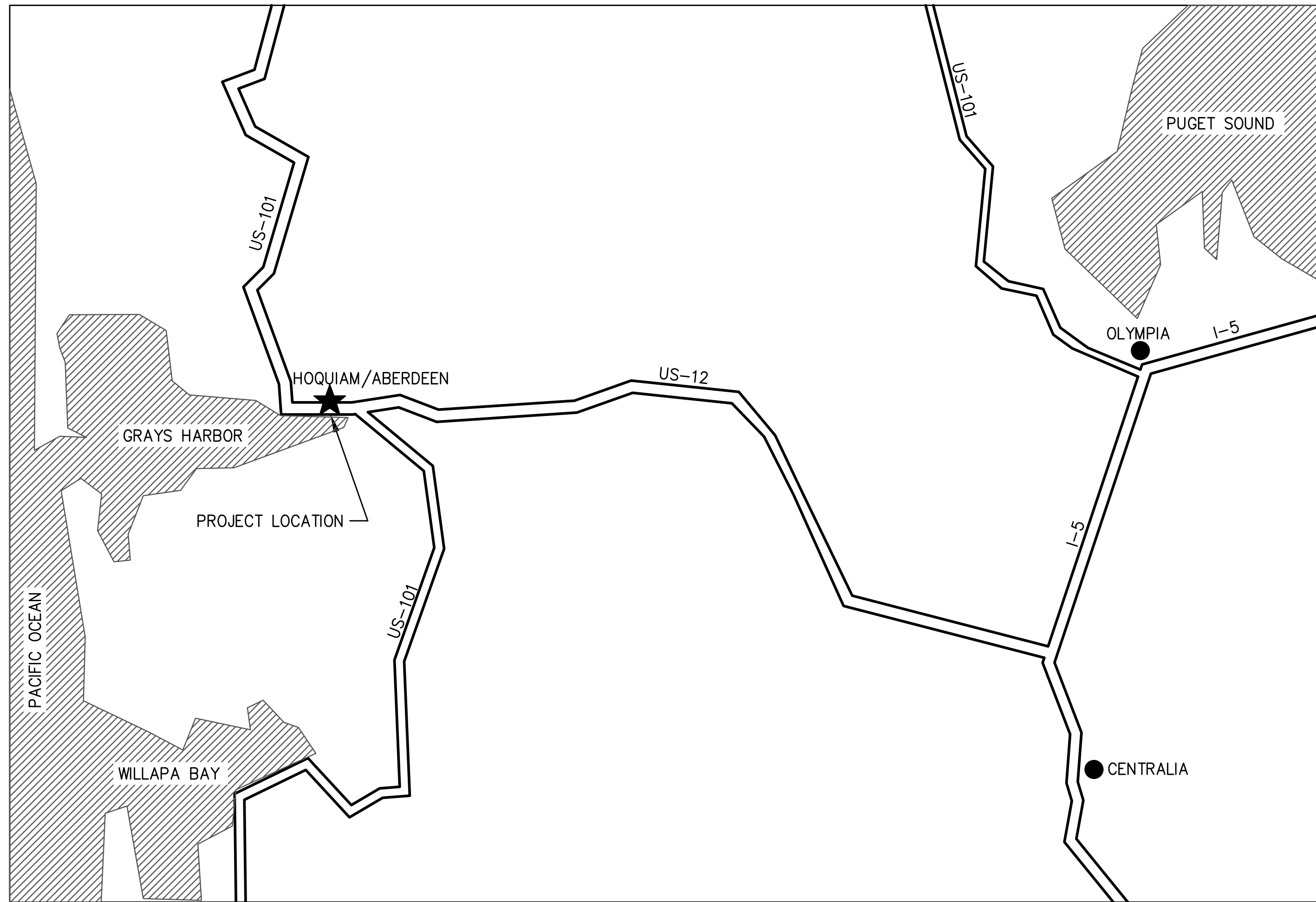


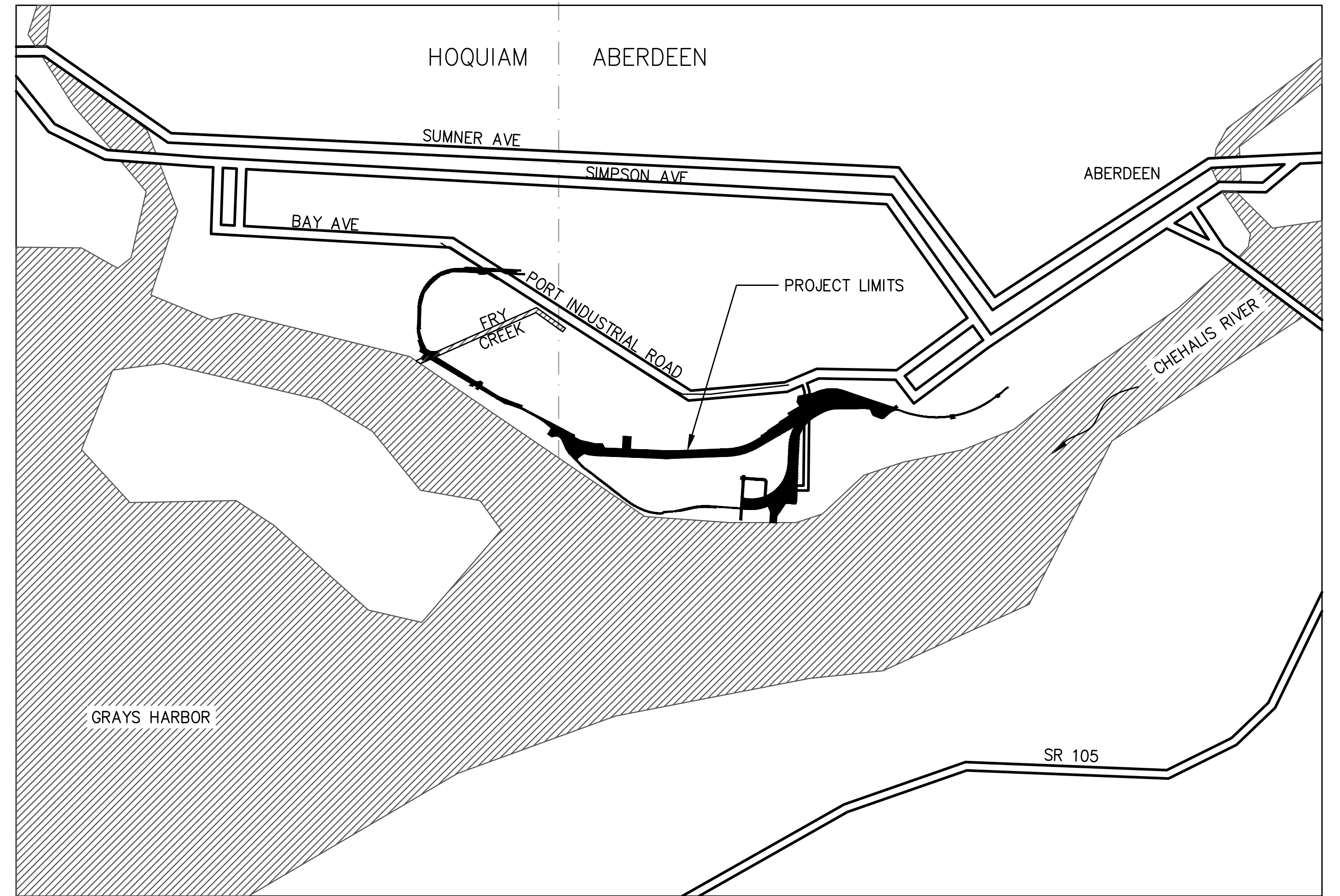
Attachment B  
Preliminary Design Drawings

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# PORT OF GRAYS HARBOR TERMINAL 4 RAIL AND SITE IMPROVEMENTS



**VICINITY MAP**  
NTS



**LOCATION MAP**  
NTS

Plotted: Jun 09, 2023 - 9:14pm riambert Layout: G1 COVER SHEET  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\G1 COVER SHEET.dwg

**kpff**

2407 North 31st Street, Suite 100  
Tacoma, Washington 98407  
(253) 396-0150 Fax (253) 396-0162

NO.	DATE	BY	REVISION

TERMINAL 4 RAIL AND SITE IMPROVEMENTS  
PORT OF GRAYS HARBOR

COVER SHEET

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>G1</b>
SHEET NO.	<b>1</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:14pm  
 rambert Layout: G2 SHEET INDEX  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\G2 SHEET INDEX.dwg

SHEET INDEX		
SHEET NO.	DRAWING NO.	SHEET TITLE
GENERAL		
1	G1	COVER SHEET
2	G2	SHEET INDEX
3	G3	KEY PLAN
4	G4	GENERAL NOTES
5	G5	LEGEND AND ABBREVIATIONS
6	G6	EXISTING CONDITIONS - AREA 1
7	G7	EXISTING CONDITIONS - AREA 2
8	G8	EXISTING CONDITIONS - AREA 3
9	G9	EXISTING CONDITIONS - AREA 4
10	G10	EXISTING CONDITIONS - AREA 5
11	G11	EXISTING CONDITIONS - AREA 6
12	G12	EXISTING CONDITIONS - AREA 7
13	G13	EXISTING CONDITIONS - AREA 8
14	G14	EXISTING CONDITIONS - AREA 9
15	G15	EXISTING CONDITIONS - AREA 10
16	G16	EXISTING CONDITIONS - AREA 11
17	G17	EXISTING CONDITIONS - AREA 12
18	G18	EXISTING CONDITIONS - AREA 13
19	G19	EXISTING CONDITIONS - AREA 14
20	G20	CONSTRUCTION STAGES - EXISTING CONDITIONS & STAGE 1
21	G21	CONSTRUCTION STAGES - STAGES 2 & 3
22	G22	CONSTRUCTION STAGES - STAGES 4 & 5
23	G23	CONSTRUCTION STAGES - STAGES 6 & 7
24	G24	CONSTRUCTION STAGES - STAGES 8 & 9
25	G25	CONSTRUCTION STAGES - STAGES 10 & 11
26	G26	CONSTRUCTION STAGES - STAGES 12 & 13
27	G27	CONSTRUCTION STAGES - STAGE 14 & FINAL CONFIGURATION
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28	D1	DEMOLITION AND TESC PLAN - AREA 1
29	D2	DEMOLITION AND TESC PLAN - AREA 2
30	D3	DEMOLITION AND TESC PLAN - AREA 3
31	D4	DEMOLITION AND TESC PLAN - AREA 4
32	D5	DEMOLITION AND TESC PLAN - AREA 5
33	D6	DEMOLITION AND TESC PLAN - AREA 6
34	D7	DEMOLITION AND TESC PLAN - AREA 7
35	D8	DEMOLITION AND TESC PLAN - AREA 8
36	D9	DEMOLITION AND TESC PLAN - AREA 9
37	D10	DEMOLITION AND TESC PLAN - AREA 10
38	D11	DEMOLITION AND TESC PLAN - AREA 11
39	D12	DEMOLITION AND TESC PLAN - AREA 12
40	D13	DEMOLITION AND TESC PLAN - AREA 13
41	D14	DEMOLITION AND TESC PLAN - AREA 14
42	D15	TESC NOTES AND DETAILS
43	D16	TESC DETAILS
CIVIL		
44	C1	SITE PLAN - AREA 1
45	C2	SITE PLAN - AREA 2
46	C3	SITE PLAN - AREA 3
47	C4	SITE PLAN - AREA 4
48	C5	SITE PLAN - AREA 5
49	C6	SITE PLAN - AREA 6
50	C7	SITE PLAN - AREA 7
51	C8	SITE PLAN - AREA 8
52	C9	SITE PLAN - AREA 9
53	C10	SITE PLAN - AREA 10
54	C11	SITE PLAN - AREA 11
55	C12	SITE PLAN - AREA 12

SHEET INDEX		
SHEET NO.	DRAWING NO.	SHEET TITLE
56	C13	SITE PLAN - AREA 13
57	C14	SITE PLAN - AREA 14
58	C15	SITE DETAILS
59	C16	SITE DETAILS
60	C17	SITE DETAILS
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61	GD1	GRADING AND DRAINAGE - SHEET 1
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63	GD3	GRADING AND DRAINAGE - SHEET 3
64	GD4	GRADING AND DRAINAGE - SHEET 4
65	GD5	GRADING AND DRAINAGE - SHEET 5
66	GD6	GRADING AND DRAINAGE - SHEET 6
67	GD7	GRADING AND DRAINAGE DETAILS
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70	U3	UTILITY PLAN - AREA 3
71	U4	UTILITY PLAN - AREA 4
72	U5	UTILITY PLAN - AREA 5
73	U6	UTILITY PLAN - AREA 6
74	U7	UTILITY PLAN - AREA 7
75	U8	UTILITY PLAN - AREA 8
76	U9	UTILITY PLAN - AREA 9
77	U10	UTILITY PLAN - AREA 10
78	U11	UTILITY PLAN - AREA 11
79	U12	UTILITY PLAN - AREA 12
80	U13	UTILITY PLAN - AREA 13
81	U14	UTILITY PLAN - AREA 14
82	U15	UTILITY DETAILS
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83	R1	RAIL PLAN - AREA 1
84	R1.1	RAIL REFINEMENT - AREA 1
85	R2	RAIL PLAN - AREA 2
86	R2.1	RAIL REFINEMENT - AREA 2
87	R3	RAIL PLAN - AREA 3
88	R3.1	RAIL REFINEMENT - AREA 3
89	R4	RAIL PLAN - AREA 4
90	R4.1	RAIL REFINEMENT - AREA 4
91	R5	RAIL PLAN - AREA 5
92	R5.1	RAIL REFINEMENT - AREA 5
93	R6	RAIL PLAN - AREA 6
94	R6.1	RAIL REFINEMENT - AREA 6
95	R7	RAIL PLAN - AREA 7
96	R7.1	RAIL REFINEMENT - AREA 7
97	R8	RAIL PLAN - AREA 8
98	R8.1	RAIL REFINEMENT - AREA 8
99	R9	RAIL PLAN - AREA 9
100	R9.1	RAIL REFINEMENT - AREA 9
101	R10	RAIL PLAN - AREA 10
102	R10.1	RAIL REFINEMENT - AREA 10
103	R11	RAIL PLAN - AREA 11
104	R11.1	RAIL REFINEMENT - AREA 11
105	R12	RAIL PLAN - AREA 12
106	R12.1	RAIL REFINEMENT - AREA 12
107	R13	RAIL PLAN - AREA 13
108	R13.1	RAIL REFINEMENT - AREA 13
109	R14	RAIL PLAN - AREA 14
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SHEET INDEX		
SHEET NO.	DRAWING NO.	SHEET TITLE
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112	R16	DATA CHARTS
113	R17	DATA CHARTS
114	R18	RAIL PROFILES - WL 01
115	R19	RAIL PROFILES - WL 01
116	R20	RAIL PROFILES - WL 01
117	R21	RAIL PROFILES - WL 02
118	R22	RAIL PROFILES - WL 03
119	R23	RAIL PROFILES - DP 03N
120	R24	RAIL PROFILES - DP 03N
121	R25	RAIL PROFILES - DP 03S
122	R26	RAIL PROFILES - DP 03S, RA 03N, RA 03S
123	R27	RAIL PROFILES - XO 01, XO 02, DL 01, HYP
124	R28	RAIL PROFILES - TT 01, TT 02, ST 01
125	R29	RAIL PROFILES - ST 01, ST 02
126	R30	RAIL PROFILES - ST 03, ST 04, ST 05
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133	R37	RAIL PROFILES - ST 11, ST 12
134	R38	RAIL PROFILES - ST 12
135	R39	RAIL PROFILES - ST 13
136	R40	RAIL PROFILES - ST 13
137	R41	RAIL SECTIONS
138	R42	RAIL SECTIONS
139	R43	RAIL SECTIONS
140	R44	RAIL DETAILS
141	R45	RAIL DETAILS
142	R46	RAIL DETAILS
STRUCTURAL ^		
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146-147	S4-S5	TERMINAL 1 PEDESTRIAN BRIDGE^
148-149	S6-S7	TERMINAL 1 PIPE BRIDGE^
150-162	S8-S20	STRUCTURAL DETAILS^
ELECTRICAL ^		
163	E1	ELECTRICAL PLAN^
164	E2	ELECTRICAL DETAILS^
165	E3	ELECTRICAL DETAILS^
166	E4	ELECTRICAL DETAILS^
167	E5	ELECTRICAL DETAILS^
168	E6	ELECTRICAL DETAILS^
SIGNALIZATION ^		
169	S11	SIGNALIZATION PLAN^
170	S12	SIGNALIZATION DETAILS^
171	S13	SIGNALIZATION DETAILS^
172	S14	SIGNALIZATION DETAILS^
173	S15	SIGNALIZATION DETAILS^
174	S16	SIGNALIZATION DETAILS^

^ NOT INCLUDED IN THIS SET.



NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
PORT OF GRAYS HARBOR

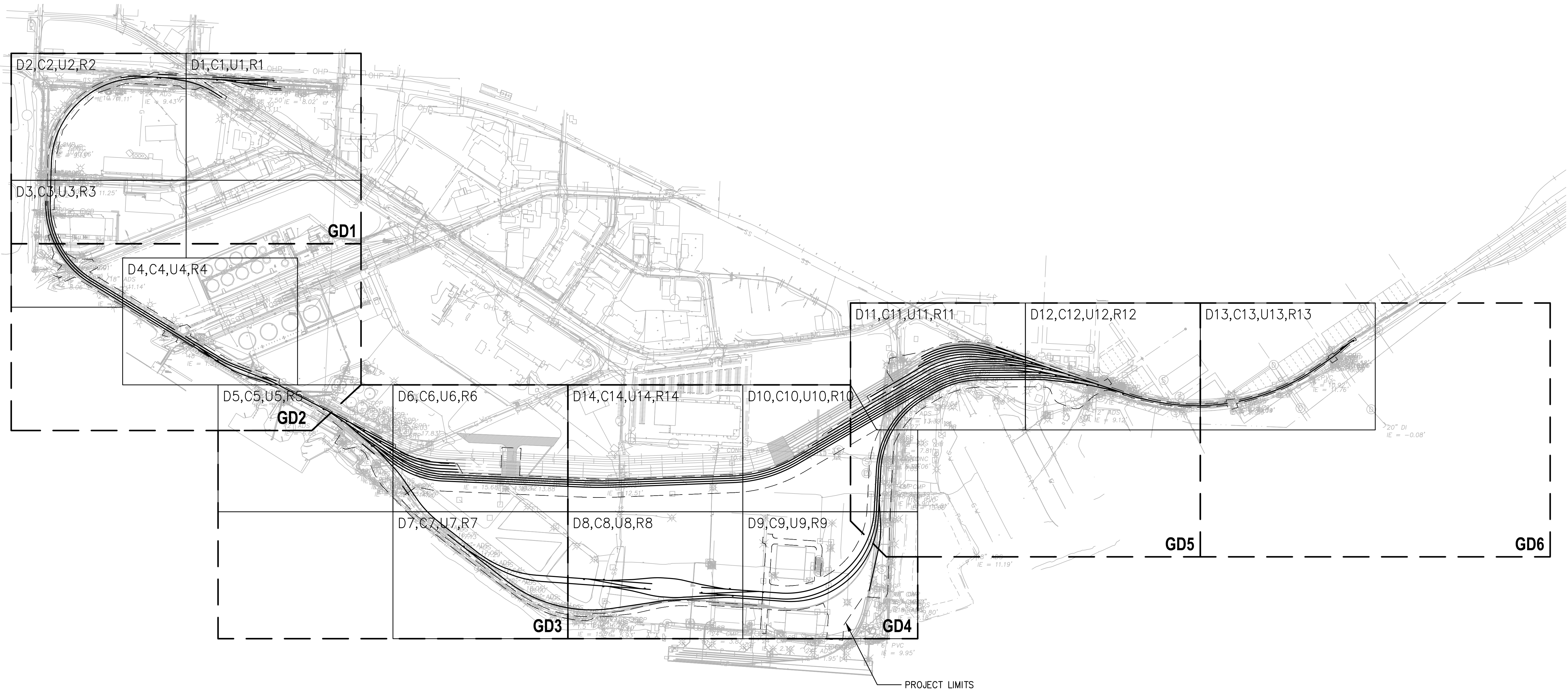
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**SHEET INDEX**

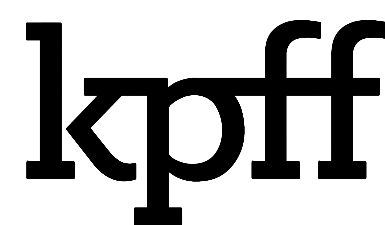
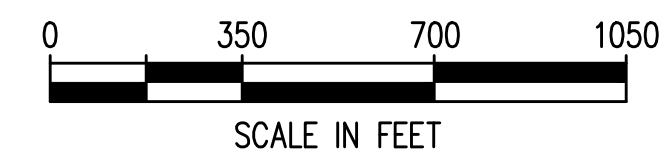
DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>G2</b>
SHEET NO.	<b>2 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:15pm riambert Layout: KEY PLAN  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\G3 KEY PLAN.dwg



**KEY PLAN**  
SCALE: 1" = 350'



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**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
PORT OF GRAYS HARBOR

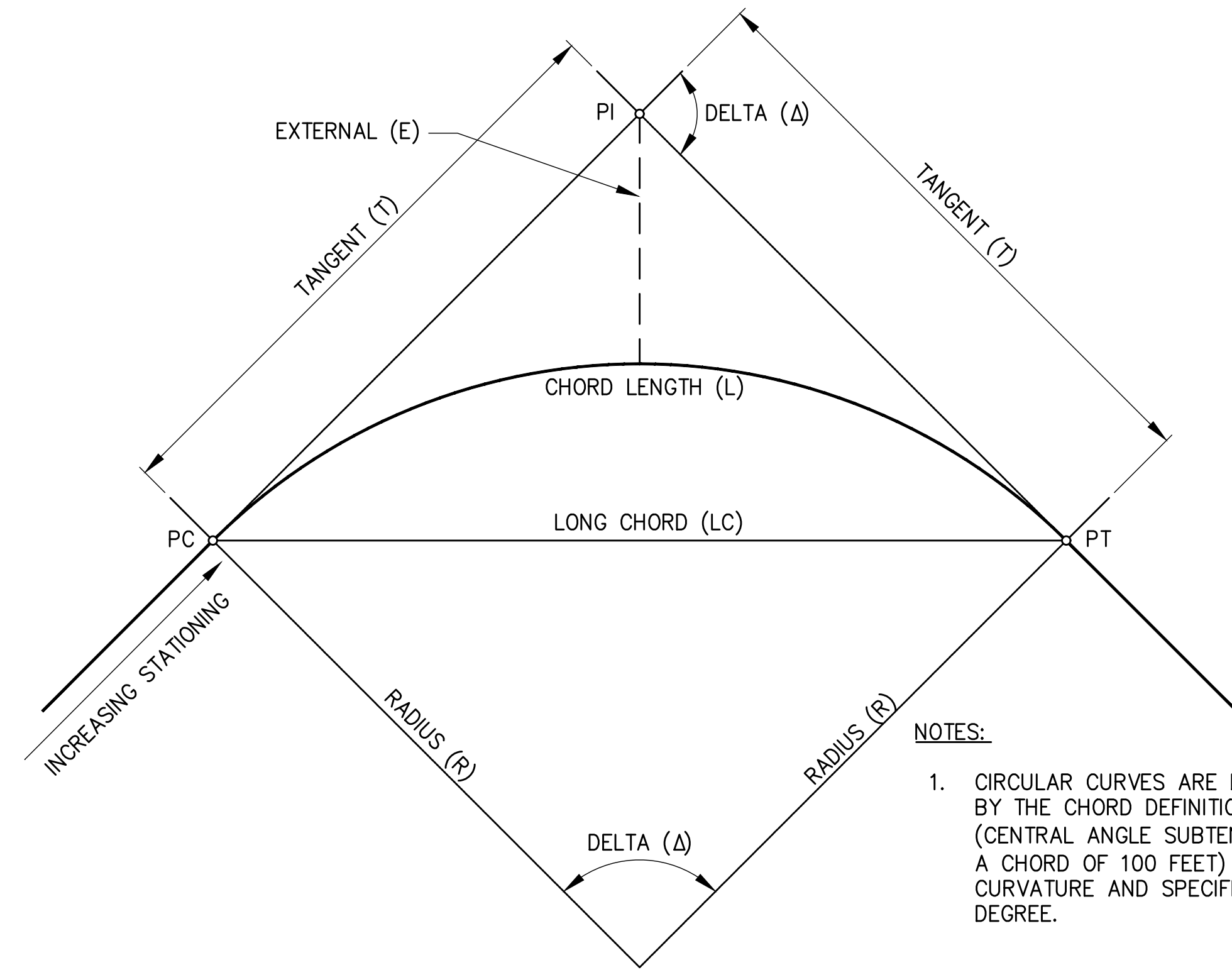
**KEY PLAN**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>G3</b>
SHEET NO.	<b>3 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

**GENERAL NOTES:**

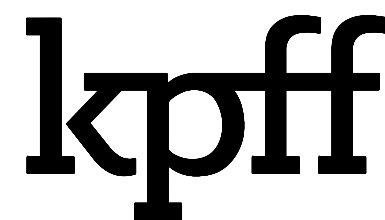
1. ALL CONSTRUCTION SHALL CONFORM TO THESE PLANS AND SPECIFICATIONS, THE WSDOT STANDARD SPECIFICATIONS (2023), AND ALL LOCAL, STATE AND FEDERAL SAFETY CODES AND REGULATIONS.
2. A COPY OF THE CONTRACT DOCUMENTS, INCLUDING PLANS AND SPECIFICATIONS, SHALL BE ON-SITE WHENEVER CONSTRUCTION IS IN PROGRESS. THROUGHOUT THE PROGRESS OF THE WORK OF THIS CONTRACT, THE CONTRACTOR SHALL MAINTAIN ACCURATE RECORD OF ALL CHANGES IN THE CONTRACT DOCUMENTS. UPON COMPLETION OF THIS CONTRACT, THE CONTRACTOR SHALL PROVIDE ONE COMPLETE SET OF RECORD DOCUMENTS TO THE ENGINEER.
3. EXISTING SURFACE FEATURES ARE BASED ON SURVEY DATA AND AS-BUILT INFORMATION BY OTHERS. ALL LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN HEREIN SHOULD BE CONSIDERED APPROXIMATE AND NOT NECESSARILY COMPLETE.
4. THE CONTRACTOR SHALL LOCATE ALL UTILITIES WITHIN THE PROJECT SITE PRIOR TO WORK. CONTRACTOR SHALL CONTACT 811 "CALL BEFORE YOU DIG" AND AN INDEPENDENT LOCATING SERVICE TO LOCATE ALL UTILITIES AT LEAST 48 HOURS PRIOR TO COMMENCING WORK.
5. THE CONTRACTOR SHALL INDEPENDENTLY FIELD VERIFY, AND POTHOLE AS NEEDED, ALL DIMENSIONS OF EXISTING STRUCTURES, UTILITY LOCATIONS, ELEVATIONS, DIAMETERS, PIPE MATERIAL TYPES AND OTHER FEATURES PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL BRING ANY CONFLICTS TO THE ENGINEERS ATTENTION PRIOR TO COMMENCING AFFECTED WORK.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY TRAFFIC CONTROL REQUIRED FOR THE DURATION OF THIS PROJECT, PER CONTRACTOR'S OPERATIONS. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). BARRIERS SHALL BE LIGHTED AT NIGHT.
7. THE CONTRACTOR SHALL KEEP ALL STREETS AND VEHICULAR TRAFFIC AREAS USED FOR THIS WORK CLEAN AT ALL TIMES.
8. ANY DAMAGE TO EXISTING UTILITIES, OTHER FACILITIES, OR EQUIPMENT DUE TO THE CONTRACTORS NEGLIGENCE SHALL BE PROMPTLY REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. THIS INCLUDES ITEMS OUTSIDE THE WORK AREA THAT ARE DAMAGED BY CONSTRUCTION ACTIVITIES DURING EXECUTION OF THIS CONTRACT.
9. UNLESS OTHERWISE NOTED, THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 3 DAYS ADVANCED WRITTEN NOTICE TO THE UTILITY AND ENGINEER FOR ALL ACTIVATION/DEACTIVATION OF UTILITIES PRIOR TO WORK.
10. UNLESS OTHERWISE NOTED, THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 7 DAYS ADVANCED WRITTEN REQUESTS TO THE ENGINEER, PORT, AND GENESSEE & WYOMING INC. (G&W)/PUGET SOUND AND PACIFIC (PSAP) RAILROAD PRIOR TO ANY SHUTDOWN OF AN ACTIVE TRACK.
11. THE CONTRACTOR MUST, WHEN WORKING WITHIN THE RAILROAD RIGHT-OF-WAY OR WHEN THEIR ACTIVITY MAY FOUL AN ACTIVE TRACK, COMPLY WITH THE RULES AND REGULATIONS PERTAINING TO FEDERAL RAILROAD ADMINISTRATION ROADWAY WORKER PROTECTION AND G&W/PSAP ROADWAY WORKER SAFETY RULES.
12. CONTRACTOR SHALL PROVIDE SAFE TRENCHING PRACTICES AND EXCAVATION SHALL BE IN ACCORDANCE WITH STATE AND FEDERAL REQUIREMENTS.
13. CONTRACTOR-INITIATED CHANGE SHALL BE SUBMITTED IN WRITING TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY SHALL NOT SATISFY THIS REQUIREMENT.
14. ALL IMPROVEMENTS SHOWN ON PLANS ARE PROPOSED WORK UNLESS NOTED OTHERWISE AS EX/EXISTING.
15. THE CONTRACTOR SHALL PROTECT ALL EXISTING SURVEY MONUMENTATION DURING THE COURSE OF CONSTRUCTION. IF EXISTING MONUMENTS ARE DISTURBED, THEN THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO OBTAIN A CORNER REMOVAL PERMIT FROM THE DEPARTMENT OF NATURAL RESOURCES. ALL SURVEY MONUMENTATION SHALL BE DOCUMENTED, PRESERVED, PROTECTED, AND/OR REPLACED IN ACCORDANCE WITH RCW 58.24.040(8) AND WAC 332-120.
16. THE CONTRACTOR SHALL AT ALL TIMES CONFORM TO THE NOISE AND AIR CONTROL REQUIREMENTS AS DEFINED IN THE SPECIFICATIONS AND APPLICABLE PERMIT REQUIREMENTS.



**NOTES:**  
 1. CIRCULAR CURVES ARE DEFINED BY THE CHORD DEFINITION (CENTRAL ANGLE SUBTENDED BY A CHORD OF 100 FEET) OF CURVATURE AND SPECIFIED BY DEGREE.

**CIRCULAR CURVE**

Plotted: Jun 09, 2023 - 9:15pm  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\G4-G5 GENERAL NOTES LEGEND AND ABBREVIATIONS.dwg  
 Layout: G4 GENERAL NOTES  
 rimbart  
 Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\G4-G5 GENERAL NOTES LEGEND AND ABBREVIATIONS.dwg



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**GENERAL NOTES**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>G4</b>
SHEET NO.	<b>4 OF 142</b>

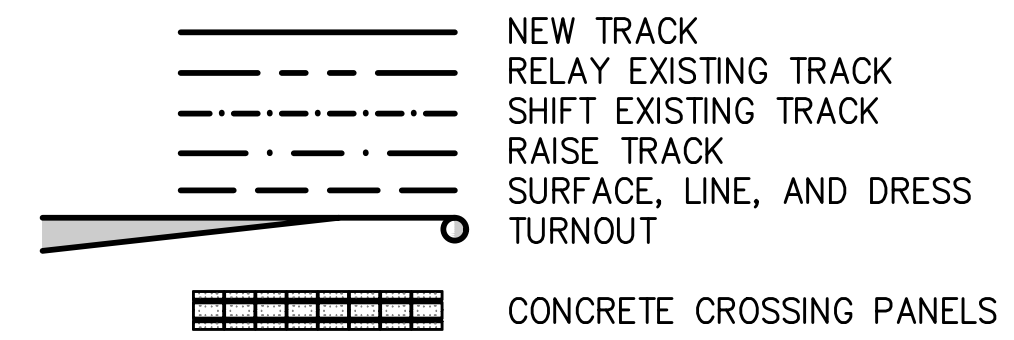
PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

# ABBREVIATIONS

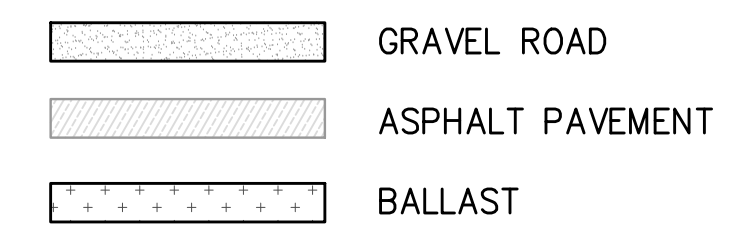
#	NUMBER	FS	FINISHED SURFACE
∅	DIAMETER	FSM	FIRE SERVICE METER
@	AT	FT	FOOT, FEET
AB	AGGREGATE BASE	G	GAS
AC	ASPHALT CONCRETE	G&W	GENESSEE & WYOMING INC.
ACI	AMERICAN CONCRETE INSTITUTE	GIS	GEOGRAPHIC INFORMATION SYSTEM
ACP	ASBESTOS CONCRETE PIPE OR ASPHALTIC CONCRETE PAVEMENT	GPS	GLOBAL POSITIONING SYSTEM
		GV	GATE VALVE
ADDL	ADDITIONAL	H or HORIZ	HORIZONTAL
ADJ	ADJACENT	HAZMAT	HAZARDOUS MATERIALS
ADMIN	ADMINISTRATION	HDPE	HIGH DENSITY POLYETHYLENE
AGGR	AGGREGATE	HMA	HOT MIX ASPHALT
ALT	ALTERNATE	HORZ	HORIZONTAL
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	HSSD	HIGH STRENGTH STORM DRAIN
APP or APPVD	APPROVED	HT	HEIGHT
APPROX	APPROXIMATE	ID	INSIDE DIAMETER
APWA	AMERICAN PUBLIC WORKS ASSOCIATION	IE	INVERT ELEVATION
AREA	AMERICAN RAILWAY ENGINEERING ASSOCIATION	IN	INCH
AREMA	AMERICAN RAILWAY ENGINEERING MAINTENANCE OF WAY ASSOCIATION	INCL	INCLUDE
		IR	INDUSTRIAL REMEDIATION
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	JB	JUNCTION BOX
AVG	AVERAGE	JS	JUNCTION STRUCTURE
AWS	AMERICAN WELDING SOCIETY	JT	JOINT
AWWA	AMERICAN WATER WORKS ASSOCIATION	KIP(S)	KILOPOUND(S)
BFO	BURIED FIBER OPTIC	L	LENGTH
BLDG	BUILDING	LAT	LATERAL
BM	BENCH MARK or BEAM	LB	POUND
BMP or BMP'S	BEST MANAGEMENT PRACTICES	LF	LINEAL FOOT
BNSF	BURLINGTON NORTHERN SANTA FE	LH	LEFT HAND
BOP	BOTTOM OF PIPE	LIN	LINEAL or LINEAR
BOT	BOTTOM	LOL	LAYOUT LINE
BRG	BEARING	MAX	MAXIMUM
BRZ	BRONZE	MH	MANHOLE
BTW or BTWN	BETWEEN	MHHW	MEAN HIGHER HIGH WATER
BV	BALL VALVE	MHW	MEAN HIGH WATER
CY	CONTAINER YARD OR CUBIC YARD	MIN	MINIMUM
C/L	CENTERLINE	MISC	MISCELLANEOUS
CAB	CRUSHED AGGREGATE BASE	MJ	MECHANICAL JOINT
CB	CATCH BASIN	MLLW	MEAN LOWER LOW WATER
CC	CENTER TO CENTER	MLW	MEAN LOW WATER
CFS	CUBIC FEET PER SECOND	MSP	MANUAL OF STANDARD PRACTICE
CIP	CAST IRON PIPE	MUTCD	MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES
CL	CENTER LINE or CLASS	N	NORTH or NORTHING
CLF	CHAIN LINK FENCE	NE	NORTHEAST
CLR	CLEAR or CLEARANCE	NIC	NOT IN CONTRACT
CMF	CORRUGATED METAL PIPE	NO	NUMBER
CO	CLEAN OUT	NTS	NOT TO SCALE
CONC	CONCRETE	NW	NORTHWEST
CONT	CONTINUE or CONTINUOUS	OC	ON CENTER
CONT'D	CONTINUED	OD	OUTSIDE DIAMETER
COORD	COORDINATE	OVH	OVERHEAD
COUP	COUPLING	OHWL	ORDINARY HIGH WATER LINE
CPT	CONE PENETROMETER TEST	P/L or PL	PROPERTY LINE
CRSI	CONCRETE REINFORCING STEEL INSTITUTE	PB	PULL BOX
CSBC	CRUSHED SURFACING BASE COURSE	PC	POINT OF CURVATURE
CSG	CASING	PCC	PORTLAND CEMENT CONCRETE
CSTC	CRUSHED SURFACING TOP COURSE	PERF	PERFORATED
CTR	CENTER	PERP	PERPENDICULAR
Dc	DEGREE OF CURVATURE	PG	PERFORMANCE GRADE
DIA	DIAMETER	PI	POINT OF INTERSECTION
DIAG	DIAGONAL	PJ	PUSH-ON JOINT
DIM	DIMENSION	PNT	POINT
DIP	DUCTILE IRON PIPE	POGH	PORT OF GRAYS HARBOR
DWG	DRAWING	PP	POWER POLE
DWY	DRIVEWAY	PR	PRESSURE RATING
E	EAST or EASTING	PRESS RED	PRESSURE REDUCER
EA	EACH	PROP	PROPOSED
EG	EXISTING GRADE	PRV	PRESSURE REDUCING VALVE
EL or ELEV	ELEVATION	PRVS	PRESSURE RELIEF VALVE
ELEC or ELECT	ELECTRICAL	PSAP	PUGET SOUND AND PACIFIC RAILROAD
ENGR	ENGINEER	PSF	POUNDS PER SQUARE FOOT
EP	EDGE OF PAVEMENT	PS	POINT OF SWITCH
EQ	EQUAL	PSI	POUNDS PER SQUARE INCH
ES	ELECTRICAL SUBSTATION or EACH SIDE	PT	POINT or POINT OF TANGENCY
ETC	ET CETERA	PVC	POLYVINYL CHLORIDE OR POINT OF VERTICAL CURVE
EX or EXIST EXG	EXISTING	PVI	POINT OF VERTICAL INTERSECTION
EXP JT	EXPANSION JOINT	PVMT	PAVEMENT
FF	FINISH FLOOR	R	RIDGE OR RADIUS
FG	FINISH GRADE	R/W or ROW	RIGHT OF WAY
FH	FIRE HYDRANT	RCP	REINFORCED CONCRETE PIPE
FIN	FINISH	RD	ROAD
FL	FLOW LINE OR FLANGE	REF	REFERENCE
FLGD	FLANGED JOINT	REINF	REINFORCE OR REINFORCING
FM	FORCE MAIN	REQ'D	REQUIRED
		RH	RIGHT HAND
		RP	RADIUS POINT
		RR	RAILROAD

# LEGEND

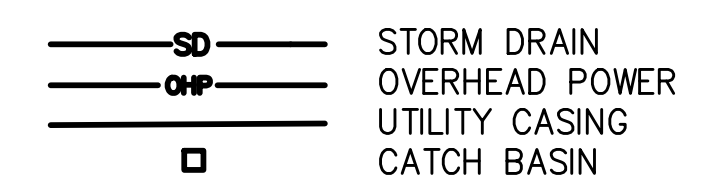
## RAIL



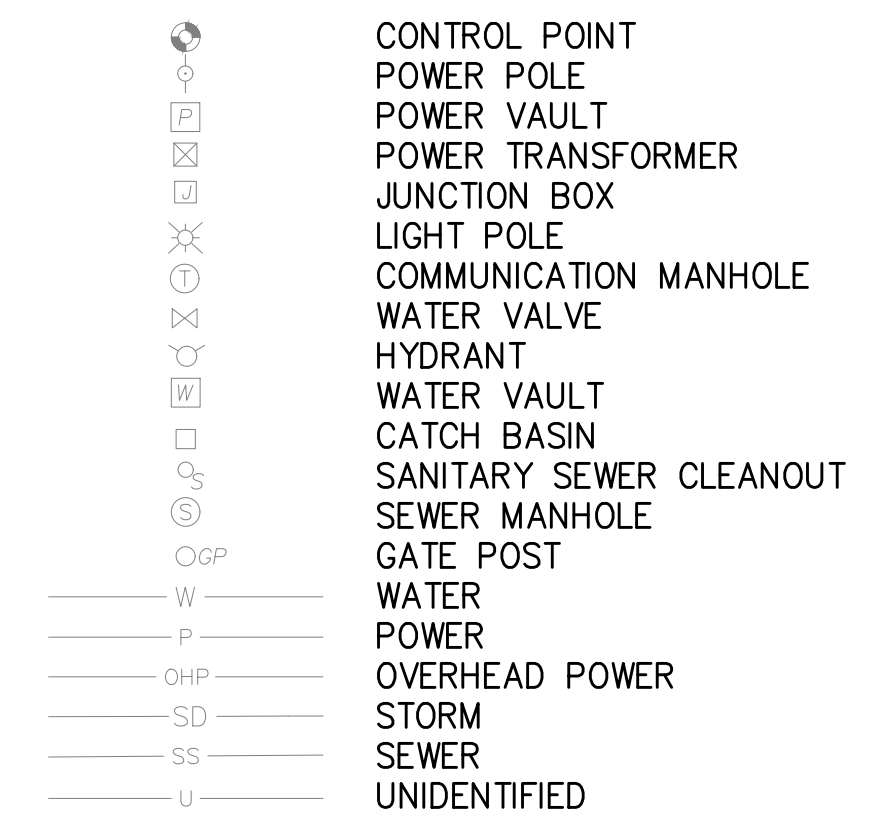
## PAVING AND SURFACE DETAILS



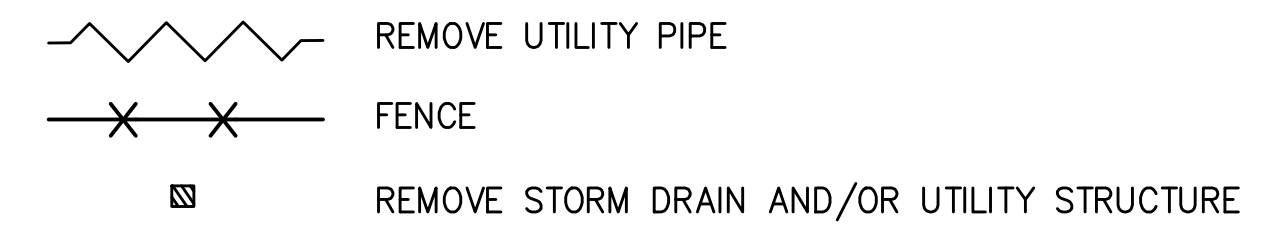
## GRADING, DRAINAGE, AND UTILITIES



## EXISTING



## DEMOLITION AND EROSION CONTROL



Plotted: Jun 09, 2023 9:15pm r1ambert  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements Part 3 - KPFF Design\3.13 Drawings\Current\G4-G5 GENERAL NOTES LEGEND AND ABBREVIATIONS.dwg



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NO.	DATE	BY	REVISION

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 PORT OF GRAYS HARBOR

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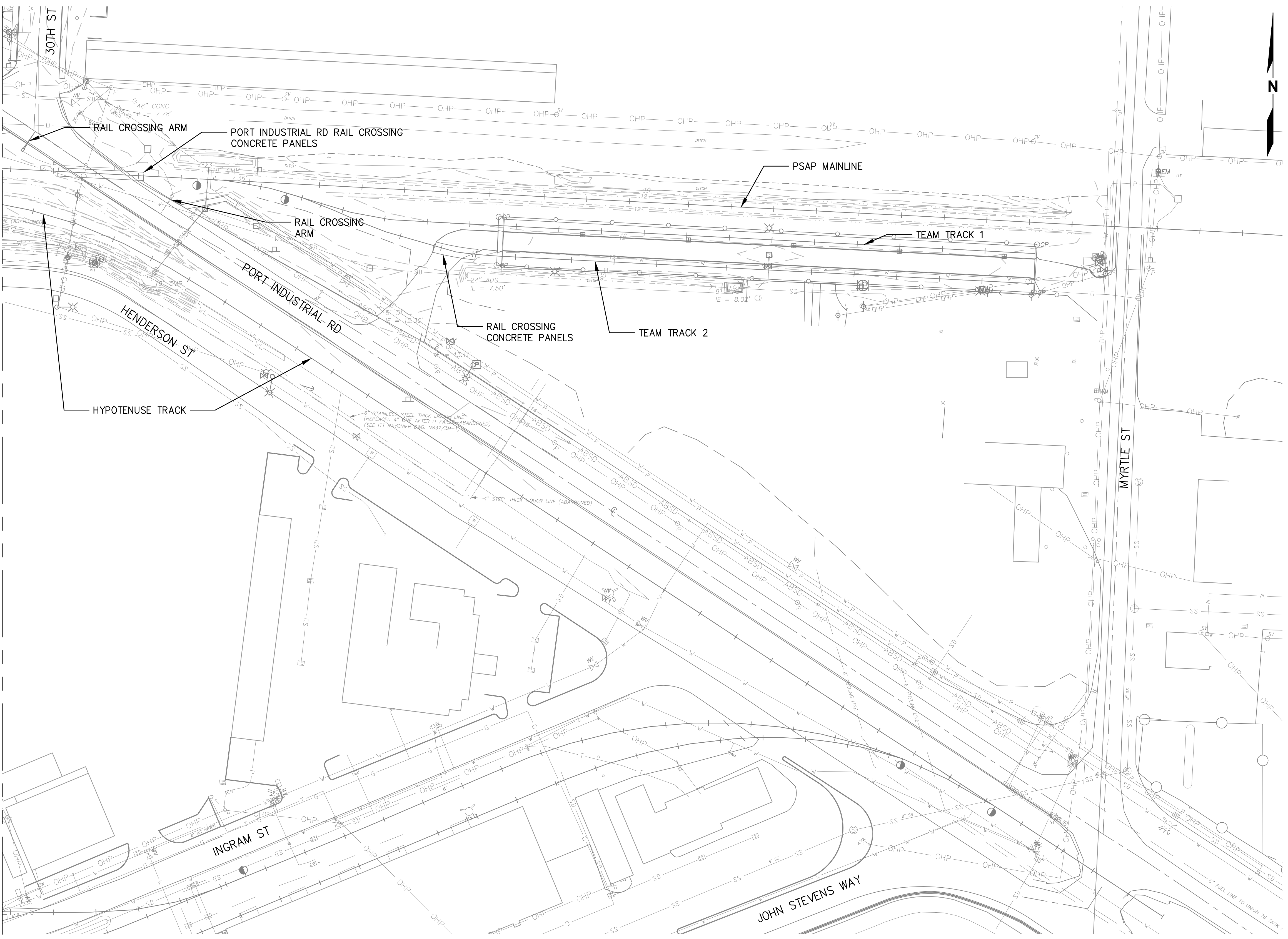
**LEGEND AND ABBREVIATIONS**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>G5</b>
SHEET NO.	<b>5 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

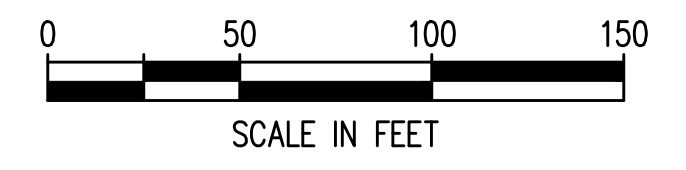
Plotted: Jun 09, 2023 - 9:15pm rhlambert Layout: G6 AREA 1  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\G6-G19 EXISTING CONDITIONS.dwg

MATCHLINE - SEE AREA 2



**NOTES**

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**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

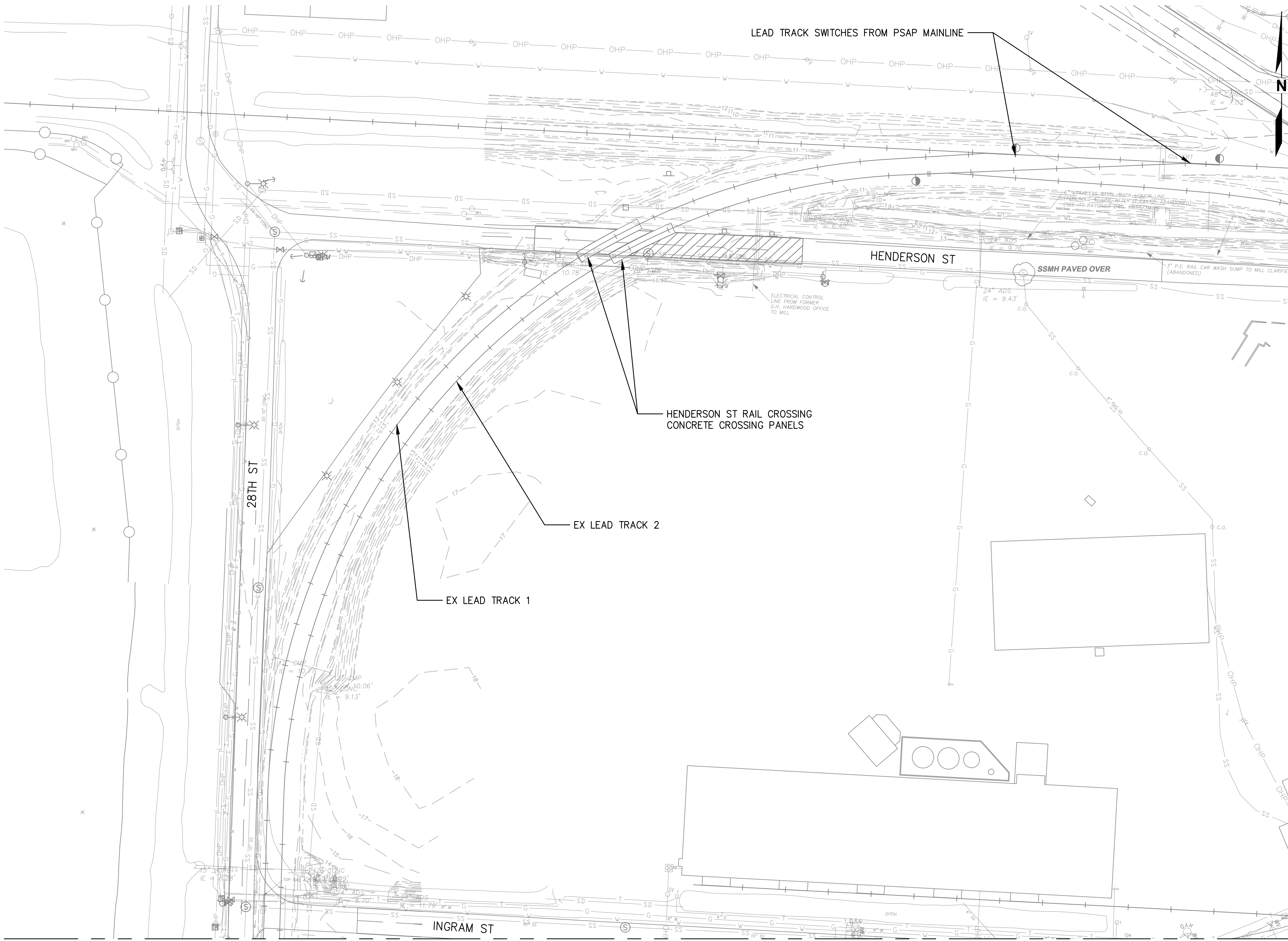
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**EXISTING CONDITIONS**  
**AREA 1**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>G6</b>
SHEET NO.	<b>6 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:15pm riambert Layout: G7 AREA 2  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\G6-G19 EXISTING CONDITIONS.dwg

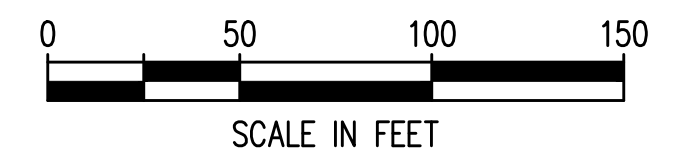


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MATCHLINE - SEE AREA 1

MATCHLINE - SEE AREA 13



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**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

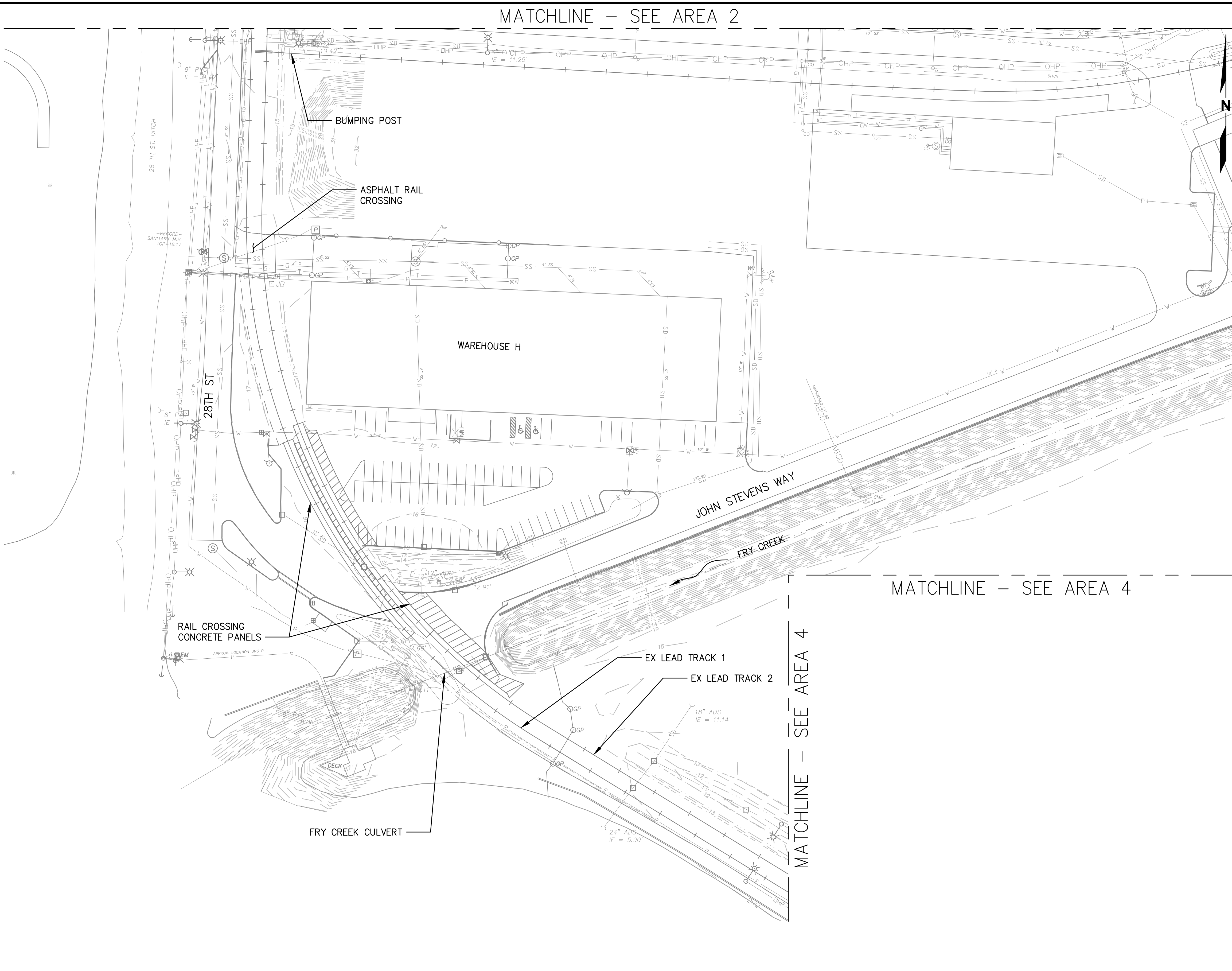
**EXISTING CONDITIONS**  
 AREA 2

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DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>G7</b>
SHEET NO.	<b>7 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

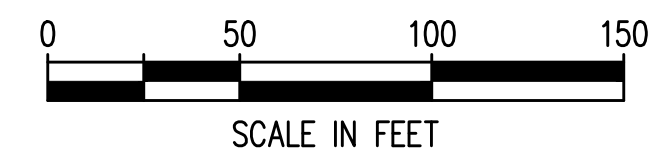


Plotted: Jun 09, 2023 - 9:15pm rimbart Layout: G8 AREA 3  
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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**EXISTING CONDITIONS**  
**AREA 3**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>G8</b>
SHEET NO.	<b>8 OF 142</b>

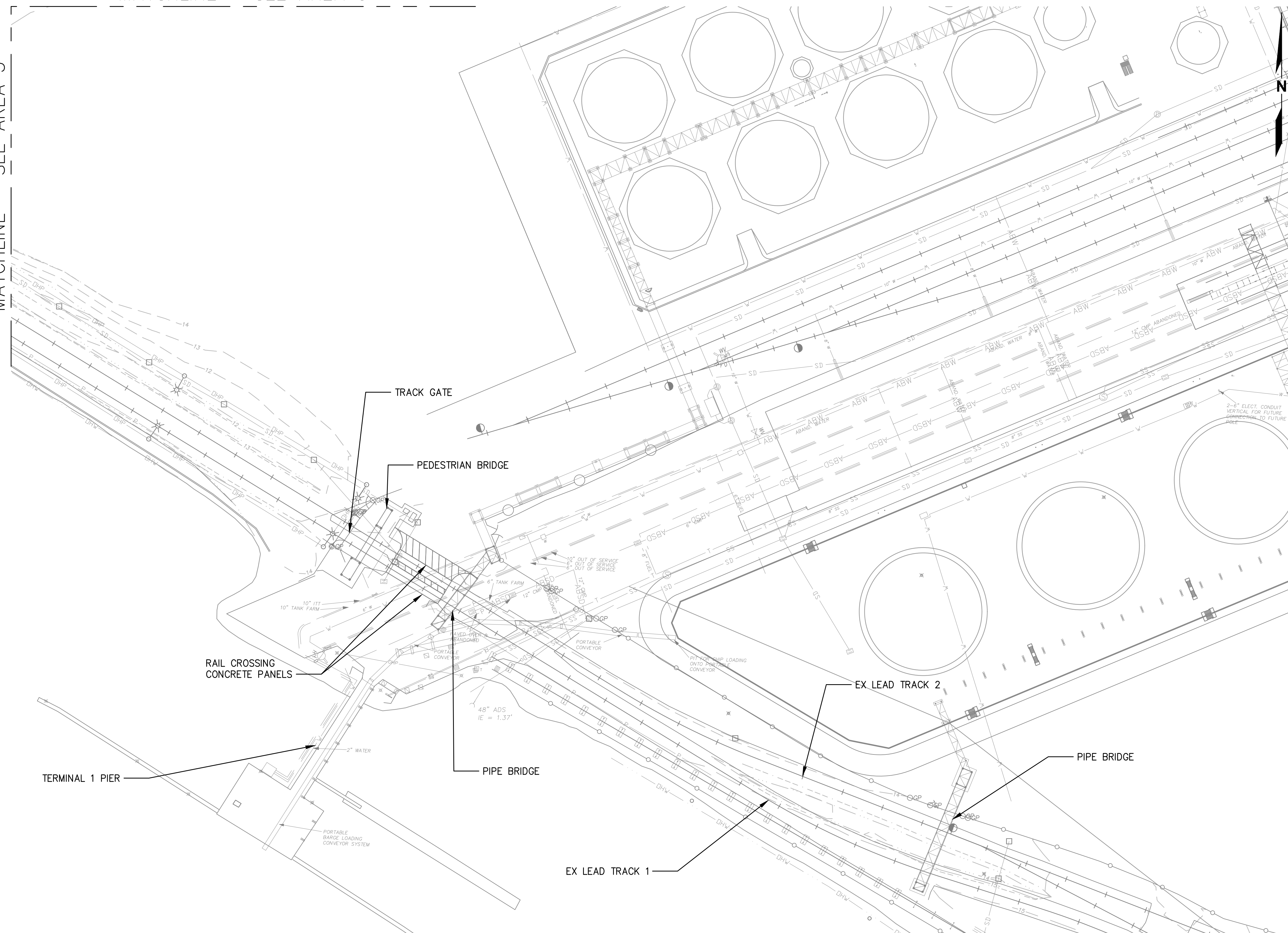
PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

MATCHLINE - SEE AREA 3

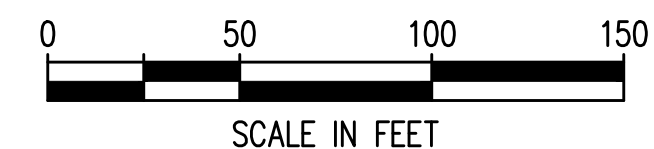
MATCHLINE - SEE AREA 3

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MATCHLINE - SEE AREA 5



Plotted: Jun 09, 2023 - 9:15pm riambert Layout: G9 AREA 4  
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NO.	DATE	BY	REVISION

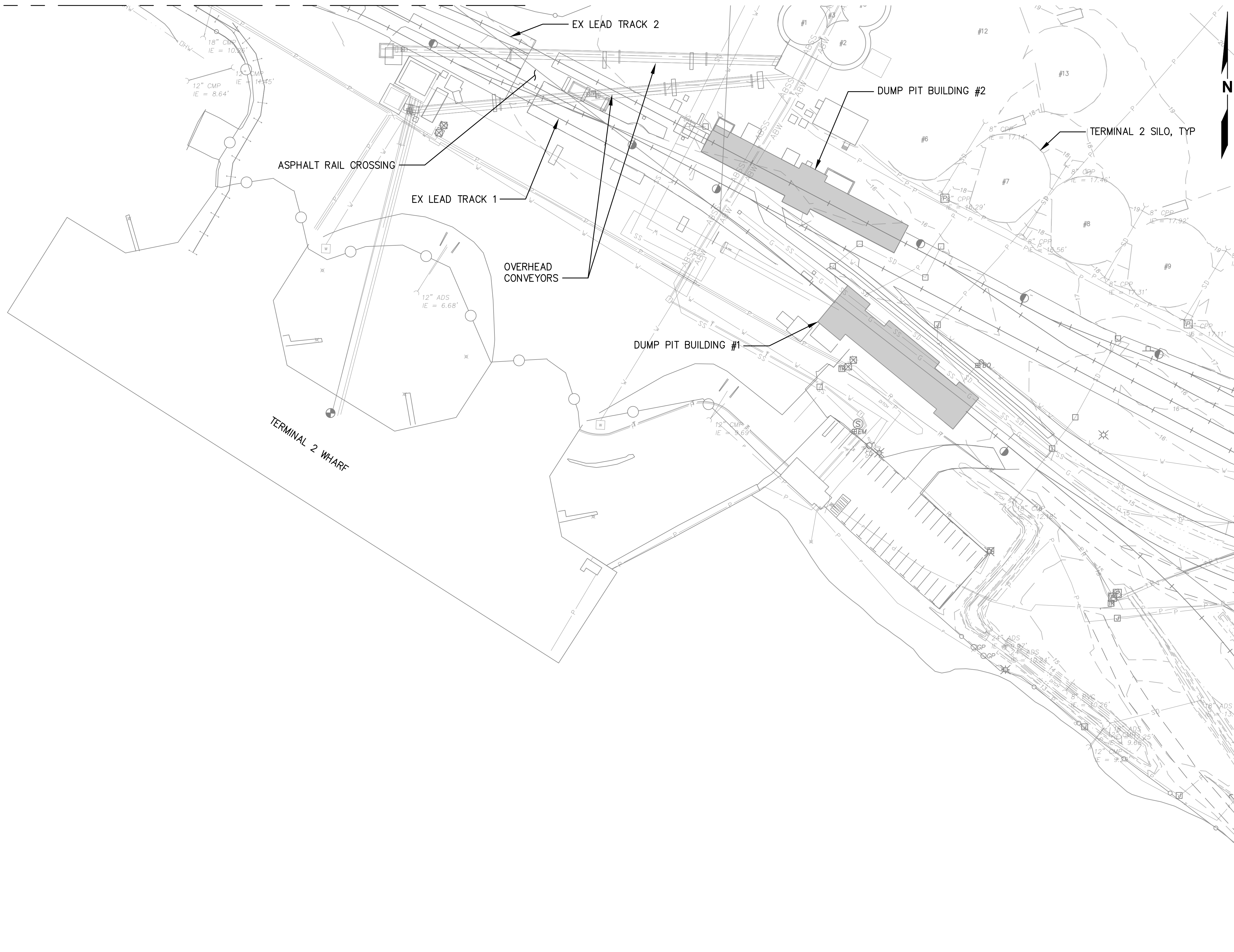
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
PORT OF GRAYS HARBOR

**EXISTING CONDITIONS**  
**AREA 4**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>G9</b>
SHEET NO.	<b>9 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

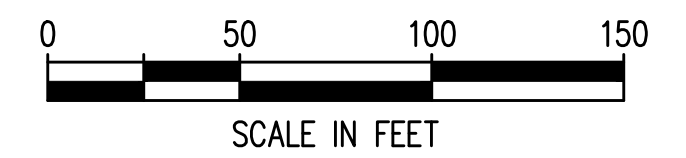
MATCHLINE - SEE AREA 4



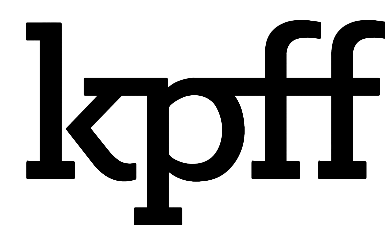
**NOTES**

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MATCHLINE - SEE AREA 6



Plotted: Jun 09, 2023 - 9:15pm rambert Layout: G10 AREA 5  
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**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

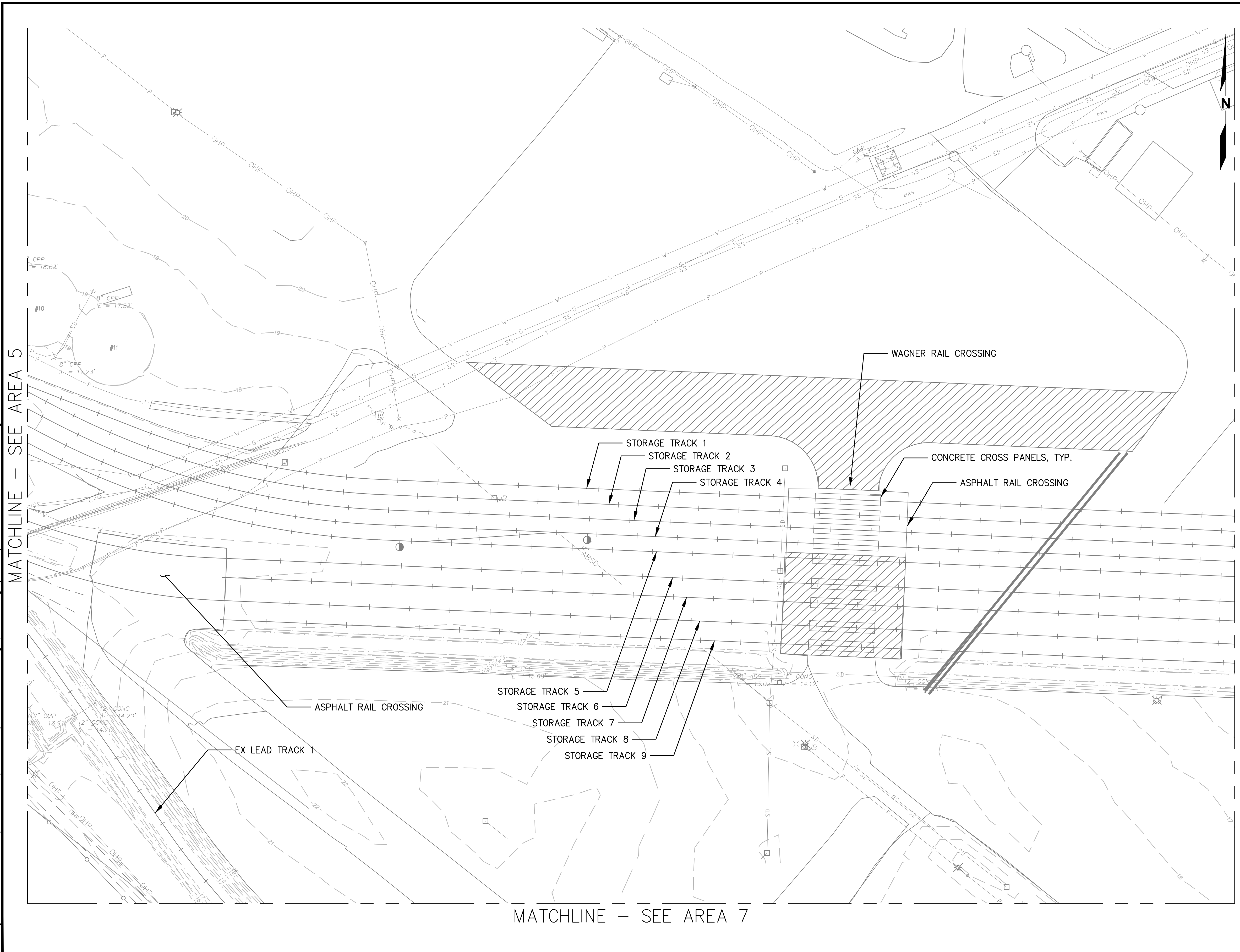
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**EXISTING CONDITIONS**  
**AREA 5**

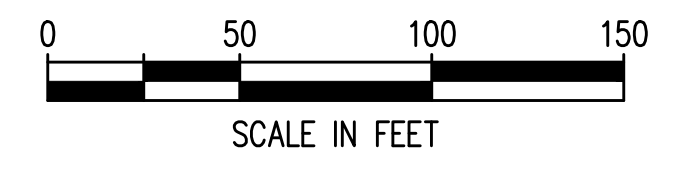
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CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>G10</b>
SHEET NO.	<b>10</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:15pm riambert Layout: G11 AREA 6  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\G6-G19 EXISTING CONDITIONS.dwg



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**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR  
  
**EXISTING CONDITIONS**  
**AREA 6**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>G11</b>
SHEET NO.	<b>11</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

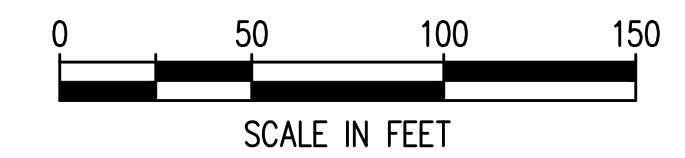
MATCHLINE — SEE AREA 6

**NOTES**

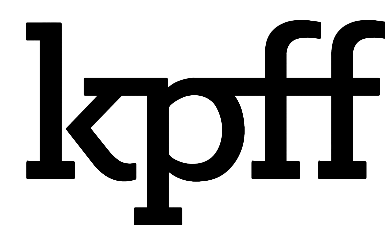
1. INFORMATION SHOWN IS A COMBINATION OF AS-BUILTS AND PROJECT-SPECIFIC SURVEY PERFORMED BY OTHERS.
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MATCHLINE — SEE AREA 8

EX LEAD TRACK 1



Plotted: Jun 09, 2023 - 9:16pm rambert Layout: G12 AREA 7  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\G6-G19 EXISTING CONDITIONS.dwg



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
PORT OF GRAYS HARBOR

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**EXISTING CONDITIONS**  
**AREA 7**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>G12</b>
SHEET NO.	<b>12</b> OF <b>142</b>

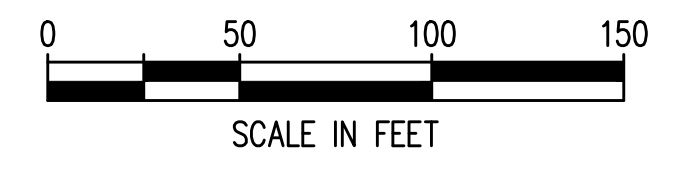
PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:16pm riambert Layout: G13 AREA 8  
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MATCHLINE - SEE AREA 14



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**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**EXISTING CONDITIONS**  
 AREA 8

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>G13</b>
SHEET NO.	<b>13</b> OF <b>142</b>

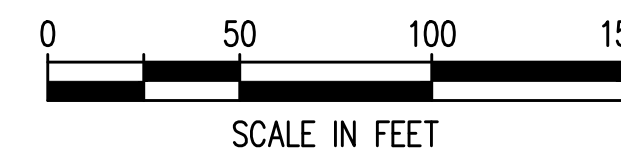
PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

MATCHLINE - SEE AREA 10

**NOTES**

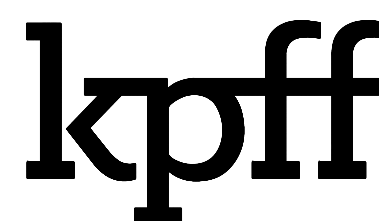
1. INFORMATION SHOWN IS A COMBINATION OF AS-BUILTS AND PROJECT-SPECIFIC SURVEY PERFORMED BY OTHERS.
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MATCHLINE - SEE AREA 8



Plotted: Jun 09, 2023 - 9:16pm r1ambert Layout: G14 AREA 9

N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\G6-G19 EXISTING CONDITIONS.dwg



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
PORT OF GRAYS HARBOR

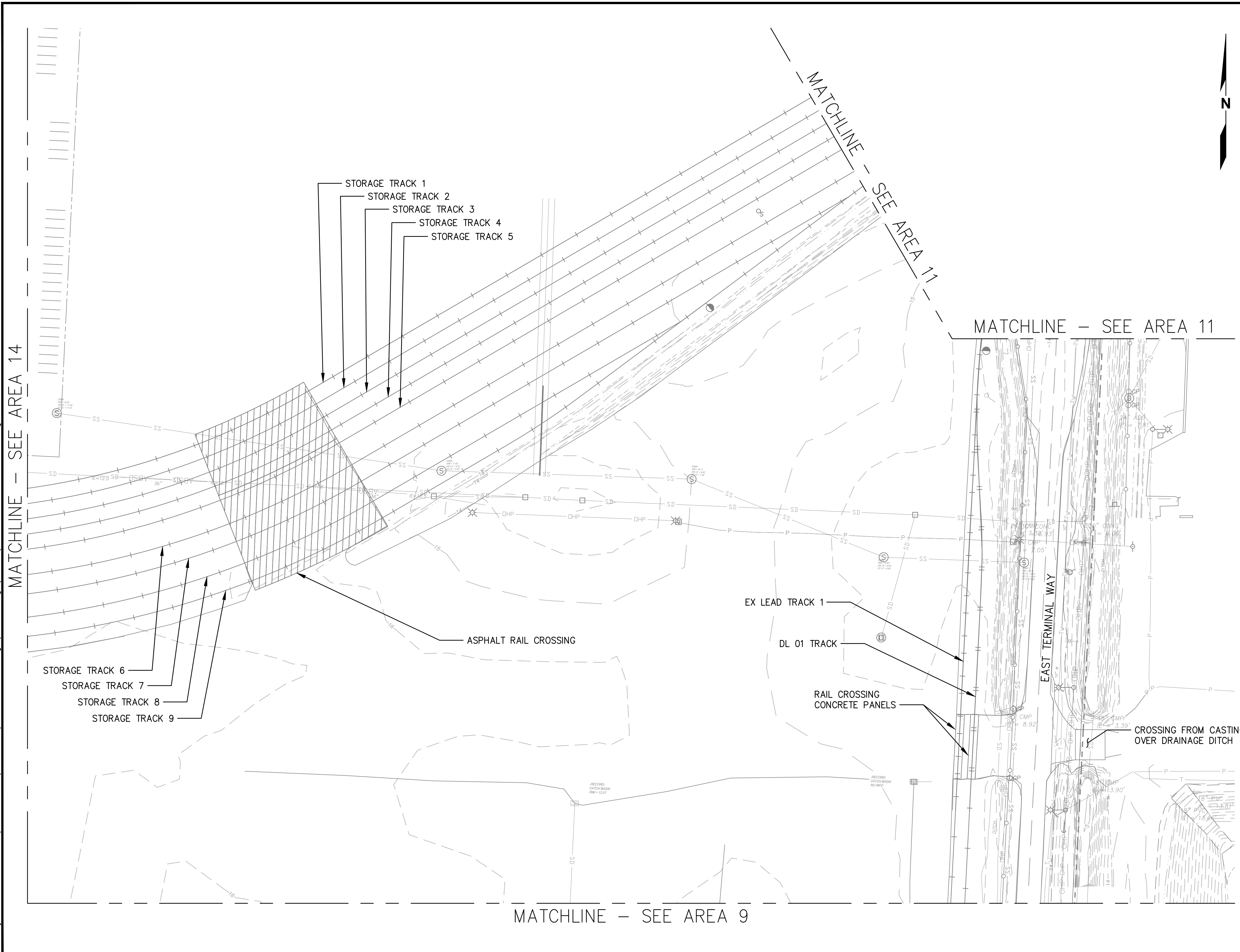
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**EXISTING CONDITIONS**  
**AREA 9**

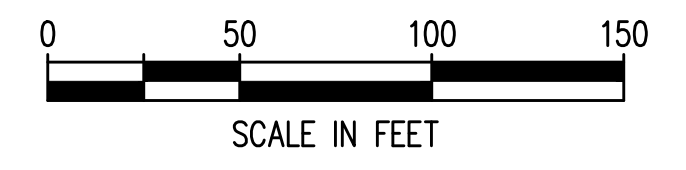
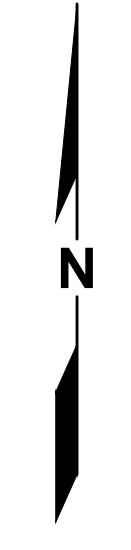
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DRAWING NO.	<b>G14</b>
SHEET NO.	<b>14</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:16pm riambert Layout: G15 AREA 10  
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NO.	DATE	BY	REVISION

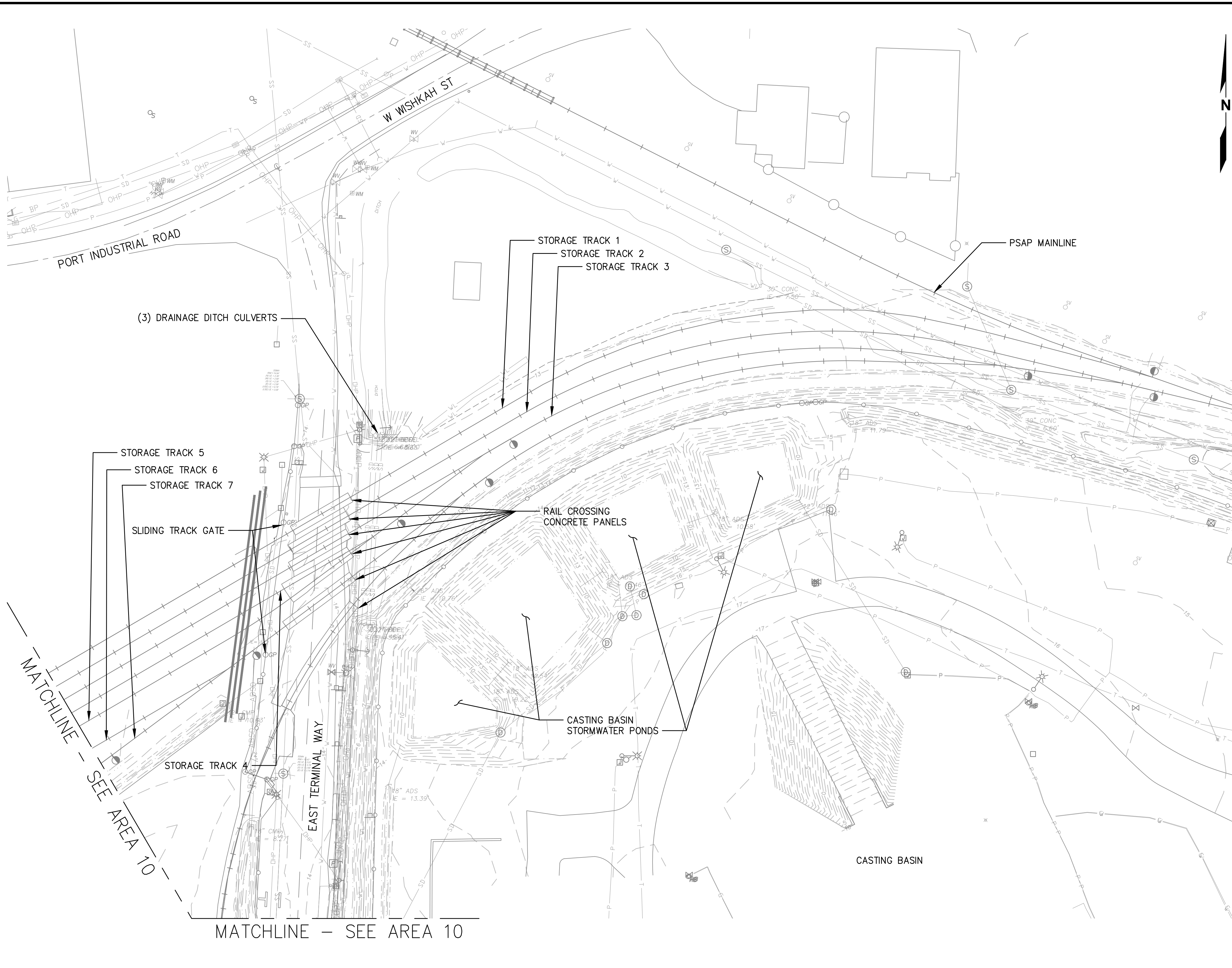
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR  
  
**EXISTING CONDITIONS**  
**AREA 10**

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DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>G15</b>
SHEET NO.	<b>15</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION



Plotted: Jun 09, 2023 - 9:16pm riambert Layout: G16 AREA 11  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\G6-G19 EXISTING CONDITIONS.dwg



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MATCHLINE - SEE AREA 12

MATCHLINE - SEE AREA 10

MATCHLINE - SEE AREA 10



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

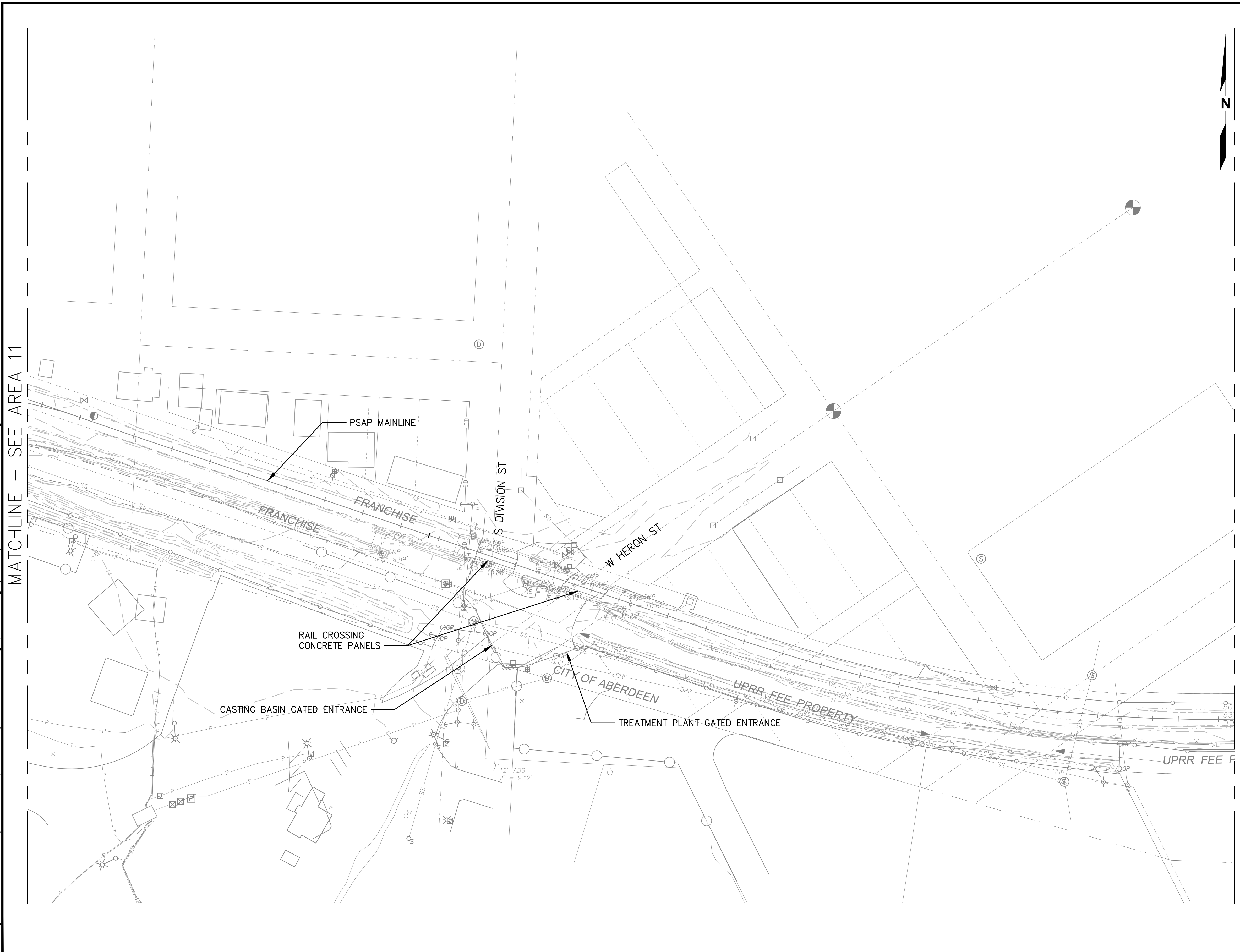
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**EXISTING CONDITIONS**  
**AREA 11**

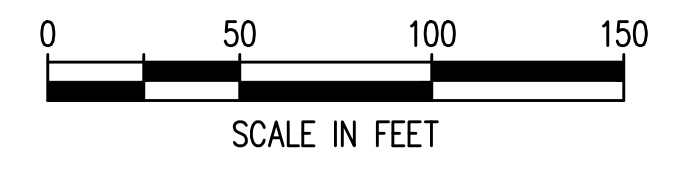
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DRAWING NO.	<b>G16</b>
SHEET NO.	<b>16 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:16pm rambert Layout: G17 AREA 12  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\G6-G19 EXISTING CONDITIONS.dwg



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

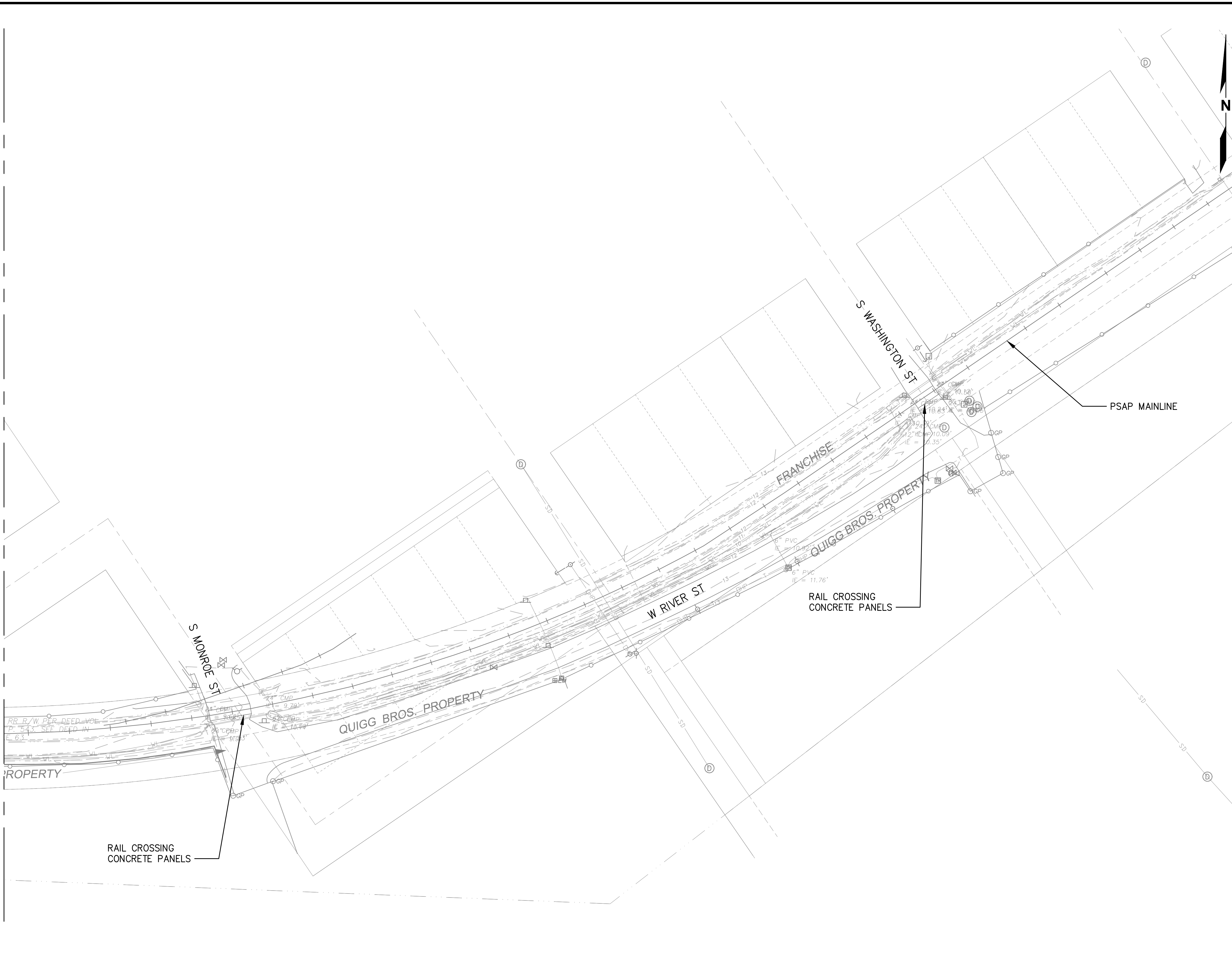
**EXISTING CONDITIONS**  
 AREA 12

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>G17</b>
SHEET NO.	<b>17</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

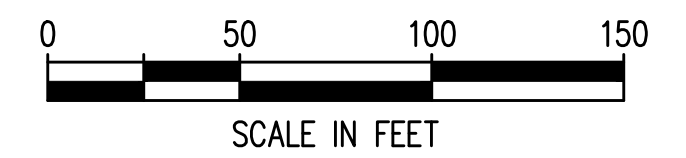
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MATCHLINE - SEE AREA 12



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

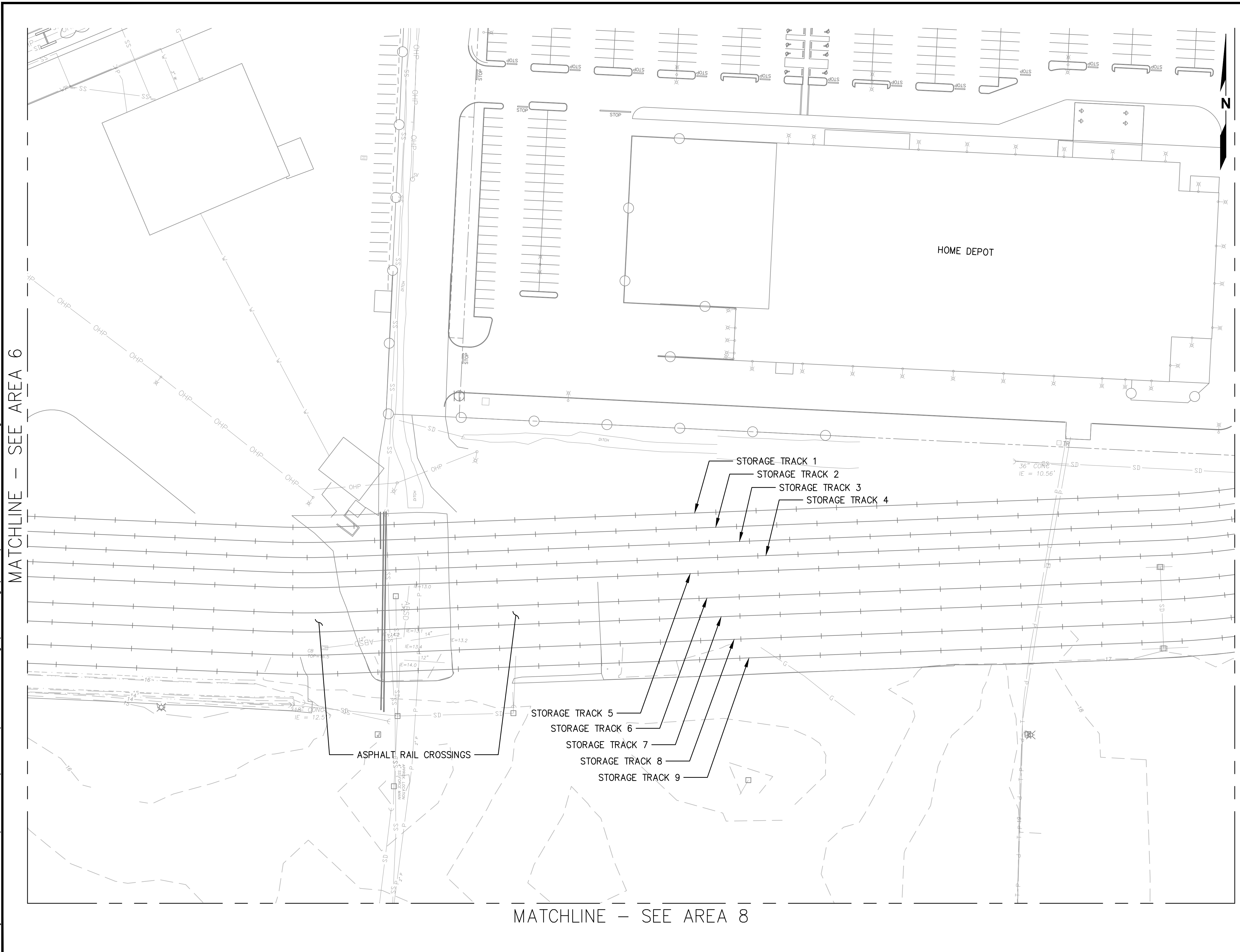
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**EXISTING CONDITIONS**  
 AREA 13

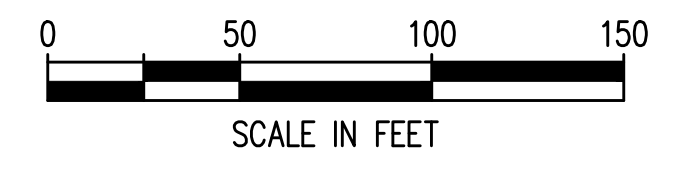
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DRAWING NO.	<b>G18</b>
SHEET NO.	<b>18</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:16pm rimbart Layout: G19 AREA 14  
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NO.	DATE	BY	REVISION

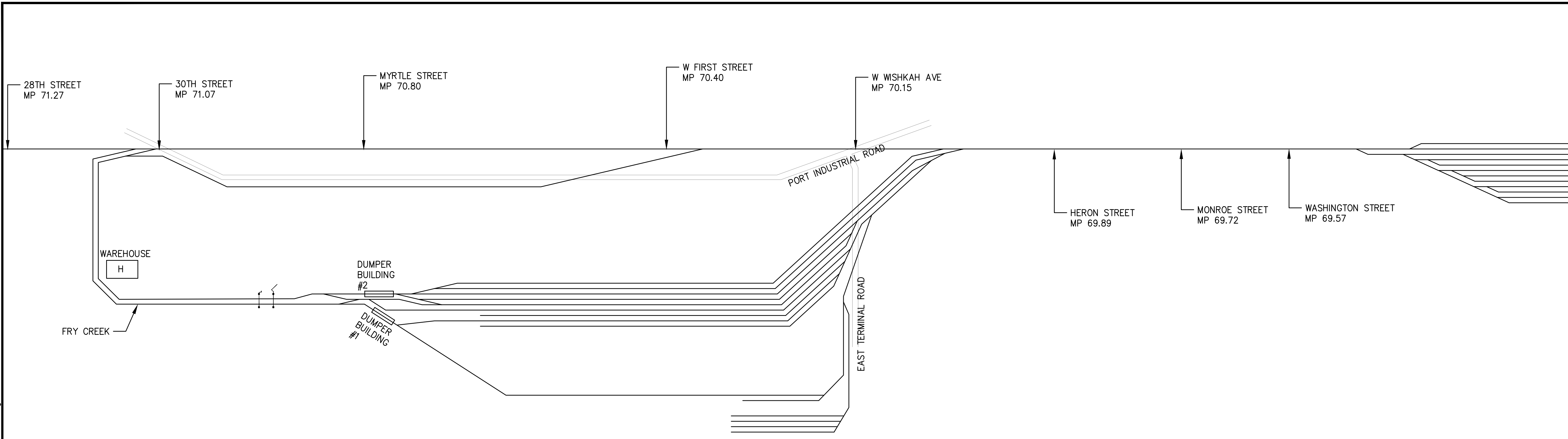
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**EXISTING CONDITIONS**  
**AREA 14**

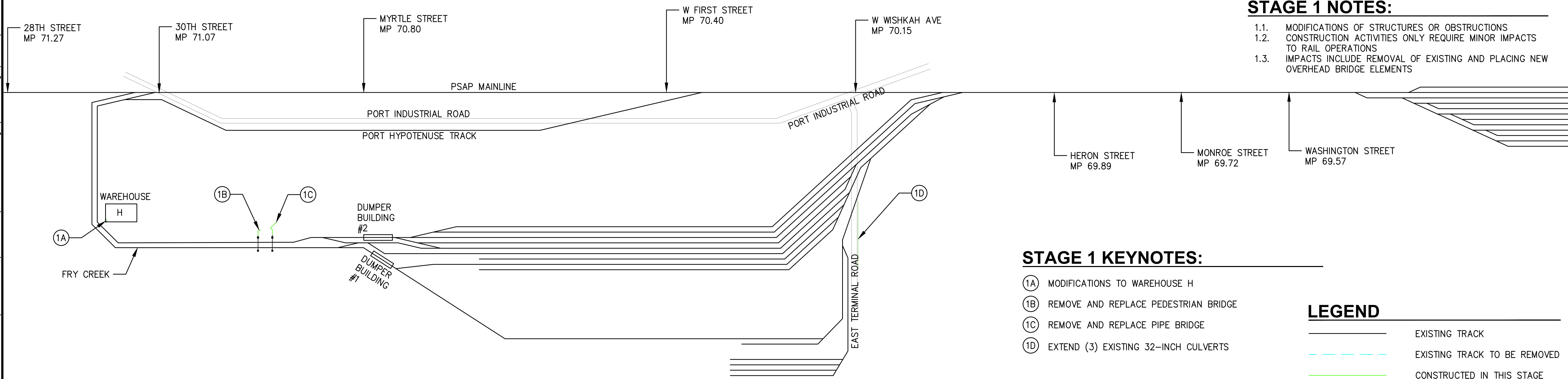
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CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>G19</b>
SHEET NO.	<b>19</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:16pm riambert Layout: G19 CONSTRUCTION STAGES  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements Part 3 - KPFF Design\3.13 Drawings\Current\G20-g27 CONSTRUCTION STAGING.dwg



**1 EXISTING CONDITIONS**  
G20 NTS



**2 STAGE 1**  
G20 NTS

**STAGE 1 NOTES:**

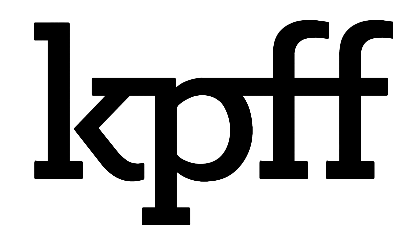
- 1.1. MODIFICATIONS OF STRUCTURES OR OBSTRUCTIONS TO RAIL OPERATIONS
- 1.2. CONSTRUCTION ACTIVITIES ONLY REQUIRE MINOR IMPACTS TO RAIL OPERATIONS
- 1.3. IMPACTS INCLUDE REMOVAL OF EXISTING AND PLACING NEW OVERHEAD BRIDGE ELEMENTS

**STAGE 1 KEYNOTES:**

- ①A MODIFICATIONS TO WAREHOUSE H
- ①B REMOVE AND REPLACE PEDESTRIAN BRIDGE
- ①C REMOVE AND REPLACE PIPE BRIDGE
- ①D EXTEND (3) EXISTING 32-INCH CULVERTS

**LEGEND**

- EXISTING TRACK
- EXISTING TRACK TO BE REMOVED
- CONSTRUCTED IN THIS STAGE
- TRACKS NOT IN SERVICE
- TRACKS BACK IN SERVICE



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**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
PORT OF GRAYS HARBOR

---

**CONSTRUCTION STAGES**  
**EXISTING CONDITIONS & STAGE 1**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>G20</b>
SHEET NO.	<b>20 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:16pm  
 rambert  
 Layout: G20 CONSTRUCTION STAGES  
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### STAGE 2 NOTES:

- 2.1 EXISTING LEAD 2 OUT OF SERVICE
- 2.2 EXISTING TEAM TRACKS OUT OF SERVICE
- 2.3 STORAGE AND LEAD TRACK CONSTRUCTION WITHOUT IMPACTING EXISTING TRACK

### STAGE 2 KEYNOTES:

- 2A REMOVE FOR REINSTALLATION EXISTING NO. 11 TURNOUT FROM PSAP MAINLINE, REPLACE WITH STANDARD TRACK ELEMENTS
- 2B REMOVE EXISTING TURNOUT TO TEAM TRACKS FROM PSAP MAINLINE, REPLACE WITH STANDARD TRACK ELEMENTS
- 2C REMOVE PORTION OF EXISTING WEST LEADS 1 & 2
- 2D RECONSTRUCT NO. 11 TURNOUT EAST OF FRY CREEK AND CONNECT TO EXISTING WEST LEAD 2
- 2E CONSTRUCT NEW STORAGE TRACKS NOT IN CONFLICT WITH OTHER TRACKS INCLUDING THE WAGNER CROSSING AREA. WAGNER CROSSING AREA CONSTRUCTED IN A LATER STAGE.
- 2F CONSTRUCT NEW STORAGE TRACKS AND TURNOUTS EAST OF E. TERMINAL ROAD NOT IN CONFLICT WITH OTHER TRACKS INCLUDING HERON STREET. HERON STREET CROSSING CONSTRUCTED IN A LATER STAGE.
- 2G CONSTRUCT NEW LEAD TRACK ADJACENT TO PSAP MAINLINE NOT IN CONFLICT WITH EXISTING TRACKS INCLUDING MONROE AND WASHINGTON STREETS. MONROE AND WASHINGTON STREET CROSSINGS CONSTRUCTED IN A LATER STAGE.

### 1 STAGE 2 G20 NTS

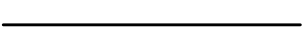




### STAGE 3 NOTES:

- 3.1 CONSTRUCT HALF OF FRY CREEK BRIDGE
- 3.2 CONSTRUCT NEW WEST LEAD 2
- 3.3 CONSTRUCT NEW WAGNER CROSSINGS
- 3.4 RAIL OPERATIONS ON SINGLE TRACK LEAD FROM PSAP MAIN TO FRY CREEK

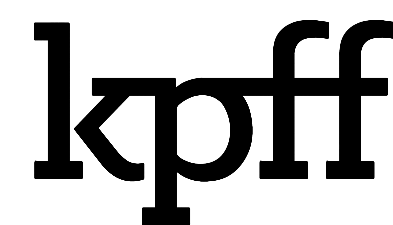
### STAGE 3 KEYNOTES:

- 3A REMOVE PORTION OF PSAP MAINLINE AND INSTALL NEW NO. 11 TURNOUT. CONSTRUCT NEW TRACK AND TURNOUT FOR TEAM TRACKS. NEW PORT INDUSTRIAL ROAD CROSSING TO BE BUILT IN A LATER STAGE.
- 3B CONSTRUCT NEW TRACK AND TURNOUTS FOR NEW WEST LEAD 2 INCLUDING HENDERSON STREET CROSSING. CONNECT TO EXISTING PORT HYPOTENUSE TRACK.
- 3C REMOVE HALF OF EXISTING FRY CREEK CULVERT. CONSTRUCT HALF OF NEW FRY CREEK BRIDGE.
- 3D CONSTRUCT NEW WEST LEAD 2 EAST OF FRY CREEK.
- 3E CONSTRUCT CROSSOVER BETWEEN EXISTING WEST LEADS 1 & 2. CONSTRUCT NEW TURNOUT AND TRACK CONNECTIONS NEAR TERMINAL 1.
- 3F CONSTRUCT NEW WAGNER CROSSING.

### LEGEND

-  EXISTING TRACK
-  EXISTING TRACK TO BE REMOVED
-  CONSTRUCTED IN THIS STAGE
-  TRACKS NOT IN SERVICE
-  TRACKS BACK IN SERVICE

### 2 STAGE 3 G20 NTS



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**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

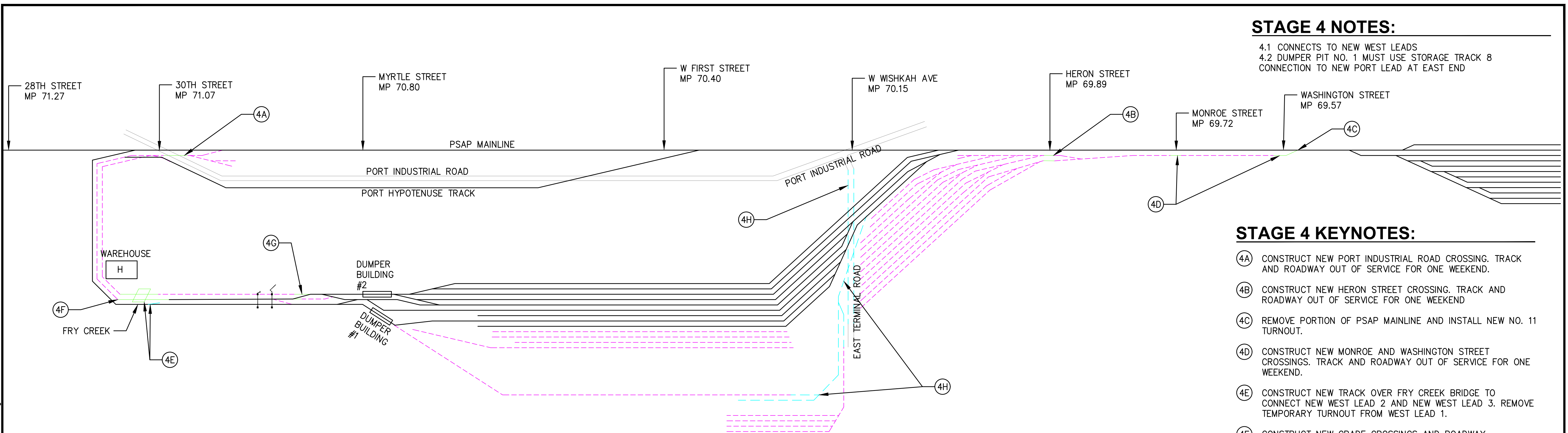
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**CONSTRUCTION STAGES**  
 EXISTING CONDITIONS & STAGE 1

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DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>G20</b>
SHEET NO.	<b>20 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:16pm rambert Layout: G21 CONSTRUCTION STAGES  
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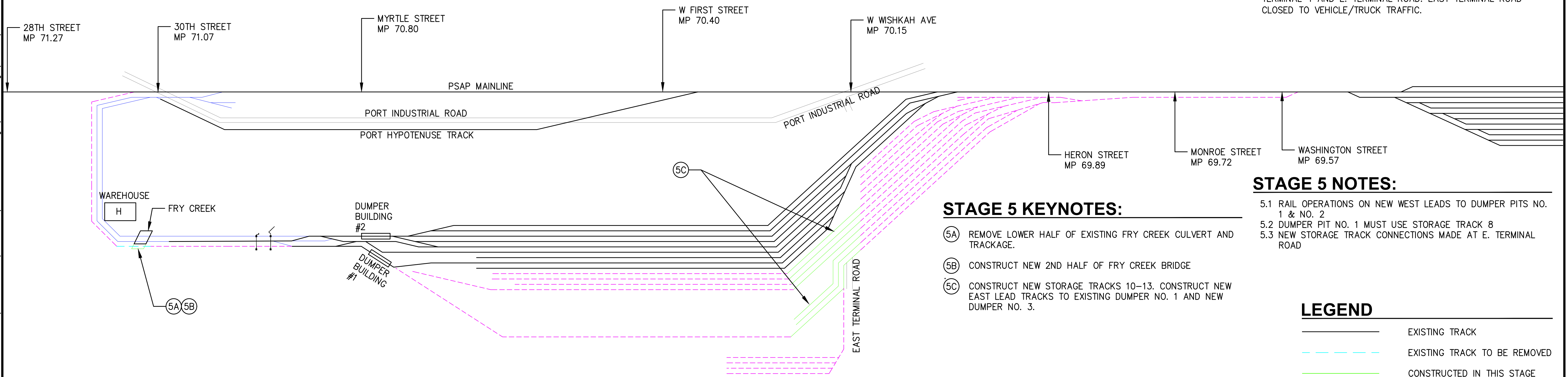
**STAGE 4 NOTES:**

- 4.1 CONNECTS TO NEW WEST LEADS
- 4.2 DUMPER PIT NO. 1 MUST USE STORAGE TRACK 8 CONNECTION TO NEW PORT LEAD AT EAST END

**STAGE 4 KEYNOTES:**

- 4A CONSTRUCT NEW PORT INDUSTRIAL ROAD CROSSING. TRACK AND ROADWAY OUT OF SERVICE FOR ONE WEEKEND.
- 4B CONSTRUCT NEW HERON STREET CROSSING. TRACK AND ROADWAY OUT OF SERVICE FOR ONE WEEKEND
- 4C REMOVE PORTION OF PSAP MAINLINE AND INSTALL NEW NO. 11 TURNOUT.
- 4D CONSTRUCT NEW MONROE AND WASHINGTON STREET CROSSINGS. TRACK AND ROADWAY OUT OF SERVICE FOR ONE WEEKEND.
- 4E CONSTRUCT NEW TRACK OVER FRY CREEK BRIDGE TO CONNECT NEW WEST LEAD 2 AND NEW WEST LEAD 3. REMOVE TEMPORARY TURNOUT FROM WEST LEAD 1.
- 4F CONSTRUCT NEW GRADE CROSSINGS AND ROADWAY IMPROVEMENTS AT JOHN STEVENS WAY.
- 4G CONNECT EXISTING TRACK TO NEW WEST LEADS(2 & 3) NEAR TERMINAL 1.
- 4H REMOVE EXISTING EAST LEAD 1 AND TRACKAGE NEAR TERMINAL 4 AND E. TERMINAL ROAD. EAST TERMINAL ROAD CLOSED TO VEHICLE/TRUCK TRAFFIC.

**1 STAGE 4**  
G21 NTS



**STAGE 5 KEYNOTES:**

- 5A REMOVE LOWER HALF OF EXISTING FRY CREEK CULVERT AND TRACKAGE.
- 5B CONSTRUCT NEW 2ND HALF OF FRY CREEK BRIDGE
- 5C CONSTRUCT NEW STORAGE TRACKS 10-13. CONSTRUCT NEW EAST LEAD TRACKS TO EXISTING DUMPER NO. 1 AND NEW DUMPER NO. 3.

**STAGE 5 NOTES:**

- 5.1 RAIL OPERATIONS ON NEW WEST LEADS TO DUMPER PITS NO. 1 & NO. 2
- 5.2 DUMPER PIT NO. 1 MUST USE STORAGE TRACK 8
- 5.3 NEW STORAGE TRACK CONNECTIONS MADE AT E. TERMINAL ROAD

**2 STAGE 5**  
G21 NTS

**LEGEND**

- EXISTING TRACK
- - - EXISTING TRACK TO BE REMOVED
- CONSTRUCTED IN THIS STAGE
- - - TRACKS NOT IN SERVICE
- TRACKS BACK IN SERVICE



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**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
PORT OF GRAYS HARBOR

**CONSTRUCTION STAGES**  
STAGE 2 & STAGE 3

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
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DRAWING NO.	<b>G21</b>
SHEET NO.	<b>21</b> OF <b>142</b>

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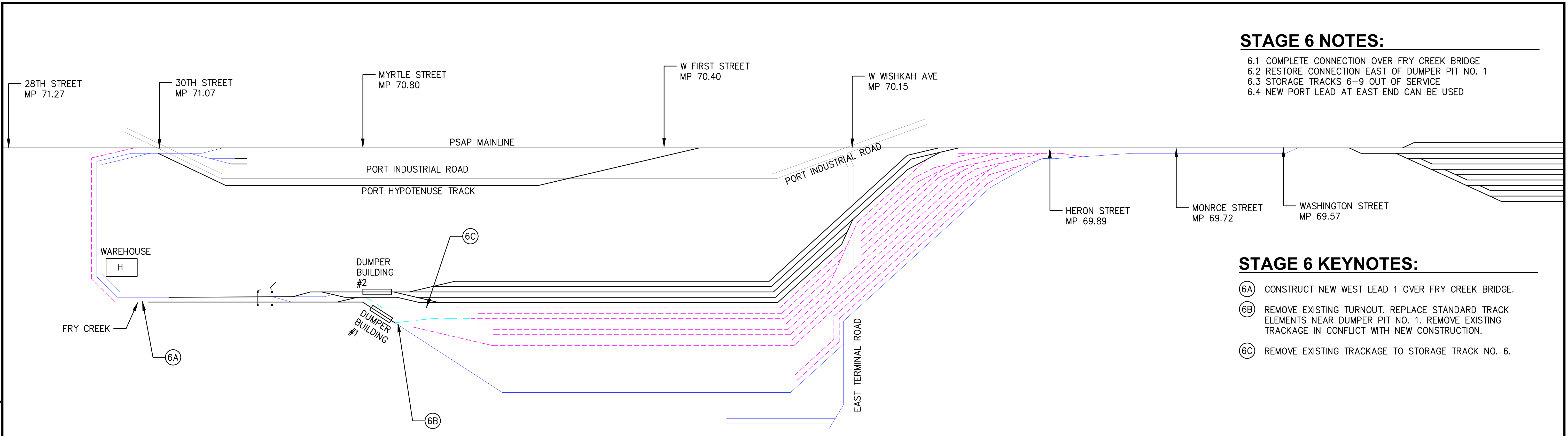
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### STAGE 6 NOTES:

- 6.1 COMPLETE CONNECTION OVER FRY CREEK BRIDGE
- 6.2 RESTORE CONNECTION EAST OF DUMPER PIT NO. 1
- 6.3 STORAGE TRACKS 6-9 OUT OF SERVICE
- 6.4 NEW PORT LEAD AT EAST END CAN BE USED

### STAGE 6 KEYNOTES:

- ⑥A CONSTRUCT NEW WEST LEAD 1 OVER FRY CREEK BRIDGE.
- ⑥B REMOVE EXISTING TURNOUT. REPLACE STANDARD TRACK ELEMENTS NEAR DUMPER PIT NO. 1. REMOVE EXISTING TRACKAGE IN CONFLICT WITH NEW CONSTRUCTION.
- ⑥C REMOVE EXISTING TRACKAGE TO STORAGE TRACK NO. 6.



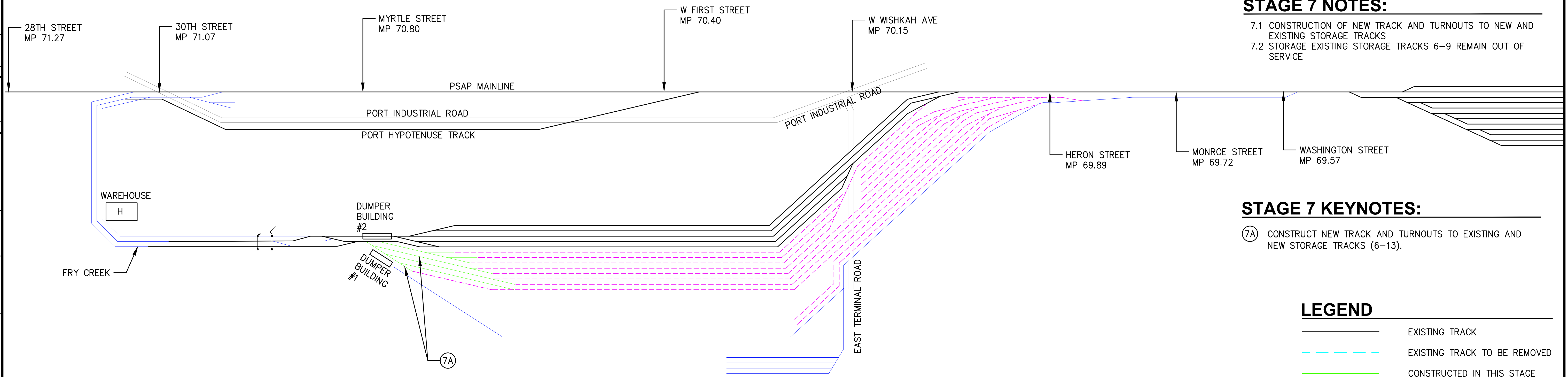
1 **STAGE 6**  
G22 NTS

### STAGE 7 NOTES:

- 7.1 CONSTRUCTION OF NEW TRACK AND TURNOUTS TO NEW AND EXISTING STORAGE TRACKS
- 7.2 STORAGE EXISTING STORAGE TRACKS 6-9 REMAIN OUT OF SERVICE

### STAGE 7 KEYNOTES:

- ⑦A CONSTRUCT NEW TRACK AND TURNOUTS TO EXISTING AND NEW STORAGE TRACKS (6-13).



2 **STAGE 7**  
G22 NTS

### LEGEND

- EXISTING TRACK
- - - EXISTING TRACK TO BE REMOVED
- CONSTRUCTED IN THIS STAGE
- - - TRACKS NOT IN SERVICE
- TRACKS BACK IN SERVICE



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**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
PORT OF GRAYS HARBOR

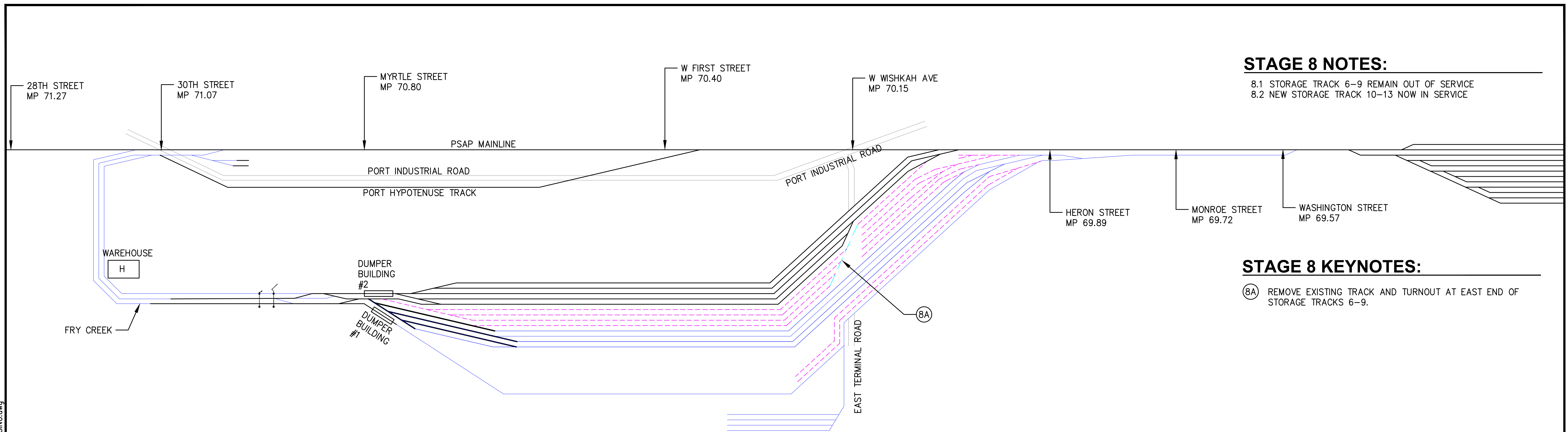
**CONSTRUCTION STAGES**  
STAGES 4 & 5

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CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>G22</b>
SHEET NO.	<b>22</b> OF <b>142</b>

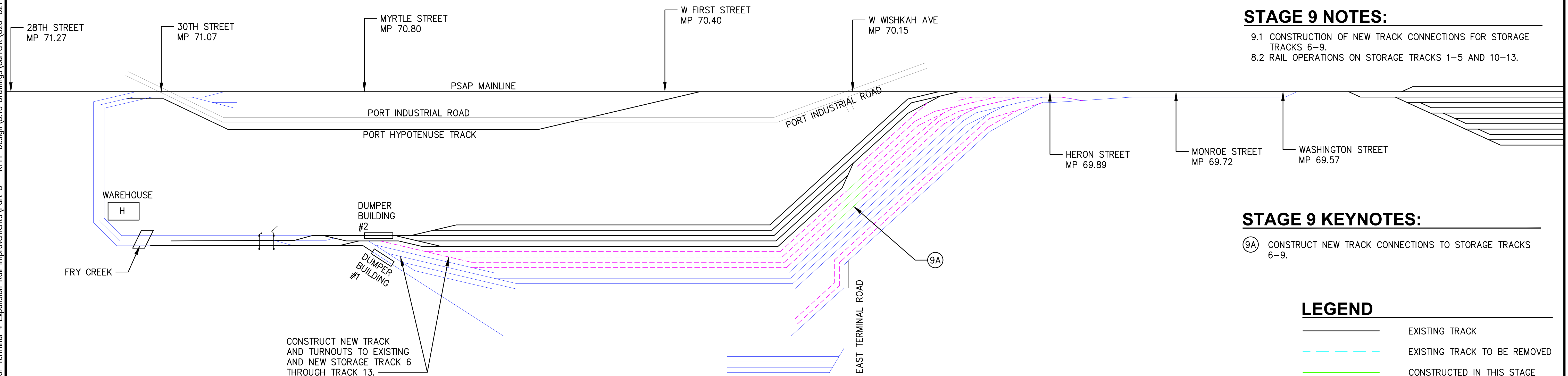
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**1**  
G24 NTS **STAGE 8**



**2**  
G24 NTS **STAGE 9**

CONSTRUCT NEW TRACK AND TURNOUTS TO EXISTING AND NEW STORAGE TRACK 6 THROUGH TRACK 13.

**LEGEND**

	EXISTING TRACK
	EXISTING TRACK TO BE REMOVED
	CONSTRUCTED IN THIS STAGE
	TRACKS NOT IN SERVICE
	TRACKS BACK IN SERVICE



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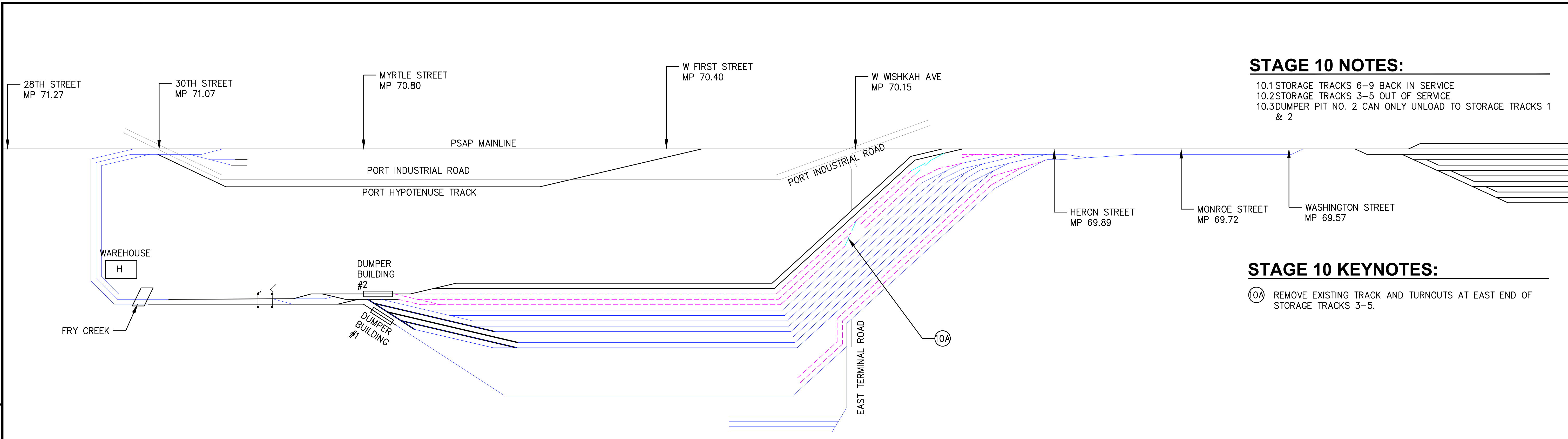
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**CONSTRUCTION STAGES**  
**STAGES 8 & 9**

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DESIGN: RLO	SCALE: AS SHOWN
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DRAWING NO.	<b>G24</b>
SHEET NO.	<b>24</b> OF <b>142</b>

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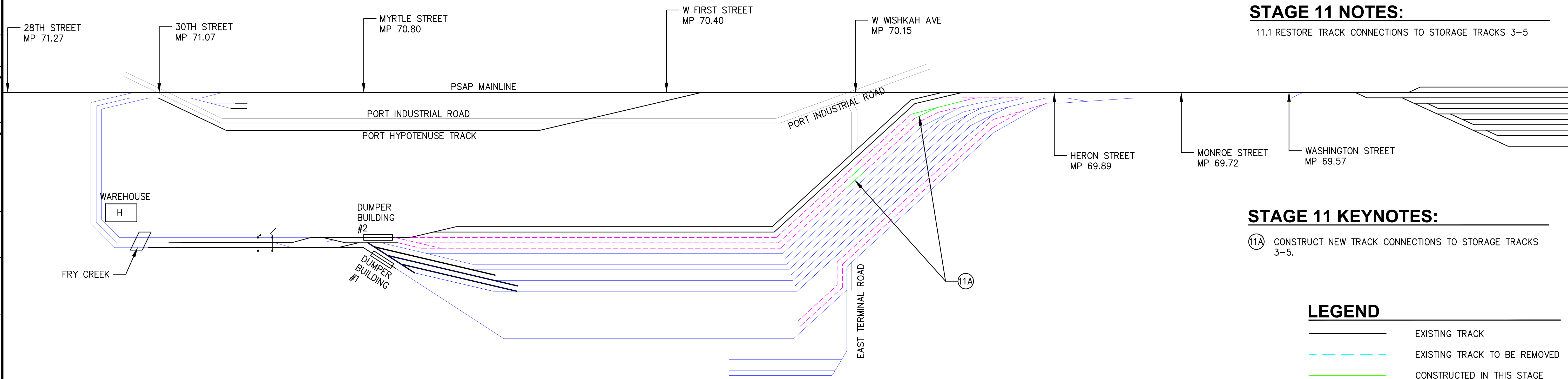
**STAGE 10 NOTES:**

10.1 STORAGE TRACKS 6-9 BACK IN SERVICE  
 10.2 STORAGE TRACKS 3-5 OUT OF SERVICE  
 10.3 DUMPER PIT NO. 2 CAN ONLY UNLOAD TO STORAGE TRACKS 1 & 2

**STAGE 10 KEYNOTES:**

(10A) REMOVE EXISTING TRACK AND TURNOUTS AT EAST END OF STORAGE TRACKS 3-5.

**1 STAGE 10**  
G25 NTS



**STAGE 11 NOTES:**

11.1 RESTORE TRACK CONNECTIONS TO STORAGE TRACKS 3-5

**STAGE 11 KEYNOTES:**

(11A) CONSTRUCT NEW TRACK CONNECTIONS TO STORAGE TRACKS 3-5.

**2 STAGE 11**  
G25 NTS

**LEGEND**

	EXISTING TRACK
	EXISTING TRACK TO BE REMOVED
	CONSTRUCTED IN THIS STAGE
	TRACKS NOT IN SERVICE
	TRACKS BACK IN SERVICE



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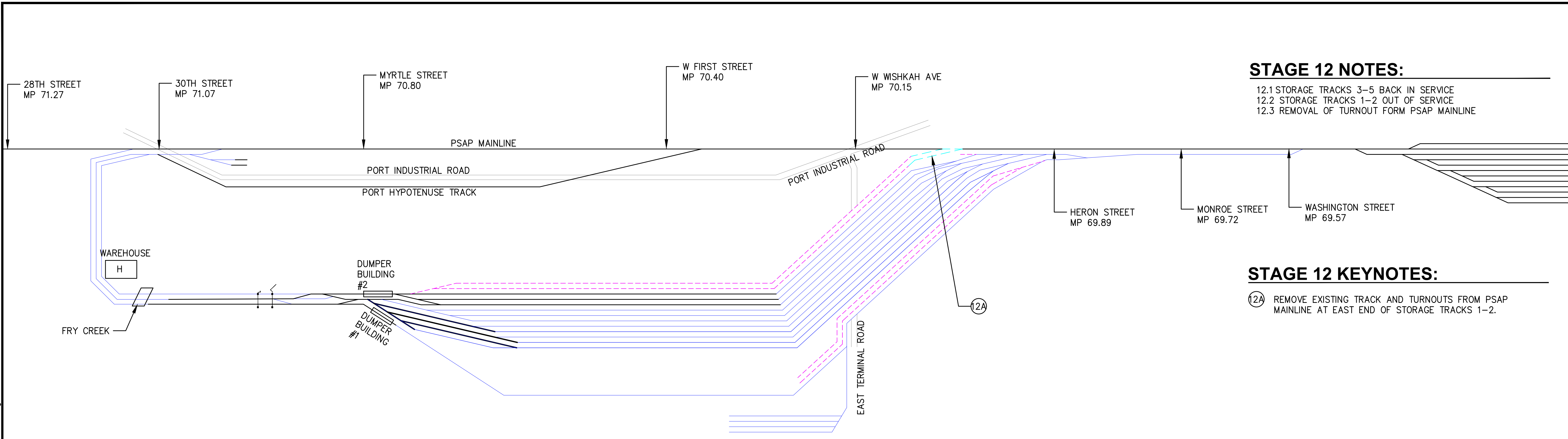
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
PORT OF GRAYS HARBOR

**CONSTRUCTION STAGES**  
STAGES 10 & 11

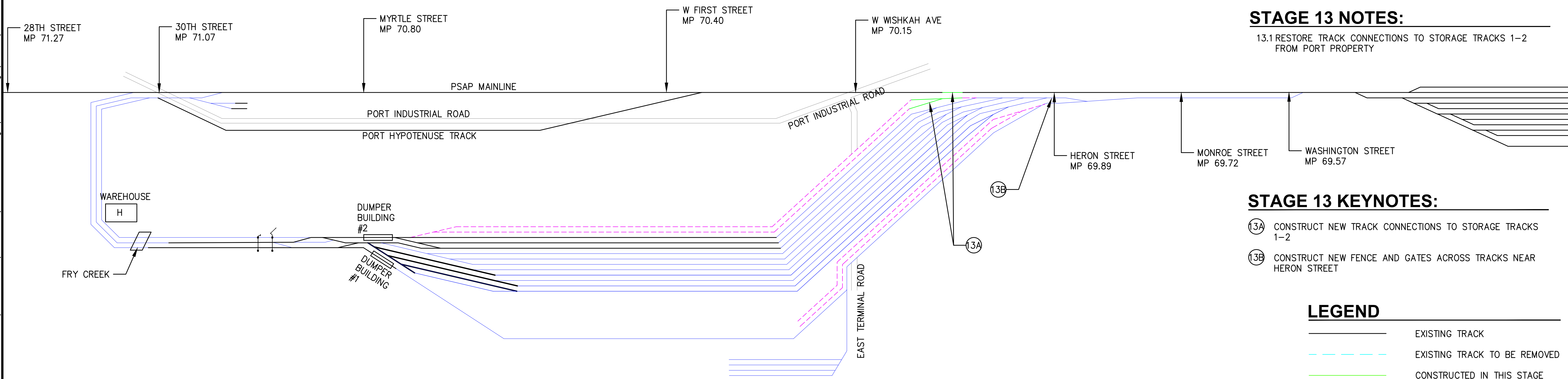
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DRAWING NO.	<b>G25</b>
SHEET NO.	<b>25</b> OF <b>142</b>

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**1 STAGE 12**  
G26 NTS



**2 STAGE 13**  
G26 NTS

**LEGEND**

	EXISTING TRACK
	EXISTING TRACK TO BE REMOVED
	CONSTRUCTED IN THIS STAGE
	TRACKS NOT IN SERVICE
	TRACKS BACK IN SERVICE



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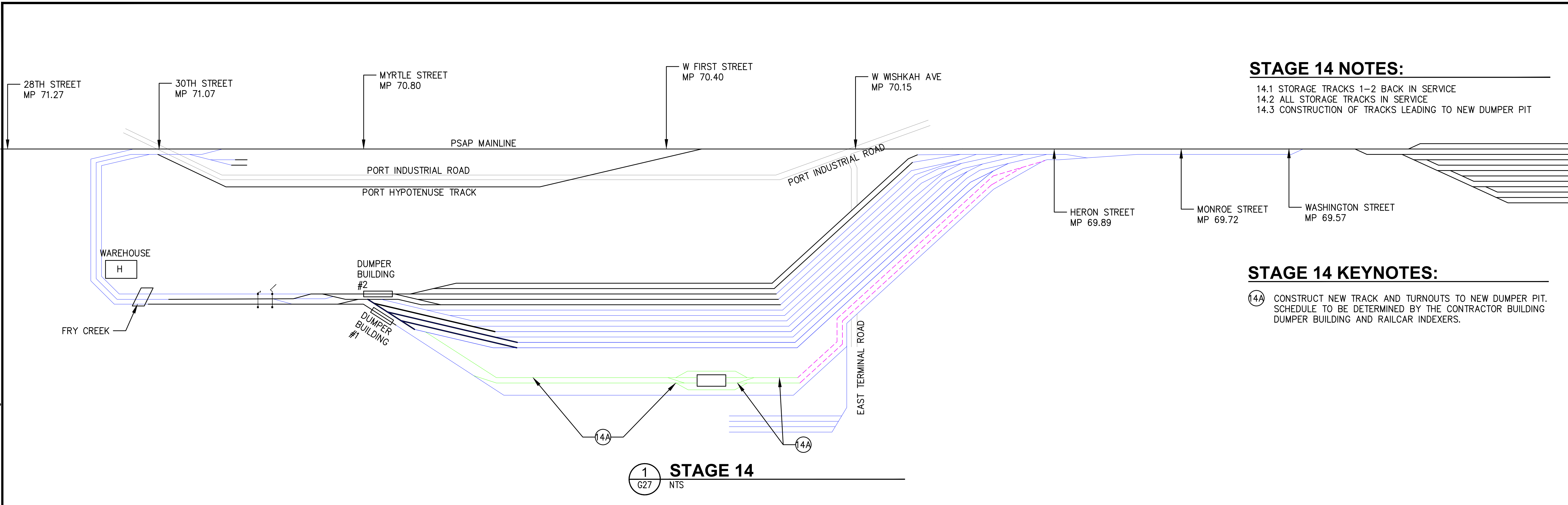
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
PORT OF GRAYS HARBOR

**CONSTRUCTION STAGES**  
STAGES 12 & 13

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>G26</b>
SHEET NO.	<b>26</b> OF <b>142</b>

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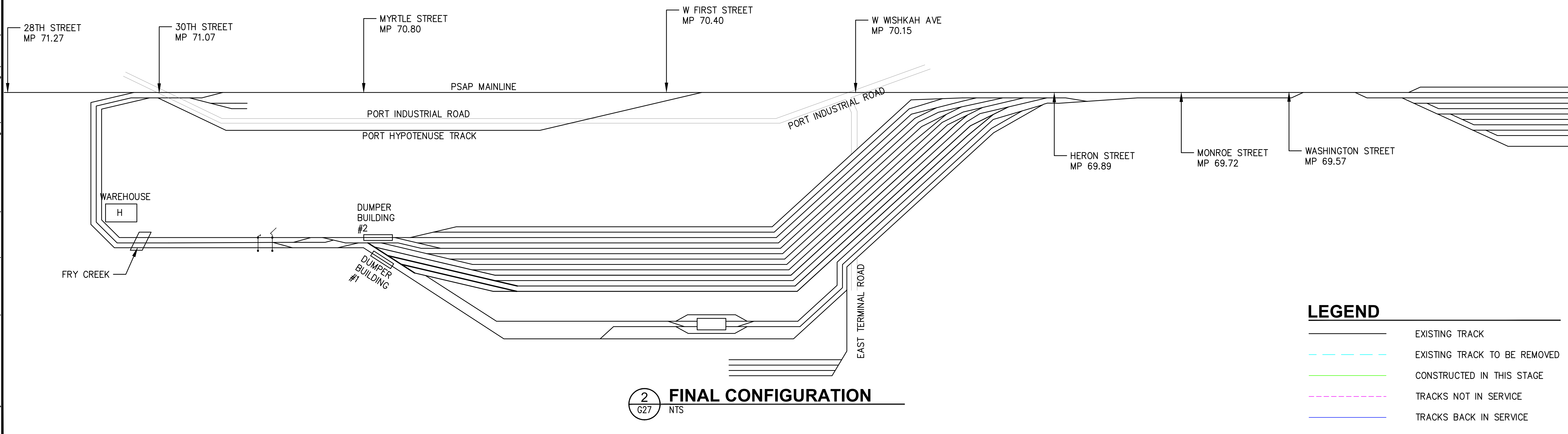
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**STAGE 14 NOTES:**  
 14.1 STORAGE TRACKS 1-2 BACK IN SERVICE  
 14.2 ALL STORAGE TRACKS IN SERVICE  
 14.3 CONSTRUCTION OF TRACKS LEADING TO NEW DUMPER PIT

**STAGE 14 KEYNOTES:**  
 (14A) CONSTRUCT NEW TRACK AND TURNOUTS TO NEW DUMPER PIT. SCHEDULE TO BE DETERMINED BY THE CONTRACTOR BUILDING DUMPER BUILDING AND RAILCAR INDEXERS.

**1**  
 G27 NTS  
**STAGE 14**



**2**  
 G27 NTS  
**FINAL CONFIGURATION**

**LEGEND**

	EXISTING TRACK
	EXISTING TRACK TO BE REMOVED
	CONSTRUCTED IN THIS STAGE
	TRACKS NOT IN SERVICE
	TRACKS BACK IN SERVICE



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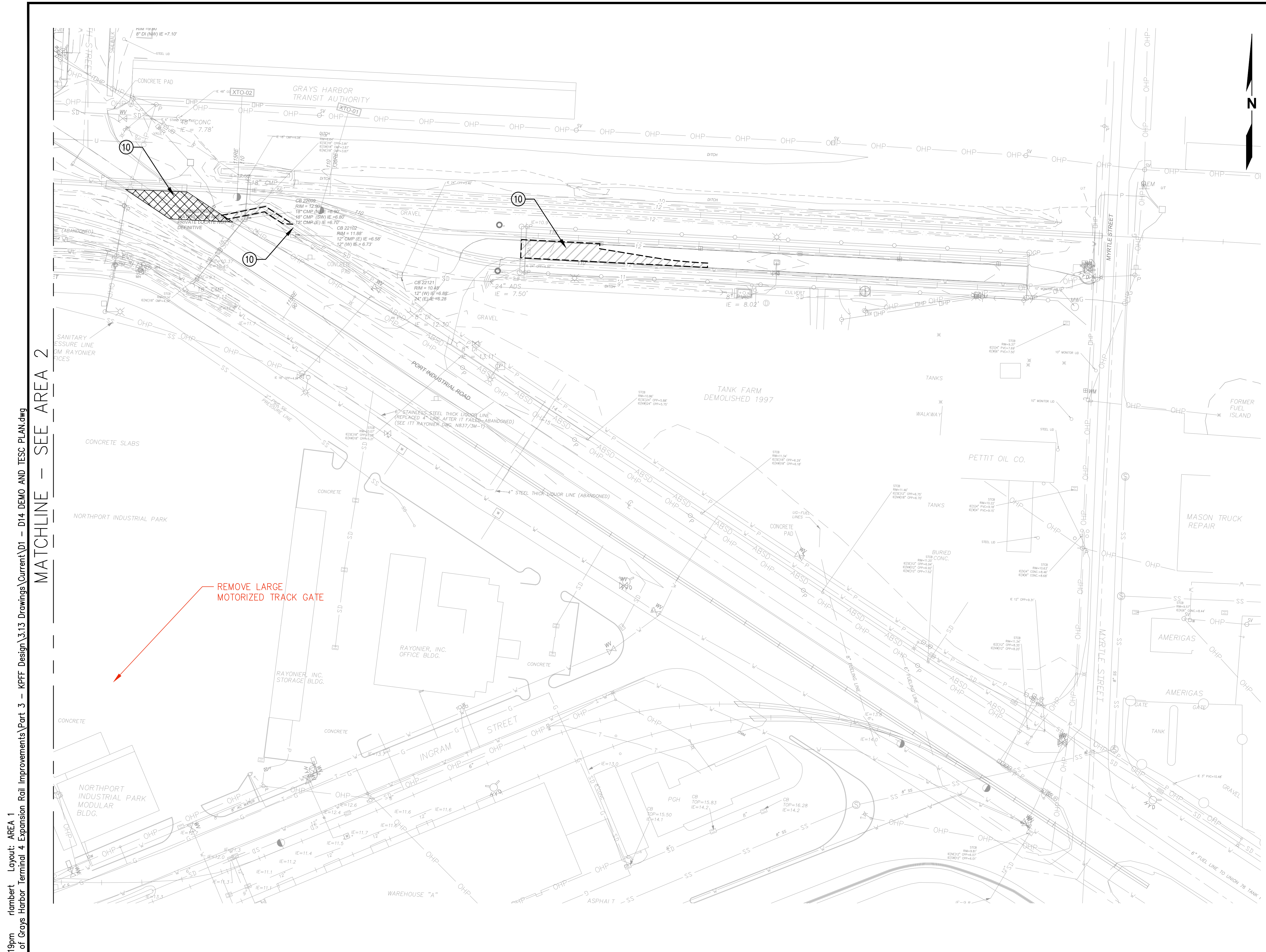
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**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**CONSTRUCTION STAGES**  
**STAGE 14 & FINAL CONFIGURATION**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>G27</b>
SHEET NO.	<b>27</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

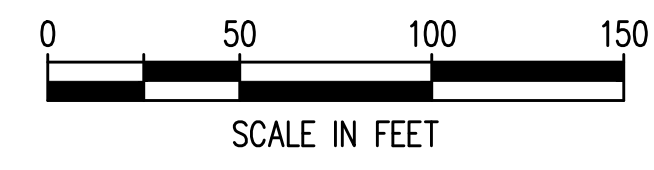


**GENERAL NOTES**

1. REFER TO SHEET \_\_\_\_\_ FOR DEMOLITION NOTES AND TEMPORARY EROSION AND SEDIMENTATION CONTROL NOTES.
2. EXISTING WETLAND, ASSOCIATED BUFFER, STORMWATER PONDS, AND STORMWATER SWALES SHALL NOT BE DISTURBED.

**TESC AND DEMO NOTES**

- ① INSTALL SILT FENCE PER DETAIL 4 ON SHEET D1.8
- ② ESTABLISH TEMPORARY CONSTRUCTION FENCE, SEE FENCING PLAN ON C1.0-C1.5
- ③ INSTALL INLET PROTECTION PER DETAIL 1 ON SHEET D1.8
- ④ STABILIZE CONSTRUCTION ENTRANCE PER DETAIL 3 ON D1.8
- ⑤ ESTABLISH TIRE WASH, DISCHARGE IN ACCORDANCE WITH SWPPP AND SDAP PERMIT REQUIREMENTS
- ⑥ CONSTRUCT INTERCEPTOR DITCHES
- ⑦ REMOVE EXISTING FENCE AND GATE
- ⑧ CLEAR AND GRUB EXISTING VEGETATION
- ⑨ SAWCUT EXISTING PAVEMENT
- ⑩ REMOVE EXISTING PAVEMENT
- ⑪ REMOVE EXISTING SW STRUCTURE AND PIPE
- ⑫ REMOVE EXISTING UTILITY STRUCTURE
- ⑬ CUT AND CAP EXISTING UTILITY
- ⑭ DECOMMISSION EXISTING MONITORING WELL
- ⑮ FIRE HYDRANT/VALVE TO BE RELOCATED
- ⑯ PROTECT EXISTING TREES
- ⑰ REMOVE EXISTING POWER POLE
- ⑱ REMOVE EXISTING GUY WIRE
- ⑲ REMOVE EXISTING HANDHOLE
- ⑳ REMOVE EXISTING LIGHTPOLE
- ㉑ REMOVE, SALVAGE, AND PROVIDE TO PORT EXISTING SIGN
- ㉒ SEDIMENT POND OR SEDIMENT TRAP STORMWATER TREATMENT WITH DISCHARGE HOLDING TANKS, SEE EROSION CONTROL GENERAL NOTES 23 AND 24 SHEET D1.7
- ㉓ INSTALL HIGH VISIBILITY FENCING AT LIMITS OF WORK, WETLAND BUFFER LIMITS, AND TRANSMISSION TOWER
- ㉔ TRACK DEMOLITION
- ㉕ REMOVE EXISTING HIGH MAST LIGHTPOLE
- ㉖ REMOVE FENCE
- ㉗ REMOVE FENCE GATE
- ㉘ REMOVE ELECTRICAL PANEL AND PAD



MATCHLINE - SEE AREA 2

Plotted: Jun 09, 2023 - 9:19pm r1ambert Layout: AREA 1  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\DI - D14 DEMO AND TESC PLAN.dwg



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**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

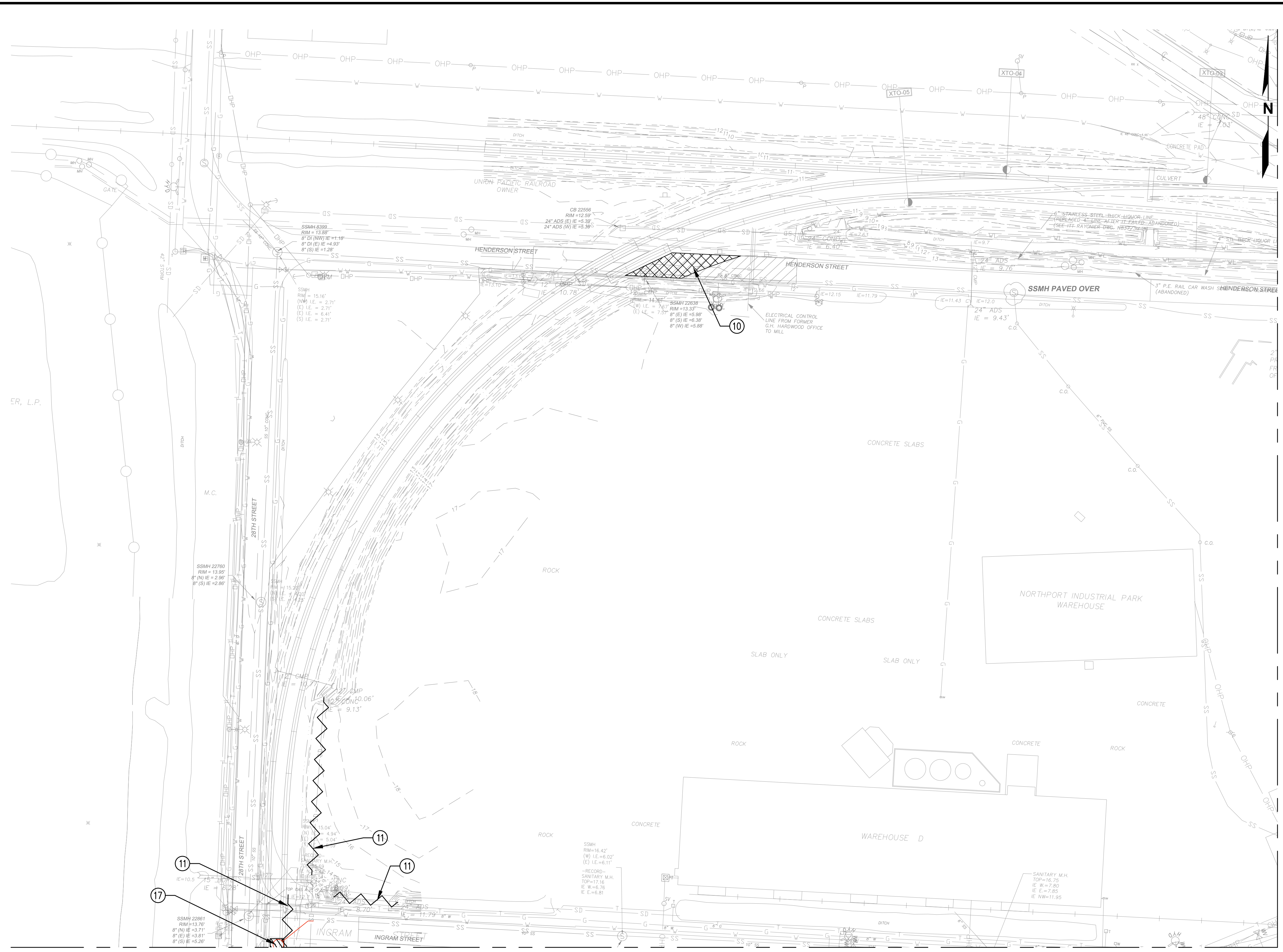
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**DEMOLITION AND TESC PLAN**  
**AREA 1**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>D1</b>
SHEET NO.	<b>28 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:19pm riambert Layout: AREA 2  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\DI - D14 DEMO AND TESC PLAN.dwg



**GENERAL NOTES**

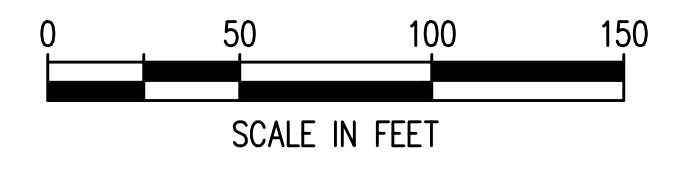
1. REFER TO SHEET \_\_\_\_\_ FOR DEMOLITION NOTES AND TEMPORARY EROSION AND SEDIMENTATION CONTROL NOTES.
2. EXISTING WETLAND, ASSOCIATED BUFFER, STORMWATER PONDS, AND STORMWATER SWALES SHALL NOT BE DISTURBED.

**TESC AND DEMO NOTES**

- ① INSTALL SILT FENCE PER DETAIL 4 ON SHEET D1.8
- ② ESTABLISH TEMPORARY CONSTRUCTION FENCE, SEE FENCING PLAN ON C1.0-C1.5
- ③ INSTALL INLET PROTECTION PER DETAIL 1 ON SHEET D1.8
- ④ STABILIZE CONSTRUCTION ENTRANCE PER DETAIL 3 ON D1.8
- ⑤ ESTABLISH TIRE WASH, DISCHARGE IN ACCORDANCE WITH SWPPP AND SDAP PERMIT REQUIREMENTS
- ⑥ CONSTRUCT INTERCEPTOR DITCHES
- ⑦ REMOVE EXISTING FENCE AND GATE
- ⑧ CLEAR AND GRUB EXISTING VEGETATION
- ⑨ SAWCUT EXISTING PAVEMENT
- ⑩ REMOVE EXISTING PAVEMENT
- ⑪ REMOVE EXISTING SW STRUCTURE AND PIPE
- ⑫ REMOVE EXISTING UTILITY STRUCTURE
- ⑬ CUT AND CAP EXISTING UTILITY
- ⑭ DECOMMISSION EXISTING MONITORING WELL
- ⑮ FIRE HYDRANT/VALVE TO BE RELOCATED
- ⑯ PROTECT EXISTING TREES
- ⑰ REMOVE EXISTING POWER POLE
- ⑱ REMOVE EXISTING GUY WIRE
- ⑲ REMOVE EXISTING HANDHOLE
- ⑳ REMOVE EXISTING LIGHTPOLE
- ㉑ REMOVE, SALVAGE, AND PROVIDE TO PORT EXISTING SIGN
- ㉒ SEDIMENT POND OR SEDIMENT TRAP STORMWATER TREATMENT WITH DISCHARGE HOLDING TANKS, SEE EROSION CONTROL GENERAL NOTES 23 AND 24 SHEET D1.7
- ㉓ INSTALL HIGH VISIBILITY FENCING AT LIMITS OF WORK, WETLAND BUFFER LIMITS, AND TRANSMISSION TOWER
- ㉔ TRACK DEMOLITION
- ㉕ REMOVE EXISTING HIGH MAST LIGHTPOLE
- ㉖ REMOVE FENCE
- ㉗ REMOVE FENCE GATE
- ㉘ REMOVE ELECTRICAL PANEL AND PAD

MATCHLINE - SEE AREA 1

MATCHLINE - SEE AREA 13



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**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
PORT OF GRAYS HARBOR

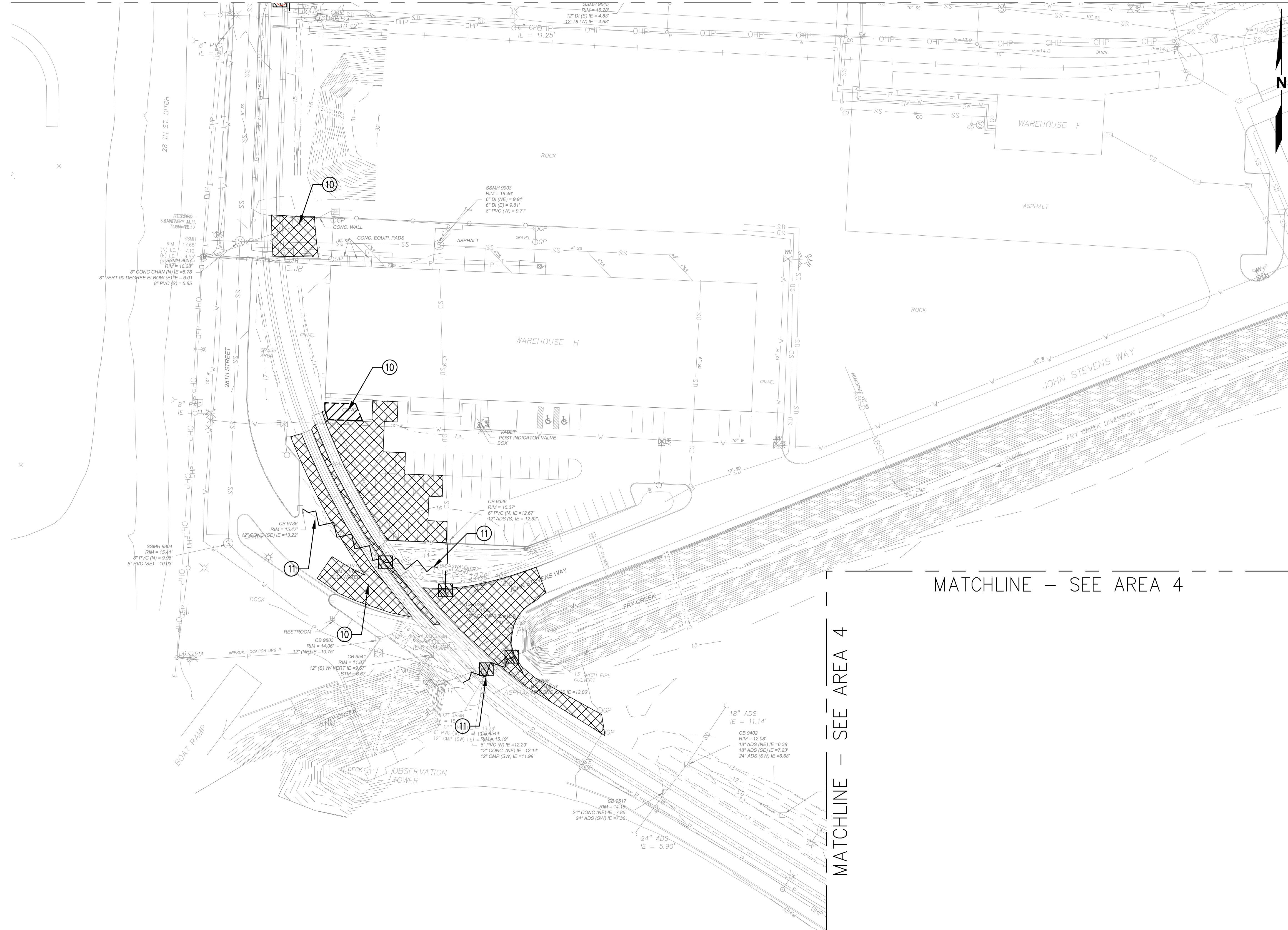
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**DEMOLITION AND TESC PLAN**  
**AREA 2**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>D2</b>
SHEET NO.	<b>29 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

MATCHLINE – SEE AREA 2



MATCHLINE – SEE AREA 4

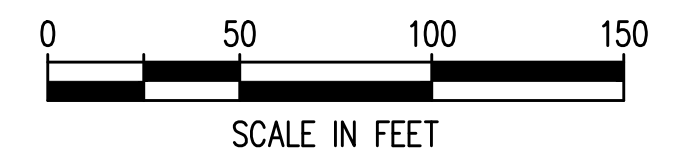
MATCHLINE – SEE AREA 4

**GENERAL NOTES**

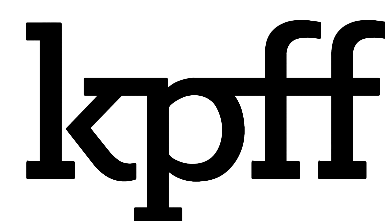
1. REFER TO SHEET \_\_\_\_\_ FOR DEMOLITION NOTES AND TEMPORARY EROSION AND SEDIMENTATION CONTROL NOTES.
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**TESC AND DEMO NOTES**

- ① INSTALL SILT FENCE PER DETAIL 4 ON SHEET D1.8
- ② ESTABLISH TEMPORARY CONSTRUCTION FENCE, SEE FENCING PLAN ON C1.0–C1.5
- ③ INSTALL INLET PROTECTION PER DETAIL 1 ON SHEET D1.8
- ④ STABILIZE CONSTRUCTION ENTRANCE PER DETAIL 3 ON D1.8
- ⑤ ESTABLISH TIRE WASH, DISCHARGE IN ACCORDANCE WITH SWPPP AND SDAP PERMIT REQUIREMENTS
- ⑥ CONSTRUCT INTERCEPTOR DITCHES
- ⑦ REMOVE EXISTING FENCE AND GATE
- ⑧ CLEAR AND GRUB EXISTING VEGETATION
- ⑨ SAWCUT EXISTING PAVEMENT
- ⑩ REMOVE EXISTING PAVEMENT
- ⑪ REMOVE EXISTING SW STRUCTURE AND PIPE
- ⑫ REMOVE EXISTING UTILITY STRUCTURE
- ⑬ CUT AND CAP EXISTING UTILITY
- ⑭ DECOMMISSION EXISTING MONITORING WELL
- ⑮ FIRE HYDRANT/VALVE TO BE RELOCATED
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Plotted: Jun 09, 2023 - 9:19pm riambert Layout: AREA 3  
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**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

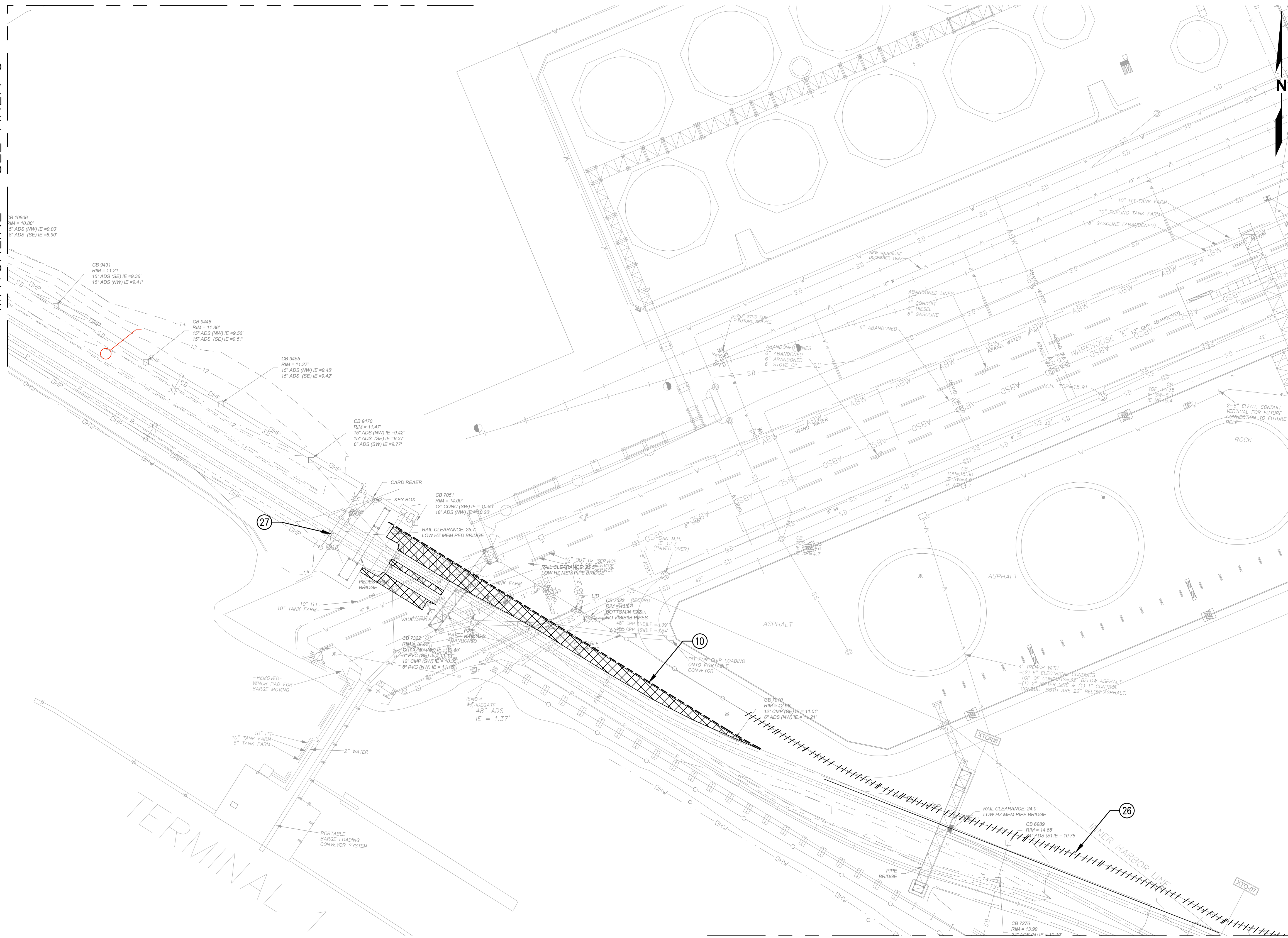
**DEMOLITION AND TESC PLAN**  
**AREA 3**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>D3</b>
SHEET NO.	<b>30 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

MATCHLINE – SEE AREA 3

MATCHLINE – SEE AREA 3



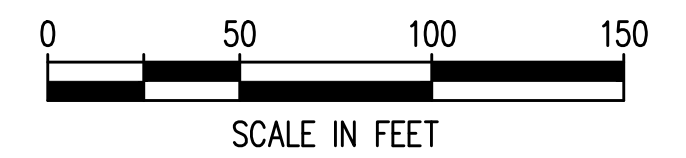
MATCHLINE – SEE AREA 5

**GENERAL NOTES**

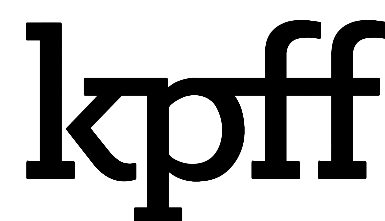
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**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

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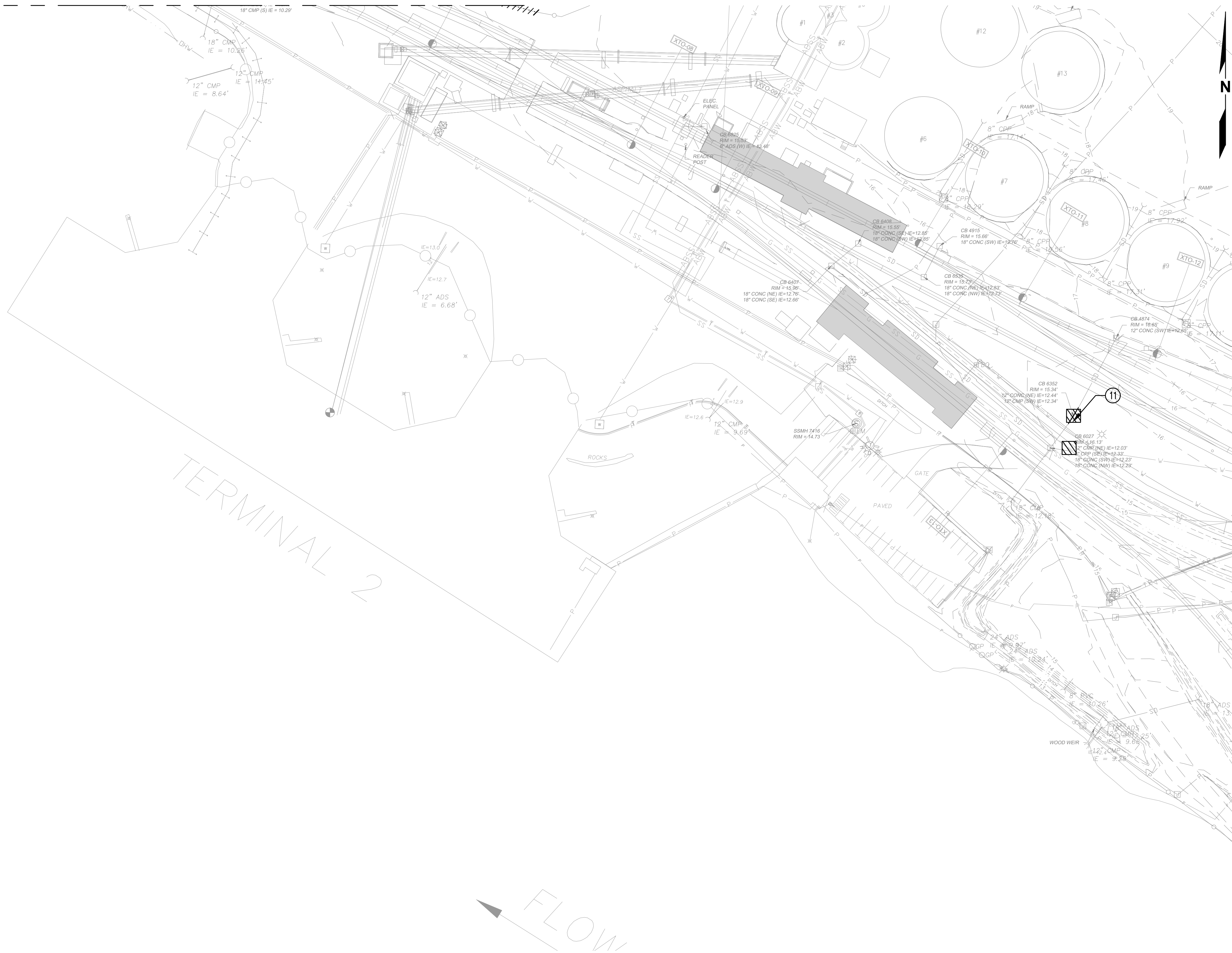
**DEMOLITION AND TESC PLAN**  
**AREA 4**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>D4</b>
SHEET NO.	<b>31</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION



MATCHLINE - SEE AREA 4

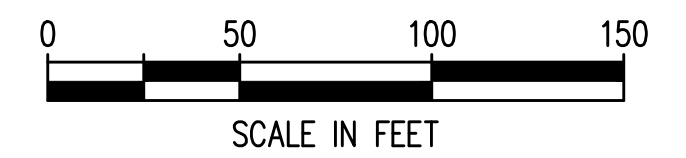


**GENERAL NOTES**

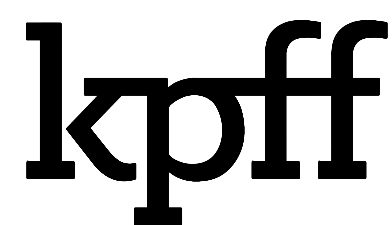
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Plotted: Jun 09, 2023 - 9:19pm rambert Layout: AREA 5  
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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

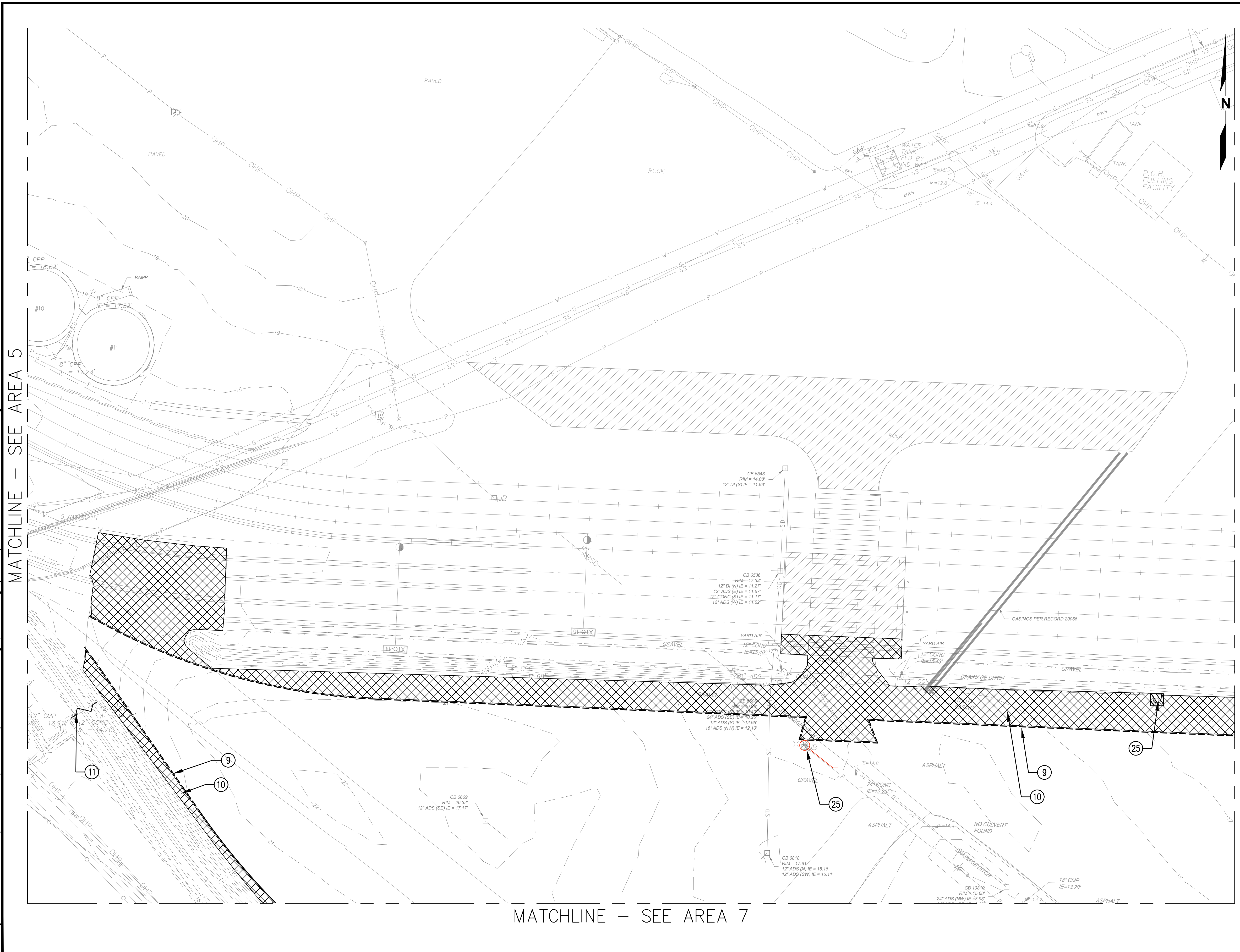
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**DEMOLITION AND TESC PLAN**  
**AREA 5**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>D5</b>
SHEET NO.	<b>32 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:19pm  
 rhambert Layout: AREA 6  
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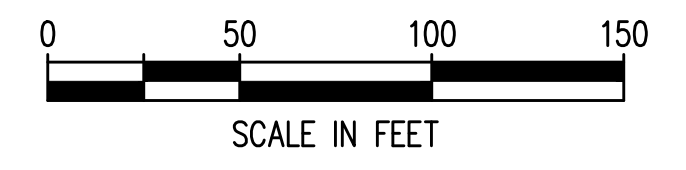
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MATCHLINE - SEE AREA 14

MATCHLINE - SEE AREA 5

MATCHLINE - SEE AREA 7



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**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

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**DEMOLITION AND TESC PLAN**  
**AREA 6**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>D6</b>
SHEET NO.	<b>33 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

MATCHLINE — SEE AREA 6

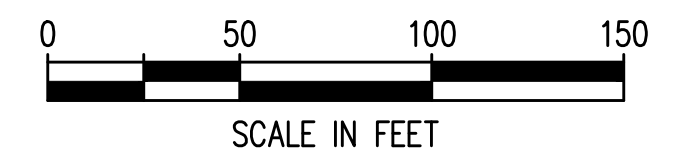
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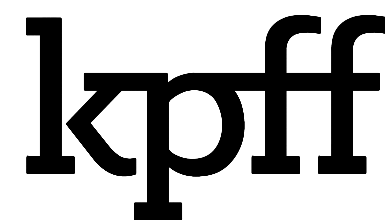
**TESC AND DEMO NOTES**

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26. REMOVE FENCE
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28. REMOVE ELECTRICAL PANEL AND PAD

MATCHLINE — SEE AREA 8



Plotted: Jun 09, 2023 - 9:19pm rambert Layout: AREA 7  
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NO.	DATE	BY	REVISION

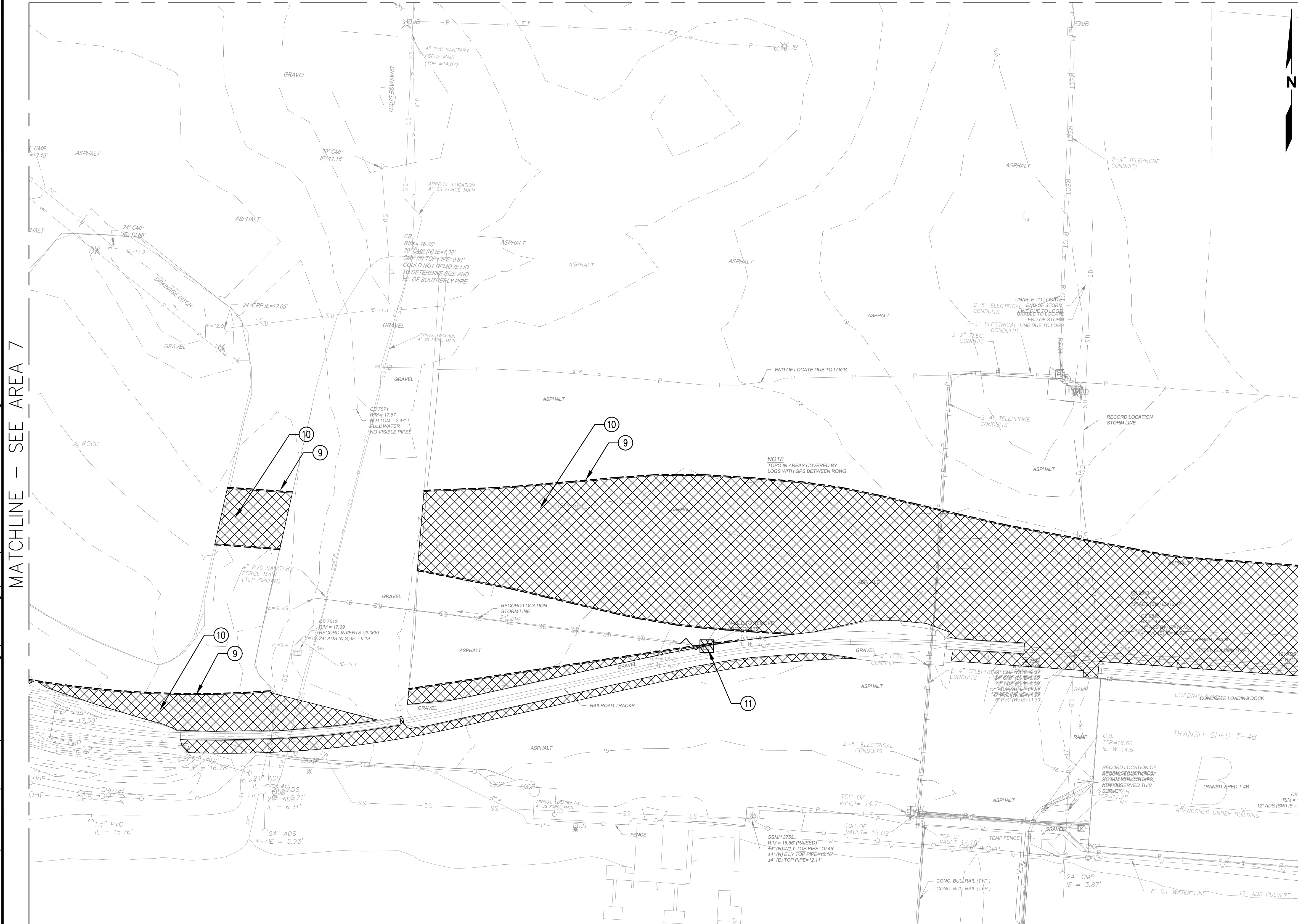
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
PORT OF GRAYS HARBOR

**DEMOLITION AND TESC PLAN**  
**AREA 7**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>D7</b>
SHEET NO.	<b>34</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

MATCHLINE - SEE AREA 14

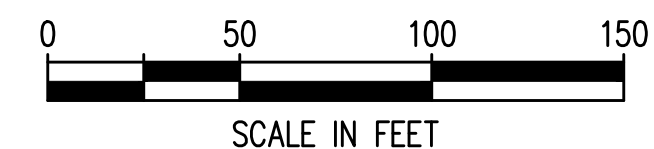


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MATCHLINE - SEE AREA 7

MATCHLINE - SEE AREA 9

Plotted: Jun 09, 2023 - 9:19pm r1ambert Layout: AREA 8  
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NO.	DATE	BY	REVISION

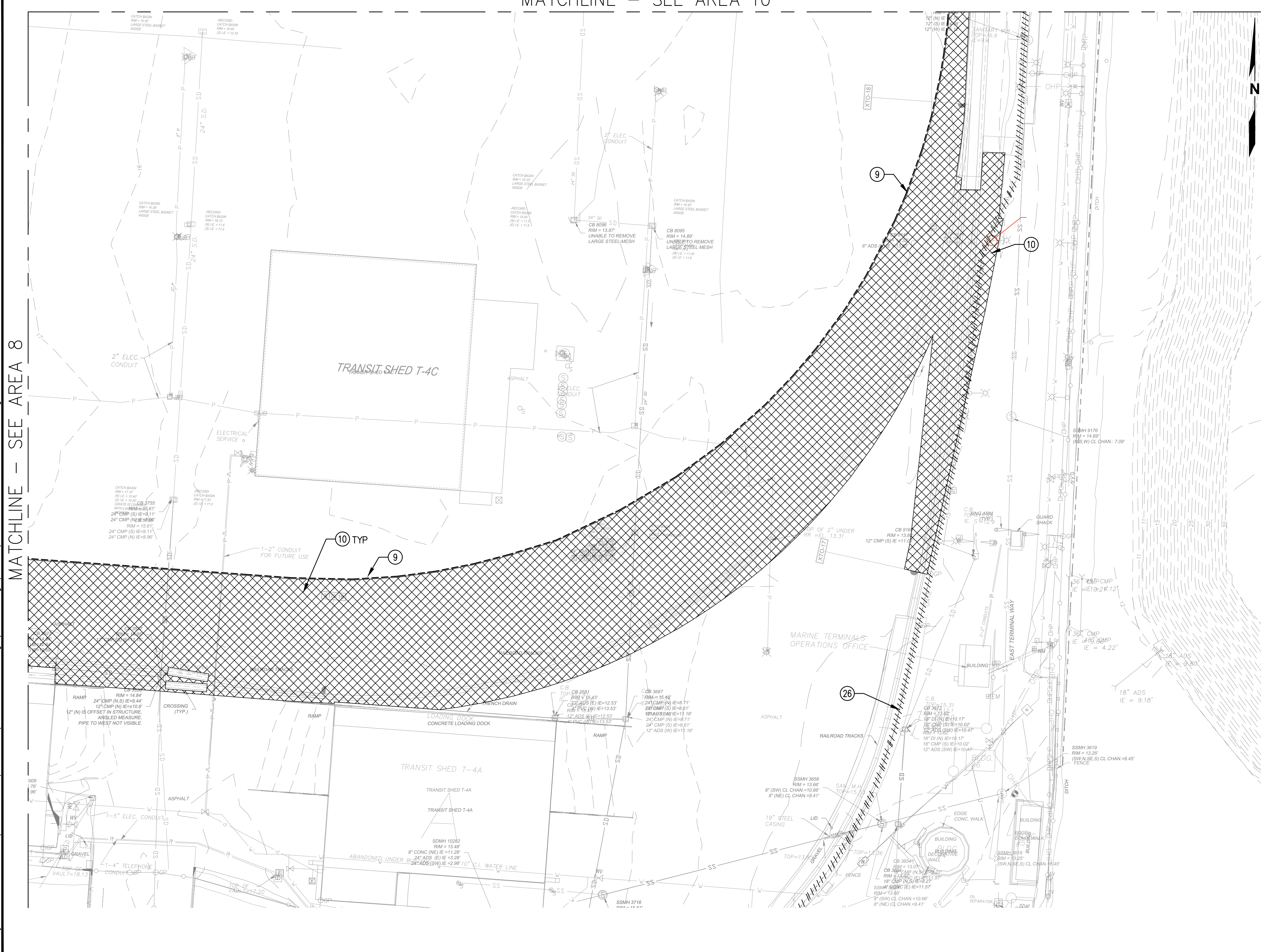
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**DEMOLITION AND TESC PLAN**  
**AREA 8**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>D8</b>
SHEET NO.	<b>35 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

MATCHLINE - SEE AREA 10

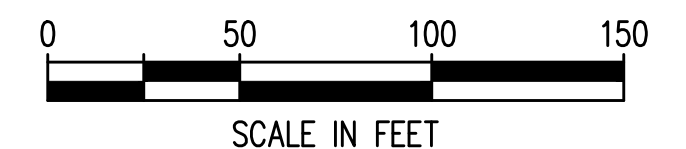


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- ㉓ INSTALL HIGH VISIBILITY FENCING AT LIMITS OF WORK, WETLAND BUFFER LIMITS, AND TRANSMISSION TOWER
- ㉔ TRACK DEMOLITION
- ㉕ REMOVE EXISTING HIGH MAST LIGHTPOLE
- ㉖ REMOVE FENCE
- ㉗ REMOVE FENCE GATE
- ㉘ REMOVE ELECTRICAL PANEL AND PAD



MATCHLINE - SEE AREA 8

Plotted: Jun 09, 2023 - 9:19pm r1ambert Layout: AREA 9 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\DI - D14 DEMO AND TESC PLAN.dwg



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NO.	DATE	BY	REVISION

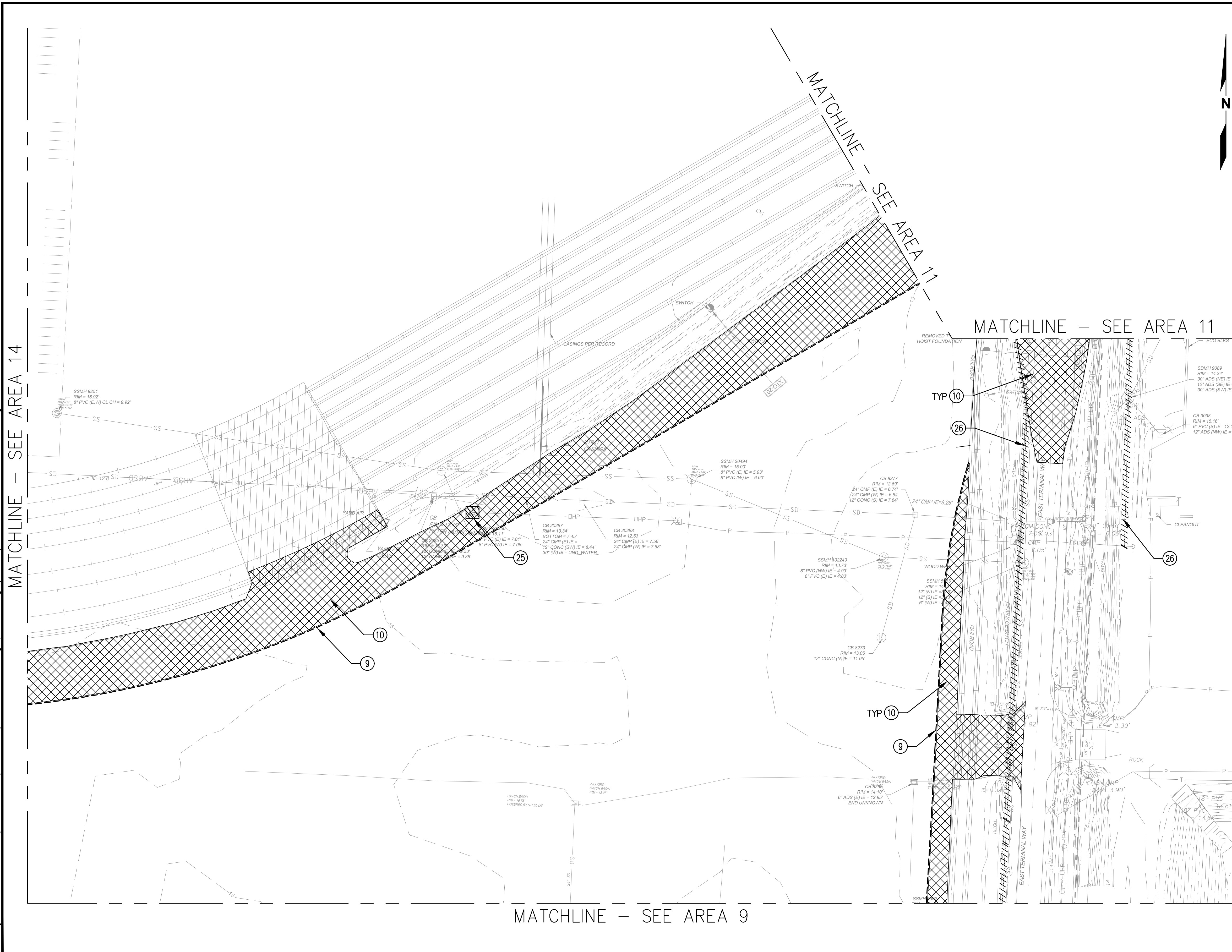
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
PORT OF GRAYS HARBOR

**DEMOLITION AND TESC PLAN**  
**AREA 9**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>D9</b>
SHEET NO.	<b>36 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:19pm riambert Layout: AREA 10  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\DI - D14 DEMO AND TESC PLAN.dwg

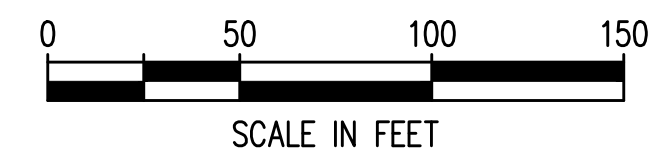


**GENERAL NOTES**

1. REFER TO SHEET \_\_\_\_\_ FOR DEMOLITION NOTES AND TEMPORARY EROSION AND SEDIMENTATION CONTROL NOTES.
2. EXISTING WETLAND, ASSOCIATED BUFFER, STORMWATER PONDS, AND STORMWATER SWALES SHALL NOT BE DISTURBED.

**TESC AND DEMO NOTES**

- ① INSTALL SILT FENCE PER DETAIL 4 ON SHEET D1.8
- ② ESTABLISH TEMPORARY CONSTRUCTION FENCE, SEE FENCING PLAN ON C1.0-C1.5
- ③ INSTALL INLET PROTECTION PER DETAIL 1 ON SHEET D1.8
- ④ STABILIZE CONSTRUCTION ENTRANCE PER DETAIL 3 ON D1.8
- ⑤ ESTABLISH TIRE WASH, DISCHARGE IN ACCORDANCE WITH SWPPP AND SDAP PERMIT REQUIREMENTS
- ⑥ CONSTRUCT INTERCEPTOR DITCHES
- ⑦ REMOVE EXISTING FENCE AND GATE
- ⑧ CLEAR AND GRUB EXISTING VEGETATION
- ⑨ SAWCUT EXISTING PAVEMENT
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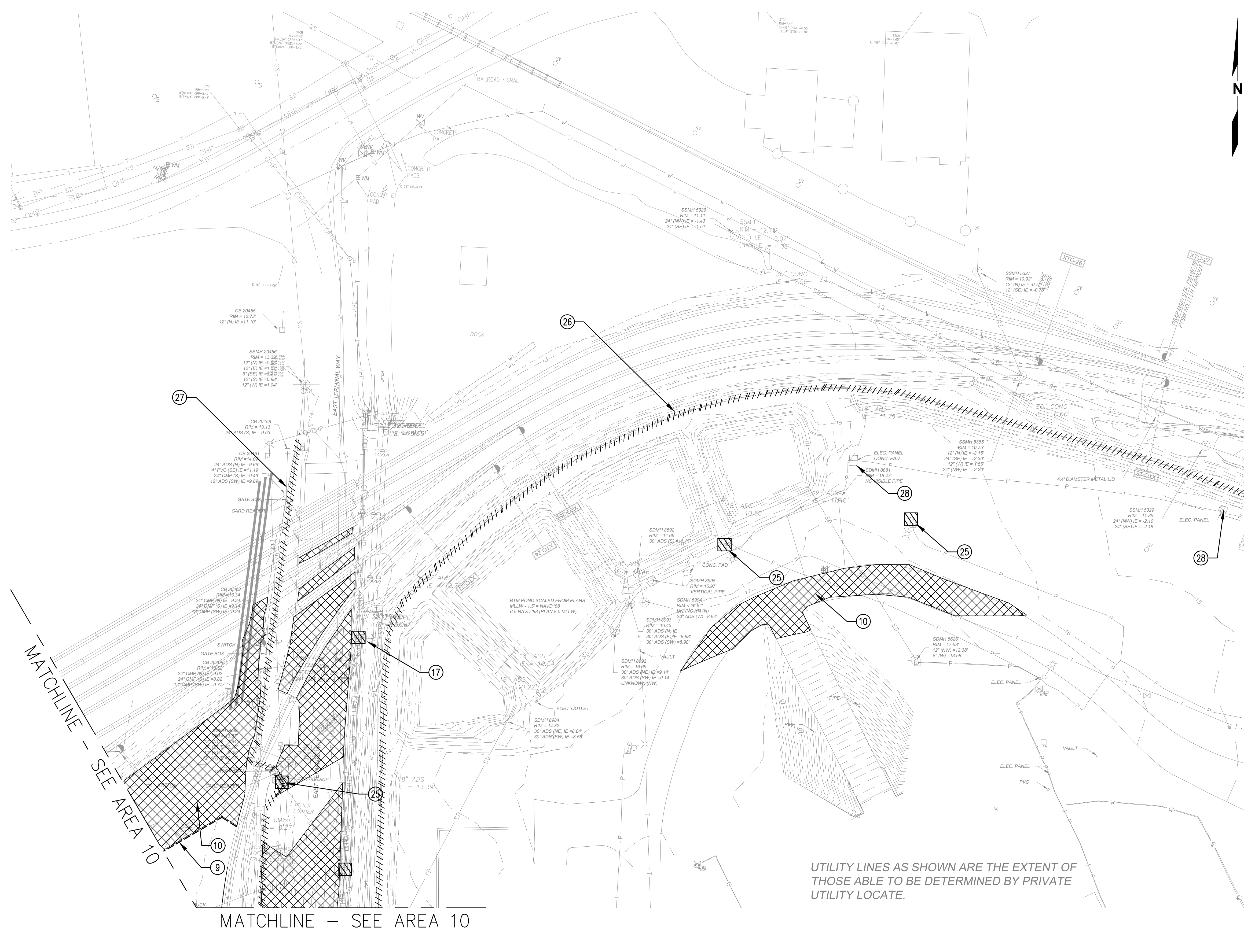
NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR  
  
**DEMOLITION AND TESC PLAN**  
**AREA 10**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>D10</b>
SHEET NO.	<b>37 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:20pm rambert Layout: AREA 11  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\DI - D14 DEMO AND TESC PLAN.dwg



**GENERAL NOTES**

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**TESC AND DEMO NOTES**

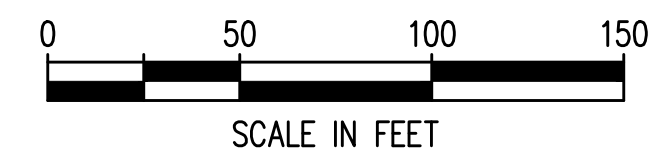
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26. REMOVE FENCE
27. REMOVE FENCE GATE
28. REMOVE ELECTRICAL PANEL AND PAD

MATCHLINE - SEE AREA 12

MATCHLINE - SEE AREA 10

MATCHLINE - SEE AREA 10

UTILITY LINES AS SHOWN ARE THE EXTENT OF THOSE ABLE TO BE DETERMINED BY PRIVATE UTILITY LOCATE.



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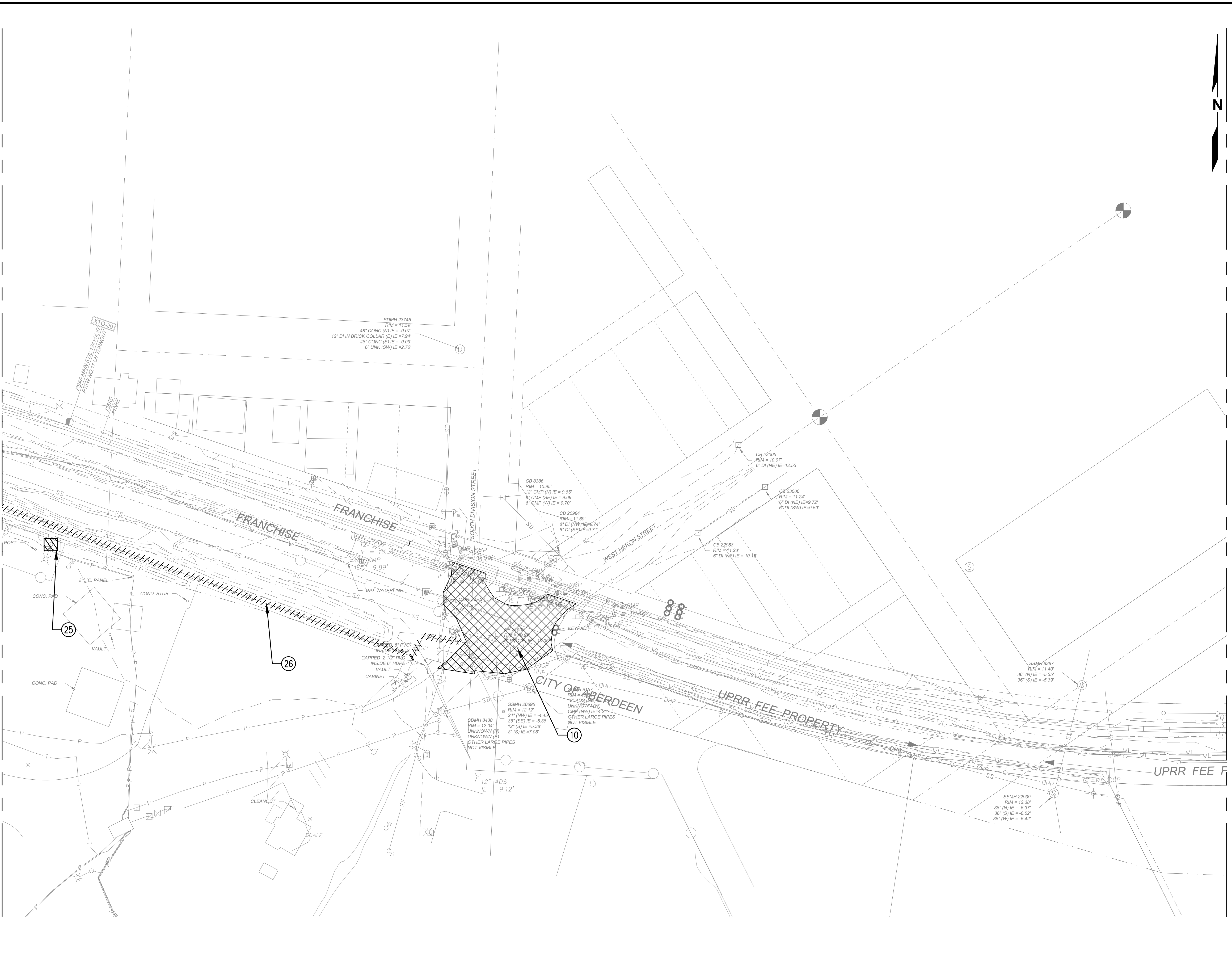
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**DEMOLITION AND TESC PLAN**  
 AREA 11

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>D11</b>
SHEET NO.	<b>38 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:20pm riambert Layout: AREA 12  
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**GENERAL NOTES**

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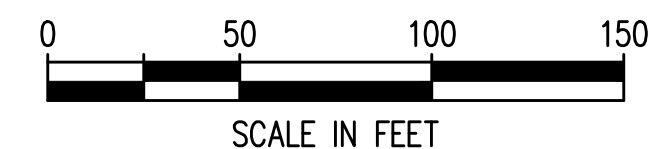
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MATCHLINE - SEE AREA 13

MATCHLINE - SEE AREA 11



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

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**DEMOLITION AND TESC PLAN**  
 AREA 12

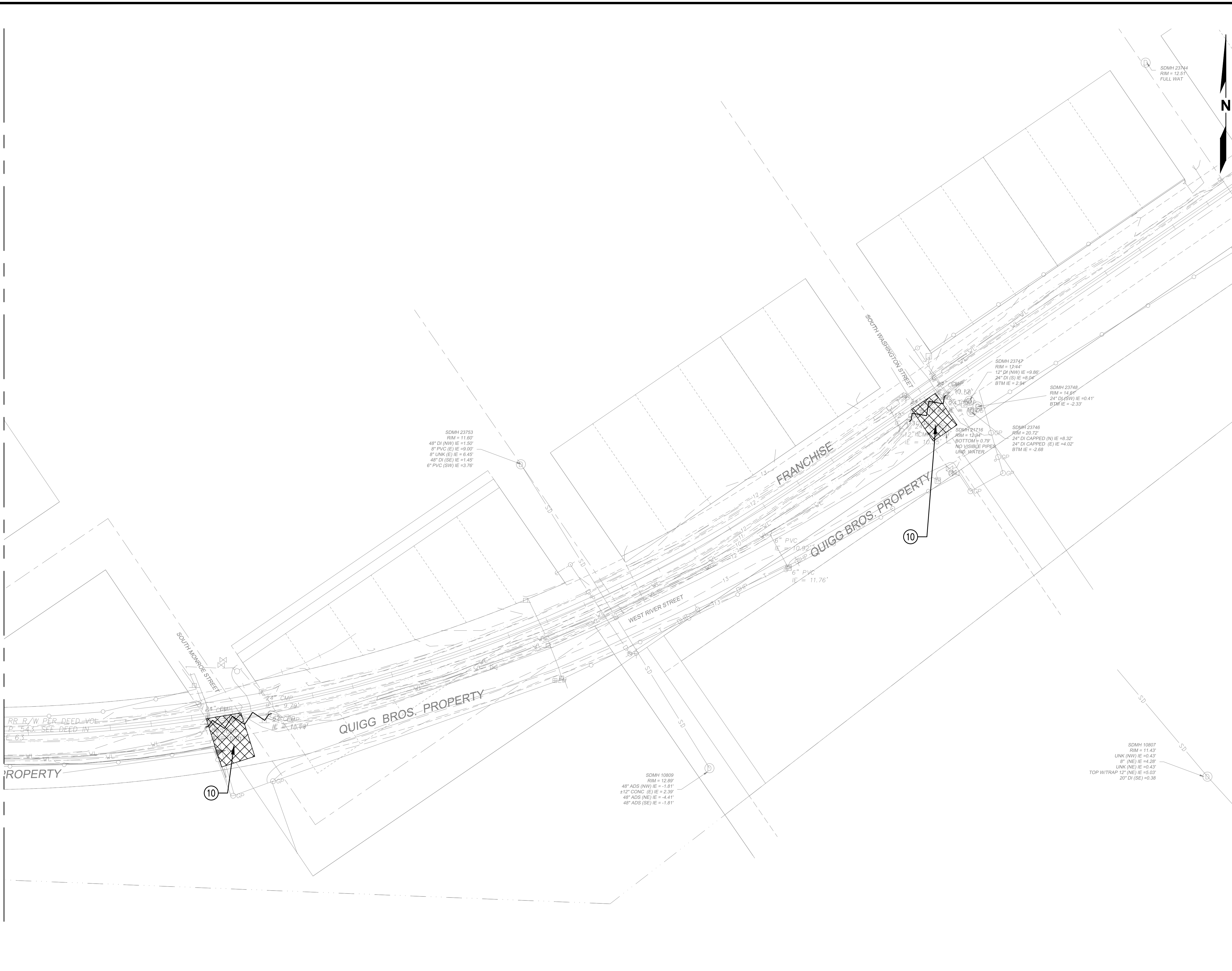
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DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>D12</b>
SHEET NO.	<b>39</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION



Plotted: Jun 09, 2023 - 9:20pm riambert Layout: AREA 13  
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MATCHLINE - SEE AREA 12



### GENERAL NOTES

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**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

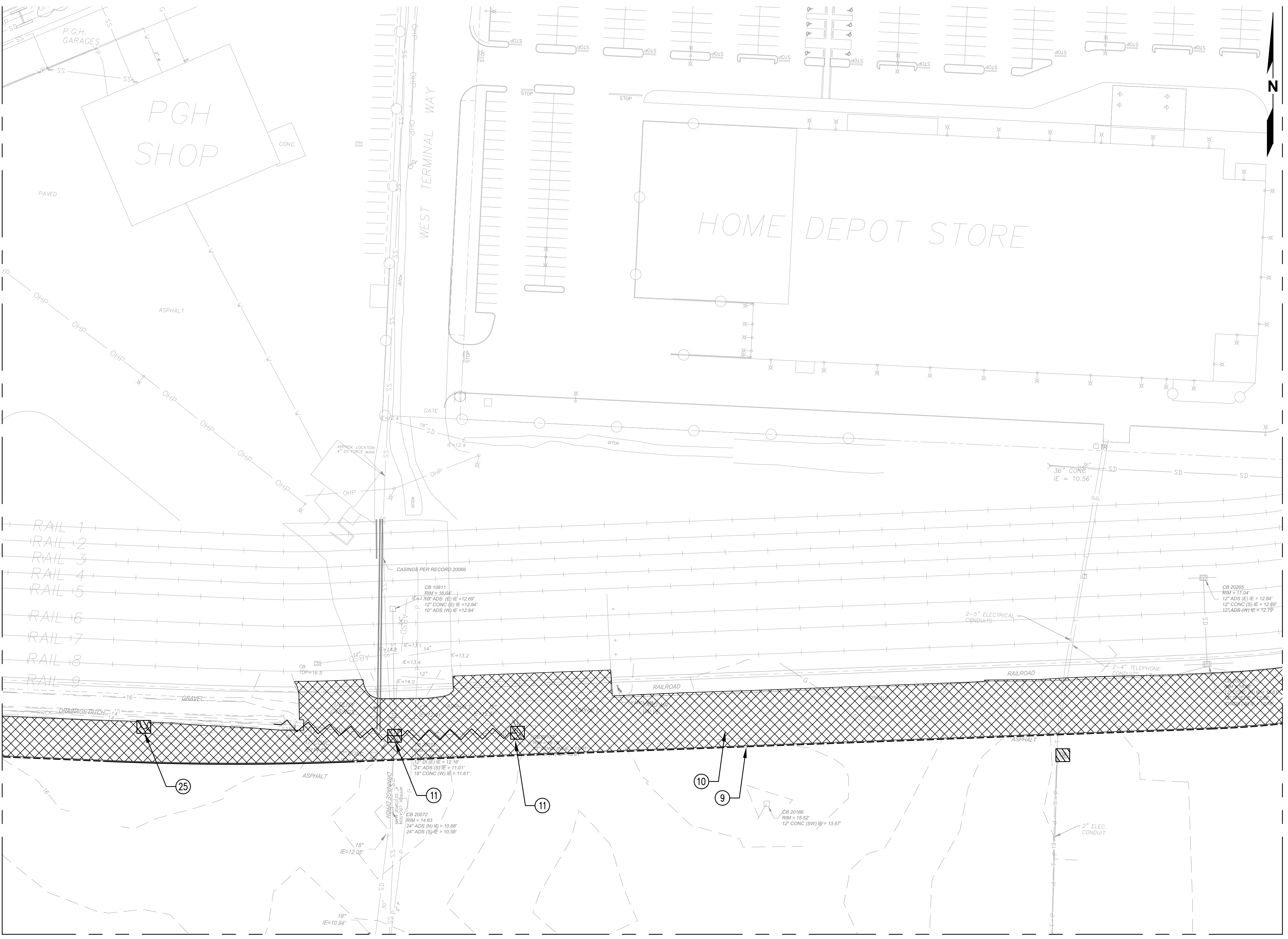
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**DEMOLITION AND TESC PLAN**  
 AREA 13

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>D13</b>
SHEET NO.	<b>40 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:20pm riambert Layout: AREA 14  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\DI - D14 DEMO AND TESC PLAN.dwg

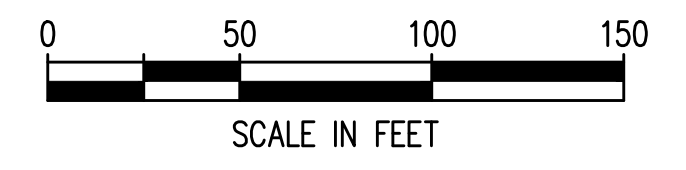


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MATCHLINE - SEE AREA 6

MATCHLINE - SEE AREA 10

MATCHLINE - SEE AREA 8



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
PORT OF GRAYS HARBOR

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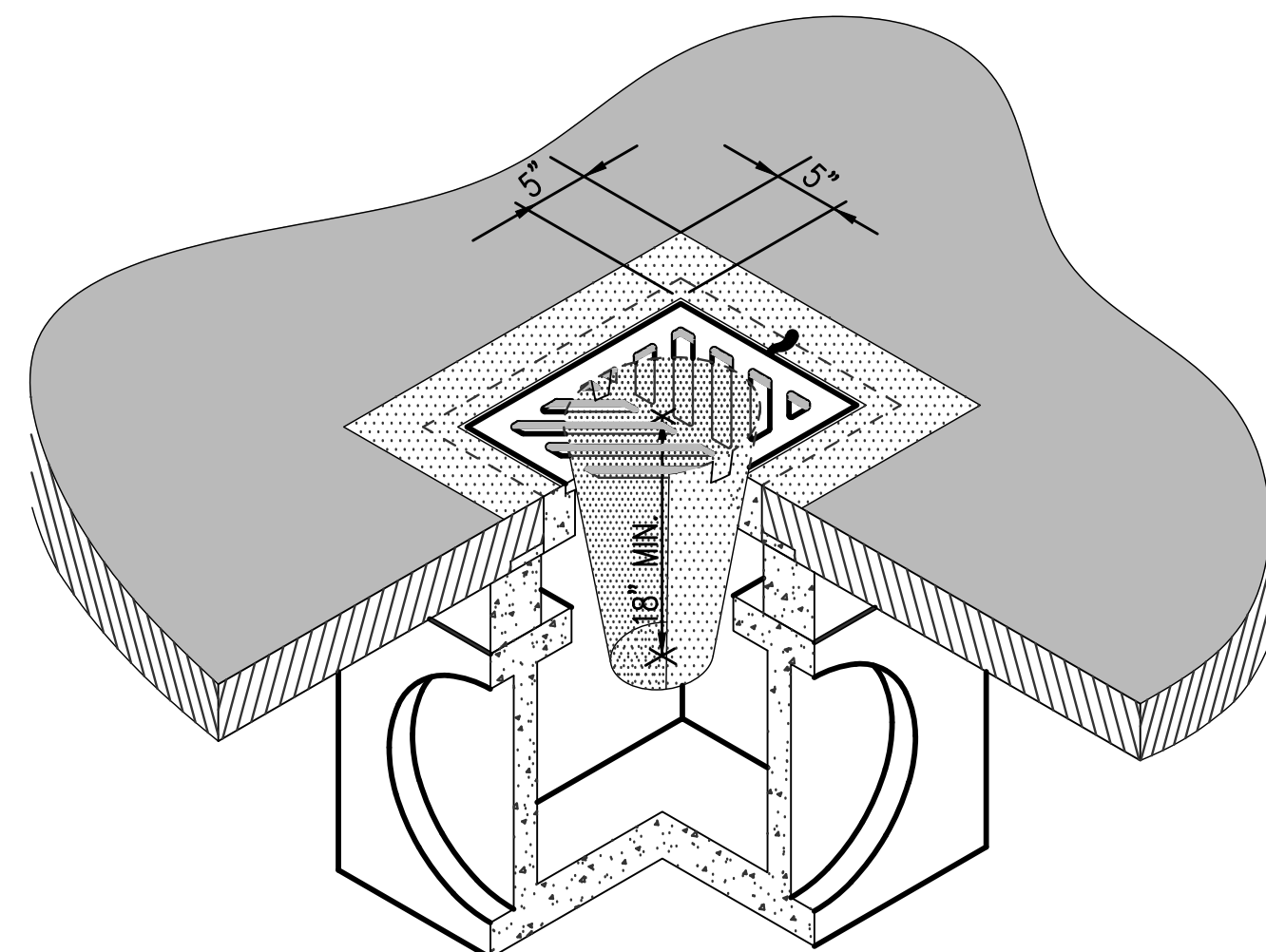
**DEMOLITION AND TESC PLAN**  
AREA 14

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>D14</b>
SHEET NO.	<b>41 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

## TEMPORARY EROSION AND SEDIMENT CONTROL (TESC) GENERAL NOTES:

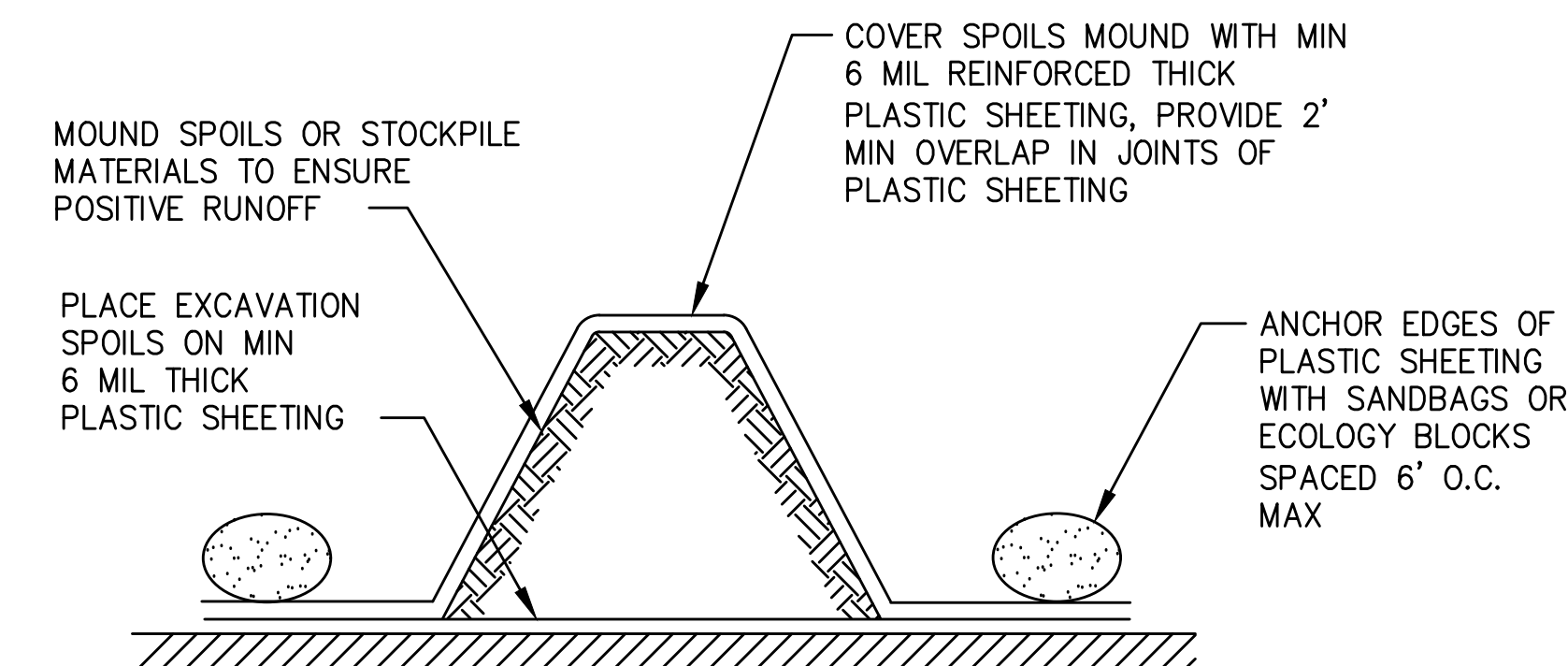
- THE IMPLEMENTATION OF THESE PLANS AND THE CONSTRUCTION, REGULAR REVIEW, MAINTENANCE, REPLACEMENT, AND CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN (SWPPP), AND UPGRADING THESE FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND PLANS UNTIL ALL CONSTRUCTION IS APPROVED AND ACCEPTED BY THE ENGINEER. AT THE DISCRETION OF THE ENGINEER, SWPP MEASURES OBSERVED AS INADEQUATE WILL BE BROUGHT TO THE CONTRACTORS ATTENTION FOR REVISION/MODIFICATION.
- THE TESC FACILITIES SHOWN ON THIS PLAN SHALL BE CONSTRUCTED PRIOR TO ALL CLEARING AND DEMOLITION SO AS TO ENSURE THAT TRANSPORT OF SEDIMENT TO SURFACE WATERS, DRAINAGE SYSTEMS, AND ADJACENT PROPERTIES IS MINIMIZED. THE TYPICAL WET SEASON RUNS FROM OCTOBER 1 THROUGH APRIL 30, AND THE DRY SEASON FROM MAY 1 THROUGH SEPTEMBER 30.
- THE TESC FACILITIES SHALL BE INSPECTED DAILY BY THE TESC SUPERVISOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING IN ACCORDANCE WITH THE SPECIFICATIONS. WRITTEN RECORDS SHALL BE KEPT OF TESC INSPECTIONS WEEKLY.
- CONTRACTOR SHALL MAINTAIN EROSION CONTROL MEASURES AT ALL TIMES TO THE REQUIREMENTS OF THE PERMITS, SPECIFICATIONS AND MINIMUM REQUIREMENTS SHOWN IN PLANS.
- THE TESC MEASURES SHOWN ON THESE PLANS ARE MINIMUM REQUIREMENTS. SHOULD TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES, AS SHOWN ON THE PLANS, BECOME INADEQUATE, THE CONTRACTOR SHALL INSTALL BMPS AND/OR FACILITIES AS NECESSARY TO PROTECT ADJACENT PROPERTIES, WATERBODIES, MUNICIPAL DRAINAGE SYSTEMS, AND EXISTING PORT DRAINAGE SYSTEMS MEETING THE APPROVAL OF THE ENGINEER.
- AS A GENERAL RULE, ANY AREAS OF EXPOSED SOILS, INCLUDING EMBANKMENTS, THAT WILL NOT BE DISTURBED FOR TWO DAYS DURING THE WET SEASON OR SEVEN DAYS DURING THE DRY SEASON SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED TESC BMP METHODS.
- INLET PROTECTION SHALL BE INSPECTED AFTER EACH STORM EVENT AND CLEANED OR REPLACED WHEN  $\frac{1}{2}$  FULL.
- THE CONTRACTOR SHALL PROTECT STOCKPILE AND EXCAVATION AREAS FROM THE RELEASE OF SEDIMENT. STOCKPILES SHALL BE COVERED AT ALL TIMES WHILE NOT IN USE TO KEEP THE STORED MATERIAL DRY, AS SHOWN IN DETAIL.
- ALL NON-SALVAGED MATERIAL REMOVED FROM THE SITE SHALL BE PLACED OR DISPOSED OF AT A PERMITTED SITE. CONTRACTOR SHALL OBTAIN CHARACTERIZATION DOCUMENTATION FROM THE ENGINEER FOR ALL MATERIAL PRIOR TO HAUL AND DISPOSAL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULL COMPLIANCE WITH THE WASHINGTON STATE DROPPING LOAD OR OTHER MATERIALS COVERING LAWS (RCW 46.61.655.3/4).
- PAVED AREAS SHALL BE SWEEPED AS NECESSARY TO PREVENT SEDIMENT AND DUST TRACKING ONTO THE PAVED AREAS.
- PREVENTATIVE MEASURES TO MINIMIZE THE WIND TRANSPORT OF SOIL SHALL BE TAKEN WHEN SEDIMENT TRANSPORTED BY THE WIND IS LIKELY TO BE DEPOSITED IN DRAINAGE WAYS, WATER RESOURCES, OR NON-PORT PROPERTY.
- ALL TESC MEASURES SHALL BE REMOVED AND DISPOSED OF AT AN APPROVED SITE UPON PROJECT COMPLETION.



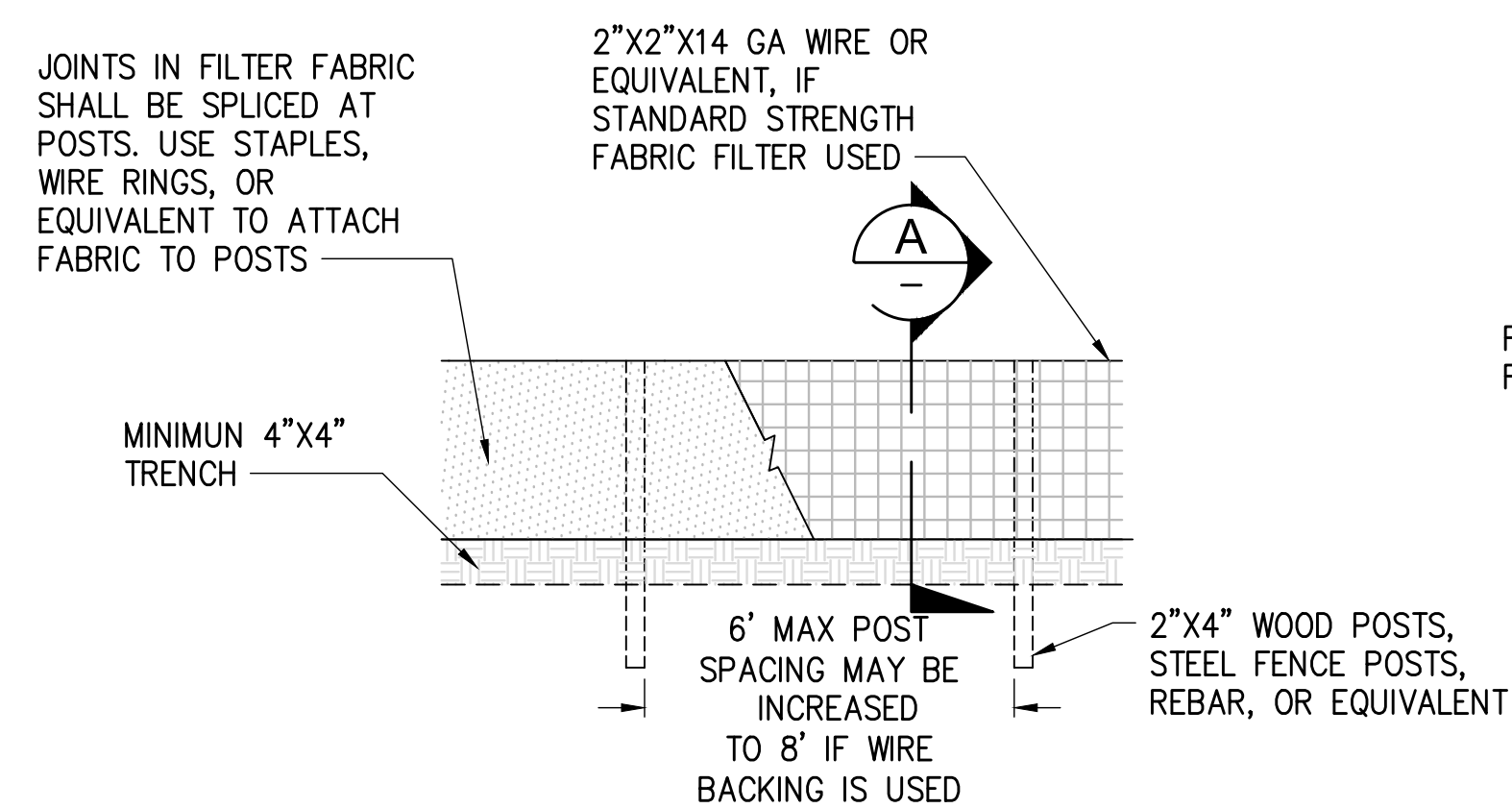
**1 INLET PROTECTION DETAIL**  
D1-D14 NTS

## NOTES:

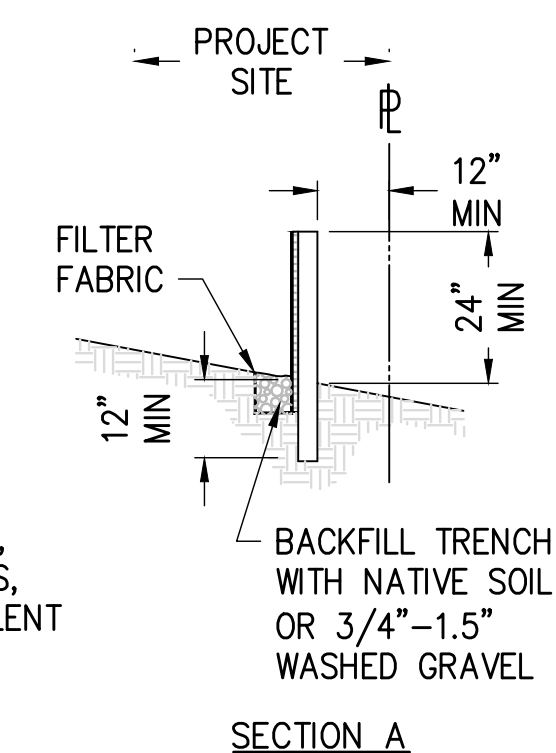
- INSERT SHALL BE INSTALLED IN ALL OPERATIONAL CATCH BASINS WITHIN 500 FEET OF WORK LIMITS PRIOR TO CLEARING AND GRADING ACTIVITY, OR UPON PLACEMENT OF A NEW CATCH BASIN.
- FILTERS SHALL BE INSPECTED AFTER EACH STORM EVENT AND CLEANED OR REPLACED WHEN IT IS  $\frac{1}{3}$  FULL.



**2 STOCKPILE PROTECTION DETAIL**  
D1-D14 NTS



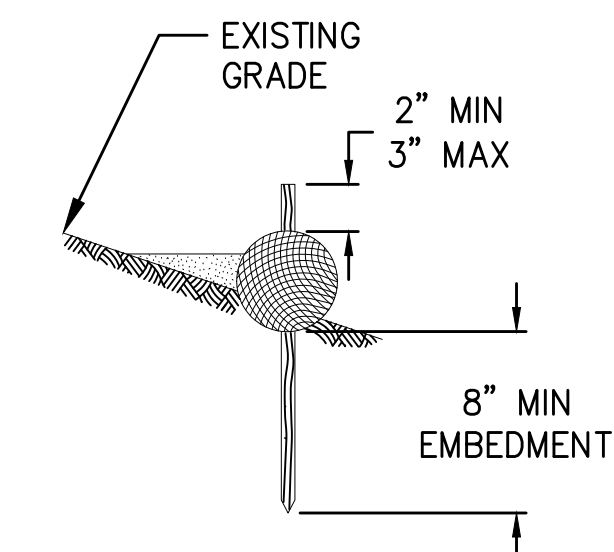
**3 SILT FENCE DETAIL**  
D1-D14 NTS



**4 STRAW WATTLE DETAIL**  
D1-D14 NTS

## MAINTENANCE NOTES:

- REPAIR ANY DAMAGE IMMEDIATELY.
- IF CONCENTRATED FLOWS ARE EVIDENT UPHILL OF THE FENCE, INTERCEPT AND CONVEY THEM TO A SEDIMENT POND.
- IT IS IMPORTANT TO CHECK THE UPHILL SIDE OF THE FENCE FOR SIGNS OF THE FENCE CLOGGING, ACTING AS A BARRIER TO FLOW, AND THEN CAUSING CHANNELIZATION OF FLOWS PARALLEL TO THE FENCE. IF THIS OCCURS, REPLACE THE FENCE OR REMOVE THE TRAPPED SEDIMENT.
- REMOVE SEDIMENT DEPOSITS WHEN THE DEPOSIT REACHES APPROXIMATELY ONE-THIRD THE HEIGHT OF THE SILT FENCE, OR INSTALL A SECOND SILT FENCE.
- IF THE FILTER FABRIC (GEOTEXTILE) HAS DETERIORATED DUE TO ULTRAVIOLET BREAKDOWN, REPLACE IT.



**4 STRAW WATTLE DETAIL**  
D1-D14 NTS

Plotted: Jun 09, 2023 - 9:20pm rambert Layout: D15 TESC DETAILS N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\D15-16 TESC NOTES AND DETAILS.dwg

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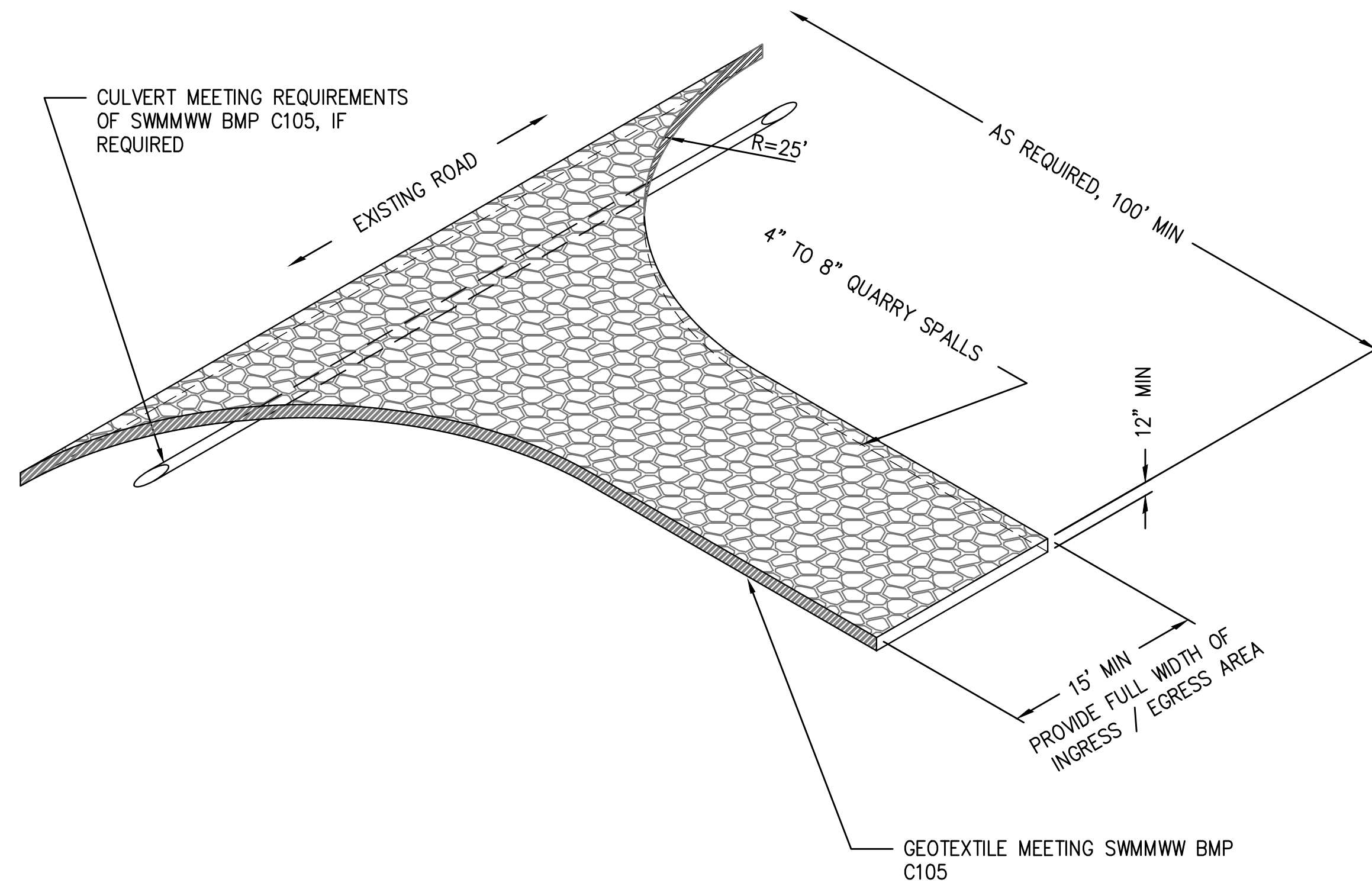
TERMINAL 4 RAIL AND SITE IMPROVEMENTS  
PORT OF GRAYS HARBOR

TESC NOTES AND DETAILS

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>D15</b>
SHEET NO.	<b>42</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

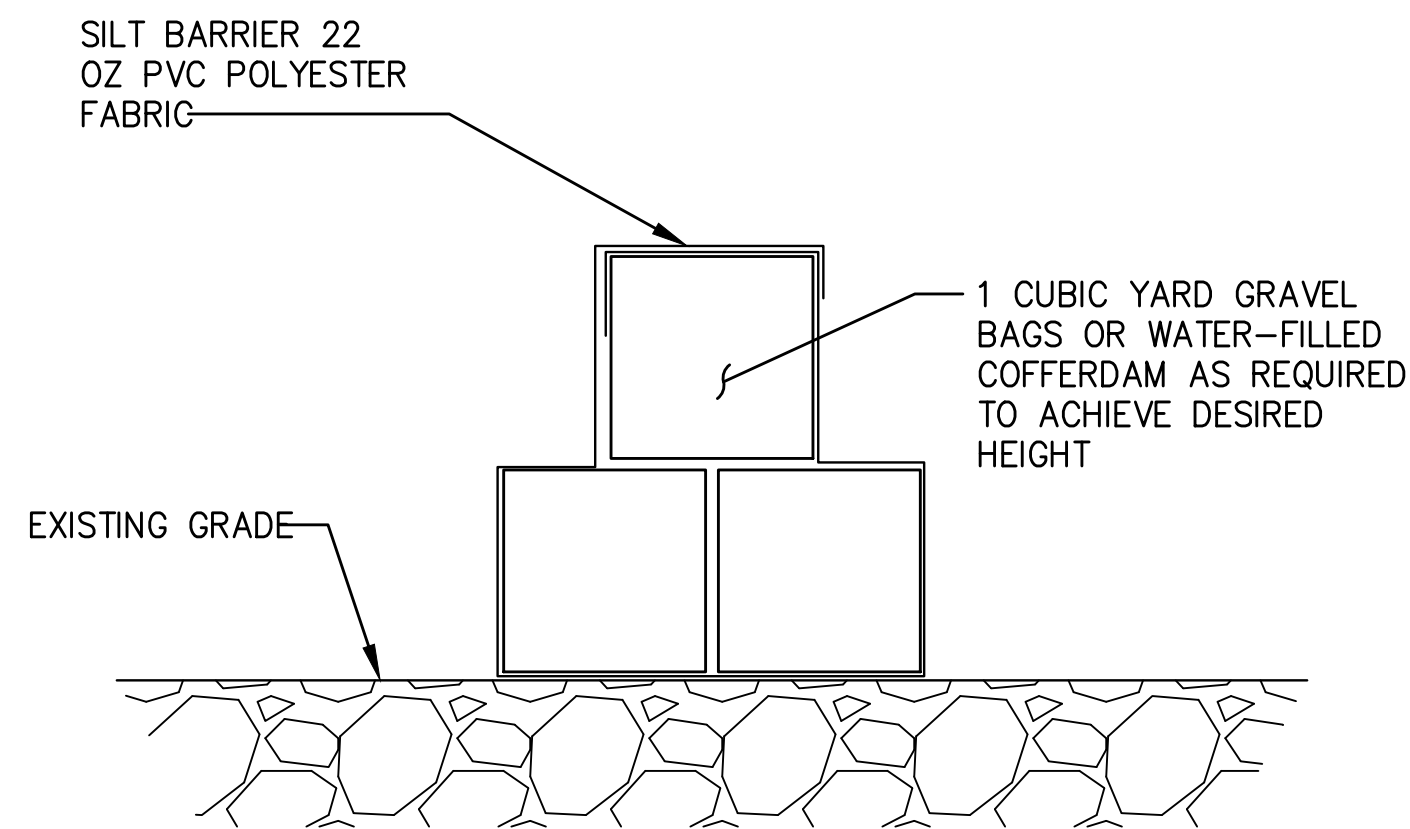
Plotted: Jun 09, 2023 - 9:20pm  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\D15-16 TESC NOTES AND DETAILS.dwg  
 Layout: D16 TESC DETAILS  
 riambert



### MAINTENANCE STANDARDS

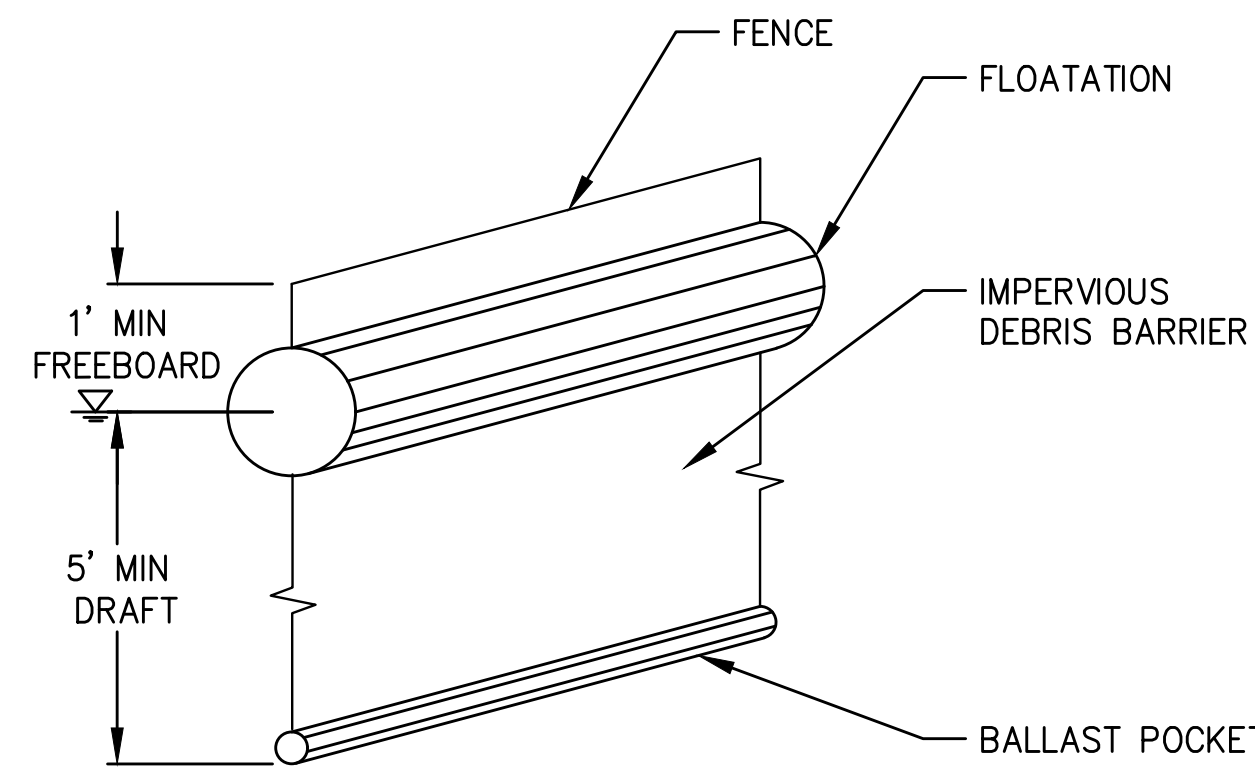
1. QUARRY SPALLS SHALL BE ADDED IF THE PAD IS NO LONGER IN ACCORDANCE WITH THE SPECIFICATIONS.
2. IF THE ENTRANCE IS NOT PREVENTING SEDIMENT FROM BEING TRACKED ONTO PAVEMENT, THEN ALTERNATIVE MEASURES TO KEEP THE STREETS FREE OF SEDIMENT SHALL BE USED. THIS MAY INCLUDE STREET SWEEPING, AN INCREASE IN THE DIMENSIONS OF THE ENTRANCE, OR THE INSTALLATION OF A WHEEL WASH. IF WASHING IS USED, IT SHALL BE DONE ON AN AREA COVERED WITH CRUSHED ROCK, AND WASH WATER SHALL DRAIN TO A SEDIMENT TRAP OR POND.
3. ANY SEDIMENT THAT IS TRACKED ONTO PAVEMENT SHALL BE REMOVED IMMEDIATELY BY SWEEPING. THE SEDIMENT COLLECTED BY SWEEPING SHALL BE REMOVED OR STABILIZED ON-SITE. THE PAVEMENT SHALL NOT BE CLEANED BY WASHING DOWN THE STREET, EXCEPT WHEN SWEEPING IS INEFFECTIVE AND THERE IS A THREAT TO PUBLIC SAFETY. IF IT IS NECESSARY TO WASH THE STREETS, THE CONSTRUCTION OF A SMALL SUMP SHALL BE CONSIDERED. THE SEDIMENT WOULD THEN BE WASHED INTO THE SUMP.
4. ANY QUARRY SPALLS THAT ARE LOOSENED FROM THE PAD AND END UP ON THE ROADWAY SHALL BE REMOVED IMMEDIATELY.
5. IF VEHICLES ARE ENTERING OR EXITING THE SITE AT POINTS OTHER THAN THE CONSTRUCTION ENTRANCE(S), FENCING SHALL BE INSTALLED TO CONTROL TRAFFIC.

**1 STABILIZED CONSTRUCTION ENTRANCE**  
D1-D14 NTS



**NOTE:**  
 COFFERDAMS SHALL BE USED TO PREPARE DEWATERED WORK AREA. COFFERDAMS SHOULD BE COMPLETELY SEALED TO PREVENT DELETERIOUS MATERIAL FROM LEACHING INTO WAPATO CREEK AND TO PREVENT WAPATO CREEK OR TIDAL WATERS FROM ENTERING THE PROJECT AREA. UPON COMPLETION OF THE PROJECT, ALL COFFERDAM MATERIALS SHALL BE REMOVED. HEIGHT TO WIDTH RATIO SHALL BE NO GREATER THAN 2:1.

**2 COFFERDAM DETAIL**  
D1-D14 NTS



**3 SILT CURTAIN DETAIL**  
D1-D14 NTS



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**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

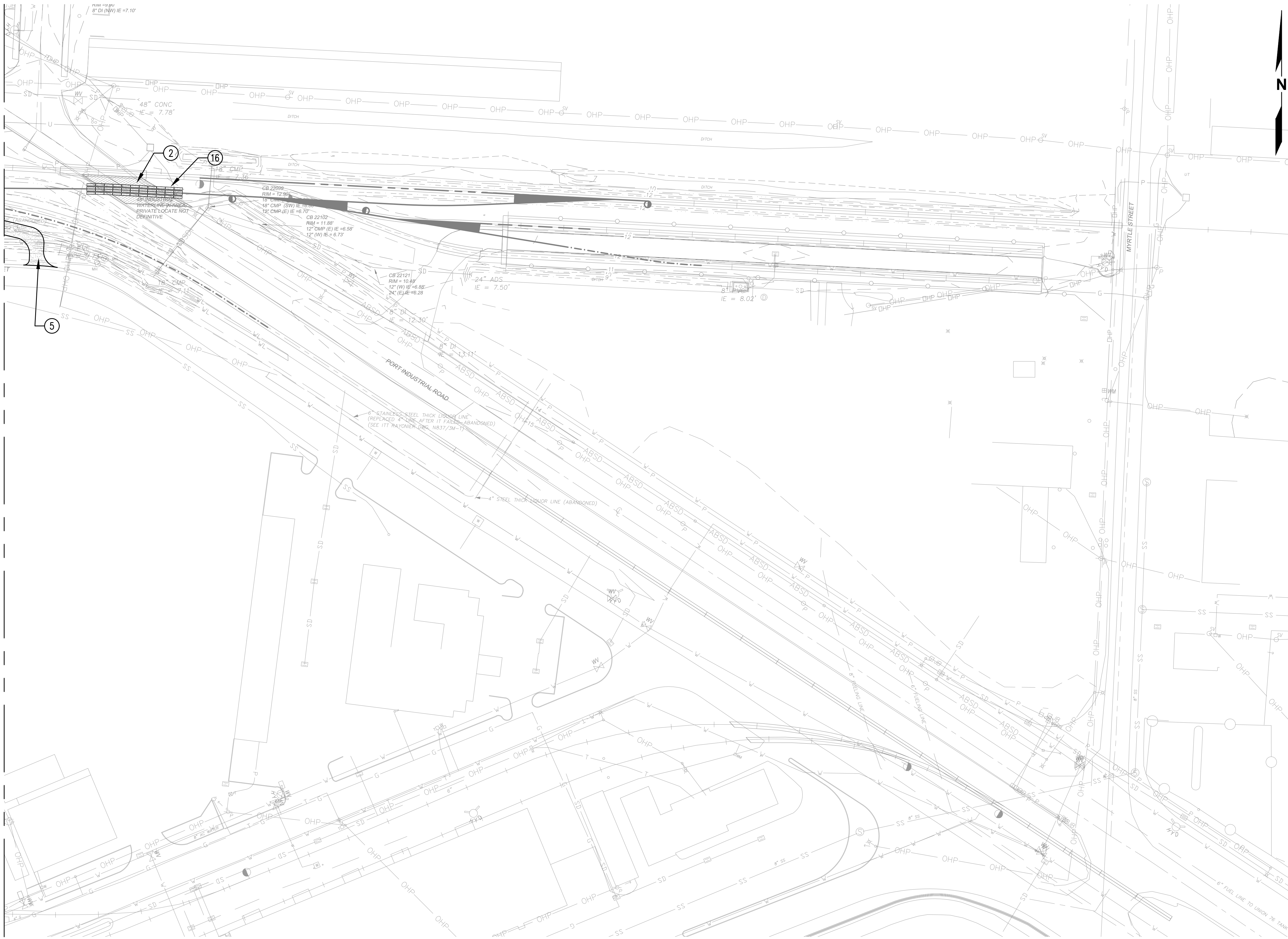
**TESC DETAILS**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>D16</b>
SHEET NO.	<b>43</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:20pm rambert Layout: AREA 1  
N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\C1 - C14 SITE PLAN.dwg

MATCHLINE - SEE AREA 2

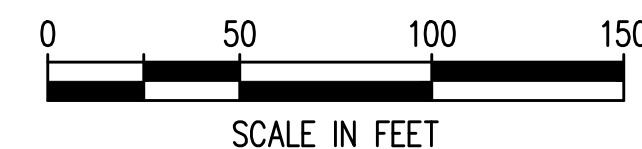


GENERAL NOTES

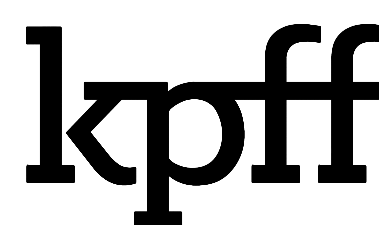
- 1. REFER TO SHEET \_\_\_\_\_ FOR LEGEND AND ABBREVIATIONS.
- 2. REFER TO SHEET \_\_\_\_\_ FOR HORIZONTAL CONTROL POINTS.
- 3. ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF PAVEMENT, UNLESS NOTED OTHERWISE.

SITE CONSTRUCTION NOTES

- ① EDGE OF PAVEMENT
- ② LIGHT DUTY HMA PAVEMENT
- ③ HEAVY DUTY HMA PAVEMENT
- ④ CONCRETE PAVEMENT
- ⑤ GRAVEL ACCESS ROAD
- ⑥ BALLAST OR WALKWAY ROCK SURFACE AS INDICATED ON RAIL PLANS
- ⑦ FENCE PER DETAILS ON C\_\_\_ AND C\_\_\_
- ⑧ 38 FT DOUBLE LEAF RAIL GATE
- ⑨ 34 FT DOUBLE LEAF ENTRANCE GATE
- ⑩ VERTICAL CURB
- ⑪ NEW HIGH MAST LIGHT POLE
- ⑫ PAINT 'STOP' PAVEMENT MARKING PER DETAIL \_\_\_ ON SHEET C\_\_\_
- ⑬ PAINT DIRECTIONAL ARROW PER DETAIL \_\_\_ ON SHEET C\_\_\_
- ⑭ PAINT ACCESS ROUTE LANE BOUNDARY, 4 INCH WIDE WHITE PAINT
- ⑮ PAINT ACCESS ROUTE CENTERLINE, 4 INCH YELLOW PAINT
- ⑯ CONCRETE GRADE CROSSING PANEL, REFER TO RAIL PLANS
- ⑰ 50 FT DOUBLE LEAF RAIL GATE
- ⑱ 18 FT SINGLE LEAF ENTRANCE GATE



SCALE IN FEET



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NO.	DATE	BY	REVISION

TERMINAL 4 RAIL AND SITE IMPROVEMENTS  
PORT OF GRAYS HARBOR

SITE PLAN  
AREA 1

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>C1</b>
SHEET NO.	<b>44</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:20pm rambert Layout: AREA 2  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\C1 - C14 SITE PLAN.dwg



**GENERAL NOTES**

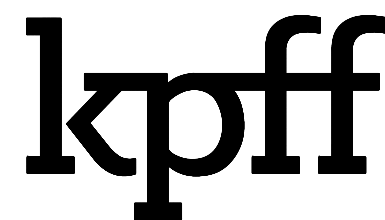
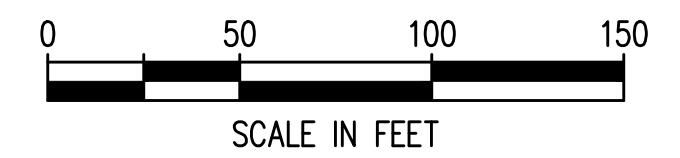
1. REFER TO SHEET \_\_\_\_\_ FOR LEGEND AND ABBREVIATIONS.
2. REFER TO SHEET \_\_\_\_\_ FOR HORIZONTAL CONTROL POINTS.
3. ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF PAVEMENT, UNLESS NOTED OTHERWISE.

**SITE CONSTRUCTION NOTES**

- ① EDGE OF PAVEMENT
- ② LIGHT DUTY HMA PAVEMENT
- ③ HEAVY DUTY HMA PAVEMENT
- ④ CONCRETE PAVEMENT
- ⑤ GRAVEL ACCESS ROAD
- ⑥ BALLAST OR WALKWAY ROCK SURFACE AS INDICATED ON RAIL PLANS
- ⑦ FENCE PER DETAILS ON C\_\_\_ AND C\_\_\_
- ⑧ 38 FT DOUBLE LEAF RAIL GATE
- ⑨ 34 FT DOUBLE LEAF ENTRANCE GATE
- ⑩ VERTICAL CURB
- ⑪ NEW HIGH MAST LIGHT POLE
- ⑫ PAINT 'STOP' PAVEMENT MARKING PER DETAIL \_\_\_ ON SHEET C\_\_\_
- ⑬ PAINT DIRECTIONAL ARROW PER DETAIL \_\_\_ ON SHEET C\_\_\_
- ⑭ PAINT ACCESS ROUTE LANE BOUNDARY, 4 INCH WIDE WHITE PAINT
- ⑮ PAINT ACCESS ROUTE CENTERLINE, 4 INCH YELLOW PAINT
- ⑯ CONCRETE GRADE CROSSING PANEL, REFER TO RAIL PLANS
- ⑰ 50 FT DOUBLE LEAF RAIL GATE
- ⑱ 18 FT SINGLE LEAF ENTRANCE GATE

MATCHLINE - SEE AREA 1

MATCHLINE - SEE AREA 3



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NO.	DATE	BY	REVISION

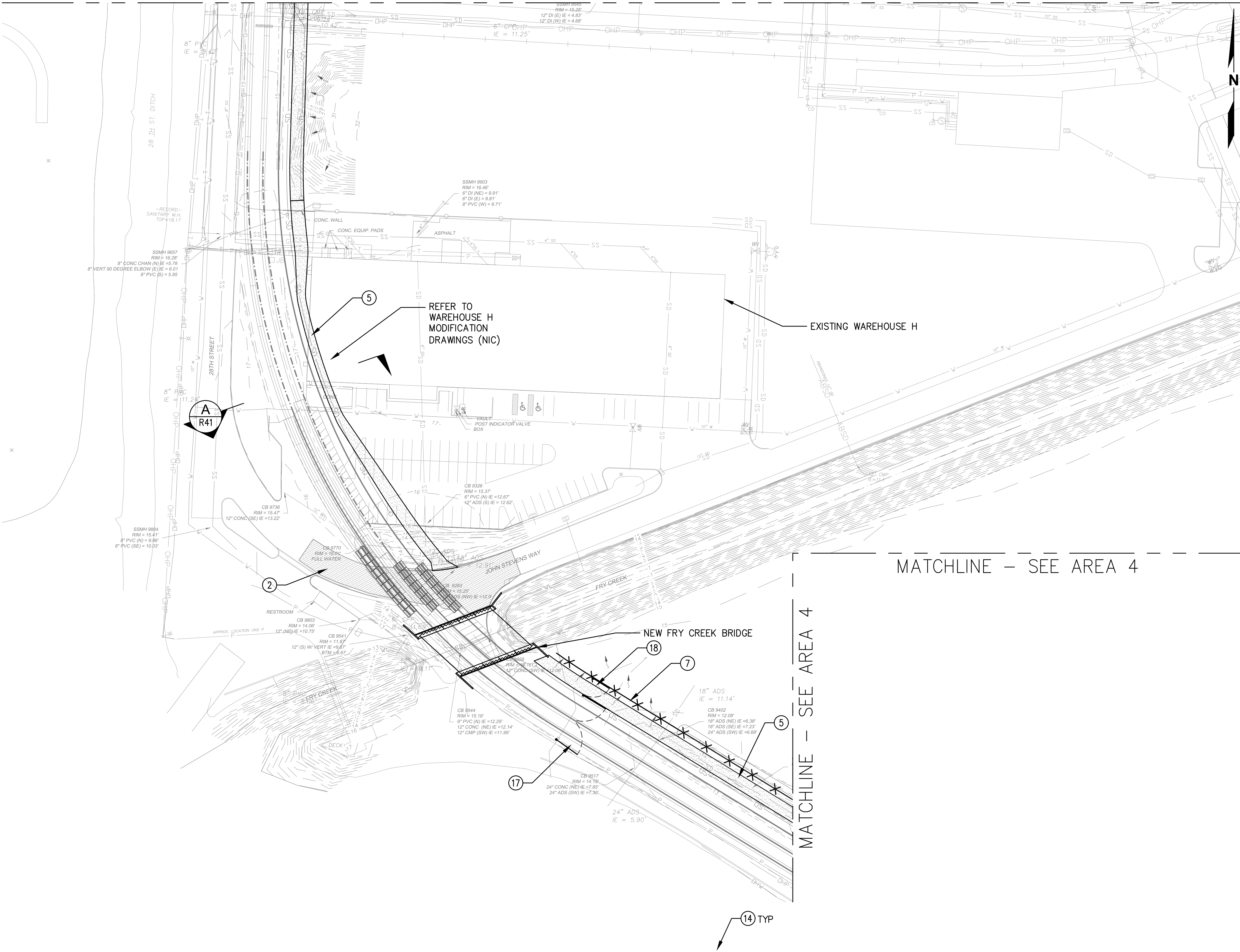
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**SITE PLAN**  
**AREA 2**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>C2</b>
SHEET NO.	<b>45 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

MATCHLINE - SEE AREA 2



**GENERAL NOTES**

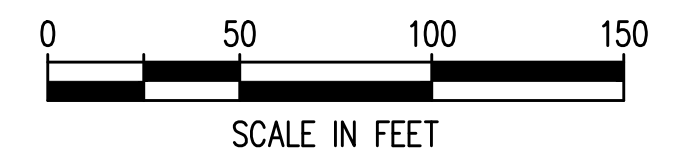
1. REFER TO SHEET \_\_\_\_\_ FOR LEGEND AND ABBREVIATIONS.
2. REFER TO SHEET \_\_\_\_\_ FOR HORIZONTAL CONTROL POINTS.
3. ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF PAVEMENT, UNLESS NOTED OTHERWISE.

**SITE CONSTRUCTION NOTES**

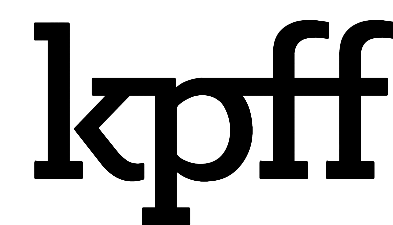
- ① EDGE OF PAVEMENT
- ② LIGHT DUTY HMA PAVEMENT
- ③ HEAVY DUTY HMA PAVEMENT
- ④ CONCRETE PAVEMENT
- ⑤ GRAVEL ACCESS ROAD
- ⑥ BALLAST OR WALKWAY ROCK SURFACE AS INDICATED ON RAIL PLANS
- ⑦ FENCE PER DETAILS ON C\_\_\_ AND C\_\_\_
- ⑧ 38 FT DOUBLE LEAF RAIL GATE
- ⑨ 34 FT DOUBLE LEAF ENTRANCE GATE
- ⑩ VERTICAL CURB
- ⑪ NEW HIGH MAST LIGHT POLE
- ⑫ PAINT 'STOP' PAVEMENT MARKING PER DETAIL \_\_\_ ON SHEET C\_\_\_
- ⑬ PAINT DIRECTIONAL ARROW PER DETAIL \_\_\_ ON SHEET C\_\_\_
- ⑭ PAINT ACCESS ROUTE LANE BOUNDARY, 4 INCH WIDE WHITE PAINT
- ⑮ PAINT ACCESS ROUTE CENTERLINE, 4 INCH YELLOW PAINT
- ⑯ CONCRETE GRADE CROSSING PANEL, REFER TO RAIL PLANS
- ⑰ 50 FT DOUBLE LEAF RAIL GATE
- ⑱ 18 FT SINGLE LEAF ENTRANCE GATE

MATCHLINE - SEE AREA 4

MATCHLINE - SEE AREA 4



Plotted: Jun 09, 2023 - 9:21pm riambert Layout: AREA 3  
N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\C1 - C14 SITE PLAN.dwg



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
PORT OF GRAYS HARBOR

**SITE PLAN**  
**AREA 3**

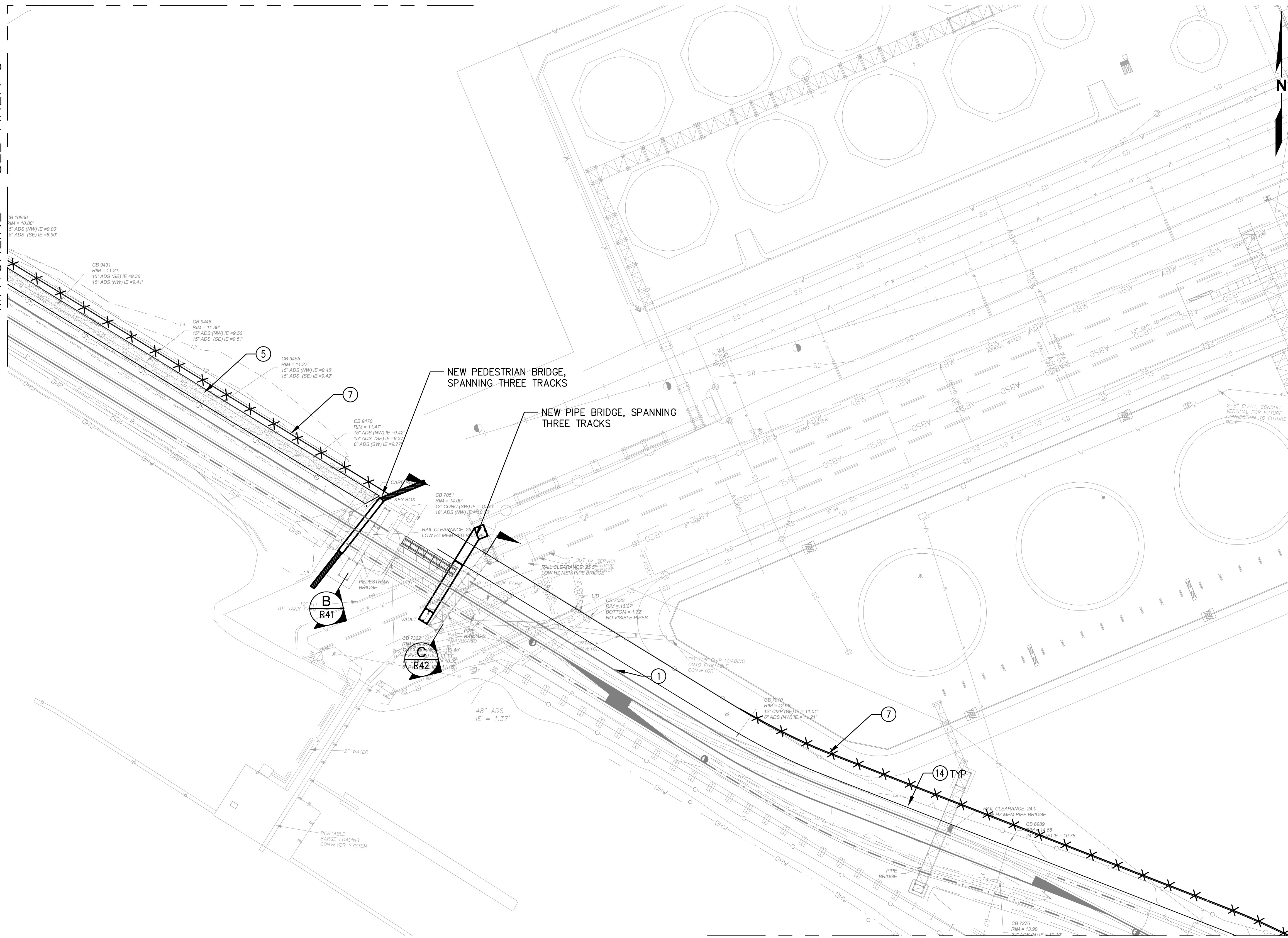
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DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>C3</b>
SHEET NO.	<b>46</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

MATCHLINE - SEE AREA 3

MATCHLINE - SEE AREA 3

Plotted: Jun 09, 2023 - 9:21pm riambert Layout: AREA 4  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\C1 - C14 SITE PLAN.dwg



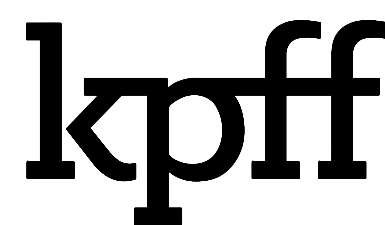
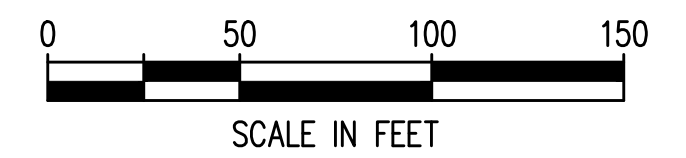
MATCHLINE - SEE AREA 5

**GENERAL NOTES**

1. REFER TO SHEET \_\_\_\_\_ FOR LEGEND AND ABBREVIATIONS.
2. REFER TO SHEET \_\_\_\_\_ FOR HORIZONTAL CONTROL POINTS.
3. ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF PAVEMENT, UNLESS NOTED OTHERWISE.

**SITE CONSTRUCTION NOTES**

- ① EDGE OF PAVEMENT
- ② LIGHT DUTY HMA PAVEMENT
- ③ HEAVY DUTY HMA PAVEMENT
- ④ CONCRETE PAVEMENT
- ⑤ GRAVEL ACCESS ROAD
- ⑥ BALLAST OR WALKWAY ROCK SURFACE AS INDICATED ON RAIL PLANS
- ⑦ FENCE PER DETAILS ON C\_\_\_ AND C\_\_\_
- ⑧ 38 FT DOUBLE LEAF RAIL GATE
- ⑨ 34 FT DOUBLE LEAF ENTRANCE GATE
- ⑩ VERTICAL CURB
- ⑪ NEW HIGH MAST LIGHT POLE
- ⑫ PAINT 'STOP' PAVEMENT MARKING PER DETAIL \_\_\_ ON SHEET C\_\_\_
- ⑬ PAINT DIRECTIONAL ARROW PER DETAIL \_\_\_ ON SHEET C\_\_\_
- ⑭ PAINT ACCESS ROUTE LANE BOUNDARY, 4 INCH WIDE WHITE PAINT
- ⑮ PAINT ACCESS ROUTE CENTERLINE, 4 INCH YELLOW PAINT
- ⑯ CONCRETE GRADE CROSSING PANEL, REFER TO RAIL PLANS
- ⑰ 50 FT DOUBLE LEAF RAIL GATE
- ⑱ 18 FT SINGLE LEAF ENTRANCE GATE



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**SITE PLAN**  
**AREA 4**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>C4</b>
SHEET NO.	<b>47</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION



MATCHLINE - SEE AREA 4

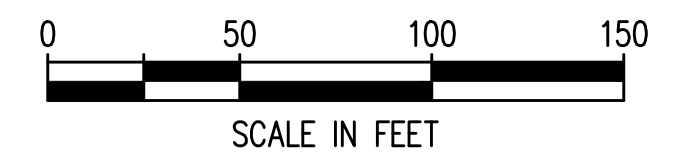
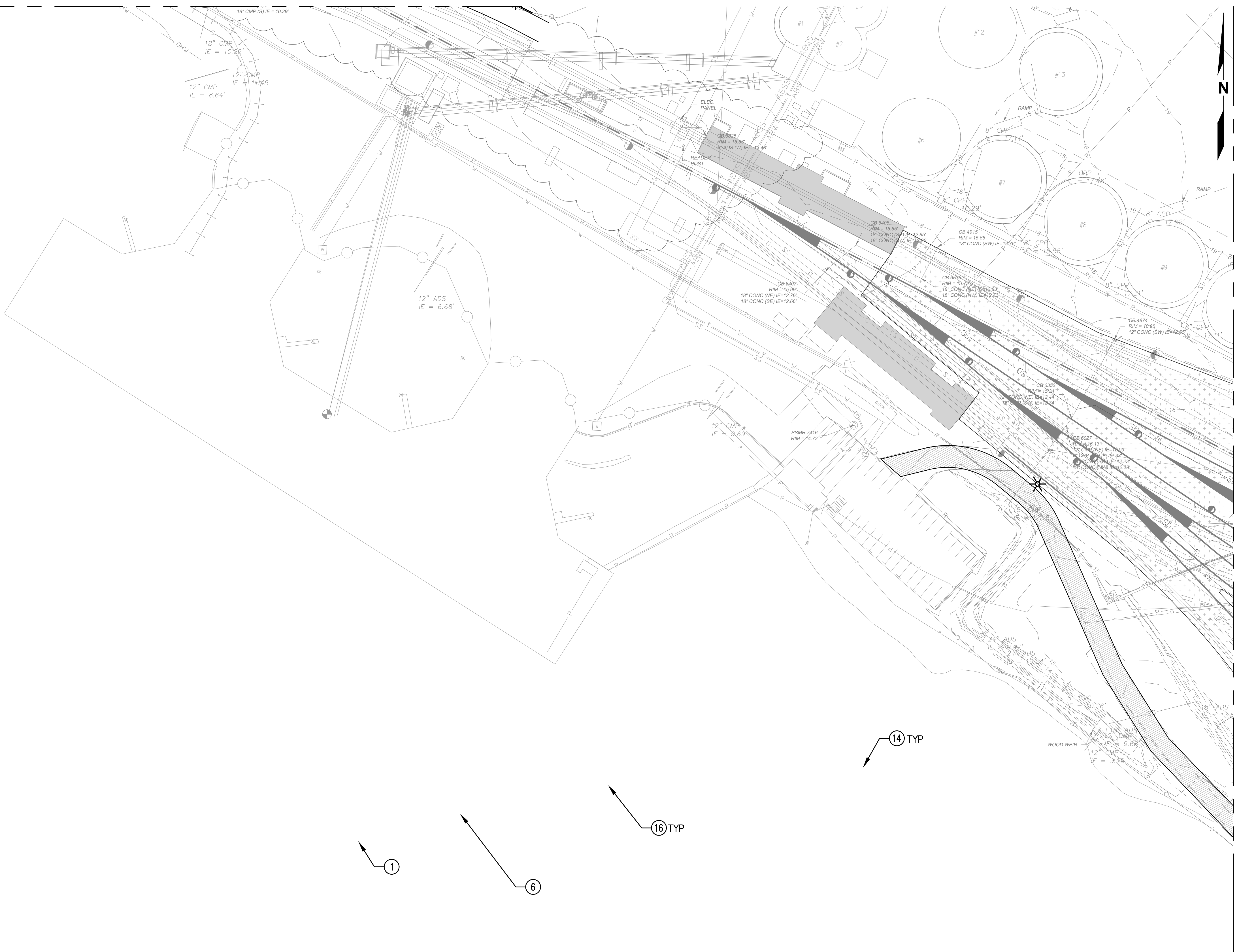
**GENERAL NOTES**

1. REFER TO SHEET \_\_\_\_\_ FOR LEGEND AND ABBREVIATIONS.
2. REFER TO SHEET \_\_\_\_\_ FOR HORIZONTAL CONTROL POINTS.
3. ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF PAVEMENT, UNLESS NOTED OTHERWISE.

**SITE CONSTRUCTION NOTES**

- ① EDGE OF PAVEMENT
- ② LIGHT DUTY HMA PAVEMENT
- ③ HEAVY DUTY HMA PAVEMENT
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- ⑭ PAINT ACCESS ROUTE LANE BOUNDARY, 4 INCH WIDE WHITE PAINT
- ⑮ PAINT ACCESS ROUTE CENTERLINE, 4 INCH YELLOW PAINT
- ⑯ CONCRETE GRADE CROSSING PANEL, REFER TO RAIL PLANS
- ⑰ 50 FT DOUBLE LEAF RAIL GATE
- ⑱ 18 FT SINGLE LEAF ENTRANCE GATE

MATCHLINE - SEE AREA 6



Plotted: Jun 09, 2023 - 9:21pm rambert Layout: AREA 5 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\C1 - C14 SITE PLAN.dwg



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NO.	DATE	BY	REVISION

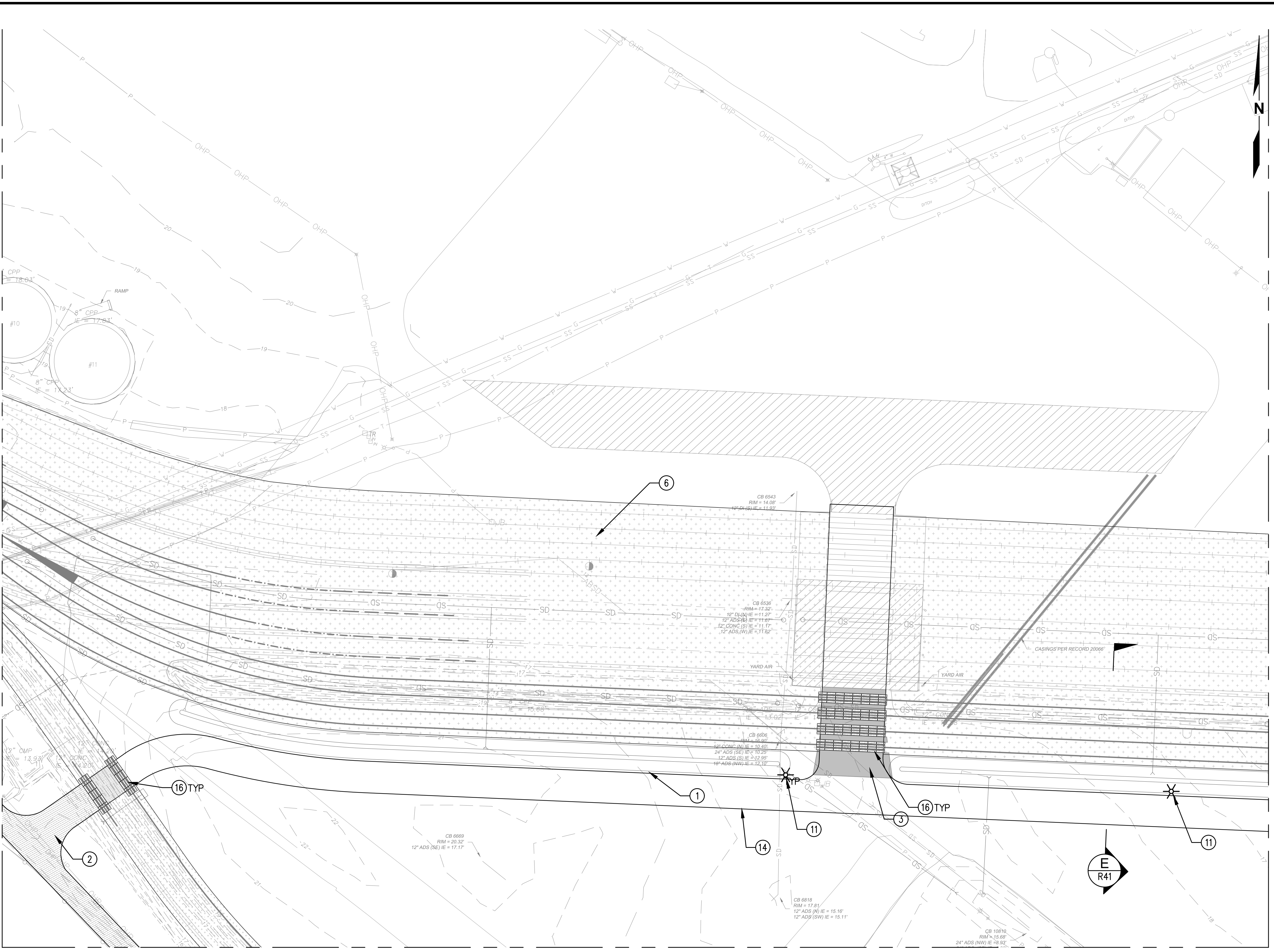
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
PORT OF GRAYS HARBOR

**SITE PLAN**  
**AREA 5**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>C5</b>
SHEET NO.	<b>48 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:21pm riambert Layout: AREA 6  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\C1 - C14 SITE PLAN.dwg



**GENERAL NOTES**

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2. REFER TO SHEET \_\_\_\_\_ FOR HORIZONTAL CONTROL POINTS.
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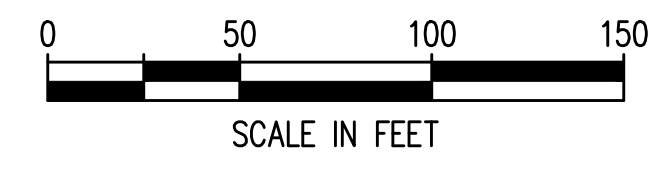
**SITE CONSTRUCTION NOTES**

- ① EDGE OF PAVEMENT
- ② LIGHT DUTY HMA PAVEMENT
- ③ HEAVY DUTY HMA PAVEMENT
- ④ CONCRETE PAVEMENT
- ⑤ GRAVEL ACCESS ROAD
- ⑥ BALLAST OR WALKWAY ROCK SURFACE AS INDICATED ON RAIL PLANS
- ⑦ FENCE PER DETAILS ON C\_\_\_ AND C\_\_\_
- ⑧ 38 FT DOUBLE LEAF RAIL GATE
- ⑨ 34 FT DOUBLE LEAF ENTRANCE GATE
- ⑩ VERTICAL CURB
- ⑪ NEW HIGH MAST LIGHT POLE
- ⑫ PAINT 'STOP' PAVEMENT MARKING PER DETAIL \_\_\_ ON SHEET C\_\_\_
- ⑬ PAINT DIRECTIONAL ARROW PER DETAIL \_\_\_ ON SHEET C\_\_\_
- ⑭ PAINT ACCESS ROUTE LANE BOUNDARY, 4 INCH WIDE WHITE PAINT
- ⑮ PAINT ACCESS ROUTE CENTERLINE, 4 INCH YELLOW PAINT
- ⑯ CONCRETE GRADE CROSSING PANEL, REFER TO RAIL PLANS
- ⑰ 50 FT DOUBLE LEAF RAIL GATE
- ⑱ 18 FT SINGLE LEAF ENTRANCE GATE

MATCHLINE - SEE AREA 5

MATCHLINE - SEE AREA 14

MATCHLINE - SEE AREA 7



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**SITE PLAN**  
**AREA 6**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>C6</b>
SHEET NO.	<b>49</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

MATCHLINE — SEE AREA 6

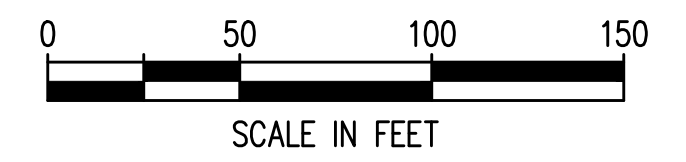
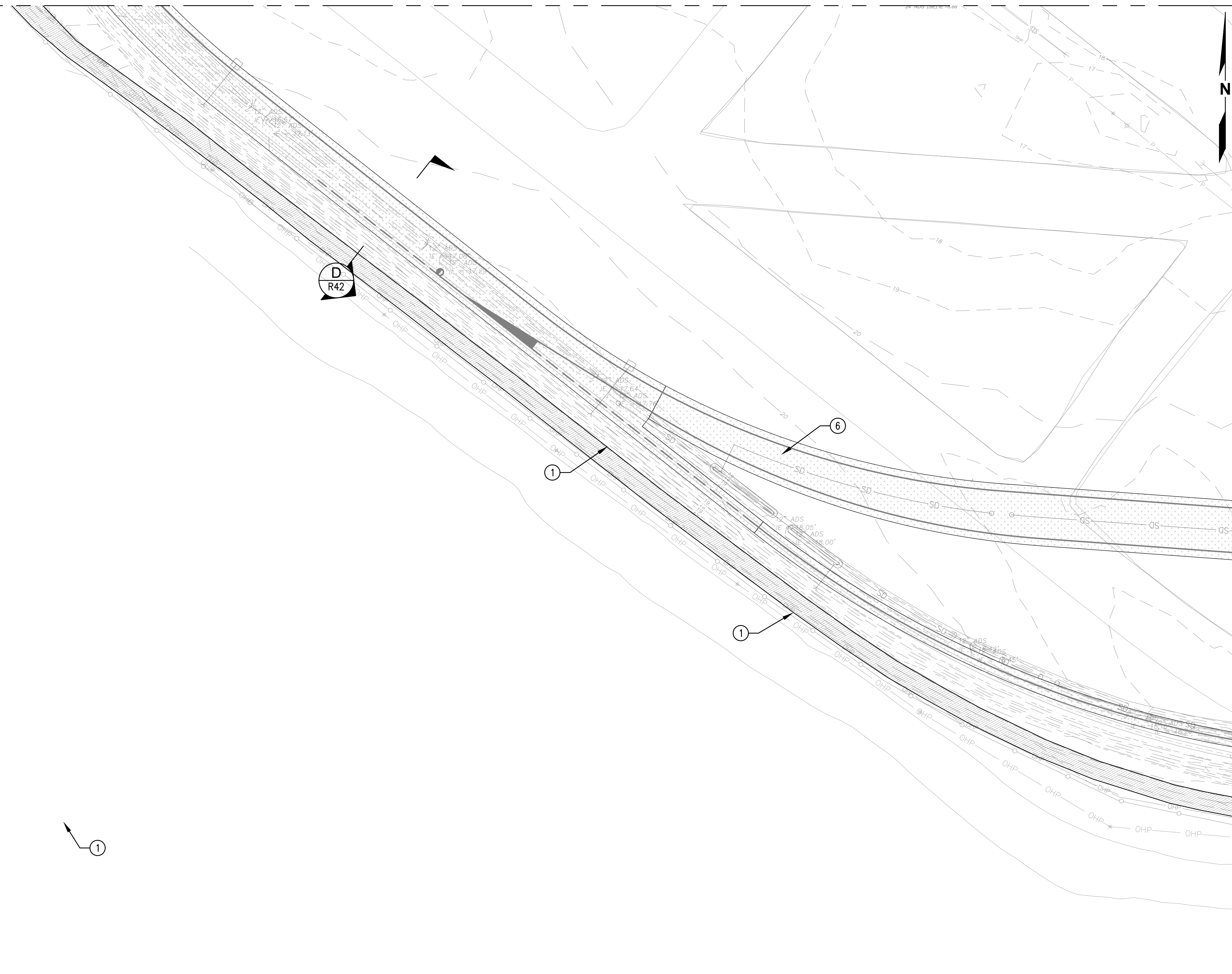
**GENERAL NOTES**

1. REFER TO SHEET \_\_\_\_\_ FOR LEGEND AND ABBREVIATIONS.
2. REFER TO SHEET \_\_\_\_\_ FOR HORIZONTAL CONTROL POINTS.
3. ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF PAVEMENT, UNLESS NOTED OTHERWISE.

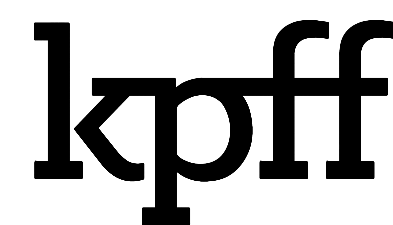
**SITE CONSTRUCTION NOTES**

- ① EDGE OF PAVEMENT
- ② LIGHT DUTY HMA PAVEMENT
- ③ HEAVY DUTY HMA PAVEMENT
- ④ CONCRETE PAVEMENT
- ⑤ GRAVEL ACCESS ROAD
- ⑥ BALLAST OR WALKWAY ROCK SURFACE AS INDICATED ON RAIL PLANS
- ⑦ FENCE PER DETAILS ON C\_\_\_ AND C\_\_\_
- ⑧ 38 FT DOUBLE LEAF RAIL GATE
- ⑨ 34 FT DOUBLE LEAF ENTRANCE GATE
- ⑩ VERTICAL CURB
- ⑪ NEW HIGH MAST LIGHT POLE
- ⑫ PAINT 'STOP' PAVEMENT MARKING PER DETAIL \_\_\_ ON SHEET C\_\_\_
- ⑬ PAINT DIRECTIONAL ARROW PER DETAIL \_\_\_ ON SHEET C\_\_\_
- ⑭ PAINT ACCESS ROUTE LANE BOUNDARY, 4 INCH WIDE WHITE PAINT
- ⑮ PAINT ACCESS ROUTE CENTERLINE, 4 INCH YELLOW PAINT
- ⑯ CONCRETE GRADE CROSSING PANEL, REFER TO RAIL PLANS
- ⑰ 50 FT DOUBLE LEAF RAIL GATE
- ⑱ 18 FT SINGLE LEAF ENTRANCE GATE

MATCHLINE — SEE AREA 8



Plotted: Jun 09, 2023 - 9:21pm rambert Layout: AREA 7  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\C1 - C14 SITE PLAN.dwg



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**SITE PLAN**  
**AREA 7**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>C7</b>
SHEET NO.	<b>50</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

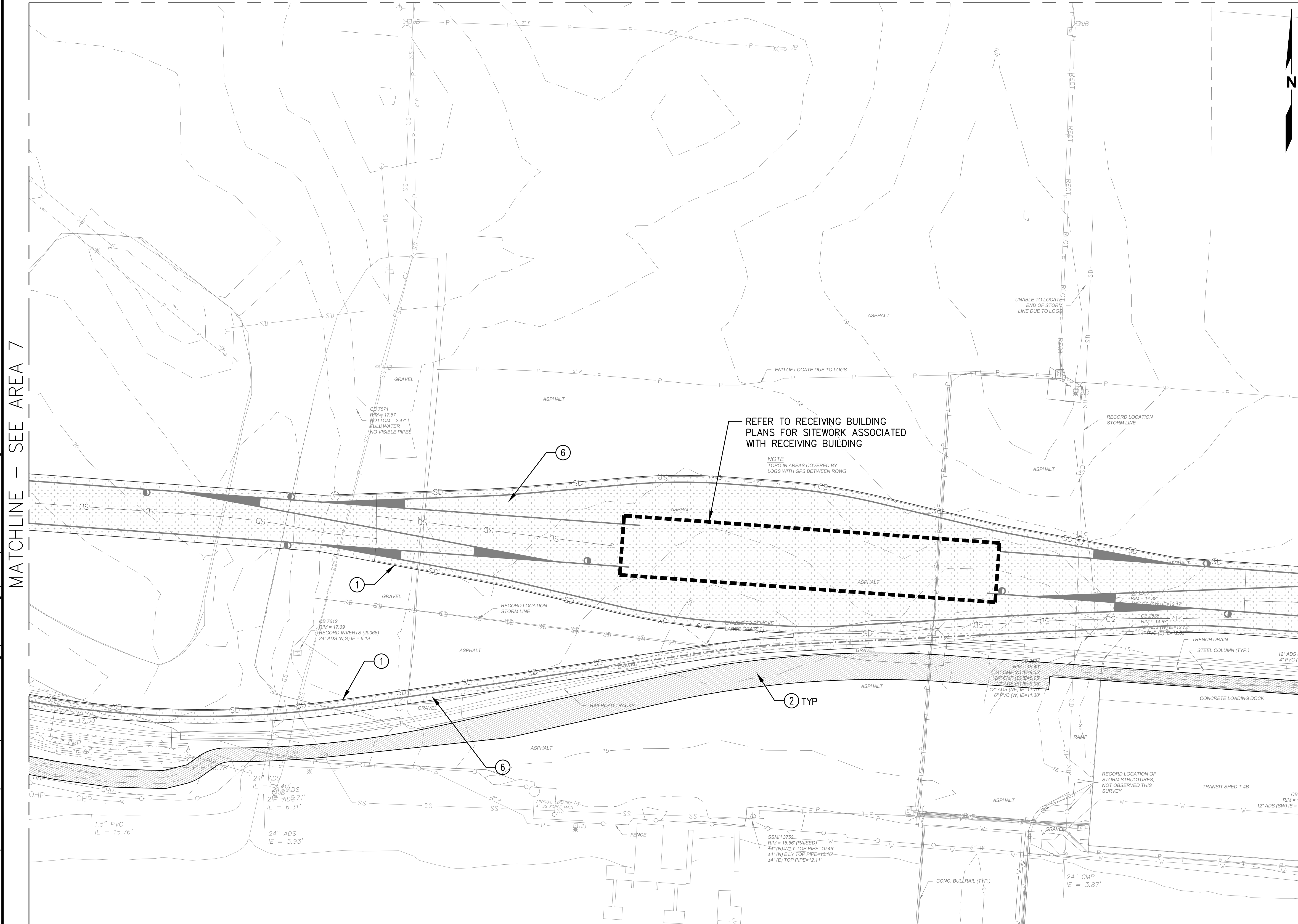
MATCHLINE - SEE AREA 14

**GENERAL NOTES**

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2. REFER TO SHEET \_\_\_\_\_ FOR HORIZONTAL CONTROL POINTS.
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**SITE CONSTRUCTION NOTES**

- ① EDGE OF PAVEMENT
- ② LIGHT DUTY HMA PAVEMENT
- ③ HEAVY DUTY HMA PAVEMENT
- ④ CONCRETE PAVEMENT
- ⑤ GRAVEL ACCESS ROAD
- ⑥ BALLAST OR WALKWAY ROCK SURFACE AS INDICATED ON RAIL PLANS
- ⑦ FENCE PER DETAILS ON C\_\_\_ AND C\_\_\_
- ⑧ 38 FT DOUBLE LEAF RAIL GATE
- ⑨ 34 FT DOUBLE LEAF ENTRANCE GATE
- ⑩ VERTICAL CURB
- ⑪ NEW HIGH MAST LIGHT POLE
- ⑫ PAINT 'STOP' PAVEMENT MARKING PER DETAIL \_\_\_ ON SHEET C\_\_\_
- ⑬ PAINT DIRECTIONAL ARROW PER DETAIL \_\_\_ ON SHEET C\_\_\_
- ⑭ PAINT ACCESS ROUTE LANE BOUNDARY, 4 INCH WIDE WHITE PAINT
- ⑮ PAINT ACCESS ROUTE CENTERLINE, 4 INCH YELLOW PAINT
- ⑯ CONCRETE GRADE CROSSING PANEL, REFER TO RAIL PLANS
- ⑰ 50 FT DOUBLE LEAF RAIL GATE
- ⑱ 18 FT SINGLE LEAF ENTRANCE GATE



Plotted: Jun 09, 2023 - 9:21pm riambert Layout: AREA 8  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\C1 - C14 SITE PLAN.dwg



NO.	DATE	BY	REVISION

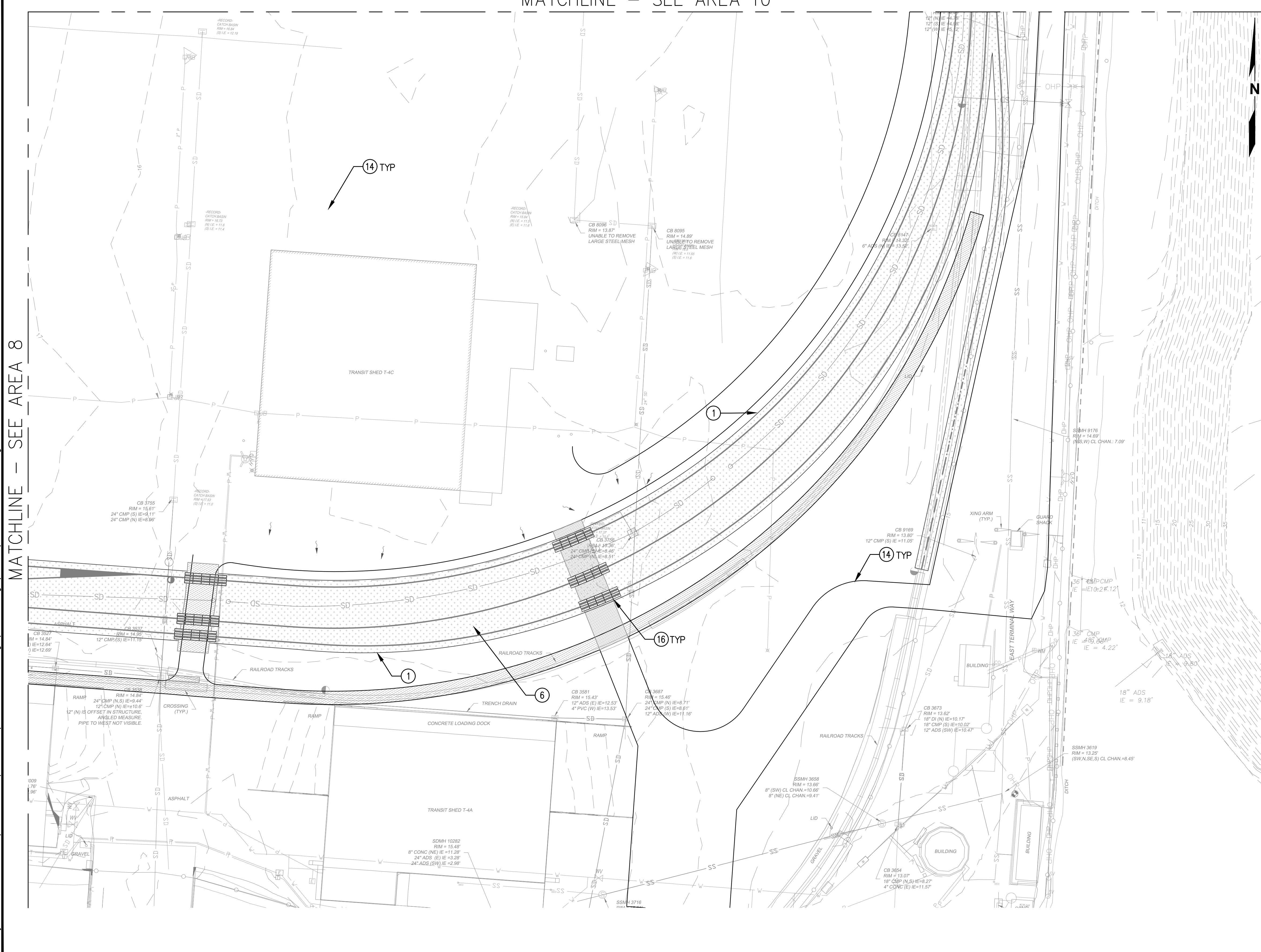
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**SITE PLAN**  
**AREA 8**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>C8</b>
SHEET NO.	<b>51</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

MATCHLINE - SEE AREA 10

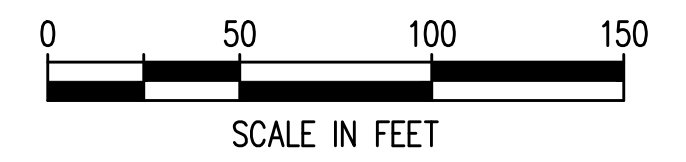


**GENERAL NOTES**

1. REFER TO SHEET \_\_\_\_\_ FOR LEGEND AND ABBREVIATIONS.
2. REFER TO SHEET \_\_\_\_\_ FOR HORIZONTAL CONTROL POINTS.
3. ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF PAVEMENT, UNLESS NOTED OTHERWISE.

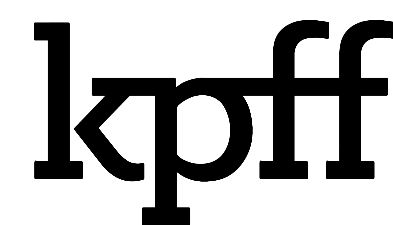
**SITE CONSTRUCTION NOTES**

- ① EDGE OF PAVEMENT
- ② LIGHT DUTY HMA PAVEMENT
- ③ HEAVY DUTY HMA PAVEMENT
- ④ CONCRETE PAVEMENT
- ⑤ GRAVEL ACCESS ROAD
- ⑥ BALLAST OR WALKWAY ROCK SURFACE AS INDICATED ON RAIL PLANS
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- ⑪ NEW HIGH MAST LIGHT POLE
- ⑫ PAINT 'STOP' PAVEMENT MARKING PER DETAIL \_\_\_ ON SHEET C\_\_\_
- ⑬ PAINT DIRECTIONAL ARROW PER DETAIL \_\_\_ ON SHEET C\_\_\_
- ⑭ PAINT ACCESS ROUTE LANE BOUNDARY, 4 INCH WIDE WHITE PAINT
- ⑮ PAINT ACCESS ROUTE CENTERLINE, 4 INCH YELLOW PAINT
- ⑯ CONCRETE GRADE CROSSING PANEL, REFER TO RAIL PLANS
- ⑰ 50 FT DOUBLE LEAF RAIL GATE
- ⑱ 18 FT SINGLE LEAF ENTRANCE GATE



Plotted: Jun 09, 2023 - 9:21pm  
 rambert Layout: AREA 9  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\C1 - C14 SITE PLAN.dwg

MATCHLINE - SEE AREA 8



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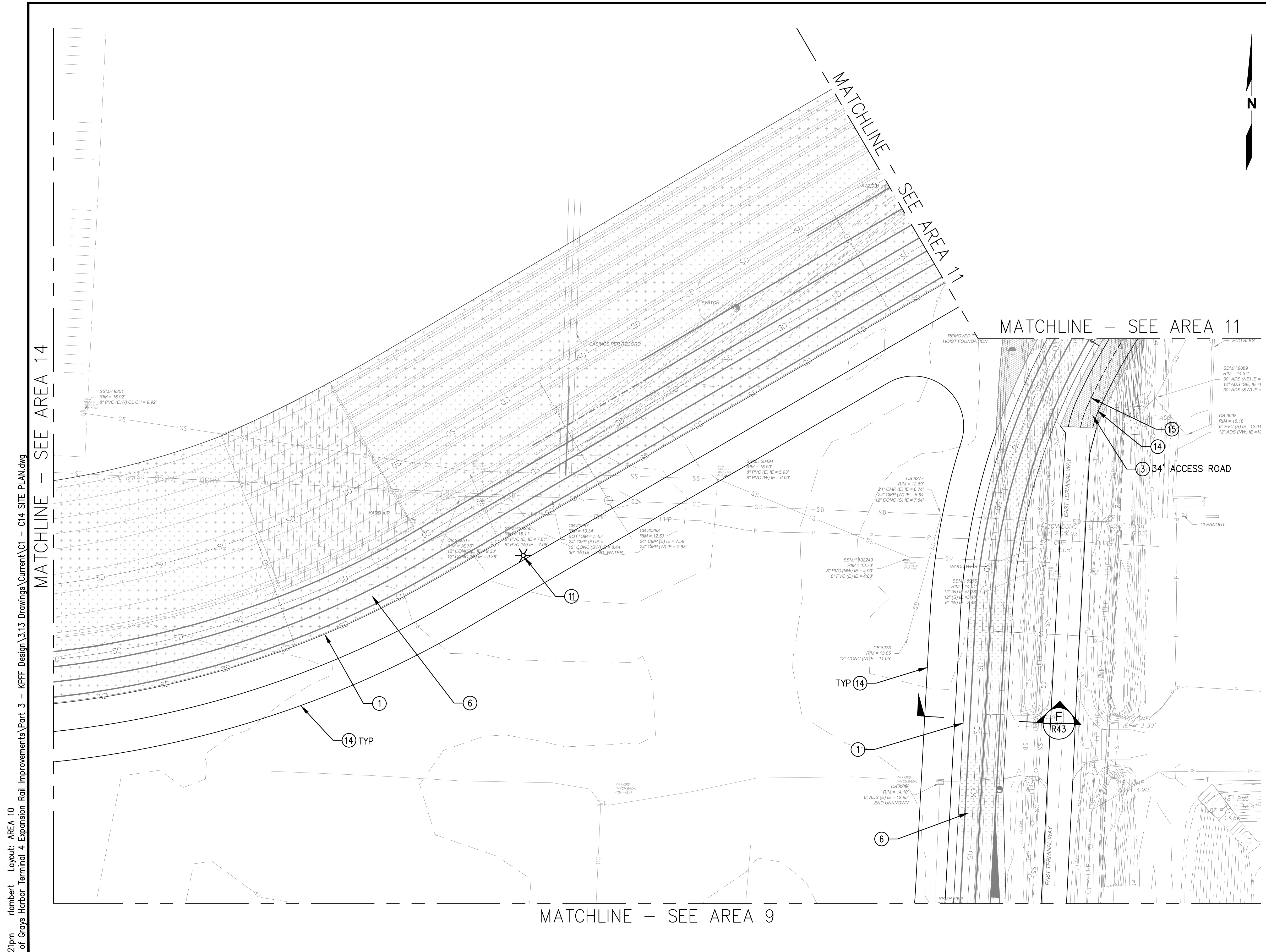
NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**SITE PLAN**  
**AREA 9**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>C9</b>
SHEET NO.	<b>52 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

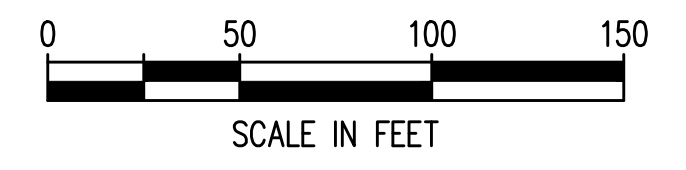


**GENERAL NOTES**

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2. REFER TO SHEET \_\_\_\_\_ FOR HORIZONTAL CONTROL POINTS.
3. ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF PAVEMENT, UNLESS NOTED OTHERWISE.

**SITE CONSTRUCTION NOTES**

- ① EDGE OF PAVEMENT
- ② LIGHT DUTY HMA PAVEMENT
- ③ HEAVY DUTY HMA PAVEMENT
- ④ CONCRETE PAVEMENT
- ⑤ GRAVEL ACCESS ROAD
- ⑥ BALLAST OR WALKWAY ROCK SURFACE AS INDICATED ON RAIL PLANS
- ⑦ FENCE PER DETAILS ON C\_\_\_ AND C\_\_\_
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- ⑨ 34 FT DOUBLE LEAF ENTRANCE GATE
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- ⑪ NEW HIGH MAST LIGHT POLE
- ⑫ PAINT 'STOP' PAVEMENT MARKING PER DETAIL \_\_\_ ON SHEET C\_\_\_
- ⑬ PAINT DIRECTIONAL ARROW PER DETAIL \_\_\_ ON SHEET C\_\_\_
- ⑭ PAINT ACCESS ROUTE LANE BOUNDARY, 4 INCH WIDE WHITE PAINT
- ⑮ PAINT ACCESS ROUTE CENTERLINE, 4 INCH YELLOW PAINT
- ⑯ CONCRETE GRADE CROSSING PANEL, REFER TO RAIL PLANS
- ⑰ 50 FT DOUBLE LEAF RAIL GATE
- ⑱ 18 FT SINGLE LEAF ENTRANCE GATE



Plotted: Jun 09, 2023 - 9:21pm riambert Layout: AREA 10  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\C1 - C14 SITE PLAN.dwg

MATCHLINE - SEE AREA 14

MATCHLINE - SEE AREA 9



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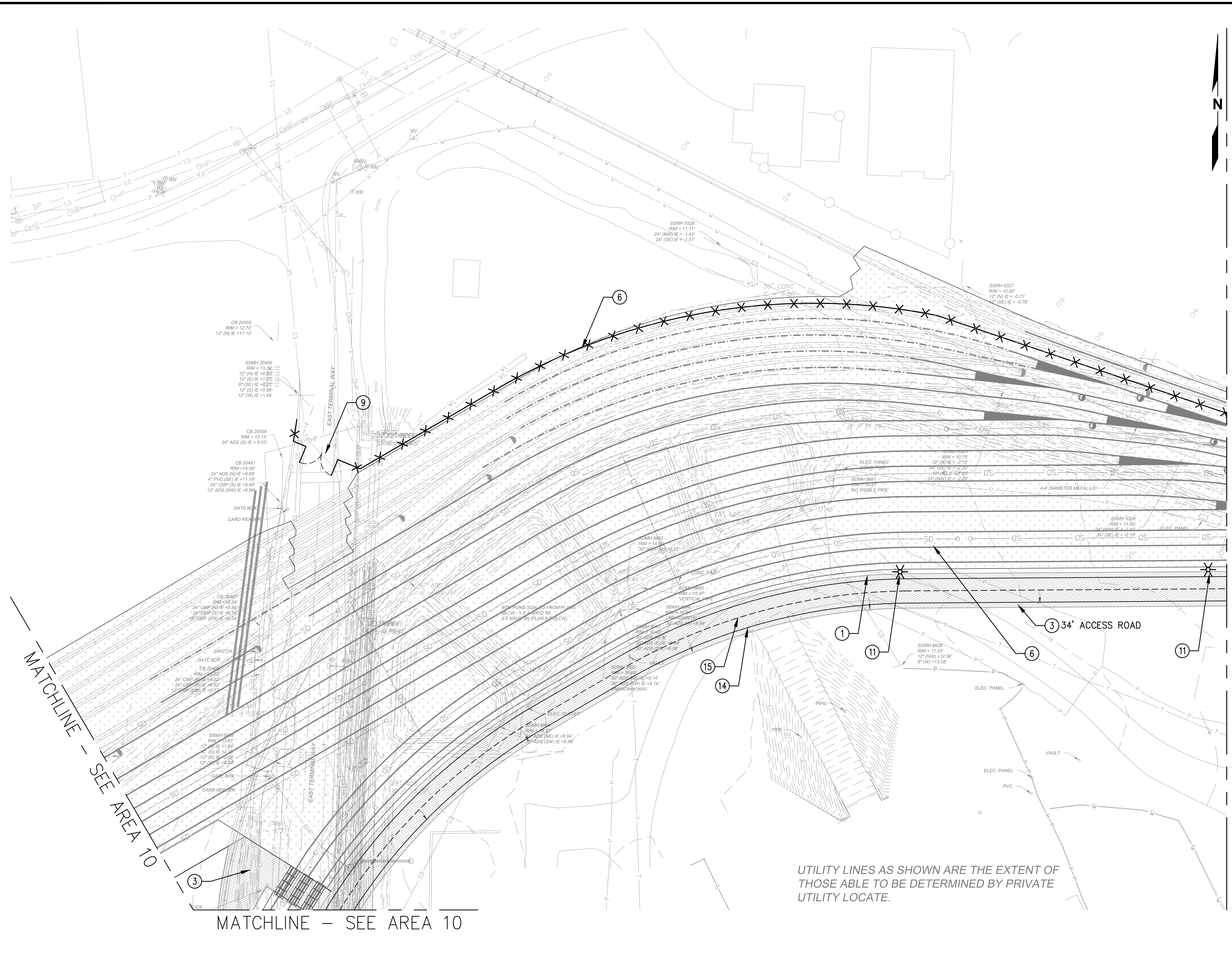
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**SITE PLAN**  
**AREA 10**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>C10</b>
SHEET NO.	<b>53</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:21pm riambert Layout: AREA 11  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\C1 - C14 SITE PLAN.dwg



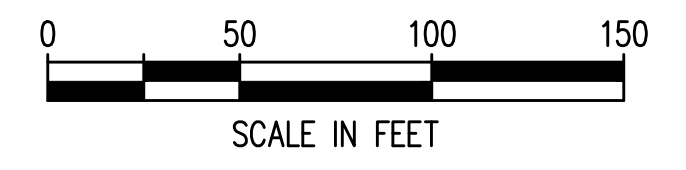
**GENERAL NOTES**

1. REFER TO SHEET \_\_\_\_\_ FOR LEGEND AND ABBREVIATIONS.
2. REFER TO SHEET \_\_\_\_\_ FOR HORIZONTAL CONTROL POINTS.
3. ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF PAVEMENT, UNLESS NOTED OTHERWISE.

**SITE CONSTRUCTION NOTES**

- ① EDGE OF PAVEMENT
- ② LIGHT DUTY HMA PAVEMENT
- ③ HEAVY DUTY HMA PAVEMENT
- ④ CONCRETE PAVEMENT
- ⑤ GRAVEL ACCESS ROAD
- ⑥ BALLAST OR WALKWAY ROCK SURFACE AS INDICATED ON RAIL PLANS
- ⑦ FENCE PER DETAILS ON C\_\_\_ AND C\_\_\_
- ⑧ 38 FT DOUBLE LEAF RAIL GATE
- ⑨ 34 FT DOUBLE LEAF ENTRANCE GATE
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- ⑪ NEW HIGH MAST LIGHT POLE
- ⑫ PAINT 'STOP' PAVEMENT MARKING PER DETAIL \_\_\_ ON SHEET C\_\_\_
- ⑬ PAINT DIRECTIONAL ARROW PER DETAIL \_\_\_ ON SHEET C\_\_\_
- ⑭ PAINT ACCESS ROUTE LANE BOUNDARY, 4 INCH WIDE WHITE PAINT
- ⑮ PAINT ACCESS ROUTE CENTERLINE, 4 INCH YELLOW PAINT
- ⑯ CONCRETE GRADE CROSSING PANEL, REFER TO RAIL PLANS
- ⑰ 50 FT DOUBLE LEAF RAIL GATE
- ⑱ 18 FT SINGLE LEAF ENTRANCE GATE

UTILITY LINES AS SHOWN ARE THE EXTENT OF THOSE ABLE TO BE DETERMINED BY PRIVATE UTILITY LOCATE.



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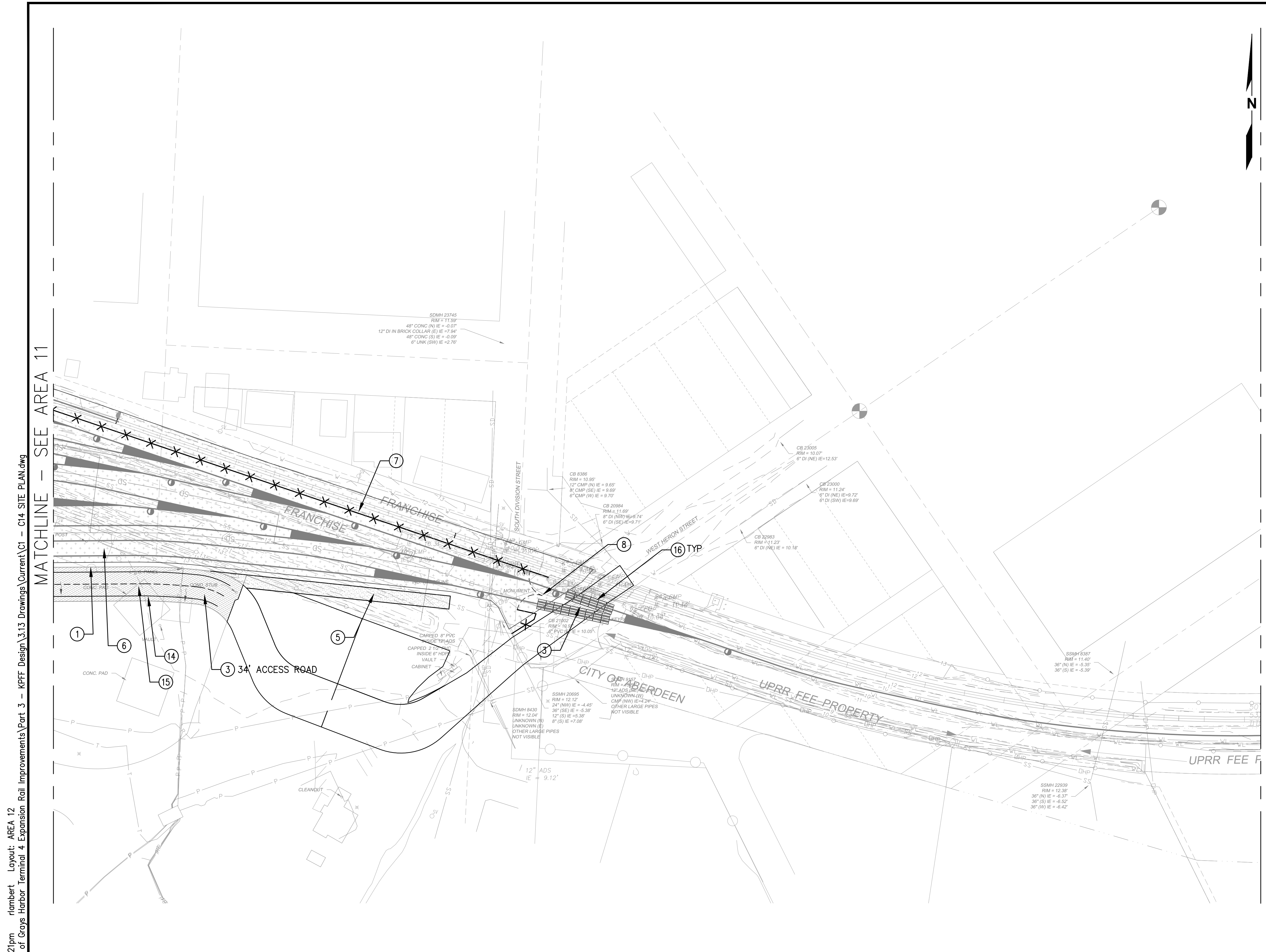
NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**SITE PLAN**  
**AREA 11**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>C11</b>
SHEET NO.	<b>54</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

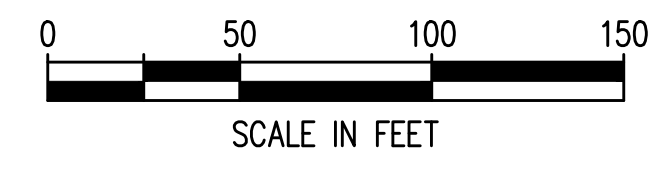


**GENERAL NOTES**

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**SITE CONSTRUCTION NOTES**

- ① EDGE OF PAVEMENT
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- ④ CONCRETE PAVEMENT
- ⑤ GRAVEL ACCESS ROAD
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- ⑱ 18 FT SINGLE LEAF ENTRANCE GATE



Plotted: Jun 09, 2023 - 9:21pm r1ambert Layout: AREA 12  
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MATCHLINE - SEE AREA 11

MATCHLINE - SEE AREA 13



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**SITE PLAN**  
**AREA 12**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>C12</b>
SHEET NO.	<b>55</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION



Plotted: Jun 09, 2023 - 9:22pm riambert Layout: AREA 13  
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MATCHLINE - SEE AREA 12



**GENERAL NOTES**

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**SITE CONSTRUCTION NOTES**

- ① EDGE OF PAVEMENT
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- ③ HEAVY DUTY HMA PAVEMENT
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- ⑤ GRAVEL ACCESS ROAD
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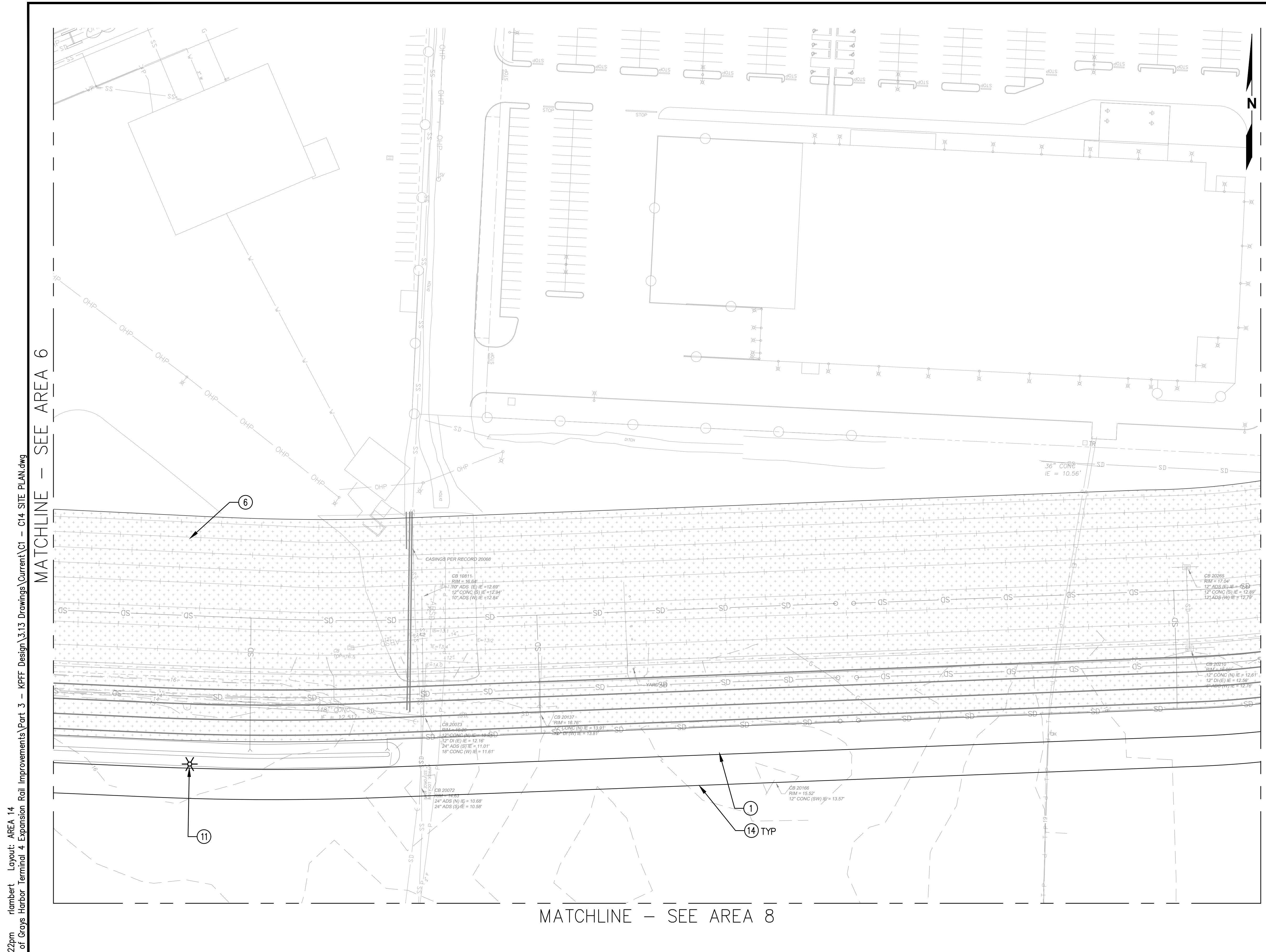
NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**SITE PLAN**  
**AREA 13**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>C13</b>
SHEET NO.	<b>56</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

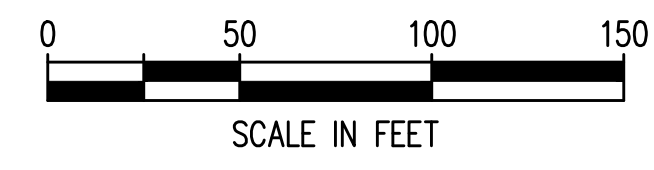


**GENERAL NOTES**

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**SITE CONSTRUCTION NOTES**

- ① EDGE OF PAVEMENT
- ② LIGHT DUTY HMA PAVEMENT
- ③ HEAVY DUTY HMA PAVEMENT
- ④ CONCRETE PAVEMENT
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- ⑪ NEW HIGH MAST LIGHT POLE
- ⑫ PAINT 'STOP' PAVEMENT MARKING PER DETAIL \_\_\_ ON SHEET C\_\_\_
- ⑬ PAINT DIRECTIONAL ARROW PER DETAIL \_\_\_ ON SHEET C\_\_\_
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- ⑮ PAINT ACCESS ROUTE CENTERLINE, 4 INCH YELLOW PAINT
- ⑯ CONCRETE GRADE CROSSING PANEL, REFER TO RAIL PLANS
- ⑰ 50 FT DOUBLE LEAF RAIL GATE
- ⑱ 18 FT SINGLE LEAF ENTRANCE GATE



Plotted: Jun 09, 2023 - 9:22pm rambert Layout: AREA 14  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\C1 - C14 SITE PLAN.dwg

MATCHLINE - SEE AREA 6

MATCHLINE - SEE AREA 10

MATCHLINE - SEE AREA 8



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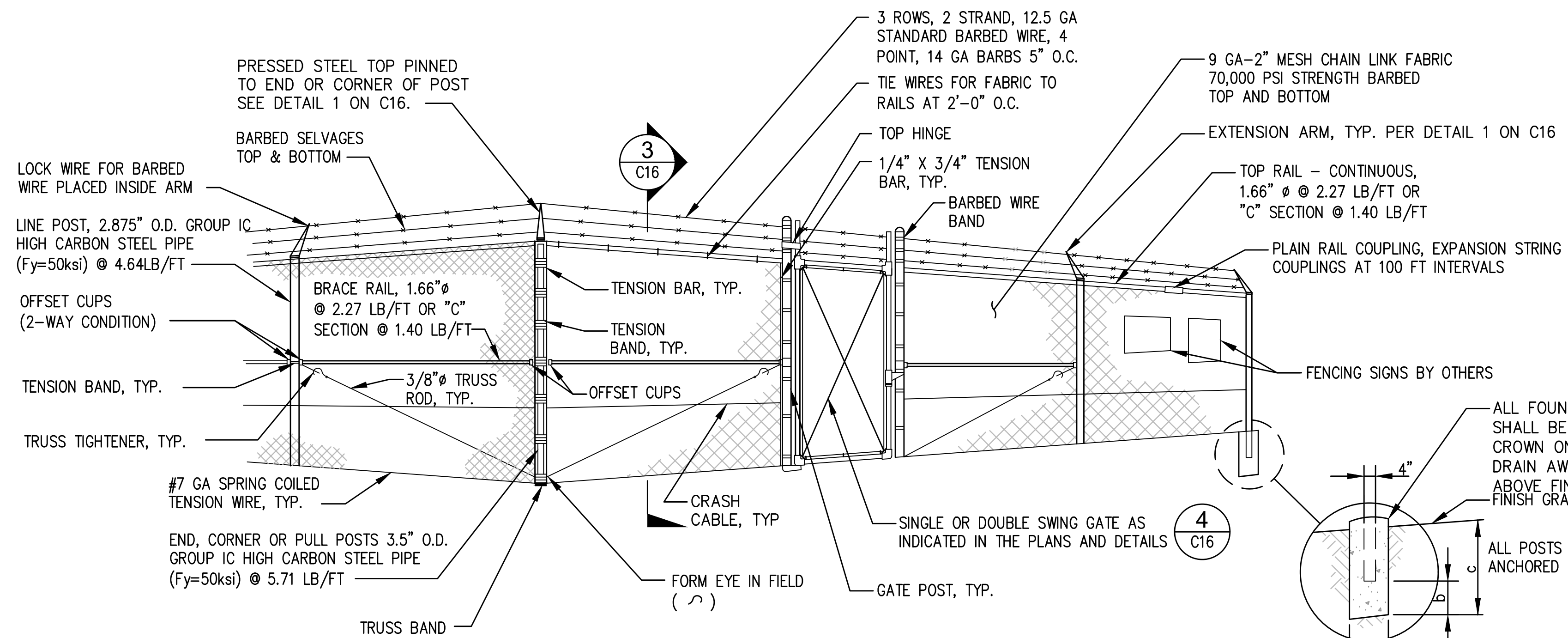
NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**SITE PLAN**  
**AREA 14**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>C14</b>
SHEET NO.	<b>57</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

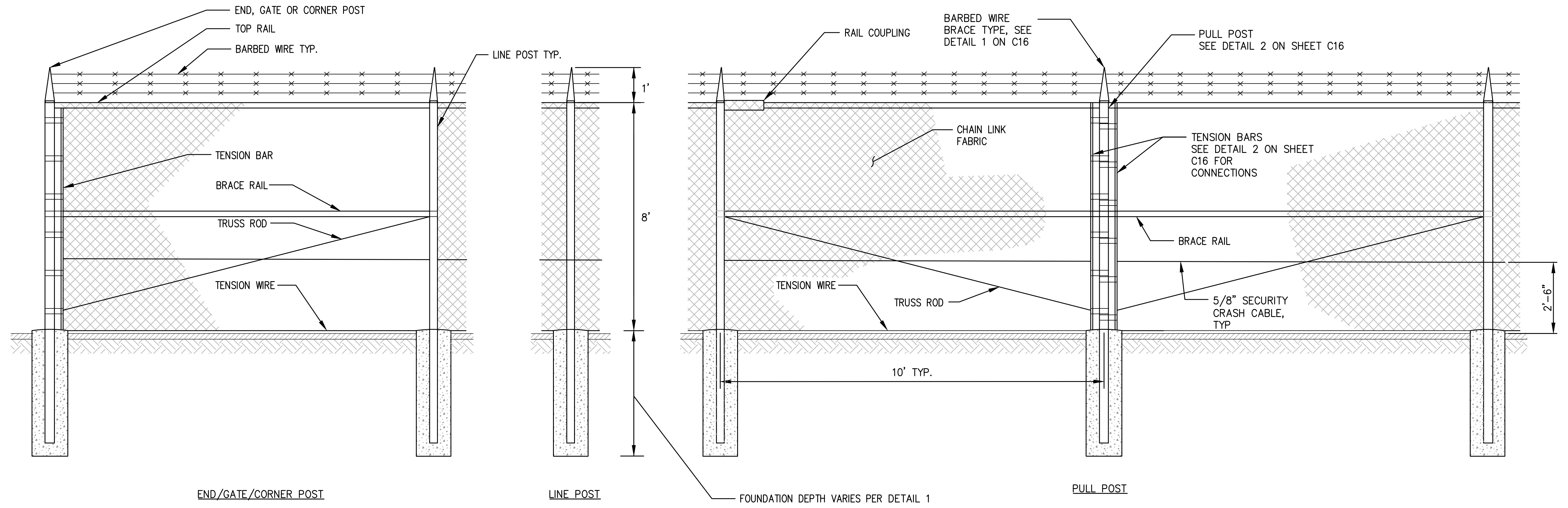


CONCRETE FOUNDATION DIMENSIONS			
LOCATION	a	b	c
CORNER	12"	6"	4'-6"
END	12"	6"	4'-6"
GATE	18" + POST OD	6"	4'-6"
LINE & TYP	10"	6"	4'-6"

**NOTES :**

1. ALL FENCING MATERIALS SHALL BE POLYVINYL CHLORIDE (PVC) COATED, UNLESS NOTED OTHERWISE.

**1 BLACK VINYL COATED CHAIN LINK FENCE DETAIL**  
 C1-C14 SCALE: NTS



**2 PULL POST/LINE POST DETAIL**  
 C1-C14 SCALE: NTS

Plotted: Jun 09, 2023 - 9:22pm rambert Layout: C15 SITE DETAILS  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\C15-C20 SITE DETAILS.dwg



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

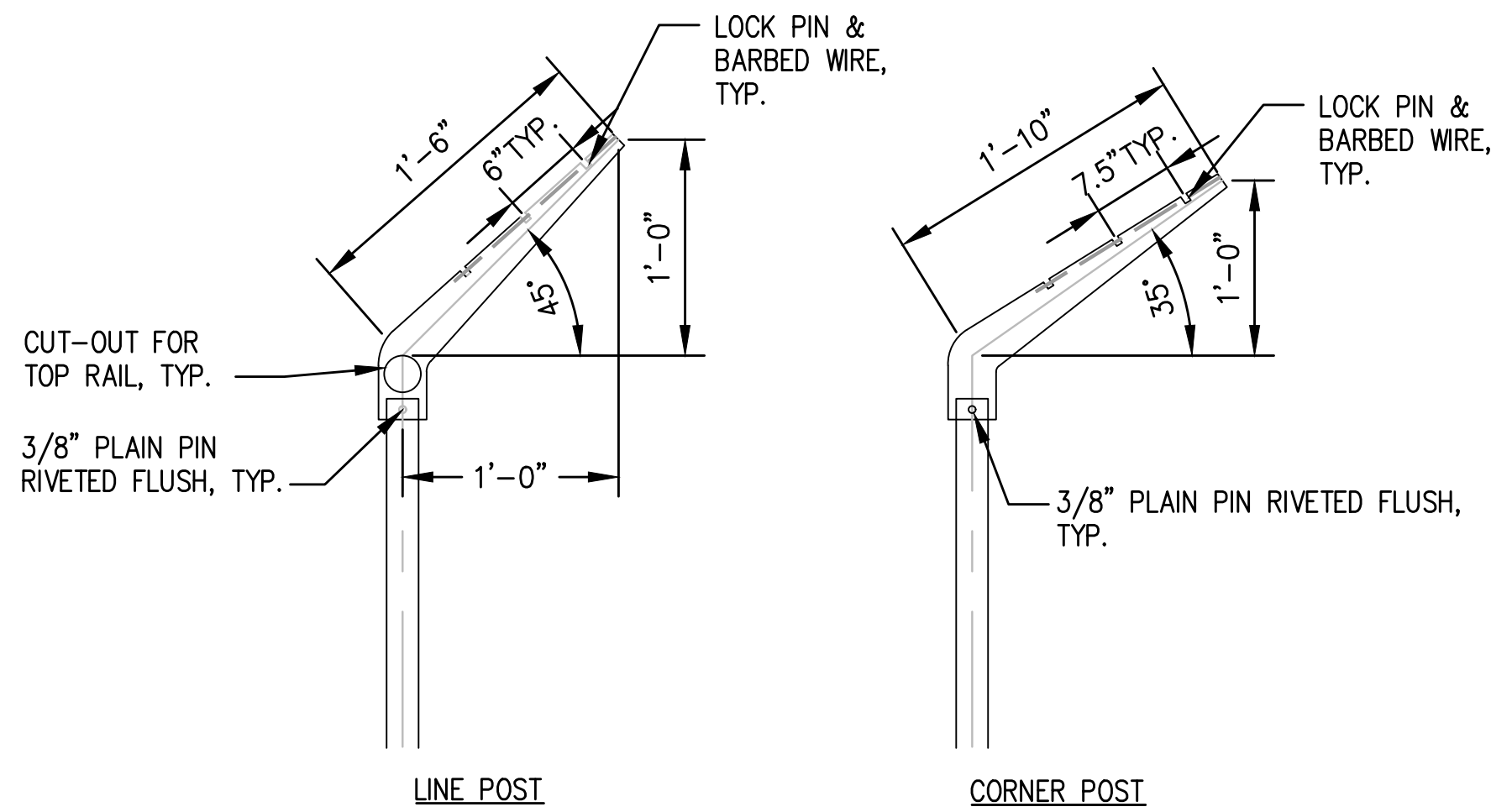
**SITE DETAILS**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>C15</b>
SHEET NO.	<b>58</b> OF <b>142</b>

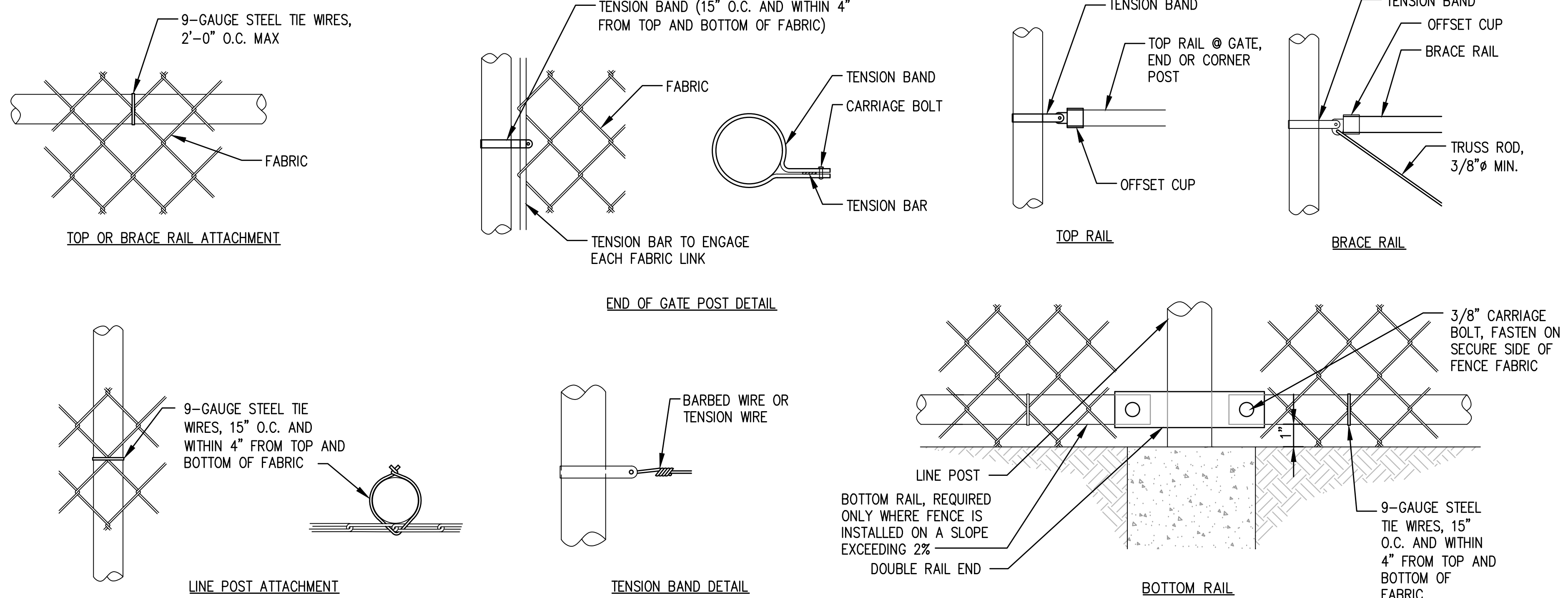
PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

**NOTES :**

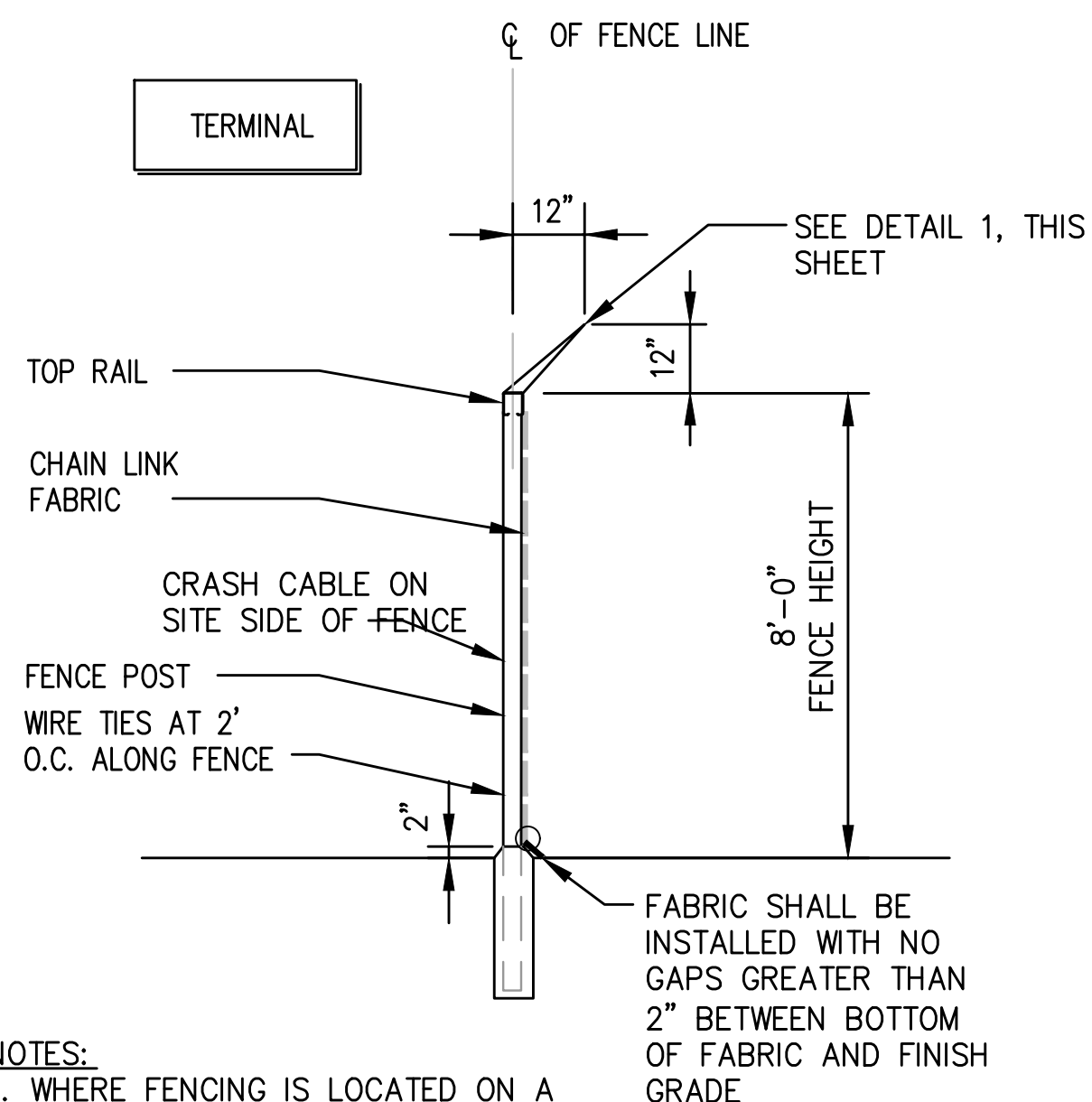
1. ALL FENCING MATERIALS SHALL BE POLYVINYL CHLORIDE (PVC) COATED, UNLESS NOTED OTHERWISE.



**1 EXTENSION ARMS**  
C15,C16 SCALE: NTS

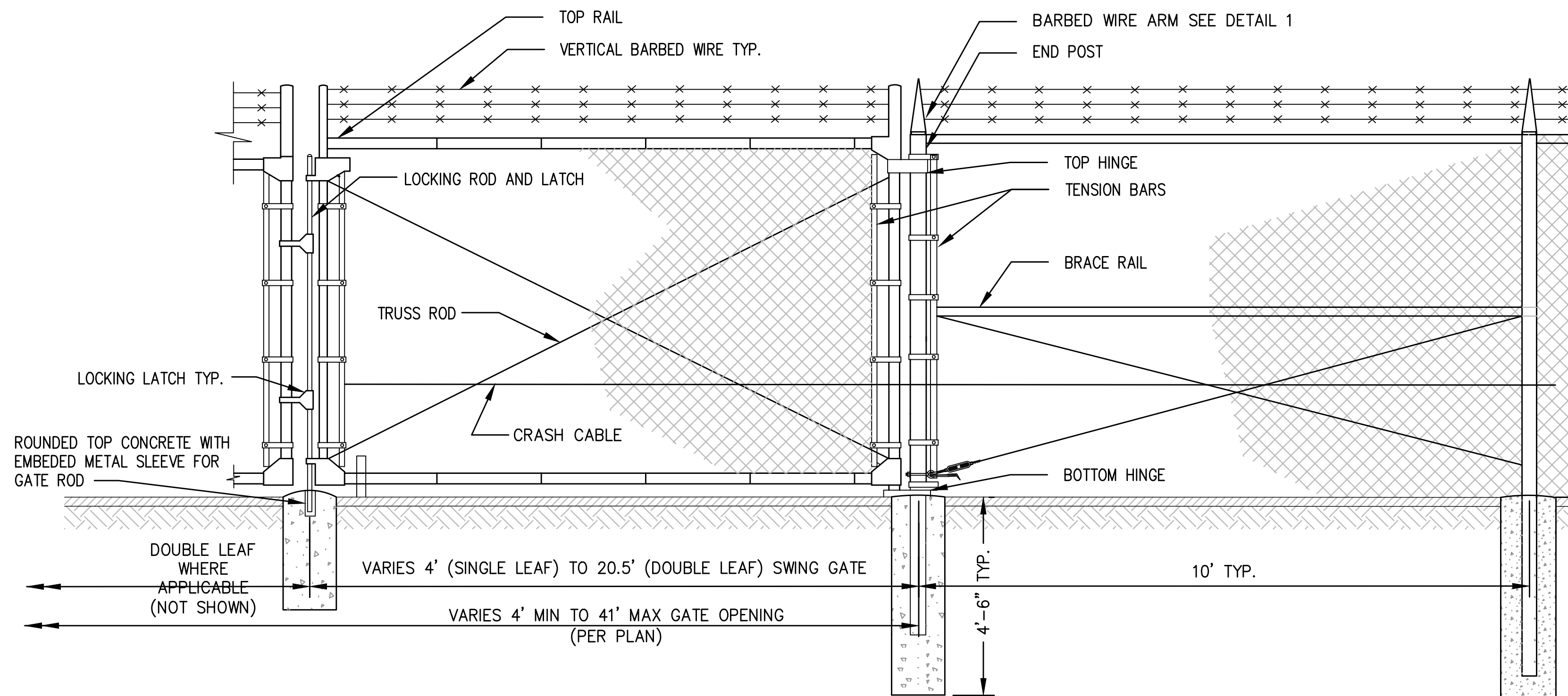


**2 CONNECTION DETAILS**  
C15,C16 SCALE: NTS



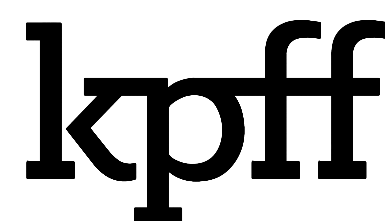
- NOTES:**
1. WHERE FENCING IS LOCATED ON A SLOPE GREATER THAN 15%, THE CONTRACTOR SHALL INSTALL A BOTTOM RAIL.

**3 TYPICAL FENCE SECTION**  
C1-C14 SCALE: NTS



**4 DOUBLE SWING GATE**  
C3,C12 SCALE: NTS

Plotted: Jun 09, 2023 - 9:22pm rambert Layout: C16 SITE DETAILS N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\C15-C20 SITE DETAILS.dwg



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NO.	DATE	BY	REVISION

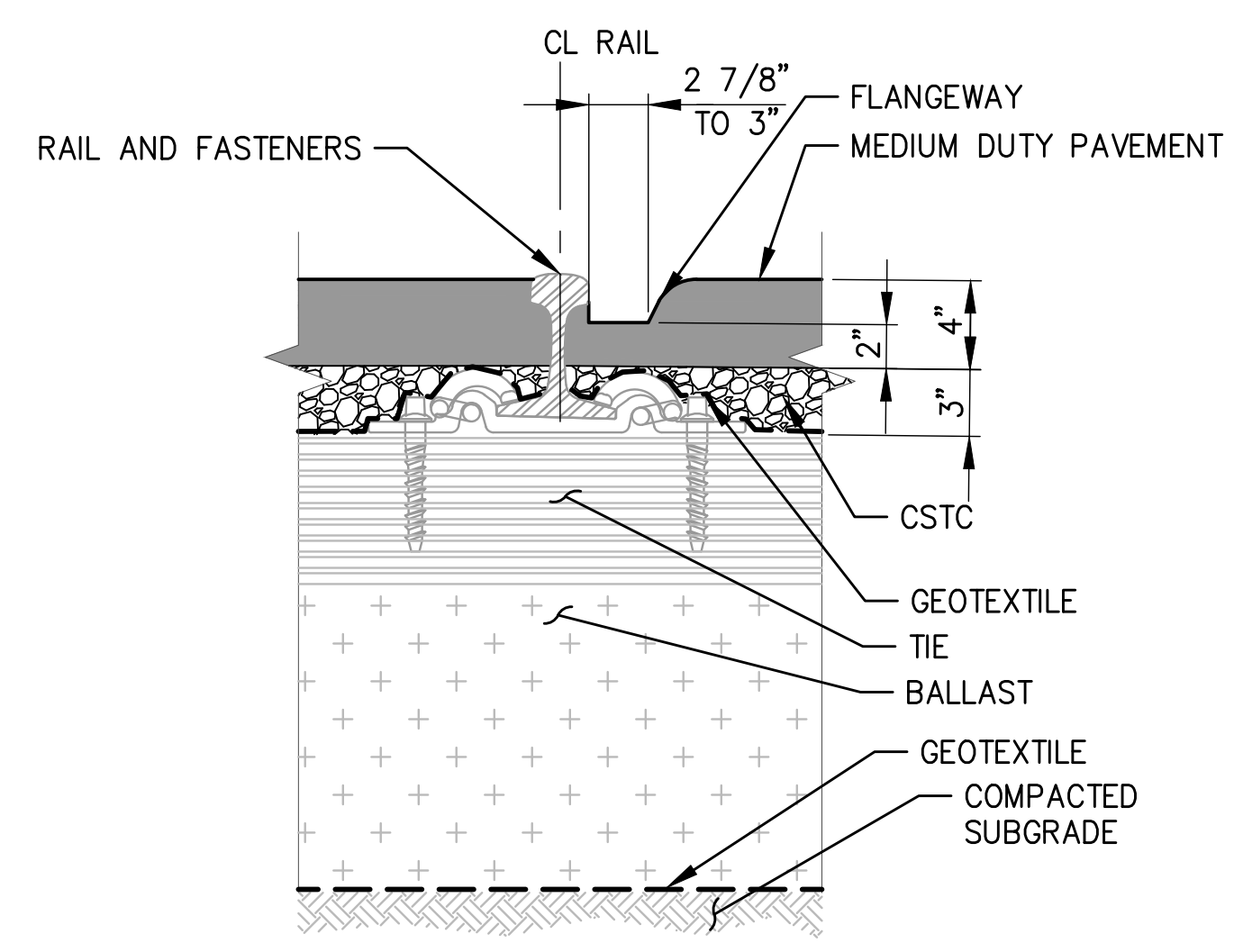
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
PORT OF GRAYS HARBOR

**SITE DETAILS**

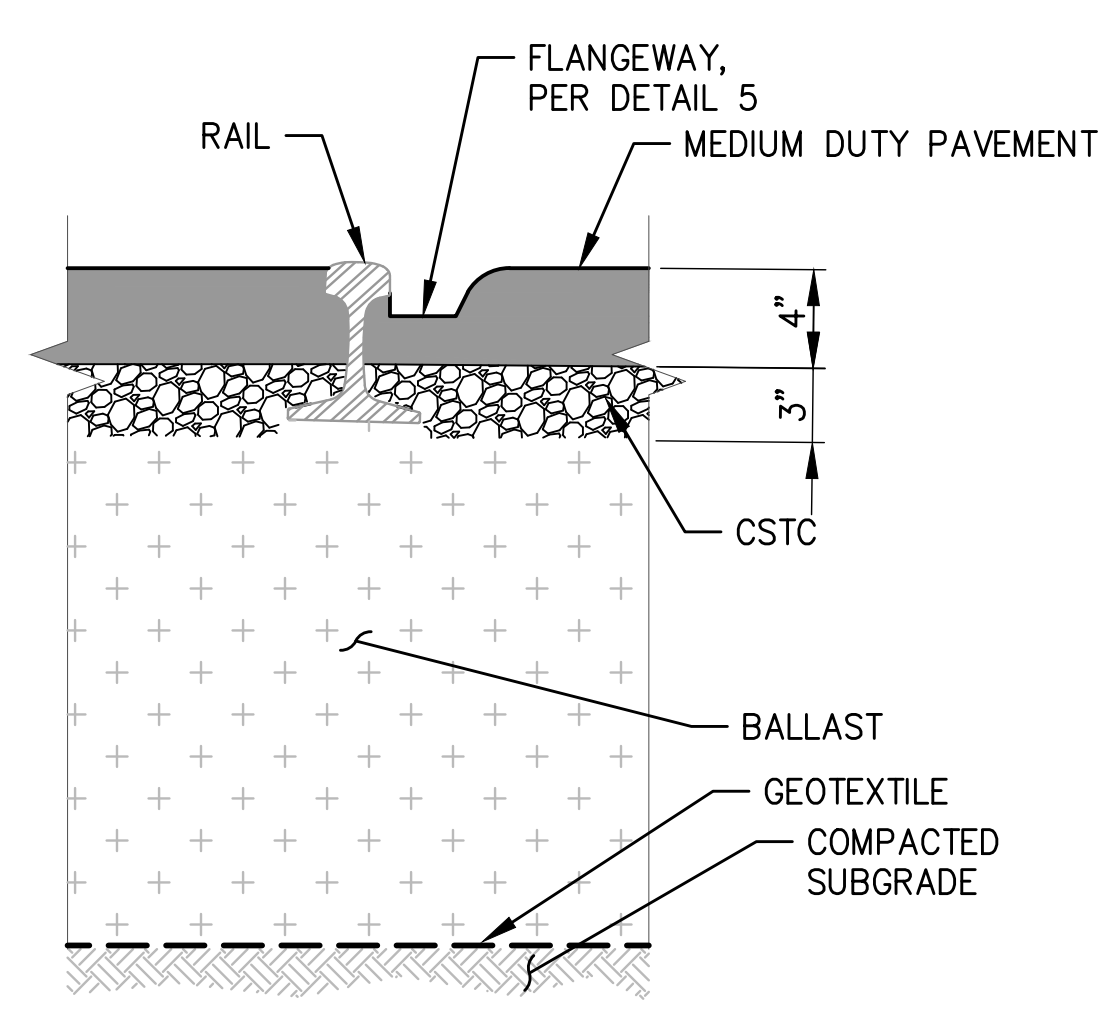
DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>C16</b>
SHEET NO.	<b>59</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

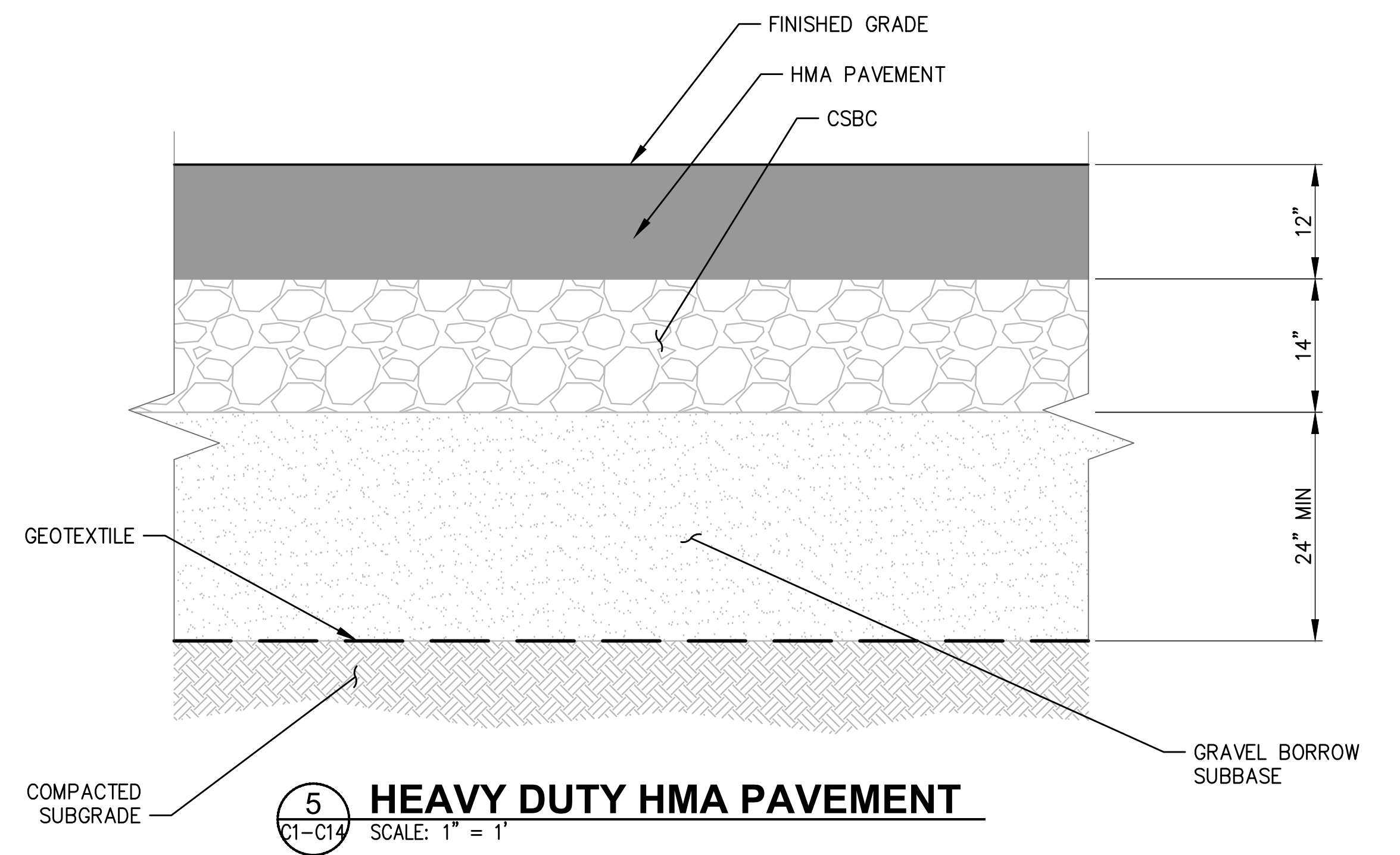
Plotted: Jun 09, 2023 - 9:22pm rambert Layout: C17 SITE DETAILS  
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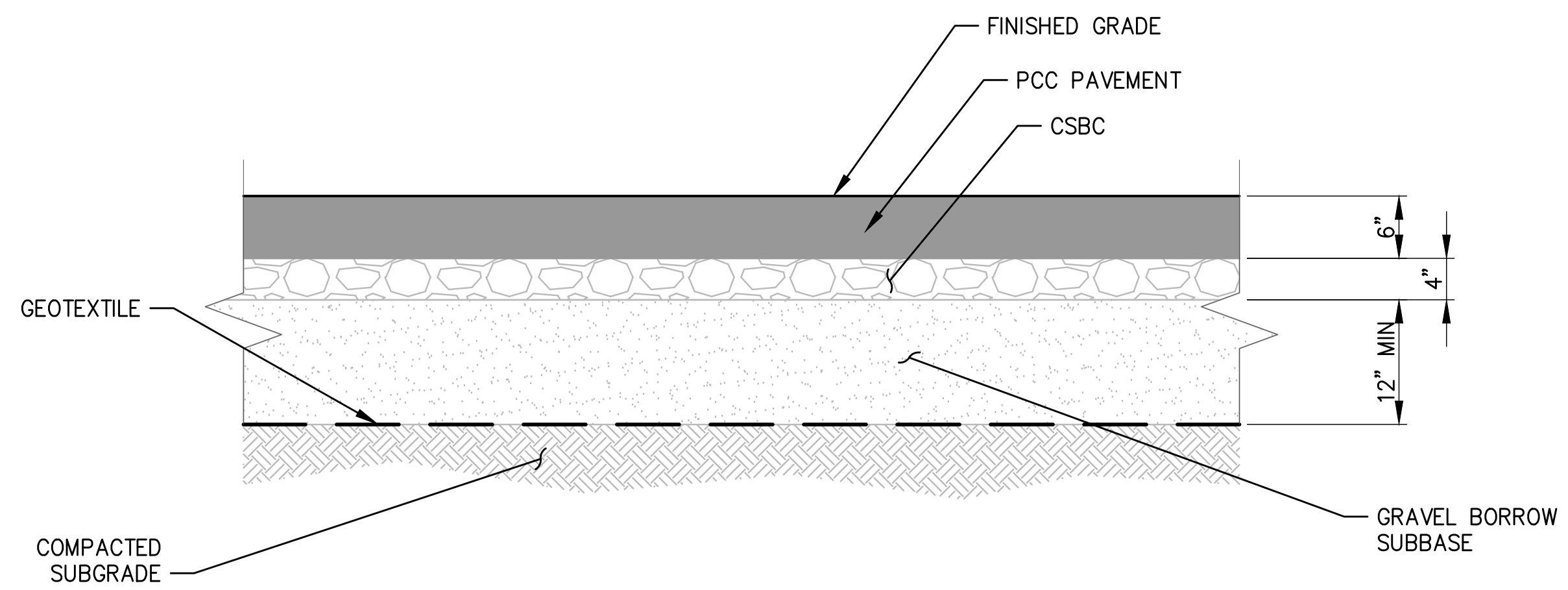
**1 PAVEMENT CROSSING TIE AND ASPHALT FLANGEWAY**  
 C1-C14 SCALE: NTS



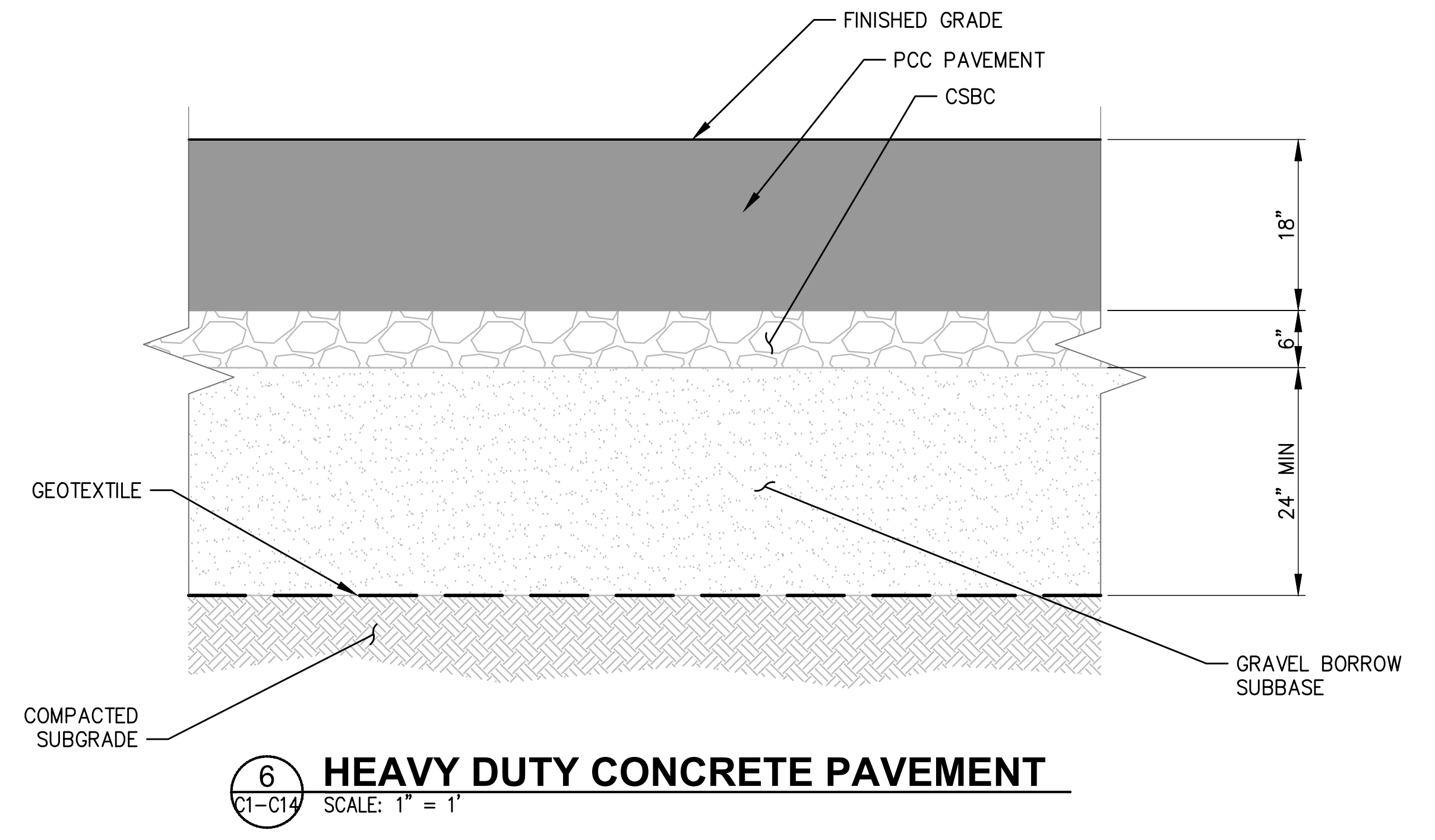
**2 PAVEMENT CROSSING RAIL AND ASPHALT FLANGEWAY**  
 C1-C14 SCALE: NTS



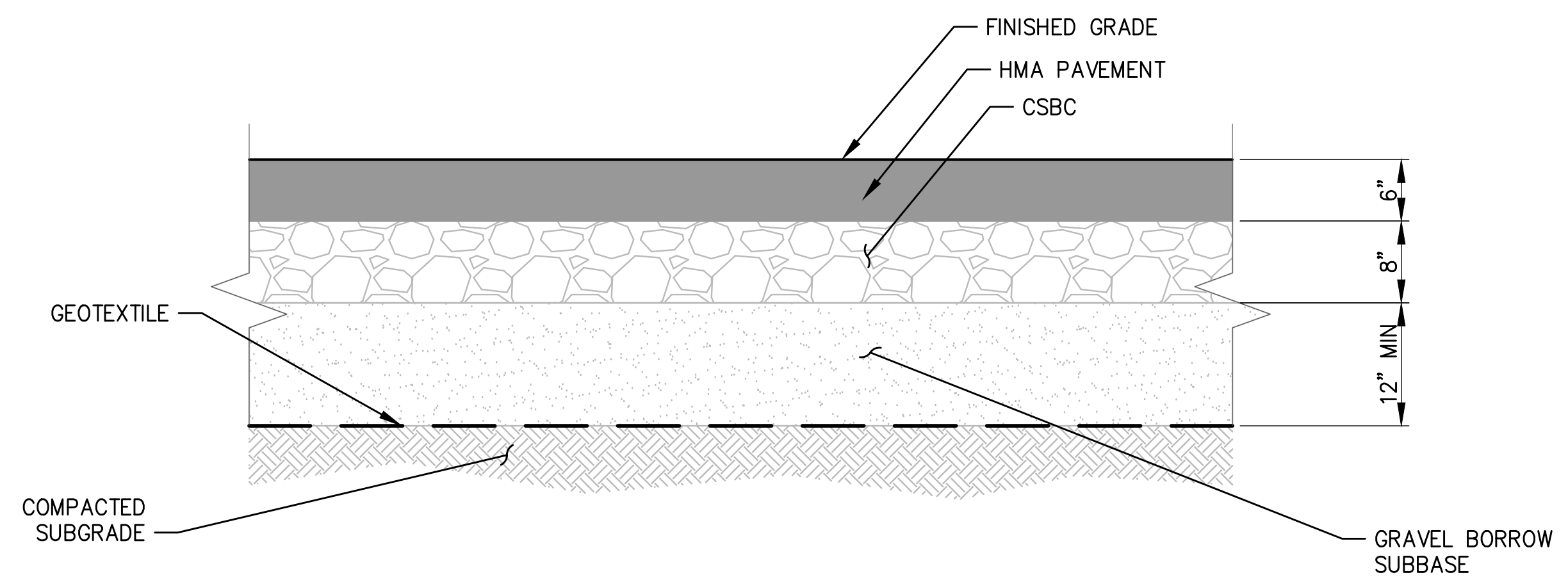
**5 HEAVY DUTY HMA PAVEMENT**  
 C1-C14 SCALE: 1" = 1'



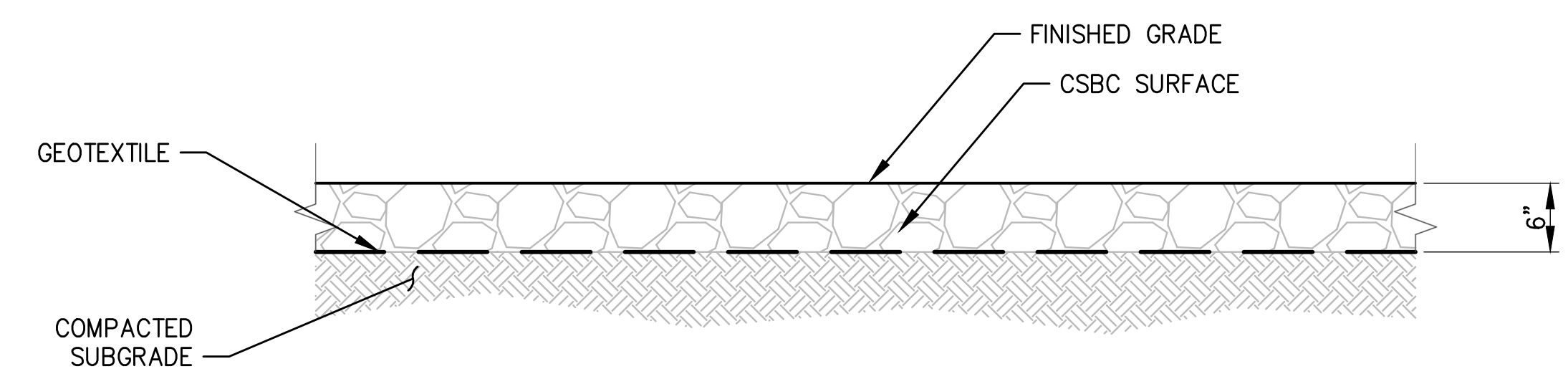
**3 LIGHT DUTY CONCRETE PAVEMENT**  
 C1-C14 SCALE: 1" = 1'



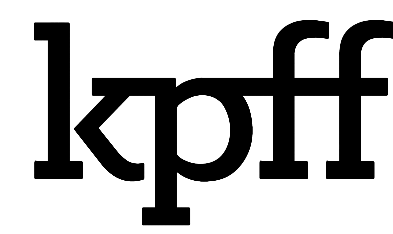
**6 HEAVY DUTY CONCRETE PAVEMENT**  
 C1-C14 SCALE: 1" = 1'



**4 LIGHT DUTY HMA PAVEMENT**  
 C1-C14 SCALE: 1" = 1'



**7 GRAVEL-SURFACED ROAD**  
 C1-C14 SCALE: 1" = 1'



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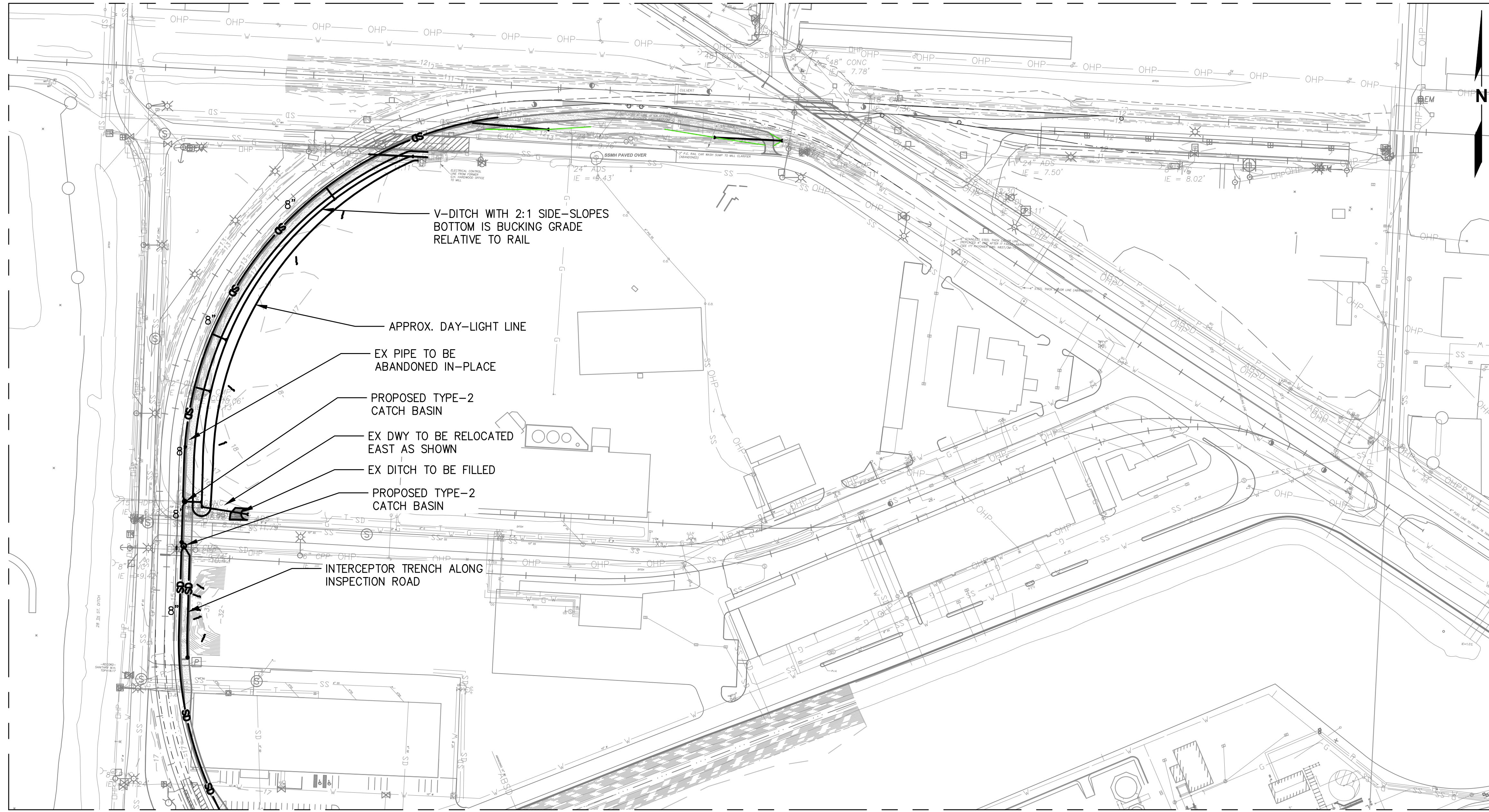
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**SITE DETAILS**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>C17</b>
SHEET NO.	<b>60 OF 142</b>

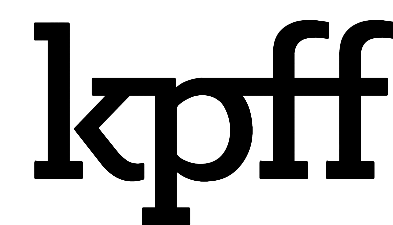
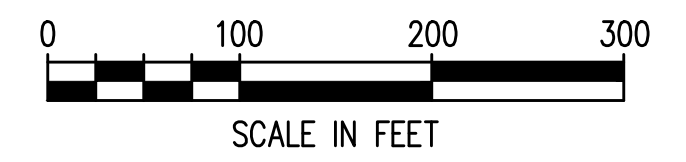
PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:23pm riambert Layout: SHT 1  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\GD1 - G06 PLAN.dwg



- V-DITCH WITH 2:1 SIDE-SLOPES  
BOTTOM IS BUCKING GRADE  
RELATIVE TO RAIL
- APPROX. DAY-LIGHT LINE
- EX PIPE TO BE  
ABANDONED IN-PLACE
- PROPOSED TYPE-2  
CATCH BASIN
- EX DWY TO BE RELOCATED  
EAST AS SHOWN
- EX DITCH TO BE FILLED
- PROPOSED TYPE-2  
CATCH BASIN
- INTERCEPTOR TRENCH ALONG  
INSPECTION ROAD

MATCHLINE SHEET 2



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**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

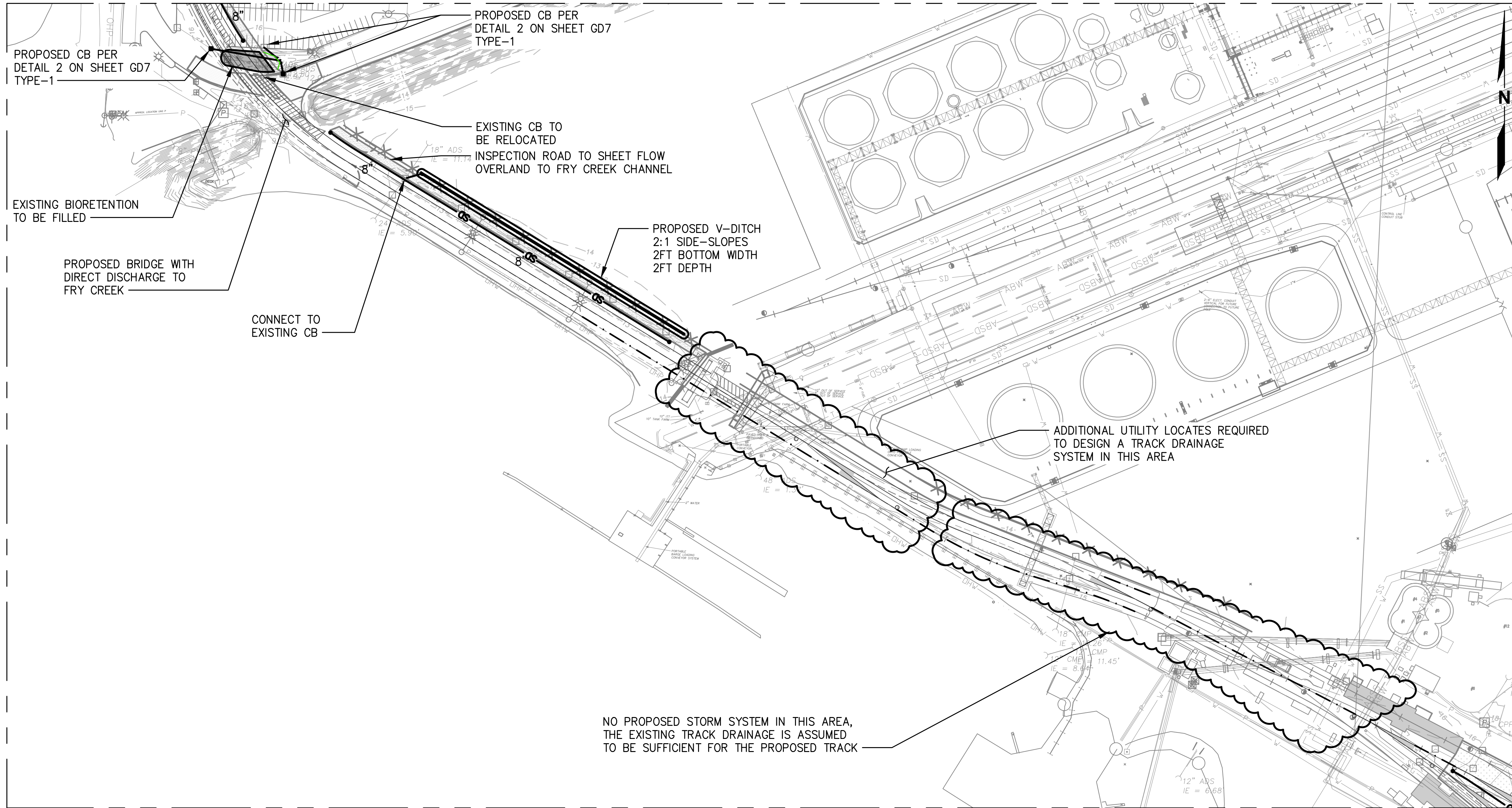
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**GRADING AND DRAINAGE**  
**SHEET 1**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>GD1</b>
SHEET NO.	<b>61</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

MATCHLINE SHEET 1



MATCHLINE SHEET 3



Plotted: Jun 09, 2023 - 9:23pm rambert Layout: SHT 2  
N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\GD1 - GD6 PLAN.dwg

**kpff**

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NO.	DATE	BY	REVISION

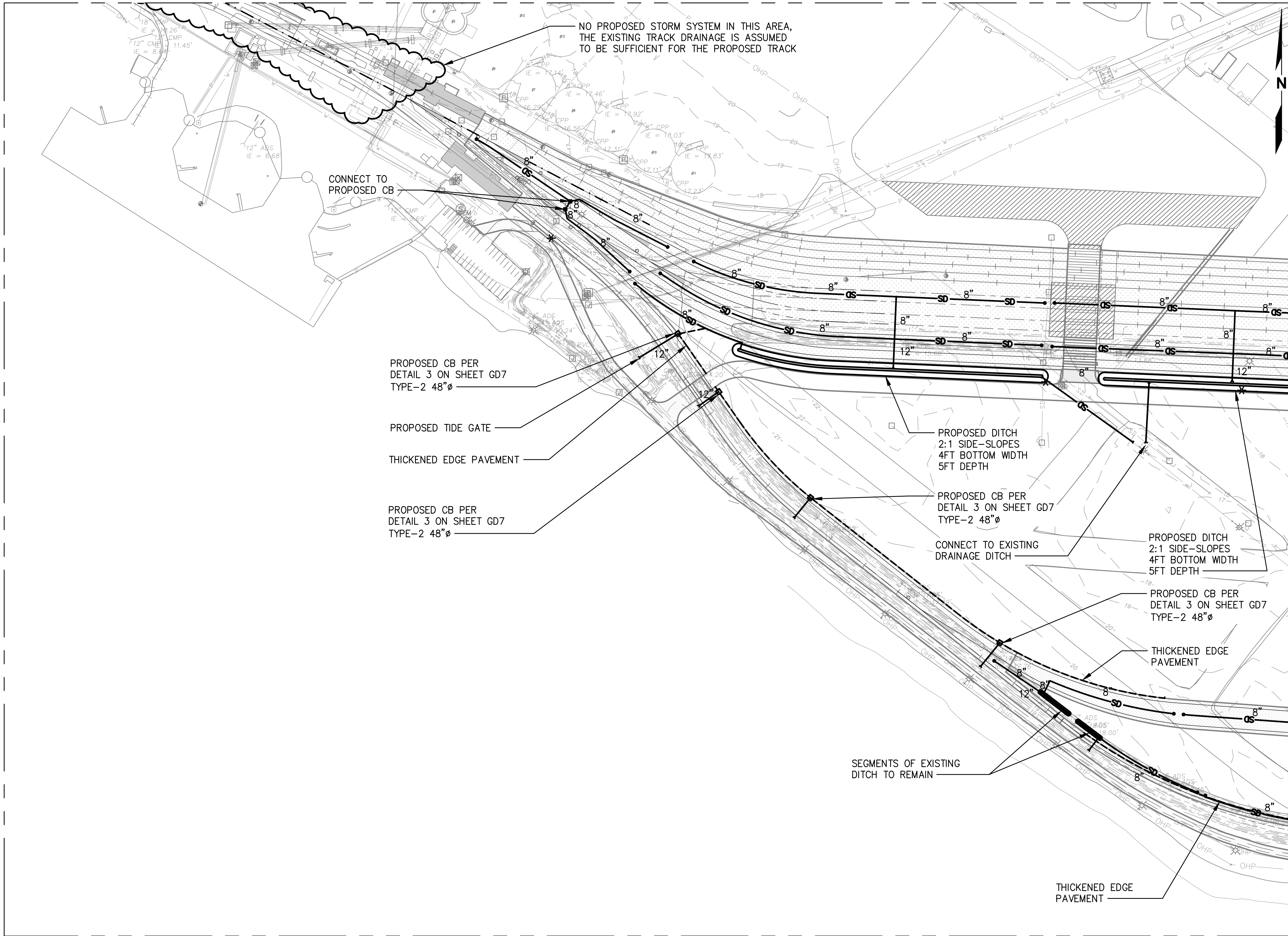
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
PORT OF GRAYS HARBOR

**GRADING AND DRAINAGE**  
**SHEET 2**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>GD2</b>
SHEET NO.	<b>62</b> OF <b>142</b>

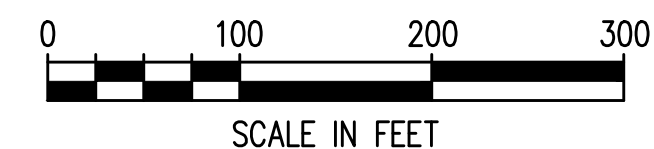
PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

MATCHLINE SHEET 2



MATCHLINE SHEET 2

MATCHLINE SHEET 4



Plotted: Jun 09, 2023 - 9:23pm riambert Layout: SHT 3  
N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\GD1 - GD6 PLAN.dwg



NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
PORT OF GRAYS HARBOR

**GRADING AND DRAINAGE**  
**SHEET 3**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>GD3</b>
SHEET NO.	<b>63</b> OF <b>142</b>

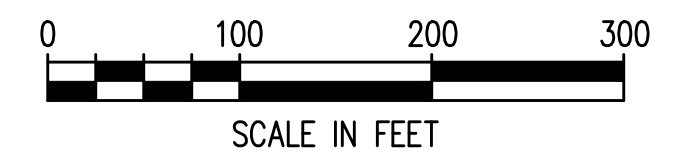
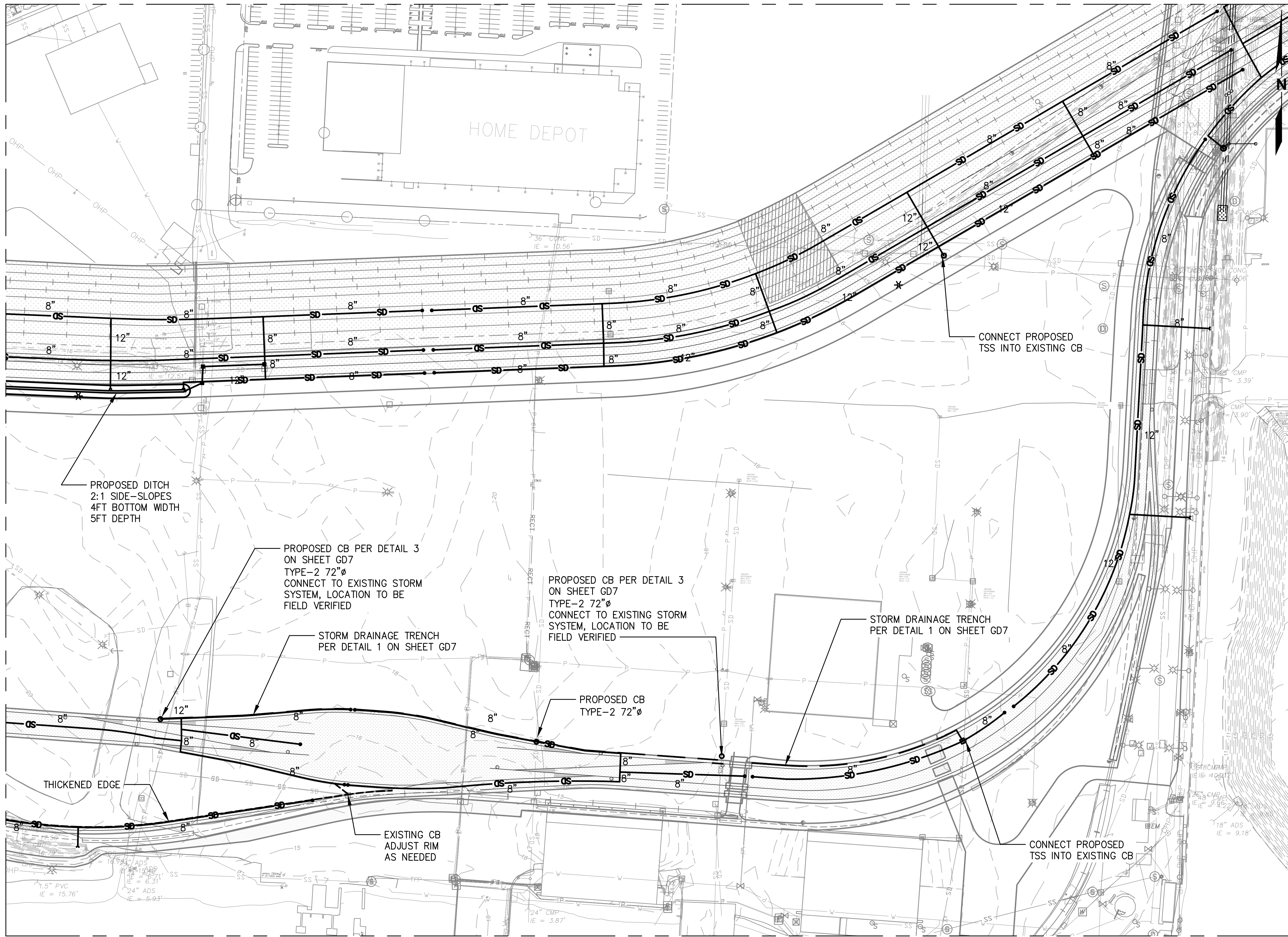
PRELIMINARY DESIGN - NOT FOR CONSTRUCTION



Plotted: Jun 09, 2023 - 9:23pm rambert Layout: SHT 4  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\GD1 - G06 PLAN.dwg

MATCHLINE SHEET 3

MATCHLINE SHEET 5



**kpff**

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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**GRADING AND DRAINAGE**  
**SHEET 4**

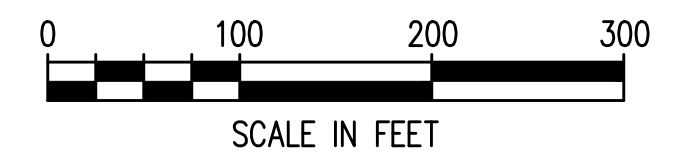
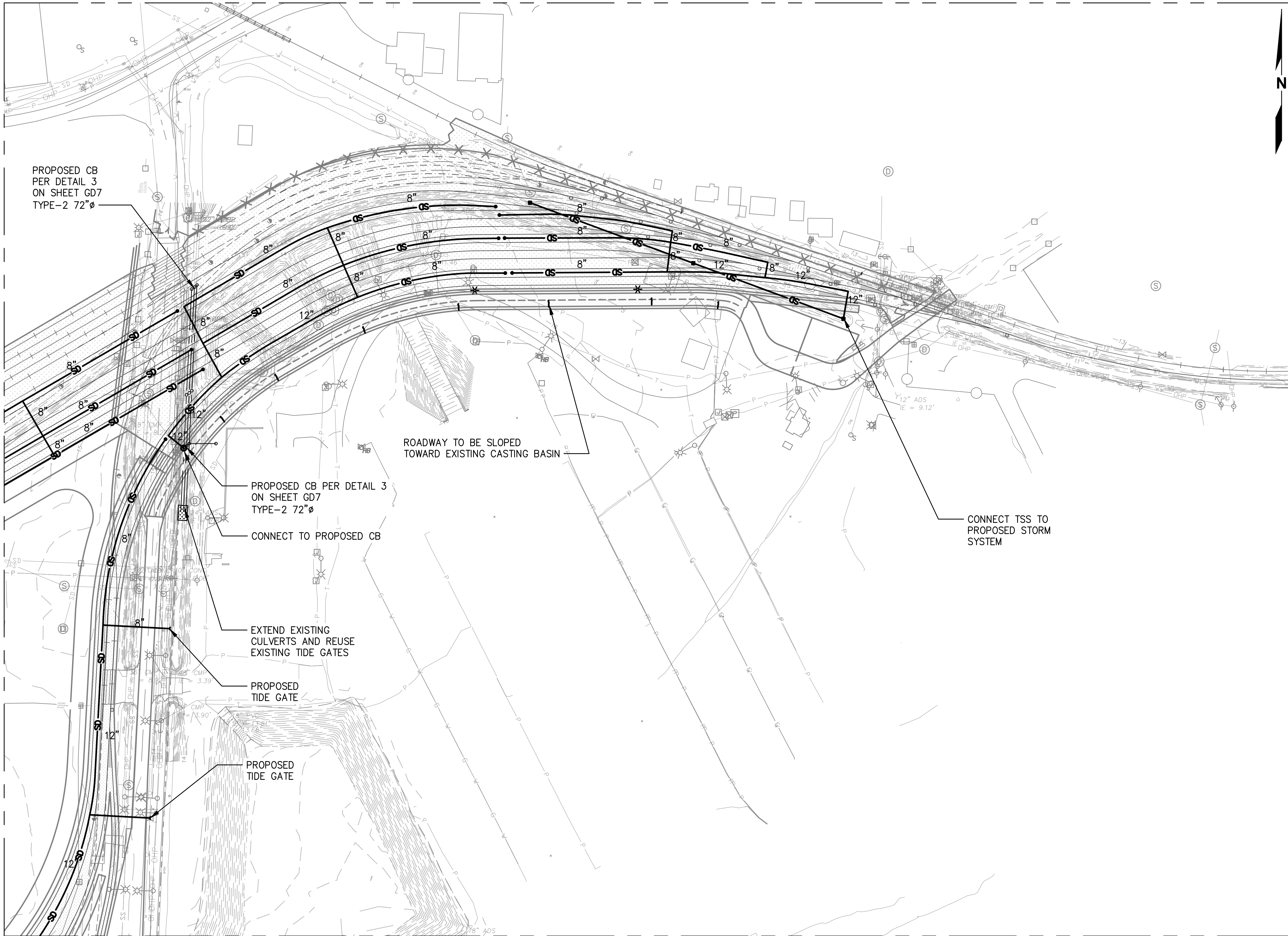
DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>GD4</b>
SHEET NO.	<b>64</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:23pm riambert Layout: SHT 5  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\GD1 - G06 PLAN.dwg

MATCHLINE SHEET 4

MATCHLINE SHEET 6



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NO.	DATE	BY	REVISION

TERMINAL 4 RAIL AND SITE IMPROVEMENTS  
 PORT OF GRAYS HARBOR

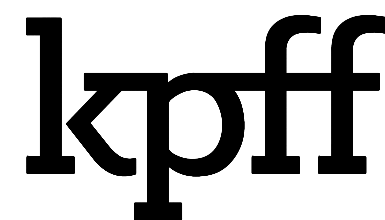
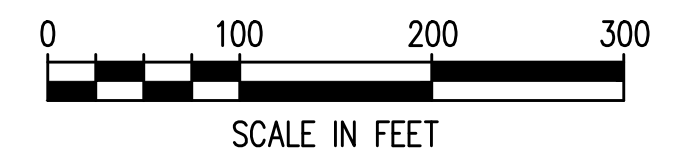
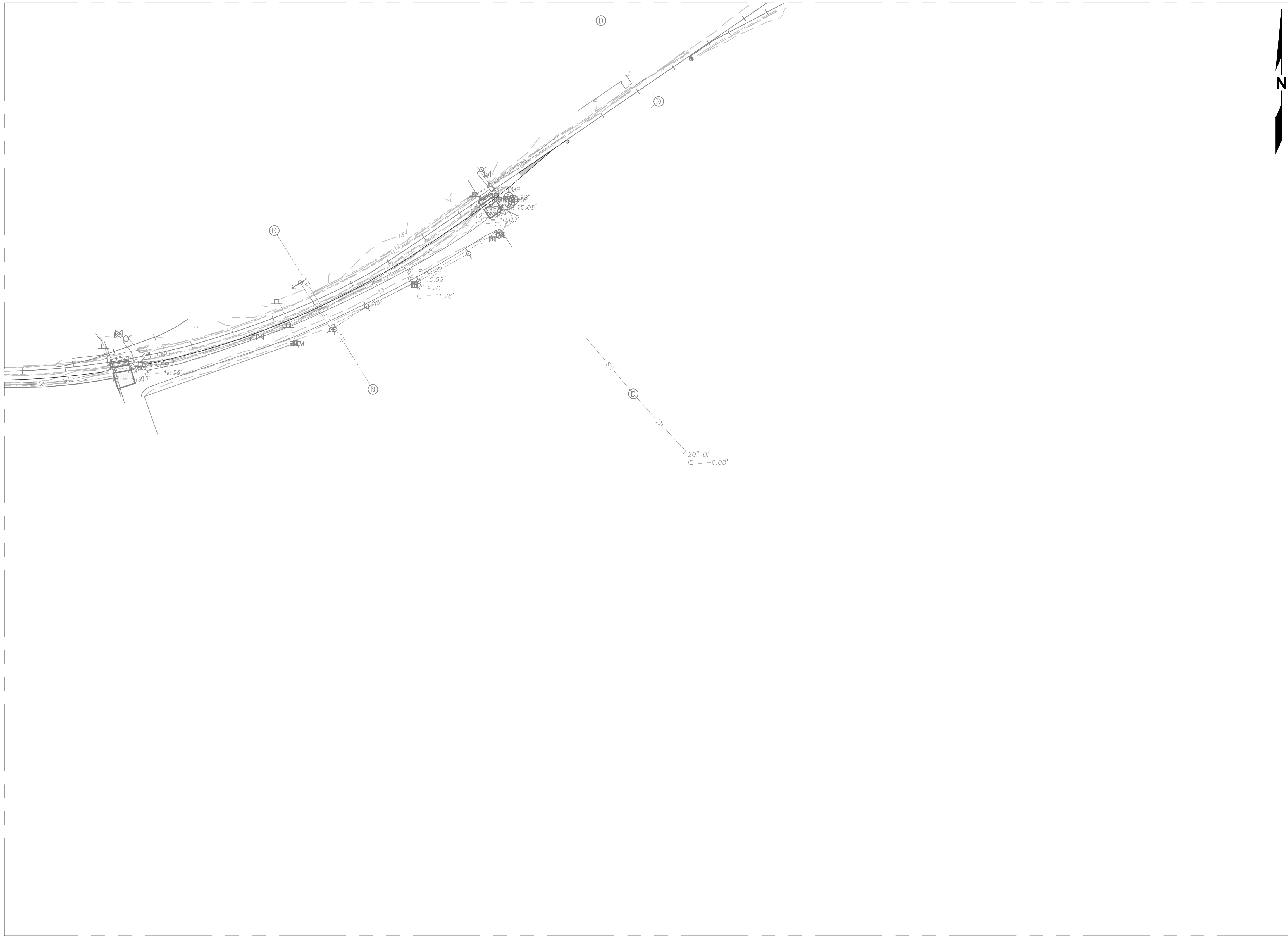
GRADING AND DRAINAGE  
 SHEET 5

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>GD5</b>
SHEET NO.	<b>65</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:23pm riambert Layout: SHT 6  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\GD1 - GD6 PLAN.dwg

MATCHLINE SHEET 5



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NO.	DATE	BY	REVISION

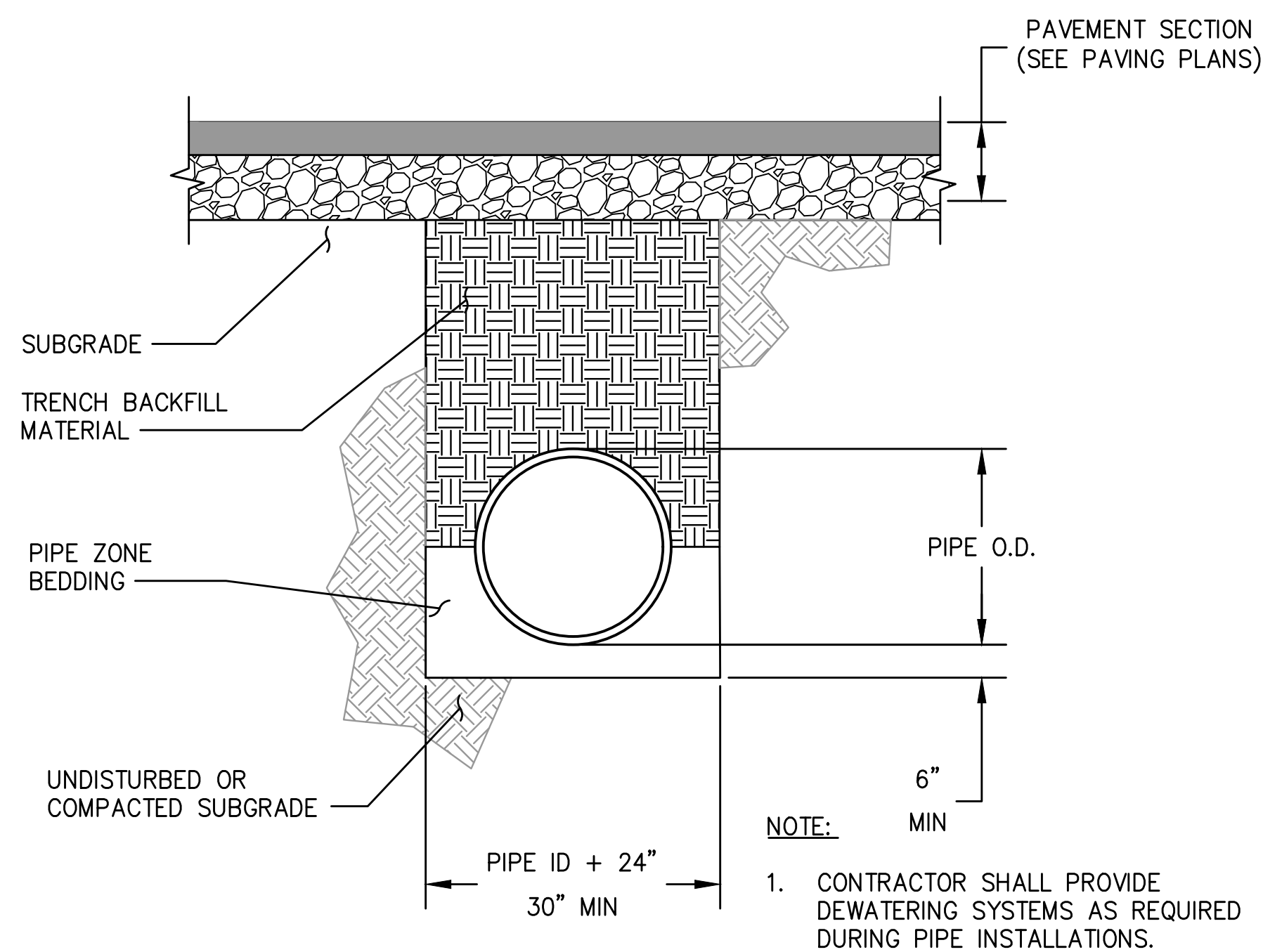
TERMINAL 4 RAIL AND SITE IMPROVEMENTS  
 PORT OF GRAYS HARBOR

GRADING AND DRAINAGE  
 SHEET 6

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>GD6</b>
SHEET NO.	<b>66</b> OF <b>142</b>

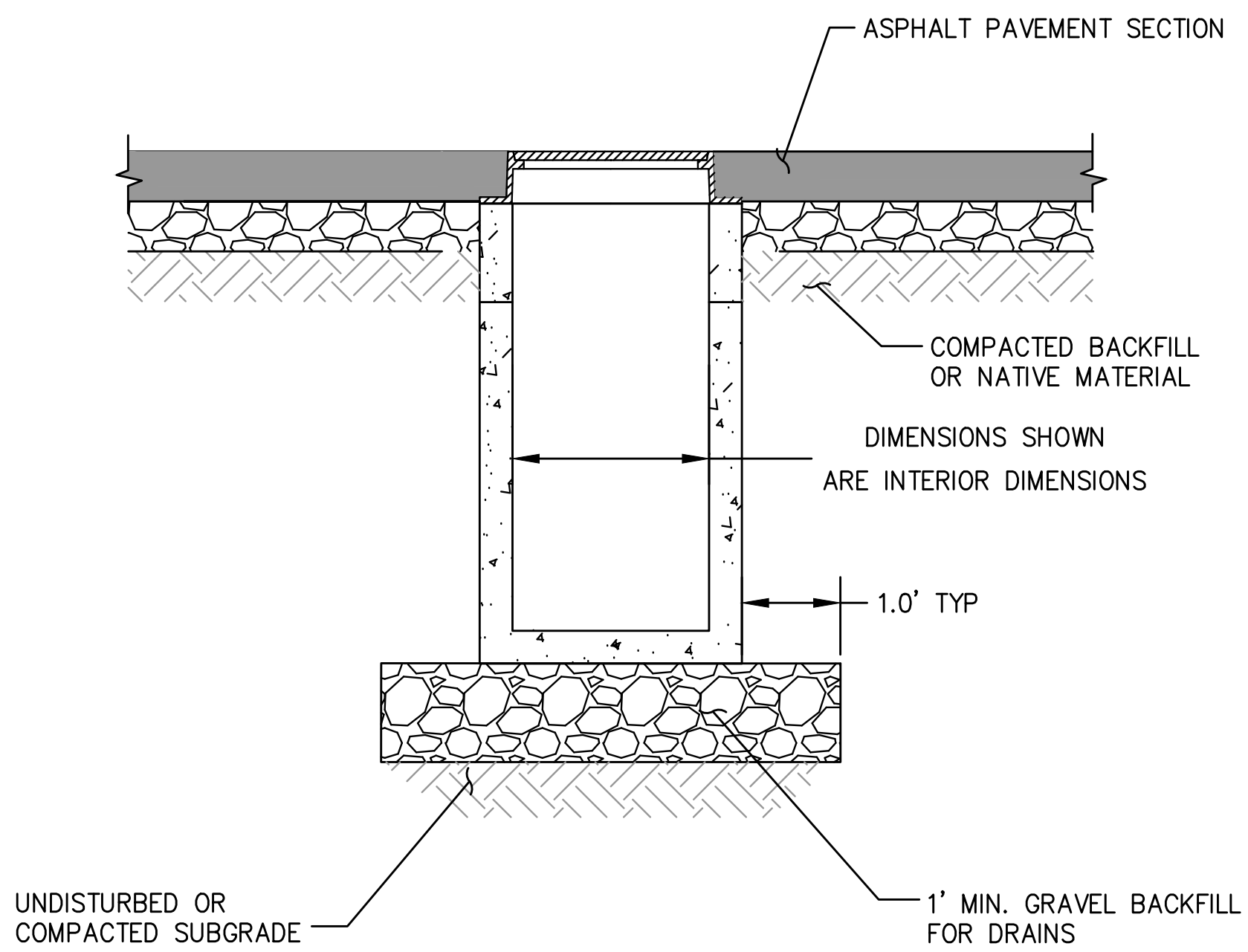
PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:23pm  
 rambert  
 Layout: GD7 GRADING AND DRAINAGE DETAILS  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements Part 3 - KPFF Design\3.13 Drawings\Current\GD7 GRADING AND DRAINAGE DETAILS.dwg

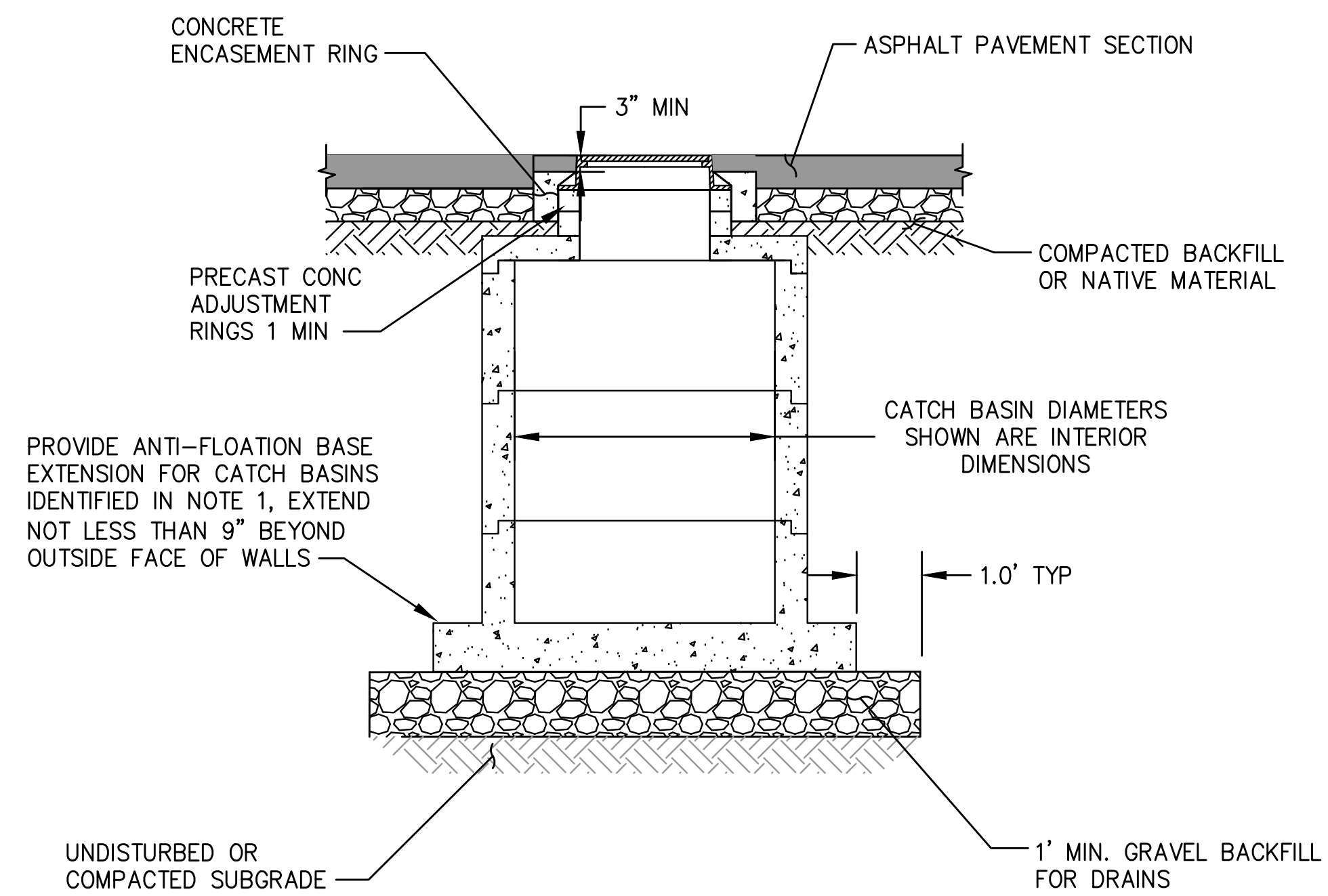


**1**  
 GD1&GD4 NTS  
**TYPICAL STORM DRAINAGE TRENCH DETAIL**

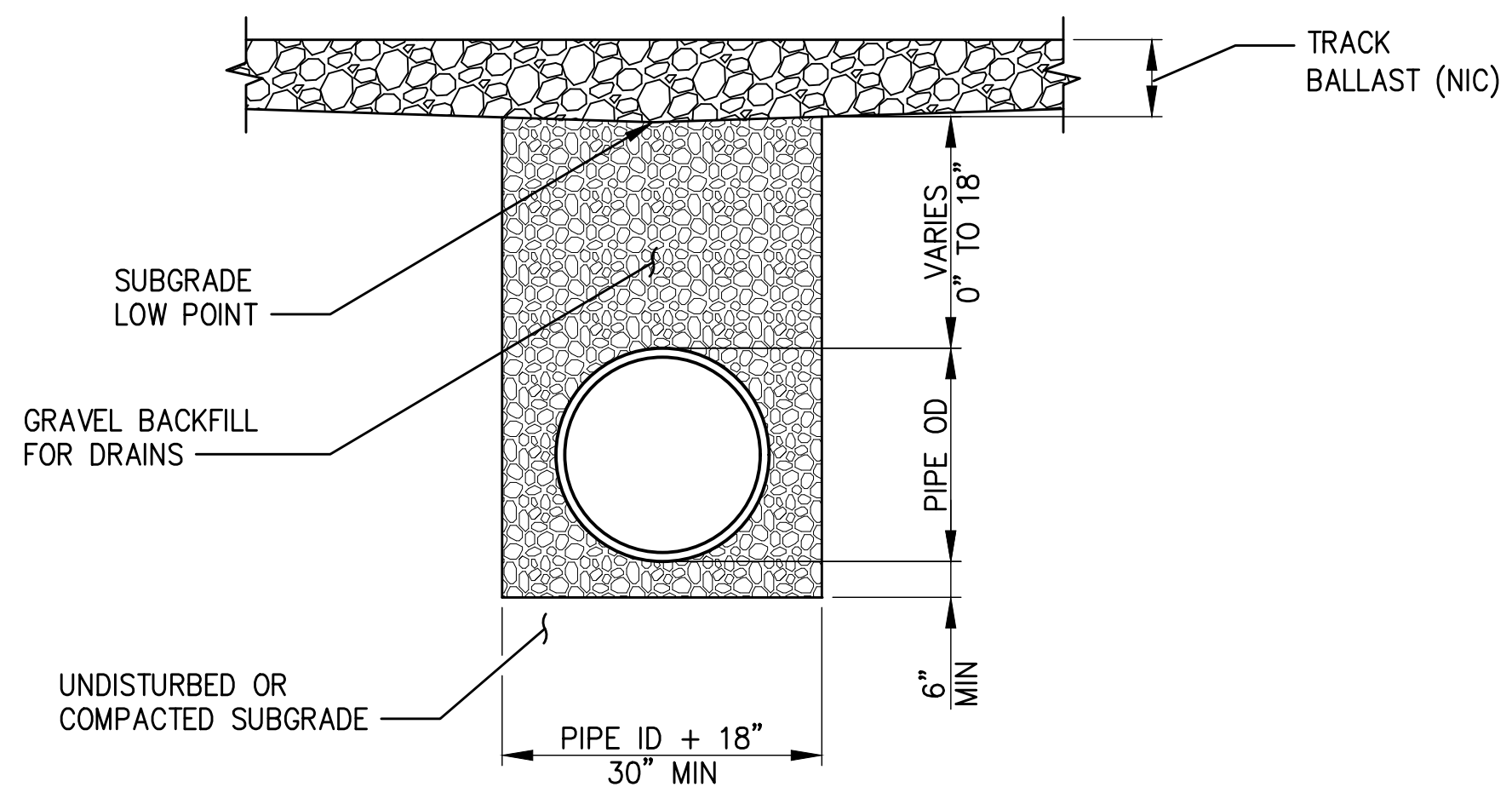
NOTE:  
 1. CONTRACTOR SHALL PROVIDE DEWATERING SYSTEMS AS REQUIRED DURING PIPE INSTALLATIONS.



**2**  
 GD1-GD5 NTS  
**TYPICAL CATCH BASIN TYPE 1 INSTALLATION DETAIL**

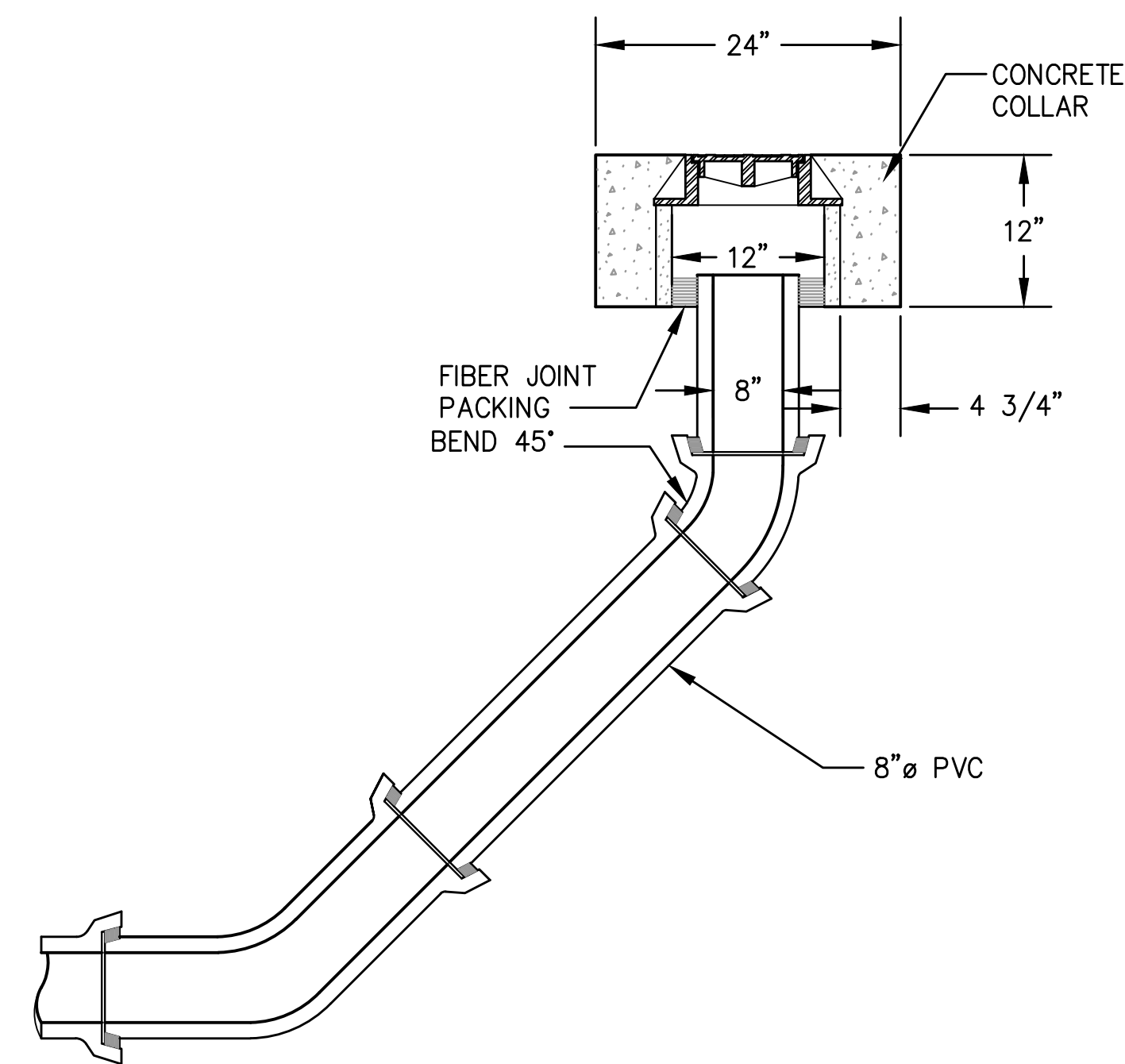


**3**  
 GD1-GD5 NTS  
**TYPICAL CATCH BASIN TYPE 2 INSTALLATION DETAIL**



**4**  
 GD1-GD6 NTS  
**TRACK SUBDRAIN**

NOTE:  
 1. CONTRACTOR SHALL PROVIDE DEWATERING SYSTEMS AS REQUIRED DURING PIPE INSTALLATIONS



**5**  
 GD1-GD6 NTS  
**PAVED OR OPEN BALLAST AREA STORM DRAIN CLEANOUT**



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**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

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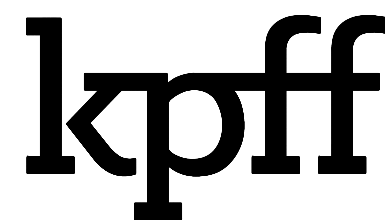
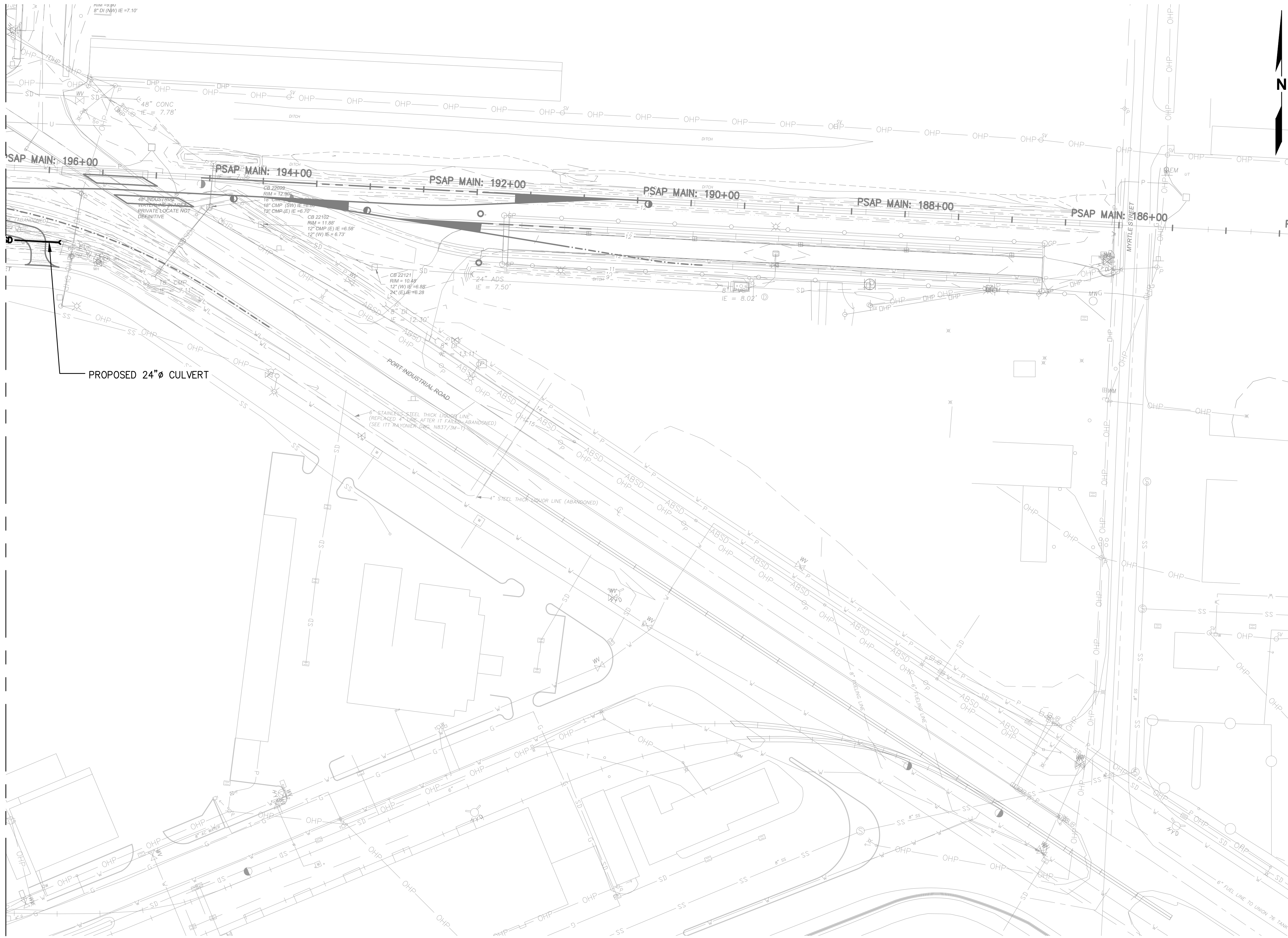
**GRADING AND DRAINAGE DETAILS**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>GD7</b>
SHEET NO.	<b>67</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:24pm riambert Layout: AREA 1  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\U1 - U14 UTILITY PLAN.dwg

MATCHLINE - SEE AREA 2



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**UTILITY PLAN**  
**AREA 1**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>U1</b>
SHEET NO.	<b>68 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:24pm rambert Layout: AREA 2  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\U1 - U14 UTILITY PLAN.dwg



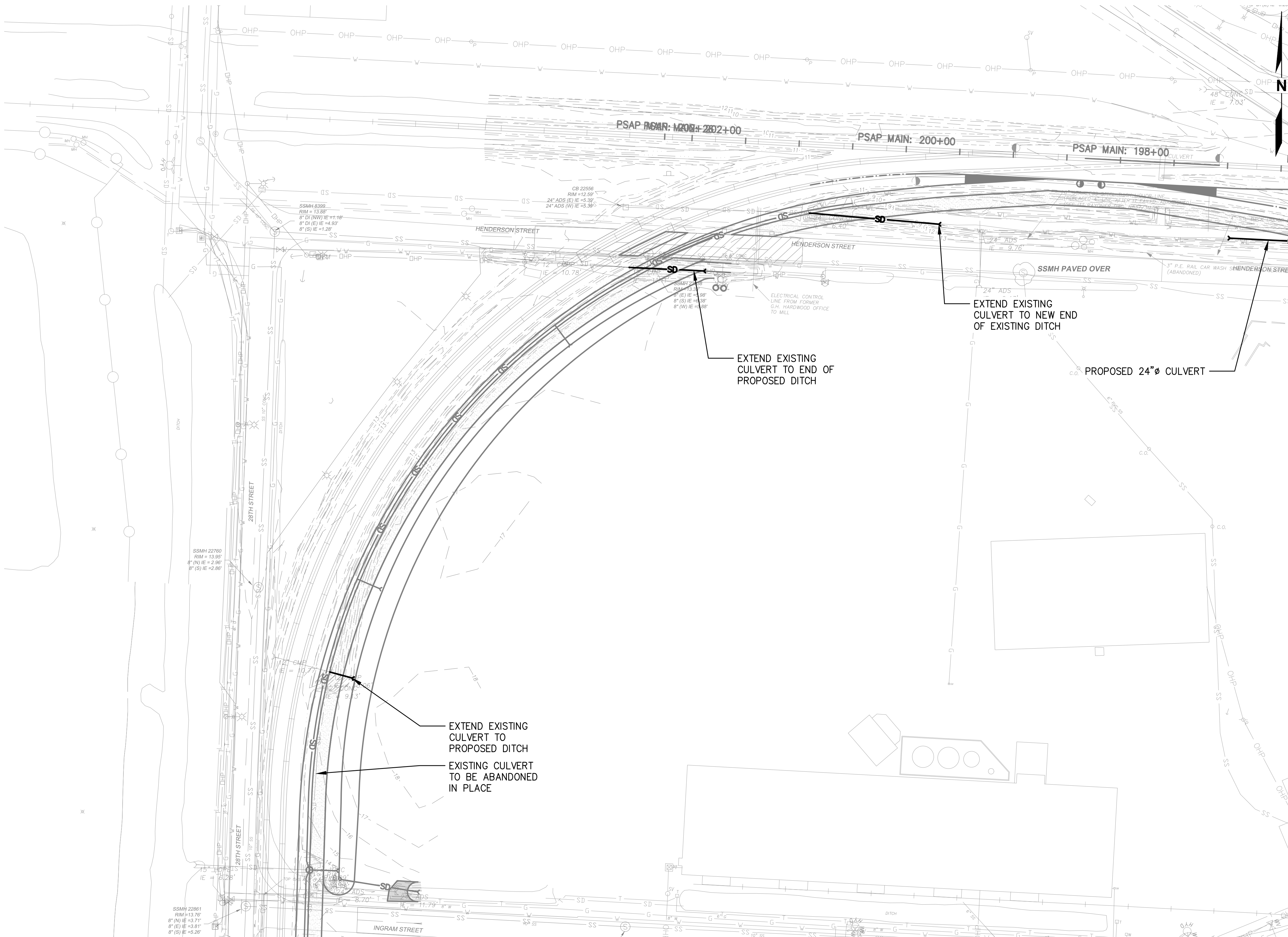
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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

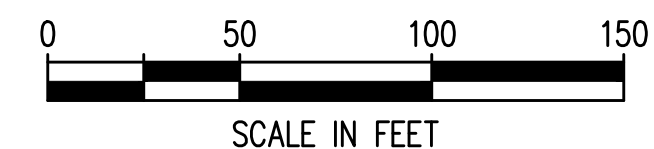
**UTILITY PLAN**  
**AREA 2**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>U2</b>
SHEET NO.	<b>69</b> OF <b>142</b>



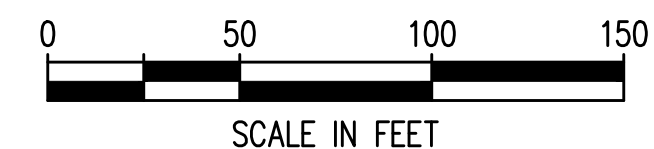
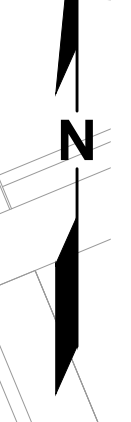
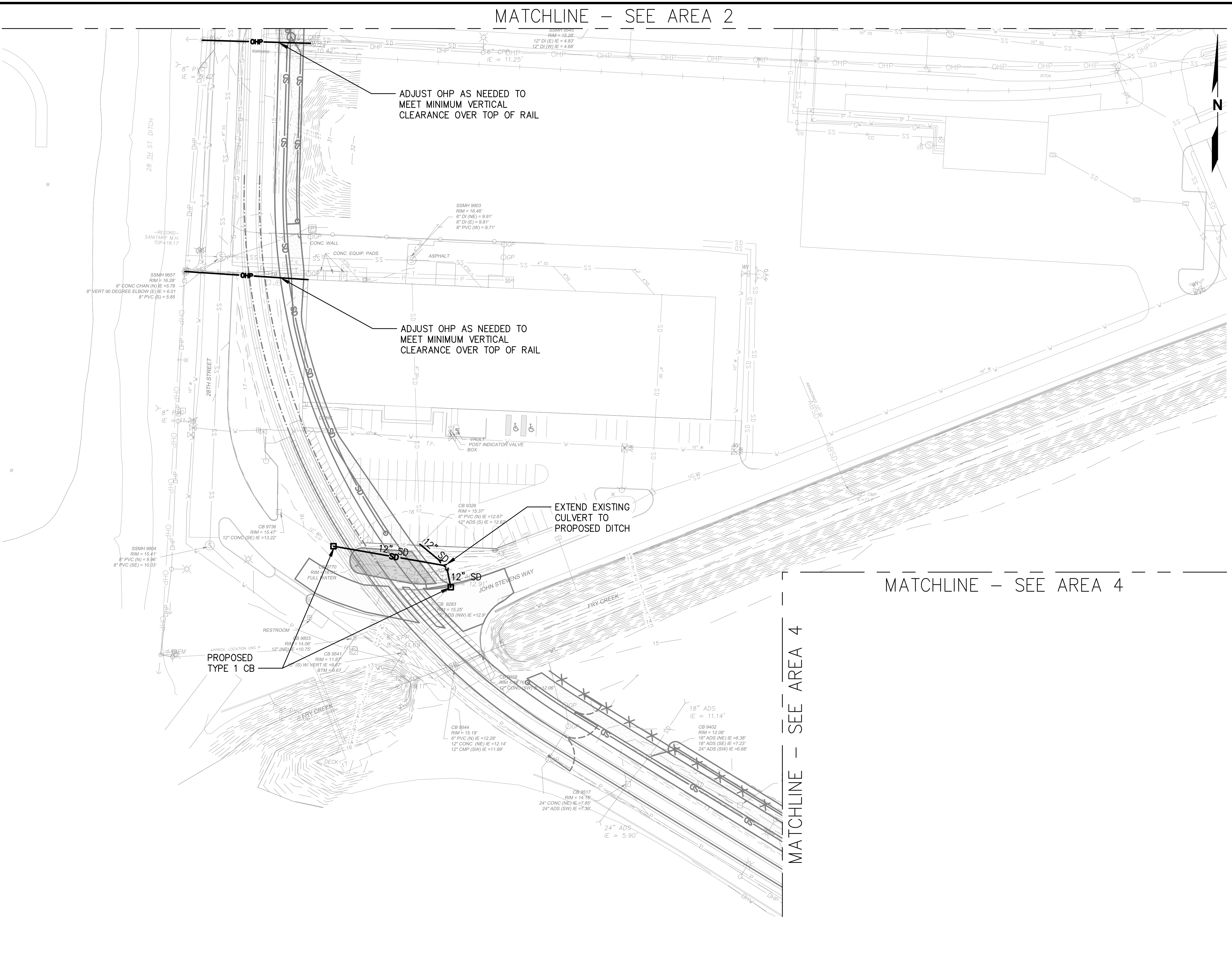
MATCHLINE - SEE AREA 1

MATCHLINE - SEE AREA 3



PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:24pm rambert Layout: AREA 3  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\U1 - U14 UTILITY PLAN.dwg



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

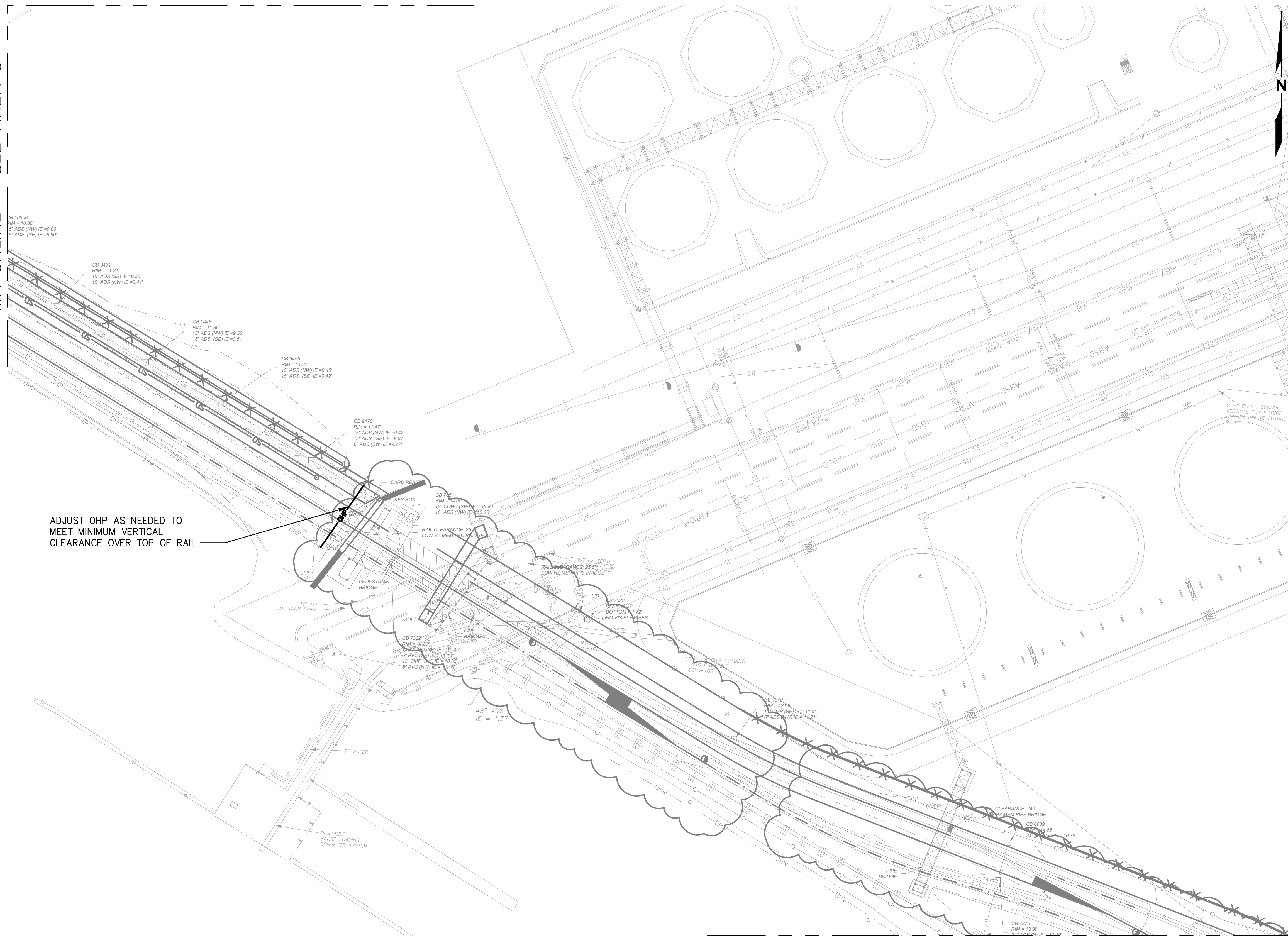
**UTILITY PLAN**  
**AREA 3**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>U3</b>
SHEET NO.	<b>70 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

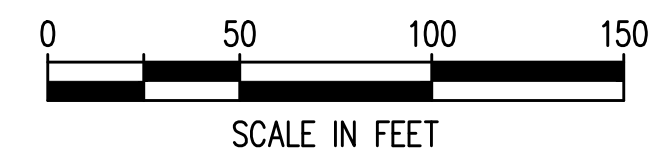
MATCHLINE – SEE AREA 3

MATCHLINE – SEE AREA 3

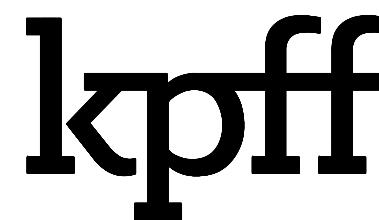


ADJUST OHP AS NEEDED TO MEET MINIMUM VERTICAL CLEARANCE OVER TOP OF RAIL

MATCHLINE – SEE AREA 5



Plotted: Jun 09, 2023 - 9:24pm rambert Layout: AREA 4  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\U1 - U14 UTILITY PLAN.dwg



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

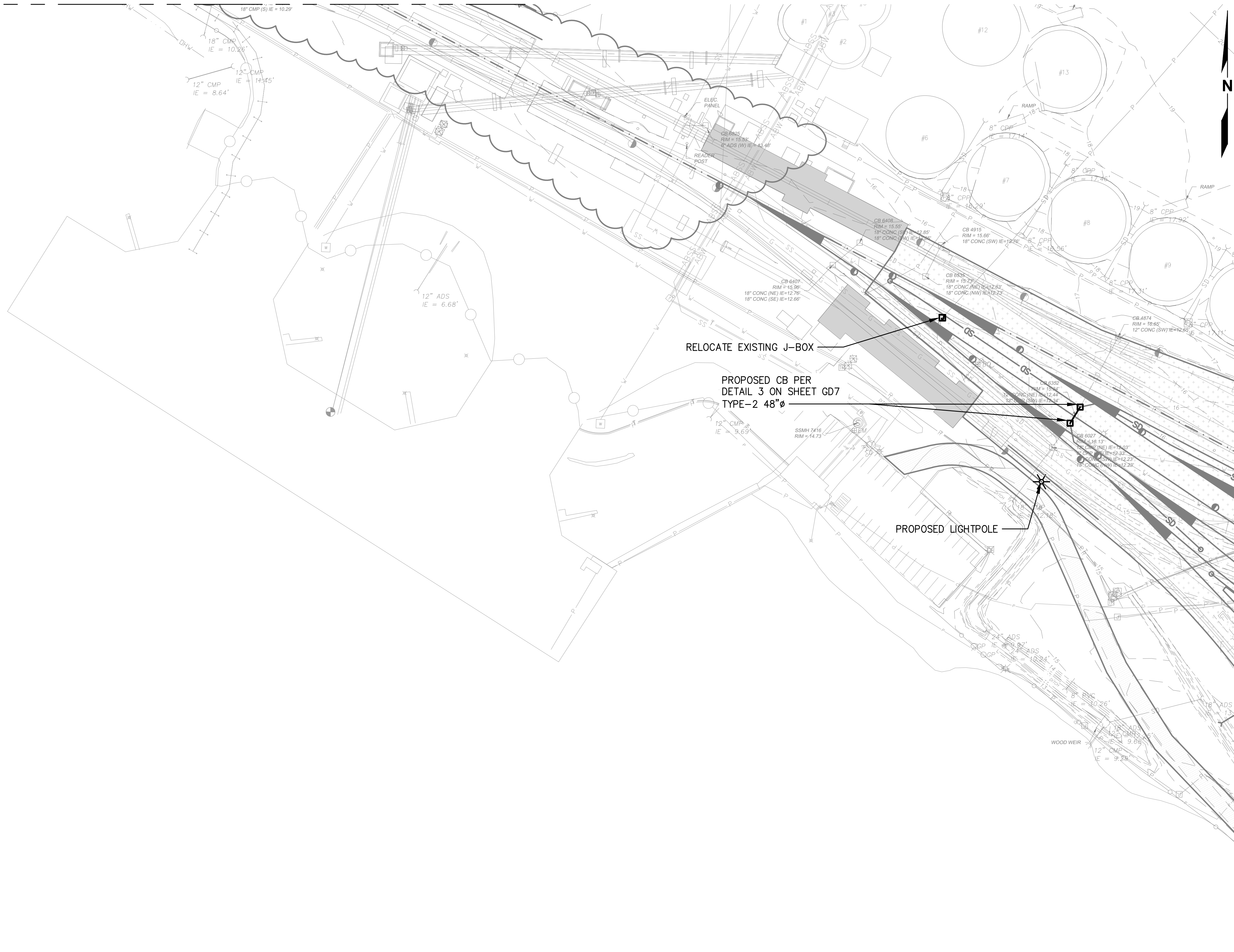
**UTILITY PLAN**  
**AREA 4**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>U4</b>
SHEET NO.	<b>71</b> OF <b>142</b>

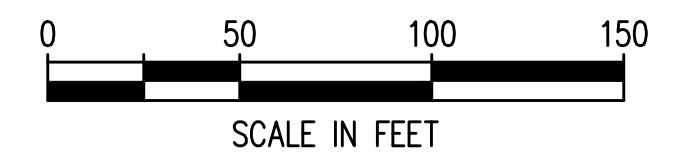
PRELIMINARY DESIGN - NOT FOR CONSTRUCTION



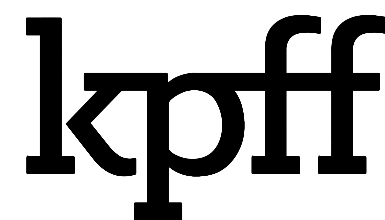
MATCHLINE – SEE AREA 4



MATCHLINE – SEE AREA 6



Plotted: Jun 09, 2023 - 9:24pm rambert Layout: AREA 5  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\U1 - U14 UTILITY PLAN.dwg



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NO.	DATE	BY	REVISION

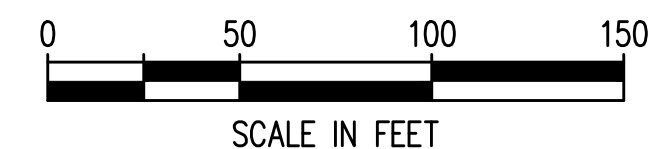
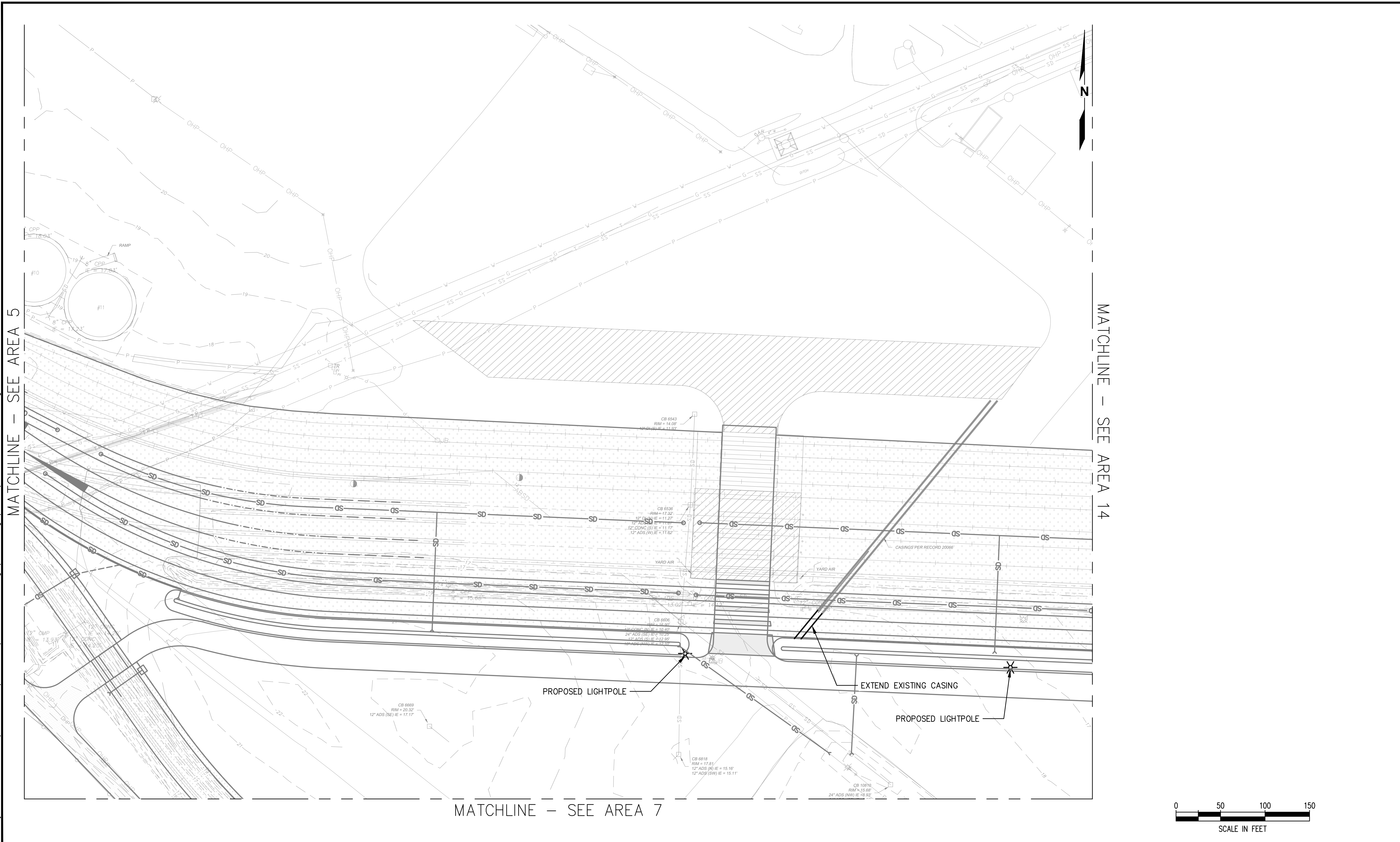
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**UTILITY PLAN**  
**AREA 5**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>U5</b>
SHEET NO.	<b>72 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:24am riambert Layout: AREA 6  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\U1 - U14 UTILITY PLAN.dwg



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NO.	DATE	BY	REVISION

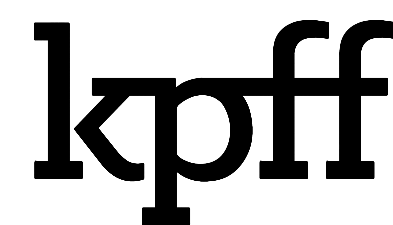
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**UTILITY PLAN**  
**AREA 6**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>U6</b>
SHEET NO.	<b>73</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:24pm rambert Layout: AREA 7  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\U1 - U14 UTILITY PLAN.dwg



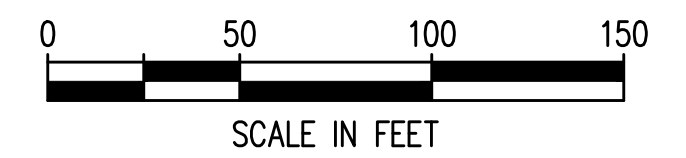
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 Tacoma, Washington 98407  
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MATCHLINE - SEE AREA 6

PROPOSED CB PER  
 DETAIL 3 ON SHEET GD7  
 TYPE-2 48"Ø

PROPOSED CB PER  
 DETAIL 3 ON SHEET GD7  
 TYPE-2 48"Ø

MATCHLINE - SEE AREA 8



NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
PORT OF GRAYS HARBOR

---

**UTILITY PLAN**  
**AREA 7**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>U7</b>
SHEET NO.	<b>74</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

MATCHLINE - SEE AREA 14



MATCHLINE - SEE AREA 7

MATCHLINE - SEE AREA 9



PROPOSED CB PER  
DETAIL 3 ON SHEET GD7  
TYPE-2 72"Ø

PROPOSED CB PER  
DETAIL 3 ON SHEET GD7  
TYPE-2 72"Ø

NOTE  
TOPS IN AREAS COVERED BY  
LOSSES WITH GPS BETWEEN ROWS



Plotted: Jun 09, 2023 9:24pm r Lambert Layout: AREA 8  
N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\U1 - U14 UTILITY PLAN.dwg



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
PORT OF GRAYS HARBOR

**UTILITY PLAN**  
**AREA 8**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>U8</b>
SHEET NO.	<b>75 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

MATCHLINE - SEE AREA 10

MATCHLINE - SEE AREA 8



Plotted: Jun 09, 2023 - 9:25pm rambert Layout: AREA 9  
N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\U1 - U14 UTILITY PLAN.dwg



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NO.	DATE	BY	REVISION

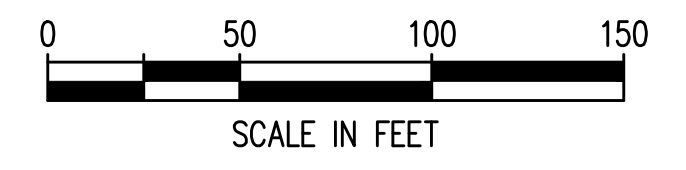
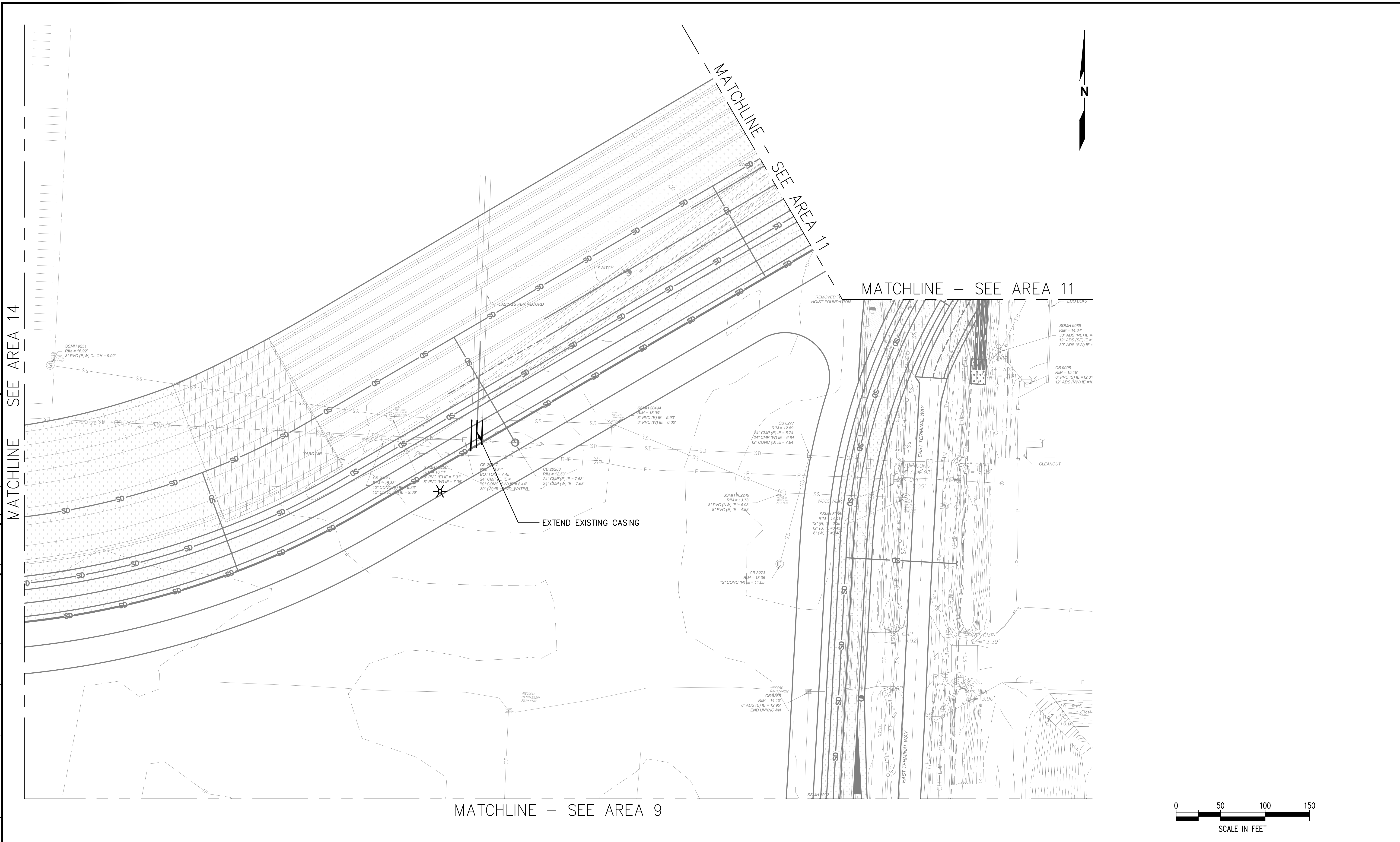
TERMINAL 4 RAIL AND SITE IMPROVEMENTS  
PORT OF GRAYS HARBOR

UTILITY PLAN  
AREA 9

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>U9</b>
SHEET NO.	<b>76 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:25pm riambert Layout: AREA 10  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\U1 - U14 UTILITY PLAN.dwg



MATCHLINE - SEE AREA 14

MATCHLINE - SEE AREA 11

MATCHLINE - SEE AREA 11

MATCHLINE - SEE AREA 9



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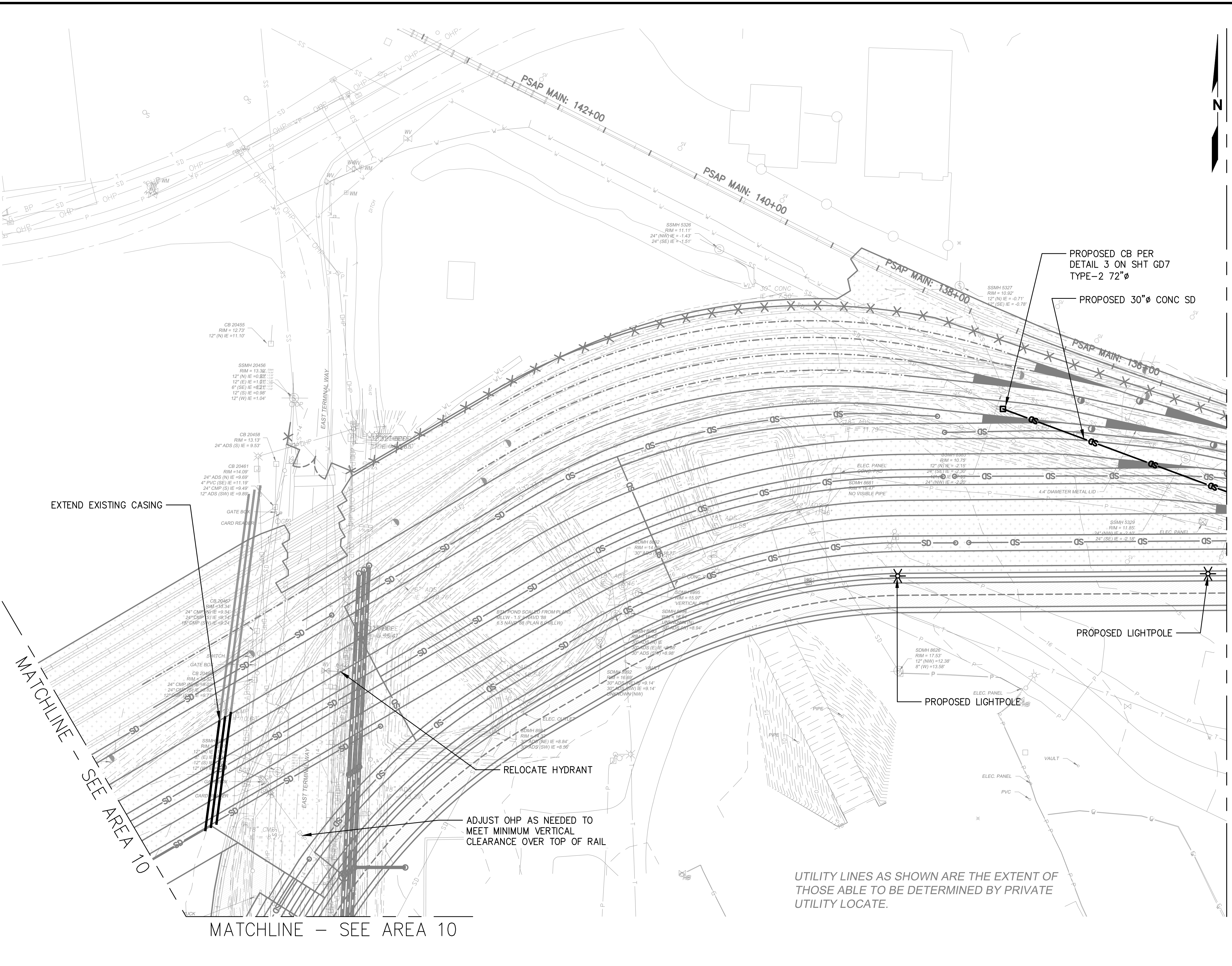
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**UTILITY PLAN**  
**AREA 10**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>U10</b>
SHEET NO.	<b>77</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

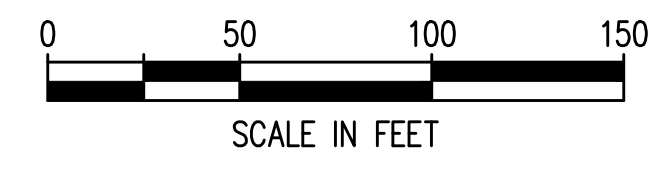
Plotted: Jun 09, 2023 - 9:25pm rambert Layout: AREA 11  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\U1 - U14 UTILITY PLAN.dwg



MATCHLINE - SEE AREA 12

MATCHLINE - SEE AREA 10

MATCHLINE - SEE AREA 10



UTILITY LINES AS SHOWN ARE THE EXTENT OF THOSE ABLE TO BE DETERMINED BY PRIVATE UTILITY LOCATE.



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NO.	DATE	BY	REVISION

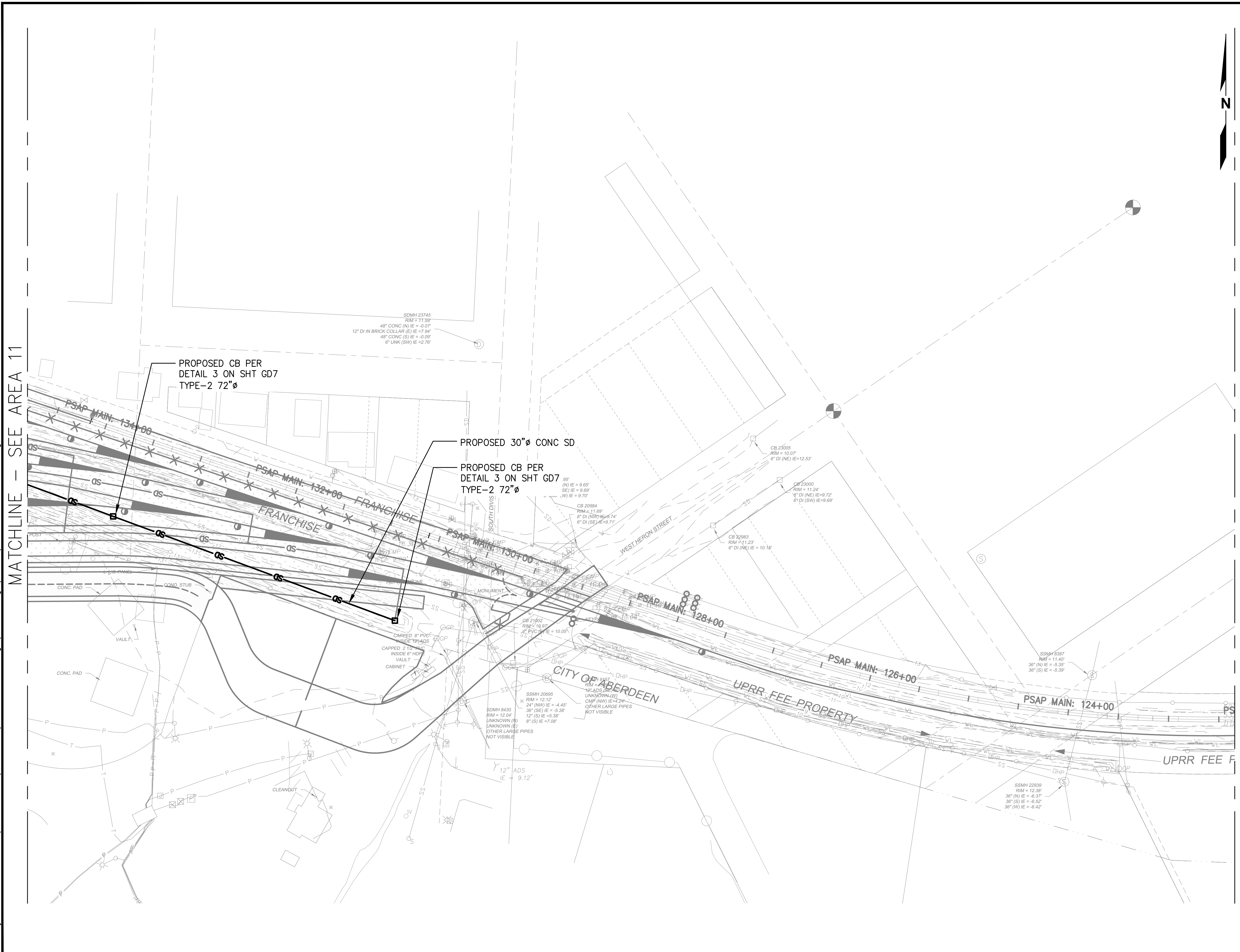
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**UTILITY PLAN**  
**AREA 11**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>U11</b>
SHEET NO.	<b>78</b> OF <b>142</b>

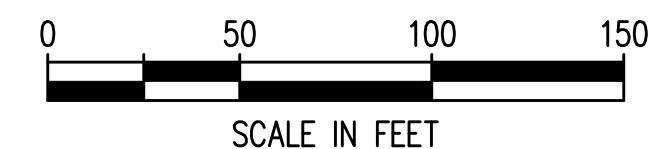
PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:25pm rambert Layout: AREA 12  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\U1 - U14 UTILITY PLAN.dwg



MATCHLINE - SEE AREA 11

MATCHLINE - SEE AREA 13



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**UTILITY PLAN**  
**AREA 12**

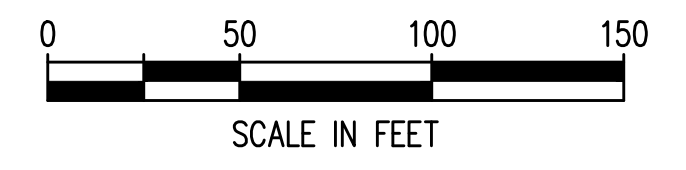
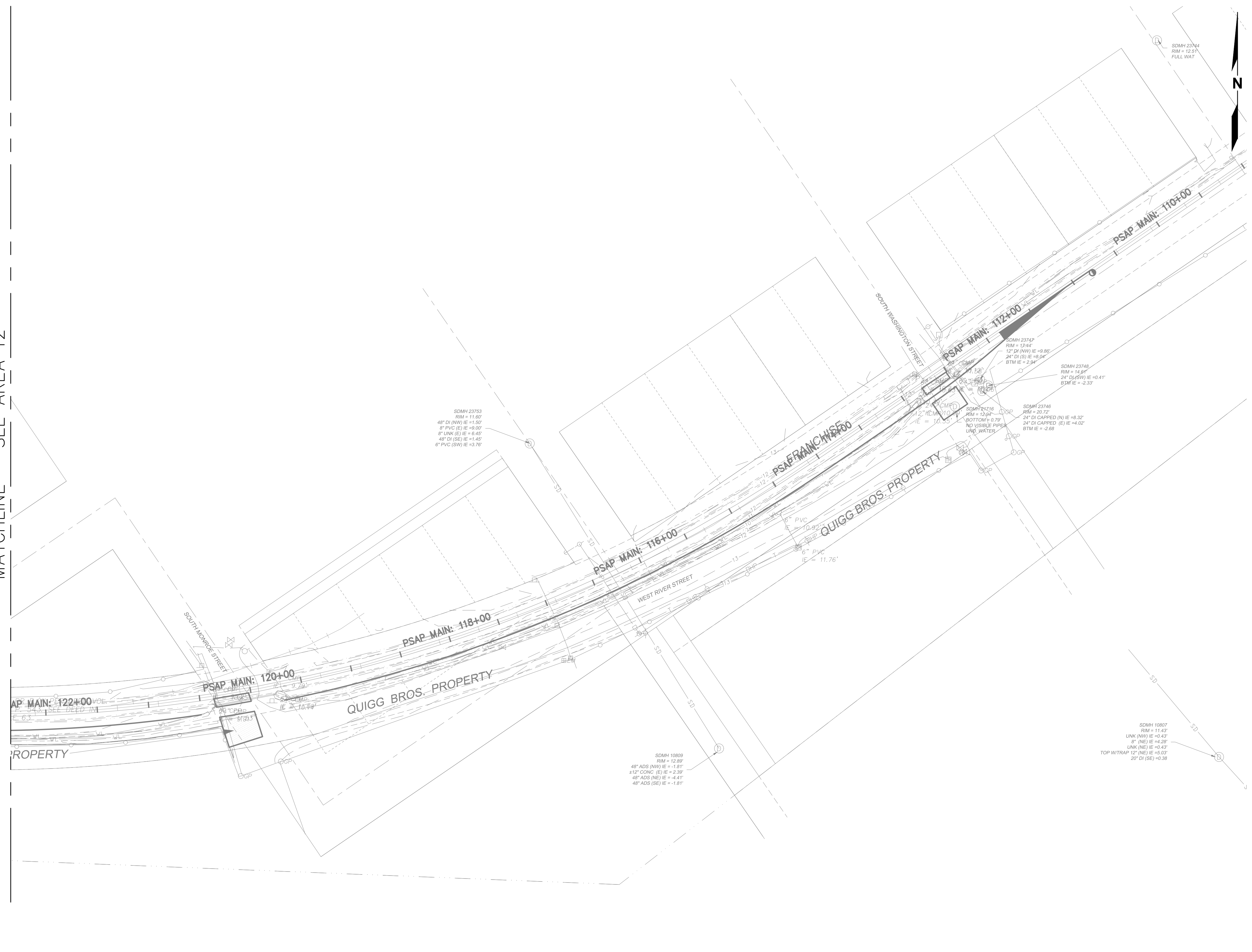
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DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>U12</b>
SHEET NO.	<b>79</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION



Plotted: Jun 09, 2023 - 9:25pm riambert Layout: AREA 13  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\U1 - U14 UTILITY PLAN.dwg

MATCHLINE - SEE AREA 12



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

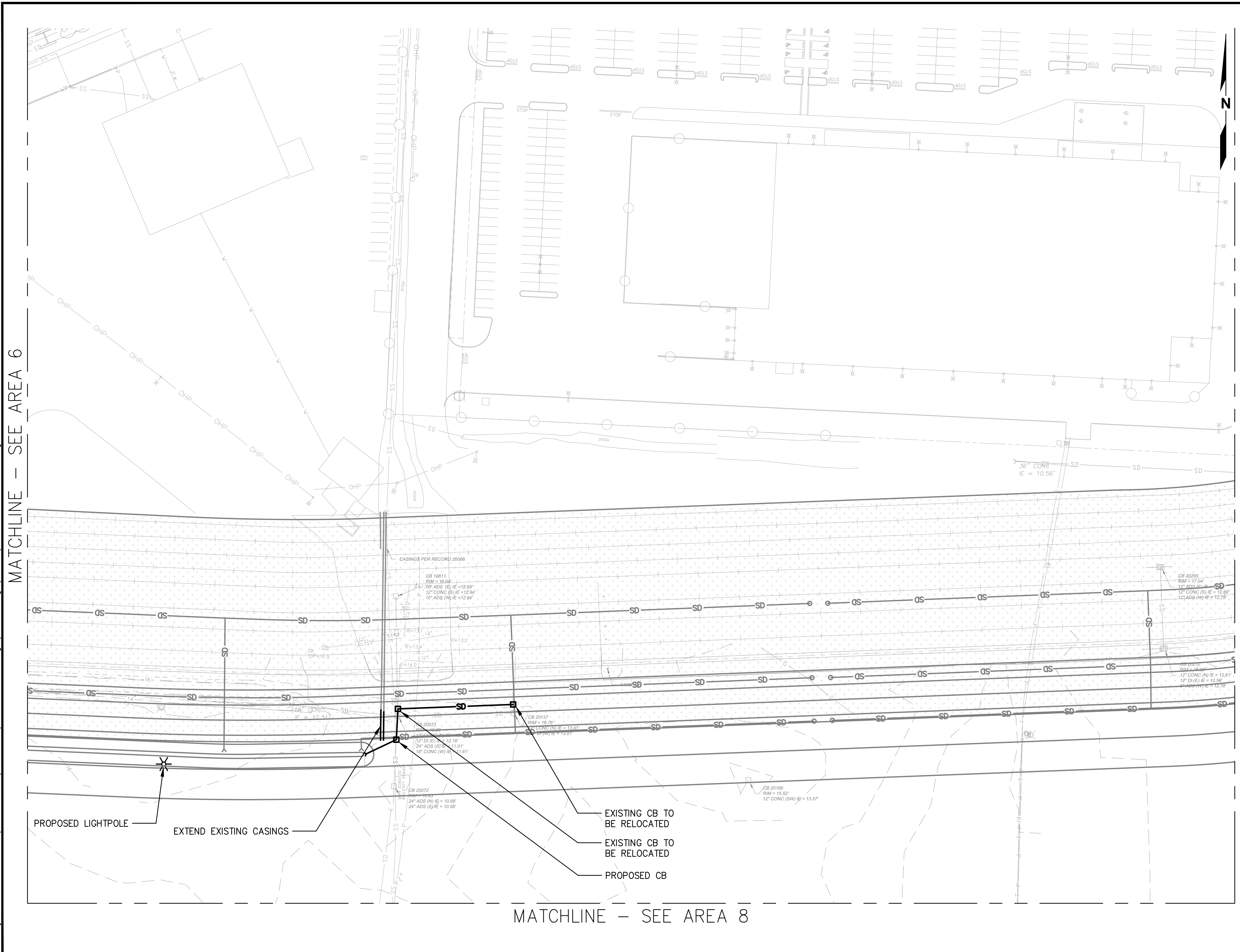
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**UTILITY PLAN**  
**AREA 13**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>U13</b>
SHEET NO.	<b>80 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:25pm rambert Layout: AREA 14  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\U1 - U14 UTILITY PLAN.dwg



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**UTILITY PLAN**  
**AREA 14**

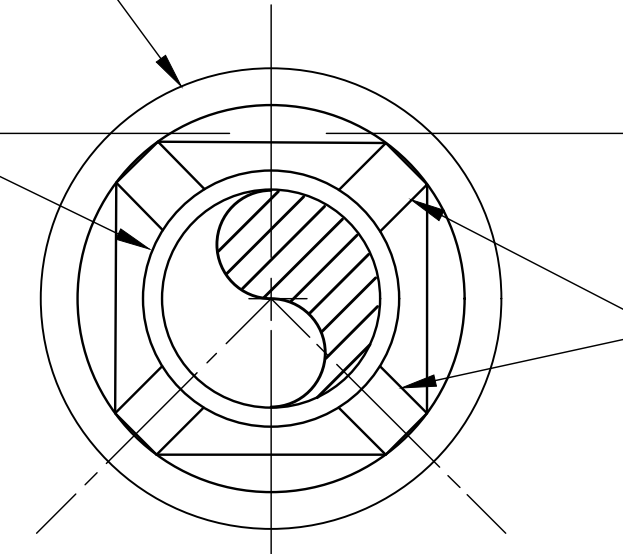
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DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>U14</b>
SHEET NO.	<b>81</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:25pm rambert Layout: U15 UTILITY DETAILS  
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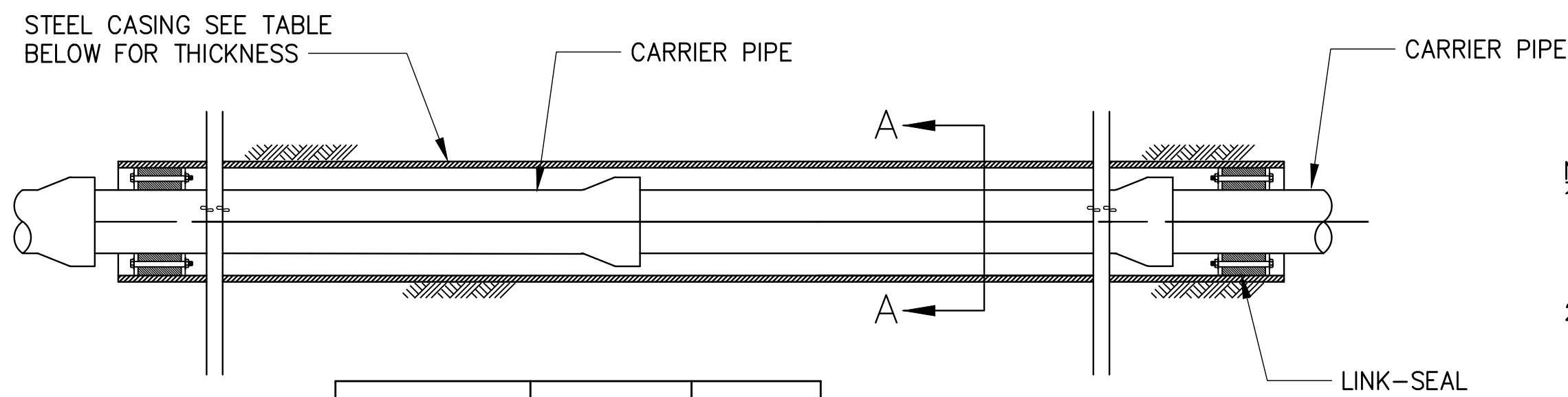
CASING PIPE, SEE TABLE FOR THICKNESS AND DIAMETER.

CARRIER PIPE



SECTION A-A  
SD PIPE

3' LONG TIMBERS TO PREVENT BELL OF CARRIER PIPE FROM BEARING ON CASING PIPE. STRAP CEDAR TIMBERS TO CARRIER PIPE WITH 16GA. x1\"/>



CARRIER PIPE SIZE (NOMINAL)	CASING SIZE (NOMINAL)	LINK-SEAL SIZE NO.
1-1/4"	3-1/4"	LS-275-C
6"	10"	LS-475-C
8"	16"	LS-475-C
10"	18"	LS-400-C
12"	20"	LS-400-C
18"	30"	LS-500-C

MINIMUM THICKNESS FOR CASING PIPE	DIAMETER OF CASING PIPE
1/4" (0.25")	12" OR LESS
5/16" (0.3125")	OVER 12"-18"
11/32" (0.344")	20" & 22"

**NOTES:**

1. THIS SECTION SHOWS PIPE CASING AS REQUIRED BY AREMA STANDARDS FOR E80 LOADING.
2. CASING SHALL EXTEND 15' BEYOND THE CENTERLINE OF THE TRACKS.

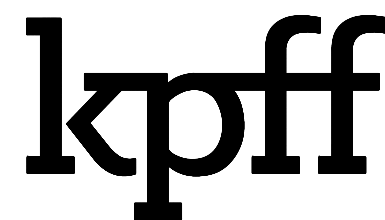
**CASING:**

SIZE AND MINIMUM THICKNESS OF CASING SHALL BE AS SHOWN ON THE CONTRACT DRAWINGS. HOWEVER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING THE THICKNESS CONSISTENT WITH HIS OPERATION.

**CASING SEAL:**

MINIMUM 3/16" THICK, SHEET TYPE SYNTHETIC RUBBER WITH STAINLESS STEEL BANDS.

**1 PIPE CASING**  
SCALE: NTS



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PORT OF GRAYS HARBOR

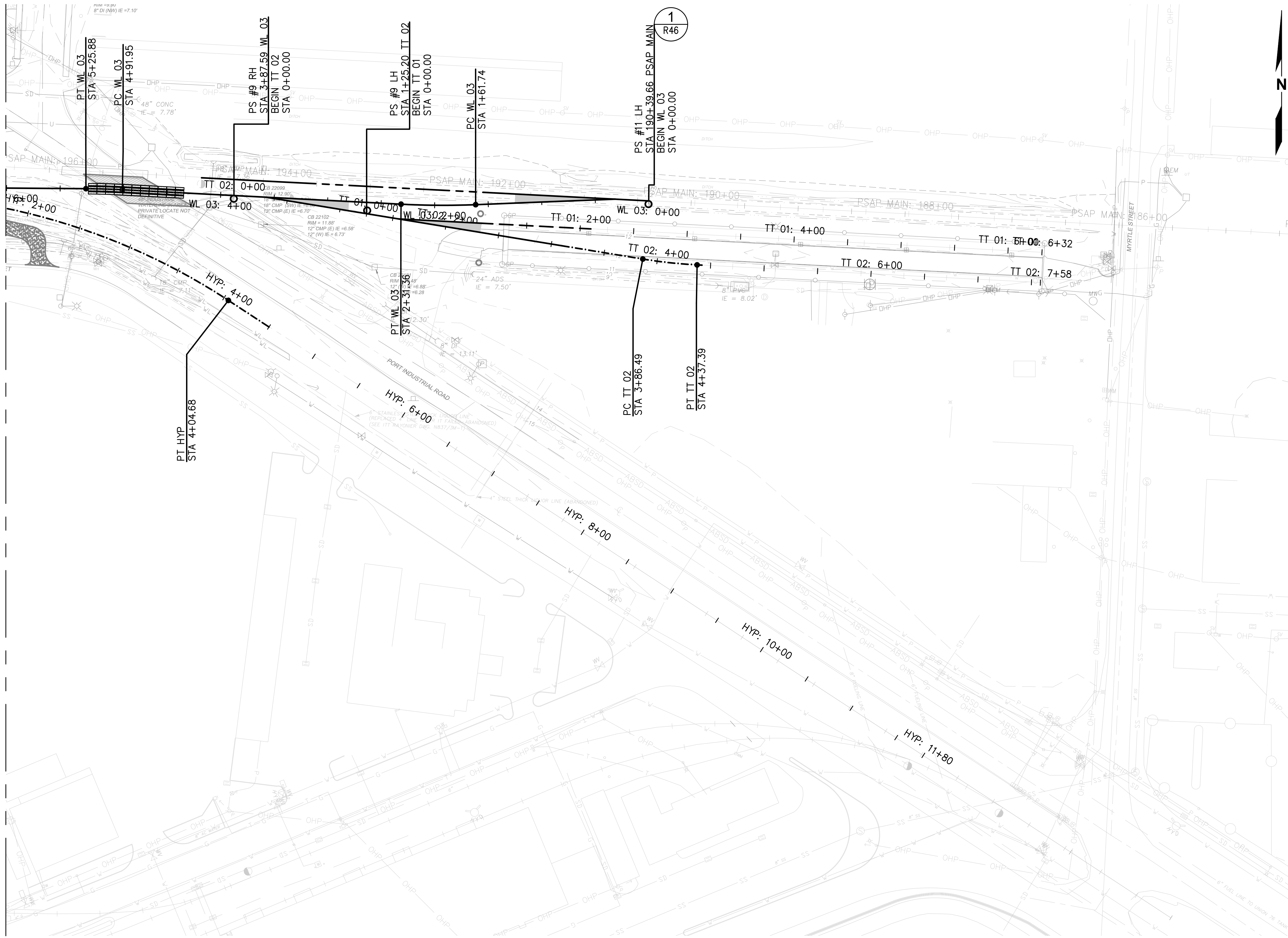
UTILITY DETAILS

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>U15</b>
SHEET NO.	<b>82</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:26pm riambert Layout: AREA 1  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\RI - R14 RAIL PLAN.dwg

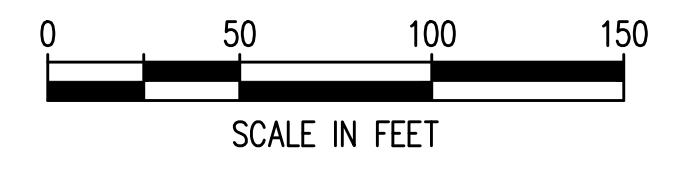
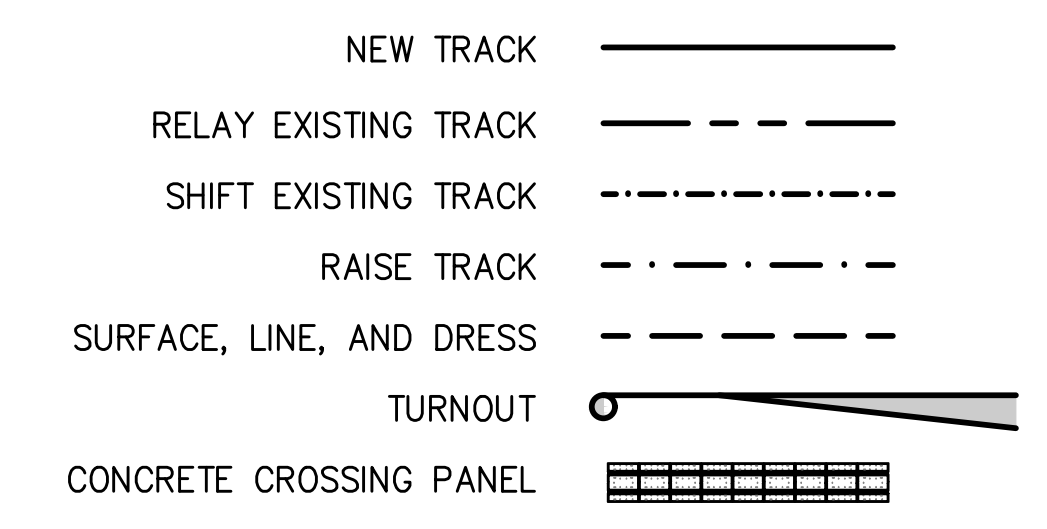
MATCHLINE - SEE AREA 2



**NOTES**

- SEE **4** FOR CROSSING PANEL DETAIL.
- SEE R18-R40 FOR RAIL PROFILES.
- TYPICAL RAIL TO BE 136RE ON CONCRETE TIES.
- SEE **1** FOR NO. 9 TURNOUT DETAIL.
- WITH THE EXCEPTION OF ST 10 6+31.88-9+58.12, ALL PROPOSED HORIZONTAL CURVES HAVE A DEGREE OF CURVATURE LESS THAN OR EQUAL TO 9'30"00".

**LEGEND**



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

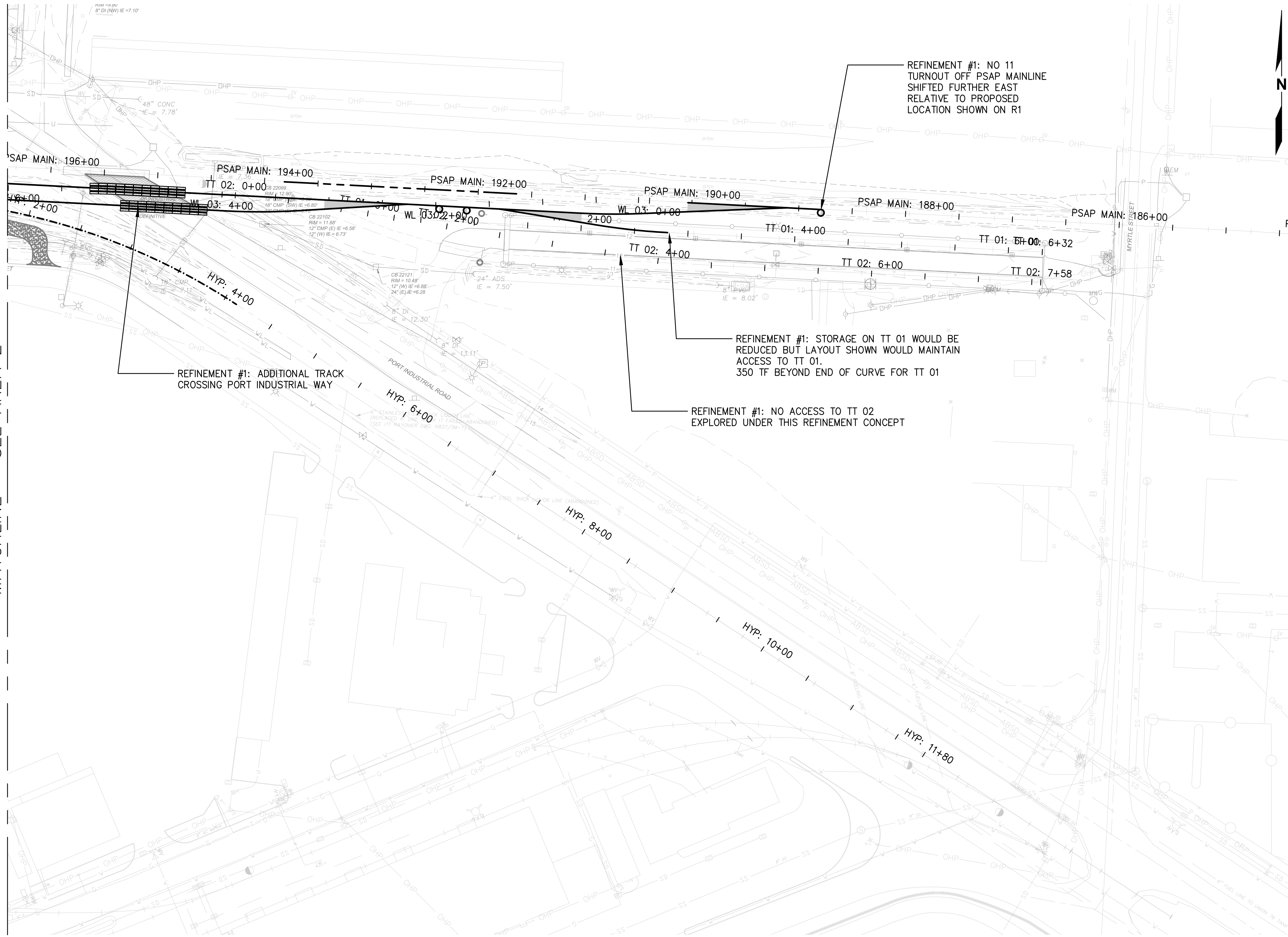
**RAIL PLAN**  
**AREA 1**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R1</b>
SHEET NO.	<b>83</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:26pm riambert Layout: RREF AREA 1 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\R1 - R14 RAIL PLAN\_Alt Refinements.dwg

MATCHLINE - SEE AREA 2

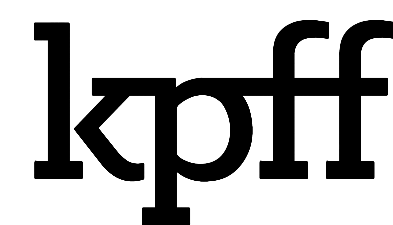
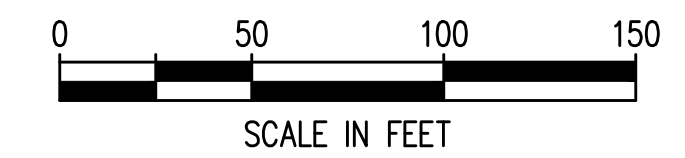


### GENERAL NOTES

- REFINEMENT #1: REDUCE DOWN TO TWO LEAD TRACKS BETWEEN TERMINAL 1 & 2. NO THIRD TRACK ACROSS OR NORTH OF FRY CREEK PARALLEL TO 28TH STREET.
- REFINEMENT #2: CONSOLIDATE TRACKS WEST OF WAGNER CROSSING ASSUMING CARS WILL BE BROKEN AND STORED TO THE EAST OF WAGNER AND THAT STORAGE WEST OF WAGNER IS NOT CRITICAL.
- REFINEMENT #3: ABANDON/DO NOT CONSTRUCT WL 01 SOUTH WITHIN LIMITS OF DP 03S/WL 01 TURNOUTS.
- SEE PLAN ANNOTATIONS FOR CHANGES ASSOCIATED WITH EACH REFINEMENT.
- HORIZONTAL ALIGNMENT STATIONING SHOWN IS REFLECTIVE OF CURRENT ALIGNMENTS ON R1-14, NOT THE REFINEMENTS.

### LEGEND

- NEW TRACK
- RELAY EXISTING TRACK
- SHIFT EXISTING TRACK
- RAISE TRACK
- SURFACE, LINE, AND DRESS
- TURNOUT
- CONCRETE CROSSING PANEL



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NO.	DATE	BY	REVISION

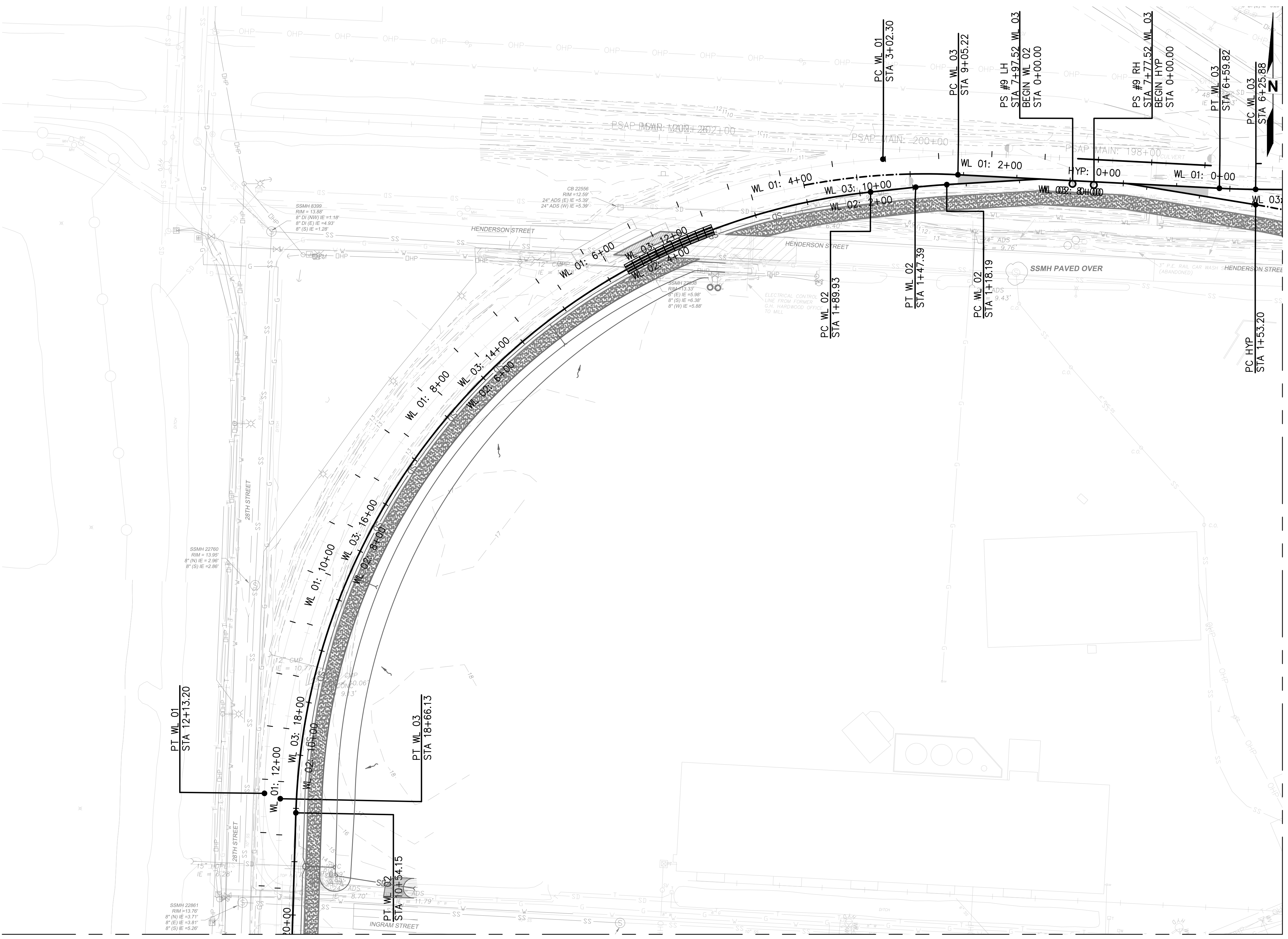
TERMINAL 4 RAIL AND SITE IMPROVEMENTS  
PORT OF GRAYS HARBOR

RAIL REFINEMENT  
AREA 1

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R1.1</b>
SHEET NO.	<b>84</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:27pm rambert Layout: AREA 2  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\1 - R14 RAIL PLAN.dwg

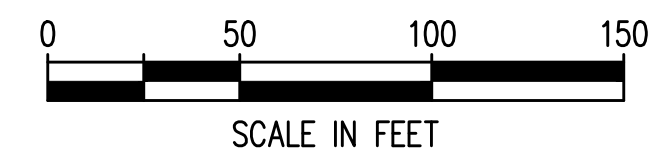


**NOTES**

- SEE **4** FOR CROSSING PANEL DETAIL.  
(R44)
- SEE R18-R40 FOR RAIL PROFILES.
- TYPICAL RAIL TO BE 136RE ON CONCRETE TIES.
- SEE **1** FOR NO. 9 TURNOUT DETAIL.  
(R45)
- WITH THE EXCEPTION OF ST 10 6+31.88-9+58.12, ALL PROPOSED HORIZONTAL CURVES HAVE A DEGREE OF CURVATURE LESS THAN OR EQUAL TO 9'30"00".

**LEGEND**

- NEW TRACK
- RELAY EXISTING TRACK
- SHIFT EXISTING TRACK
- RAISE TRACK
- SURFACE, LINE, AND DRESS
- TURNOUT
- CONCRETE CROSSING PANEL



MATCHLINE - SEE AREA 3

MATCHLINE - SEE AREA 1



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NO.	DATE	BY	REVISION

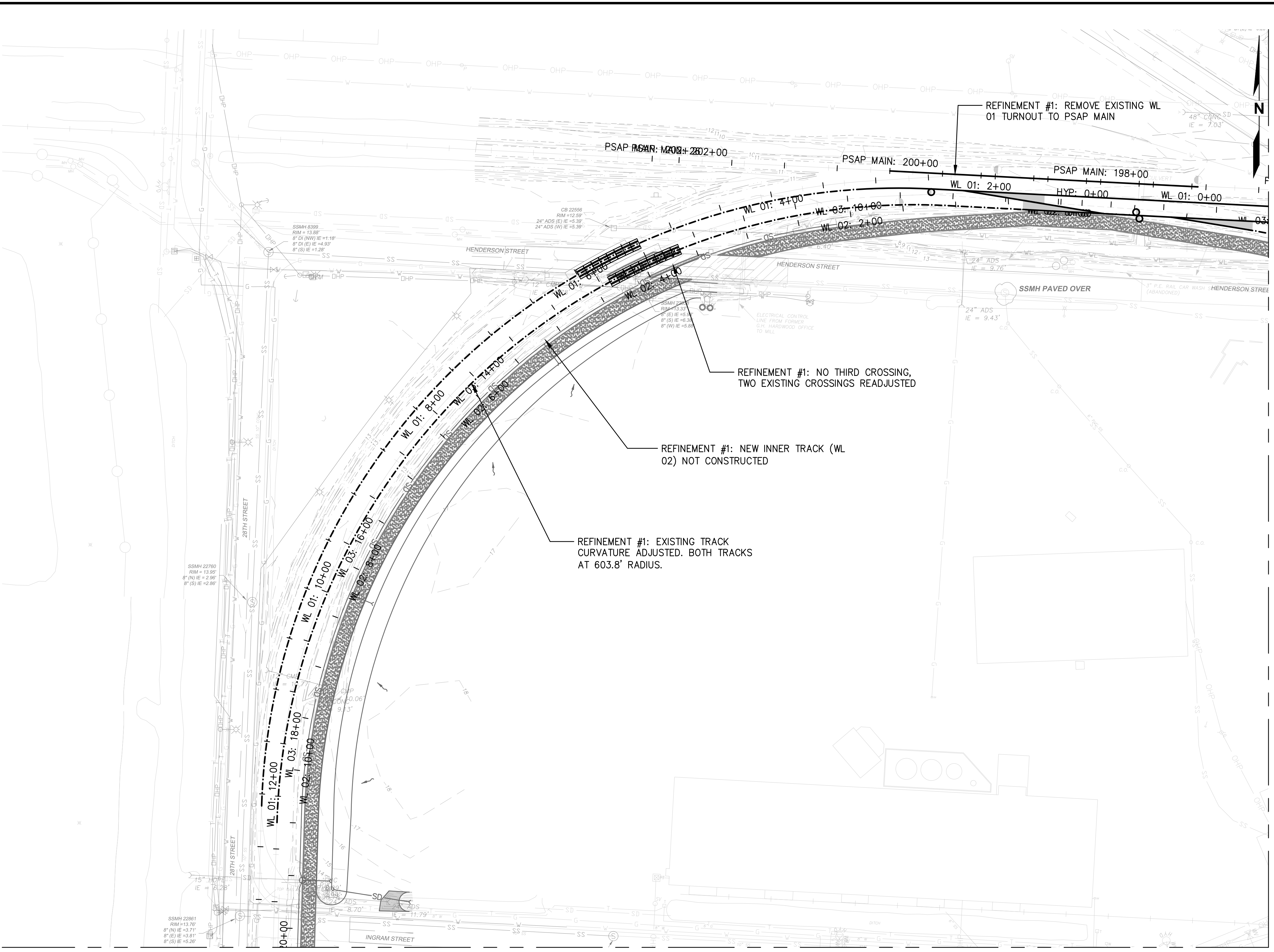
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**RAIL PLAN**  
**AREA 2**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R2</b>
SHEET NO.	<b>85</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

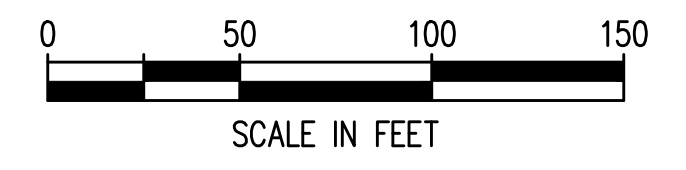
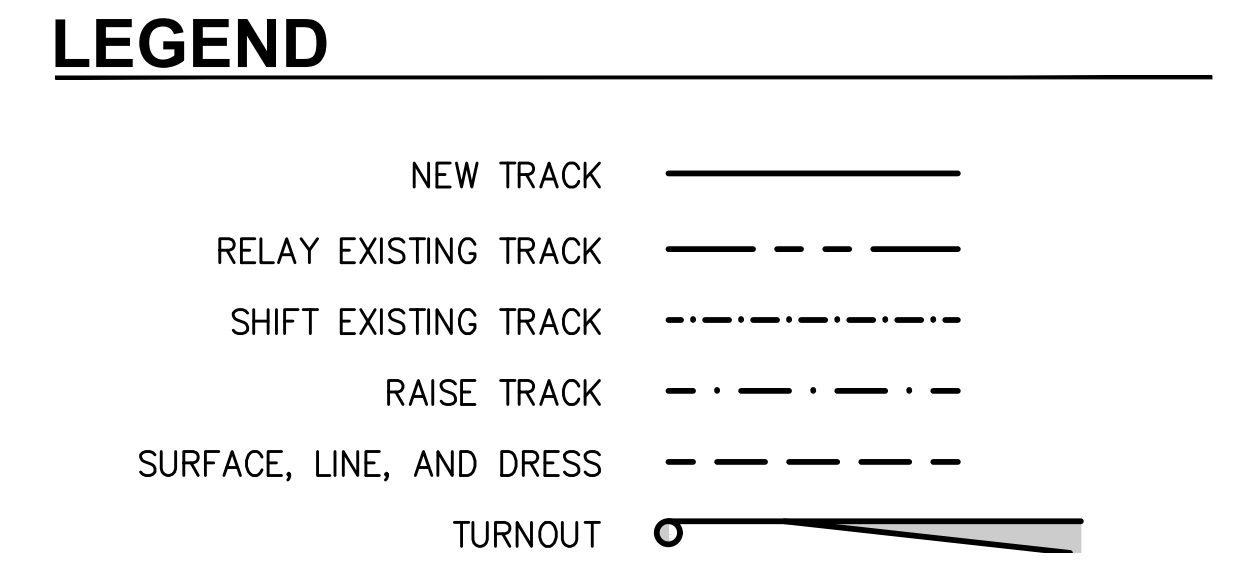
Plotted: Jun 09, 2023 - 9:27pm rambert Layout: RREF AREA 2  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\R1 - R14 RAIL PLAN\_Alt Refinements.dwg



- ### GENERAL NOTES
- REFINEMENT #1: REDUCE DOWN TO TWO LEAD TRACKS BETWEEN TERMINAL 1 & 2. NO THIRD TRACK ACROSS OR NORTH OF FRY CREEK PARALLEL TO 28TH STREET.
  - REFINEMENT #2: CONSOLIDATE TRACKS WEST OF WAGNER CROSSING ASSUMING CARS WILL BE BROKEN AND STORED TO THE EAST OF WAGNER AND THAT STORAGE WEST OF WAGNER IS NOT CRITICAL.
  - REFINEMENT #3: ABANDON/DO NOT CONSTRUCT WL 01 SOUTH WITHIN LIMITS OF DP 03S/WL 01 TURNOUTS.
  - SEE PLAN ANNOTATIONS FOR CHANGES ASSOCIATED WITH EACH REFINEMENT.
  - HORIZONTAL ALIGNMENT STATIONING SHOWN IS REFLECTIVE OF CURRENT ALIGNMENTS ON R1-14, NOT THE REFINEMENTS.

MATCHLINE - SEE AREA 1

MATCHLINE - SEE AREA 3



NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**RAIL REFINEMENT**  
**AREA 2**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R2.1</b>
SHEET NO.	<b>86 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:28pm riambert Layout: AREA 3  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\R1 - R14 RAIL PLAN.dwg



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

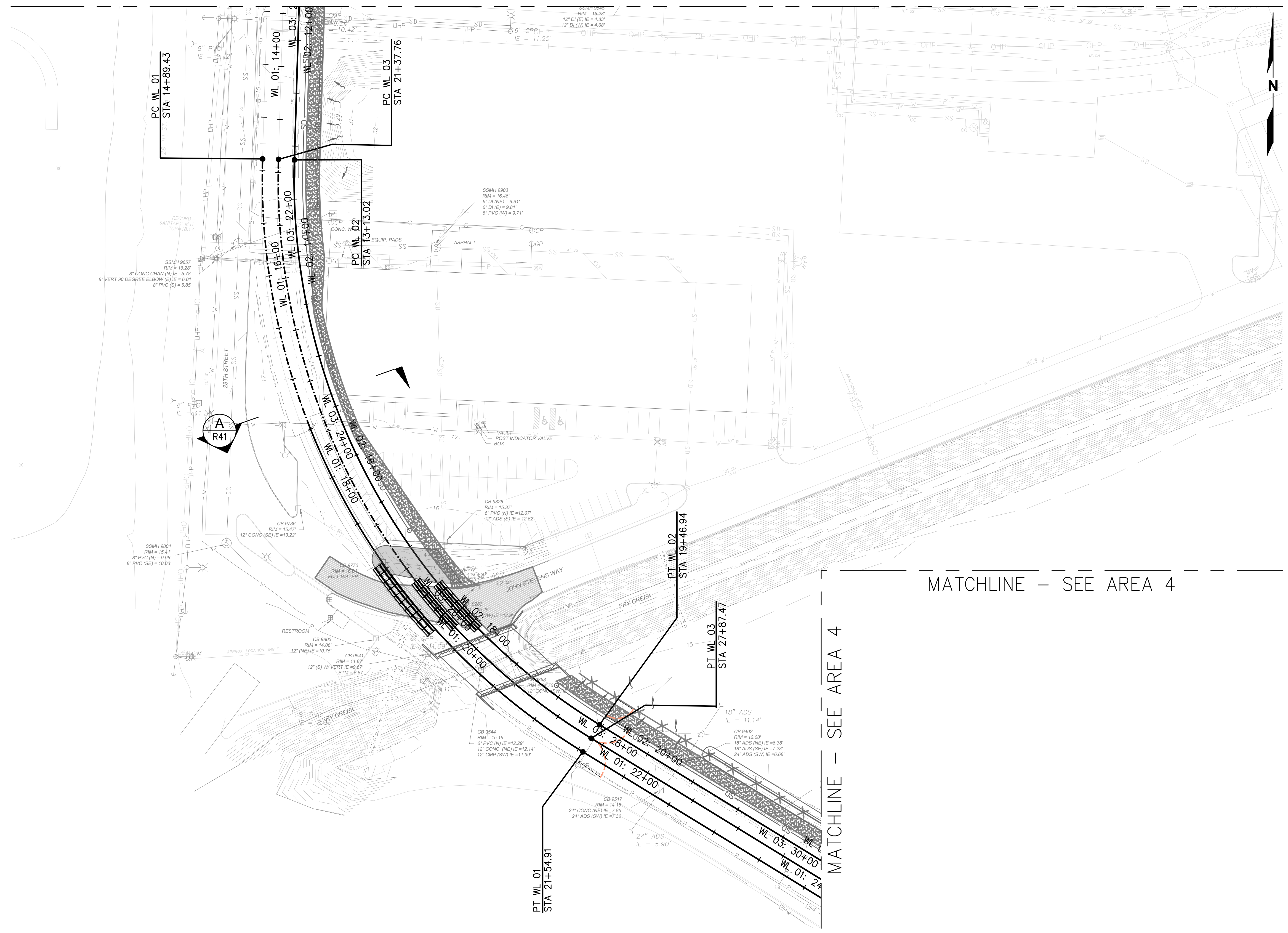
**RAIL PLAN**  
**AREA 3**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R3</b>
SHEET NO.	<b>87</b> OF <b>142</b>

MATCHLINE - SEE AREA 2

MATCHLINE - SEE AREA 4

MATCHLINE - SEE AREA 4

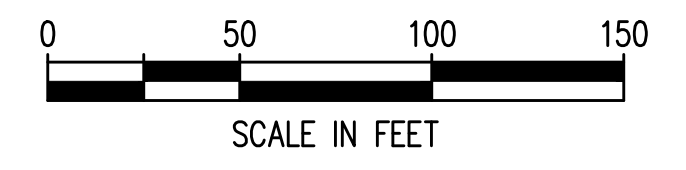


**NOTES**

- SEE **4** FOR CROSSING PANEL DETAIL.  
(R44)
- SEE R18-R40 FOR RAIL PROFILES.
- TYPICAL RAIL TO BE 136RE ON CONCRETE TIES.
- SEE **1** FOR NO. 9 TURNOUT DETAIL.  
(R45)
- WITH THE EXCEPTION OF ST 10 6+31.88-9+58.12, ALL PROPOSED HORIZONTAL CURVES HAVE A DEGREE OF CURVATURE LESS THAN OR EQUAL TO 9'30"00".

**LEGEND**

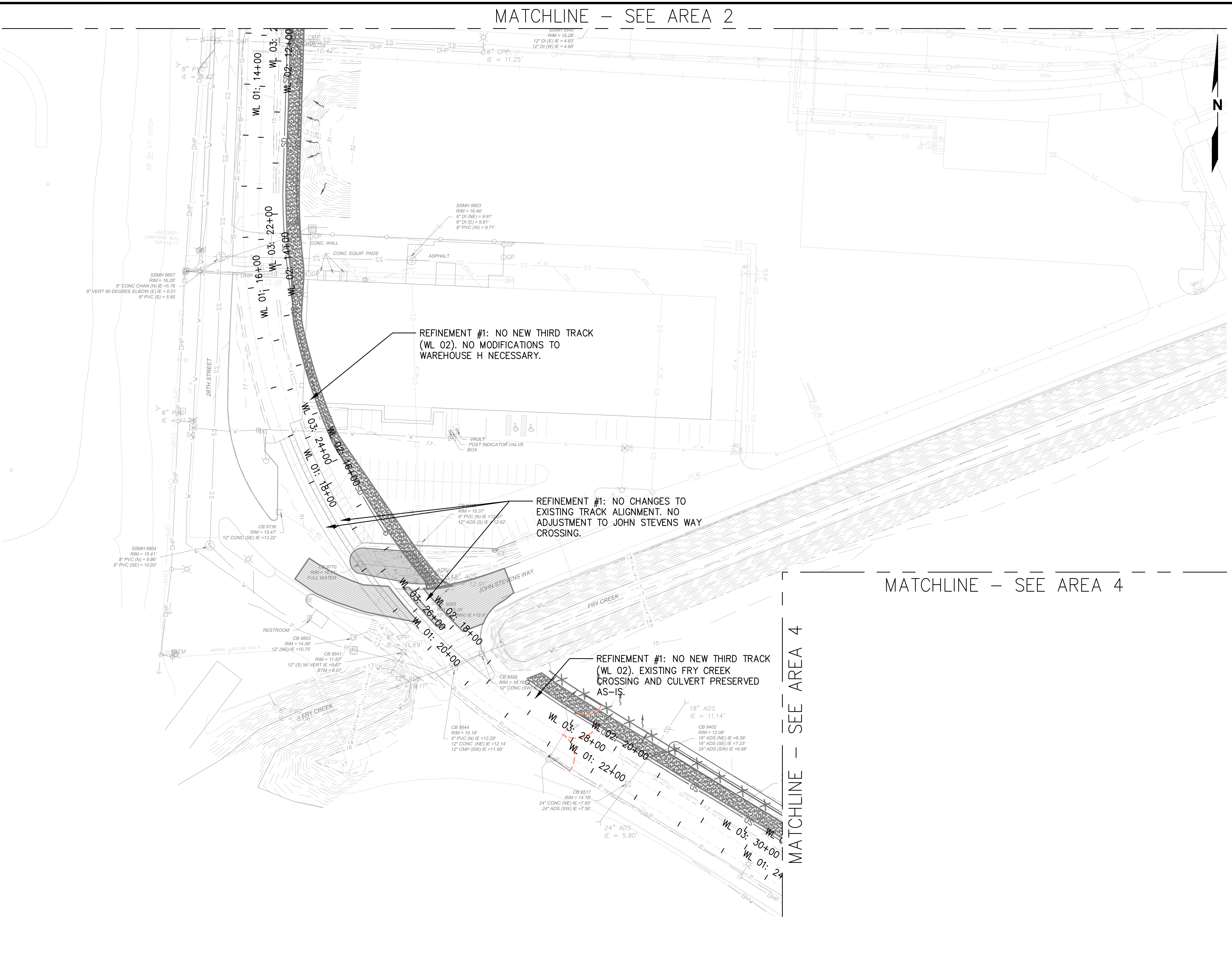
- NEW TRACK
- RELAY EXISTING TRACK
- SHIFT EXISTING TRACK
- RAISE TRACK
- SURFACE, LINE, AND DRESS
- TURNOUT
- CONCRETE CROSSING PANEL



PRELIMINARY DESIGN - NOT FOR CONSTRUCTION



Plotted: Jun 09, 2023 - 9:28pm rambert Layout: RREF AREA 3  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\R1 - R14 RAIL PLAN\_Alt Refinements.dwg



MATCHLINE - SEE AREA 2

MATCHLINE - SEE AREA 4

**GENERAL NOTES**

1. REFINEMENT #1: REDUCE DOWN TO TWO LEAD TRACKS BETWEEN TERMINAL 1 & 2. NO THIRD TRACK ACROSS OR NORTH OF FRY CREEK PARALLEL TO 28TH STREET.
2. REFINEMENT #2: CONSOLIDATE TRACKS WEST OF WAGNER CROSSING ASSUMING CARS WILL BE BROKEN AND STORED TO THE EAST OF WAGNER AND THAT STORAGE WEST OF WAGNER IS NOT CRITICAL.
3. REFINEMENT #3: ABANDON/DO NOT CONSTRUCT WL 01 SOUTH WITHIN LIMITS OF DP 03S/WL 01 TURNOUTS.
4. SEE PLAN ANNOTATIONS FOR CHANGES ASSOCIATED WITH EACH REFINEMENT.
5. HORIZONTAL ALIGNMENT STATIONING SHOWN IS REFLECTIVE OF CURRENT ALIGNMENTS ON R1-14, NOT THE REFINEMENTS.

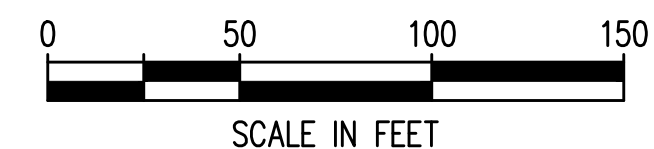
REFINEMENT #1: NO NEW THIRD TRACK (WL 02). NO MODIFICATIONS TO WAREHOUSE H NECESSARY.

REFINEMENT #1: NO CHANGES TO EXISTING TRACK ALIGNMENT. NO ADJUSTMENT TO JOHN STEVENS WAY CROSSING.

REFINEMENT #1: NO NEW THIRD TRACK (WL 02). EXISTING FRY CREEK CROSSING AND CULVERT PRESERVED AS-IS.

**LEGEND**

- NEW TRACK
- RELAY EXISTING TRACK
- SHIFT EXISTING TRACK
- RAISE TRACK
- SURFACE, LINE, AND DRESS
- TURNOUT



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**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**RAIL REFINEMENT**  
**AREA 3**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R3.1</b>
SHEET NO.	<b>88</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

MATCHLINE - SEE AREA 3

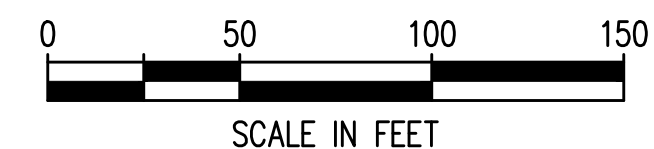
MATCHLINE - SEE AREA 3

**NOTES**

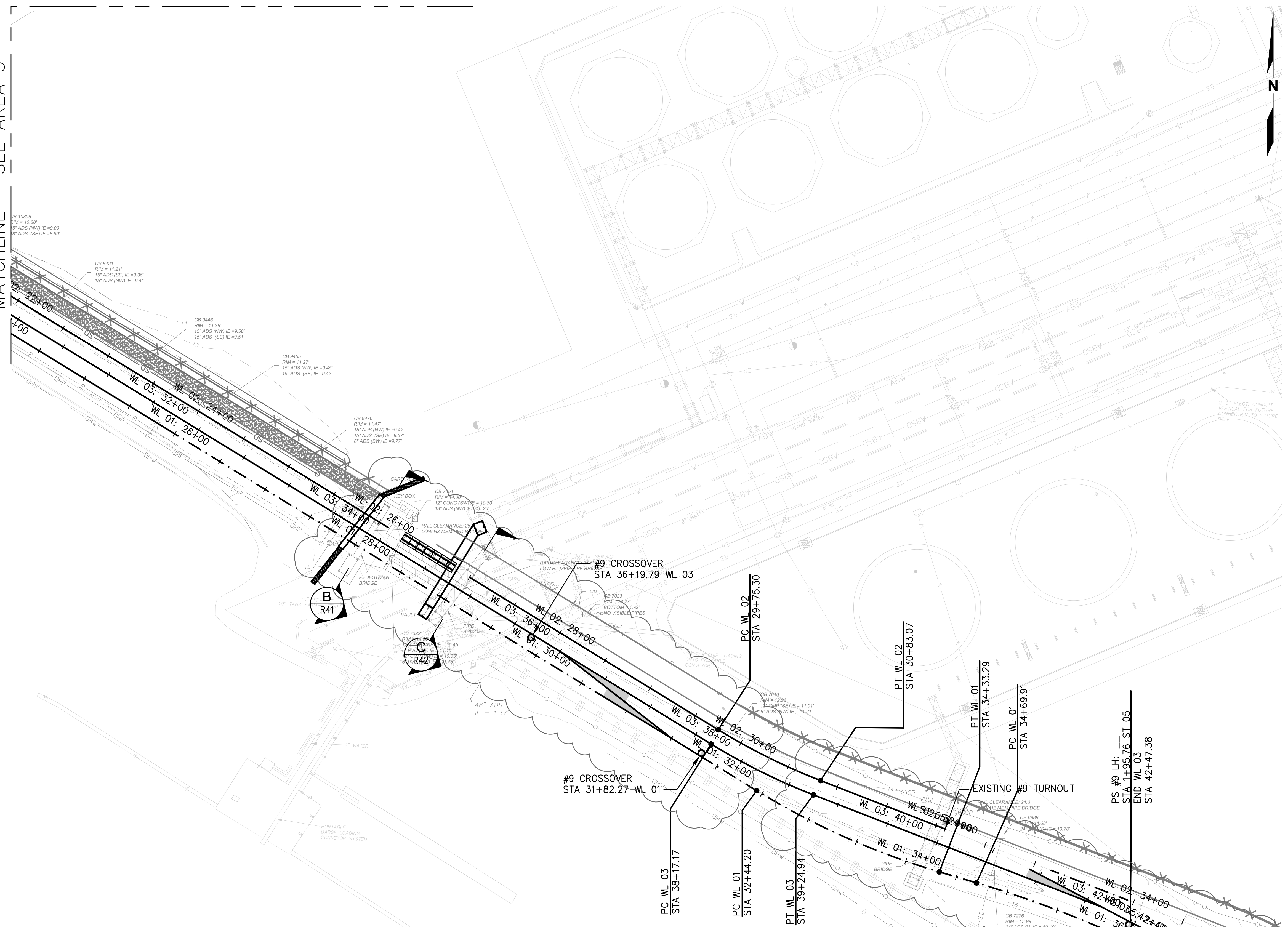
- SEE **(4)** FOR CROSSING PANEL DETAIL.  
R44
- SEE R18-R40 FOR RAIL PROFILES.
- TYPICAL RAIL TO BE 136RE ON CONCRETE TIES.
- SEE **(1)** FOR NO. 9 TURNOUT DETAIL.  
R45
- WITH THE EXCEPTION OF ST 10 6+31.88-9+58.12, ALL PROPOSED HORIZONTAL CURVES HAVE A DEGREE OF CURVATURE LESS THAN OR EQUAL TO 9'30"00".

**LEGEND**

- NEW TRACK
- RELAY EXISTING TRACK
- SHIFT EXISTING TRACK
- RAISE TRACK
- SURFACE, LINE, AND DRESS
- TURNOUT
- CONCRETE CROSSING PANEL



MATCHLINE - SEE AREA 5



Plotted: Jun 09, 2023 - 9:29pm riambert Layout: AREA 4  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\RI - R14 RAIL PLAN.dwg



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
PORT OF GRAYS HARBOR

**RAIL PLAN**  
**AREA 4**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R4</b>
SHEET NO.	<b>89</b> OF <b>142</b>

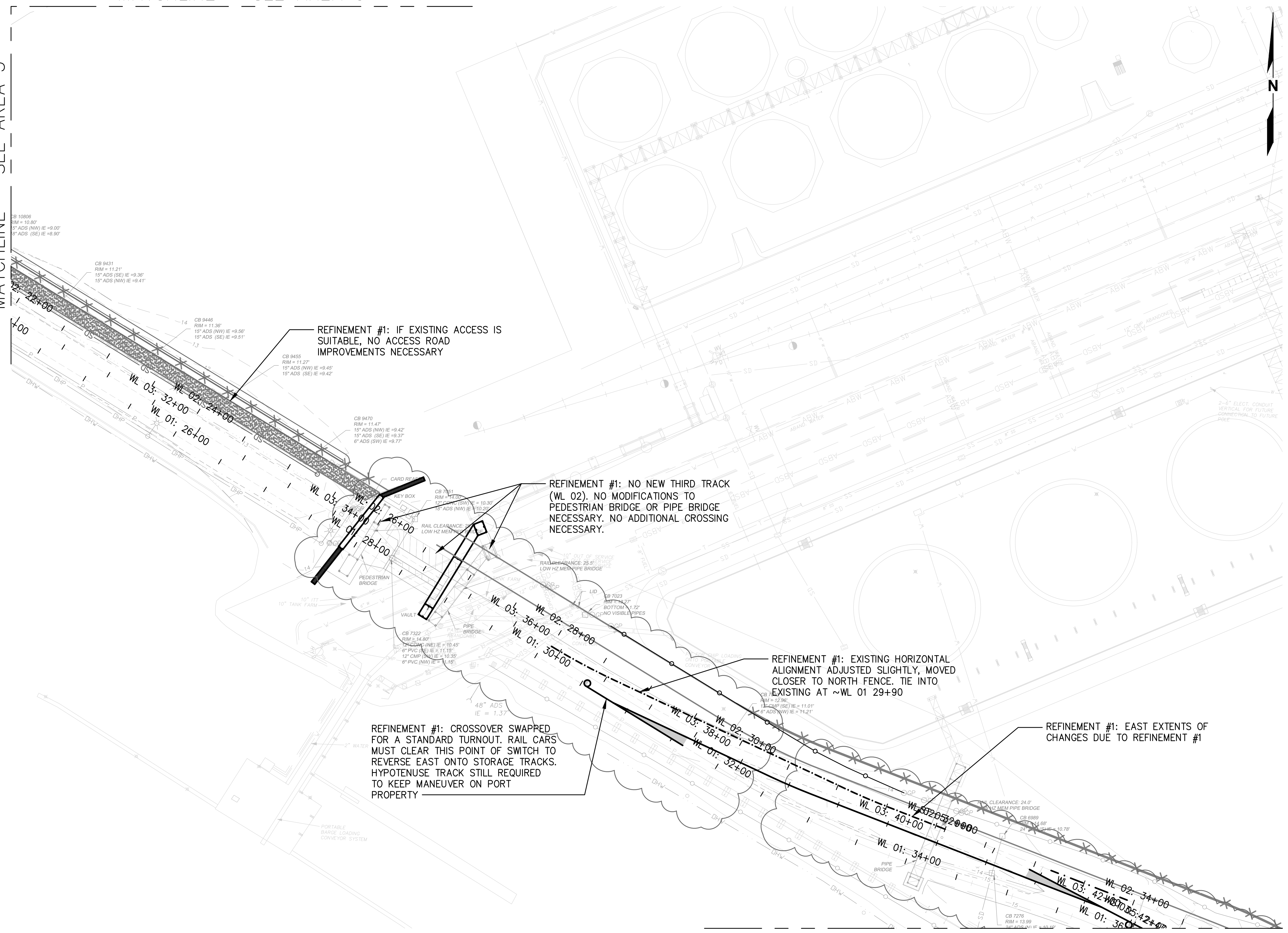
PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

MATCHLINE – SEE AREA 3

MATCHLINE – SEE AREA 3

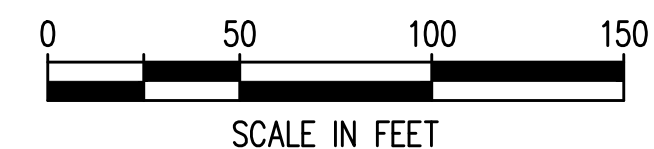
**GENERAL NOTES**

1. REFINEMENT #1: REDUCE DOWN TO TWO LEAD TRACKS BETWEEN TERMINAL 1 & 2. NO THIRD TRACK ACROSS OR NORTH OF FRY CREEK PARALLEL TO 28TH STREET.
2. REFINEMENT #2: CONSOLIDATE TRACKS WEST OF WAGNER CROSSING ASSUMING CARS WILL BE BROKEN AND STORED TO THE EAST OF WAGNER AND THAT STORAGE WEST OF WAGNER IS NOT CRITICAL.
3. REFINEMENT #3: ABANDON/DO NOT CONSTRUCT WL 01 SOUTH WITHIN LIMITS OF DP 03S/WL 01 TURNOUTS.
4. SEE PLAN ANNOTATIONS FOR CHANGES ASSOCIATED WITH EACH REFINEMENT.
5. HORIZONTAL ALIGNMENT STATIONING SHOWN IS REFLECTIVE OF CURRENT ALIGNMENTS ON R1-14, NOT THE REFINEMENTS.



**LEGEND**

- NEW TRACK
- RELAY EXISTING TRACK
- SHIFT EXISTING TRACK
- RAISE TRACK
- SURFACE, LINE, AND DRESS
- TURNOUT



MATCHLINE – SEE AREA 5

Plotted: Jun 09, 2023 - 9:29pm  
 rambert  
 Layout: RREF AREA 4  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\R1 - R14 RAIL PLAN\_Alt Refinements.dwg



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**RAIL REFINEMENT**  
**AREA 4**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R4.1</b>
SHEET NO.	<b>90 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

MATCHLINE - SEE AREA 4

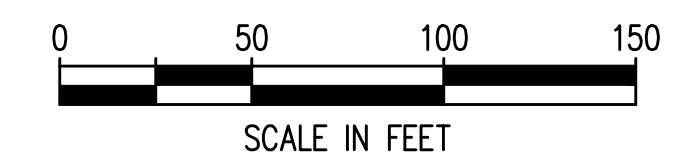
**NOTES**

- SEE **(4)** FOR CROSSING PANEL DETAIL.  
R44
- SEE R18-R40 FOR RAIL PROFILES.
- TYPICAL RAIL TO BE 136RE ON CONCRETE TIES.
- SEE **(1)** FOR NO. 9 TURNOUT DETAIL.  
R45
- WITH THE EXCEPTION OF ST 10 6+31.88-9+58.12, ALL PROPOSED HORIZONTAL CURVES HAVE A DEGREE OF CURVATURE LESS THAN OR EQUAL TO 9°30'00".

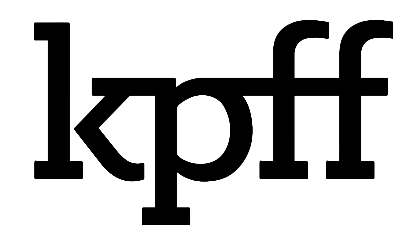
MATCHLINE - SEE AREA 6

**LEGEND**

- NEW TRACK
- RELAY EXISTING TRACK
- SHIFT EXISTING TRACK
- RAISE TRACK
- SURFACE, LINE, AND DRESS
- TURNOUT
- CONCRETE CROSSING PANEL



Plotted: Jun 09, 2023 - 9:30pm rambert Layout: AREA 5  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\RI - RI14 RAIL PLAN.dwg



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
PORT OF GRAYS HARBOR

---

**RAIL PLAN**  
**AREA 5**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R5</b>
SHEET NO.	<b>91 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION







MATCHLINE - SEE AREA 4

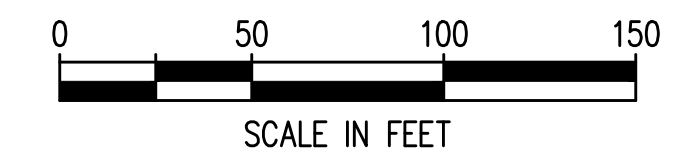
**GENERAL NOTES**

1. REFINEMENT #1: REDUCE DOWN TO TWO LEAD TRACKS BETWEEN TERMINAL 1 & 2. NO THIRD TRACK ACROSS OR NORTH OF FRY CREEK PARALLEL TO 28TH STREET.
2. REFINEMENT #2: CONSOLIDATE TRACKS WEST OF WAGNER CROSSING ASSUMING CARS WILL BE BROKEN AND STORED TO THE EAST OF WAGNER AND THAT STORAGE WEST OF WAGNER IS NOT CRITICAL.
3. REFINEMENT #3: ABANDON/DO NOT CONSTRUCT WL 01 SOUTH WITHIN LIMITS OF DP 03S/WL 01 TURNOUTS.
4. SEE PLAN ANNOTATIONS FOR CHANGES ASSOCIATED WITH EACH REFINEMENT.
5. HORIZONTAL ALIGNMENT STATIONING SHOWN IS REFLECTIVE OF CURRENT ALIGNMENTS ON R1-14, NOT THE REFINEMENTS.

MATCHLINE - SEE AREA 6

**LEGEND**

- NEW TRACK 
- RELAY EXISTING TRACK 
- SHIFT EXISTING TRACK 
- RAISE TRACK 
- SURFACE, LINE, AND DRESS 
- TURNOUT 



Plotted: Jun 09, 2023 - 9:30pm rambert Layout: RREF AREA 5  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\R1 - R14 RAIL PLAN\_Alt Refinements.dwg



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

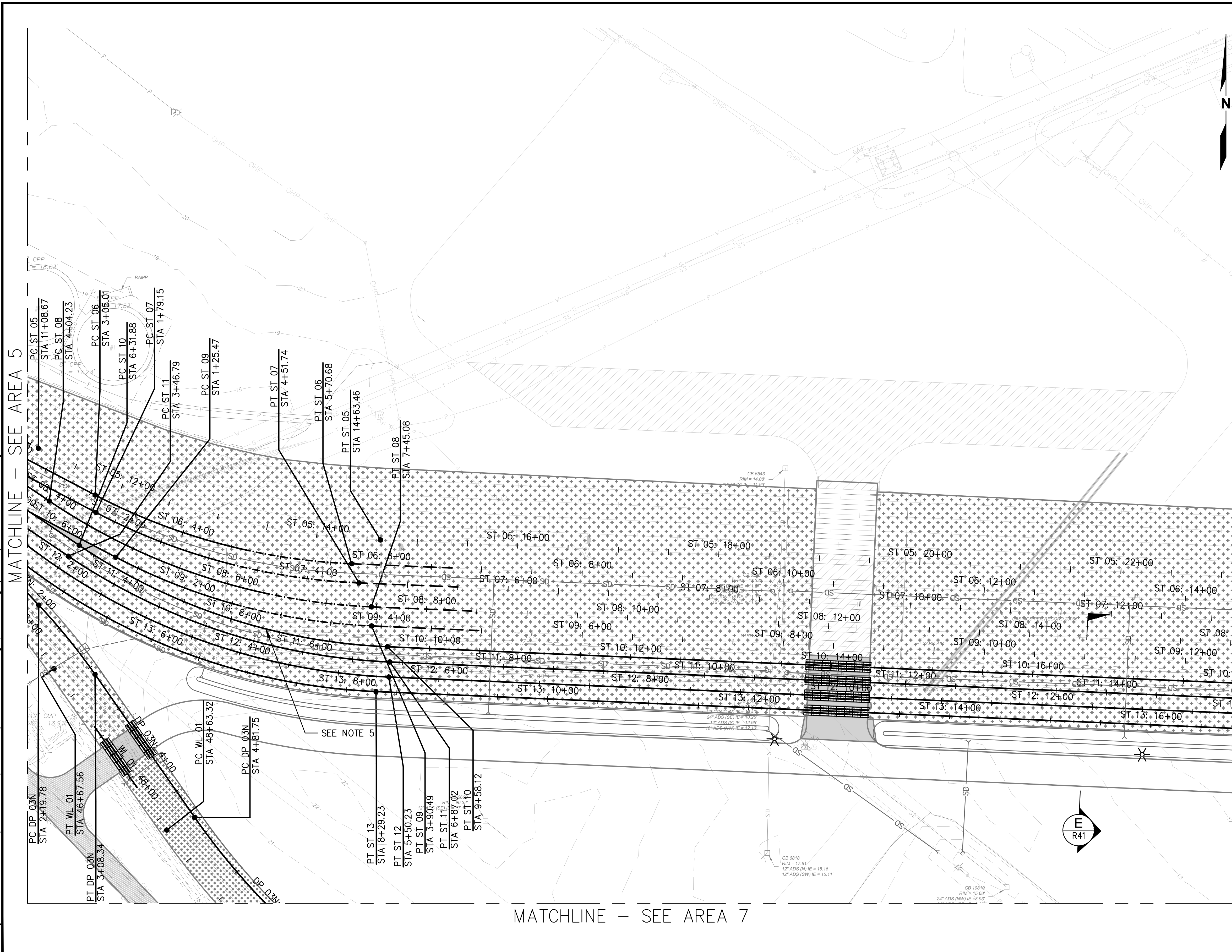
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**RAIL REFINEMENT**  
**AREA 5**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R5.1</b>
SHEET NO.	<b>92</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

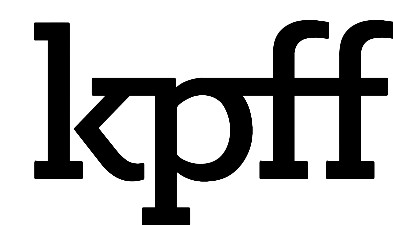
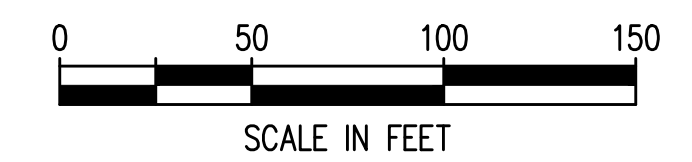
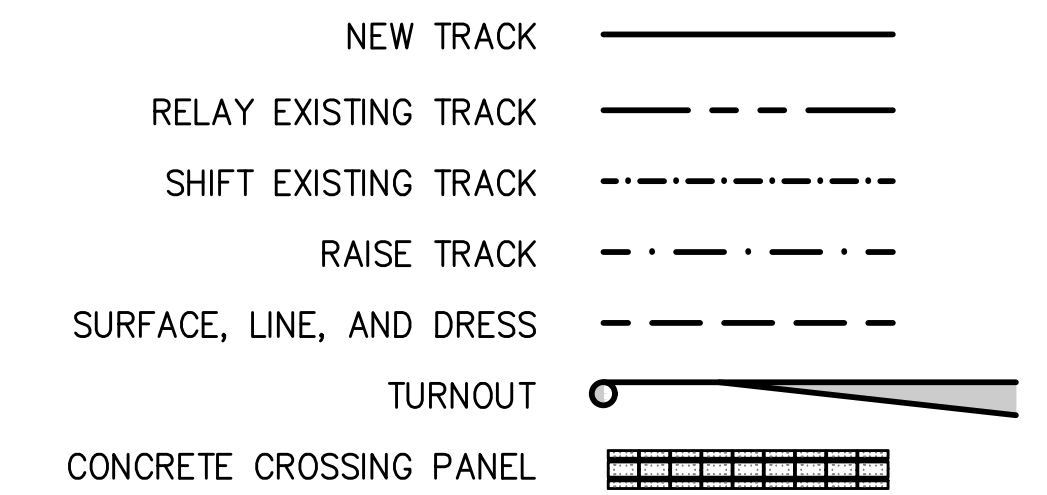
Plotted: Jun 09, 2023 - 9:31pm rambert Layout: AREA 6  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\RI - R14 RAIL PLAN.dwg



**NOTES**

- SEE **4** FOR CROSSING PANEL DETAIL.  
R44
- SEE R18-R40 FOR RAIL PROFILES.
- TYPICAL RAIL TO BE 136RE ON CONCRETE TIES.
- SEE **1** FOR NO. 9 TURNOUT DETAIL.  
R45
- WITH THE EXCEPTION OF ST 10 6+31.88-9+58.12, ALL PROPOSED HORIZONTAL CURVES HAVE A DEGREE OF CURVATURE LESS THAN OR EQUAL TO 9'30"00".

**LEGEND**



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NO.	DATE	BY	REVISION

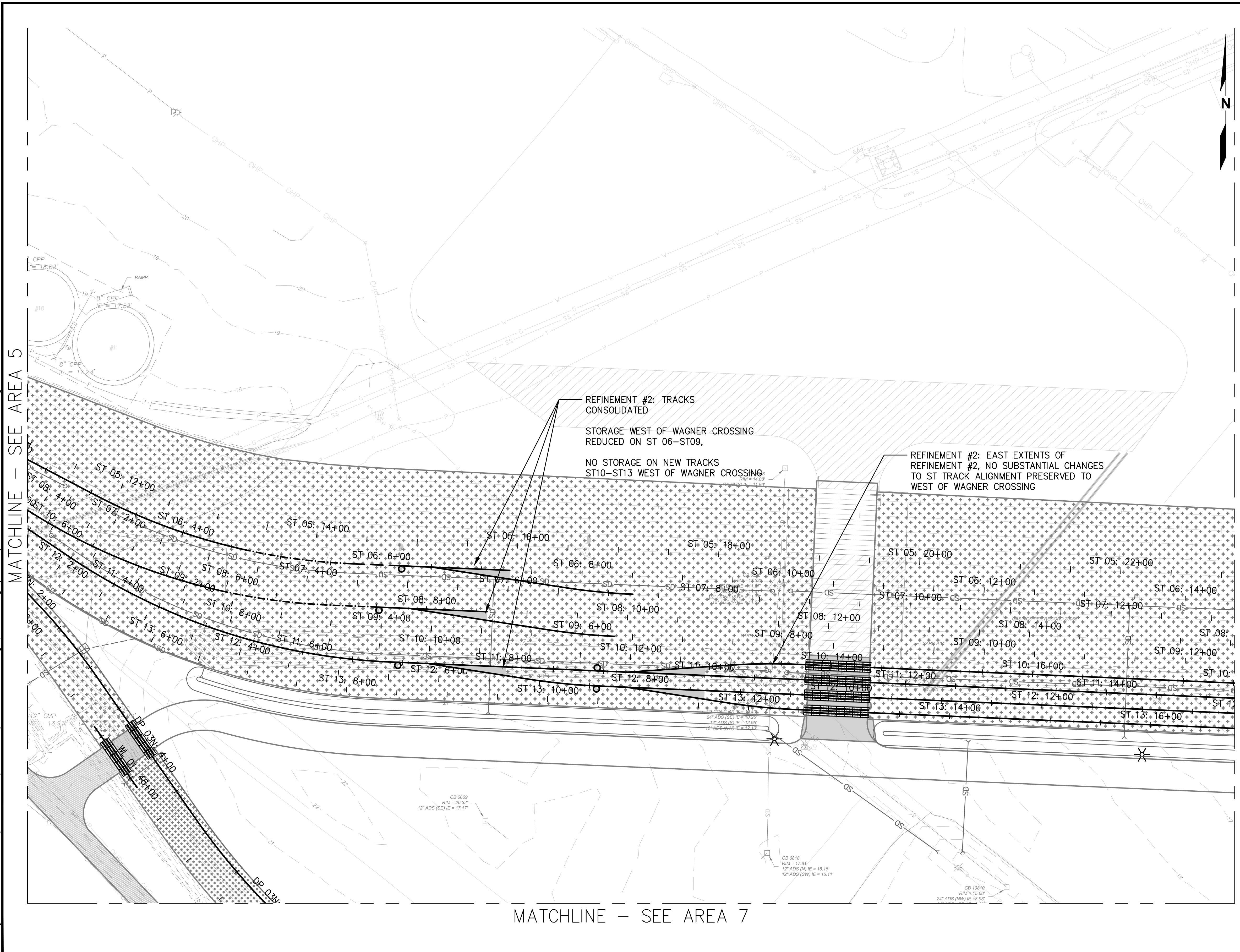
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**RAIL PLAN**  
**AREA 6**

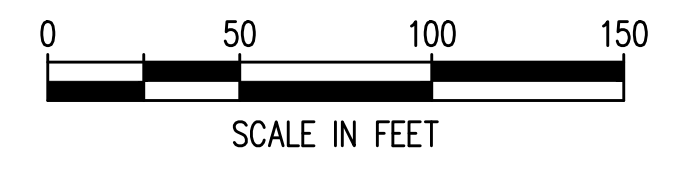
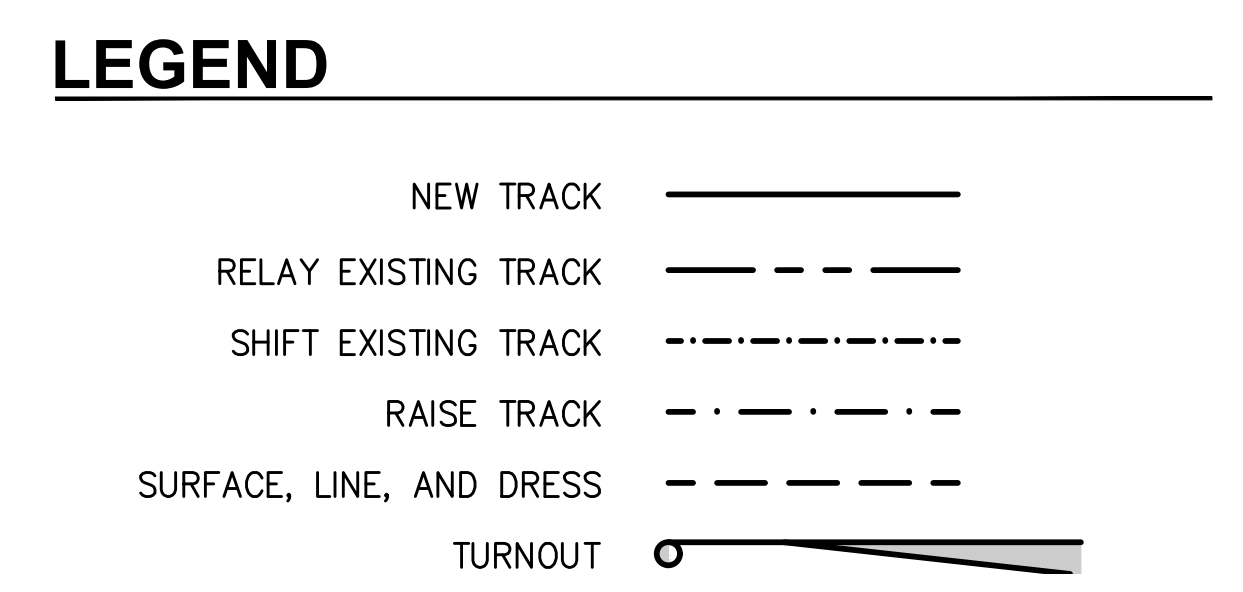
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DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R6</b>
SHEET NO.	<b>93</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:31pm  
 rambert Layout: RREF AREA 6  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\RI - R14 RAIL PLAN\_Alt Refinements.dwg



- ### GENERAL NOTES
- REFINEMENT #1: REDUCE DOWN TO TWO LEAD TRACKS BETWEEN TERMINAL 1 & 2. NO THIRD TRACK ACROSS OR NORTH OF FRY CREEK PARALLEL TO 28TH STREET.
  - REFINEMENT #2: CONSOLIDATE TRACKS WEST OF WAGNER CROSSING ASSUMING CARS WILL BE BROKEN AND STORED TO THE EAST OF WAGNER AND THAT STORAGE WEST OF WAGNER IS NOT CRITICAL.
  - REFINEMENT #3: ABANDON/DO NOT CONSTRUCT WL 01 SOUTH WITHIN LIMITS OF DP 03S/WL 01 TURNOUTS.
  - SEE PLAN ANNOTATIONS FOR CHANGES ASSOCIATED WITH EACH REFINEMENT.
  - HORIZONTAL ALIGNMENT STATIONING SHOWN IS REFLECTIVE OF CURRENT ALIGNMENTS ON R1-14, NOT THE REFINEMENTS.



NO.	DATE	BY	REVISION



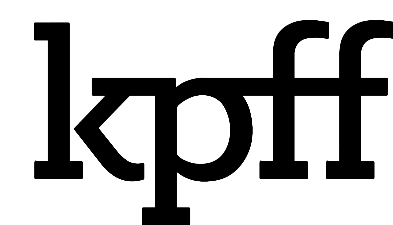
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**RAIL REFINEMENT**  
**AREA 6**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R6.1</b>
SHEET NO.	<b>94</b> OF <b>142</b>

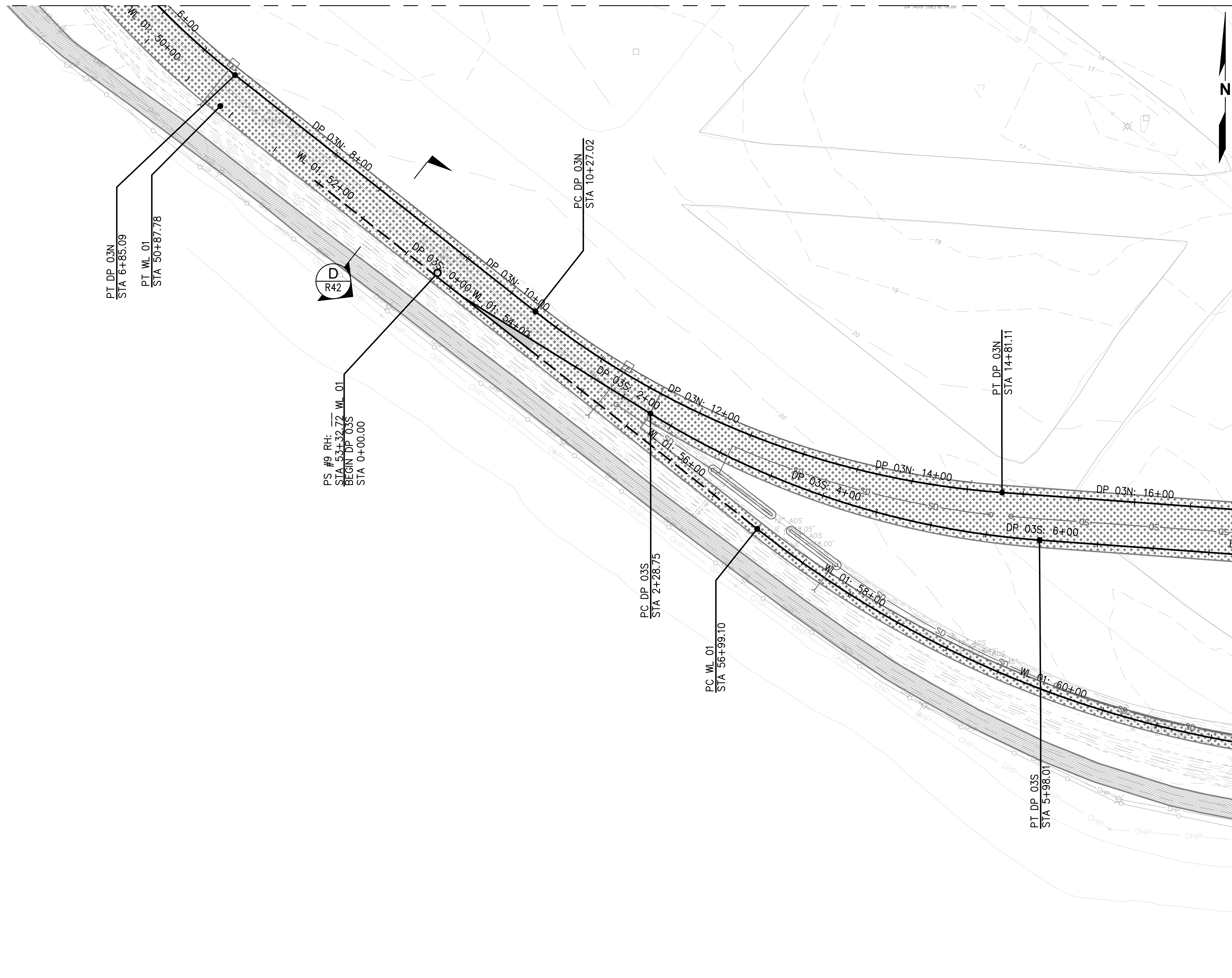
PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:32pm r Lambert Layout: AREA 7  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\RI - RI4 RAIL PLAN.dwg



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MATCHLINE - SEE AREA 6



MATCHLINE - SEE AREA 8

**NOTES**

1. SEE  $\frac{4}{R44}$  FOR CROSSING PANEL DETAIL.
2. SEE R18-R40 FOR RAIL PROFILES.
3. TYPICAL RAIL TO BE 136RE ON CONCRETE TIES.
4. SEE  $\frac{1}{R45}$  FOR NO. 9 TURNOUT DETAIL.
5. WITH THE EXCEPTION OF ST 10 6+31.88-9+58.12, ALL PROPOSED HORIZONTAL CURVES HAVE A DEGREE OF CURVATURE LESS THAN OR EQUAL TO 9°30'00".

**LEGEND**

- NEW TRACK
- RELAY EXISTING TRACK
- SHIFT EXISTING TRACK
- RAISE TRACK
- SURFACE, LINE, AND DRESS
- TURNOUT
- CONCRETE CROSSING PANEL



NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**RAIL PLAN**  
**AREA 7**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R7</b>
SHEET NO.	<b>95</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION



MATCHLINE — SEE AREA 6







**GENERAL NOTES**

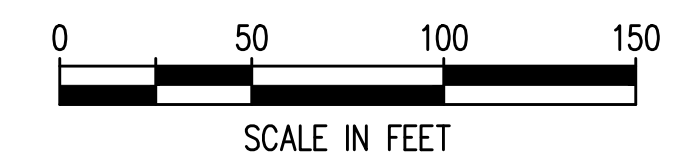
1. REFINEMENT #1: REDUCE DOWN TO TWO LEAD TRACKS BETWEEN TERMINAL 1 & 2. NO THIRD TRACK ACROSS OR NORTH OF FRY CREEK PARALLEL TO 28TH STREET.
2. REFINEMENT #2: CONSOLIDATE TRACKS WEST OF WAGNER CROSSING ASSUMING CARS WILL BE BROKEN AND STORED TO THE EAST OF WAGNER AND THAT STORAGE WEST OF WAGNER IS NOT CRITICAL.
3. REFINEMENT #3: ABANDON/DO NOT CONSTRUCT WL 01 SOUTH WITHIN LIMITS OF DP 03S/WL 01 TURNOUTS.
4. SEE PLAN ANNOTATIONS FOR CHANGES ASSOCIATED WITH EACH REFINEMENT.
5. HORIZONTAL ALIGNMENT STATIONING SHOWN IS REFLECTIVE OF CURRENT ALIGNMENTS ON R1-14, NOT THE REFINEMENTS.

REFINEMENT #3: ASSUMED THAT WL 01 IS CUTOFF WHEN UNLOADING OCCURS ON DP 03S, NO MODIFICATIONS TO WL 01 PROPOSED TO SOUTHEAST OF THIS TURNOUT

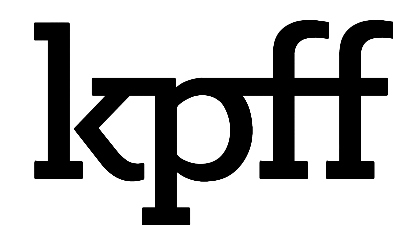
MATCHLINE — SEE AREA 8

**LEGEND**

- NEW TRACK 
- RELAY EXISTING TRACK 
- SHIFT EXISTING TRACK 
- RAISE TRACK 
- SURFACE, LINE, AND DRESS 
- TURNOUT 



Plotted: Jun 09, 2023 - 9:32pm rambert Layout: RREF AREA 7  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\R1 - R14 RAIL PLAN\_Alt Refinements.dwg



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**RAIL REFINEMENT**  
**AREA 7**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R7.1</b>
SHEET NO.	<b>96</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

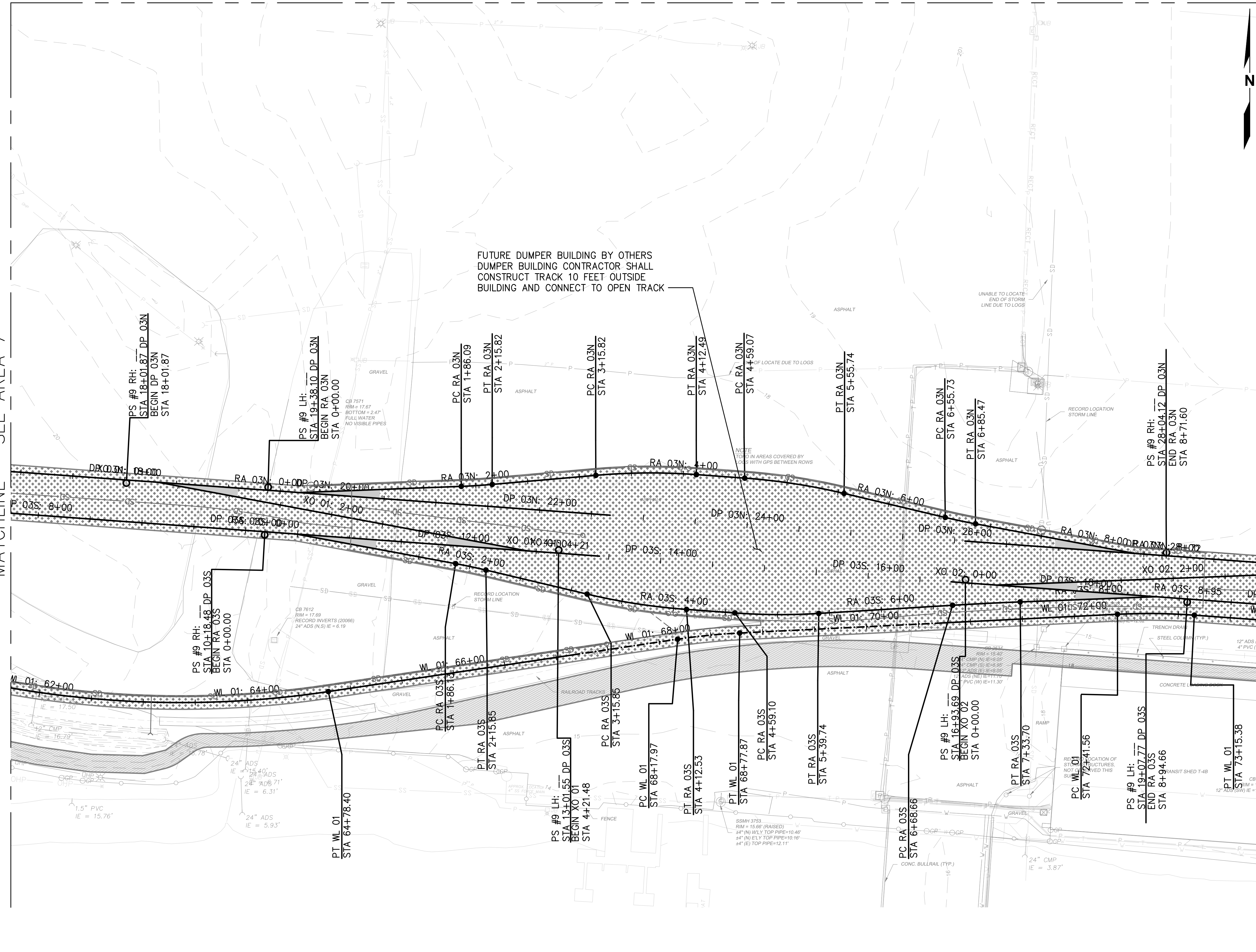
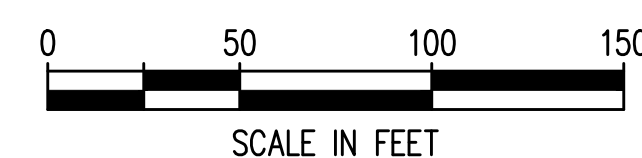
**NOTES**

1. SEE **(4)** FOR CROSSING PANEL DETAIL.  
R44
2. SEE R18-R40 FOR RAIL PROFILES.
3. TYPICAL RAIL TO BE 136RE ON CONCRETE TIES.
4. SEE **(1)** FOR NO. 9 TURNOUT DETAIL.  
R45
5. WITH THE EXCEPTION OF ST 10 6+31.88-9+58.12, ALL PROPOSED HORIZONTAL CURVES HAVE A DEGREE OF CURVATURE LESS THAN OR EQUAL TO 9°30'00".

MATCHLINE - SEE AREA 9

**LEGEND**

- NEW TRACK
- RELAY EXISTING TRACK
- SHIFT EXISTING TRACK
- RAISE TRACK
- SURFACE, LINE, AND DRESS
- TURNOUT
- CONCRETE CROSSING PANEL



MATCHLINE - SEE AREA 7

Plotted: Jun 09, 2023 - 9:33pm riambert Layout: AREA 8 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\RI - R14 RAIL PLAN.dwg



NO.	DATE	BY	REVISION

<b>TERMINAL 4 RAIL AND SITE IMPROVEMENTS</b> PORT OF GRAYS HARBOR		DRAWN: RRL	PROJECT NO.: 2300034
		DESIGN: RLO	SCALE: AS SHOWN
<b>RAIL PLAN</b> <b>AREA 8</b>		CHECKED: SWK	DATE: 6/9/2023
		DRAWING NO.	<b>R8</b> SHEET NO. <b>97</b> OF <b>142</b>
		PRELIMINARY DESIGN - NOT FOR CONSTRUCTION	

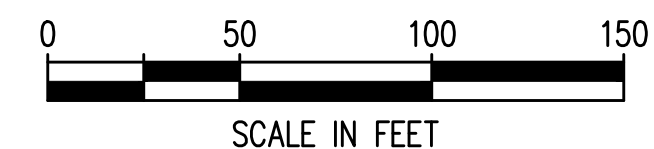
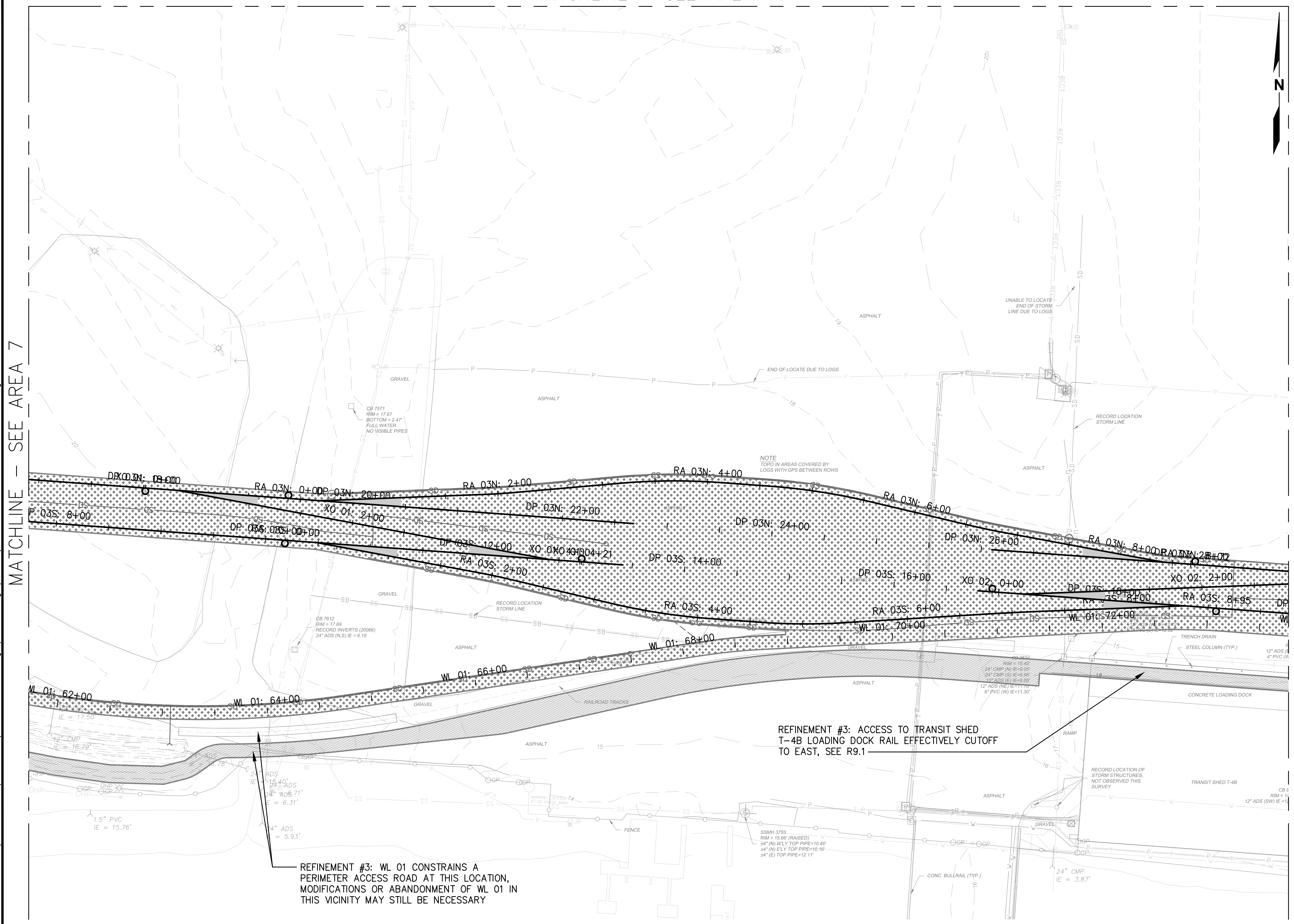
MATCHLINE - SEE AREA 14

**GENERAL NOTES**

1. REFINEMENT #1: REDUCE DOWN TO TWO LEAD TRACKS BETWEEN TERMINAL 1 & 2. NO THIRD TRACK ACROSS OR NORTH OF FRY CREEK PARALLEL TO 28TH STREET.
2. REFINEMENT #2: CONSOLIDATE TRACKS WEST OF WAGNER CROSSING ASSUMING CARS WILL BE BROKEN AND STORED TO THE EAST OF WAGNER AND THAT STORAGE WEST OF WAGNER IS NOT CRITICAL.
3. REFINEMENT #3: ABANDON/DO NOT CONSTRUCT WL 01 SOUTH WITHIN LIMITS OF DP 03S/WL 01 TURNOUTS.
4. SEE PLAN ANNOTATIONS FOR CHANGES ASSOCIATED WITH EACH REFINEMENT.
5. HORIZONTAL ALIGNMENT STATIONING SHOWN IS REFLECTIVE OF CURRENT ALIGNMENTS ON R1-14, NOT THE REFINEMENTS.

**LEGEND**

- NEW TRACK
- RELAY EXISTING TRACK
- SHIFT EXISTING TRACK
- RAISE TRACK
- SURFACE, LINE, AND DRESS
- TURNOUT



MATCHLINE - SEE AREA 7

MATCHLINE - SEE AREA 9

Plotted: Jun 09, 2023 - 9:33pm Layout: RREF AREA 8  
N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\RI - R14 RAIL PLAN\_Alt Refinements.dwg



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
PORT OF GRAYS HARBOR

**RAIL REFINEMENT**  
**AREA 8**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R8.1</b>
SHEET NO.	<b>98 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

MATCHLINE - SEE AREA 10

MATCHLINE - SEE AREA 8

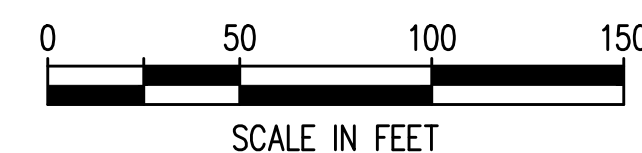


**NOTES**

- SEE **4** FOR CROSSING PANEL DETAIL.  
R44
- SEE R18-R40 FOR RAIL PROFILES.
- TYPICAL RAIL TO BE 136RE ON CONCRETE TIES.
- SEE **1** FOR NO. 9 TURNOUT DETAIL.  
R45
- WITH THE EXCEPTION OF ST 10 6+31.88-9+58.12, ALL PROPOSED HORIZONTAL CURVES HAVE A DEGREE OF CURVATURE LESS THAN OR EQUAL TO 9°30'00".

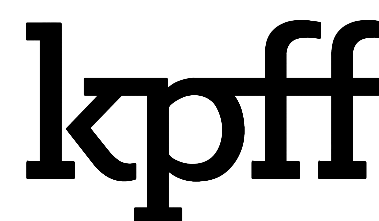
**LEGEND**

- NEW TRACK
- RELAY EXISTING TRACK
- SHIFT EXISTING TRACK
- RAISE TRACK
- SURFACE, LINE, AND DRESS
- TURNOUT
- CONCRETE CROSSING PANEL



Plotted: Jun 09, 2023 - 9:34pm rambert

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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
PORT OF GRAYS HARBOR

**RAIL PLAN**  
**AREA 9**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R9</b>
SHEET NO.	<b>99</b> OF <b>142</b>

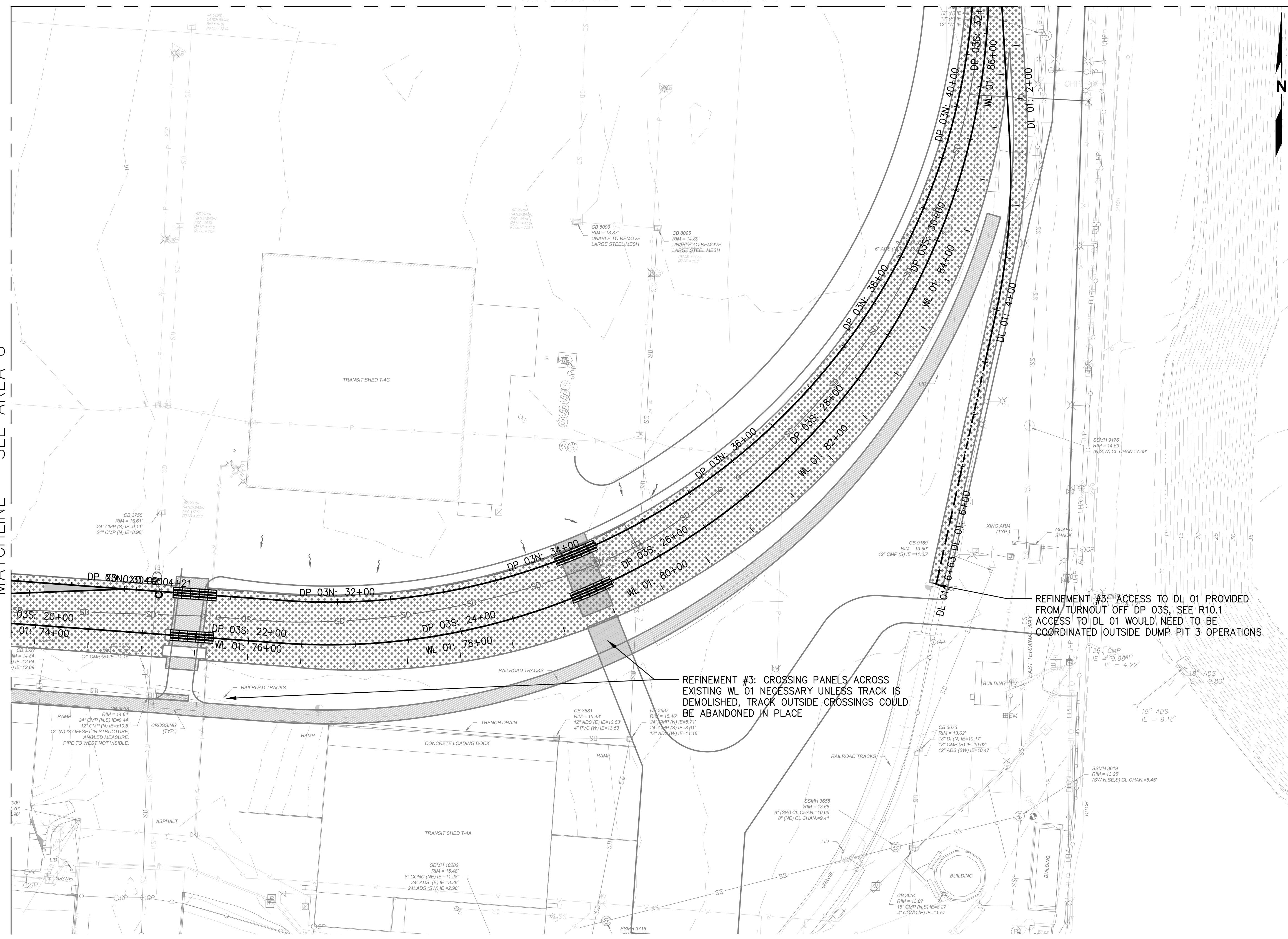
PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

MATCHLINE - SEE AREA 10

**GENERAL NOTES**

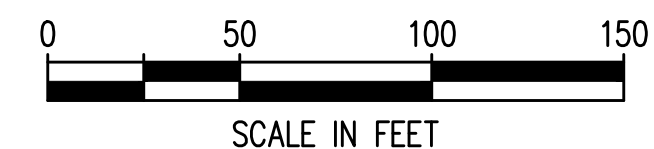
1. REFINEMENT #1: REDUCE DOWN TO TWO LEAD TRACKS BETWEEN TERMINAL 1 & 2. NO THIRD TRACK ACROSS OR NORTH OF FRY CREEK PARALLEL TO 28TH STREET.
2. REFINEMENT #2: CONSOLIDATE TRACKS WEST OF WAGNER CROSSING ASSUMING CARS WILL BE BROKEN AND STORED TO THE EAST OF WAGNER AND THAT STORAGE WEST OF WAGNER IS NOT CRITICAL.
3. REFINEMENT #3: ABANDON/DO NOT CONSTRUCT WL 01 SOUTH WITHIN LIMITS OF DP 03S/WL 01 TURNOUTS.
4. SEE PLAN ANNOTATIONS FOR CHANGES ASSOCIATED WITH EACH REFINEMENT.
5. HORIZONTAL ALIGNMENT STATIONING SHOWN IS REFLECTIVE OF CURRENT ALIGNMENTS ON R1-14, NOT THE REFINEMENTS.

MATCHLINE - SEE AREA 8



**LEGEND**

- NEW TRACK
- RELAY EXISTING TRACK
- SHIFT EXISTING TRACK
- RAISE TRACK
- SURFACE, LINE, AND DRESS
- TURNOUT



Plotted: Jun 09, 2023 - 9:34pm  
 Layout: RREF AREA 9  
 rambert  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\RI - R14 RAIL PLAN\_Alt Refinements.dwg



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NO.	DATE	BY	REVISION

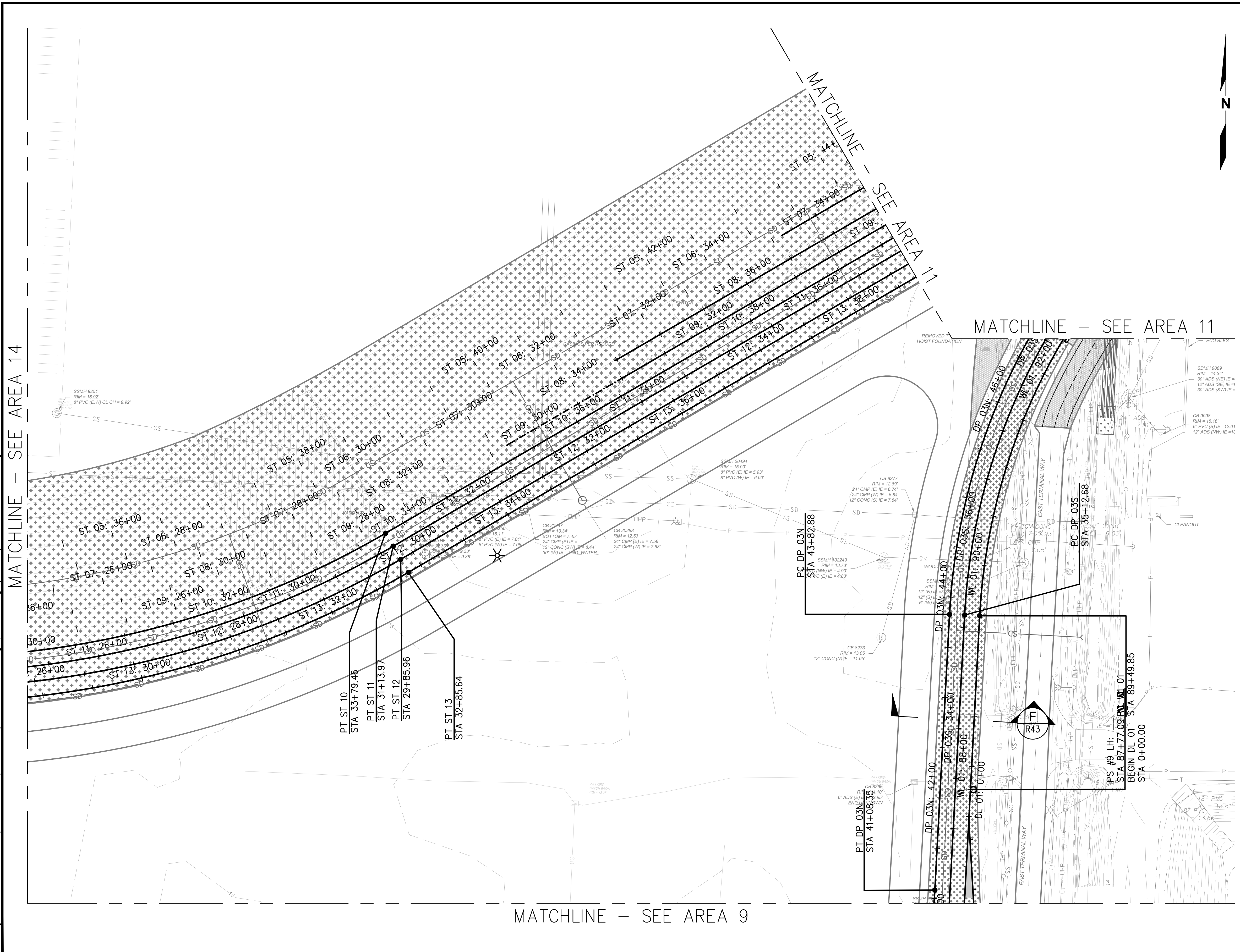
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**RAIL REFINEMENT**  
**AREA 9**

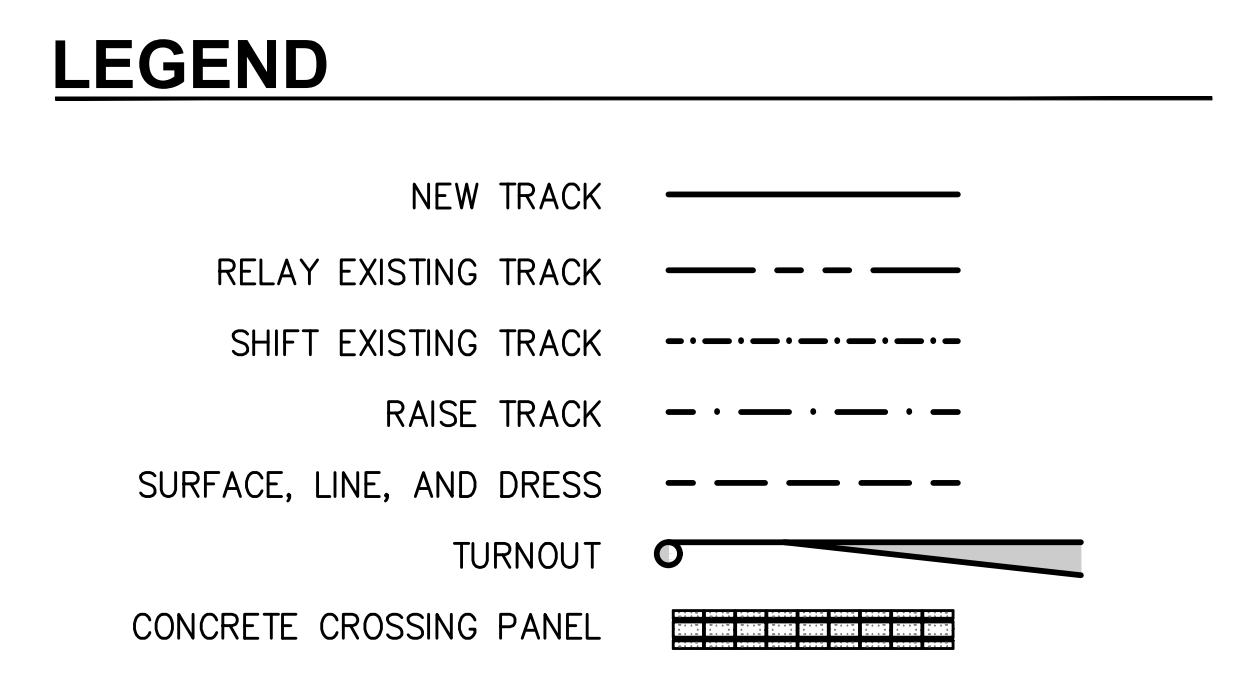
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DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R9.1</b>
SHEET NO.	<b>100</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:35pm riambert Layout: AREA 10  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\RI - R14 RAIL PLAN.dwg



- ### NOTES
- SEE **4** FOR CROSSING PANEL DETAIL.  
R44
  - SEE R18-R40 FOR RAIL PROFILES.
  - TYPICAL RAIL TO BE 136RE ON CONCRETE TIES.
  - SEE **1** FOR NO. 9 TURNOUT DETAIL.  
R45
  - WITH THE EXCEPTION OF ST 10 6+31.88-9+58.12, ALL PROPOSED HORIZONTAL CURVES HAVE A DEGREE OF CURVATURE LESS THAN OR EQUAL TO 9'30"00".



NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

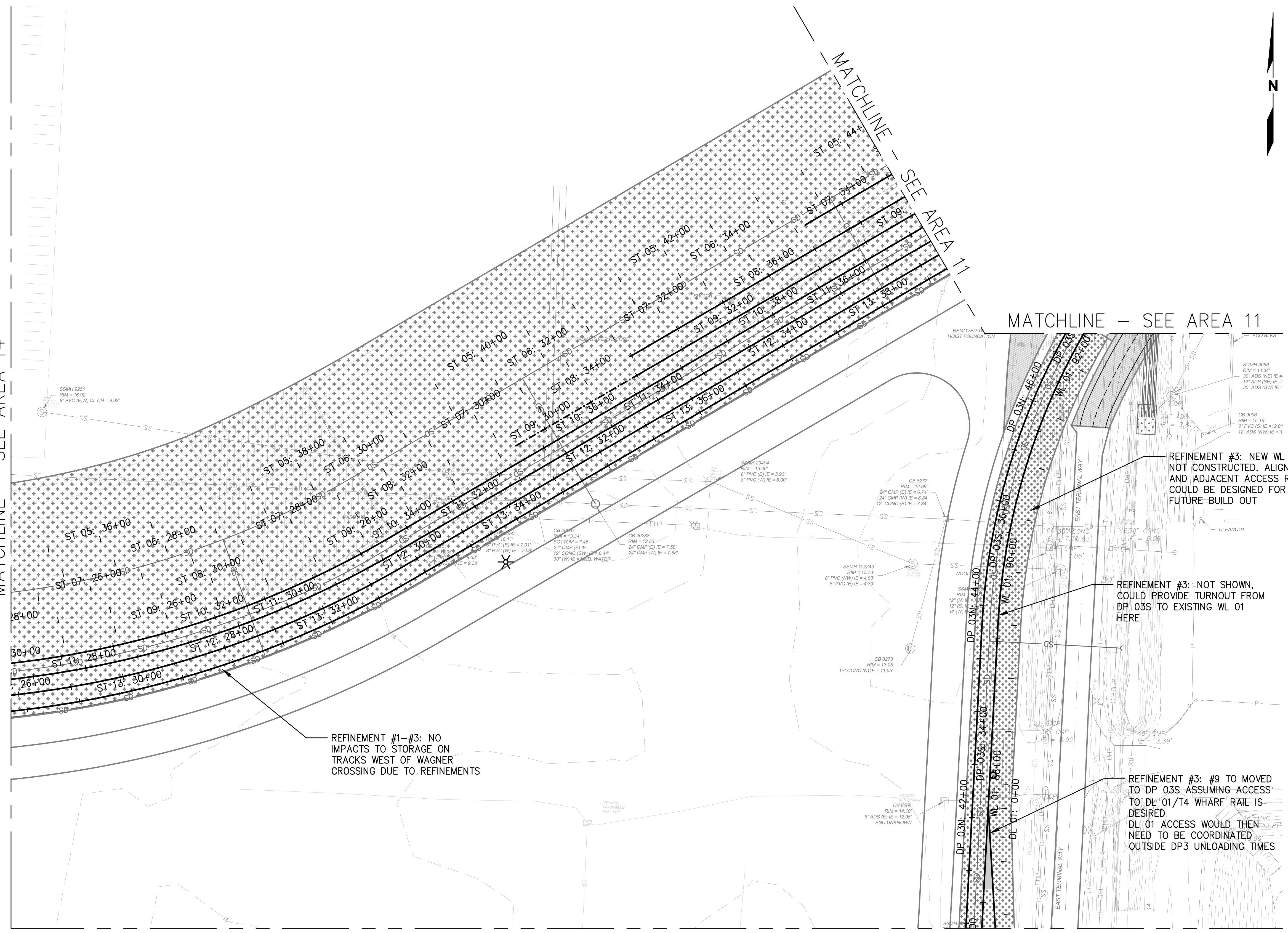
**RAIL PLAN**  
**AREA 10**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R10</b>
SHEET NO.	<b>101</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:35pm  
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 Layout: RREF AREA 10  
 rambert

MATCHLINE - SEE AREA 14



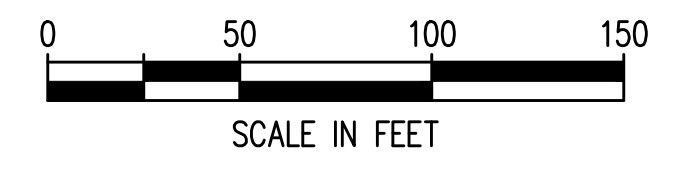
**GENERAL NOTES**

1. REFINEMENT #1: REDUCE DOWN TO TWO LEAD TRACKS BETWEEN TERMINAL 1 & 2. NO THIRD TRACK ACROSS OR NORTH OF FRY CREEK PARALLEL TO 28TH STREET.
2. REFINEMENT #2: CONSOLIDATE TRACKS WEST OF WAGNER CROSSING ASSUMING CARS WILL BE BROKEN AND STORED TO THE EAST OF WAGNER AND THAT STORAGE WEST OF WAGNER IS NOT CRITICAL.
3. REFINEMENT #3: ABANDON/DO NOT CONSTRUCT WL 01 SOUTH WITHIN LIMITS OF DP 03S/WL 01 TURNOUTS.
4. SEE PLAN ANNOTATIONS FOR CHANGES ASSOCIATED WITH EACH REFINEMENT.
5. HORIZONTAL ALIGNMENT STATIONING SHOWN IS REFLECTIVE OF CURRENT ALIGNMENTS ON R1-14, NOT THE REFINEMENTS.



**LEGEND**

- NEW TRACK
- RELAY EXISTING TRACK
- SHIFT EXISTING TRACK
- RAISE TRACK
- SURFACE, LINE, AND DRESS
- TURNOUT



REFINEMENT #1-#3: NO IMPACTS TO STORAGE ON TRACKS WEST OF WAGNER CROSSING DUE TO REFINEMENTS

REFINEMENT #3: NEW WL 01 NOT CONSTRUCTED. ALIGNMENTS AND ADJACENT ACCESS ROADS COULD BE DESIGNED FOR FUTURE BUILD OUT

REFINEMENT #3: NOT SHOWN, COULD PROVIDE TURNOUT FROM DP 03S TO EXISTING WL 01 HERE

REFINEMENT #3: #9 TO MOVED TO DP 03S ASSUMING ACCESS TO DL 01/T4 WHARF RAIL IS DESIRED DL 01 ACCESS WOULD THEN NEED TO BE COORDINATED OUTSIDE DP3 UNLOADING TIMES

MATCHLINE - SEE AREA 9

MATCHLINE - SEE AREA 11



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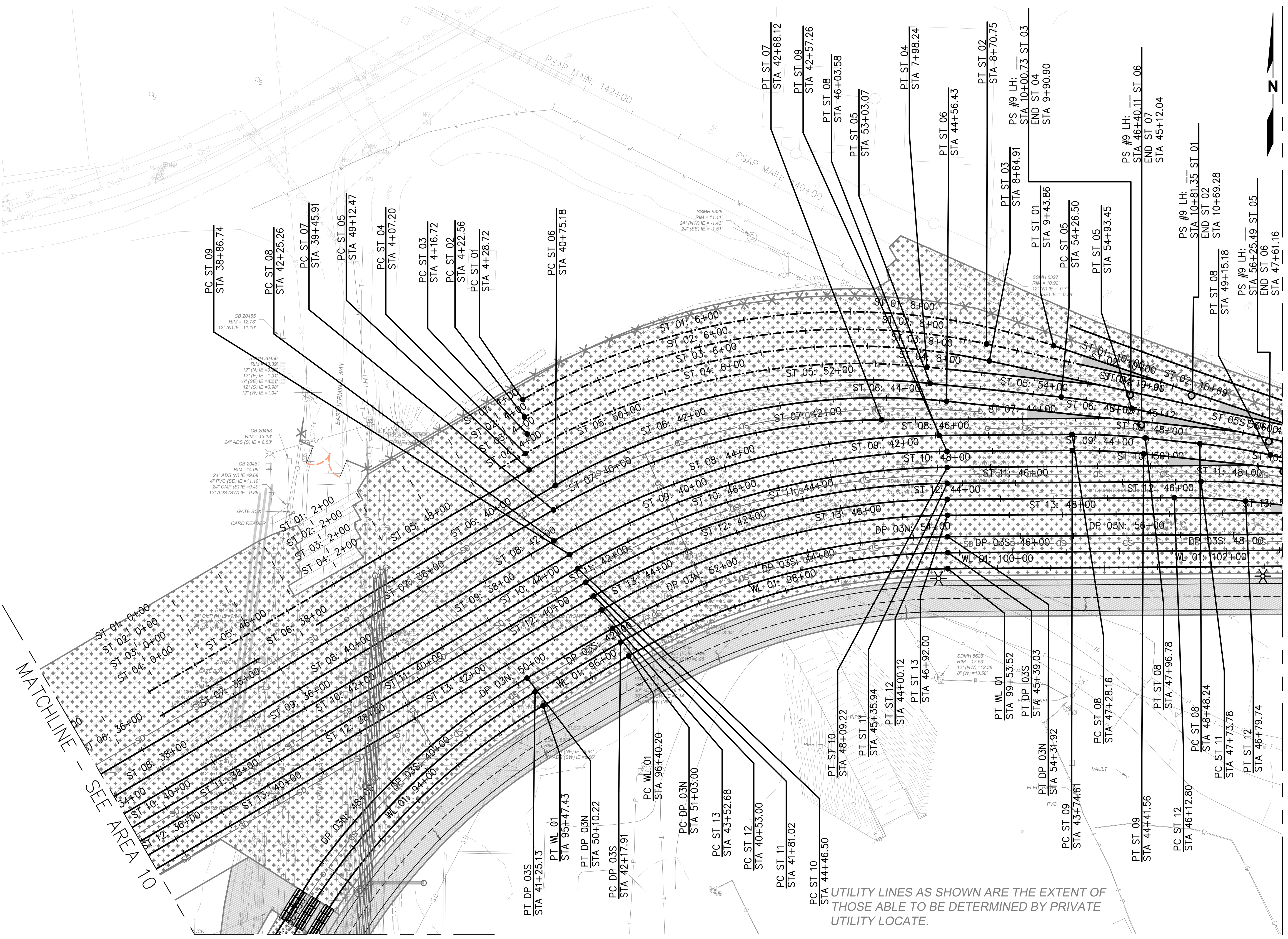
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**RAIL REFINEMENT**  
**AREA 10**

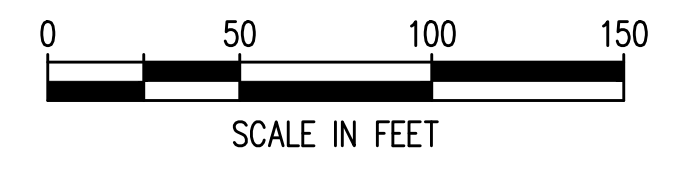
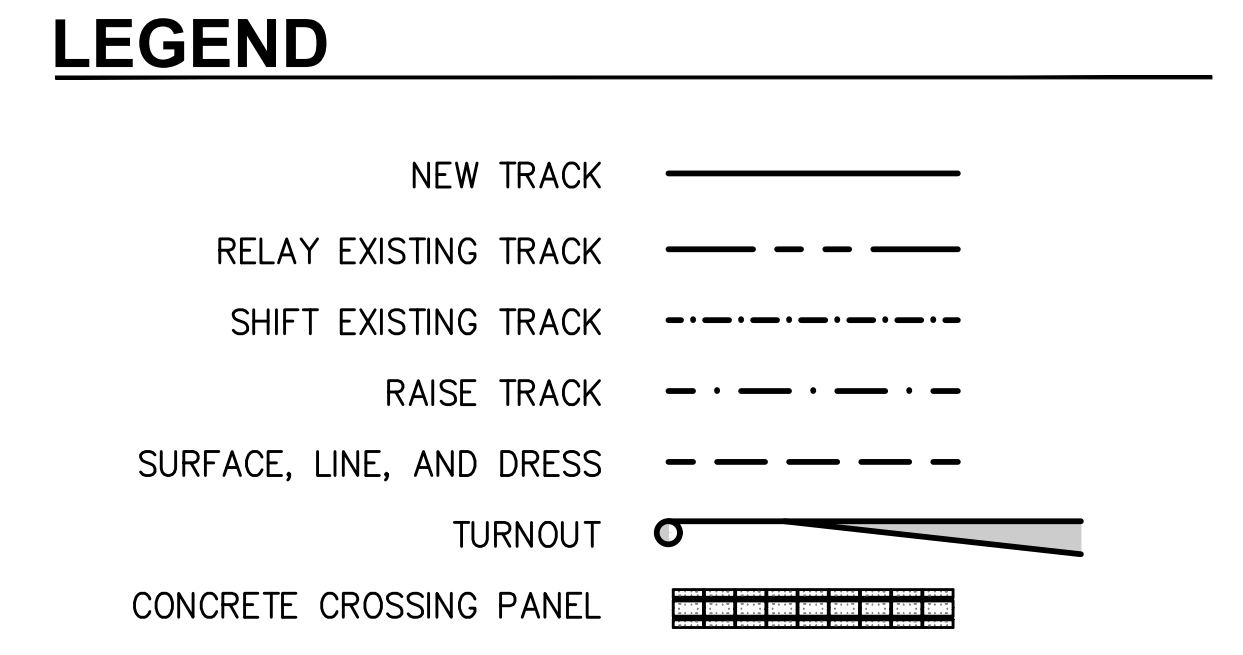
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DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R10.1</b>
SHEET NO.	<b>102</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:36pm rambert Layout: AREA 11  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\RI - R14 RAIL PLAN.dwg



- ### NOTES
- SEE 4 FOR CROSSING PANEL DETAIL.
  - SEE R18-R40 FOR RAIL PROFILES.
  - TYPICAL RAIL TO BE 136RE ON CONCRETE TIES.
  - SEE 1 FOR NO. 9 TURNOUT DETAIL.
  - WITH THE EXCEPTION OF ST 10 6+31.88-9+58.12, ALL PROPOSED HORIZONTAL CURVES HAVE A DEGREE OF CURVATURE LESS THAN OR EQUAL TO 9°30'00".



UTILITY LINES AS SHOWN ARE THE EXTENT OF THOSE ABLE TO BE DETERMINED BY PRIVATE UTILITY LOCATE.



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

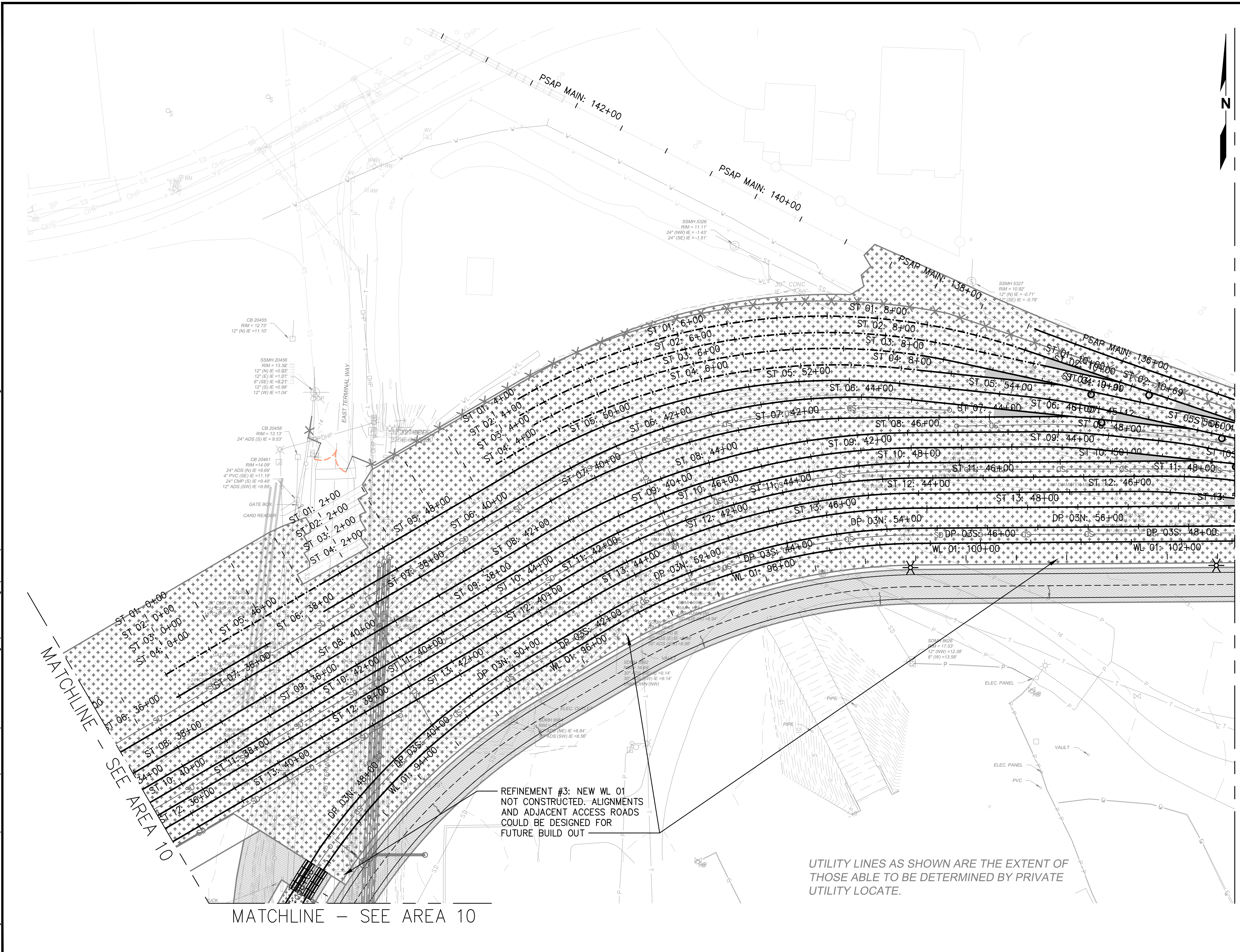
**RAIL PLAN**  
**AREA 11**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R11</b>
SHEET NO.	<b>103 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

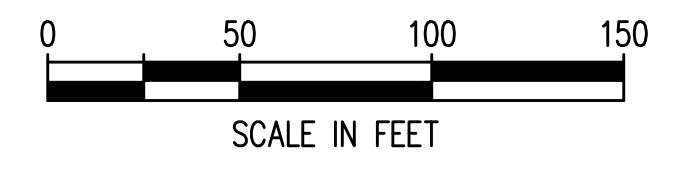
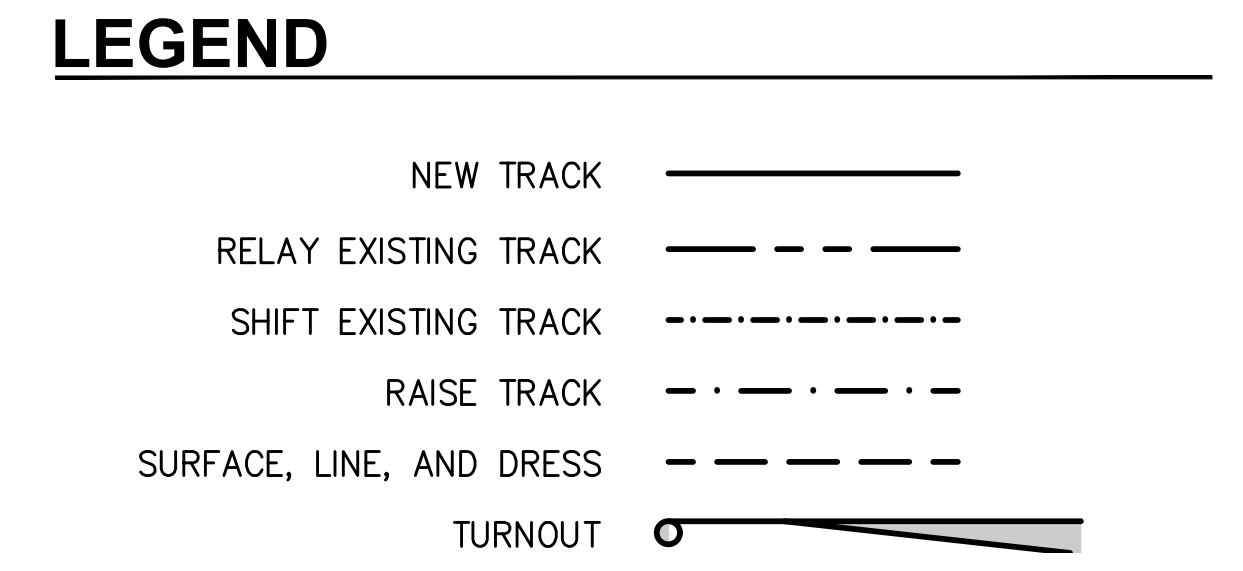


Plotted: Jun 09, 2023 9:36pm rambert Layout: RREF AREA 11  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\11 - R14 RAIL PLAN\_Alt Refinements.dwg



- ### GENERAL NOTES
1. REFINEMENT #1: REDUCE DOWN TO TWO LEAD TRACKS BETWEEN TERMINAL 1 & 2. NO THIRD TRACK ACROSS OR NORTH OF FRY CREEK PARALLEL TO 28TH STREET.
  2. REFINEMENT #2: CONSOLIDATE TRACKS WEST OF WAGNER CROSSING ASSUMING CARS WILL BE BROKEN AND STORED TO THE EAST OF WAGNER AND THAT STORAGE WEST OF WAGNER IS NOT CRITICAL.
  3. REFINEMENT #3: ABANDON/DO NOT CONSTRUCT WL 01 SOUTH WITHIN LIMITS OF DP 03S/WL 01 TURNOUTS.
  4. SEE PLAN ANNOTATIONS FOR CHANGES ASSOCIATED WITH EACH REFINEMENT.
  5. HORIZONTAL ALIGNMENT STATIONING SHOWN IS REFLECTIVE OF CURRENT ALIGNMENTS ON R1-14, NOT THE REFINEMENTS.

MATCHLINE - SEE AREA 12



REFINEMENT #3: NEW WL 01 NOT CONSTRUCTED. ALIGNMENTS AND ADJACENT ACCESS ROADS COULD BE DESIGNED FOR FUTURE BUILD OUT

UTILITY LINES AS SHOWN ARE THE EXTENT OF THOSE ABLE TO BE DETERMINED BY PRIVATE UTILITY LOCATE.



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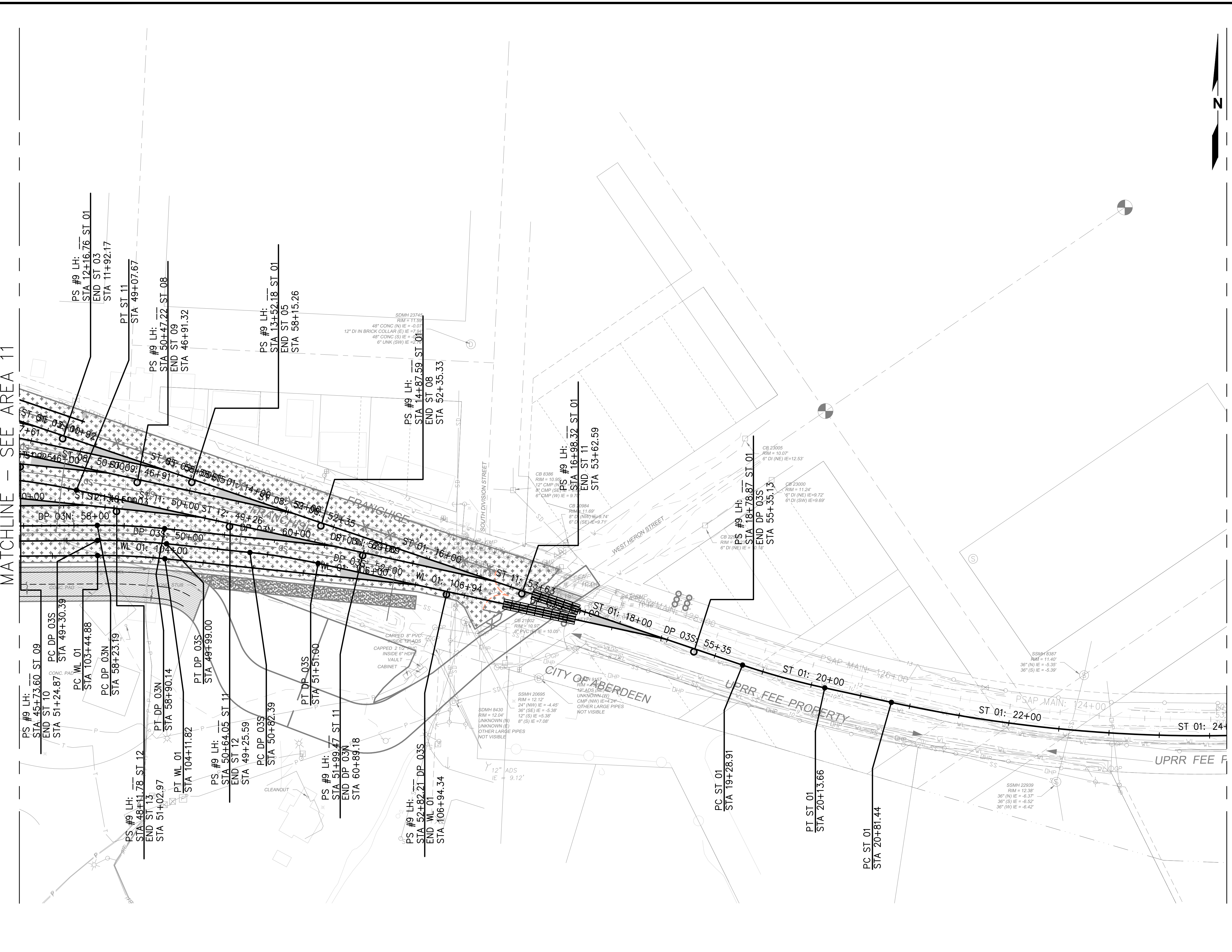
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**RAIL REFINEMENT**  
**AREA 11**

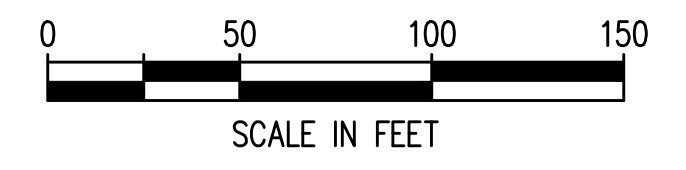
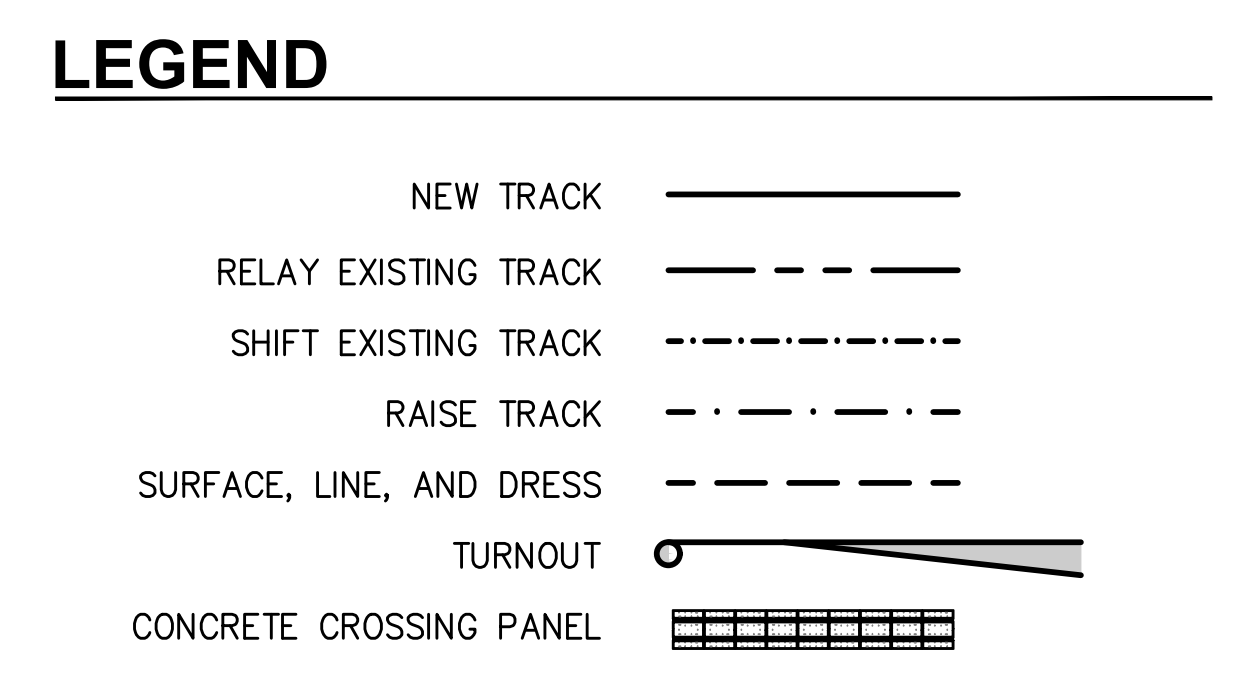
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DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R11.1</b>
SHEET NO.	<b>104</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:37pm riambert Layout: AREA 12  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\RI - R14 RAIL PLAN.dwg



- ### NOTES
- SEE **4** FOR CROSSING PANEL DETAIL.  
R44
  - SEE R18-R40 FOR RAIL PROFILES.
  - TYPICAL RAIL TO BE 136RE ON CONCRETE TIES.
  - SEE **1** FOR NO. 9 TURNOUT DETAIL.  
R45
  - WITH THE EXCEPTION OF ST 10 6+31.88-9+58.12, ALL PROPOSED HORIZONTAL CURVES HAVE A DEGREE OF CURVATURE LESS THAN OR EQUAL TO 9'30"00".



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NO.	DATE	BY	REVISION

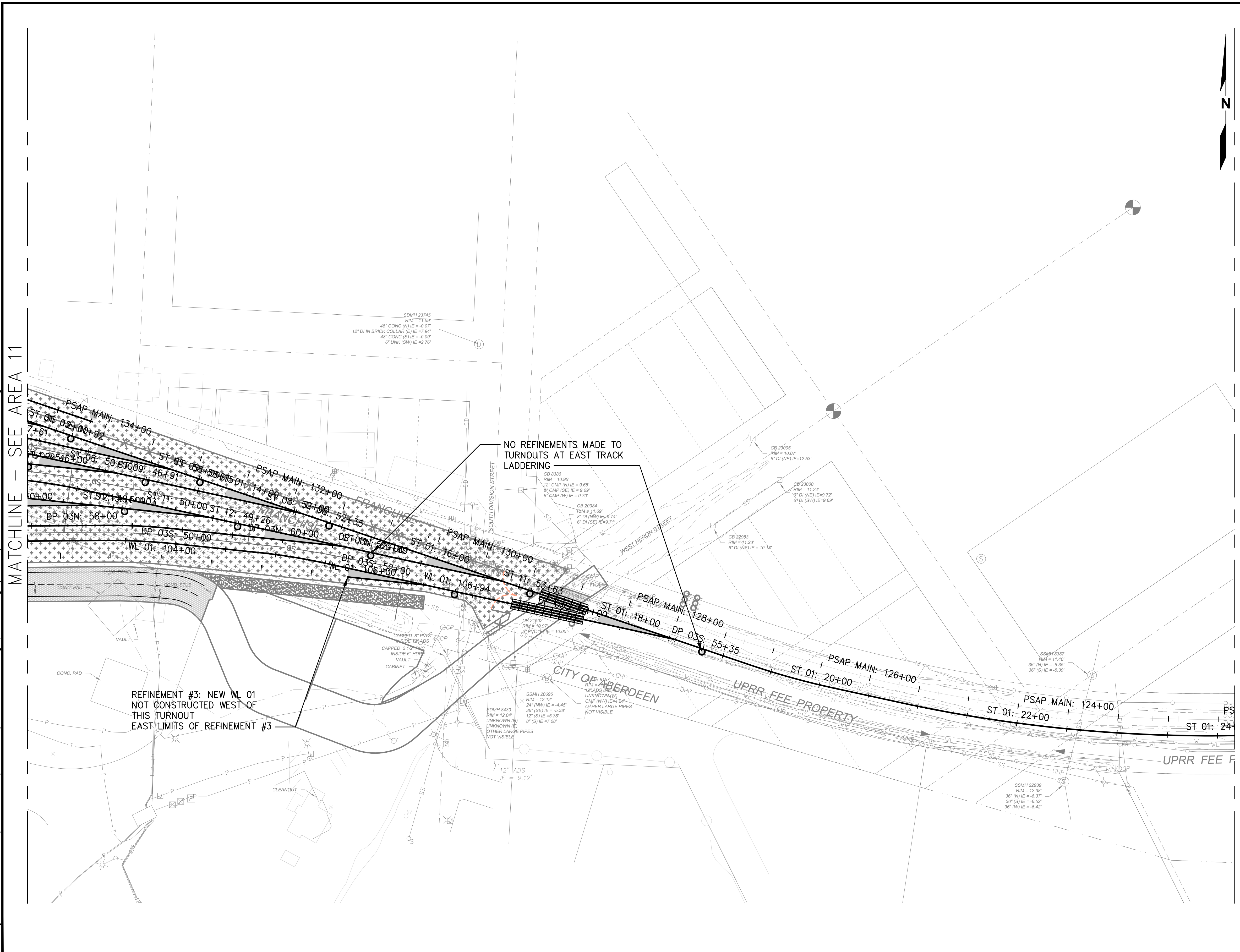
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**RAIL PLAN**  
**AREA 12**

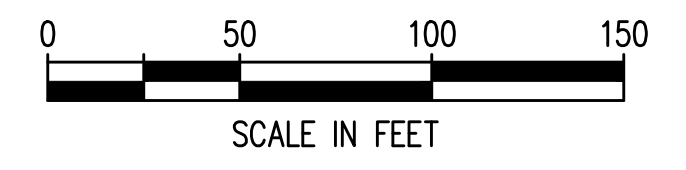
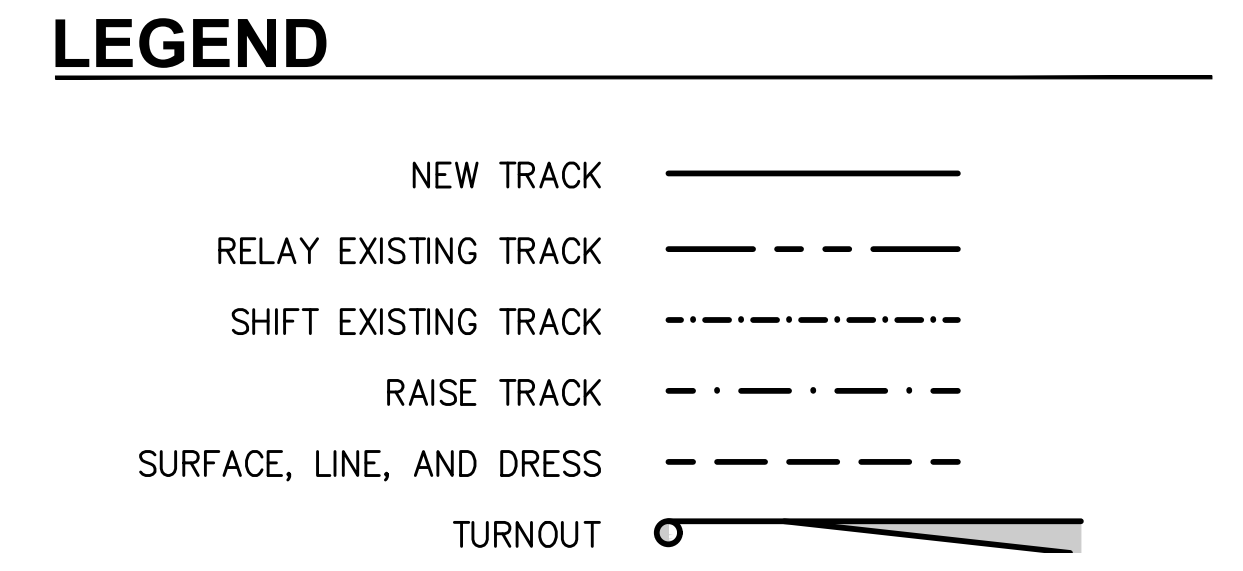
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CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R12</b>
SHEET NO.	<b>105</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:37pm rambert Layout: RREF AREA 12  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\RI - R14 RAIL PLAN\_Alt Refinements.dwg



- ### GENERAL NOTES
- REFINEMENT #1: REDUCE DOWN TO TWO LEAD TRACKS BETWEEN TERMINAL 1 & 2. NO THIRD TRACK ACROSS OR NORTH OF FRY CREEK PARALLEL TO 28TH STREET.
  - REFINEMENT #2: CONSOLIDATE TRACKS WEST OF WAGNER CROSSING ASSUMING CARS WILL BE BROKEN AND STORED TO THE EAST OF WAGNER AND THAT STORAGE WEST OF WAGNER IS NOT CRITICAL.
  - REFINEMENT #3: ABANDON/DO NOT CONSTRUCT WL 01 SOUTH WITHIN LIMITS OF DP 03S/WL 01 TURNOUTS.
  - SEE PLAN ANNOTATIONS FOR CHANGES ASSOCIATED WITH EACH REFINEMENT.
  - HORIZONTAL ALIGNMENT STATIONING SHOWN IS REFLECTIVE OF CURRENT ALIGNMENTS ON R1-14, NOT THE REFINEMENTS.



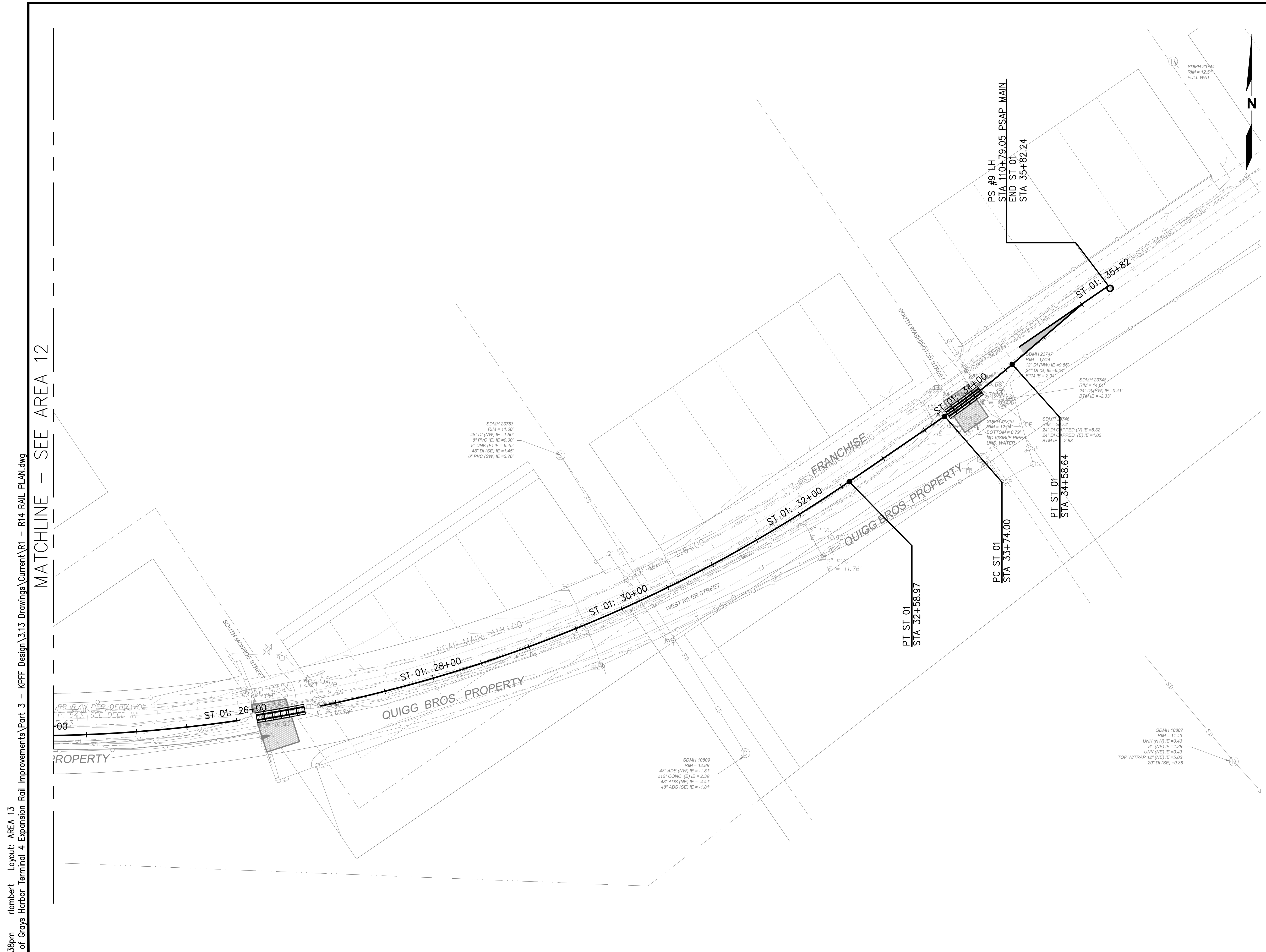
NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

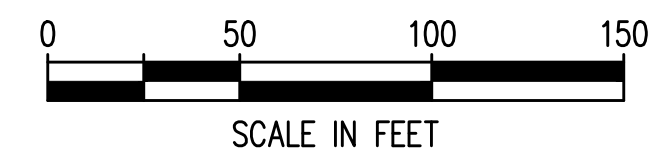
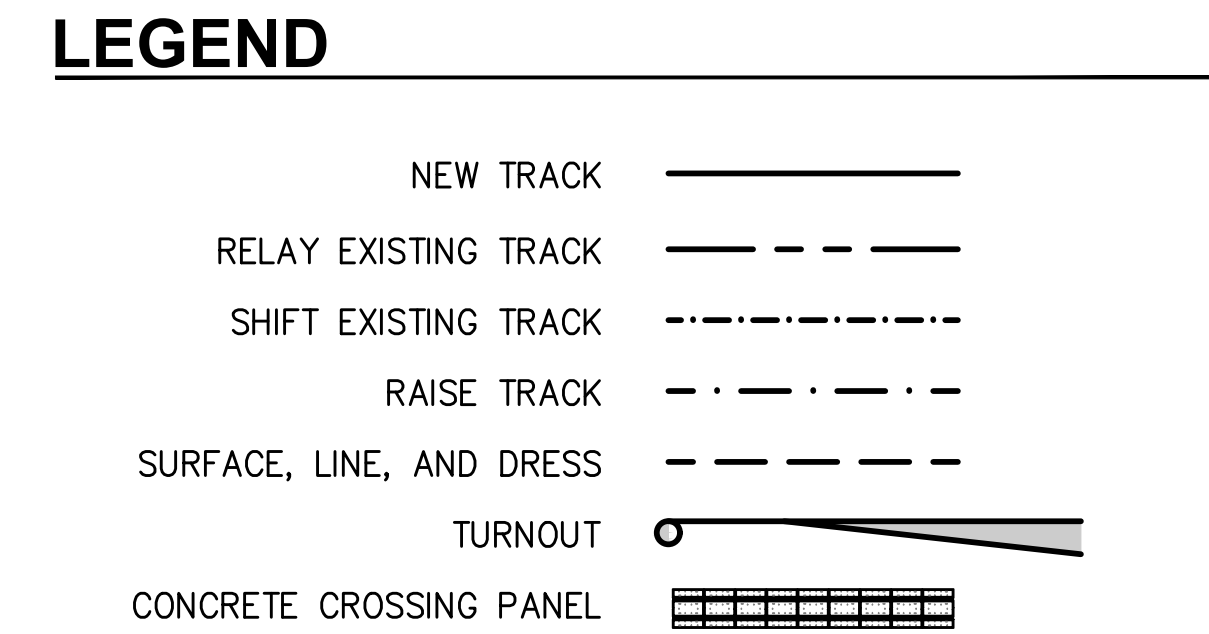
**RAIL REFINEMENT**  
**AREA 12**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R12.1</b>
SHEET NO.	<b>106</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION



- NOTES**
- SEE **(4)** FOR CROSSING PANEL DETAIL.  
R44
  - SEE R18-R40 FOR RAIL PROFILES.
  - TYPICAL RAIL TO BE 136RE ON CONCRETE TIES.
  - SEE **(1)** FOR NO. 9 TURNOUT DETAIL.  
R45
  - WITH THE EXCEPTION OF ST 10 6+31.88-9+58.12, ALL PROPOSED HORIZONTAL CURVES HAVE A DEGREE OF CURVATURE LESS THAN OR EQUAL TO 9'30"00".



Plotted: Jun 09, 2023 - 9:38pm riambert Layout: AREA 13  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\RI - R14 RAIL PLAN.dwg

MATCHLINE - SEE AREA 12



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
PORT OF GRAYS HARBOR

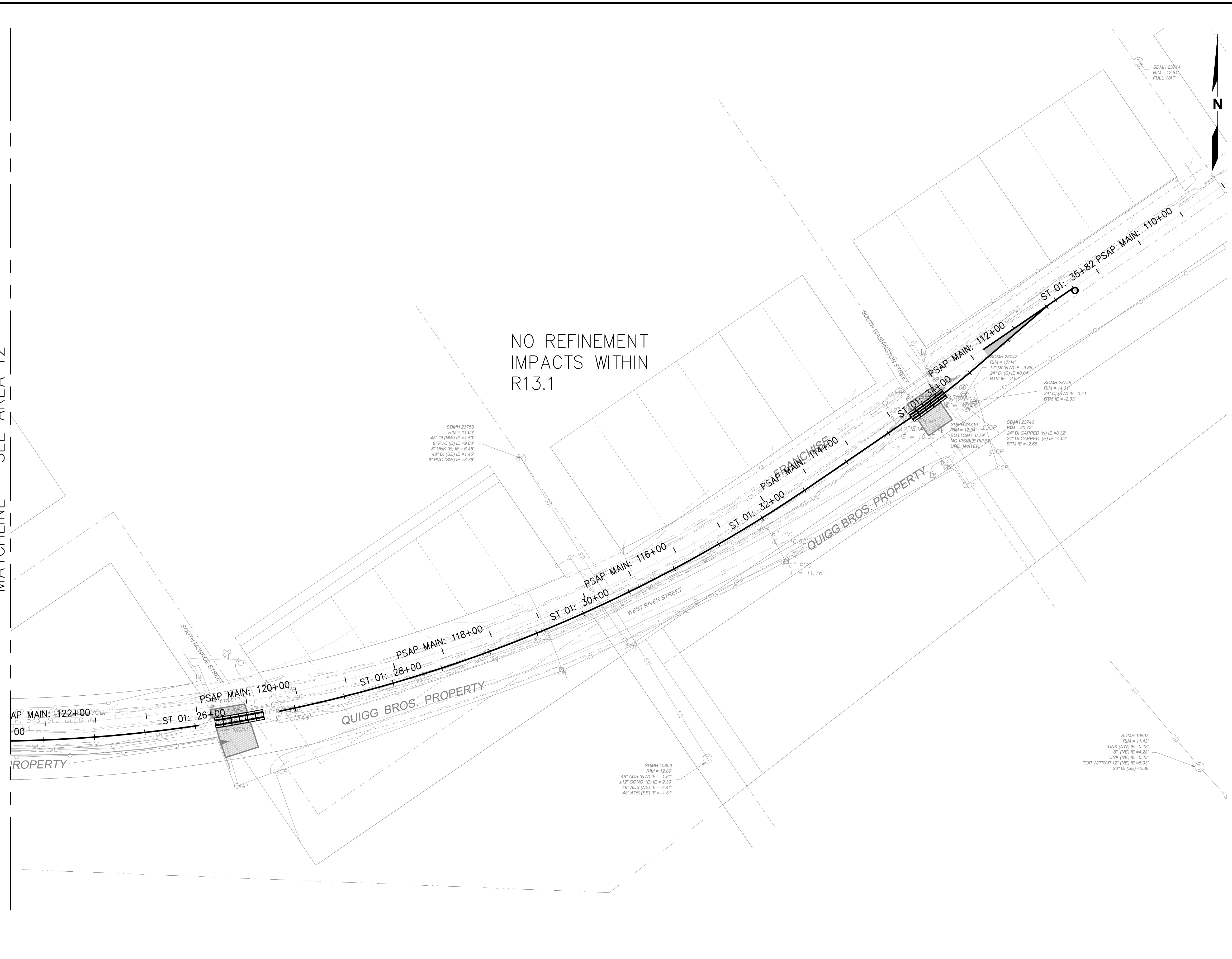
**RAIL PLAN**  
**AREA 13**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R13</b>
SHEET NO.	<b>107</b> OF <b>142</b>

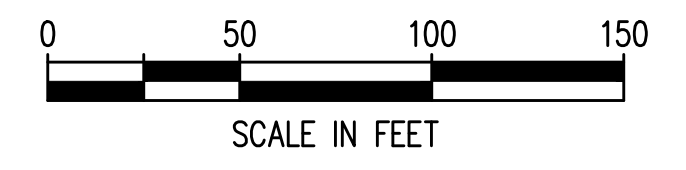
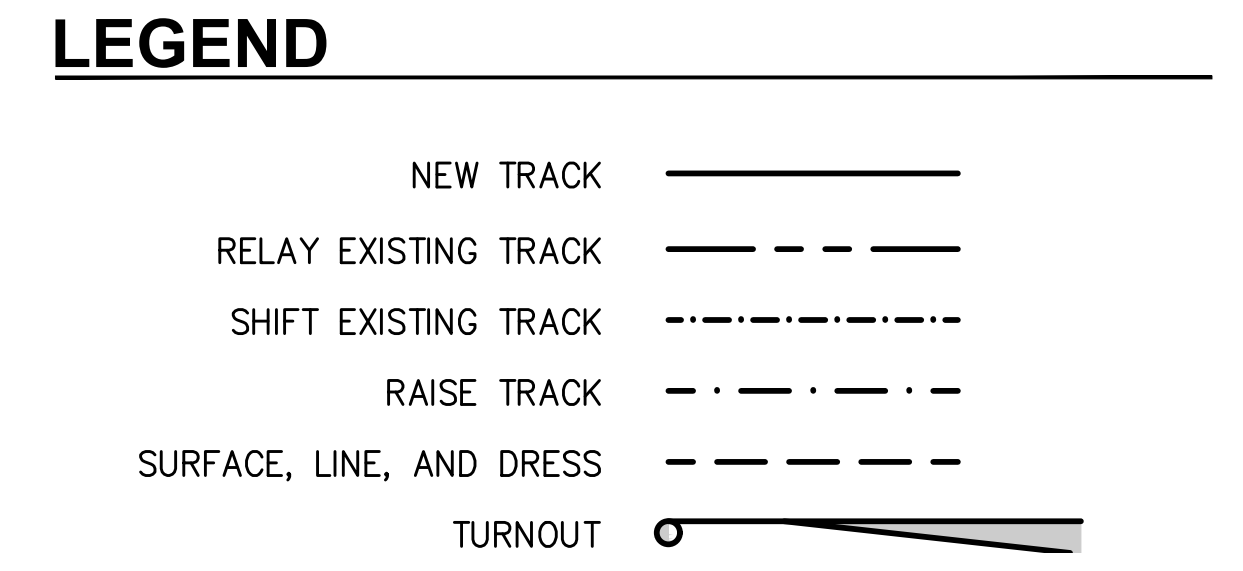
PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:39pm riambert Layout: RREF AREA 13  
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MATCHLINE - SEE AREA 12



- ### GENERAL NOTES
- REFINEMENT #1: REDUCE DOWN TO TWO LEAD TRACKS BETWEEN TERMINAL 1 & 2. NO THIRD TRACK ACROSS OR NORTH OF FRY CREEK PARALLEL TO 28TH STREET.
  - REFINEMENT #2: CONSOLIDATE TRACKS WEST OF WAGNER CROSSING ASSUMING CARS WILL BE BROKEN AND STORED TO THE EAST OF WAGNER AND THAT STORAGE WEST OF WAGNER IS NOT CRITICAL.
  - REFINEMENT #3: ABANDON/DO NOT CONSTRUCT WL 01 SOUTH WITHIN LIMITS OF DP 03S/WL 01 TURNOUTS.
  - SEE PLAN ANNOTATIONS FOR CHANGES ASSOCIATED WITH EACH REFINEMENT.
  - HORIZONTAL ALIGNMENT STATIONING SHOWN IS REFLECTIVE OF CURRENT ALIGNMENTS ON R1-14, NOT THE REFINEMENTS.



NO.	DATE	BY	REVISION

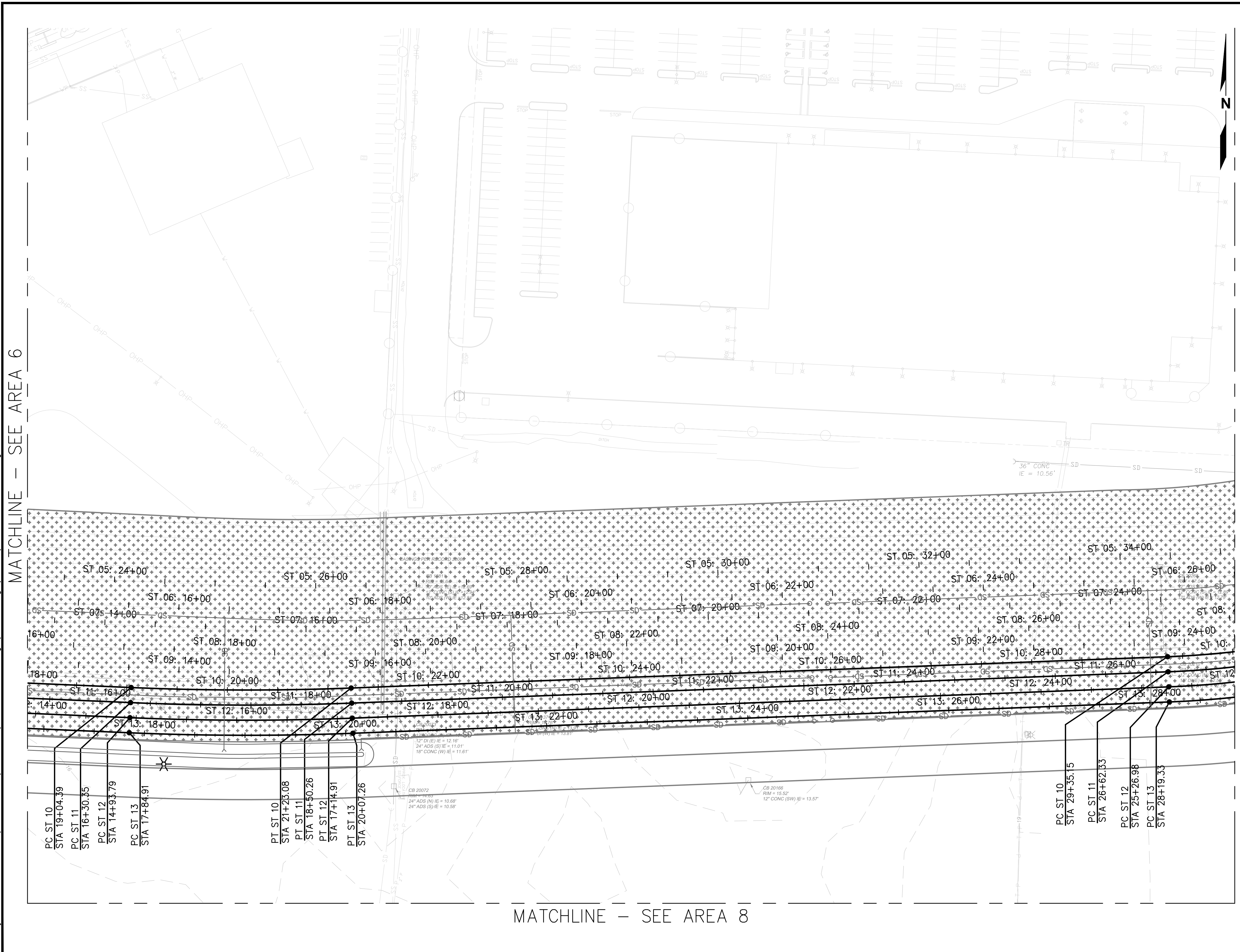
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**RAIL REFINEMENT**  
**AREA 13**

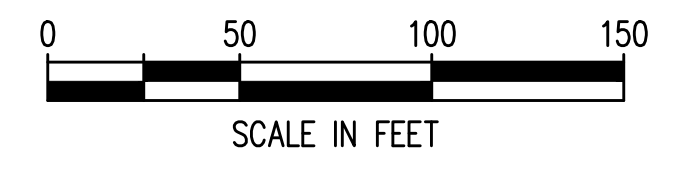
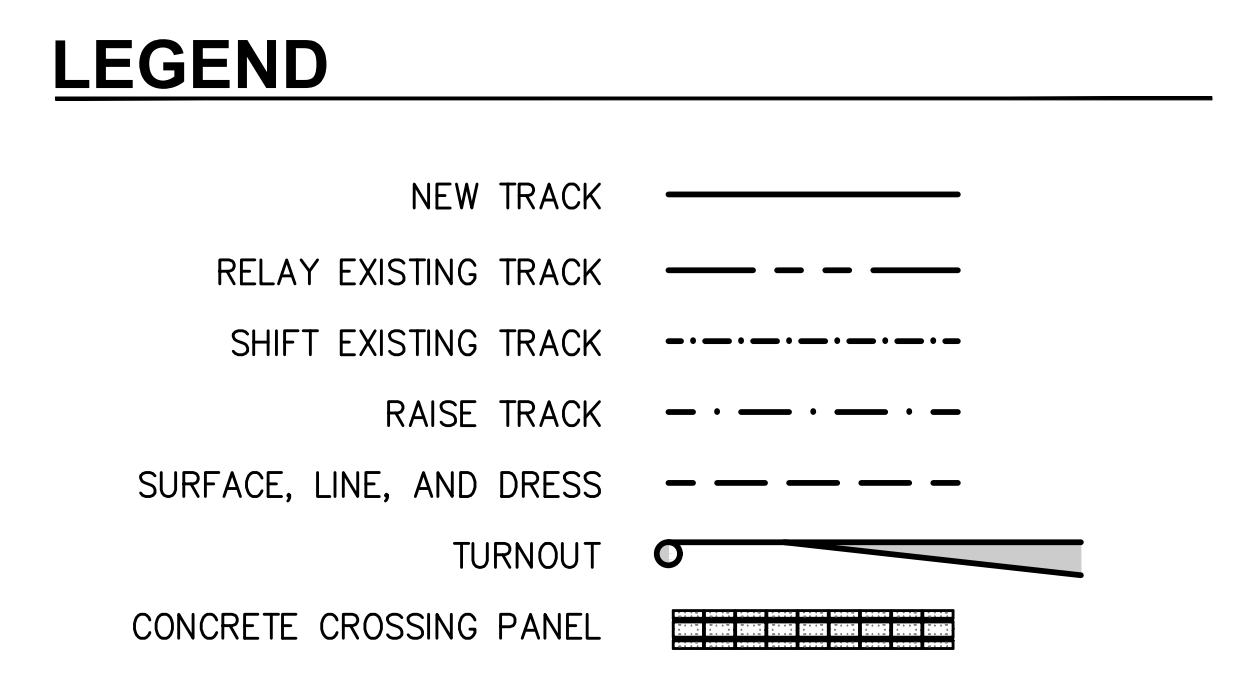
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DRAWING NO.	<b>R13.1</b>
SHEET NO.	<b>108</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:39pm rambert Layout: AREA 14  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\RI - R14 RAIL PLAN.dwg



- ### NOTES
- SEE **4** FOR CROSSING PANEL DETAIL.  
R44
  - SEE R18-R40 FOR RAIL PROFILES.
  - TYPICAL RAIL TO BE 136RE ON CONCRETE TIES.
  - SEE **1** FOR NO. 9 TURNOUT DETAIL.  
R45
  - WITH THE EXCEPTION OF ST 10 6+31.88-9+58.12, ALL PROPOSED HORIZONTAL CURVES HAVE A DEGREE OF CURVATURE LESS THAN OR EQUAL TO 9°30'00".



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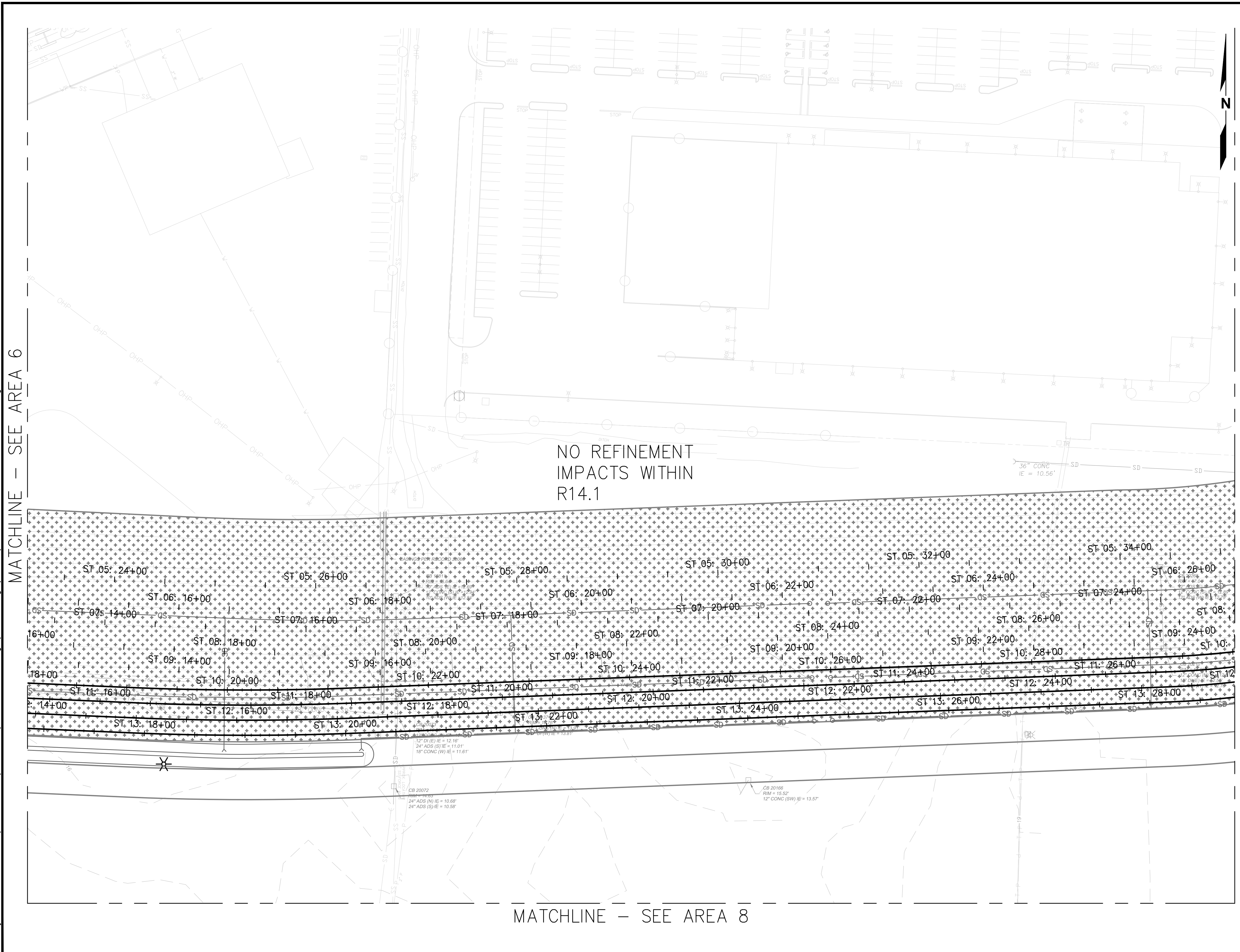
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**RAIL PLAN**  
**AREA 14**

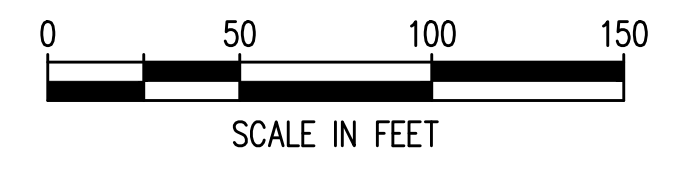
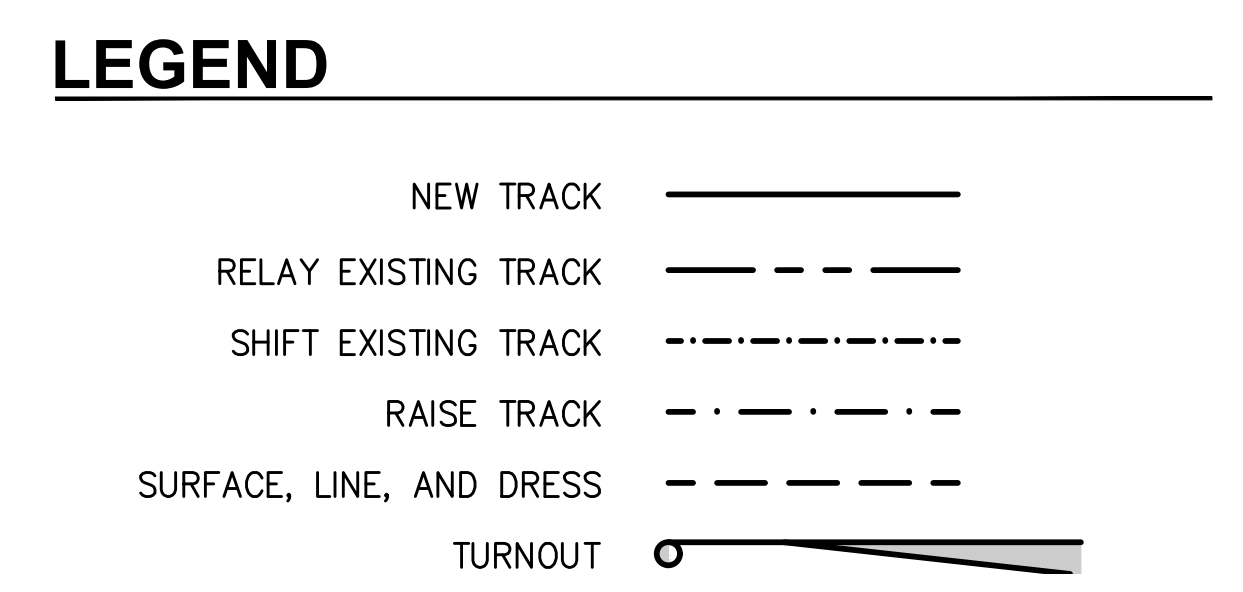
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DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R14</b>
SHEET NO.	<b>109</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:40pm rambert Layout: RREF AREA 14  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\RI - R14 RAIL PLAN\_Alt\_Refinements.dwg



- ### GENERAL NOTES
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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

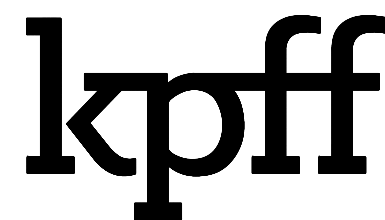
**RAIL REFINEMENT**  
**AREA 14**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R14.1</b>
SHEET NO.	<b>110</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:40pm rambert Layout: R15 DATA CHARTS  
N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\R15-R17 DATA CHARTS.dwg

NOTE TO REVIEWER:  
TRACK DATA CHARTS IN  
DEVELOPMENT



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NO.	DATE	BY	REVISION

TERMINAL 4 RAIL AND SITE IMPROVEMENTS  
PORT OF GRAYS HARBOR

DATA CHARTS

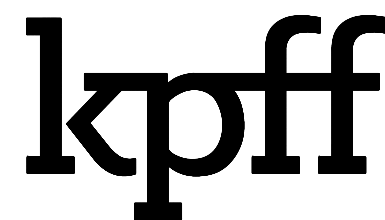
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DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R15</b>
SHEET NO.	<b>111</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION



Plotted: Jun 09, 2023 - 9:40pm rambert Layout: R16 DATA CHARTS  
N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\R15-R17 DATA CHARTS.dwg

NOTE TO REVIEWER:  
TRACK DATA CHARTS IN  
DEVELOPMENT



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TERMINAL 4 RAIL AND SITE IMPROVEMENTS  
PORT OF GRAYS HARBOR

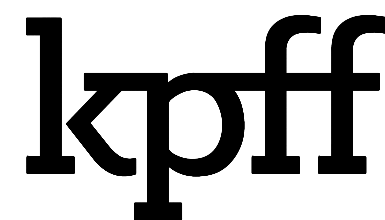
DATA CHARTS

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R16</b>
SHEET NO.	<b>112</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:40pm rhlambert Layout: R17 DATA CHARTS  
N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\R15-R17 DATA CHARTS.dwg

NOTE TO REVIEWER:  
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DEVELOPMENT



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NO.	DATE	BY	REVISION

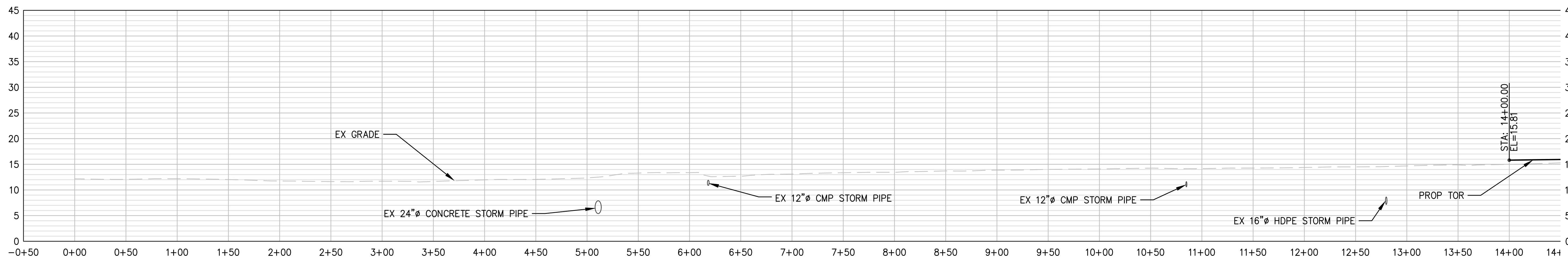
TERMINAL 4 RAIL AND SITE IMPROVEMENTS  
PORT OF GRAYS HARBOR

DATA CHARTS

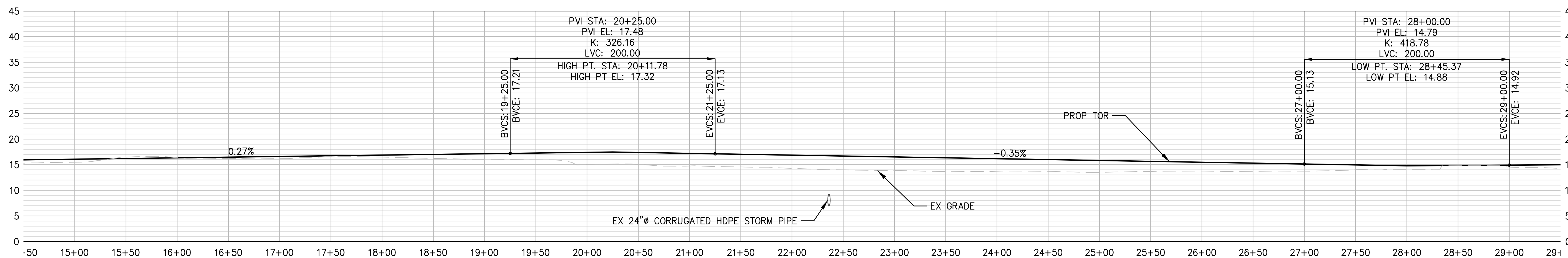
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DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R17</b>
SHEET NO.	<b>113</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

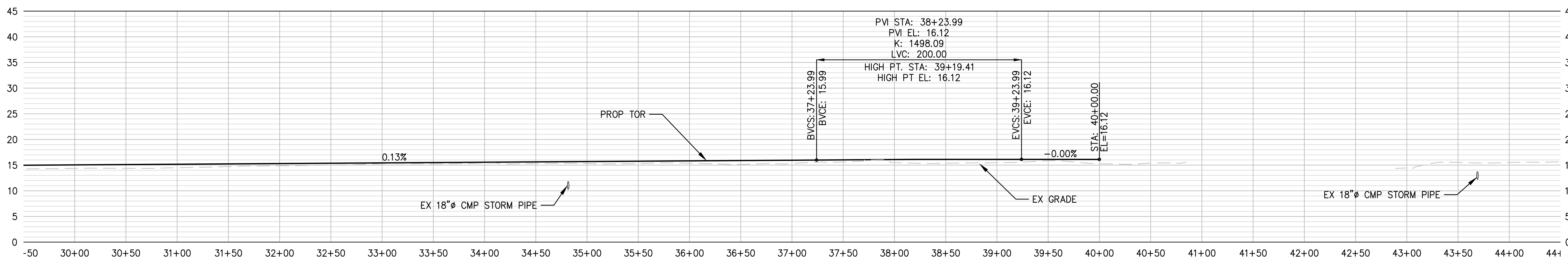
Plotted: Jun 09, 2023 - 9:40pm riambert Layout: R18 WL 01  
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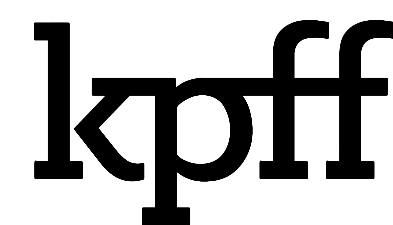
**1 WL 01 RAIL PROFILE: STA 0+00 - 14+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**2 WL 01 RAIL PROFILE: STA 14+50 - 29+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**3 WL 01 RAIL PROFILE: STA 29+50 - 44+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



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**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

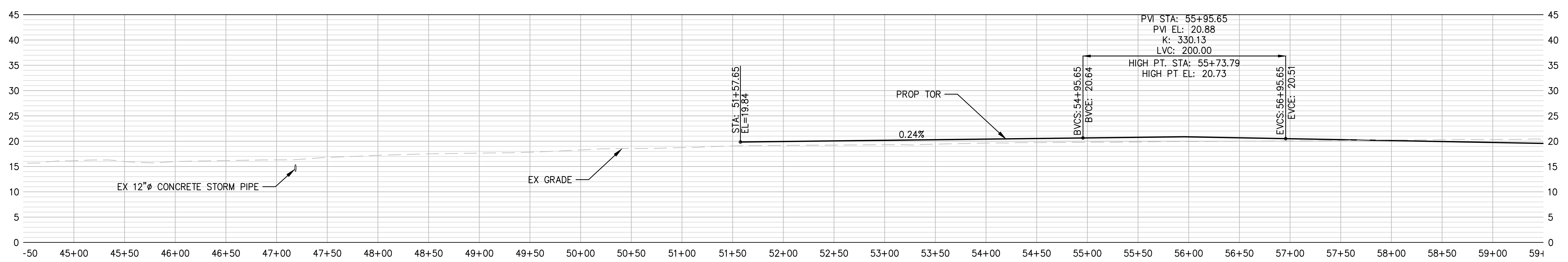
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**RAIL PROFILES**  
**WL 01**

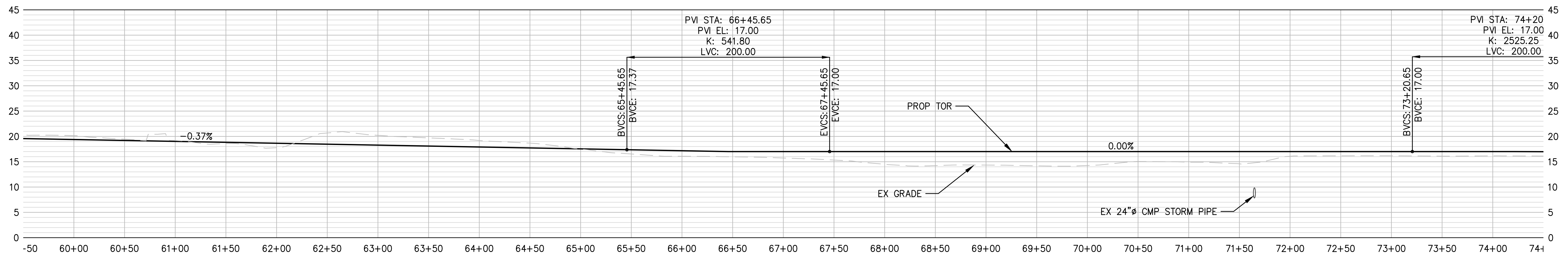
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CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R18</b>
SHEET NO.	<b>114 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

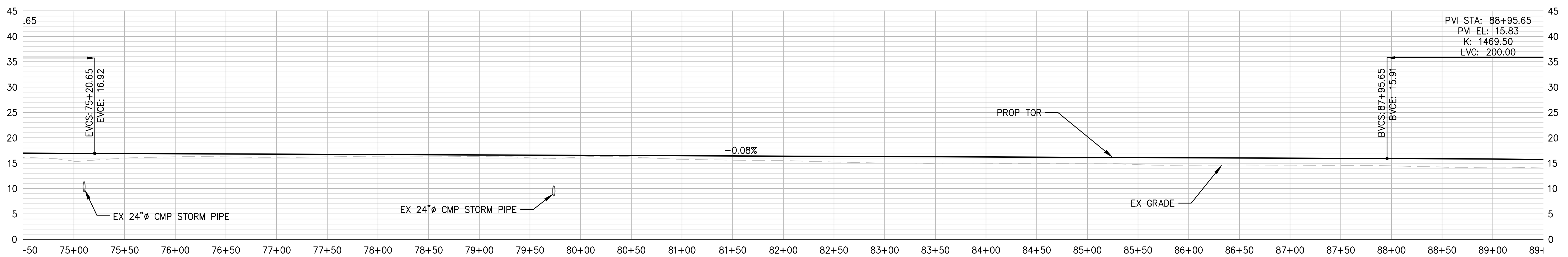
Plotted: Jun 09, 2023 - 9:40pm  
 rambert  
 Layout: R19 WL 01  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\R18-R40 RAIL PROFILES.dwg



**1 WL 01 RAIL PROFILE: STA 44+50 - 59+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**2 WL 01 RAIL PROFILE: STA 59+50 - 74+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**3 WL 01 RAIL PROFILE: STA 74+50 - 89+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

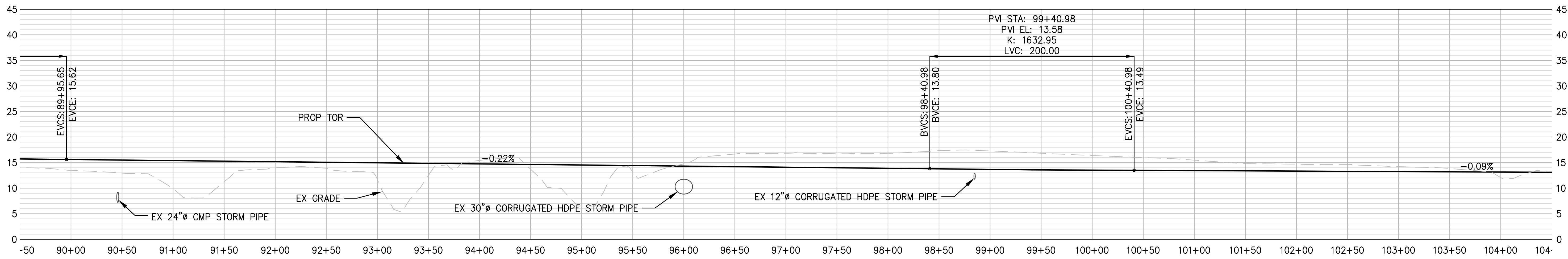
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**RAIL PROFILES**  
**WL 01**

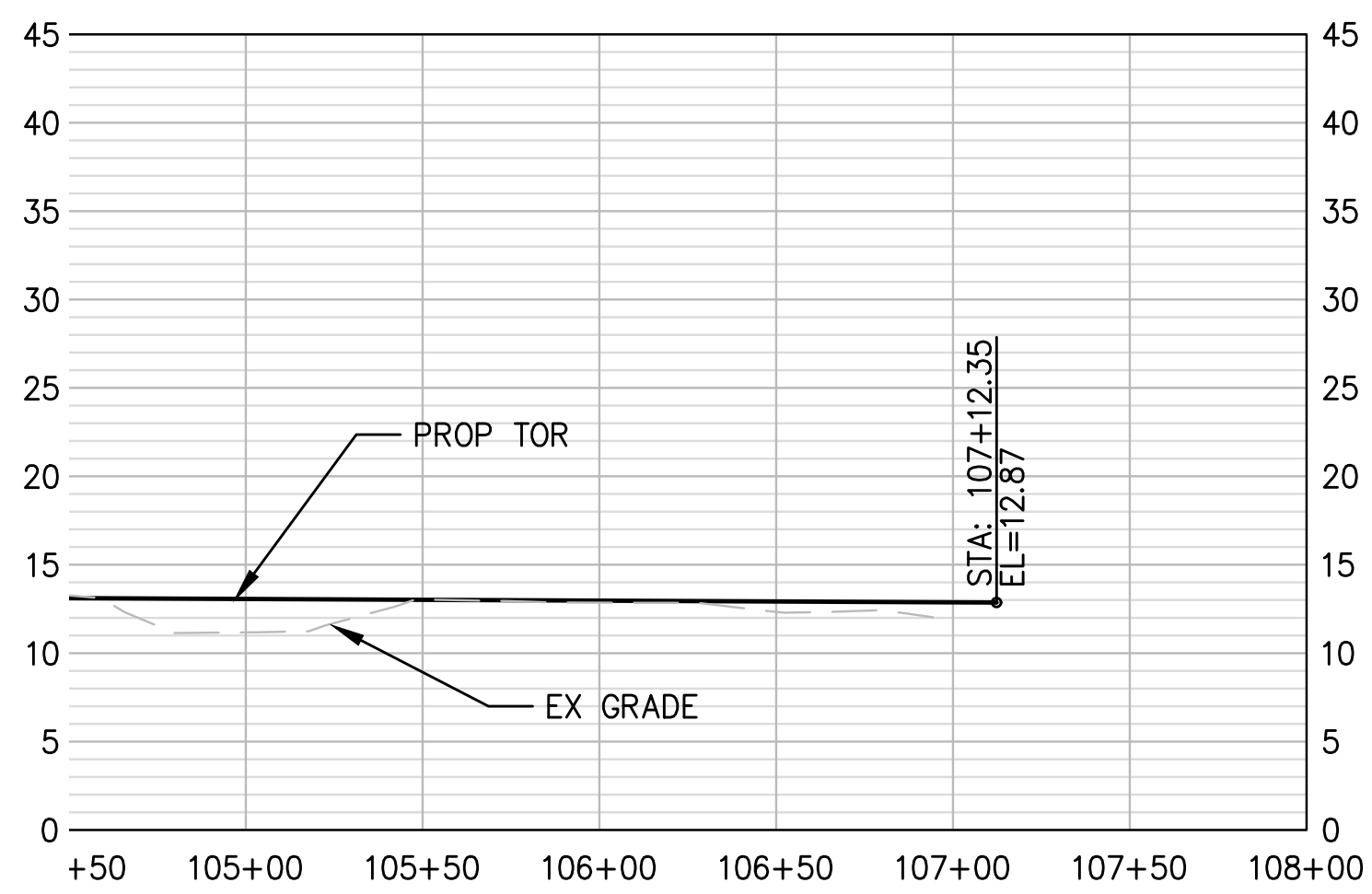
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DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R19</b>
SHEET NO.	<b>115 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:40pm riambert Layout: R20 WL 01  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\18-R40 RAIL PROFILES.dwg



**1 WL 01 RAIL PROFILE: STA 89+50 - 104+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**2 WL 01 RAIL PROFILE: STA 104+50 - 107+12.35**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



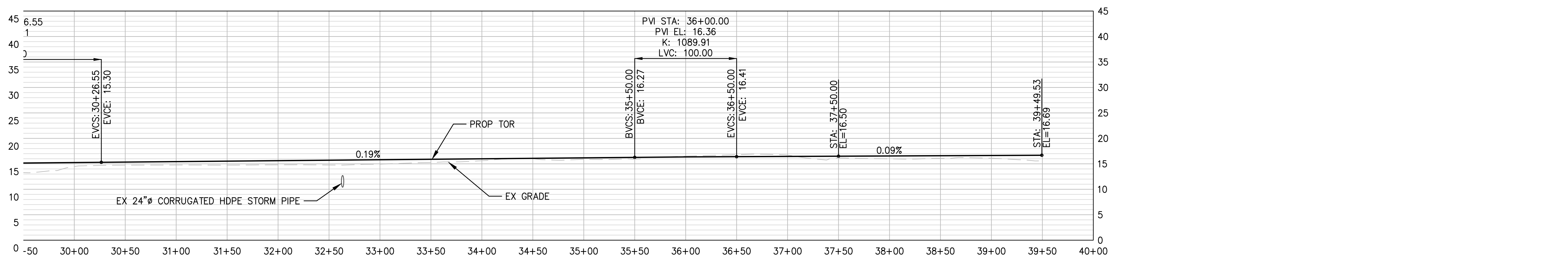
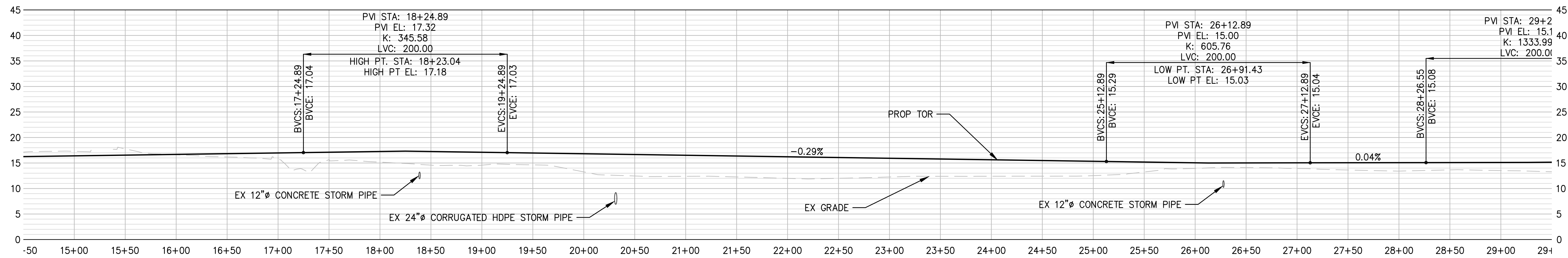
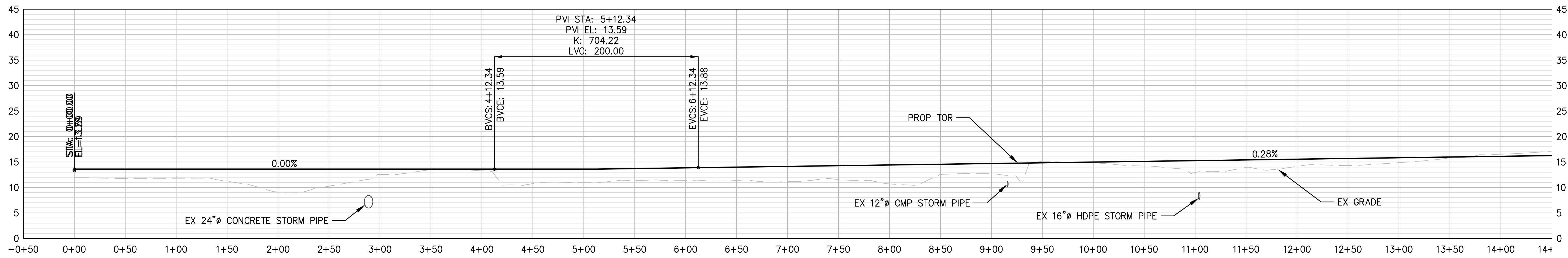
NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR  
  
**RAIL PROFILES**  
**WL 01**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R20</b>
SHEET NO.	<b>116</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:41pm r1ambert Layout: R21 WL 02  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\18-R40 RAIL PROFILES.dwg



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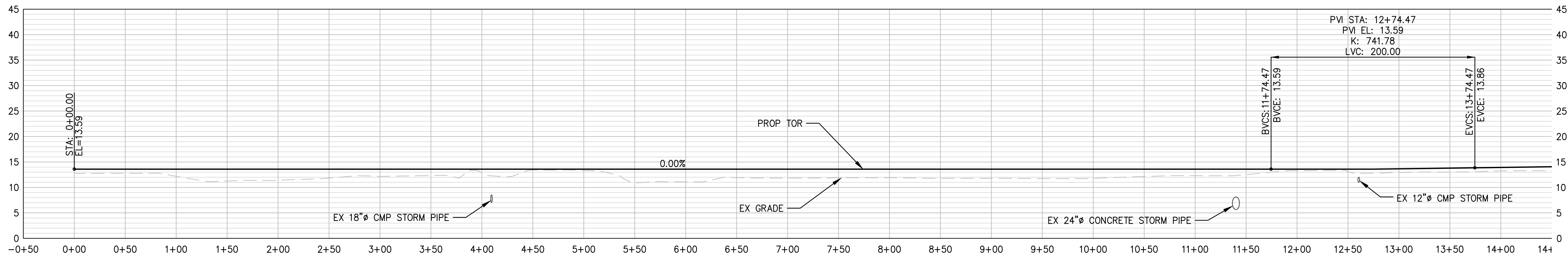
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**RAIL PROFILES**  
**WL 02**

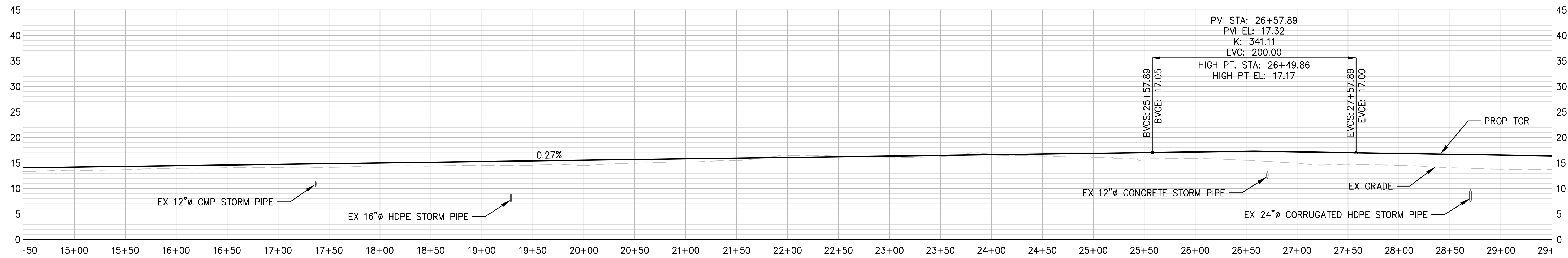
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CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R21</b>
SHEET NO.	<b>117</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

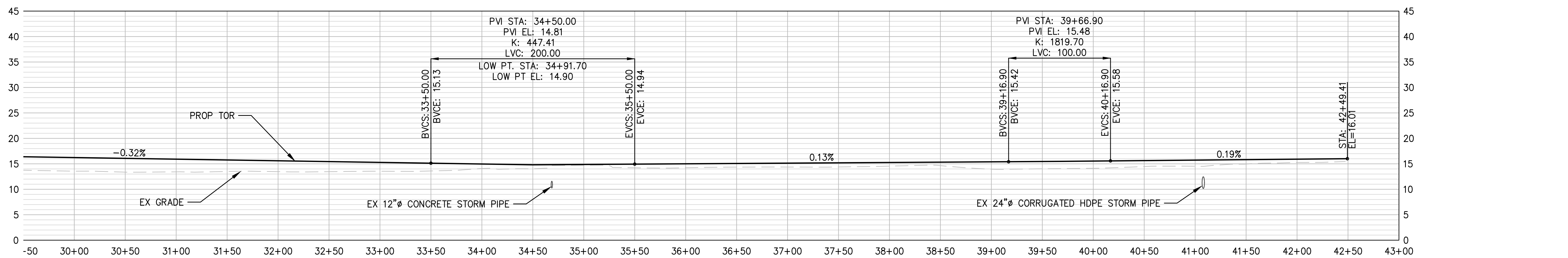
Plotted: Jun 09, 2023 - 9:41pm r1ambert Layout: R22 WL 03  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\18-R40 RAIL PROFILES.dwg



**1 WL 03 RAIL PROFILE: STA 0+00 - 14+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**2 WL 03 RAIL PROFILE: STA 14+50 - 29+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**3 WL 03 RAIL PROFILE: STA 29+50 - 42+47**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



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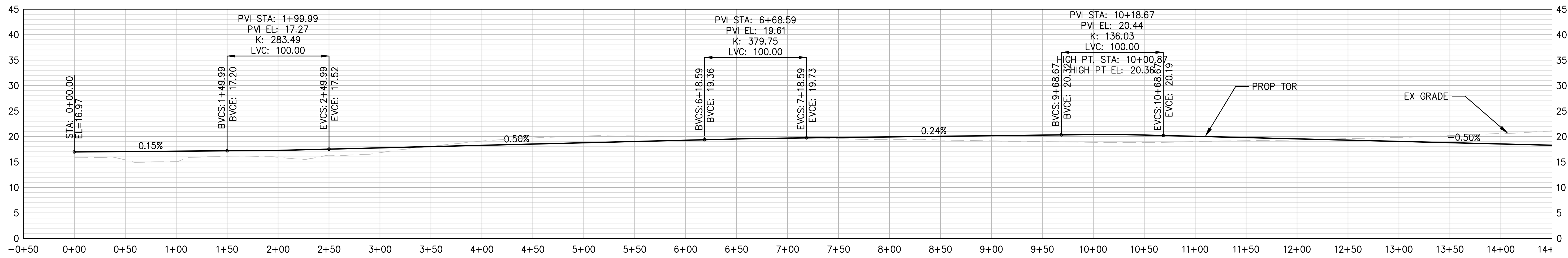
NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR  
**RAIL PROFILES**  
**WL 03**

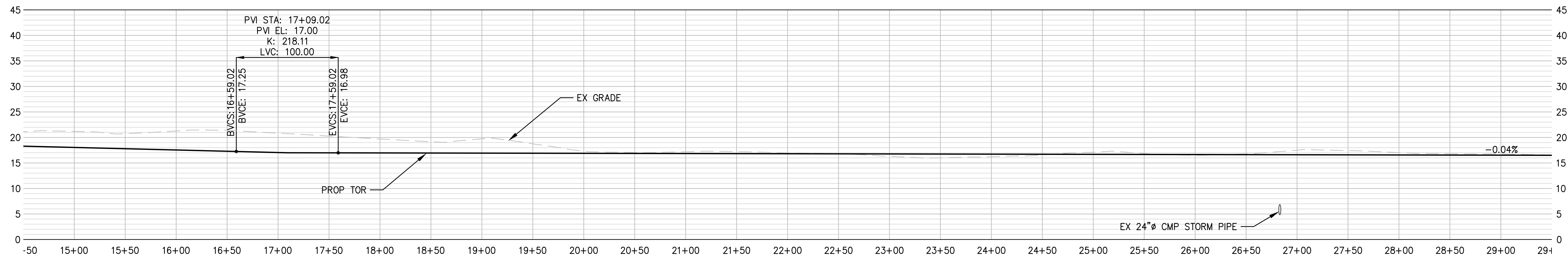
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CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R22</b>
SHEET NO.	<b>118</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

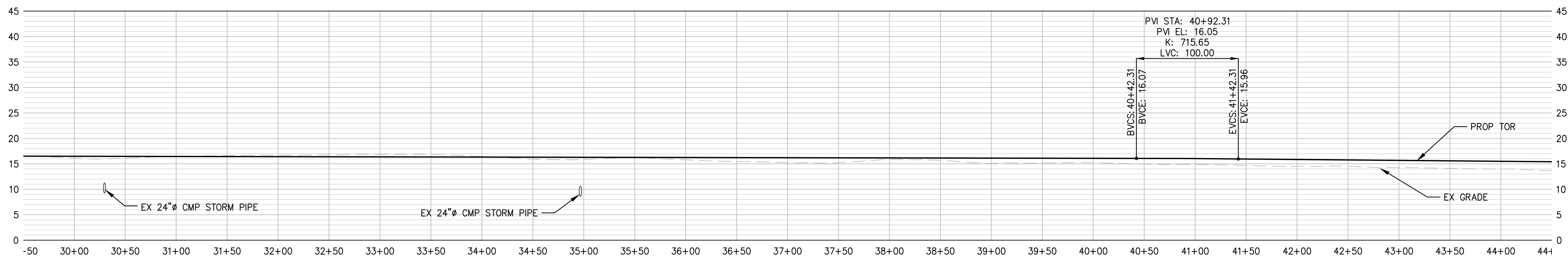
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**1 DP 03N RAIL PROFILE: STA 0+00 - 14+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**2 DP 03N RAIL PROFILE: STA 14+50 - 29+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**3 DP 03N RAIL PROFILE: STA 29+50 - 44+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



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NO.	DATE	BY	REVISION

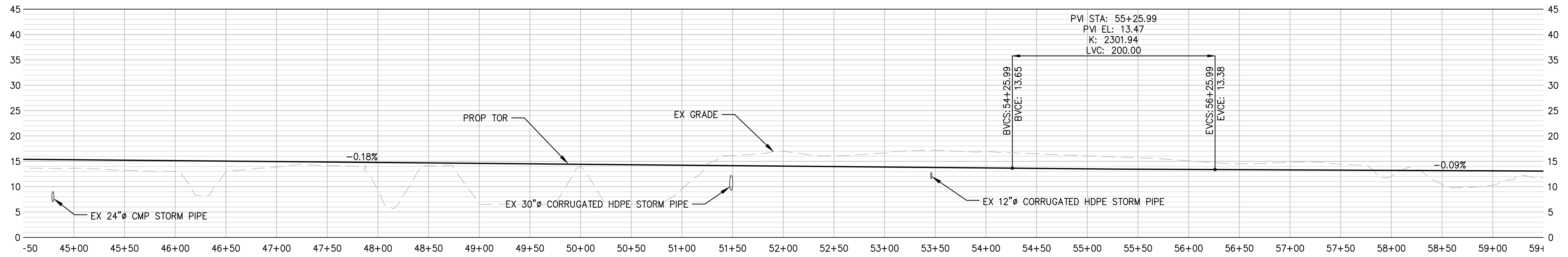
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR  
**RAIL PROFILES**  
 DP 03N

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R23</b>
SHEET NO.	<b>119</b> OF <b>142</b>

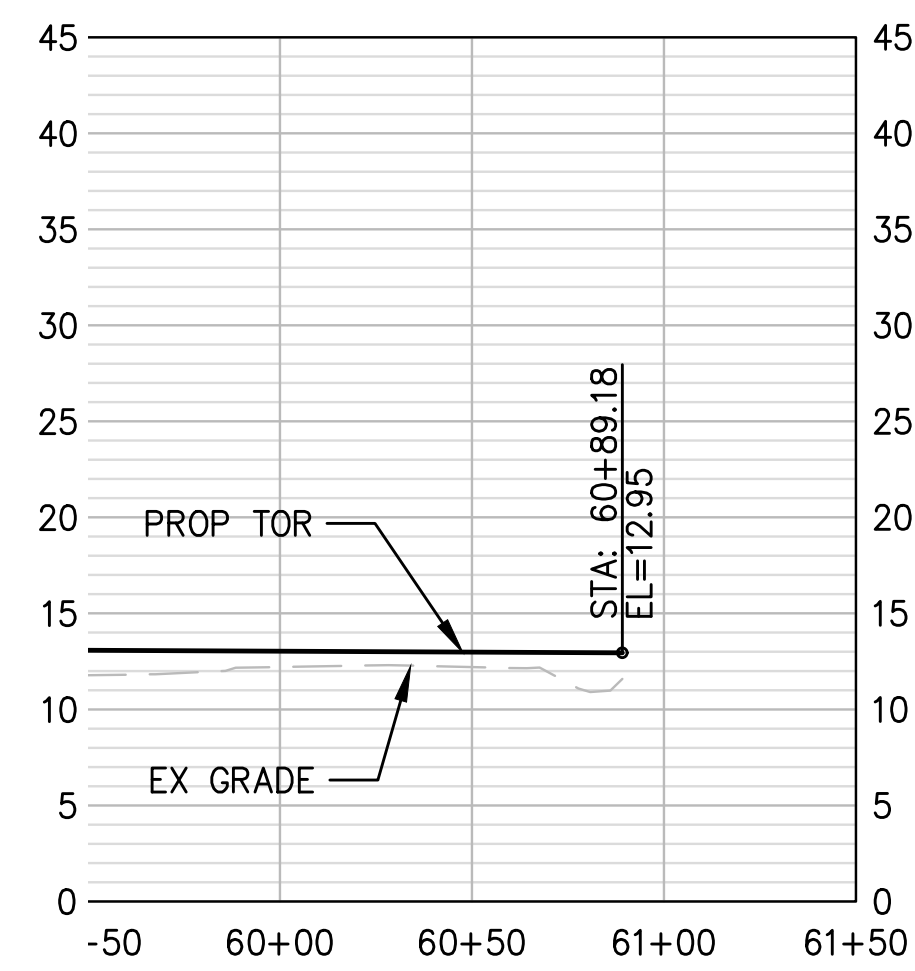
PRELIMINARY DESIGN - NOT FOR CONSTRUCTION



Plotted: Jun 09, 2023 - 9:41pm r1ambert Layout: R24 DP 03N  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\R18-R40 RAIL PROFILES.dwg



**1 DP 03N RAIL PROFILE: STA 44+50 - 59+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**2 DP 03N RAIL PROFILE: STA 59+50 - 60+89**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



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**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

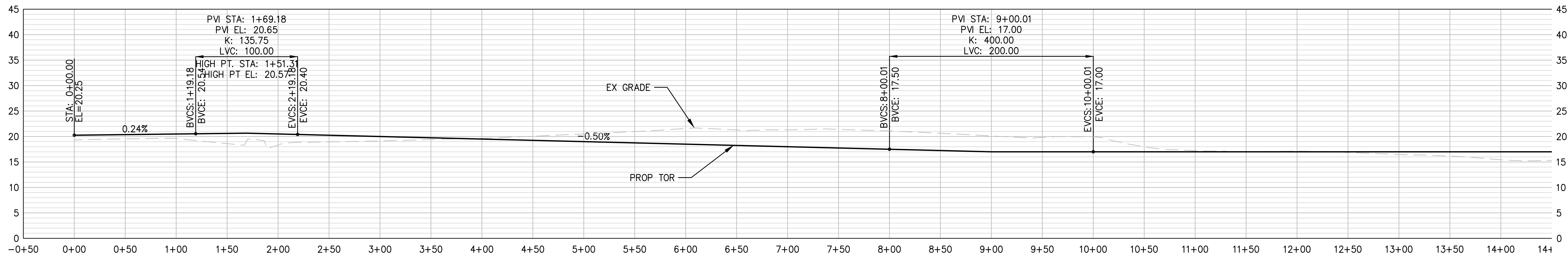
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**RAIL PROFILES**  
**DP 03N**

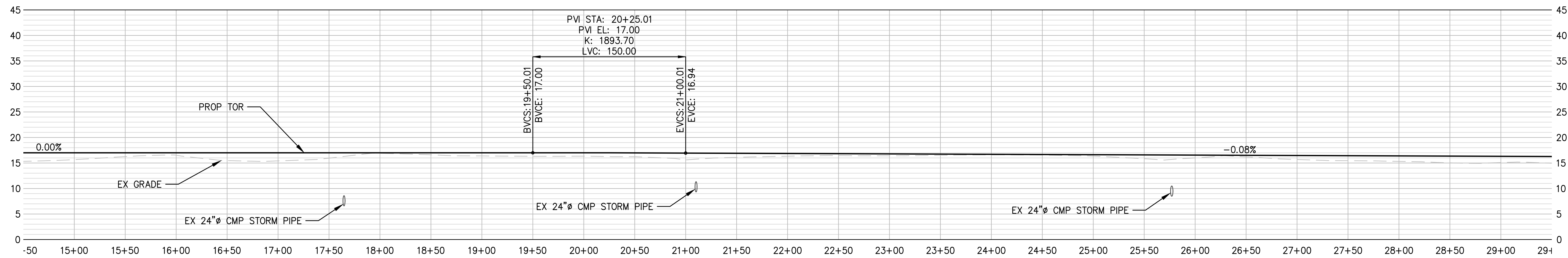
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DRAWING NO.	<b>R24</b>
SHEET NO.	<b>120 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

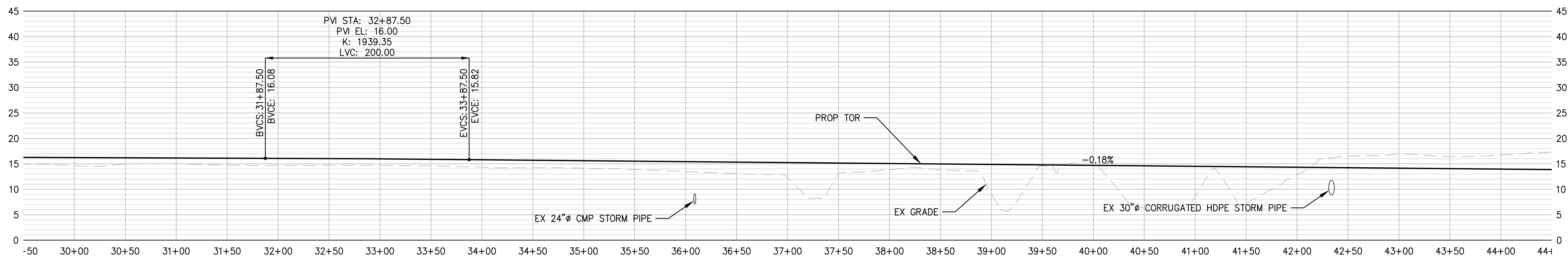
Plotted: Jun 09, 2023 - 9:41pm r1ambert Layout: R25 DP 03S  
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**1 DP 03S RAIL PROFILE: STA 0+00 - 14+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**2 DP 03S RAIL PROFILE: STA 14+50 - 29+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**3 DP 03S RAIL PROFILE: STA 29+50 - 44+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



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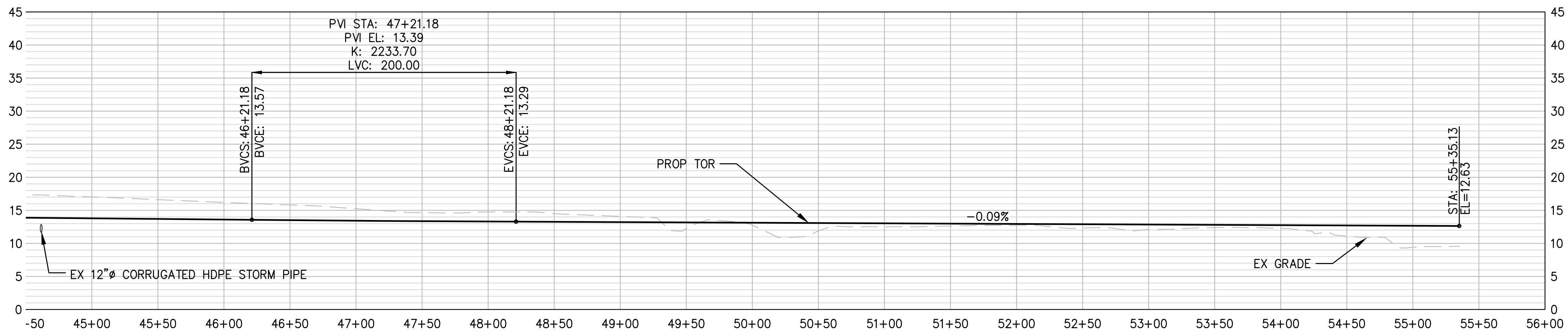
NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR  
  
**RAIL PROFILES**  
**DP 03S**

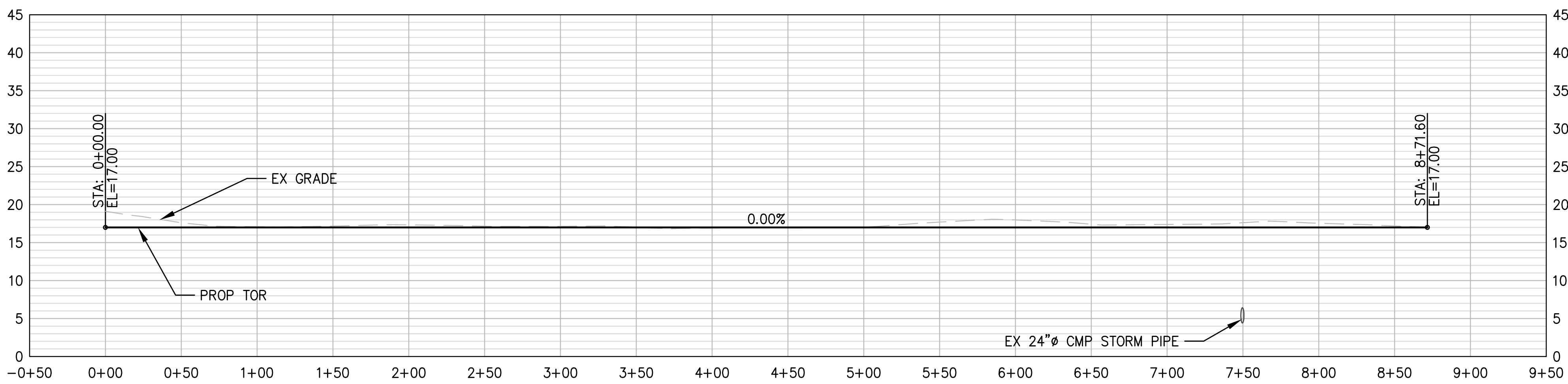
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DRAWING NO.	<b>R25</b>
SHEET NO.	<b>121</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

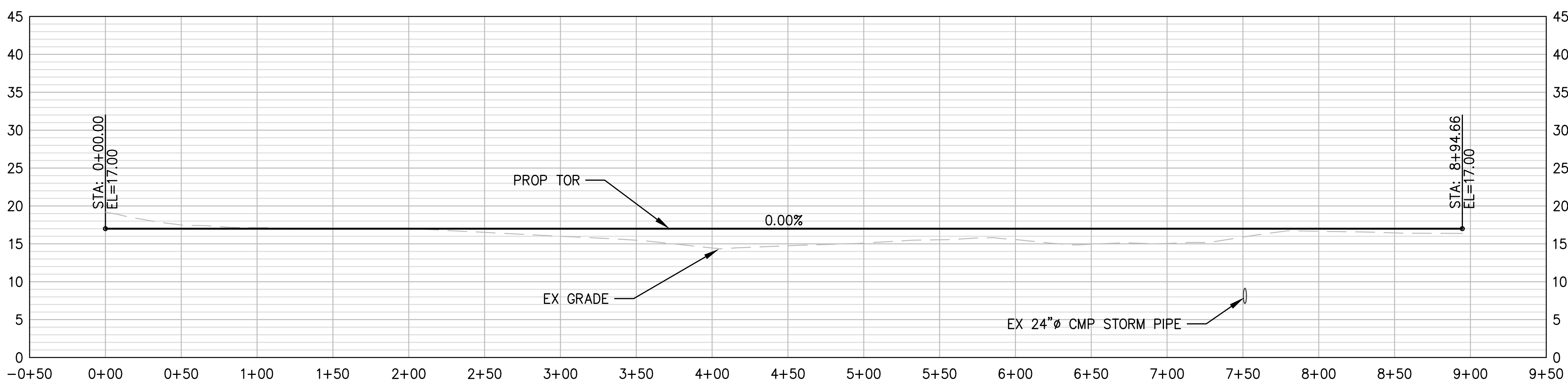
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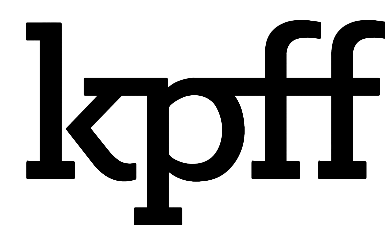
**1 DP 03S RAIL PROFILE: STA 44+50 - 55+35.13**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**2 RA 03N RAIL PROFILE**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**3 RA 03S RAIL PROFILE**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



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NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

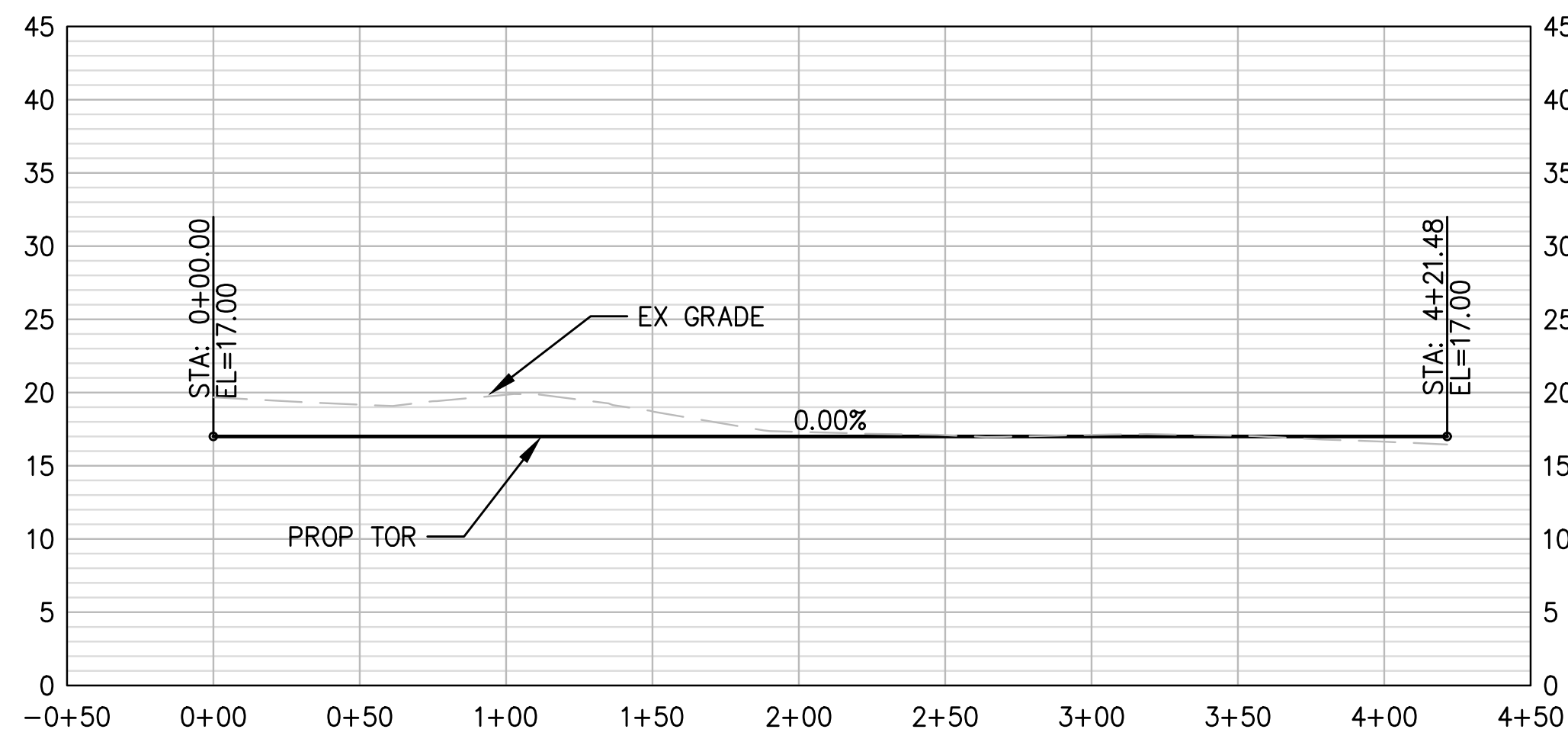
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**RAIL PROFILES**  
 DP 03S, RA 03N, RA 03S

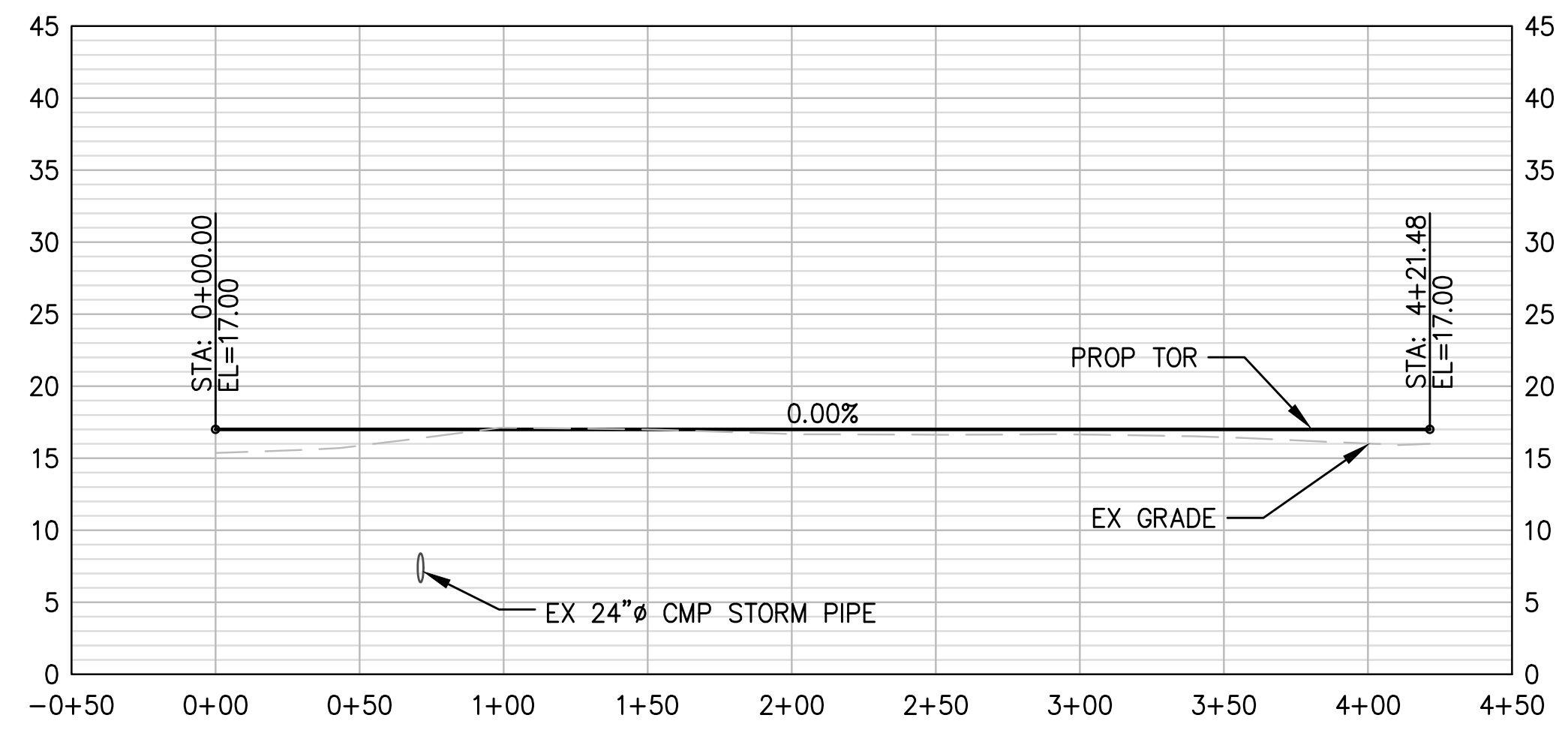
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DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R26</b>
SHEET NO.	<b>122 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

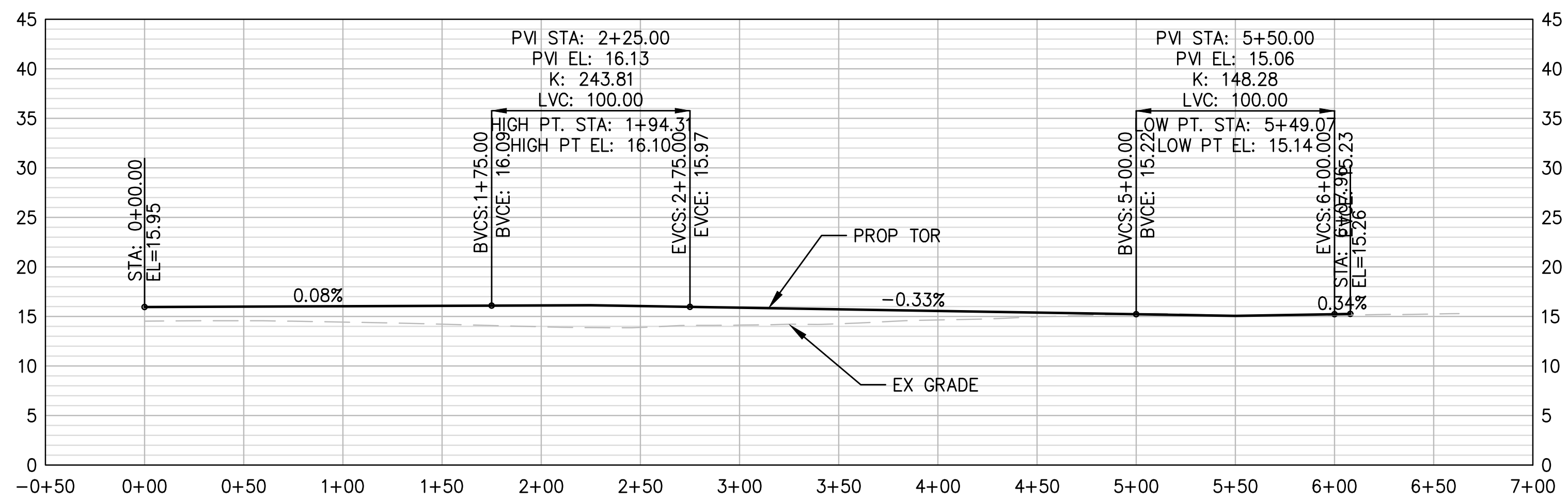
Plotted: Jun 09, 2023 - 9:41pm r1ambert Layout: R27\_X01\_X02\_DL01\_HYP N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\18-R40 RAIL PROFILES.dwg



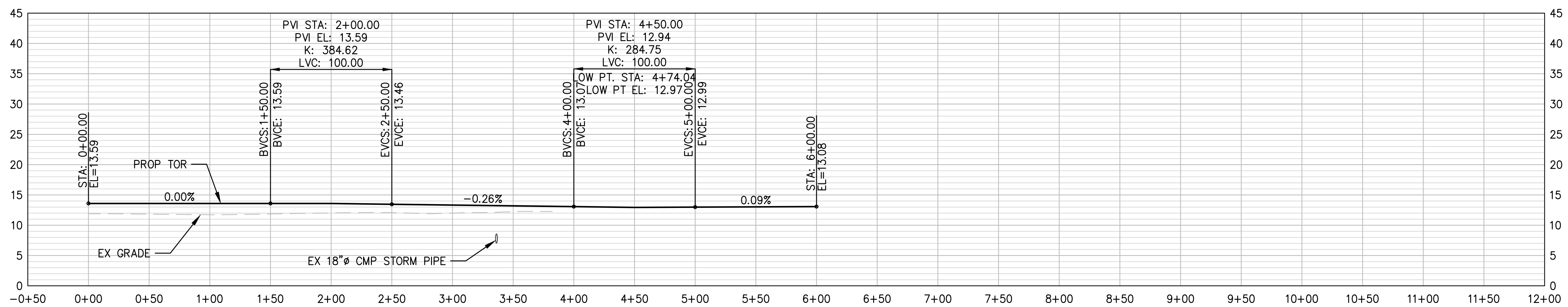
**1 XO 01 RAIL PROFILE**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**2 XO 02 RAIL PROFILE**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**3 DL 01 RAIL PROFILE**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**4 HYP RAIL PROFILE**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



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NO.	DATE	BY	REVISION

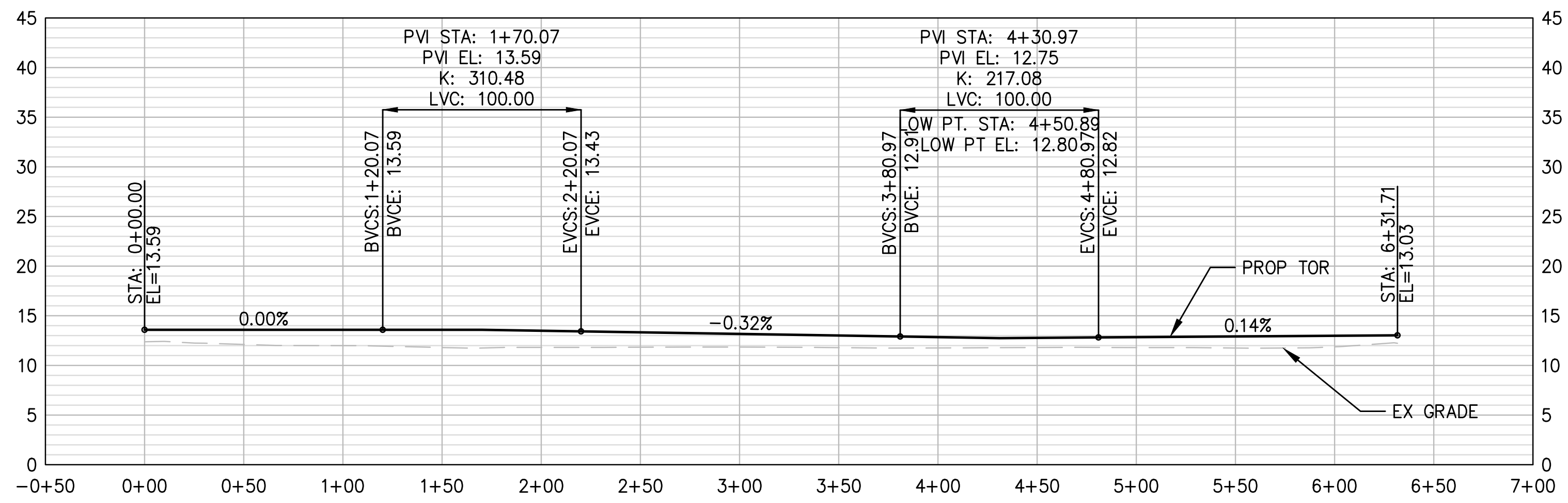
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**RAIL PROFILES**  
 XO 01, XO 02, DL 01, HYP

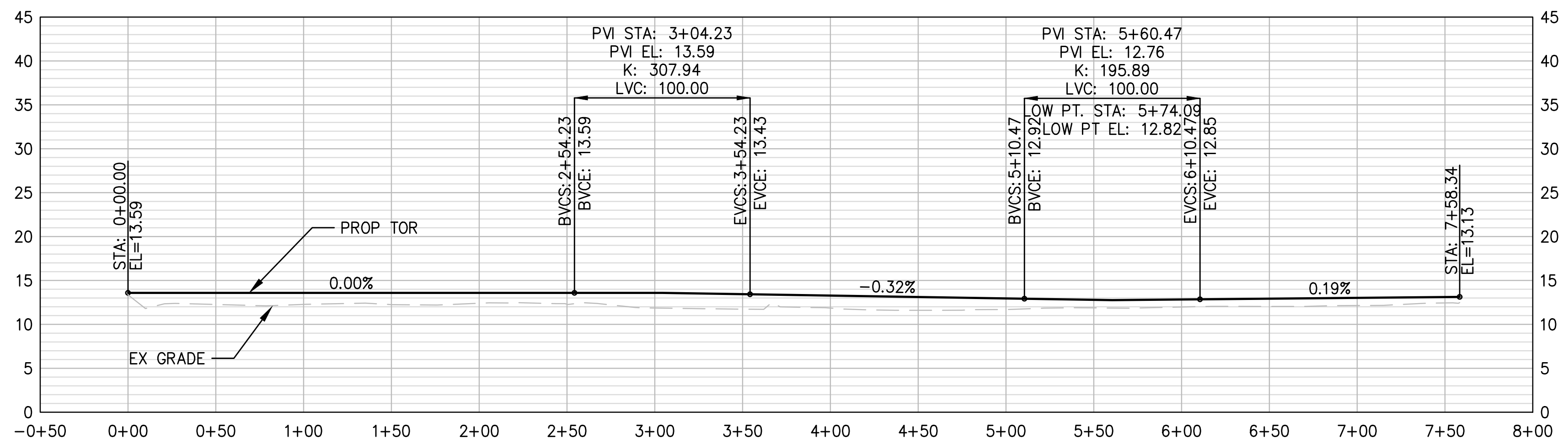
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CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R27</b>
SHEET NO.	<b>123</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

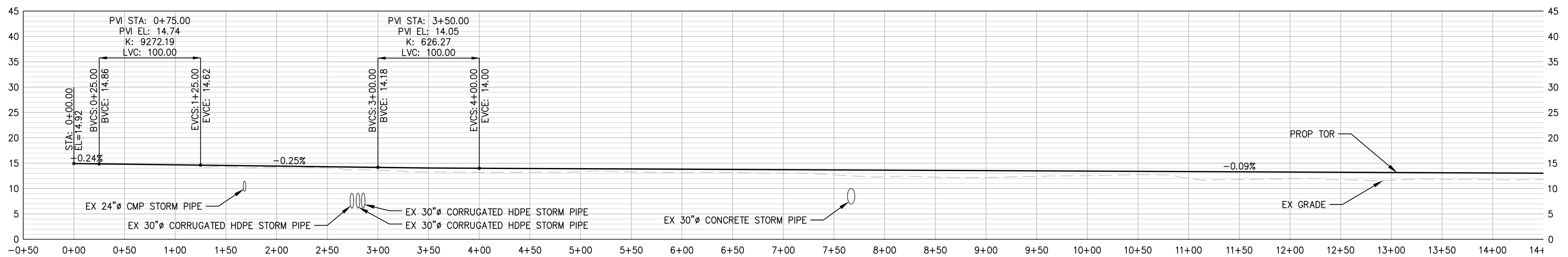
Plotted: Jun 09, 2023 - 9:41pm r1ambert Layout: R28 TT 01 TT 02 ST 01  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\R18-R40 RAIL PROFILES.dwg



**1 TT 01 RAIL PROFILE**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**2 TT 02 RAIL PROFILE**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**3 ST 01 RAIL PROFILE: 0+00 - 14+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



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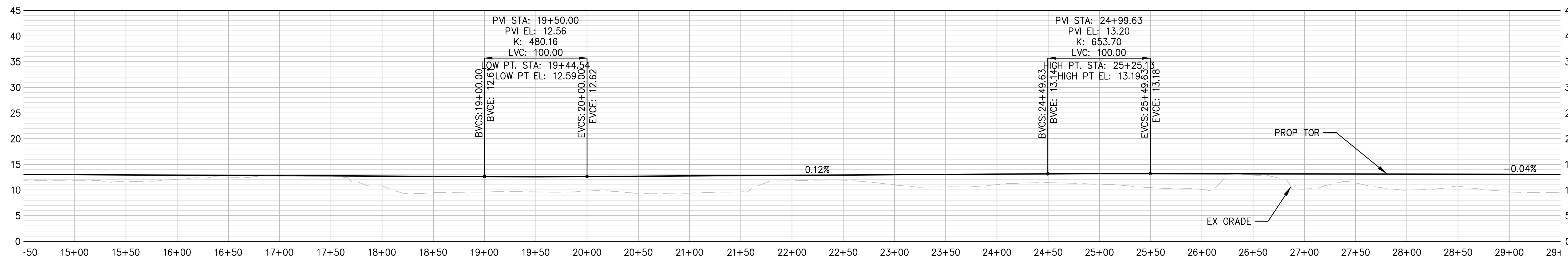
NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR  
  
**RAIL PROFILES**  
 TT 01, TT 02, ST 01

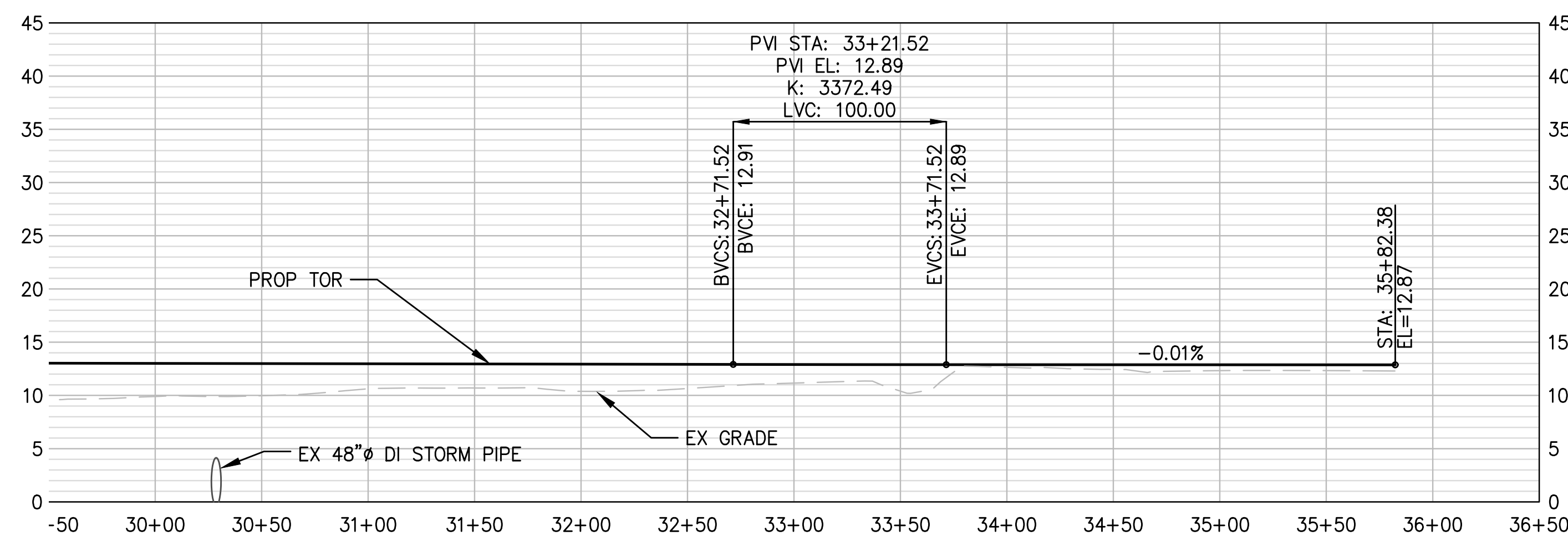
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DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R28</b>
SHEET NO.	<b>124</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

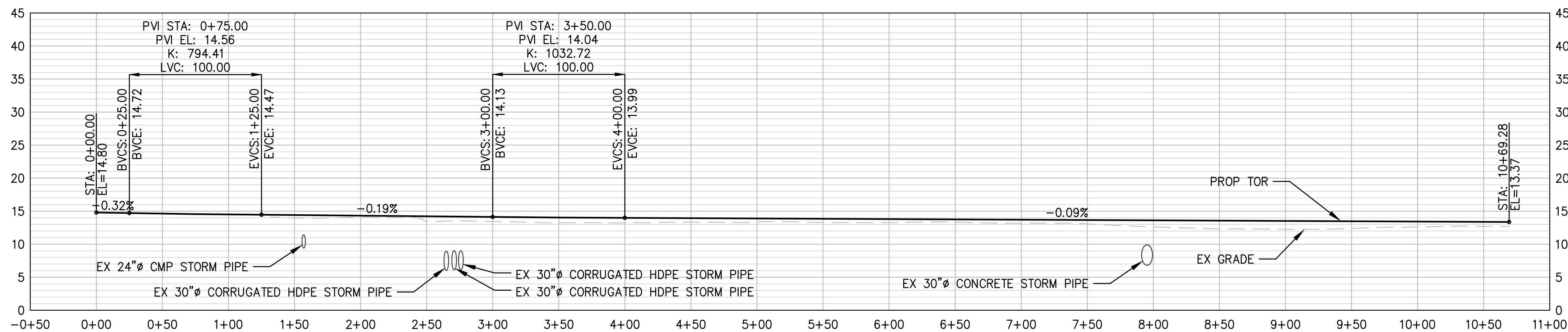
Plotted: Jun 09, 2023 - 9:41pm r1ambert Layout: R29 ST 01 ST 02  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\18-R40 RAIL PROFILES.dwg



**1 ST 01 RAIL PROFILE: STA 14+50-29+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**2 ST 01 RAIL PROFILE: STA 29+50 - 35+82.38**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**3 ST 02 RAIL PROFILE**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



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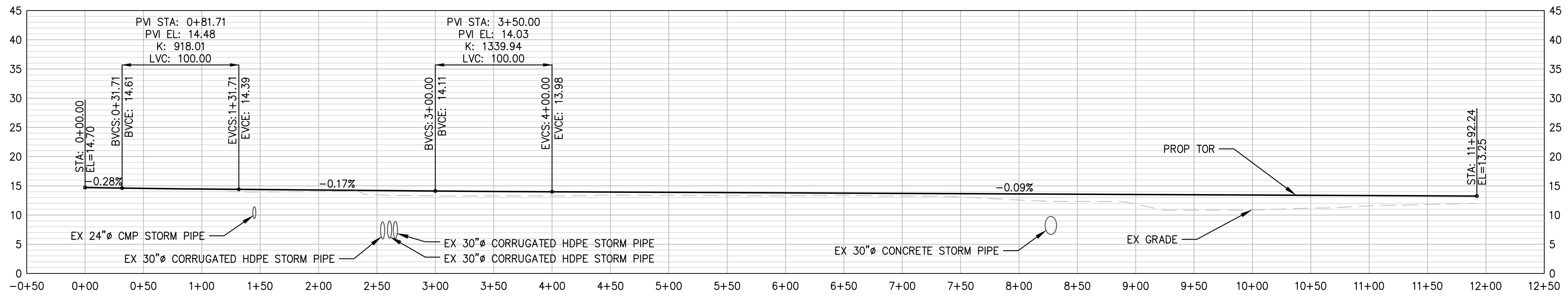
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**RAIL PROFILES**  
**ST 01, ST 02**

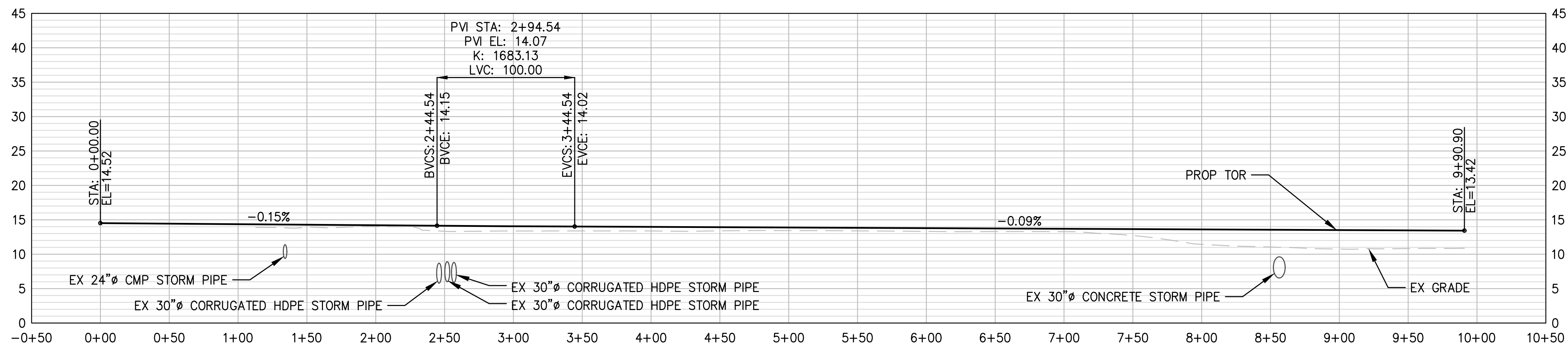
DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R29</b>
SHEET NO.	<b>125</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

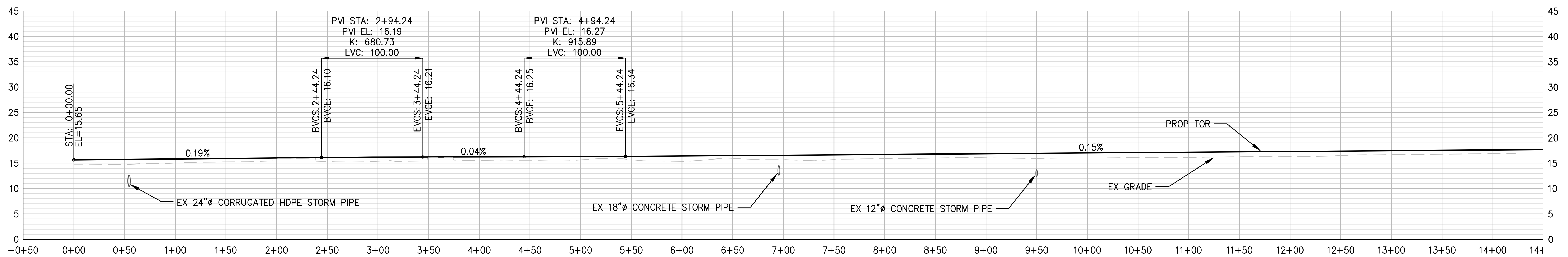
Plotted: Jun 09, 2023 - 9:41pm r1ambert Layout: R30 ST 05 - ST 05  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\R18-R40 RAIL PROFILES.dwg



**1 ST 03 RAIL PROFILE**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**2 ST 04 RAIL PROFILE**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**3 ST 05 RAIL PROFILE: STA 0+00 - 14+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'

NOTE:  
 EXISTING TRACK STATIONING BETWEEN 14+50 AND 43+50 NOT SHOW FOR ST 05.



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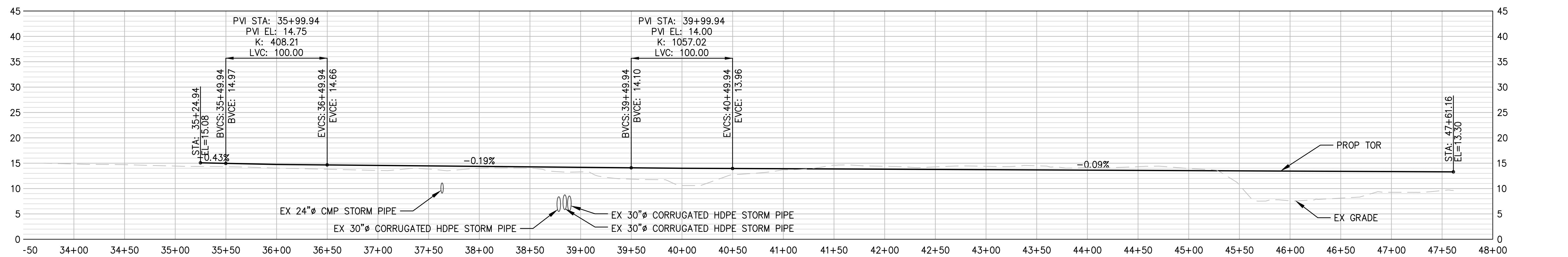
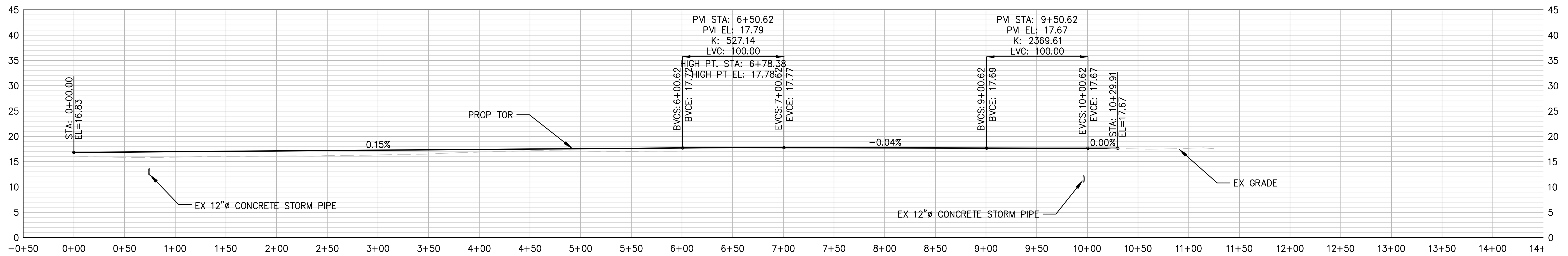
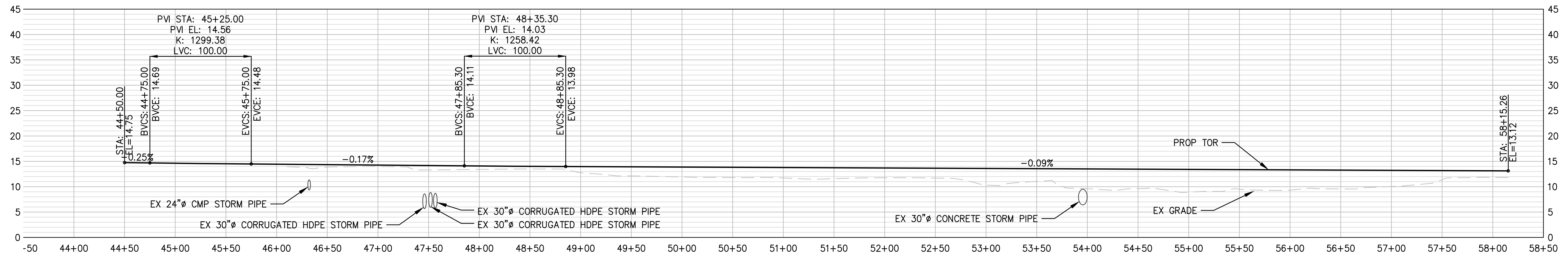
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**RAIL PROFILES**  
**ST 03, ST 04, ST 05**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R30</b>
SHEET NO.	<b>126</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:42pm  
 N:\2023\10092300034 Part of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\R18-R40 RAIL PROFILES.dwg  
 Layout: R31 ST 05-ST06  
 rambert



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TERMINAL 4 RAIL AND SITE IMPROVEMENTS  
 PORT OF GRAYS HARBOR

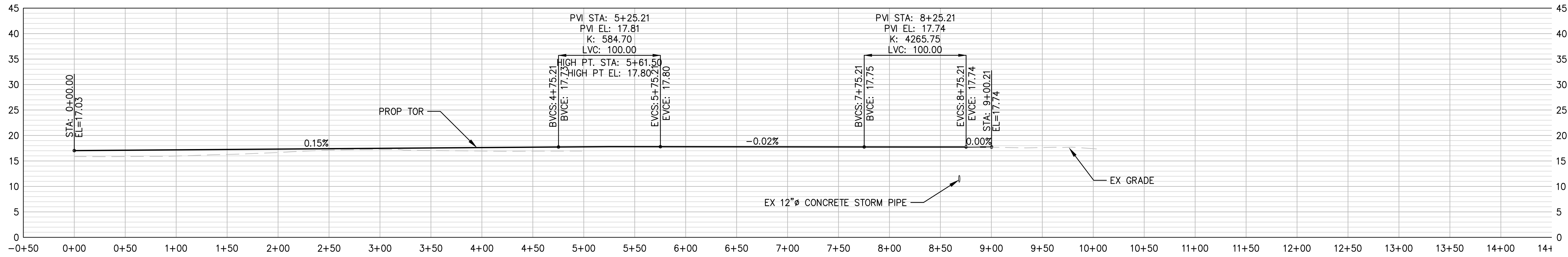
**RAIL PROFILES**  
**ST 05, ST 06**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R31</b>
SHEET NO.	<b>127</b> OF <b>142</b>

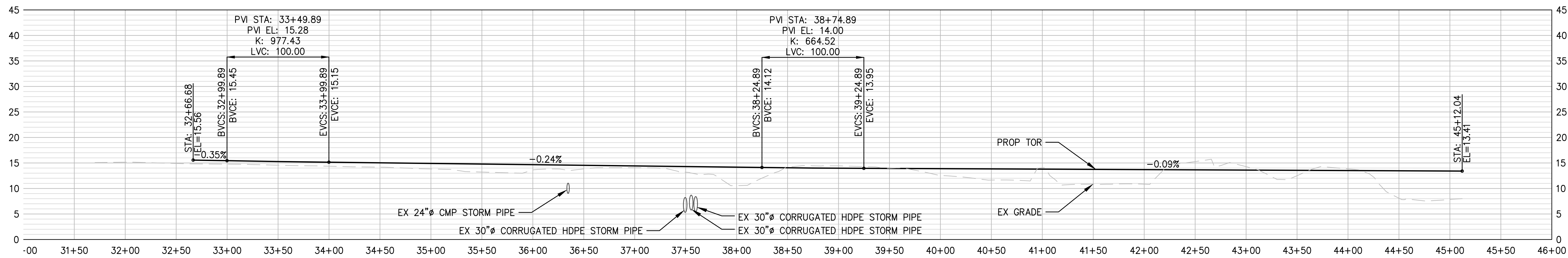
PRELIMINARY DESIGN - NOT FOR CONSTRUCTION



Plotted: Jun 09, 2023 - 9:42pm r1ambert Layout: R32\_ST07  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\R18-R40 RAIL PROFILES.dwg



**1 ST 07 RAIL PROFILE: STA 0+00 - 14+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**2 ST 07 RAIL PROFILE: STA 31+00 - 45+12.04**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'

NOTE:  
 EXISTING TRACK STATIONING BETWEEN 14+50 AND 31+00 NOT SHOW FOR ST 07.



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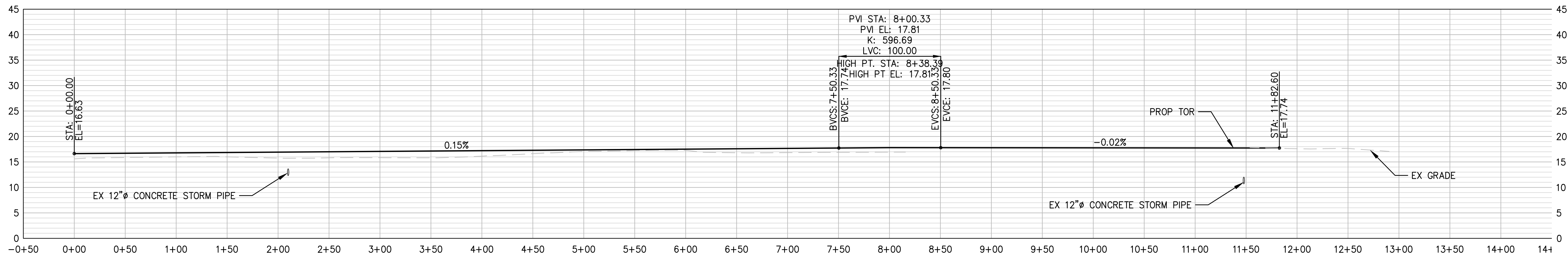
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**RAIL PROFILES**  
 ST 07

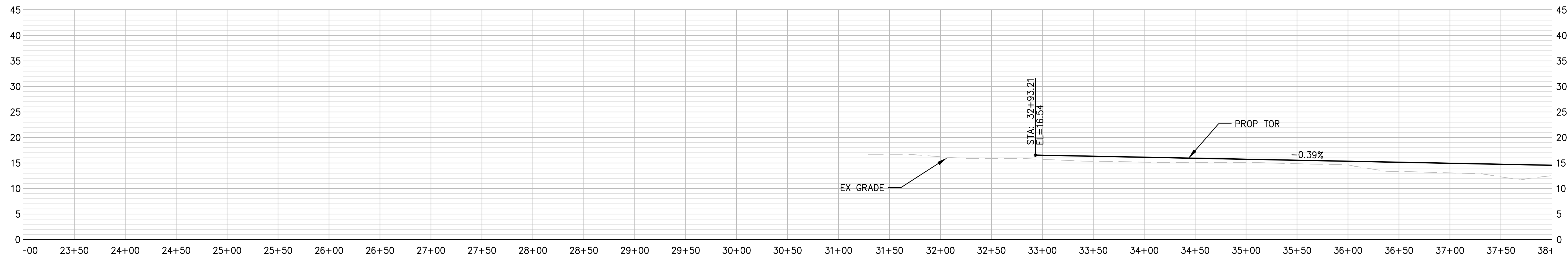
DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R32</b>
SHEET NO.	<b>128</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

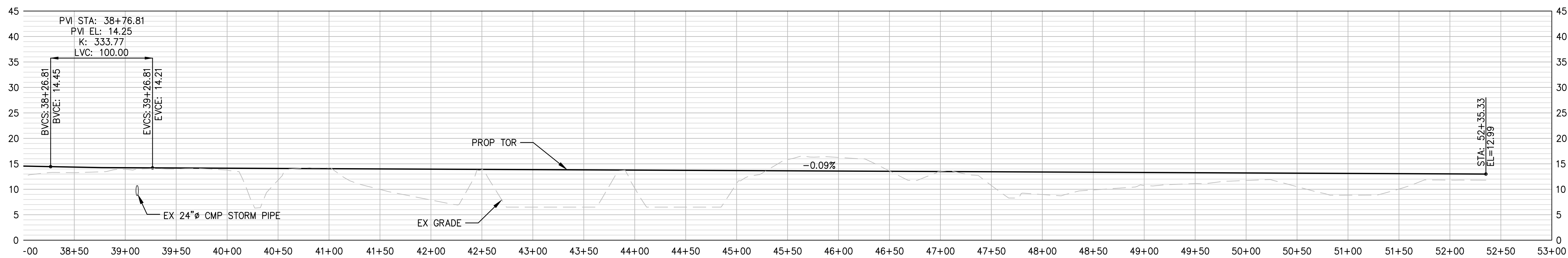
Plotted: Jun 09, 2023 - 9:42pm rambert Layout: R33 ST 08  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\R18-R40 RAIL PROFILES.dwg



**1 ST 08 RAIL PROFILE: STA 0+00 - 14+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**2 ST 08 RAIL PROFILE: STA 23+00 - 37+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**3 ST 08 RAIL PROFILE: STA 37+50 - 52+35.33**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'

NOTE:  
 EXISTING TRACK STATIONING BETWEEN 14+50 AND 23+00 NOT SHOW FOR ST 08.



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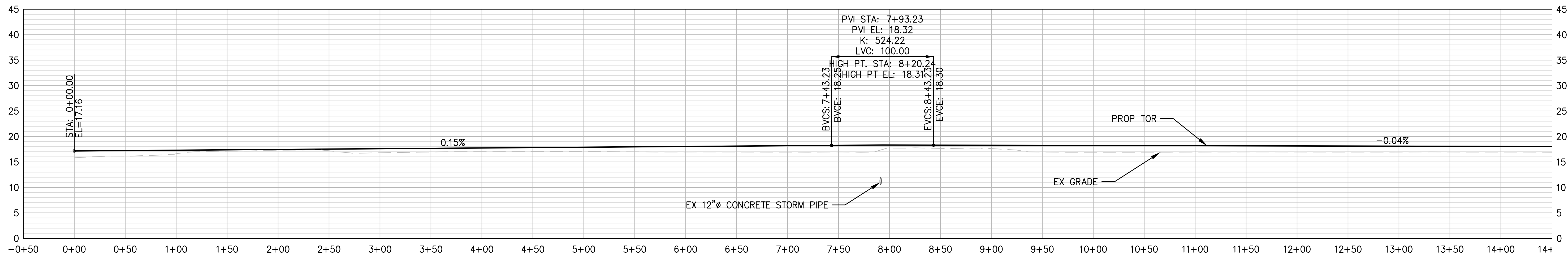
NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR  
  
**RAIL PROFILES**  
**ST 08**

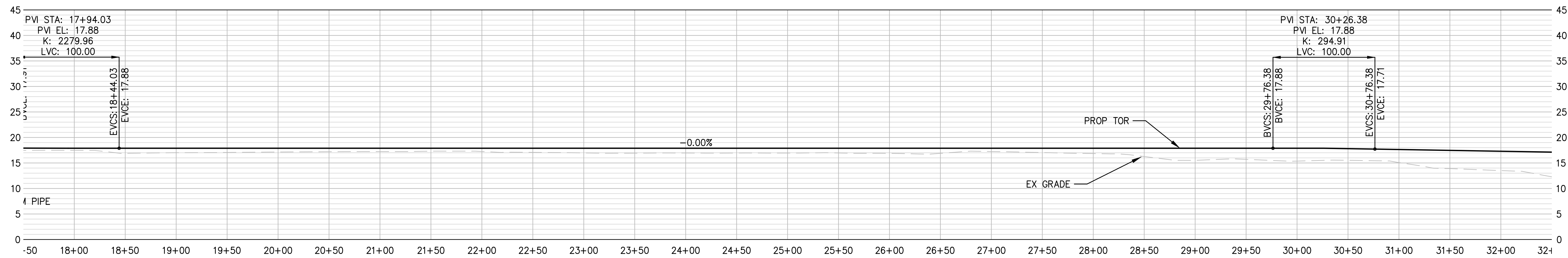
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DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R33</b>
SHEET NO.	<b>129</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

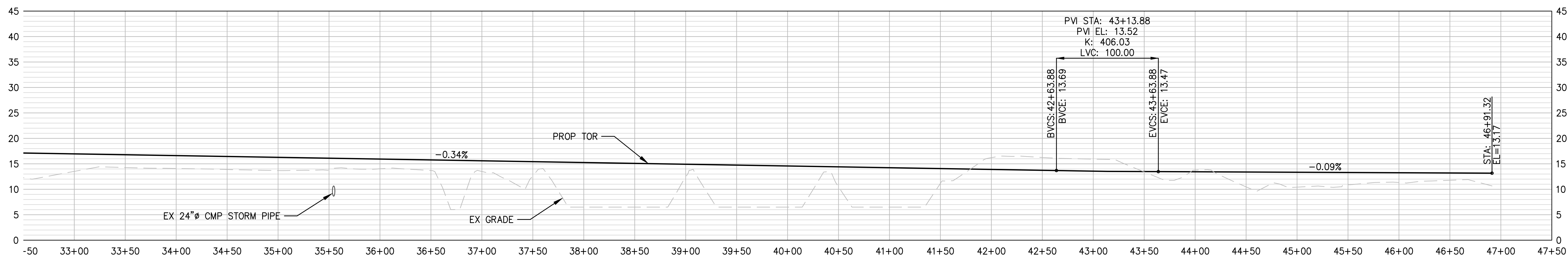
Plotted: Jun 09, 2023 - 9:42pm rambert Layout: R34 ST 09  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\R18-R40 RAIL PROFILES.dwg



**1 ST 09 RAIL PROFILE: STA 0+00 - 14+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**2 ST 09 RAIL PROFILE: STA 17+50 - 32+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**3 ST 09 RAIL PROFILE: STA 32+50 - 46+91.32**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'

NOTE:  
 EXISTING TRACK STATIONING BETWEEN 14+50 AND 17+50 NOT SHOW FOR ST 09.



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**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

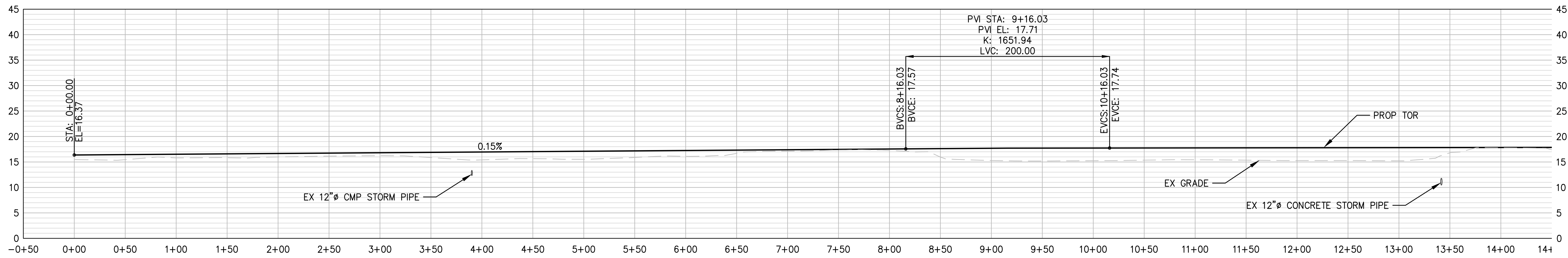
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**RAIL PROFILES**  
**ST 09**

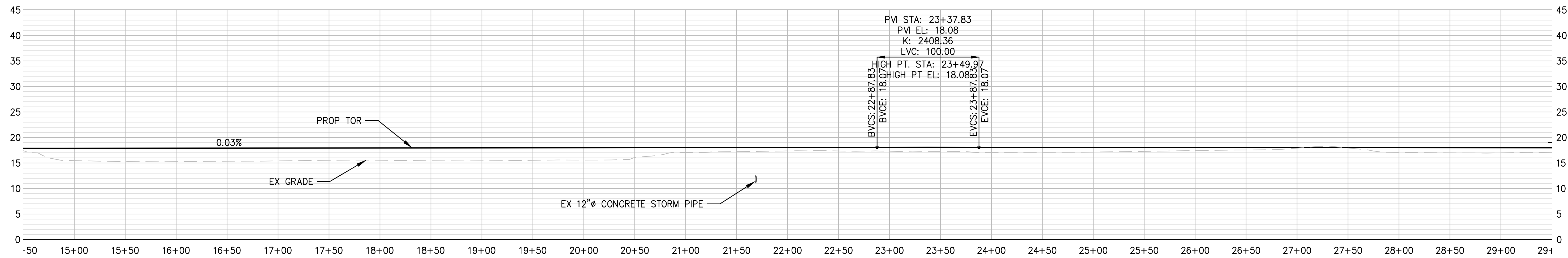
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CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R34</b>
SHEET NO.	<b>130 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

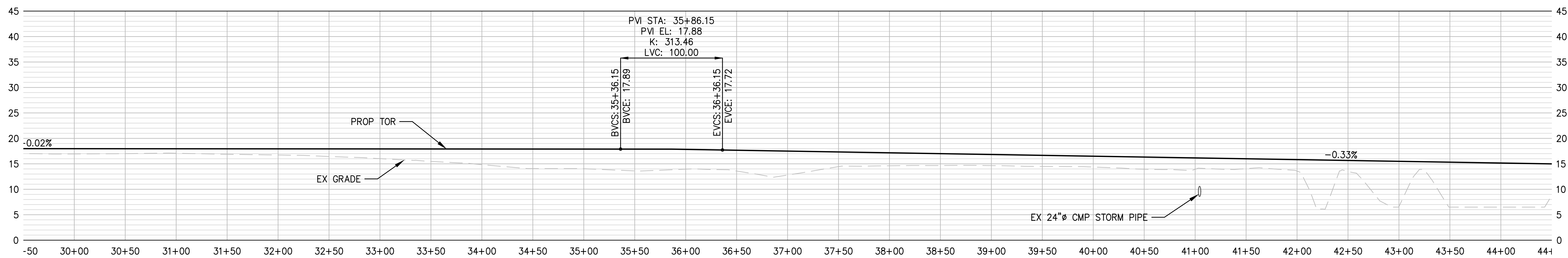
Plotted: Jun 09, 2023 - 9:42pm rambert Layout: R35 ST 10  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\18-R40 RAIL PROFILES.dwg



**1 ST 10 RAIL PROFILE: STA 0+00 - 14+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**2 ST 10 RAIL PROFILE: STA 14+50-29+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**3 ST 10 RAIL PROFILE: STA 29+50-44+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



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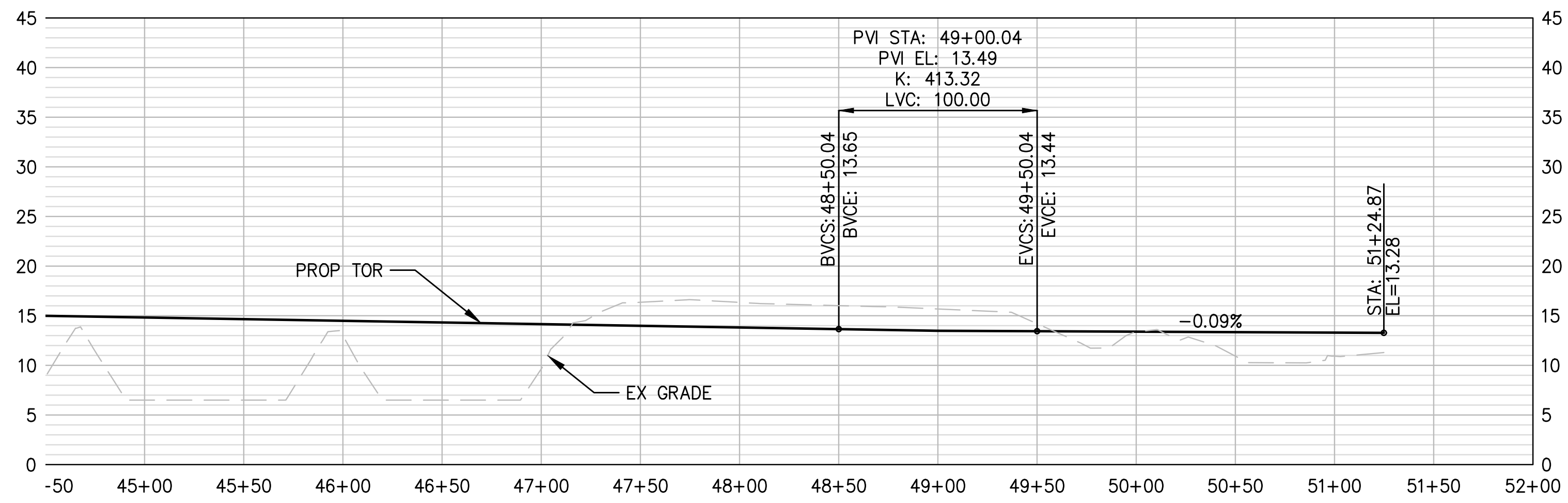
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**RAIL PROFILES**  
**ST 10**

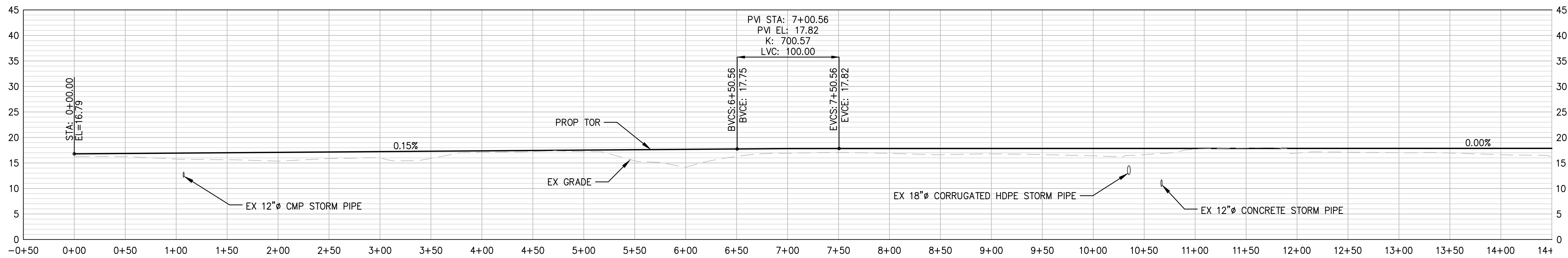
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DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R35</b>
SHEET NO.	<b>131</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

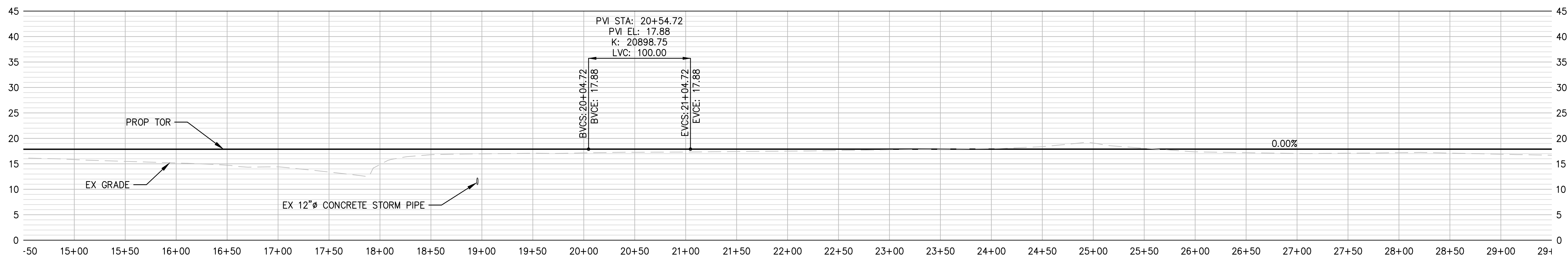
Plotted: Jun 09, 2023 - 9:42pm rambert Layout: R36 ST 10 - ST 11  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\18-R40 RAIL PROFILES.dwg



**1 ST 10 RAIL PROFILE: STA 44+50 - 51+24.87**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**2 ST 11 RAIL PROFILE: STA 0+00 - 14+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**3 ST 11 RAIL PROFILE: STA 14+50 - 29+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



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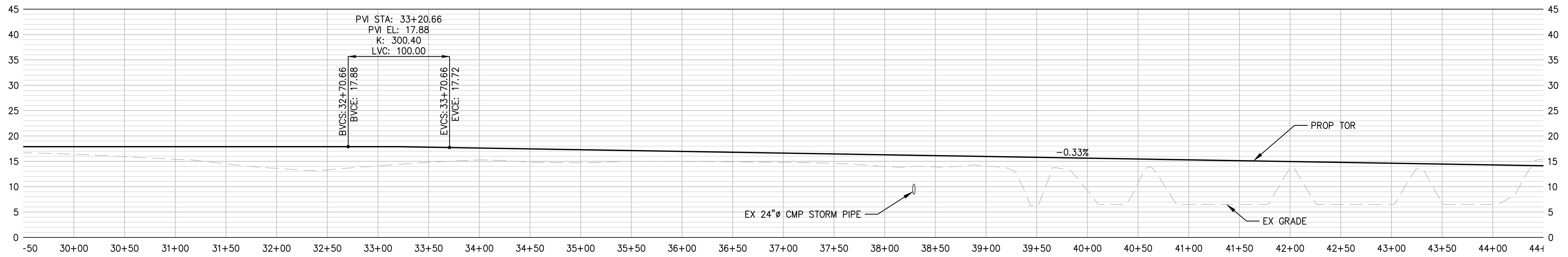
NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR  
  
**RAIL PROFILES**  
 ST 10, ST 11

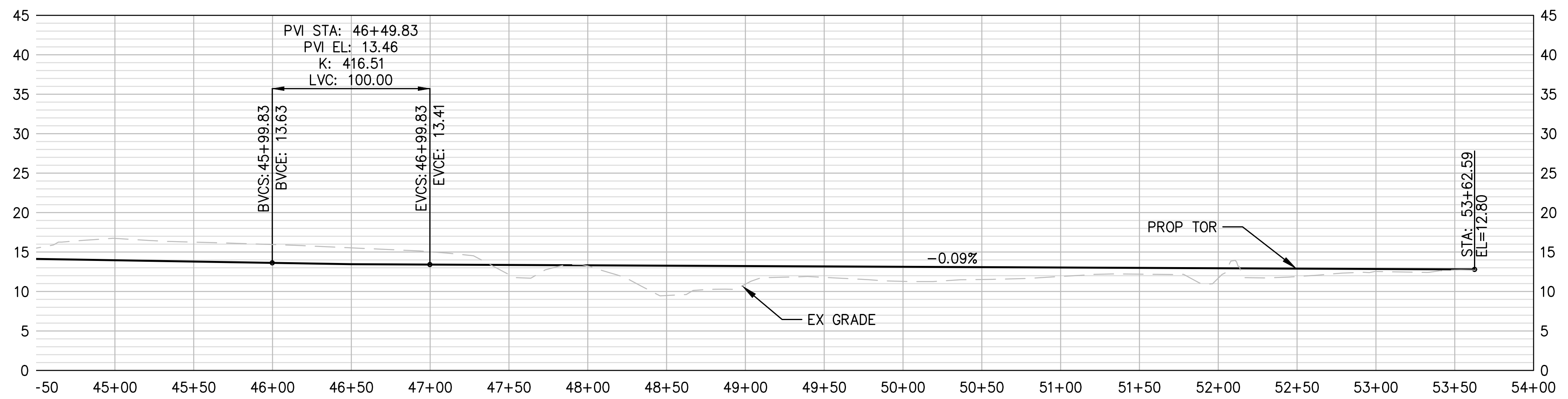
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CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R36</b>
SHEET NO.	<b>132</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

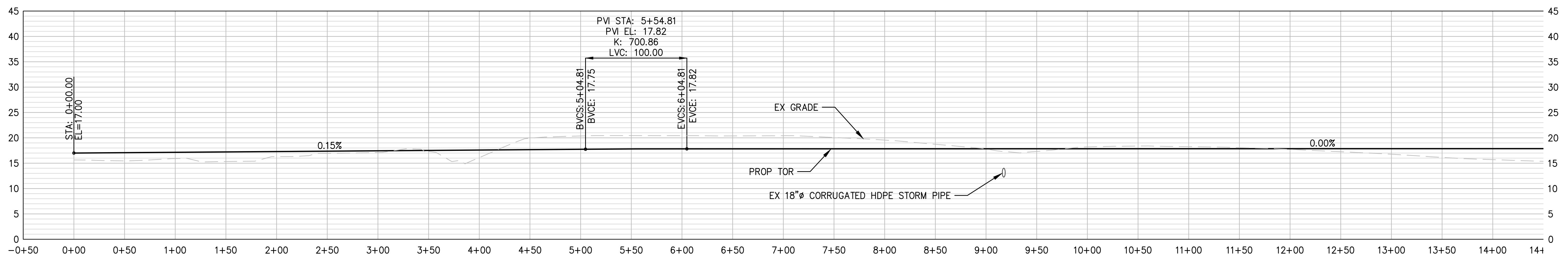
Plotted: Jun 09, 2023 - 9:42pm riambert Layout: R37 ST 11 - ST 12  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\18-R40 RAIL PROFILES.dwg



**1 ST 11 RAIL PROFILE: STA 29+50 - 44+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**2 ST 11 RAIL PROFILE: STA 44+50 - 53+62.59**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**3 ST 12 RAIL PROFILE: STA 0+00 - 14+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



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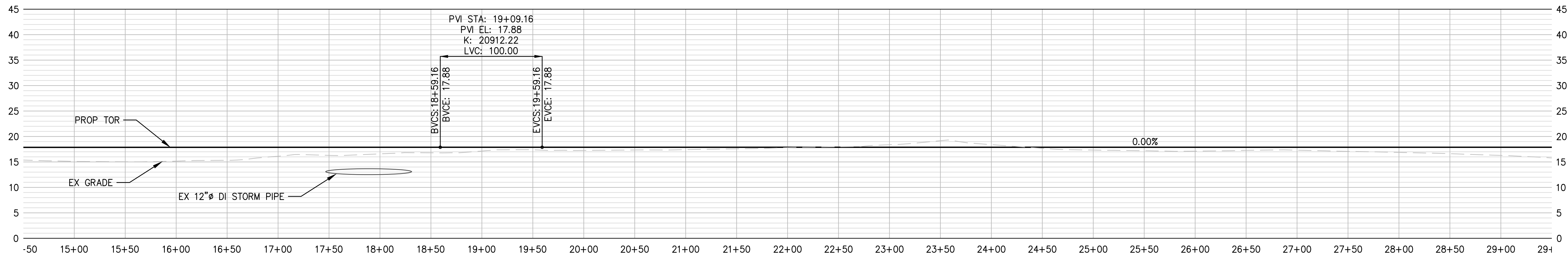
NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR  
**RAIL PROFILES**  
 ST 11, ST 12

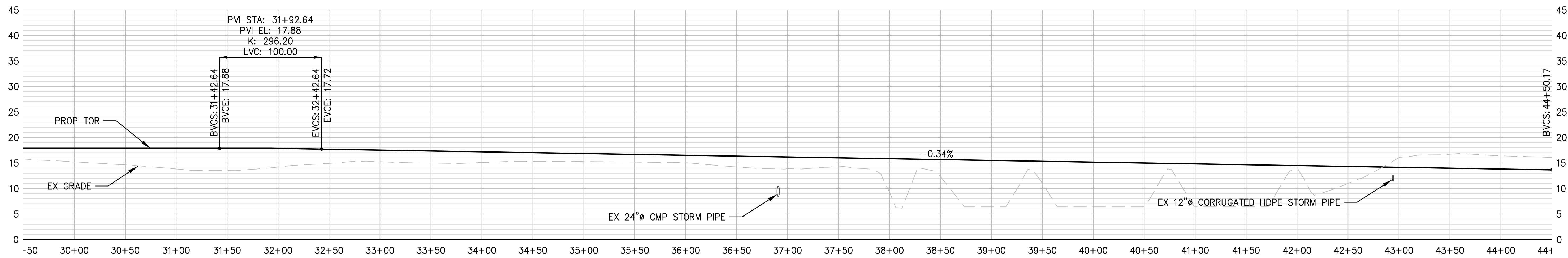
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CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R37</b>
SHEET NO.	<b>133</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

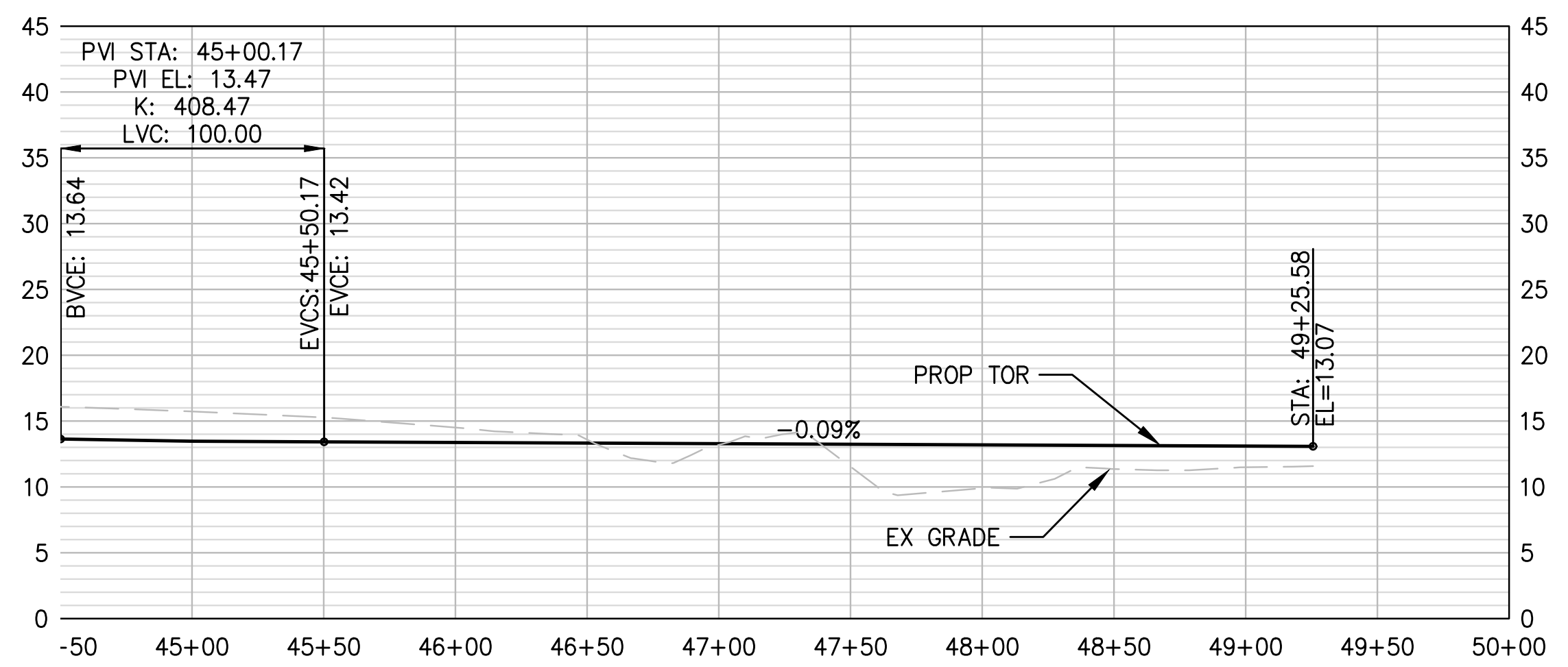
Plotted: Jun 09, 2023 - 9:42pm riambert Layout: R38 ST 12  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\18-R40 RAIL PROFILES.dwg



**1 ST 12 RAIL PROFILE: STA 14+50 - 29+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**2 ST 12 RAIL PROFILE: STA 29+50 - 44+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**3 ST 12 RAIL PROFILE: STA 44+50 - 49+25.88**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



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**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

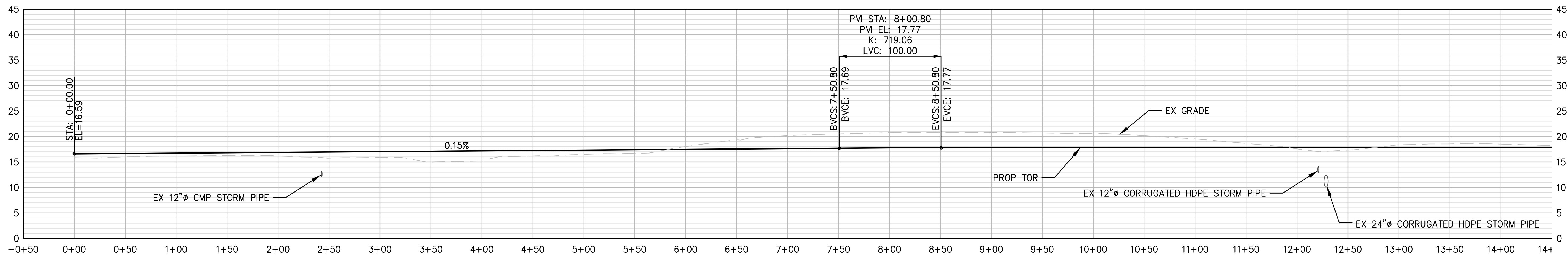
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**RAIL PROFILES**  
**ST 12**

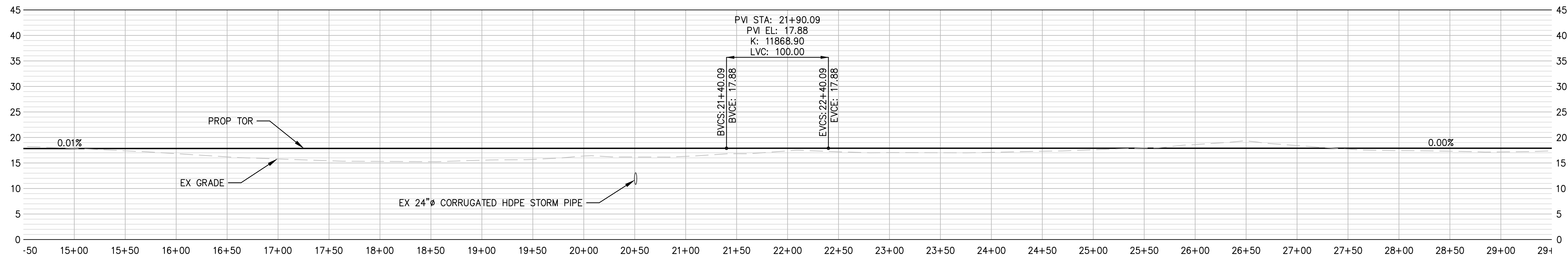
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DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R38</b>
SHEET NO.	<b>134 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

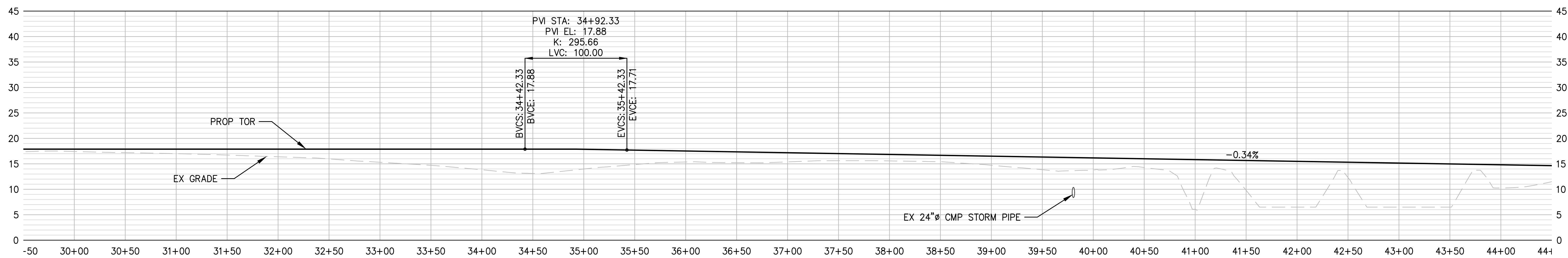
Plotted: Jun 09, 2023 - 9:42pm rambert Layout: R39 ST 13  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\18-R40 RAIL PROFILES.dwg



**1 ST 13 RAIL PROFILE: STA 0+00 - 14+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**2 ST 13 RAIL PROFILE: STA 14+50 - 29+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



**3 ST 13 RAIL PROFILE: STA 29+50 - 44+50**  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



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NO.	DATE	BY	REVISION

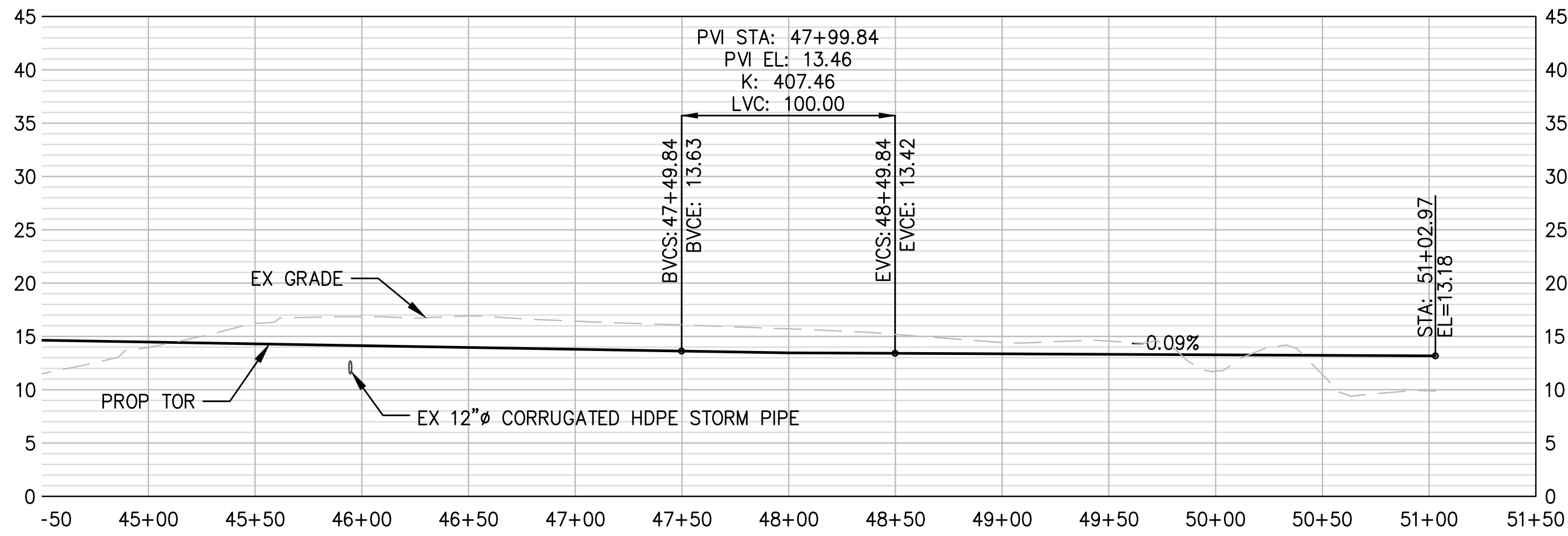
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR  
  
**RAIL PROFILES**  
**ST 13**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R39</b>
SHEET NO.	<b>135</b> OF <b>142</b>

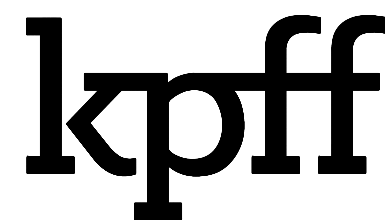
PRELIMINARY DESIGN - NOT FOR CONSTRUCTION



Plotted: Jun 09, 2023 - 9:42pm r Lambert Layout: R40 ST 13  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\R18-R40 RAIL PROFILES.dwg



**1** ST 13 RAIL PROFILE: STA 44+50 - 51+02.97  
 R1-R14 SCALE: H 1" = 50', V 1" = 10'



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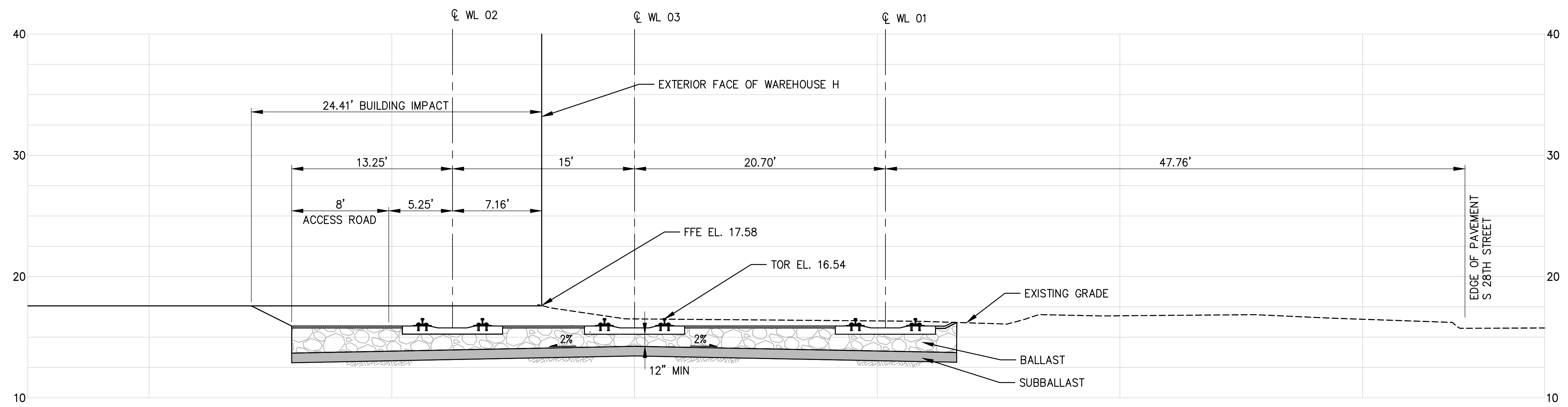
**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

**RAIL PROFILES**  
**ST 13**

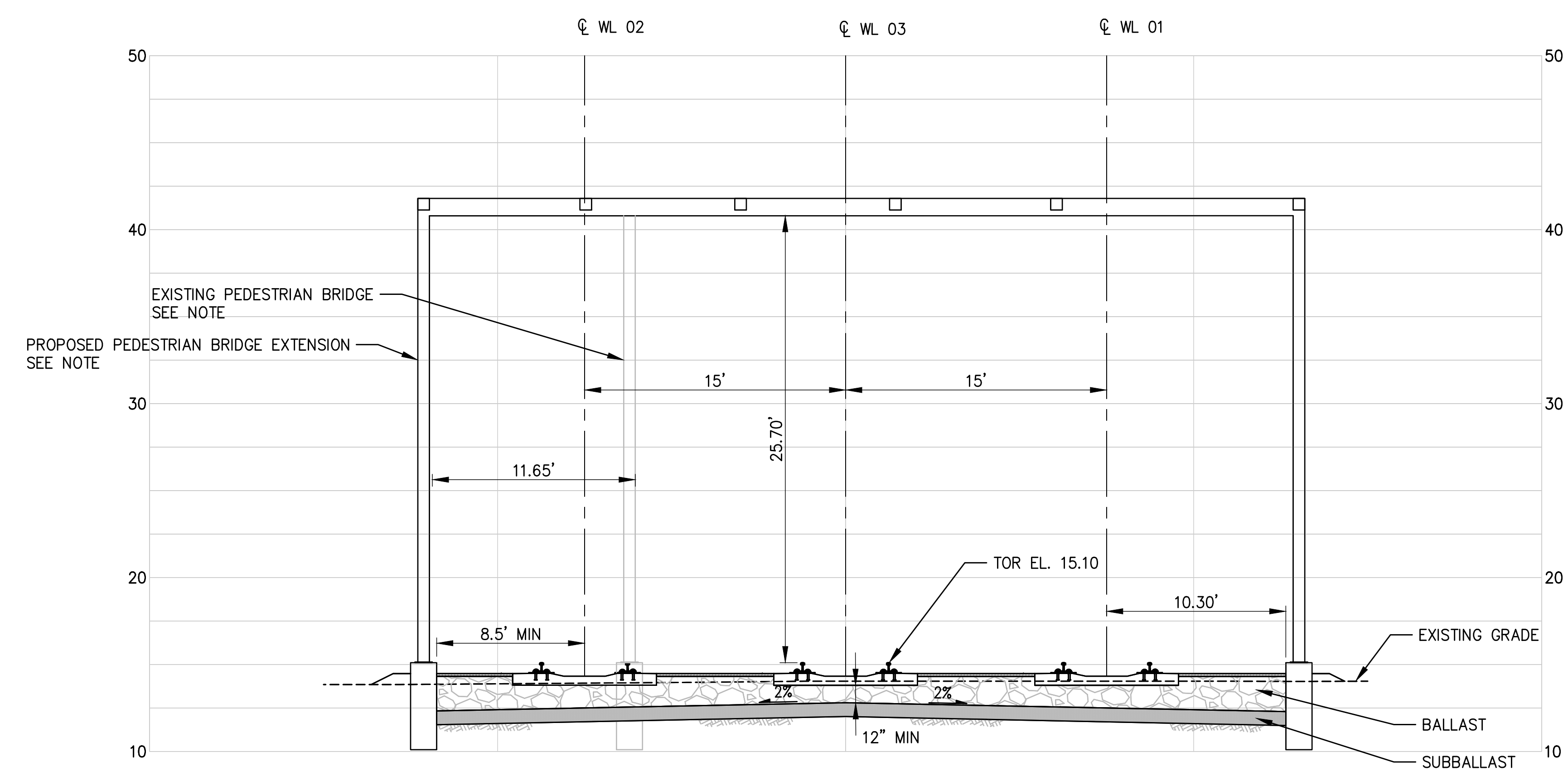
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CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R40</b>
SHEET NO.	<b>136</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:43pm  
 riambert  
 Layout: R41 RAIL SECTIONS  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\R41-R43 RAIL SECTIONS.dwg

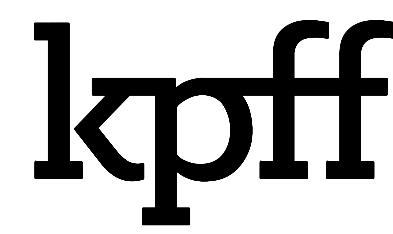


**A SECTION - WAREHOUSE H**  
 C3,R3 SCALE: 1" = 5'



**B SECTION - PEDESTRIAN BRIDGE**  
 C4,R4 SCALE: 1" = 5'

NOTE: BRIDGE STRUCTURE OUTLINE IS INTENDED ONLY TO REFLECT THE TRACK CLEARANCE ENVELOPE. STRUCTURE CONFIGURATION WILL BE DEVELOPED IN FUTURE DESIGN STAGES.



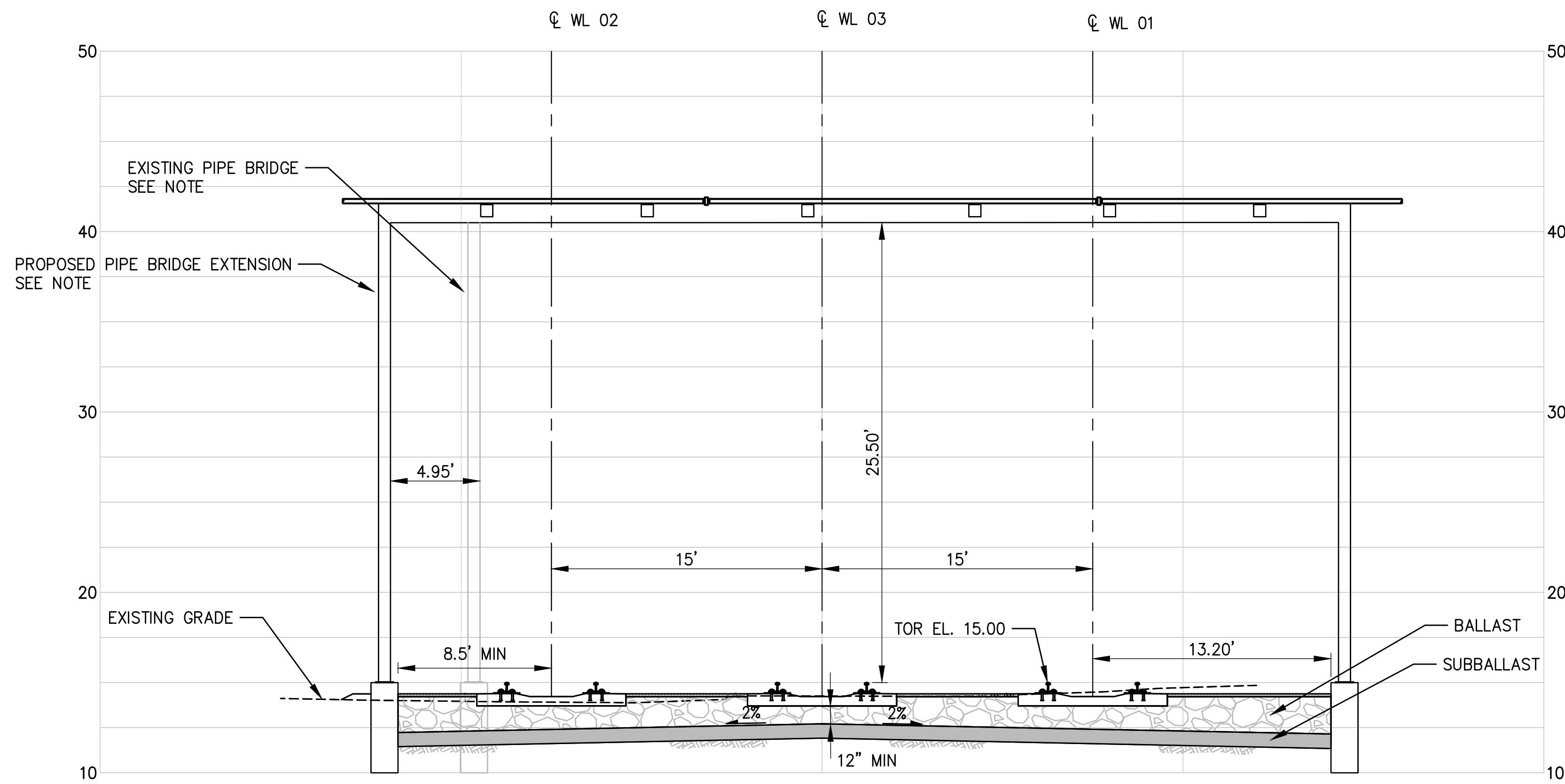
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NO.	DATE	BY	REVISION

<b>TERMINAL 4 RAIL AND SITE IMPROVEMENTS</b>	
PORT OF GRAYS HARBOR	
<b>RAIL SECTIONS</b>	

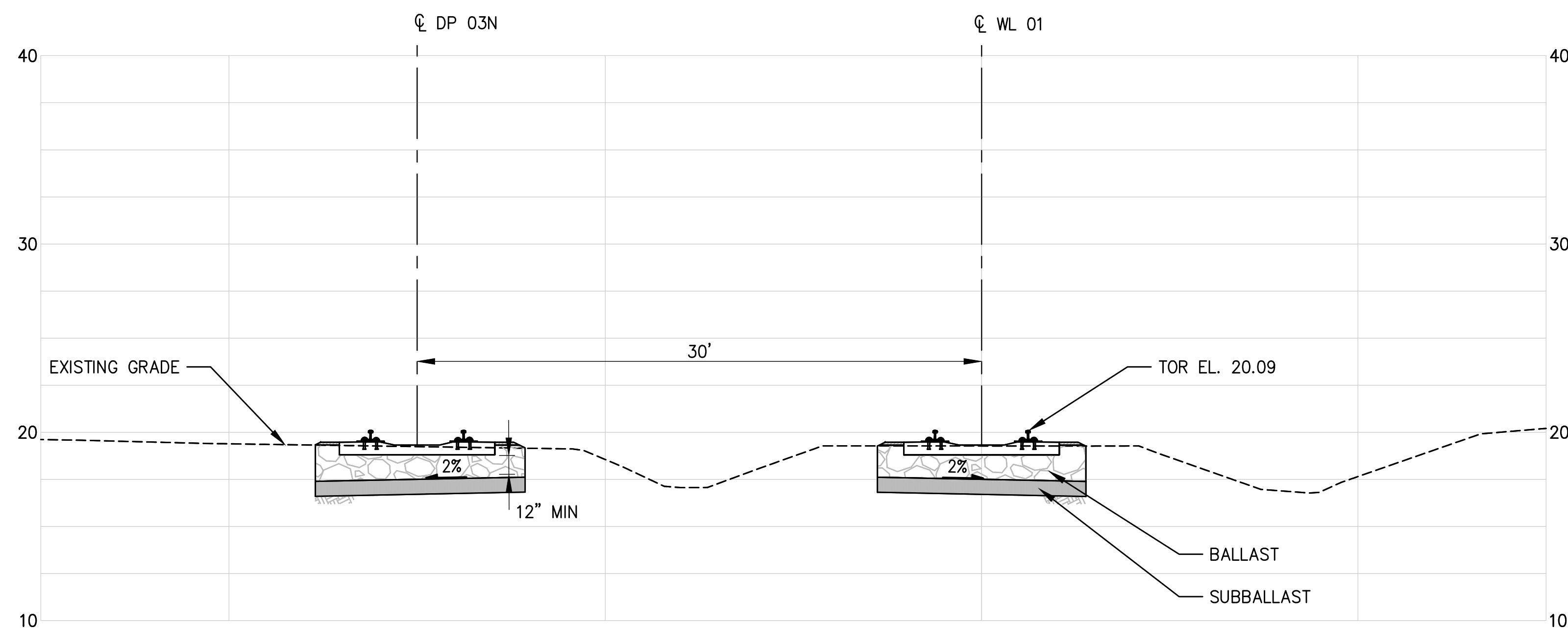
DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R41</b>
SHEET NO.	<b>137 OF 142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION



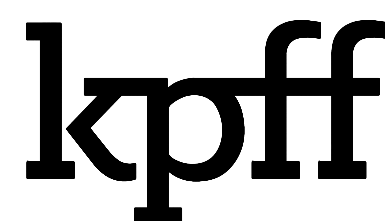
**C SECTION - PIPE BRIDGE**  
 C4,R4 SCALE: 1" = 5'

NOTE: BRIDGE STRUCTURE OUTLINE IS INTENDED ONLY TO REFLECT THE TRACK CLEARANCE ENVELOPE. STRUCTURE CONFIGURATION WILL BE DEVELOPED IN FUTURE DESIGN STAGES.



**D SECTION - WL 01 52+68.50**  
 C7,R7 SCALE: 1" = 5'

Plotted: Jun 09, 2023 - 9:43pm rambert Layout: R42 RAIL SECTIONS  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\R41-R43 RAIL SECTIONS.dwg



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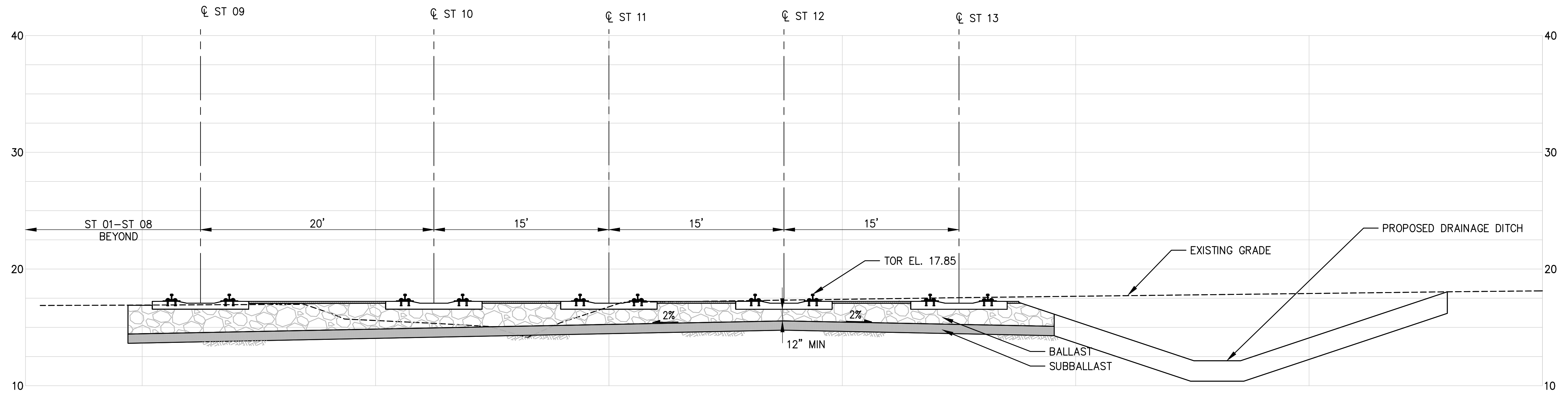
NO.	DATE	BY	REVISION

<b>TERMINAL 4 RAIL AND SITE IMPROVEMENTS</b>	
PORT OF GRAYS HARBOR	
<b>RAIL SECTIONS</b>	

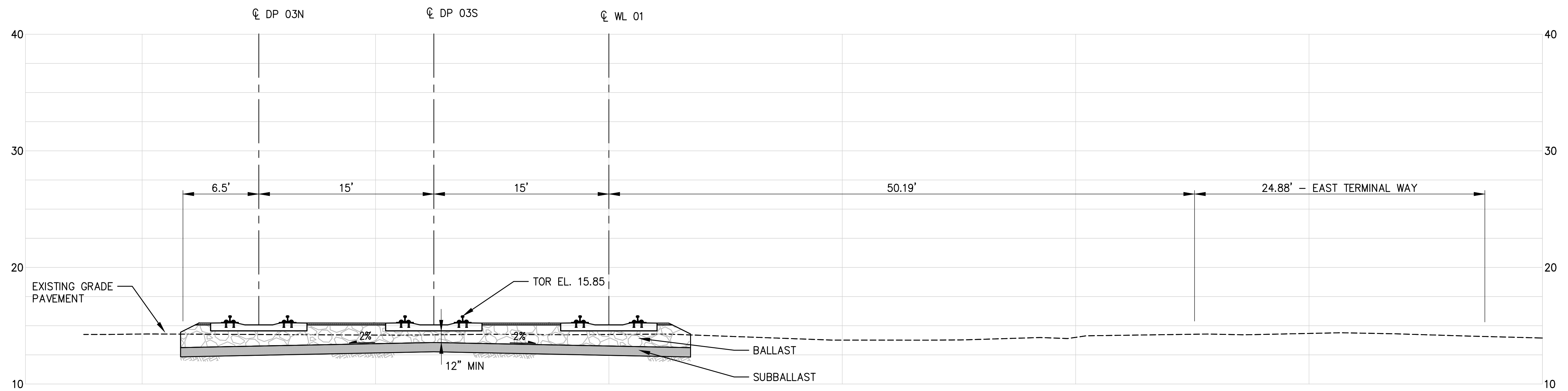
DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R42</b>
SHEET NO.	<b>138</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

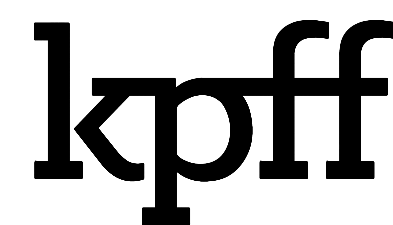
Plotted: Jun 09, 2023 - 9:43pm r Lambert Layout: R43 RAIL SECTIONS  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\R41-R43 RAIL SECTIONS.dwg



**E SECTION - ST 11 13+78.22**  
 SCALE: 1" = 5'



**F SECTION - WL 01 88+15.30**  
 SCALE: 1" = 5'



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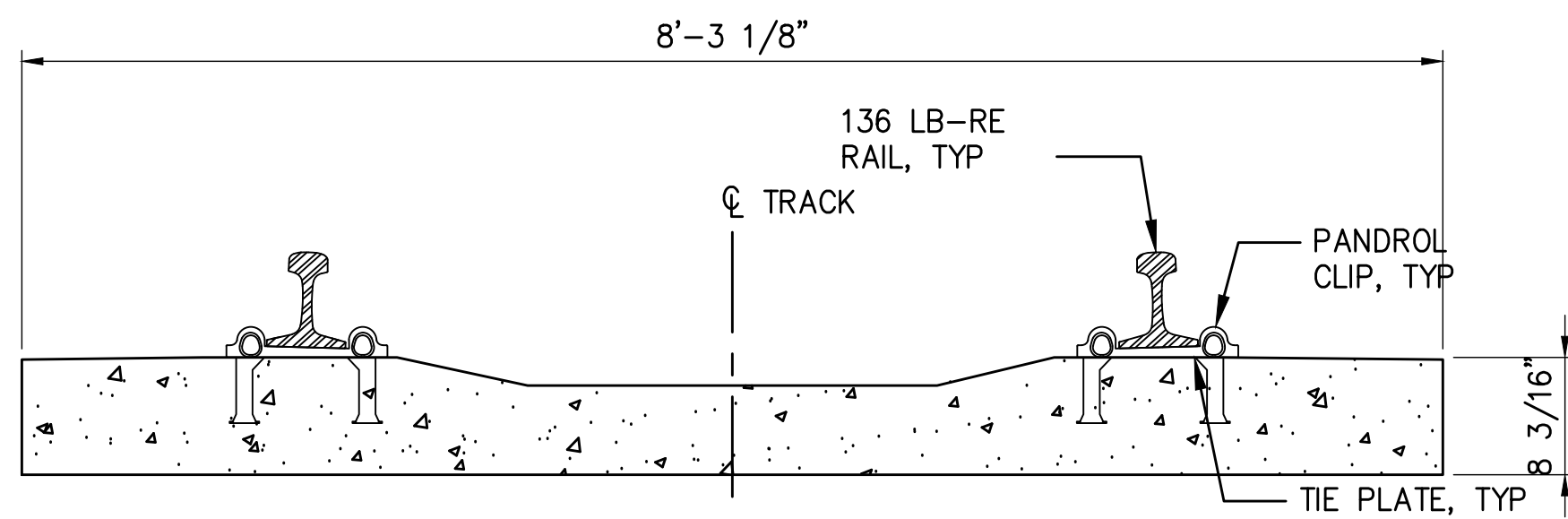
NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

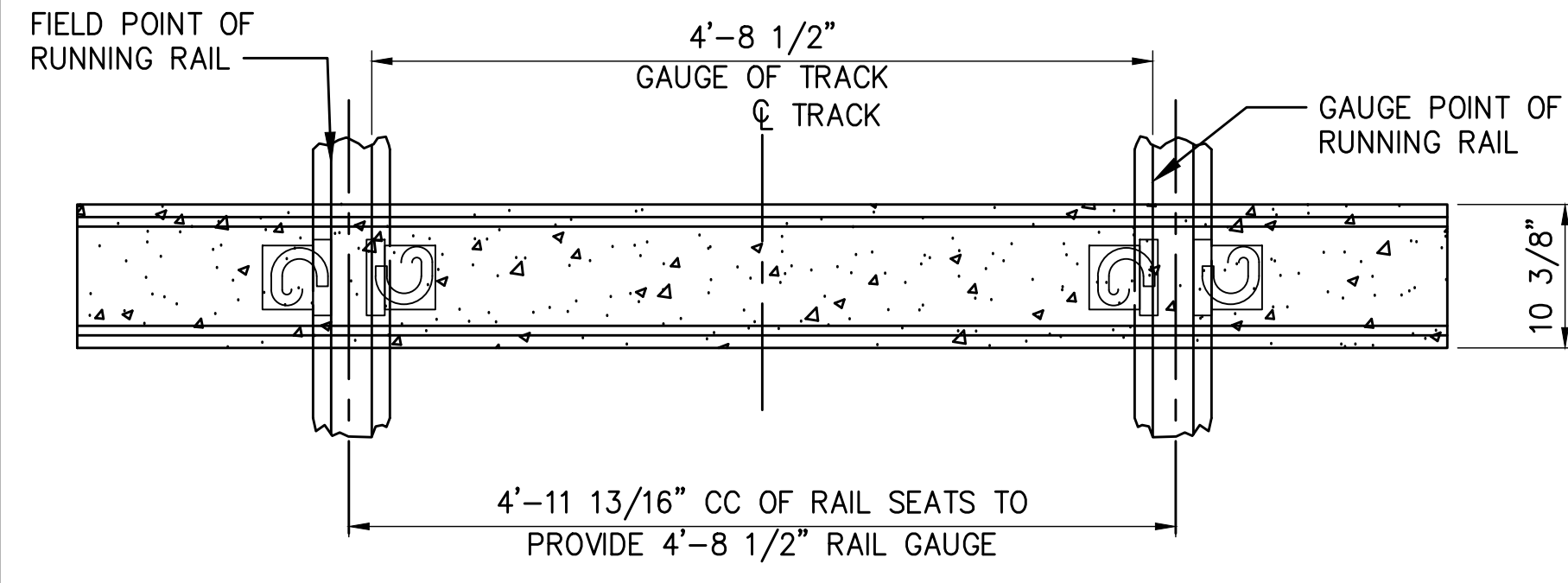
**RAIL SECTIONS**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R43</b>
SHEET NO.	<b>139</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

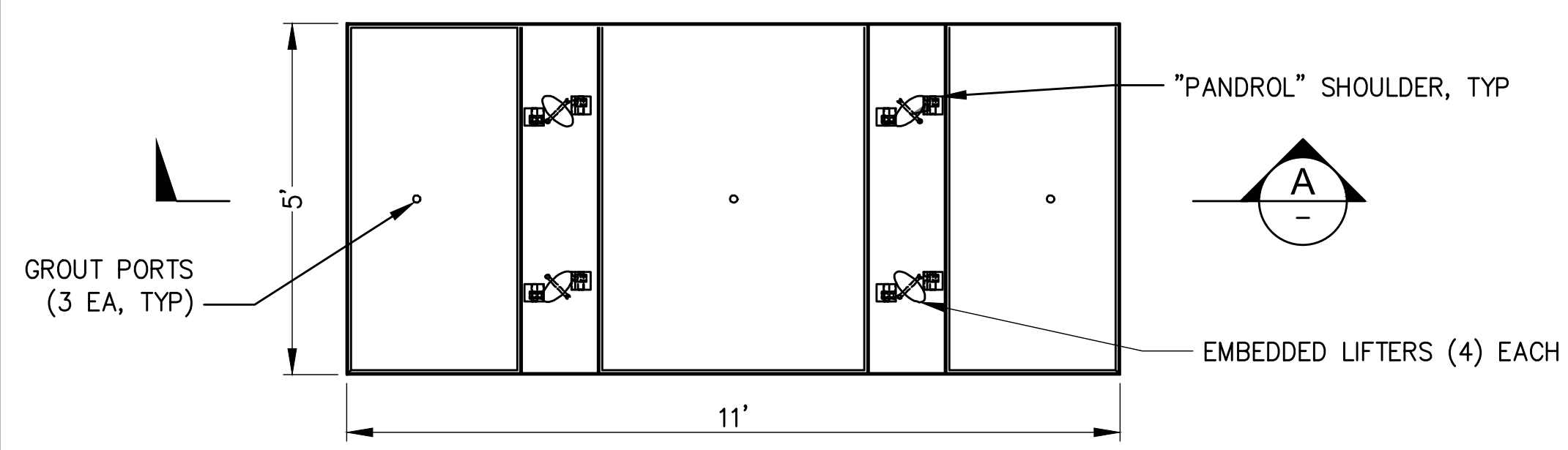


ELEVATION

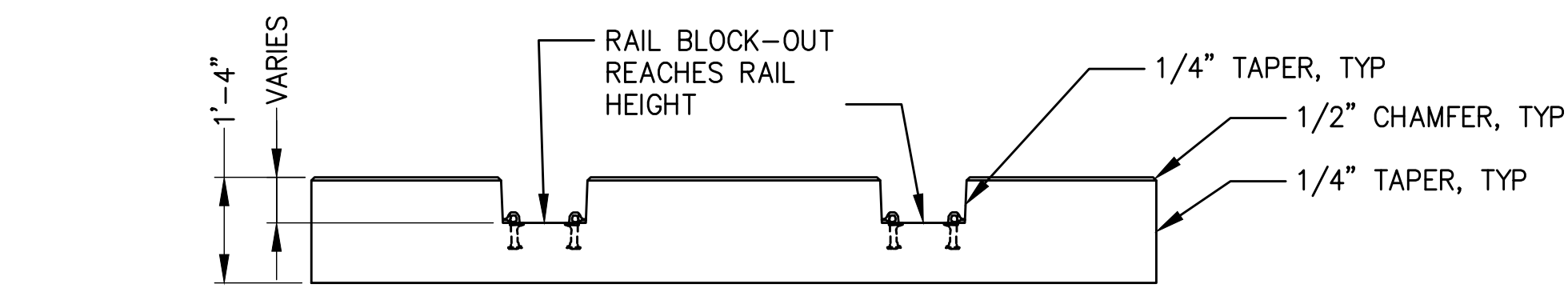


PLAN

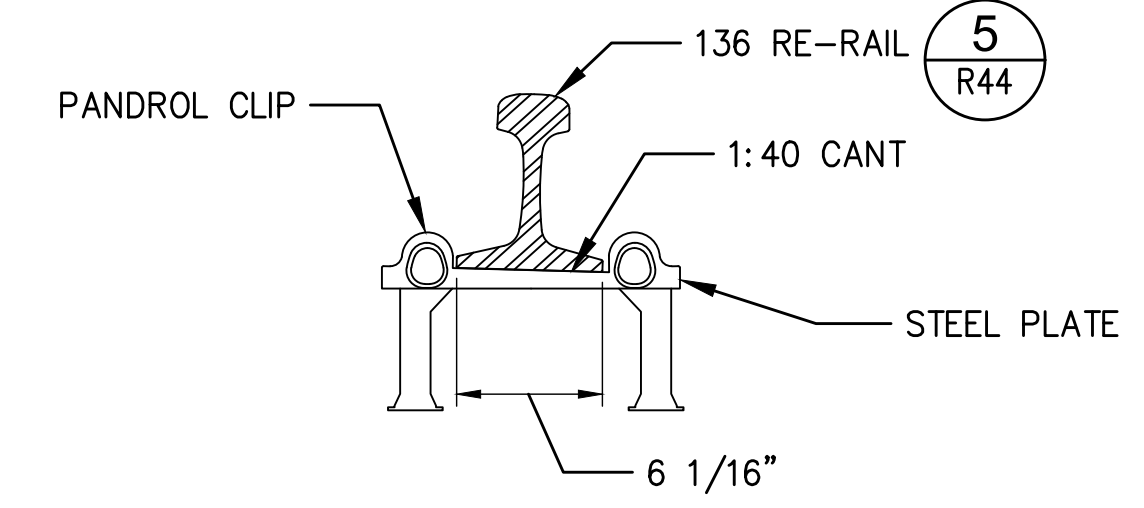
1 CONCRETE TIE  
SCALE: 1" = 1'-0"



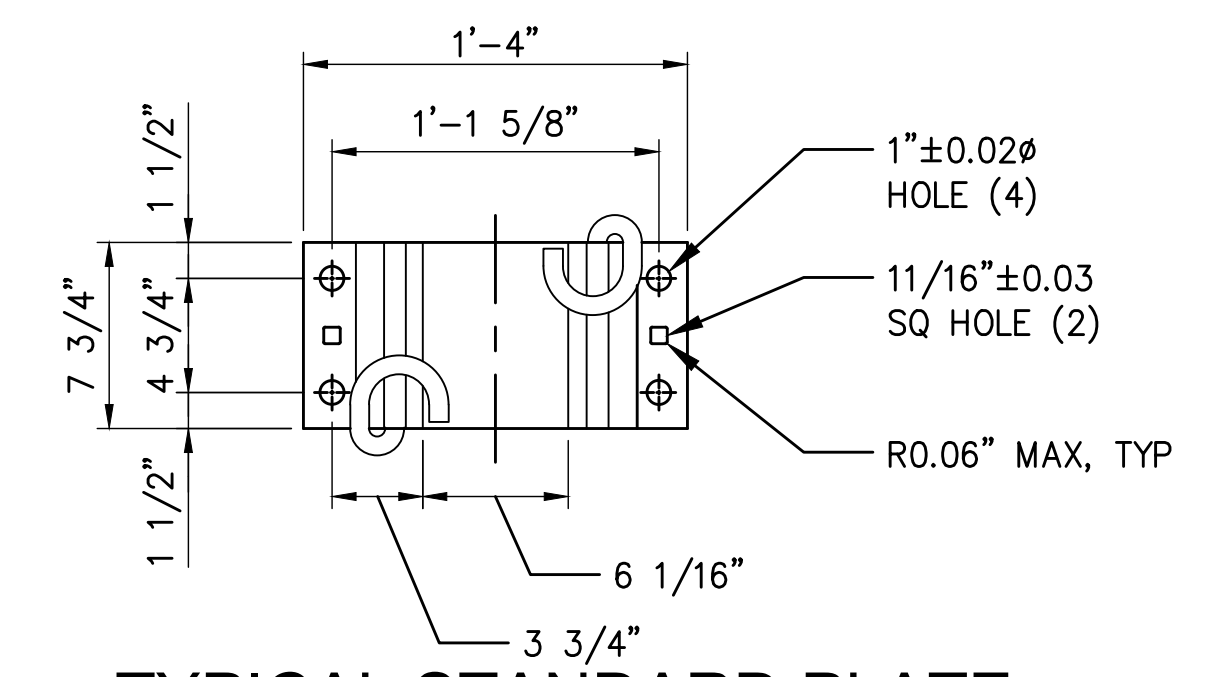
4 TYPICAL HEAVY DUTY PRECAST CROSSING DETAIL  
NTS



A TYPICAL HEAVY DUTY PRECAST CROSSING SECTION  
NTS

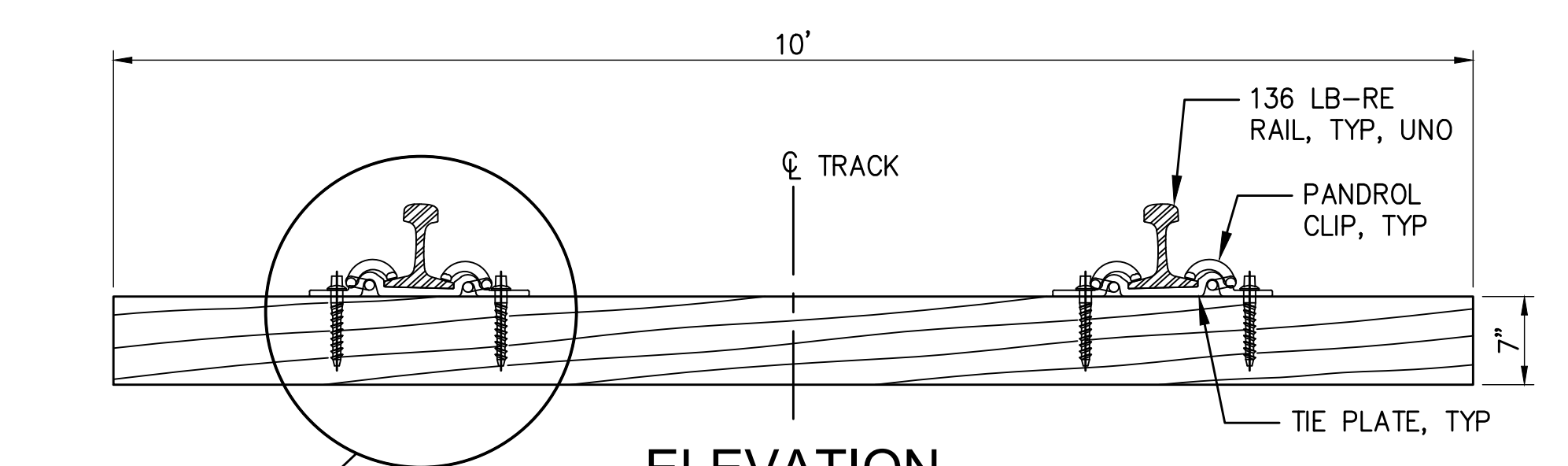


PANDROL TYPE e2055 CLIPS ON CONCRETE TIES

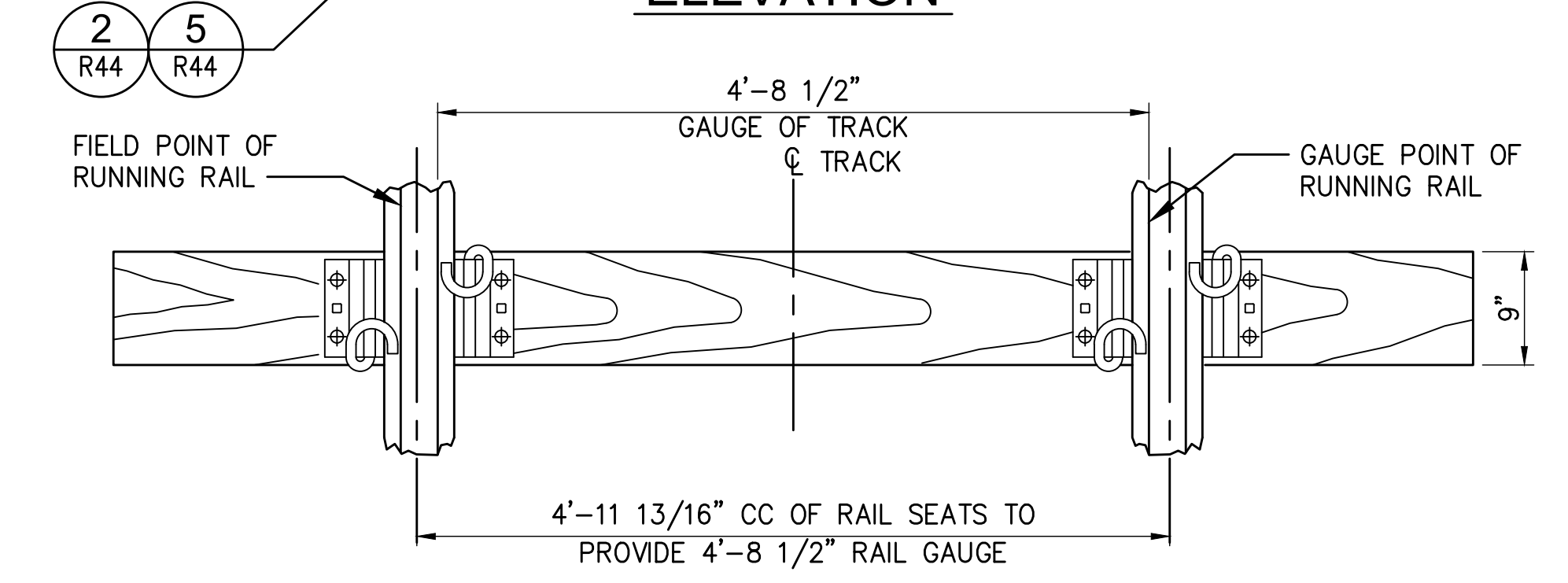


TYPICAL STANDARD PLATE FOR PANDROL TYPE e2055 CLIP

2 FASTENERS W/ 136# RAIL  
SCALE: 1-1/2" = 1'-0"



ELEVATION

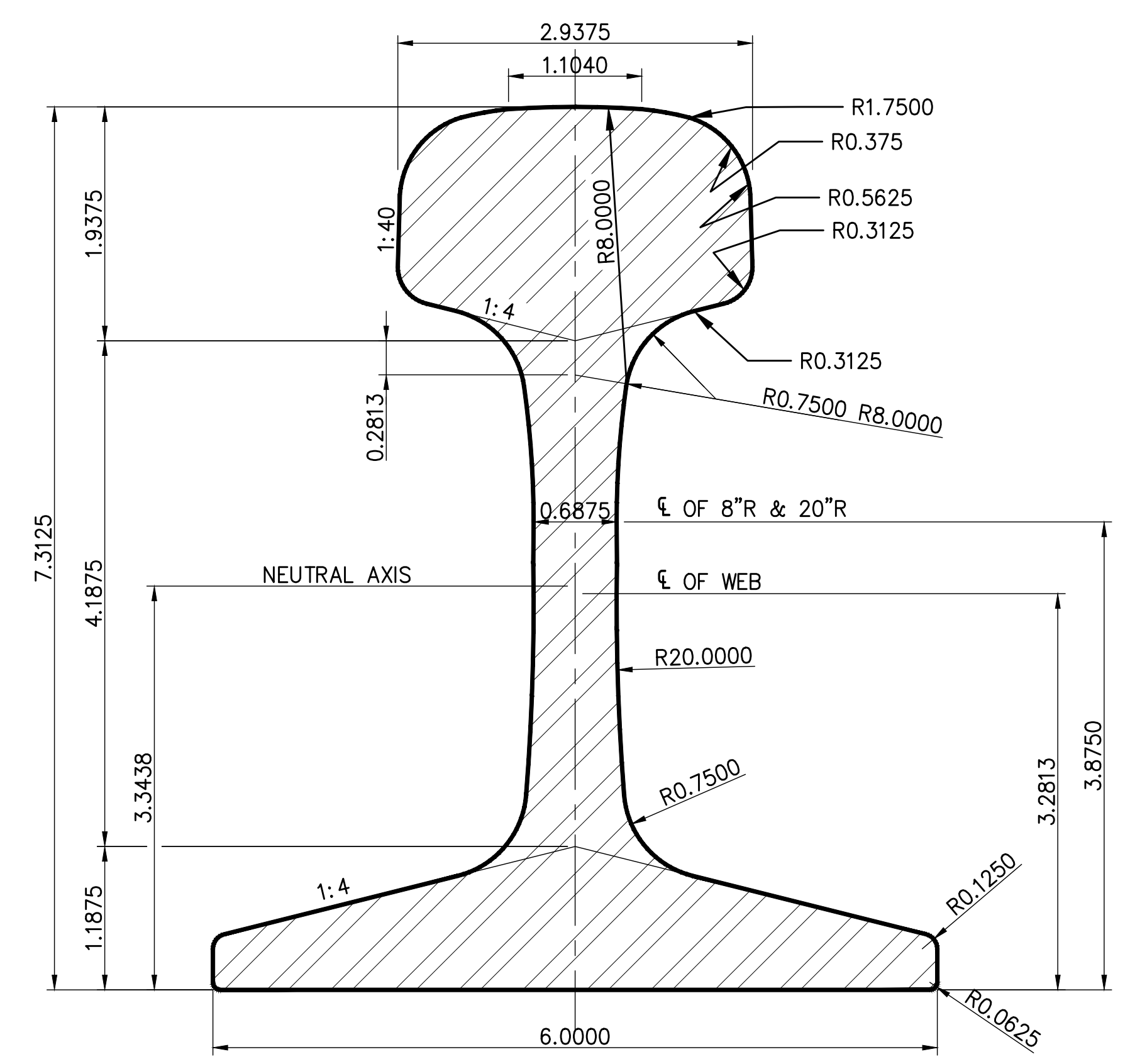


PLAN

3 TIMBER TIE  
SCALE: 1" = 1'-0"

PROPERTIES		
AREA OF HEAD	4.8187 SQ. IN.	36.2%
AREA OF WEB	3.6375 SQ. IN.	27.3%
AREA OF BASE	4.8702 SQ. IN.	36.5%
TOTAL AREA	13.3263 SQ. IN.	100.0%
MOMENT OF INERTIA 94.20		
SECTION MODULUS, HEAD 23.70		
SECTION MODULUS, BASE 28.20		
WEIGHT 135.8826 LBS PER YARD		

- NOTES:
- PANEL DEPTH, CURVATURE, AND DIMENSIONS SHALL BE VERIFIED IN MANUFACTURER'S SHOP DRAWINGS, INCLUDING PANEL LAYOUT, AND APPROVED BY THE ENGINEER PRIOR TO FABRICATION.
  - SUBGRADE PREPARATION AND MODULE PLACEMENT SHALL BE PER SPECIFICATIONS.
  - CONTRACTOR SHALL SUBMIT SHOP DRAWINGS INCLUDING PANEL LAYOUT TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION AND PLACEMENT OF MODULES.



5 RAIL SECTION 136#  
SCALE: 1" = 1"

Plotted: Jun 09, 2023 - 9:43pm rambert Layout: R44 RAIL DETAILS  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\R44 RAIL DETAILS.dwg



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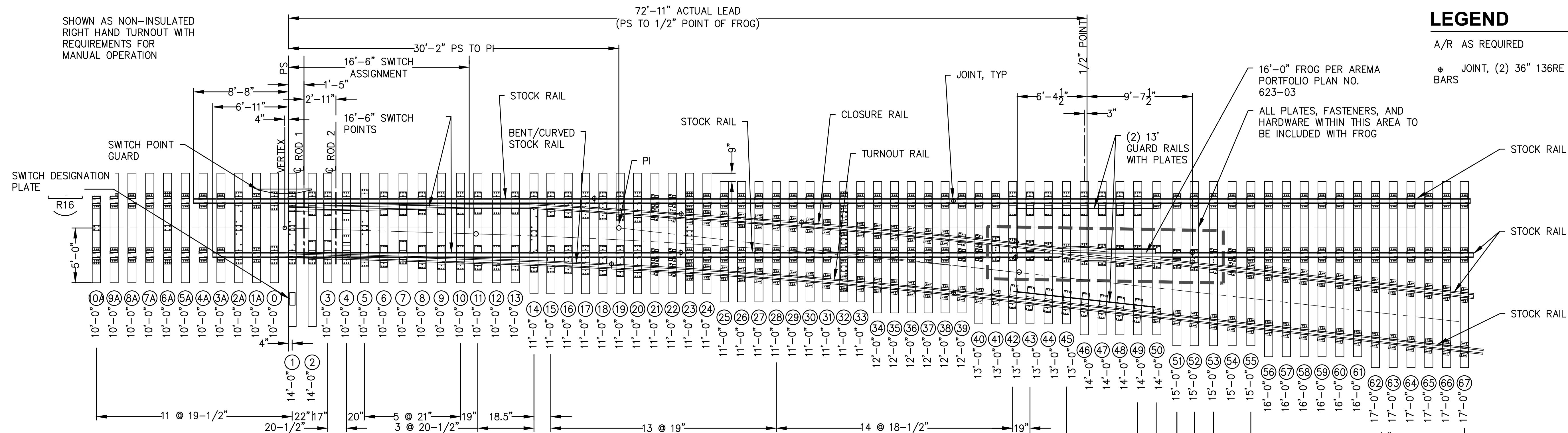
NO.	DATE	BY	REVISION

**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR  
**RAIL DETAILS**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R44</b>
SHEET NO.	<b>140</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotfile: Jun 09, 2023 - 9:43pm r Lambert Layout: R45 DETAILS  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\R45 - R46 RAIL DETAILS.dwg



**LEGEND**

- A/R AS REQUIRED  
 ⊕ JOINT, (2) 36" 136RE JOINT BARS

STANDARD BILL OF MATERIALS			
QTY	DESCRIPTION	LOCATION	BNSF/UP COMMON STANDARDS DWG NUMBER
2	16'-6" SAMSON POINT SWITCH POINTS		
1	36'-7" STRAIGHT SAMSON STOCK RAIL		241500
1	36'-5" BENT/CURVED SAMSON STOCK RAIL		241500
1	SWITCH ROD #1		241600
1	SWITCH ROD #2		241600
2	GAGE PLATE AHEAD OF POINT	TIES 6A & 10A	241304
1	ADJUSTABLE BRACE GAGE PLATE	TIE 2A	241301
2	TIE PLATE	TIE 1A	241307
1	ADJUSTABLE BRACE GAGE PLATE	TIE 1	241300
2	ADJUSTABLE BRACE GAGE PLATE	TIES 5 & 9	241305
2	EKOSLIDE ROLLER ASSEMBLY TYPE CZ-5		2413.15
2	PLATE	TIE 0	241306
6	ADJUSTABLE BRACE SLIDE PLATE	TIES 2, 3, & 7	241306
2	SLIDE PLATE	TIE 6	241306
2	EKOSLIDE ROLLER ASSEMBLY TYPE CX		2413.14
2	ADJUSTABLE BRACE ROLLER PLATE	TIE 2	2413.19
2	RISER SLIDE PLATE	TIE 8	243309
2	RISER SLIDE PLATE	TIE 10	241306
18	TURNOUT PLATE	TIES 11, 12, 13, 15, 16, 17, 18, 19, & 20	241307
1	GAGE PLATE	TIE 14	241311
1	GAGE PLATE	TIE 23	241312
1	GAGE PLATE	TIE 32	241313
1	CLOSURE RAIL		341001

STANDARD BILL OF MATERIALS			
QTY	DESCRIPTION	LOCATION	BNSF/UP COMMON STANDARDS DWG NUMBER
1	TURNOUT RAIL		341001
A/R	136 RE RAIL		N/A
A/R	PANDROL TIE PLATES	SEE NOTE 1	263000
14	MODIFIED PANDROL TIE PLATE	TIES 21, 22, 39, 40, & 54	263001
A/R	PANDROL ECLIP E-2055		132500
A/R	15/16" DIA. X 6 1/2" LG. SCREW SPIKES		130800
2208	RAIL ANCHORS		135010
2	FIXED HEEL BLOCKS		
1	NO. 9 16'-0" AREMA RBM FROG PER AREMA PORTFOLIO PLAN NO. 623-03 WITH SCREW SPIKE PLATES AND ELASTIC FASTENERS		N/A
2	GUARD RAILS PER AREMA PORTFOLIO PLAN NO. 504-03 (13") WITH SCREW PLATES AND ELASTIC FASTENERS		N/A
1	SWITCH POINT GUARD PER SPECIFICATIONS		N/A
1	SWITCH STAND, RACOR MODEL 22-E TRAILABLE		N/A
20	136RE 36" JOINT BARS		
22	7" X 9" X 10'-0" TIE	TIES 0-10A & 3-13	
20	7" X 9" X 11'-0" TIE	TIES 14-33	
6	7" X 9" X 12'-0" TIE	TIES 34-39	
6	7" X 9" X 13'-0" TIE	TIES 40-45	
5	7" X 9" X 14'-0" TIE	TIES 46-50	
5	7" X 9" X 15'-0" TIE	TIES 51-55	
6	7" X 9" X 16'-0" TIE	TIES 56-61	
8	7" X 9" X 17'-0" TIE	TIES 1-2 & 62-67	

FROG DATA	
ANGLE	6'-21'-35"
TURNOUT DATA	
RADIUS OF CENTERLINE	614'
T =	24.59'
CENTRAL ANGLE - CLOSURE CURVE	4'-35'-13"
DEGREE OF CURVE	9'-20'-31"
DIMENSIONS ALONG TURNOUT	
VERTEX TO PC	17'-7 9/32"
PC TO PT	614'-0" $\phi$ RADIUS
PT TO FROG POINT	6'-4 1/2"

SWITCH DATA	
SWITCH LENGTH	16'-6"
HEEL SPREAD	6 1/4"
HEEL ANGLE	1'-46'-22"
SWITCH ANGLE	1'-46'-22"
THROW AT ROD #1	4 3/4"
THICKNESS AT POINT	0"
TURNOUT POINT RADIUS (CLOSURE CURVE)	616.3542'
TURNOUT POINT VERTEX DISTANCE	7 4/16"

**NOTES**

- PANDROL TIE PLATES AND RESILIENT FASTENERS SHALL BE USED AT ALL LOCATIONS UNLESS OTHERWISE NOTED, SEE DETAIL 5 ON SHEET R10.
- SWITCH POINTS SHALL HAVE MANGANESE TIPS (AREA 220).
- SAMSON SWITCH POINTS SHALL BE HEAD HARDENED AND DOUBLE REINFORCED WITH TRANSIT STYLE CLIPS.
- TURNOUTS SHALL HAVE HORIZONTAL SWITCH RODS.
- FROG SHALL BE HIGH INTEGRITY, EXPLOSION HARDENED, RAIL BOUND MANGANESE STEEL CASTING WITH MITERED HEEL AND EXTENDED HEEL AND WING RAILS.
- THE GUARD RAIL IS TO BE 54-5/8" FROM THE GAUGE SIDE OF THE FROG POINT TO THE STRAIGHT GUARDING FACE OF THE GUARD RAIL.
- NO ALLOWANCE HAS BEEN MADE FOR EXPANSION GAPS OR END POST IN COMPUTING RAIL LENGTHS SHOWN.
- FRACTIONAL RAIL LENGTH CUTTINGS SHOWN ARE THEORETICAL AND ARE SUBJECT TO MINOR ADJUSTMENT TO MEET ACTUAL CLOSURE REQUIREMENTS IN THE FIELD.
- ALL SWITCH RODS AND GAUGE PLATES ARE TO BE INSULATED TYPES.
- STOCK RAILS ARE TO BE BENT IN THE MILL OR IN THE SHOP.
- A MINIMUM 1" GAP MUST BE MAINTAINED BETWEEN THE ENDS OF METAL TIE PLATES LOCATED BEYOND THE CLOSURE AREA OF INSULATED JOINTS IN ORDER TO PROVIDE PROPER TRACK CIRCUIT PROTECTION.
- ACTUAL TURNOUT DATA, TURNOUT OFFSETS, RAIL LENGTHS, AND SWITCH TIE LENGTHS MAY VARY ON MANUFACTURER'S SHOP DRAWINGS.
- CHORD METHOD IS USED TO CALCULATE TURNOUT CURVE DATA AND OFFSETS.

**1** TYPICAL NO. 9 TURNOUT  
 R1-R14 SCALE: 1" = 5'



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**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
 PORT OF GRAYS HARBOR

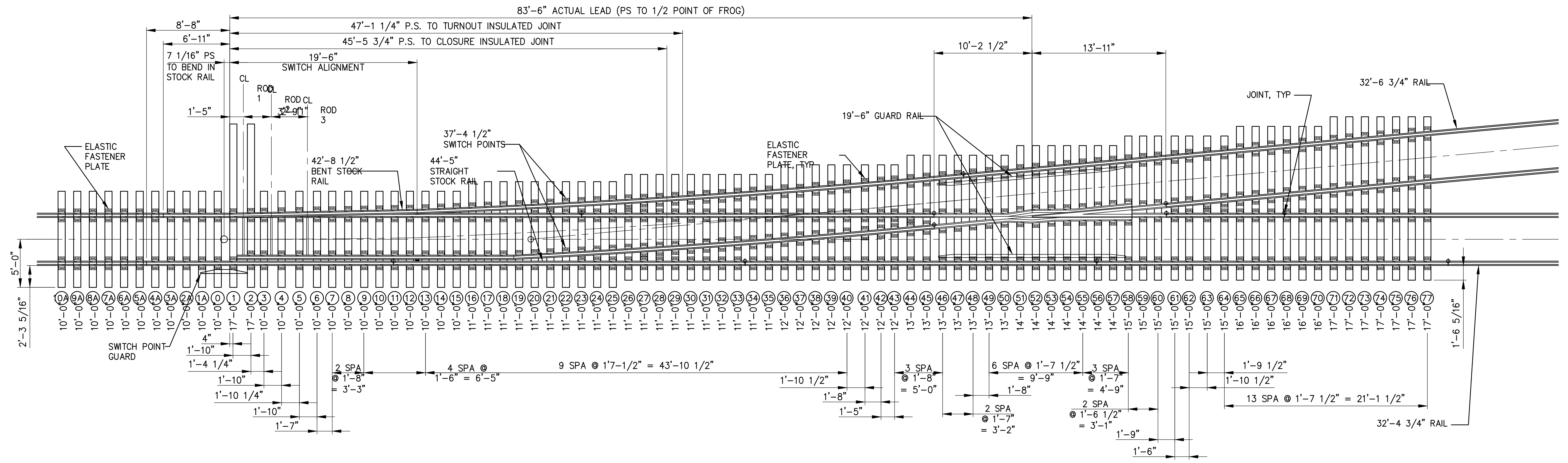
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**RAIL DETAILS**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R45</b>
SHEET NO. <b>141</b>	OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

Plotted: Jun 09, 2023 - 9:43pm rambert Layout: R46 DETAILS  
 N:\2023\10092300034 Port of Grays Harbor Terminal 4 Expansion Rail Improvements\Part 3 - KPFF Design\3.13 Drawings\Current\R45 - R46 RAIL DETAILS.dwg



STANDARD BILL OF MATERIALS			
QTY	DESCRIPTION	LOCATION	BNSF/UP COMMON STANDARDS DWG NUMBER
1	19'-6" (EXT. 35'-9") STRT SAMSON SWITCH POINT (NO TIP)		243100
1	19'-6" (EXT. 35'-9") CURVED SAMSON SWITCH POINT (W/TIP)		243100
1	37'-11" STRAIGHT SAMSON STOCK RAIL		241500
1	36'-2" BENT/CURVED SAMSON STOCK RAIL		241500
1	EA. SWITCH RODS NO. 2, AND 3		241600
2	"GP" GAGE PLATE FOR TIES 6A & 10A AHEAD OF POINT	TIES 6A AND 10A	241304
1	"GPO/2A" ADJUSTABLE BRACE GAGE PLATE FOR TIE 2A	TIE 2A	241301
2	"1A" PLATE	TIE 1A	241307
1	"GP9" ADJUSTABLE BRACE GAGE PLATE	TIE 9	241305
4	RBP-ADJUSTABLE BRACE ROLLER PLATE	TIES 3 & 8	2413.19
2	EKOSLIDE ROLLER ASSEMBLY TYPE CZ-5		2413.15
2	EKOSLIDE ROLLER ASSEMBLY TYPE CZ-10		2413.16
4	"BP1" ADJUSTABLE BRACE SLIDE PLATE		241306
6	"SP1" SIDE PLATE		241306
2	EA. "RSP1", "RSP2", AND "RSP3" RISER SLIDE PLATES	TIES 10-12	243309
2	TURNOUT PLATES	TIES 13-22	243307
1	"GP17" GAGE PLATE	TIE 17	243311
1	"GP31" GAGE PLATE	TIE 31	243312
1	"GP38" GAGE PLATE	TIE 38	243313
1	36'-1" CLOSURE INSULATED JOINT RAIL		343001
1	32'-9" INSULATED JOINT TURNOUT RAIL		343001
253	136LB. RAIL (IN LINEAR FEET)		N/A
152	PANDROL TIE PLATE		263000
12	MODIFIED PANDROL TIE PLATE		263001

STANDARD BILL OF MATERIALS			
QTY	DESCRIPTION	LOCATION	BNSF/UP COMMON STANDARDS DWG NUMBER
518	PANDROL ECLIP E-2055		132500
1254	15/16" DIA 6 1/2' LG. "RAILROAD APPROVED" SCREW SPIKES		130800
2208	RAIL ANCHORS FOR BNSF	TIES 0-10A & 3-13	
REQUIRED FOR MANUAL			
2	"BP0" PLATE FOR TIE 0	TIE 0	241306
1	"GP1" ADJUSTABLE BRACE GAGE PLATE FOR TIE 1	TIE 1	241300
2	"BP1" ADJUSTABLE BRACE SLIDE PLATE	TIE 2	241306
1	7" X 9" X 10'-0" TIE	TIE 0	N/A
2	7" X 9" X 16'-0" OR 7" X 9" X 17'-0" TIE	TIES 1 AND 2	N/A
1	SWITCH ROD NO. 1		241600
1	RBM FROG, PANEL (COMPLETE)		4737227
1	SWITCH POINT GUARD PER SPECIFICATIONS		N/A
1	SWITCH STAND, RACOR MODEL 22-E TRAILABLE		N/A
FROGS			
1	RBM WITH PLATES		153100
2	19'-6" BOLTLESS ADJUSTABLE GUARD BAR		160100
TIMBER TIES			
10	7" X 9" X 10'-0"	TIES 1A THRU 10A	N/A
13	7" X 9" X 10'-0"	TIES 3 THRU 15	N/A
20	7" X 9" X 11'-0"	TIES 16 THRU 35	N/A
8	7" X 9" X 12'-0"	TIES 36 THRU 43	N/A
7	7" X 9" X 13'-0"	TIES 44 THRU 50	N/A
7	7" X 9" X 14'-0"	TIES 51 THRU 57	N/A
7	7" X 9" X 15'-0"	TIES 58 THRU 64	N/A

STANDARD BILL OF MATERIALS			
QTY	DESCRIPTION	LOCATION	BNSF/UP COMMON STANDARDS DWG NUMBER
6	7" X 9" X 16'-0"	TIES 65 THRU 70	N/A
7	7" X 9" X 17'-0"	TIES 71 THRU 77	N/A

FROG DATA	
ANGLE	5'-12'-18"
TURNOUT DATA	
RADIUS OF CENTERLINE	1011.69'
T =	28.35'
CENTRAL ANGLE - CLOSURE CURVE	3'-13'-02"
DEGREE OF CURVE	5'-00'-06"
DIMENSIONS ALONG TURNOUT	
VERTEX TO PC	19'-6"
PC TO PT	1011.69' $\frac{1}{4}$
PT TO FROG POINT	7'-4 $\frac{7}{16}$ "

**NOTES :**

- PANDROL TIE PLATES AND RESILIENT FASTENERS SHALL BE USED AT ALL LOCATIONS UNLESS OTHERWISE NOTED, SEE DETAIL 5 ON SHEET R10.
- SWITCH POINTS SHALL HAVE MANGANESE TIPS (AREA 220).
- SAMSON SWITCH POINTS SHALL BE HEAD HARDENED AND DOUBLE REINFORCED WITH TRANSIT STYLE CLIPS.
- TURNOUTS SHALL HAVE HORIZONTAL SWITCH RODS.
- FROG SHALL BE HIGH INTEGRITY, EXPLOSION HARDENED, RAIL BOUND MANGANESE STEEL CASTING WITH MITERED HEEL AND EXTENDED HEEL AND WING RAILS.
- THE GUARD RAIL IS TO BE 54-5/8" FROM THE GAUGE SIDE OF THE FROG POINT TO THE STRAIGHT GUARDING FACE OF THE GUARD RAIL.
- NO ALLOWANCE HAS BEEN MADE FOR EXPANSION GAPS OR END POST IN COMPUTING RAIL LENGTHS SHOWN.
- FRACTIONAL RAIL LENGTH CUTTINGS SHOWN ARE THEORETICAL AND ARE SUBJECT TO MINOR ADJUSTMENT TO MEET ACTUAL CLOSURE REQUIREMENTS IN THE FIELD.
- ALL SWITCH RODS AND GAUGE PLATES ARE TO BE INSULATED TYPES.
- STOCK RAILS ARE TO BE BENT IN THE MILL OR IN THE SHOP.
- A MINIMUM 1" GAP MUST BE MAINTAINED BETWEEN THE ENDS OF METAL TIE PLATES LOCATED BEYOND THE CLOSURE AREA OF INSULATED JOINTS IN ORDER TO PROVIDE PROPER TRACK CIRCUIT PROTECTION.
- ACTUAL TURNOUT DATA, TURNOUT OFFSETS, RAIL LENGTHS, AND SWITCH TIE LENGTHS MAY VARY ON MANUFACTURER'S SHOP DRAWINGS.
- CHORD METHOD IS USED TO CALCULATE TURNOUT CURVE DATA AND OFFSETS.

SWITCH DATA	
SWITCH LENGTH	19'-6"
HEEL SPREAD	6 1/4"
HEEL ANGLE	1'-59'-16"
SWITCH ANGLE	1'-00'-40"
THROW AT ROD #1	4 3/4"
THICKNESS AT POINT	0'-0 1/8"
RADIUS (CLOSURE CURVE)	1145.92'
VERTEX DISTANCE	0'-7 1/16"

**1 TYPICAL NO. 11 TURNOUT**  
R1 SCALE: 3/16" = 1'



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**TERMINAL 4 RAIL AND SITE IMPROVEMENTS**  
PORT OF GRAYS HARBOR

**RAIL DETAILS**

DRAWN: RRL	PROJECT NO.: 2300034
DESIGN: RLO	SCALE: AS SHOWN
CHECKED: SWK	DATE: 6/9/2023
DRAWING NO.	<b>R46</b>
SHEET NO.	<b>142</b> OF <b>142</b>

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION

# PORT OF GRAYS HARBOR

## TERMINAL 4 - DOCK UPGRADES - FENDER SYSTEM

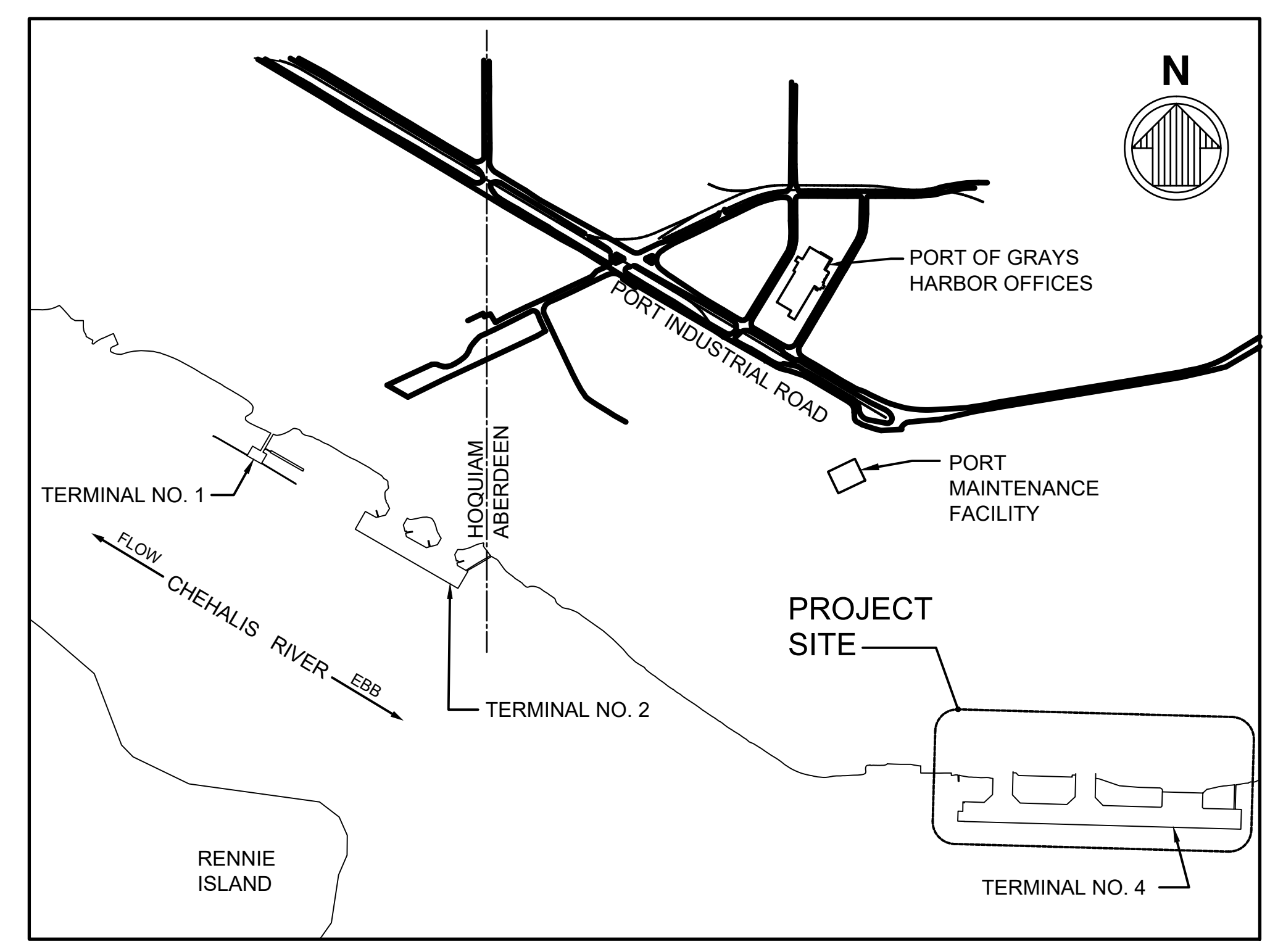
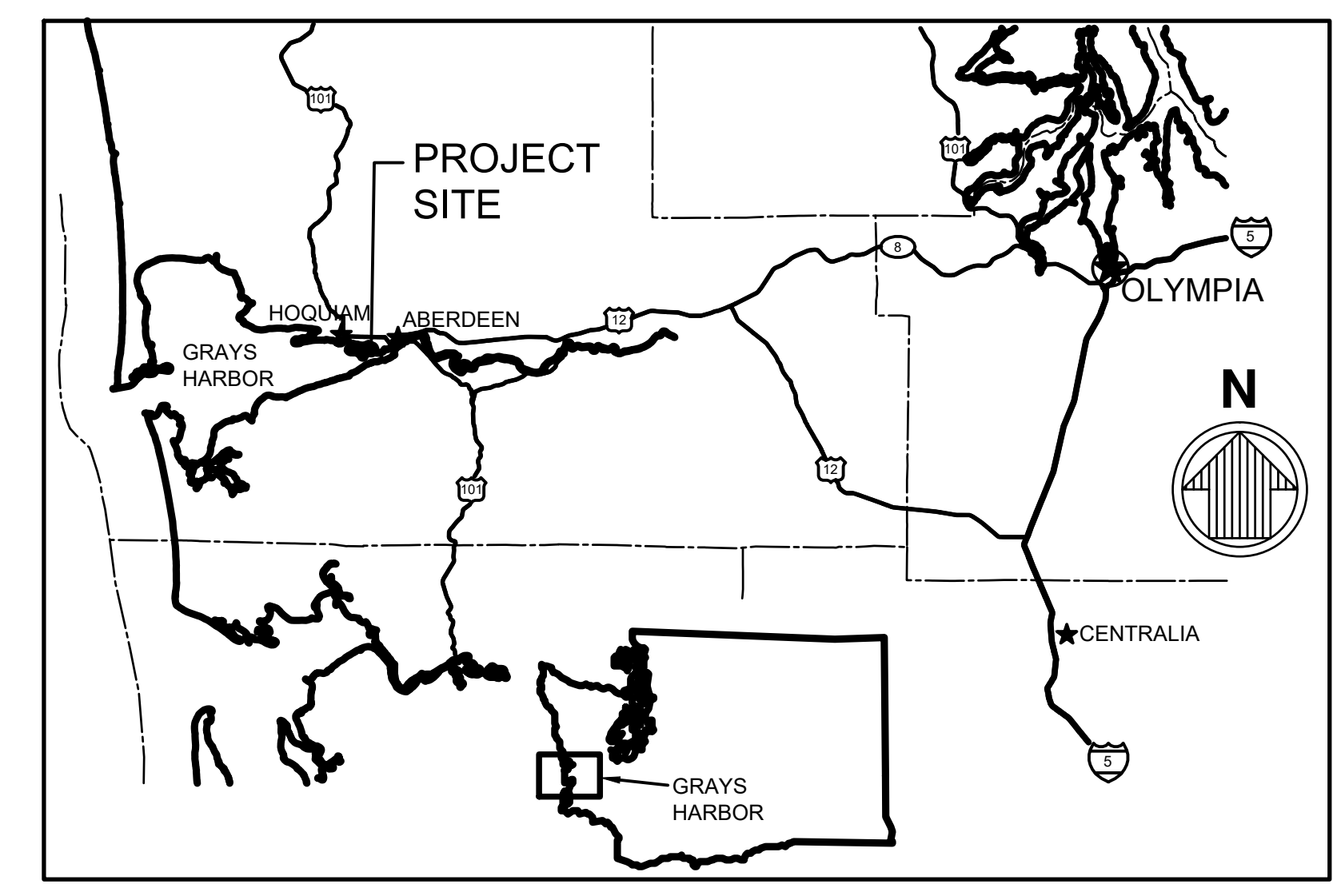
### PORT STAFF:

- GARY NELSON  
Executive Director
- LEONARD BARNES  
Deputy Executive Director
- AARON ASCHIM  
Contracts Manager
- RANDY LEWIS  
Director of Environmental Services
- KRIS KOSKI  
Port Engineer

### PORT COMMISSIONERS:

- STAN PINNICK
- TOM QUIGG
- PHIL PAPAC

DRAWING LIST		
SHEET NO.	SHEET TITLE	30%
G-001	COVER SHEET	XX
G-002	DRAWING LIST, ABBREVIATIONS AND LEGEND	XX
G-003	GENERAL NOTES	XX
G-004	TERMINAL 4 GENERAL ARRANGEMENT	XX
S-100	GENERAL ARRANGEMENT - BERTH A EXISTING FENDER SYSTEM	XX
S-101	BERTH A EXISTING CONDITIONS & DEMOLITION - SHEET 1	XX
S-102	BERTH A EXISTING CONDITIONS & DEMOLITION - SHEET 2	XX
S-103	BERTH A EXISTING CONDITIONS & DEMOLITION - SHEET 3	XX
S-104	GENERAL ARRANGEMENT - BERTH B EXISTING FENDER SYSTEM	XX
S-105	BERTH B EXISTING CONDITIONS & DEMOLITION - SHEET 1	XX
S-106	BERTH B EXISTING CONDITIONS & DEMOLITION - SHEET 2	XX
S-107	BERTH B EXISTING CONDITIONS & DEMOLITION - SHEET 3	XX
S-108	BERTH B EXISTING CONDITIONS & DEMOLITION - SHEET 4	XX
S-109	BERTH B EXISTING CONDITIONS & DEMOLITION - SHEET 5	XX
S-200	GENERAL ARRANGEMENT - BERTH A FENDER SYSTEM	XX
S-201	BERTH A FENDER SYSTEM - SHEET 1	XX
S-202	BERTH A FENDER SYSTEM - SHEET 2	XX
S-203	BERTH A FENDER SYSTEM - SHEET 3	XX
S-204	GENERAL ARRANGEMENT - BERTH B FENDER SYSTEM	XX
S-205	BERTH B FENDER SYSTEM - SHEET 1	XX
S-206	BERTH B FENDER SYSTEM - SHEET 2	XX
S-207	BERTH B FENDER SYSTEM - SHEET 3	XX
S-208	BERTH B FENDER SYSTEM - SHEET 4	XX
S-209	BERTH B FENDER SYSTEM - SHEET 5	XX
S-300	BERTH A AND B SECTIONS	XX
S-301	FENDER SYSTEM ELEVATIONS, SECTIONS & DETAILS - SHEET 1	XX
S-302	FENDER SYSTEM ELEVATIONS, SECTIONS & DETAILS - SHEET 2	XX
S-303	FENDER SYSTEM ELEVATIONS, SECTIONS & DETAILS - SHEET 1	XX
S-304	BERTH A SECTIONS	XX
S-305	BERTH B SECTIONS	XX
S-306	TYPICAL FENDER SECTIONS - BERTH A	XX
S-307	TYPICAL FENDER SECTIONS - BERTH B	XX
SD-001	DEMOLITION PLAN, SECTION & DETAILS	XX
SD-002	DEMOLITION SECTION AND DETAILS	XX



Rev.	Date	By	Description
A	2023-01-27	SB	ISSUED FOR 30% REVIEW

PORT OF GRAYS HARBOR T4 DOCK UPGRADES  
FENDER SYSTEM LAYOUTS

**COVER SHEET**

Designed by:	SB	Drawn by:	JVD / DP	Checked by:	SB	Reviewed by:	SB	Submitted by:	SCOTT BRANLIND MOFFATT & NICHOL
Date:	2022-12-09	M&N Project No.:	221760	Drawing code:		Drawing Scale:	1" = 1' (0 SHEET)	Post scale:	

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SEAL

Sheet Reference No.  
**G-001**  
INDEX: 1 OF 34

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Date	2023-01-27
Mark	A

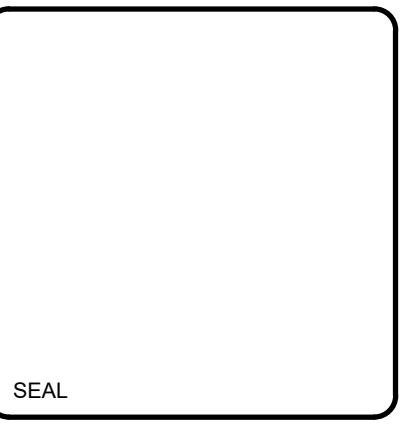
**PORT OF GRAYS HARBOR T4 DOCK UPGRADES  
FENDER SYSTEM LAYOUTS**

**DRAWINGS LIST,  
ABBREVIATIONS AND LEGEND**

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Date:	2022-12-09
MAN Project No.	221760
MAN Project Name:	JVD / DP
Submitted by:	SCOTT BRANLUND MOFFATT & NICHOL
Per Scale:	1:1 (0 SHEET)

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SUITE 200  
SEAL: E 08101  
SEA: E 08101  
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**moffatt & nichol**

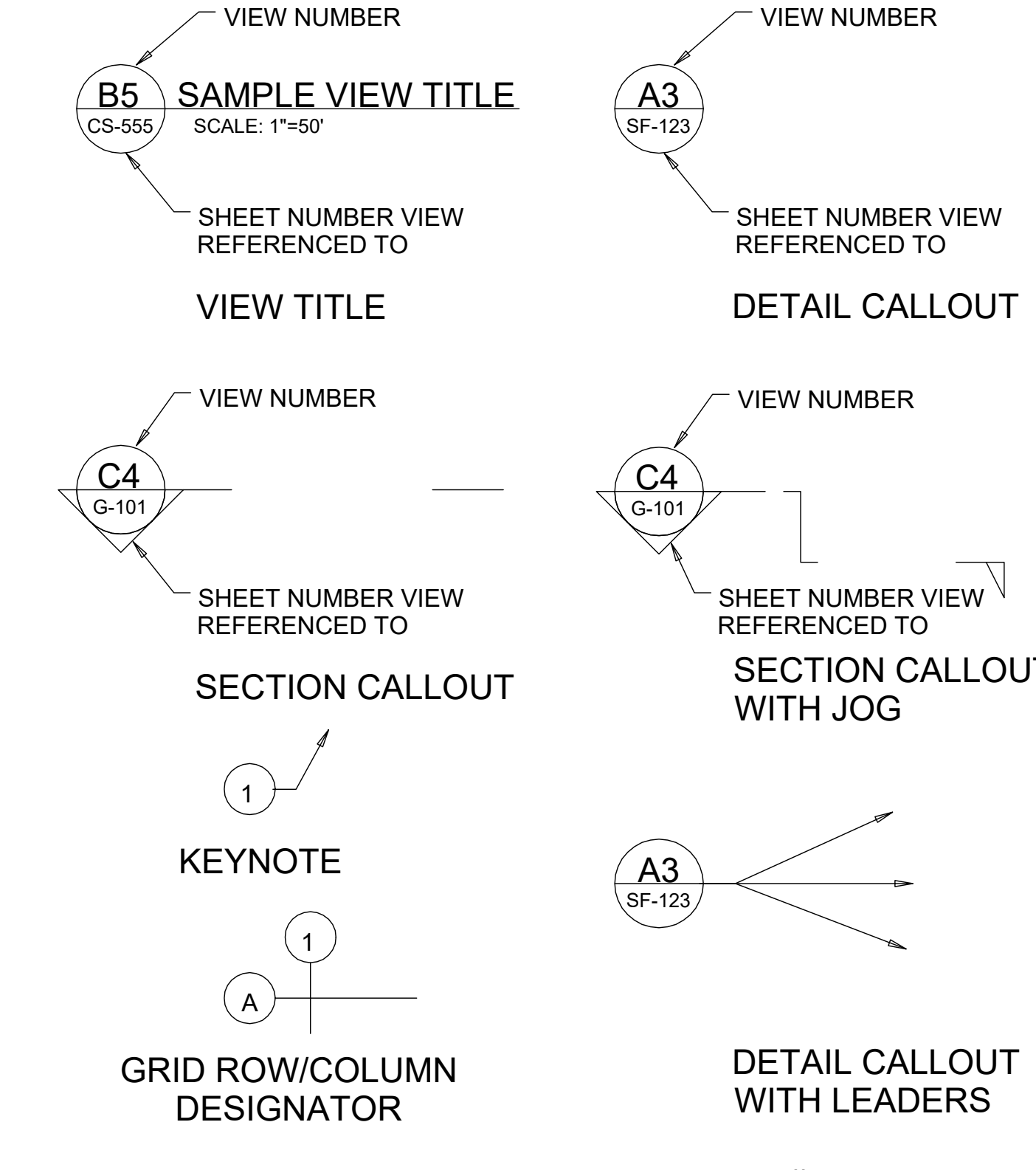


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**G-002**  
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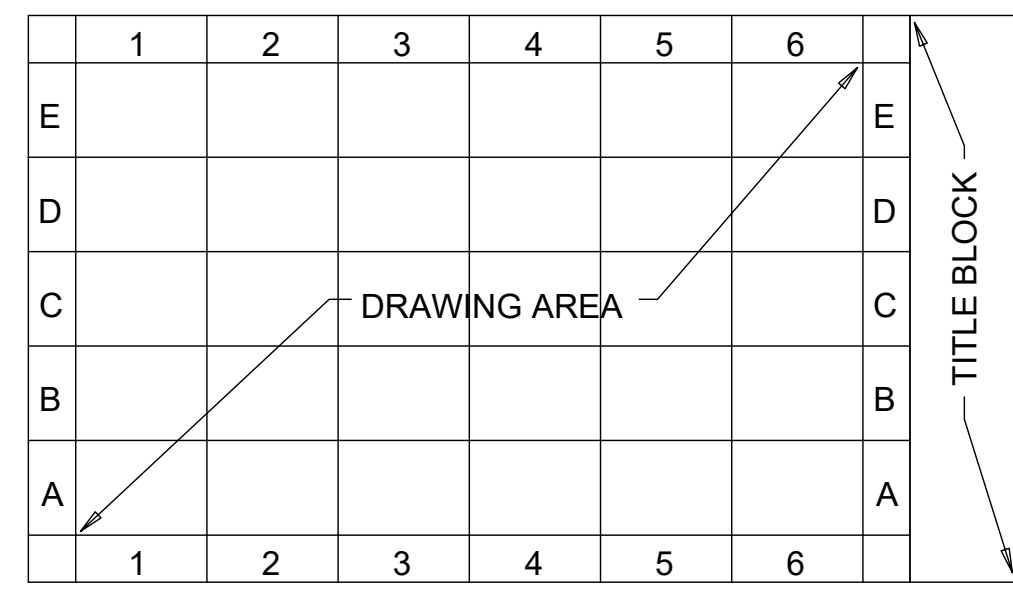
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AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS	G	GAS	P	POWER. POLE. PUMP or PIPE
AB	ANCHOR BOLT or AGGREGATE BASE	GA	GAUGE	PC	PRECAST
ABV	ABOVE	GALV	GALVANIZED	PC/PC	PRECAST / PRESTRESSED
ACI	AMERICAN CONCRETE INSTITUTE	GAL	GALLON	PCC	PORTLAND CEMENT CONCRETE
AGG	AGGREGATE	GND	GROUND	PCF	POUND PER CUBIC FOOT
AISC	AMERICAN INSTITUTE OF STEEL	GPM	GALLONS PER MINUTE	PI	POINT OF INTERSECTION
ALT	ALTERNATE	GR	GRADE BREAK	PL	PLATE
ALUM	ALUMINUM	GR	GRADE	PNL	PANEL
APPROX	APPROXIMATE	H	HEIGHT	PRESS	PRESSURE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	HAS	HEADED ANCHOR STUD	PRI	PRIMARY
AWS	AMERICAN WELDING SOCIETY	HD	HEAD	PROJ	PROJECT
BL	BASELINE	HHW	HIGHER HIGH WATER	PSF	POUNDS PER SQUARE FOOT
BLDG	BUILDING	HNDRL	HANDRAIL	PSI	POUNDS PER SQUARE INCH
BLKG	BLOCKOUT	HORZ	HORIZONTAL	QTY	QUANTITY
BOT	BOTTOM	HR	HOUR	R.O.W.	RIGHT OF WAY
BRG	BEARING	Hz	HERTZ	RAD, R	RADIUS
C	CONTROL	ID	INSIDE DIAMETER	RCP	REINFORCED CONCRETE PIPE
C&G	CURB AND GUTTER	INT	INTERIOR	REINF	REINFORCEMENT
CANT.	CANTILEVER	JT	JOINT	REQD	REQUIRED
CD	CHART DATUM	KN	KILONEWTON	RET	RETAINING
CF	CUBIC FEET	KPa	KILOPASCAL	REV	REVISION or REVISED
CIP	CAST IN PLACE	KSI	KIPS PER SQUARE INCH	RP	REFERENCE POINT
CJ	CONSTRUCTION JOINT	kw	KILOWATTS	RT	RIGHT
CL, t	CENTER LINE	L	STEEL ANGLE	S	SEWER. SLOPE or SOUTH
CLE	CONTINGENCY LEVEL EARTHQUAKE	LAT	LATERAL	SAN	SANITARY
CLR	CLEAR	LB	POUND	SCHED	SCHEDULE
CMP	CORRUGATED METAL PIPE	LF	LINEAR or LINEAL FEET	SD	STORM DRAIN
COL	COLUMN	LLW	LOWER LOW WATER	SEC	SECONDARY
CONC	CONCRETE	LNT	LOWEST NORMAL TIDE	SECT	SECTION
COND	CONDUIT	m	METER	SF	SQUARE FOOT
CONN	CONNECTOR, CONNECTION	MATL	MATERIAL	SHLDR	SHOULDER
CONST	CONSTRUCTION	MAX	MAXIMUM	SHT	SHEET
CONT	CONTINUOUS or CONTINUE	MECH	MECHANICAL	SIM	SIMILAR
COORD	COORDINATE	MET	METAL	SPA	SPACE/SPACING
COR	CENTER OF ROTATION	MFTR	MANUFACTURE or MANUFACTURER	SPEC	SPECIFICATION
CTR	CENTER	MH	MANHOLE	SPECD	SPECIFIED
CU	CUBIC	MHHW	MEAN HIGHER HIGH WATER	SPECS	SPECIFICATIONS
D	DRAIN	MHW	MEAN HIGH WATER	SQ	SQUARE
DE	DESIGN EARTHQUAKE	MIN	MINIMUM	SS	STAINLESS STEEL or SANITARY SEWER
DET	DETAIL	MLW	MEAN LOWER LOW WATER	STA	STATION
DIA OR Ø	DIAMETER	MLW	MEAN LOW WATER	STD	STANDARD
DIM	DIMENSION	mm	MILIMETER	STL	STEEL
DWGS	DRAWINGS	MPa	MEGAPASCAL	STRUCT	STRUCTURE or STRUCTURAL
DWT	DEAD WEIGHT TONNAGE	MSL	MEAN SEA LEVEL	SYM	SYMMETRICAL
E	EAST	MT	METRIC TON	T&B	TOP AND BOTTOM
EA	EACH	MTD	MOUNTED	T/	TOP OF
EF	EACH FACE	MTL	MEAN TIDE LEVEL	TBD	TO BE DETERMINED
EG	EXISTING GROUND	N	NORTH	TEMP	TEMPERATURE or TEMPORARY
EJ	EXPANSION JOINT	NAD	NORTH AMERICAN DATUM	THD	THREAD
EL	ELEVATION	NAVD	NORTH AMERICAN VERTICAL DATUM	THRU	THROUGH
ELECT	ELECTRICAL	NIC	NOT IN CONTRACT	TOC	TOP OF CONCRETE
ELEV	ELEVATION	NO.	NUMBER	TON	METRIC TON
ELW	EXTREME LOWER WATER	NOM	NOMINAL	TOT	TOTAL
EMB	EMBODIMENT	NTS	NOT TO SCALE	TW	TOP OF WALL
EOR	ENGINEER OF RECORD	OA	OVERALL	TYP	TYPICAL
EP	EDGE OF PAVEMENT	OC	ON CENTER	UON	UNLESS OTHERWISE NOTED
EQ	EQUAL	OD	OUTSIDE DIAMETER	UTIL	UTILITY
EQUIP	EQUIPMENT	OG	ORIGINAL GRADE	V	VERTICAL
EQUIV	EQUIVALENT	OH	OPPOSITE HAND	VAR	VARIES
ES	EACH SIDE	OLE	OPERATING LEVEL EARTHQUAKE	VERT	VERTICAL
EW	EACH WAY	OPNG	OPENING	W	WATER, WEST, WIDE, or WIRE
EXIST, (E)	EXISTING	OPP	OPPOSITE	W/	WITH
E EXP	EXPANSION			WP	WORKING POINT
E EXT	EXTENDED SHIP LOADER BOOM			WT	WEIGHT
F	FLANGE			WWF	WELDED WIRE FABRIC
FG	FINAL GRADE. FINISHED GRADE or FINISHED GROUND			'	FEET
FH	FIRE HYDRANT			"	INCH
FL	FLOW LINE				
FND	FOUNDATION				
FS	FINISHED SURFACE				
FT	FOOTING				

**CROSS REFERENCE LEGEND**



\* VIEW NUMBER IS BASED ON THE (DACS) LOCATION OF THE LOWER-LEFT EXTENTS OF THE VIEW ON THE REFERENCED SHEET. WHEN REFERENCING DRAWING INFORMATION BETWEEN SHEETS, BOTH THE VIEW AND SHEET NUMBERS MUST BE QUOTED TOGETHER - EITHER IN A CALLOUT FORMAT AS SHOWN ABOVE OR IN THE FORM; "VIEW NO./SHEET NO." (EG A1/CS-5001)



**DRAWING AREA COODINATE SYSTEM (DACS)**

**SHEET TYPE DESIGNATORS**

0	GENERAL (COVER SHEET, LEGEND, NOTES)
1	PLANS (HORIZONTAL VIEWS)
2	ELEVATIONS (NOT TYPICALLY USED)
3	SECTIONS (OVERALL VIEWS)
4	LARGE-SCALE VIEWS (PLANS, SECT. OR ELEV. - NOT DETAILS)
5	DETAILS (MAY BE PLAN, SECT. OR ELEV. VIEWS)
6	SCHEDULES
7	USER DEFINED
8	USER DEFINED
9	3D ISOMETRIC

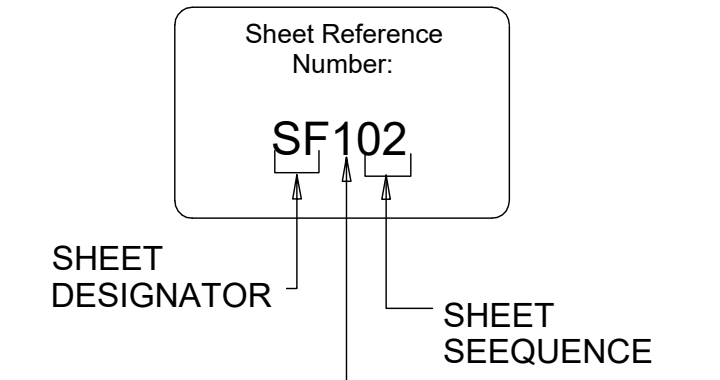
**DISCIPLINE DESIGNATORS**

DISCIPLINE	DESIGNATOR
GENERAL	G
SURVEY/MAPPING	V
GEOTECHNICAL	B
CIVIL WORKS	W
CIVIL	C
STRUCTURAL	S
MECHANICAL	M
ELECTRICAL	E
OTHER DISCIPLINES	X

**SECONDARY DESIGNATORS**

DEMOLITION	GENERAL	SUBSTRUCTURE	FRAMING	COMPONENT	SITE
D	G	B	F	C	S

**SHEET NUMBERING**



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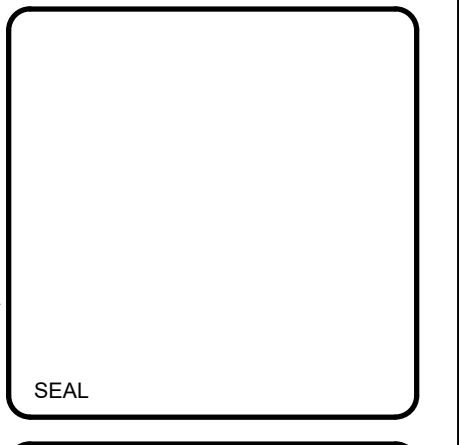
**PORT OF GRAYS HARBOR T4 DOCK UPGRADES  
FENDER SYSTEM LAYOUTS**

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**GENERAL NOTES**

Designed by:	SB	Drawn by:	JVD / JP	Reviewed by:	SB	Submitted by:	SCOTT BRANLUND MOFFATT & NICHOL
Date:	2022-12-09	M&N Project No.:	221780	Drawing code:		Drawing Scale:	1:1 (0 SHEET)
Rev:	A						

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Sheet Reference No.  
**G-003**  
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GENERAL

- THESE NOTES CONTAIN GENERAL INFORMATION AND ARE NOT COMPLETE FOR CONSTRUCTION PURPOSES. VERIFY INFORMATION GIVEN HERE WITH THE SPECIFICATIONS AND OTHER DRAWINGS AND BRING CONFLICT(S) TO THE PORT'S ATTENTION BEFORE BEGINNING AFFECTED WORK. THE PORT WILL RESOLVE CONFLICT(S). IN GENERAL, SPECIFICATIONS TAKE PRECEDENCE OVER THESE NOTES.
- THE PROJECT IS LOCATED IN AN ACTIVE SHIPPING CHANNEL. DO NOT OBSTRUCT OR HINDER ACTIVITIES IN THE CHANNEL AT ANY TIME. MOOR WATER BORNE EQUIPMENT OUT OF THE CHANNEL OR AS DIRECTED BY THE PORT. DO NOT PLACE MOORING LINES OR ANCHORS IN THE CHANNEL.
- PORTIONS OF THE TERMINAL MUST BE KEPT IN OPERATION DURING THE DURATION OF THE PROJECT. KEEP WORKERS, MATERIALS, AND EQUIPMENT CLEAR OF TERMINAL AND SHIPPING OPERATIONS. DO NOT HINDER OR DISRUPT PORT OR TENANT OPERATIONS.
- PORTIONS OF THE TERMINAL WILL BE UNDER REDEVELOPMENT DURING THE DURATION OF THE PROJECT. COORDINATE CONSTRUCTION ACTIVITIES FOR THE PROJECT WITH OTHER CONTRACTORS IN THE AREA AND AS DIRECTED BY THE PORT.
- FIELD VERIFY FEATURES, DIMENSIONS, AND ELEVATIONS PRIOR TO STARTING THE WORK (CONSTRUCTION OR FABRICATION). CONSIDER DIMENSIONS, LOCATIONS, AND ELEVATIONS OF EXISTING STRUCTURES AND FEATURES TO BE APPROXIMATE EVEN WHERE NOT INDICATED SO ON THE DRAWINGS. THE CONDITIONS SHOWN ON THESE DRAWINGS ARE BASED ON AVAILABLE EXISTING DATA. NOTIFY THE PORT OF DISCREPANCIES WITH THE CONTRACT DOCUMENTS BEFORE BEGINNING THE AFFECTED WORK. PROVIDE A FIELD SURVEY OF AS-BUILT CONDITIONS AT THE LOCATIONS OF FEATURES FOR THIS WORK BEFORE BEGINNING THE WORK. VERIFY HORIZONTAL AND VERTICAL ALIGNMENT AND PLUMBNESS OF EXISTING STRUCTURES WHEN JOINING TO NEW CONSTRUCTION.
- DIMENSIONS, ELEVATIONS, AND DETAILS OF EXISTING STRUCTURES ARE INCLUDED ON THESE DRAWINGS FOR REFERENCE ONLY AND MAY NOT REFLECT ACTUAL FIELD CONDITIONS. NOTIFY THE PORT OF MISALIGNMENTS, DISCREPANCIES, OR DIMENSIONS THAT NEED MODIFICATION, OR OMISSIONS BEFORE THE SHOP DRAWING SUBMITTALS.
- PRIOR TO COMMENCING WORK, PREPARE AND SUBMIT SHOP DRAWINGS TO THE PORT FOR APPROVAL. AS A MINIMUM, INCLUDE THE FOLLOWING (SEE THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS):  
A. STEEL FABRICATIONS - COMPLY WITH AISC 303, INCLUDE WELDS SIZES, HOLE CUTS, ETC. AND MILL CERTIFICATIONS ON MATERIALS  
B. REINFORCING STEEL - COMPLY WITH ACI 315, INCLUDE METHODS OF SUPPORTING LAYERS OF REINFORCING STEEL
- DO NOT SCALE DIMENSIONS FROM PLANS, ELEVATIONS, SECTIONS, OR DETAILS ON THESE DRAWINGS.
- PROVIDE NEW MATERIALS FOR THE WORK. DO NOT PROVIDE USED MATERIALS UNLESS INDICATED ON THESE DRAWINGS OR ALLOWED BY THE PORT.
- PERFORM WORK IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL PERMITS, LAWS, AND REGULATIONS. REVIEW THESE DOCUMENTS AND BE FAMILIAR WITH THE REQUIREMENTS BEFORE STARTING THE WORK.
- IMMEDIATELY REMOVE MATERIALS THAT INADVERTENTLY FALL INTO THE WATER ON A DAILY BASIS.

DEMOLITION

- CONTAIN DEMOLITION WORK WITHIN THE LIMITS OF THE WORK. DO NOT DAMAGE EXISTING STRUCTURES THAT REMAIN.
- PRIOR TO DEMOLITION, SAWCUT AS NOTED ON THE DRAWINGS OR OTHERWISE REQUIRED TO PRODUCE A SMOOTH, CLEAN BREAK FROM CONNECTING LINKS WITH EXISTING STRUCTURES OR FEATURES.
- AVOID DAMAGE TO THE EXISTING DOCK DURING THE WORK. PERFORM CALCULATIONS TO DETERMINE STRUCTURAL CAPACITY FOR THE ANTICIPATED LOADS OF THE CONSTRUCTION EQUIPMENT TO BE USED AND OPERATIONS TO OCCUR ON THE DOCK. REPAIR DAMAGE TO EXISTING STRUCTURES OR FEATURES TO REMAIN CAUSED BY CONSTRUCTION OPERATIONS, AT NO EXPENSE TO THE PORT, TO THE PREDISTURBED CONDITION AS DIRECTED BY THE PORT.
- COMPLETELY REMOVE AND DISPOSE OF DEMOLISHED MATERIALS IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS.
- COMPLETELY REMOVE BY EXTRACTION THE EXISTING PILES INDICATED TO BE REMOVED. IMMEDIATELY NOTIFY THE PORT IF EXTRACTION IS NOT POSSIBLE.

SURVEY CONTROL

- VERTICAL CONTROL INCLUDING TIDAL INFORMATION IS PROVIDED FOR THE CONTRACT DOCUMENTS BY BERGLUND SCHMIDT AND ASSOCIATES DATED XX XX 2023.
- HORIZONTAL CONTROL IS PROVIDED FOR THE CONTRACT DOCUMENTS BY BERGLUND SCHMIDT AND ASSOCIATES DATED XX XX 2023. ESTABLISH A PROJECT BASELINE USING THIS INFORMATION.

CODES, SPECIFICATIONS, AND STANDARDS

COMPLY WITH THE FOLLOWING.

- AMERICAN CONCRETE INSTITUTE (ACI) "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", ACI 318-19
- ACI "SPECIFICATIONS FOR CONCRETE CONSTRUCTION", ACI 301-20
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", AISC 360-20
- AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES", AISC 303-20
- AMERICAN SOCIETY FOR TESTING AND MATERIALS INTERNATIONAL (ASTM) SPECIFICATIONS, TEST METHODS, PRACTICES, GUIDES, TERMINOLOGY, CLASSIFICATION SYSTEMS, TABLES, NOMENCLATURE, AND OTHER PUBLICATIONS.
- AMERICAN WELDING SOCIETY (AWS) "STRUCTURAL WELDING CODE - STEEL", AWS D1.1-2020
- WASHINGTON STATE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATION FOR ROADS, BRIDGES, AND MUNICIPAL PUBLIC WORKS CONSTRUCTION", 2021 EDITION.

DESIGN LOADS

- DEAD LOADS: ACTUAL WEIGHT OF MATERIALS
- WIND LOADS (30 SECOND SUSTAINED WIND):  
OFFSHORE (NORTH AND NORTHEAST WINDS) = 60 MILES PER HOUR  
ONSHORE (SOUTH AND SOUTHWEST WINDS) = 70 MILES PER HOUR
- VESSEL IMPACT ON FENDER SYSTEM: 750-FOOT-LONG PANAMAX SHIP (73,000 LT DISPLACEMENT) STRIKING FENDER SYSTEM AT 0.29 FEET PER SECOND APPROACH VELOCITY AND 10 DEGREE IMPACT ANGLE.
- BARGE IMPACT: THE FENDER SYSTEM IS NOT DESIGNED FOR BARGE BEASTING OR MOORING.
- FENDER PANEL FORCES: MAXIMUM HULL PRESSURE ASSUMED FOR FENDER PANEL DESIGN = XXX POUNDS PER SQUARE FOOT

STRUCTURAL CONCEPTS

- FOR PILE DESIGN CRITERIA SEE "GEOTECHNICAL ENGINEERING SERVICES REPORT, TERMINAL 4 BERTH B IMPROVEMENTS, PORT OF GRAYS HARBOR, WASHINGTON, SEPTEMBER 1, 2022.
- VESSEL BREASTING OR MOORING ON EXISTING DOCK: IN GENERAL, A VESSEL IMPACTS ON THE FENDER PANELS, RESULTING LATERAL FORCES ARE TRANSMITTED FROM THE FENDER PANELS THROUGH THE EXISTING CONCRETE DECK SYSTEM ACTING AS A DIAPHRAGM TO EXISTING PILES, PILES ARE RESTRAINED BY SIDE FRICTION, COHESION, AND/OR END BEARING IN THE SOIL.
- AT BERTH A, FENDER PANELS ARE SUPPORTED VERTICALLY BY A DRIVEN STEEL PIPE PILE ATTACHED TO THE FENDER PANEL SYSTEM. DRIVE PILES TO THE MINIMUM REQUIRED TIP ELEVATIONS INDICATED ON THE DRAWINGS.
- AT BERTH B, FENDER PANELS ARE SUPPORTED VERTICALLY FROM THE FACE OF EXISTING DOCK.

STEEL PILING

- PIPE PILE MATERIAL: ASTM A252, GRADE 3 WITH INCREASED YIELD STRENGTH = 50 KSI
- COAT PILES PER THE SPECIFICATIONS. REPAIR COATING PER THE SPECIFICATIONS.
- DRIVEN PILE CAPACITIES: SEE THE GEOTECHNICAL REPORT.
- NOTIFY THE PORT IF A PILE IS DRIVEN BEYOND THE TOLERANCES SHOWN IN THE SPECIFICATIONS. MODIFIED OR ADDITIONAL CONNECTION DETAILS MAY BE REQUIRED. SEE THE SPECIFICATIONS.

MISCELLANEOUS STEEL

- PIPE: ASTM A53, YIELD STRENGTH = 35 KSI
- HOLLOW STRUCTURAL SECTIONS (HSS): ASTM A500, GRADE C WITH YIELD STRENGTH = 50 KSI
- SHAPES, PLATES, BARS, SQUARE OR RECTANGULAR WASHERS: ASTM A572, YIELD STRENGTH = 50 KSI
- ANCHOR RODS AND THREADED RODS: ASTM F1554, GRADE 105 TYPICAL
- BOLTS: ASTM A307 TYPICAL, ASTM A325 WHERE HIGH STRENGTH BOLTS ARE REQUIRED (NOTED AT HS). FULLY PRETENSION HS BOLTS.
- NUTS: HEAVY HEX, ASTM A563, GRADE SUITABLE FOR THE TYPE OF ROD OR BOLT. PROVIDE A HEAVY HEX NUT AND LOCK NUT ON BOLTS (TYPICAL AND HS).
- ROUND WASHERS: ASTM F844, WIDE SERIES, MAXIMUM THICKNESS FOR BOLTS AND ASTM A436 FOR HS BOLTS.

- PERFORM WELDING IN ACCORDANCE WITH AWD D1.1 USING CERTIFIED WELDERS, WELDING OPERATORS, AND TACK WELDERS AND QUALIFIED JOINT WELDING PROCEDURES. PREPARE JOINTS TO FIT PROPERLY FOR THE APPROPRIATE WELD AS INDICATED ON THE DRAWINGS. INSPECT WELDS.
- COAT FENDER PANELS WITH A HIGH-PERFORMANCE MARINE COATING SYSTEM. SEE THE SPECIFICATIONS.
- EXCEPT FOR THE FENDER PANELS, HOT-DIP GALVANIZE STEEL MATERIALS, FABRICATIONS, AND ASSEMBLIES IN ACCORDANCE WITH ASTM A123, ASTM A153, OR ASTM F2329 AS APPLICABLE. GALVANIZE ITEMS AFTER FABRICATION AS FAR AS PRACTICAL.
- RESTORE GALVANIZING DAMAGED BY WELDING, HANDLING, OR OTHER CAUSES BY USE OF A FIELD-APPLIED GALVANIZING COMPOUND PER ASTM A788, ANNEX A1, 12 MILS MINIMUM THICKNESS.
- SET EMBEDDED ANCHOR RODS AND SIMILAR ELEMENTS USING TEMPLATES THAT ARE VERIFIED WITH THE SHOP DRAWINGS OF THE FENDER PANEL FRAMING, OR HARDWARE PRIOR TO SETTING. NOTIFY THE OWNER OF ANY CHANGES TO ANCHOR ROD OR SIMILAR ELEMENT SIZES, EMBEDMENTS, SPACING, OR QUANTITIES FROM WHAT IS SHOWN ON THE DRAWINGS. IF NEEDED, USE TEMPLATES THAT ARE ADEQUATE TO HOLD THE RODS OR ELEMENTS IN POSITION BOTH FOR VERTICAL AND HORIZONTAL ALIGNMENT DURING DRILLING OPERATIONS.
- PROVIDE HOT-DIP GALVANIZED STEEL SHIMS AS REQUIRED TO PROVIDE HORIZONTAL ALIGNMENT AND PLUMBNESS FOR THE FABRICATIONS TO BE INSTALLED ON THE FACE OF EXISTING DOCK.

FENDER ELEMENTS

- PROVIDE THE STANDOFF AS INDICATED ON THE DRAWINGS.
- PROVIDE COMPRESSION BUCKLING TYPE RUBBER VEE FENDERS.
- MAXIMUM RATED REACTION PER EACH VEE ELEMENT IN BERTH A = XX.XX KIPS PER FOOT AT A MAXIMUM DEFLECTION OF XX INCHES. MINIMUM RATED ENERGY ABSORBED PER EACH VEE ELEMENT = XXX FOOT-KIPS PER FOOT FOR THE SAME MAXIMUM DEFLECTION. FENITEK XXX SERIES WITH RUBBER COMPOUND XXX MEETS THESE REQUIREMENTS.
- MAXIMUM RATED REACTION PER EACH VEE ELEMENT IN BERTH B = XX.XX KIPS PER FOOT AT A MAXIMUM DEFLECTION OF XX INCHES. MINIMUM RATED ENERGY PER EACH VEE ELEMENT = XXX FOOT-KIPS PER FOOT FOR THE SAME MAXIMUM DEFLECTION. SHIBATAFENDERTeam XXX SERIES WITH RUBBER COMPOUND XXX MEETS THESE REQUIREMENTS.
- FENDER PANELS: AS A MINIMUM, MEET THE FOLLOWING REQUIREMENTS  
MATERIAL: ASTM A572 AND ASTM A500 AND SPECIFIED ABOVE  
THICKNESS: AS INDICATED ON THE DRAWINGS  
SECTION MODULUS: XXX CUBIC INCHES FOR THE SECTION INDICATED ON THE DRAWINGS.
- UHMW-PE FACING: ASTM D4020, RECYCLED MATERIAL OR 100 PERCENT VIRGIN MATERIAL, 100 PERCENT CROSS-LINKED, STABILIZED FOR ULTRA-VIOLET LIGHT. ATTACH FACING TO FENDER PANEL USING FASTENERS AT NOMINAL APPROXIMATE 12-INCH SPACING EACH WAY.
- ASSEMBLE EACH FENDER PANEL UNIT WITH THREE VEE FENDER ELEMENTS EACH SIDE AND A 2 INCH GAP BETWEEN VEE FENDER ELEMENTS UNLESS OTHERWISE APPROVED BY THE PORT.
- PRIOR TO FENDER SYSTEM FABRICATION, VERIFY SIZES, DIMENSIONS, AND LOCATION OF COMPONENTS INCLUDING VEE FENDERS, UHMW-PE FACING, FENDER PANEL FRAMES, EXISTING CONCRETE DOCK DIMENSIONS, FENDER BOLTS, ANCHOR RODS, ETC. SO THAT COMPONENTS ARE COMPATIBLE AND SNUG UPON COMPLETION OF THE FENDER SYSTEM AND TIGHT CONNECTIONS CAN BE MADE. ALSO VERIFY STANDOFF FROM FACE OF EXISTING DOCK TO OUTBOARD FACE OF UHMW-PE FACING.
- MAXIMUM HORIZONTAL LOAD PER FENDER PANEL ASSUMED AT XX KIPS. NOTIFY THE PORT IF THE FENDER MANUFACTURER REQUIRES A LARGER LOAD BASED ON PANEL OR FENDER DESIGN.

MODIFICATIONS TO EXISTING FENDER SYSTEM

- MODIFY PORTIONS OF THE EXISTING FENDER SYSTEM TO REMAIN AS INDICATED ON THE DRAWINGS.
- REPAIR COATINGS ON EXISTING STEEL ELEMENTS DAMAGED DURING THE WORK. SEE THE SPECIFICATIONS.
- REPAIR CUTS, HOLES, ABRASIONS, AND OTHER DAMAGE RESULTING FROM THE WORK. SEE THE SPECIFICATIONS.

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Mark	Description	Date	Appr.
A	ISSUED FOR 30% REVIEW	2023-01-27	SB

**PORT OF GRAYS HARBOR T4 DOCK UPGRADES  
FENDER SYSTEM LAYOUTS**

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**TERMINAL 4 GENERAL  
ARRANGEMENT**

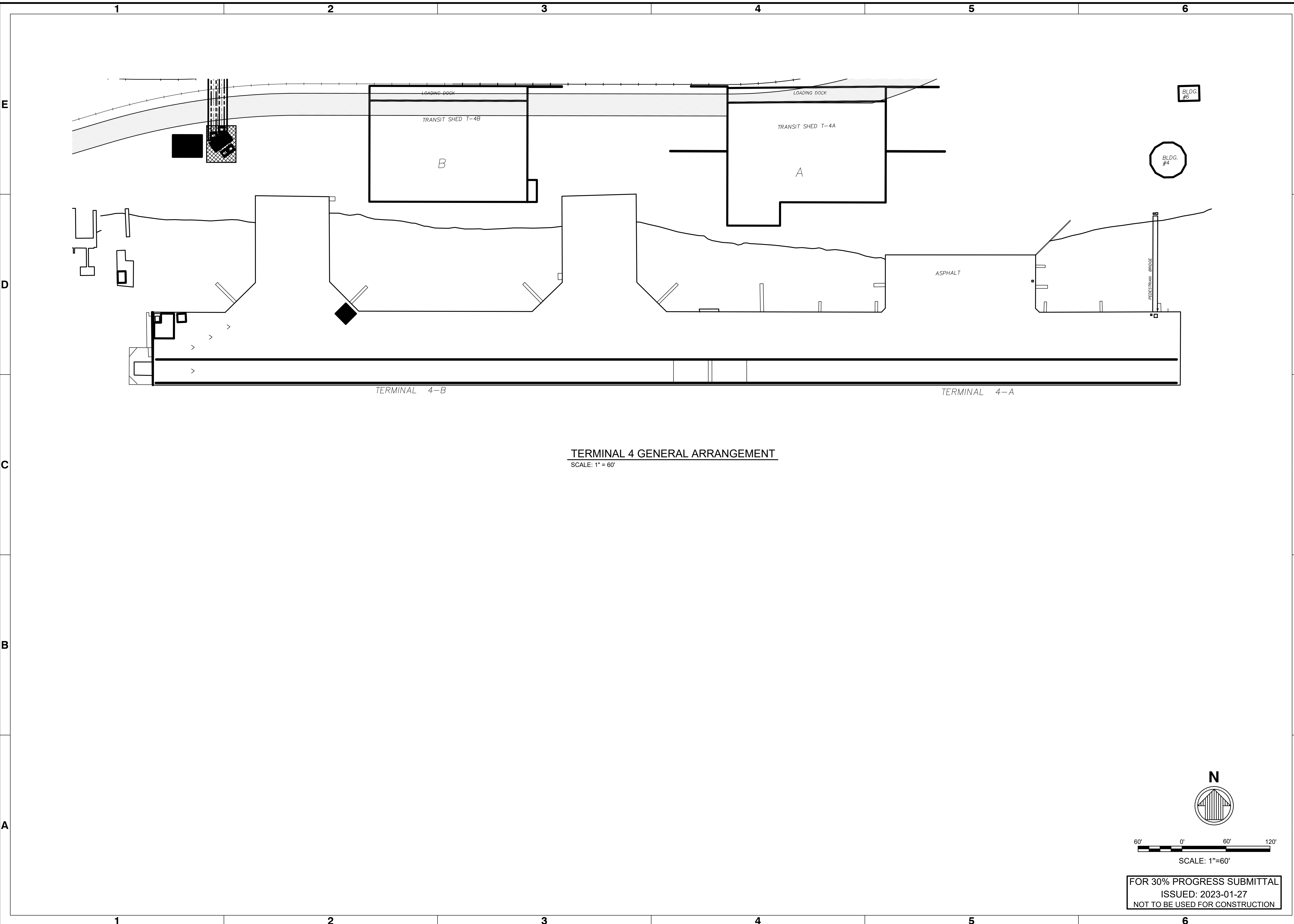
Designed by:	SB	Date:	2022-12-09	Rev:	A
Drawn by:	JVD / DP	M&N Project No.:	221780		
Checked by:	SB	Drawing code:			
Reviewed by:	SB	Submitted by:	SCOTT ERANLUND MOFFATT & NICHOL	Drawing Scale:	1:1 (0 SHEET)

600 UNIVERSITY ST  
SUITE 400  
SEASIDE, WA 98101  
(206) 622-0222

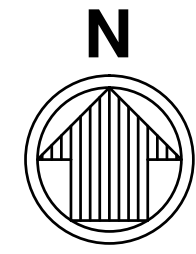


SEAL

Sheet Reference No.  
**G-004**  
INDEX: 4 OF 34



**TERMINAL 4 GENERAL ARRANGEMENT**  
SCALE: 1" = 60'



60' 0' 60' 120'

SCALE: 1"=60'

FOR 30% PROGRESS SUBMITTAL  
ISSUED: 2023-01-27  
NOT TO BE USED FOR CONSTRUCTION

File: I:\hmc\projects\SEA\21780120\CADD\Active\_Port of Grays Harbor T4 Dock Upgrades - Fender System Layouts\217801\_S-100 - Plotted\_12/26/2023 12:11 PM by PENNA, DANIEL, Saved: 1/23/2023 3:39 PM by DFEWA



Mark	Description	Date	Appr.
A	ISSUED FOR 30% REVIEW	2023-01-27	

PORT OF GRAYS HARBOR T4 DOCK UPGRADES  
FENDER SYSTEM LAYOUTS

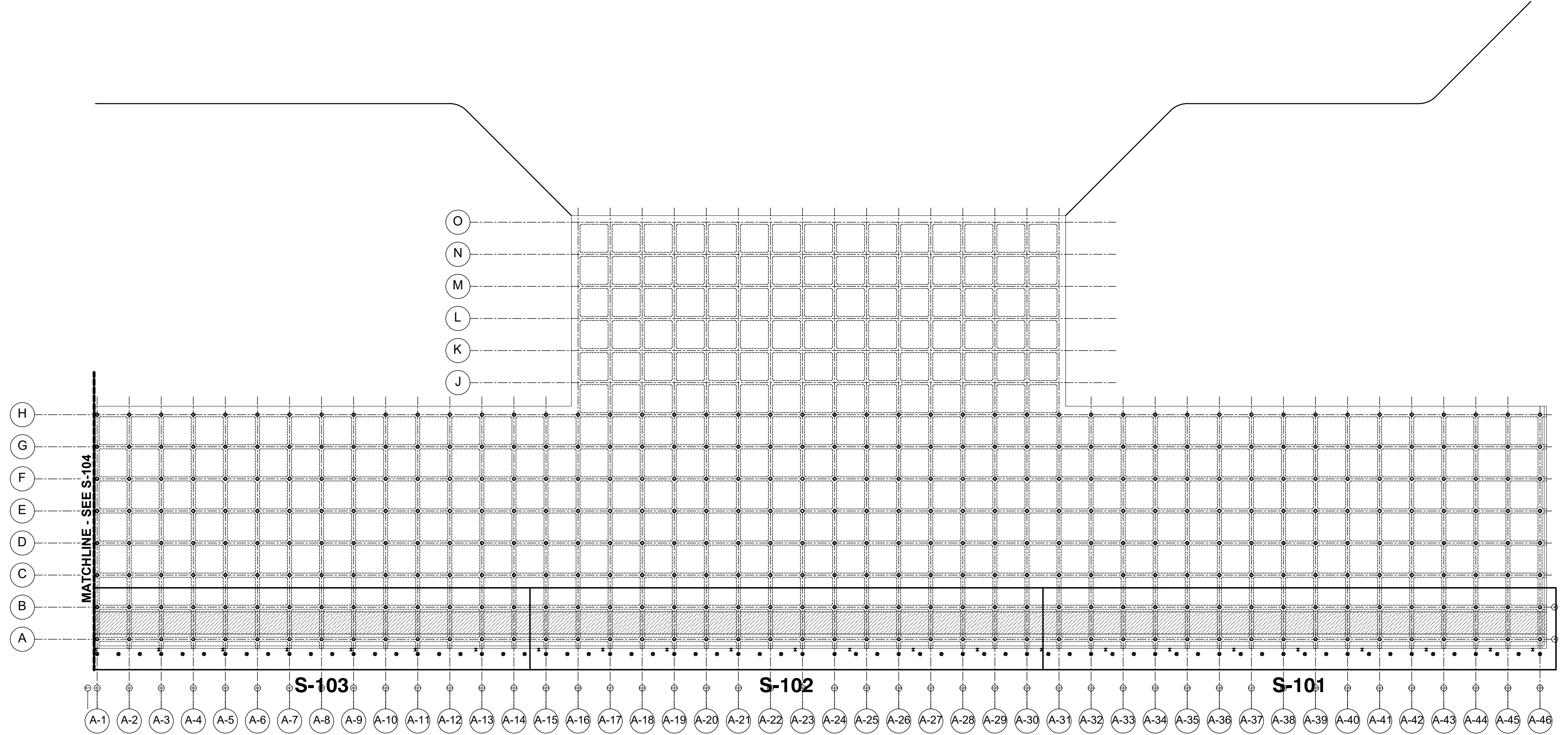
**GENERAL ARRANGEMENT - BERTH A EXISTING FENDER SYSTEM**

Designed by:	SB	Date:	2022-12-09	Rev:	A
Drawn by:	JVD / DP	M&N Project No.:	221760		
Reviewed by:	SB	Drawing code:			
Submitted by:	SCOTT ERANLIND MOFFATT & NICHOL	Drawing Scale:	1:1 (0 SHEET)		

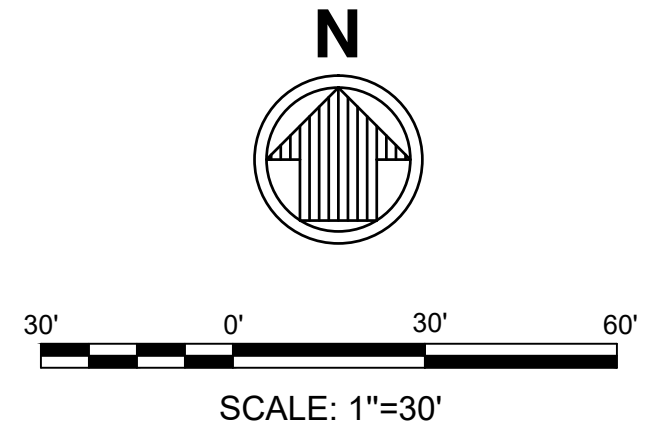
600 UNIVERSITY ST  
SUITE 400  
SEASIDE, WA 98101  
(206) 622-0222

SEAL

Sheet Reference No.  
**S-100**  
INDEX: 5 OF 34



**GENERAL ARRANGEMENT - BERTH A EXISTING FENDER SYSTEM**  
SCALE: 1" = 30'



FOR 30% PROGRESS SUBMITTAL  
ISSUED: 2023-01-27  
NOT TO BE USED FOR CONSTRUCTION

File: I:\mre\projects\SEA\21780120 CAD\1\_Active\_Port of Grays Harbor T4 Dock Upgrades - Fender System Layouts\21780\_S-101\_Plotter\_12/28/2023 12:11 PM by PENNA, DANIEL, Saved: 1/23/2023 9:14 AM by DRENA


Rev.	Date	Description
A	2023-01-27	ISSUED FOR 30% REVIEW

**PORT OF GRAYS HARBOR T4 DOCK UPDATES  
FENDER SYSTEM LAYOUTS**

**BERTH A EXISTING CONDITIONS &  
DEMOLITION - SHEET 1**

Designed by:	SB	Date:	2022-12-09	Rev:	A
Drawn by:	JVD/DP	M&N Project No.:	221760		
Reviewed by:	SB	Drawing code:			
Submitted by:	SCOTT BRANLIND MOFFATT & NICHOL	Per scale:	1" = (0 SHEET)		

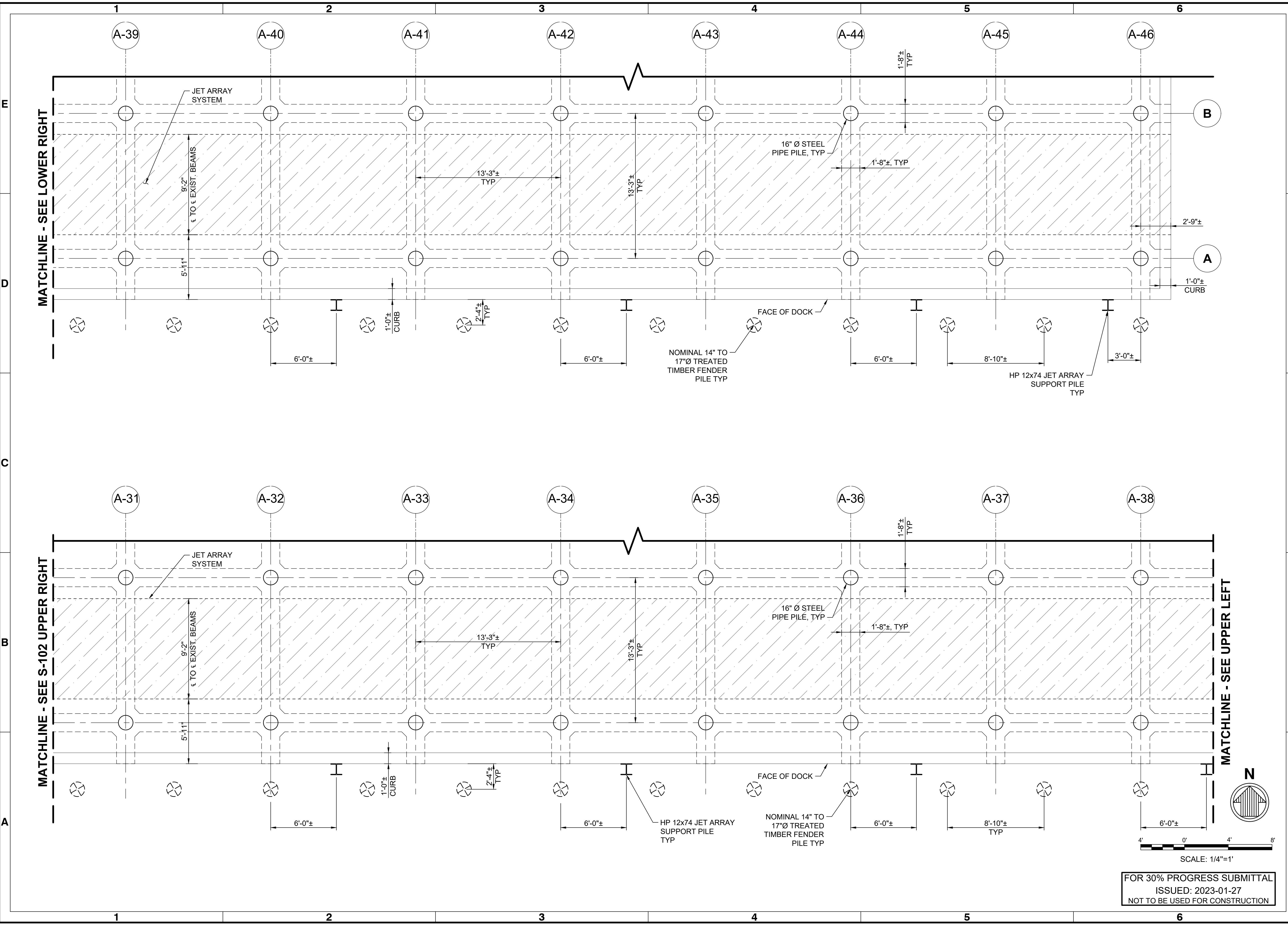
600 UNIVERSITY ST  
SUITE 100  
SEASIDE, WA 98101  
(206) 622-0222



**moffatt & nichol**

SEAL

Sheet Reference No.  
**S-101**  
INDEX: 6 OF 34



SCALE: 1/4"=1'

FOR 30% PROGRESS SUBMITTAL  
ISSUED: 2023-01-27  
NOT TO BE USED FOR CONSTRUCTION

File: I:\mre\projects\SEAN21780120\_CADD\Active\_Port of Grays Harbor T4 Dock Upgrades - Fender System Layouts\21780\_S-102 - Plotset\_1/28/2023 12:12 PM by PENVA, DANIEL, Saved: 1/23/2023 9:17 AM by DREWA



Rev.	Date	Description
A	2023-01-27	ISSUED FOR 30% REVIEW

**PORT OF GRAYS HARBOR T4 DOCK UPGRADES  
FENDER SYSTEM LAYOUTS**

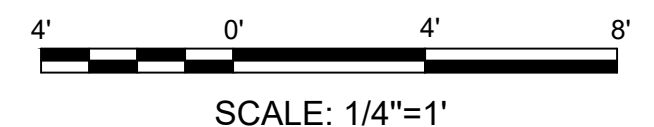
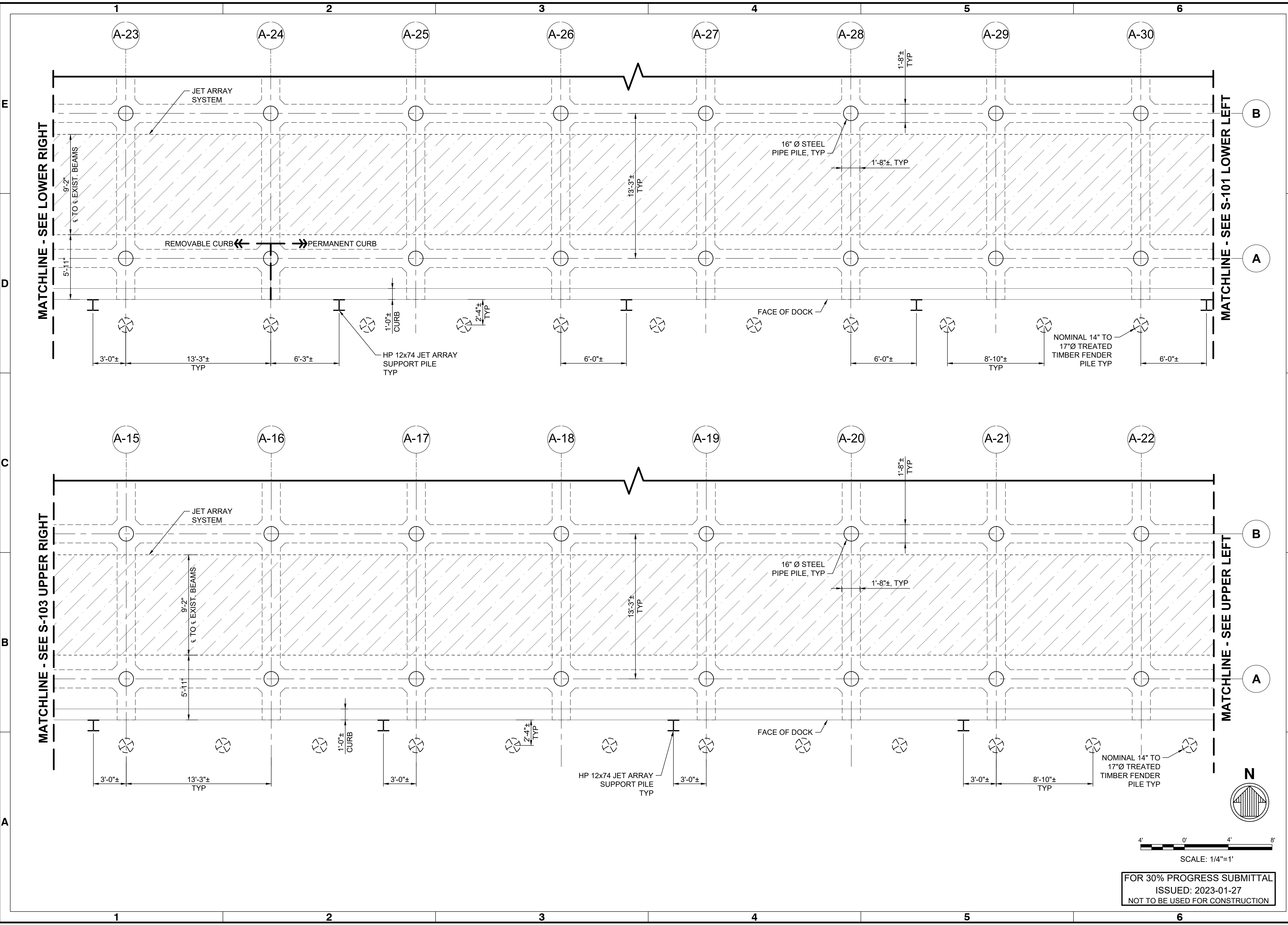
**BERTH A EXISTING CONDITIONS &  
DEMOLITION - SHEET 2**

Designed by:	SB	Date:	2022-12-09	Rev:	A
Drawn by:	JVD / DP	MAN Project No.:	221760		
Reviewed by:	SB	Drawing code:			
Submitted by:	SCOTT BRANLIND MOFFATT & NICHOL	Per Scale:	1:1 (0 SHEET)		

600 UNIVERSITY ST  
SUITE 100  
SEASIDE, WA 98101  
(206) 622-0222

SEAL

Sheet Reference No.  
**S-102**  
INDEX: 7 OF 34



SCALE: 1/4"=1'

FOR 30% PROGRESS SUBMITTAL  
ISSUED: 2023-01-27  
NOT TO BE USED FOR CONSTRUCTION

DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING

File: I:\mre\projects\SEA\21780120\CADD\Aerial\_Port\_of\_Grays\_Harbor\_T4\_Dock\_Upgrade - Fender System Layouts\221780\_S-103 - Plotted - 1/26/2023 12:12 PM by PENNA, DANIEL - Saved: 1/23/2023 9:26 AM by DREWA



Mark	Description	Date	Appr
A	ISSUED FOR 30% REVIEW	2023-01-27	SB

PORT OF GRAYS HARBOR T4 DOCK UPGRADES  
FENDER SYSTEM LAYOUTS

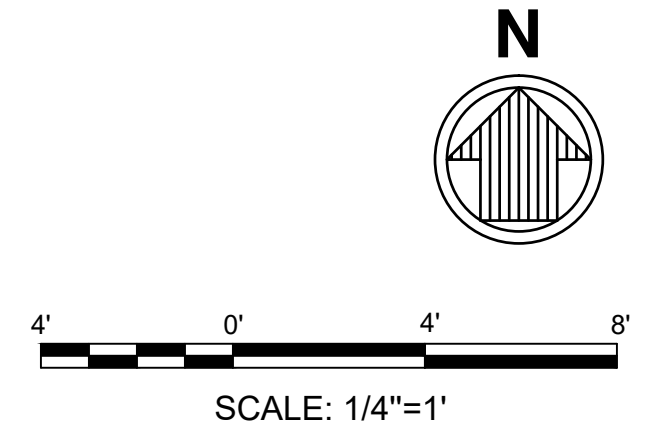
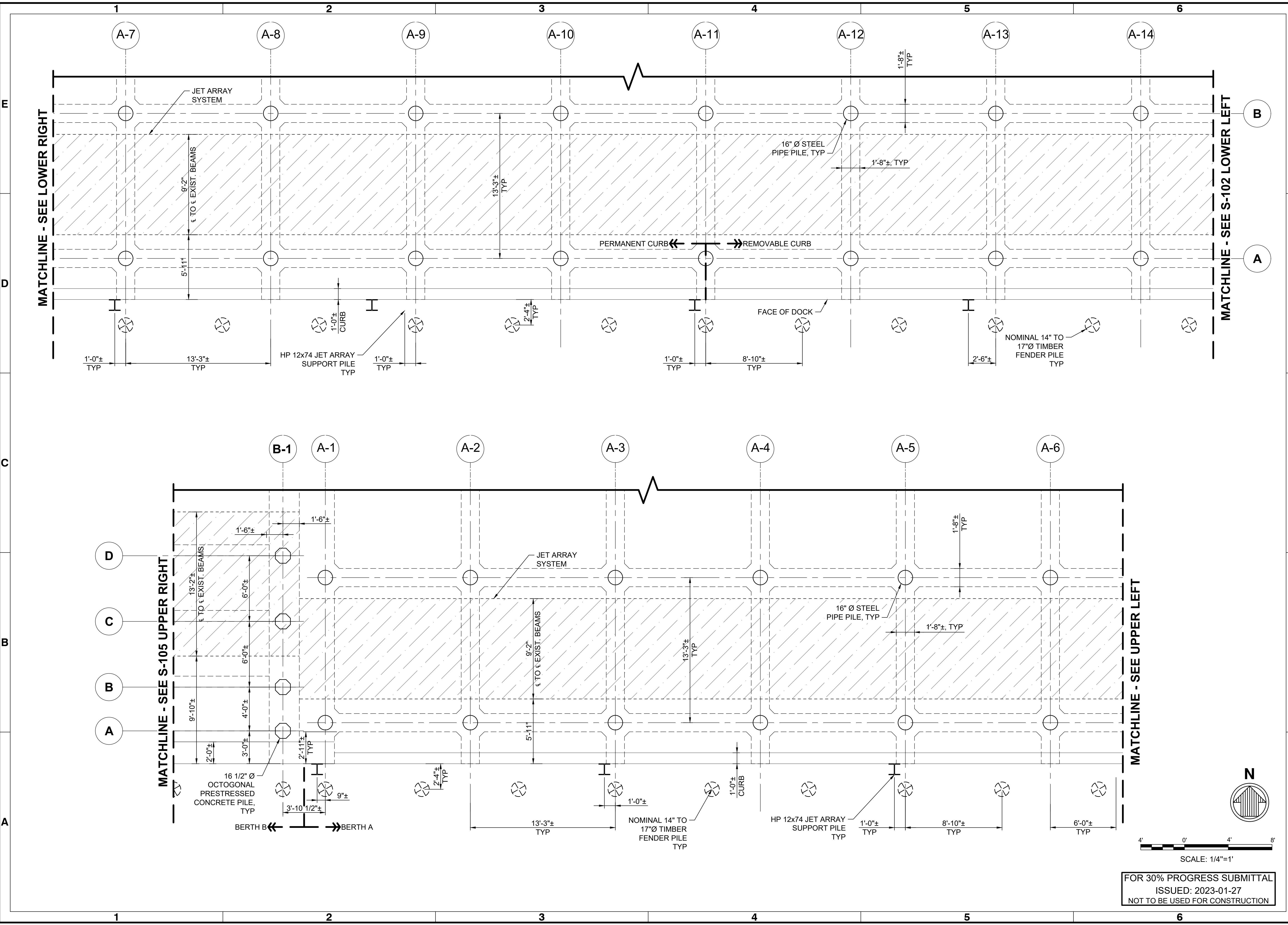
BERTH A EXISTING CONDITIONS &  
DEMOLITION - SHEET 3

Designed by:	Date:	Rev:
SB	2022-12-09	A
Drawn by:	M&N Project No.	
JVD/DP	221780	
Reviewed by:	Drawing code:	
SB		
Submitted by:	Drawing Scale:	
SCOTT BRANLIND	1:1 (0 SHEET)	
MOFFATT & NICHOL	Plot Scale:	
	1:1 (0 SHEET)	

600 UNIVERSITY ST  
SUITE 400  
SEASIDE WA 98101  
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SEAL

Sheet Reference No.  
**S-103**  
INDEX: 8 OF 34



FOR 30% PROGRESS SUBMITTAL  
ISSUED: 2023-01-27  
NOT TO BE USED FOR CONSTRUCTION

DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING

File: I:\mre\projects\SEA\21780120\CADD\Active\_Port of Grays Harbor T4 Dock Upgrades - Fender System Layouts\217801\_S-104 - Plotted - 1/26/2023 12:13 PM by PENVA, DANIEL, Saved: 1/22/2023 7:05 PM by JDOBZANSKI

Mark	Description	Date	Appr
A	ISSUED FOR 30% REVIEW	2023-01-27	SB

PORT OF GRAYS HARBOR T4 DOCK UPGRADES  
FENDER SYSTEM LAYOUTS

**GENERAL ARRANGEMENT - BERTH B EXISTING FENDER SYSTEM**

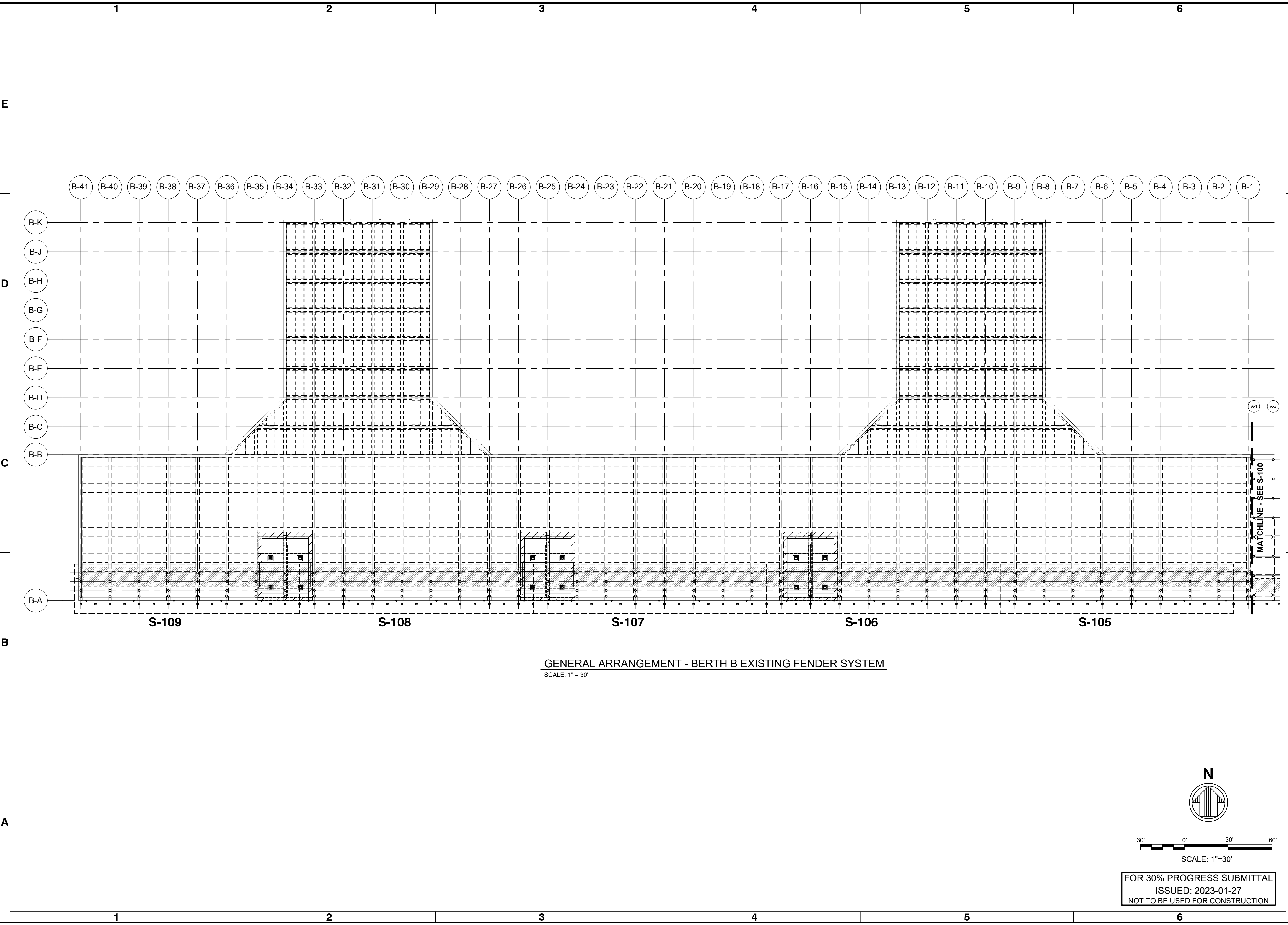
Designed by:	SB	Date:	2022-12-09	Rev:	A
Drawn by:	JVD / DP	MAN Project No.:	221760		
Reviewed by:	SB	Drawing code:			
Submitted by:	SCOTT BRANLIND MOFFATT & NICHOL	Drawing Scale:	1" = 30'		(0 SHEET)

600 UNIVERSITY ST  
SUITE 400  
SEASIDE, WA 98101  
(206) 622-0222

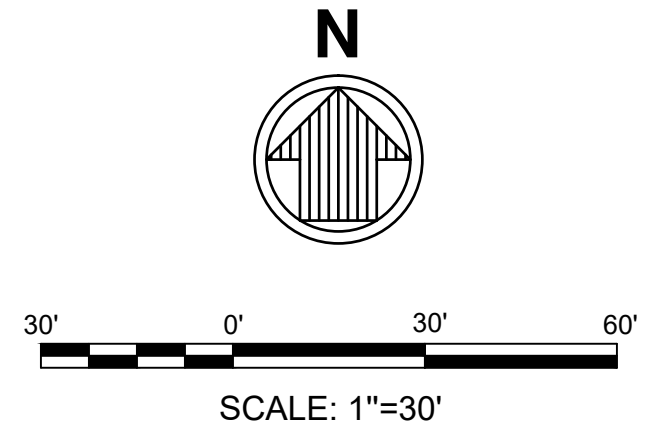


SEAL

Sheet Reference No.  
**S-104**  
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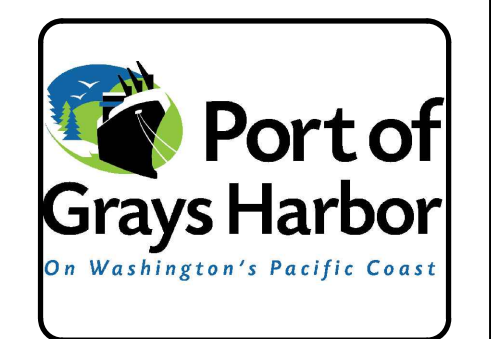
**GENERAL ARRANGEMENT - BERTH B EXISTING FENDER SYSTEM**  
SCALE: 1" = 30'



FOR 30% PROGRESS SUBMITTAL  
ISSUED: 2023-01-27  
NOT TO BE USED FOR CONSTRUCTION



File: I:\mre.net\projects\SEA\21780120\CADD\Activel\_Port of Grays Harbor T4 Dock Upgrades - Fender System Layouts\221780\_S-105 - Platent - 1/26/2023 12:13 PM by PENNA, DANIEL - Saved: 1/23/2023 9:20 AM by DRENA



Rev.	Date	Description
A	2023-01-27	ISSUED FOR 30% REVIEW

**PORT OF GRAYS HARBOR T4 DOCK UPGRADES  
FENDER SYSTEM LAYOUTS**

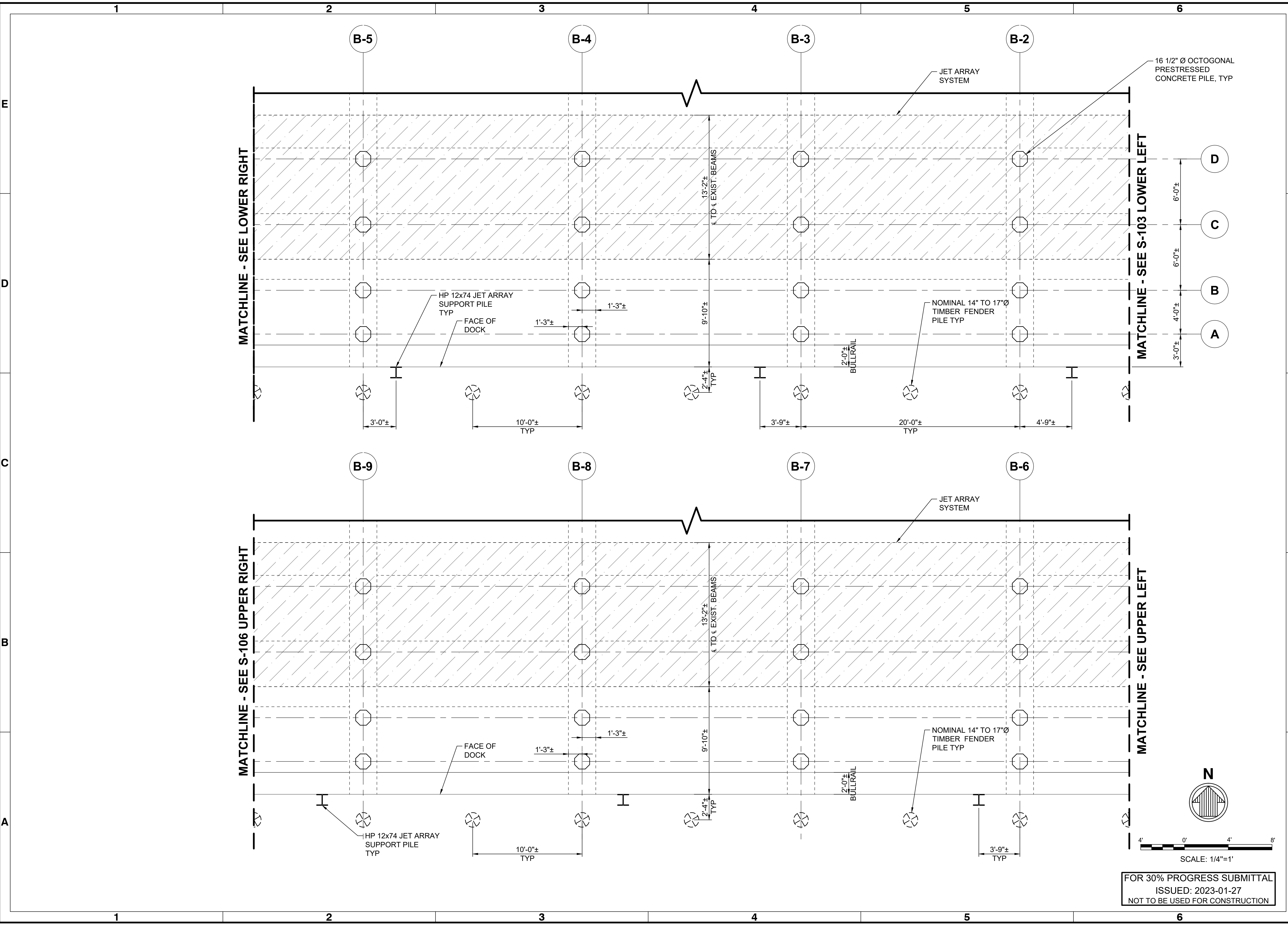
**BERTH B EXISTING CONDITIONS &  
DEMOLITION - SHEET 1**

Designed by:	SB	Date:	2022-12-09	Rev:	A
Drawn by:	JVD/DP	M&N Project No.:	221780	Drawn by:	SB
Reviewed by:	SB	Submitted by:	SCOTT BRANLIND MOFFATT & NICHOL	Per scale:	1:1 (0 SHEET)

600 UNIVERSITY ST  
SUITE 400  
SEASIDE, WA 98101  
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SEAL

Sheet Reference No.  
**S-105**  
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ISSUED: 2023-01-27  
NOT TO BE USED FOR CONSTRUCTION

DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING

File: \\hmc\projects\SEA\21780120\CADD\Aerial\_Port\_of\_Grays\_Harbor\_T4\_Dock\_Upgrade - Fender System Layouts\221780\_S-106 - Platent\_1282023 12:14 PM by PENVA, DANIEL, Saved: 12/23/2023 9:48 AM by DRENA



Rev.	Date	Description
A	2023-01-27	ISSUED FOR 30% REVIEW

**PORT OF GRAYS HARBOR T4 DOCK UPGRADES  
FENDER SYSTEM LAYOUTS**

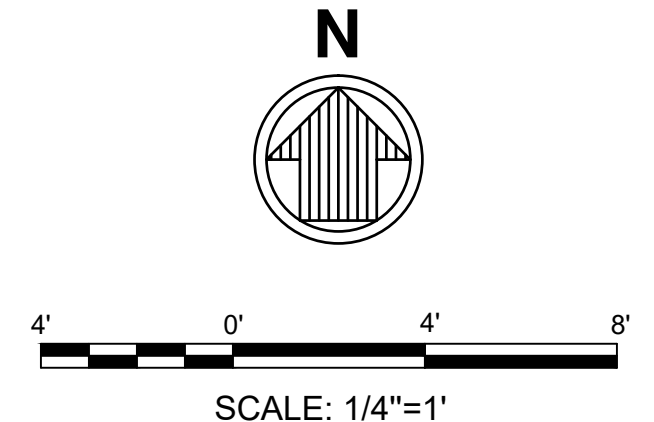
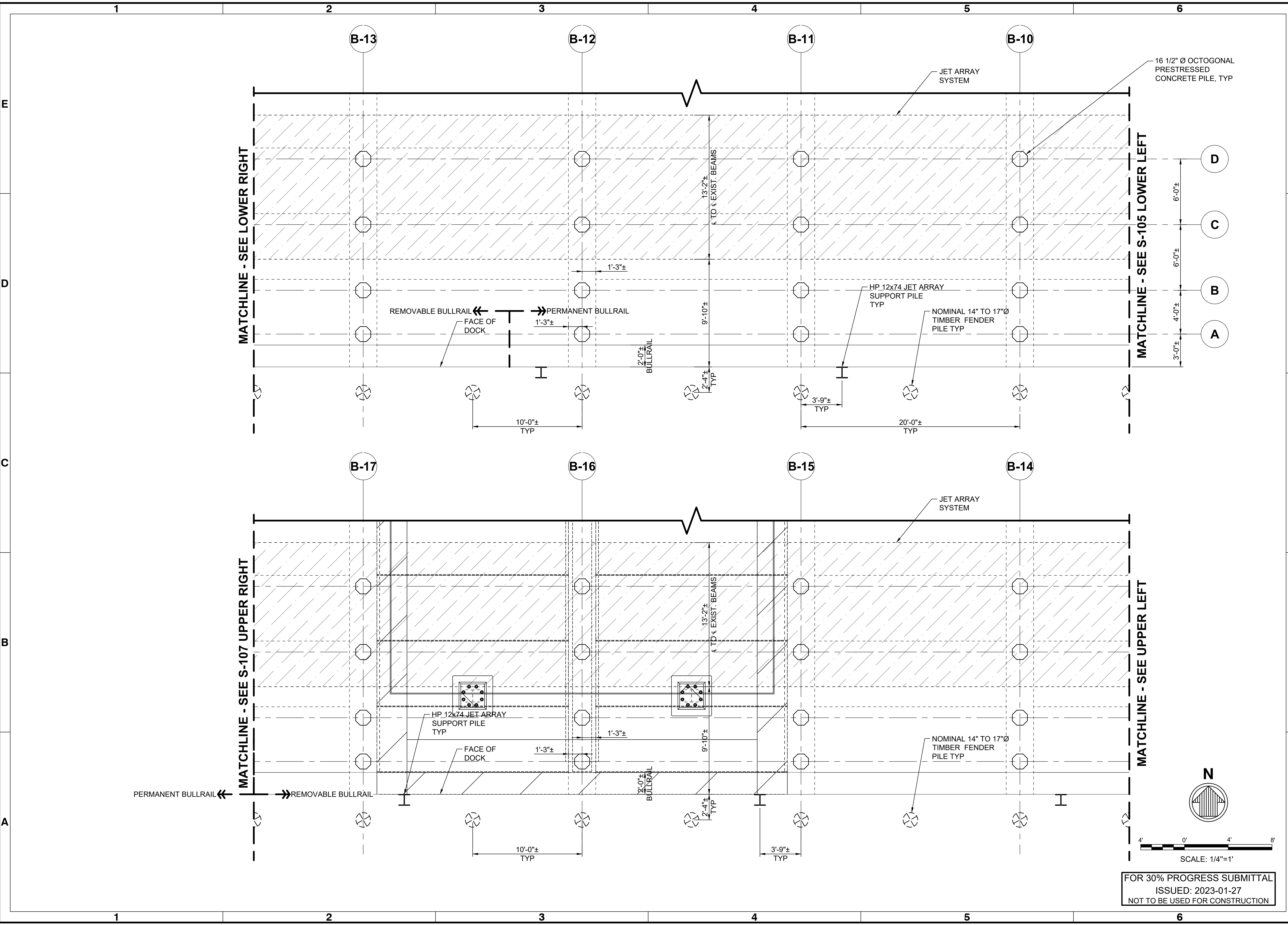
**BERTH B EXISTING CONDITIONS & DEMOLITION  
SHEET 2**

Designed by: SB	Date: 2022-12-09	Rev. A
Drawn by: JVD/DP	M&N Project No. 221780	
Reviewed by: SB	Drawing code:	
Submitted by: SCOTT BRANLIND MOFFATT & NICHOL	Drawing Scale: Per Scale: 1" = 10' (SHEET)	

600 UNIVERSITY ST  
SUITE 400  
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(206) 622-0222

SEAL

Sheet Reference No.  
**S-106**  
INDEX: 11 OF 34



**FOR 30% PROGRESS SUBMITTAL**  
ISSUED: 2023-01-27  
NOT TO BE USED FOR CONSTRUCTION

DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING

File: I:\mre.net\projects\SEA\21780120\CADD\A\Berth B Existing Conditions - Fender System Layouts\217801\_S-107 - Platent - 1/26/2023 12:14 PM by PENVA, DANIEL, Saved: 1/23/2023 9:27 AM by DRENA

Mark	Description	Date	Appr.
A	ISSUED FOR 30% REVIEW	2023-01-27	SB

**PORT OF GRAYS HARBOR T4 DOCK UPGRADES  
FENDER SYSTEM LAYOUTS**

**BERTH B EXISTING CONDITIONS &  
DEMOLITION - SHEET 3**

Designed by:	SB	Date:	2022-12-09	Rev:	A
Drawn by:	JVD / DP	M&N Project No.:	221760	Drawn by:	SB
Reviewed by:	SB	Reviewed by:		Drawing code:	
Submitted by:	SCOTT BRANLIND MOFFATT & NICHOL	Submitted by:		Drawing Scale:	1:1 (0 SHEET)

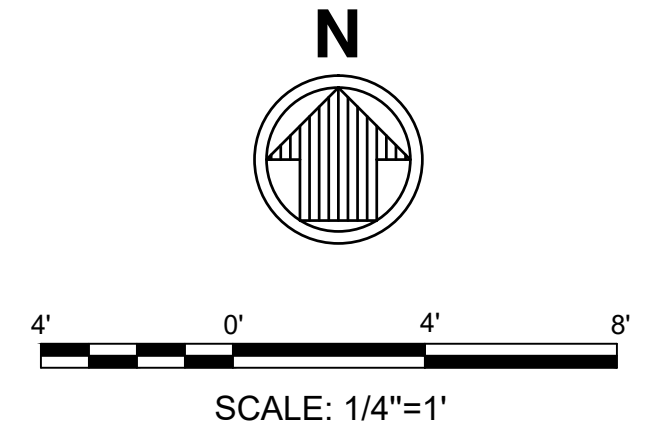
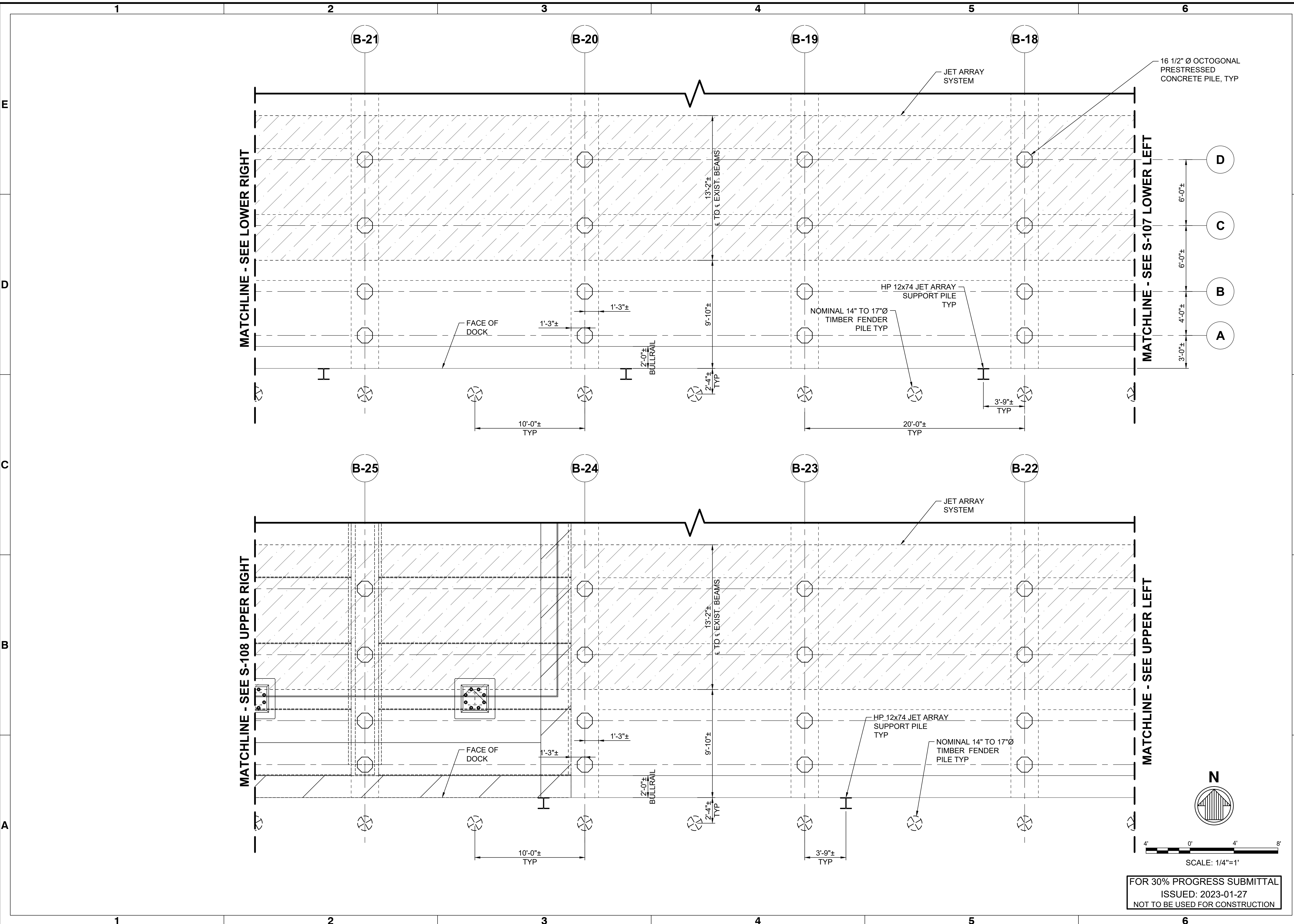
600 UNIVERSITY ST  
SUITE 400  
SEASIDE, WA 98101  
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Sheet Reference No.  
**S-107**  
INDEX: 12 OF 34



FOR 30% PROGRESS SUBMITTAL  
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File: I:\mre.net\projects\SEA\21780120\_CADD\A\Drawings\Port of Grays Harbor T4 Dock Upgrades - Fender System Layouts\221780\_S-108 - Platent - 1/26/2023 12:16 PM by PENNA, DANIEL - Saved: 1/23/2023 9:28 AM by DRENA



Rev.	Date	Description
A	2023-01-27	ISSUED FOR 30% REVIEW
SB		

**PORT OF GRAYS HARBOR T4 DOCK UPGRADES  
FENDER SYSTEM LAYOUTS**

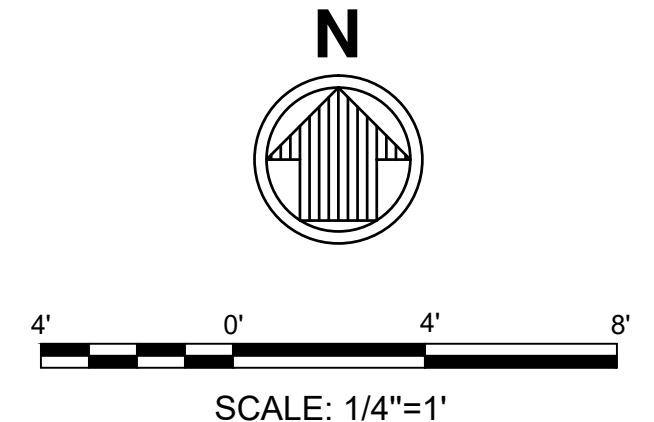
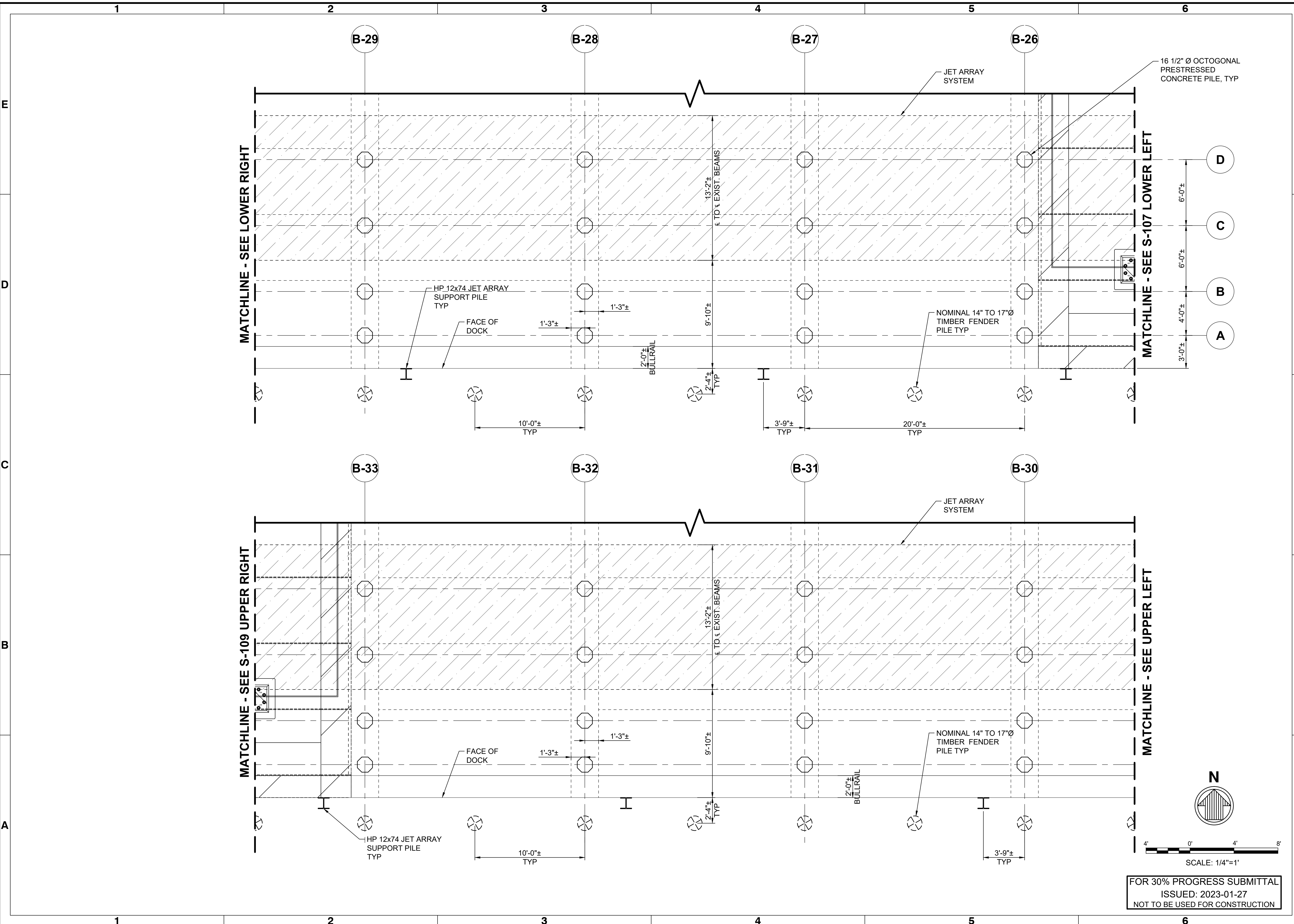
**BERTH B EXISTING CONDITIONS &  
DEMOLITION - SHEET 4**

Designed by:	SB	Date:	2022-12-09	Rev:	A
Drawn by:	JVD / DP	MAN Project No.:	221780		
Reviewed by:	SB	Drawing code:			
Submitted by:	SCOTT BRANLIND MOFFATT & NICHOL	Drawing Scale:	1:1 (0 SHEET)		

600 UNIVERSITY ST  
SUITE 400  
SEASIDE, WA 98101  
(206) 622-0222

SEAL

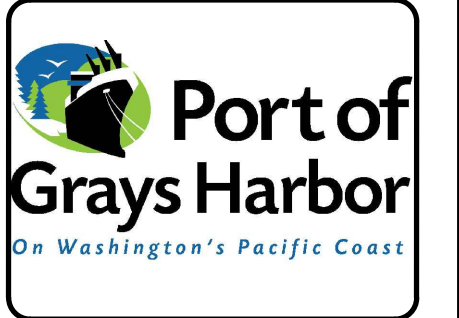
Sheet Reference No.  
**S-108**  
INDEX: 13 OF 34



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NOT TO BE USED FOR CONSTRUCTION

DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING

File: \\imre.net\projects\SEA\21760120\_CADD\Active\_Port of Grays Harbor T4 Dock Upgrades - Fender System Layouts\221760\_S-108 - Platent\_1/26/2023 12:16 PM by PENNA, DANIEL - Saved: 1/23/2023 9:29 AM by DRENA



Rev.	Date	Appr.
A	2023-01-27	SB

**PORT OF GRAYS HARBOR T4 DOCK UPGRADES  
FENDER SYSTEM LAYOUTS**

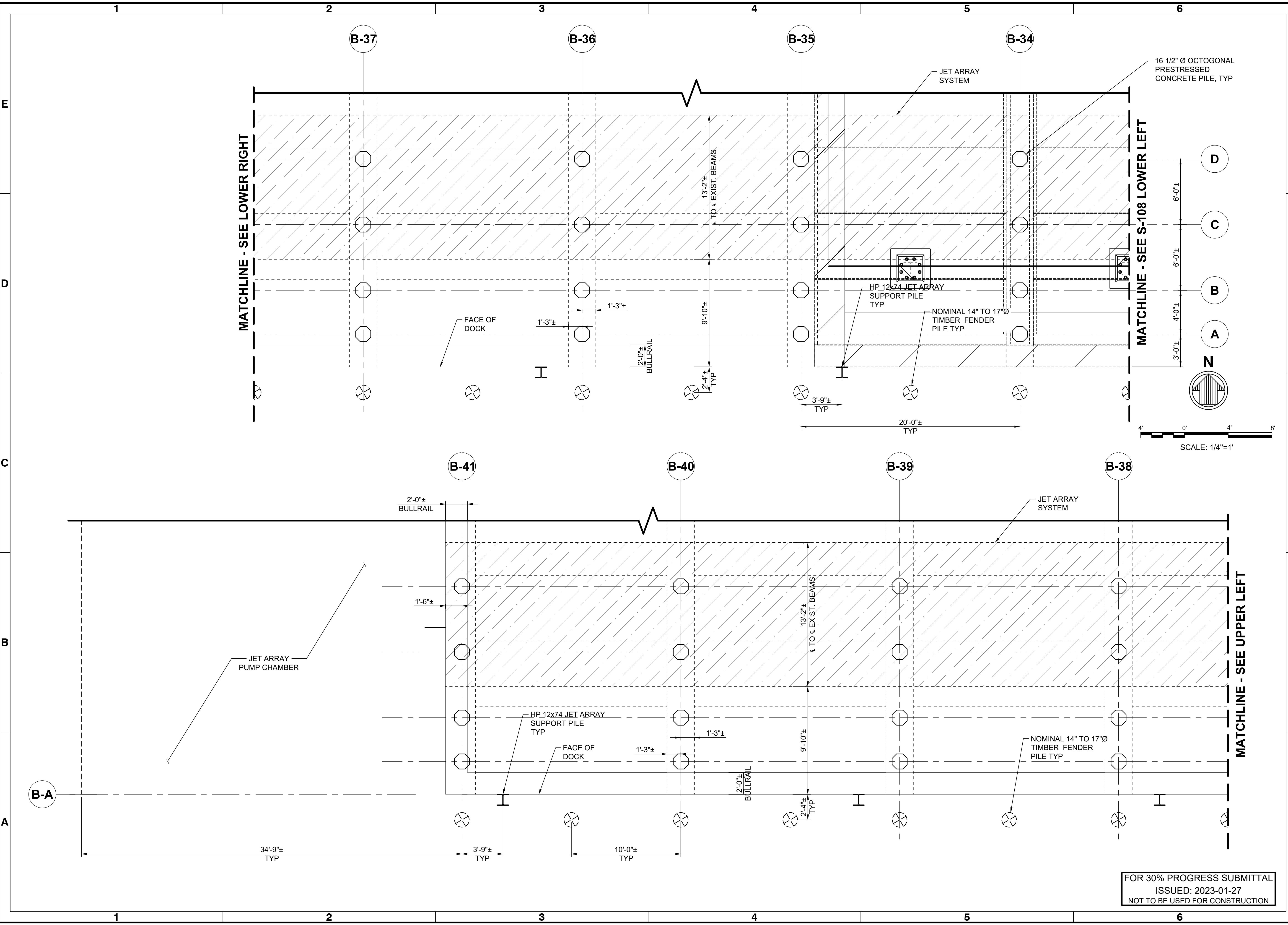
**BERTH B EXISTING CONDITIONS &  
DEMOLITION - SHEET 5**

Designed by:	SB	Date:	2022-12-09	Rev:	A
Drawn by:	JVD/DP	MAN Project No.:	221760	Drawn by:	SB
Reviewed by:	SB	Drawing code:		Submitted by:	SCOTT BRANLIND MOFFATT & NICHOL
Drawing Scale:			Per scale: 1:1 (0 SHEET)		

600 UNIVERSITY ST  
SUITE 400  
SEASIDE, WA 98101  
(206) 622-0222

SEAL

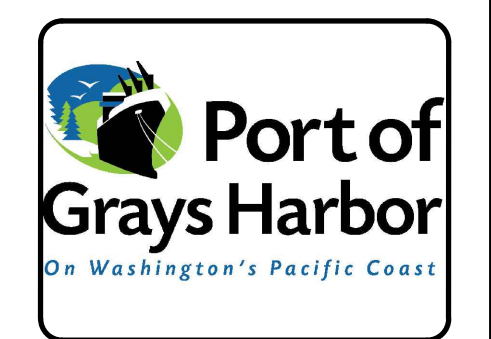
Sheet Reference No.  
**S-109**  
INDEX: 14 OF 34



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ISSUED: 2023-01-27  
NOT TO BE USED FOR CONSTRUCTION

DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING

File: I:\mre\projects\SEA\21780120\CADD\Active\_Port of Grays Harbor T4 Dock Upgrades - Fender System Layouts\217801\_S-200 - Plotted - 1/26/2023 12:16 PM by PENVA, DANIEL, Saved: 1/23/2023 9:44 AM by DREWA



Mark	Description	Date	Appr.
A	ISSUED FOR 30% REVIEW	2023-01-27	

**PORT OF GRAYS HARBOR T4 DOCK UPGRADES  
FENDER SYSTEM LAYOUTS**

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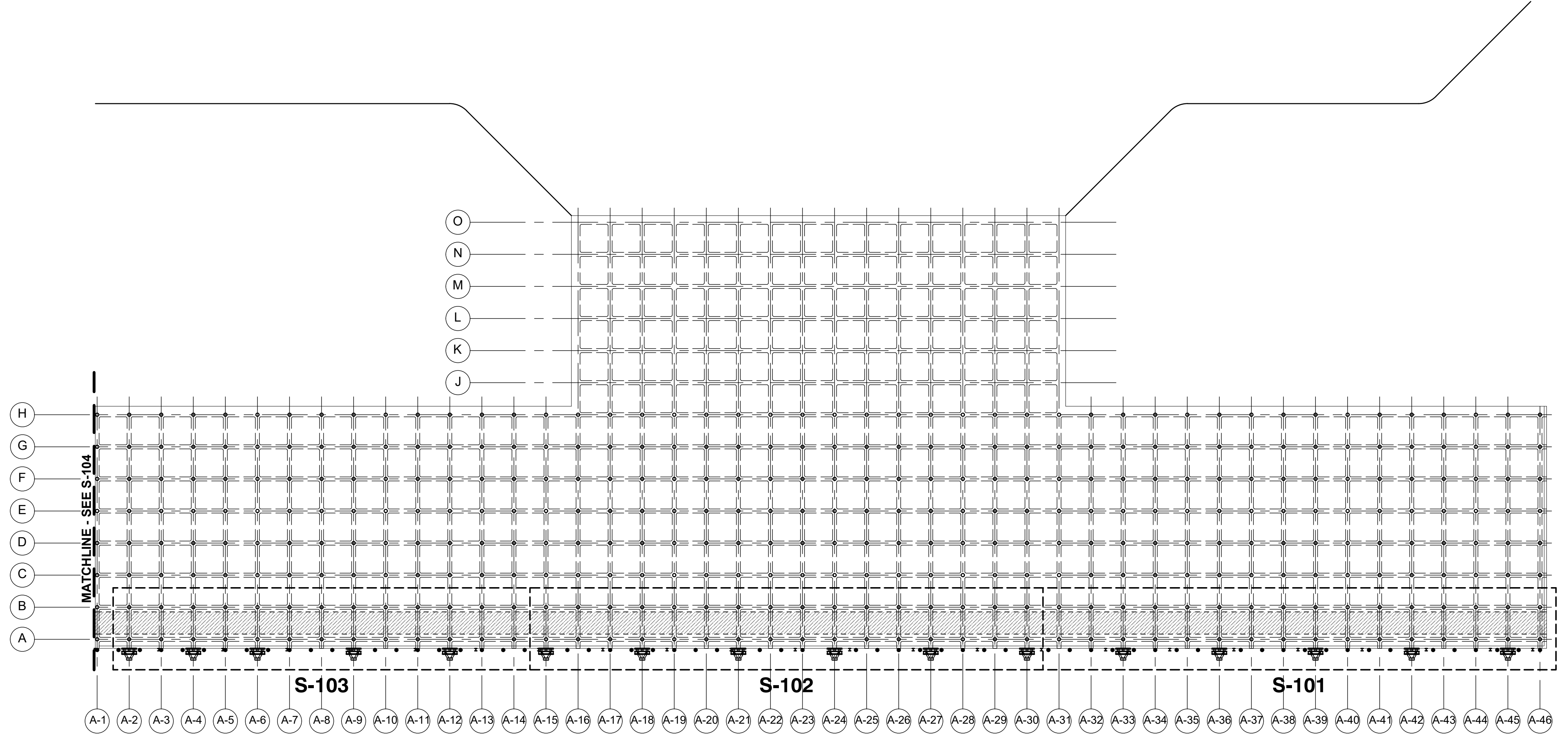
**GENERAL - BERTH  
ARRANGEMENT - BERTH  
A FENDER SYSTEM**

Designed by: SB	Date: 2022-12-09	Rev: A
Drawn by: JVD / DP	M&N Project No. 221760	
Reviewed by: SB	Drawing code:	
Submitted by: SCOTT BRANLIND MOFFATT & NICHOL	Drawing Scale: Per Scale: 1" = (0 SHEET)	

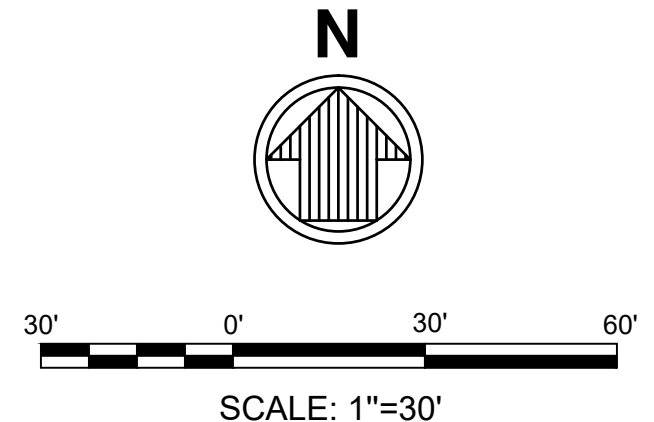
600 UNIVERSITY ST  
SUITE 400  
SEASIDE, WA 98101  
(206) 622-0222

SEAL

Sheet Reference No.  
**S-200**  
INDEX: 15 OF 34

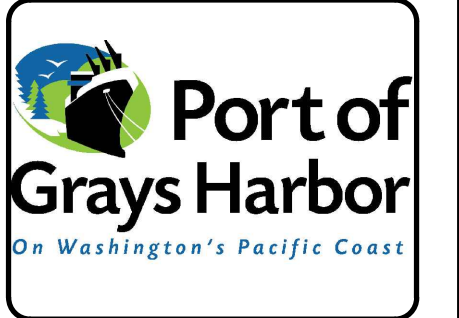


**GENERAL ARRANGEMENT - BERTH A FENDER SYSTEM**  
SCALE: 1" = 30'



FOR 30% PROGRESS SUBMITTAL  
ISSUED: 2023-01-27  
NOT TO BE USED FOR CONSTRUCTION

File: I:\mre\projects\SEA\21780120\CADD\Aerial\_Port of Grays Harbor T4 Dock Upgrades - Fender System Layouts\217801\_2-201\_1-Platent\_12/16/23 12:16 PM by PENVA, DANIEL, Saved: 1/23/2023 2:12 PM by DEENA



Rev.	Date	Description
A	2023-01-27	ISSUED FOR 30% REVIEW

**PORT OF GRAYS HARBOR T4 DOCK UPGRADES  
FENDER SYSTEM LAYOUTS**

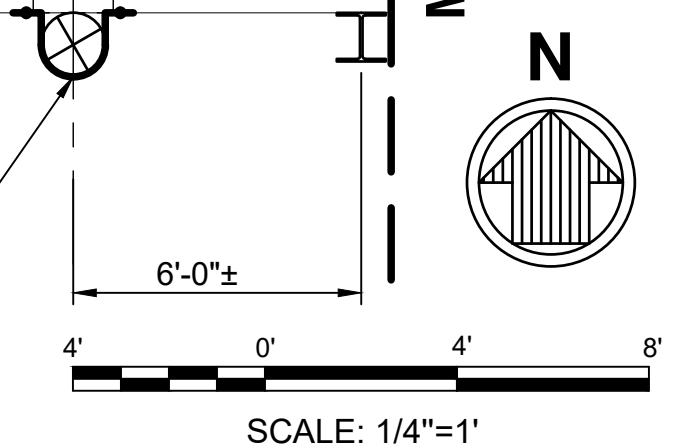
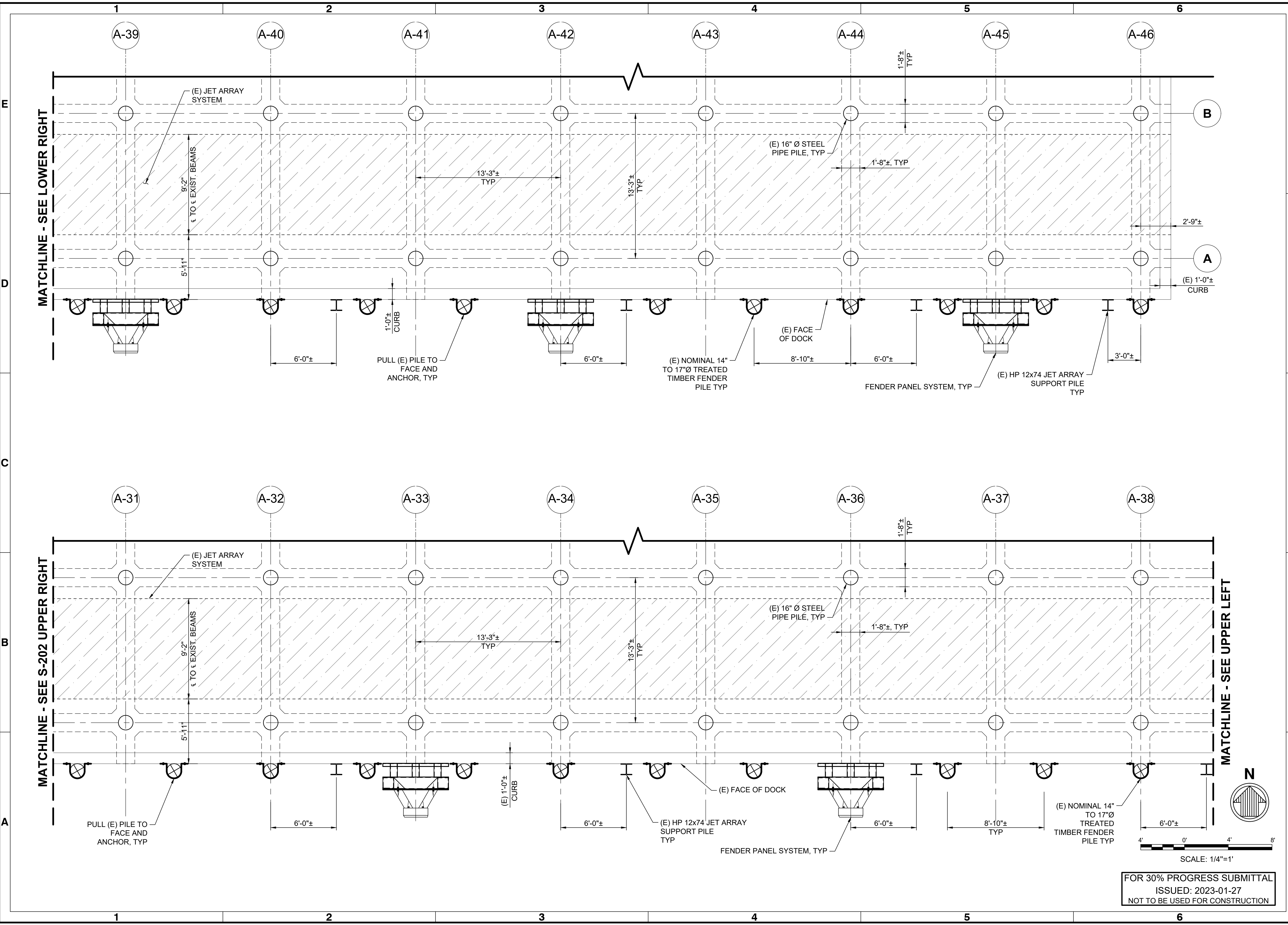
**BERTH A FENDER SYSTEM - SHEET 1**

Designed by:	SB	Date:	2022-12-09	Rev:	A
Drawn by:	JVD/DP	M&N Project No.:	221760		
Reviewed by:	SB	Drawing code:			
Submitted by:	SCOTT BRANLIND MOFFATT & NICHOL	Per scale:	1:1 (0 SHEET)		

600 UNIVERSITY ST  
SUITE 100  
SEASIDE, WA 98101  
(206) 622-0222

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Sheet Reference No.  
**S-201**  
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ISSUED: 2023-01-27  
NOT TO BE USED FOR CONSTRUCTION

DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING

File: I:\mre\projects\SEA\21780120\_CADD\Active\_Port of Grays Harbor T4 Dock Upgrades - Fender System Layouts\21780\_S-202 - Plotted - 1/28/2023 12:17 PM by PENNA, DANIEL - Saved: 1/23/2023 2:12 PM by DEENA



Mark	Description	Date	Appr.
A	ISSUED FOR 30% REVIEW	2023-01-27	SB

**PORT OF GRAYS HARBOR T4 DOCK UPGRADES  
FENDER SYSTEM LAYOUTS**

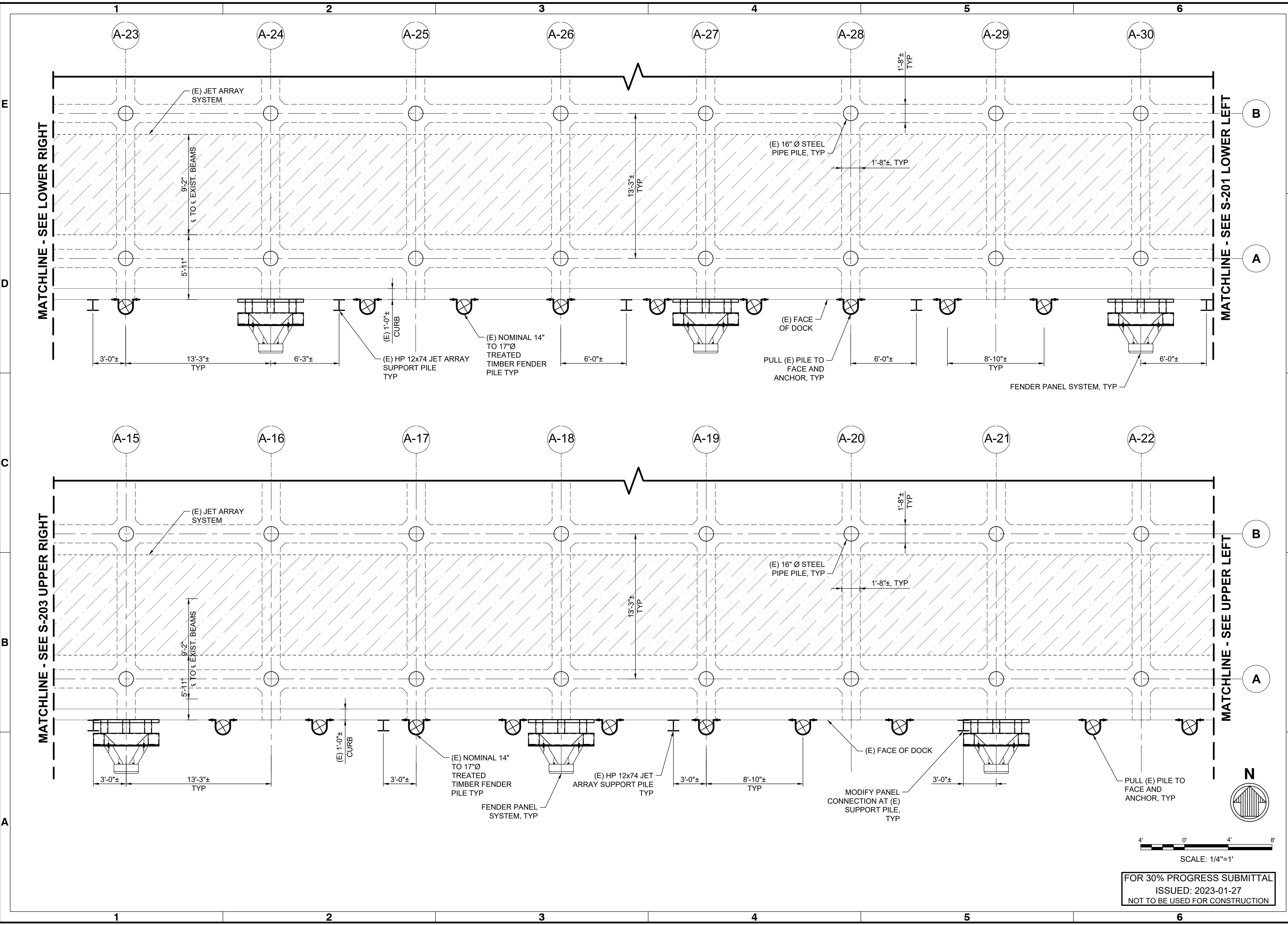
**BERTH A FENDER SYSTEM - SHEET 2**

Designed by:	SB	Date:	2022-12-09
Drawn by:	JVD/DP	M&N Project No.:	221760
Reviewed by:	SB	Drawing code:	
Submitted by:	SCOTT BRANLUND MOFFATT & NICHOL	Drawing Scale:	Per scale: 1" = (0 SHEET)

600 UNIVERSITY ST  
SUITE 400  
SEASIDE, WA 98101  
(206) 622-0222

SEAL

Sheet Reference No.  
**S-202**  
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SCALE: 1/4"=1'

FOR 30% PROGRESS SUBMITTAL  
ISSUED: 2023-01-27  
NOT TO BE USED FOR CONSTRUCTION

DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING



File: I:\mre\projects\SEA\21780120\CADD\Activel\_Port of Grays Harbor T4 Dock Upgrades - Fender System Layouts\221780\_S-203 - Platent - 1/26/2023 12:17 PM by PENVA, DANIEL, Saved: 1/23/2023 11:27 AM by DPENA

Rev.	Date	By	Description
A	2023-01-27	SB	ISSUED FOR 30% REVIEW

PORT OF GRAYS HARBOR T4 DOCK UPGRADES  
FENDER SYSTEM LAYOUTS

BERTH A FENDER SYSTEM - SHEET 3

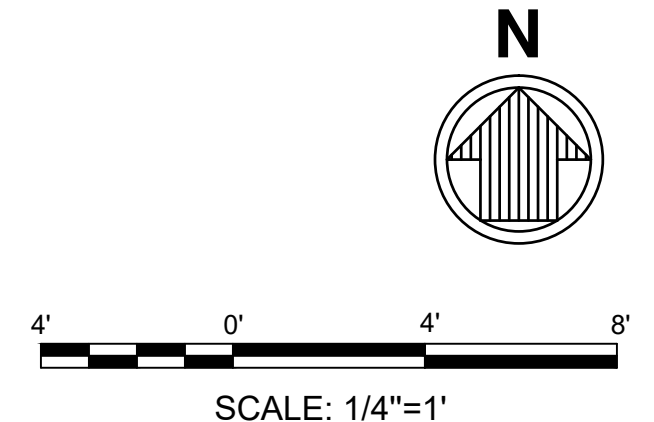
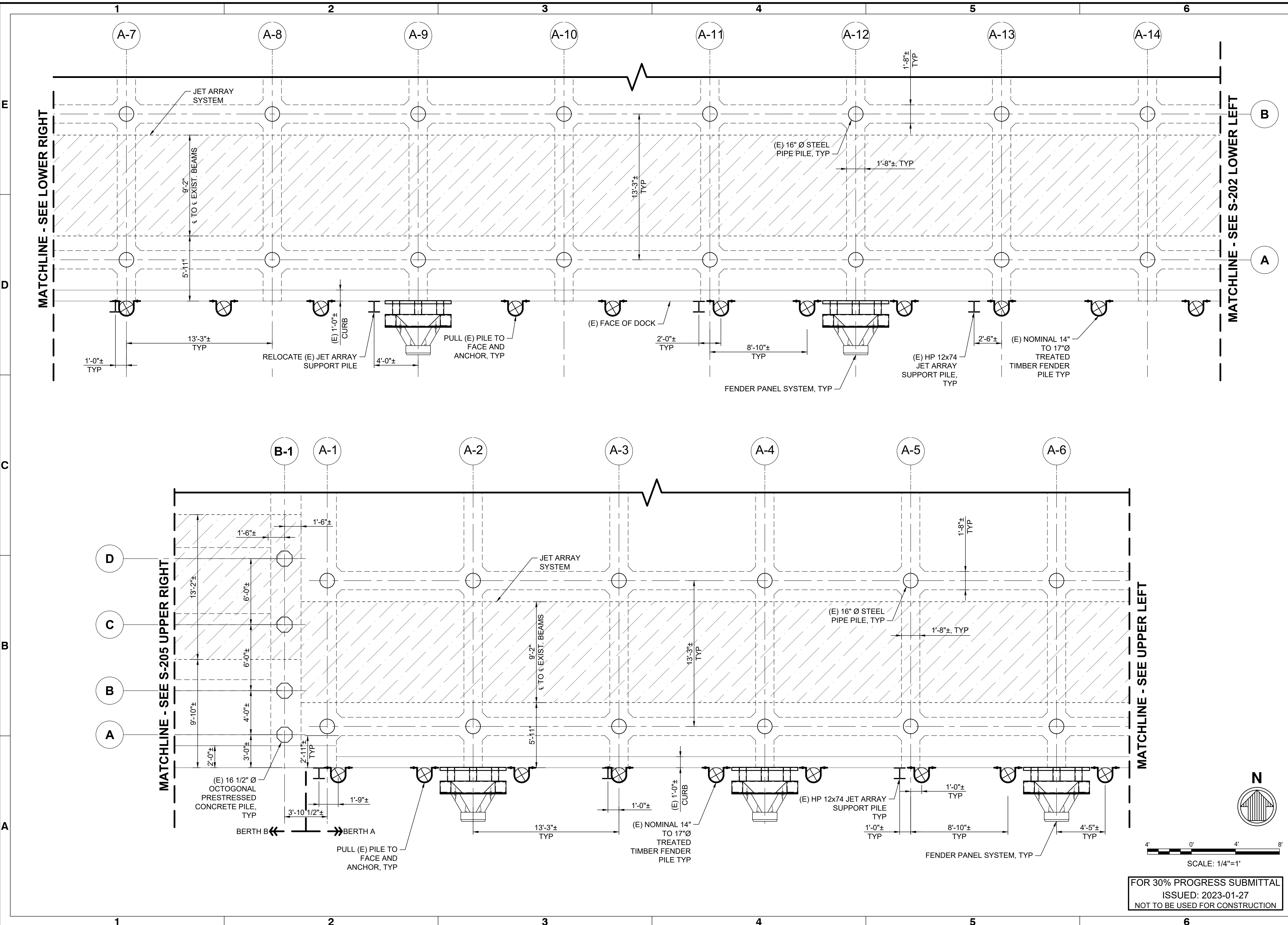
Designed by:	SB	Date:	2022-12-09
Drawn by:	JVD/DP	M&N Project No.:	221780
Reviewed by:	SB	Drawing code:	
Submitted by:	SCOTT BRANLIND MOFFATT & NICHOL	Per Scale:	1:1 (0 SHEET)

600 UNIVERSITY ST  
SUITE 100  
SEASIDE, WA 98101  
(206) 622-0222

**moffatt & nichol**

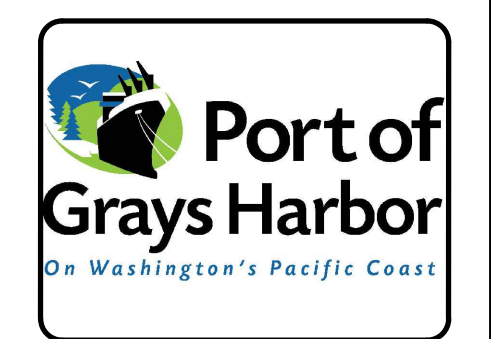
Sheet Reference No.  
**S-203**

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Mark	Description	Date	Appr.
A	ISSUED FOR 30% REVIEW	2023-01-27	SB

**PORT OF GRAYS HARBOR T4 DOCK UPGRADES  
FENDER SYSTEM LAYOUTS**

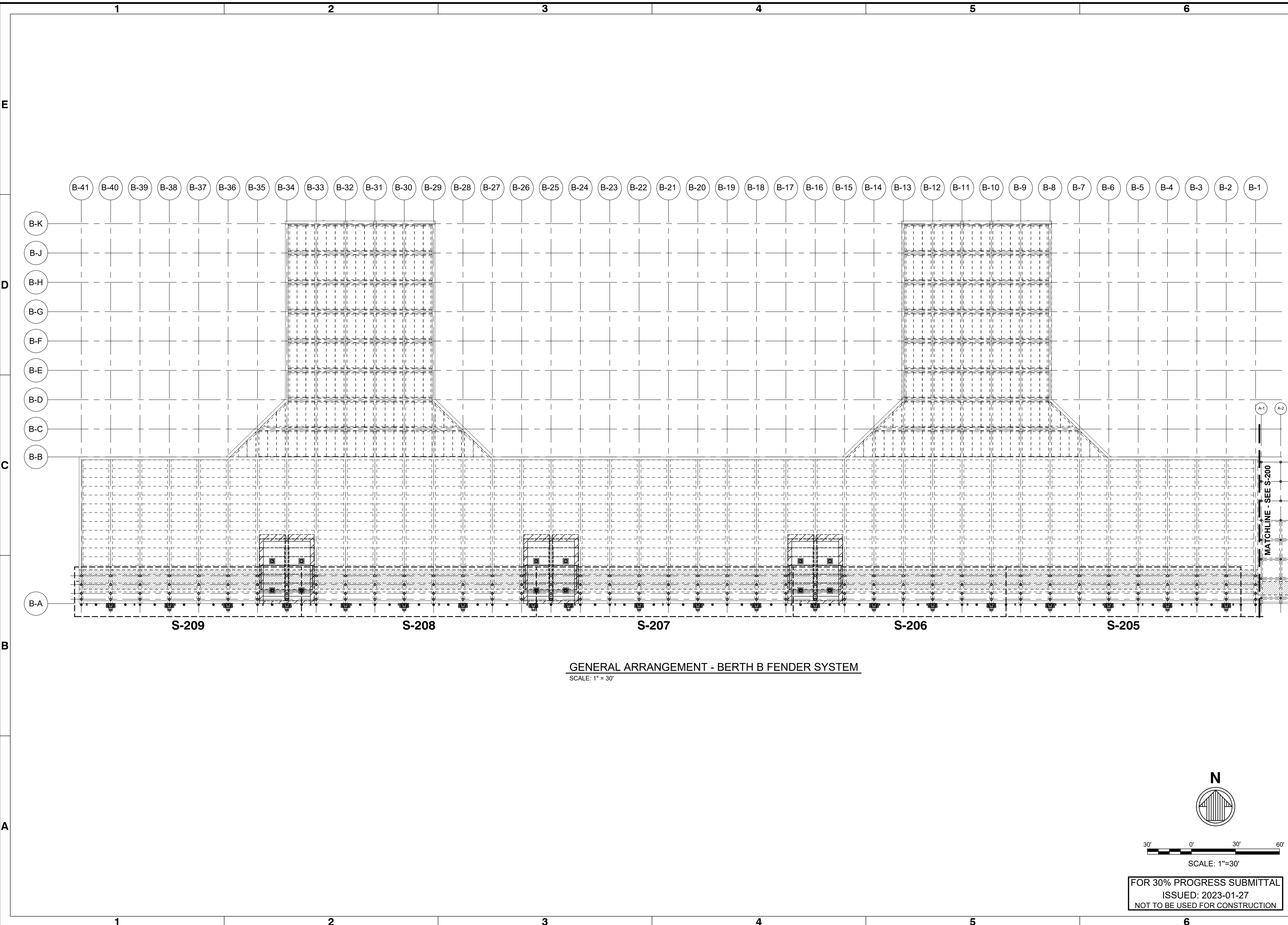
**GENERAL - BERTH  
ARRANGEMENT - BERTH  
B FENDER SYSTEM**

Designed by: SB	Date: 2022-12-09	Rev: A
Drawn by: JVD / DP	MAN Project No: 221760	
Reviewed by: SB	Drawing code:	
Submitted by: SCOTT BRANLIND MOFFATT & NICHOL	Drawing Scale: Per Scale: 1" = (0 SHEET)	

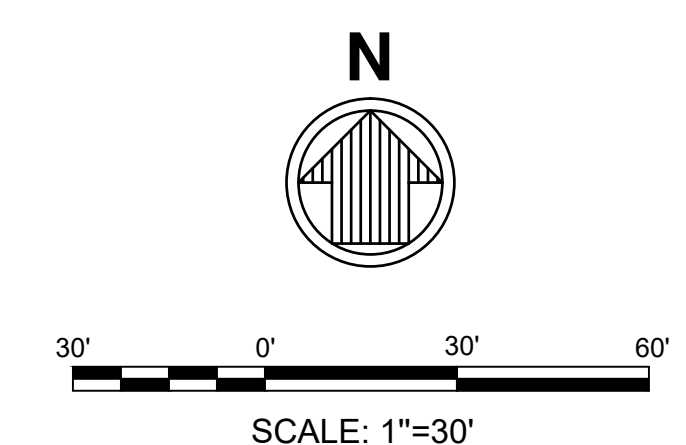
600 UNIVERSITY ST  
SUITE 400 08101  
SEASIDE, WA  
(206) 622-0222

SEAL

Sheet Reference No.  
**S-204**  
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**GENERAL ARRANGEMENT - BERTH B FENDER SYSTEM**  
SCALE: 1" = 30'



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File: I:\mre\projects\SEA\21780120\_CADD\A\livel\_Port of Grays Harbor T4 Dock Upgrades - Fender System Layouts\221780\_S-205 - Platent - 1/26/2023 12:18 PM by PENNA, DANIEL - Saved: 1/23/2023 2:10 PM by DRENA

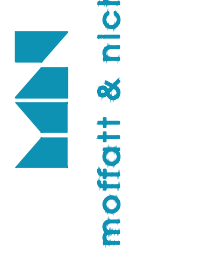
Rev.	Date	Description
A	2023-01-27	ISSUED FOR 30% REVIEW

**PORT OF GRAYS HARBOR T4 DOCK UPGRADES  
FENDER SYSTEM LAYOUTS**

**BERTH B FENDER SYSTEM - SHEET 1**

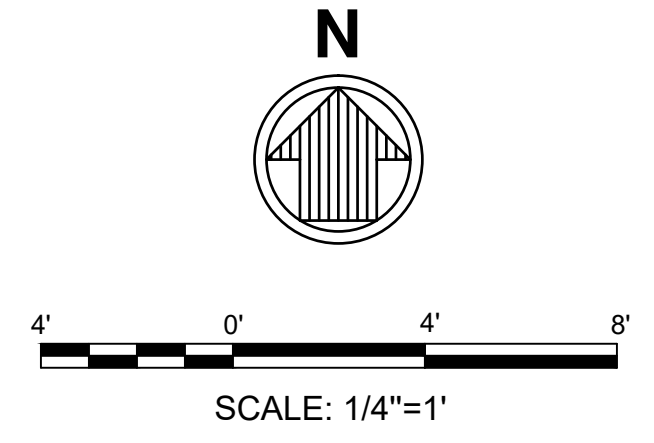
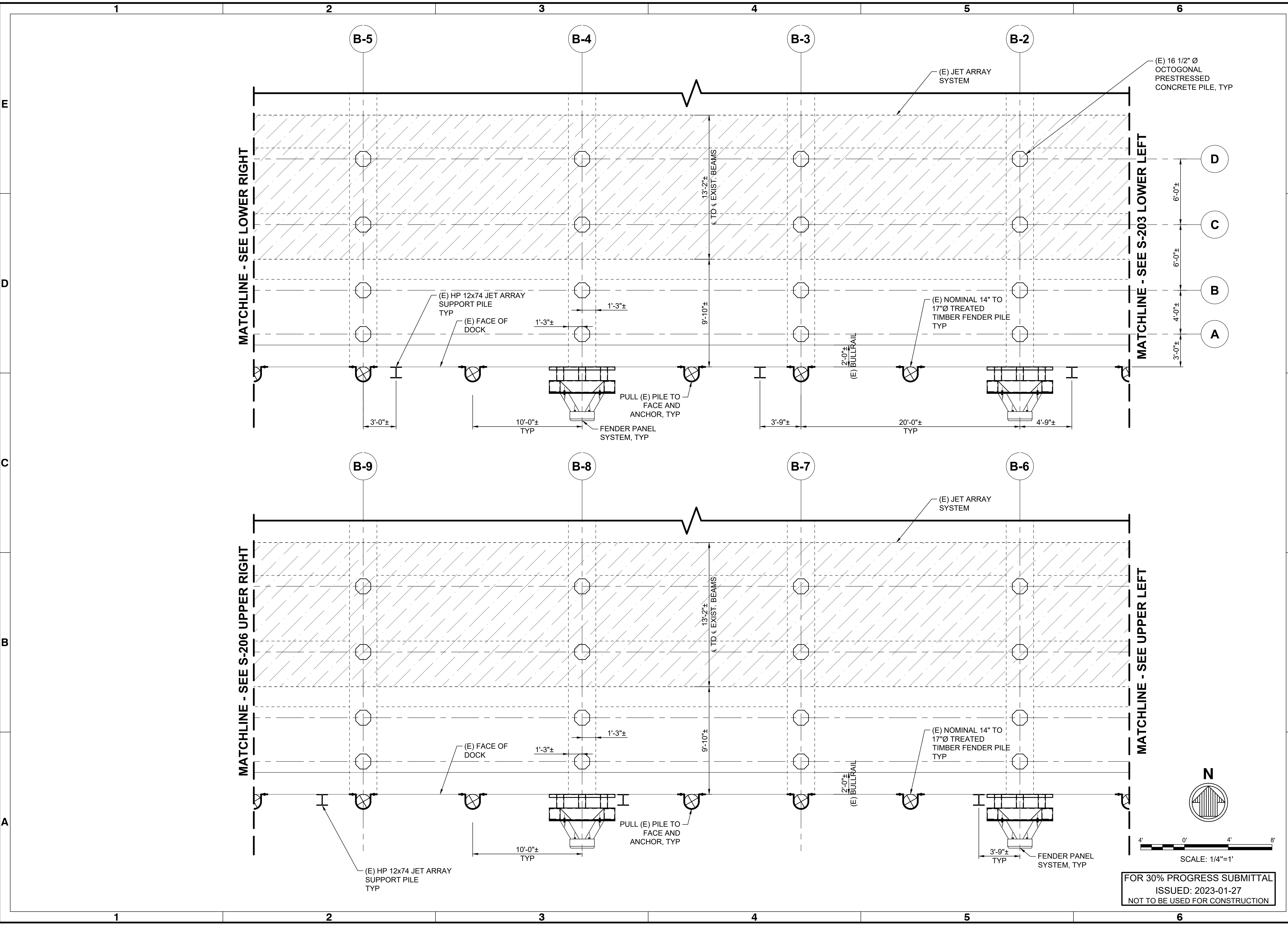
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Reviewed by:	SB	Drawing code:			
Submitted by:	SCOTT BRANLIND MOFFATT & NICHOL	Per scale:	1" = (0 SHEET)		

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SUITE 400  
SEASIDE, WA 98101  
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Sheet Reference No.  
**S-205**  
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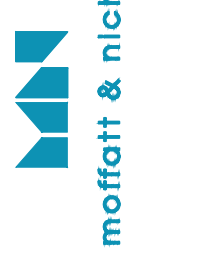
Rev.	Date	By	Description
A	2023-01-27	SB	ISSUED FOR 30% REVIEW

**PORT OF GRAYS HARBOR T4 DOCK UPGRADES  
FENDER SYSTEM LAYOUTS**

**BERTH B FENDER SYSTEM - SHEET 2**

Designed by:	SB	Date:	2022-12-09	Rev:	A
Drawn by:	JVD / DP	M&N Project No.:	221760	Drawn by:	SB
Reviewed by:	SB	Submitted by:	SCOTT ERANLIND MOFFATT & NICHOL	Drawing code:	
Submitted by:			Drawing Scale:		
MOFFATT & NICHOL			1" = 10' (SHEET)		

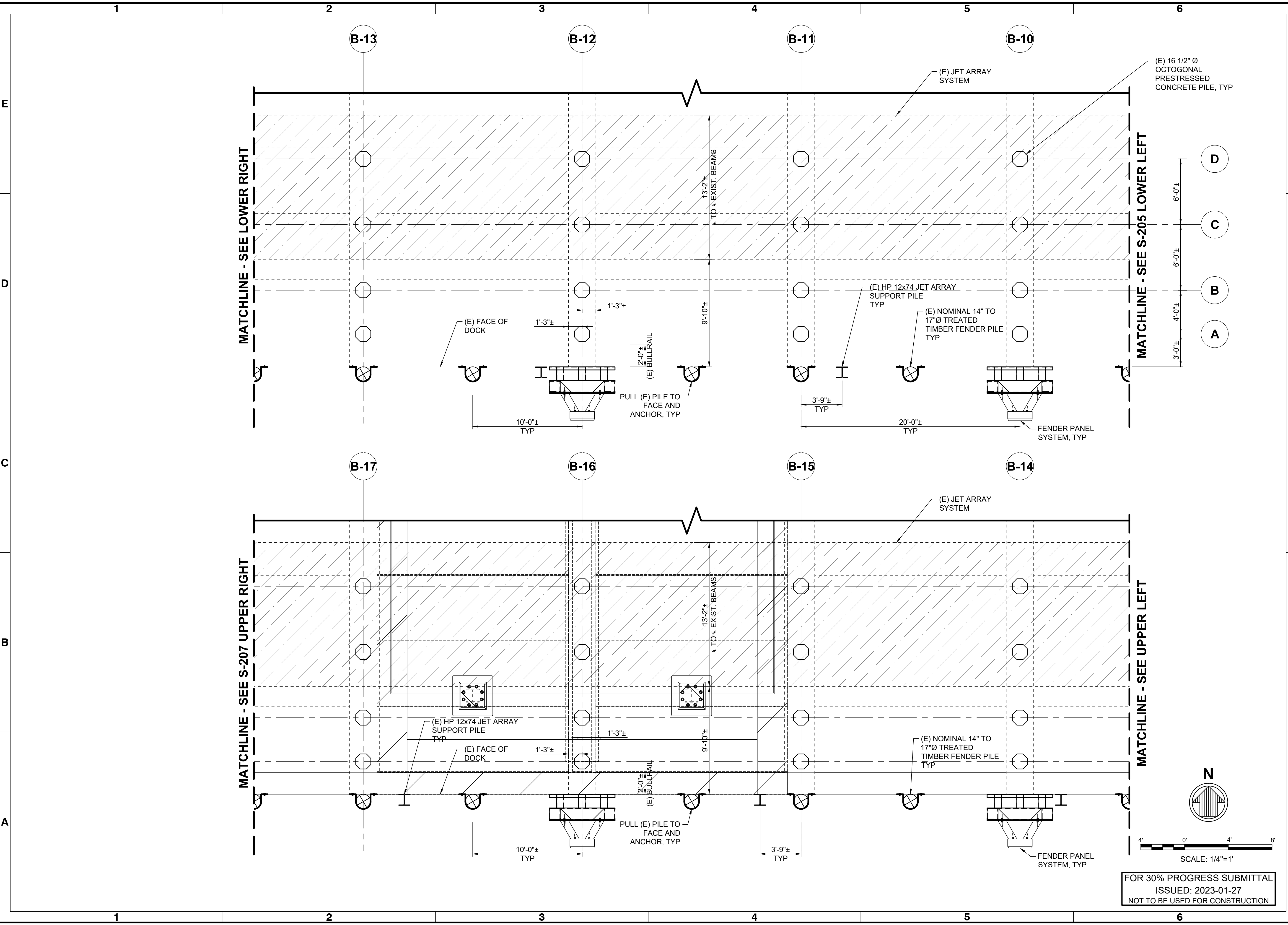
600 UNIVERSITY ST  
SUITE #901  
SEASIDE, WA 98101  
(206) 622-0222



**moffatt & nichol**

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Sheet Reference No.  
**S-206**  
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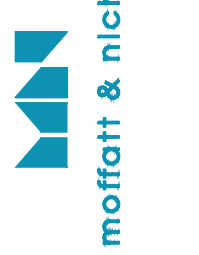
Rev.	Date	Description
A	2023-01-27	ISSUED FOR 30% REVIEW
SB		

**PORT OF GRAYS HARBOR T4 DOCK UPGRADES  
FENDER SYSTEM LAYOUTS**

**BERTH B FENDER SYSTEM - SHEET 3**

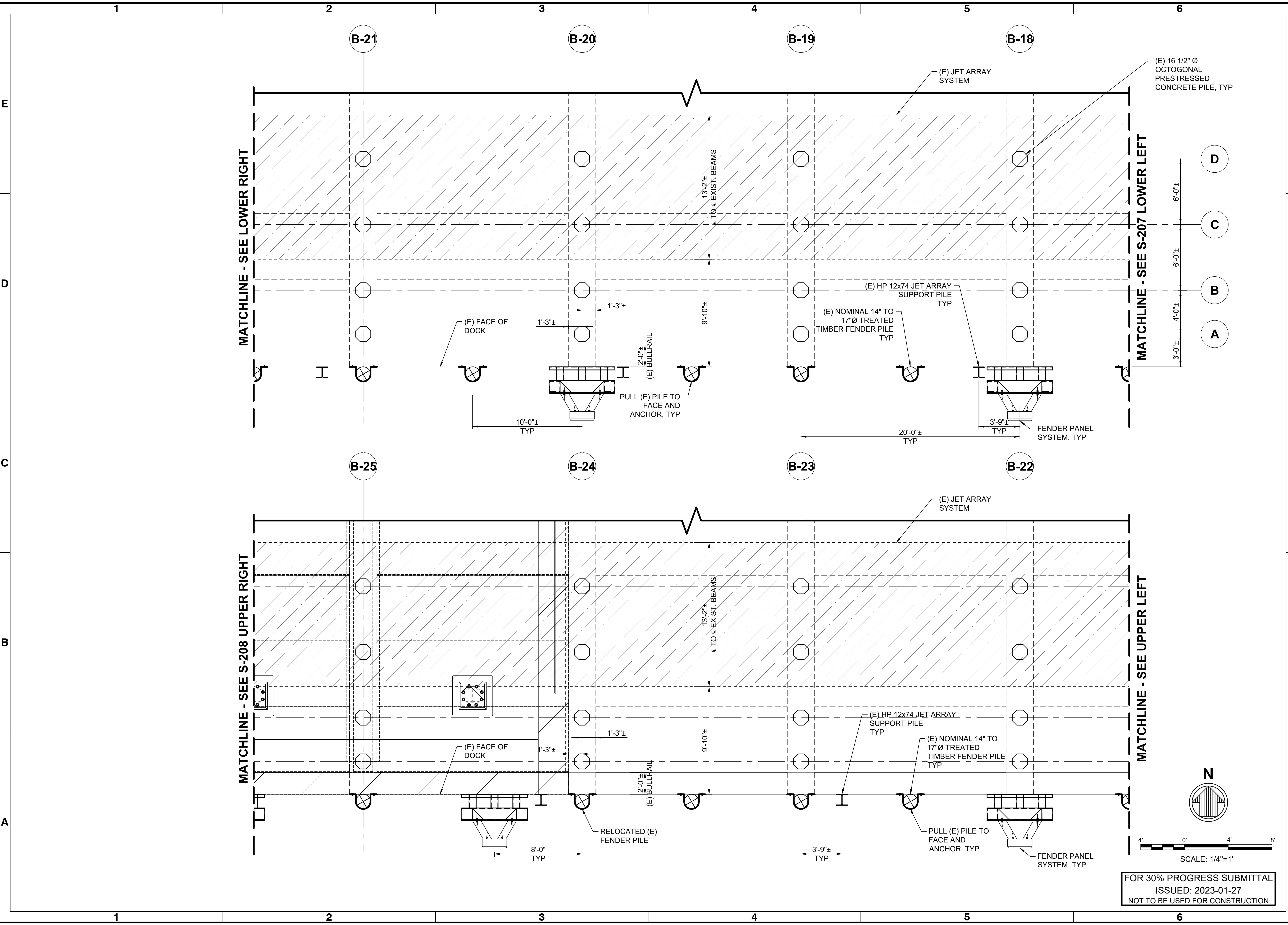
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Drawn by:	JVD / DP	M&N Project No.:	221760		
Reviewed by:	SB	Drawing code:			
Submitted by:	SCOTT BRANLIND MOFFATT & NICHOL	Per scale:	1" = 10' (0 SHEET)		

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SUITE 100  
SEASIDE, WA 98101  
(206) 622-0222



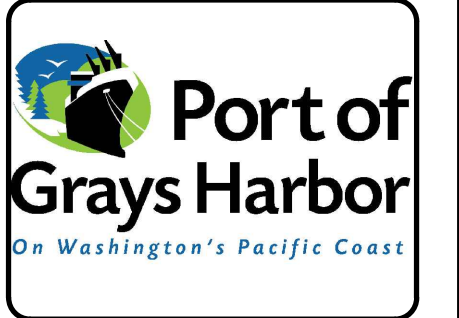
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Sheet Reference No.  
**S-207**  
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ISSUED: 2023-01-27  
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Rev.	Date	Description
A	2023-01-27	ISSUED FOR 30% REVIEW

PORT OF GRAYS HARBOR T4 DOCK UPGRADES  
FENDER SYSTEM LAYOUTS

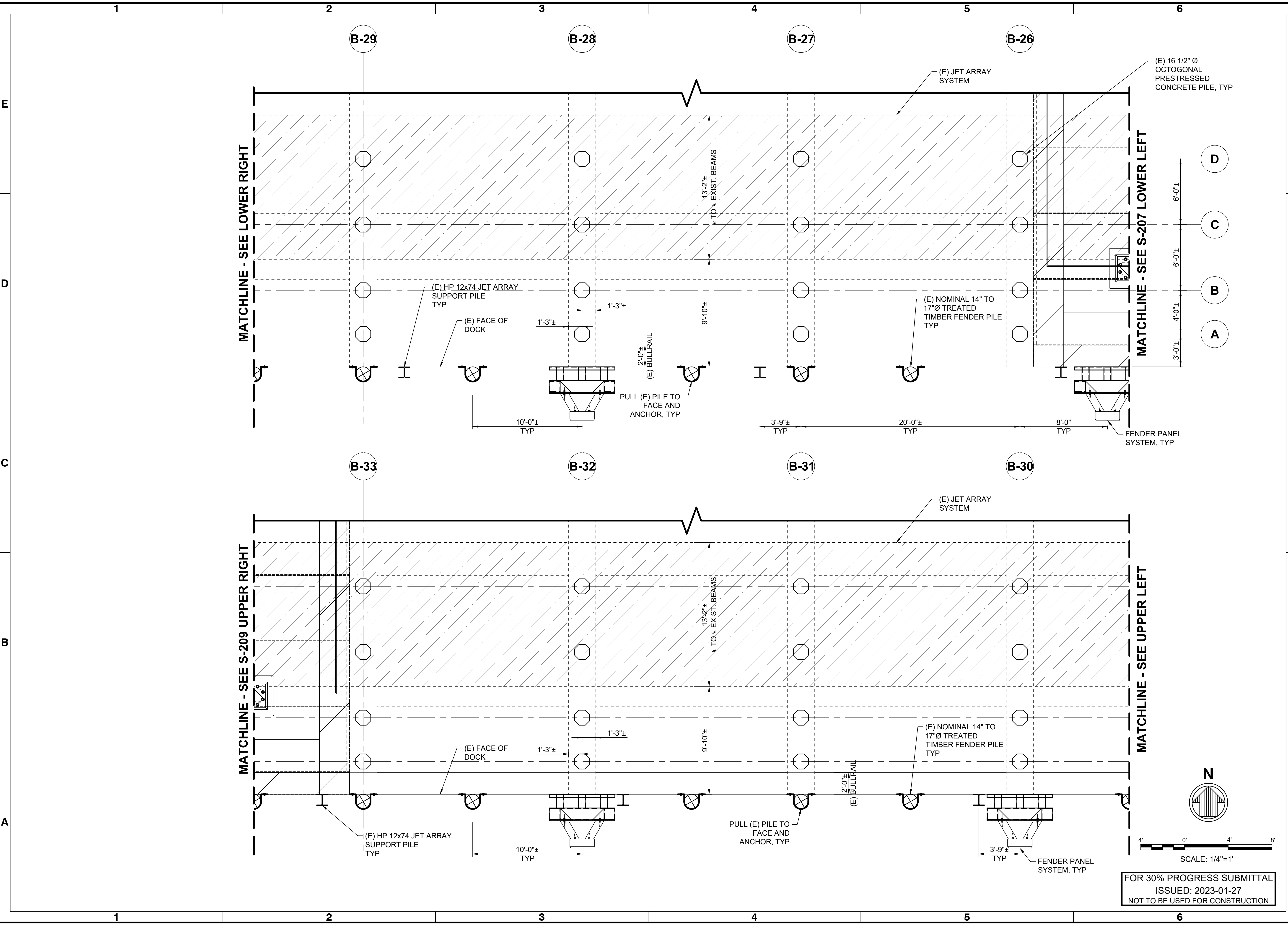
BERTH B FENDER SYSTEM - SHEET 4

Designed by	Date	Rev.
SB	2022-12-09	A
Drawn by	MAN Project No.	
JVD / DP	221760	
Checked by	SB	
Reviewed by	SB	
Submitted by	SCOTT BRANLIND	
	MOFFATT & NICHOL	
Per Scale:	1" = 10' (0 SHEET)	

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SUITE 400  
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Sheet Reference No.  
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DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING

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**PORT OF GRAYS HARBOR T4 DOCK UPGRADES  
FENDER SYSTEM LAYOUTS**

**BERTH B FENDER SYSTEM - SHEET 5**

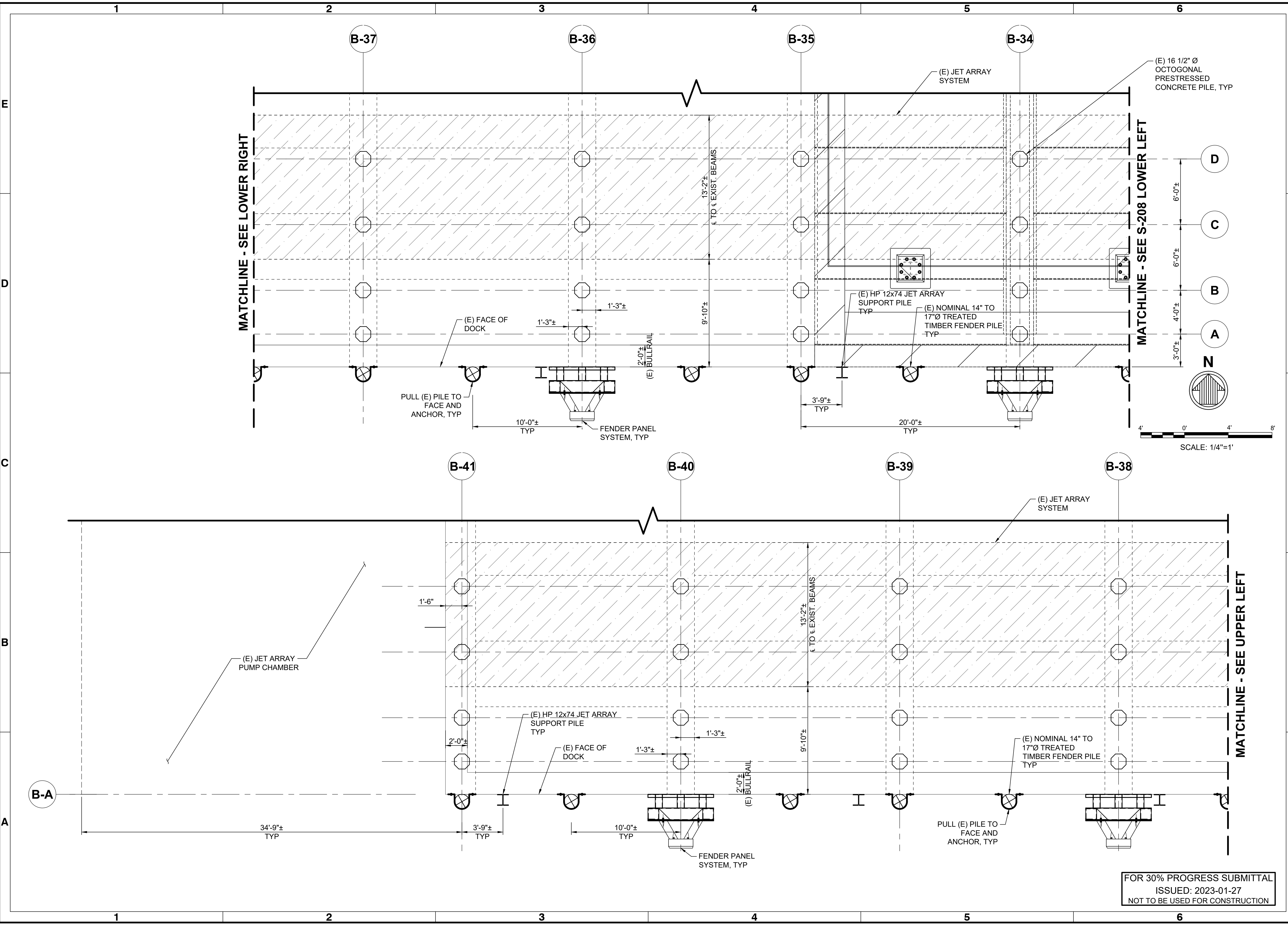
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Drawn by:	JVD/DP	M&N Project No.:	221760
Reviewed by:	SB	Drawing code:	
Submitted by:	SCOTT BRANLUND MOFFATT & NICHOL	Drawing Scale:	1" = 10' (0 SHEET)

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SUITE 100  
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**PORT OF GRAYS HARBOR T4 DOCK UPGRADES  
FENDER SYSTEM LAYOUTS**

**BERTH A SECTIONS**

Designed by:	SB	Date:	2022-12-09	Rev:	A
Drawn by:	JVD/DP	MAN Project No.:	221760		
Reviewed by:	SB	Drawing code:			
Submitted by:	SCOTT ERANLIND MOFFATT & NICHOL	Per scale:	1" = (0 SHEET)		

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SUITE 100  
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(206) 622-0222

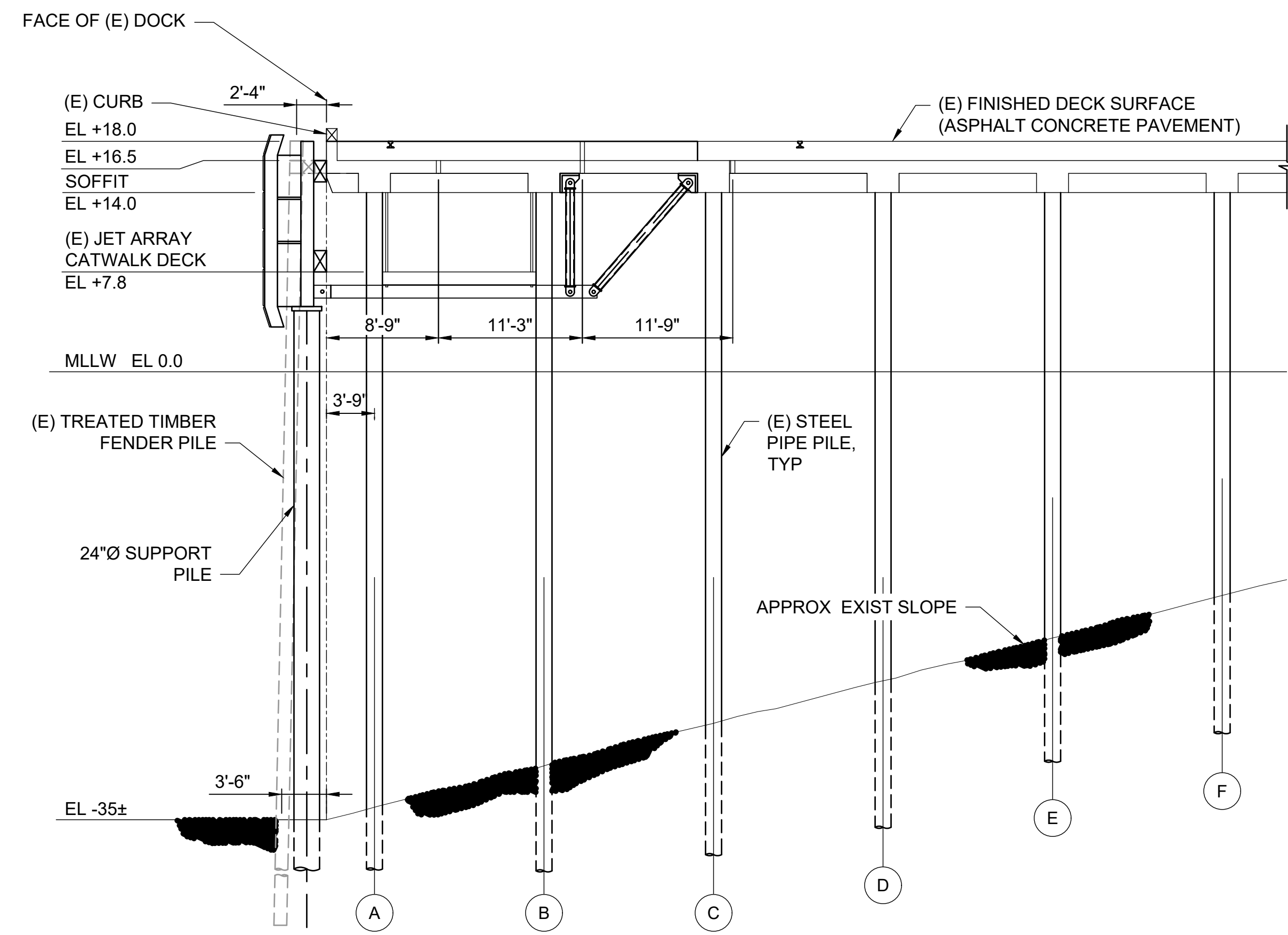


**moffatt & nichol**

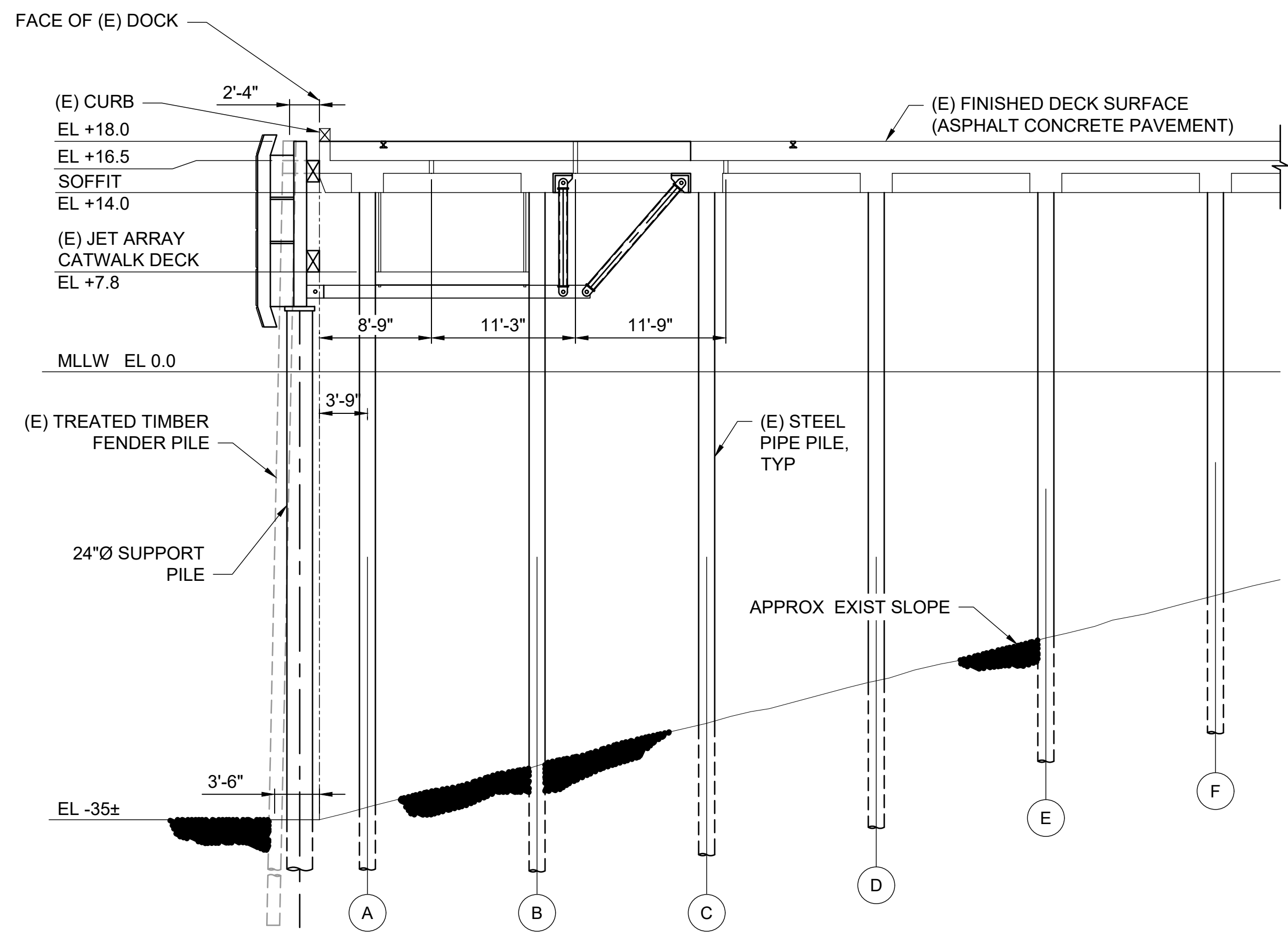
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Sheet Reference No.  
**S-304**  
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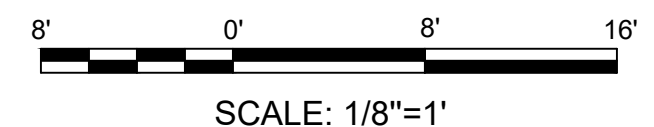
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**C2 SECTION - EXIST BERTH A AT FENDER PANEL**  
S-304 SCALE: 1/8" = 1'-0"



**C5 SECTION - EXIST BERTH A AT EXISTING FENDER PILE**  
S-304 SCALE: 1/8" = 1'-0"



SCALE: 1/8" = 1'  
**FOR 30% PROGRESS SUBMITTAL**  
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A	2023-01-27	ISSUED FOR 30% REVIEW

**PORT OF GRAYS HARBOR T4 DOCK UPGRADES  
FENDER SYSTEM LAYOUTS**

**BERTH B SECTIONS**

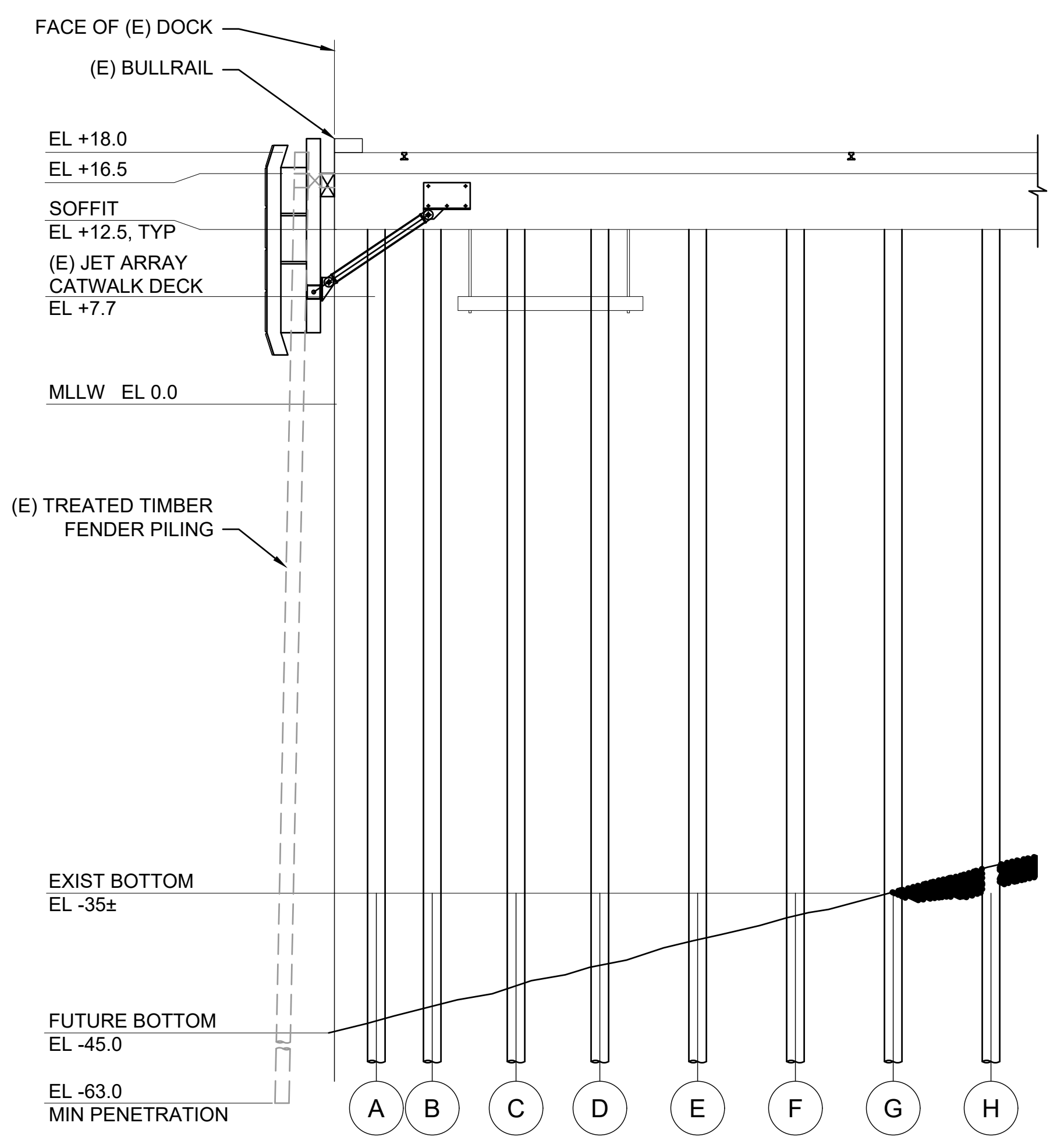
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Reviewed by:	SB	Drawing code:			
Submitted by:	SCOTT ERANLIND MOFFATT & NICHOL	Drawing Scale:	1" = 10' (0 SHEET)		

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SUITE #901  
SEASIDE, WA 98101  
(206) 622-0222

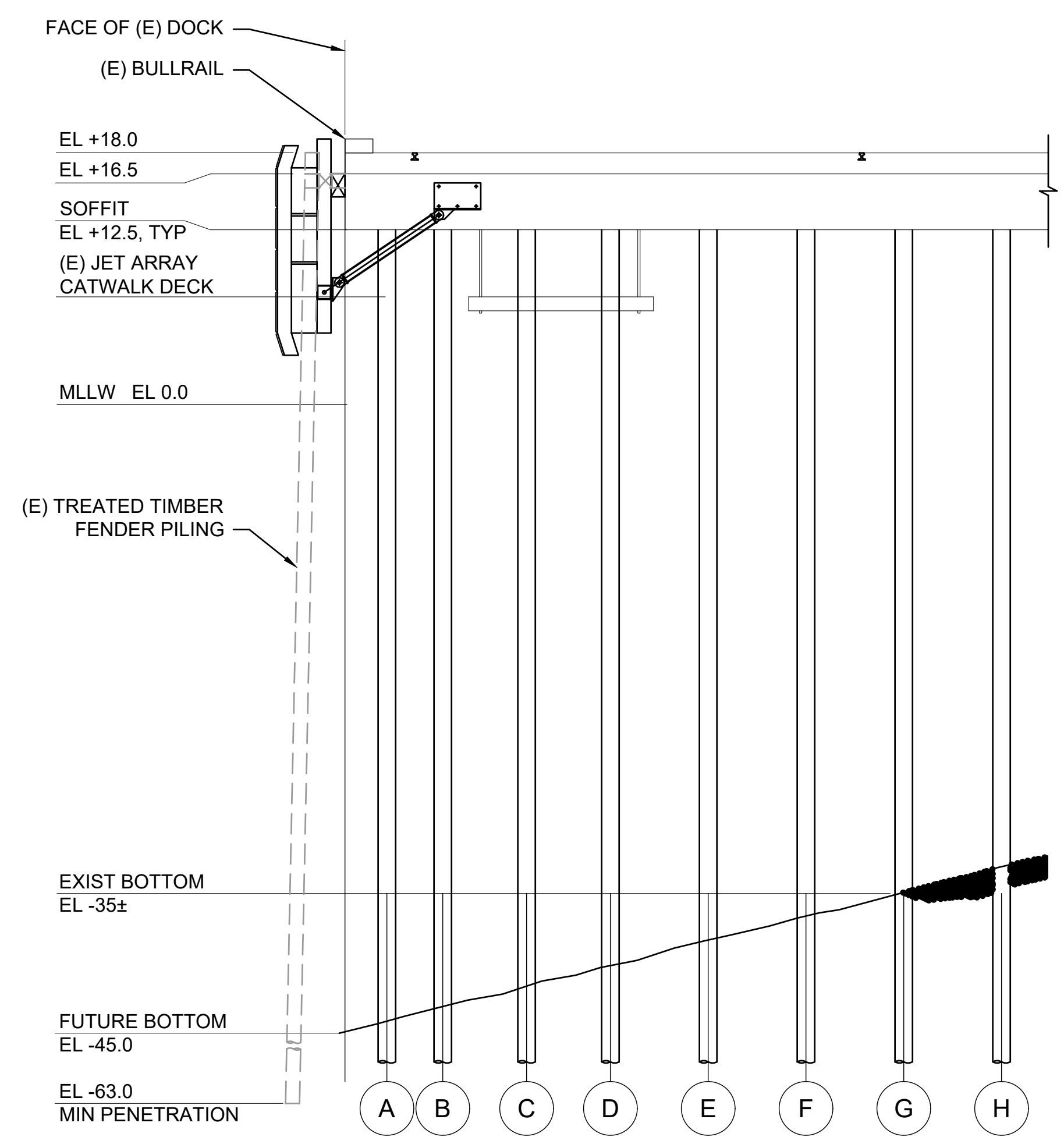
**moffatt & nichol**

SEAL

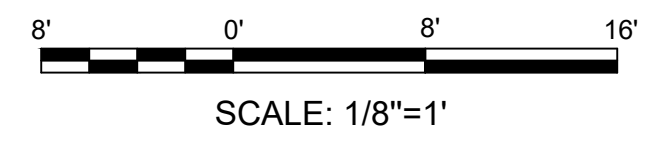
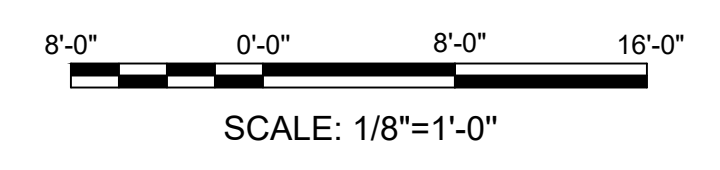
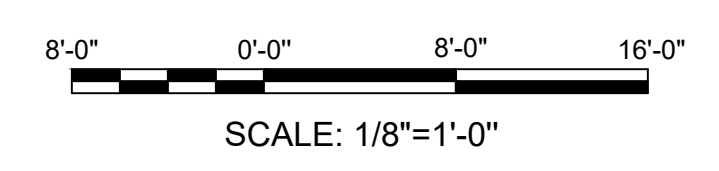
Sheet Reference No.  
**S-305**  
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**C2** SECTION - EXIST - BERTH B AT FENDER PANEL  
S-305 SCALE: 1/8" = 1'-0"



**C4** SECTION - EXIST - BERTH B AT EXIST FENDER PILE  
S-305 SCALE: 1/8" = 1'-0"



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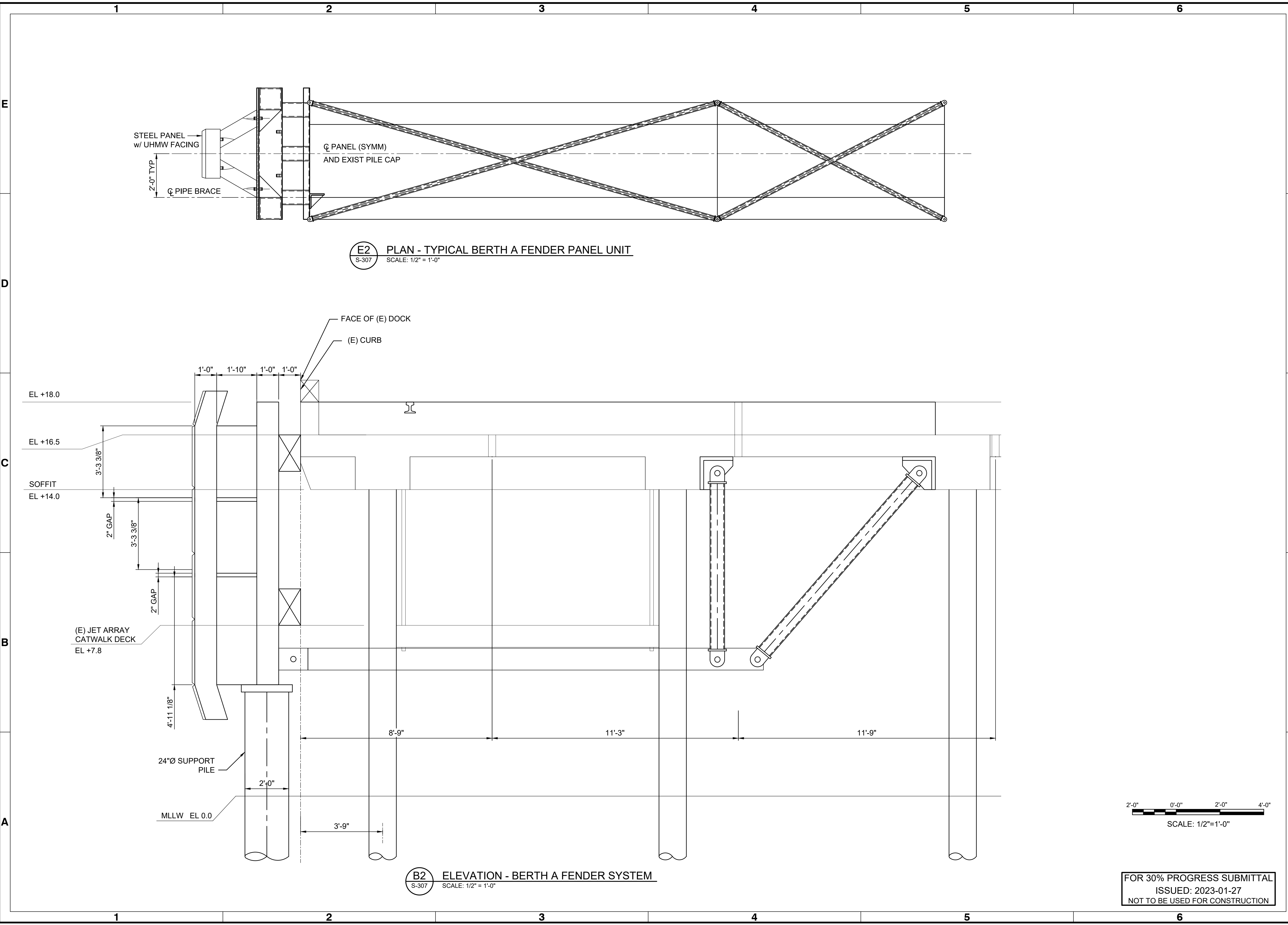
**PORT OF GRAYS HARBOR T4 DOCK UPGRADES  
 FENDER SYSTEM LAYOUTS**  
**TYPICAL FENDER SECTIONS - BERTH A**

Designated by:	Date:	Rev.	Rev/NO
DSGN			
Drawn by:	DATE	MAN Project No.	
DRFT		221760	
Checked by:	CHKR	Drawing code:	
REV'R			
Submitted by:	Submitted by:	Per scale:	1:1 (0 SHEET)
MOFFATT & NICHOL	SCOTT ERANLUND	MOFFATT & NICHOL	

600 UNIVERSITY ST  
 SUITE 400 08101  
 SEASIDE, WA 98138  
 (206) 622-0222  


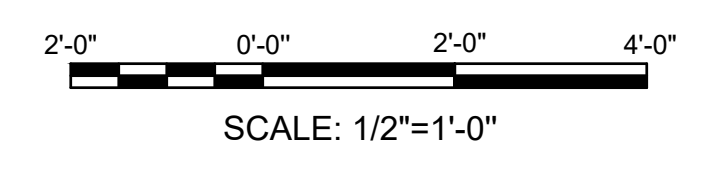
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Sheet Reference No.  
**S-306**  
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**E2 PLAN - TYPICAL BERTH A FENDER PANEL UNIT**  
 S-307 SCALE: 1/2" = 1'-0"

**B2 ELEVATION - BERTH A FENDER SYSTEM**  
 S-307 SCALE: 1/2" = 1'-0"



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 ISSUED: 2023-01-27  
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Rev.	Date	By	Description
A	2023-01-27	SB	ISSUED FOR 30% REVIEW

PORT OF GRAYS HARBOR T4 DOCK UPGRADES  
FENDER SYSTEM LAYOUTS

TYPICAL FENDER SECTIONS - BERTH B

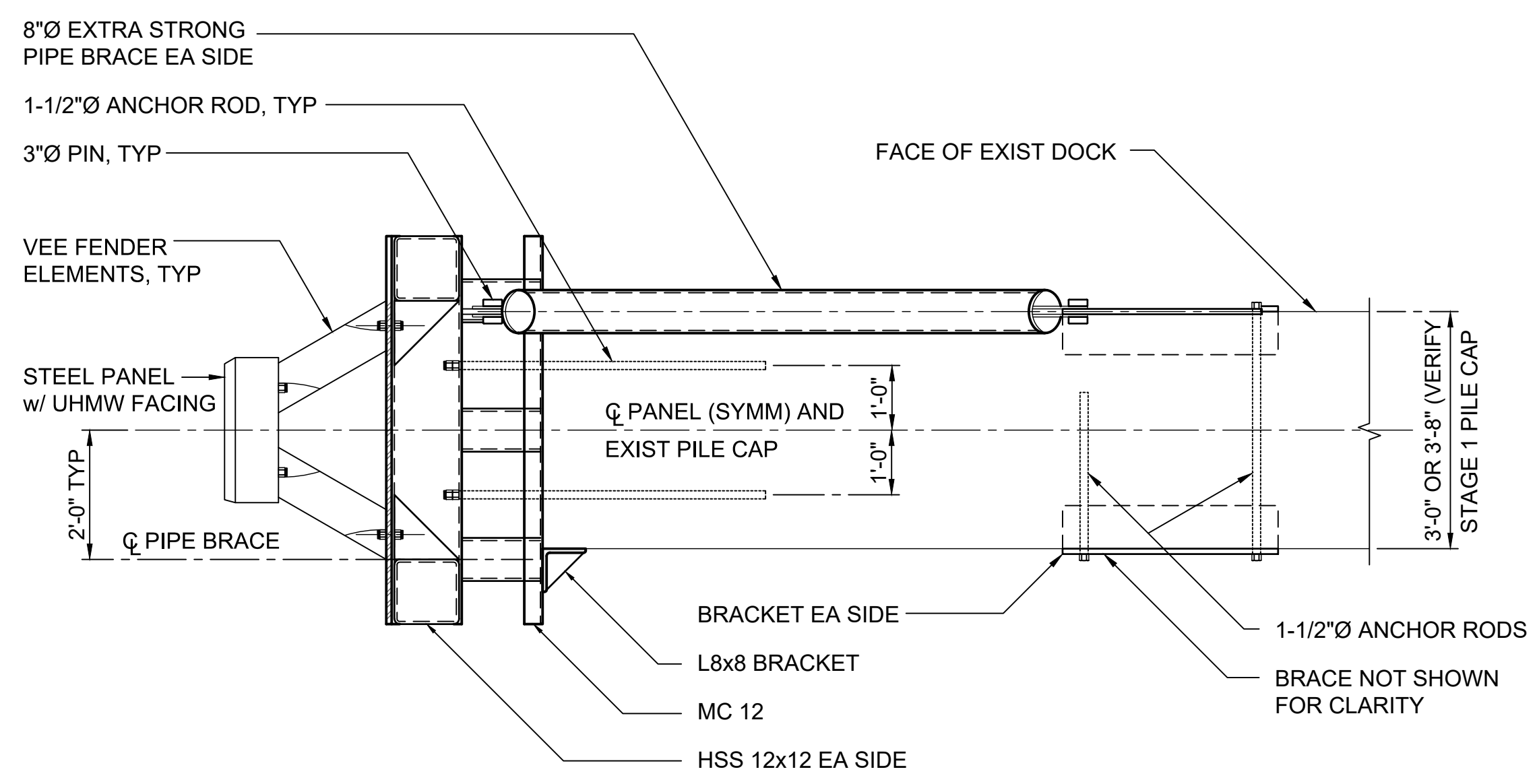
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Date:	2022-12-09	M&N Project No.:	221760	Drawing code:		Drawing Scale:	1:1 (0 SHEET)

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SUITE #9008101  
SEASIDE, WA 98101  
(206) 622-0222

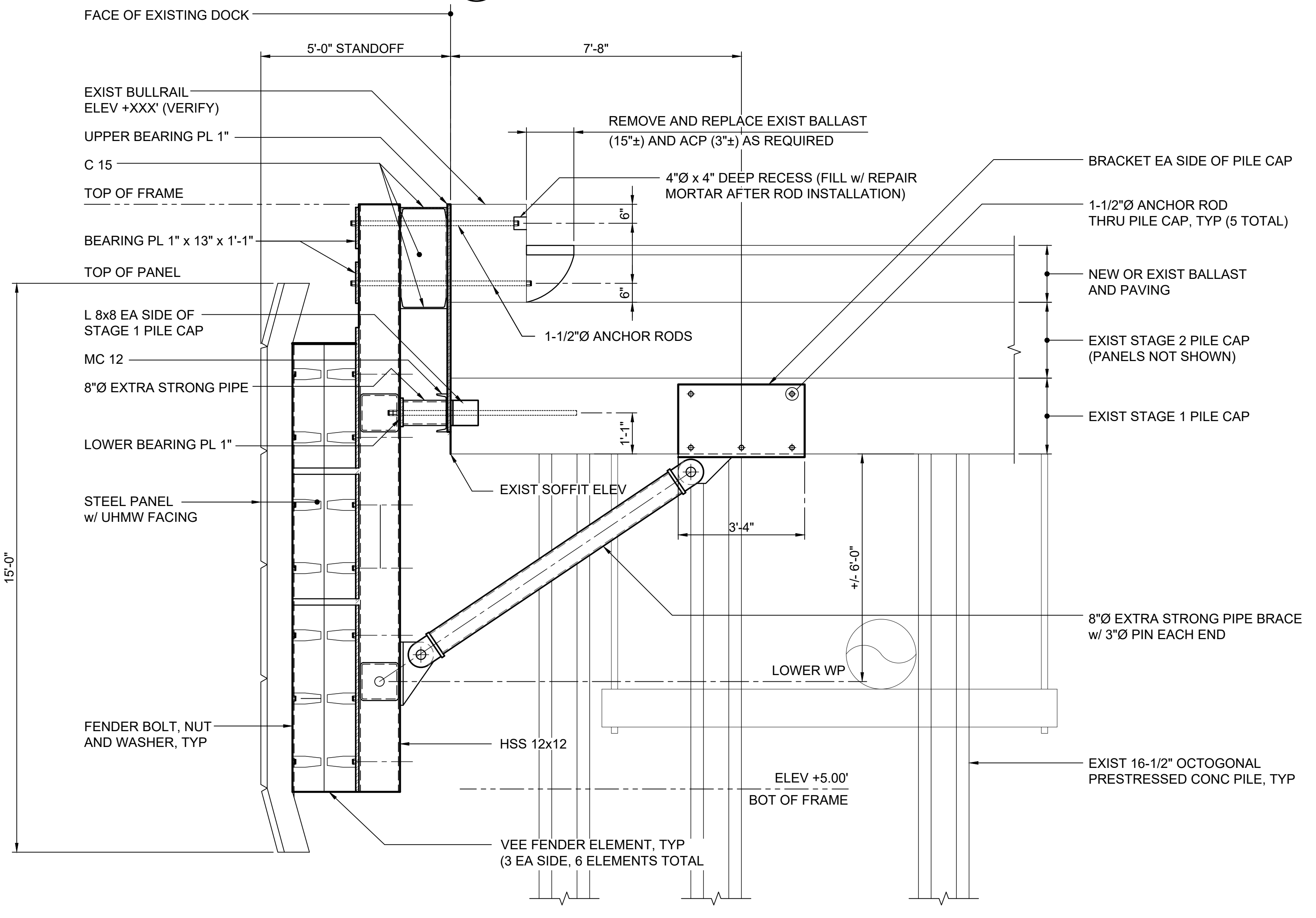


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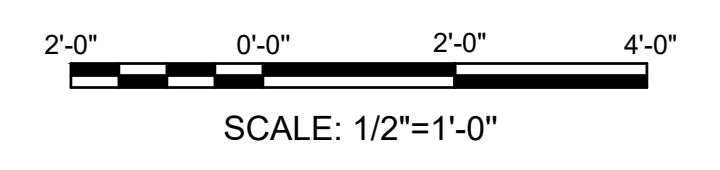
Sheet Reference No.  
**S-307**  
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**E2** PLAN - TYPICAL BERTH B FENDER PANEL UNIT  
S-307 1/2" = 1'-0"



**B2** ELEVATION - BERTH B FENDER SYSTEM  
S-307 SCALE: 1/2" = 1'-0"



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**PORT OF GRAYS HARBOR T4 DOCK UPGRADES  
FENDER SYSTEM LAYOUTS**

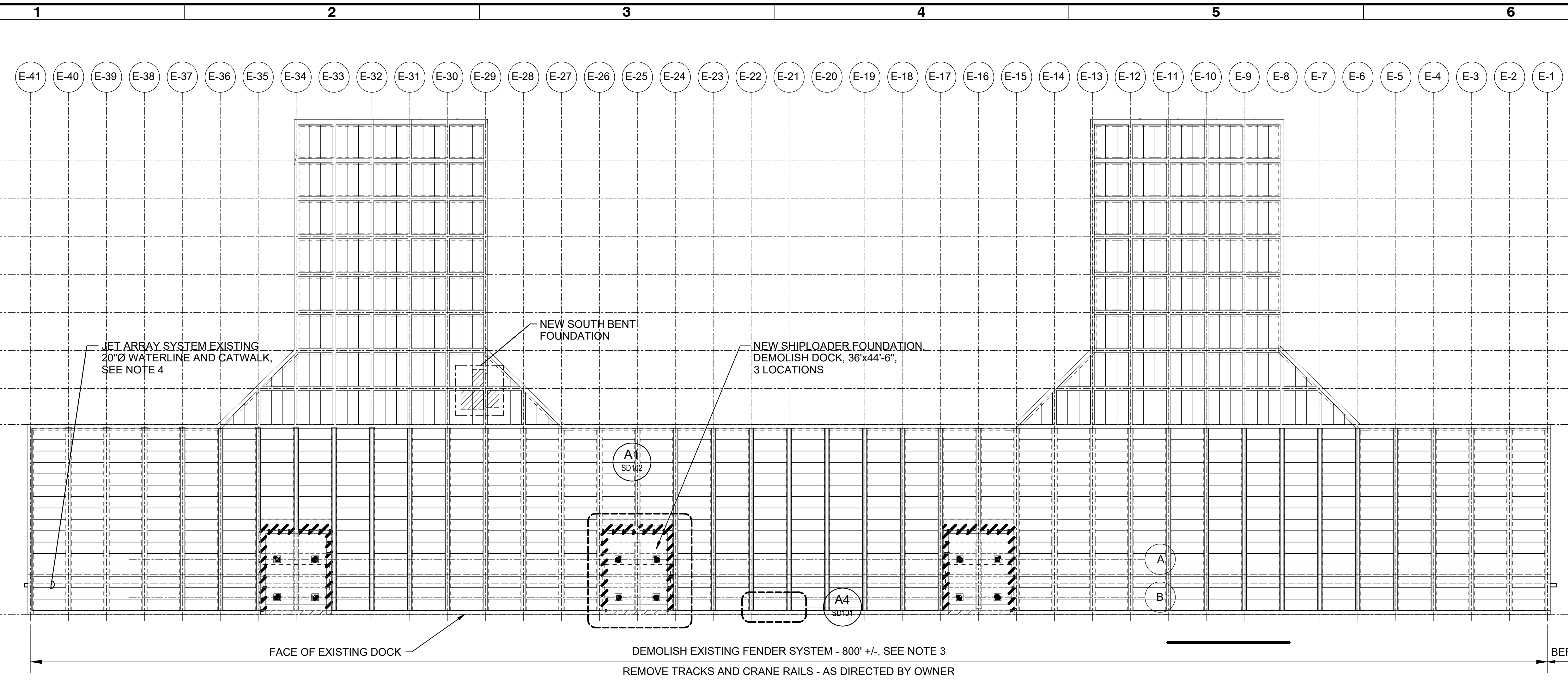
**DEMOLITION PLAN, SECTION & DETAILS**

Rev.	Date	By	Description
A	2022-12-09	SB	DESIGNED
		JVD / DP	DRAWN
		SB	REVIEWED
		SB	SUBMITTED

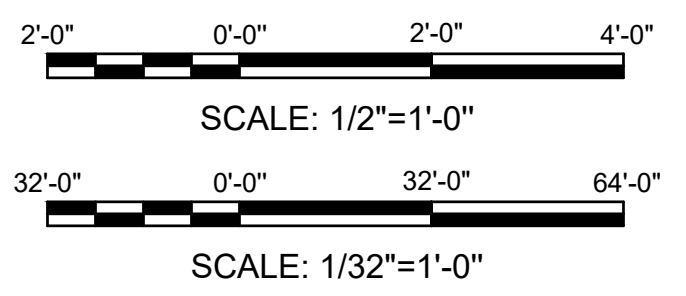
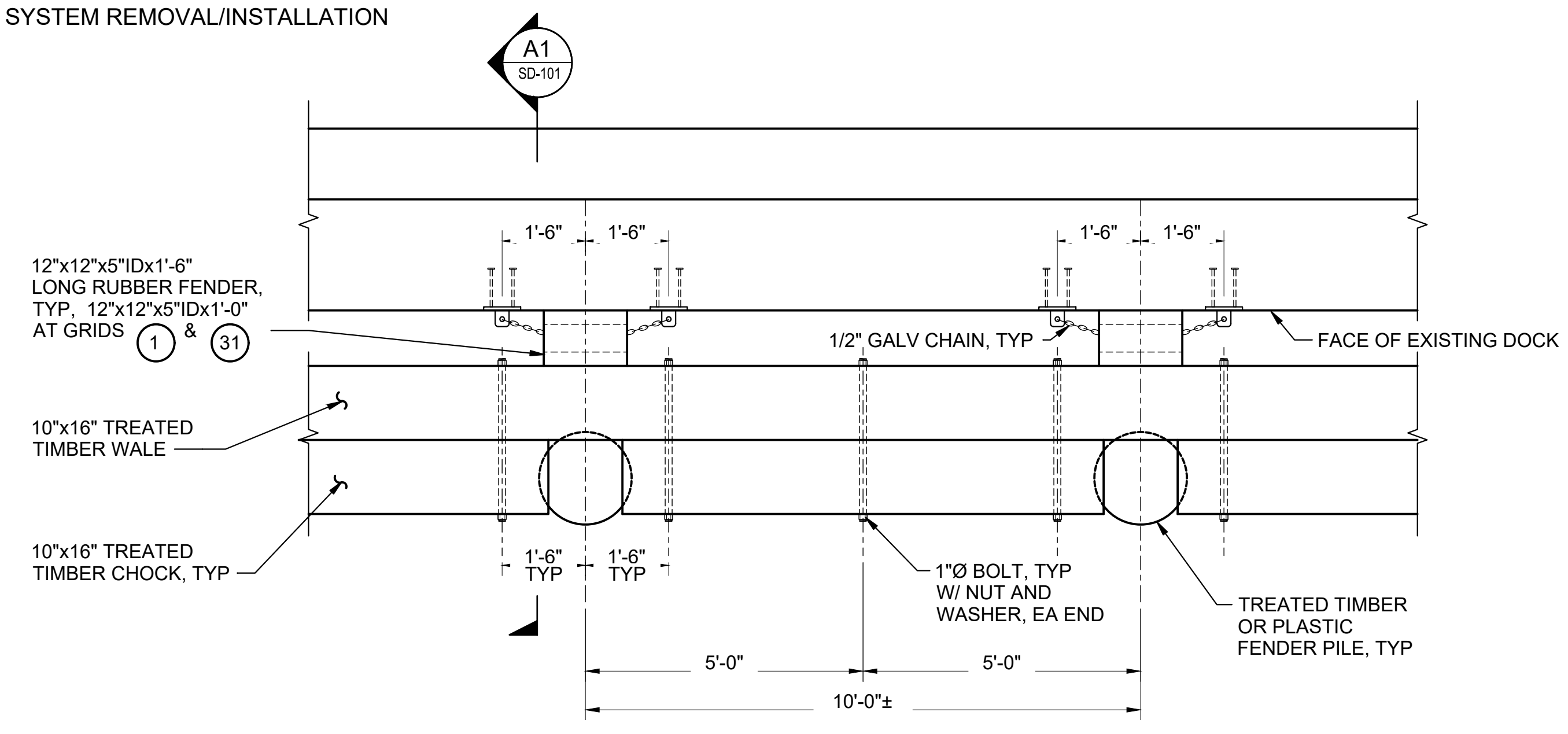
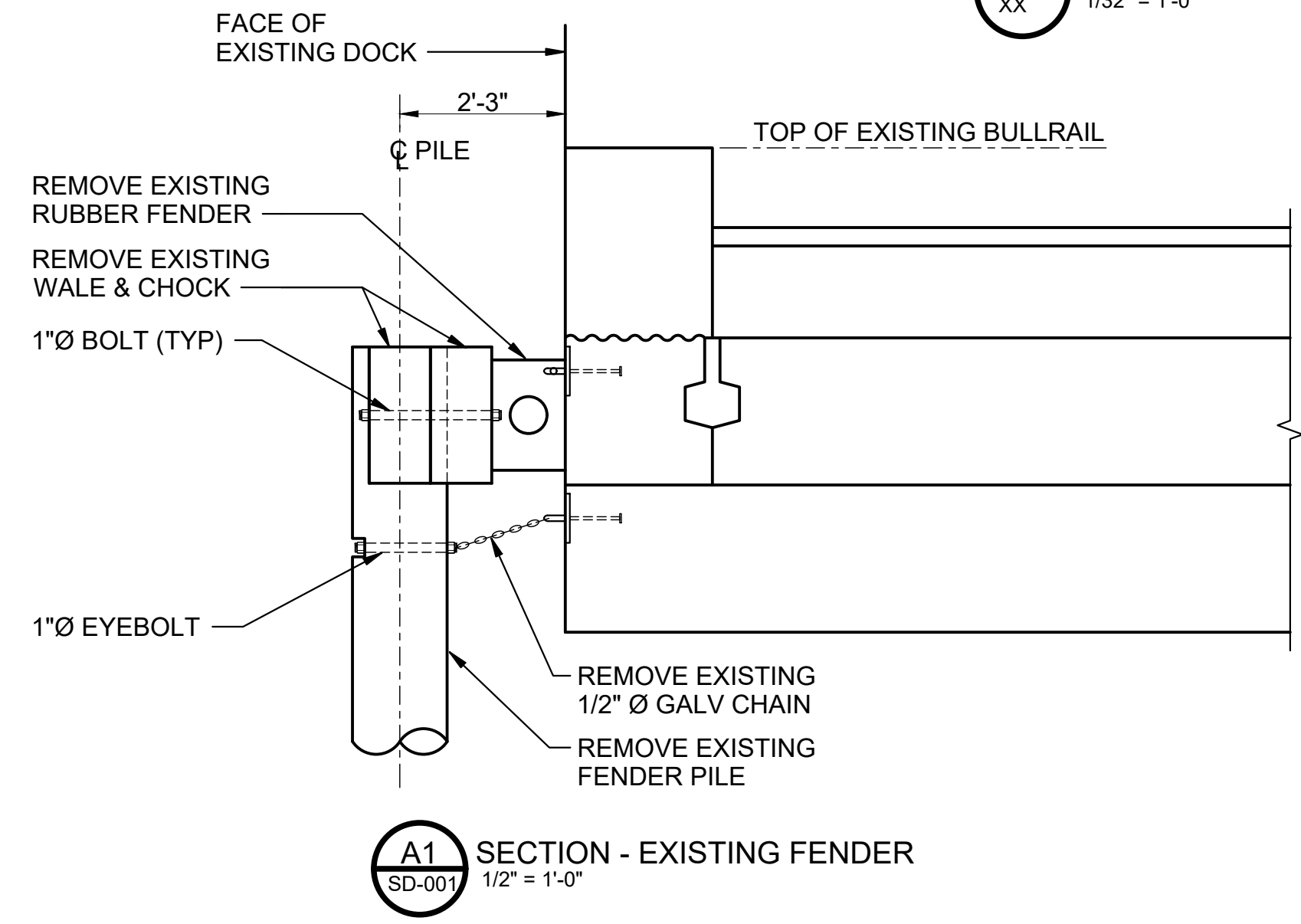
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600 UNIVERSITY ST  
SUITE 400  
SEASIDE, WA 98101  
(206) 622-0222

Sheet Reference No.  
**SD-001**  
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**C1**  
PLAN - DEMOLITION AND JET ARRAY SYSTEM REMOVAL/INSTALLATION  
1/32" = 1'-0"



- NOTES:**
- VERIFY EXISTING DOCK DIMENSIONS.
  - PAVING AND BALLAST NOT SHOWN.
  - EXISTING FENDER SYSTEM INCLUDES TREATED TIMBER AND PLASTIC PILES, ASSUME PILE LENGTH = 90'.
  - REMOVE, MODIFY, AND REINSTALL JET ARRAY SYSTEM AT NEW SHIPLOADER FOUNDATIONS.

File: I:\mre\projects\SEA\21760\20\_CADD\_Active\_Port of Grays Harbor T4 Dock Upgrades - Fender System Layouts\221760\_SD-001.dwg, Plotted: 1/26/2023 12:25 PM by PEVA, DANIEL, Saved: 1/20/2023 3:54 PM by JDOBZANSKI

# PORT OF GRAYS HARBOR T4A CARGO YARD EXPANSION

ABERDEEN, WASHINGTON  
30% SUBMITTAL - 01/31/2023



SHEET INDEX		
SHEET NO.	DRAWING NO.	DESCRIPTION
1	G1.0	COVER SHEET, LOCATION MAP, AND SHEET INDEX
2	G1.1	GENERAL NOTES
3	G1.2	PROPERTY BOUNDARY AND LEGAL DESCRIPTION
4	G1.3	EXISTING SITE MAP
5	G1.4	STANDARD ABBREVIATIONS AND REFERENCE SYMBOLS
6	G2.1	TEMPORARY EROSION AND SEDIMENT CONTROL PLAN
7	G2.2	TEMPORARY EROSION AND SEDIMENT CONTROL DETAILS
8	D1.0	DEMOLITION PLAN
9	D1.2	DEMOLITION PHOTOS
10	D1.3	TYPICAL DEMOLITION SECTION
11	C1.0	CIVIL DESIGN CRITERIA
12	C2.0	GRADING AND SURFACING PLAN
13	C2.1	MSE WALL AND BACKFILL PLAN
14	C2.2	MSE WALL AND BACKFILL SECTION
15	C2.3	CASTING BASIN BACKFILL PHASING DETAILS
16	C3.0	STORMWATER PLAN
17	C4.0	UTILITY PLAN



**1** LOCATION MAP  
- NTS

Plotted: Jan 31, 2023 - 4:55pm bmoachus Layout: G1.0  
M:\2022\2200119 Port of Grays Harbor T4A Cargo Yard Expansion\2.18 Drawings\Current\2200119\_G1.0 Cover Sheet and Location Map.dwg

**kpff**

1601 5th Avenue, Suite 1300  
Seattle, Washington 98101  
(206) 382-0600 Fax (206) 382-0500

NO.	DATE	BY	REVISION

**T4A CARGO YARD EXPANSION  
PORT OF GRAYS HARBOR**

**COVER SHEET,  
LOCATION MAP,  
AND SHEET INDEX**

DRAWN: DCG	PROJECT NO.: 2200119
DESIGN: SJS	SCALE: AS SHOWN
CHECKED: NAW	DATE: 01/31/2023
DRAWING NO.	<b>G1.0</b>
SHEET NO.	<b>1</b> OF <b>17</b>

**30% SUBMITTAL**

## GENERAL NOTES

1. DATUM:
  - A. VERTICAL DATUM: NAVD88, 1983–2001 EPOCH
  - B. HORIZONTAL DATUM: NAD83, WASHINGTON STATE SOUTH ZONE
2. TIDE LEVELS: NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
 

HAT EL= 10.78 FT  
 MHHW EL= 8.47 FT  
 MHW EL= 7.77 FT  
 MLW EL= -0.17 FT  
 MLLW EL= -1.64 FT  
 ELW EL= -4.99 FT
3. EXISTING STRUCTURES:
  - A. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS OF EXISTING STRUCTURES AND UTILITIES THAT MAY IMPACT THE WORK.
  - B. CONTRACTOR SHALL COORDINATE WITH THE ENGINEER IF THERE ARE ANY CONFLICTS BETWEEN PROPOSED WORK AND EXISTING STRUCTURES TO REMAIN ON-SITE.
4. UTILITIES:
  - A. CONTRACTOR SHALL PROTECT-IN-PLACE ALL UTILITIES THAT ARE NOT INDICATED FOR DEMOLITION.
5. ALL CONSTRUCTION SHALL CONFORM TO THESE PLANS AND SPECIFICATIONS AND THE CURRENT VERSION OF THE CITY OF ABERDEEN STANDARDS.
6. DIMENSIONS AND CALLOUTS NOTED AS PLUS OR MINUS ( $\pm$ ) OR (REF) INDICATE UNVERIFIED DIMENSIONS AND ARE APPROXIMATE. NOTIFY THE ENGINEER IMMEDIATELY OF CONFLICTS OR VARIATIONS FROM AS INDICATED. NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS – DO NOT SCALE THE PLANS.
7. ALL LOCATIONS OF EXISTING STRUCTURES AND UTILITIES SHOWN HEREIN HAVE BEEN OBTAINED FROM AVAILABLE RECORDS AND SHOULD, THEREFORE, BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN AND TO FURTHER DISCOVER AND AVOID OTHER UTILITIES NOT SHOWN HEREIN WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN. THE CONTRACTOR SHALL POTHOLE OR OTHERWISE CONFIRM EXISTING CONDITIONS, SPECIFICALLY PIPE SIZES PRIOR TO CONSTRUCTION, AND BRING ANY CONFLICTS BETWEEN EXISTING CONDITIONS AND NEW WORK TO THE ENGINEER'S ATTENTION.
8. A COPY OF THE PLANS SHALL BE ON-SITE WHENEVER CONSTRUCTION IS IN PROGRESS. THROUGHOUT THE PROGRESS OF THE WORK OF THIS CONTRACT, THE CONTRACTOR SHALL MAINTAIN AN ACCURATE RECORD OF ALL CHANGES IN THE CONTRACT DOCUMENTS. UPON THE COMPLETION OF THIS CONTRACT, THE CONTRACTOR SHALL PROVIDE ONE COMPLETE SET OF CONTRACTOR REDLINE AS-BUILT MARK-UPS TO THE PORT OF GRAYS HARBOR.
9. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS OF EXISTING STRUCTURES AND OTHER FEATURES THAT MAY IMPACT THE WORK. CONTRACTOR SHALL BRING ANY CONFLICTS TO THE ENGINEER'S ATTENTION PRIOR TO BEGINNING AFFECTED WORK.
10. ANY DAMAGE TO EXISTING UTILITIES, OTHER FACILITIES OR EQUIPMENT DUE TO THE CONTRACTOR'S NEGLIGENCE, EXCEPT FOR ITEMS DESIGNATED FOR DEMOLITION, SHALL BE PROMPTLY REPAIRED BY THE CONTRACTOR AT THEIR EXPENSE. THIS INCLUDES ITEMS OUTSIDE THE WORK AREA AND WITHIN THE PORT OF GRAYS HARBOR PROPERTY THAT ARE DAMAGED BY CONSTRUCTION ACTIVITIES DURING EXECUTION OF THIS CONTRACT.
11. ALL ACTIVATION AND DEACTIVATION OF UTILITIES SHALL BE COORDINATED WITH THE UTILITY PURVEYOR AND THE ENGINEER IN ADVANCE. PROVIDE A MINIMUM OF 3 DAYS ADVANCE WRITTEN NOTICE TO THE UTILITY AND ENGINEER.
12. THE CONTRACTOR SHALL KEEP ALL STREETS OUTSIDE OF WORK AREA LIMITS AND VEHICULAR TRAFFIC AREAS USED FOR THIS WORK CLEAN AT ALL TIMES, SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. CONTRACTOR IS RESPONSIBLE FOR ANY TRAFFIC CONTROLS REQUIRED DURING THE DURATION OF THIS PROJECT, PER CONTRACTOR'S OPERATION. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
13. CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE PORT FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.
14. THE CONTRACTOR SHALL TAKE NECESSARY MEASURES TO PREVENT INTERRUPTION OF ADJACENT PORT OPERATIONS AND PROTECT ALL EXISTING SURFACES/STRUCTURES TO REMAIN AT THE FACILITY DURING CONSTRUCTION. DETAILS SHALL BE PRESENTED IN THE CONTRACTOR'S WORK PLAN.
15. CONTRACTOR SHALL COORDINATE WORK WITH OTHER ONGOING CONSTRUCTION ON THE T4A SITE AND ADJACENT TERMINAL AREAS, INCLUDING RAIL UPGRADES AND AGP TERMINAL CONSTRUCTION. THIS INCLUDES SHARED ACCESS TO PORT PROPERTIES.

## SCOPE OF WORKS NARRATIVE

THE PURPOSE OF THIS PROJECT IS TO MAKE THE SITE DEVELOPMENT READY FOR FUTURE CARGO DEVELOPMENT. THE EXISTING GRAVING DOCK WHICH SERVED AS A CASTING BASIN FOR THE SR-520 FLOATING PONTOONS WILL BE FILLED IN TO PROVIDE FUNCTIONAL FLAT LAYDOWN SPACE ON THE SITE AT THE END OF THE PROJECT.

MAJOR WORK INCLUDES BUT IS NOT LIMITED TO PARTIAL DEMOLITION OF THE FORMER CASTING BASIN, NEW MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL, EXCAVATION AND BACKFILLING OF SOIL, STORM DRAINAGE SYSTEM UPGRADE AND UTILITIES RE-ROUTE.

## PROJECT CONTACTS

OWNER: PORT OF GRAYS HARBOR

PROJECT MANAGER  
 KRIS KOSKI, P.E.  
 PORT OF GRAYS HARBOR  
 PO BOX 660  
 ABERDEEN, WA 98520  
 360-533-9545  
 KKOSKI@PORTGRAYS.ORG

ENGINEER CONTACT  
 NATHAN WATSON, P.E.  
 KPFF – CONSULTING ENGINEERS  
 1601 5TH AVE SUITE 1300  
 SEATTLE, WA 98101  
 206-382-0600  
 NATHAN.WATSON@KPFF.COM

## TESC NOTES

1. THE TESC FACILITIES SHOWN IN THESE PLANS SHALL BE CONSTRUCTED PRIOR TO THE START OF WORK. THE FACILITIES SHOWN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE TESC FACILITIES SHALL BE UPGRADED AS NEEDED TO ENSURE THAT NO CONSTRUCTION DEBRIS LEAVES THE SITE OR ENTERS THE WATER. ANY CONSTRUCTION DEBRIS THAT LEAVES THE PROJECT WORK AREA LIMITS OR ENTERS THE WATER SHALL BE RETRIEVED BY THE CONTRACTOR IMMEDIATELY.
2. THE TESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND OBSERVATIONS SHALL BE DOCUMENTED IN WRITING. ANY ISSUES OBSERVED DURING DAILY INSPECTIONS SHALL BE REPORTED TO THE ENGINEER AND MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE CONTINUED FUNCTION OF ALL TESC FACILITIES.
3. STABILIZED CONSTRUCTION ENTRANCES SHALL CONSIST OF FULLY PAVED SURFACES. TRUCKS SHALL NOT TRACK ANY SAND, GRIT, GRAVEL OR OTHER DEBRIS ONTO CITY ROADWAY. VACUUM STREET SWEEPERS SHALL BE USED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN AND TRACK-OUT OF DEBRIS IS PREVENTED. ALL TEMPORARY EXPOSED CONSTRUCTION AREAS INCLUDING CONSTRUCTION ROADS SHALL BE STABILIZED. CONSTRUCTION ACCESS SHALL BE RESTORED TO ORIGINAL GRADE AND TO EQUAL OR BETTER CONDITION THAN ITS PRE-CONSTRUCTION STATE.
4. THE EXISTING STORMWATER CONVEYANCE SYSTEM SHALL BE PROTECTED IN PLACE THROUGH INLET PROTECTION. ALL INLET PROTECTION/CATCH BASINS SHALL BE CHECKED AND CLEANED WEEKLY, WITHIN 24 HOURS AFTER EACH STORM EVENT, AND PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.
5. ALL EXPOSED SOILS, AGGREGATES, AND/OR STOCKPILES SHALL BE COVERED WITH CLEAR PLASTIC COVERING. SELECTED SOIL STABILIZATION MEASURES WHICH ARE APPROPRIATE FOR THE TIME OF YEAR, SITE CONDITIONS, EXPOSURE, ORIENTATION, DURATION OF USE, AND IMPACTS TO WATER QUALITY AND GROUND WATER SHALL BE IMPLEMENTED AND MAINTAINED.
6. CONTRACTOR SHALL IMPLEMENT PREVENTIVE DUST CONTROL MEASURES TO MINIMIZE THE WIND TRANSPORT OF SOIL WHEN PORT TERMINAL OR TRAFFIC HAZARDS MAY BE CREATED, OR WHEN SEDIMENT TRANSPORTED BY THE WIND IS LIKELY TO BE DEPOSITED IN DRAINAGE WAYS OR WATER RESOURCES. WHEN USING WATER FOR DUST CONTROL, SPRAY UNTIL SOIL IS WET BUT RUNOFF IS NOT INITIATED. MINIMIZE THE PERIOD OF SOIL EXPOSURE THROUGH THE USE OF PLASTIC GROUND COVER OR STEEL PLATES.

Plotted: Jan 31, 2023 - 4:55pm  
 M:\2022\2200119 Port of Grays Harbor T4A Cargo Yard Expansion\2.18 Drawings\Current\2200119\_G1.1 General Notes.dwg  
 bmoachus Layout: 2200119\_G1.1 General Notes



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NO.	DATE	BY	REVISION

### T4A CARGO YARD EXPANSION PORT OF GRAYS HARBOR

#### GENERAL NOTES

DRAWN: DCG	PROJECT NO.: 2200119
DESIGN: SJS	SCALE: AS SHOWN
CHECKED: NAW	DATE: 01/31/2023
DRAWING NO.	<b>G1.1</b>
SHEET NO.	<b>2</b> OF <b>17</b>

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Plotted: Jan 31, 2023 - 4:55pm  
 M:\2022\2200119 Port of Grays Harbor T4A Cargo Yard Expansion\2.18 Drawings\Current\2200119\_G1.2 Property Boundary and Legal Description.dwg



1 **PROPERTY BOUNDARY**  
 NOT TO SCALE

### T4A CARGO YARD LEGAL DESCRIPTION

COMMENCING AT THE NORTHWEST CORNER OF LOT 1, TRACT 20 OF ABERDEEN TIDE AND SHORELANDS, AS DESCRIBED IN WARRANTY DEED DATED SEPTEMBER 26, 1955, RECORDED JANUARY 24, 1975, IN VOLUME 370 OF DEEDS, PAGE 32, AS AUDITOR' FILE NO. 15896, SAID POINT BEING THE INTERSECTION OF THE GOVERNMENT MEANDER LINE AND THE WEST BOUNDARY LINE OF SAID LOT 1, WHICH IS ALSO THE WESTERLY 1/16 LINE OF SECTION 8, TOWNSHIP 17 NORTH, RANGE 9 WEST OF THE WILLAMETTE MERIDIAN;

THENCE SOUTH 2° 50' 47" WEST, ALONG THE WEST LINE OF SAID LOT 1, TRACT 20, AS SHOWN ON SAID SURVEY RECORDED AS AUDITOR'S FILE NO. 2009-07240078 A DISTANCE OF 358.33 FEET;

THENCE CONTINUE SOUTH 2° 50' 47" WEST ALONG THE WEST LINE OF SAID LOT 1, TRACT 20 A DISTANCE OF 49.07 FEET TO THE TRUE POINT OF BEGINNING;

THENCE NORTH 54° 22' 36" EAST A DISTANCE OF 52.11 FEET;

THENCE NORTH 59° 11' 55" EAST A DISTANCE OF 101.50 FEET;

THENCE NORTH 56° 06' 25" EAST A DISTANCE OF 105.12 FEET;

THENCE NORTH 61° 59' 41" EAST A DISTANCE OF 53.47 FEET;

THENCE NORTH 65° 48' 16" EAST A DISTANCE OF 59.56 FEET;

THENCE NORTH 70° 06' 30" EAST DISTANCE OF 55.48 FEET;

THENCE NORTH 84° 20' 45" EAST A DISTANCE OF 55.38 FEET;

THENCE SOUTH 88° 38' 35" EAST A DISTANCE 77.29 FEET;

THENCE NORTH 84° 51' 58" EAST A DISTANCE OF 68.81 FEET;

THENCE NORTH 78° 29' 55" A DISTANCE OF 23.13 FEET;

THENCE SOUTH 86° 38' 36" A DISTANCE OF 27.34 FEET;

THENCE SOUTH 76° 26' 03" EAST A DISTANCE OF 222.34 FEET TO A POINT ON THE SOUTH RIGHT-OF-WAY LINE OF WEST HERRON STREET AS SHOWN ON SAID RECORD OF SURVEY, AND ALSO BEING A POINT ON THE NORTH LINE OF PROPERTY DESCRIBED IN WARRANTY DEED RECORDED UNDER AUDITOR'S FILE NO. 2010-11090008, REFERRED TO ABOVE;

THENCE CONTINUING ALONG THE BOUNDARY OF SAID PROPERTY DESCRIBED IN SAID WARRANTY DEED, THE FOLLOWING COURSES:

THENCE SOUTH 71° 14' 53" EAST ALONG SAID SOUTH RIGHT-OF-WAY LINE A DISTANCE OF 476.61 FEET;

THENCE SOUTH 2° 44' 33" WEST A DISTANCE OF 55.22 FEET;

THENCE SOUTH 73° 43' 56" EAST A DISTANCE OF 58.30 FEET;

THENCE SOUTH 2° 42' 40" WEST A DISTANCE OF 90.00 FEET;

THENCE SOUTH 87° 17' 20" EAST A DISTANCE OF 90.69 FEET;

THENCE SOUTH 16° 51' 22" WEST A DISTANCE OF 260.99 FEET;

THENCE SOUTH 26° 20' 40" EAST A DISTANCE OF 644.54 FEET TO THE INNER HARBOR LINE;

THENCE SOUTH 64° 45' 48" WEST A DISTANCE OF 644.54 FEET TO THE INNER HARBOR LINE;

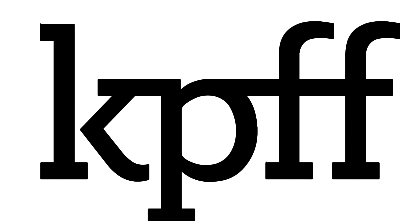
THENCE SOUTH 68° 18' 54" WEST A DISTANCE OF 1,055.66 FEET ALONG THE INNER HARBOR LINE;

THENCE SOUTH 76° 48' 43" WEST A DISTANCE OF 567.13 FEET ALONG THE INNER HARBOR LINE;

THENCE NORTH 2° 50' 47" EAST A DISTANCE OF 1,633.69 FEET ALONG THE SAID LOT 1 TO THE TRUE POINT OF BEGINNING.

### NOTES

PROJECT LOCATION: PORT OF GRAYS HARBOR, WA  
 FEMA FLOOD ZONE DESIGNATION: AE, X  
 PARCEL NUMBERS: 029902000101, 029901800401, 029901800406, 317090834001



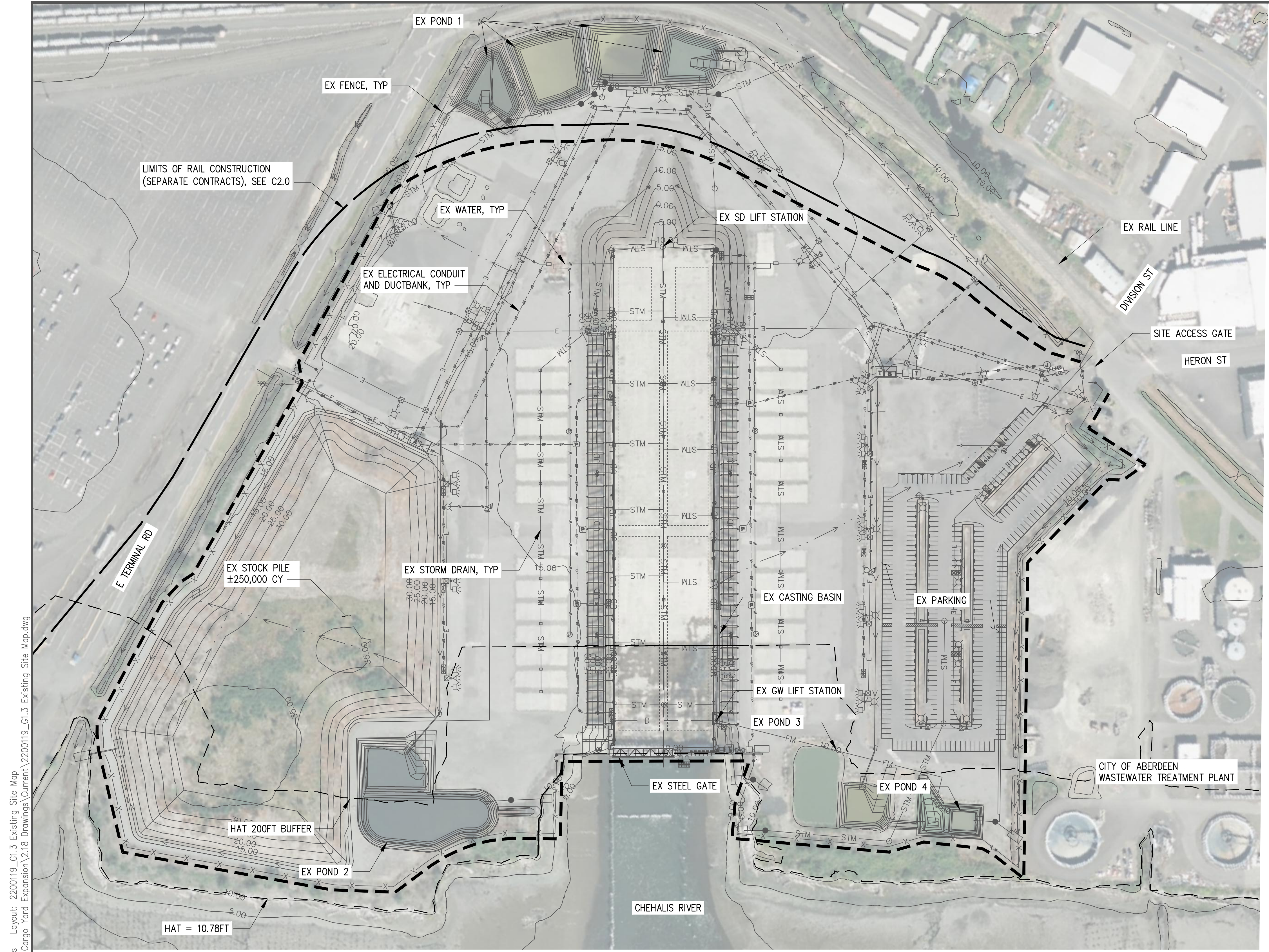
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NO.	DATE	BY	REVISION

**T4A CARGO YARD EXPANSION**  
**PORT OF GRAYS HARBOR**  
**PROPERTY BOUNDARY AND**  
**LEGAL DESCRIPTION**

DRAWN: DCG	PROJECT NO.: 2200119
DESIGN: SJS	SCALE: AS SHOWN
CHECKED: NAW	DATE: 01/31/2023
DRAWING NO.	<b>G1.2</b>
SHEET NO.	<b>3</b> OF <b>17</b>

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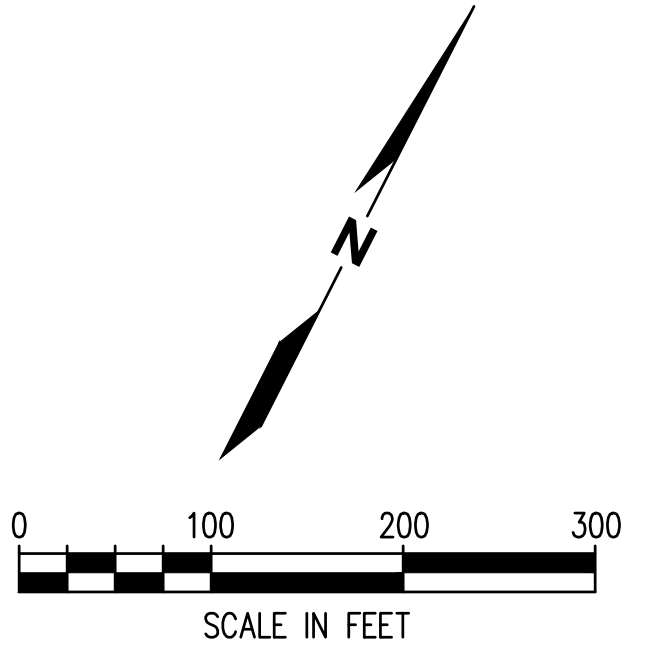


**NOTES**

1. ENTIRE SITE IS WITHIN THE FEMA FLOOD ZONE AE AND ZONE X.
2. EXISTING UTILITIES SHOWN HERE ARE BASED ON BEST AVAILABLE INFORMATION. UTILITY LOCATIONS SHOWN HERE ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY PRIOR TO CONSTRUCTION.

**LEGEND**

--- CONTRACTOR WORK AREA LIMITS



**1 EXISTING CONDITION SITE PLAN**  
SCALE: 1" = 100'-0"

Plotted: Jan 31, 2023 - 4:55pm  
 M:\2022\2200119 Port of Grays Harbor T4A Cargo Yard Expansion\2.18 Drawings\Current\2200119\_G1.3 Existing Site Map.dwg  
 Layout: 2200119\_G1.3 Existing Site Map  
 M:\2022\2200119 Port of Grays Harbor T4A Cargo Yard Expansion\2.18 Drawings\Current\2200119\_G1.3 Existing Site Map.dwg  
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 M:\2022\2200119 Port of Grays Harbor T4A Cargo Yard Expansion\2.18 Drawings\Current\2200119\_G1.3 Existing Site Map.dwg



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NO.	DATE	BY	REVISION

**T4A CARGO YARD EXPANSION**  
**PORT OF GRAYS HARBOR**  
**EXISTING SITE MAP**

DRAWN: DCG	PROJECT NO.: 2200119
DESIGN: SJS	SCALE: AS SHOWN
CHECKED: NAW	DATE: 01/31/2023
DRAWING NO.	<b>G1.3</b>
SHEET NO.	4 OF 17

**30% SUBMITTAL**



# ABBREVIATIONS:

∅	DIA
&	AND
ADD'L	ADDITIONAL
±	APPROXIMATELY
@	AT
C	CENTERLINE
'	EQUALS
'	FOOT
#	NUMBER
%	PERCENT
A/C	ASPHALT CONCRETE
ABV	ABOVE
ACI	AMERICAN CONCRETE INSTITUTE
ACP	ASPHALT CONCRETE PAVEMENT
AFF	ABOVE FINISHED SLAB
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALT	ALTERNAT (-E, -IVE)
APPROX	APPROXIMAT (-E, -LY)
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AVE	AVENUE
AVG	AVERAGE
AWS	AMERICAN WELDING SOCIETY
AWWA	AMERICAN WATER WORKS ASSOCIATION
BLDG	BUILDING
BMP	BEST MANAGEMENT PRACTICES
BTWN	BETWEEN
BOT	BOTTOM
CB	CATCH BASIN
CDF	CONTROLLED DENSITY FILL
CL	CLASS
CLR	CLEAR (-ANCE)
CO	CLEANOUT
COL	COLUMN
COS	CITY OF SEATTLE
COMM	COMMUNICATION
CONC	CONCRETE
CONN	CONNECT/CONNECTION
CONST	CONSTRUCT (-ION)
CONT	CONTINU (-ED, -OUS, -ATION)
CONTR	CONTRACTOR
COORD	COORDINATE
CSBC	CRUSHED SURFACE BASE COURSE
CSTC	CRUSHED SURFACE TOP COURSE
CY	CUBIC YARD
DEG	DEGREES
DEMO	DEMOLISH OR DEMOLITION
DIA	DIAMETER
DIM	DIMENSION (-S)
DOE	WASHINGTON STATE DEPARTMENT OF ECOLOGY
DIP	DUCTILE IRON PIPE
DL	DEAD LOAD
DPV	DRY PIPE VALVE
DWG	DRAWING
E	EAST/EXISTING
EA	EACH
EC	ELECTRICAL CONDUIT
EF	EACH FACE
EHW	EXTREME HIGH WATER
EL/ELEV	ELEVATION
ELEC	ELECTRIC (-AL)
ELW	EXTREME LOW WATER
ENGR	ENGINEER
EQ	EQUAL (-LY)
EQUIP	EQUIPMENT
EW	EACH WAY
EXIST, EX	EXISTING
FDN	FOUNDATION
FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
FF	FINISHED FLOOR
FH	FIRE HYDRANT
FIG	FIGURE
FT	FEET, FOOT
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZE (-D)
GENL	GENERAL
HDPE	HIGH DENSITY POLYETHYLENE
HDPF	HIGH DENSITY POLYURETHANE FOAM

HH	HANDHOLE
HMA	HOT MIX ASPHALT
HORIZ	HORIZONTAL
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN	INCH (-ES)
IPS	IRON PIPE SIZE
KIP	1000 POUNDS
KSI	1000 POUNDS PER SQUARE INCH
L	LENGTH
LB	POUND (-S)
LF	LINEAR FEET
LL	LIVE LOAD
LOC	LOCATION
LONG.	LONGITUDINAL
MAX	MAXIMUM
MB	MACHINE BOLT
ME	MATCH EXISTING
MECH	MECHANICAL
MFR	MANUFACTURER
MH	MANHOLE
MHHW	MEAN HIGHER HIGH WATER
MHW	MEAN HIGH WATER
MIL	1/1000 INCH
MIN	MINIMUM
MISC	MISCELLANEOUS
MLLW	MEAN LOWER LOW WATER
MLW	MEAN LOW WATER
MON	MONUMENT
MPH	MILES PER HOUR
MTC	MODEL TOXICS CONTROL ACT
MV	MEDIUM VOLTAGE
N	NORTH
N/A	NOT APPLICABLE
NAVD	NORTH AMERICAN VERTICAL DATUM
NE	NORTHEAST
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
NW	NORTHWEST
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD
OPNG	OPENING
OPP	OPPOSITE
OVS	OIL/WATER SEPARATOR
PC	POINT OF CURVATURE, PIECE, PRECAST
PCC	PORTLAND CEMENT CONCRETE
PCF	POUNDS PER CUBIC FEET
PCS	PORT CONSTRUCTION SERVICES
PDA	PILE DYNAMIC ANALYSIS
PG	PERFORMANCE GRADE
PL	PLATE
PI	POINT OF INTERSECTION
PORT	PORT OF GRAYS HARBOR
PROJ	PROJECT
PSF	POUNDS PER SQUARE FEET
PT	POINT OF TANGENCY, POINT
PVC	POLY VINYL CHLORIDE
PVMT	PAVEMENT
PWR	POWER
QTY	QUANTITY
R	RADIUS, REMOTE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
REF	REFERENCE
REINF	REINFORC (-E, -ED, -ING, -MENT)
REQ'D	REQUIRED
REV	REVISION
RGS	RIGID GALVANIZED STEEL
ROW	RIGHT-OF-WAY
RP	RADIUS POINT
RR	RAILROAD
RTG	RUBBER Tired GANTRY
S	SOUTH
SCHED	SCHEDULE
SD	STORM DRAIN
SE	SOUTHEAST

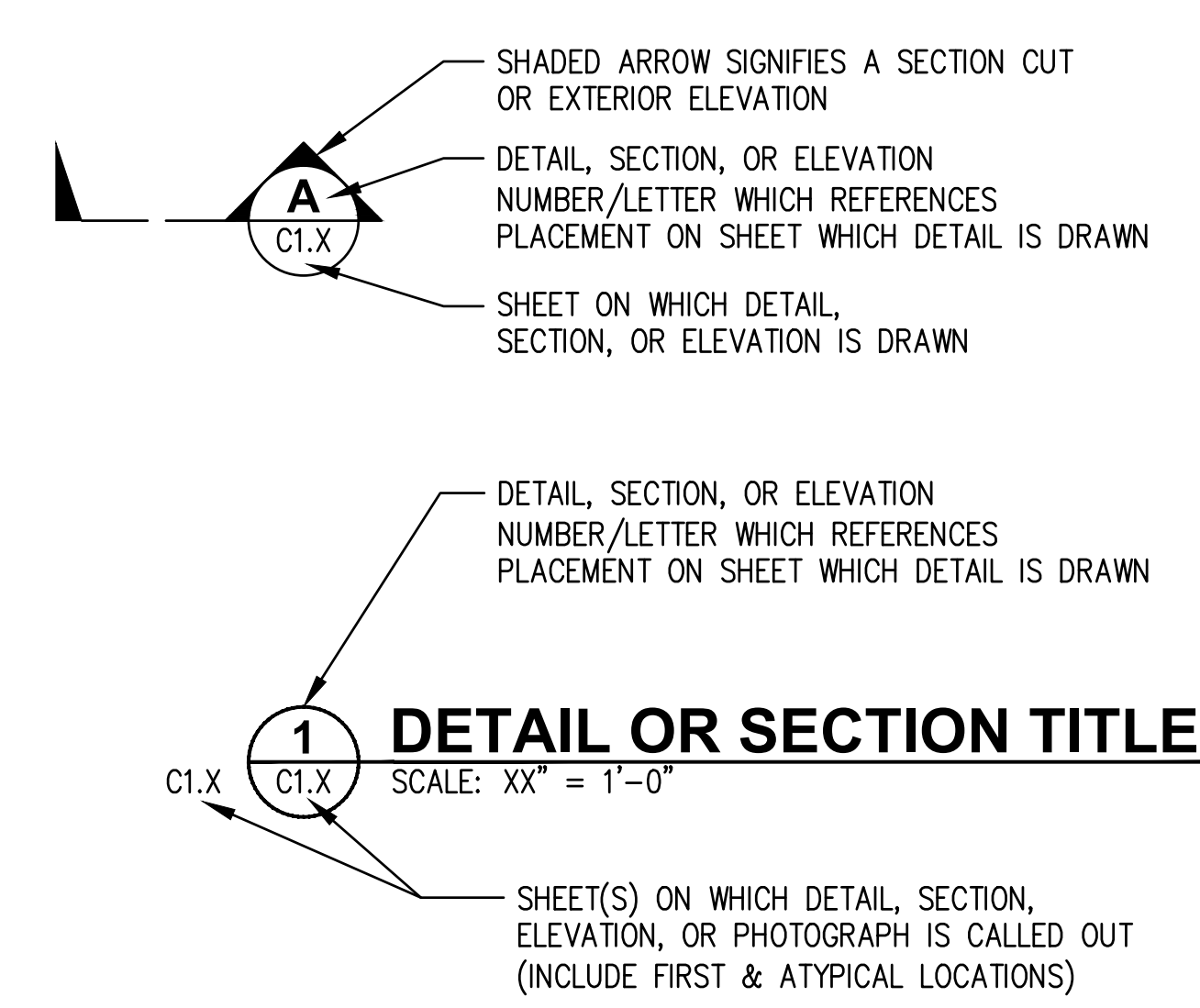
SECT	SECTION (-S)
SHT	SHEET
SIM	SIMILAR
SMMWW	2019 STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON SPECIFICATIONS
SPEC	SQUARE
SQ	SQUARE INCH
SQ IN	SANITARY SEWER
SS	STAINLESS STEEL
SSTL	STREET
ST	STATION
STA	STANDARD
STD	STORM
STM	STRUCTUR (-E, -AL)
STRUCT	SOUTHWEST
SW	SYMMETRICAL
SYM	TO BE DETERMINED
TBD	TELEPHONE
TEL, TELE	TEMPORARY EROSION AND SEDIMENT CONTROL
TESC	TWENTY FOOT EQUIVALENT UNIT
TEU	TOP OF CONCRETE
TOC	TOP OF SLAB
TOS	TRANSPORTATION WORKER IDENTIFICATION CREDENTIAL TYPICAL
TWIC	UNIVERSAL BUILDING CODE
TYP	UNITED STATES COAST GUARD UNDERGROUND
UBC	UNDERWRITER LABORATORY UNLESS NOTED OTHERWISE
USCG	VERTICAL
UG, UDG	WIDTH; WEST
UL	WITH
UNO	WITHOUT
VERT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
W	WATER
W/	
W/O	
WSDOT	
WTR	

# LEGEND

	PHOTO LABEL		SS FLAG
	KEYNOTE		WA FLAG
	REVISION DELTA		SD FLAG
	GRID SYMB 1		FLAG NOTE
	GRID SYMB 2		BENCH MARK
	GRID SYMB 3		
	MLLW		
	WATER VALVE		
	FDC		
	CAP		

# LEGEND (CONTINUED)

	MLLW
	MHHW
	OHWM
	SILT CURTAIN
	FENCE
	HIGH VISIBILITY FENCE
	LIMITS OF WORK
	OVERHEAD POWER
	TELEPHONE LINE
	GAS
	FIBER OPTIC
	SANITARY SEWER
	BURIED POWER
	FORCE MAIN
	SILT FENCE, CONSTRUCTION FENCE, HIGH VISIBILITY FENCE
	WATER LINE
	STORM DRAIN
	SLOPE
	SPOT ELEVATION
	STRAW WATTLES
	CONTOUR LINE
	SD - CATCH BASIN
	FLOW DIRECTION
	MANHOLE
	CENTERLINE
	EXISTING SURFACE (PROFILES)
	DREDGE SLOPE



Plotted: Jan 31, 2023 - 4:55pm  
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 bmoehus Layout: 2200119\_G1.4 Standard Abbreviations and Reference Symbols



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**T4A CARGO YARD EXPANSION**  
**PORT OF GRAYS HARBOR**

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**STANDARD ABBREVIATIONS AND REFERENCE SYMBOLS**

DRAWN: DCG	PROJECT NO.: 2200119
DESIGN: SJS	SCALE: AS SHOWN
CHECKED: NAW	DATE: 01/31/2023
DRAWING NO.	<b>G1.4</b>
SHEET NO.	<b>5 OF 17</b>

**30% SUBMITTAL**

**NOTE TO REVIEWER:  
UTILITY DEMOLITION AND  
STORMWATER REWORK  
SEQUENCING WILL NEED TO BE  
COORDINATE WITH RAIL WORK.**


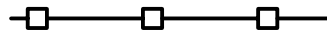
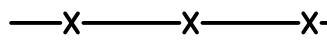


**NOTES**

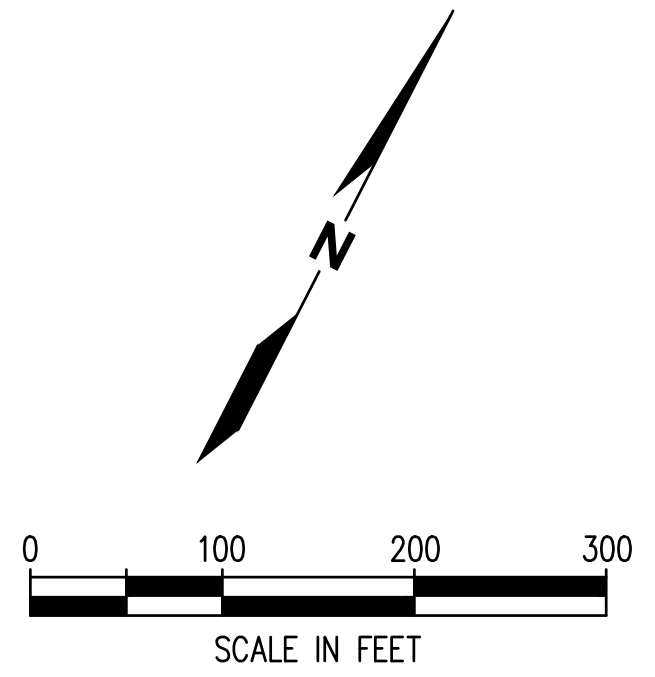
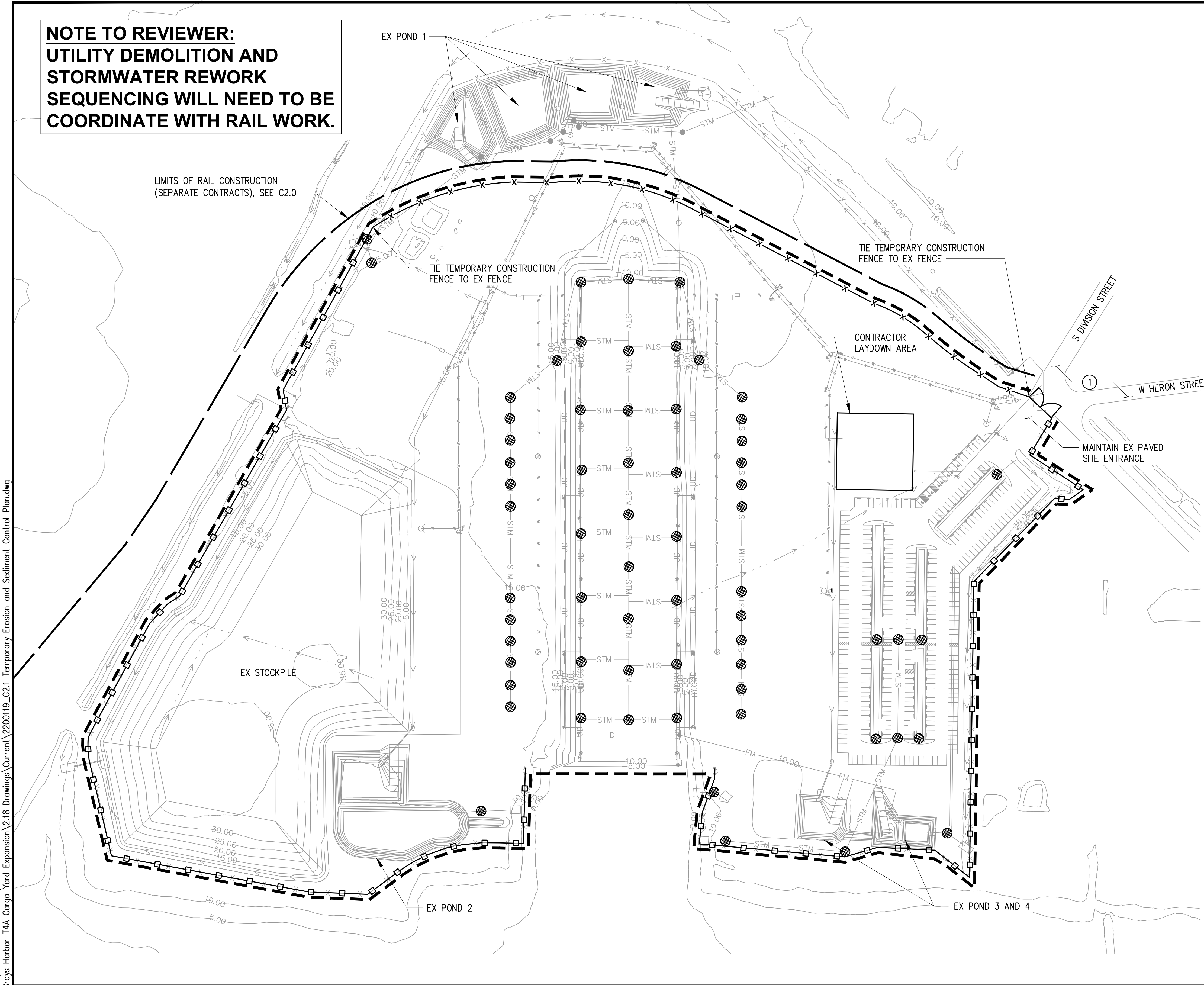
- SEE SHEET G1.1 FOR GENERAL TESC NOTES.

**CONSTRUCTION NOTES**

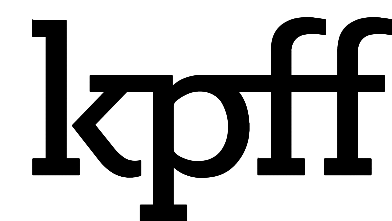
- PROVIDE VACUUM SWEEPING AROUND THE WORK AREA ENTRANCE. NO AGGREGATE, PAVEMENT, SOIL, OR OTHER MATERIALS SHALL BE ALLOWED TO "TRACK" ACROSS THE TERMINAL. SEE SPECIFICATIONS FOR FURTHER REQUIREMENTS.

**LEGEND**

-  WORK AREA LIMITS
-  SILT CURTAIN ON EX FENCE 5  
G2.2
-  TEMPORARY CONSTRUCTION FENCE AND SILT CURTAIN 4  
G2.2
-  INLET PROTECTION 1  
G2.2
-  CONSTRUCTION ACCESS GATE



Plotted: Jan 31, 2023 - 4:55pm bmoachus Layout: G2.1  
M:\2022\2200119 Port of Grays Harbor T4A Cargo Yard Expansion\2.18 Drawings\Current\2200119\_G2.1 Temporary Erosion and Sediment Control Plan.dwg



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NO.	DATE	BY	REVISION

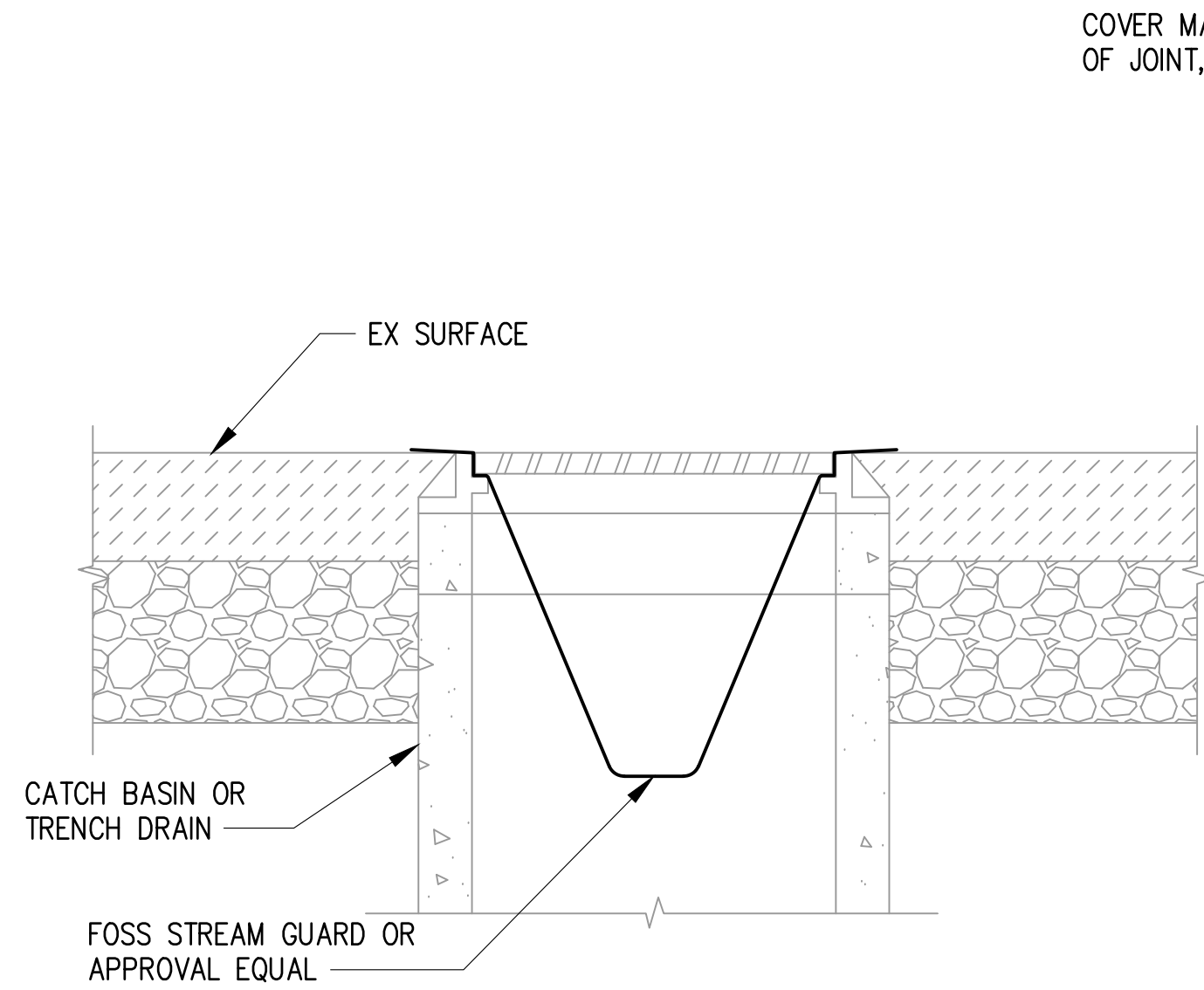
**T4A CARGO YARD EXPANSION**  
**PORT OF GRAYS HARBOR**  
**TEMPORARY EROSION AND SEDIMENT CONTROL**  
**PLAN**

DRAWN: DCG	PROJECT NO.: 2200119
DESIGN: SJS	SCALE: AS SHOWN
CHECKED: NAW	DATE: 01/31/2023
DRAWING NO.	<b>G2.1</b>
SHEET NO.	6 OF 17

**30% SUBMITTAL**

Plotted: Jan 31, 2023 - 4:55pm  
 M:\2022\2200119 Port of Grays Harbor T4A Cargo Yard Expansion\2.18 Drawings\Current\2200119\_G2.2 Temporary Erosion and Sediment Control Details.dwg

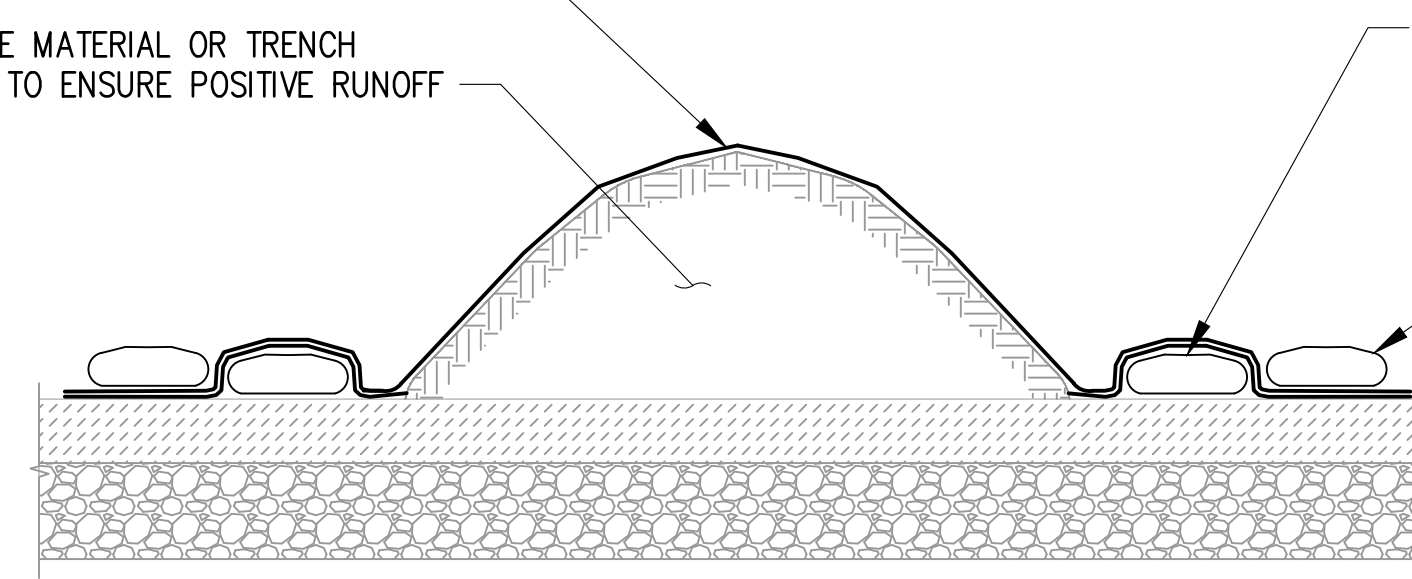
Layout: G2.2  
 bmoehus



**1 INLET PROTECTION**  
 G2.1 SCALE: NTS

COVER MATERIAL WITH OVER NIGHT STORAGE WITH 6 MIL REINFORCEMENT PLASTIC COVER OF JOINT, WEIGHT DOWN PLASTIC AS REQUIRED

MOUND SOIL, STOCKPILE MATERIAL OR TRENCH EXCAVATION MATERIAL TO ENSURE POSITIVE RUNOFF



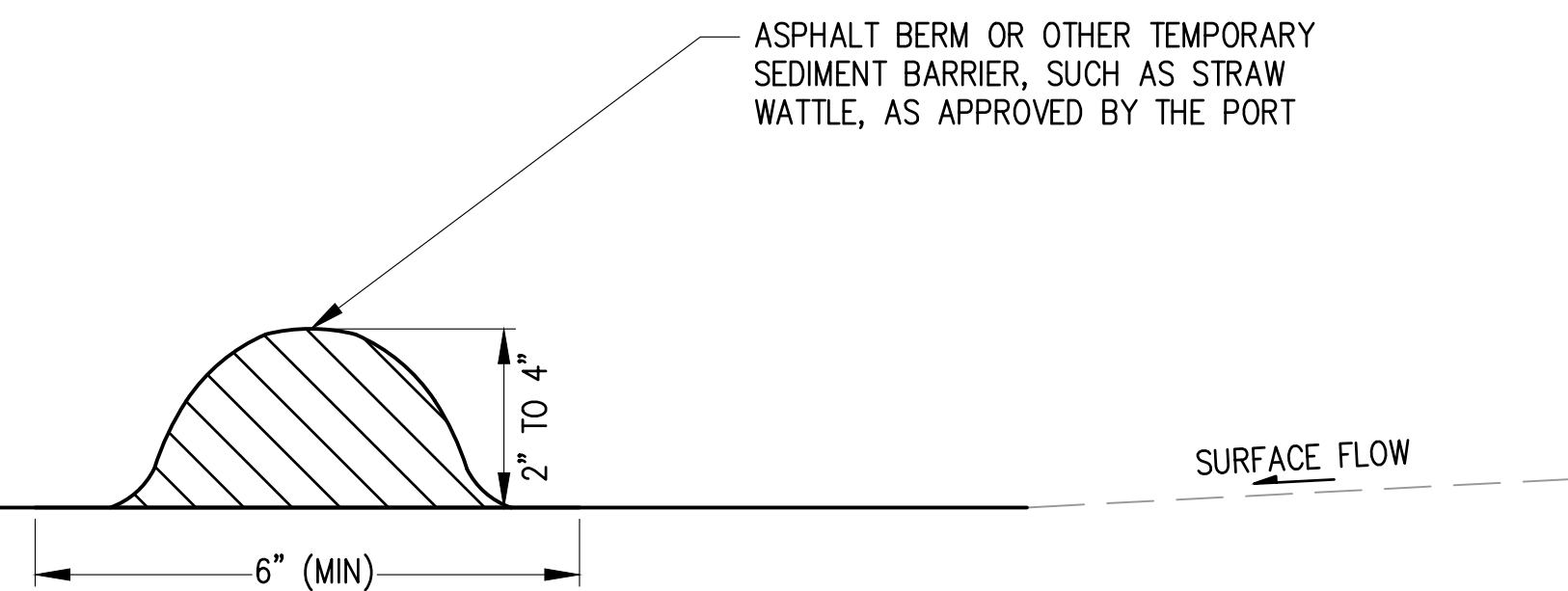
**NOTE:**

1. RIPS AND TEARS IN THE PLASTIC SHEETING SHALL BE REPAIRED IN A TIMELY MANNER.
2. SOIL STOCKPILE MATERIAL AND TRENCH EXCAVATIONS MATERIAL SUITABLE FOR BACKFILL SHALL BE STOCKPILED AT NO MORE THAN 1 TO 1 SLOPE AND TOE OF THE STOCKPILE SHALL NO CLOSER THAN 2' FROM THE EDGE OF EXCAVATION. STOCKPILE HEIGHT SHALL NOT EXCEED 10'.

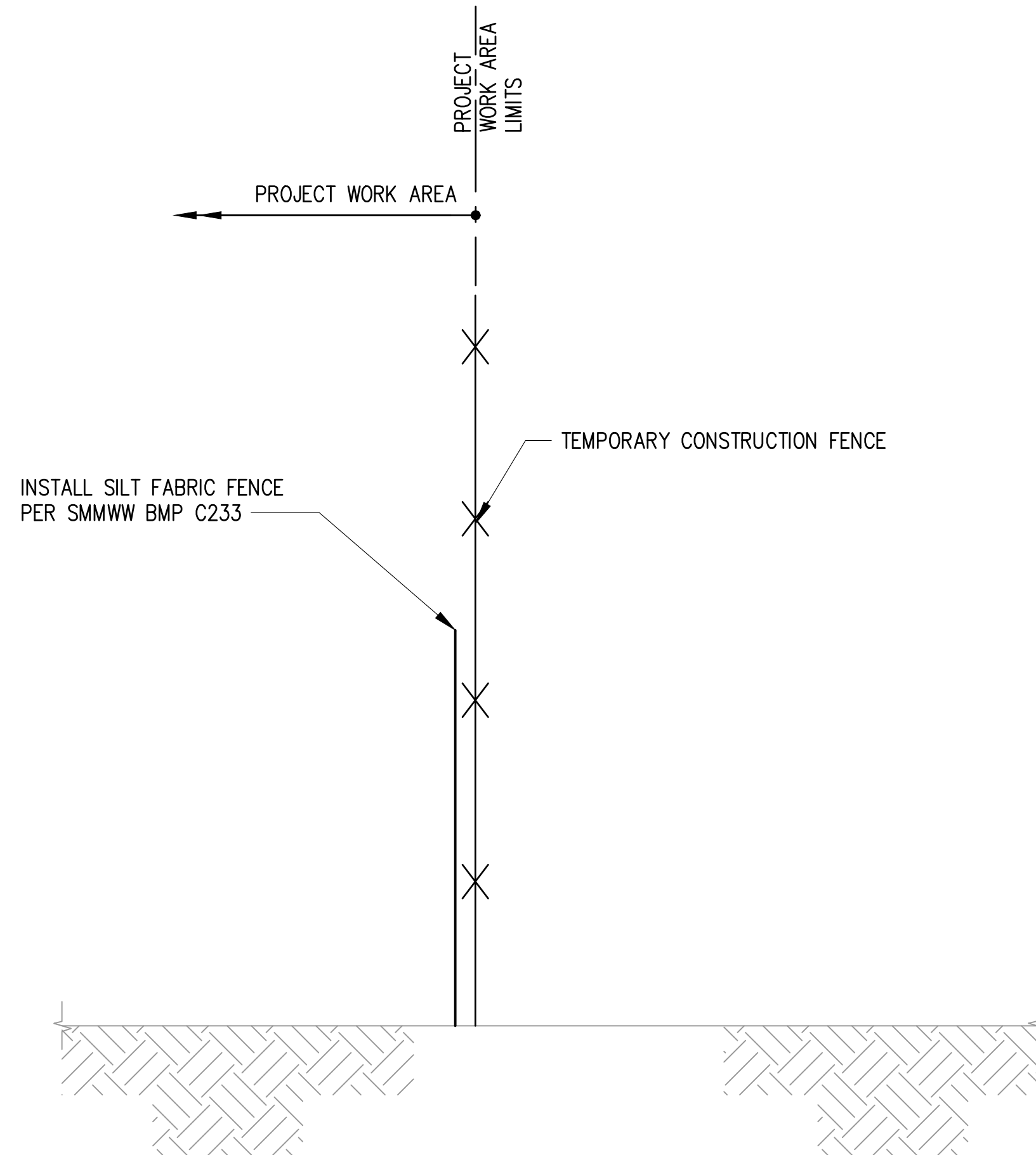
**3 TEMPORARY STOCKPILE DETAIL**  
 G2.1 SCALE: NTS

**NOTES**

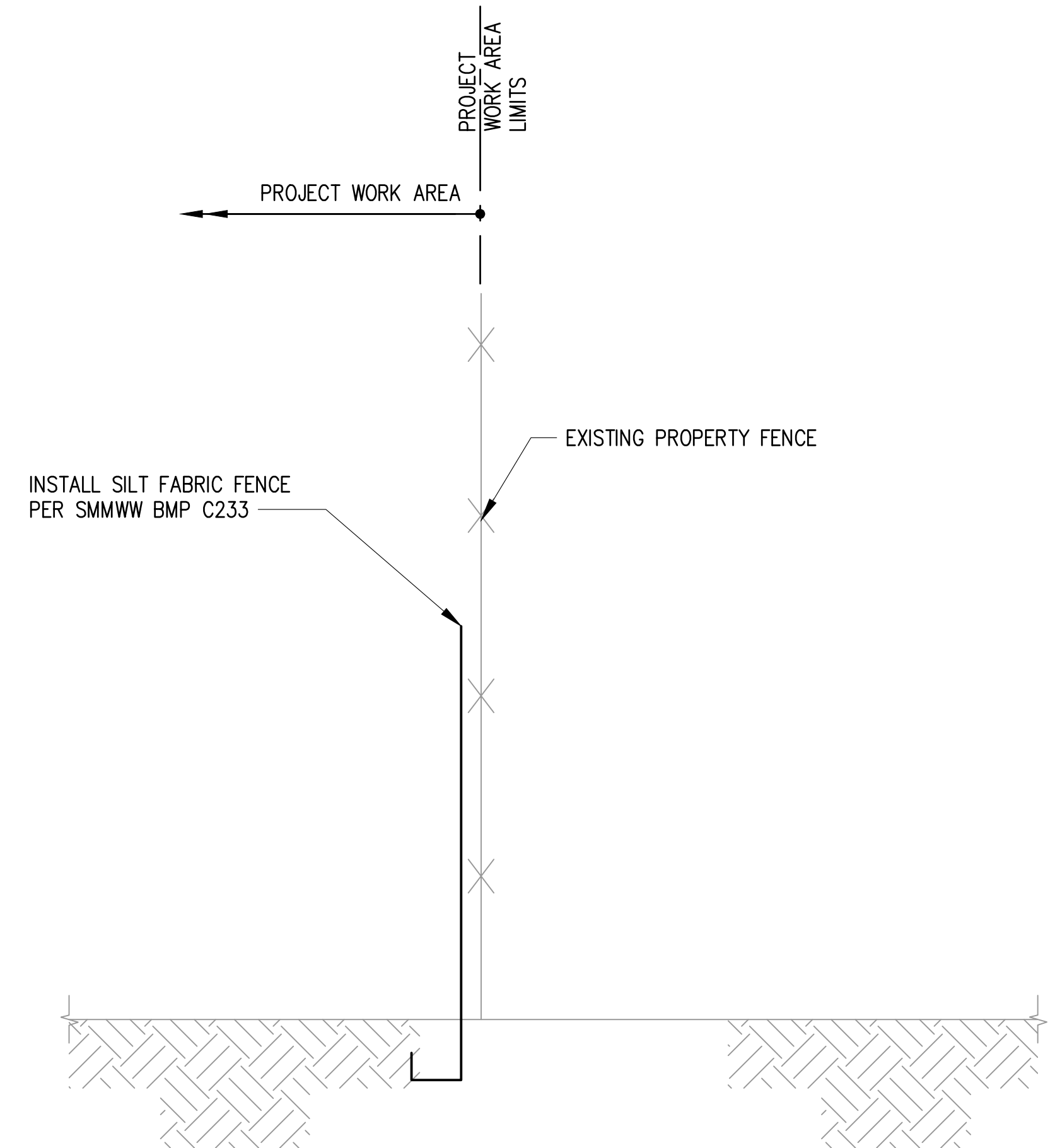
1. CONTRACTOR TO ADJUST TESC MEASURES TO MINIMIZE IMPACT TO PORT DURING EACH PHASE.
2. CLEAN OUT STORMWATER CATCH BASINS PRIOR TO INSTALLING INLET PROTECTION.
3. MAINTAIN INLET PROTECTION PER MANUFACTURERS RECOMMENDATIONS OR CLEAN OR REMOVE AND REPLACE WHEN SEDIMENT HAS FILLED ONE-THIRD OF THE AVAILABLE STORAGE. IMMEDIATELY REMOVE ANY ACCUMULATED SEDIMENT ON OR AROUND THE INLET.
4. DO NOT REMOVE SEDIMENT BY FLUSHING WITH WATER. DISPOSE OF ALL SEDIMENT OFF-SITE AT AN APPROVED FACILITY.



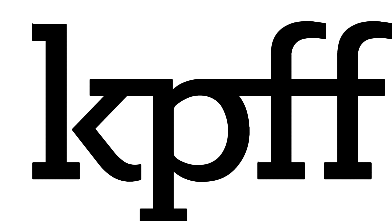
**2 SEDIMENT BARRIER/ASPHALT BERM**  
 G2.1 SCALE: NTS



**4 TEMPORARY FENCING**  
 G2.1 SCALE: NTS



**5 SILT FABRIC FENCING**  
 G2.1 SCALE: NTS



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**T4A CARGO YARD EXPANSION**  
**PORT OF GRAYS HARBOR**  
**TEMPORARY EROSION AND SEDIMENT CONTROL**  
**DETAILS**

DRAWN: DCG	PROJECT NO.: 2200119
DESIGN: SJS	SCALE: AS SHOWN
CHECKED: NAW	DATE: 01/31/2023
DRAWING NO.	<b>G2.2</b>
SHEET NO.	7 OF 17







30% SUBMITTAL

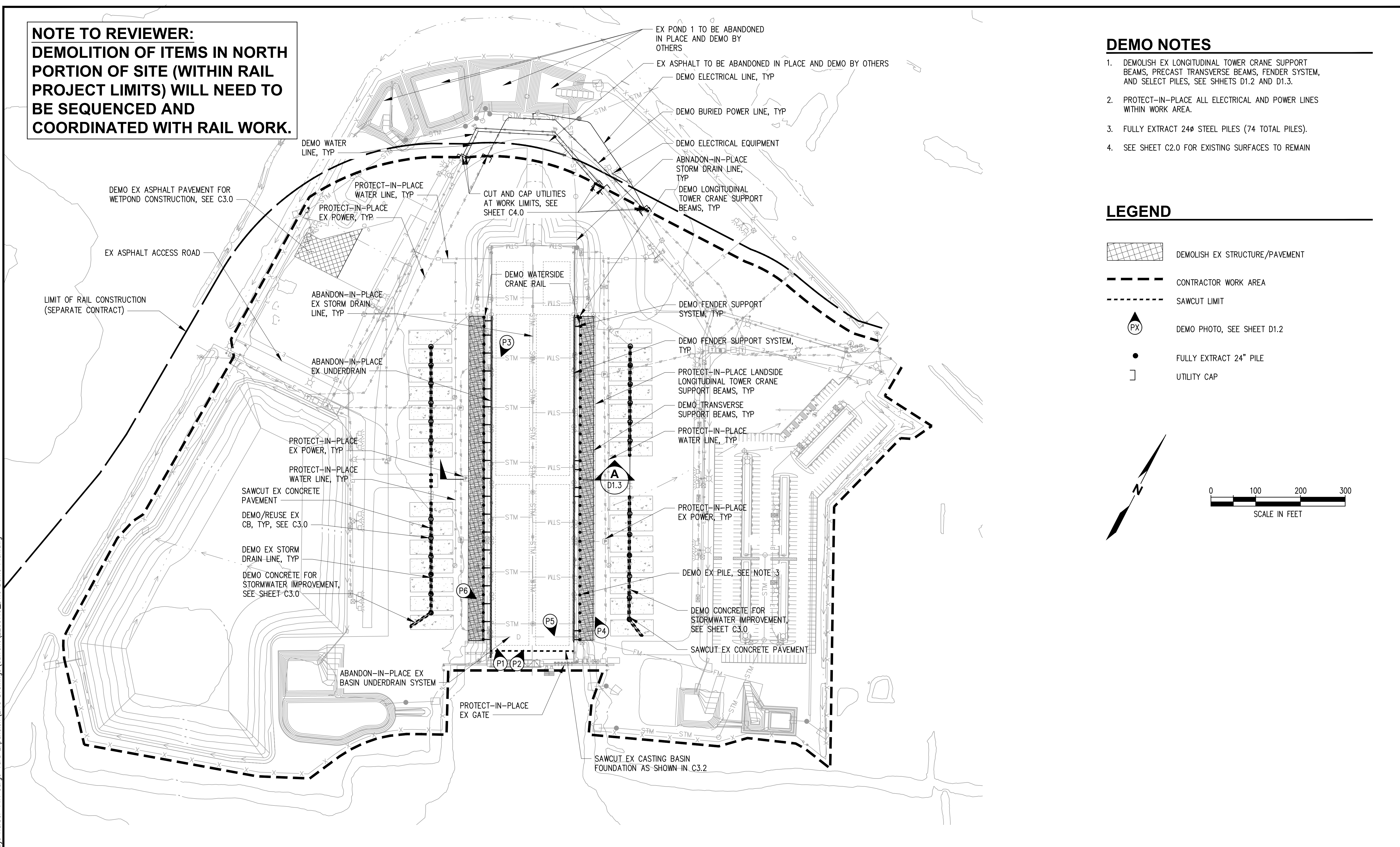
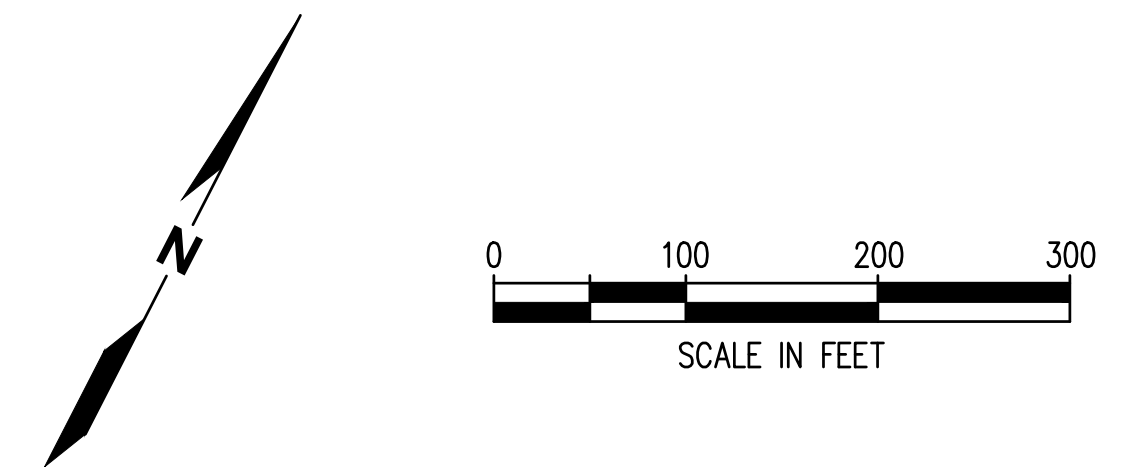
**NOTE TO REVIEWER:  
DEMOLITION OF ITEMS IN NORTH  
PORTION OF SITE (WITHIN RAIL  
PROJECT LIMITS) WILL NEED TO  
BE SEQUENCED AND  
COORDINATED WITH RAIL WORK.**

**DEMO NOTES**

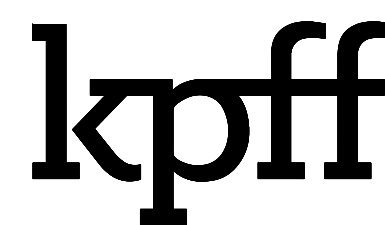
1. DEMOLISH EX LONGITUDINAL TOWER CRANE SUPPORT BEAMS, PRECAST TRANSVERSE BEAMS, FENDER SYSTEM, AND SELECT PILES, SEE SHHETS D1.2 AND D1.3.
2. PROTECT-IN-PLACE ALL ELECTRICAL AND POWER LINES WITHIN WORK AREA.
3. FULLY EXTRACT 24# STEEL PILES (74 TOTAL PILES).
4. SEE SHEET C2.0 FOR EXISTING SURFACES TO REMAIN

**LEGEND**

-  DEMOLISH EX STRUCTURE/PAVEMENT
-  CONTRACTOR WORK AREA
-  SAWCUT LIMIT
-  DEMO PHOTO, SEE SHEET D1.2
-  FULLY EXTRACT 24" PILE
-  UTILITY CAP



Plotted: Jan 31, 2023 - 4:55pm bmoachus Layout: 2200119\_D1.0 Demo Plan  
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NO.	DATE	BY	REVISION

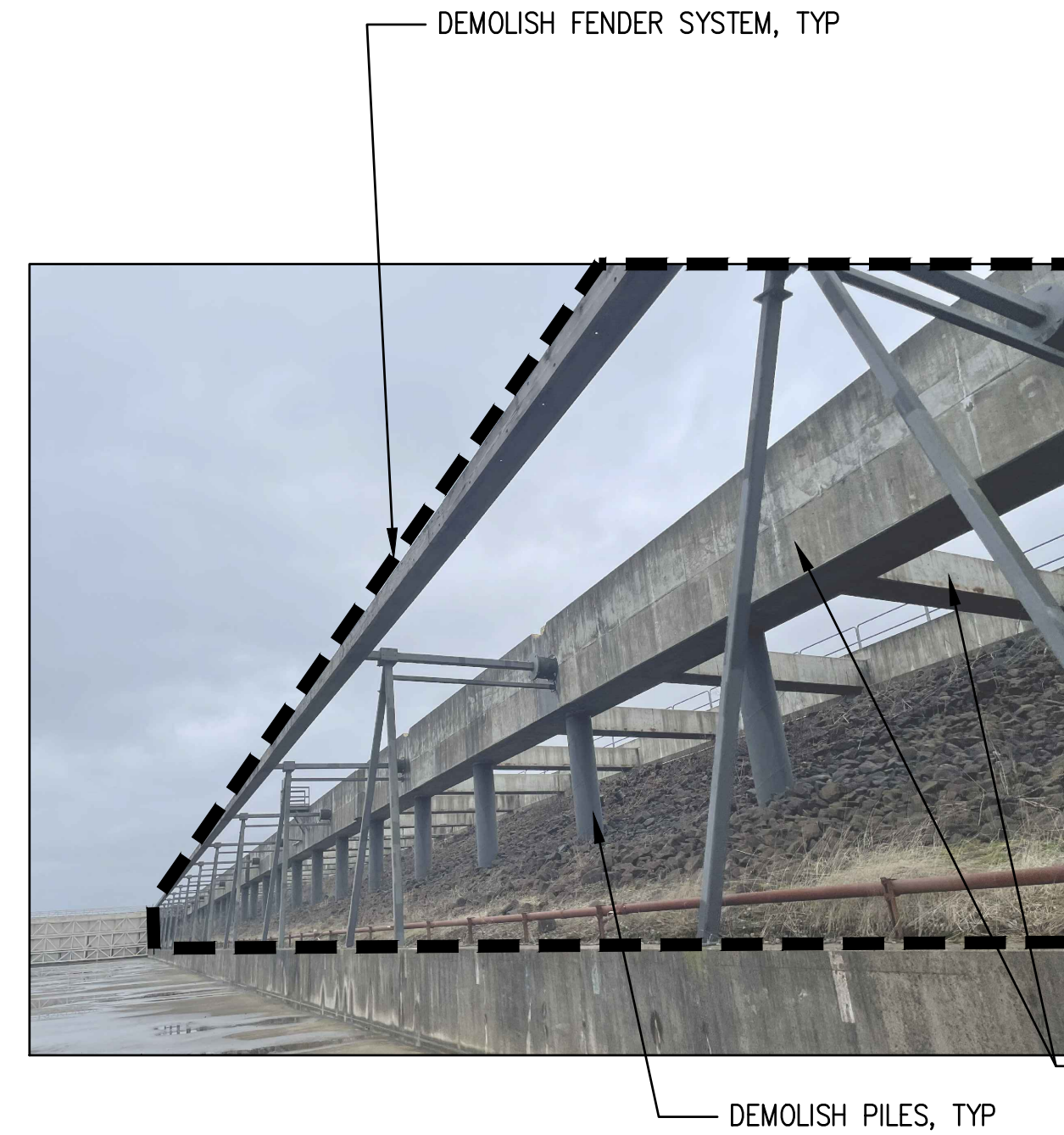
**T4A CARGO YARD EXPANSION  
PORT OF GRAYS HARBOR  
DEMOLITION PLAN**

DRAWN: DCG	PROJECT NO.: 2200119
DESIGN: SJS	SCALE: AS SHOWN
CHECKED: NAW	DATE: 01/31/2023
DRAWING NO.	<b>D1.0</b>
SHEET NO.	8 OF 17

**30% SUBMITTAL**

**GENERAL NOTES**

1. SEE SHEET D1.0 FOR PHOTO ORIENTATION AND LOCATION.
2. THE INTENT OF THE DEMOLITION PHOTOS ARE TO SHOW GENERAL SCOPE OF ITEMS TO BE REMOVED/DEMOLISHED. THE PHOTOS ARE FOR REFERENCE ONLY AND TO HIGHLIGHT ITEMS IN THE FOREGROUND TO BE REMOVED/DEMOLISHED. ITEMS IN THE BACKGROUND THAT ARE NOT IDENTIFIED MAY REQUIRE DEMOLITION, SEE DEMOLITION PLAN FOR EXTENTS OF WORK. THE CONTRACTOR SHALL VISIT THE SITE AND SURVEY THE SCOPE OF REMOVAL.
3. ALL PILES THAT ARE IDENTIFIED TO BE DEMOLISHED ARE TO BE FULLY EXTRACTED.
4. THE DEMOLITION BOUNDARY ILLUSTRATES APPROXIMATE EXTENTS OF DEMOLITION ABOVE THE GROUND. ADDITIONAL DEMOLITION IS REQUIRED BELOW GROUND SURFACE.
5. UNLESS SPECIFICALLY NOTED OTHERWISE, DEMOLISH IS DEFINED AS COMPLETE DEMOLITION, REMOVAL, AND SATISFACTORY DISPOSAL OR RECYCLING.
6. CONTRACTOR SHALL PROTECT-IN-PLACE ALL STRUCTURES, UTILITIES AND OBJECTS NOT IDENTIFIED AS BEING DEMOLISHED ON THE PLANS. ANY DAMAGE TO ITEMS NOT BEING DEMOLISHED SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT THEIR EXPENSE.
7. PRIOR TO COMMENCING DEMOLITION ACTIVITIES, THE CONTRACTOR SHALL IMPLEMENT TEMPORARY EROSION AND SEDIMENTATION CONTROL (TESC). NO DEMOLITION MATERIAL OR DEBRIS SHALL BE ALLOWED TO ENTER THE WATER. (SEE SHEET G2.1).



**P3 PHOTO**  
DEMOLISH FENDER SYSTEM

DEMO BEAM AND STRUTS, TYP.  
SEE SHEET D1.3



**P1 PHOTO**  
DEMOLISH WEST CRANE RAIL AND FENDER SYSTEM



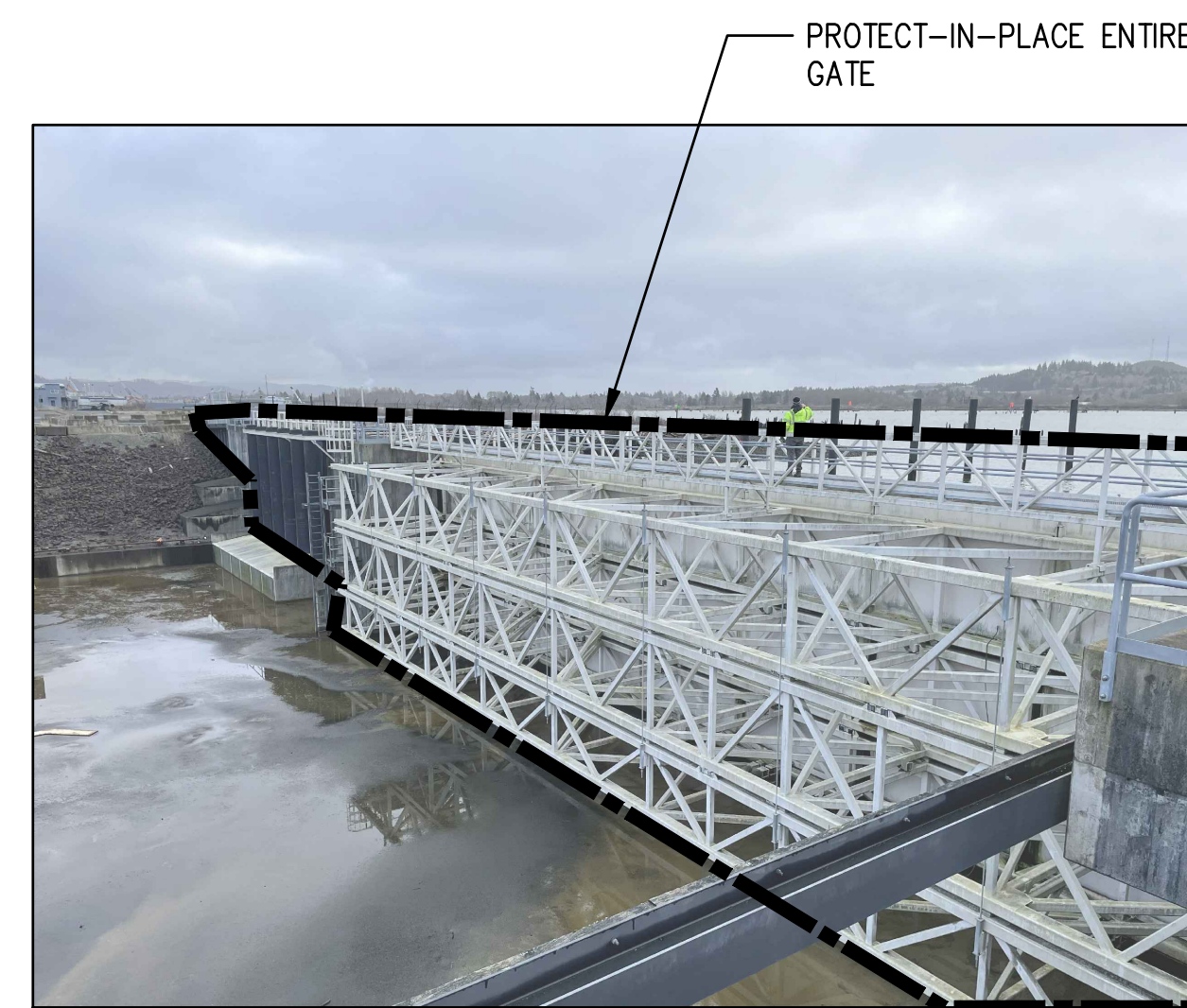
**P2 PHOTO**  
DEMOLISH EAST CRANE RAIL AND FENDER SYSTEM



**P4 PHOTO**  
DEMOLISH CRANE RAIL SYSTEM, TYP



**P5 PHOTO**  
DEMOLISH BASIN OUTLET STRUCTURE

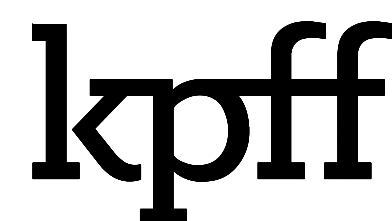


**P6 PHOTO**  
PROTECT-IN-PLACE GATE

**LEGEND**

- DEMOLITION BOUNDARY (SEE NOTE 4)
- - - UTILITY OR STRUCTURE SALVAGE BOUNDARY

Plotted: Jan 31, 2023 - 4:55pm bmoachus Layout: 2200119\_D1.2 Demo Photos  
M:\2022\2200119 Port of Grays Harbor 14A Cargo Yard Expansion\2.18 Drawings\Current\2200119\_D1.2 Demo Photos.dwg



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**T4A CARGO YARD EXPANSION**  
**PORT OF GRAYS HARBOR**  
**DEMOLITION PHOTOS**

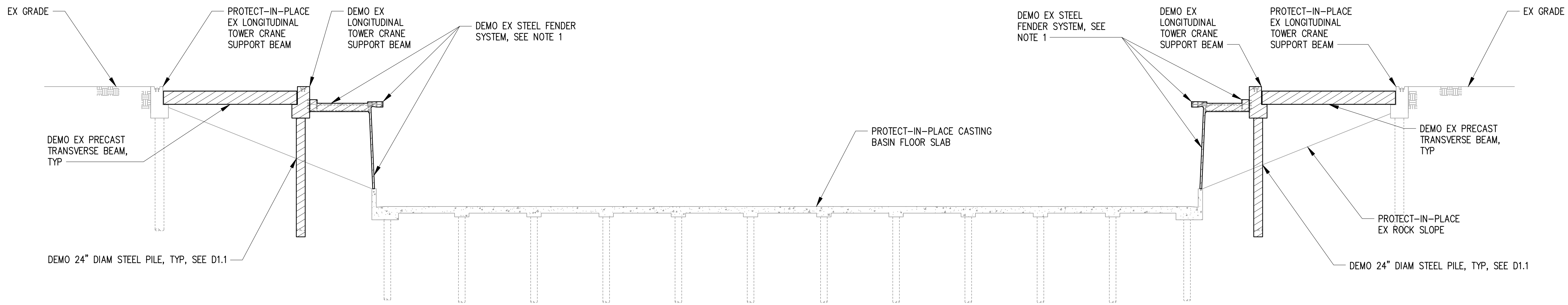
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DESIGN: SJS	SCALE: AS SHOWN
CHECKED: NAW	DATE: 01/31/2023
DRAWING NO.	<b>D1.2</b>
SHEET NO.	<b>9 OF 17</b>

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**DEMO NOTES**

1. DEMOLISH EX LONGITUDINAL TOWER CRANE SUPPORT BEAMS, PRECAST TRANSVERSE BEAMS, FENDER SYSTEM, AND SELECT PILES BASED ON D1.0.

**LEGEND**



**A** **TYPICAL CASTING BASIN SECTION**  
D1.0 SCALE: NTS

Plotted: Jan 31, 2023 - 4:55pm  
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**T4A CARGO YARD EXPANSION**  
**PORT OF GRAYS HARBOR**

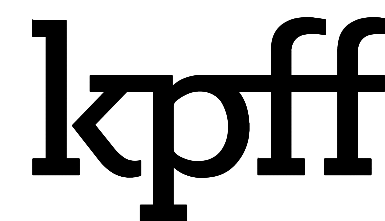
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**TYPICAL DEMOLITION SECTION**

DRAWN: DCG	PROJECT NO.: 2200119
DESIGN: SJS	SCALE: AS SHOWN
CHECKED: NAW	DATE: 01/31/2023
DRAWING NO.	D1.3
SHEET NO.	10 OF 17

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**T4A CARGO YARD EXPANSION**  
**PORT OF GRAYS HARBOR**  
**CIVIL DESIGN CRITERIA**

DRAWN: DCG	PROJECT NO.: 2200119
DESIGN: SJS	SCALE: AS SHOWN
CHECKED: NAW	DATE: 01/31/2023
DRAWING NO.	<b>C1.0</b>
SHEET NO.	<b>11 OF 17</b>

**STORM DRAINAGE NOTES**

1. DESIGN MANUAL: WASHINGTON STATE DEPARTMENT OF ECOLOGY 2019 STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON (SMMWW).
2. CONVEYANCE SIZING: 25-YR STORM MODELED FROM WESTERN WASHINGTON HYDROLOGY MODEL (WWM) AND GRAYS HARBOR COUNTY GAUGE WITH A 1.10 PRECIPITATION FACTOR.
3. BACKWATER TIDAL ELEVATION: HAT = 10.78 (NAVD88)
4. FLOW CONTROL: EXEMPT, DISCHARGING TO A DESIGNATED RECEIVING WATER BODY.
5. WATER QUALITY: DESIGN FLOW RATE GREATER THAN OR EQUAL TO 91% OF THE TOTAL RUNOFF VOLUME FOR THE SIMULATION PERIOD, USING WWM  
  
WATER QUALITY BASIC TREATMENT STANDARDS: SMMWW
6. TESC: TESC STORMWATER RUNOFF FLOWS: WWM 5 MIN TIME STEP

**FIRE PROTECTION NOTES**

1. CODES AND DESIGN CRITERIA:
  - A. THE FIRE PROTECTION SYSTEM SHALL CONFORM TO THE CITY OF ABERDEEN MUNICIPAL CODE CHAPTER 15.70 FIRE PREVENTION CODE

**DOMESTIC WATER NOTES**

1. THE WATER SYSTEM SHALL CONFORM TO THE CITY OF ABERDEEN MUNICIPAL CODE CHAPTER 15.32 PLUMBING CODE

**30% SUBMITTAL**

**NOTE TO REVIEWER:  
SUBBASIN SURFACE AREA  
AND FLOW INFORMATION IN  
FUTURE SUBMITTAL.**





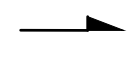


**GENERAL NOTES**

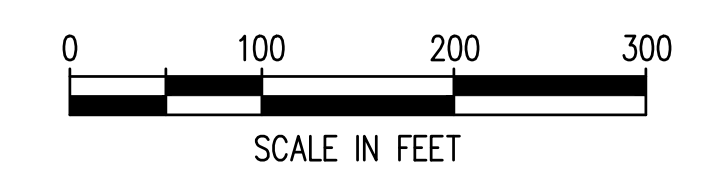
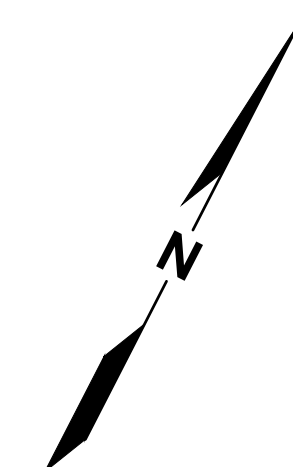
- SEE SHEET C3.0 FOR STORM DRAINAGE APPEARANCES.
- ALL SURFACE ARE CONSIDERED TO BE POLLUTION GENERATING.
- GRAVEL SURFACING CONSISTS OF 1 FOOT OF CRUSHED SURFACING OVERLAYING 2 FEET OF QUARRY SPALLS

**SUBBASIN TABLE:**

ID#	SURFACE AREA (AC)	25-YR STORM (CFS)
SB1		
SB2		
SB3		
SB4		
SB5		
SB6		

**LEGEND**

-  APPROXIMATE DRAINAGE SUB BASIN OUTLINE
-  EX CONCRETE SURFACE
-  EX GRAVEL SURFACE
-  GRAVEL SURFACING, SEE NOTE 3
-  STORMWATER FLOW DIRECTION
-  PLACE HMA PG 58H-22 PER WSDOT STANDARD SPECIFICATIONS
-  CONCRETE ECOLOGY BLOCKS



DRAINAGE DITCH,  
SEE NOTE 1

PLACE 8,000  
SQUARE FEET OF  
HMA CONNECTING  
DRIVE PATHS

1  
C2.1 CASTING BASIN BACKFILL DETAIL

NEW RAIL CONSTRUCTION  
(BY OTHERS)

EX ASPHALT SURFACE FOR  
FORMER CONCRETE BATCH PLANT

EX CONCRETE SURFACE  
FOR FORMER CONCRETE  
BATCH PLANT TO REMAIN

EX ASPHALT ACCESS ROAD TO REMAIN

EX ASPHALT  
ACCESS ROAD

CONCRETE &  
ASPHALT  
REPLACEMENT OVER  
UTILITY TRENCH

EX ASPHALT  
PARKING AREA

EX CONCRETE  
LAYDOWN AREA, TYP

CONCRETE &  
ASPHALT  
REPLACEMENT OVER  
UTILITY TRENCH

PLACE GRAVEL  
SURFACING IN  
STOCKPILE AREA  
AFTER PLACING  
MATERIAL IN BASIN

PLACE GRAVEL  
SURFACING OVER  
FILL ZONE

ECOLOGY CONCRETE BLOCK WALL

Plotted: Jan 31, 2023 - 4:56pm bmoachus Layout: C2.0  
M:\2022\2200119 Port of Grays Harbor T4A Cargo Yard Expansion\2.18 Drawings\Current\2200119\_C2.0 Grading and Paving Plan.dwg



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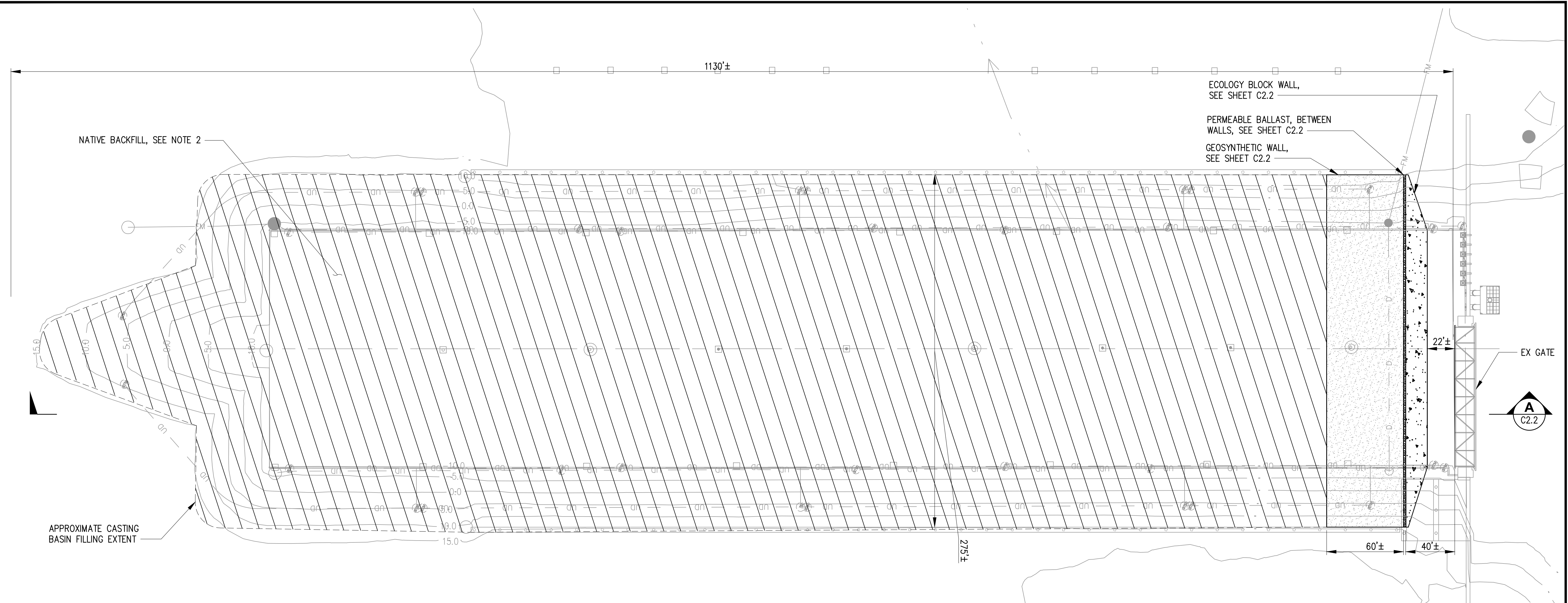
**T4A CARGO YARD EXPANSION  
PORT OF GRAYS HARBOR  
GRADING AND SURFACING PLAN**

DRAWN: DCH	PROJECT NO.: 2200119
DESIGN: SJS	SCALE: AS SHOWN
CHECKED: NAW	DATE: 01/31/2023
DRAWING NO.	<b>C2.0</b>
SHEET NO.	<b>12</b> OF <b>17</b>

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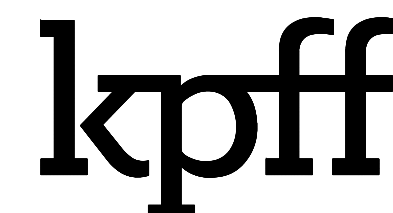
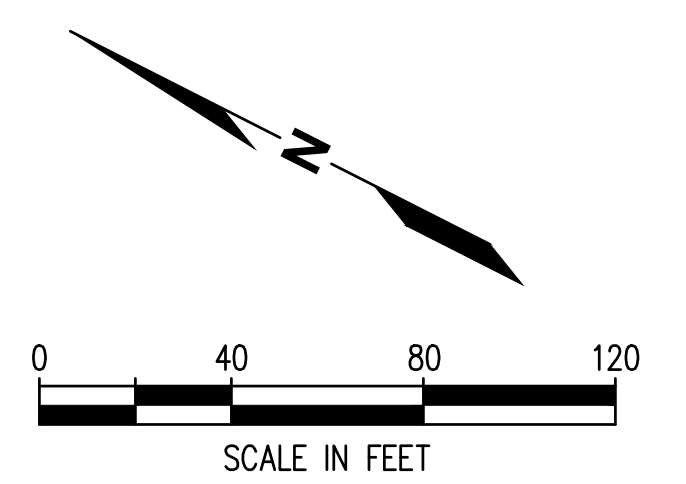


Plotted: Jan 31, 2023 - 5:10pm bmoachus Layout: C2.1  
 M:\2022\2200119 Port of Grays Harbor T4A Cargo Yard Expansion\2.18 Drawings\Current\2200119\_C2.1 MSE Wall and Backfill Plan.dwg



**1 CASTING BASIN BACKFILL PLAN**  
 SCALE: 1" = 40'-0"

- NOTES**
- SEE SHEET C2.3 FOR MSE WALL AND BASIN FILL PHASING REQUIREMENTS.
  - CONTRACTOR SHALL UTILIZE THE EXISTING SOIL STOCKPILE ON SITE AS THE PRIMARY FILL FOR THE BASIN. ADDITIONAL FILL IF REQUIRED, SHALL BE COMMON BORROW FOR ANY FILL MORE THAN 3 FEET BELOW FINISH SURFACE.
  - CASTING BASIN AREA SHALL BE SURFACED WITH GRAVEL SURFACING IN THE TOP 3 FEET. GRAVEL SURFACING SHALL CONSIST OF 1 FOOT OF CRUSHED SURFACING OVERLAYING 2 FEET OF QUARRY SPALLS.



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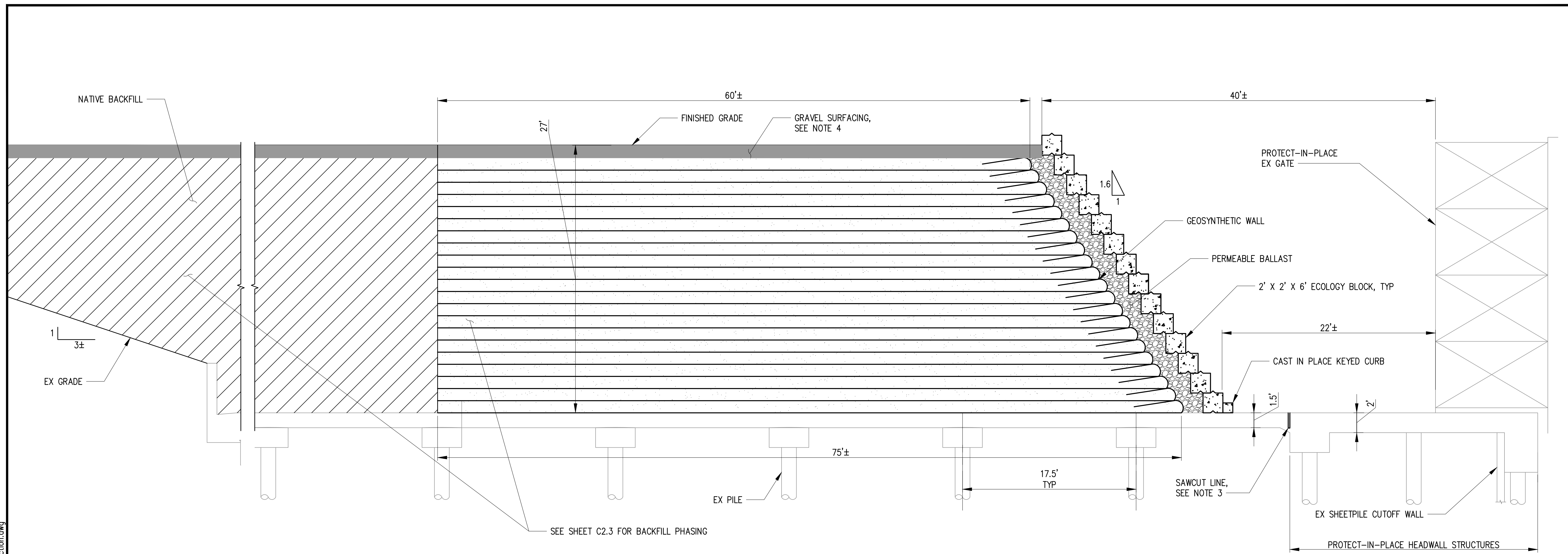
NO.	DATE	BY	REVISION

**T4A CARGO YARD EXPANSION**  
**PORT OF GRAYS HARBOR**  
**MSE WALL AND BACKFILL PLAN**

DRAWN: DCG	PROJECT NO.: 2200119
DESIGN: SJS	SCALE: AS SHOWN
CHECKED: NAW	DATE: 01/31/2023
DRAWING NO.	<b>C2.1</b>
SHEET NO.	<b>13</b> OF <b>17</b>

**30% SUBMITTAL**

Plotted: Jan 31, 2023 - 5:05pm  
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 Layout: C2.2  
 bmoachus



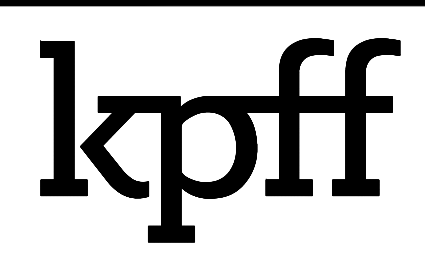
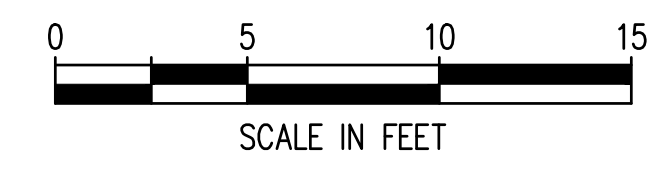
**A**  
**C2.1** **MSE WALL AND BACKFILL SECTION**  
 SCALE: 1" = 5'-0"

**NOTES**

1. CONTRACTOR SHALL USE BACKFILL THE CASTING BASIN TO THE MAXIMUM EXTENT FROM THE EXISTING STOCKPILE LOCATED IN THE SOUTHWEST SIDE OF THE SITE, AS SHOWN IN G1.3.
2. NATIVE BACKFILL FROM STOCKPILE SHALL BE PLACED IN MAX 6IN LIFT AT A TIME, SEE C2.3 FOR BACKFILL PHASING REQUIREMENTS.
3. CONTRACTOR TO SAWCUT CONCRETE TO PRODUCE STRUCTURAL SEPARATION BETWEEN HEADWALL STRUCTURE FOUNDATIONS AND PILE SUPPORTED CASTING BASIN SLAB
3. CASTING BASIN AREA SHALL BE SURFACED WITH GRAVEL SURFACING IN THE TOP 3 FEET. GRAVEL SURFACING SHALL CONSIST OF 1 FOOT OF CRUSHED SURFACING OVERLAYING 2 FEET OF QUARRY SPALLS.

**LEGEND**

- NATIVE BACKFILL, SEE NOTE 1
- GEOSYNTHETIC WALL
- PERMEABLE BALLAST



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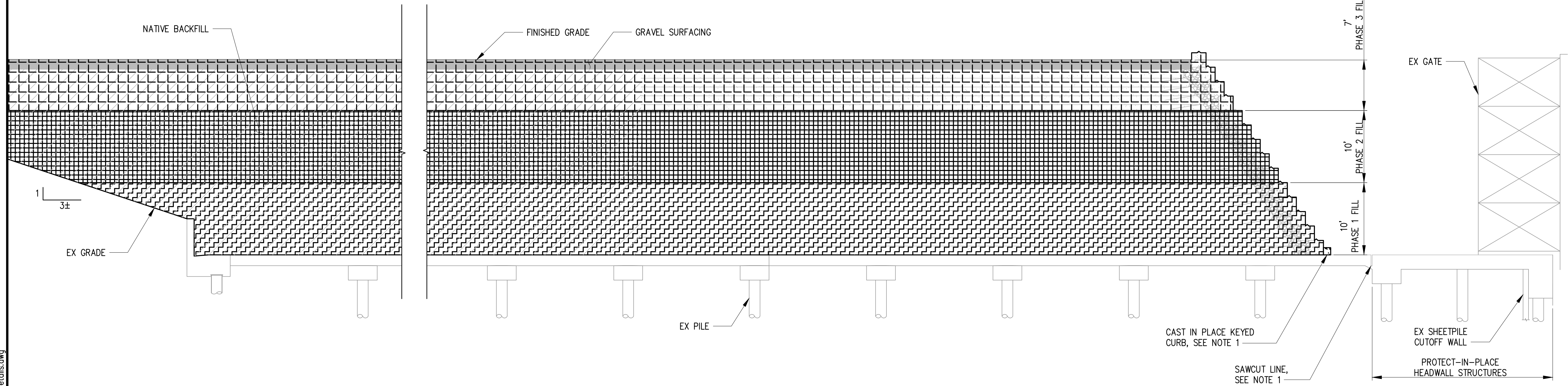
NO.	DATE	BY	REVISION

**T4A CARGO YARD EXPANSION**  
**PORT OF GRAYS HARBOR**  
**MSE WALL AND BACKFILL SECTION**

DRAWN: DCG	PROJECT NO.: 2200119
DESIGN: SJS	SCALE: AS SHOWN
CHECKED: NAW	DATE: 01/31/2023
DRAWING NO.	<b>C2.2</b>
SHEET NO.	<b>14</b> OF <b>17</b>

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Plotted: Jan 31, 2023 - 5:05pm  
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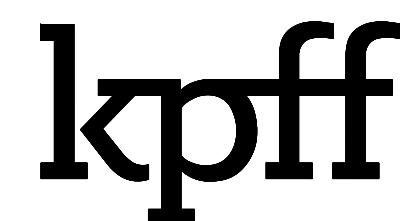
**A**  
C2.1 **CASTING BASIN BACKFILL PHASING SECTION**  
SCALE: NTS

**NOTES**

- CONTRACTOR SHALL SAWCUT CASTING BASIN AND CONSTRUCT KEYED CURB AS SHOWN PRIOR TO BACKFILL AND MSE WALL CONSTRUCTION. CONTRACTOR MAY CONSTRUCT MSE WALL AND BACKFILL THE CASTING BASIN UP TO 10FT WITH NO RESTRICTION ON LEVELING.
- ONCE THE BACKFILL AND MSE WALL REACHES 8FT FILL HEIGHT, CONTRACTOR SHALL BACKFILL THE ENTIRE CASTING AS LEVEL AS POSSIBLE WITH A MAXIMUM DIFFERENTIAL HEIGHT OF 2FT ANYWHERE WITHIN THE BACKFILL AREA. CONTRACTOR SHALL CONTINUE TO MAINTAIN A LEVEL FILL FROM 10FT TO 20FT.
- AFTER FILL REACHES 20FT IN HEIGHT, CONTRACTOR MAY FILL THE SITE WITH NO RESTRICTION ON LEVELING.

**LEGEND**

- NATIVE BACKFILL
- GEOSYNTHETIC WALL
- PERMEABLE BALLAST
- PHASE 1 BACKFILL (0'-10'), SEE NOTE 1
- PHASE 2 BACKFILL (10'-20'), SEE NOTE 2
- PHASE 3 BACKFILL (20'-27'), SEE NOTE 3



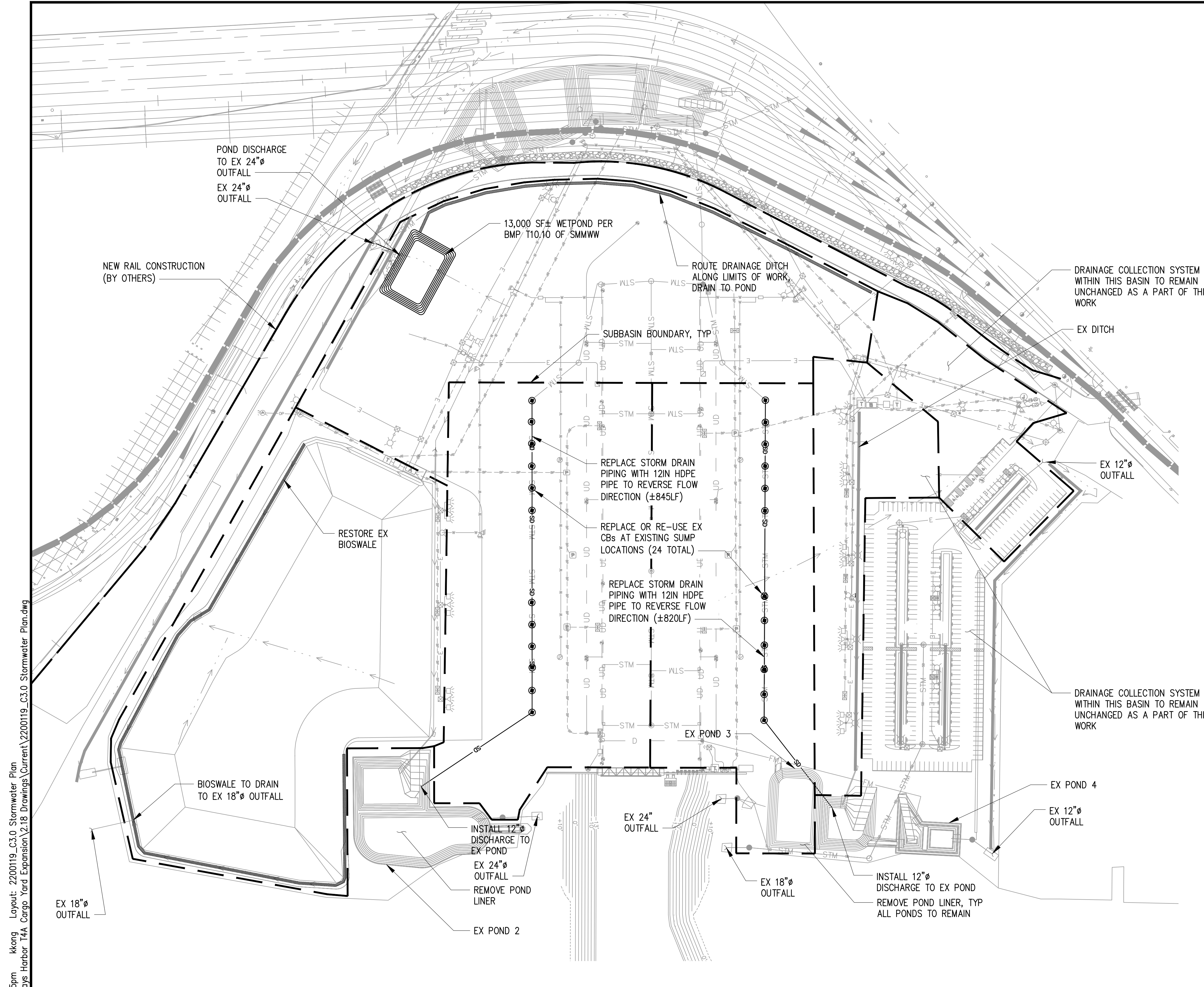
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NO.	DATE	BY	REVISION

**T4A CARGO YARD EXPANSION**  
**PORT OF GRAYS HARBOR**  
**CASTING BASIN BACKFILL PHASING DETAILS**

DRAWN: DCG	PROJECT NO.: 2200119
DESIGN: SJS	SCALE: AS SHOWN
CHECKED: NAW	DATE: 01/31/2023
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SHEET NO.	<b>15</b> OF <b>17</b>

**30% SUBMITTAL**



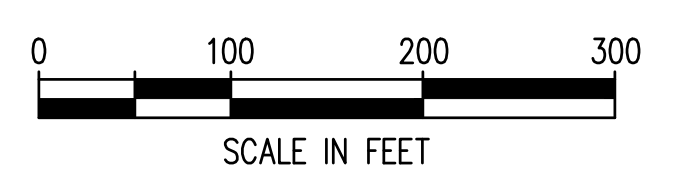
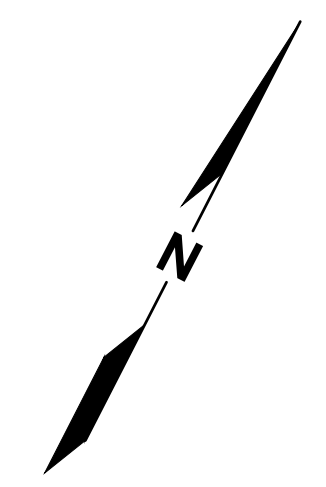
**NOTES**

1. VERIFY INVERTS AND PIPE DIAMETERS AT ALL LOCATIONS PRIOR TO CONSTRUCTING STORM DRAINAGE CONVEYANCE PIPES OR STRUCTURES.
2. FIELD VERIFY AND POTHOLE EXISTING UTILITY CROSSINGS PRIOR TO CONSTRUCTION.

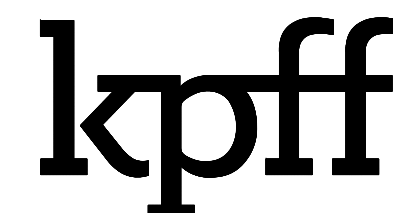
**LEGEND**

- APPROXIMATE DRAINAGE SUBBASIN BOUNDARY
- STORM DRAIN
- EX STORM DRAIN
- EX STORM WATER STRUCTURE
- STORM WATER CATCH BASIN
- STORM WATER FLOW DIRECTION
- OUTFALL
- DRAINAGE DITCH

**NOTE TO REVIEWER:  
DEMOLITION OF DRAINAGE  
INFRASTRUCTURE IN NORTH  
PORTION OF SITE WILL NEED TO BE  
SEQUENCED AND COORDINATED  
WITH THE RAIL PROJECT.**



Plotted: Jan 31, 2023 - 5:05pm kkong Layout: 2200119\_C3.0 Stormwater Plan  
 M:\2022\2200119 Port of Grays Harbor T4A Cargo Yard Expansion\2.18 Drawings\Current\2200119\_C3.0 Stormwater Plan.dwg



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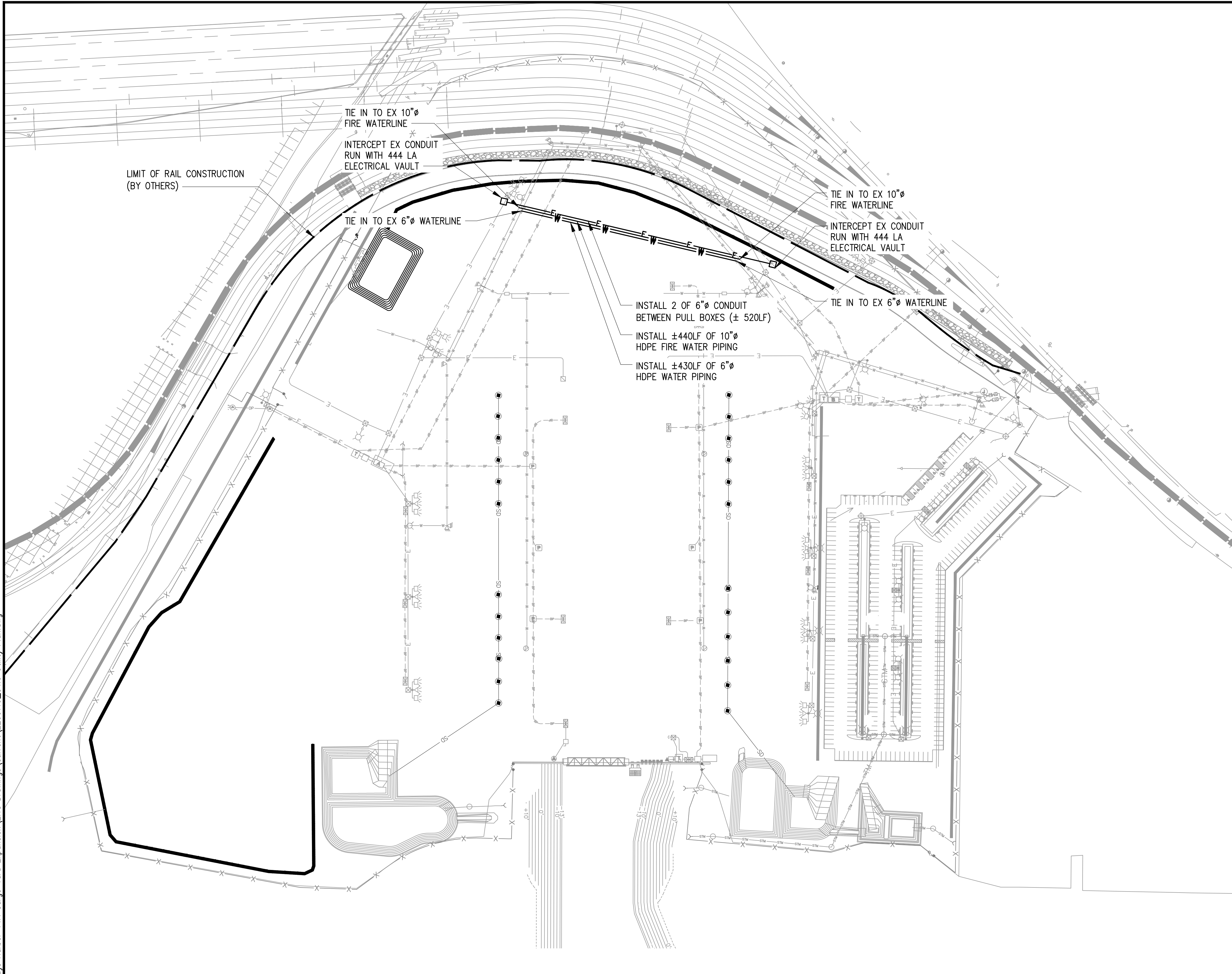
NO.	DATE	BY	REVISION

**T4A CARGO YARD EXPANSION**  
**PORT OF GRAYS HARBOR**  
**STORMWATER PLAN**

DRAWN: DCG	PROJECT NO.: 2200119
DESIGN: SJS	SCALE: AS SHOWN
CHECKED: NAW	DATE: 01/31/2023
DRAWING NO.	<b>C3.0</b>
SHEET NO.	<b>16</b> OF <b>17</b>

**30% SUBMITTAL**

Plotted: Jan 31, 2023 - 5:05pm kkong Layout: 2200119\_C4.0 Utility Plan  
 M:\2022\2200119 Port of Grays Harbor T4A Cargo Yard Expansion\2.18 Drawings\Current\2200119\_C4.0 Utility Plan.dwg



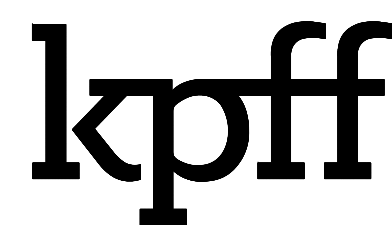
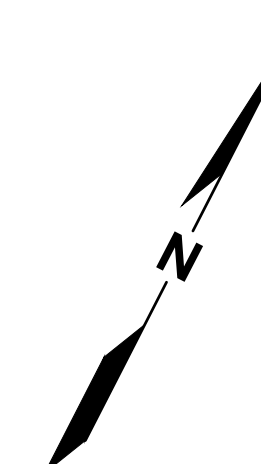
**NOTES**

- UTILITY LOCATION SHOWN IS APPROXIMATE, CONTRACTOR TO FIELD VERIFY PRIOR TO UTILITY WORK.

**LEGEND**

- W — WATER LINE
- E — ELECTRICAL CONDUIT/DUCTBANK
- SD — STORM DRAIN
- ELECTRICAL VAULT

**NOTE TO REVIEWER:**  
 SEQUENCING OF UTILITY REROUTES AT NORTH PORTION OF SITE WILL NEED TO BE COORDINATED WITH RAIL PROJECT.



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NO.	DATE	BY	REVISION

**T4A CARGO YARD EXPANSION**  
**PORT OF GRAYS HARBOR**  
**UTILITY PLAN**

DRAWN: DCG	PROJECT NO.: 2200119
DESIGN: SJS	SCALE: AS SHOWN
CHECKED: NAW	DATE: 01/31/2023
DRAWING NO.	<b>C4.0</b>
SHEET NO.	<b>17 OF 17</b>

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