



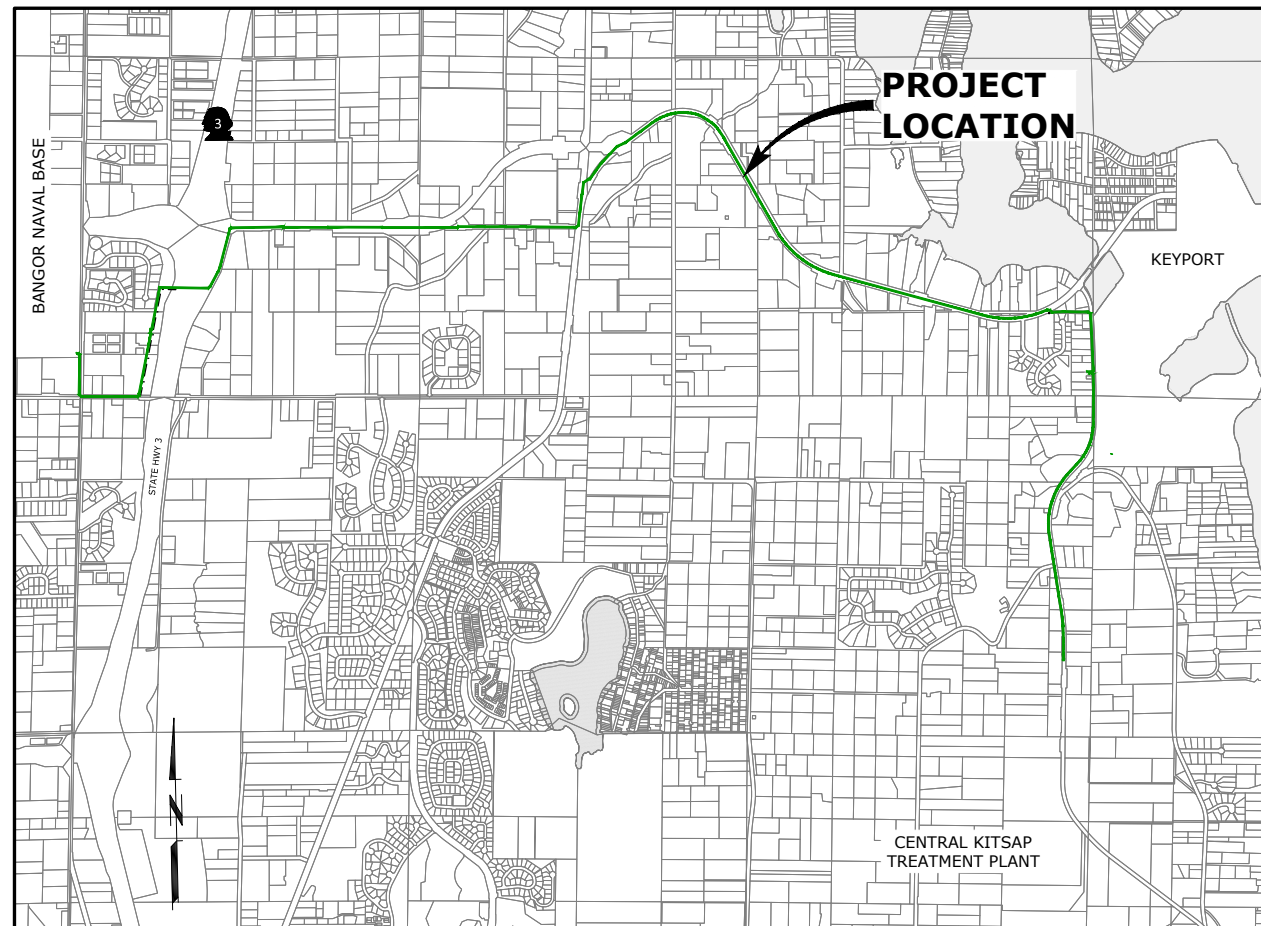
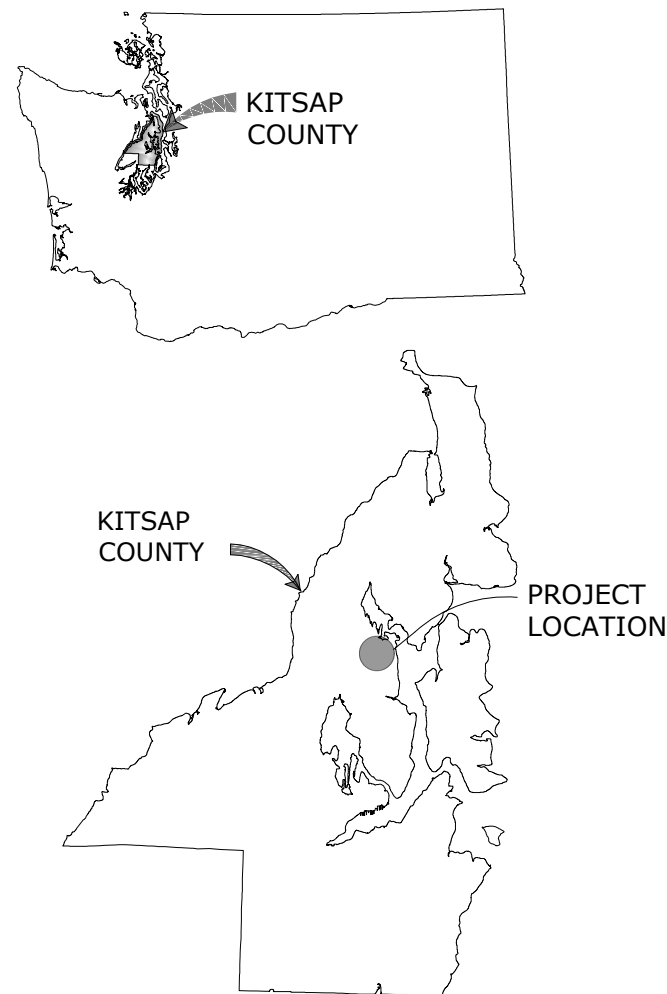
BANGOR-KEYPORT FORCE MAIN REPLACEMENT

FEBRUARY 2022

VOLUME 2 OF 2

LOCATION MAPS

NTS



VICINITY MAP
SCALE: 1"=1500'

COUNTY COMMISSIONERS

ROBERT GELDER - DISTRICT #1

CHARLOTTE GARRIDO - DISTRICT #2

EDWARD WOLFE - DISTRICT #3

APPROVED BY

DATE

DAVID TUCKER
ASSISTANT DIRECTOR OF PUBLIC WORKS

DATE

COUNTY ROAD ENGINEER

murraysmith

600 UNION STREET, SUITE 300
SEATTLE, WA 98101
P 206.462.7030



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DRAWING INDEX

GENERAL								
1	G-1	TITLE SHEET & VICINITY MAP	51	SS-37	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 187+00 TO STA 192+00 SCHEDULE A	100	R-24	RESTORATION PLAN STA 232+00 TO 242+00 SCHEDULE B
2	G-2	INDEX OF DRAWINGS	52	SS-38	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 192+00 TO STA 197+00 SCHEDULE A	101	R-25	RESTORATION PLAN STA 242+00 TO 252+00 SCHEDULE B
3	G-3	ABBREVIATIONS, SYMBOLS AND LEGEND	53	SS-39	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 197+00 TO STA 202+00 SCHEDULE A	102	R-26	RESTORATION PLAN STA 252+00 TO 262+00 SCHEDULE B
4	G-4	GENERAL NOTES & DESIGN CRITERIA	54	SS-40	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 202+00 TO STA 207+00 SCHEDULE A	103	R-27	RESTORATION PLAN STA 262+00 TO 272+00 SCHEDULE B
5	G-5	SURVEY CONTROL PLAN & KEY MAP	55	SS-41	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 207+00 TO STA 212+00 SCHEDULE A	104	R-28	RESTORATION PLAN STA 272+00 TO 278+40 SCHEDULE B
6	G-6	TEMPORARY EROSION AND SEDIMENT CONTROL TYPICAL PLAN	56	SS-42	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 212+00 TO STA 217+00 SCHEDULE A	105	R-29	MISCELLANEOUS RESTORATION DETAILS-1 SCHEDULE A & SCHEDULE B
PUMP STATIONS			57	SS-43	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 217+00 TO STA 220+00 SCHEDULE A & SCHEDULE B	106	R-30	MISCELLANEOUS RESTORATION DETAILS-2 SCHEDULE A
7	PS17-1	PUMP STATION 17 YARD PIPING PLAN SCHEDULE A	58	SS-44	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 220+00 TO STA 225+00 SCHEDULE B	106A	R-31	MISCELLANEOUS RESTORATION DETAILS-3 SCHEDULE A
8	PS17-2	PUMP STATION 17 YARD PIPING SECTION AND DETAILS - 1 SCHEDULE A	59	SS-45	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 225+00 TO STA 228+00 SCHEDULE B	TRAFFIC CONTROL PLAN		
9	PS17-3	PUMP STATION 17 DETAILS - 2 SCHEDULE A	60	SS-46	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 228+00 TO STA 232+00 SCHEDULE B	107	TC-1	TRAFFIC CONTROL NOTES SCHEDULE A & SCHEDULE B
10	PS64-1	PUMP STATION 64 CONNECTION DETAIL SCHEDULE A	61	SS-47	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 232+00 TO STA 237+00 SCHEDULE B	108	TC-2	TRAFFIC CONTROL STRATEGY WSDOT RIGHT OF WAY SCHEDULE A
11	PS24-1	PUMP STATION 24 YARD PIPING PLAN SCHEDULE B	62	SS-48	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 237+00 TO STA 242+00 SCHEDULE B	109	TC-3	TRAFFIC CONTROL STRATEGY KITSAP COUNTY RIGHT OF WAY SCHEDULE B
12	PS24-2	PUMP STATION 24 DETAILS - 1 SCHEDULE B	63	SS-49	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 242+00 TO STA 247+00 SCHEDULE B	110	TC-4	SR 308 TRAFFIC CONTROL PLAN SHEET INDEX SCHEDULE A
13	PS24-3	PUMP STATION 24 DETAILS - 2 SCHEDULE B	64	SS-50	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 247+00 TO STA 252+00 SCHEDULE B	111	TC-5	SR 308 - EASTBOUND SHOULDER WORK ZONE (1 OF 5) SCHEDULE A
SANITARY SEWER			65	SS-51	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 252+00 TO STA 257+00 SCHEDULE B	112	TC-6	SR 308 - EASTBOUND SHOULDER WORK ZONE (2 OF 5) SCHEDULE A
15	SS-1	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 10+00 TO STA 15+00 SCHEDULE A	66	SS-52	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 257+00 TO STA 262+00 SCHEDULE B	113	TC-7	SR 308 - EASTBOUND SHOULDER WORK ZONE (3 OF 5) SCHEDULE A
16	SS-2	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 15+00 TO STA 18+00 SCHEDULE A	67	SS-53	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 262+00 TO STA 267+00 SCHEDULE B	114	TC-8	SR 308 - EASTBOUND SHOULDER WORK ZONE (4 OF 5) SCHEDULE A
17	SS-3	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 18+00 TO STA 23+00 SCHEDULE A	68	SS-54	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 267+00 TO STA 272+00 SCHEDULE B	115	TC-9	SR 308 - EASTBOUND SHOULDER WORK ZONE (5 OF 5) SCHEDULE A
18	SS-4	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 23+00 TO STA 27+20 SCHEDULE A	69	SS-55	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 272+00 TO STA 277+00 SCHEDULE B	116	TC-10	SR 308 - CROSSING AT KATY PLACE (1 OF 3) SCHEDULE A
19	SS-5	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 27+20 TO STA 32+00 SCHEDULE A	70	SS-56	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 277+00 TO STA 278+40 SCHEDULE B	117	TC-11	SR 308 - CROSSING AT KATY PLACE (2 OF 3) SCHEDULE A
20	SS-6	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 32+00 TO STA 37+00 SCHEDULE A	71	SS-57	MISCELLANEOUS SEWER DETAILS-1 SCHEDULE A & SCHEDULE B	118	TC-12	SR 308 - CROSSING AT KATY PLACE (3 OF 3) SCHEDULE A
21	SS-7	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 37+00 TO STA 42+00 SCHEDULE A	72	SS-58	MISCELLANEOUS SEWER DETAILS-2 SCHEDULE A & SCHEDULE B	119	TC-13	SR 308 - KATY PLACE TO CENTRAL VALLEY RD (1 OF 3) SCHEDULE A
22	SS-8	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 42+00 TO STA 47+40 SCHEDULE A	73	SS-59	MISCELLANEOUS SEWER DETAILS-3 SCHEDULE A & SCHEDULE B	120	TC-14	SR 308 - KATY PLACE TO CENTRAL VALLEY RD (2 OF 3) SCHEDULE A
23	SS-9	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 47+40 TO STA 52+00 SCHEDULE A	74	SS-60	MISCELLANEOUS SEWER DETAILS-4 SCHEDULE A & SCHEDULE B	121	TC-15	SR 308 - KATY PLACE TO CENTRAL VALLEY RD (3 OF 3) SCHEDULE A
24	SS-10	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 52+00 TO STA 57+40 SCHEDULE A	75	SS-61	MISCELLANEOUS SEWER DETAILS-5 SCHEDULE A & SCHEDULE B	122	TC-16	SCANDIA RD CLOSURE (1 OF 3) SCHEDULE A
25	SS-11	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 57+40 TO STA 62+40 SCHEDULE A	76	SS-62	MISCELLANEOUS SEWER DETAILS-6 SCHEDULE A & SCHEDULE B	123	TC-17	SCANDIA RD CLOSURE (2 OF 3) SCHEDULE A
26	SS-12	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 62+40 TO STA 68+00 SCHEDULE A	ROADWAY RESTORATION PLAN			124	TC-18	SCANDIA RD CLOSURE (3 OF 3) SCHEDULE A
27	SS-13	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 67+00 TO STA 73+00 SCHEDULE A	77	R-1	RESTORATION PLAN STA 10+00 TO 18+00 SCHEDULE A	125	TC-19	SR 308 AT CENTRAL VALLEY RD - EAST SIDE WORK ZONE (1 OF 3) SCHEDULE A
28	SS-14	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 73+00 TO STA 78+00 SCHEDULE A	78	R-2	RESTORATION PLAN STA 18+00 TO 27+00 SCHEDULE A	126	TC-20	SR 308 AT CENTRAL VALLEY RD - EAST SIDE WORK ZONE (2 OF 3) SCHEDULE A
29	SS-15	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 78+00 TO STA 83+00 SCHEDULE A	79	R-3	RESTORATION PLAN STA 27+00 TO 37+00 SCHEDULE A	127	TC-21	SR 308 AT CENTRAL VALLEY RD - EAST SIDE WORK ZONE (3 OF 3) SCHEDULE A
30	SS-16	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 83+00 TO STA 88+00 SCHEDULE A	80	R-4	RESTORATION PLAN STA 37+00 TO 47+00 SCHEDULE A	128	TC-22	SR 308 - CENTRAL VALLEY RD TO HAWK AVE NE SCHEDULE A
31	SS-17	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 88+00 TO STA 93+00 SCHEDULE A	81	R-5	RESTORATION PLAN STA 47+00 TO 57+00 SCHEDULE A	129	TC-23	SR 308 CROSSING AT HAWK AVE NE - NORTH WORK ZONE (1 OF 3) SCHEDULE A
32	SS-18	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 93+00 TO STA 98+00 SCHEDULE A	82	R-6	RESTORATION PLAN STA 57+00 TO 67+00 SCHEDULE A	130	TC-24	SR 308 CROSSING AT HAWK AVE NE - NORTH WORK ZONE (2 OF 3) SCHEDULE A
33	SS-19	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 98+00 TO STA 103+00 SCHEDULE A	83	R-7	RESTORATION PLAN STA 67+00 TO 77+00 SCHEDULE A	131	TC-25	SR 308 CROSSING AT HAWK AVE NE - NORTH WORK ZONE (3 OF 3) SCHEDULE A
34	SS-20	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 103+00 TO STA 108+00 SCHEDULE A	84	R-8	RESTORATION PLAN STA 77+00 TO 87+00 SCHEDULE A	132	TC-26	SR 308 CROSSING AT HAWK AVE NE - SOUTHWEST WORK ZONE (1 OF 2) SCHEDULE A
35	SS-21	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 108+00 TO STA 113+00 SCHEDULE A	85	R-9	RESTORATION PLAN STA 77+00 TO 97+20 SCHEDULE A	133	TC-27	SR 308 CROSSING AT HAWK AVE NE - SOUTHWEST WORK ZONE (2 OF 2) SCHEDULE A
36	SS-22	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 113+00 TO STA 117+00 SCHEDULE A	86	R-10	RESTORATION PLAN STA 97+20 TO 107+00 SCHEDULE A	134	TC-28	SR 308 CROSSING AT HAWK AVE NE - SOUTHEAST WORK ZONE (1 OF 3) SCHEDULE A
37	SS-23	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 117+00 TO STA 122+00 SCHEDULE A	87	R-11	RESTORATION PLAN STA 107+00 TO 116+00 SCHEDULE A	135	TC-29	SR 308 CROSSING AT HAWK AVE NE - SOUTHEAST WORK ZONE (2 OF 3) SCHEDULE A
38	SS-24	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 122+00 TO STA 126+60 SCHEDULE A	88	R-12	RESTORATION PLAN STA 116+00 TO 126+00 SCHEDULE A	136	TC-30	SR 308 CROSSING AT HAWK AVE NE - SOUTHEAST WORK ZONE (3 OF 3) SCHEDULE A
39	SS-25	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 126+60 TO STA 131+60 SCHEDULE A	89	R-13	RESTORATION PLAN STA 126+00 TO 136+00 SCHEDULE A	137	TC-31	DETOUR ROUTE - SR308 CLOSURE AT KATY PLACE SCHEDULE A
40	SS-26	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 131+60 TO STA 137+00 SCHEDULE A	90	R-14	RESTORATION PLAN STA 136+00 TO 146+00 SCHEDULE A	138	TC-32	DETOUR ROUTE - SCANDIA RD CLOSURE AT SR 308 SCHEDULE A
41	SS-27	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 137+00 TO STA 142+00 SCHEDULE A	91	R-15	RESTORATION PLAN STA 146+00 TO 156+00 SCHEDULE A	138A	TC-33	WSDOT STD PLAN TC-1 SCHEDULE A & SCHEDULE B
42	SS-28	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 142+00 TO STA 147+00 SCHEDULE A	92	R-16	RESTORATION PLAN STA 156+00 TO 166+00 SCHEDULE A			
43	SS-29	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 147+00 TO STA 152+00 SCHEDULE A	93	R-17	RESTORATION PLAN STA 166+00 TO 176+00 SCHEDULE A			
44	SS-30	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 152+00 TO STA 157+00 SCHEDULE A	94	R-18	RESTORATION PLAN STA 176+00 TO 186+00 SCHEDULE A			
45	SS-31	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 157+00 TO STA 162+00 SCHEDULE A	95	R-19	RESTORATION PLAN STA 186+00 TO 196+00 SCHEDULE A			
46	SS-32	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 162+00 TO STA 167+00 SCHEDULE A	96	R-20	RESTORATION PLAN STA 196+00 TO 206+00 SCHEDULE A			
47	SS-33	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 167+00 TO STA 172+00 SCHEDULE A	97	R-21	RESTORATION PLAN STA 207+00 TO 216+00 SCHEDULE A			
48	SS-34	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 172+00 TO STA 177+00 SCHEDULE A	98	R-22	RESTORATION PLAN STA 216+00 TO 224+50 SCHEDULE A & SCHEDULE B			
49	SS-35	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 177+00 TO STA 182+00 SCHEDULE A	99	R-23	RESTORATION PLAN STA 224+50 TO 232+00 SCHEDULE B			
50	SS-36	FORCE MAIN REPLACEMENT PLAN & PROFILE STA 182+00 TO STA 187+00 SCHEDULE A						

NO.	DATE	BY	REVISION

NOTICE

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DESIGNED

HCM
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EKS
CHECKED



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

INDEX OF DRAWINGS			
PROJECT NO.:	20-2815	SCALE:	AS SHOWN
DATE:	FEBRUARY 2022		

SHEET

G-2

2 of 138

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ABBREVIATIONS

ABAND	ABANDONED
AL	ALUMINUM
APPROX	APPROXIMATE
ASSY	ASSEMBLY
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
ATB	ASPHALT TREATED BASE
AVE	AVENUE
AWWA	AMERICAN WATER WORKS ASSOCIATION
B&B	BALLED AND BURLAP
BFG	BELOW FINISHED GRADE
BLDG	BUILDING
BOW	BACK OF WALK
BP	BURIED POWER
BPA	BONNEVILLE POWER ADMINISTRATION
BTM	BOTTOM
BT	BURIED TELEPHONE
C/L	CENTERLINE
CB	CATCH BASIN
CDF	CONTROLLED DENSITY FILL
CF	CUBIC FEET
CIPP	CURED-IN-PLACE PIPE
CKTP	CENTRAL KITSAP TREATMENT PLANT
CL	CLASS
CLR, CLEAR	CLEARANCE
CMP	CORRUGATED METAL PIPE
COMM	COMMUNICATIONS
COORD	COORDINATE
CONC	CONCRETE
CPLG	COUPLING
CSBC	CRUSHED SURFACE BASE COURSE
CSTC	CRUSHED SURFACING TOP COURSE
CY	CUBIC YARD
DEG	DEGREE
DEMO	DEMOLISH
DET	DETAIL
DI	DUCTILE IRON
DIA	DIAMETER
D/W	DRIVEWAY
DR	DIMENSION RATIO
DWG	DRAWING
E	EAST
EA	EACH
ECO	ECOLOGY
EL	ELEVATION
ELEC	ELECTRICAL
EQ	EQUAL
ESC	EROSION AND SEDIMENT CONTROL
ESMT	EASEMENT
EX	EXISTING
EXIST	EXISTING
FH	FIRE HYDRANT
FIN	FINISHED
FLG	FLANGE
FM	FORCE MAIN
FO	FIBER OPTICS
FT	FEET
G	GAS
GA	GAUGE
GALV	GALVANIZED
GC	GROUND COVER
GEN	GENERAL
GR	GRADE
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE (PIPE)
HMA	HOT MIX ASPHALT
HORIZ	HORIZONTAL(LY)
HP	HIGH PRESSURE
HWY	HIGHWAY
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
INSTL	INSTALL
INV	INVERT
IPS	INDIVIDUAL PUMP STATION
JUNCT	JUNCTION

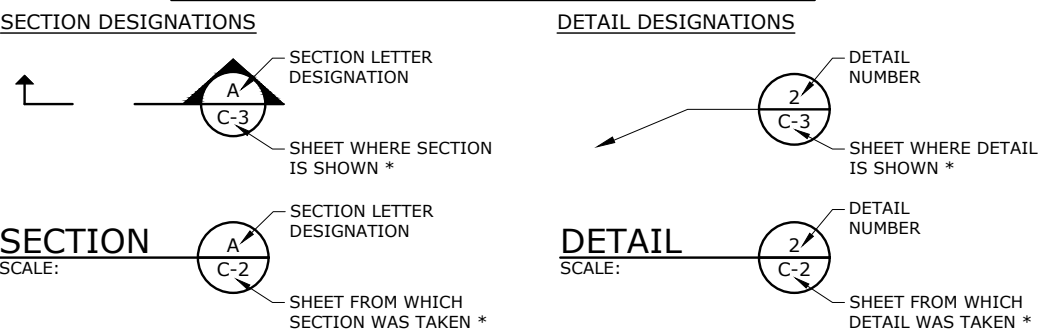
L	LENGTH
LF	LINEAR FOOT
LS	LONG BODY SLEEVE
LT	LEFT
LTF	LENGTH TO FIT
MAG	MAGNETIC NAILS
MAX	MAXIMUM
MFR	MANUFACTURER
MH	MANHOLE
MJ	MECHANICAL JOINT
MIN	MINIMUM
MON	MONUMENT
N	NORTH
NE	NORTHEAST
NIC	NOT IN CONTRACT
NOM	NOMINAL
NPT	NATIONAL PIPE THREAD
NTS	NOT TO SCALE
NW	NORTH WEST
O.C.	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD
OHP	OVERHEAD POWER
OHW	OVERHEAD WIRE
PE	PLAIN END
PG	PERFORMANCE GRADE
PH	POTHOLE
PL	PLASTIC
POC	POINT OF CONNECTION
PS	PUMP STATION
PVC	POLYVINYL CHLORIDE
PWR	POWER
RESTR	RESTRAIN(ED)
REQ'D	REQUIRED
RD	ROAD
RFCA	RESTRAINED FLANGE COUPLING ADAPTER
RJ	RESTRAINED JOINT PIPE
RSGV	RESILIENT SEATED GATE VALVE
RT	RIGHT
R/W, ROW	RIGHT OF WAY
S	SOUTH
SCHED	SCHEDULE
SD	STORM DRAIN
SDMH	STORM MANHOLE
SDR	STANDARD DIMENSION RATIO
SERV	SERVICE
SHT(S)	SHEET(S)
SL	SLOPE
SLV	SLEEVE
SMFO	SINGLE MODE FIBER OPTIC
SP	SPECIAL PROVISIONS
SPEC(S)	SPECIFICATIONS
SPL	SPOOL
SQ	SQUARE
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEANOUT
SSFM	SANITARY SEWER FORCE MAIN
SSMH	SANITARY SEWER MANHOLE
SST	STAINLESS STEEL
ST	STREET
STA	STATION
STD	STANDARD
STL	STEEL
SW	SOUTHWEST
S/W	SIDEWALK
T, TE, TEL	TELEPHONE
TB	THRUST BLOCK
TEMP	TEMPORARY
TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
TN	TOP OF NUT
TRANS	TRANSITION
TYP	TYPICAL
UGP	UNDERGROUND POWER LINE
UV	ULTRAVIOLET
VAR	VARIES
VERT	VERTICAL(LY)

W	WATER, WEST
WAS	WASTE ACTIVATED SLUDGE
W.M.	WESTERN MERIDIAN
WS	WATER SERVICE
WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
WWTP	WASTE WATER TREATMENT PLANT
WV	WATER VALVE
#S	#-INCH STRAND (FIBER OPTIC)

SYMBOLS & LEGEND

	EXISTING	PROPOSED		EXISTING	PROPOSED
WATERLINE			MANHOLE		
OVERHEAD POWER			CLEAN-OUT		
BURRIED POWER			CATCH BASIN/FIELD INLET		
GAS			TYPE 2 CATCH BASIN		
BURIED TELEPHONE			CULVERT		
BURIED COMMUNICATIONS			FLOW DIRECTION		
FIBER OPTICS			CAP		
SANITARY SEWER LINE			VALVE		
SANITARY SEWER FORCE MAIN			BLOW-OFF ASSEMBLY		
STORM DRAIN			AIR/VAC ASSEMBLY		
DITCH			COMPOST SOCK		
REMOVE/ABANDON PIPE			CATCH BASIN INSERT		
DEMOLITION			FILTER FABRIC FENCE		
EASEMENT/PROPERTY LINE			SURVEY BENCHMARK		
STRUCTURE OR FACILITY			SEWER FACILITY/PIPING (RESTRAINED FOR ALL PRESSURE PIPE) FLANGE FITTING		
RESTORATION			MECHANICAL JOINT FITTING (RESTRAINED FOR ALL PRESSURE PIPE)		
SHEET PILES			FLEXIBLE COUPLING		
TOP/TOE OF SLOPE			BALL VALVE		
EDGE OF GRAVEL			THRUST BLOCK		
EDGE OF PAVEMENT					
FENCE					
GUARD RAIL					
CONTROLLED DENSITY FILL					
IPS FORCE MAIN					
WATERLINE					

SECTION AND DETAIL DESIGNATIONS



* NOTE: IF PLAN AND SECTION FOR DETAIL CALL-OUT AND DETAIL ARE SHOWN ON THE SAME DRAWING, DRAWING NUMBER IS REPLACED WITH A DASH.

ROAD RESTORATION LEGEND

	GRASS PAVER, SEE DETAIL 1, DRAWING R-29
	RESTORE SURFACE WITH SOIL AND HYDROSEED, SEE DETAIL 2, DRAWING R-29
	GRAVEL SURFACING, SEE DETAIL 3, DRAWING R-29
	HMA PAVEMENT, SEE DETAIL 3, DRAWING R-29
	RESTORE CEMENT CONCRETE DRIVEWAY PER WSDOT STANDARD DETAIL F-80.10-04



NO.	DATE	BY	REVISION

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SHEET
G-3
3 of 138

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GENERAL NOTES

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE 2021 EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION (REFERRED TO HEREIN AS THE STANDARD SPECIFICATIONS), PREPARED BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND THE WASHINGTON STATE CHAPTER OF THE APWA; KITSAP COUNTY DEPARTMENT OF PUBLIC WORKS STANDARD FOR SANITARY SEWER EXTENSIONS; AND KITSAP COUNTY'S ROAD STANDARDS AND SPECIFICATIONS, AS SUPPLEMENTED BY THE DRAWINGS AND CONTRACT DOCUMENTS.
2. VERIFY ALL DIMENSIONS BEFORE STARTING WORK AND IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
3. ALL CONSTRUCTION IS SUBJECT TO INSPECTION BY KITSAP COUNTY. NOTIFY THE COUNTY OF THE SCHEDULE IN SUFFICIENT TIME TO PERMIT INSPECTION PRIOR TO AND DURING WORK.
4. ALL WORK WITHIN THE SITE AND KITSAP COUNTY RIGHT OF WAY SHALL BE SUBJECT TO INSPECTION BY THE COUNTY'S INSPECTOR. NOTIFY THE COUNTY INSPECTOR IN SUFFICIENT TIME TO PERMIT INSPECTION PRIOR TO AND DURING WORK.
5. CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE COUNTY, THE ENGINEER OF RECORD, AND PERMITTING AGENCY AND SHALL BE RESOLVED PRIOR TO PROCEEDING WITH CONSTRUCTION.
6. EMPLOY THE PROPER STANDARD OF CARE FOR ALL WORK AROUND EXISTING OVERHEAD AND UNDERGROUND UTILITIES. PROTECT ALL EXISTING UTILITIES AND VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UTILITIES UNDERGROUND LOCATION CENTER AT 1-800-424-5555 (OR 811), KITSAP COUNTY PUBLIC WORKS AT (360) 337-5777 AND WSDOT, A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION.
7. HAVE A COPY OF THE APPROVED ISSUED FOR CONSTRUCTION PLANS ON THE CONSTRUCTION SITE AT ALL TIMES.
8. OBTAIN ALL APPLICABLE PERMITS AND EASEMENTS AS REQUIRED BY KITSAP COUNTY PUBLIC WORKS DEPARTMENT AND WASHINGTON STATE DEPARTMENT OF TRANSPORTATION.
9. CONSTRUCTION NOISE SHALL BE LIMITED AS PER KITSAP COUNTY MUNICIPAL CODE (SECTION 10.28.040 AND 10.28.070).
10. WHERE CONSTRUCTION IS CARRIED OUT IN AREAS NOT SPECIFIED ON THE PLANS AND WHICH HAVE EXISTING IMPROVEMENTS, APPROPRIATE MEASURES SHALL BE TAKEN TO RESTORE SUCH AREAS TO CONDITIONS EXISTING PRIOR TO CONSTRUCTION OR AS REQUIRED BY KITSAP COUNTY DEPARTMENT OF PUBLIC WORKS.
11. OFF SITE PREMISE STAGING OR STORAGE AREAS SHALL REQUIRE A WRITTEN RELEASE FROM THE AFFECTED PROPERTY OWNER. IN ADDITION, A RELEASE FROM THE COUNTY SHALL BE REQUIRED DESIGNATING THAT DAMAGE TO COUNTY PROPERTY IS NEGLIGIBLE OR NON-EXISTENT.
12. TAKE ALL NECESSARY PRECAUTIONS FOR THE SAFETY OF EMPLOYEES ON THE PROJECT AND COMPLY WITH ALL APPLICABLE PROVISIONS OF FEDERAL, STATE, AND MUNICIPAL SAFETY LAWS AND BUILDING CODES. ERECT AND PROPERLY MAINTAIN, AT ALL TIMES, AS REQUIRED BY THE CONDITIONS AND PROGRESS OF THE WORK, ALL NECESSARY SAFEGUARDS FOR PROTECTION OF WORKERS AND THE PUBLIC; POST DANGER SIGNS WARNING AGAINST KNOWN OR UNUSUAL HAZARDS; AND DESIGNATE A RESPONSIBLE MEMBER OF THE ORGANIZATION ON THE CONSTRUCTION SITE WHOSE DUTY IS THE PREVENTION OF ACCIDENTS.
13. CONTRACTOR IS RESPONSIBLE FOR DAMAGES TO COUNTY PROPERTY, PAVEMENT, WALKS, UTILITIES OR UNDERGROUND CABLES. IT IS STRONGLY RECOMMENDED TO VIDEO RECORD THE EXISTING CONDITIONS OF THE SURROUNDING AREAS AND SUBMITTING THE VIDEO TO THE COUNTY PRIOR TO THE START OF ANY WORK.
14. ALL WORK SHALL BE COORDINATED WITH KITSAP COUNTY STAFF TO MINIMIZE INTERRUPTION TO THE OPERATION OF CKTP AND THE PUMP STATIONS.
15. ALL EQUIPMENT AND VALVES SHALL BE OPERATED ONLY BY KITSAP COUNTY STAFF.
16. ALL PIPING SHALL BE CLEANED AND TESTED PRIOR TO PAVING IN CONFORMANCE WITH THE SPECIFICATIONS.
17. PRIOR TO BACKFILL, ALL PIPES AND APPURTENANCES SHALL BE INSPECTED BY THE COUNTY. INSPECTION SHALL NOT RELIEVE THE CONTRACTOR OF CORRECTION OF ANY DEFICIENCIES AND/OR FAILURES AS DETERMINED BY SUBSEQUENT TESTING AND INSPECTION.
18. COORDINATE WITH THE ENGINEER REGARDING TEMPORARY CONSTRUCTION EASEMENTS PRIOR TO CONSTRUCTION ON EASEMENTS.

19. DEVELOP A SANITARY SEWER TEMPORARY BYPASS PLAN PRIOR TO DISRUPTING ANY LIVE SEWERS, INCLUDING MAIN LINES, FORCE MAINS, OR SIDE SEWERS. PLAN SHALL ADDRESS COUNTY COORDINATION. SUBMIT PLAN TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.
20. PHYSICAL CONNECTIONS TO THE EXISTING SEWER SYSTEM SHALL NOT BE MADE UNTIL AUTHORIZED BY THE ENGINEER. SUCH AUTHORIZATION WILL NOT BE GIVEN UNTIL THE CONTRACTOR HAS SATISFIED THE ENGINEER THAT THE NEW FORCE MAIN IS READY TO BE PLACED INTO SERVICE.
21. VERIFY ACCURACY OF ALL UTILITY LOCATIONS SHOWN ON DRAWINGS. DISCOVER AND AVOID ALL UTILITIES, SHOWN OR NOT SHOWN, THAT MAY BE IMPACTED BY THE CONTRACTOR'S WORK.
22. ADJUST ALL MANHOLE RIMS, DRAINAGE STRUCTURES, LIDS, VALVE BOXES, UTILITY ACCESS STRUCTURES, AND MONUMENT COVERS TO FINISH GRADE WITHIN AREAS AFFECTED BY THE CONTRACTOR'S WORK.
23. CDF IS REQUIRED WHERE MINIMUM 3'-0" COVER CANNOT BE MET AND INSTALLED PER SPECIFICATIONS.



NO.	DATE	BY	REVISION

NOTICE

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BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

GENERAL NOTES & DESIGN CRITERIA

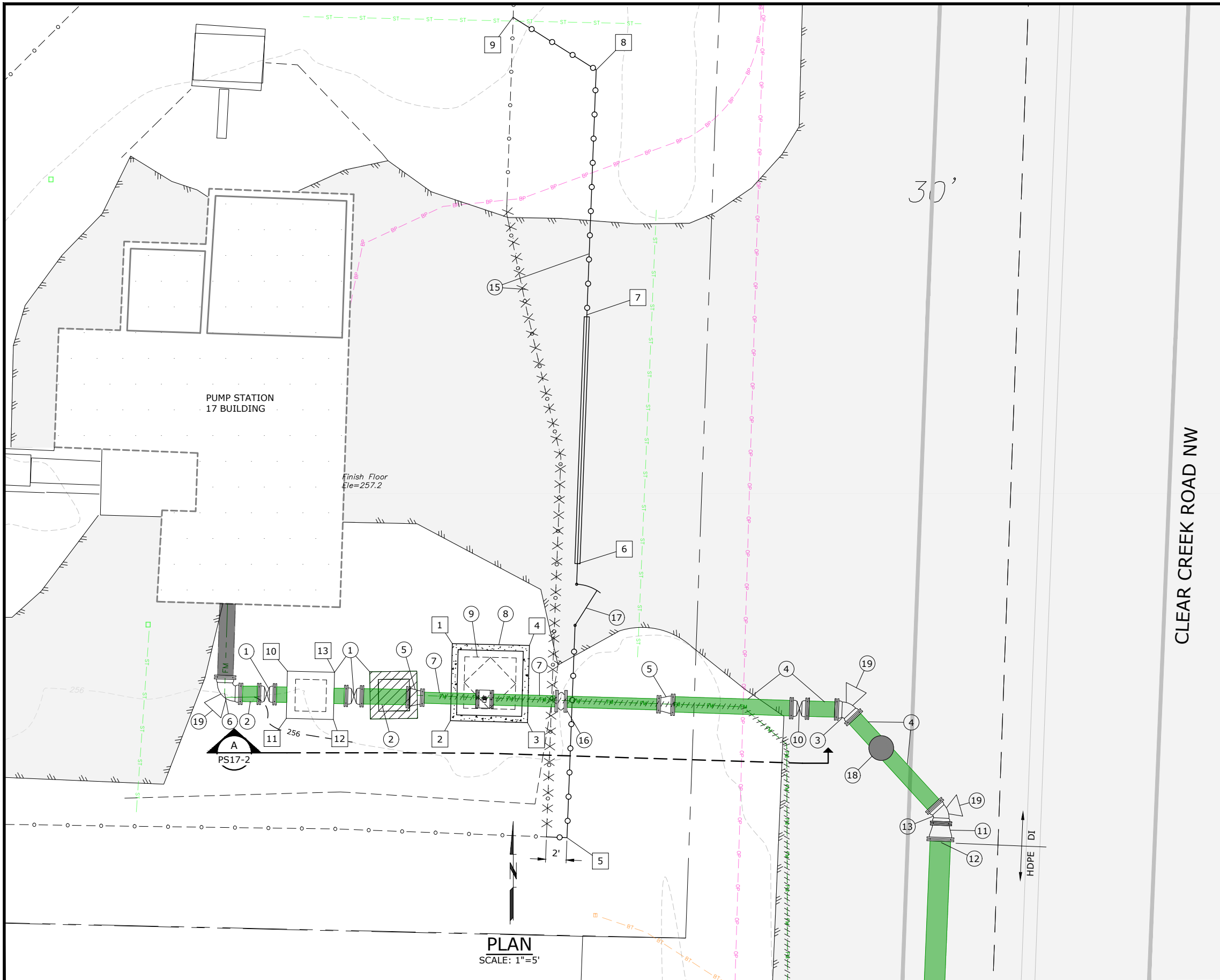
PROJECT NO.: 20-2815SCALE: AS SHOWNDATE: FEBRUARY 2022

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4 of 138

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- KEY NOTES:**
- RELOCATE EXIST PIG LAUNCH VAULT, GATE VALVES, TEE, AND PIG LAUNCH TUBE APPROX 8' WEST, MAINTAIN ORIGINAL FITTING & VAULT CONFIGURATION, CONNECT TO PUMP STATION 17 DISCHARGE PIPING, SEE NOTE 2, THIS SHT
 - 18" DI SPL, LENGTH AS REQ'D, SEE NOTE 2 THIS SHEET
 - 18" DI 45° BEND, MJ, RESTR
 - 18" DI SPL, PE, LENGTH AS REQ'D
 - 18"x14" DI ECCENTRIC REDUCER, MJ, RESTR
 - 18" DI 90° BEND, MJ, RESTR
 - 14" DI SPL, FLGxPE, LENGTH AS REQ'D
 - OLDCASTLE VAULT 777 OR APPROVED EQUAL
 - 5'0"x5'0" H-30 RATED DOUBLE ACCESS HATCH W/ SAFETY GRATING FOR FALL PROTECTION, LW PRODUCTS OR APPROVED EQUAL
 - 18" DI GV, MJ, RESTR
 - 18"x24" DI ECCENTRIC REDUCER, FLG
 - 24" DR 11 HDPE FLANGE ADAPTER
 - 18" DI 45° BEND, FLGxMJ, RESTR
 - 14" DI SPL, PE, LENGTH AS REQ'D
 - DEMOLISH EXIST & INSTALL NEW CHAIN LINK FENCE & 24' CANTILEVER SLIDE GATE TO ACCOMMODATE METER VAULT; SEE DETS 1&2, SHT PS 17-2
 - 14" RESTRAINED FLEX COUPLING
 - 4' SWING GATE, SEE DET 1, SHT PS17-3
 - 6" BYPASS PORT, SEE DET 2, SHT PS17-3
 - CONCRETE THRUST BLOCK, SEE DET 1, SHT SS-61, FOR REQUIREMENTS

- GENERAL NOTES:**
- ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE INTERNALLY COATED WITH PROTECTO 401.
 - CONTRACTOR TO FIELD VERIFY EXIST GATE VALVE CONNECTION TYPES AND PROVIDE COMPATIBLE DI SPOOLS.

SURVEY CONTROL POINTS				
PT NO.	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	METER VAULT NW CORNER	N259317.30	E1182642.04	256.50
2	METER VAULT SW CORNER	N259309.80	E1182641.86	256.50
3	METER VAULT SW CORNER	N259309.62	E1182649.35	256.50
4	METER VAULT NE CORNER	N259317.11	E1182649.53	256.50
5	SE CHAIN LINK CORNER FENCE POST	N259298.44	E1182653.18	254.75
6	N CHAIN LINK SECURITY GATE POST	N259325.06	E1182654.20	256.50
7	N CHAIN LINK SECURITY GATE POST	N259349.04	E1182655.11	256.90
8	N CHAIN LINK SECURITY FENCE POST	N259373.02	E1182656.02	256.90
9	NW CHAIN LINK CORNER FENCE POST	N259378.14	E1182647.94	257.20
10	RELOCATED PIG LAUNCH VAULT	N259314.62	E1182626.02	256.10
11	RELOCATED PIG LAUNCH VAULT	N259310.03	E1182625.91	256.10
12	RELOCATED PIG LAUNCH VAULT	N259309.92	E1182630.49	256.10
13	RELOCATED PIG LAUNCH VAULT	N259314.51	E1182630.60	256.10

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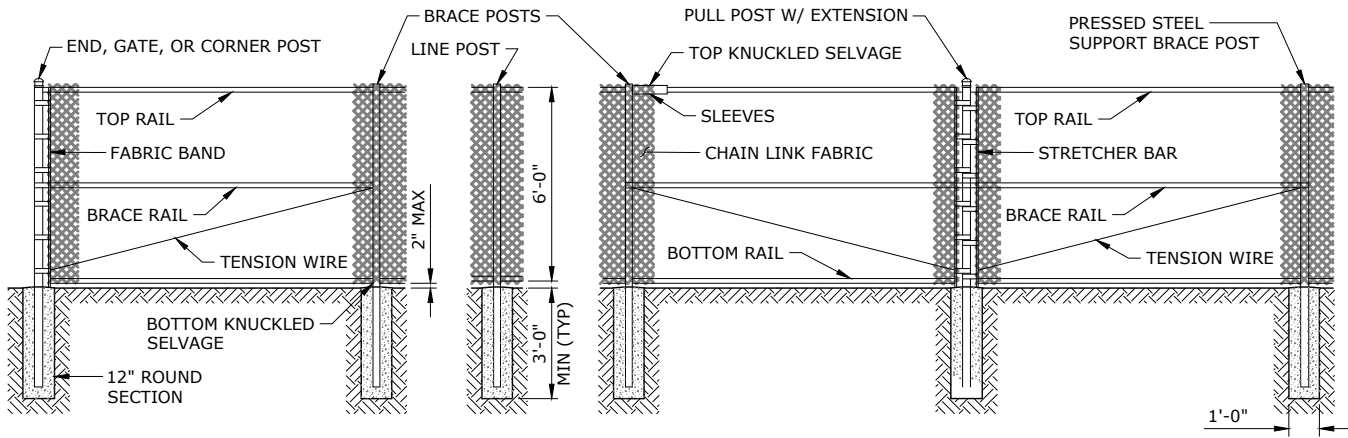
**BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT**

**PUMP STATION 17
YARD PIPING PLAN
SCHEDULE A**

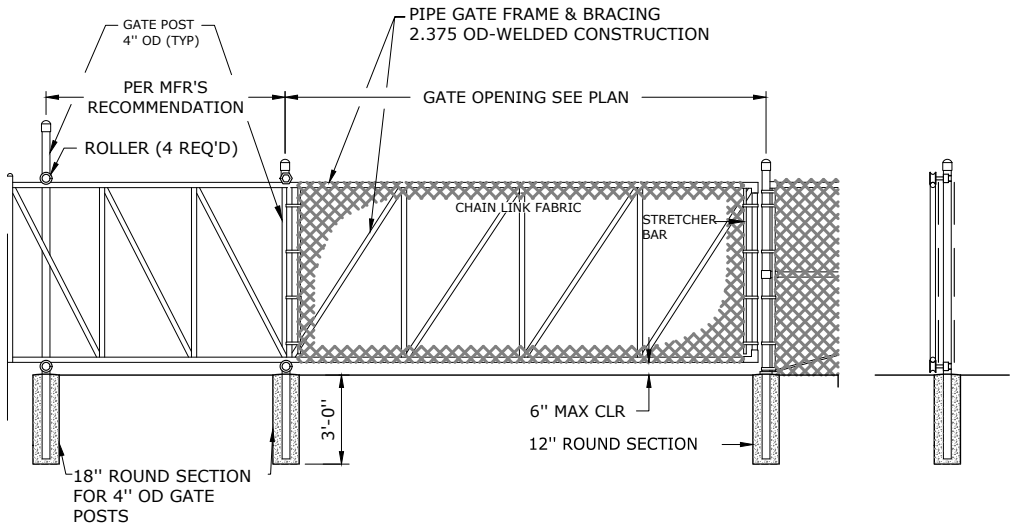
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET
PS17-1
7 of 138

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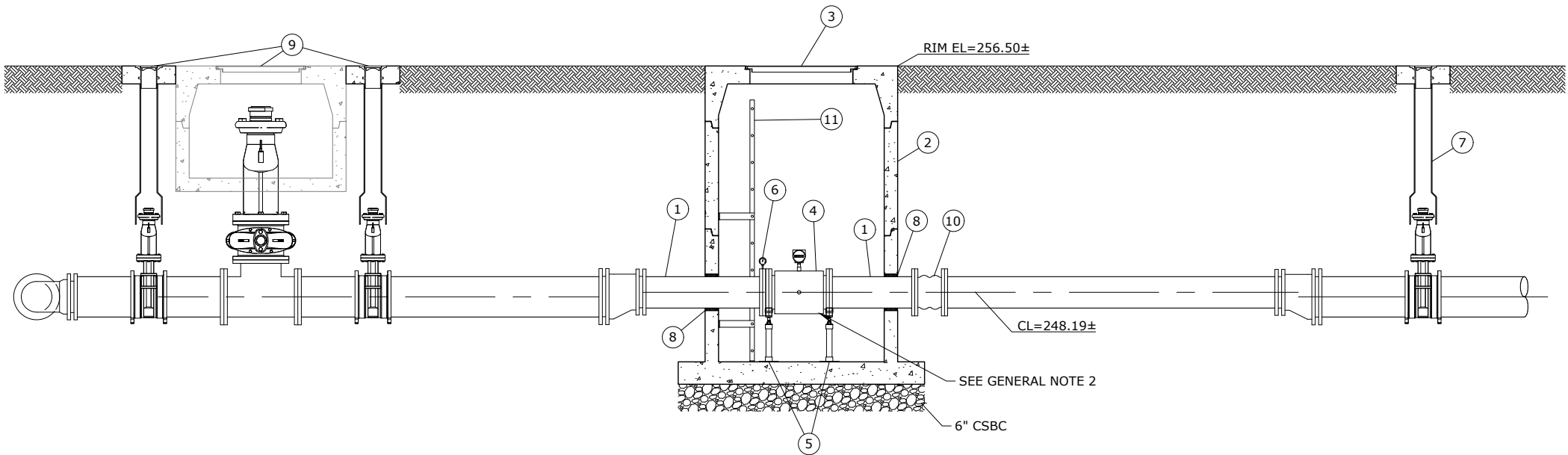


CHAIN LINK FENCE 1
SCALE: NTS PS 17-1



NOTE:
1. PROVIDE LOCK ASSY AND GATE STOP FOR EACH GATE.

CANTILEVER SLIDE GATE 2
SCALE: NTS PS 17-1



SECTION A
SCALE: NTS PS 17-1

- KEY NOTES:
- 14" DI SPL, FLGxPE, LENGTH AS REQ'D
 - VAULT, 6'4" x 6'4", OLDCASTLE MODEL 777 OR APPROVED EQUAL
 - 5'0"x5'0" H-30 RATED DOUBLE ACCESS HATCH W/ SAFETY GRATING FOR FALL PROTECTION, LW PRODUCTS OR APPROVED EQUAL
 - KROHNE OPTIFLUX 2000 14" MAGNETIC FLOW METER OR APPROVED EQUAL
 - STANDON MODEL S92 PIPE SUPPORT OR APPROVED EQUAL
 - PRESSURE SENSOR RING WITH LOCAL 4" PRESSURE GAUGE AND PRESSURE TRANSMITTER, WIRE TRANSMITTER TO CONTROL ROOM
 - VALVE EXTENSION STEM W/ 2" SQUARE OPERATING NUT, SERVICE BOX EXTENSION, AND SERVICE BOX, SEE DET 4, SHT SS-57
 - SEAL ALL PIPE PENETRATIONS THROUGH WALLS PER DETAIL 1, SHT SS-60
 - RELOCATE EXIST PIG LAUNCH, VAULT, TEE, AND GATE VALVES APPROX. 8' WEST TO ACCOMODATE NEW FLOW METER VAULT. MAINTAIN EXIST VAULT AND VALVE CONFIGURATION AND INSTALL CONCRETE FLOOR WITHIN VAULT
 - 14" DI FLEXIBLE COUPLING, ALPHA FC OR APPROVED EQUAL
 - ACCESS LADDER W/ BILCO LU 4 ALUMINUM LADDER UP SAFETY POST OR APPROVED EQUAL

- GENERAL NOTES:
- ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE INTERNALLY COATED WITH PROTECTO 401.
 - PROVIDE DI FLG SPL EQUAL TO FLOW METER LENGTH.

NO.	DATE	BY	REVISION

NOTICE
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CHECKED



murraysmith



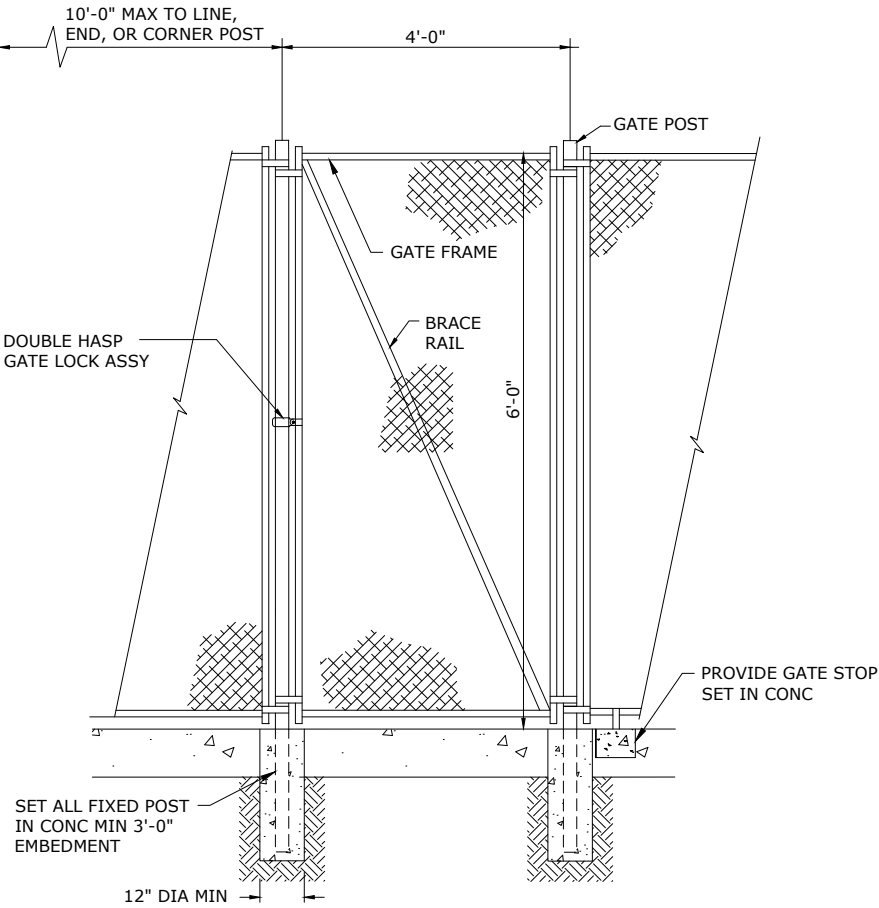
BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

PUMP STATION 17 YARD
PIPING SECTION AND DETAILS
SCHEDULE A

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

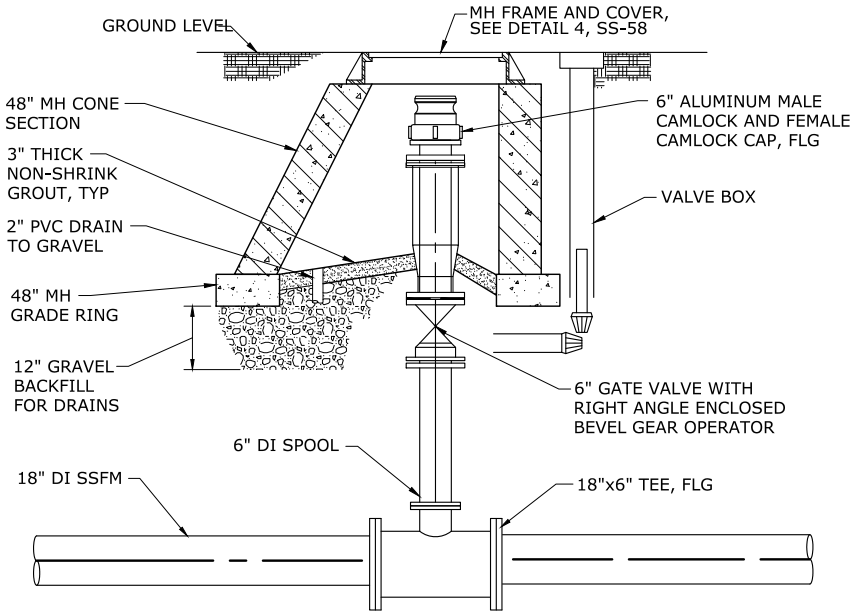
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PS17-2
8 of 138

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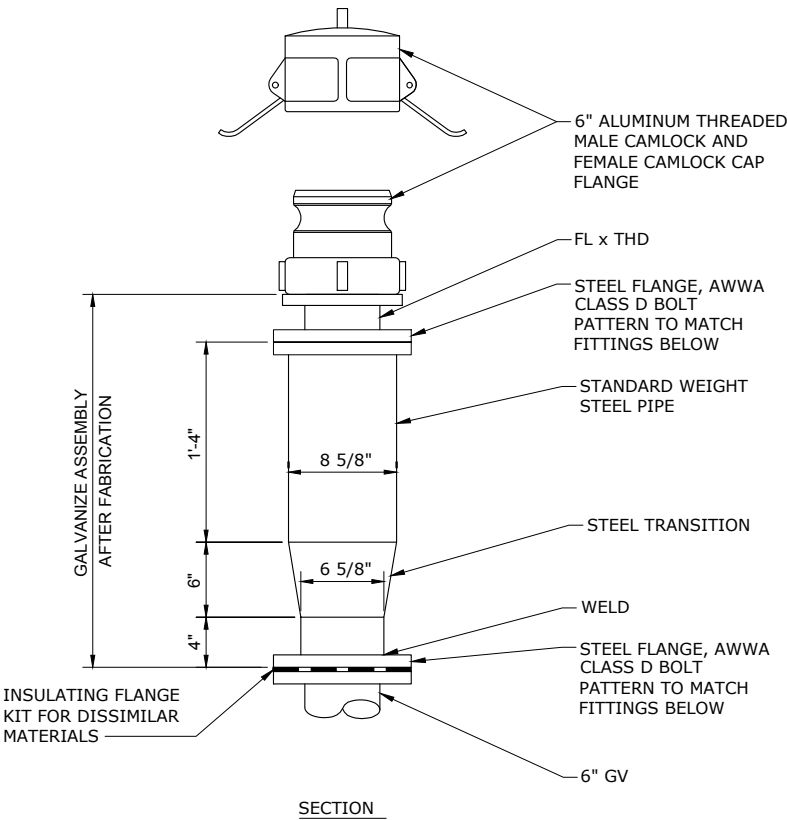
CHAIN LINK MAN GATE
SCALE: NTS

2
PS17-1



6" BYPASS PORT
SCALE: NTS

2
PS17-1



BYPASS TUBE
SCALE: NTS

3
PS17-1

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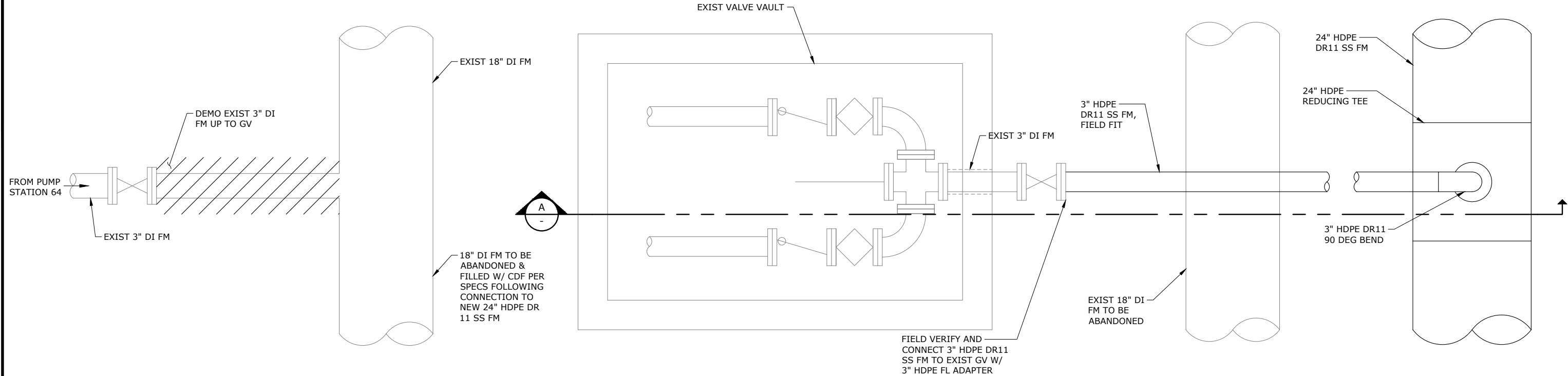


BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

PUMP STATION 17 DETAILS - 2 SCHEDULE A			
PROJECT NO.:	20-2815	SCALE:	AS SHOWN
DATE:	FEBRUARY 2022		

SHEET
PS17-3
9 of 138

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PS 64 EXIST FORCE MAIN DEMOLITION

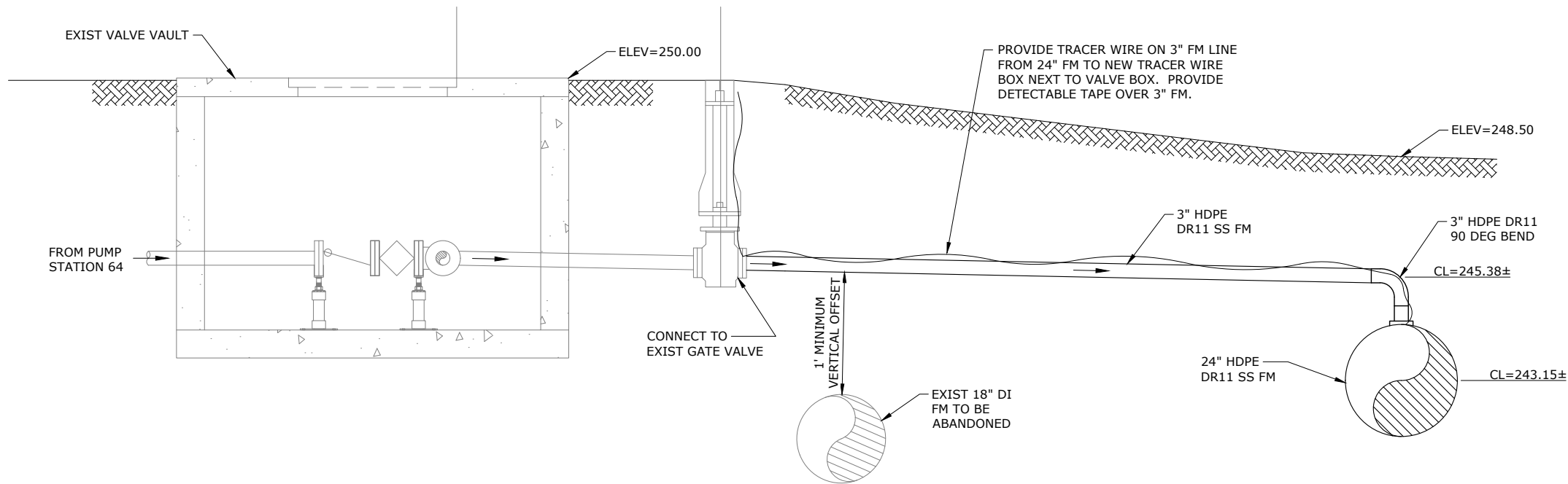
SCALE: NTS

1
SS-5

PS 64 CONNECTION

SCALE: NTS

2
SS-5



PS 64 CONNECTION - SECTION

SCALE: NTS

A
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NO.	DATE	BY	REVISION

NOTICE

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BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

PUMP STATION 64
CONNECTION DETAIL
SCHEDULE A

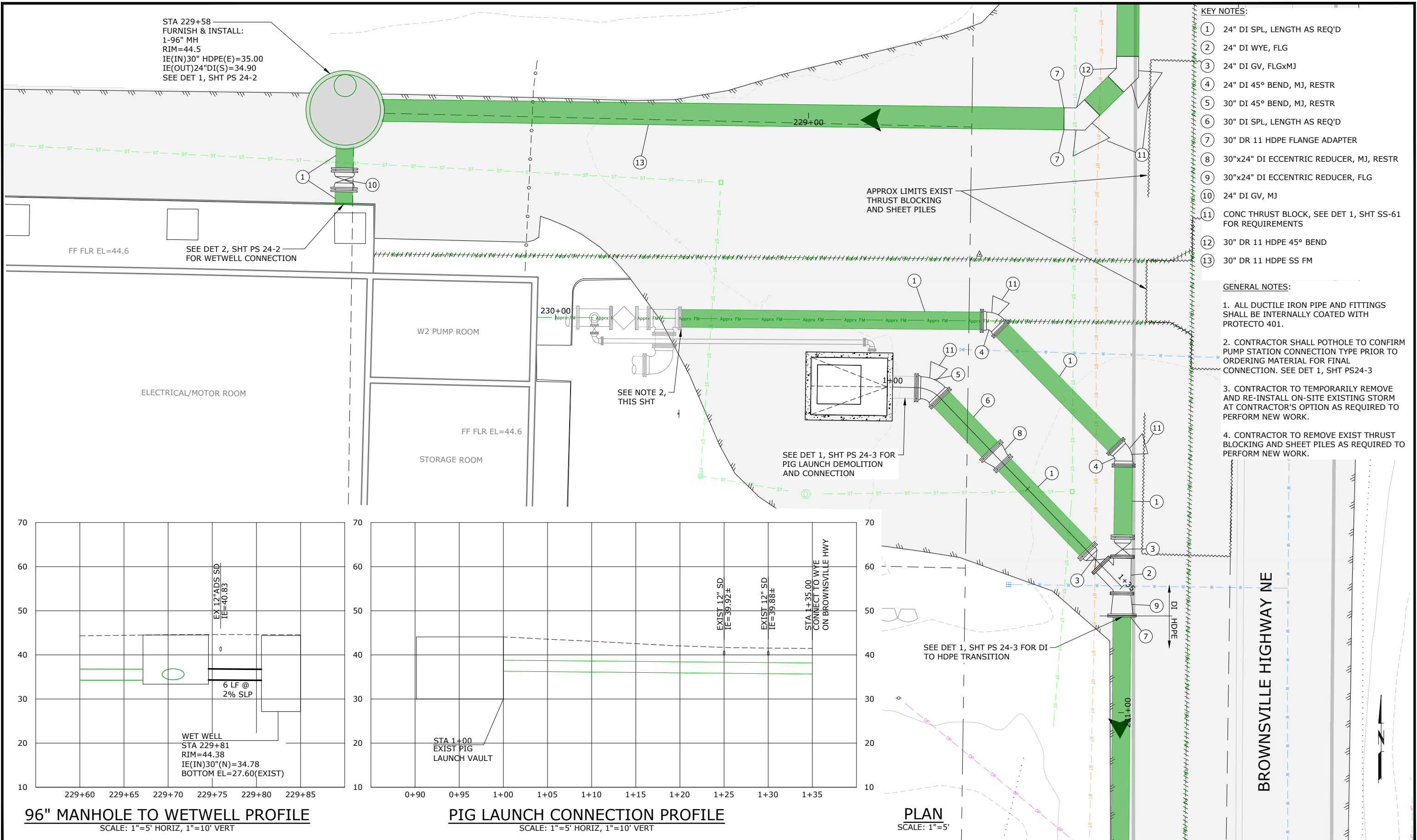
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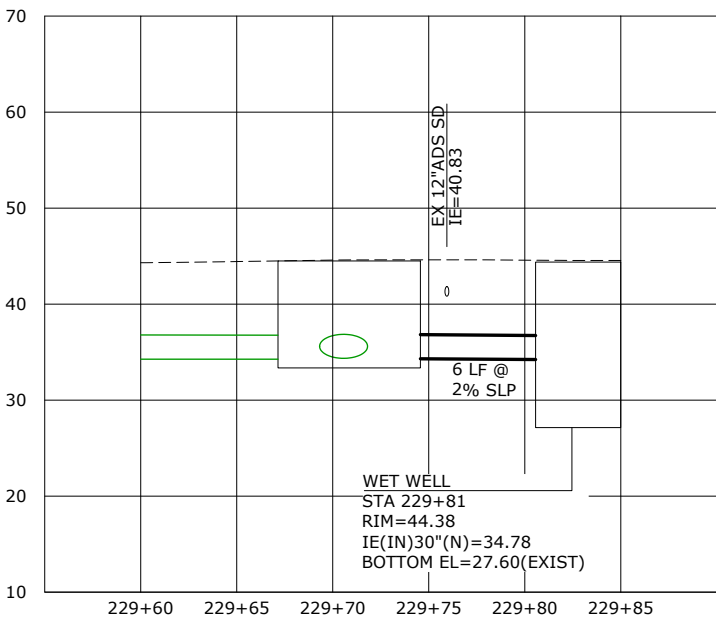
10 of 138

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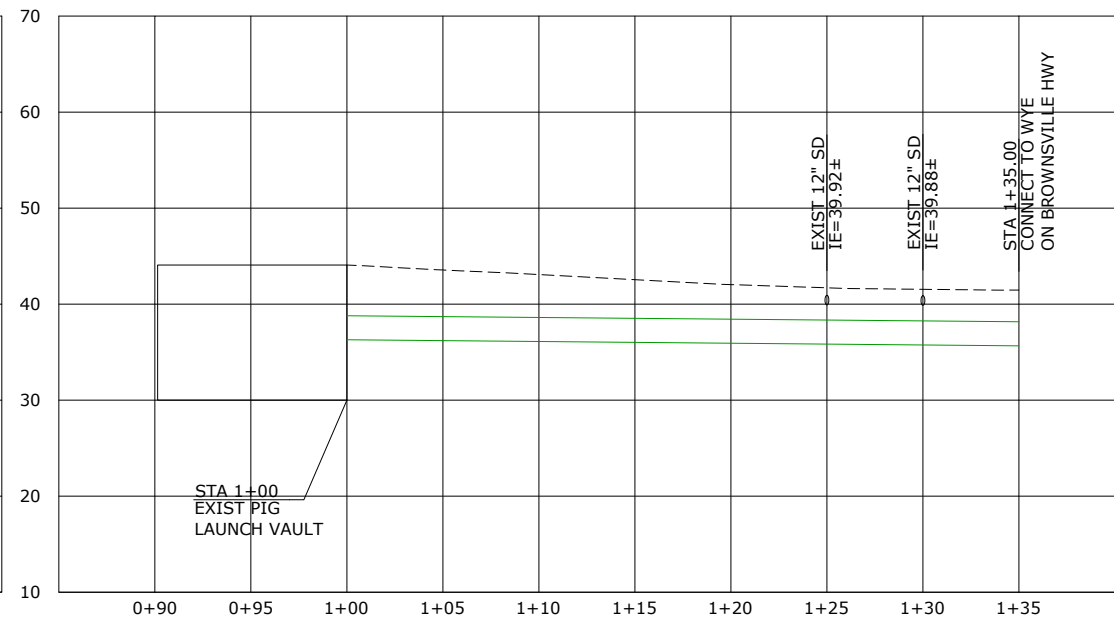


- KEY NOTES:
- 1 24" DI SPL, LENGTH AS REQ'D
 - 2 24" DI WYE, FLG
 - 3 24" DI GV, FLGxMJ
 - 4 24" DI 45° BEND, MJ, RESTR
 - 5 30" DI 45° BEND, MJ, RESTR
 - 6 30" DI SPL, LENGTH AS REQ'D
 - 7 30" DR 11 HDPE FLANGE ADAPTER
 - 8 30"x24" DI ECCENTRIC REDUCER, MJ, RESTR
 - 9 30"x24" DI ECCENTRIC REDUCER, FLG
 - 10 24" DI GV, MJ
 - 11 CONC THRUST BLOCK, SEE DET 1, SHT SS-61 FOR REQUIREMENTS
 - 12 30" DR 11 HDPE 45° BEND
 - 13 30" DR 11 HDPE SS FM

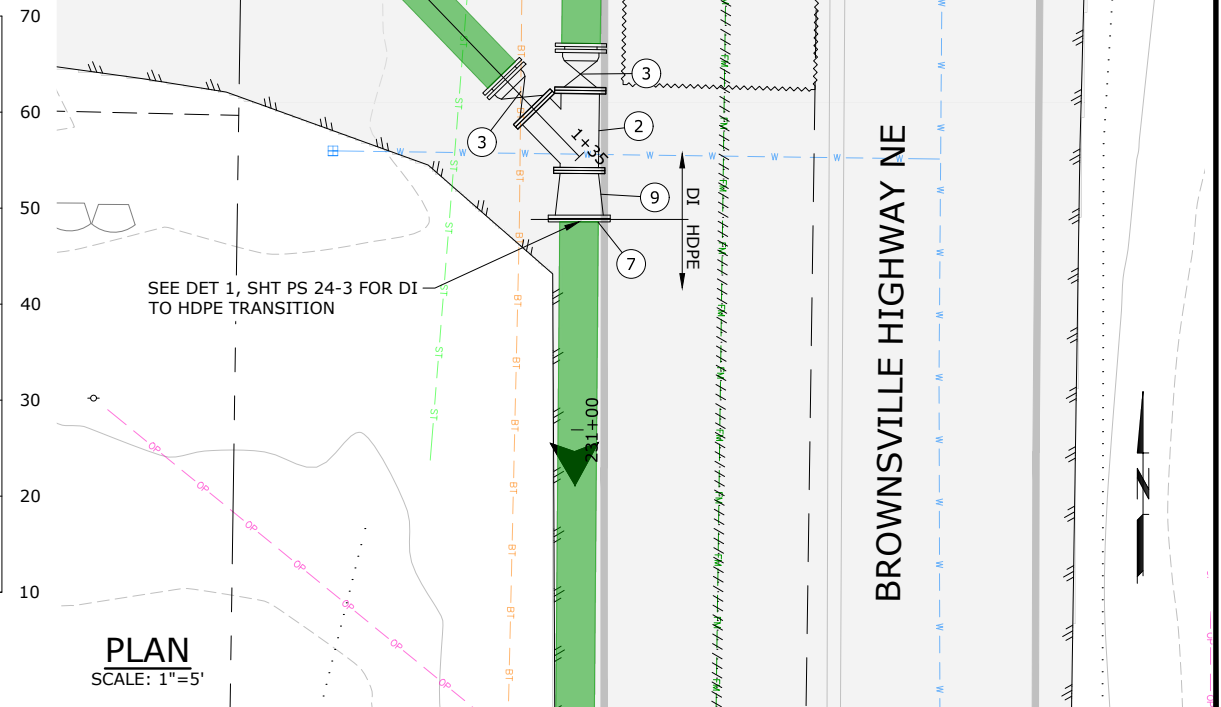
- GENERAL NOTES:
- 1. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE INTERNALLY COATED WITH PROTECTO 401.
 - 2. CONTRACTOR SHALL POTHOLE TO CONFIRM PUMP STATION CONNECTION TYPE PRIOR TO ORDERING MATERIAL FOR FINAL CONNECTION. SEE DET 1, SHT PS24-3
 - 3. CONTRACTOR TO TEMPORARILY REMOVE AND RE-INSTALL ON-SITE EXISTING STORM AT CONTRACTOR'S OPTION AS REQUIRED TO PERFORM NEW WORK.
 - 4. CONTRACTOR TO REMOVE EXIST THRUST BLOCKING AND SHEET PILES AS REQUIRED TO PERFORM NEW WORK.



96" MANHOLE TO WETWELL PROFILE
SCALE: 1"=5' HORIZ, 1"=10' VERT



PIG LAUNCH CONNECTION PROFILE
SCALE: 1"=5' HORIZ, 1"=10' VERT



PLAN
SCALE: 1"=5'

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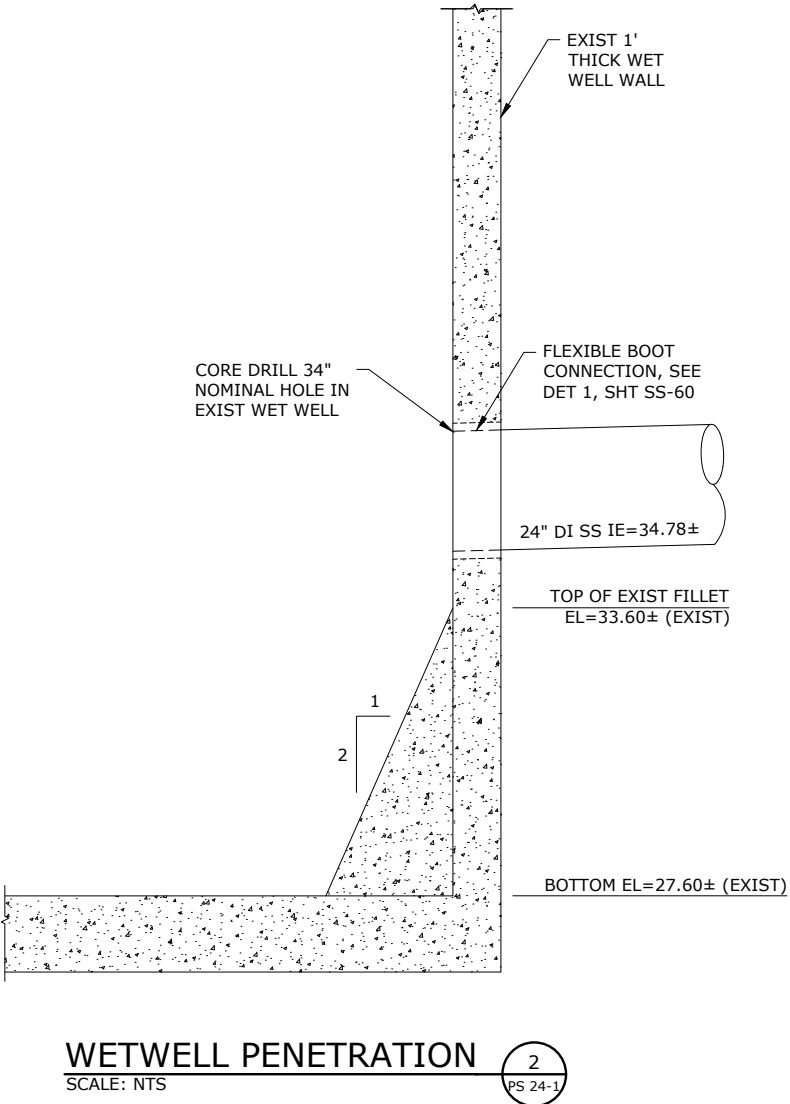
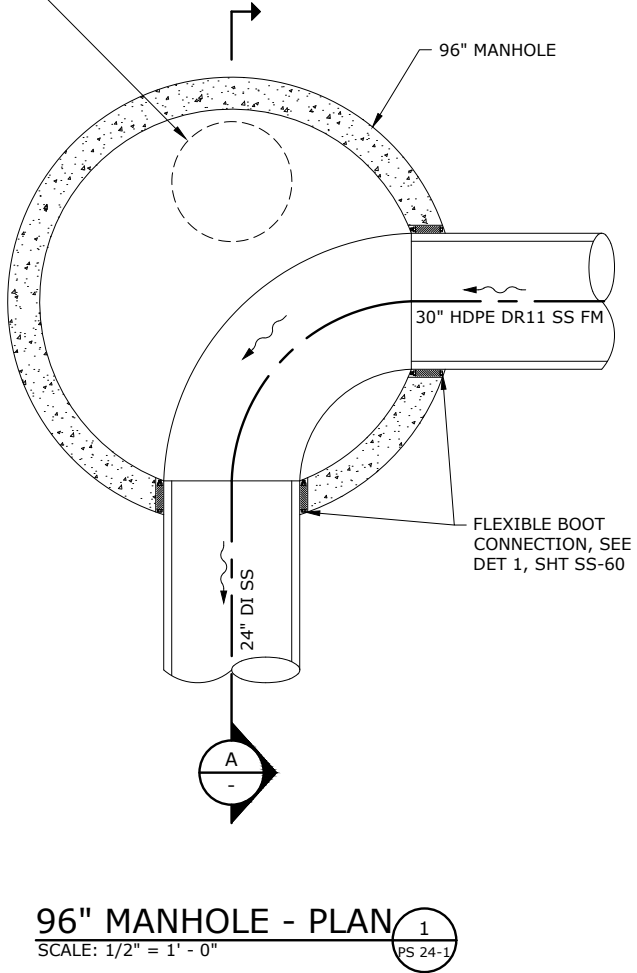
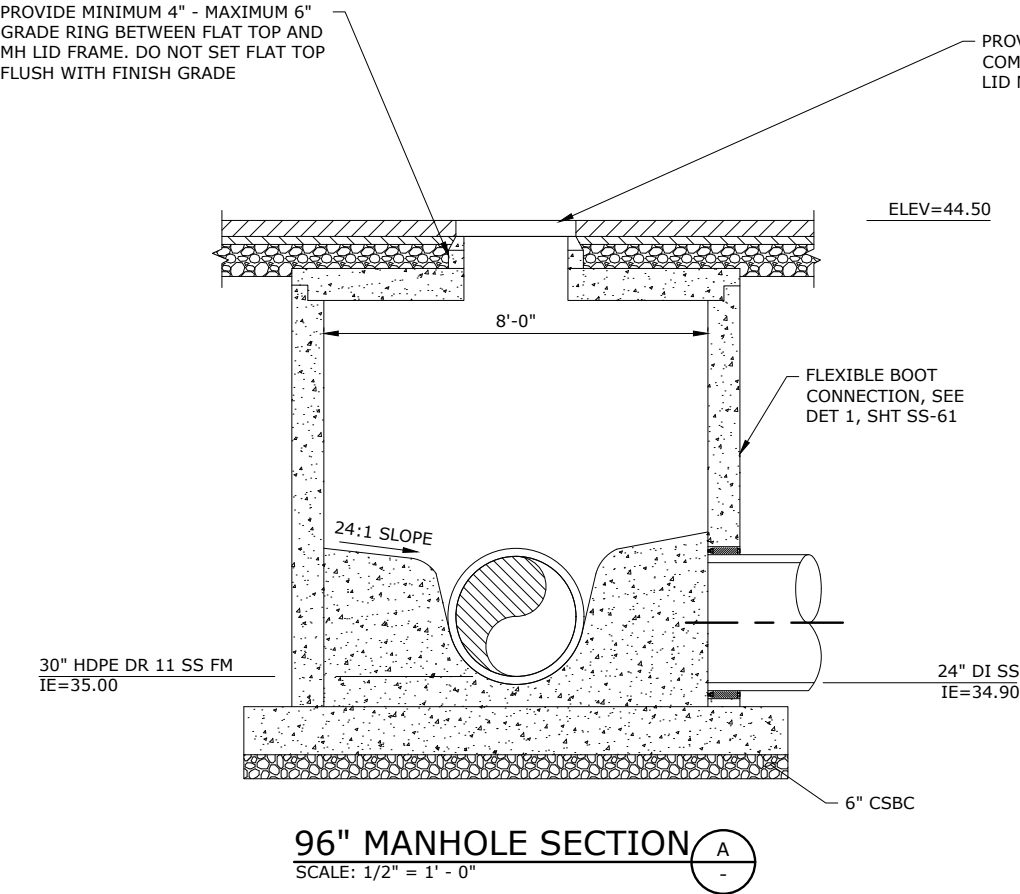


BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

PUMP STATION 24
YARD PIPING PLAN
SCHEDULE B

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

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**BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT**

**PUMP STATION 24
DETAILS - 1
SCHEDULE B**

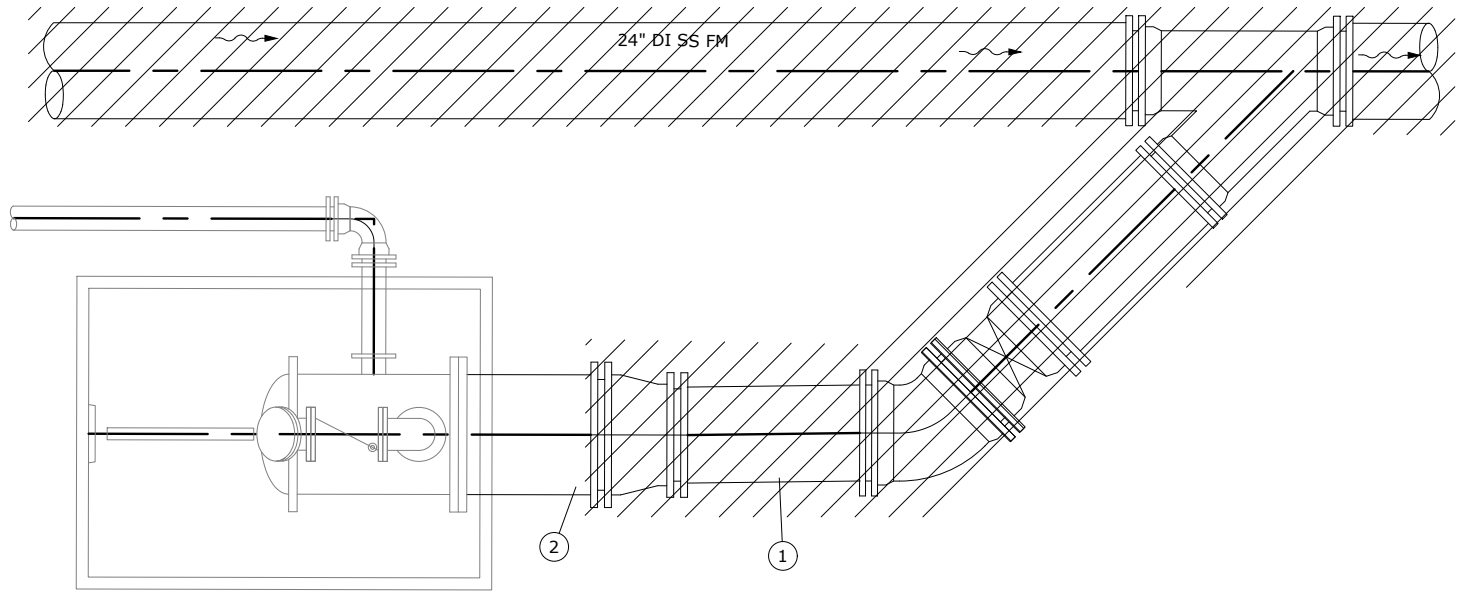
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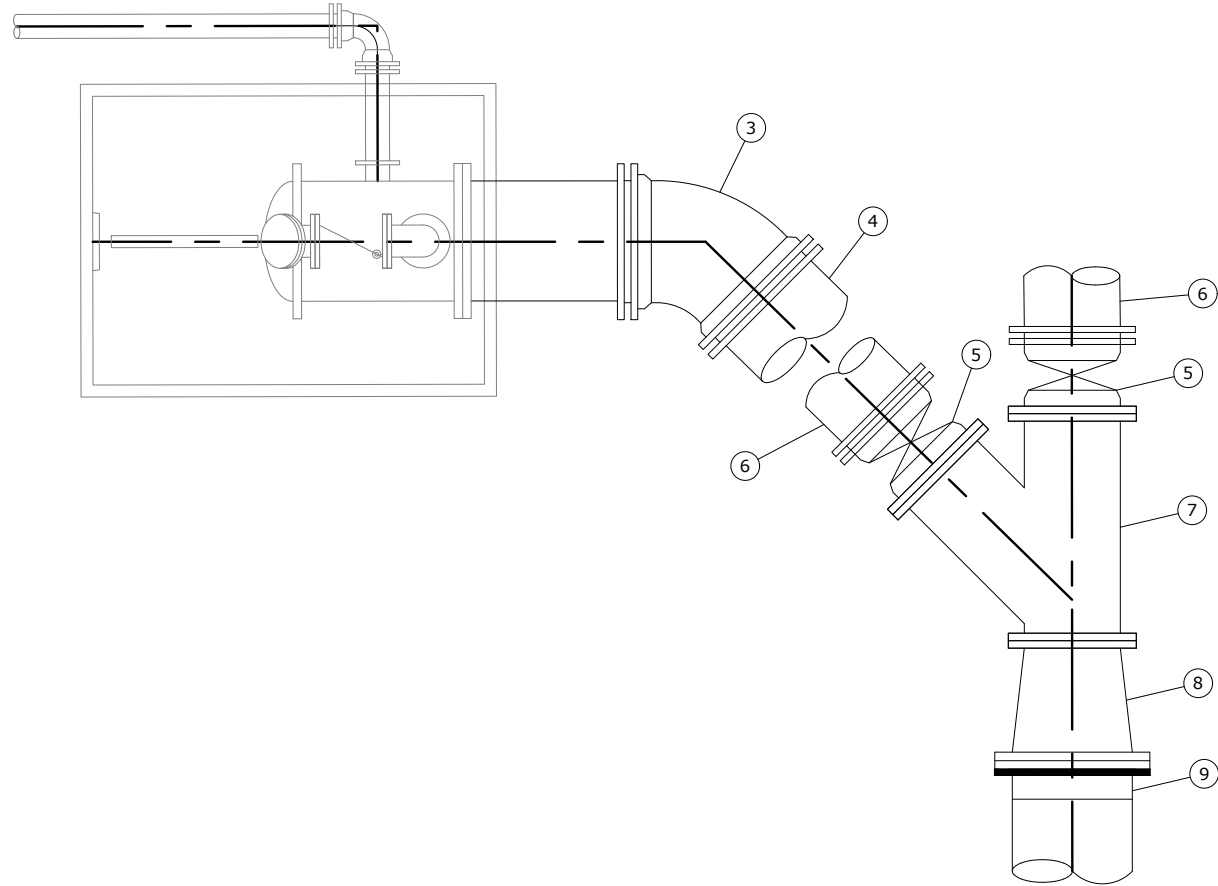
PS24-2

12 of 138

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EXIST PIG LAUNCH DEMOLITION
SCALE: NTS

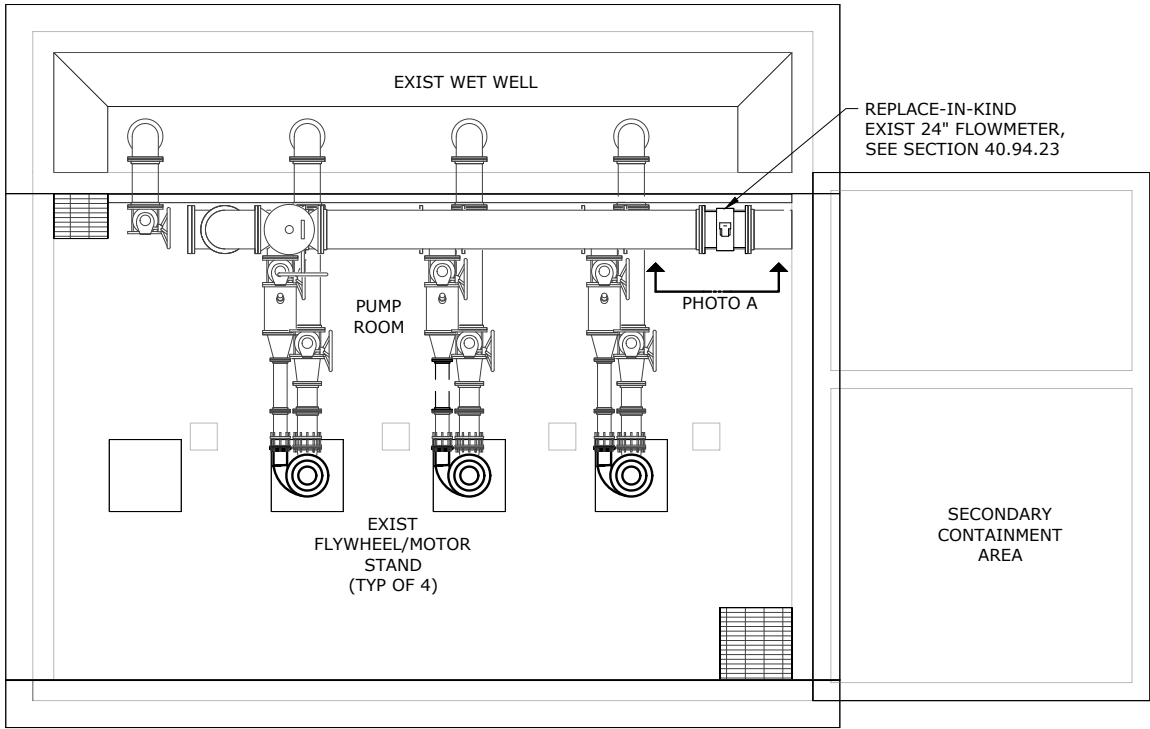


PIG LAUNCH CONNECTION & 24" DI TO 30" HDPE TRANSITION
SCALE: NTS

1
PS 24-1

KEY NOTES:

- 1 REMOVE EXIST PIG LAUNCH PIPE & FITTINGS UP TO EXIST 30" DI SPL
- 2 REMOVE 30"DI SPOOL MJ; LEAVE PLAIN END EXPOSED
- 3 INSTALL 30" DI 45 DEG BEND, MJ, RESTR
- 4 INSTALL 30" DI SPL, LENGTH AS REQ'D
- 5 INSTALL 24" GV, FLGxMJ, RESTR
- 6 INSTALL 24" DI SPL, LENGTH AS REQ'D
- 7 INSTALL 24" DI WYE, FLG
- 8 INSTALL 30"x24" DI ECCENTRIC REDUCER, FLG
- 9 INSTALL 30" DR11 HDPE FLANGE ADAPTER



PUMP STATION 24 FLOWMETER REPLACEMENT
SCALE: NTS

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PHOTO A
SCALE: NTS

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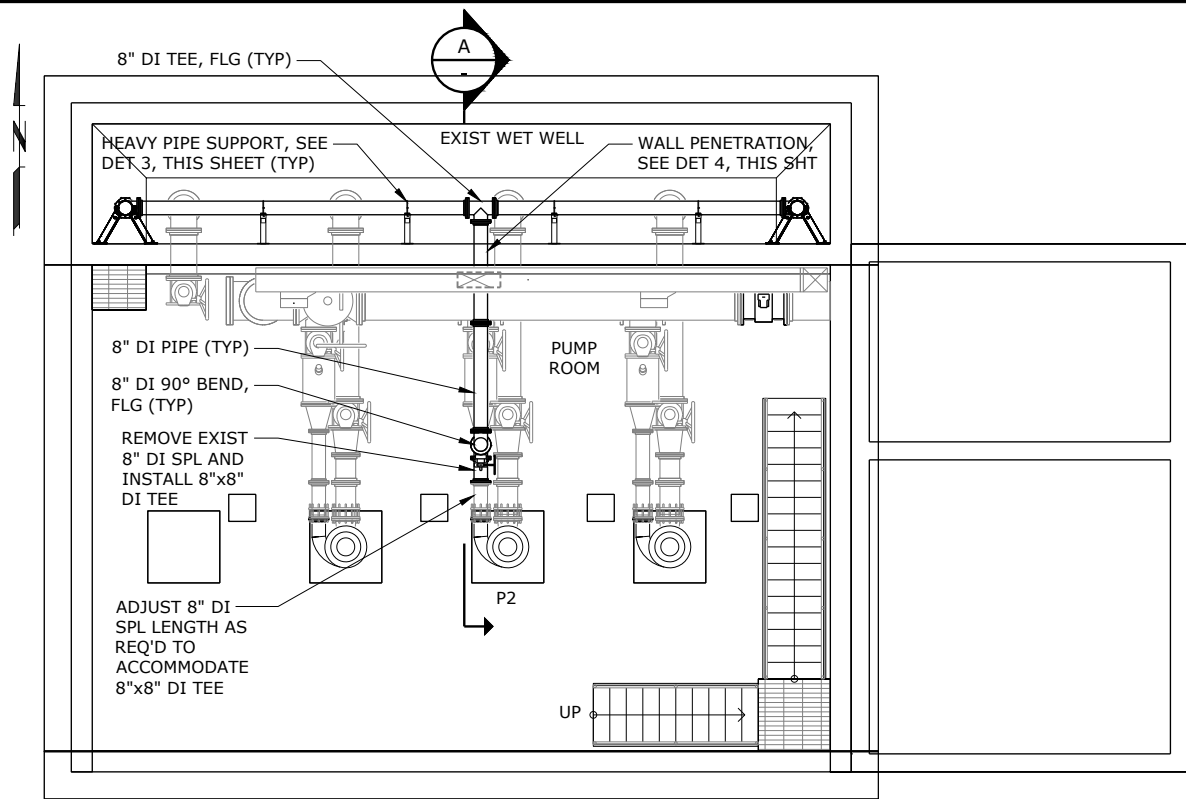


BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

PUMP STATION 24 DETAILS - 2 SCHEDULE B			
PROJECT NO.:	20-2815	SCALE:	AS SHOWN
DATE:	FEBRUARY 2022		

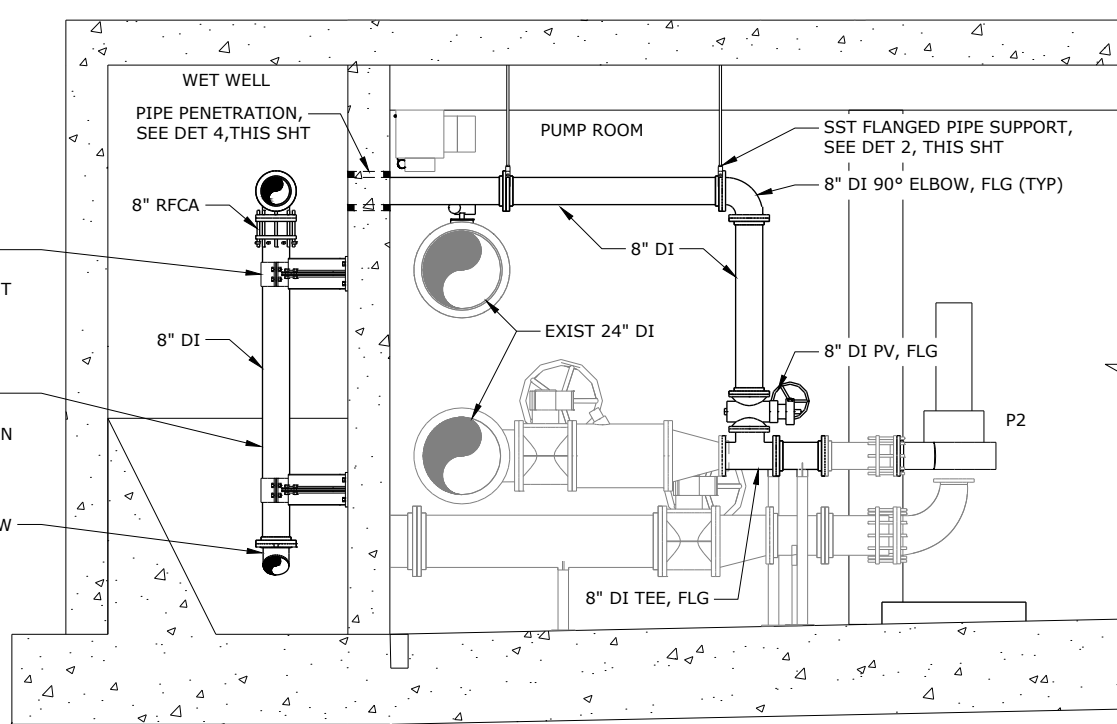
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PS24-3
13 of 138

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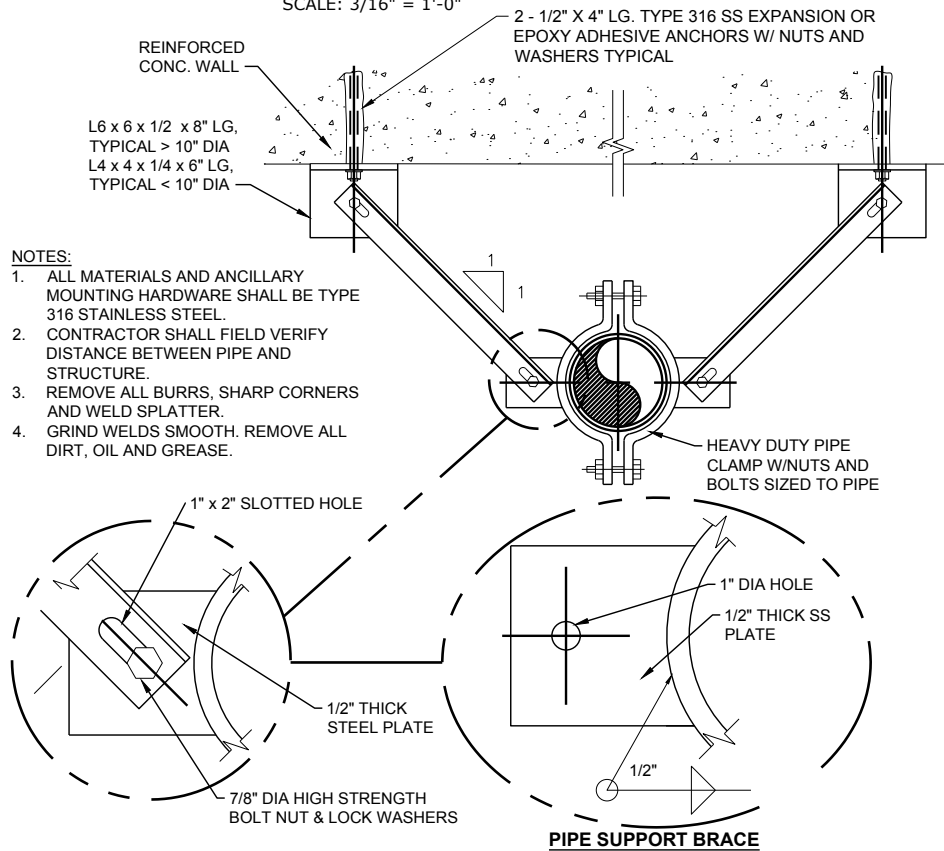
PUMP STATION 24 PUMP ROOM PLAN

SCALE: 3/16" = 1'-0"



SECTION A

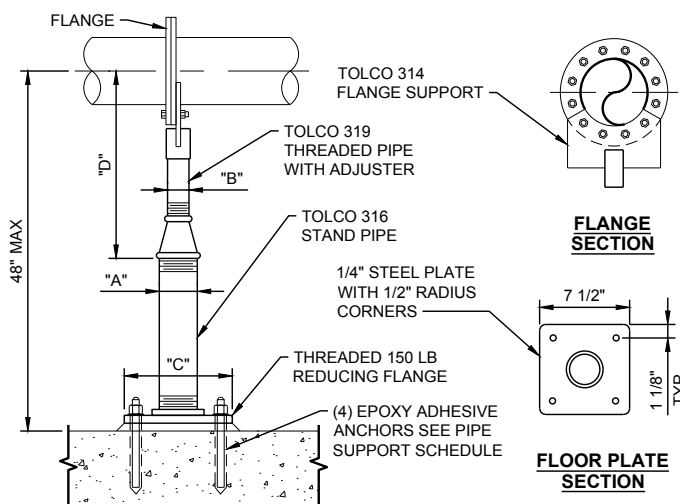
SCALE: 3/8" = 1'-0"



ANGUAR PIPE SUPPORT

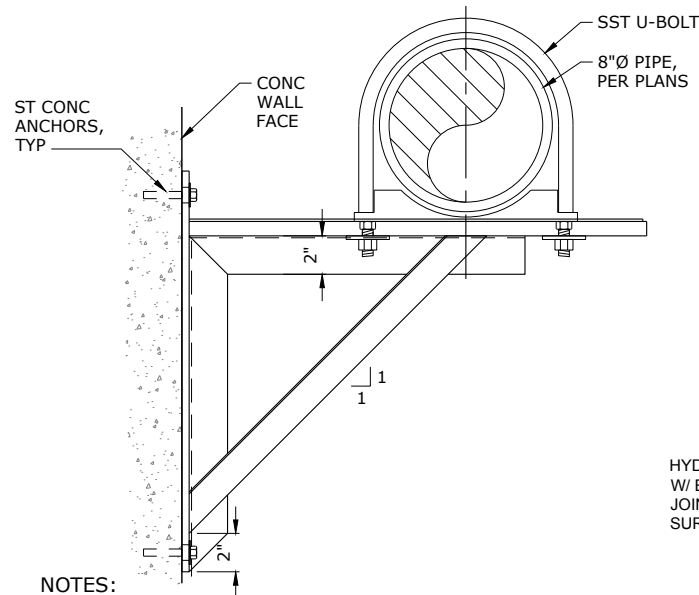
SCALE: NTS

PIPE SIZE	PIPE SUPPORT SCHEDULE					
	"A"	"B"	"C"	"D"	"E"	
8"	3"	2 1/2"	9"	MAX	DIA	EMBED
				15 1/2"	5/8"	5"



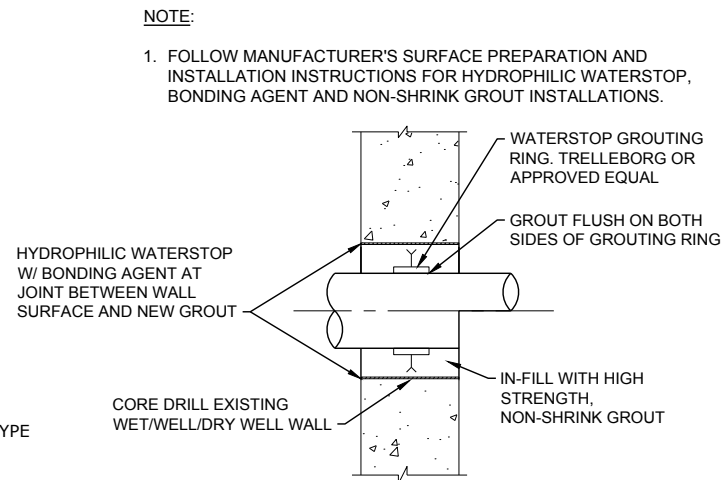
FLANGED PIPE SUPPORT

SCALE: NTS



PIPE SUPPORT

SCALE: NTS



PIPE PENETRATION

SCALE: NTS

NOTES:

1. ALL MATERIALS AND ANCILLARY MOUNTING HARDWARE SHALL BE TYPE 316 STAINLESS STEEL.
2. CONTRACTOR SHALL FIELD VERIFY DISTANCE BETWEEN PIPE AND STRUCTURE.
3. REMOVE ALL BURRS, SHARP CORNERS AND WELD SPLATTER.
4. GRIND WELDS SMOOTH. REMOVE ALL DIRT, OIL AND GREASE.

- NOTE:
1. NOT INTENDED FOR THRUST RESTRAINT.
 2. NAMED PRODUCTS ARE BASIS OF DESIGN. PROVIDE OR EQUAL.

NOTES:

1. ALL SUPPORT MATERIAL TO BE TYPE 316L STAINLESS STEEL. ALL FASTENERS (NUTS, BOLTS, ANCHORS, WASHERS, ETC.) SHALL BE TYPE 316 OR 316L STAINLESS STEEL.
2. CONTRACTOR TO PROVIDE PIPE SUPPORT DESIGN STAMPED BY ENGINEER LICENSED IN WASHINGTON STATE.

NOTE:

1. FOLLOW MANUFACTURER'S SURFACE PREPARATION AND INSTALLATION INSTRUCTIONS FOR HYDROPHILIC WATERSTOP, BONDING AGENT AND NON-SHRINK GROUT INSTALLATIONS.

NO.	DATE	BY	REVISION

NOTICE

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murraysmith



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

PUMP STATION 24
DETAILS - 3
SCHEDULE B

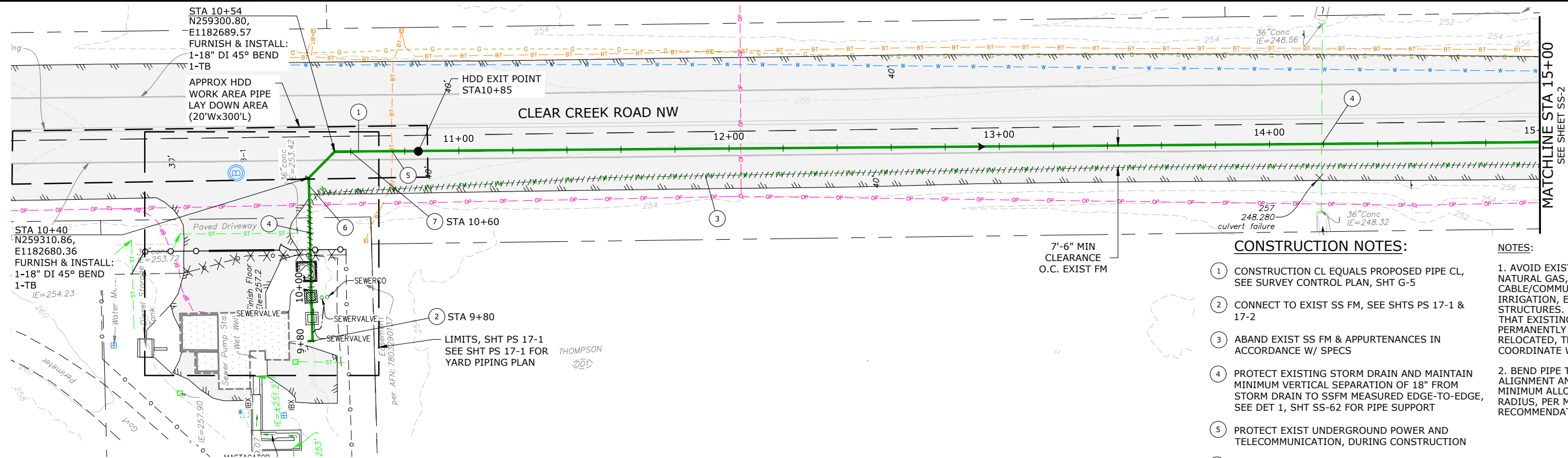
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PS24-4

14 of 138

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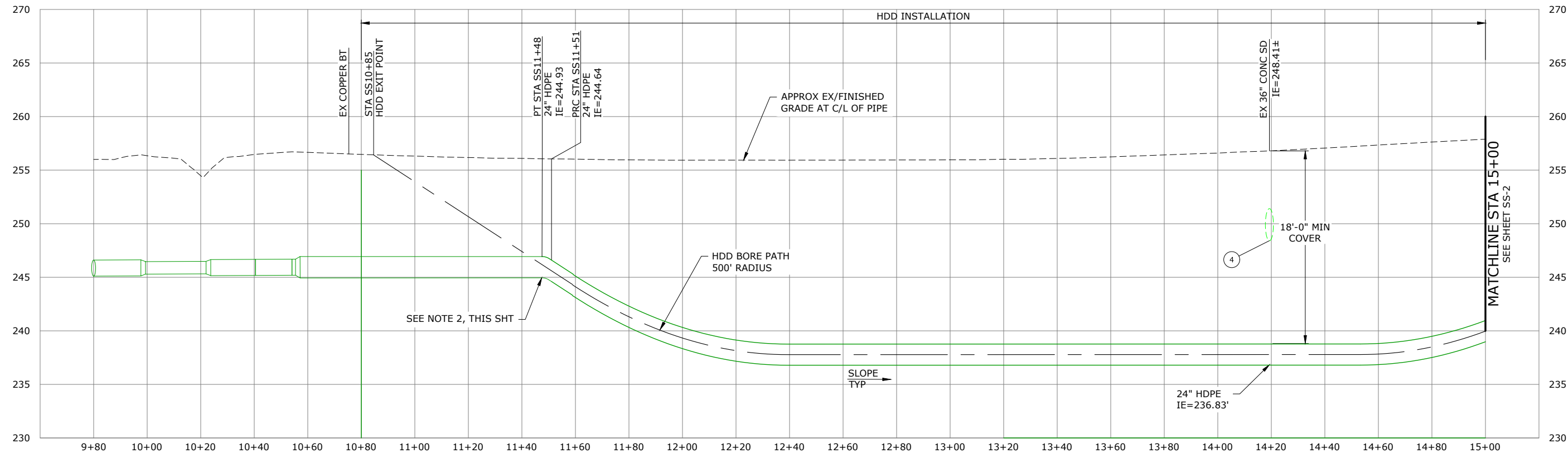
PLAN
SCALE: 1"=20'

CONSTRUCTION NOTES:

1. CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
2. CONNECT TO EXIST SS FM, SEE SHTS PS 17-1 & 17-2
3. ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
4. PROTECT EXISTING STORM DRAIN AND MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" FROM STORM DRAIN TO SSFM MEASURED EDGE-TO-EDGE, SEE DET 1, SHT SS-62 FOR PIPE SUPPORT
5. PROTECT EXIST UNDERGROUND POWER AND TELECOMMUNICATION, DURING CONSTRUCTION
6. SS FM TRENCH SECTION PER DET 3, SHT SS-58
7. FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58

NOTES:

1. AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY.
2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.



PROFILE
SCALE: 1"=20' HORIZ, 1"=5' VERT

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH/JCP
DESIGNED
BAW
DRAWN
EKS/BVO
CHECKED



murraysmith



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

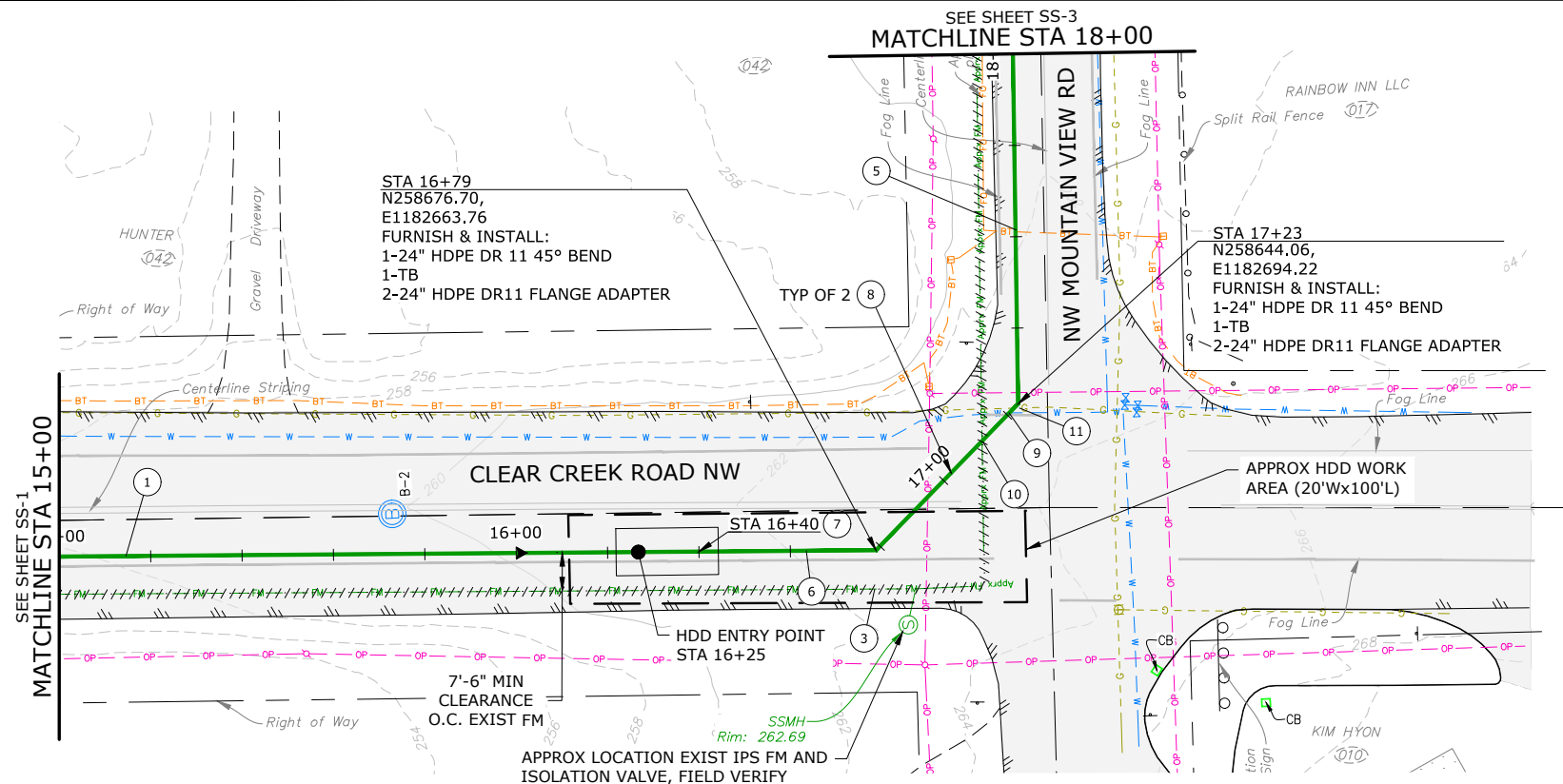
FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 9+80
TO STA 15+00
SCHEDULE A

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

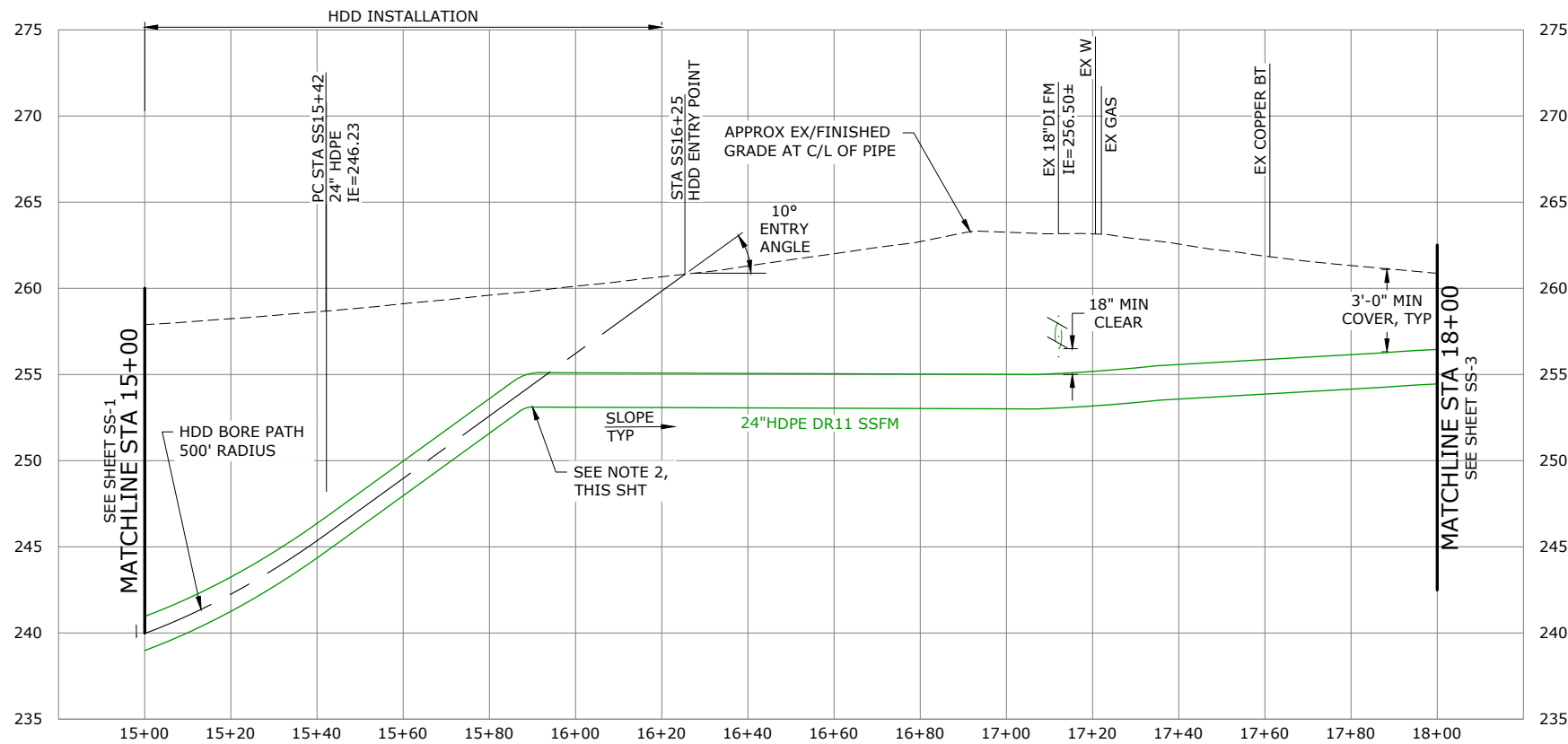
SHEET

SS-1

15 of 138

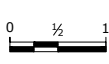


SCALE: 1"=20'



SCALE: $1''=20'$ HORIZ, $1''=5'$ VERT

NO.	DATE	BY	REVISION



IF THIS BAR DOES
NOT MEASURE 1"
THEN DRAWING IS
NOT TO SCALE

TMH/JCP
DESIGNED
BAW
DRAWN
EKS/BVO
CHECKED



murraysmith



BANGOR-KEYPORT FORCE MAIN REPLACEMENT

**FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 15+00
TO STA 18+00
SCHEDULE A**

SHEET

SS-2

16 of 138

NOTES:

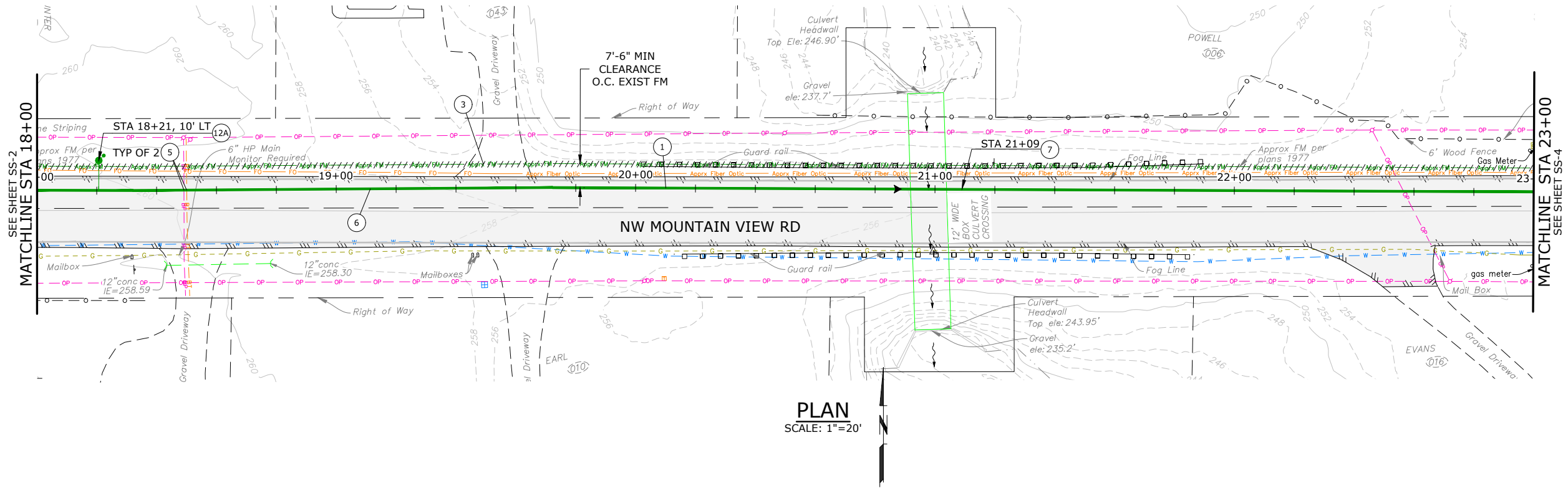
1. AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY AND THE UTILITY.

2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.

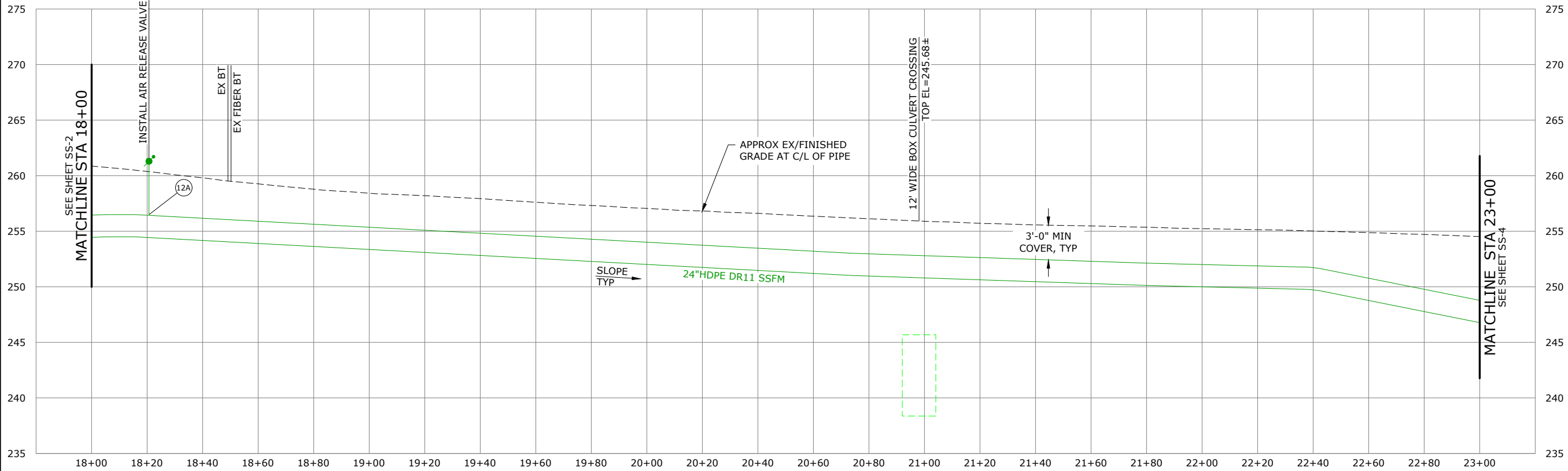
CONSTRUCTION NOTES:

- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY LOCATION PLAN, SHT G-5
- 3 ABANDON EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
- 5 PROTECT EXIST UNDERGROUND POWER AND TELECOMMUNICATION, DURING CONSTRUCTION
- 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
- 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
- 8 CONNECT EXIST IPS PER DET 1, SHT SS-57
- 9 PROTECT EXISTING WATER MAIN AND MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" FROM WATER MAIN MEASURED EDGE-TO-EDGE
- 10 PROTECT EXIST SSFM, MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" MEASURED EDGE-TO-EDGE. SEE SPECS FOR ADDITIONAL REQUIREMENTS
- 11 PROTECT EXIST GAS, MAINTAIN MINIMUM VERTICAL SEPARATION OF 12" MEASURED EDGE-TO-EDGE. MONITORING BY GAS UTILITY IS REQUIRED AT ALL TIMES DURING EXCAVATION AND BACKFILL OPERATIONS. WHEN GAS LINE IS EXPOSED RESTORE PIPE BY PACKING 6" OF SAND AROUND THE PIPE.

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PLAN
SCALE: 1"=20'



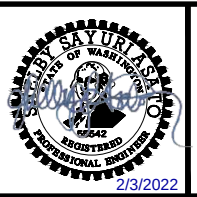
PROFILE
SCALE: 1"=20' HORIZ, 1"=5' VERT

- NOTES:**
1. AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY AND THE UTILITY.
 2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.
- CONSTRUCTION NOTES:**
- (1) CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
 - (3) ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
 - (5) PROTECT EXIST UNDERGROUND POWER AND TELECOMMUNICATION, DURING CONSTRUCTION
 - (6) SS FM TRENCH SECTION PER DET 3, SHT SS-58
 - (7) FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
 - (12A) FURNISH & INSTALL 2" AIR RELEASE VALVE PER DET 1, SHT SS-59

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
DRAWN
EKS
CHECKED

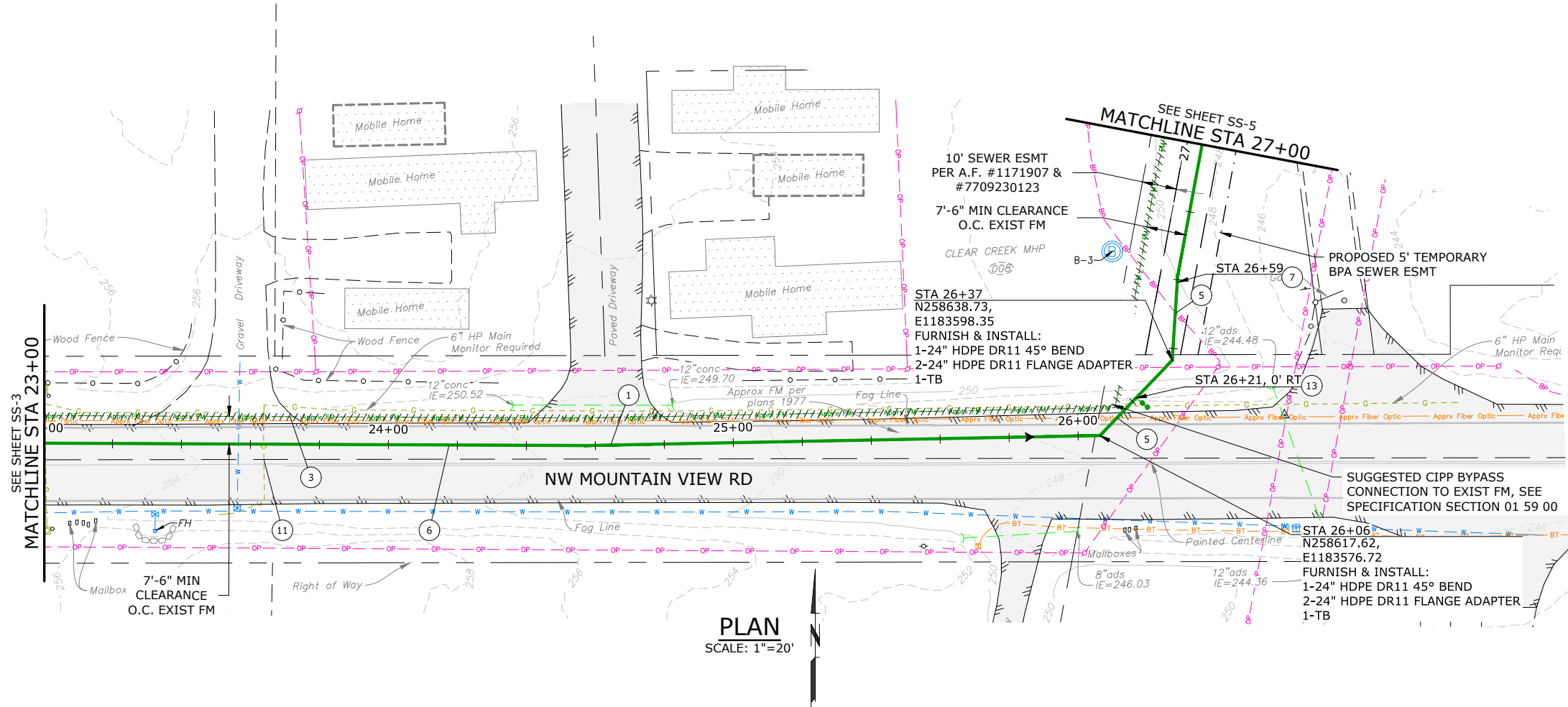


**BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT**

**FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 18+00
TO STA 23+00
SCHEDULE A**

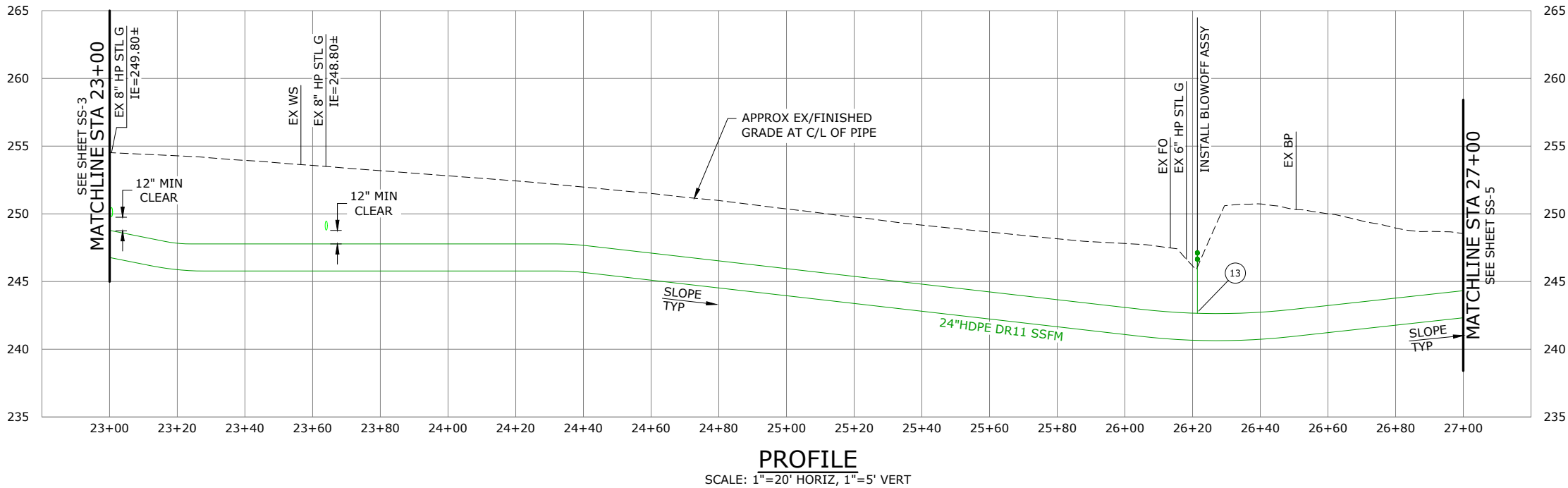
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

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- NOTES:
1. AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY AND THE UTILITY.
 2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.

- CONSTRUCTION NOTES:
- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
 - 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
 - 5 PROTECT EXIST UNDERGROUND POWER AND TELECOMMUNICATION, DURING CONSTRUCTION
 - 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
 - 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
 - 11 PROTECT EXIST GAS, MAINTAIN MINIMUM VERTICAL SEPARATION OF 12" MEASURED EDGE-TO-EDGE. MONITORING BY GAS UTILITY IS REQUIRED AT ALL TIMES DURING EXCAVATION AND BACKFILL OPERATIONS. WHEN GAS LINE IS EXPOSED RESTORE PIPE BY PACKING 6" OF SAND AROUND THE PIPE.
 - 13 FURNISH & INSTALL BLOW OFF ASSY PER DET 2, SHT SS-58



NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH DESIGNED

BAW DRAWN

EKS CHECKED

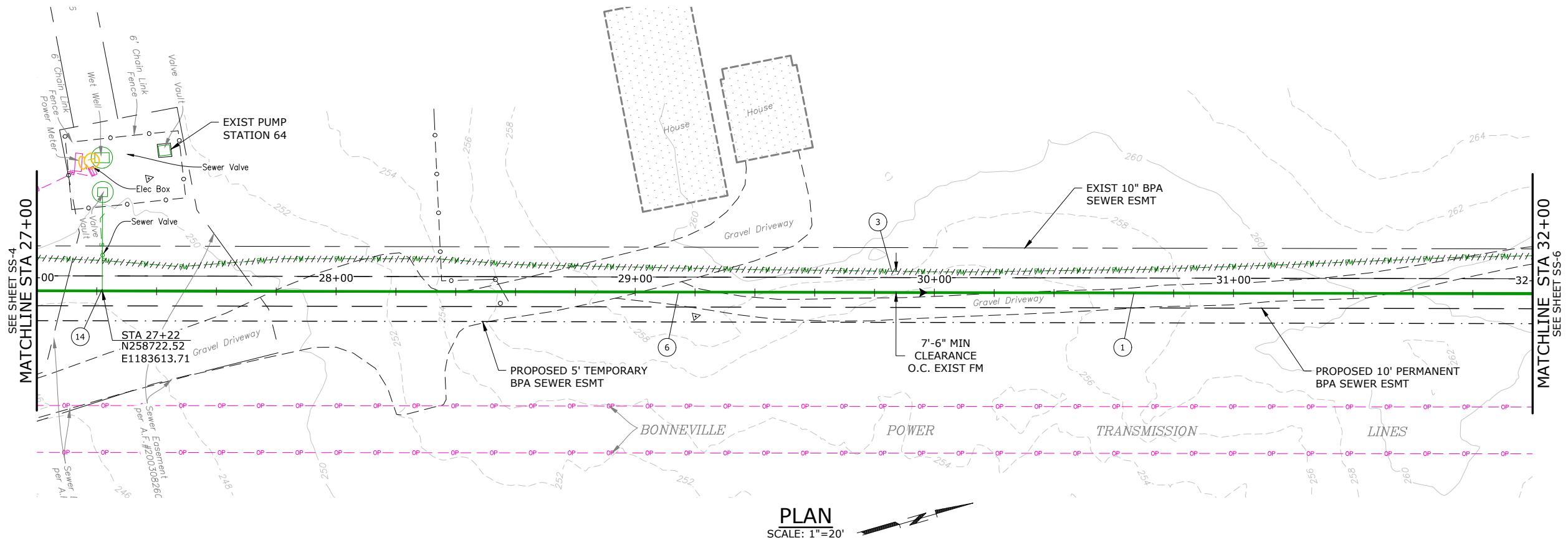


BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 23+00
TO STA 27+00
SCHEDULE A

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

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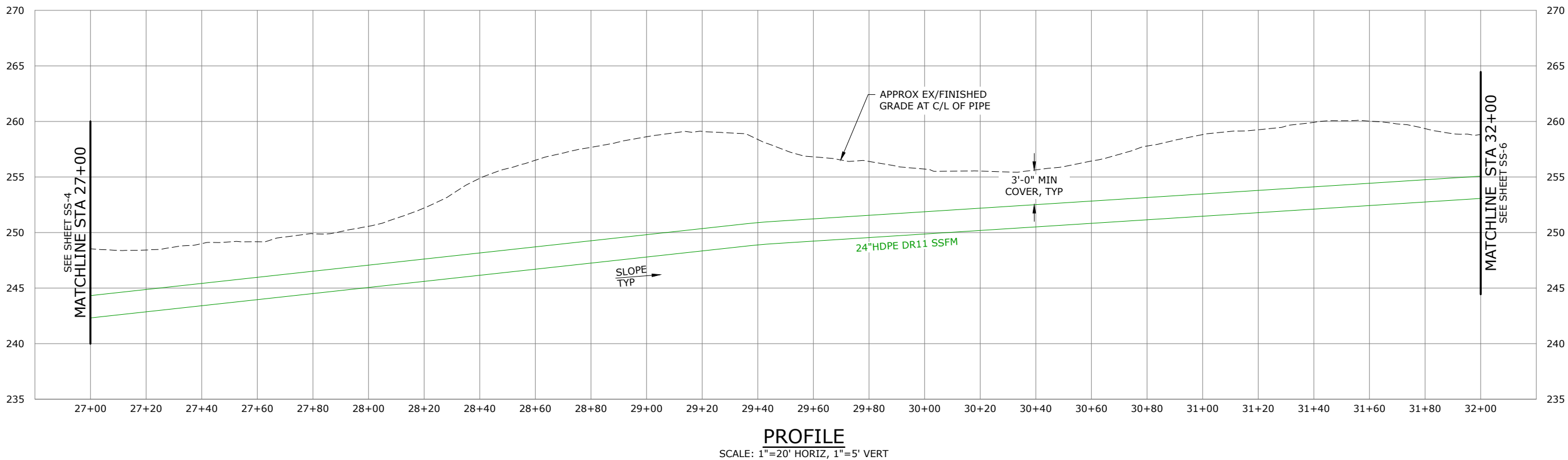
NOTES:

1. AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY AND THE UTILITY.

2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.

CONSTRUCTION NOTES:

- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
- 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
- 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
- 14 CONNECT TO EXIST PS-64 PER DET 1, SHT PS64-1



NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
DRAWN
EKS
CHECKED



murraysmith



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 27+00
TO STA 32+00
SCHEDULE A

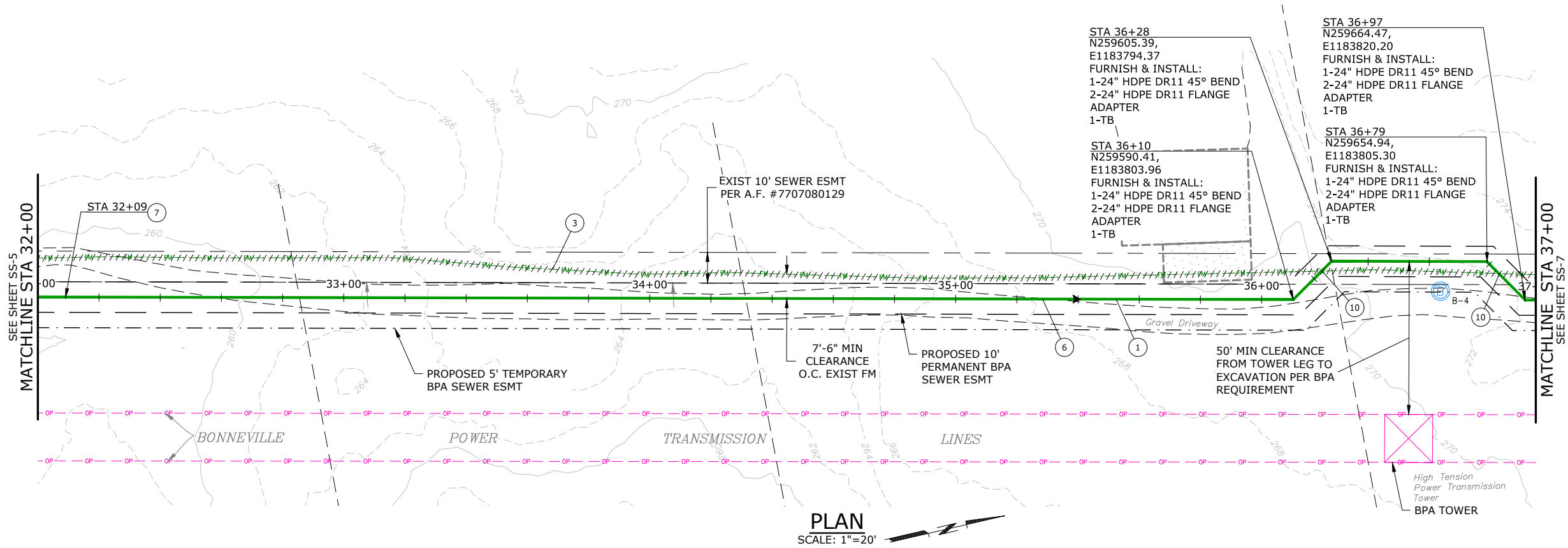
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SHEET

SS-5

19 of 138

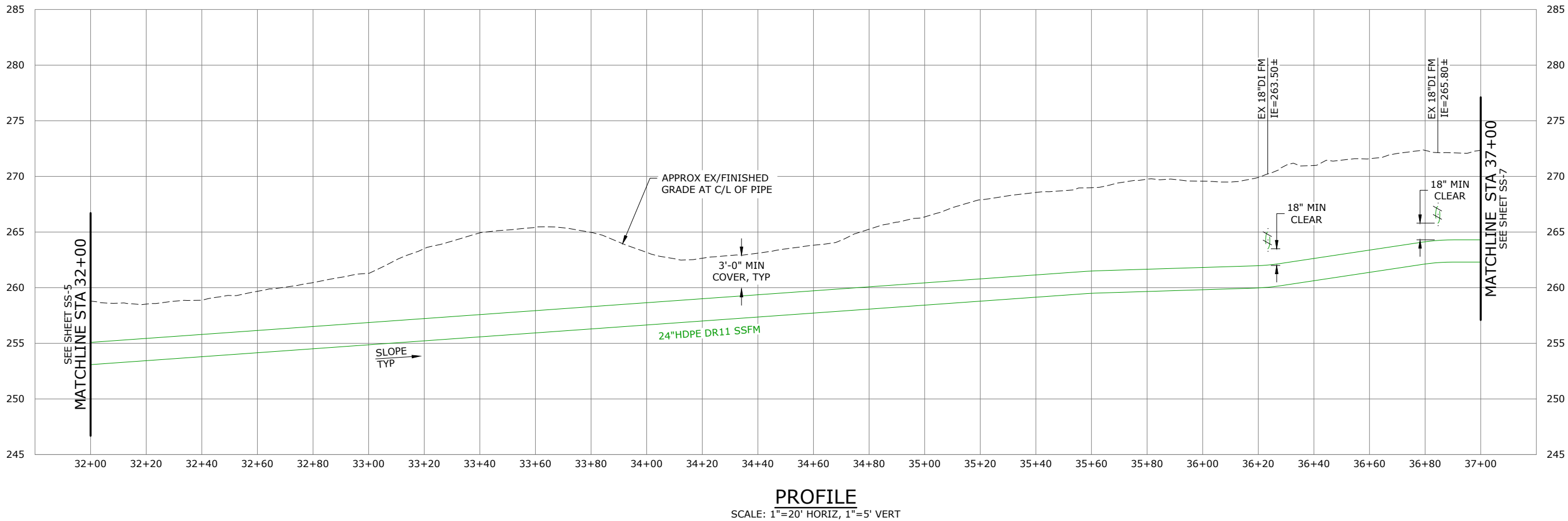
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- NOTES:
1. AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY AND THE UTILITY
 2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.

CONSTRUCTION NOTES:

- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
- 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
- 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
- 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
- 10 PROTECT EXIST SSFM, MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" MEASURED EDGE-TO-EDGE. SEE SPECS FOR ADDITIONAL REQUIREMENTS



NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

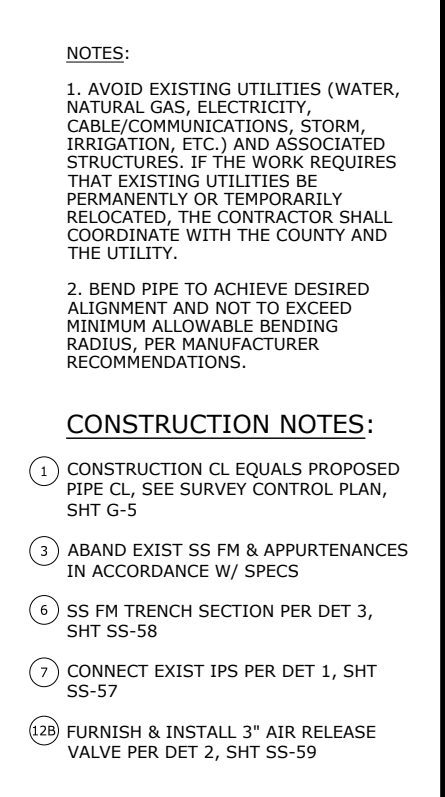
TMH
DESIGNED
BAW
DRAWN
EKS
CHECKED



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 32+00
TO STA 37+00
SCHEDULE A

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022



NOTICE  IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE	TMH DESIGNED BAW DRAWN EKS CHECKED
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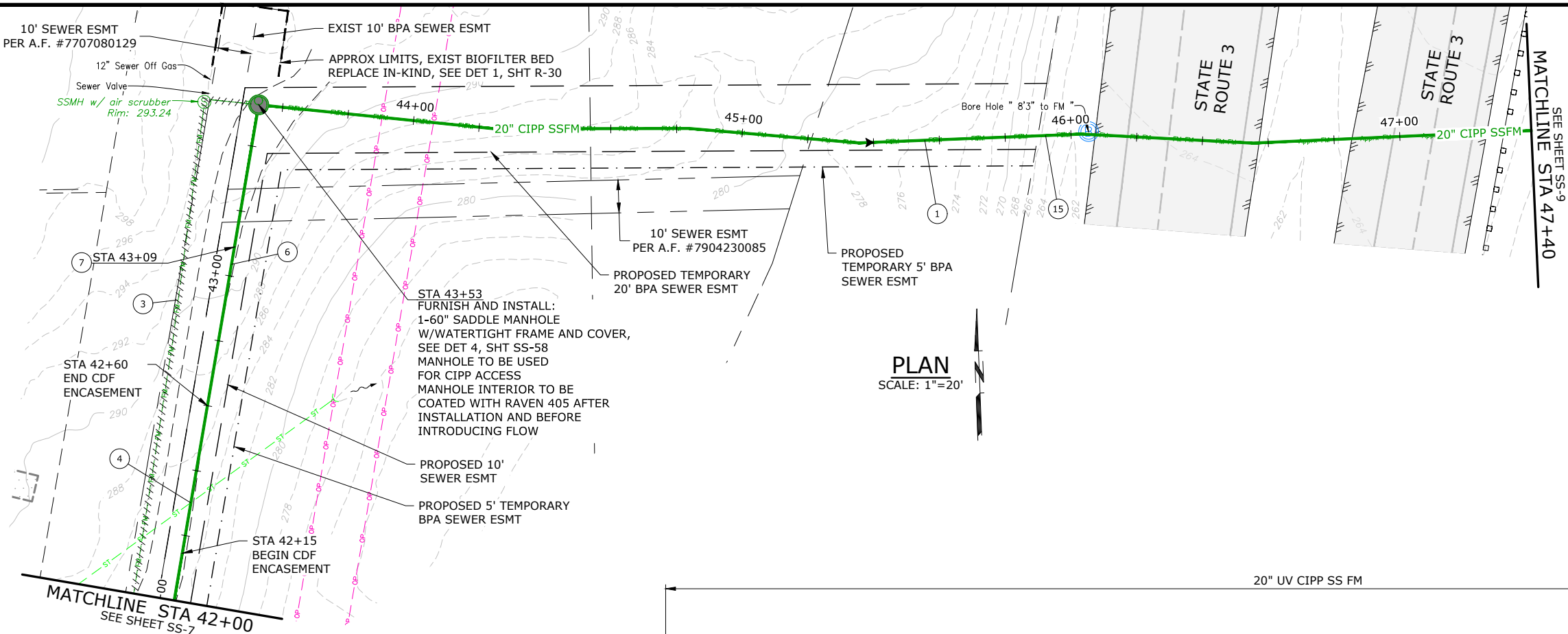


SHEET

SS-7

21 of 138

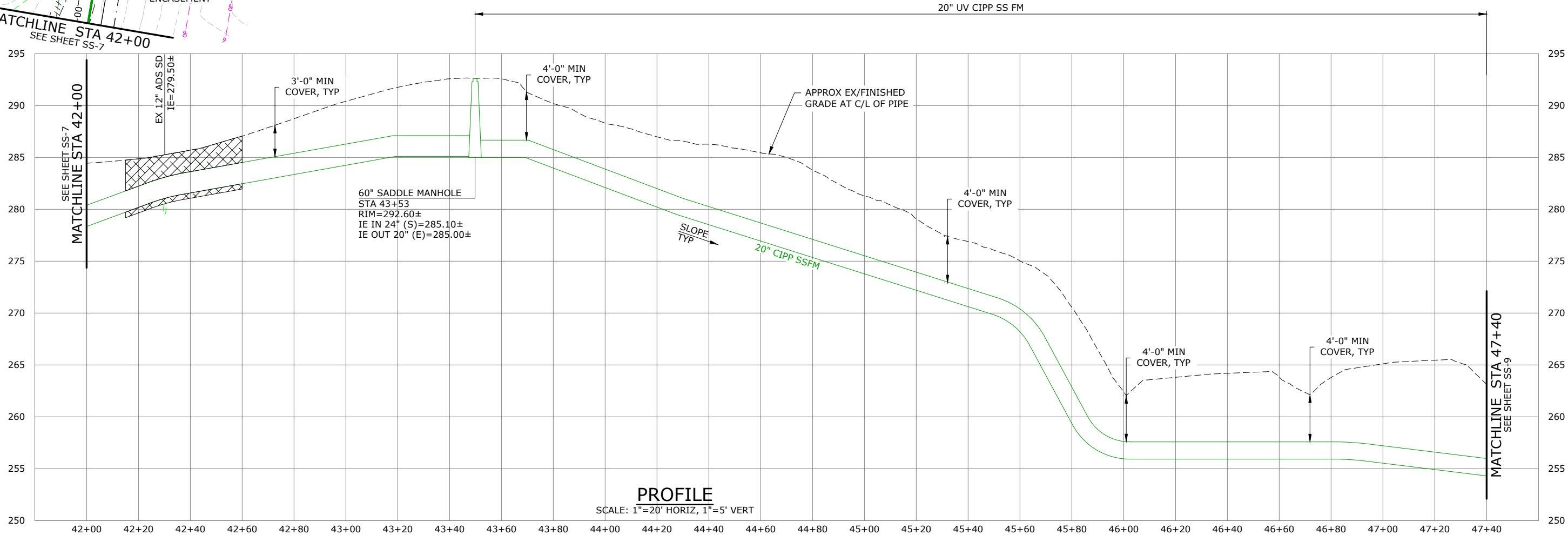
\\ad.msa-ep.com\Everett\evt_projects\20\2815 - Kitsap County Bangor_keyport Fm Replacement\CAD\Sheets\20-2815-WA-CIVIL1.dwg SS-8 2/3/2022 1:37 PM MATT.ESSTEP 23.0s (LMS Tech)



- NOTES:
1. THE CONTRACTOR SHALL AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY.
 2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.
 3. TEMPORARY BYPASS SSFM FOR CIPP, PER SPEC 01 59 00.

CONSTRUCTION NOTES:

- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
- 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
- 4 PROTECT EXISTING STORM DRAIN AND MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" FROM STORM DRAIN TO SSFM MEASURED EDGE-TO-EDGE, SEE DET 1, SHT SS-62 FOR PIPE SUPPORT
- 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
- 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
- 15 UV CIPP EXIST 20" DI SS FM PER SPECS, SEE NOTE 3, THIS SHT



NO.	DATE	BY	REVISION

NOTICE

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1/2

1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH

DESIGNED

BAW

DRAWN

EKS

CHECKED



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 42+00
TO STA 47+40
SCHEDULE A

PROJECT NO.: 20-2815

SCALE: AS SHOWN

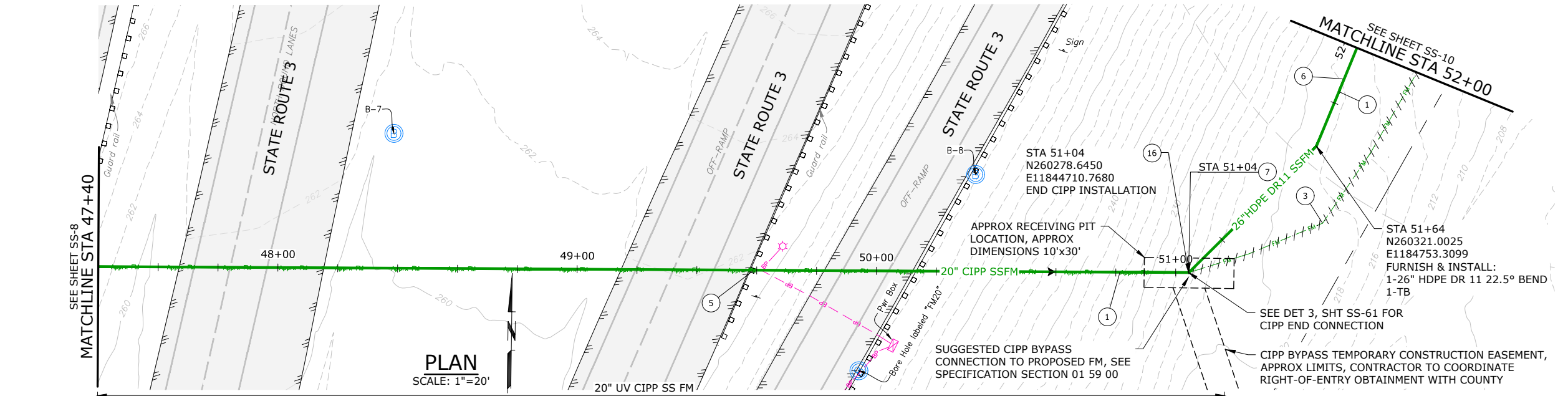
DATE: FEBRUARY 2022

SHEET

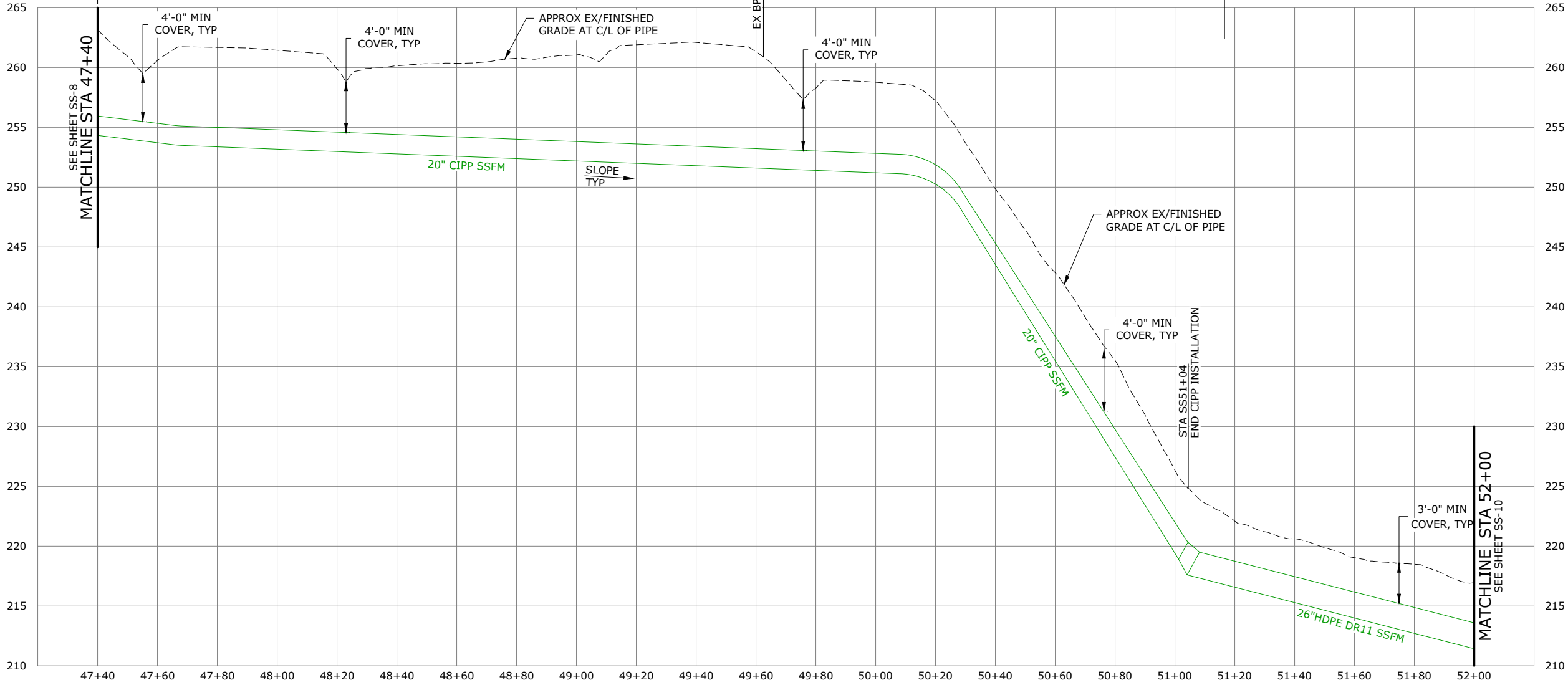
SS-8

22 of 138

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PLAN
SCALE: 1"=20'



PROFILE

SCALE: 1"=20' HORIZ, 1"=5' VERT

NOTES:

1. THE CONTRACTOR SHALL AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE HOMEOWNER AND THE UTILITY.

2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.

CONSTRUCTION NOTES:

- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
- 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
- 5 PROTECT EXIST UNDERGROUND POWER AND TELECOMMUNICATION, DURING CONSTRUCTION
- 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
- 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
- 16 TRANSITION FROM 20" DI TO 26" HDPE DR 11 PIPE, SEE DET 4, SHT SS-60

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
DRAWN
EKS
CHECKED



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 47+40
TO STA 52+00
SCHEDULE A

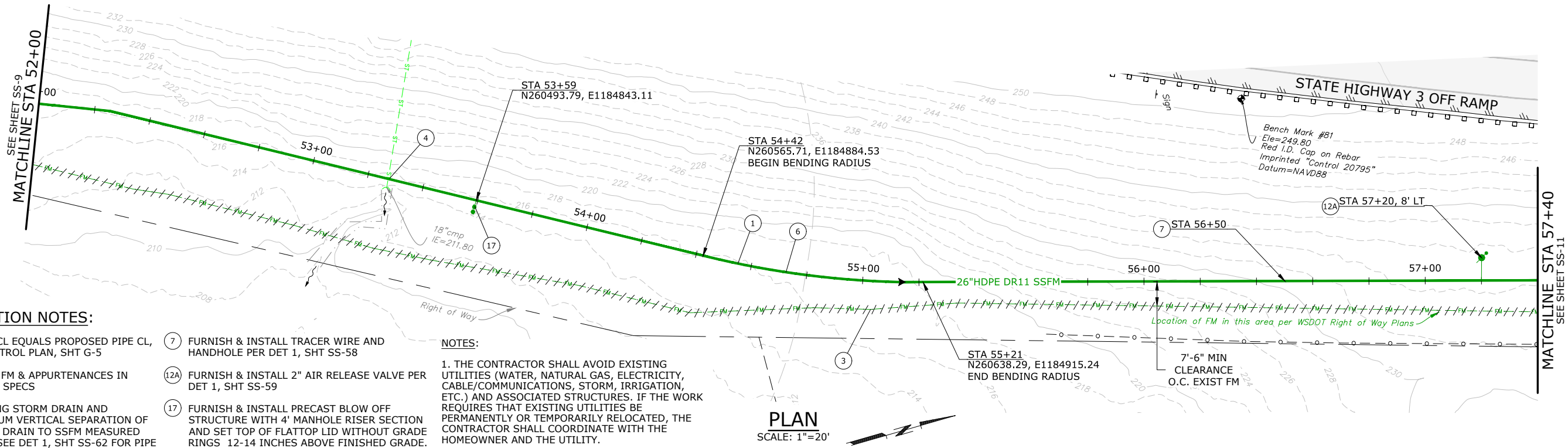
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET

SS-9

23 of 138

\\ad.msa-ep.com\Everett\evt_projects\20\2815 - Kitsap County Bangor_keyport Fm Replacement\CAD\Sheets\20-2815-WA-CIVIL2.dwg SS-10 2/3/2022 12:49 PM MATT.ESSTEP 23:05 (LMS Tech)

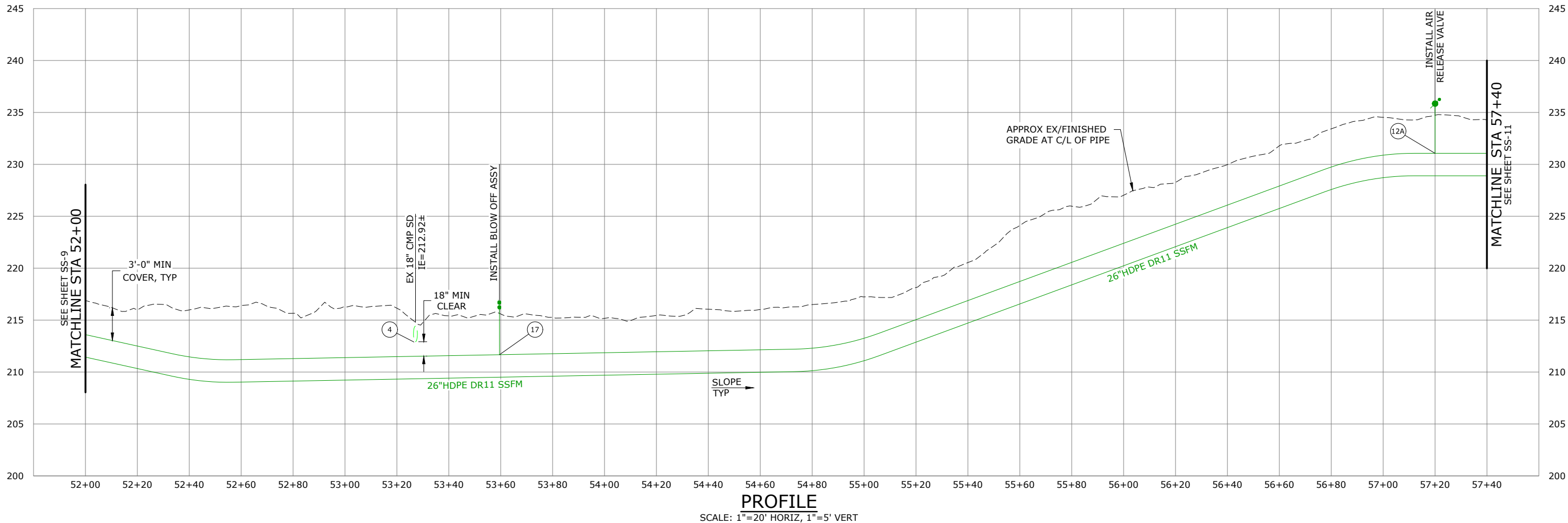


CONSTRUCTION NOTES:

1. CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
2. ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
3. PROTECT EXISTING STORM DRAIN AND MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" FROM STORM DRAIN TO SSFM MEASURED EDGE-TO-EDGE, SEE DET 1, SHT SS-62 FOR PIPE SUPPORT
4. SS FM TRENCH SECTION PER DET 3, SHT SS-58
5. FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
6. FURNISH & INSTALL 2" AIR RELEASE VALVE PER DET 1, SHT SS-59
7. FURNISH & INSTALL PRECAST BLOW OFF STRUCTURE WITH 4' MANHOLE RISER SECTION AND SET TOP OF FLATTOP LID WITHOUT GRADE RINGS 12-14 INCHES ABOVE FINISHED GRADE. SET VALVE BOX AND CONCRETE COLLAR 3 - 6 INCHES ABOVE FINISHED GRADE.

NOTES:

1. THE CONTRACTOR SHALL AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE HOMEOWNER AND THE UTILITY.
2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.



NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
DRAWN
EKS
CHECKED

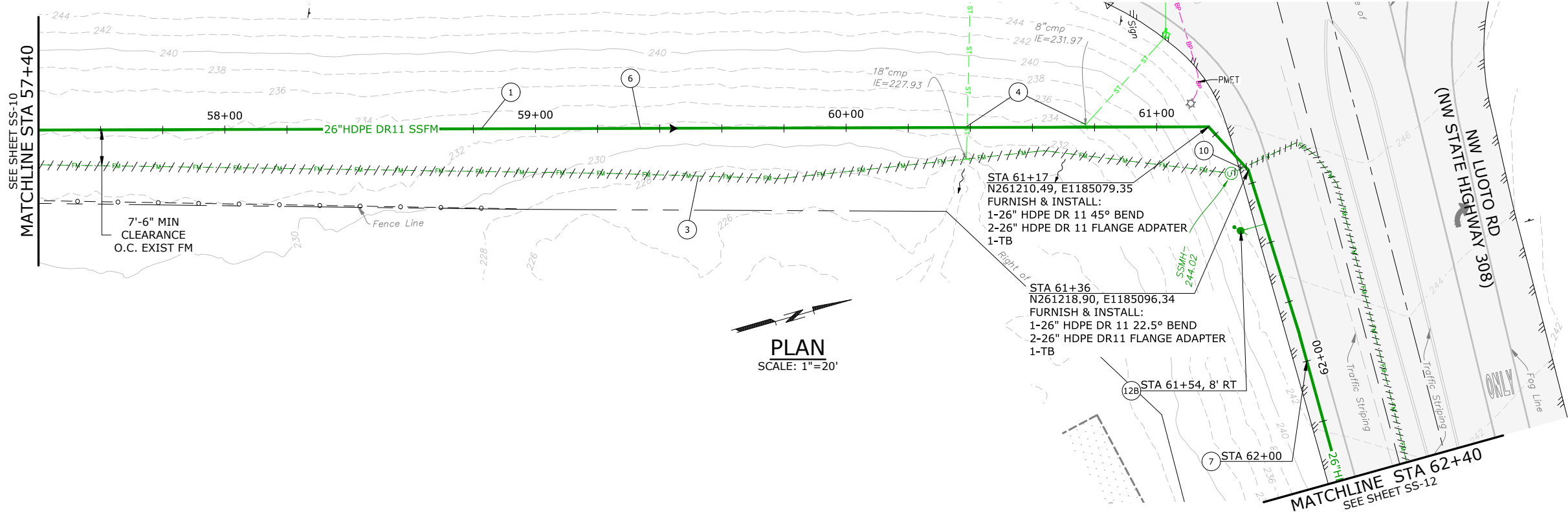


BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 52+00
TO STA 57+40
SCHEDULE A

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

\\ad.msa-ep.com\Everett\evt_projects\20\2815 - Kitsap County Bangor_keyport Fm Replacement\CAD\Sheets\20-2815-WA-CIVIL2.dwg SS-11 2/3/2022 12:49 PM MATT. ESTEP 23.0s (LMS Tech)



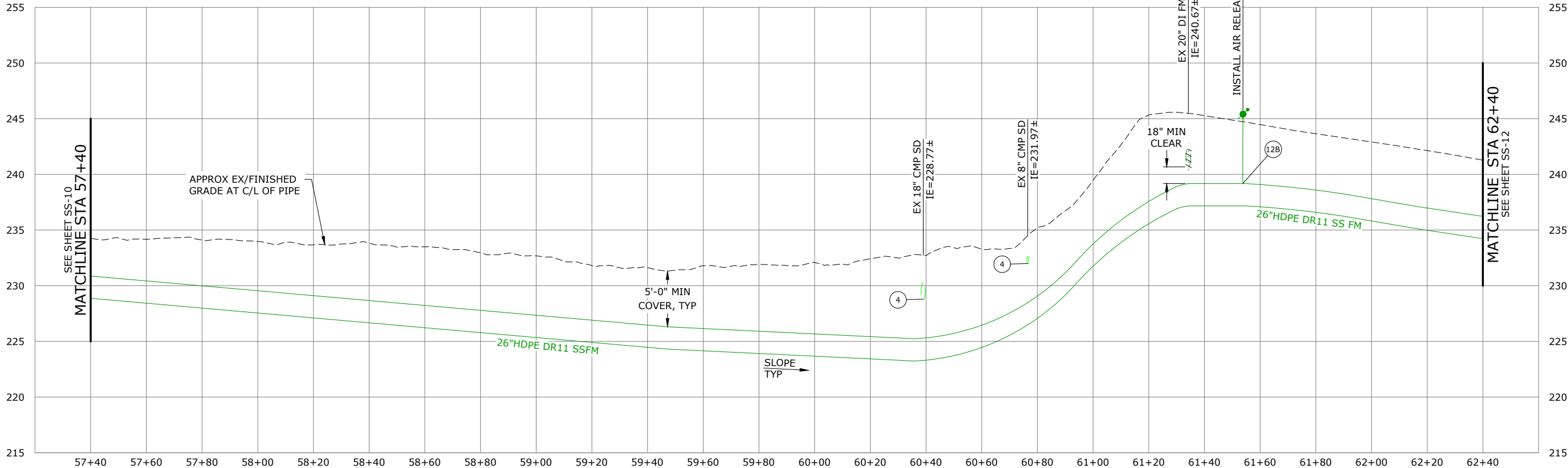
PLAN
SCALE: 1"=20'

NOTES:

1. THE CONTRACTOR SHALL AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE HOMEOWNER AND THE UTILITY.
2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.

CONSTRUCTION NOTES:

- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
- 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
- 4 PROTECT EXISTING STORM DRAIN AND MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" FROM STORM DRAIN TO SSFM MEASURED EDGE-TO-EDGE, SEE DET 1, SHT SS-62 FOR PIPE SUPPORT
- 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
- 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
- 10 PROTECT EXIST SSFM, MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" MEASURED EDGE-TO-EDGE. SEE SPECS FOR ADDITIONAL REQUIREMENTS
- 12B FURNISH & INSTALL 3" AIR RELEASE VALVE PER DET 2, SHT SS-59



PROFILE
SCALE: 1"=20' HORIZ, 1"=5' VERT

NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
DRAWN
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BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 57+40
TO STA 62+40
SCHEDULE A

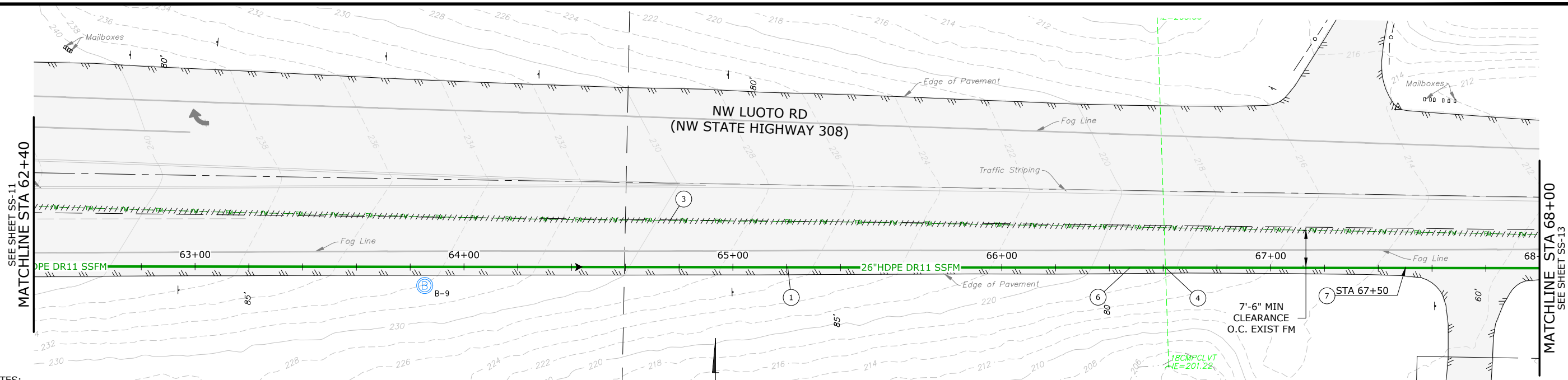
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET

SS-11

25 of 138

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NOTES:

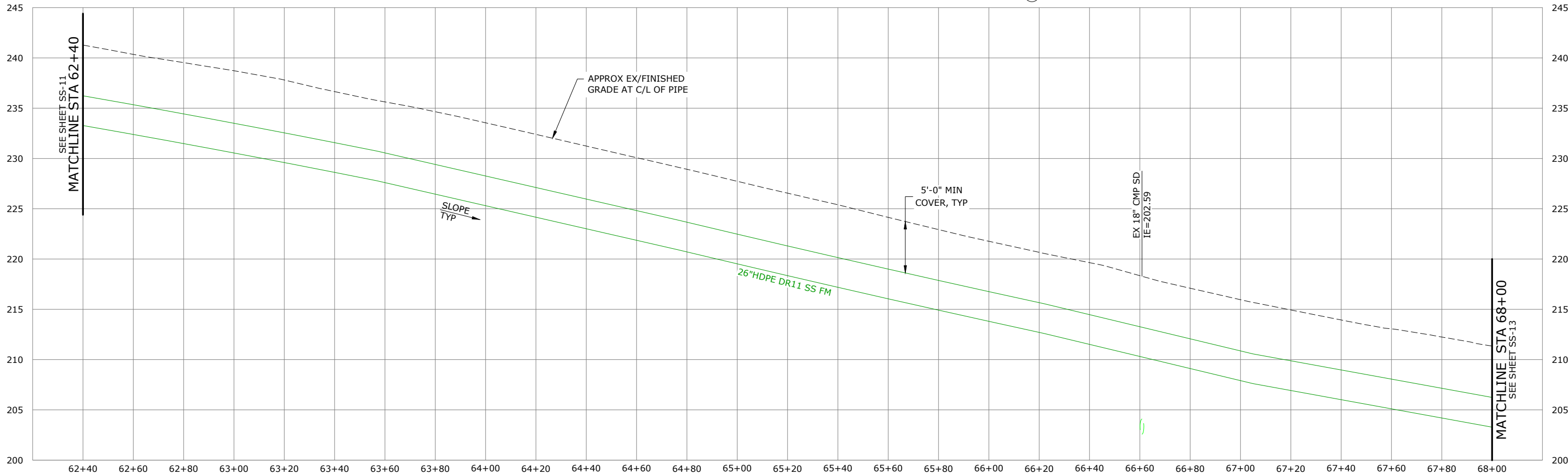
1. THE CONTRACTOR SHALL AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE HOMEOWNER AND THE UTILITY

2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.

PLAN
SCALE: 1"=20'

CONSTRUCTION NOTES:

- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
- 2 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
- 3 PROTECT EXISTING STORM DRAIN AND MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" FROM STORM DRAIN TO SSFM MEASURED EDGE-TO-EDGE, SEE DET 1, SHT SS-62 FOR PIPE SUPPORT
- 4 SS FM TRENCH SECTION PER DET 3, SHT SS-58
- 5 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58



PROFILE

SCALE: 1"=20' HORIZ, 1"=5' VERT

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
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EKS
CHECKED



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 62+40
TO STA 68+00
SCHEDULE A

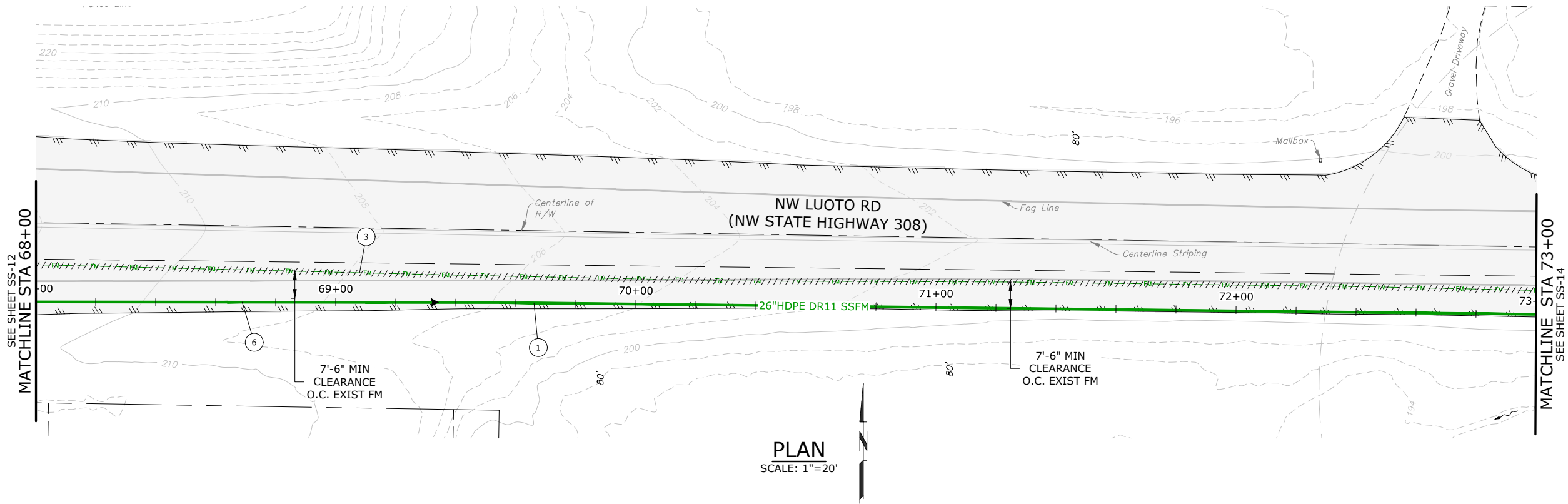
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET

SS-12

26 of 138

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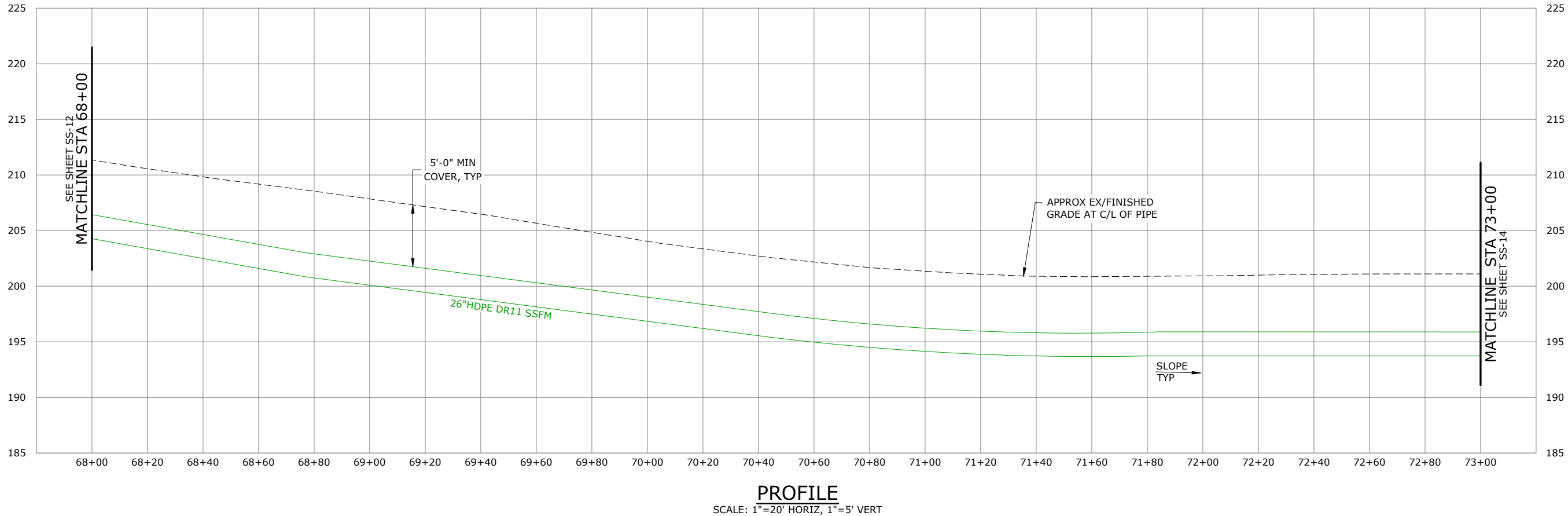


NOTES:

1. THE CONTRACTOR SHALL AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE HOMEOWNER AND THE UTILITY
2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.

CONSTRUCTION NOTES:

- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
- 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
- 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58



PROFILE
SCALE: 1"=20' HORIZ, 1"=5' VERT

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
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CHECKED



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

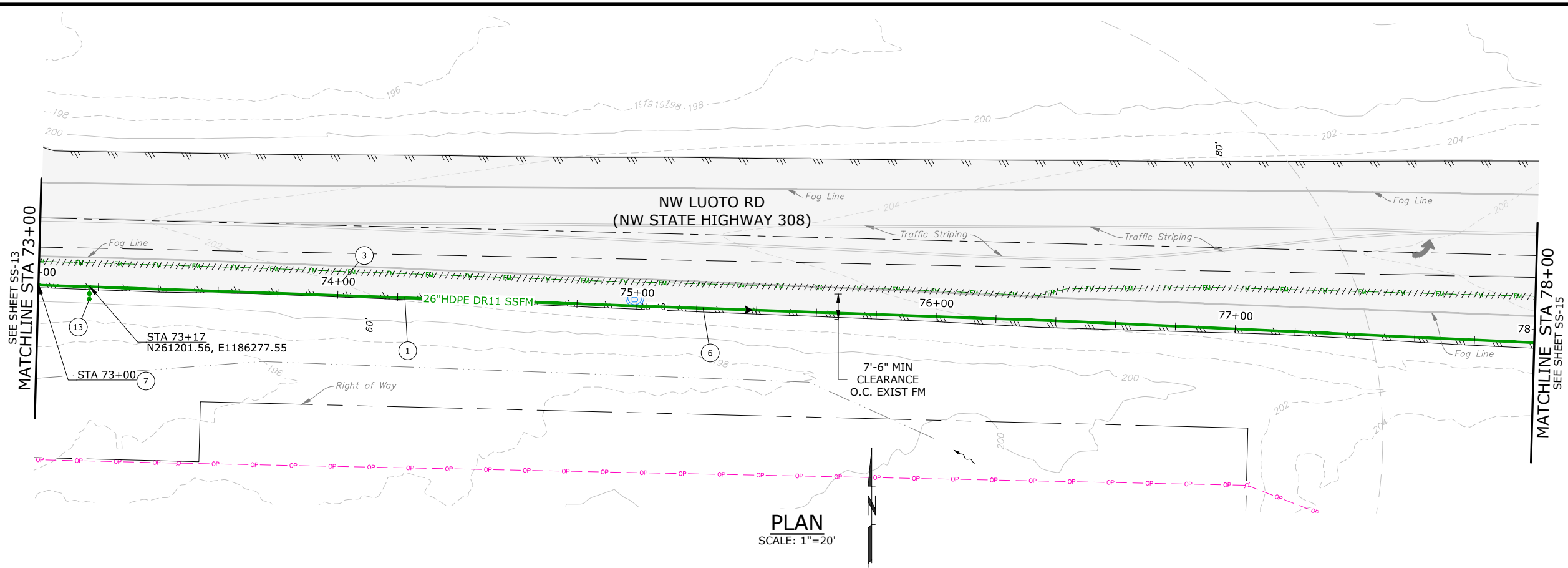
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PLAN & PROFILE STA 68+00
TO STA 73+00
SCHEDULE A

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET
SS-13

27 of 138

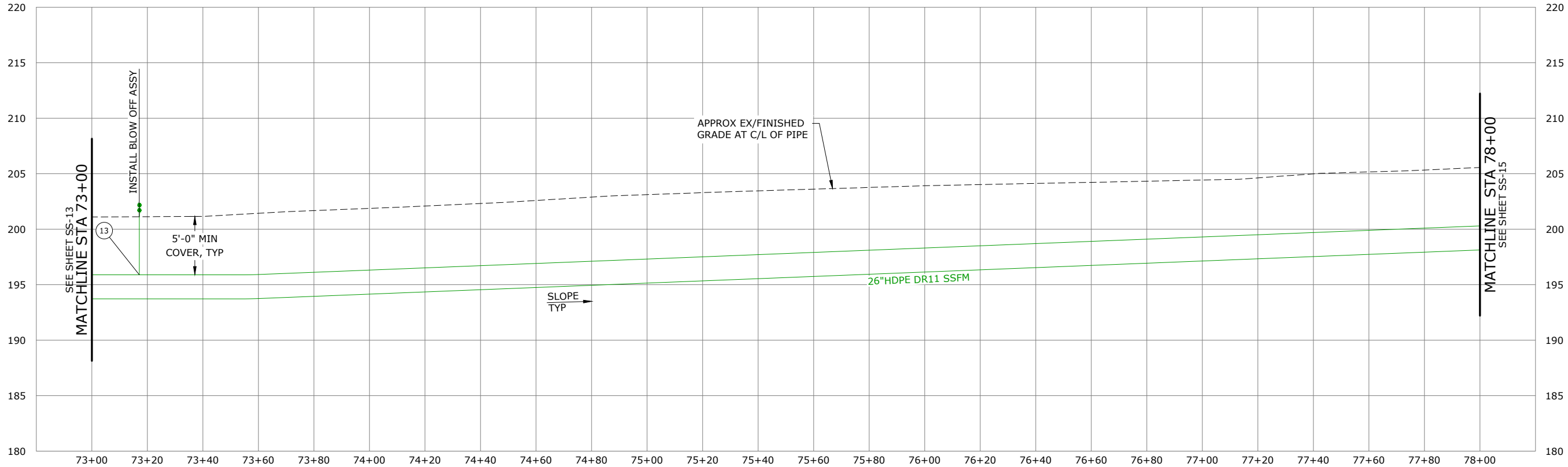
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- NOTES:
1. THE CONTRACTOR SHALL AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE HOMEOWNER AND THE UTILITY
 2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.

CONSTRUCTION NOTES:

- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
- 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
- 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
- 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
- 13 FURNISH & INSTALL BLOW OFF ASSY PER DET 2, SHT SS-58



PROFILE
SCALE: 1"=20' HORIZ, 1"=5' VERT

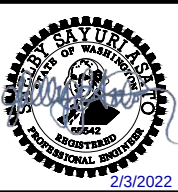
NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
DRAWN
EKS
CHECKED



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

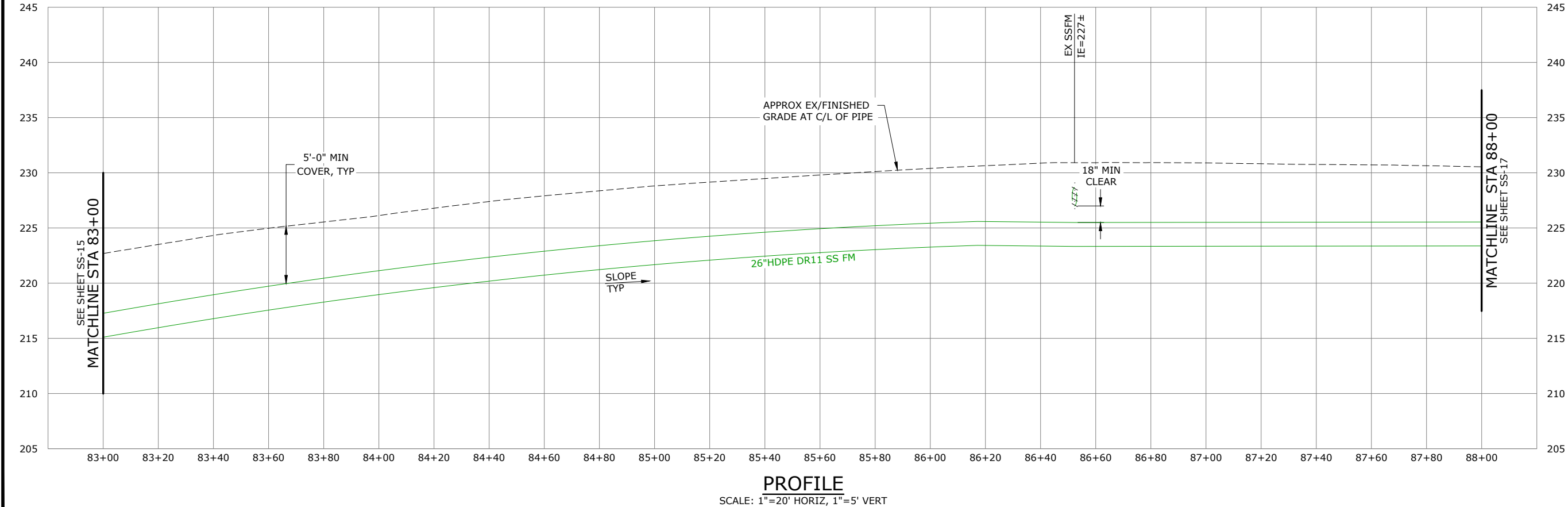
FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 73+00
TO STA 78+00
SCHEDULE A

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET

SS-14

28 of 138



2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.

- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
- 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
- 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
- 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
- 10 PROTECT EXIST SSFM, MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" MEASURED EDGE-TO-EDGE. SEE SPECS FOR ADDITIONAL REQUIREMENTS

NOTICE

0 $\frac{1}{2}$ 1

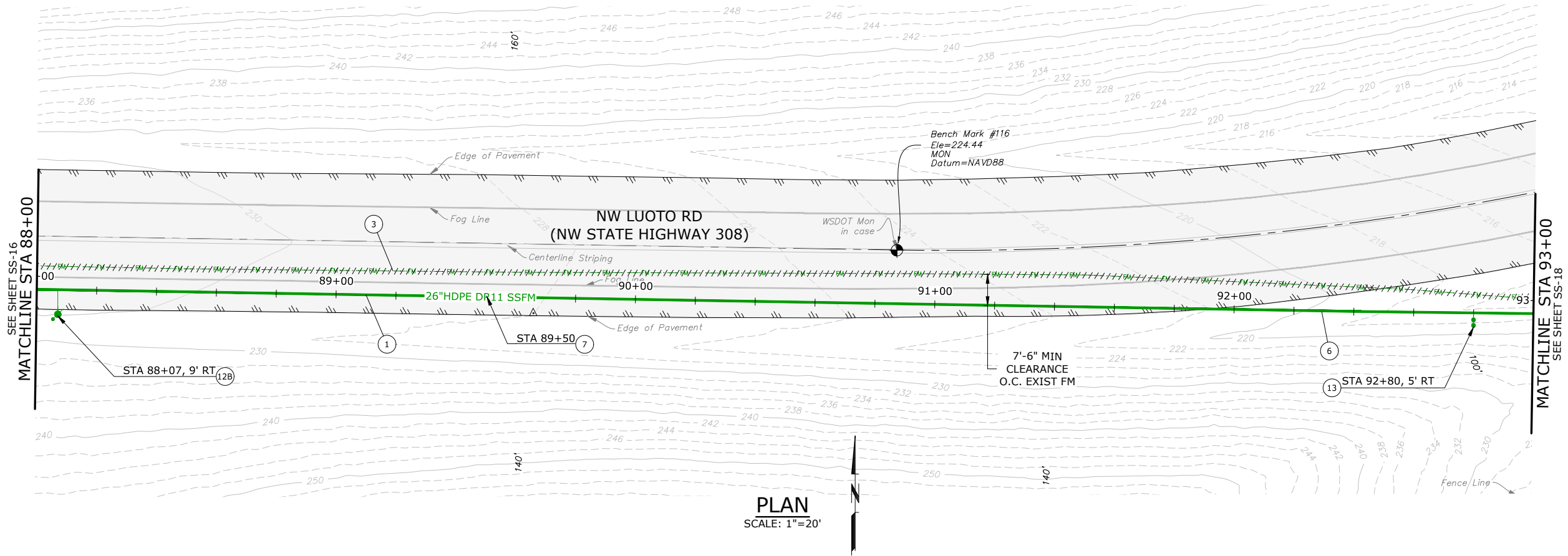


IF THIS BAR DOES
NOT MEASURE 1"
THEN DRAWING IS
NOT TO SCALE



PROJECT NO.:	20-2815	SCALE:	AS SHOWN	DATE:	FEBRUARY 2022
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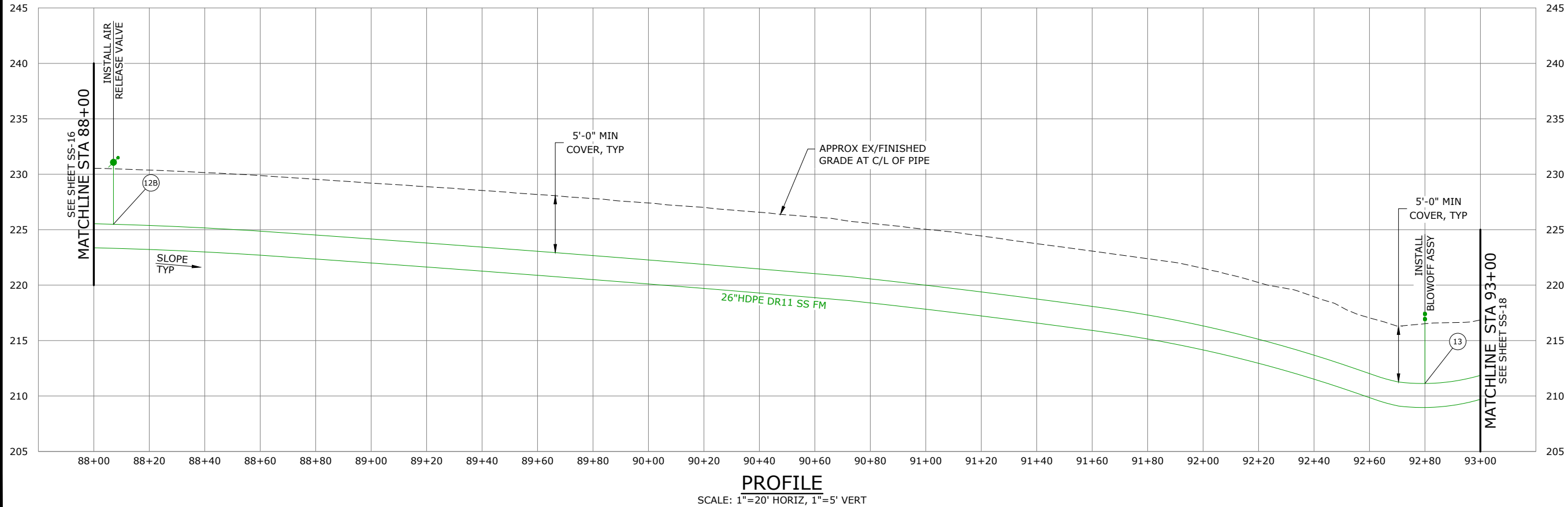
\\ad.msa-ep.com\Everett\evt_projects\20\2815 - Kitsap County Bangor_keyport Fm Replacement\CAD\Sheets\20-2815-WA-CIVIL2.dwg SS-17 2/3/2022 12:49 PM MATT. ESTEP 23.0s (LMS Tech)



- NOTES:**
1. THE CONTRACTOR SHALL AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE HOMEOWNER AND THE UTILITY
 2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.

CONSTRUCTION NOTES:

- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
- 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
- 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
- 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
- 12B FURNISH & INSTALL 3" AIR RELEASE VALVE PER DET 2, SHT SS-59
- 13 FURNISH & INSTALL BLOW OFF ASSY PER DET 2, SHT SS-58



NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
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CHECKED



**BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT**

**FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 88+00
TO STA 93+00S
SCHEDULE A**

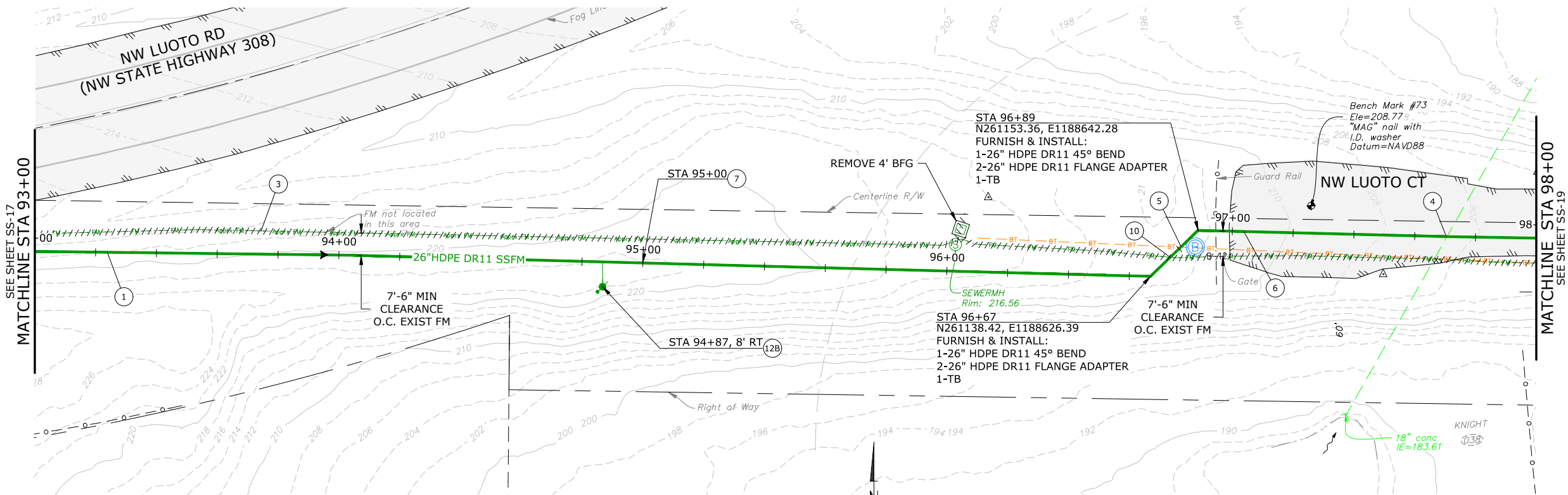
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SHEET

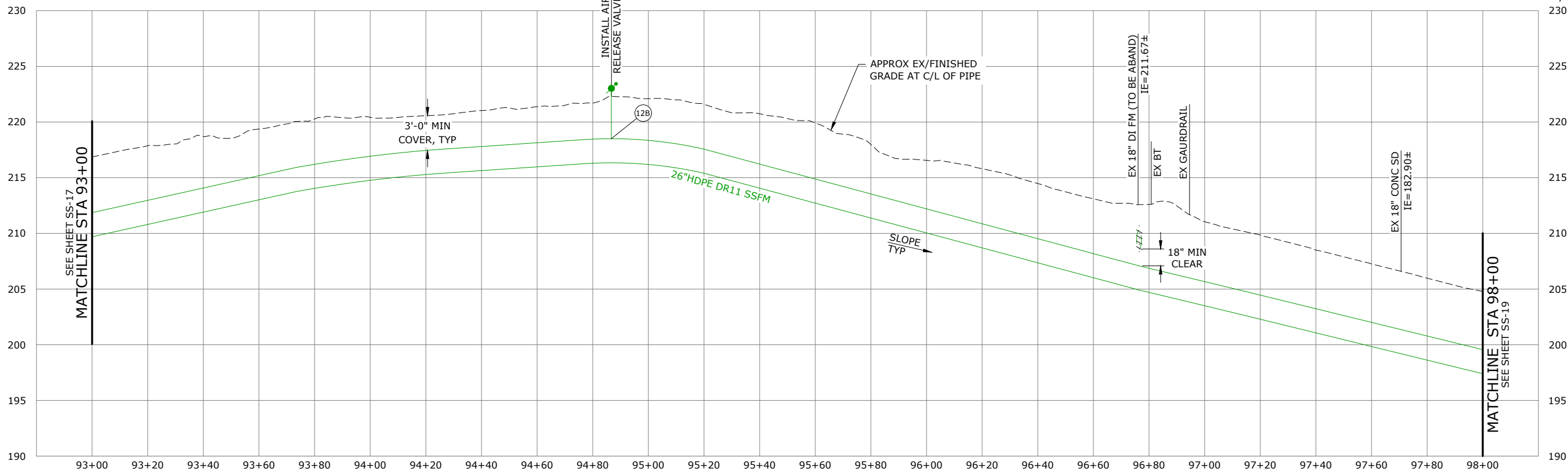
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31 of 138

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PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ, 1"=5' VERT

NOTES:

1. THE CONTRACTOR SHALL AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE HOMEOWNER AND THE UTILITY

2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.

CONSTRUCTION NOTES:

- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
- 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
- 4 PROTECT EXISTING STORM DRAIN AND MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" FROM STORM DRAIN TO SSFM MEASURED EDGE-TO-EDGE, SEE DET 1, SHT SS-62 FOR PIPE SUPPORT
- 5 PROTECT EXIST UNDERGROUND POWER AND TELECOMMUNICATION, DURING CONSTRUCTION
- 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
- 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
- 10 PROTECT EXIST SSFM, MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" MEASURED EDGE-TO-EDGE. SEE SPECS FOR ADDITIONAL REQUIREMENTS
- 12B FURNISH & INSTALL 3" AIR RELEASE VALVE PER DET 2, SHT SS-59

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
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EKS
CHECKED



murraysmith



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 93+00
TO STA 98+00
SCHEDULE A

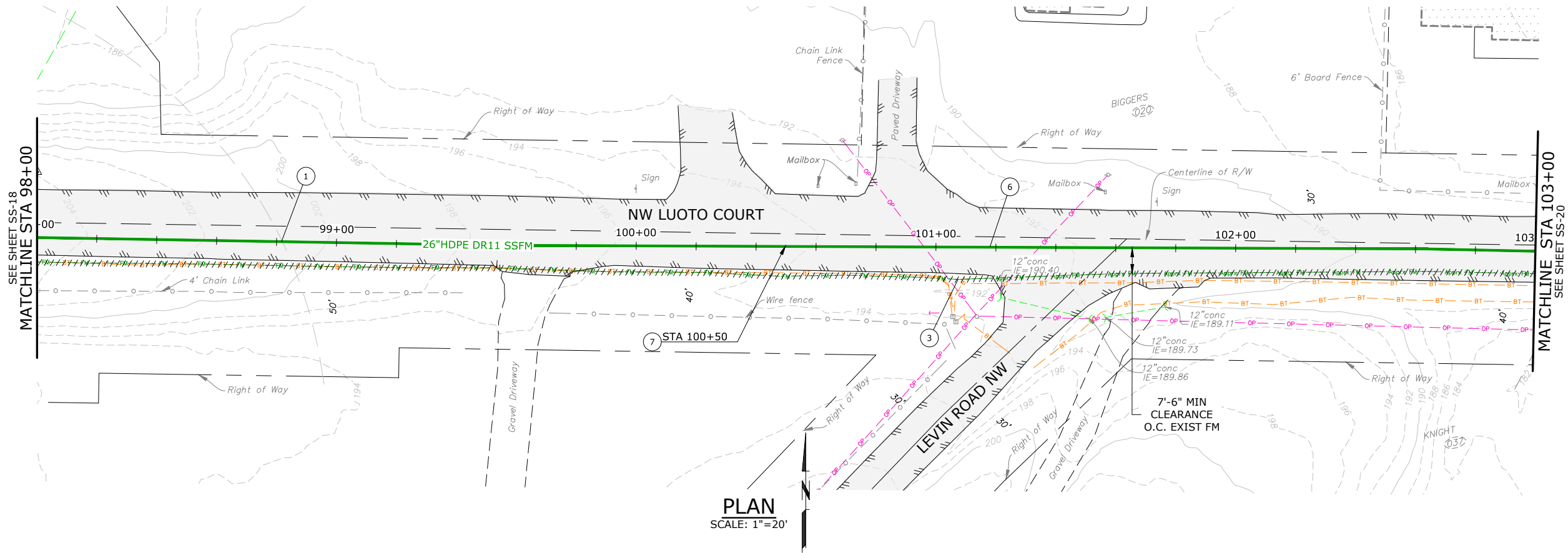
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SS-18

32 of 138

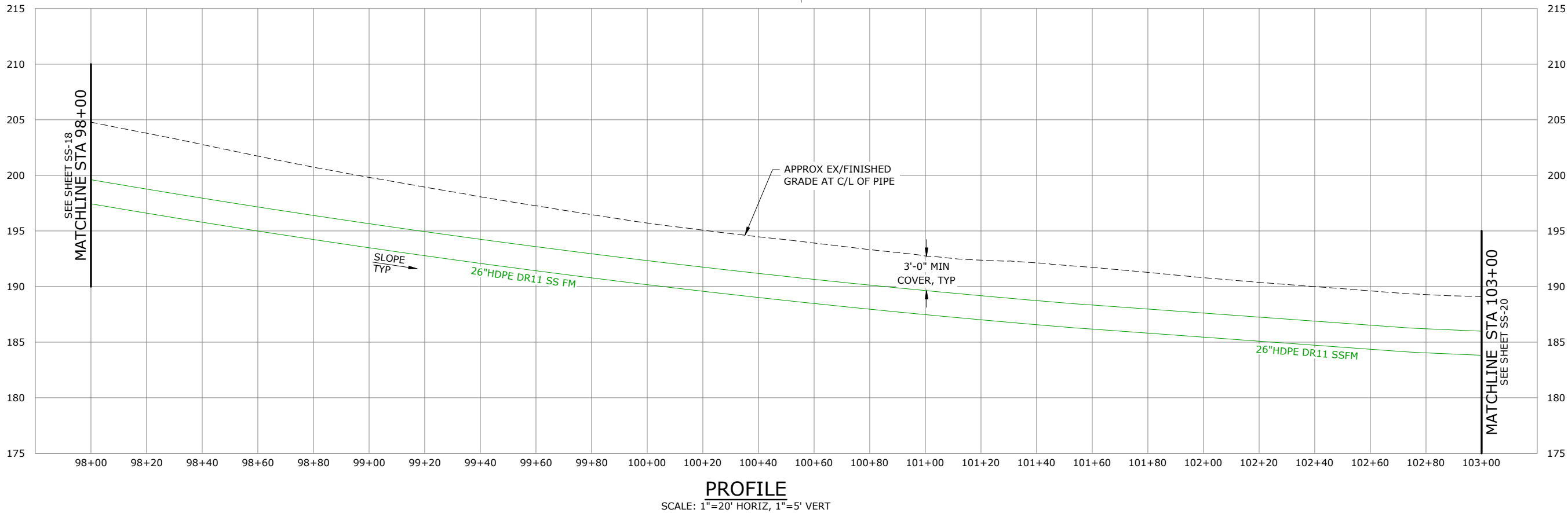
\\ad.msa-ep.com\Everett\evt_projects\20\2815 - Kitsap County Bangor_keyport Fm Replacement\CAD\Sheets\20-2815-WA-CIVIL3.dwg SS-19 2/3/2022 12:55 PM MATT. ESTEP 23.0s (LMS Tech)



- NOTES:
1. THE CONTRACTOR SHALL AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE HOMEOWNER AND THE UTILITY.
 2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.

CONSTRUCTION NOTES:

- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
- 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
- 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
- 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58



NO.	DATE	BY	REVISION

NOTICE
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IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
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CHECKED



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 98+00
TO STA 103+00
SCHEDULE A

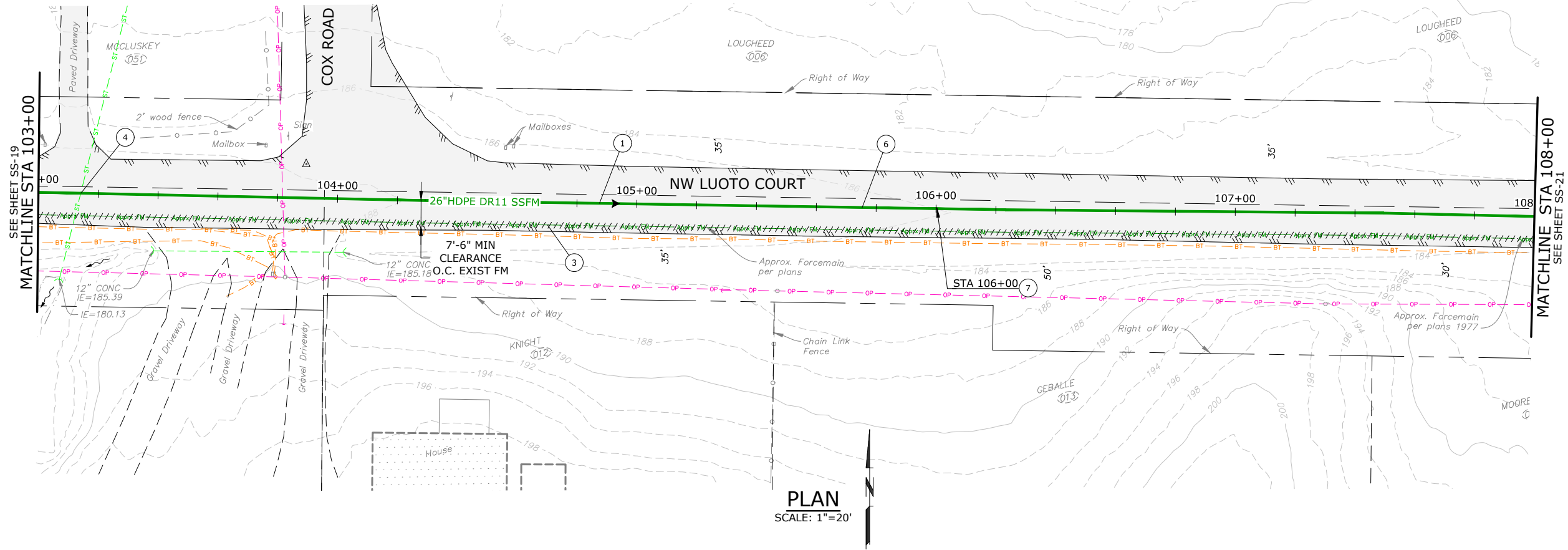
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SS-19

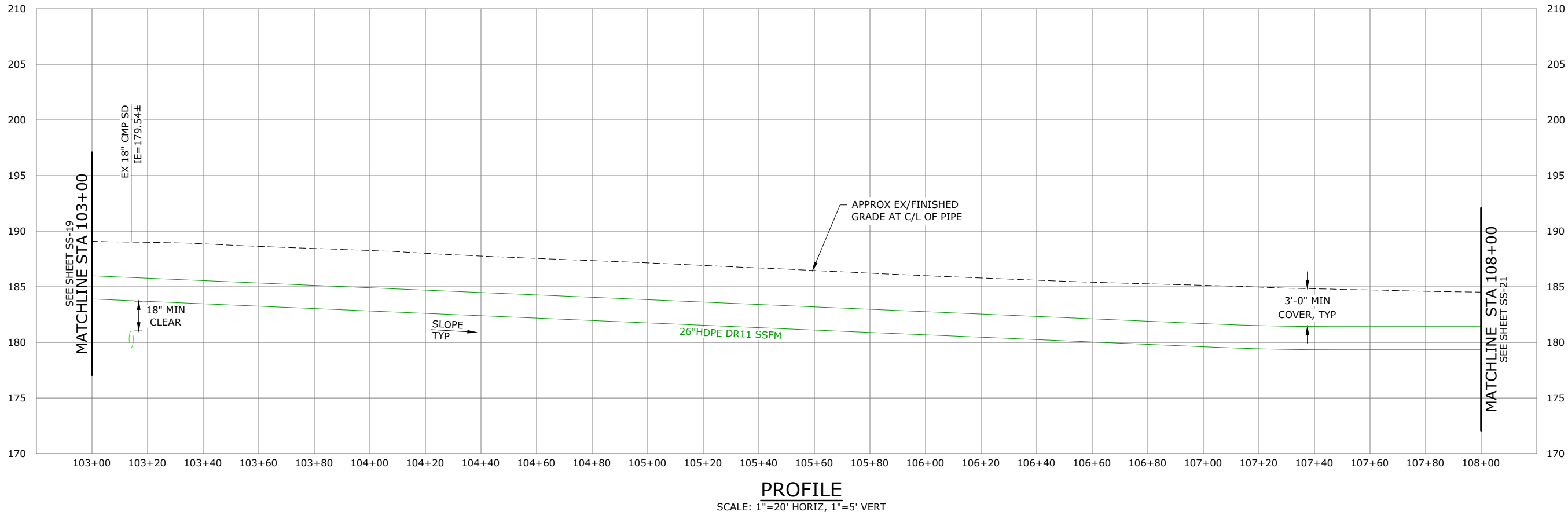
33 of 138

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- NOTES:
1. THE CONTRACTOR SHALL AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE HOMEOWNER AND THE UTILITY
 2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.

- CONSTRUCTION NOTES:
1. CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
 3. ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
 4. PROTECT EXISTING STORM DRAIN AND MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" FROM STORM DRAIN TO SSFM MEASURED EDGE-TO-EDGE, SEE DET 1, SHT SS-62 FOR PIPE SUPPORT
 6. SS FM TRENCH SECTION PER DET 3, SHT SS-58
 7. FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58



NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
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CHECKED



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 103+00
TO STA 108+00
SCHEDULE A

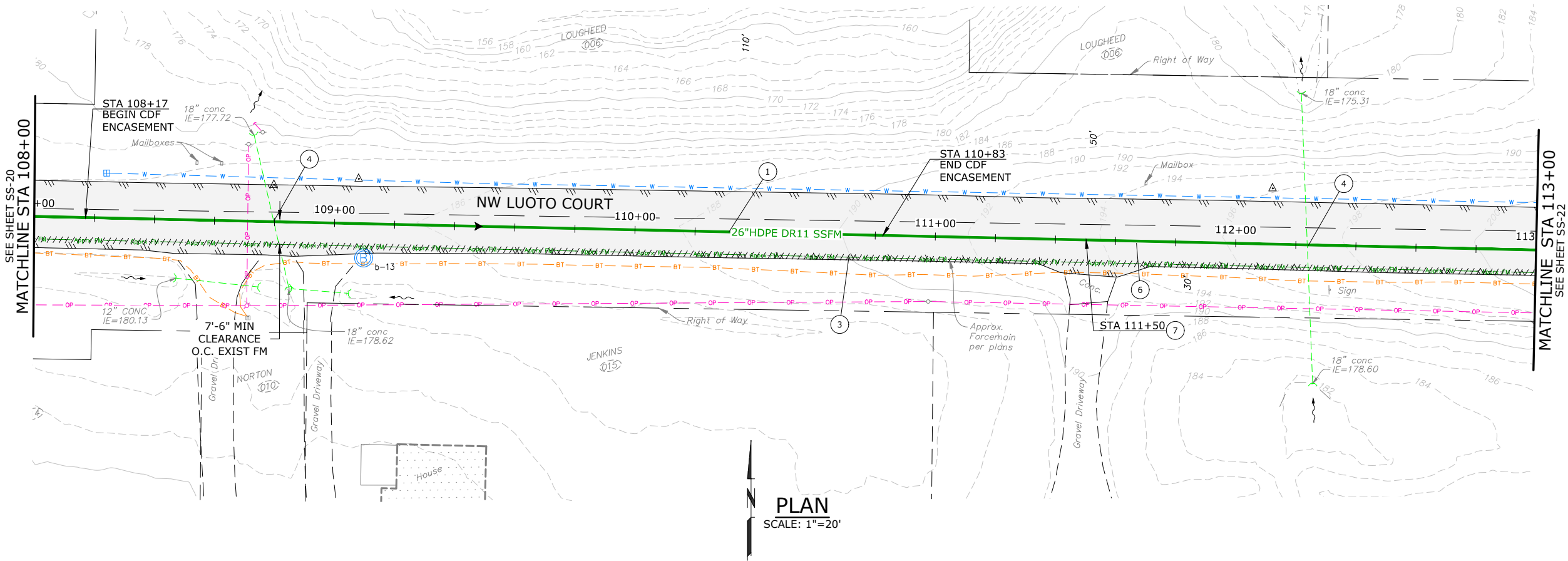
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

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34 of 138

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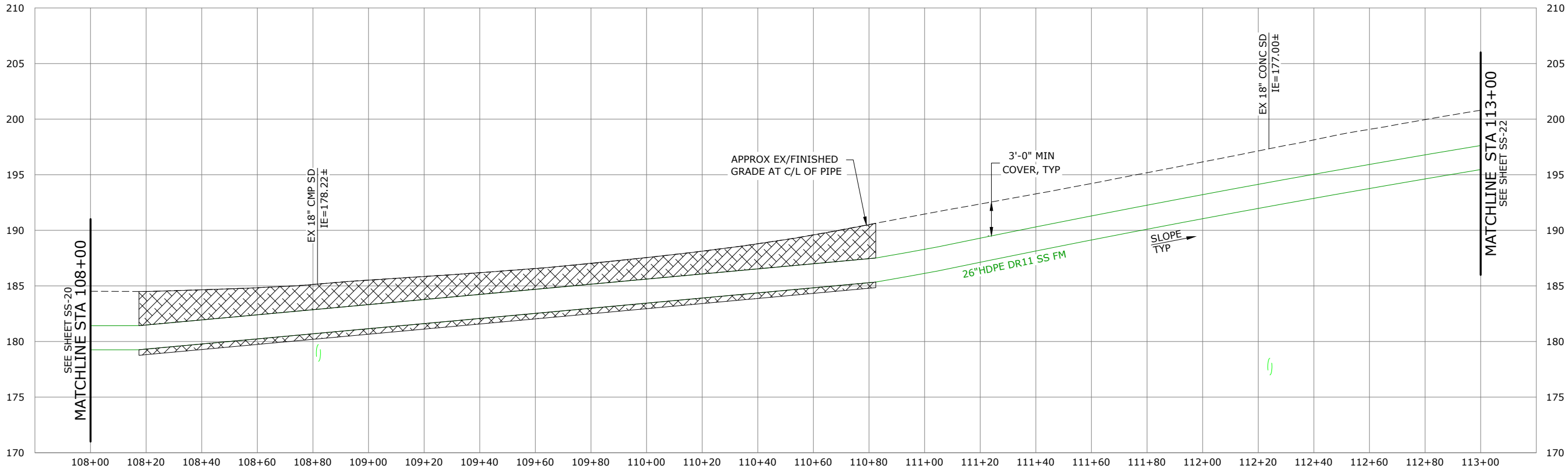


NOTES:

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2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.
3. SEE SPEC SECTION 31 23 33 FOR CDF REQUIREMENTS.

CONSTRUCTION NOTES:

- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
- 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
- 4 PROTECT EXISTING STORM DRAIN AND MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" FROM STORM DRAIN TO SSFM MEASURED EDGE-TO-EDGE, SEE DET 1, SHT SS-62 FOR PIPE SUPPORT
- 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
- 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58



PROFILE

SCALE: 1"=20' HORIZ, 1"=5' VERT

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
DRAWN
EKS
CHECKED



murraysmith



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 108+00
TO STA 113+00
SCHEDULE A

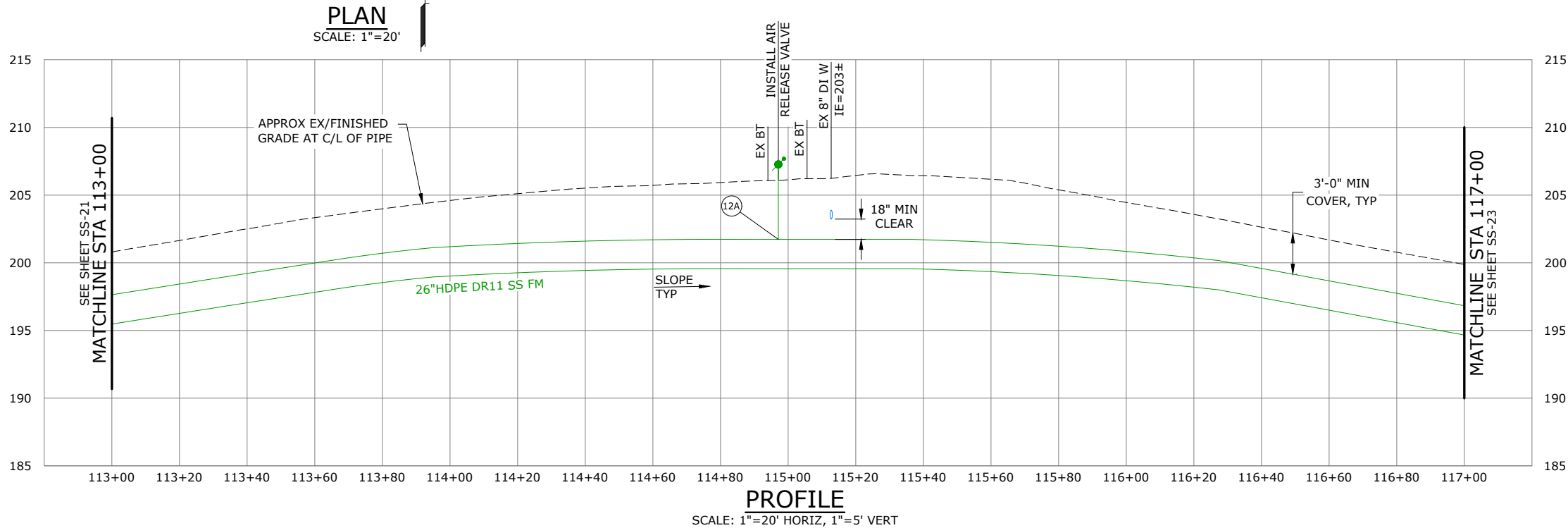
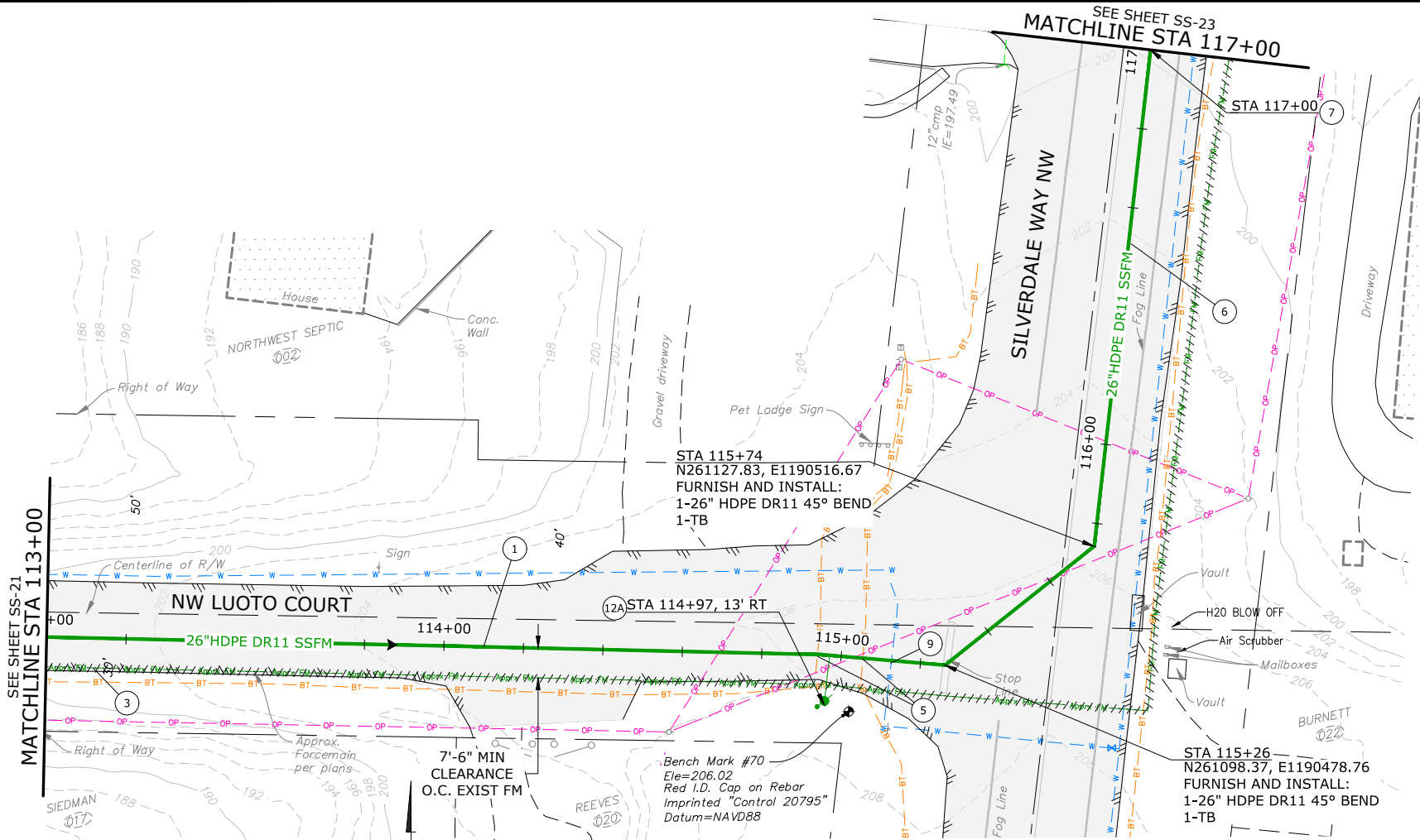
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35 of 138

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NOTES:

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CONSTRUCTION NOTES:

- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
- 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
- 5 PROTECT EXIST UNDERGROUND POWER AND TELECOMMUNICATION, DURING CONSTRUCTION
- 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
- 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
- 9 PROTECT EXISTING WATER MAIN AND MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" FROM WATER MAIN MEASURED EDGE-TO-EDGE
- 12A FURNISH & INSTALL 2" AIR RELEASE VALVE PER DET 1, SHT SS-59

NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
DRAWN
EKS
CHECKED



murraysmith



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 113+00
TO STA 117+00
SCHEDULE A

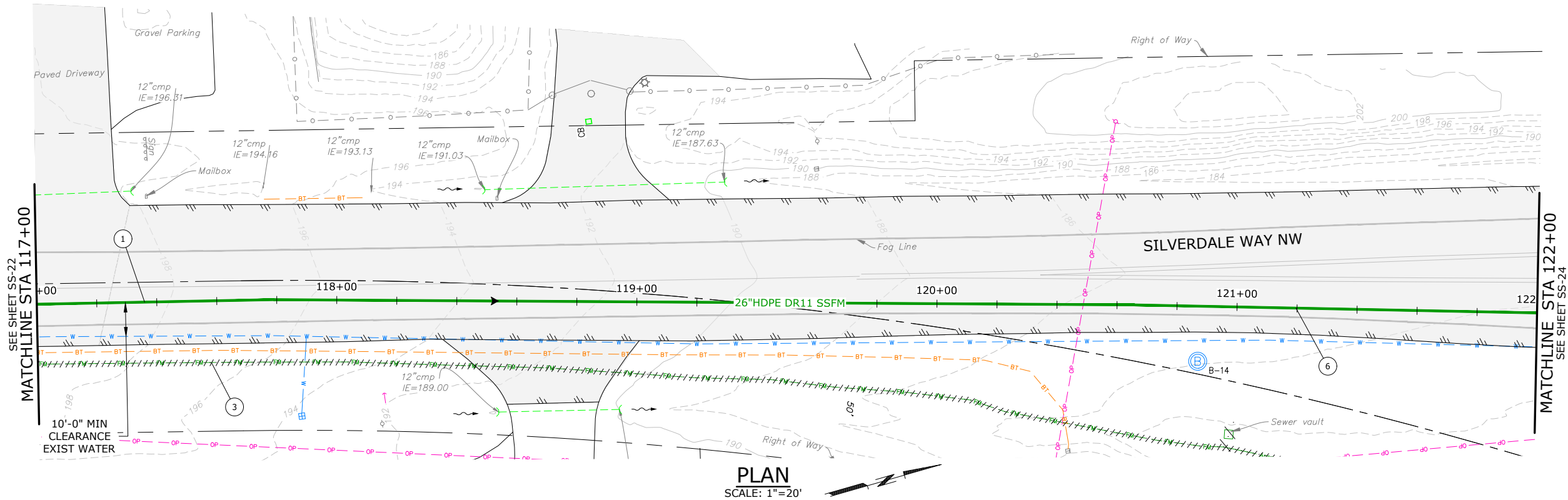
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SS-22

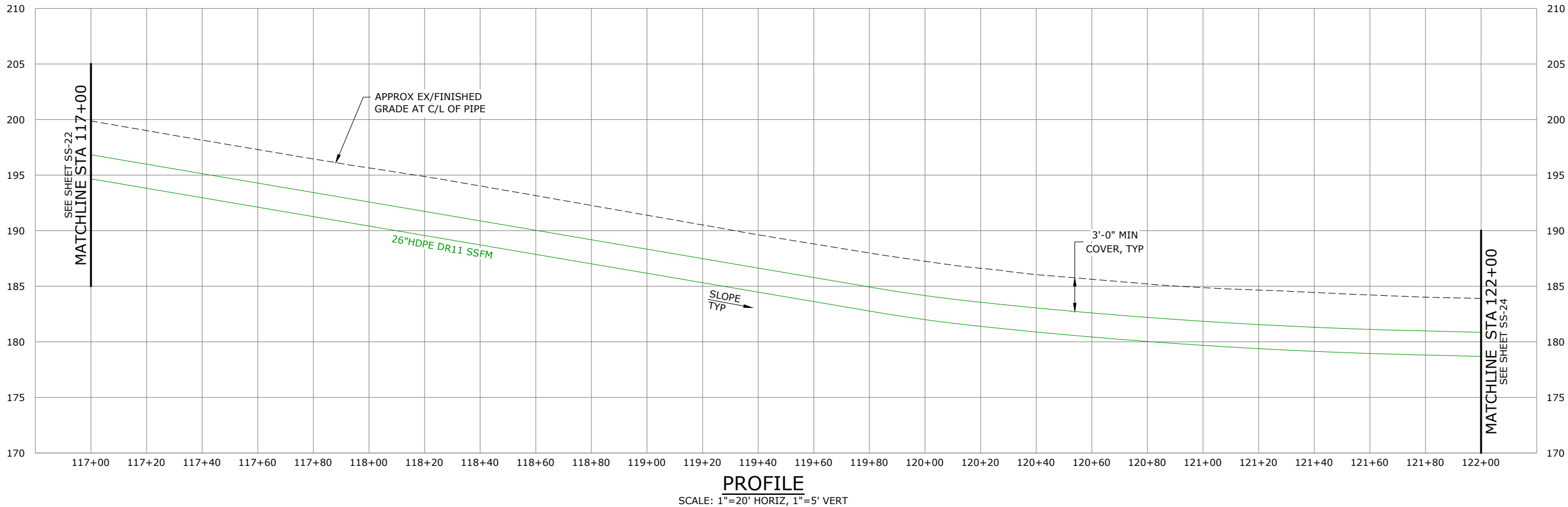
36 of 138

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- CONSTRUCTION NOTES:
- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
 - 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
 - 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58



NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

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TMH
DESIGNED
BAW
DRAWN
EKS
CHECKED



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 117+00
TO STA 122+00
SCHEDULE A

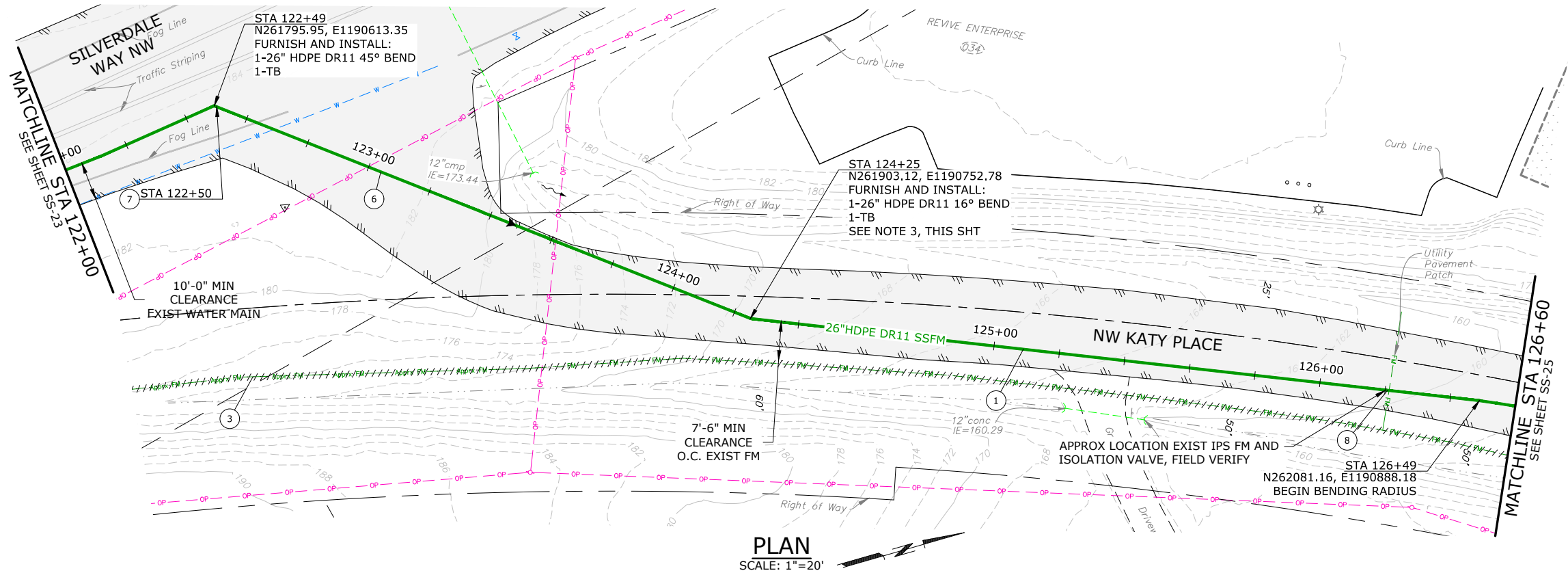
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET

SS-23

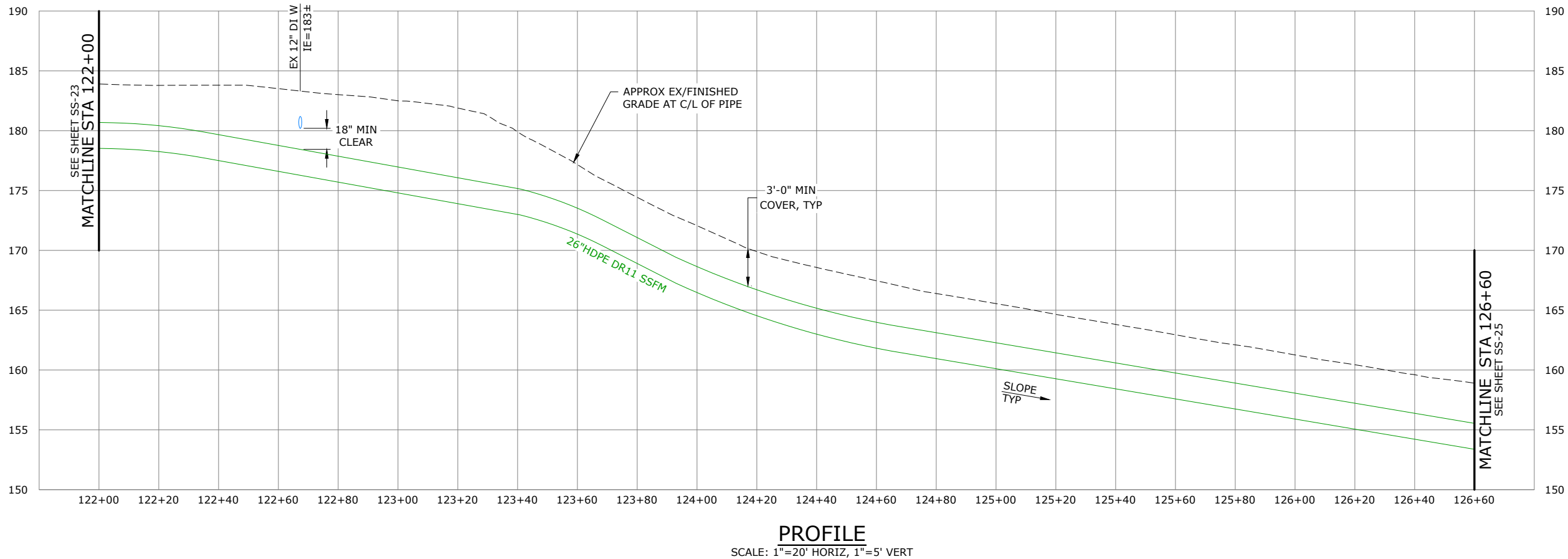
37 of 138

\\ad.msa-ep.com\Everett\evt_projects\20\2815 - Kitsap County Bangor_keyport Fm Replacement\CAD\Sheets\20-2815-WA-CIVIL3.dwg SS-24 2/3/2022 12:55 PM MATT. ESTEP 23.0s (LMS Tech)



- NOTES:
1. THE CONTRACTOR SHALL AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE HOMEOWNER AND THE UTILITY
 2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.
 3. CONTRACTOR TO COORDINATE WITH FITTING FABRICATOR TO ACHIEVE NON-STANDARD HDPE FITTING ANGLES.

- CONSTRUCTION NOTES:
- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
 - 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
 - 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
 - 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
 - 8 CONNECT EXIST IPS PER DET 1, SHT SS-57



NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
DRAWN
EKS
CHECKED



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 122+00
TO STA 126+60
SCHEDULE A

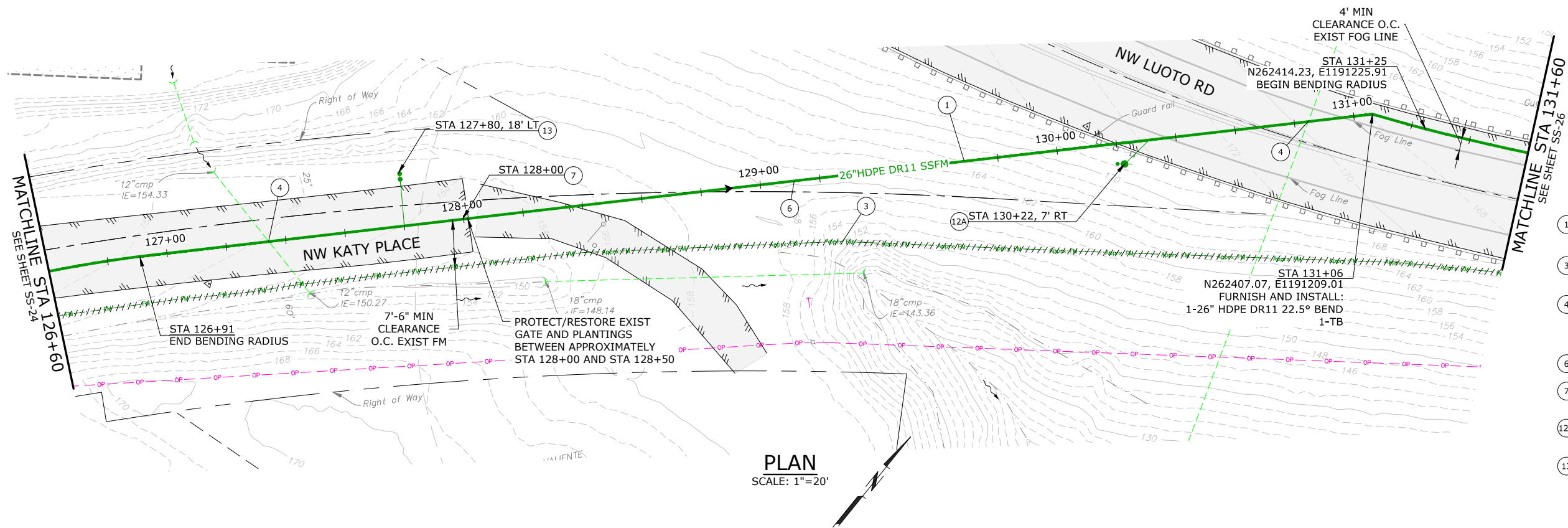
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET

SS-24

38 of 138

\\ad.msa-ep.com\Everett\evt_projects\20\2815 - Kitsap County Bangor_keyport Fm Replacement\CAD\Sheets\20-2815-WA-CIVIL3.dwg SS-25 2/3/2022 12:55 PM MATT. ESTEP 23.05 (LMS Tech)

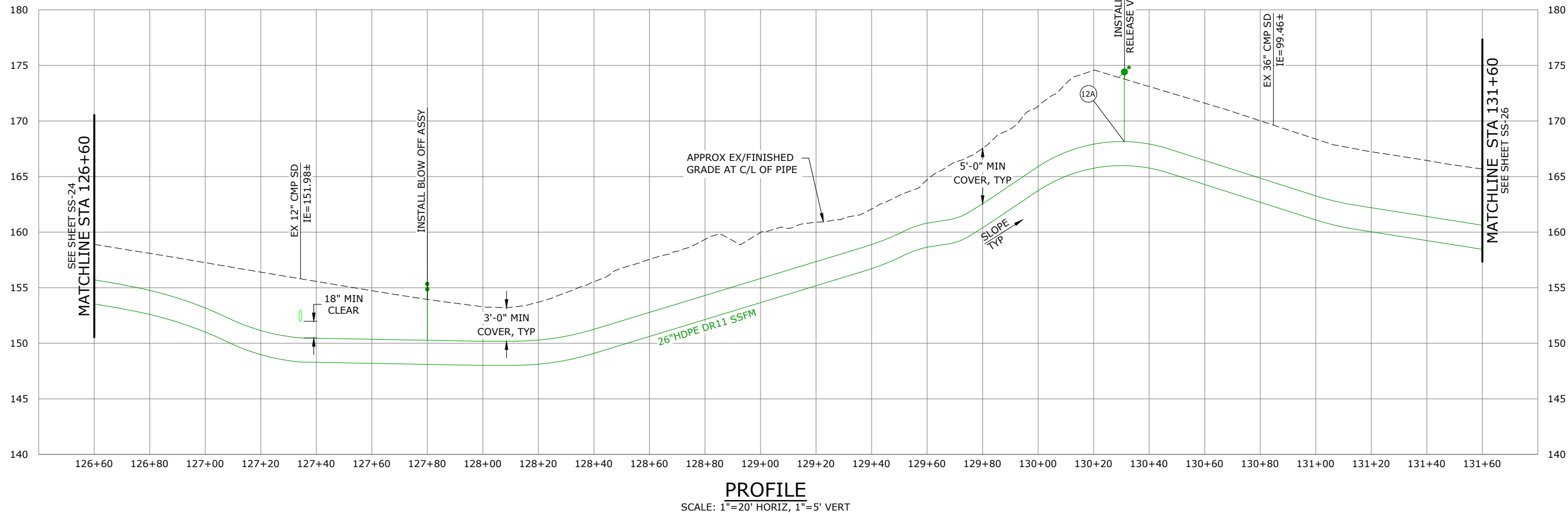


NOTES:

1. THE CONTRACTOR SHALL AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE HOMEOWNER AND THE UTILITY
2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.

CONSTRUCTION NOTES:

- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
- 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
- 4 PROTECT EXISTING STORM DRAIN AND MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" FROM STORM DRAIN TO SSFM MEASURED EDGE-TO-EDGE, SEE DET 1, SHT SS-62 FOR PIPE SUPPORT
- 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
- 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
- 12A FURNISH & INSTALL 2" AIR RELEASE VALVE PER DET 1, SHT SS-59
- 13 FURNISH & INSTALL BLOW OFF ASSY PER DET 2, SHT SS-58



NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
DRAWN
EKS
CHECKED



murraysmith



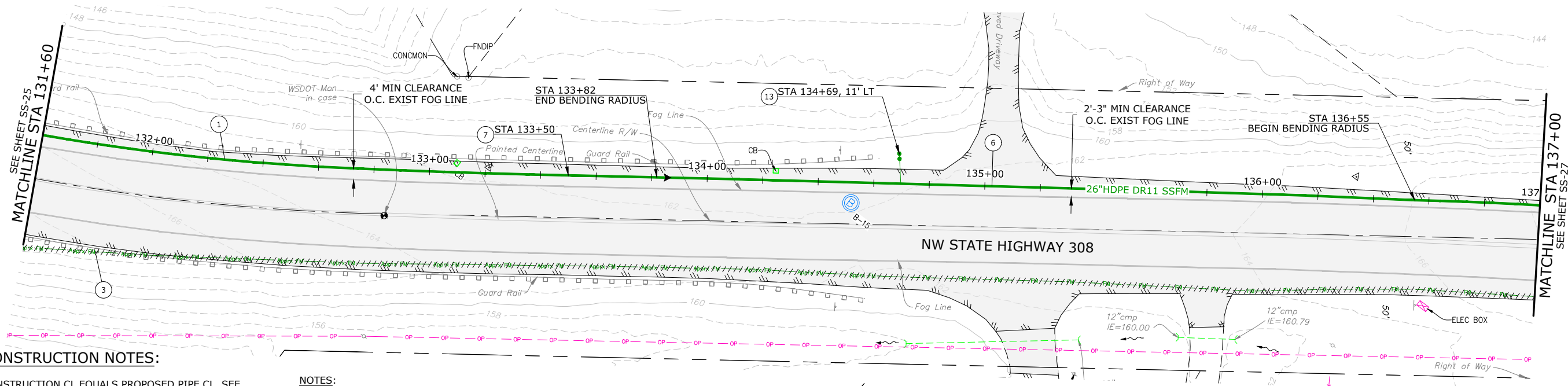
BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 126+60
TO STA 131+60
SCHEDULE A

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET
SS-25
39 of 138

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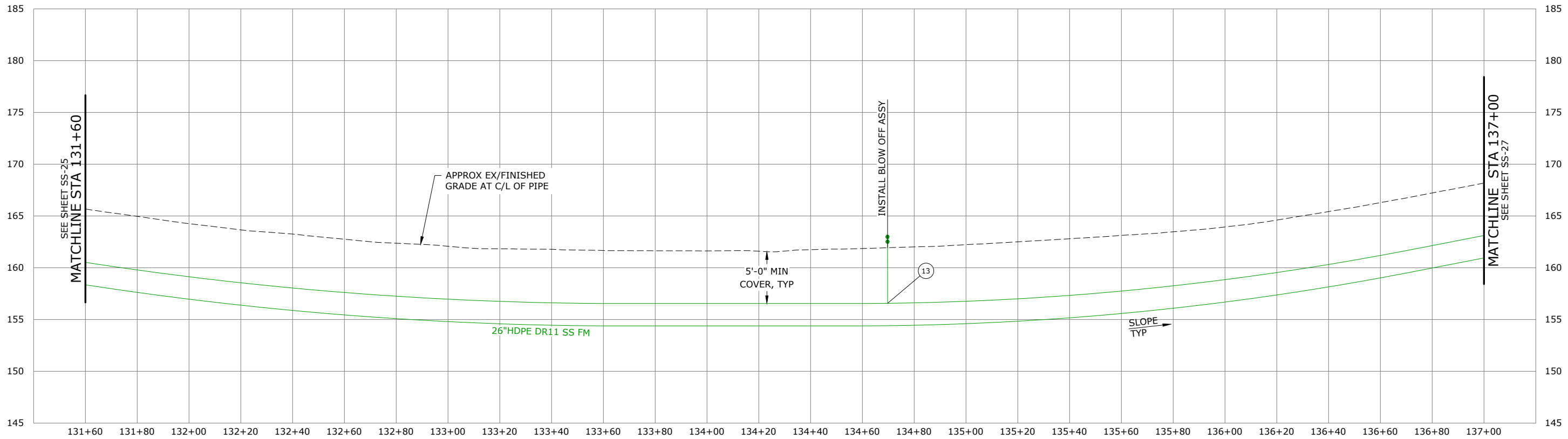
CONSTRUCTION NOTES:

- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
- 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
- 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
- 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
- 13 FURNISH & INSTALL BLOW OFF ASSY PER DET 2, SHT SS-58

NOTES:

- 1. THE CONTRACTOR SHALL AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE HOMEOWNER AND THE UTILITY
- 2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.

PLAN
SCALE: 1"=20'



PROFILE

SCALE: 1"=20' HORIZ, 1"=5' VERT

NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
DRAWN
EKS
CHECKED



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 131+60
TO STA 137+00
SCHEDULE A

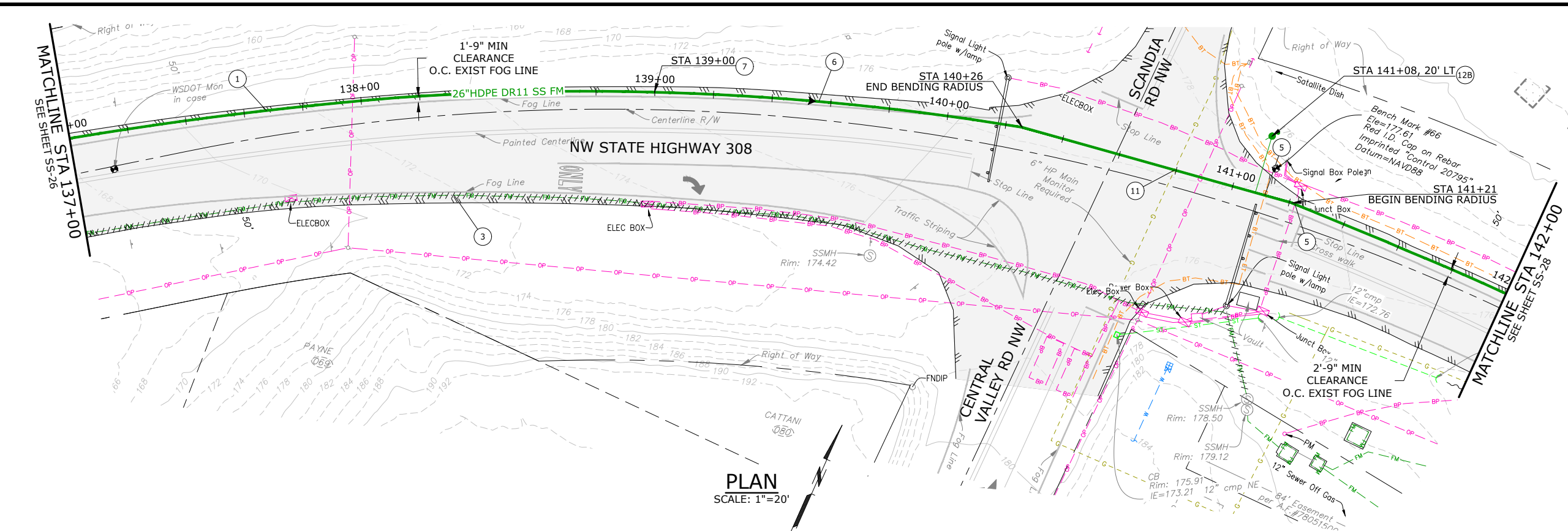
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET

SS-26

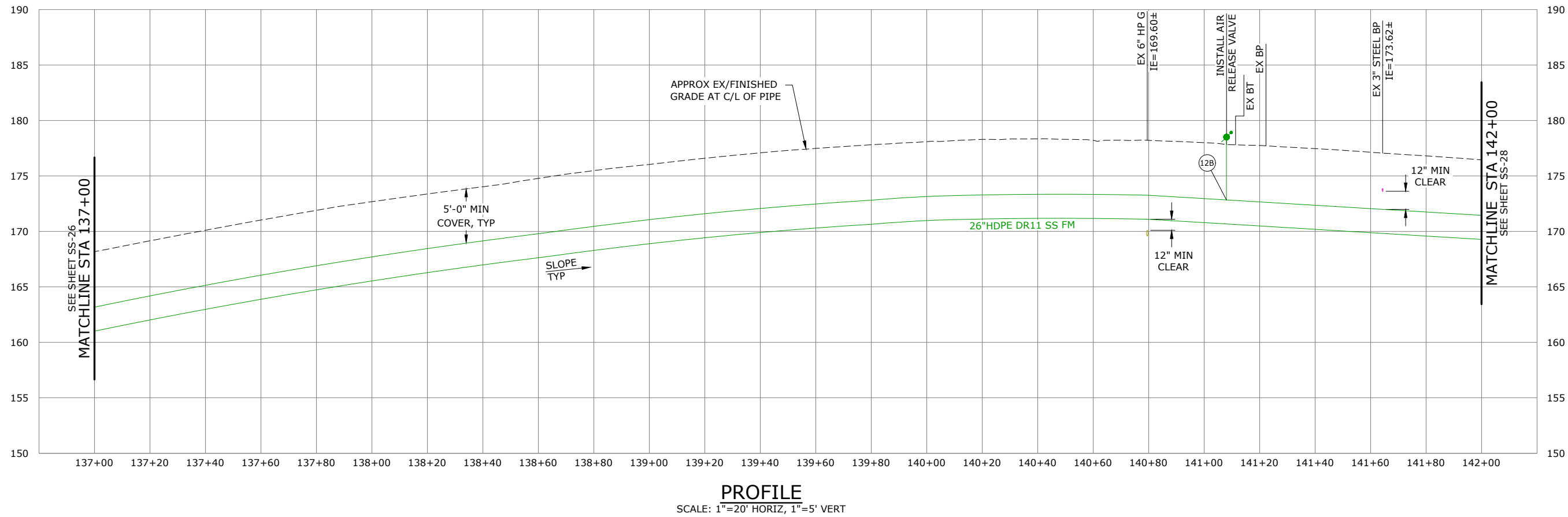
40 of 138

\\ad.msa-ep.com\Everett\evt_projects\20\2815 - Kitsap County Bangor_keyport Fm Replacement\CAD\Sheets\20-2815-WA-CIVIL3.dwg SS-27 2/3/2022 12:55 PM MATT. ESTEP 23.05 (LMS Tech)



- NOTES:**
1. THE CONTRACTOR SHALL AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE HOMEOWNER AND THE UTILITY
 2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.

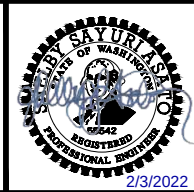
- CONSTRUCTION NOTES:**
- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
 - 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
 - 5 PROTECT EXIST UNDERGROUND POWER AND TELECOMMUNICATION, DURING CONSTRUCTION
 - 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
 - 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
 - 11 PROTECT EXIST GAS, MAINTAIN MINIMUM VERTICAL SEPARATION OF 12" MEASURED EDGE-TO-EDGE. MONITORING BY GAS UTILITY IS REQUIRED AT ALL TIMES DURING EXCAVATION AND BACKFILL OPERATIONS. WHEN GAS LINE IS EXPOSED RESTORE PIPE BY PACKING 6" OF SAND AROUND THE PIPE.
 - 12B FURNISH & INSTALL 3" AIR RELEASE VALVE PER DET 2, SHT SS-59



NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
DRAWN
EKS
CHECKED

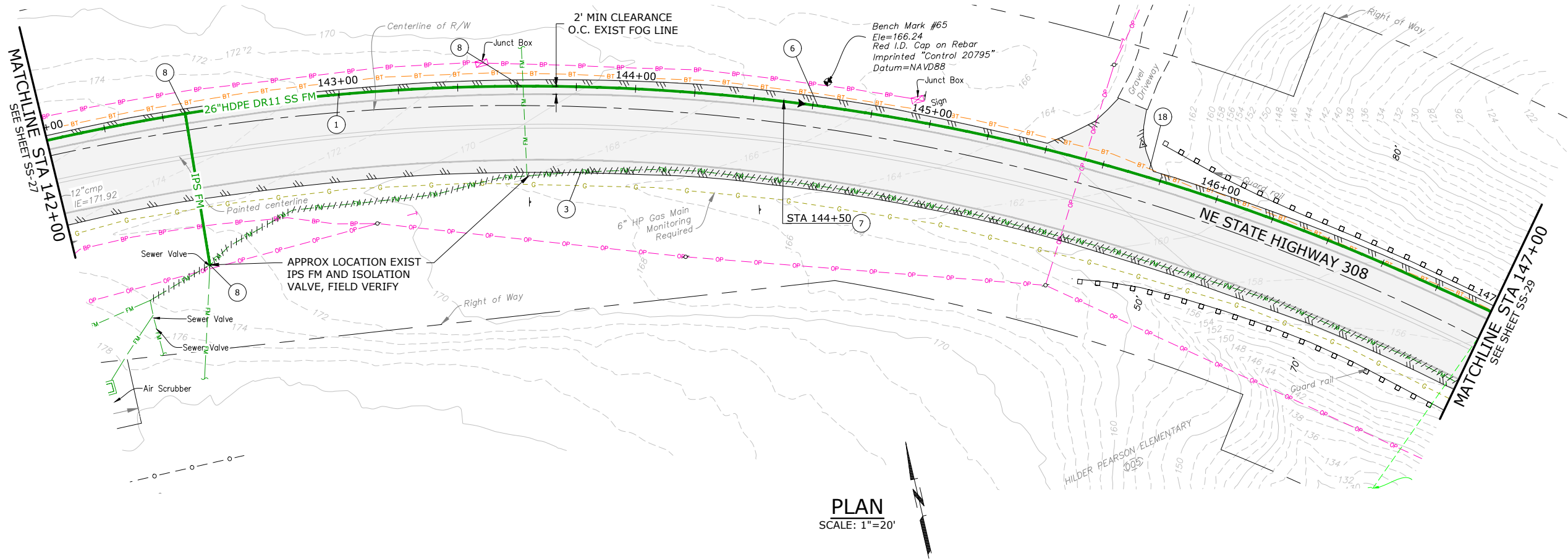


**BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT**

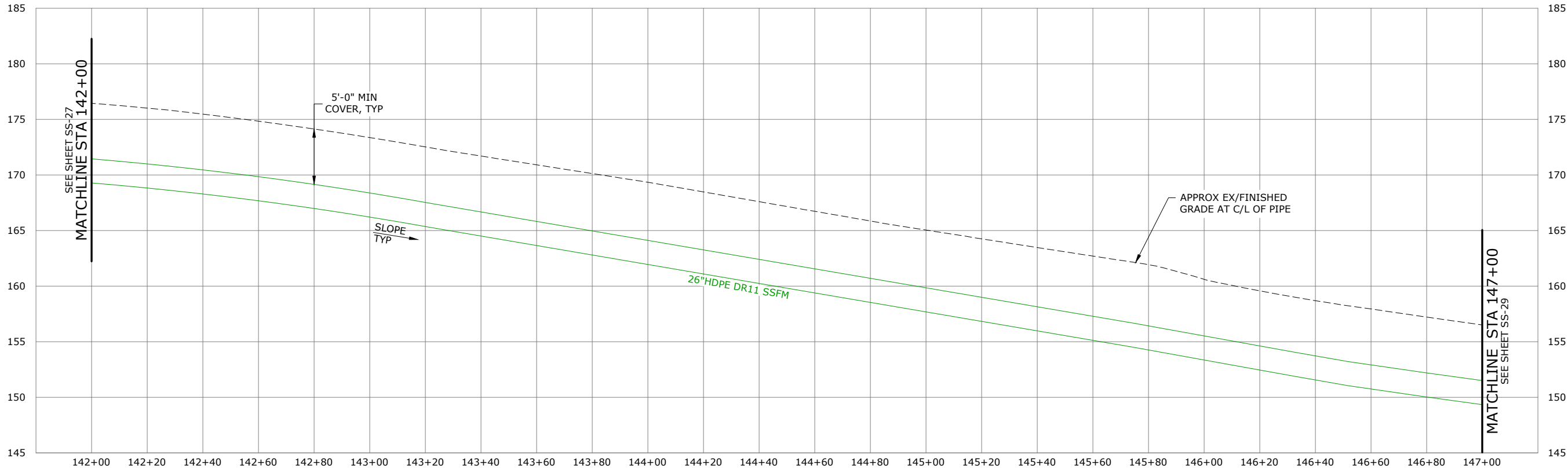
**FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 137+00
TO STA 142+00
SCHEDULE A**

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

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PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ, 1"=5' VERT

NOTES:

1. AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY AND THE UTILITY.
2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.

CONSTRUCTION NOTES:

- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
- 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
- 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
- 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
- 8 CONNECT EXIST IPS PER DET 1, SHT SS-57
- 18 BURIED TELEPHONE TO BE RELOCATED BY UTILITY

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
DRAWN
EKS
CHECKED

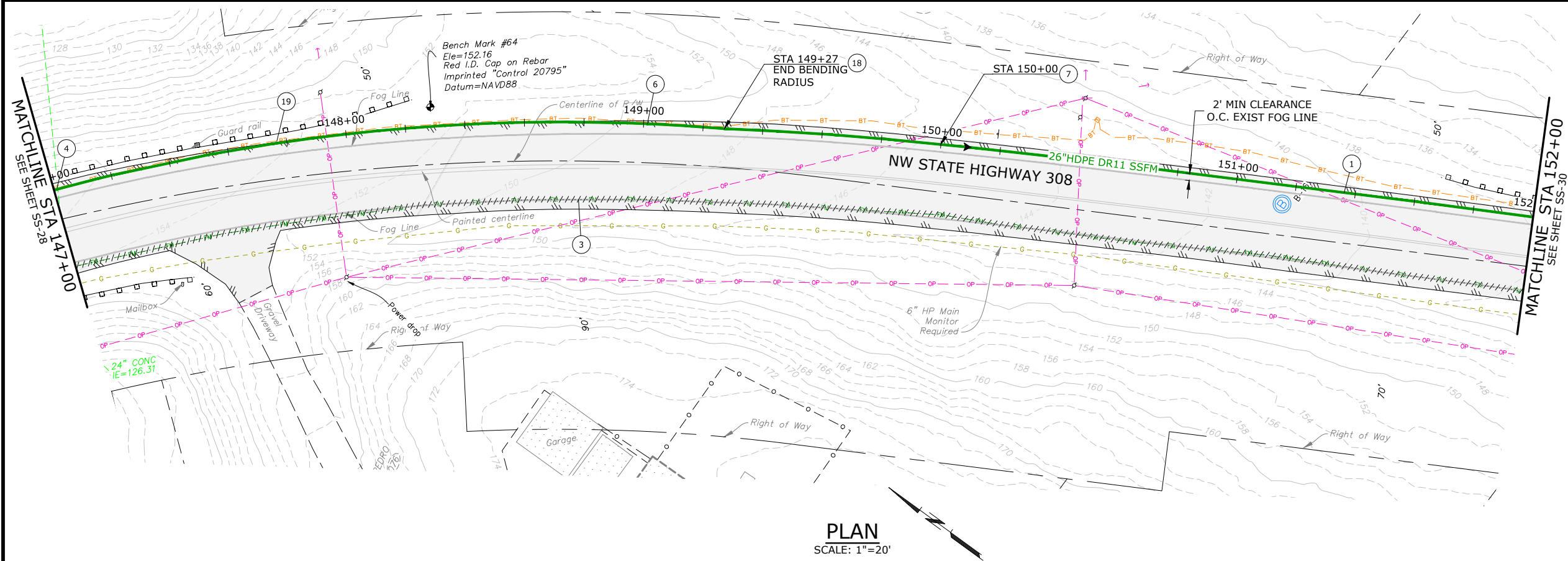


BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT PLAN & PROFILE STA 142+00 TO STA 147+00 SCHEDULE A			
PROJECT NO.:	20-2815	SCALE:	AS SHOWN
DATE:	FEBRUARY 2022		

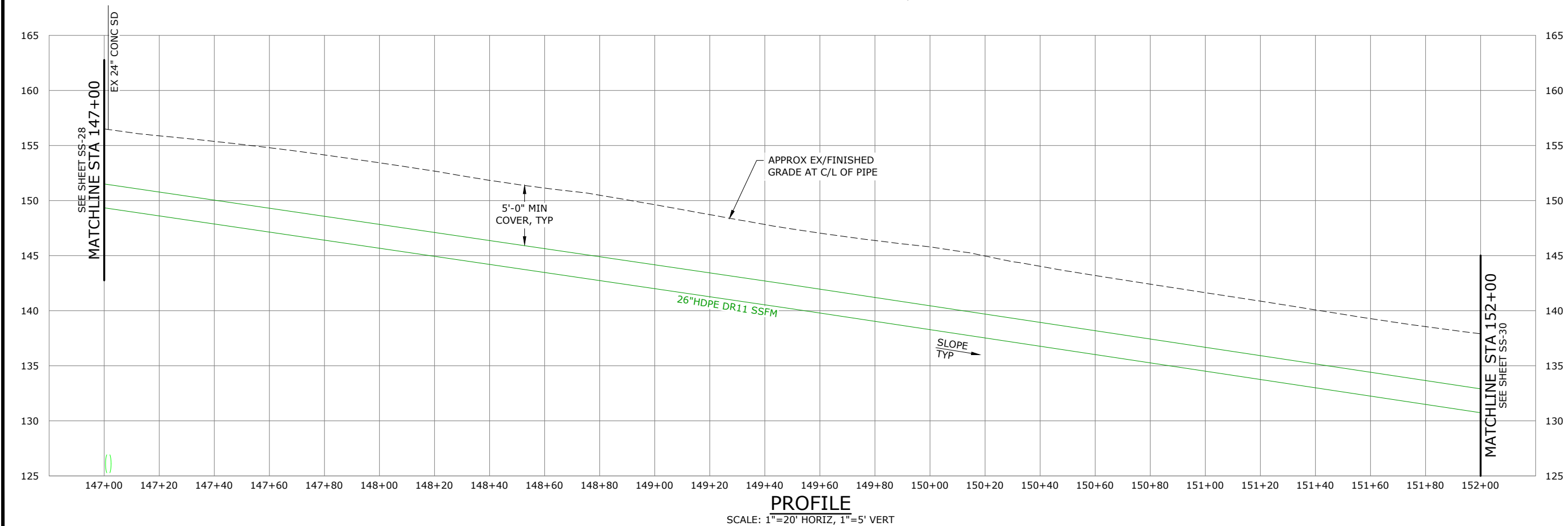
SHEET
SS-28
42 of 138

\\ad.msa-ep.com\Everett\evt_projects\20\2815 - Kitsap County Bangor_keyport Fm Replacement\CAD\Sheets\20-2815-WA-CIVIL4.dwg SS-29 2/3/2022 12:59 PM JUSTIN.DEUEL 23.0s (LMS Tech)



- NOTES:
1. AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY AND THE UTILITY.
 2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.

- CONSTRUCTION NOTES:
- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
 - 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
 - 4 PROTECT EXISTING STORM DRAIN AND MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" FROM STORM DRAIN TO SSFM MEASURED EDGE-TO-EDGE, SEE DET 1, SHT SS-62 FOR PIPE SUPPORT
 - 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
 - 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
 - 18 BURIED TELEPHONE TO BE RELOCATED BY UTILITY
 - 19 CONNECT TO EXIST 16" DI SS FM, SEE DET 3, SHT SS-60



NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
DRAWN
EKS
CHECKED



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

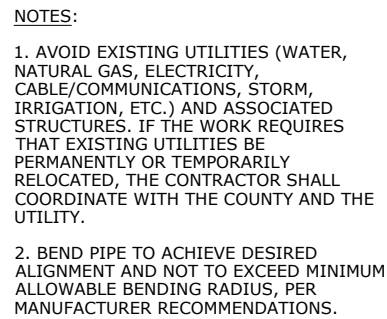
FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 147+00
TO STA 152+00
SCHEDULE A

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET

SS-29

43 of 138



- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
- 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
- 4 PROTECT EXISTING STORM DRAIN AND MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" FROM STORM DRAIN TO SSFM MEASURED EDGE-TO-EDGE, SEE DET 1, SHT SS-62 FOR PIPE SUPPORT
- 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
- 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58



NOTICE

A horizontal scale bar with three segments. The first segment is labeled '0' at its left end. The second segment is labeled '1/2' at its right end. The third segment is labeled '1' at its right end. The bar is divided into three equal parts by two vertical lines.

IF THIS BAR DOES
NOT MEASURE 1"
THEN DRAWING IS
NOT TO SCALE

TMH

DESIGNED

BAW

DRAWN

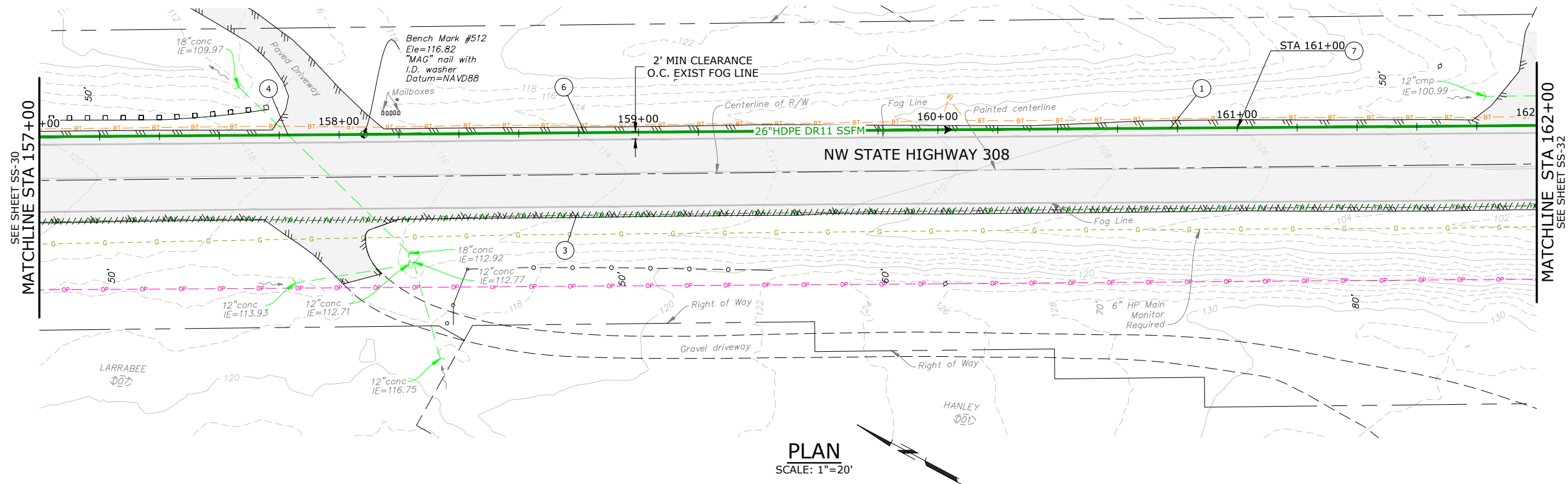
EKS

CHECKED



PROJECT NO.:	20-2815	SCALE:	AS SHOWN	DATE:	FEBRUARY 2022
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\\ad.msa-ep.com\Everett\evt_projects\20\2815 - Kitsap County Bangor_keyport Fm Replacement\CAD\Sheets\20-2815-WA-CIVIL4.dwg SS-31 2/3/2022 12:59 PM JUSTIN.DEUEL 23.0s (LMS Tech)

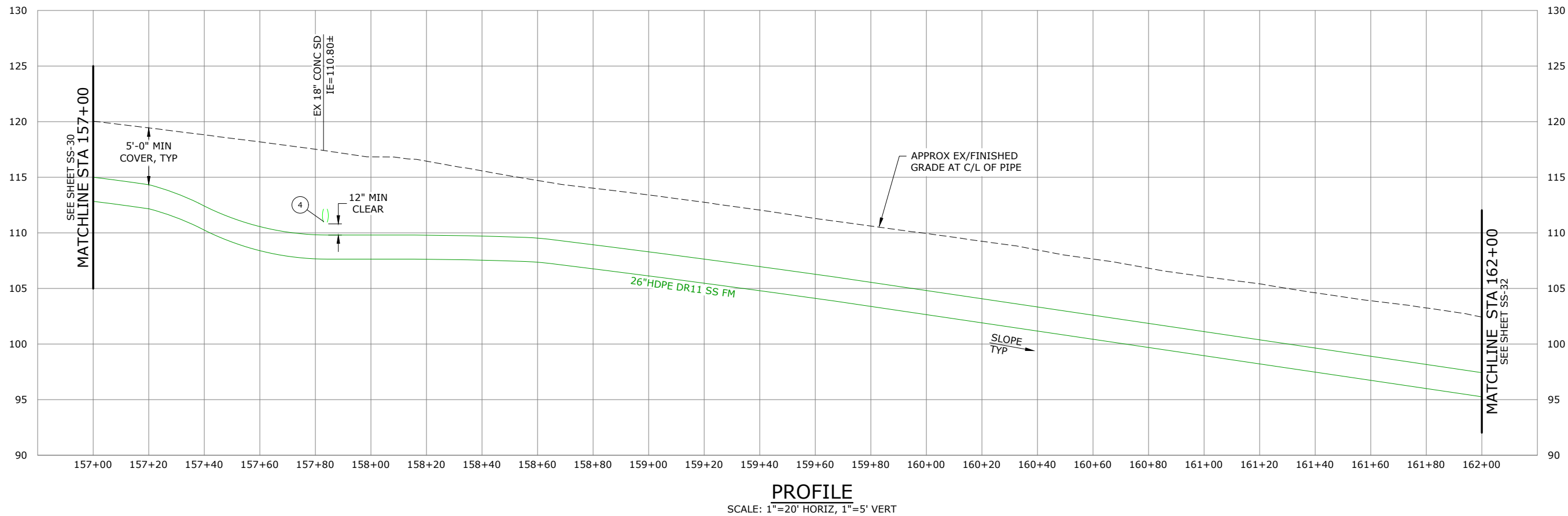


NOTES:

1. AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY AND THE UTILITY.
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CONSTRUCTION NOTES:

1. CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
3. ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
4. PROTECT EXISTING STORM DRAIN AND MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" FROM STORM DRAIN TO SSFM MEASURED EDGE-TO-EDGE, SEE DET 1, SHT SS-62 FOR PIPE SUPPORT
6. SS FM TRENCH SECTION PER DET 3, SHT SS-58
7. FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58



NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
DRAWN
EKS
CHECKED

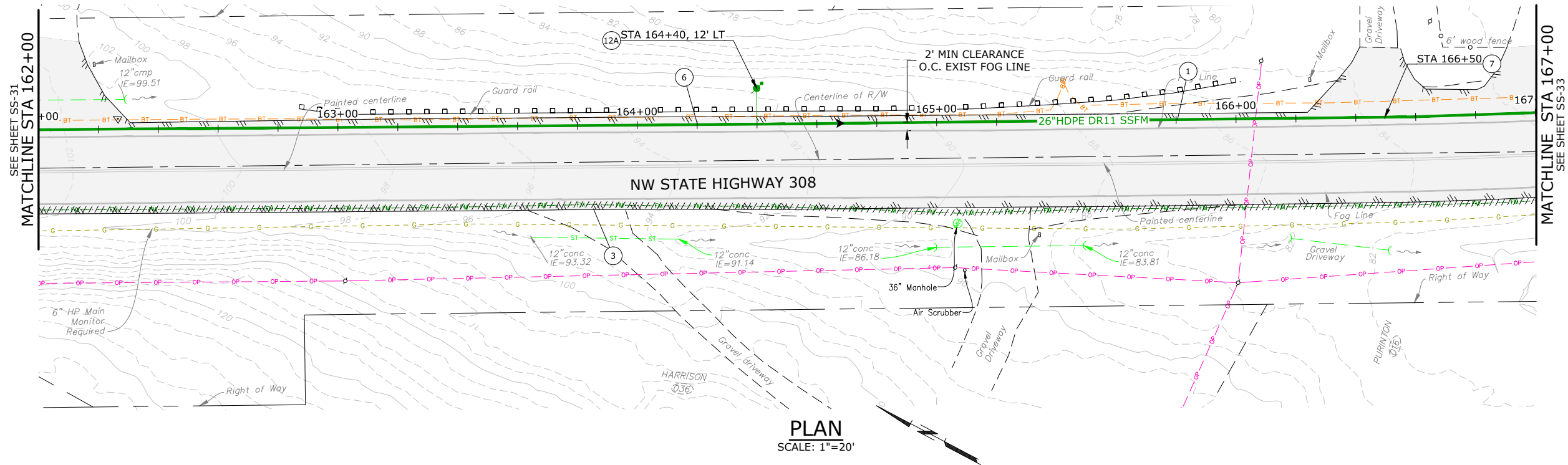


BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 157+00
TO STA 162+00
SCHEDULE A
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

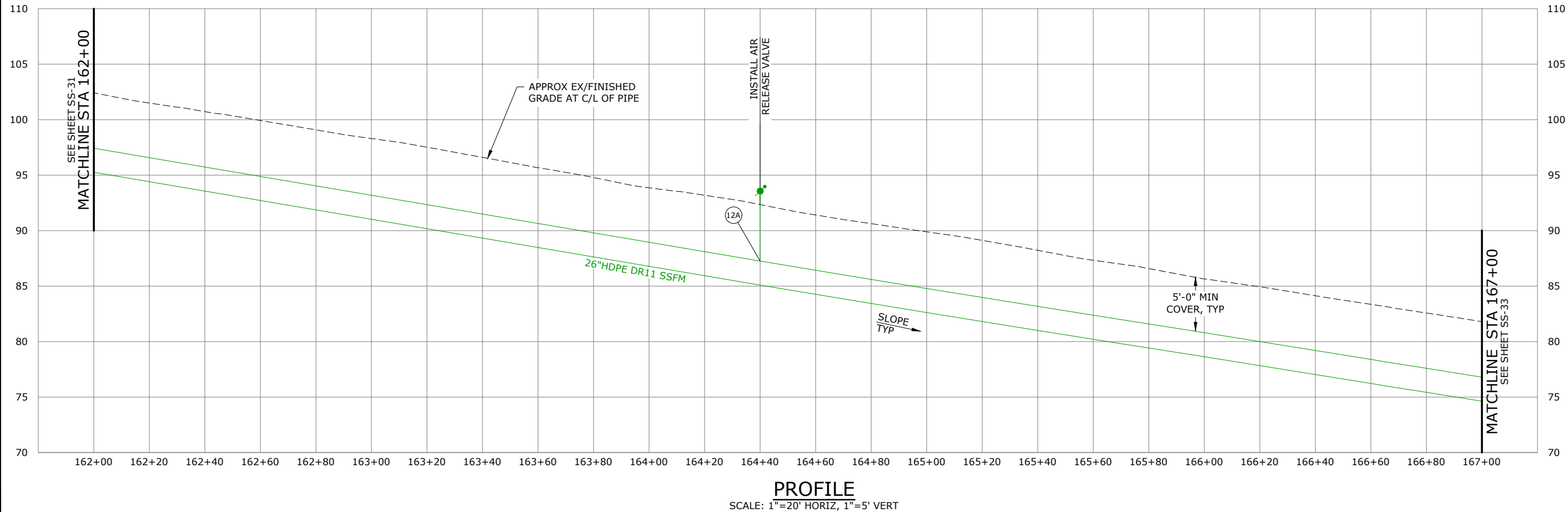
SHEET
SS-31
45 of 138

\\ad.msa-ep.com\Everett\evt_projects\20\2815 - Kitsap County Bangor_keyport Fm Replacement\CAD\Sheets\20-2815-WA-CIVIL4.dwg SS-32 2/3/2022 12:59 PM JUSTIN.DEUEL 23.0s (LMS Tech)



- NOTES:
1. AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY AND THE UTILITY.
 2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.

- CONSTRUCTION NOTES:
- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
 - 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
 - 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
 - 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
 - 12A FURNISH & INSTALL 2" AIR RELEASE VALVE PER DET 1, SHT SS-59



NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
DRAWN
EKS
CHECKED

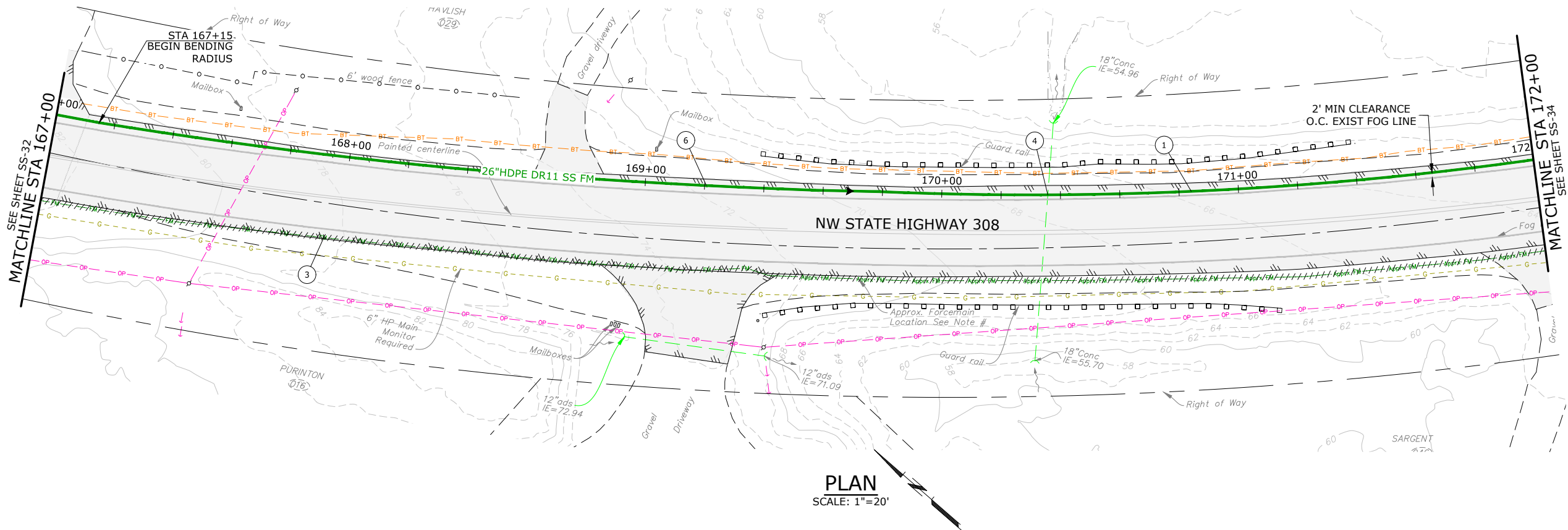


BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

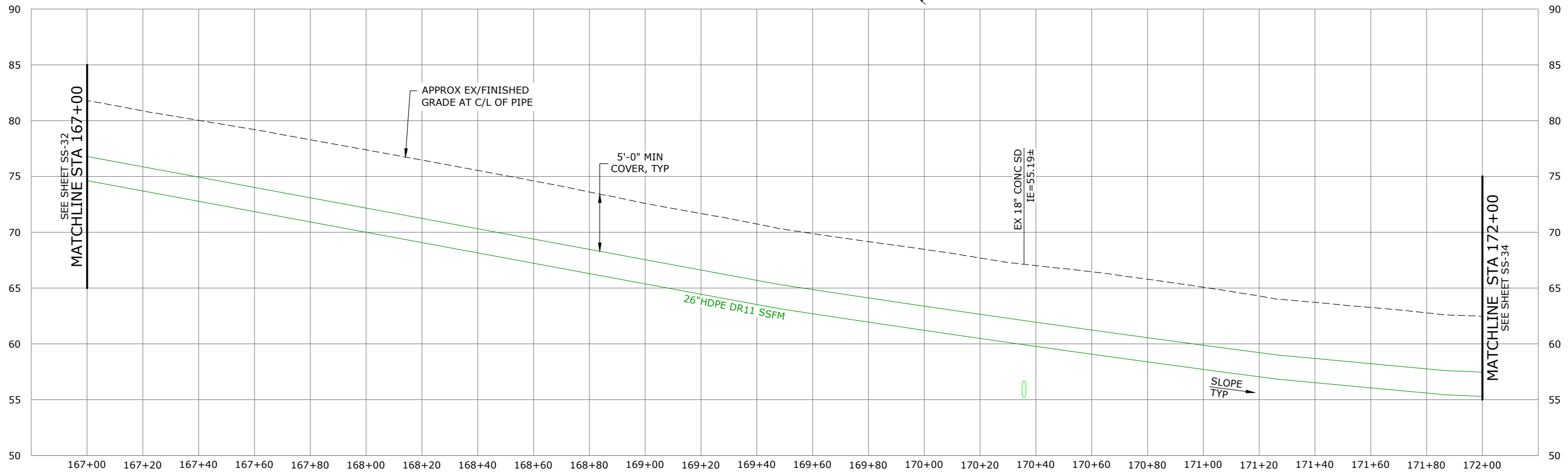
FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 162+00
TO STA 167+00
SCHEDULE A

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

\\ad.msa-ep.com\Everett\evt_projects\20\2815 - Kitsap County Bangor_keyport Fm Replacement\CAD\Sheets\20-2815-WA-CIVIL4.dwg SS-33 2/3/2022 12:59 PM JUSTIN.DEVEL 23.0s (LMS Tech)



PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ, 1"=5' VERT

NOTES:

1. AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY AND THE UTILITY.
2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.

CONSTRUCTION NOTES:

1. CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
3. ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
4. PROTECT EXISTING STORM DRAIN AND MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" FROM STORM DRAIN TO SSFM MEASURED EDGE-TO-EDGE, SEE DET 1, SHT SS-62 FOR PIPE SUPPORT
6. SS FM TRENCH SECTION PER DET 3, SHT SS-58

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
DRAWN
EKS
CHECKED



murraysmith



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 167+00
TO STA 172+00
SCHEDULE A

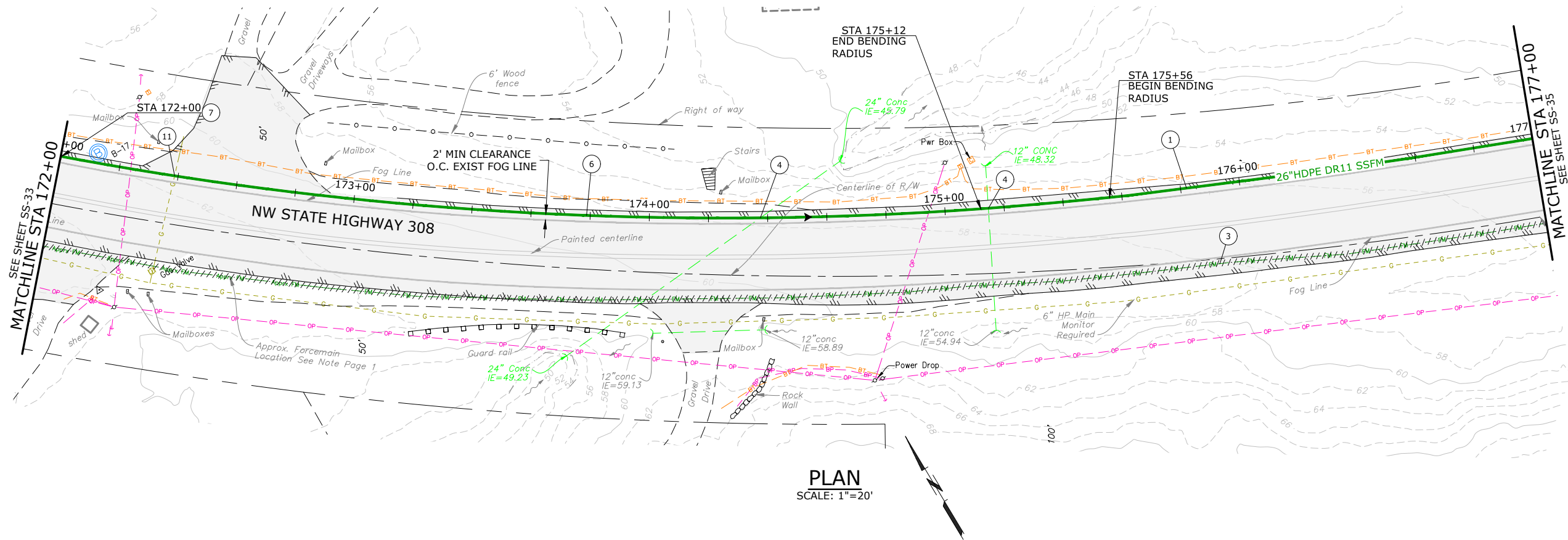
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET

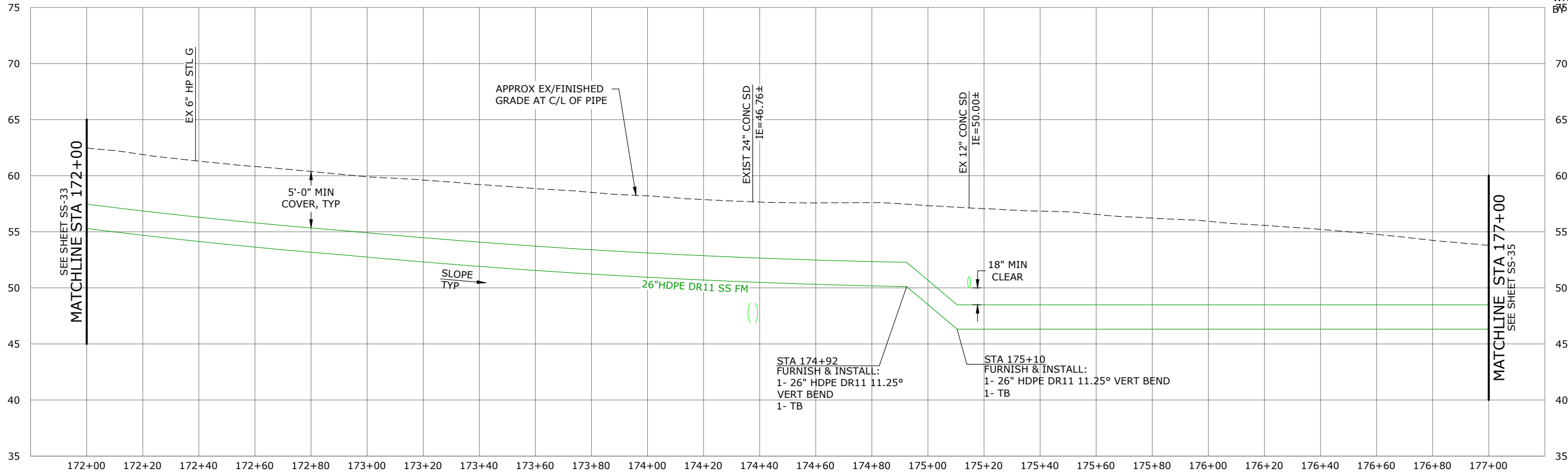
SS-33

47 of 138

\\ad.msa-ep.com\Everett\evt_projects\20\2815 - Kitsap County Bangor_keyport Fm Replacement\CAD\Sheets\20-2815-WA-CIVIL4.dwg SS-34 2/3/2022 12:59 PM JUSTIN.DEUEL 23.0s (LMS Tech)



PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ, 1"=5' VERT

NOTES:

1. AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE HOMEOWNER AND THE UTILITY.
2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.
3. SEE SPEC SECTION 31 23 33 FOR CDF REQUIREMENTS.

CONSTRUCTION NOTES:

- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
- 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
- 4 PROTECT EXISTING STORM DRAIN AND MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" FROM STORM DRAIN TO SSFM MEASURED EDGE-TO-EDGE, SEE DET 1, SHT SS-62 FOR PIPE SUPPORT
- 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
- 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
- 11 PROTECT EXIST GAS, MAINTAIN MINIMUM VERTICAL SEPARATION OF 12" MEASURED EDGE-TO-EDGE. MONITORING BY GAS UTILITY IS REQUIRED AT ALL TIMES DURING EXCAVATION AND BACKFILL OPERATIONS. WHEN GAS LINE IS EXPOSED RESTORE PIPE BY PACKING 6" OF SAND AROUND THE PIPE.

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
DRAWN
EKS
CHECKED



murraysmith



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 172+00
TO STA 177+00
SCHEDULE A

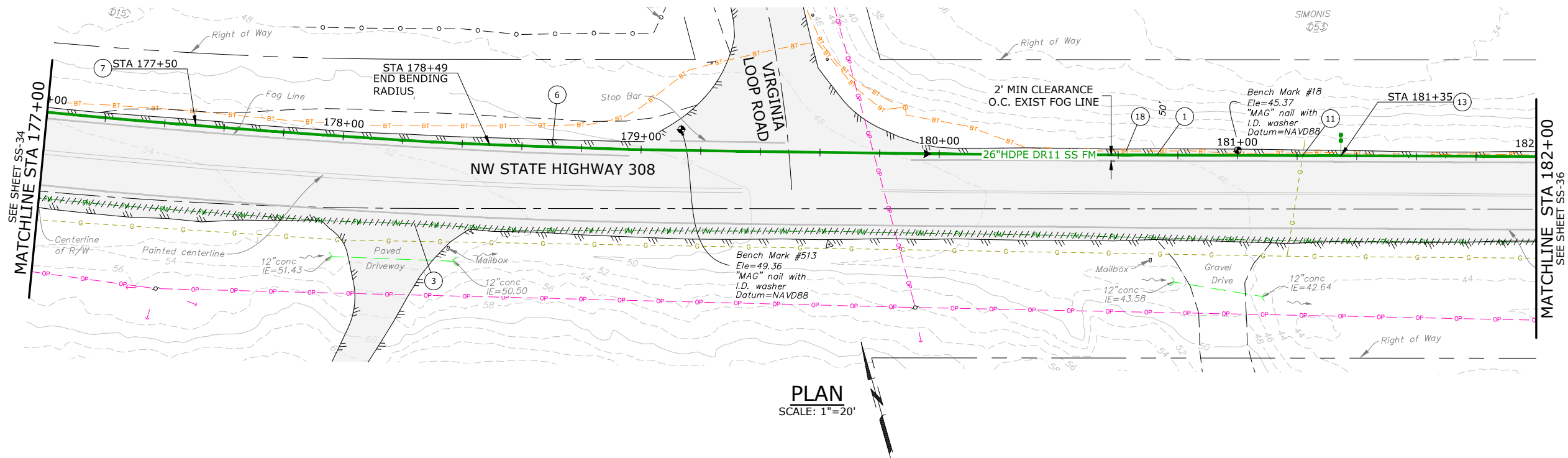
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET

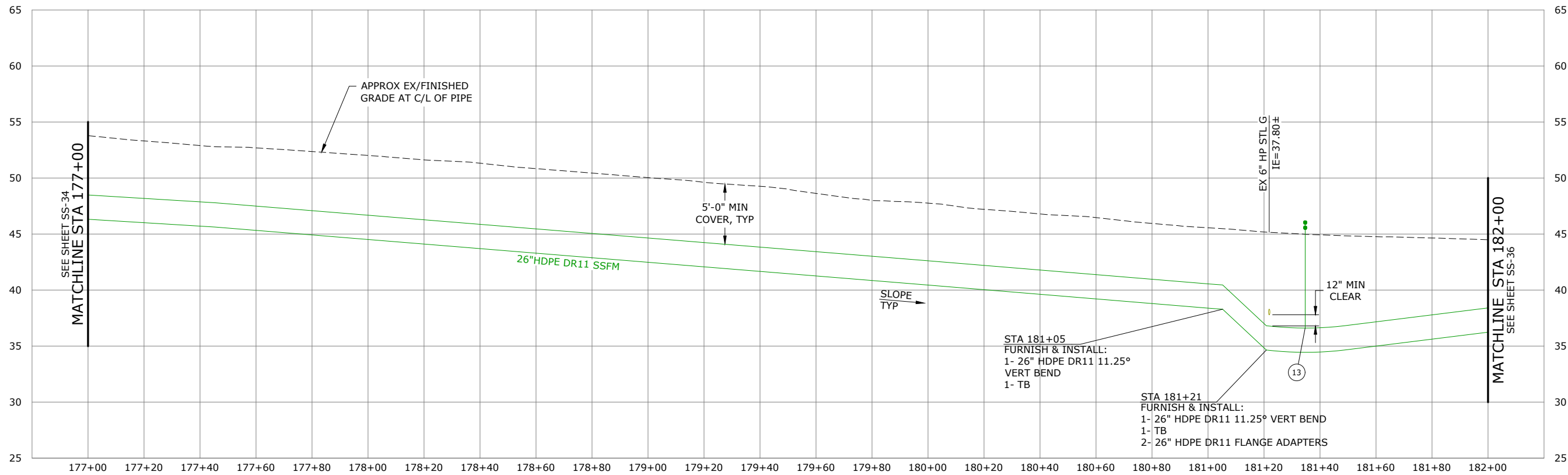
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48 of 138

\\ad.msa-ep.com\Everett\evt_projects\20\2815 - Kitsap County Bangor_keyport Fm Replacement\CAD\Sheets\20-2815-WA-CIVIL4.dwg SS-35 2/3/2022 12:59 PM JUSTIN.DEUEL 23.0s (LMS Tech)



PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ, 1"=5' VERT

NOTES:

1. AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY AND THE UTILITY.
2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.

CONSTRUCTION NOTES:

- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
- 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
- 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
- 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
- 11 PROTECT EXIST GAS, MAINTAIN MINIMUM VERTICAL SEPARATION OF 12" MEASURED EDGE-TO-EDGE. MONITORING BY GAS UTILITY IS REQUIRED AT ALL TIMES DURING EXCAVATION AND BACKFILL OPERATIONS. WHEN GAS LINE IS EXPOSED RESTORE PIPE BY PACKING 6" OF SAND AROUND THE PIPE.
- 13 FURNISH & INSTALL BLOW OFF ASSY PER DET 2, SHT SS-58
- 18 BURIED TELEPHONE TO BE RELOCATED BY UTILITY

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
DRAWN
EKS
CHECKED



murraysmith



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 177+00
TO STA 182+00
SCHEDULE A

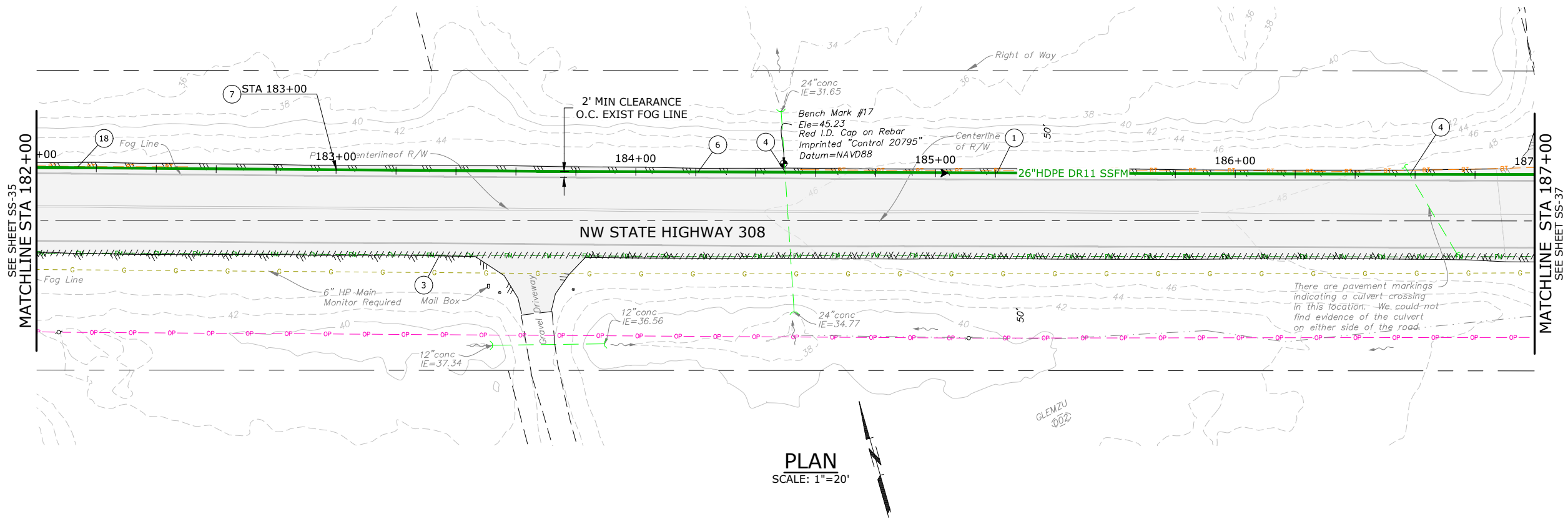
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET

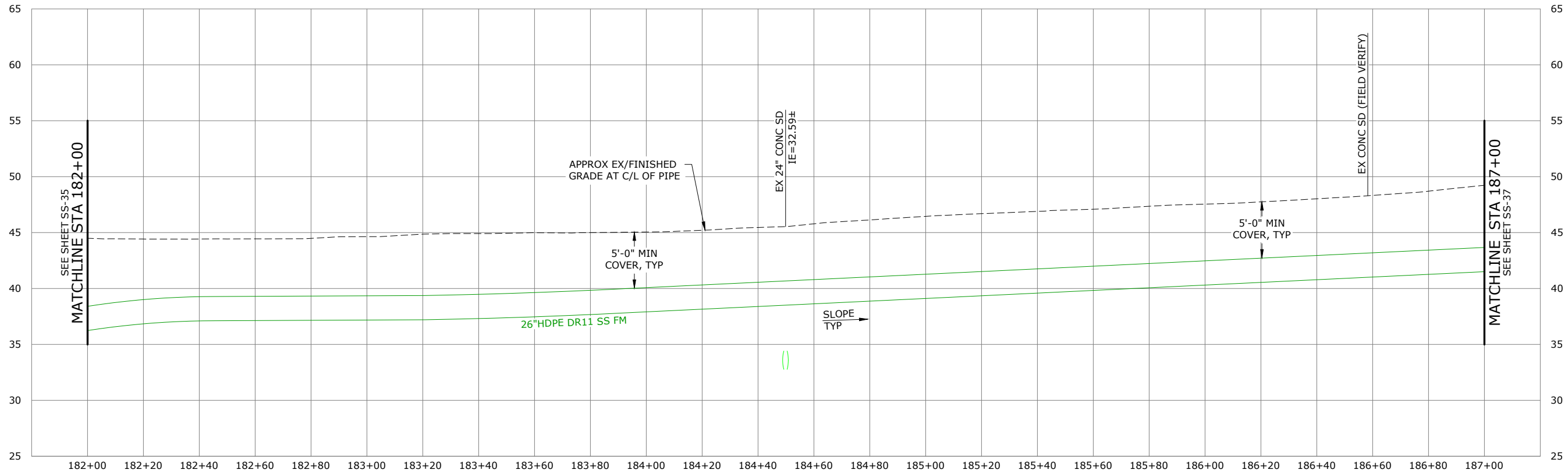
SS-35

49 of 138

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PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ, 1"=5' VERT

- NOTES:
1. AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY AND THE UTILITY.
 2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.

CONSTRUCTION NOTES:

1. CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
3. ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
4. PROTECT EXISTING STORM DRAIN AND MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" FROM STORM DRAIN TO SSFM MEASURED EDGE-TO-EDGE, SEE DET 1, SHT SS-62 FOR PIPE SUPPORT
6. SS FM TRENCH SECTION PER DET 3, SHT SS-58
7. FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
18. BURIED TELEPHONE TO BE RELOCATED BY UTILITY

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
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EKS
CHECKED



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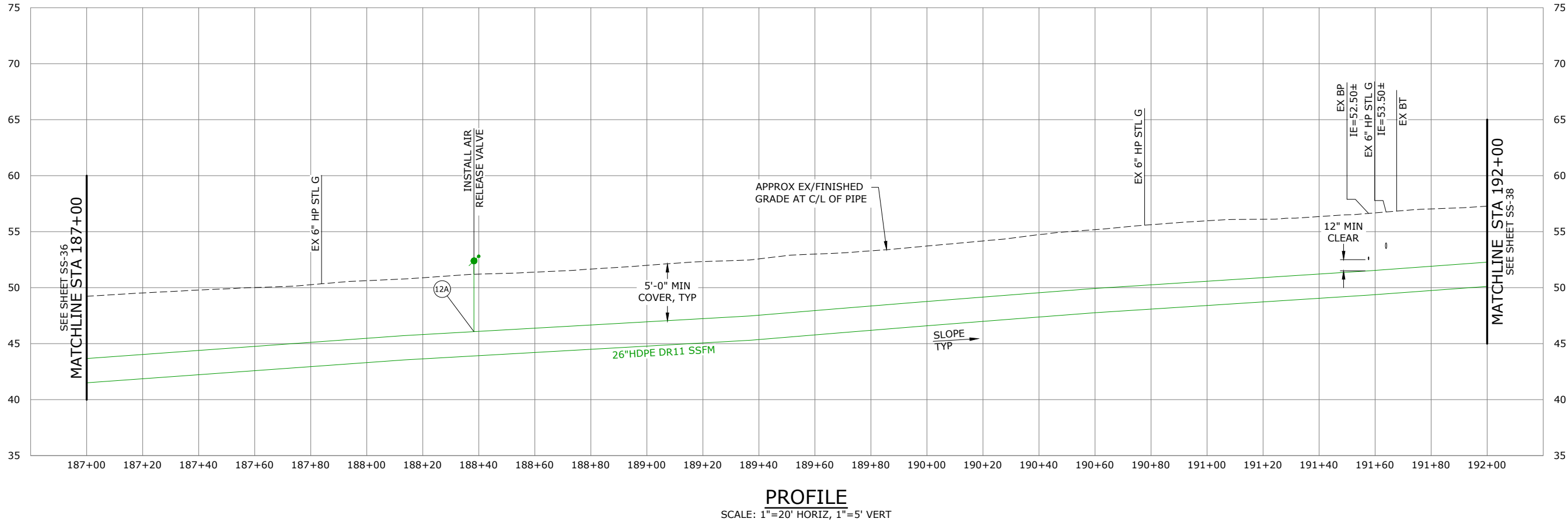
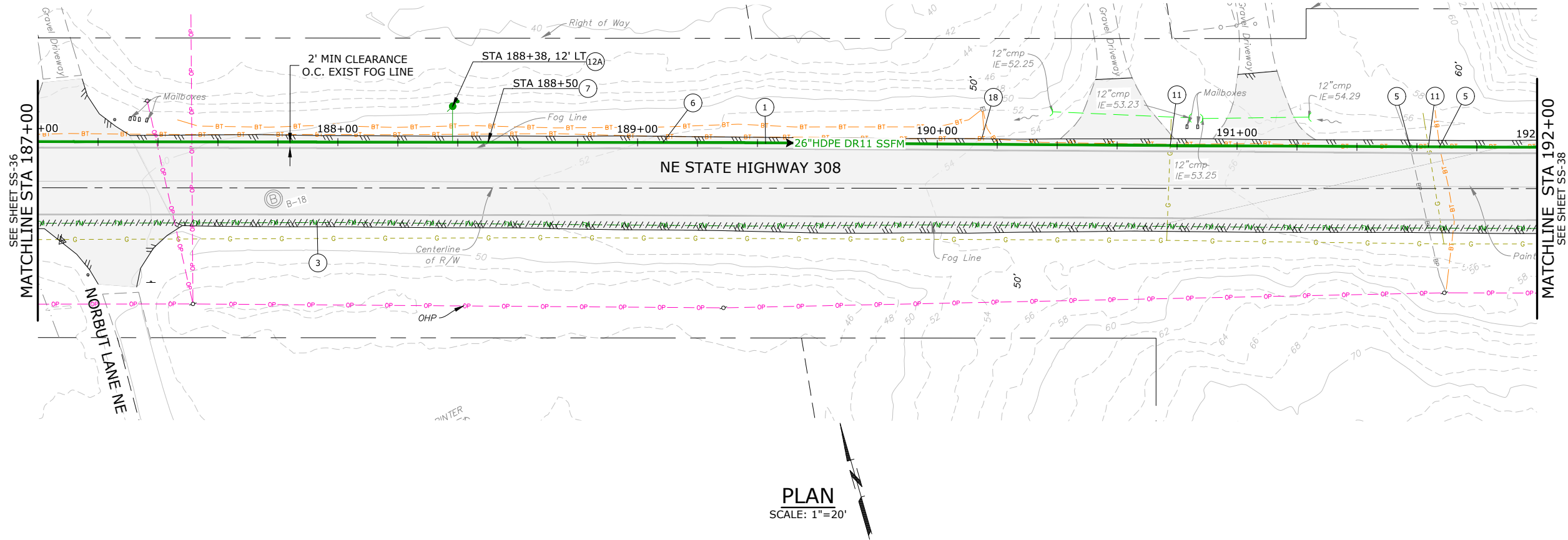
BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 182+00
TO STA 187+00
SCHEDULE A

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET
SS-36
50 of 138

\\ad.msa-ep.com\Everett\evt_projects\20\2815 - Kitsap County Bangor_keyport Fm Replacement\CAD\Sheets\20-2815-WA-CIVIL5.dwg SS-37 2/3/2022 1:06 PM JUSTIN.DEUEL 23.0s (LMS Tech)



- NOTES:
1. AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY AND THE UTILITY.
 2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.
- CONSTRUCTION NOTES:
- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
 - 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
 - 5 PROTECT EXIST UNDERGROUND POWER AND TELECOMMUNICATION, DURING CONSTRUCTION
 - 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
 - 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
 - 11 PROTECT EXIST GAS, MAINTAIN MINIMUM VERTICAL SEPARATION OF 12" MEASURED EDGE-TO-EDGE. MONITORING BY GAS UTILITY IS REQUIRED AT ALL TIMES DURING EXCAVATION AND BACKFILL OPERATIONS. WHEN GAS LINE IS EXPOSED RESTORE PIPE BY PACKING 6" OF SAND AROUND THE PIPE.
 - 12A FURNISH & INSTALL 2" AIR RELEASE VALVE PER DET 1, SHT SS-59
 - 18 BURIED TELEPHONE TO BE RELOCATED BY UTILITY

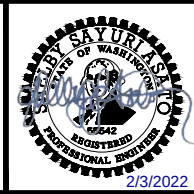
NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
DRAWN
EKS
CHECKED



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 187+00
TO STA 192+00
SCHEDULE A

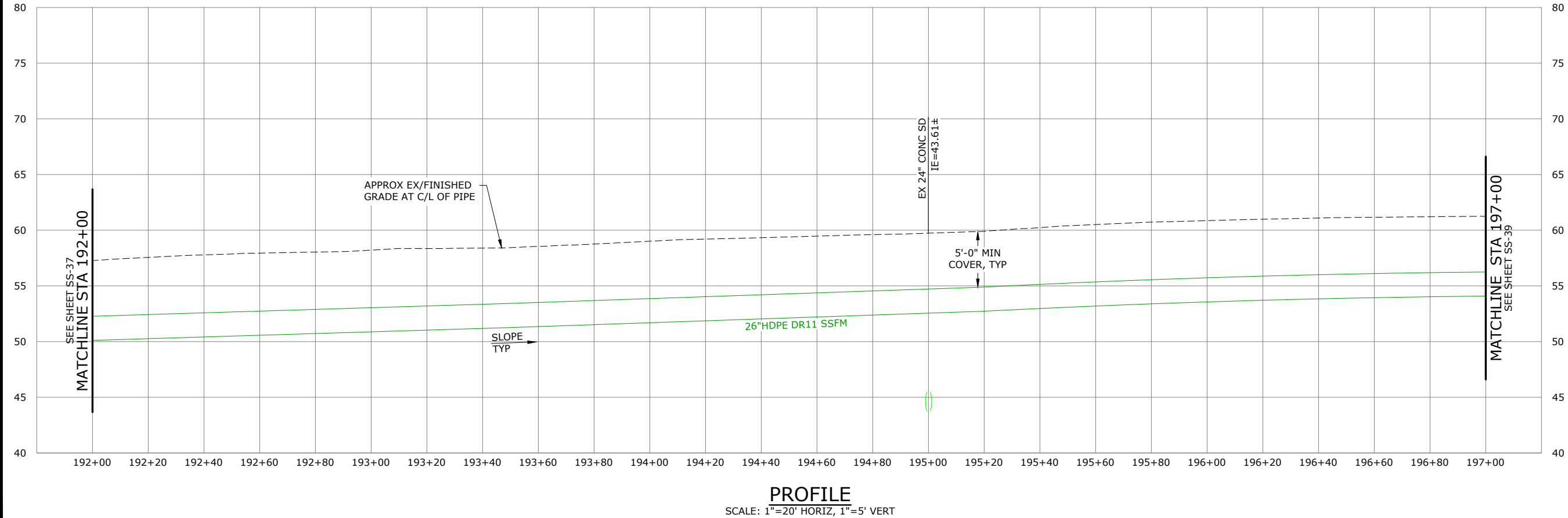
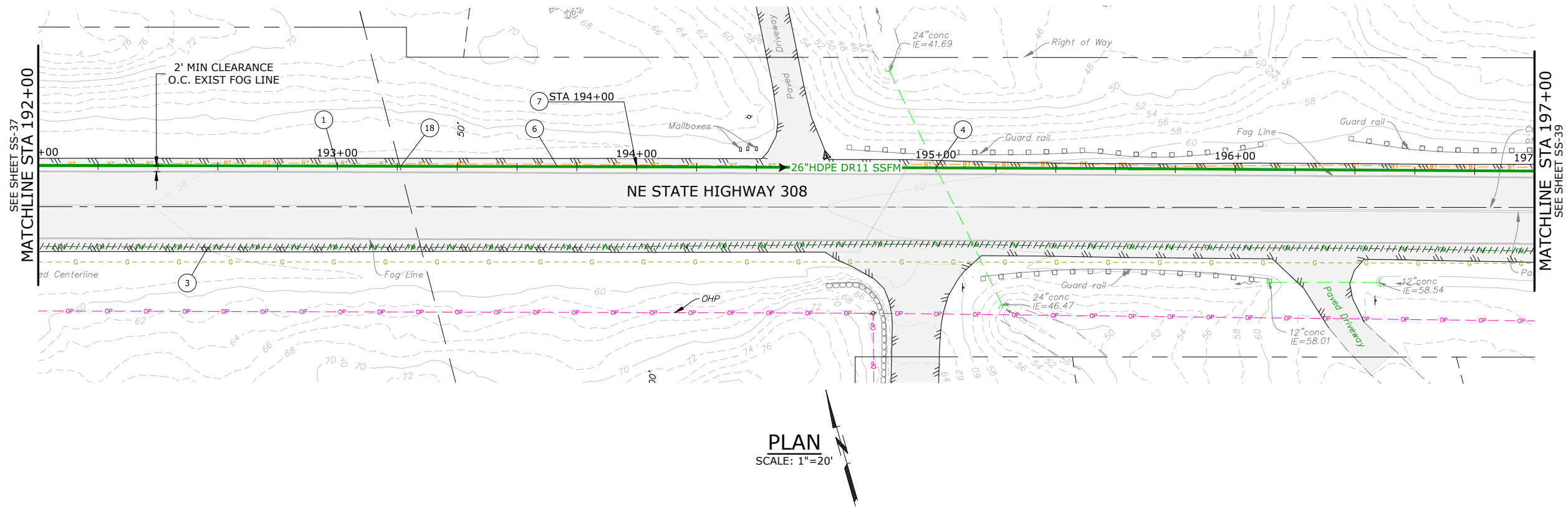
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

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SS-37

51 of 138

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- NOTES:**
1. AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY AND THE UTILITY.

2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.

CONSTRUCTION NOTES:

- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
- 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
- 4 PROTECT EXISTING STORM DRAIN AND MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" FROM STORM DRAIN TO SSFM MEASURED EDGE-TO-EDGE, SEE DET 1, SHT SS-62 FOR PIPE SUPPORT
- 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
- 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
- 18 BURIED TELEPHONE TO BE RELOCATED BY UTILITY

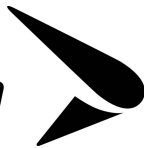
NO.	DATE	BY	REVISION

NOTICE
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IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
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EKS
CHECKED



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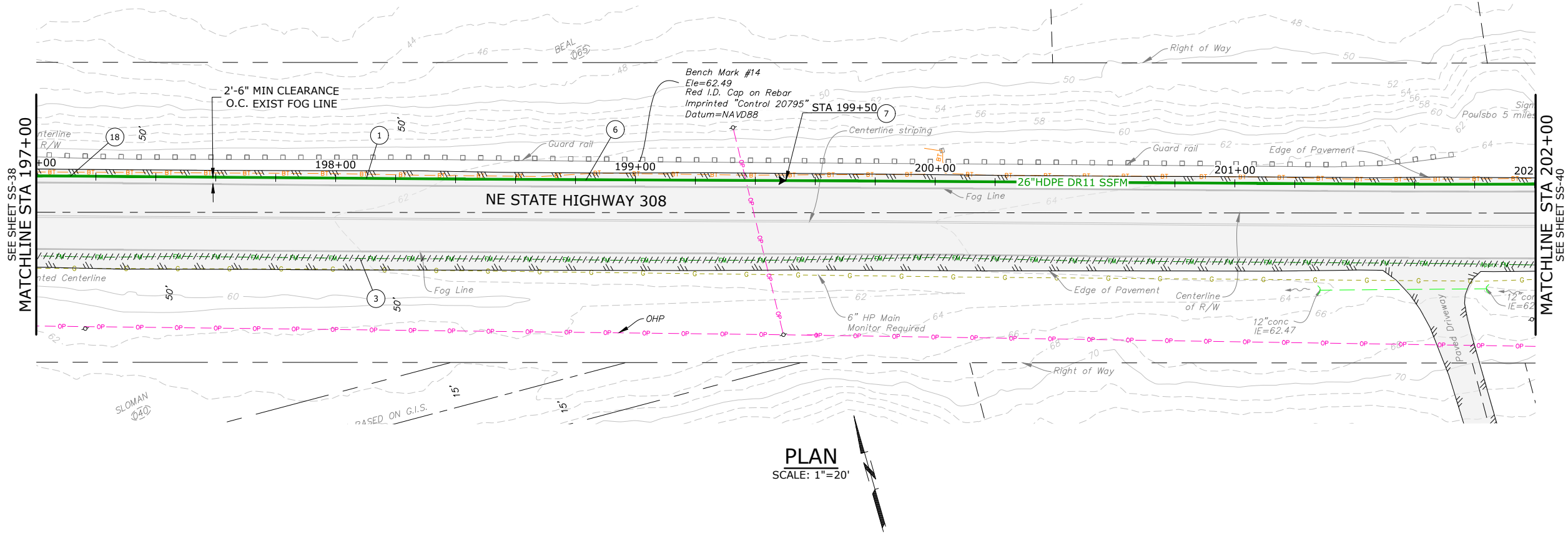
BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 192+00
TO STA 197+00
SCHEDULE A

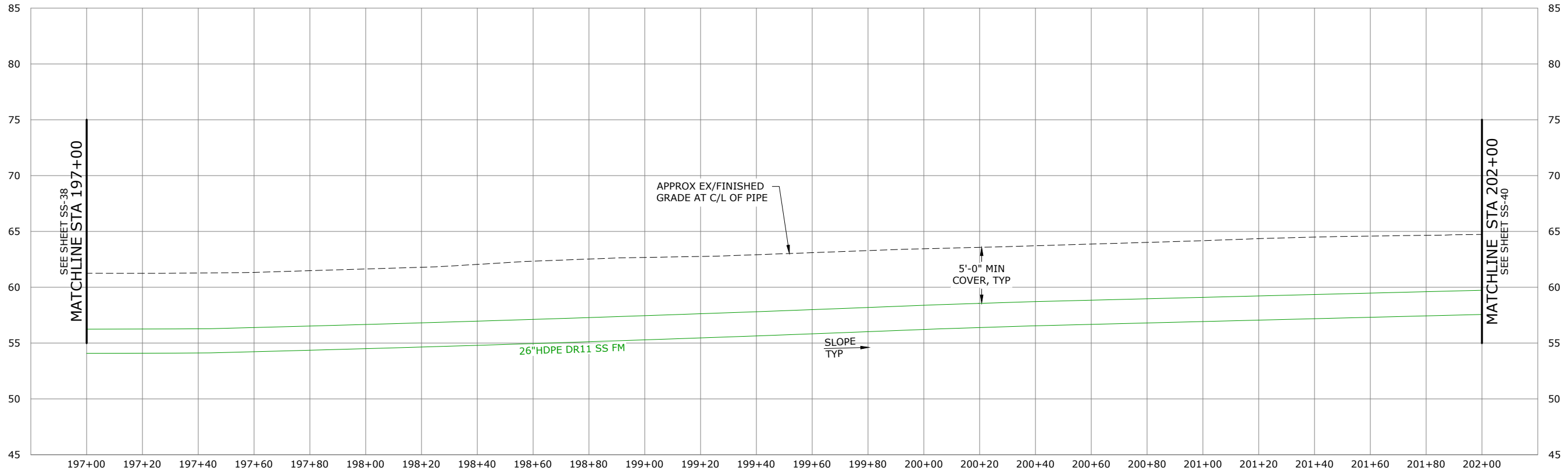
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET
SS-38
52 of 138

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PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ, 1"=5' VERT

NOTES:

1. AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY AND THE UTILITY.

2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.

CONSTRUCTION NOTES:

1. CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
3. ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
6. SS FM TRENCH SECTION PER DET 3, SHT SS-58
7. FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
18. BURIED TELEPHONE TO BE RELOCATED BY UTILITY

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
DRAWN
EKS
CHECKED

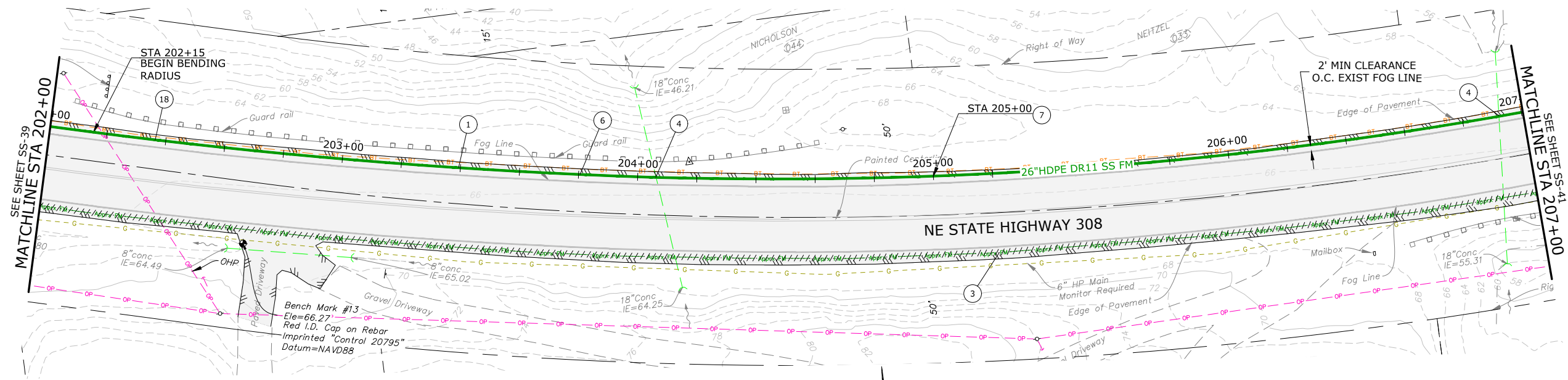


BANGOR-KEYPORT
FORCE MAIN
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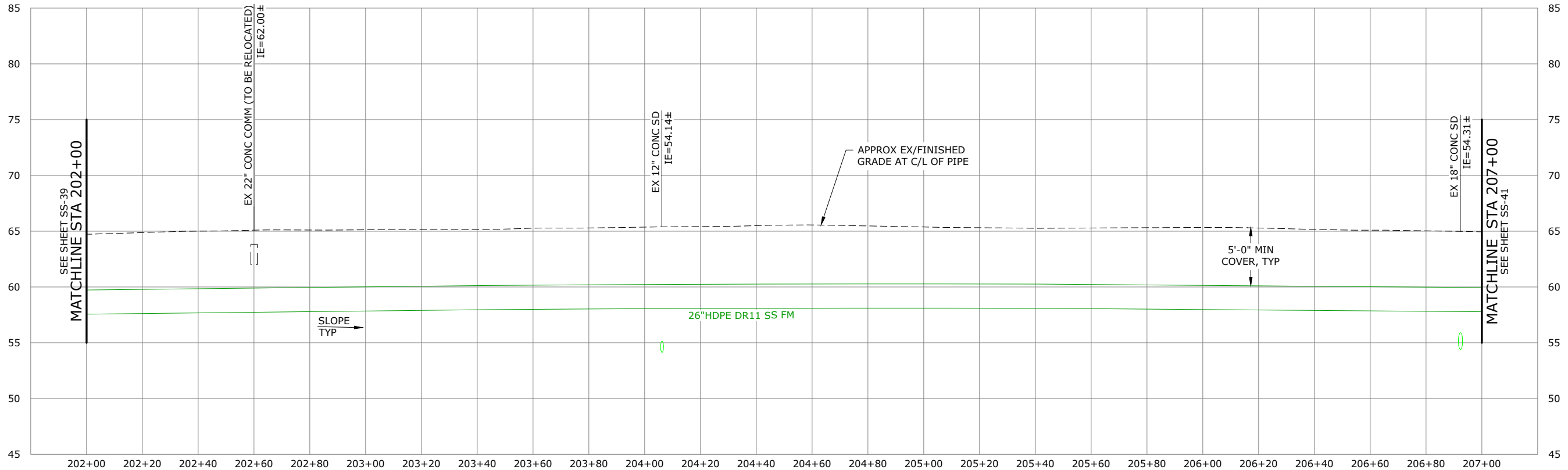
FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 197+00 TO
STA 202+00
SCHEDULE A
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

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SS-39
53 of 138

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PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ, 1"=5' VERT

NOTES:

1. AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY AND THE UTILITY.
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CONSTRUCTION NOTES:

- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
- 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
- 4 PROTECT EXISTING STORM DRAIN AND MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" FROM STORM DRAIN TO SSFM MEASURED EDGE-TO-EDGE, SEE DET 1, SHT SS-62 FOR PIPE SUPPORT
- 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
- 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
- 18 BURIED TELEPHONE TO BE RELOCATED BY UTILITY

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
DRAWN
EKS
CHECKED



murraysmith



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 202+00
TO STA 207+00
SCHEDULE A

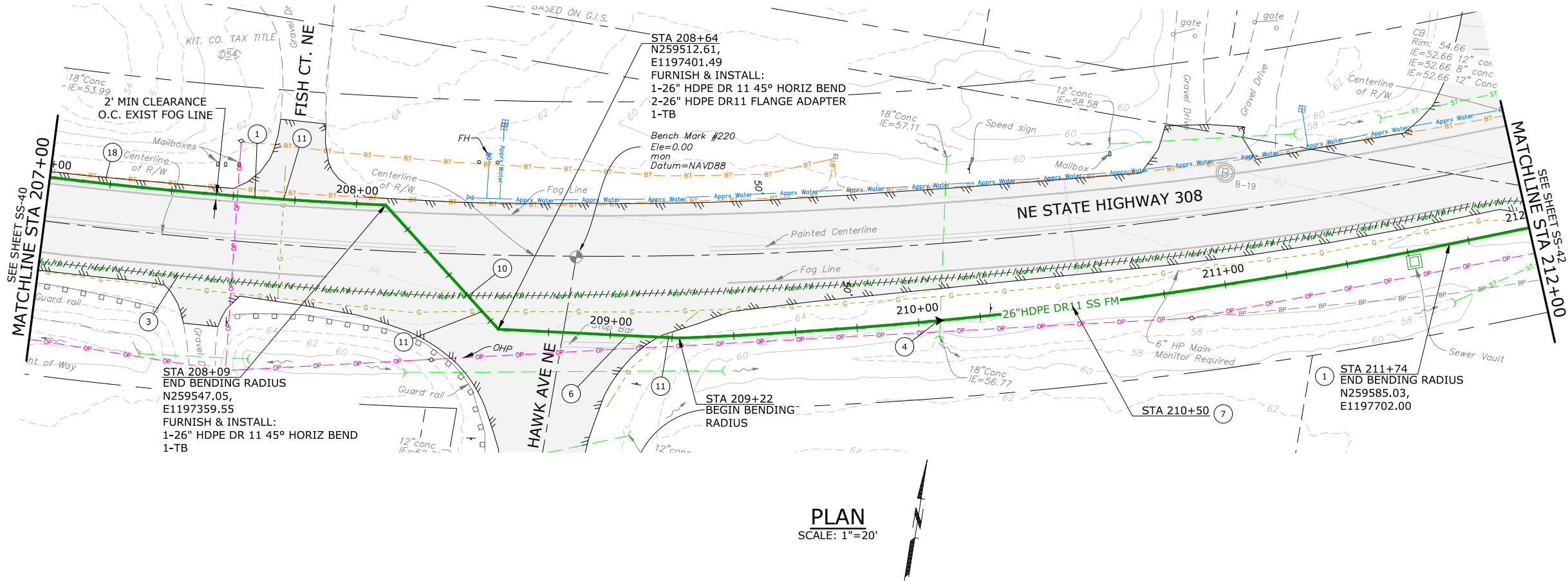
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET

SS-40

54 of 138

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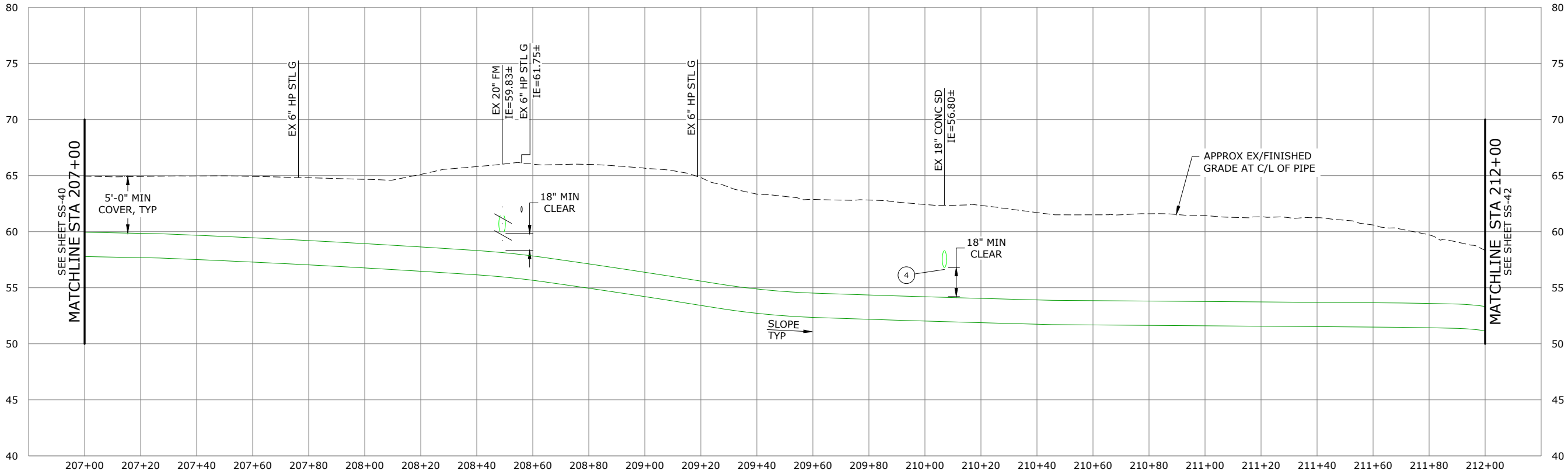


NOTES:

1. AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY AND THE UTILITY.
2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.

CONSTRUCTION NOTES:

- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
- 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
- 4 PROTECT EXISTING STORM DRAIN AND MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" FROM STORM DRAIN TO SSFM MEASURED EDGE-TO-EDGE, SEE DET 1, SHT SS-62 FOR PIPE SUPPORT
- 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
- 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
- 10 PROTECT EXIST SSFM, MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" MEASURED EDGE-TO-EDGE. SEE SPECS FOR ADDITIONAL REQUIREMENTS
- 11 PROTECT EXIST GAS, MAINTAIN MINIMUM VERTICAL SEPARATION OF 12" MEASURED EDGE-TO-EDGE. MONITORING BY GAS UTILITY IS REQUIRED AT ALL TIMES DURING EXCAVATION AND BACKFILL OPERATIONS. WHEN GAS LINE IS EXPOSED RESTORE PIPE BY PACKING 6" OF SAND AROUND THE PIPE.
- 18 BURIED TELEPHONE TO BE RELOCATED BY UTILITY



PROFILE

SCALE: 1"=20' HORIZ, 1"=5' VERT

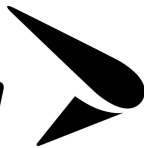
NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
DRAWN
EKS
CHECKED



murraysmith



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 207+00
TO STA 212+00
SCHEDULE A

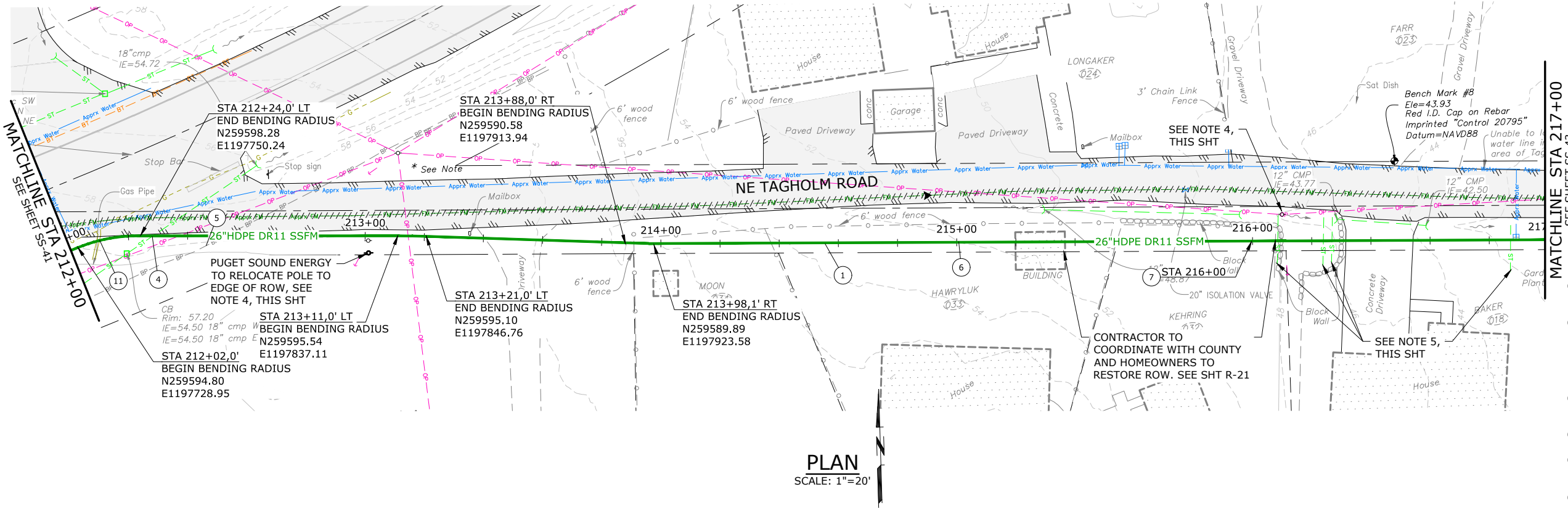
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET

SS-41

55 of 138

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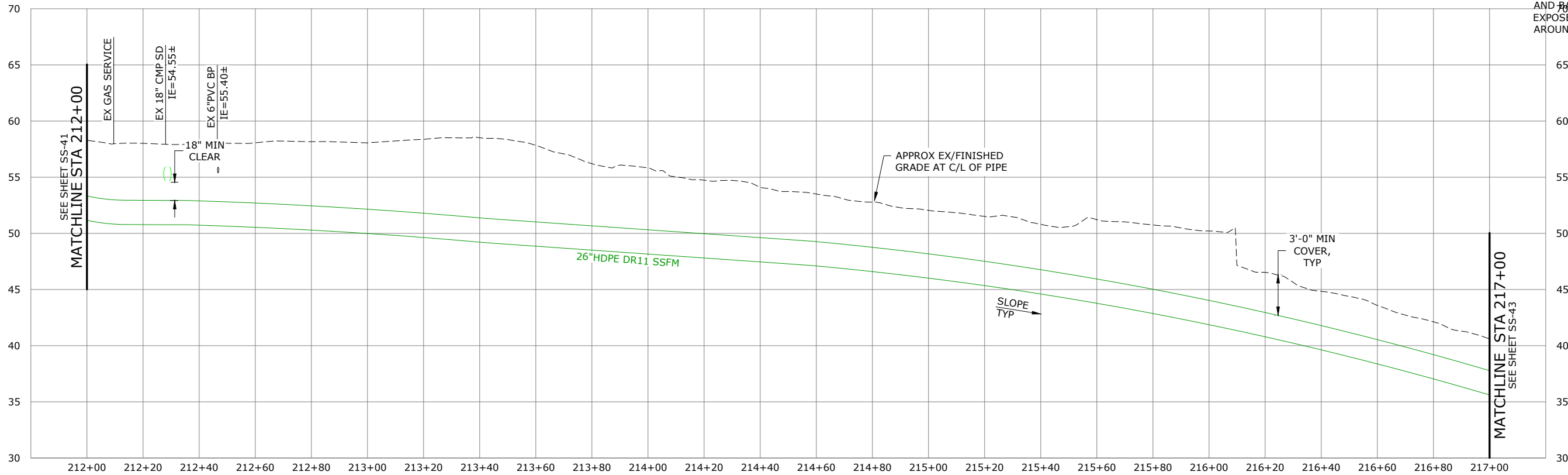


NOTES:

1. AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY AND THE UTILITY.
2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.
3. CONTRACTOR TO COORDINATE WITH FITTING FABRICATOR TO ACHIEVE NON-STANDARD HDPE FITTING ANGLES.
4. CONTRACTOR TO COORDINATE POWER POLE STABILIZATION DURING TRENCHING AND PIPE PLACEMENT OPERATIONS WITH PUGET SOUND ENERGY.
5. APPROX LOCATION EXIST YARD DRAIN, CONTRACTOR TO FIELD VERIFY LOCATION & QUANTITY ALONG TAGHOLM RD. RESTORE CONNECTIONS TO STORM SYSTEM, SEE SHT R-22.

CONSTRUCTION NOTES:

- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
- 4 PROTECT EXISTING STORM DRAIN AND MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" FROM STORM DRAIN TO SSFM MEASURED EDGE-TO-EDGE, SEE DET 1, SHT SS-62 FOR PIPE SUPPORT
- 5 PROTECT EXIST UNDERGROUND POWER AND TELECOMMUNICATION, DURING CONSTRUCTION
- 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
- 7 CONNECT EXIST IPS PER DET 1, SHT SS-57
- 11 PROTECT EXIST GAS, MAINTAIN MINIMUM VERTICAL SEPARATION OF 12" MEASURED EDGE-TO-EDGE. MONITORING BY GAS UTILITY IS REQUIRED AT ALL TIMES DURING EXCAVATION AND BACKFILL OPERATIONS. WHEN GAS LINE IS EXPOSED RESTORE PIPE BY PACKING 6" OF SAND AROUND THE PIPE.



PROFILE
SCALE: 1"=20' HORIZ, 1"=5' VERT

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
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EKS
CHECKED



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

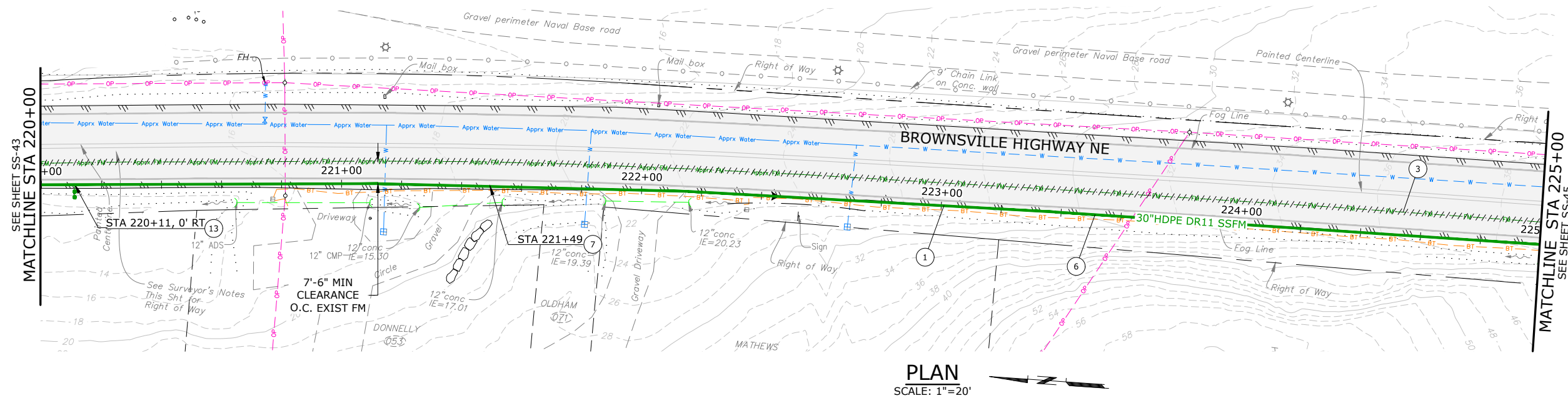
FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 212+00
TO STA 217+00
SCHEDULE A

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET

SS-42

56 of 138



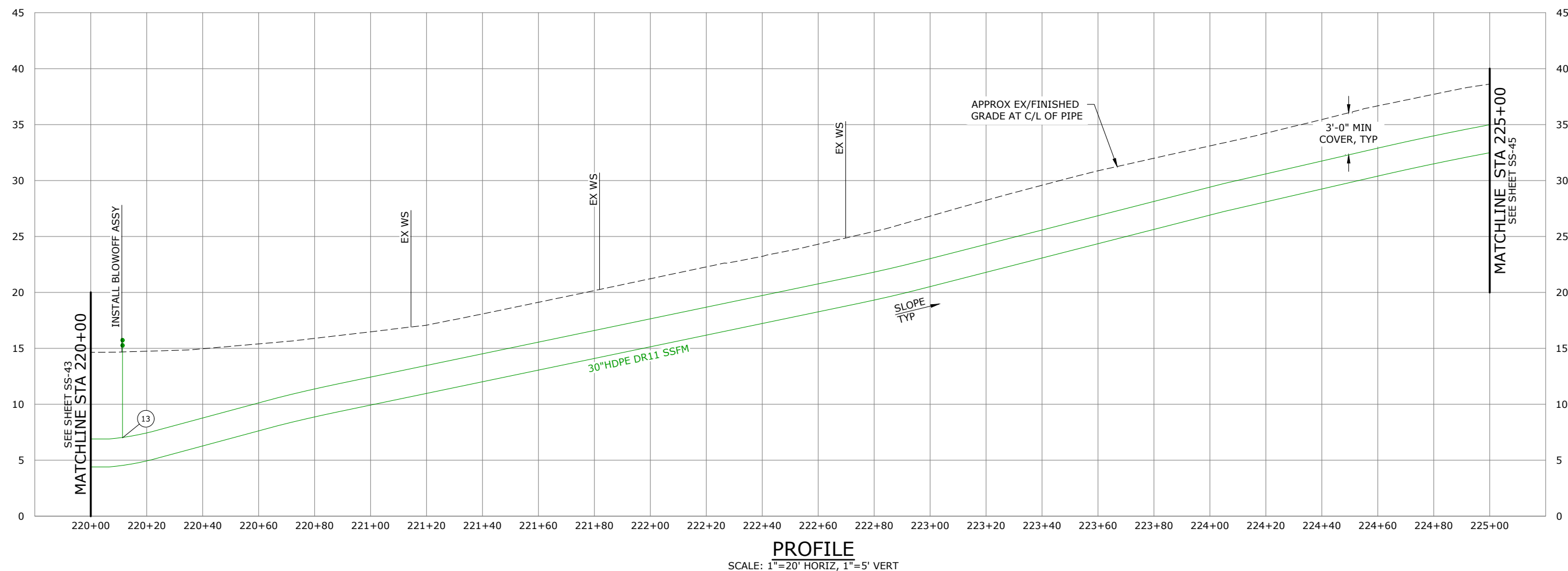
NOTES:

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CONSTRUCTION NOTES:

- ① CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
- ③ ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
- ⑥ SS FM TRENCH SECTION PER DET 3, SHT SS-58
- ⑦ FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
- ⑬ FURNISH & INSTALL BLOW OFF ASSY PER DET 2, SHT SS-58

[illegible]

NOTICE

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IF THIS BAR DOES NOT MEASURE 1 THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
DRAWN
EKS
CHECKED



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BANGOR-KEYPORT FORCE MAIN REPLACEMENT

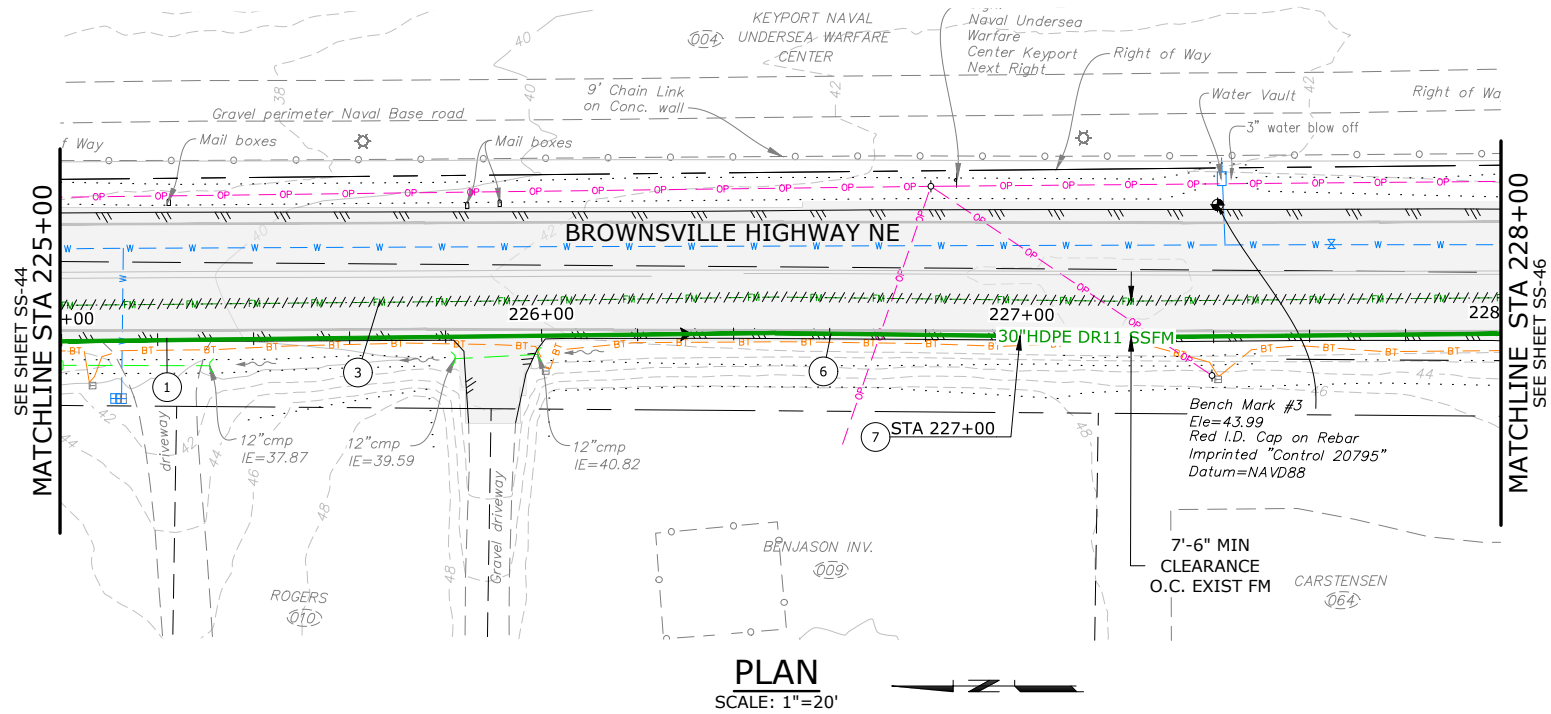
**FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 220+00
TO STA 225+00
SCHEDULE B**

SHEET

SS-44

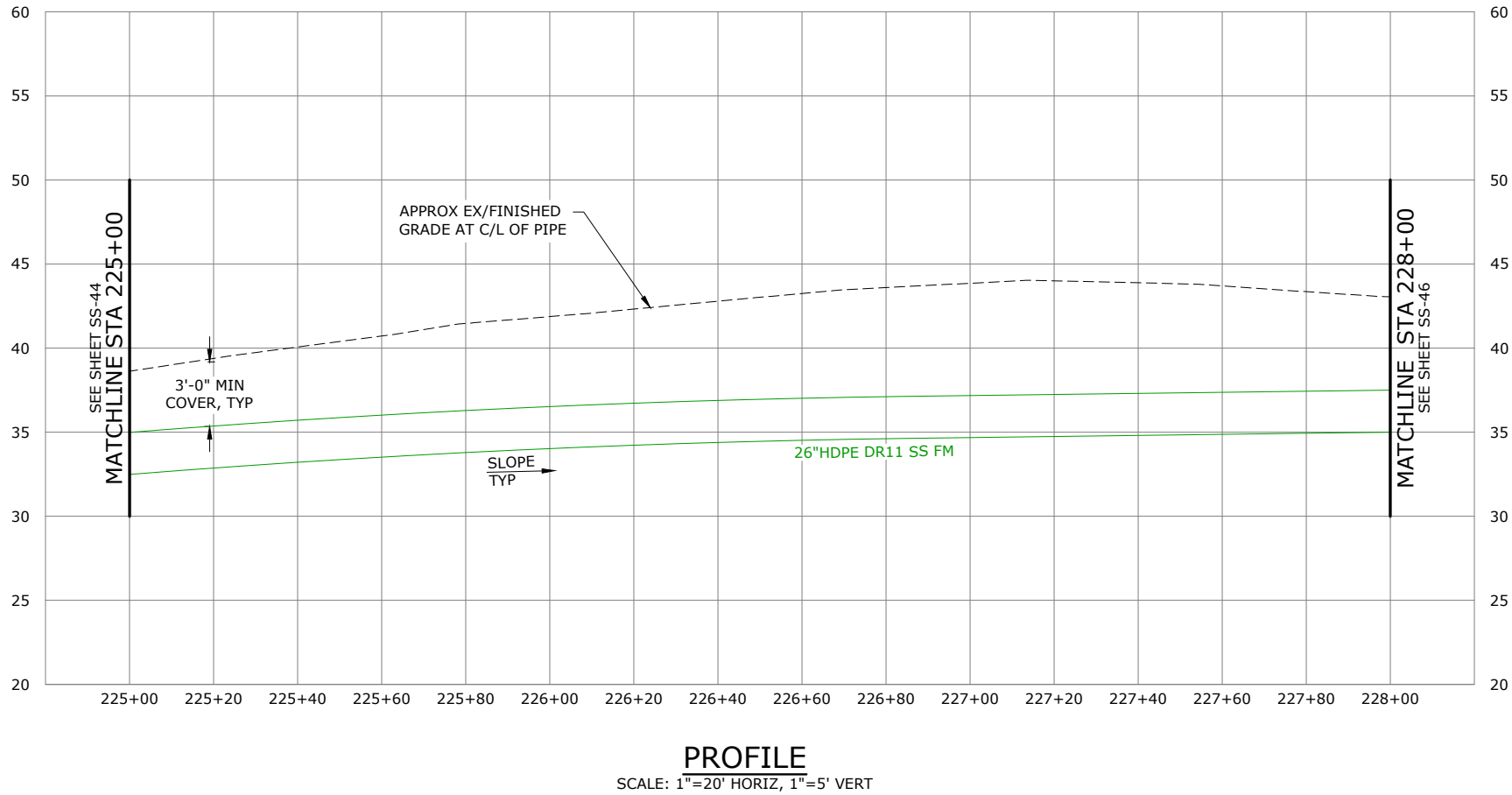
58 of 138

\\ad.msa-ep.com\Everett\evt_projects\20\2815 - Kitsap County Bangor_keyport_fm Replacement\CAD\Sheets\20-2815-WA-CIVIL5.dwg SS-45 2/3/2022 1:06 PM JUSTIN.DEUEL 23.0s (LMS Tech)



- NOTES:
1. AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY AND THE UTILITY.
 2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.

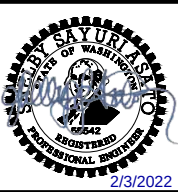
- CONSTRUCTION NOTES:
- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
 - 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
 - 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
 - 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58



NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
DRAWN
EKS
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BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 225+00
TO STA 228+00
SCHEDULE B

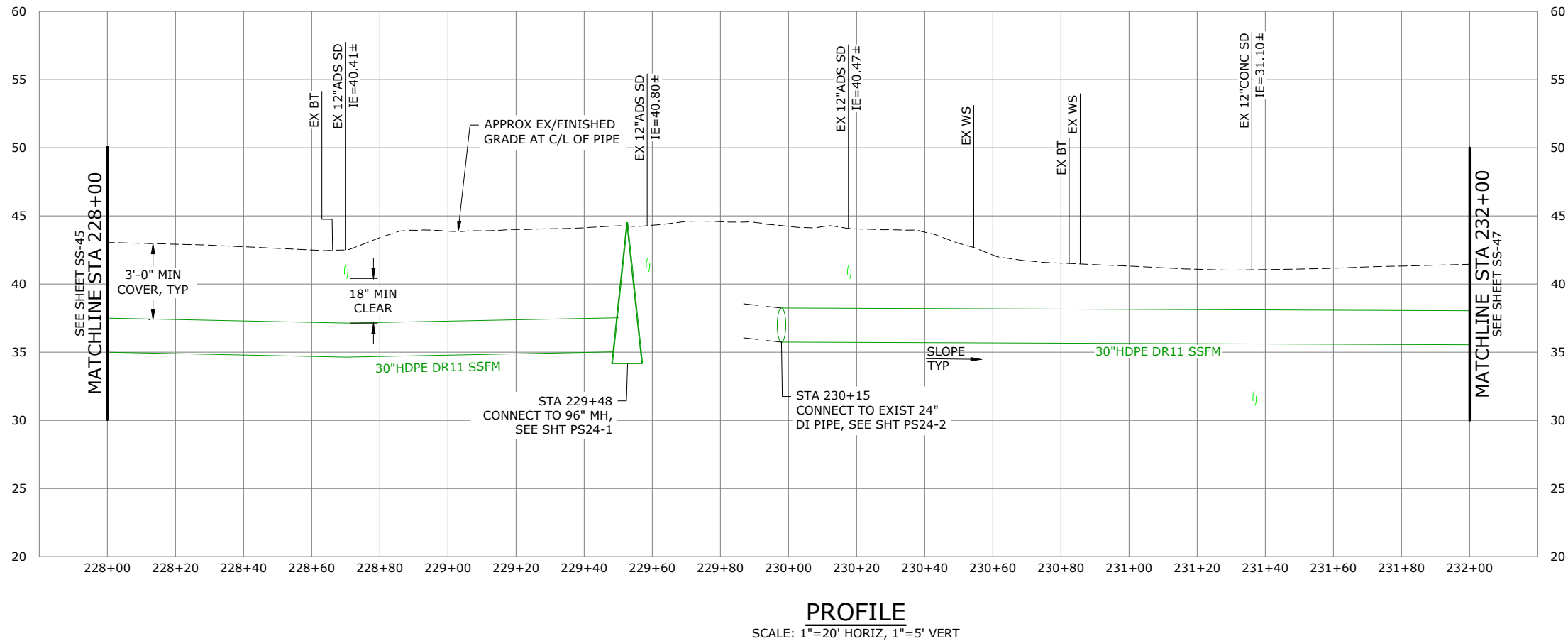
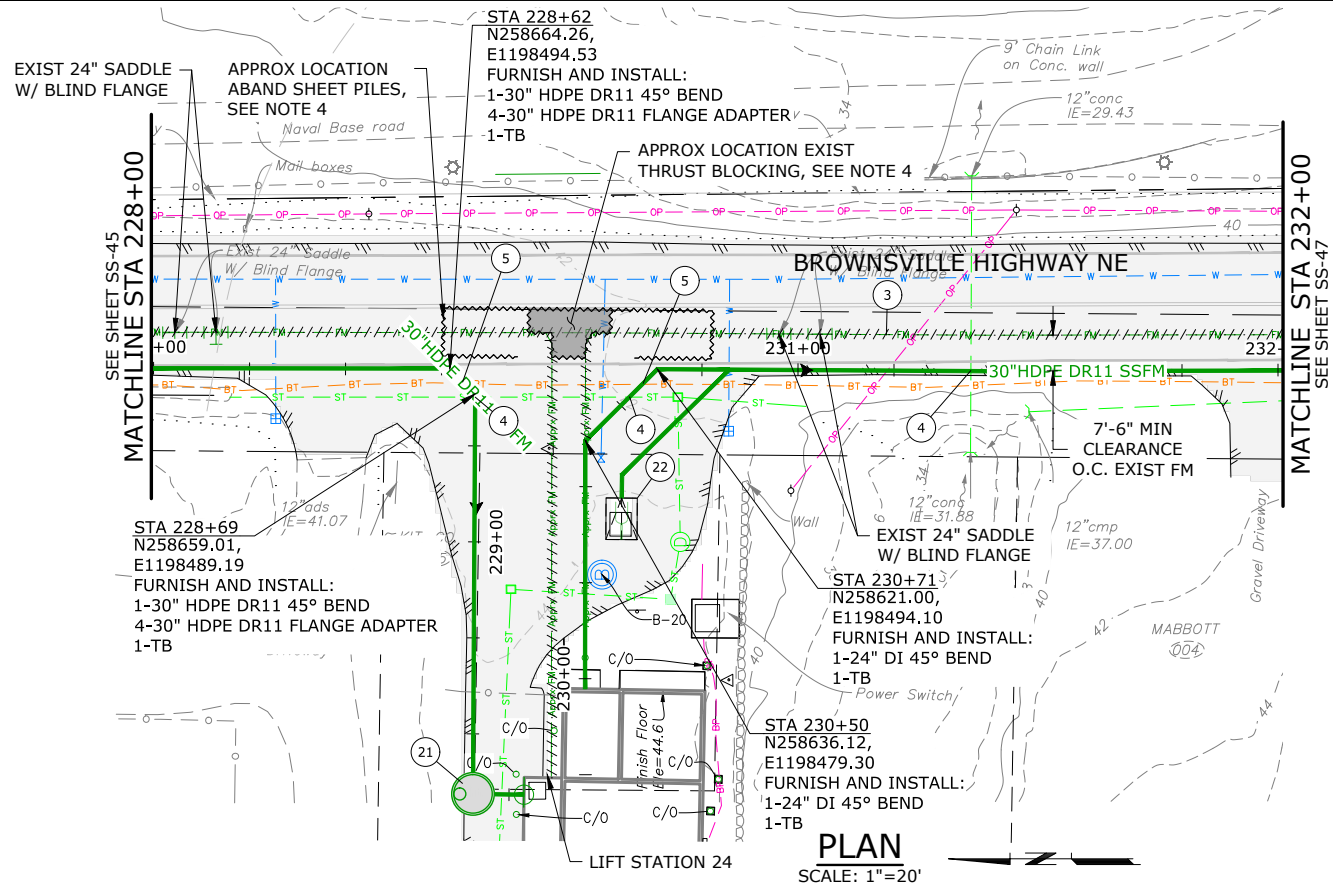
PROJECT NO.: 20-2815 | SCALE: AS SHOWN | DATE: FEBRUARY 2022

SHEET

SS-45

59 of 138

\\ad.msa-ep.com\Everett\evt_projects\20\2815 - Kitsap County Bangor_keyport Fm Replacement\CAD\Sheets\20-2815-WA-CIVIL6.dwg SS-46 2/3/2022 1:12 PM JUSTIN.DEUEL 23.0s (LMS Tech)



- NOTES:**
1. AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY AND THE UTILITY
 2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.
 3. PROTECT EXISTING LANDSCAPING
 4. CONTRACTOR TO REMOVE ANY EXISTING SHEET PILES AND THRUST BLOCKS FOUND TO BE IN CONFLICT WITH NEW WORK
 5. TEMPORARY BYPASS PS 24 FOR WET WELL REHABILITATION AND FINAL CONNECTIONS, SEE SPEC SECTION 01 59 00.
 6. RECOAT WET WELL WITH RAVEN 405 EPOXY COATING SYSTEM, SEE SPEC SECTION 09 96 00
 7. CONTRACTOR SHALL PROTECT EXISTING LANDSCAPING AT ENTIRE PS 24 SITE. CONTRACTOR SHALL COORDINATE WITH THE COUNTY FOR SELECTIVE REMOVAL OF EXISTING LANDSCAPING AS IS REQUIRED TO COMPLETE THE WORK.

- CONSTRUCTION NOTES:**
1. CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
 3. ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
 4. PROTECT EXISTING STORM DRAIN AND MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" FROM STORM DRAIN TO SSFM MEASURED EDGE-TO-EDGE, SEE DET 1, SHT SS-62 FOR PIPE SUPPORT
 5. PROTECT EXIST UNDERGROUND POWER AND TELECOMMUNICATION, DURING CONSTRUCTION
 6. SS FM TRENCH SECTION PER DET 3, SHT SS-58
 21. CONNECT TO 96" MANHOLE & WETWELL AT PS 24, SEE SHT PS 24-1
 22. CONNECT TO EXIST PIG LAUNCH VAULT PER DET 2, SHT PS 24-3

NO.	DATE	BY	REVISION

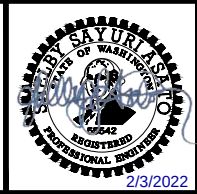
NOTICE

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1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
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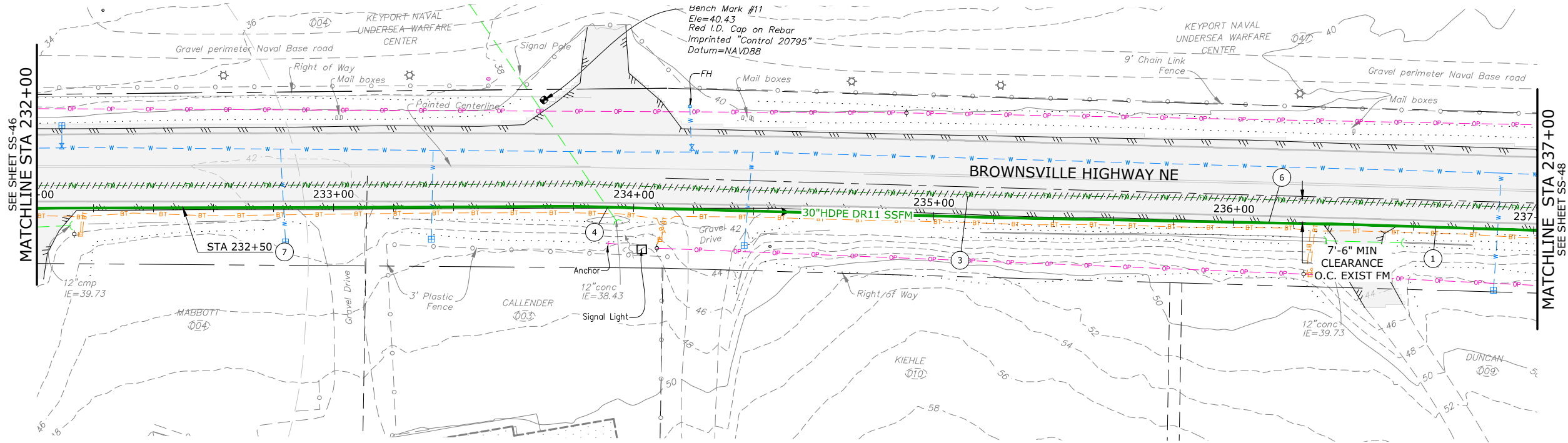


BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

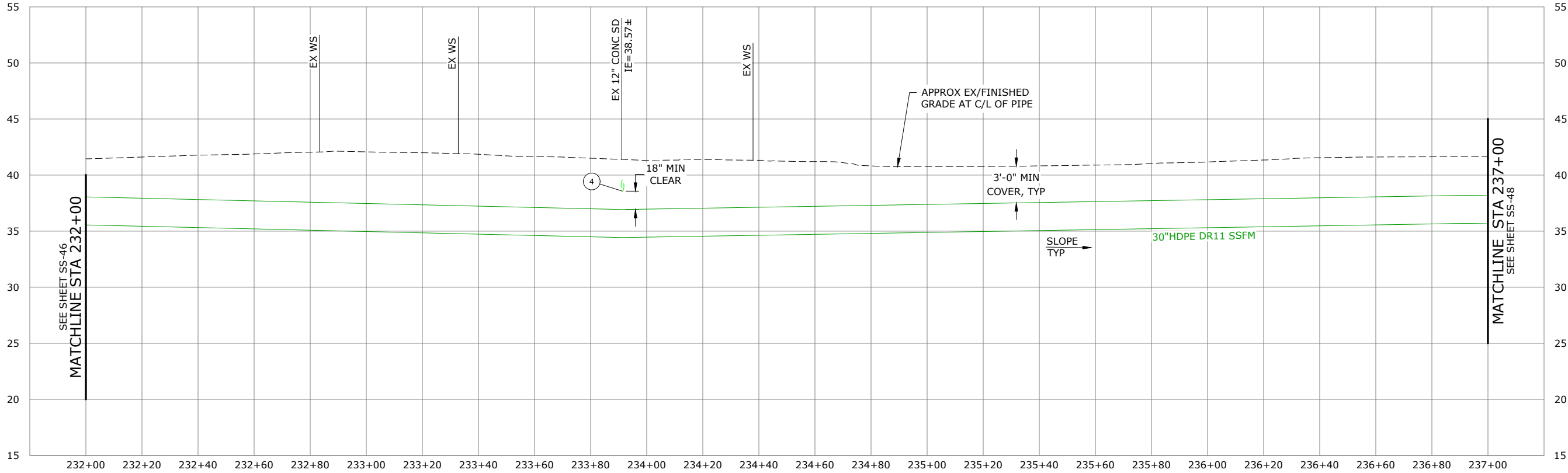
FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 228+00 TO
STA 232+00
SCHEDULE B

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

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PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ, 1"=5' VERT

NOTES:

1. AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY AND THE UTILITY
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CONSTRUCTION NOTES:

- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
- 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
- 4 PROTECT EXISTING STORM DRAIN AND MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" FROM STORM DRAIN TO SSFM MEASURED EDGE-TO-EDGE, SEE DET 1, SHT SS-62 FOR PIPE SUPPORT
- 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
- 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58

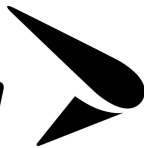
NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
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EKS
CHECKED



murraysmith



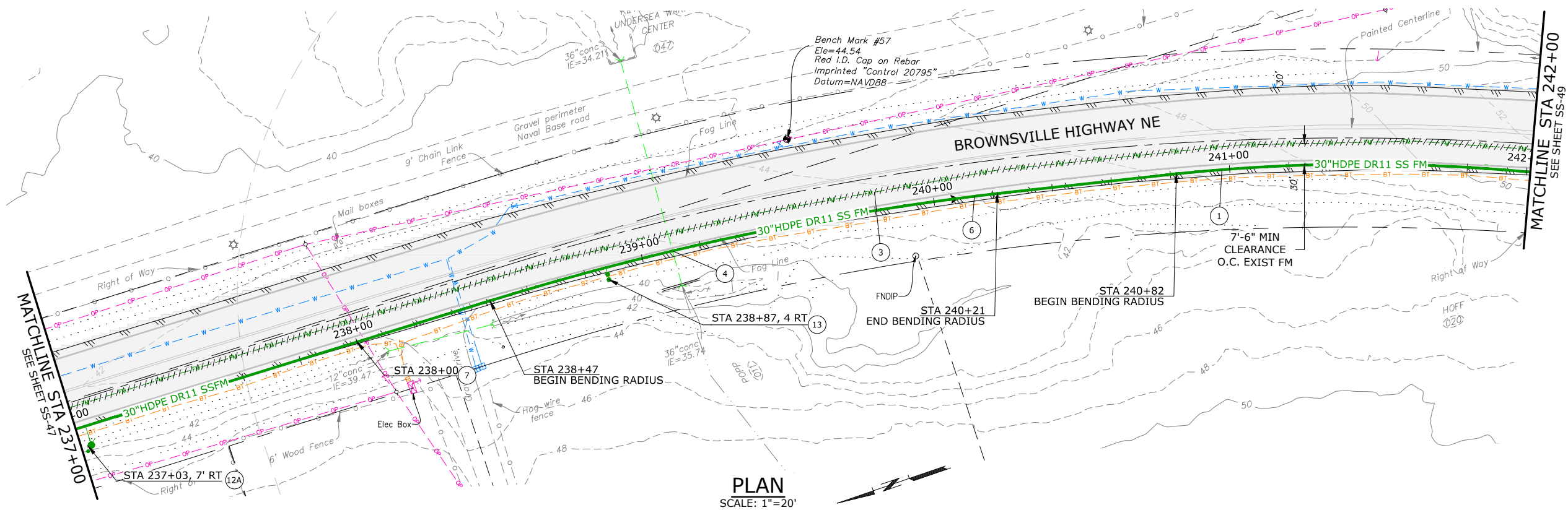
BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 232+00 TO
STA 237+00
SCHEDULE B

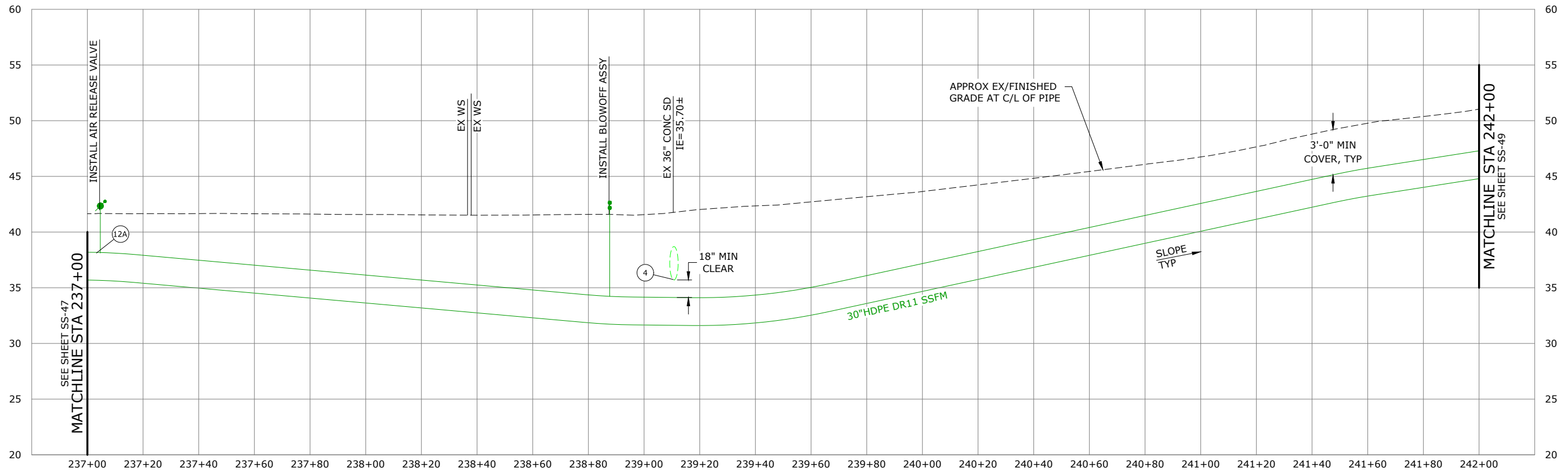
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET
SS-47
61 of 138

\\ad.msa-ep.com\Everett\evt_projects\20\2815 - Kitsap County Bangor_keyport Fm Replacement\CAD\Sheets\20-2815-WA-CIVIL6.dwg SS-48 2/3/2022 1:12 PM JUSTIN.DEUEL 23.0s (LMS Tech)



PLAN
SCALE: 1"=20'



PROFILE
SCALE: 1"=20' HORIZ, 1"=5' VERT

NOTES:

1. AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY AND THE UTILITY
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CONSTRUCTION NOTES:

1. CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
3. ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
4. PROTECT EXISTING STORM DRAIN AND MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" FROM STORM DRAIN TO SSFM MEASURED EDGE-TO-EDGE, SEE DET 1, SHT SS-62 FOR PIPE SUPPORT
6. SS FM TRENCH SECTION PER DET 3, SHT SS-58
7. FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
- 12A. FURNISH & INSTALL 2" AIR RELEASE VALVE PER DET 1, SHT SS-59
13. FURNISH & INSTALL BLOW OFF ASSY PER DET 2, SHT SS-58

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
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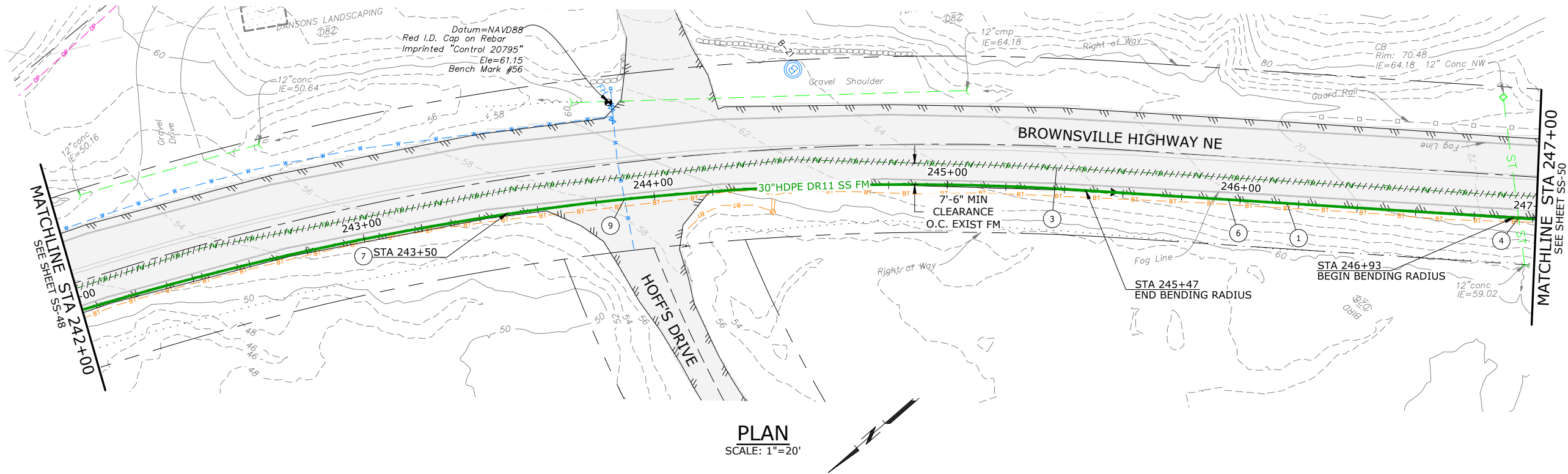


BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT PLAN & PROFILE STA 237+00 TO STA 242+00 SCHEDULE B			
PROJECT NO.:	20-2815	SCALE:	AS SHOWN
DATE:	FEBRUARY 2022		

SHEET
SS-48
62 of 138

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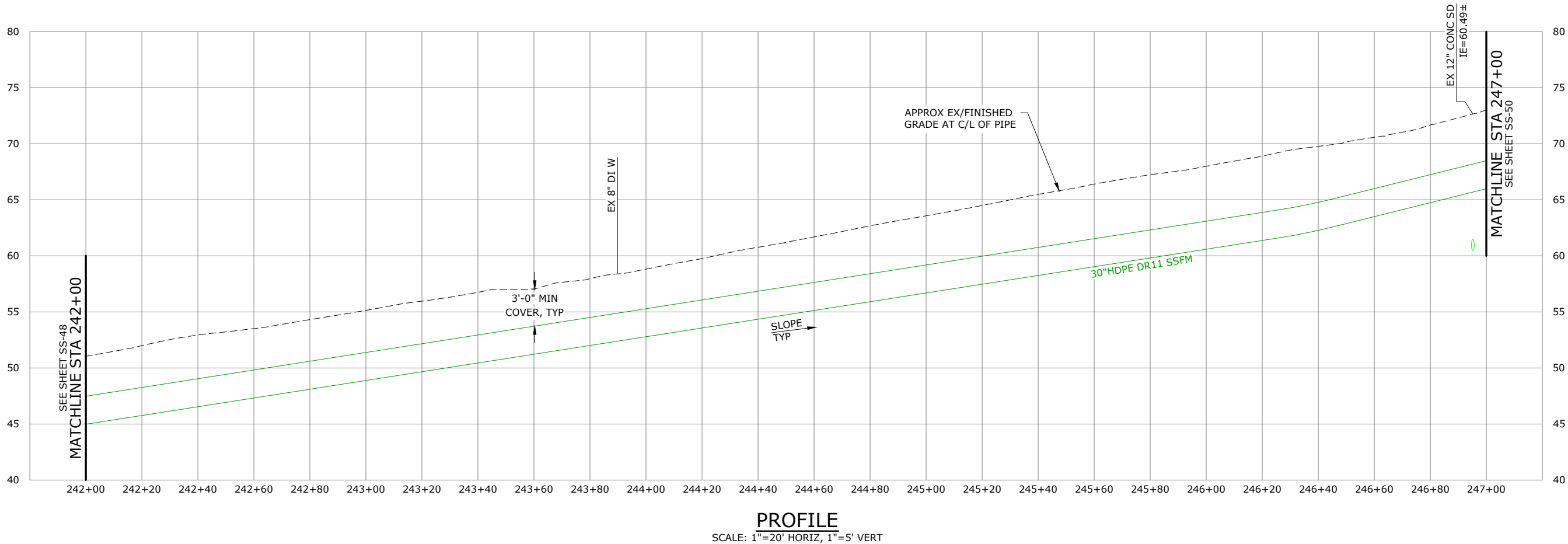


NOTES:

1. AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY AND THE UTILITY
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CONSTRUCTION NOTES:

1. CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
3. ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
4. PROTECT EXISTING STORM DRAIN AND MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" FROM STORM DRAIN TO SSFM MEASURED EDGE-TO-EDGE, SEE DET 1, SHT SS-62 FOR PIPE SUPPORT
6. SS FM TRENCH SECTION PER DET 3, SHT SS-58
7. FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58
9. PROTECT EXISTING WATER MAIN AND MAINTAIN MINIMUM VERTICAL SEPARATION OF 18" FROM WATER MAIN MEASURED EDGE-TO-EDGE



NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
DRAWN
EKS
CHECKED



murraysmith



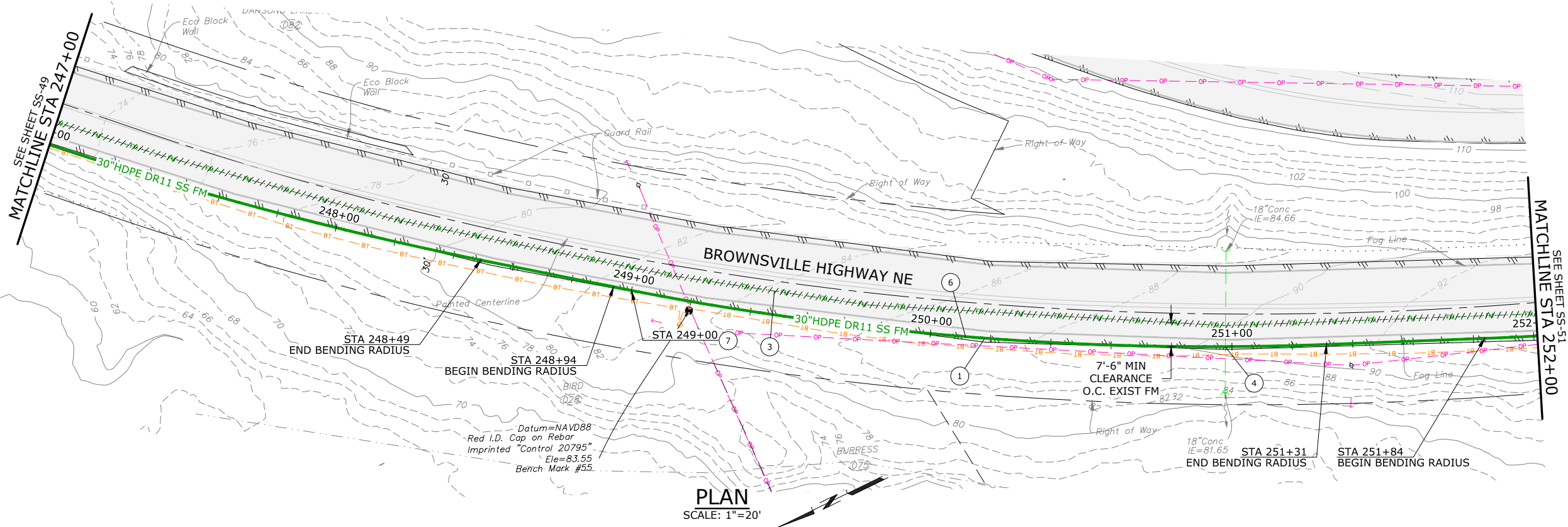
BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 242+00
TO STA 247+00
SCHEDULE B

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

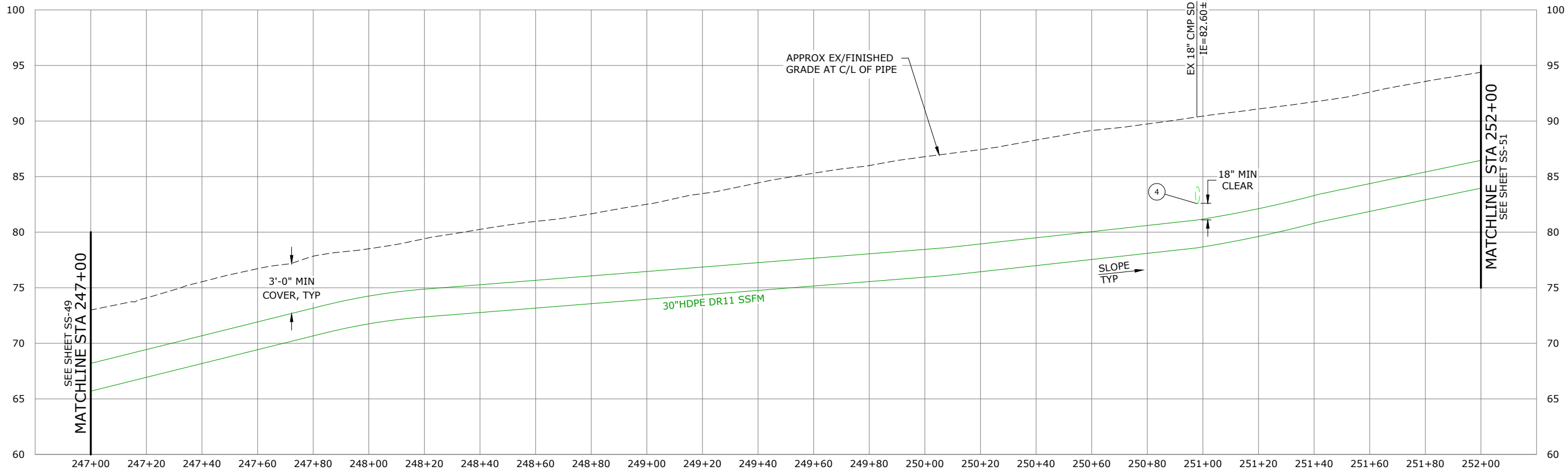
SHEET
SS-49
63 of 138

\\ad.msa-ep.com\Everett\evt_projects\20\2815 - Kitsap County Bangor_keyport Fm Replacement\CAD\Sheets\20-2815-WA-CIVIL6.dwg SS-50 2/3/2022 1:12 PM JUSTIN.DEUEL 23.0s (LMS Tech)



- NOTES:
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 - 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
 - 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58



PROFILE
SCALE: 1"=20' HORIZ, 1"=5' VERT

NO.	DATE	BY	REVISION

NOTICE
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IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
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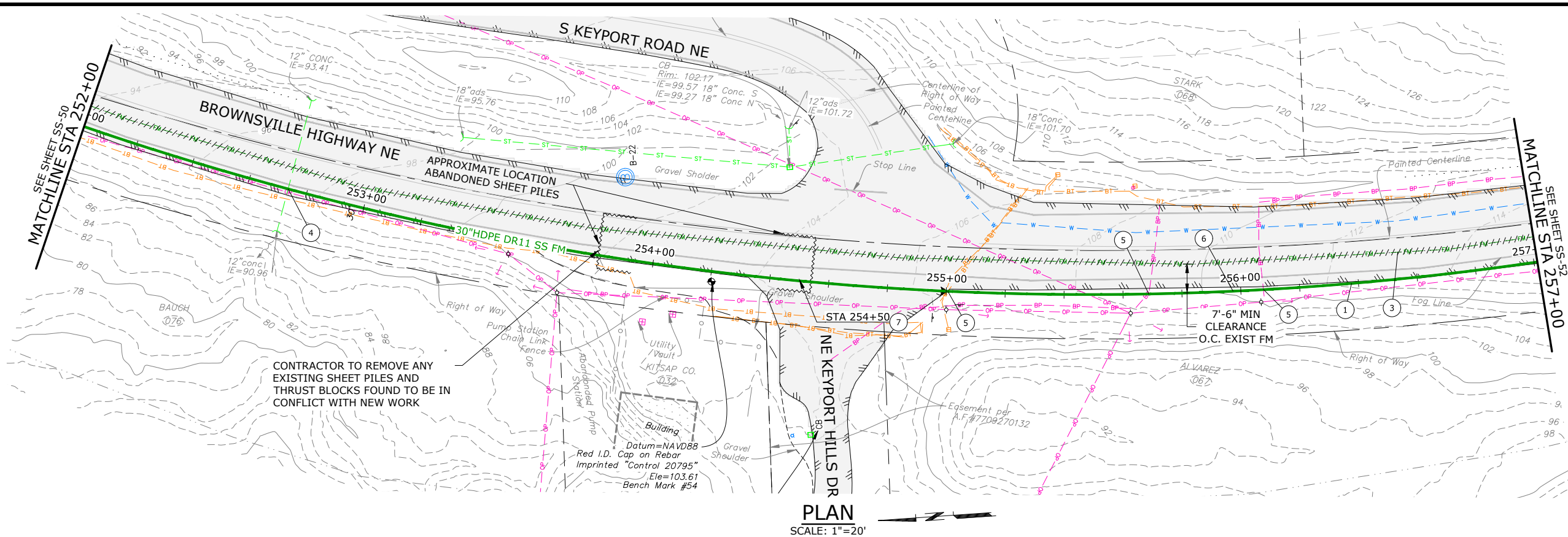


BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 247+00
TO STA 252+00
SCHEDULE B

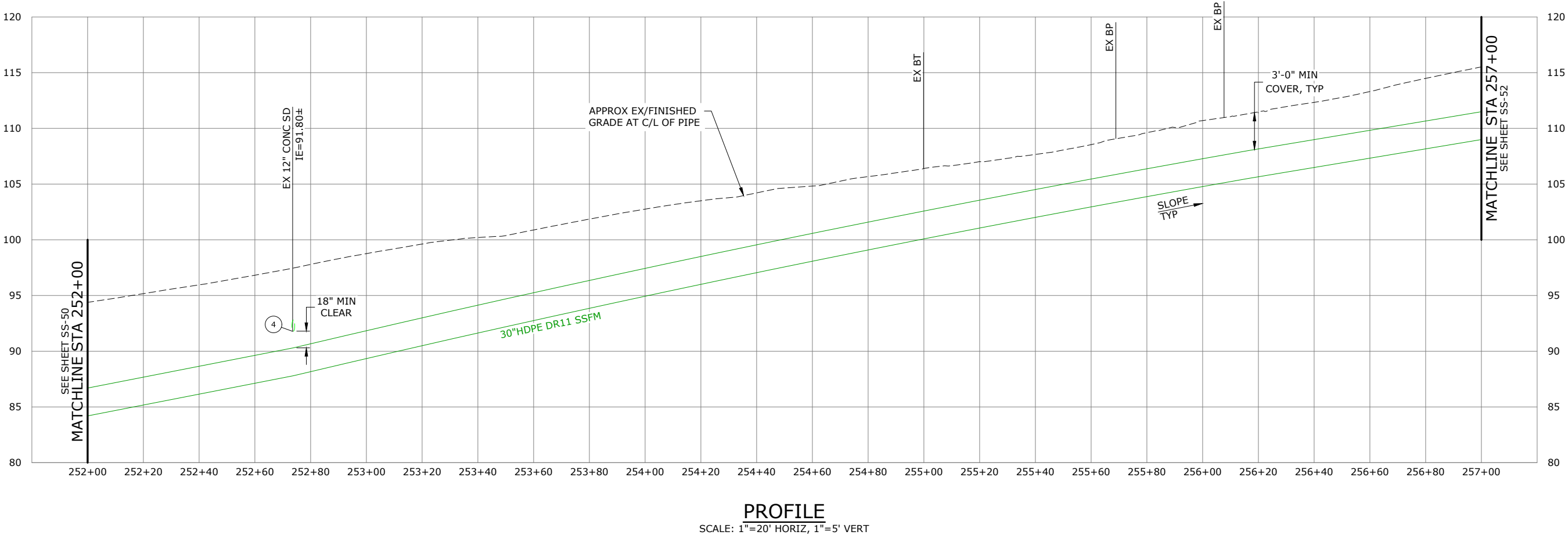
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

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- NOTES:
1. AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY AND THE UTILITY
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 5. PROTECT EXIST UNDERGROUND POWER AND TELECOMMUNICATION, DURING CONSTRUCTION
 6. SS FM TRENCH SECTION PER DET 3, SHT SS-58
 7. FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58



NO.	DATE	BY	REVISION

NOTICE

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IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
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CHECKED



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 252+00
TO STA 257+00
SCHEDULE B

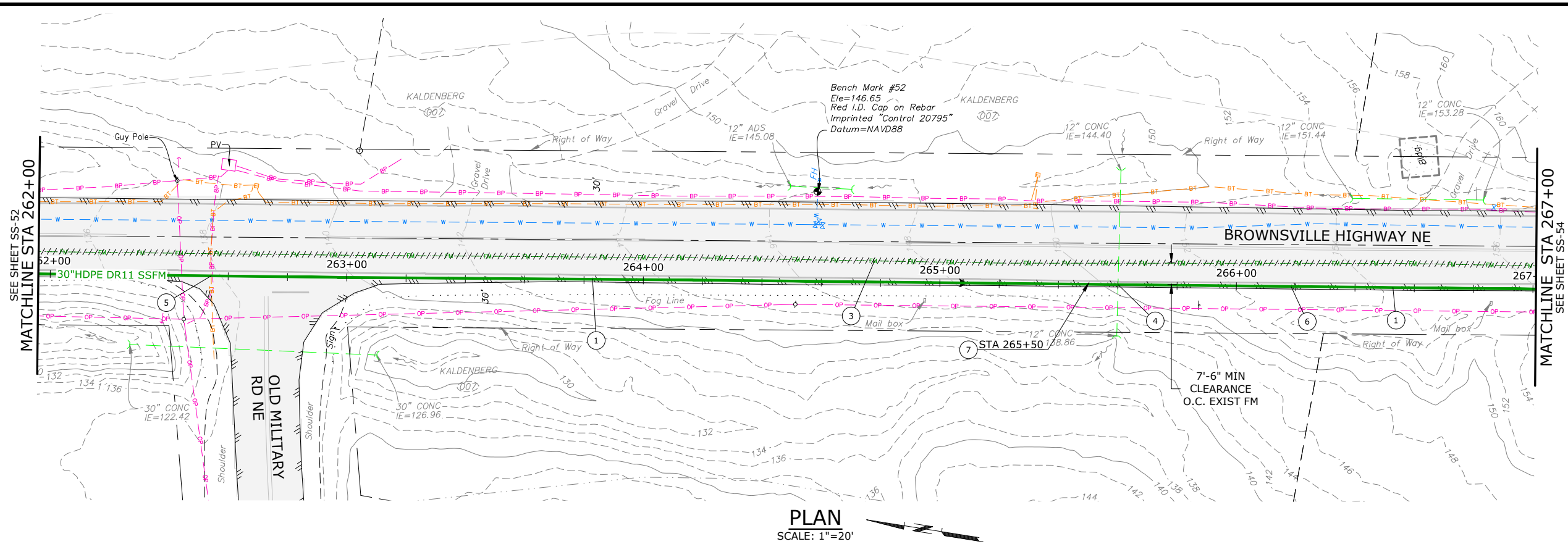
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET

SS-51

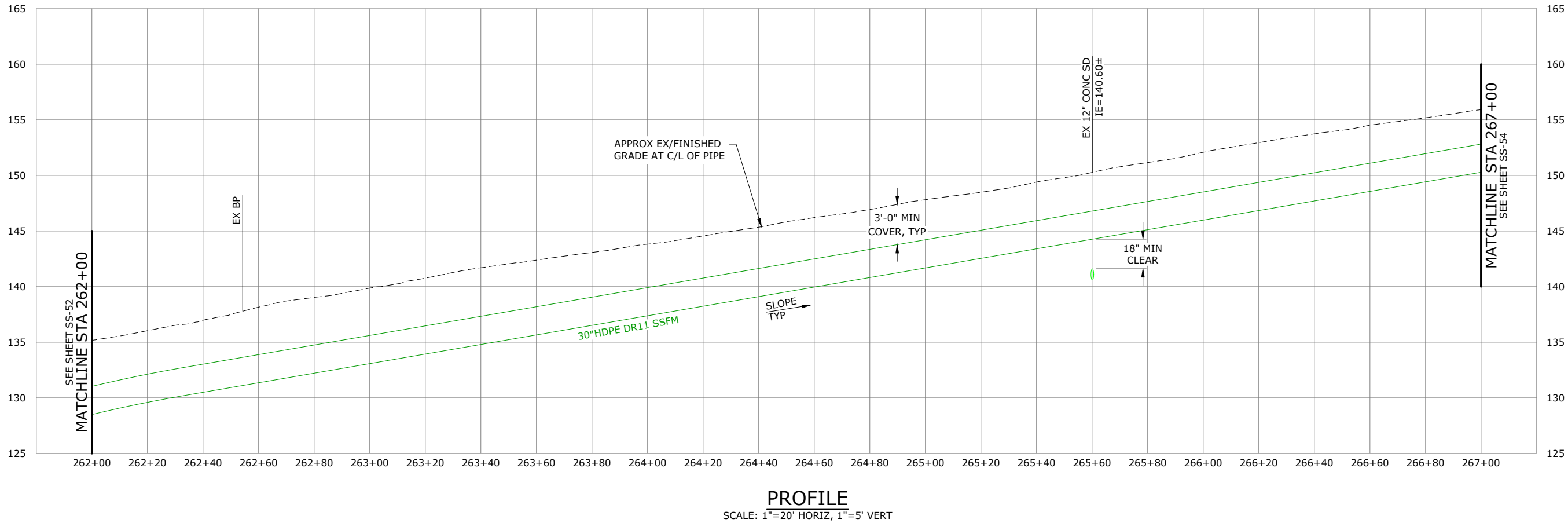
65 of 138

\\ad.msa-ep.com\Everett\evt_projects\20\2815 - Kitsap County Bangor_keyport Fm Replacement\CAD\Sheets\20-2815-WA-CIVIL6.dwg SS-53 2/3/2022 1:12 PM JUSTIN.DEUEL 23.0s (LMS Tech)



- NOTES:
1. AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY AND THE UTILITY
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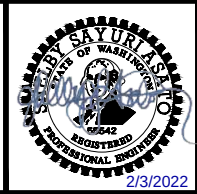
- CONSTRUCTION NOTES:
1. CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
 3. ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
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 5. PROTECT EXIST UNDERGROUND POWER AND TELECOMMUNICATION, DURING CONSTRUCTION
 6. SS FM TRENCH SECTION PER DET 3, SHT SS-58
 7. FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58



NO.	DATE	BY	REVISION

NOTICE
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IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
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EKS
CHECKED

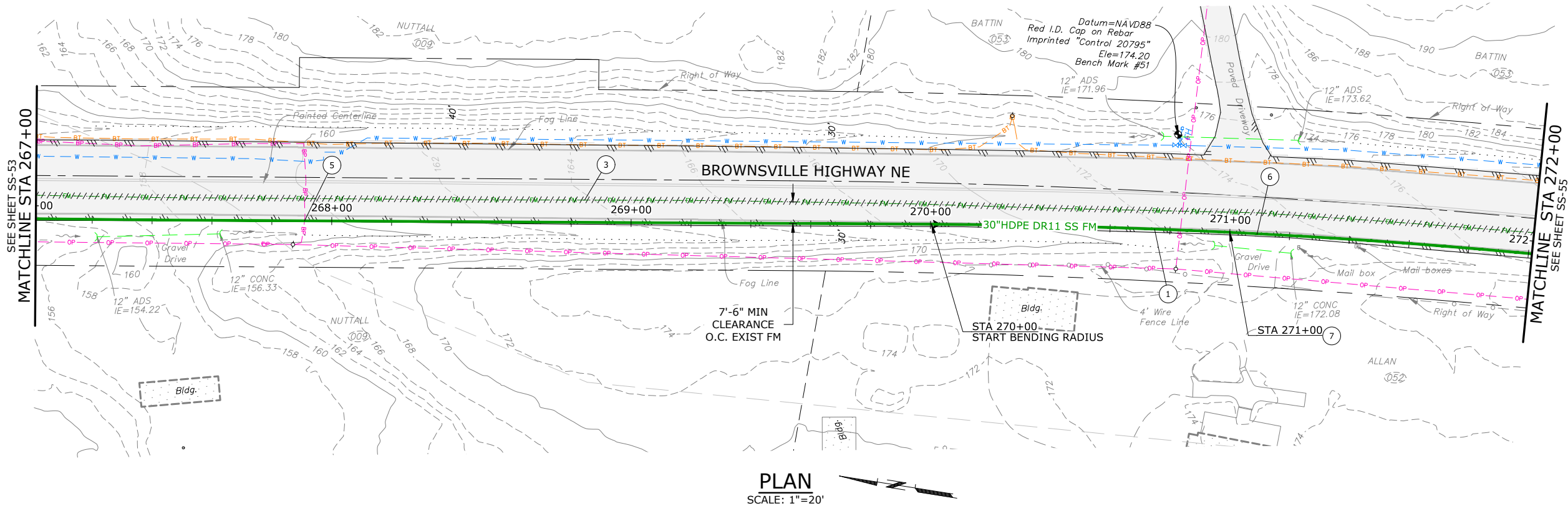


BANGOR-KEYPORT
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REPLACEMENT

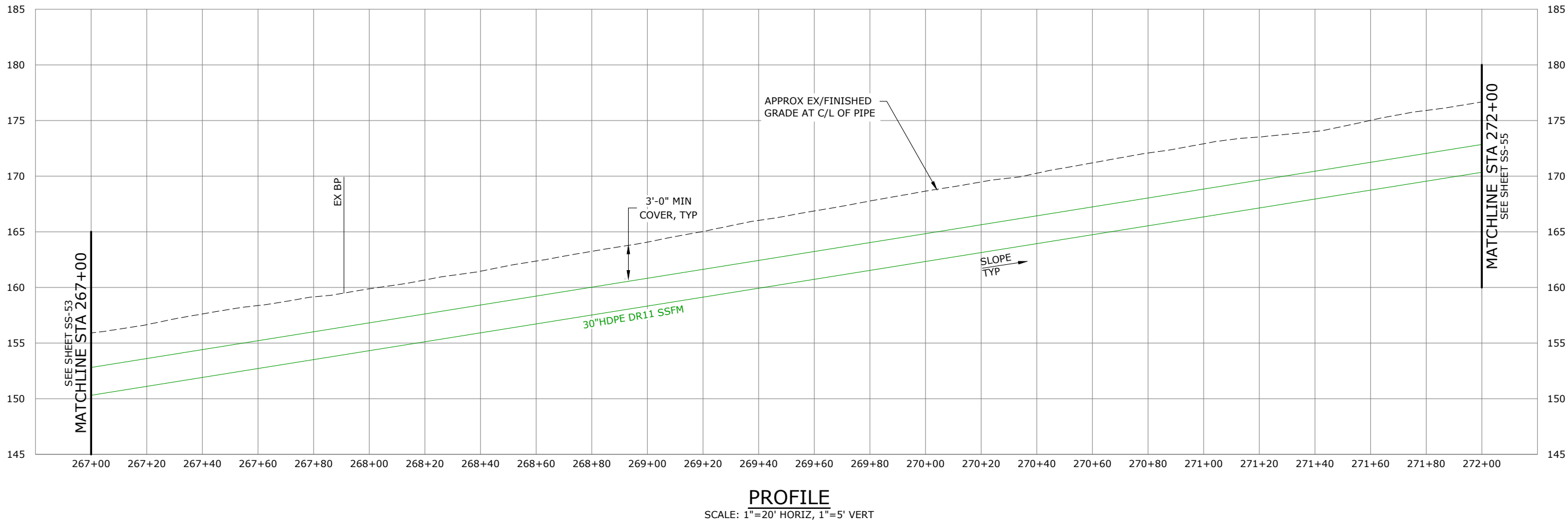
FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 262+00
TO STA 267+00
SCHEDULE B

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

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- ① CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
 - ③ ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
 - ⑤ PROTECT EXIST UNDERGROUND POWER AND TELECOMMUNICATION, DURING CONSTRUCTION
 - ⑥ SS FM TRENCH SECTION PER DET 3, SHT SS-58
 - ⑦ FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58



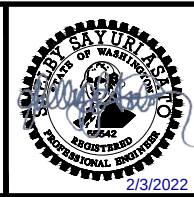
NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
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BAW
DRAWN
EKS
CHECKED



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

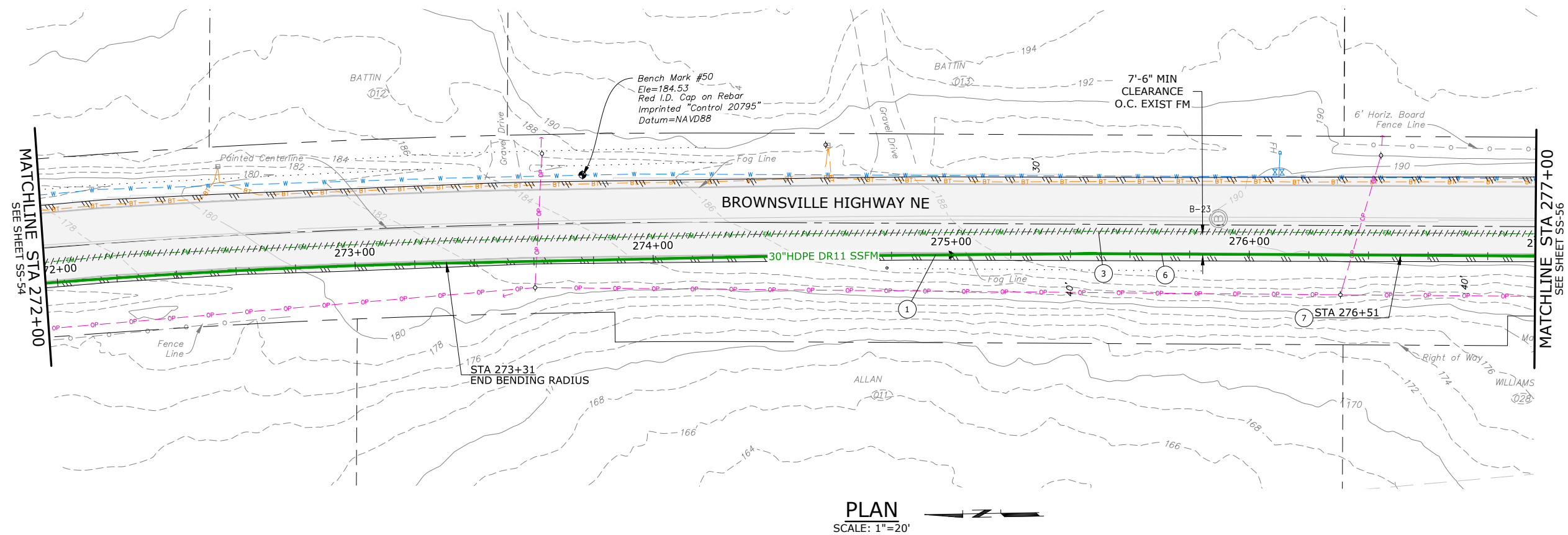
FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 267+00
TO STA 272+00
SCHEDULE B

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET

SS-54

68 of 138



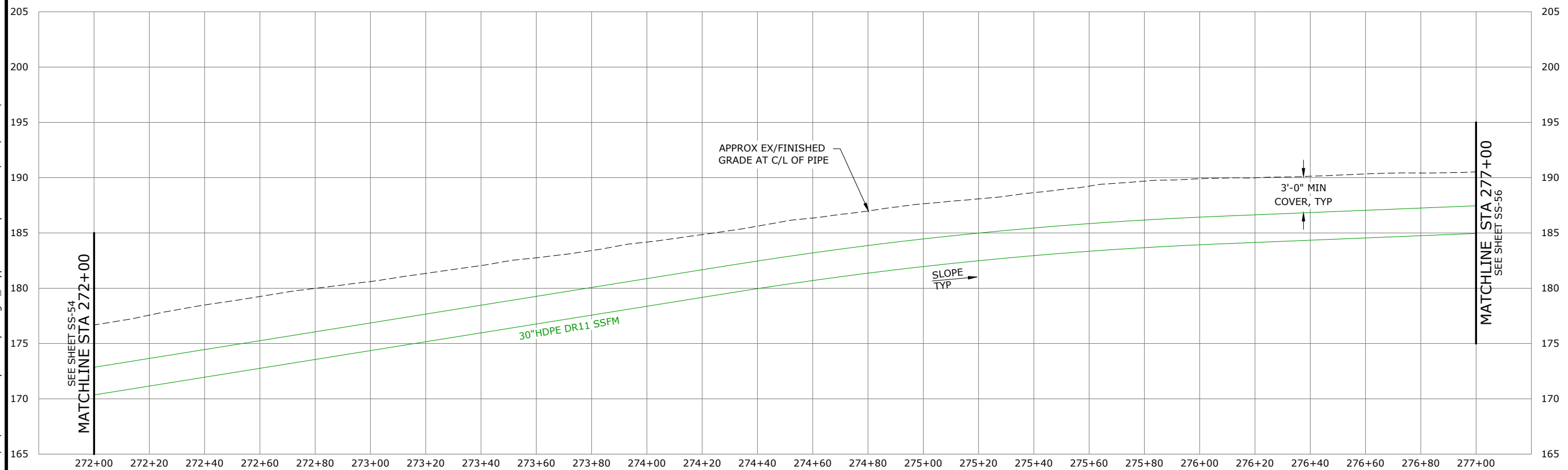
NOTES:

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CONSTRUCTION NOTES:

- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
- 3 ABAND EXIST SS FM & APPURTENANCES IN ACCORDANCE W/ SPECS
- 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
- 7 FURNISH & INSTALL TRACER WIRE AND HANDHOLE PER DET 1, SHT SS-58

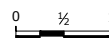


PROFILE

SCALE: 1"=20' HORIZ, 1"=5' VERT

NO.	DATE	BY	REVISION

NOTICE



IF THIS BAR DOES
NOT MEASURE 1"
THEN DRAWING IS
NOT TO SCALE

TMH
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murraysmith



BANGOR-KEYPORT FORCE MAIN REPLACEMENT

**SCHEDULE B
FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 272+00 TO
STA 277+00**

PROJECT NO.:	20-2815	SCALE:	AS SHOWN	DATE:	FEBRUARY 2022
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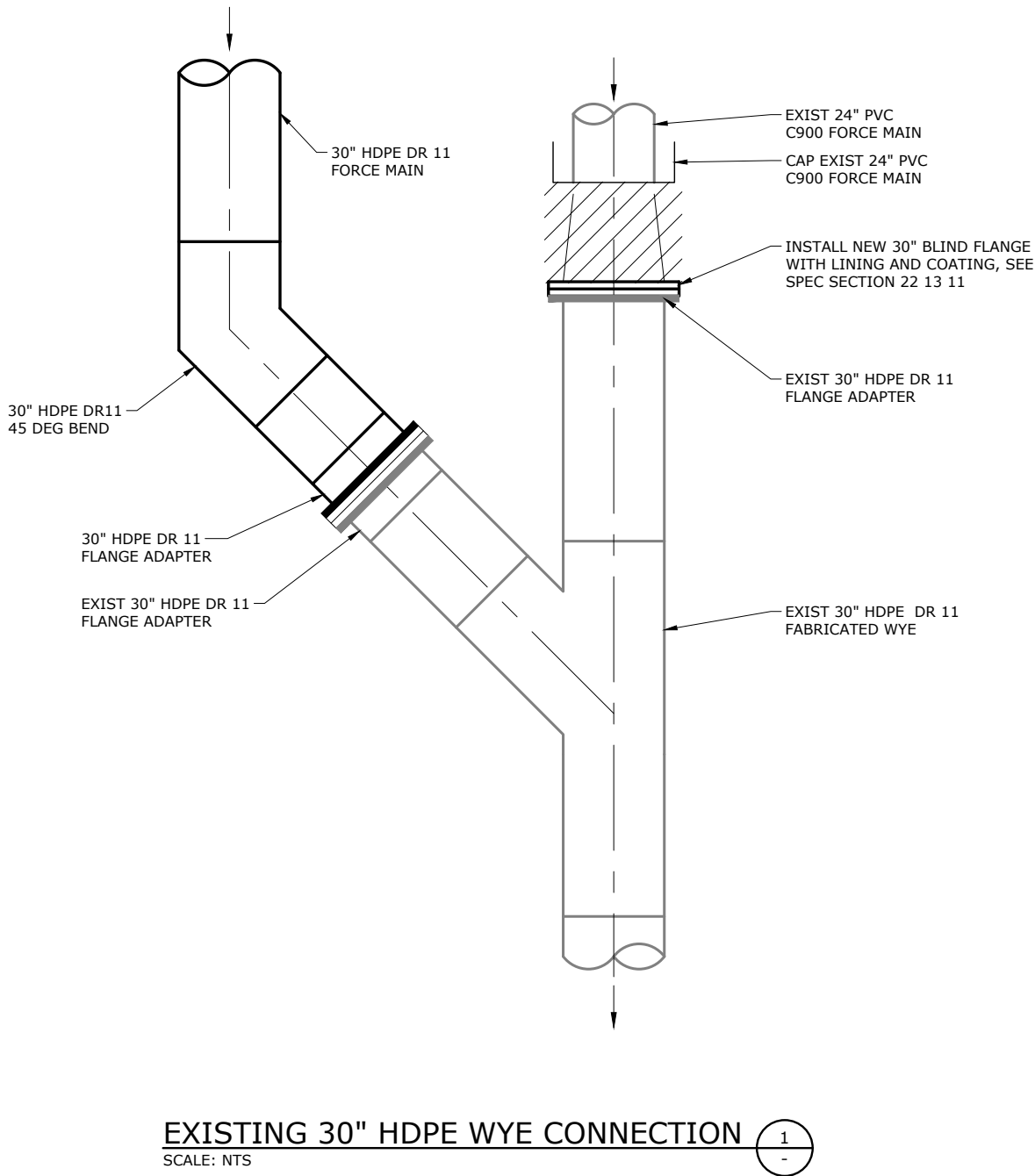
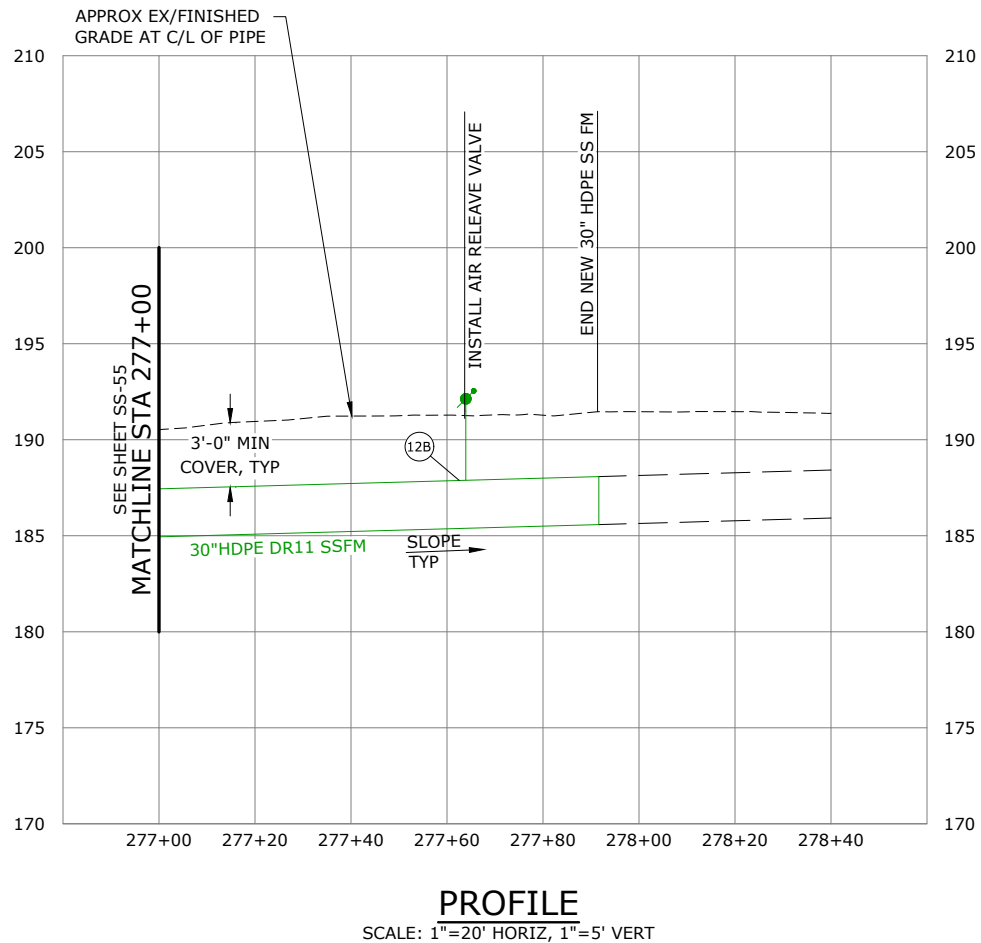
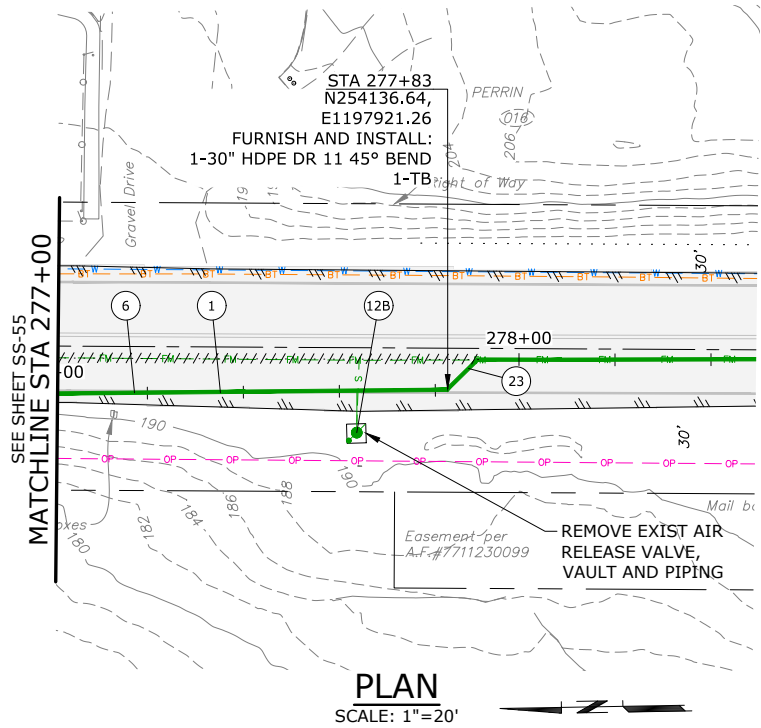
SHEET

SS-55

59 of 138

\\ad.msa-ep.com\Everett\evt_projects\20\2815 - Kitsap County Bangor Fm Replacement\CAD\Sheets\20-2815-WA-CIVIL7.dwg SS-55 2/3/2022 11:42 AM JUSTIN.DEUEL 23.0s (LMS Tech)

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NOTES:

1. AVOID EXISTING UTILITIES (WATER, NATURAL GAS, ELECTRICITY, CABLE/COMMUNICATIONS, STORM, IRRIGATION, ETC.) AND ASSOCIATED STRUCTURES. IF THE WORK REQUIRES THAT EXISTING UTILITIES BE PERMANENTLY OR TEMPORARILY RELOCATED, THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY AND THE UTILITY.

2. BEND PIPE TO ACHIEVE DESIRED ALIGNMENT AND NOT TO EXCEED MINIMUM ALLOWABLE BENDING RADIUS, PER MANUFACTURER RECOMMENDATIONS.

3. SEE SPEC SECTION 01 12 16 FOR SUGGESTED WORK/FINAL CONNECTION SEQUENCE.

CONSTRUCTION NOTES:

- 1 CONSTRUCTION CL EQUALS PROPOSED PIPE CL, SEE SURVEY CONTROL PLAN, SHT G-5
- 6 SS FM TRENCH SECTION PER DET 3, SHT SS-58
- 12B FURNISH & INSTALL 3" AIR RELEASE VALVE PER DET 2, SHT SS-59
- 23 CONNECT TO EXISTING 30" HDPE WYE PER DET 1, THIS SHT

NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

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BAW
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EKS
CHECKED



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BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

FORCE MAIN REPLACEMENT
PLAN & PROFILE STA 277+00
TO STA 278+40
SCHEDULE B

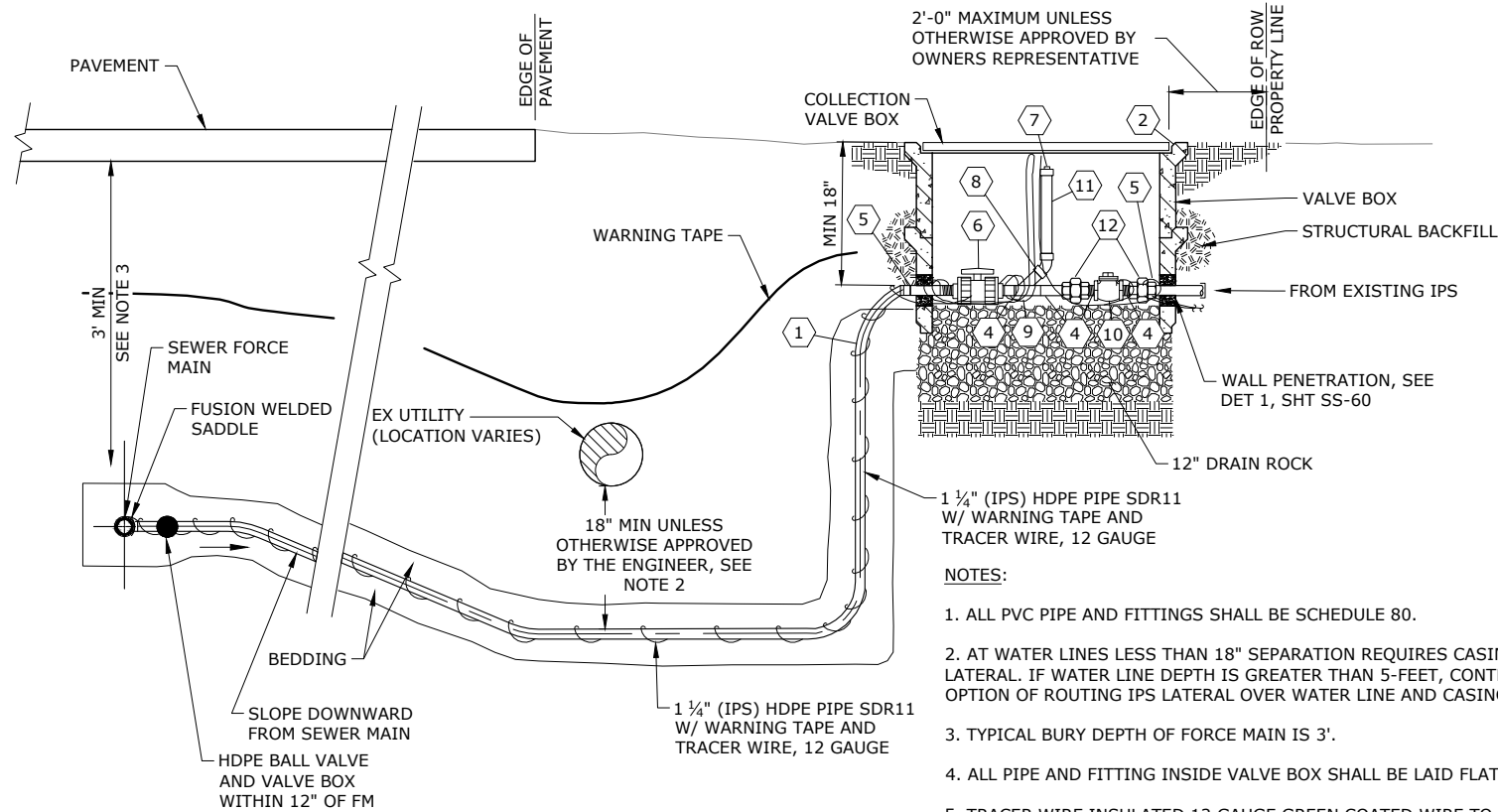
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET

SS-56

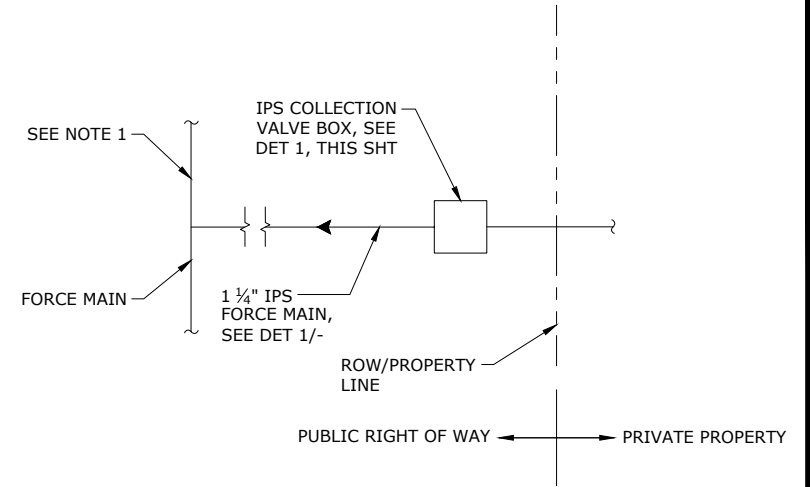
70 of 138

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MATERIAL LIST:
ALL PIPE, FITTINGS AND VALVES SHALL BE MPT THREADED SCH 80 PVC,
UNLESS OTHERWISE NOTED

- 1 1 1/4" PE PRESSURE PIPE SDR 11
- 2 OLDCASTLE POLYMER 2436 WITH POLYMER CONCRETE LID MARKED "SEWER"
- 3 NOT USED
- 4 1 1/4" NIPPLE
- 5 1 1/4" MPT 316 SST IP x HDPE BUTT FUSION TRANSITION FITTING
- 6 1 1/4" BALL VALVE TRUE UNION
- 7 1 1/4" FEMALE PIPE THREAD x HUB ADAPTER W/ THREADED CAP
- 8 1 1/4" 45° BENDS
- 9 1 1/4" WYE
- 10 1 1/4" SWING CHECK VALVE
- 11 1 1/4" PIPE, EXTEND TO WITHIN 3" OF LID UNDER SIDE
- 12 UNION

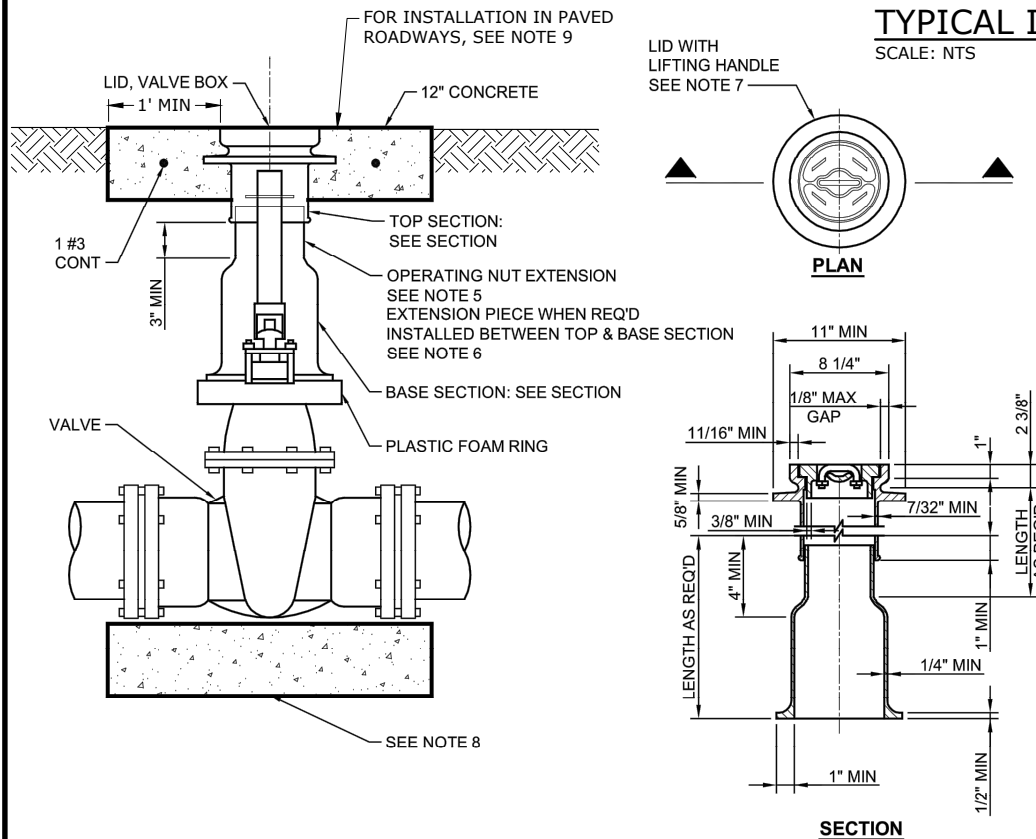


NOTE: SEE DET 1/- FOR FORCE MAIN CONNECTION REQUIREMENTS.

IPS SCHEMATIC DETAIL

SCALE: NTS

2



VALVE AND VALVE BOX DETAIL

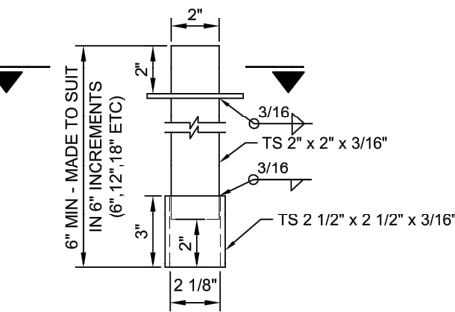
SCALE: NTS

4

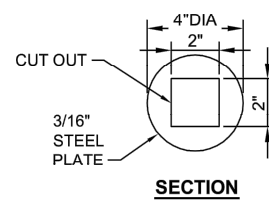
TYPICAL IPS SIDE SEWER CONNECTION DETAIL

SCALE: NTS

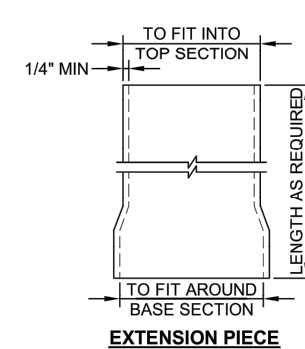
1



OPERATING NUT EXTENSION DETAIL



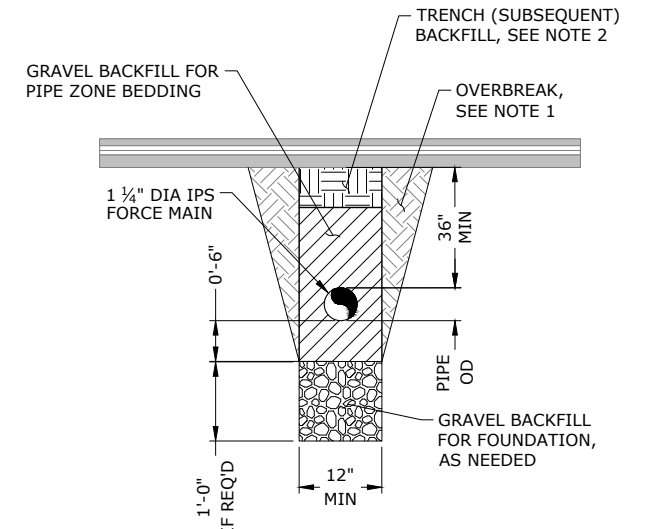
PLASTIC FOAM RING DETAIL



EXTENSION PIECE

NOTES:

1. FRAME AND COVER SHALL BE TESTED FOR ACCURACY OF FIT AND SHALL BE MARKED IN SETS FOR DELIVERY.
2. CASTINGS AND EXTENSIONS SHALL BE HOT-DIPPED IN ASPHALTIC VARNISH ROYSTON ROSKOTE #612XM OR 2 COATS OF MASTIC ROYSTON INSIDE AND OUT.
3. VALVE BOXES SHALL BE RICH #045: TOP SECTION, LID AND BASE; OR OLYMPIC FOUNDRY: LID #1908-33, TOP SECTION #1106-33, BASE SECTION #1301-33 OR APPROVED EQUAL.
4. ALL CASTINGS SHALL BE DUCTILE OR GREY CAST IRON.
5. AN OPERATING NUT EXTENSION SHALL BE INSTALLED WHEN THE GROUND SURFACE IS MORE THAN 2'-6" ABOVE THE VALVE OPERATING NUT. THE OPERATING NUT EXTENSION SHALL EXTEND INTO THE TOP SECTION OF THE STANDARD VALVE BOX AND SHALL CLEAR THE BOTTOM OF THE LID BY 6" MIN.
6. EXTENSION PIECES (WHEN USED) SHALL CONFORM TO MINIMUM THICKNESS REQUIREMENTS AND SHALL FIT INTO THE TOP SECTION AND OVER THE BOTTOM SECTION.
7. LID SHALL BE STAMPED "SEWER".
8. PLACE 16" - 24" GATE VALVES ON COMMERCIAL CLASS CONCRETE PAD. (12" D x 42" W x 30" L).
9. FOR INSTALLATION INSIDE PAVED ROADWAY, 12" CONCRETE SHALL HAVE 2" MINIMUM HMA COVER FOR PATCHES AND SET MINIMUM 2" BELOW ROAD GRADE. SEAL JOINTS WITH PAVING ASPHALT PG 64-22.



NOTES:

1. EXCAVATION AND BACKFILL BEYOND THE TRENCH WIDTH PAY LIMITS SHALL BE TREATED ON OVERBREAK AND SHALL BE THE CONTRACTOR'S RESPONSIBILITIES.
2. ALL EXCAVATION OVER 4' IN DEPTH SHALL HAVE A TRENCH SUPPORT SYSTEM AS REQUIRED BY STATE AND FEDERAL LAW.

IPS TRENCH DETAIL

SCALE: NTS

3

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
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BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

SCHEDULE A & SCHEDULE B
MISCELLANEOUS SEWER
DETAILS - 1

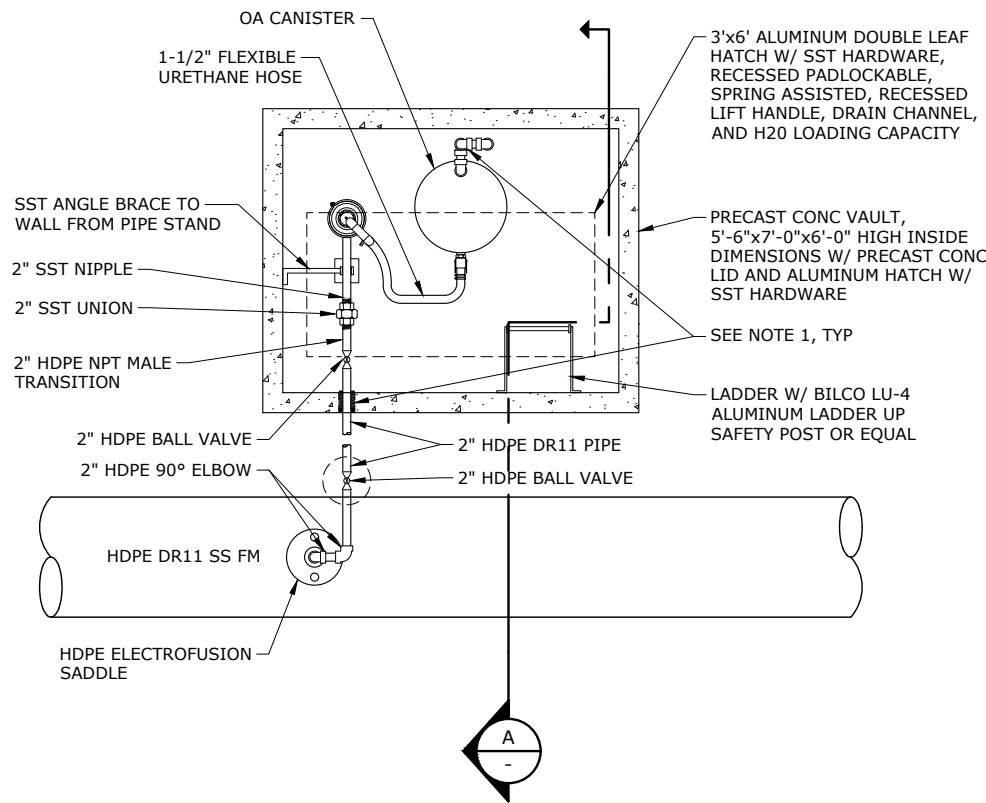
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

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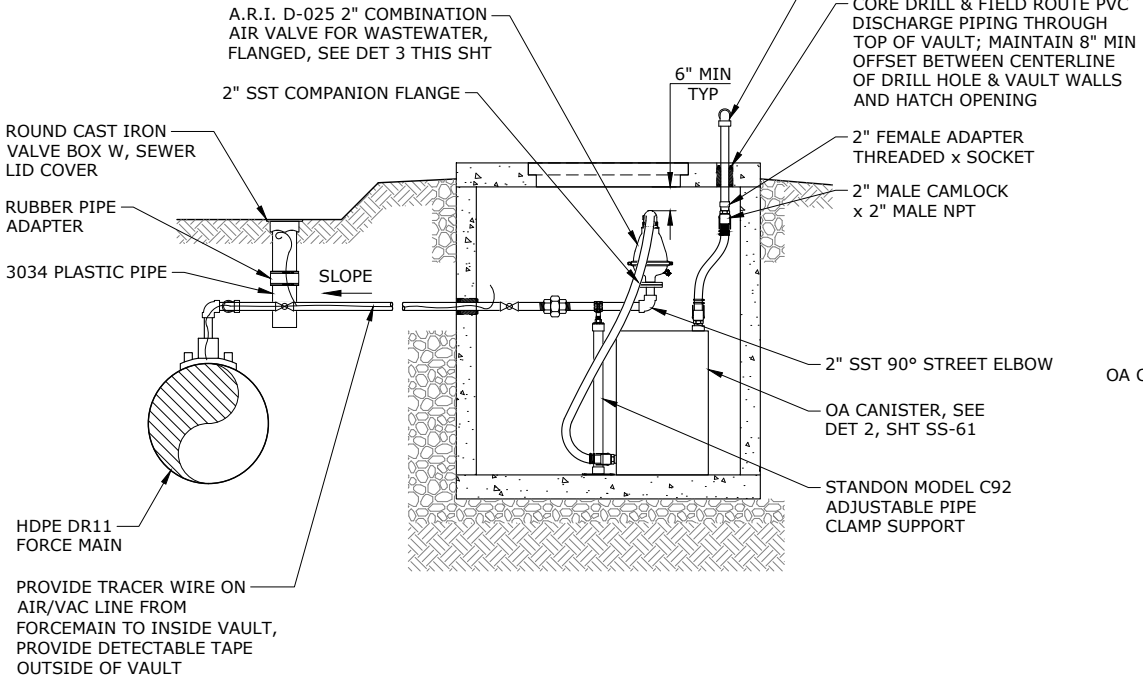
SS-57

71 of 138

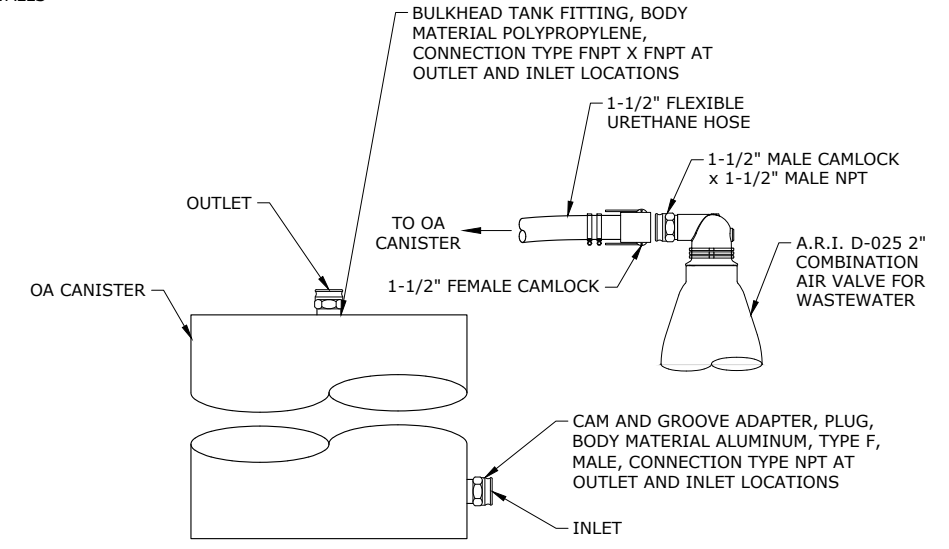
\\ad.msa-ep.com\Everett\evt_projects\20\2815 - Kitsap County Bangor_keyport_fm Replacement\CAD\Sheets\20-2815-WA-AIR2.dwg SS-59 2/3/2022 1:45 PM JUSTIN.DEUEL 23.0s (LMS Tech)



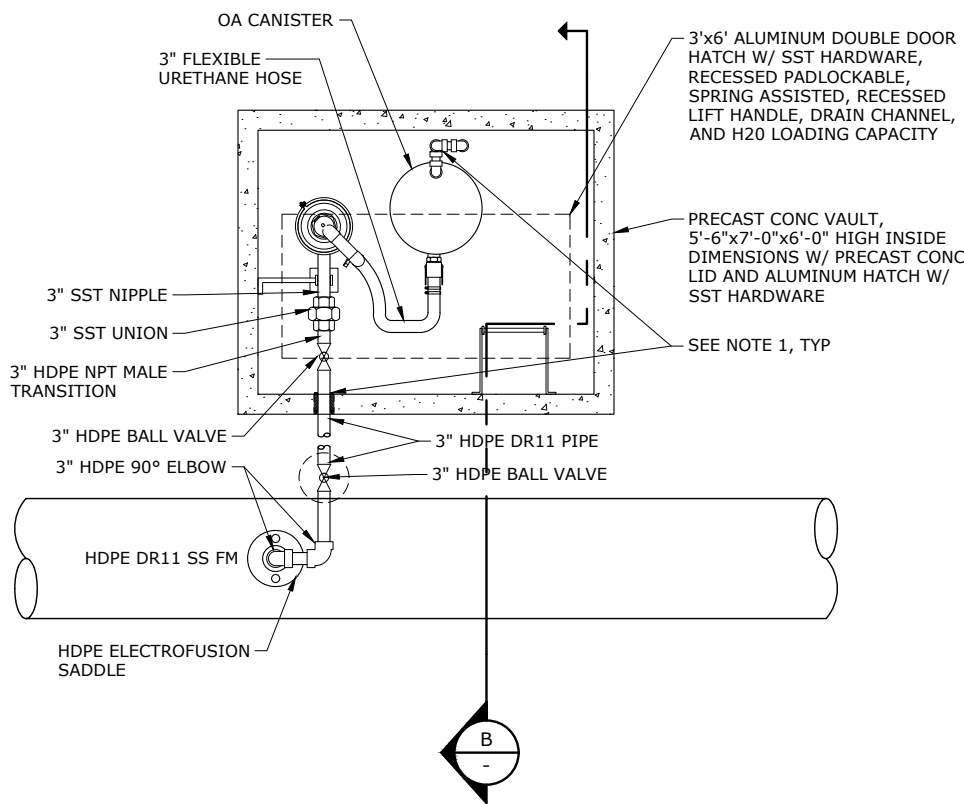
2" AIR/VACUUM VALVE DETAIL 1
SCALE: NTS



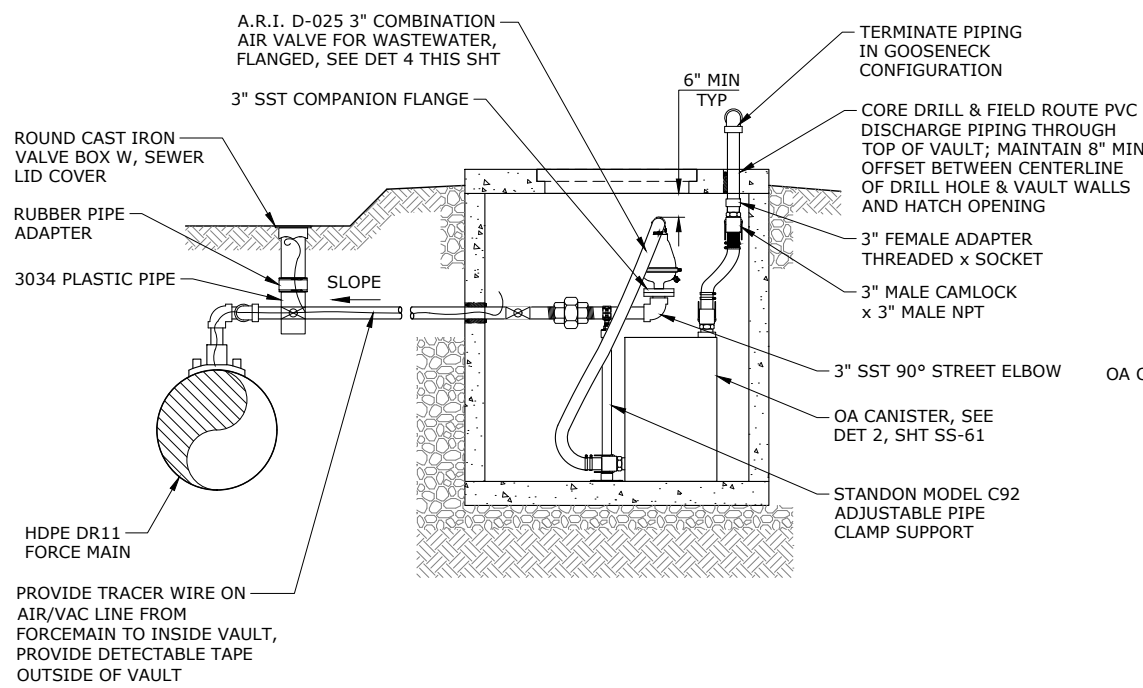
SECTION A
SCALE: NTS



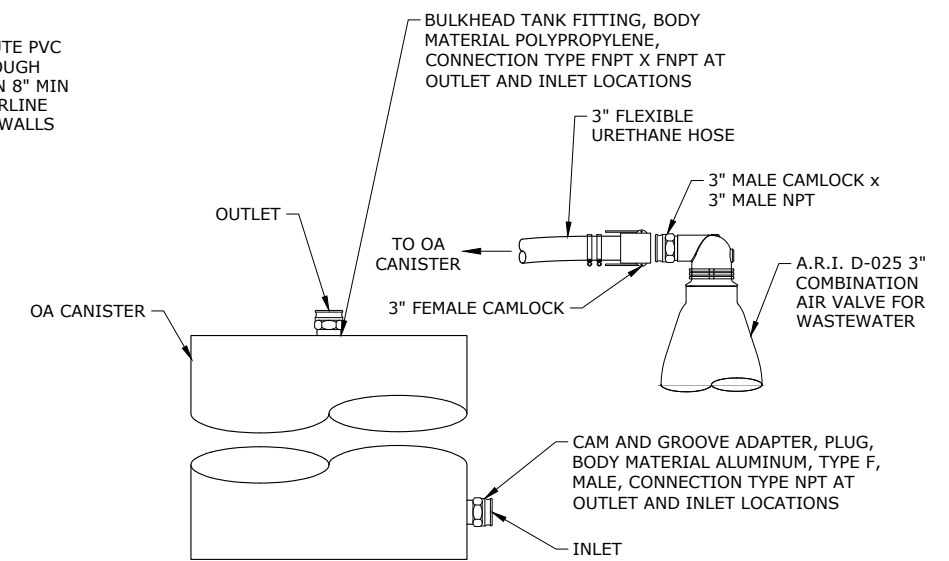
2" AIR/VACUUM VALVE VENT DETAIL 3
SCALE: NTS



3" AIR/VACUUM VALVE DETAIL 2
SCALE: NTS



SECTION B
SCALE: NTS

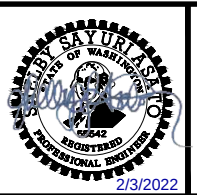


3" AIR/VACUUM VALVE VENT DETAIL 4
SCALE: NTS

NO.	DATE	BY	REVISION

NOTICE
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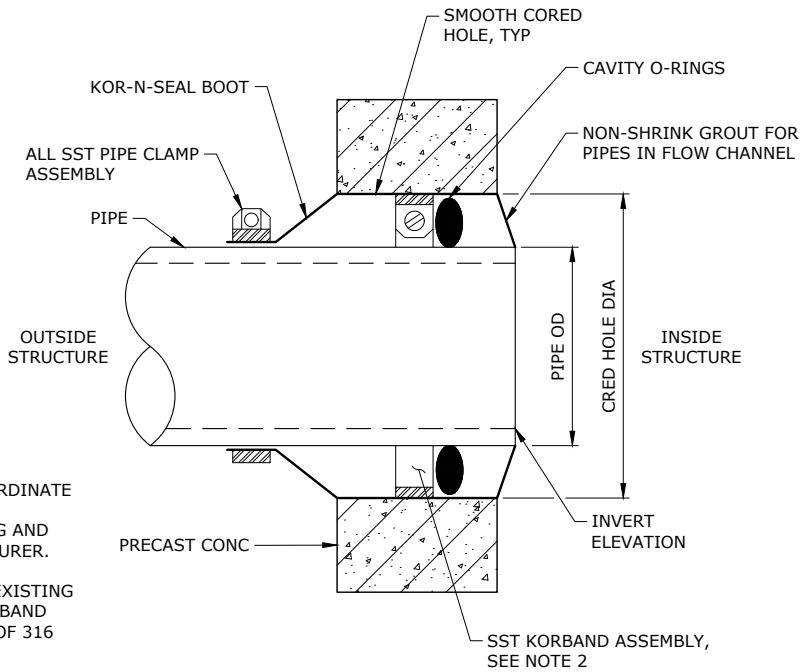
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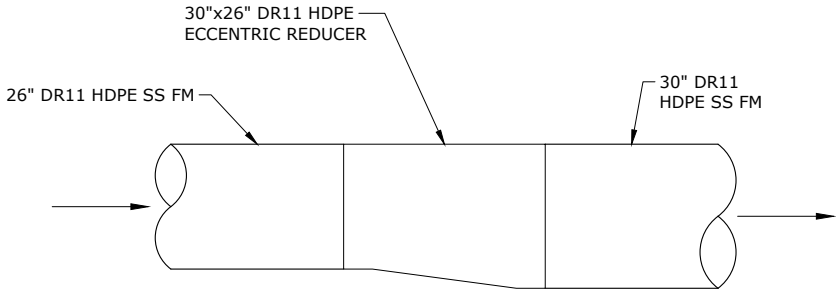
SCHEDULE A & SCHEDULE B MISCELLANEOUS SEWER DETAILS - 3			
PROJECT NO.:	20-2815	SCALE:	AS SHOWN
DATE:	FEBRUARY 2022		

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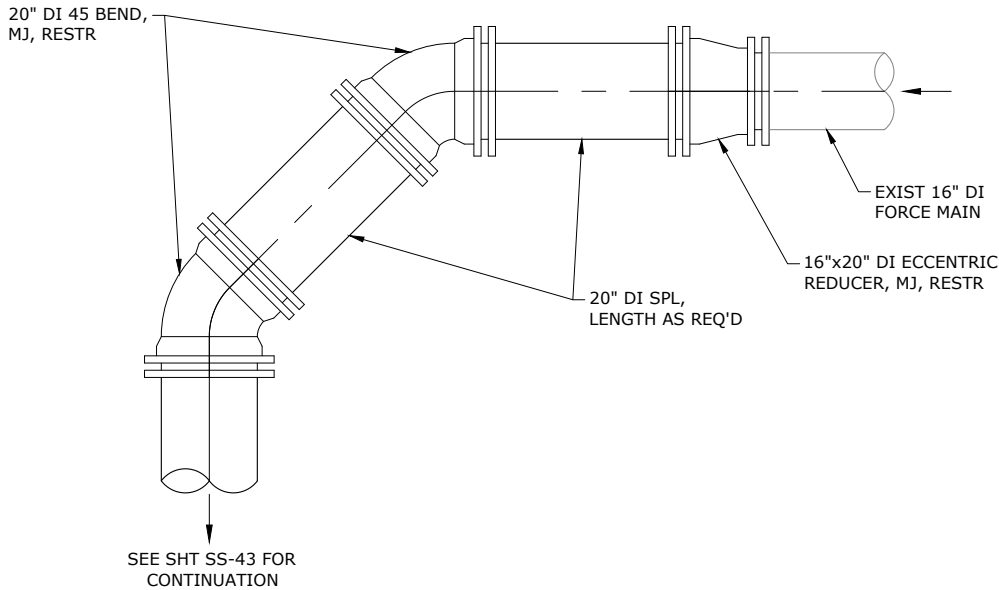


- NOTES:
1. CONTRACTOR SHALL COORDINATE CORED HOLE DIAMETER REQUIREMENTS WITH PIPING AND MANHOLE/VAULT MANUFACTURER.
 2. FOR PENETRATION INTO EXISTING MANHOLES OR VAULTS, KORBAND ASSEMBLY SHALL CONSIST OF 316 STAINLESS STEEL WEDGES.

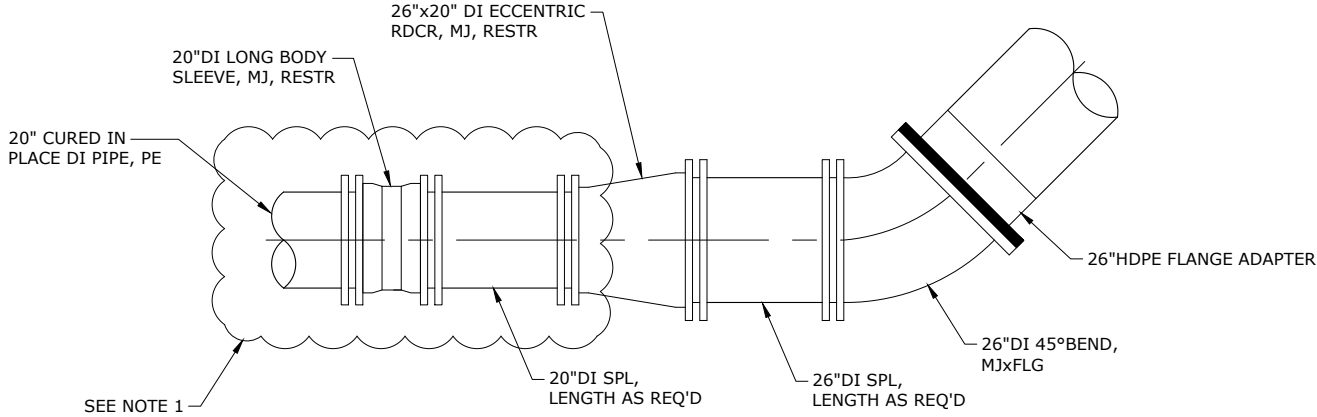
FLEXIBLE BOOT CONNECTION 1
SCALE: NTS PS17-2/PS24-2



26" TO 30" HDPE TRANSITION 2
SCALE: NTS SS-43



CONNECTION TO EXIST 16" FORCE MAIN 3
SCALE: NTS SS-43



- NOTES:
1. SEE DETAIL 3, ON SHEET SS-61 FOR CIPP END CONNECTION.

TRANSITION FROM 20" DI TO 26" HDPE 4
SCALE: NTS SS-9

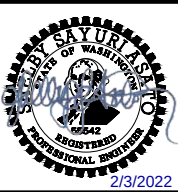
NO.	DATE	BY	REVISION

NOTICE

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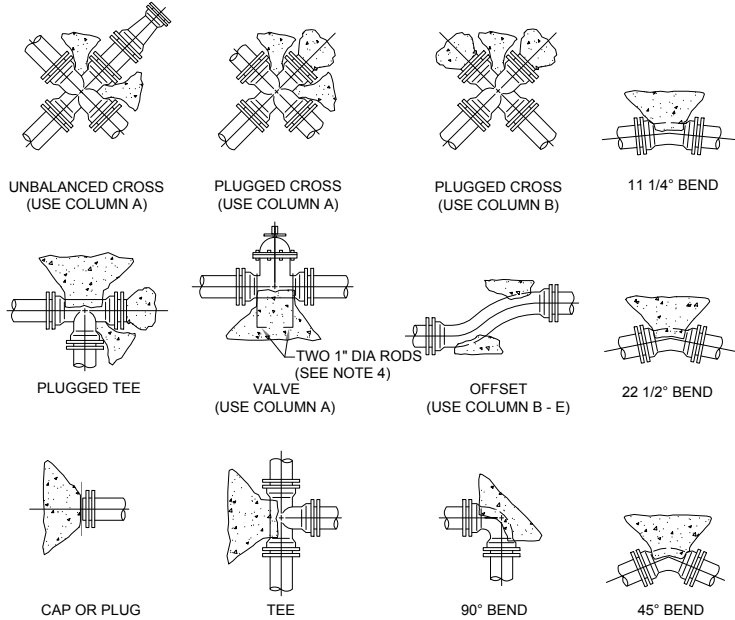
SCHEDULE A & SCHEDULE B MISCELLANEOUS SEWER DETAILS - 4			
PROJECT NO.:	20-2815	SCALE:	AS SHOWN
DATE:	FEBRUARY 2022		

SHEET

SS-60

74 of 138

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THRUST AT FITTINGS IN POUNDS								
SIZE	TEST PRESSURE PSI	A	B	C	D	E	F	G
		TEE AND DEAD ENDS	90° BEND	45° BEND	22.5° BEND	11.25° BEND	DIA RESTRAINT ROD (IN)	ALLOWABLE THRUST PER RESTRAINT ROD (LBS)
4"	250	3,140	4,440	2,405	1,225	615	5/8"	3,450
6"	250	7,070	9,995	5,410	2,760	1,385	3/4"	5,150
8"	250	12,565	17,770	9,620	4,905	2,465	3/4"	5,150
10"	250	19,635	27,770	15,030	7,660	3,850	7/8"	7,150
12"	250	28,275	39,985	21,640	11,030	5,545	7/8"	7,150
14"	250	38,485	54,425	29,455	15,015	7,545	1"	9,350
16"	250	50,265	71,085	38,470	19,615	9,855	1"	9,350
18"	250	63,620	89,980	48,700	24,820	12,480	1 1/8"	11,800
24"	250	113,100	159,960	86,580	44,120	22,180	1 1/4"	15,000
30"	250	176,720	249,930	135,270	68,940	34,650	1 1/4"	15,000

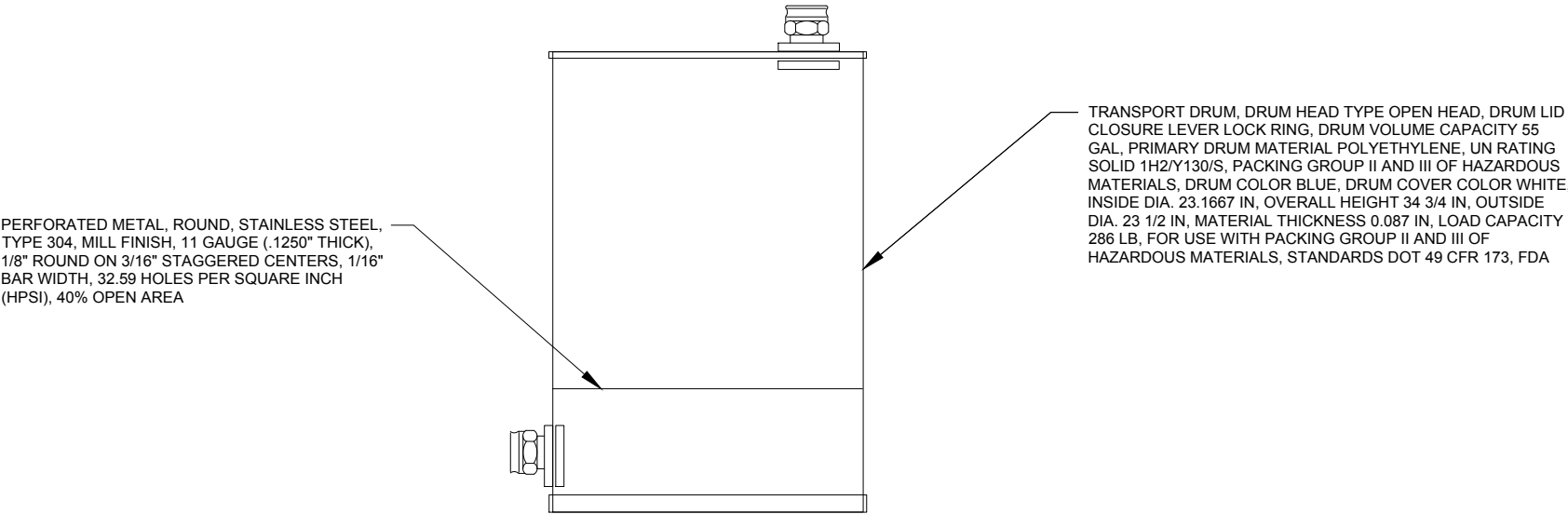
ELEVATION SOIL TYPE	SAFE BEARING LOAD PSF
MUCK, PEAT, ETS.	0
SOFT CLAY	1,000
SAND	2,000
SAND AND GRAVEL	3,000
SAND AND GRAVEL CEMENTED WITH CLAY	4,000
HARD SHALE	10,000

- NOTES:**
- CONTRACTOR TO PROVIDE BLOCKING ADEQUATE TO WITHSTAND FULL TEST PRESSURE.
 - DIVIDE THRUST BY SAFE BEARING LOAD TO DETERMINE REQUIRED AREA (IN SQUARE FEET) OF CONCRETE TO DISTRIBUTE LOAD.
 - AREAS TO BE ADJUSTED FOR OTHER PRESSURE CONDITIONS.
 - RESTRAINT RODS, NUTS, WASHERS AND APPURTENANCES SHALL BE CONSTRUCTED OF 304 SST. RODS SHALL BE ALL-THREAD DESIGN.
 - JOINTS USING RODS FOR RESTRAINT SHALL NOT EXCEED ALLOWABLE THRUST PER RESTRAINT ROD AS SHOWN IN COLUMN.
 - IN NO CASE SHALL LESS THAN 2 RODS BE USED.

CONCRETE THRUST BLOCK DETAIL

SCALE: NTS

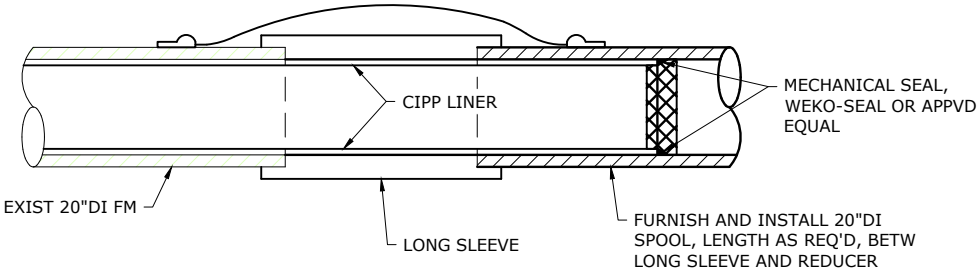
1
SS-43



OA CANISTER SECTION

SCALE: NTS

2
SS-59



- NOTE:**
- THE USE OF CEMENT LINED PIPES, FITTINGS AND ETC. IS NOT ACCEPTABLE.

CIPP END CONNECTION

SCALE: NTS

3
SS-9/SS-60

NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

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SEAL OF THE STATE OF WASHINGTON
JULY 1954
PROFESSIONAL ENGINEER
2/3/2022

murraysmith

KITSAP COUNTY
18 57
WASHINGTON

BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

MISCELLANEOUS SEWER
DETAILS - 5

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET

SS-61

75 of 138

LOADING SEQUENCE:

- NOTES:

- (THESE NOTES ARE TYPICAL UNLESS NOTED OR DETAILED OTHERWISE ON DRAWINGS)

*STRAP REQUIREMENTS FOR TRENCH BOX OF VARIOUS WIDTHS:

-
- PIPE SUPPORT**
- SCALE: NTS
- 22'-0" MAX
- 2" STRAPS EVENLY SPACED,
REFER TO STRAP REQUIREMENTS
- STRAP WINCH
MOUNT WELDED
TO STEEL BEAM
- A
- 2'-6"
MAX, TYP
- W16x57
- 3/16 2"@12 TYP
- PL 1x3'-0" SQ
BEARING PLATE
- TRENCH BOX OR OTHER
SHORING, AS NEEDED
TO PREVENT LOSS OF
EXISTING BACKFILL
AROUND PIPE
- 2" NYLON RATCHET STRAP
BY ANCRA OR APPROVED
EQUAL. EA. STRAP MUST BE
APPROVED FOR 10,000LBS
MIN ALLOWABLE TENSION
- EXIST STORM DRAIN
(SIZE VARIES)
- 18" MIN
CLR PER
CIVIL
- NEW PIPE
PER SS SHTS
- TIGHTEN STRAPS AS
REQUIRED TO PREVENT
EXISTING PIPE FROM
DEFLECTION
- VARIES (4'-6" MIN, 15'-0" MAX)
- NOTE:**
EACH PIPE MUST HAVE
ITS OWN SUPPORT
BEAM AS SHOWN
- 2" STRAP BY ANCRA OR
APPROVED ALTERNATIVE. WINCH
TO HAVE MINIMUM 10,000 LBS
ALLOWABLE LOAD CAPACITY
- 1/4" x 1" x 1" x 2" LONG
UHMW ANGLE GLUED TO
BEAM AT STRAP LOCATIONS
(EA SIDE OF BEAM)
- 3/16
- 2" WEB STRAP BY ANCRA
OR APPROVED
ALTERNATIVE. STRAP TO
BE APPROVED FOR
MINIMUM 10,000 LBS
ALLOWABLE TENSION
- STEEL BEAM
PER DETAIL 1
- EXIST PIPE TO BE
TEMPORARILY
SUPPORTED
- PIPE SUPPORT**
- SCALE: NTS
- A

NO.	DATE	BY	REVISION

NOTICE

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BANGOR-KEYPORT FORCE MAIN REPLACEMENT

MISCELLANEOUS SEWER DETAILS - 6

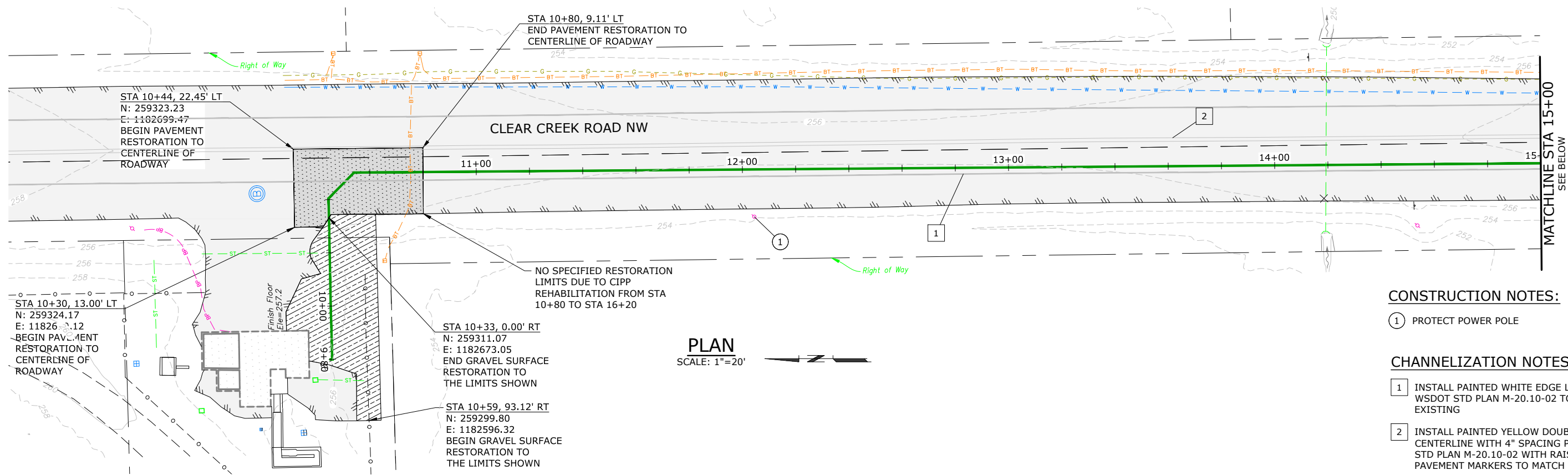
PROJECT NO.:	20-2815	SCALE:	AS SHOWN	DATE:	FEBRUARY 2022
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HEET

SS-62

6 of 138

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PLAN
SCALE: 1"=20'

CONSTRUCTION NOTES:

- 1 PROTECT POWER POLE

CHANNELIZATION NOTES:

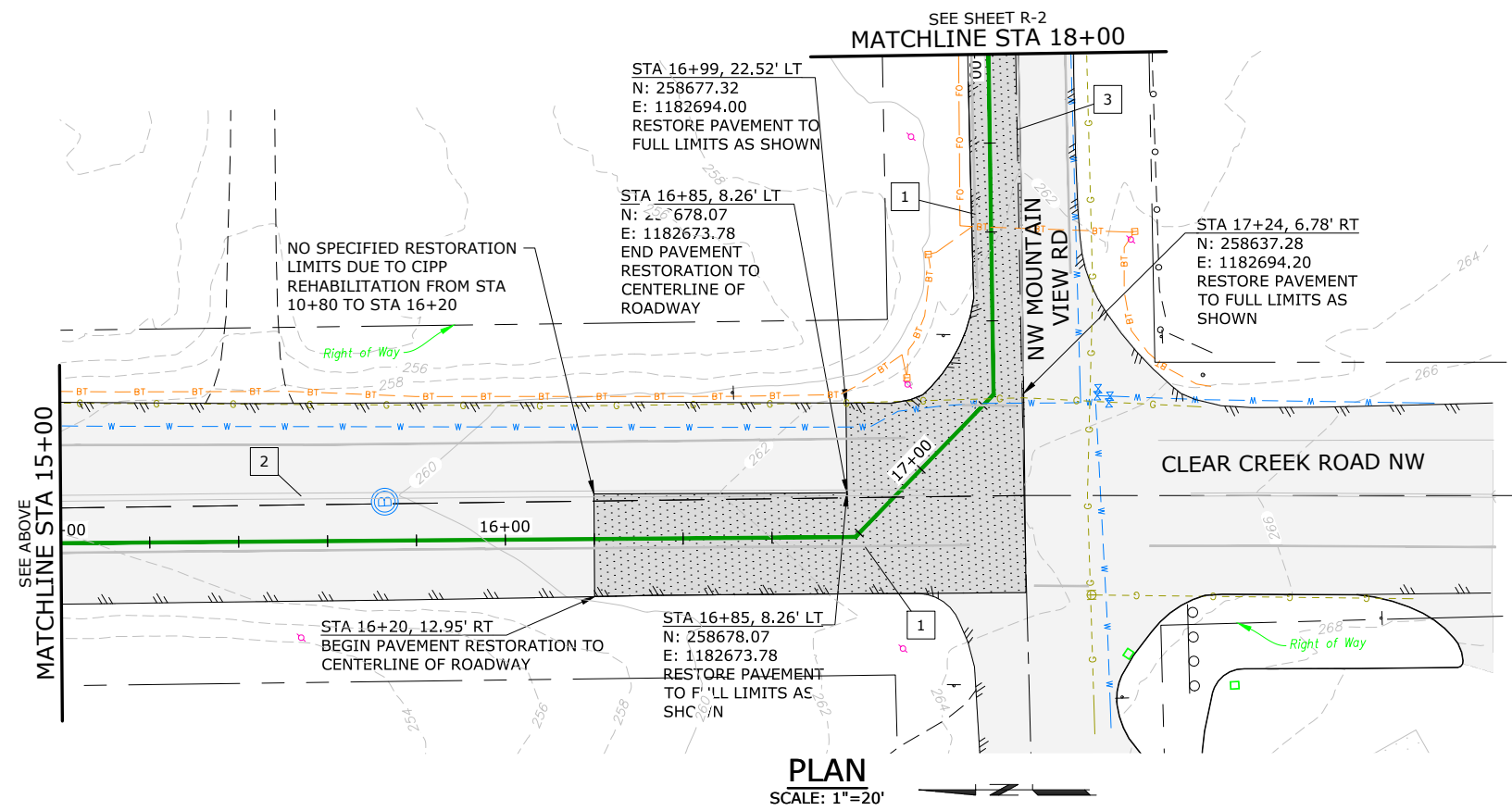
- 1 INSTALL PAINTED WHITE EDGE LINE PER WSDOT STD PLAN M-20.10-02 TO MATCH EXISTING
- 2 INSTALL PAINTED YELLOW DOUBLE CENTERLINE WITH 4" SPACING PER WSDOT STD PLAN M-20.10-02 WITH RAISED PAVEMENT MARKERS TO MATCH EXISTING
- 3 INSTALL PAINTED YELLOW DOTTED CENTERLINE PER WSDOT STD PLAN M-20.10-02 WITH RAISED PAVEMENT MARKERS TO MATCH EXISTING

NOTES:

1. ALL NECESSARY RESTORATION MAY NOT BE IDENTIFIED ON THE DRAWINGS. RESTORE ALL DISTURBED AREAS TO PRE-CONSTRUCTION CONDITIONS OR BETTER WITH LIKE MATERIAL.
2. NATIVE VEGETATION WILL BE RESTORED IN KIND IN CONSTRUCTION AREA. DO NOT DISTURB NATIVE VEGETATION OUTSIDE THE CONSTRUCTION LIMITS.
3. PROVIDE ALL THERMOPLASTIC MARKINGS PAINT STRIPING, AND SIGNAGE.
4. REMOVE ALL EXISTING PAVEMENT MARKINGS IN CONFLICT WITH PROPOSED MARKINGS.
5. ALL PAVEMENT MARKINGS SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, UNLESS OTHERWISE NOTED.
6. CONTACT COUNTY WORKS TRAFFIC DIVISION PRIOR TO INSTALLING PAVEMENT MARKINGS OR OTHER TRAFFIC DELINEATORS ON COUNTY RIGHTS OF WAY TO ENSURE COMPLIANCE WITH KITSAP COUNTY ROAD STANDARDS SECTION 6.2.5.

LEGEND:

- GRAVEL SURFACING, SEE DETAIL 2, DRAWING R-29
- HMA PAVEMENT, SEE DETAIL 3, DRAWING R-29

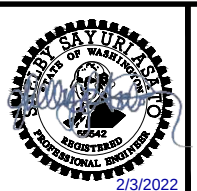


PLAN
SCALE: 1"=20'

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
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EKS
CHECKED



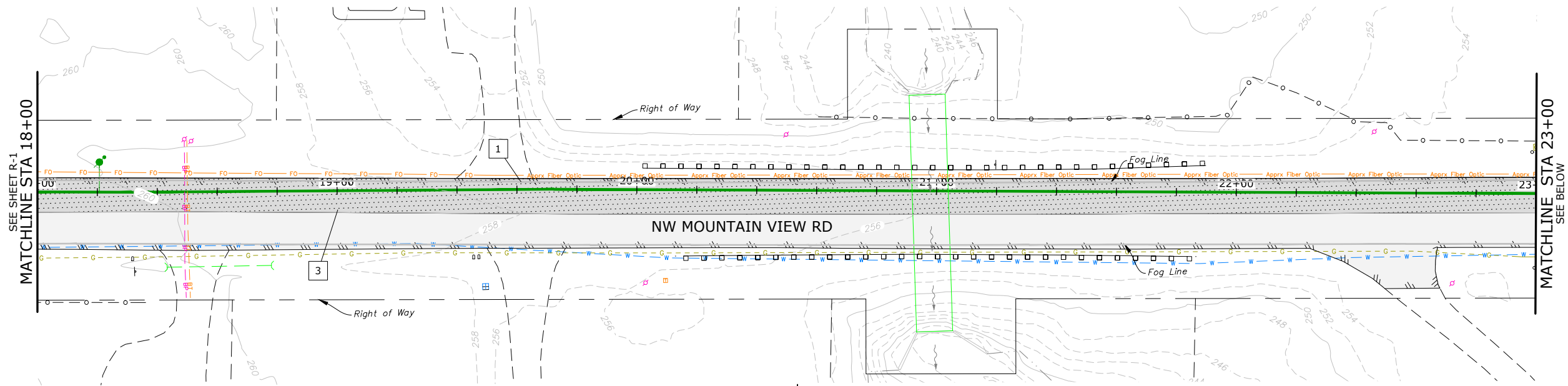
BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

RESTORATION PLAN
STA 10+00 TO 18+00
SCHEDULE A

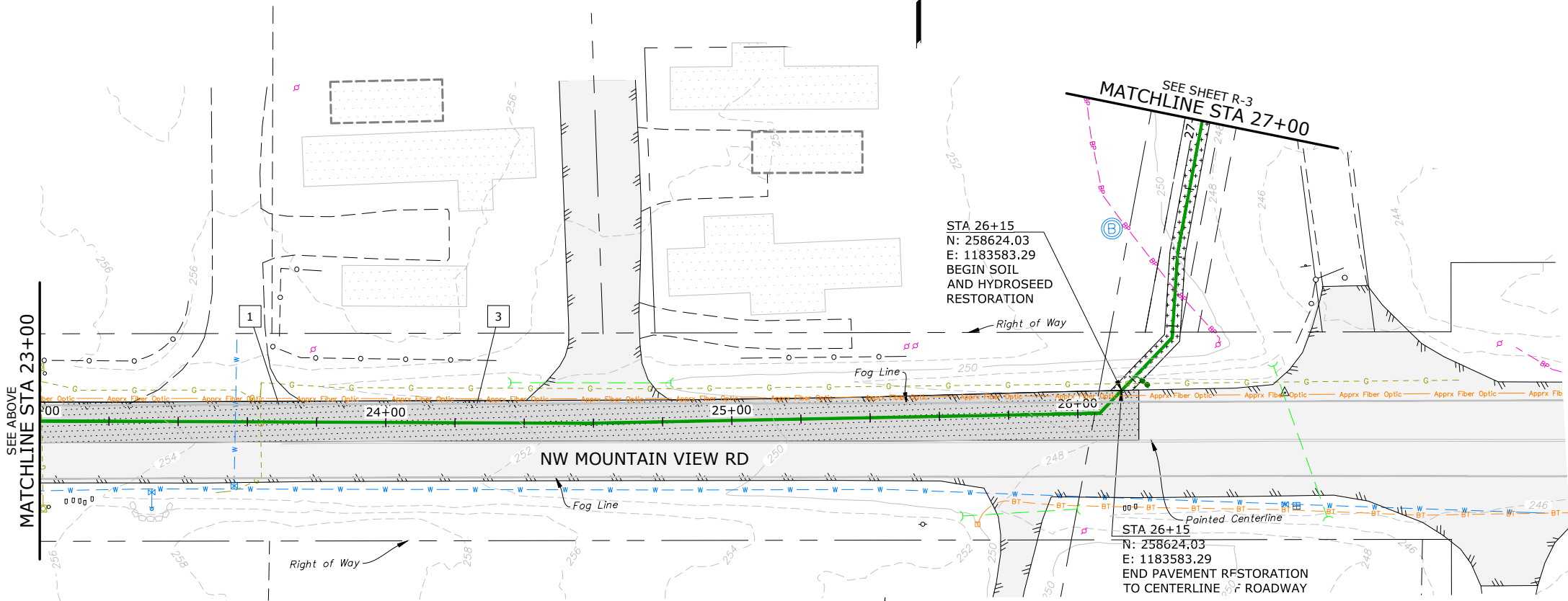
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET
R-1
77 of 138

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PLAN
SCALE: 1"=20'



PLAN
SCALE: 1"=20'

CHANNELIZATION NOTES:

1. INSTALL PAINTED WHITE EDGE LINE PER WSDOT STD PLAN M-20.10-02 TO MATCH EXISTING
3. INSTALL PAINTED YELLOW DOTTED CENTERLINE PER WSDOT STD PLAN M-20.10-02 WITH RAISED PAVEMENT MARKERS TO MATCH EXISTING

NOTES:

1. ALL NECESSARY RESTORATION MAY NOT BE IDENTIFIED ON THE DRAWINGS. RESTORE ALL DISTURBED AREAS TO PRE-CONSTRUCTION CONDITIONS OR BETTER WITH LIKE MATERIAL.
2. NATIVE VEGETATION WILL BE RESTORED IN KIND IN CONSTRUCTION AREA. DO NOT DISTURB NATIVE VEGETATION OUTSIDE THE CONSTRUCTION LIMITS.
3. PROVIDE ALL THERMOPLASTIC MARKINGS PAINT STRIPING, AND SIGNAGE.
4. REMOVE ALL EXISTING PAVEMENT MARKINGS IN CONFLICT WITH PROPOSED MARKINGS.
5. ALL PAVEMENT MARKINGS SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, UNLESS OTHERWISE NOTED.
6. CONTACT COUNTY WORKS TRAFFIC DIVISION PRIOR TO INSTALLING PAVEMENT MARKINGS OR OTHER TRAFFIC DELINEATORS ON COUNTY RIGHTS OF WAY TO ENSURE COMPLIANCE WITH KITSAP COUNTY ROAD STANDARDS SECTION 6.2.5.

LEGEND:

- RESTORE SURFACE WITH SOIL AND HYDROSEED, SEE DETAIL 2, DRAWING R-29
- HMA PAVEMENT, SEE DETAIL 3, DRAWING R-29

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
HCM
DRAWN
EKS
CHECKED



murraysmith



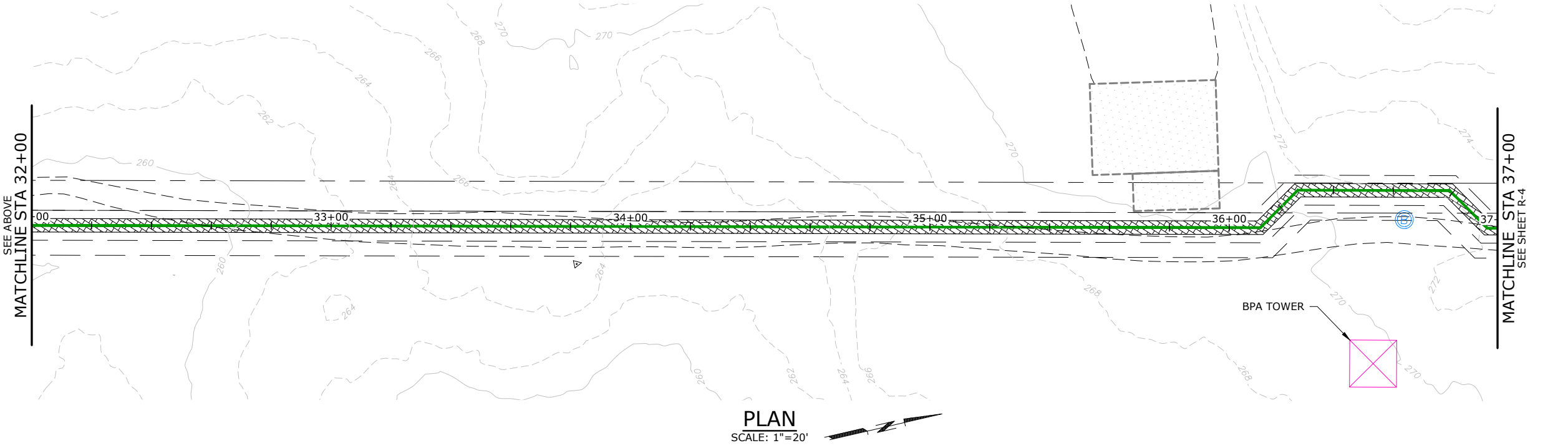
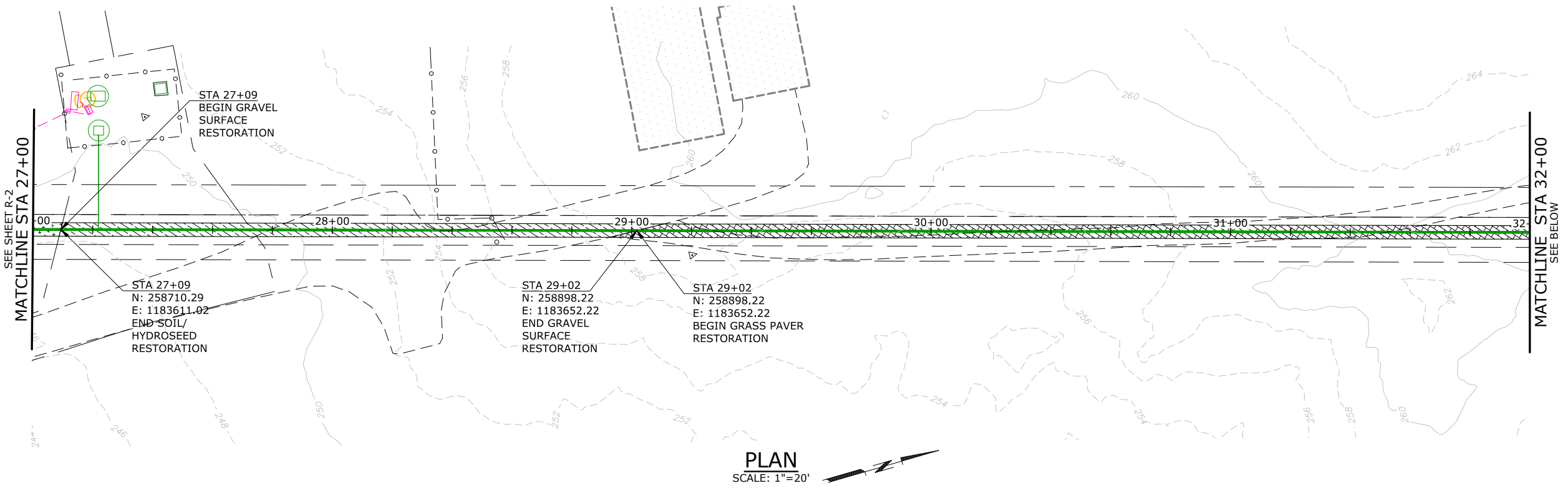
BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

RESTORATION PLAN
STA 18+00 TO 27+00
SCHEDULE A

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET
R-2
78 of 138

\\ad.msa-ep.com\everett\evt_projects\20\2815 - Kitsap County Bangor_keyport Fm Replacement\CAD\Sheets\20-2815-WA-R-1.dwg R-3 2/3/2022 1:07 PM JUSTIN.DEUEL 23.0s (LMS Tech)



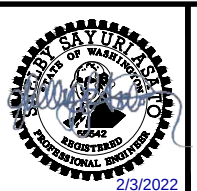
- NOTES:
1. ALL NECESSARY RESTORATION MAY NOT BE IDENTIFIED ON THE DRAWINGS. RESTORE ALL DISTURBED AREAS TO PRE-CONSTRUCTION CONDITIONS OR BETTER WITH LIKE MATERIAL.
 2. NATIVE VEGETATION WILL BE RESTORED IN KIND IN CONSTRUCTION AREA. DO NOT DISTURB NATIVE VEGETATION OUTSIDE THE CONSTRUCTION LIMITS.
 3. PROVIDE ALL THERMOPLASTIC MARKINGS PAINT STRIPING, AND SIGNAGE.
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- LEGEND:
- GRASS PAVER, SEE DETAIL 1, DRAWING R-29
 - RESTORE SURFACE WITH SOIL AND HYDROSEED, SEE DETAIL 2, DRAWING R-29
 - GRAVEL SURFACING, SEE DETAIL 2, DRAWING R-29

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
HCM
DRAWN
EKS
CHECKED



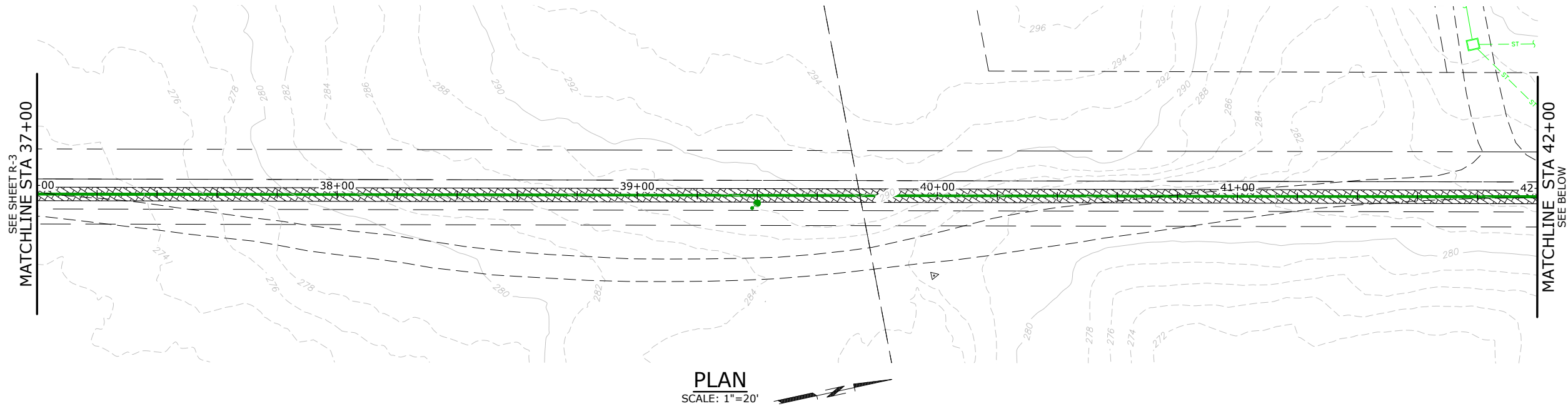
BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

RESTORATION PLAN
STA 27+00 TO 37+00
SCHEDULE A

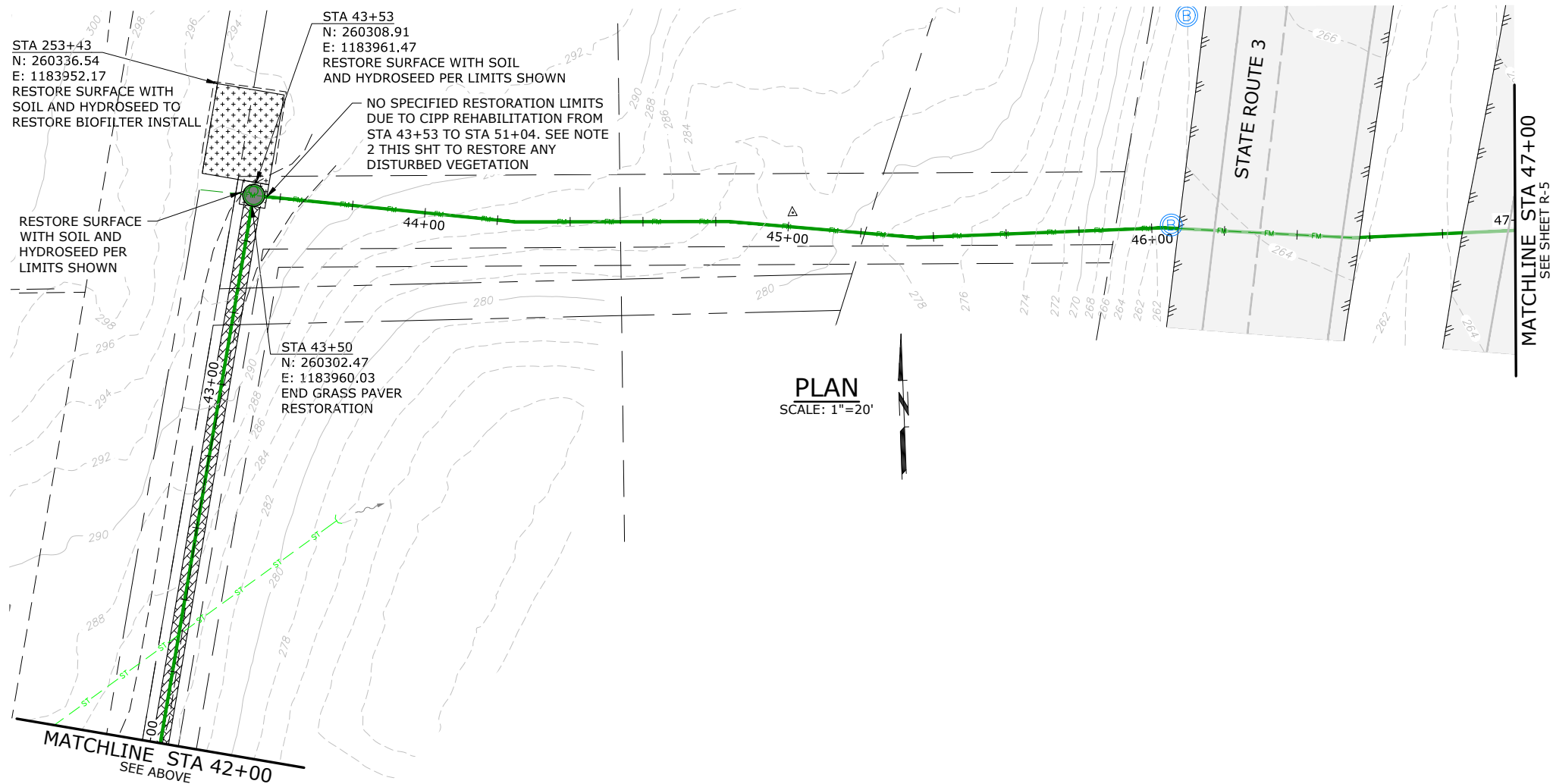
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET
R-3
79 of 138

\\ad.msa-ep.com\everett\evt_projects\20\2815 - Kitsap County Bangor_keyport Fm Replacement\CAD\Sheets\20-2815-WA-R-1.dwg R-4 2/3/2022 1:07 PM JUSTIN.DEUEL 23.0s (LMS Tech)



- NOTES:
1. ALL NECESSARY RESTORATION MAY NOT BE IDENTIFIED ON THE DRAWINGS. RESTORE ALL DISTURBED AREAS TO PRE-CONSTRUCTION CONDITIONS OR BETTER WITH LIKE MATERIAL.
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- LEGEND:
- GRASS PAVER, SEE DETAIL 1, DRAWING R-29
 - RESTORE SURFACE WITH SOIL AND HYDROSEED, SEE DETAIL 2, DRAWING R-29

NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
HCM
DRAWN
EKS
CHECKED



murraysmith



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

RESTORATION PLAN
STA 37+00 TO 47+00
SCHEDULE A

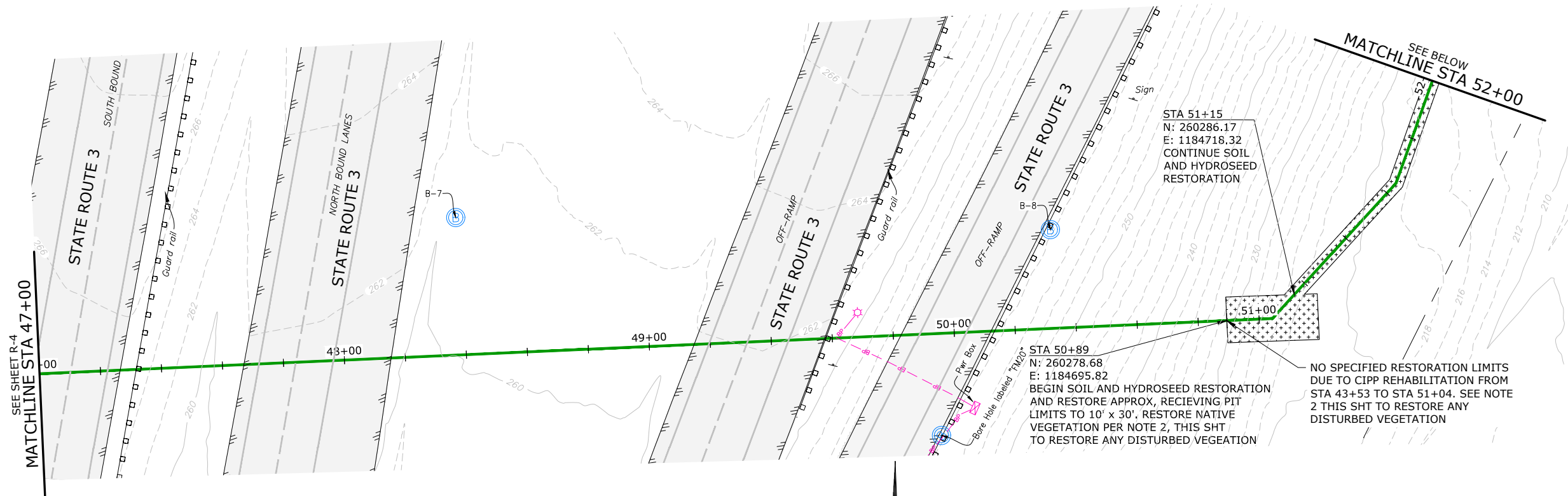
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET

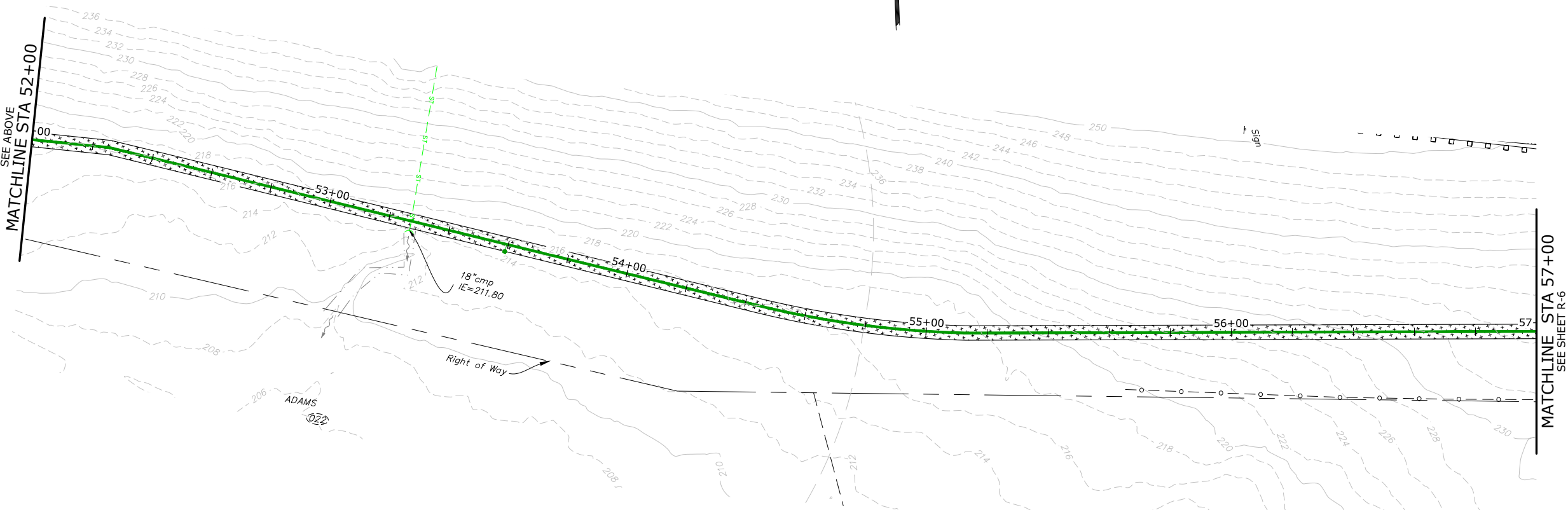
R-4

80 of 138

\\ad.msa-ep.com\everett\evt_projects\20\2815 - Kitsap County Bangor_keyport Fm Replacement\CAD\Sheets\20-2815-WA-R-2.dwg R-5 2/3/2022 11:47 AM JUSTIN.DEUEL 23.0s (LMS Tech)



PLAN
SCALE: 1"=20'



PLAN
SCALE: 1"=20'

NOTES:

1. ALL NECESSARY RESTORATION MAY NOT BE IDENTIFIED ON THE DRAWINGS. RESTORE ALL DISTURBED AREAS TO PRE-CONSTRUCTION CONDITIONS OR BETTER WITH LIKE MATERIAL.
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LEGEND:



RESTORE SURFACE WITH SOIL AND HYDROSEED, SEE DETAIL 2, DRAWING R-29

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
HCM
DRAWN
EKS
CHECKED



murraysmith



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

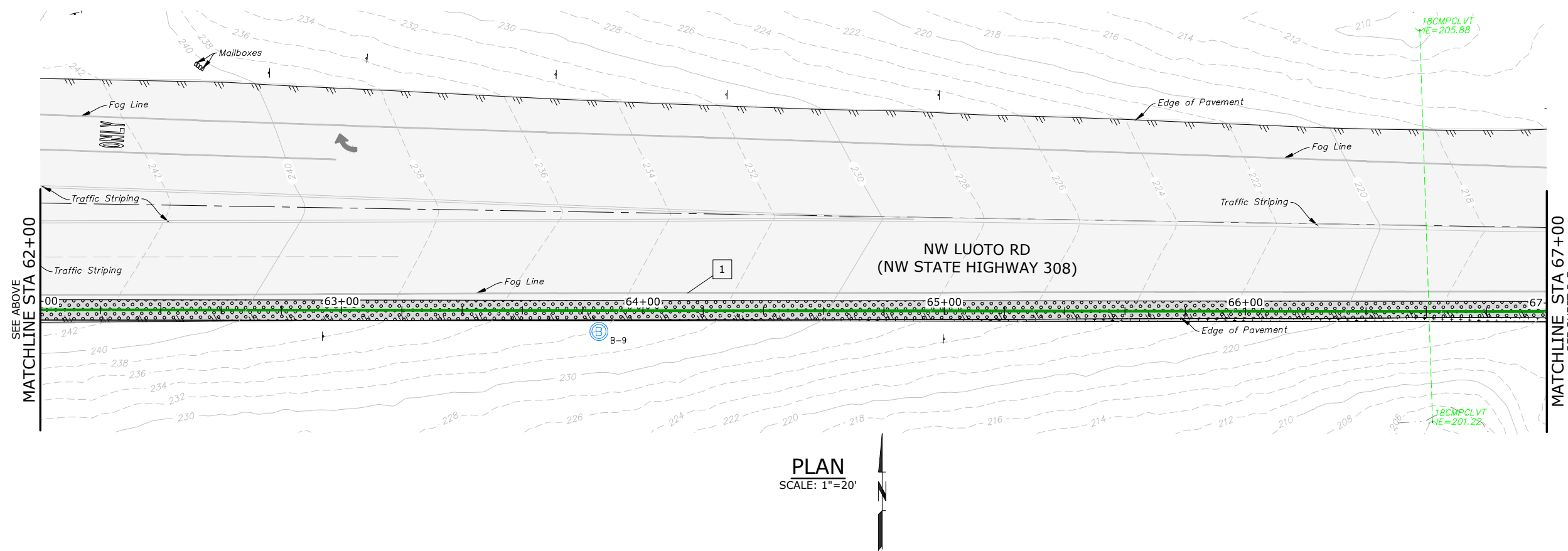
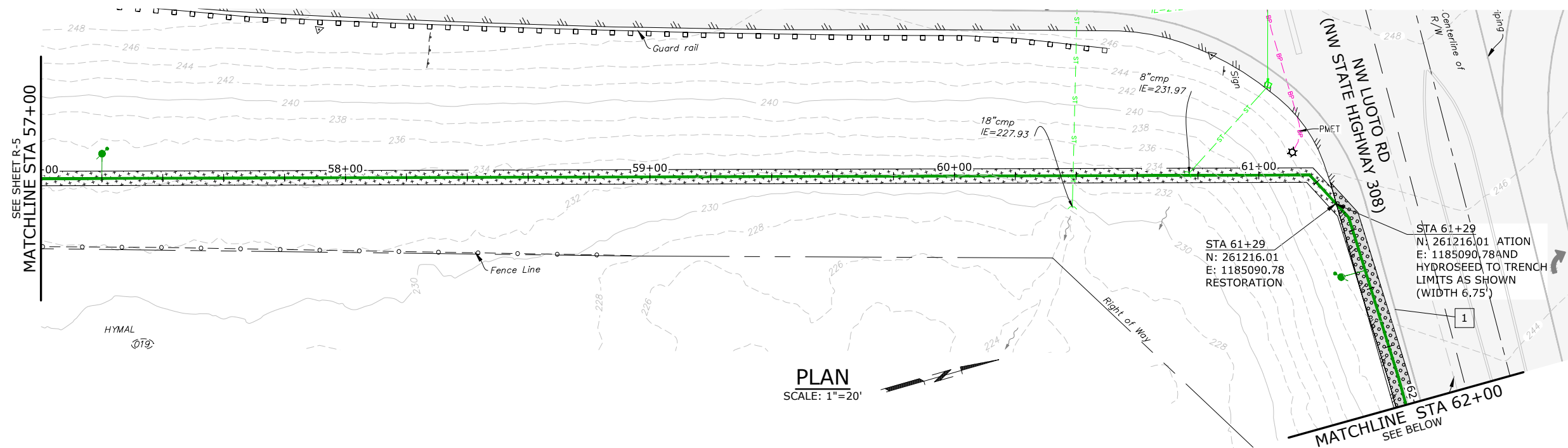
RESTORATION PLAN
STA 47+00 TO 57+00
SCHEDULE A

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET

R-5

81 of 138



CHANNELIZATION NOTES:

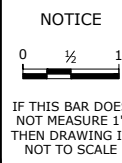
- 1 PAINTED WHITE EDGE LINE PER WSDOT
STD PLAN M-20.10-02 TO MATCH
EXISTING.

NOTES:

1. ALL NECESSARY RESTORATION MAY NOT BE IDENTIFIED ON THE DRAWINGS. RESTORE ALL DISTURBED AREAS TO PRE-CONSTRUCTION CONDITIONS OR BETTER WITH LIKE MATERIAL.
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LEGEND:

- | | |
|---|---|
|  | RESTORE SURFACE WITH SOIL
AND HYDROSEED, SEE DETAIL 2,
DRAWING R-29 |
|  | HMA PAVEMENT,
SEE DETAIL 3, DRAWING R-29 |
|  | HMA PAVEMENT ON WSDOT ROADWAY,
SEE DETAIL 2, DRAWING R-30 |

[illegible]

TMH
DESIGNED
HCM
DRAWN
EKS
CHECKED



BANGOR-KEYPORT FORCE MAIN REPLACEMENT

RESTORATION PLAN STA 57+00 TO 67+00 SCHEDULE A

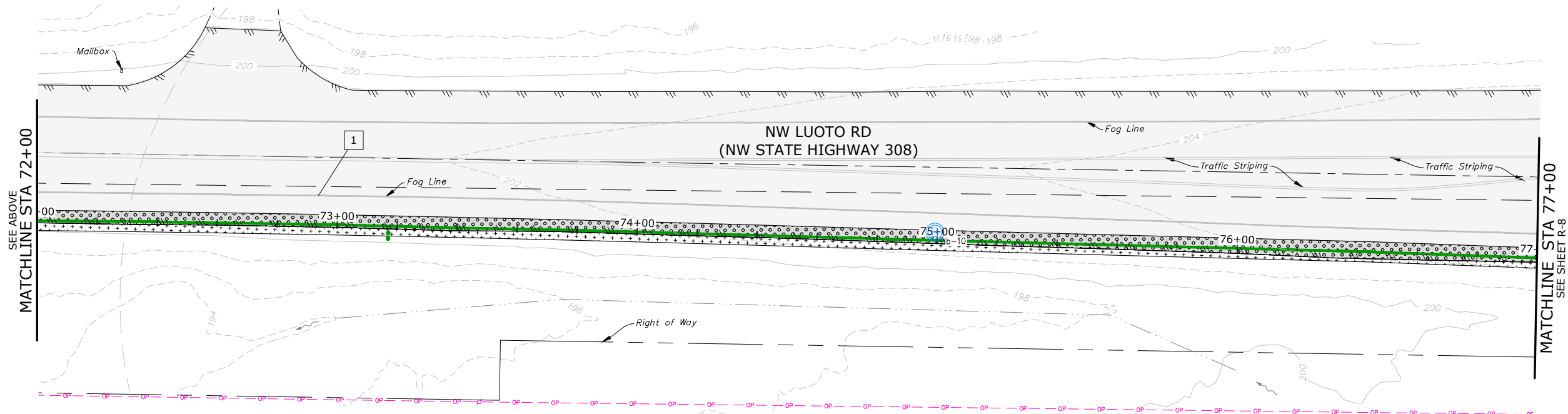
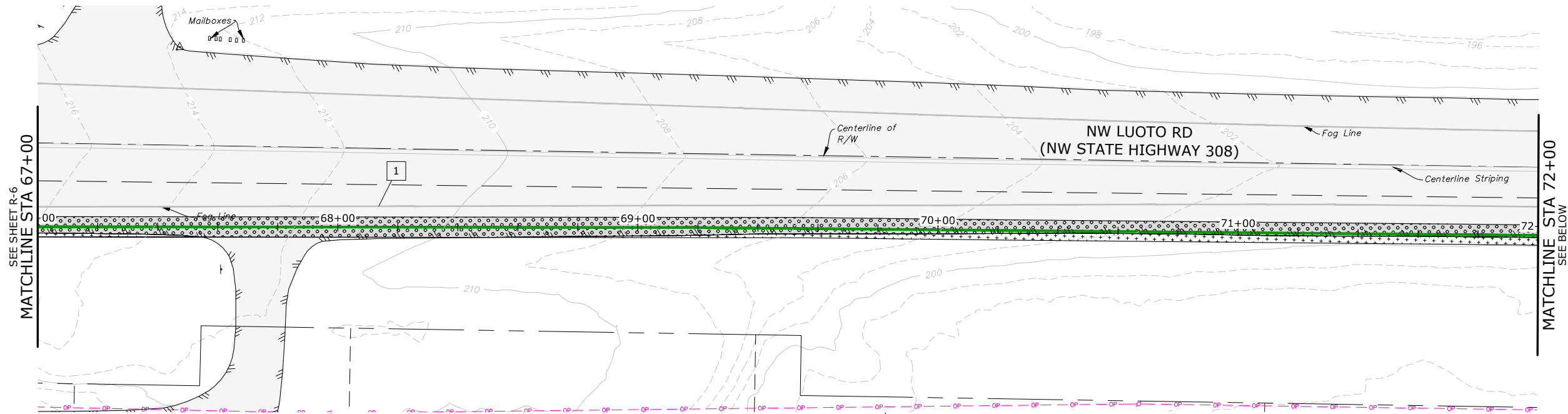
PROJECT NO.:	20-2815	SCALE:	AS SHOWN	DATE:	FEBRUARY 2022
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SHEET

R-6

82 of 138

\\ad.msa-ep.com\everett\evt_projects\20\2815 - Kitsap County Bangor_keyport Fm Replacement\CAD\Sheets\20-2815-WA-R-2.dwg R-7 2/3/2022 11:47 AM JUSTIN.DEUEL 23.0s (LMS Tech)



CHANNELIZATION NOTES:

- 1 PAINTED WHITE EDGE LINE PER WSDOT STD PLAN M-20.10-02 TO MATCH EXISTING.

NOTES:

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LEGEND:

-  RESTORE SURFACE WITH SOIL AND HYDROSEED, SEE DETAIL 2, DRAWING R-29
-  HMA PAVEMENT, SEE DETAIL 3, DRAWING R-29
-  HMA PAVEMENT ON WSDOT ROADWAY, SEE DETAIL 2, DRAWING R-30

NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
HCM
DRAWN
EKS
CHECKED



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

RESTORATION PLAN
STA 67+00 TO 77+00
SCHEDULE A

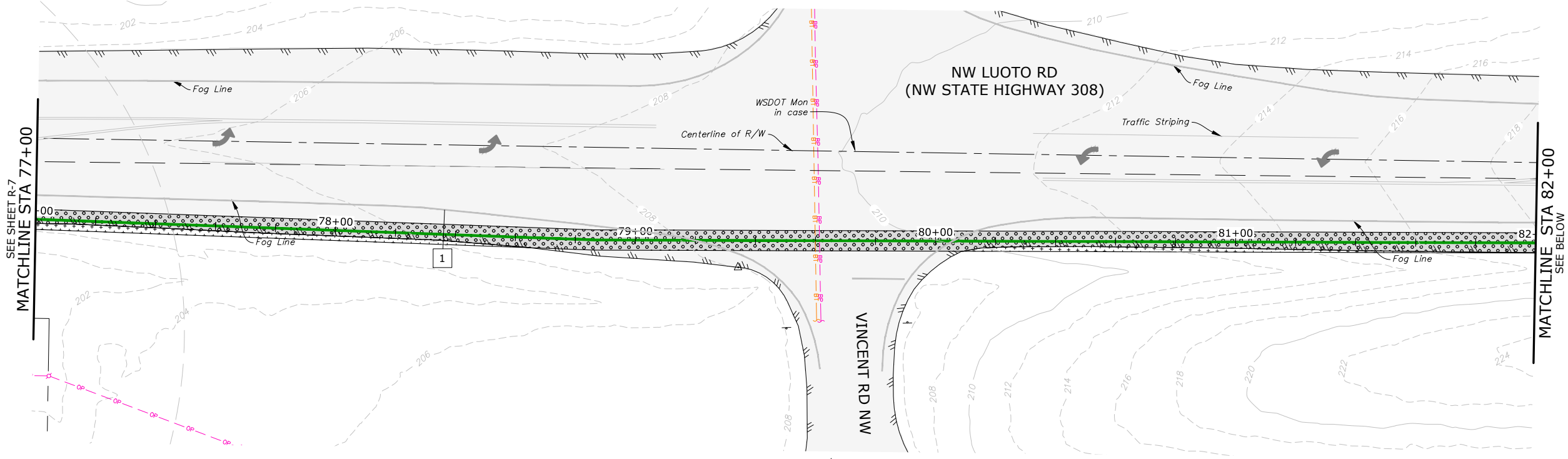
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET

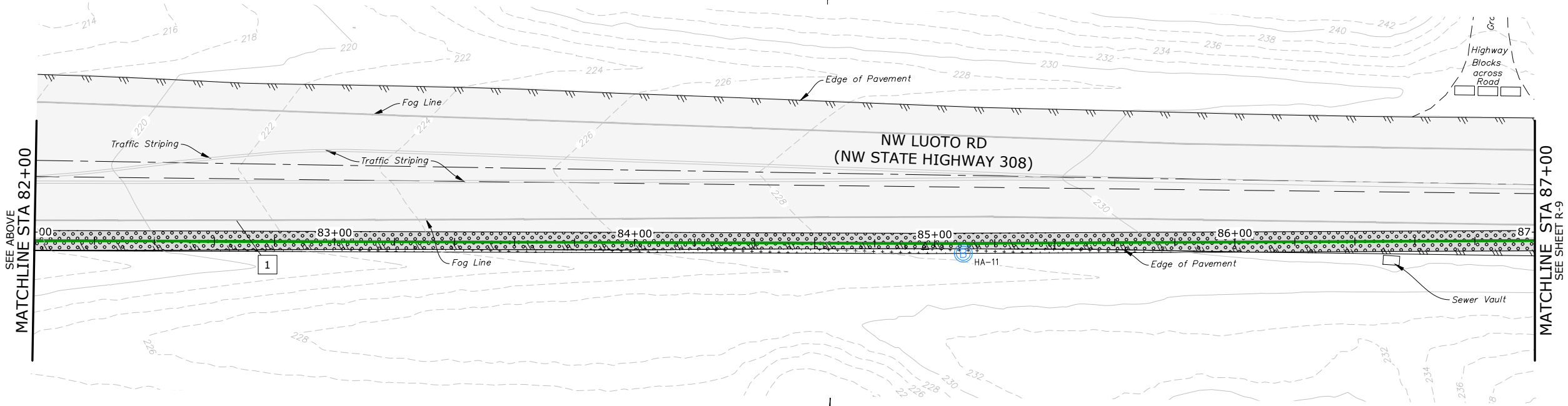
R-7

83 of 138

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PLAN
SCALE: 1"=20'



PLAN
SCALE: 1"=20'

CHANNELIZATION NOTES:

- 1 PAINTED WHITE EDGE LINE PER WSDOT STD PLAN M-20.10-02 TO MATCH EXISTING.

NOTES:

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LEGEND:

-  RESTORE SURFACE WITH SOIL AND HYDROSEED, SEE DETAIL 2, DRAWING R-29
-  HMA PAVEMENT ON WSDOT ROADWAY, SEE DETAIL 2, DRAWING R-30

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
HCM
DRAWN
EKS
CHECKED



murraysmith



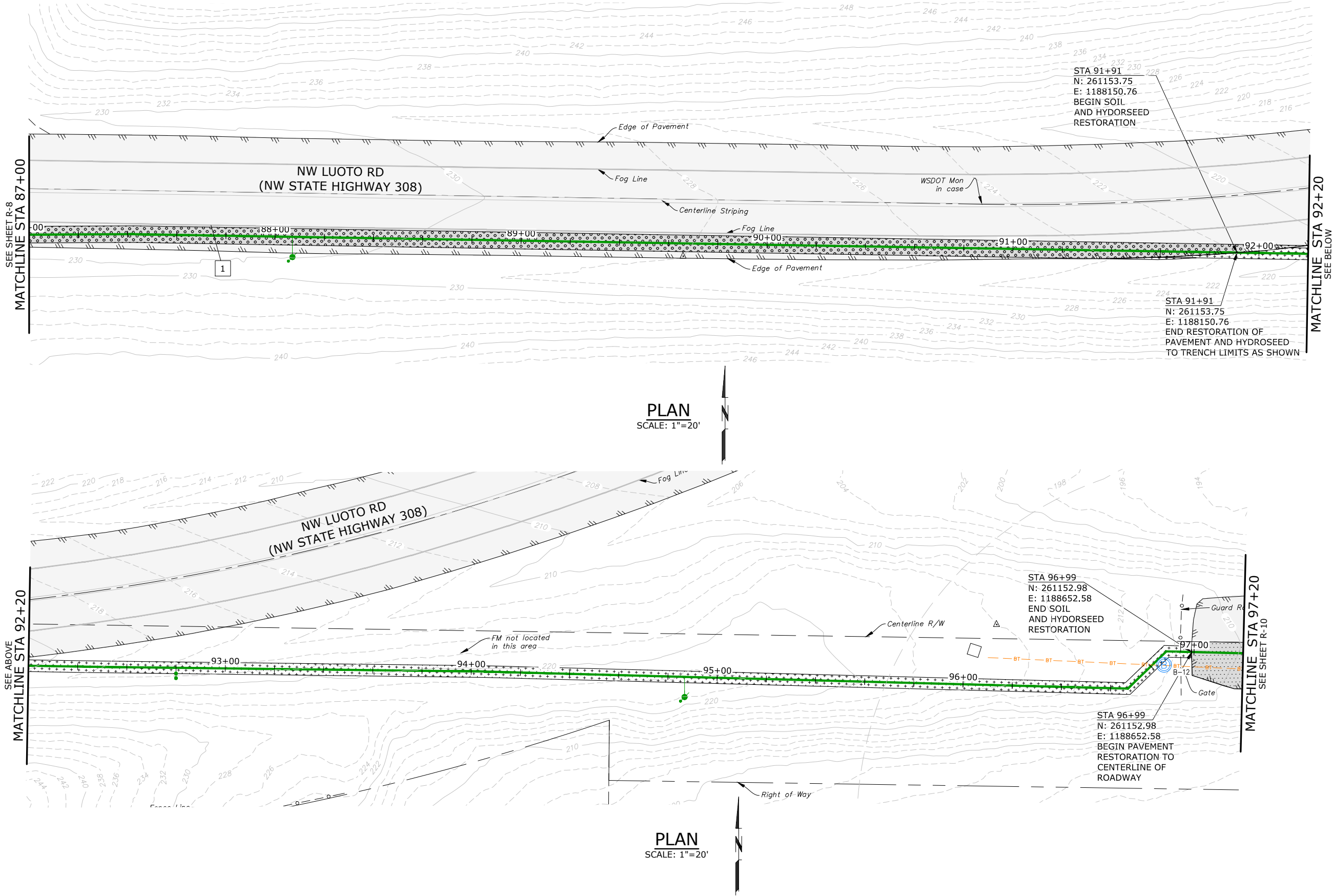
BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

RESTORATION PLAN
STA 77+00 TO 87+00
SCHEDULE A

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET
R-8
84 of 138

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CHANNELIZATION NOTES:

1. PAINTED WHITE EDGE LINE PER WSDOT STD PLAN M-20.10-02 TO MATCH EXISTING.

NOTES:

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LEGEND:

- RESTORE SURFACE WITH SOIL AND HYDROSEED, SEE DETAIL 2, DRAWING R-29
- HMA PAVEMENT, SEE DETAIL 3, DRAWING R-29
- HMA PAVEMENT ON WSDOT ROADWAY, SEE DETAIL 2, DRAWING R-30

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
HCM
DRAWN
EKS
CHECKED



murraysmith



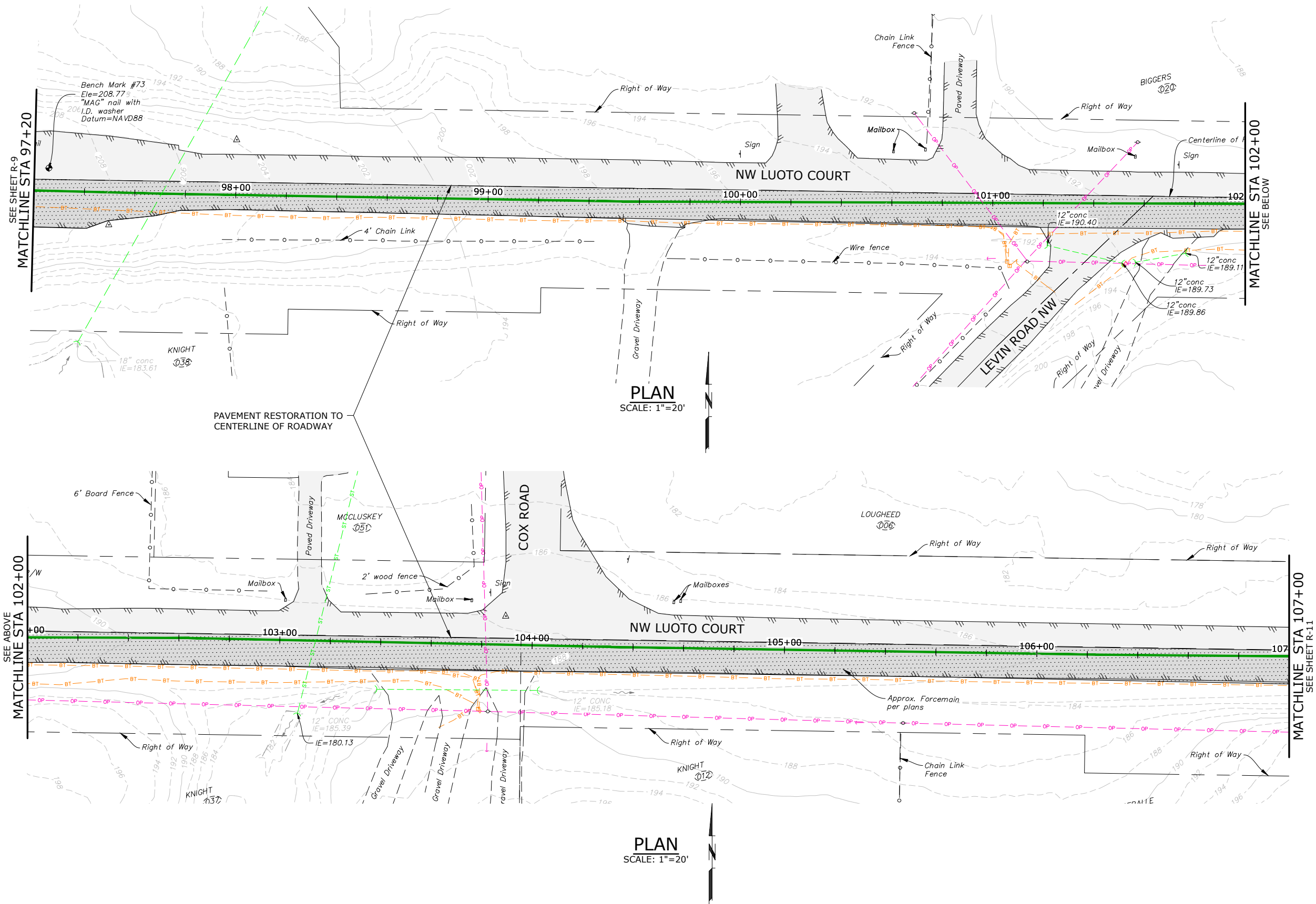
BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

RESTORATION PLAN
STA 87+00 TO 97+20
SCHEDULE A

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET
R-9
85 of 138

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NOTES:

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LEGEND:

HMA PAVEMENT, SEE DETAIL 3, DRAWING R-29

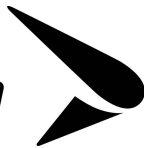
NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
HCM
DRAWN
EKS
CHECKED



murraysmith



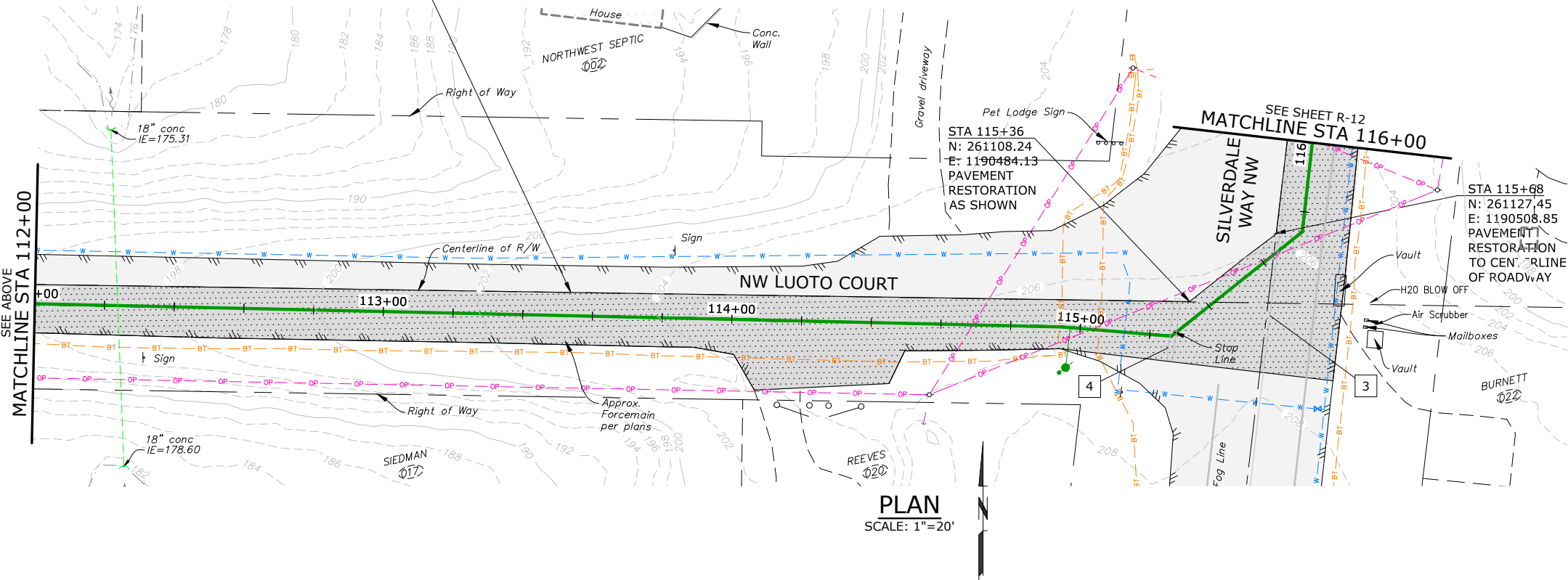
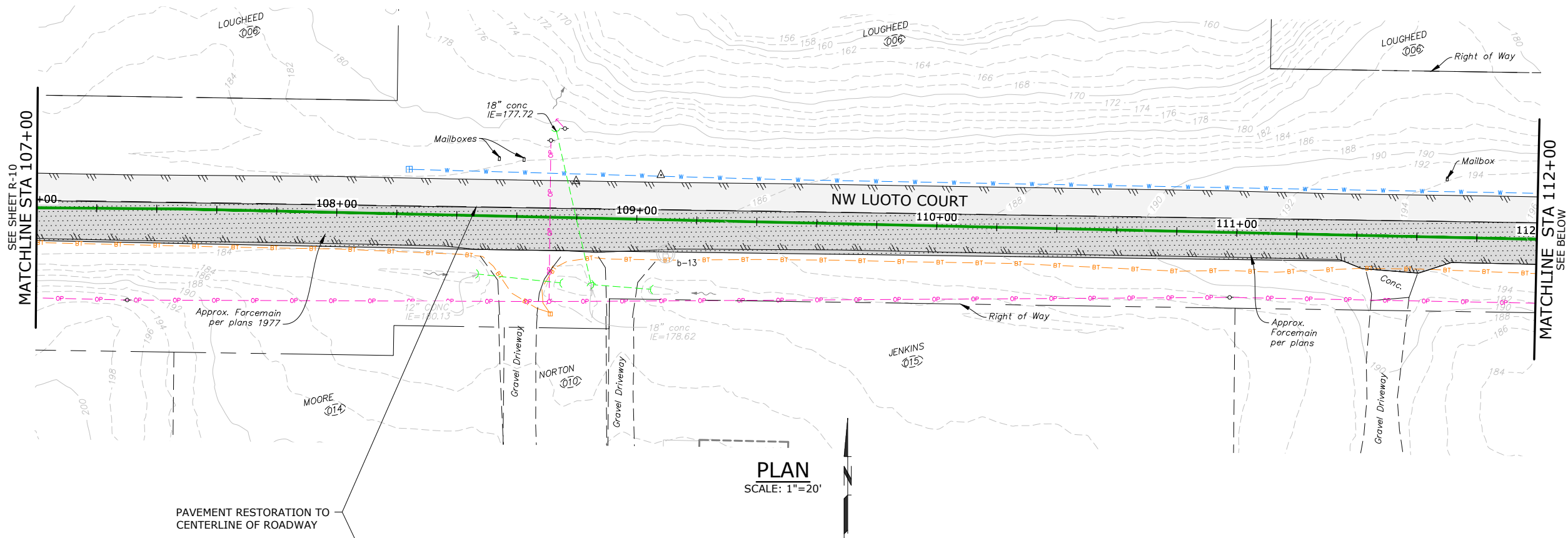
BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

RESTORATION PLAN
STA 97+20 TO 107+00
SCHEDULE A

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET
R-10
86 of 138

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CHANNELIZATION NOTES:

- 3 PAINTED YELLOW DOTTED CENTERLINE PER WSDOT STD PLAN M-20.10-02 WITH RAISED PAVEMENT MARKERS TO MATCH EXISTING.
- 4 PAINTED WHITE STOP LINE.

NOTES:

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LEGEND:

HMA PAVEMENT, SEE DETAIL 3, DRAWING R-29

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
HCM
DRAWN
EKS
CHECKED

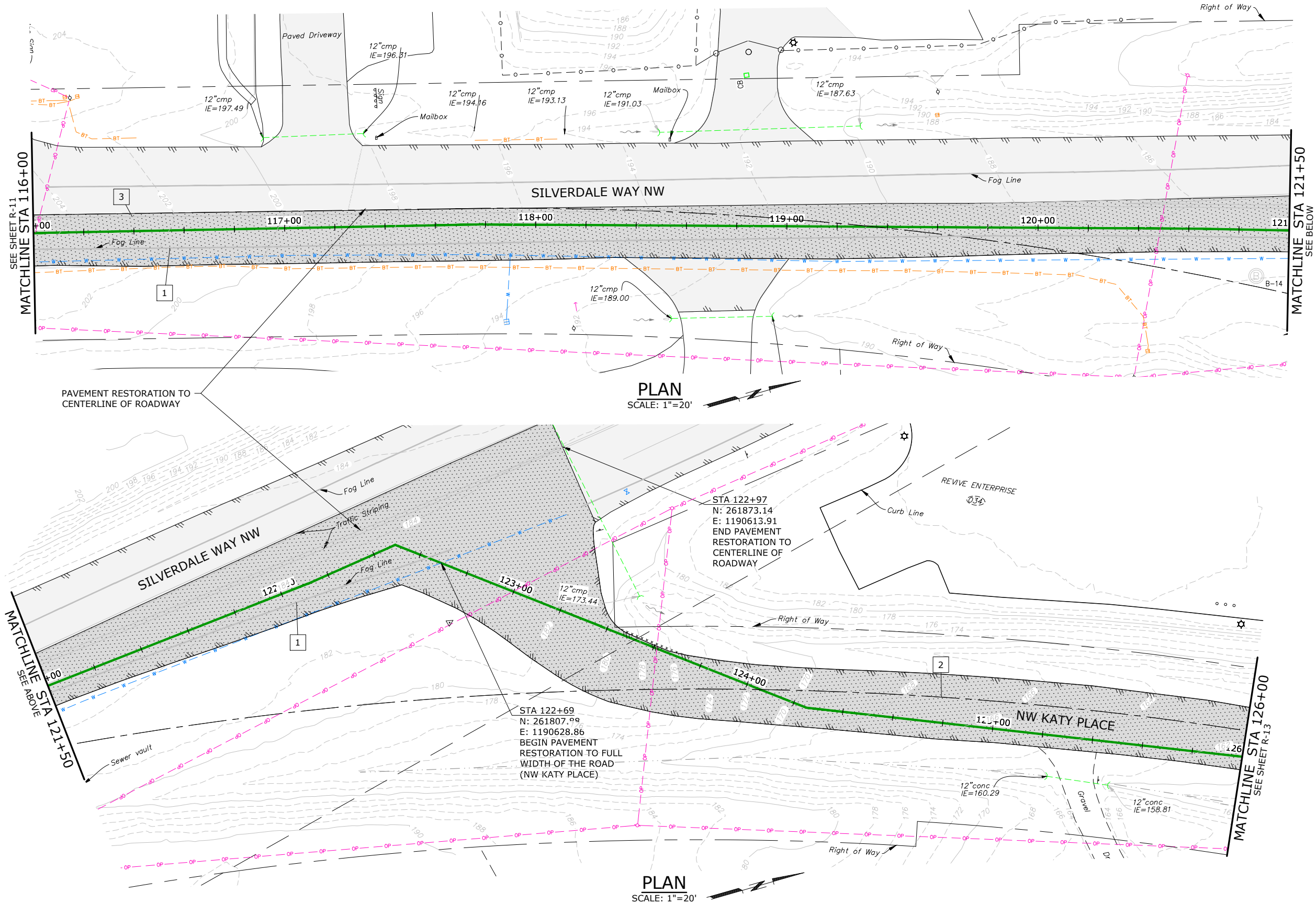


BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

RESTORATION PLAN
STA 107+00 TO 116+00
SCHEDULE A
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET
R-11
87 of 138

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CHANNELIZATION NOTES:

1. PAINTED WHITE EDGE LINE PER WSDOT STD PLAN M-20.10-02 TO MATCH EXISTING.
2. PAINTED YELLOW DOUBLE CENTERLINE WITH 4" SPACING PER WSDOT STD PLAN M-20.10-02 WITH RAISED PAVEMENT MARKERS TO MATCH EXISTING.
3. PAINTED YELLOW DOTTED CENTERLINE PER WSDOT STD PLAN M-20.10-02 WITH RAISED PAVEMENT MARKERS TO MATCH EXISTING.

NOTES:

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LEGEND:

-  RESTORE SURFACE WITH SOIL AND HYDROSEED, SEE DETAIL 2, DRAWING R-29
-  HMA PAVEMENT, SEE DETAIL 3, DRAWING R-29

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
HCM
DRAWN
EKS
CHECKED

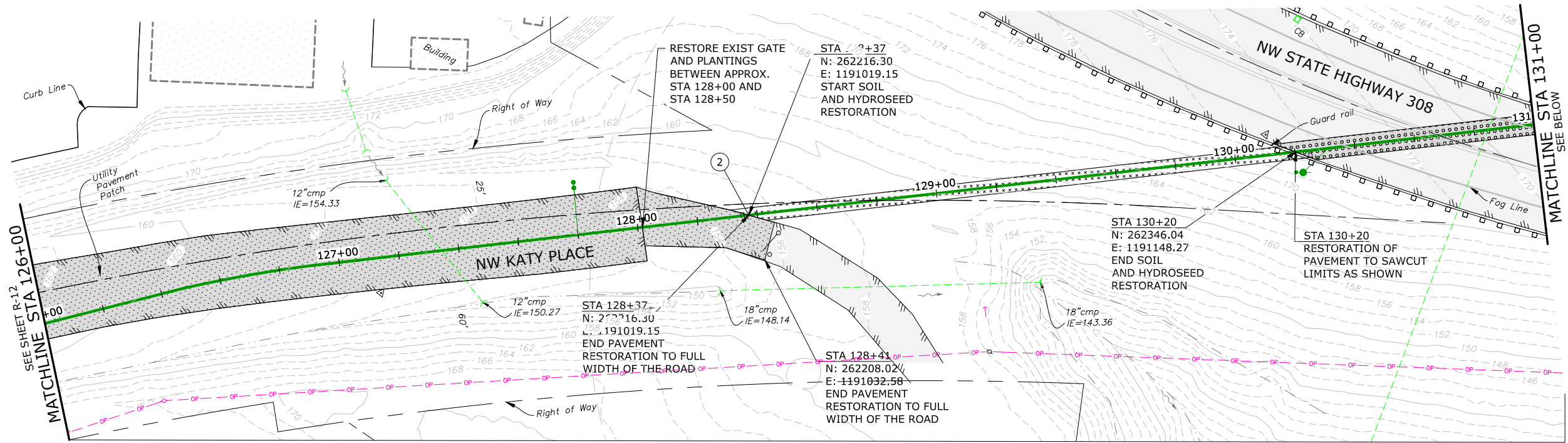


BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

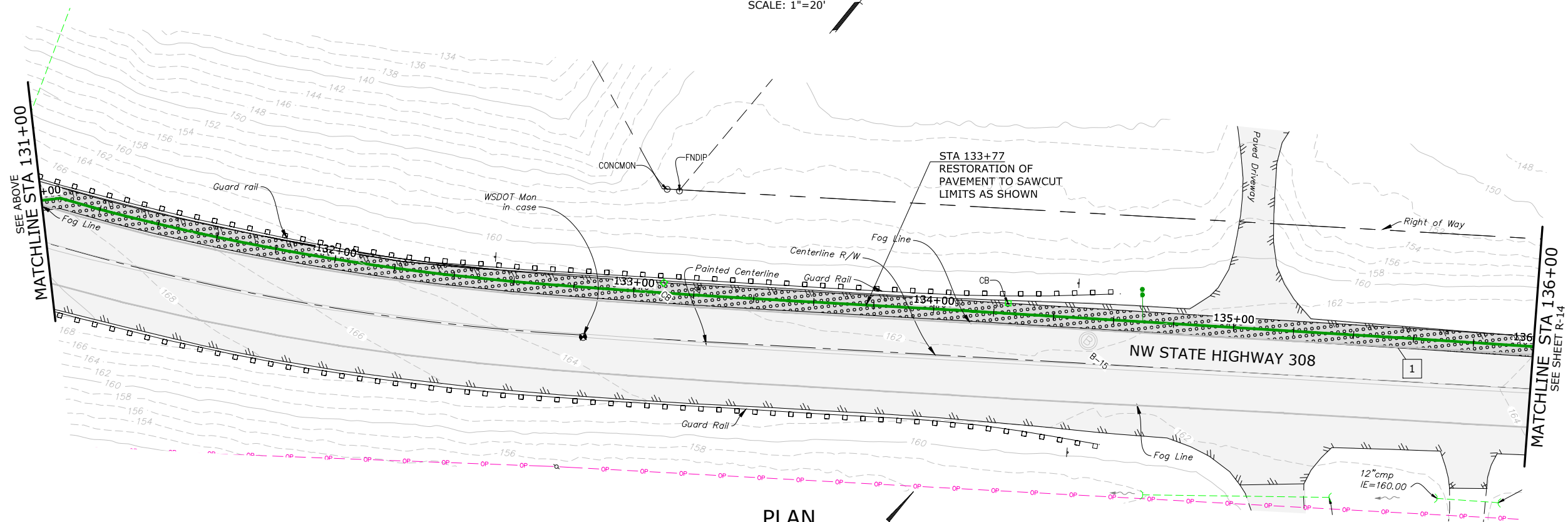
RESTORATION PLAN
STA 116+00 TO 126+00
SCHEDULE A
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET
R-12
88 of 138

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PLAN
SCALE: 1"=20'



PLAN
SCALE: 1"=20'

CONSTRUCTION NOTES

2. PROTECT/ RESTORE EXIST GATE AND PLANTINGS

CHANNELIZATION NOTES:

1. PAINTED WHITE EDGE LINE PER WSDOT STD PLAN M-20.10-02 TO MATCH EXISTING.

NOTES:

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3. PROVIDE ALL THERMOPLASTIC MARKINGS PAINT STRIPING, AND SIGNAGE.
4. REMOVE ALL EXISTING PAVEMENT MARKINGS IN CONFLICT WITH PROPOSED MARKINGS.
5. ALL PAVEMENT MARKINGS SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, UNLESS OTHERWISE NOTED.

LEGEND:

- RESTORE SURFACE WITH SOIL AND HYDROSEED, SEE DETAIL 2, DRAWING R-29
- HMA PAVEMENT, SEE DETAIL 3, DRAWING R-29
- HMA PAVEMENT ON WSDOT ROADWAY, SEE DETAIL 2, DRAWING R-30

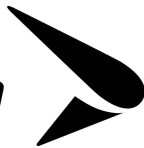
NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
HCM
DRAWN
EKS
CHECKED



murraysmith



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

RESTORATION PLAN
STA 126+00 TO 136+00
SCHEDULE A

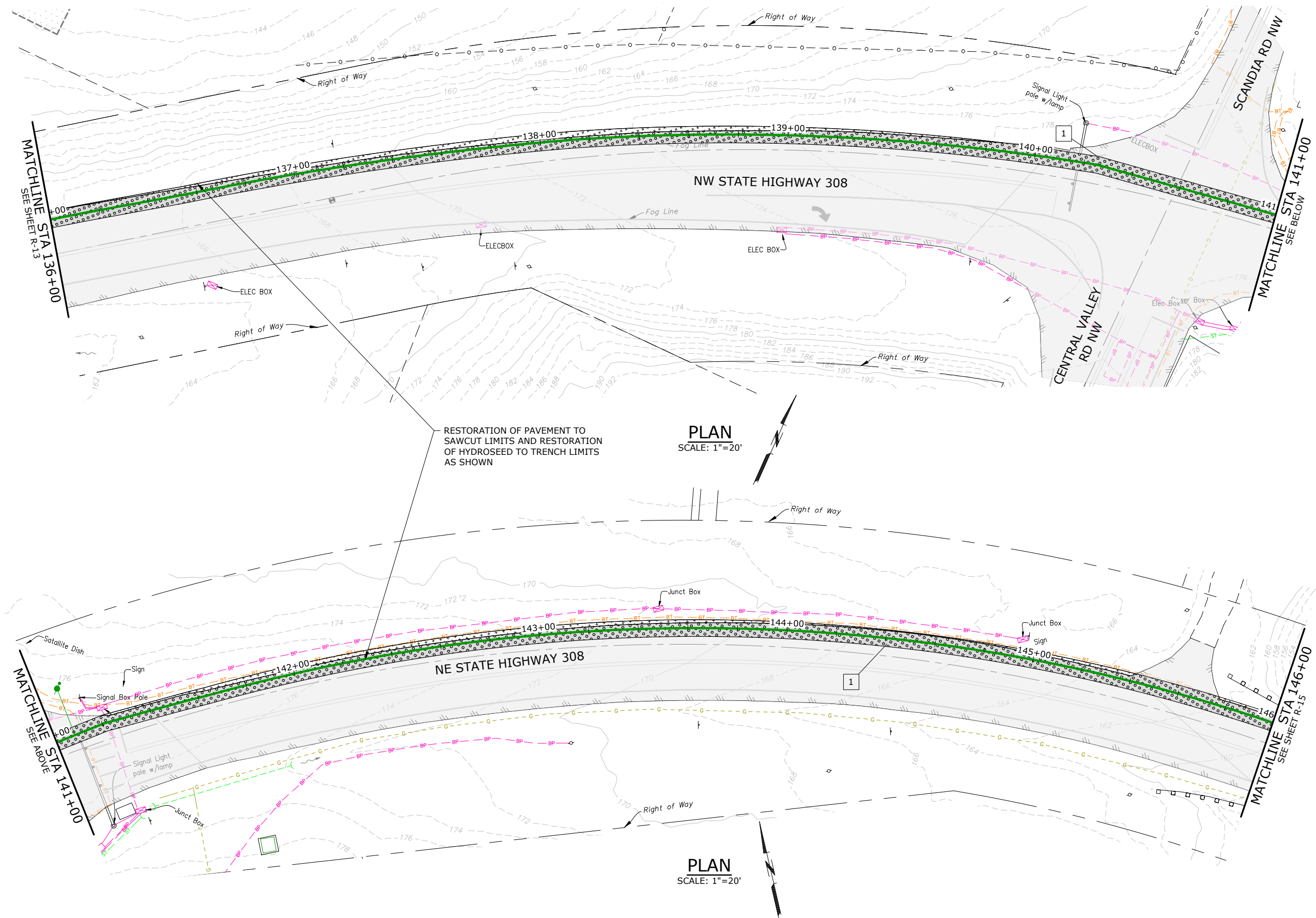
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET

R-13

89 of 138

\\ad.msa-ep.com\everett\evt_projects\20\2815 - Kitsap County Bangor Keyport Fm Replacement\CAD\Sheets\20-2815-WA-R-4.dwg R-14 2/3/2022 12:43 PM JUSTIN.DEUEL 23.0s (LMS Tech)



CHANNELIZATION NOTES:

- 1 PAINTED WHITE EDGE LINE PER WSDOT STD PLAN M-20.10-02 TO MATCH EXISTING.

NOTES:

1. ALL NECESSARY RESTORATION MAY NOT BE IDENTIFIED ON THE DRAWINGS. RESTORE ALL DISTURBED AREAS TO PRE-CONSTRUCTION CONDITIONS OR BETTER WITH LIKE MATERIAL.
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LEGEND:

- RESTORE SURFACE WITH SOIL AND HYDROSEED, SEE DETAIL 2, DRAWING R-29
- HMA PAVEMENT ON WSDOT ROADWAY, SEE DETAIL 2, DRAWING R-30

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
HCM
DRAWN
EKS
CHECKED



murraysmith



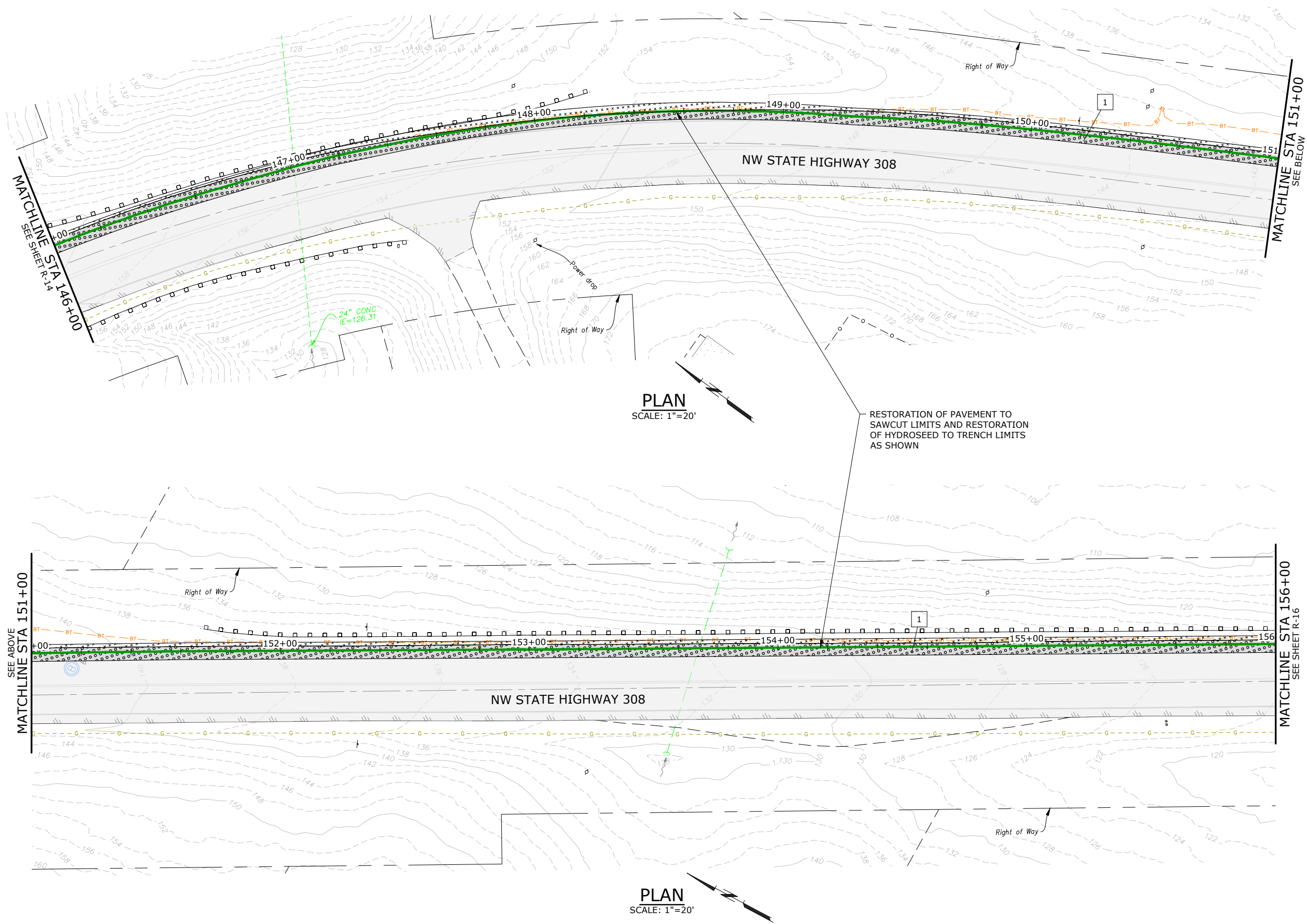
BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

RESTORATION PLAN
STA 136+00 TO 146+00
SCHEDULE A

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET
R-14
90 of 138

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CHANNELIZATION NOTES:

1. INSTALL PAINTED WHITE EDGE LINE PER WSDOT STD PLAN M-20.10-02 TO MATCH EXISTING

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LEGEND:

-  RESTORE SURFACE WITH SOIL AND HYDROSEED, SEE DETAIL 2, DRAWING R-29
-  HMA PAVEMENT ON WSDOT ROADWAY, SEE DETAIL 2, DRAWING R-30

NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
HCM
DRAWN
EKS
CHECKED



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

RESTORATION PLAN
STA 146+00 TO 156+00
SCHEDULE A

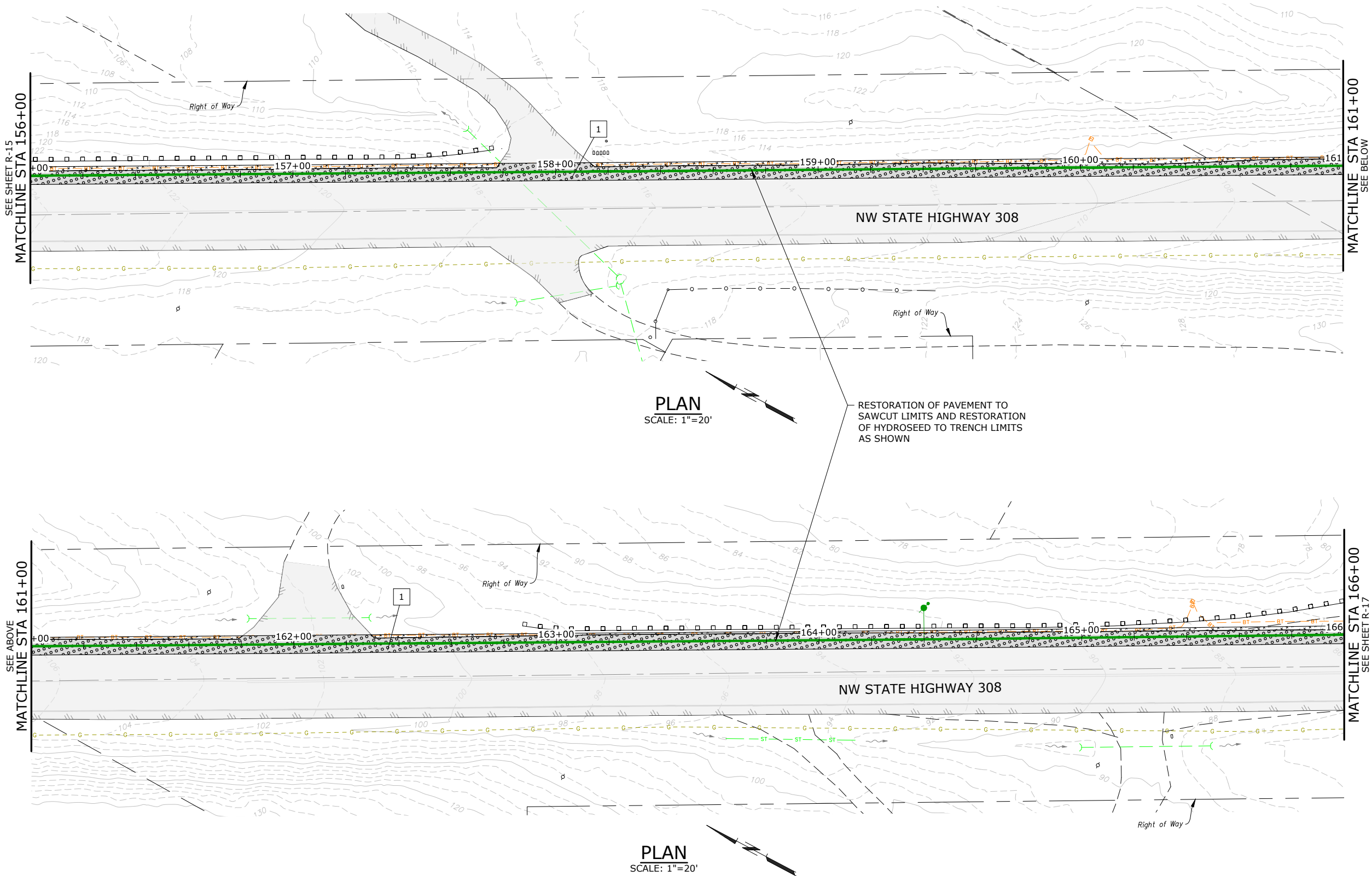
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET

R-15

91 of 138

\\ad.msa-ep.com\everett\evt_projects\20\2815 - Kitsap County Bangor_keyport Fm Replacement\CAD\Sheets\20-2815-WA-R-4.dwg R-16 2/3/2022 12:43 PM JUSTIN.DEUEL 23.0s (LMS Tech)



CHANNELIZATION NOTES:

1. INSTALL PAINTED WHITE EDGE LINE PER WSDOT STD PLAN M-20.10-02 TO MATCH EXISTING

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LEGEND:

-  RESTORE SURFACE WITH SOIL AND HYDROSEED, SEE DETAIL 2, DRAWING R-29
-  HMA PAVEMENT ON WSDOT ROADWAY, SEE DETAIL 2, DRAWING R-30

NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
HCM
DRAWN
EKS
CHECKED



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

RESTORATION PLAN
STA 156+00 TO 166+00
SCHEDULE A

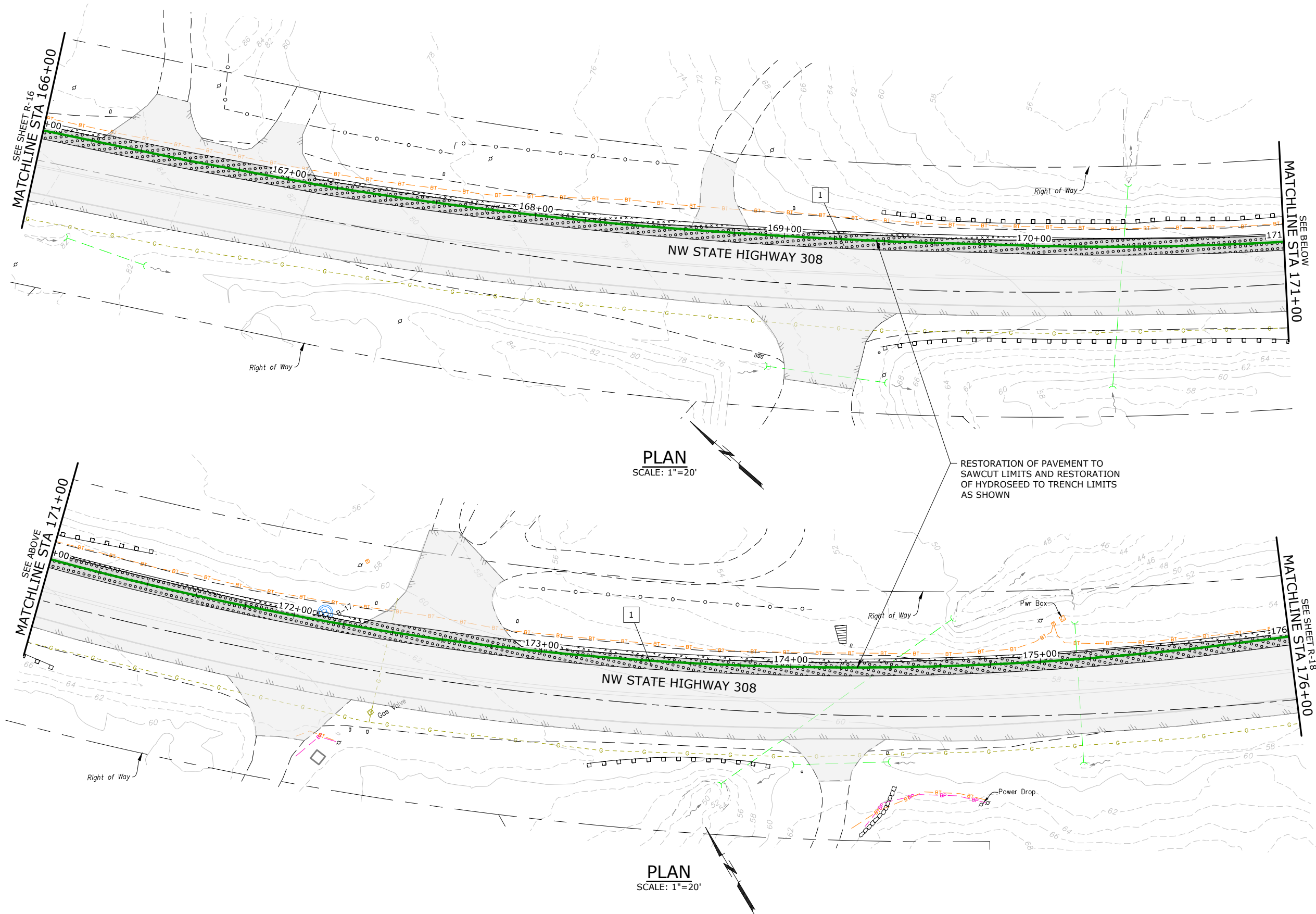
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET

R-16

92 of 138

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CHANNELIZATION NOTES:

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LEGEND:

- RESTORE SURFACE WITH SOIL AND HYDROSEED, SEE DETAIL 2, DRAWING R-29
- HMA PAVEMENT ON WSDOT ROADWAY, SEE DETAIL 2, DRAWING R-30

NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

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TMH
DESIGNED
HCM
DRAWN
EKS
CHECKED



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

RESTORATION PLAN
STA 166+00 TO 176+00
SCHEDULE A

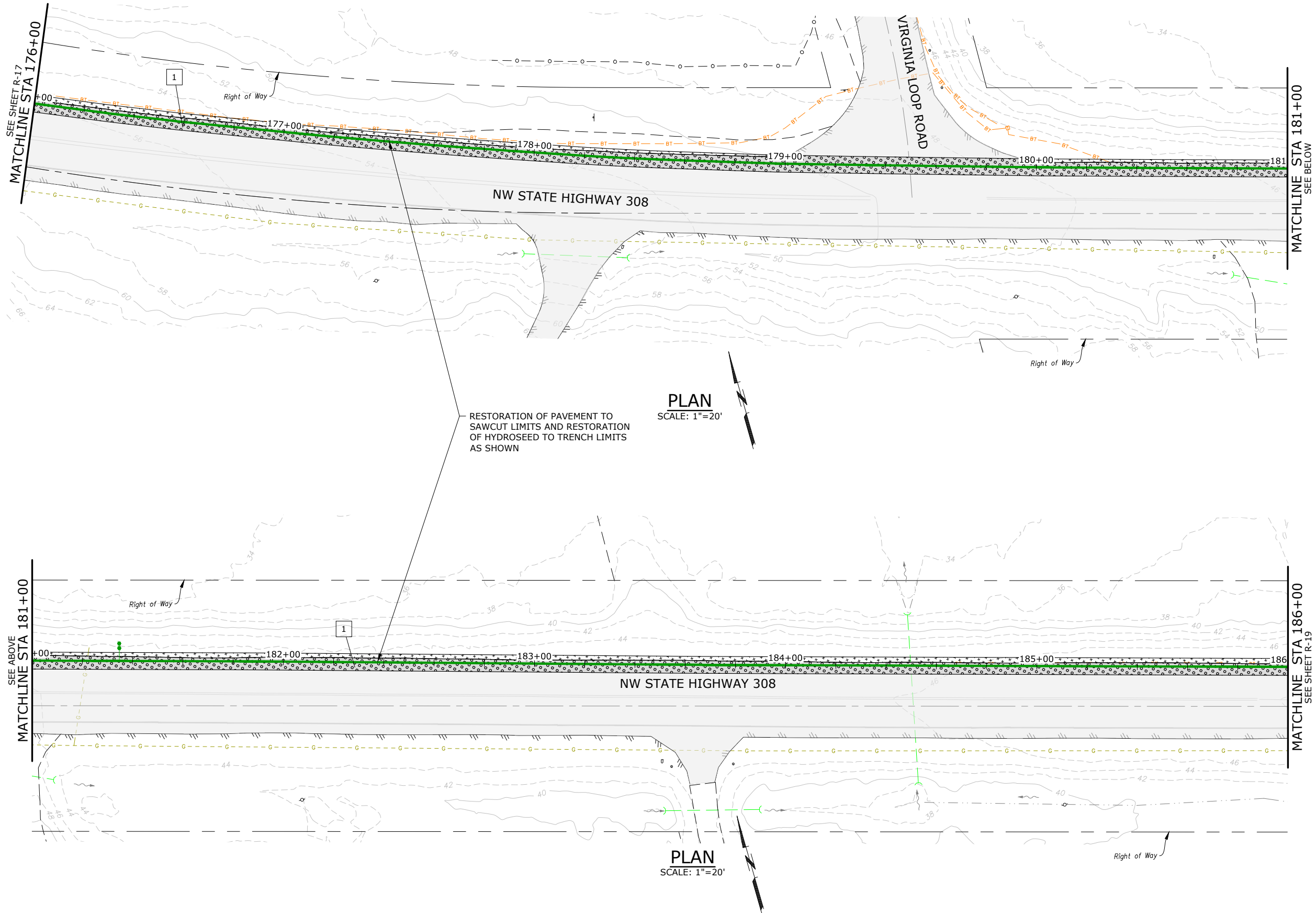
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET

R-17

93 of 138

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CHANNELIZATION NOTES:

1. INSTALL PAINTED WHITE EDGE LINE PER WSDOT STD PLAN M-20.10-02 TO MATCH EXISTING

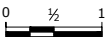
NOTES:

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LEGEND:

-  RESTORE SURFACE WITH SOIL AND HYDROSEED, SEE DETAIL 2, DRAWING R-29
-  HMA PAVEMENT ON WSDOT ROADWAY, SEE DETAIL 2, DRAWING R-30

NO.	DATE	BY	REVISION

NOTICE

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
HCM
DRAWN
EKS
CHECKED



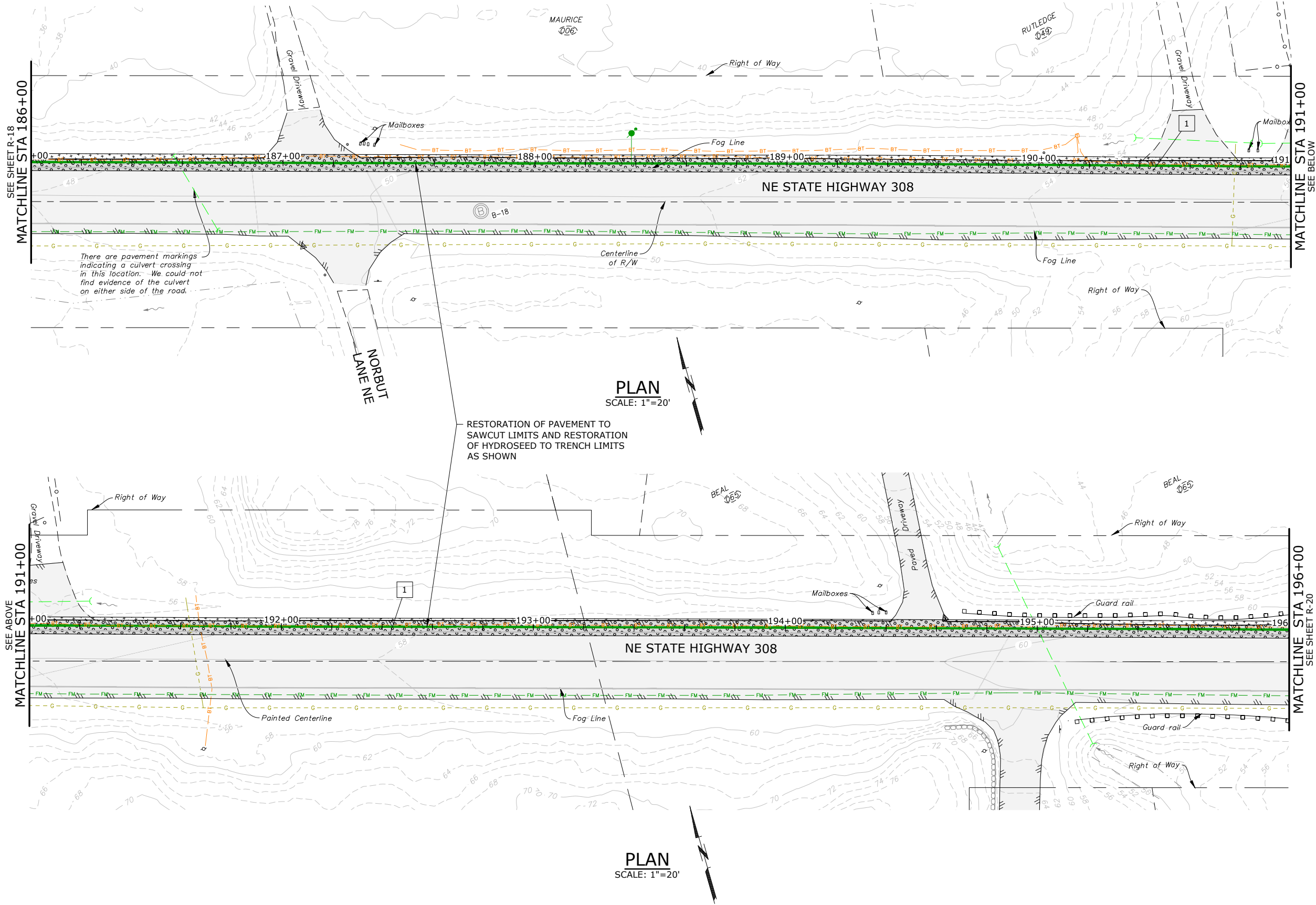
**BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT**

**RESTORATION PLAN
STA 176+00 TO 186+00
SCHEDULE A**

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET
R-18
94 of 138

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CHANNELIZATION NOTES:

1. INSTALL PAINTED WHITE EDGE LINE PER WSDOT STD PLAN M-20.10-02 TO MATCH EXISTING

NOTES:

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LEGEND:

-  RESTORE SURFACE WITH SOIL AND HYDROSEED, SEE DETAIL 2, DRAWING R-29
-  HMA PAVEMENT ON WSDOT ROADWAY, SEE DETAIL 2, DRAWING R-30

NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

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TMH
DESIGNED
HCM
DRAWN
EKS
CHECKED



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

RESTORATION PLAN
STA 186+00 TO 196+00
SCHEDULE A

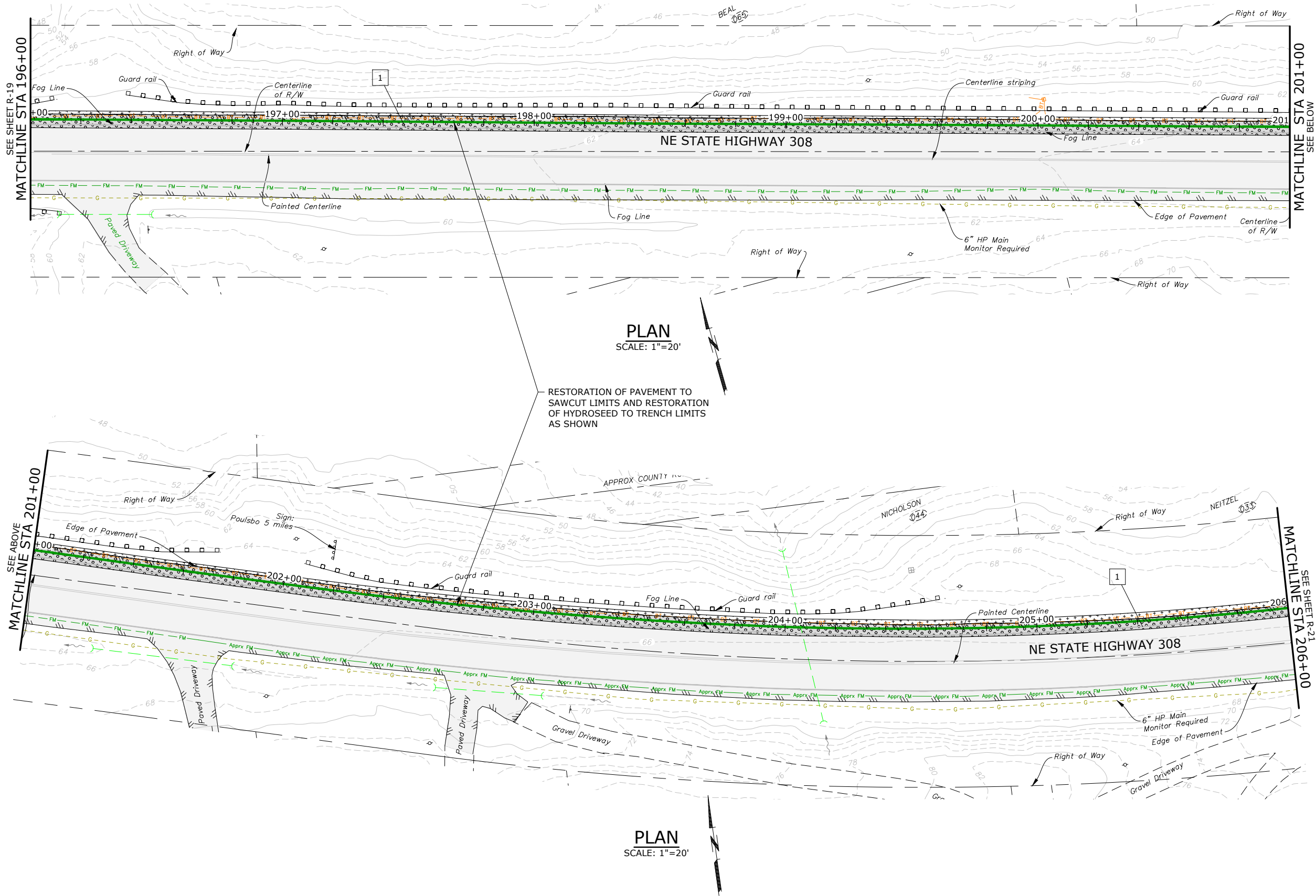
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET

R-19

95 of 138

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CHANNELIZATION NOTES:

1. INSTALL PAINTED WHITE EDGE LINE PER WSDOT STD PLAN M-20.10-02 TO MATCH EXISTING

NOTES:

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LEGEND:

- RESTORE SURFACE WITH SOIL AND HYDROSEED, SEE DETAIL 2, DRAWING R-29
- HMA PAVEMENT ON WSDOT ROADWAY, SEE DETAIL 2, DRAWING R-30

NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
HCM
DRAWN
EKS
CHECKED



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

RESTORATION PLAN
STA 196+00 TO 206+00
SCHEDULE A

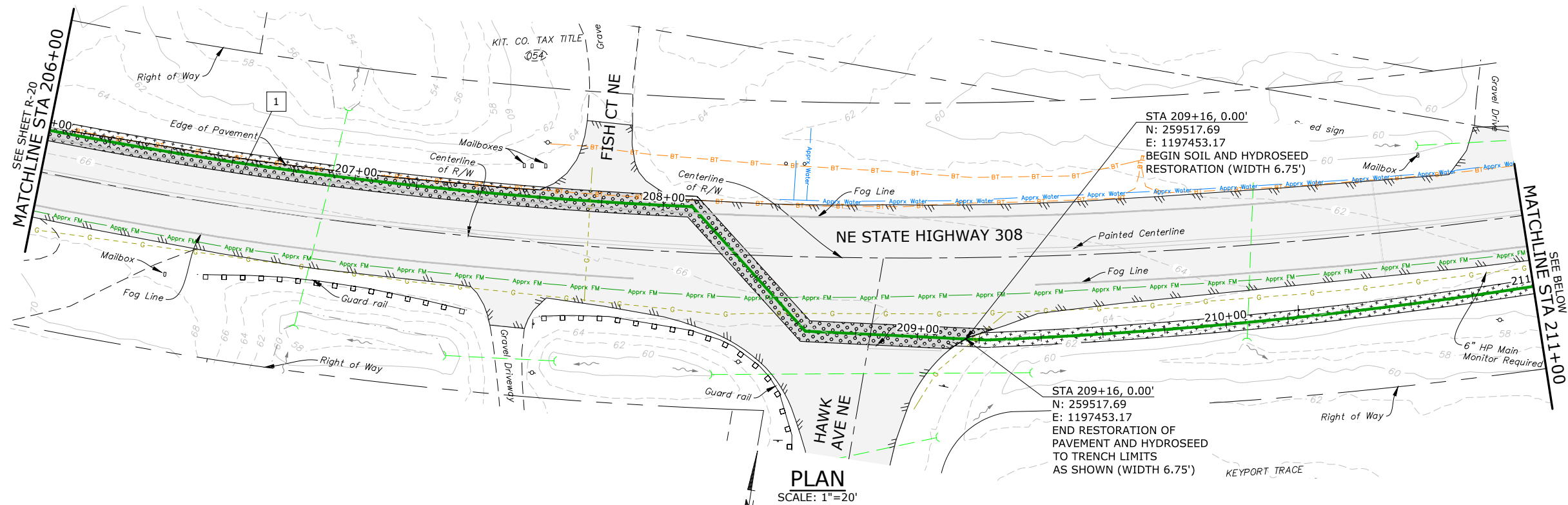
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET

R-20

96 of 138

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PLAN
SCALE: 1"=20'

CONSTRUCTION NOTES

- 3) MOVE EXIST WOOD FENCE TO BEHIND THE ROW LINE. REPLACE FENCE TO EXIST CONDITIONS OR BETTER
- 4) REPLACE EXIST SHED BEHIND THE ROW LINE
- 5) PUGET SOUND ENERGY TO RELOCATE POLE TO EDGE OF ROW PER NOTE 4, SHT SS-42

CHANNELIZATION NOTES:

- 1) INSTALL PAINTED WHITE EDGE LINE PER WSDOT STD PLAN M-20.10-02 TO MATCH EXISTING
- 2) INSTALL PAINTED YELLOW DOUBLE CENTERLINE WITH 4" SPACING PER WSDOT STD PLAN M-20.10-02 WITH RAISED PAVEMENT MARKERS TO MATCH EXISTING

NOTES:

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LEGEND:

- RESTORE SURFACE WITH SOIL AND HYDROSEED, SEE DETAIL 2, DRAWING R-29
- HMA PAVEMENT, SEE DETAIL 3, DRAWING R-29
- GRAVEL SURFACING, SEE DETAIL 2, DRAWING R-29
- RESTORE SOD SURFACING, PER WSDOT STANDARD SPEC 9-14.7(4)
- HMA PAVEMENT ON WSDOT ROADWAY, SEE DETAIL 2, DRAWING R-30

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

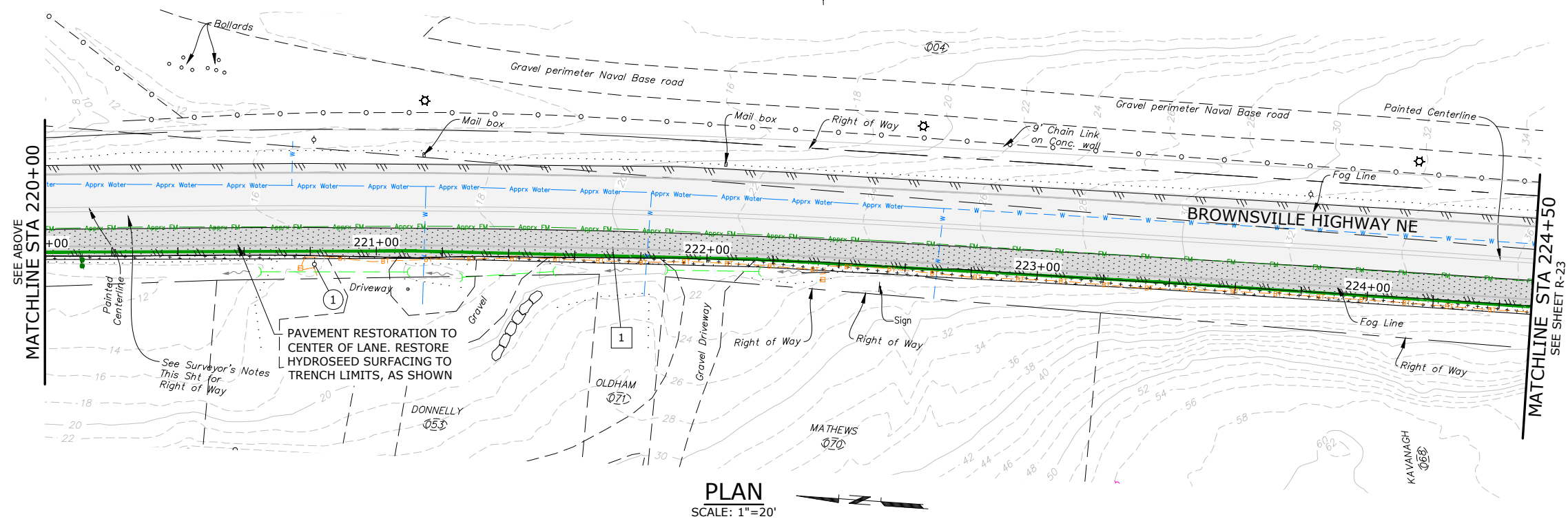
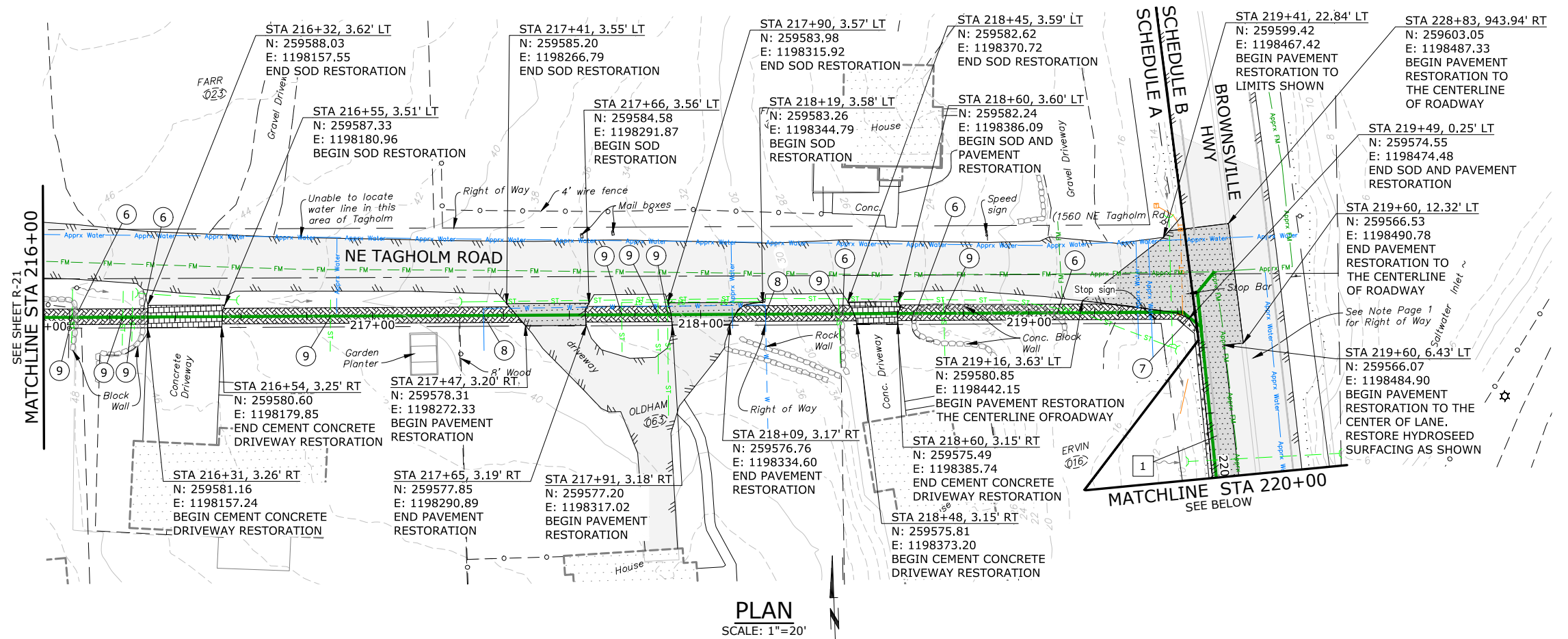
TMH
DESIGNED
HCM
DRAWN
EKS
CHECKED



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

RESTORATION PLAN
STA 206+00 TO 216+00
SCHEDULE A
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET
R-21
97 of 138



CONSTRUCTION NOTES

- 1 PROTECT POWER POLE
- 6 MOVE EXIST ROCK WALL TO BEHIND THE ROW LINE. RESTORE TO EXIST CONDITIONS OR BETTER
- 7 REINSTALL STREET SIGNAGE PER KITSAP COUNTY STANDARDS
- 8 RESTORE SPRINKLER SYSTEM TO BEHIND ROW LINE, SO THERE IS NO NET LOSS OF SPRINKLER COVERAGE. SEE NOTE 6, SHT SS-43 FOR MORE INFORMATION
- 9 RECONNECT AND REESTABLISH CONNECTION TO EXIST STORM DRAIN. SEE NOTE 5, SHT SS-43 FOR MORE INFORMATION

CHANNELIZATION NOTES:

- 1 INSTALL PAINTED WHITE EDGE LINE PER
WSDOT STD PLAN M-20.10-02 TO MATCH
EXISTING

NOTES:

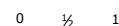
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6. CONTACT COUNTY WORKS TRAFFIC DIVISION PRIOR TO INSTALLING PAVEMENT MARKINGS OR OTHER TRAFFIC DELINEATORS ON COUNTY RIGHTS OF WAY TO ENSURE COMPLIANCE WITH KITASAP COUNTY ROAD STANDARDS SECTION 6.2.5.

LEGEND:

- | | |
|---|---|
|  | RESTORE SURFACE WITH SOIL
AND HYDROSEED, SEE DETAIL 2,
DRAWING R-29 |
|  | HMA PAVEMENT,
SEE DETAIL 3, DRAWING R-29 |
|  | RESTORE CEMENT CONCRETE
DRIVEWAY PER WSDOT
STANDARD DETAIL F-80.10-04 |
|  | GRAVEL SURFACING, SEE DETAIL 2,
DRAWING, DRAWING R-29 |
|  | RESTORE SOD SURFACING, PER
WSDOT STANDARD SPEC 9-14.7(4) |

NO.	DATE	BY	REVISION

NOTICE



IF THIS BAR DOES
NOT MEASURE 1"
THEN DRAWING IS

TMH
DESIGNED
HCM
DRAWN
EKS
CHECKED



murraysmith



BANGOR-KEYPORT FORCE MAIN REPLACEMENT

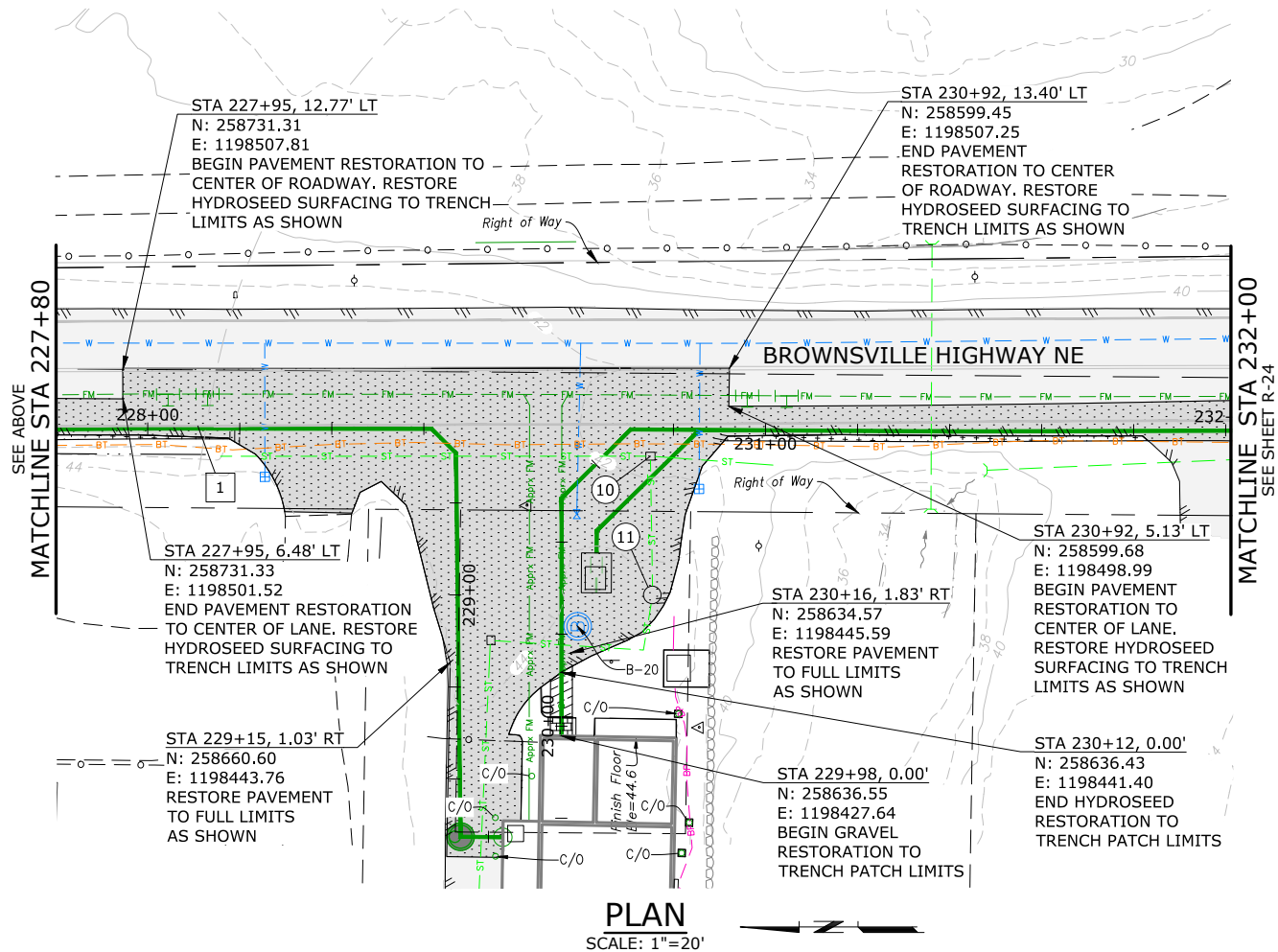
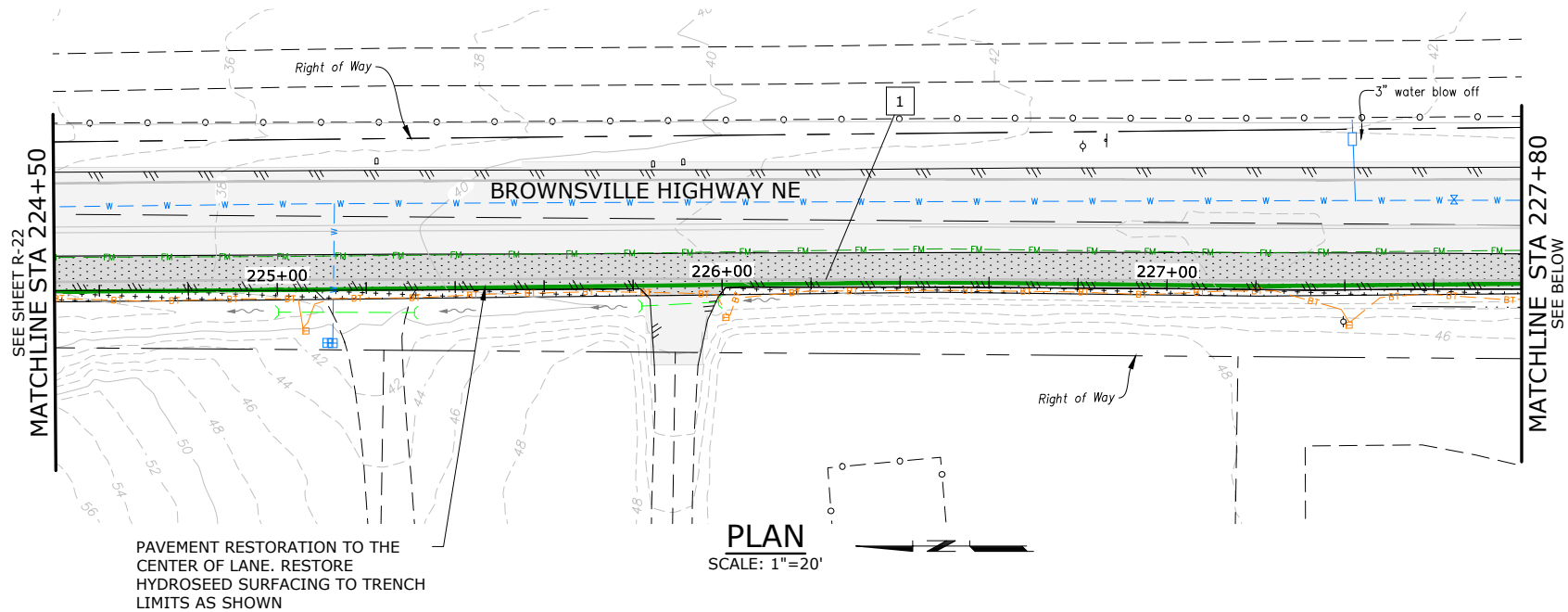
**RESTORATION PLAN
STA 216+00 TO 224+50
SCHEDULE A &
SCHEDULE B**

HEET

R-22

98 of 138

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CHANNELIZATION NOTES:

1. INSTALL PAINTED WHITE EDGE LINE PER WSDOT STD PLAN M-20.10-02 TO MATCH EXISTING

CONSTRUCTION NOTES

10. ADJUST STORM DRAIN LID TO FINAL GRADE
11. ADJUST MANHOLE LID TO FINAL GRADE

NOTES:

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LEGEND:

-  RESTORE SURFACE WITH SOIL AND HYDROSEED, SEE DETAIL 2, DRAWING R-29
-  GRAVEL SURFACING, SEE DETAIL 2, DRAWING R-29
-  HMA PAVEMENT, SEE DETAIL 3, DRAWING R-29

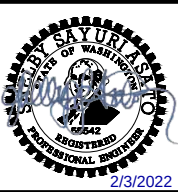
NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

SEO
DESIGNED
HCM
DRAWN
EKS
CHECKED



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

RESTORATION PLAN
STA 224+50 TO 232+00
SCHEDULE B

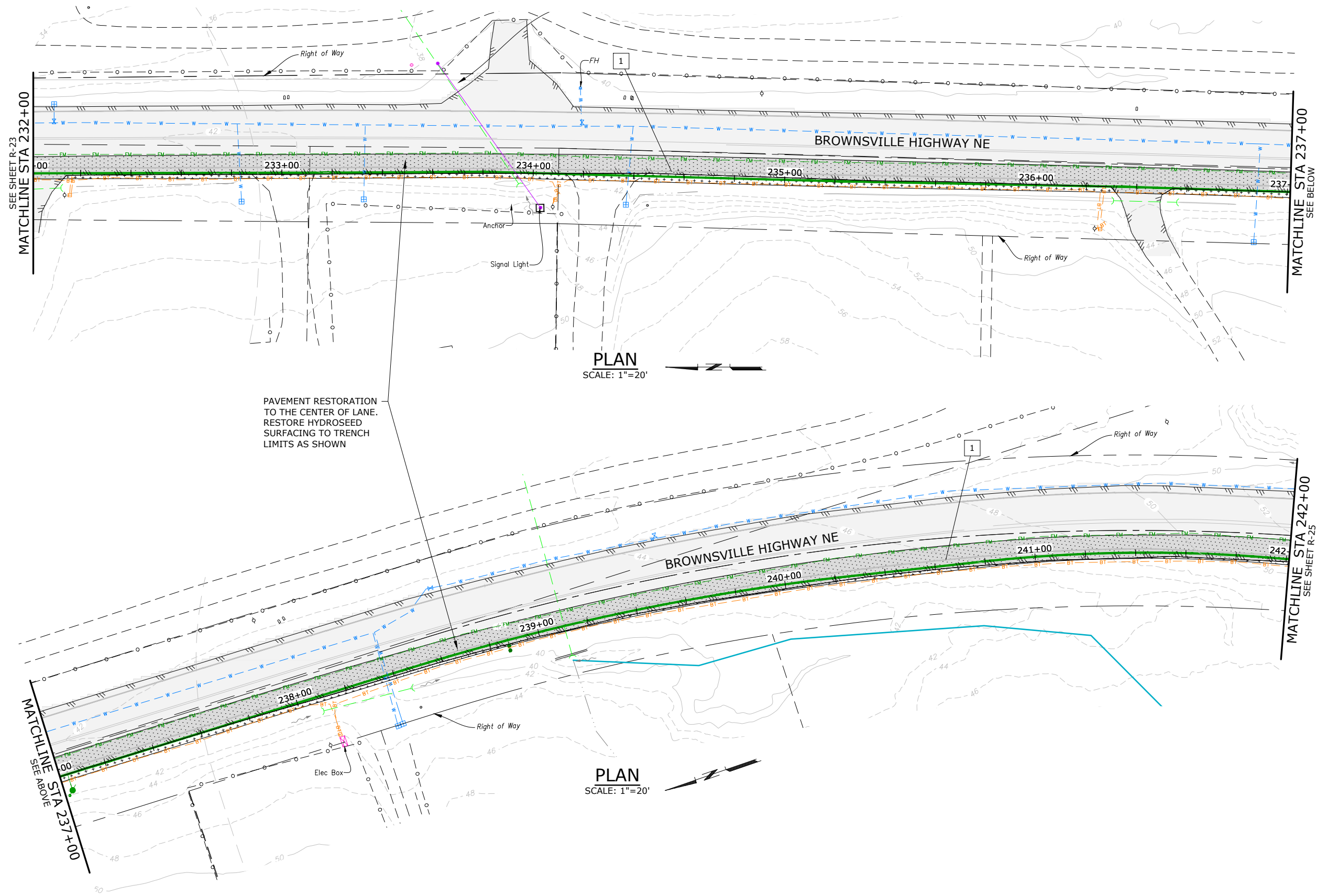
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET

R-23

99 of 138

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PAVEMENT RESTORATION
TO THE CENTER OF LANE.
RESTORE HYDROSEED
SURFACING TO TRENCH
LIMITS AS SHOWN

PLAN
SCALE: 1"=20'

PLAN
SCALE: 1"=20'

CHANNELIZATION NOTES:

1. INSTALL PAINTED WHITE EDGE LINE PER WSDOT STD PLAN M-20.10-02 TO MATCH EXISTING

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6. CONTACT COUNTY WORKS TRAFFIC DIVISION PRIOR TO INSTALLING PAVEMENT MARKINGS OR OTHER TRAFFIC DELINEATORS ON COUNTY RIGHTS OF WAY TO ENSURE COMPLIANCE WITH KITSAP COUNTY ROAD STANDARDS SECTION 6.2.5.

LEGEND:

-  RESTORE SURFACE WITH SOIL AND HYDROSEED, SEE DETAIL 2, DRAWING R-29
-  HMA PAVEMENT, SEE DETAIL 3, DRAWING R-29

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

SEO
DESIGNED
HCM
DRAWN
EKS
CHECKED



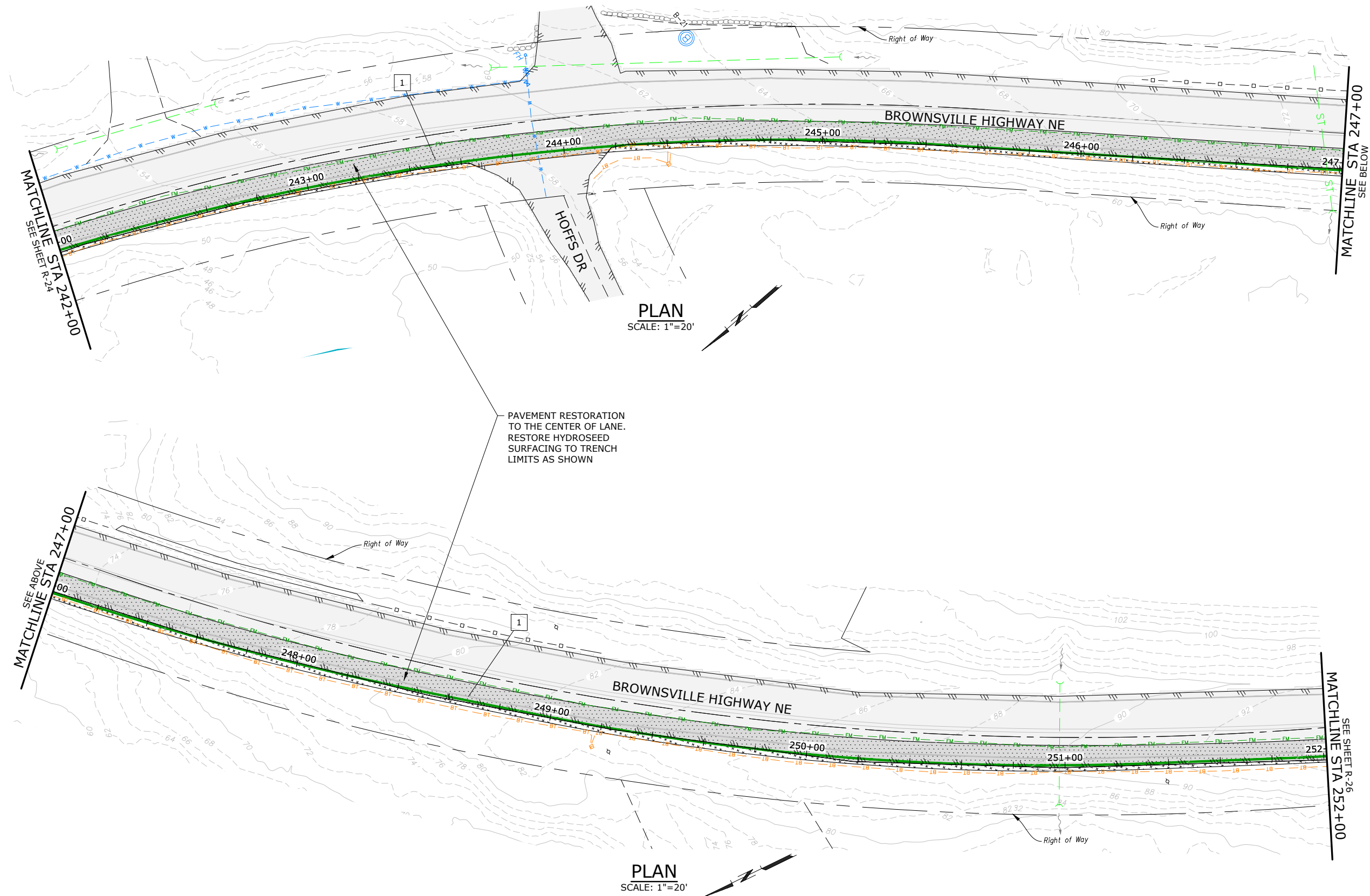
BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

RESTORATION PLAN
STA 232+00 TO 242+00
SCHEDULE B

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET
R-24
100 of 138

\\ad.msa-ep.com\everett\evt_projects\20\2815 - Kitsap County Bangor_keyport Fm Replacement\CAD\Sheets\20-2815-WA-R-6.dwg R-25 2/3/2022 12:52 PM JUSTIN.DEUEL 23.0s (LMS Tech)



CHANNELIZATION NOTES:

- 1
- INSTALL PAINTED WHITE EDGE LINE PER WSDOT STD PLAN M-20.10-02 TO MATCH EXISTING

NOTES:

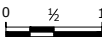
1. ALL NECESSARY RESTORATION MAY NOT BE IDENTIFIED ON THE DRAWINGS. RESTORE ALL DISTURBED AREAS TO PRE-CONSTRUCTION CONDITIONS OR BETTER WITH LIKE MATERIAL.
2. NATIVE VEGETATION WILL BE RESTORED IN KIND IN CONSTRUCTION AREA. DO NOT DISTURB NATIVE VEGETATION OUTSIDE THE CONSTRUCTION LIMITS.
3. PROVIDE ALL THERMOPLASTIC MARKINGS PAINT STRIPING, AND SIGNAGE.
4. REMOVE ALL EXISTING PAVEMENT MARKINGS IN CONFLICT WITH PROPOSED MARKINGS.
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LEGEND:

-  RESTORE SURFACE WITH SOIL AND HYDROSEED, SEE DETAIL 2, DRAWING R-29
-  HMA PAVEMENT, SEE DETAIL 3, DRAWING R-29

NO.	DATE	BY	REVISION

NOTICE



IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

SEO

DESIGNED

HCM

DRAWN

EKS

CHECKED



BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

RESTORATION PLAN
STA 242+00 TO 252+00
SCHEDULE B

PROJECT NO.: 20-2815

SCALE: AS SHOWN

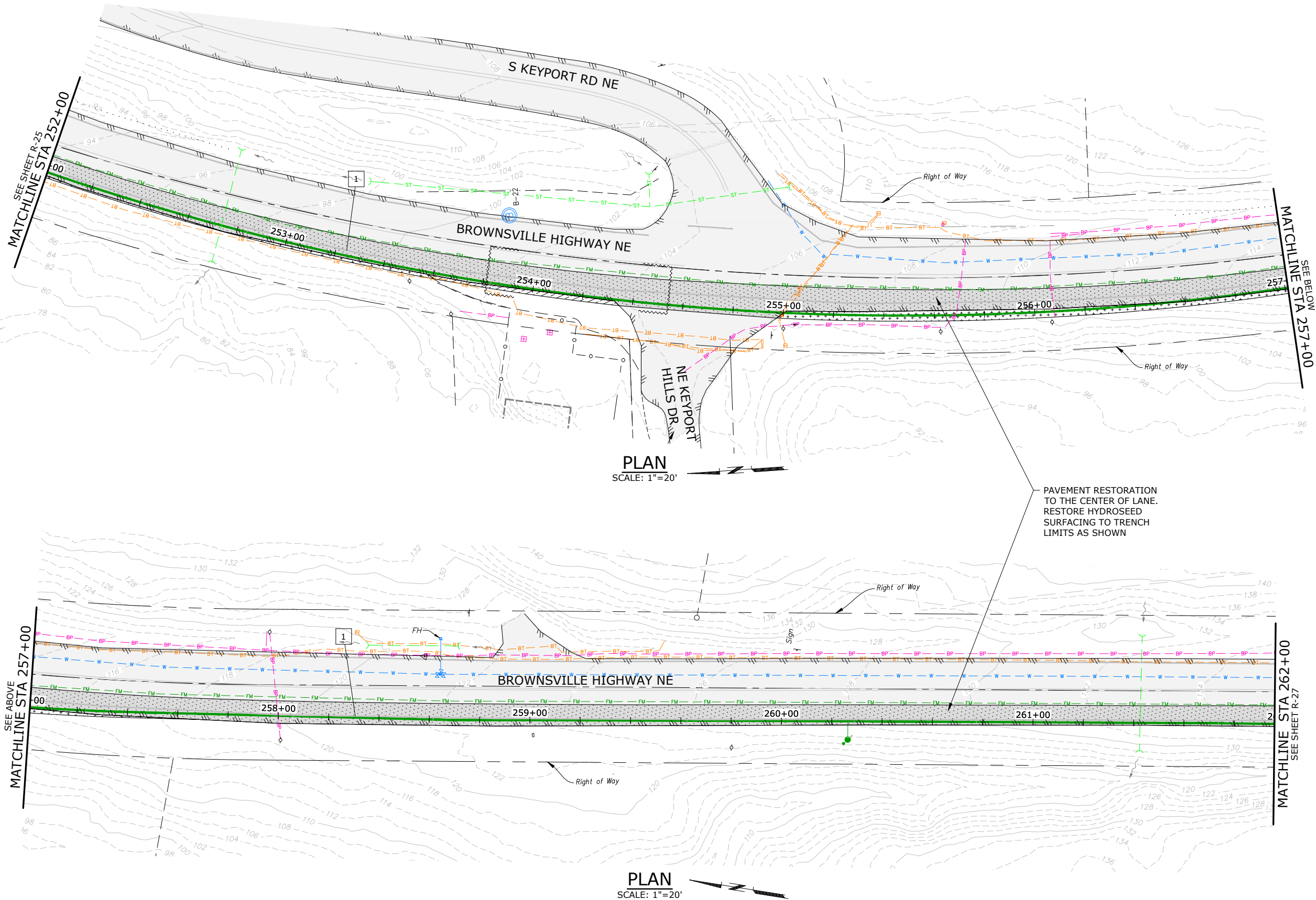
DATE: FEBRUARY 2022

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R-25

101 of 138

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CHANNELIZATION NOTES:

1. INSTALL PAINTED WHITE EDGE LINE PER WSDOT STD PLAN M-20.10-02 TO MATCH EXISTING

NOTES:

1. ALL NECESSARY RESTORATION MAY NOT BE IDENTIFIED ON THE DRAWINGS. RESTORE ALL DISTURBED AREAS TO PRE-CONSTRUCTION CONDITIONS OR BETTER WITH LIKE MATERIAL.
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LEGEND:

- RESTORE SURFACE WITH SOIL AND HYDROSEED, SEE DETAIL 2, DRAWING R-29
- HMA PAVEMENT, SEE DETAIL 3, DRAWING R-29
- GRAVEL SURFACING, SEE DETAIL 2, DRAWING R-29

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

SEO
DESIGNED
HCM
DRAWN
EKS
CHECKED



murraysmith



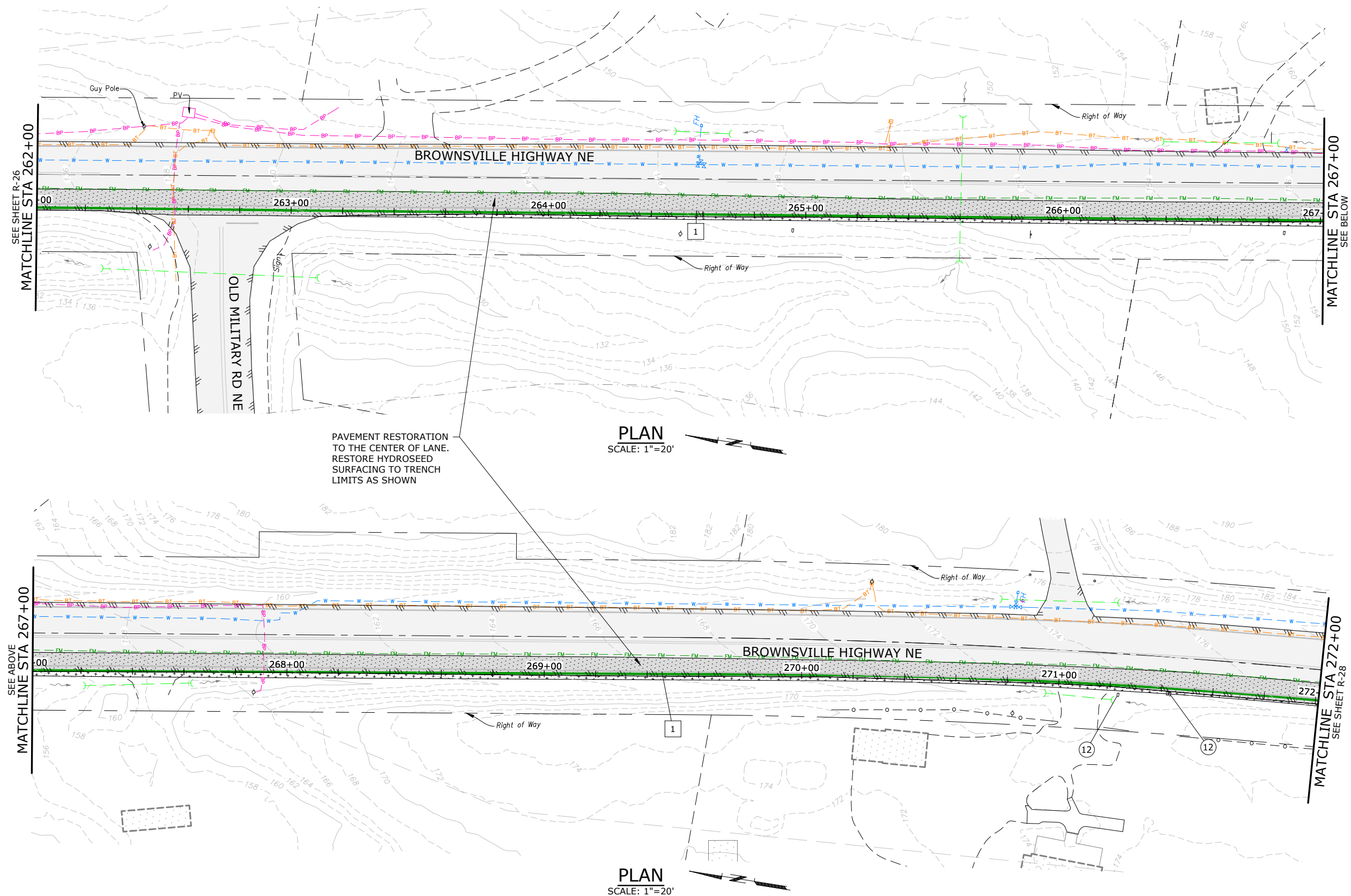
BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

RESTORATION PLAN
STA 252+00 TO 262+00
SCHEDULE B

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET
R-26
102 of 138

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CONSTRUCTION NOTES

- 12 PROTECT EXIST PRIVATE MAILBOX

CHANNELIZATION NOTES:

- 1 INSTALL PAINTED WHITE EDGE LINE PER WSDOT STD PLAN M-20.10-02 TO MATCH EXISTING

NOTES:

1. ALL NECESSARY RESTORATION MAY NOT BE IDENTIFIED ON THE DRAWINGS. RESTORE ALL DISTURBED AREAS TO PRE-CONSTRUCTION CONDITIONS OR BETTER WITH LIKE MATERIAL.
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LEGEND:

-  RESTORE SURFACE WITH SOIL AND HYDROSEED, SEE DETAIL 2, DRAWING R-29
-  HMA PAVEMENT, SEE DETAIL 3, DRAWING R-29

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

SEO
DESIGNED
HCM
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CHECKED



murraysmith



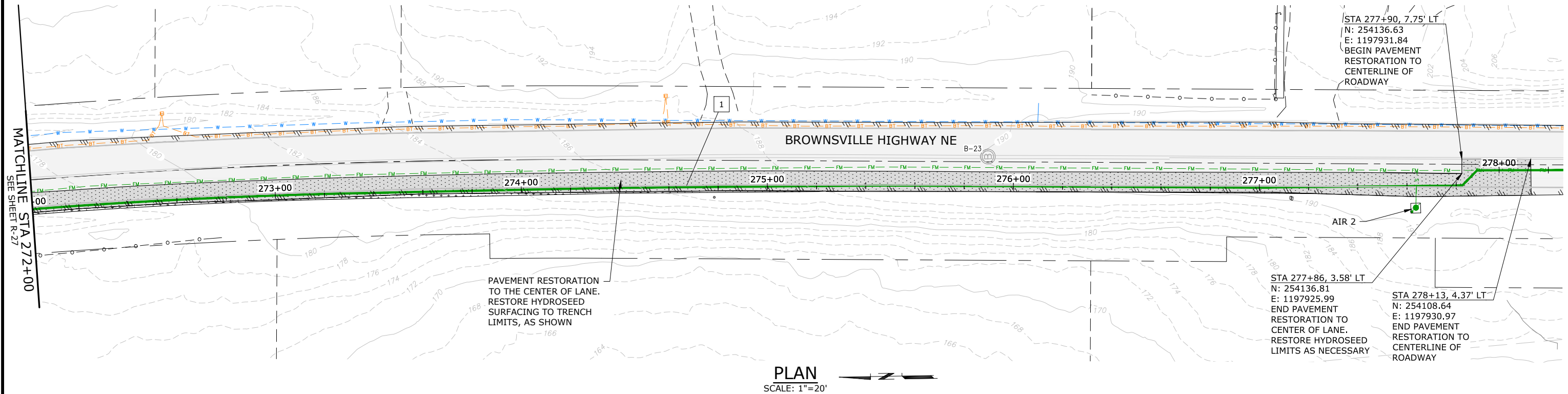
BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

RESTORATION PLAN
STA 262+50 TO 272+00
SCHEDULE B

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET
R-27
103 of 138

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NOTES:

1. ALL NECESSARY RESTORATION MAY NOT BE IDENTIFIED ON THE DRAWINGS. RESTORE ALL DISTURBED AREAS TO PRE-CONSTRUCTION CONDITIONS OR BETTER WITH LIKE MATERIAL.
2. NATIVE VEGETATION WILL BE RESTORED IN KIND IN CONSTRUCTION AREA. DO NOT DISTURB NATIVE VEGETATION OUTSIDE THE CONSTRUCTION LIMITS.
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CHANNELIZATION NOTES:

1. INSTALL PAINTED WHITE EDGE LINE PER WSDOT STD PLAN M-20.10-02 TO MATCH EXISTING

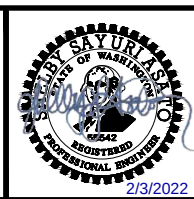
LEGEND:

-  RESTORE SURFACE WITH SOIL AND HYDROSEED, SEE DETAIL 2, DRAWING R-29
-  HMA PAVEMENT, SEE DETAIL 3, DRAWING R-29

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

SEO
DESIGNED
HCM
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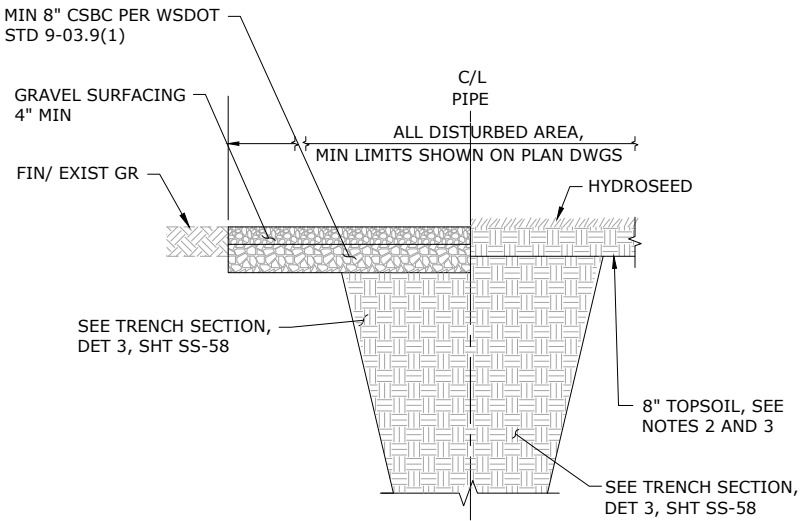
**BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT**

**RESTORATION PLAN
STA 272+00 TO 278+20
SCHEDULE B**

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: FEBRUARY 2022

SHEET
R-28
104 of 138

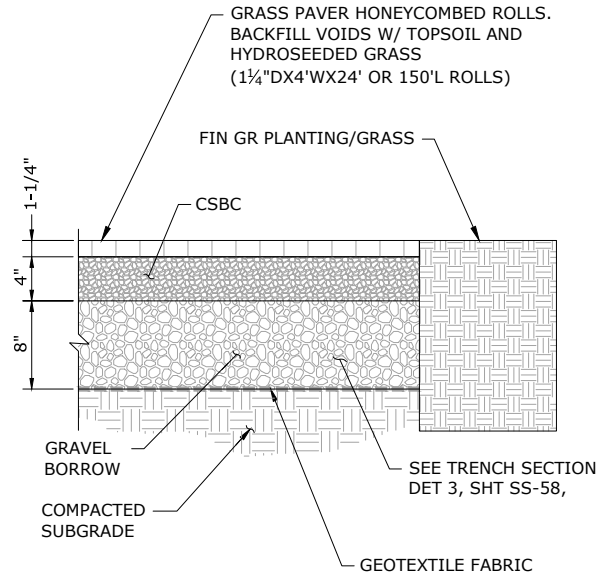
\\ad.msa-ep.com\Everett\evt_projects\20\2815 - Kitsap County Bangor_keyport Fm Replacement\CAD\Sheets\20-2815-WA-RD.dwg R-29 2/3/2022 12:57 PM JUSTIN DEUEL 23.0s (LMS Tech)



TRENCH WIDTH PAY LIMITS	
PIPE	MAX TRENCH WIDTH PAY LIMIT
24" FM	4'-6"
26" FM	4'-9"
30" FM	5'-3"

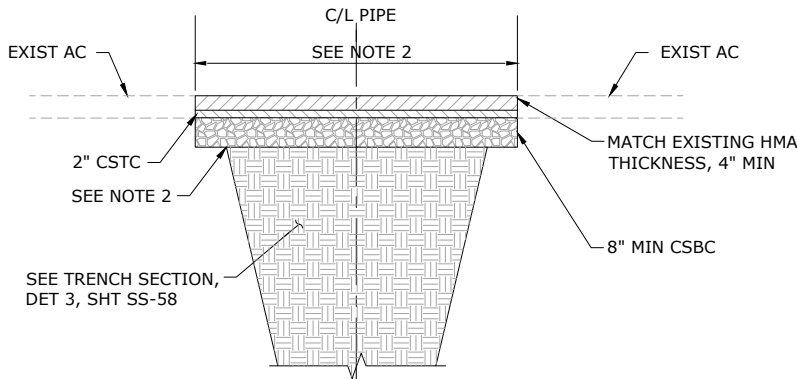
NOTES:

1. THIS RESTORATION DETAIL APPLIES TO TRENCHES EXCAVATED IN EXISTING UNPAVED AREAS.
2. REGRADE DISTURBED AREAS TO ORIGINAL OR PROPOSED CONTOURS LESS DEPTH OF NEW TOPSOIL PRIOR TO INSTALLING NEW TOPSOIL. RESTORE ORIGINAL GRADE AND ELEVATIONS AFTER INSTALLATION OF TOPSOIL.
3. TOPSOIL LAYER SHALL HAVE A MINIMUM ORGANIC MATTER CONTENT OF 5% DRY WEIGHT AND A PH FROM 6.0 TO 8.0 OR MATCHING THE PH OF THE UNDISTURBED SOIL. THE TOPSOIL LAYER SHALL HAVE A MINIMUM DEPTH OF EIGHT INCHES EXCEPT WHERE TREE ROOTS LIMIT THE DEPTH OF INCORPORATION OF AMENDMENTS NEEDED TO MEET THE CRITERIA. SUBSOILS BELOW THE TOPSOIL LAYER SHALL BE SCARIFIED AT LEAST 4 INCHES WITH SOME INCORPORATION OF THE UPPER MATERIAL TO AVOID STRATIFIED LAYERS, WHERE FEASIBLE.
4. STOCKPILE EXISTING TOPSOIL DURING GRADING FOR USE IN HYDROSEEDING AREAS. STOCKPILED TOPSOIL SHALL BE AMENDED, IF NEEDED, TO MEET THE ORGANIC MATTER OR DEPTH REQUIREMENTS, AS SHOWN ON THE DRAWINGS. AMENDMENTS SHALL BE AT A DEFAULT "PRE-APPROVED" RATE OR AT A CUSTOM CALCULATED RATE.
5. AS REQUIRED, IMPORT TOPSOIL MIX OF WITH ORGANIC CONTENT THAT MEETS REQUIREMENTS NOTED ABOVE.
6. RESTORE DISTURBED GRAVEL SHOULDER WITH 4" OF CSTC. REMOVE EXISTING GRAVEL AS NECESSARY TO MAINTAIN GRADES.
7. MAX TRENCH WIDTH PAY LIMITS, UNLESS OTHERWISE SHOWN ON THE DRAWINGS.



GRASS PAVER DETAIL
SCALE: NTS

1
-



TRENCH WIDTH PAY LIMITS	
PIPE	MAX TRENCH WIDTH PAY LIMIT
24" FM	4'-6"
26" FM	4'-9"
30" FM	5'-3"

NOTES:

1. THIS RESTORATION DETAIL APPLIES TO TRENCHES EXCAVATED IN EXISTING AC-PAVED AND CONCRETE PAVED AREAS.
2. SAW CUT EXISTING AC PAVEMENT 2' WIDER THAN TOP OF TRENCH. CUTS SHALL BE STRAIGHT, VERTICAL, AND FULL DEPTH. REMOVE AND DISPOSE OF EXISTING AC OVER TRENCH. CLEAN, HEAT, AND TACK EDGES OF EXISTING AC WITH SEALER PRIOR TO INSTALLING NEW HMA PATCH. PROVIDE SMOOTH TRANSITION BETWEEN EXISTING AC PAVEMENT AND NEW HMA PATCH.
3. ALL JOINTS SHALL BE SEALED WITH A 4" WIDE STRIP OF ASPHALT SEALER CENTERED ON JOINT. SEALER TO CONFORM TO WSDOT STANDARD SPECIFICATION 9-04.2.
4. MATCH ELEVATIONS OF EXISTING PAVEMENT, DRIVEWAYS, SHOULDERS, AND OTHER SURFACE FEATURES.
5. RESTORE ALL DISTURBED PAVEMENT MARKINGS.
6. MAX TRENCH WIDTH PAY LIMITS, UNLESS OTHERWISE SHOWN ON THE DRAWINGS.

SURFACE RESTORATION PAVED AREAS
SCALE: NTS

3
-

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
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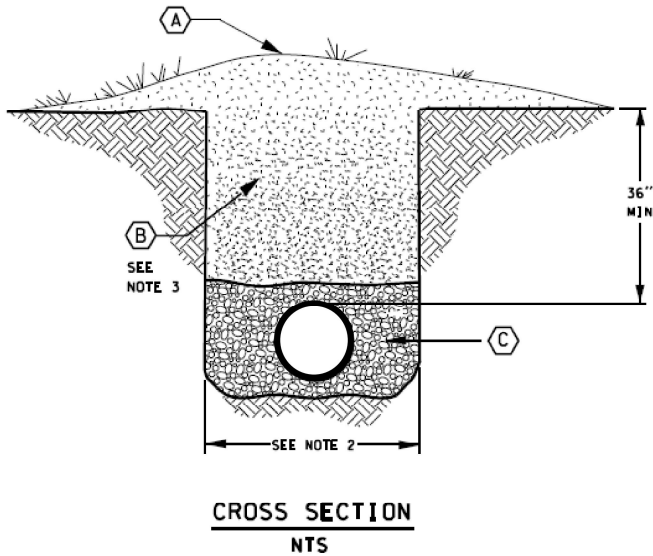


BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

MISCELLANEOUS RESTORATION DETAILS - 1 SCHEDULE A & SCHEDULE B			
PROJECT NO.:	20-2815	SCALE:	AS SHOWN
DATE:	FEBRUARY 2022		

SHEET
R-29
105 of 138

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LEGEND

- A Surface treatment to restore existing to match adjacent (seeding, bark, etc.).
- B Native material or as directed by WSDOT.
- C Bedding material. Bedding material depth over and beneath pipe casing shall be half the diameter of pipe casing or 6 inches, whichever is less.

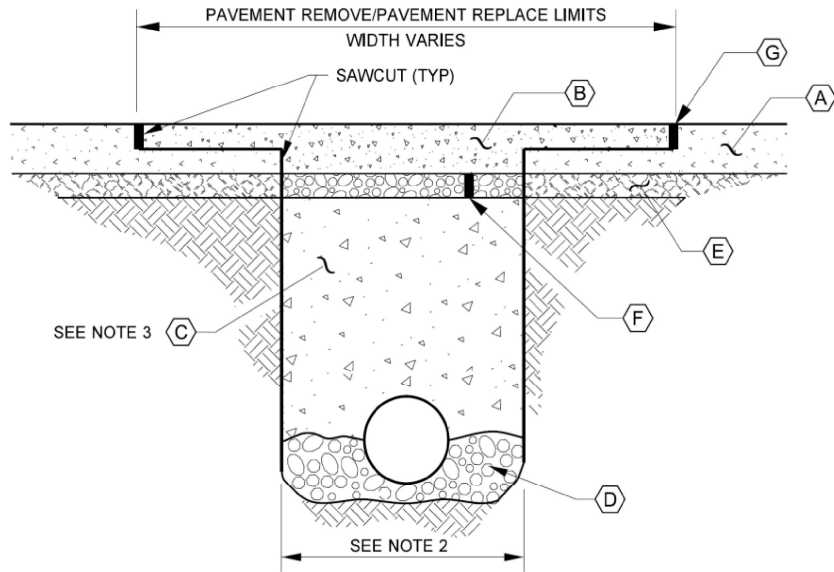
GENERAL NOTES

1. Trenching and pipe installation shall meet the requirements of WSDOT Standard Specification 7-08.
2. Maximum trench width shall be outside casing pipe width plus 1 foot either side of casing pipe.
3. Compaction shall be method _____ per Standard Specification Section 2-03.3 (14) C.
4. When connecting to an existing facility under the pavement, pavement restoration may, at the department's discretion, include the full lane width and encroached shoulder.
5. Casing pipes shall extend a minimum of six (6) feet beyond the toe of fill slopes, bottom of ditchline, or outside of curb.

UTILITY TRENCH BACKFILL DETAIL

SCALE: NTS

1
-

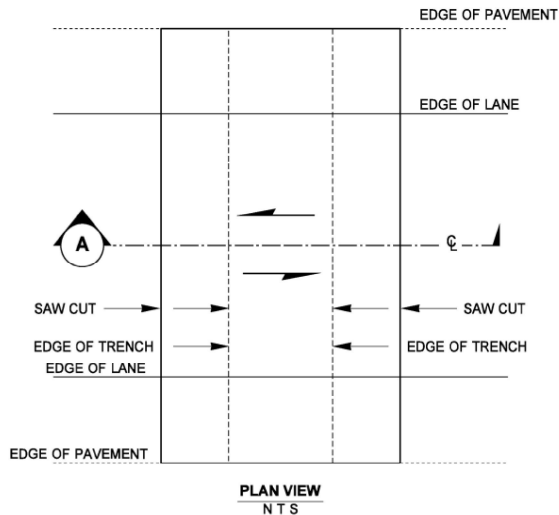


OPEN CUT CROSS SECTION

NTS

LEGEND

- A Existing HMA (Hot Mix Asphalt) or PCCP (Portland Cement Concrete Pavement).
- B HMA class ½ inch or PCCP: Depth and material shall match existing pavement. Removal and replacement limits of pavement to be determined at the time of utility permit/franchise review.
- C Approved backfill material or CDF (Control Density Backfill) or as specified by WSDOT.
- D Bedding material depth beneath the pipe/casing shall be six (6) inches. Additional pipe bedding shall be placed equal to half the diameter of the pipe/casing or six (6) inches, whichever is less.
- E Existing crushed surfacing base course.
- F Crushed surfacing base course depth shall match depth of existing crushed surfacing base course.
- G HMA butt joint requires tack, seal, and sand. For PCCP, refer to General Note 5.



GENERAL NOTES

1. Trenching and pipe installation shall meet the requirements of WSDOT Standard Specification 7-08.
2. Maximum trench width shall not exceed casing/pipe diameter plus an additional one (1) foot on either side.
3. Compaction shall be method "C" per Standard Specification Section 2-03.3(14)C.
4. Minimum depth shall be sixty (60) inches from the finished surface to top of casing.
5. PCCP shall be replaced to the next panel joint in each direction as approved by WSDOT. All work shall be as specified in WSDOT Standard Specification Section 5-01.3(4).
6. When connecting to an existing facility under the pavement, pavement restoration may, at the department's discretion, include the full lane width and encroached shoulder.
7. Casing pipes shall extend a minimum of six (6) feet beyond the toe of fill slopes, bottom of ditchline, or outside of curb.
8. Tack asphalt per WSDOT Standard Specification 5-4.3(5)A.

OPEN CUT UTILITY TRENCH BACKFILL DETAIL

SCALE: NTS

2
-

NO.	DATE	BY	REVISION

NOTICE
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

TMH
DESIGNED
BAW
DRAWN
EKS
CHECKED



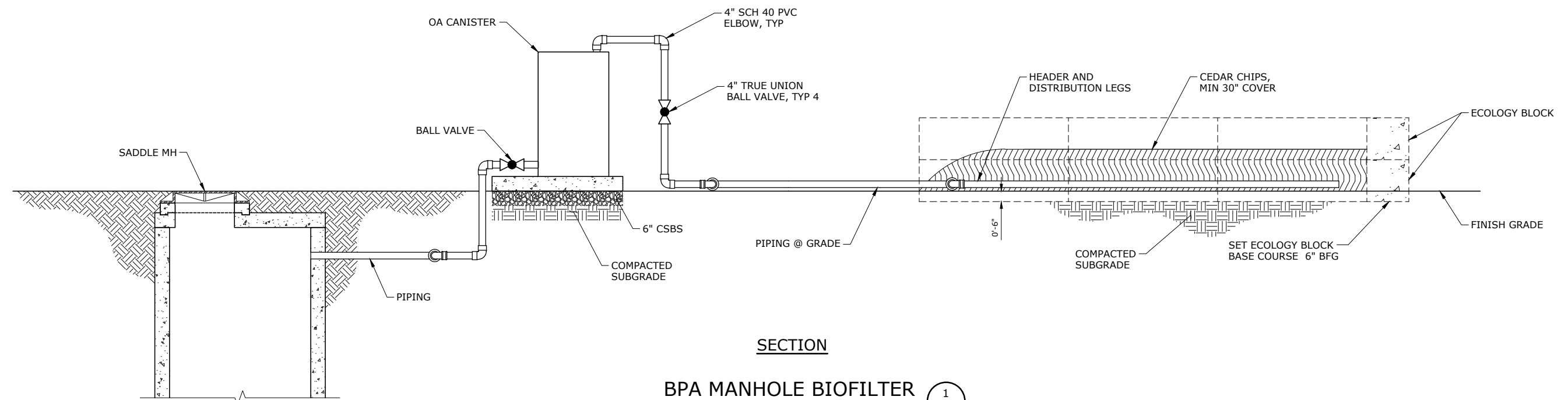
BANGOR-KEYPORT
FORCE MAIN
REPLACEMENT

**MISCELLANEOUS
RESTORATION DETAILS - 2
SCHEDULE A**

PROJECT NO.:	20-2815	SCALE:	AS SHOWN	DATE:	FEBRUARY 2022
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SHEET
R-30
106 of 138

1. MANHOLE PENETRATION TO BE SEALED WITH WALL SLEEVE SWEALS. USE LINK SEAL IN HOLES AROUND PIPE.



SCALE: NTS

1
SS-

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A horizontal number line segment with endpoints labeled 0 and 1. A tick mark is placed at the midpoint, labeled $\frac{1}{2}$.

IF THIS BAR DOES
NOT MEASURE 1"
THEN DRAWING IS
NOT TO SCALE

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2/3/2022

murraysmith



BANGOR-KEYPORT FORCE MAIN REPLACEMENT

**MISCELLANEOUS
RESTORATION DETAILS - 3
SCHEDULE A**

PROJECT NO.:	20-2815	SCALE:	AS SHOWN	DATE:	FEBRUARY 2022
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SHEET

R-31

06A of 138

//HP-DESKTOP/business/Active Projects/Murraysmith - Kitsap County Bangor FM/Working Files/TC PLANS/TC PLANS ALL
Drawn: B Faubion - Casseday Consulting
Edited: December 20, 2021
Plotted: December 20, 2021

SIGN SPACING = X (1)		
FREEWAY & EXPRESSWAYS	55 / 70 MPH	~1500'
RURAL HIGHWAYS	60 / 65 MPH	~800'
RURAL ROADS	45 / 55 MPH	~500'
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	~350'
RURAL ROADS & URBAN ARTERIALS	25 / 30 MPH	~200' (2)
RESIDENTIAL & BUSINESS DISTRICTS		
URBAN STREETS	25 MPH OR LESS	~100' (2)
(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMP, AT-GRADE INTERSECTIONS AND DRIVEWAYS.		
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.		

MINIMUM TAPER LENGTH = L (feet)						
LANE WIDTH (feet)	Posted Speed (mph)					
	25	30	35	40	45	50
10	105	150	205	270	450	500
11	115	165	225	295	495	550
12	125	180	245	320	540	600

CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50	40	80
35/45	30	60
25/30	20	40

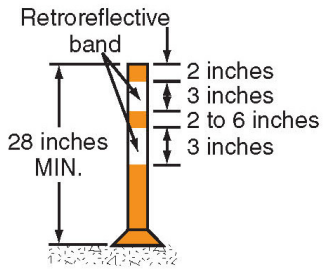
WSDOT NOTES:

1. NOTIFY RAFAEL REYES, WSDOT OLYMPIC REGION UTILITIES ENGINEER AT 360-570-6743 5 DAYS BEFORE STARTING WORK.
2. AT TIME OF WORK, CALL WSDOT OLYMPIC RADIO AT 253-538-3300 ONE HOUR BEFORE IMPACTING TRAFFIC (LANE IS CLOSED OR INTERSECTION FLAGGED), AND AGAIN WHEN LANE/INTERSECTION IS OPENED. LEAVE A CONTACT NAME AND CELL PHONE NUMBER WITH RADIO.
3. ALL CHANNELIZING DEVICES SHALL BE TRAFFIC SAFETY DRUMS UNLESS OTHERWISE NOTED. ANY CHANNELIZING DEVICES USED DURING HOURS OF DARKNESS SHALL BE STEADY BURN TYPE C LIGHTS.
4. DURING NON-WORKING HOURS WORK AREAS SHALL MEET CRITERIA IN WSDOT STD. SPECS. 1-07.23; INCLUDING BUT NOT LIMITED TO "DROP OFF" PROTECTION
5. ALL ("W" SERIES) SIGNS SHALL BE 48" X 48", BLACK ON ORANGE, UNLESS OTHERWISE NOTED. SEE DETAIL B FOR SIGN DETAILS.
6. SIGNS SHALL CONFORM TO WSDOT SIGN FABRICATION MANUAL M 55-05.
7. WORK DAYS SHALL BE MONDAY TO FRIDAY. WORK HOURS SHALL BE APPROVED BY WSDOT. NO LANE CLOSURES ALLOWED ON SR 308 BETWEEN 6-8 AM AND 3-5 PM.
8. PEDESTRIAN SPOTTER TO REMAIN ON WORK SITE TO DIRECT PEDESTRIANS.
9. NOTIFY TRANSIT AGENCY 5 DAYS PRIOR TO WORK.
10. FLAGGER STATIONS SHALL BE ILLUMINATED AT NIGHT, PER WSDOT STD. SPEC 1-10.3(1)A.

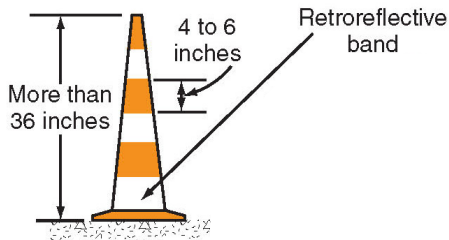
TRAFFIC CONTROL NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION AND SCHEDULING, INCLUDING ALL TRAFFIC CONTROL DURING CONSTRUCTION, AS IDENTIFIED IN THE WSDOT STANDARD SPECIFICATIONS AND AS AMENDED IN THIS CONTRACT. SEE SECTIONS 1-07.23 PUBLIC CONVENIENCE AND SAFETY, 1-08.5 TIME FOR COMPLETION AND 1-10 TEMPORARY TRAFFIC CONTROL.
2. SEE TC-2 AND TC-3 FOR TRAFFIC CONTROL STRATEGY FOR THE PROJECT.
3. THE CONTRACTOR SHALL MAINTAIN ACCESS TO BANGOR AND KEYPORT NAVAL BASE ENTRY POINTS AT ALL TIMES.
4. EMERGENCY VEHICLES, SCHOOL DISTRICT TRANSPORTATION AND LOCAL RESIDENTS SHALL HAVE ACCESS AT ALL TIMES. THE CONTRACTOR SHALL COORDINATE WITH EMERGENCY SERVICE PROVIDERS, NORTH KITSAP AND CENTRAL KITSAP SCHOOL DISTRICTS, KITSAP TRANSIT AND USPS AT LEAST TWO WEEKS PRIOR TO ANY CHANGE IN TRAFFIC CONTROL.
5. DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN LOCAL ACCESS TO ALL PROPERTIES WITHIN THE CONSTRUCTION ZONE. CONTRACTOR SHALL COORDINATE DAILY WITH PROPERTY AND BUSINESS OWNERS FOR CHANGES TO ACCESS AND DETOUR CONDITIONS.
6. THE CONTRACTOR SHALL SUBMIT PROPOSED HAUL ROUTES TO WSDOT AND TO KITSAP COUNTY ROADS DIVISION FOR APPROVAL.
7. THE CONTRACTOR SHALL PROVIDE FOR BICYCLE AND PEDESTRIAN ACCESS AROUND OR THROUGH CONSTRUCTION WORK ZONE. CONTRACTOR SHALL PREPARE AN ADA TEMPORARY ACCESS PLAN FOR APPROVAL BY KITSAP COUNTY, FOR WORK ZONES IN KITSAP COUNTY ROADWAYS.
8. THE CONTRACTOR SHALL POST MOTORCYCLE SUPPLEMENTAL WARNING SIGNS FOR WORK ZONES WITH STEEL PLATES OR UNEVEN ROADWAY SURFACE.
9. DISTANCES SHOWN ON PLANS MAY VARY AS APPROVED BY THE ENGINEER IN COORDINATION WITH KITSAP COUNTY PUBLIC WORKS.
10. WORK ON THIS CONTRACT WILL OCCUR IN THREE WORK AREAS:
 - SR 3 RIGHT OF WAY
 - SR 308 RIGHT OF WAY
 - KITSAP COUNTY ROADWAYS
11. WITHIN SR 3 RIGHT OF WAY, THE CONTRACTOR WILL CONSTRUCT THE FORCE MAIN WITHIN WSDOT UTILITY FRANCHISE 30511 AND SHALL ACCESS THE WORK AREA VIA PRIVATE EASEMENT ON THE WEST OF SR 3 AND VIA LOCAL ROADWAY AND/OR PRIVATE EASEMENT ON THE EAST OF SR 3. APPROVED TRAFFIC CONTROL PLANS ARE NOT REQUIRED FOR WORK WITHIN THE SR 3 RIGHT OF WAY. THE CONTRACTOR SHALL SUBMIT PROPOSED SCHEDULE TO WSDOT FOR WORK IN SR 3 RIGHT OF WAY, WITH PROPOSED WORK HOURS FOR WSDOT APPROVAL. WORK WITHIN SR 3 RIGHT OF WAY SHALL CONFORM TO FRANCHISE AGREEMENT 30511.
12. WITHIN SR 308 RIGHT OF WAY, TRAFFIC CONTROL FOR WORK SHALL BE APPROVED BY WSDOT AND WORK HOURS SHALL BE APPROVED BY WSDOT. ROAD AND SHOULDER CLOSURE, TEMPORARY LANE CLOSURES AND WORK ZONES AT SR 308 CROSSINGS WILL REQUIRE WSDOT APPROVALS FOR WORK HOURS AND FOR TRAFFIC CONTROL PLANS. NO LANE CLOSURES ARE ALLOWED ON SR 308 DURING PEAK HOUR TRAFFIC FOR BANGOR NAVAL BASE AND KEYPORT NAVAL BASE (6-8AM AND 3-5PM). AT END OF EACH WORK DAY, THE CONTRACTOR SHALL RESTORE TRAVEL LANES FOR ACCESS AND TO PROTECT SITE AND PUBLIC. ON SR 308, SHOULDER WORK AREA MAY REMAIN CLOSED, WITH WSDOT APPROVAL. THE CONTRACTOR MAY REQUEST ADDITIONAL WORK HOURS INCLUDING NIGHTS AND WEEKENDS FOR THE FORCE MAIN CONSTRUCTION. SEE TC-2 FOR TRAFFIC CONTROL STRATEGY FOR WORK IN WSDOT RIGHTS OF WAY.
13. DETAILED TRAFFIC CONTROL PLANS (APPROVED BY WSDOT) ARE PROVIDED FOR WORK IN SR 308. THE CONTRACTOR MAY SUBMIT ALTERNATIVE TRAFFIC CONTROL PLANS FOR WSDOT APPROVAL AT THE SOLE EXPENSE OF THE CONTRACTOR. THE CONTRACTOR SHALL REMAIN RESPONSIBLE FOR SCHEDULE. ANY DELAYS IN SCHEDULE DUE TO WSDOT REVIEW AND COMMENT PERIOD WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
14. WITHIN KITSAP COUNTY ROADWAYS, THE CONTRACTOR IS RESPONSIBLE FOR PREPARING AND SUBMITTING TRAFFIC CONTROL PLANS TO KITSAP COUNTY CONSTRUCTION MANAGER FOR APPROVALS. CONSTRUCTION ON KITSAP COUNTY ROADS SHALL BE CONDUCTED DURING DAYTIME HOURS, DURING AN 8 HOUR PERIOD BETWEEN 7AM AND 6PM, AS APPROVED BY KITSAP COUNTY CONSTRUCTION MANAGER. THE CONTRACTOR MAY REQUEST KITSAP COUNTY APPROVAL FOR ADDITIONAL DAYTIME HOURS, NIGHT WORK OR WEEKEND WORK HOURS. SEE TC-3 FOR TRAFFIC CONTROL STRATEGY FOR WORK IN KITSAP COUNTY ROADWAYS.
15. ON SR 308 AND ON COUNTY ARTERIALS, THE CONTRACTOR SHALL MAINTAIN ONE TRAVEL LANE FOR EACH DIRECTION THROUGH THE WORK ZONE DURING PEAK TRAVEL PERIODS AND SHALL MAINTAIN ONE 11' TRAVEL LANE FOR ALTERNATING TRAFFIC WITH FLAGGER CONTROL FOR OFF PEAK HOURS. LANE CLOSURES THROUGH SIGNALIZED INTERSECTIONS REQUIRE UNIFORMED POLICE OFFICER CONTROL WITH THE SIGNAL ON ALL-RED FLASH OR DARK SIGNAL IN CONJUNCTION WITH CONTRACTOR TRAFFIC CONTROL PLANS.
16. ON COUNTY ROADS WHERE NOT POSSIBLE TO MAINTAIN ONE TRAVEL LANE FOR ALTERNATING TRAFFIC, THE CONTRACTOR MAY APPLY TO CLOSE ROADWAY (LESS THAN 12 HOURS) DURING WORK HOURS AND DEFINE DETOUR ROUTE FOR TRAFFIC, ACCORDING TO GUIDELINES OUTLINED IN SECTION 8.2.2 OF KITSAP COUNTY ROAD STANDARDS FOR TEMPORARY ROAD CLOSURES AND DETOURS. CONTRACTOR SHALL MAINTAIN LOCAL ACCESS TO PROPERTY. CONTRACTOR SHALL RESTORE ROADWAY DAILY FOR EVENING AND WEEKEND LOCAL ACCESS. ANY ROAD CLOSURE LONGER THAN 12 HOURS WOULD REQUIRE COUNTY COMMISSION APPROVAL, TAKING AN ESTIMATED 8-12 WEEKS FOR COUNTY PROCESS AND APPROVAL.
17. THE CONTRACTOR SHALL PROVIDE CHANGEABLE MESSAGE SIGNS (CMS) TO INFORM THE TRAVELING PUBLIC OF UPCOMING CLOSURES (IF ALLOWED) AND DETOURS. CMS SHALL BE PLACED ALONG THE CONSTRUCTION ROUTE AND DETOUR ROUTE AT LEAST TWO WEEKS IN ADVANCE OF CLOSURE.
18. PUBLIC NOTICE AND ALTERNATE ROUTES: FORCE MAIN CONSTRUCTION WILL IMPACT TRAFFIC ON BOTH WSDOT AND COUNTY ROADWAYS. THE CONTRACTOR SHALL WORK WITH KITSAP COUNTY TO PROVIDE ADVANCE INFORMATION TO THE TRAVELING PUBLIC (MINIMUM 2 WEEK ADVANCE NOTICE OF CONSTRUCTION) – TO IDENTIFY ALTERNATIVE ROUTES AND TO ENCOURAGE TRAVELERS TO AVOID THE CONSTRUCTION WORK ZONES.

DETAIL A



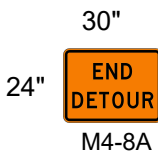
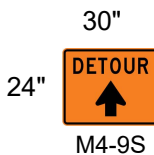
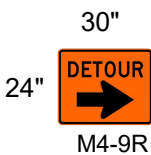
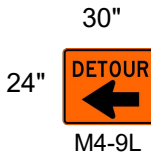
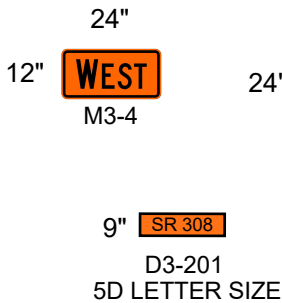
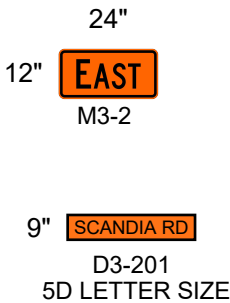
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SOURCE: MUTCD 2009 FIGURE 6F-7

DETAIL B

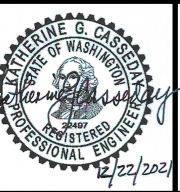


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**BANGOR-KEYPORT
FORCEMAIN
REPLACEMENT**

TRAFFIC CONTROL NOTES SCHEDULE A & SCHEDULE B			
PROJECT NO.:	20-2815	SCALE:	AS SHOWN
DATE:	DECEMBER 2021		

SHEET
TC-1
107 of 138

TRAFFIC CONTROL STRATEGY NOTES FOR WORK IN WSDOT RIGHT OF WAY (SR 3 RAMP AND SR 308)

1.

SEE TC-1 FOR TRAFFIC CONTROL NOTES FOR THIS CONTRACT. SEE TC-3 FOR TRAFFIC CONTROL STRATEGY FOR WORK ON KITSAP COUNTY ROADWAYS, FOR SEGMENTS WITH "*" DESIGNATION ON MAP.
2.

FORCE MAIN CONSTRUCTION IN SR 3 RIGHT OF WAY WILL REQUIRE WORK IN TWO SEGMENTS:
 - SEGMENT A: FORCE MAIN UNDER SR 3 WITH WORK AREAS ON BOTH WEST AND EAST SIDES. CONTRACTOR ACCESS WILL BE VIA PRIVATE EASEMENT AND LOCAL ROADWAY/EASEMENT. SEE FRANCHISE AGREEMENT 30511.
 - SEGMENT B: FORCE MAIN ON EAST SIDE OF NORTHBOUND OFF RAMP. CONTRACTOR ACCESS WILL BE VIA LOCAL ROADWAY AND/OR EASEMENT. SEE FRANCHISE AGREEMENT 30511.
3.

FORCE MAIN CONSTRUCTION IN SR 308 RIGHT OF WAY WILL REQUIRE WORK IN MULTIPLE SEGMENTS. CONSTRUCTION IN SR 308/ LUOTO ROAD RIGHT OF WAY WILL REQUIRE SHOULDER CLOSURES, TWO CROSSINGS OF SR 308, AND LANE CLOSURES. WSDOT-APPROVED TRAFFIC CONTROL PLANS ARE PROVIDED IN BID PACKAGE FOR WORK SEGMENTS IN SR 308.
 - SEGMENT C: SR 308 EASTBOUND SHOULDER, NORTHBOUND SR 3 OFF RAMP TO LUOTO CT ALIGNMENT
 - SEGMENT D: CROSSING SR 308 AT KATY PLACE WILL REQUIRE ROAD CLOSURE FOR NIGHT-TIME CONSTRUCTION
 - SEGMENT E: SR 308 WESTBOUND SHOULDER, KATY PLACE TO CENTRAL VALLEY ROAD/SKANDIA ROAD
 - SEGMENT F: CROSSING CENTRAL VALLEY ROAD/SKANDIA ROAD INTERSECTION WILL REQUIRE CLOSURE OF SCANDIA RD NW FOR UP TO 12 HOURS
 - SEGMENT G: SR 308 WESTBOUND SHOULDER, CENTRAL VALLEY ROAD/SKANDIA ROAD TO TAGHOLM ROAD
 - SEGMENT H: CROSSING SR 308 NEAR TAGHOLM ROAD
4.

SEGMENT A GUIDELINES: REHABILITATION OF NEW FORCE MAIN UNDER SR 3 WILL BE TRENCHLESS METHOD UV CURED CIPP. CONSTRUCTION WORK HOURS FOR SEGMENT A WILL BE DETERMINED BY WSDOT. CONTRACTOR ACCESS TO THE SITE WEST OF SR 3 WILL BE VIA PRIVATE EASEMENT. CONTRACTOR ACCESS TO THE SITE EAST OF SR 3 WILL BE VIA LOCAL ROADWAY/PRIVATE EASEMENT. SEE FRANCHISE AGREEMENT 30511.
5.

SEGMENT B GUIDELINES: CONSTRUCTION OF NEW FORCE MAIN IN UTILITY EASEMENT WILL REQUIRE CONTRACTOR ACCESS VIA LOCAL ROADWAY/PRIVATE EASEMENT. SEE FRANCHISE AGREEMENT 30511.
6.

WSDOT APPROVALS FOR SR 308 WORK HOURS AND FOR SR 308 TRAFFIC CONTROL PLANS ARE REQUIRED. NO LANE CLOSURES ARE ALLOWED DURING PEAK HOURS FOR BANGOR NAVAL BASE OR KEYPORT NAVAL BASE (6-8 AM AND 3-5 PM, M-F). DETAILED TRAFFIC CONTROL PLANS FOR WORK IN SR 308 RIGHT OF WAY ARE INCLUDED IN BID PACKAGE. SHEET TC-4 PROVIDES SHEET INDEX FOR SR 308 TRAFFIC CONTROL PLANS.
7.

SEGMENT C GUIDELINES: CONSTRUCTION OF NEW FORCE MAIN IN SR 308/LUOTO ROAD IN EASTBOUND SHOULDER (FROM INTERSECTION WITH SR3 NORTHBOUND RAMPS TO LUOTO CT ALIGNMENT) WILL REQUIRE SHOULDER PLUS LANE CLOSURE WITH FLAGGER CONTROL FOR ALTERNATING TRAFFIC DURING DAYTIME WORK HOURS, AS DEFINED BY WSDOT .
8.

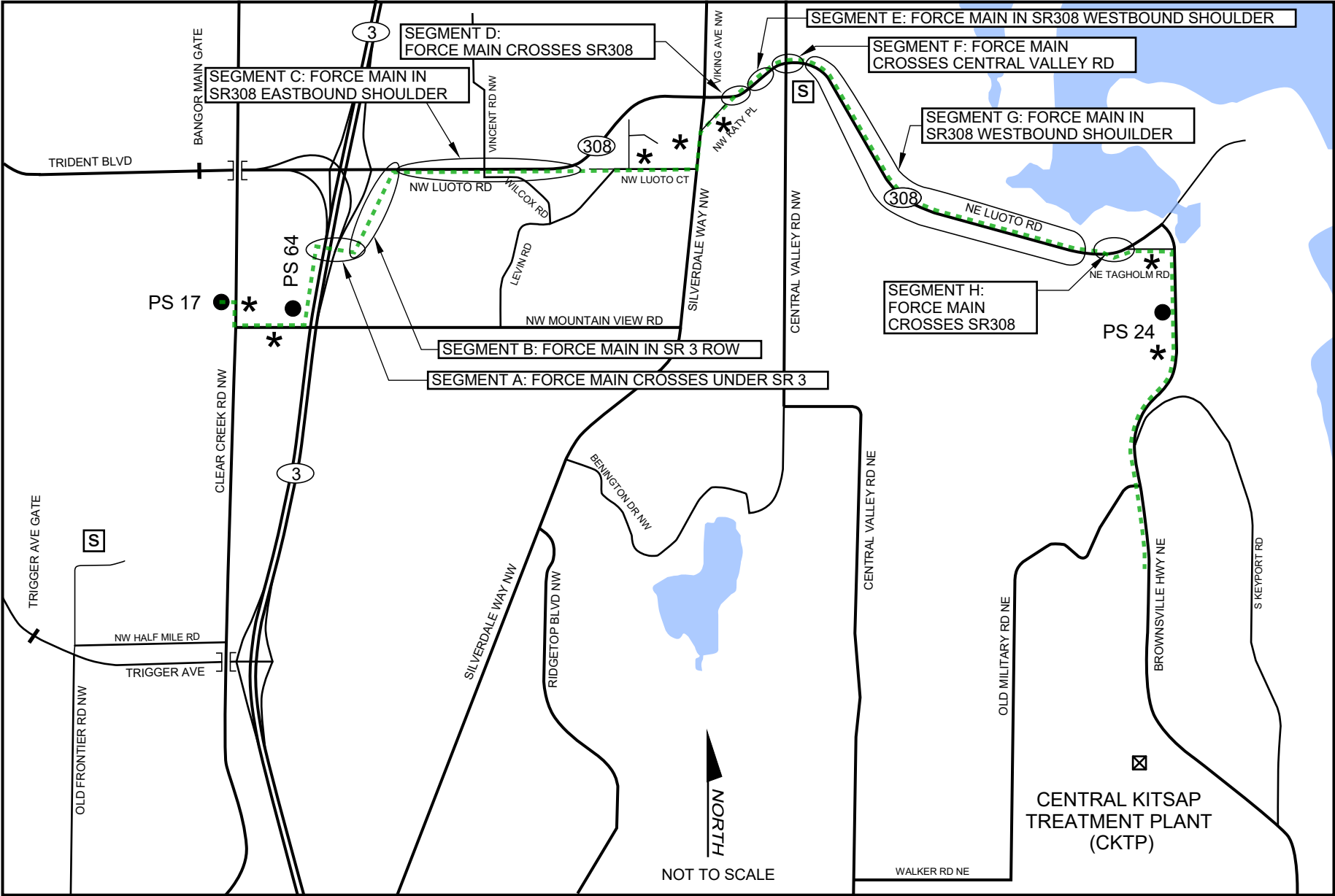
SEGMENT D GUIDELINES: CONSTRUCTION OF NEW FORCE MAIN IN SR 308 TO CROSS FROM EASTBOUND SHOULDER TO WESTBOUND SHOULDER NEAR KATY PLACE WILL REQUIRE ROAD CLOSURE FOR NIGHT TIME WORK HOURS, AS DEFINED BY WSDOT. TRAFFIC CONTROL WILL REQUIRE UNIFORMED POLICE OFFICER (UPO) TRAFFIC CONTROL AT ADJACENT SIGNALIZED INTERSECTIONS AND DETOURS.
9.

SEGMENT E GUIDELINES: CONSTRUCTION OF NEW FORCE MAIN IN SR 308 WILL REQUIRE WESTBOUND SHOULDER PLUS LANE CLOSURE AND ALTERNATING TRAFFIC WITH FLAGGER CONTROL DURING DAYTIME WORK HOURS WITH WSDOT APPROVALS FOR WORK HOURS AND FOR TRAFFIC CONTROL PLANS. TRAFFIC CONTROL WILL REQUIRE UNIFORMED POLICE OFFICER (UPO) TRAFFIC CONTROL AT ADJACENT SIGNALIZED INTERSECTIONS.
10.

SEGMENT F GUIDELINES: CONSTRUCTION FOR FORCE MAIN CROSSING AT SR 308 AT CENTRAL VALLEY ROAD/SCANDIA ROAD WILL REQUIRE CLOSING SCANDIA RD NW AT INTERSECTION (NORTH LEG), WITH UNIFORMED POLICE OFFICER (UPO) TRAFFIC CONTROL AT TRAFFIC SIGNAL, WITH WORK HOURS AND TRAFFIC CONTROL AS APPROVED BY WSDOT. THE CONTRACTOR SHALL CLOSE COUNTY ROADWAY (LESS THAN 12 HOURS) DURING WORK HOURS AND DEFINE DETOUR ROUTE FOR TRAFFIC, ACCORDING TO GUIDELINES OUTLINED IN SECTION 8.2.2 OF KITSAP COUNTY ROAD STANDARDS FOR TEMPORARY ROAD CLOSURES AND DETOURS. CONTRACTOR SHALL MAINTAIN LOCAL ACCESS TO PROPERTY. CONTRACTOR SHALL RESTORE ROADWAY DAILY FOR EVENING AND WEEKEND LOCAL ACCESS. ANY ROAD CLOSURE LONGER THAN 12 HOURS WOULD REQUIRE COUNTY COMMISSION APPROVAL, TAKING AN ESTIMATED 8-12 WEEKS FOR COUNTY PROCESS AND APPROVAL.
11.

SEGMENT G GUIDELINES: CONSTRUCTION OF NEW FORCE MAIN IN SR 308 WILL REQUIRE WESTBOUND SHOULDER PLUS LANE CLOSURE AND ALTERNATING TRAFFIC WITH FLAGGER CONTROL DURING DAYTIME WORK HOURS WITH WSDOT APPROVALS FOR WORK HOURS AND FOR TRAFFIC CONTROL PLANS.
12.

SEGMENT H GUIDELINES: CONSTRUCTION FOR FORCE MAIN CROSSING AT SR 308 NEAR HAWK AVENUE AND TAGHOLM ROAD WILL REQUIRE LANE CLOSURES IN THREE STAGES WITH ALTERNATING TRAFFIC AND FLAGGER CONTROL FOR DAYTIME WORK HOURS, AS DEFINED BY WSDOT.



PS X ●

PUMP STATION

S

SCHOOL

ROUTE OF FORCE MAIN

*

FORCE MAIN ON COUNTY ROAD, SEE TC-3 FOR TRAFFIC CONTROL STRATEGY

○

WORK ZONE SEGMENT

NO.	DATE	BY	REVISION	

NOTICE

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KATHERINE G. CASSEDAY

ENGINEER OF WASHINGTON

REGISTERED PROFESSIONAL ENGINEER

12/22/2021

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KITSAP COUNTY

18

57

WASHINGTON

BANGOR-KEYPORT

FORCEMAIN

REPLACEMENT

TRAFFIC CONTROL STRATEGY

WSDOT RIGHT OF WAY

SCHEDULE A

PROJECT NO.:

20-2815

SCALE:

AS SHOWN

DATE:

DECEMBER 2021

SHEET

TC-2

108 of 138

//HP-DESKTOP/business/Active Projects/Murraysmith - Kitsap County Bangor FM/Working Files/TC PLANS/TC PLANS ALL
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Plotted: December 20, 2021



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TRAFFIC CONTROL STRATEGY NOTES ON KITSAP COUNTY ROADWAYS

1.

SEE TC-1 FOR TRAFFIC CONTROL NOTES FOR THIS CONTRACT. SEE TC-2 FOR TRAFFIC CONTROL STRATEGY FOR WORK IN WSDOT RIGHTS OF WAY, FOR SEGMENTS WITH **** DESIGNATION ON MAP.
2.

FORCE MAIN CONSTRUCTION IN KITSAP COUNTY RIGHT OF WAY WILL REQUIRE WORK IN BOTH ARTERIAL AND LOCAL ROADWAYS.
3.

ARTERIAL ROAD GUIDELINES:

a.

CONTRACTOR SHALL KEEP ONE LANE EACH DIRECTION OPEN FOR TRAFFIC DURING PEAK TRAVEL TIMES AND WHERE/WHEN POSSIBLE.

b.

DURING OFF PEAK HOURS, WHERE NOT POSSIBLE TO MAINTAIN ONE TRAVEL LANE EACH DIRECTION, CONTRACTOR SHALL MAINTAIN ONE 11' WIDE TRAVEL LANE WITH FLAGGER CONTROL FOR ALTERNATING TRAFFIC, DURING DAYTIME CONSTRUCTION.

c.

DAYTIME WORK HOURS SHALL BE ONE 8 HOUR PERIOD BETWEEN 7AM AND 6PM, OR AS APPROVED BY KITSAP COUNTY CONSTRUCTION MANAGER.

d.

LANE CLOSURES THROUGH SIGNALIZED INTERSECTIONS REQUIRE UNIFORMED POLICE OFFICER CONTROL WITH THE SIGNAL ON ALL-RED FLASH OR DARK SIGNAL IN CONJUNCTION WITH CONTRACTOR TRAFFIC CONTROL PLANS.

•

SEGMENT AA: CLEAR CREEK RD NW - ARTERIAL

•

SEGMENT DD: SILVERDALE WAY NW - ARTERIAL

•

SEGMENT GG: BROWNSVILLE HIGHWAY NE – ARTERIAL – DETOUR (IF APPROVED) VIA OLD MILITARY RD, WALKER RD, CENTRAL VALLEY RD, AND SR 308
4.

LOCAL ROAD GUIDELINES:

a.

CONTRACTOR SHALL MAINTAIN ONE 11' TRAVEL LANE AROUND WORK ZONE WITH FLAGGER CONTROL FOR ALTERNATING TRAFFIC WHEN POSSIBLE.

b.

CONSTRUCTION ON LOCAL ROADS MAY REQUIRE TEMPORARY ROAD CLOSURE AND DETOUR FOR LOCAL TRAFFIC.

c.

CONSTRUCTION WORK HOURS FOR LOCAL ROADS ARE WEEKDAYS, ONE 8 HOUR PERIOD BETWEEN 7AM AND 6PM, OR AS APPROVED BY KITSAP COUNTY CONSTRUCTION MANAGER.

d.

CONTRACTOR SHALL CLOSE ROAD WHEN A 11' MINIMUM TRAVEL LANE AROUND THE WORK ZONE IS NOT POSSIBLE. CLOSURE SHALL BE LIMITED TO 12 HOURS WITHIN WORK HOURS. CONTRACTOR SHALL FOLLOW SECTION 8.2.2 OF KITSAP COUNTY ROAD STANDARDS TO APPLY FOR TEMPORARY ROAD CLOSURES AND DETOURS FOR UP TO 12 HOURS.

e.

TWO TRAVEL LANES SHALL BE RESTORED FOR TWO WAY TRAVEL AND LOCAL ACCESS EACH NIGHT AND WEEKENDS.

f.

WHEN ROAD CLOSURE IS REQUIRED, CLOSE ONLY THE ACTIVE WORK ZONE AND MAINTAIN LOCAL ACCESS TO PROPERTY AT ALL TIMES.

g.

CONTRACTOR SHALL PROPOSE DETOUR ROUTE ON PUBLIC ROADWAYS FOR APPROVAL BY KITSAP COUNTY CONSTRUCTION MANAGER.

•

SEGMENT BB: NW MOUNTAINVIEW RD – LOCAL ROAD – DETOUR (IF APPROVED) VIA CLEAR CREEK RD, TRIGGER AVENUE, SR 3, SR 308, AND SILVERDALE WAY

•

SEGMENT CC: NW LUOTO CT – LOCAL ROAD – DETOUR VIA LEVIN RD, WILCOX RD, SR 308 AND SILVERDALE WAY

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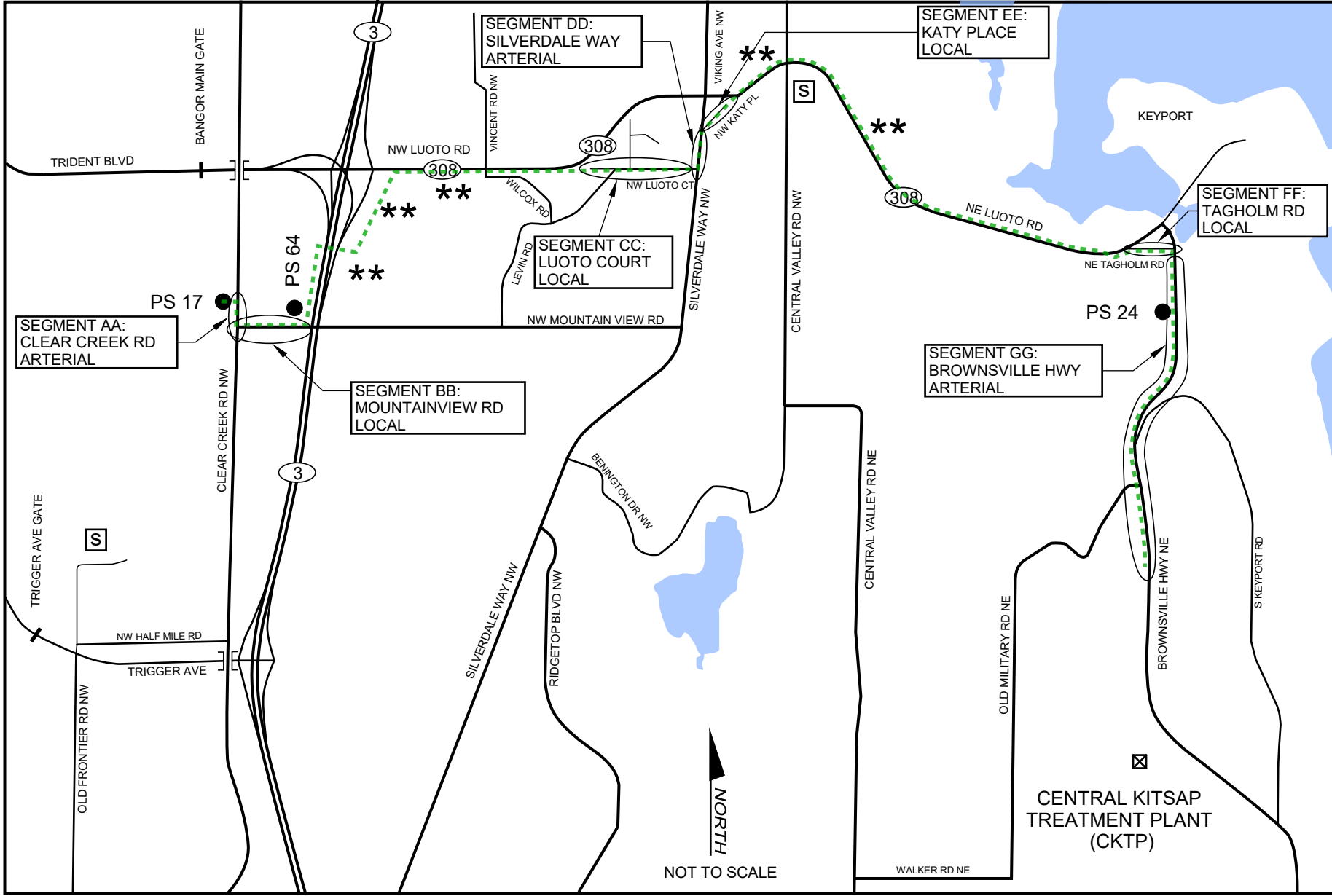
NW KATY PLACE – LOCAL ROAD, DEAD END – NO DETOUR, CONTRACTOR SHALL MAINTAIN PROPERTY ACCESS

•

NE TAGHOLM RD – LOCAL ROAD – DETOUR VIA SR 308 AND BROWNSVILLE HIGHWAY
5.

DETOURS MAY BE REQUIRED FOR FORCE MAIN CONSTRUCTION ALONG BROWNSVILLE HIGHWAY, NW MOUNTAINVIEW ROAD, NW LUOTO COURT, NW KATY PLACE AND NE TAGHOLM ROAD, AS APPROVED BY KITSAP COUNTY CONSTRUCTION MANAGER. CONTRACTOR SHALL COORDINATE DETOURS TO MINIMIZE IMPACT ON PROPERTY ACCESS AND TRAFFIC CIRCULATION.
6.

DETOURS WILL BE REQUIRED ALONG COUNTY ROADWAYS WHEN PIPELINE CONSTRUCTION REQUIRES CLOSING SR 308 AND CLOSING SCANDIA RD.



PS X ●

PUMP STATION

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SCHOOL

ROUTE OF FORCE MAIN

**

FORCE MAIN IN WSDOT RIGHT OF WAY, SEE TC-2 FOR TRAFFIC CONTROL STRATEGY

○

WORK ZONE SEGMENT

NO.	DATE	BY	REVISION

NOTICE

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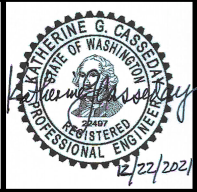
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BANGOR-KEYPORT

FORCEMAIN

REPLACEMENT

TRAFFIC CONTROL STRATEGY

KITSAP COUNTY RIGHT OF WAY

SCHEDULE B

PROJECT NO.:

20-2815

SCALE:

AS SHOWN

DATE:

DECEMBER 2021

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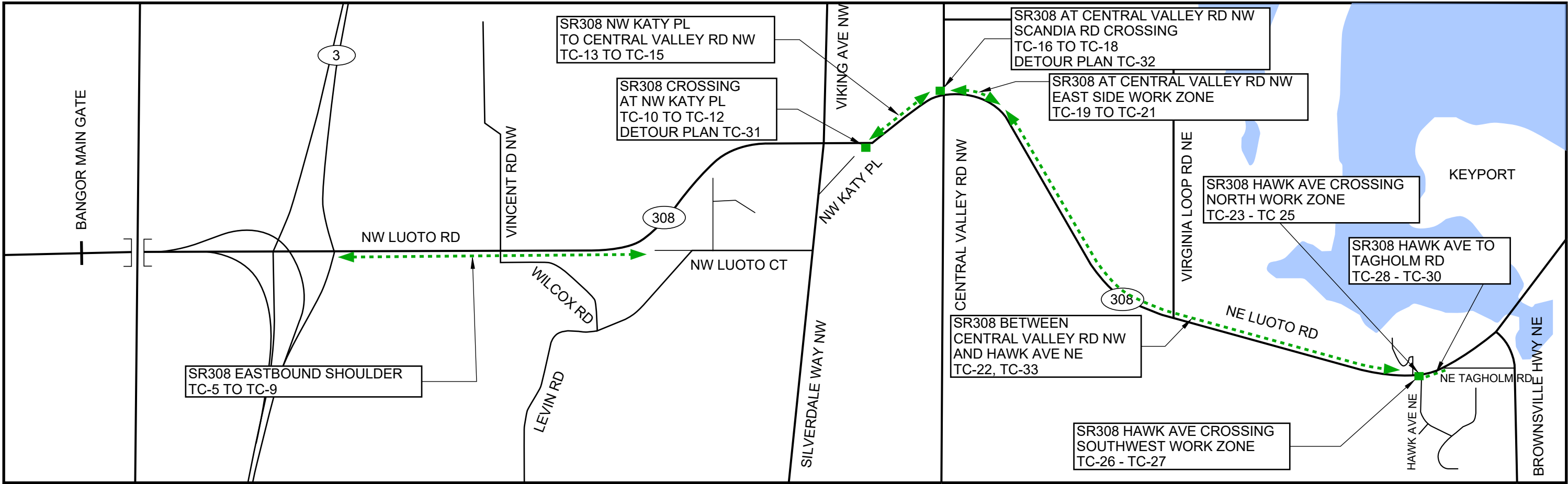
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109 of 138

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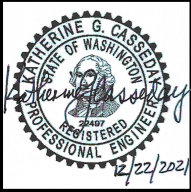
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**BANGOR-KEYPORT
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REPLACEMENT**

**SR308 TRAFFIC CONTROL PLAN
SHEET INDEX
SCHEDULE A**

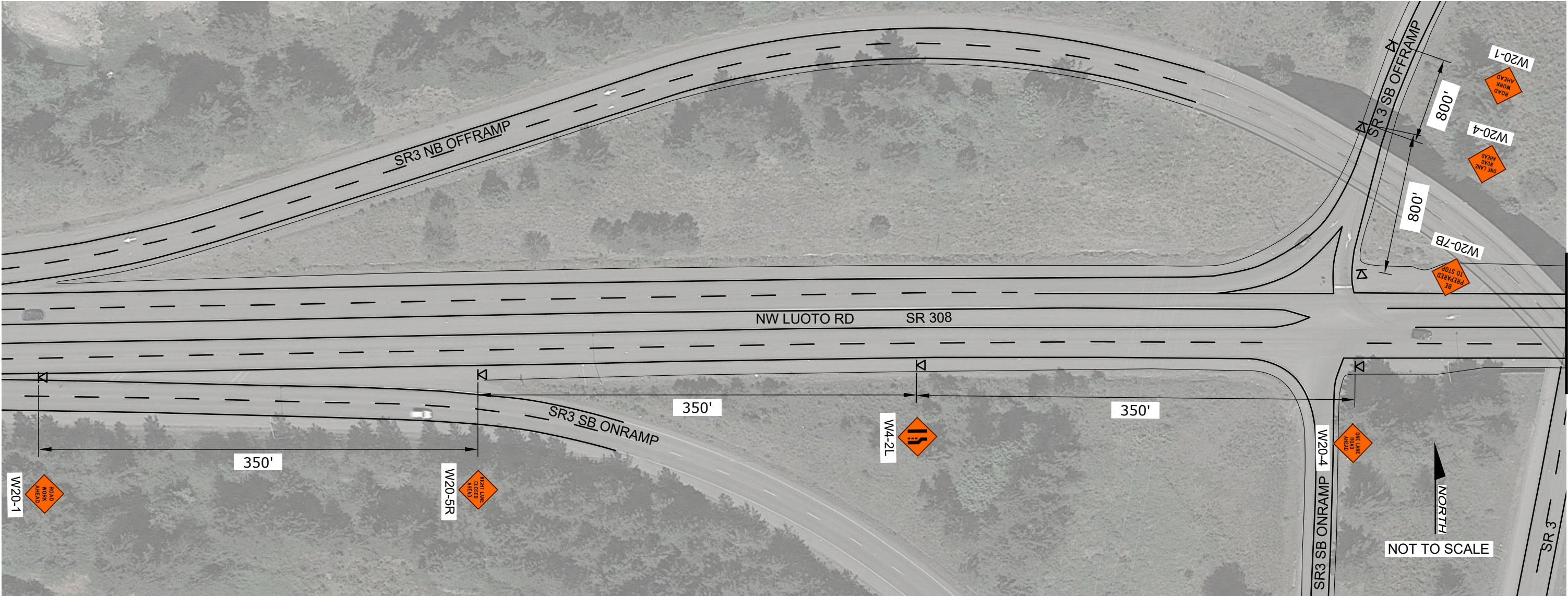
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110 of 138

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LEGEND

TEMPORARY SIGN LOCATION

TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)

CHANNELIZING DEVICES

SEQUENTIAL ARROW BOARD

UNIFORMED POLICE OFFICER (UPO)

FLAGGER

PROTECTIVE VEHICLE

- NOTES:
1.

SEE TC-1 FOR TRAFFIC CONTROL NOTES. SEE TC-2 FOR TRAFFIC CONTROL STRATEGY ON WSDOT ROW.
2.

SEE SPECIAL PROVISIONS FOR WORK HOURS.
3.

FLAGGER OR UPO SHALL ASSIST FOR SIDE STREET AND DRIVEWAY ACCESS.



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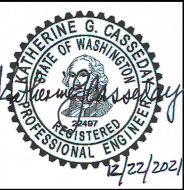
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BANGOR-KEYPORT
FORCEMAIN
REPLACEMENT

SR308 - EASTBOUND SHOULDER
WORK ZONE. (1 OF 5)
SCHEDULE A

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: DECEMBER 2021

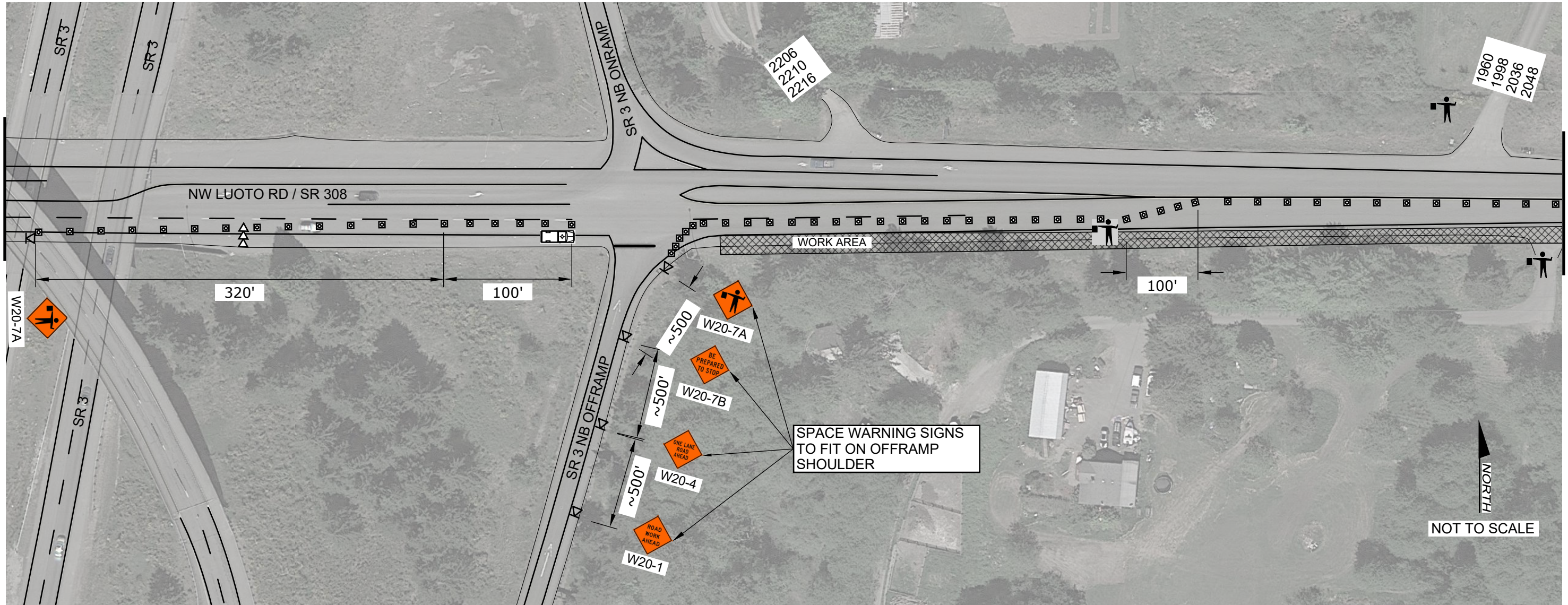
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MATCH LINE SEE TC-5



MATCH LINE SEE TC-7

LEGEND

- TEMPORARY SIGN LOCATION
- TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)
- CHANNELIZING DEVICES
- SEQUENTIAL ARROW BOARD
- UNIFORMED POLICE OFFICER (UPO)
- FLAGGER
- PROTECTIVE VEHICLE
- WORK ZONE

NOTES:

- SEE TC-1 FOR TRAFFIC CONTROL NOTES. SEE TC-2 FOR TRAFFIC CONTROL STRATEGY ON WSDOT ROW.
- SEE SPECIAL PROVISIONS FOR WORK HOURS.
- FLAGGER OR UPO SHALL ASSIST FOR SIDE STREET AND DRIVEWAY ACCESS.



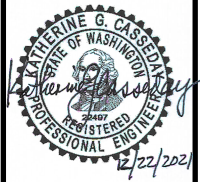
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**BANGOR-KEYPORT
FORCEMAIN
REPLACEMENT**

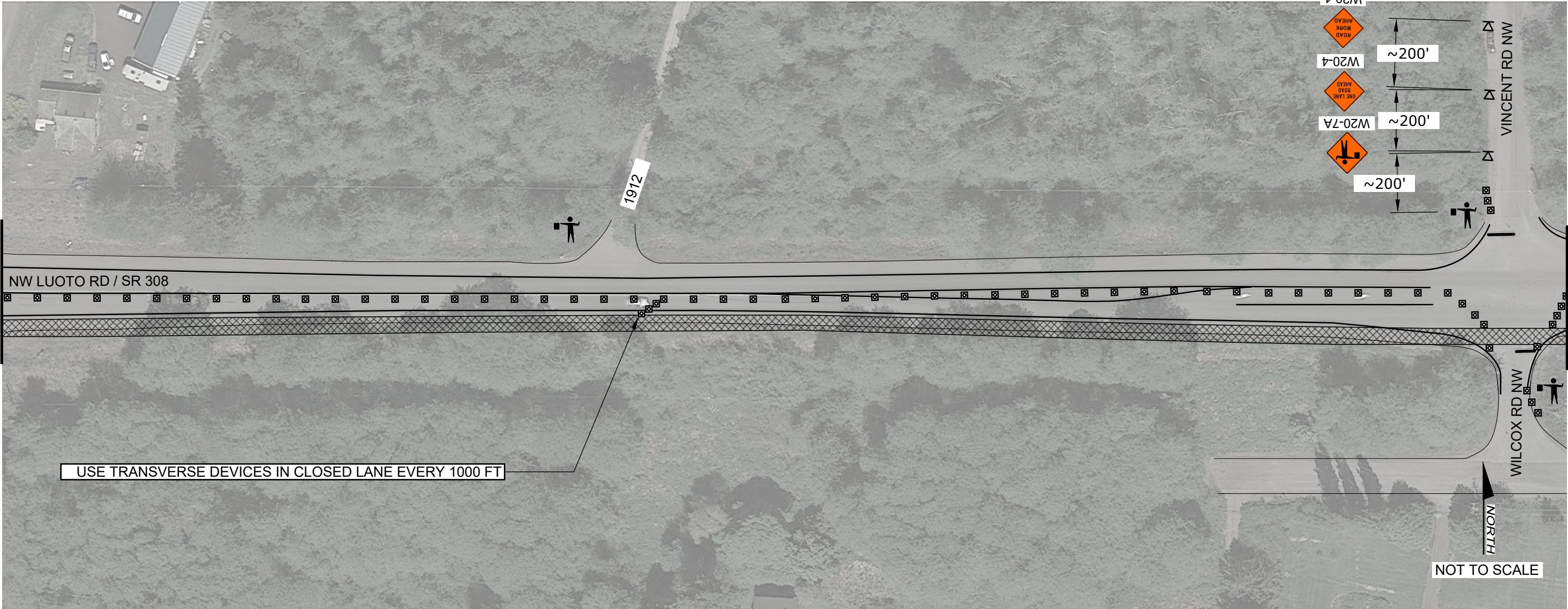
**SR308 - EASTBOUND SHOULDER
WORK ZONE. (2 OF 5)
SCHEDULE A**

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: DECEMBER 2021

SHEET
TC-6
112 of 138

\\HP-DESKTOP\business\Active Projects\Murraysmith - Kitsap County Bangor FM\Working Files\TC PLANS\TC PLANS ALL
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MATCH LINE SEE TC-6



MATCH LINE SEE TC-8

LEGEND

- TEMPORARY SIGN LOCATION
- TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)
- CHANNELIZING DEVICES
- SEQUENTIAL ARROW BOARD
- UNIFORMED POLICE OFFICER (UPO)
- FLAGGER
- PROTECTIVE VEHICLE
- WORK ZONE

NOTES:

- SEE TC-1 FOR TRAFFIC CONTROL NOTES. SEE TC-2 FOR TRAFFIC CONTROL STRATEGY ON WSDOT ROW.
- SEE SPECIAL PROVISIONS FOR WORK HOURS.
- FLAGGER OR UPO SHALL ASSIST FOR SIDE STREET AND DRIVEWAY ACCESS.



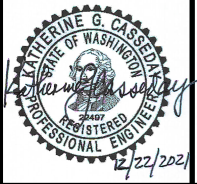
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Call before you dig.

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**BANGOR-KEYPORT
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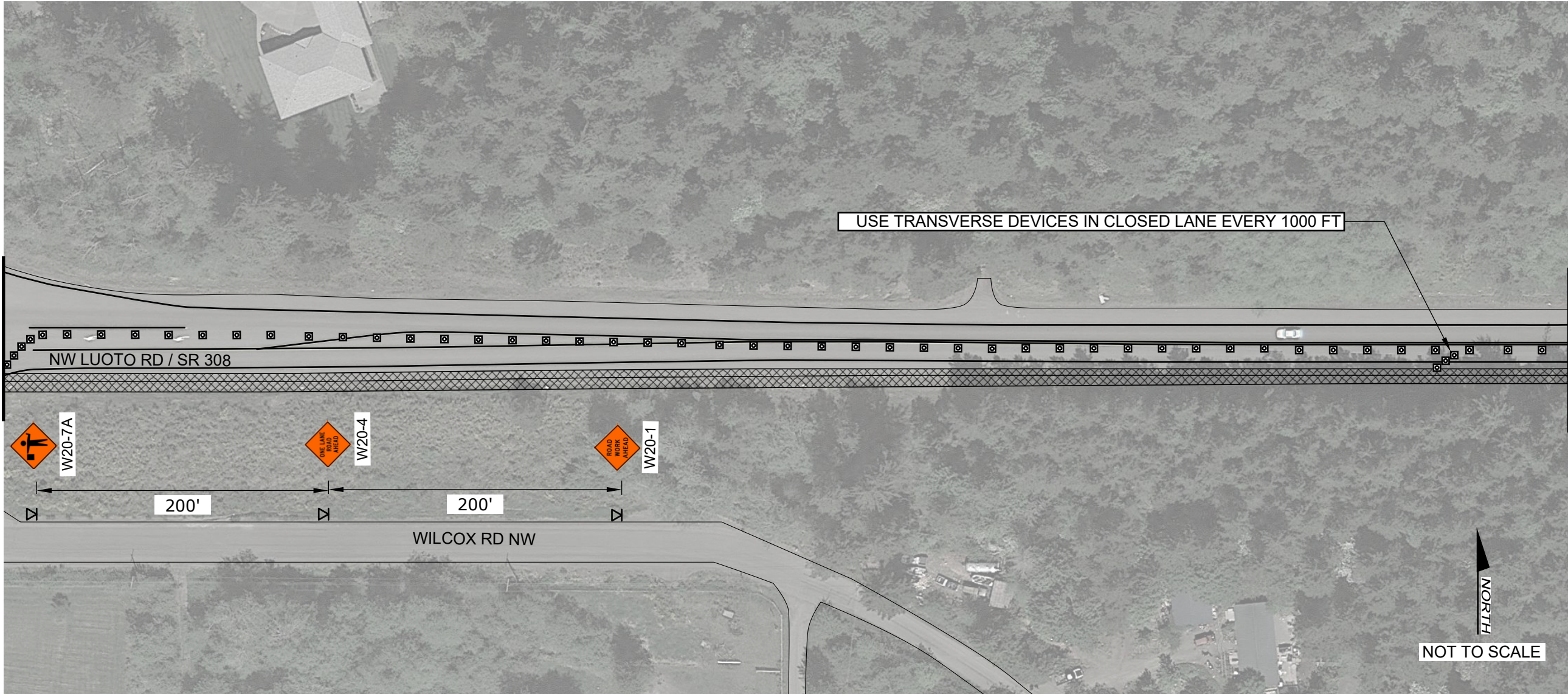
**SR308 - EASTBOUND SHOULDER
WORK ZONE. (3 OF 5)
SCHEDULE A**

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: DECEMBER 2021

SHEET
TC-7
113 of 138

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MATCH LINE SEE TC-7



MATCH LINE SEE TC-9

LEGEND

-  TEMPORARY SIGN LOCATION
-  TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)
-  CHANNELIZING DEVICES
-  SEQUENTIAL ARROW BOARD
-  UNIFORMED POLICE OFFICER (UPO)
-  FLAGGER
-  PROTECTIVE VEHICLE
-  WORK ZONE

NOTES:

- SEE TC-1 FOR TRAFFIC CONTROL NOTES. SEE TC-2 FOR TRAFFIC CONTROL STRATEGY ON WSDOT ROW.
- SEE SPECIAL PROVISIONS FOR WORK HOURS.
- FLAGGER OR UPO SHALL ASSIST FOR SIDE STREET AND DRIVEWAY ACCESS.

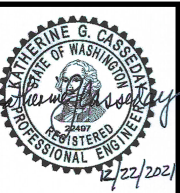


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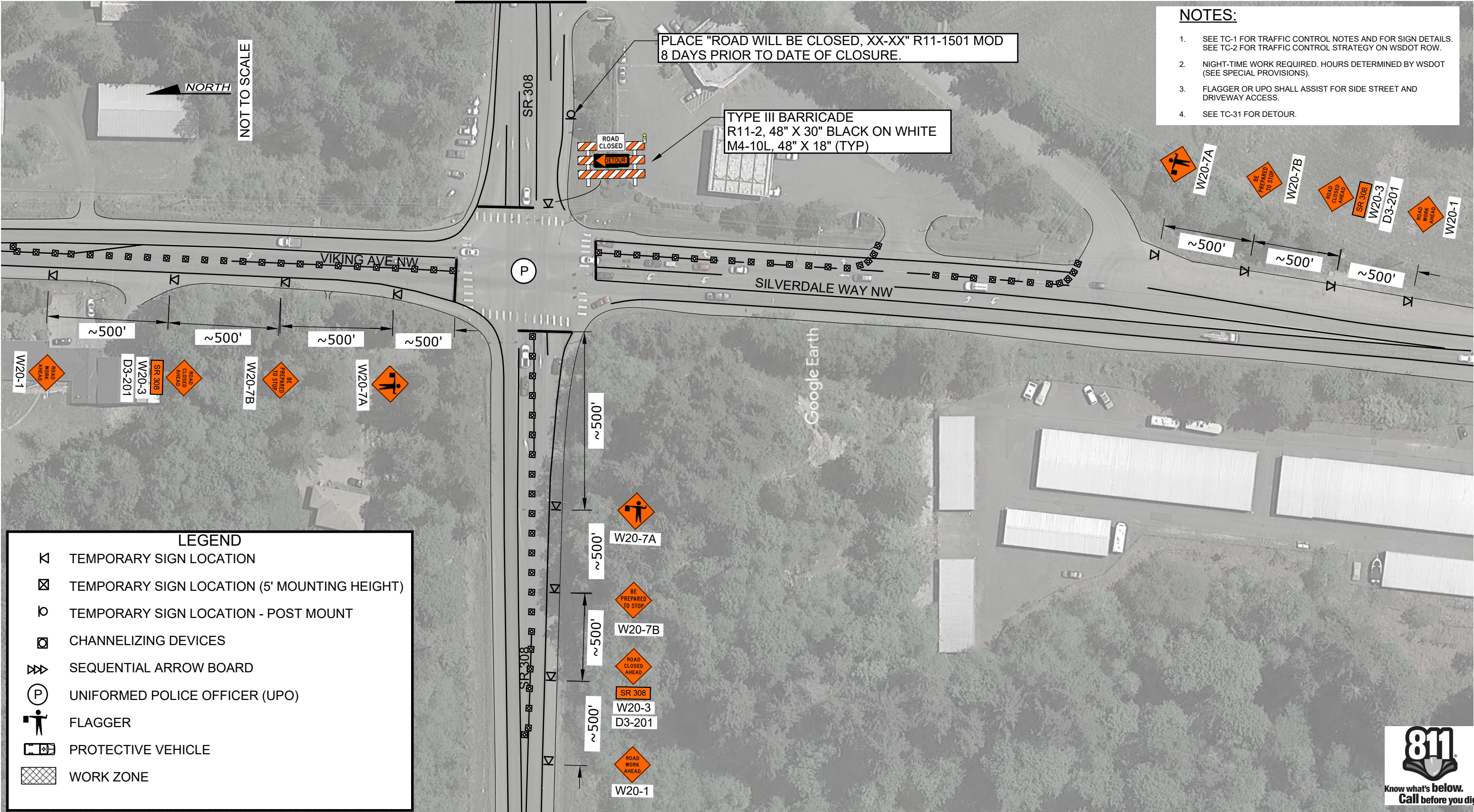
**BANGOR-KEYPORT
FORCEMAIN
REPLACEMENT**

**SR308 - EASTBOUND SHOULDER
WORK ZONE. (4 OF 5)
SCHEDULE A**

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: DECEMBER 2021

SHEET
TC-8
114 of 138

MATCH LINE SEE TC-11



NOTES:

1. SEE TC-1 FOR TRAFFIC CONTROL NOTES AND FOR SIGN DETAILS. SEE TC-2 FOR TRAFFIC CONTROL STRATEGY ON WSDOT ROW.
2. NIGHT-TIME WORK REQUIRED. HOURS DETERMINED BY WSDOT (SEE SPECIAL PROVISIONS).
3. FLAGGER OR UPO SHALL ASSIST FOR SIDE STREET AND DRIVEWAY ACCESS.
4. SEE TC-31 FOR DETOUR.

LEGEND

- TEMPORARY SIGN LOCATION
- TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)
- TEMPORARY SIGN LOCATION - POST MOUNT
- CHANNELIZING DEVICES
- SEQUENTIAL ARROW BOARD
- UNIFORMED POLICE OFFICER (UPO)
- FLAGGER
- PROTECTIVE VEHICLE
- WORK ZONE

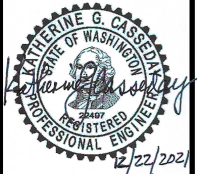


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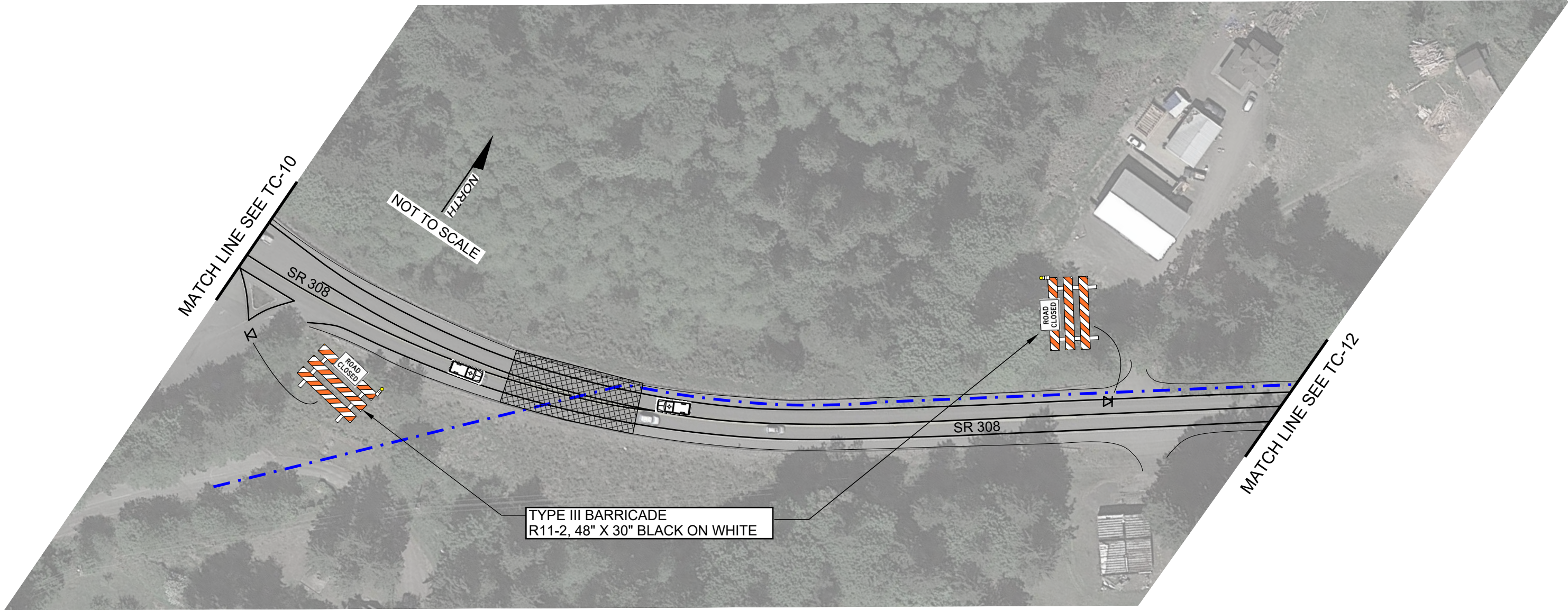
BANGOR-KEYPORT
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REPLACEMENT

SR308 - CLOSURE AT KATY PLACE.
(1 OF 3)
SCHEDULE A

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: DECEMBER 2021

SHEET
TC-10
116 of 138

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LEGEND

- TEMPORARY SIGN LOCATION
- TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)
- CHANNELIZING DEVICES
- SEQUENTIAL ARROW BOARD
- UNIFORMED POLICE OFFICER (UPO)
- FLAGGER
- PROTECTIVE VEHICLE
- WORK ZONE
- FORCEMAIN

NOTES:

- SEE TC-1 FOR TRAFFIC CONTROL NOTES AND FOR SIGN DETAILS. SEE TC-2 FOR TRAFFIC CONTROL STRATEGY ON WSDOT ROW.
- NIGHT-TIME WORK REQUIRED. HOURS DETERMINED BY WSDOT (SEE SPECIAL PROVISIONS).
- FLAGGER OR UPO SHALL ASSIST FOR SIDE STREET AND DRIVEWAY ACCESS.
- SEE TC-31 FOR DETOUR.

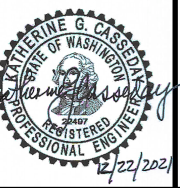


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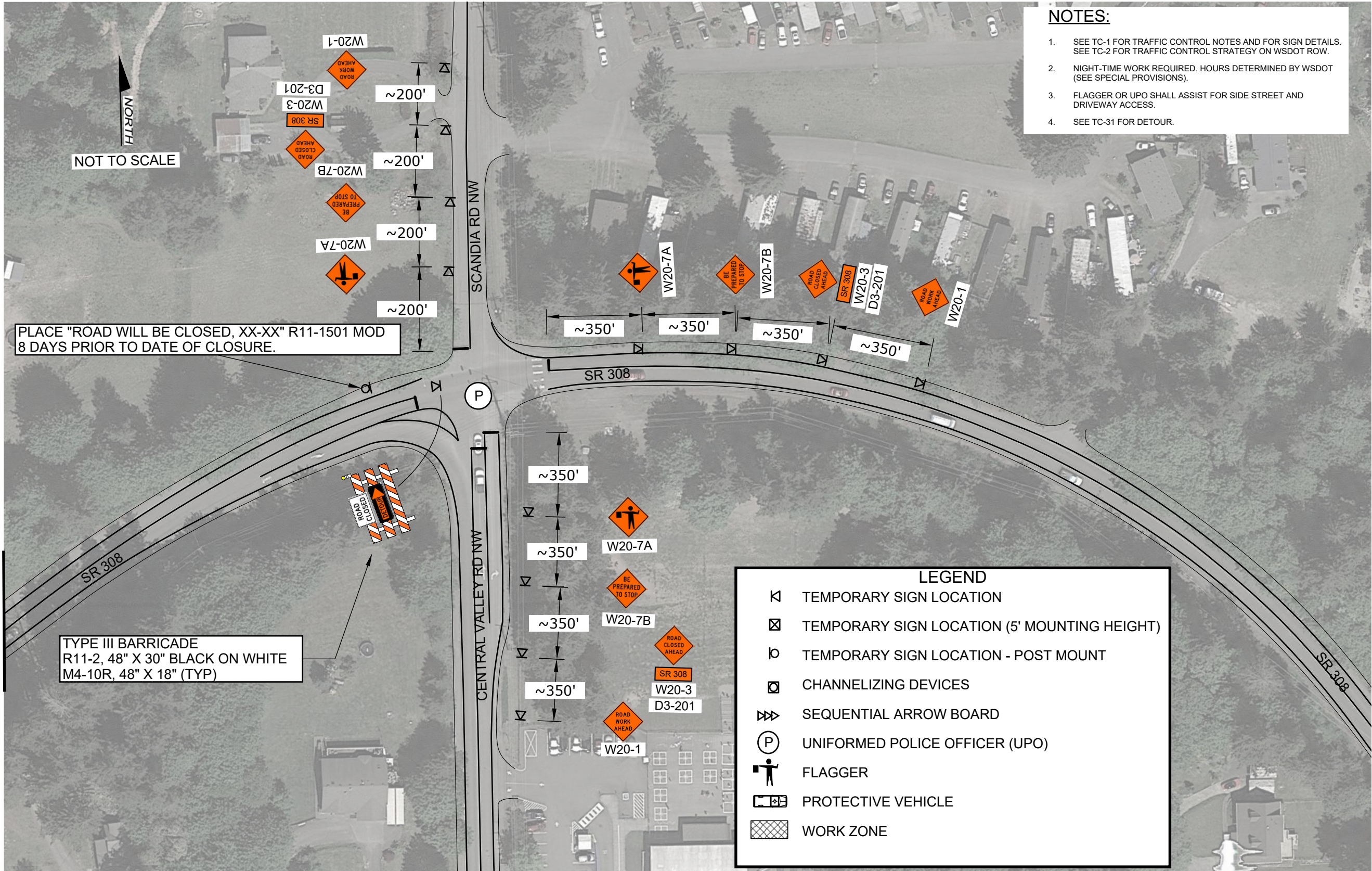
**BANGOR-KEYPORT
FORCEMAIN
REPLACEMENT**

SR308 - CLOSURE AT KATY PLACE. (2 OF 3) SCHEDULE A			
PROJECT NO.:	20-2815	SCALE:	AS SHOWN
DATE:	DECEMBER 2021		

SHEET
TC-11
117 of 138

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MATCH LINE SEE TC-11

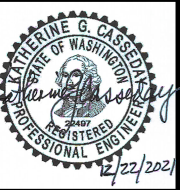


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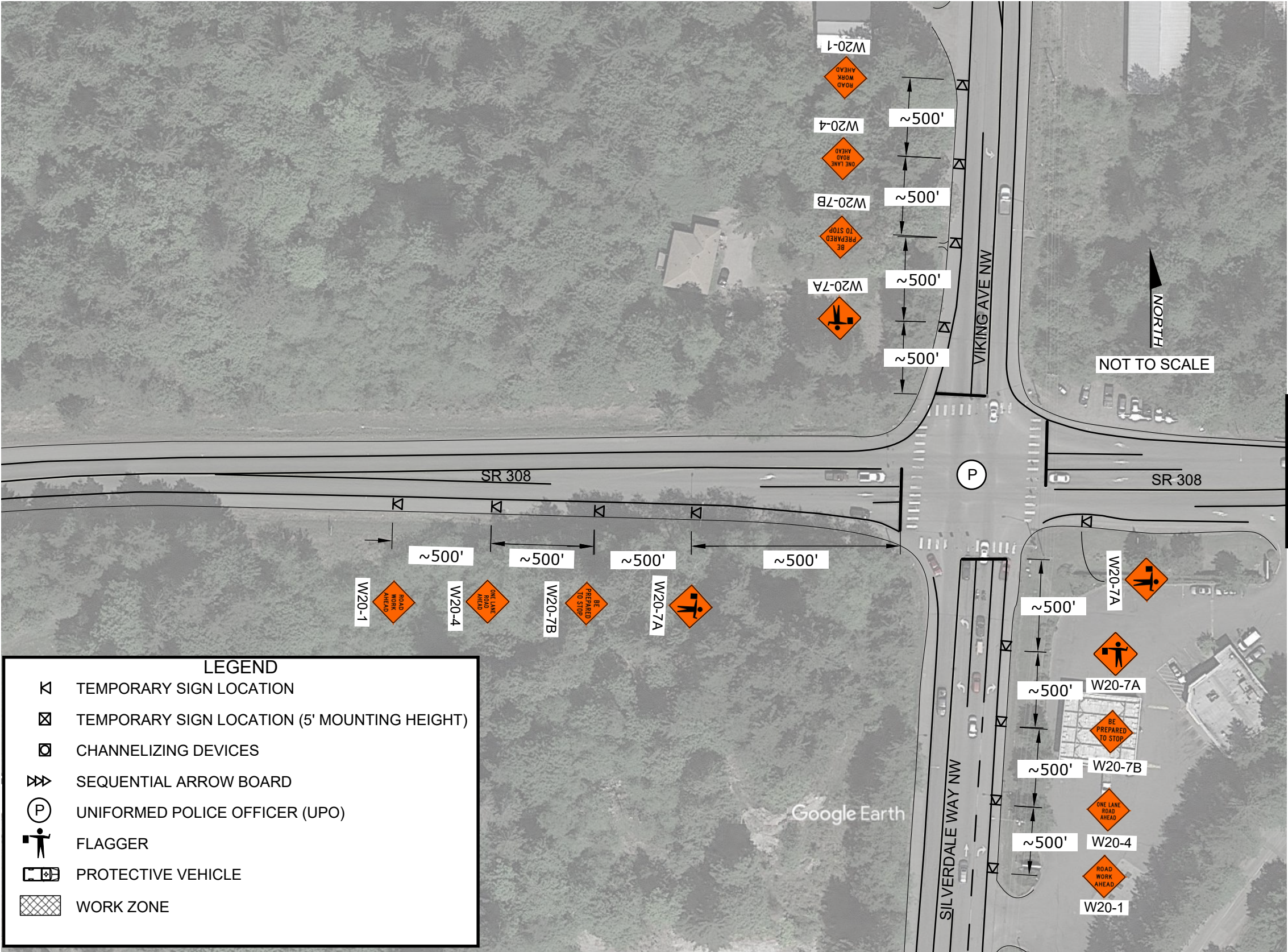


**BANGOR-KEYPORT
FORCEMAIN
REPLACEMENT**

SR308 - CLOSURE AT KATY PLACE. (3 OF 3) SCHEDULE A		
PROJECT NO.:	20-2815	SCALE: AS SHOWN
DATE:	DECEMBER 2021	

SHEET
TC-12
118 of 138

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Plotted: December 20, 2021



- NOTES:**
- SEE TC-1 FOR TRAFFIC CONTROL NOTES. SEE TC-2 FOR TRAFFIC CONTROL STRATEGY ON WSDOT ROW.
 - SEE SPECIAL PROVISIONS FOR WORK HOURS.
 - FLAGGER OR UPO SHALL ASSIST FOR SIDE STREET AND DRIVEWAY ACCESS.

MATCH LINE SEE TC-14

LEGEND

- TEMPORARY SIGN LOCATION
- TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)
- CHANNELIZING DEVICES
- SEQUENTIAL ARROW BOARD
- UNIFORMED POLICE OFFICER (UPO)
- FLAGGER
- PROTECTIVE VEHICLE
- WORK ZONE



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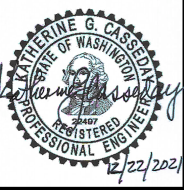
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**BANGOR-KEYPORT
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REPLACEMENT**

**SR308 - KATY PLACE TO
CENTRAL VALLEY RD. (1 OF 3)
SCHEDULE A**

PROJECT NO.: 20-2815

SCALE: AS SHOWN

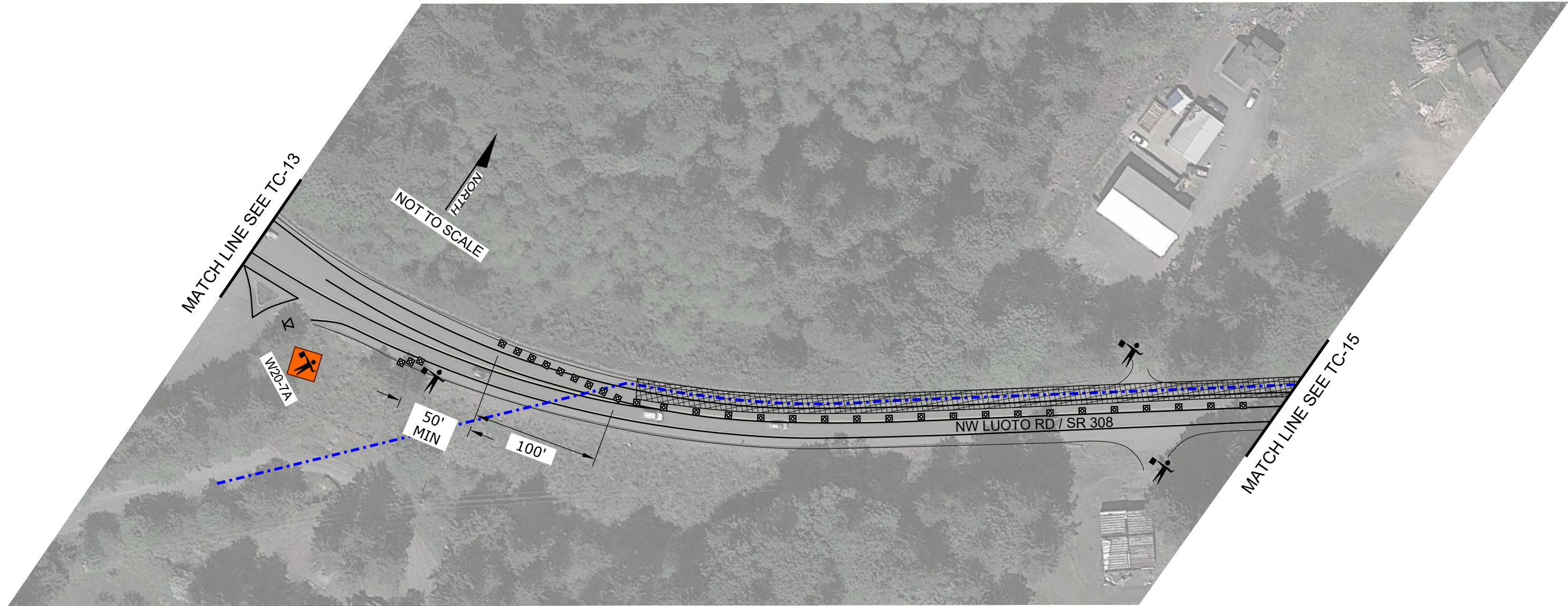
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TC-13

119 of 138

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Plotted: December 20, 2021



LEGEND

TEMPORARY SIGN LOCATION

TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)

CHANNELIZING DEVICES

SEQUENTIAL ARROW BOARD

UNIFORMED POLICE OFFICER (UPO)

FLAGGER

PROTECTIVE VEHICLE

WORK ZONE

FORCEMAIN

- NOTES:
1.

SEE TC-1 FOR TRAFFIC CONTROL NOTES. SEE TC-2 FOR TRAFFIC CONTROL STRATEGY ON WSDOT ROW.
2.

SEE SPECIAL PROVISIONS FOR WORK HOURS.
3.

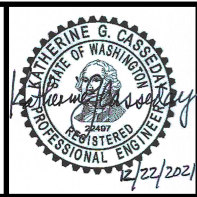
FLAGGER OR UPO SHALL ASSIST FOR SIDE STREET AND DRIVEWAY ACCESS.

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BANGOR-KEYPORT
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REPLACEMENT

SR308 - KATY PLACE TO
CENTRAL VALLEY RD. (2 OF 3)
SCHEDULE A

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: DECEMBER 2021

SHEET

TC-14

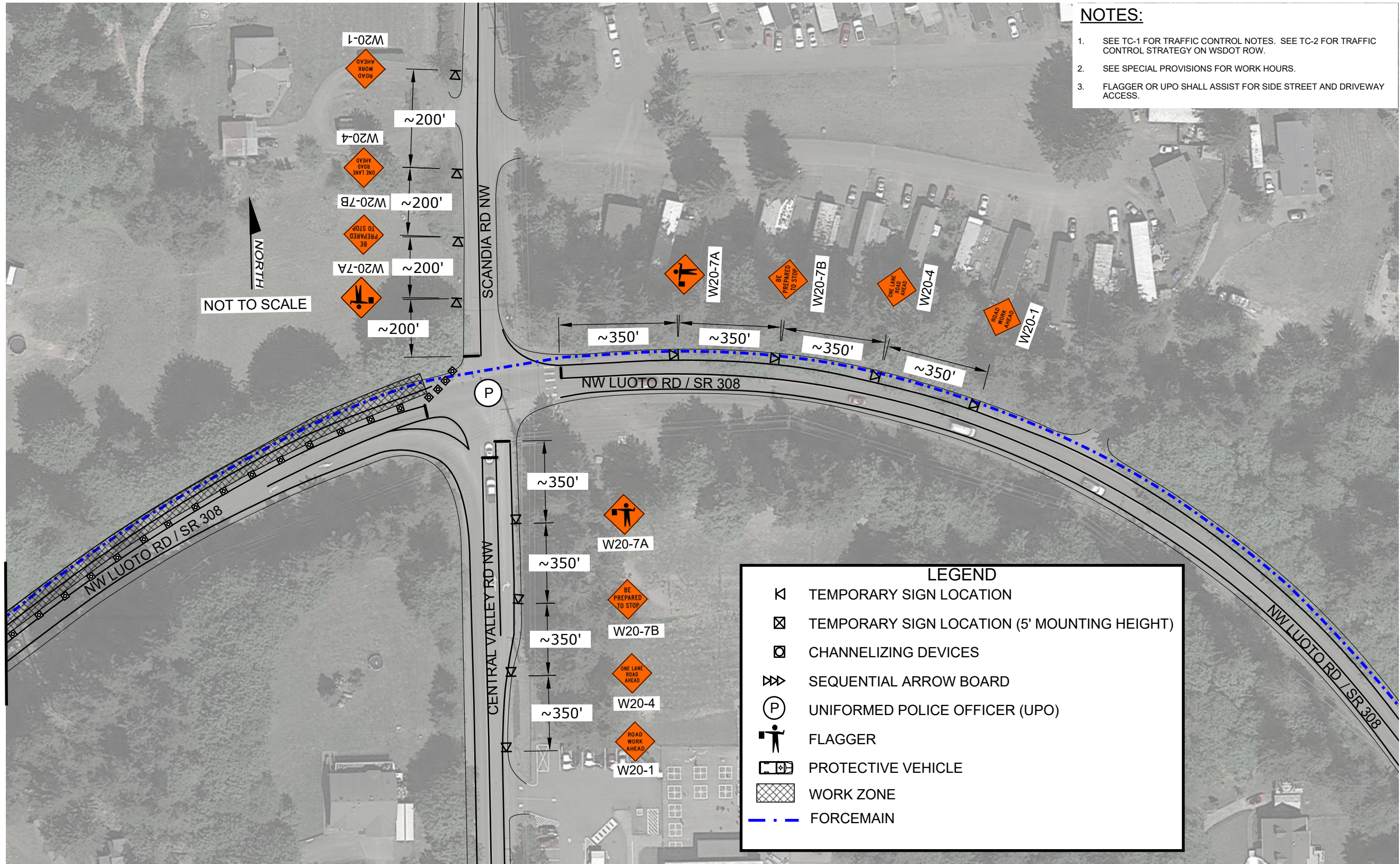
120 of 138



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MATCH LINE SEE TC-14



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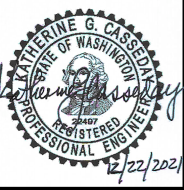
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**BANGOR-KEYPORT
FORCEMAIN
REPLACEMENT**

**SR308 - KATY PLACE TO
CENTRAL VALLEY RD. (3 OF 3)
SCHEDULE A**

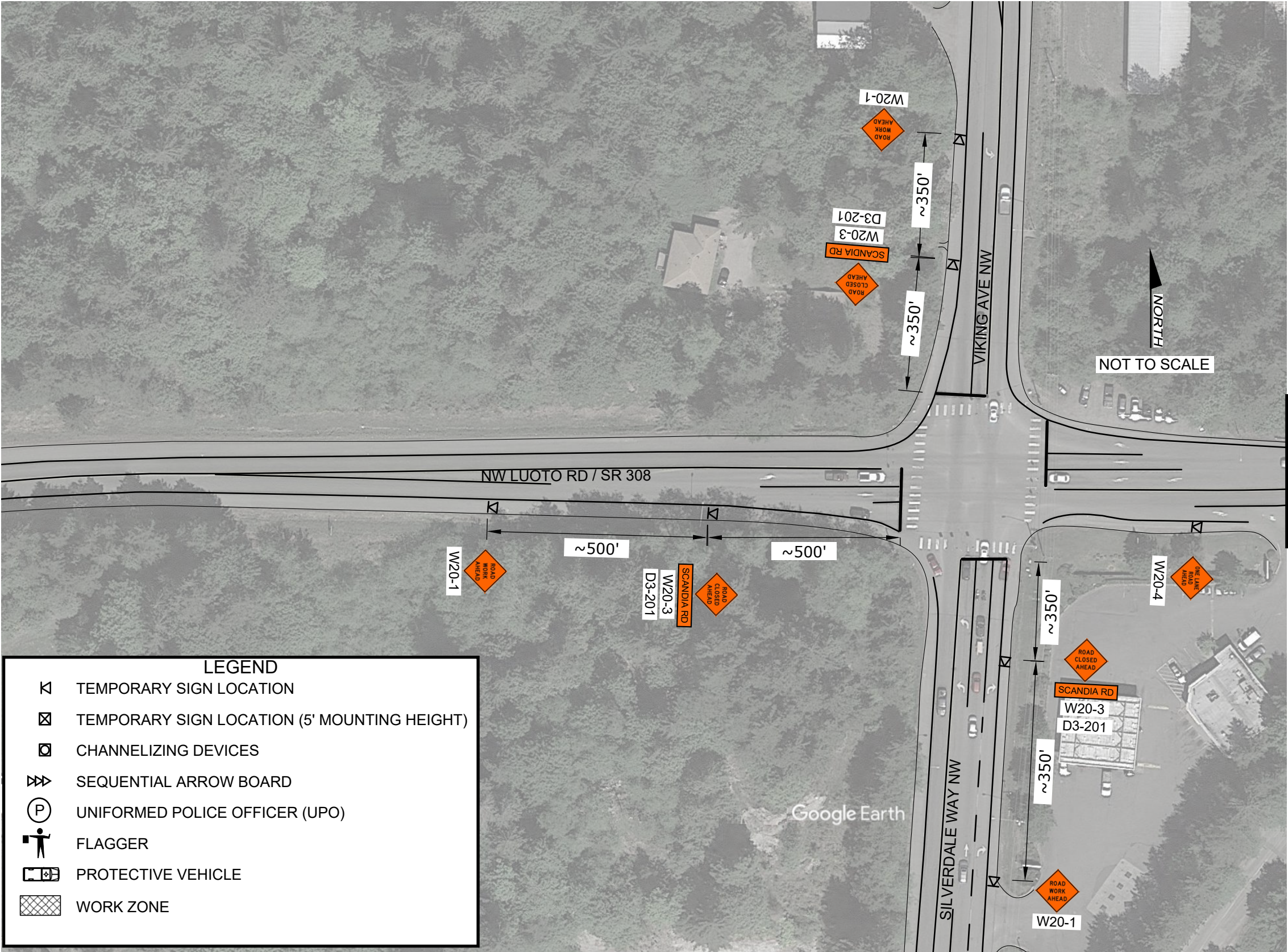
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: DECEMBER 2021

SHEET

TC-15

121 of 138

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Edited: December 20, 2021
Plotted: December 20, 2021



NOTES:

1. SEE TC-1 FOR TRAFFIC CONTROL NOTES AND FOR SIGN DETAILS.
SEE TC-2 FOR TRAFFIC CONTROL STRATEGY ON WSDOT ROW.
2. MAXIMUM CLOSURE FOR SCANDIA RD IS 12 HOURS (SEE SPECIAL PROVISIONS FOR WORK HOURS).
3. FLAGGER OR UPO SHALL ASSIST FOR SIDE STREET AND DRIVEWAY ACCESS.
4. FLAGGER OR UPO SHALL ASSIST PEDESTRIAN AND BICYCLE ACCESS TO SCANDIA RD.
5. SEE TC-32 FOR DETOUR.

MATCH LINE SEE TC-17



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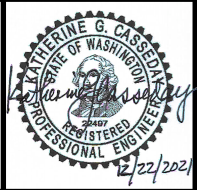
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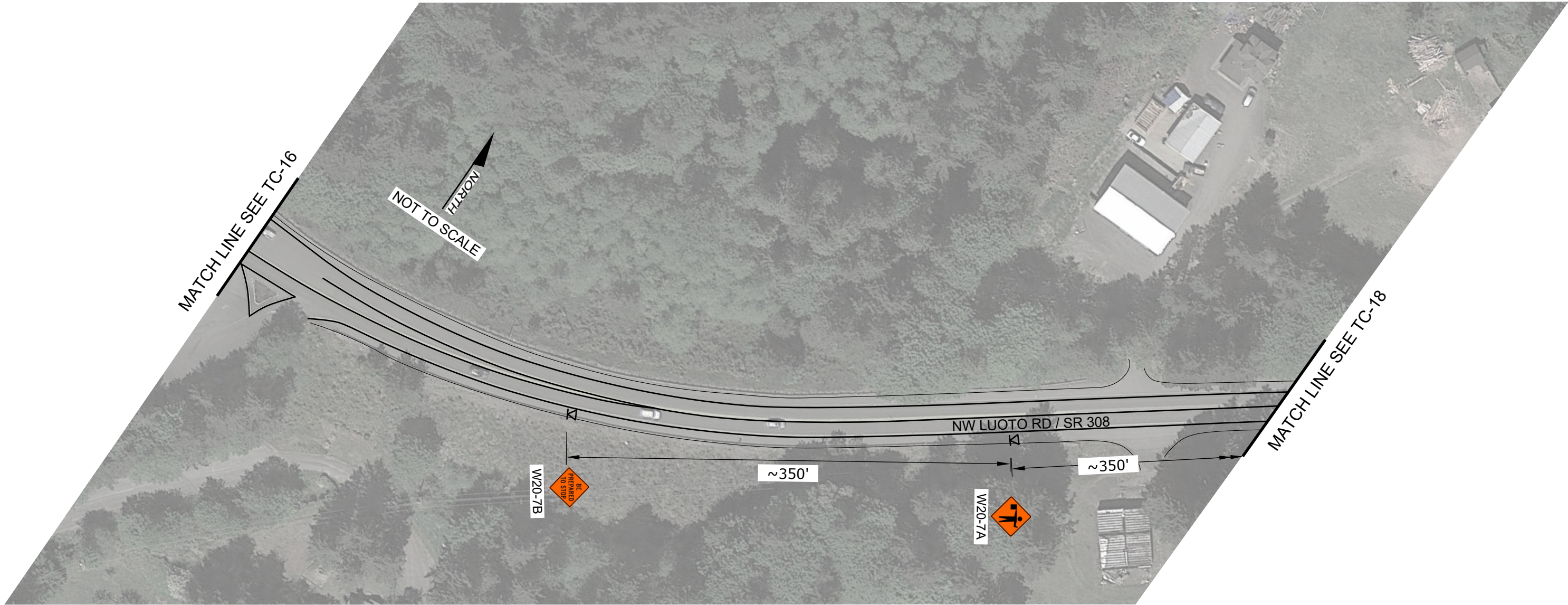


BANGOR-KEYPORT
FORCEMAIN
REPLACEMENT

SCANDIA RD CLOSURE (1 OF 3) SCHEDULE A			
PROJECT NO.:	20-2815	SCALE:	AS SHOWN
DATE:	DECEMBER 2021		

SHEET
TC-16
122 of 138

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LEGEND

- TEMPORARY SIGN LOCATION
- TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)
- CHANNELIZING DEVICES
- SEQUENTIAL ARROW BOARD
- UNIFORMED POLICE OFFICER (UPO)
- FLAGGER
- PROTECTIVE VEHICLE
- WORK ZONE

NOTES:

- SEE TC-1 FOR TRAFFIC CONTROL NOTES AND FOR SIGN DETAILS. SEE TC-2 FOR TRAFFIC CONTROL STRATEGY ON WSDOT ROW.
- MAXIMUM CLOSURE FOR SCANDIA RD IS 12 HOURS (SEE SPECIAL PROVISIONS FOR WORK HOURS).
- FLAGGER OR UPO SHALL ASSIST FOR SIDE STREET AND DRIVEWAY ACCESS.
- FLAGGER OR UPO SHALL ASSIST PEDESTRIAN AND BICYCLE ACCESS TO SCANDIA RD.
- SEE TC-32 FOR DETOUR.

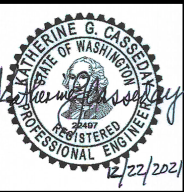


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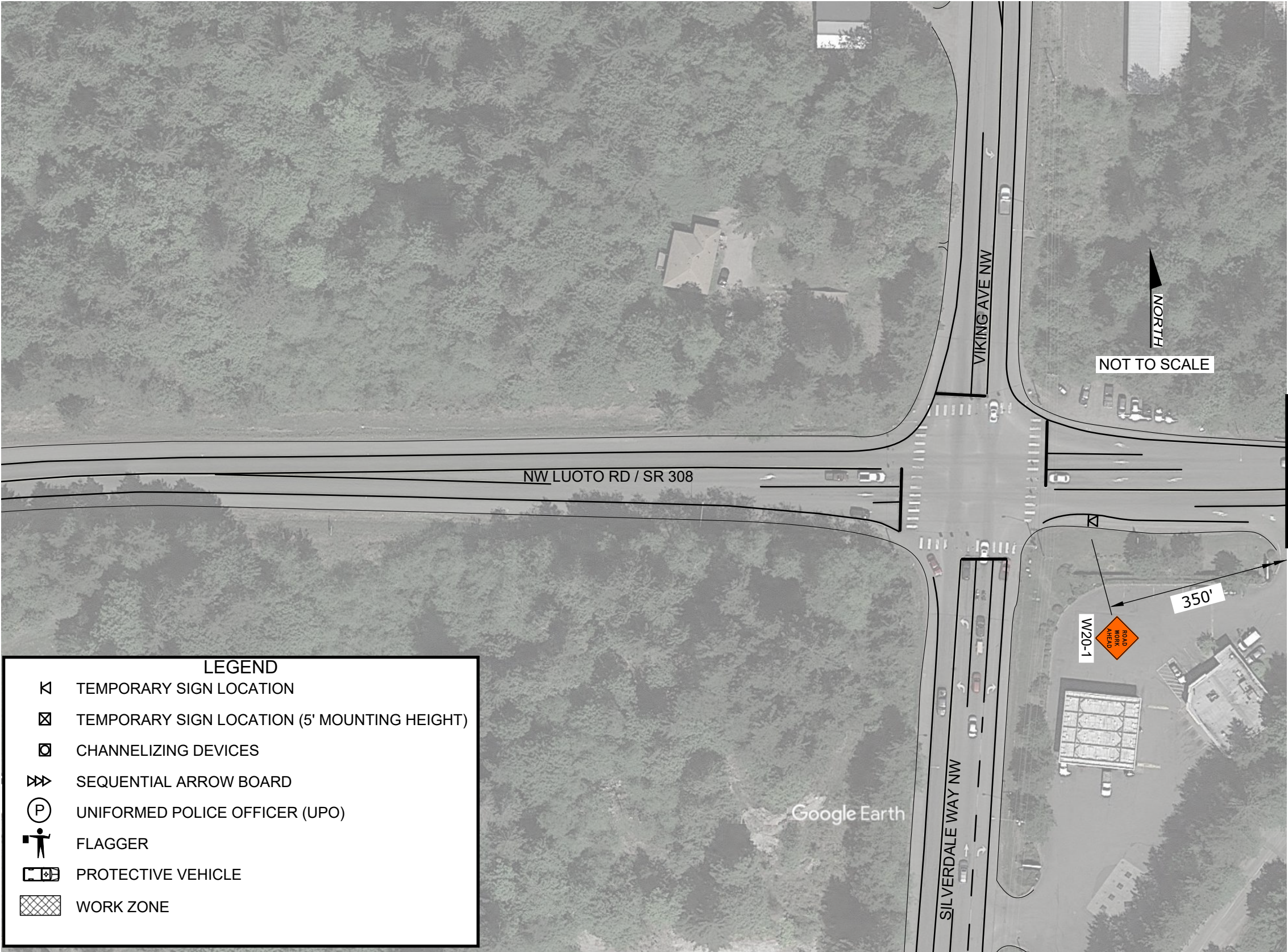


BANGOR-KEYPORT
FORCEMAIN
REPLACEMENT

SCANDIA RD CLOSURE (2 OF 3) SCHEDULE A			
PROJECT NO.:	20-2815	SCALE:	AS SHOWN
DATE:	DECEMBER 2021		

SHEET
TC-17
123 of 138

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NOTES:

1. SEE TC-1 FOR TRAFFIC CONTROL NOTES. SEE TC-2 FOR TRAFFIC CONTROL STRATEGY ON WSDOT ROW.
2. SEE SPECIAL PROVISIONS FOR WORK HOURS.
3. FLAGGER OR UPO SHALL ASSIST FOR SIDE STREET AND DRIVEWAY ACCESS.

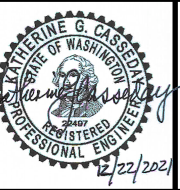


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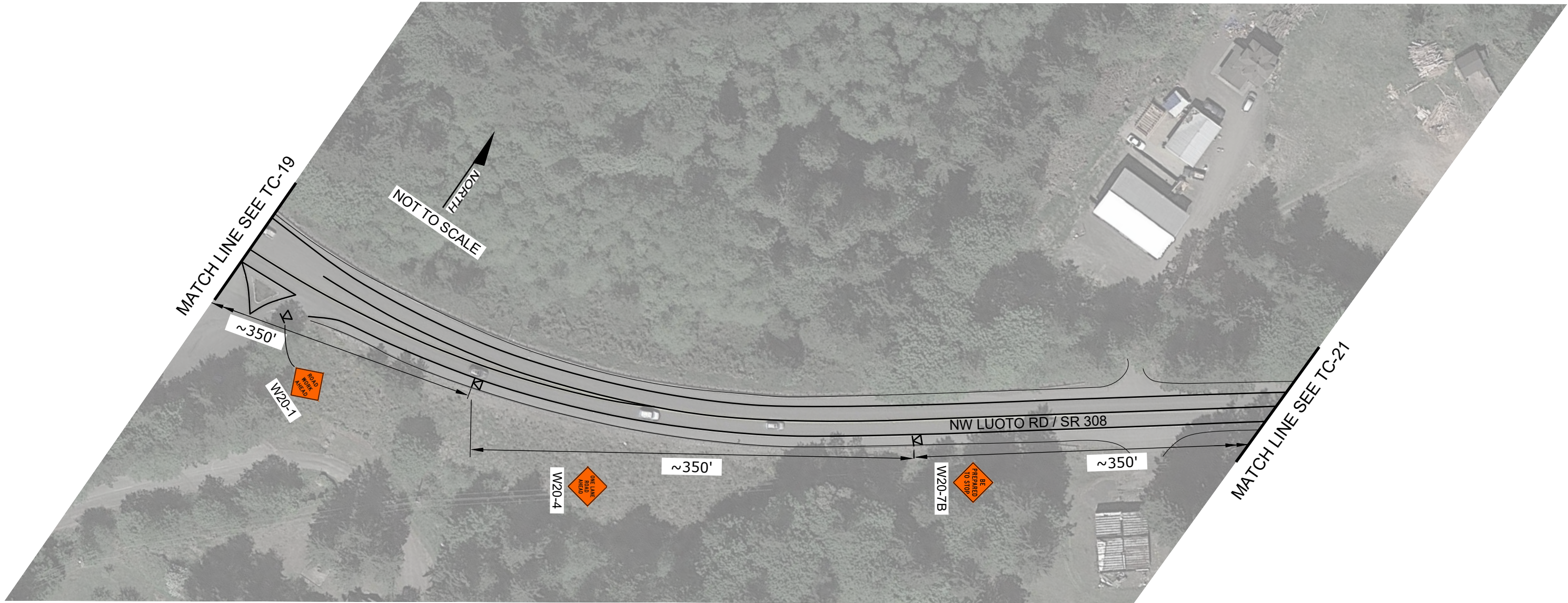


**BANGOR-KEYPORT
FORCEMAIN
REPLACEMENT**

SR308 AT CENTRAL VALLEY RD - EAST SIDE WORK ZONE. (1 OF 3) SCHEDULE A			
PROJECT NO.:	20-2815	SCALE:	AS SHOWN
DATE:	DECEMBER 2021		

SHEET
TC-19
125 of 138

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LEGEND

TEMPORARY SIGN LOCATION

TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)

CHANNELIZING DEVICES

SEQUENTIAL ARROW BOARD

UNIFORMED POLICE OFFICER (UPO)

FLAGGER

PROTECTIVE VEHICLE

WORK ZONE

- NOTES:
- SEE TC-1 FOR TRAFFIC CONTROL NOTES. SEE TC-2 FOR TRAFFIC CONTROL STRATEGY ON WSDOT ROW.
 - SEE SPECIAL PROVISIONS FOR WORK HOURS.
 - FLAGGER OR UPO SHALL ASSIST FOR SIDE STREET AND DRIVEWAY ACCESS.



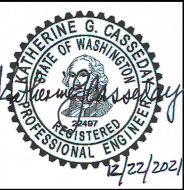
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BANGOR-KEYPORT
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REPLACEMENT

SR308 AT CENTRAL VALLEY RD -
EAST SIDE WORK ZONE. (2 OF 3)
SCHEDULE A

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: DECEMBER 2021

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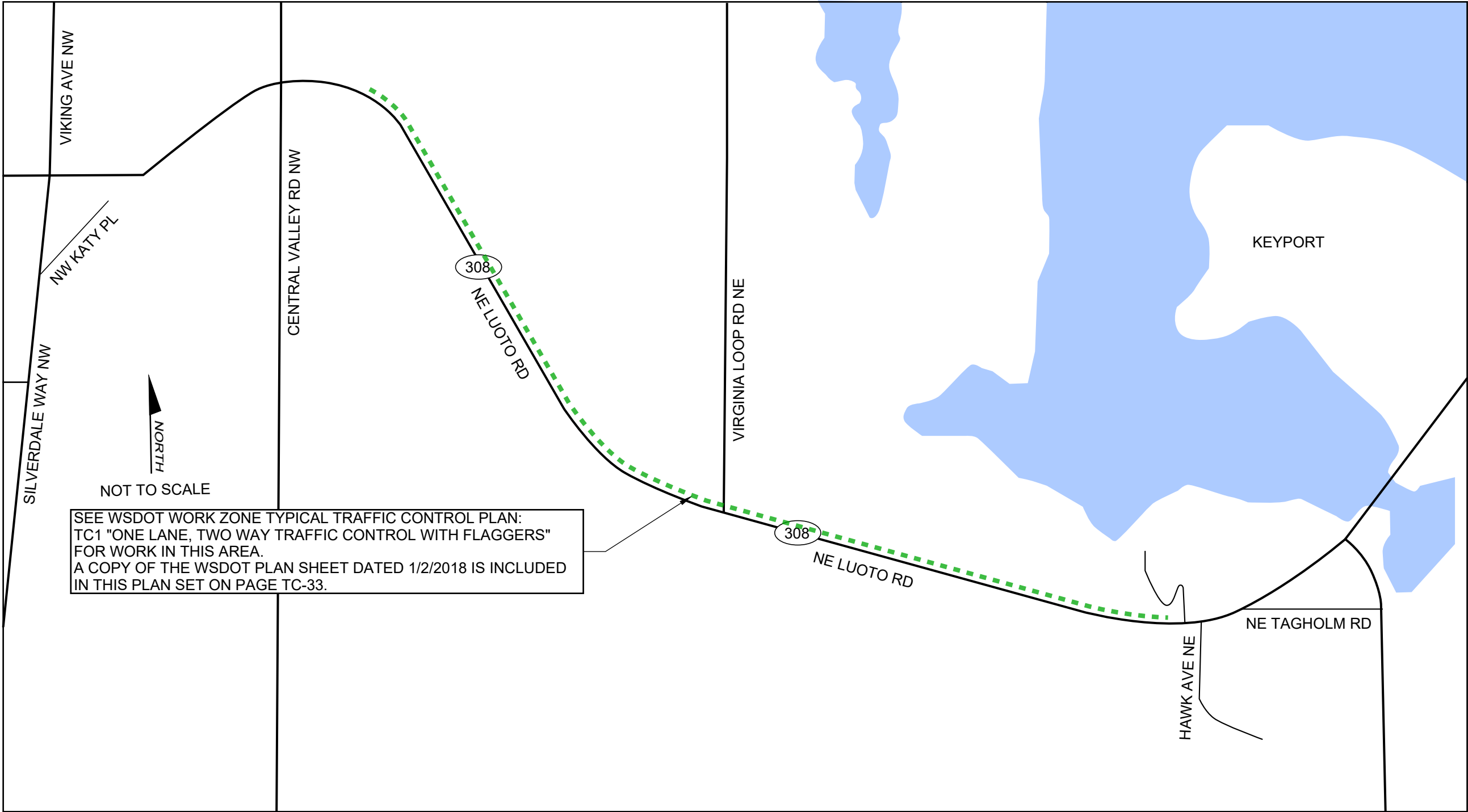
TC-20

126 of 138

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NOTES:

1. SEE TC-1 FOR TRAFFIC CONTROL NOTES. SEE TC-2 FOR TRAFFIC CONTROL STRATEGY ON WSDOT ROW.
2. SEE SPECIAL PROVISIONS FOR WORK HOURS.
3. FLAGGER OR UPO SHALL ASSIST FOR SIDE STREET AND DRIVEWAY ACCESS.
4. SEE WSDOT TEMPORARY TRAFFIC CONTROL STANDARD PLAN TC-1 FOR WORK IN THIS AREA, SEE TC-33.
5. WHEN WORK ZONE IS WITHIN 500 FEET OF A SIGNALIZED INTERSECTION, A UNIFORMED POLICE OFFICER (UPO) SHALL BE USED TO CONTROL INTERSECTION TRAFFIC.



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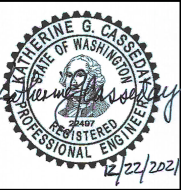
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**BANGOR-KEYPORT
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REPLACEMENT**

**SR308 - CENTRAL VALLEY RD TO
HAWK AVE NE
SCHEDULE A**

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: DECEMBER 2021

SHEET

TC-22

128 of 138

1. SEE TC-1 FOR TRAFFIC CONTROL NOTES. SEE TC-2 FOR TRAFFIC CONTROL STRATEGY ON WSDOT ROW.
2. SEE SPECIAL PROVISIONS FOR WORK HOURS.
3. FLAGGER OR UPO SHALL ASSIST FOR SIDE STREET AND DRIVEWAY ACCESS.
4. SEE TC-3 FOR WORK ZONE TRAFFIC CONTROL STRATEGY ON KITSAP COUNTY ROADS.



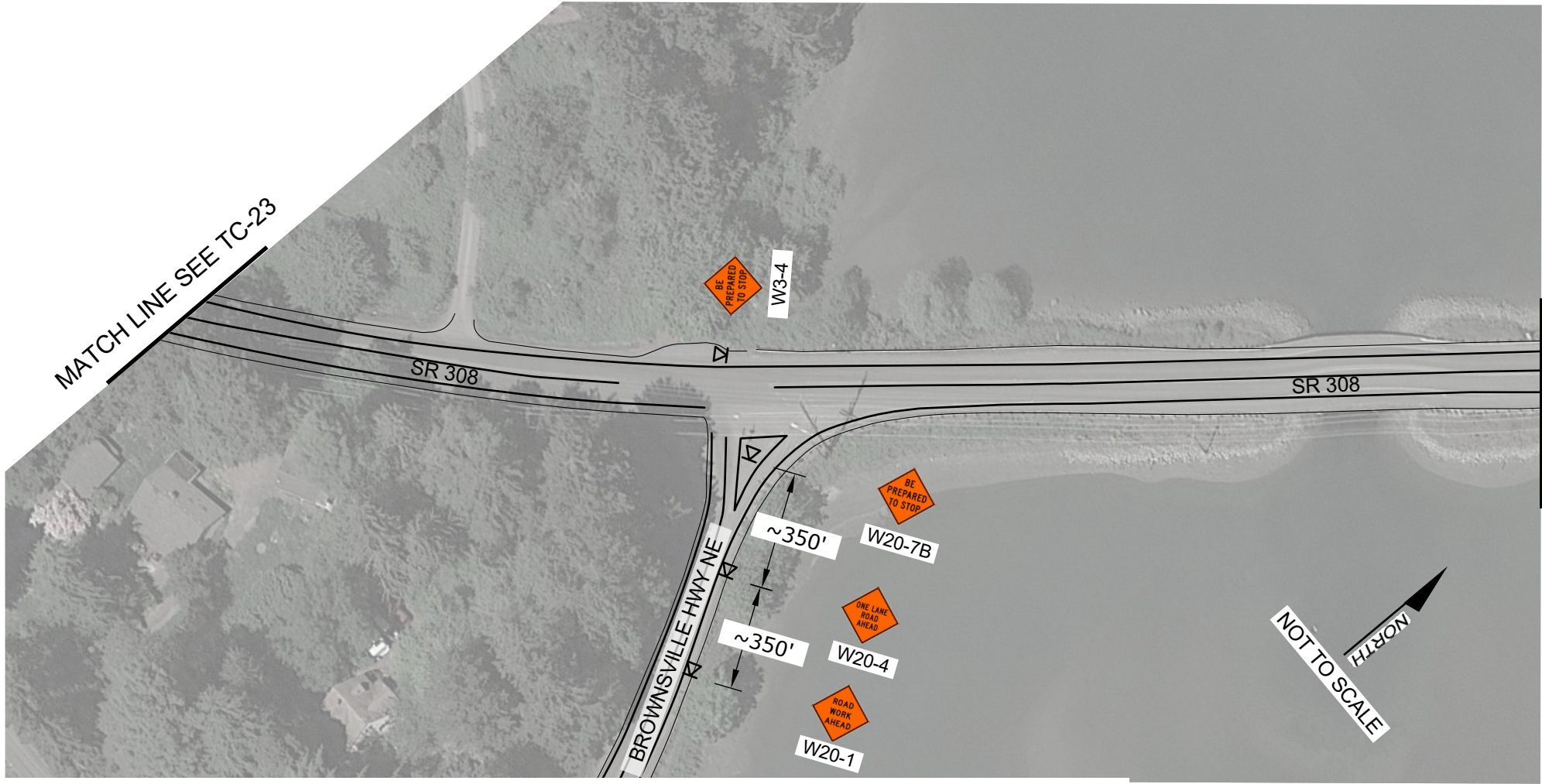
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TC-23

129 of 138

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LEGEND

- TEMPORARY SIGN LOCATION
- TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)
- CHANNELIZING DEVICES
- SEQUENTIAL ARROW BOARD
- UNIFORMED POLICE OFFICER (UPO)
- FLAGGER
- PROTECTIVE VEHICLE
- WORK ZONE



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**BANGOR-KEYPORT
FORCEMAIN
REPLACEMENT**

**SR308 CROSSING AT HAWK AVE NE -
NORTH WORK ZONE. (2 OF 3)
SCHEDULE A**

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: DECEMBER 2021

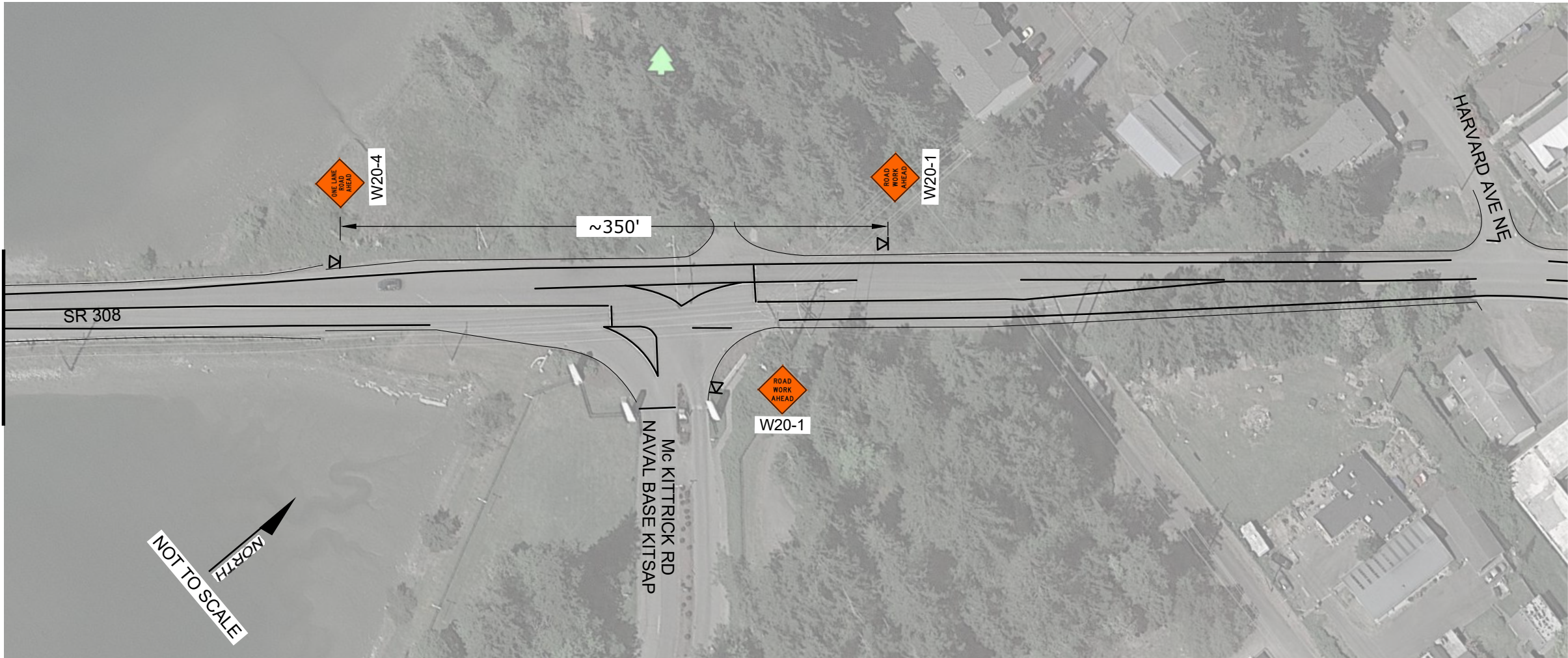
SHEET

TC-24

130 of 138

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MATCH LINE SEE TC-24



LEGEND

TEMPORARY SIGN LOCATION

TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)

CHANNELIZING DEVICES

SEQUENTIAL ARROW BOARD

UNIFORMED POLICE OFFICER (UPO)

FLAGGER

PROTECTIVE VEHICLE

WORK ZONE



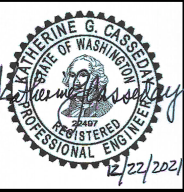
100% SUBMITTAL

NO.	DATE	BY	REVISION

NOTICE

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

BSF	DESIGNED
BSF	DRAWN
KGC	CHECKED



CASSEDAY CONSULTING

9726 NE 138th Pl
Kirkland, WA 98034
(206) 450-8758
katherine@cassedaytraffic.com



BANGOR-KEYPORT
FORCEMAIN
REPLACEMENT

SR308 CROSSING AT HAWK AVE NE -
NORTH WORK ZONE. (3 OF 3)
SCHEDULE A

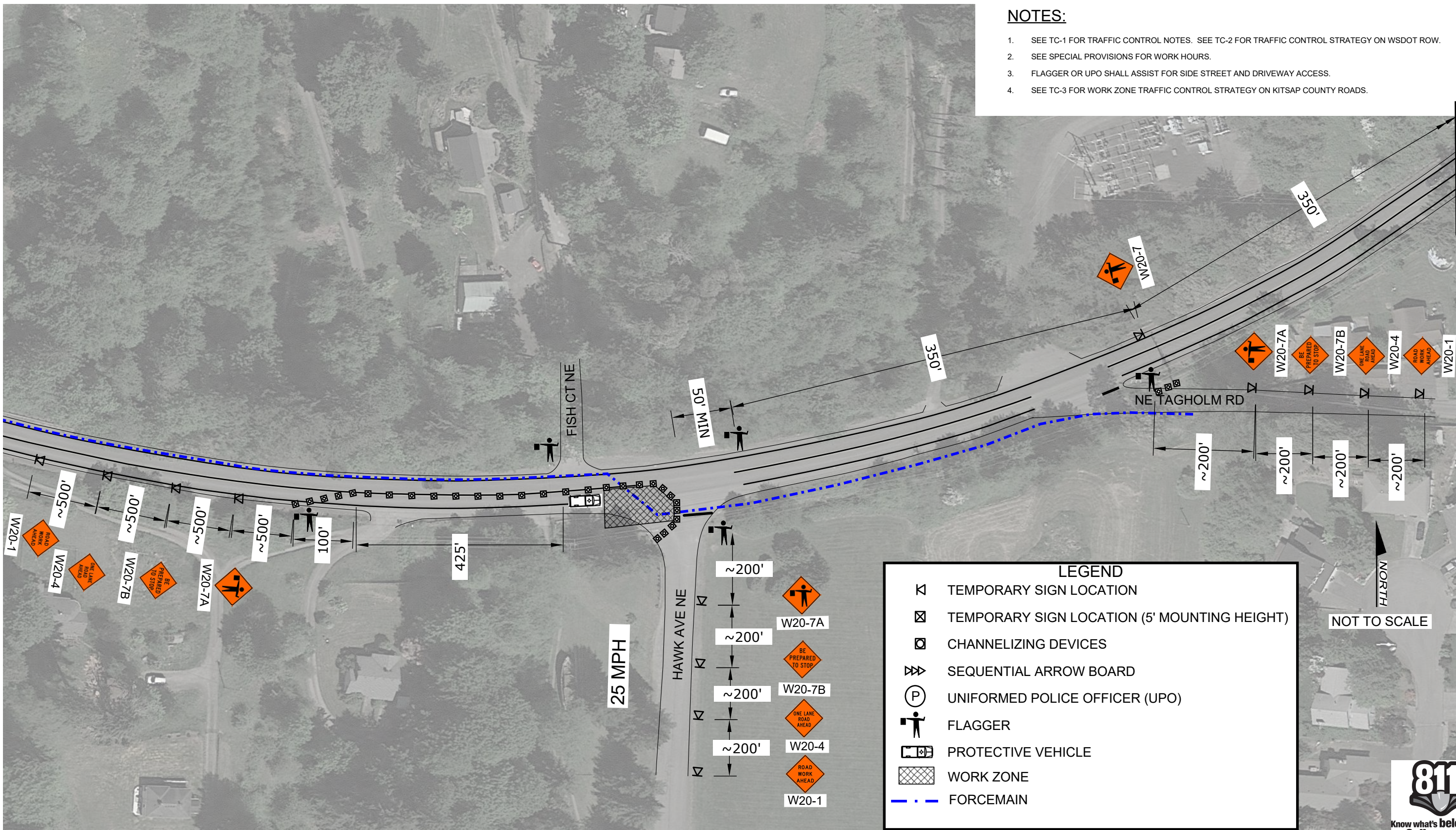
PROJECT NO.: 20-2815 | SCALE: AS SHOWN | DATE: DECEMBER 2021

SHEET

TC-25

131 of 138

Drawn: B Faubion - Caseday
 Edited: December 20, 2021
 Plotted: December 20, 2021



NOTES:

1. SEE TC-1 FOR TRAFFIC CONTROL NOTES. SEE TC-2 FOR TRAFFIC CONTROL STRATEGY ON WSDOT ROW.
2. SEE SPECIAL PROVISIONS FOR WORK HOURS.
3. FLAGGER OR UPO SHALL ASSIST FOR SIDE STREET AND DRIVEWAY ACCESS.
4. SEE TC-3 FOR WORK ZONE TRAFFIC CONTROL STRATEGY ON KITSAP COUNTY ROADS.

MATCH LINE SEE TC-27

100% SUBMITTAL

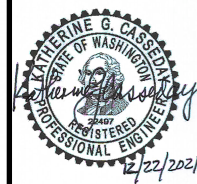
Printed: December 20			
NO.	DATE	BY	REVISION

NOTICE

0 $\frac{1}{2}$ 1

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DRAWN
KGC
CHECKED



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BANGOR-KEYPORT FORCEMAIN REPLACEMENT

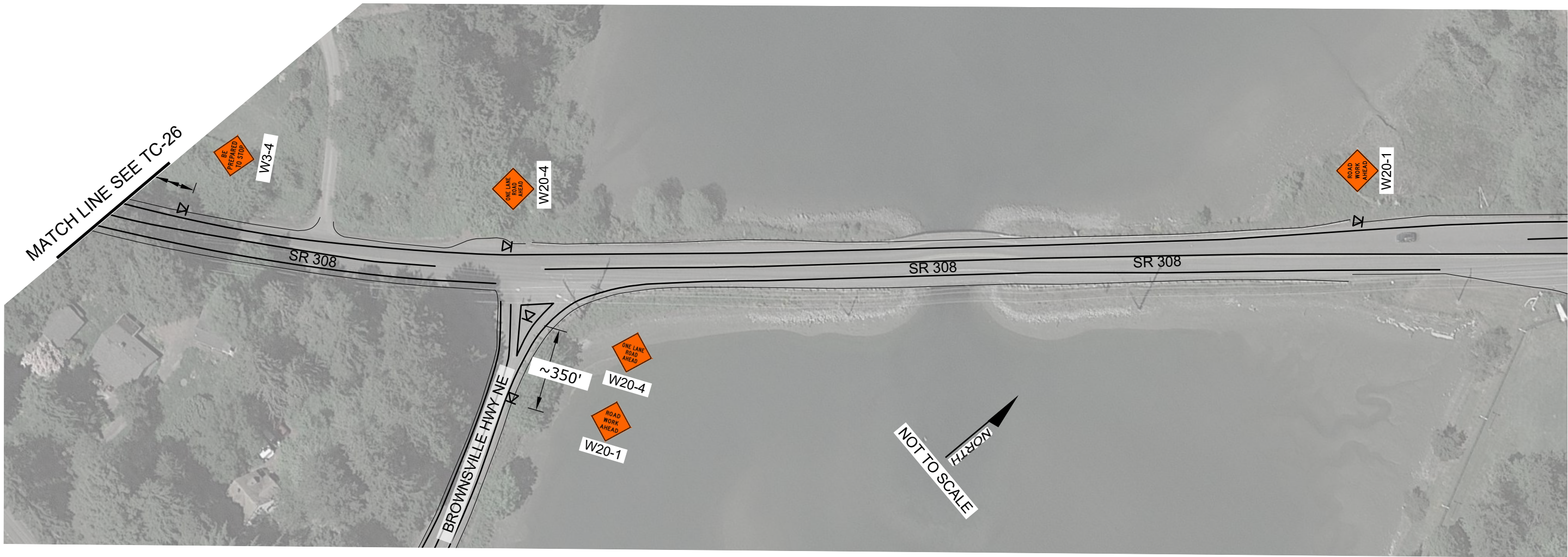
**SR308 CROSSING AT HAWK AVE NE -
SOUTHWEST WORK ZONE. (1 OF 2)
SCHEDULE A**

PROJECT NO.:	20-2815	SCALE:	AS SHOWN	DATE:	DECEMBER 2021
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TC-26

132 of 138

HP-DESKTOP/business/Active Projects/Murraysmith - Kitsap County Bangor FM/Working Files/TC PLANS/TC PLANS ALL
Drawn: B Faubion - Casseday Consulting
Edited: December 20, 2021
Plotted: December 20, 2021



LEGEND

- TEMPORARY SIGN LOCATION
- TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)
- CHANNELIZING DEVICES
- SEQUENTIAL ARROW BOARD
- UNIFORMED POLICE OFFICER (UPO)
- FLAGGER
- PROTECTIVE VEHICLE
- WORK ZONE



100% SUBMITTAL

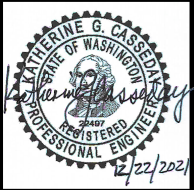
NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

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BSF
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KGC
CHECKED



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**BANGOR-KEYPORT
FORCEMAIN
REPLACEMENT**

**SR308 CROSSING AT HAWK AVE NE -
SOUTHWEST WORK ZONE. (2 OF 2)
SCHEDULE A**

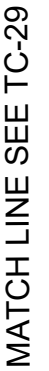
PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: DECEMBER 2021

SHEET

TC-27

133 of 138

1. SEE TC-1 FOR TRAFFIC CONTROL NOTES. SEE TC-2 FOR TRAFFIC CONTROL STRATEGY ON WSDOT ROW.
2. SEE SPECIAL PROVISIONS FOR WORK HOURS.
3. FLAGGER OR UPO SHALL ASSIST FOR SIDE STREET AND DRIVEWAY ACCESS.
4. SEE TC-3 FOR WORK ZONE TRAFFIC CONTROL STRATEGY ON KITSAP COUNTY ROADS.



**Know what's below.
Call before you dig.**

Plotted: December 20			
NO.	DATE	BY	REVISION

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KGC
CHECKED



**SR308 CROSSING AT HAWK AVE NE -
SOUTHEAST WORK ZONE. (1 OF 3)
SCHEDULE A**

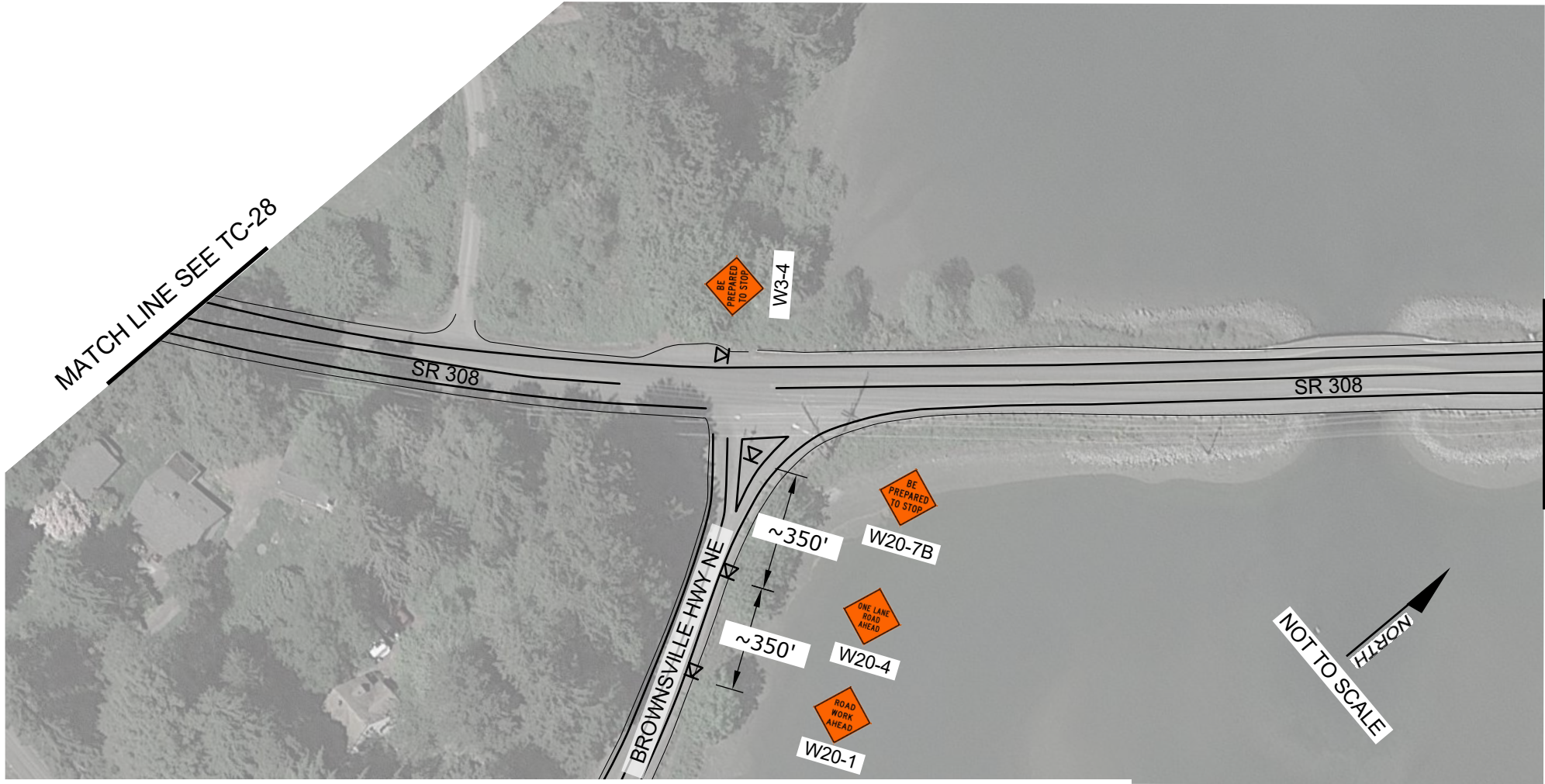
PROJECT NO.:	20-2815	SCALE:	AS SHOWN	DATE:	DECEMBER 2021
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SHEET

TC-28

134 of 138

//HP-DESKTOP/business/Active Projects/Murraysmith - Kitsap County Bangor FM/Working Files/TC PLANS/TC PLANS ALL
Drawn: B Faubion - Caseday Consulting
Edited: December 20, 2021
Plotted: December 20, 2021



LEGEND

- TEMPORARY SIGN LOCATION
- TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)
- CHANNELIZING DEVICES
- SEQUENTIAL ARROW BOARD
- UNIFORMED POLICE OFFICER (UPO)
- FLAGGER
- PROTECTIVE VEHICLE
- WORK ZONE



100% SUBMITTAL

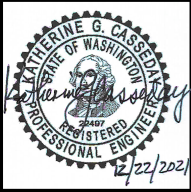
NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

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**BANGOR-KEYPORT
FORCEMAIN
REPLACEMENT**

**SR308 CROSSING AT HAWK AVE NE -
SOUTHEAST WORK ZONE. (2 OF 3)
SCHEDULE A**

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: DECEMBER 2021

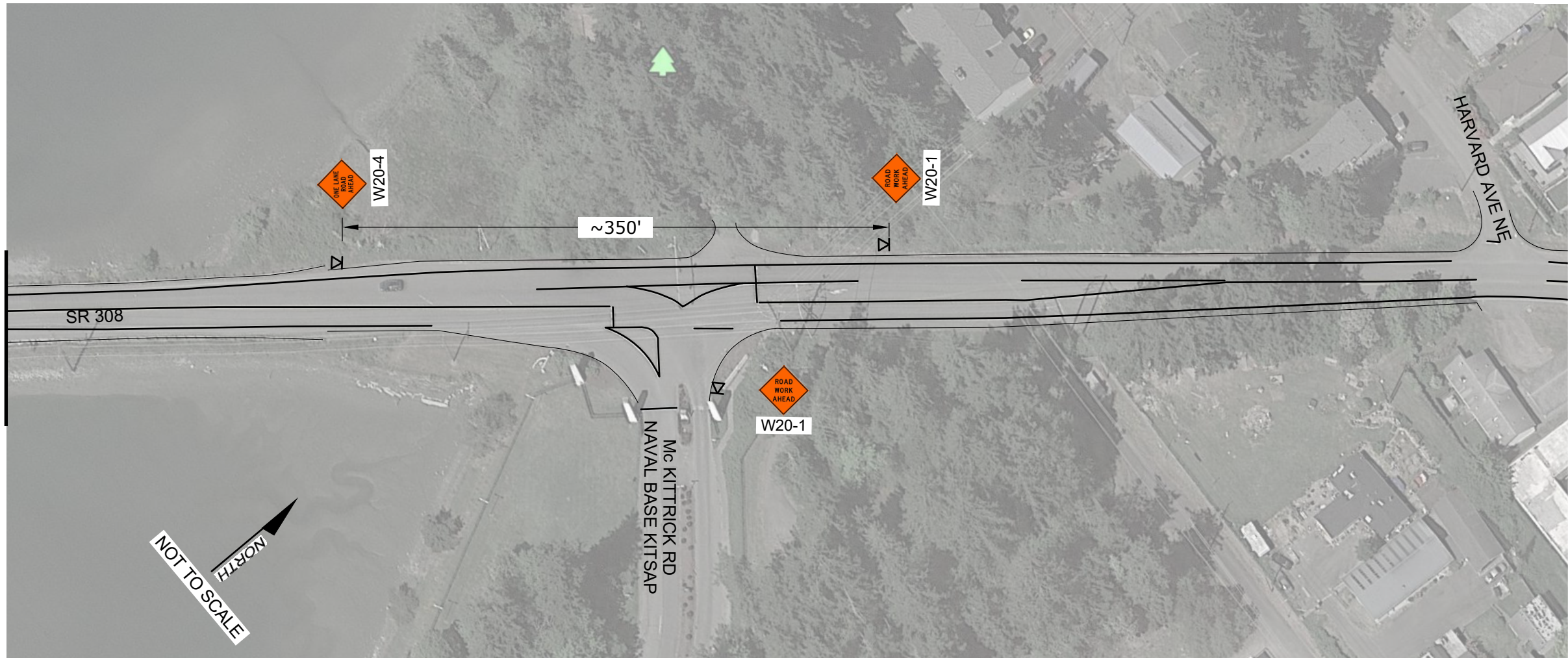
SHEET

TC-29

135 of 138

HP-DESKTOP/business/Active Projects/Murraysmith - Kitsap County Bangor FM/Working Files/TC PLANS/TC PLANS ALL
Drawn: B Faubion - Casseday Consulting
Edited: December 20, 2021
Plotted: December 20, 2021

MATCH LINE SEE TC-29



LEGEND

TEMPORARY SIGN LOCATION

TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)

CHANNELIZING DEVICES

SEQUENTIAL ARROW BOARD

UNIFORMED POLICE OFFICER (UPO)

FLAGGER

PROTECTIVE VEHICLE

WORK ZONE



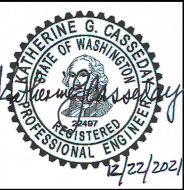
100% SUBMITTAL

NO.	DATE	BY	REVISION

NOTICE

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

BSF	DESIGNED
BSF	DRAWN
KGC	CHECKED



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BANGOR-KEYPORT
FORCEMAIN
REPLACEMENT

SR308 CROSSING AT HAWK AVE NE -
SOUTHEAST WORK ZONE. (3 OF 3)
SCHEDULE A

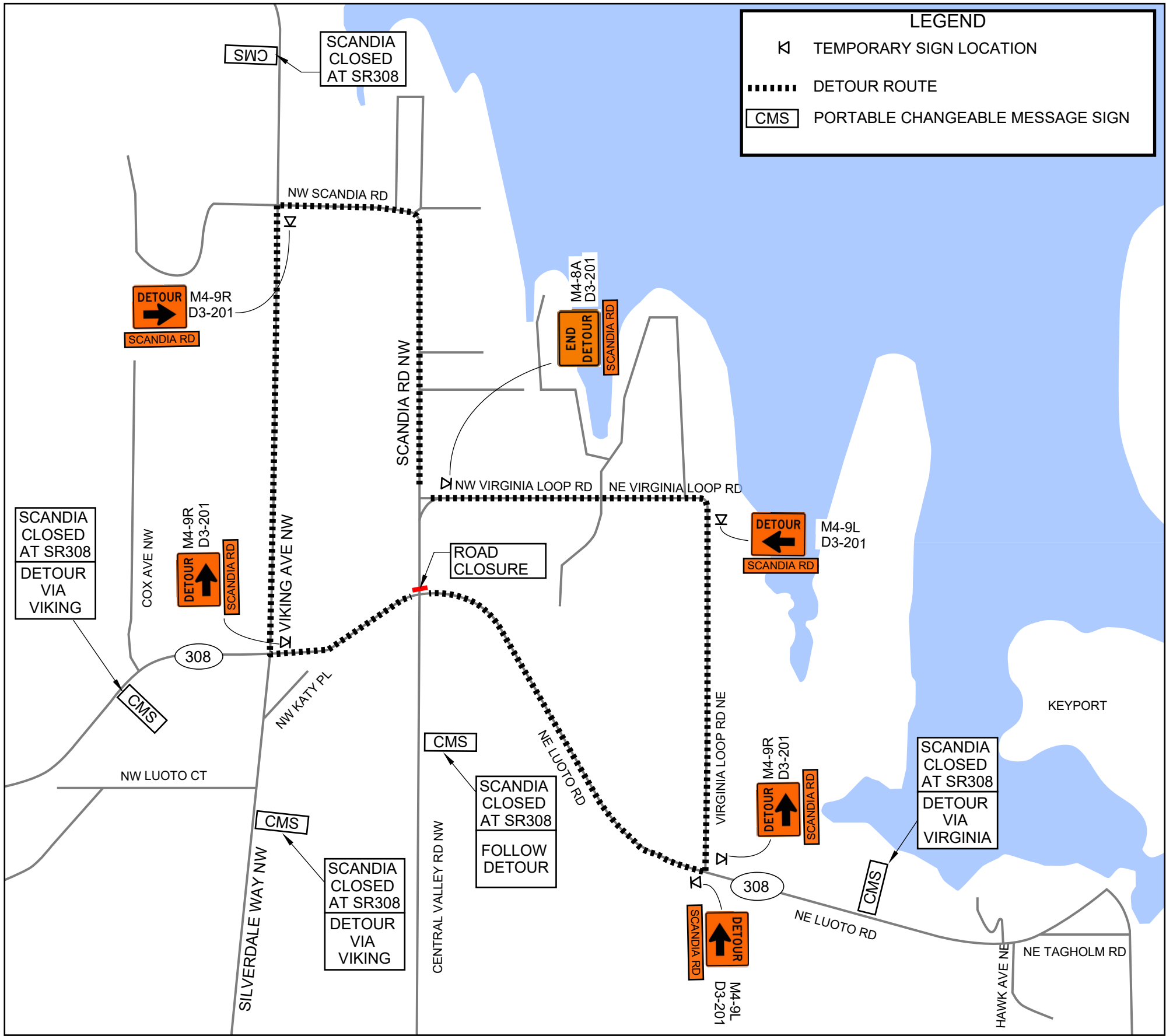
PROJECT NO.: 20-2815 | SCALE: AS SHOWN | DATE: DECEMBER 2021

SHEET

TC-30

136 of 138

HP-DESKTOP/business/Active Projects/Murraysmith - Kitsap County Bangor FM/Working Files/TC PLANS/TC PLANS ALL
Drawn: B Faubion - Casseday Consulting
Edited: December 20, 2021
Plotted: December 20, 2021



- NOTES:**
- SEE TC-1 FOR TRAFFIC CONTROL NOTES AND FOR SIGN DETAILS. SEE TC-2 FOR TRAFFIC CONTROL STRATEGY ON WSDOT ROW.
 - SEE SPECIAL PROVISIONS FOR WORK HOURS.
 - SEE TC-16 THROUGH TC-18 FOR WORK ZONE TRAFFIC CONTROL.



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NO.	DATE	BY	REVISION

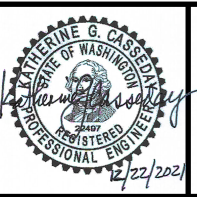
NOTICE

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BSF DESIGNED

BSF DRAWN

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**BANGOR-KEYPORT
FORCEMAIN
REPLACEMENT**

DETOUR ROUTE -
SCANDIA RD CLOSURE AT SR 308
SCHEDULE A

PROJECT NO.: 20-2815 SCALE: AS SHOWN DATE: DECEMBER 2021

SHEET

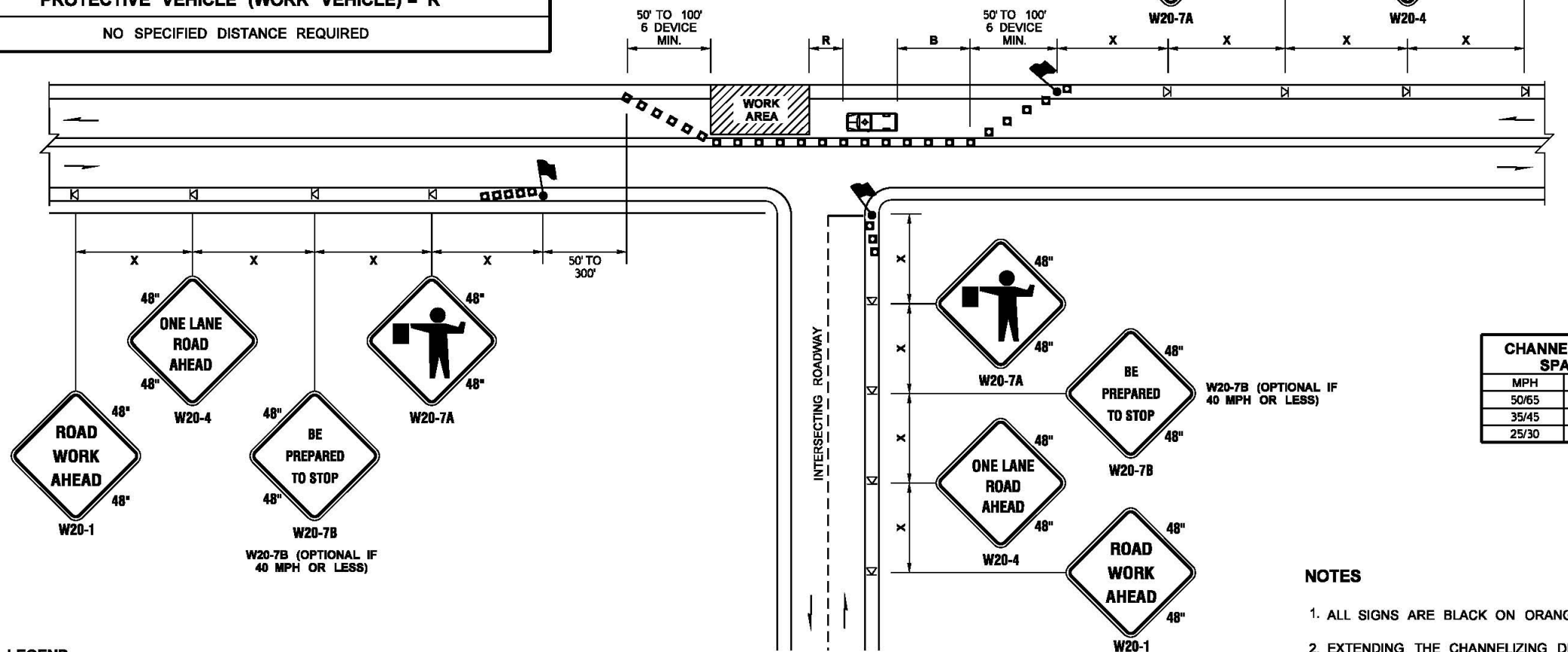
TC-32

138 of 138

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730
TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R										
HOST VEHICLE WEIGHT 9,900 TO 22,000 lbs.					HOST VEHICLE WEIGHT > 22,000 lbs.					
< 45 MPH	45-55 MPH		> 55 MPH		< 45 MPH	45-55 MPH		> 55 MPH		
100'	123'		172'		74'	100'		150'		
PROTECTIVE VEHICLE (WORK VEHICLE) = R										
NO SPECIFIED DISTANCE REQUIRED										

SIGN SPACING = X (1)		
RURAL HIGHWAYS	60 / 65 MPH	800' ±
RURAL ROADS	45 / 55 MPH	500' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
URBAN STREETS	25 MPH OR LESS	100' ± (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERSECTIONS AND DRIVEWAYS.
 (2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.



ONE-LANE, TWO-WAY TRAFFIC CONTROL WITH FLAGGERS

NOT TO SCALE

FILE NAME	S:\Design R P& S\4-Standard\2-Plan Sheet Library\01-Published PSL(TC) Work Zone Traffic Control\TC-1 One Lane Two Way Traffic Control with Flaggers\TC-1.dgn
TIME	3:05:14 PM
DATE	1/2/2018
PLOTTED BY	Ildelf
DESIGNED BY	
ENTERED BY	
CHECKED BY	
PROJ. ENGR.	
REGIONAL ADM.	
REVISION	
DATE	
BY	
CONTRACT NO.	FED.AID PROJ.NO.
LOCATION NO.	
P.E. STAMP BOX	DATE
P.E. STAMP BOX	DATE
Washington State Department of Transportation	
TRAFFIC CONTROL PLAN	



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Call before you dig.

100% SUBMITTAL

[illegible]