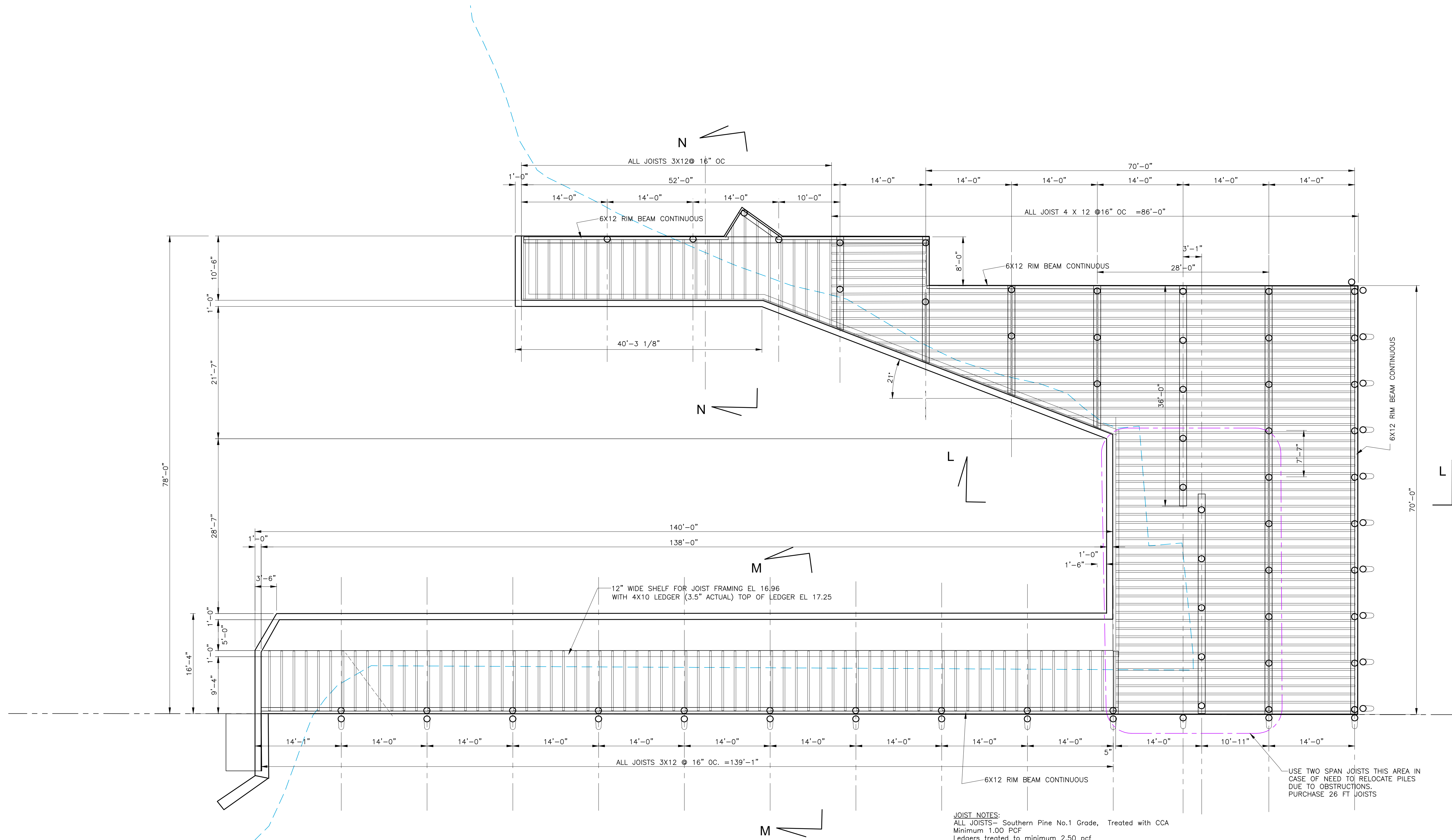
MIDDLE PIER CONCEPT
 STRUCTURAL PLANS

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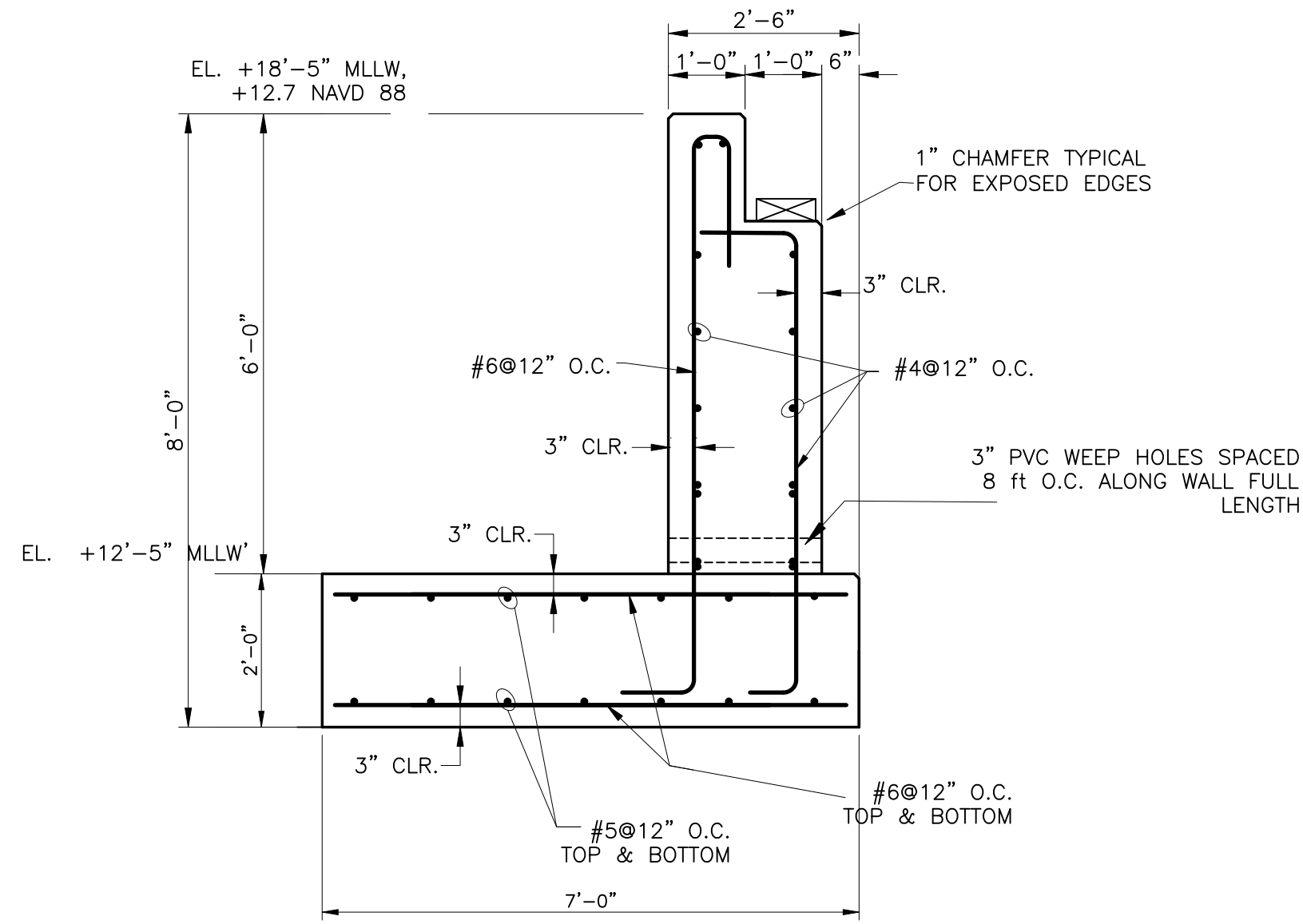
DOWNTOWN WATERFRONT MARINE INFRASTRUCTURE
 AT HARBOR AND BUOY PARKS
 ROCKLAND, MAINE

MIDDLE PIER DECK PLAN

S-9
 REV. 0

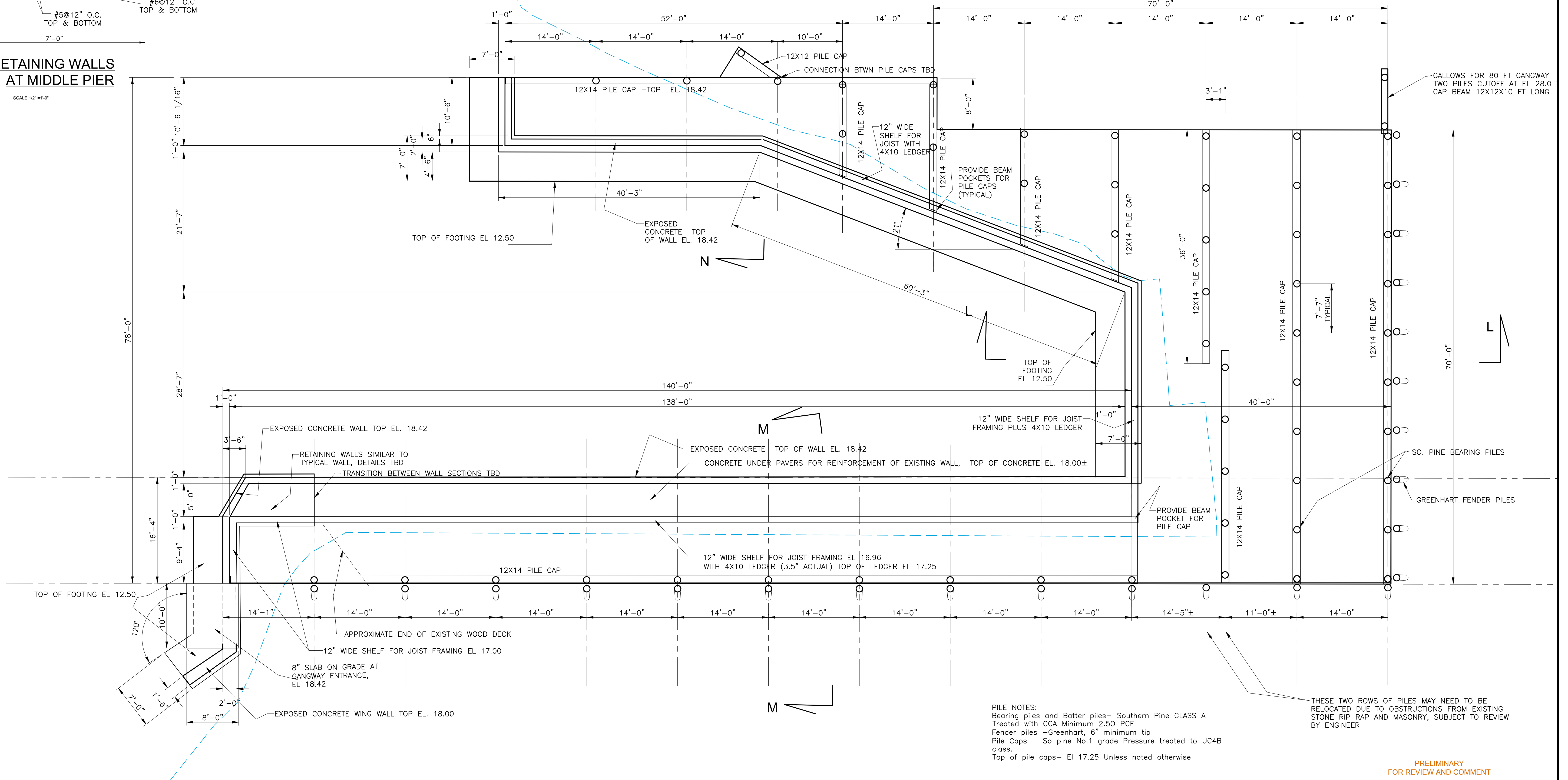


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TYPICAL SECTION RETAINING WALLS AT MIDDLE PIER

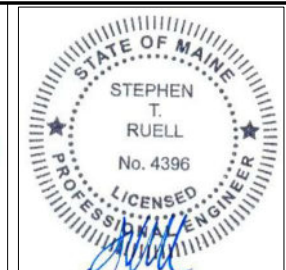
SCALE 1/2" = 1'-0"



PILE NOTES:
 Bearing piles and Batter piles-- Southern Pine CLASS A
 Treated with CCA Minimum 2.50 PCF
 Fender piles --Greenhart, 6" minimum tip
 Pile Caps -- So pine No.1 grade Pressure treated to UC4B class.
 Top of pile caps-- El.17.25 Unless noted otherwise

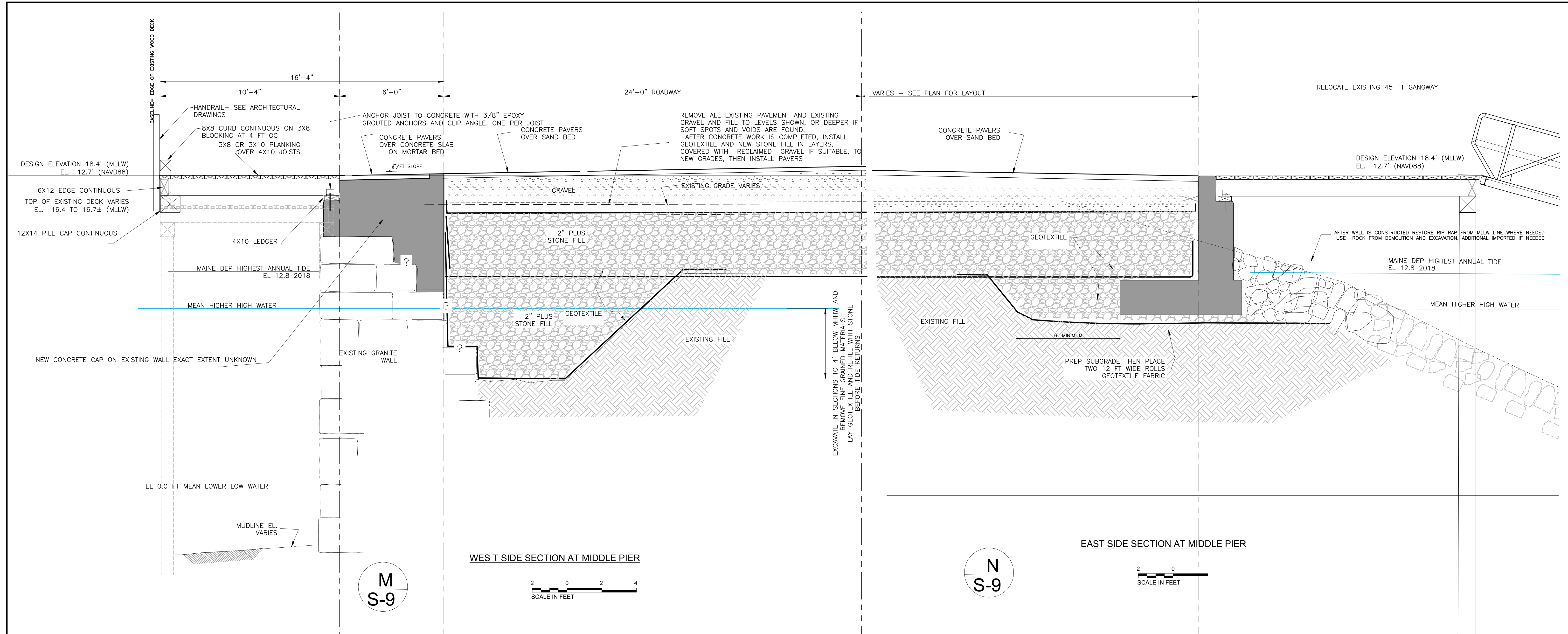
THESE TWO ROWS OF PILES MAY NEED TO BE RELOCATED DUE TO OBSTRUCTIONS FROM EXISTING STONE RIP RAP AND MASONRY, SUBJECT TO REVIEW BY ENGINEER

PRELIMINARY FOR REVIEW AND COMMENT



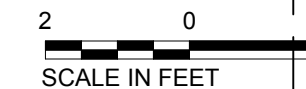
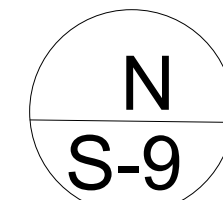
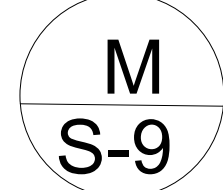
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24x36 = FULL SCALE



WEST SIDE SECTION AT MIDDLE PIER

EAST SIDE SECTION AT MIDDLE PIER



PRELIMINARY FOR REVIEW AND COMMENT

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 33 Pinnacle Road
 Canaan, ME 04924
 PinnacleHillEngineering@gmail.com



MIDDLE PIER CONCEPT STRUCTURAL PLANS

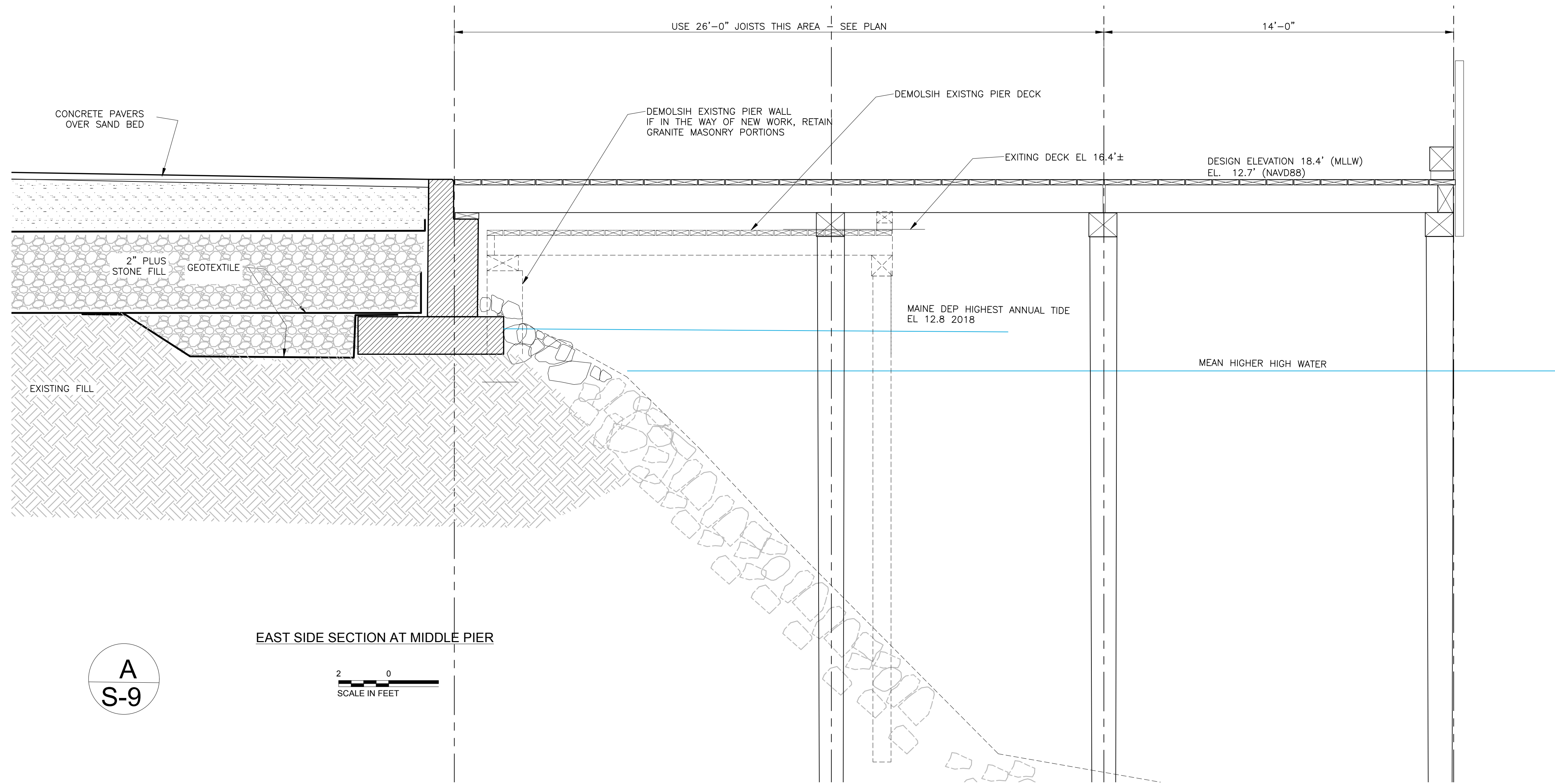
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DOWNTOWN WATERFRONT MARINE INFRASTRUCTURE
 AT HARBOR AND BUOY PARKS
 ROCKLAND, MAINE

MIDDLE PIER TRANSVERSE SECTIONS

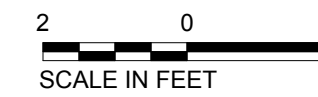
S-12
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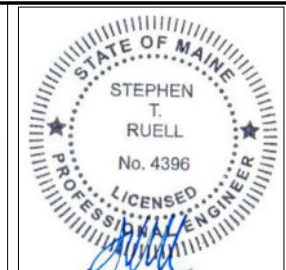
A
S-9

EAST SIDE SECTION AT MIDDLE PIER



PRELIMINARY
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MIDDLE PIER CONCEPT
STRUCTURAL SECTIONS

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DOWNTOWN WATERFRONT MARINE INFRASTRUCTURE
AT HARBOR AND BUOY PARKS
ROCKLAND, MAINE

MIDDLE PIER
LONGITUDINAL SECTION

S-13
REV. 0