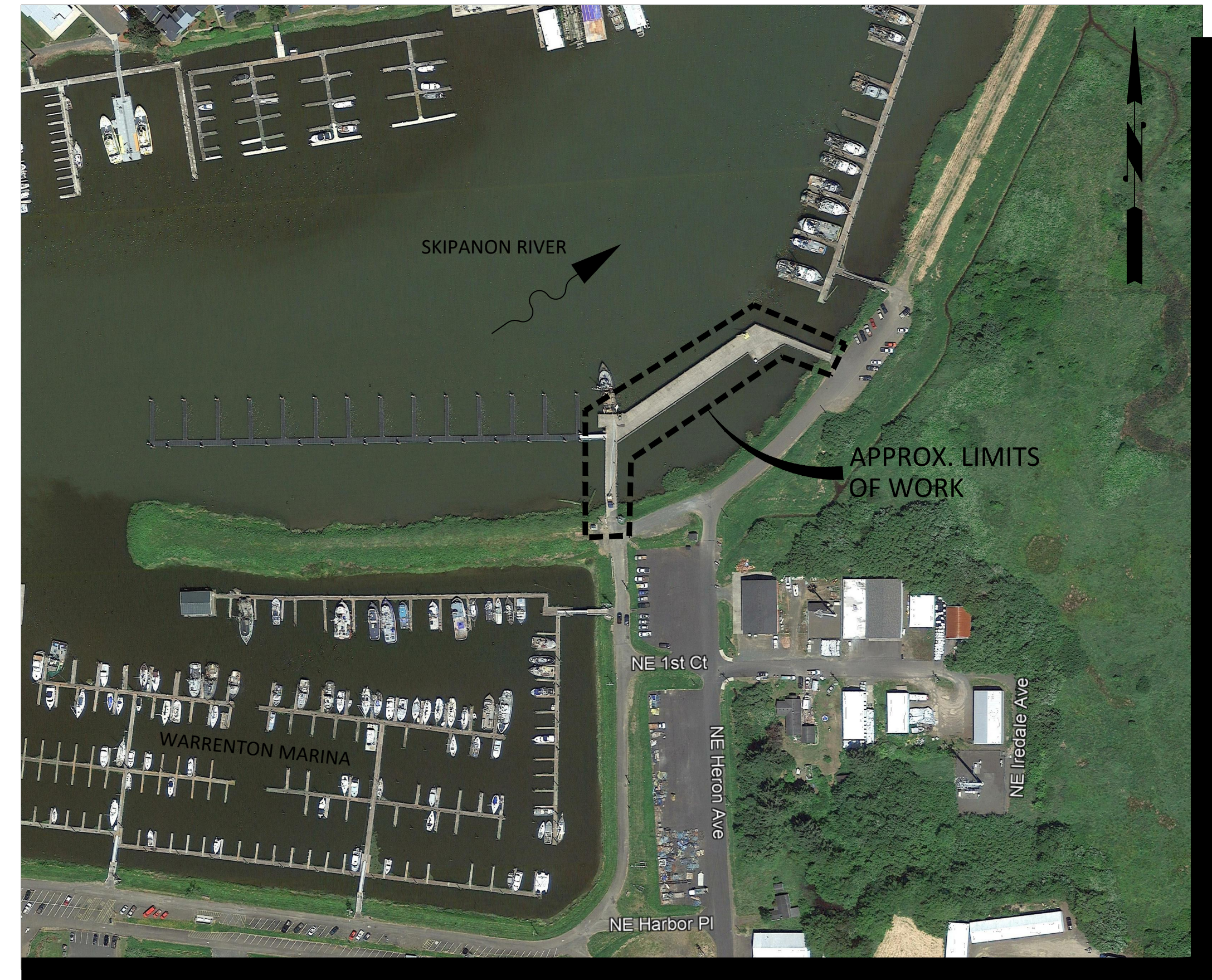
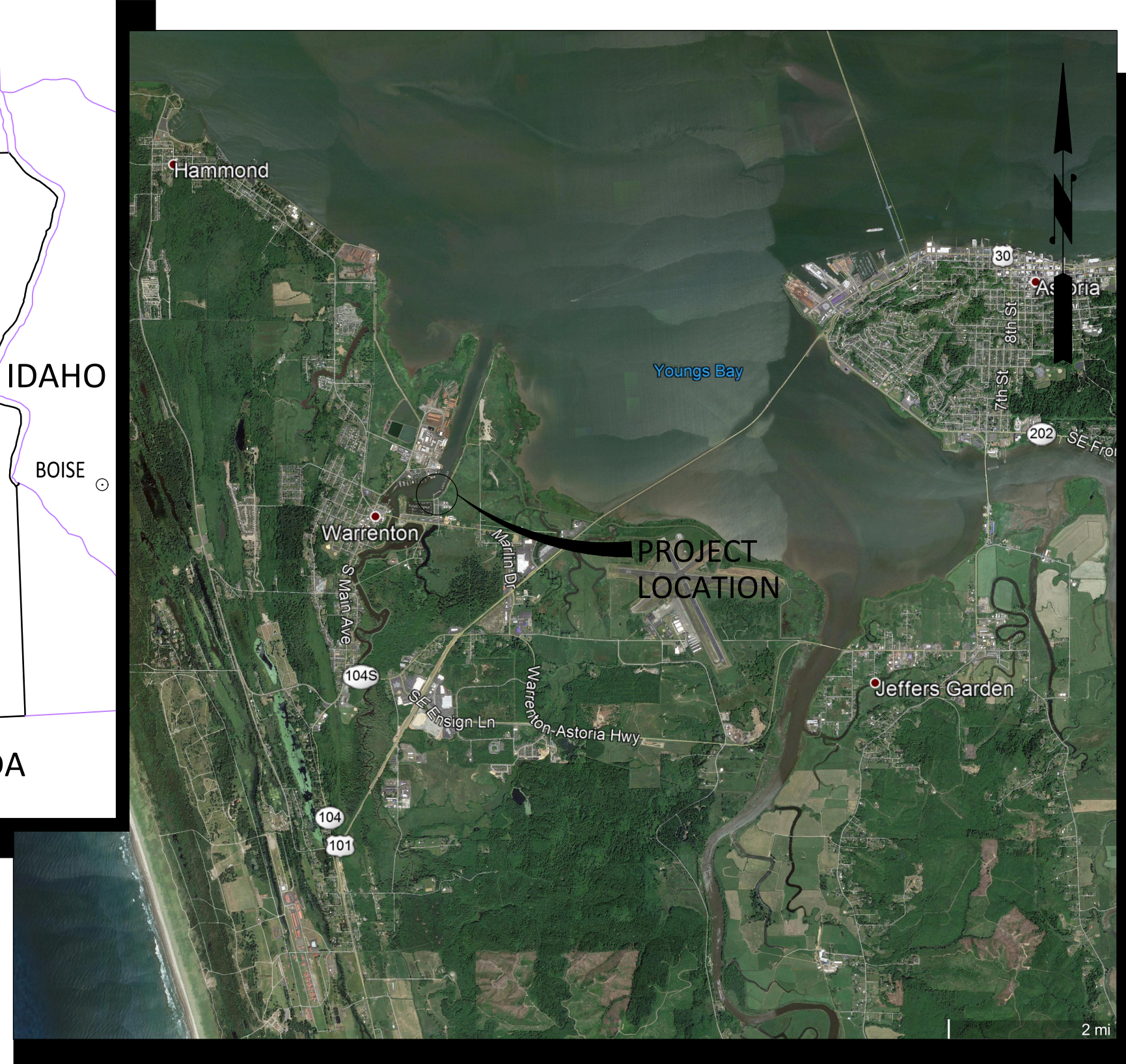
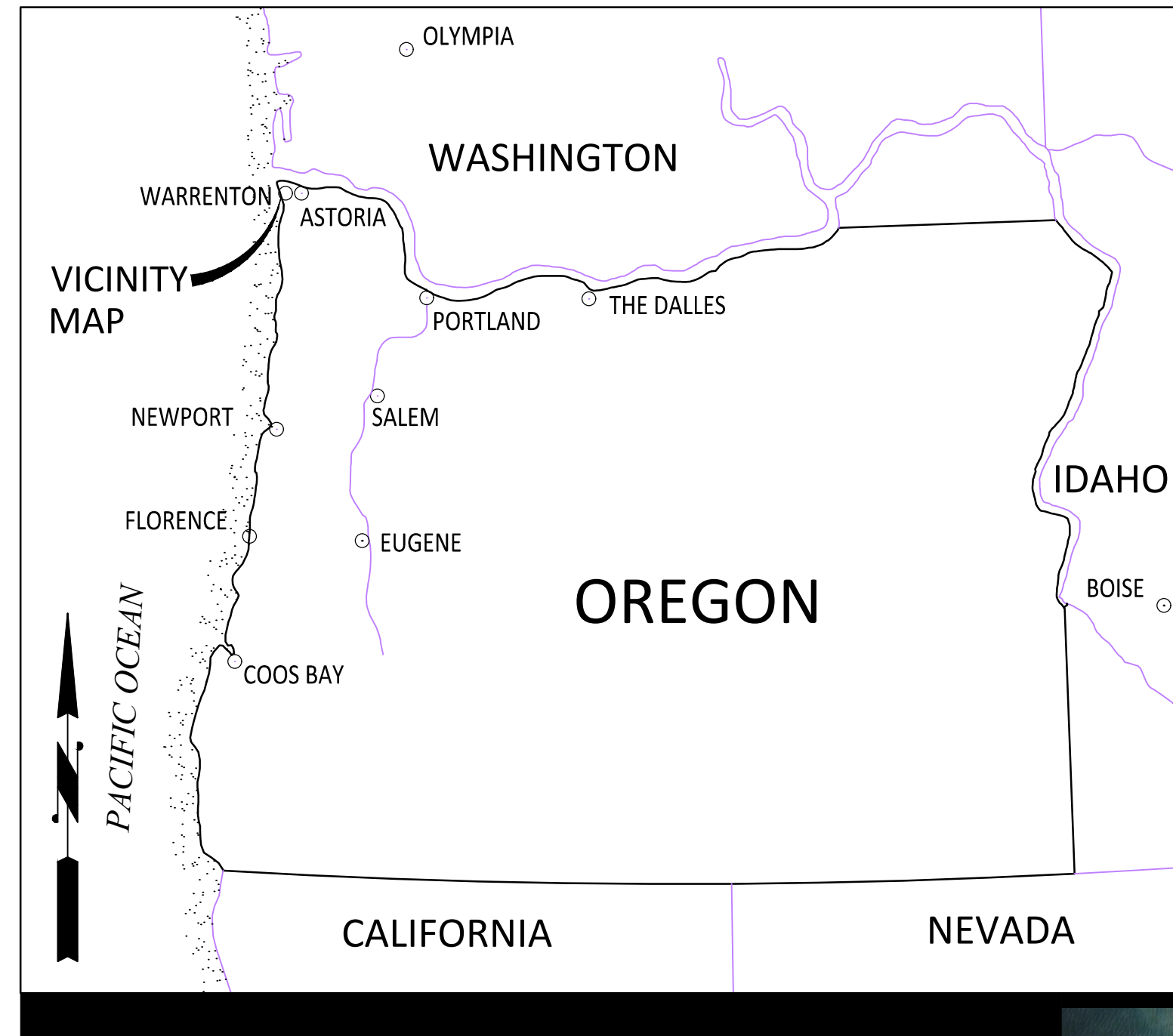


CITY OF WARRENTON

WORK PIER REHABILITATION - PHASES II & III



OREGON KEY MAP

TIDAL DATA		
Station: 9439040, Astoria, OR	MLLW (feet)	NAVD88 (feet)
HMT	12.37	12.58
BASE FLOOD	11.79	12.00
MHHW	8.61	8.82
MHW	7.94	8.15
MTL	4.55	4.76
MSL	4.51	4.72
DTL	4.31	4.52
MLW	1.17	1.38
MLLW	0.00	0.21
NAVD88	-0.21	0.00
MIN	-3.85	-3.64

HMT	Highest Measured Tide (1/27/1983)
BASE FLOOD	100-Year Flood
MHHW	Mean Higher-High Water
MHW	Mean High Water
MTL	Mean Tide Level
MSL	Mean Sea Level
DTL	Mean Diurnal Tide Level
MLW	Mean Low Water
MLLW	Mean Lower-Low Water
NAVD88	North American Vertical Datum of 1988
MIN	Lowest Observed Water Level (1/28/1979)

VICINITY MAP

SHEET INDEX

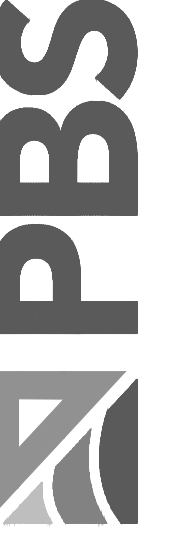
DRAWING	SHEET	SHEET TITLE
G01	1	COVER SHEET
S01	2	DRAWING LEGEND AND ABBREVIATIONS
S02	3	STRUCTURAL NOTES
S03	4	SPECIAL INSPECTION AND STRUCTURAL OBSERVATIONS
S04	5	PIER KEY PLAN
S05	6	PIER PLAN - SHEET 1
S06	7	PIER PLAN - SHEET 2
S07	8	PIER PLAN - SHEET 3
S08	9	PIER PLAN - SHEET 4
S09	10	PIER PLAN - SHEET 5
S10	11	PIER PLAN - SHEET 6
S11	12	PIER PLAN - SHEET 7
S12	13	PIER PLAN - SHEET 8
S13	14	PIER PLAN - SHEET 9

SHEET INDEX (CONT.)

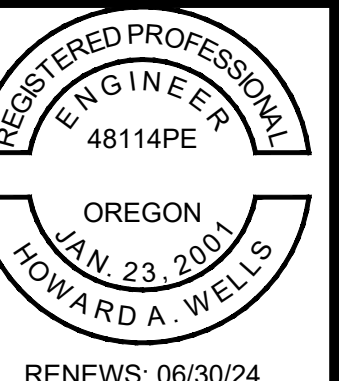
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S14	15	REHABILITATION DETAILS - SHEET 1
S15	16	REHABILITATION DETAILS - SHEET 2
S16	17	REHABILITATION DETAILS - SHEET 3
S17	18	REHABILITATION DETAILS - SHEET 4
S18	19	REHABILITATION DETAILS - SHEET 5

LOCATION MAP (WARRENTON, OREGON)

PBS Engineering and Environmental Inc.
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COVER SHEET FOR:
WORK PIER REHABILITATION-PHASES II & III
A SITE LOCATED IN THE CITY OF WARRENTON, OREGON



DESIGNED:
JMC
CHECKED:
KL
AUGUST 31, 2022
74202.000

SHEET ID
G01

SHEET 1 OF 19

No.	Revision	Date	By	App'd

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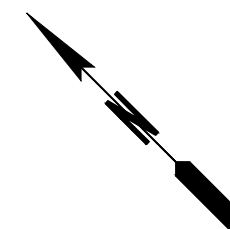
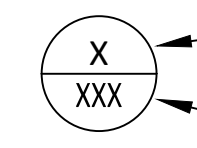

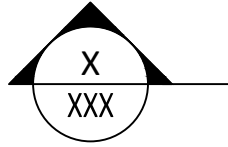
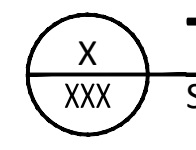
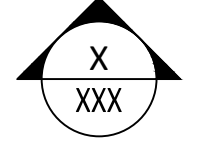


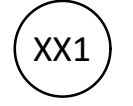





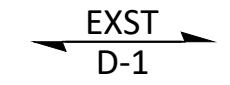
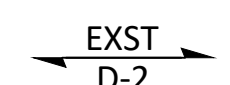
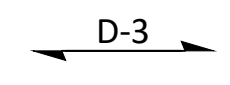
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ABBREVIATIONS:

&	AND	LBS	POUNDS
@	AT	LF	LINEAR FEET
APPROX	APPROXIMATE	LLV	LONG LEG VERTICAL
AR	ANCHOR RODS	MAX	MAXIMUM
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	MFT	MANUFACTURER
		MIN	MINIMUM
BF	BOARD FEET	MISC	MISCELLANEOUS
BLKG	BLOCKING	MET	METAL
BLW	BELOW	#	NUMBER
BOT	BOTTOM	N	NORTH
BTWN	BETWEEN	NA	NOT APPLICABLE
		NIC	NOT IN CONTRACT
CIP	CAST IN PLACE	NOM	NOMINAL
CL, ζ	CENTER LINE	NS	NEAR SIDE
CLR	CLEAR	NTS	NOT TO SCALE
CONC	CONCRETE		
CONN	CONNECTION	OC	ON CENTER
CONT	CONTINUOUS	OPP	OPPOSITE
		PCF	POUNDS PER CUBIC FOOT
DEMO	DEMOLISH	PL	PLATE
DIA OR \emptyset	DIAMETER	PSF	POUNDS PER SQUARE FOOT
DIAG	DIAGONAL	PT	PRESSURE TREATED
DIM	DIMENSION		
DWG	DRAWING	QTY	QUANTITY
		REF	REFERENCE
E	EAST	REINF	REINFORCE, REINFORCEMENT
EA	EACH	REQD	REQUIRED
EF	EACH FACE	REV	REVISION
EL	ELEVATION		
ELEC	ELECTRIC	S	SOUTH
EMBED	EMBEDMENT	SF	SQUARE FOOT
EQ	EQUAL	SIM	SIMILAR
EW	EACH WAY	SPA	SPACE, SPACING
EXST	EXISTING	SPEC	SPECIFICATION
		SQ	SQUARE
FS	FAR SIDE	T&B	TOP AND BOTTOM
FT	FOOT, FEET	THRU	THROUGH
FV	FIELD VERIFY	TOC	TOP OF CONCRETE
		TYP	TYPICAL
GA	GAGE		
GALV	GALVANIZED	UNO	UNLESS NOTED OTHERWISE
GVW	GROSS VEHICLE WEIGHT	W	WEST
		W/	WITH
HPC	HIGH PERFORMANCE CEMENTITIOUS	W/O	WITHOUT
HS	HIGH STRENGTH		
HT	HEIGHT		
IN	INCH		
INFO	INFORMATION		
KSI	KIPS PER SQUARE INCH		

LEGEND:

	NORTH ARROW
	SECTION, DETAIL, OR ELEVATION CALLOUT
	DRAWING WHERE SECTION, DETAIL OR ELEVATION IS FIRST SHOWN OR CALLED FROM
	SECTION OR ELEVATION CUT
	PLAN, SECTION, DETAIL, OR ELEVATION
	PHOTO - INDICATES APPROXIMATE PERSPECTIVE
	EXISTING PLUMB PILE
	EXISTING BATTERED PILE (1:12) UNO
	BENT NUMBER
	ROW LETTER
	EXISTING POWER/ELECTRICAL CONDUIT
	EXISTING WATER LINE
	SPOT ELEVATION
	EXISTING 3x8 PILE BRACING ATTACHED AT TOP OF PILE
	SPAN DIRECTION OF EXISTING 3" UNREINFORCED CONCRETE OVER 1 1/2" DEEP METAL DECK W/ 4 1/2" FLUTE SPACING. TO BE REPLACED WITH D-3
	SPAN DIRECTION OF EXISTING 3 3/4" CONCRETE WITH #4 REBAR AT 12" OC, EACH WAY, OVER 3/4" DEEP METAL DECK W/ 3" FLUTE SPACING
	SPAN DIRECTION OF NEW 3" CONC W/ #4 AT 12" OC EA WAY AT MID DEPTH OF CONC, OVER 1 1/2" DEEP METAL DECK

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DRAWING LEGEND AND ABBREVIATIONS FOR:
WORK PIER REHABILITATION-PHASES II & III
A SITE LOCATED IN THE CITY OF WARRENTON, OREGON



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S01

No.	Revision	Date	By	App'd

CODES AND STANDARDS:

- REINFORCED CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301) AND "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (ACI 318).
- STRUCTURAL AND MISCELLANEOUS STEEL FABRICATION AND ERECTION THEREOF SHALL CONFORM TO THE "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" (AISC 303) AND "SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS" (AISC 360).
- WELDING OF STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO "STRUCTURAL WELDING CODE - STEEL" (AWS D1.1).
- CONCRETE REPAIR SHALL CONFORM TO REQUIREMENTS OF "GUIDE TO CONCRETE REPAIR" (ACI 546R).
- TIMBER CONSTRUCTION SHALL CONFORM TO "NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION" (NDS).

GENERAL:

- THE IMPLEMENTATION OF A BEST MANAGEMENT PRACTICES PLAN (BMP) DURING CONSTRUCTION IS REQUIRED. THE CONTRACTOR SHALL PREVENT/MINIMIZE ENVIRONMENTAL IMPACTS DURING ALL CONSTRUCTION WORK.
- THESE NOTES CONTAIN GENERAL INFORMATION AND ARE NOT COMPLETE FOR CONSTRUCTION PURPOSES. VERIFY INFORMATION GIVEN HERE WITH THE SPECIFICATIONS AND OTHER DRAWINGS, AND BRING ANY CONFLICTS TO THE ATTENTION OF THE CITY BEFORE BEGINNING AFFECTED WORK. THE CITY WILL RESOLVE ANY CONFLICTS.
- FIELD VERIFY ALL FEATURES, DIMENSIONS, AND ELEVATIONS PRIOR TO FABRICATION OF ASSEMBLIES OR CONSTRUCTION. THE CONDITIONS SHOWN ON THESE DRAWINGS ARE BASED ON AVAILABLE EXISTING DATA. NOTIFY THE CITY OF ANY DISCREPANCIES BEFORE BEGINNING THE AFFECTED WORK.
- DIMENSIONS, ELEVATIONS, AND DETAILS OF EXISTING STRUCTURES ARE INCLUDED ON THESE DRAWINGS FOR REFERENCE ONLY AND MAY NOT REFLECT ACTUAL FIELD CONDITIONS. VERIFY DIMENSIONS AND DETAILS, AND NOTIFY THE CITY OF ANY MISALIGNMENT, DISCREPANCIES, DIMENSIONS THAT NEED MODIFICATION, OR OMISSIONS BEFORE THE SHOP DRAWING SUBMITTALS.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR FIELD VERIFICATION AND DETERMINATION OF STRUCTURAL CAPACITY OF THE EXISTING STRUCTURES FOR THE ANTICIPATED LOADS DURING CONSTRUCTION.
- PROVIDE WATER-TIGHT CONTAINMENT SYSTEM FOR ALL UNDER DECK REPAIRS. INSTALL TEMPORARY WORK PLATFORMS IF NEEDED, AND CONTAINMENT SYSTEM IN ACCORDANCE WITH THE SPECIFICATIONS.
- THE FOLLOWING REPORT IS INCLUDED FOR REFERENCE ONLY. THE INFORMATION CONTAINED IN THIS REPORT IS INFORMATIONAL AND IS NOT PART OF THE CONTRACT DOCUMENTS.
 - WARRENTON MARINA WORK PIER, CONDITION SURVEY AND LOAD RATING REPORT, JULY 2017.

DEMOLITION:

- THE CONTRACTOR SHALL CONTAIN THE DEMOLITION WITHIN THE LIMITS DESIGNATED, TO PREVENT DAMAGE TO EXISTING STRUCTURES, UTILITIES, OR FACILITIES, AND KEEP ALL DEBRIS FROM FALLING INTO THE WATER.
- PRIOR TO GENERAL DEMOLITION, THE CONTRACTOR SHALL SAWCUT WHERE NOTED, OR OTHERWISE PROVIDE A SMOOTH CLEAN BREAK BETWEEN ITEMS THAT ARE TO BE DEMOLISHED AND ITEMS THAT ARE TO REMAIN.
- ALL DEMOLITION MATERIAL, EXCEPT AS NOTED, SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE COMPLETELY REMOVED AND DISPOSED OF BY THE CONTRACTOR. THE REMOVAL, HANDLING, AND DISPOSAL OF ALL DEMOLITION MATERIALS, INCLUDING CREOSOTE-TREATED TIMBERS, SHALL BE IN STRICT ACCORDANCE WITH ALL STATE AND FEDERAL REQUIREMENTS. PROPER DISPOSAL OF ALL DEMOLITION AND CONSTRUCTION MATERIALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE ITSELF WITH THE MATERIALS TO BE DISPOSED OF AND ALL GOVERNING AGENCIES AND PERMIT REQUIREMENTS.

REINFORCED CONCRETE:

- REINFORCED CONCRETE MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS: 5,000 PSI
- REINFORCING STEEL
 - ALL REINFORCING STEEL SHALL BE DEFORMED STEEL BARS CONFORMING TO ASTM A615, GRADE 60, UNLESS NOTED OTHERWISE. WELDED REINFORCING BARS SHALL CONFORM TO ASTM A706.
 - SHOW SPLICE LOCATIONS FOR REINFORCING STEEL ON THE SHOP DRAWINGS. SPLICES SHALL CONFORM TO THE FOLLOWING TABLE, UNLESS OTHERWISE NOTED.

SCHEDULE OF LAP SPLICE LENGTHS (f'c=5000 PSI)

BAR SIZE	4	5	6	7	8
TOP BARS	2'-6"	3'-0"	3'-9"	5'-3"	6'-0"
BOTTOM BARS	2'-0"	2'-6"	3'-0"	4'-0"	4'-9"

NOTES:

- VALUES ARE BASED ON CLASS "B" SPLICES (MAX OF 50% BAR SPLICED AT ONE LOCATION).
- TOP BARS ARE DEFINED AS ANY HORIZONTAL BAR PLACED SUCH THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE BAR IN ANY SINGLE POUR.
- DETAIL ALL REINFORCING STEEL IN ACCORDANCE WITH ACI 315.
- PROVIDE 1 1/2-INCHES OF CONCRETE COVER UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
- CONCRETE FORMING: SEE SPECIFICATIONS. FILL ALL VOIDS LEFT BY CONES AND OTHER FORMWORK HARDWARE AFTER FORMS ARE REMOVED. FOR CHAIRS, SUPPORTS, AND SPACERS TO SUPPORT REINFORCING STEEL, USE ALL-PLASTIC OR EPOXY-COATED WITH PRE-MOLDED PLASTIC TIPS. PROVIDE CHAIRS, SUPPORTS, AND SPACERS AT INTERVALS LESS THAN 4 FEET ON CENTER UNLESS OTHERWISE ALLOWED BY THE CITY.
- CONCRETE FINISHING: TERMINOLOGY IS AS DEFINED IN ACI 301. SLAB OR TOP SURFACE = LIGHT BROOM FINISH W/ 1/16" STRIA FORMED SURFACES = SMOOTH FORM FINISH SURFACES RECEIVING GROUT = SCRATCH FINISH
- CONCRETE CURING: MOIST CURE CONCRETE SURFACES OR USE AN APPROVED CURING MEMBRANE IN ACCORDANCE WITH ACI 301 UNLESS A LONGER TIME IS REQUIRED IN THE SPECIFICATIONS.
- CONCRETE DEFECTS: REPAIR FORMED SURFACES BY REMOVING MINOR HONEYCOMBS, PITS GREATER THAN 1/2-SQUARE-INCH IN AREA OR GREATER THAN 1/4-INCH IN DEPTH, AND ALL OTHER DEFECTS AS DIRECTED BY THE CITY OR AS DESCRIBED IN THE SPECIFICATIONS OR REFERENCE DOCUMENTS. PROVIDE EDGES PERPENDICULAR TO THE SURFACE, PATCH WITH GROUT AS SPECIFIED, AND PROVIDE A SMOOTH FORM FINISH. CONCRETE WITH EXTENSIVE HONEYCOMBING OR OTHER DEFECTS WHICH AFFECT SERVICEABILITY AND/OR STRUCTURAL STRENGTH OF THE CONCRETE ELEMENT, AS DETERMINED BY THE CITY, SHALL BE REJECTED AND REPLACED AT NO ADDITIONAL COST TO THE CITY.

STRUCTURAL AND MISCELLANEOUS STEEL:

- MISCELLANEOUS STEEL SHAPES, PLATES, AND BARS: ASTM A572, Fy = 50 KSI, TYPICAL
- ANGLES: ASTM A36, UNO
- BOLTS: ASTM A307 TYPICAL, UNO
- NUTS: HEAVY HEX, ASTM A563, GRADE SUITABLE FOR THE TYPE OF BOLT.
- WASHERS: ASTM F844, WIDE SERIES, MAXIMUM THICKNESS FOR ASTM A307 BOLTS.
- HOT-DIP GALVANIZE ALL STEEL MATERIALS, FABRICATIONS, AND ASSEMBLIES IN ACCORDANCE WITH ASTM A123 OR ASTM A153 AS APPLICABLE, UNO. GALVANIZE ITEMS AFTER FABRICATION AS FAR AS PRACTICABLE. RESTORE GALVANIZING DAMAGED BY WELDING, HANDLING, OR OTHER CAUSES IN ACCORDANCE WITH THE SPECIFICATIONS. GALVANIZED ITEMS SHALL BE COATED IN ACCORDANCE WITH THE SPECIFICATIONS.
- STEEL FENDER PILE: ASTM A252, GRADE 3, Fy = 50 KSI.

METAL DECK:

- STEEL FLOOR DECK SHALL BE COMPOSITE METAL DECK WITH FLUTES AT 6" ON CENTER AND CONFORM TO ASTM A653-SS DESIGNATION, GRADE 50 MINIMUM OR ASTM A611, GRADE C. ACCEPTABLE METAL DECK AS FOLLOWS.
 - ASC BH-36 HI FORM.
 - VERCO PLB FORM LOCK.
 - NEW MILLENIUM BUILDING SYSTEM, TYPE 1.5CD.
- THE MINIMUM DECK SIZE AND GAUGE ARE BASED ON A 3-SPAN, UNSHORED CONDITION. THE MINIMUM DECK PROPERTIES ARE 1 1/2" DEEP, 16 GAGE FLOOR DECK MIN. I(IN⁴/FT)=0.355, S(IN³/FT)=0.390
- STEEL DECK COATING IN ACCORDANCE WITH ASTM A653 G60. PROVIDE FACTORY PRIMER TO UNDERSIDE OF DECK.
- STEEL FLOOR DECK ATTACHMENT SHALL BE (2) 5/16 DIA x 3" LONG GALVANIZED SCREWS @ 6" OC AT ALL TRANSVERSE, PERIMETER AND LONGITUDINAL TIMBER SUPPORTS AND BLOCKING.

TIMBER:

- ALL SAWN LUMBER SHALL BE PRESSURE TREATED AND CONFORM TO WEST COAST LUMBER INSPECTION BUREAU OR WESTERN WOOD PRODUCTS ASSOCIATION GRADING RULES. LUMBER SHALL BE OF BEAMS 5" x 5" AND GREATER, DOUGLAS FIR LARCH NO.1 (Fb = 1350 PSI)
- TIMBER BOLTS AND TIMBER LAG SCREWS SHALL CONFORM TO ANSI/ASME STANDARD B18.2.1-1981. ALL TIMBER BOLTS AND TIMBER LAG SCREWS SHALL BE DOME HEAD AND INSTALLED WITH MALLEABLE IRON WASHERS. ALL TIMBER BOLTS SHALL BE A307 AND HAVE CUT THREADS.
- ALL FASTENERS, NAILS, LAG SCREWS AND BOLTS SHALL BE HOT-DIP GALVANIZED.
- HOLES FOR BOLTS SHALL BE DRILLED WITH A BIT OF THE SAME NOMINAL DIAMETER AS THE BOLT +1/16". LEAD HOLES FOR LAG SCREWS SHALL BE BORED IN ACCORDANCE WITH ANSI/AWC NDS-2012, SECTION 11.1.4.
- WHEN FIELD CUTTING, DRILLING OR FABRICATION IS NECESSARY, IT SHALL BE DONE AWAY FROM THE WATER TO THE DEGREE PRACTICAL AND ALL WASTE, INCLUDING SAWDUST, SHALL BE COLLECTED AND DISPOSED OF APPROPRIATELY.
- TREAT ALL HOLES, CUTS OR INJURIES IN EXISTING TIMBERS WITH A COPPER NAPHTHENATE BASED SOLUTION. THE FOLLOWING GUIDELINES SHALL BE FOLLOWED IN FIELD TREATMENT OF TIMBERS:
 - FOLLOW THE PROCEDURES OUTLINED IN AWPA STANDARD M4, STANDARD FOR THE CARE OF PRESERVATIVE-TREATED WOOD PRODUCTS.
 - WHEN FIELD TREATING EXISTING TIMBERS BY BRUSHING, SPRAYING, DIPPING OR SOAKING DO SO IN SUCH A MANNER THAT THE PRESERVATIVE DOES NOT DRIP OR SPILL INTO THE ENVIRONMENT.
 - WHENEVER POSSIBLE, APPLY FIELD TREATMENTS PRIOR TO ASSEMBLING THE STRUCTURE OVER THE BODY OF WATER.
 - CONDUCT THE APPLICATION OF THE PRESERVATIVE SO THAT ANY OVERSPRAY OR DRIPPAGE OF PRESERVATIVE CAN BE RECOVERED OR RETAINED.
 - SPECIFIERS AND INSTALLERS SHALL FOLLOW THE DIRECTIONS FOR USE ON THE COPPER NAPHTHENATE BASED END CUT SOLUTION LABEL AND MATERIAL SAFETY DATA SHEETS (MSDS) FOR THE PRODUCT.

CONSTRUCTION LOADS:

- SEE DRAWING S-04 FOR EQUIPMENT AND LOAD RESTRICTIONS.
- DO NOT OPERATE EQUIPMENT OR USE AS STAGING AREAS ANYWHERE IDENTIFIED AS A LOAD RESTRICTED AREA.

DECK JOINT SEAL:

- HOT Poured JOINT SEALANT
 - USED FOR JOINT WIDTHS 1/2" OR LESS
 - SHALL BE CRAFCO ROADSAVER 221 OR APPROVED EQUAL
- TWO-COMPONENT, ELASTOMERIC JOINT SEALANT
 - USED FOR JOINT WIDTHS 1/2" UP TO 2 1/2"
 - SHALL BE SIKAFLEX-2C NS EZ MIX OR APPROVED EQUAL

KEY NOTES AND ESTIMATED REPAIR QUANTITIES:

KEY NOTE	LOCATION	REPAIR DESCRIPTION	DETAIL	QTY	UNIT
1	WEST TRESTLE	REMOVE & REPLACE CONCRETE OVER METAL DECK	A,B,C S14	3040	SF
2	WORK PIER	STRENGTHENING PILE CAP WP3	A S15	1	EA
3	WORK PIER	STRENGTHENING PILE CAP WP4	B S15	1	EA
4	WEST TRESTLE	STRENGTHENING WEST TRESTLE PILE CAP	A, B S16	9	EA
5	WORK PIER	STRENGTHENING TYPICAL WORK PIER PILE CAP	C S16	27	EA
6	EAST TRESTLE	STRENGTHENING TYPICAL EAST TRESTLE PILE CAP	D S16	8	EA
7	WORK PIER	STRENGTHENING JOIST - SINGLE SPAN	A S17	8	EA
8	WORK PIER	STRENGTHENING JOIST - 2-SPAN	B S17	4	EA
9	WORK PIER - EAST TRESTLE	REMOVE & REPLACE FENDER PILE	B S18	7	EA
10	WEST TRESTLE	REPLACE BRACE	A S18	3	EA

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STRUCTURAL NOTES FOR:

WORK PIER REHABILITATION-PHASES II & III
 A SITE LOCATED IN THE CITY OF WARRENTON, OREGON



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CHECKED: KL

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TABLE 2					
REQUIRED STRUCTURAL SPECIAL INSPECTIONS					
SYSTEM OR MATERIAL	INSPECTION				REMARKS
	IBC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY		
			CONTINUOUS	PERIODIC	
FABRICATORS					
FABRICATORS	1704.2.5			X	SPECIAL INSPECTION IS REQUIRED FOR STRUCTURAL LOAD-BEARING MEMBERS AND ASSEMBLIES FABRICATED ON THE PREMISES OF A FABRICATOR'S SHOP.
	1704.2.5.1				THE SPECIAL INSPECTOR SHALL VERIFY THAT THE FABRICATOR MAINTAINS DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES AND SHALL REVIEW FOR COMPLETENESS AND ADEQUACY RELATIVE TO THE CODE REQUIREMENT.
	1704.2.5.2				SPECIAL INSPECTIONS REQUIRED BY SECTION 1705 ARE NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. APPROVAL SHALL BE BASED UPON REVIEW OF THE FABRICATOR'S WRITTEN PROCEDURAL AND QUALITY CONTROL MANUALS AND PERIODIC AUDITING OF FABRICATION PRACTICES BY A NATIONALLY RECOGNIZED ACCREDITING AUTHORITY. AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE BUILDING OFFICIAL STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.
CONCRETE					
REINFORCING STEEL	1705.3 1910.4 1901.3.2	ACI 318: 3.5 ACI 318: 7.1-7.7		X	TOLERANCES AND REINFORCING PLACEMENT PER ACI 7.5; SPACING LIMITS FOR REINFORCING ACI 7.6 PROTECTION OF REINFORCEMENT PER ACI 7.7
VERIFYING USE OF REQUIRED MIX DESIGN(S)	TABLE 1705.3 1904 1904.2 1910.2 1910.3	ACI 318: CHAPTER 4 ACI 318: 5.2-5.4		X	
CONCRETE PLACEMENT	TABLE 1705.3	ACI 318: 1.3.2.D ACI 318: 5.9 - 5.10	X		
STEEL					
FABRICATION OF STRUCTURAL ELEMENTS	1704.2.5.2	AISC 360 N2		X	REFER TO INSPECTION OF FABRICATOR REQUIREMENTS APPROVAL BASED ON NATIONALLY RECOGNIZED ACCREDITING AUTHORITY
MATERIAL VERIFICATION OF STRUCTURAL STEEL	1705.2.1 2203.1 TABLE 1705.2	ASTM A6 ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS AISC 360 N3.2 AISC 360 A3.1 AISC 360 M5.5		X	CERTIFIED MILL TEST REPORTS
INSTALLATION OF COMPOSITE SLAB DECKING	1705.1.1	ICC EVALUATION REPORT ASCE 9 CHAPTER 3		X	SPECIAL INSPECTIONS APPLY TO DECKING TYPE, DEPTH, GAGE, AND FASTENING

TABLE 5					
REQUIRED TESTING FOR SPECIAL INSPECTIONS					
SYSTEM OR MATERIAL	INSPECTION				REMARKS
	IBC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY		
			CONTINUOUS	PERIODIC	
CONCRETE					
AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	TABLE 1705.3	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8	X		FABRICATE SPECIMENS AT TIME FRESH CONCRETE IS PLACED ONCE EACH DAY FOR A GIVEN CLASS OF CONCRETE, OR LESS THAN ONCE FOR EACH 150 YDS OF CONCRETE, OR LESS THAN ONCE FOR EACH 5,000 FT2 OF SURFACE AREA FOR SLABS/WALLS. ONCE EACH SHIFT FOR IN-PLACE WORK OR FROM TEST PANEL AND MINIMUM ONE SPECIMEN FOR EACH 50 CUBIC YARDS. "PRECONSTRUCTION TESTS AS REQUIRED PER THE BUILDING OFFICIAL."
CONCRETE STRENGTH	TABLE 1705.3	ASTM C39	X		
CONCRETE SLUMP		ASTM C143	X		
CONCRETE AIR CONTENT	TABLE 1705.3	ASTM C231	X		
CONCRETE TEMPERATURE		ASTM C1064	X		

TABLE 9					
STRUCTURAL OBSERVATION					
SYSTEM OR MATERIAL	INSPECTION				REMARKS
	IBC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY		
			CONTINUOUS	PERIODIC	
PRIOR TO FIRST CONCRETE POUR				X	

STRUCTURAL OBSERVATIONS:

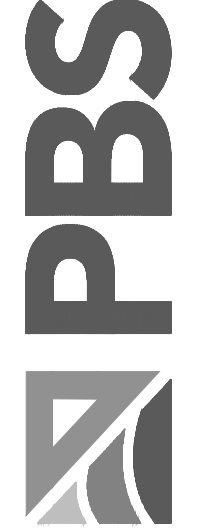
- STRUCTURAL OBSERVATION WILL CONFORM TO SECTION 1704 OF THE 2021 IBC. SEE TABLE 9 FOR REQUIRED STRUCTURAL OBSERVATION.
- STRUCTURAL OBSERVATION WILL BE PERFORMED BY THE ENGINEER OF RECORD. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE ENGINEER OF RECORD IN ADVANCE OF THE STAGES LISTED IN TABLE 9.
- THE STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR ANY REQUIRED SPECIAL INSPECTIONS.

SPECIAL INSPECTION PROGRAM NOTES:

- SPECIAL INSPECTIONS SHALL CONFORM TO CHAPTER 17 OF THE 2021 INTERNATIONAL BUILDING CODE.
- SPECIAL INSPECTIONS AND ASSOCIATED TESTING SHALL BE PERFORMED BY AN APPROVED ACCREDITED INDEPENDENT AGENCY MEETING THE REQUIREMENTS OF ASTM E329 (MATERIALS), ASTM D3740 (SOILS), ASTM C1077 (CONCRETE), ASTM A880 (STEEL), AND ASTM E543 (NON-DESTRUCTIVE). THE INSPECTION AND TESTING AGENCY SHALL FURNISH TO THE ENGINEER OF RECORD A COPY OF THEIR SCOPE OF ACCREDITATION. SPECIAL INSPECTORS SHALL BE CERTIFIED BY THE BUILDING OFFICIAL. WELDING INSPECTORS SHALL BE QUALIFIED PER SECTION 6.1.4.1.1 OF AWS D1.1. THE OWNER SHALL SECURE AND PAY FOR SERVICES OF THE INSPECTION AND TESTING AGENCY TO PERFORM ALL SPECIAL INSPECTIONS AND TESTS.
- THE SPECIAL INSPECTOR SHALL OBSERVE THE INDICATED WORK FOR COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION NOTED IN THE INSPECTION REPORTS, AND IF NOT CORRECTED, BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD AND THE OWNER.
- THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS FOR EACH INSPECTION TO THE ENGINEER OF RECORD, CONTRACTOR, AND OWNER. THE SPECIAL INSPECTION AGENCY SHALL SUBMIT A FINAL REPORT INDICATING THE WORK REQUIRING SPECIAL INSPECTION WAS INSPECTED AND IS IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THAT ALL DISCREPANCIES NOTED IN THE INSPECTION REPORTS HAVE BEEN CORRECTED.
- THE CONTRACTOR SHALL PROVIDE MINIMUM 48 HOURS ADVANCED NOTIFICATION OF CONSTRUCTION ACTIVITIES TO THE SPECIAL INSPECTOR TO ALLOW FOR INSPECTION OF WORK.
- MAINTAIN ACCESS TO WORK REQUIRING INSPECTION UNTIL IT HAS BEEN INSPECTED AND INDICATED TO BE IN CONFORMANCE.
- DEFINITIONS:
 - CONTINUOUS INSPECTION: THE INSPECTOR IS OBSERVING THE WORK REQUIRING INSPECTION AT ALL TIMES.
 - PERIODIC INSPECTION: THE INSPECTOR IS ON SITE AS REQUIRED TO CONFIRM THAT THE WORK REQUIRING INSPECTION IS IN CONFORMANCE.
- IBC SPECIAL INSPECTION TABLES 1, 3, 4, 6, 7 AND 8 ARE NOT REQUIRED FOR THIS PROJECT.

No.	Revision	Date	By	App'd

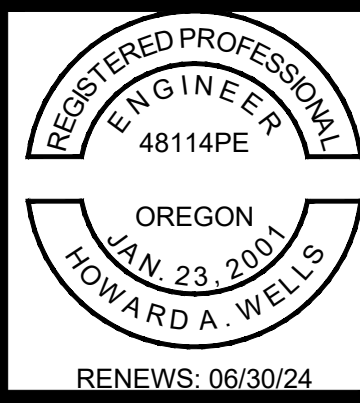
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SPECIAL INSPECTIONS AND STRUCTURAL OBSERVATIONS FOR:
WORK PIER REHABILITATION-PHASES II & III
 A SITE LOCATED IN THE CITY OF WARRENTON, OREGON



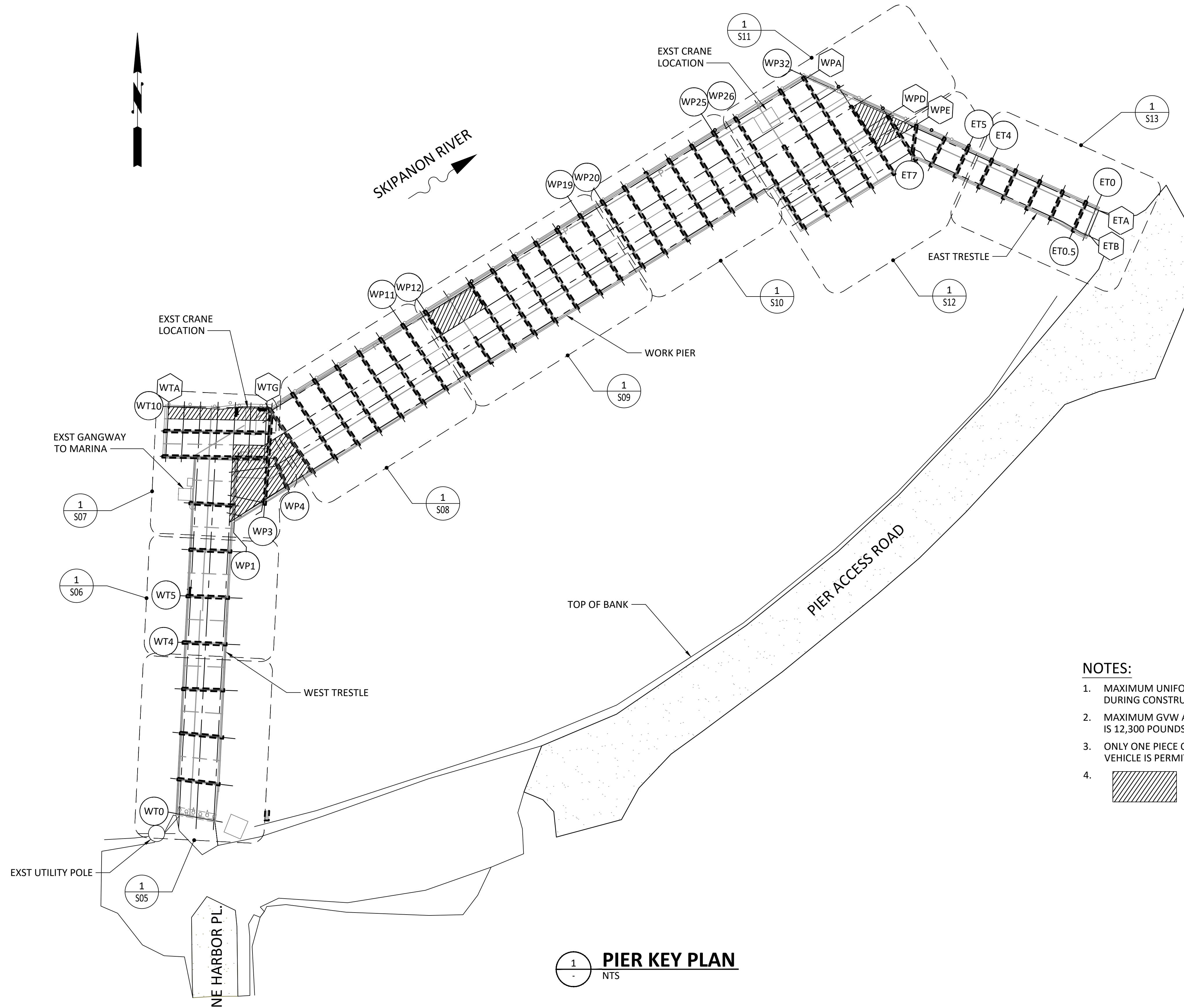
Know what's below.
Call before you dig.



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CHECKED: KL
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74202.000

SHEET ID
S03

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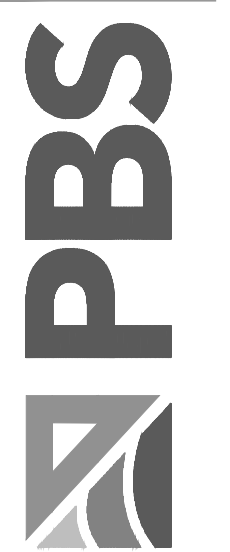
1 PIER KEY PLAN
 NTS

NOTES:

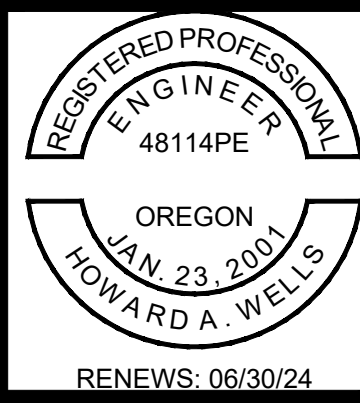
1. MAXIMUM UNIFORM CONSTRUCTION LOAD ALLOWED ON PIER DURING CONSTRUCTION IS 100 PSF.
2. MAXIMUM GVW ALLOWED ON THE PIER DURING CONSTRUCTION IS 12,300 POUNDS.
3. ONLY ONE PIECE OF HEAVY EQUIPMENT OR CONSTRUCTION VEHICLE IS PERMITTED ON THE PIER AT A TIME.
4. INDICATES LOAD RESTRICTED AREA. DO NOT OPERATE EQUIPMENT OR USE AS STAGING AREA.

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PIER KEY PLAN FOR:
WORK PIER REHABILITATION-PHASES II & III
 A SITE LOCATED IN THE CITY OF WARRENTON, OREGON

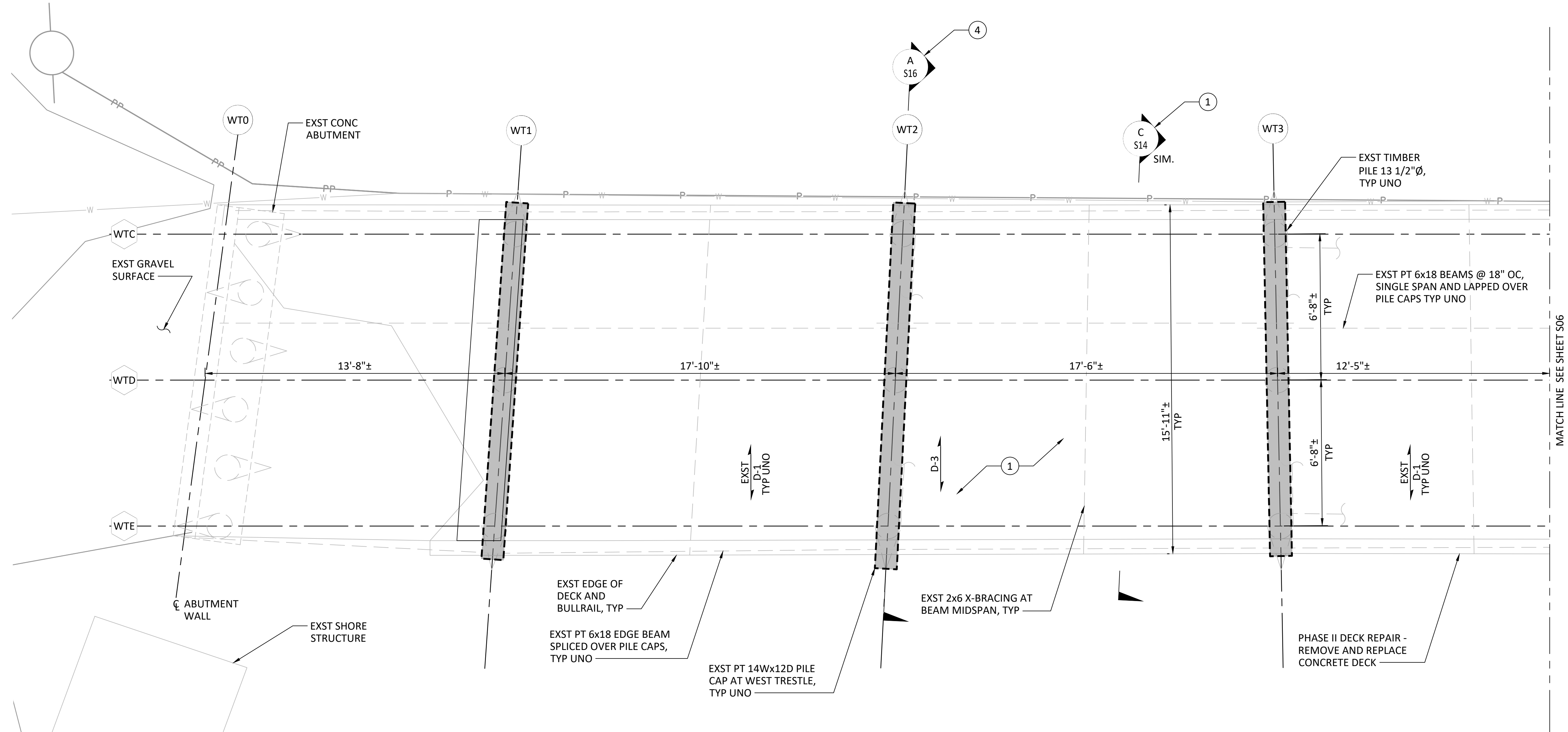


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 74202.000

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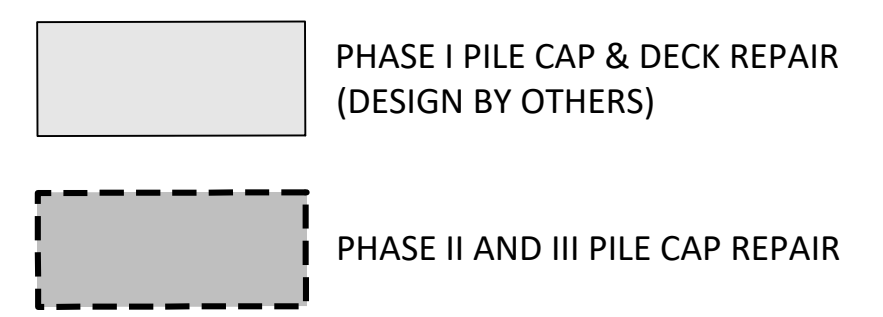
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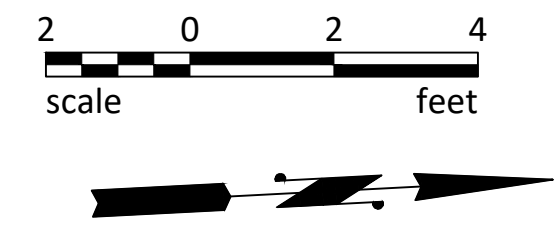


NOTES:

1. ALL TIMBER DIMENSIONS ARE NOMINAL SIZES (INCHES).
2. SEE SHEET S01 FOR SHEET LEGEND & ABBREVIATIONS.
3. SEE SHEET S02 FOR KEY NOTES.



1
S04
PIER PLAN
 SCALE: 3/8" = 1'-0"



MATCH LINE SEE SHEET S06

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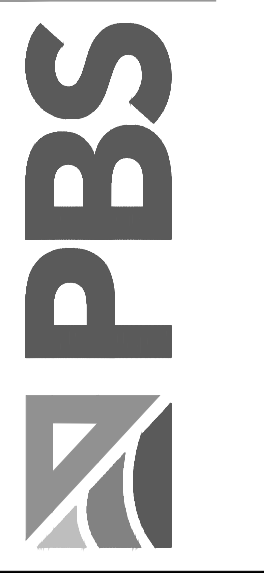
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 A SITE LOCATED IN THE CITY OF WARRENTON, OREGON



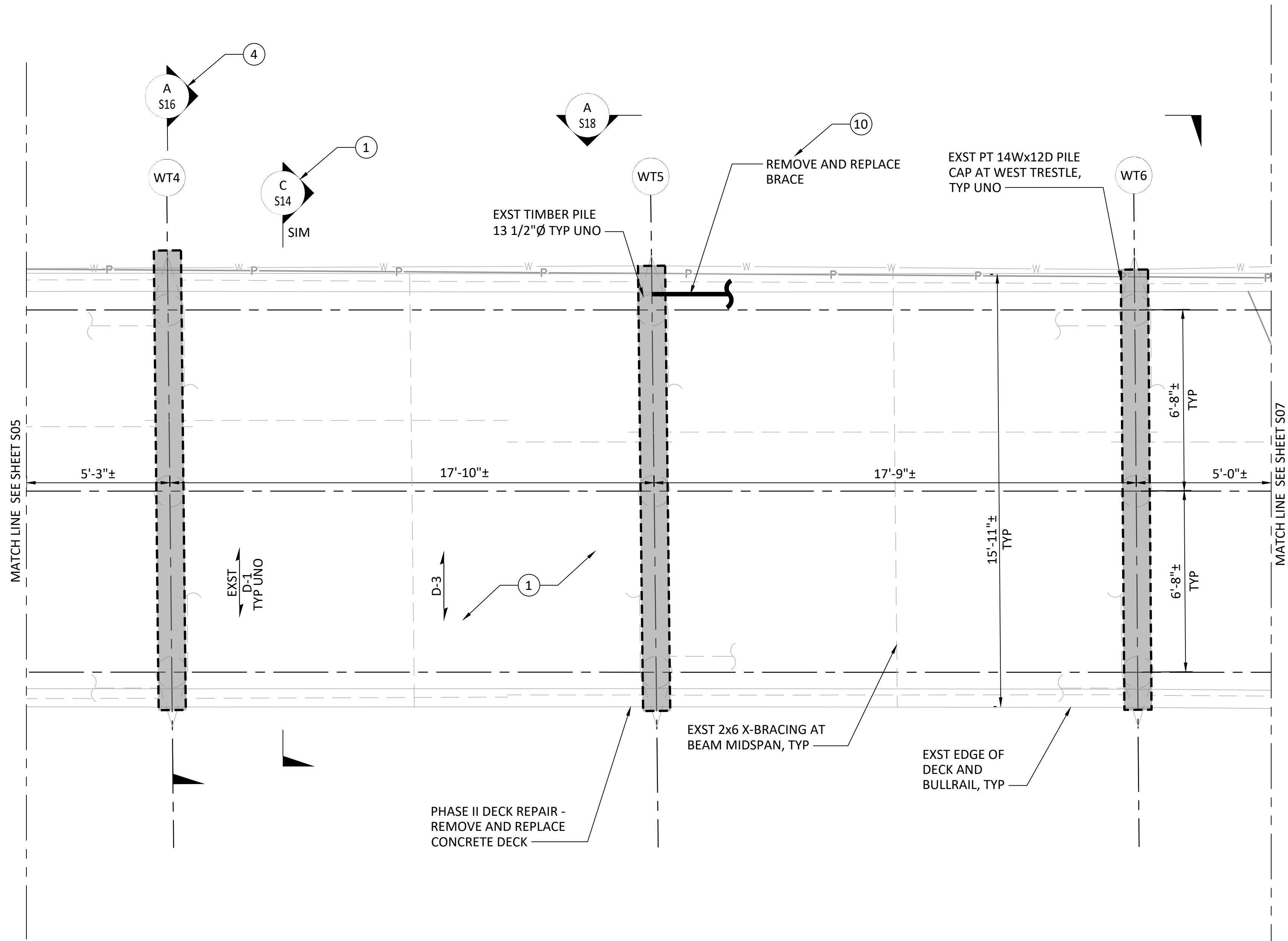
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S05

No.	Revision	Date	By	App'd

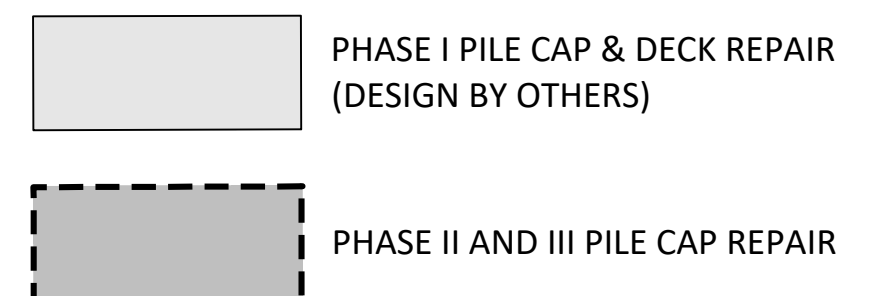


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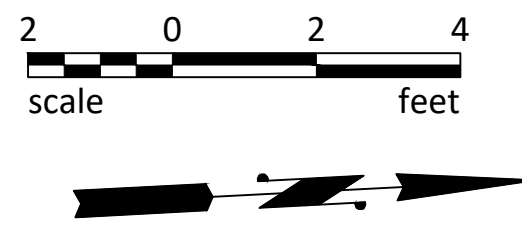


NOTES:

1. ALL TIMBER DIMENSIONS ARE NOMINAL SIZES (INCHES).
2. SEE SHEET S01 FOR SHEET LEGEND & ABBREVIATIONS.
3. SEE SHEET S02 FOR KEY NOTES.



PIER PLAN
SCALE: 3/8" = 1'-0"



PIER PLAN - SHEET 2 FOR:

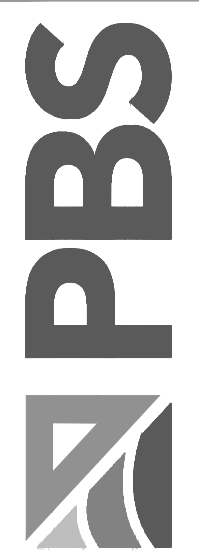
WORK PIER REHABILITATION-PHASES II & III
A SITE LOCATED IN THE CITY OF WARRENTON, OREGON



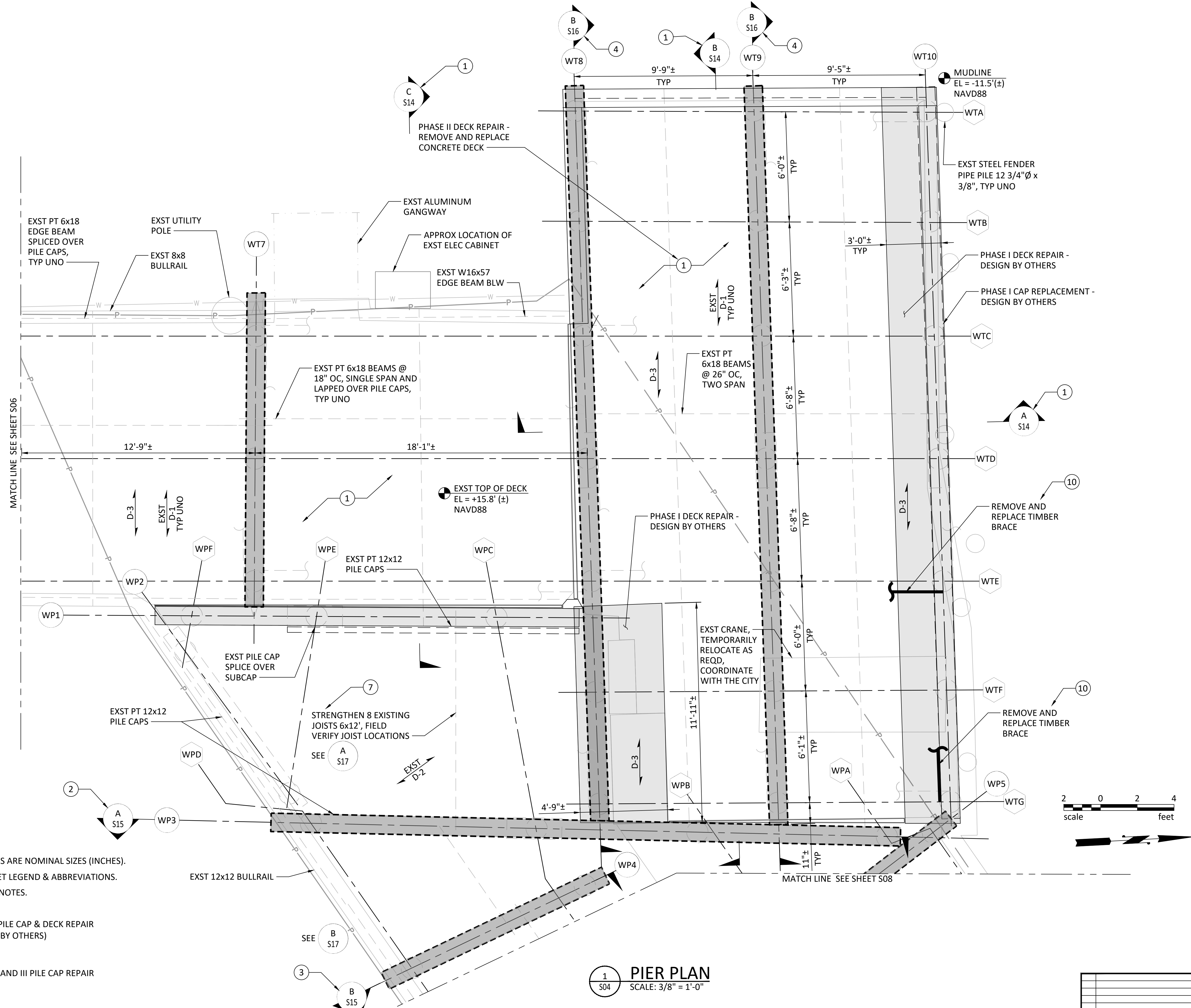
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S06

No.	Revision	Date	By	App'd



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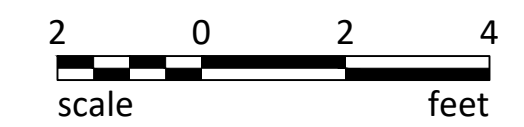


NOTES:

1. ALL TIMBER DIMENSIONS ARE NOMINAL SIZES (INCHES).
2. SEE SHEET S01 FOR SHEET LEGEND & ABBREVIATIONS.
3. SEE SHEET S02 FOR KEY NOTES.

- PHASE I PILE CAP & DECK REPAIR (DESIGN BY OTHERS)
- PHASE II AND III PILE CAP REPAIR

1 **PIER PLAN**
 SCALE: 3/8" = 1'-0"



No.	Revision	Date	By	App'd

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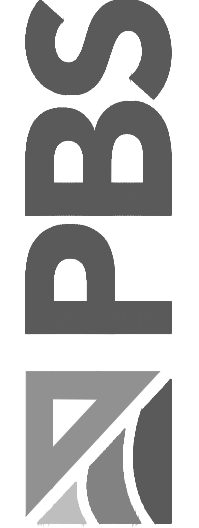
WORK PIER REHABILITATION-PHASES II & III

A SITE LOCATED IN THE CITY OF WARRENTON, OREGON

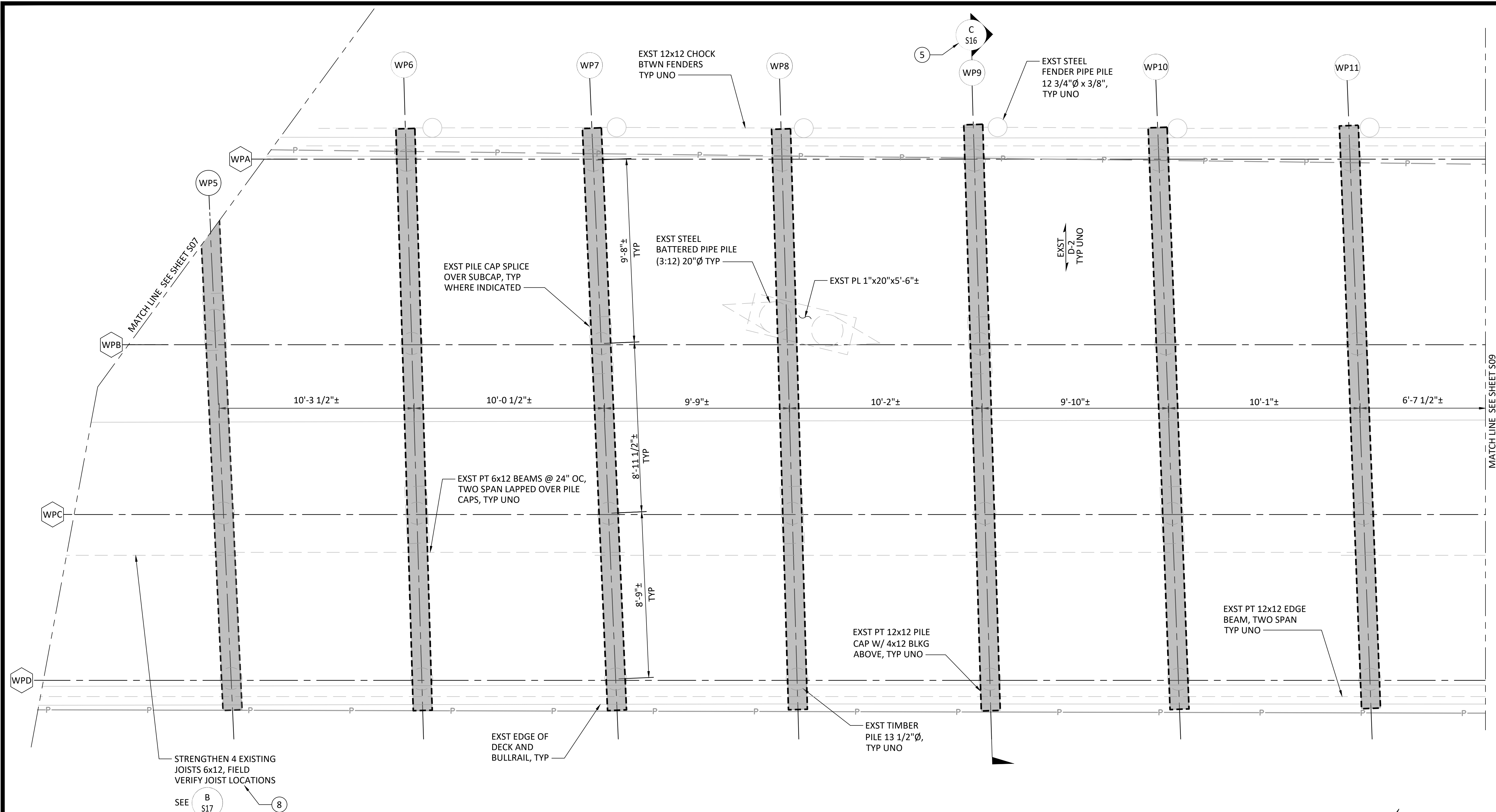


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SHEET ID S07
SHEET 8 OF 19

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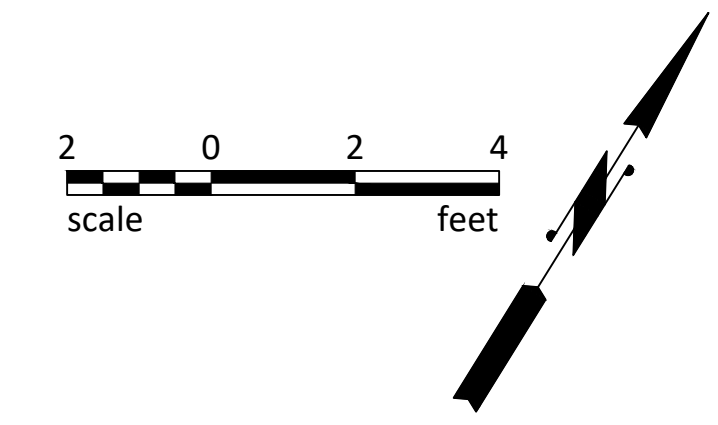


STRENGTHEN 4 EXISTING JOISTS 6x12, FIELD VERIFY JOIST LOCATIONS
SEE **B** S17 **8**

- NOTES:**
- ALL TIMBER DIMENSIONS ARE NOMINAL SIZES (INCHES).
 - SEE SHEET S01 FOR SHEET LEGEND & ABBREVIATIONS.
 - SEE SHEET S02 FOR KEY NOTES.

PHASE I PILE CAP & DECK REPAIR (DESIGN BY OTHERS)
 PHASE II AND III PILE CAP REPAIR

1 PIER PLAN
S04 SCALE: 3/8" = 1'-0"



No.	Revision	Date	By	App'd

PIER PLAN - SHEET 4 FOR:

WORK PIER REHABILITATION-PHASES II & III

A SITE LOCATED IN THE CITY OF WARRENTON, OREGON



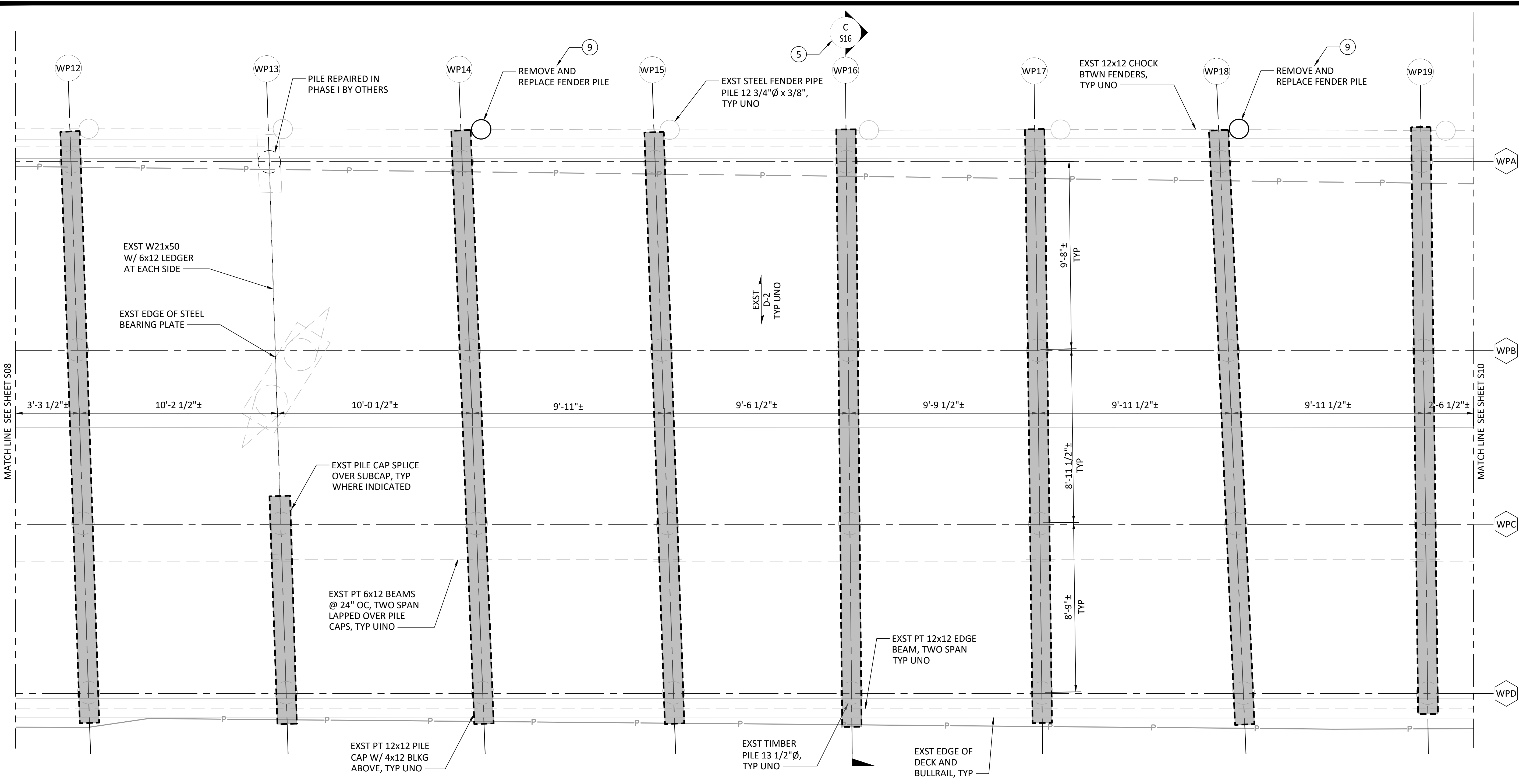
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S08

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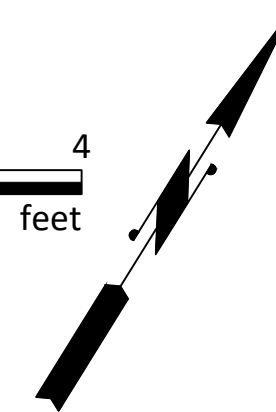
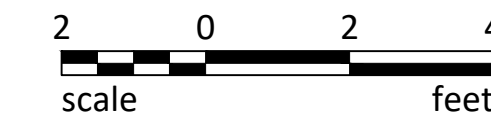


NOTES:

1. ALL TIMBER DIMENSIONS ARE NOMINAL SIZES (INCHES).
2. SEE SHEET S01 FOR SHEET LEGEND & ABBREVIATIONS.
3. SEE SHEET S02 FOR KEY NOTES.

- PHASE I PILE CAP & DECK REPAIR (DESIGN BY OTHERS)
- PHASE II AND III PILE CAP REPAIR

1
S04
PIER PLAN
 SCALE: 3/8" = 1'-0"



PIER PLAN - SHEET 5 FOR:
WORK PIER REHABILITATION-PHASES II & III
 A SITE LOCATED IN THE CITY OF WARRENTON, OREGON



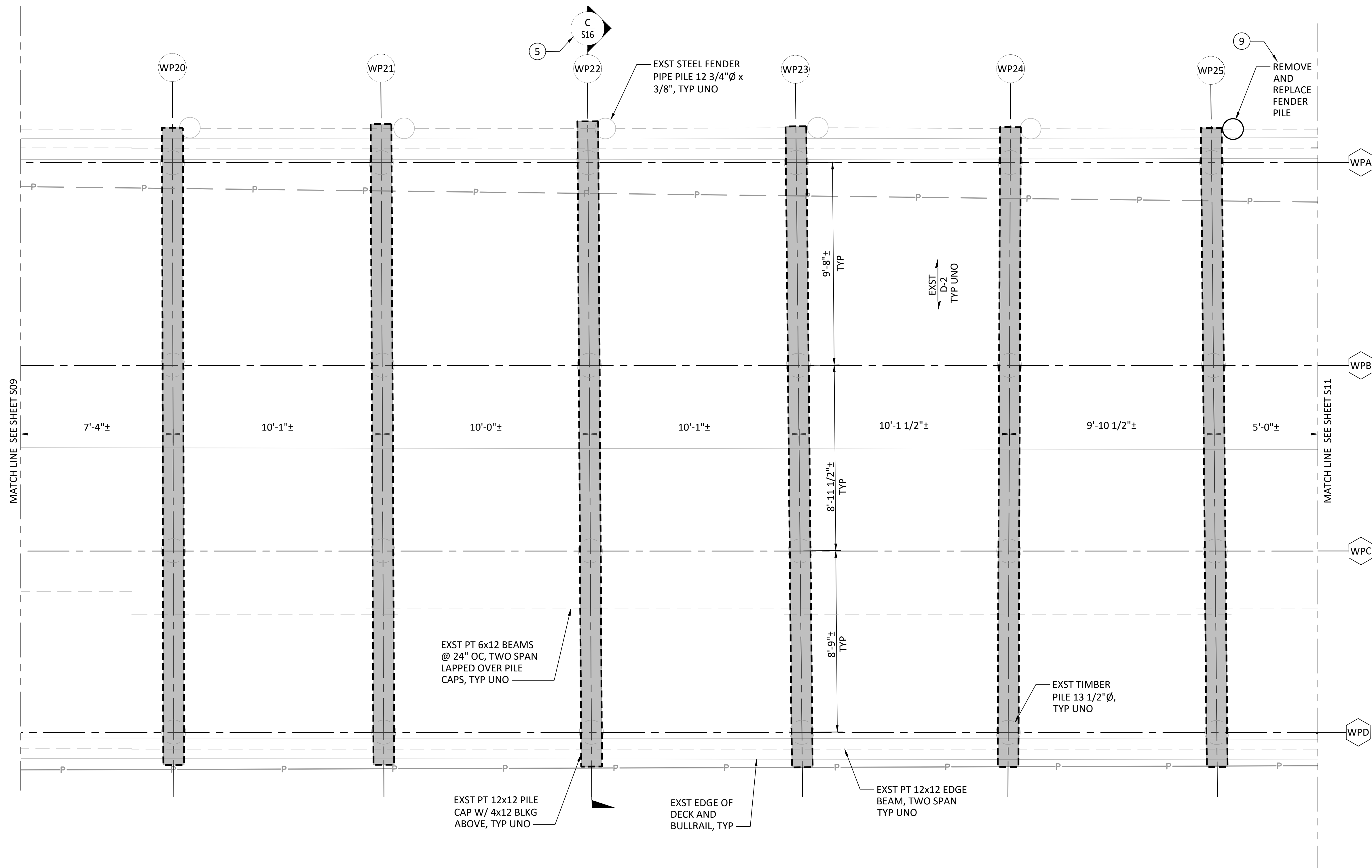
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S09

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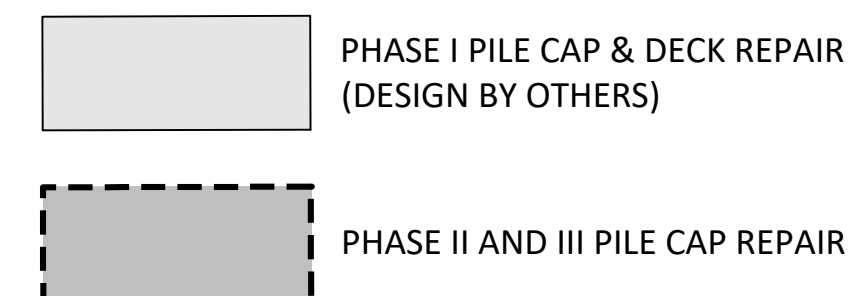
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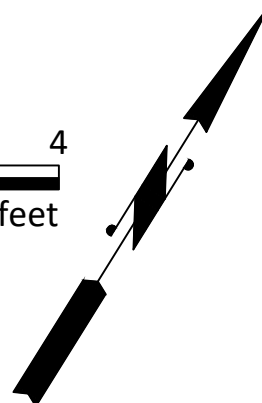
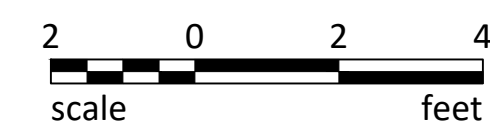


NOTES:

1. ALL TIMBER DIMENSIONS ARE NOMINAL SIZES (INCHES).
2. SEE SHEET S01 FOR SHEET LEGEND & ABBREVIATIONS.
3. SEE SHEET S02 FOR KEY NOTES.



1
S04 **PIER PLAN**
SCALE: 3/8" = 1'-0"



PIER PLAN - SHEET 6 FOR:

WORK PIER REHABILITATION-PHASES II & III
A SITE LOCATED IN THE CITY OF WARRENTON, OREGON



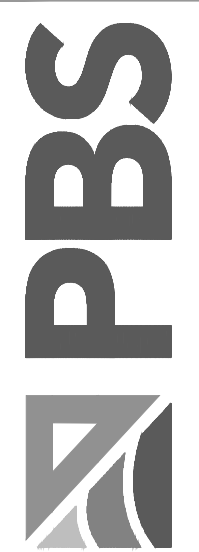
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S10

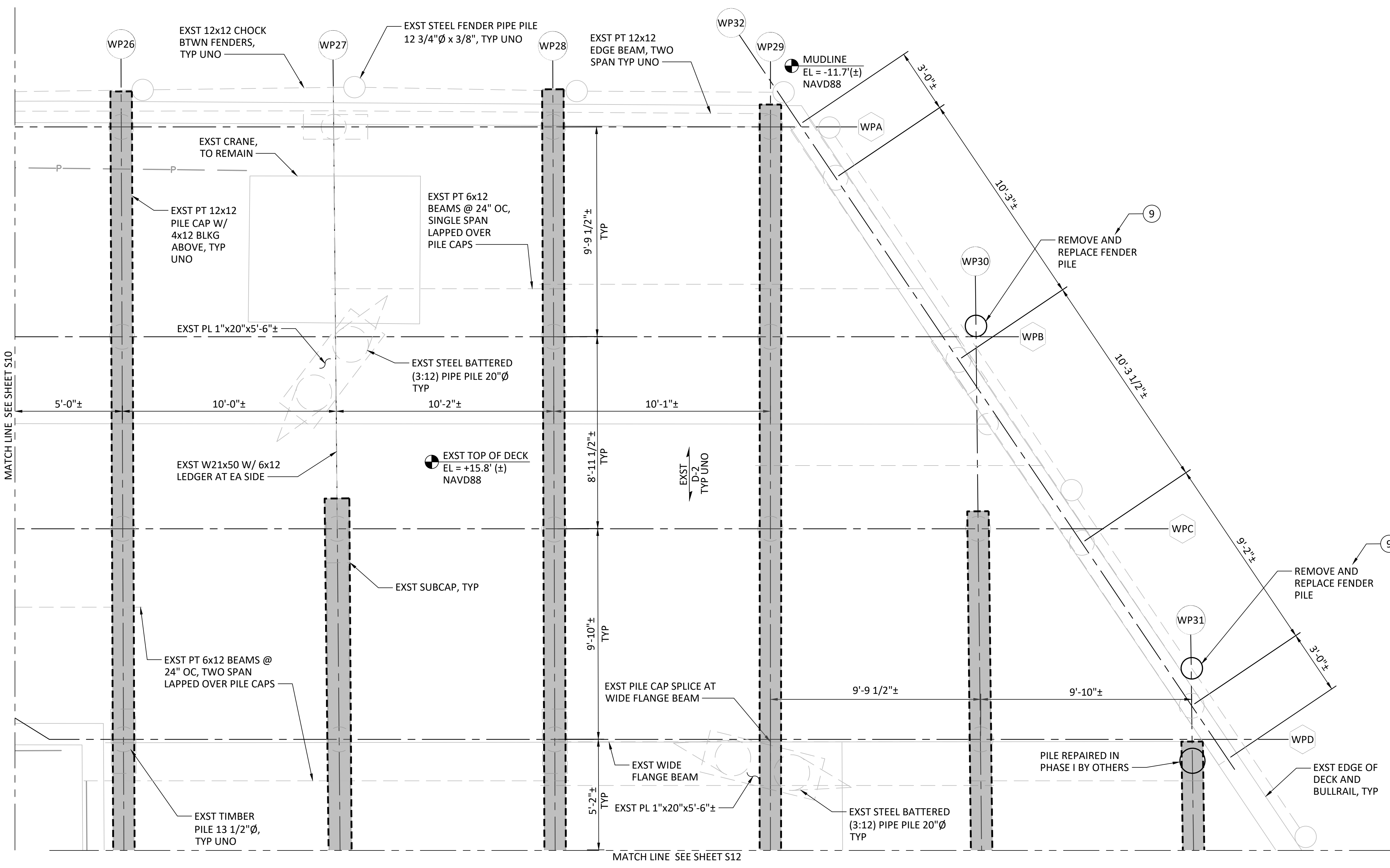
SHEET 11 OF 19

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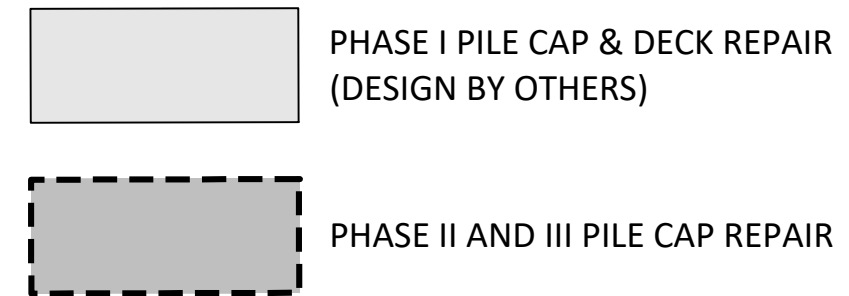


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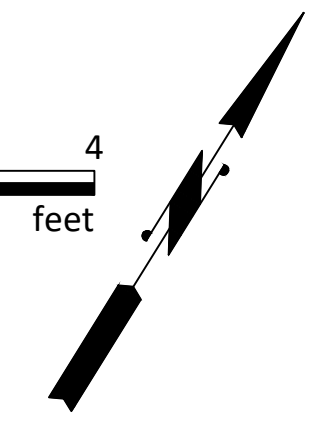
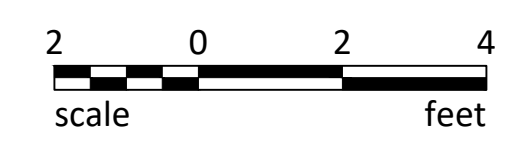


NOTES:

1. ALL TIMBER DIMENSIONS ARE NOMINAL SIZES (INCHES).
2. SEE SHEET S01 FOR SHEET LEGEND & ABBREVIATIONS.
3. SEE SHEET S02 FOR KEY NOTES.



1 **PIER PLAN**
 SCALE: 3/8" = 1'-0"



PIER PLAN - SHEET 7 FOR:

WORK PIER REHABILITATION-PHASES II & III
 A SITE LOCATED IN THE CITY OF WARRENTON, OREGON



REGISTERED PROFESSIONAL
 ENGINEER
 48114PE
 OREGON
 JAN. 23, 2001
 HOWARD A. WELLS
 RENEWS: 06/30/24

DESIGNED: JMC
 CHECKED: KL
 AUGUST 31, 2022
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S11

SHEET 12 OF 19

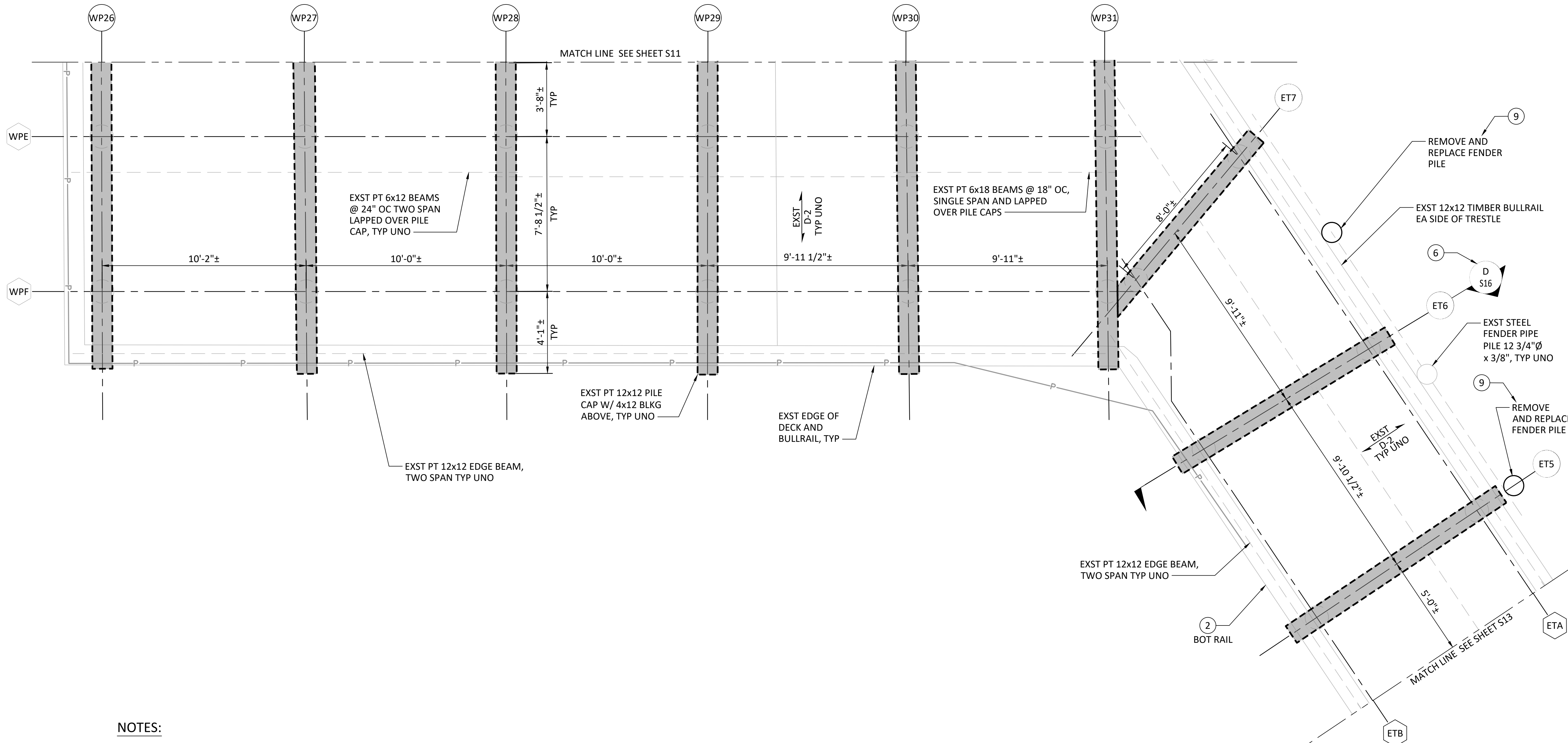
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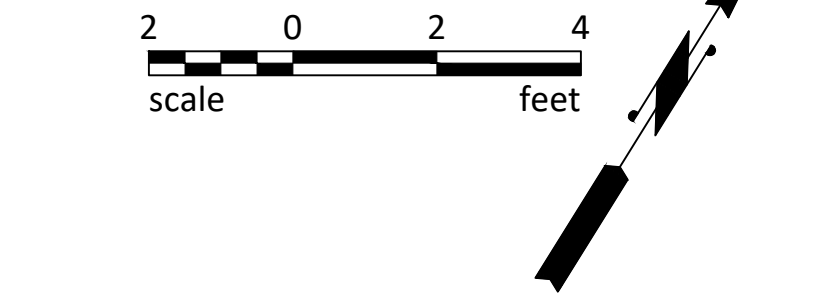
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 2. SEE SHEET S01 FOR SHEET LEGEND & ABBREVIATIONS.
 3. SEE SHEET S02 FOR KEY NOTES.

PHASE I PILE CAP & DECK REPAIR (DESIGN BY OTHERS)

PHASE II AND III PILE CAP REPAIR

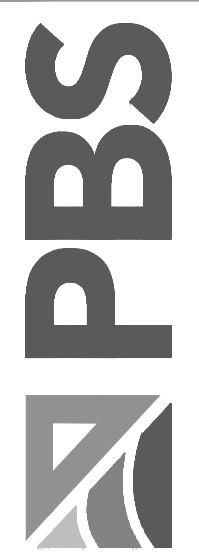
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S04

PIER PLAN
SCALE: 3/8" = 1'-0"



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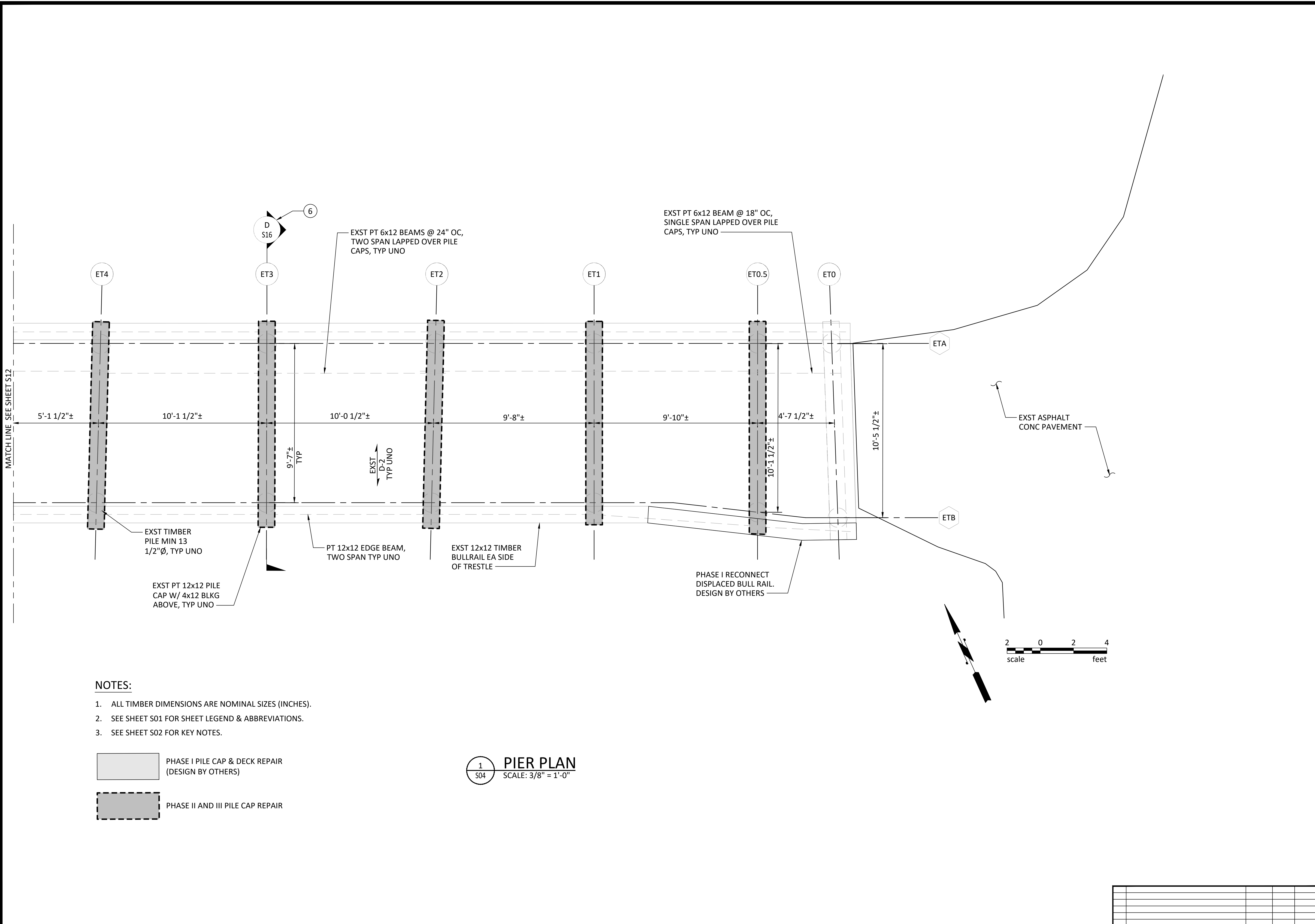
PIER PLAN - SHEET 8 FOR:
WORK PIER REHABILITATION-PHASES II & III
A SITE LOCATED IN THE CITY OF WARRENTON, OREGON



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SHEET 13 OF 19

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NOTES:

1. ALL TIMBER DIMENSIONS ARE NOMINAL SIZES (INCHES).
2. SEE SHEET S01 FOR SHEET LEGEND & ABBREVIATIONS.
3. SEE SHEET S02 FOR KEY NOTES.

- PHASE I PILE CAP & DECK REPAIR (DESIGN BY OTHERS)
- PHASE II AND III PILE CAP REPAIR

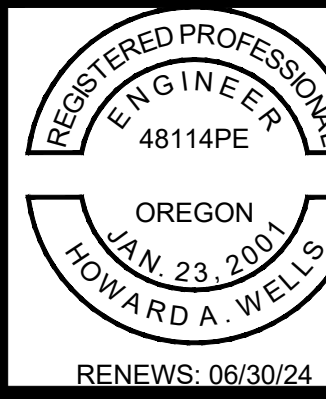
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 SCALE: 3/8" = 1'-0"

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No.	Revision	Date	By	App'd

PIER PLAN - SHEET 9 FOR:

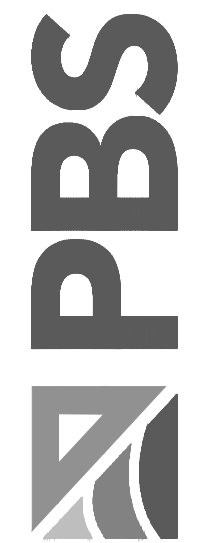
WORK PIER REHABILITATION-PHASES II & III
 A SITE LOCATED IN THE CITY OF WARRENTON, OREGON



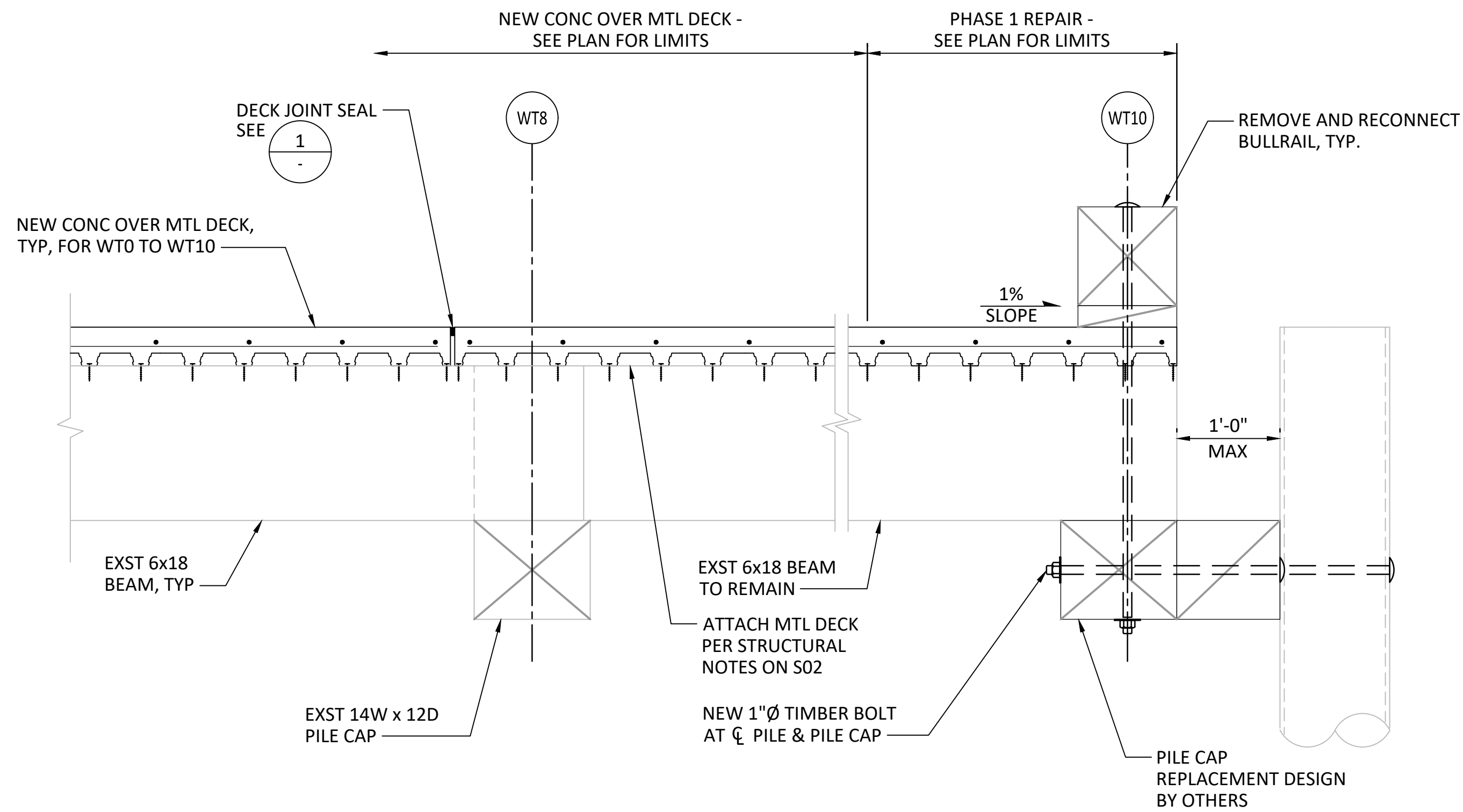
DESIGNED: JMC
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SHEET ID
S13
 SHEET **14** OF **19**

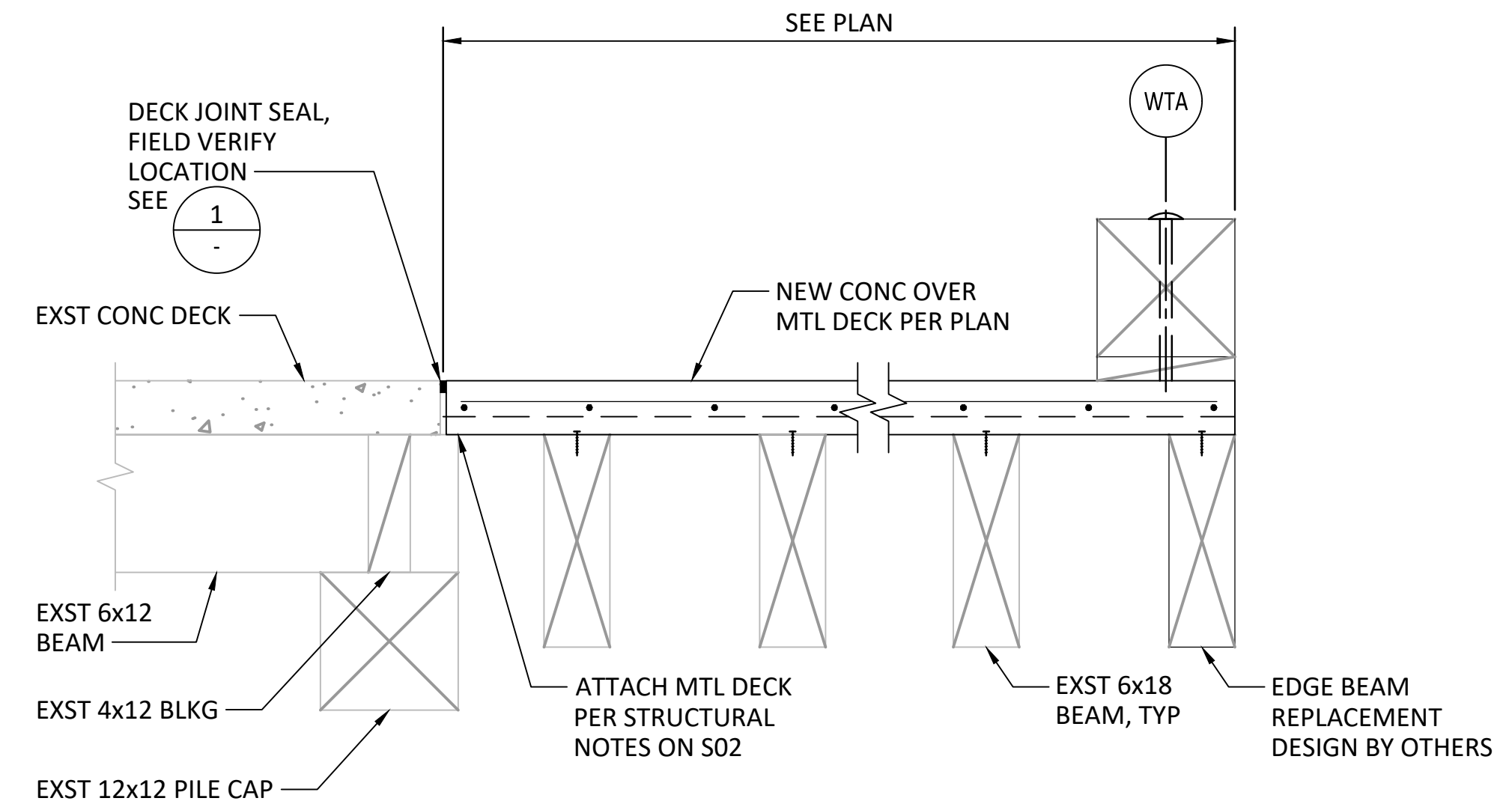
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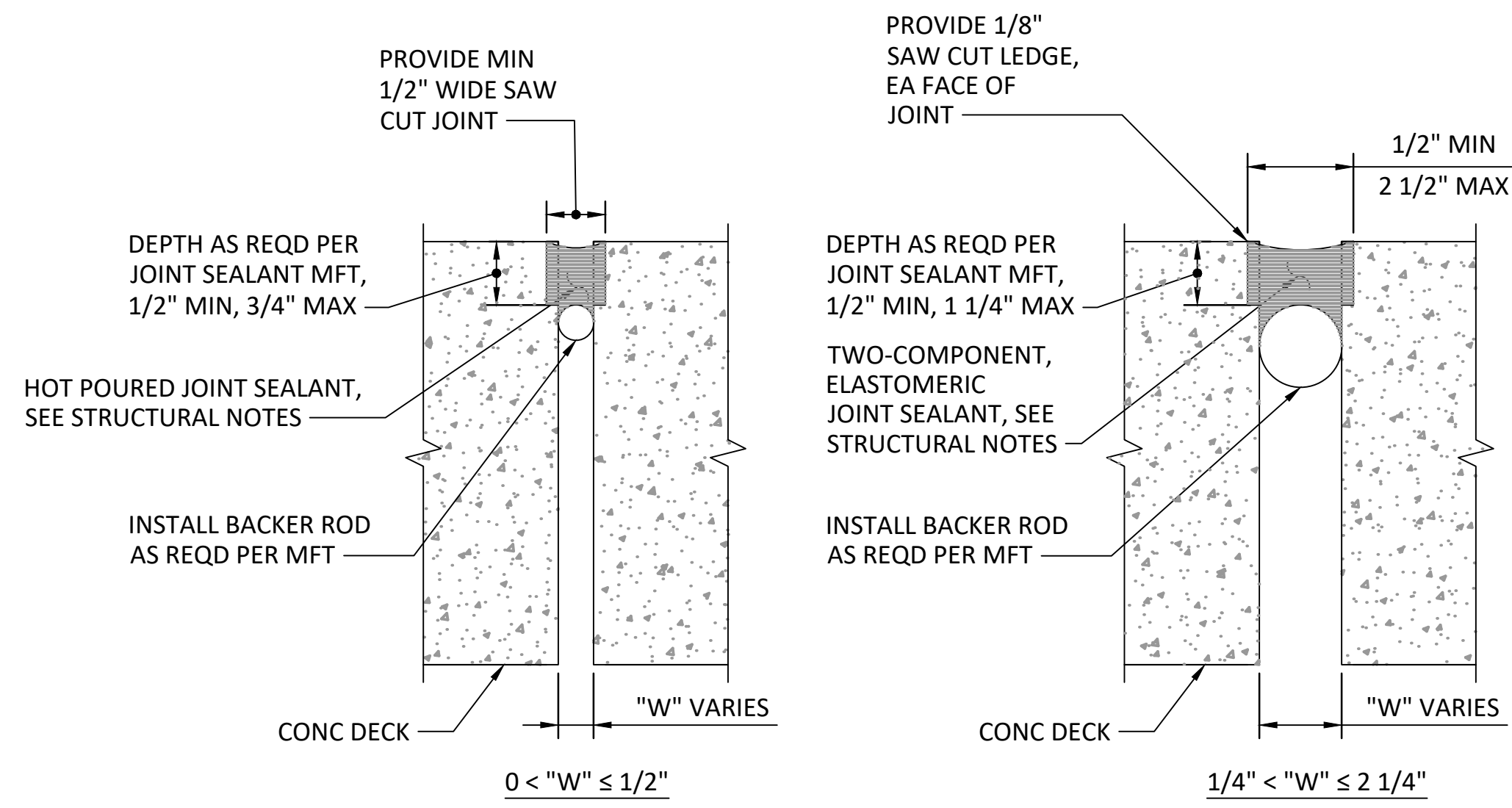
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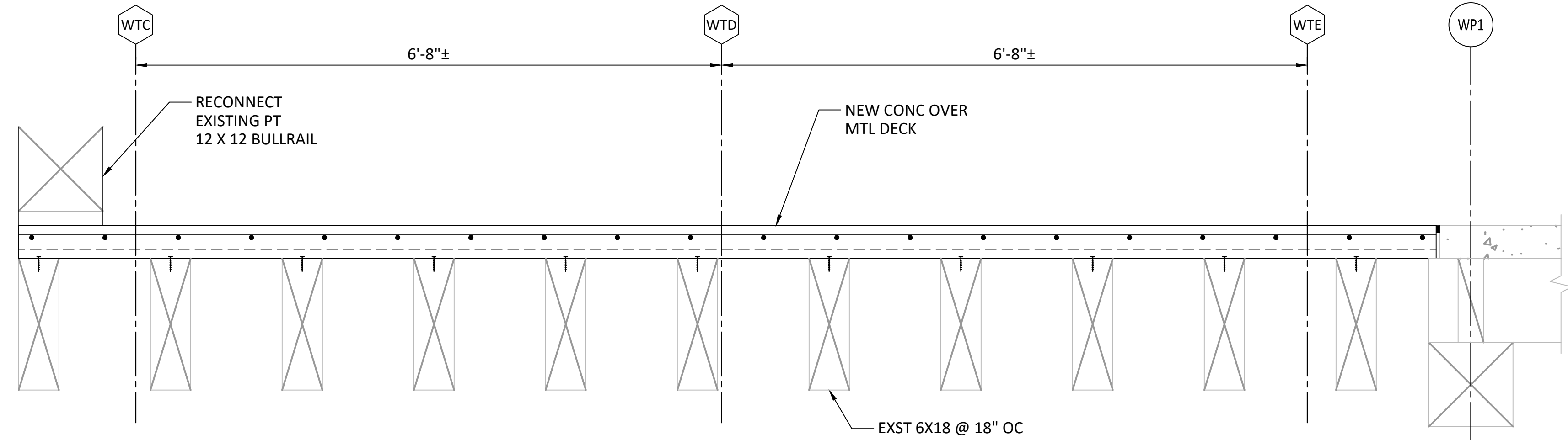
A
SECTION - NEW CONCRETE DECK (D-3)
SCALE: 1" = 1'-0"



B
SECTION - CONCRETE DECK (D-3)
SCALE: 1" = 1'-0"



1
DETAIL - TYPICAL DECK JOINT SEAL
SCALE: NTS



C
SECTION - CONCRETE DECK (D-3)
SCALE: 1" = 1'-0"

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REHABILITATION DETAILS - SHEET 1 FOR:
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 A SITE LOCATED IN THE CITY OF WARRENTON, OREGON



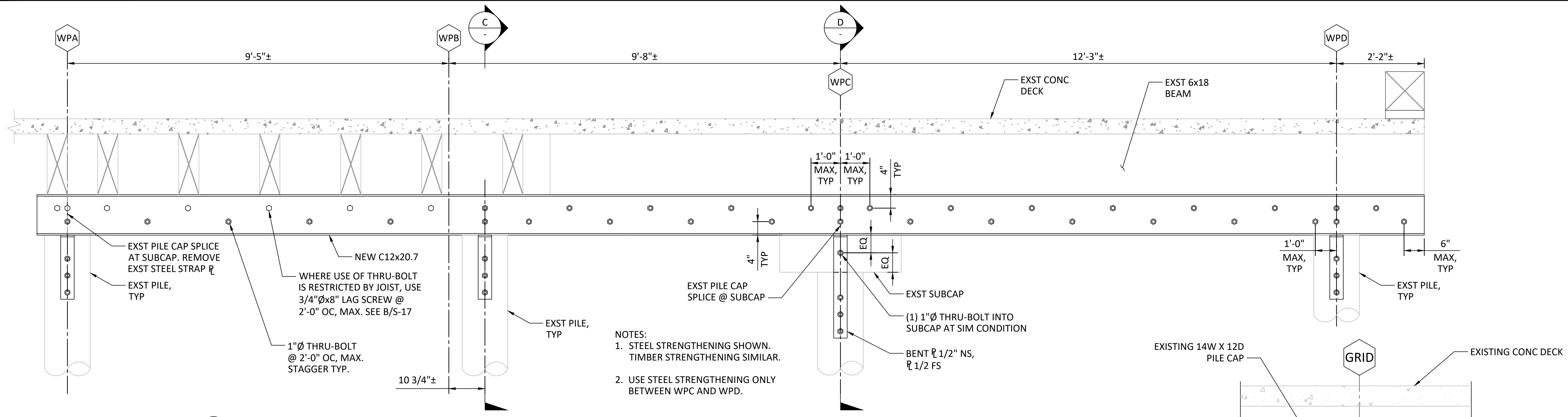
DESIGNED:
 JMC
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SHEET ID
S14

SHEET 15 OF 19

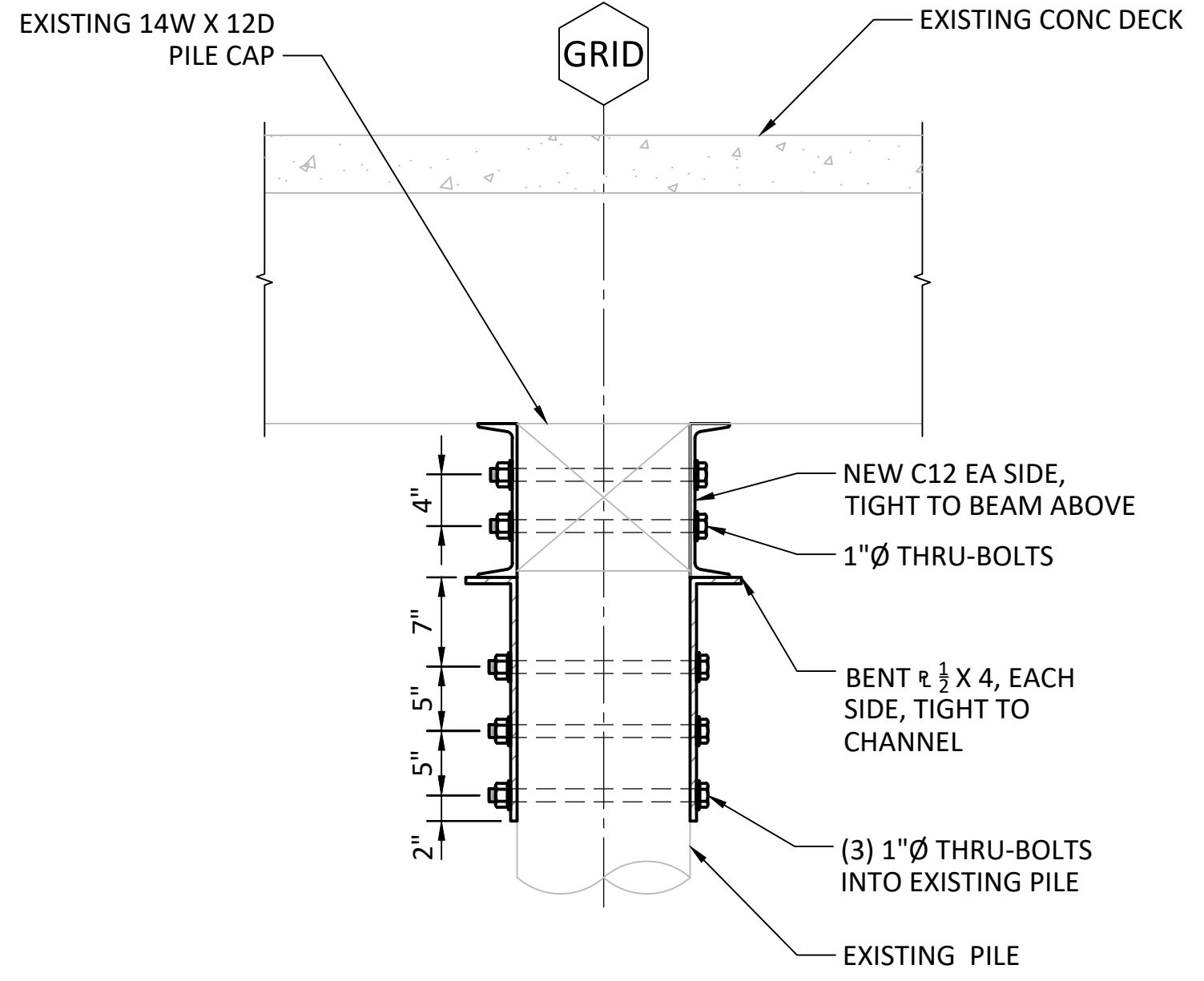
No.	Revision	Date	By	App'd

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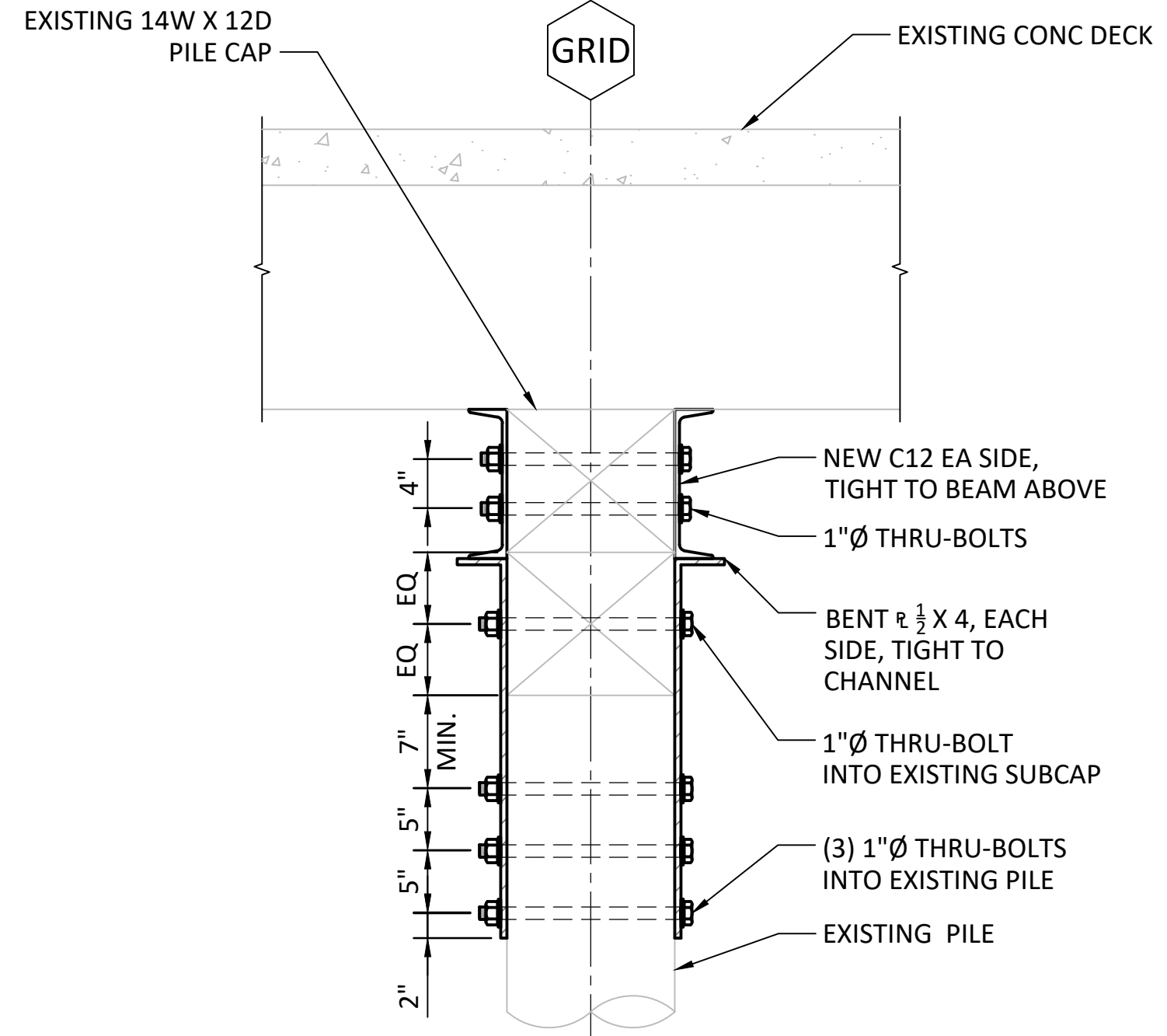


A
S07
ELEVATION - PILE CAP STRENGTHENING AT WP3
SCALE: 3/4"=1'-0"

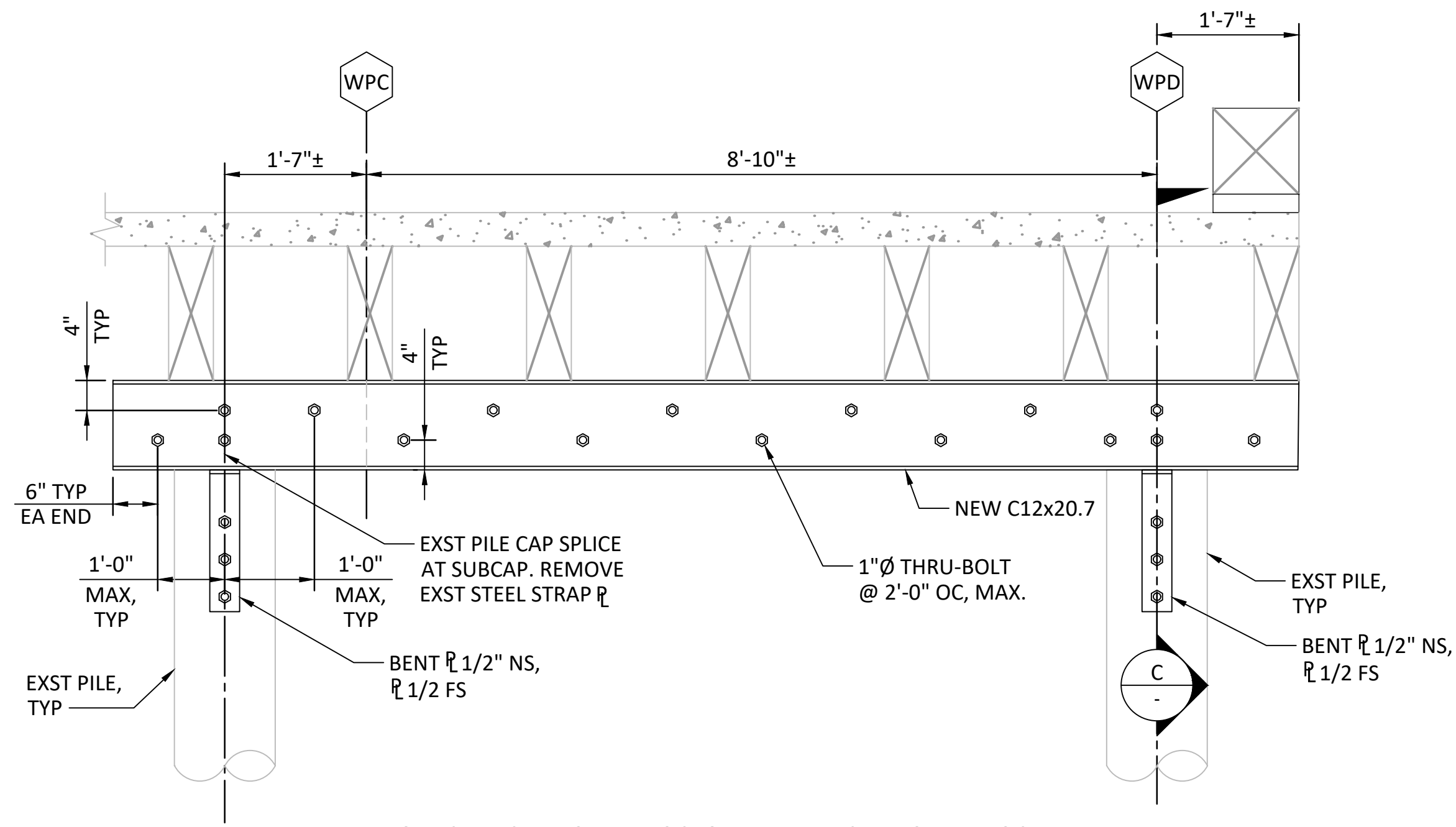
NOTES:
 1. STEEL STRENGTHENING SHOWN. TIMBER STRENGTHENING SIMILAR.
 2. USE STEEL STRENGTHENING ONLY BETWEEN WPC AND WPD.



C
-
SECTION - C12 PILE CAP STRENGTHENING
SCALE: 1"=1'-0"

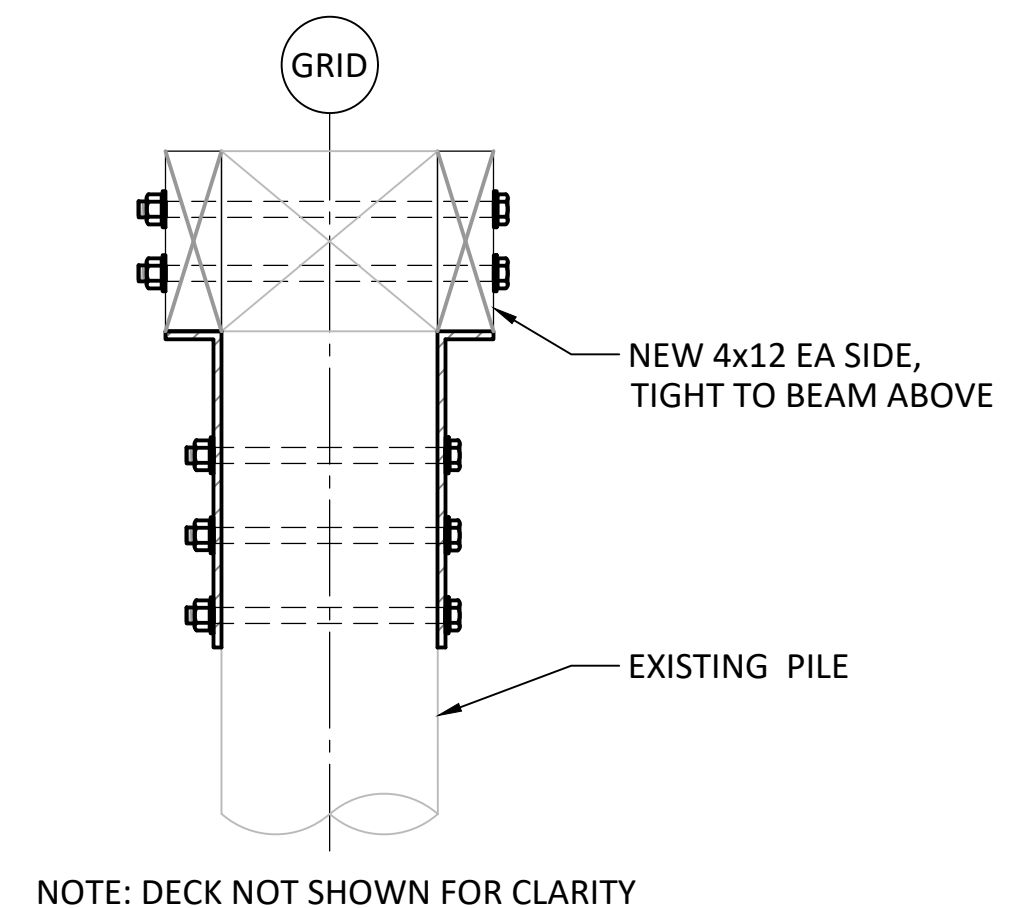


D
-
SECTION - C12 PILE CAP STRENGTHENING
SCALE: 1"=1'-0"



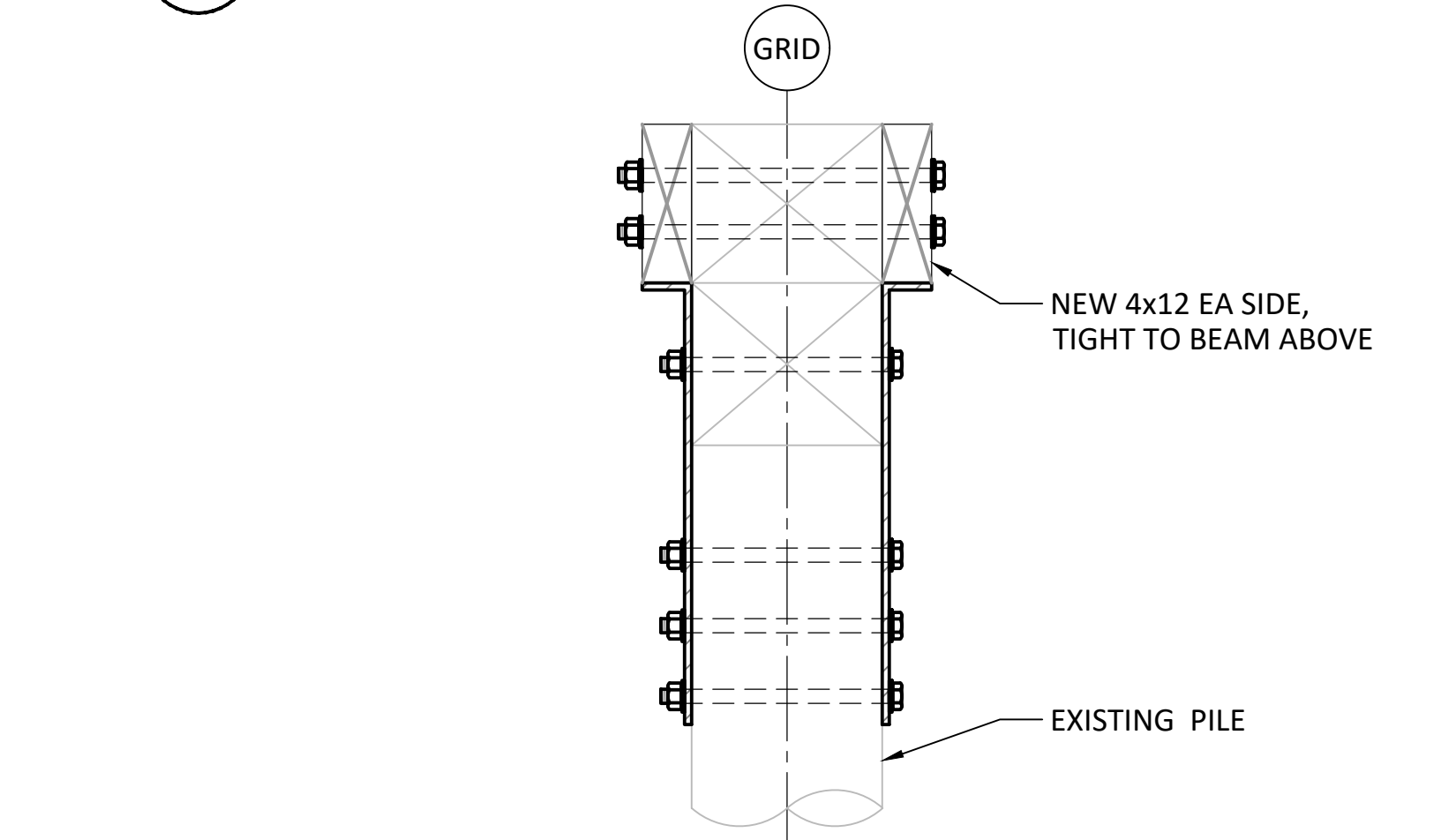
B
S07
ELEVATION - PILE CAP STRENGTHENING AT WP4
SCALE: 3/4"=1'-0"

NOTE: STEEL STRENGTHENING SHOWN. TIMBER STRENGTHENING SIMILAR.



C
-
SECTION (ALT) - 4x12 PILE CAP STRENGTHENING
SCALE: 1"=1'-0"

NOTE: DECK NOT SHOWN FOR CLARITY

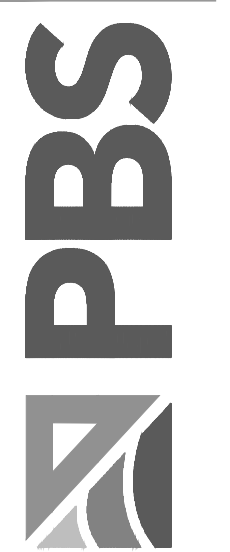


D
-
SECTION (ALT) - 4x12 PILE CAP STRENGTHENING
SCALE: 1"=1'-0"

NOTE: DECK NOT SHOWN FOR CLARITY

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REHABILITATION DETAILS - SHEET 2 FOR:
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 A SITE LOCATED IN THE CITY OF WARRENTON, OREGON



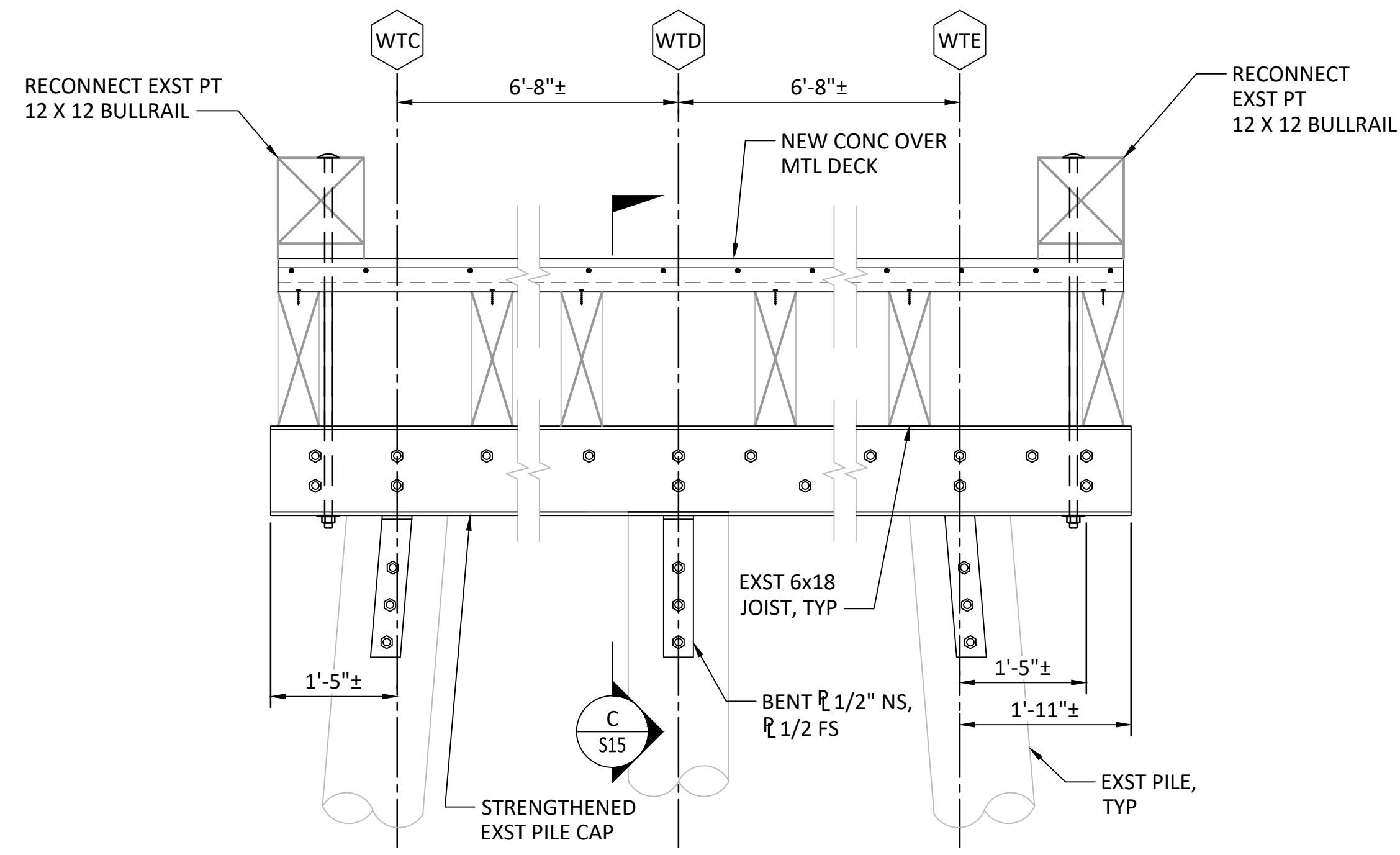
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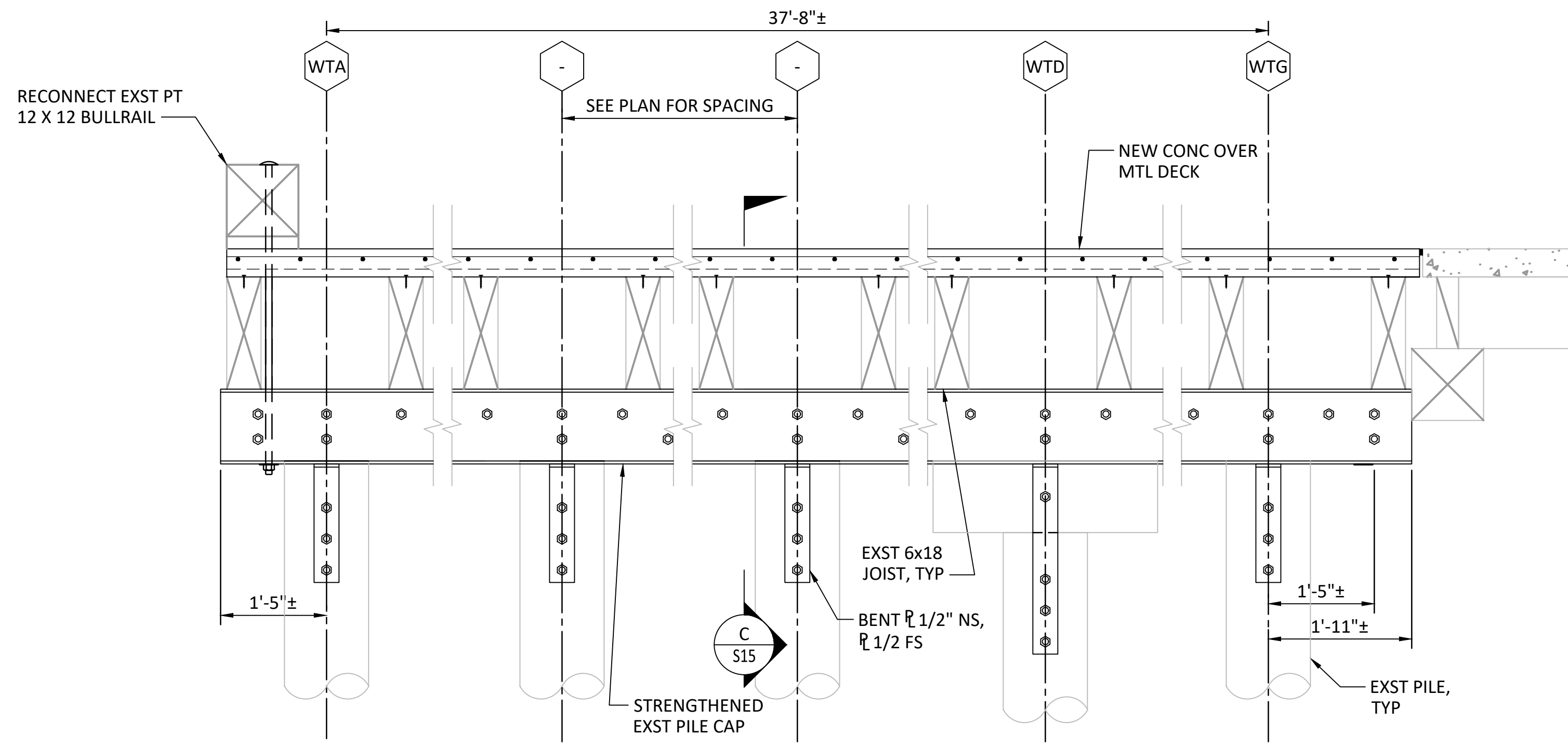
SHEET ID
S15
 SHEET 16 OF 19

Full Size Sheet Format Is 22x34; If Printed Size Is Not 22x34, Then This Sheet Format Has Been Modified & Indicated Drawing Scale Is Not Accurate.



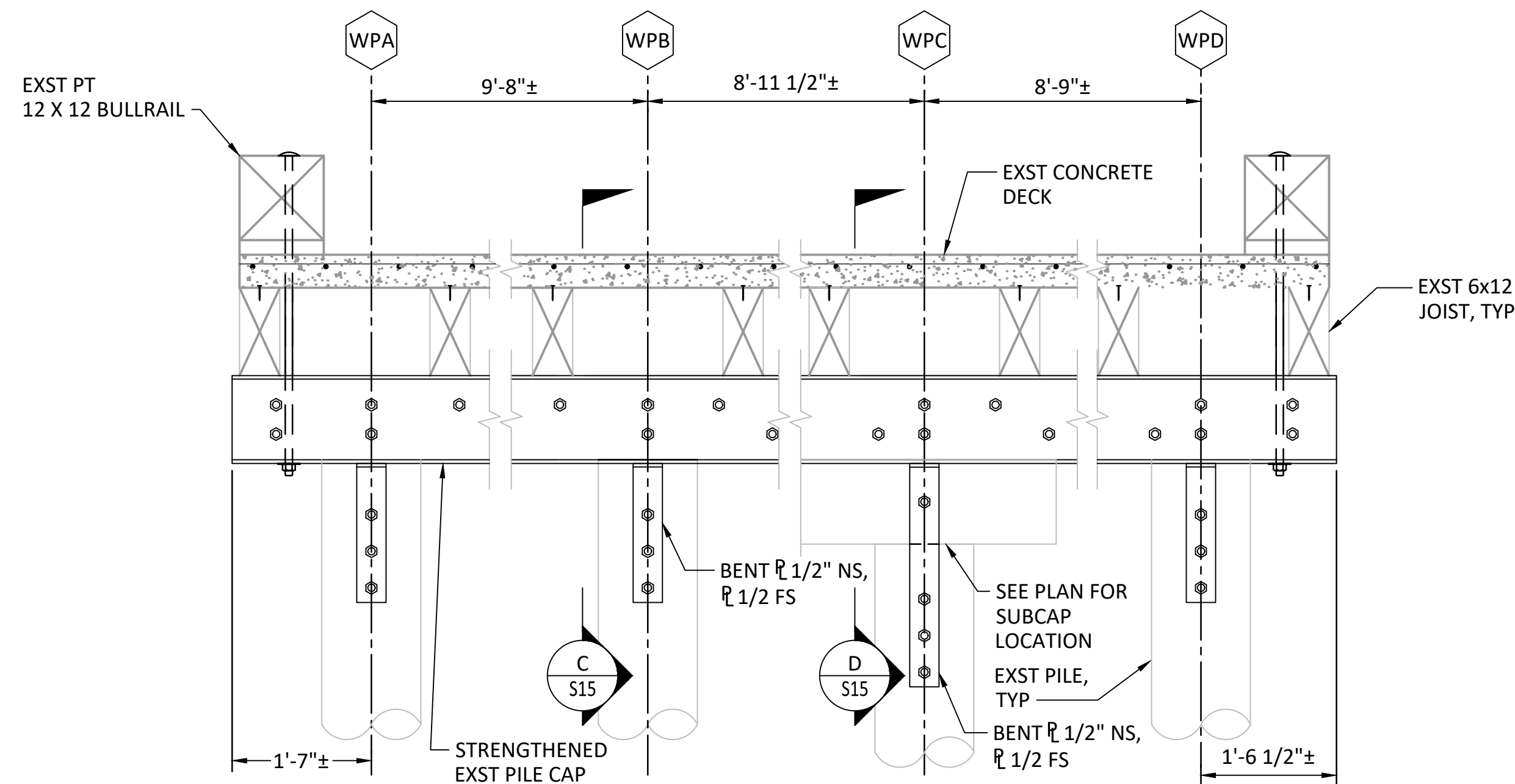
NOTE: FOR INFO. NOT SHOWN, SEE SHEET S-15

A
SECTION - WEST TRESTLE TYPICAL PILE CAP STRENGTHENING
SCALE: 3/4"=1'-0"



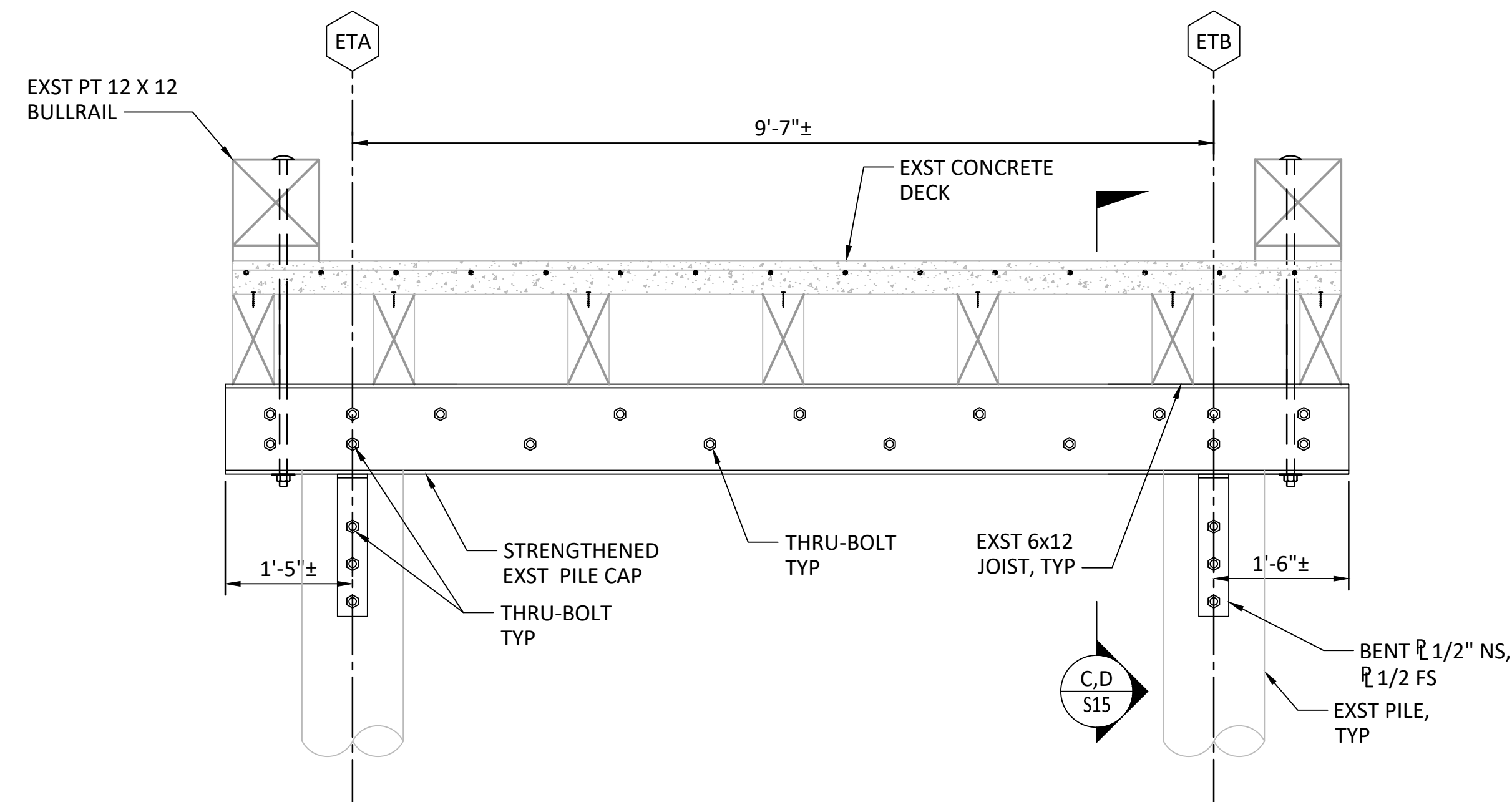
NOTE: FOR INFO. NOT SHOWN, SEE SHEET S-15

B
SECTION - WEST TRESTLE PILE CAP STRENGTHENING
SCALE: 3/4"=1'-0"



NOTES:
1. TYPICAL CAP SHOWN, WP26-WP31 SIMILAR
2. FOR INFO. NOT SHOWN, SEE SHEET S-15

C
SECTION - WORK PIER PILE CAP STRENGTHENING
SCALE: 3/4"=1'-0"



NOTE: FOR INFO. NOT SHOWN, SEE SHEET S-15

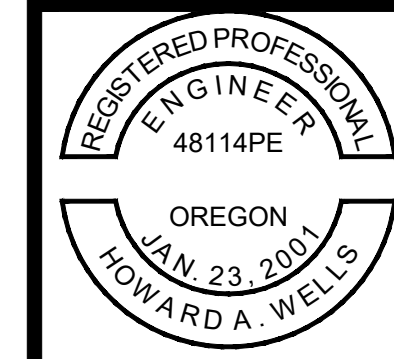
D
SECTION - EAST TRESTLE TYPICAL PILE CAP STRENGTHENING
SCALE: 3/4"=1'-0"

File name: L:\Projects\74000\74202\00\Structural\CAD\Working\Sheets\74202-000-S16.dwg User: Lance Gubernia CAD Plot Date/Time: 8/31/2022 10:47:18 AM

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REHABILITATION DETAILS - SHEET 3 FOR:
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A SITE LOCATED IN THE CITY OF WARRENTON, OREGON



RENEWS: 06/30/24

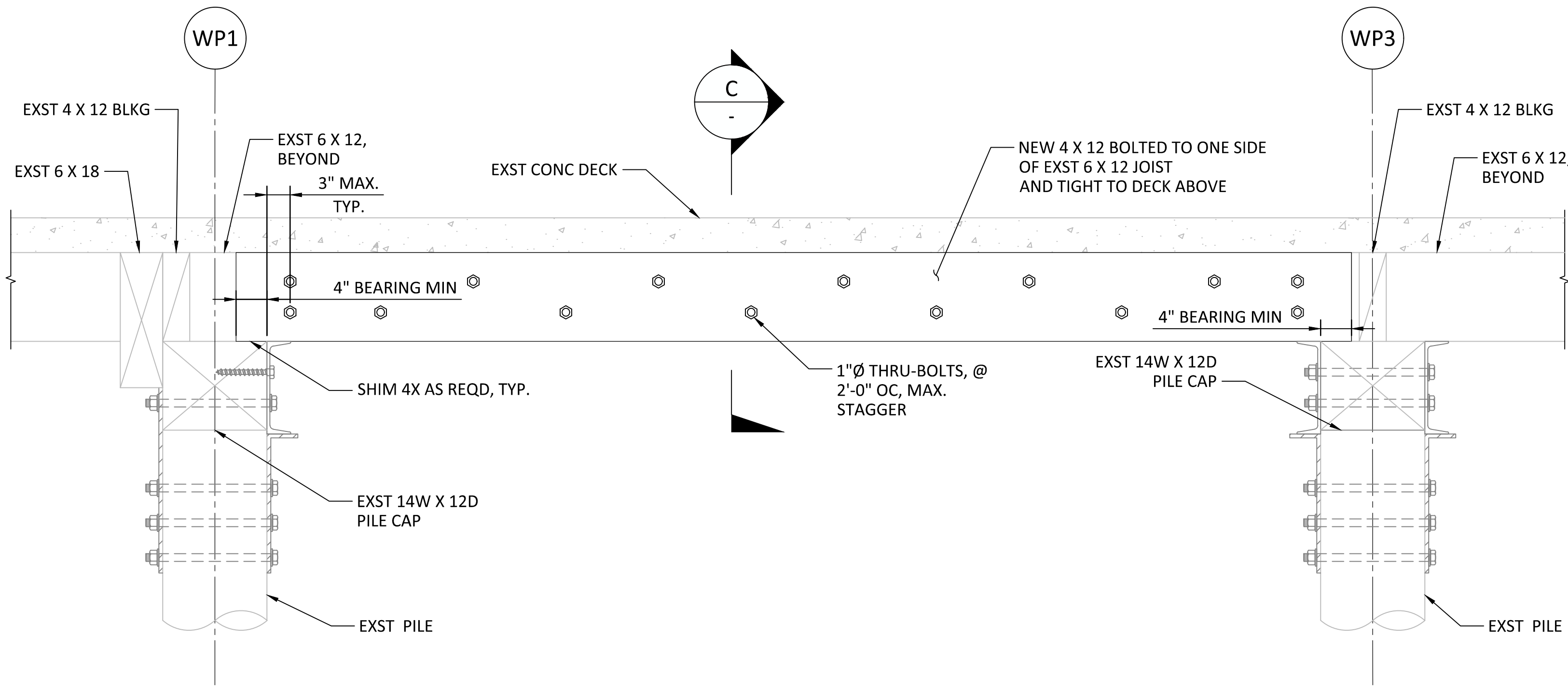
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SHEET ID
S16

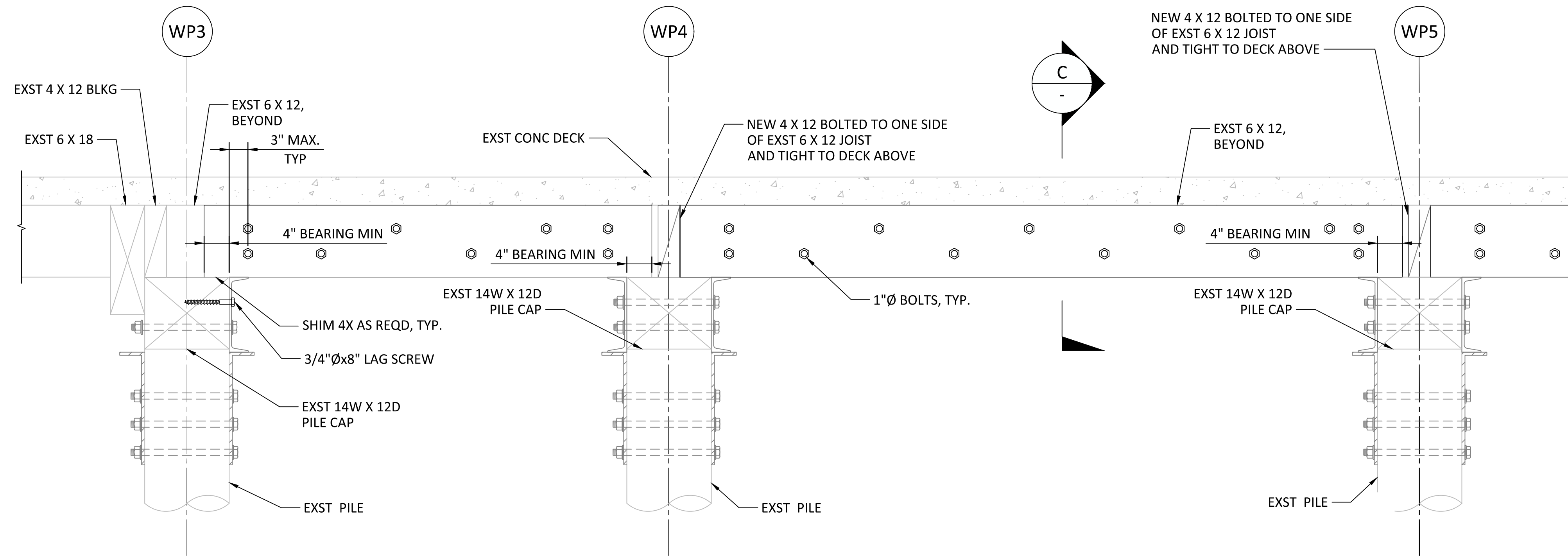
SHEET 17 OF 19

No.	Revision	Date	By	App'd

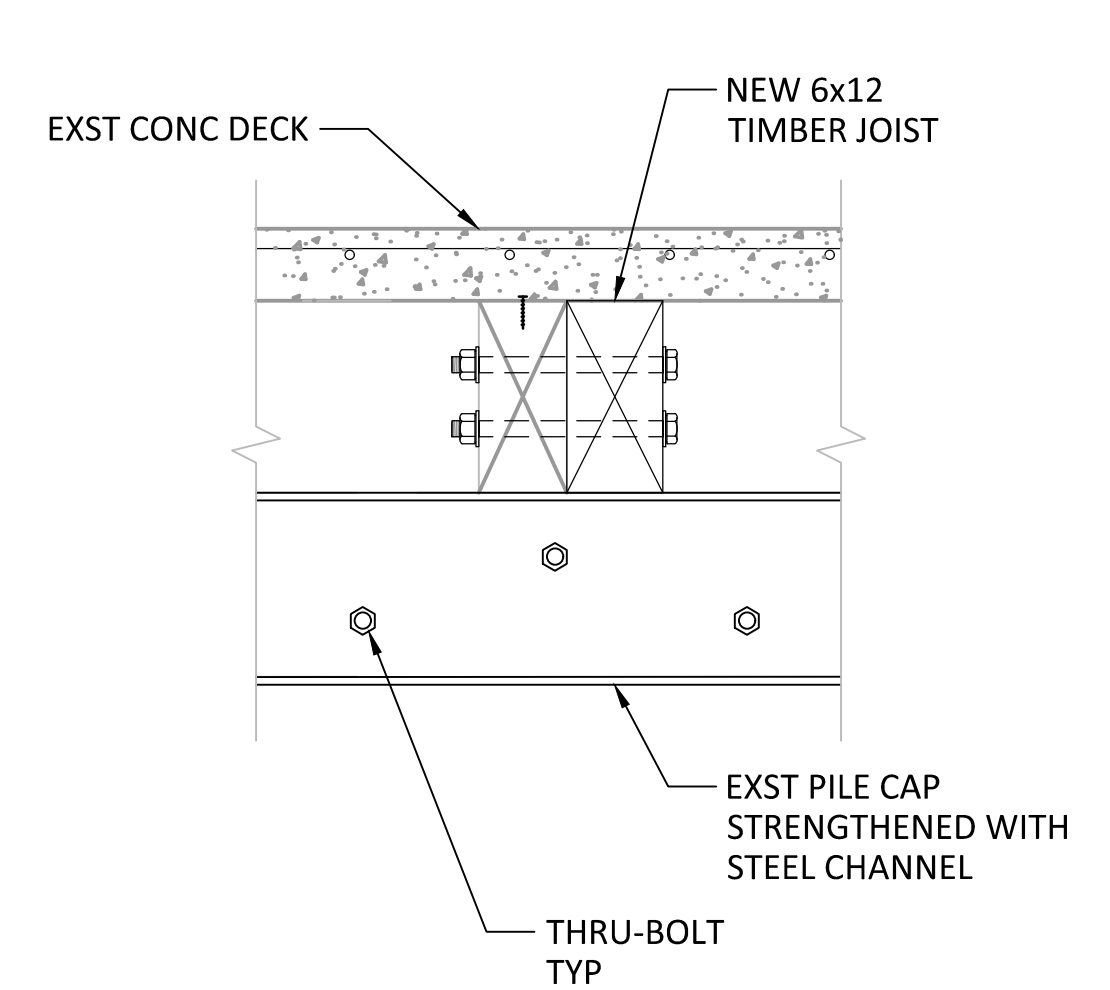
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 User: Lance Gubernia
 Layout: Tab: S17
 CAD Plot Date/Time: 8/31/2022 10:47:26 AM



A
 SECTION - JOIST STRENGTHENING
 SCALE: 1"=1'-0"



B
 SECTION - JOIST STRENGTHENING
 SCALE: 1"=1'-0"



C
 SECTION - JOIST STRENGTHENING
 SCALE: 1"=1'-0"

No.	Revision	Date	By	App'd

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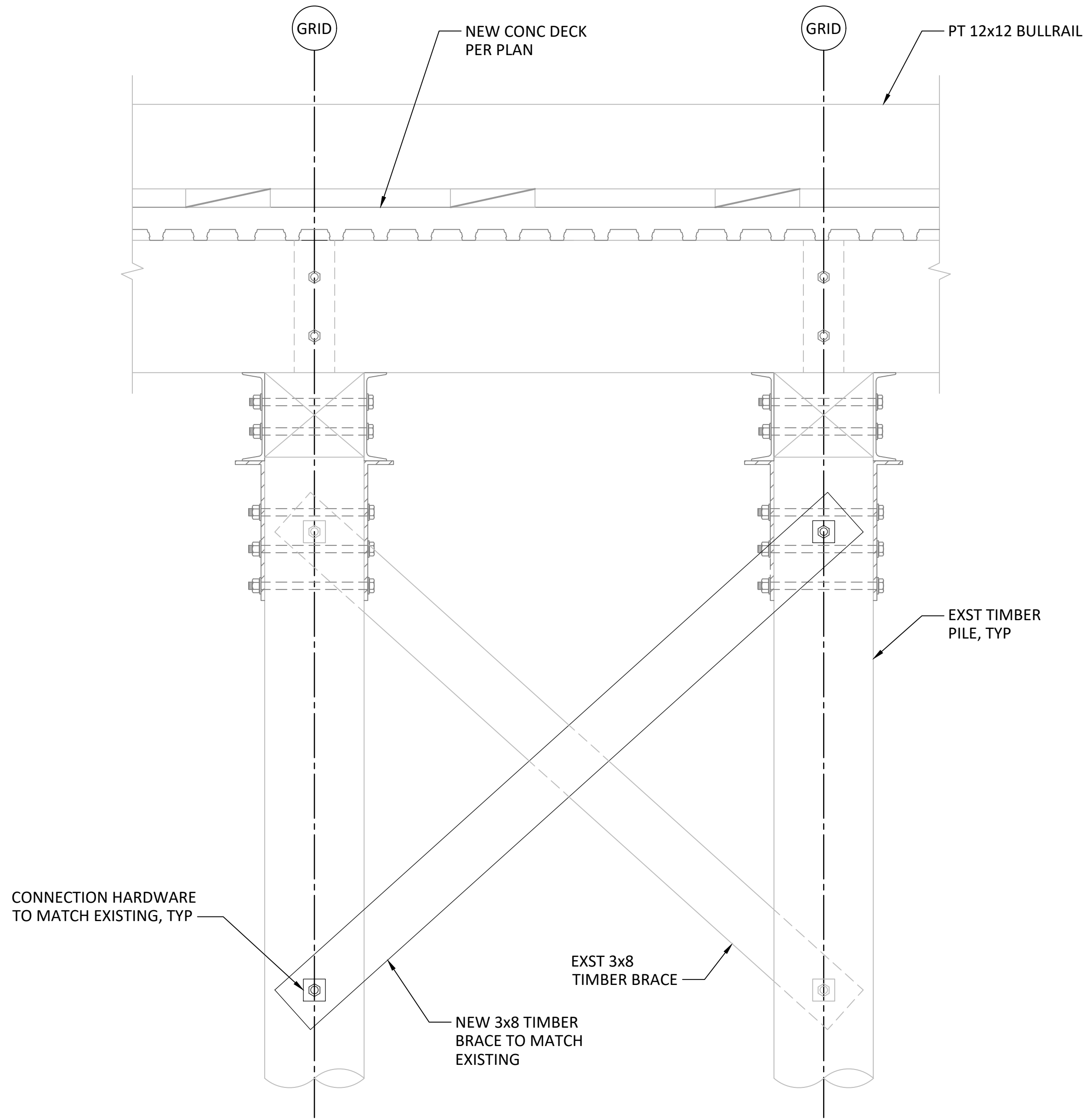
REHABILITATION DETAILS - SHEET 4 FOR:
WORK PIER REHABILITATION-PHASES II & III
 A SITE LOCATED IN THE CITY OF WARRENTON, OREGON



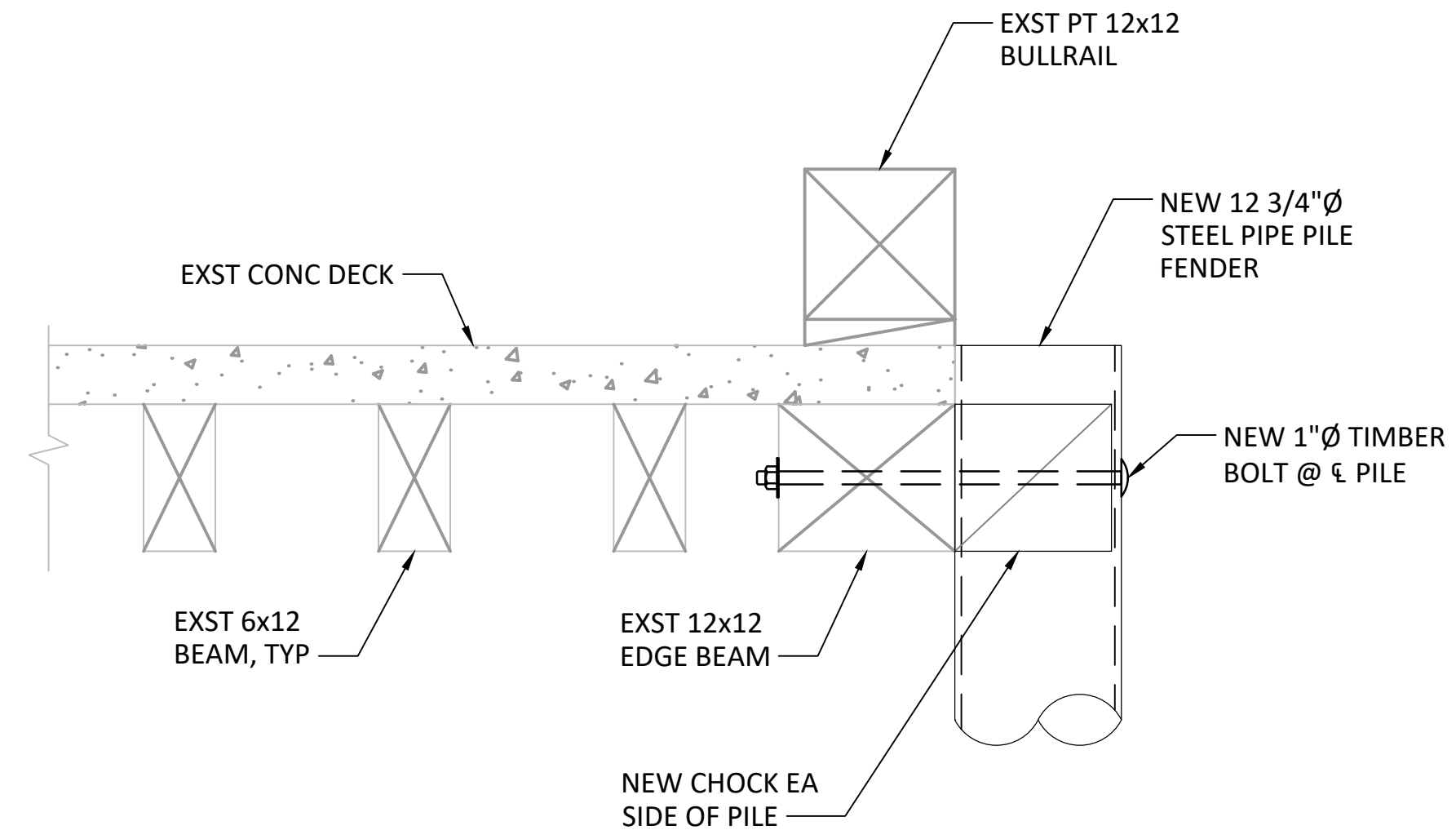
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SHEET ID
S17
 SHEET 18 OF 19

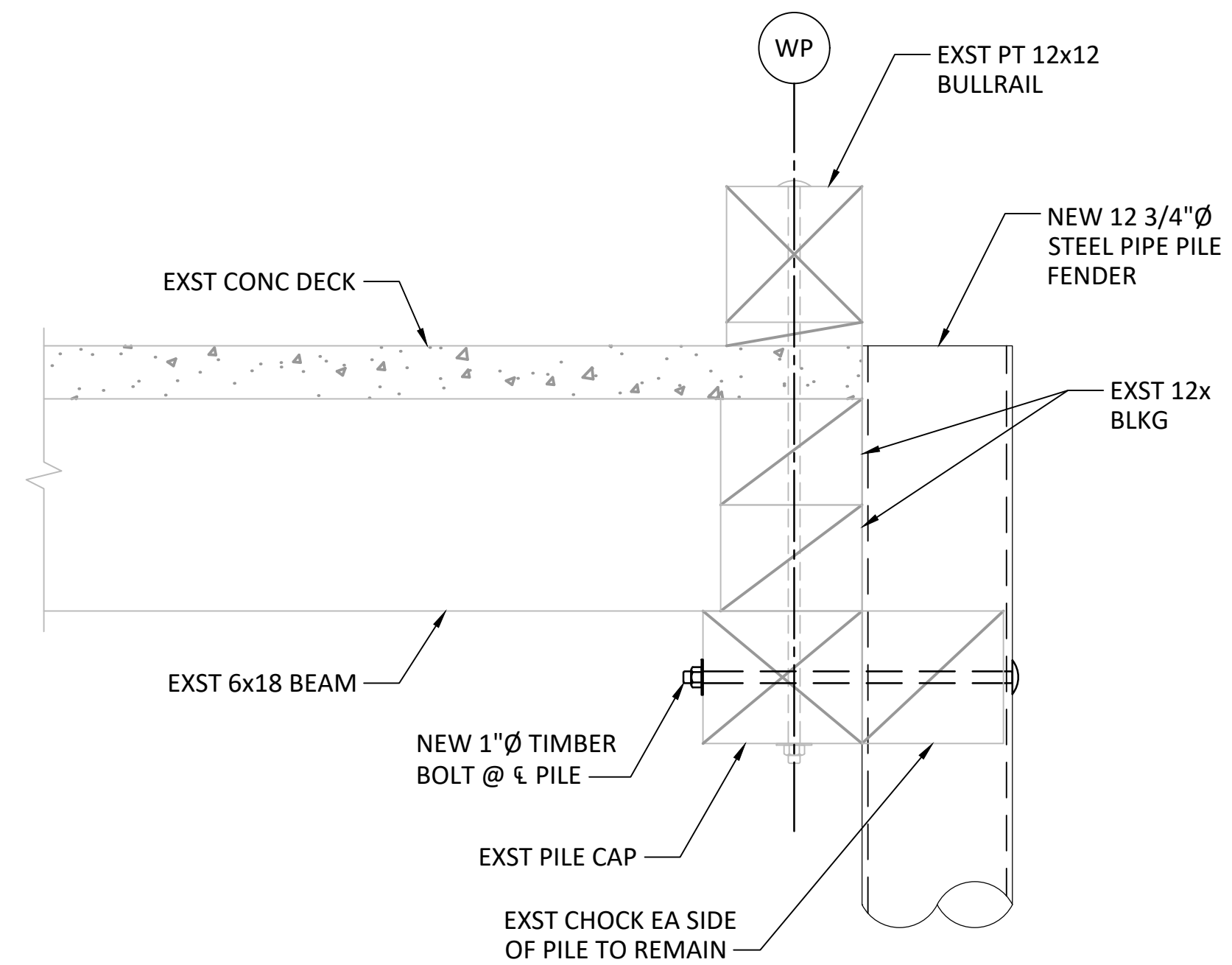
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A ELEVATION - REMOVE AND REPLACE BRACING
SCALE: 1" = 1'-0"



B DETAIL - FENDER PILE REPLACEMENT @ WP 14, 18, 25, ET 5, ET 6.5
SCALE: 1" = 1'-0"



C DETAIL - FENDER PILE REPLACEMENT @ WP 30 AND 31
SCALE: 1" = 1'-0"

No.	Revision	Date	By	App'd

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REHABILITATION DETAILS - SHEET 5 FOR:
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 JAN. 23, 2001
 HOWARD A. WELLS

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SHEET ID

S18

SHEET 19 OF 19