

LOCATION MAP

LATITUDE: 40 °07'08" LONGITUDE: 82 °52 '59"



PORTION TO BE IMPROVED	—————
INTERSTATE HIGHWAY	=====
FEDERAL ROUTES	—————
STATE ROUTES	—————
COUNTY & TOWNSHIP ROADS	—————
OTHER ROADS	—————

DESIGN DESIGNATION

CURRENT ADT (2024)	64,716
DESIGN YEAR ADT (2045)	86,550
DESIGN HOURLY VOLUME (2045)	9,080
DIRECTIONAL DISTRIBUTION	50%
TRUCKS (24 HOUR B&C)	8%
DESIGN SPEED	70 MPH
LEGAL SPEED	65 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
02 OTHER FREEWAY & EXPRESSWAY (URBAN)	
NHS PROJECT	YES

DESIGN EXCEPTIONS

NONE REQUIRED

ADA DESIGN WAIVERS

NONE REQUIRED

UNDERGROUND UTILITIES
Contact Two Working Days
Before You Dig

OHIO811.org
Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764
(Non members must be called directly)

PLAN PREPARED BY:
ARCADIS - IBI GROUP
8101 North High Street
Columbus, OH 43235
tel 614 818 4900 fax 614 818 4901

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

FRA-161-15.80 NOISE WALLS

CITY OF COLUMBUS AND NEW ALBANY PLAIN TOWNSHIP FRANKLIN COUNTY

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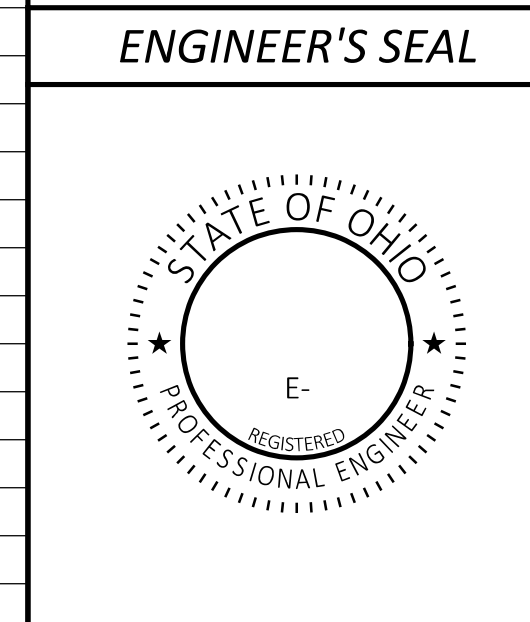
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MAP EFFECTIVE DATE: JUNE 17, 2008
BFE: 957.40
FLOOD ZONES AE & X

FIRM PANELS: 39049C0204K
MAP EFFECTIVE DATE: JUNE 17, 2008
BFE: 974
FLOOD ZONES AE & X

NO FILL WILL BE ADDED IN THE
100-YEAR FLOOD PLAIN.

STAGE 3 SUBMITTAL 03/27/24

STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS	
BP-5.1	7/15/22	MT-95.30	7/19/19	TC-41.10	1/19/13	800-2023	7/19/24		
		MT-95.40	7/21/23	TC-41.20	10/18/13	821	4/20/12		
DM-1.1	7/17/20	MT-95.45	7/21/23	TC-42.10	10/18/13	832	7/21/23		
DM-1.2	7/16/21	MT-95.50	7/21/17	TC-42.20	10/18/13				
DM-4.1	7/17/20			TC-51.11	1/15/16	921	4/20/12		
		MT-98.10	1/17/20	TC-61.30	7/19/19				
F-1.1	7/19/13	MT-98.11	1/17/20						
F-3.3	7/19/13	MT-98.21	1/17/20	HL-30.31	1/19/24				
F-3.4	7/19/13	MT-98.22	1/17/20						
				BR-1 REV.	4/03/90				
MGS-1.1	7/16/21	MT-98.29	1/17/20						
MGS-2.1	1/19/18	MT-99.20	4/19/19	RM-4.3	1/21/22				
MGS-3.1	1/19/18	MT-101.70	4/21/23						
MGS-5.3	7/15/16	MT-101.75	7/21/23						
NBS-1-09	7/15/22								



FEDERAL PROJECT NUMBER

NON-FEDERAL

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

INSTALLATION OF 8,422 FEET OF NOISE WALL AND 4,836 FEET OF 81" SINGLE SLOPE BARRIER AT VARIOUS LOCATIONS ALONG STATE ROUTE 161 BETWEEN ULRY ROAD AND US 62. THIS PROJECT SUPPLEMENTS THE FRA-161-15.80 WIDENING PROJECT.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	7.95 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	8.20 ACRES

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2023 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

Anthony C. Turowski

Anthony C. Turowski, P.E.
District 06 Deputy Director

Jack Marchbanks

Jack Marchbanks, PhD
Director, Department of Transportation

NOTE:
FOR CITY OF COLUMBUS AND CITY OF NEW ALBANY
SIGNATURES, SEE SEPARATE SIGNATURE PAGE

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

JDH 03-27-24

PROJECT ID

117607

SHEET

P.1

TOTAL

P.295

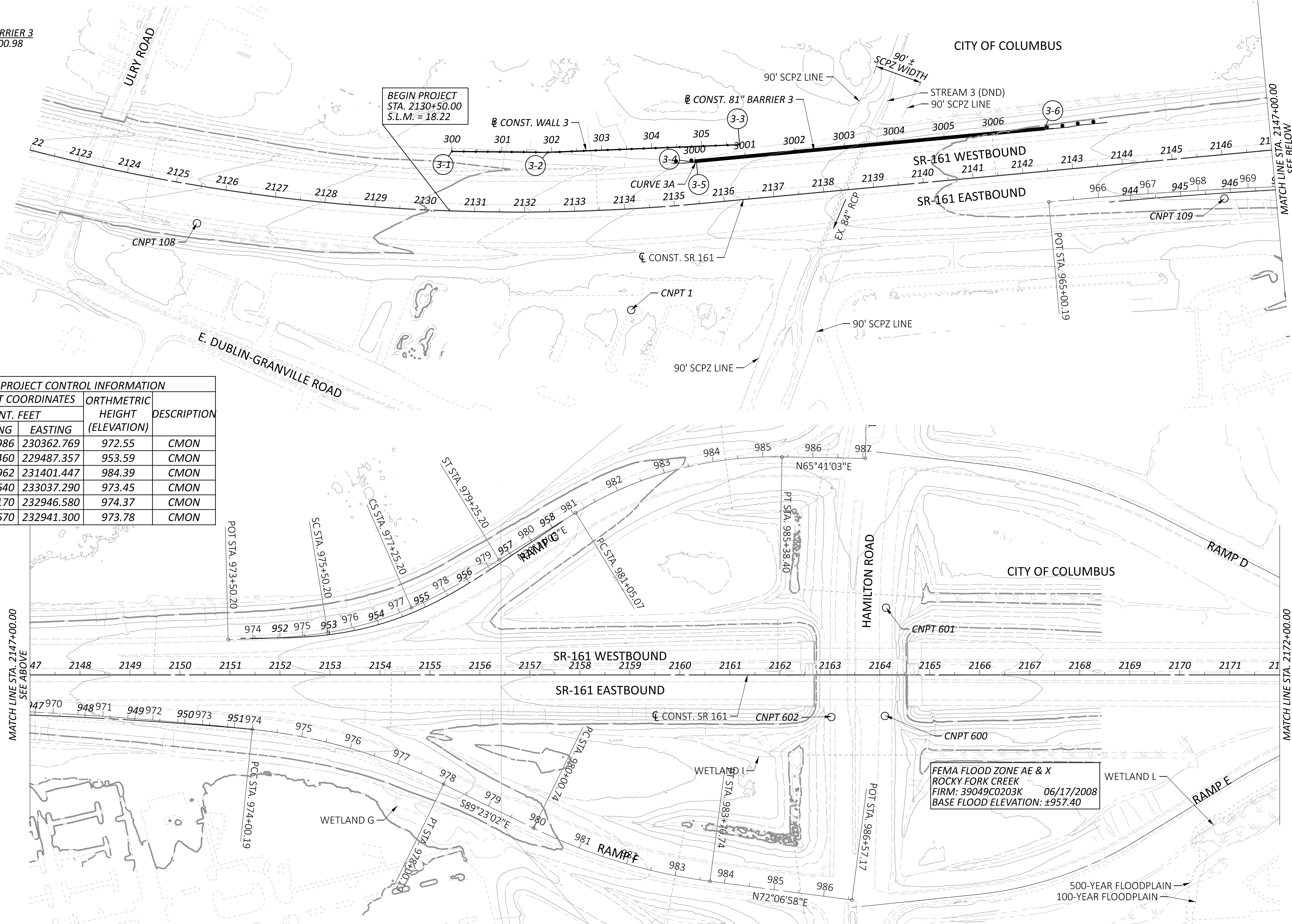
BASELINE GEOMETRY - NOISE WALL 3

P.I. NUMBER	NOISE BARRIER STATION	SR-161 STATIONING		NORTHING	EASTING	BEARING
		STATION	OFFSET			
3-1	300+00.00	2130+50.00	119.00' LT	612183.0140	229916.9520	N 70°31'40" E
3-2	301+92.00	2132+48.06	119.00' LT	612247.0170	230097.9700	N 67°40'14" E
3-3	305+76.00	2136+41.07	110.00' LT	612392.9100	230453.1760	N/A

BASELINE GEOMETRY - 81" BARRIER 3

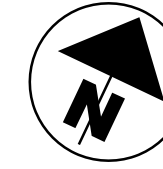
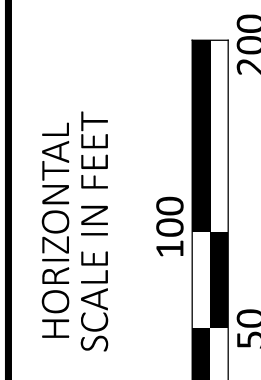
P.I. NUMBER	81" BARRIER STATION	SR-161 STATIONING		NORTHING	EASTING	BEARING
		STATION	OFFSET			
3-4	3000+00.00	2135+50.00	83.50' LT	612329.9490	230382.2990	CURVE 3A
3-5	3000+01.96	2135+52.00	83.50' LT	612330.7890	230384.0710	N 64°36'58" E
3-6	3006+99.96	2142+50.00	83.50' LT	612630.0060	231014.6800	N/A

3A CURVE DATA
 CONST. 81" BARRIER 3
 P.I. = STA. 3000+00.98
 $\Delta = 00^{\circ}01'46''$ LT
 $D_c = 01^{\circ}29'57''$
 $R = 3,822.15'$
 $T = 0.98'$
 $L = 1.96'$
 $E = 0.00'$



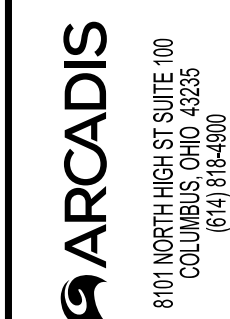
PRIMARY PROJECT CONTROL INFORMATION

POINT NUMBER	PROJECT COORDINATES		ORTHOMETRIC HEIGHT (ELEVATION)	DESCRIPTION
	NORTHING	EASTING		
CNPT 1	612007.986	230362.769	972.55	CMON
CNPT 108	611873.460	229487.357	953.59	CMON
CNPT 109	612623.962	231401.447	984.39	CMON
CNPT 600	613406.640	233037.290	973.45	CMON
CNPT 601	613603.170	232946.580	974.37	CMON
CNPT 602	613358.670	232941.300	973.78	CMON



SCHMATIC PLAN
 STA. 2122+00.00 TO STA. 2172+00.00

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

JDH 03-27-24

PROJECT ID

117607

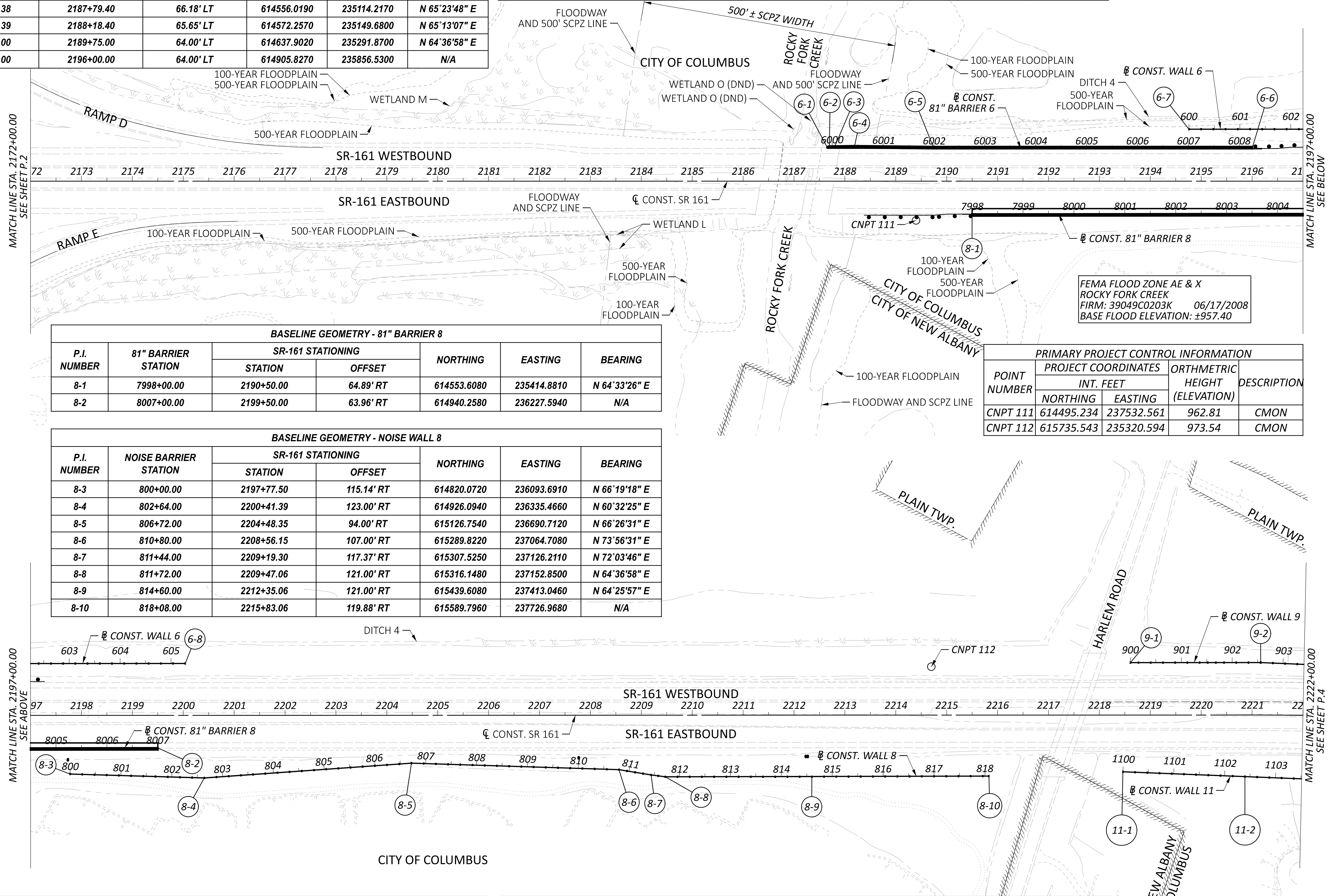
SHEET TOTAL

P.2 P.295

FEMA FLOOD ZONE AE & X
 ROCKY FORK CREEK
 FIRM: 39049C0203K 06/17/2008
 BASE FLOOD ELEVATION: ±957.40

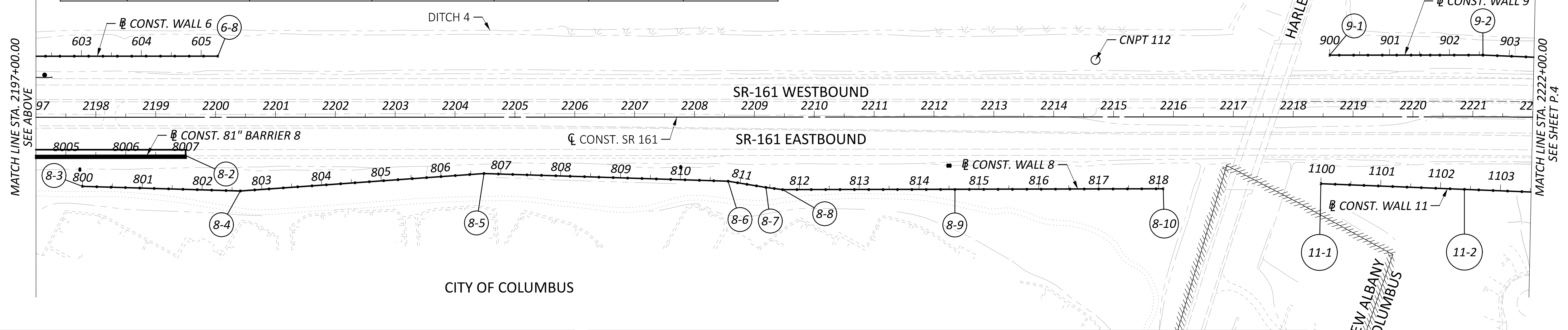
BASELINE GEOMETRY - 81" BARRIER 6						
P.I. NUMBER	81" BARRIER STATION	SR-161 STATIONING		NORTHING	EASTING	BEARING
		STATION	OFFSET			
6-1	5999+90.38	2187+65.40	66.09' LT	614549.9420	235101.6040	N 64°36'58" E
6-2	5999+94.38	2187+69.40	66.09' LT	614551.6570	235105.2180	N 64°08'19" E
6-3	6000+04.38	2187+79.40	66.18' LT	614556.0190	235114.2170	N 65°23'48" E
6-4	6000+43.39	2188+18.40	65.65' LT	614572.2570	235149.6800	N 65°13'07" E
6-5	6002+00.00	2189+75.00	64.00' LT	614637.9020	235291.8700	N 64°36'58" E
6-6	6008+25.00	2196+00.00	64.00' LT	614905.8270	235856.5300	N/A

BASELINE GEOMETRY - NOISE WALL 6						
P.I. NUMBER	NOISE BARRIER STATION	SR-161 STATIONING		NORTHING	EASTING	BEARING
		STATION	OFFSET			
6-7	600+00.00	2194+76.00	102.00' LT	614887.0020	235728.2120	N 64°36'58" E
6-8	605+28.00	2200+04.00	102.00' LT	615113.3450	236205.2370	N/A



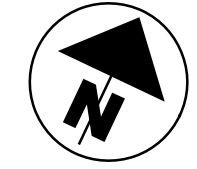
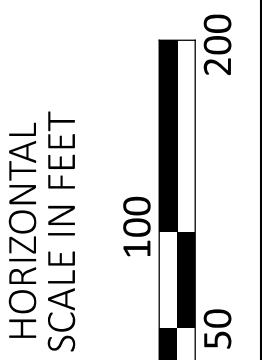
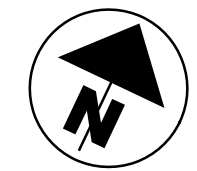
BASELINE GEOMETRY - 81" BARRIER 8						
P.I. NUMBER	81" BARRIER STATION	SR-161 STATIONING		NORTHING	EASTING	BEARING
		STATION	OFFSET			
8-1	7998+00.00	2190+50.00	64.89' RT	614553.6080	235414.8810	N 64°33'26" E
8-2	8007+00.00	2199+50.00	63.96' RT	614940.2580	236227.5940	N/A

BASELINE GEOMETRY - NOISE WALL 8						
P.I. NUMBER	NOISE BARRIER STATION	SR-161 STATIONING		NORTHING	EASTING	BEARING
		STATION	OFFSET			
8-3	800+00.00	2197+77.50	115.14' RT	614820.0720	236093.6910	N 66°19'18" E
8-4	802+64.00	2200+41.39	123.00' RT	614926.0940	236335.4660	N 60°32'25" E
8-5	806+72.00	2204+48.35	94.00' RT	615126.7540	236690.7120	N 66°26'31" E
8-6	810+80.00	2208+56.15	107.00' RT	615289.8220	237064.7080	N 73°56'31" E
8-7	811+44.00	2209+19.30	117.37' RT	615307.5250	237126.2110	N 72°03'46" E
8-8	811+72.00	2209+47.06	121.00' RT	615316.1480	237152.8500	N 64°36'58" E
8-9	814+60.00	2212+35.06	121.00' RT	615439.6080	237413.0460	N 64°25'57" E
8-10	818+08.00	2215+83.06	119.88' RT	615589.7960	237726.9680	N/A



BASELINE GEOMETRY - NOISE WALL 9						
P.I. NUMBER	NOISE BARRIER STATION	SR-161 STATIONING		NORTHING	EASTING	BEARING
		STATION	OFFSET			
9-1	900+00.00	2218+61.00	103.00' LT	615910.3080	237882.5260	N 64°36'58" E
9-2	902+56.00	2221+17.00	103.00' LT	616020.0500	238113.8110	N 67°00'42" E

BASELINE GEOMETRY - NOISE WALL 11						
P.I. NUMBER	NOISE BARRIER STATION	SR-161 STATIONING		NORTHING	EASTING	BEARING
		STATION	OFFSET			
11-1	1100+00.00	2218+46.22	111.43' RT	615710.2410	237961.0980	N 66°54'02" E
11-2	1102+40.00	2220+86.03	121.00' RT	615804.4000	238181.8560	N 66°54'02" E



SCHEMATIC PLAN
 STA. 2172+00.00 TO STA. 2222+00.00

PRIMARY PROJECT CONTROL INFORMATION				
POINT NUMBER	PROJECT COORDINATES		DESCRIPTION	
	INT. FEET	ORTHOMETRIC HEIGHT (ELEVATION)		
CNPT 111	614495.234	237532.561	962.81	CMON
CNPT 112	615735.543	235320.594	973.54	CMON

FEMA FLOOD ZONE AE & X
 ROCKY FORK CREEK
 FIRM: 39049C0203K 06/17/2008
 BASE FLOOD ELEVATION: ±957.40

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY 200 SUITE 100
 COLUMBUS, OH 43240
 (614) 814-4900
 www.aracadis.com

DESIGNER
JMK

REVIEWER
 JDH 03-27-24

PROJECT ID
 117607

SHEET TOTAL
 P.3 P.295

BASELINE GEOMETRY - NOISE WALL 9

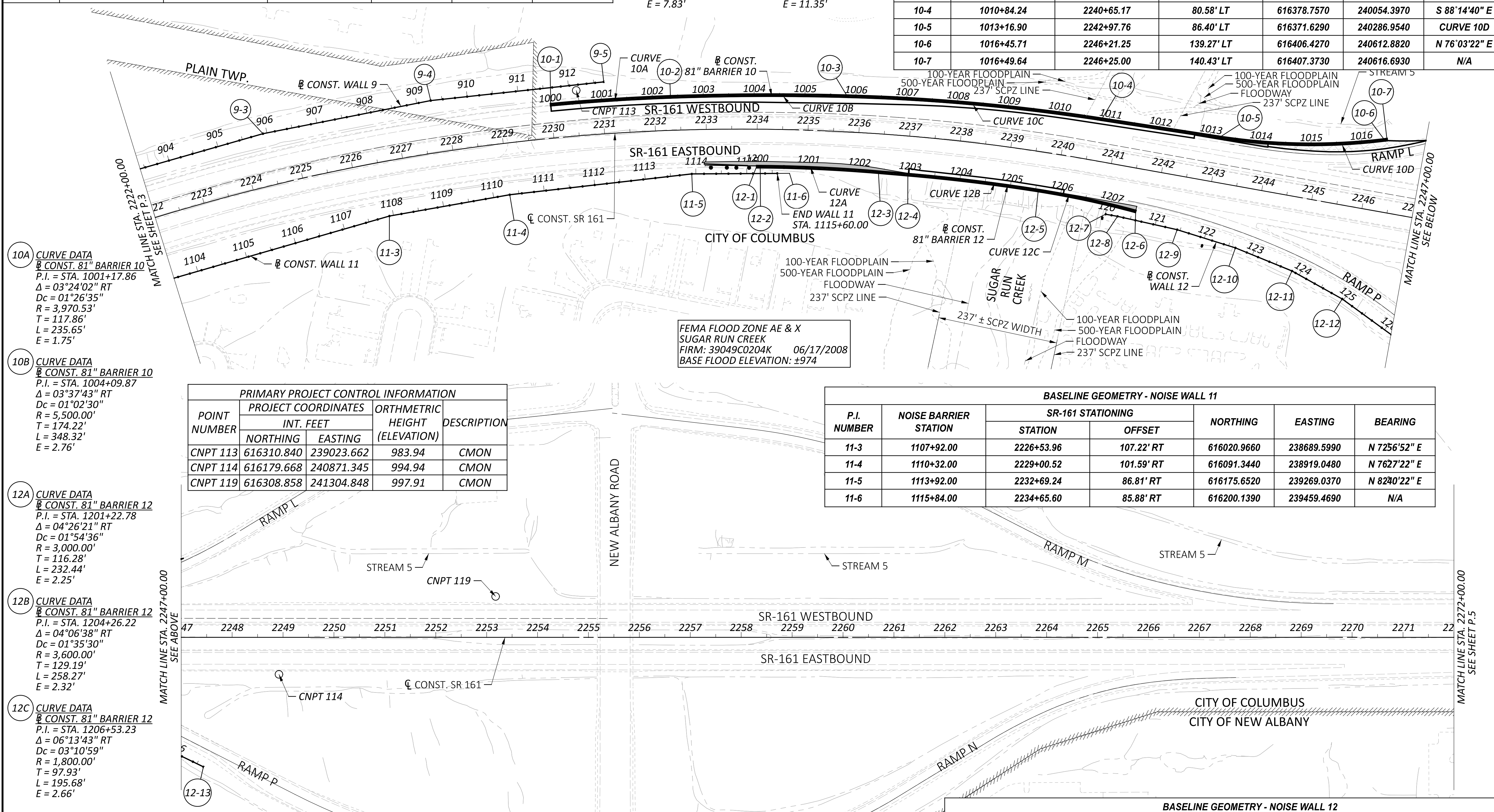
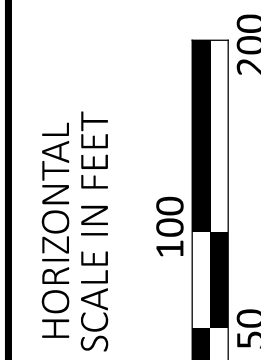
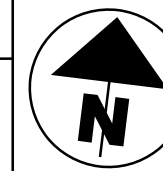
P.I. NUMBER	NOISE BARRIER STATION	SR-161 STATIONING		NORTHING	EASTING	BEARING
		STATION	OFFSET			
9-3	905+92.00	2224+44.48	103.00' LT	616151.2730	238423.1270	N 71°48'52" E
9-4	909+28.00	2227+71.94	103.00' LT	616256.1370	238742.3440	N 76°49'40" E
9-5	912+70.00	2231+05.30	102.00' LT	616334.0720	239075.3460	N/A

10C CURVE DATA
 CONST. 81" BARRIER 10
 P.I. = STA. 1008+34.43
 $\Delta = 07^{\circ}09'57''$ RT
 $Dc = 01^{\circ}25'57''$
 $R = 4,000.00'$
 $T = 250.46'$
 $L = 500.27'$
 $E = 7.83'$

10D CURVE DATA
 CONST. 81" BARRIER 10
 P.I. = STA. 1014+82.35
 $\Delta = 15^{\circ}41'58''$ LT
 $Dc = 04^{\circ}46'29''$
 $R = 1,200.00'$
 $T = 165.44'$
 $L = 328.81'$
 $E = 11.35'$

BASELINE GEOMETRY - 81" BARRIER 10

P.I. NUMBER	81" BARRIER STATION	SR-161 STATIONING		NORTHING	EASTING	BEARING
		STATION	OFFSET			
10-1	1000+00.00	2230+00.00	64.00' LT	616275.1150	238977.7230	CURVE 10A
10-2	1002+35.65	2232+31.85	64.00' LT	616319.0190	239209.2100	CURVE 10B
10-3	1005+83.97	2235+74.40	68.24' LT	616362.8150	239554.7080	CURVE 10C
10-4	1010+84.24	2240+65.17	80.58' LT	616378.7570	240054.3970	S 88°14'40" E
10-5	1013+16.90	2242+97.76	86.40' LT	616371.6290	240286.9540	CURVE 10D
10-6	1016+45.71	2246+21.25	139.27' LT	616406.4270	240612.8820	N 76°03'22" E
10-7	1016+49.64	2246+25.00	140.43' LT	616407.3730	240616.6930	N/A



10A CURVE DATA
 CONST. 81" BARRIER 10
 P.I. = STA. 1001+17.86
 $\Delta = 03^{\circ}24'02''$ RT
 $Dc = 01^{\circ}26'35''$
 $R = 3,970.53'$
 $T = 117.86'$
 $L = 235.65'$
 $E = 1.75'$

10B CURVE DATA
 CONST. 81" BARRIER 10
 P.I. = STA. 1004+09.87
 $\Delta = 03^{\circ}37'43''$ RT
 $Dc = 01^{\circ}02'30''$
 $R = 5,500.00'$
 $T = 174.22'$
 $L = 348.32'$
 $E = 2.76'$

12A CURVE DATA
 CONST. 81" BARRIER 12
 P.I. = STA. 1201+22.78
 $\Delta = 04^{\circ}26'21''$ RT
 $Dc = 01^{\circ}54'36''$
 $R = 3,000.00'$
 $T = 116.28'$
 $L = 232.44'$
 $E = 2.25'$

12B CURVE DATA
 CONST. 81" BARRIER 12
 P.I. = STA. 1204+26.22
 $\Delta = 04^{\circ}06'38''$ RT
 $Dc = 01^{\circ}35'30''$
 $R = 3,600.00'$
 $T = 129.19'$
 $L = 258.27'$
 $E = 2.32'$

12C CURVE DATA
 CONST. 81" BARRIER 12
 P.I. = STA. 1206+53.23
 $\Delta = 06^{\circ}13'43''$ RT
 $Dc = 03^{\circ}10'59''$
 $R = 1,800.00'$
 $T = 97.93'$
 $L = 195.68'$
 $E = 2.66'$

FEMA FLOOD ZONE AE & X
 SUGAR RUN CREEK
 FIRM: 39049C0204K 06/17/2008
 BASE FLOOD ELEVATION: ±974

PRIMARY PROJECT CONTROL INFORMATION				
POINT NUMBER	PROJECT COORDINATES		ORTHOMETRIC HEIGHT (ELEVATION)	DESCRIPTION
	NORTHING	EASTING		
CNPT 113	616310.840	239023.662	983.94	CMON
CNPT 114	616179.668	240871.345	994.94	CMON
CNPT 119	616308.858	241304.848	997.91	CMON

BASELINE GEOMETRY - NOISE WALL 11						
P.I. NUMBER	NOISE BARRIER STATION	SR-161 STATIONING		NORTHING	EASTING	BEARING
		STATION	OFFSET			
11-3	1107+92.00	2226+53.96	107.22' RT	616020.9660	238689.5990	N 72°56'52" E
11-4	1110+32.00	2229+00.52	101.59' RT	616091.3440	238919.0480	N 76°27'22" E
11-5	1113+92.00	2232+69.24	86.81' RT	616175.6520	239269.0370	N 82°0'22" E
11-6	1115+84.00	2234+65.60	85.88' RT	616200.1390	239459.4690	N/A

BASELINE GEOMETRY - 81" BARRIER 12						
P.I. NUMBER	81" BARRIER STATION	SR-161 STATIONING		NORTHING	EASTING	BEARING
		STATION	OFFSET			
12-1	1200+00.00	2234+00.00	72.00' RT	616207.1220	239394.0850	N 83°25'39" E
12-2	1200+06.51	2234+06.63	71.99' RT	616207.8670	239400.5490	CURVE 12A
12-3	1202+38.95	2236+43.45	73.56' RT	616225.5050	239632.2600	N 87°52'00" E
12-4	1202+97.02	2237+02.65	74.00' RT	616227.6670	239690.2970	CURVE 12B
12-5	1205+55.30	2239+65.92	74.56' RT	616228.0190	239948.5140	CURVE 12C
12-6	1207+50.97	2241+63.30	82.30' RT	616210.6620	240143.3220	N/A

BASELINE GEOMETRY - NOISE WALL 12						
P.I. NUMBER	NOISE BARRIER STATION	SR-161 STATIONING		NORTHING	EASTING	BEARING
		STATION	OFFSET			
12-7	120+00.00	2241+06.19	100.00' RT	616196.1680	240085.3170	S 86°49'03" E
12-8	120+24.00	2241+30.19	100.00' RT	616194.8350	240109.2800	S 84°25'26" E
12-9	121+44.00	2242+50.09	105.00' RT	616183.1750	240228.7120	S 79°37'52" E
12-10	122+64.00	2243+69.15	120.00' RT	616161.5770	240246.7530	S 74°47'14" E
12-11	123+84.00	2244+86.51	145.00' RT	616130.0880	240462.5480	S 67°50'46" E
12-12	124+97.00	2245+93.38	181.72' RT	616087.4760	240567.2050	S 60°56'13" E
12-13	126+64.00	2247+43.64	254.60' RT	616006.3520	240713.1780	N/A



SCHEMATIC PLAN
 STA. 2222+00.00 TO STA. 2272+00.00

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY 100 SUITE 100
 COLUMBUS, OH 43240
 TEL: (614) 810-4900
 www.arcadis.com

DESIGNER
JMK

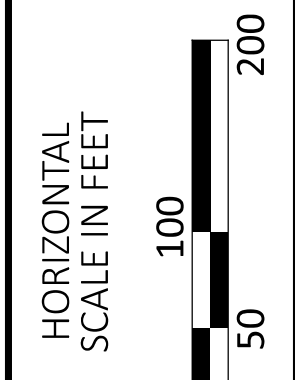
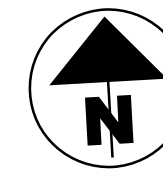
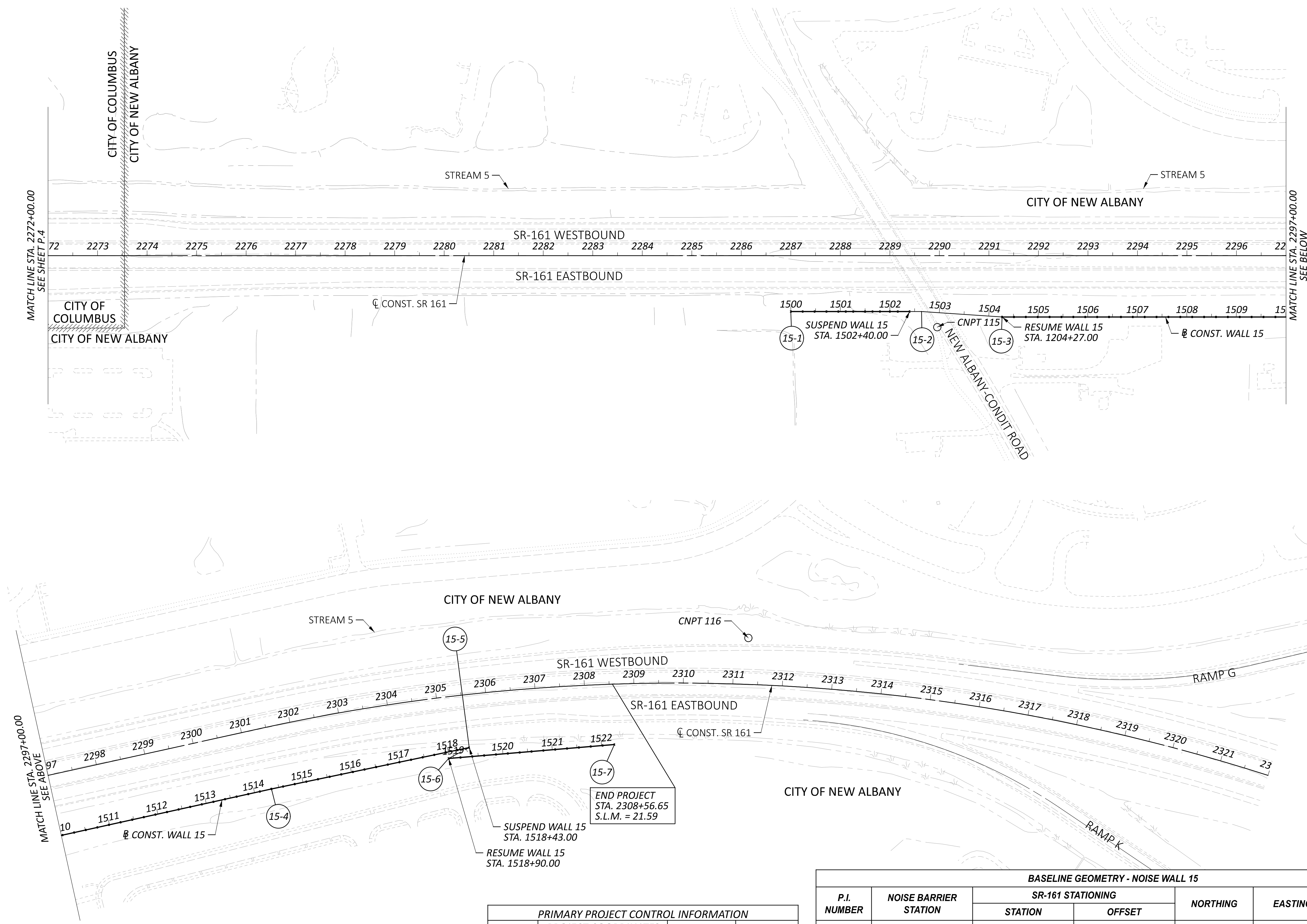
REVIEWER
 JDH 03-27-24

PROJECT ID
 117607

SHEET TOTAL
 P.4 P.295

FRA-161-15.80 NOISE WALLS

MODEL: CLP_SR161 - Plan 7 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-27 TIME: 3:06:56 PM USER: jennifer.kelley
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PRIMARY PROJECT CONTROL INFORMATION				
POINT NUMBER	PROJECT COORDINATES		ORTHOMETRIC HEIGHT (ELEVATION)	DESCRIPTION
	NORTHING	EASTING		
CNPT 115	615879.718	244964.871	1045.73	CMON
CNPT 116	615870.875	247112.825	1043.63	CMON

BASELINE GEOMETRY - NOISE WALL 15						
P.I. NUMBER	NOISE BARRIER STATION	SR-161 STATIONING		NORTHING	EASTING	BEARING
		STATION	OFFSET			
15-1	1500+00.00	2287+00.00	113.00' RT	615927.7020	244671.2920	S 86°48'42" E
15-2	1502+64.00	2289+64.00	113.00' RT	615913.0190	244934.8830	S 82°56'32" E
15-3	1504+27.00	2291+26.63	124.00' RT	615892.9920	245096.6480	S 86°48'42" E
15-4	1514+35.00	2301+34.63	124.00' RT	615836.9310	246103.0880	S 86°10'26" E
15-5	1518+43.00	2305+54.77	107.00' RT	615809.7050	246510.1780	S 77°45'25" W
15-6	1518+90.00	2305+09.61	124.00' RT	615799.7390	246464.2470	S 79°09'57" E
15-7	1522+26.00	2308+56.65	122.00' RT	615736.5810	246794.2580	N/A

SCHEMATIC PLAN
 STA. 2272+00.00 TO STA. 2322+00.00

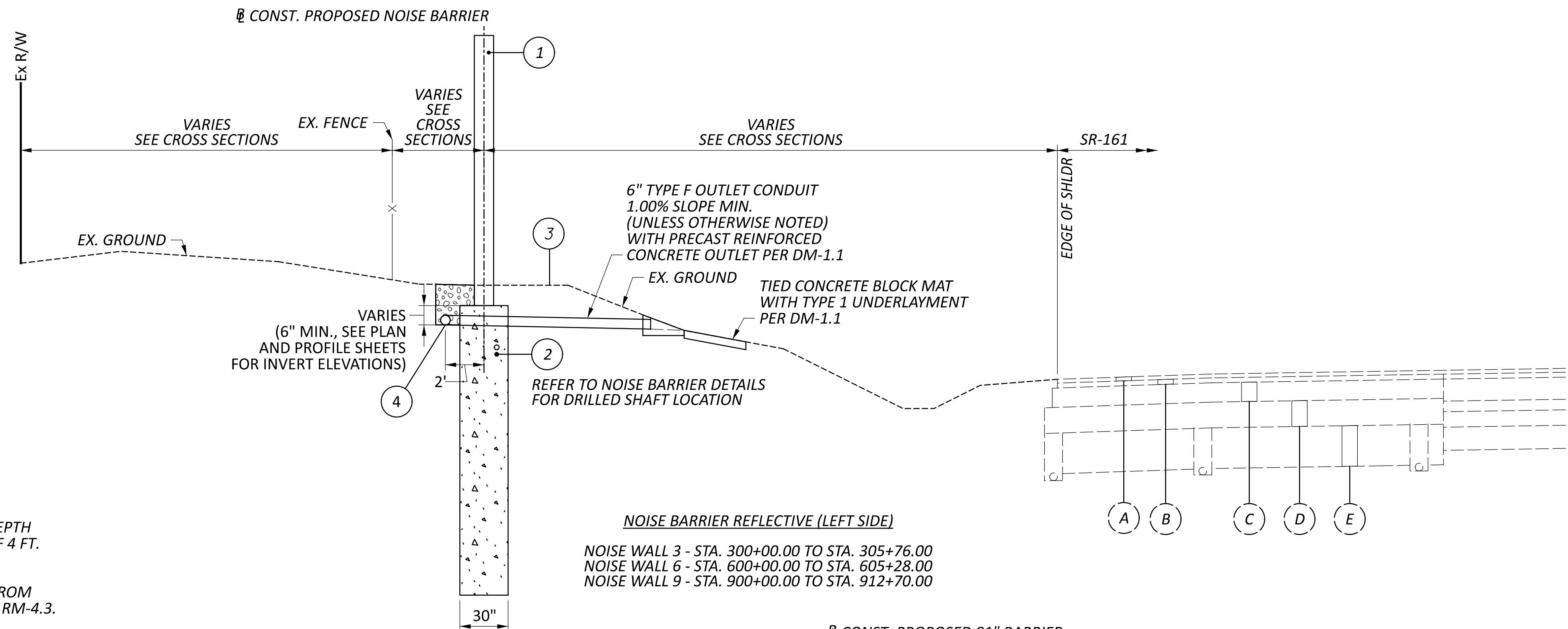
DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY 30, SUITE 100
 COLUMBUS, OH 43240
 614.848.4900
 www.arcadis.com

DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

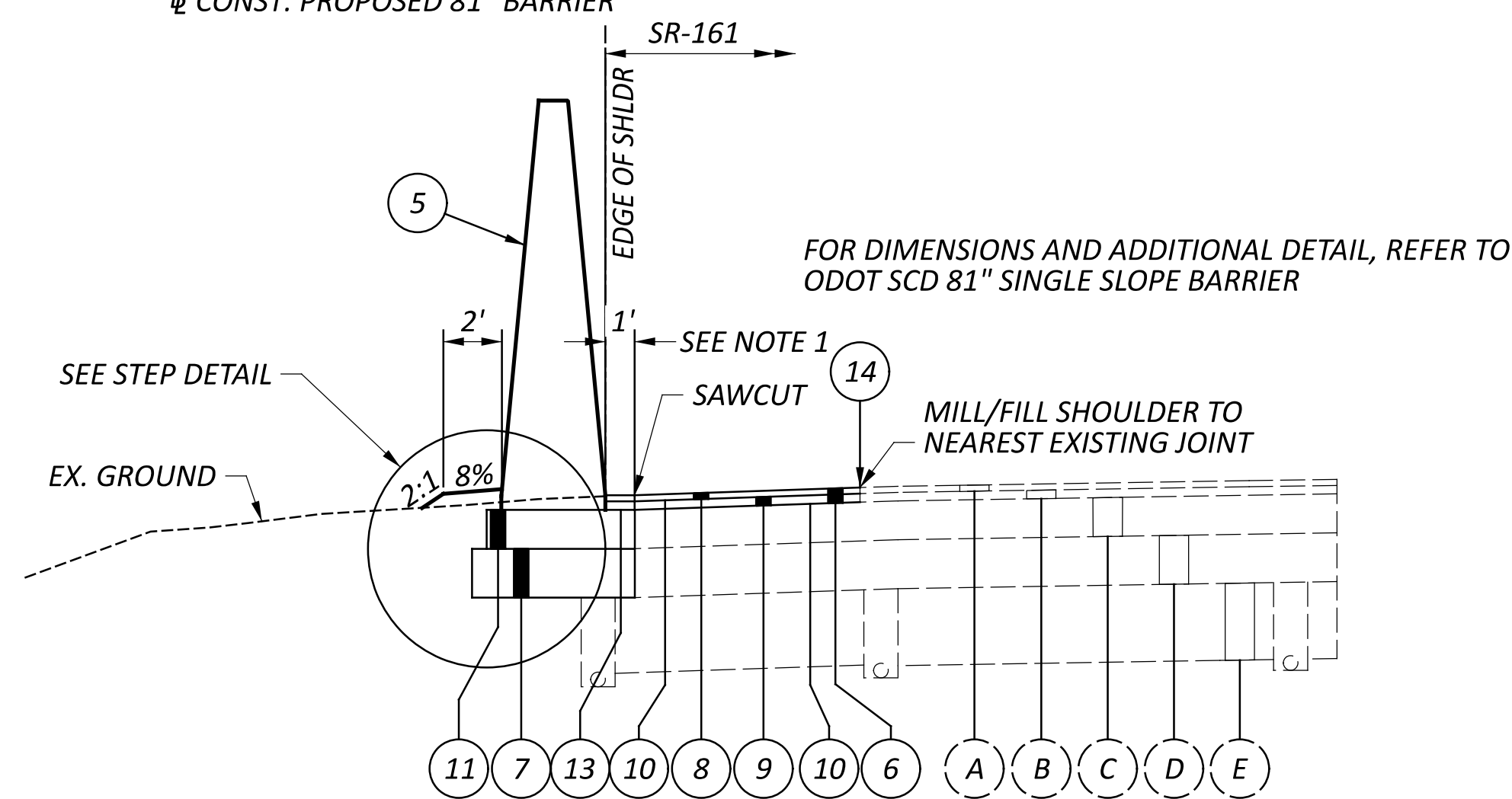
SHEET TOTAL
 P.5 P.295



NOISE BARRIER REFLECTIVE (LEFT SIDE)

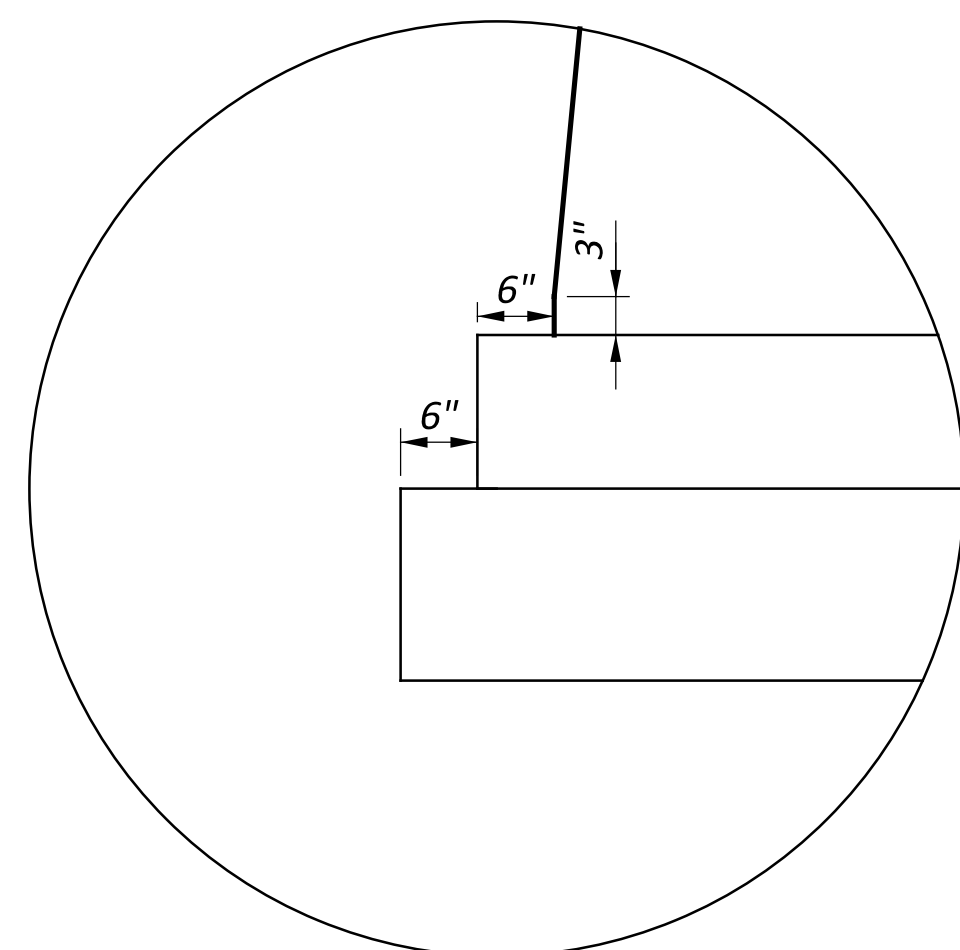
NOISE WALL 3 - STA. 300+00.00 TO STA. 305+76.00
 NOISE WALL 6 - STA. 600+00.00 TO STA. 605+28.00
 NOISE WALL 9 - STA. 900+00.00 TO STA. 912+70.00

CONST. PROPOSED 81" BARRIER



BARRIER, MISC.: 81" SINGLE SLOPE BARRIER (LEFT SIDE)

81" BARRIER 3 - STA. 3000+00.00 TO STA. 3006+99.96



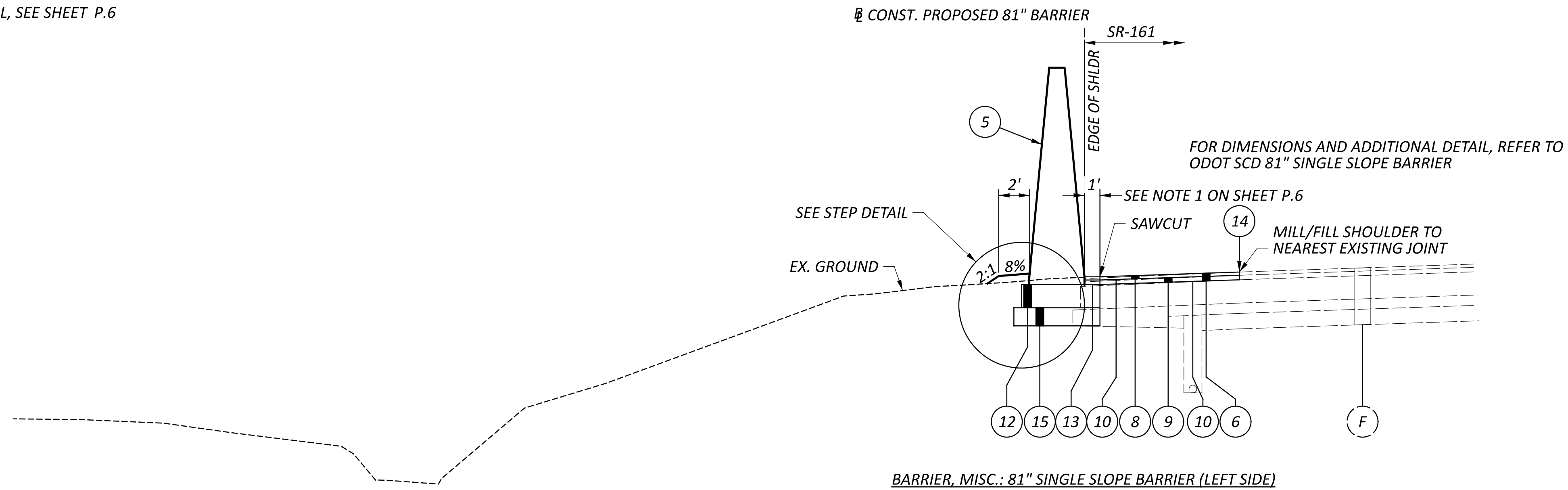
STEP DETAIL

81" BARRIERS 8, 10, 12

LEGEND

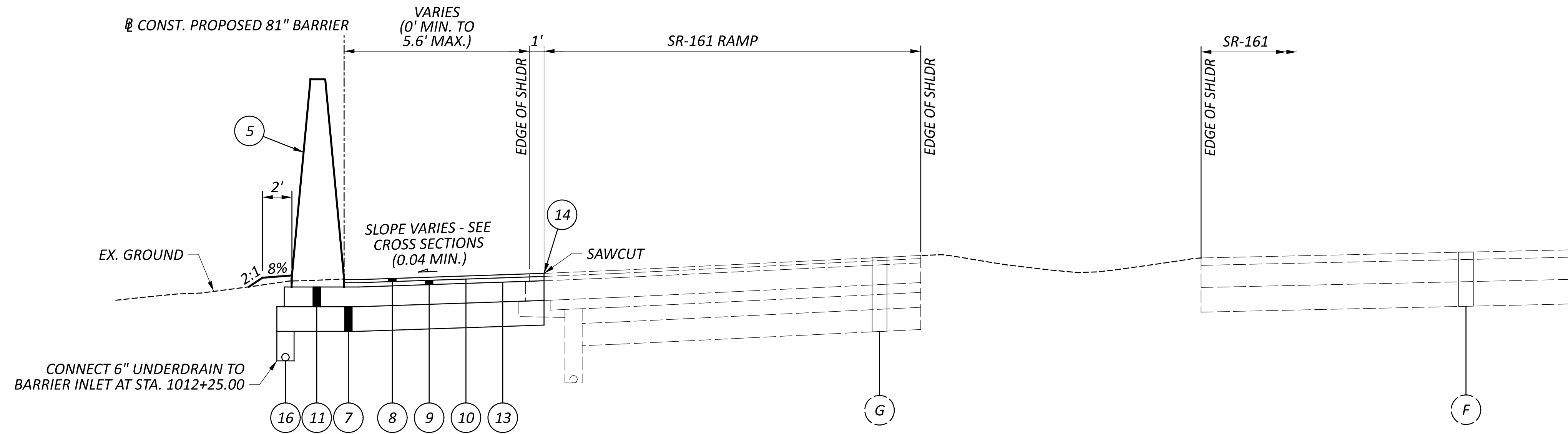
- | | | | | |
|--|---|--|---|--|
| 1 ITEM 606 - SPECIAL - NOISE BARRIER (REFLECTIVE) | 6 ITEM 254 - 3" PAVEMENT PLANING, ASPHALT CONCRETE | 11 ITEM 452 - 8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P | 16 ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS | (D) 10"± EX. AGGREGATE BASE |
| 2 ITEM 524 - DRILLED SHAFTS (TO BE PAID WITH ITEM 606 - SPECIAL - NOISE BARRIER) | 7 ITEM 304 - 10" AGGREGATE BASE | 12 ITEM 452 - 9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P | 17 ITEM 606 - GUARDRAIL, TYPE MGS | (E) EX. SUBBASE (DEPTH VARIES) |
| 3 ITEM 659 - SEEDING AND MULCHING | 8 ITEM 442 - 1.5" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN, PG70-22M | 13 ITEM 407 - TACK COAT (RATE AS PER C&MS TABLE 407.06-1) | (A) 1.5"± EX. ASPHALT CONCRETE SURFACE COURSE | (F) 3" ASPHALT ON 9" CONCRETE BASE ON 10" STONE BASE |
| 4 ITEM 605 - 6" UNCLASSIFIED UNDERDRAIN AND GRANULAR MATERIAL PER CMS 605.02 (GRANULAR MATERIAL INCLUDED WITH NOISE BARRIER FOR PAYMENT) | 9 ITEM 442 - 1.5" ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5 MM, TYPE A (446) | 14 ITEM 872 - VOID REDUCING ASPHALT MEMBRANE (AT ALLOWABLE COLD JOINT) | (B) 1.75"± EX. ASPHALT CONCRETE INTERMEDIATE COURSE | (G) 3" ASPHALT ON 8" CONCRETE BASE ON 10" AGGREGATE BASE WITH 9" LIME SOIL STABILIZED SUBGRADE |
| 5 ITEM 622 - BARRIER, MISC.: 81" SINGLE SLOPE BARRIER | 10 ITEM 407 - NON-TRACKING TACK COAT (RATE AS PER C&MS TABLE 407.06-1) | 15 ITEM 304 - 7" AGGREGATE BASE | (C) 7.5"± EX. ASPHALT CONCRETE BASE | |

FOR LEGEND AND STEP DETAIL, SEE SHEET P.6



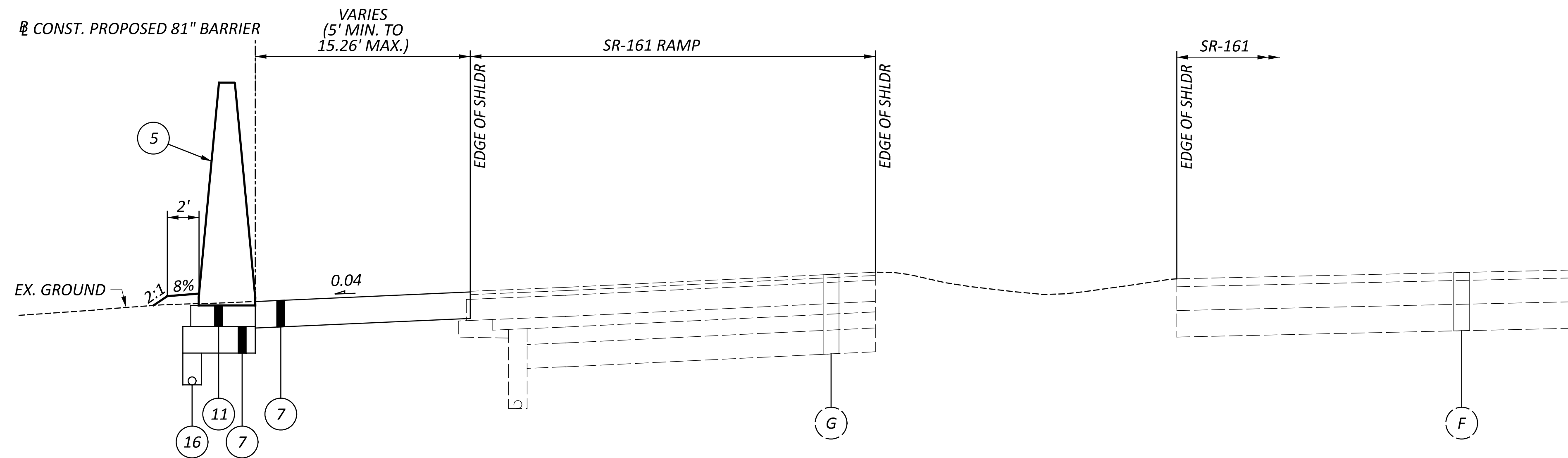
BARRIER, MISC.: 81" SINGLE SLOPE BARRIER (LEFT SIDE)

81" BARRIER 6 - STA. 5999+90.38 TO STA. 6008+25.00
81" BARRIER 10 - STA. 1000+00.00 TO STA. 1012+70.07



BARRIER, MISC.: 81" SINGLE SLOPE BARRIER (LEFT SIDE SHIFTED FROM EXISTING PAVEMENT EDGE)

81" BARRIER 10 - STA. 1012+70.07 TO STA. 1014+15.44



BARRIER, MISC.: 81" SINGLE SLOPE BARRIER (LEFT SIDE SHIFTED FROM EXISTING PAVEMENT EDGE)

81" BARRIER 10 - STA. 1014+15.44 TO STA. 1016+49.64

FRA-161-15.80 NOISE WALLS

MODEL: GY002 PAPER SIZE: 34x22 (in.) DATE: 2024-03-27 TIME: 2:46:31 PM USER: jennifer.kelley
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TYPICAL SECTIONS

DESIGN AGENCY

ARCADIS
8101 NORTH HIGGINS SUITE 100
COLUMBIA, MO 65203
616.448.4900
www.arcadis.com

DESIGNER

NRS

REVIEWER

JDH 03-27-24

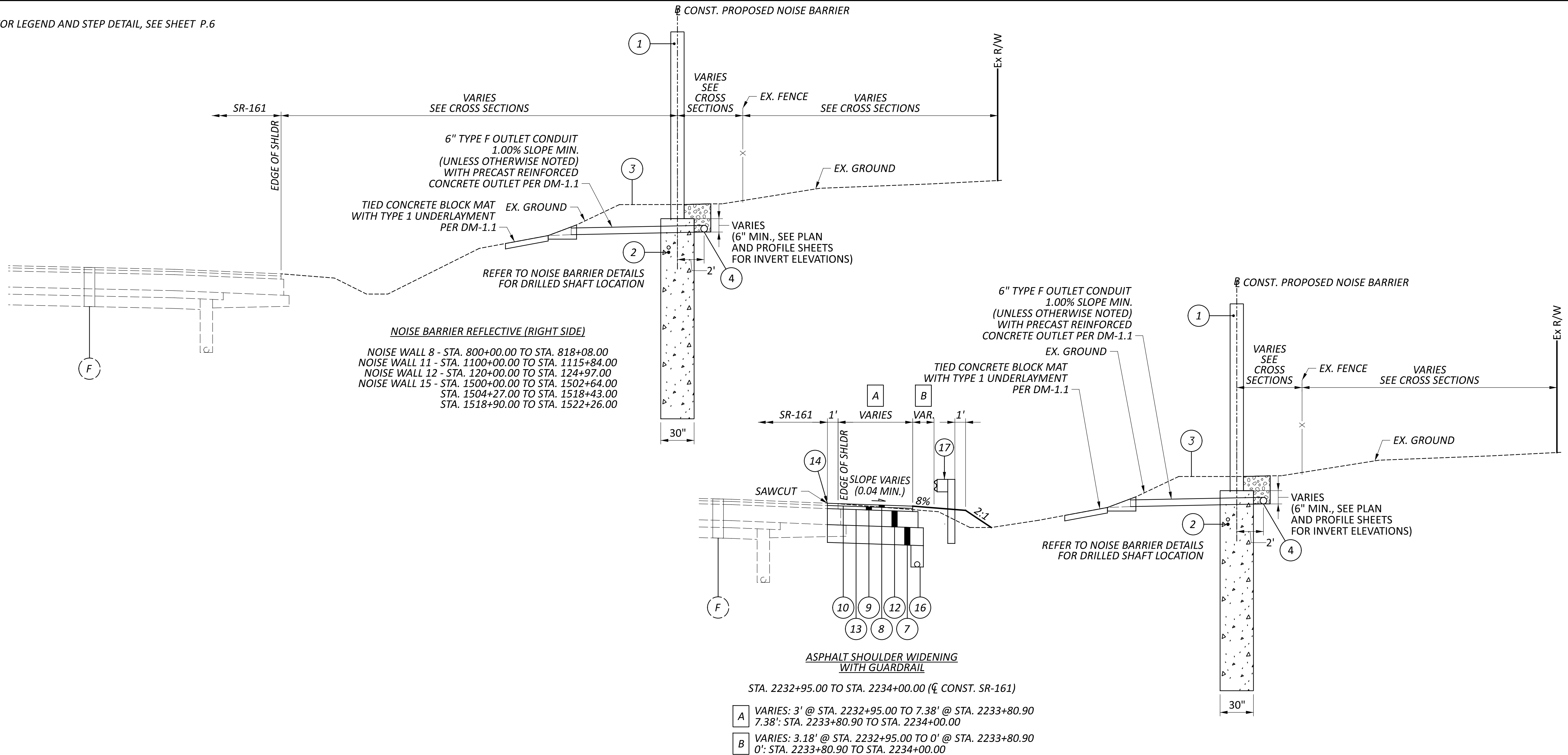
PROJECT ID

117607

SHEET TOTAL

P.7 P.295

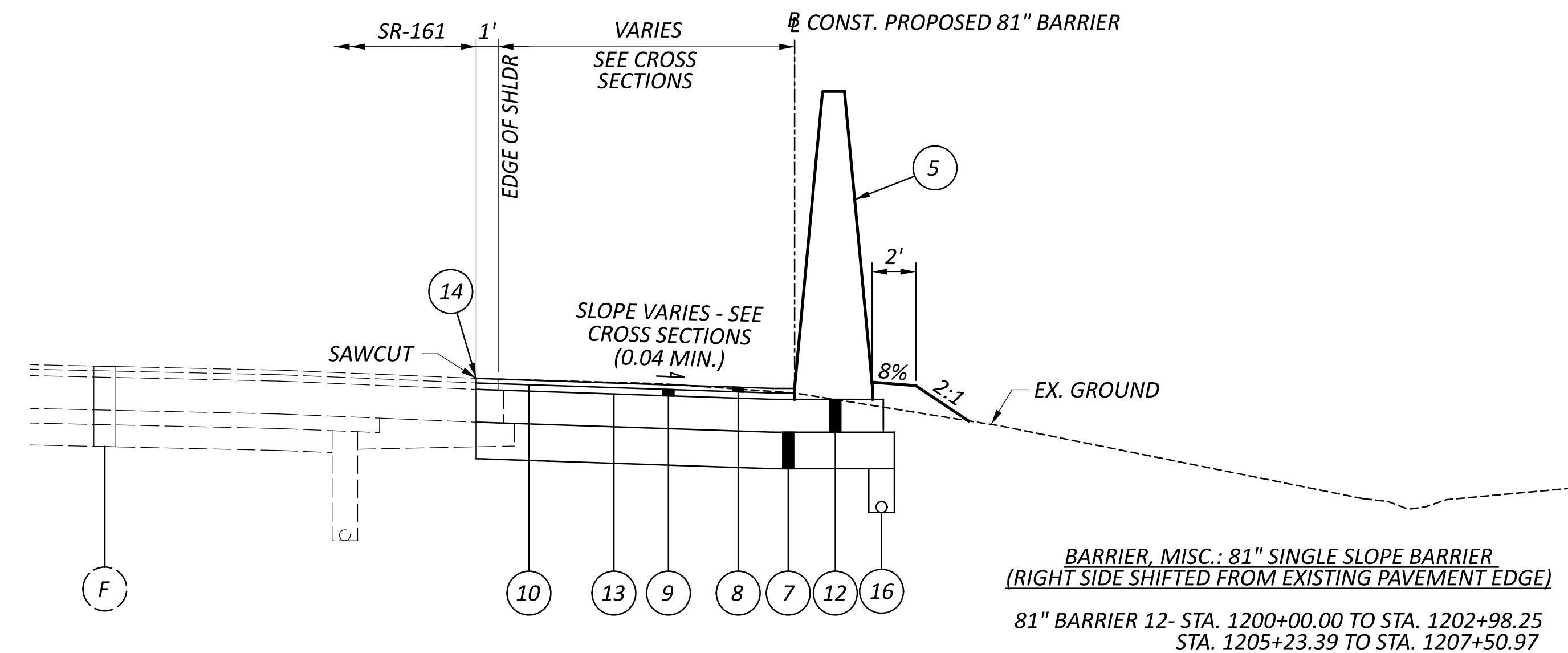
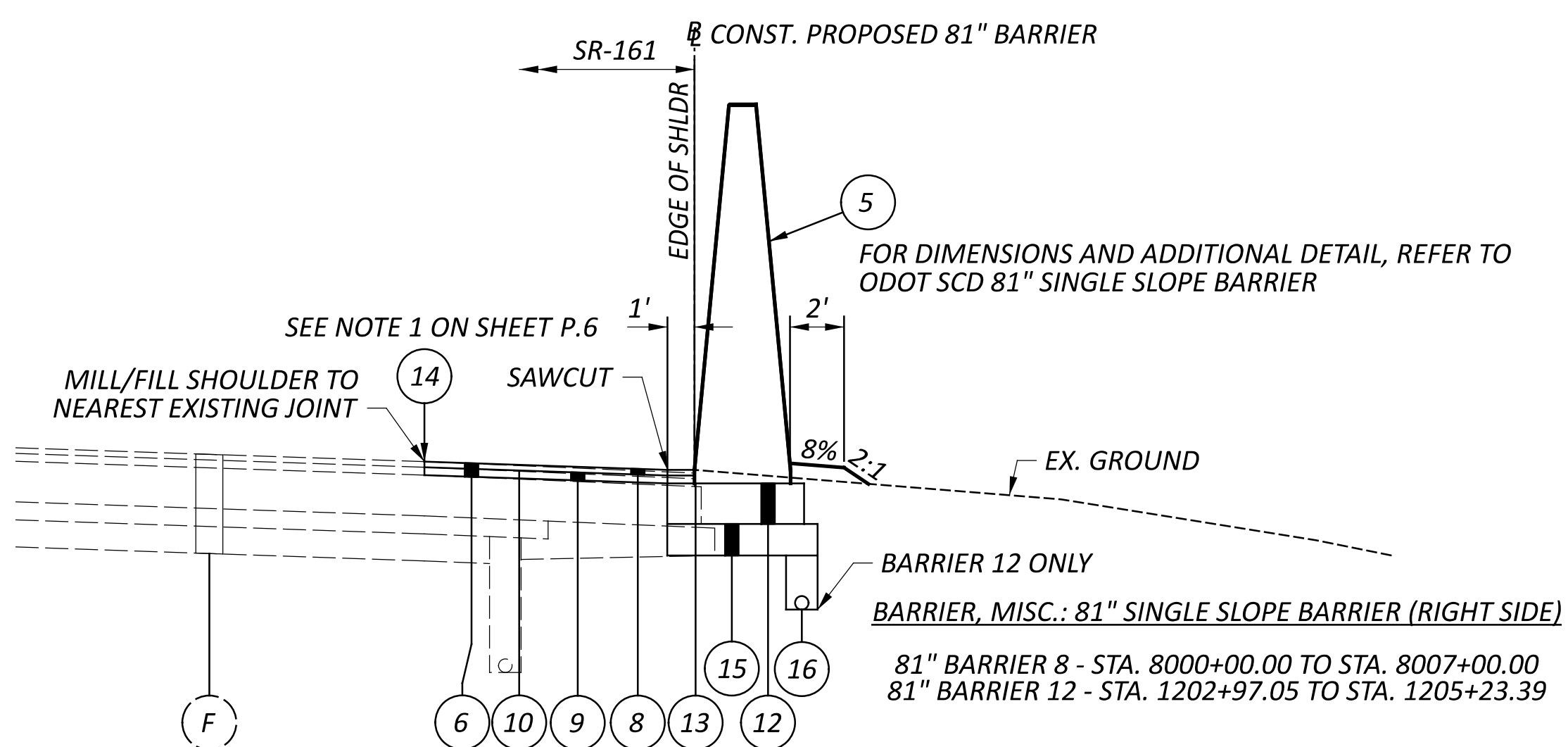
FOR LEGEND AND STEP DETAIL, SEE SHEET P.6



TYPICAL SECTIONS

FRA-161-15.80 NOISE WALLS

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DESIGN AGENCY

ARCADIS
8101 NORTH HIGGINS SUITE 100
COLUMBIANA, OHIO 43082
614.849.4900
www.arcadis.com

DESIGNER

NRS

REVIEWER

JDH 03-27-24

PROJECT ID

117607

SHEET TOTAL

P.8 P.295

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

GAS
COLUMBIA GAS OF OHIO
3550 JOHNNY APPESEED COURT
COLUMBUS, OH 43231
ATTN: ROB CALDWELL
OFFICE: 614-818-2104
CELL: 614-370-1906
CUSTOMER SERVICE: 1-800-344-4077
DAMAGE PREVENTION: 1-866-632-6243
COLUMBIAGAS_COLUMBUSENG@NISOURCE.COM
RCALDWELL@NISOURCE.COM

COLUMBIA GAS OF OHIO
TRANSMISSION
1600 EASTGATE PKWY
GAHANNA, OH 43230
ATTN: ROBERT REED
PHONE: 740-279-0870
ROBERT1_REED@TCENERGY.COM

TELEPHONE/CABLE/FIBER
AMERICAN ELECTRIC POWER (TELECOM)
777 HOPEWELL DRIVE
HEATH, OHIO 43056
ATTN: UNA BLANUSA
AEP SOLUTION CENTER: 800-277-2177
OHHFIBERRELOCATE@AEP.COM

AT&T - OHIO
111 N. 4TH STREET
COLUMBUS, OH 43215
ATTN: DONALD G. MARSHALL, JR.
CELL: 614-216-2396
AT&T REPAIR SERVICE: 888-611-4466
DAMAGE PREVENTION: 937-296-3929
G01553@ATT.COM

AT&T (TRANSMISSION)
METROPOLITAN COMM. GROUP OHIO (MCG)
155 COMMERCE PARK DRIVE, SUITE 1
WESTERVILLE, OH 43082
ATTN: JAMES SCHNEIDER (PROJECT MANAGER)
CELL: 440-525-4322
JAMES.SCHNEIDER@MCGFIBER.COM
ATTN: WILLIAM TAGGART (FIELD ENGINEER)
CELL: 614-370-5414

CHARTER COMMUNICATIONS / SPECTRUM
3760 INTERCHANGE ROAD
COLUMBUS, OH 43204
DL-MOH-CONSTRUCTION-FRELO-TEAM@CHARTER.COM

COLUMBUS FIBERNET
1600 WALCUTT ROAD
COLUMBUS, OH 43228
PHONE: 614-921-8524
ATTN: MATT BLACKSTONE
MABLACKSTONE@COLUMBUSFIBER.NET
CFNINFO@COLUMBUSFIBER.NET

LUMEN
250 W. OLD WILSON BRIDGE, SUITE 130
WORTHINGTON, OH 43085
ATTN: HALEY WOOD
RELOCATIONS@LUMEN.COM
RELOCATIONS@BRIGHTSPEED.COM
HALEY.WOOD@LUMEN.COM

CROWN CASTLE FIBER
2 EASTON OVAL, SUITE 425
COLUMBUS, OH 43219
ATTN: JON TARNOWSKI
OFFICE: 585-445-5813
CELL: 614-940-2462
JON.TARNOWSKI@CROWNCastle.COM

VERIZON BUSINESS (AKA MCI/XO)
757 COMMERCE CT.
LEWIS CENTER, OH 43035
CELL: 614-593-6685 (MAURICE JONES)
CELL: 614-816-0361 (BOB DILLOW)
VZ.NET.COLUMBUS@VERIZON.COM
BRIAN.ANSEL@VERIZON.COM
TERRY.SHUMATE@VERIZONWIRELESS.COM
JOHN.CORNELL@VERIZONWIRELESS.COM
MICHAEL.HENNON@VERIZONWIRELESS.COM
MICHAEL.BONDY@VERIZONWIRELESS.COM
SVEN.CHRISTIANSON@VERIZONWIRELESS.COM

WATER
CITY OF COLUMBUS DIVISION OF WATER
910 DUBLIN RD.
COLUMBUS, OH 43215
PHONE: 614-645-7788

WATER (CONT.)
AQUA OHIO - WATER
5481 BUENOS AIRES BLVD.
WESTERVILLE, OH 43081
ATTN: JAKE LOGAN
PHONE: 614-882-6586 X50559
JELOGAN@AQUAAMERICA.COM

CITY OF NEW ALBANY
PUBLIC SERVICE
7800 BEVELHYMER ROAD
NEW ALBANY, OH 43054
PHONE: 614-855-0076
PUBLICSERVICE@NEWALBANYOHIO.ORG

ELECTRIC
AMERICAN ELECTRIC POWER (DISTRIBUTION)
777 HOPEWELL DRIVE
HEATH, OHIO 43056
ATTN: PAUL PAXTON
PHONE: 740-348-5322
AEP SOLUTION CENTER: 800-277-2177
PTPAXTON@AEP.COM

AMERICAN ELECTRIC POWER (TRANSMISSION)
8600 SMITHS MILL ROAD
NEW ALBANY, OH 43054
ATTN: MICHAEL CARR
PHONE: 380-205-5072
TL_PUBLICPROJECTS@AEP.COM

CITY OF COLUMBUS
DIVISION OF POWER
3500 INDIANOLA AVE.
COLUMBUS, OH 43214
ATTN: CHARLES HORNER
PHONE: 614-645-7569
DISPATCH CENTER: 614-645-7627
CRHORNER@COLUMBUS.GOV

SANITARY & STORMWATER:
CITY OF COLUMBUS DPU
DIVISION OF SEWERAGE & DRAINAGE
1250 FAIRWOOD AVENUE
COLUMBUS, OH 43206
PHONE: 614-645-7102

AQUA OHIO - SEWER
5481 BUENOS AIRES BLVD.
WESTERVILLE, OH 43081
ATTN: JAKE LOGAN
PHONE: 614-882-6586 X50559
JELOGAN@AQUAAMERICA.COM

CITY OF NEW ALBANY
PUBLIC SERVICE
7800 BEVELHYMER ROAD
NEW ALBANY, OH 43054
PHONE: 614-855-0076
PUBLICSERVICE@NEWALBANYOHIO.ORG

ITS/CTSS/TRAFFIC
ODOT CENTRAL OFFICE ITS
929 EASTWIND DRIVE
SUITE 201
WESTERVILLE, OH 43081
ATTN: EVAN KRAUS
PHONE: 614-948-0537
EVAN.KRAUS@SAM.BIZ

CITY OF COLUMBUS
TRAFFIC SIGNALS
1820 E. 17TH AVENUE
COLUMBUS, OH 43219
ATTN: BRAD HEGWOOD
PHONE: 614-560-0839
BDHEGWOOD@COLUMBUS.GOV

ODOT DISTRICT 6 TRAFFIC
400 E. WILLIAM STREET
DELAWARE, OH 43015
PHONE: 740-833-8000
ATTN: TROY BRYANT

CITY OF NEW ALBANY
PUBLIC SERVICE
7800 BEVELHYMER ROAD
NEW ALBANY, OH 43054
PHONE: 614-855-0076
PUBLICSERVICE@NEWALBANYOHIO.ORG

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET P.2 - P.5 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL

POSITIONING METHOD: ODOT VRS
MONUMENT TYPE: CLASS A

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD88
GEOID: GEOID 18

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83 (2011)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: FRANKLIN COUNTY LDP
COMBINED FACTOR SCALE: 1.00000000
ORIGIN OF COORDINATE SYSTEM: 0,0

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

UNITS ARE IN INTERNATIONAL FT (ft).

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 7:00 PM AND 7:00 AM. IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

ITEM 524 - DRILLED SHAFTS

FOLLOW STANDARD DRAWING NBS-1-09 AND THE DETAILS OF THESE PLANS.

PAYMENT FOR THIS ITEM SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE FOOT FOR ITEM 606 - SPECIAL - NOISE BARRIER (REFLECTIVE) UNLESS OTHERWISE NOTED, AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 606 - SPECIAL - NOISE BARRIER (REFLECTIVE)

THIS ITEM WILL BE USED TO INSTALL REFLECTIVE FIBERGLASS NOISE PANELS. SEE SHEET P.217 FOR COLOR, TEXTURE, AND LOCATION OF INSTALLATION.

NOISE WALL CONSTRUCTION SHALL ADHERE TO NBS-1-09.

SEEDING AND MULCHING IS REQUIRED. FOR AREAS ADJACENT TO A RESIDENTIAL PROPERTY, USE CMS 659 LAWN MIXTURE.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE FOOT FOR ITEM 606 - SPECIAL - NOISE BARRIER (REFLECTIVE) UNLESS OTHERWISE NOTED, AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM SPECIAL - SURVEY CONTROL VERIFICATION

THE CONTRACTOR SHALL PERFORM THIS WORK TO VERIFY THE PROVIDED SURVEY CONTROL. THE CONTRACTOR WILL PERFORM THE VERIFICATION USING ONE OF THE TWO METHODS BELOW DEPENDENT UPON THE CONTRACTOR'S CHOSEN MEANS OF SURVEY CONTROL TO BE USED ON THE PROJECT. THE WORK SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF AN OHIO LICENSED SURVEYOR.

1) IF USING GPS DEVICES TO ESTABLISH AND OR PROVIDE SUPPLEMENTAL HORIZONTAL AND VERTICAL SURVEY CONTROL:

- A. LOCATE VERTICAL CONTROL POINTS PROVIDED IN THE PLANS AND PERFORM A DIFFERENTIAL LEVEL CIRCUIT.
- B. PERFORM A SITE CALIBRATION UTILIZING THE AVAILABLE HORIZONTAL AND VERTICAL CONTROL POINTS PROVIDED IN THE PLAN.
- C. PROVIDE A REPORT, SIGNED BY AN OHIO LICENSED SURVEYOR, TO THE PROJECT ENGINEER COMPARING THE OBSERVED DATA TO THE PLAN DATA ALONG WITH A NARRATIVE DETAILING ANY DISCREPANCIES FOUND.

2) IF USING CONVENTIONAL SURVEY INSTRUMENTATION TO ESTABLISH AND OR PROVIDE SUPPLEMENTAL HORIZONTAL AND VERTICAL SURVEY CONTROL:

- A. LOCATE VERTICAL CONTROL POINTS PROVIDED IN THE PLANS AND PERFORM A DIFFERENTIAL LEVEL CIRCUIT.
- B. LOCATE AND OBSERVE ANGLE AND DISTANCE TO ALL AVAILABLE HORIZONTAL CONTROL POINTS PROVIDED IN THE PLAN.
- C. PROVIDE A REPORT, SIGNED BY AN OHIO LICENSED SURVEYOR, TO THE PROJECT ENGINEER COMPARING THE OBSERVED DATA TO THE PLAN DATA ALONG WITH A NARRATIVE DETAILING ANY DISCREPANCIES FOUND.

ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID ITEM.

A LUMP SUM QUANTITY FOR ITEM SPECIAL - SURVEY CONTROL VERIFICATION HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THE WORK DESCRIBED ABOVE.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, NOTIFY THE ENGINEER BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, NOTIFY THE ENGINEER BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE IS INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

REVIEW OF DRAINAGE FACILITIES

PRIOR TO THE START OF WORK AND AGAIN BEFORE FINAL ACCEPTANCE, PERFORM AN INSPECTION WITH REPRESENTATIVES OF THE DEPARTMENT, CONTRACTOR AND LOCALS OF ALL EXISTING DRAINAGE FACILITIES THAT ARE TO REMAIN IN SERVICE WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES IS DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION ARE MAINTAINED BY THE DEPARTMENT.

CONFIRM ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE-MENTIONED PARTIES ARE MAINTAINED AND LEFT IN A CONDITION COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. THE CONTRACTOR IS RESPONSIBLE TO CORRECT ANY CHANGE IN THE CONDITION RESULTING FROM THEIR OPERATIONS AS DIRECTED AND APPROVED BY THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE IS INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

BENCHING OF FOUNDATION SLOPES

ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATIONS IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. BENCH ALL OTHER SLOPED EMBANKMENT AREAS AS SET FORTH IN SECTION 203.05 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS). NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER THE PROVISIONS OF SECTION 203.05.

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, SOIL ANALYSIS TEST	1 EACH
659, TOPSOIL	887 CU. YD.
659, SEEDING AND MULCHING	7985 SQ. YD.
659, REPAIR SEEDING AND MULCHING	400 SQ. YD.
659, INTER-SEEDING	400 SQ. YD.
659, COMMERCIAL FERTILIZER	1.08 TON
659, LIME	1.65 ACRES
659, WATER	45 M. GAL.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS AND HAVE BEEN DETERMINED USING CAD GENERATED AREAS. FOR AREAS ADJACENT TO A RESIDENTIAL PROPERTY, USE CMS 659 LAWN MIXTURE.

CLEARING AND GRUBBING, AS PER PLAN

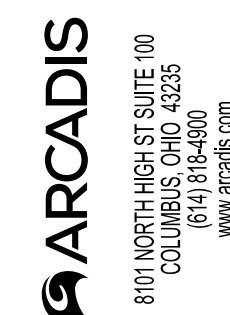
THIS LUMP SUM ITEM SHALL BE USED TO CLEAR BRUSH AND THE NEAT TRIMMING AND/OR REMOVAL OF TREES IN CONFLICT WITH THE PROPOSED NOISE WALL LOCATIONS. TREES SCHEDULED TO BE TRIMMED OR REMOVED SHALL BE MARKED AND APPROVED BY THE PROJECT ENGINEER PRIOR TO THE WORK BEING PERFORMED.

ON THE FREEWAY SIDE OF THE NOISE WALL, THE CONTRACTOR SHALL PERFORM CLEARING AND GRUBBING IN THE AREA BETWEEN THE FACE OF THE NOISE WALL AND THE EDGE OF SHOULDER OF SR-161. THIS WORK AREA SHALL BE USED BY THE CONTRACTOR'S EQUIPMENT TO PERFORM WORK NECESSARY TO INSTALL THE NOISE WALL.

FOR CLARIFICATION, TREES SHALL BE INTERPRETED AS ANY GROWTH WITH A TRUNK DIAMETER OF AT LEAST THREE (3) INCHES.

IN THE AREA BETWEEN THE BACK OF THE NOISE WALL AND EXISTING FENCE, WHERE THE FENCE IS TO BE REMOVED, AND THE ADJOINING PROPERTY IS RESIDENTIAL, THE AREA SHALL BE RESTORED TO A STATE COMPARABLE TO THE ADJOINING PROPERTY.

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

JDH 03-27-24

PROJECT ID

117607

SHEET TOTAL

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EXISTING SUBSURFACE DRAINAGE

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS OR AGGREGATE DRAINS ENCOUNTERED DURING CONSTRUCTION.

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDERDRAINS THAT OUTLET TO A SLOPE. UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDERDRAINS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM 601, TIED CONCRETE BLOCK MAT, TYPE 1	10 SQ. YD.
ITEM 605, AGGREGATE DRAINS	50 FT.
ITEM 611, 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	25 FT.
ITEM 611, PRECAST REINFORCED CONCRETE OUTLET	5 EACH
ITEM 605, 6" UNCLASSIFIED PIPE UNDERDRAINS	50 FT.

SPECIFIC SERVICE AND TOURIST-ORIENTED DIRECTIONAL SIGNS REMOVAL AND RELOCATION

PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT KEVIN MCDERMOTT AT OHIO LOGOS, INC. AT (800) 860-5646 TO COORDINATE THE REMOVAL AND RELOCATION OF THE SPECIFIC SERVICE SIGNS (LOGO) AND TOURIST-ORIENTED DIRECTIONAL SIGNS (TODS) LOCATED NEAR STA. 2238+00, AS SHOWN ON PLAN SHEET P.48 . OHIO LOGOS, INC. WILL RELOCATE THE SIGN UPON COMPLETION OF CONSTRUCTION.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016), EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 633 - CONTROLLER WORK PAD, AS PER PLAN

IF NECESSARY, THE CONTRACTOR SHALL REPAIR THE CONCRETE WORK PAD LOCATED AT SR-161 STA. 2219+37.32, OFFSET 90.38' LT / NOISE WALL 9 STA. 900+76.32, OFFSET 12.62' RT IF DAMAGED DURING THE INSTALLATION OF THE NOISE WALL AND DRILLED SHAFTS. IF NECESSARY, THE CONTRACTOR SHALL GRADE THE SURROUNDING AREA SLIGHTLY IN ORDER TO INSTALL A LEVEL WORK PAD AND RESTORE SITE CONDITIONS AS APPROVED BY THE PROJECT ENGINEER. PAYMENT FOR ALL OF THE ABOVE WORK SHALL BE INCIDENTAL TO THE UNIT BID PRICE FOR ITEM 633, CONTROLLER WORK PAD, AS PER PLAN AND SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO CONSTRUCT THE ITEM.

VEGETATED FILTER STRIP

THIS PLAN UTILIZES VEGETATED FILTER STRIPS FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE EITHER ITEM 660 - SODDING OR ITEM 659 - SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AND ITEM 670 - SLOPE EROSION PROTECTION TO ALL DISTURBED AREAS DESIGNATED AS VEGETATED FILTER STRIPS, THE EDGE OF SHOULDER, AND THE FORESLOPE AS SPECIFIED IN THE PLANS. AREAS OUTSIDE OF THE CONSTRUCTION LIMITS DO NOT REQUIRE PLACEMENT OF ITEM 660 OR 659/670. TREATMENT WILL BE CLAIMED USING THE ESTABLISHED EXISTING VEGETATION.

FOR THE CITY OF COLUMBUS DIVISION OF POWER

THE DIVISION OF POWER (DOP) MAY HAVE UNDERGROUND OR OVERHEAD PRIMARY POWER, SECONDARY POWER, CONDUIT SYSTEMS AND STREET LIGHTING AT THIS WORK LOCATION. THE CONTRACTOR IS HEREBY REQUIRED TO CONTACT OUPS AT 811 OR 1-800-362-2764 FORTY EIGHT HOURS PRIOR TO CONDUCTING ANY ACTIVITY WITHIN THE CONSTRUCTION AREA.

ANY REQUIRED RELOCATION, SUPPORT, PROTECTION, OR ANY OTHER ACTIVITY CONCERNED WITH THE CITY'S ELECTRICAL FACILITIES IN THE CONSTRUCTION AREA IS TO BE PERFORMED BY THE CONTRACTOR UNDER THE DIRECTION OF DOP PERSONNEL AND AT THE EXPENSE OF THE PROJECT. DOP SHALL MAKE ALL FINAL CONNECTIONS TO DOP'S EXISTING ELECTRICAL SYSTEM AT THE EXPENSE OF THE PROJECT. THE CONTRACTOR SHALL USE MATERIAL AND MAKE REPAIRS TO A CITY OF COLUMBUS STREET LIGHTING SYSTEM BY FOLLOWING DOP'S "MATERIAL AND INSTALLATION SPECIFICATIONS" (MIS) AND THE CITY OF COLUMBUS "CONSTRUCTION AND MATERIAL SPECIFICATIONS" (CMSC). ANY NEW OR RE-INSTALLED UNDERGROUND STREETLIGHT SYSTEM SHALL REQUIRE TESTING AS REFERRED TO IN SECTION 1001.18 OF THE CMSC MANUAL. THE CONTRACTOR SHALL CONFORM TO DOP'S EXISTING STREET LIGHTING LOCKOUT/TAGOUT (LOTO) PROCEDURE, MIS-01, COPIES OF WHICH ARE AVAILABLE AT:
<https://www.columbus.gov/WorkArea/DownloadAsset.aspx?id=2147503200>

IF ANY ELECTRIC FACILITY BELONGING TO DOP IS DAMAGED IN ANY MANNER BY THE CONTRACTOR, ITS AGENTS, SERVANTS, OR EMPLOYEES, AND REQUIRES EMERGENCY REPAIRS, THE DOP DISPATCH OFFICE SHOULD BE CONTACTED IMMEDIATELY AT (614) 645-7627. DOP SHALL MAKE ALL NECESSARY REPAIRS, AND THE EXPENSE OF SUCH REPAIRS AND OTHER RELATED COSTS SHALL BE PAID BY THE CONTRACTOR TO THE DIVISION OF POWER, CITY OF COLUMBUS, OHIO.

CITY OF COLUMBUS DIVISION OF WATER GENERAL NOTES

THE CITY OF COLUMBUS, CONSTRUCTION AND MATERIAL SPECIFICATIONS, 2018 EDITION AND ALL REVISIONS, INCLUDING ALL SUPPLEMENTS THERETO, SHALL GOVERN ALL CONSTRUCTION ITEMS THAT ARE A PART OF THIS PLAN, UNLESS OTHERWISE NOTED.

ALL WATER MAIN MATERIALS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE CURRENT RULES AND REGULATIONS OF THE CITY OF COLUMBUS, DIVISION OF WATER. ALL CITY OF COLUMBUS, DIVISION OF WATER STANDARD DRAWINGS SHALL APPLY TO THE PROJECT, UNLESS OTHERWISE NOTED.

FOR ANY EMERGENCIES INVOLVING THE WATER DISTRIBUTION SYSTEM, PLEASE CONTACT THE DIVISION OF WATER DISTRIBUTION MAINTENANCE OFFICE AT 614-645-7788.

ALL BRASS FITTINGS ASSOCIATED WITH WATER WORK, INCLUDING REPAIRS TO THE EXISTING SYSTEM, SHALL CONFORM TO THE REVISED ALLOWABLE LEAD EXTRACTION LIMIT PER THE UPDATED NSF/ANSI 61 STANDARD. THE DIVISION OF WATER'S APPROVED MATERIALS LIST HAS BEEN UPDATED TO REFLECT THIS REQUIREMENT.

IT SHALL BE UNLAWFUL FOR ANY PERSON TO PERFORM ANY WORK ON CITY OF COLUMBUS WATER MAIN SYSTEMS WITHOUT FIRST SECURING LICENSE TO ENGAGE IN SUCH WORK, AS INDICATED IN COLUMBUS CITY CODE SECTION 1103.02 AND 1103.06. THIS WORK INCLUDES ANY ATTACHMENTS, ADDITIONS TO OR ALTERATIONS IN ANY CITY SERVICE PIPE OR APPURTENANCES (INCLUDING WATER SERVICE LINES AND TAPS). THIS REQUIREMENT MAY BE MET BY UTILIZATION OF A SUBCONTRACTOR WHO HOLDS A CITY OF COLUMBUS WATER CONTRACTOR LICENSE OR A COMBINED WATER/SEWER CONTRACTOR LICENSE TO PERFORM THIS WORK. UTILIZATION OF A SUBCONTRACTOR MUST MEET THE LICENSING REQUIREMENTS OF CITY OF COLUMBUS BUILDING CODE, IN PARTICULAR SECTION 4114.119 AND 4114.529.

NO PERSON SHALL BEGIN CONSTRUCTION OR INSTALLATION OF A PUBLIC WATER MAIN UNTIL PLANS HAVE BEEN APPROVED BY THE STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA).

THE CONTRACTOR SHALL OBTAIN THE PROPER HYDRANT PERMIT(S), AND PAY ANY APPLICABLE FEES, FOR ANY APPROVED HYDRANT USAGE DEEMED NECESSARY FOR WORK UNDER THIS IMPROVEMENT. PERMITS MAY BE OBTAINED THROUGH THE DIVISION OF WATER PERMIT OFFICE (645-7330). THE CONTRACTOR SHALL ADHERE TO ALL RULES & REGULATIONS GOVERNING SAID PERMIT AND MUST HAVE THE ORIGINAL PERMIT ON SITE ANYTIME IN WHICH THE HYDRANT IS IN USE. PERMITS MAY BE OBTAINED BY ACCESSING [HTTP://PORTAL.COLUMBUS.GOV/PERMITS/](http://portal.columbus.gov/permits/). COST TO BE INCLUDED IN THE VARIOUS BID ITEMS.

WHERE NEW CONDUIT IS PROPOSED TO CROSS AN EXISTING OR PROPOSED WATER MAIN OR WATER TAP/SERVICE LINE, A MINIMUM OF 12-INCHES OF VERTICAL CLEARANCE SHALL BE MAINTAINED BETWEEN THE CONDUIT AND THE WATER MAIN OR TAP/SERVICE LINE. A MINIMUM OF 3-FEET OF HORIZONTAL CLEARANCE (OUT TO OUT) IS REQUIRED AT LOCATIONS WHERE THE CONDUIT IS PARALLEL TO THE WATER MAIN AND AT LOCATIONS OF WATER MAIN THRUST BLOCKS.

A MINIMUM OF 3 FEET OF HORIZONTAL CLEARANCE (OUT TO OUT) SHALL BE MAINTAINED BETWEEN ALL EXISTING WATER MAINS AND FOUNDATIONS FOR POLES, PULL BOXES, PUSH BUTTON PEDESTALS, AND ANY OTHER MISCELLANEOUS ELECTRICAL STRUCTURE.

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

JDH 03-27-24

PROJECT ID

117607

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TC ENERGY GENERAL NOTES AND REQUIREMENTS

INVOLVEMENT STATUS RELATES SOLELY TO FACILITIES OWNED AND/OR OPERATED BY TC ENERGY. WORK WITHIN THE TC ENERGY'S RIGHT-OF-WAY WILL BE PERFORMED IN ACCORDANCE WITH TC ENERGY PROCEDURES TO PROTECT THE SAFETY OF TC ENERGY'S FACILITIES. THE FOLLOWING GUIDELINES, ALTHOUGH NOT INCLUSIVE, ARE PROVIDED TO ACCOMMODATE YOUR REQUEST AND PROTECT OUR PIPELINES AND FACILITIES.

- 1. FOLLOW ALL APPLICABLE FEDERAL AND STATE SAFETY REQUIREMENTS AT ALL TIMES.
- 2. BEFORE ANY PRELIMINARY FIELD WORK OR CONSTRUCTION BEGINS IN THE VICINITY OF TC ENERGY PIPELINE FACILITIES THE APPROXIMATE LOCATION AND ELEVATION OF THE PIPELINE SHALL BE INVESTIGATED. BEGIN WITH A CALL TO 811 OR APPROPRIATE STATE "ONE CALL" NOTIFICATION NUMBER. REQUEST BOTH THE APPROXIMATE LOCATION AND DEPTH OF THE PIPELINE TO BE DETERMINED IN ANY AREA OF PROPOSED CONSTRUCTION. THE AREA OF PROPOSED CONSTRUCTION SHALL BE MARKED WITH WHITE PAINT, FLAGS, OR OTHERWISE AS REQUIRED BY STATE LAW.
- 3. WHEN CONDUCTING CONSTRUCTION ACTIVITIES IN OR AROUND TC ENERGY PIPELINE FACILITIES OR RIGHTS-OF-WAY, A TC ENERGY ON-SITE COMPANY REPRESENTATIVE SHALL BE PRESENT UNLESS OTHERWISE PERMITTED BY TC ENERGY. A TC ENERGY REPRESENTATIVE WILL REVIEW THE LOCATION OF PIPELINE FACILITIES PRIOR TO STARTING WORK.
- 4. NOTICE OF AT LEAST SEVENTY-TWO (72) HOURS IN ADVANCE OF CONSTRUCTION MUST BE PROVIDED.
- 5. PERMITTEE SHALL NOTIFY THE RESPONSIBLE STATE "ONE CALL" CENTER TO REQUEST THAT TC ENERGY RE-MARK A PIPELINE IF THE EXISTING MARKERS ARE INADEQUATE OR NO LONGER VISIBLE FOR ANY REASON, INCLUDING DISTURBANCE DUE TO CONSTRUCTION ACTIVITIES.
- 6. PERMITTEE SHALL NOT BURN OR BURY TRASH, BRUSH, OR OTHER ITEMS OR SUBSTANCES WITHIN TC ENERGY PIPELINE RIGHTS-OF-WAY.
- 7. PERMITTEE SHALL NOT PARK EQUIPMENT OR STORE MATERIALS ON THE TC ENERGY RIGHT-OF-WAY.
- 8. USE OF VIBRATORY EQUIPMENT LARGER THAN WALK-BEHIND UNITS SHALL NOT BE PERMITTED WITHIN TWENTY-FIVE (25) FEET OF THE PIPELINE OR RELATED FACILITY.
- 9. THE PERMITTEE SHALL MARK ANY EXCAVATION AREA WITH WHITE PAINT, FLAGS, OR AS REQUIRED BY APPLICABLE STATE LAW WITHIN TC ENERGY RIGHT-OF-WAY.
- 10. THE FOLLOWING ITEMS, BUT NOT LIMITED TO, ARE NOT PERMITTED WITHIN THE ROW; VALVES, CURB BOXES, MANHOLES, SPRINKLER HEADS, SPLICE BOXES, SERVICE RISERS, ENERGIZED EQUIPMENT, POLES, TOWERS, GUY WIRES, MECHANICAL SUPPORTS, GROUND RODS, ANCHORS, SIGNS, BOLLARDS, AND SIMILAR STRUCTURES.
- 11. BEFORE EXCAVATION CAN BEGIN NEAR A TC ENERGY RIGHT-OF-WAY, THE EXCAVATION AREA MUST BE LOCATED AND MARKED IN ACCORDING TO THE APPROPRIATE STATE ONE CALL REGULATION. SAFE DIGGING IS NO ACCIDENT. KNOW WHAT'S BELOW. CALL 811 BEFORE YOU DIG. TC ENERGY OR ITS REPRESENTATIVE SHALL LOCATE THE PIPELINE AND DETERMINE THE APPROXIMATE DEPTH OF COVER BEFORE THE PERMITTEE CAN BEGIN EXCAVATION.
- 12. TC ENERGY SHALL HAVE A COMPANY REPRESENTATIVE PRESENT DURING ALL EXCAVATION ACTIVITIES. THE COMPANY REPRESENTATIVE SHALL HAVE FULL AUTHORITY TO STOP THE WORK IF IT IS DETERMINED THAT THE WORK IS BEING PERFORMED IN AN UNSAFE MANNER RELATIVE TO TC ENERGY FACILITIES OR PERSONNEL.

TC ENERGY GENERAL NOTES AND REQUIREMENTS (CONT.)

- 13. SHOULD IT BE NECESSARY FOR A TC ENERGY EMPLOYEE/REPRESENTATIVE TO ENTER THE EXCAVATION TO INSPECT ITS PIPELINE(S), THE EXCAVATION AT THE CROSSING SHALL BE SLOPED, PERMITTED SAFE WITH TRENCH BOXES, OR SHORED IN ACCORDANCE WITH THE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.
- 14. NO EQUIPMENT SHALL WORK DIRECTLY OVER THE PIPELINE, UNLESS TC ENERGY GRANTS SPECIFIC WRITTEN PERMISSION. THE PERMITTEE SHALL INSTALL TEMPORARY FENCING ALONG THE TC ENERGY RIGHT-OF-WAY BOUNDARIES SO EQUIPMENT SHALL NOT INADVERTENTLY PASS OVER THE PIPELINE AT LOCATIONS OTHER THAN THOSE ESTABLISHED FOR THE CROSSING.
- 15. WHEN EXCAVATING WITHIN A TC ENERGY RIGHT-OF-WAY, IN THE PRESENCE OF A LOADED PIPELINE, THE PERMITTEE'S EXCAVATION EQUIPMENT SHALL HAVE A PLATE WELDED OR ATTACHED OVER THE TEETH OF THE EXCAVATOR BUCKET.
- 16. NO SIDE CUTTERS SHALL BE USED DURING ANY EXCAVATION WITHIN A TC ENERGY ROW.
- 17. NO PART OF POWERED EQUIPMENT SHALL COME WITHIN TWO (2) FEET OF TC ENERGY'S PIPELINES, OR ACCORDING TO APPLICABLE STATE OR FEDERAL REQUIREMENTS.
- 18. NO BUCKET, ANY ATTACHMENT OR LOAD MAY BE SWUNG OVER TC ENERGY'S PIPELINE(S) WHERE THERE IS LESS THAN TWO (2) FEET OF COVER.
- 19. TC ENERGY REQUIRES POTHOLING TECHNIQUES TO BE USED WHEN DIGGING WITHIN TWO (2) FEET OF THE OUTER EDGE OF THE PIPE, UNLESS REQUIREMENTS THAT ARE MORE STRINGENT ARE SET FORTH BY THE APPLICABLE STATE'S ONE CALL SYSTEM. WITHIN THIS "TOLERANCE ZONE" ONLY HAND EXCAVATION, AIR CUTTING, VACUUM EXCAVATION OR OTHER TC ENERGY APPROVED TECHNIQUES ARE PERMITTED.
- 20. NO EXCAVATION SHALL BE MADE ON LAND ADJACENT TO THE PIPELINE THAT SHALL IN ANY WAY IMPAIR, WITHDRAW LATERAL SUPPORT, CAUSE SUBSIDENCE, CREATE THE ACCUMULATION OF WATER, OR CAUSE DAMAGE TO THE PIPELINE OR RIGHT-OF-WAY.
- 21. THE PERMITTEE SHALL ENSURE ALL EXCAVATION WORK COMPLIES WITH OSHA'S EXCAVATION STANDARDS OUTLINED IN 29 CFR 1926 AND CORRECT ANY NONCOMPLIANT EXCAVATION SITE BEFORE WORK WITHIN TC ENERGY RIGHT-OF-WAY CONTINUES.
- 22. AT ANY LOCATION WHERE THE PIPELINE IS EXPOSED, THE PERMITTEE SHALL PROVIDE TC ENERGY THE OPPORTUNITY TO INSPECT THE PIPELINE CONDITION, INSTALL CATHODIC PROTECTION EQUIPMENT, REPAIR ANY PIPE COATING IMPERFECTIONS, AND/OR INSTALL UNDERGROUND WARNING MATERIALS.
- 23. NO TC ENERGY BURIED PIPELINE SHALL BE LEFT EXPOSED FOR ANY DURATION OF TIME, UNLESS OTHERWISE PERMITTED BY TC ENERGY.
- 24. BACKFILL AND COMPACTION SHALL BE PERFORMED TO THE SATISFACTION AND IN THE PRESENCE OF A COMPANY REPRESENTATIVE. AT LEAST 6 INCHES OF FINE, LOOSE EARTH OR OTHER PERMITTED BACKFILL MATERIAL WITH NO SHARP GRAVEL, ROCK, HARD CLODS, VEGETATION, OR OTHER DEBRIS SHALL BE ADDED ON ALL SIDES OF ANY PIPELINE, AND REMAINING BACKFILL SHALL BE PLACED SO AS NOT TO DISTURB THIS PADDING MATERIAL OR DAMAGE THE PIPELINE AND ITS COATING. BACKFILL OVER THE PIPE SHALL BE COMPACTED BY HAND UNTIL EIGHTEEN (18) INCHES OF COVER IS ACHIEVED.
- 25. IF A FLOWABLE FILL IS REQUIRED BY TC ENERGY TO ACHIEVE NECESSARY COMPACTION AND SUPPORT UNDER AND AROUND THE PIPE, SPECIFICATIONS WILL BE PROVIDED AFTER DRAWING REVIEW AND APPROVAL.

TC ENERGY GENERAL NOTES AND REQUIREMENTS (CONT.)

- 26. DISTURBED GROUND SHALL BE COMPACTED TO AT LEAST THE SAME DEGREE OF COMPACTION AS SURROUNDING AREAS.
- 27. THE PERMITTEE SHALL RESTORE THE SITE TO ITS ORIGINAL CONDITION UNLESS OTHERWISE PERMITTED BY TC ENERGY.
- 28. CONTINUOUSLY POURED, STEEL REINFORCED CONCRETE IS NOT PERMITTED WITHIN TC ENERGY RIGHT-OF-WAY.
- 29. THERE SHALL BE NO WORK OR SPOIL STORAGE ON THE TC ENERGY RIGHT-OF-WAY, NOR SHALL THERE BE ANY UNAUTHORIZED EQUIPMENT CROSSING(S) ON THE TC ENERGY RIGHT-OF-WAY.
- 30. THE PERMITTEE MAY BE CROSSING ONE OR MORE OF TC ENERGY'S TRANSMISSION PIPELINE(S). THESE PIPELINE(S) MAY BE COATED WITH A MATERIAL TO PROTECT THEM FROM CORROSION. THE COATING MAY CONTAIN ASBESTOS. IF THE EXCAVATION RESULTS IN EXPOSING TC ENERGY'S PIPELINE(S) AND THERE IS ANY DAMAGE TO THE COATING, YOU WILL BE RESPONSIBLE FOR ALL COSTS, INCLUDING ANY DISPOSAL COSTS, ASSOCIATED WITH THE COATING REPAIR. IF NECESSARY, YOU WILL ALSO BE REQUIRED, TO HALT ALL WORK ACTIVITY WHILE THE COATING MATERIAL IS BEING ANALYZED. THE COATING REPAIR, INCLUDING THE REMOVAL OF THE ORIGINAL MATERIAL, WILL BE PERFORMED BY TC ENERGY PERSONNEL OR A QUALIFIED THIRD-PARTY CONTRACTOR SELECTED BY TC ENERGY. ALL WORK WILL BE DONE IN ACCORDANCE WITH TC ENERGY'S CURRENT ENGINEERING AND ENVIRONMENTAL STANDARDS. DURING THE COURSE OF THE EXCAVATION WORK, CONTRACTOR AGREES TO COOPERATE WITH TC ENERGY TO ENSURE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL AND SAFETY REGULATIONS ARE FOLLOWED.
- 31. THE PERMITTEE SHALL SUBMIT A HEAVY EQUIPMENT CROSSING INFORMATION FORM FOR ALL ADDITIONAL EQUIPMENT THAT WILL OPERATE WITHIN THE TC ENERGY RIGHT-OF-WAY. NO ADDITIONAL EQUIPMENT WILL BE PERMITTED WITHIN THE RIGHT-OF-WAY WITHOUT PRIOR APPROVAL FROM TC ENERGY. THE PERMITTEE WILL WORK WITH THE ON-SITE REPRESENTATIVE TO COMPLETE THE HEAVY EQUIPMENT CROSSING INFORMATION FORM.

TC ENERGY GENERAL NOTES AND REQUIREMENTS (CONT.)

- 32. WHILE USING THE PERMITTED CROSSING AREA(S) WITH HEAVY EQUIPMENT, IF RUTTING, ANY FORM OF GROUND DECAY, OR GROUND PUMPING OCCURS, ADDITIONAL MEASURES WILL BE REQUIRED. THE ADDITIONAL MEASURES WILL INCLUDE BUT ARE NOT LIMITED TO: LOAD CALCULATION REASSESSMENT, MATTING/AIR BRIDGE INSTALLMENT, ADDITIONAL COVER, CONCRETE RELIEF SLABS, ETC.
- 33. TC ENERGY SHALL LIMIT THE NUMBER OF TEMPORARY CONSTRUCTION ROADS CONSTRUCTED BY THE PERMITTEE. CROSSINGS SHALL BE LIMITED TO PRE-SELECTED SITES AND SHALL BE CLEARLY DEFINED AND MARKED. RANDOM CROSSINGS ARE NOT PERMITTED.
- 34. DURING THE USE OF A PERMITTED TEMPORARY CONSTRUCTION ROAD, THE PERMITTEE SHALL TAKE ALL REASONABLE AND NECESSARY STEPS TO MAINTAIN THE INTEGRITY OF THE PERMITTED CROSSING PROTECTION. TC ENERGY PERSONNEL SHOULD INSPECT CROSSINGS PERIODICALLY AND MAY REQUIRE THE PERMITTEE TO PROVIDE ADDITIONAL PROTECTIVE MEASURES DEEMED NECESSARY TO PREVENT DAMAGE TO THE PIPELINE OR RIGHT-OF-WAY.
- 35. PAYMENT FOR THE OPERATIONS AND REQUIREMENTS DESCRIBED ABOVE SHALL BE INCIDENTAL TO THE PROJECT CONSTRUCTION COST AND SHALL NOT BE A SEPARATE PAY ITEM.

CONVENTIONAL SYMBOLS

County Line	—————	Edge of Shoulder (Ex)	-----
Township Line	-----	Edge of Shoulder (Pr)	-----
Section Line	-----	Ditch / Creek (Ex)	-----
Corporation Line	----- or -----	Ditch / Creek (Pr)	-----
Fence Line (Ex)	----- x----- x----- (Pr) ----- x----- x-----	Tree Line (Ex)	-----
Center Line	-----	Ownership Hook Symbol	Z
Right of Way (Ex)	----- Ex R/W -----	Property Line Symbol	P
Right of Way (Pr)	----- R/W -----	Example	----- Z
Standard Highway Ease.(Ex)	----- Ex SH -----	Example	----- P
Standard Highway Ease.(Pr)	----- SH -----	Break Line Symbol	-----
Temporary Right of Way	----- TMP -----	Tree (Pr)	Tree (Ex) Shrub (Ex)
Channel Ease. (Pr)	----- CH -----	Tree (Remove)	Shrub (Remove)
Utility Ease. (Ex)	----- Ex U -----	Evergreen (Ex)	Stump
Railroad	or -----	Evergreen (Remove)	Stump (Remove)
Guardrail (Ex)	o o o o o (Pr)	Wetland (Pr)	Grass (Pr) Aerial Target
Construction Limits	Post (Ex)	Mailbox (Ex) Mailbox (Pr)
Edge of Pavement (Ex)	-----	Light (Ex)	Telephone Marker (Ex) +TEL
Edge of Pavement (Pr)	-----	Fire Hydrant (Ex)	Water Meter (Ex)
		Water Valve (Ex)	Utility Valve Unknown (Ex.)
		Telephone Pole (Ex)	Power Pole (Ex)
		Light Pole (Ex)	

MAINTENANCE OF TRAFFIC SEQUENCE OF CONSTRUCTION

CONSTRUCT FOUNDATIONS, GRADING, PAVEMENT WIDENING, AND 81 INCH BARRIER 3 USING SHOULDER CLOSURES WITH PORTABLE BARRIER PER MT-95.45. RIGHT LANE WIDTH MAY BE REDUCED TO 11 FT MINIMUM.

CONSTRUCT 81 INCH BARRIERS 6, 8, 10, AND 12 USING SINGLE LANE CLOSURES WITH PORTABLE BARRIER PER MT-95.40. LANE AND RAMP CLOSURES SHALL BE LIMITED TO HOURS LISTED IN THE LANE VALUE CONTRACT TABLE.

CONSTRUCT NOISE WALLS USING SHOULDER CLOSURES WITH DRUMS. ALL LANES ALONG SR-161 EASTBOUND AND WESTBOUND WILL BE MAINTAINED.

ITEM 614, MAINTAINING TRAFFIC

ALL EXISTING LANES ON SR-161 SHALL BE MAINTAINED AT ALL TIMES EXCEPT FOR SHORT TERM SINGLE LANE CLOSURES DURING ALLOWABLE PERIODS PER THE LANE VALUE CONTRACT TABLE. A MINIMUM OF ONE LANE OF TRAFFIC SHALL BE MAINTAINED ON RAMPS AT ALL TIMES EXCEPT THE NEW ALBANY RD TO SR-161 WB RAMP MAY BE CLOSED DURING ALLOWABLE PERIODS PER THE LANE VALUE CONTRACT TABLE.

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

NEW YEAR'S (OBSERVED)	GENERAL/REGULAR ELECTION DAY (NOV)
MEMORIAL DAY	THANKSGIVING
FOURTH OF JULY (OBSERVED)	CHRISTMAS (OBSERVED)
LABOR DAY	

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF HOLIDAY OR EVENT	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00 N FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00 N FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00 N MONDAY THROUGH 6:00 AM WEDNESDAY
TUESDAY (GEN./REG. ELECTION)	5:00 AM TUESDAY THROUGH 12:00 AM WEDNESDAY
WEDNESDAY	12:00 N TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00 N WEDNESDAY THROUGH 6:00 AM FRIDAY
THURSDAY (THANKSGIVING ONLY)	6:00 AM WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00 N THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00 N FRIDAY THROUGH 6:00 AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE PER THE LANE VALUE CONTRACT (PN 127).

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

NOTICE OF CLOSURE SIGNS (W20-H13) SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD OR RAMP CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW.

THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT OR NEAR THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.

NOTICE OF CLOSURE SIGN TIME TABLE		
ITEM	DURATION OF CLOSURE	SIGN DISPLAYED TO PUBLIC
RAMP & ROAD CLOSURES	>= 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	7 CALENDAR DAYS PRIOR TO CLOSURE
	< 12 HOURS	2 BUSINESS DAYS PRIOR TO CLOSURE

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MMM-DD FORMAT AND THE NUMBER OF DAYS OF THE CLOSURE. THE LAST LINE OF THE W20-H13 SIGN LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION. THIS IS TO BE A SPECIFIC OFFICE WITHIN THE DISTRICT RATHER THAN THE GENERAL SWITCHBOARD NUMBER.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

COORDINATION BETWEEN CONTRACTORS

THE CONTRACTOR SHALL COORDINATE WORK WITH ODOT AND THE CONTRACTORS ON THE ADJACENT PROJECTS. COORDINATION SHALL BE MADE TO PREVENT CONFLICTING ADVANCE WARNING SIGNS, CONFLICTING DETOUR ROUTES, OVERLAPPING/CONFLICTING LANE CLOSURES, AND TO ENSURE THAT A MINIMUM DISTANCE OF 2 MILES BETWEEN ADJACENT LANE CLOSURES IS MAINTAINED. THIS IS NOT AN EXHAUSTIVE LIST OF COORDINATION ITEMS THAT MAY NEED TO BE RESOLVED BETWEEN PROJECTS. THE DEPARTMENT RESERVES THE RIGHT TO DECIDE WHICH PROJECT'S ACTIVITIES TAKE PRECEDENCE. PROJECTS THAT HAVE ACTIVITIES DELAYED DUE TO CONFLICTS WILL CONSIDER THIS AN EXCUSABLE, NON-COMPENSABLE DELAY PER 108.06.B. ON PROJECTS THAT HAVE ACTIVITIES DELAYED DUE TO CONFLICTS WHERE THE CONTRACTOR FAILED TO MEET THE NOTIFICATION REQUIREMENTS, THE DELAYS SHALL NOT BE CONSIDERED EXCUSABLE OR COMPENSABLE.

ATTENDANCE AT DEPARTMENT ORDERED TRAFFIC COORDINATION MEETINGS BETWEEN ADJACENT PROJECTS SHALL BE CONSIDERED MANDATORY FOR EACH PROJECT'S SUPERINTENDENT, AND INCIDENTAL TO THE LUMP SUM MAINTENANCE OF TRAFFIC PAYMENT ITEM.

THE FOLLOWING PROJECTS MAY HAVE CONFLICTS:
 FRA-161-15.80, PID 116322
 D05/D06-ITS EXPANSION-FY23, PID 117546

FLOODLIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER 50 M. GAL.

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS APPROVED PRODUCTS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

DELINEATION OF PORTABLE AND PERMANENT BARRIER

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL; AND, ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE-WAY.

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

IN ADDITION TO THE REQUIREMENT OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS APPROVED BY THE ENGINEER:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION (OR AT THE POINT OF ROAD CLOSURE), AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONES.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

ENSURE PROVIDED LEOS HAVE BEEN TRAINED APPROPRIATE TO THE JOB DECISIONS THEY ARE REQUIRED TO MAKE WHILE ON THE PROJECT, IN ACCORDANCE WITH C&MS 614.03.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE THAT SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 300 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF A LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 800 FEET AND 650 FEET, RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. THE PCMS SHALL BE DELINEATED IN ACCORDANCE WITH C&MS 614.03.

PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED AWAY FROM ALL TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN 4 HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN, CONT'D

(THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT.) THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF C&MS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN,
 AS PER PLAN 96 SIGN MONTH
 ASSUMING 4 PCMS SIGNS FOR 24 MONTHS

NOTIFICATION OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE BUT IS NOT LIMITED TO ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION OF TRAFFIC RESTRICTIONS TIME TABLE

ITEM	DURATION OF CLOSURE	NOTIFICATION DUE TO DISTRICT 4 COMMUNICATIONS OFFICE
RAMP & ROAD CLOSURES	>= 2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 12 HOURS	4 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	>= 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WEEKS	5 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME FRAME TABLE.

LANE AND RAMP CLOSURE TABLES

ODOT RESERVES THE RIGHT TO AMEND THE LANE AND RAMP CLOSURE TABLES. NO ADJACENT RAMP CLOSURES SHALL OCCUR CONCURRENTLY.

LANE VALUE CONTRACT TABLE						
FRA-161						
SECTION (SLM)	EXISTING NUMBER OF LANES PER DIRECTION	LANE CLOSURES NOT PERMITTED				DISINCENTIVE PER MINUTE PER LANE
		LANE REDUCTION	MON TO FRI	SAT	SUN	
LITTLE TURTLE WAY (17.31) TO HAMILTON ROAD (18.60)	4	4 TO 3	6 AM - 9 AM 3 PM - 6 PM	NO RESTRICTION	NO RESTRICTION	\$180
		4 TO 2	5 AM - 9 AM 2 PM - 7 PM	9 AM - 6 PM	10 AM - 5 PM	
		4 TO 1	5 AM - 9 PM	6 AM - 7 PM	8 AM - 7 PM	
HAMILTON ROAD (18.60) TO KITZMILLER ROAD (22.40)	3	3 TO 2	6 AM - 9 AM 3 PM - 6 PM	NO RESTRICTION	NO RESTRICTION	\$250
		3 TO 1	5 AM - 7 PM	8 AM - 7 PM	8 AM - 7 PM	

SHORT TERM SHOULDER CLOSURES ARE NOT PERMITTED 6 AM - 9 PM & 3 PM - 6 PM MONDAY - FRIDAY

RAMP CLOSURE RESTRICTIONS					
SR-161					
SECONDARY ROUTE: NEW ALBANY					
RAMP DESIGNATION	MOVEMENT	NO CLOSURES ALLOWED		PRIMARY DETOUR ROUTE	SECONDARY DETOUR ROUTE
		MON - FRI	SAT - SUN		
L	NEW ALBANY RD TO SR-161 WB	5 AM - 9 PM	8 AM - 8 PM	RAMP N TO SR-161 EB TO RAMP K TO JOHNSTOWN RD NB TO RAMP G TO SR-161 WB	NONE
P	SR-161 EB TO NEW ALBANY RD	5 AM - 9 PM	8 AM - 8 PM	SR-161 EB TO RAMP K TO JOHNSTOWN RD NB TO RAMP G TO SR-161 WB TO RAMP M TO NEW ALBANY RD	NONE

SHORT DURATION RAMP CLOSURES

FOR THE PURPOSE OF PERFORMING THE REQUIRED WORK, RAMPS MAY BE CLOSED FOR SHORT DURATIONS AND DETOURED IN ACCORDANCE WITH THE RAMP CLOSURE TABLE IF APPROVED BY THE ENGINEER. RAMP CLOSURES ARE SUBJECT TO DISINCENTIVES.

FOR ALL SERVICE RAMP CLOSURES LASTING MORE THAN 12 HOURS BUT LESS THAN 60 HOURS, THE CONTRACTOR SHALL PROVIDE THE FOLLOWING:

A MINIMUM OF TWO PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) PLACED, AS DIRECTED BY THE ENGINEER, TO WARN DRIVERS OF THE CLOSURE AND TO PROVIDE THE DESIGNATED DETOUR ROUTE. POSITIVE GUIDANCE ALONG THE DETOUR ROUTE WITH DETOUR SIGNS (M4-9 SERIES) IN ACCORDANCE WITH THE DETOUR SIGNS NOTE.

FOR ALL RAMP CLOSURES LASTING LESS THAN 12 HOURS, THE CONTRACTOR SHALL PROVIDE THE FOLLOWING:

A MINIMUM OF TWO PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) PLACED, AS DIRECTED BY THE ENGINEER, TO WARN DRIVERS OF THE CLOSURE AND TO PROVIDE THE DESIGNATED DETOUR ROUTE.

WHEN CLOSING ENTRANCE RAMPS, CORRESPONDING LEAD-IN LANES AND TURN LANES SHALL ALSO BE CLOSED.

IF A DESIGNATED DETOUR ROUTE IS NOT PROVIDED IN THE PLANS, TRAFFIC SHALL BE DIRECTED TO THE NEXT INTERCHANGE, IF AVAILABLE, TO TURN AROUND. IF THE USE OF THE NEXT INTERCHANGE IS NOT POSSIBLE, AN ALTERNATIVE DETOUR ROUTE SHALL BE PROVIDED BY THE ENGINEER.

DETOUR SIGNING

SIZE AND PLACEMENT OF DETOUR SIGNS (M4-9) SHOULD FOLLOW THE REQUIREMENTS OF THE ODOT SECTION 6F.03, SECTION 2A.11 AND TABLE 6F-01.

DETOUR SIGNING SHALL PROVIDE DRIVERS ADEQUATE TIME TO CLEARLY READ THE SIGNS AND MAKE THE PROPER DECISIONS AT EACH REQUIRED TURNING MOVEMENT. THE DESIGNATED DETOUR ROUTE SHALL BE SIGNED IN ACCORDANCE WITH THE REQUIREMENTS BELOW:

- APPROXIMATELY 1500 FEET PRIOR TO TIP OF THE PAINTED GORE AT AN INTERCHANGE WHEN EXITING A HIGH SPEED (45 MPH OR HIGHER) FACILITY.
- AT OR NEAR THE EXISTING SIGN IN THE GORE OF AN INTERCHANGE RAMP.
- AT OR NEAR THE FIRST EXISTING LANE ASSIGNMENT SIGN ON AN INTERCHANGE EXIT RAMP.
- AT OR NEAR THE EXISTING LANE ASSIGNMENT SIGN OR EXISTING ROUTE MARKER AT THE END OF AN EXIT RAMP.
- APPROXIMATELY 500 FEET PRIOR TO A REQUIRED TURN AT AN INTERSECTION NOT CONTROLLED BY A STOP SIGN (FOR 45 MPH OR HIGHER ONLY).
- AT OR NEAR THE EXISTING LANE ASSIGNMENT SIGN OR EXISTING ROUTE MARKER AT AN INTERSECTION.
- EVERY TWO MILES ALONG A TANGENT SECTION BETWEEN TURNING MOVEMENTS OUTSIDE A CITY.
- EVERY TWO BLOCKS ALONG A TANGENT SECTION BETWEEN TURNING MOVEMENTS WITHIN A CITY.
- AT ANY OTHER INTERSECTION OR DECISION POINT WHERE THE DETOUR ROUTE IS CONTRARY TO THE NORMAL, EXPECTED TURNING MANEUVER OR OTHERWISE UNCLEAR.

DETOUR SIGNS SHALL BE PLACED, WHEN POSSIBLE, NEXT TO BUT NOT BLOCKING EXISTING ROUTE MARKERS OR LANE ASSIGNMENT SIGNS. DETOUR SIGNS SHALL NOT OBSCURE OR BE OBSCURED BY OTHER EXISTING OR TEMPORARY SIGNS.

DETOUR SIGNS SHALL BE ERECTED AND/OR UNCOVERED PRIOR TO THE ROAD OR RAMP BEING CLOSED TO TRAFFIC BUT NO EARLIER THAN FOUR HOURS PRIOR TO THE CLOSURE. DETOUR SIGNS SHALL BE COVERED AND/OR REMOVED NO LATER THAN FOUR HOURS FOLLOWING THE ROAD OR RAMP RE-OPENING TO TRAFFIC.

PAYMENT FOR ACCEPTED QUANTITIES WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, PROPER SIGN PLACEMENT AND SIZING, TIMELY ERECTING AND/OR UNCOVERING OF SIGNS, MAINTAINING SIGNS, AND TIMELY COVERING AND/OR REMOVING SIGNS AND SUPPORTS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.
 ITEM 614 - DETOUR SIGNING = LUMP SUM

DESIGN AGENCY



DESIGNER

NRS/BSS

REVIEWER

JDH 03-27-24

PROJECT ID

117607

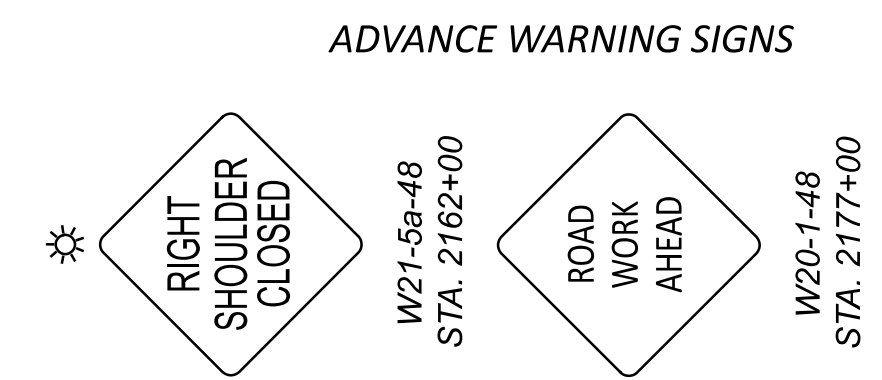
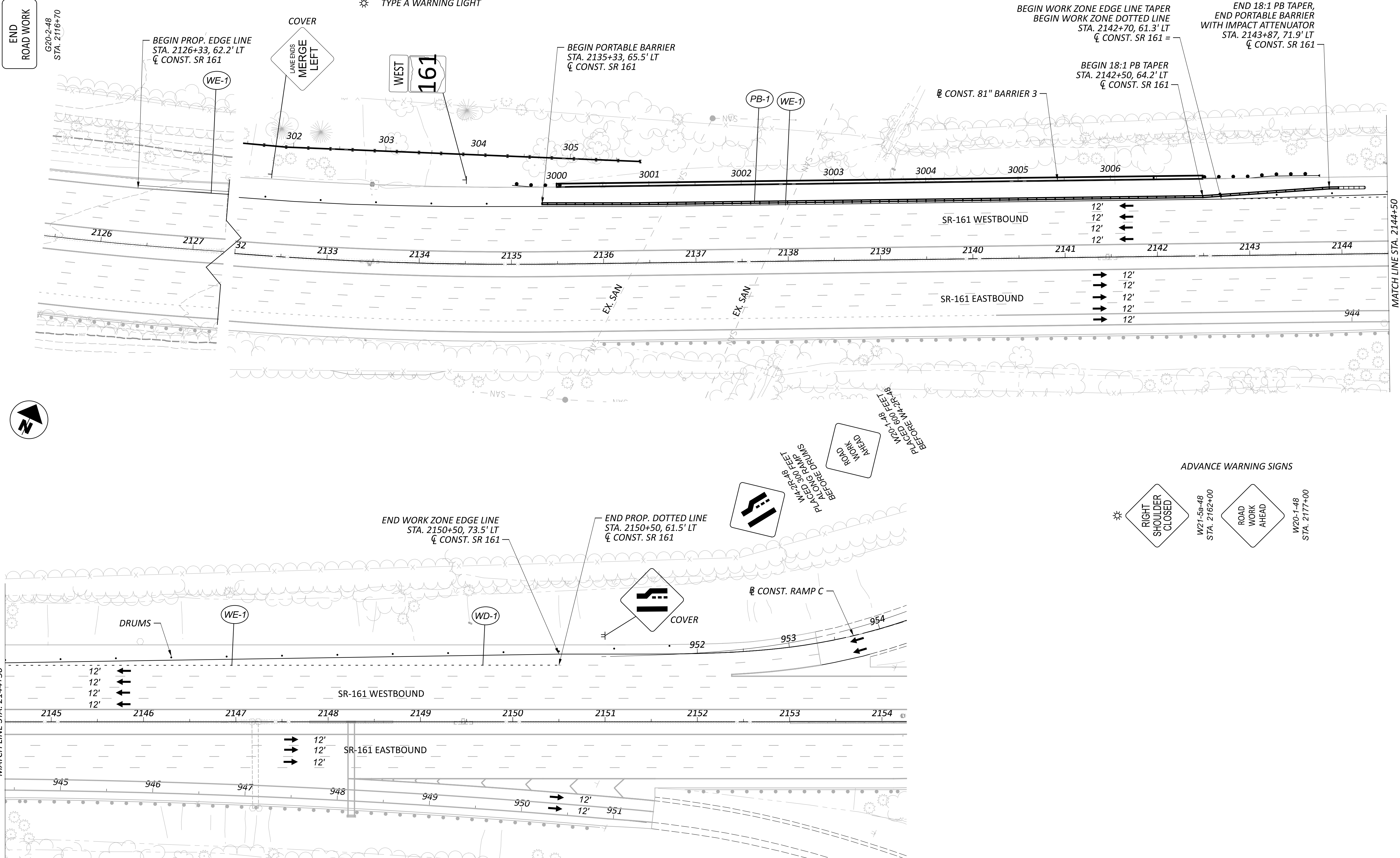
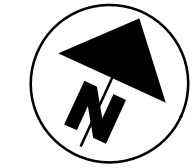
SHEET TOTAL

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MAINTENANCE OF TRAFFIC LEGEND

- WORK ZONE EDGE LINE, CLASS I, 6", 740.06, TYPE 1 (WHITE)
- WORK ZONE DOTTED LINE, CLASS I, 6", 740.06, TYPE 1 (WHITE)
- PORTABLE BARRIER, UNANCHORED
- DIRECTION OF TRAVEL
- DRUMS
- PORTABLE BARRIER
- WORK ZONE IMPACT ATTENUATOR
- TYPE III BARRICADE
- TYPE A WARNING LIGHT

- NOTES:
1. REMOVE CONFLICTING MARKINGS AND RPM REFLECTORS
 2. ALL SHOULDERS 2' MIN. UNLESS OTHERWISE NOTED
 3. OFFSETS ARE MEASURED TO THE CENTER OF PORTABLE BARRIER



FRA-161-15.80 NOISE WALLS

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MATCH LINE STA. 2144+50

MAINTENANCE OF TRAFFIC PLAN
81" BARRIER 3

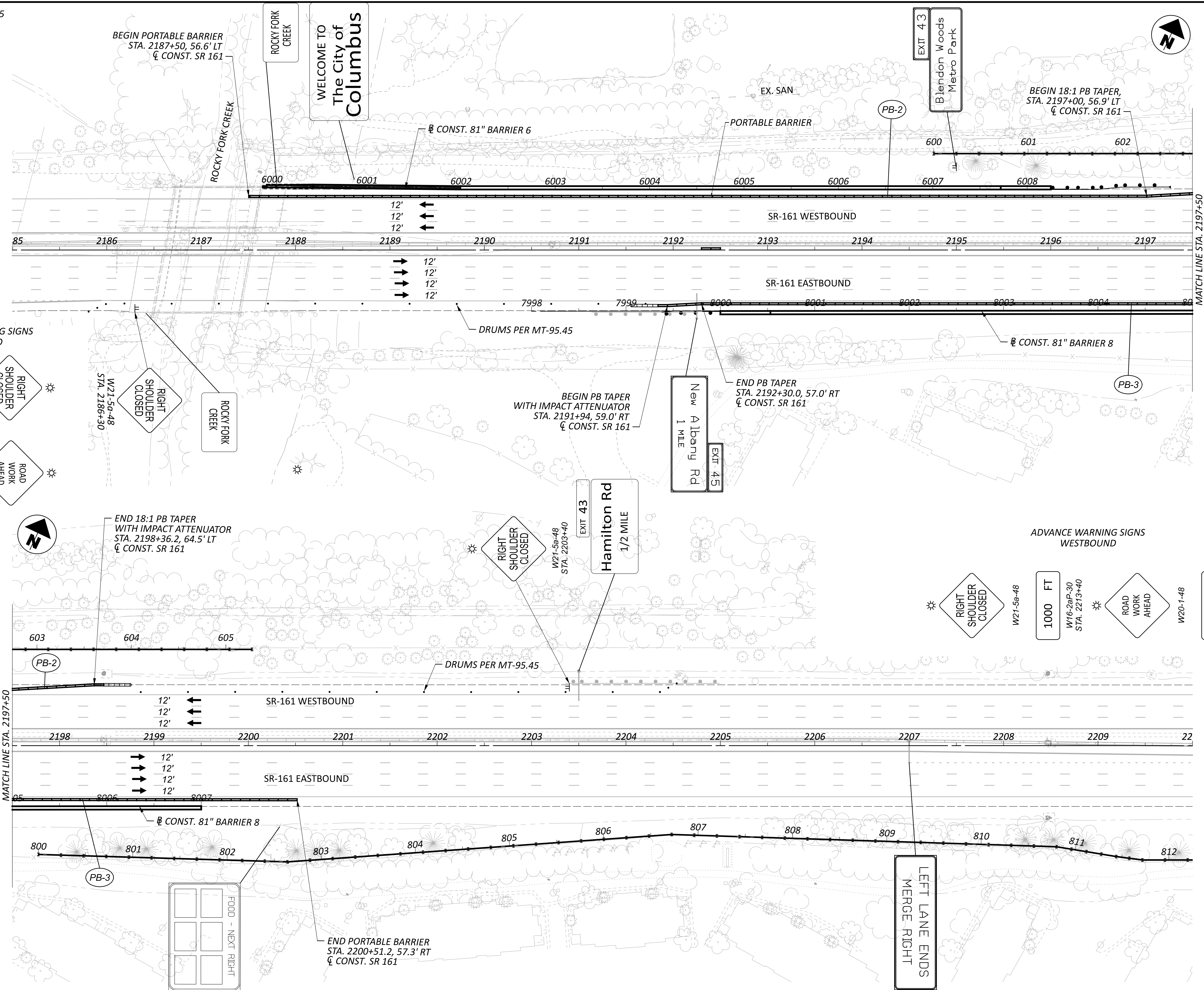
DESIGN AGENCY	
8101 NORTH HIGGINS SITE 100 COLUMBIA, MO 65203 616.448.4900 www.arcadis.com	
DESIGNER	
NRS/BSS	
REVIEWER	
JDH 03-27-24	
PROJECT ID	
117607	
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END ROAD WORK
 G20-2-48
 STA. 2177+50

ADVANCE WARNING SIGNS
 EASTBOUND

1100 FT
 W16-2aP-30
 STA. 2176+30

1/2 MILE
 W16-2aP-30
 STA. 2161+30



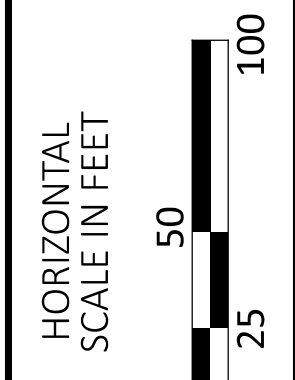
END ROAD WORK
 G20-2-48
 STA. 2210+50

ADVANCE WARNING SIGNS
 WESTBOUND

1000 FT
 W16-2aP-30
 STA. 2213+40

1/2 MILE
 W16-2aP-30
 STA. 2228+40

1/2 MILE
 W16-2aP-30
 STA. 2228+40

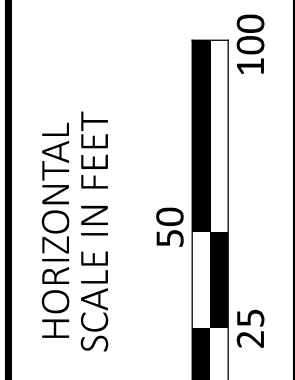
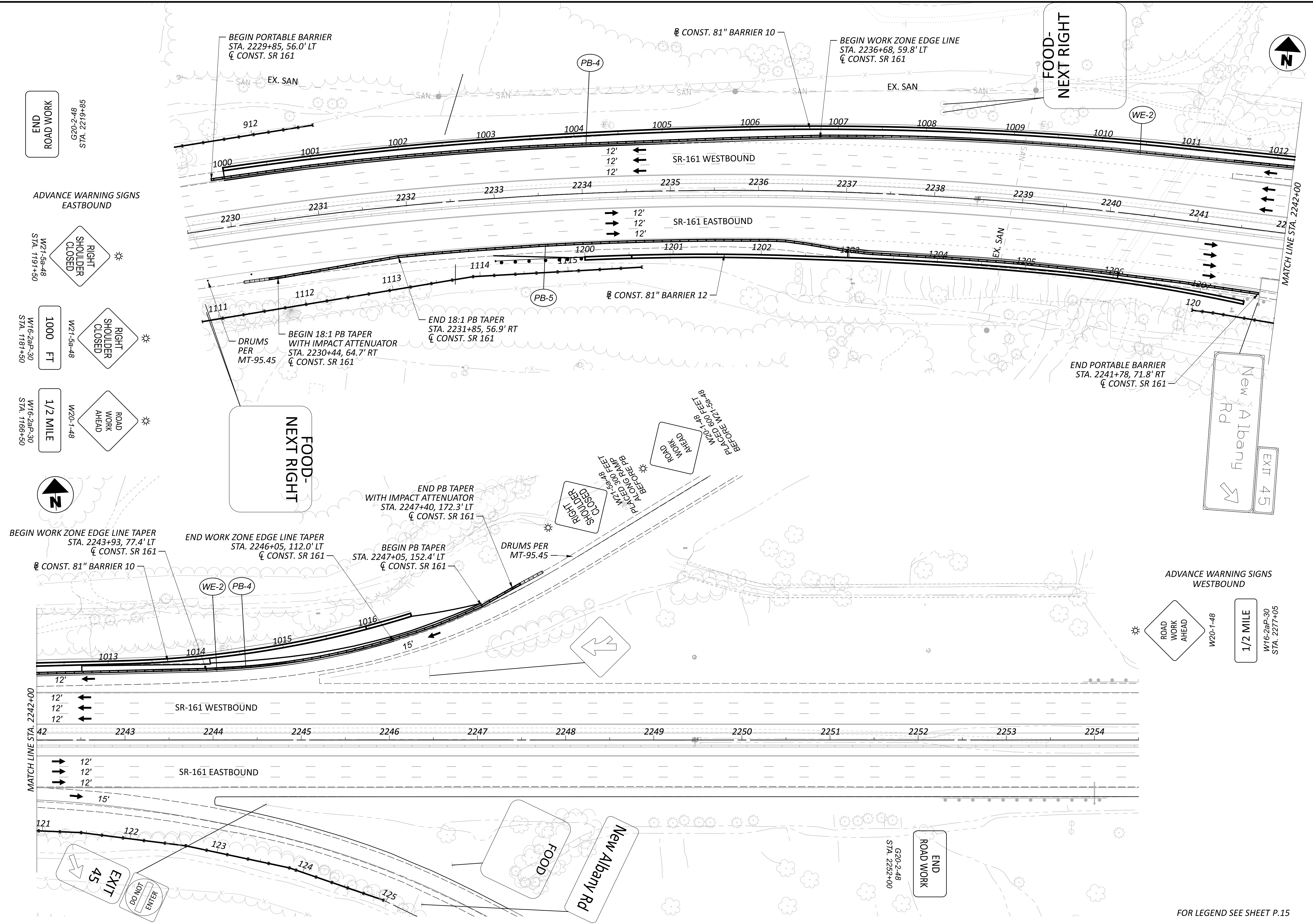


MAINTENANCE OF TRAFFIC PLAN
 81" BARRIERS 6 AND 8

DESIGN AGENCY	
ARCADIS 8101 NORTH HIGGINS AVE. SUITE 100 COLUMBIANA, OH 43085 614.948.4900 www.arcadis.com	
DESIGNER	NRS/BSS
REVIEWER	JDH
PROJECT ID	03-27-24
SHEET	117607
TOTAL	P.16
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FRA-161-15.80 NOISE WALLS

MODEL: CLP_SR161 - Barrier 10-12 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 7:12:47 PM USER: jennifer.kelley
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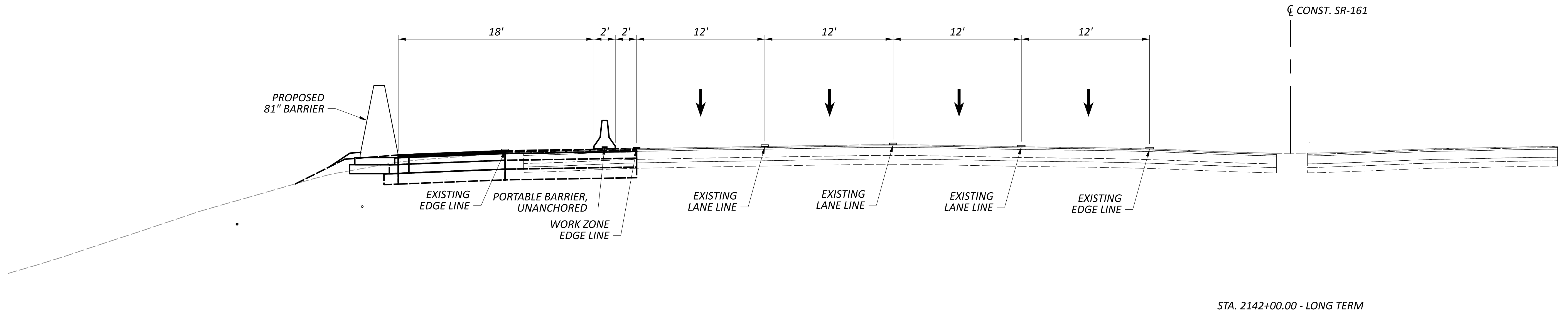
**MAINTENANCE OF TRAFFIC PLAN
 81" BARRIERS 10 AND 12**

DESIGN AGENCY	
ARCADIS	8101 NORTH HIGGINS AVE SUITE 100 COLUMBIANA, OH 43085 614.948.9400 www.arcadis.com
DESIGNER	
NRS/BSS	
REVIEWER	
JDH 03-27-24	
PROJECT ID	
117607	
SHEET	TOTAL
P.17	P.295

FOR LEGEND SEE SHEET P.15

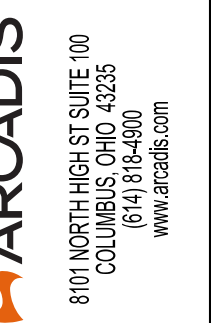
FRA-161-15.80 NOISE WALLS

MODEL: CLP_SR161 - 2142+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 7:13:24 PM USER: jennifer.kelley
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**MAINTENANCE OF TRAFFIC TYPICAL SECTIONS
 BARRIER 3 - STA. 2142+00 WESTBOUND**

DESIGN AGENCY



DESIGNER

BSS

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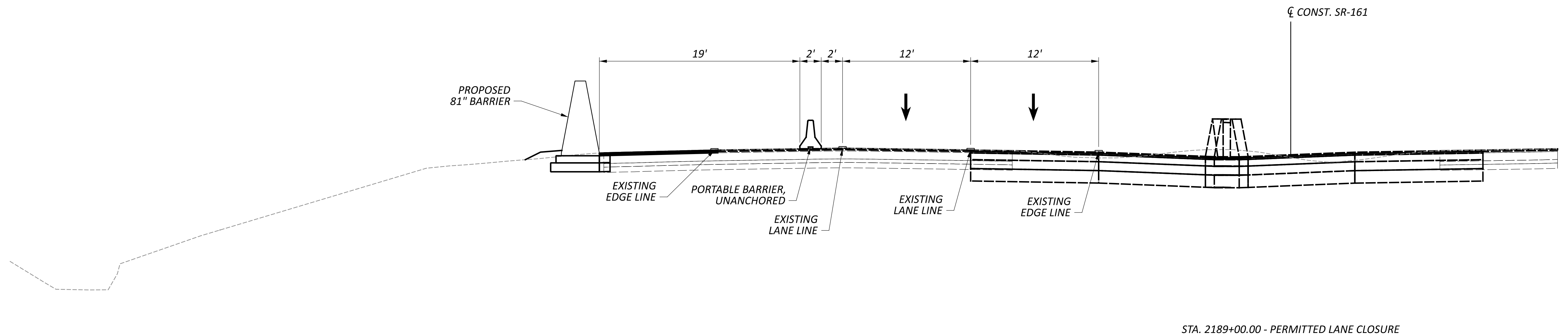
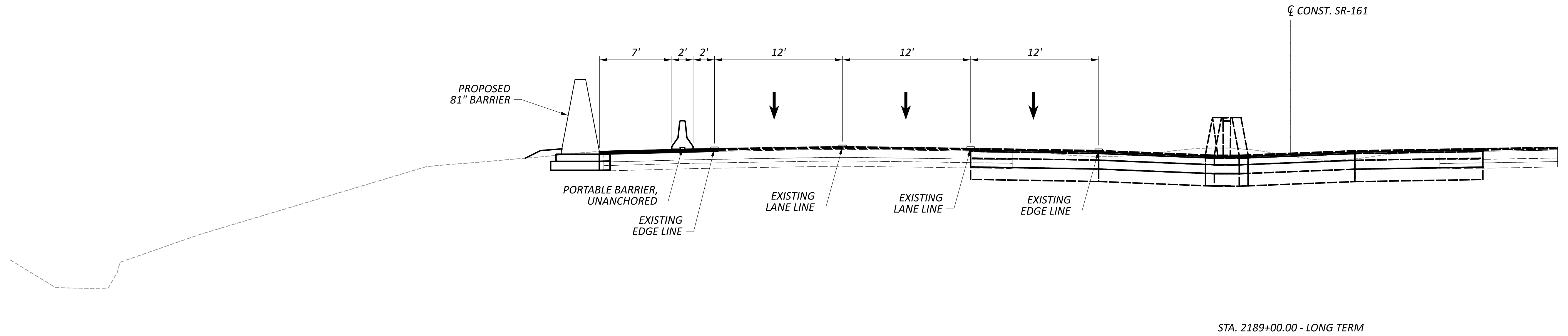
JDH 03-27-24

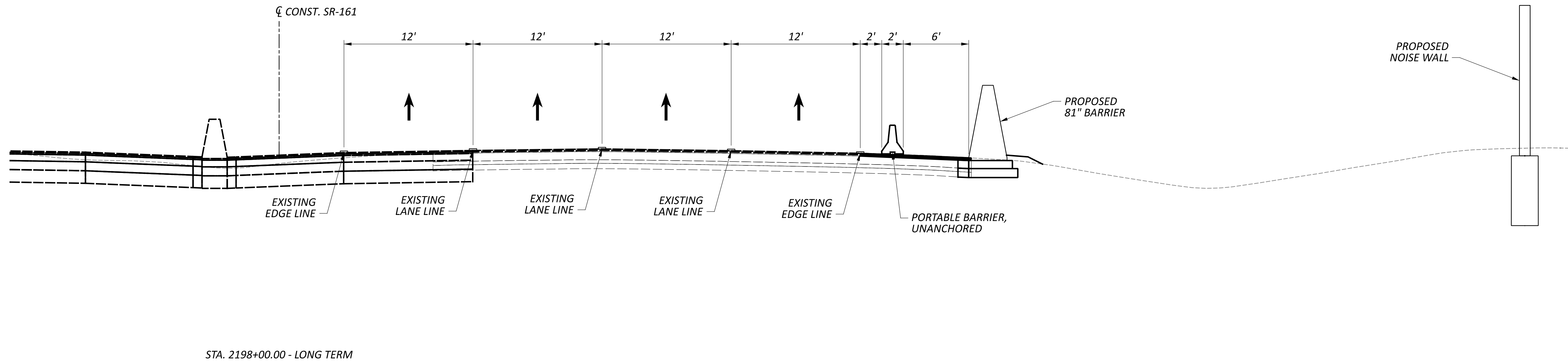
PROJECT ID

117607

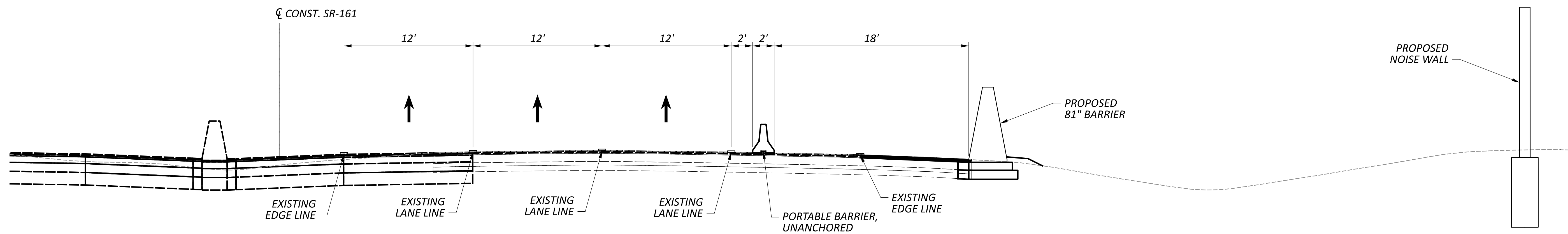
SHEET TOTAL

P.18 | P.295





STA. 2198+00.00 - LONG TERM



STA. 2198+00.00 - PERMITTED LANE CLOSURE

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS
 BARRIER 8 - STA. 2198+00 EASTBOUND

DESIGN AGENCY



DESIGNER

BSS

REVIEWER

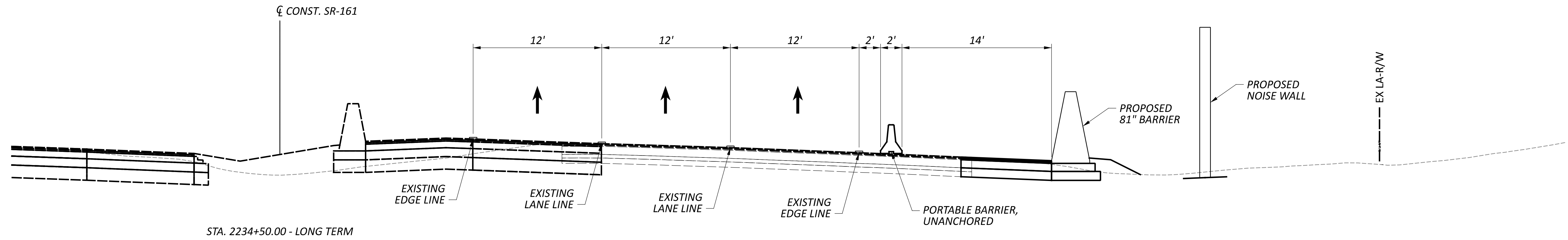
JDH 03-27-24

PROJECT ID

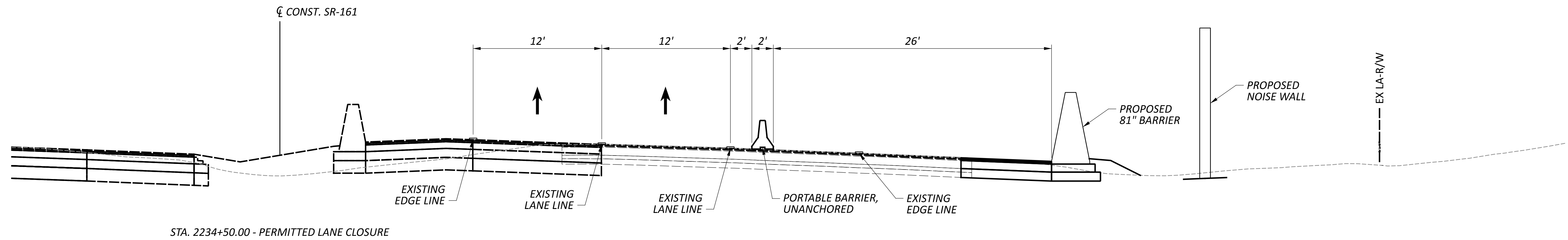
117607

SHEET TOTAL

P.20 P.295



STA. 2234+50.00 - LONG TERM



STA. 2234+50.00 - PERMITTED LANE CLOSURE

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS
 BARRIER 12 - STA. 2234+50 EASTBOUND

DESIGN AGENCY



DESIGNER

BSS

REVIEWER

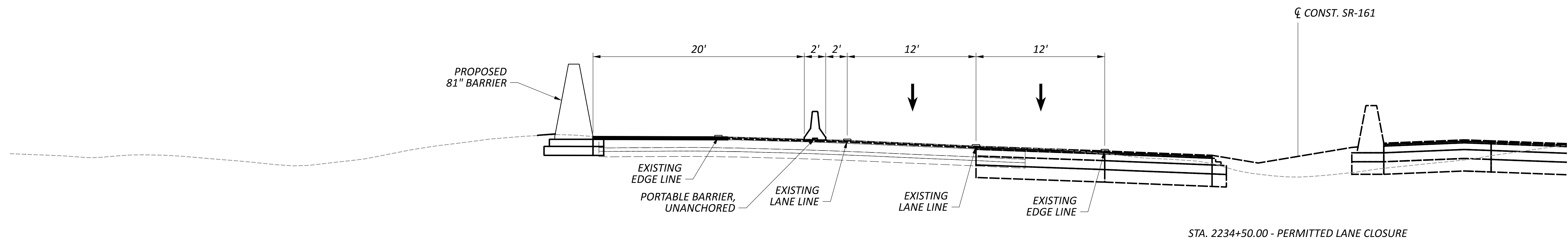
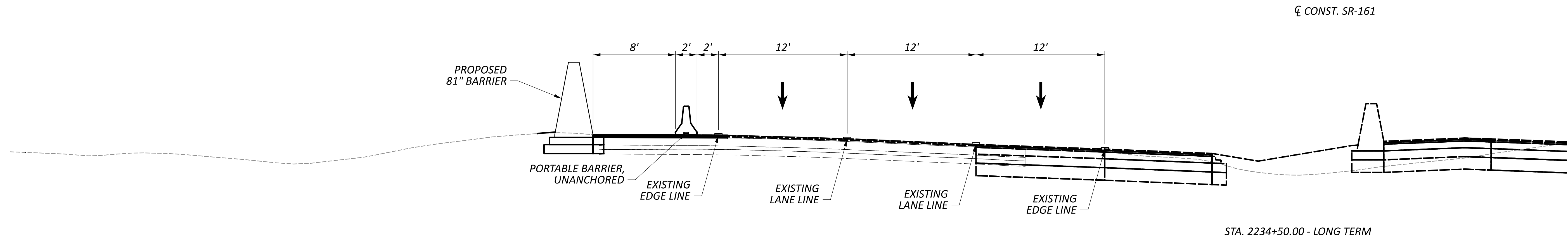
JDH 03-27-24

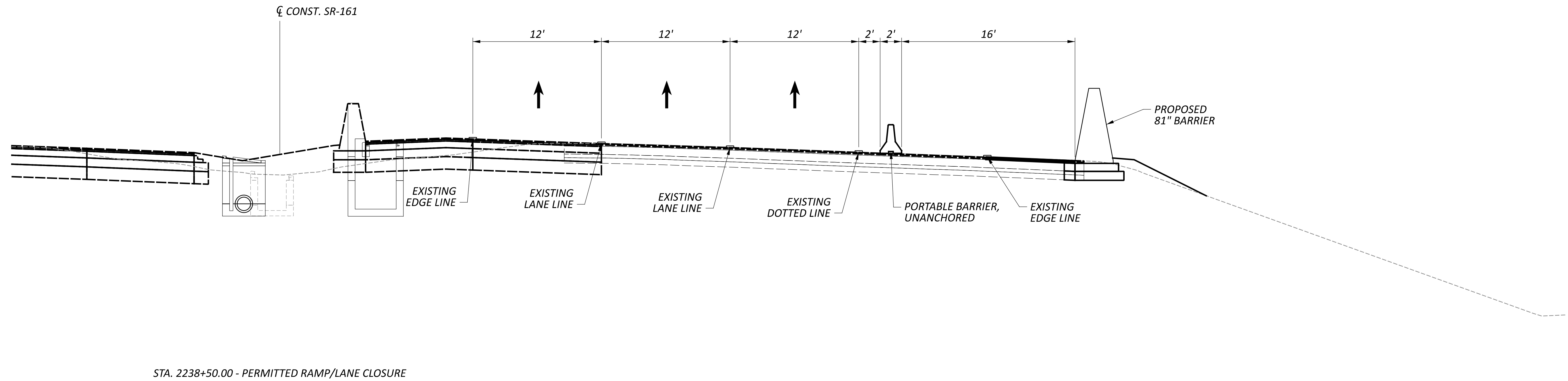
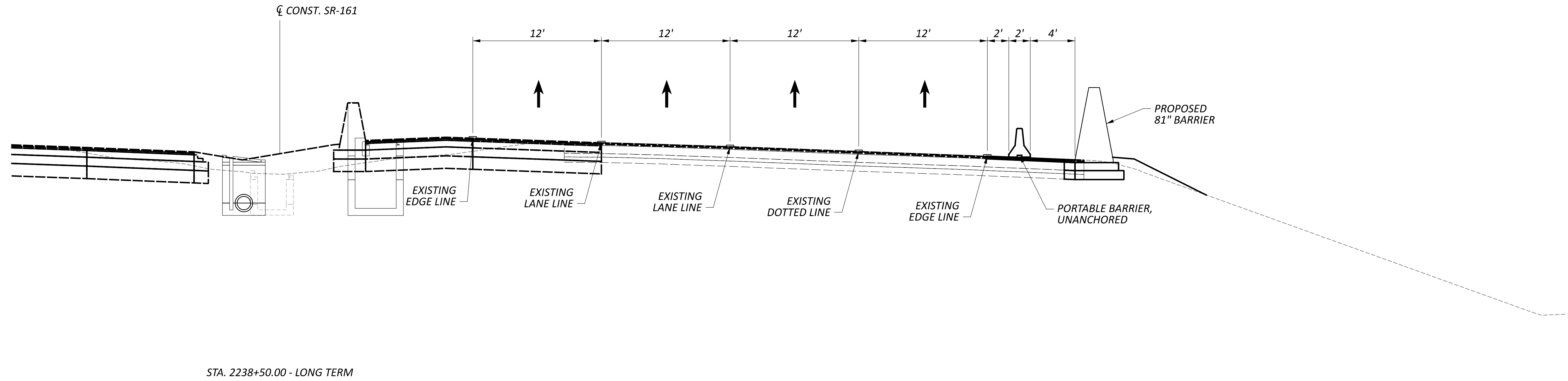
PROJECT ID

117607

SHEET TOTAL

P.21 | P.295





FRA-161-15.80 NOISE WALLS

MODEL: GG001 PAPER: SIZE: 34x22 (in.) DATE: 2024-03-27 TIME: 4:00:43 PM USER: jennifer.kelley
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SHEET NUM.							PART.			ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
P.9	P.10	P.12	P.26	P.27	P.28	P.222				EXT	TOTAL				
ROADWAY															
LS				1,262					201	11000	LS		CLEARING AND GRUBBING	P.9	
				1					202	38000	1,262	FT	GUARDRAIL REMOVED		
				3,942					202	42040	1	EACH	ANCHOR ASSEMBLY REMOVED, TYPE T		
					2,229				202	75000	3,942	FT	FENCE REMOVED		
									203	10000	2,229	CY	EXCAVATION		
					684				203	20000	684	CY	EMBANKMENT		
					67				203	98000	67	CY	ROADWAY, MISC.: TEMPORARY OVER-STEEPENED FILL		
				201					607	35000	201	FT	FENCE REMOVED AND REBUILT		
EROSION CONTROL															
1									659	00100	1	EACH	SOIL ANALYSIS TEST		
887									659	00300	887	CY	TOPSOIL		
				955					659	00590	955	SY	SEEDING AND MULCHING, CLASS 6		
7,985									659	10000	7,985	SY	SEEDING AND MULCHING		
400									659	14000	400	SY	REPAIR SEEDING AND MULCHING		
400									659	15000	400	SY	INTER-SEEDING		
1.08									659	20000	1.08	TON	COMMERCIAL FERTILIZER		
1.65									659	31000	1.65	ACRE	LIME		
45		50							659	35000	95	MGAL	WATER		
				9,090					670	00500	9,090	SY	SLOPE EROSION PROTECTION		
									832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN		
									832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS		
									832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE		
									832	30000	170,204	EACH	EROSION CONTROL		
DRAINAGE															
	10			235					601	21050	245	SY	TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT		
			2.97						602	20000	2.97	CY	CONCRETE MASONRY		
	50			9,349					605	13300	9,399	FT	6" UNCLASSIFIED PIPE UNDERDRAINS		
	50								605	31100	50	FT	AGGREGATE DRAINS		
	25			524					611	00510	549	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS		
				275					611	06100	275	FT	15" CONDUIT, TYPE C		
				92					611	06700	92	FT	15" CONDUIT, TYPE F		
	5			24					611	99710	29	EACH	PRECAST REINFORCED CONCRETE OUTLET		
PAVEMENT															
			4,822						254	01000	4,822	SY	PAVEMENT PLANING, ASPHALT CONCRETE		
			998						304	20000	998	CY	AGGREGATE BASE, 10"		
			219						407	10000	219	GAL	TACK COAT		
			760						407	20000	760	GAL	NON-TRACKING TACK COAT		
			188						442	10001	188	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN, 1.5"		
			188						442	10100	188	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446), 1.5"		
			1,803						452	12010	1,803	SY	8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P		
			1,147						452	13010	1,147	SY	9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P		
			4,401						872	10000	4,401	FT	VOID REDUCING ASPHALT MEMBRANE (VRAM)		
NOISE BARRIERS															
						4			519	11101	4	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN		
			115,234						SPECIAL	60610210	115,234	SF	NOISE BARRIER (REFLECTIVE)	P.9	
			362						606	15050	362	FT	GUARDRAIL, TYPE MGS		
			3						606	26150	3	EACH	ANCHOR ASSEMBLY, MGS TYPE E		
			4						606	35002	4	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1		
			1						606	35102	1	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2		
			108						609	24000	108	FT	CURB, TYPE 4-A		
			11						611	99500	11	EACH	INLET, MISC.: BARRIER INLET, 81" SSB	P.226	
			3,743						622	90000	3,743	FT	BARRIER, MISC.: 81" SINGLE SLOPE BARRIER	P.224	
			29						622	90000	29	FT	BARRIER, MISC.: 81" SINGLE SLOPE BARRIER END ANCHORAGE, REINFORCED	P.224	
			6						622	90200	6	EACH	BARRIER, MISC.: BARRIER DRAINAGE WINDOW SECTION	P.228	
			6						622	90200	6	EACH	BARRIER, MISC.: 81" CONCRETE BARRIER END SECTION	P.223	
	1								633	67201	1	EACH	CONTROLLER WORK PAD, AS PER PLAN	P.10	

GENERAL SUMMARY

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGH ST SUITE 100
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DESIGNER
JMK

REVIEWER
 JDH 03-27-24

PROJECT ID
117607

SHEET TOTAL
 P.24 P.295

FRA-161-15.80 NOISE WALLS

MODEL: GS002 PAPER: 34x22 (in.) DATE: 2024-03-27 TIME: 4:01:20 PM USER: jennifer.kelley
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SHEET NO.	REF. NO.	STATION		SIDE	601	605	611	611
		FROM	TO		TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT	6" UNCLASSIFIED PIPE UNDERDRAINS	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	PRECAST REINFORCED CONCRETE OUTLET
WALL 3 / BARRIER 3					SY	FT	FT	EACH
P.33	UD-1	300+00.00	302+74.00	LT	2	279	12	1
P.33 - P.34	UD-2	302+78.00	305+76.00	LT	2	298	25	1
P.34	EC-1	2135+44.37	2135+50.00	LT	2			
P.34	EC-2	2136+45.04	2136+55.04	LT	12			
	EC-3	NOT USED						
WALL 6 / BARRIER 6								
	EC-4	NOT USED						
	EC-5	NOT USED						
	EC-18	NOT USED						
	EC-6	NOT USED						
P.37	UD-3	600+00.00	602+02.00	LT	2	207	12	1
P.37 - P.38	UD-4	602+06.00	605+28.00	LT	2	322	16	1
WALL 8 / BARRIER 8								
P.39	EC-7	2190+25.79	2190+31.29	RT	24			
P.41	EC-8	805+47.00	805+57.00	LT	25			
	EC-19	NOT USED						
P.40	EC-9	2196+45.02	2196+55.02	RT	21			
P.40 - P.42	UD-5	800+00.00	809+96.00	RT	2	1001	29	1
P.42	UD-6	810+00.00	812+40.00	RT	2	240	22	1
P.42 - P.43	UD-7	812+44.00	814+48.00	RT	2	204	41	1
P.43	UD-8	814+52.00	818+08.00	RT	2	356	41	1
WALL 9								
P.44 - P.45	UD-9	900+00.00	904+34.00	LT	2	439	26	1
P.45	UD-10	904+38.00	908+42.00	LT	2	404	24	1
P.45 - P.46	UD-11	908+46.00	911+92.00	LT	2	346	22	1
P.46	UD-12	911+96.00	2231+10.24	RT	2	79	30	1
BARRIER 10								
P.47	EC-10	2229+94.60	2230+00.00	LT	6			
P.47	EC-11	2230+93.49	2231+03.31	LT	8			
P.47	EC-12	2233+88.33	2233+98.11	LT	26			
P.48	EC-13	2236+82.81	2236+92.55	LT	29			
P.49 - P.50	UD-22	1012+25.00	1015+50.00	LT		395	1	
	EC-20	NOT USED						
	EC-15	NOT USED						
WALL 11								
P.51 - P.54	UD-22	1099+95.00	1115+60.00	RT	6	1565	77	3
P.51 - P.54	EC-14		1107+90.00	LT	30			
WALL 12 / BARRIER 12								
P.55	EC-16	2233+75.29	2233+80.90	RT	4			
	EC-17	NOT USED						
P.56	UD-13	120+00.00	121+96.00	LT	2	201	10	1
P.56 - P.57	UD-14	122+00.00	124+97.00	LT	2	297	17	1
P.56 - P.57	UD-23	1200+00.00	1207+51.00	LT	2	721	1	1
WALL 15								
P.58	UD-15	1500+00.00	1502+40.00	RT	2	245	16	1
P.59	UD-16	1504+27.00	1507+03.00	RT	2	276	18	1
P.59 - P.60	UD-17	1507+07.00	1509+18.00	RT	2	211	24	1
P.60 - P.61	UD-18	1509+22.00	1514+20.00	RT	2	498	43	1
P.61	UD-19	1514+20.00	1517+33.00	RT		313		
P.61	UD-20	1517+37.00	1518+43.00	RT	2	111	6	1
P.61 - P.62	UD-21	1518+90.00	2308+61.91	RT	2	341	11	1
TOTALS					235	9,349	524	24

SHEET NO.	REF. NO.	STATION		SIDE	202	202	202	607	659	670
		FROM	TO		GUARDRAIL REMOVED	ANCHOR ASSEMBLY REMOVED, TYPE T	FENCE REMOVED	FENCE REMOVED AND REBUILT	SEEDING AND MULCHING, CLASS 6	SLOPE EROSION PROTECTION
WALL 3 / BARRIER 3					FT	EACH	FT	FT	SY	SY
P.29	VF-1	299+99.94	305+75.94	RT						1572
P.29	SM-1	3002+79.85	3003+94.48	CEN					86	
WALL 6 / BARRIER 6										
P.37 - P.38	R-1	600+00.00	605+28.00	LT			528			
P.36	R-6	2187+65.24	2189+58.43	LT	195					
P.30	VF-2	601+99.88	605+27.88	RT						935
P.30	SM-2	5999+74.18	6000+83.57	CEN					141	
WALL 8 / BARRIER 8										
P.40 - P.43	R-2	800+00.00	818+08.00	RT			1808			
P.39	R-7	7998+63.74	7999+76.24	RT	113	1				
P.30	VF-3	810+49.84	818+10.87	LT						3387
WALL 9										
P.44 - P.46	R-3	900+00.00	912+70.00	LT			1270			
P.30 - P.31	VF-4	899+99.82	911+99.82	RT						3196
BARRIER 10										
P.48 - P.49	R-8	1008+56.41	1012+83.96	LT	428					
P.31	SM-3	1010+49.68	1012+13.57	CEN					217	
WALL 11										
P.51	R-5	1099+94.42	1101+92.46	RT				201		
WALL 12 / BARRIER 12										
P.55 - P.56	R-9	1202+02.04	1207+26.90	RT	526					
P.31	SM-4	1204+13.85	1206+52.61	CEN					511	
WALL 15										
P.61 - P.62	R-4	1518+90.00	1522+26.00	RT			336			
TOTALS					1,262	1	3,942	201	955	9090

SUBSUMMARY

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DESIGNER
JMK

REVIEWER
JDH

PROJECT ID
03-27-24

SHEET TOTAL
117607

P.27 | P.295

FRA-161-15.80 NOISE WALLS

MODEL: GS002 PAPER: 34x22 (in.) DATE: 2024-03-27 TIME: 4:01:34 PM USER: jennifer.kelley
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SHEET NO.	203	203	203
	EXCAVATION	EMBANKMENT	ROADWAY, MISC.: TEMPORARY OVER- STEEPENED FILL
	CY	CY	CY
WALL 3 / 81" SSB 3			
P.63	0	0	0
P.64	0	0	0
P.65	0	0	0
P.66	0	0	0
P.67	0	0	0
P.68	0	0	0
P.69	0	0	0
P.70	20	6	0
P.71	16	14	0
P.72	29	14	0
P.73	22	8	0
P.74	14	13	0
P.75	24	22	0
WALL 6 / 81" SSB 6			
P.76	2	0	0
P.77	44	4	0
P.78	44	2	0
P.79	44	2	0
P.80	44	2	0
P.81	44	1	0
P.82	44	1	0
P.83	44	0	0
P.84	44	1	0
P.85	11	0	0
P.86	0	0	0
P.87	0	0	0
P.88	0	0	0
P.89	0	0	0
P.90	0	0	0
P.91	0	0	0
P.92	0	0	0
P.93	0	0	0
81" SSB 8 / WALL 8			
P.94			0
P.95			0
P.96			0
P.97			0
P.98			0
P.99			0
P.100			0
P.101			0
P.102			0
P.103			0
P.104			0
P.105			0
P.106			0
P.107			0
P.108			0
P.109			0
P.110			0
P.111			0
P.112			0
P.113			0
P.114			0
P.115			0
P.116			0
P.117			0
P.118			0
P.119			0
P.120			0
P.121			0
P.122			0
P.123			0
WALL 8 TOTAL	200	20	0
SUBTOTAL	690	110	0

SHEET NO.	203	203	203
	EXCAVATION	EMBANKMENT	ROADWAY, MISC.: TEMPORARY OVER- STEEPENED FILL
	CY	CY	CY
WALL 9			
P.124	0	0	0
P.125	0	0	0
P.126	0	0	0
P.127	0	0	0
P.128	0	0	0
P.129	0	0	0
P.130	0	0	0
P.131	0	0	0
P.132	0	0	0
P.133	0	0	0
P.134	0	0	0
P.135	0	0	0
P.136	0	0	0
P.137	0	0	0
P.138	0	0	0
P.139	0	0	0
81" SSB 10			
P.140	0	0	0
P.141	44	2	0
P.142	68	2	0
P.143	72	0	0
P.144	72	0	0
P.145	46	0	0
P.146	45	1	0
P.147	42	2	0
P.148	41	2	0
P.149	40	2	0
P.150	20	1	0
P.151	39	4	0
P.152	39	3	0
P.153	48	2	0
P.154	58	3	0
P.155	71	4	0
P.156	33	1	0
WALL 11			
P.140	0	0	0
P.141	0	0	0
P.142	0	0	0
P.143	0	0	0
P.144	0	0	0
P.145	0	0	0
P.146	0	0	0
P.147	0	0	0
P.148	0	0	0
P.149	0	0	0
P.150	0	0	0
P.151	0	0	0
P.152	0	0	0
P.153	0	0	0
P.154	0	0	0
P.155	0	0	0
P.156	0	0	0
SUBTOTAL	778	29	0

SHEET NO.	203	203	203
	EXCAVATION	EMBANKMENT	ROADWAY, MISC.: TEMPORARY OVER- STEEPENED FILL
	CY	CY	CY
81" SSB 12 / WALL 12			
P.174	72	11	0
P.175	81	9	0
P.176	62	4	0
P.177	44	5	0
P.178	88	74	14
P.179	180	200	27
P.180	160	180	22
P.181	74	62	4
P.182	0	0	0
P.183	0	0	0
P.184	0	0	0
P.185	0	0	0
P.186	0	0	0
P.187	0	0	0
P.188	0	0	0
P.189	0	0	0
WALL 15			
P.190	0	0	0
P.191	0	0	0
P.192	0	0	0
P.193	0	0	0
P.194	0	0	0
P.195	0	0	0
P.196	0	0	0
P.197	0	0	0
P.198	0	0	0
P.199	0	0	0
P.200	0	0	0
P.201	0	0	0
P.202	0	0	0
P.203	0	0	0
P.204	0	0	0
P.205	0	0	0
P.206	0	0	0
P.207	0	0	0
P.208	0	0	0
P.209	0	0	0
P.210	0	0	0
P.211	0	0	0
P.212	0	0	0
P.213	0	0	0
SUBTOTAL	761	545	67
TOTAL CARRIED TO GENERAL SUMMARY	2,229	684	67

SUBSUMMARY

DESIGN AGENCY
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DESIGNER
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REVIEWER
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PROJECT ID
03-27-24

SHEET
117607

TOTAL
P.28 P.295

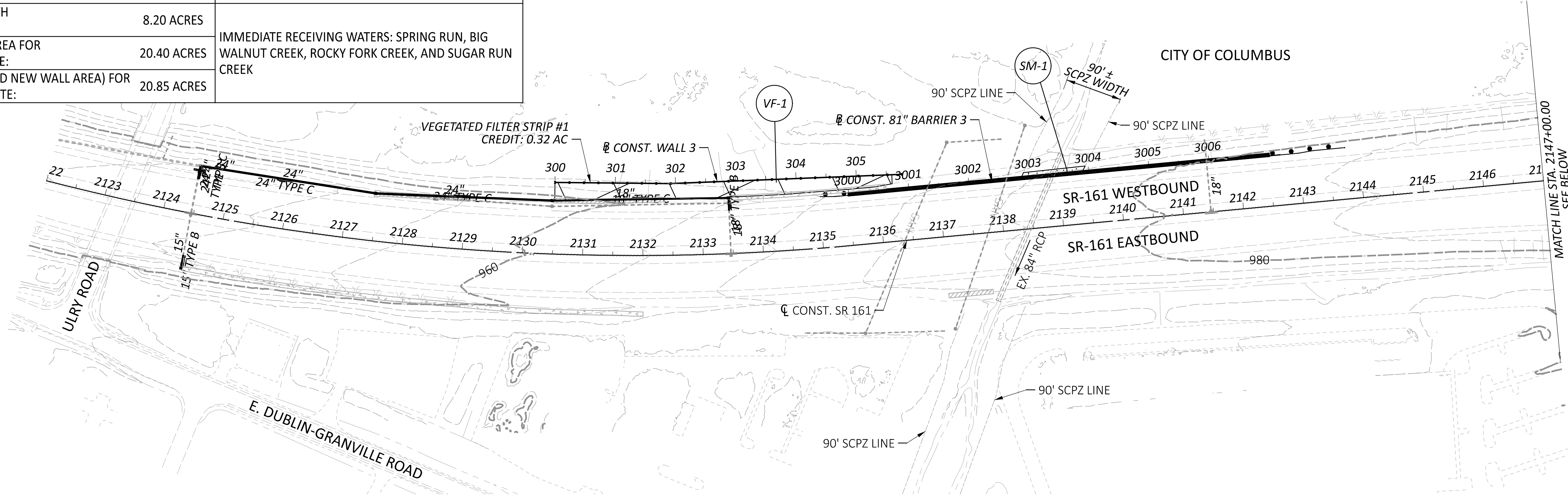
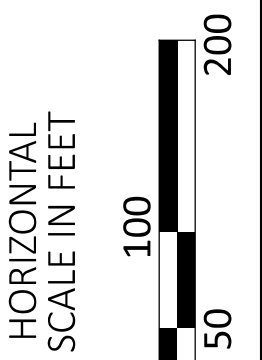
FRA-161-15.80 NOISE WALLS

MODEL: CLP_SR161 - Plan 1 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-27 TIME: 9:18:38 AM USER: jennifer.kelley
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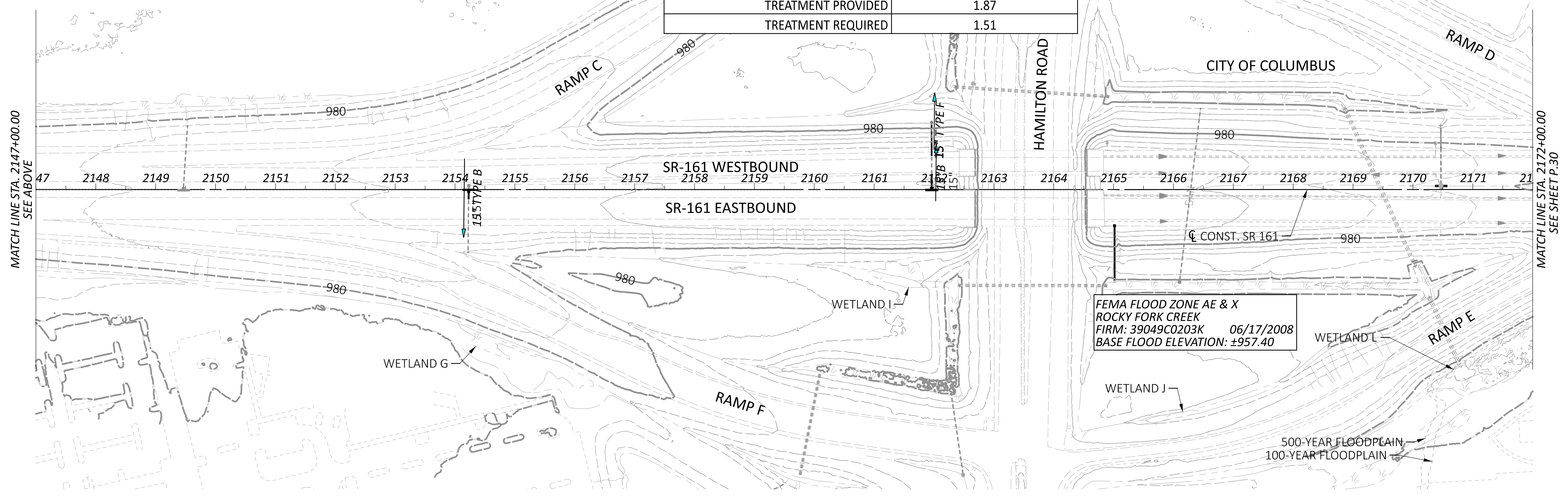
PROJECT DATA			
TOTAL AREA (RIGHT-OF-WAY):	42.77 ACRES	RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE:	0.56
PROJECT EARTH DISTURBED AREA:	7.95 ACRES	RUNOFF COEFFICIENT FOR POST-CONSTRUCTION SITE:	0.58
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.25 ACRES	POST CONSTRUCTION BMP: VEGETATED FILTER STRIPS	
NOTICE OF INTENT EARTH DISTURBED AREA:	8.20 ACRES	IMMEDIATE RECEIVING WATERS: SPRING RUN, BIG WALNUT CREEK, ROCKY FORK CREEK, AND SUGAR RUN CREEK	
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE:	20.40 ACRES		
IMPERVIOUS (PAVED AND NEW WALL AREA) FOR POST-CONSTRUCTION SITE:	20.85 ACRES		

USGS MAPS:
 NORTHEAST COLUMBUS, OH TNM GEOSPATIAL
 NEW ALBANY, OH TNM GEOSPATIAL
 LATITUDE: 40° 07' 08"
 LONGITUDE: 82° 52' 59" W
 *LATITUDE AND LONGITUDE TO APPROX. CENTER OF PROJECT

PROJECT DESCRIPTION
 INSTALLATION OF 8,422 FEET OF NOISE WALL AND 4,836 FEET OF 81" SINGLE SLOPE BARRIER AT VARIOUS LOCATIONS ALONG STATE ROUTE 161 BETWEEN ULRY ROAD AND US 62. THIS PROJECT SUPPLEMENTS THE FRA-161-15.80 WIDENING PROJECT.



Maintenance Ownership	BMP TYPE	NORTHING		EASTING		BMP WIDTH	EDA TREATMENT CREDIT
		BEGIN	END	BEGIN	END		
ODOT	VEGETATED FILTER STRIP 1	612181.7892	612385.2908	229916.4923	230437.1461	15' MIN.	0.32
ODOT	VEGETATED FILTER STRIP 2	614971.5085	615112.1153	235908.4312	236204.7643	24' MIN.	0.19
ODOT	VEGETATED FILTER STRIP 3	615276.6007	615588.5647	237036.7344	237726.4929	23' MIN.	0.70
ODOT	VEGETATED FILTER STRIP 4	615909.0762	237882.0507	616316.8878	239006.7099	21' MIN.	0.66
TREATMENT PROVIDED							1.87
TREATMENT REQUIRED							1.51



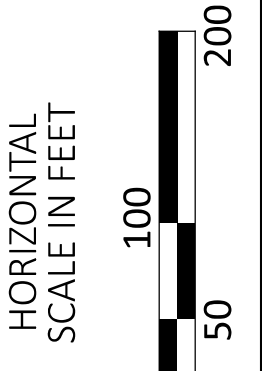
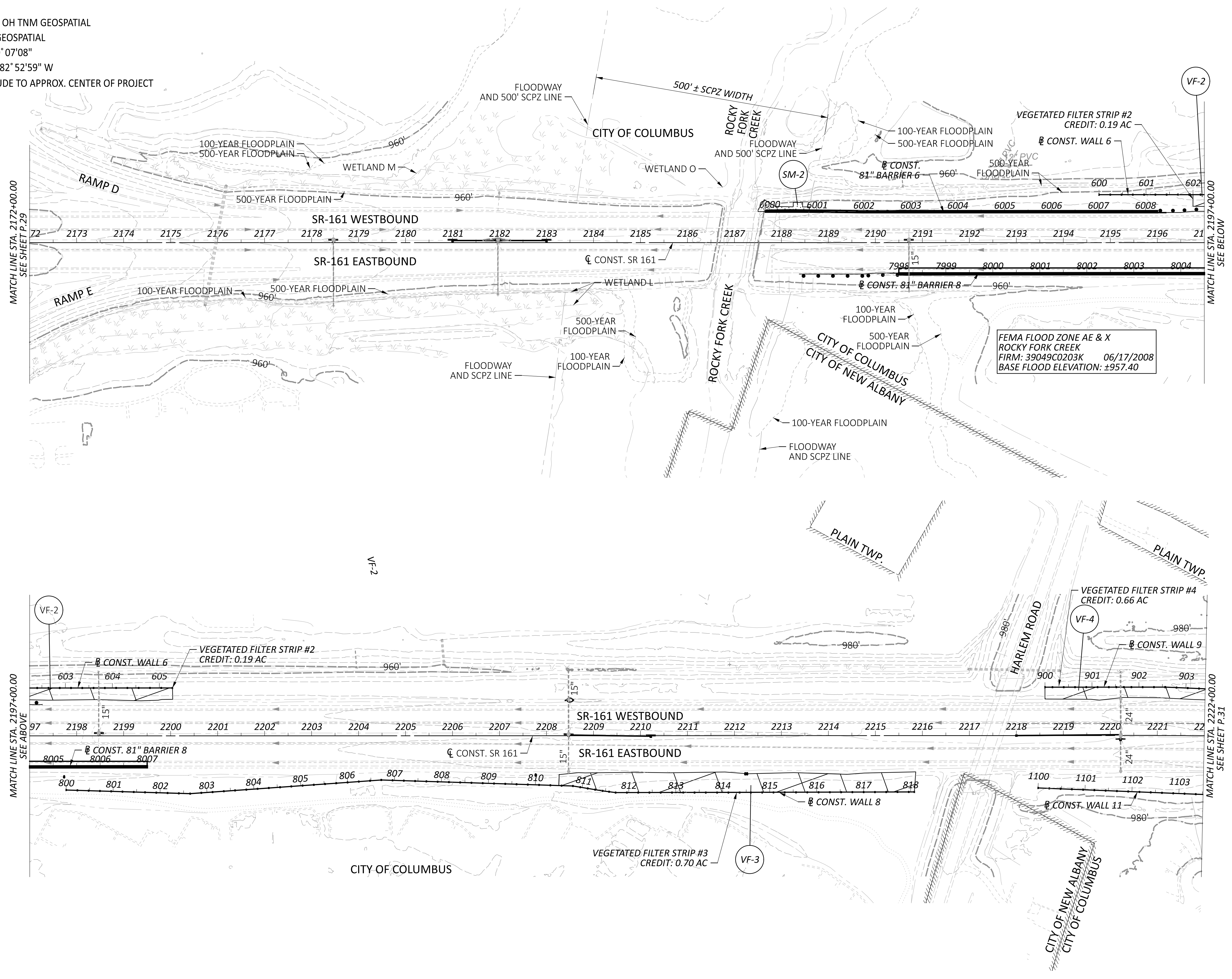
PROJECT SITE PLAN
 STA. 2122+00.00 TO STA. 2172+00.00

DESIGN AGENCY	ARCADIS
DESIGNER	JMK
REVIEWER	JDK
PROJECT ID	117607
SHEET	P.29
TOTAL	P.295

FRA-161-15.80 NOISE WALLS

MODEL: CLP_SR161 - Plan 3 [Sheet] PAPER: 34x22 (in.) DATE: 2024-03-27 TIME: 9:18:51 AM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Drainage\Sheets\117607_DE001.dgn

USGS MAPS:
 NORTHEAST COLUMBUS, OH TNM GEOSPATIAL
 NEW ALBANY, OH TNM GEOSPATIAL
 LATITUDE: 40° 07'08"
 LONGITUDE: 82° 52'59" W
 *LATITUDE AND LONGITUDE TO APPROX. CENTER OF PROJECT



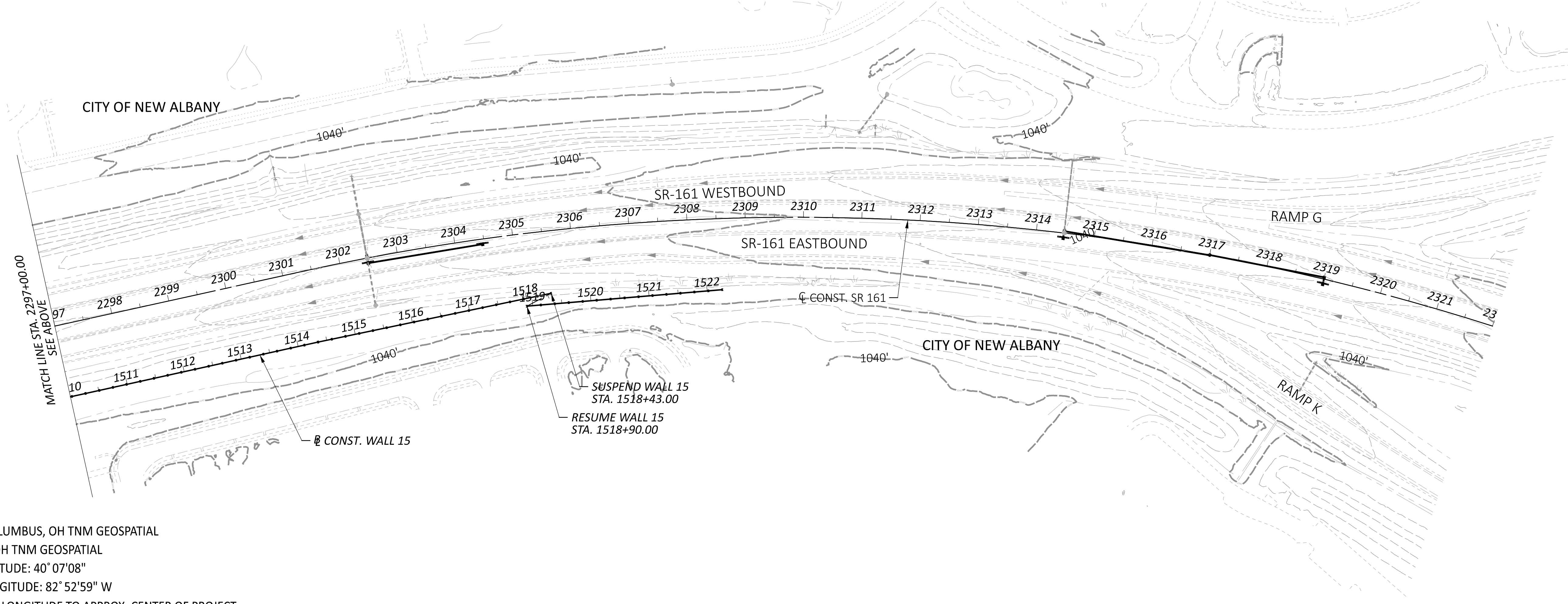
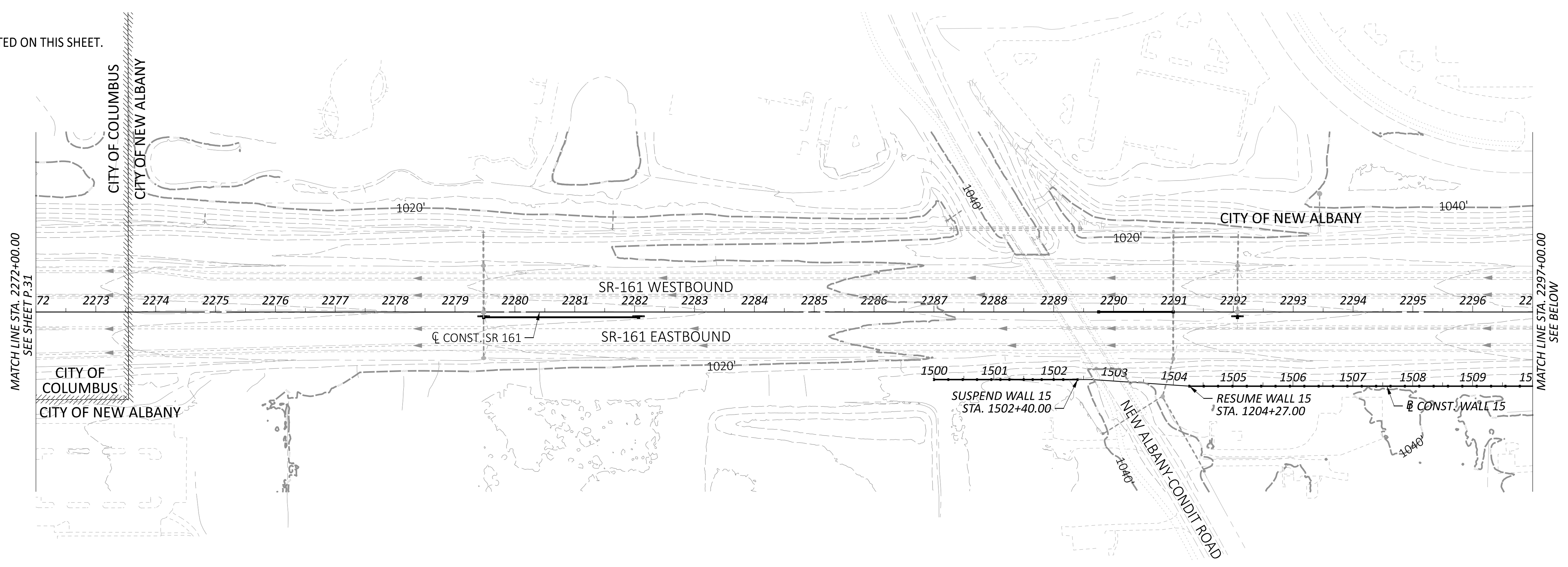
PROJECT SITE PLAN
 STA. 2172+00.00 TO STA. 2222+00.00

DESIGN AGENCY	
ARCADIS	8101 NORTH HIGHWAY 100 COLUMBUS, OH 43240 614.810.4900 www.arcadis.com
DESIGNER	
JMK	
REVIEWER	
JDH 03-27-24	
PROJECT ID	
117607	
SHEET	TOTAL
P.30	P.295

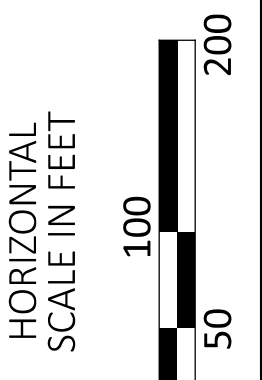
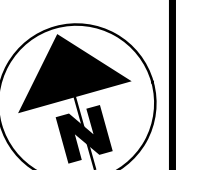
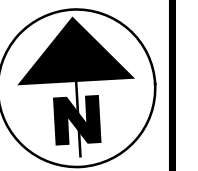
FRA-161-15.80 NOISE WALLS

MODEL: CLP_SR161 - Plan 7 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-27 TIME: 9:19:01 AM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Drainage\Sheets\117607_DE001.dgn

NOTE:
 NO BMPs ARE LOCATED ON THIS SHEET.



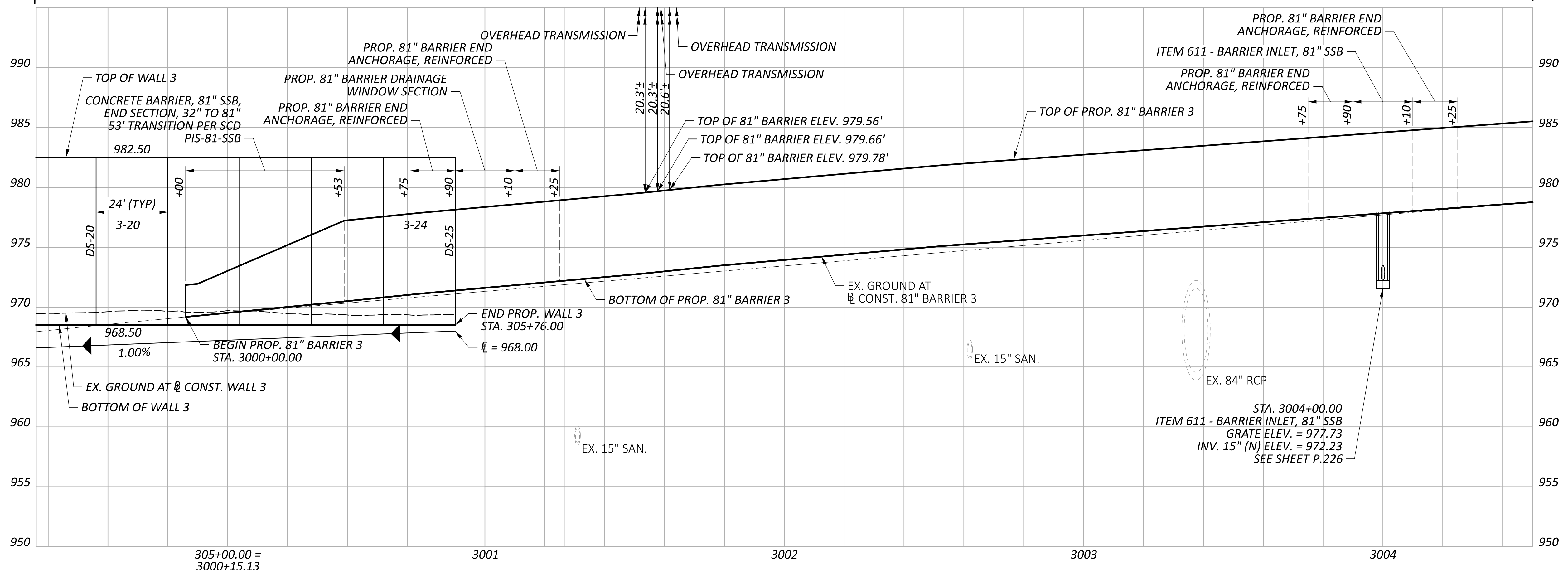
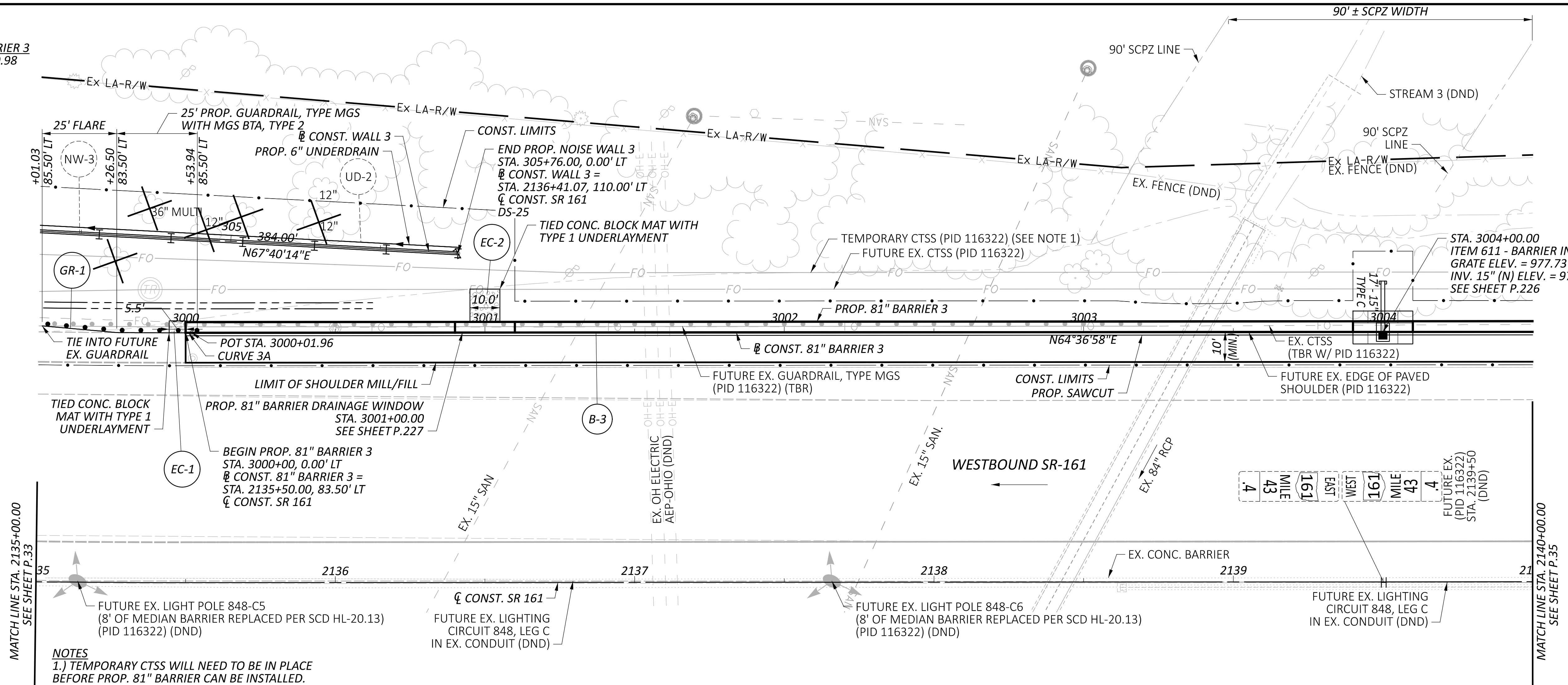
USGS MAPS:
 NORTHEAST COLUMBUS, OH TNM GEOSPATIAL
 NEW ALBANY, OH TNM GEOSPATIAL
 LATITUDE: 40° 07'08"
 LONGITUDE: 82° 52'59" W
 *LATITUDE AND LONGITUDE TO APPROX. CENTER OF PROJECT



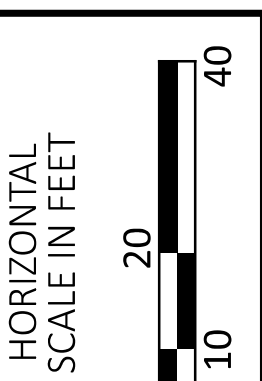
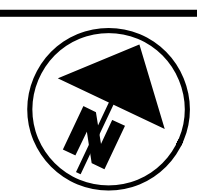
PROJECT SITE PLAN
 STA. 2272+00.00 TO STA. 2322+00.00

DESIGN AGENCY	
ARCADIS <small>8101 NORTH HIGHWAY 32, SUITE 100 COLUMBUS, OH 43240 (614) 871-4900 www.arcadis.com</small>	
DESIGNER	
JMK	
REVIEWER	
JDH 03-27-24	
PROJECT ID	
117607	
SHEET	TOTAL
P.32	P.295

3A CURVE DATA
 Ø CONST. 81" BARRIER 3
 P.I. = STA. 3000+00.98
 Δ = 00°01'46" LT
 Dc = 01°29'57"
 R = 3,822.15'
 T = 0.98'
 L = 1.96'
 E = 0.00'

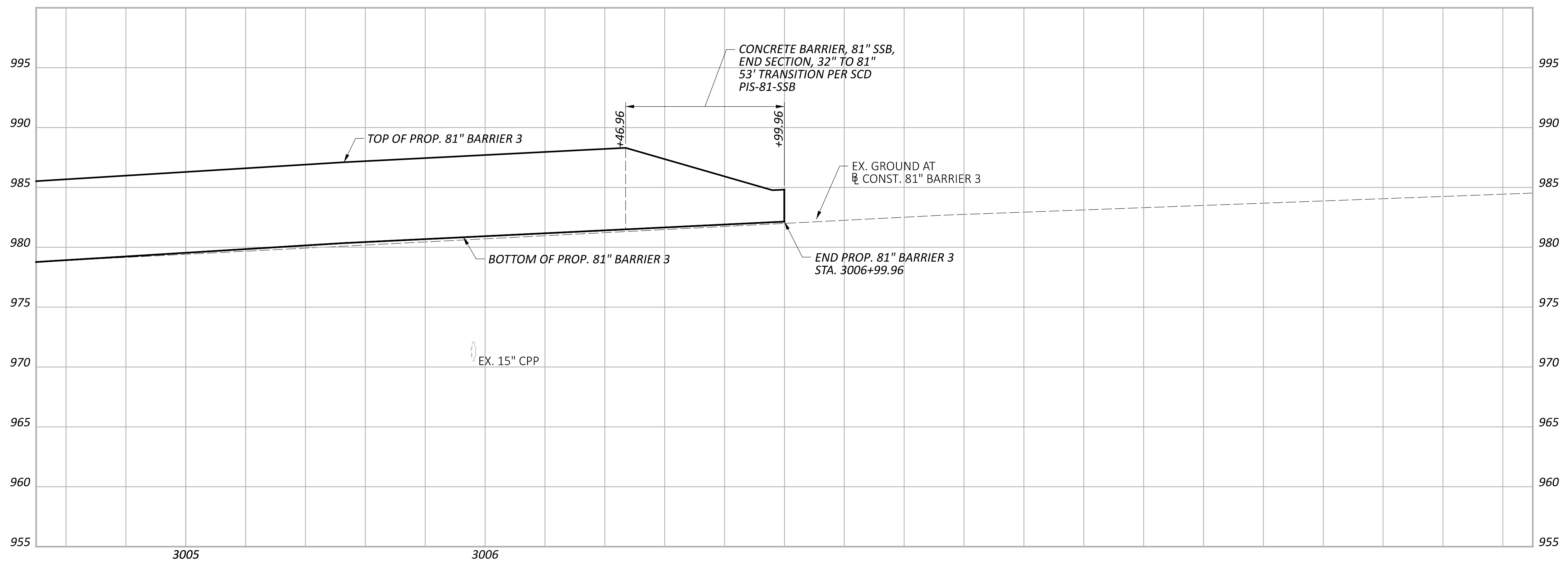
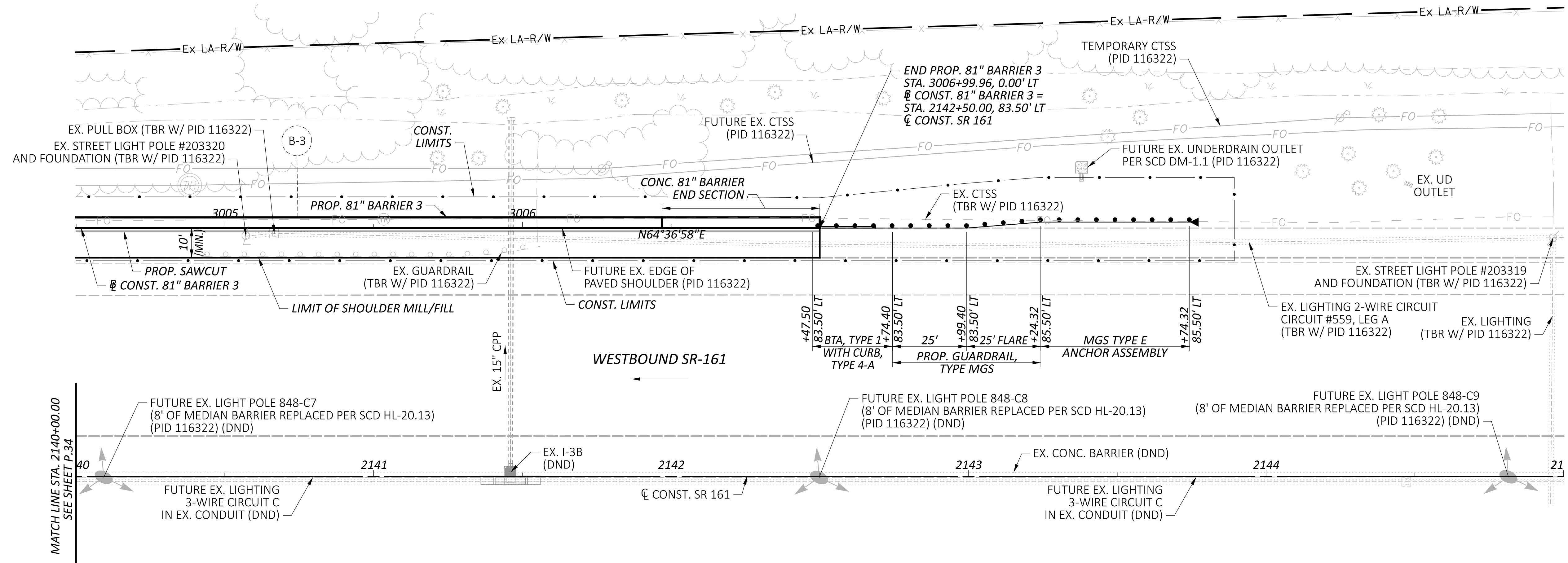
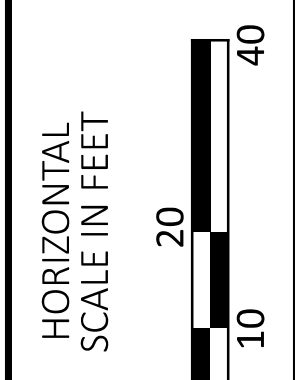
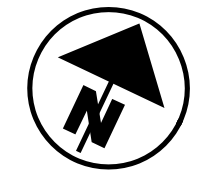


NOTES
 1.) TEMPORARY CTSS WILL NEED TO BE IN PLACE BEFORE PROP. 81" BARRIER CAN BE INSTALLED.



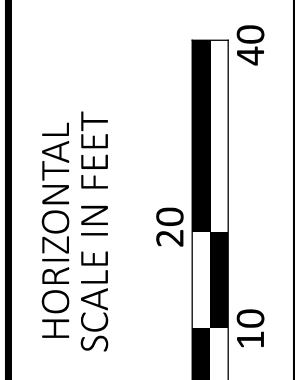
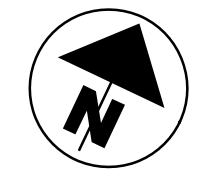
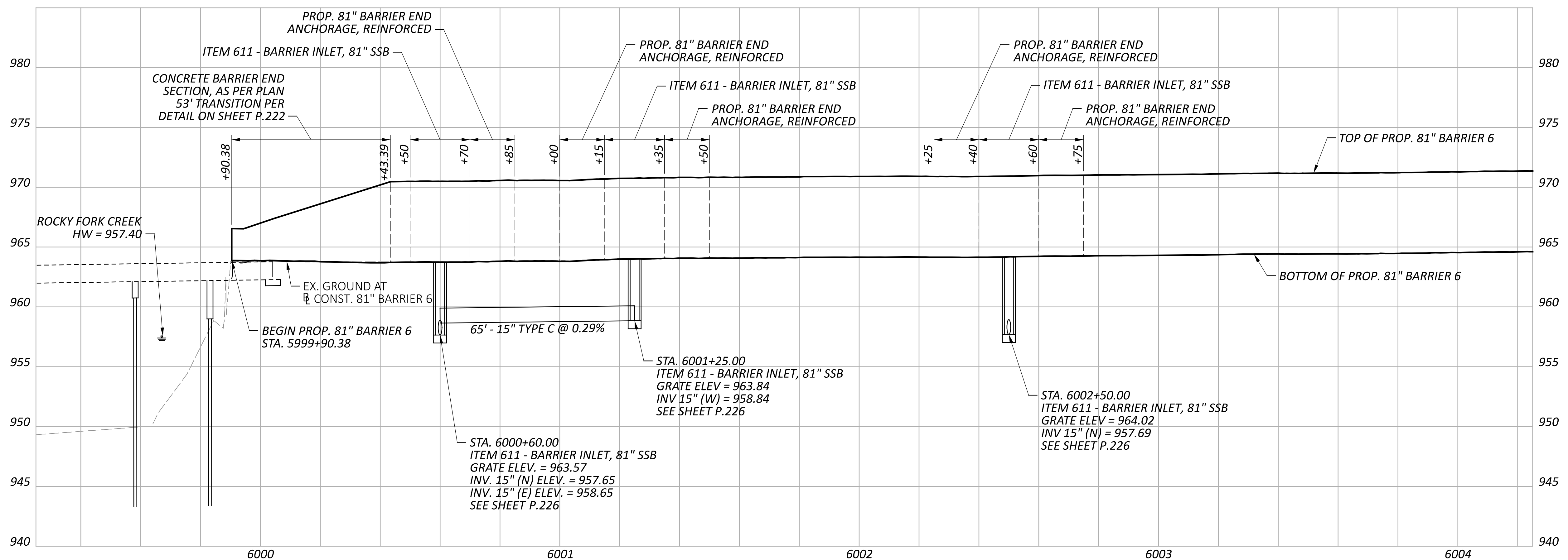
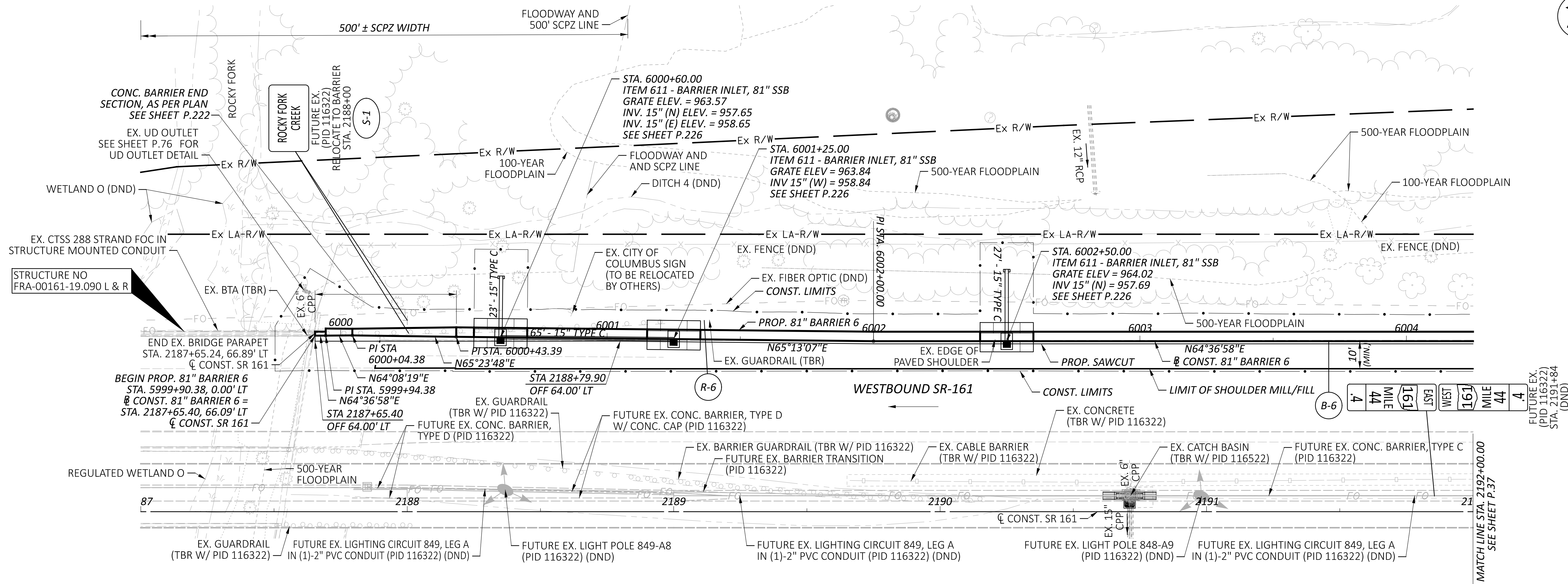
PLAN & PROFILE - WALL 3 / 81" BARRIER 3
 STA. 2135+00.00 TO STA. 2140+00.00

DESIGN AGENCY	
8101 NORTH HIGHWAY 200 SUITE 100 COLUMBIANA, OHIO 43025 614.874.4900 www.arcadis.com	
DESIGNER	
JMK	
REVIEWER	
JDH 03-27-24	
PROJECT ID	
117607	
SHEET	TOTAL
P.34	P.295



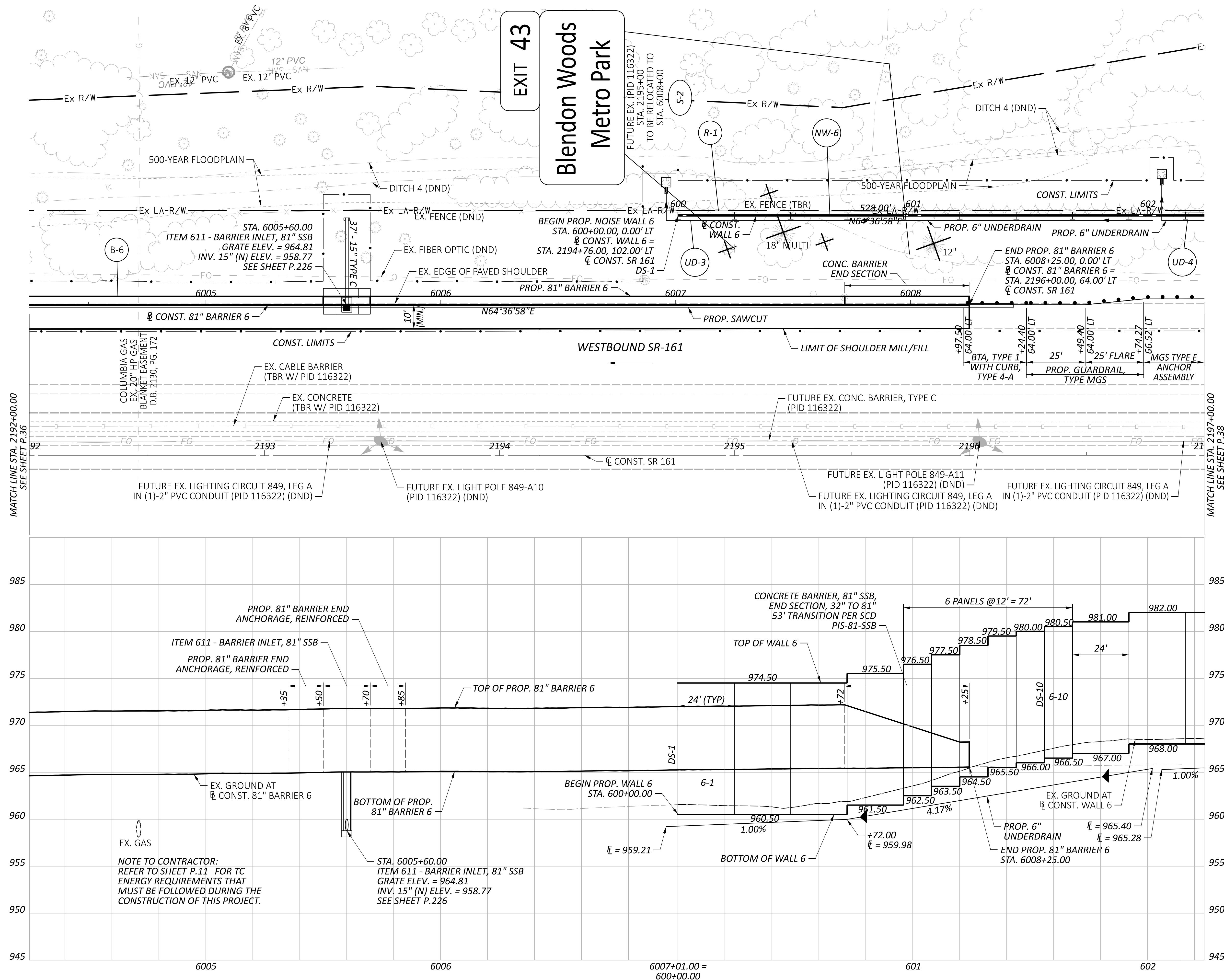
**PLAN & PROFILE - 81" BARRIER 3
 STA. 2140+00.00 TO STA. 2145+00.00**

DESIGN AGENCY	
ARCADIS	8101 NORTH HIGGINS SITE 100 COLUMBIA, MO 65203 616.448.4900 www.arcadis.com
DESIGNER	
JMK	
REVIEWER	
JDH 03-27-24	
PROJECT ID	
117607	
SHEET	TOTAL
P.35	P.295

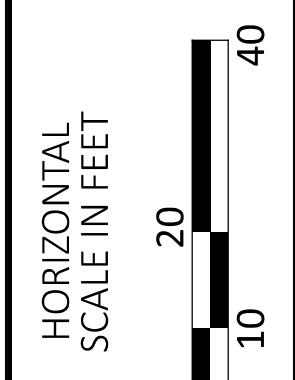
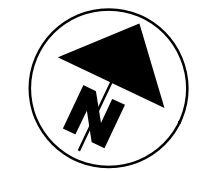


PLAN & PROFILE - 81" BARRIER 6
 STA. 2187+00.00 TO STA. 2192+00.00

DESIGN AGENCY	
8101 NORTH HIGGINS AVE SUITE 100 COLUMBIA, MO 65203 646.441.4900 www.arcadis.com	
DESIGNER	
JMK	
REVIEWER	
JDH 03-27-24	
PROJECT ID	
117607	
SHEET	TOTAL
P.36	P.295



EXIT 43
Blendon Woods Metro Park



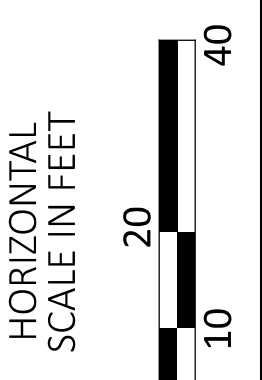
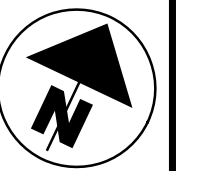
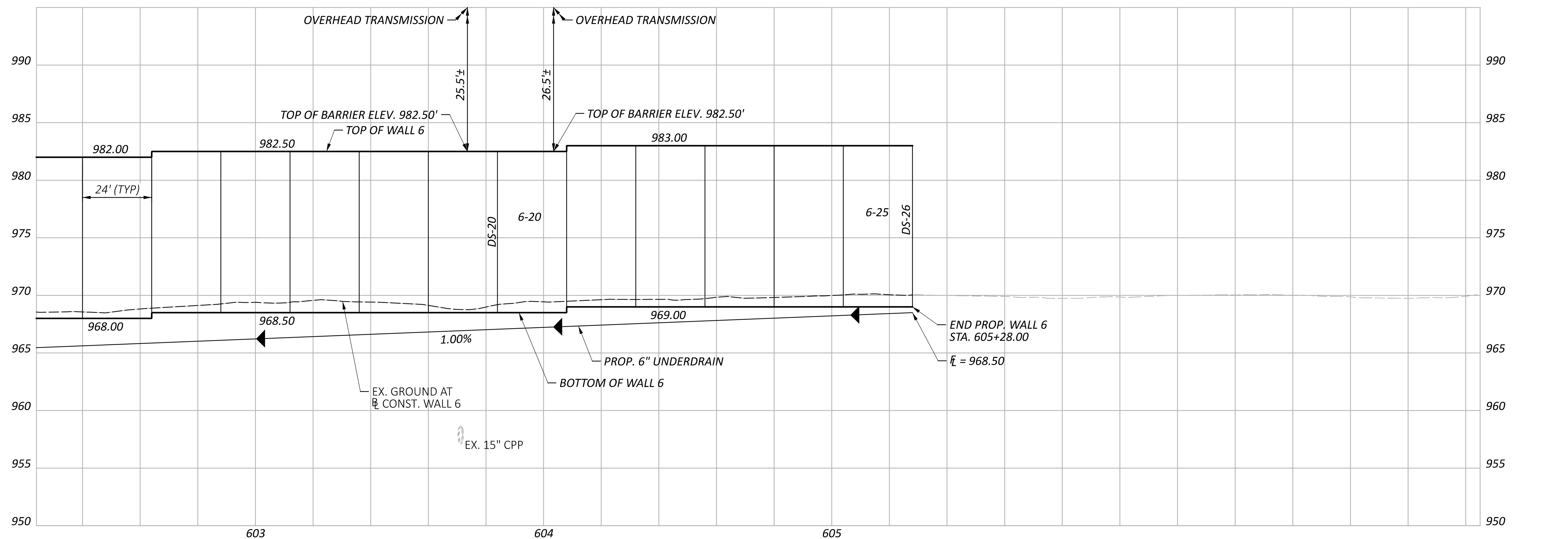
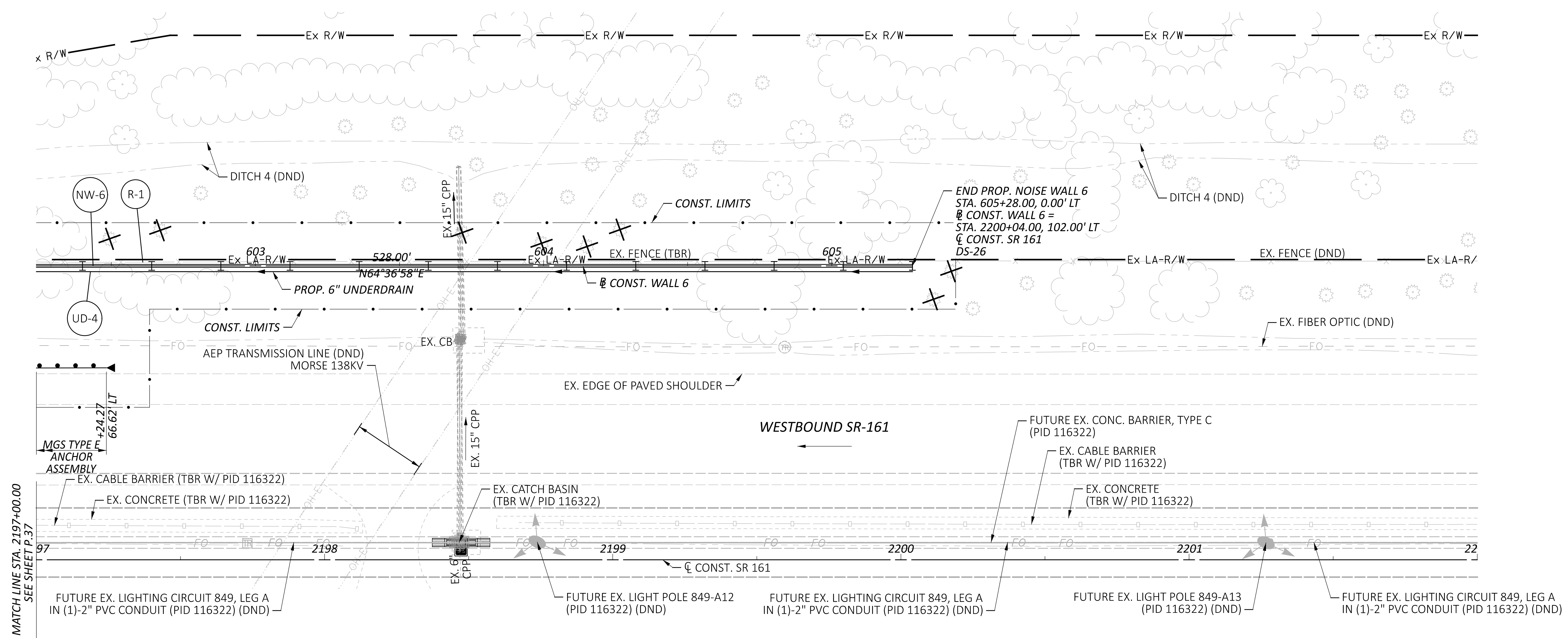
PLAN & PROFILE - 81" BARRIER 6 / WALL 6
STA. 2192+00.00 TO STA. 2197+00.00

DESIGN AGENCY	
ARCADIS	
8101 NORTH HIGGINS AVE. SUITE 100 COLUMBIA, MD 21046-3225 410.484.8149 www.arcadis.com	
DESIGNER	
JMK	
REVIEWER	
JDH 03-27-24	
PROJECT ID	
117607	
SHEET	TOTAL
P.37	P.295

NOTE TO CONTRACTOR:
 REFER TO SHEET P.11 FOR TC
 ENERGY REQUIREMENTS THAT
 MUST BE FOLLOWED DURING THE
 CONSTRUCTION OF THIS PROJECT.

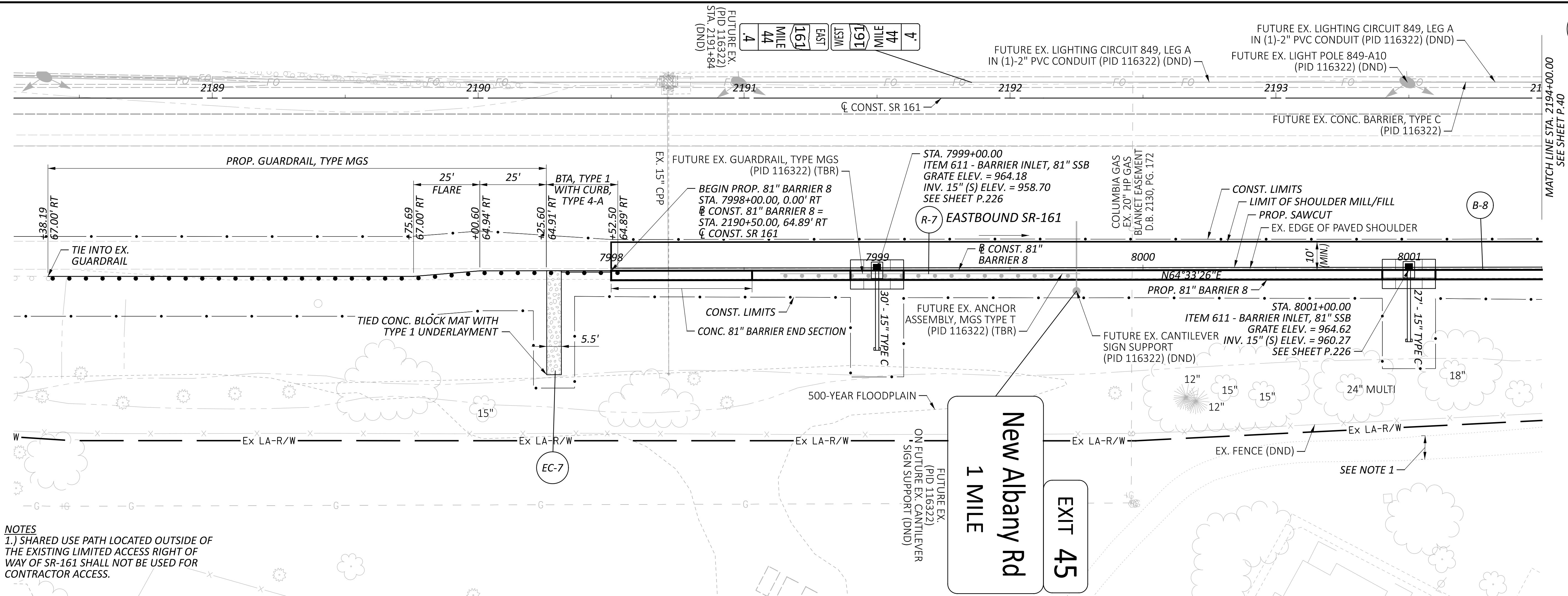
FRA-161-15.80 NOISE WALLS

MODEL: Wall 6 - Plan 28 PAPER/SCALE: 34x22 (in.) DATE: 2024-03-25 TIME: 10:21:04 PM USER: jennifer.kelley
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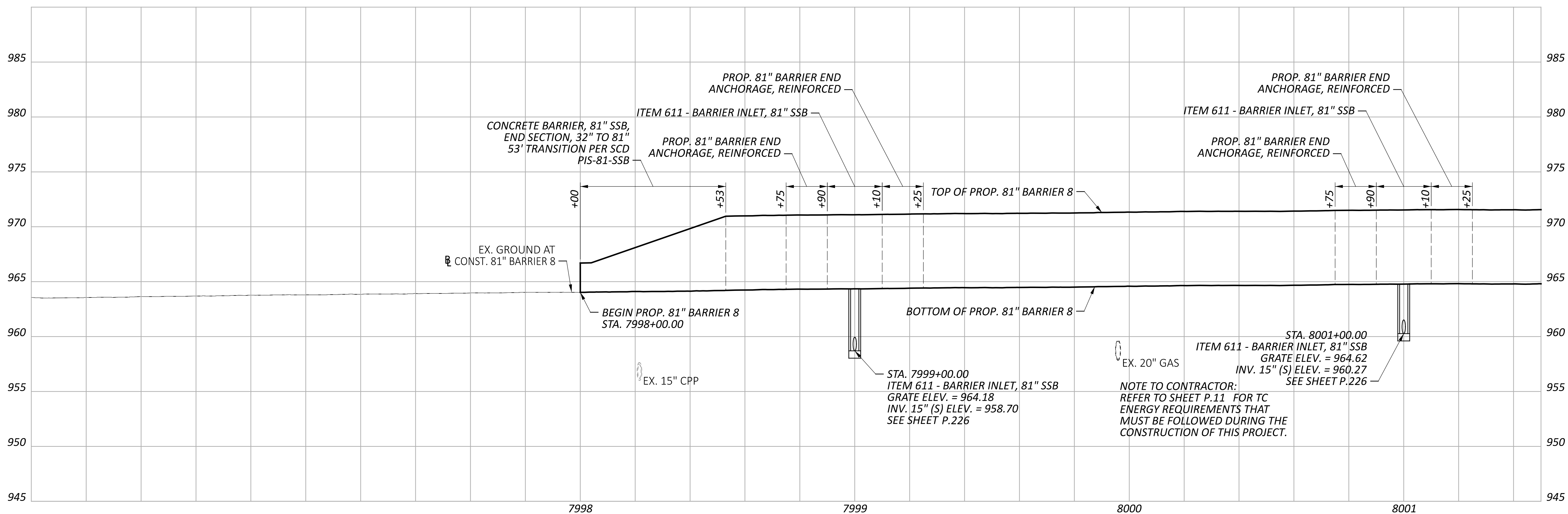


**PLAN & PROFILE - WALL 6
 STA. 2197+00.00 TO STA. 2202+00.00**

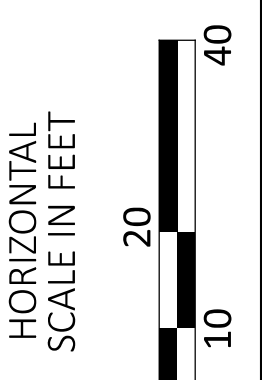
DESIGN AGENCY	
ARCADIS <small>8101 NORTH HIGHWAY 34, SUITE 100 COLUMBIA, MO 65203 TEL: (646) 810-4900 www.arcadis.com</small>	
DESIGNER	
JMK	
REVIEWER	
JDH 03-27-24	
PROJECT ID	
117607	
SHEET	TOTAL
P.38	P.295



NOTES
 1.) SHARED USE PATH LOCATED OUTSIDE OF THE EXISTING LIMITED ACCESS RIGHT OF WAY OF SR-161 SHALL NOT BE USED FOR CONTRACTOR ACCESS.

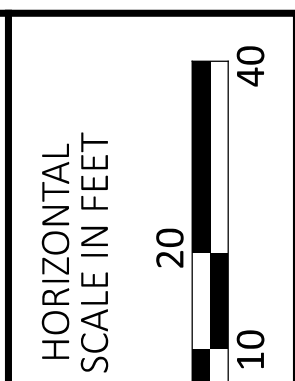
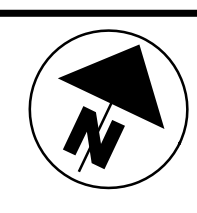
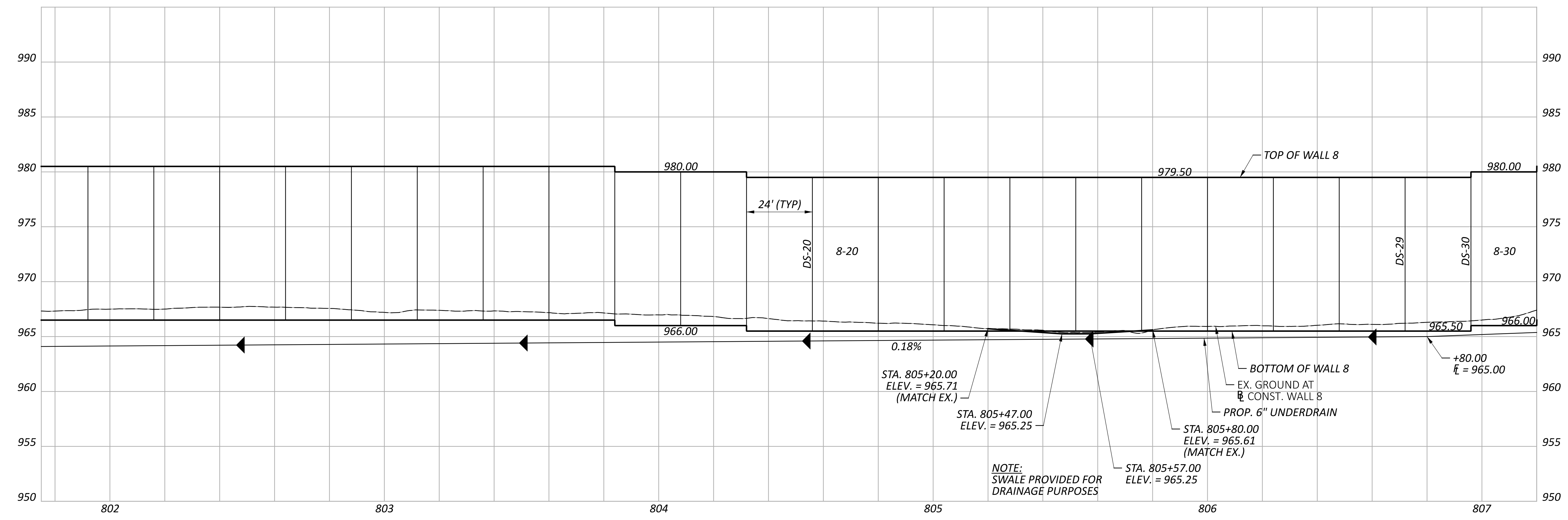
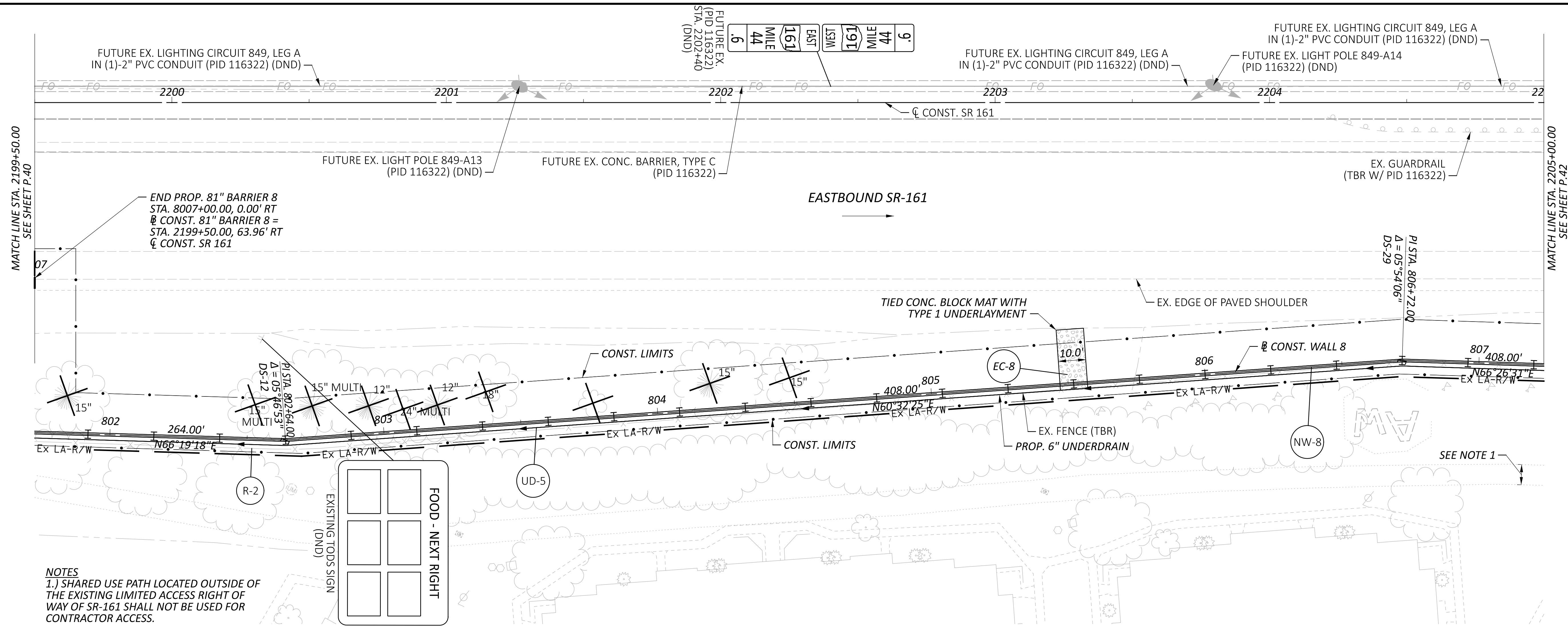


NOTE TO CONTRACTOR:
 REFER TO SHEET P.11 FOR TC ENERGY REQUIREMENTS THAT MUST BE FOLLOWED DURING THE CONSTRUCTION OF THIS PROJECT.



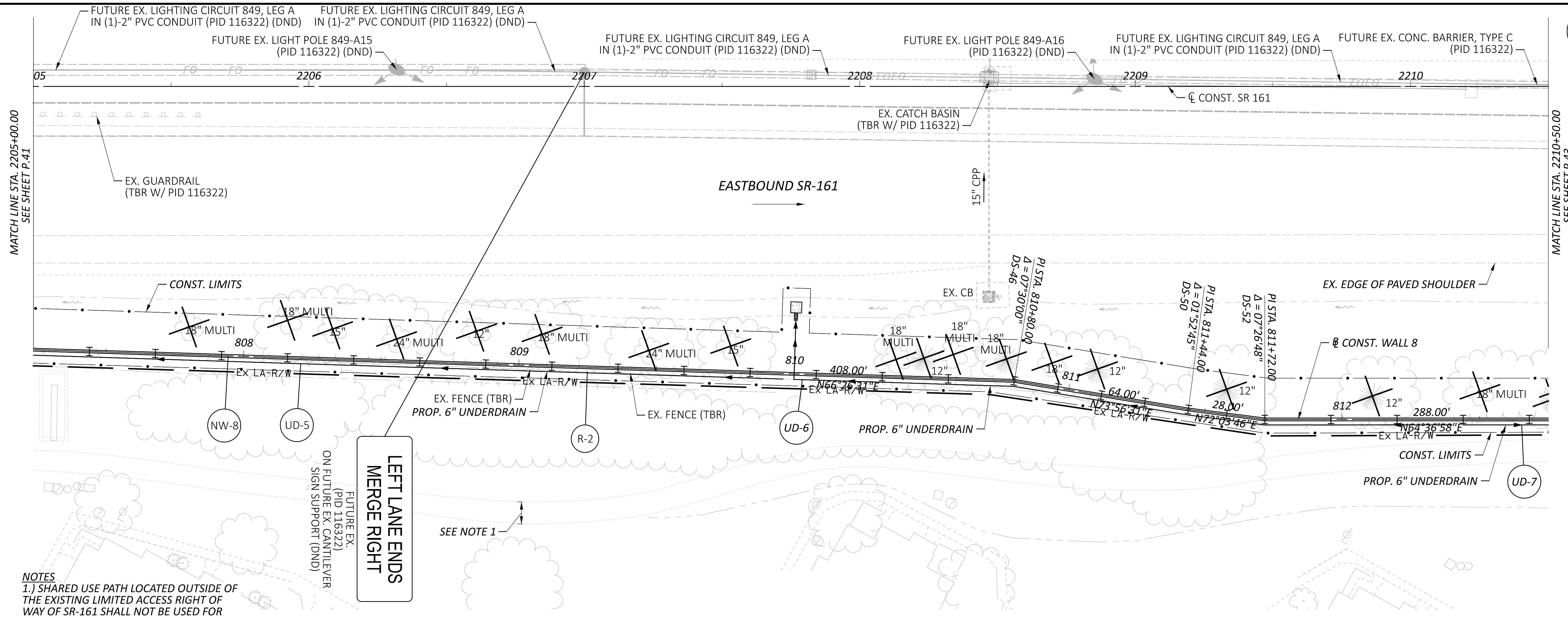
**PLAN & PROFILE - 81" BARRIER 8
 STA. 2188+00.00 TO STA. 2194+00.00**

DESIGN AGENCY	
ARCADIS <small>8101 NORTH HIGGINS AVE. SUITE 100 COLUMBIA, MO 65203 (646) 814-4900 www.arcadis.com</small>	
DESIGNER	
JMK	
REVIEWER	
JDH 03-27-24	
PROJECT ID	
117607	
SHEET	TOTAL
P.39	P.295



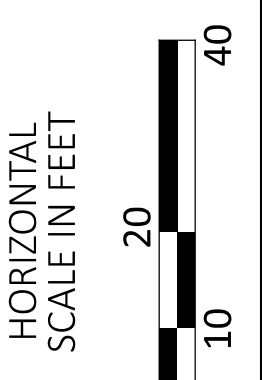
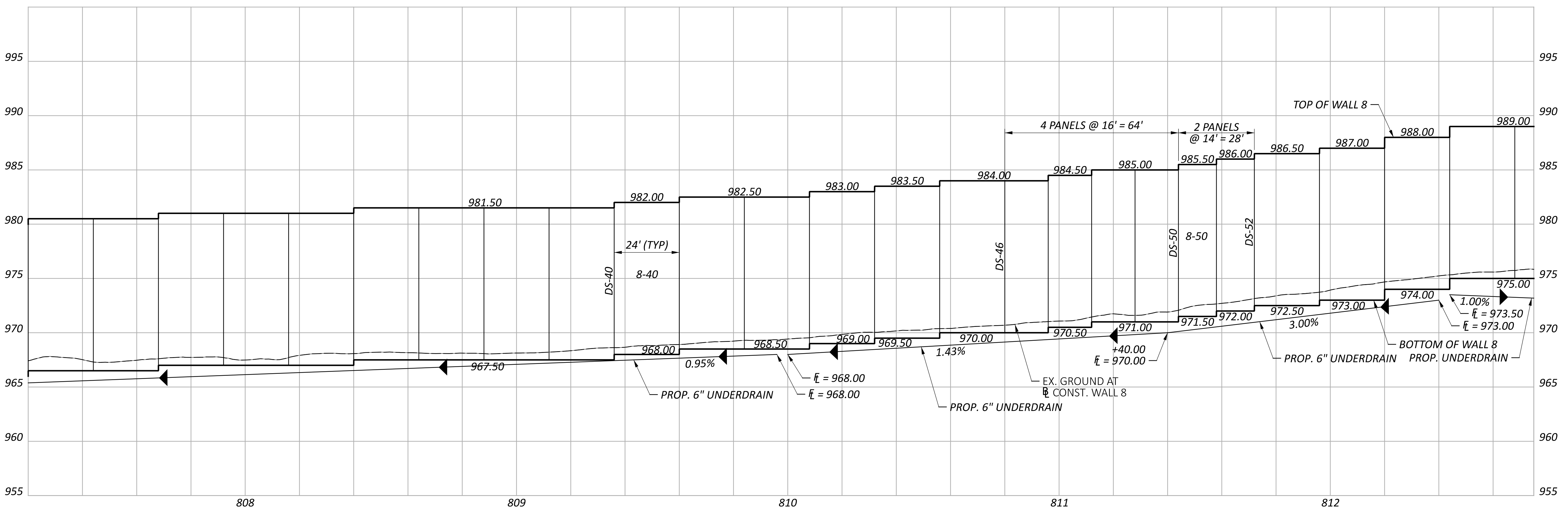
PLAN & PROFILE - WALL 8
 STA. 2199+50.00 TO STA. 2205+00.00

DESIGN AGENCY	
ARCADIS	
8101 NORTH HIGHWAY 200, SUITE 100 COLUMBIA, SC 29223 PH: (803) 791-4900 WWW.ARCADIS.COM	
DESIGNER	
JMK	
REVIEWER	
JDH 03-27-24	
PROJECT ID	
117607	
SHEET	TOTAL
P.41	P.295



NOTES
 1.) SHARED USE PATH LOCATED OUTSIDE OF THE EXISTING LIMITED ACCESS RIGHT OF WAY OF SR-161 SHALL NOT BE USED FOR CONTRACTOR ACCESS.

LEFT LANE ENDS
 MERGE RIGHT

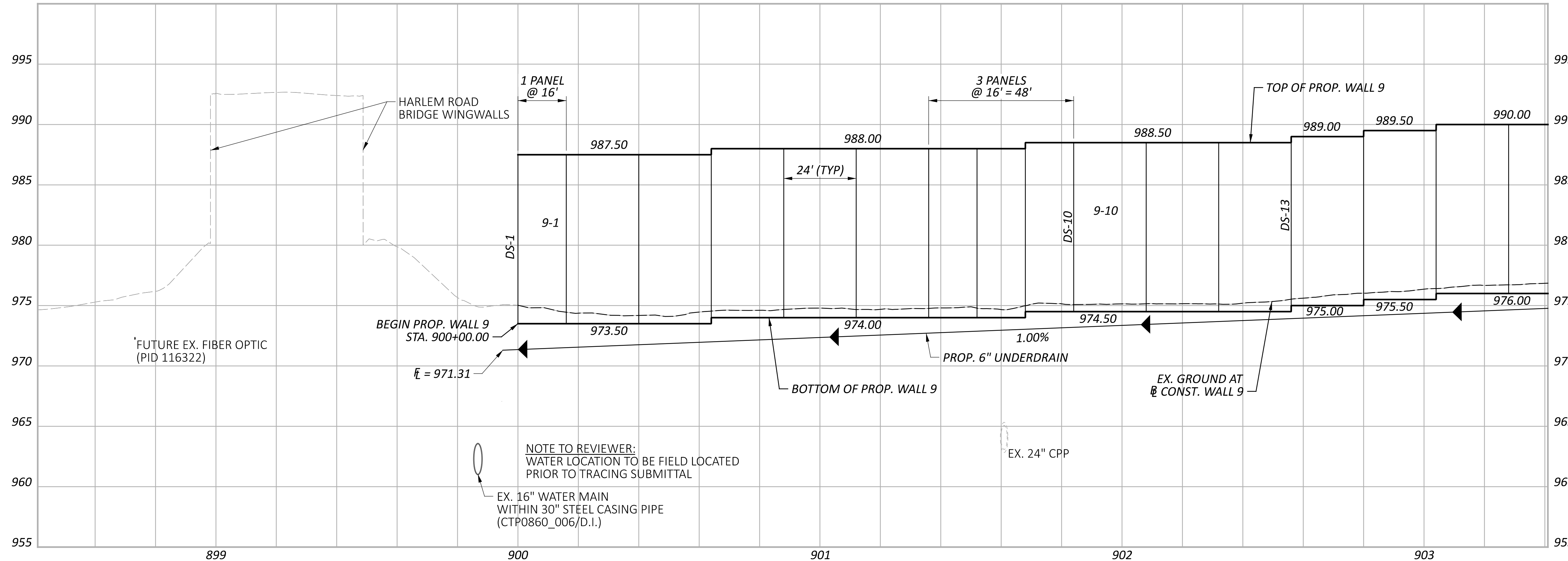
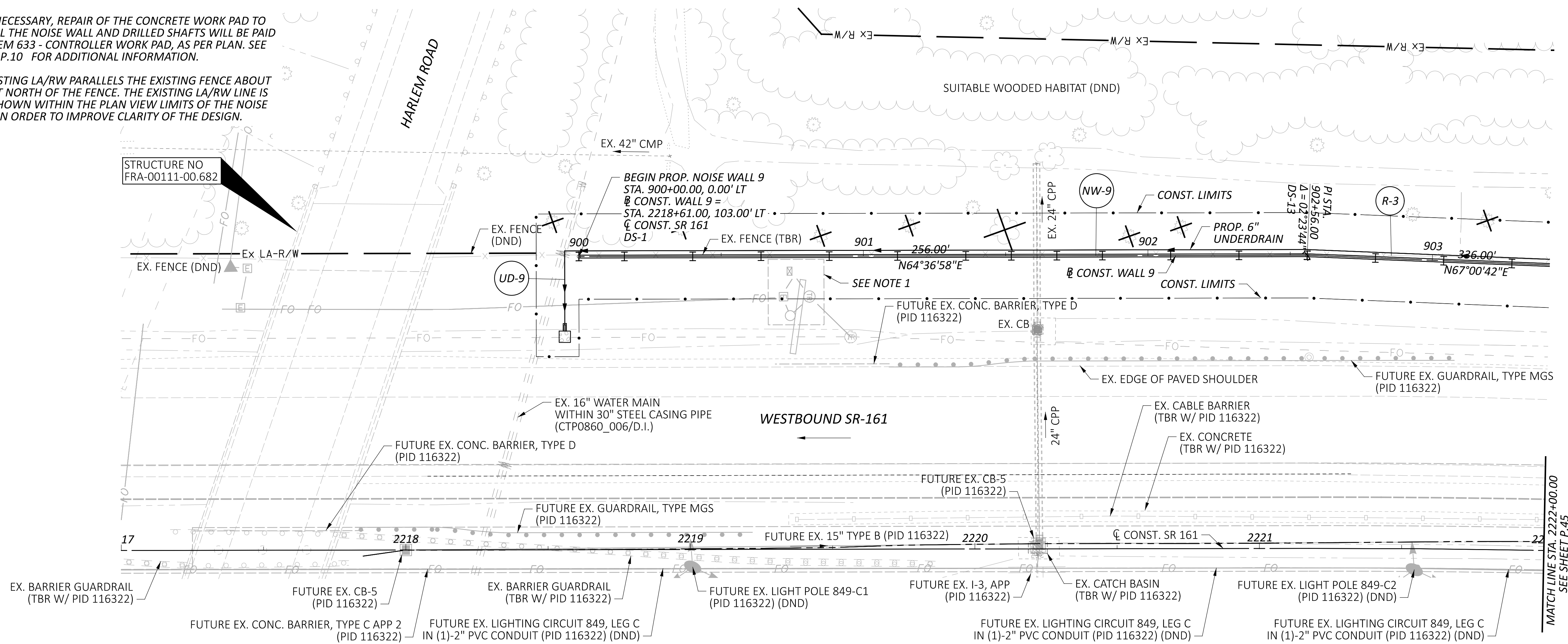


PLAN & PROFILE - WALL 8
 STA. 2205+00.00 TO STA. 2210+50.00

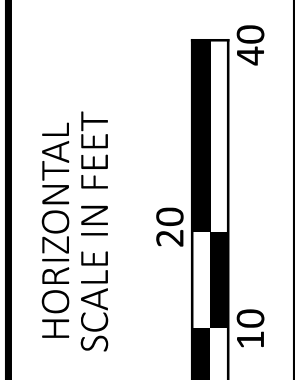
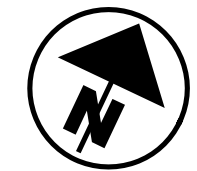
DESIGN AGENCY	ARCADIS
DESIGNER	JMK
REVIEWER	JDH
PROJECT ID	117607
SHEET	P.42
TOTAL	P.295

NOTES
 1.) IF NECESSARY, REPAIR OF THE CONCRETE WORK PAD TO INSTALL THE NOISE WALL AND DRILLED SHAFTS WILL BE PAID PER ITEM 633 - CONTROLLER WORK PAD, AS PER PLAN. SEE SHEET P.10 FOR ADDITIONAL INFORMATION.

2.) EXISTING LA/RW PARALLELS THE EXISTING FENCE ABOUT 1 FOOT NORTH OF THE FENCE. THE EXISTING LA/RW LINE IS NOT SHOWN WITHIN THE PLAN VIEW LIMITS OF THE NOISE WALL IN ORDER TO IMPROVE CLARITY OF THE DESIGN.



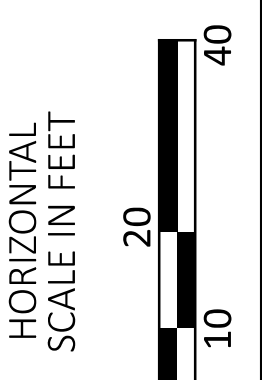
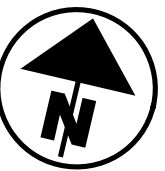
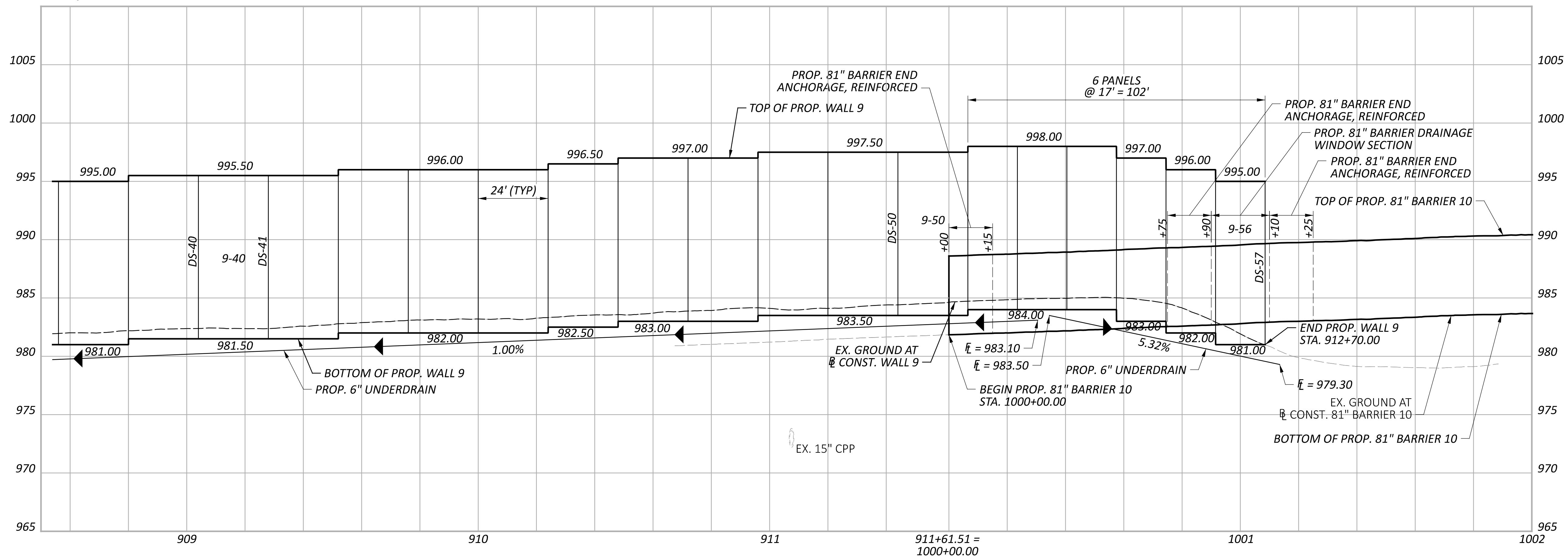
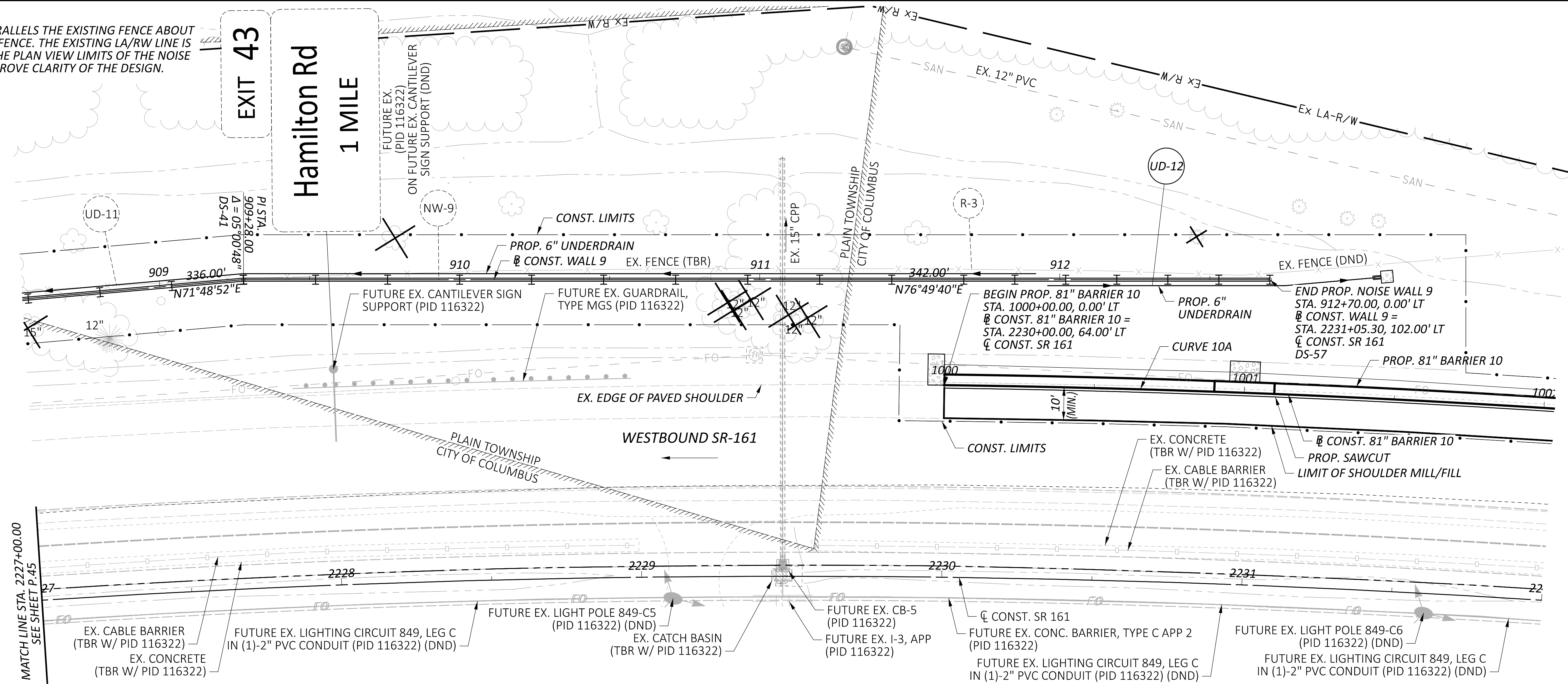
NOTE TO REVIEWER:
 WATER LOCATION TO BE FIELD LOCATED
 PRIOR TO TRACING SUBMITTAL



PLAN & PROFILE - WALL 9
 STA. 2217+00.00 TO STA. 2222+00.00

DESIGN AGENCY	
8101 NORTH HIGHWAY 3400 SUITE 100 COLUMBIA, MD 21046-3625 410.311.4900 www.arcadis.com	
DESIGNER	
JMK	
REVIEWER	
JDH 03-27-24	
PROJECT ID	
117607	
SHEET	TOTAL
P.44	P.295

NOTES:
 1.) EXISTING LA/RW PARALLELS THE EXISTING FENCE ABOUT 1 FOOT NORTH OF THE FENCE. THE EXISTING LA/RW LINE IS NOT SHOWN WITHIN THE PLAN VIEW LIMITS OF THE NOISE WALL IN ORDER TO IMPROVE CLARITY OF THE DESIGN.



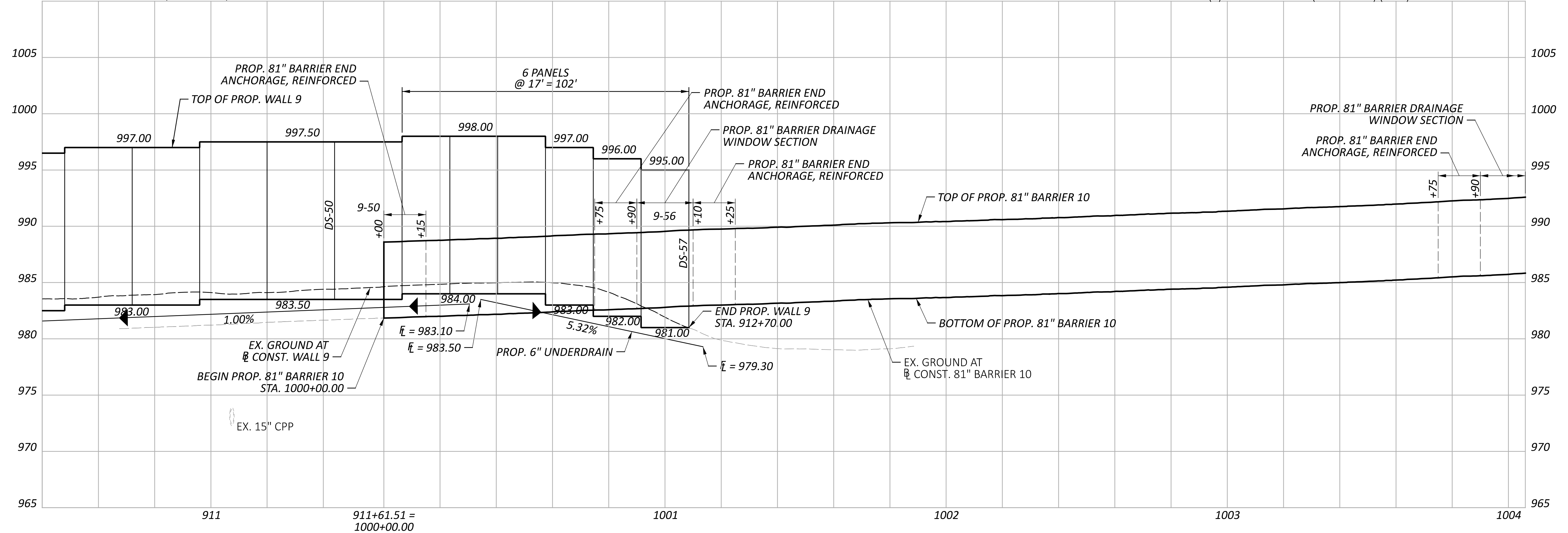
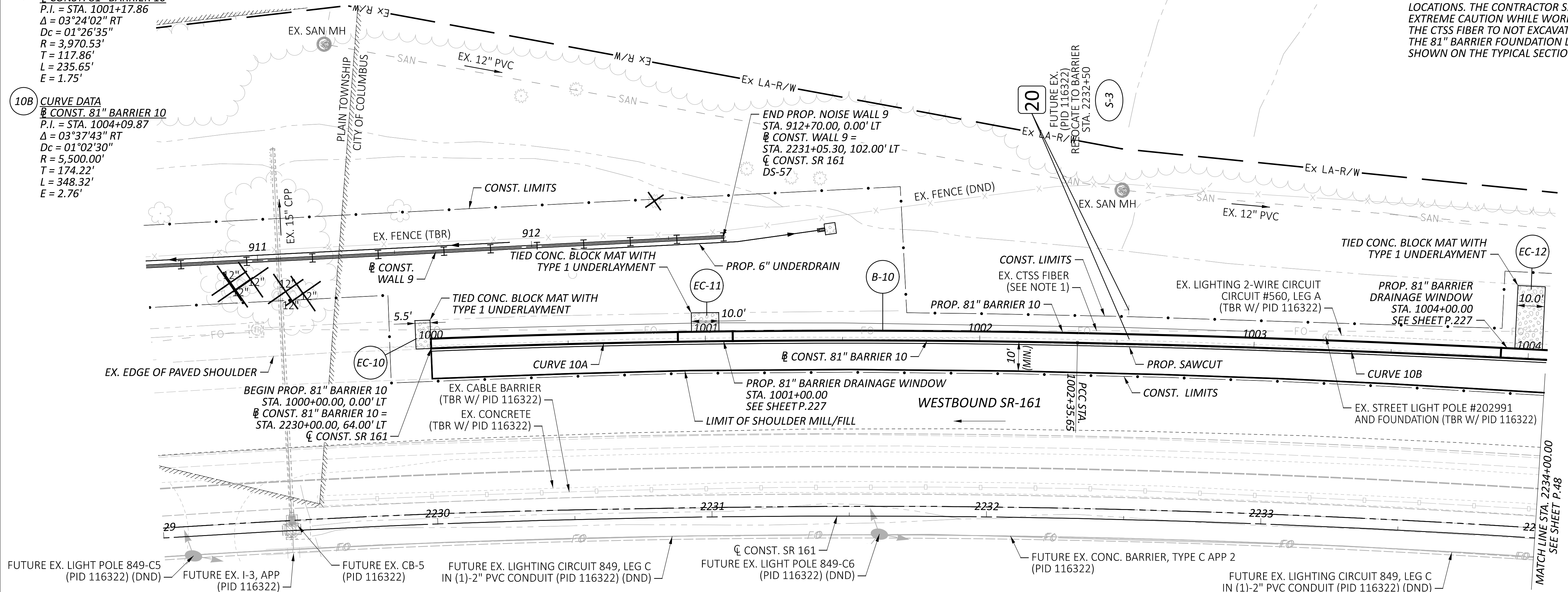
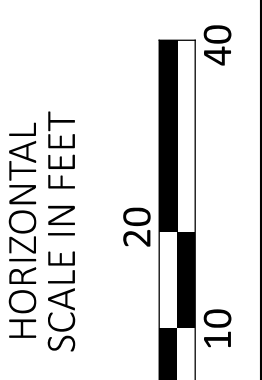
PLAN & PROFILE - WALL 9
 STA. 2227+00.00 TO STA. 2232+00.00

DESIGN AGENCY	ARCADIS
DESIGNER	JMK
REVIEWER	JDH
PROJECT ID	117607
SHEET	P.46
TOTAL	P.295

10A CURVE DATA
 CONST. 81" BARRIER 10
 P.I. = STA. 1001+17.86
 $\Delta = 03^{\circ}24'02''$ RT
 $D_c = 01^{\circ}26'35''$
 $R = 3,970.53'$
 $T = 117.86'$
 $L = 235.65'$
 $E = 1.75'$

10B CURVE DATA
 CONST. 81" BARRIER 10
 P.I. = STA. 1004+09.87
 $\Delta = 03^{\circ}37'43''$ RT
 $D_c = 01^{\circ}02'30''$
 $R = 5,500.00'$
 $T = 174.22'$
 $L = 348.32'$
 $E = 2.76'$

NOTES
 1.) CAUTION: EX. CTSS FIBER DEPTH BASED ON FIELD SURVEY SHOTS AT EX. PULL BOX LOCATIONS. THE CONTRACTOR SHALL USE EXTREME CAUTION WHILE WORKING NEAR THE CTSS FIBER TO NOT EXCAVATE BELOW THE 81" BARRIER FOUNDATION LIMITS SHOWN ON THE TYPICAL SECTIONS.

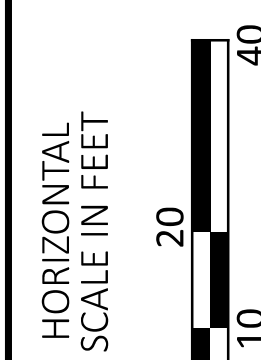
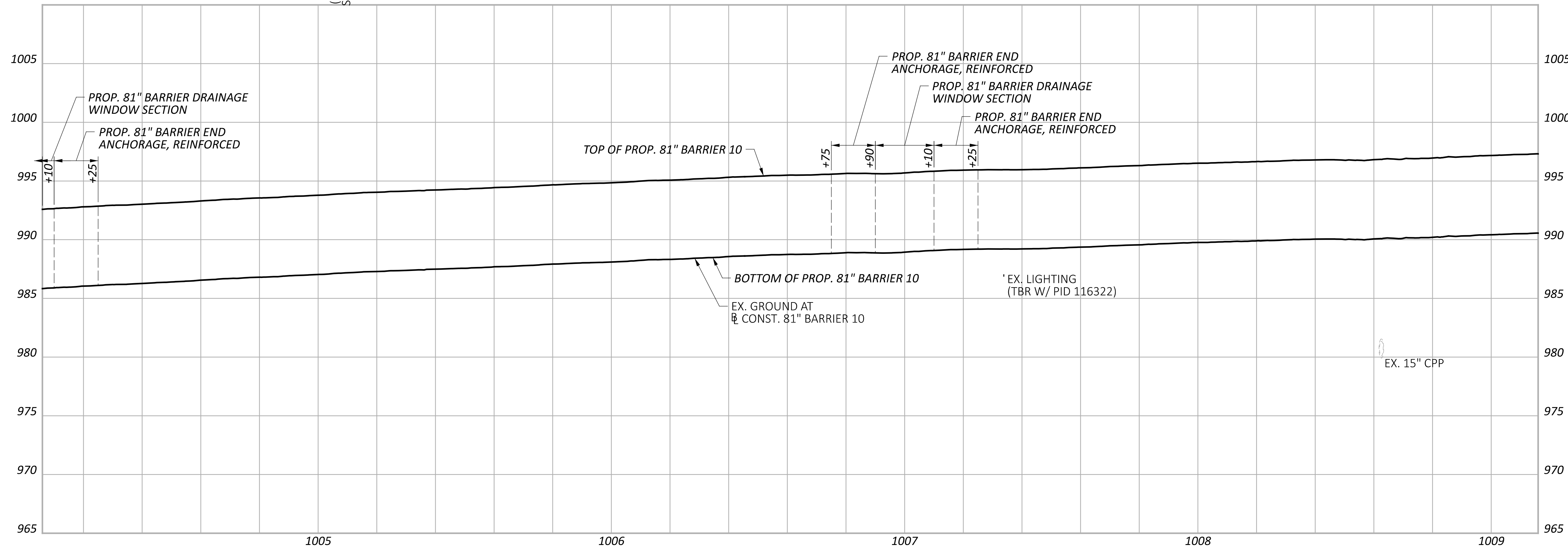
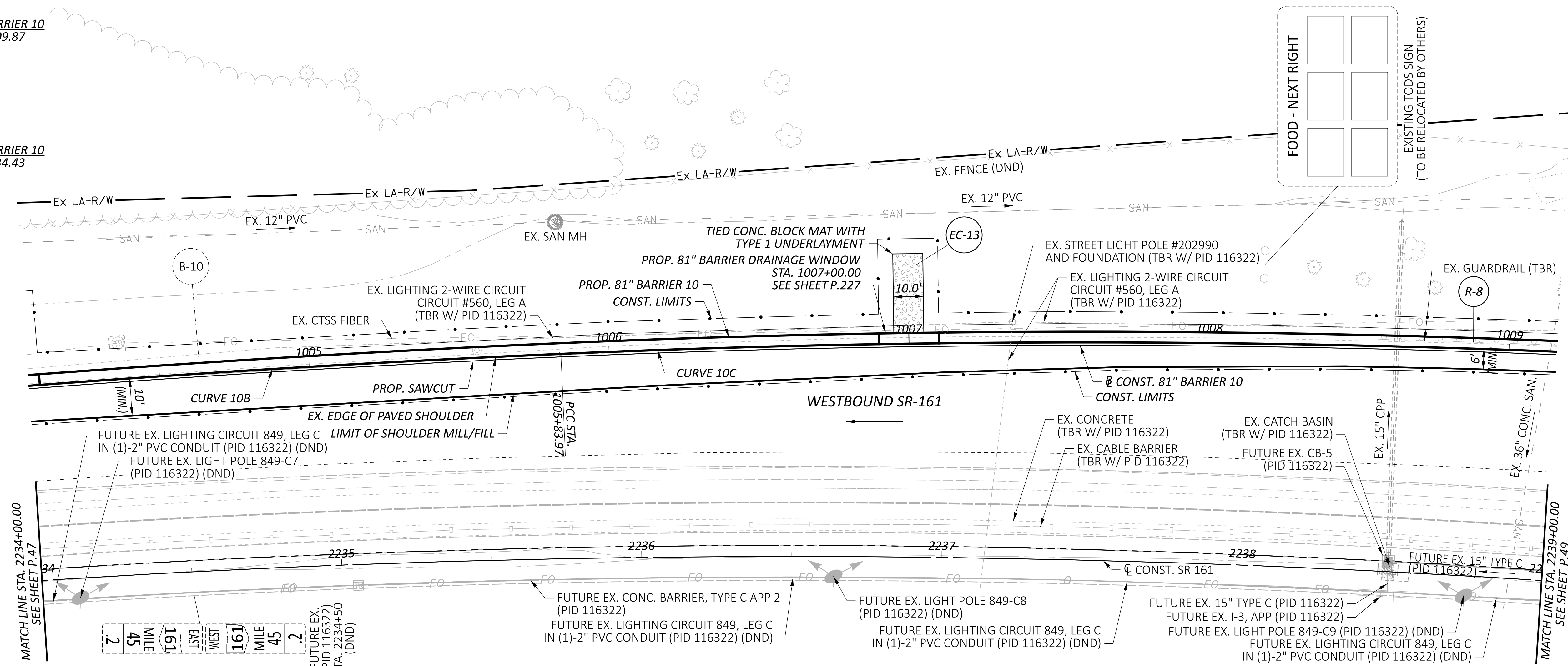


PLAN & PROFILE - 81" BARRIER 10
 STA. 2229+00.00 TO STA. 2234+00.00

DESIGN AGENCY	
ARCADIS <small>8101 NORTH HIGGINS AVE SUITE 100 COLUMBIA, MO 65203 646.441.4900 www.arcadis.com</small>	
DESIGNER	
JMK	
REVIEWER	
JDH 03-27-24	
PROJECT ID	
117607	
SHEET	TOTAL
P.47	P.295

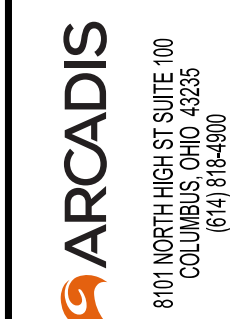
10B CURVE DATA
 CONST. 81" BARRIER 10
 P.I. = STA. 1004+09.87
 $\Delta = 03^{\circ}37'43"$ RT
 $D_c = 01^{\circ}02'30"$
 $R = 5,500.00'$
 $T = 174.22'$
 $L = 348.32'$
 $E = 2.76'$

10C CURVE DATA
 CONST. 81" BARRIER 10
 P.I. = STA. 1008+34.43
 $\Delta = 07^{\circ}09'57"$ RT
 $D_c = 01^{\circ}25'57"$
 $R = 4,000.00'$
 $T = 250.46'$
 $L = 500.27'$
 $E = 7.83'$



PLAN & PROFILE - 81" BARRIER 10
 STA. 2234+00.00 TO STA. 2239+00.00

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

JDH 03-27-24

PROJECT ID



117607

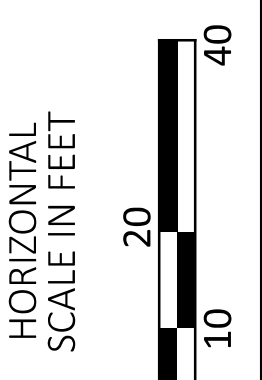
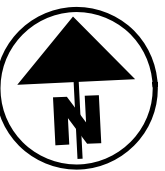
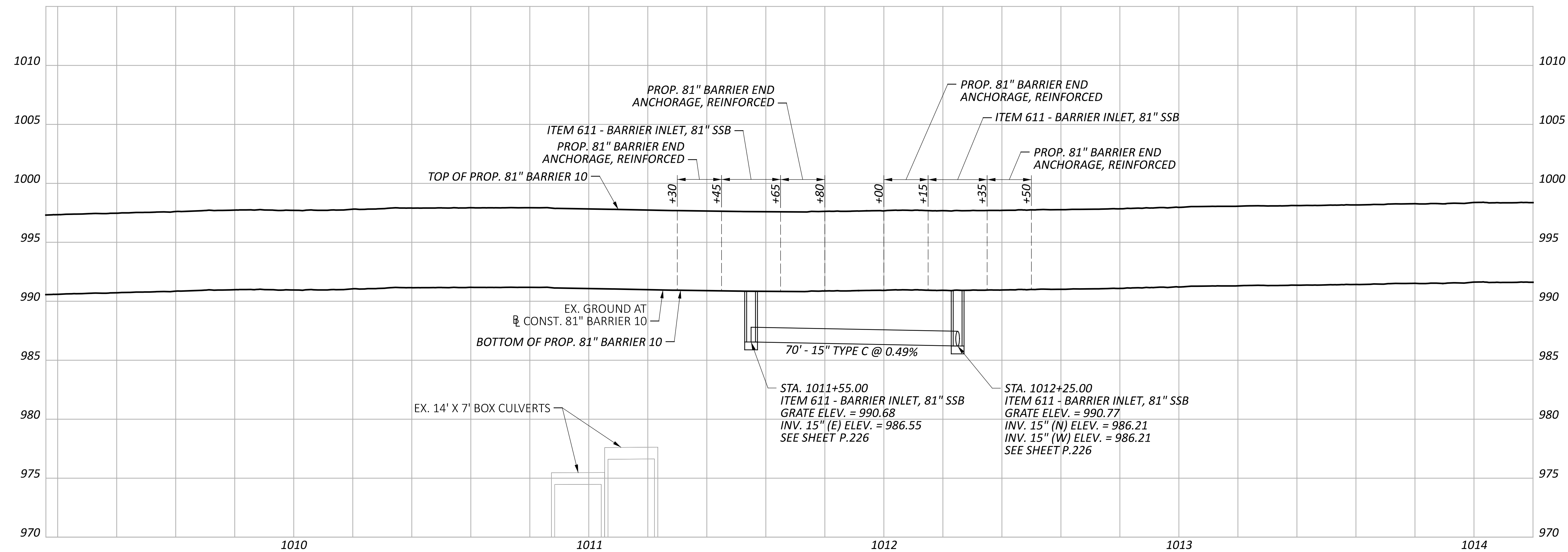
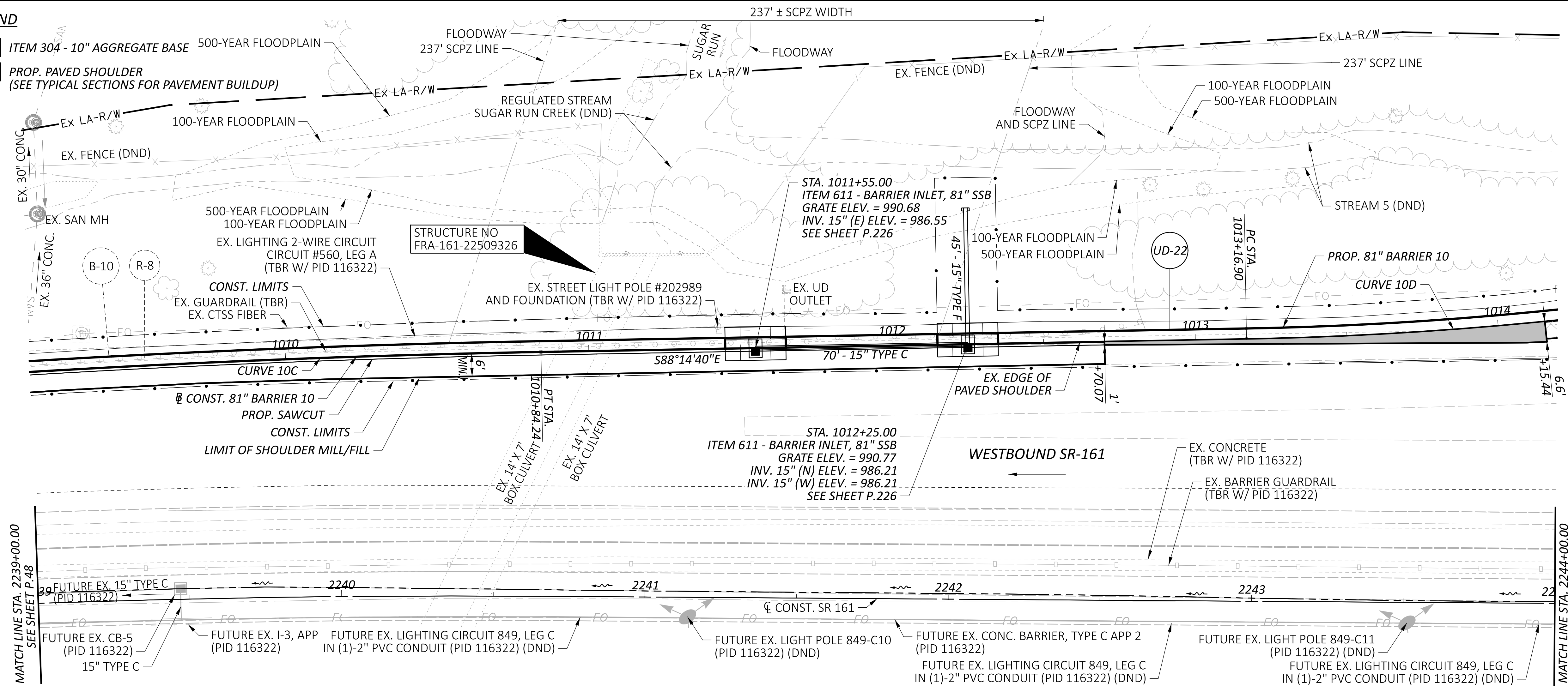
SHEET

P.48

TOTAL P.295

LEGEND

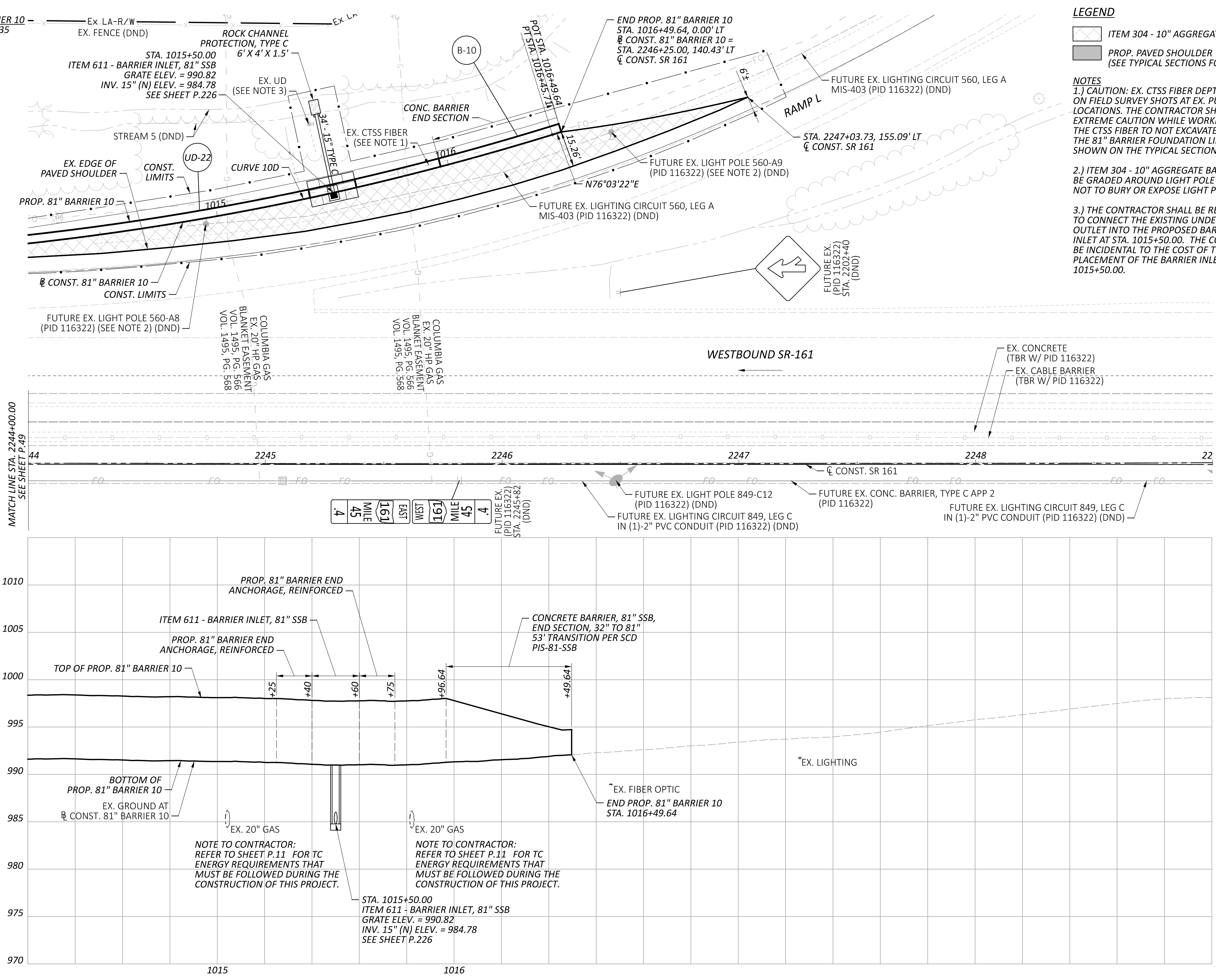
-  ITEM 304 - 10" AGGREGATE BASE 500-YEAR FLOODPLAIN
-  PROP. PAVED SHOULDER (SEE TYPICAL SECTIONS FOR PAVEMENT BUILDUP)



PLAN & PROFILE - 81" BARRIER 10
 STA. 2239+00.00 TO STA. 2244+00.00

DESIGN AGENCY	
	8101 NORTH HIGHWAY 200 SUITE 100 COLUMBIA, MO 65203 PH: (646) 818-4900 www.arcadis.com
DESIGNER	
JMK	
REVIEWER	
JDH 03-27-24	
PROJECT ID	
117607	
SHEET	TOTAL
P.49	P.295

10D CURVE DATA
 CONST. 81" BARRIER 10
 P.I. = STA. 1014+82.35
 $\Delta = 15^\circ 41' 58''$ LT
 $D_c = 04' 46' 29''$
 $R = 1,200.00'$
 $T = 165.44'$
 $L = 328.81'$
 $E = 11.35'$

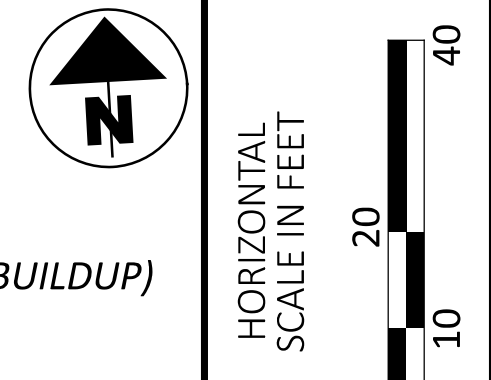


LEGEND

- ITEM 304 - 10" AGGREGATE BASE
- PROP. PAVED SHOULDER (SEE TYPICAL SECTIONS FOR PAVEMENT BUILDUP)

NOTES

- CAUTION: EX. CTSS FIBER DEPTH BASED ON FIELD SURVEY SHOTS AT EX. PULL BOX LOCATIONS. THE CONTRACTOR SHALL USE EXTREME CAUTION WHILE WORKING NEAR THE CTSS FIBER TO NOT EXCAVATE BELOW THE 81" BARRIER FOUNDATION LIMITS SHOWN ON THE TYPICAL SECTIONS.
- ITEM 304 - 10" AGGREGATE BASE SHALL BE GRADED AROUND LIGHT POLE SO AS NOT TO BURY OR EXPOSE LIGHT POLE BASE.
- THE CONTRACTOR SHALL BE REQUIRED TO CONNECT THE EXISTING UNDERDRAIN OUTLET INTO THE PROPOSED BARRIER INLET AT STA. 1015+50.00. THE COST SHALL BE INCIDENTAL TO THE COST OF THE PLACEMENT OF THE BARRIER INLET AT STA. 1015+50.00.

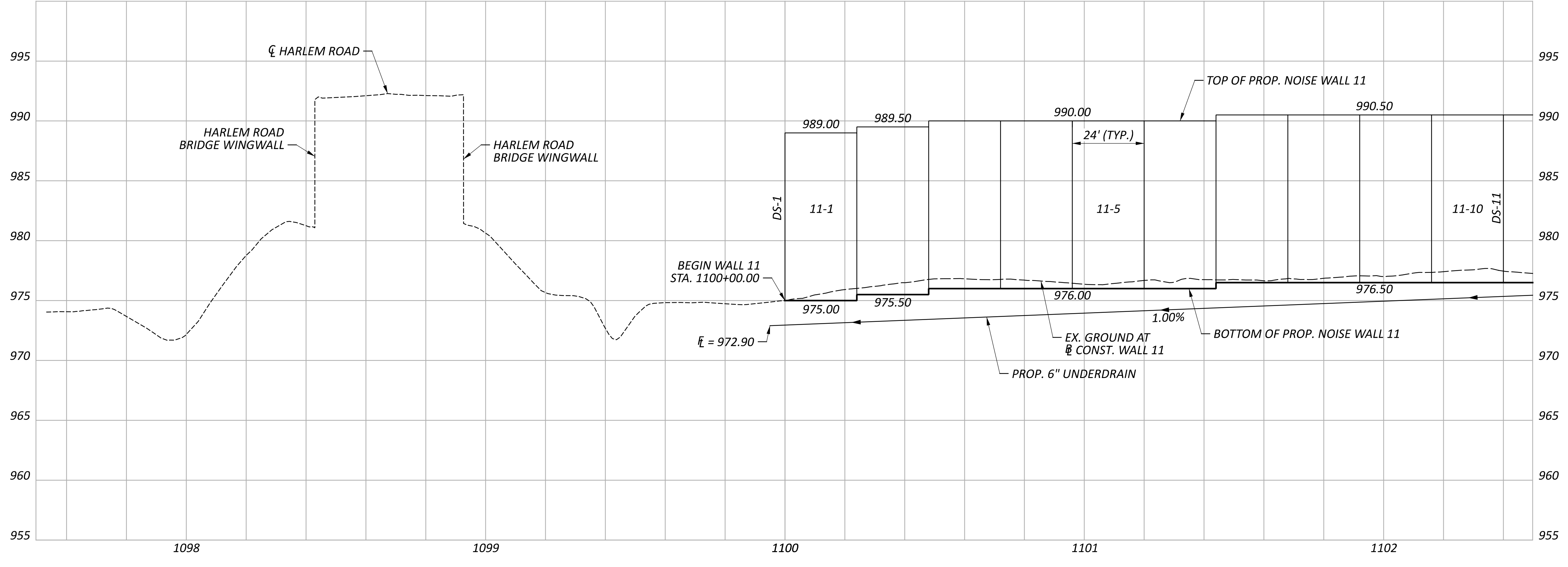
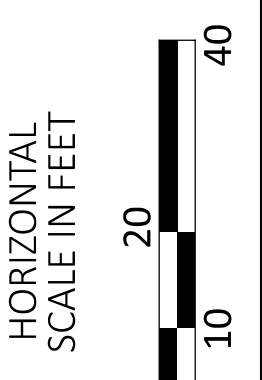
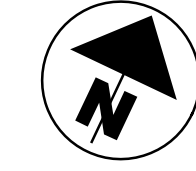
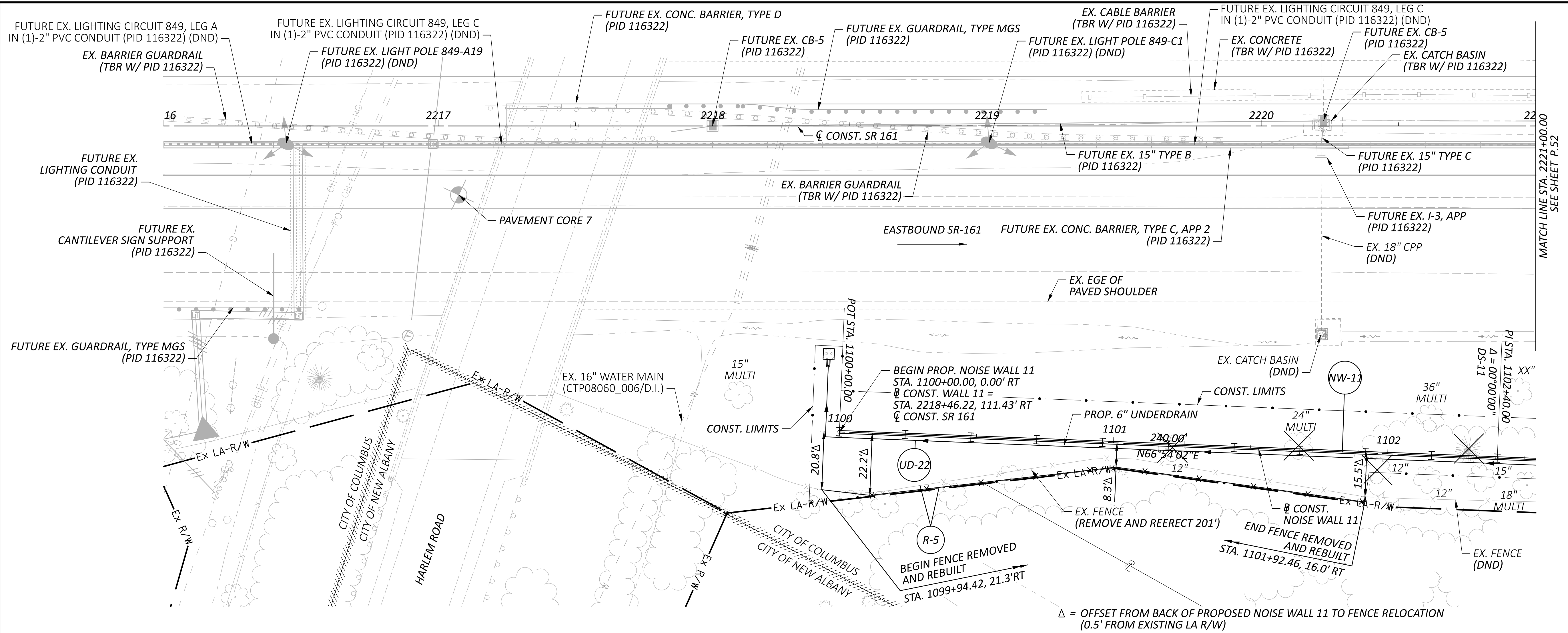


PLAN & PROFILE - 81" BARRIER 10
 STA. 2244+00.00 TO STA. 2249+00.00

DESIGN AGENCY	
ARCADIS 8101 NORTH HIGHWAY 34, SUITE 100 COLUMBIA, MO 64114-4900 www.arcadis.com	
DESIGNER	
JMK	
REVIEWER	
JDH 03-27-24	
PROJECT ID	
117607	
SHEET	TOTAL
P.50	P.295

FRA-161-15.80 NOISE WALLS

MODEL: Plan PAPER SIZE: 34x22 (in.) DATE: 3/25/2024 TIME: 3:21:25 PM USER: JPerchinske
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PLAN & PROFILE - WALL 11
STA. 2216+00.00 TO STA. 2221+00.00

DESIGN AGENCY
BG
 www.bgegroup.com
 5560 WILCOX PLACE, SUITE C
 DUBLIN, OHIO 43016

DESIGNER
 JEP

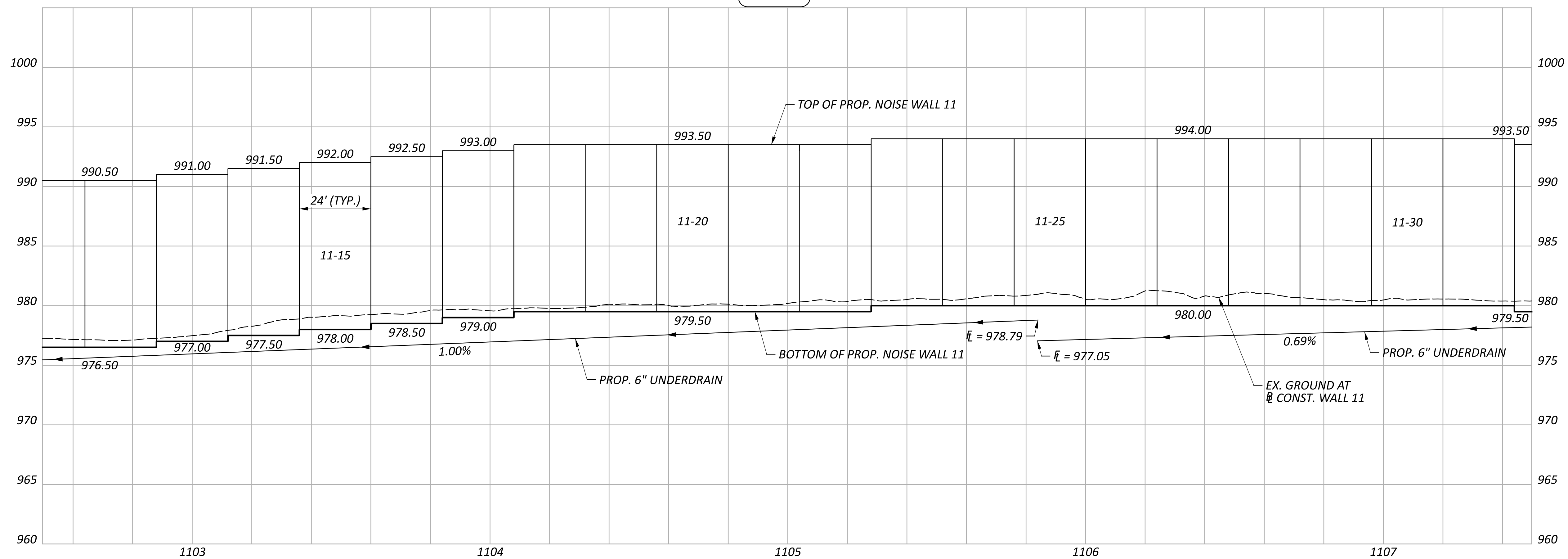
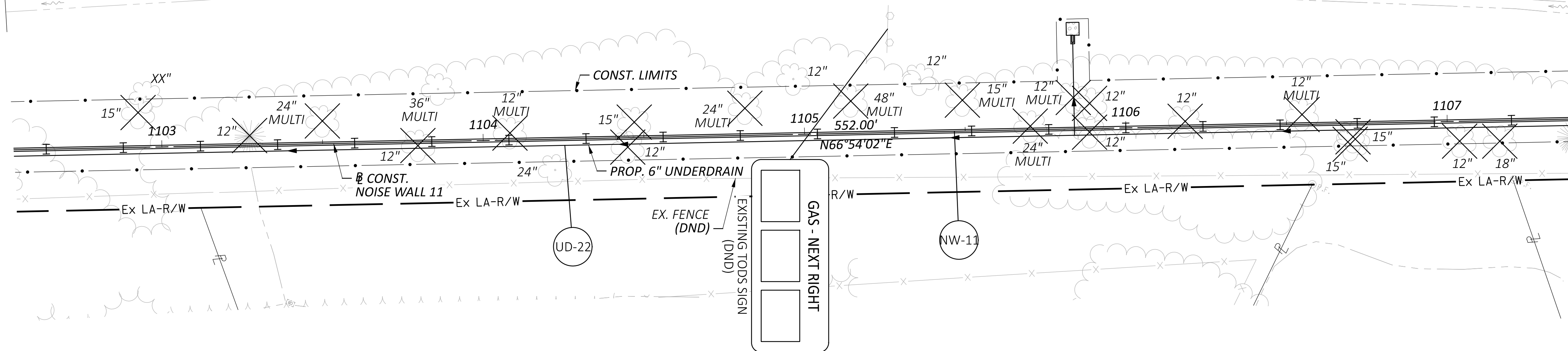
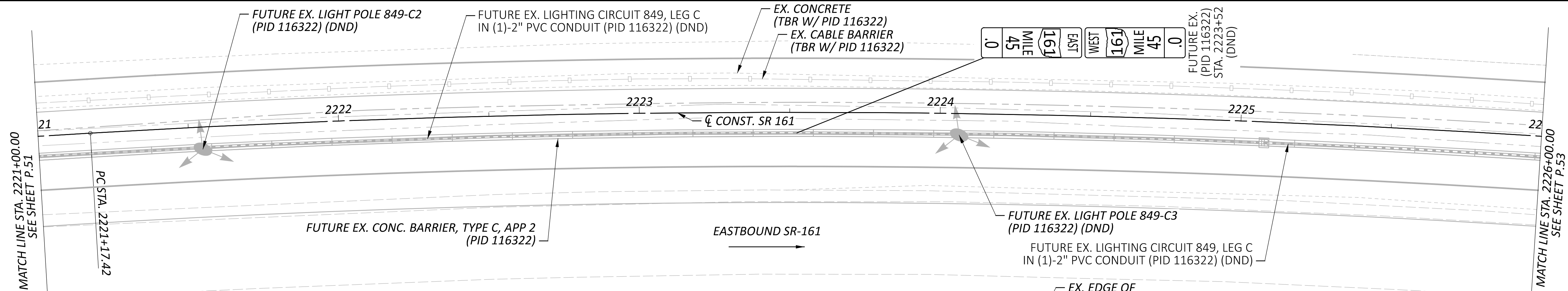
REVIEWER
 RG 03-27-24

PROJECT ID
 117607

SHEET TOTAL
 P.51 P.295

FRA-161-15.80 NOISE WALLS

MODEL: Plan-1 PAPER SIZE: 34x42 (in.) DATE: 3/25/2024 TIME: 3:21:43 PM USER: JPerchinske
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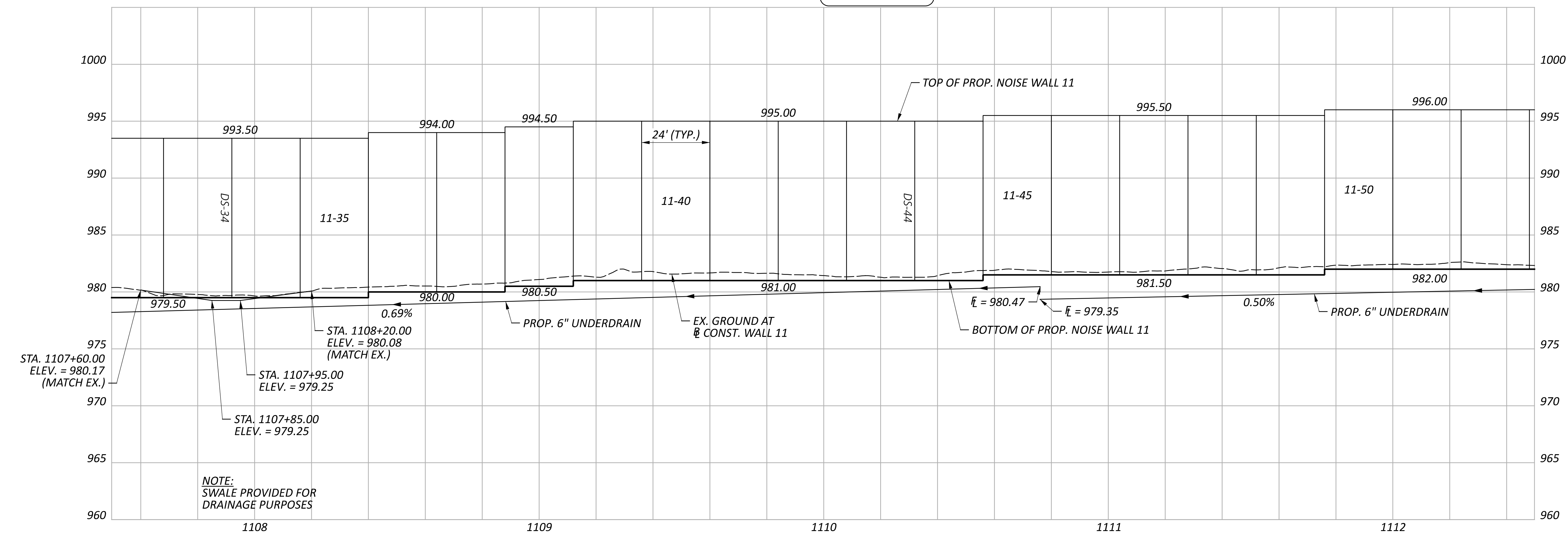
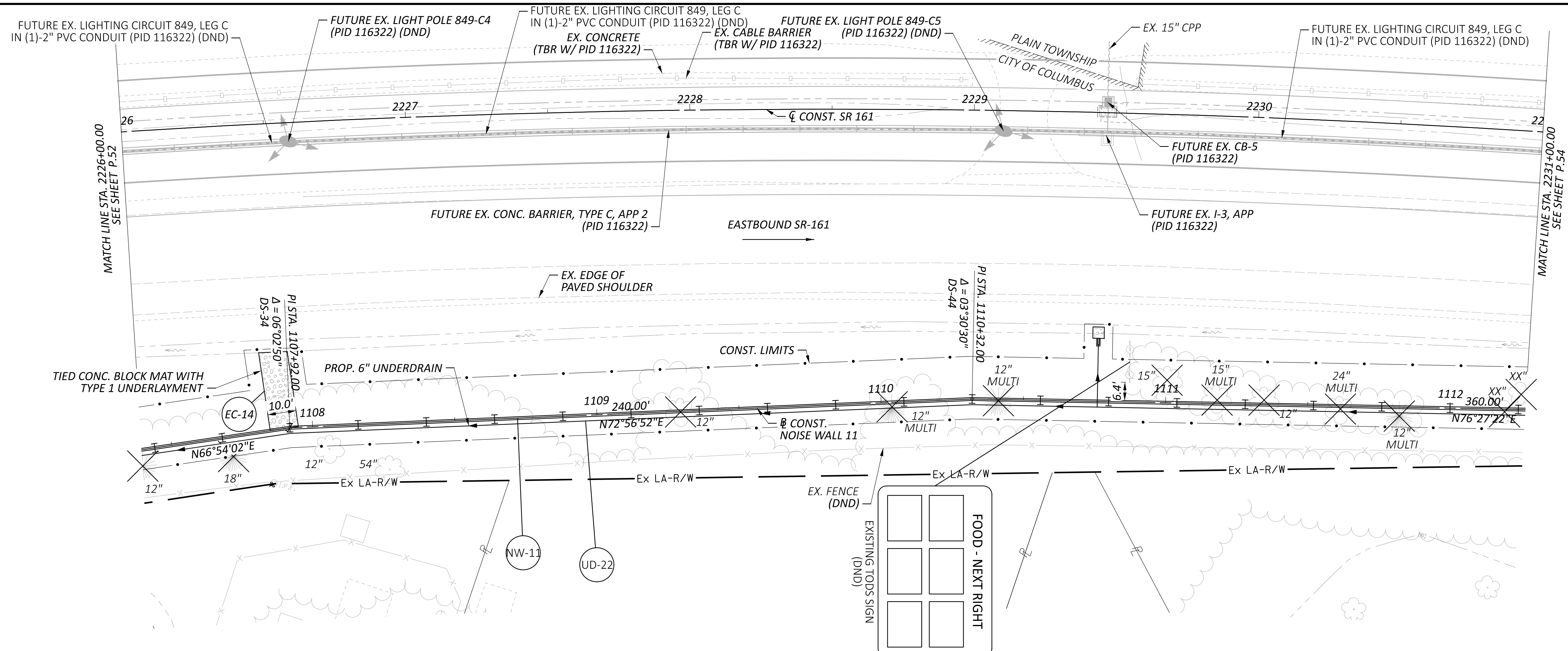
**PLAN & PROFILE - WALL 11
 STA. 2221+00.00 TO STA. 2226+00.00**



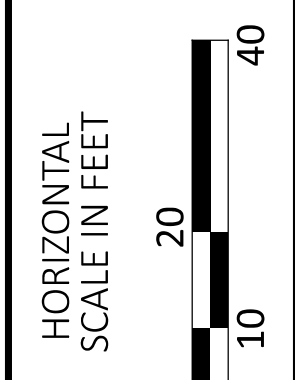
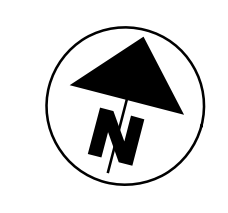
DESIGNER	JEP
REVIEWER	RG
PROJECT ID	03-27-24
SHEET	117607
TOTAL	P.295

FRA-161-15.80 NOISE WALLS

MODEL: Plan-2 PAPER: 34x42 (in.) DATE: 3/25/2024 TIME: 3:22:02 PM USER: JPerchinske
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NOTE:
 SWALE PROVIDED FOR
 DRAINAGE PURPOSES

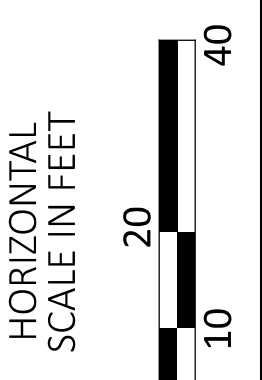
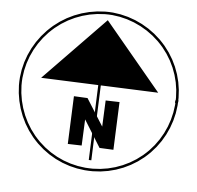
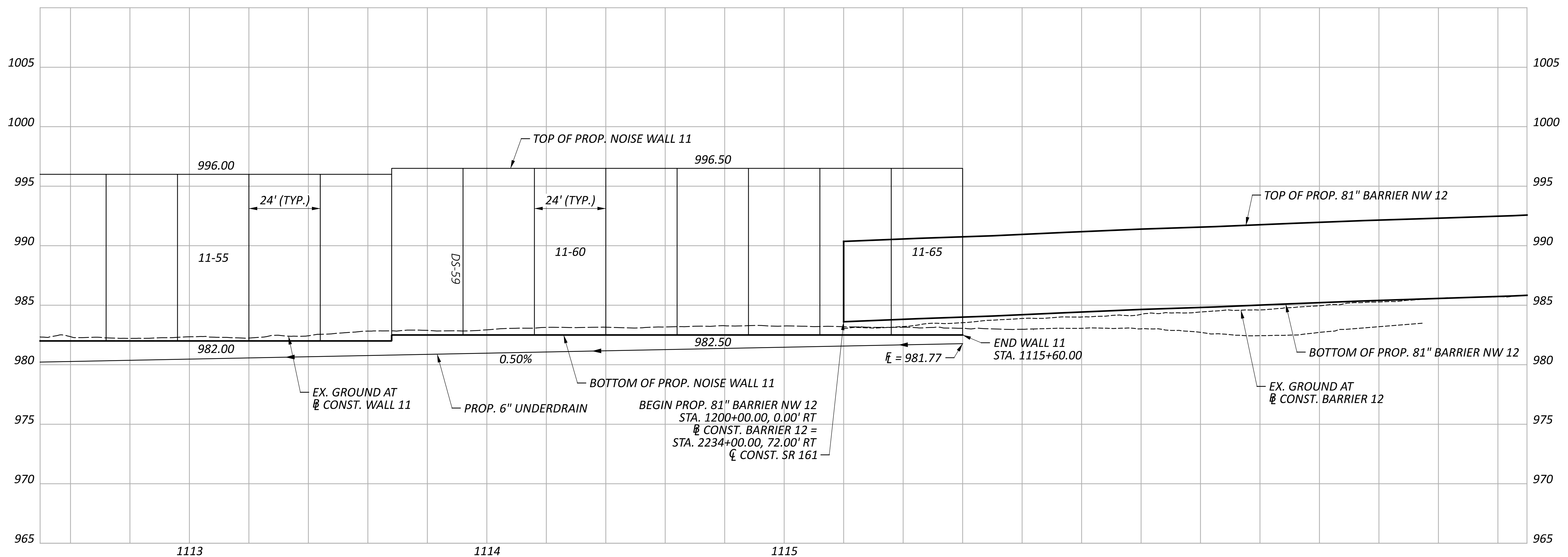
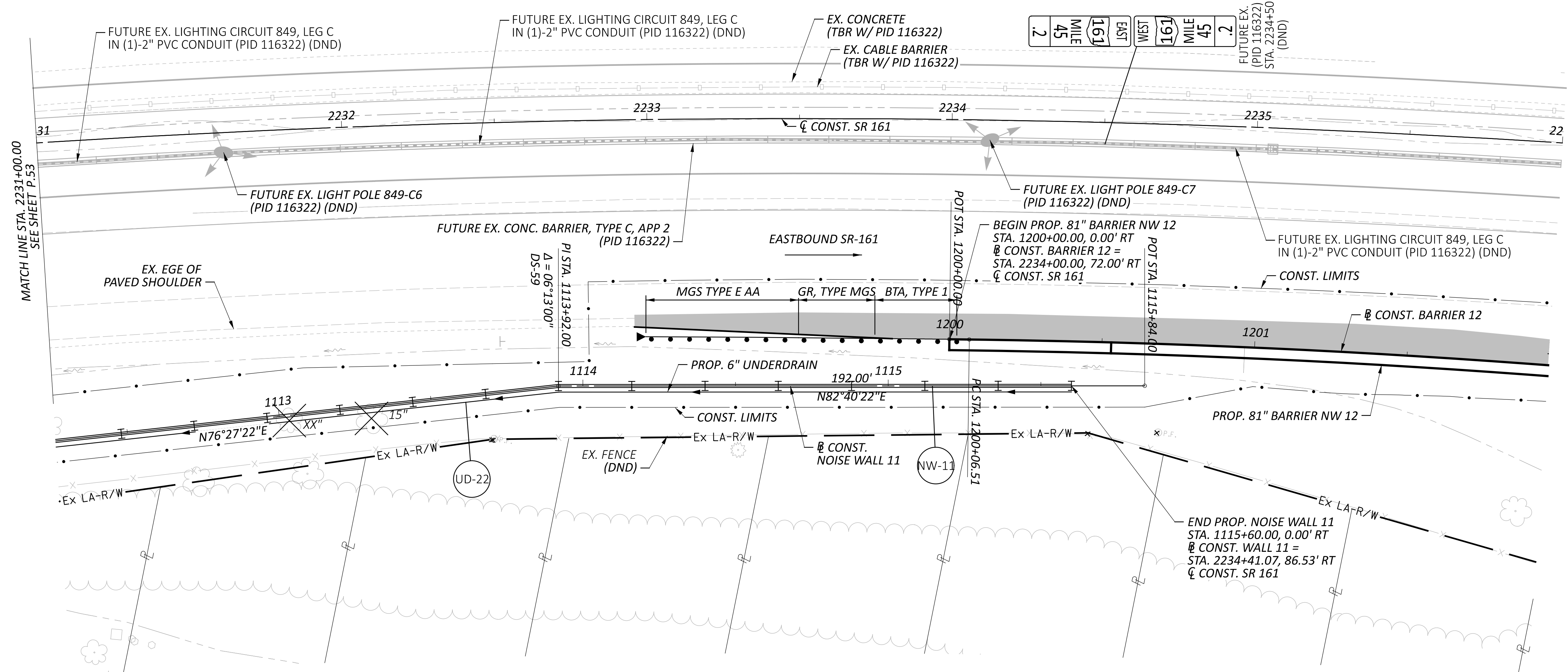


PLAN & PROFILE - WALL 11
 STA. 2226+00.00 TO STA. 2231+00.00

DESIGN AGENCY	
BG www.bgegroup.com 5560 WILCOX PLACE, SUITE C DUBLIN, OHIO 43016	
DESIGNER	
JEP	
REVIEWER	
RG 03-27-24	
PROJECT ID	
117607	
SHEET	TOTAL
P.53	P.295

FRA-161-15.80 NOISE WALLS

MODEL: Plan-3 PAPER SIZE: 34x42 (in.) DATE: 3/26/2024 TIME: 8:50:17 AM USER: jperchinske
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**PLAN & PROFILE - WALL 11
 STA. 2231+00.00 TO STA. 2236+00.00**

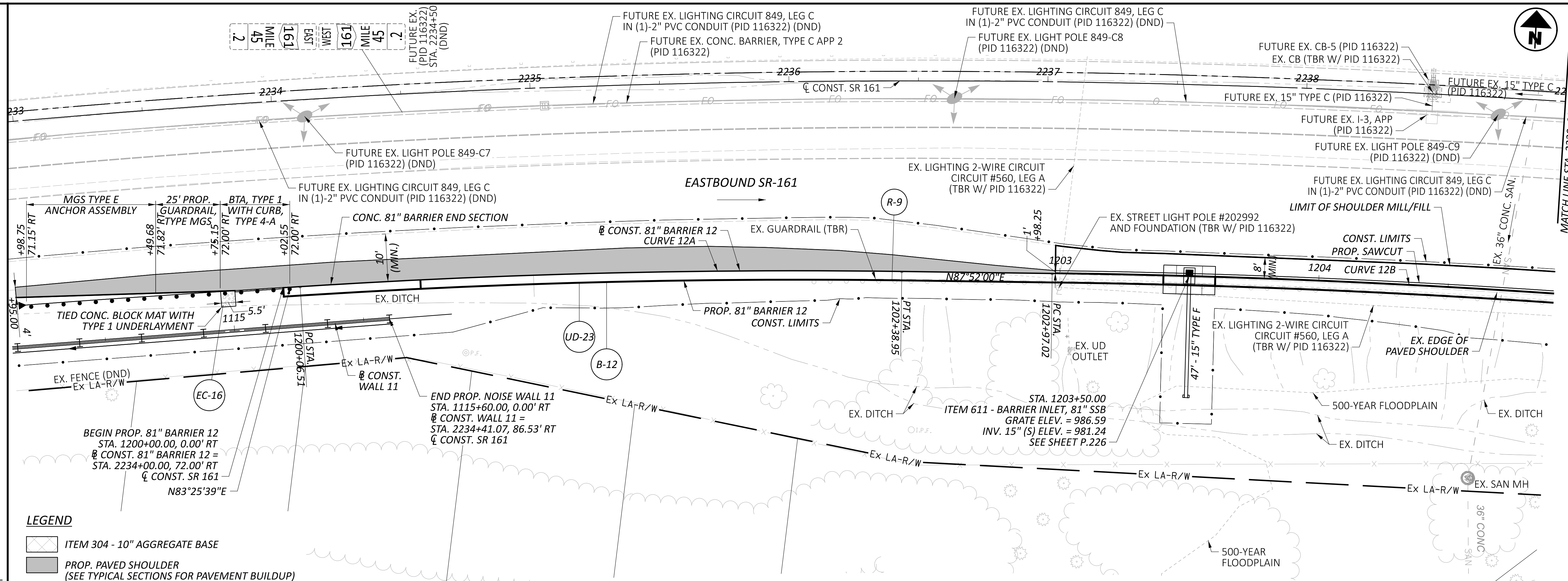
DESIGN AGENCY
BG
 www.bgengineering.com
 5560 WILCOX PLACE, SUITE C
 DUBLIN, OHIO 43016

DESIGNER
 JEP

REVIEWER
 RG 03-27-24

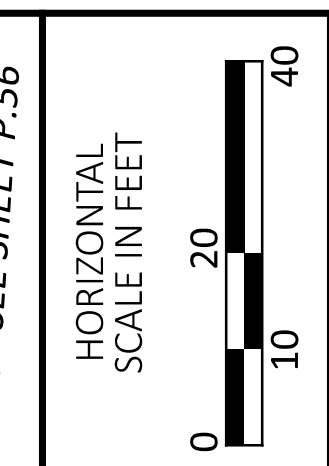
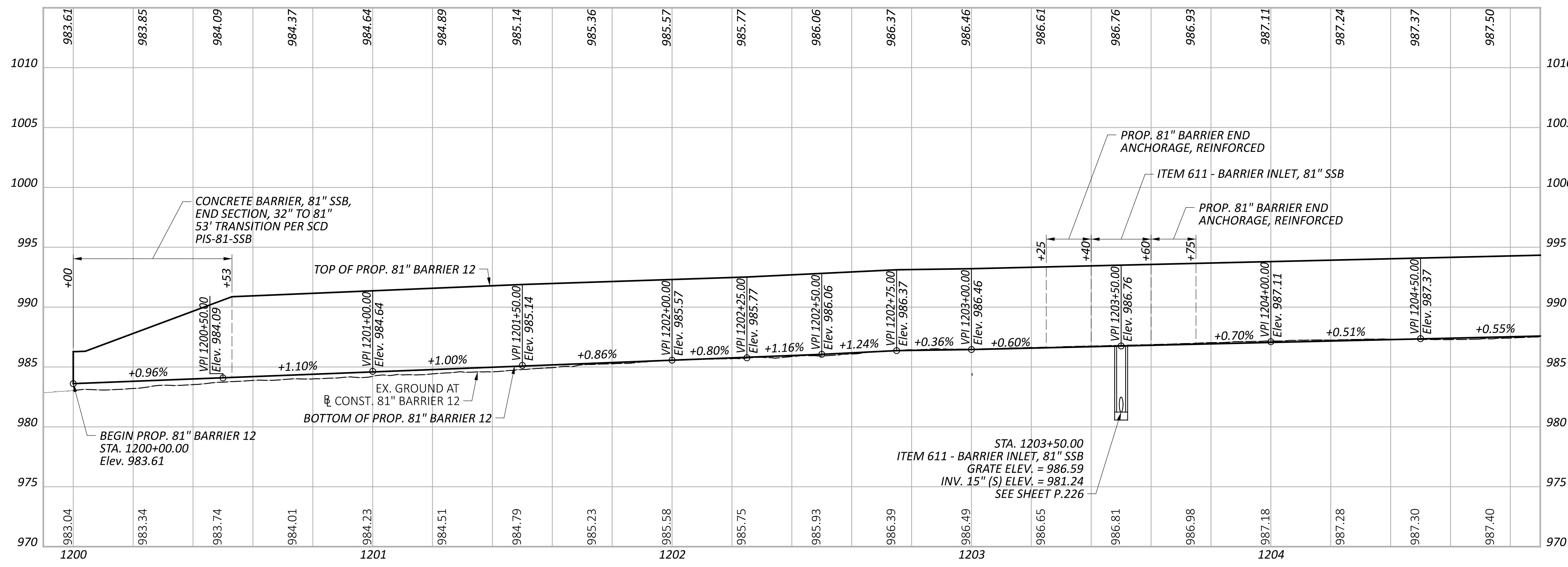
PROJECT ID
 117607

SHEET TOTAL
 P.54 P.295



- LEGEND**
- ITEM 304 - 10" AGGREGATE BASE
 - PROP. PAVED SHOULDER (SEE TYPICAL SECTIONS FOR PAVEMENT BUILDUP)

- 12A CURVE DATA**
 CONST. 81" BARRIER 12
 P.I. = STA. 1201+22.78
 $\Delta = 04^{\circ}26'21''$ RT
 $D_c = 01^{\circ}54'36''$
 $R = 3,000.00'$
 $T = 116.28'$
 $L = 232.44'$
 $E = 2.25'$
- 12B CURVE DATA**
 CONST. 81" BARRIER 12
 P.I. = STA. 1204+26.22
 $\Delta = 04^{\circ}06'38''$ RT
 $D_c = 01^{\circ}35'30''$
 $R = 3,600.00'$
 $T = 129.19'$
 $L = 258.27'$
 $E = 2.32'$



HORIZONTAL SCALE IN FEET
 0 20 40

PLAN & PROFILE - 81" BARRIER 12
 STA. 2233+00.00 TO STA. 2239+00.00

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHTS DRIVE, SUITE 100
 COLUMBIA, MD 21046-3225
 www.arcadis.com

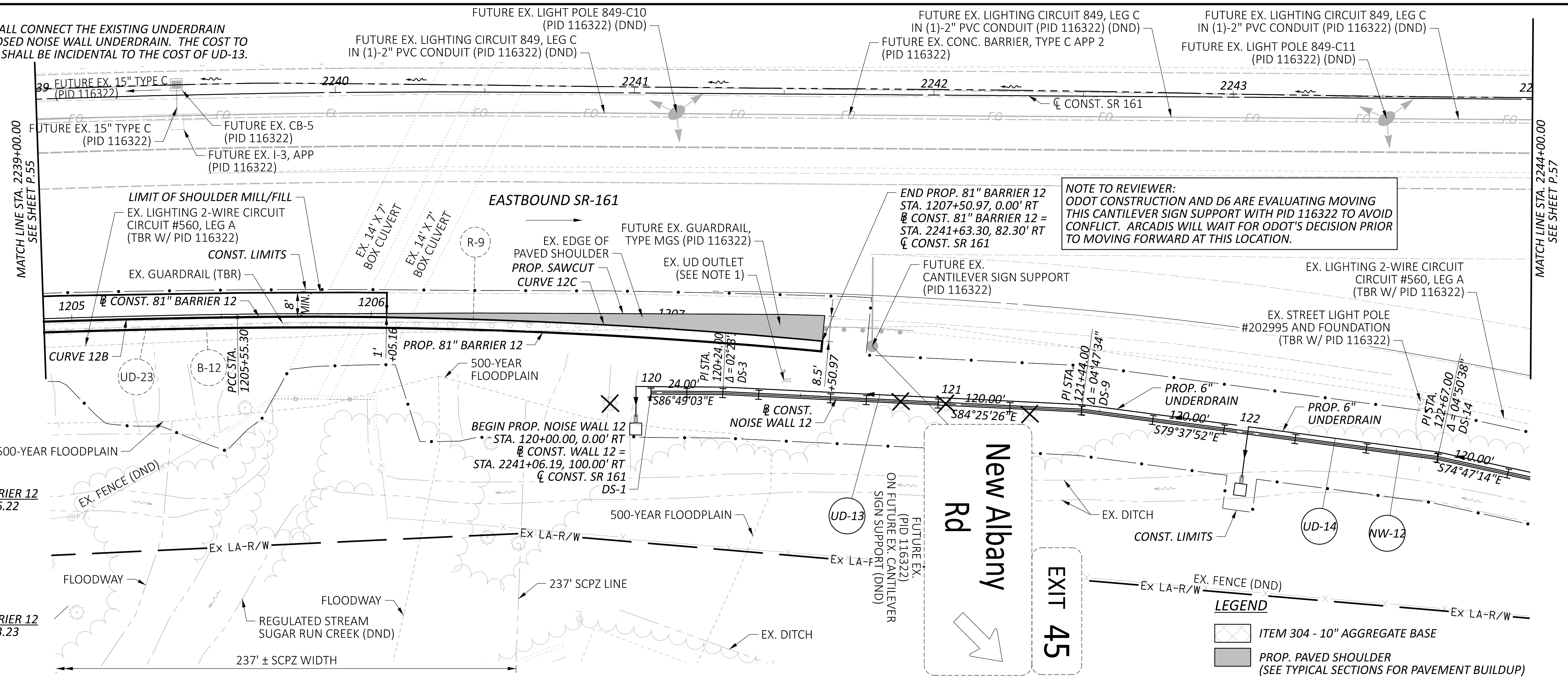
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

SHEET TOTAL
 P.55 P.295

NOTES:
 1.) THE CONTRACTOR SHALL CONNECT THE EXISTING UNDERDRAIN OUTLET INTO THE PROPOSED NOISE WALL UNDERDRAIN. THE COST TO MAKE THE CONNECTION SHALL BE INCIDENTAL TO THE COST OF UD-13.



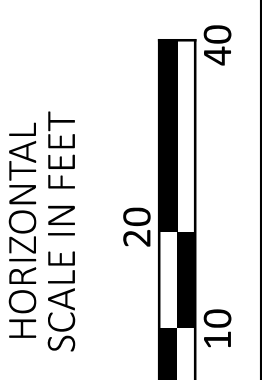
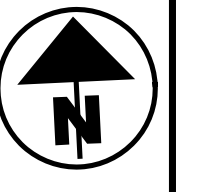
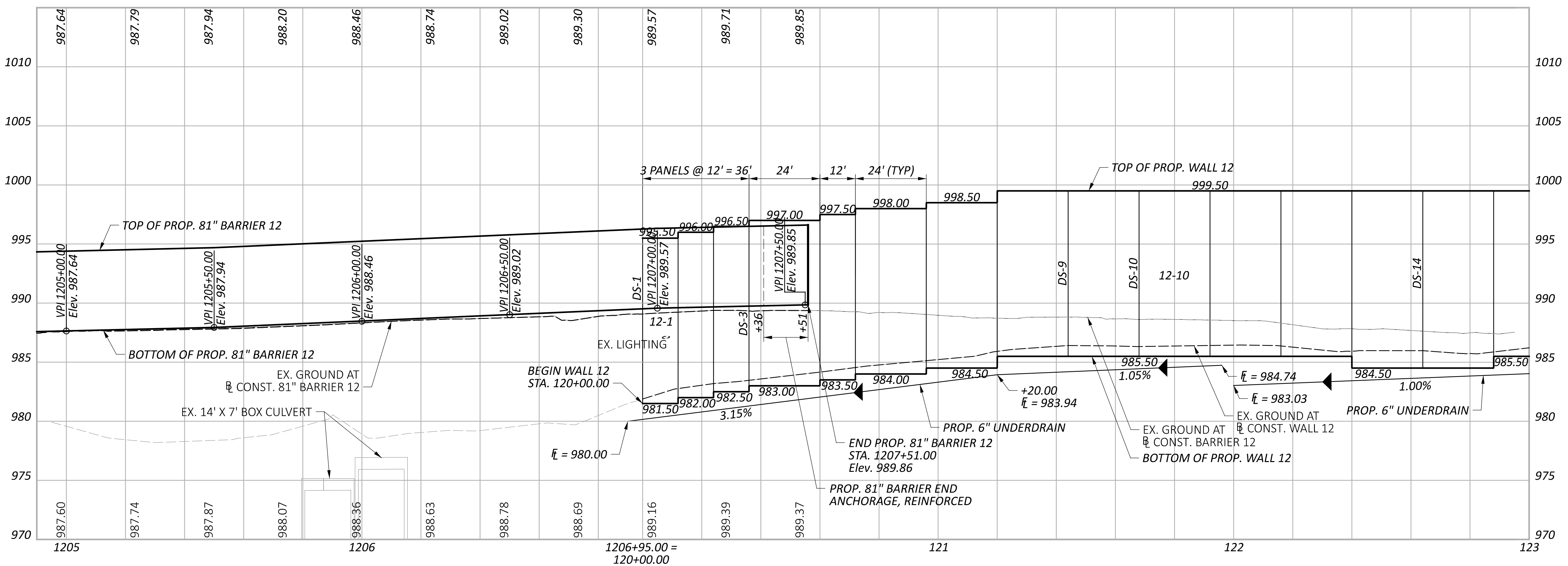
12B CURVE DATA
 CONST. 81" BARRIER 12
 P.I. = STA. 1204+26.22
 $\Delta = 04^{\circ}06'38''$ RT
 $D_c = 01^{\circ}35'30''$
 $R = 3,600.00'$
 $T = 129.19'$
 $L = 258.27'$
 $E = 2.32'$

12C CURVE DATA
 CONST. 81" BARRIER 12
 P.I. = STA. 1206+53.23
 $\Delta = 06^{\circ}13'43''$ RT
 $D_c = 03^{\circ}10'59''$
 $R = 1,800.00'$
 $T = 97.93'$
 $L = 195.68'$
 $E = 2.66'$

NOTE TO REVIEWER:
 ODOT CONSTRUCTION AND D6 ARE EVALUATING MOVING THIS CANTILEVER SIGN SUPPORT WITH PID 116322 TO AVOID CONFLICT. ARCADIS WILL WAIT FOR ODOT'S DECISION PRIOR TO MOVING FORWARD AT THIS LOCATION.

LEGEND

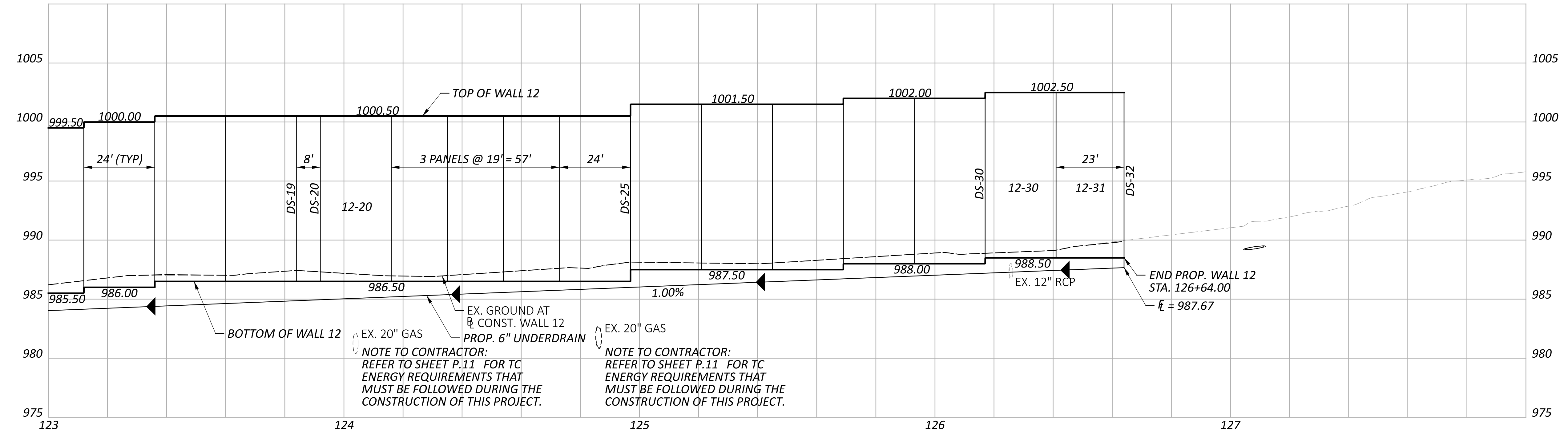
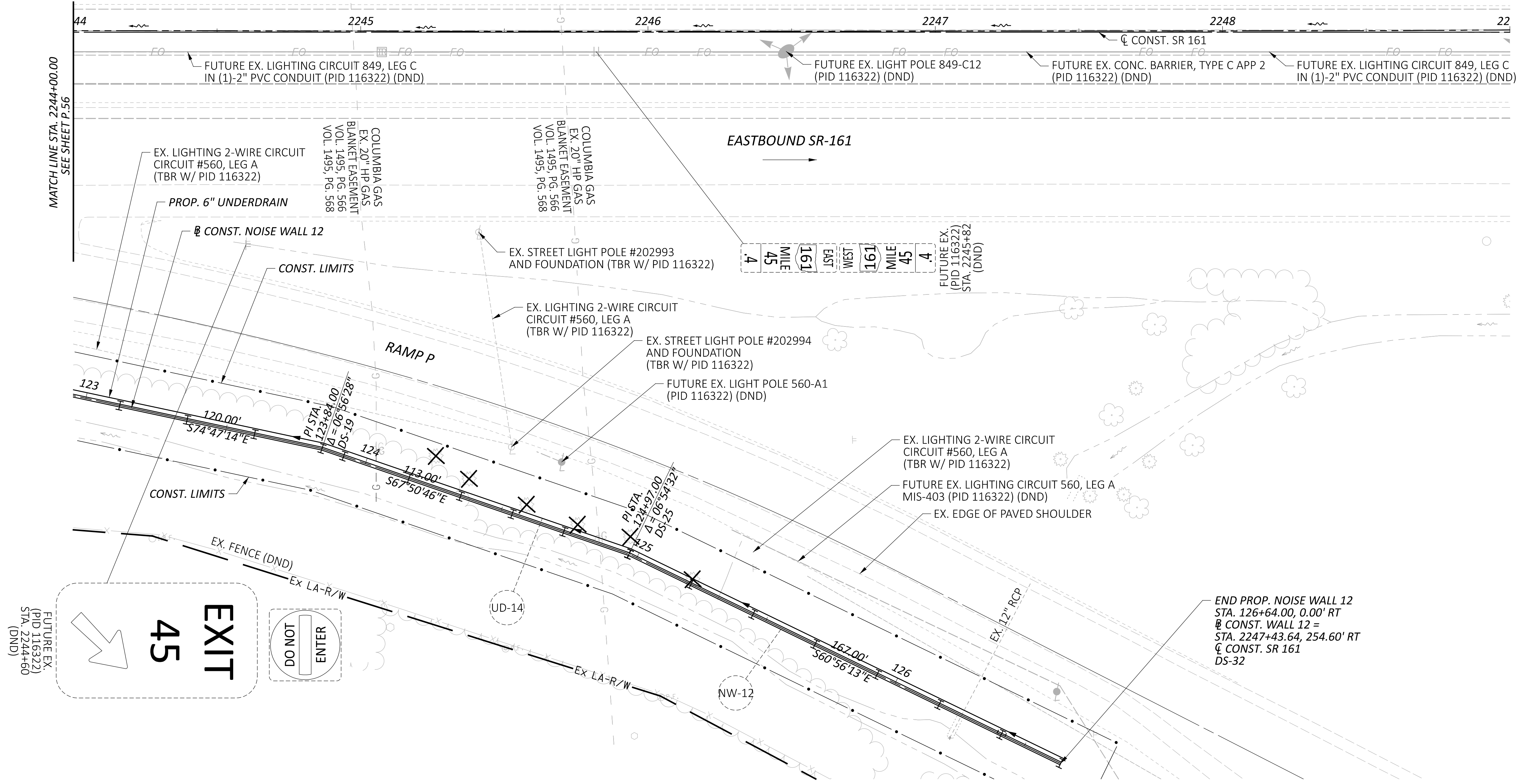
- ITEM 304 - 10" AGGREGATE BASE
- PROP. PAVED SHOULDER (SEE TYPICAL SECTIONS FOR PAVEMENT BUILDUP)



PLAN & PROFILE - 81" BARRIER 12 / WALL 12
 STA. 2239+00.00 TO STA. 2244+00.00

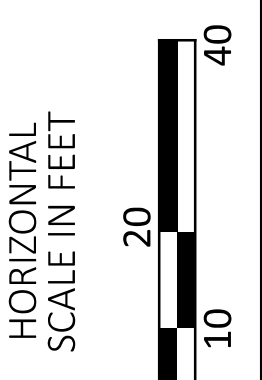
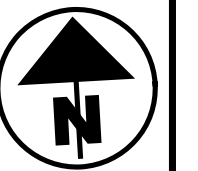
FRA-161-15.80 NOISE WALLS

MODEL: Wall 12 - Plan 21 PAPER SIZE: 34x22 (in.) DATE: 2024-03-27 TIME: 1:36:27 PM USER: jennifer.kelley
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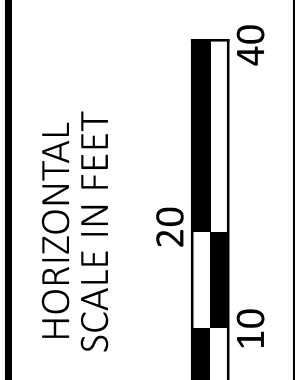
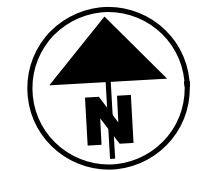
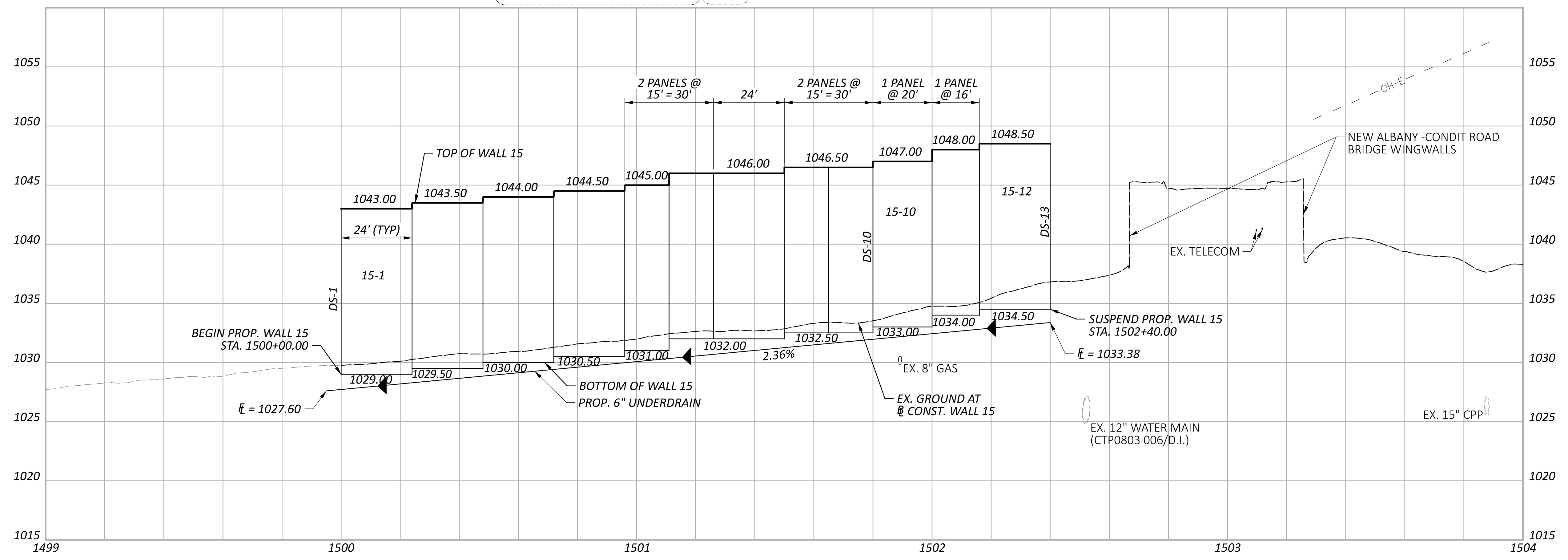
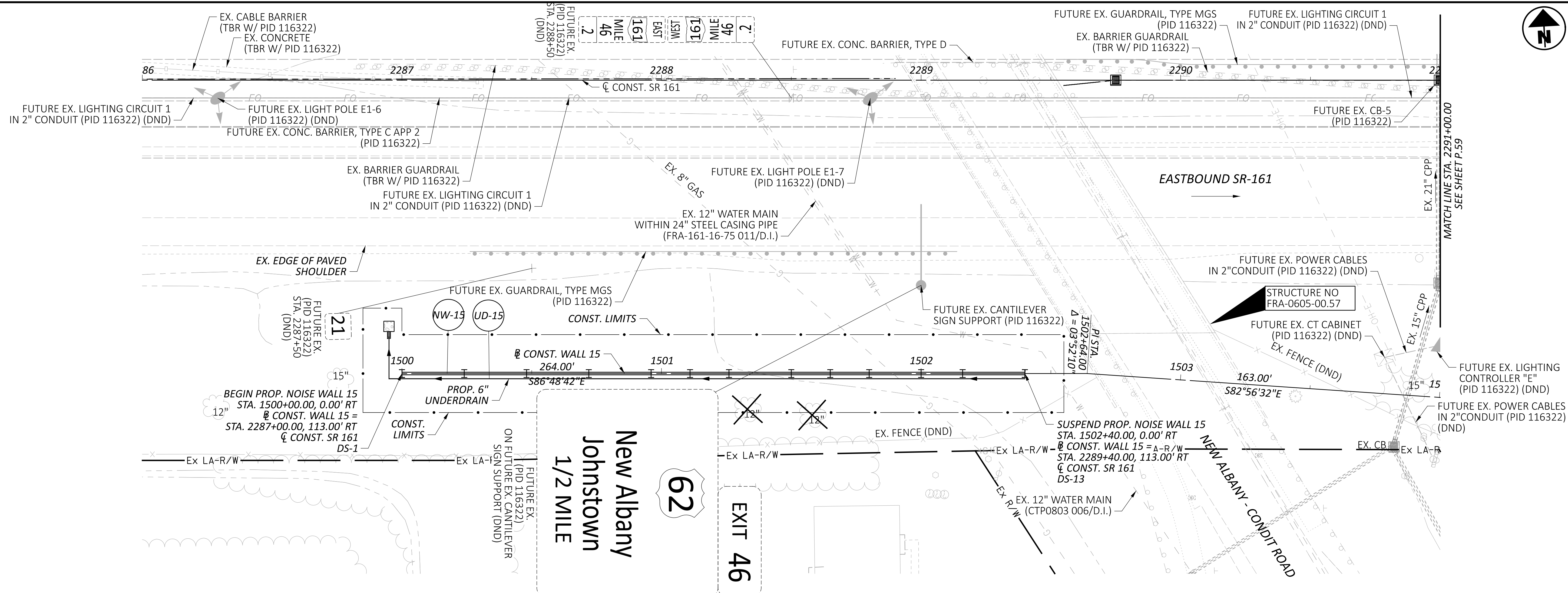
NOTE TO CONTRACTOR:
 REFER TO SHEET P.11 FOR TC ENERGY REQUIREMENTS THAT MUST BE FOLLOWED DURING THE CONSTRUCTION OF THIS PROJECT.

NOTE TO CONTRACTOR:
 REFER TO SHEET P.11 FOR TC ENERGY REQUIREMENTS THAT MUST BE FOLLOWED DURING THE CONSTRUCTION OF THIS PROJECT.



**PLAN & PROFILE - WALL 12
 STA. 2244+00.00 TO STA. 2249+00.00**

DESIGN AGENCY	
ARCADIS	8101 NORTH HIGGINS AVE SUITE 100 COLUMBIA, MO 65203 616.448.4900 www.arcadis.com
DESIGNER	
JMK	
REVIEWER	
JDH 03-27-24	
PROJECT ID	
117607	
SHEET	TOTAL
P.57	P.295

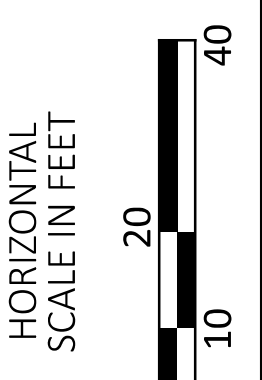
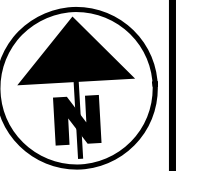
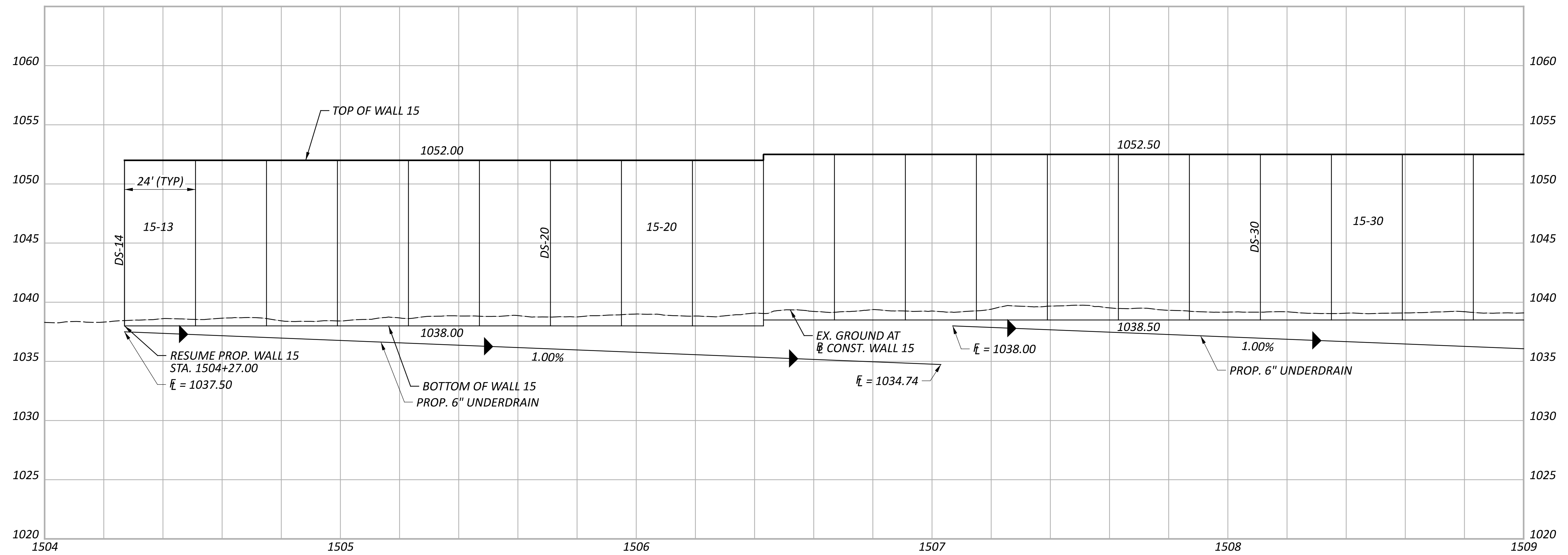
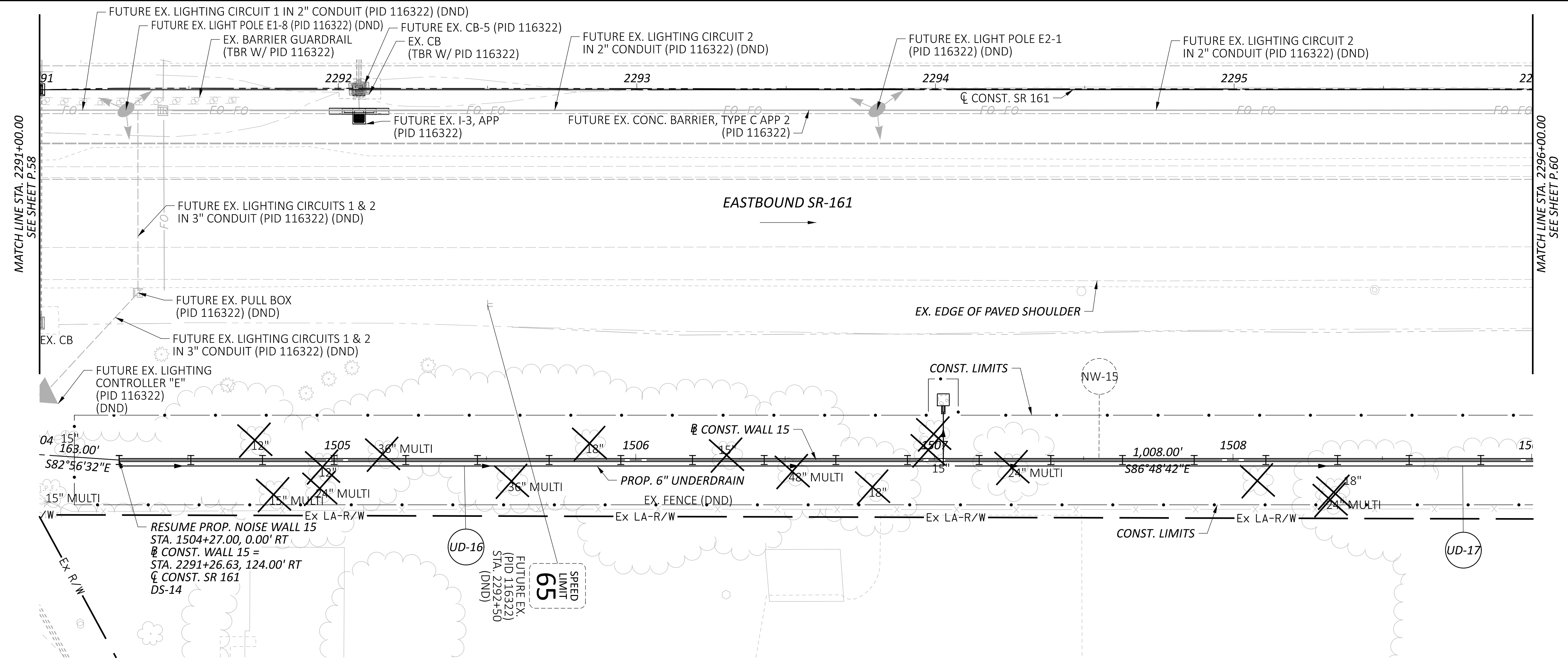


PLAN & PROFILE - WALL 15
 STA. 2286+00.00 TO STA. 2291+00.00

DESIGN AGENCY	
8101 NORTH HIGGINS SITE 100 COLUMBIANA, OH 43082 614.819.4900 www.arcadis.com	
DESIGNER	
JMK	
REVIEWER	
JDH 03-27-24	
PROJECT ID	
117607	
SHEET	TOTAL
P.58	P.295

FRA-161-15.80 NOISE WALLS

MODEL: Wall 15 - Plan 23 PAPER SIZE: 34x22 (in.) DATE: 2024-03-26 TIME: 8:53:24 AM USER: jennifer_kelley
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**PLAN & PROFILE - WALL 15
 STA. 2291+00.00 TO STA. 2296+00.00**

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

JDH 03-27-24

PROJECT ID

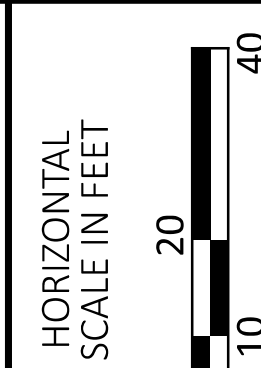
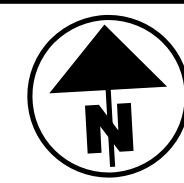
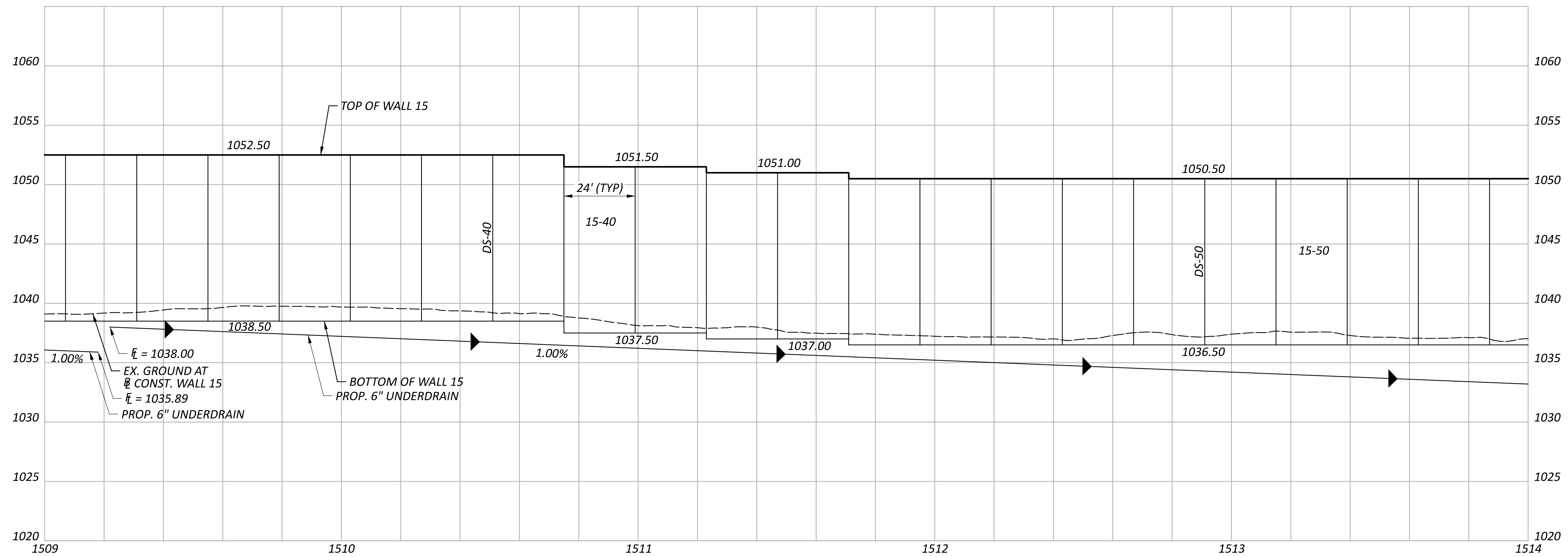
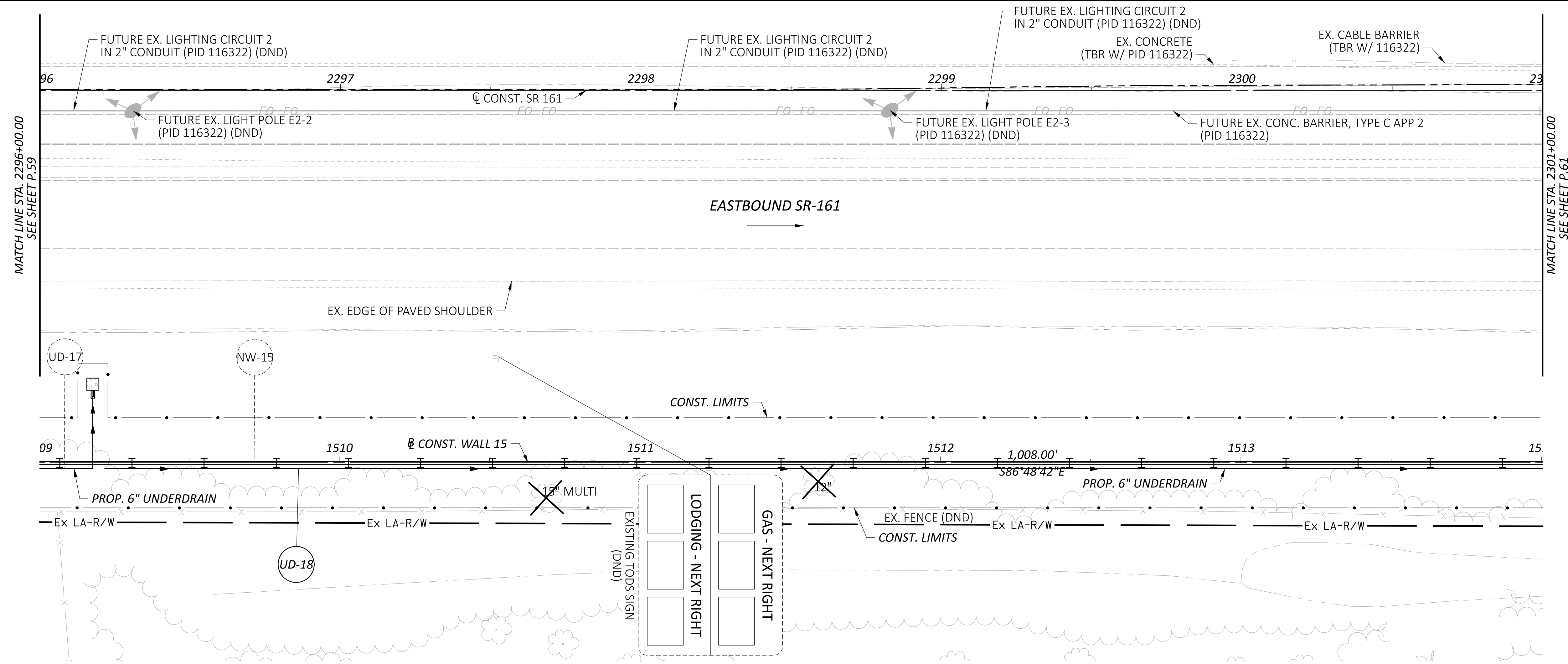
117607

SHEET TOTAL

P.59 P.295

FRA-161-15.80 NOISE WALLS

MODEL: Wall 15 - Plan 24 PAPER SIZE: 34x22 (in.) DATE: 2024-03-26 TIME: 8:53:53 AM USER: jennifer_kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\Projects\143720\00_CAD\400-Engineering\Roadway\Sheets\117607_GP1503.dgn



PLAN & PROFILE - WALL 15
STA. 2296+00.00 TO STA. 2301+00.00

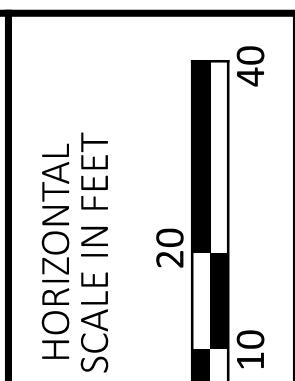
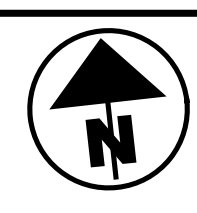
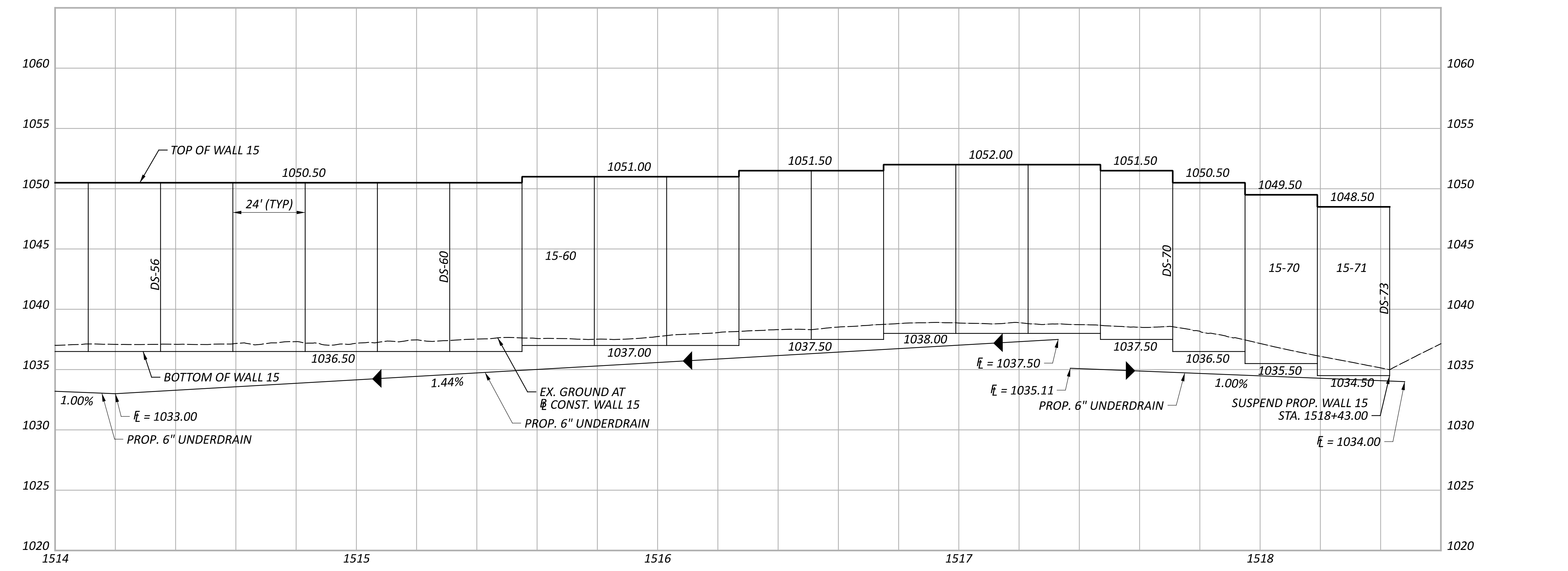
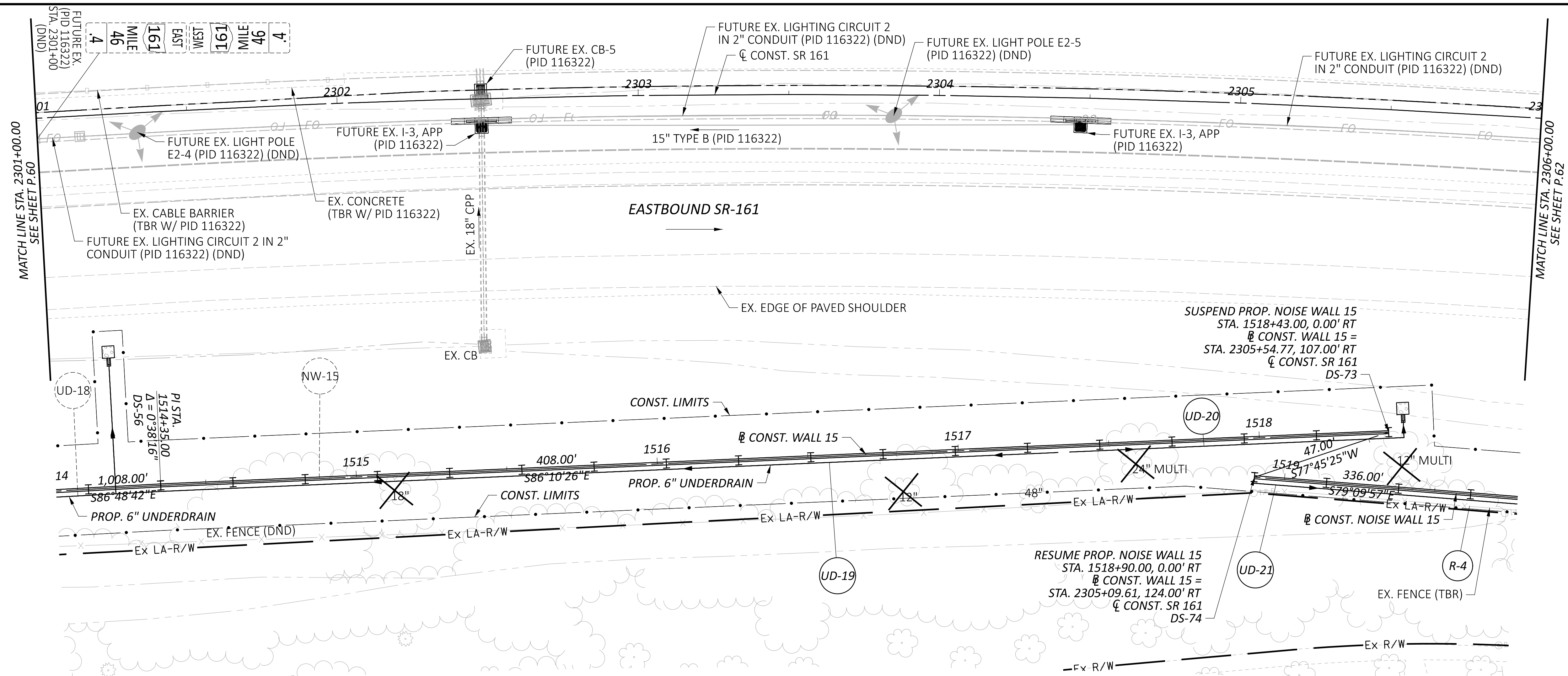
DESIGN AGENCY



DESIGNER	JMK
REVIEWER	JDK
PROJECT ID	117607
SHEET	P.60
TOTAL	P.295

FRA-161-15.80 NOISE WALLS

MODEL: Wall 15 - Plan 25 PAPER SIZE: 34x22 (in.) DATE: 2024-03-26 TIME: 8:54:21 AM USER: jennifer_kelley
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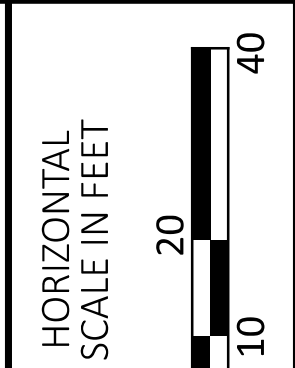
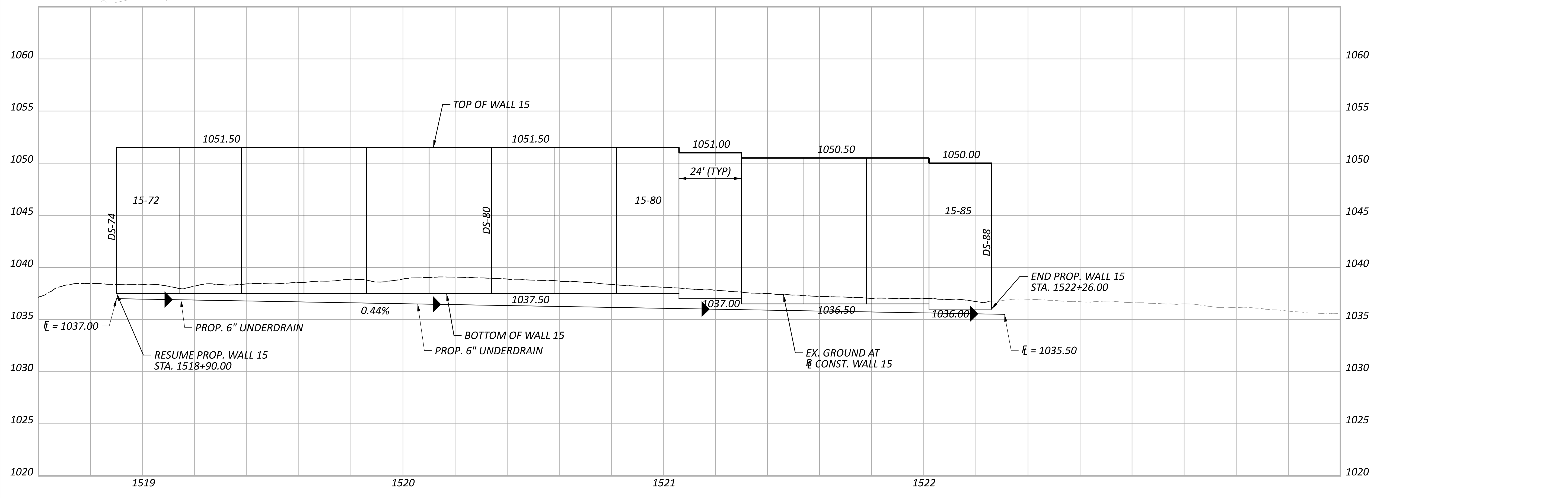
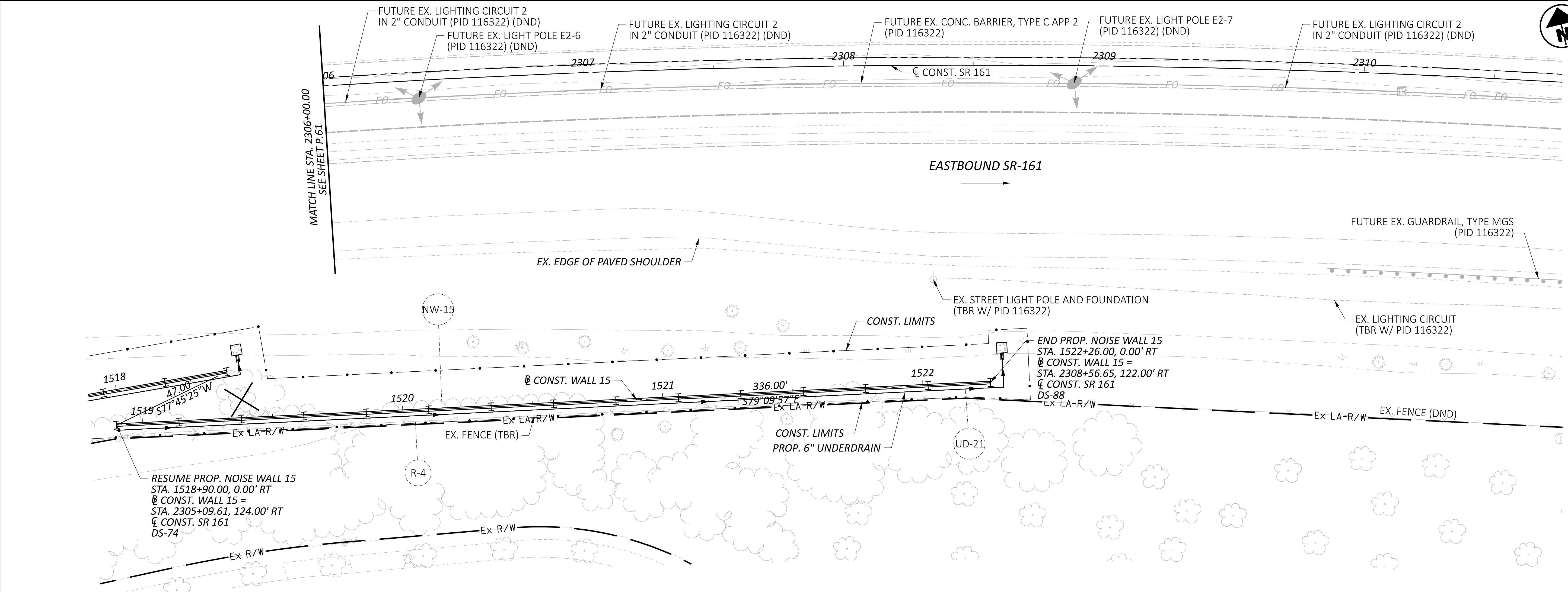


**PLAN & PROFILE - WALL 15
 STA. 2301+00.00 TO STA. 2306+00.00**

DESIGN AGENCY	
ARCADIS	8101 NORTH HIGGINS SITE 100 COLUMBIANA, OH 43082 614.814.4900 www.arcadis.com
DESIGNER	
JMK	
REVIEWER	
JDH 03-27-24	
PROJECT ID	
117607	
SHEET	TOTAL
P.61	P.295

FRA-161-15.80 NOISE WALLS

MODEL: Wall 15 - Plan 26 PAPER SIZE: 34x22 (in.) DATE: 2024-03-26 TIME: 8:54:47 AM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\Projects\143720\000_CAD\400-Engineering\Roadway\Sheets\117607_GP1505.dgn

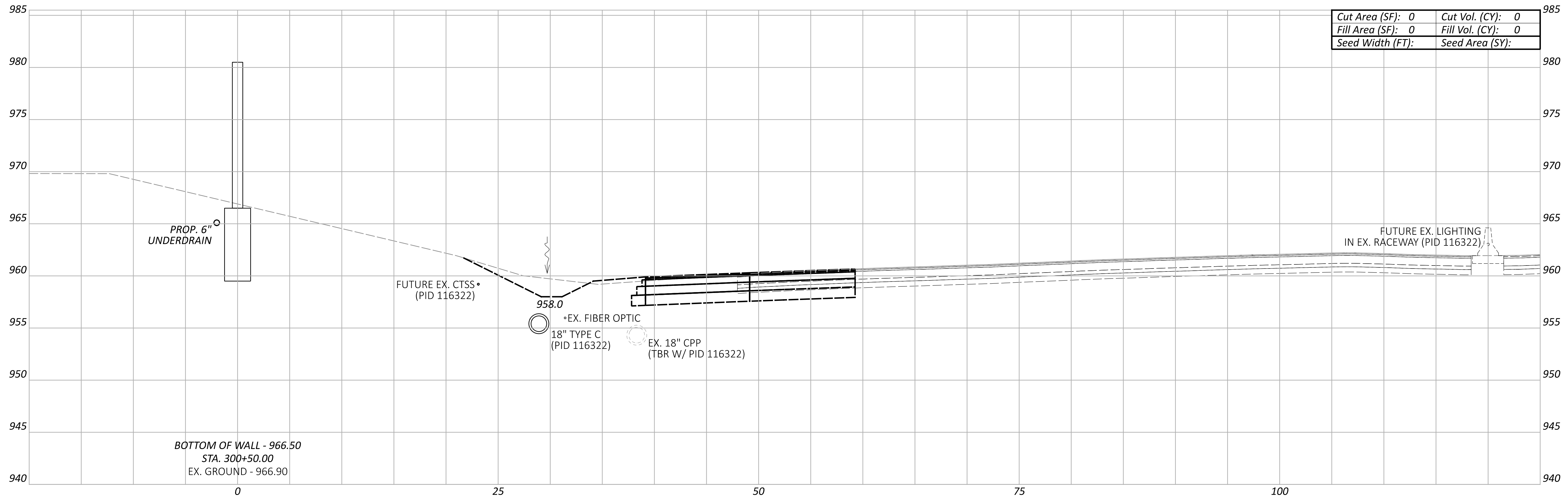


**PLAN & PROFILE - WALL 15
 STA. 2306+00.00 TO STA. 2311+00.00**

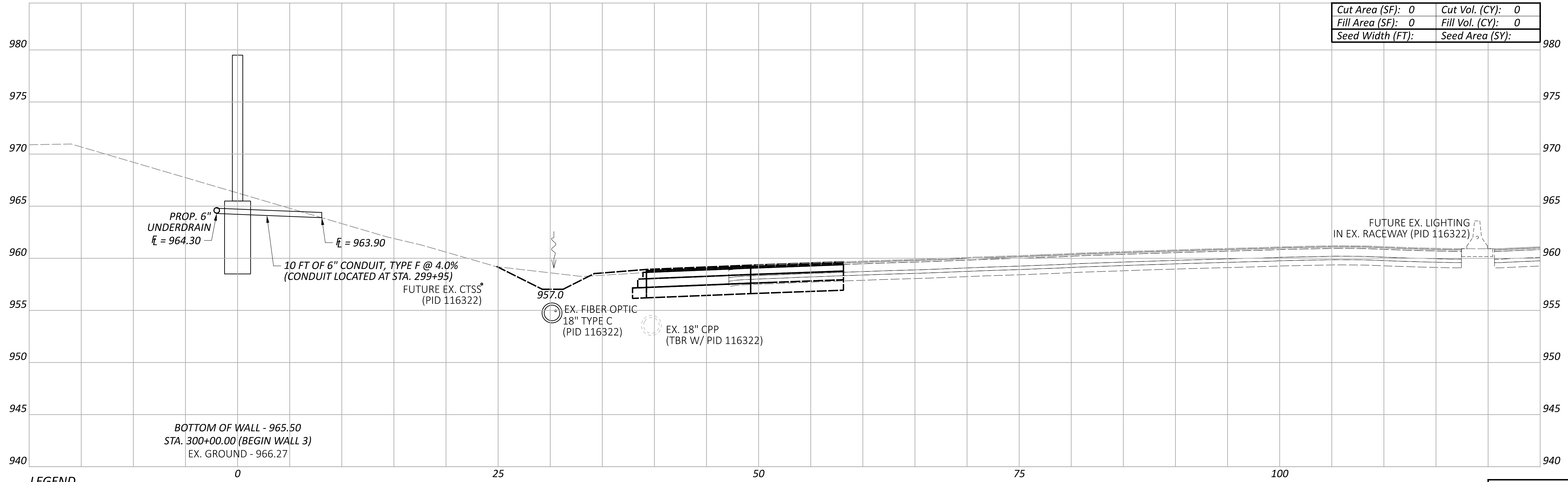
DESIGN AGENCY	
ARCADIS <small>8101 NORTH HIGHWAY 200 SUITE 100 COLUMBIANA, OH 43085 (614) 818-4900 www.arcadis.com</small>	
DESIGNER	
JMK	
REVIEWER	
JDH 03-27-24	
PROJECT ID	
117607	
SHEET	TOTAL
P.62	P.295

FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL3 - 300+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 7:34:53 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS003A.dgn



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
0	0	0	P.63 P.295

**CROSS SECTIONS - WALL 3
 STA. 300+00.00 TO STA. 300+50.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY SUITE 100
 COLUMBIA, MO 65203
 (648) 810-4900
 www.arcadis.com

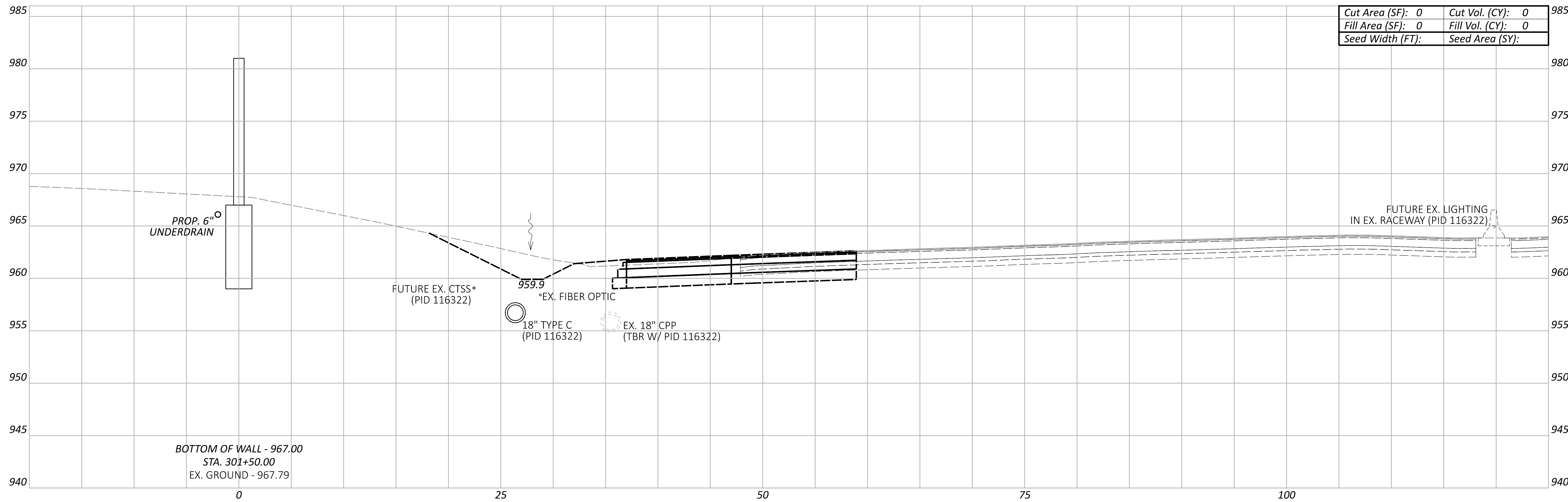
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

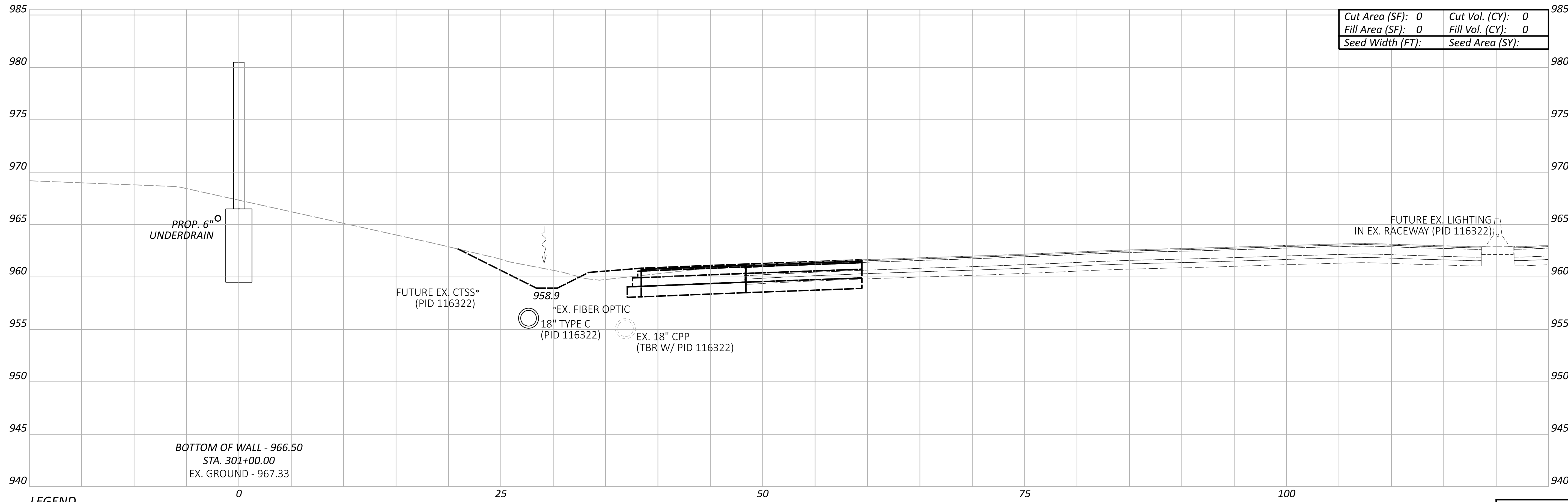
FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL3 - 301+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-27 TIME: 5:08:50 PM USER: jennifer.kelley
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Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 967.00
 STA. 301+50.00
 EX. GROUND - 967.79



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 966.50
 STA. 301+00.00
 EX. GROUND - 967.33

LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

**CROSS SECTIONS - WALL 3
 STA. 301+00.00 TO STA. 301+50.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY SUITE 100
 COLUMBIA, MO 65203
 (646) 810-4900
 www.arcadis.com

DESIGNER
JMK

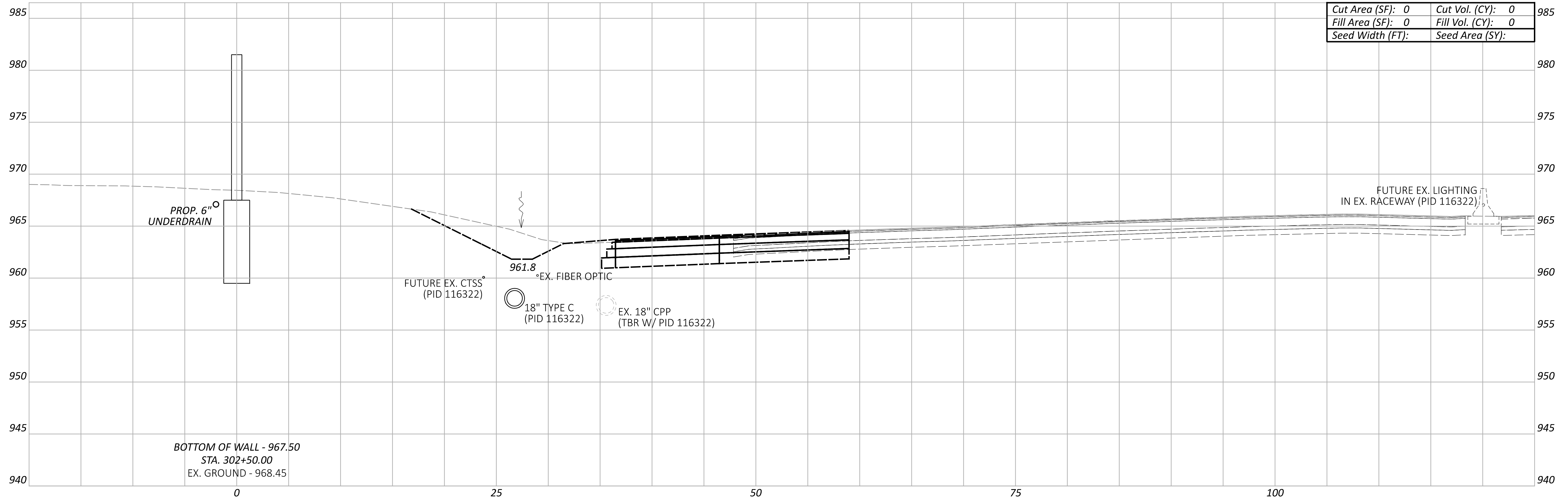
REVIEWER
JDH 03-27-24

PROJECT ID
117607

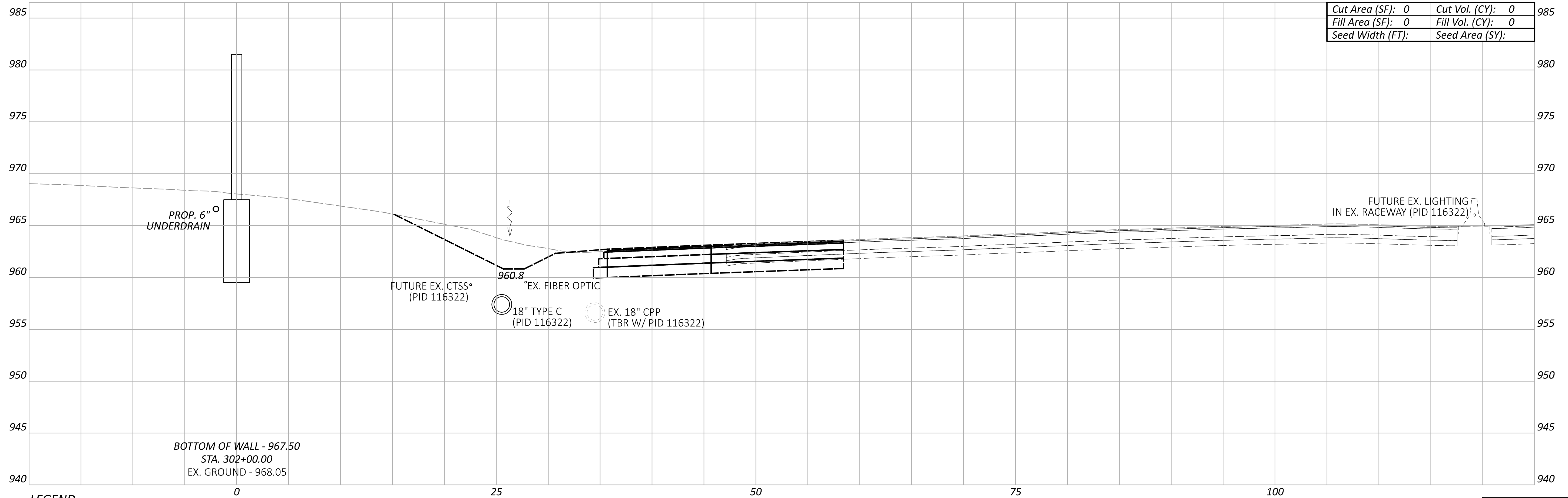
Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
0	0	0	P.64 P.295

FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL3 - 302+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-27 TIME: 5:09:37 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS003A.dgn



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

LEGEND

- EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
0	0	0	P.65 P.295

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY 302, SUITE 100
 COLUMBIA, MO 65203
 (644) 810-4900
 www.arcadis.com

DESIGNER
JMK

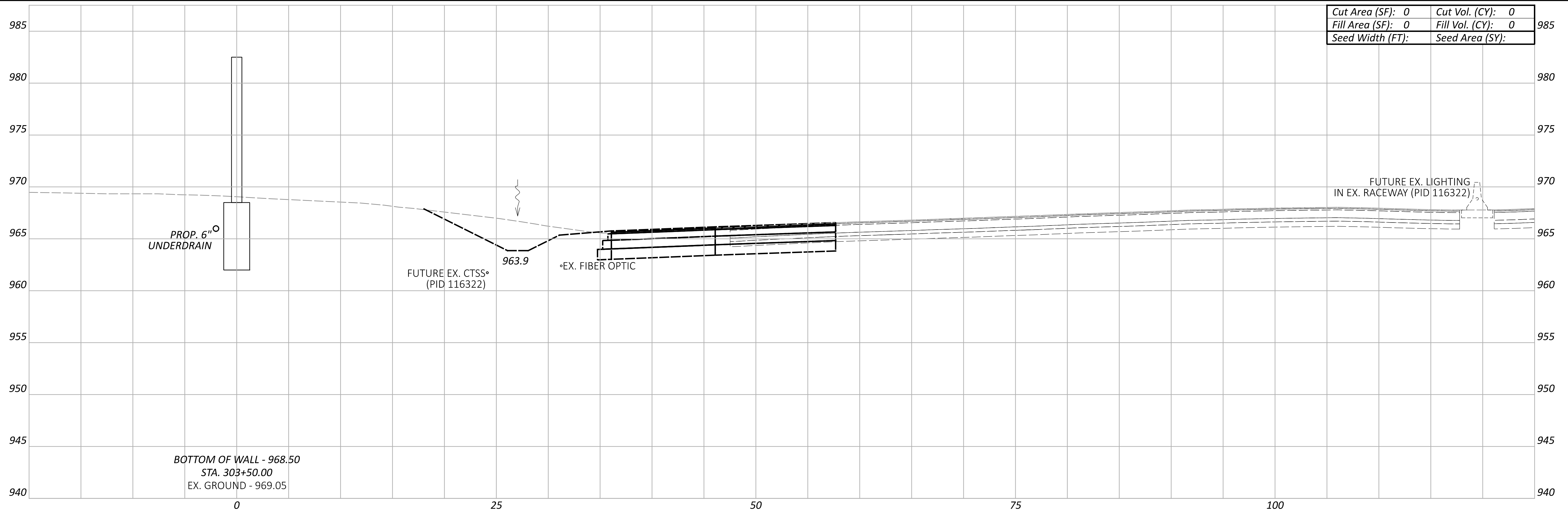
REVIEWER
JDH 03-27-24

PROJECT ID
117607

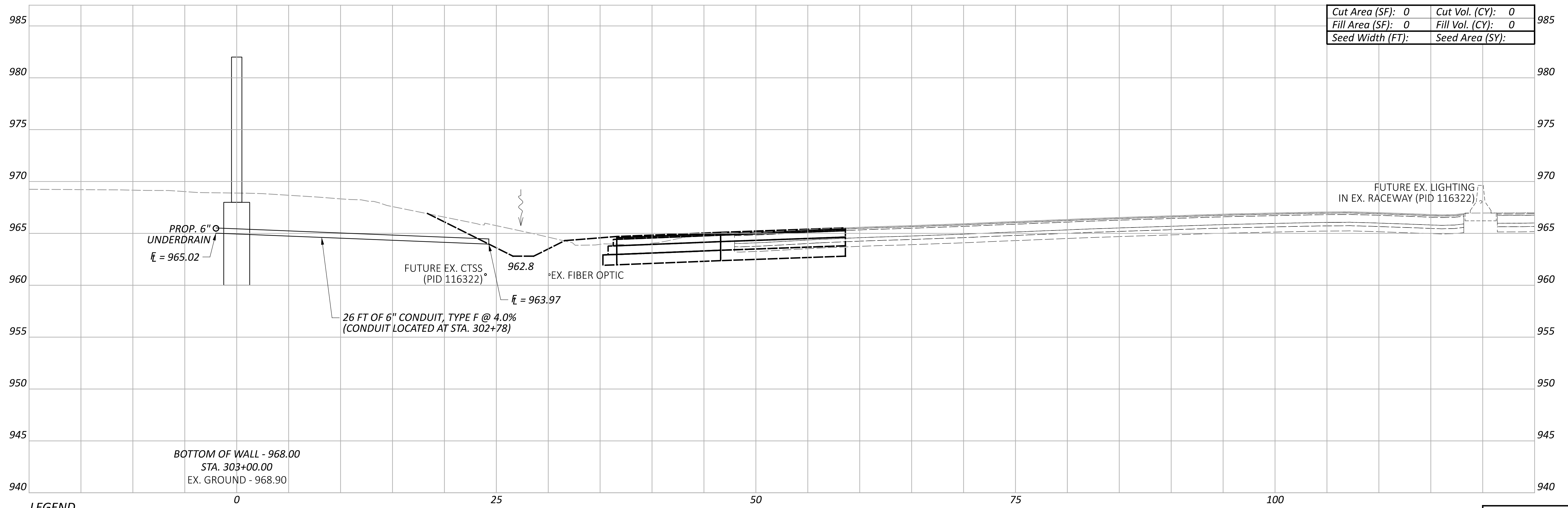
**CROSS SECTIONS - WALL 3
 STA. 302+00.00 TO STA. 302+50.00**

FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL3 - 303+00.00 [Sheet] PAPER: 34x22 (in.) DATE: 2024-03-27 TIME: 5:10:01 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS003A.dgn



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

LEGEND

- EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
0	0	0	P.66 P.295

**CROSS SECTIONS - WALL 3
 STA. 303+00.00 TO STA. 303+50.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY 200 SUITE 100
 COLUMBIA, MO 65203
 (646) 441-4900
 www.arcadis.com

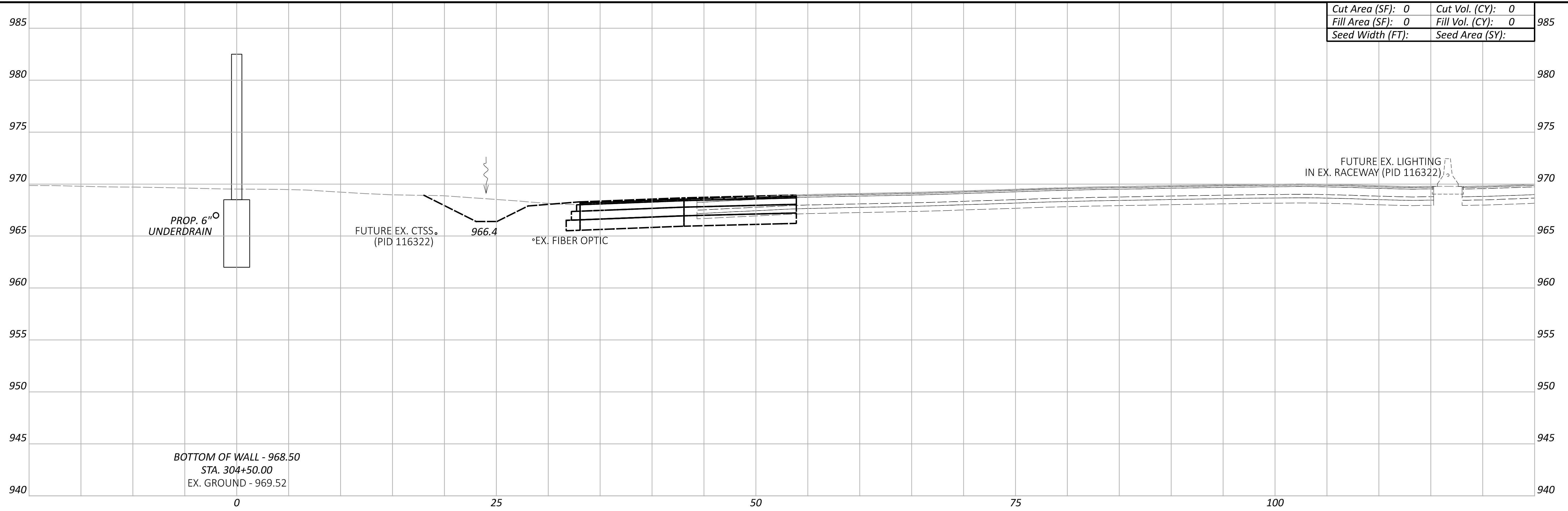
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

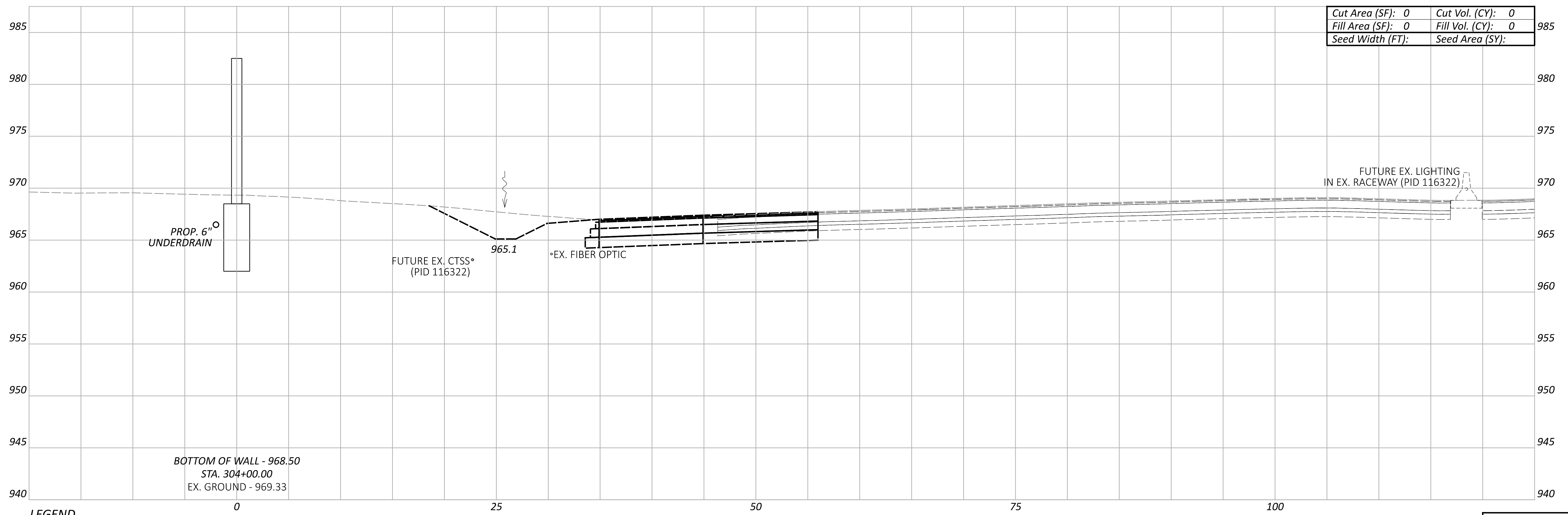
FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL3 - 304+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-27 TIME: 5:10:24 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS003A.dgn



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 968.50
 STA. 304+50.00
 EX. GROUND - 969.52



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 968.50
 STA. 304+00.00
 EX. GROUND - 969.33

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

**CROSS SECTIONS - WALL 3
 STA. 304+00.00 TO STA. 304+50.00**

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

JDH 03-27-24

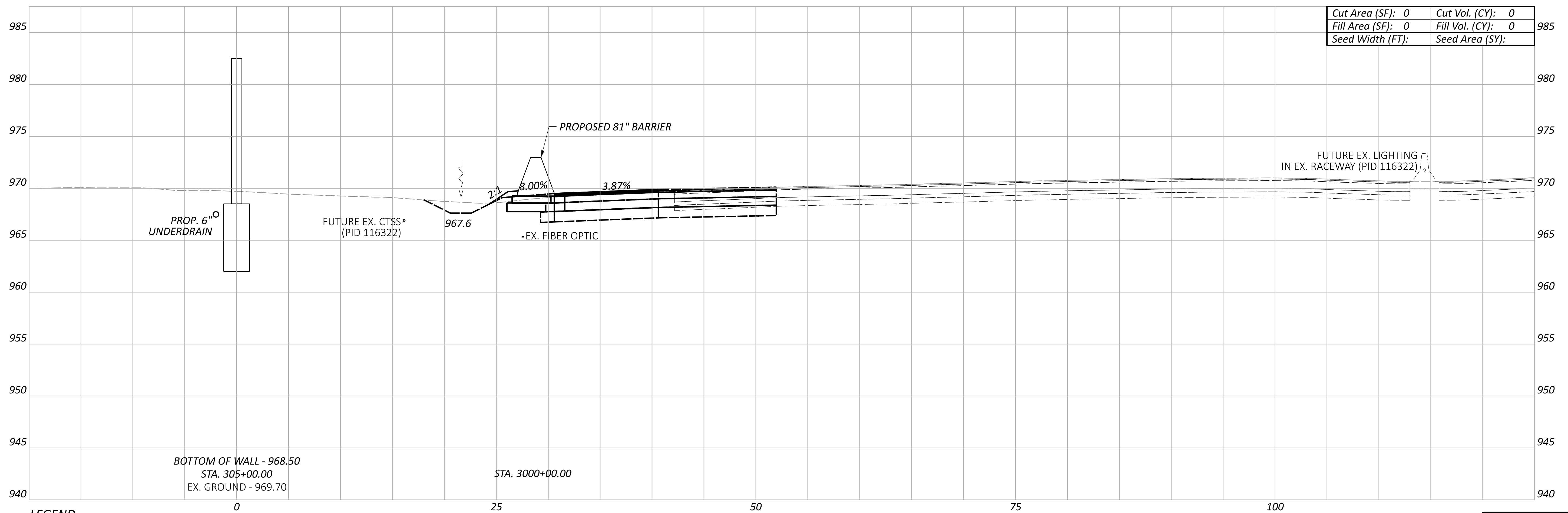
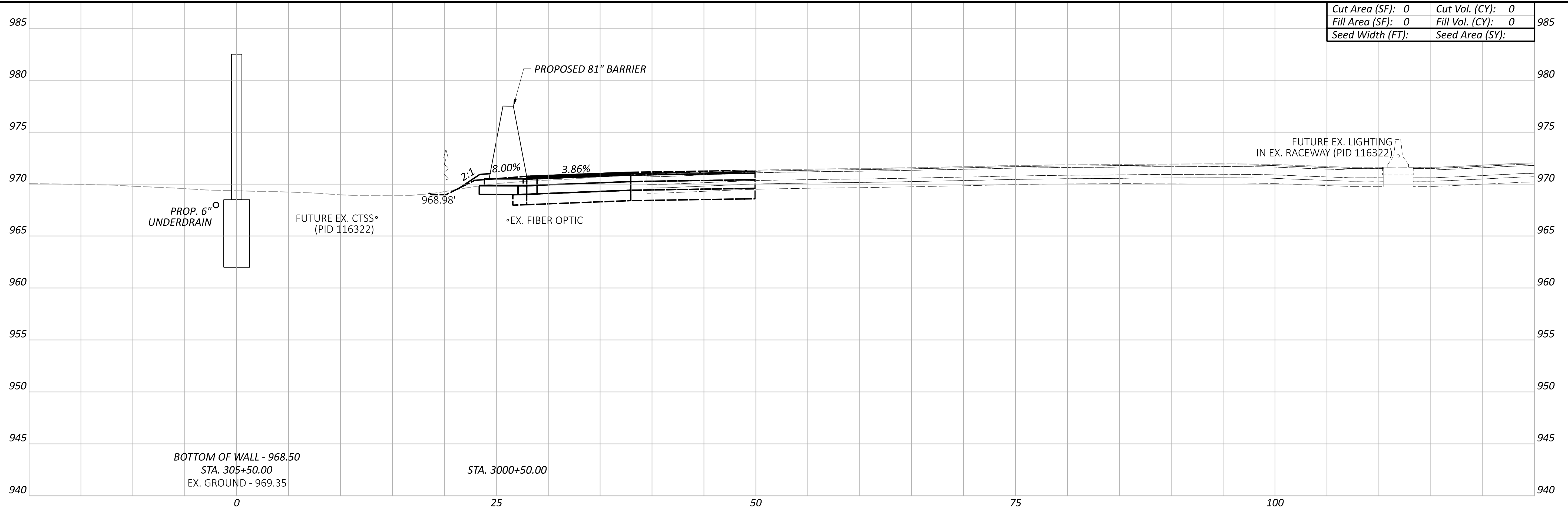
PROJECT ID

117607

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
0	0	0	P.67 P.295

FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL3 - 305+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 7:39:18 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS003A.dgn



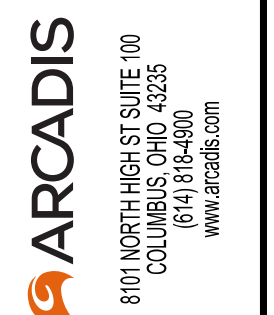
LEGEND

- EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
0	0	0	P.68	P.295

**CROSS SECTIONS - WALL 3
 STA. 305+00.00 TO STA. 305+50.00**

DESIGN AGENCY



DESIGNER

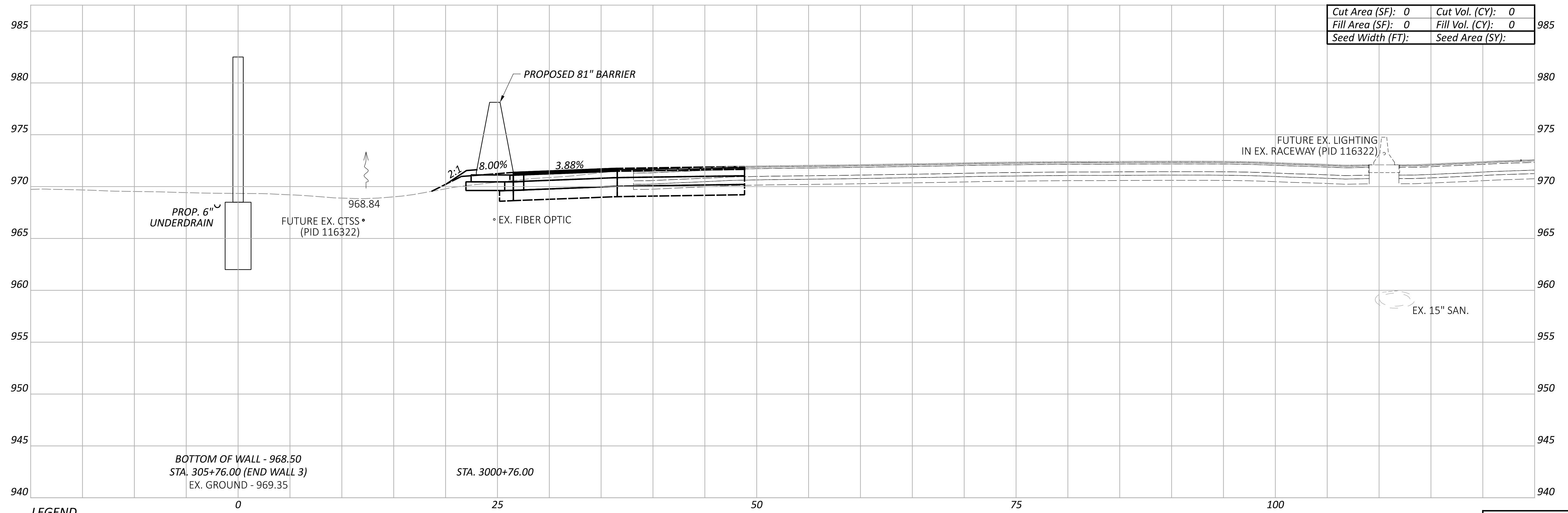
JMK

REVIEWER

JDH 03-27-24

PROJECT ID

117607

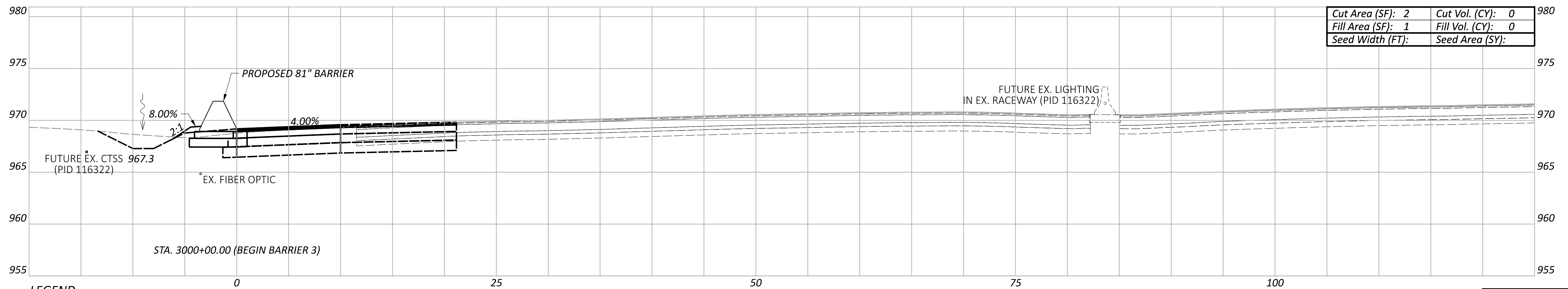
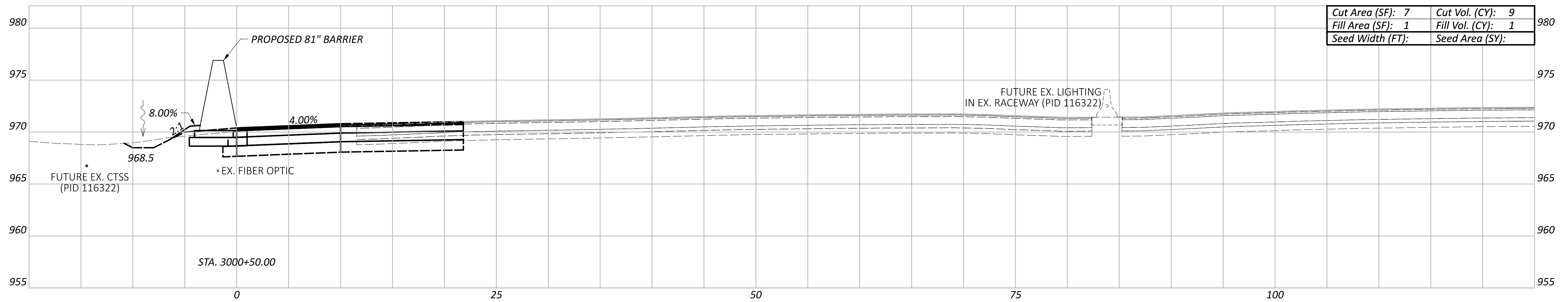
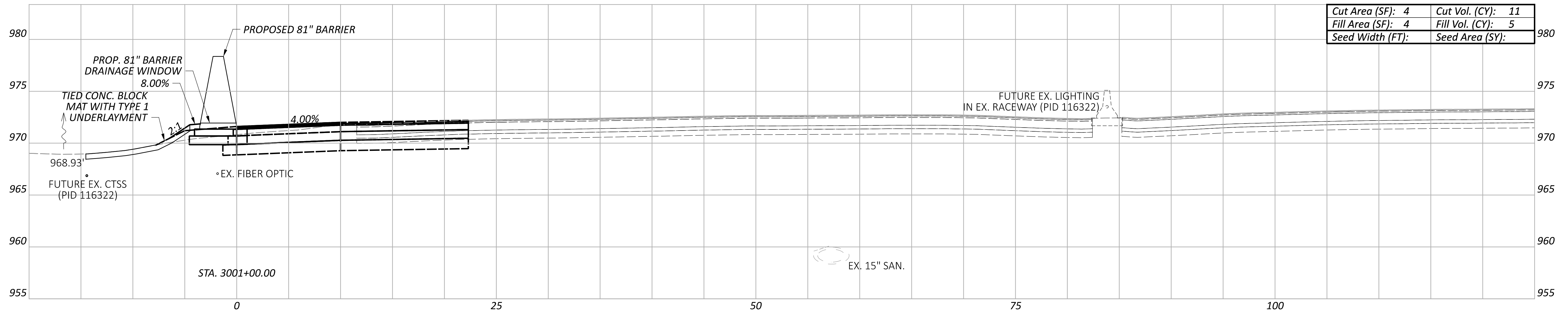


Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

LEGEND

---	EXISTING SR-161 PRIOR TO PID 116322
---	FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
0	0	0	P.69 P.295



LEGEND

- EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
	20	6	P.70	P.295

CROSS SECTIONS - 81" BARRIER 3
 STA. 3000+00.00 TO STA. 3001+00.00

DESIGN AGENCY



DESIGNER

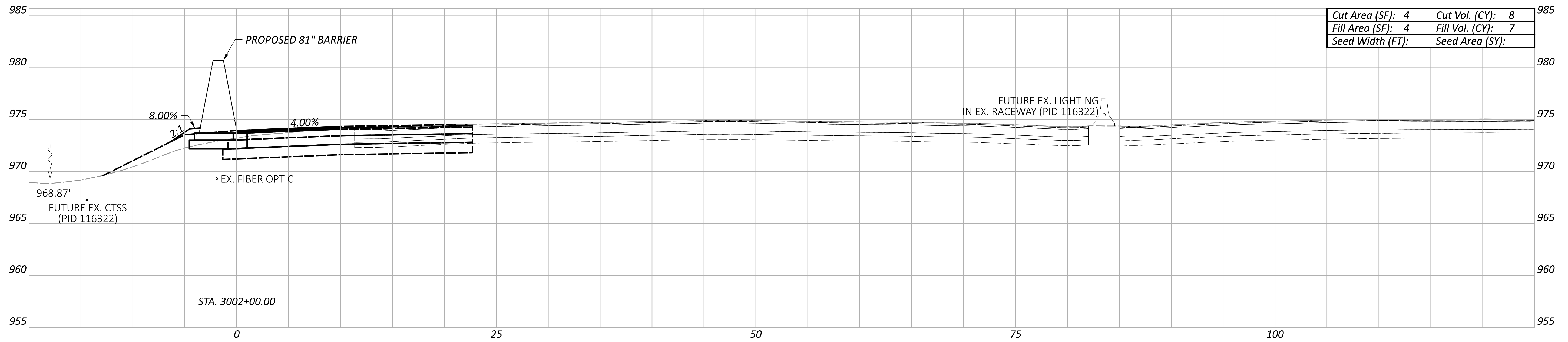
JMK

REVIEWER

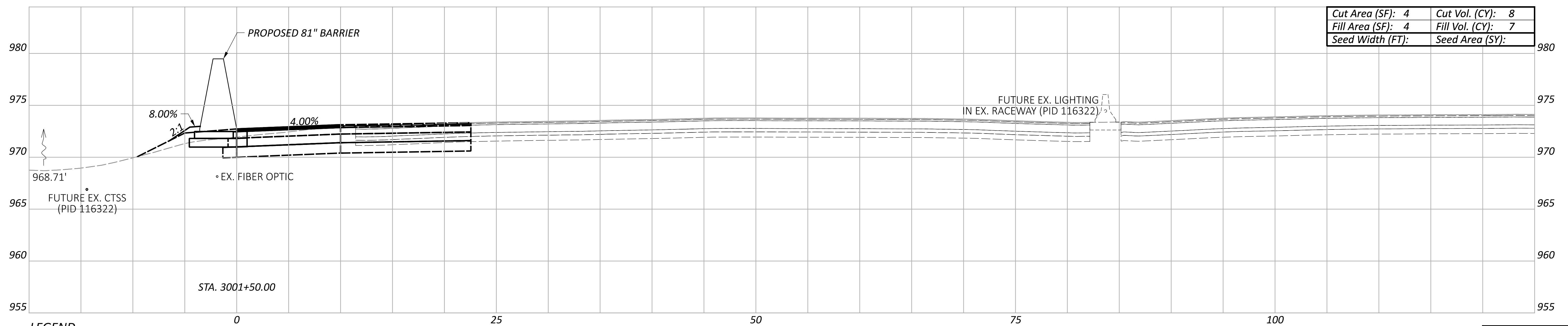
JDH 03-27-24

PROJECT ID

117607



Cut Area (SF):	4	Cut Vol. (CY):	8
Fill Area (SF):	4	Fill Vol. (CY):	7
Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	4	Cut Vol. (CY):	8
Fill Area (SF):	4	Fill Vol. (CY):	7
Seed Width (FT):		Seed Area (SY):	

LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
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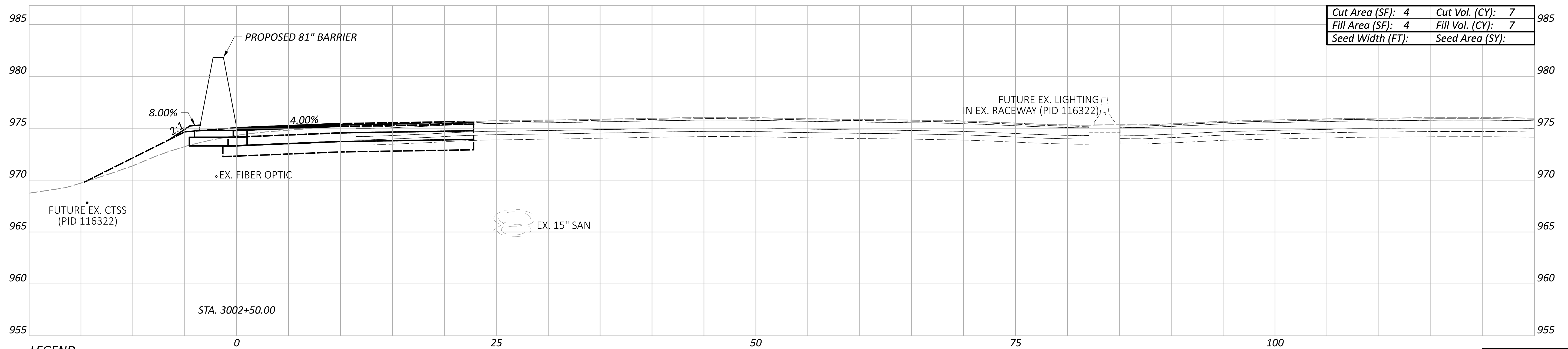
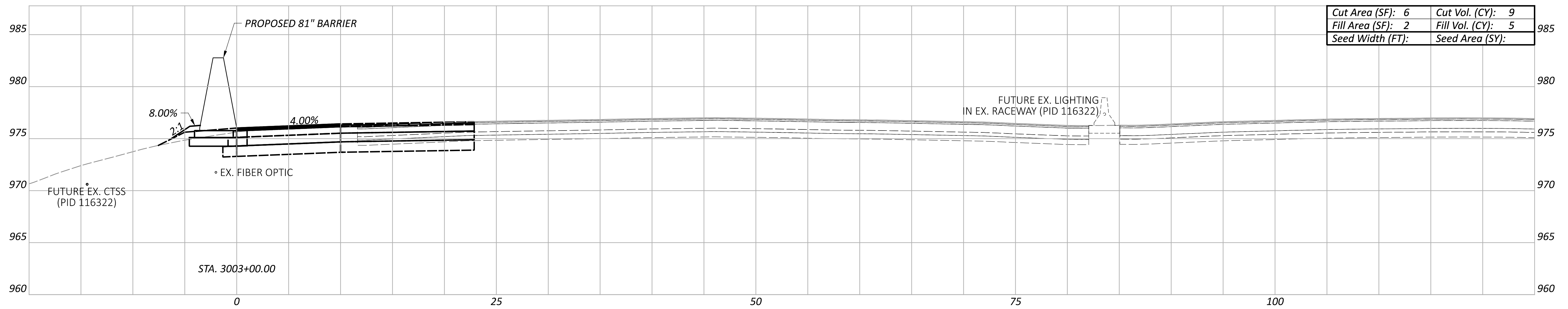
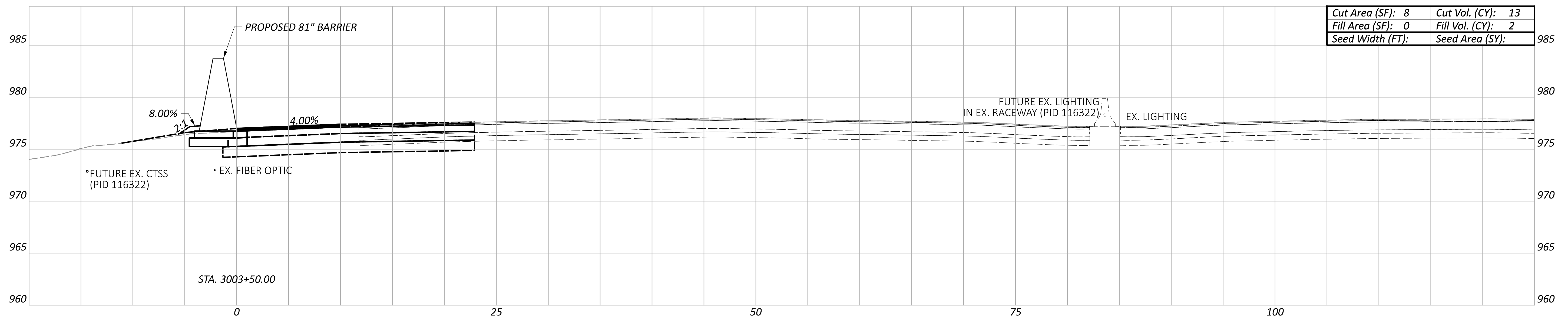
CROSS SECTIONS - 81" BARRIER 3
 STA. 3001+50.00 TO STA. 3002+00.00

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS AVE SUITE 100
 COLUMBIANA, OH 43085
 (614) 891-4900
 www.arcadis.com

DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607



LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
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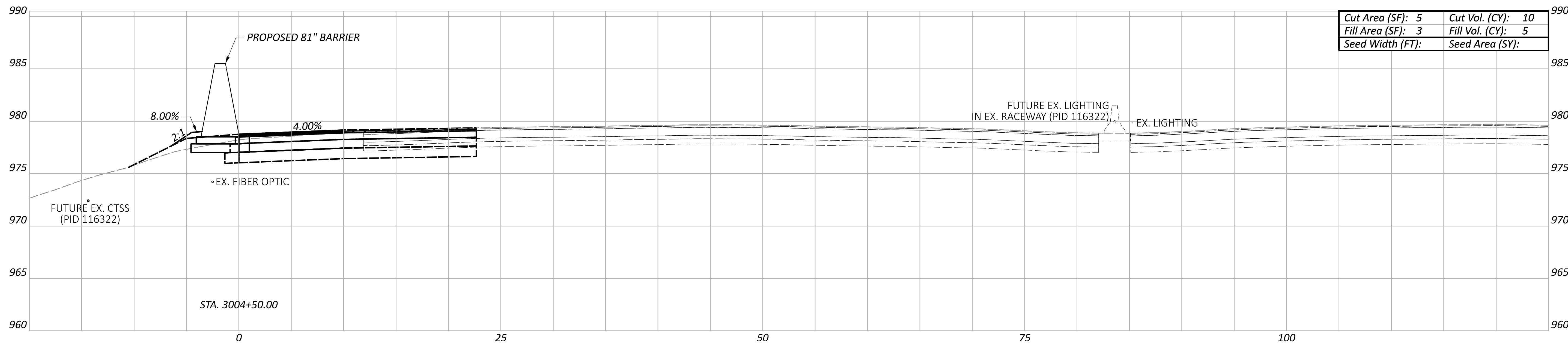
CROSS SECTIONS - 81" BARRIER 3
 STA. 3002+50.00 TO STA. 3003+50.00

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY 242, SUITE 100
 COLUMBIA, SC 29223
 (803) 799-4900
 www.arcadis.com

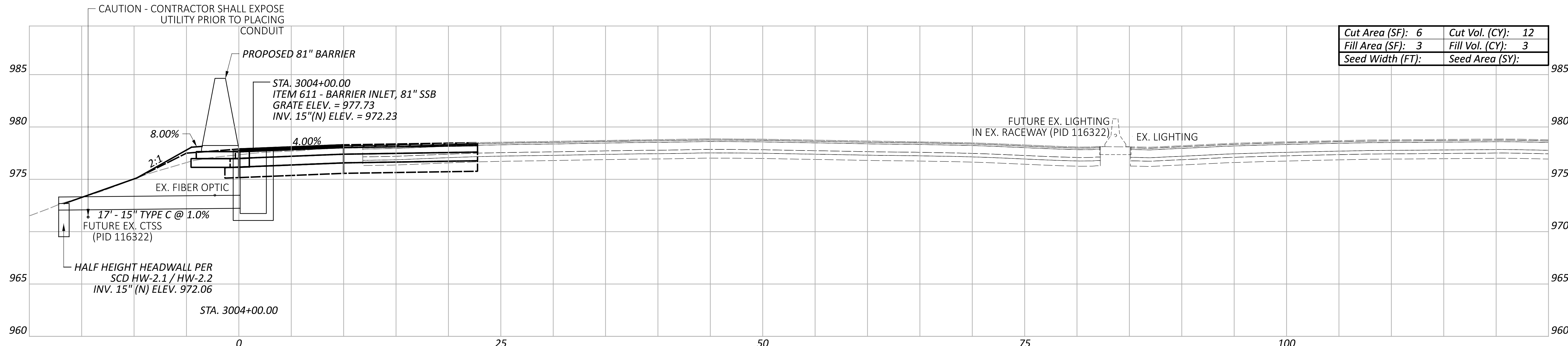
DESIGNER
JMK

REVIEWER
 JDH 03-27-24

PROJECT ID
 117607



Cut Area (SF):	5	Cut Vol. (CY):	10
Fill Area (SF):	3	Fill Vol. (CY):	5
Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	6	Cut Vol. (CY):	12
Fill Area (SF):	3	Fill Vol. (CY):	3
Seed Width (FT):		Seed Area (SY):	

LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
	22	8	P.73	P.295

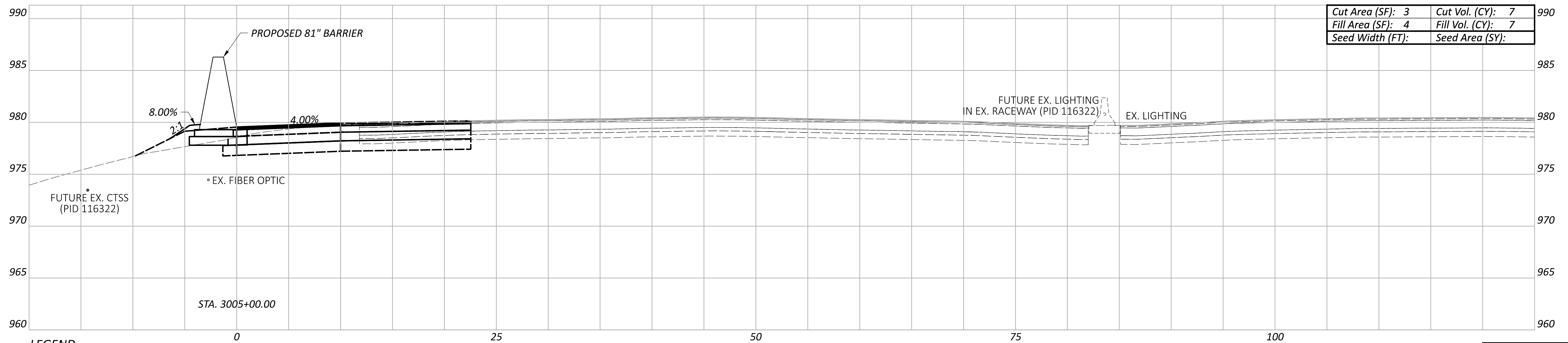
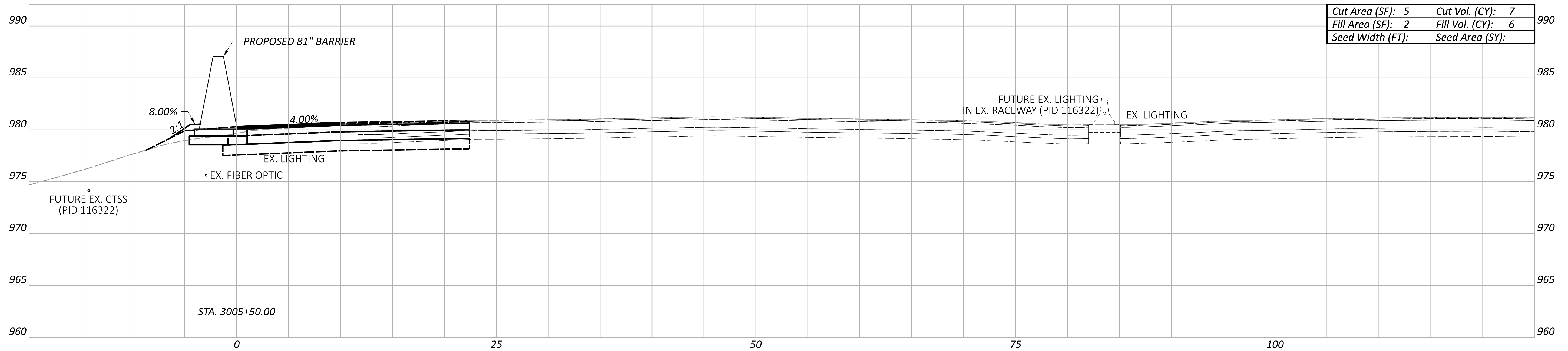
CROSS SECTIONS - 81" BARRIER 3
 STA. 3004+00.00 TO STA. 3004+50.00

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS AVE SUITE 100
 COLUMBIANA, OH 43085
 (614) 810-4900
 www.arcadis.com

DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607



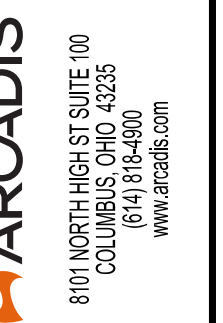
LEGEND

- EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
	14	13	P.74	P.295

CROSS SECTIONS - 81" BARRIER 3
 STA. 3005+00.00 TO STA. 3005+50.00

DESIGN AGENCY



DESIGNER

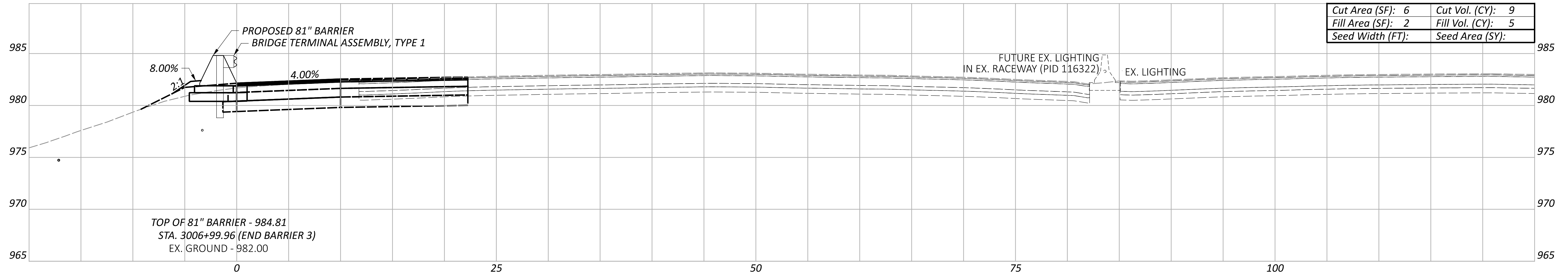
JMK

REVIEWER

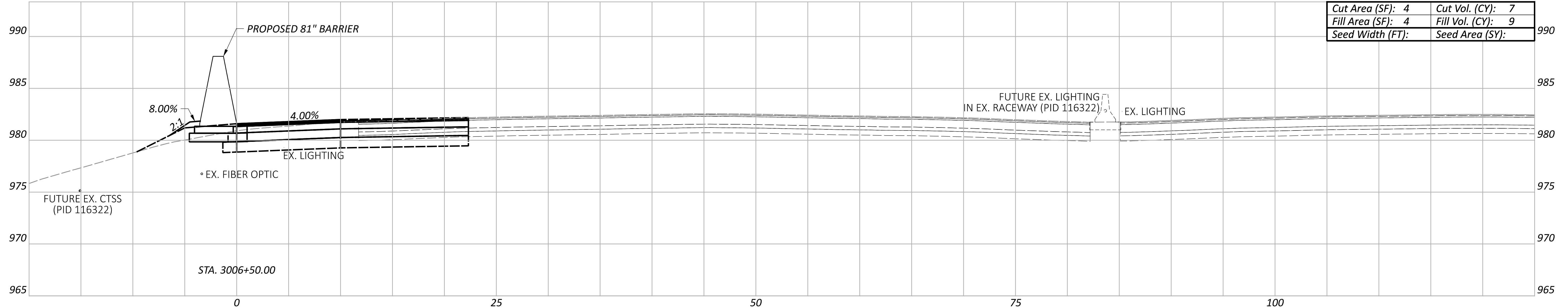
JDH 03-27-24

PROJECT ID

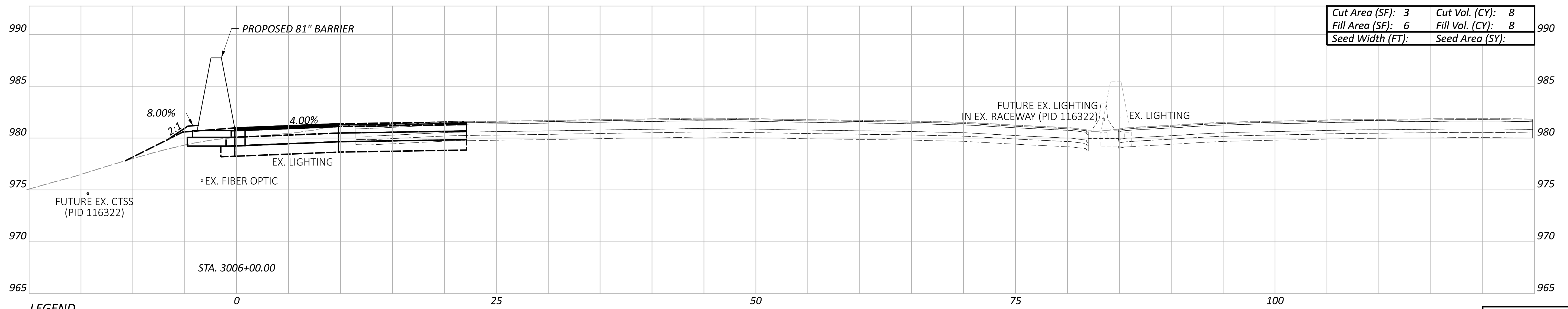
117607



Cut Area (SF):	6	Cut Vol. (CY):	9
Fill Area (SF):	2	Fill Vol. (CY):	5
Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	4	Cut Vol. (CY):	7
Fill Area (SF):	4	Fill Vol. (CY):	9
Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	3	Cut Vol. (CY):	8
Fill Area (SF):	6	Fill Vol. (CY):	8
Seed Width (FT):		Seed Area (SY):	

LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
	24	22	P.75	P.295

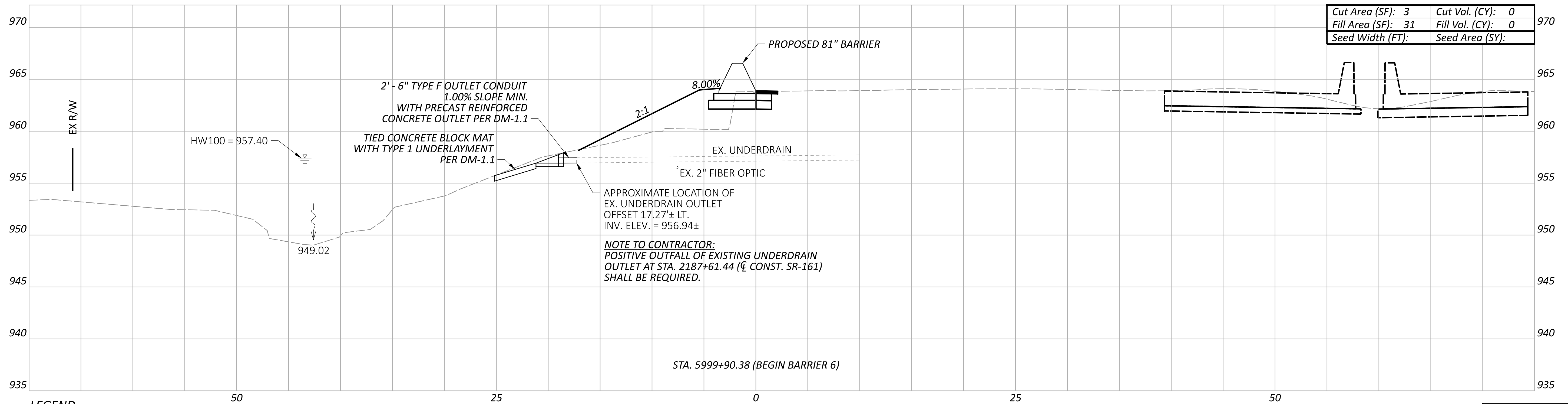
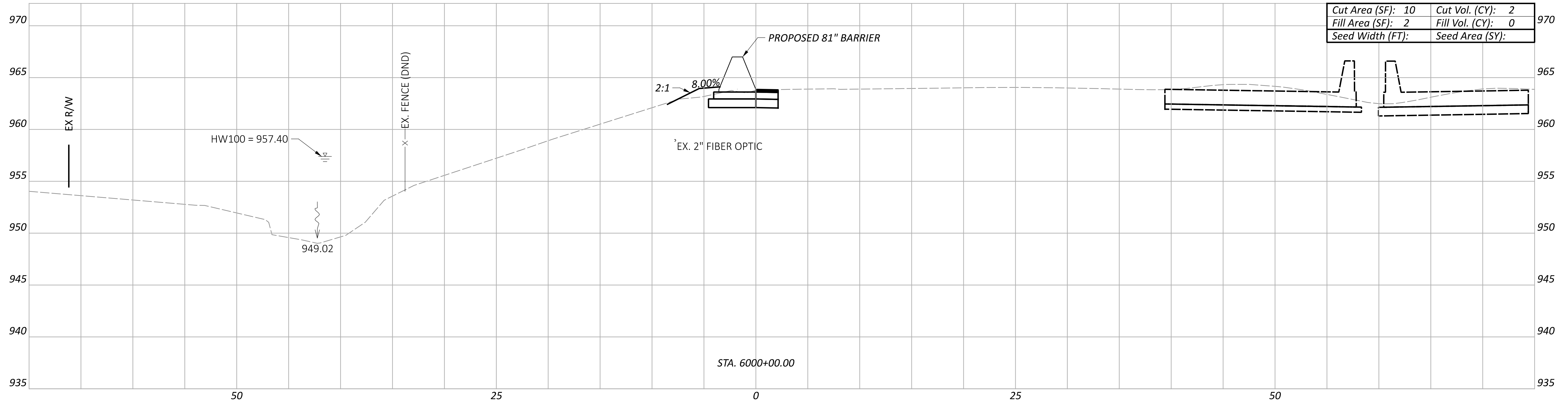
CROSS SECTIONS - 81" BARRIER 3
 STA. 3006+00.00 TO STA. 3006+99.96

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY 200 SUITE 100
 COLUMBIA, MD 21046
 TEL: (410) 314-4900
 www.arcadis.com

DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607



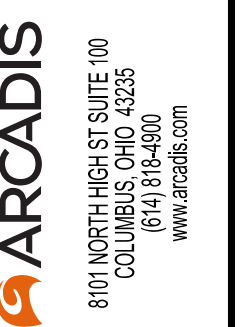
LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
	2	0	P.76	P.295

CROSS SECTIONS - 81" BARRIER 6
 STA. 5999+90.38 TO STA. 6000+00.00

DESIGN AGENCY



DESIGNER

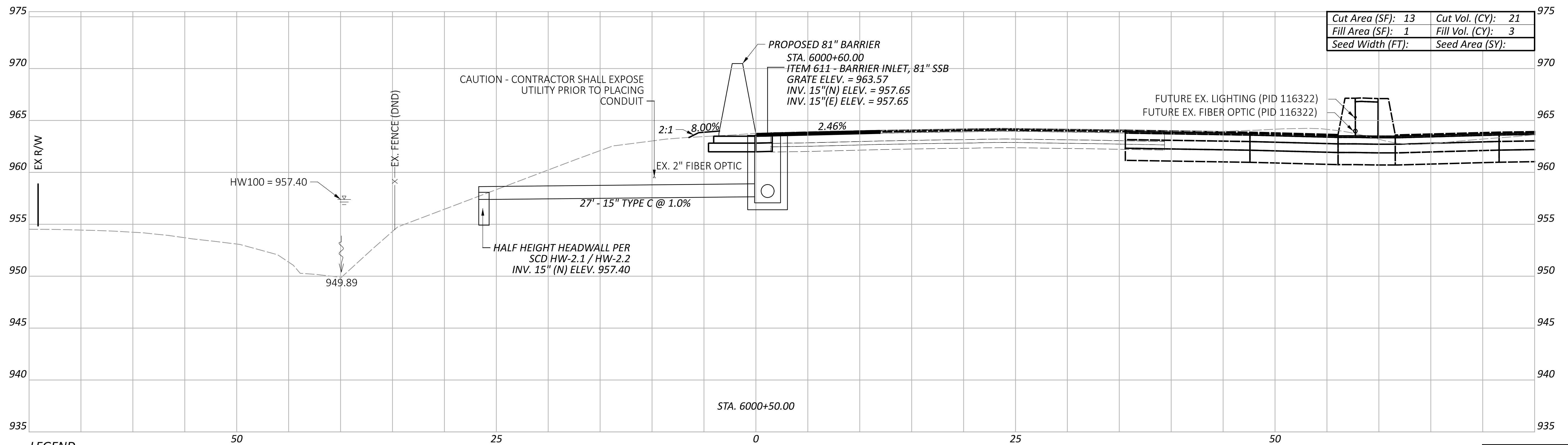
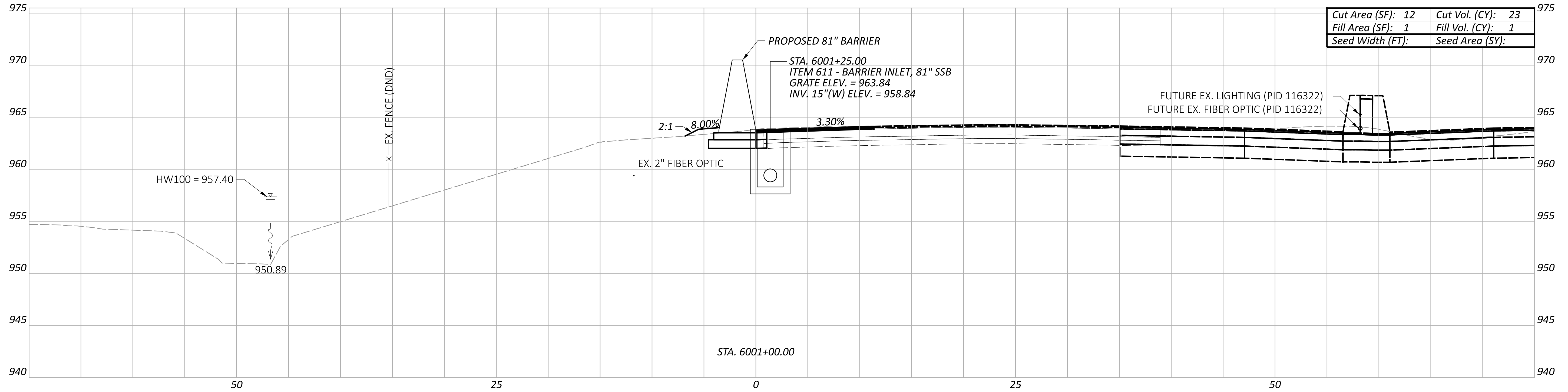
JMK

REVIEWER

JDH 03-27-24

PROJECT ID

117607

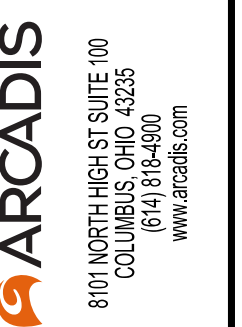


LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
	44	4	P.77 P.295

DESIGN AGENCY



DESIGNER

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JDH 03-27-24

PROJECT ID

117607

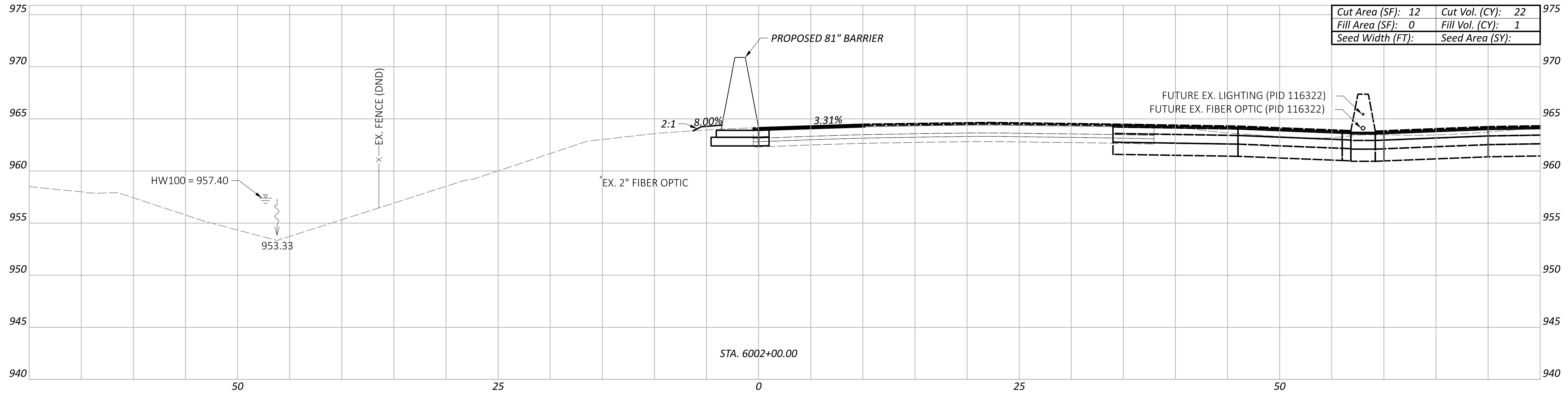
SHEET

P.77 | P.295

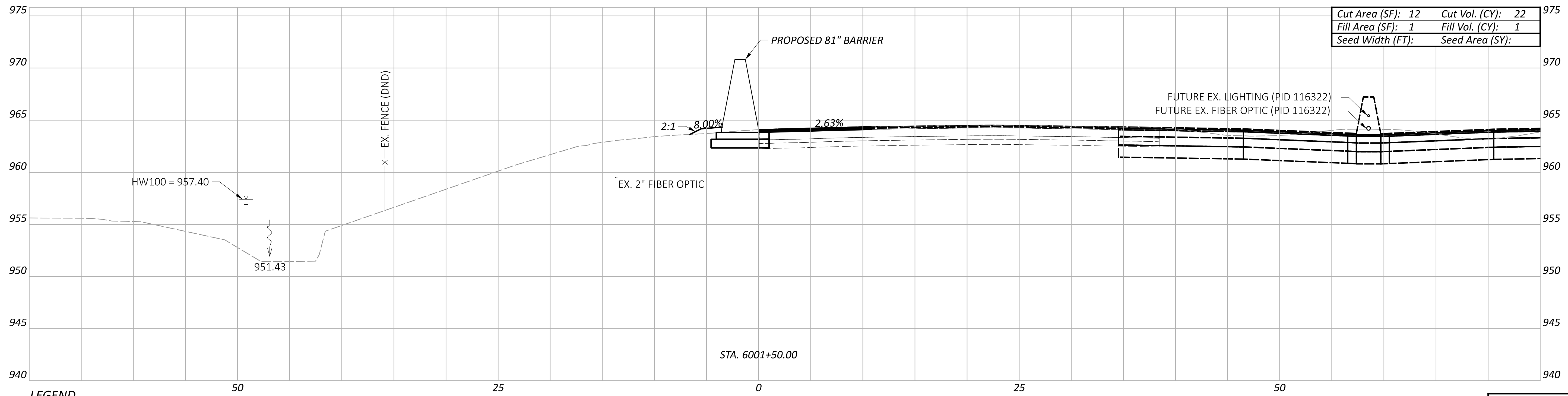
CROSS SECTIONS - 81" BARRIER 6
 STA. 6000+50.00 TO STA. 6001+00.00

FRA-161-15.80 NOISE WALLS

MODEL: BLP_BARRIERE - 6001+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 7:48:08 PM USER: jennifer.kelley
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Fill Area (SF):	0	Fill Vol. (CY):	1
Seed Width (FT):		Seed Area (SY):	



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Fill Area (SF):	1	Fill Vol. (CY):	1
Seed Width (FT):		Seed Area (SY):	

LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
	44	2	P.78 P.295

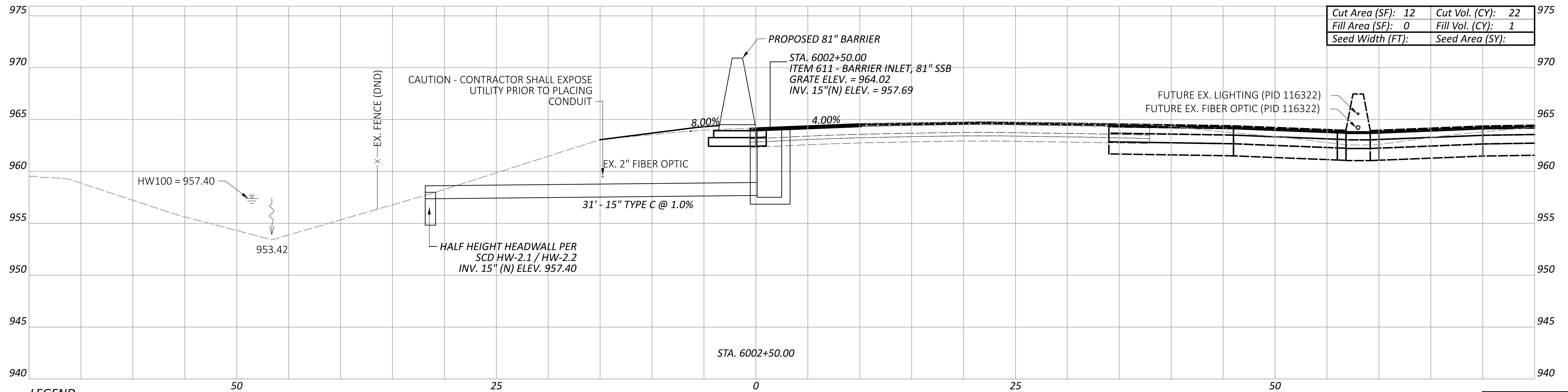
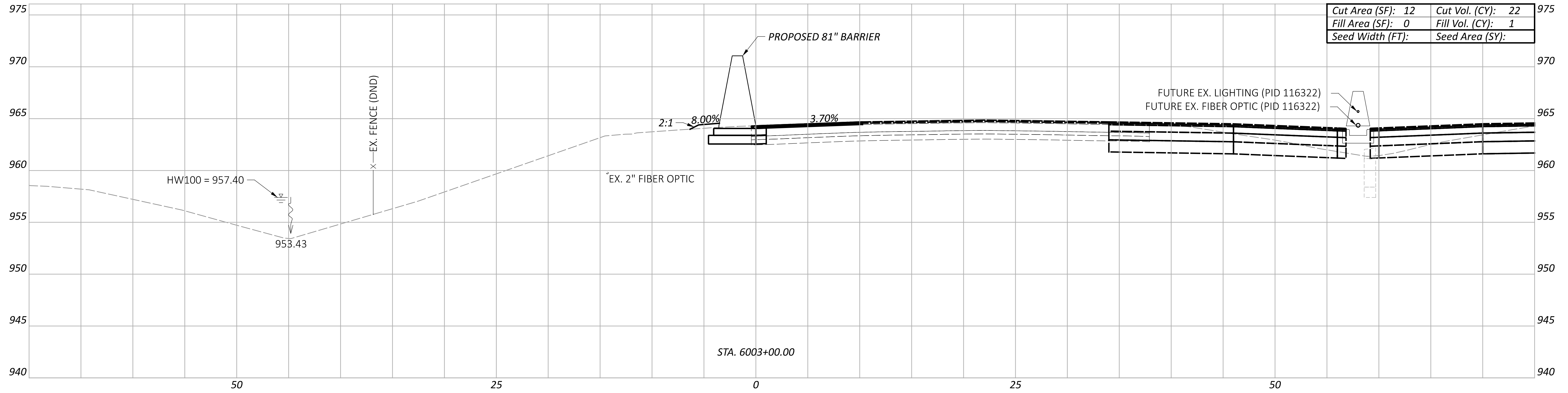
**CROSS SECTIONS - 81" BARRIER 6
 STA. 6001+50.00 TO STA. 6002+00.00**

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ARCADIS
 8101 NORTH HIGHWAY SUITE 100
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JDH 03-27-24

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117607



LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
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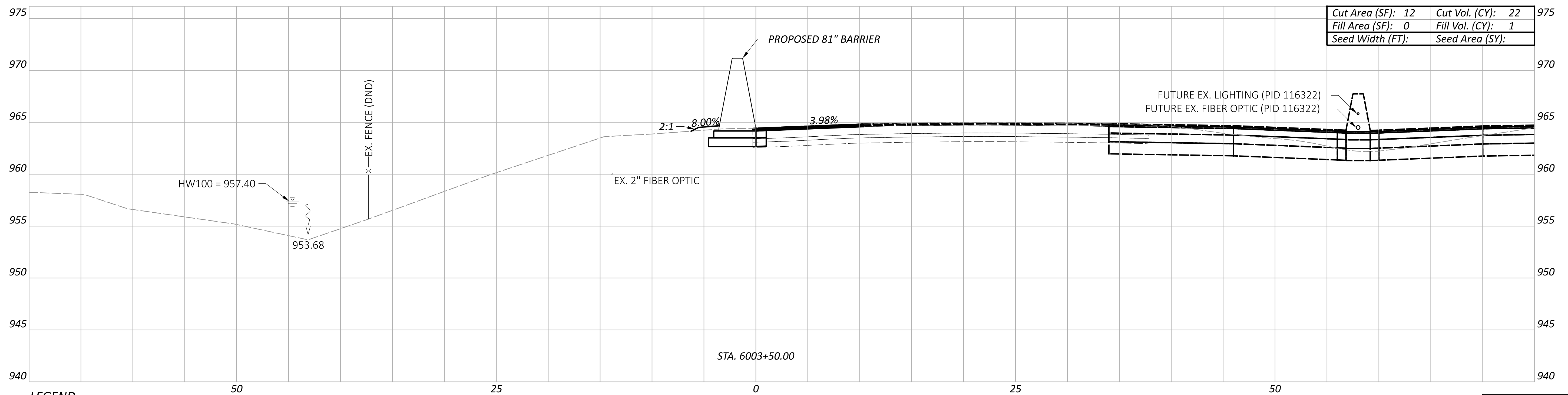
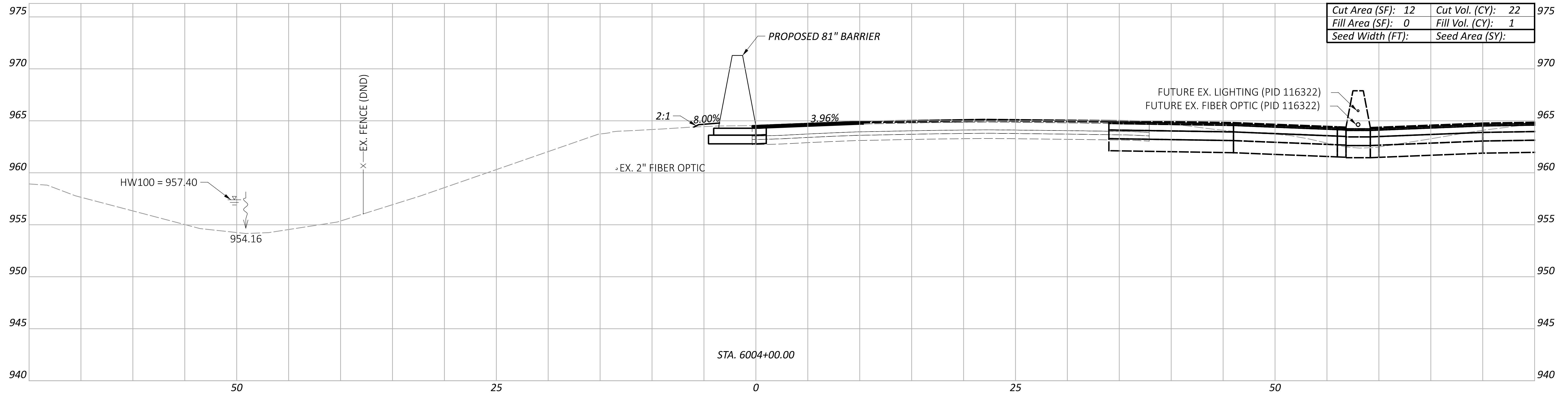
SHEET

P.79

TOTAL

P.295

CROSS SECTIONS - 81" BARRIER 6
 STA. 6002+50.00 TO STA. 6003+00.00



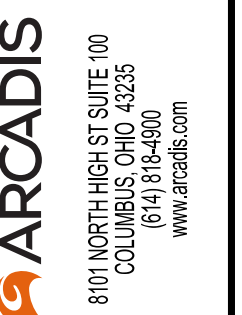
LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
	44	2	P.80	P.295

CROSS SECTIONS - 81" BARRIER 6
 STA. 6003+50.00 TO STA. 6004+00.00

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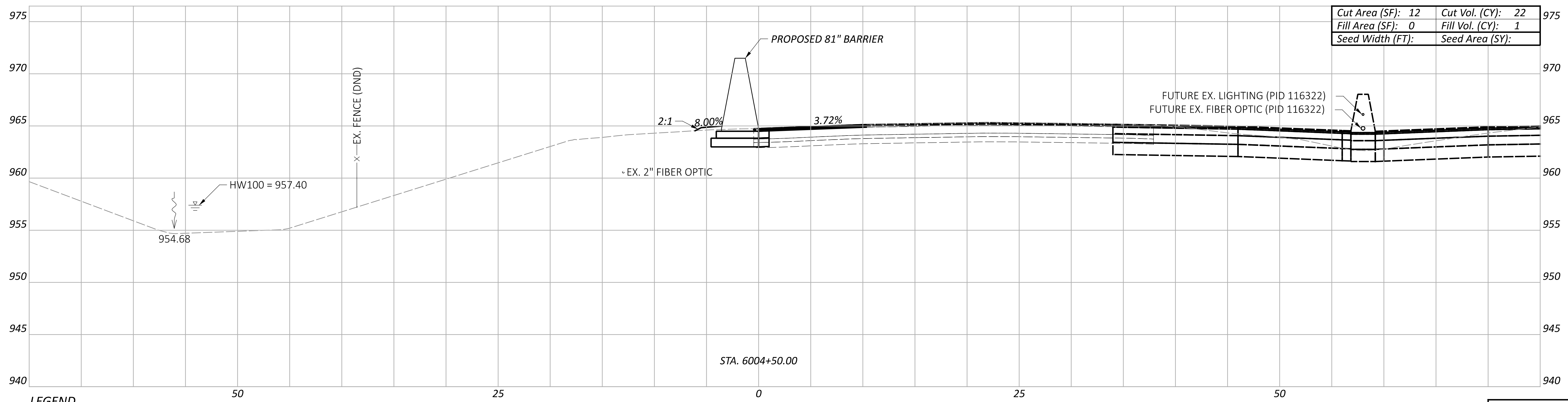
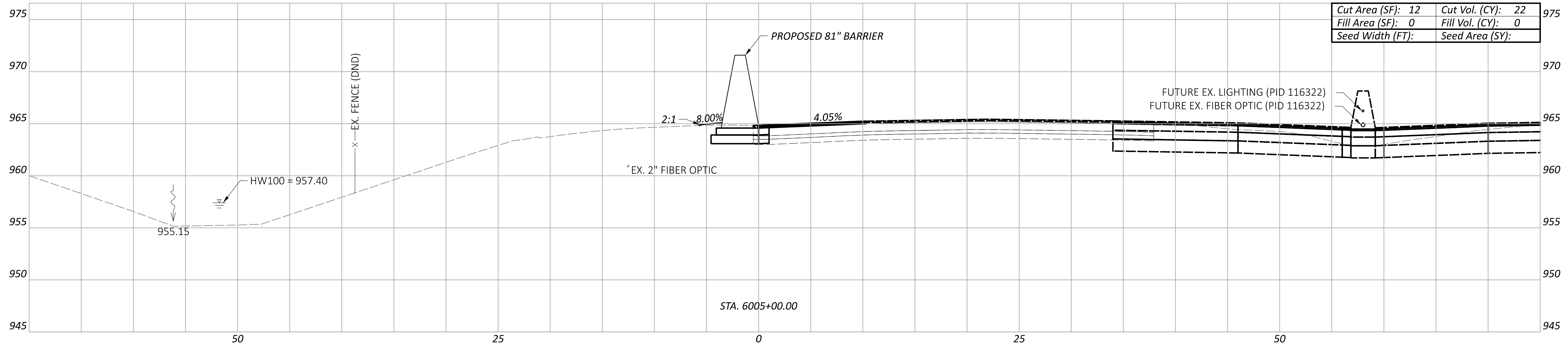
JDH 03-27-24

PROJECT ID

117607

FRA-161-15.80 NOISE WALLS

MODEL: BLP_BARRIER6 - 6004+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 7:49:08 PM USER: jennifer.kelley
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LEGEND

- EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
44	1		P.81 P.295

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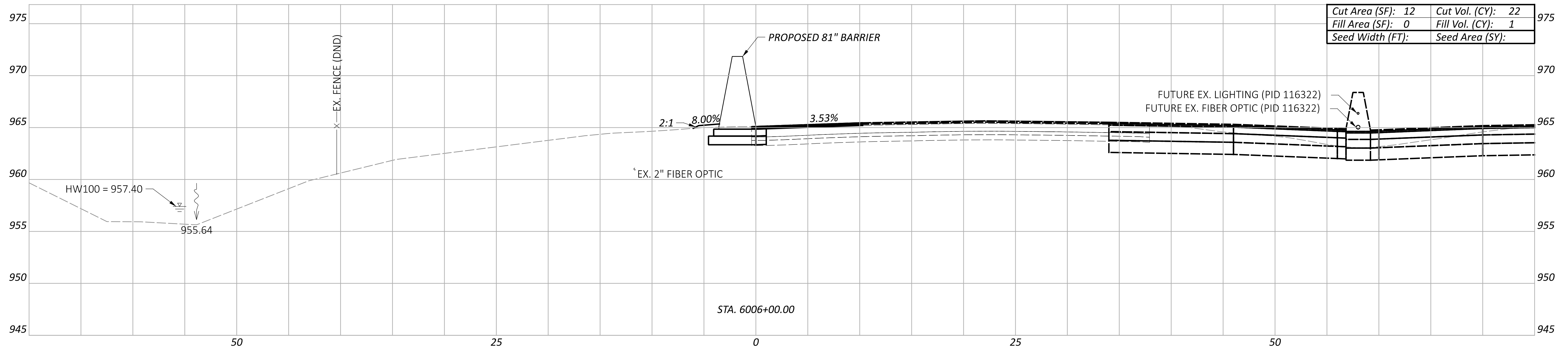
REVIEWER
 JDH 03-27-24

PROJECT ID
 117607

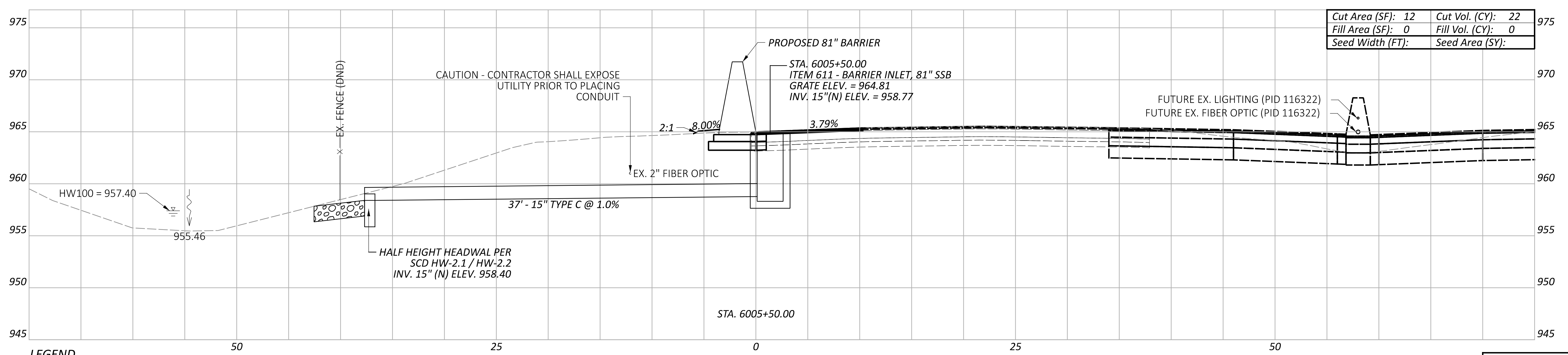
CROSS SECTIONS - 81" BARRIER 6
 STA. 6004+50.00 TO STA. 6005+00.00

FRA-161-15.80 NOISE WALLS

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Seed Width (FT):		Seed Area (SY):	



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Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
44	1		P.82 P.295

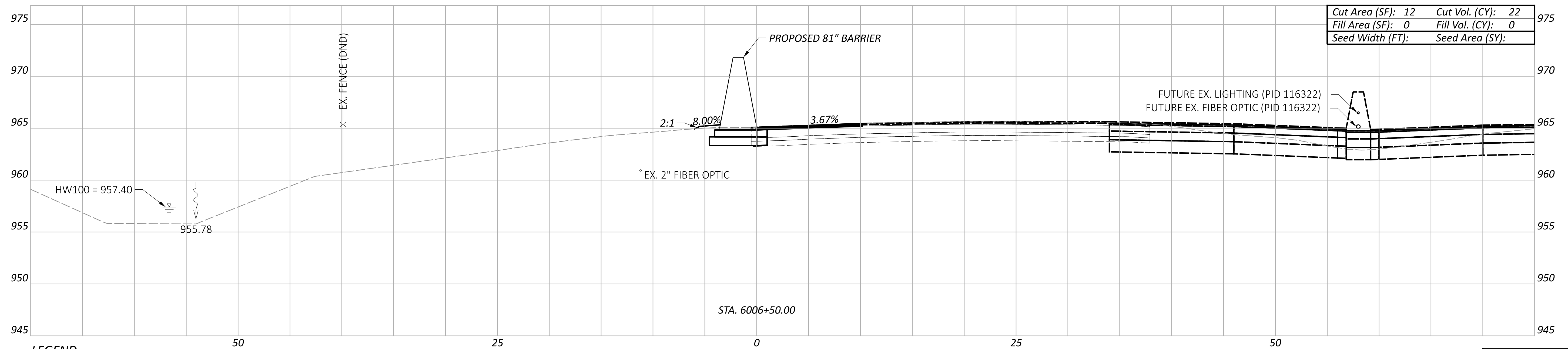
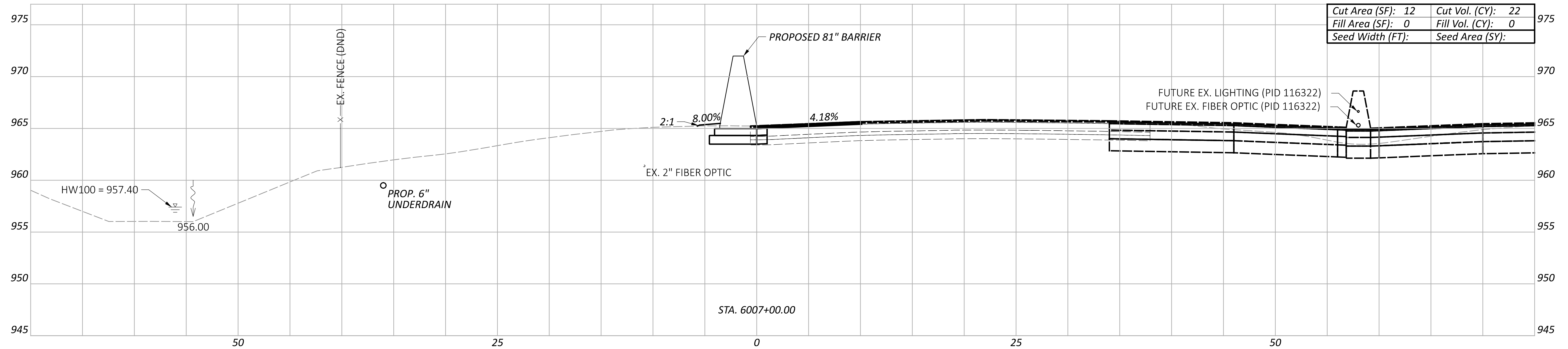
**CROSS SECTIONS - 81" BARRIER 6
 STA. 6005+50.00 TO STA. 6006+00.00**

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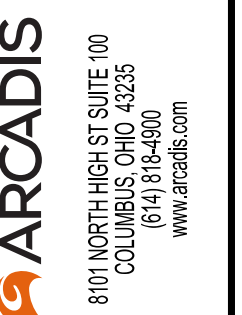
LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
44	0	0	P.83	P.295

**CROSS SECTIONS - 81" BARRIER 6
 STA. 6006+50.00 TO STA. 6007+00.00**

DESIGN AGENCY



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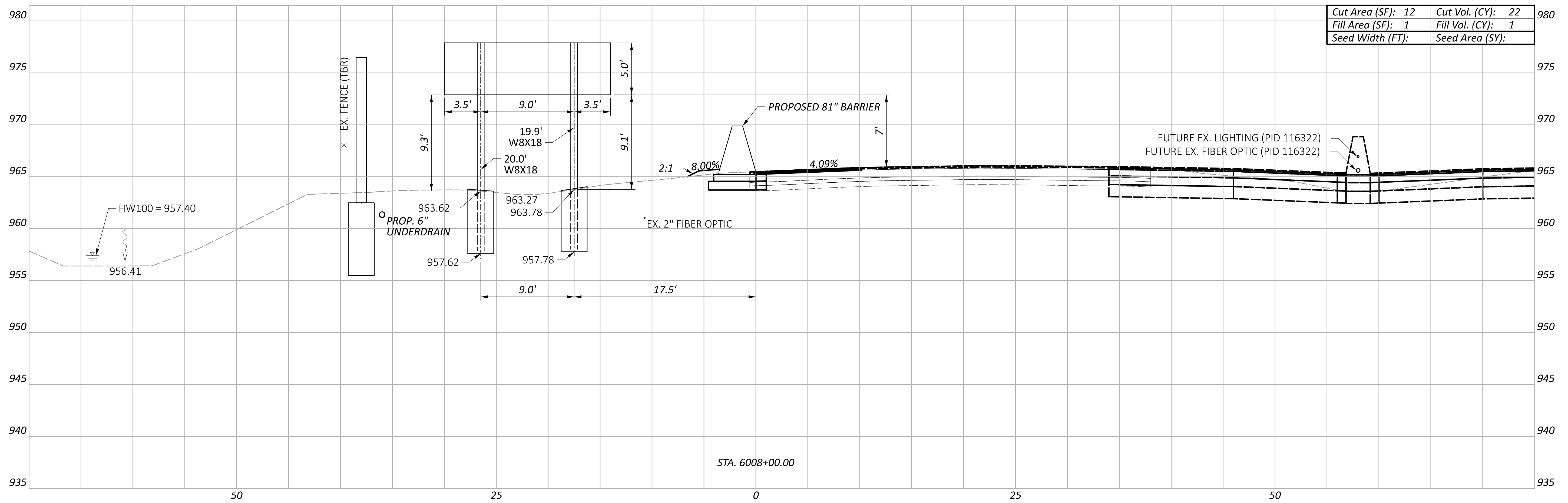
JMK

REVIEWER

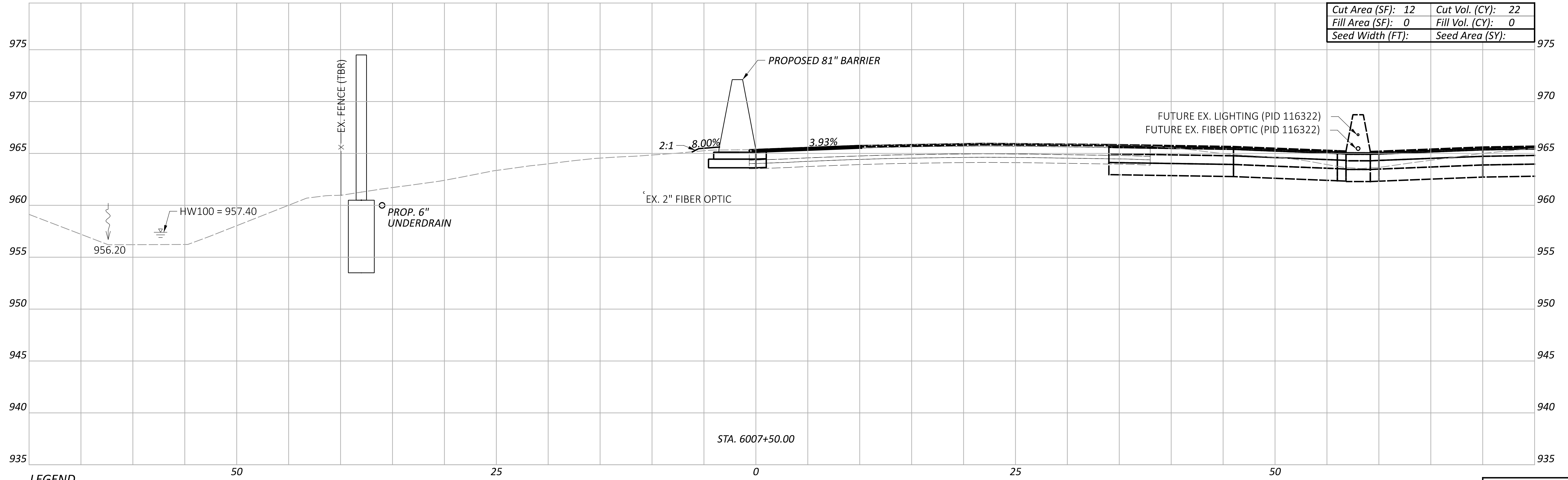
JDH 03-27-24

PROJECT ID

117607



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Seed Width (FT):		Seed Area (SY):	

LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

CROSS SECTIONS - 81" BARRIER 6
 STA. 6007+50.00 TO STA. 6008+00.00

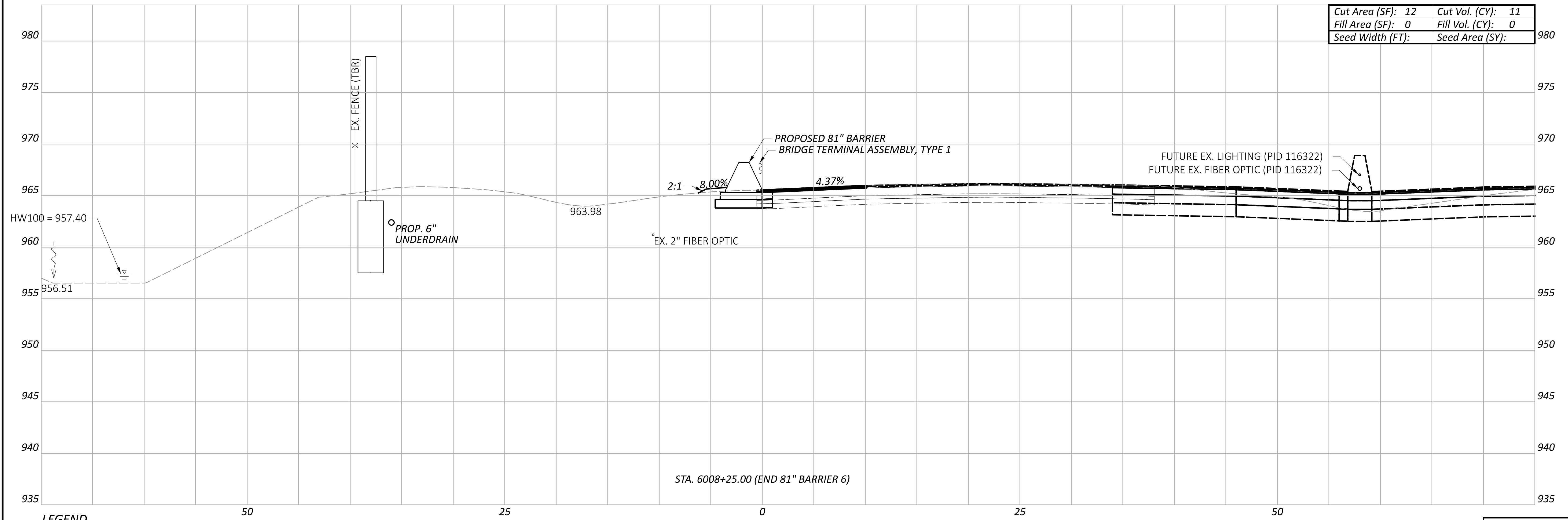
DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS SUITE 100
 COLUMBIANA, OHIO 43085
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PROJECT ID
117607

Sheet Totals			TOTAL	
Seeding	Cut	Fill	P.84	P.295
	44	1		



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Seed Width (FT):		Seed Area (SY):	

LEGEND

---	EXISTING SR-161 PRIOR TO PID 116322
---	FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

STA. 6008+25.00 (END 81" BARRIER 6)

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
	11	0	P.85 P.295

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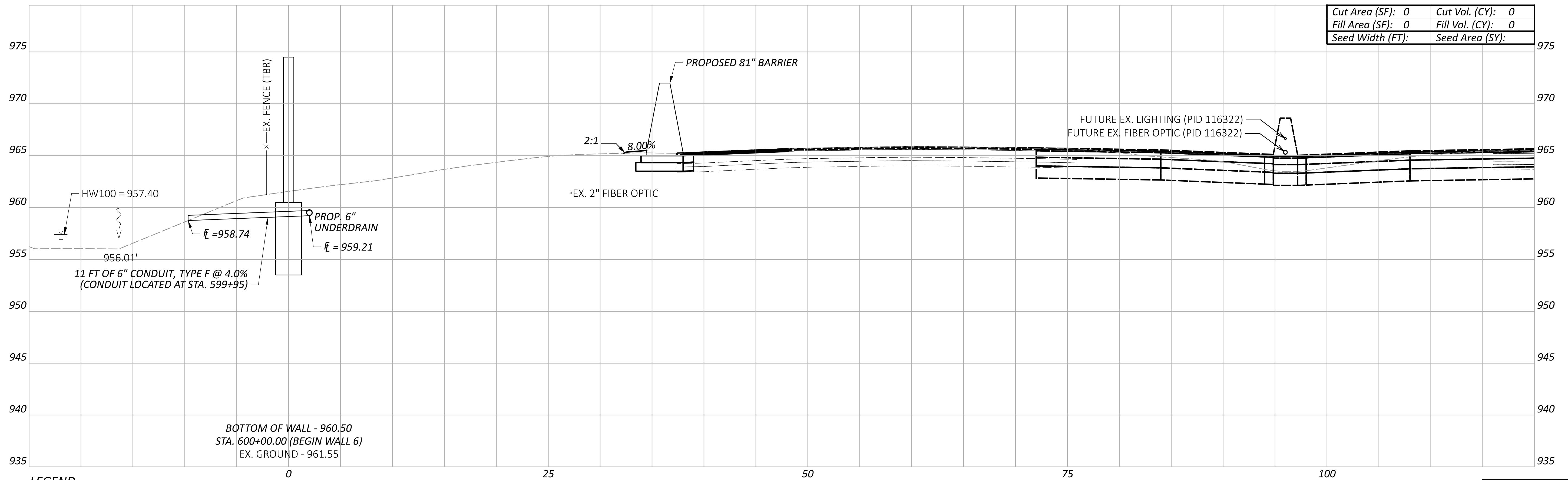
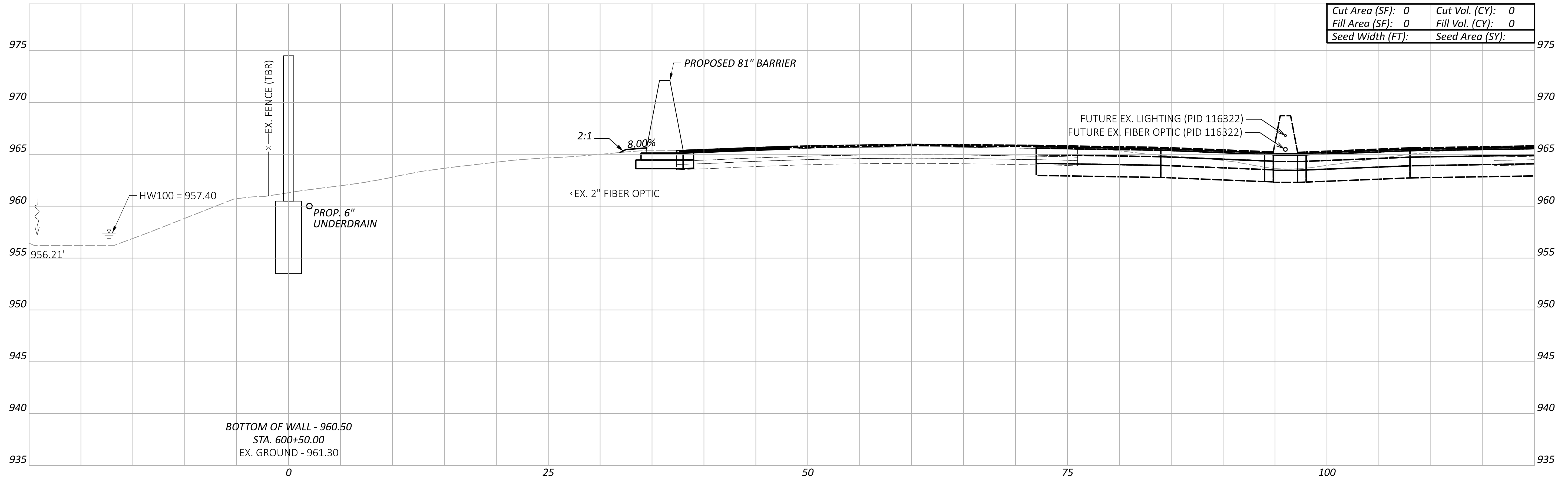
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL6 - 600+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 7:51:01 PM USER: jennifer.kelley
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LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
0	0	0	P.86 P.295

**CROSS SECTIONS - WALL 6
 STA. 600+00.00 TO STA. 600+50.00**

DESIGN AGENCY



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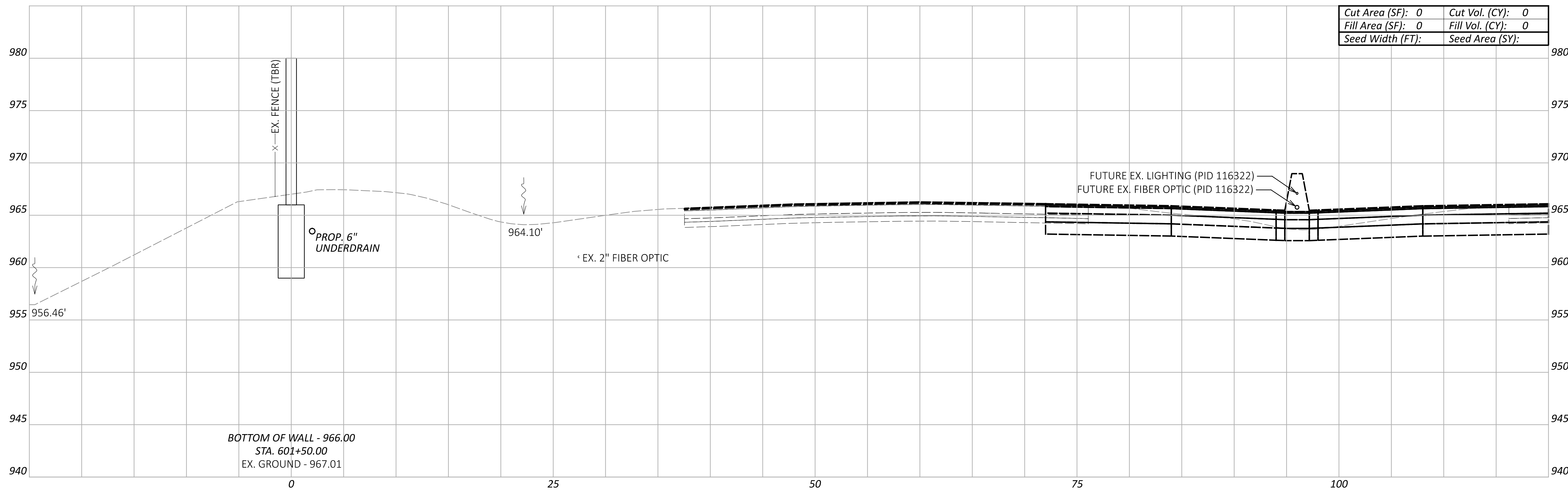
JDH 03-27-24

PROJECT ID

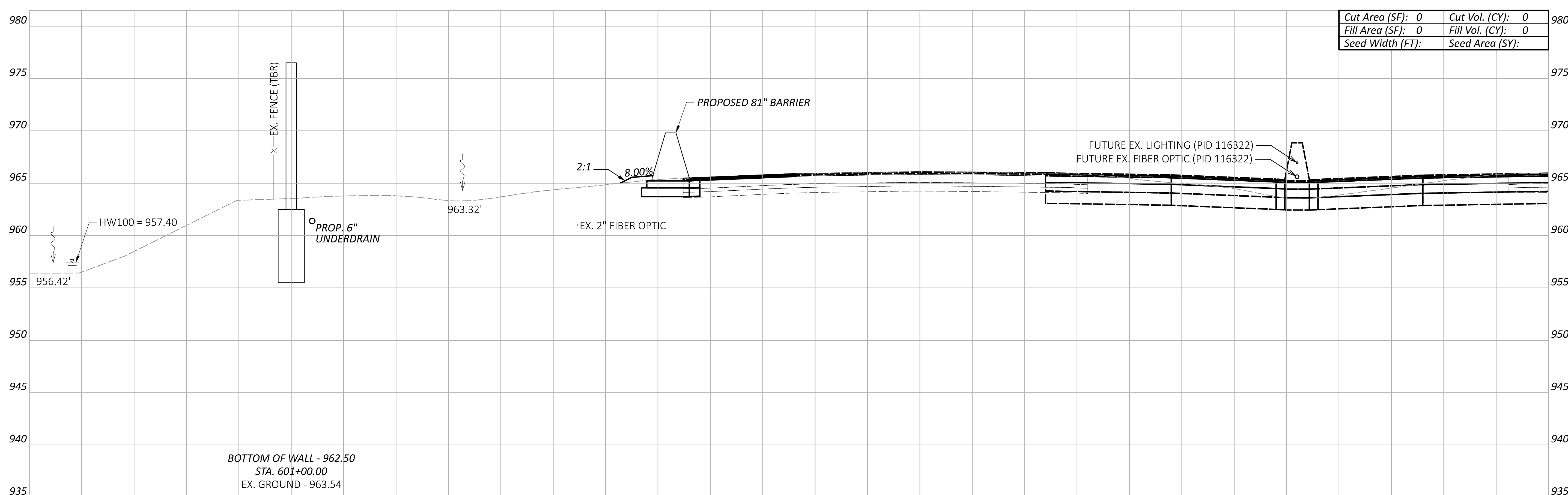
117607

FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL6 - 601+00.00 [Sheet] PAPER: 34x22 (in.) DATE: 2024-03-22 TIME: 7:51:27 PM USER: jennifer.kelley
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Cut Area (SF):	0	Cut Vol. (CY):	0
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Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	0	Cut Vol. (CY):	0
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Seed Width (FT):		Seed Area (SY):	

LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

**CROSS SECTIONS - WALL 6
 STA. 601+00.00 TO STA. 601+50.00**

DESIGN AGENCY
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 8101 NORTH HIGHWAY 30, SUITE 100
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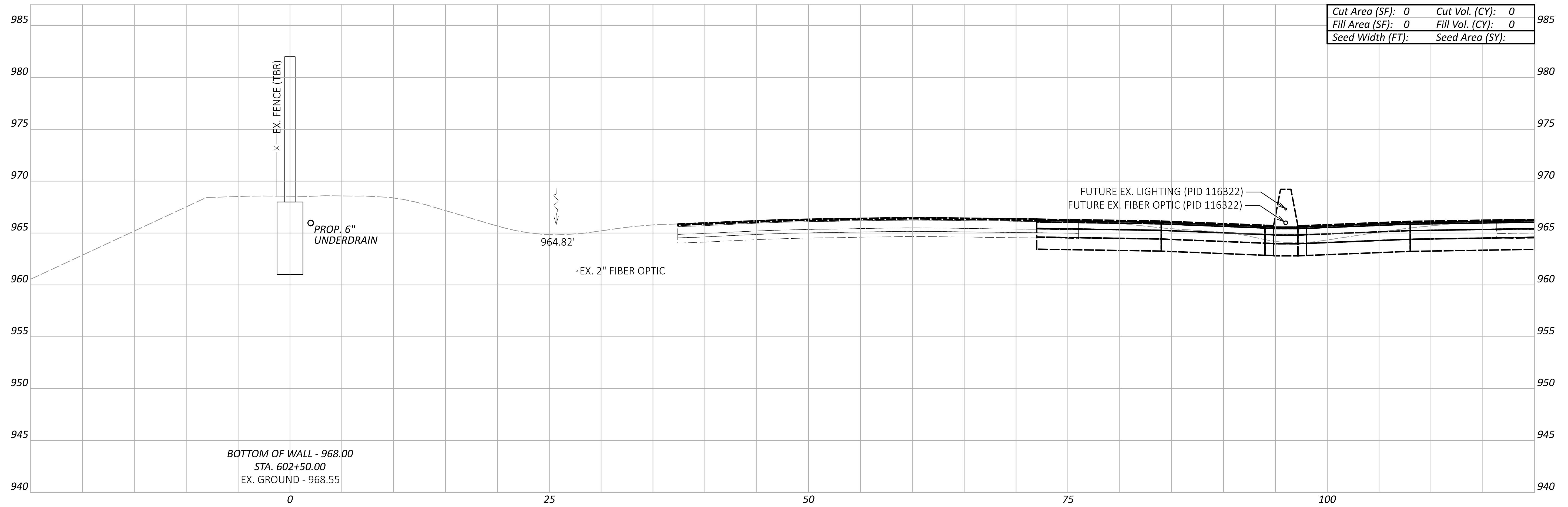
REVIEWER
JDH 03-27-24

PROJECT ID
117607

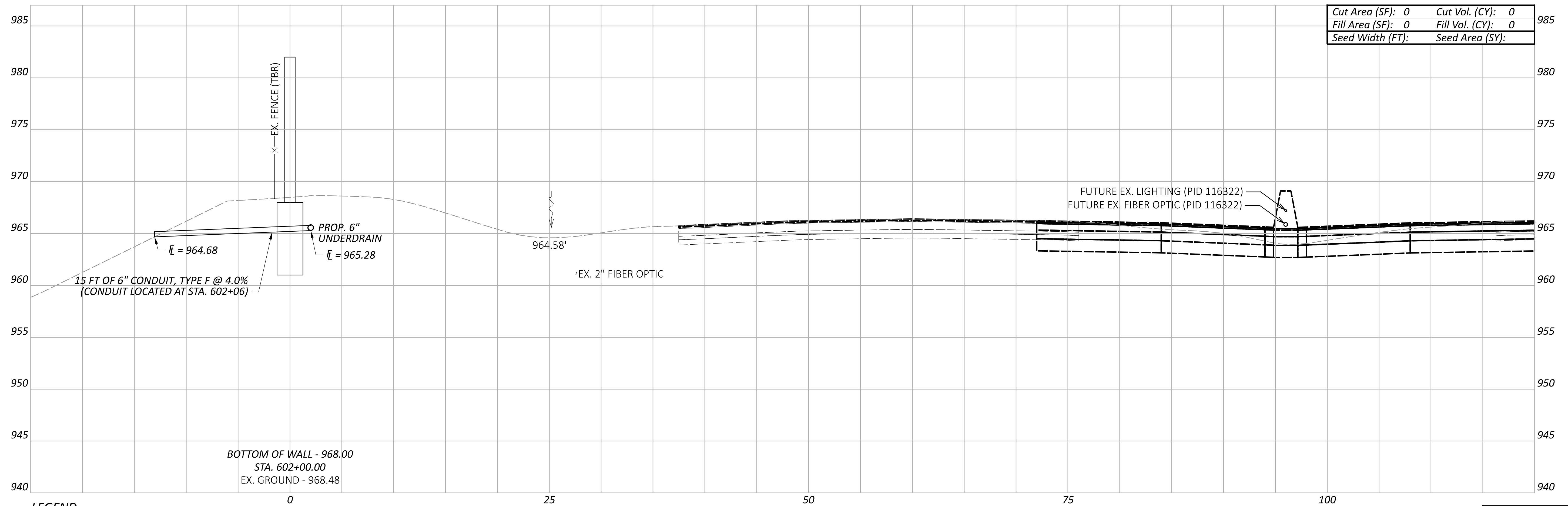
Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
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FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL6 - 602+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 7:51:50 PM USER: jennifer.kelley
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Seed Width (FT):		Seed Area (SY):	

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

**CROSS SECTIONS - WALL 6
 STA. 602+00.00 TO STA. 602+50.00**

DESIGN AGENCY



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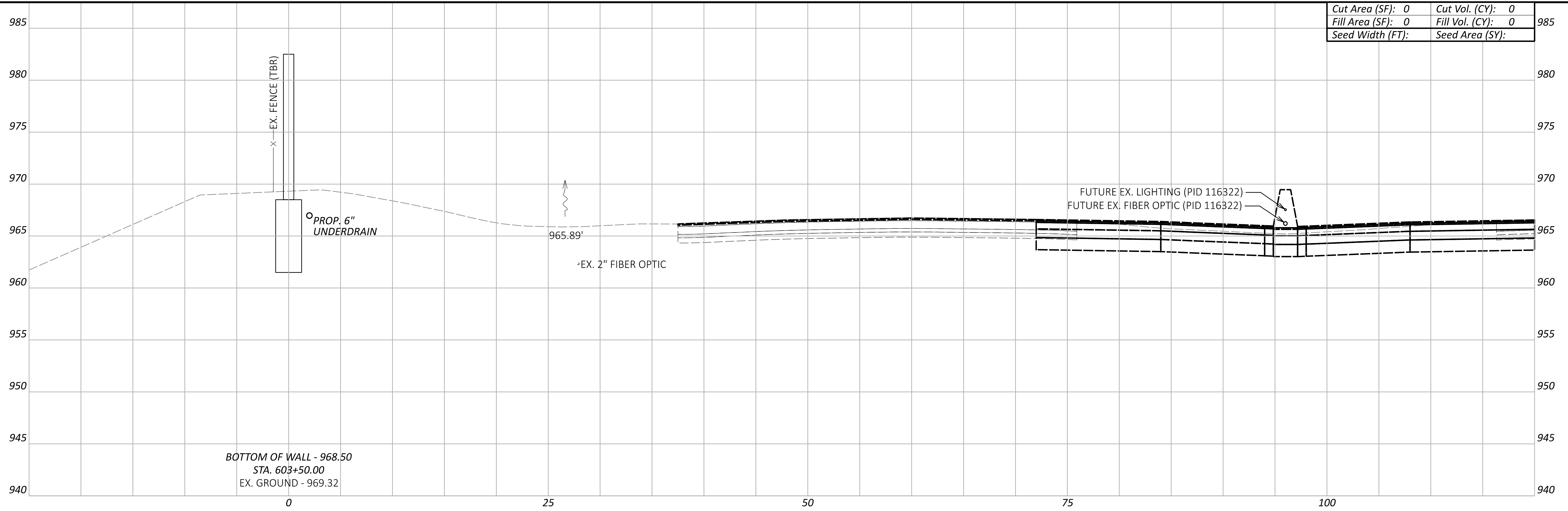
PROJECT ID

117607

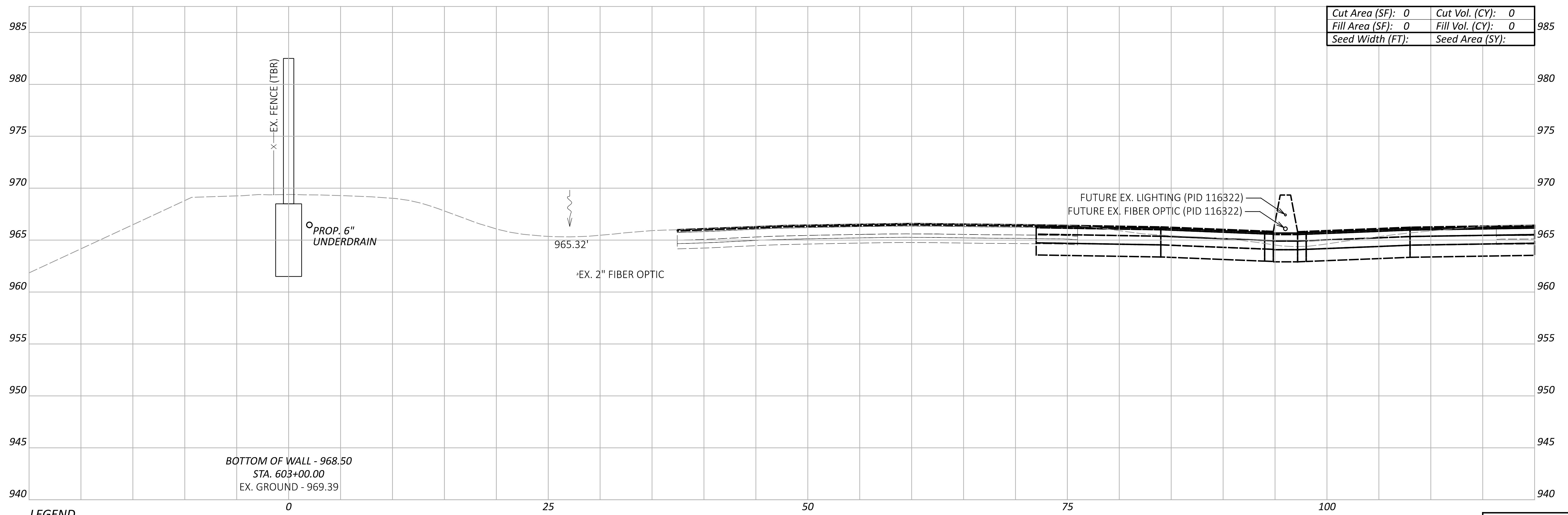
Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
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FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL6 - 603+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 7:52:12 PM USER: jennifer.kelley
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Seed Width (FT):		Seed Area (SY):	

LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

**CROSS SECTIONS - WALL 6
 STA. 603+00.00 TO STA. 603+50.00**

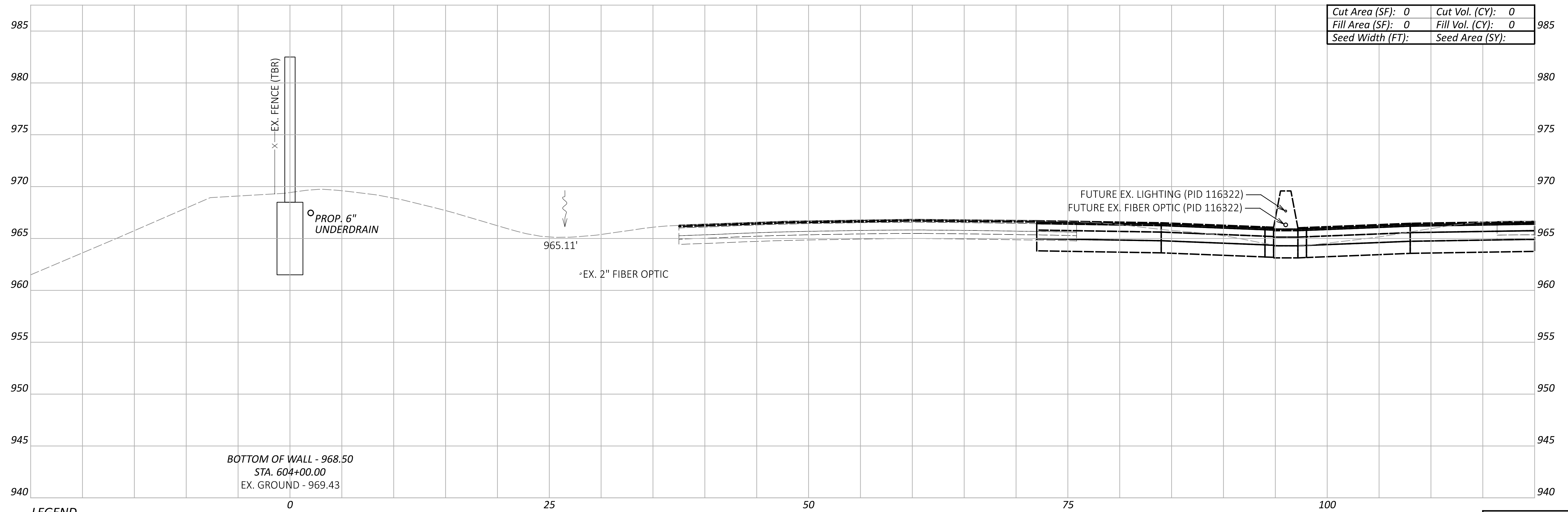
DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY 200 SUITE 100
 COLUMBIA, MO 65203
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PROJECT ID
117607

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
0	0	0	P.89 P.295



LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

BOTTOM OF WALL - 968.50
 STA. 604+00.00
 EX. GROUND - 969.43

EX. FENCE (TBR)

PROP. 6" UNDERDRAIN

965.11'

EX. 2" FIBER OPTIC

FUTURE EX. LIGHTING (PID 116322)
 FUTURE EX. FIBER OPTIC (PID 116322)

DESIGN AGENCY



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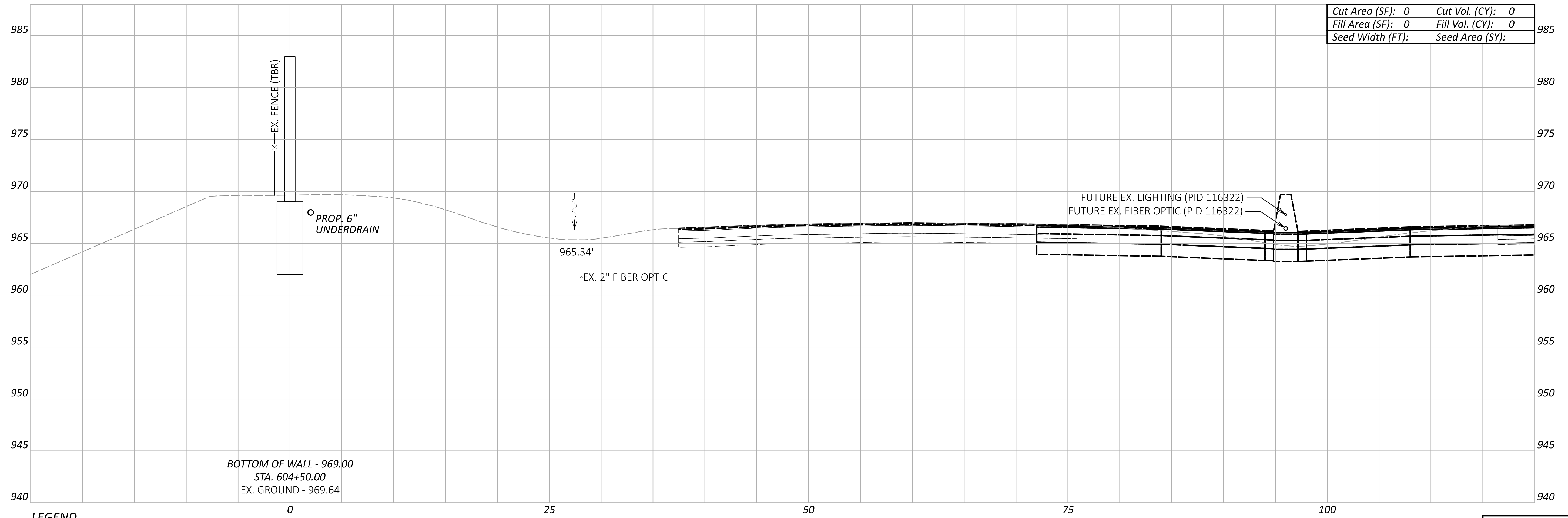
REVIEWER

JDH 03-27-24

PROJECT ID

117607

Sheet Totals			TOTAL	
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Seed Width (FT):		Seed Area (SY):	

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
0	0	0	P.91 P.295

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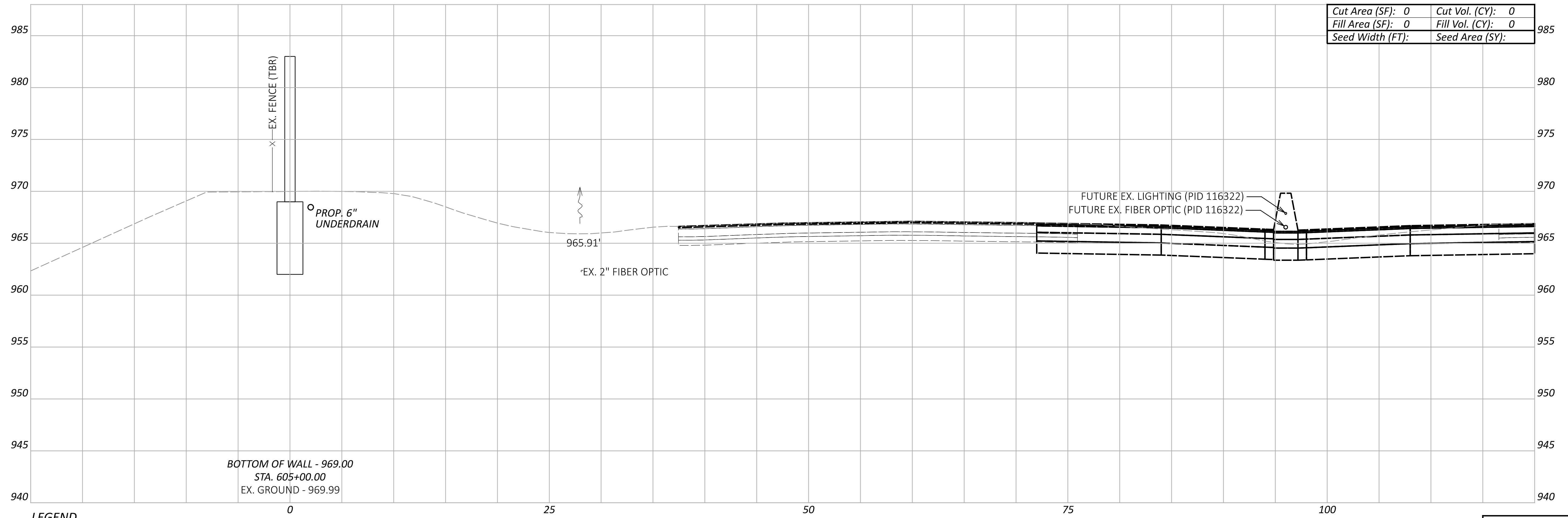
DESIGNER
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REVIEWER
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PROJECT ID
117607

FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL6 - 605+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 7:53:00 PM USER: jennifer.kelley
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LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

BOTTOM OF WALL - 969.00
 STA. 605+00.00
 EX. GROUND - 969.99

EX. 2" FIBER OPTIC

PROP. 6" UNDERDRAIN

EX. FENCE (TBR)

FUTURE EX. LIGHTING (PID 116322)
 FUTURE EX. FIBER OPTIC (PID 116322)

**CROSS SECTIONS - WALL 6
 STA. 605+00.00**

DESIGN AGENCY
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 COLUMBIANA, OHIO 43085
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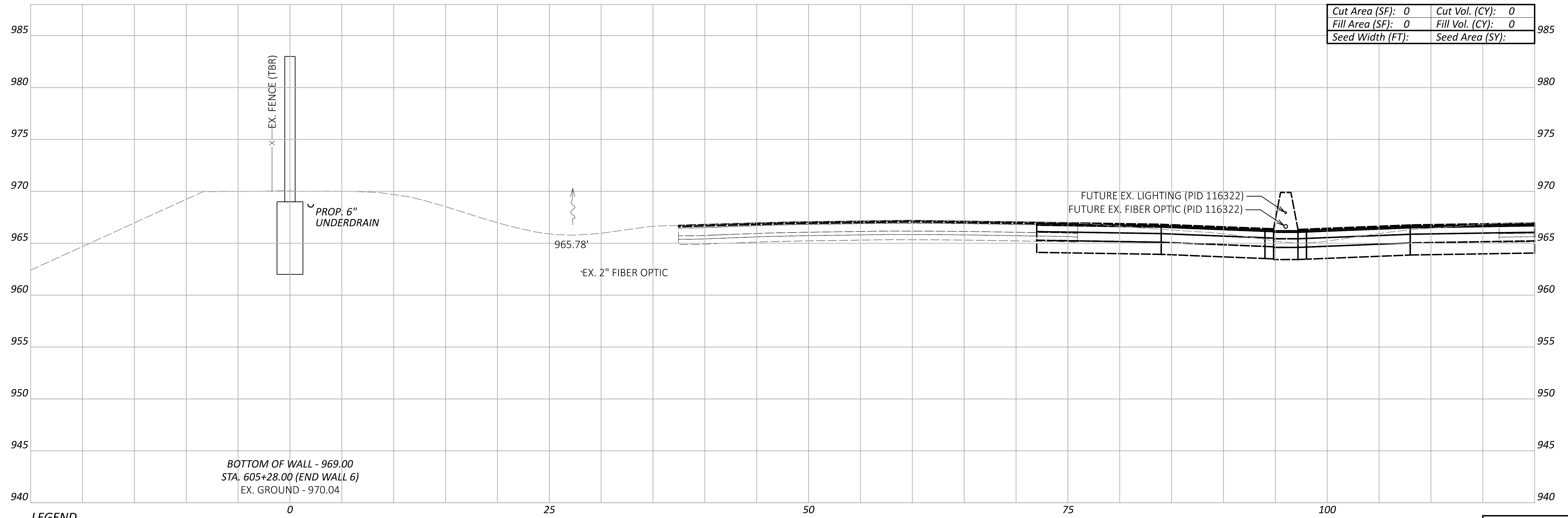
DESIGNER
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PROJECT ID
117607

Sheet Totals			TOTAL	
Seeding	Cut	Fill	P.92	P.295
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FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL6 - 605+28.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 7:53:13 PM USER: jennifer.kelley
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Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

BOTTOM OF WALL - 969.00
 STA. 605+28.00 (END WALL 6)
 EX. GROUND - 970.04

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
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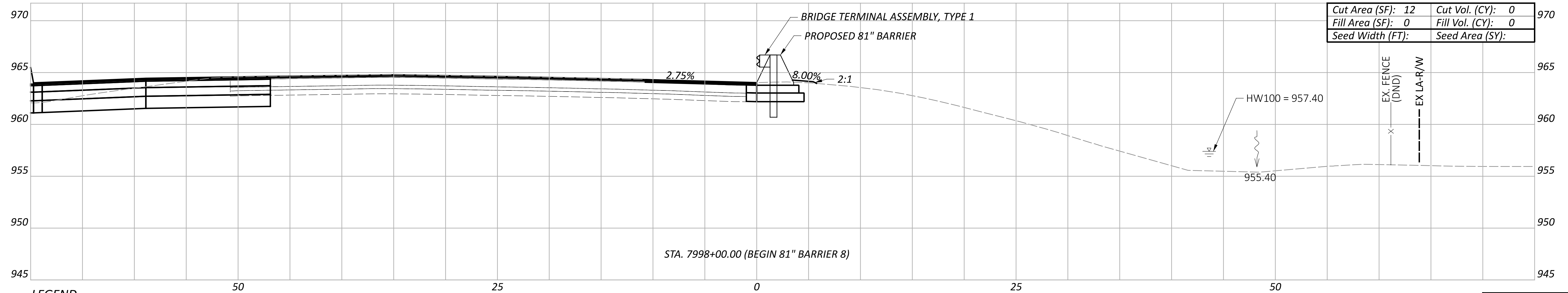
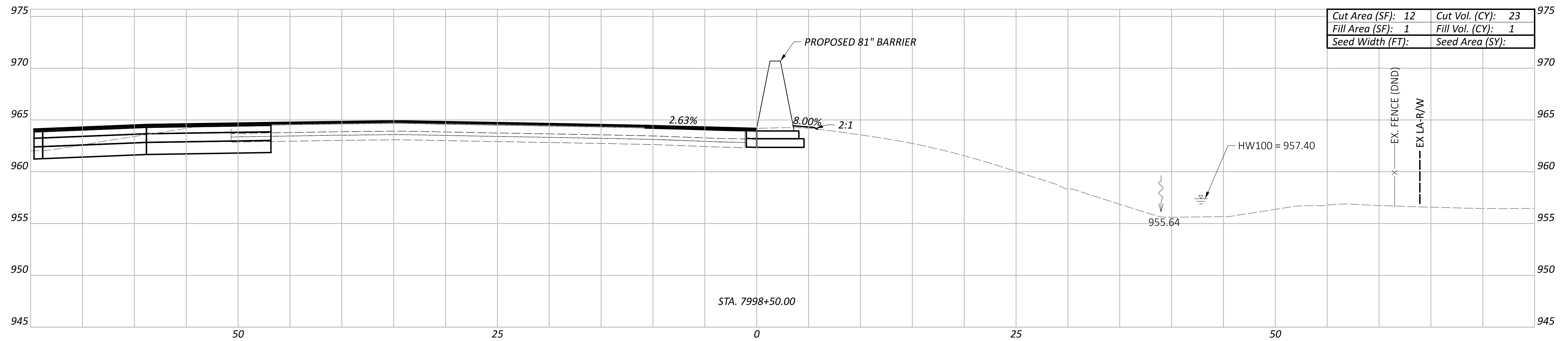
DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY SUITE 100
 COLUMBIA, MO 65203
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DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

**CROSS SECTIONS - WALL 6
 STA. 605+28.00**



LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
			P.94	P.295

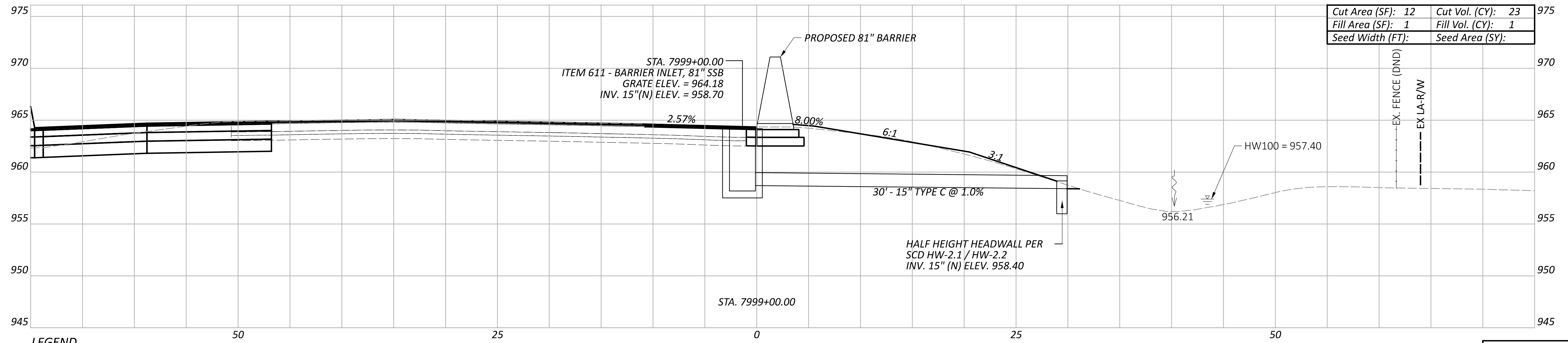
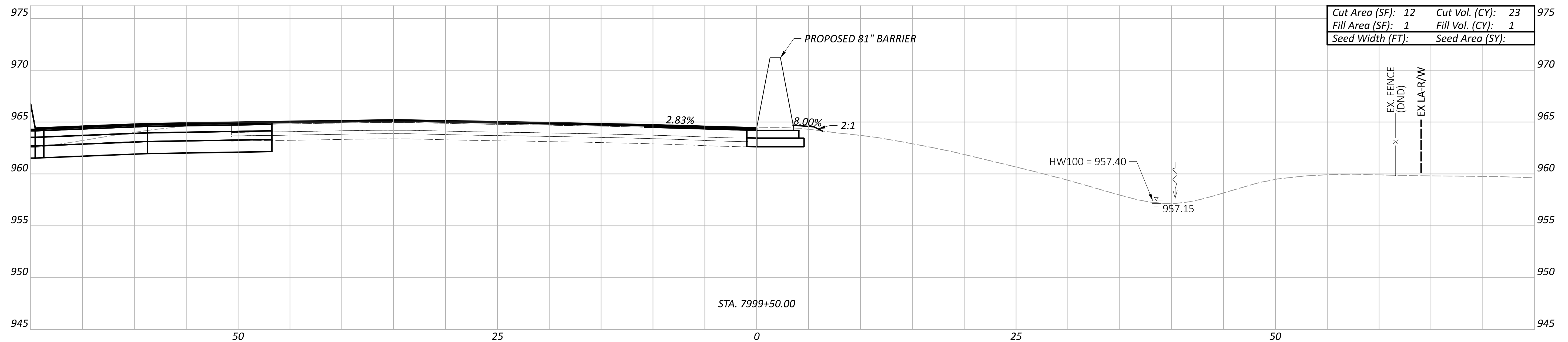
CROSS SECTIONS - 81" BARRIER 8
 STA. 7998+00.00 TO STA. 7998+50.00

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS AVE SUITE 100
 COLUMBIANA, OH 43085
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JMK

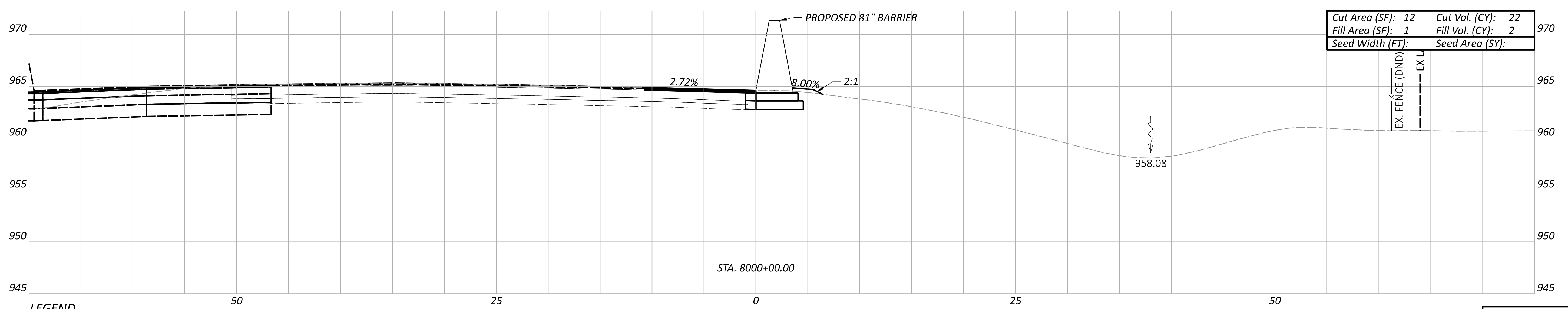
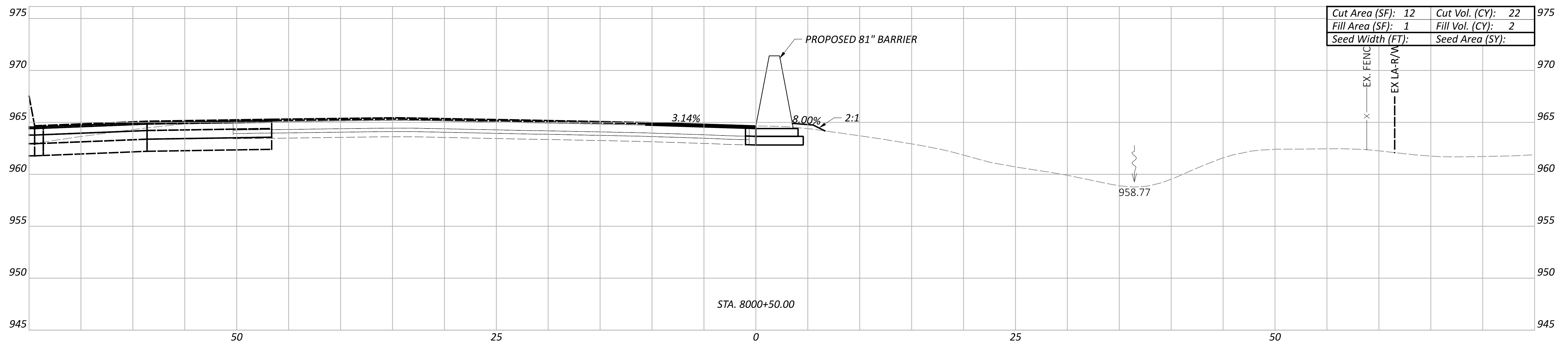
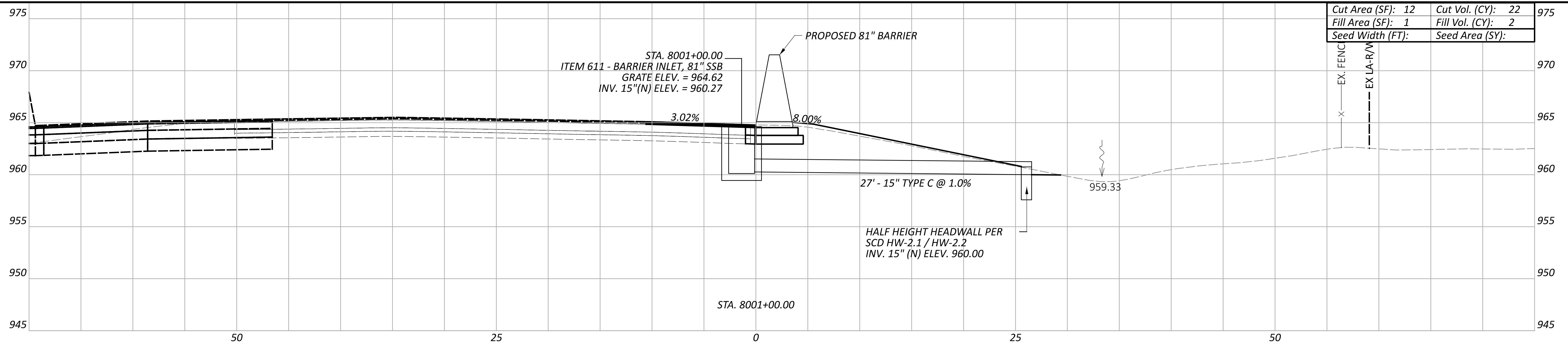
REVIEWER
JDH 03-27-24

PROJECT ID
117607



LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
			P.95	P.295



LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	
P.96	P.295		

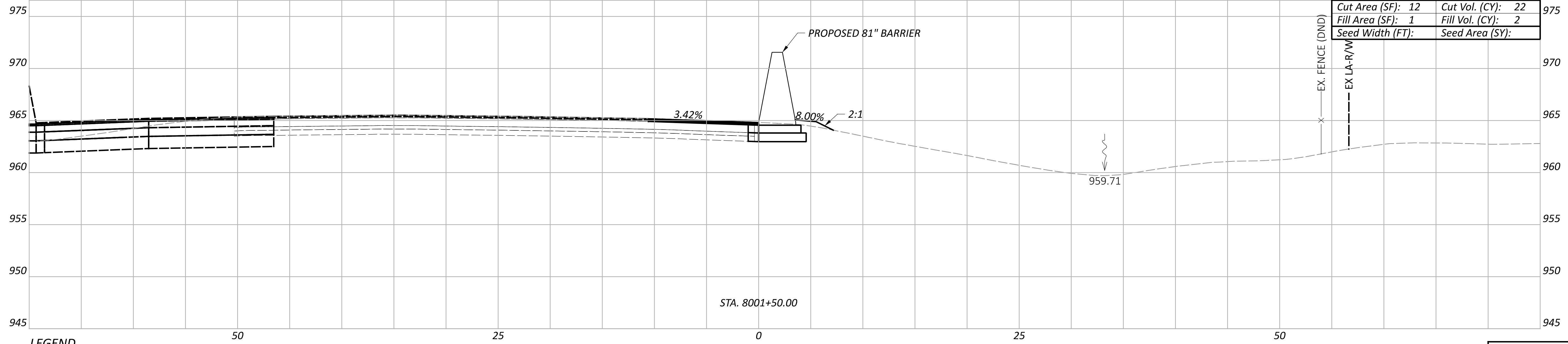
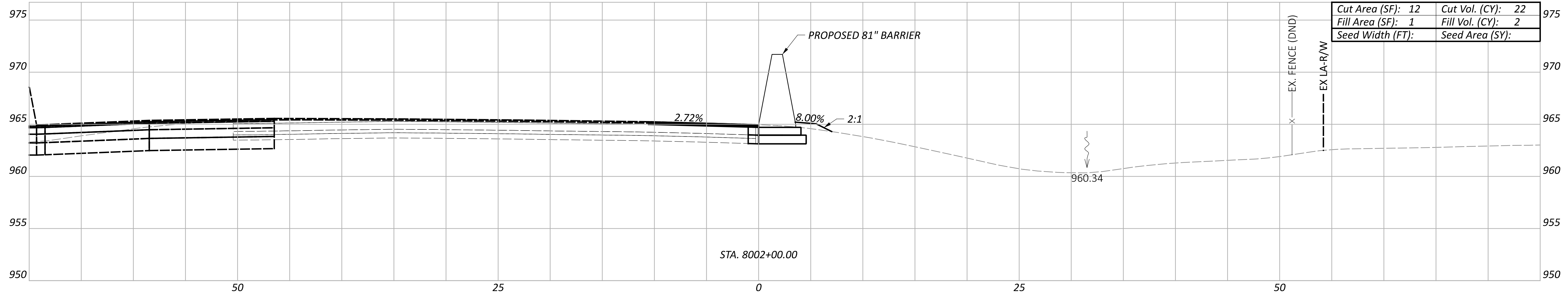
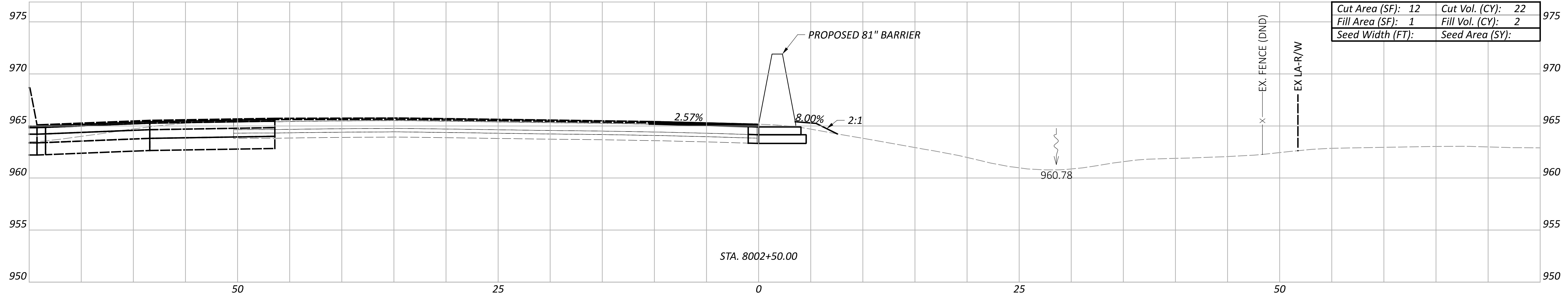
CROSS SECTIONS - 81" BARRIER 8
 STA. 8000+00.00 TO STA. 8001+00.00

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ARCADIS
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DESIGNER
JMK

REVIEWER
 JDH 03-27-24

PROJECT ID
 117607



LEGEND

--- EXISTING SR-161 PRIOR TO PID 116322

--- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
			P.97	P.295

CROSS SECTIONS - 81" BARRIER 8
 STA. 8001+50.00 TO STA. 8002+50.00

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 8101 NORTH HIGGINS AVE SUITE 100
 COLUMBIANA, OH 43085
 614.894.8100-4900
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REVIEWER

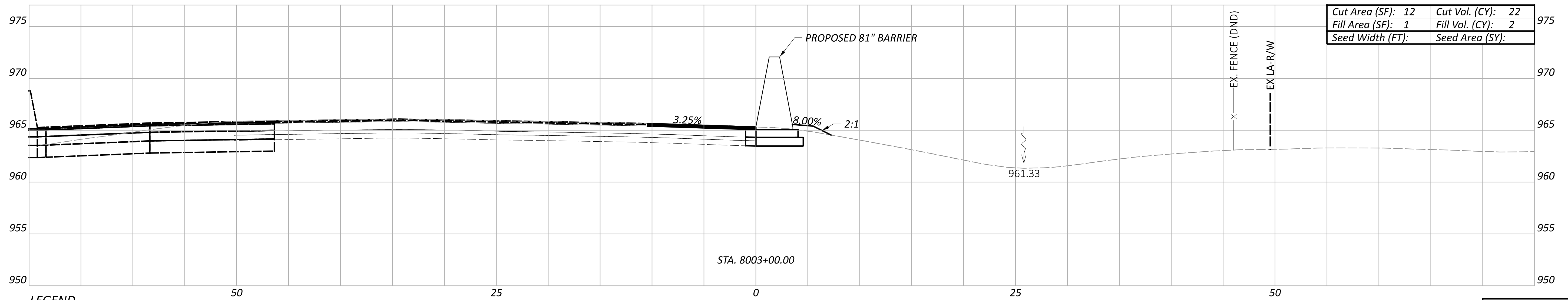
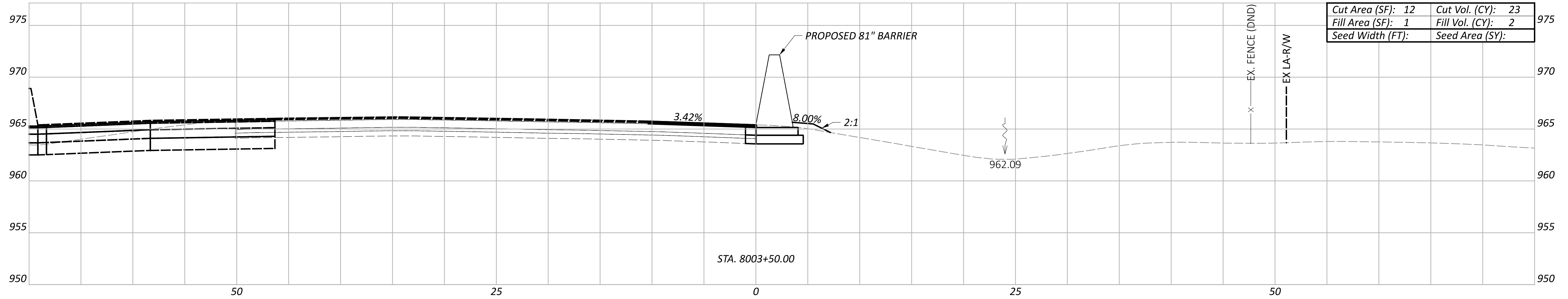
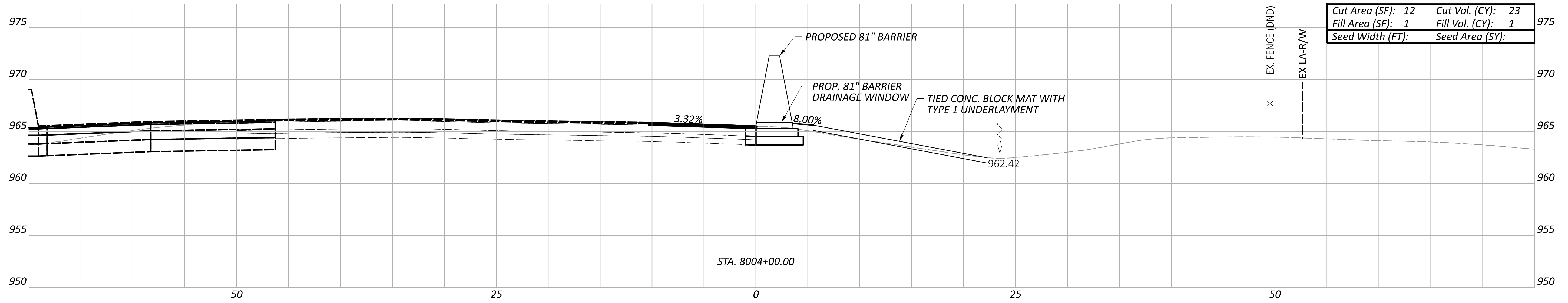
JDH 03-27-24

PROJECT ID

117607

FRA-161-15.80 NOISE WALLS

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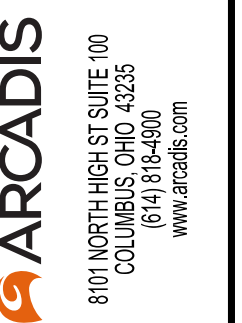
LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
			P.98	P.295

**CROSS SECTIONS - 81" BARRIER 8
 STA. 8003+00.00 TO STA. 8004+00.00**

DESIGN AGENCY



DESIGNER

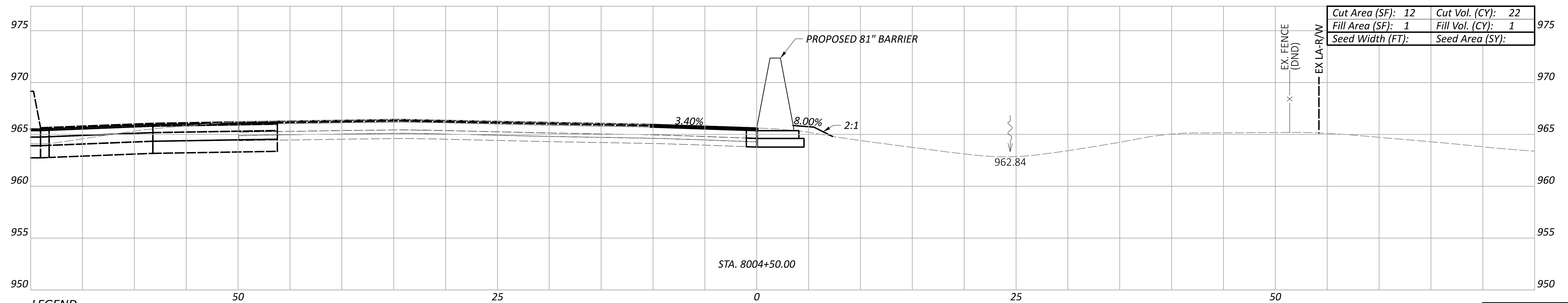
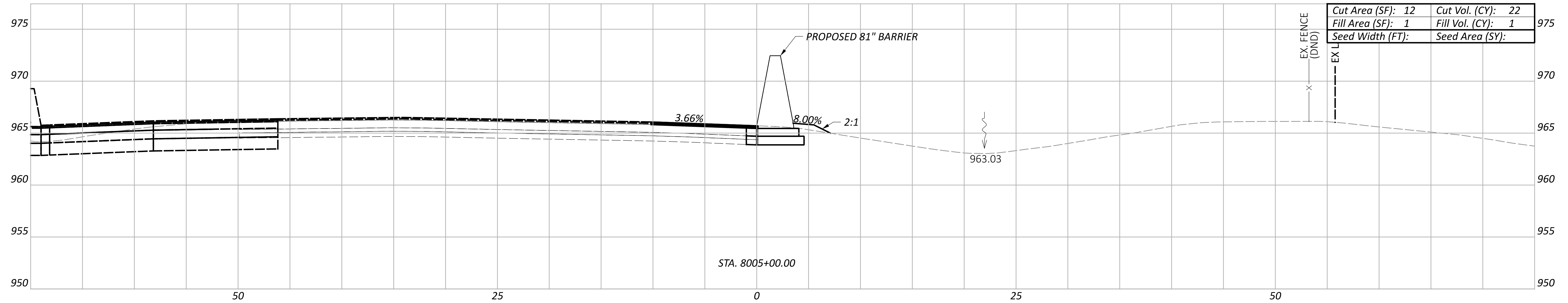
JMK

REVIEWER

JDH 03-27-24

PROJECT ID

117607

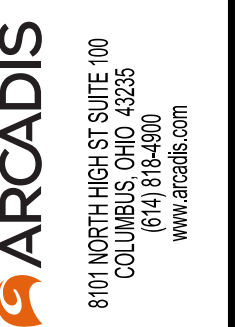


LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
			P.99	P.295

DESIGN AGENCY



DESIGNER

JMK

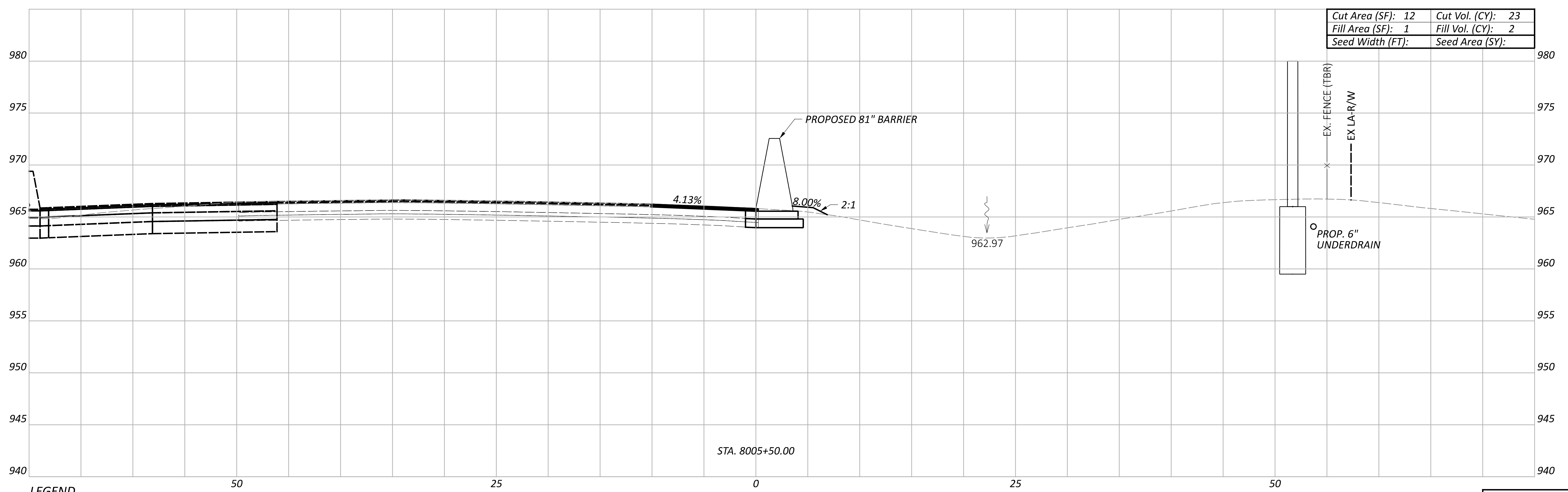
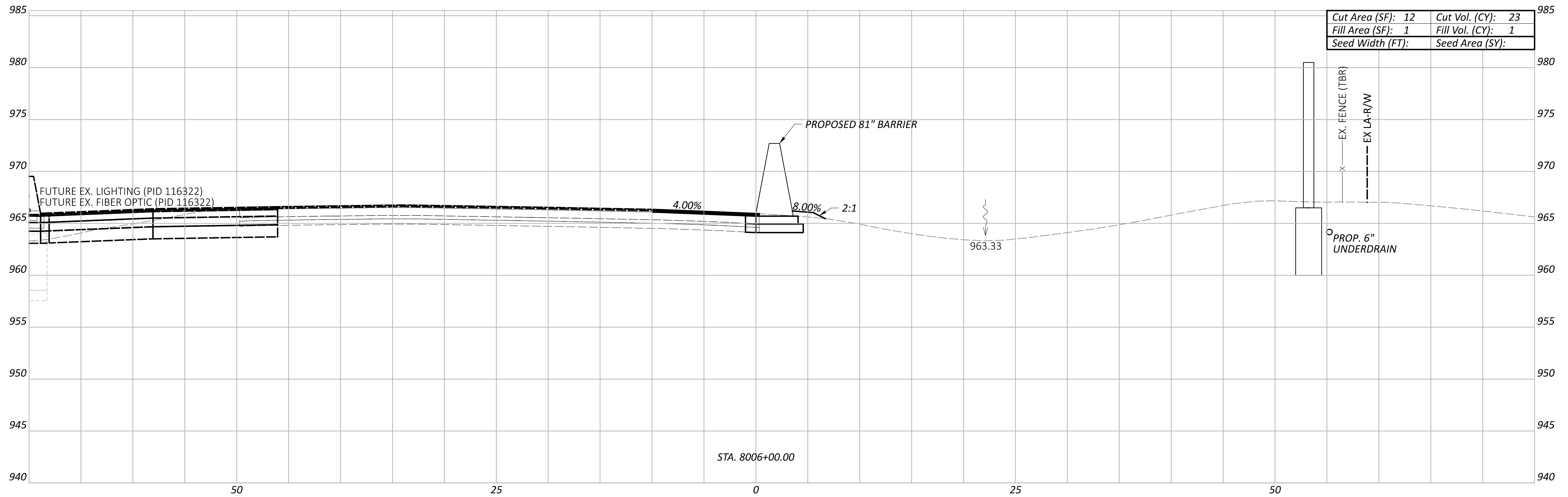
REVIEWER

JDH 03-27-24

PROJECT ID

117607

CROSS SECTIONS - 81" BARRIER 8
 STA. 8004+50.00 TO STA. 8005+00.00



LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
			P.100	P.295

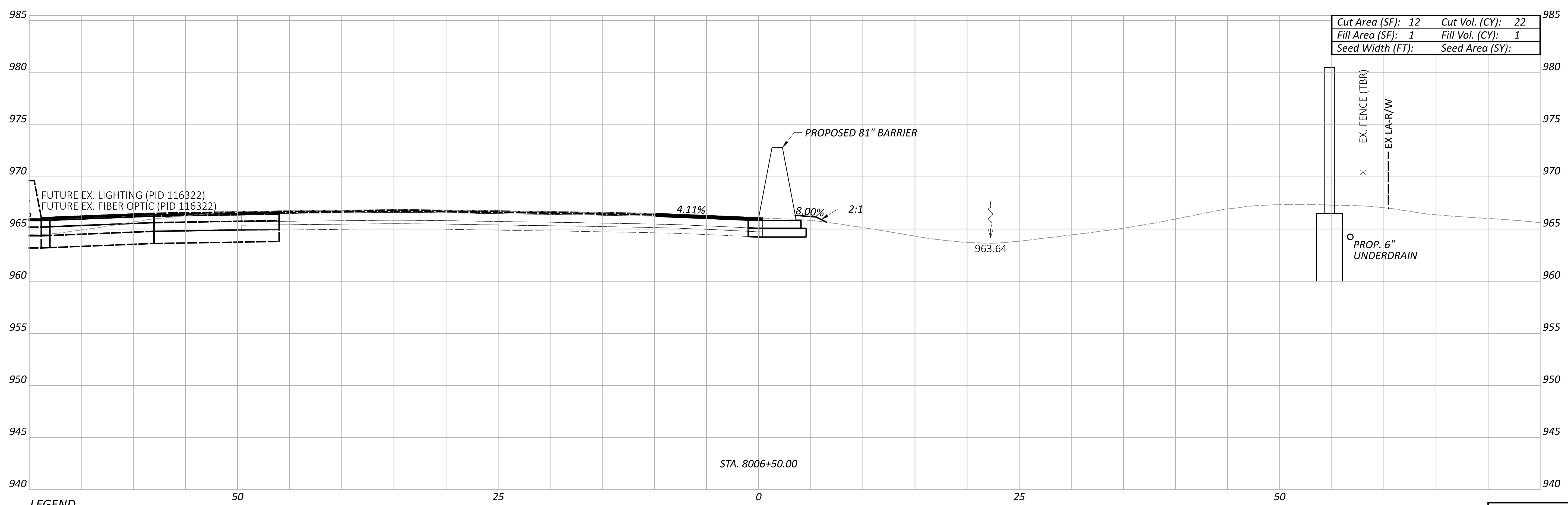
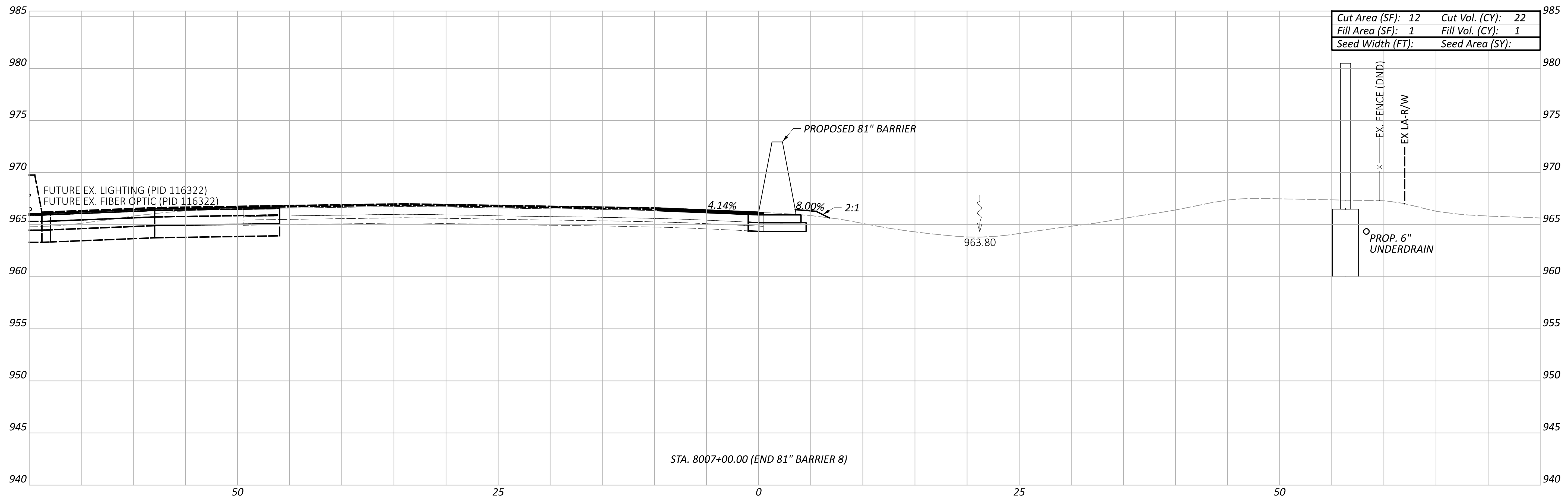
DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS AVE SUITE 100
 COLUMBIA, MO 65203
 PH: (646) 810-4900
 www.arcadis.com

DESIGNER
JMK

REVIEWER
 JDH 03-27-24

PROJECT ID
 117607

CROSS SECTIONS - 81" BARRIER 8
 STA. 8005+50.00 TO STA. 8006+00.00



LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
			P.101	P.295



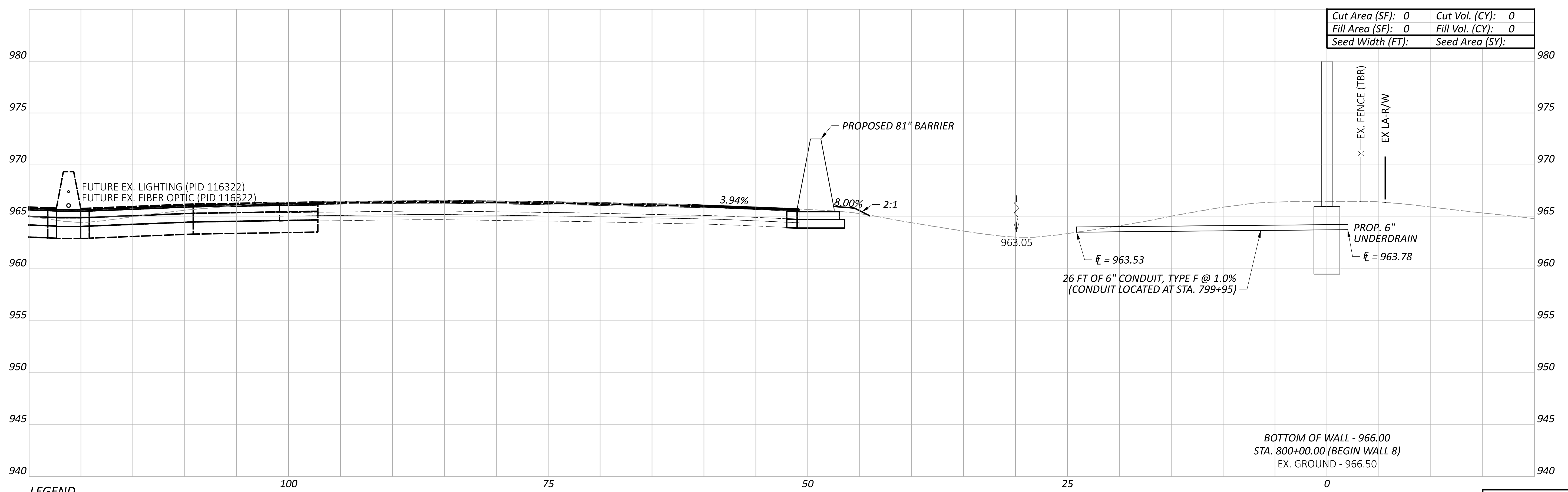
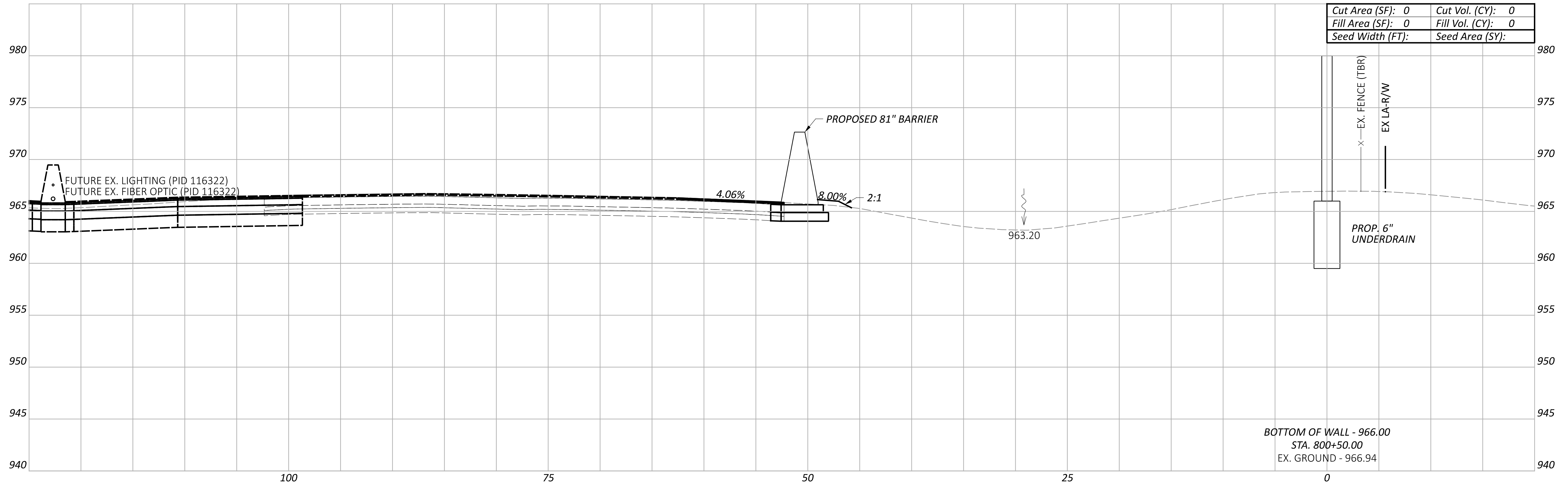
DESIGNER: JMK
 REVIEWER: JDH 03-27-24

PROJECT ID: 117607

CROSS SECTIONS - 81" BARRIER 8
 STA. 8006+50.00 TO STA. 8007+00.00

FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL9 - 800+00.00 [Sheet] PAPER: 34x22 (in.) DATE: 2024-03-22 TIME: 7:57:16 PM USER: jennifer.kelley
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LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
			P.102	P.295

**CROSS SECTIONS - WALL 8
 STA. 800+00.00 TO STA. 800+50.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY 30, SUITE 100
 COLUMBIA, MO 65203
 (616) 491-4900
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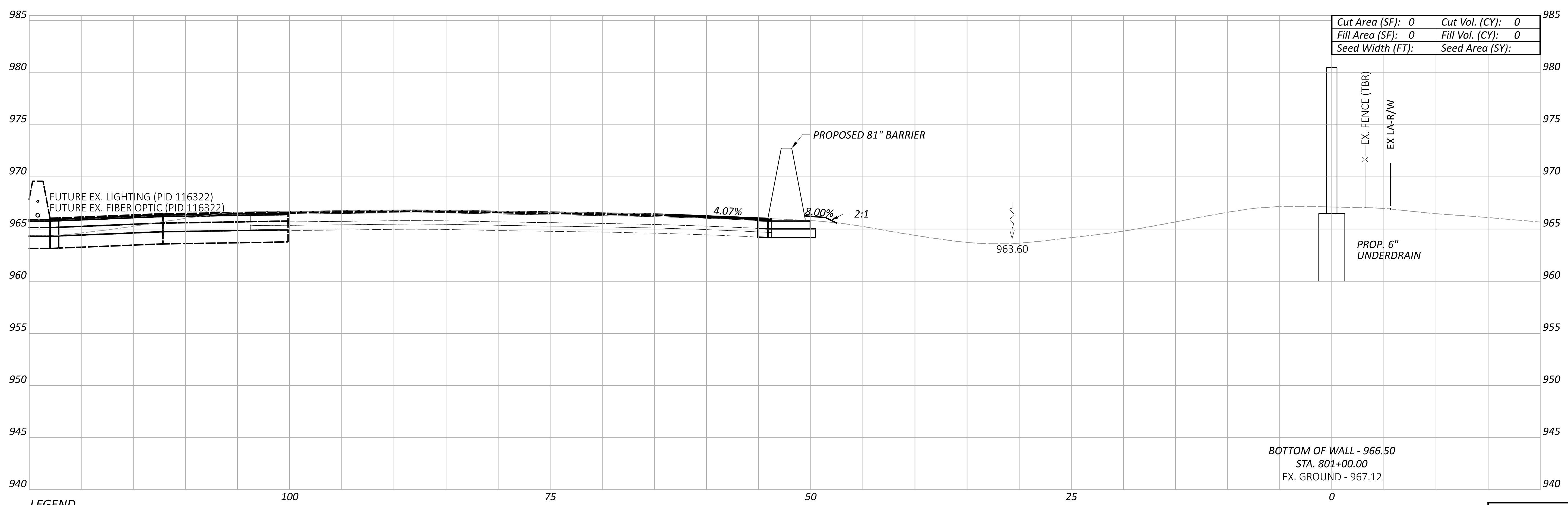
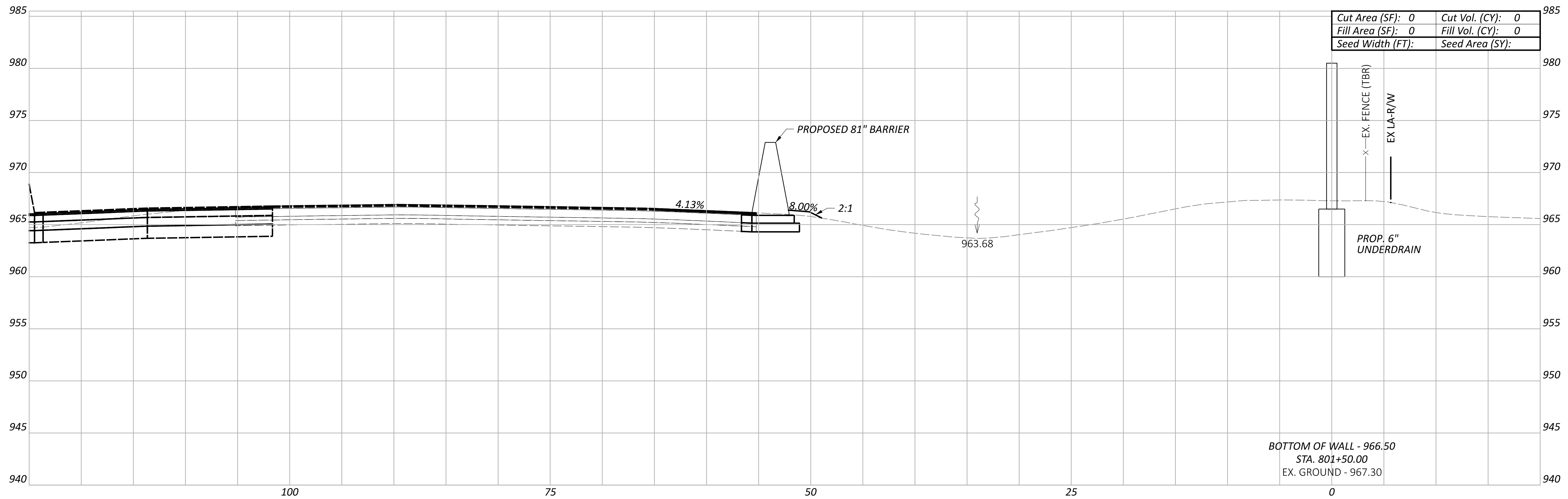
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL9 - 801+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 7:57:52 PM USER: jennifer.kelley
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LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
			P.103	P.295

**CROSS SECTIONS - WALL 8
 STA. 801+00.00 TO STA. 801+50.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY 300 SUITE 100
 COLUMBIA, MO 65203
 616.448.4900
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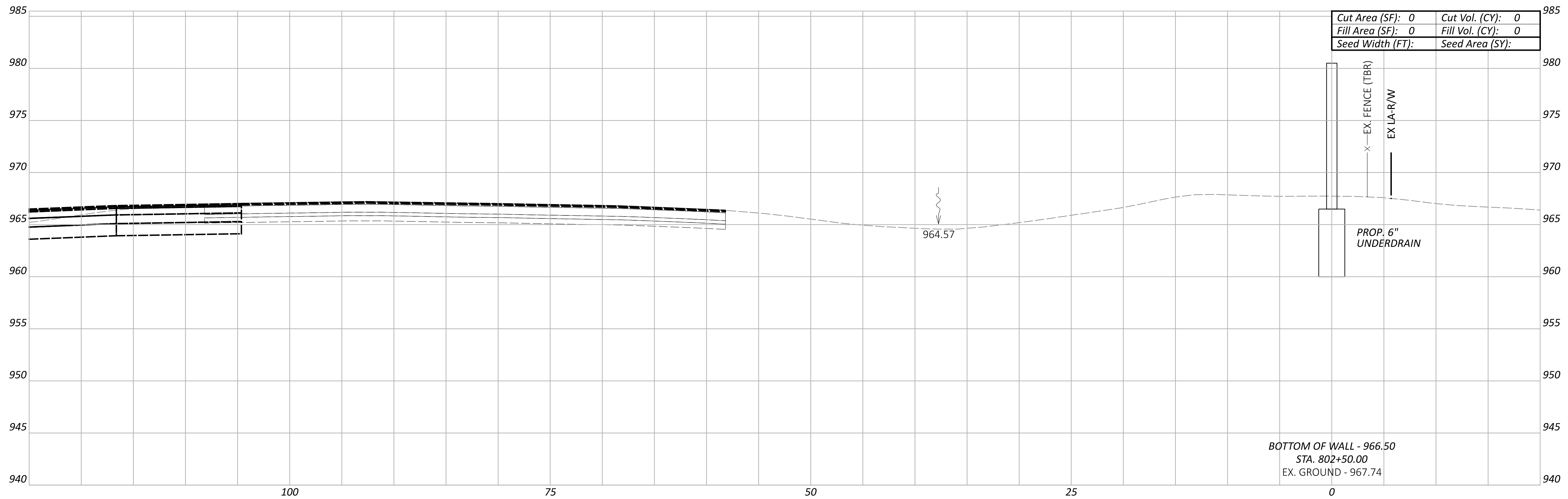
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

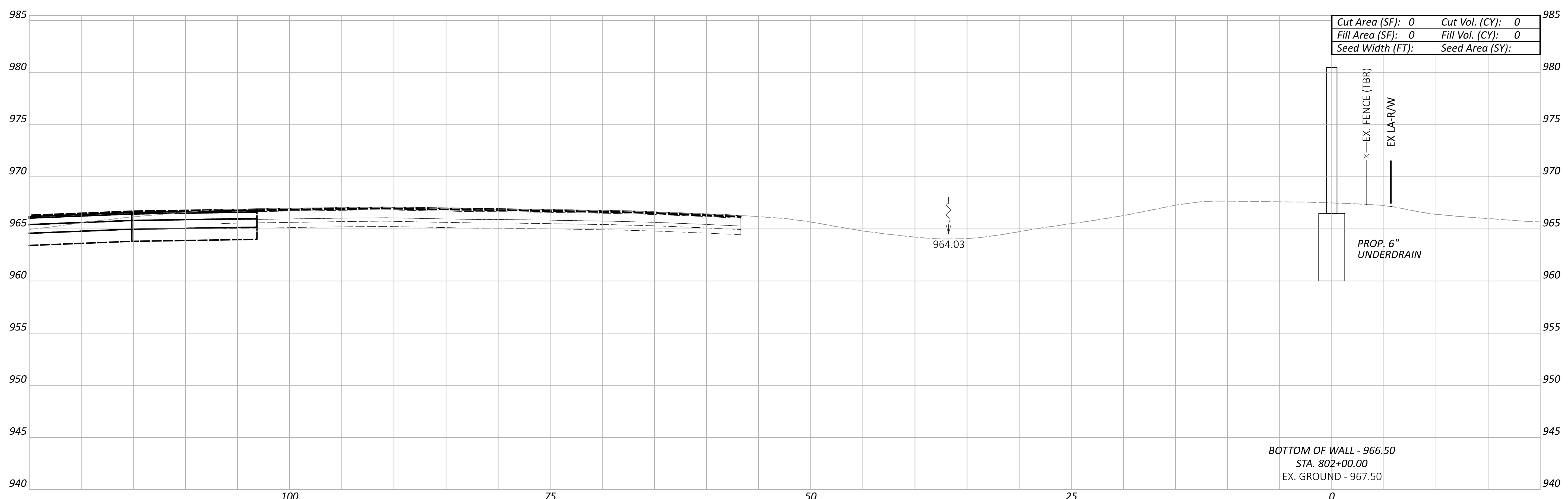
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Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 966.50
 STA. 802+50.00
 EX. GROUND - 967.74



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 966.50
 STA. 802+00.00
 EX. GROUND - 967.50

LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
			P.104 P.295

**CROSS SECTIONS - WALL 8
 STA. 802+00.00 TO STA. 802+50.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY 36, SUITE 100
 COLUMBIA, MO 65253
 (616) 419-4900
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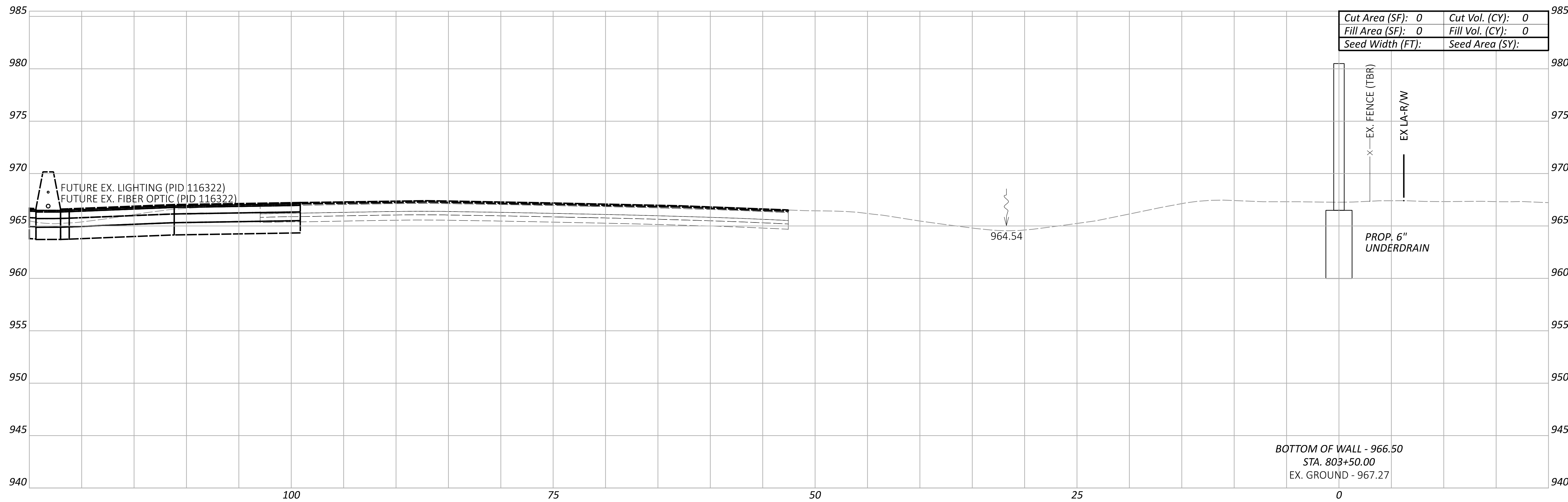
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

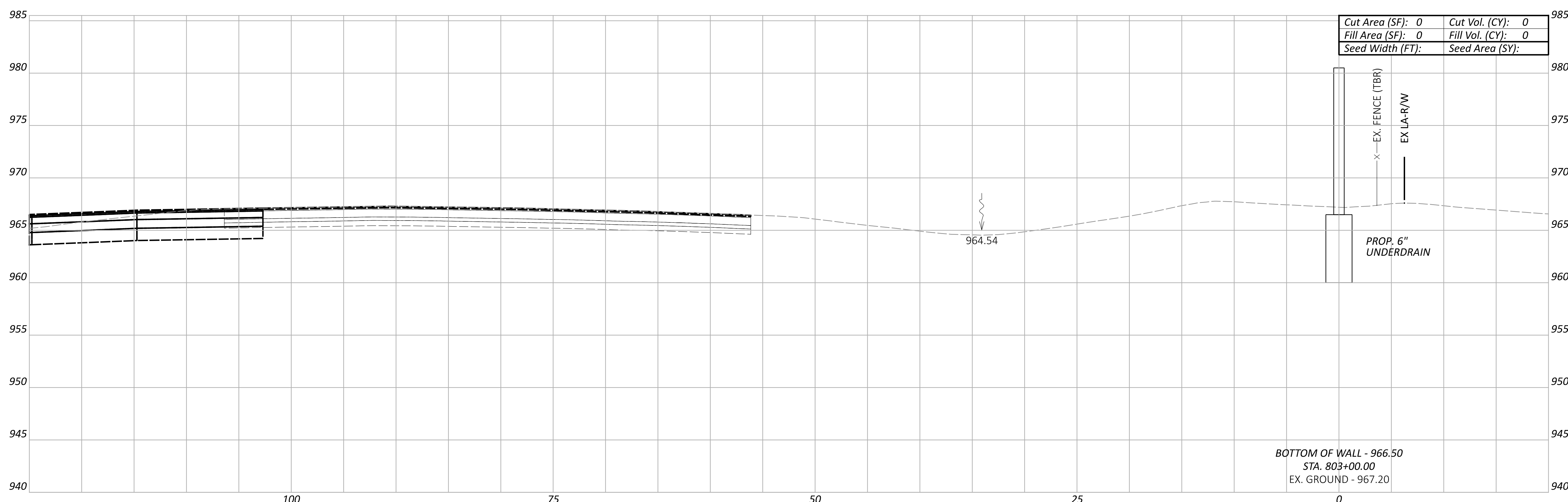
FRA-161-15.80 NOISE WALLS

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Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 966.50
 STA. 803+50.00
 EX. GROUND - 967.27



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 966.50
 STA. 803+00.00
 EX. GROUND - 967.20

LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
			P.105 P.295

**CROSS SECTIONS - WALL 8
 STA. 803+00.00 TO STA. 803+50.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS AVE SUITE 100
 COLUMBIANA, OH 43085
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 www.arcadis.com

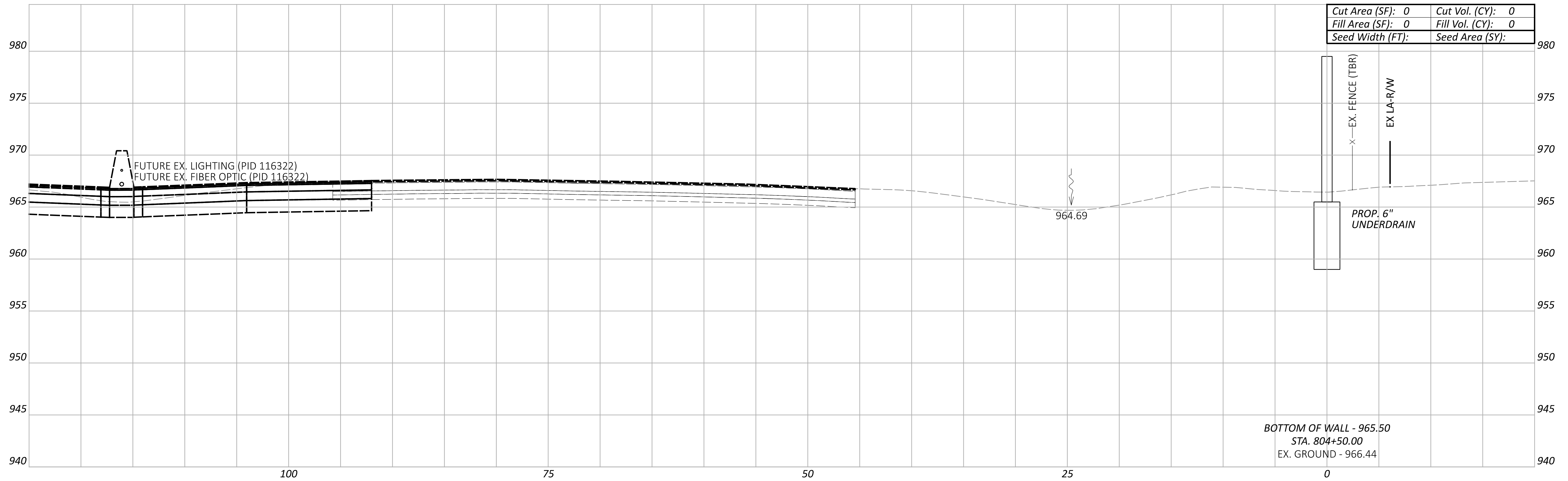
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

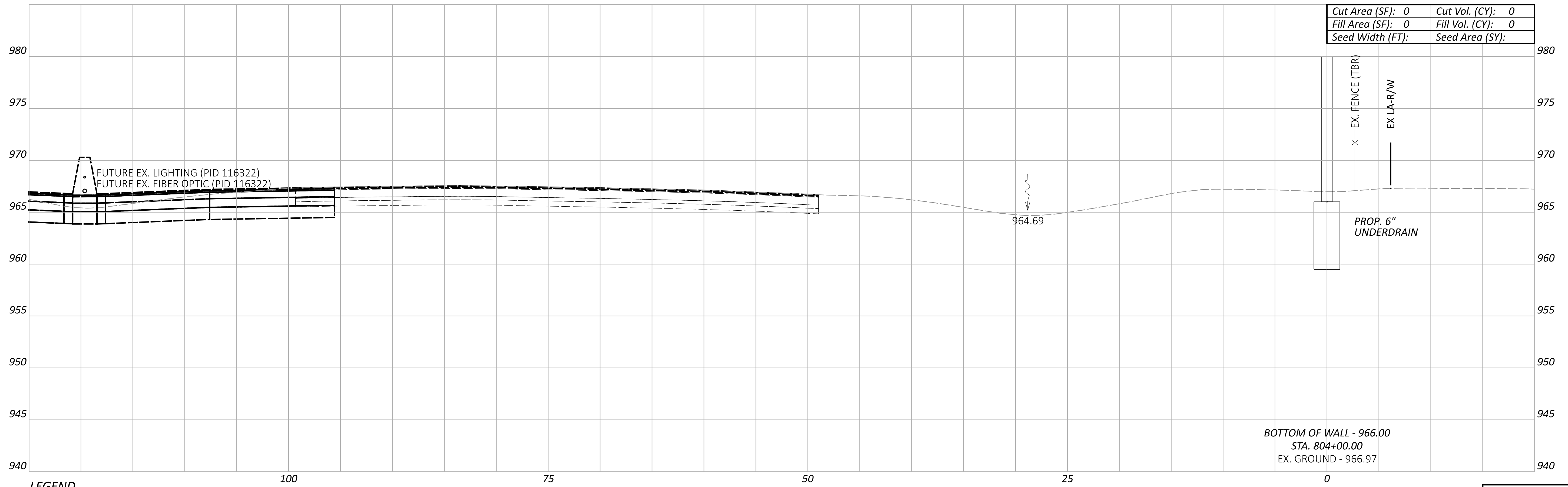
FRA-161-15.80 NOISE WALLS

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 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS0088.dgn



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Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 965.50
 STA. 804+50.00
 EX. GROUND - 966.44



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 966.00
 STA. 804+00.00
 EX. GROUND - 966.97

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
			P.106	P.295

**CROSS SECTIONS - WALL 8
 STA. 804+00.00 TO STA. 804+50.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS AVE SUITE 100
 COLUMBIANA, OH 43085
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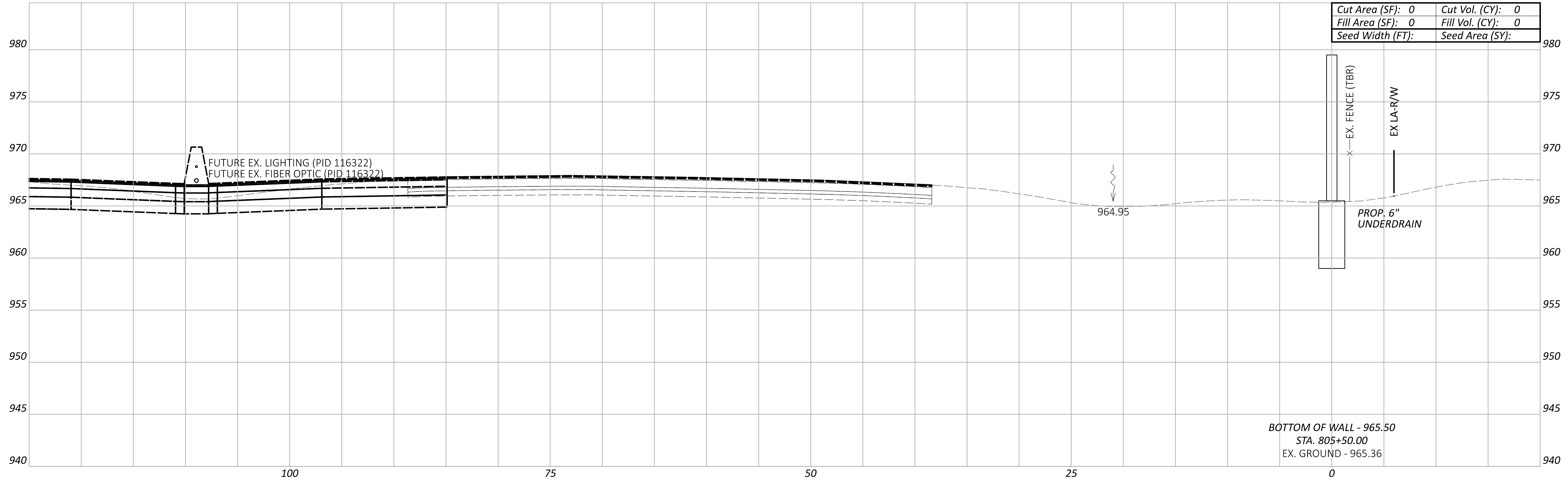
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

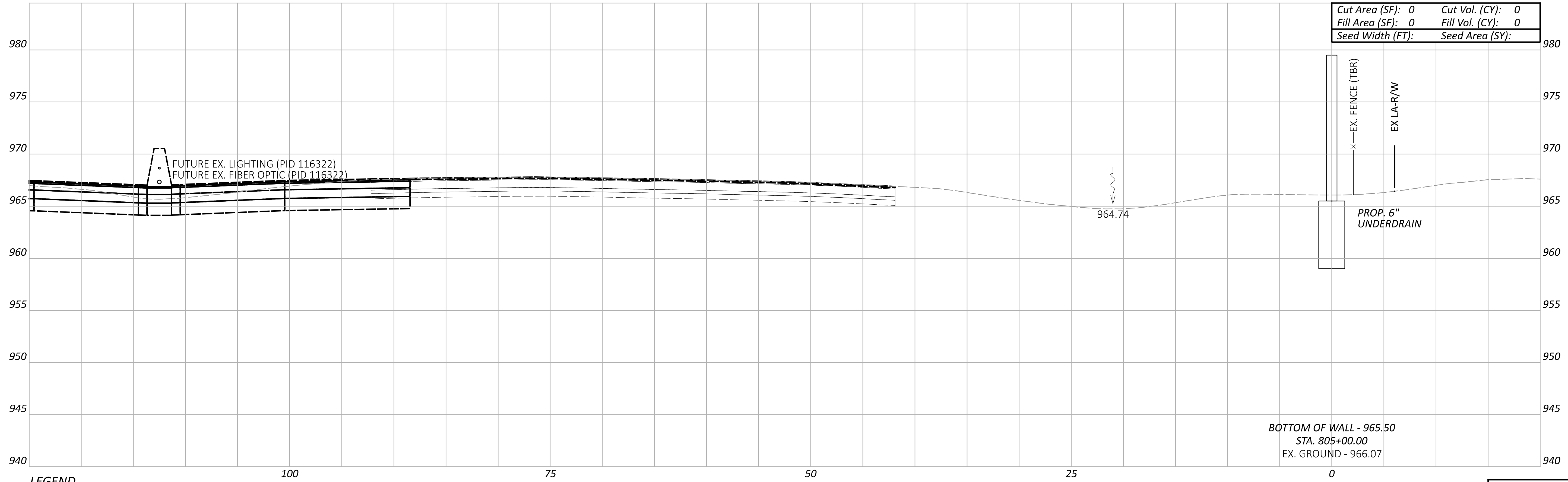
FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL9 - 805+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 7:59:52 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS0088.dgn



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Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 965.50
 STA. 805+50.00
 EX. GROUND - 965.36



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Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 965.50
 STA. 805+00.00
 EX. GROUND - 966.07

LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
			P.107	P.295

**CROSS SECTIONS - WALL 8
 STA. 805+00.00 TO STA. 805+50.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS AVE SUITE 100
 COLUMBIANA, OH 43085
 (614) 810-4900
 www.arcadis.com

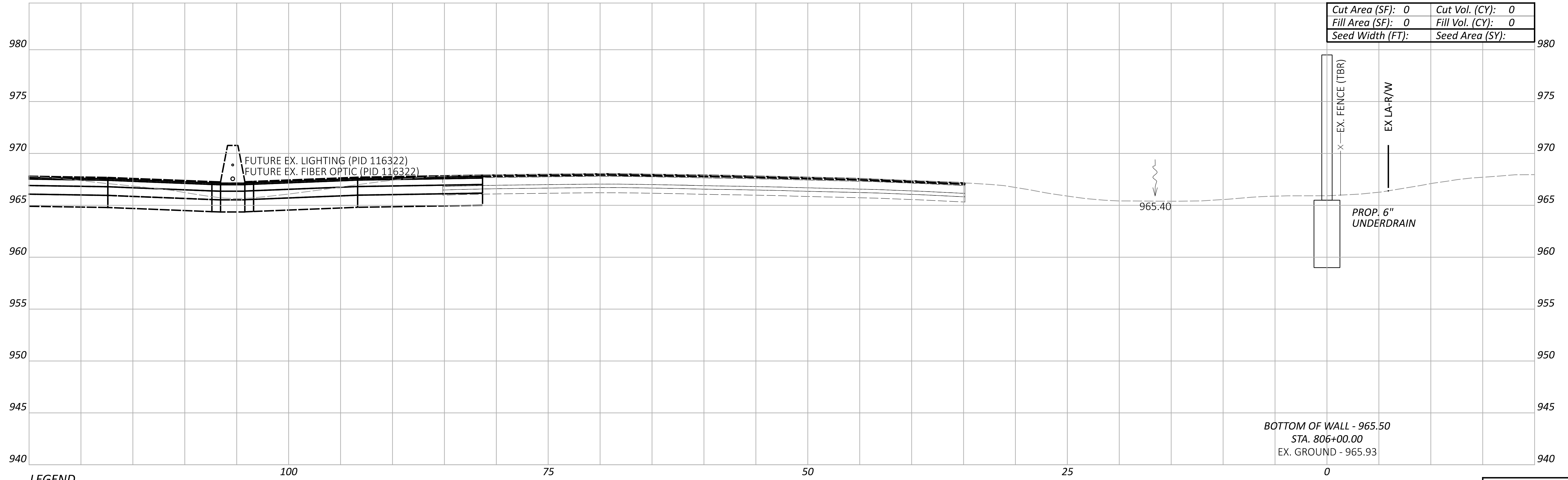
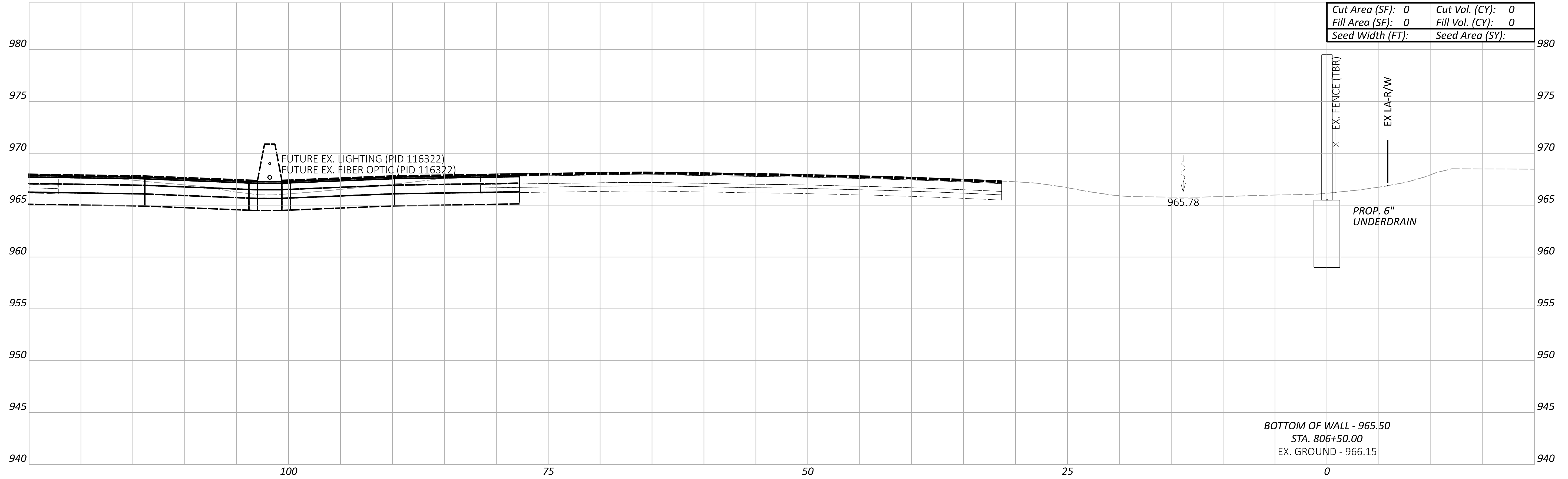
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

FRA-161-15.80 NOISE WALLS

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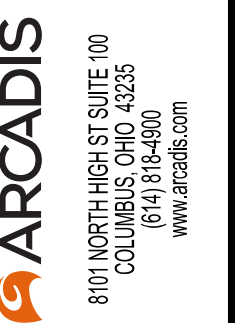
LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
			P.108	P.295

**CROSS SECTIONS - WALL 8
 STA. 806+00.00 TO STA. 806+50.00**

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

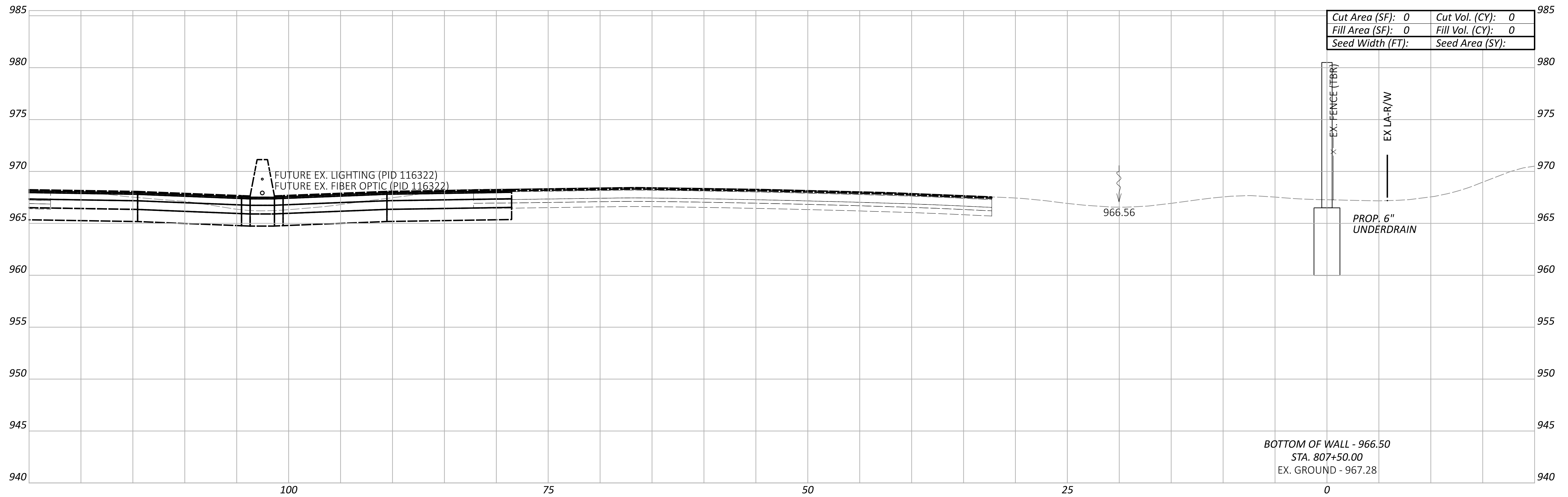
JDH 03-27-24

PROJECT ID

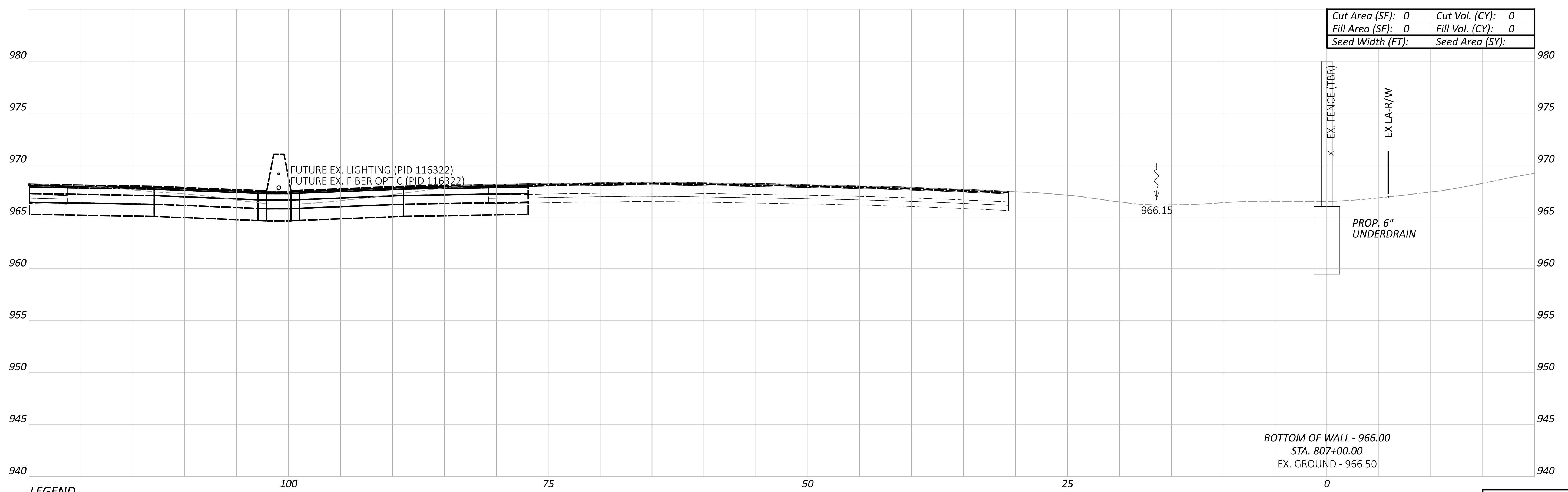
117607

FRA-161-15.80 NOISE WALLS

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 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS0088.dgn



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	0	Cut Vol. (CY):	0
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Seed Width (FT):		Seed Area (SY):	

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
			P.109	P.295

**CROSS SECTIONS - WALL 8
 STA. 807+00.00 TO STA. 807+50.00**

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

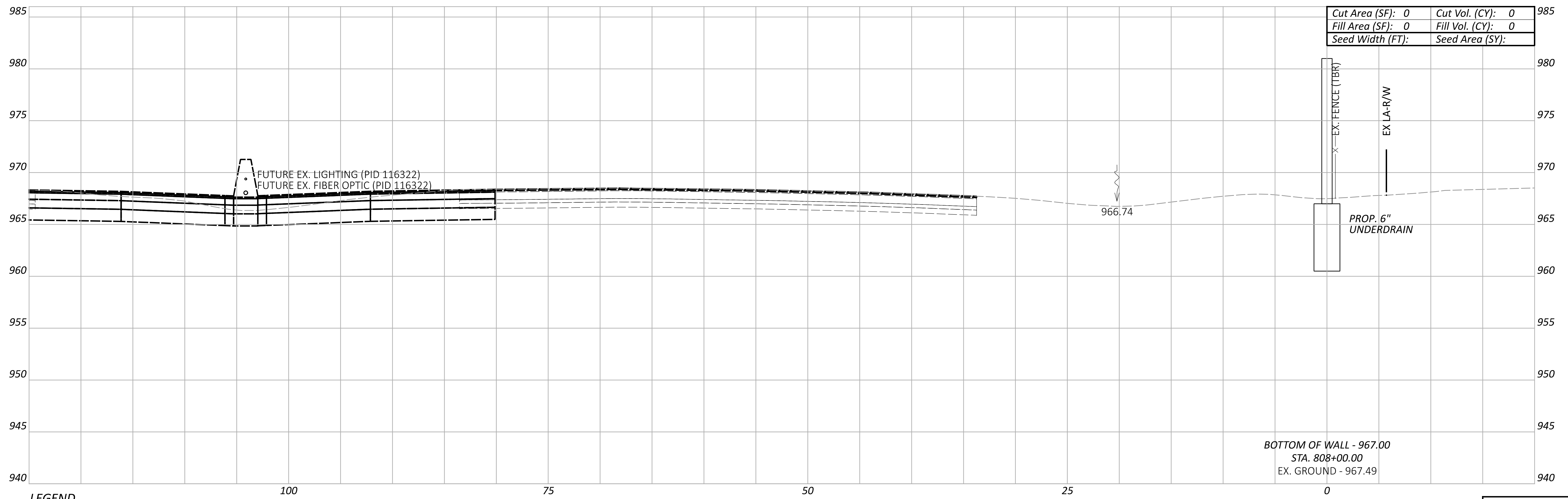
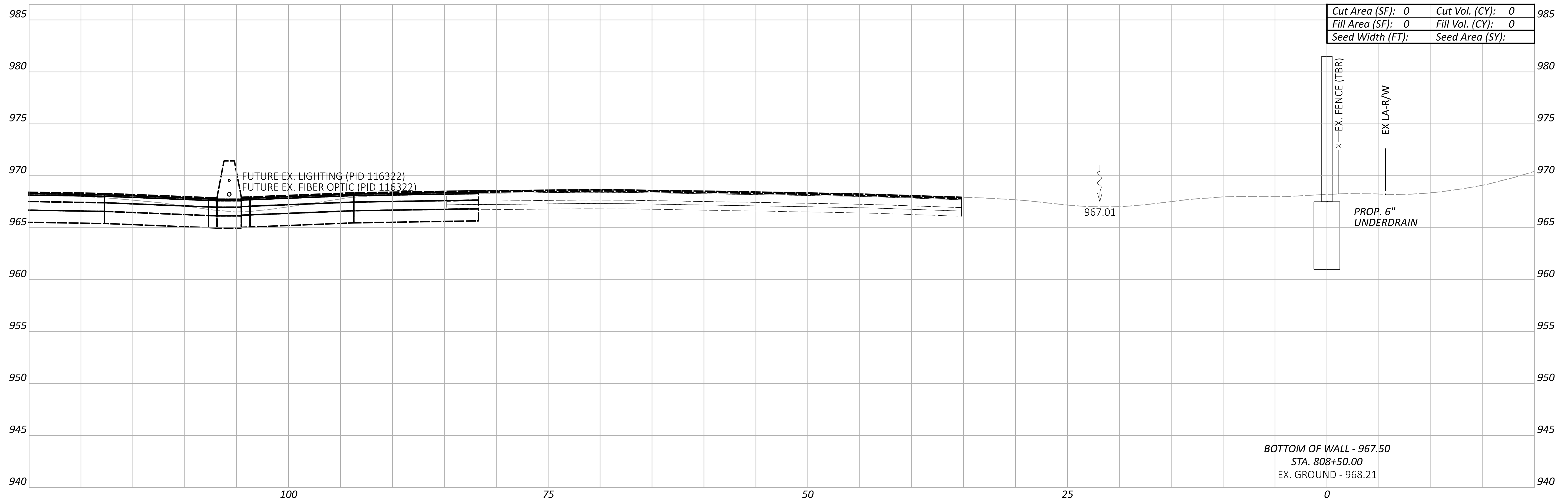
JDH 03-27-24

PROJECT ID

117607

FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL9 - 808+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:01:08 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS0088.dgn



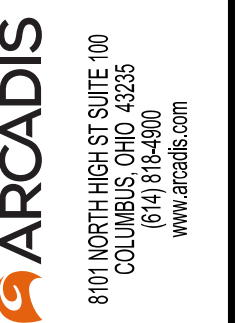
LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
			P.110	P.295

**CROSS SECTIONS - WALL 8
 STA. 808+00.00 TO STA. 808+50.00**

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

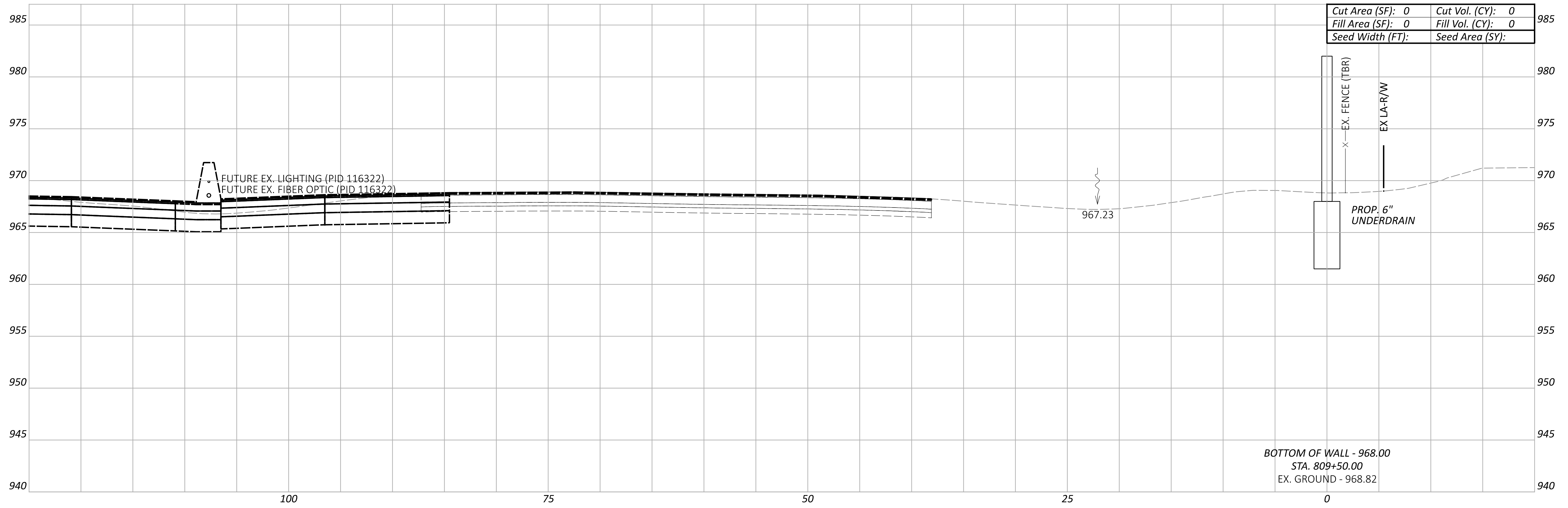
JDH 03-27-24

PROJECT ID

117607

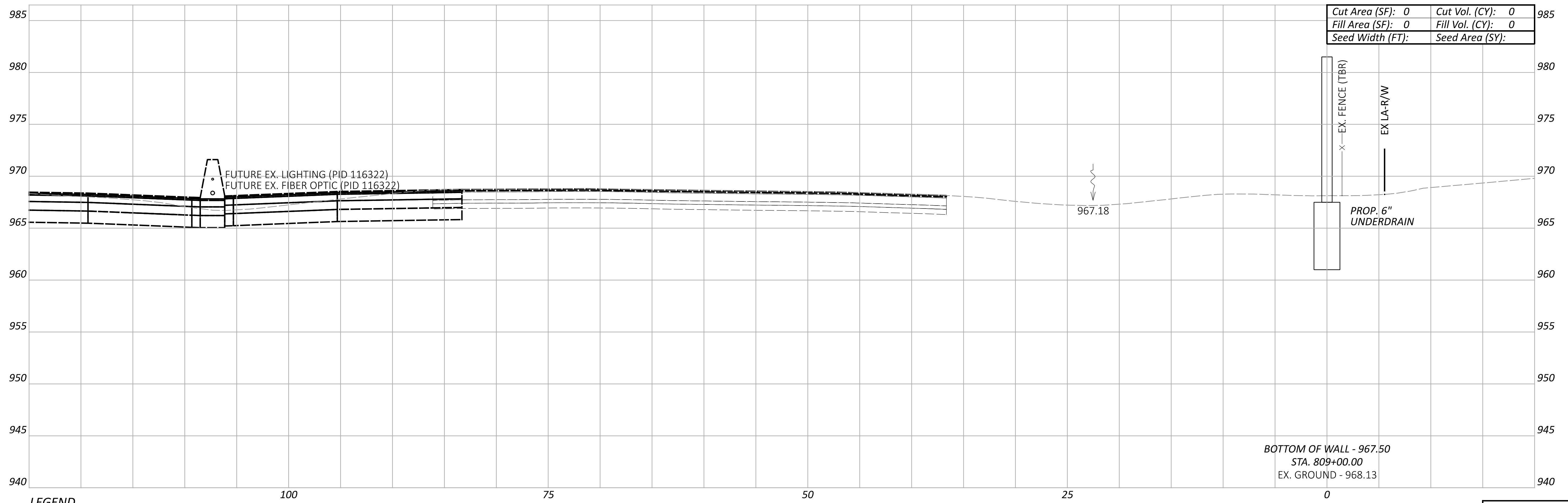
FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL9 - 809+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:01:34 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS0088.dgn



BOTTOM OF WALL - 968.00
 STA. 809+50.00
 EX. GROUND - 968.82

Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	



BOTTOM OF WALL - 967.50
 STA. 809+00.00
 EX. GROUND - 968.13

Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
			P.111	P.295

CROSS SECTIONS - WALL 8
 STA. 809+00.00 TO STA. 809+50.00

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY 34, SUITE 100
 COLUMBIA, MO 65203
 (616) 414-4900
 www.arcadis.com

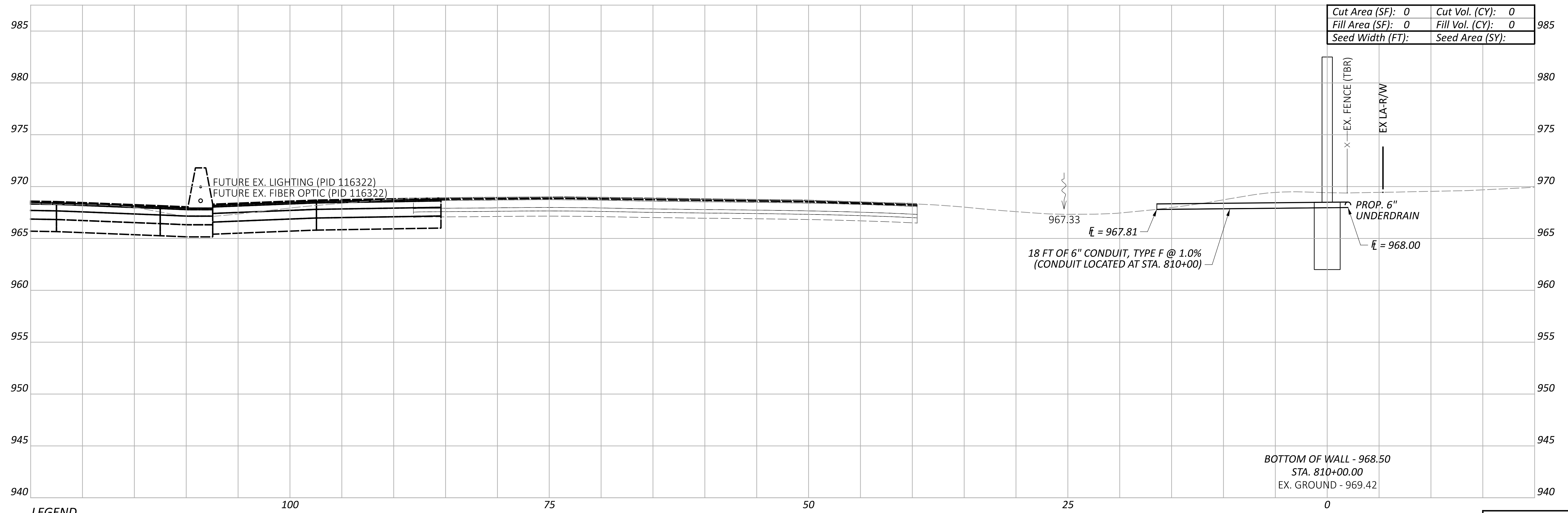
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL9 - 810+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:01:59 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS0088.dgn



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

LEGEND

- EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

BOTTOM OF WALL - 968.50
 STA. 810+00.00
 EX. GROUND - 969.42

967.33
 $\ell = 967.81$
 18 FT OF 6" CONDUIT, TYPE F @ 1.0%
 (CONDUIT LOCATED AT STA. 810+00)

PROP. 6" UNDERDRAIN
 $\ell = 968.00$

EX. FENCE (TBR)
 EX LA-R/W

Sheet Totals			117607
Seeding	Cut	Fill	
P.112			P.295

**CROSS SECTIONS - WALL 8
 STA. 810+00.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY 36, SUITE 100
 COLUMBIA, MO 65203
 (644) 810-4900
 www.arcadis.com

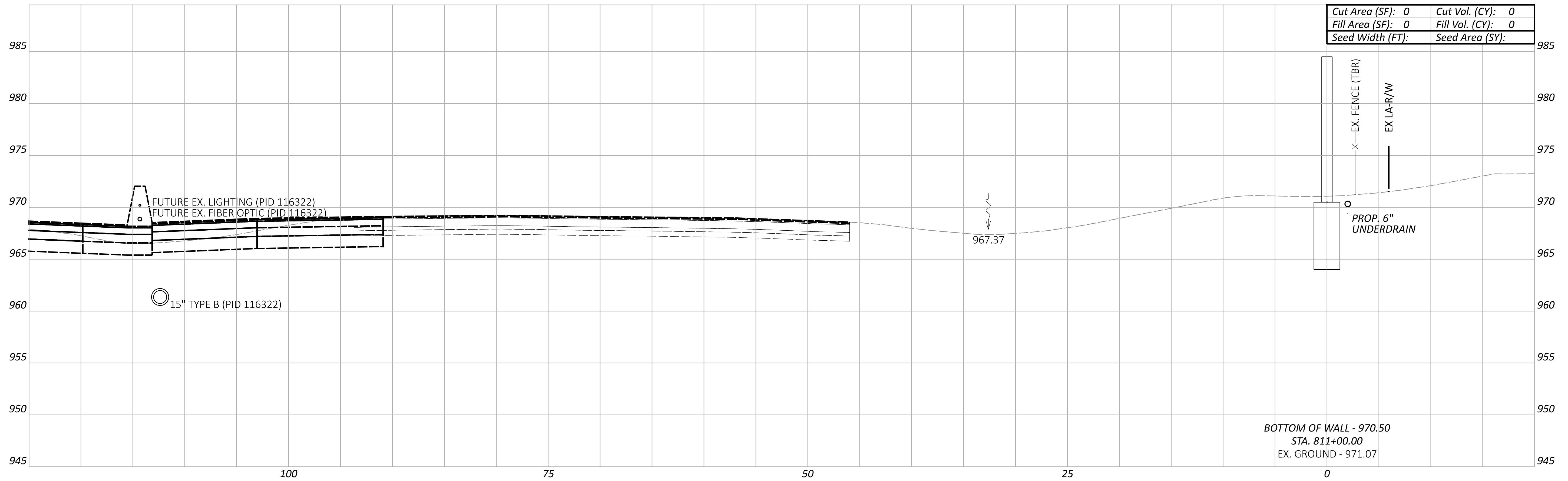
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

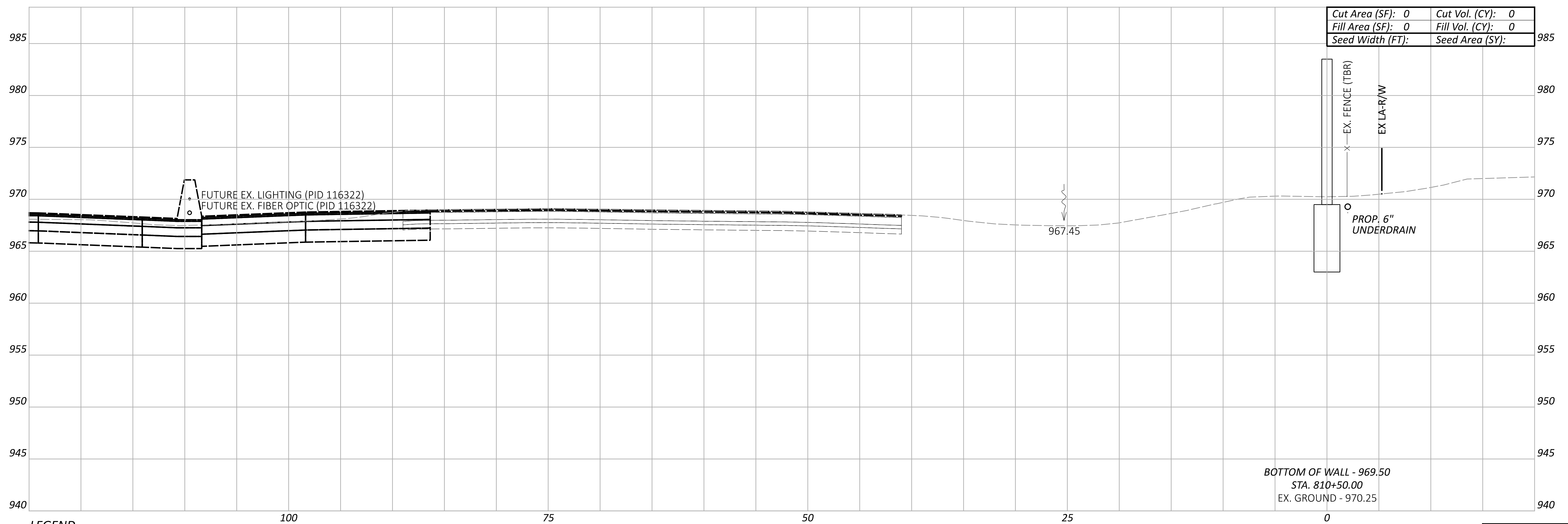
FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL9 - 810+50.00 [Sheet] PAPER/SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:02:14 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS0088.dgn



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 970.50
 STA. 811+00.00
 EX. GROUND - 971.07



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 969.50
 STA. 810+50.00
 EX. GROUND - 970.25

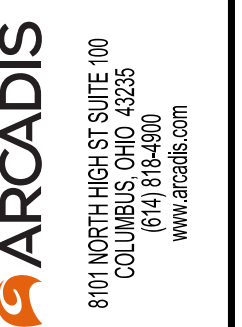
LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
			P.113	P.295

**CROSS SECTIONS - WALL 8
 STA. 810+50.00 TO STA. 811+00.00**

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

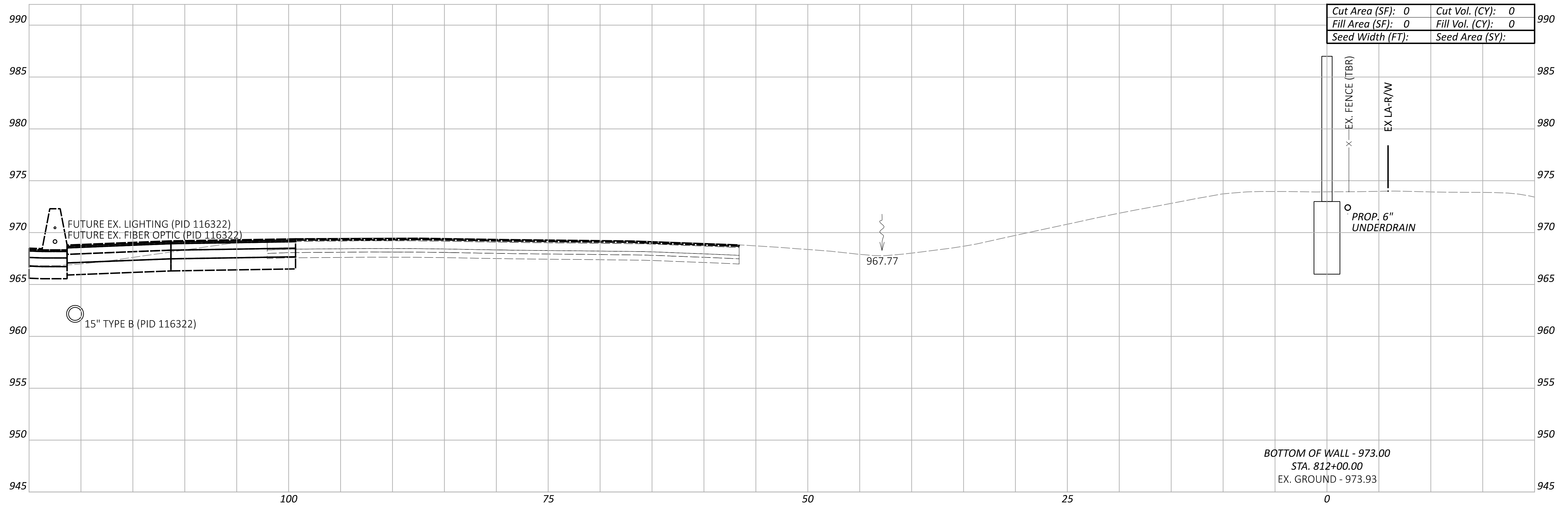
JDH 03-27-24

PROJECT ID

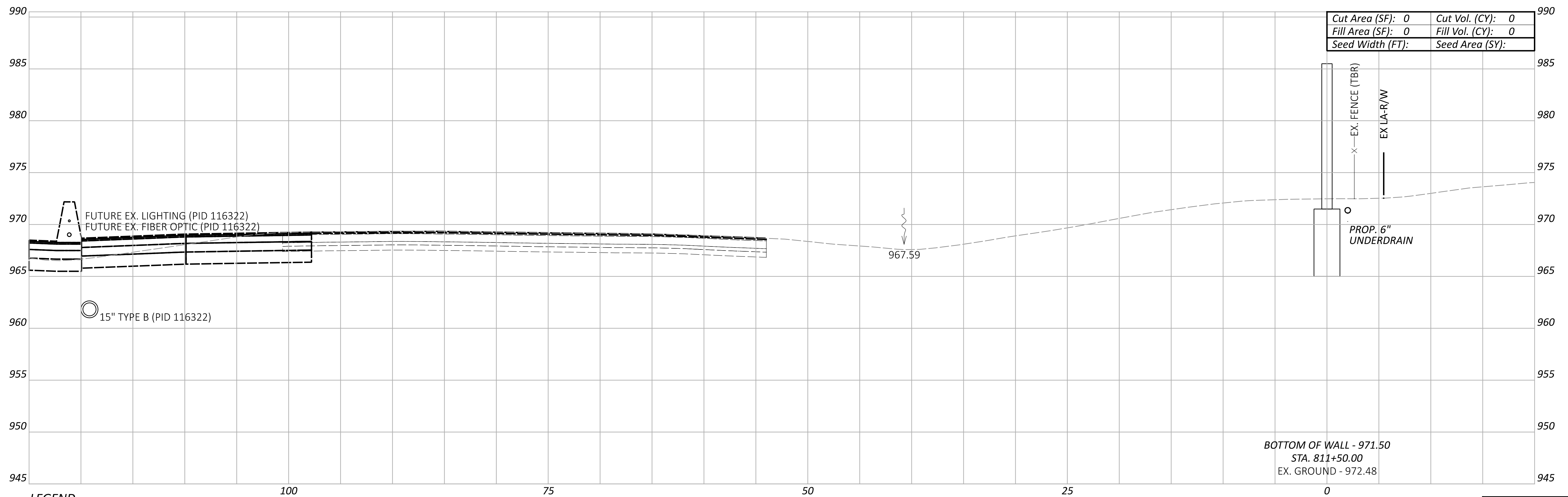
117607

FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL9 - 811+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:02:40 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS0088.dgn



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
			P.114	P.295

**CROSS SECTIONS - WALL 8
 STA. 811+50.00 TO STA. 812+00.00**

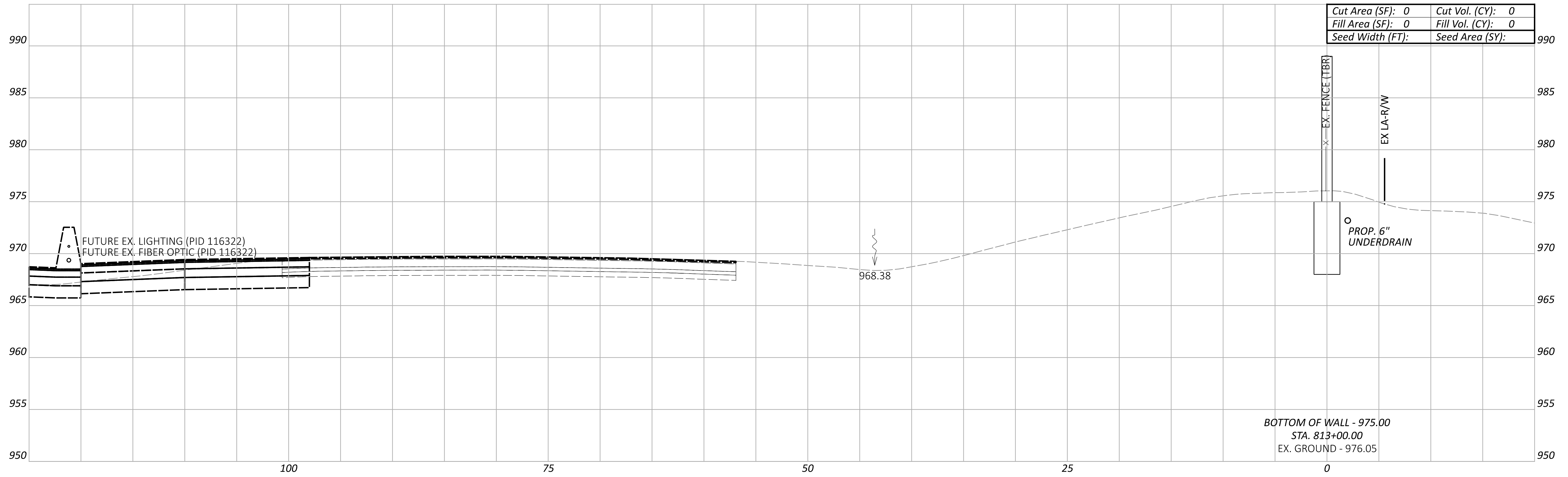
DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY 38, SUITE 100
 COLUMBIA, MO 65203
 (646) 441-4900
 www.arcadis.com

DESIGNER
JMK
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PROJECT ID
117607

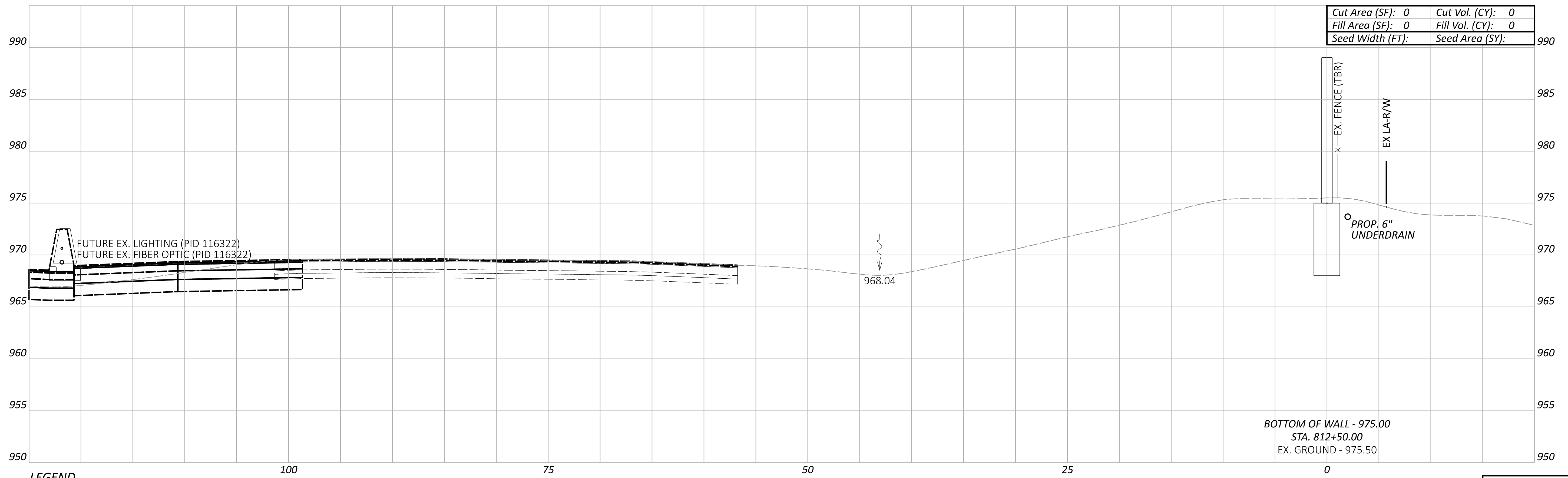
FRA-161-15.80 NOISE WALLS

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Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 975.00
 STA. 813+00.00
 EX. GROUND - 976.05



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 975.00
 STA. 812+50.00
 EX. GROUND - 975.50

LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
			P.115 P.295

**CROSS SECTIONS - WALL 8
 STA. 812+50.00 TO STA. 813+00.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY 200 SUITE 100
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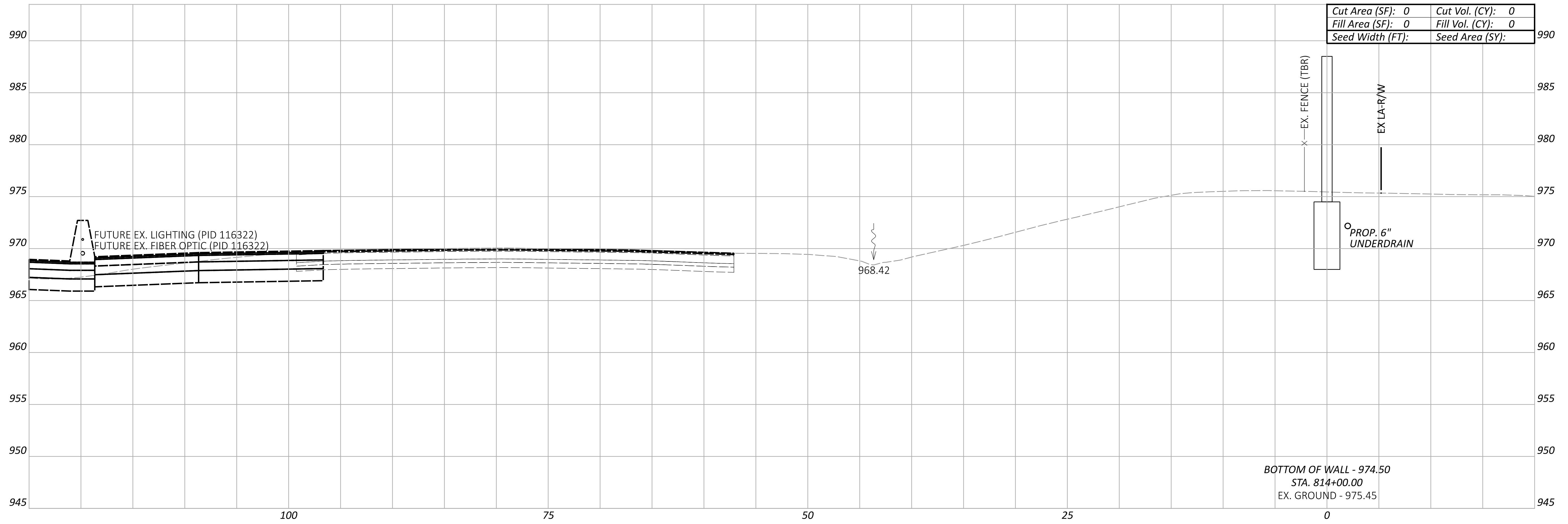
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

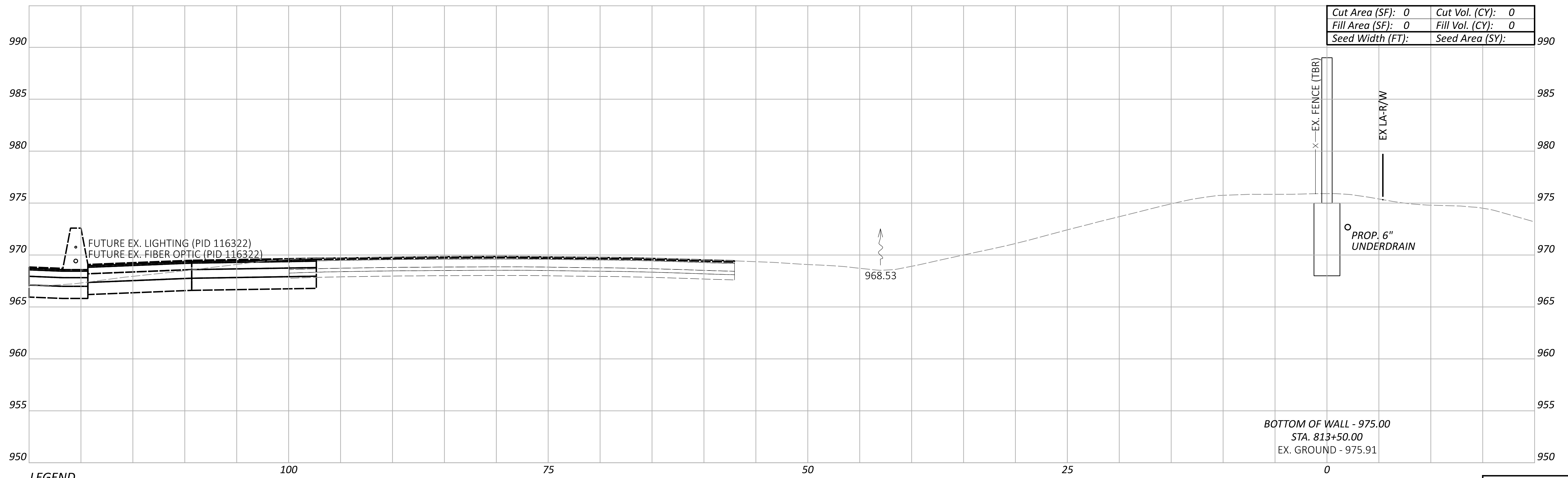
FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL9 - 813+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:03:27 PM USER: jennifer.kelley
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Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 974.50
 STA. 814+00.00
 EX. GROUND - 975.45



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 975.00
 STA. 813+50.00
 EX. GROUND - 975.91

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

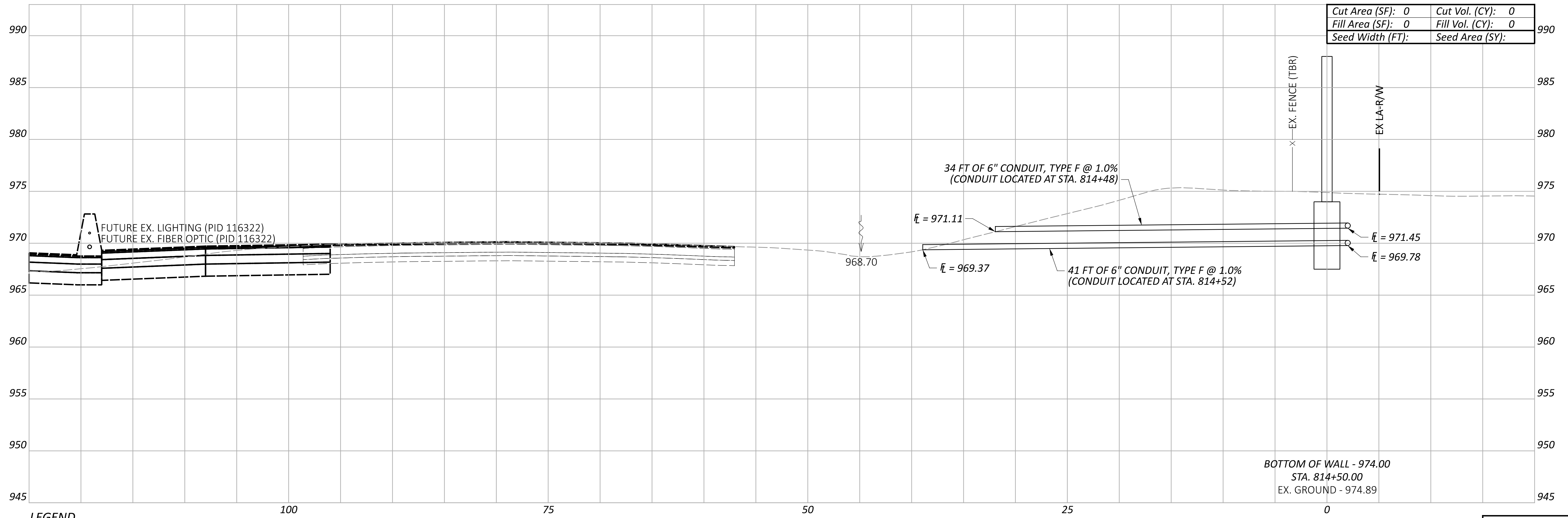
Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
			P.116	P.295

**CROSS SECTIONS - WALL 8
 STA. 813+50.00 TO STA. 814+00.00**

DESIGN AGENCY
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 8101 NORTH HIGHWAY 200 SUITE 100
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LEGEND

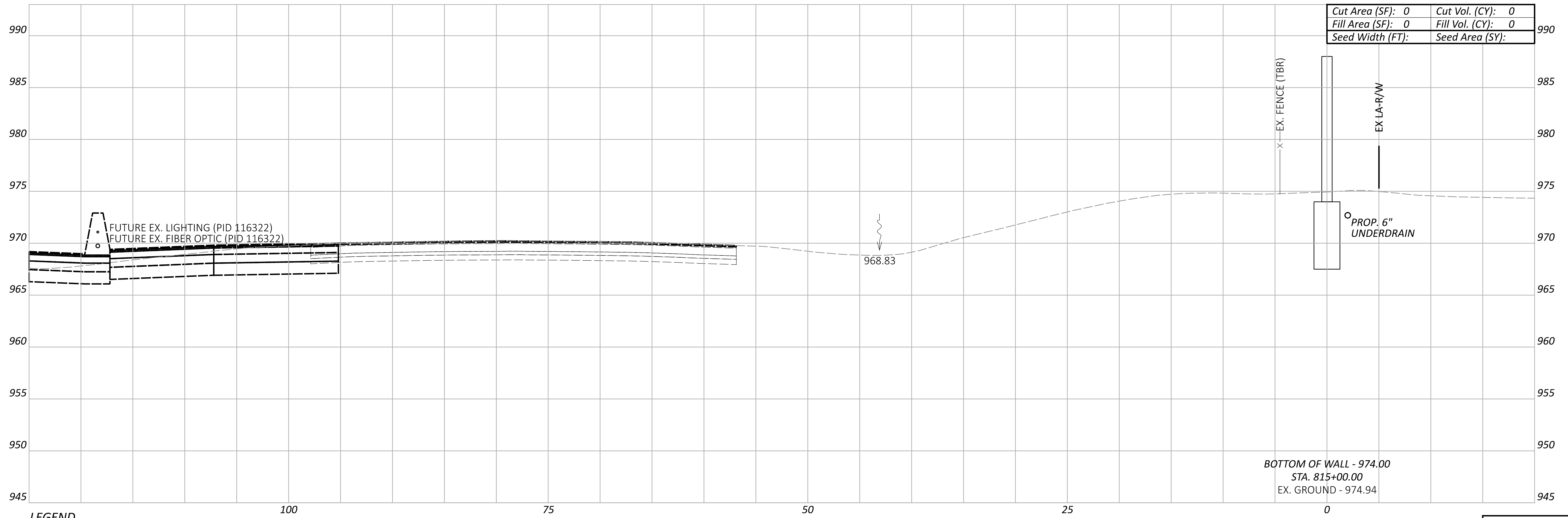
- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
			P.117	P.295

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY SUITE 100
 COLUMBIANA, OHIO 43085
 (614) 810-4900
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 REVIEWER
JDH 03-27-24

PROJECT ID
117607



LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

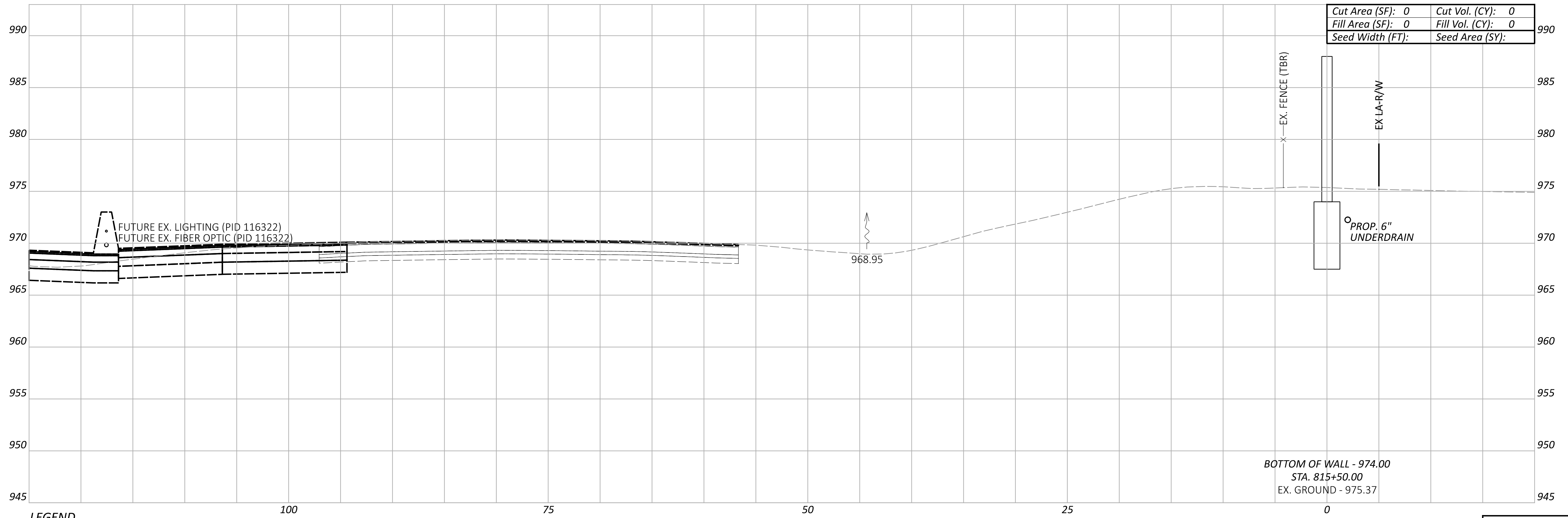
BOTTOM OF WALL - 974.00
 STA. 815+00.00
 EX. GROUND - 974.94

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
			P.118 P.295

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY SUITE 100
 COLUMBIANA, OHIO 43085
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JDH 03-27-24

PROJECT ID
117607



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

LEGEND

---	EXISTING SR-161 PRIOR TO PID 116322
---	FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

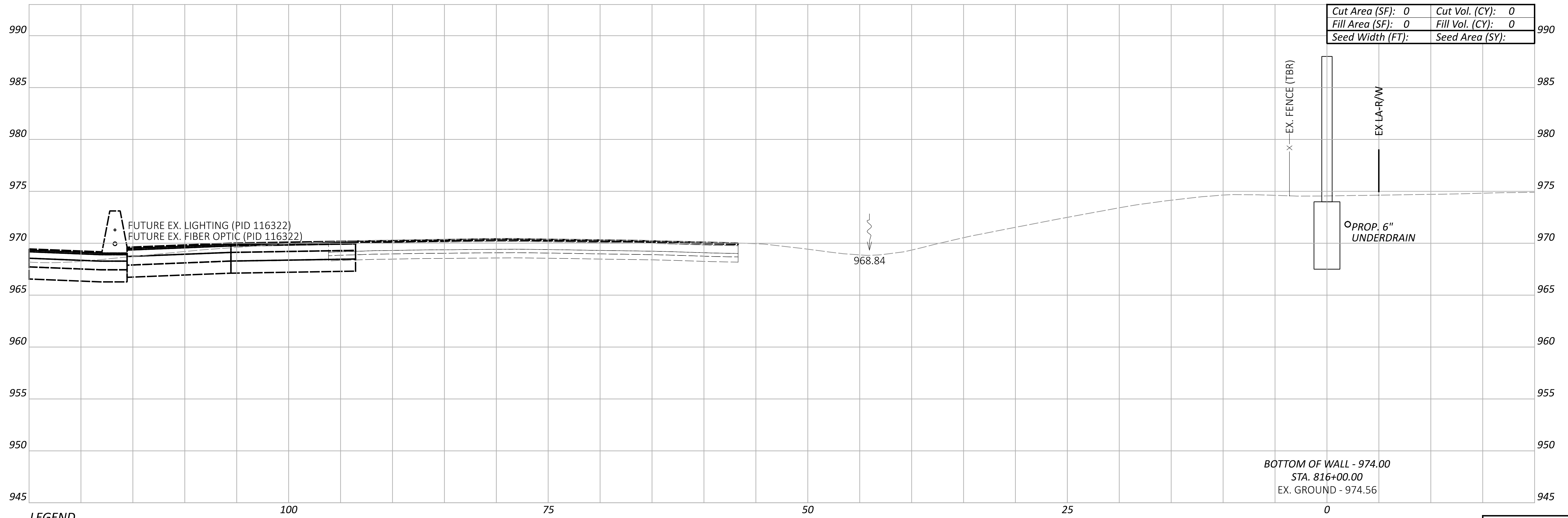
Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
			P.119 P.295

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY SUITE 100
 COLUMBIANA, OHIO 43085
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JDH 03-27-24

PROJECT ID
117607



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

LEGEND

---	EXISTING SR-161 PRIOR TO PID 116322
---	FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
			P.120 P.295

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY SUITE 100
 COLUMBIANA, OHIO 43085
 (614) 810-4900
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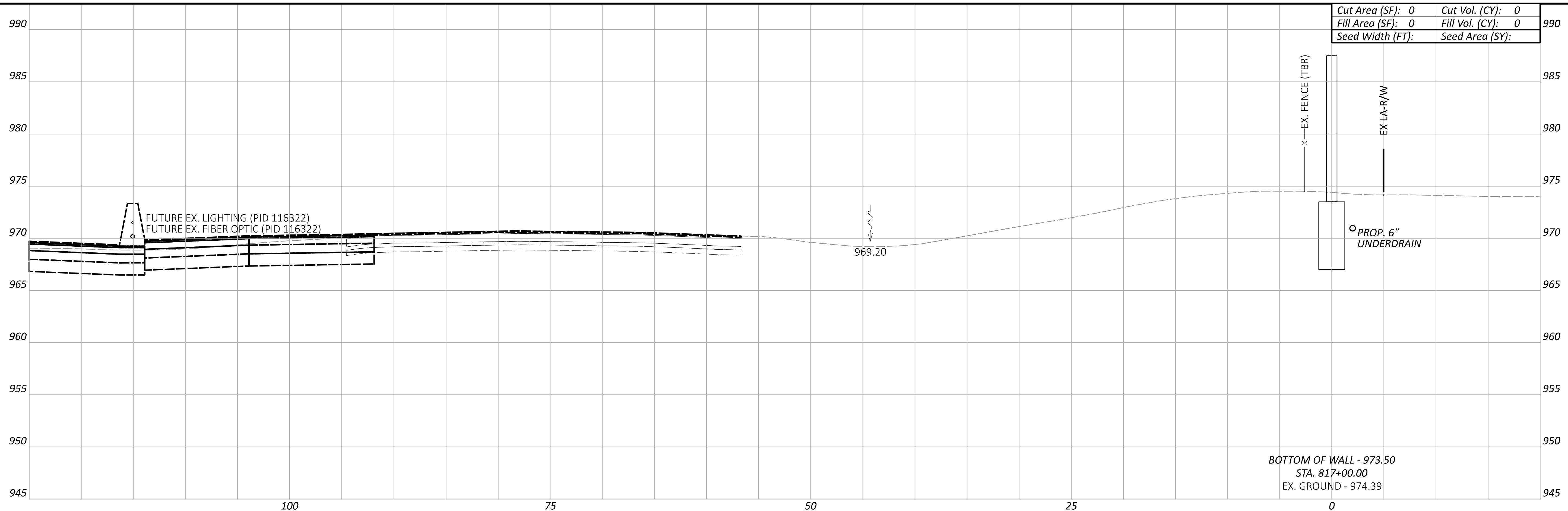
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

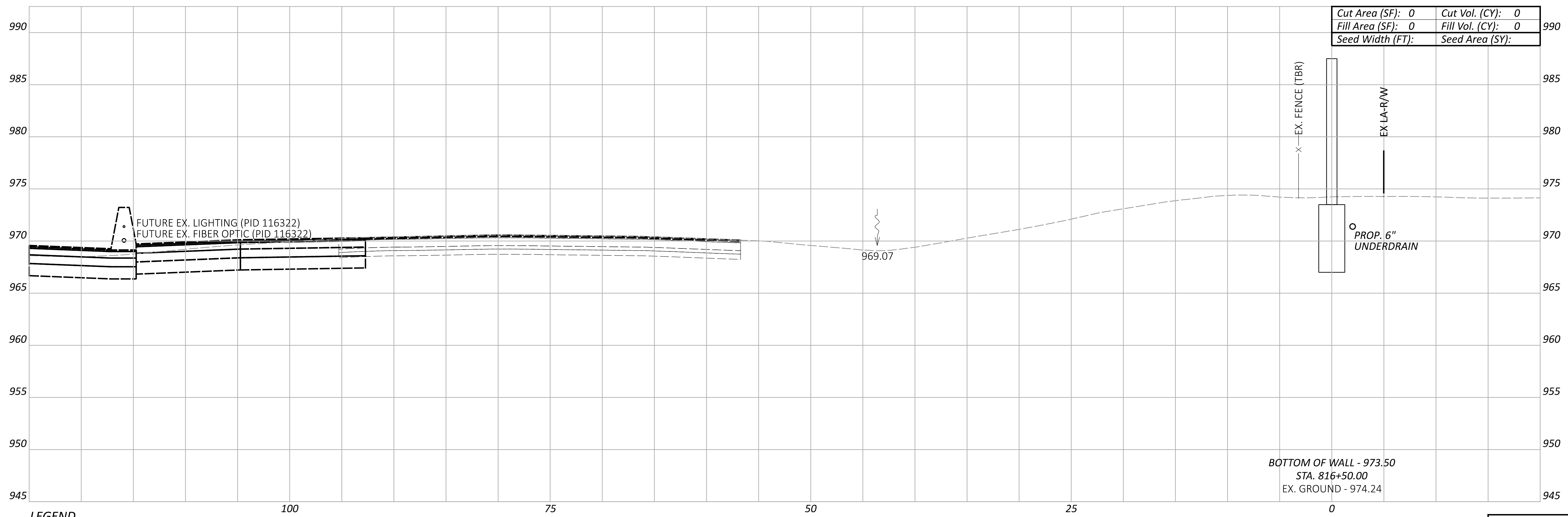
FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL9 - 816+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:04:43 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS0088.dgn



BOTTOM OF WALL - 973.50
 STA. 817+00.00
 EX. GROUND - 974.39

Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	



BOTTOM OF WALL - 973.50
 STA. 816+50.00
 EX. GROUND - 974.24

Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

**CROSS SECTIONS - WALL 8
 STA. 816+50.00 TO STA. 817+00.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS AVE SUITE 100
 COLUMBIANA, OH 43085
 (614) 819-4900
 www.arcadis.com

DESIGNER
JMK

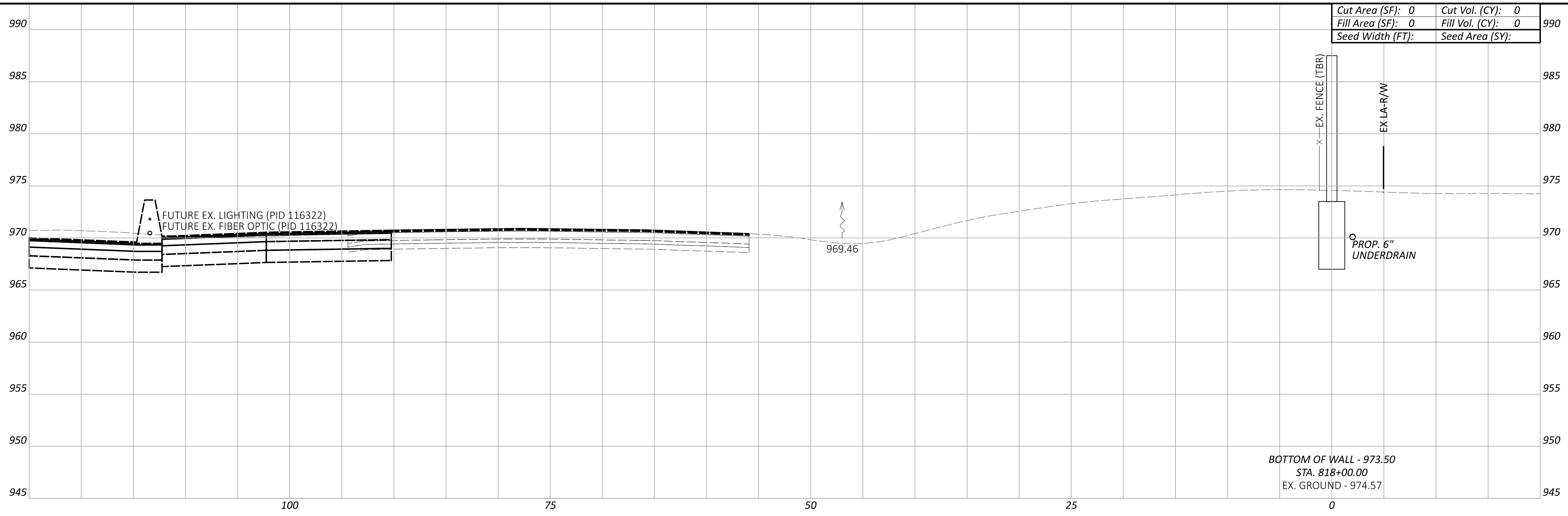
REVIEWER
JDH 03-27-24

PROJECT ID
117607

Sheet Totals			TOTAL	
Seeding	Cut	Fill	P.121	P.295

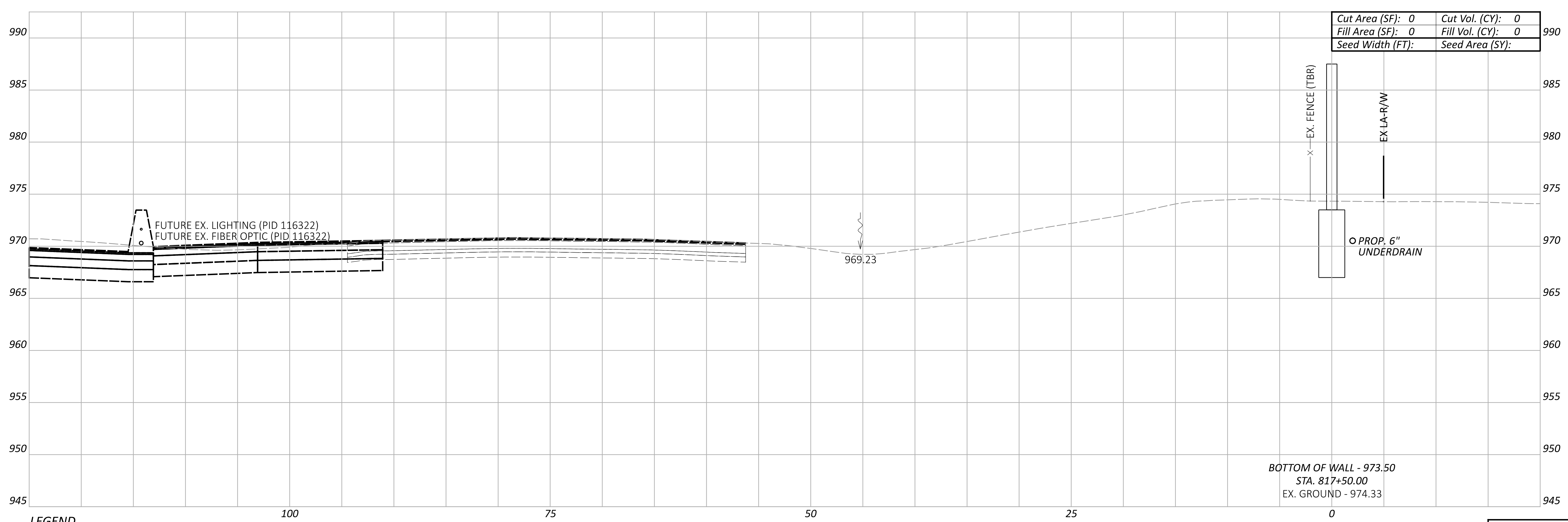
FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL9 - 817+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:05:07 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS0088.dgn



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 973.50
 STA. 818+00.00
 EX. GROUND - 974.57



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 973.50
 STA. 817+50.00
 EX. GROUND - 974.33

LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
			P.122	P.295

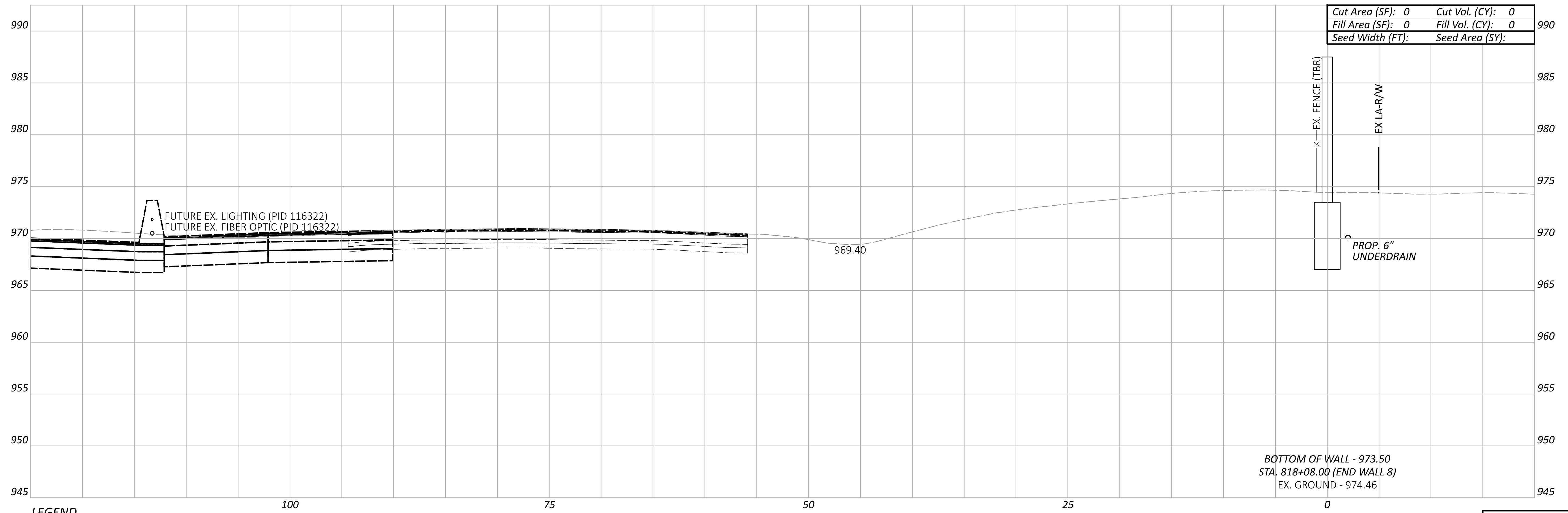
**CROSS SECTIONS - WALL 8
 STA. 817+50.00 TO STA. 818+00.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY 30, SUITE 100
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DESIGNER
JMK

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JDH 03-27-24

PROJECT ID
117607



LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

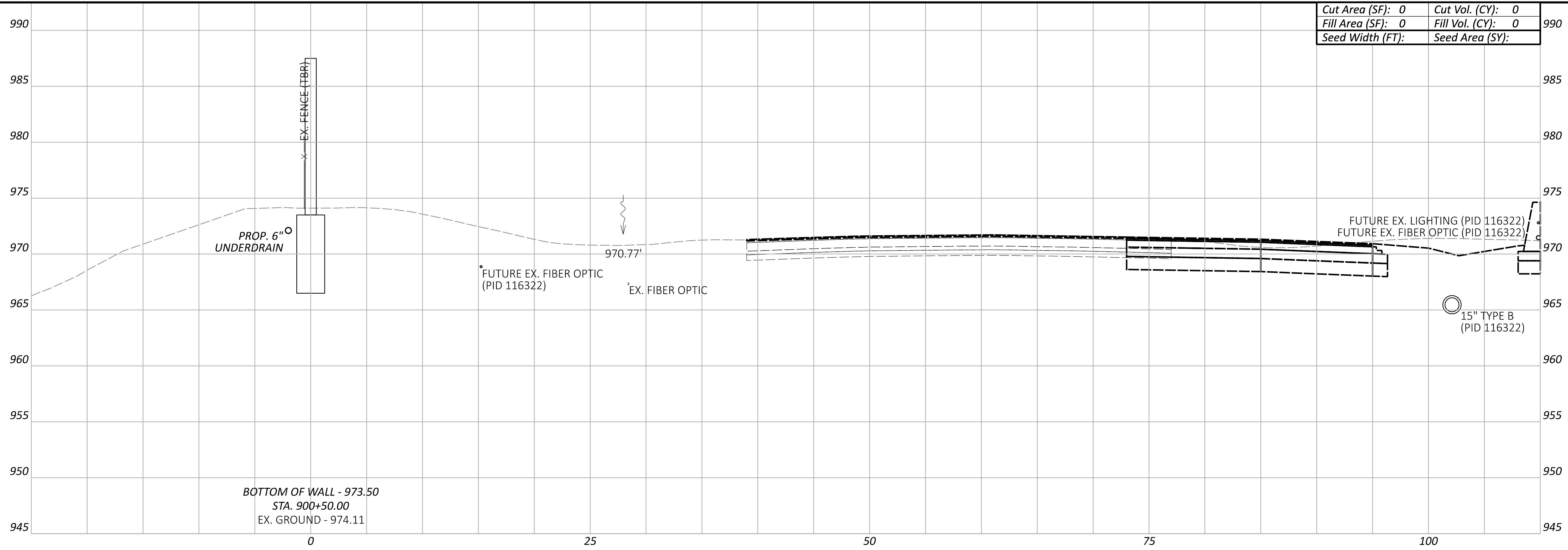
Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 973.50
 STA. 818+08.00 (END WALL 8)
 EX. GROUND - 974.46

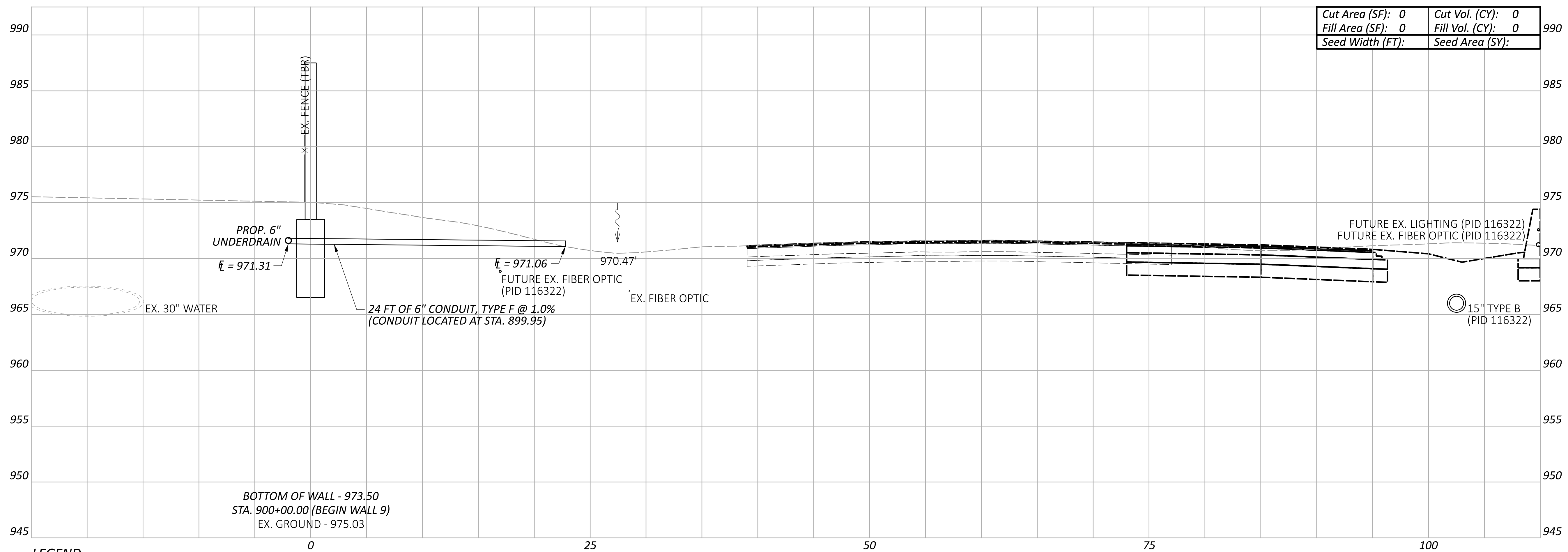
Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
			P.123 P.295

FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL9 - 900+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:06:06 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS009.dgn



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

LEGEND

- EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

**CROSS SECTIONS - WALL 9
 STA. 900+00.00 TO STA. 900+50.00**

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

JDH 03-27-24

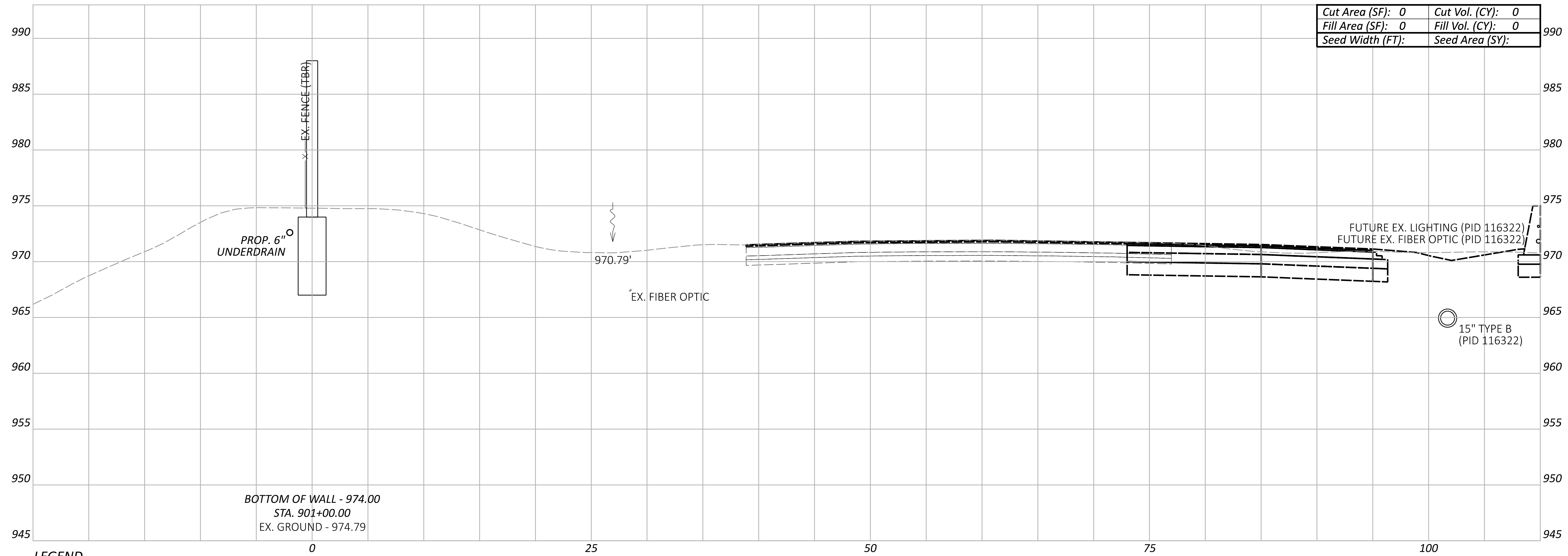
PROJECT ID

117607

Sheet Totals			TOTAL	
Seeding	Cut	Fill	P.124	P.295
0	0	0		

FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL9 - 901+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:06:52 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS009.dgn



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
0	0	0	P.125	P.295

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY 34, SUITE 100
 COLUMBIA, MO 65203
 (644) 810-4900
 www.arcadis.com

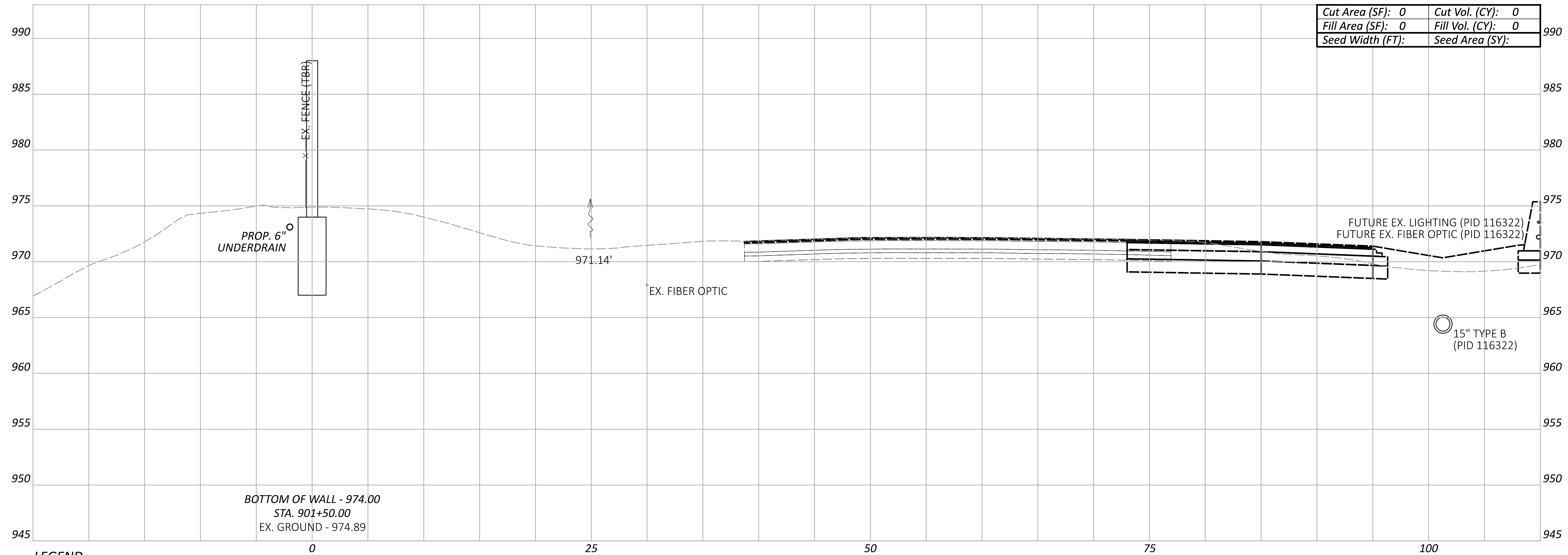
DESIGNER
JMK
 REVIEWER
JDH 03-27-24

PROJECT ID
117607

CROSS SECTIONS - WALL 9
STA. 901+00.00

FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL9 - 901+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:07:15 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS009.dgn



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

**CROSS SECTIONS - WALL 9
 STA. 901+50.00**

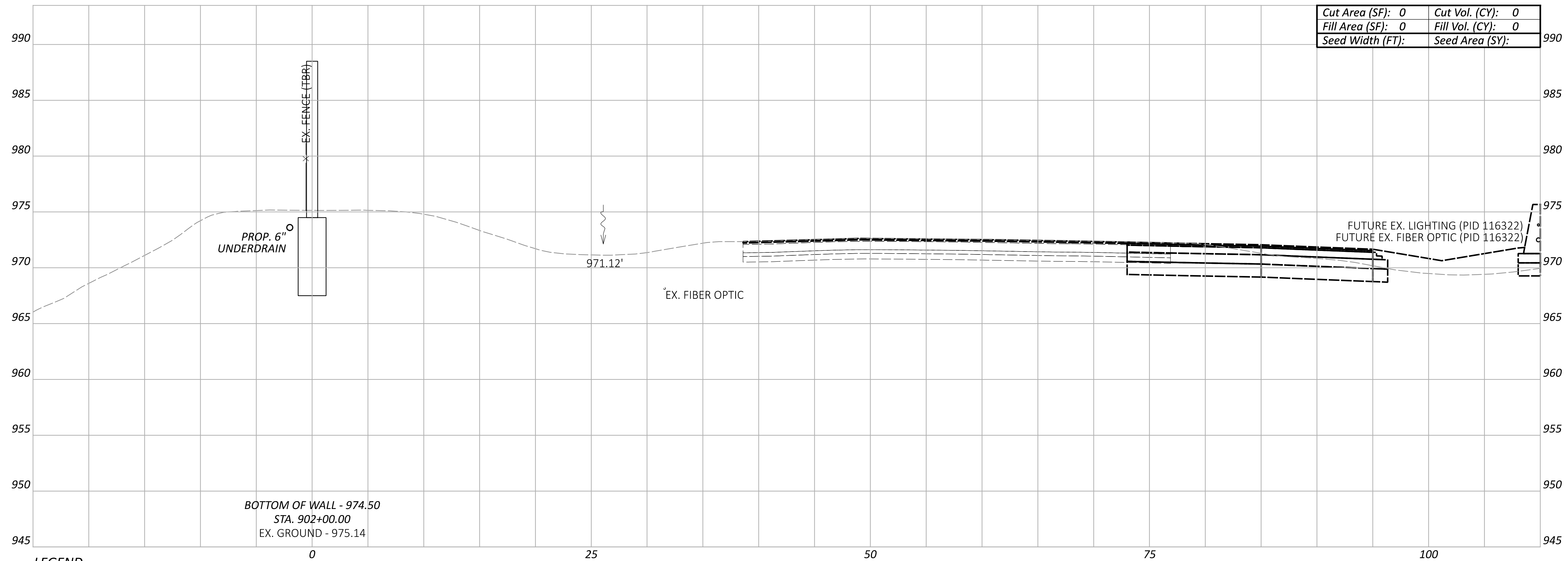
DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS AVE SUITE 100
 COLUMBIANA, OH 43085
 (614) 810-4900
 www.arcadis.com

DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

Sheet Totals			TOTAL	
Seeding	Cut	Fill	P.126	P.295
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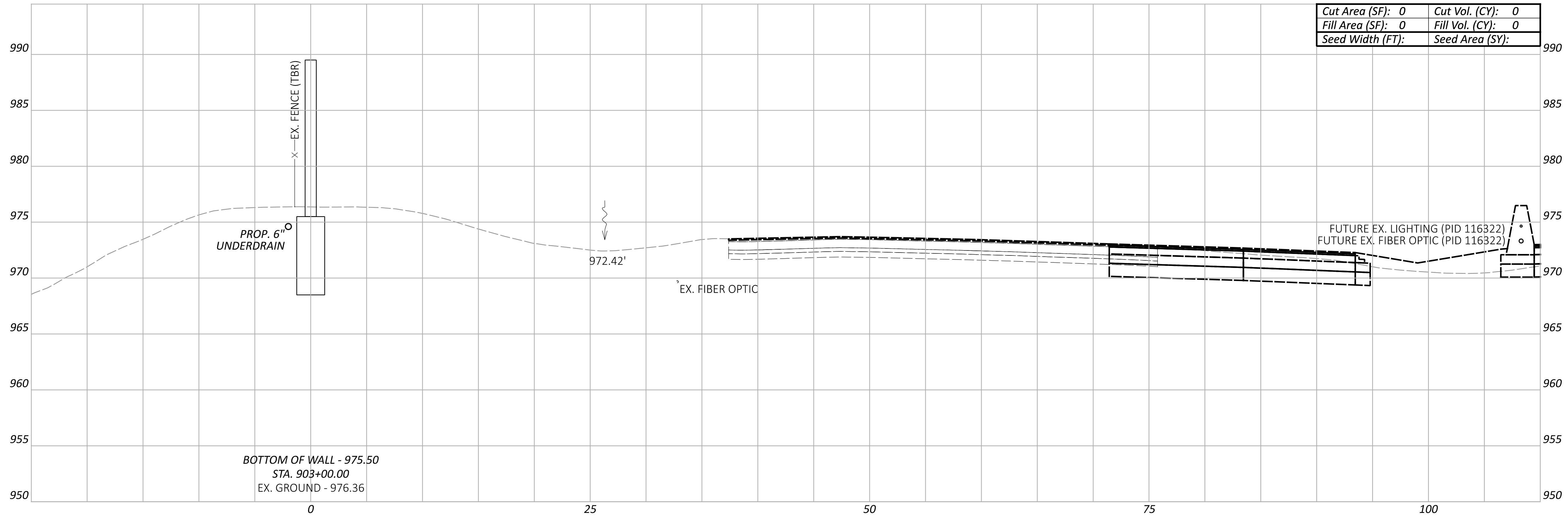
LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

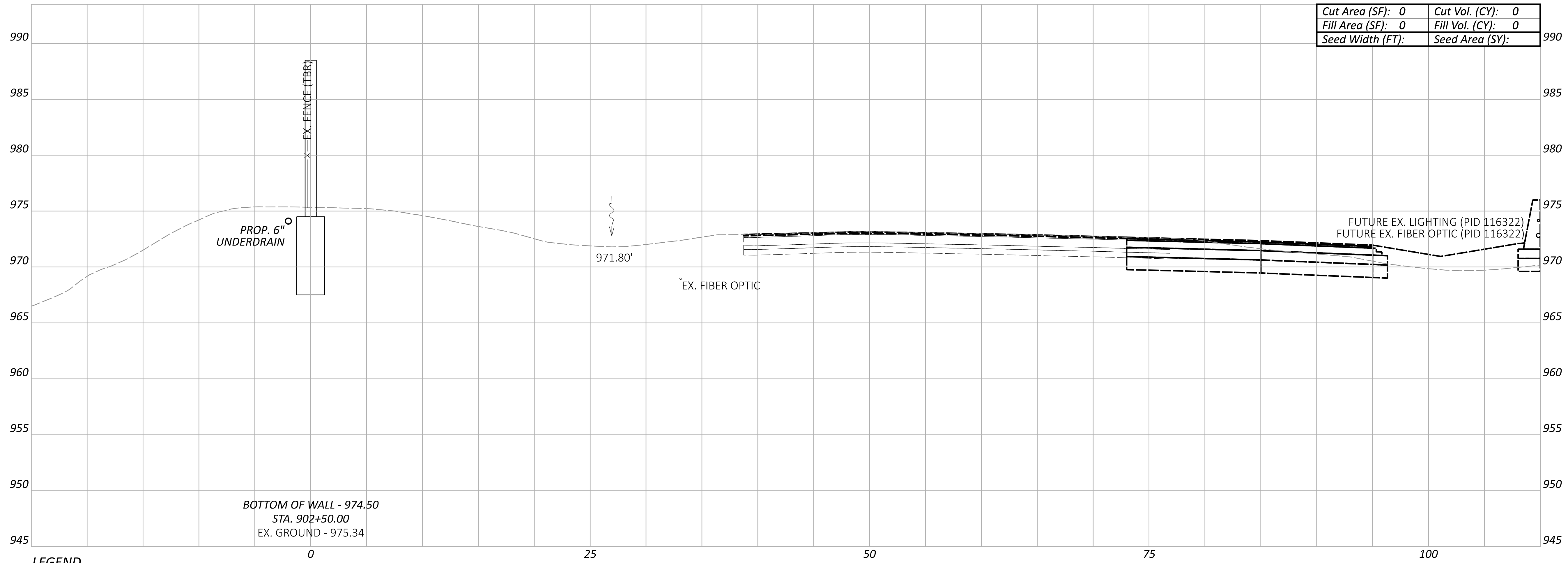
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FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL9 - 902+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:07:59 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS009.dgn



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

**CROSS SECTIONS - WALL 9
 STA. 902+50.00 TO STA. 903+00.00**

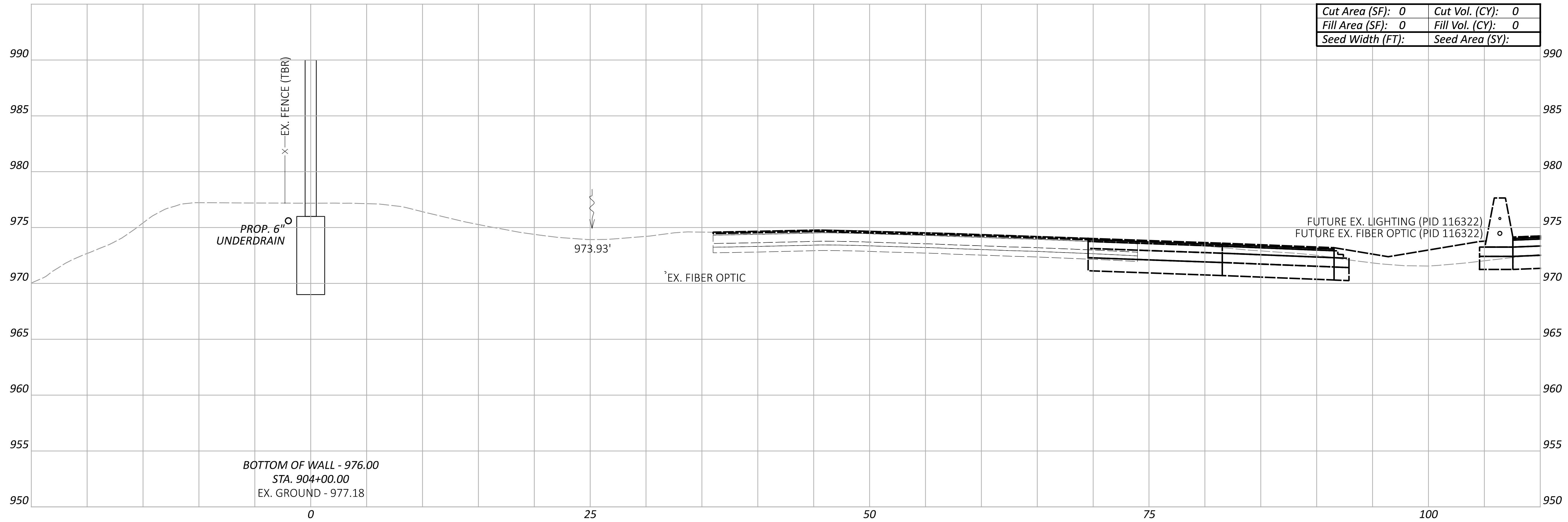
DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY 32, SUITE 100
 COLUMBIA, MO 65203
 (646) 810-4900
 www.arcadis.com

DESIGNER
JMK
 REVIEWER
JDH 03-27-24
 PROJECT ID
117607

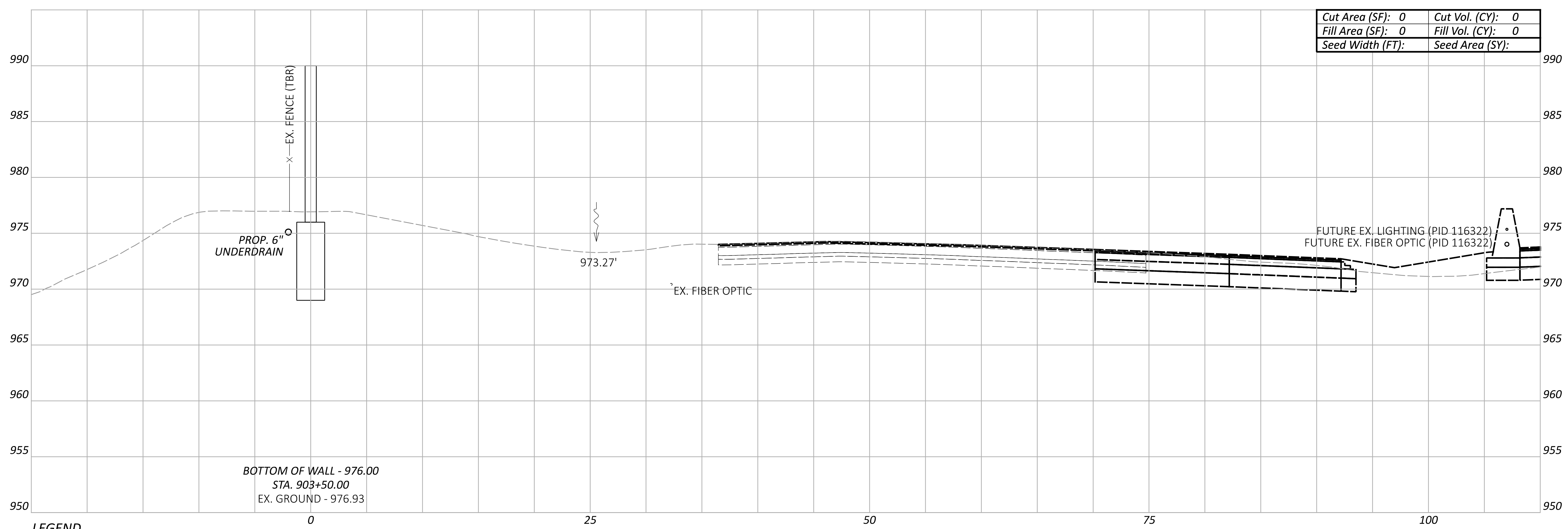
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FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL9 - 903+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:08:35 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS009.dgn



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

**CROSS SECTIONS - WALL 9
 STA. 903+50.00 TO STA. 904+00.00**

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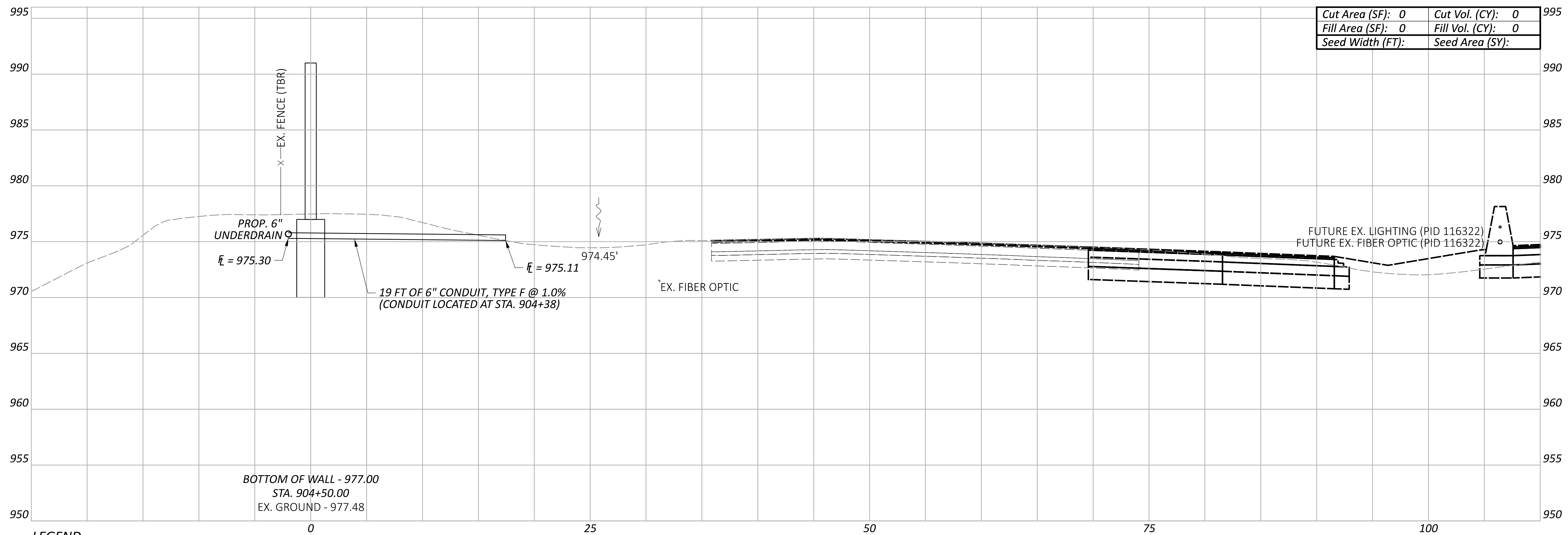
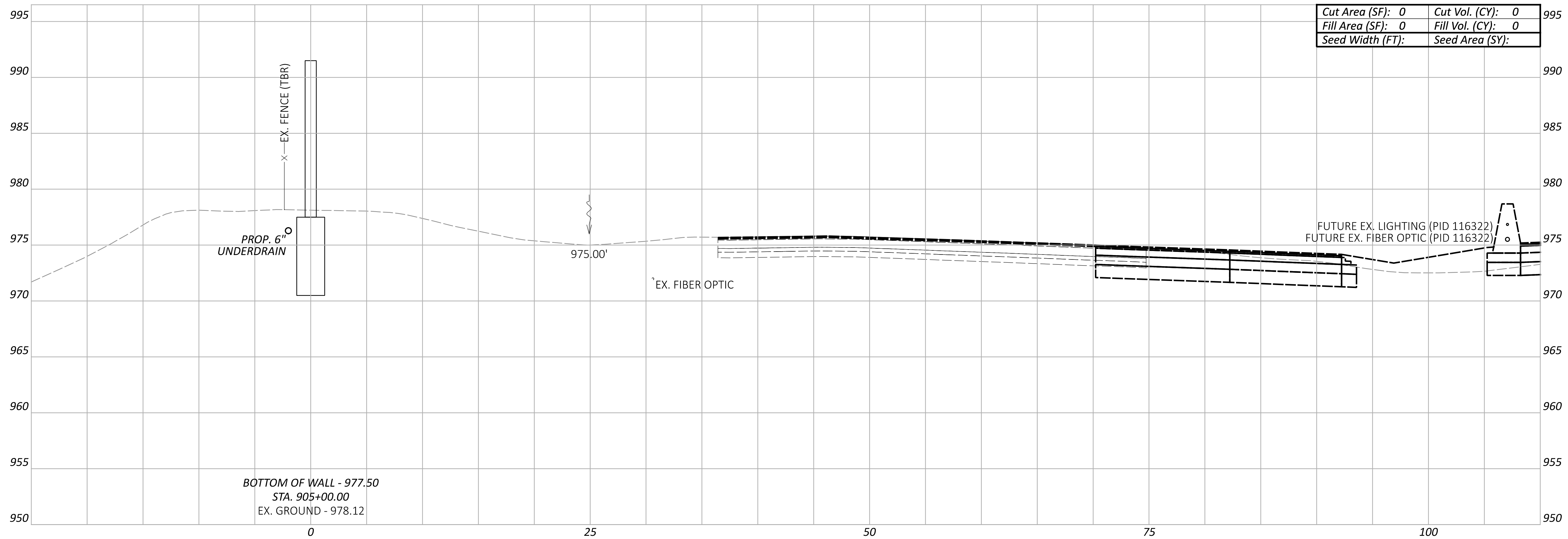
REVIEWER
JDH 03-27-24

PROJECT ID
117607

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
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FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL9 - 904+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:09:09 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS009.dgn



LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

**CROSS SECTIONS - WALL 9
 STA. 904+50.00 TO STA. 905+00.00**

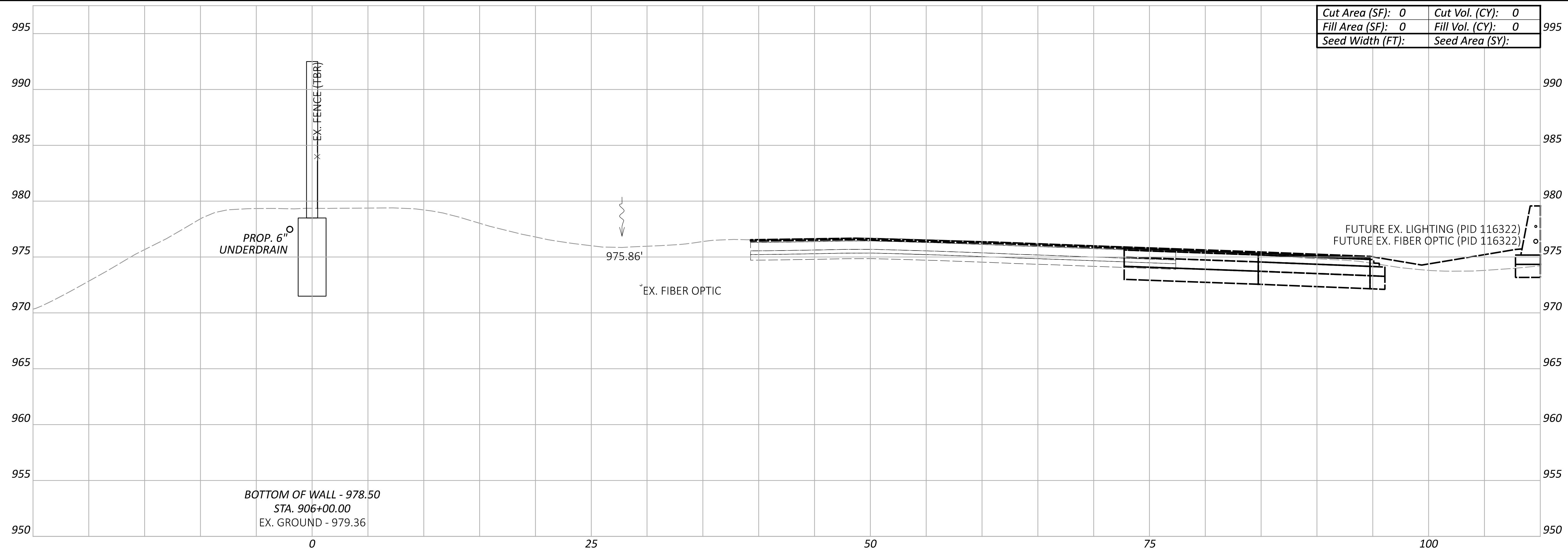
DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS SUITE 100
 COLUMBIANA, OH 43085
 (614) 819-4900
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DESIGNER
JMK
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 PROJECT ID
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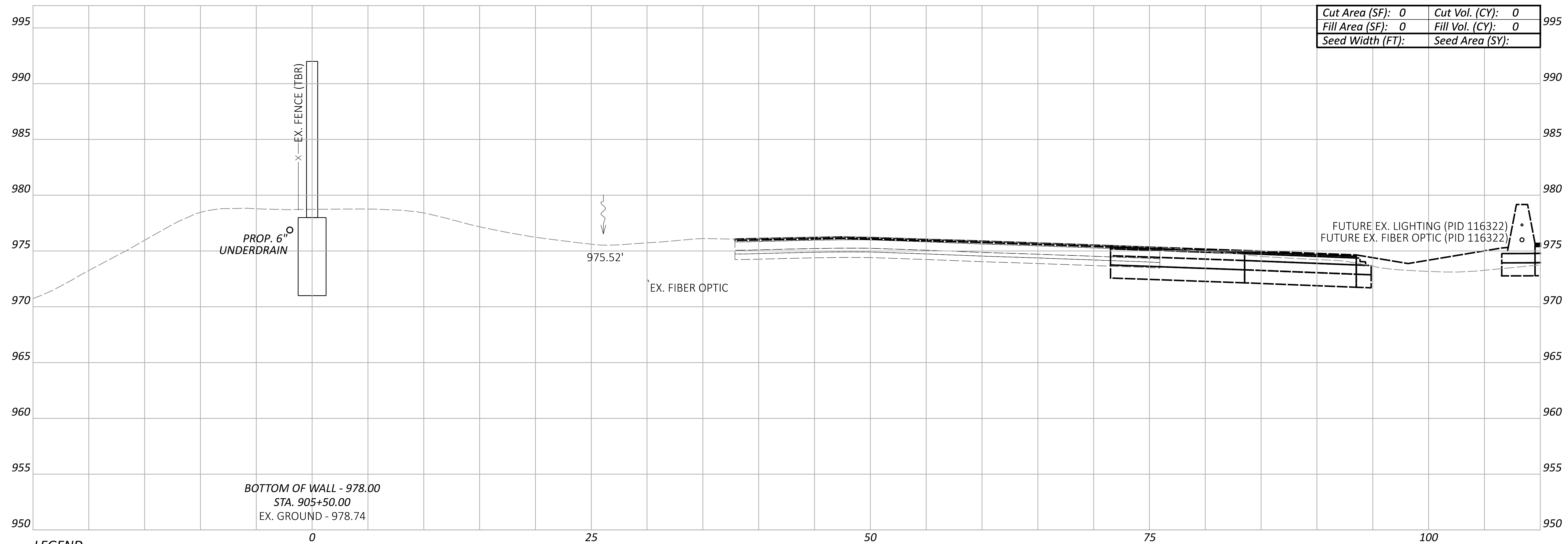
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FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL9 - 905+50.00 [Sheet] PAPER: 34x22 (in.) DATE: 2024-03-22 TIME: 8:09:41 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS009.dgn



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Seed Width (FT):		Seed Area (SY):	



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LEGEND

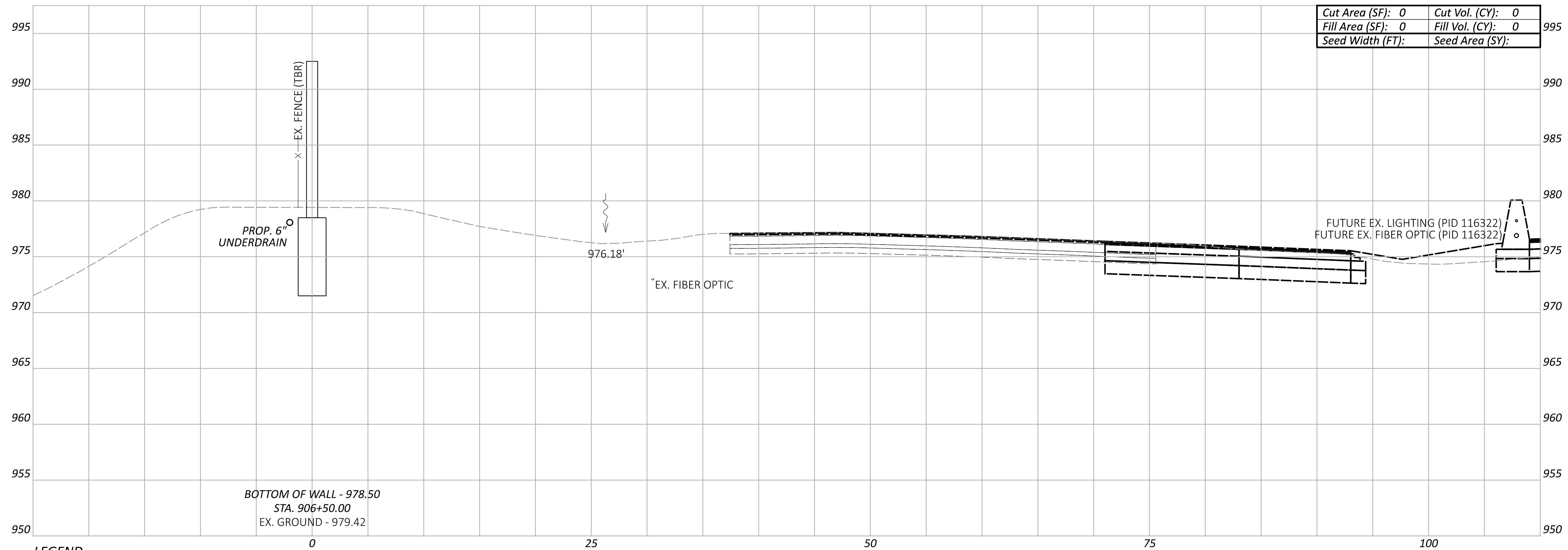
- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

**CROSS SECTIONS - WALL 9
 STA. 905+50.00 TO STA. 906+00.00**

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 PROJECT ID
117607

Sheet Totals			TOTAL	
Seeding	Cut	Fill	P.131	P.295
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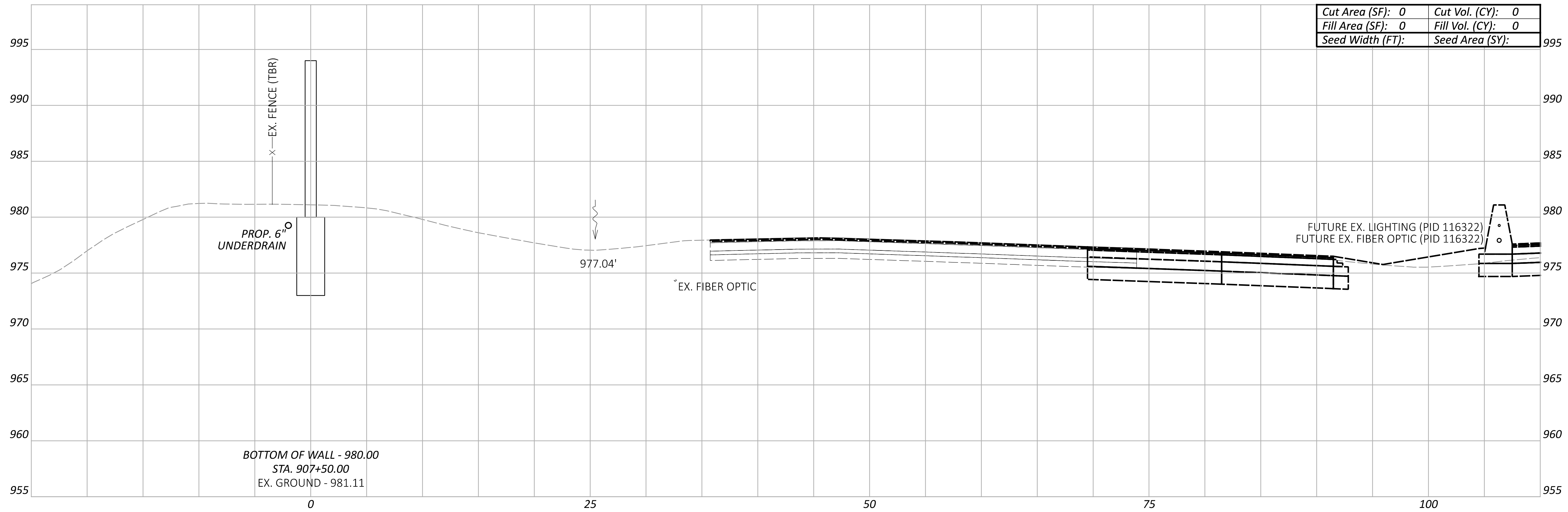
LEGEND

- EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

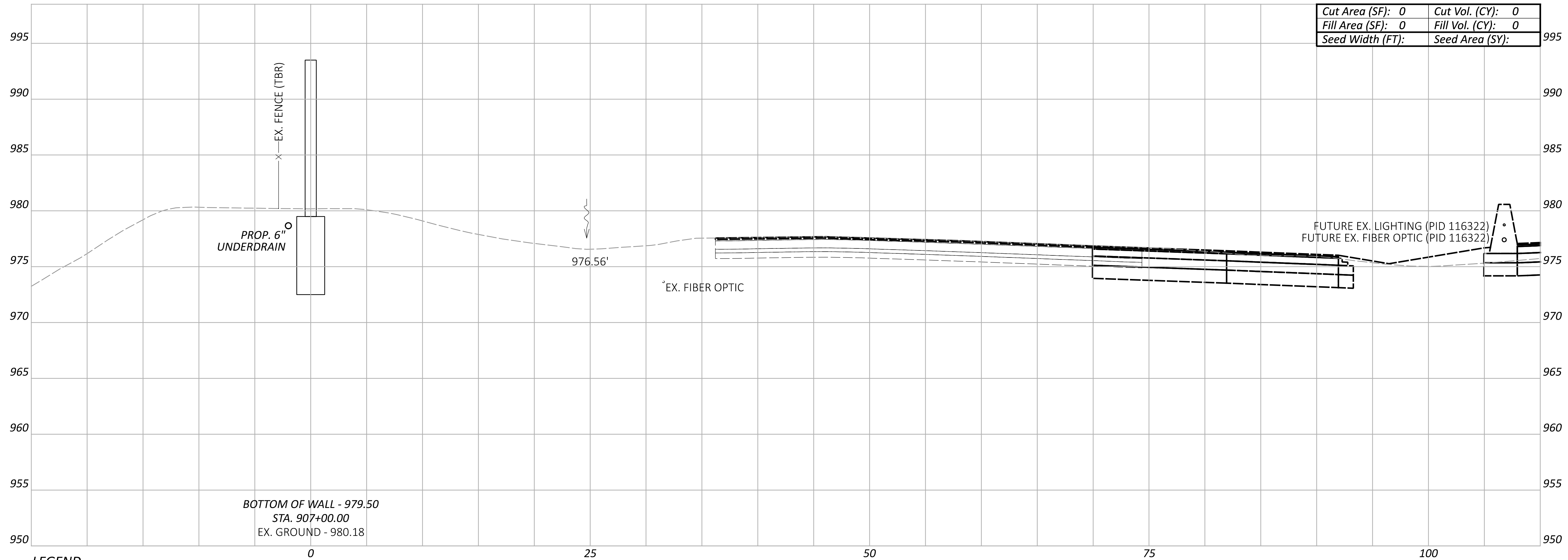
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FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL9 - 907+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:10:30 PM USER: jennifer.kelley
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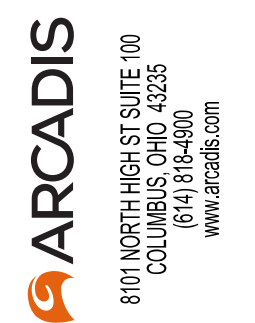
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LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

**CROSS SECTIONS - WALL 9
 STA. 907+00.00 TO STA. 907+50.00**

DESIGN AGENCY



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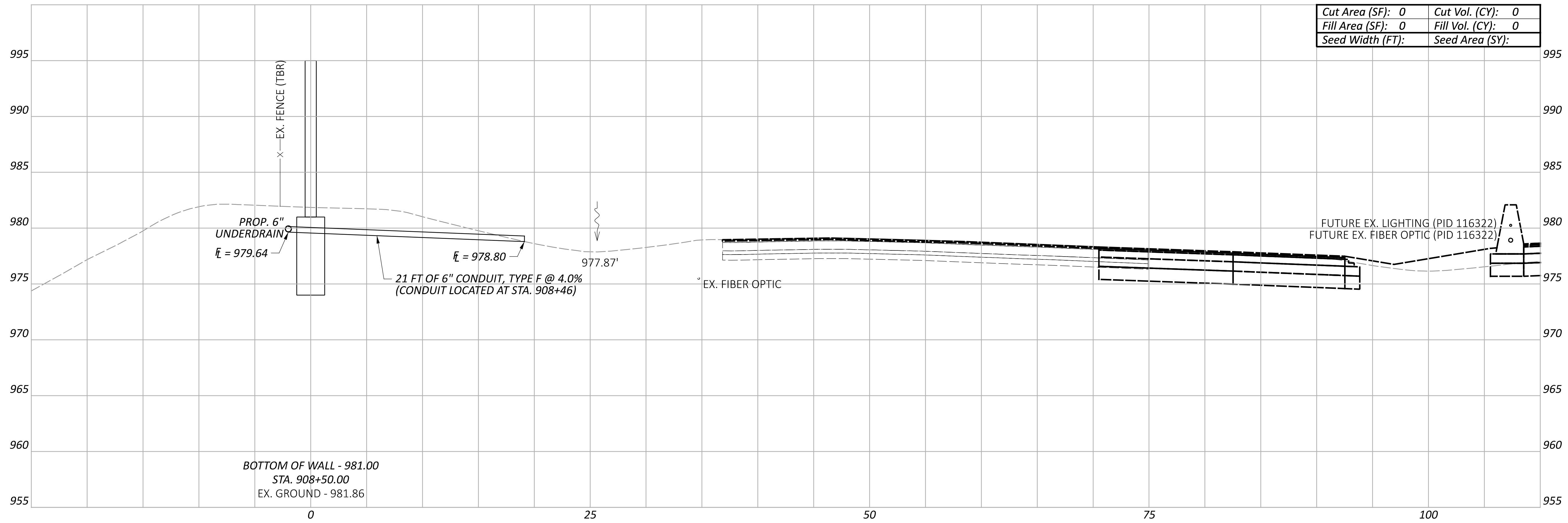
PROJECT ID

117607

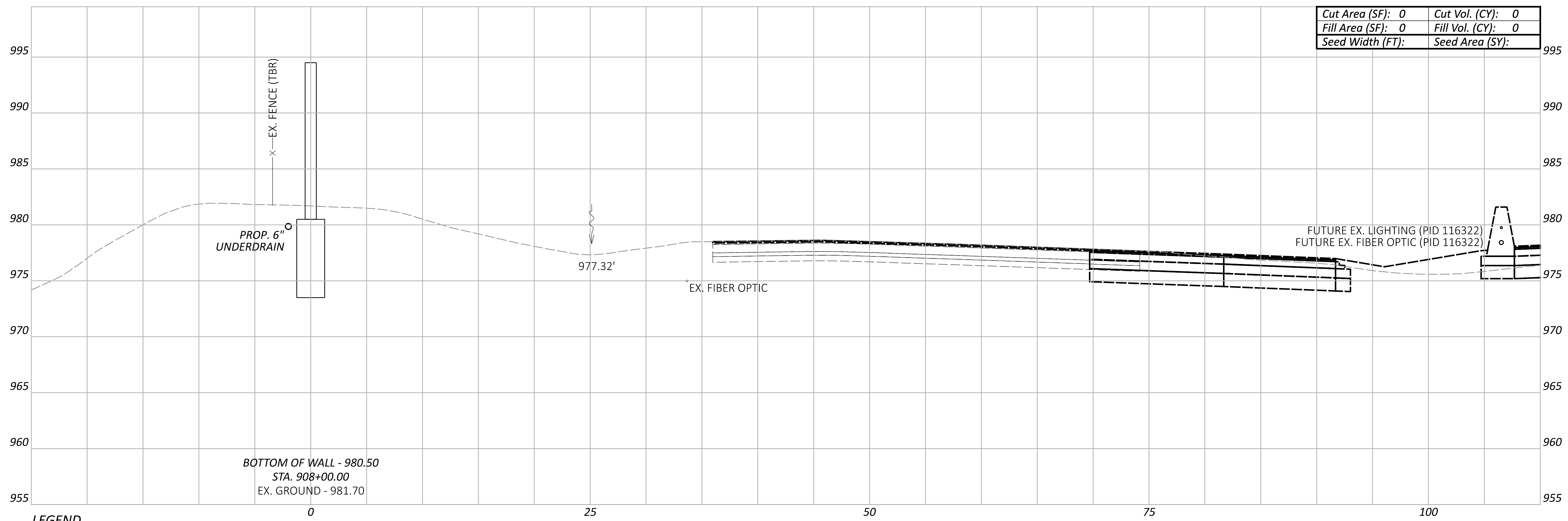
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Seeding	Cut	Fill	SHEET	TOTAL
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FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL9 - 908+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:10:58 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS009.dgn



Cut Area (SF):	0	Cut Vol. (CY):	0
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Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

**CROSS SECTIONS - WALL 9
 STA. 908+00.00 TO STA. 908+50.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY SUITE 100
 COLUMBIA, MO 65203
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DESIGNER
JMK

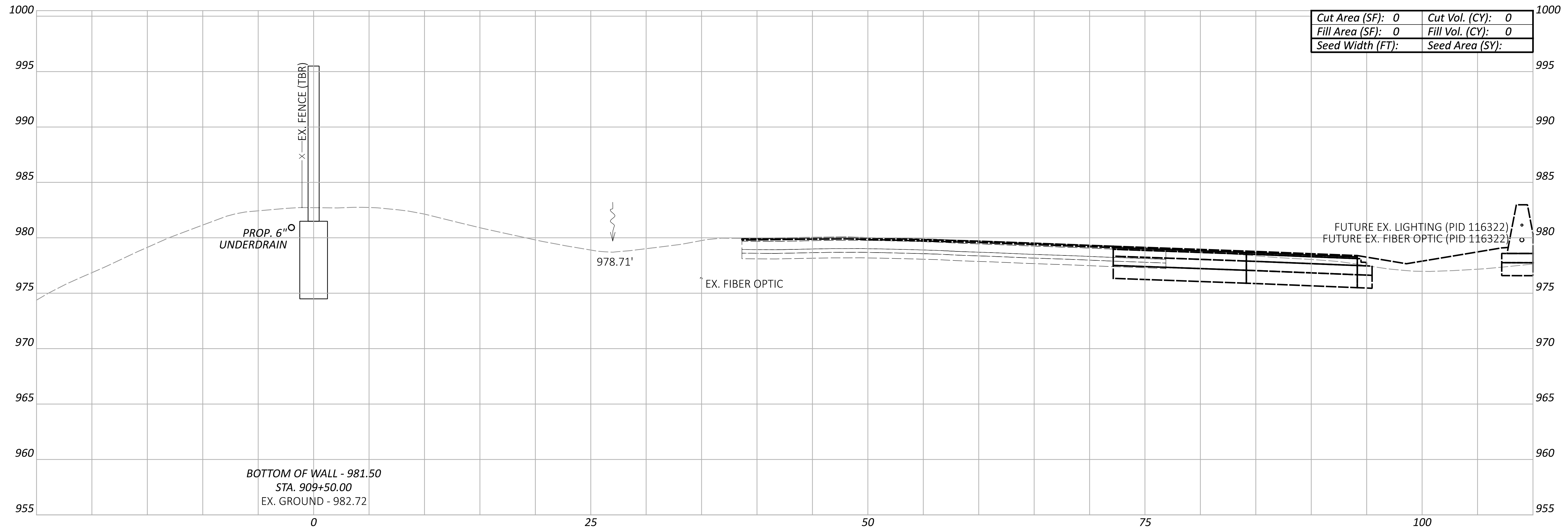
REVIEWER
JDH 03-27-24

PROJECT ID
117607

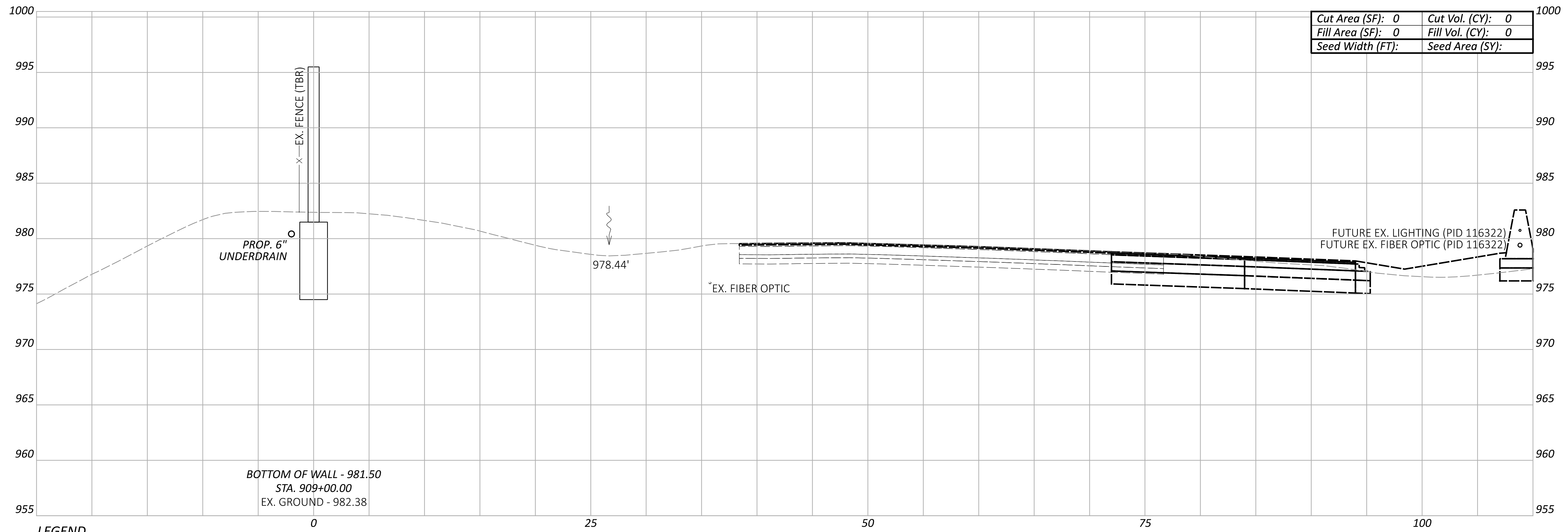
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FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL9 - 909+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:11:24 PM USER: jennifer.kelley
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Seed Width (FT):		Seed Area (SY):	

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

**CROSS SECTIONS - WALL 9
 STA. 909+00.00 TO STA. 909+50.00**

DESIGN AGENCY



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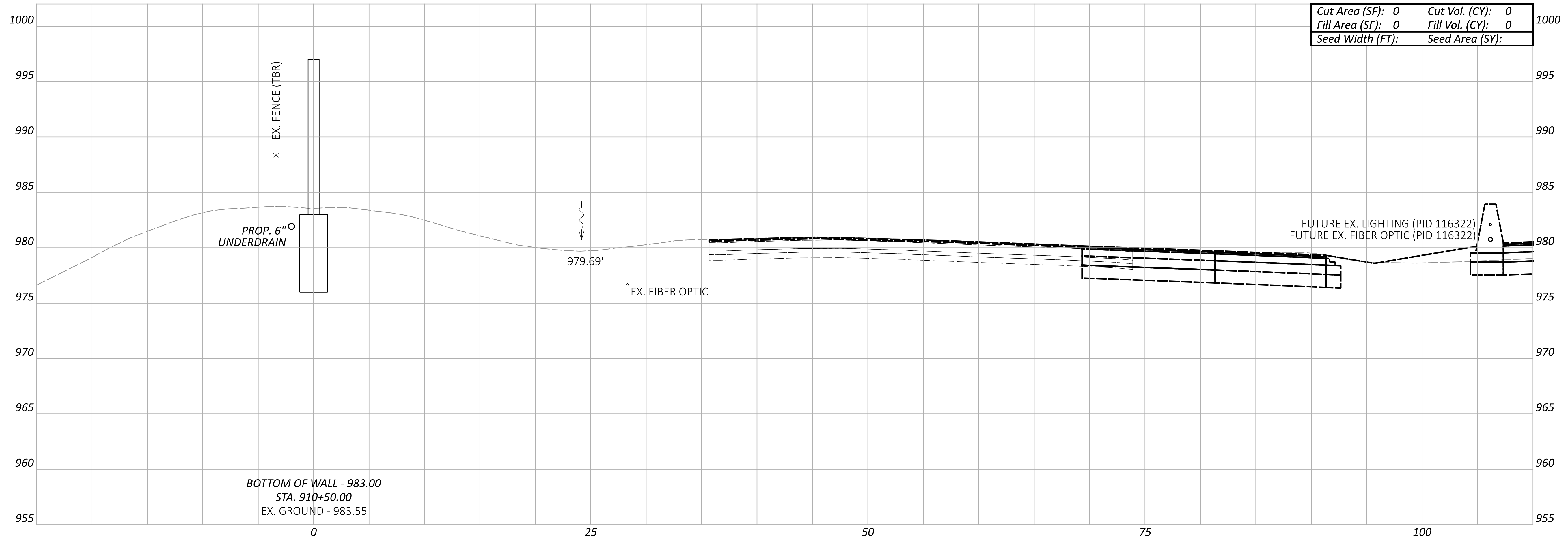
PROJECT ID

117607

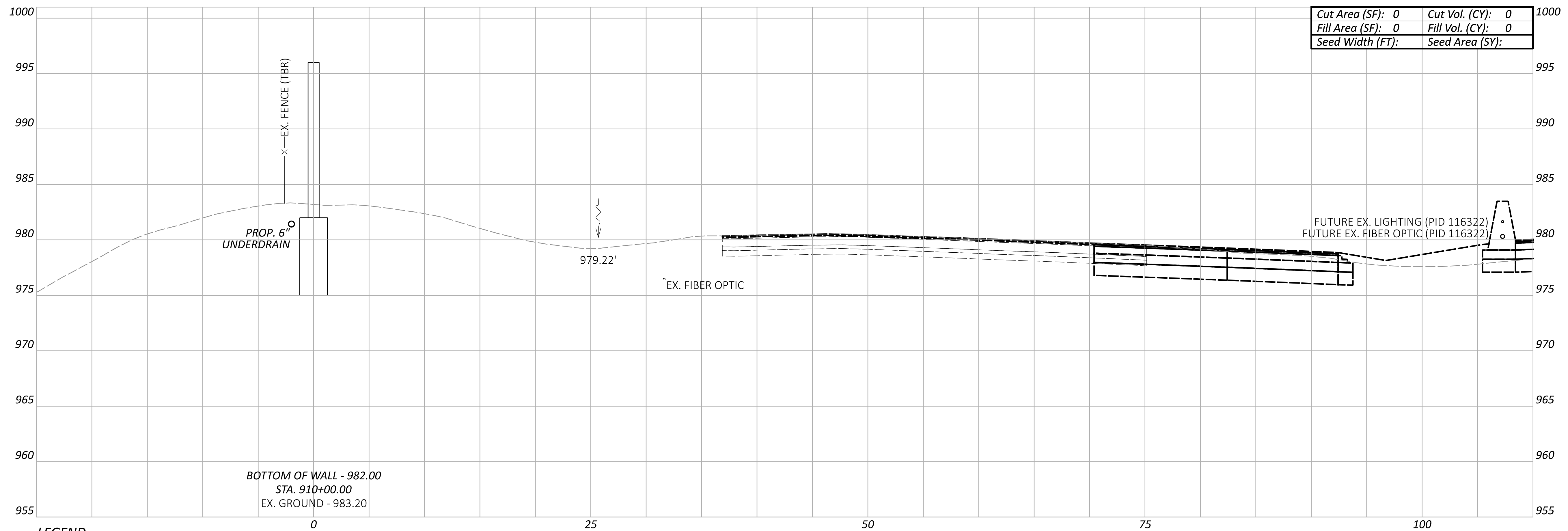
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FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL9 - 910+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:11:46 PM USER: jennifer.kelley
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Seed Width (FT):		Seed Area (SY):	



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Seed Width (FT):		Seed Area (SY):	

LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

**CROSS SECTIONS - WALL 9
 STA. 910+00.00 TO STA. 910+50.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHEST SUITE 100
 COLUMBIA, MO 65203
 (646) 810-4900
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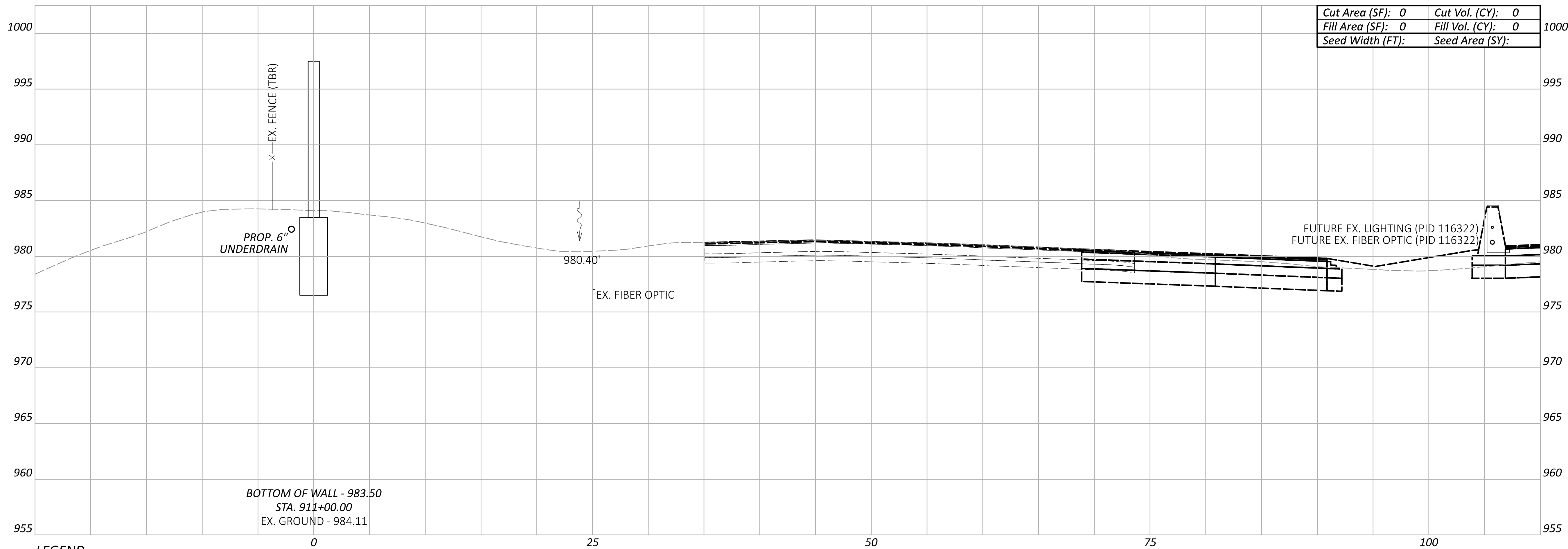
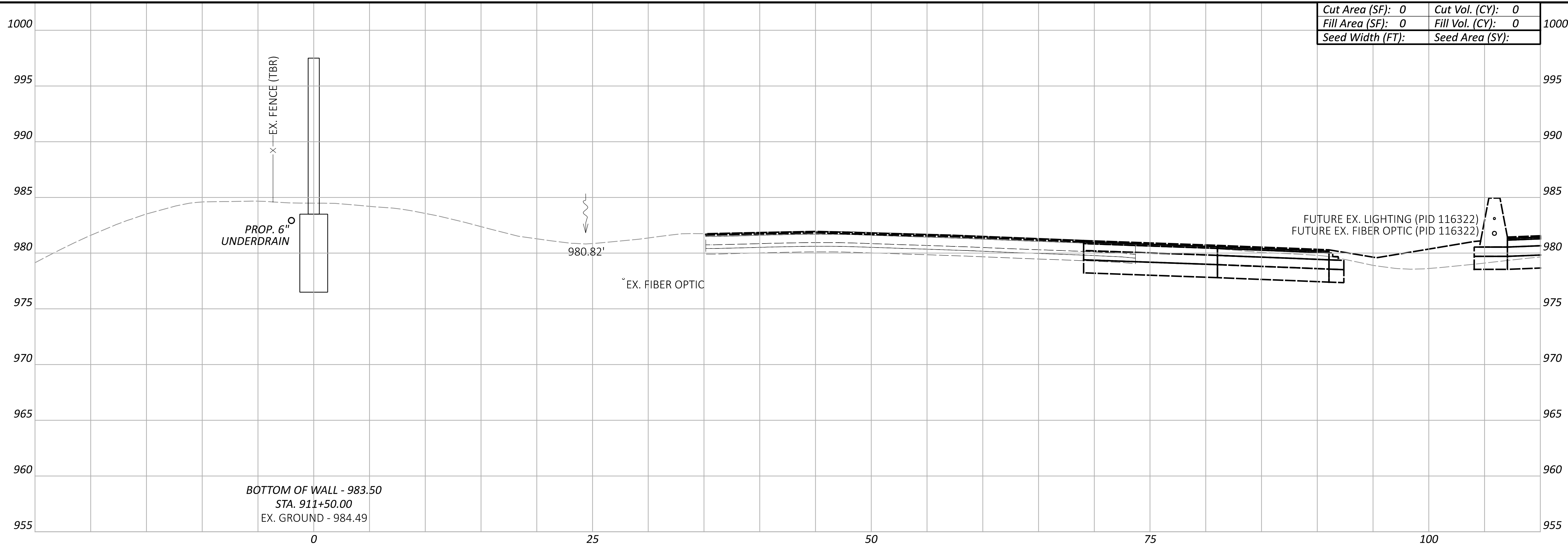
DESIGNER
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 REVIEWER
JDH 03-27-24

PROJECT ID
117607

Sheet Totals			TOTAL	
Seeding	Cut	Fill	P.136	P.295
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FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL9 - 911+00.00 [Sheet] PAPER/SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:12:07 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS009.dgn



LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

**CROSS SECTIONS - WALL 9
 STA. 911+00.00 TO STA. 911+50.00**

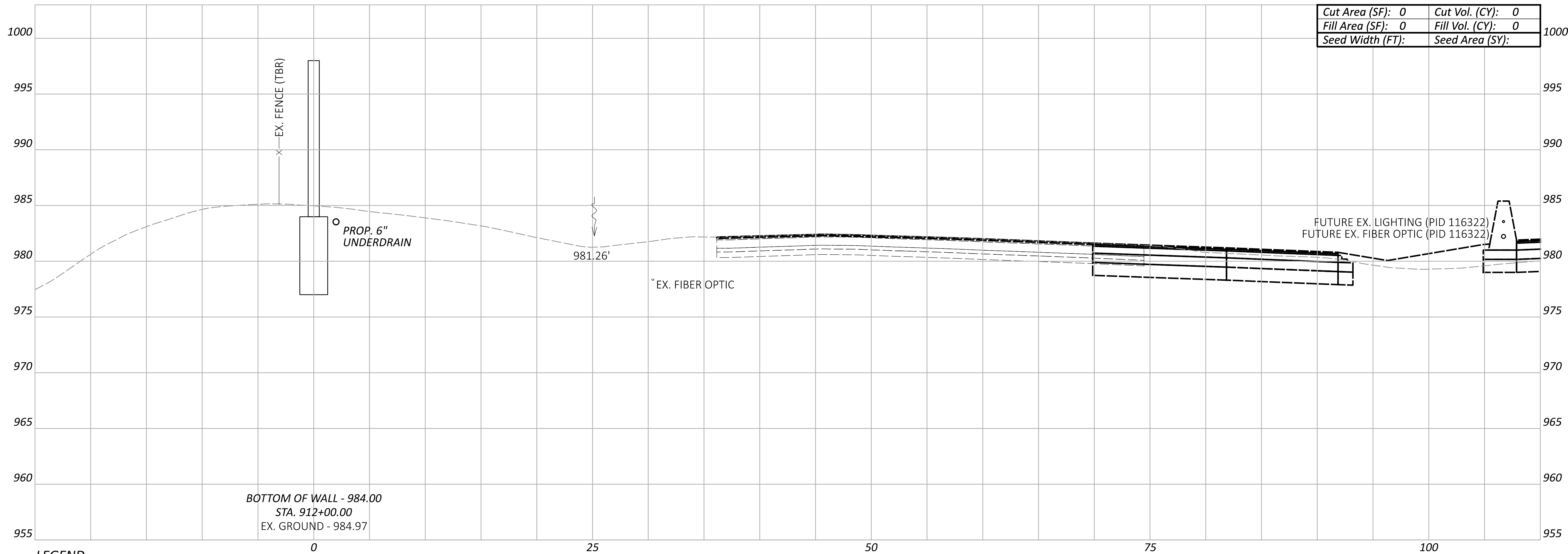
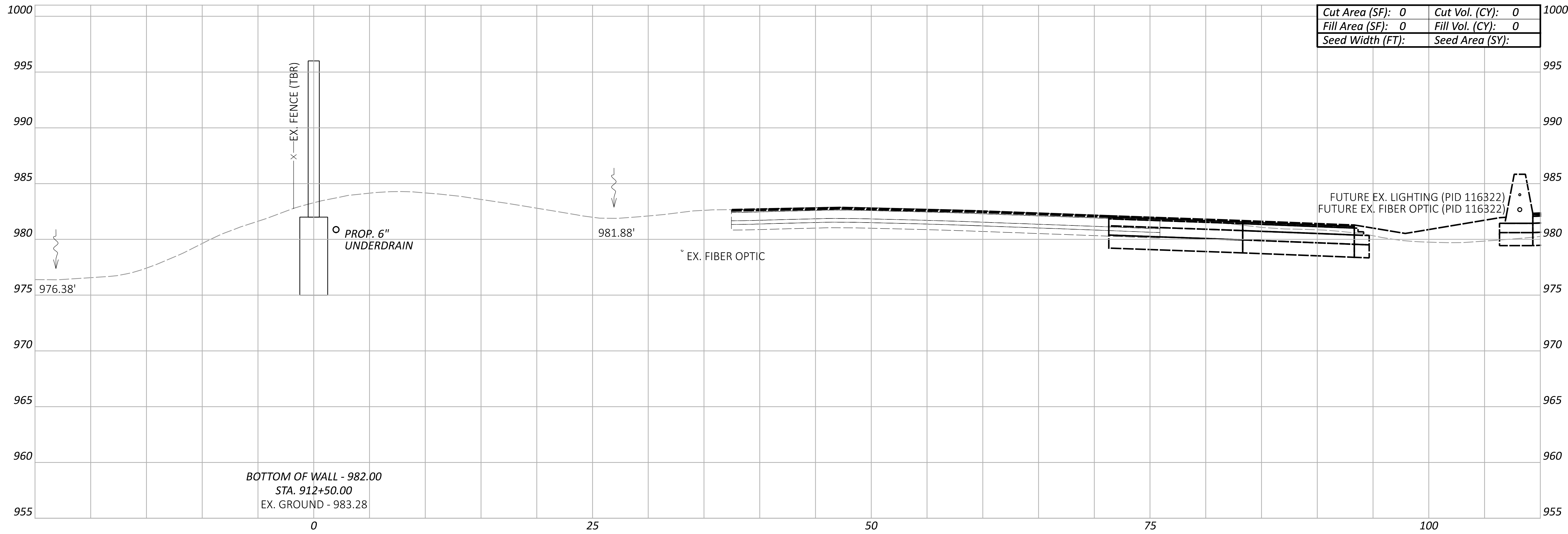
DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS SUITE 100
 COLUMBIA, MO 65203
 (646) 441-4900
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DESIGNER
JMK
 REVIEWER
JDH 03-27-24
 PROJECT ID
117607

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
0	0	0	P.137 P.295

FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL9 - 912+00.00 [Sheet] PAPER/SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:12:28 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS009.dgn



LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

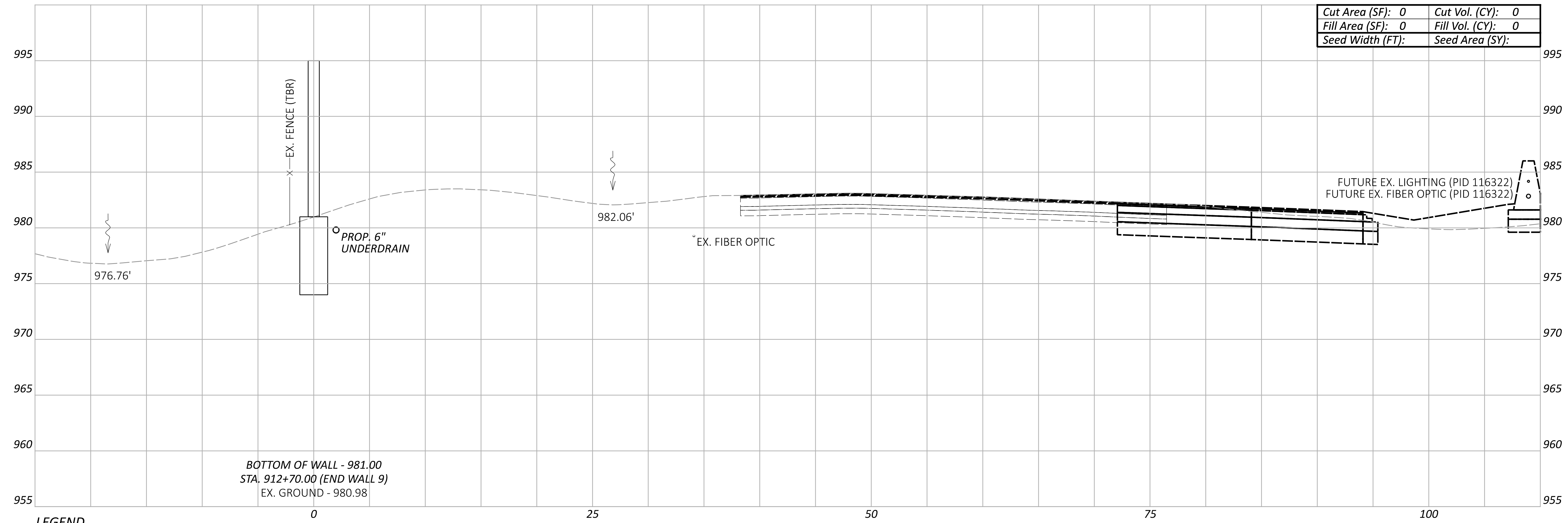
**CROSS SECTIONS - WALL 9
 STA. 912+00.00 TO STA. 912+50.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS AVE SUITE 100
 COLUMBIANA, OH 43085
 614.894.9800
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JDH 03-27-24

PROJECT ID
117607

Sheet Totals			TOTAL	
Seeding	Cut	Fill	P.138	P.295
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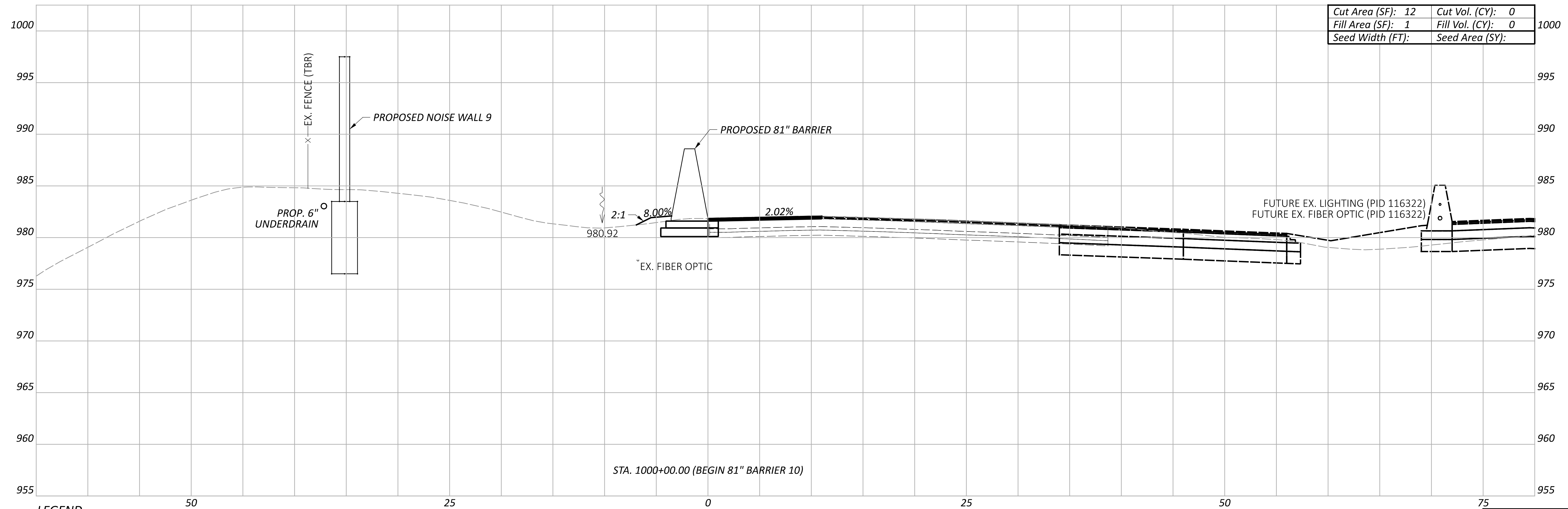


LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

BOTTOM OF WALL - 981.00
 STA. 912+70.00 (END WALL 9)
 EX. GROUND - 980.98

Sheet Totals			TOTAL	
Seeding	Cut	Fill	P.139	P.295
0	0	0		



Cut Area (SF):	12	Cut Vol. (CY):	0
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Seed Width (FT):		Seed Area (SY):	

LEGEND

---	EXISTING SR-161 PRIOR TO PID 116322
---	FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

CROSS SECTIONS - 81" BARRIER 10
 STA. 1000+00.00

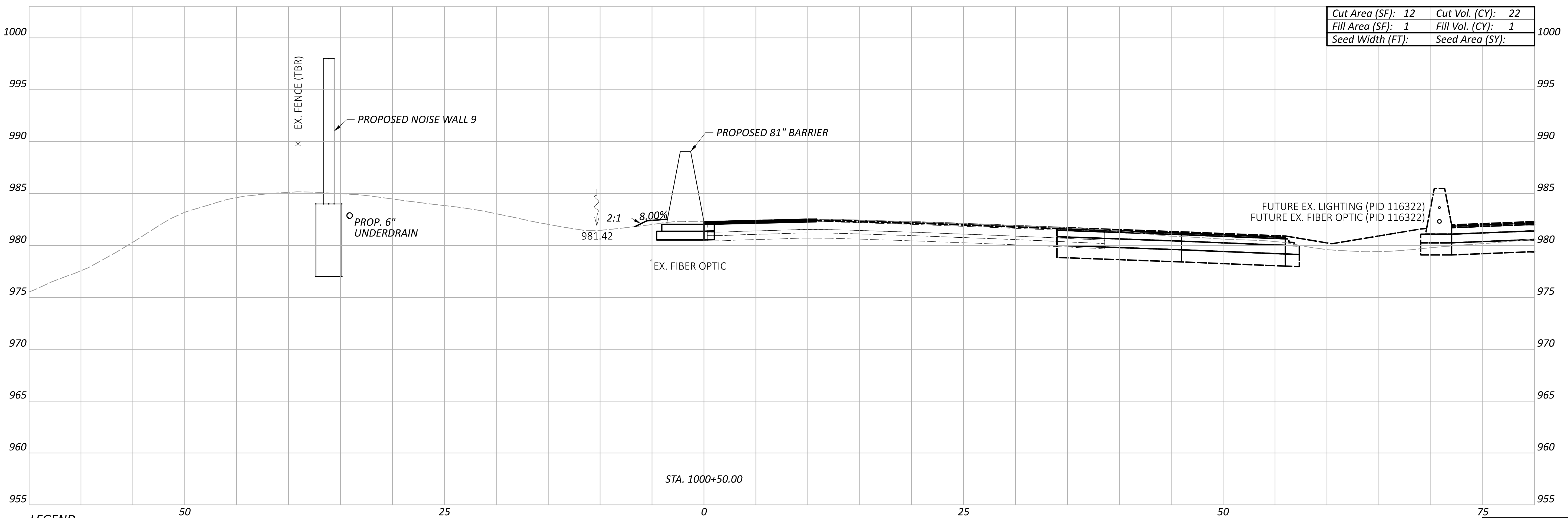
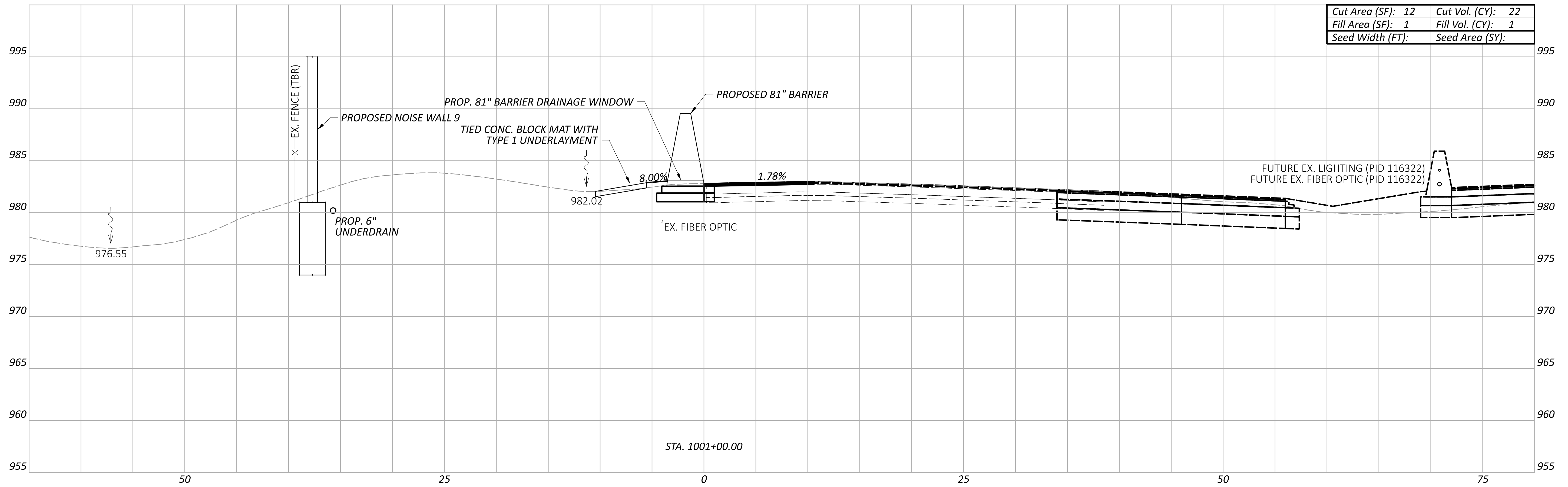
DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS AVE. SUITE 100
 COLUMBIA, MO 65203
 PH: (646) 810-4900
 www.arcadis.com

DESIGNER
JMK
 REVIEWER
 JDH 03-27-24

PROJECT ID		117607	
Sheet Totals	Seeding	Cut	Fill
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SHEET	TOTAL		
P.140	P.295		

FRA-161-15.80 NOISE WALLS

MODEL: BLP_BARRIER11 - 1000+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:13:43 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS010.dgn



LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

**CROSS SECTIONS - 81" BARRIER 10
 STA. 1000+50.00 TO STA. 1001+00.00**

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

JDH 03-27-24

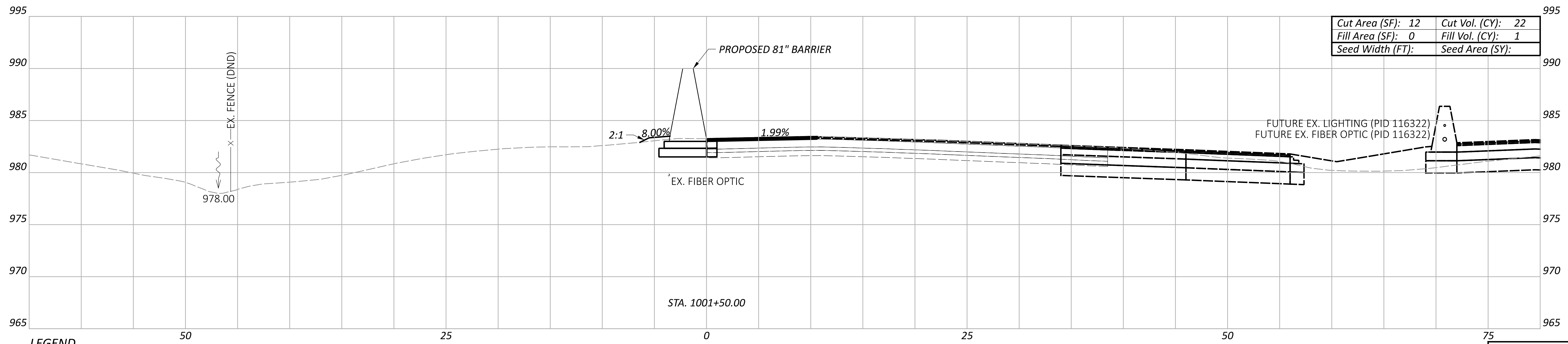
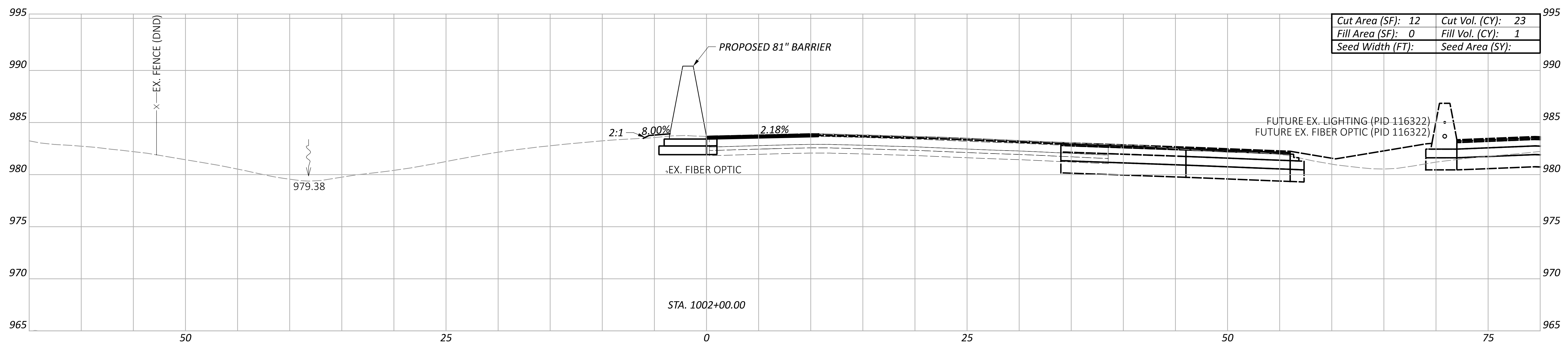
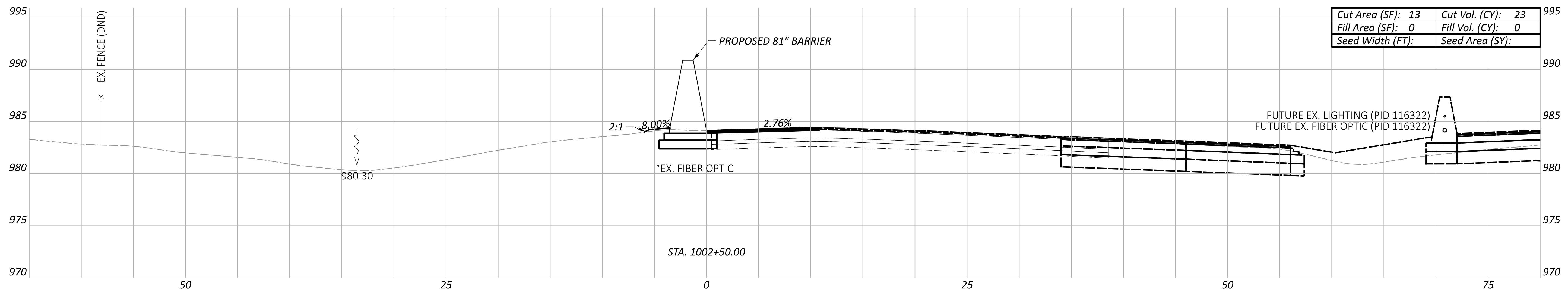
PROJECT ID

117607

Sheet Totals			TOTAL
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FRA-161-15.80 NOISE WALLS

MODEL: BLP_BARRIER11 - 1001+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:14:08 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS010.dgn



LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
	68	2	P.142	P.295

**CROSS SECTIONS - 81" BARRIER 10
 STA. 1001+50.00 TO STA. 1002+50.00**

DESIGN AGENCY
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 (614) 810-4900
 www.arcadis.com

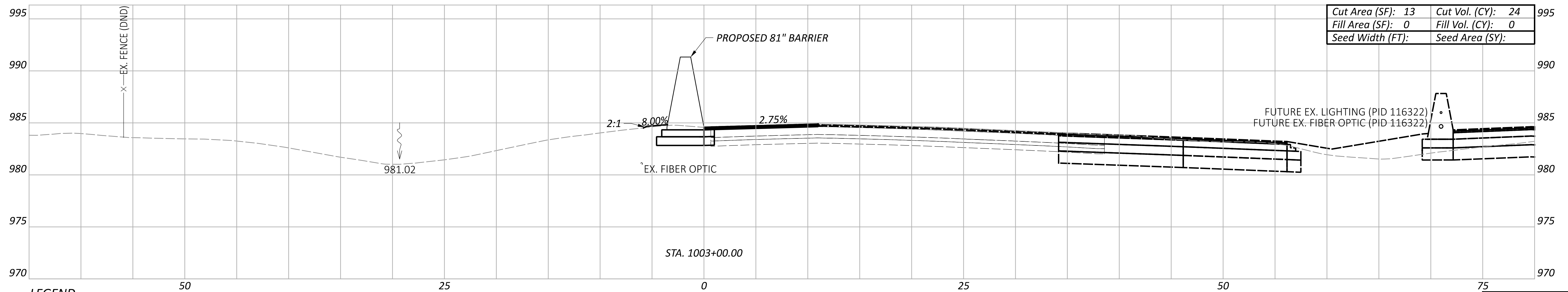
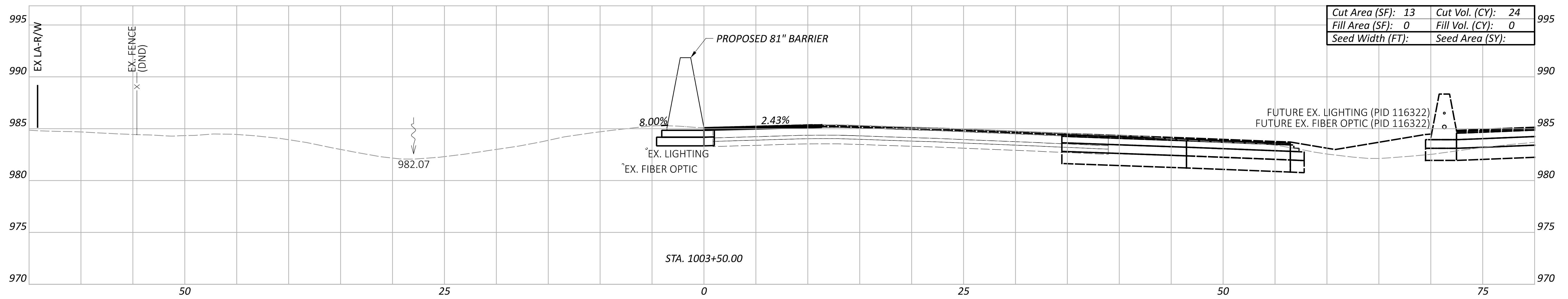
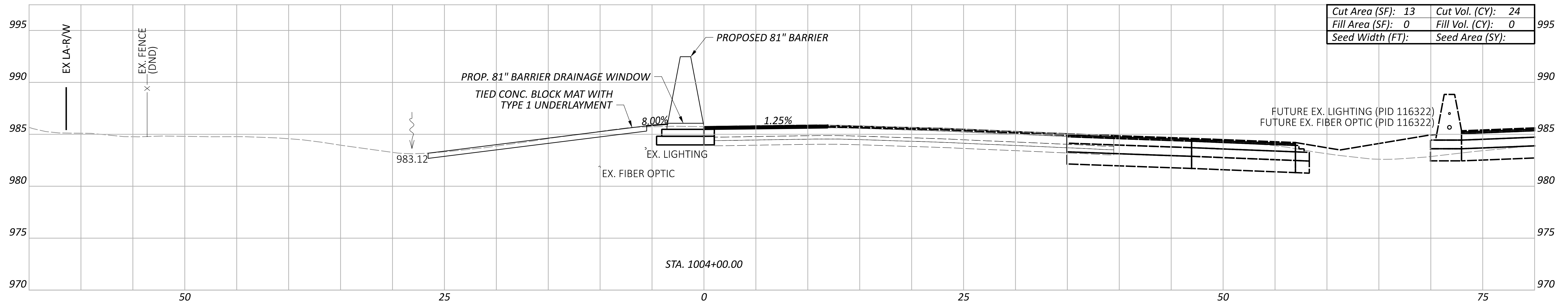
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

FRA-161-15.80 NOISE WALLS

MODEL: BLP_BARRIER11 - 1003+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:14:45 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS010.dgn



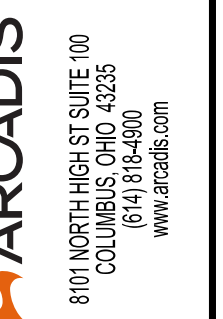
LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
	72	0	P.143	P.295

**CROSS SECTIONS - 81" BARRIER 10
 STA. 1003+00.00 TO STA. 1004+00.00**

DESIGN AGENCY



DESIGNER

JMK

REVIEWER

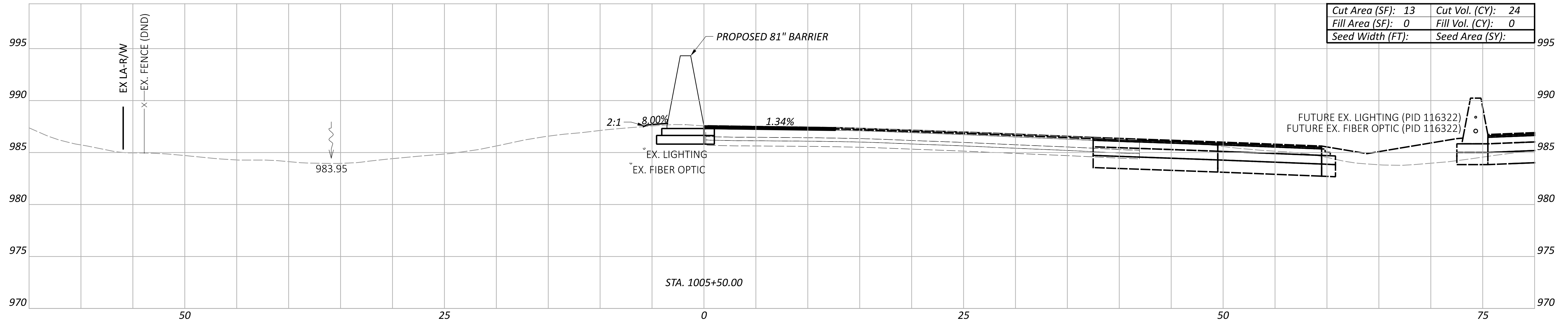
JDH 03-27-24

PROJECT ID

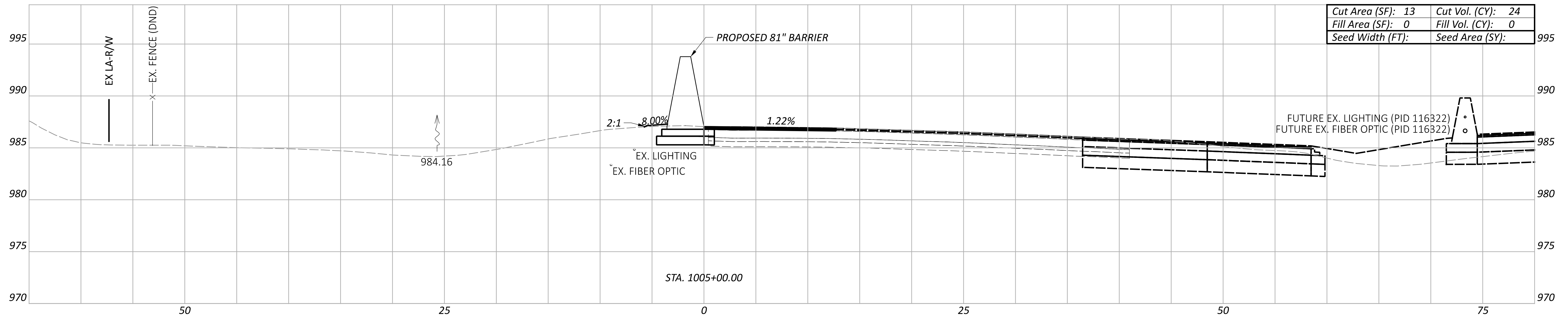
117607

FRA-161-15.80 NOISE WALLS

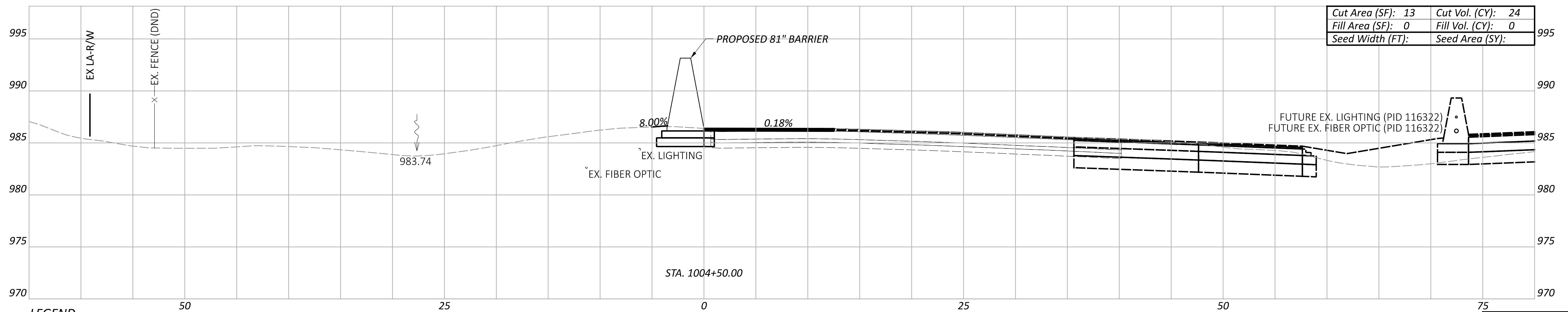
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Cut Area (SF):	13	Cut Vol. (CY):	24
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	13	Cut Vol. (CY):	24
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	13	Cut Vol. (CY):	24
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
	72	0	P.144	P.295

**CROSS SECTIONS - 81" BARRIER 10
 STA. 1004+50.00 TO STA. 1005+50.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY 240 SUITE 100
 COLUMBIANA, OHIO 43085
 (614) 810-4900
 www.arcadis.com

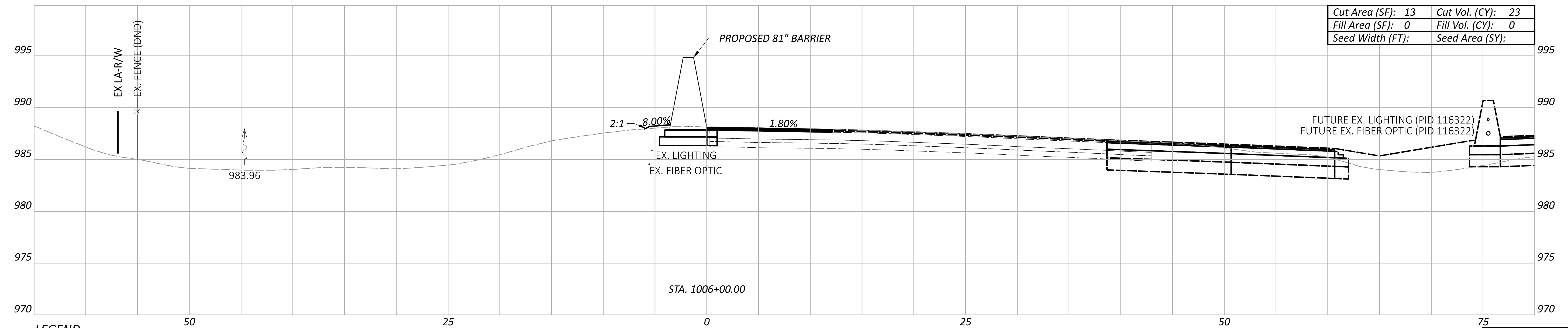
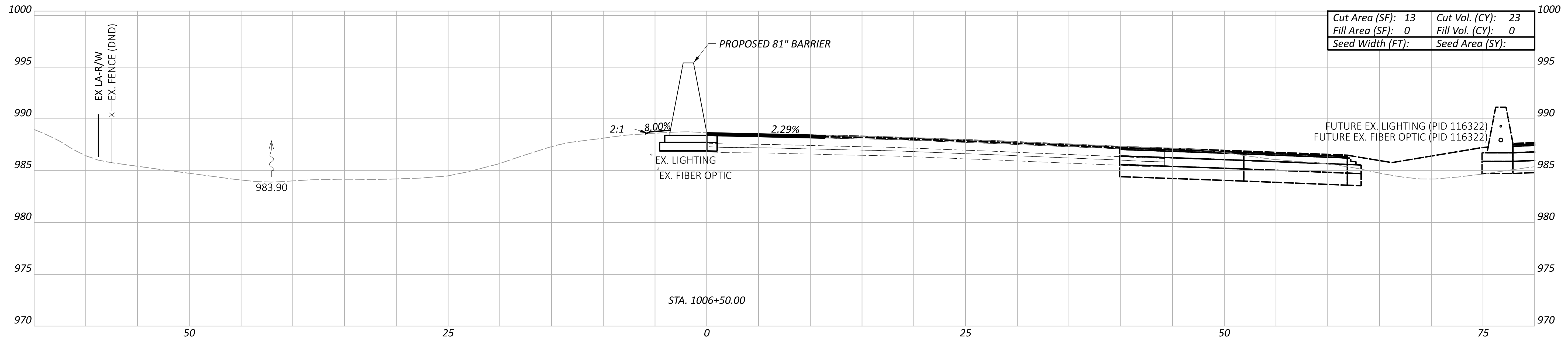
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

FRA-161-15.80 NOISE WALLS

MODEL: BLP_BARRIER11 - 1006+00.00 [Sheet] PAPER/SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:15:53 PM USER: jennifer.kelley
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LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

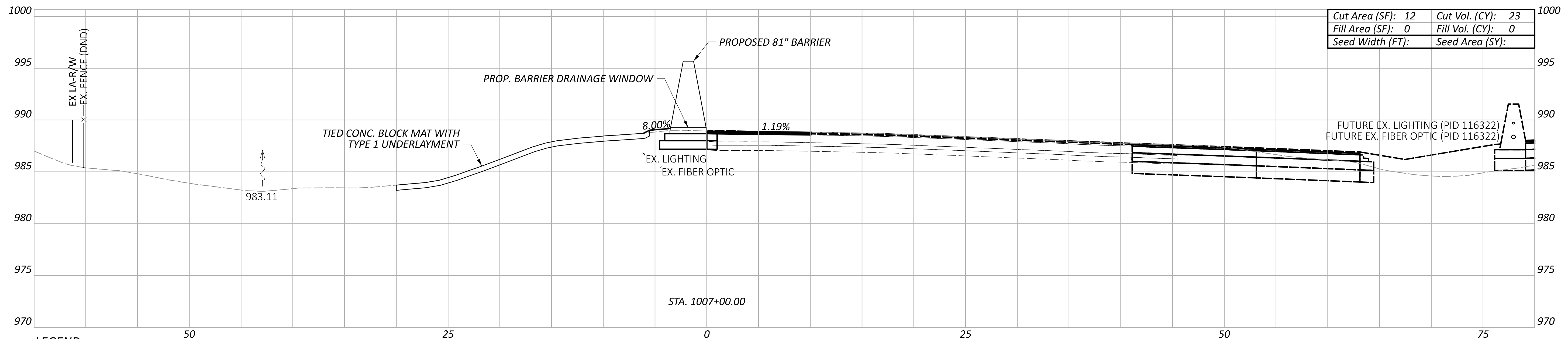
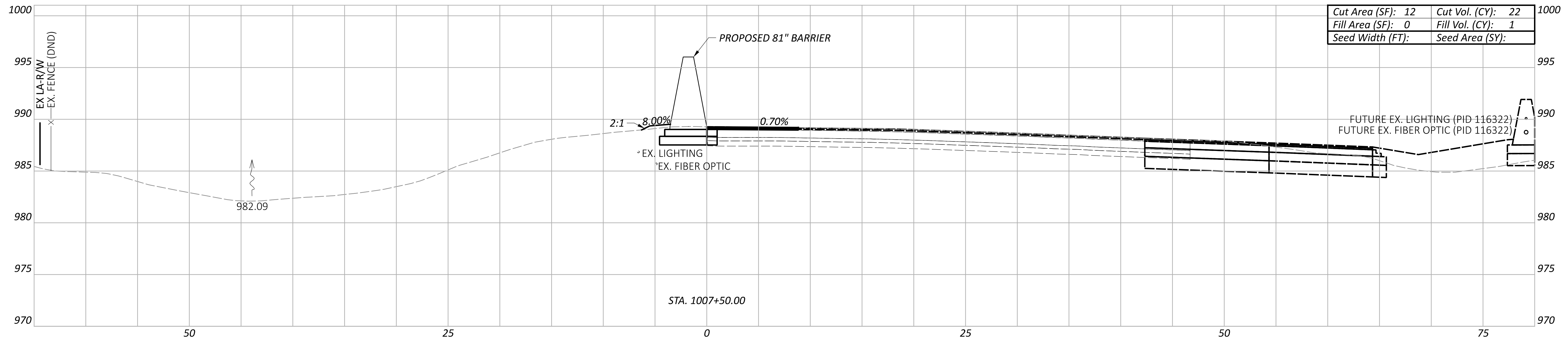
Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
46	0	0	P.145	P.295

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY SUITE 100
 COLUMBIANA, OH 43085
 (614) 891-4900
 www.arcadis.com

DESIGNER
JMK
 REVIEWER
 JDH 03-27-24

PROJECT ID
117607

**CROSS SECTIONS - 81" BARRIER 10
 STA. 1006+00.00 TO STA. 1006+50.00**



LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
45	1		P.146 P.295

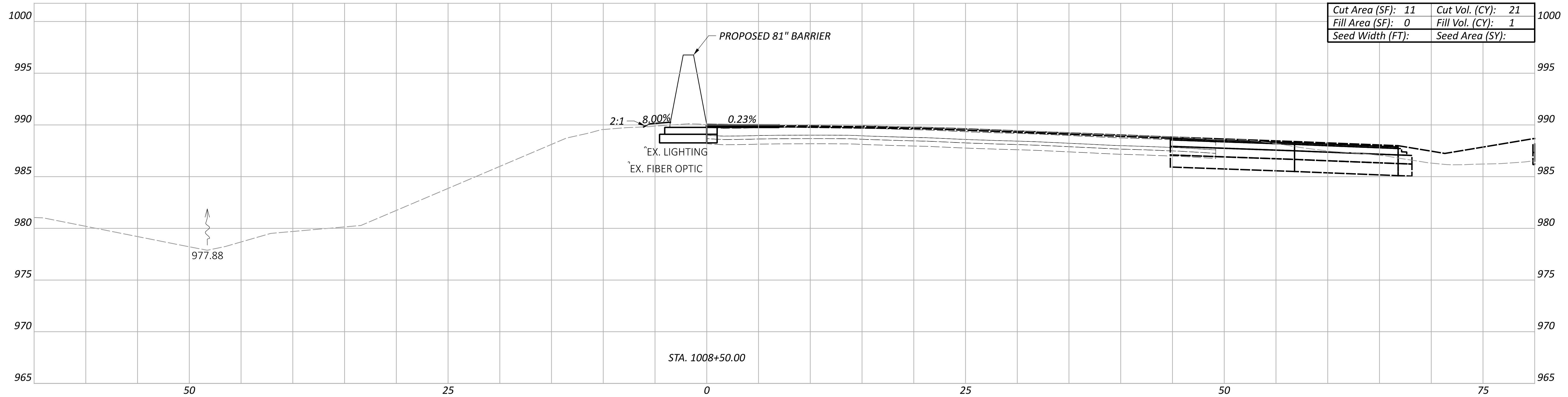
**CROSS SECTIONS - 81" BARRIER 10
 STA. 1007+00.00 TO STA. 1007+50.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS AVE SUITE 100
 COLUMBIANA, OH 43085
 (614) 810-4900
 www.arcadis.com

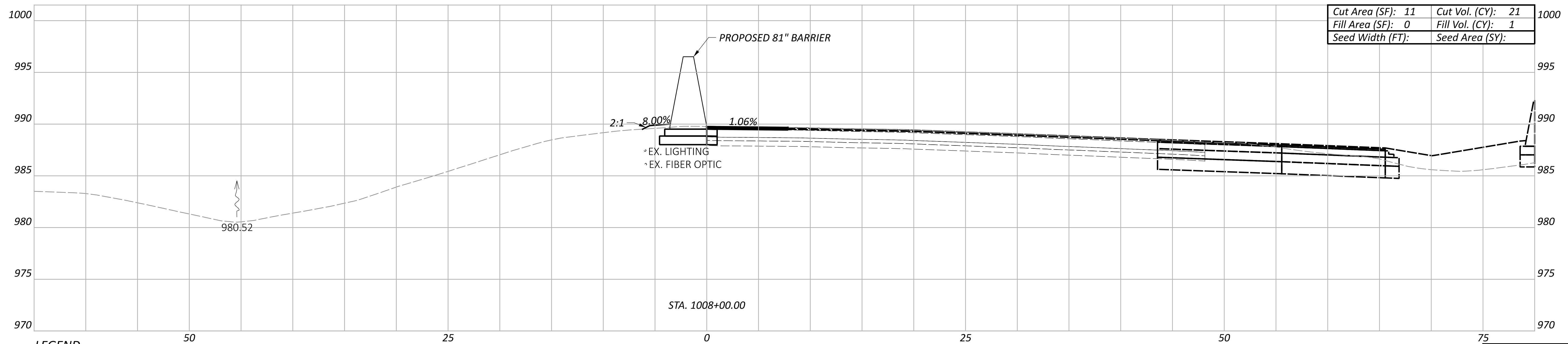
DESIGNER
JMK

REVIEWER
 JDH 03-27-24

PROJECT ID
 117607



STA. 1008+50.00



STA. 1008+00.00

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

**CROSS SECTIONS - 81" BARRIER 10
 STA. 1008+00.00 TO STA. 1008+50.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS AVE SUITE 100
 COLUMBIANA, OH 43085
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DESIGNER
JMK

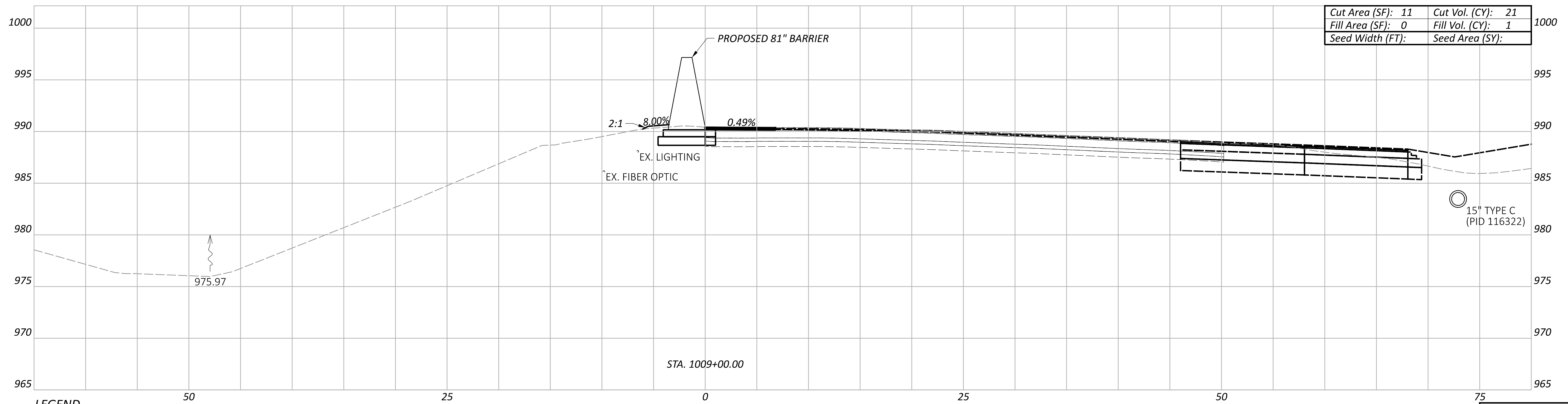
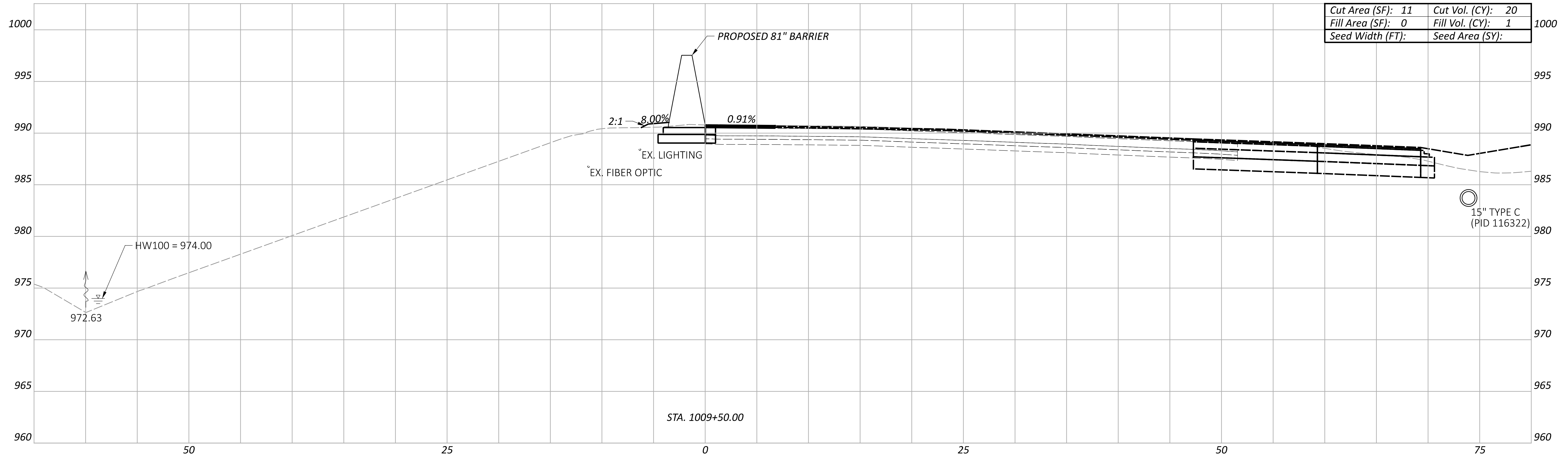
REVIEWER
 JDH 03-27-24

PROJECT ID
117607

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
	42	2	P.147	P.295

FRA-161-15.80 NOISE WALLS

MODEL: BLP_BARRIER11 - 1009+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:16:55 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS010.dgn



LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
41	2	P.148	P.295

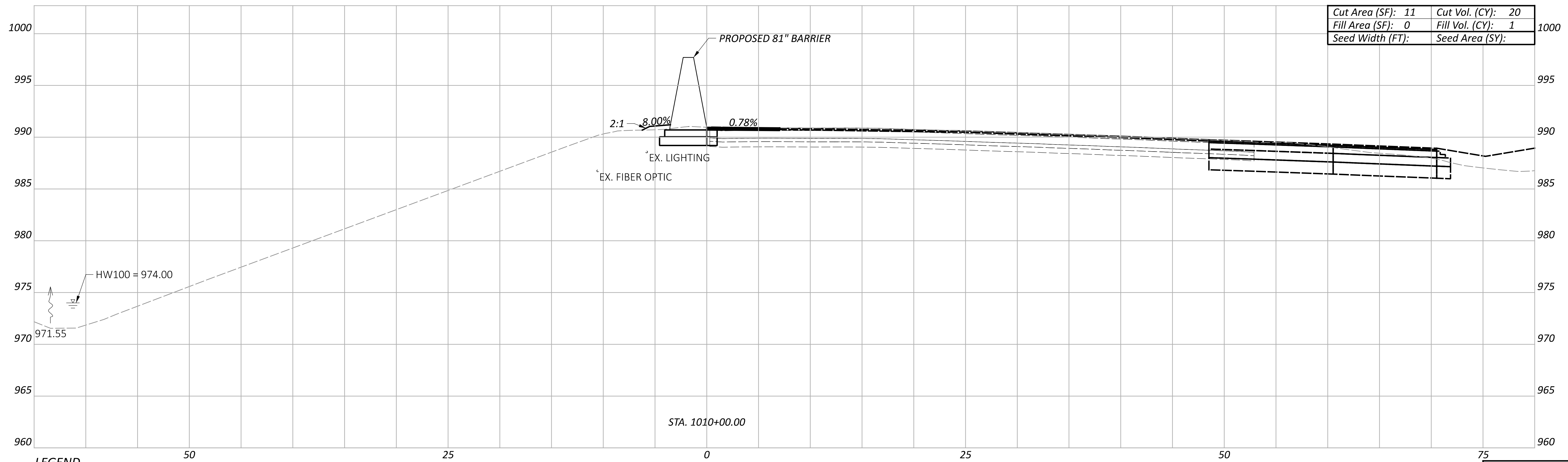
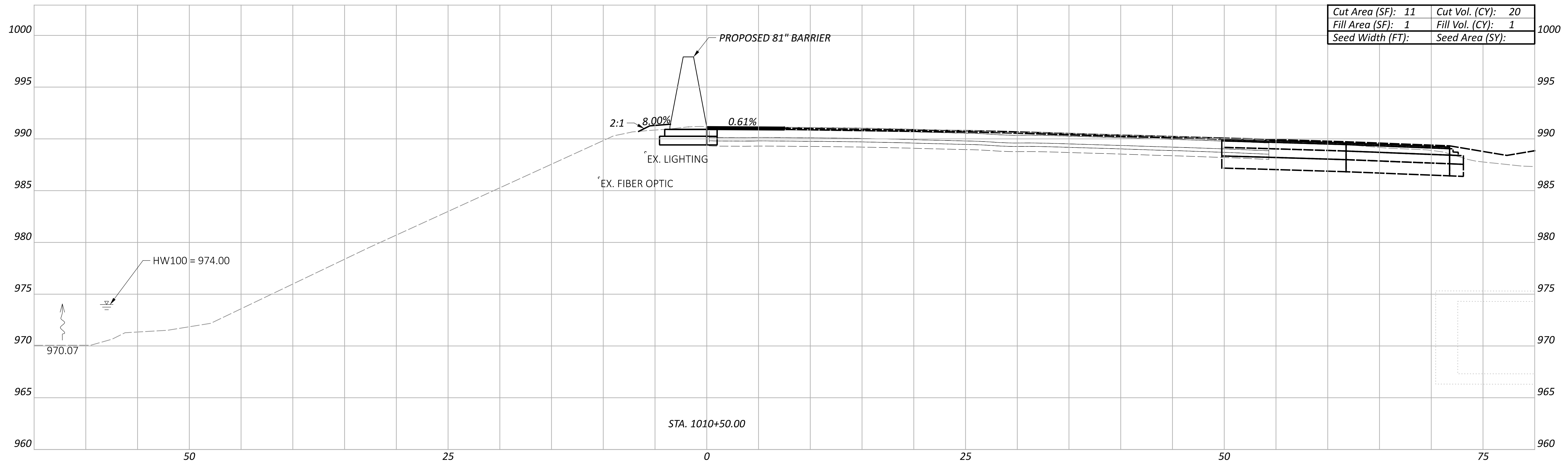
**CROSS SECTIONS - 81" BARRIER 10
 STA. 1009+00.00 TO STA. 1009+50.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS SUITE 100
 COLUMBIANA, OH 43085
 (614) 891-4900
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DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

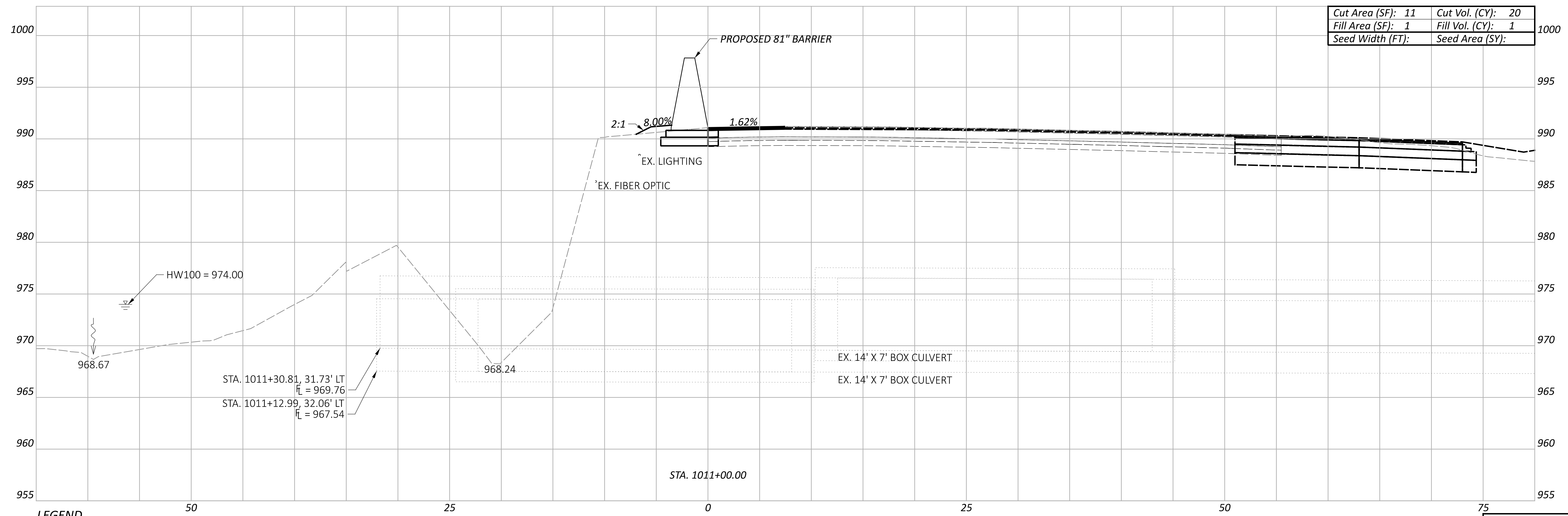


LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

**CROSS SECTIONS - 81" BARRIER 10
 STA. 1010+00.00 TO STA. 1010+50.00**

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
40	2	P.149	P.295



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Fill Area (SF):	1	Fill Vol. (CY):	1
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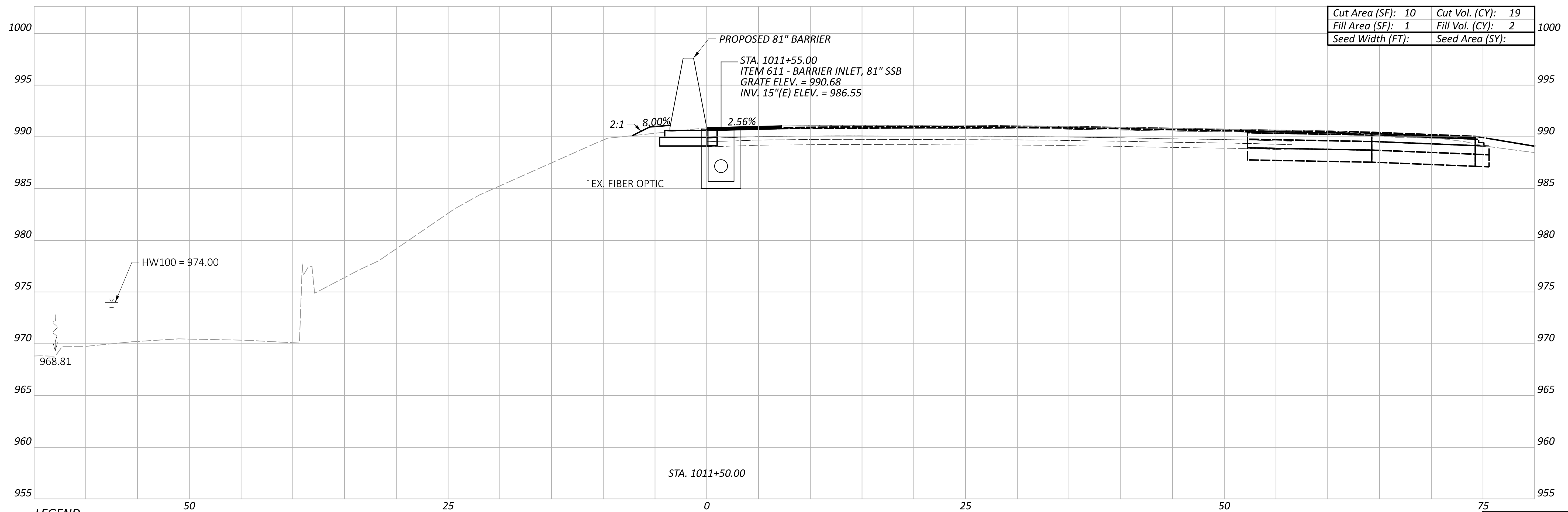
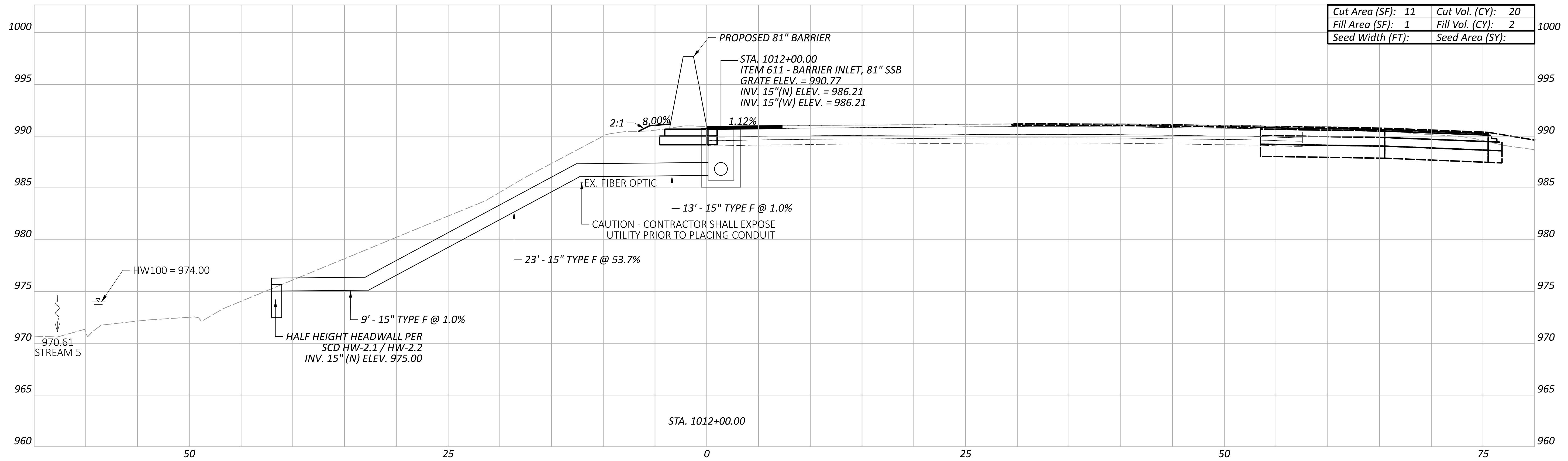
LEGEND

- EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
20	1		P.150 P.295

FRA-161-15.80 NOISE WALLS

MODEL: BLP_BARRIER11 - 1011+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-27 TIME: 12:58:43 AM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS010.dgn



LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
	39	4	P.151	P.295

**CROSS SECTIONS - 81" BARRIER 10
 STA. 1011+50.00 TO STA. 1012+00.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY 200 SUITE 100
 COLUMBIA, MD 21046
 (410) 814-4900
 www.arcadis.com

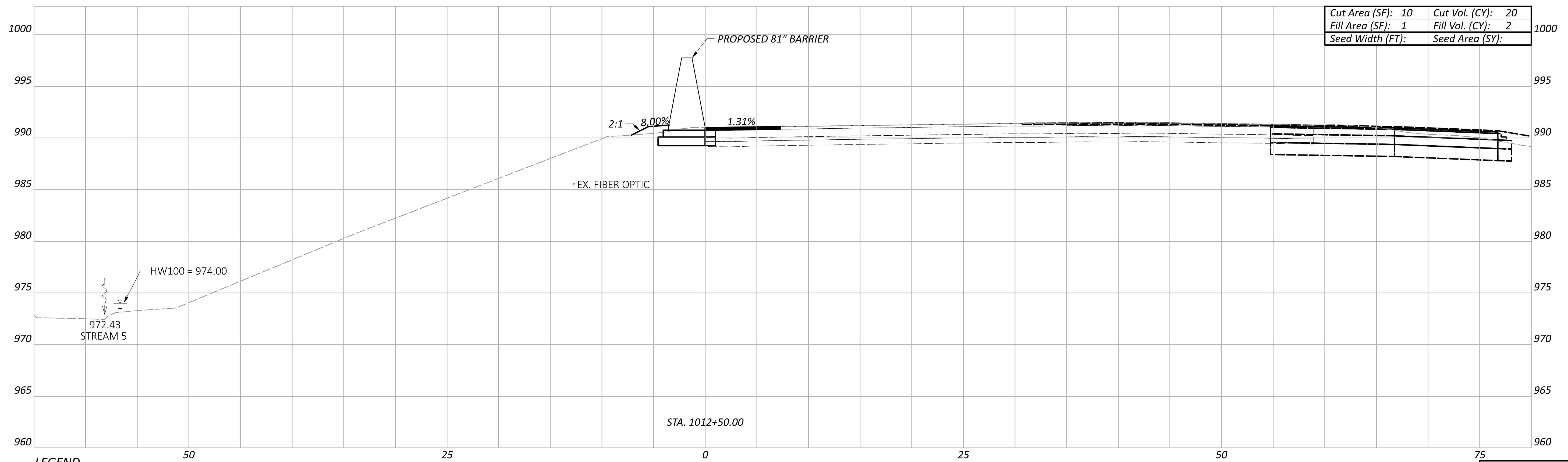
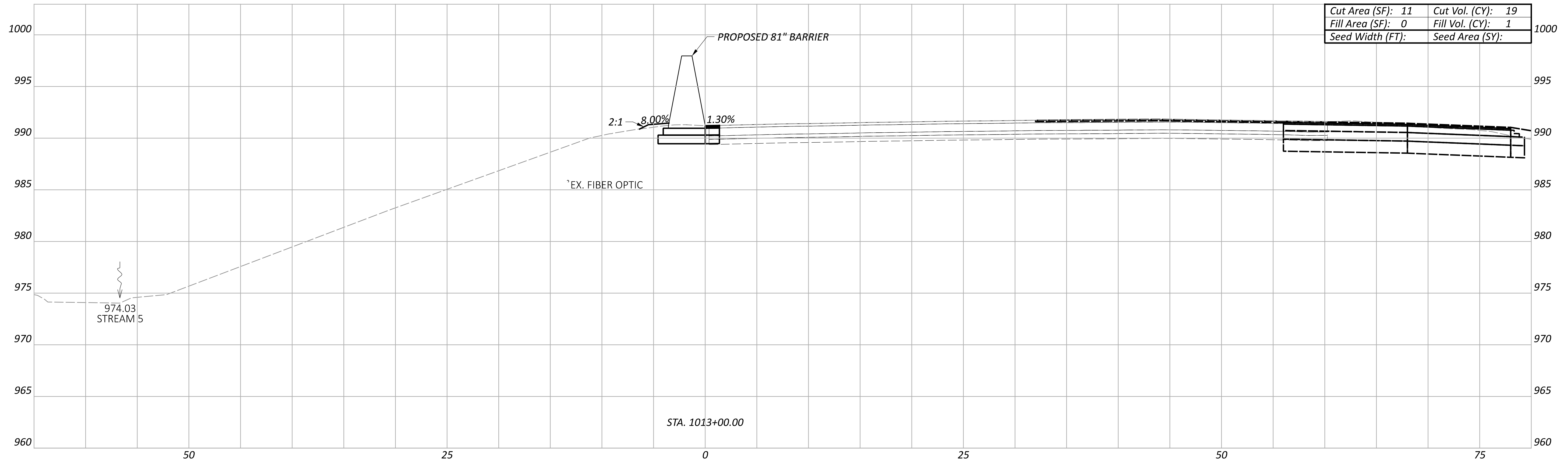
DESIGNER
JMK

REVIEWER
 JDH 03-27-24

PROJECT ID
 117607

FRA-161-15.80 NOISE WALLS

MODEL: BLP_BARRIER11 - 1012+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:17:50 PM USER: jennifer.kelley
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LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

CROSS SECTIONS - 81" BARRIER 10
 STA. 1012+50.00 TO STA. 1013+00.00

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS SUITE 100
 COLUMBIANA, OH 43085
 (614) 819-4900
 www.arcadis.com

DESIGNER
JMK

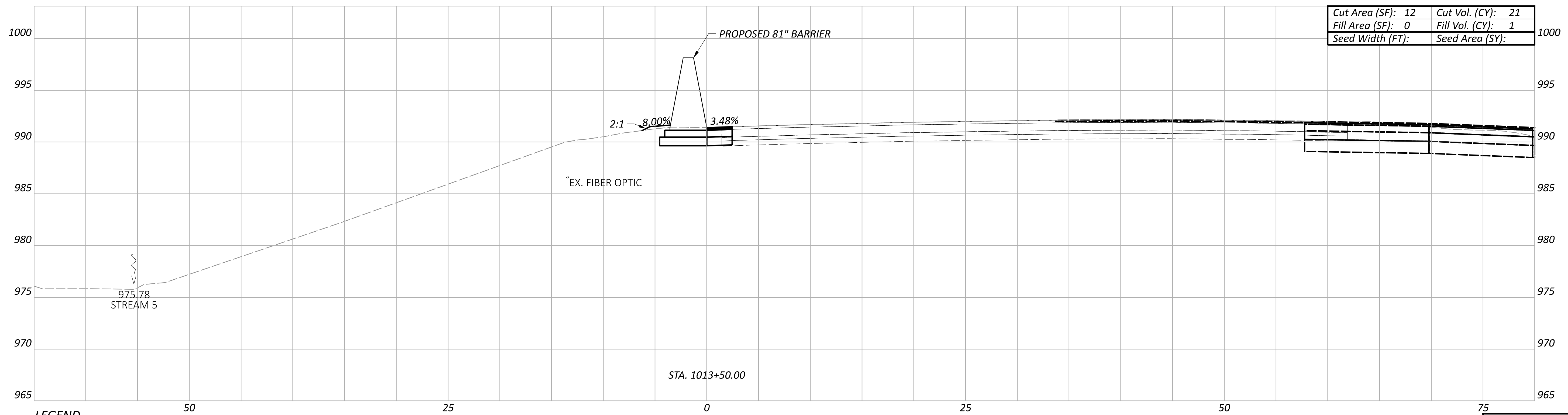
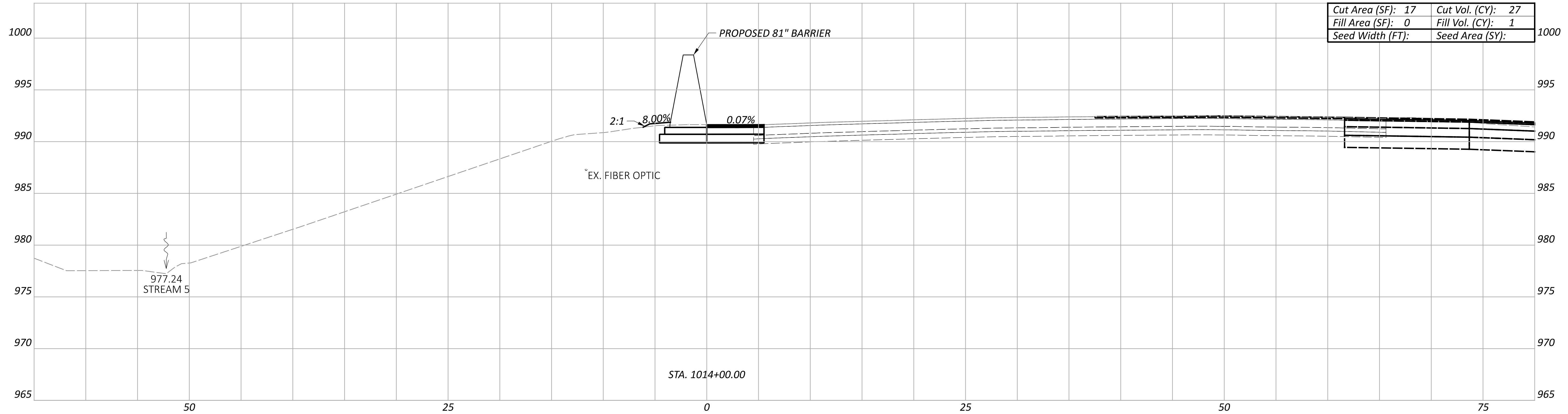
REVIEWER
JDH 03-27-24

PROJECT ID
117607

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
39	3		P.152	P.295

FRA-161-15.80 NOISE WALLS

MODEL: BLP_BARRIER11 - 1013+50.00 (Sheet) PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:18:06 PM USER: jennifer.kelley
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LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

**CROSS SECTIONS - 81" BARRIER 10
 STA. 1013+50.00 TO STA. 1014+00.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS AVE SUITE 100
 COLUMBIANA, OH 43085
 (614) 810-4900
 www.arcadis.com

DESIGNER
JMK

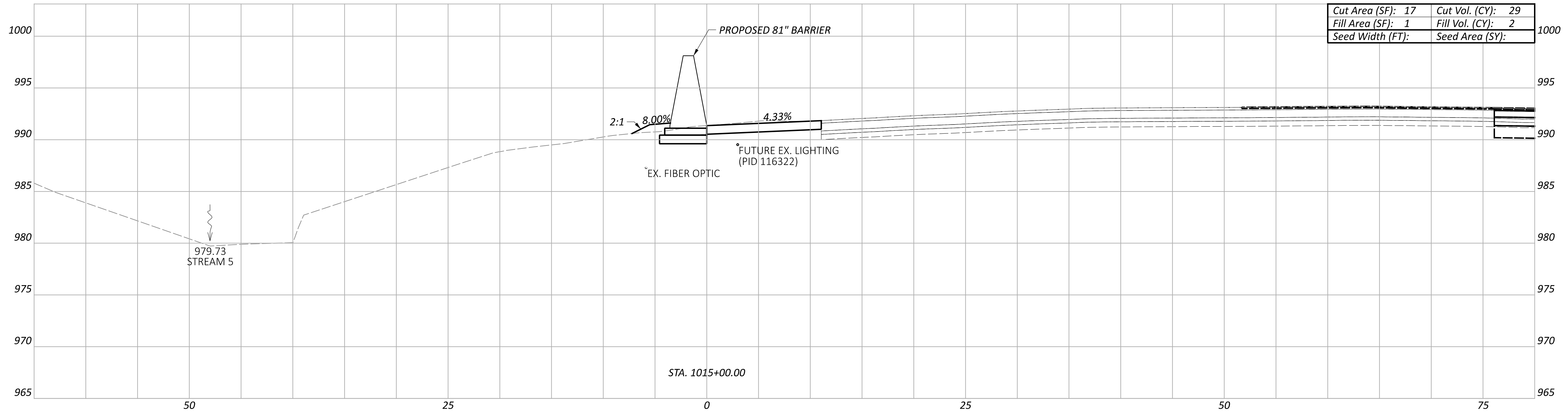
REVIEWER
JDH 03-27-24

PROJECT ID
117607

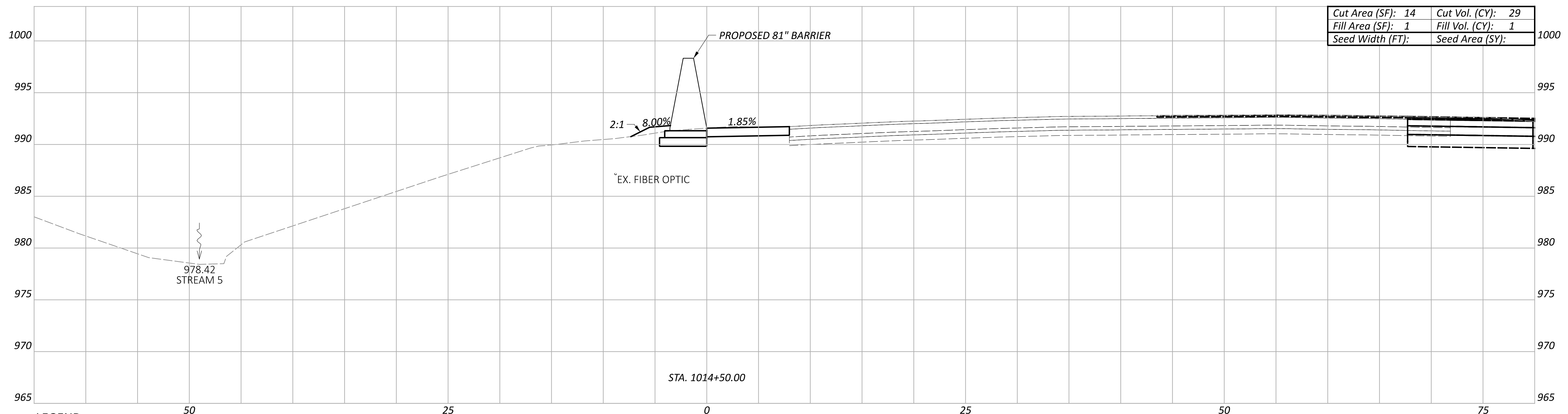
Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
48	2		P.153	P.295

FRA-161-15.80 NOISE WALLS

MODEL: BLP_BARRIER11 - 1014+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:18:22 PM USER: jennifer.kelley
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Seed Width (FT):		Seed Area (SY):	



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Seed Width (FT):		Seed Area (SY):	

LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

**CROSS SECTIONS - 81" BARRIER 10
 STA. 1014+50.00 TO STA. 1015+00.00**

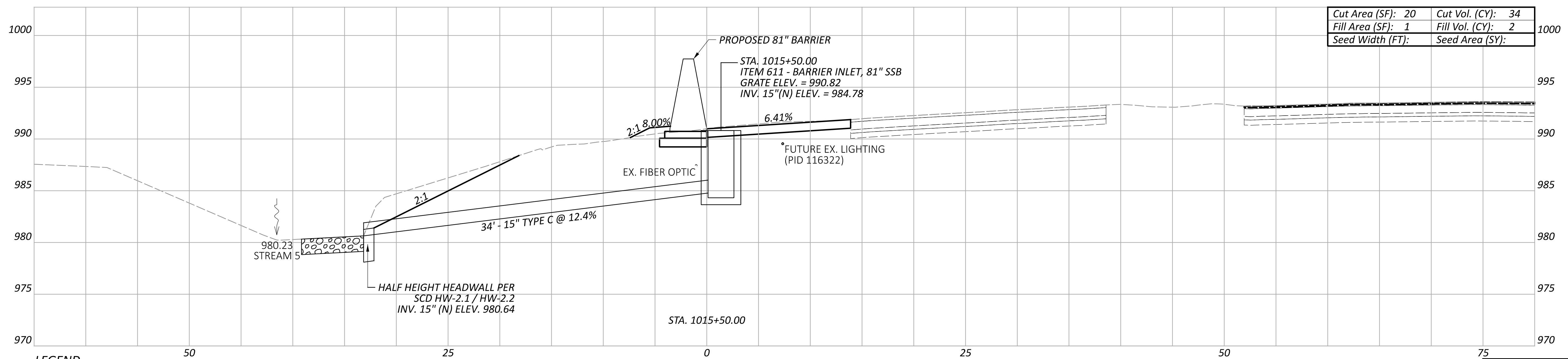
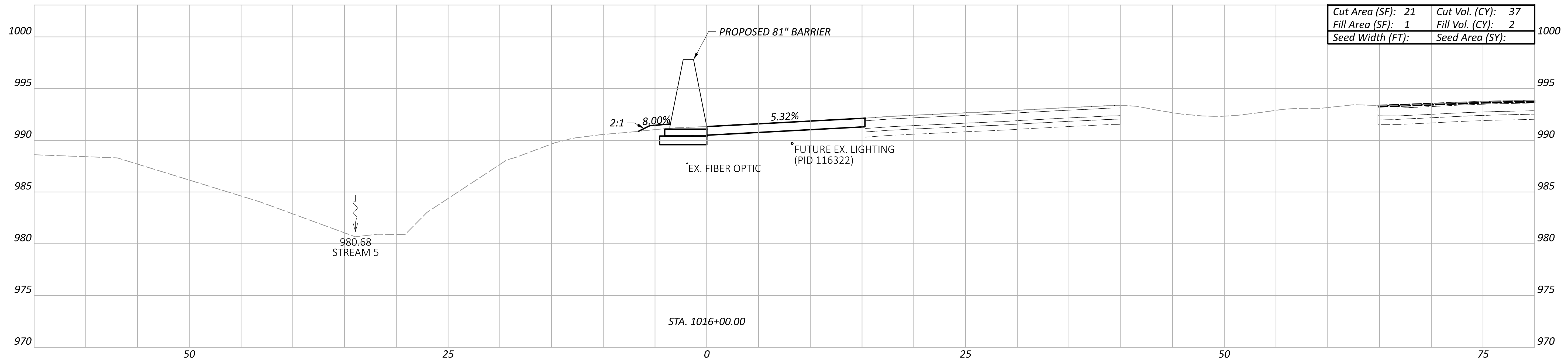
DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS AVE. SUITE 100
 COLUMBIANA, OH 43085
 (614) 810-4900
 www.arcadis.com

DESIGNER
JMK

REVIEWER
JDH

PROJECT ID
117607

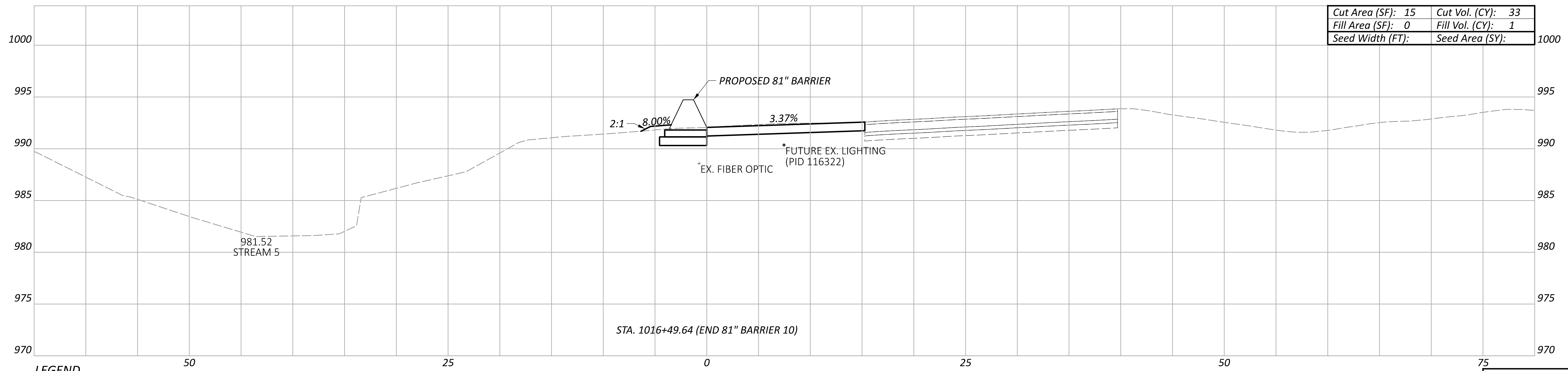
Sheet Totals			TOTAL	
Seeding	Cut	Fill	P.154	P.295
	58	3		



LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
71	4		P.155	P.295



LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

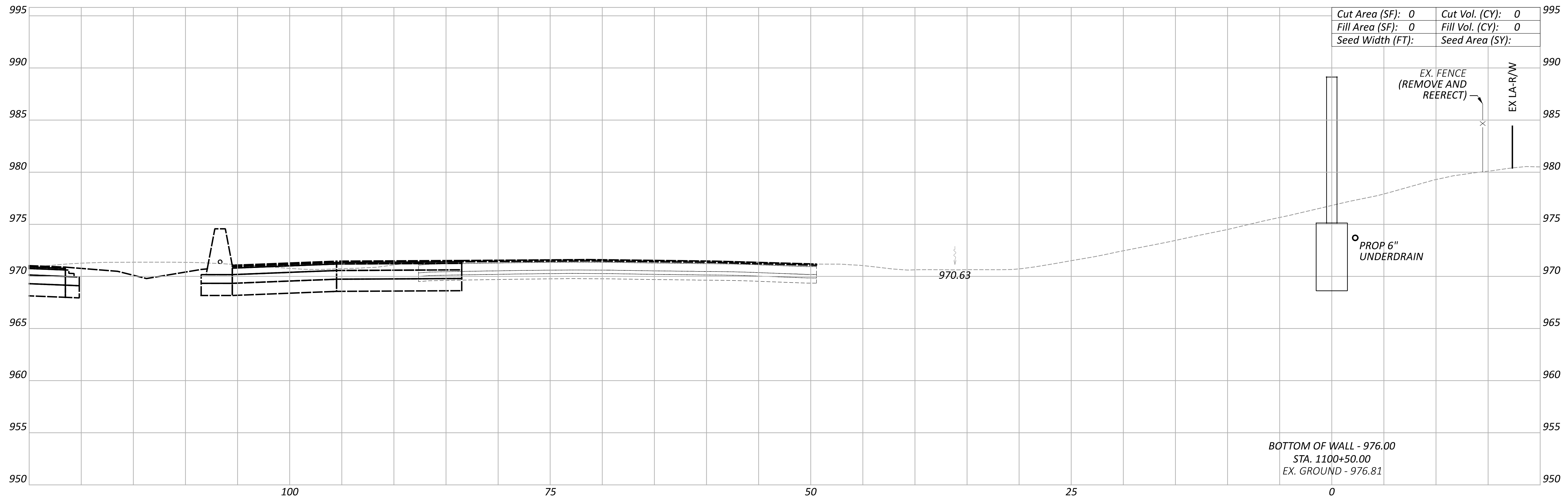
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STA. 1016+49.64 (END 81" BARRIER 10)

Sheet Totals			TOTAL	
Seeding	Cut	Fill	P.156	P.295
	33	1		

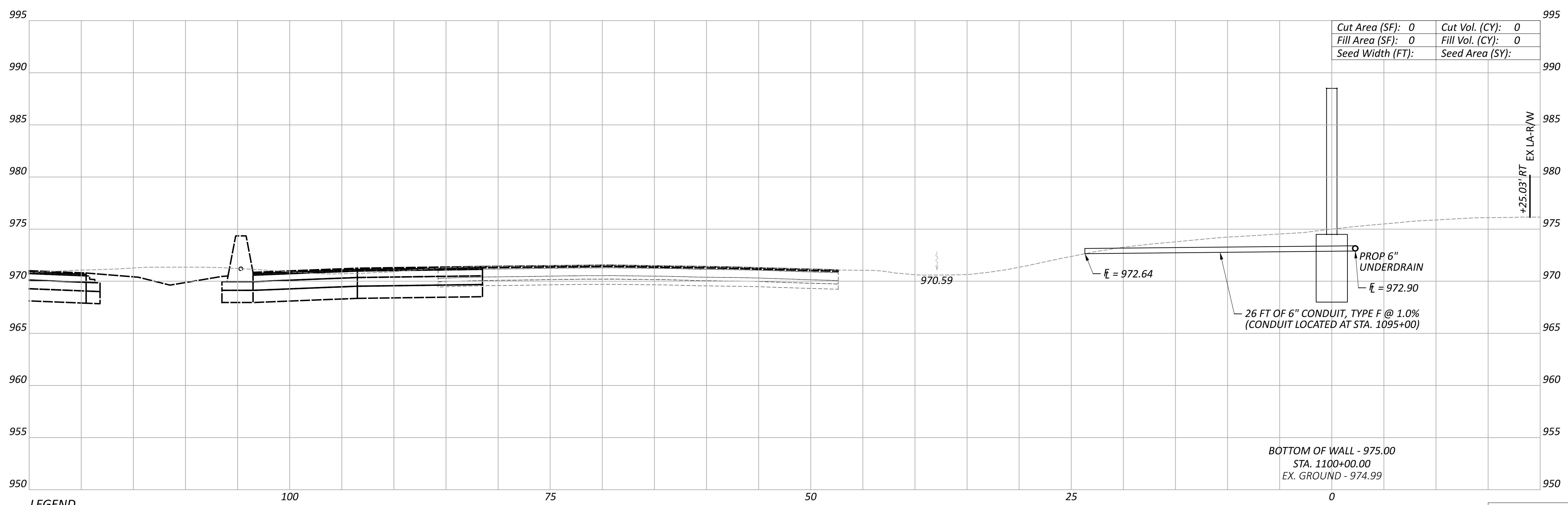
FRA-161-15.80 NOISE WALLS

MODEL: 1100+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 3/25/2024 TIME: 3:35:26 PM USER: JPerchinske
 pw:\arcds-us-pw.bentley.com\arcds-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS011.dgn



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 976.00
 STA. 1100+50.00
 EX. GROUND - 976.81




Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 975.00
 STA. 1100+00.00
 EX. GROUND - 974.99

LEGEND
 — EXISTING SR-161 PRIOR TO PID 116322
 — FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
			P.157 P.295

**CROSS SECTIONS - WALL 11
 STA. 1100+00.00 TO STA. 1100+50.00**

DESIGN AGENCY

 www.bgengr.com
 5560 WILCOX PLACE, SUITE C
 DUBLIN, OHIO 43016

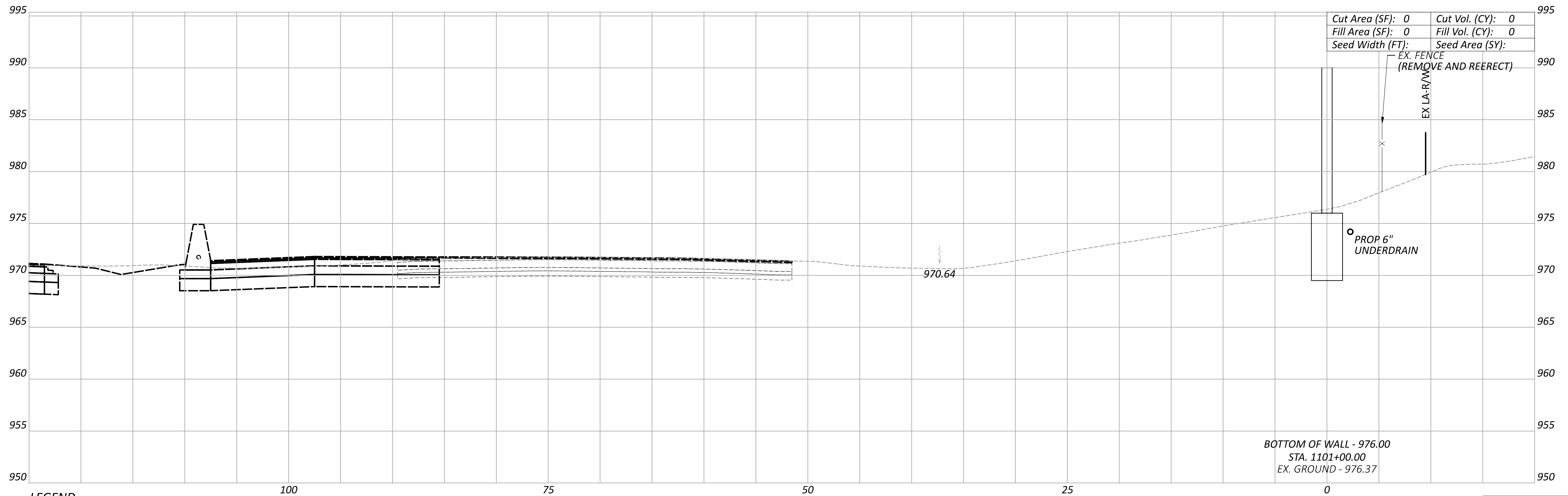
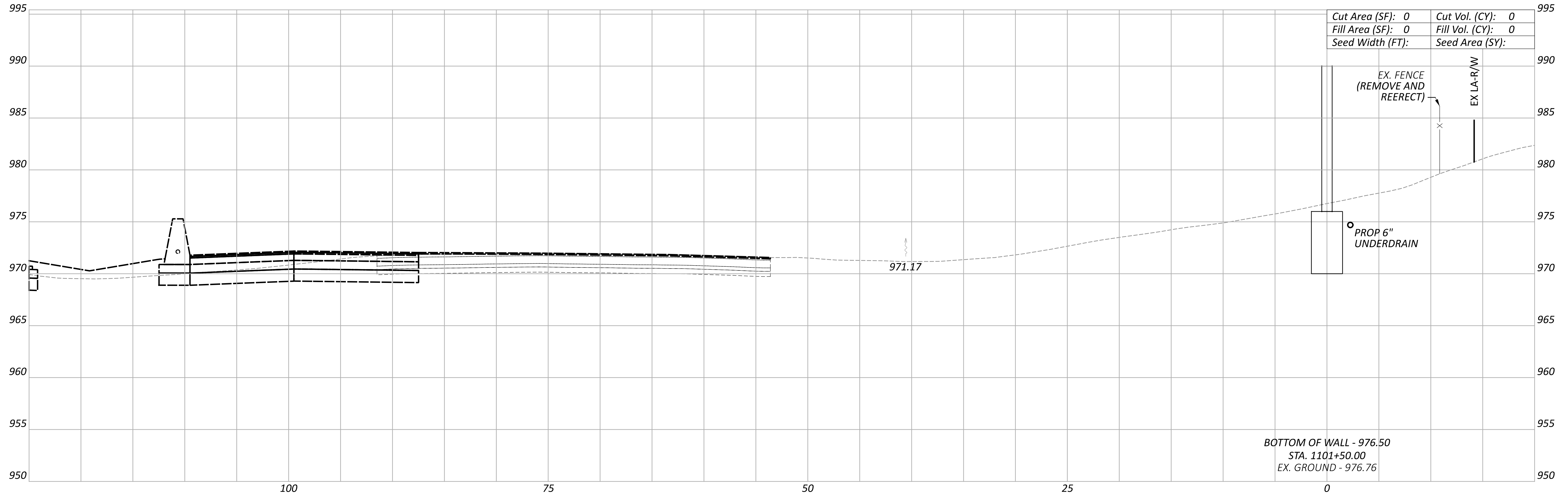
DESIGNER
 JEP

REVIEWER
 RG 03-27-24

PROJECT ID
 117607

FRA-161-15.80 NOISE WALLS

MODEL: 1101+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 3/25/2024 TIME: 3:35:43 PM USER: JPerchinske
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LEGEND

- EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 976.50
 STA. 1101+50.00
 EX. GROUND - 976.76

BOTTOM OF WALL - 976.00
 STA. 1101+00.00
 EX. GROUND - 976.37

Sheet Totals		
Seeding	Cut	Fill

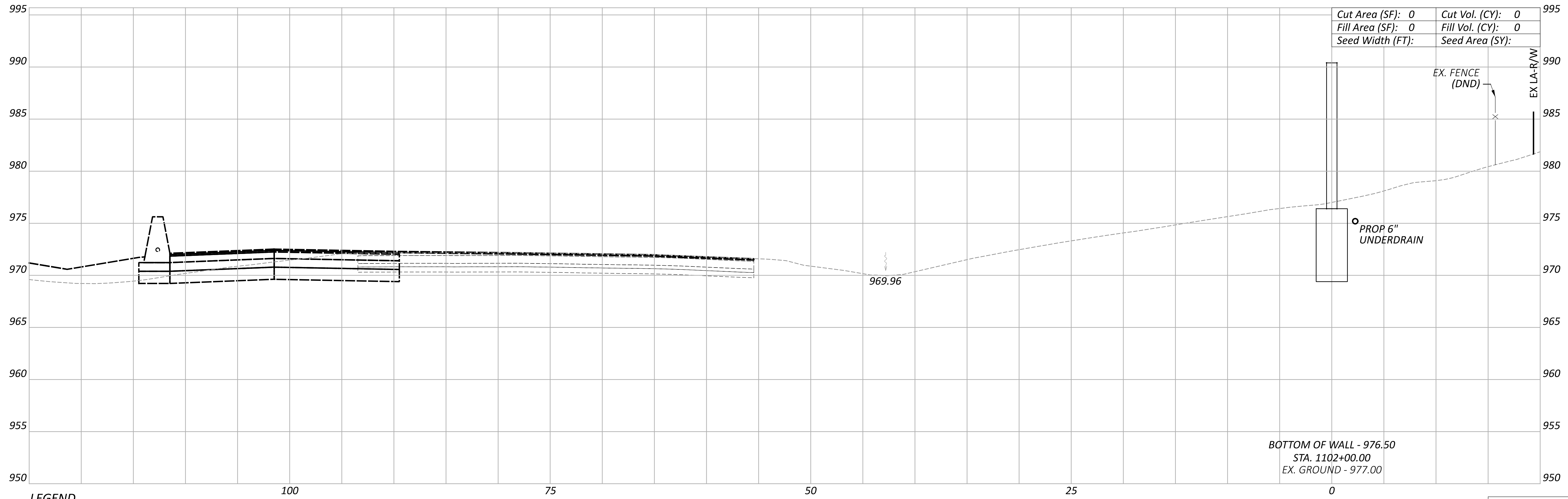
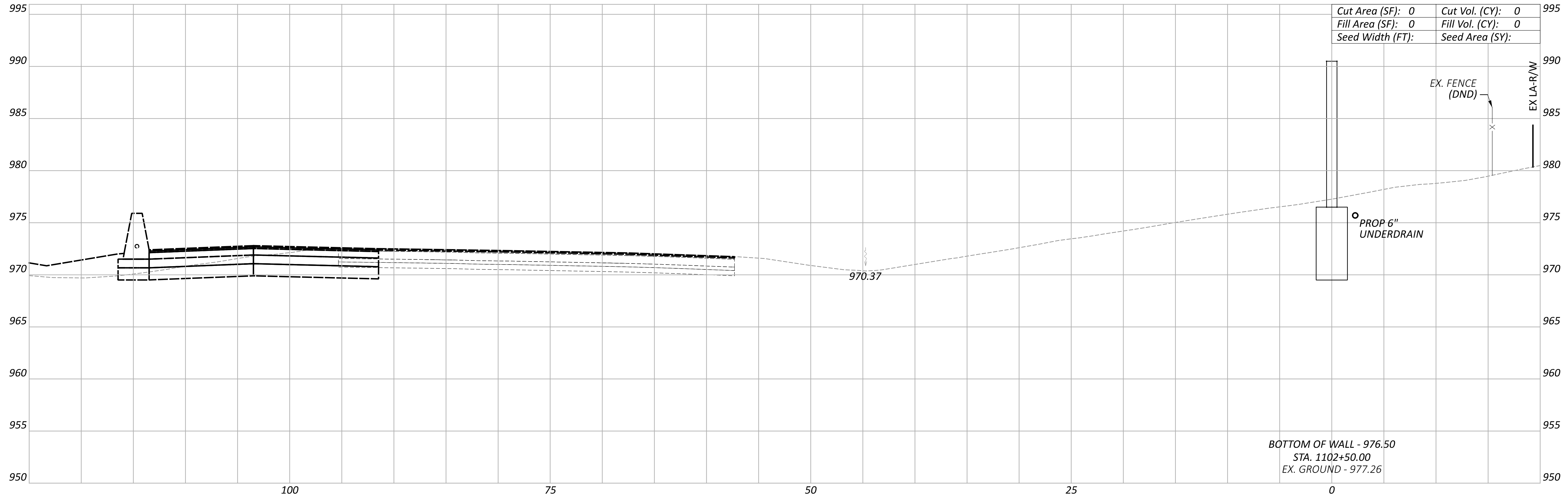
**CROSS SECTIONS - WALL 11
 STA. 1101+00.00 TO STA. 1101+50.00**



DESIGNER	JEP
REVIEWER	RG
PROJECT ID	117607
SHEET	P.158
TOTAL	P.295

FRA-161-15.80 NOISE WALLS

MODEL: 1102+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 3/25/2024 TIME: 3:35:51 PM USER: JPerchinske
 pw:\arcds-us-pw.bentley.com\arcds-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS011.dgn



LEGEND

- EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals		
Seeding	Cut	Fill

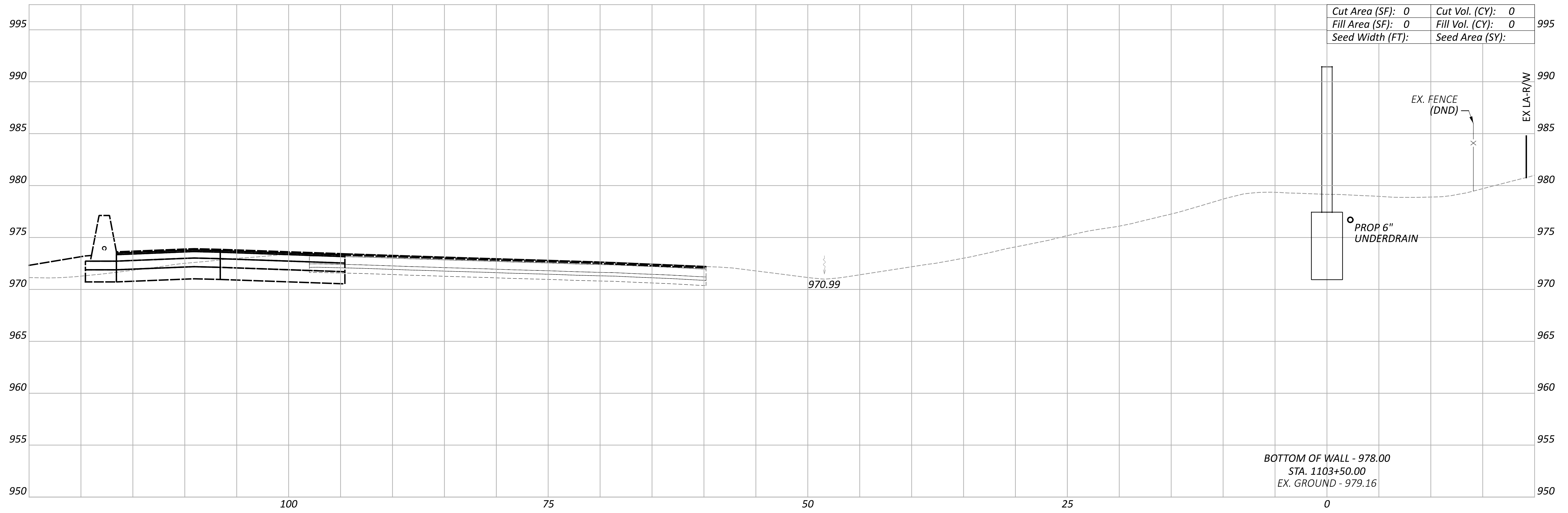
**CROSS SECTIONS - WALL 11
 STA. 1102+00.00 TO STA. 1102+50.00**



DESIGN AGENCY
 DESIGNER: JEP
 REVIEWER: RG
 PROJECT ID: 117607
 SHEET: P.159
 TOTAL: P.295

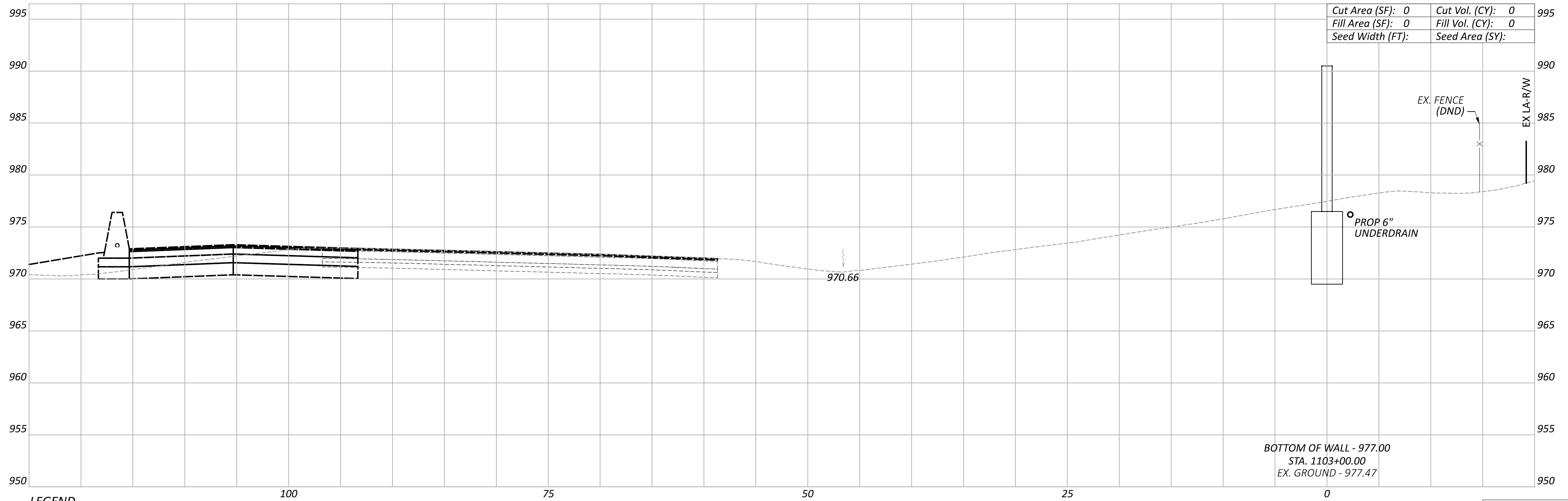
FRA-161-15.80 NOISE WALLS

MODEL: 1103+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 3/25/2024 TIME: 3:36:00 PM USER: JPerchinske
 pw:\arcds-us-pw.bentley.com\arcds-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS011.dgn



Cut Area (SF): 0	Cut Vol. (CY): 0
Fill Area (SF): 0	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):

BOTTOM OF WALL - 978.00
 STA. 1103+50.00
 EX. GROUND - 979.16



Cut Area (SF): 0	Cut Vol. (CY): 0
Fill Area (SF): 0	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):

BOTTOM OF WALL - 977.00
 STA. 1103+00.00
 EX. GROUND - 977.47

LEGEND

- EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals		
Seeding	Cut	Fill

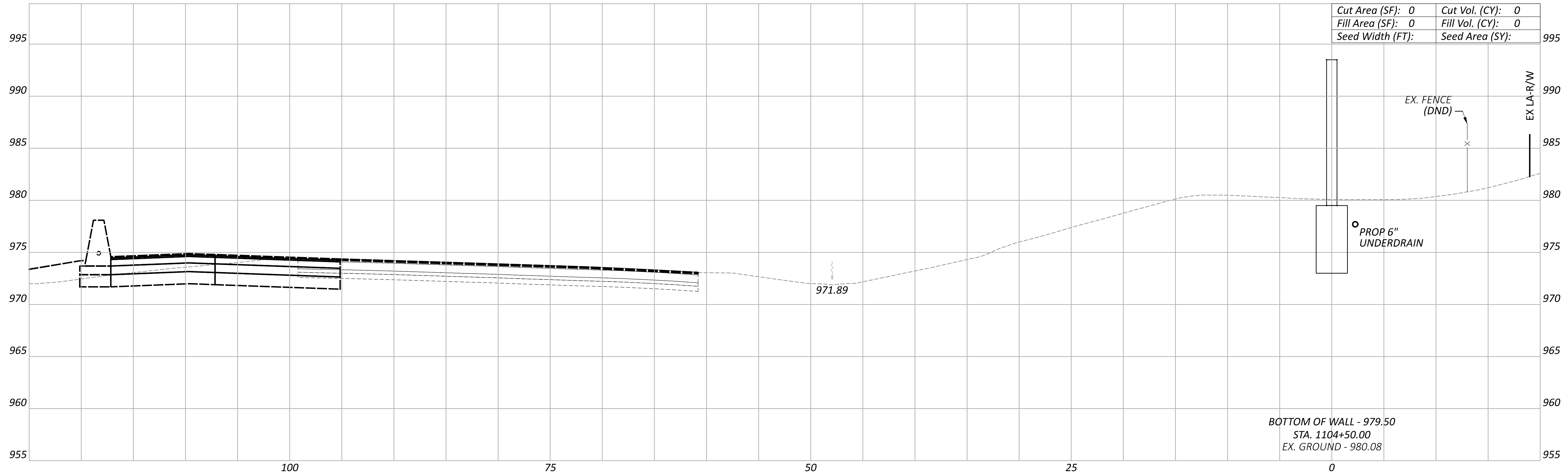


DESIGNER
 JEP
 REVIEWER
 RG 03-27-24
 PROJECT ID
 117607
 SHEET TOTAL
 P.160 P.295

**CROSS SECTIONS - WALL 11
 STA. 1103+00.00 TO STA. 1103+50.00**

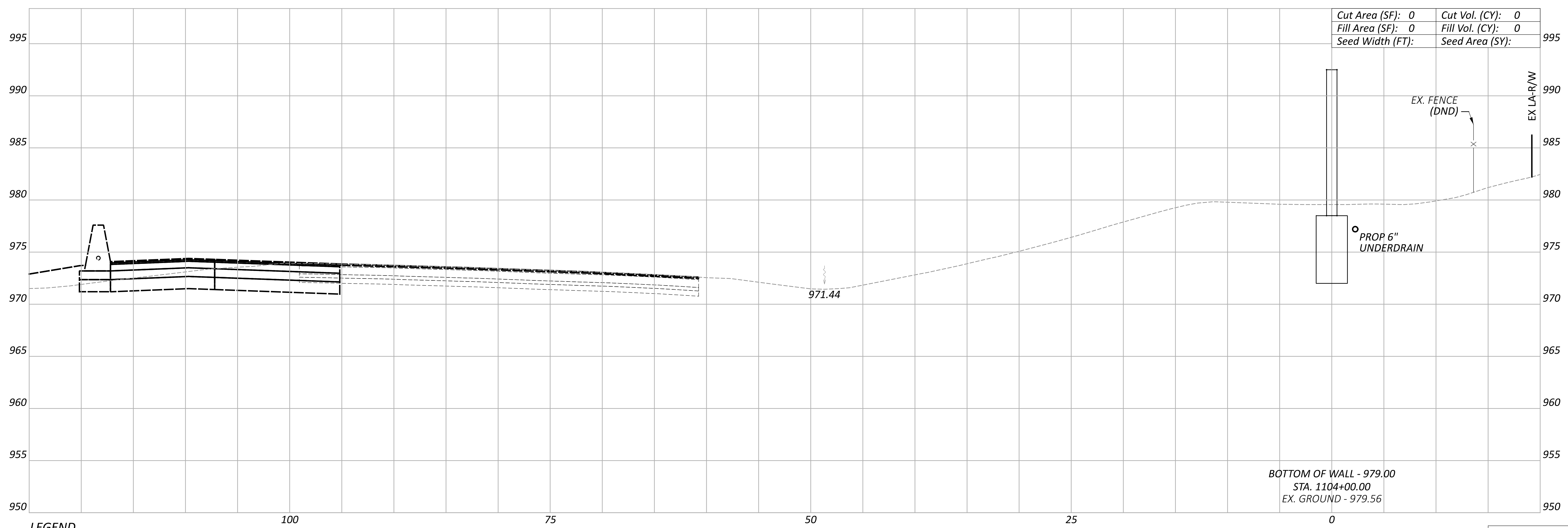
FRA-161-15.80 NOISE WALLS

MODEL: 1104+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 3/25/2024 TIME: 3:36:08 PM USER: JPerchinske
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Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 979.50
 STA. 1104+50.00
 EX. GROUND - 980.08




Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 979.00
 STA. 1104+00.00
 EX. GROUND - 979.56

LEGEND
 — EXISTING SR-161 PRIOR TO PID 116322
 — FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
			P.161 P.295

**CROSS SECTIONS - WALL 11
 STA. 1104+00.00 TO STA. 1104+50.00**

DESIGN AGENCY

 www.bgengr.com
 5560 WILCOX PLACE, SUITE C
 DUBLIN, OHIO 43016

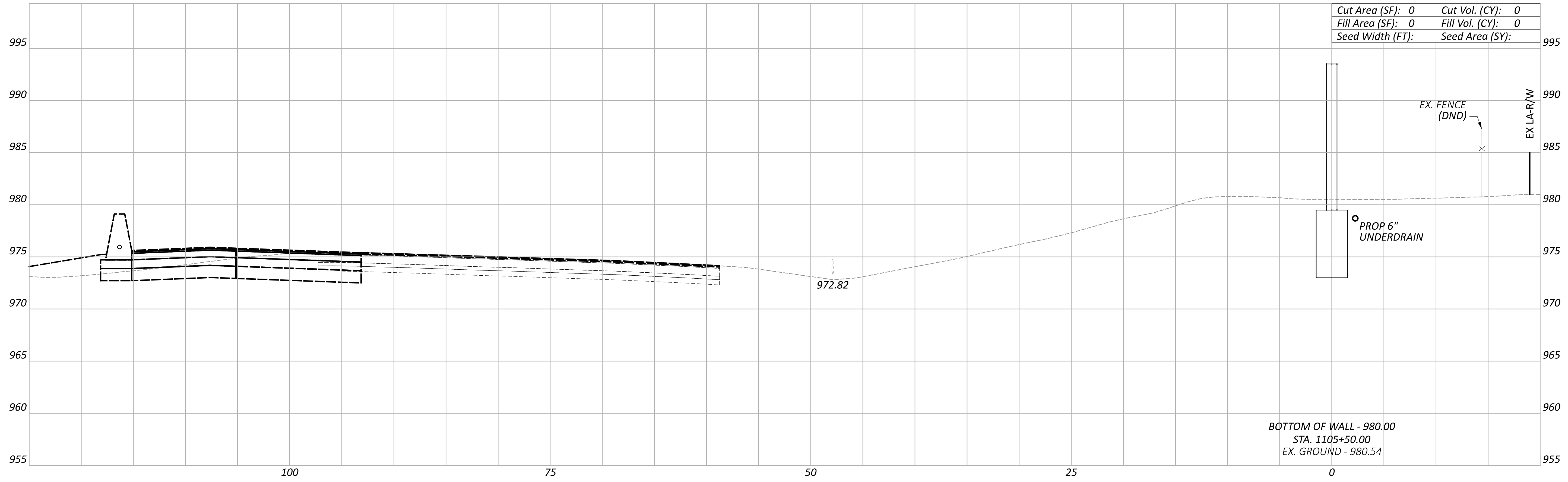
DESIGNER
 JEP

REVIEWER
 RG 03-27-24

PROJECT ID
 117607

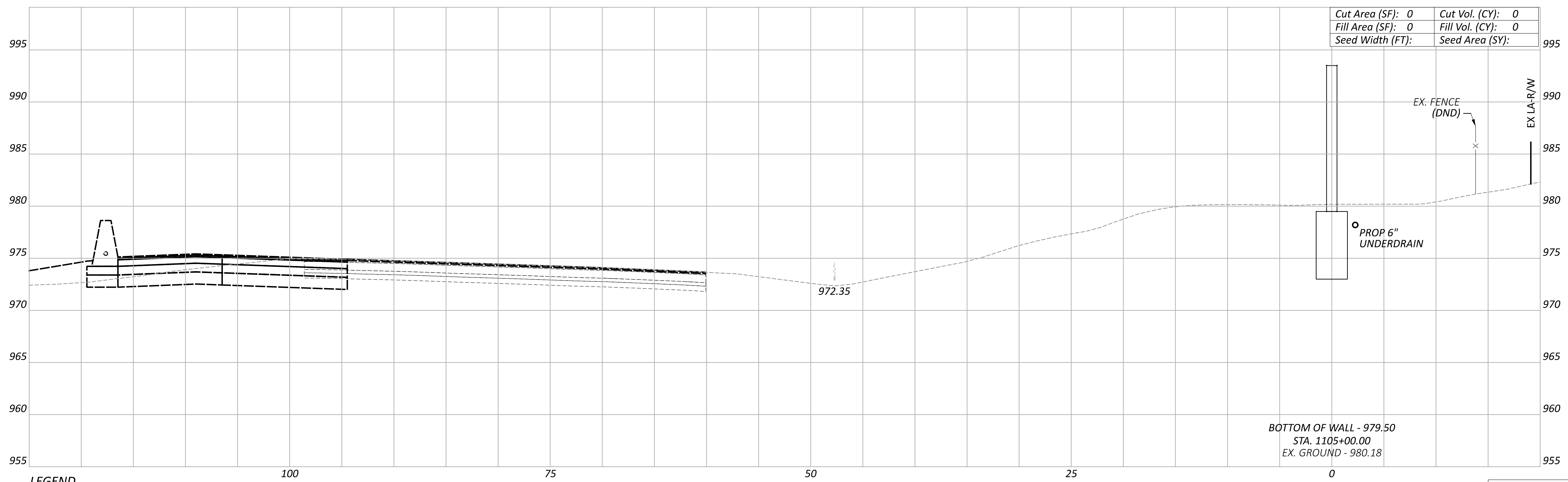
FRA-161-15.80 NOISE WALLS

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Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 980.00
 STA. 1105+50.00
 EX. GROUND - 980.54




Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 979.50
 STA. 1105+00.00
 EX. GROUND - 980.18

LEGEND
 - - - - - EXISTING SR-161 PRIOR TO PID 116322
 ——— FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
			P.162 P.295

**CROSS SECTIONS - WALL 11
 STA. 1105+00.00 TO STA. 1105+50.00**

DESIGN AGENCY

 www.bgegroup.com
 5560 WILCOX PLACE, SUITE C
 DUBLIN, OHIO 43016

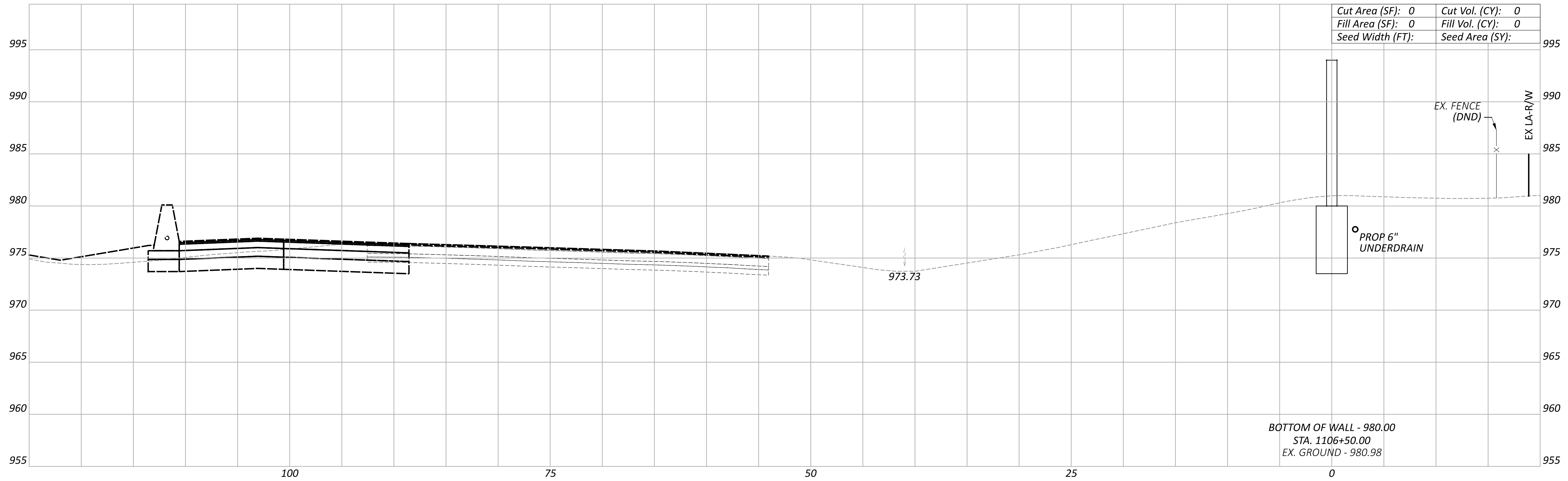
DESIGNER
 JEP

REVIEWER
 RG 03-27-24

PROJECT ID
 117607

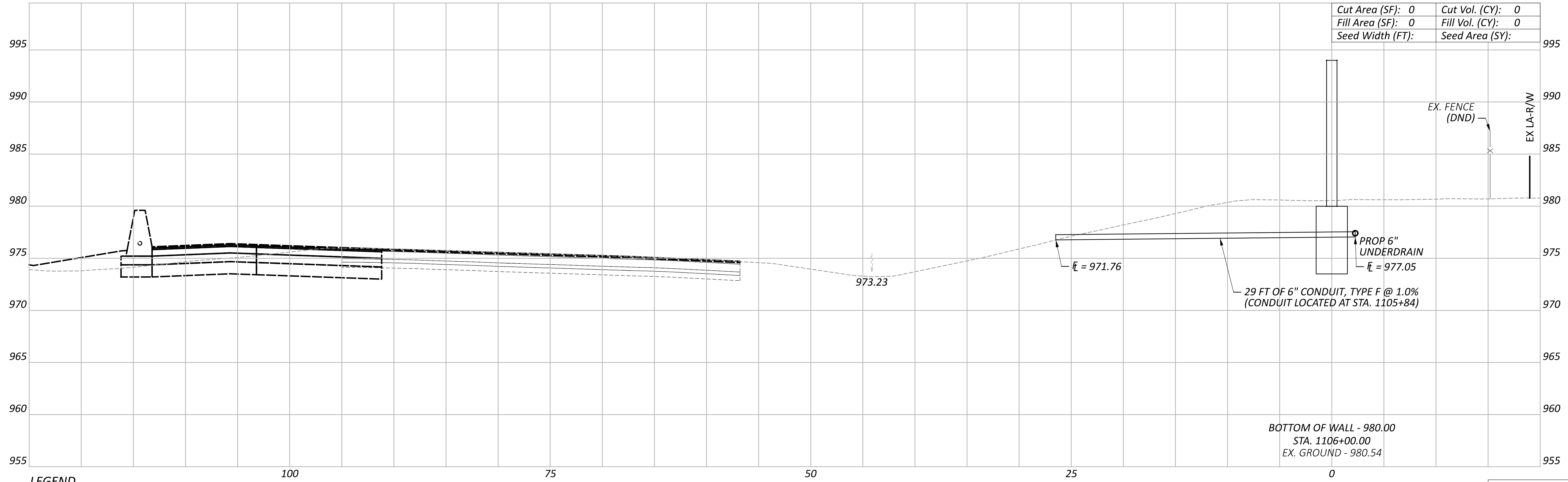
FRA-161-15.80 NOISE WALLS

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Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 980.00
 STA. 1106+50.00
 EX. GROUND - 980.98




Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 980.00
 STA. 1106+00.00
 EX. GROUND - 980.54

LEGEND
 — EXISTING SR-161 PRIOR TO PID 116322
 — FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
			P.163 P.295

**CROSS SECTIONS - WALL 11
 STA. 1106+00.00 TO STA. 1106+50.00**

DESIGN AGENCY

 www.bgegroup.com
 5560 WILCOX PLACE, SUITE C
 DUBLIN, OHIO 43016

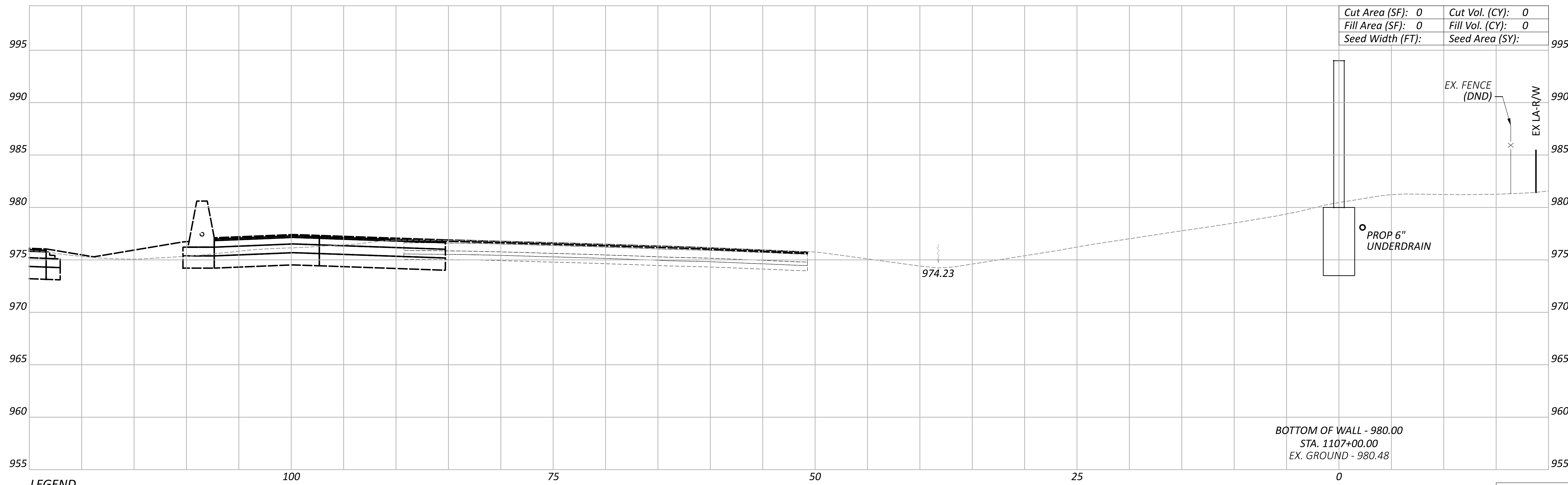
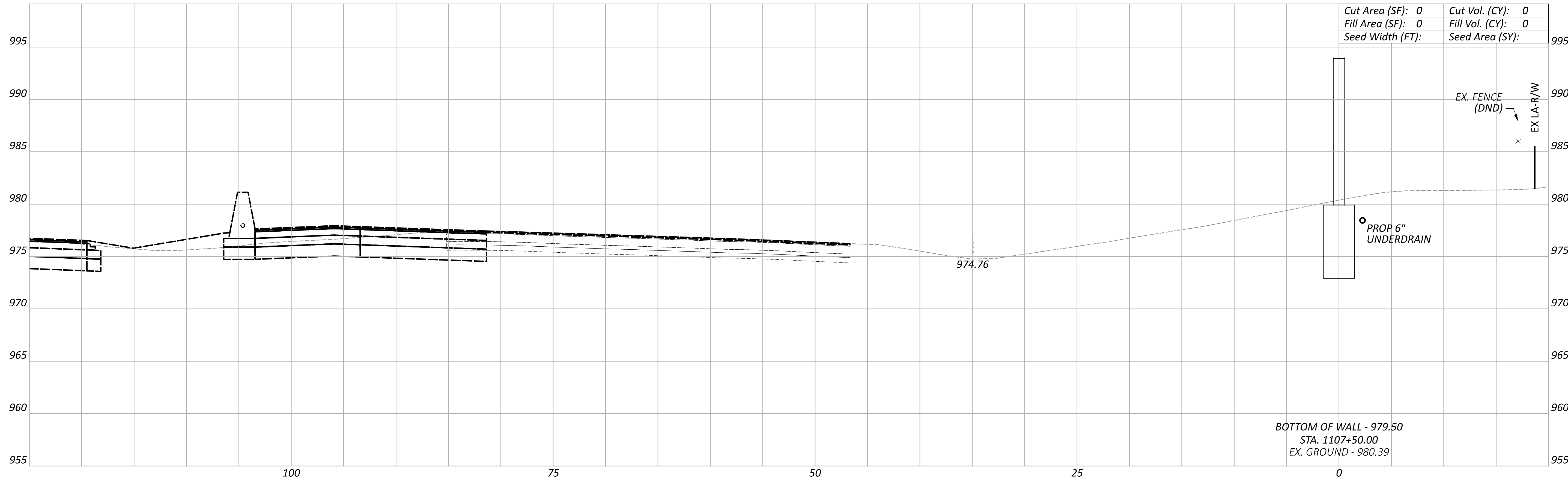
DESIGNER
 JEP

REVIEWER
 RG 03-27-24

PROJECT ID
 117607

FRA-161-15.80 NOISE WALLS

MODEL: 1107+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 3/25/2024 TIME: 3:36:32 PM USER: JPerchinske
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LEGEND

- EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals		
Seeding	Cut	Fill

DESIGN AGENCY
BG
 www.bgengineering.com
 5560 WILCOX PLACE, SUITE C
 DUBLIN, OHIO 43016

DESIGNER
 JEP

REVIEWER
 RG 03-27-24

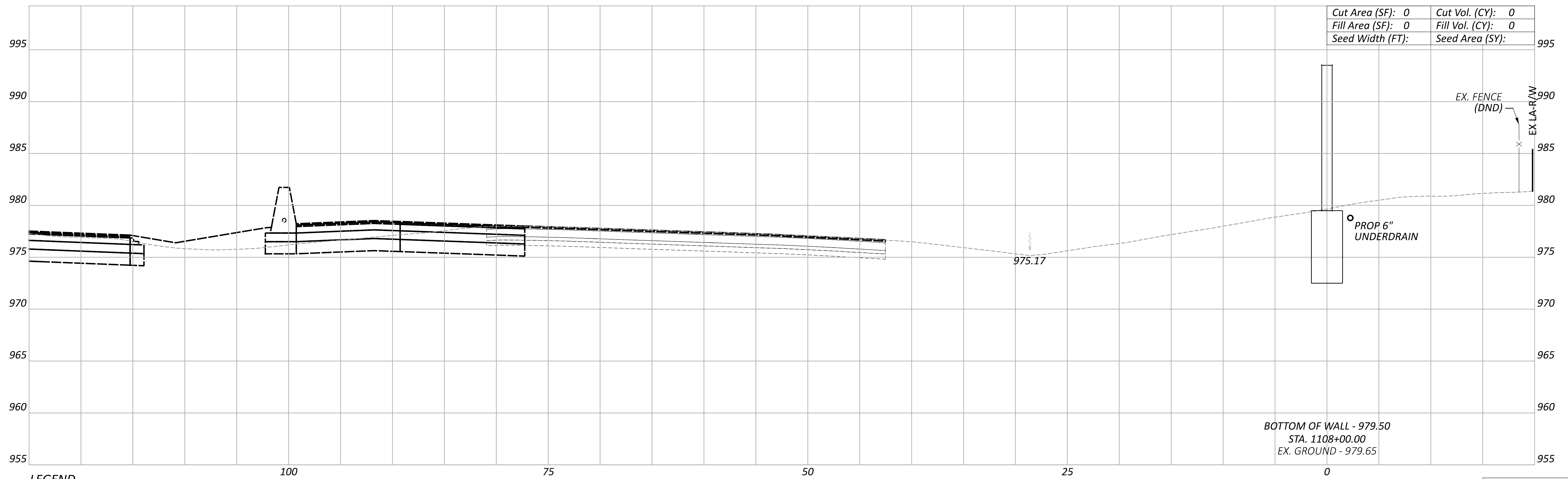
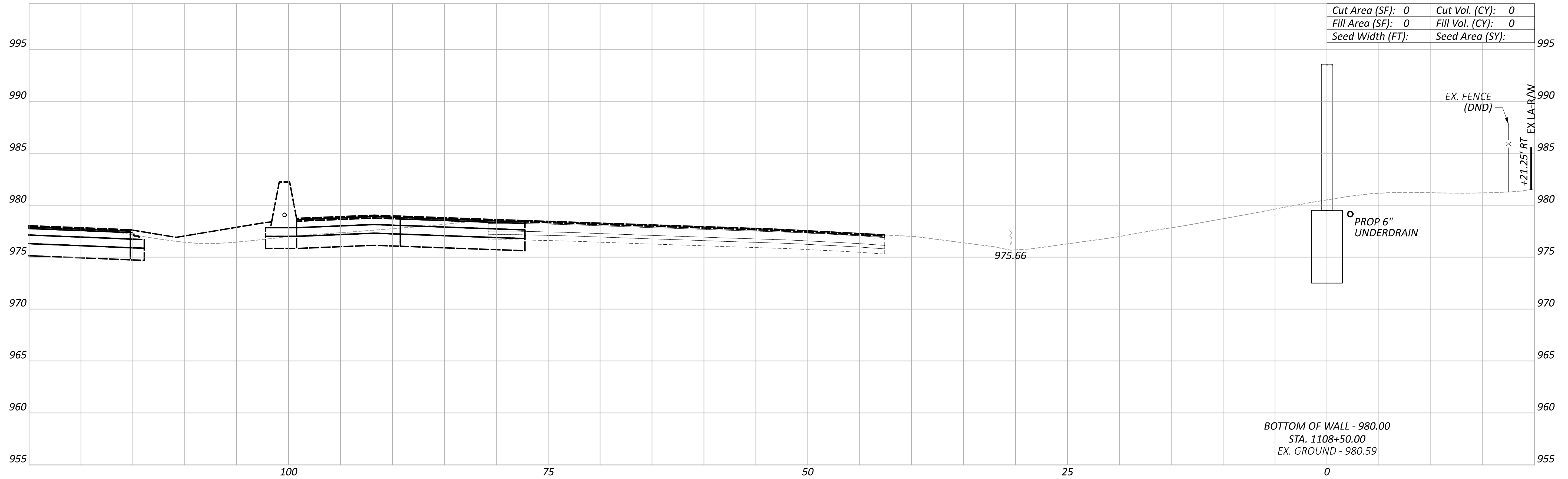
PROJECT ID
 117607

SHEET TOTAL
 P.164 P.295

**CROSS SECTIONS - WALL 11
 STA. 1107+00.00 TO STA. 1107+50.00**

FRA-161-15.80 NOISE WALLS

MODEL: 1108+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 3/25/2024 TIME: 3:36:40 PM USER: JPerchinske
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LEGEND

- EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals		
Seeding	Cut	Fill

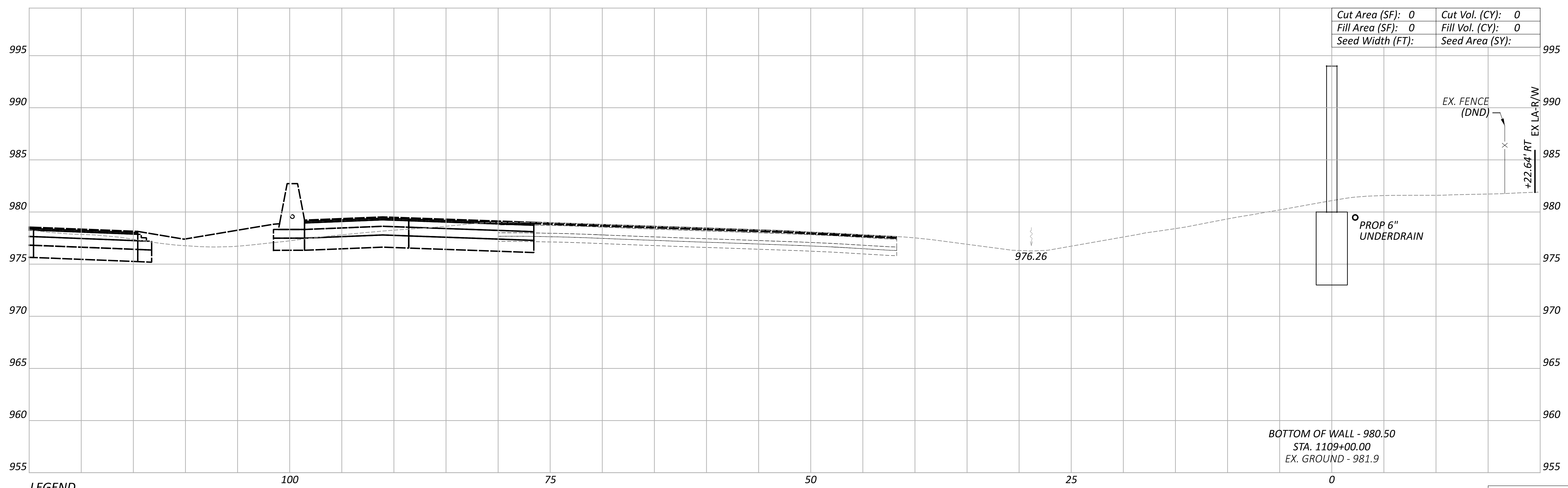
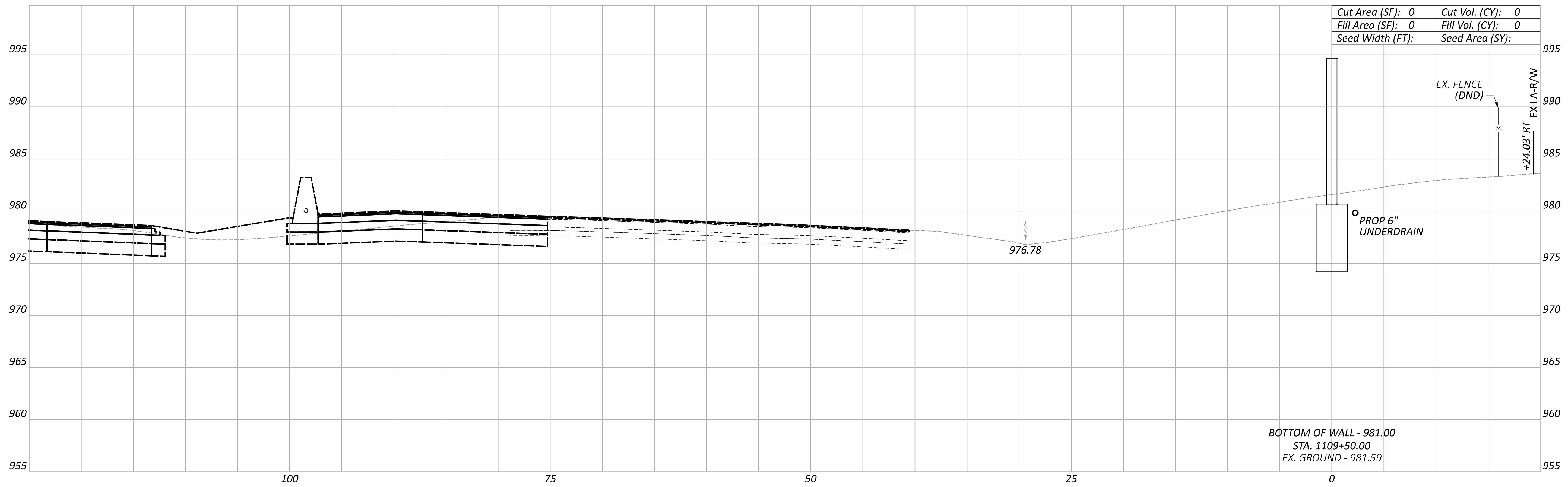


DESIGNER: JEP
 REVIEWER: RG
 PROJECT ID: 117607
 SHEET: P.165
 TOTAL: P.295

**CROSS SECTIONS - WALL 11
 STA. 1108+00.00 TO STA. 1108+50.00**

FRA-161-15.80 NOISE WALLS

MODEL: 1109+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 3/25/2024 TIME: 3:36:49 PM USER: JPerchinske
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LEGEND

- EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals		
Seeding	Cut	Fill

DESIGN AGENCY
BG
 www.bgengineering.com
 5560 WILCOX PLACE, SUITE C
 DUBLIN, OHIO 43016

DESIGNER
 JEP

REVIEWER
 RG

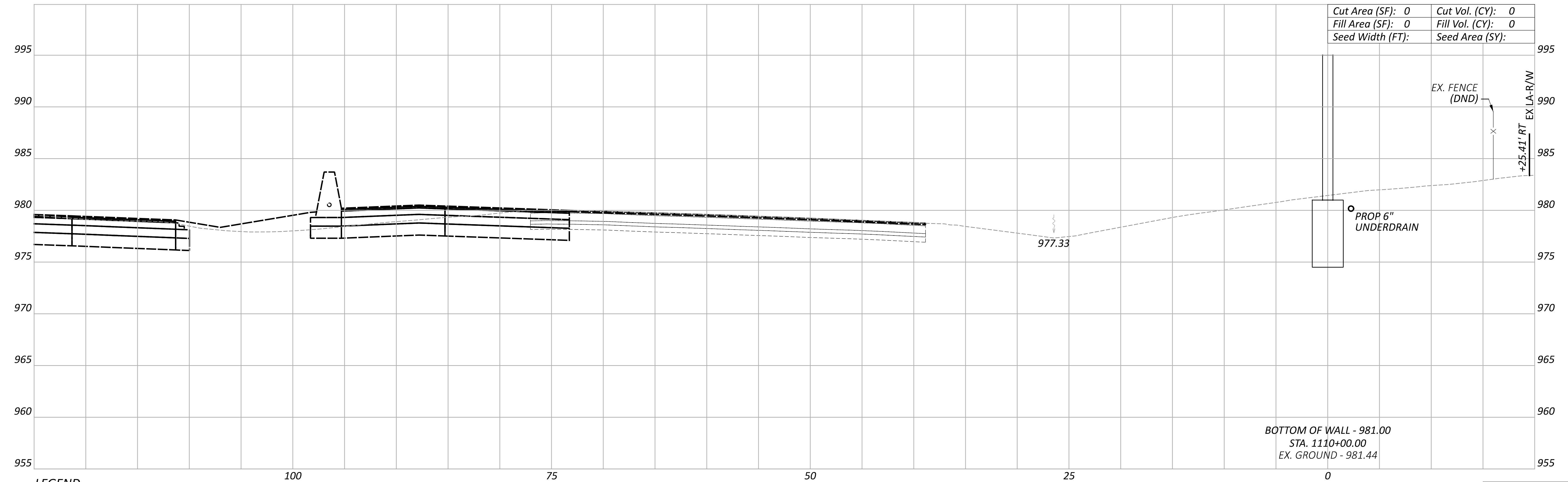
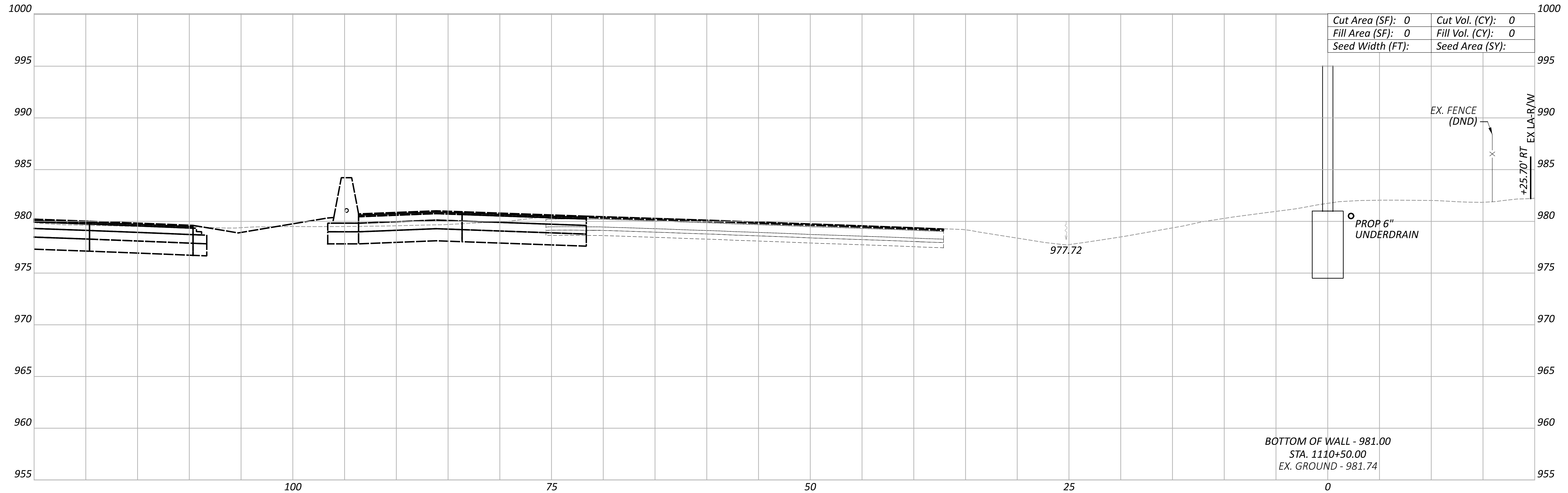
PROJECT ID
 117607

SHEET TOTAL
 P.166 P.295

**CROSS SECTIONS - WALL 11
 STA. 1109+00.00 TO STA. 1109+50.00**

FRA-161-15.80 NOISE WALLS

MODEL: 1110+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 3/25/2024 TIME: 3:36:58 PM USER: JPerchinske
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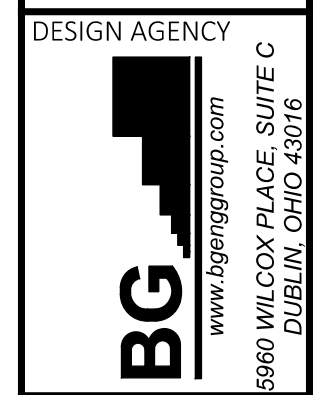


LEGEND

- EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals		
Seeding	Cut	Fill

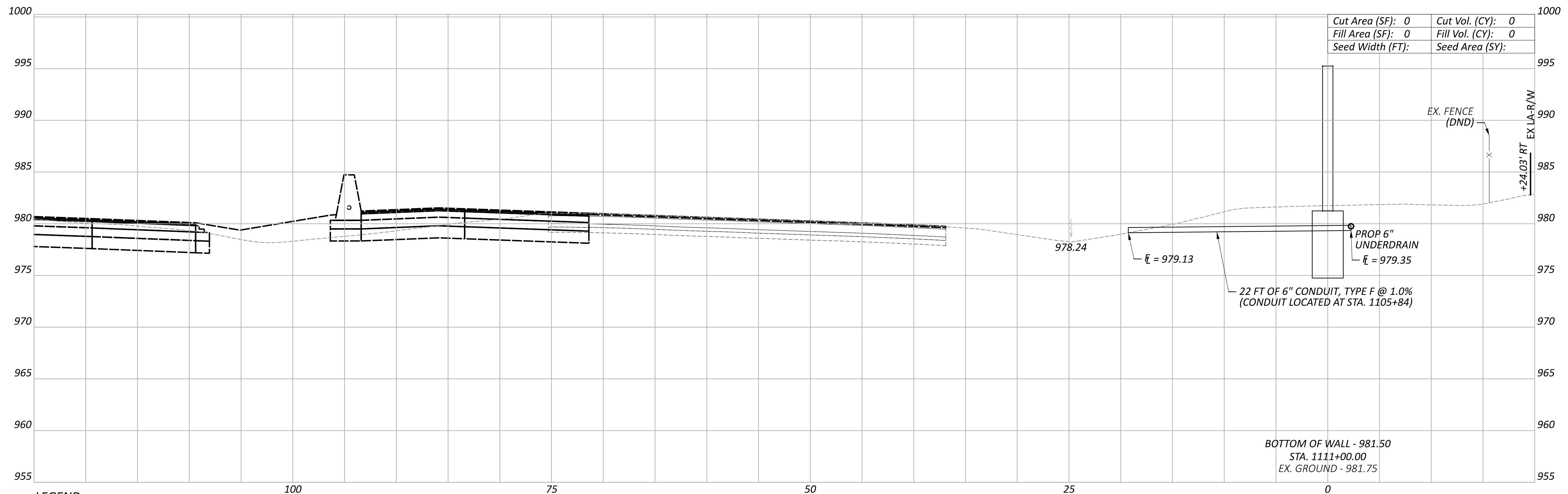
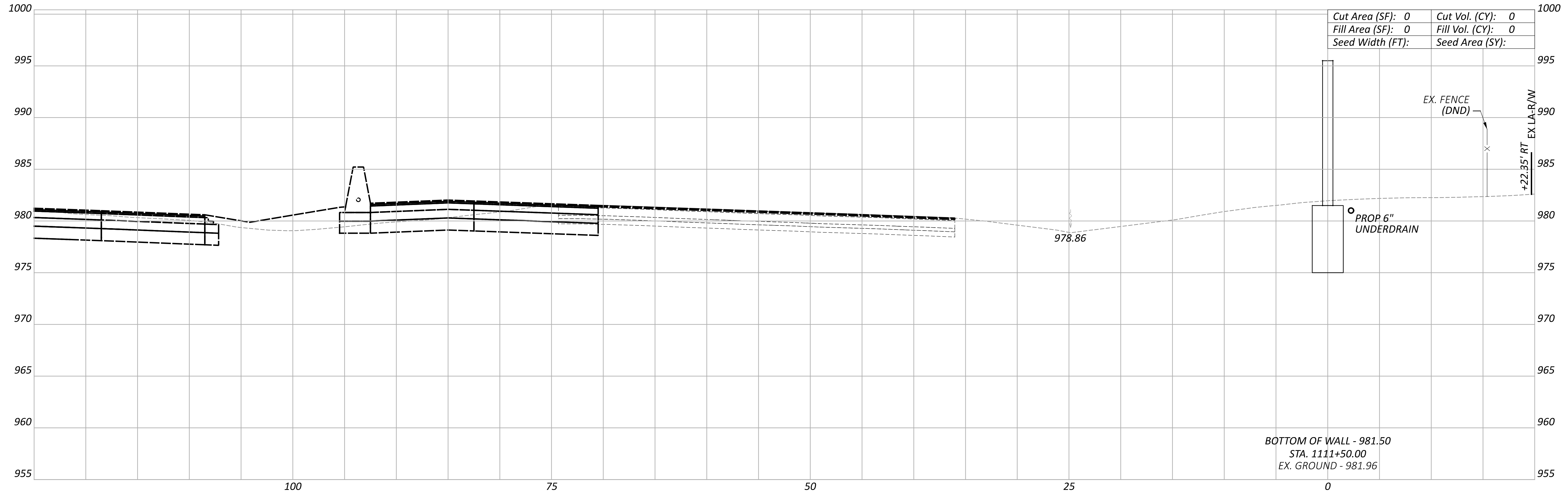
**CROSS SECTIONS - WALL 11
 STA. 1110+00.00 TO STA. 1110+50.00**



DESIGNER	JEP
REVIEWER	RG
PROJECT ID	117607
SHEET	P.167
TOTAL	P.295

FRA-161-15.80 NOISE WALLS

MODEL: 1111+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 3/25/2024 TIME: 3:37:06 PM USER: JPerchinske
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LEGEND

- EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
P.168			P.295

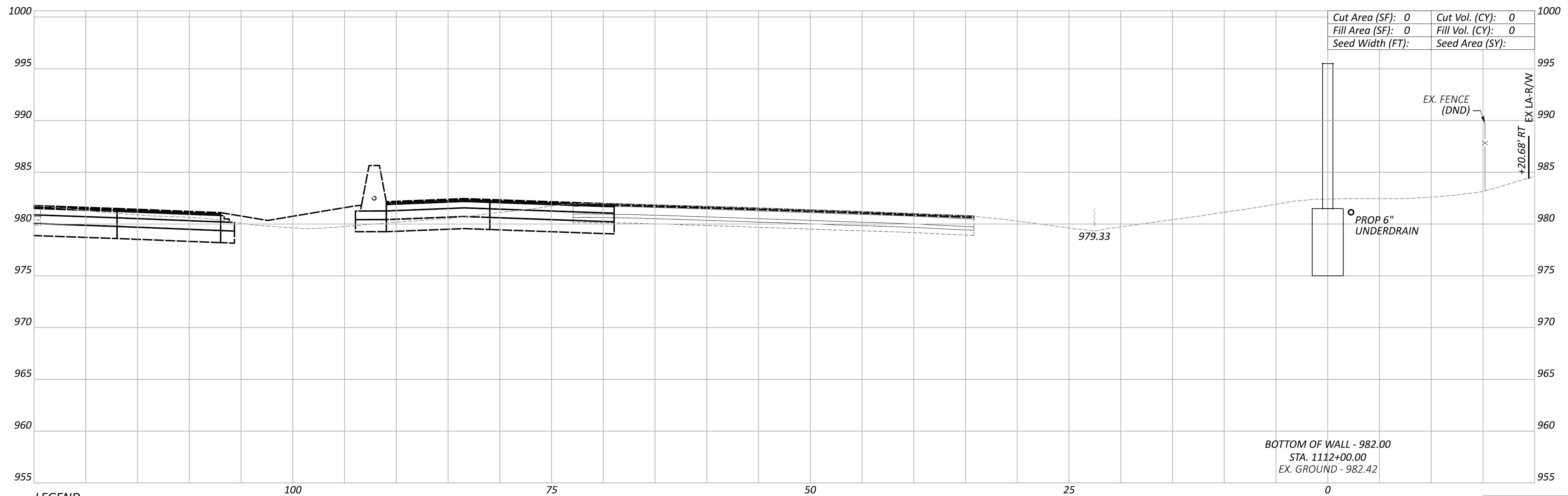
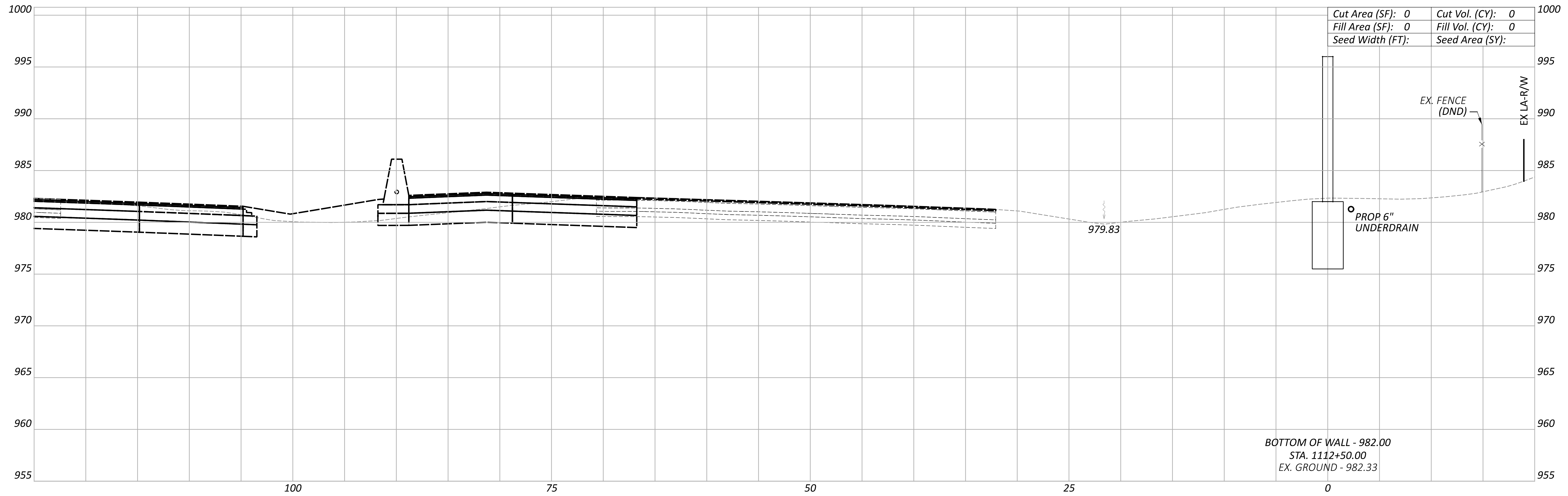
**CROSS SECTIONS - WALL 11
 STA. 1111+00.00 TO STA. 1111+50.00**



DESIGNER: JEP
 REVIEWER: RG
 PROJECT ID: 117607
 SHEET: P.168
 TOTAL: P.295

FRA-161-15.80 NOISE WALLS

MODEL: 1112+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 3/25/2024 TIME: 3:37:16 PM USER: JPerchinske
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LEGEND

- EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals		
Seeding	Cut	Fill

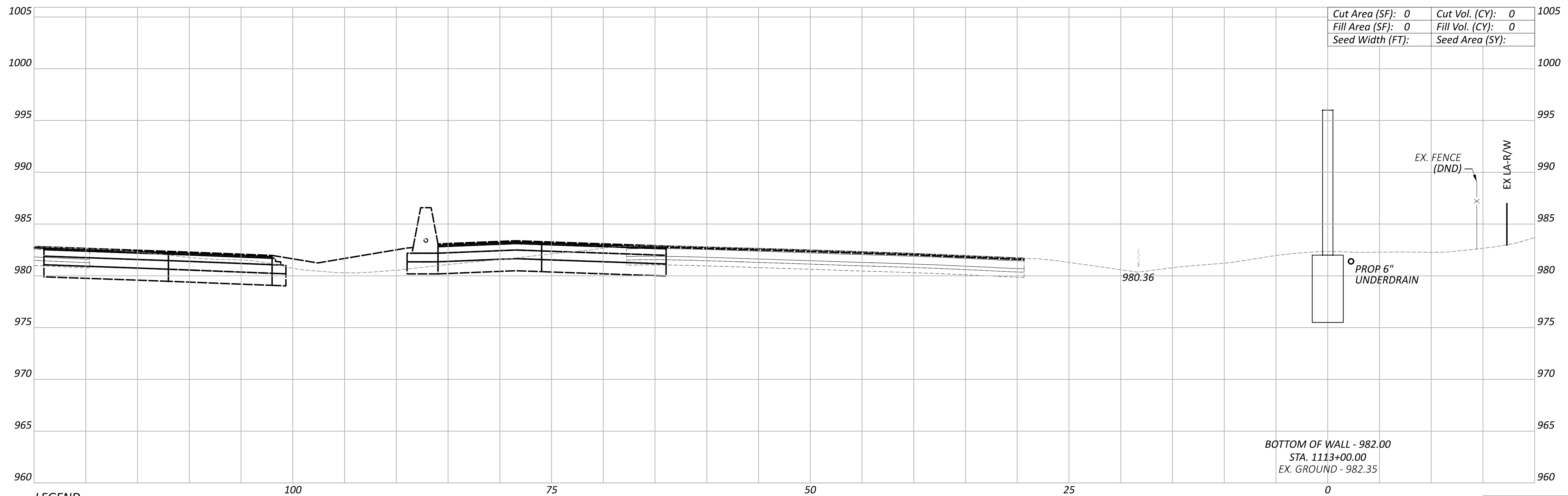
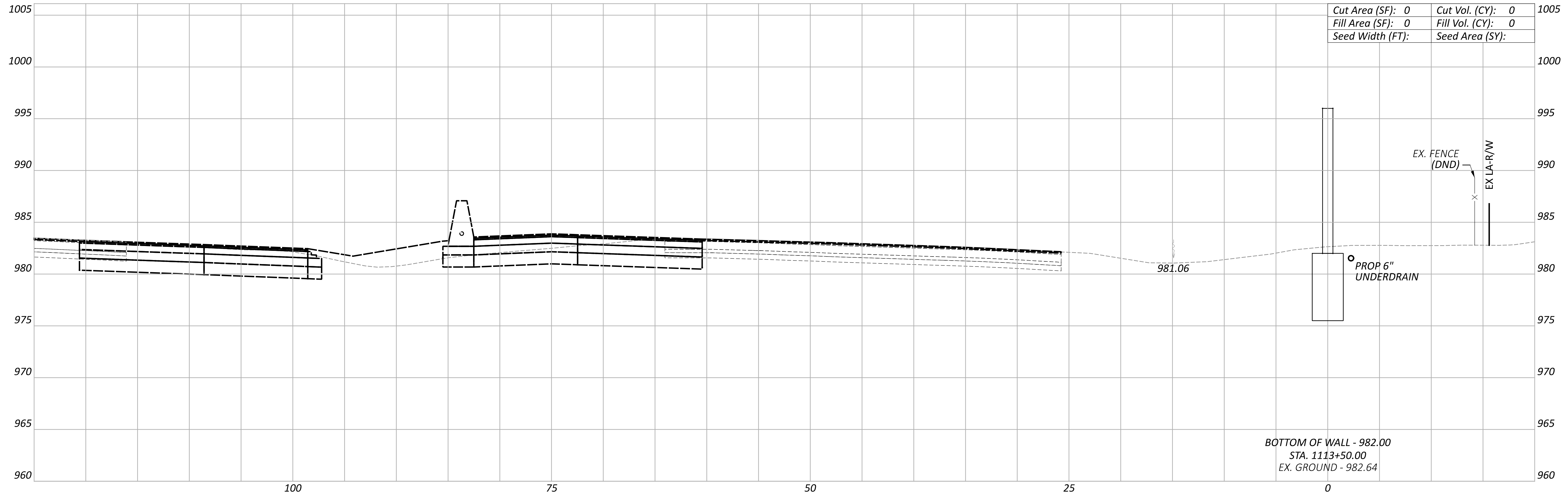
**CROSS SECTIONS - WALL 11
 STA. 1112+00.00 TO STA. 1112+50.00**



DESIGNER: JEP
 REVIEWER: RG
 PROJECT ID: 117607
 SHEET: P.169
 TOTAL: P.295

FRA-161-15.80 NOISE WALLS

MODEL: 1113+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 3/25/2024 TIME: 3:37:24 PM USER: JPerchinske
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LEGEND

- EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals		
Seeding	Cut	Fill



DESIGNER
JEP

REVIEWER
RG 03-27-24

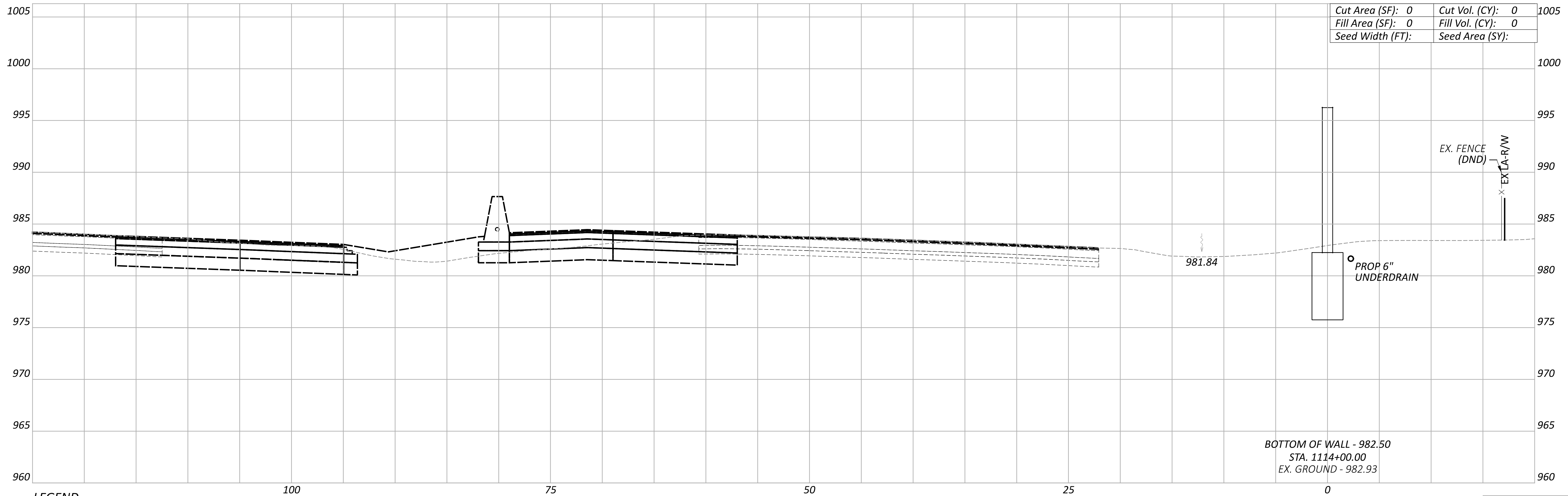
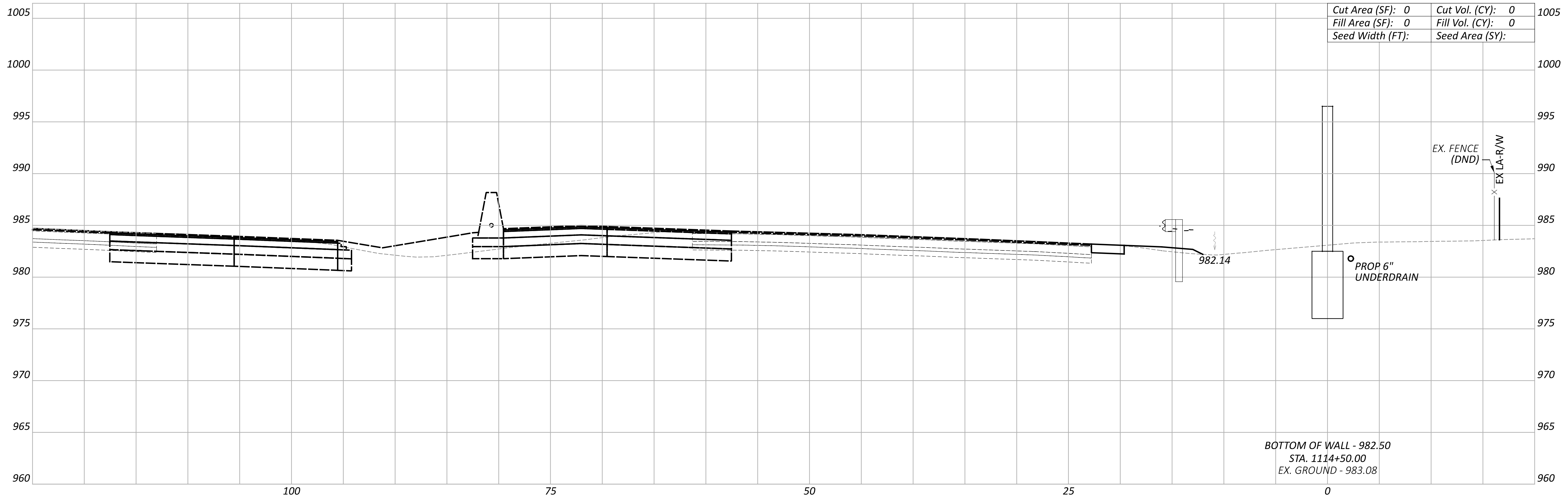
PROJECT ID
117607

SHEET TOTAL
P.170 P.295

**CROSS SECTIONS - WALL 11
 STA. 1113+00.00 TO STA. 1113+50.00**

FRA-161-15.80 NOISE WALLS

MODEL: 1114+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 3/25/2024 TIME: 3:37:34 PM USER: JPerchinske
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LEGEND

- EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals		
Seeding	Cut	Fill

DESIGN AGENCY
BG
 www.bgengineering.com
 5560 WILCOX PLACE, SUITE C
 DUBLIN, OHIO 43016

DESIGNER
 JEP

REVIEWER
 RG 03-27-24

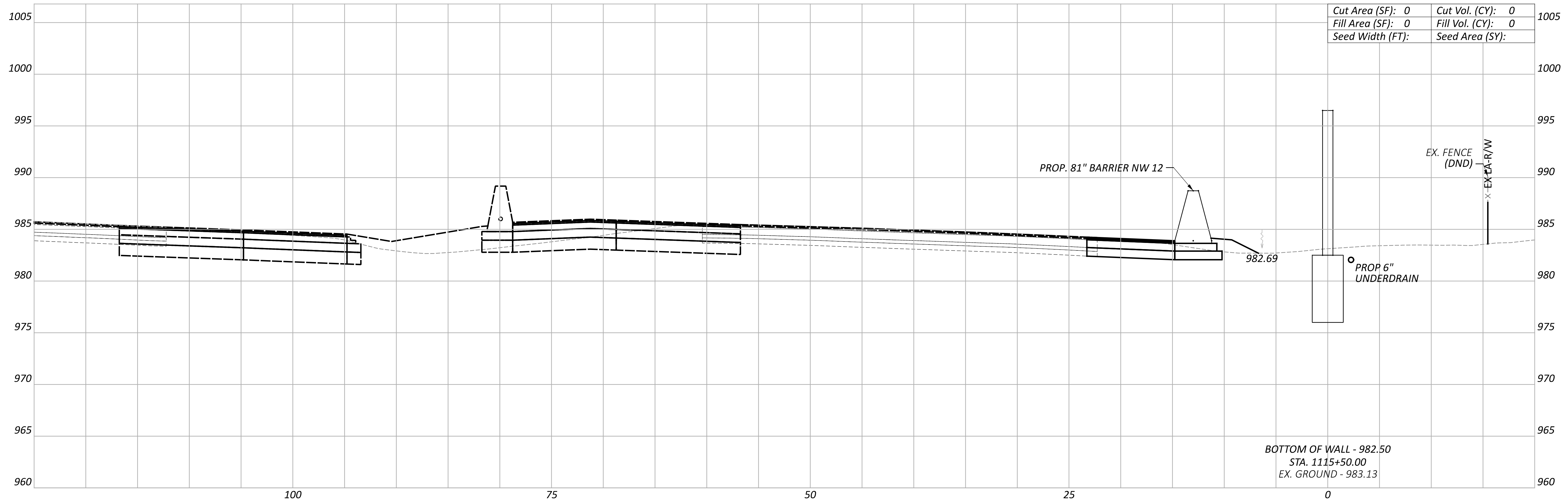
PROJECT ID
 117607

SHEET	TOTAL
P.171	P.295

**CROSS SECTIONS - WALL 11
 STA. 1114+00.00 TO STA. 1114+50.00**

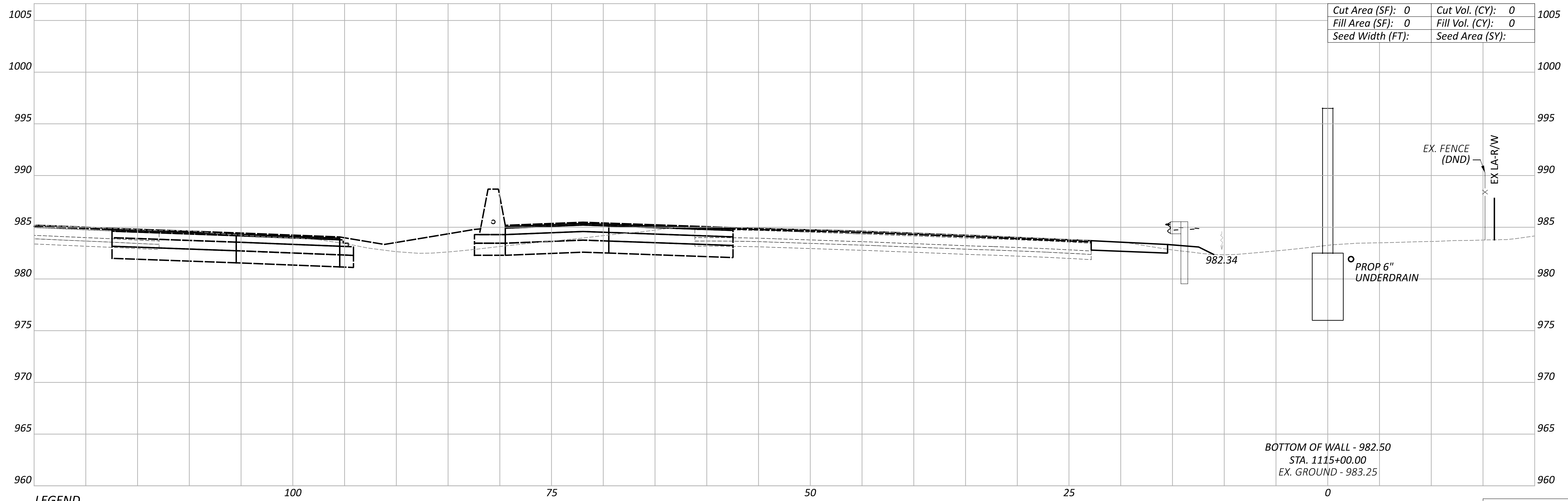
FRA-161-15.80 NOISE WALLS

MODEL: 1115+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 3/25/2024 TIME: 3:37:43 PM USER: JPerchinske
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Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 982.50
 STA. 1115+50.00
 EX. GROUND - 983.13



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 982.50
 STA. 1115+00.00
 EX. GROUND - 983.25

LEGEND

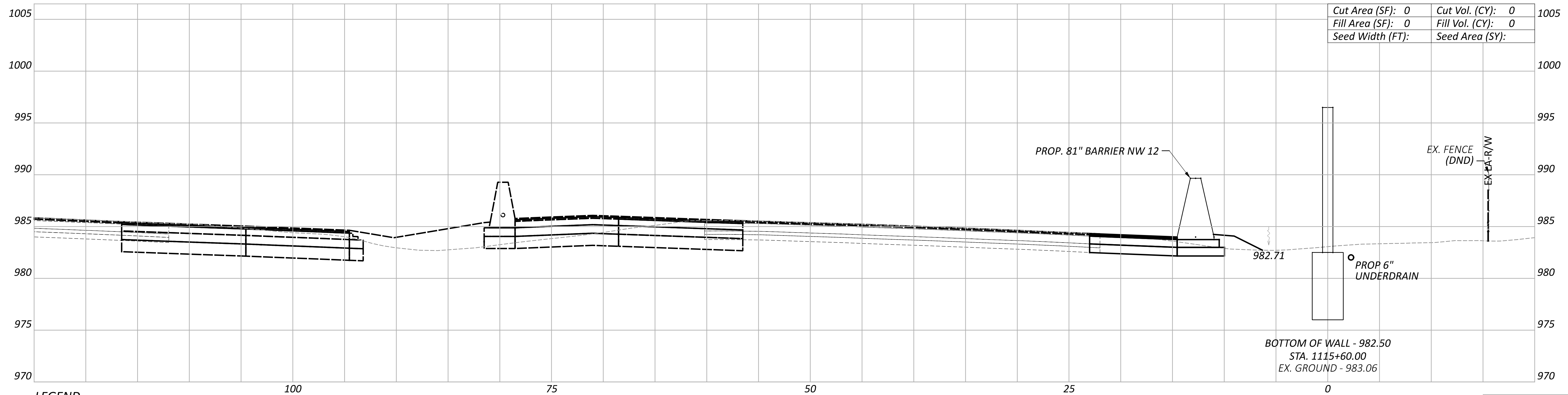
- EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
P.172			P.295

**CROSS SECTIONS - WALL 11
 STA. 1115+00.00 TO STA. 1115+50.00**



DESIGNER: JEP
 REVIEWER: RG
 PROJECT ID: 117607
 SHEET: P.172
 TOTAL: P.295



LEGEND

- EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

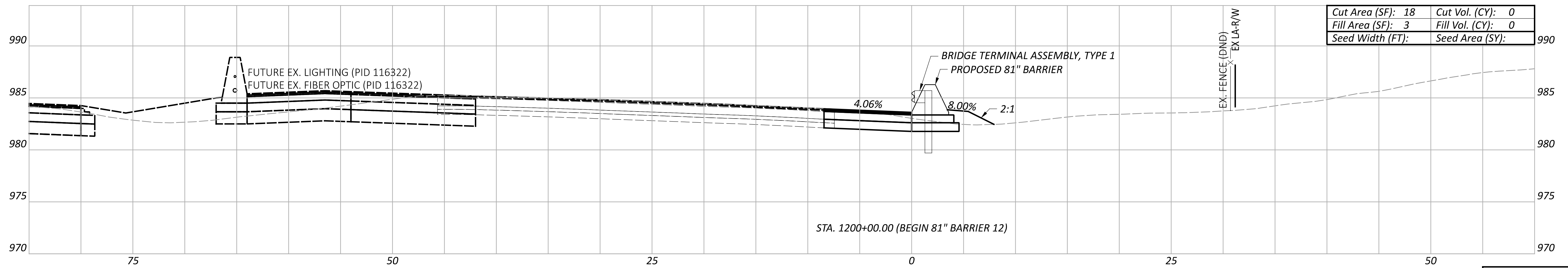
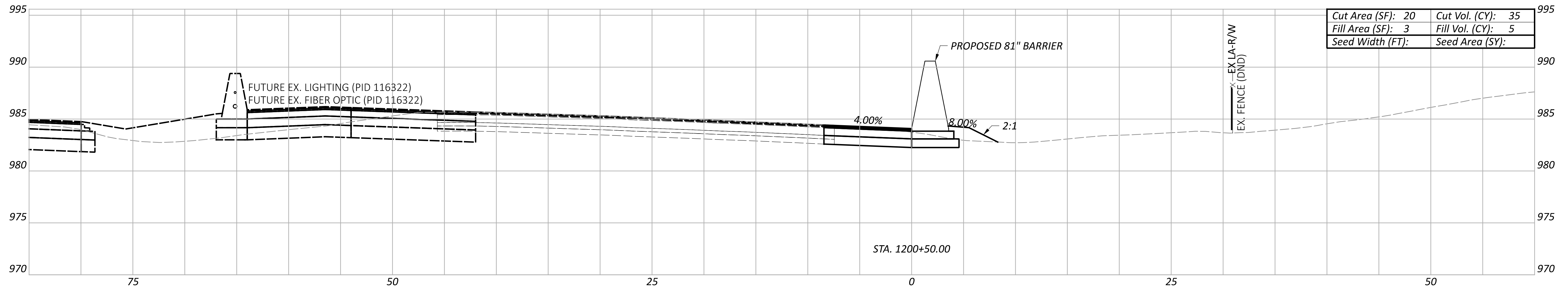
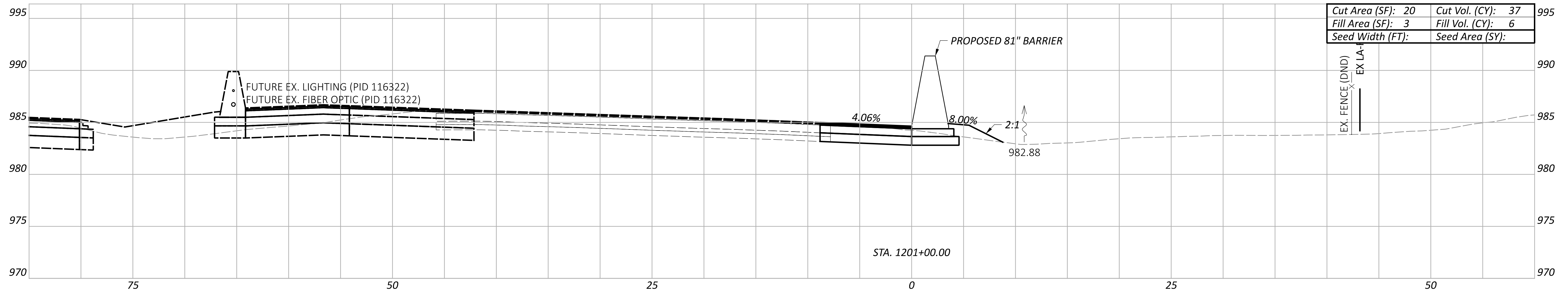
Sheet Totals		
Seeding	Cut	Fill

CROSS SECTIONS - WALL 11
 STA. 1115+60.00

DESIGN AGENCY

 www.bgengr.com
 5560 WILCOX PLACE, SUITE C
 DUBLIN, OHIO 43016

DESIGNER	JEP
REVIEWER	RG
PROJECT ID	117607
SHEET	P.173
TOTAL	P.295



Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
72	11		P.174	P.295

CROSS SECTIONS - 81" BARRIER 12
 STA. 1200+00.00 TO STA. 1201+00.00

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS SUITE 100
 COLUMBIANA, OHIO 43085
 (614) 818-4900
 www.arcadis.com

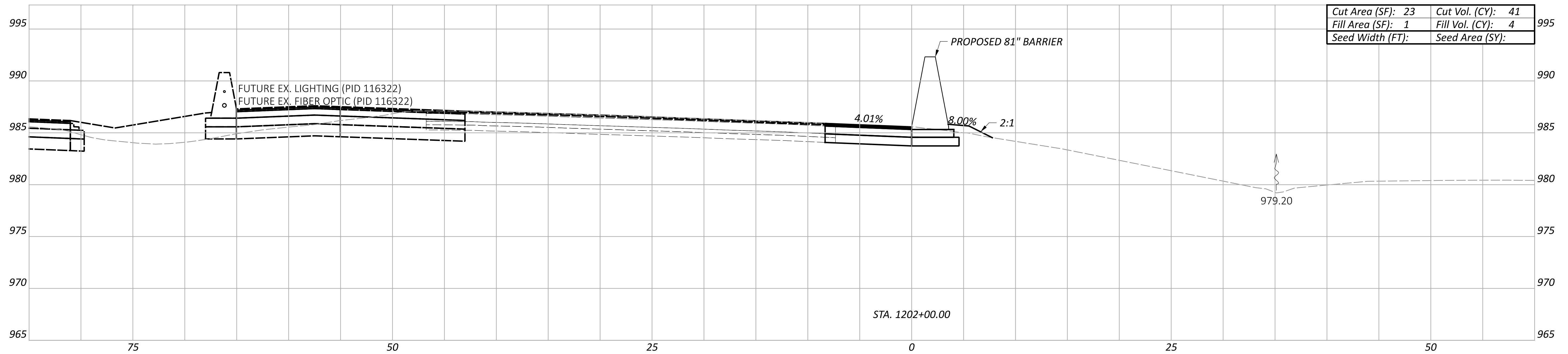
DESIGNER
JMK

REVIEWER
 JDH 03-27-24

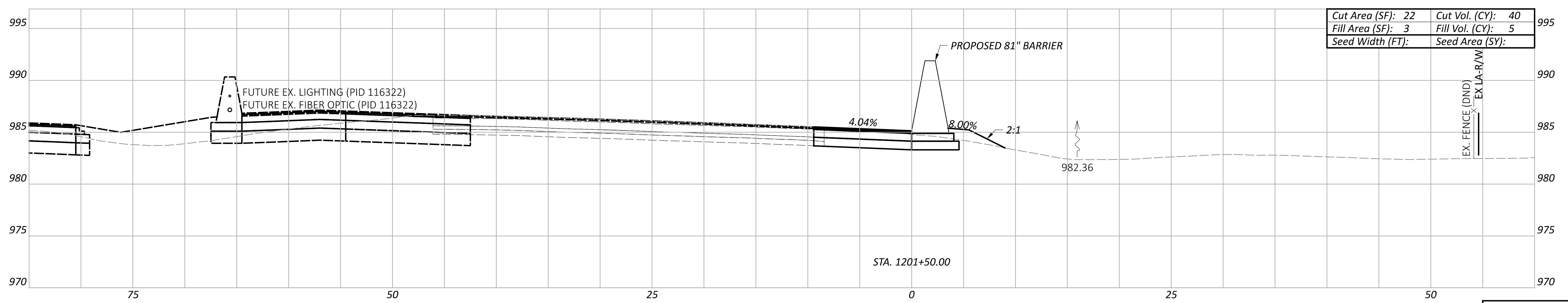
PROJECT ID
 117607

FRA-161-15.80 NOISE WALLS

MODEL: BLP_BARRIER12 - 1201+50.00 [Sheet] PAPER/SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:28:31 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS012A.dgn



Cut Area (SF):	23	Cut Vol. (CY):	41
Fill Area (SF):	1	Fill Vol. (CY):	4
Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	22	Cut Vol. (CY):	40
Fill Area (SF):	3	Fill Vol. (CY):	5
Seed Width (FT):		Seed Area (SY):	

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
	81	9	P.175	P.295

**CROSS SECTIONS - 81" BARRIER 12
 STA. 1201+50.00 TO STA. 1202+00.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS AVE SUITE 100
 COLUMBIANA, OH 43085
 (614) 810-4900
 www.arcadis.com

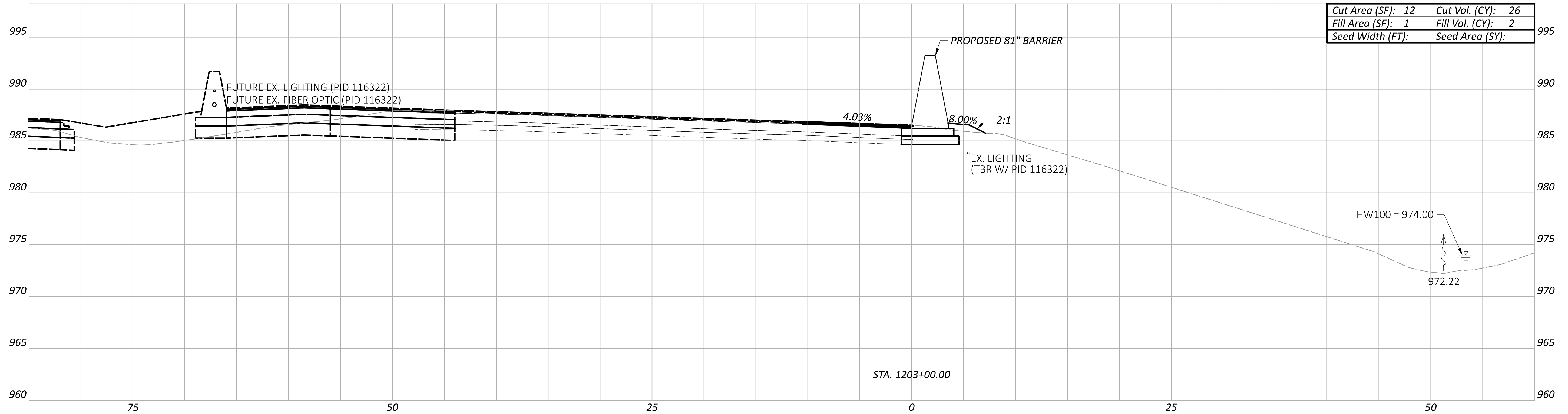
DESIGNER
JMK

REVIEWER
JDH 03-27-24

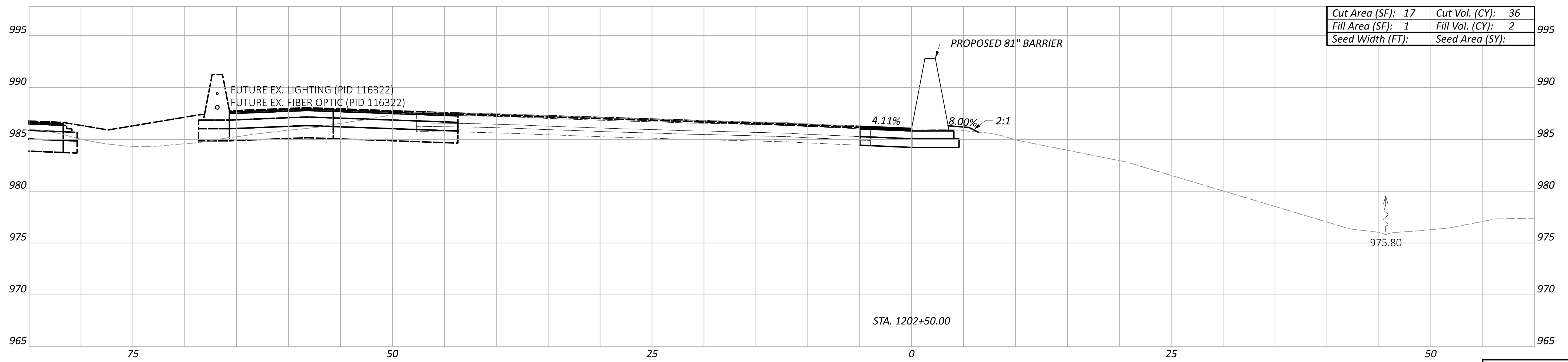
PROJECT ID
117607

FRA-161-15.80 NOISE WALLS

MODEL: BLP_BARRIER12 - 1202+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:29:01 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS012A.dgn



Cut Area (SF):	12	Cut Vol. (CY):	26
Fill Area (SF):	1	Fill Vol. (CY):	2
Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	17	Cut Vol. (CY):	36
Fill Area (SF):	1	Fill Vol. (CY):	2
Seed Width (FT):		Seed Area (SY):	

Sheet Totals				117607	
Seeding	Cut	Fill	SHEET	TOTAL	
	62	4	P.176	P.295	

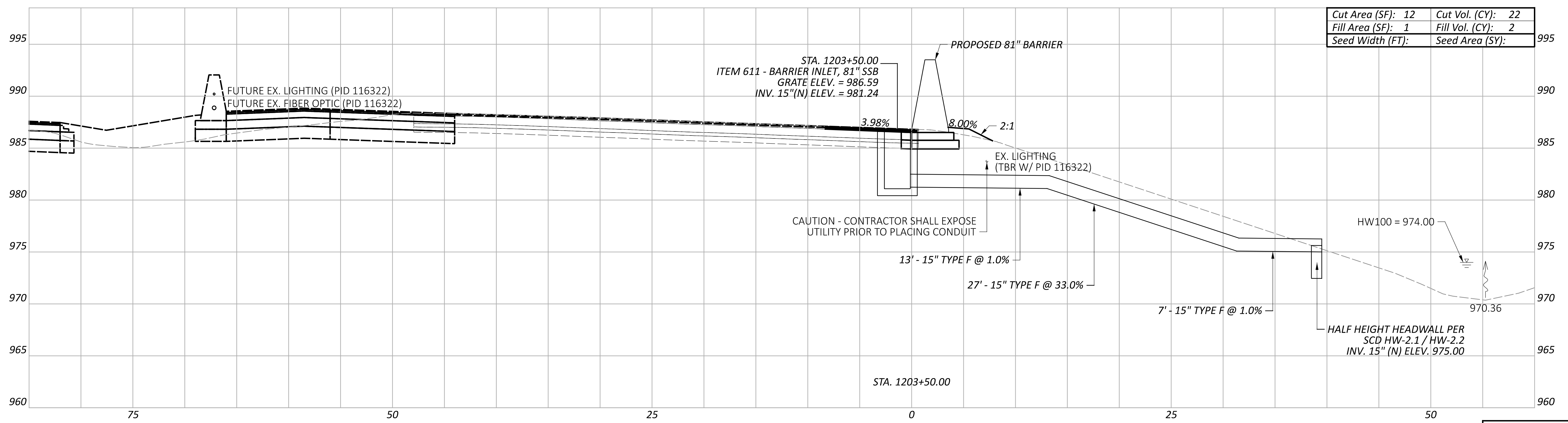
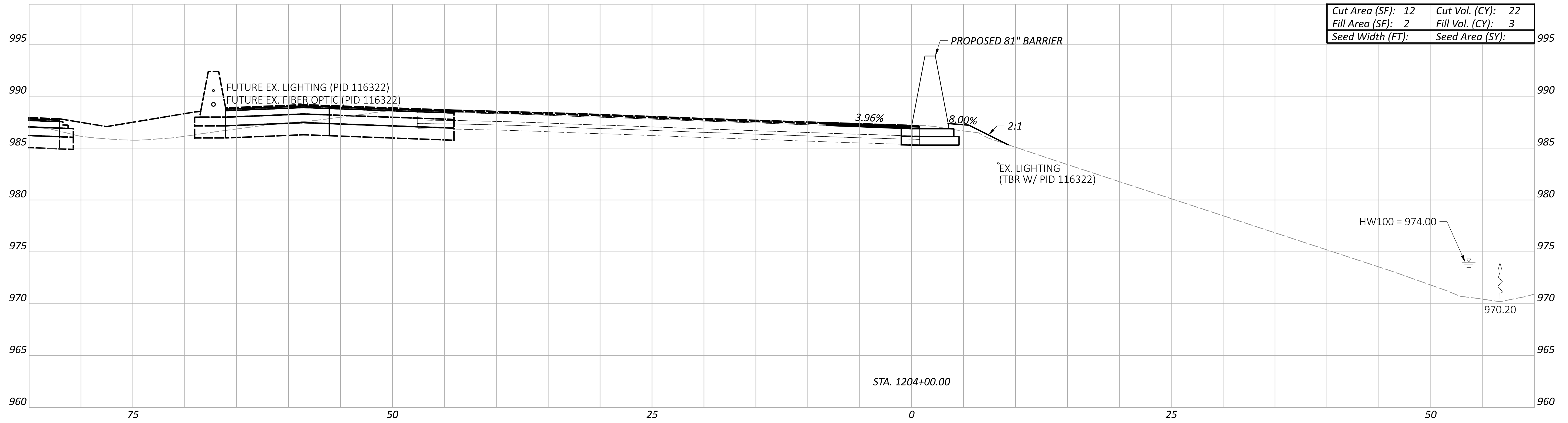
**CROSS SECTIONS - 81" BARRIER 12
 STA. 1202+50.00 TO STA. 1203+00.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY SUITE 100
 COLUMBIANA, OH 43085
 (614) 819-4900
 www.arcadis.com

DESIGNER
JMK

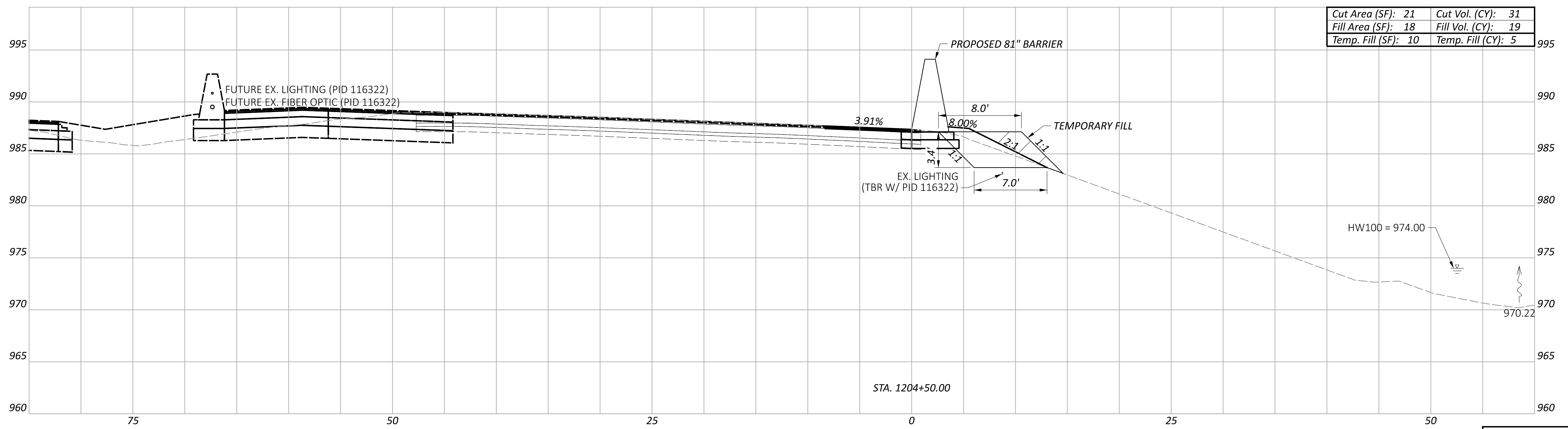
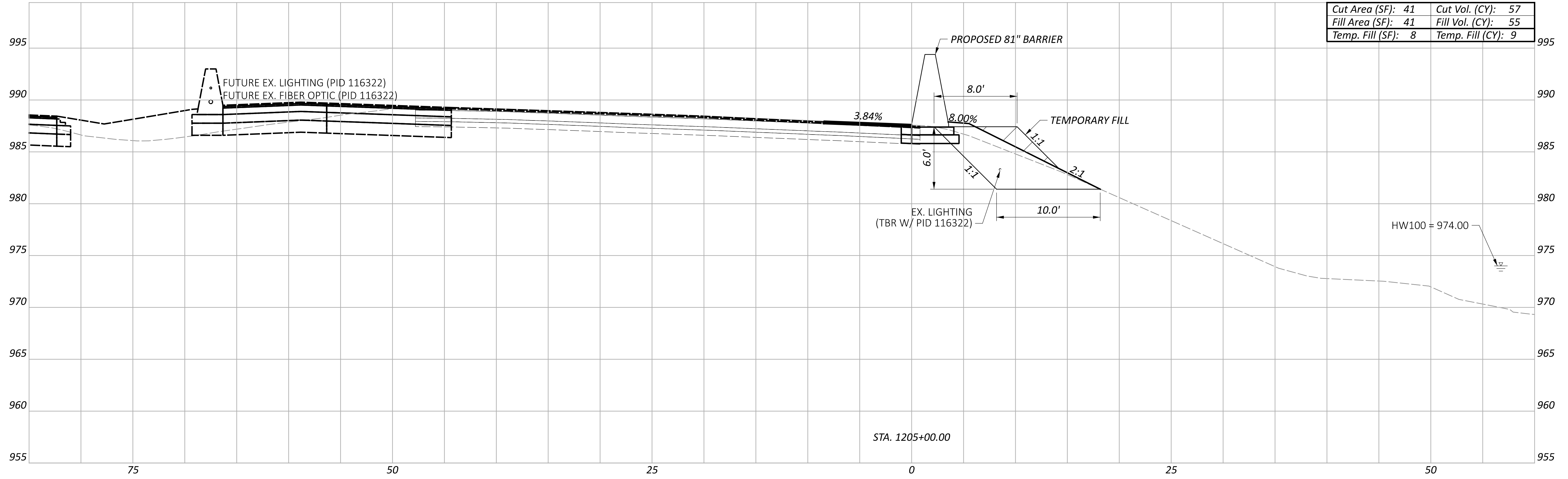
REVIEWER
JDH 03-27-24

PROJECT ID
117607



CROSS SECTIONS - 81" BARRIER 12
 STA. 1203+50.00 TO STA. 1204+00.00

Sheet Totals			TOTAL	
Seeding	Cut	Fill	P.177	P.295
	44	5		



Sheet Totals			117607
Temp. Fill	Cut	Fill	TOTAL
14	88	74	P.178 P.295

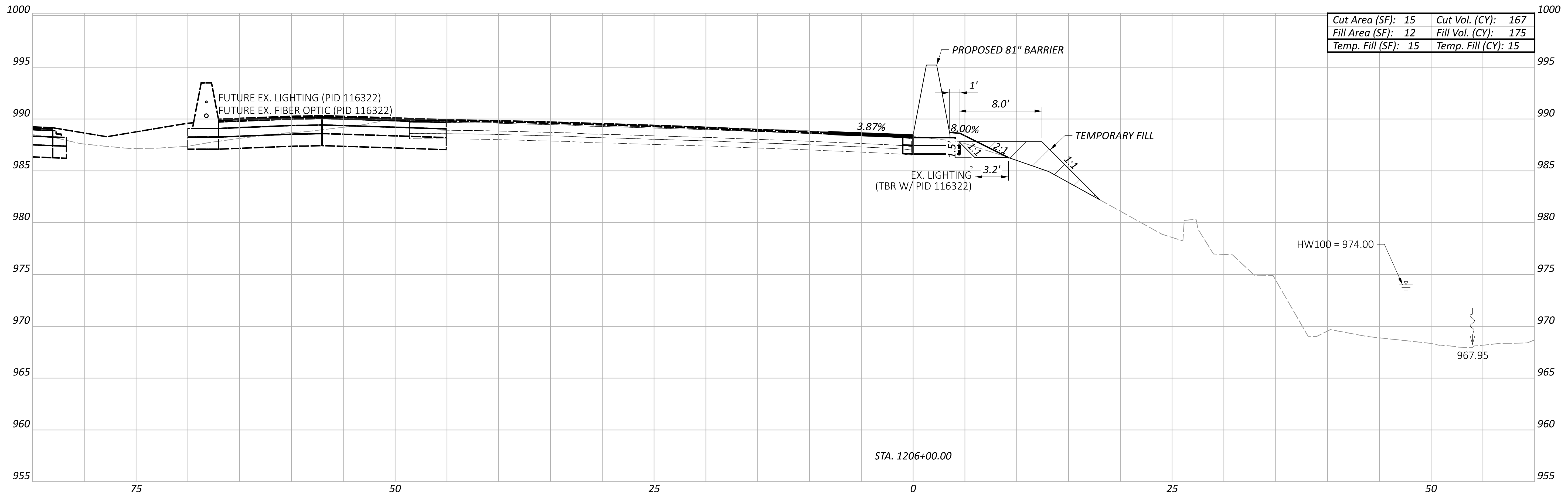
CROSS SECTIONS - 81" BARRIER 12
 STA. 1204+50.00 TO STA. 1205+00.00

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ARCADIS
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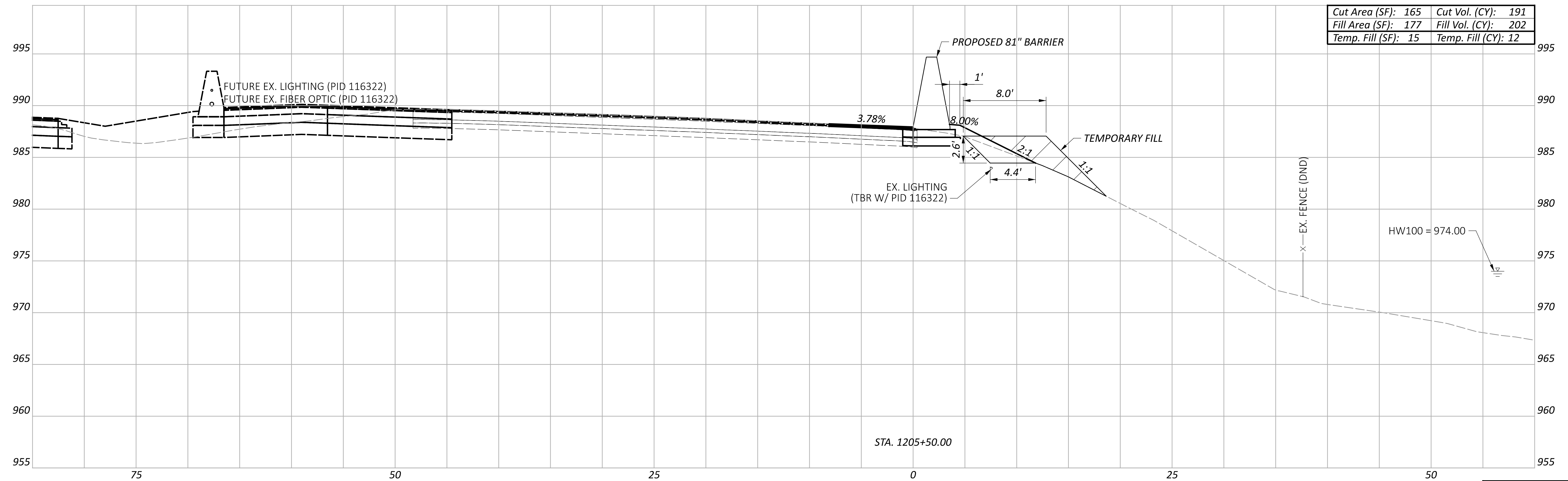
DESIGNER
JMK

REVIEWER
 JDH 03-27-24

PROJECT ID
 117607



Cut Area (SF):	15	Cut Vol. (CY):	167
Fill Area (SF):	12	Fill Vol. (CY):	175
Temp. Fill (SF):	15	Temp. Fill (CY):	15



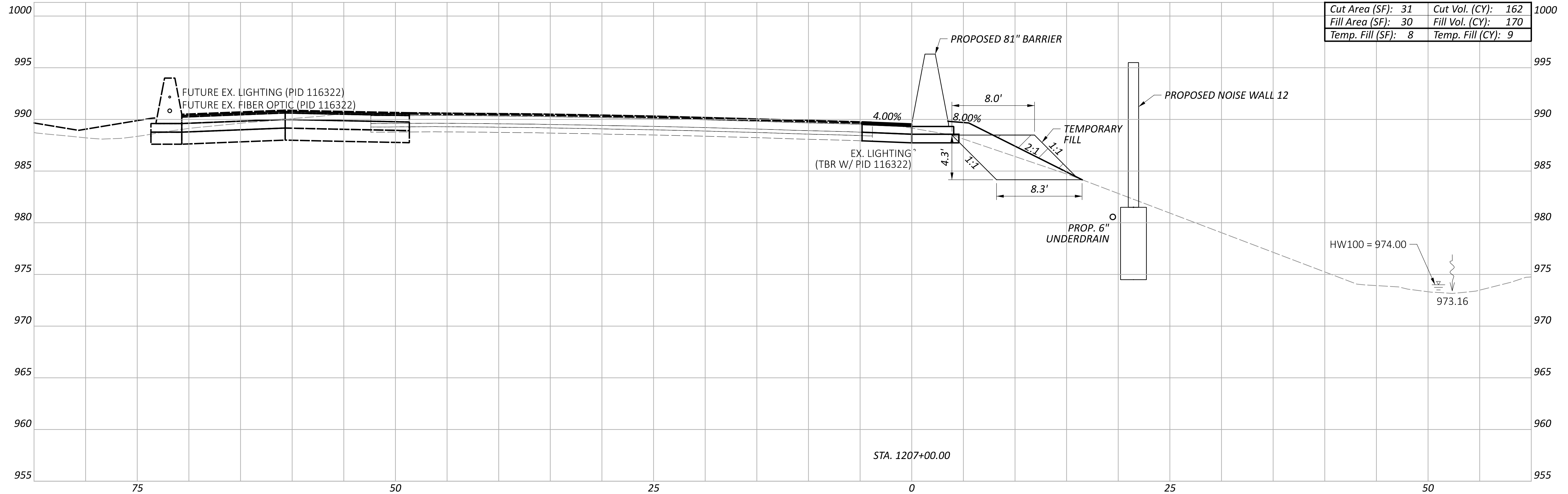
Cut Area (SF):	165	Cut Vol. (CY):	191
Fill Area (SF):	177	Fill Vol. (CY):	202
Temp. Fill (SF):	15	Temp. Fill (CY):	12

CROSS SECTIONS - 81" BARRIER 12
 STA. 1205+50.00 TO STA. 1206+00.00

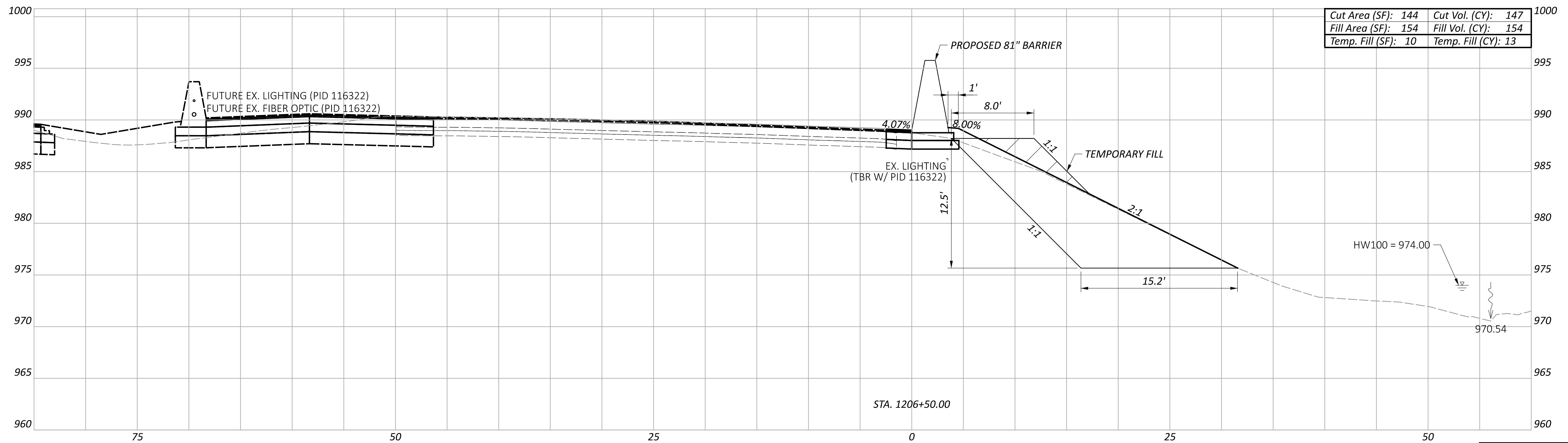
Sheet Totals			117607
Temp. Fill	Cut	Fill	TOTAL
27	358	377	P.179 P.295

FRA-161-15.80 NOISE WALLS

MODEL: BLP_BARRIER12 - 1206+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-27 TIME: 1:44:29 AM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS012A.dgn



Cut Area (SF): 31	Cut Vol. (CY): 162
Fill Area (SF): 30	Fill Vol. (CY): 170
Temp. Fill (SF): 8	Temp. Fill (CY): 9



Cut Area (SF): 144	Cut Vol. (CY): 147
Fill Area (SF): 154	Fill Vol. (CY): 154
Temp. Fill (SF): 10	Temp. Fill (CY): 13

Sheet Totals			117607	
Temp. Fill	Cut	Fill	SHEET	TOTAL
22	309	324	P.180	P.295

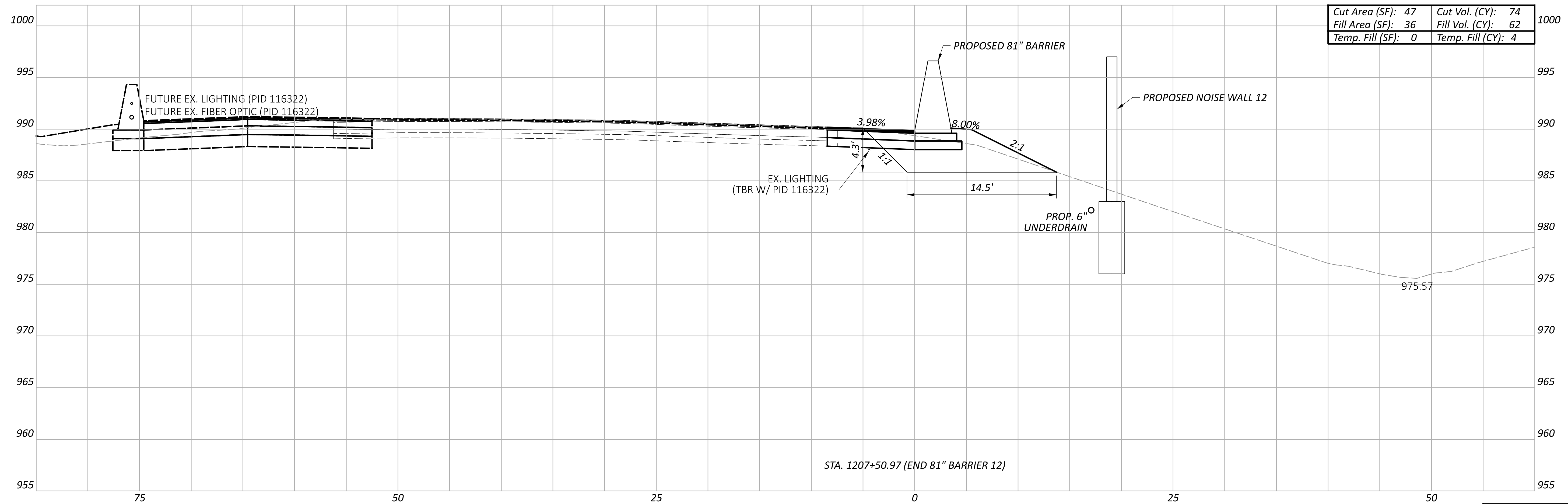
**CROSS SECTIONS - 81" BARRIER 12
 STA. 1206+50.00 TO STA. 1207+00.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHTWAY SUITE 100
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DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607



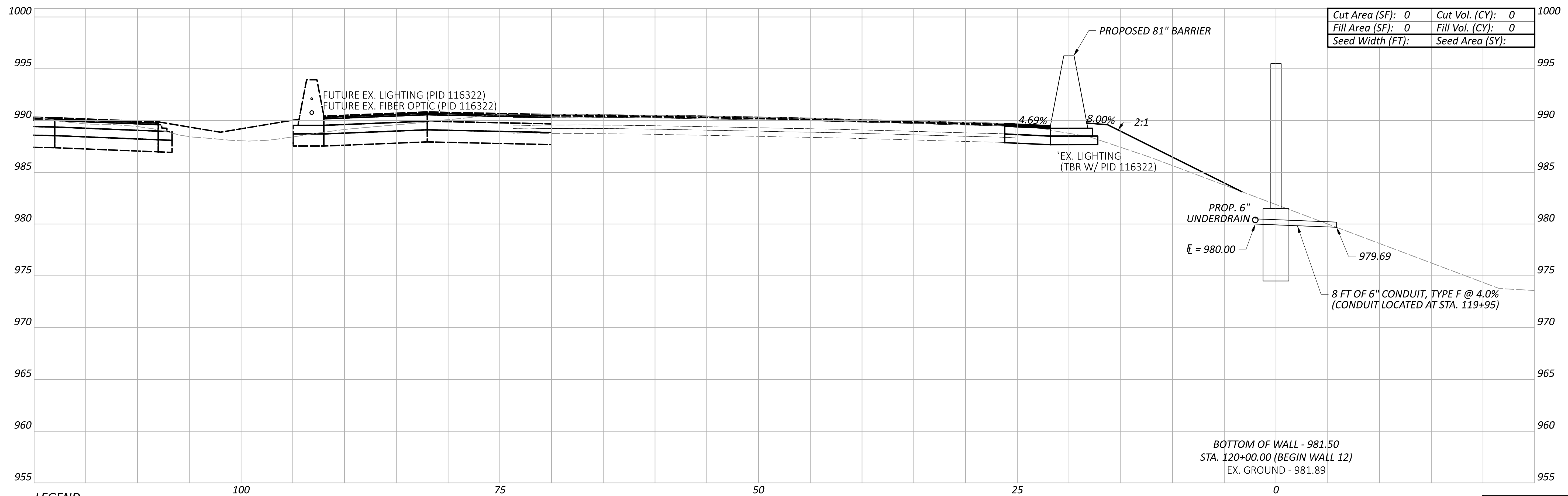
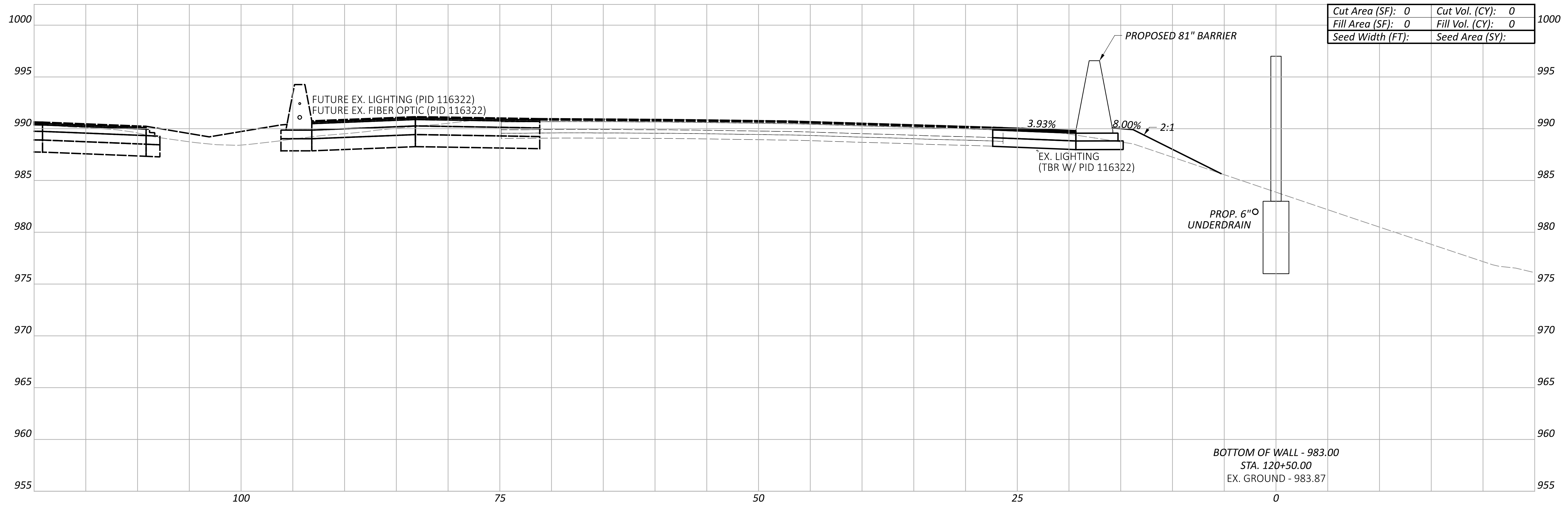
Cut Area (SF):	47	Cut Vol. (CY):	74
Fill Area (SF):	36	Fill Vol. (CY):	62
Temp. Fill (SF):	0	Temp. Fill (CY):	4

STA. 1207+50.97 (END 81" BARRIER 12)

Sheet Totals			117607
Temp. Fill	Cut	Fill	TOTAL
4	74	62	P.181 P.295

FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL13 - 120+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:31:25 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS012B.dgn



LEGEND

- EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
0	0	0	P.182 P.295

**CROSS SECTIONS - WALL 12
 STA. 120+00.00 TO STA. 120+50.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY SUITE 100
 COLUMBIANA, OH 43085
 614.894.9900
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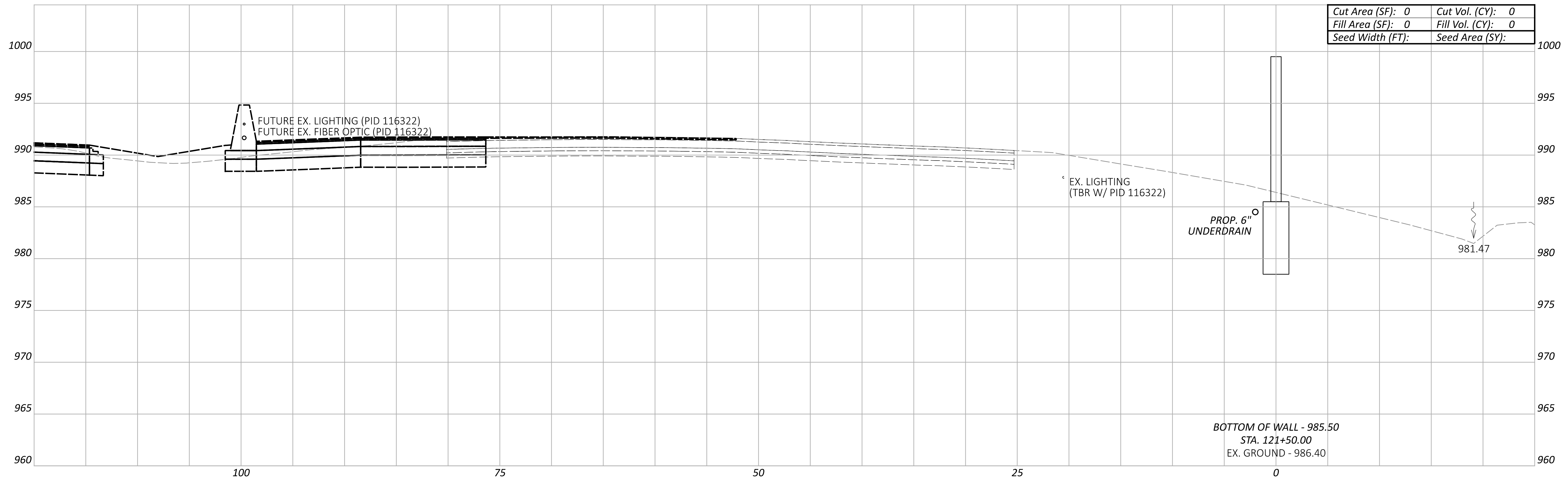
DESIGNER
JMK

REVIEWER
JDH 03-27-24

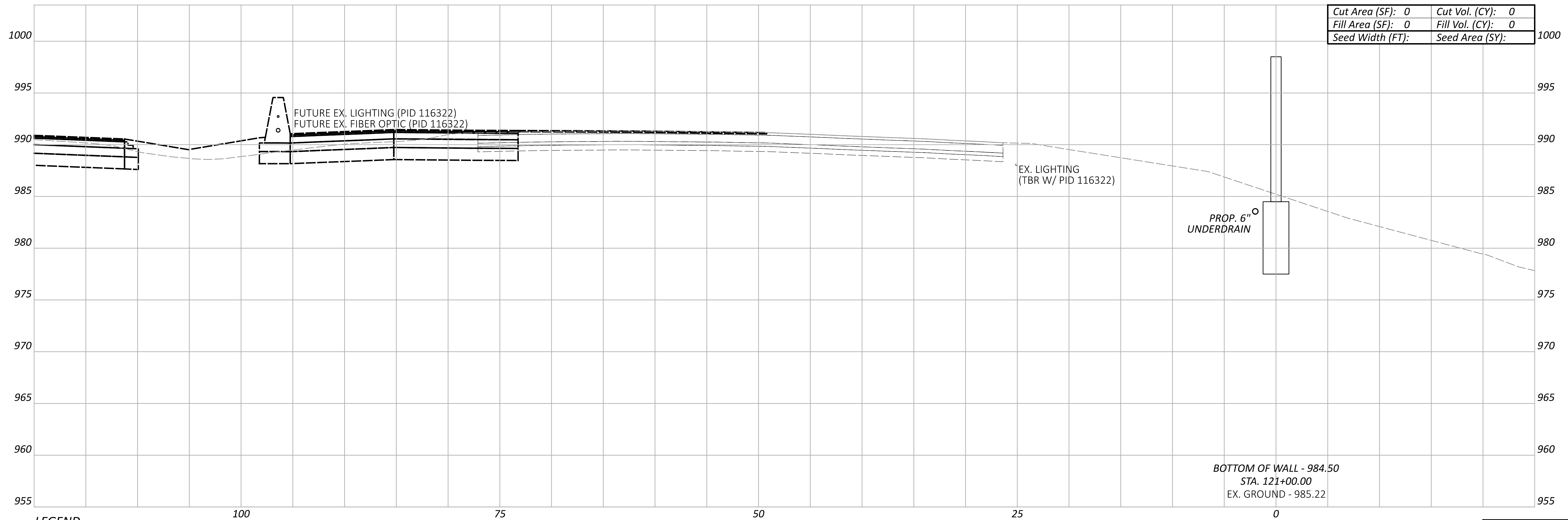
PROJECT ID
117607

FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL13 - 121+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:32:22 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS012B.dgn



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

LEGEND

- EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
0	0	0	P.183	P.295

**CROSS SECTIONS - WALL 12
 STA. 121+00.00 TO STA. 121+50.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS SUITE 100
 COLUMBIANA, OH 43085
 614.849.4900
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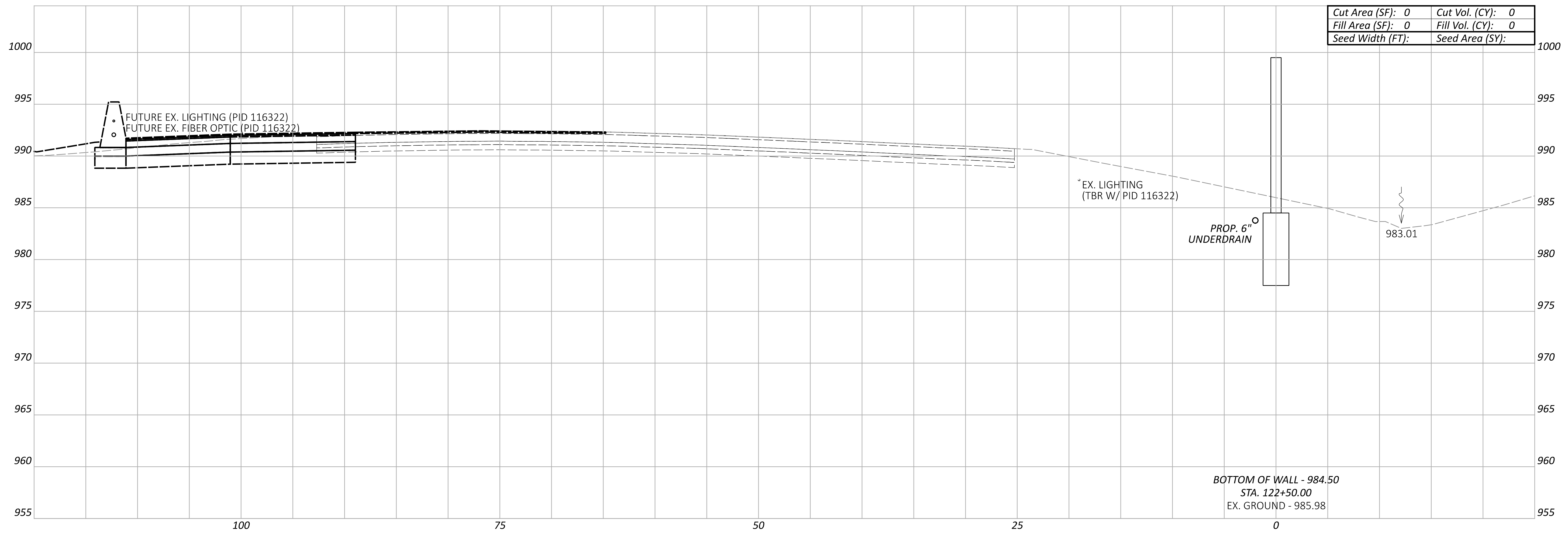
DESIGNER
JMK

REVIEWER
JDH 03-27-24

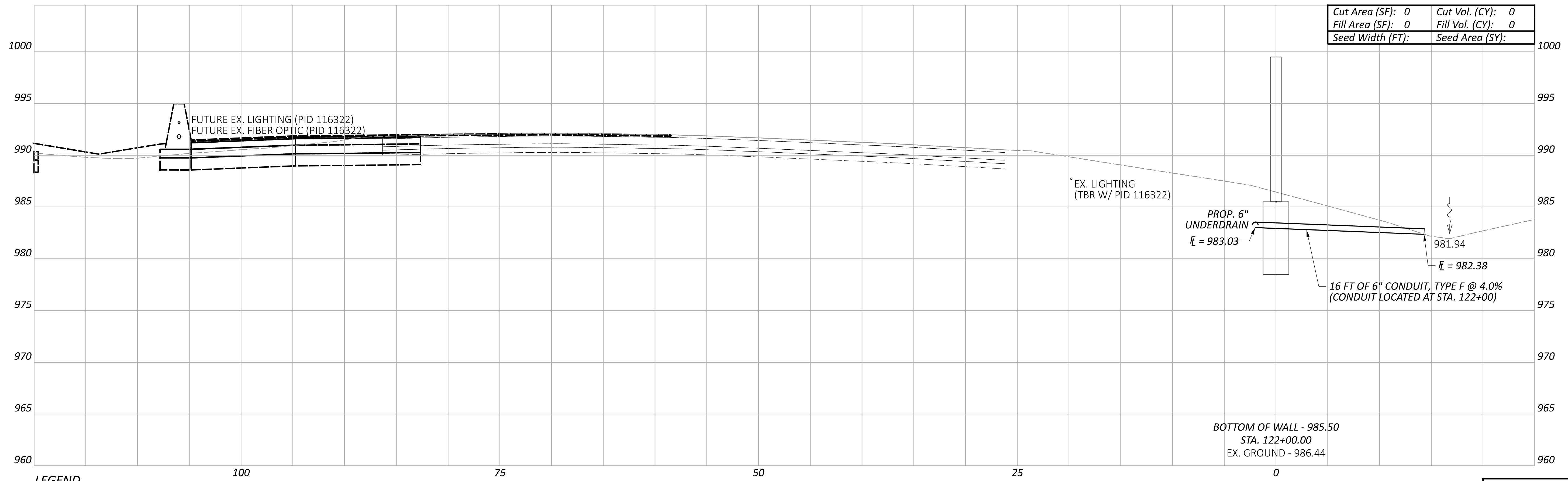
PROJECT ID
117607

FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL13 - 122+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:33:10 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS012B.dgn



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
0	0	0	P.184	P.295

**CROSS SECTIONS - WALL 12
 STA. 122+00.00 TO STA. 122+50.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY 200 SUITE 100
 COLUMBIA, MO 65203
 (616) 419-4900
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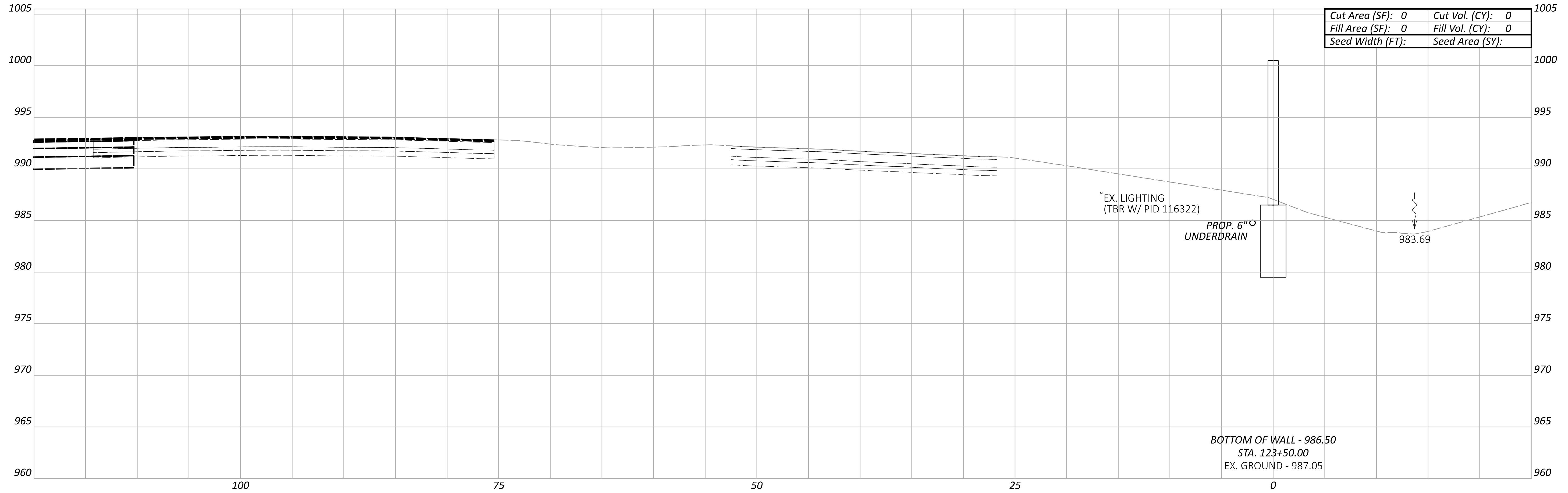
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

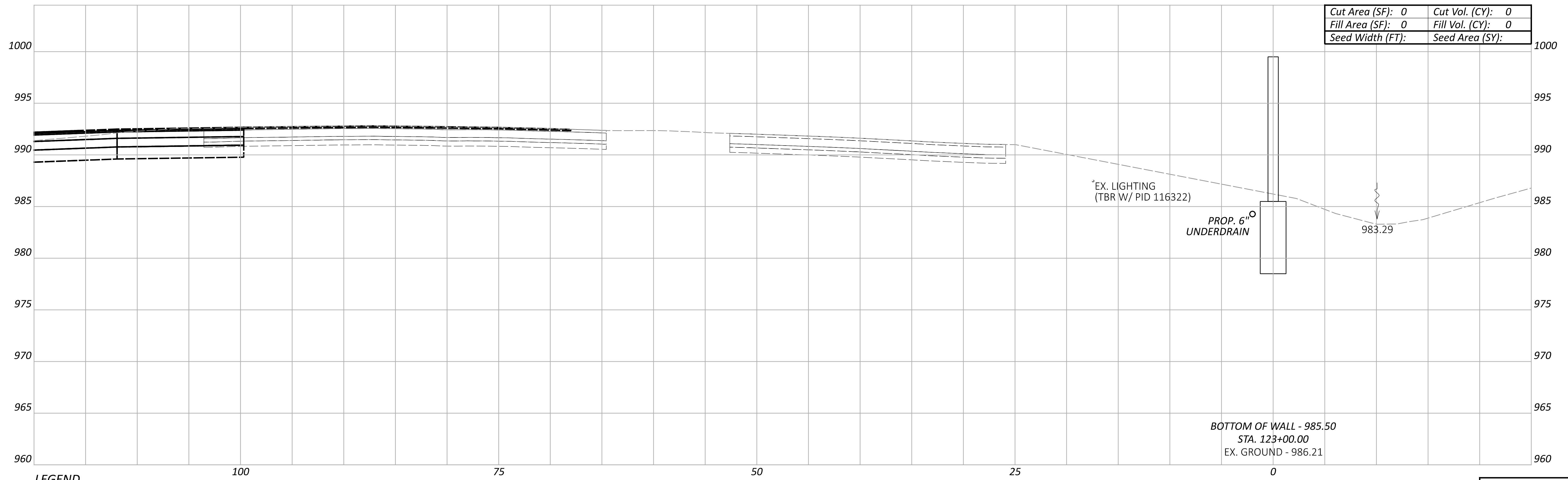
FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL13 - 123+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:33:55 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS012B.dgn



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 986.50
 STA. 123+50.00
 EX. GROUND - 987.05



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 985.50
 STA. 123+00.00
 EX. GROUND - 986.21

LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
0	0	0	P.185	P.295

**CROSS SECTIONS - WALL 12
 STA. 123+00.00 TO STA. 123+50.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS SUITE 100
 COLUMBIA, MO 65203
 (646) 441-4900
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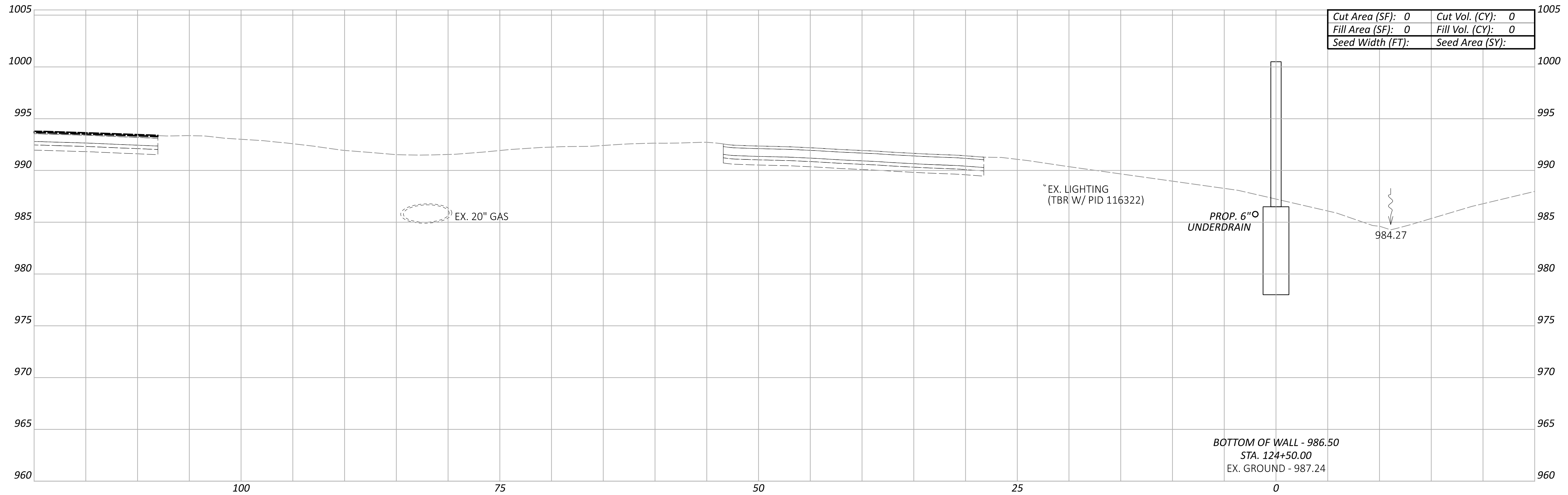
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL13 - 124+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:34:38 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS012B.dgn



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

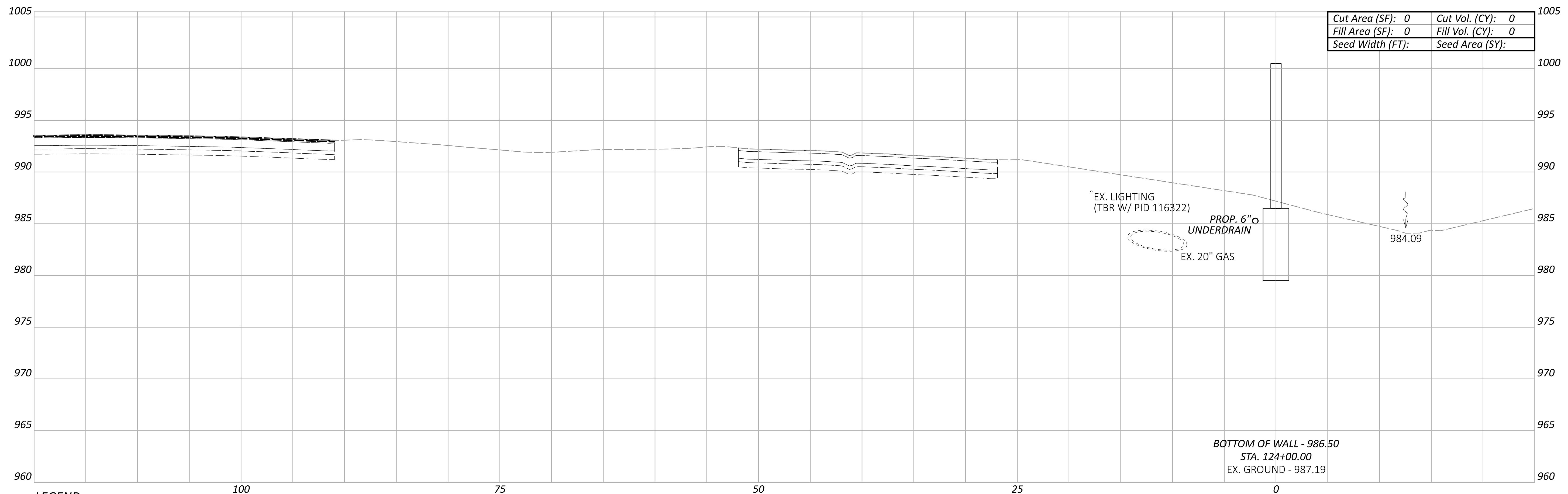
PROP. 6" UNDERDRAIN

BOTTOM OF WALL - 986.50
 STA. 124+50.00
 EX. GROUND - 987.24

984.27

EX. LIGHTING (TBR W/ PID 116322)

EX. 20" GAS



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

PROP. 6" UNDERDRAIN

BOTTOM OF WALL - 986.50
 STA. 124+00.00
 EX. GROUND - 987.19

984.09

EX. LIGHTING (TBR W/ PID 116322)

EX. 20" GAS

LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

**CROSS SECTIONS - WALL 12
 STA. 124+00.00 TO STA. 124+50.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS SUITE 100
 COLUMBIANA, OHIO 43085
 (614) 819-4900
 www.arcadis.com

DESIGNER
JMK

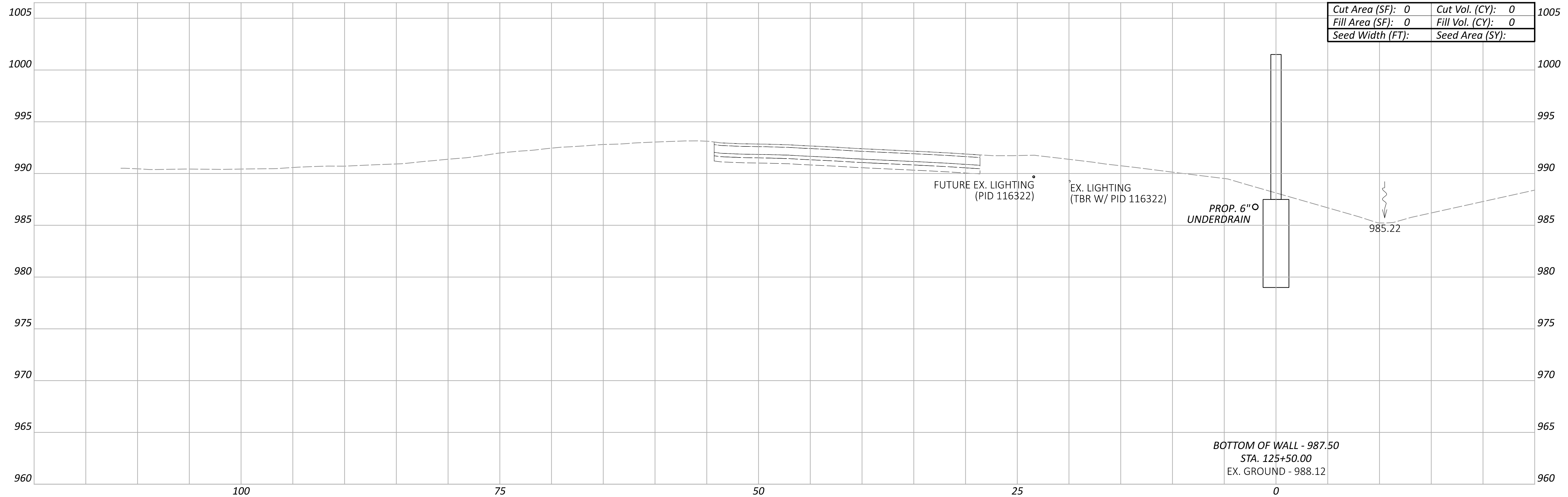
REVIEWER
JDH 03-27-24

PROJECT ID
117607

Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	P.186	P.295
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FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL13 - 125+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:35:35 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS012B.dgn

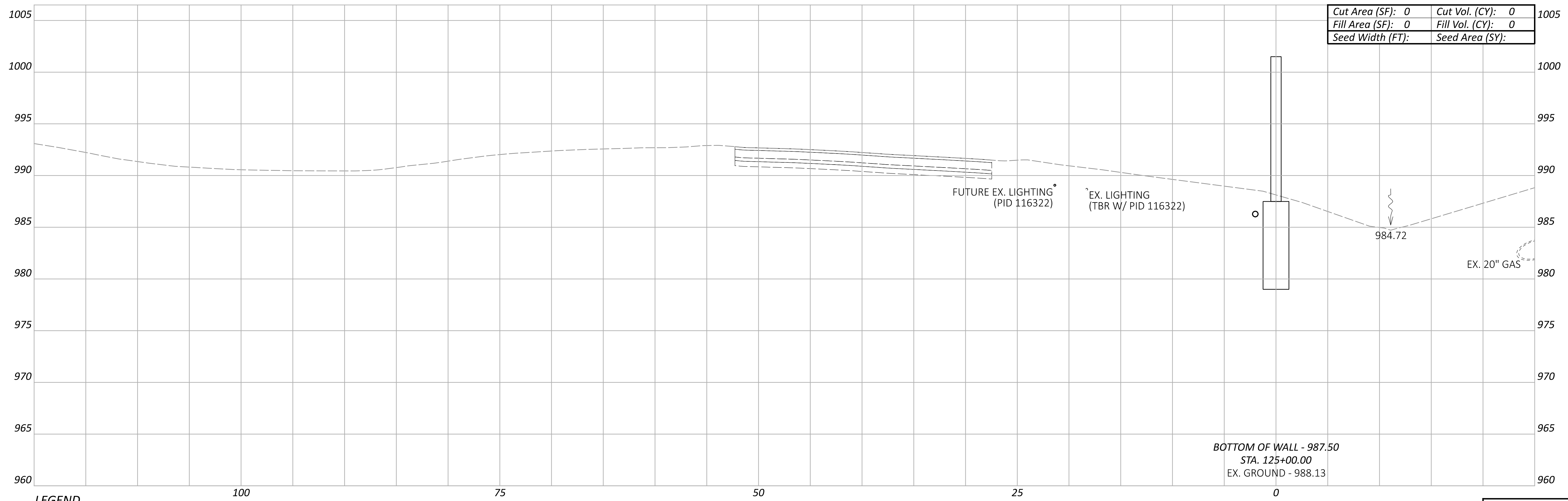


Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

PROP. 6" O UNDERDRAIN

BOTTOM OF WALL - 987.50
 STA. 125+50.00
 EX. GROUND - 988.12

985.22



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 987.50
 STA. 125+00.00
 EX. GROUND - 988.13

984.72

EX. 20" GAS

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
0	0	0	P.187 P.295

**CROSS SECTIONS - WALL 12
 STA. 125+00.00 TO STA. 125+50.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY SUITE 100
 COLUMBIA, MO 65203
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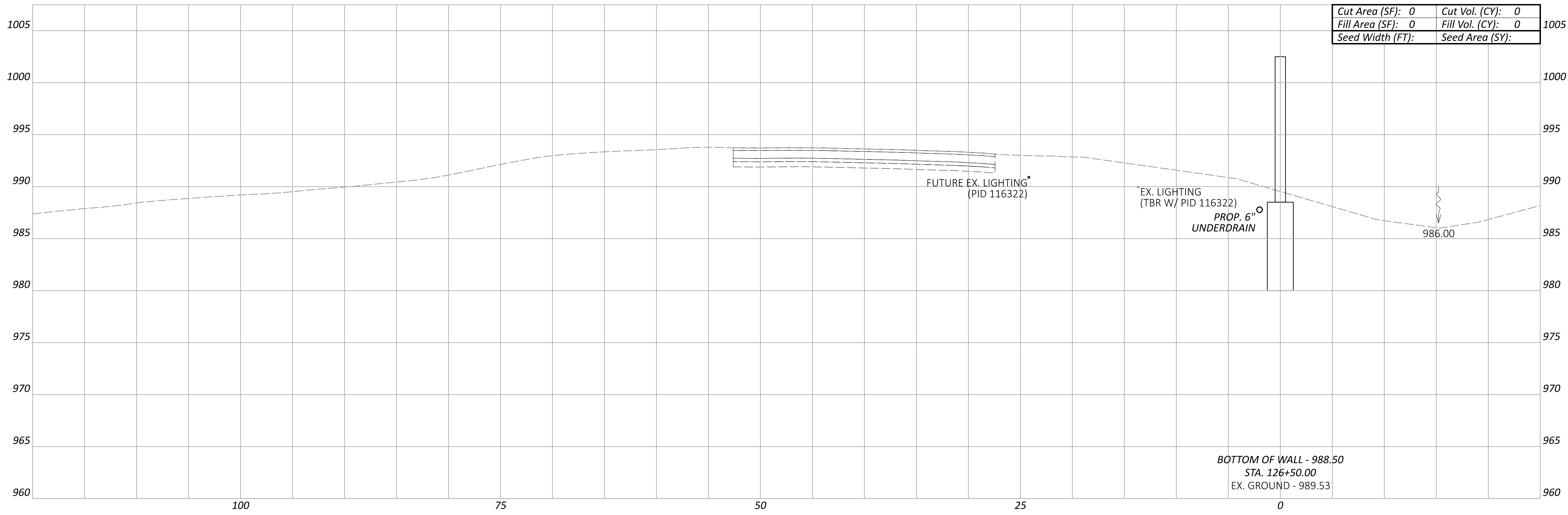
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

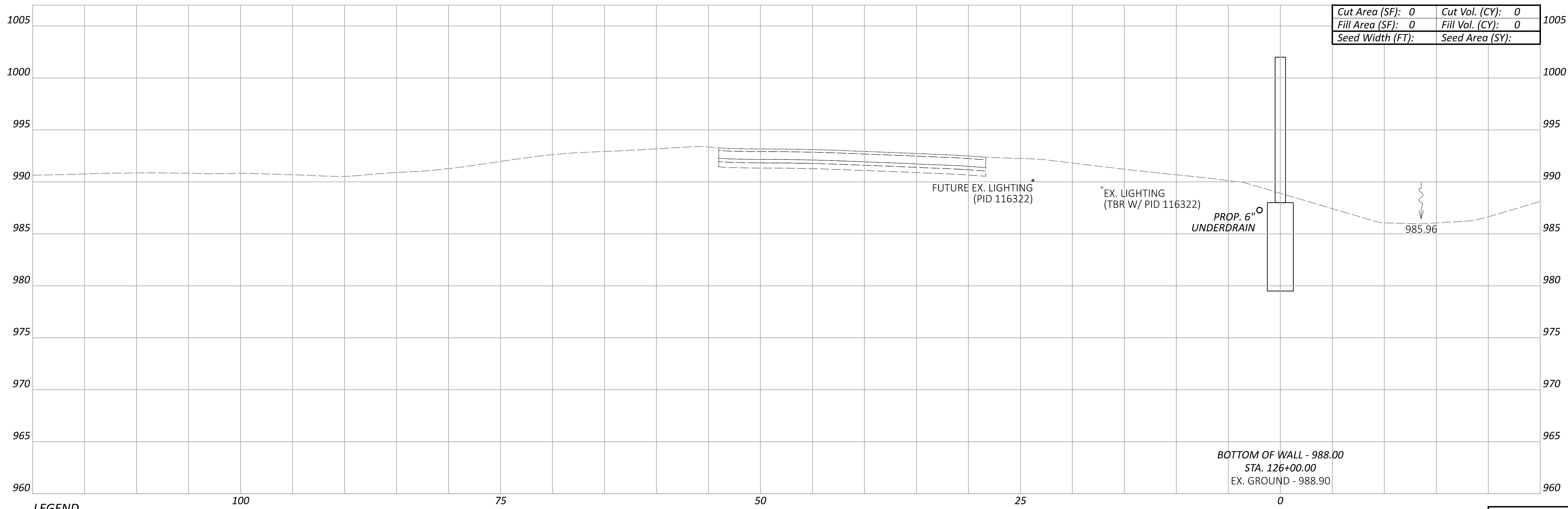
FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL13 - 126+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:37:14 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS012B.dgn



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 988.50
 STA. 126+50.00
 EX. GROUND - 989.53



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 988.00
 STA. 126+00.00
 EX. GROUND - 988.90

LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

CROSS SECTIONS - WALL 12
 STA. 126+00.00 TO STA. 126+50.00

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS SUITE 100
 COLUMBIA, MO 65203
 (646) 441-4900
 www.arcadis.com

DESIGNER
JMK

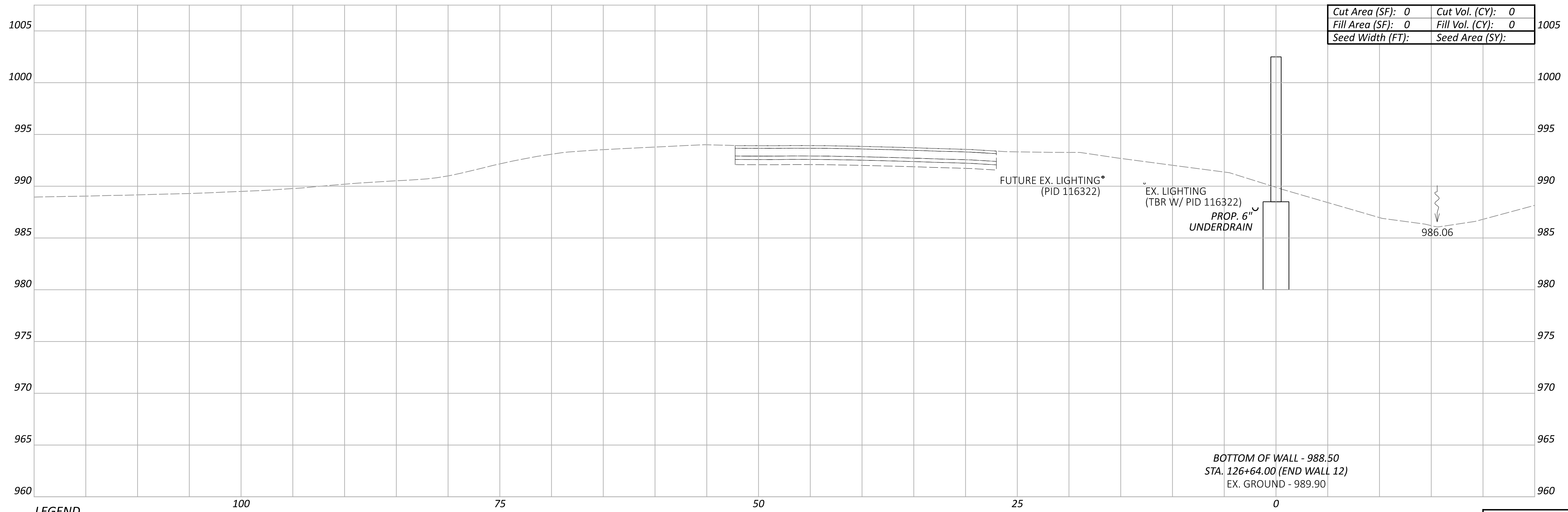
REVIEWER
JDH 03-27-24

PROJECT ID
117607

Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	P.188	P.295
0	0	0		

FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL13 - 126+64.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:38:50 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS012B.dgn



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

LEGEND

	EXISTING SR-161 PRIOR TO PID 116322
	FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

BOTTOM OF WALL - 988.50
 STA. 126+64.00 (END WALL 12)
 EX. GROUND - 989.90

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
0	0		P.189 P.295

**CROSS SECTIONS - WALL 12
 STA. 126+64.00**

DESIGN AGENCY
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 8101 NORTH HIGHWAY SUITE 100
 COLUMBIANA, OHIO 43085
 (614) 819-4900
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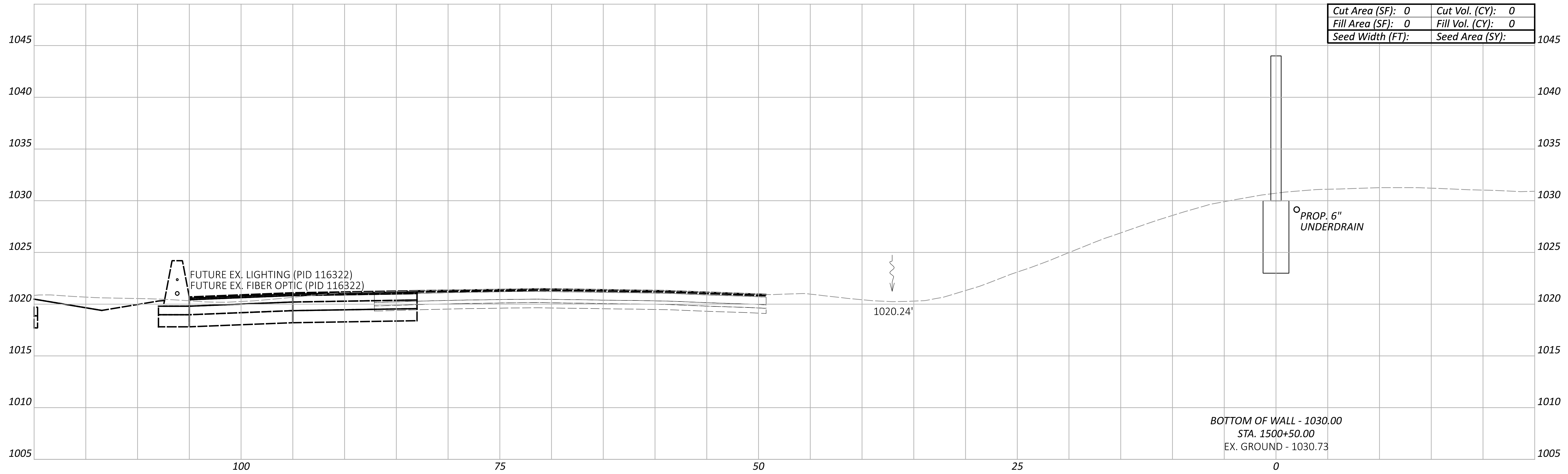
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

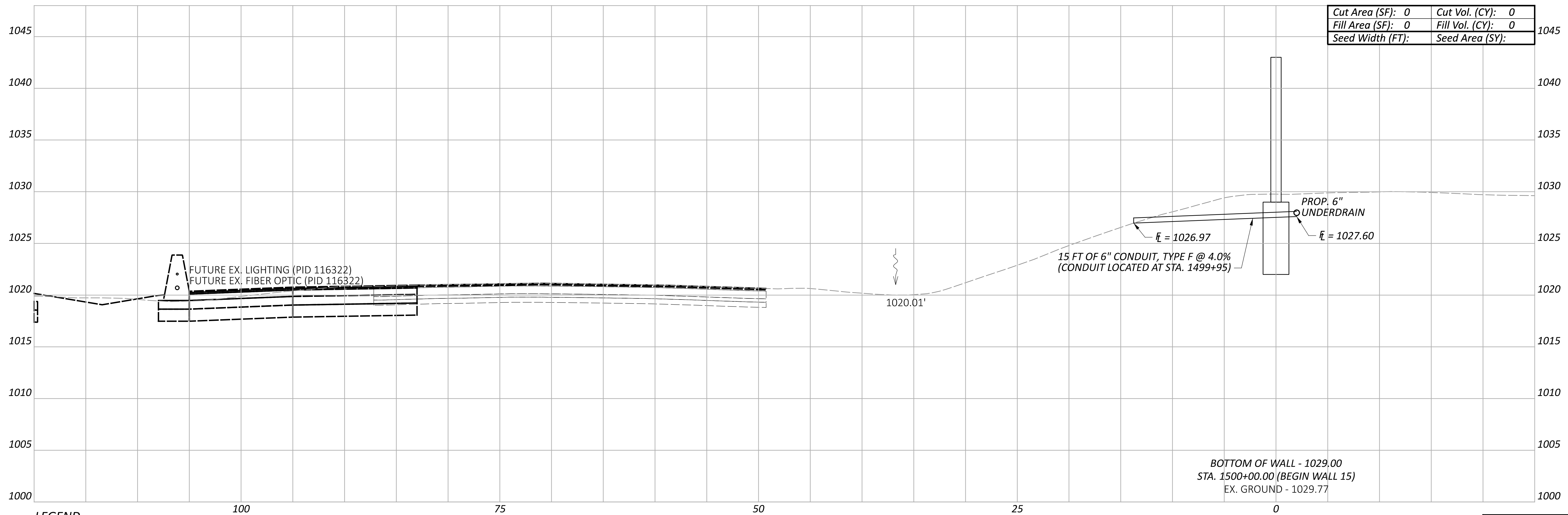
FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL15 - 1500+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:40:12 PM USER: jennifer.kelley
 pw:\arcadis-us-pw\benitey.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS015.dgn



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 1030.00
 STA. 1500+50.00
 EX. GROUND - 1030.73



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

15 FT OF 6" CONDUIT, TYPE F @ 4.0%
 (CONDUIT LOCATED AT STA. 1499+95)

$\bar{E} = 1026.97$

$\bar{E} = 1027.60$

BOTTOM OF WALL - 1029.00
 STA. 1500+00.00 (BEGIN WALL 15)
 EX. GROUND - 1029.77

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

CROSS SECTIONS - WALL 15
 STA. 1500+00.00 TO STA. 1500+50.00

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY 38, SUITE 100
 COLUMBIA, MO 65203
 (616) 414-4900
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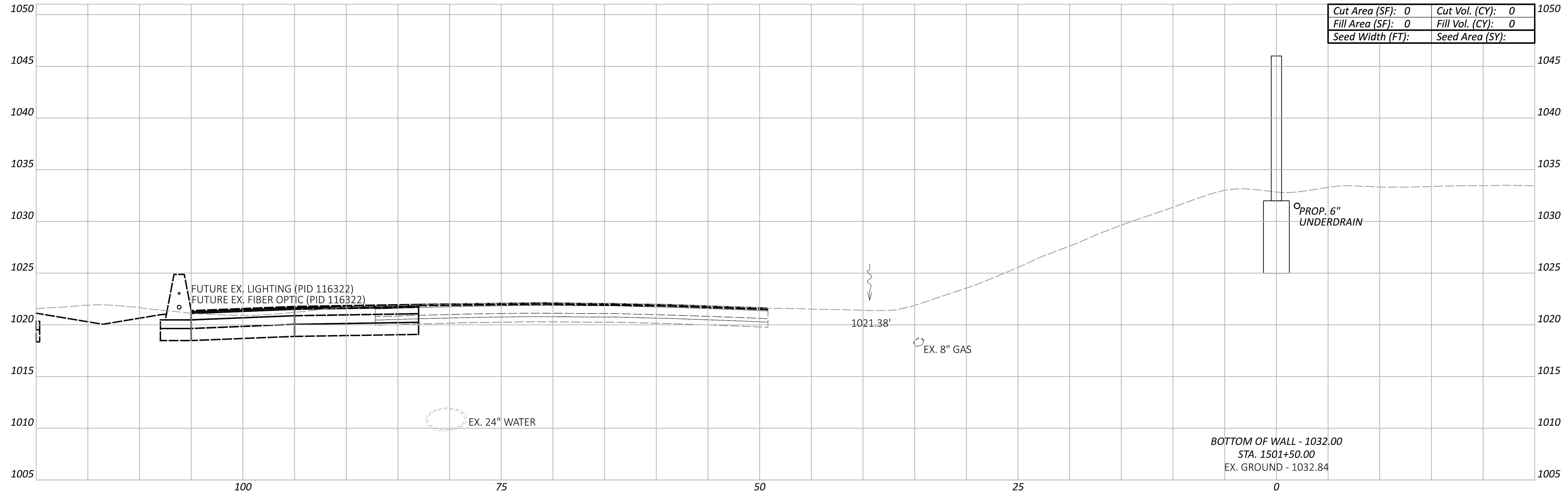
DESIGNER
JMK
 REVIEWER
JDH 03-27-24

PROJECT ID
117607

Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	P.190	P.295
0	0	0	P.190	P.295

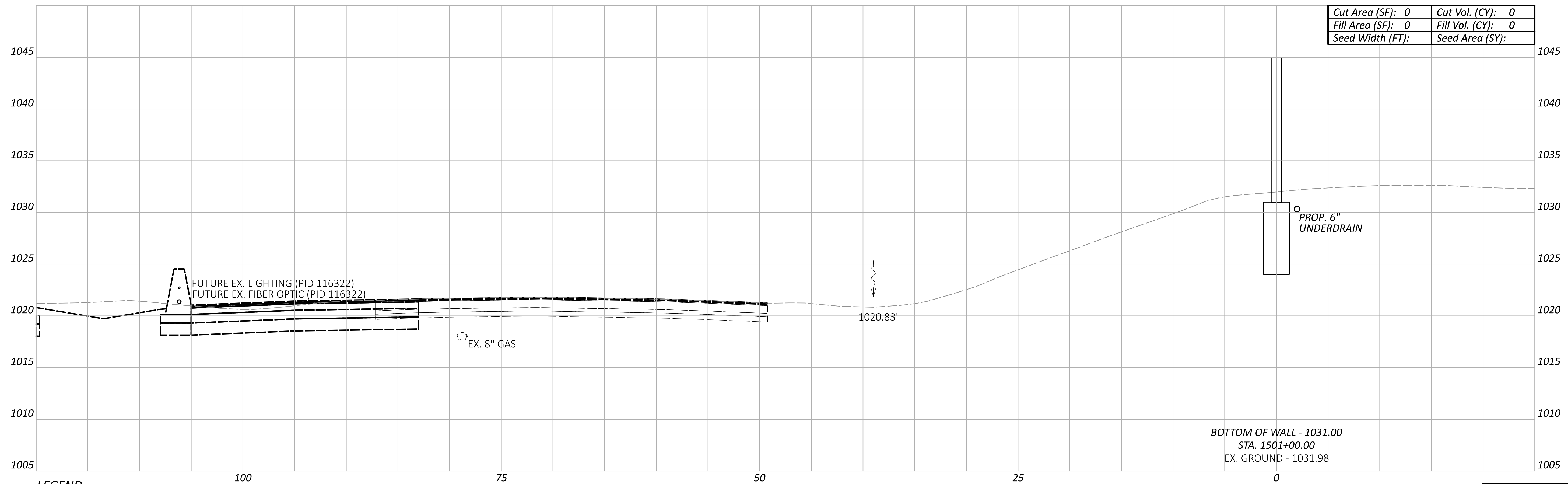
FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL15 - 1501+00.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:40:43 PM USER: jennifer.kelley
 pw:\arcadis-us-pw\benitey.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS015.dgn



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 1032.00
 STA. 1501+50.00
 EX. GROUND - 1032.84



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 1031.00
 STA. 1501+00.00
 EX. GROUND - 1031.98

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
0	0	0	P.191	P.295

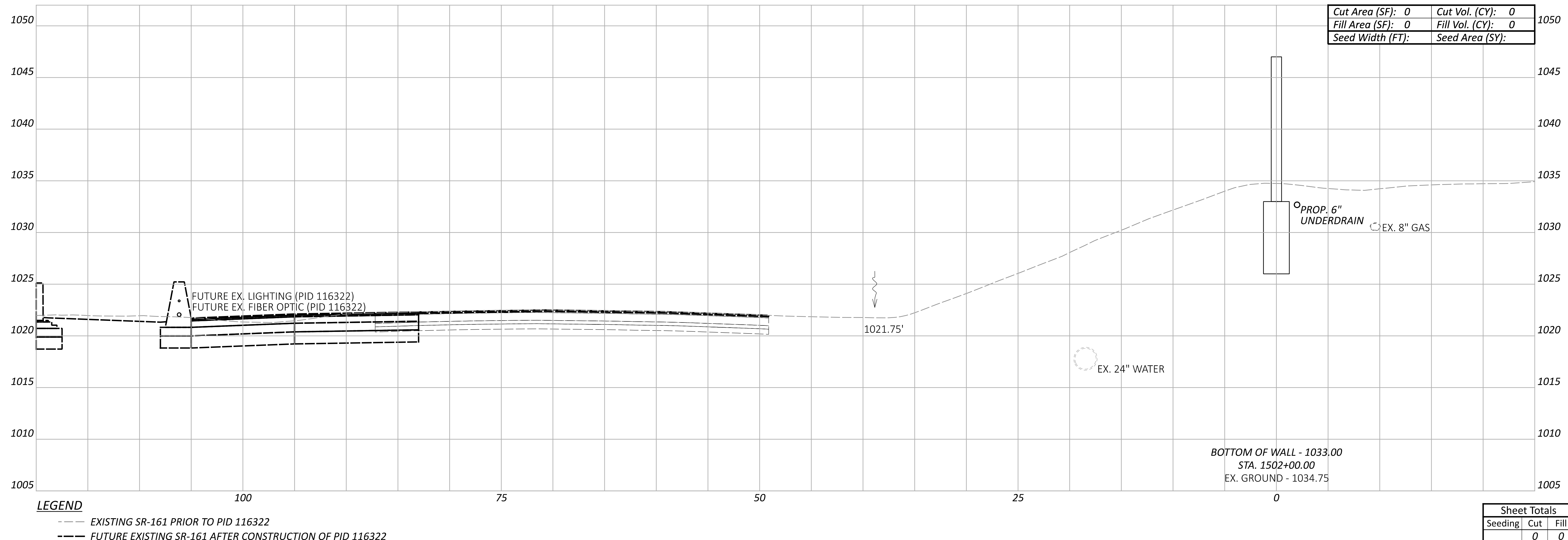
**CROSS SECTIONS - WALL 15
 STA. 1501+00.00 TO STA. 1501+50.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS AVE SUITE 100
 COLUMBIA, MO 65203
 (616) 414-4900
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DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607



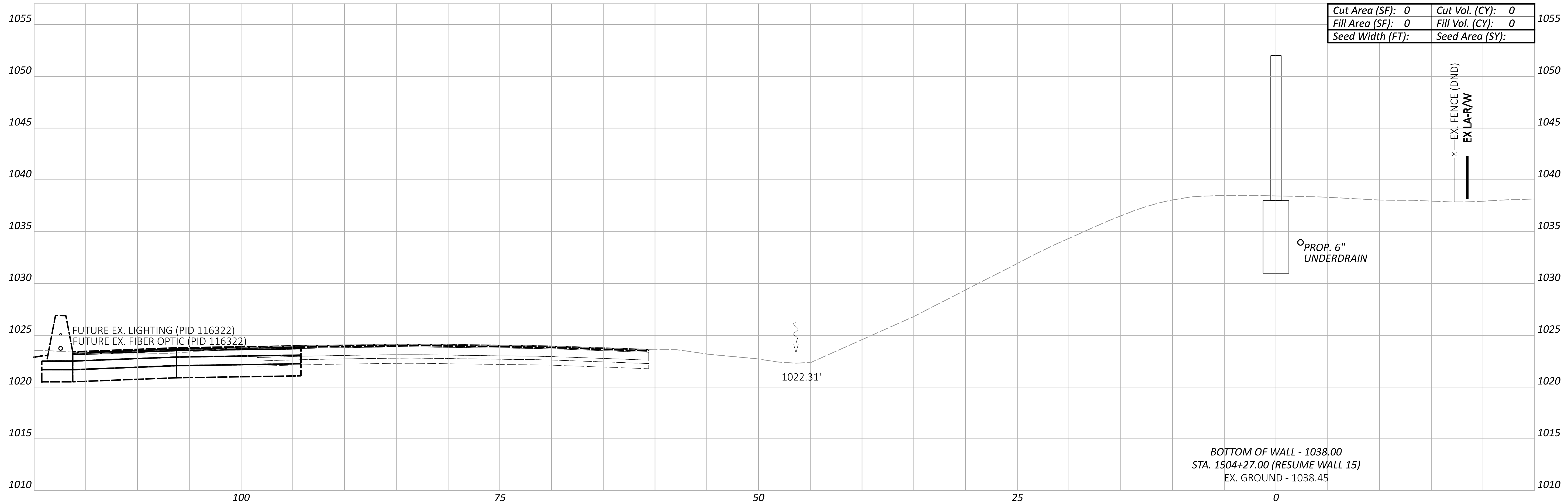
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Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

LEGEND
 - - - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
0	0	0	P.192 P.295

FRA-161-15.80 NOISE WALLS

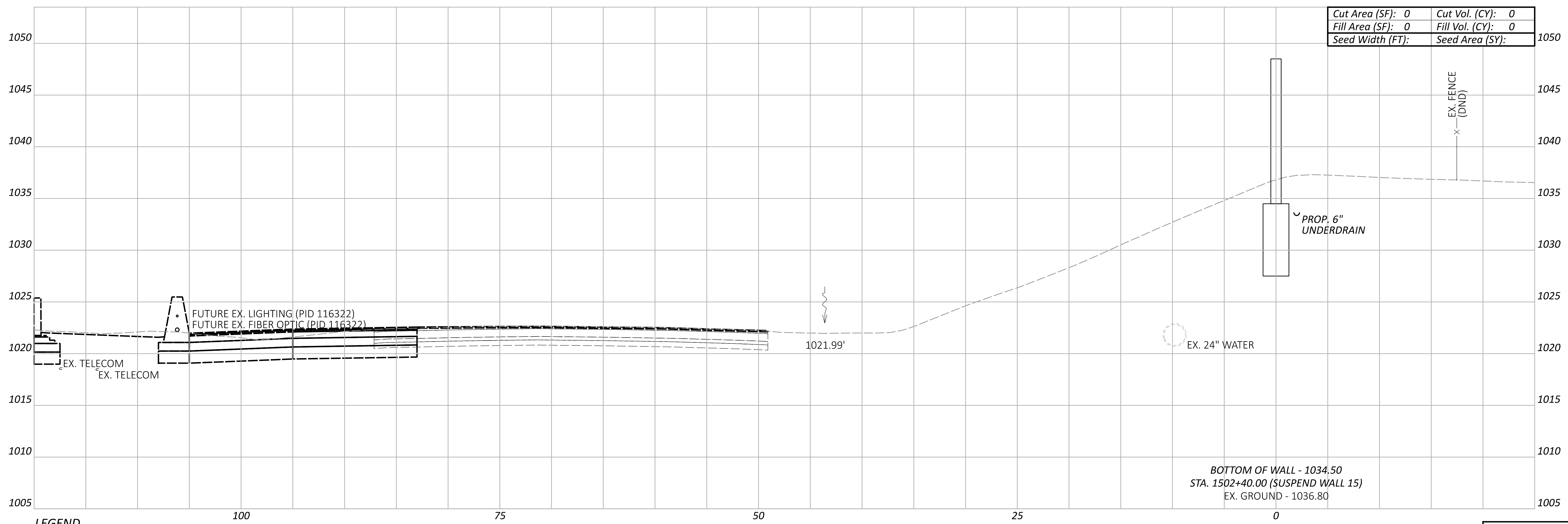
MODEL: BLP_WALL15 - 1502+64.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:41:18 PM USER: jennifer.kelley
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Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

x - EX. FENCE (DND)
EX LA-R/W

BOTTOM OF WALL - 1038.00
 STA. 1504+27.00 (RESUME WALL 15)
 EX. GROUND - 1038.45



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

x - EX. FENCE (DND)

BOTTOM OF WALL - 1034.50
 STA. 1502+40.00 (SUSPEND WALL 15)
 EX. GROUND - 1036.80

LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

**CROSS SECTIONS - WALL 15
 STA. 1502+40.00 TO STA. 1504+27.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY SUITE 100
 COLUMBIA, MO 65203
 (646) 441-4900
 www.arcadis.com

DESIGNER
JMK

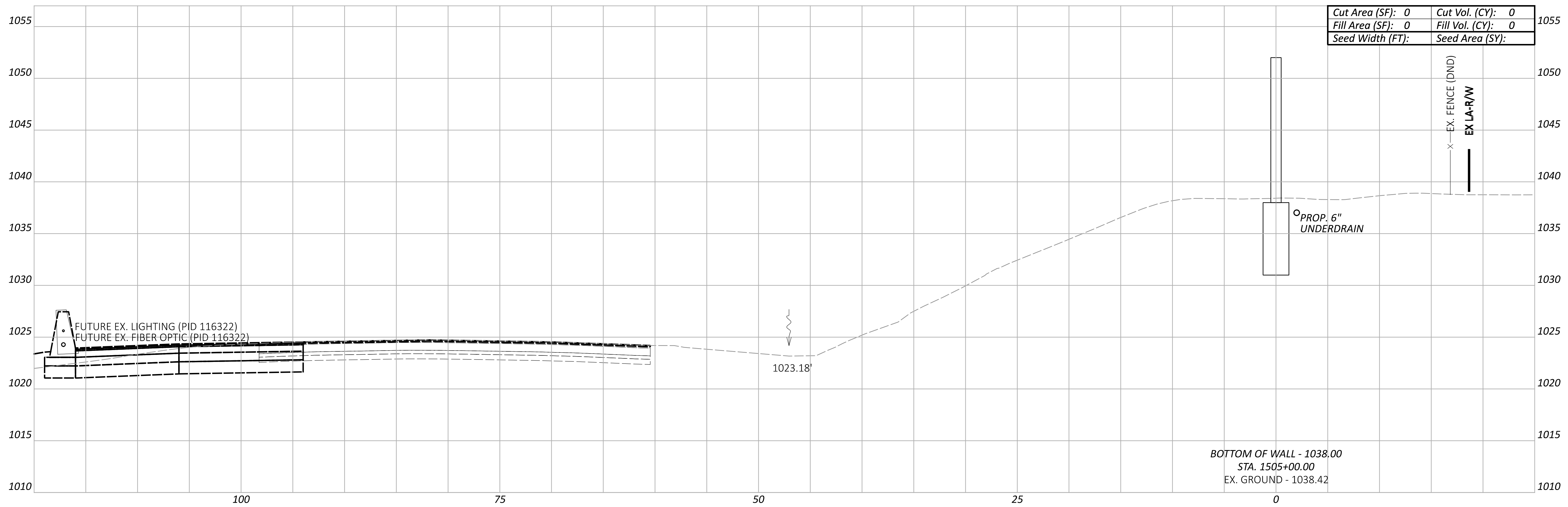
REVIEWER
JDH 03-27-24

PROJECT ID
117607

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
0	0	0	P.193	P.295

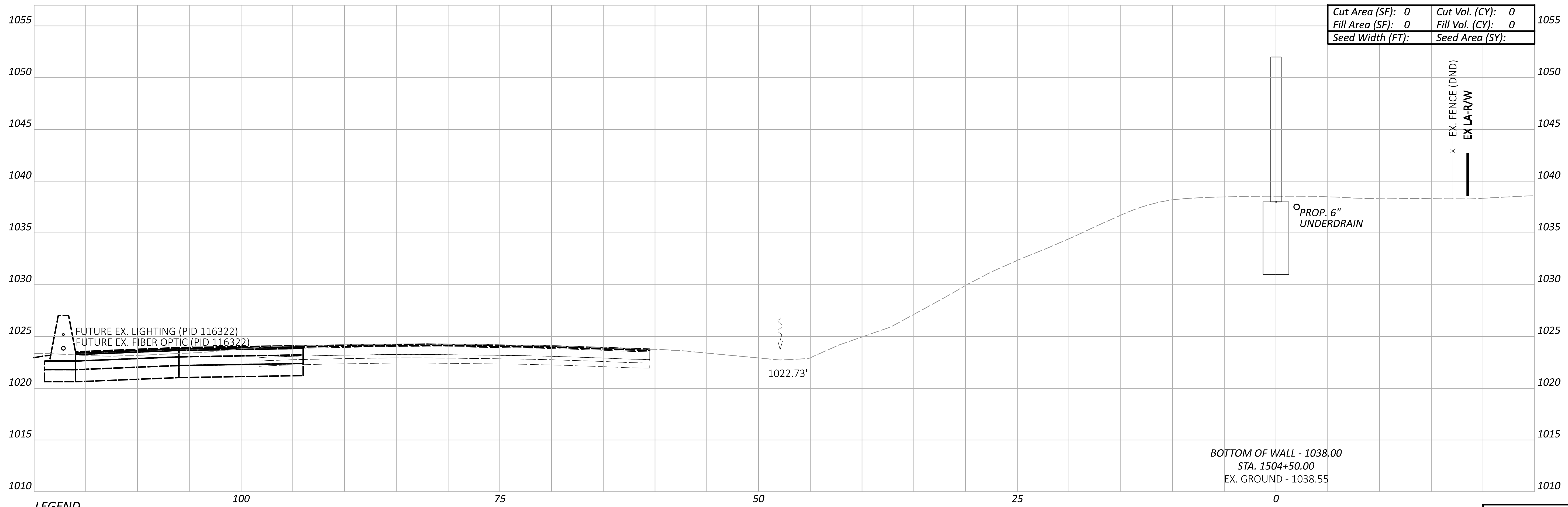
FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL15 - 1504+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:41:41 PM USER: jennifer.kelley
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Cut Area (SF): 0	Cut Vol. (CY): 0
Fill Area (SF): 0	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):

BOTTOM OF WALL - 1038.00
 STA. 1505+00.00
 EX. GROUND - 1038.42



Cut Area (SF): 0	Cut Vol. (CY): 0
Fill Area (SF): 0	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):

BOTTOM OF WALL - 1038.00
 STA. 1504+50.00
 EX. GROUND - 1038.55

LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
0	0	0	P.194	P.295

**CROSS SECTIONS - WALL 15
 STA. 1504+50.00 TO STA. 1505+00.00**

DESIGNER AGENCY
ARCADIS
 8101 NORTH HIGGINS AVE SUITE 100
 COLUMBIANA, OHIO 43085
 (614) 819-4900
 www.arcadis.com

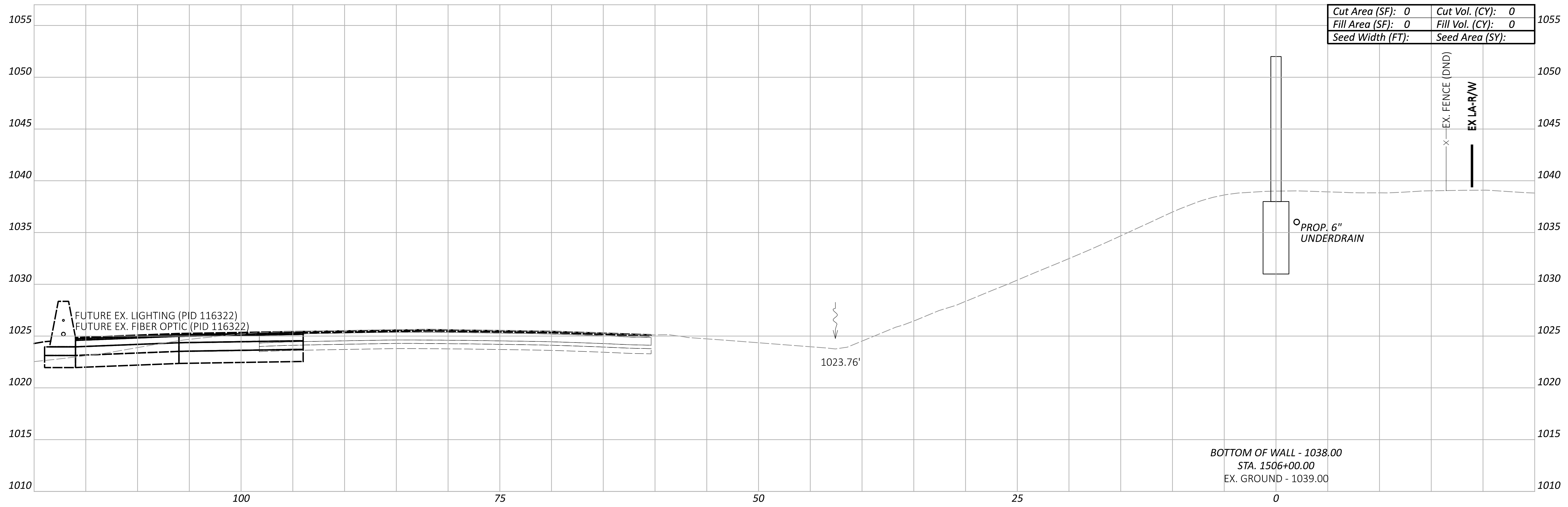
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

FRA-161-15.80 NOISE WALLS

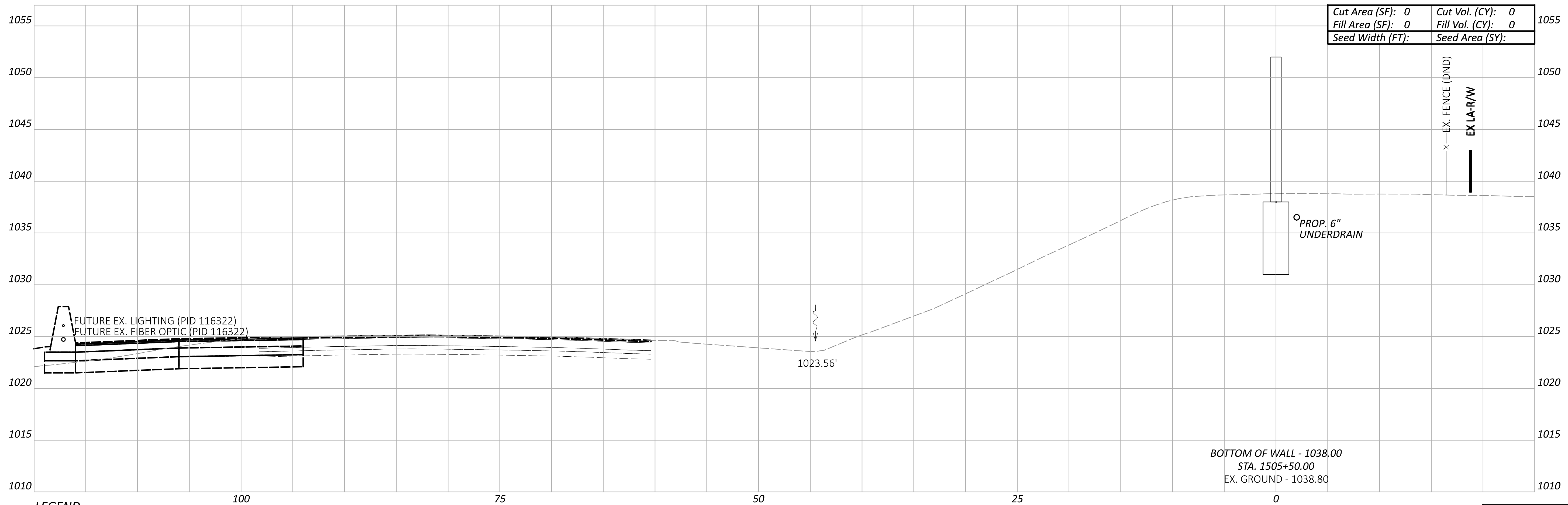
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Cut Area (SF): 0	Cut Vol. (CY): 0
Fill Area (SF): 0	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):

EX. FENCE (DND)
 EX LA-R/W

BOTTOM OF WALL - 1038.00
 STA. 1506+00.00
 EX. GROUND - 1039.00



Cut Area (SF): 0	Cut Vol. (CY): 0
Fill Area (SF): 0	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):

EX. FENCE (DND)
 EX LA-R/W

BOTTOM OF WALL - 1038.00
 STA. 1505+50.00
 EX. GROUND - 1038.80

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
0	0	0	P.195	P.295

**CROSS SECTIONS - WALL 15
 STA. 1505+50.00 TO STA. 1506+00.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY 200 SUITE 100
 COLUMBIANA, OHIO 43085
 614.894.4900
 www.arcadis.com

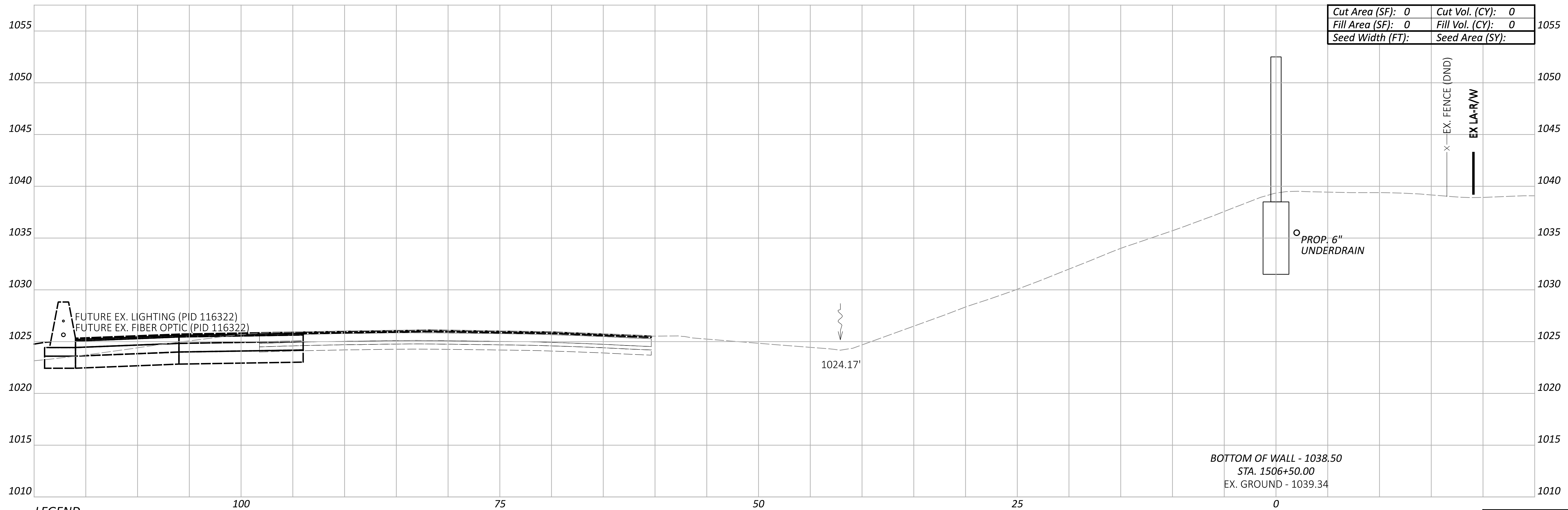
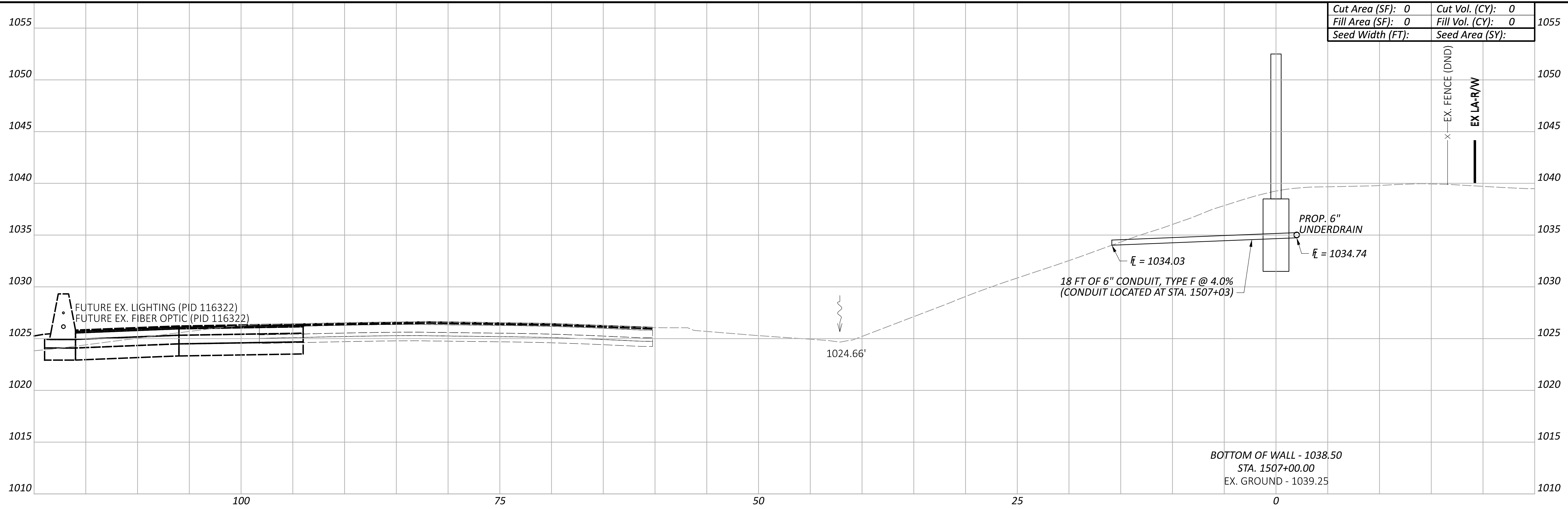
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL15 - 1506+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:42:25 PM USER: jennifer.kelley
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LEGEND

- EXISTING SR-161 PRIOR TO PID 116322
- FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
0	0		P.196 P.295

**CROSS SECTIONS - WALL 15
 STA. 1506+50.00 TO STA. 1507+00.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHEST SUITE 100
 COLUMBIANA, OHIO 43085
 (614) 819-4900
 www.arcadis.com

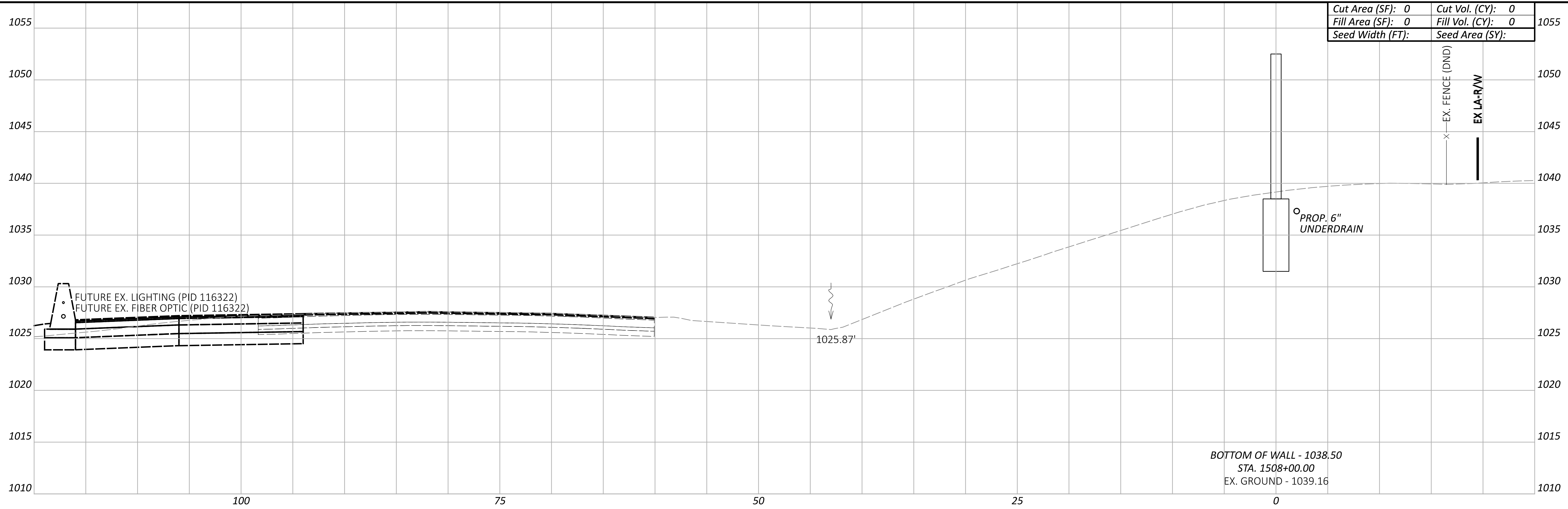
DESIGNER
JMK

REVIEWER
JDH 03-27-24

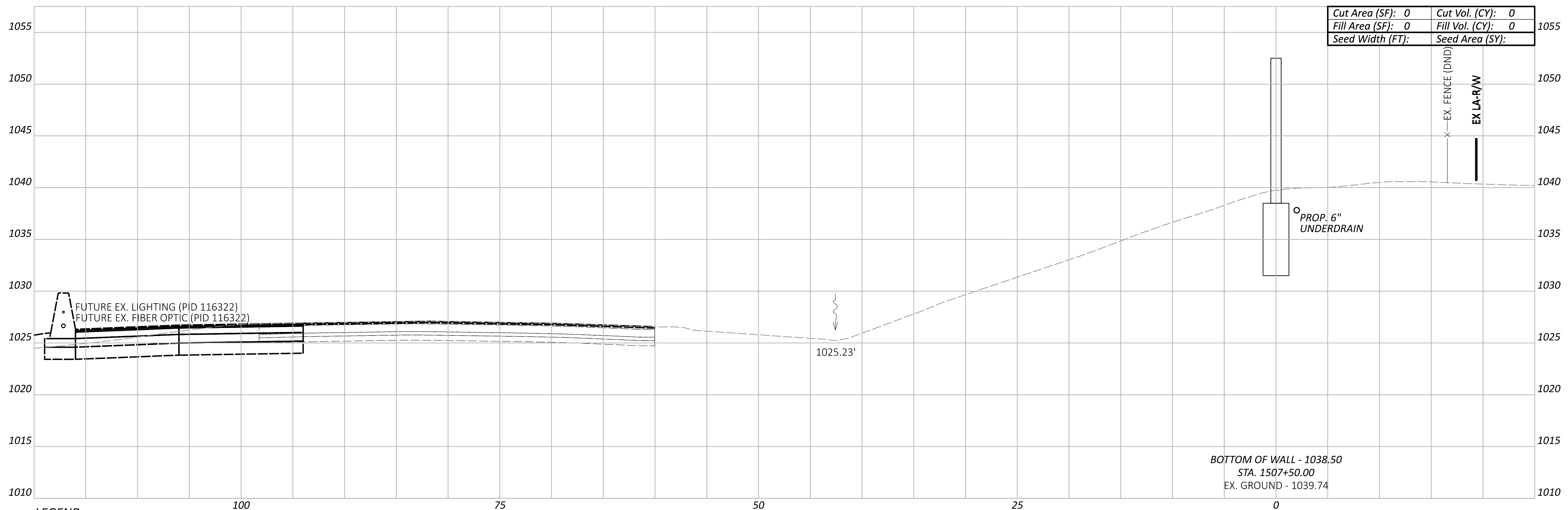
PROJECT ID
117607

FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL15 - 1507+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:42:47 PM USER: jennifer.kelley
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Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
0	0		P.197 P.295

**CROSS SECTIONS - WALL 15
 STA. 1507+50.00 TO STA. 1508+00.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHEST SUITE 100
 COLUMBIANA, OH 43085
 614.819.4900
 www.arcadis.com

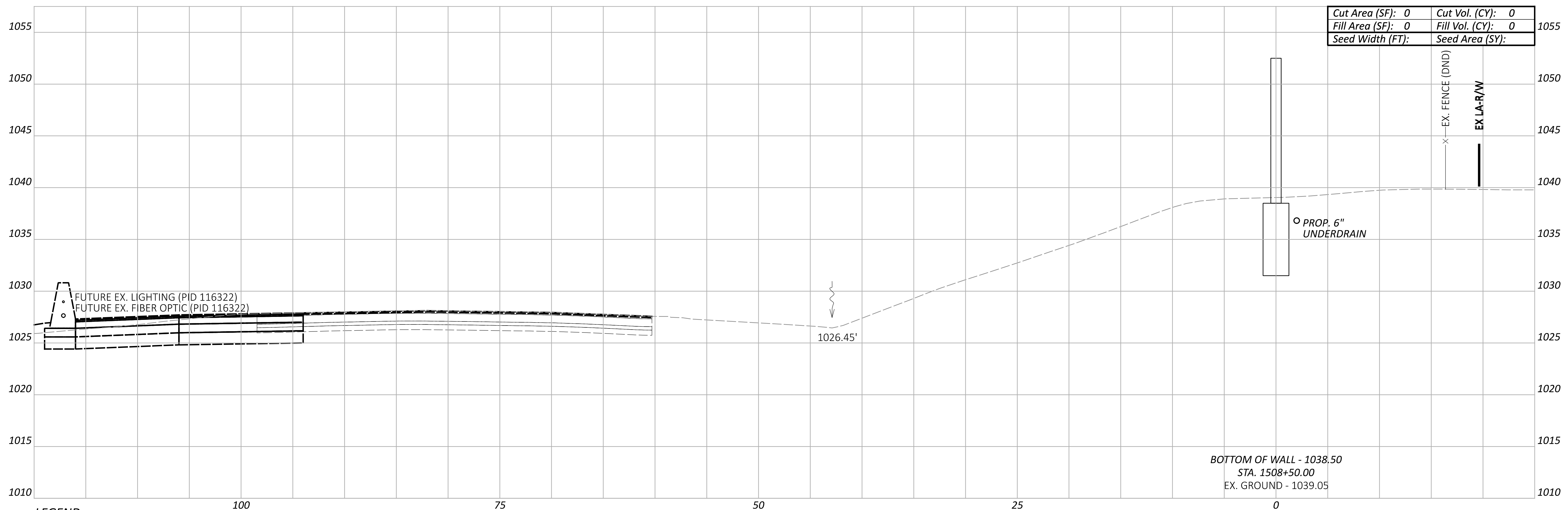
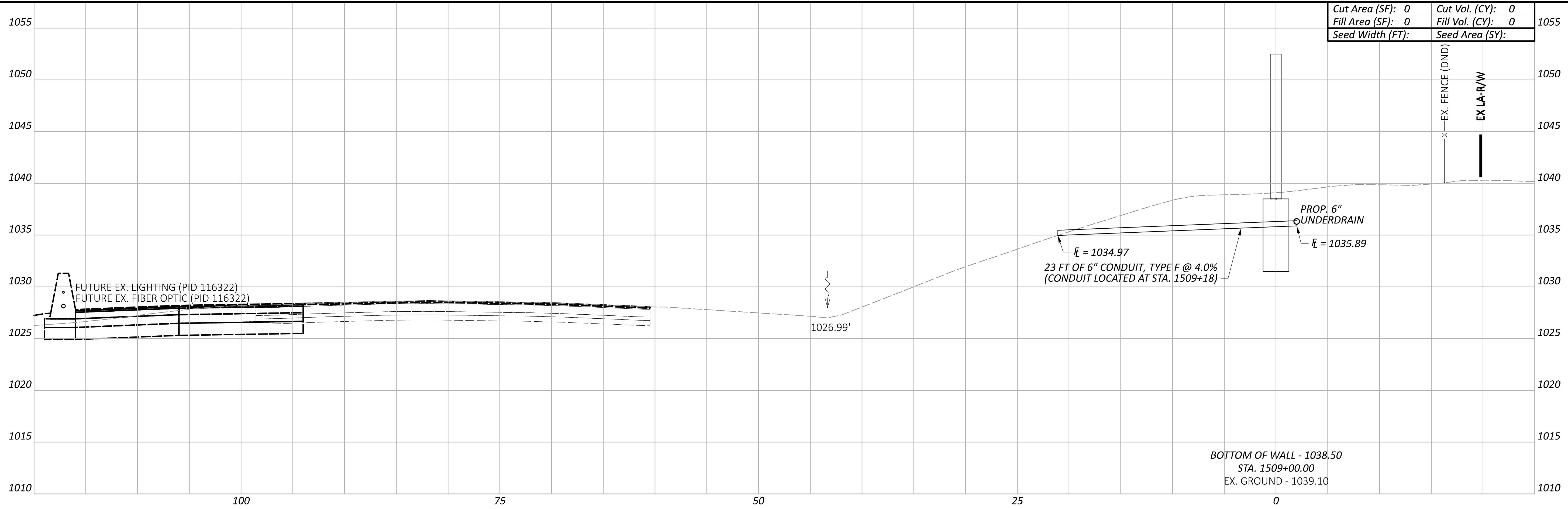
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL15 - 1508+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-26 TIME: 4:57:06 PM USER: jennifer.kelley
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LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
0	0	0	P.198	P.295

CROSS SECTIONS - WALL 15
 STA. 1508+50.00 TO STA. 1509+00.00

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHEST SUITE 100
 COLUMBIA, MO 65203
 (616) 414-4900
 www.arcadis.com

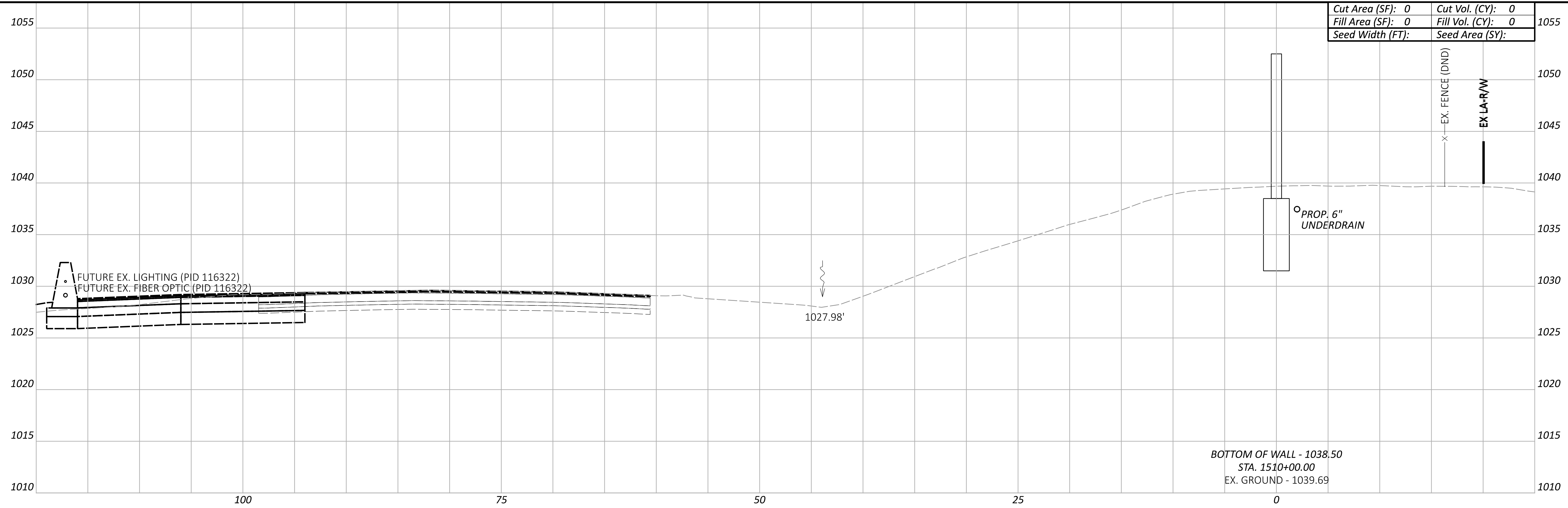
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

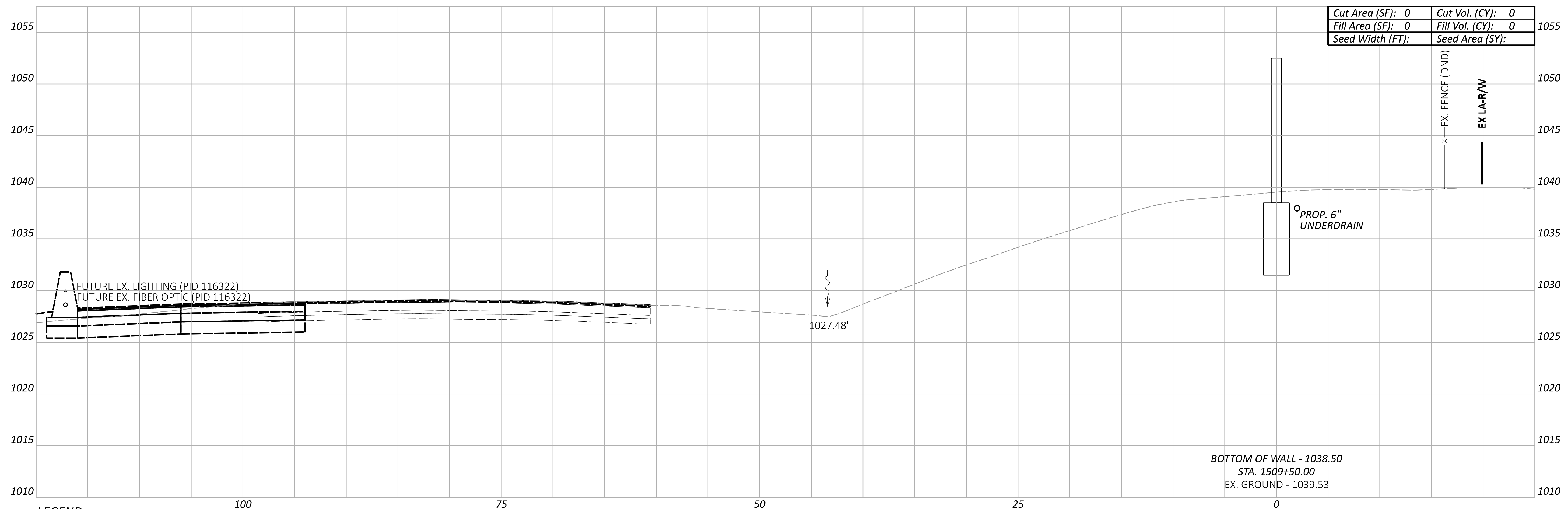
FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL15 - 1509+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:43:30 PM USER: jennifer.kelley
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Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 1038.50
 STA. 1510+00.00
 EX. GROUND - 1039.69



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 1038.50
 STA. 1509+50.00
 EX. GROUND - 1039.53

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

**CROSS SECTIONS - WALL 15
 STA. 1509+50.00 TO STA. 1510+00.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHEST SUITE 100
 COLUMBIA, MD 21046
 (410) 314-4900
 www.arcadis.com

DESIGNER
JMK

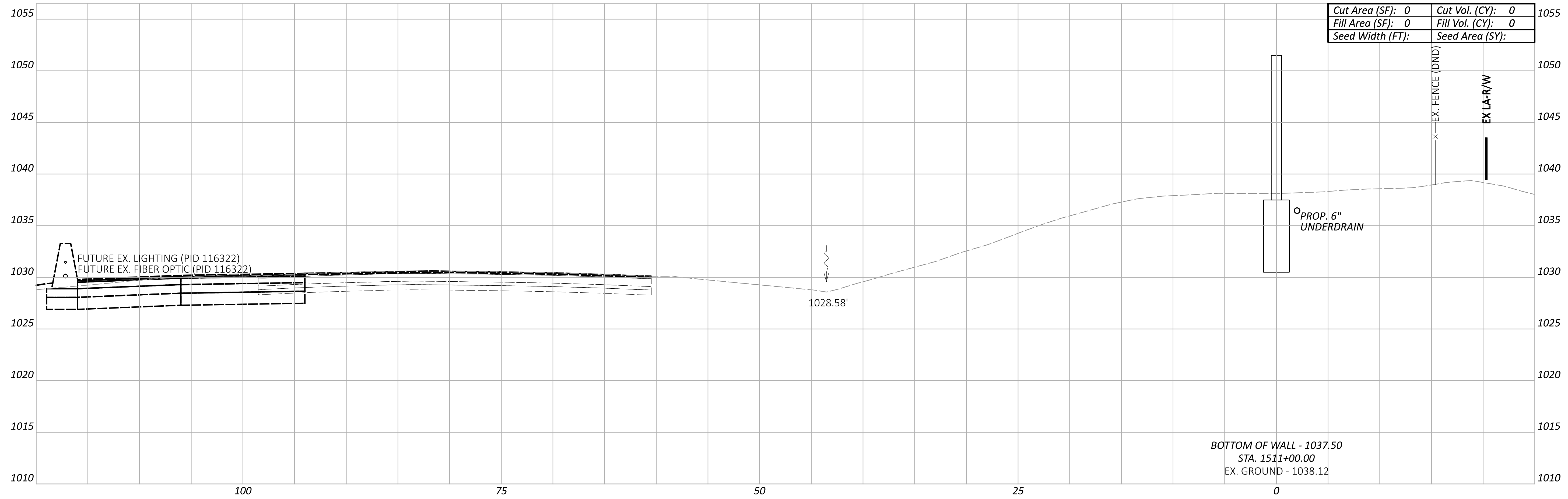
REVIEWER
JDH 03-27-24

PROJECT ID
117607

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
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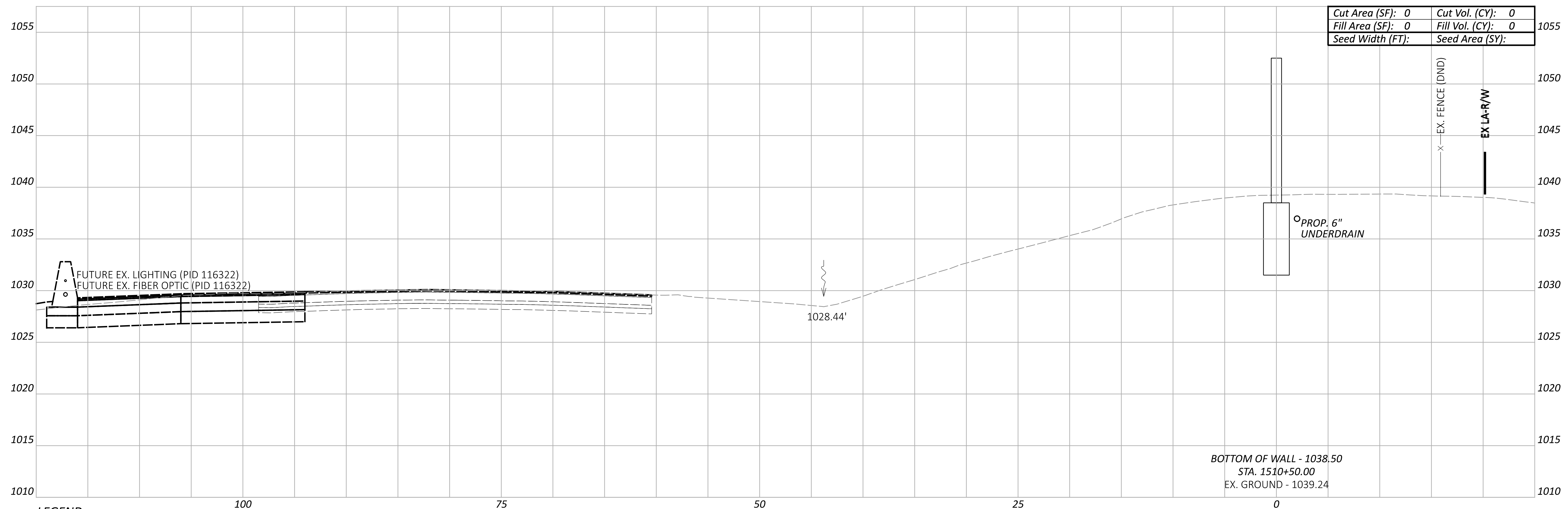
FRA-161-15.80 NOISE WALLS

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Cut Area (SF): 0	Cut Vol. (CY): 0
Fill Area (SF): 0	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):

BOTTOM OF WALL - 1037.50
 STA. 1511+00.00
 EX. GROUND - 1038.12



Cut Area (SF): 0	Cut Vol. (CY): 0
Fill Area (SF): 0	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):

BOTTOM OF WALL - 1038.50
 STA. 1510+50.00
 EX. GROUND - 1039.24

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
0	0	0	P.200	P.295

**CROSS SECTIONS - WALL 15
 STA. 1510+50.00 TO STA. 1511+00.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS SUITE 100
 COLUMBIANA, OH 43085
 (614) 819-4900
 www.arcadis.com

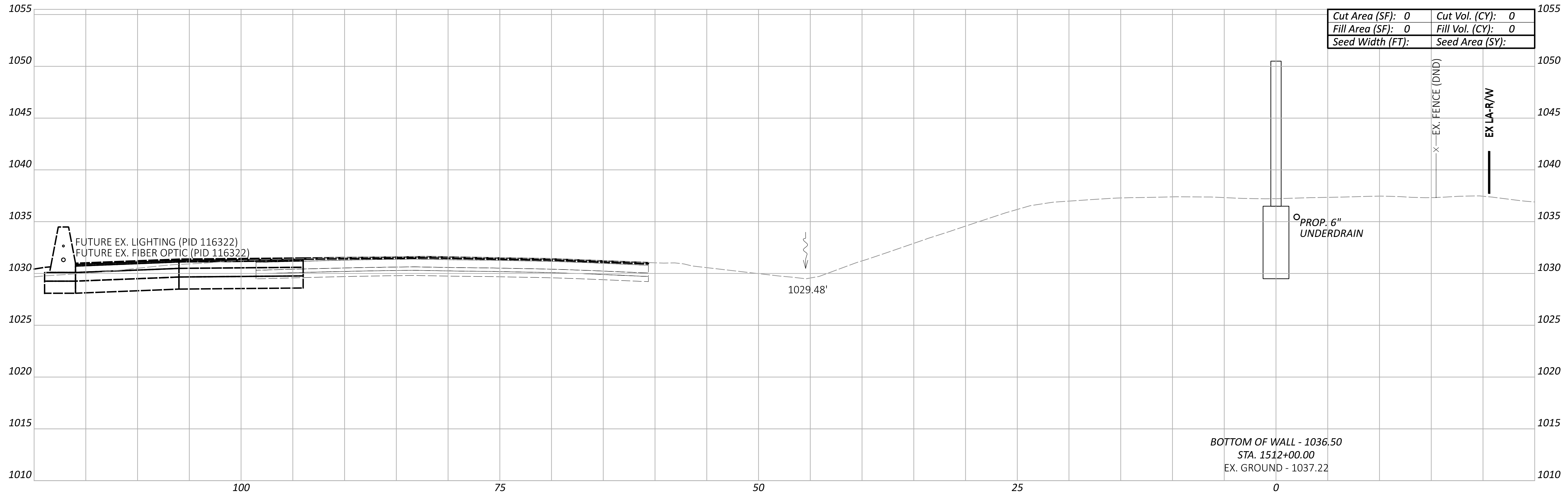
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

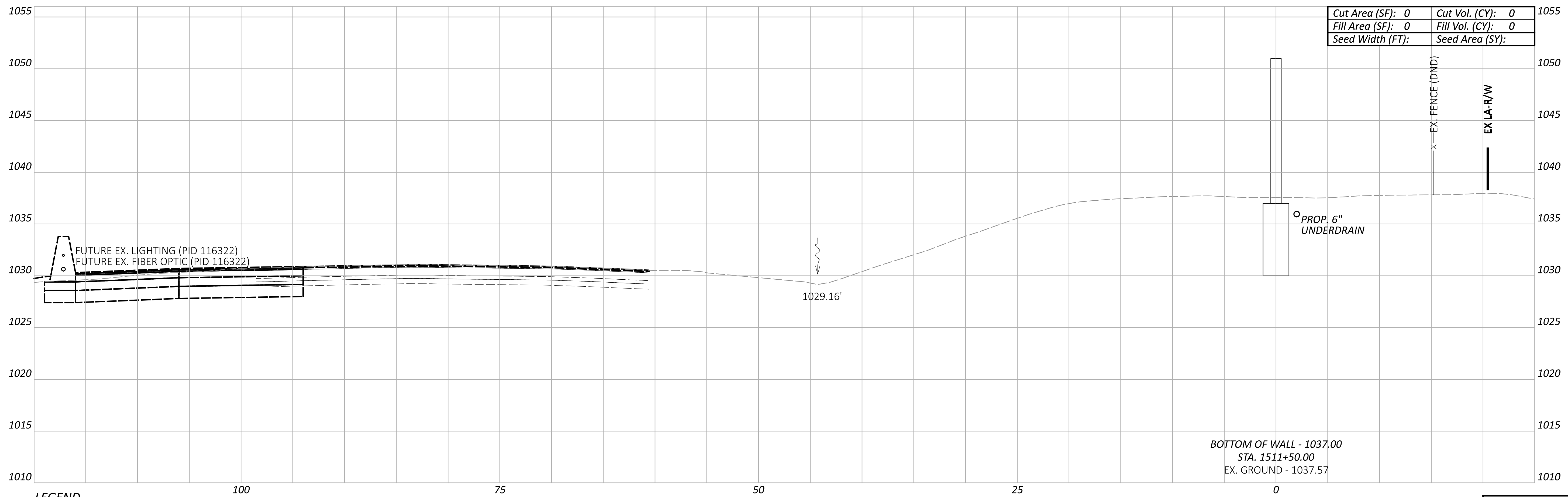
FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL15 - 1511+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:44:14 PM USER: jennifer.kelley
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Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 1036.50
 STA. 1512+00.00
 EX. GROUND - 1037.22



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 1037.00
 STA. 1511+50.00
 EX. GROUND - 1037.57

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

**CROSS SECTIONS - WALL 15
 STA. 1511+50.00 TO STA. 1512+00.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS SUITE 100
 COLUMBIANA, OH 43085
 (614) 819-4900
 www.arcadis.com

DESIGNER
JMK

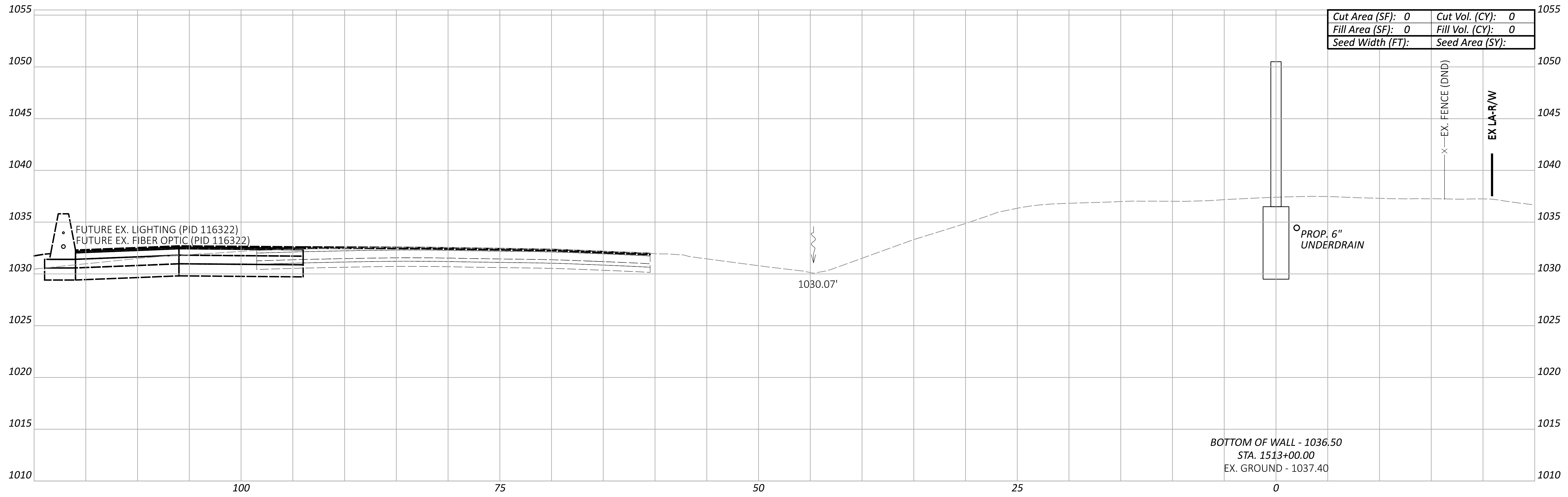
REVIEWER
JDH 03-27-24

PROJECT ID
117607

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
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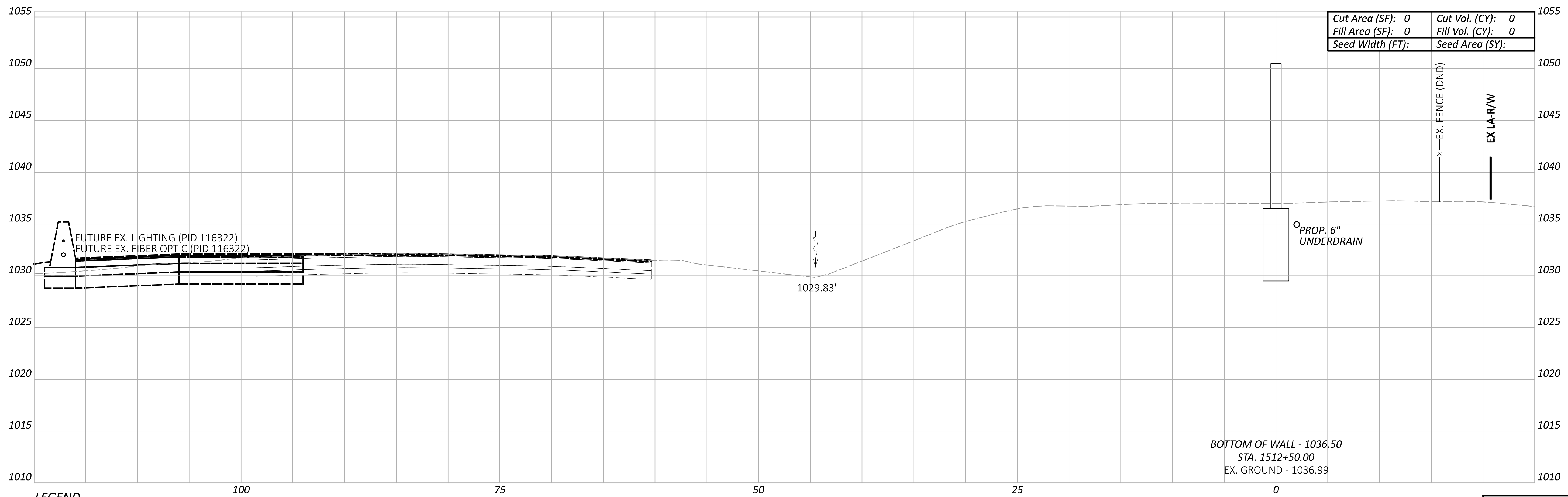
FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL15 - 1512+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:44:36 PM USER: jennifer.kelley
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Cut Area (SF): 0	Cut Vol. (CY): 0
Fill Area (SF): 0	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):

BOTTOM OF WALL - 1036.50
 STA. 1513+00.00
 EX. GROUND - 1037.40



Cut Area (SF): 0	Cut Vol. (CY): 0
Fill Area (SF): 0	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):

BOTTOM OF WALL - 1036.50
 STA. 1512+50.00
 EX. GROUND - 1036.99

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
0	0	0	P.202 P.295

**CROSS SECTIONS - WALL 15
 STA. 1512+50.00 TO STA. 1513+00.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS SUITE 100
 COLUMBIANA, OHIO 43082
 (614) 819-4900
 www.arcadis.com

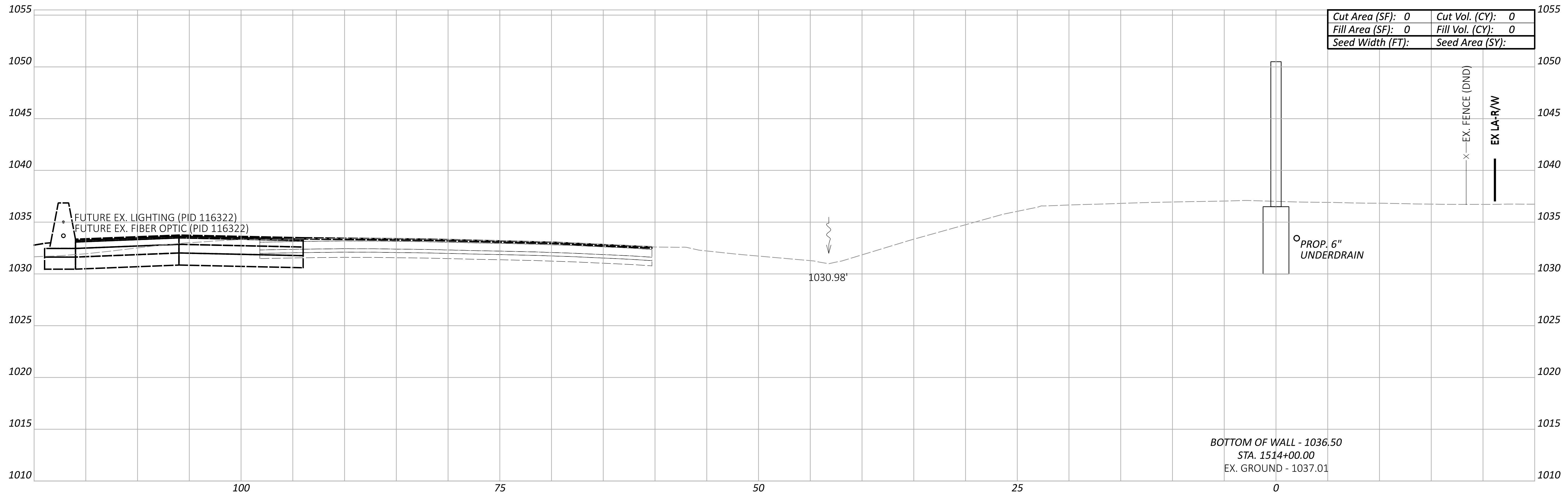
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

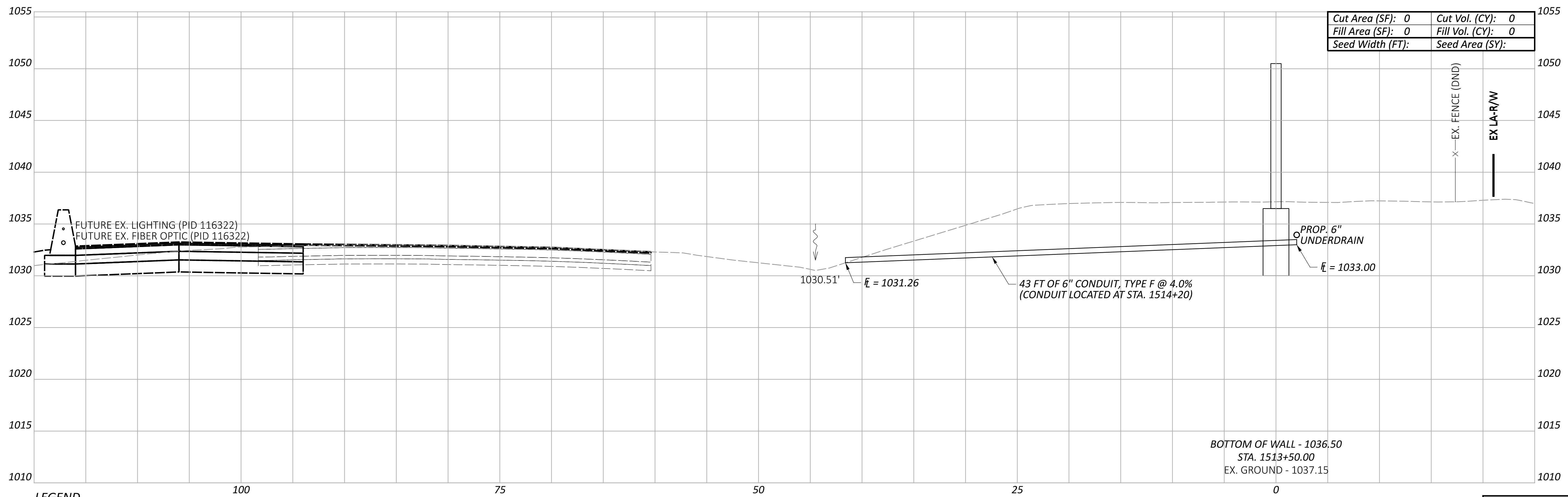
FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL15 - 1513+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:44:57 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS015.dgn



Cut Area (SF): 0	Cut Vol. (CY): 0
Fill Area (SF): 0	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):

BOTTOM OF WALL - 1036.50
 STA. 1514+00.00
 EX. GROUND - 1037.01



Cut Area (SF): 0	Cut Vol. (CY): 0
Fill Area (SF): 0	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):

BOTTOM OF WALL - 1036.50
 STA. 1513+50.00
 EX. GROUND - 1037.15

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
0	0	0	P.203	P.295

**CROSS SECTIONS - WALL 15
 STA. 1513+50.00 TO STA. 1514+00.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHEST SUITE 100
 COLUMBIA, MD 21046
 TEL: (410) 314-4900
 www.arcadis.com

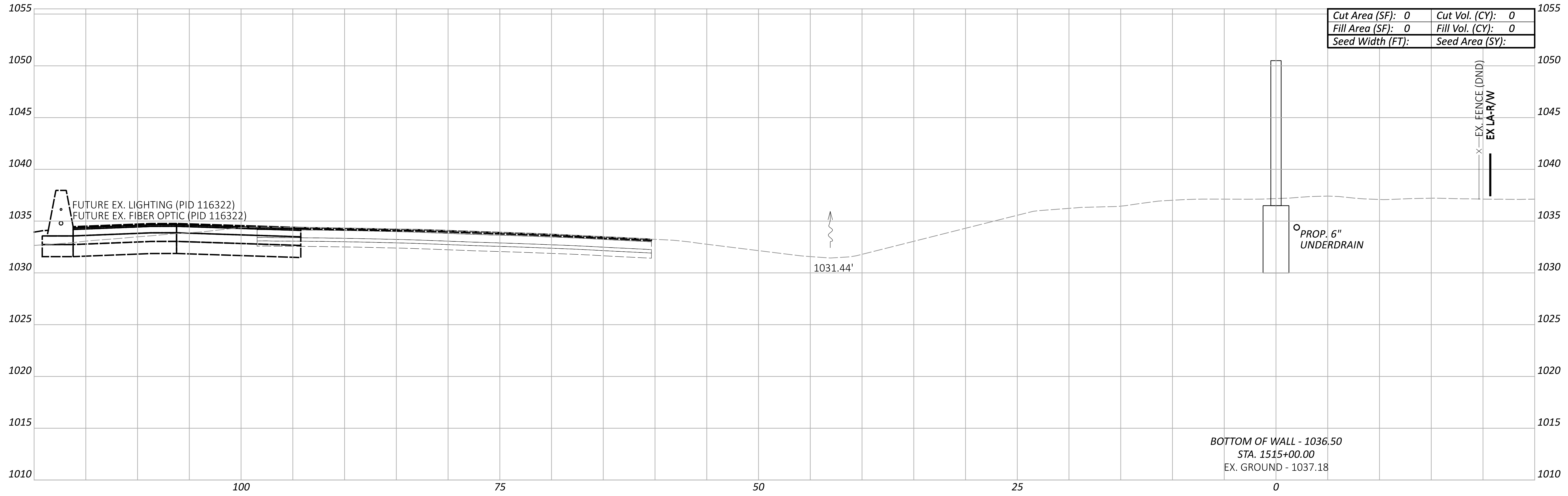
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

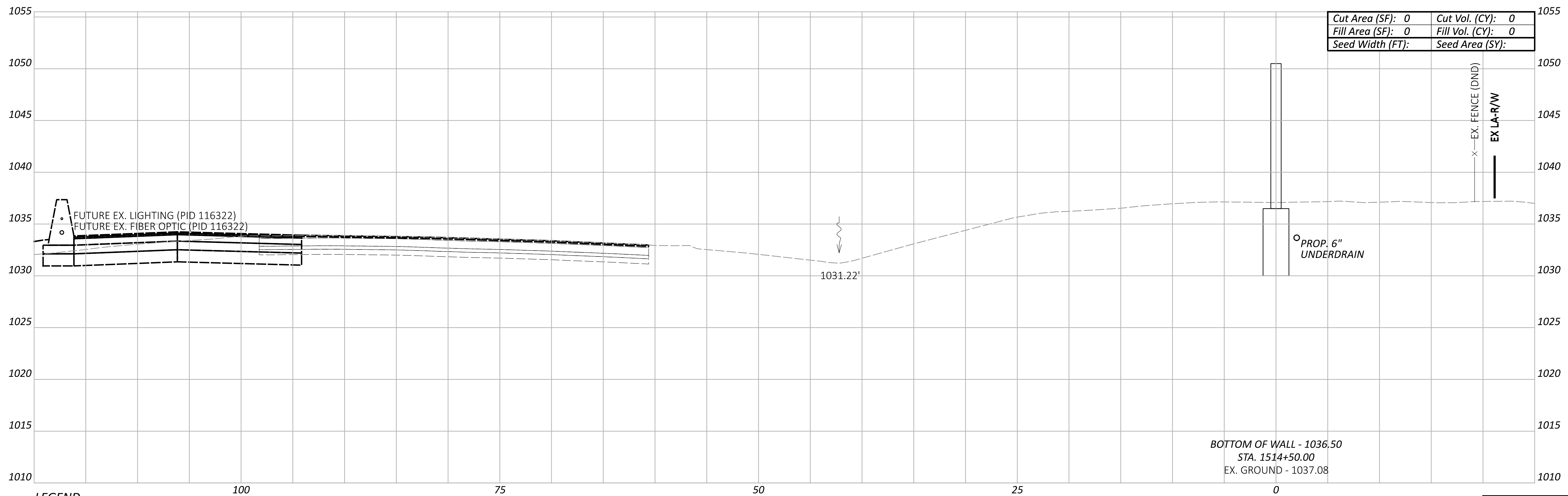
FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL15 - 1514+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:45:18 PM USER: jennifer.kelley
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Cut Area (SF): 0	Cut Vol. (CY): 0
Fill Area (SF): 0	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):

BOTTOM OF WALL - 1036.50
 STA. 1515+00.00
 EX. GROUND - 1037.18



Cut Area (SF): 0	Cut Vol. (CY): 0
Fill Area (SF): 0	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):

BOTTOM OF WALL - 1036.50
 STA. 1514+50.00
 EX. GROUND - 1037.08

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
0	0	0	P.204	P.295

**CROSS SECTIONS - WALL 15
 STA. 1514+50.00 TO STA. 1515+00.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS AVE SUITE 100
 COLUMBIA, MO 65203
 (616) 419-4900
 www.arcadis.com

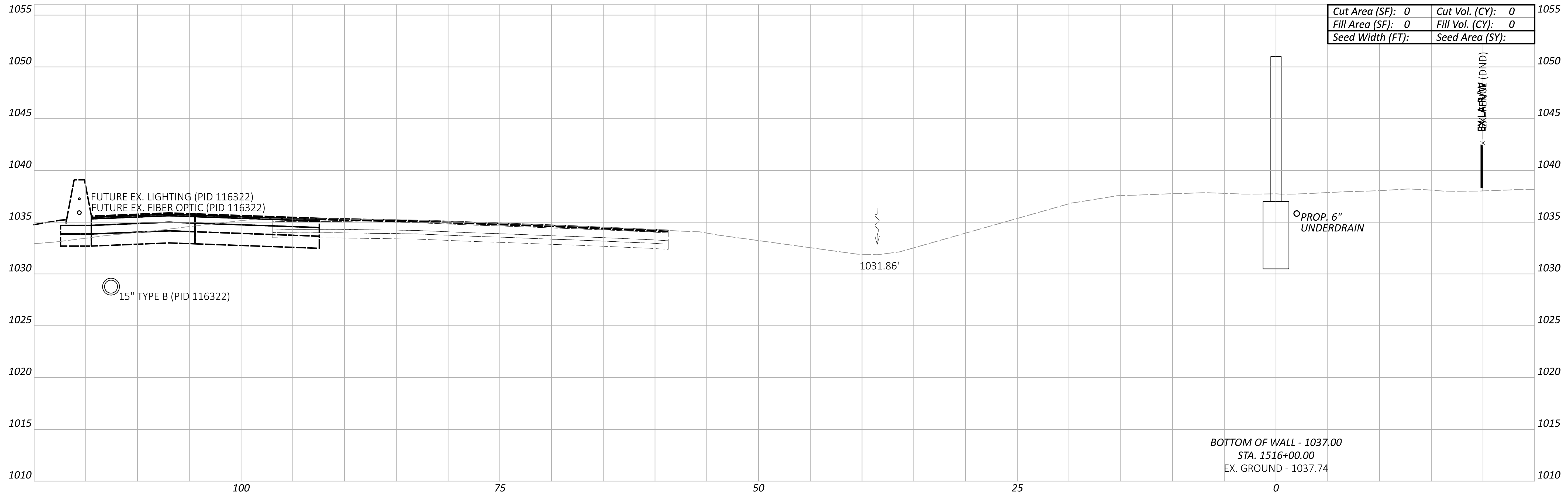
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

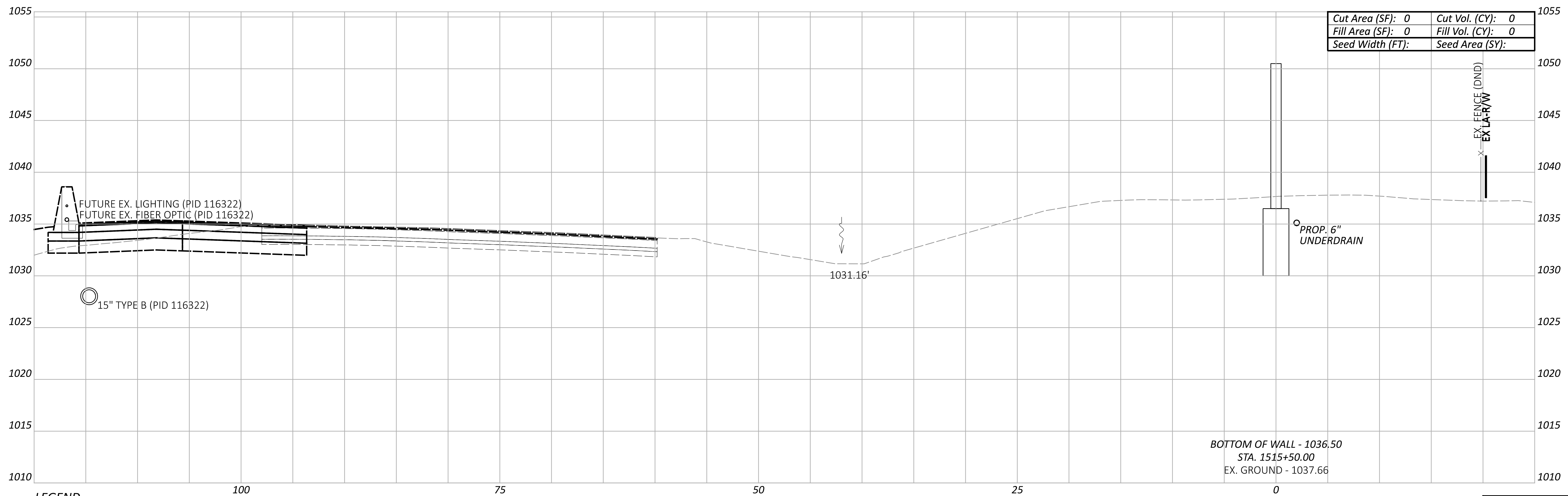
FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL15 - 1515+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:45:40 PM USER: jennifer.kelley
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Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 1037.00
 STA. 1516+00.00
 EX. GROUND - 1037.74



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 1036.50
 STA. 1515+50.00
 EX. GROUND - 1037.66

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
0	0	0	P.205 P.295

**CROSS SECTIONS - WALL 15
 STA. 1515+50.00 TO STA. 1516+00.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS SUITE 100
 COLUMBIA, MO 65203
 (616) 419-4900
 www.arcadis.com

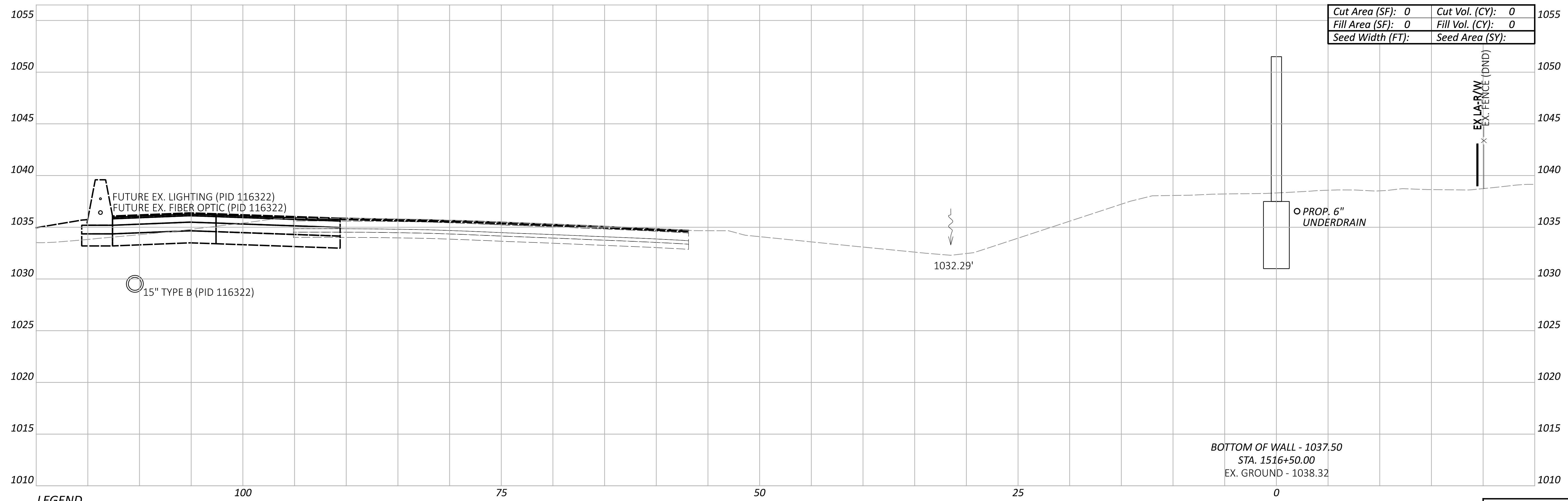
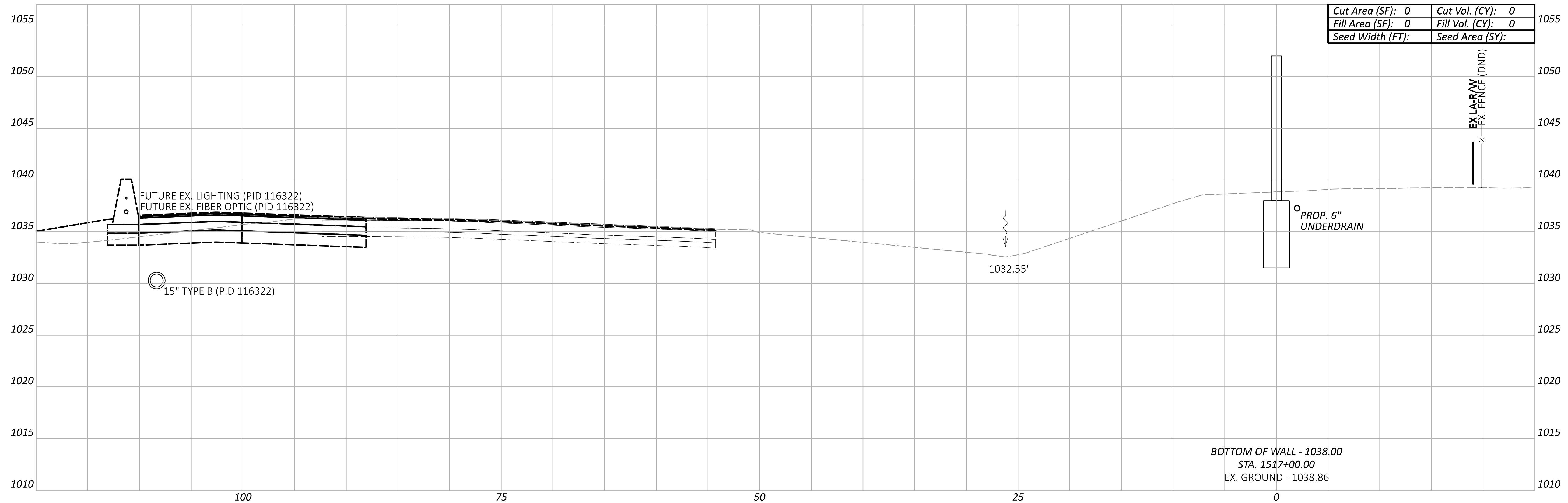
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL15 - 1516+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:46:02 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS015.dgn



LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
0	0	0	P.206	P.295

**CROSS SECTIONS - WALL 15
 STA. 1516+50.00 TO STA. 1517+00.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS AVE SUITE 100
 COLUMBIA, MO 65203
 (646) 441-4900
 www.arcadis.com

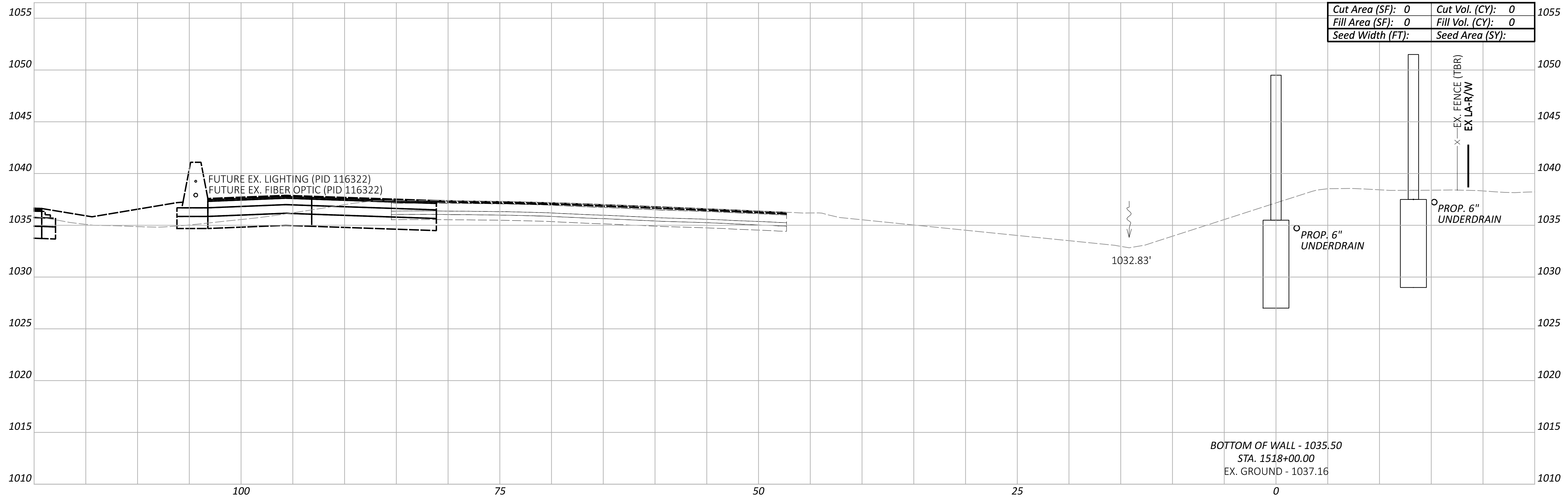
DESIGNER
JMK

REVIEWER
JDH 03-27-24

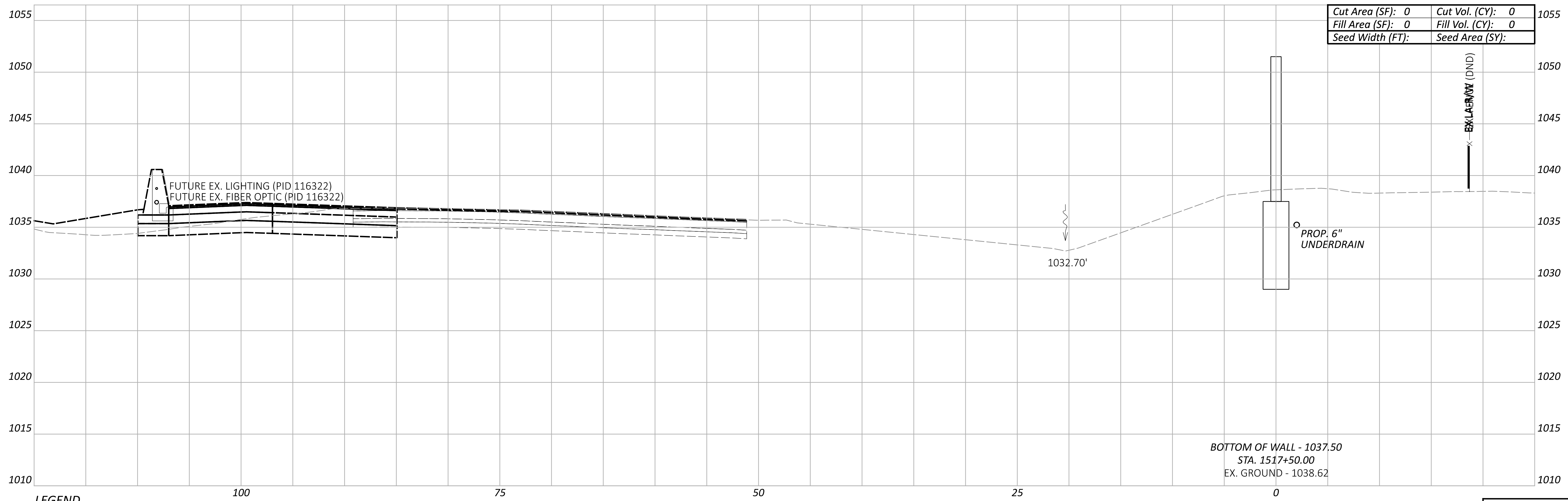
PROJECT ID
117607

FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL15 - 1517+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:46:22 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS015.dgn



BOTTOM OF WALL - 1035.50
 STA. 1518+00.00
 EX. GROUND - 1037.16



BOTTOM OF WALL - 1037.50
 STA. 1517+50.00
 EX. GROUND - 1038.62

**CROSS SECTIONS - WALL 15
 STA. 1517+50.00 TO STA. 1518+00.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS SUITE 100
 COLUMBIA, MO 65203
 (646) 441-4900
 www.arcadis.com

DESIGNER
JMK

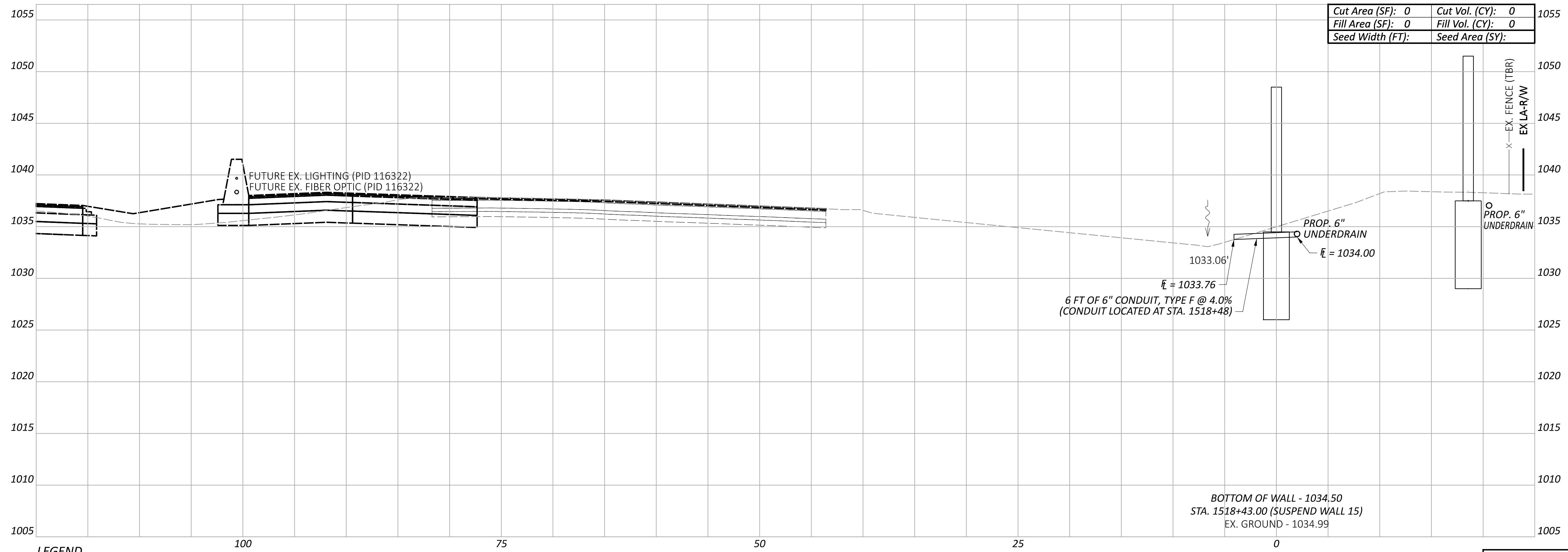
REVIEWER
JDH 03-27-24

PROJECT ID
117607

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
0	0	0	P.207	P.295

FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL15 - 1518+43.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:46:42 PM USER: jennifer.kelley
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LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

o — EX. FENCE (TBR)
 — EX LA-R/W

BOTTOM OF WALL - 1034.50
 STA. 1518+43.00 (SUSPEND WALL 15)
 EX. GROUND - 1034.99

Sheet Totals			117607	
Seeding	Cut	Fill	SHEET	TOTAL
0	0	0	P.208	P.295

**CROSS SECTIONS - WALL 15
 STA. 1518+43.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY 240 SUITE 100
 COLUMBUS, OHIO 43223
 (614) 810-4900
 www.arcadis.com

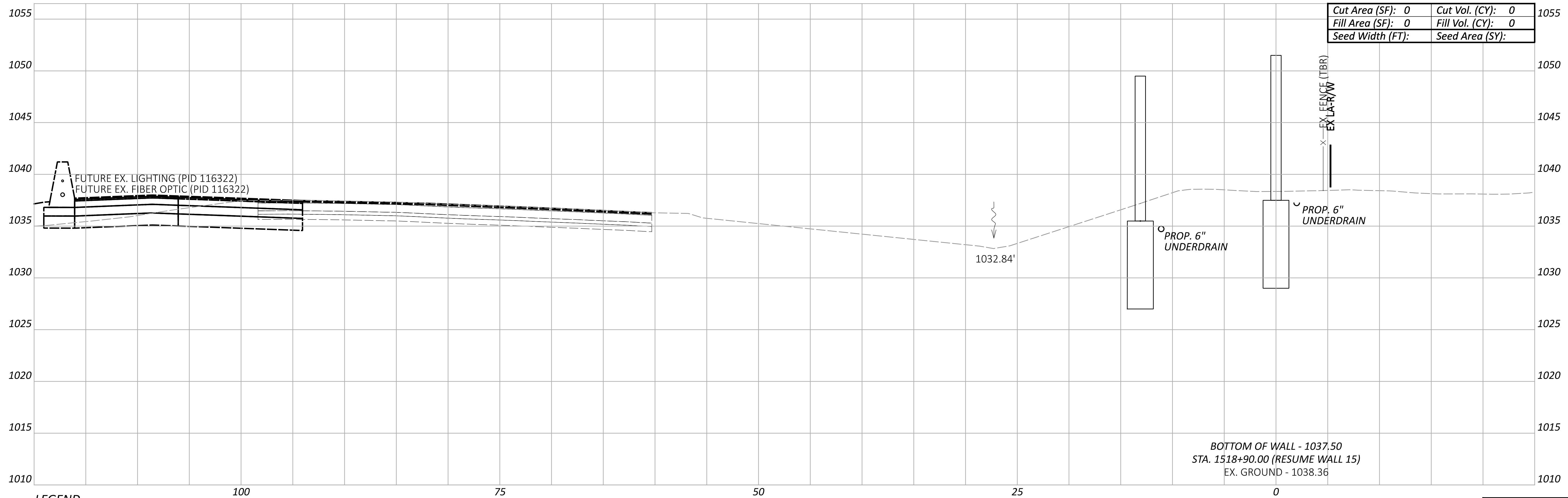
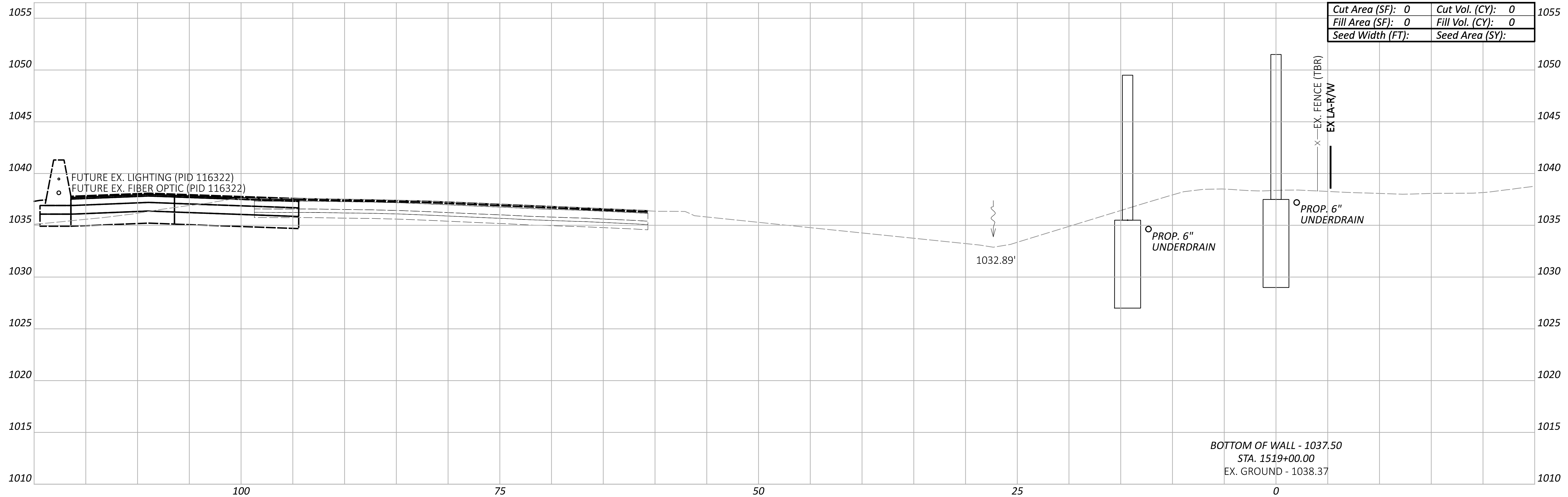
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL15 - 1518+90.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:46:54 PM USER: jennifer.kelley
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LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
0	0	0	P.209 P.295

**CROSS SECTIONS - WALL 15
 STA. 1518+90.00 TO STA. 1519+00.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY 200 SUITE 100
 COLUMBIA, MO 65203
 (646) 441-4900
 www.arcadis.com

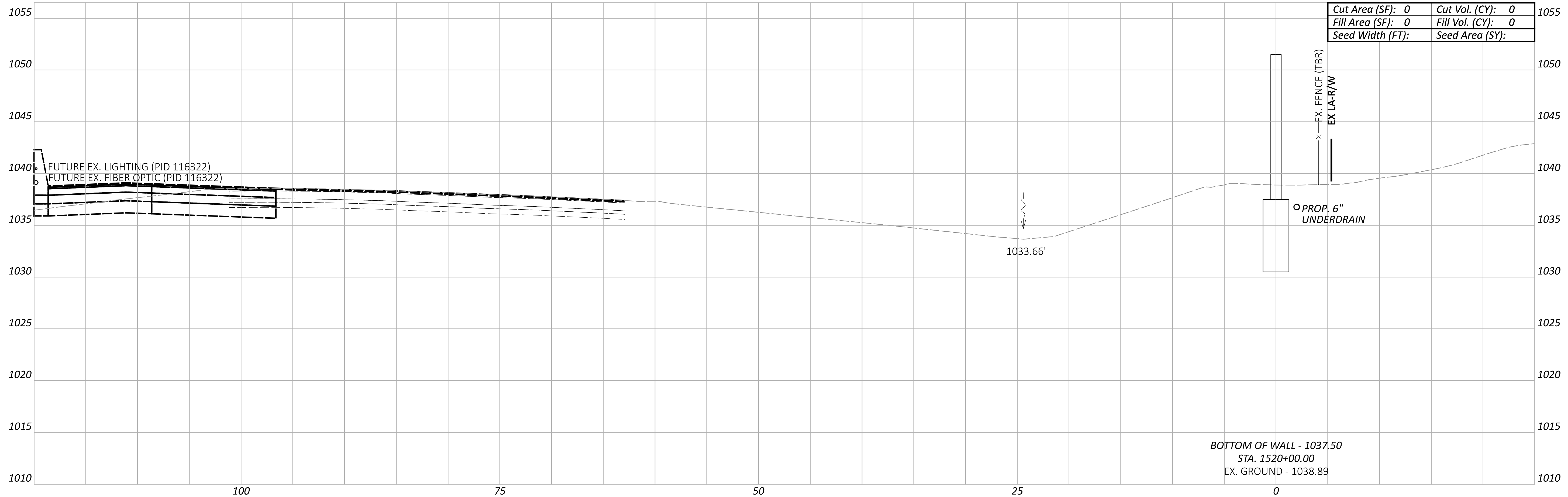
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

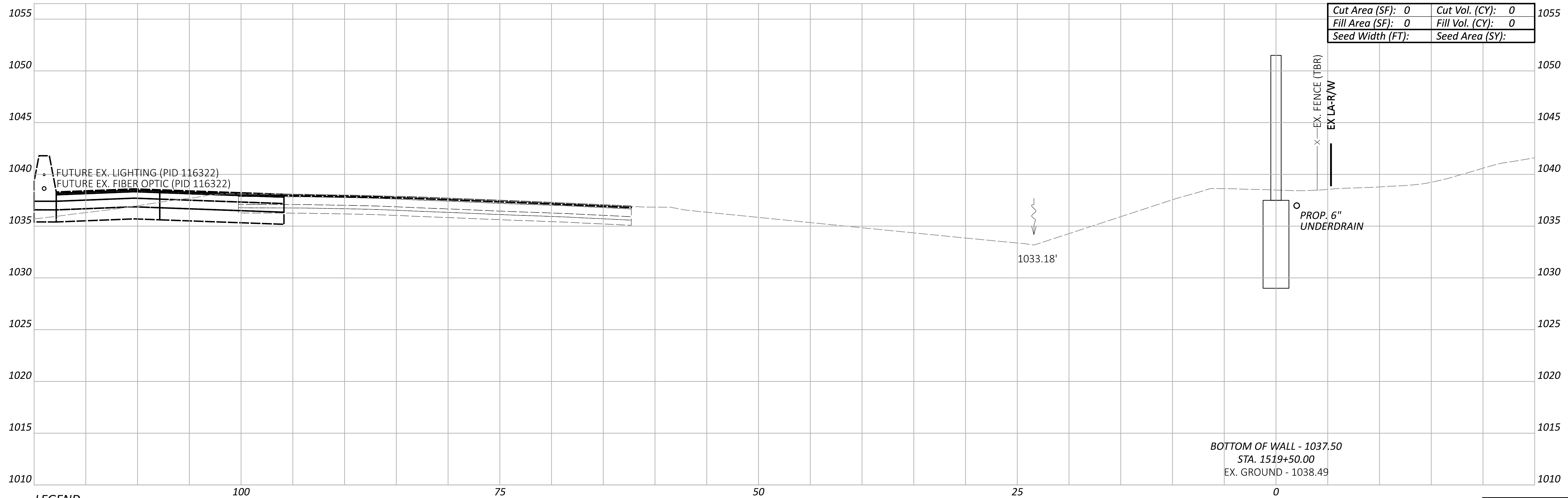
FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL15 - 1519+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:47:39 PM USER: jennifer.kelley
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Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 1037.50
 STA. 1520+00.00
 EX. GROUND - 1038.89



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 1037.50
 STA. 1519+50.00
 EX. GROUND - 1038.49

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
0	0	0	P.210 P.295

**CROSS SECTIONS - WALL 15
 STA. 1519+50.00 TO STA. 1520+00.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGHWAY SUITE 100
 COLUMBIA, MO 65203
 (616) 414-4900
 www.arcadis.com

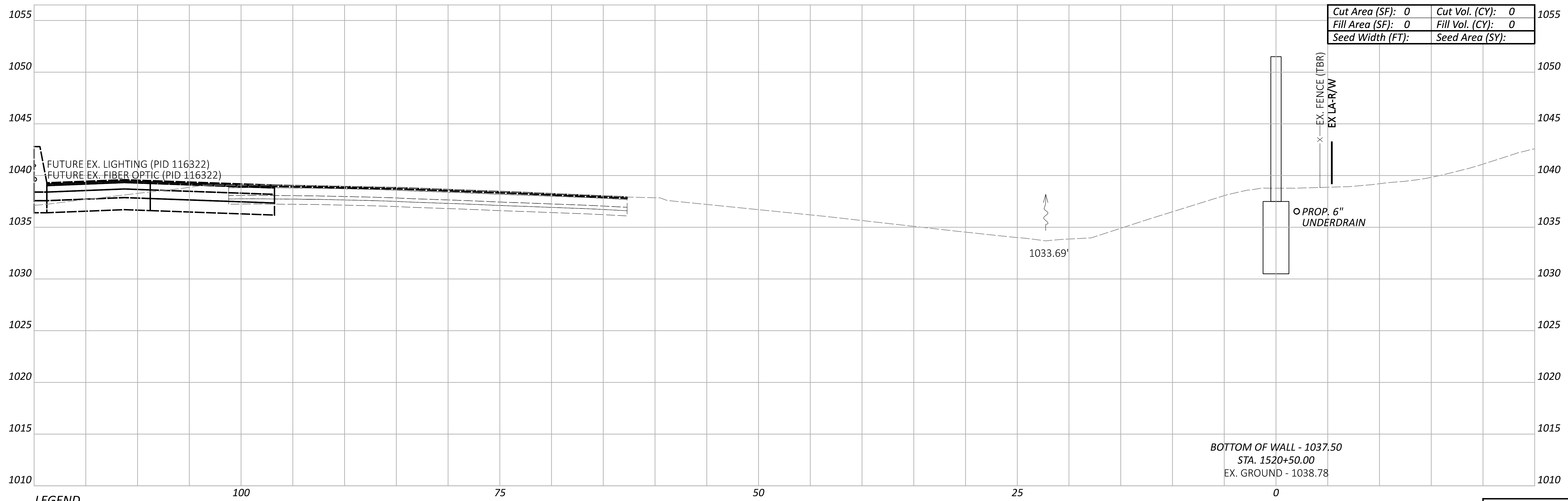
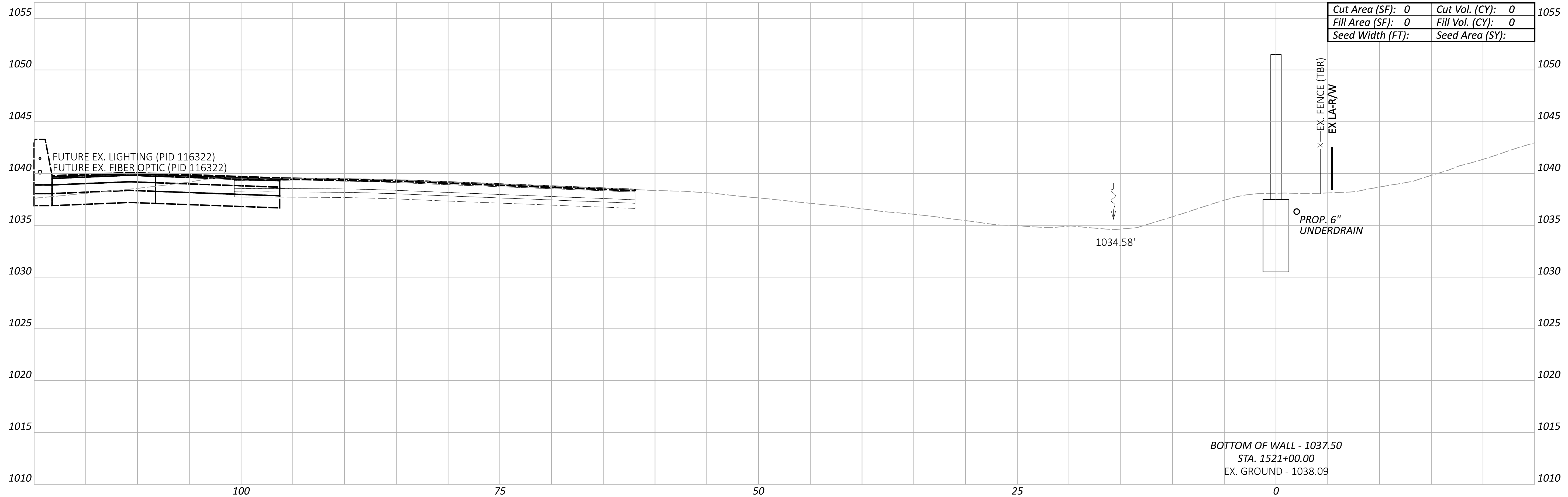
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL15 - 1520+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:48:25 PM USER: jennifer.kelley
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LEGEND
 - - - EXISTING SR-161 PRIOR TO PID 116322
 - - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
0	0	0	P.211 P.295

**CROSS SECTIONS - WALL 15
 STA. 1520+50.00 TO STA. 1521+00.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS SUITE 100
 COLUMBIA, MO 65203
 (646) 441-4900
 www.arcadis.com

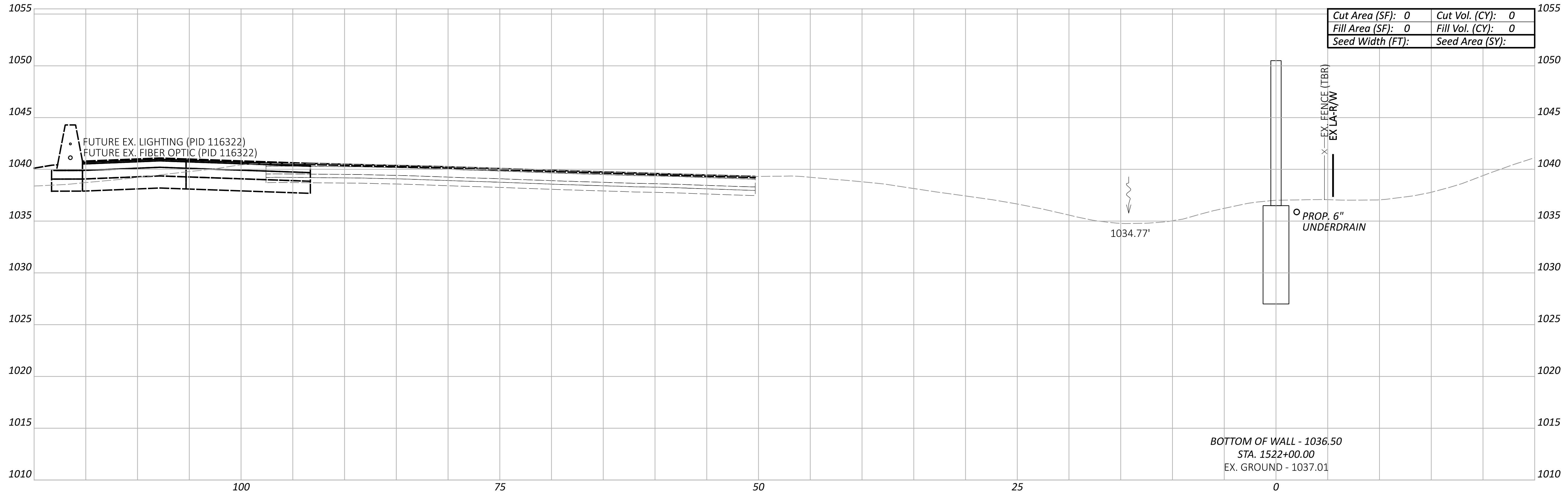
DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

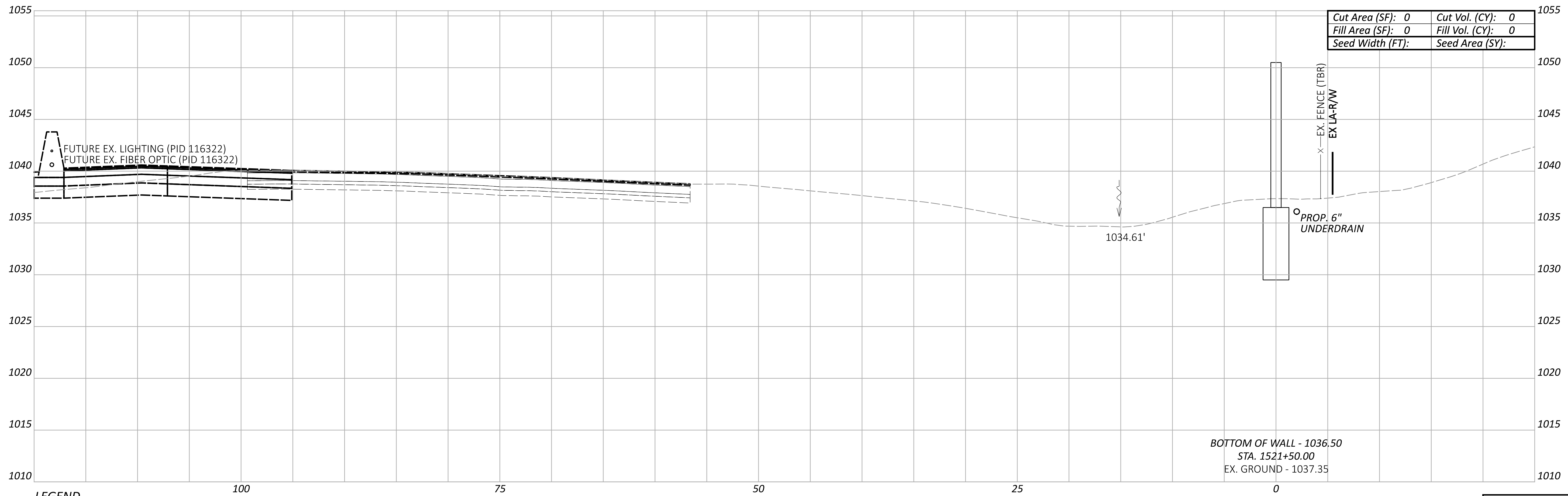
FRA-161-15.80 NOISE WALLS

MODEL: BLP_WALL15 - 1521+50.00 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:49:12 PM USER: jennifer.kelley
 pw:\arcadis-us-pw.bentley.com\arcadis-us-01\Documents\01 Active Projects\143720\400_CAD\400-Engineering\Roadway\Sheets\117607_XS015.dgn



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 1036.50
 STA. 1522+00.00
 EX. GROUND - 1037.01



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

BOTTOM OF WALL - 1036.50
 STA. 1521+50.00
 EX. GROUND - 1037.35

LEGEND

- - - EXISTING SR-161 PRIOR TO PID 116322
- - - FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
0	0		P.212 P.295

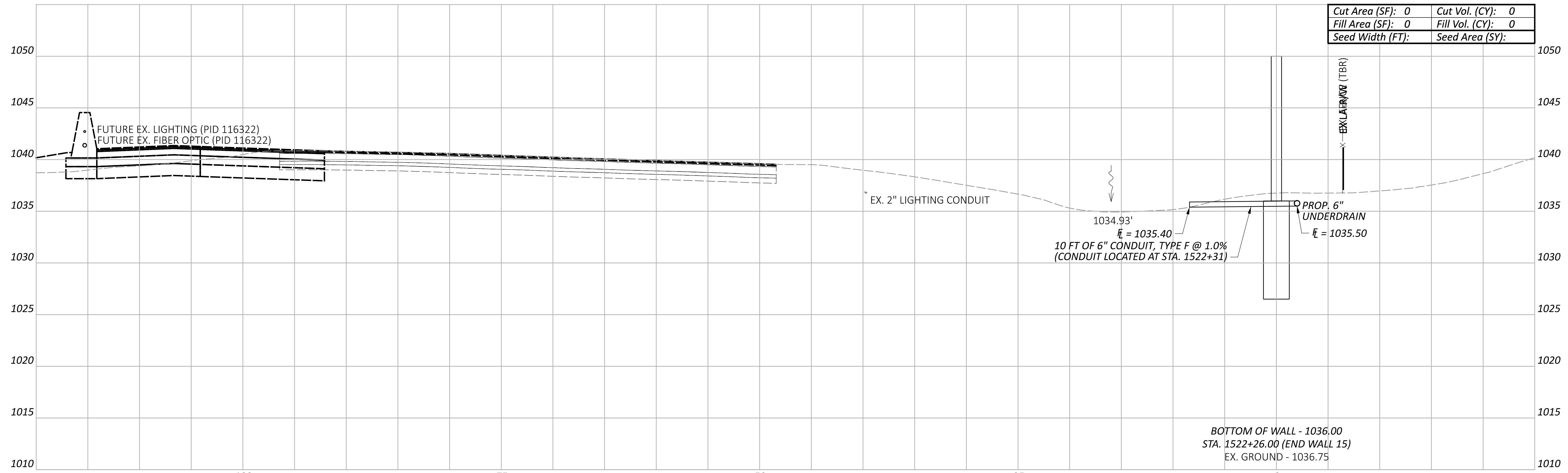
**CROSS SECTIONS - WALL 15
 STA. 1521+50.00 TO STA. 1522+00.00**

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS AVE SUITE 100
 COLUMBIANA, OH 43085
 (614) 819-4900
 www.arcadis.com

DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

LEGEND

---	EXISTING SR-161 PRIOR TO PID 116322
---	FUTURE EXISTING SR-161 AFTER CONSTRUCTION OF PID 116322

Sheet Totals			117607
Seeding	Cut	Fill	TOTAL
0	0	0	P.213 P.295

CROSS SECTIONS - WALL 15
 STA. 1522+26.00

DESIGN AGENCY
ARCADIS
 8101 NORTH HIGGINS AVE SUITE 100
 COLUMBIANA, OH 43085
 (614) 810-4900
 www.arcadis.com

DESIGNER
JMK

REVIEWER
JDH 03-27-24

PROJECT ID
117607

NOISE WALL 3						
DRILLED SHAFT NO.	WORKPOINT STATION	DEFLECTION ANGLE	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)	BOTTOM OF BARRIER ELEVATION	TOP OF BARRIER ELEVATION
1	300+00.00	0000'00" LT	965.18	7.00	965.50	979.50
2	300+24.00	0000'00" LT	965.18	7.00	965.50	979.50
3	300+48.00	0000'00" LT	965.18	7.00	965.50	980.50
4	300+72.00	0000'00" LT	966.18	7.00	966.50	980.50
5	300+96.00	0000'00" LT	966.18	7.00	966.50	980.50
6	301+20.00	0000'00" LT	966.18	8.00	966.50	981.00
7	301+44.00	0000'00" LT	966.68	8.00	967.00	981.00
8	301+68.00	0000'00" LT	966.68	8.00	967.00	981.00
9	301+92.00	02'51'26" LT	966.68	8.00	967.00	981.50
10	302+16.00	0000'00" LT	967.18	8.00	967.50	981.50
11	302+40.00	0000'00" LT	967.18	8.00	967.50	981.50
12	302+64.00	0000'00" LT	967.18	8.00	967.50	982.00
13	302+88.00	0000'00" LT	967.68	8.00	968.00	982.00
14	303+12.00	0000'00" LT	967.68	6.50	968.00	982.50
15	303+36.00	0000'00" LT	968.18	6.50	968.50	982.50
16	303+60.00	0000'00" LT	968.18	6.50	968.50	982.50
17	303+84.00	0000'00" LT	968.18	6.50	968.50	982.50
18	304+08.00	0000'00" LT	968.18	6.50	968.50	982.50
19	304+32.00	0000'00" LT	968.18	6.50	968.50	982.50
20	304+56.00	0000'00" LT	968.18	6.50	968.50	982.50
21	304+80.00	0000'00" LT	968.18	6.50	968.50	982.50
22	305+04.00	0000'00" LT	968.18	6.50	968.50	982.50
23	305+28.00	0000'00" LT	968.18	6.50	968.50	982.50
24	305+52.00	0000'00" LT	968.18	6.50	968.50	982.50
25	305+76.00	0000'00" LT	968.18	6.50	968.50	982.50

NOISE WALL 6						
DRILLED SHAFT NO.	WORKPOINT STATION	DEFLECTION ANGLE	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)	BOTTOM OF BARRIER ELEVATION	TOP OF BARRIER ELEVATION
1	600+00.00	0000'00" LT	960.18	7.00	960.50	974.50
2	600+24.00	0000'00" LT	960.18	7.00	960.50	974.50
3	600+48.00	0000'00" LT	960.18	7.00	960.50	974.50
4	600+72.00	0000'00" LT	960.18	7.00	960.50	975.50
5	600+96.00	0000'00" LT	961.18	7.00	961.50	976.50
6	601+08.00	0000'00" LT	962.18	7.00	962.50	977.50
7	601+20.00	0000'00" LT	963.18	7.00	963.50	978.50
8	601+32.00	0000'00" LT	964.18	7.00	964.50	979.50
9	601+44.00	0000'00" LT	965.18	7.00	965.50	980.00
10	601+56.00	0000'00" LT	965.68	7.00	966.00	980.50
11	601+68.00	0000'00" LT	966.18	7.00	966.50	981.00
12	601+92.00	0000'00" LT	966.68	7.00	967.00	982.00
13	602+16.00	0000'00" LT	967.68	7.00	968.00	982.00
14	602+40.00	0000'00" LT	967.68	7.00	968.00	982.00
15	602+64.00	0000'00" LT	967.68	7.00	968.00	982.50
16	602+88.00	0000'00" LT	968.18	7.00	968.50	982.50
17	603+12.00	0000'00" LT	968.18	7.00	968.50	982.50
18	603+36.00	0000'00" LT	968.18	7.00	968.50	982.50
19	603+60.00	0000'00" LT	968.18	7.00	968.50	982.50
20	603+84.00	0000'00" LT	968.18	7.00	968.50	982.50
21	604+08.00	0000'00" LT	968.18	7.00	968.50	983.00
22	604+32.00	0000'00" LT	968.68	7.00	969.00	983.00
23	604+56.00	0000'00" LT	968.68	7.00	969.00	983.00
24	604+80.00	0000'00" LT	968.68	7.00	969.00	983.00
25	605+04.00	0000'00" LT	968.68	7.00	969.00	983.00
26	605+28.00	0000'00" LT	968.68	7.00	969.00	983.00

NOISE WALL 8													
DRILLED SHAFT NO.	WORKPOINT STATION	DEFLECTION ANGLE	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)	BOTTOM OF BARRIER ELEVATION	TOP OF BARRIER ELEVATION	DRILLED SHAFT NO.	WORKPOINT STATION	DEFLECTION ANGLE	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)	BOTTOM OF BARRIER ELEVATION	TOP OF BARRIER ELEVATION
1	800+00.00	00'00'00" LT	965.68	6.50	966.00	980.00	41	809+60.00	00'00'00" RT	967.68	6.50	968.00	982.50
2	800+24.00	00'00'00" LT	965.68	6.50	966.00	980.00	42	809+84.00	00'00'00" RT	968.18	6.50	968.50	982.50
3	800+48.00	00'00'00" LT	965.68	6.50	966.00	980.00	43	810+08.00	00'00'00" RT	968.18	6.50	968.50	983.00
4	800+72.00	00'00'00" LT	965.68	6.50	966.00	980.50	44	810+32.00	00'00'00" RT	968.68	6.50	969.00	983.50
5	800+96.00	00'00'00" LT	966.18	6.50	966.50	980.50	45	810+56.00	00'00'00" RT	969.18	6.50	969.50	984.00
6	801+20.00	00'00'00" LT	966.18	6.50	966.50	980.50	46	810+80.00	07'30'00" RT	969.68	6.50	970.00	984.00
7	801+44.00	00'00'00" LT	966.18	6.50	966.50	980.50	47	810+96.00	00'00'00" RT	969.68	6.50	970.00	984.50
8	801+68.00	00'00'00" LT	966.18	6.50	966.50	980.50	48	811+12.00	00'00'00" RT	970.18	6.50	970.50	985.00
9	801+92.00	00'00'00" LT	966.18	6.50	966.50	980.50	49	811+28.00	00'00'00" RT	970.68	6.50	971.00	985.00
10	802+16.00	00'00'00" LT	966.18	6.50	966.50	980.50	50	811+44.00	01'52'45" LT	970.68	6.50	971.00	985.50
11	802+40.00	00'00'00" LT	966.18	6.50	966.50	980.50	51	811+58.00	00'00'00" LT	971.18	6.50	971.50	986.00
12	802+64.00	05'46'53" LT	966.18	6.50	966.50	980.50	52	811+72.00	07'26'48" LT	971.68	7.00	972.00	986.50
13	802+88.00	00'00'00" LT	966.18	6.50	966.50	980.50	53	811+96.00	00'00'00" LT	972.18	7.00	972.50	987.00
14	803+12.00	00'00'00" LT	966.18	6.50	966.50	980.50	54	812+20.00	00'00'00" LT	972.68	7.00	973.00	988.00
15	803+36.00	00'00'00" LT	966.18	6.50	966.50	980.50	55	812+44.00	00'00'00" LT	973.68	7.00	974.00	989.00
16	803+60.00	00'00'00" LT	966.18	6.50	966.50	980.50	56	812+68.00	00'00'00" LT	974.68	7.00	975.00	989.00
17	803+84.00	00'00'00" LT	965.68	6.50	966.00	980.50	57	812+92.00	00'00'00" LT	974.68	7.00	975.00	989.00
18	804+08.00	00'00'00" LT	965.68	6.50	966.00	980.00	58	813+16.00	00'00'00" LT	974.68	7.00	975.00	989.00
19	804+32.00	00'00'00" LT	965.18	6.50	965.50	980.00	59	813+40.00	00'00'00" LT	974.68	7.00	975.00	989.00
20	804+56.00	00'00'00" LT	965.18	6.50	965.50	979.50	60	813+64.00	00'00'00" LT	974.68	7.00	975.00	989.00
21	804+80.00	00'00'00" LT	965.18	6.50	965.50	979.50	61	813+88.00	00'00'00" LT	974.18	6.50	974.50	989.00
22	805+04.00	00'00'00" LT	965.18	6.50	965.50	979.50	62	814+12.00	00'00'00" LT	974.18	6.50	974.50	988.50
23	805+28.00	00'00'00" LT	965.18	6.50	965.50	979.50	63	814+36.00	00'00'00" LT	973.68	6.50	974.00	988.50
24	805+52.00	00'00'00" LT	965.18	6.50	965.50	979.50	64	814+60.00	00'11'01" LT	973.68	6.50	974.00	988.00
25	805+76.00	00'00'00" LT	965.18	6.50	965.50	979.50	65	814+84.00	00'00'00" LT	973.68	6.50	974.00	988.00
26	806+00.00	00'00'00" LT	965.18	6.50	965.50	979.50	66	815+08.00	00'00'00" LT	973.68	6.50	974.00	988.00
27	806+24.00	00'00'00" LT	965.18	6.50	965.50	979.50	67	815+32.00	00'00'00" LT	973.68	6.50	974.00	988.00
28	806+48.00	00'00'00" LT	965.18	6.50	965.50	979.50	68	815+56.00	00'00'00" LT	973.68	6.50	974.00	988.00
29	806+72.00	05'54'06" RT	965.18	6.50	965.50	979.50	69	815+80.00	00'00'00" LT	973.68	6.50	974.00	988.00
30	806+96.00	00'00'00" RT	965.18	6.50	965.50	980.00	70	816+04.00	00'00'00" LT	973.18	6.50	973.50	988.00
31	807+20.00	00'00'00" RT	965.68	6.50	966.00	980.50	71	816+28.00	00'00'00" LT	973.18	6.50	973.50	987.50
32	807+44.00	00'00'00" RT	966.18	6.50	966.50	980.50	72	816+52.00	00'00'00" LT	973.18	6.50	973.50	987.50
33	807+68.00	00'00'00" RT	966.18	6.50	966.50	981.00	73	816+76.00	00'00'00" LT	973.18	6.50	973.50	987.50
34	807+92.00	00'00'00" RT	966.68	6.50	967.00	981.00	74	817+00.00	00'00'00" LT	973.18	6.50	973.50	987.50
35	808+16.00	00'00'00" RT	966.68	6.50	967.00	981.00	75	817+24.00	00'00'00" LT	973.18	6.50	973.50	987.50
36	808+40.00	00'00'00" RT	966.68	6.50	967.00	981.50	76	817+48.00	00'00'00" LT	973.18	6.50	973.50	987.50
37	808+64.00	00'00'00" RT	967.18	6.50	967.50	981.50	77	817+72.00	00'00'00" LT	973.18	6.50	973.50	987.50
38	808+88.00	00'00'00" RT	967.18	6.50	967.50	981.50	78	817+96.00	00'00'00" LT	973.18	6.50	973.50	987.50
39	809+12.00	00'00'00" RT	967.18	6.50	967.50	981.50	79	818+08.00	00'00'00" LT	973.18	6.50	973.50	987.50
40	809+36.00	00'00'00" RT	967.18	6.50	967.50	982.00							

NOTES:
 1.) FOR POST TYPE SPECIFICATIONS, SEE SHEETS P.218 - P.221

2.) VALUES LISTED FOR BOTTOM OF BARRIER ELEVATION AND TOP OF BARRIER ELEVATION CORRESPOND WITH THE BOTTOMMOST AND TOPMOST PANEL AT EACH DRILLED SHAFT LOCATION.

NOISE WALL 9						
DRILLED SHAFT NO.	WORKPOINT STATION	DEFLECTION ANGLE	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)	BOTTOM OF BARRIER ELEVATION	TOP OF BARRIER ELEVATION
1	900+00.00	0000'00" RT	973.18	7.00	973.50	987.50
2	900+16.00	0000'00" RT	973.18	7.00	973.50	987.50
3	900+40.00	0000'00" RT	973.18	7.00	973.50	987.50
4	900+64.00	0000'00" RT	973.18	7.00	973.50	988.00
5	900+88.00	0000'00" RT	973.68	7.00	974.00	988.00
6	901+12.00	0000'00" RT	973.68	7.00	974.00	988.00
7	901+36.00	0000'00" RT	973.68	7.00	974.00	988.00
8	901+52.00	0000'00" RT	973.68	7.00	974.00	988.00
9	901+68.00	0000'00" RT	973.68	7.00	974.00	988.50
10	901+84.00	0000'00" RT	974.18	7.00	974.50	988.50
11	902+08.00	0000'00" RT	974.18	7.00	974.50	988.50
12	902+32.00	0000'00" RT	974.18	7.00	974.50	988.50
13	902+56.00	02'23'44" RT	974.18	7.00	974.50	989.00
14	902+80.00	0000'00" RT	974.68	7.00	975.00	989.50
15	903+04.00	0000'00" RT	975.18	7.00	975.50	990.00
16	903+28.00	0000'00" RT	975.68	7.00	976.00	990.00
17	903+52.00	0000'00" RT	975.68	7.00	976.00	990.00
18	903+76.00	0000'00" RT	975.68	7.00	976.00	990.00
19	904+00.00	0000'00" RT	975.68	7.00	976.00	990.50
20	904+24.00	0000'00" RT	976.18	7.00	976.50	990.50
21	904+48.00	0000'00" RT	976.18	7.00	976.50	991.00
22	904+72.00	0000'00" RT	976.68	7.00	977.00	991.00
23	904+96.00	0000'00" RT	976.68	7.00	977.00	991.50
24	905+20.00	0000'00" RT	977.18	7.00	977.50	991.50
25	905+44.00	0000'00" RT	977.18	7.00	977.50	992.00
26	905+68.00	0000'00" RT	977.68	7.00	978.00	992.50
27	905+92.00	04'48'10" RT	978.18	7.00	978.50	992.50
28	906+16.00	0000'00" RT	978.18	7.00	978.50	992.50
29	906+40.00	0000'00" RT	978.18	7.00	978.50	992.50
30	906+64.00	0000'00" RT	978.18	7.00	978.50	993.00
31	906+88.00	0000'00" RT	978.68	7.00	979.00	993.50
32	907+12.00	0000'00" RT	979.18	7.00	979.50	993.50
33	907+36.00	0000'00" RT	979.18	7.00	979.50	994.00
34	907+60.00	0000'00" RT	979.68	7.00	980.00	994.50
35	907+84.00	0000'00" RT	980.18	7.00	980.50	994.50
36	908+08.00	0000'00" RT	980.18	7.00	980.50	994.50
37	908+32.00	0000'00" RT	980.18	7.00	980.50	995.00
38	908+56.00	0000'00" RT	980.68	7.00	981.00	995.00
39	908+80.00	0000'00" RT	980.68	7.00	981.00	995.50
40	909+04.00	0000'00" RT	981.18	7.00	981.50	995.50
41	909+28.00	05'00'48" RT	981.18	7.00	981.50	995.50
42	909+52.00	0000'00" RT	981.18	7.00	981.50	996.00
43	909+76.00	0000'00" RT	981.68	7.00	982.00	996.00
44	910+00.00	0000'00" RT	981.68	7.00	982.00	996.00
45	910+24.00	0000'00" RT	981.68	7.00	982.00	996.50
46	910+48.00	0000'00" RT	982.18	7.00	982.50	997.00
47	910+72.00	0000'00" RT	982.68	7.00	983.00	997.00
48	910+96.00	0000'00" RT	982.68	7.00	983.00	997.50
49	911+20.00	0000'00" RT	983.18	7.00	983.50	997.50
50	911+44.00	0000'00" RT	983.18	7.00	983.50	997.50
51	911+68.00	0000'00" RT	983.18	7.00	983.50	998.00
52	911+85.00	0000'00" RT	983.68	7.00	984.00	998.00
53	912+02.00	0000'00" RT	983.68	7.00	984.00	998.00
54	912+19.00	0000'00" RT	982.68	7.00	983.00	998.00
55	912+36.00	0000'00" RT	981.68	7.00	982.00	997.00
56	912+53.00	0000'00" RT	980.68	7.00	981.00	996.00
57	912+70.00	0000'00" RT	980.68	7.00	981.00	995.00

NOISE WALL 11													
DRILLED SHAFT NO.	WORKPOINT STATION	DEFLECTION ANGLE	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)	BOTTOM OF BARRIER ELEVATION	TOP OF BARRIER ELEVATION	DRILLED SHAFT NO.	WORKPOINT STATION	DEFLECTION ANGLE	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)	BOTTOM OF BARRIER ELEVATION	TOP OF BARRIER ELEVATION
1	1100+00.00	00'00'00" RT	974.68	6.50	975.00	989.00	35	1108+16.00	00'00'00" RT	979.18	7.00	979.50	993.50
2	1100+24.00	00'00'00" RT	974.68	6.50	975.00	989.50	36	1108+40.00	00'00'00" RT	979.18	7.00	979.50	994.00
3	1100+48.00	00'00'00" RT	975.18	6.50	975.50	990.00	37	1108+64.00	00'00'00" RT	979.68	7.00	980.00	994.00
4	1100+72.00	00'00'00" RT	975.68	6.50	976.00	990.00	38	1108+88.00	00'00'00" RT	979.68	7.00	980.00	994.50
5	1100+96.00	00'00'00" RT	975.68	6.50	976.00	990.00	39	1109+12.00	00'00'00" RT	980.18	6.50	980.50	995.00
6	1101+20.00	00'00'00" RT	975.68	7.00	976.00	990.00	40	1109+36.00	00'00'00" RT	980.68	6.50	981.00	995.00
7	1101+44.00	00'00'00" RT	975.68	7.00	976.00	990.50	41	1109+60.00	00'00'00" RT	980.68	6.50	981.00	995.00
8	1101+68.00	00'00'00" RT	976.18	7.00	976.50	990.50	42	1109+84.00	00'00'00" RT	980.68	6.50	981.00	995.00
9	1101+92.00	00'00'00" RT	976.18	7.00	976.50	990.50	43	1110+08.00	00'00'00" RT	980.68	6.50	981.00	995.00
10	1102+16.00	00'00'00" RT	976.18	7.00	976.50	990.50	44	1110+32.00	03'30'30" RT	980.68	6.50	981.00	995.00
11	1102+40.00	00'00'00" RT	976.18	7.00	976.50	990.50	45	1110+56.00	00'00'00" RT	980.68	6.50	981.00	995.50
12	1102+64.00	00'00'00" RT	976.18	7.00	976.50	990.50	46	1110+80.00	00'00'00" RT	981.18	6.50	981.50	995.50
13	1102+88.00	00'00'00" RT	976.18	7.00	976.50	991.00	47	1111+04.00	00'00'00" RT	981.18	6.50	981.50	995.50
14	1103+12.00	00'00'00" RT	976.68	6.50	977.00	991.50	48	1111+28.00	00'00'00" RT	981.18	6.50	981.50	995.50
15	1103+36.00	00'00'00" RT	977.18	6.50	977.50	992.00	49	1111+52.00	00'00'00" RT	981.18	6.50	981.50	995.50
16	1103+60.00	00'00'00" RT	977.68	6.50	978.00	992.50	50	1111+76.00	00'00'00" RT	981.18	6.50	981.50	996.00
17	1103+84.00	00'00'00" RT	978.18	6.50	978.50	993.00	51	1112+00.00	00'00'00" RT	981.68	6.50	982.00	996.00
18	1104+08.00	00'00'00" RT	978.68	6.50	979.00	993.50	52	1112+24.00	00'00'00" RT	981.68	6.50	982.00	996.00
19	1104+32.00	00'00'00" RT	979.18	6.50	979.50	993.50	53	1112+48.00	00'00'00" RT	981.68	6.50	982.00	996.00
20	1104+56.00	00'00'00" RT	979.18	6.50	979.50	993.50	54	1112+72.00	00'00'00" RT	981.68	6.50	982.00	996.00
21	1104+80.00	00'00'00" RT	979.18	6.50	979.50	993.50	55	1112+96.00	00'00'00" RT	981.68	6.50	982.00	996.00
22	1105+04.00	00'00'00" RT	979.18	6.50	979.50	993.50	56	1113+20.00	00'00'00" RT	981.68	6.50	982.00	996.00
23	1105+28.00	00'00'00" RT	979.18	6.50	979.50	994.00	57	1113+44.00	00'00'00" RT	981.68	6.50	982.00	996.00
24	1105+52.00	00'00'00" RT	979.68	6.50	980.00	994.00	58	1113+68.00	00'00'00" RT	981.68	6.50	982.00	996.50
25	1105+76.00	00'00'00" RT	979.68	6.50	980.00	994.00	59	1113+92.00	06'13'00" RT	982.18	6.50	982.50	996.50
26	1106+00.00	00'00'00" RT	979.68	6.50	980.00	994.00	60	1114+16.00	00'00'00" RT	982.18	6.50	982.50	996.50
27	1106+24.00	00'00'00" RT	979.68	6.50	980.00	994.00	61	1114+40.00	00'00'00" RT	982.18	6.50	982.50	996.50
28	1106+48.00	00'00'00" RT	979.68	6.50	980.00	994.00	62	1114+64.00	00'00'00" RT	982.18	6.50	982.50	996.50
29	1106+72.00	00'00'00" RT	979.68	6.50	980.00	994.00	63	1114+88.00	00'00'00" RT	982.18	6.50	982.50	996.50
30	1106+96.00	00'00'00" RT	979.68	6.50	980.00	994.00	64	1115+12.00	00'00'00" RT	982.18	6.50	982.50	996.50
31	1107+20.00	00'00'00" RT	979.68	7.00	980.00	994.00	65	1115+36.00	00'00'00" RT	982.18	6.50	982.50	996.50
32	1107+44.00	00'00'00" RT	979.18	7.00	979.50	994.00	66	1115+60.00	00'00'00" RT	982.18	6.50	982.50	996.50
33	1107+68.00	00'00'00" RT	979.18	7.00	979.50	993.50							
34	1107+92.00	06'02'50" RT	979.18	7.00	979.50	993.50							

NOISE WALL 12													
DRILLED SHAFT NO.	WORKPOINT STATION	DEFLECTION ANGLE	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)	BOTTOM OF BARRIER ELEVATION	TOP OF BARRIER ELEVATION	DRILLED SHAFT NO.	WORKPOINT STATION	DEFLECTION ANGLE	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)	BOTTOM OF BARRIER ELEVATION	TOP OF BARRIER ELEVATION
1	120+00.00	00'00'00" RT	981.18	7.00	981.50	995.50	17	123+36.00	00'00'00" RT	985.68	7.00	986.00	1000.50
2	120+12.00	00'00'00" RT	981.18	7.00	981.50	996.00	18	123+60.00	00'00'00" RT	986.18	7.00	986.50	1000.50
3	120+24.00	02'23'37" RT	981.68	7.00	982.00	996.50	19	123+84.00	06'56'28" RT	986.18	7.00	986.50	1000.50
4	120+36.00	00'00'00" RT	982.18	7.00	982.50	997.00	20	123+92.00	00'00'00" RT	986.18	7.00	986.50	1000.50
5	120+60.00	00'00'00" RT	982.68	7.00	983.00	997.50	21	124+16.00	00'00'00" RT	986.18	7.00	986.50	1000.50
6	120+72.00	00'00'00" RT	983.18	7.00	983.50	998.00	22	124+35.00	00'00'00" RT	986.18	8.50	986.50	1000.50
7	120+96.00	00'00'00" RT	983.68	7.00	984.00	998.50	23	124+54.00	00'00'00" RT	986.18	8.50	986.50	1000.50
8	121+20.00	00'00'00" RT	984.18	7.00	984.50	999.00	24	124+73.00	00'00'00" RT	986.18	8.50	986.50	1000.50
9	121+44.00	04'47'34" RT	985.18	7.00	985.50	999.50	25	124+97.00	06'54'32" RT	986.18	8.5		

NOISE WALL 15													
DRILLED SHAFT NO.	WORKPOINT STATION	DEFLECTION ANGLE	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)	BOTTOM OF BARRIER ELEVATION	TOP OF BARRIER ELEVATION	DRILLED SHAFT NO.	WORKPOINT STATION	DEFLECTION ANGLE	TOP OF DRILLED SHAFT ELEVATION	SHAFT LENGTH (FEET)	BOTTOM OF BARRIER ELEVATION	TOP OF BARRIER ELEVATION
1	1500+00.00	00'00'00" RT	1028.68	7.00	1029.00	1043.00	45	1511+71.00	00'00'00" RT	1036.18	7.00	1036.50	1051.00
2	1500+24.00	00'00'00" RT	1028.68	7.00	1029.00	1043.50	46	1511+95.00	00'00'00" RT	1036.18	7.00	1036.50	1050.50
3	1500+48.00	00'00'00" RT	1029.18	7.00	1029.50	1044.00	47	1512+19.00	00'00'00" RT	1036.18	7.00	1036.50	1050.50
4	1500+72.00	00'00'00" RT	1029.68	7.00	1030.00	1044.50	48	1512+43.00	00'00'00" RT	1036.18	7.00	1036.50	1050.50
5	1500+96.00	00'00'00" RT	1030.18	7.00	1030.50	1045.00	49	1512+67.00	00'00'00" RT	1036.18	7.00	1036.50	1050.50
6	1501+11.00	00'00'00" RT	1030.68	7.00	1031.00	1046.00	50	1512+91.00	00'00'00" RT	1036.18	7.00	1036.50	1050.50
7	1501+26.00	00'00'00" RT	1031.68	7.00	1032.00	1046.00	51	1513+15.00	00'00'00" RT	1036.18	6.50	1036.50	1050.50
8	1501+50.00	00'00'00" RT	1031.68	7.00	1032.00	1046.50	52	1513+39.00	00'00'00" RT	1036.18	6.50	1036.50	1050.50
9	1501+65.00	00'00'00" RT	1032.18	7.00	1032.50	1046.50	53	1513+63.00	00'00'00" RT	1036.18	6.50	1036.50	1050.50
10	1501+80.00	00'00'00" RT	1032.18	7.00	1032.50	1047.00	54	1513+87.00	00'00'00" RT	1036.18	6.50	1036.50	1050.50
11	1502+00.00	00'00'00" RT	1032.68	7.00	1033.00	1048.00	55	1514+11.00	00'00'00" RT	1036.18	6.50	1036.50	1050.50
12	1502+16.00	00'00'00" RT	1033.68	7.00	1034.00	1048.50	56	1514+35.00	00'38'16" RT	1036.18	6.50	1036.50	1050.50
13	1502+40.00	00'00'00" RT	1034.18	7.00	1034.50	1048.50	57	1514+59.00	00'00'00" RT	1036.18	6.50	1036.50	1050.50
SUSPEND NOISE WALL 15													
14	1504+27.00	00'00'00" RT	1037.68	7.00	1038.00	1052.00	58	1514+83.00	00'00'00" RT	1036.18	6.50	1036.50	1050.50
15	1504+51.00	00'00'00" RT	1037.68	7.00	1038.00	1052.00	59	1515+07.00	00'00'00" RT	1036.18	6.50	1036.50	1050.50
16	1504+75.00	00'00'00" RT	1037.68	7.00	1038.00	1052.00	60	1515+31.00	00'00'00" RT	1036.18	6.50	1036.50	1050.50
17	1504+99.00	00'00'00" RT	1037.68	7.00	1038.00	1052.00	61	1515+55.00	00'00'00" RT	1036.18	6.50	1036.50	1051.00
18	1505+23.00	00'00'00" RT	1037.68	7.00	1038.00	1052.00	62	1515+79.00	00'00'00" RT	1036.68	6.50	1037.00	1051.00
19	1505+47.00	00'00'00" RT	1037.68	7.00	1038.00	1052.00	63	1516+03.00	00'00'00" RT	1036.68	6.50	1037.00	1051.00
20	1505+71.00	00'00'00" RT	1037.68	7.00	1038.00	1052.00	64	1516+27.00	00'00'00" RT	1036.68	6.50	1037.00	1051.50
21	1505+95.00	00'00'00" RT	1037.68	7.00	1038.00	1052.00	65	1516+51.00	00'00'00" RT	1037.18	6.50	1037.50	1051.50
22	1506+19.00	00'00'00" RT	1037.68	7.00	1038.00	1052.00	66	1516+75.00	00'00'00" RT	1037.18	6.50	1037.50	1052.00
23	1506+43.00	00'00'00" RT	1037.68	7.00	1038.00	1052.50	67	1516+99.00	00'00'00" RT	1037.68	6.50	1038.00	1052.00
24	1506+67.00	00'00'00" RT	1038.18	7.00	1038.50	1052.50	68	1517+23.00	00'00'00" RT	1037.68	8.50	1038.00	1052.00
25	1506+91.00	00'00'00" RT	1038.18	7.00	1038.50	1052.50	69	1517+47.00	00'00'00" RT	1037.18	8.50	1037.50	1052.00
26	1507+15.00	00'00'00" RT	1038.18	7.00	1038.50	1052.50	70	1517+71.00	00'00'00" RT	1036.18	8.50	1036.50	1051.50
27	1507+39.00	00'00'00" RT	1038.18	7.00	1038.50	1052.50	71	1517+95.00	00'00'00" RT	1035.18	8.50	1035.50	1050.50
28	1507+63.00	00'00'00" RT	1038.18	7.00	1038.50	1052.50	72	1518+19.00	00'00'00" RT	1034.18	8.50	1034.50	1049.50
29	1507+87.00	00'00'00" RT	1038.18	7.00	1038.50	1052.50	73	1518+43.00	00'00'00" RT	1034.18	8.50	1034.50	1048.50
SUSPEND NOISE WALL 15													
30	1508+11.00	00'00'00" RT	1038.18	7.00	1038.50	1052.50	74	1518+90.00	00'00'00" RT	1037.18	8.50	1037.50	1051.50
31	1508+35.00	00'00'00" RT	1038.18	7.00	1038.50	1052.50	75	1519+14.00	00'00'00" RT	1037.18	8.50	1037.50	1051.50
32	1508+59.00	00'00'00" RT	1038.18	7.00	1038.50	1052.50	76	1519+38.00	00'00'00" RT	1037.18	8.50	1037.50	1051.50
33	1508+83.00	00'00'00" RT	1038.18	7.00	1038.50	1052.50	77	1519+62.00	00'00'00" RT	1037.18	8.50	1037.50	1051.50
34	1509+07.00	00'00'00" RT	1038.18	7.00	1038.50	1052.50	78	1519+86.00	00'00'00" RT	1037.18	7.00	1037.50	1051.50
35	1509+31.00	00'00'00" RT	1038.18	7.00	1038.50	1052.50	79	1520+10.00	00'00'00" RT	1037.18	7.00	1037.50	1051.50
36	1509+55.00	00'00'00" RT	1038.18	7.00	1038.50	1052.50	80	1520+34.00	00'00'00" RT	1037.18	7.00	1037.50	1051.50
37	1509+79.00	00'00'00" RT	1038.18	7.00	1038.50	1052.50	81	1520+58.00	00'00'00" RT	1037.18	7.00	1037.50	1051.50
38	1510+03.00	00'00'00" RT	1038.18	7.00	1038.50	1052.50	82	1520+82.00	00'00'00" RT	1037.18	7.00	1037.50	1051.50
39	1510+27.00	00'00'00" RT	1038.18	7.00	1038.50	1052.50	83	1521+06.00	00'00'00" RT	1036.68	7.00	1037.00	1051.50
40	1510+51.00	00'00'00" RT	1038.18	7.00	1038.50	1052.50	84	1521+30.00	00'00'00" RT	1036.18	7.00	1036.50	1051.00
41	1510+75.00	00'00'00" RT	1037.18	7.00	1037.50	1052.50	85	1521+54.00	00'00'00" RT	1036.18	9.50	1036.50	1050.50
42	1510+99.00	00'00'00" RT	1037.18	7.00	1037.50	1051.50	86	1521+78.00	00'00'00" RT	1036.18	9.50	1036.50	1050.50
43	1511+23.00	00'00'00" RT	1036.68	7.00	1037.00	1051.50	87	1522+02.00	00'00'00" RT	1035.68	9.50	1036.00	1050.50
44	1511+47.00	00'00'00" RT	1036.68	7.00	1037.00	1051.00	88	1522+26.00	00'00'00" RT	1035.68	9.50	1036.00	1050.00

NOTES:
 1.) FOR POST TYPE SPECIFICATIONS, SEE SHEETS P.218 - P.221

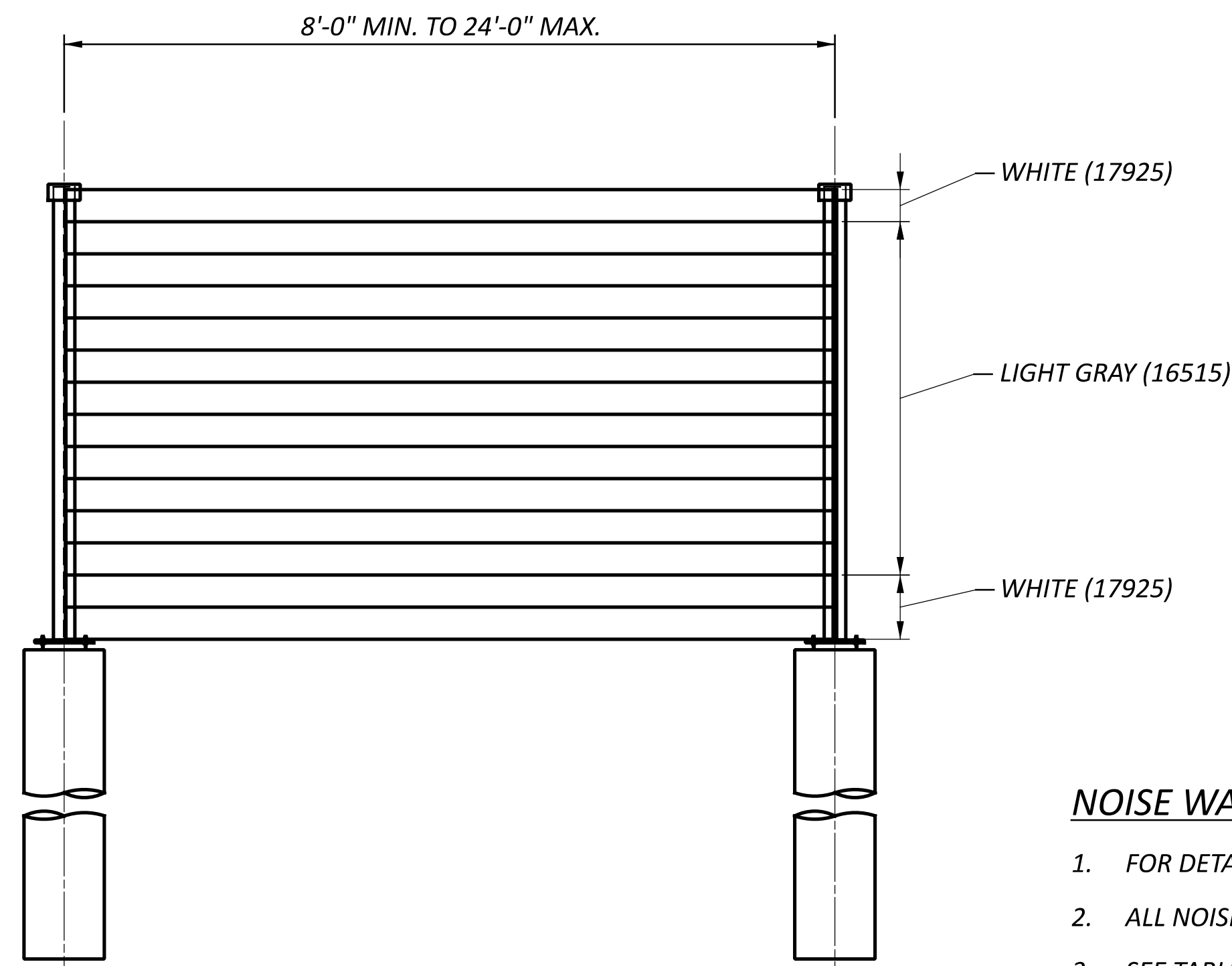
2.) VALUES LISTED FOR BOTTOM OF BARRIER ELEVATION AND TOP OF BARRIER ELEVATION CORRESPOND WITH THE BOTTOMMOST AND TOPMOST PANEL AT EACH DRILLED SHAFT LOCATION.

PANEL MATERIAL AND ARCHITECTURAL SURFACE TREATMENT

NOISE BARRIER	PANEL MATERIAL	RESIDENTIAL SIDE TREATMENT		ROADWAY SIDE TREATMENT	
		COLOR	TEXTURE	COLOR	TEXTURE
		FEDERAL COLOR NUMBER	FORMLINER ID	FEDERAL COLOR NUMBER	FORMLINER ID
WALL 3	FIBERGLASS	POST COVERS: LIGHT GRAY (16515) PANELS: LIGHT GRAY (16515)	N/A	POST COVERS: WHITE (17925) TOP PANEL OF EACH BAY: WHITE (17925) BOTTOM TWO PANELS OF EACH BAY: WHITE (17925) ALL OTHER PANELS*: LIGHT GRAY (16515)	N/A
WALL 6	FIBERGLASS	POST COVERS: LIGHT GRAY (16515) PANELS: LIGHT GRAY (16515)	N/A	POST COVERS: WHITE (17925) TOP PANEL OF EACH BAY: WHITE (17925) BOTTOM TWO PANELS OF EACH BAY: WHITE (17925) ALL OTHER PANELS*: LIGHT GRAY (16515)	N/A
WALL 8	FIBERGLASS	POST COVERS: LIGHT GRAY (16515) PANELS: LIGHT GRAY (16515)	N/A	POST COVERS: WHITE (17925) TOP PANEL OF EACH BAY: WHITE (17925) BOTTOM TWO PANELS OF EACH BAY: WHITE (17925) ALL OTHER PANELS*: LIGHT GRAY (16515)	N/A
WALL 9	FIBERGLASS	POST COVERS: LIGHT GRAY (16515) PANELS: LIGHT GRAY (16515)	N/A	POST COVERS: WHITE (17925) TOP PANEL OF EACH BAY: WHITE (17925) BOTTOM TWO PANELS OF EACH BAY: WHITE (17925) ALL OTHER PANELS*: LIGHT GRAY (16515)	N/A
WALL 11	FIBERGLASS	POST COVERS: LIGHT GRAY (16515) PANELS: LIGHT GRAY (16515)	N/A	POST COVERS: WHITE (17925) TOP PANEL OF EACH BAY: WHITE (17925) BOTTOM TWO PANELS OF EACH BAY: WHITE (17925) ALL OTHER PANELS*: LIGHT GRAY (16515)	N/A
WALL 15	FIBERGLASS	POST COVERS: LIGHT GRAY (16515) PANELS: LIGHT GRAY (16515)	N/A	POST COVERS: WHITE (17925) TOP PANEL OF EACH BAY: WHITE (17925) BOTTOM TWO PANELS OF EACH BAY: WHITE (17925) ALL OTHER PANELS*: LIGHT GRAY (16515)	N/A

* INCLUDES ALL PANELS BETWEEN THE TOP PANEL AND THE BOTTOM TWO PANELS

AESTHETIC SURFACE TREATMENT:
 THE SURFACE OF ALL NOISE PANELS SHALL HAVE A PATTERN SPECIFIED BY THE CHART ABOVE. PATTERN RELIEF SHALL BE A MINIMUM OF 1". THE COLOR SHALL BE AS SPECIFIED BY THE CHART ABOVE, UNLESS SPECIFIED OTHERWISE BY THE PLAN DETAILS.



NOISE WALL DETAIL
(ROADWAY SIDE)

NOISE WALL PANEL NOTES:

- FOR DETAILS NOT SHOWN SEE STD. DWG. NBS-1-09
- ALL NOISE WALL PANELS SHALL BE REFLECTIVE.
- SEE TABLE ABOVE FOR ARCHITECTURAL SURFACE TREATMENTS.

ITEM SPECIAL - NOISE BARRIERS

GENERAL NOTES:

DESCRIPTION:

THIS WORK CONSISTS OF PREPARING ANY NECESSARY SHOP DRAWINGS, AND MANUFACTURING, TESTING, TRANSPORTING, STORING, AND INSTALLING NOISE BARRIERS; FURNISHING AND INSTALLING DRILLED SHAFTS; EXCAVATING AND BACKFILLING; AND RESTORING THE WORK AREA IN ACCORDANCE WITH THESE PROVISIONS AND IN CONFORMITY WITH THE DIMENSIONS, LINES AND GRADES SHOWN ON THE PROJECT PLANS. ALL APPLICABLE REQUIREMENTS OF THE STANDARD BRIDGE DRAWING NBS-1-09 SHALL BE MET UNLESS DIRECTED OTHERWISE BY THIS PLAN SET.

STANDARD DRAWINGS:

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:
 NBS-1-09 REVISED 01-15-21

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020, AND THE ODOT BRIDGE DESIGN MANUAL, 2020

DESIGN LOADING:

WIND LOAD: APPLIED WIND LOAD ON POSTS AND PANELS IS 35 PSF.
 ICE LOAD: APPLIED ICE LOAD IS 3 INCHES AT 57.3 PCF = 14.32 PSF

MATERIAL SPECIFICATIONS:

REINFORCING STEEL:
 REINFORCING STEEL SHALL BE EPOXY-COATED AS PER CMS 709.00 OR GALVANIZED AS PER CMS 709.16.
 THE REQUIREMENTS OF 509.09 SHALL APPLY TO BOTH EPOXY-COATED AND GALVANIZED REINFORCING STEEL.
 REINFORCING STEEL SHALL CONFORM TO CMS 709.01, GRADE 60.

CONCRETE:
 CONCRETE CLASS QC5 = 4,000 PSI (DRILLED SHAFTS)
 CONCRETE FOR DRILLED SHAFTS SHALL CONFORM TO CMS 524.

STRUCTURAL STEEL:
 ASTM A709, GRADE 50 AS PER CMS 711.01.

PANELS AND POST COVERS:
 NOISE BARRIER PANELS, RETAINER PANELS, AND POST COVER MATERIALS SHALL BE GLASS FIBER REINFORCED PULTRUSION BY CARSONITE COMPOSITES OR AN APPROVED EQUAL. REFER TO SHEET P.221 FOR EXAMPLE SCHEMATIC PANEL AND POST COVER.

FASTENERS:

BASE PLATE TO DRILLED SHAFT CONNECTIONS:
 ANCHOR BOLTS SHALL BE ASTM F1554, GRADE 10S
 NUTS SHALL BE ASTM A563, GRADE DH
 WASHERS SHALL BE ASTM F436

BACKUP BRACKET AND PANEL TO POST CONNECTIONS:
 BOLTS, NUTS AND WASHERS SHALL BE ASTM A325

GALVANIZING:

GALVANIZE ALL STRUCTURAL STEEL, STEEL POSTS, ANGLES, BENT PLATES, BASE PLATES AS PER CMS 711.02. GALVANIZE AFTER CUTTING, BENDING, AND WELDING AS SHOWN ON THE PLANS.

GALVANIZE ALL ANCHOR BOLTS, BOLTS, NUTS, AND WASHERS AS PER CMS 711.02. ENSURE THAT THE ENTIRE LENGTH OF ANCHOR BOLTS ARE GALVANIZED.

BEARING PADS:

ALL BOTTOM NOISE BARRIER PANELS REQUIRE A NEOPRENE PREFORMED BEARING PAD BETWEEN THE BOTTOM OF THE NOISE PANEL AND THE BEARING SURFACE AT THE BASE PLATE AND SUPPORT ANGLES. THE BEARING PADS SHALL BE 1/8" THICK AND 4 INCHES BY 5 INCHES FOR NOISE BARRIER PANELS AND 5 INCHES BY 5 INCHES FOR RETAINER PANELS. THE BEARING PADS SHALL CONFORM TO ODOT CMS SECTION 711.21, PREFORMED BEARING PADS.

DRILLED SHAFTS:

THE NOISE BARRIER POSTS SHALL BE SUPPORTED BY 30" DIAMETER DRILLED SHAFT FOUNDATION. CONSTRUCT DRILLED SHAFTS ACCORDING TO C&MS 524.

AVOIDANCE OF UNEXPECTED OBSTRUCTIONS:

IF THE AVOIDANCE OF UNEXPECTED UTILITIES OR OTHER OBSTRUCTIONS REQUIRES THE USE OF CLOSER POST SPACINGS THAN WHAT WAS SHOWN ON THE PROJECT PLANS FURNISH AND INSTALL ADDITIONAL FOUNDATIONS, POSTS, AND PANELS AS DIRECTED BY THE ENGINEER. THE ADDITIONAL FOUNDATIONS, POSTS, AND PANELS SHALL CONFORM TO THESE STANDARD DRAWINGS AND PROVISIONS. THE TOP AND BOTTOM ELEVATIONS OF THE ADDITIONAL POSTS AND PANELS, AND PANEL JOINT LOCATION.

SHOP DRAWINGS:

PROVIDE SHOP DRAWINGS FOR ALL NOISE WALL COMPONENTS THAT REQUIRE SHOP FABRICATION. INCLUDE THE FABRICATION SCHEDULE FOR ALL NOISE BARRIER WALL COMPONENTS IN THE PROJECT PROGRESS SCHEDULE AS REQUIRED BY C&MS 108.02.

NOISE BARRIER AND RETAINER PANELS, AND POST COVERS:

THE NOISE BARRIER AND RETAINER PANELS, AND POST COVERS SHALL BE GLASS FIBER REINFORCED, AND FABRICATED AND INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS. THE SURFACE TEXTURE AND FINISH COLOR SHALL BE AS SHOWN IN THE PLANS.

PANELS BELOW GRADE:

PANELS INSTALLED BELOW GRADES WITHIN SIDE SLOPES SHALL BE RETAINER PANELS AND BE DESIGNED TO RETAIN BACK SLOPES. SUBMIT DESIGN CALCULATIONS SEALED AND SIGNED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER.

DIMENSION ADJUSTMENTS:

PANEL DIMENSIONS SHOWN ON THE PLANS WERE OBTAINED FROM THE GLASS FIBER NOISE WALL MANUFACTURER AT THE TIME THE PLANS WERE PREPARED. IF THE CONTRACTOR'S SELECTED MANUFACTURER HAS A DESIGN WITH PANEL DIMENSIONS THAT DO NOT CONFORM TO THE DIMENSIONS SHOWN ON THE PLANS, A MARKED COPY OF THE PROJECT PLANS, INCLUDING ALL PLAN NOTES AND DETAILS SHOWING ALL ITEMS AFFECTED BY THE DIFFERENT PANEL DIMENSIONS, SHALL BE SUBMITTED FOR APPROVAL WITH THE SHOP DRAWINGS. ALL WORK REQUIRED TO ACCOMMODATE ANY REVISED DIMENSIONS SHALL BE AT NO EXTRA COST TO THE PROJECT.

HIGH DENSITY POLYURETHANE:

FILL GAP BETWEEN THE BASE PLATE AND THE DRILLED SHAFT WITH HIGH DENSITY POLYURETHANE PER SS 842.

NEOPRENE FOAM RUBBER:

THE NEOPRENE FOAM RUBBER SHALL BE MEDIUM DENSITY FOAM RUBBER WITH UV, WATER AND WEATHERING RESISTANCE AND WIDE OPERATING TEMPERATURE RANGE. THE COLOR SHALL BE LIGHT GREY. FURNISH AND INSTALL NEOPRENE FOAM RUBBER STRIPS PER THE MANUFACTURER'S RECOMMENDED SPECIFICATIONS.

CONSTRUCTION METHODS:

CONSTRUCTION METHODS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD BRIDGE DRAWING NBS-1-09.

METHOD OF MEASUREMENT:

THE DEPARTMENT WILL MEASURE THE NOISE BARRIER BY THE NUMBER OF SQUARE FEET.

THE DEPARTMENT WILL DETERMINE THE AREA OF INDIVIDUAL NOISE BARRIER SEGMENTS FROM PROJECT PLAN DIMENSIONS USING A HEIGHT FROM THE BOTTOM OF THE BOTTOM PANEL TO THE TOP OF THE CAP ON THE TOP PANEL, AND SPAN LENGTHS MEASURED FROM CENTER TO CENTER POSTS.

BASIS OF PAYMENT:

PAYMENT FOR NOISE BARRIERS IS FULL COMPENSATION FOR FURNISHING AND INSTALLING FOUNDATIONS, POSTS INCLUDING APPARATUS SUCH AS BACKUP BRACKETS AND BENT PLATES, PANELS, POST COVERS, STEEL BASE PLATES AND CONNECTIONS, ARCHITECTURAL SURFACE TREATMENTS, SAMPLE POST(S) AND PANEL(S), BEARING PADS, EXCAVATION, DRAINAGE AND BACKFILL, AND OTHER ITEMS THAT DO NOT HAVE SEPARATE PAY ITEMS BUT ARE NECESSARY TO COMPLETE THE NOISE BARRIER.

THE DEPARTMENT WILL PAY FOR THE ADDITIONAL LENGTH OF DRILLED SHAFTS CONSTRUCTED AT THE DIRECTION OF THE ENGINEER IN UNEXPECTED AREAS OF POOR SOIL AS EXTRA WORK IN ACCORDANCE WITH C&MS 109.05.

THE DEPARTMENT WILL PAY FOR THE ADDITIONAL FOUNDATIONS, POSTS, AND PANELS FURNISHED AND INSTALLED AT THE DIRECTION OF THE ENGINEER TO AVOID UNEXPECTED UTILITIES OR OTHER OBSTRUCTIONS AS EXTRA WORK IN ACCORDANCE WITH C&MS 109.05.

WHERE THE DRILLED SHAFT LENGTH WAS DECREASED FROM THE PROJECT PLAN DIMENSION DUE TO INTERFERENCE WITH UNEXPECTED BEDROCK, THE DEPARTMENT WILL NON-PERFORM THE SHAFT LENGTH BELOW THE BEDROCK ELEVATION AND PAY FOR THE ROCK SOCKET AND INCIDENTALS AS EXTRA WORK ACCORDING TO C&MS 109.05.

THE DEPARTMENT WILL NOT PAY FOR REPAIRED OR REPLACED COMPONENTS DAMAGED BY IMPROPER HANDLING, TRANSPORTING, STORING, OR ERECTING.

THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICES AS FOLLOWS:

ITEM 606 - SPECIAL - NOISE BARRIER (REFLECTIVE)

DESIGN AGENCY

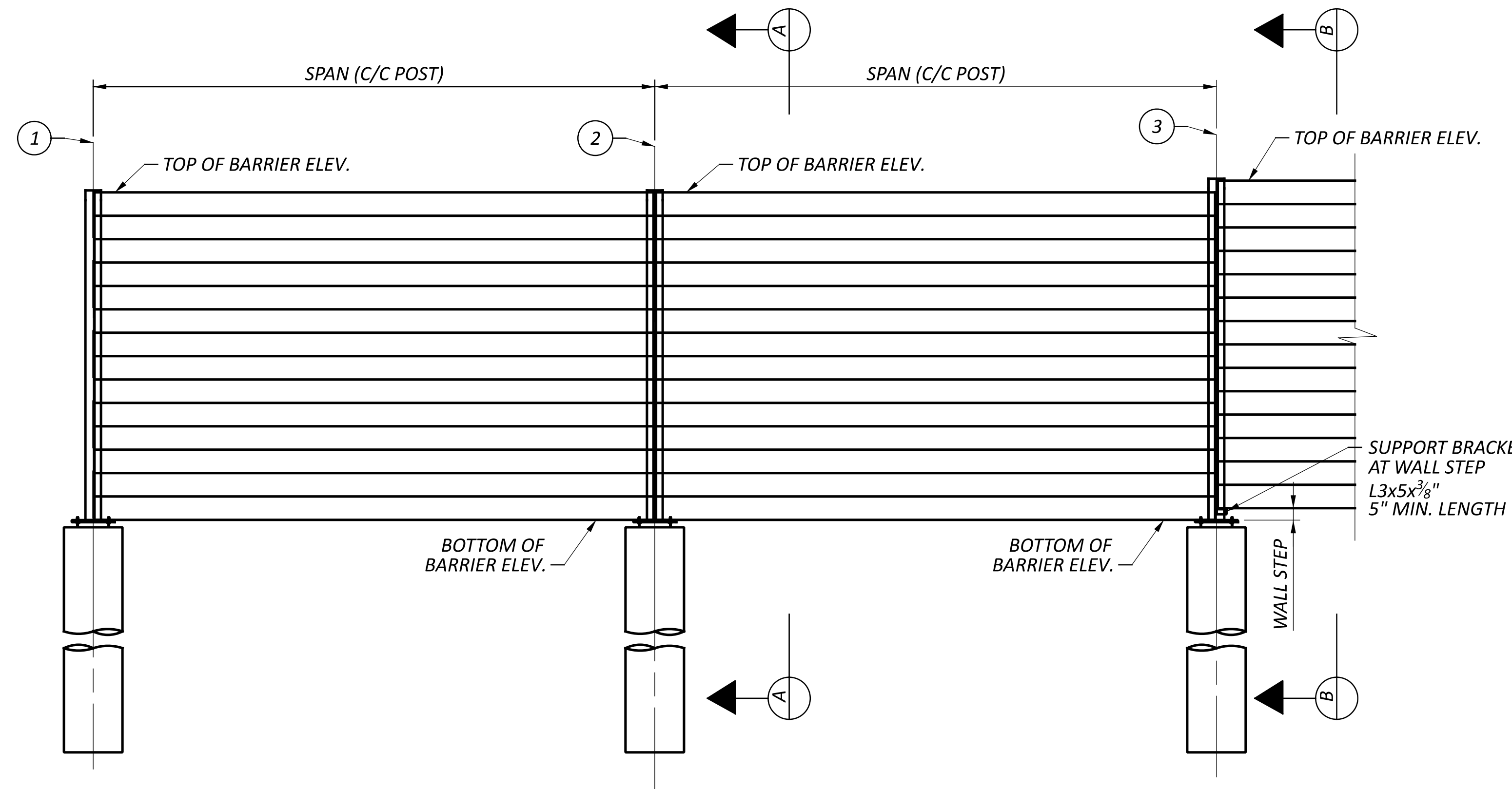


DESIGNER
 AIS

REVIEWER
 SS 03-27-24

PROJECT ID
 117607

SHEET TOTAL
 P.218 P.295



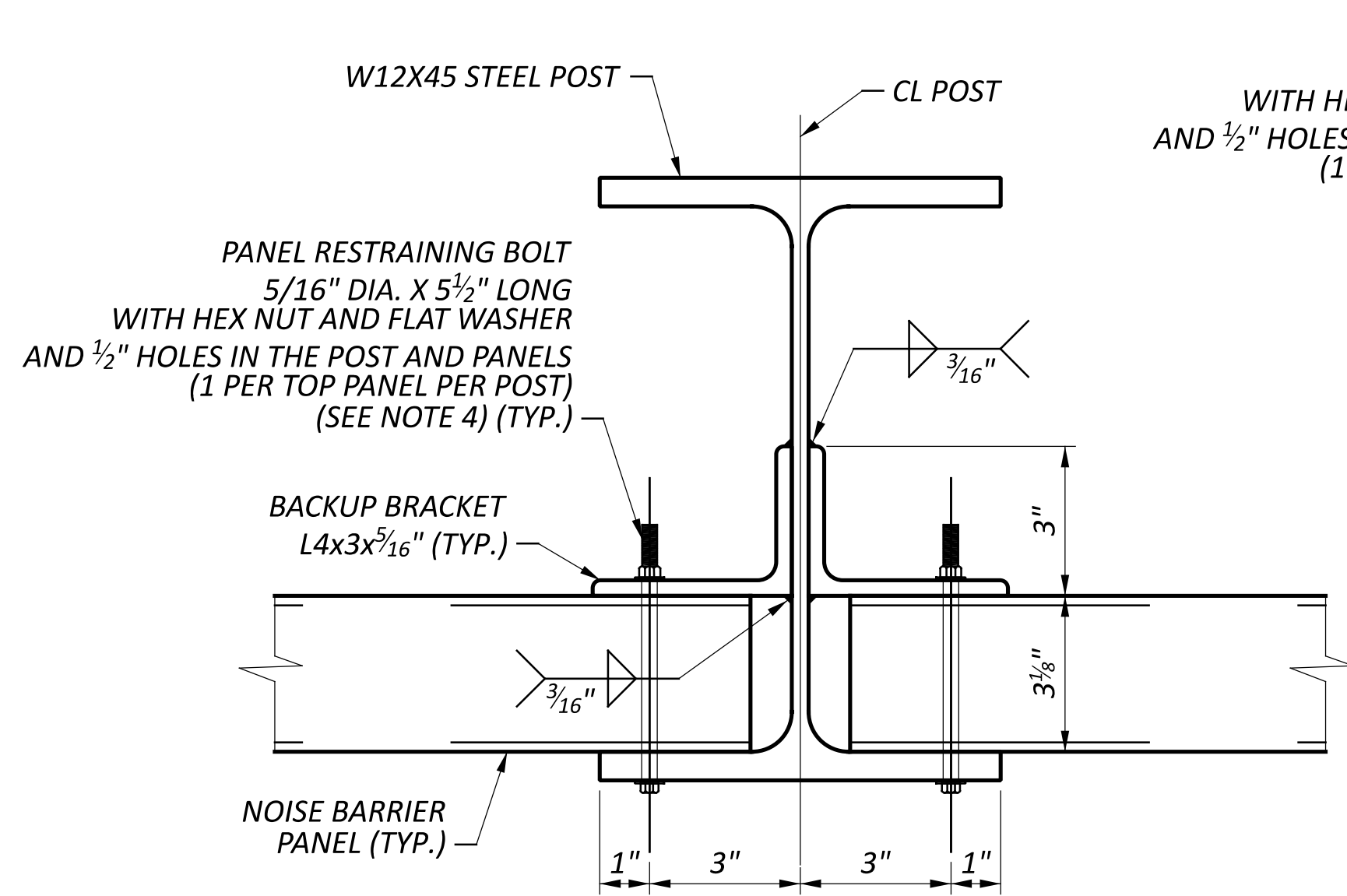
PARTIAL ELEVATION
(POST COVERS NOT SHOWN)

NOTES:

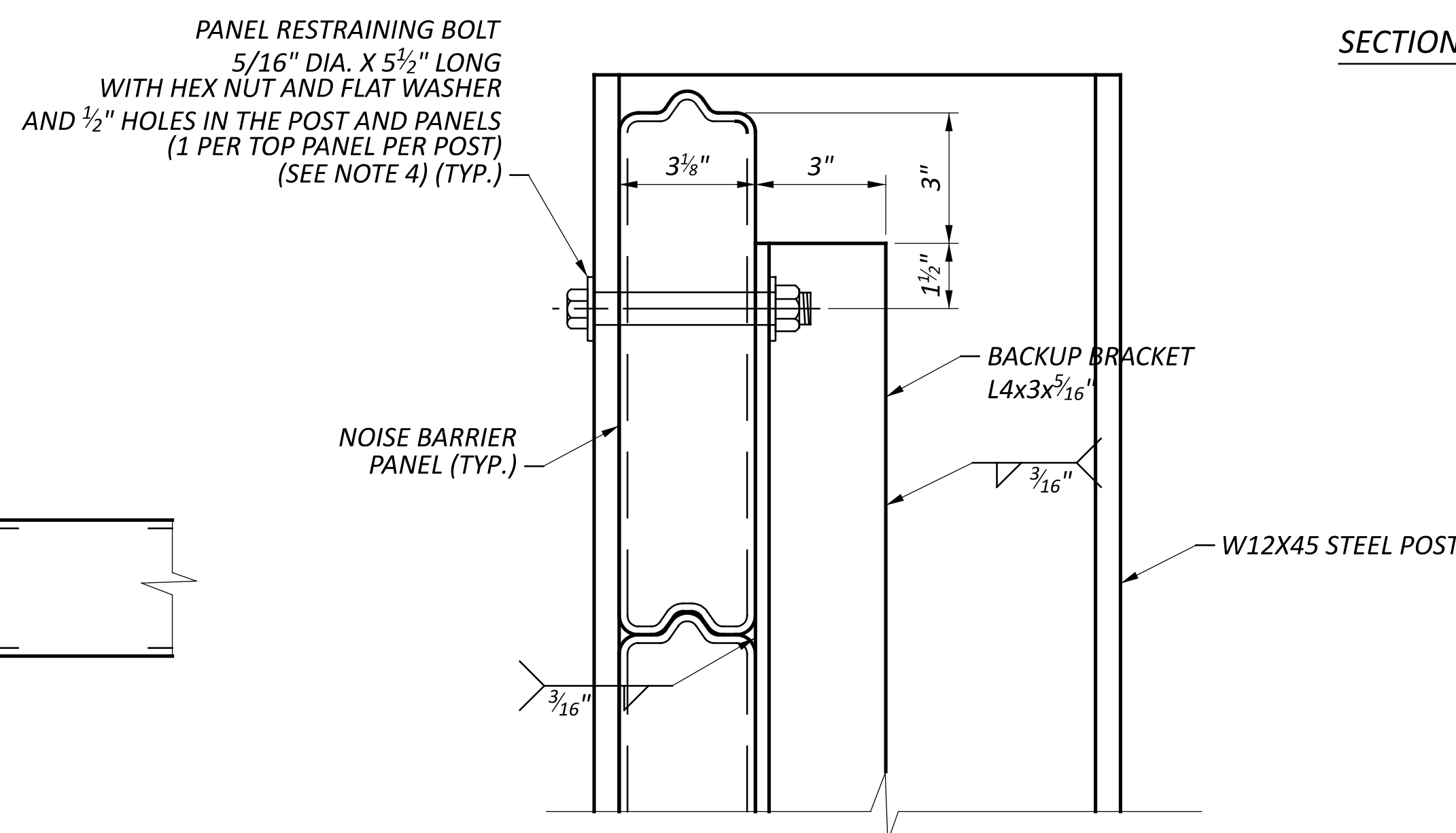
1. FOR NOISE WALL PLANS AND PROFILE, SEE SHEETS P.33 - P.62 .
2. FOR NOISE WALL ELEVATION TABLES, SEE SHEETS P.214 - P.216
3. FOR NOISE WALL STEPS HEIGHT AND LOCATION, SEE NOISE WALL PLANS AND PROFILE SHEETS.
4. SHOP DRILL HOLES IN THE STRUCTURAL STEEL BEFORE GALVANIZING AND FIELD DRILL HOLES IN THE PANELS AS SHOWN.

LEGEND:

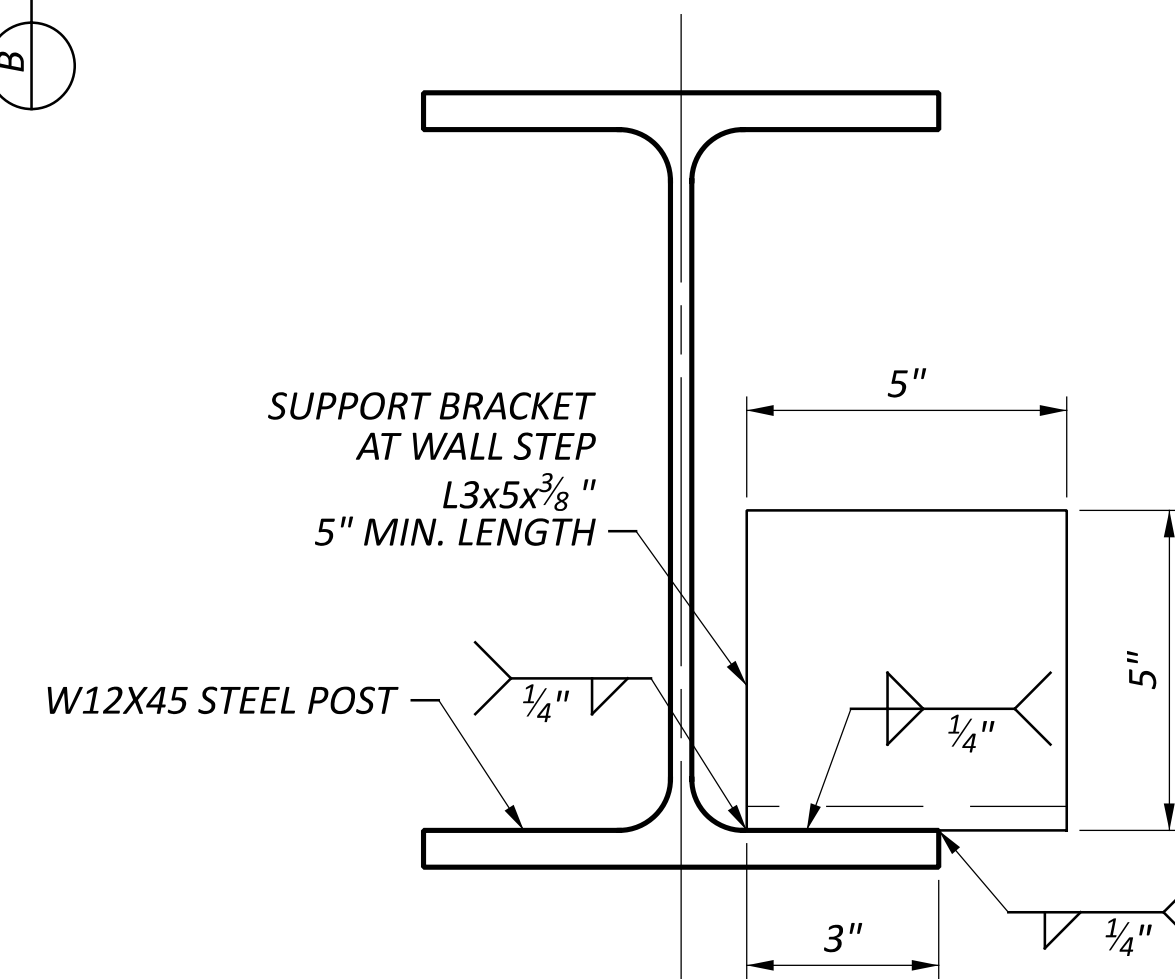
(X) - DRILLED SHAFT NUMBER



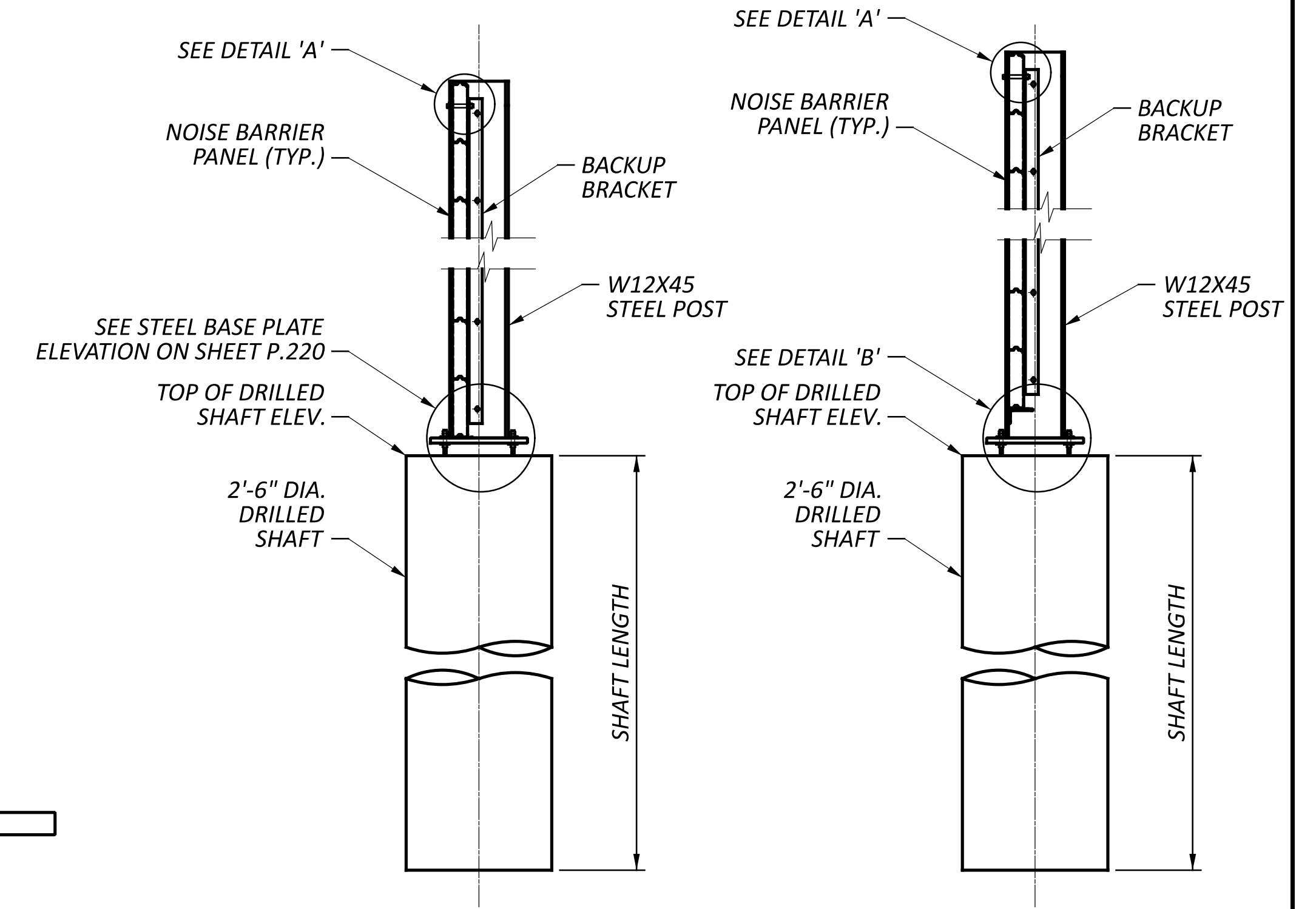
PARTIAL PLAN
(POST COVERS NOT SHOWN)



DETAIL 'A'
(POST COVERS NOT SHOWN)

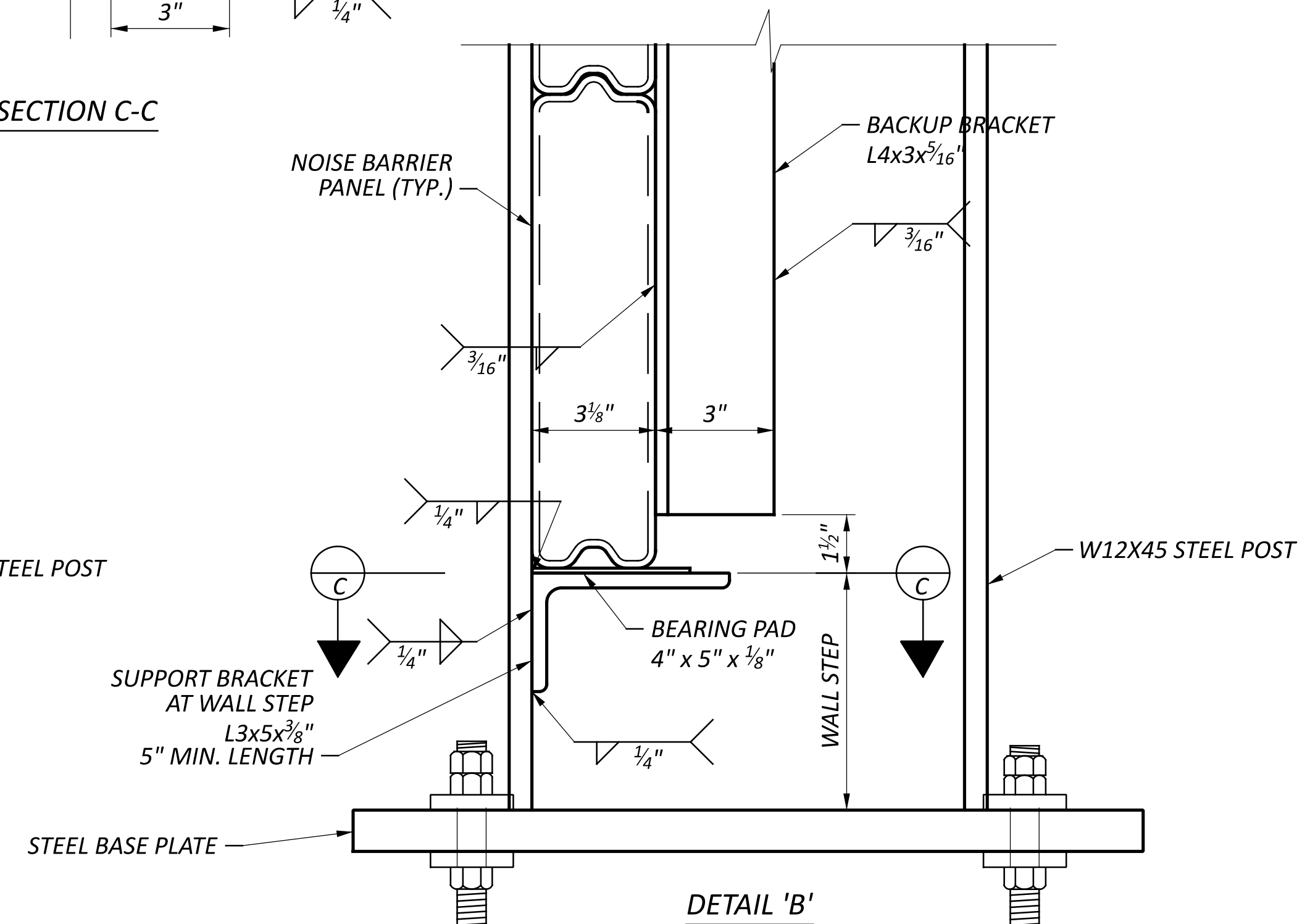


SECTION C-C



SECTION A-A
(POST COVERS NOT SHOWN)

SECTION B-B
(POST COVERS NOT SHOWN)



DETAIL 'B'
(POST COVERS NOT SHOWN)

DESIGN AGENCY



DESIGNER

REVIEWER

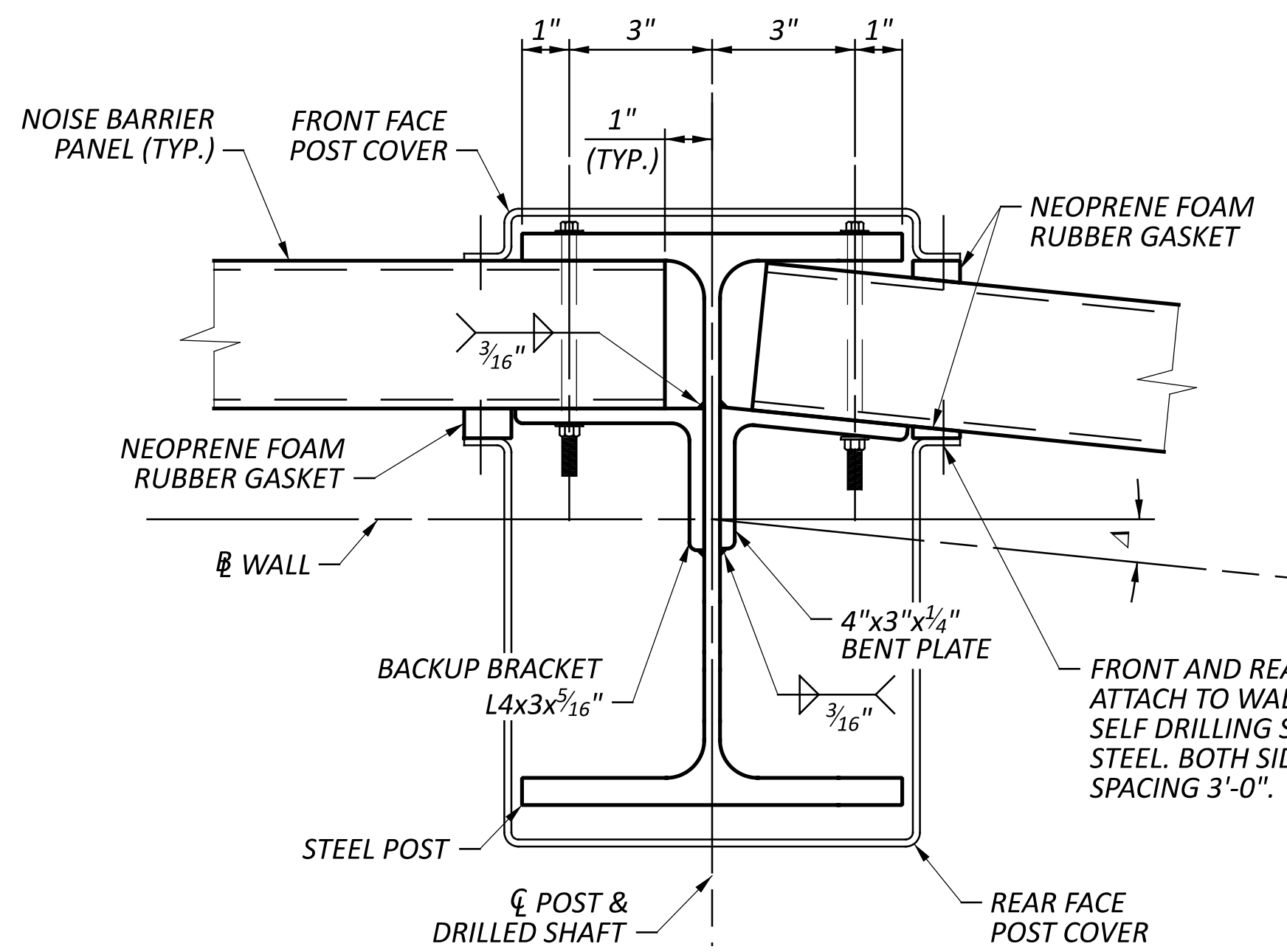
SS 03-27-24

PROJECT ID

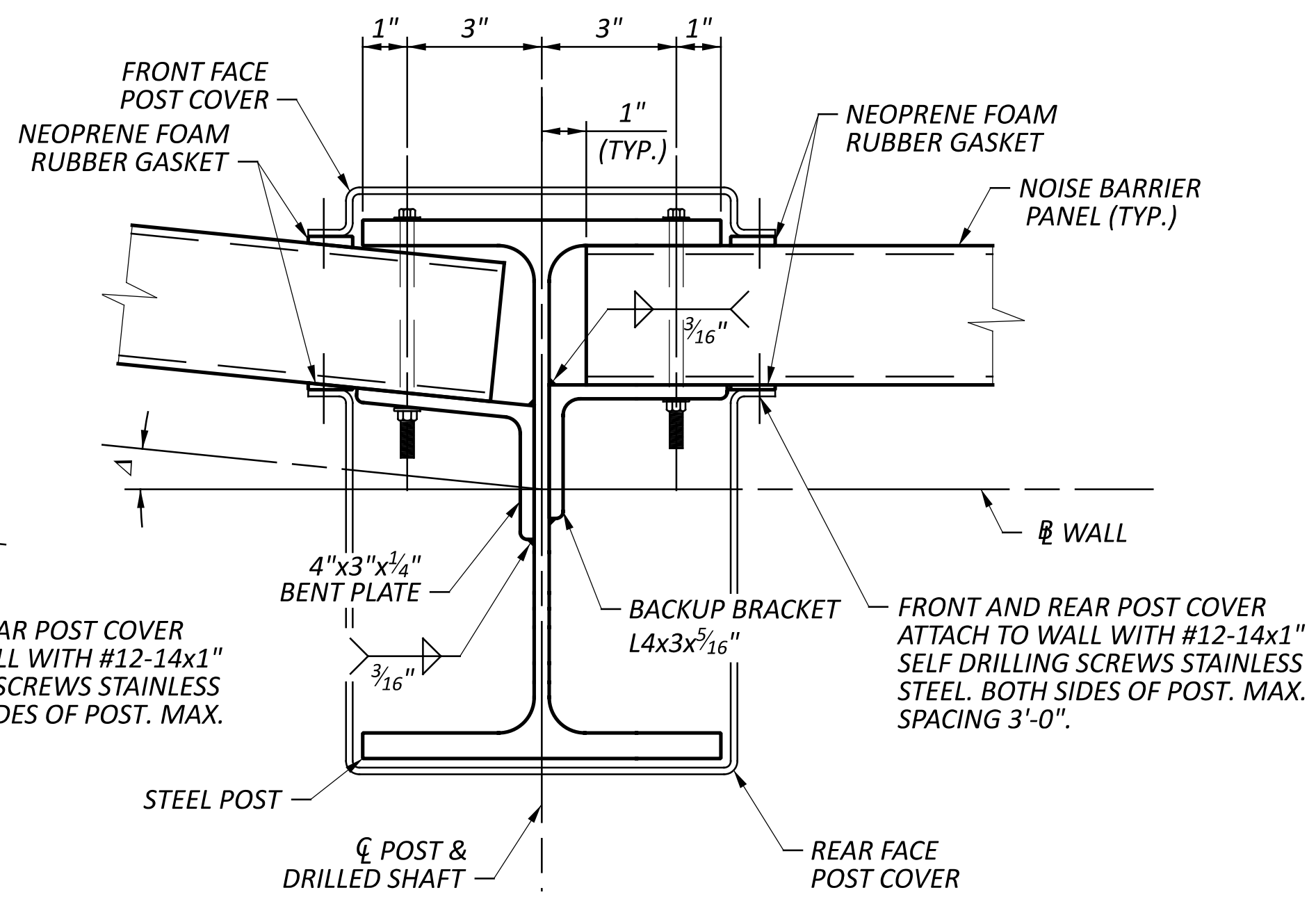
117607

SHEET TOTAL

P.219 P.295



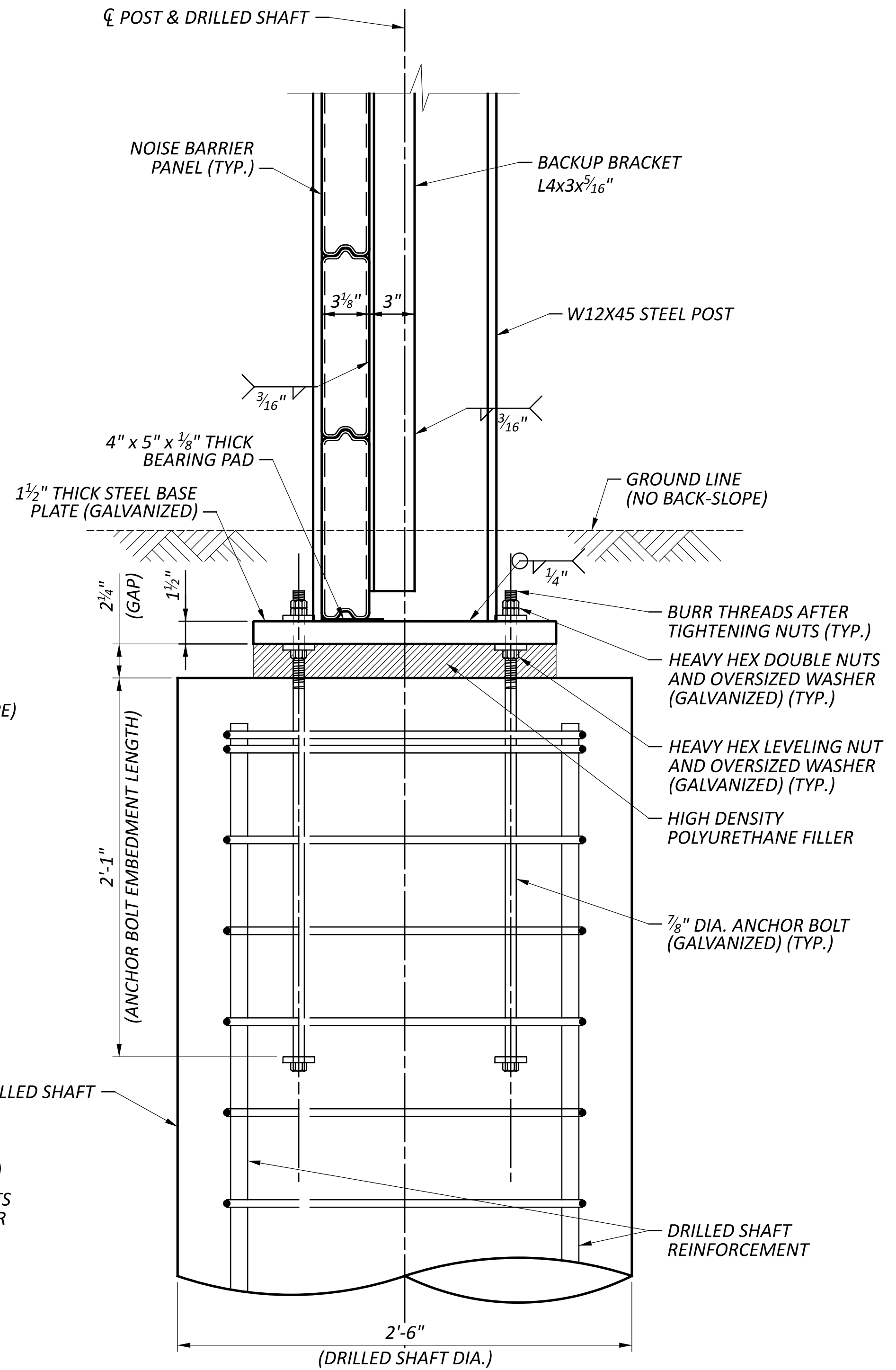
SKEWED POST DETAILS - 1



SKEWED POST DETAILS - 2

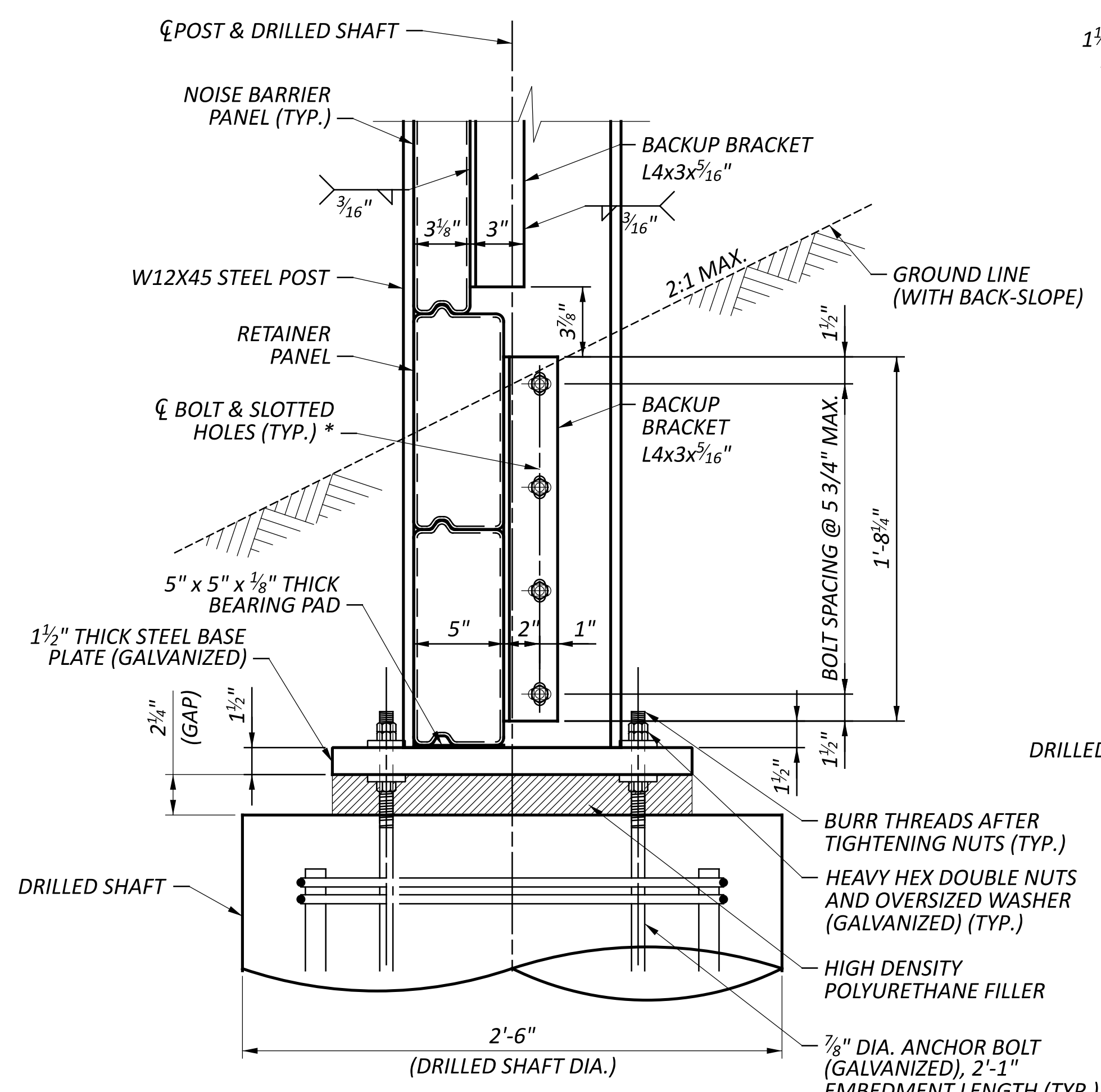
NOTES:

1. FOR WALL DEFLECTION ANGLES, SEE TABLES ON SHEETS P.214 - P.216.
2. FOR GROUND LINE BACK-SLOPES, SEE CROSS SECTIONS ON SHEETS P.63 - P.213.
3. FOR ADDITIONAL BASE PLATE AND DRILLED SHAFT NOTES AND DETAILS, REFER TO STD. DWG. NBS-1-09.
4. BACKUP BRACKET BOLTS SHALL BE F3125, GRADE A325, TYPE 1, WITH HEX NUTS AND WASHERS. GALVANIZE BOLTS, NUTS AND WASHERS IN ACCORDANCE TO CMS 711.02.
5. INSTALL 1" WIDE x 1/4" MINIMUM TO 1" MAXIMUM THICK NEOPRENE FOAM RUBBER STRIPS WITH ADHESIVE BACKING AT SKEWED POSTS AND AS NEEDED TO INSTALL POST COVERS PARALLEL TO THE FLANGE. THE COLOR SHALL BE LIGHT GREY. FURNISH AND INSTALL THE NEOPRENE FOAM RUBBER STRIPS ACCORDING TO THE MANUFACTURER'S RECOMMENDED SPECIFICATIONS.



STEEL POST AND BASE PLATE ELEVATION (NO BACK-SLOPE)

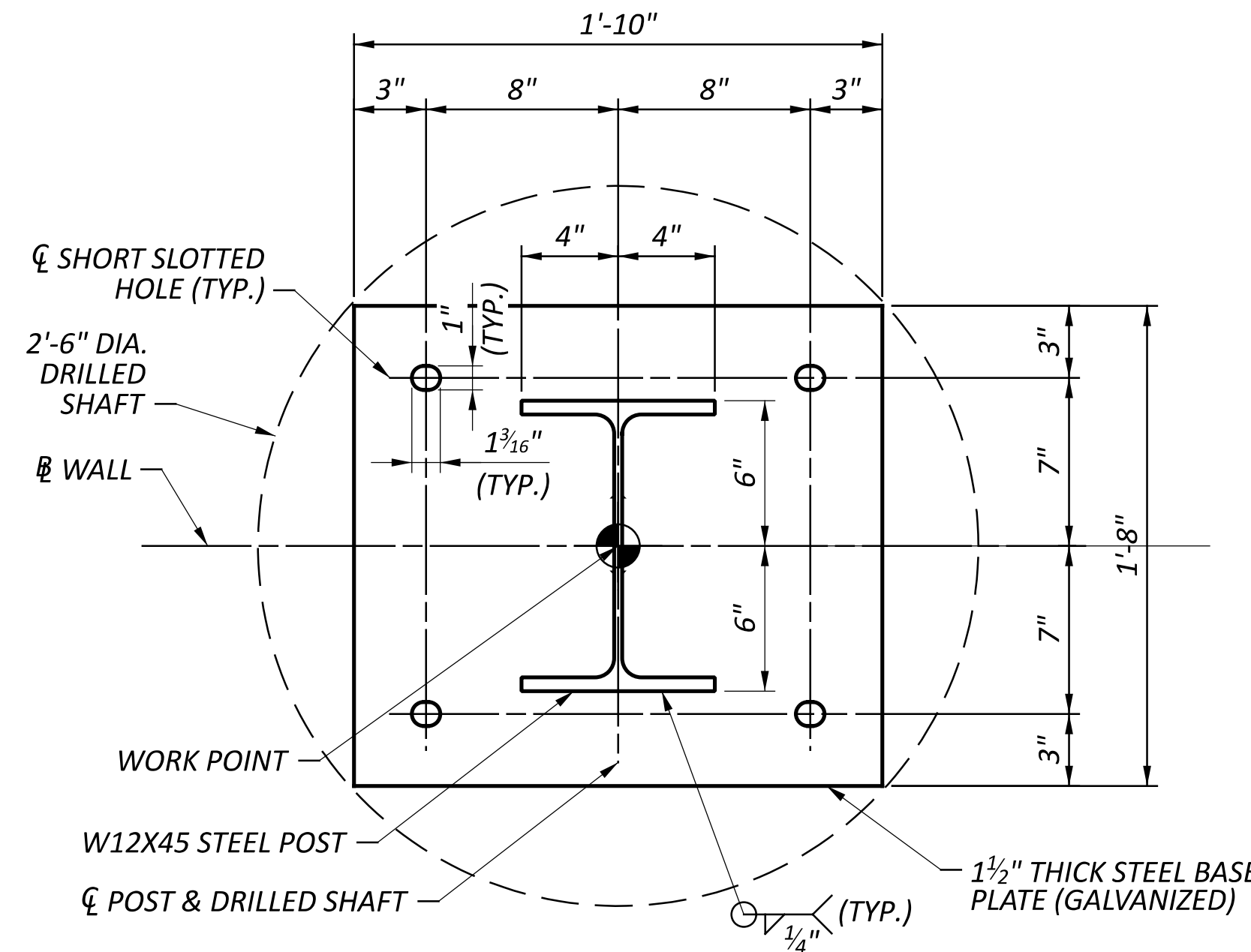
(POST COVERS NOT SHOWN)



STEEL POST AND BASE PLATE ELEVATION (WITH BACK-SLOPE)

(POST COVERS NOT SHOWN)

- Δ - WALL DEFLECTION ANGLE
- * - 1/2" x 1 3/4" A325 BOLT WITH HEX NUT AND WASHERS THE SIZE OF SLOTTED HOLE SHALL BE 5/8" x 1 1/4". THE SLOT SHALL BE HORIZONTAL IN THE STEEL POST AND VERTICAL IN THE ANGLE AND BENT PLATE.

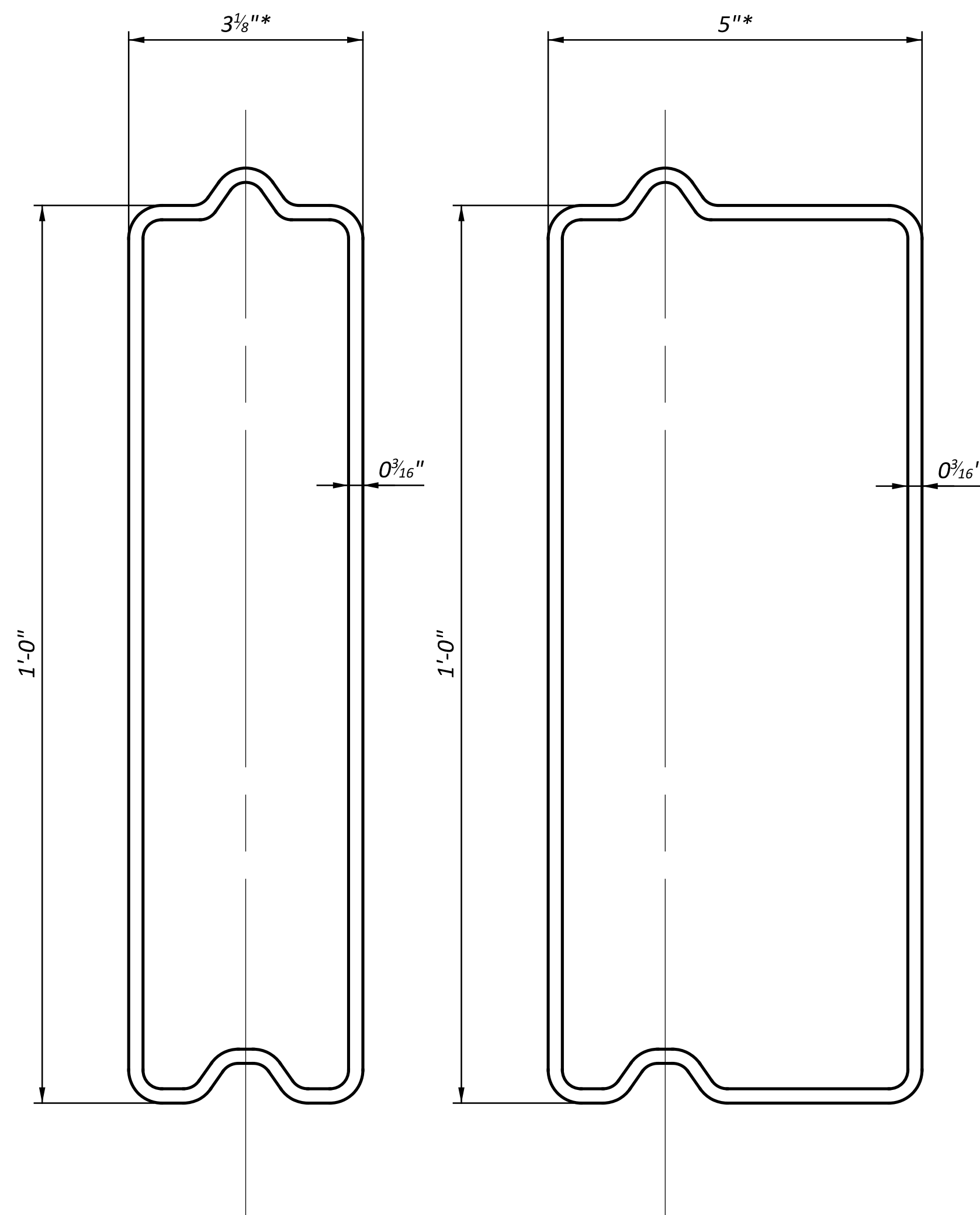


STEEL BASE PLATE PLANS

DESIGN AGENCY	ARCADIS
DESIGNER	ARCADIS
REVIEWER	SS
PROJECT ID	117607
SHEET	P.220
TOTAL	P.295

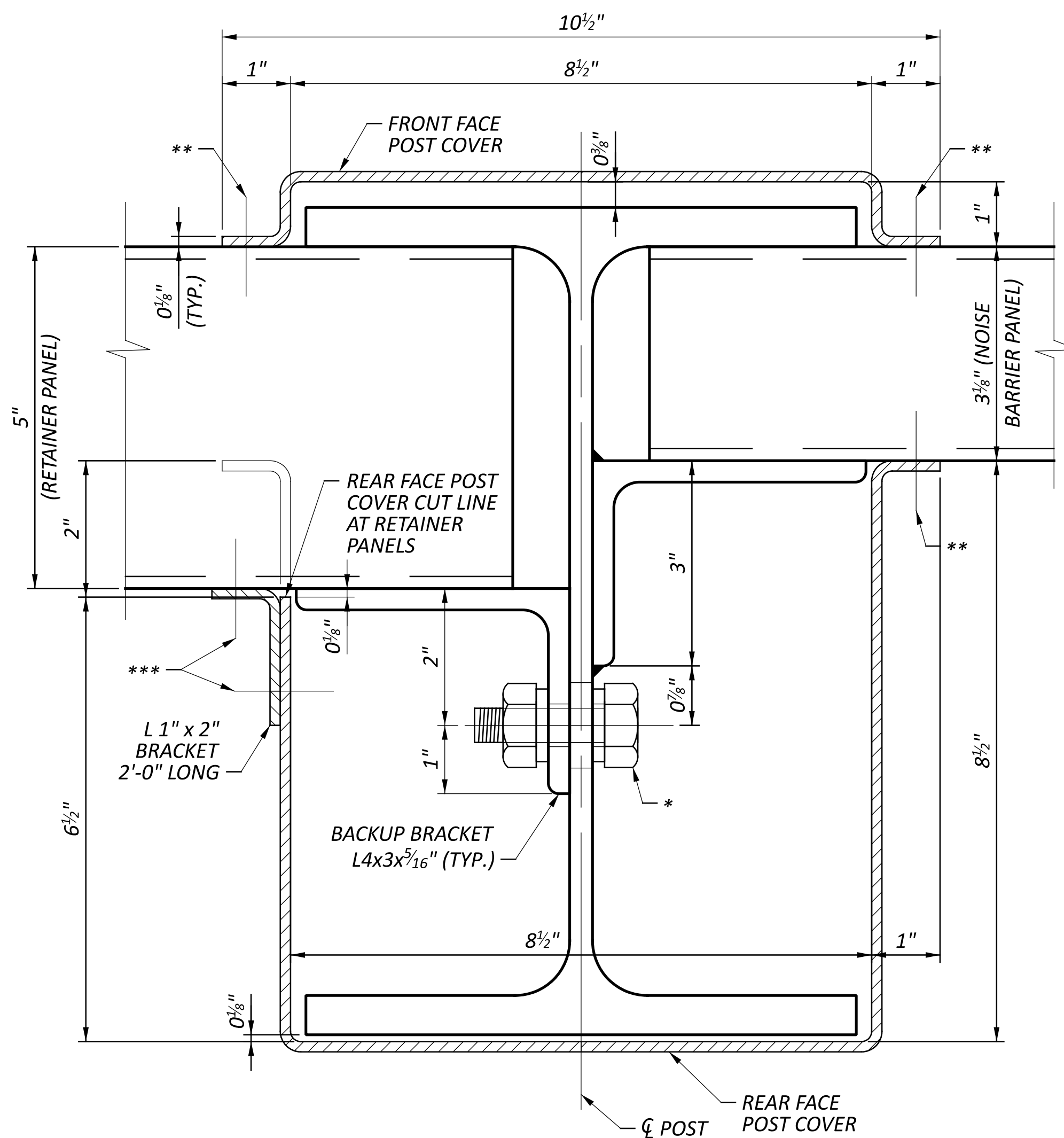
- NOTES:**
1. INSTALL PANELS AND POST COVER PER MANUFACTURER'S WRITTEN RECOMMENDATIONS.
 2. PANELS AND POST COVER SHALL BE GLASS FIBER REINFORCED FROM CARSONITE COMPOSITES OR AN APPROVED EQUAL.
 3. TRIM REAR FACE POST COVER AT RETAINER PANELS AS SHOWN ON THE PLANS. ATTACH REAR POST COVER TO RETAINER PANELS WITH THE USE OF L 1 x 2" BRACKET AND SELF DRILLING SCREWS. THE L 1" x 2" BRACKET MATERIAL TYPE AND COLOR SHALL BE THE SAME AS THE POST COVER.
 4. INSTALL SIDE COVER FROM TOP OF WALL TO TOP OF POST AT THE LOW SIDE OF WALL STEPS AS SHOWN. ATTACH FRONT AND REAR POST COVERS TO THE SIDE COVER WITH A MINIMUM OF TWO SELF DRILLING SCREWS EACH SIDE. THE SIDE COVER MATERIAL TYPE AND COLOR SHALL BE THE SAME AS THE POST COVER.

- * - 1/2" x 1 3/4" A325 BOLT WITH HEX NUT AND WASHERS THE SIZE OF SLOTTED HOLE SHALL BE 5/8" x 1 1/4". THE SLOT SHALL BE HORIZONTAL IN THE STEEL POST AND VERTICAL IN THE ANGLE AND BENT PLATE.
- ** - FRONT AND REAR POST COVER ATTACH TO WALL WITH #12-14x1" SELF DRILLING SCREWS STAINLESS STEEL. MAX. SPACING 3'-0".
- *** - REAR POST COVER ATTACH TO WALL WITH #12-14x1" SELF DRILLING SCREWS STAINLESS STEEL. MAX. SPACING 1'-0".

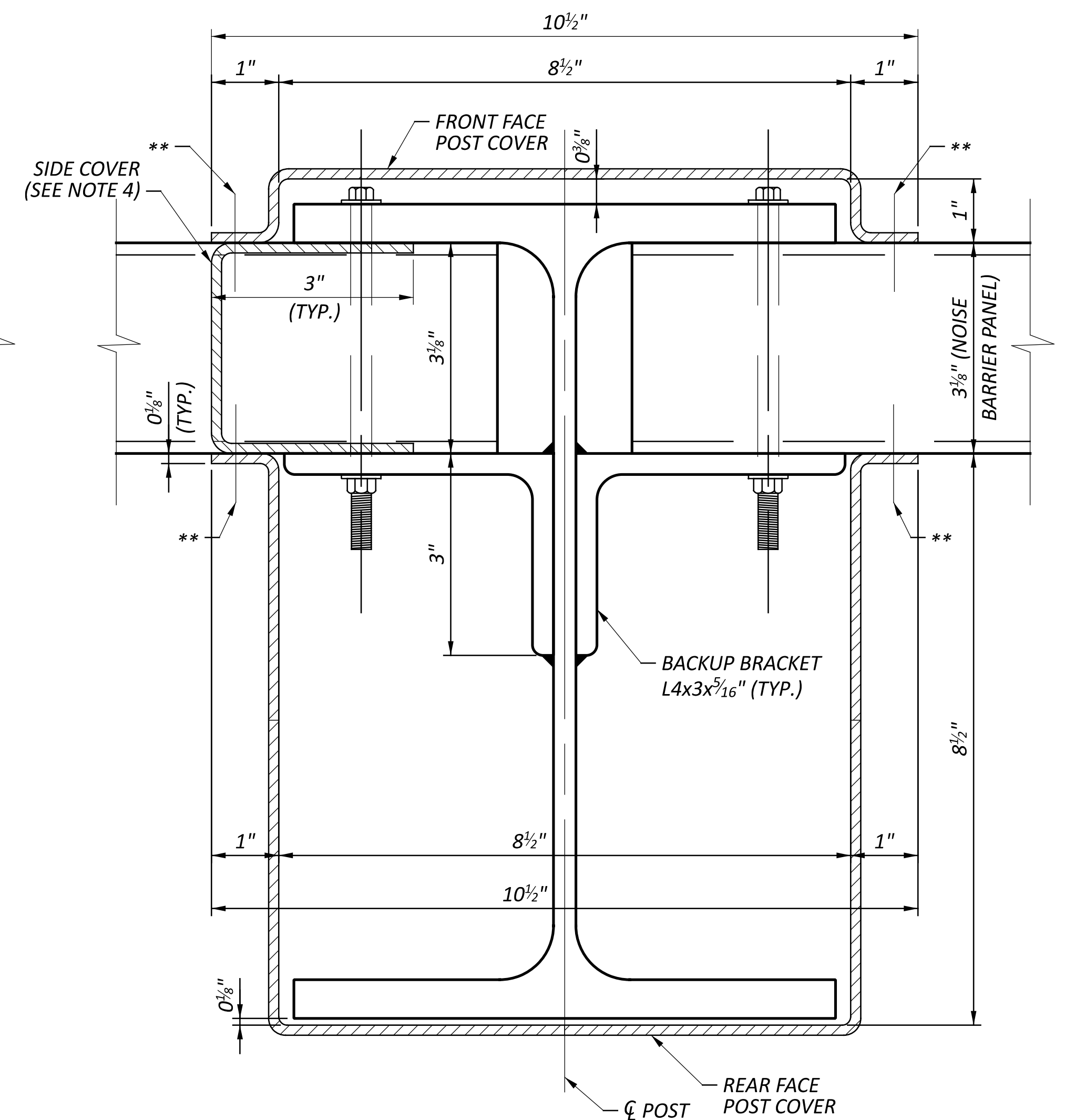


NOISE BARRIER PANEL DETAIL

RETAINER PANEL DETAIL

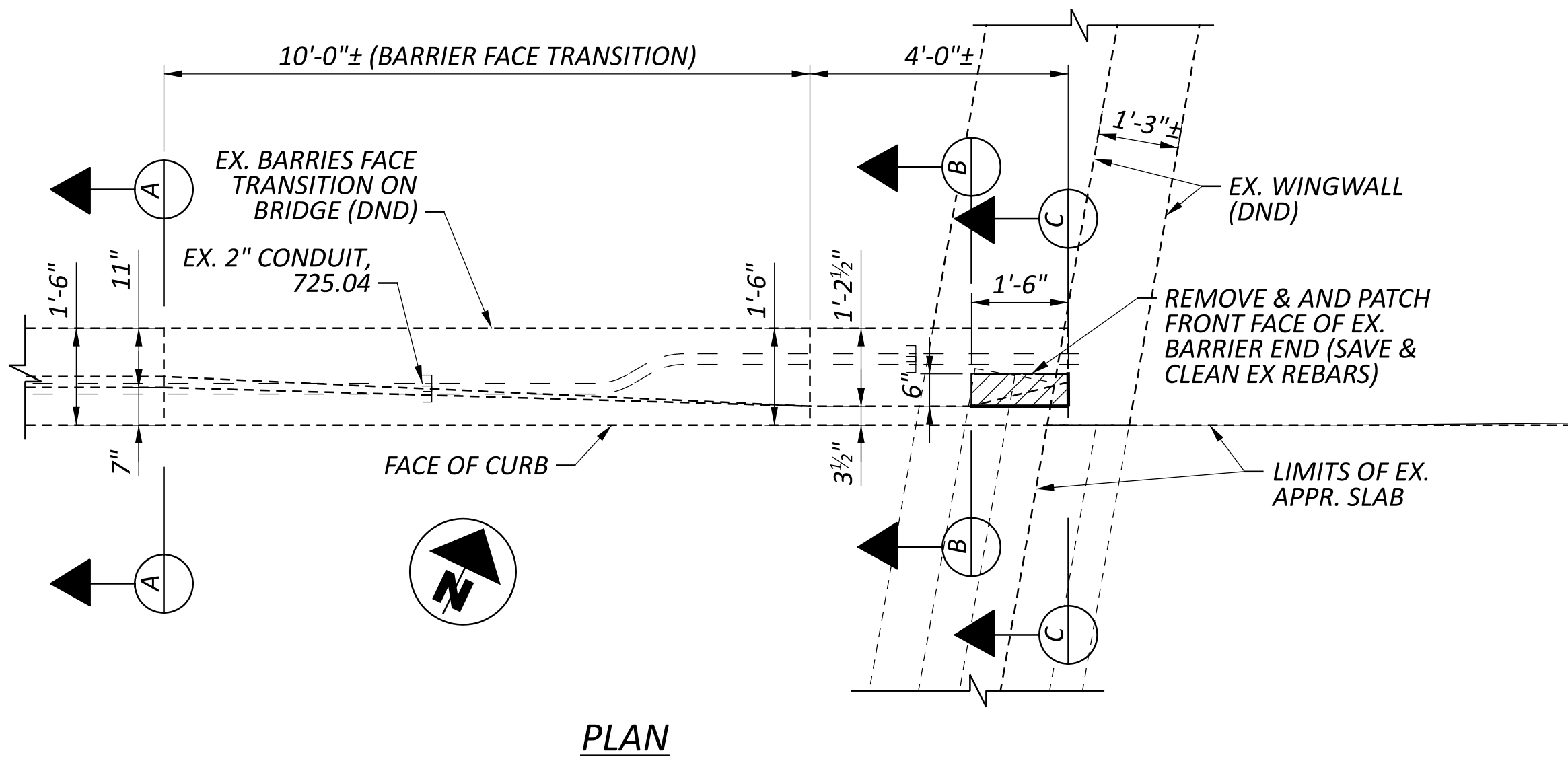


(AT RETAINER PANELS)

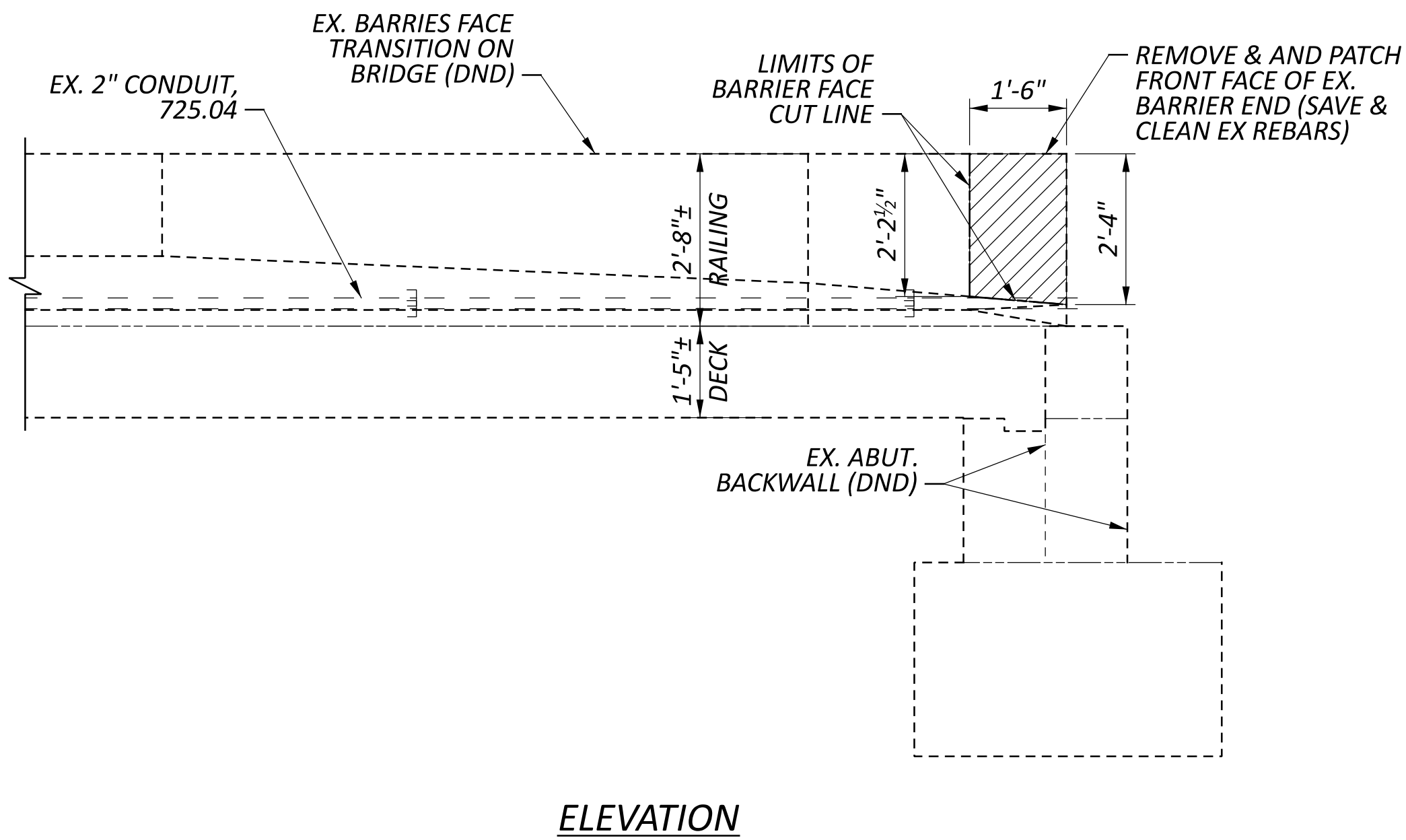
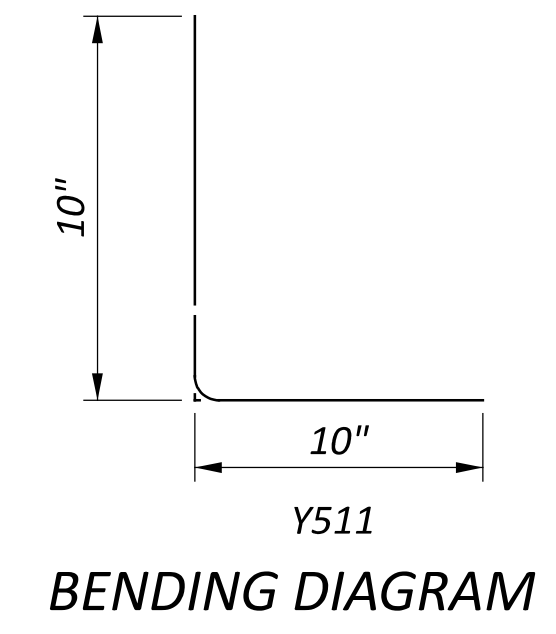


(AT NOISE BARRIER PANELS)

POST COVER DETAIL

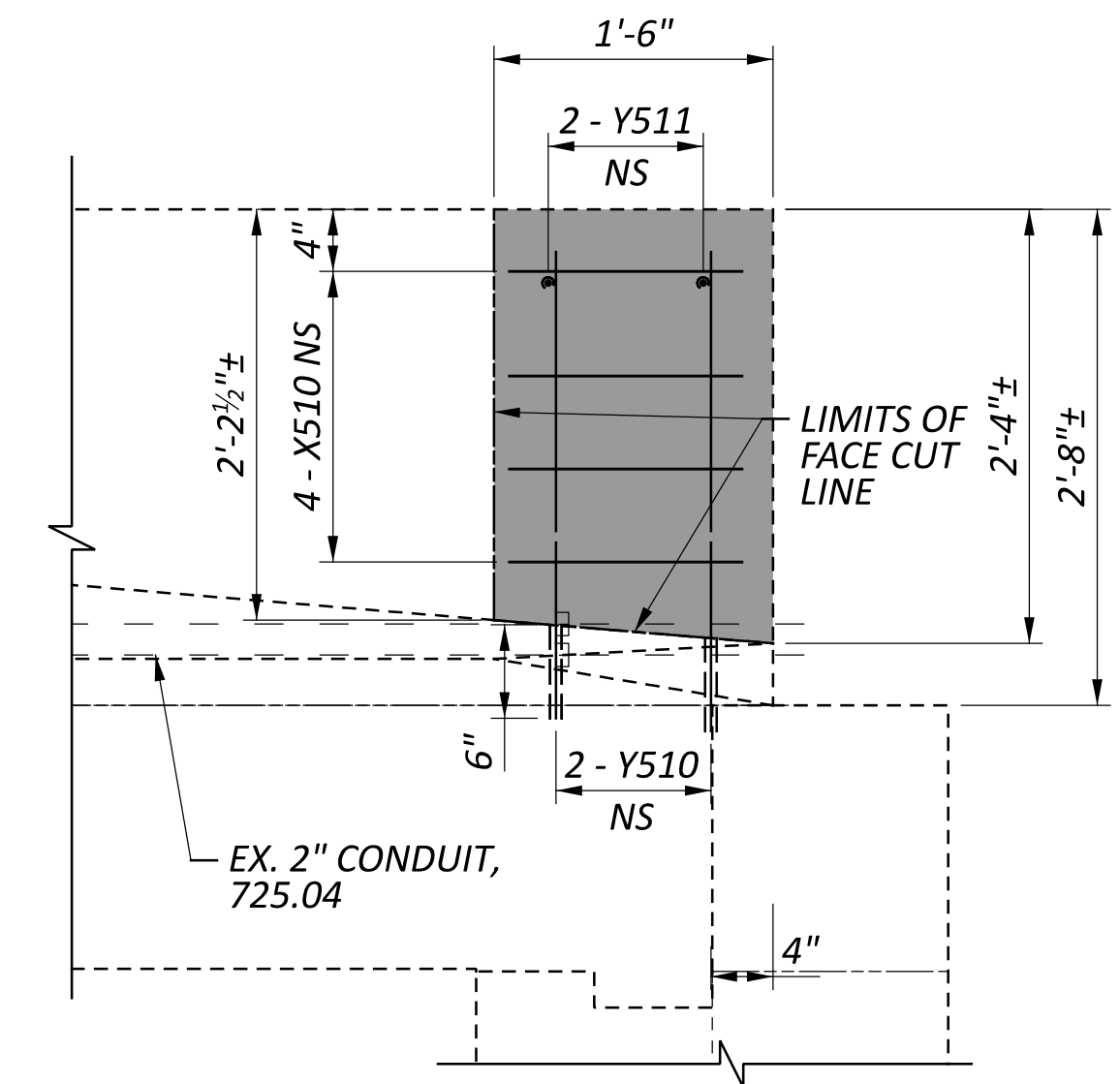


STEEL LIST (For Estimating Purposes Only)					
Mark	Bar	Shape	No.	Length	Weight (lb)
X510	#5	Straight	4	1'-2"	5
Y510	#5	Straight	2	2'-8"	6
Y511	#5	Bent	2	1'-7"	3
				Total =	14



NOTES:

1. REMOVE EX. CONCRETE BARRIER FRONT FACE ON ABUTMENT WINGWALL AS SHOWN. THE COST SHALL BE INCLUDED WITH THE UNIT PRICE FOR ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN FOR PAYMENT.
2. ALL EX. DIMENSIONS ARE ±.
3. INSTALL DOWEL BARS IN ACCORDANCE WITH CMS 510 USING NON-SHRINK NONMETALLIC GROUT.
4. FOR ADDITIONAL CONCRETE RAILING NOTES AND DETAILS, SEE STD. DWG. BR-1 REV. 04-03-90.
5. PAYMENT FOR PATCHING CONCRETE BARRIER END SECTION SHALL BE MADE AT THE UNIT PRICE FOR ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN AND SHALL INCLUDE ALL MATERIALS, LABOR, DOWEL HOLES AND REINFORCING STEEL REQUIRED TO PATCH THE BARRIER END SECTION AS SHOWN.

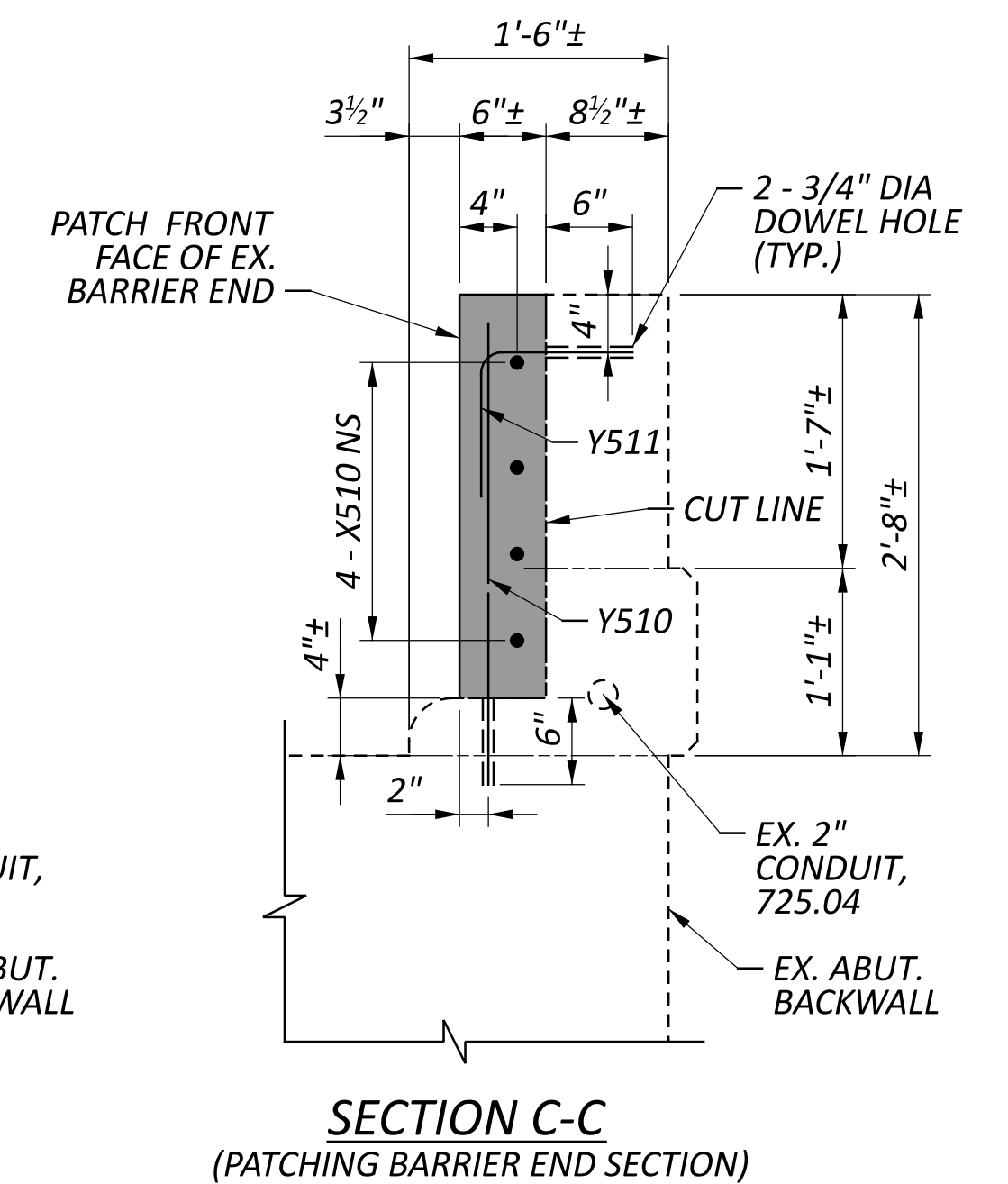
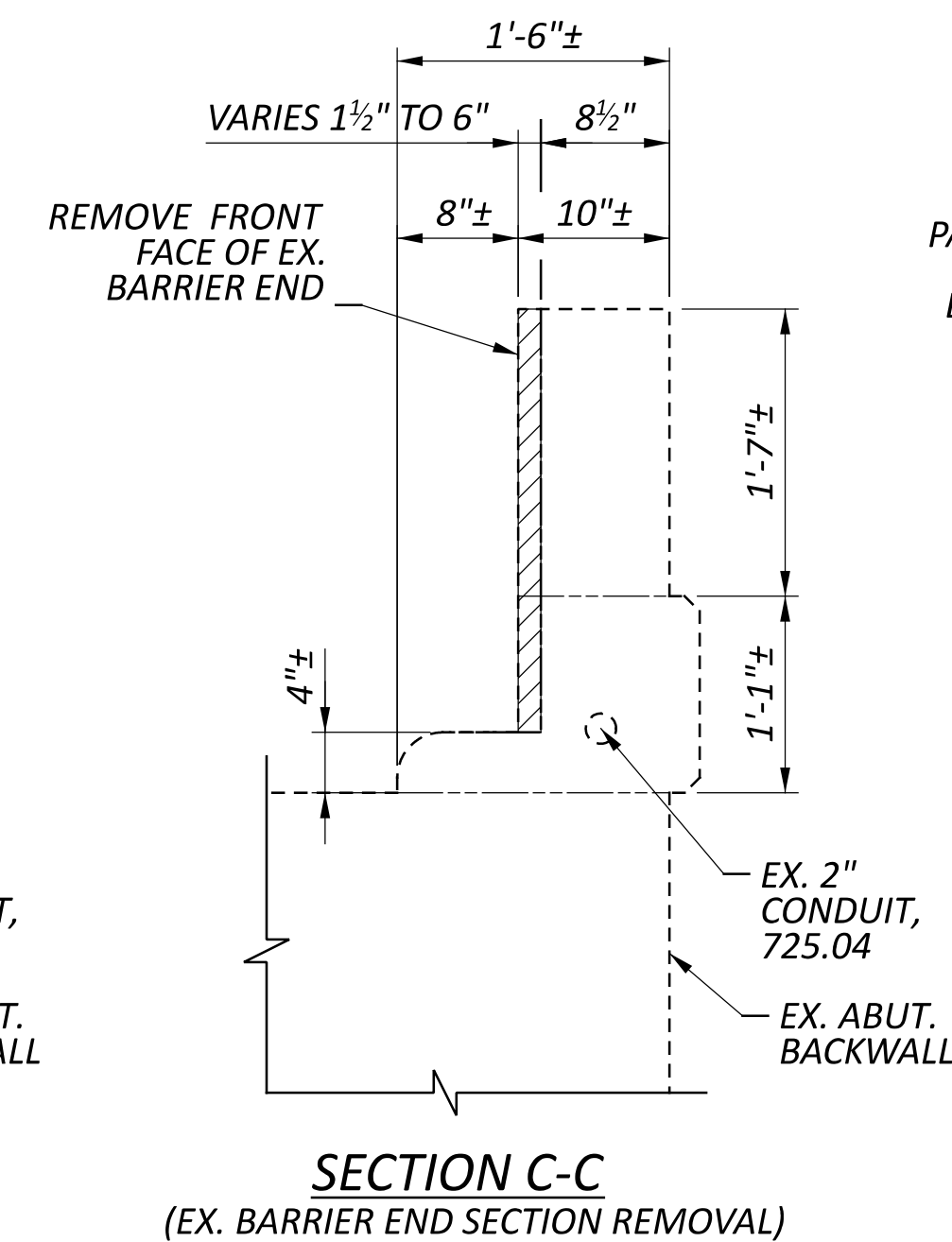
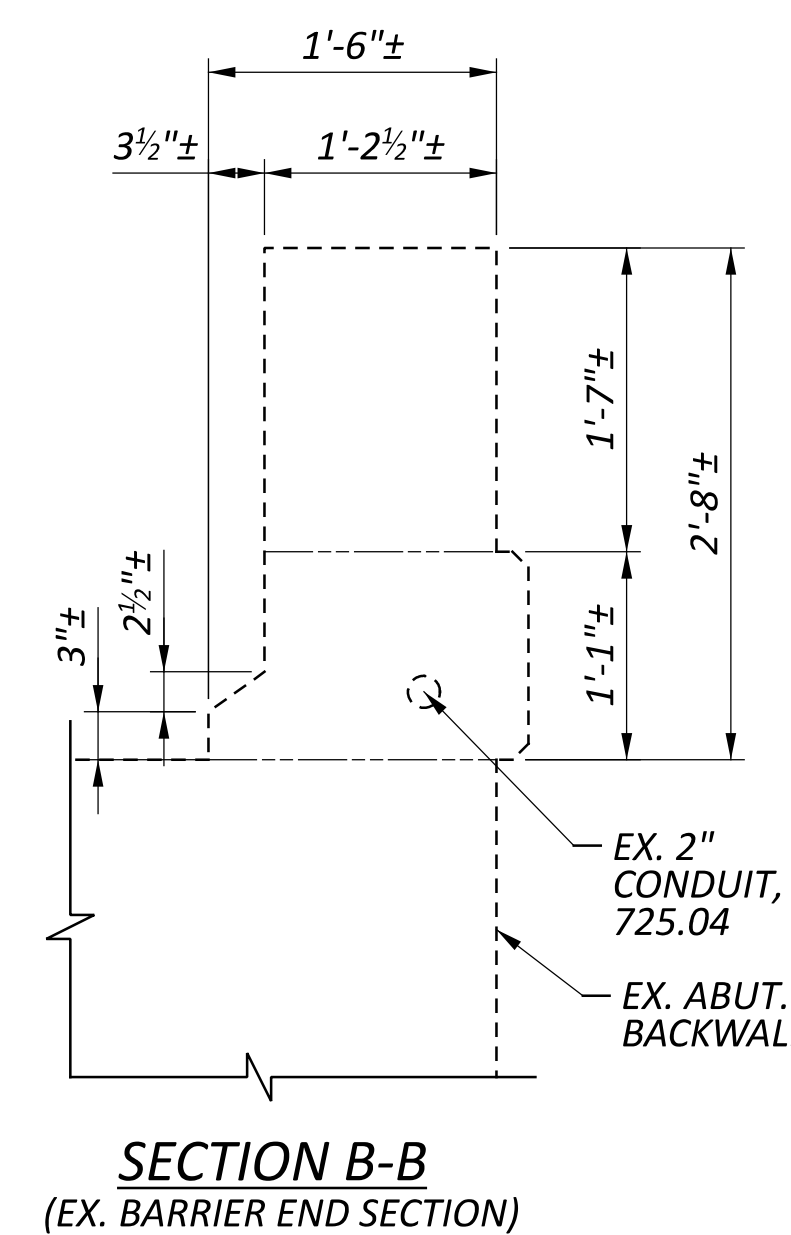
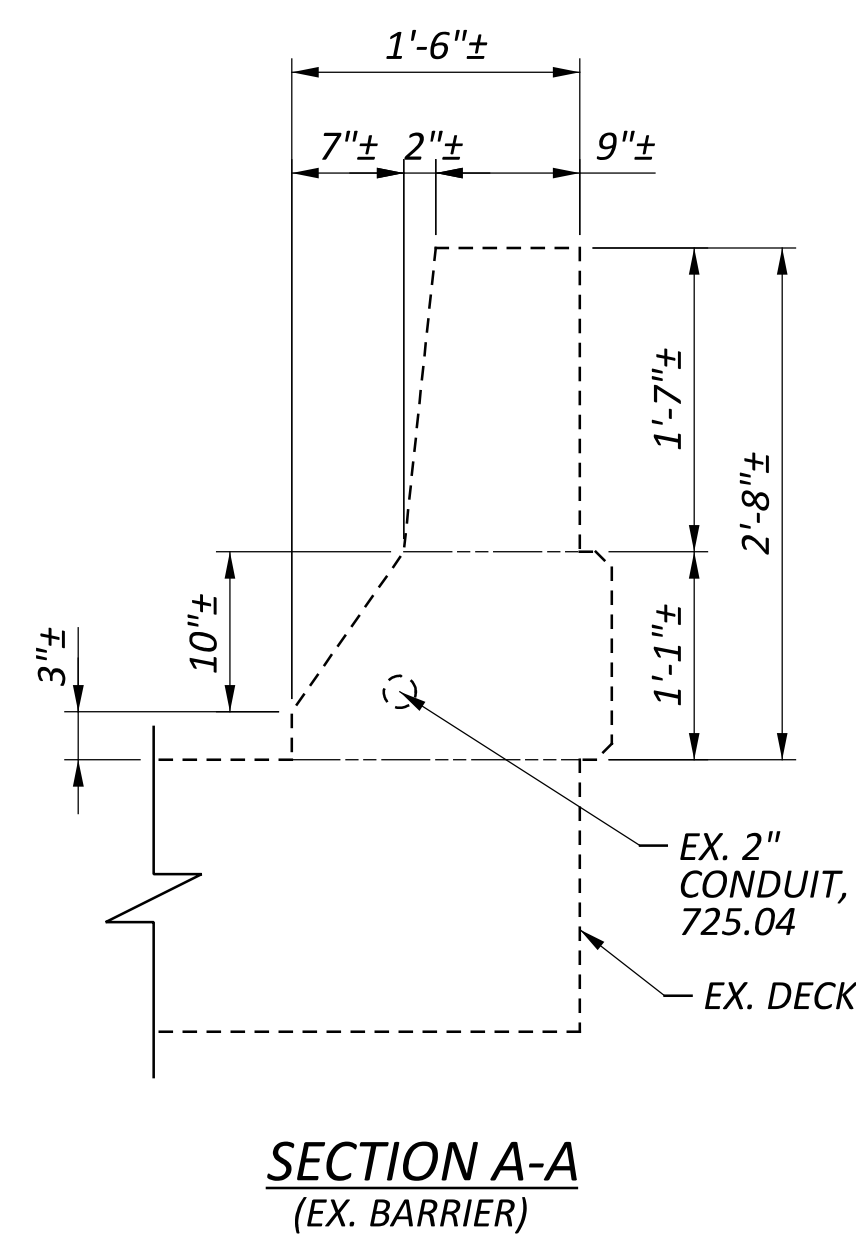


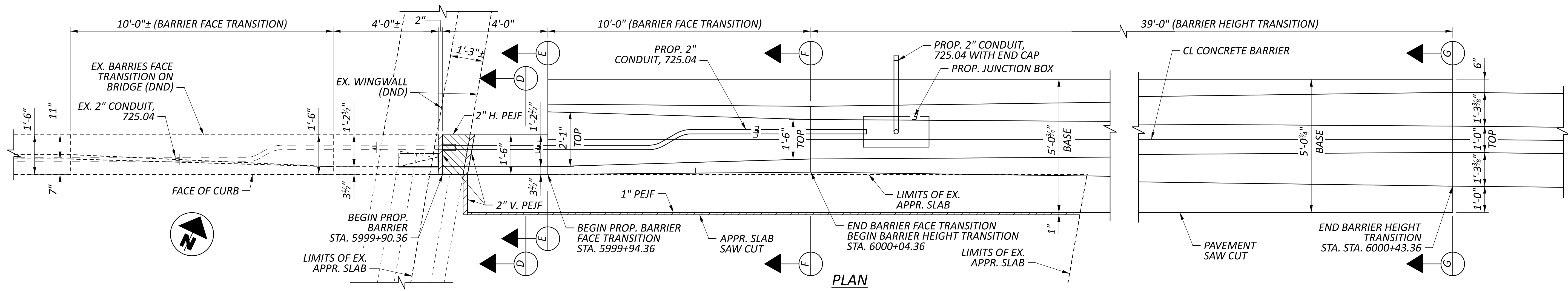
LEGEND:

- EX. CONCRETE BARRIER REMOVAL
- PATCHING OF CONCRETE

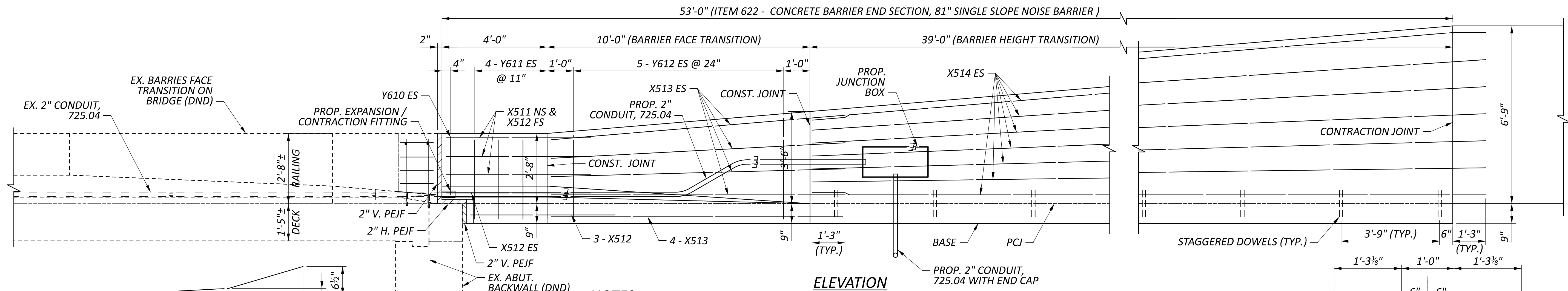
ABBREVIATIONS:

- CONST. = CONSTRUCTION
- DND = DO NOT DISTURB
- ES = EACH SIDE
- EX. = EXISTING
- FS = FAR SIDE
- NS = NEAR SIDE
- PEJF = PREFORMED EXPANSION JOINT FILLER
- PROP. = PROPOSED
- TYP. = TYPICAL





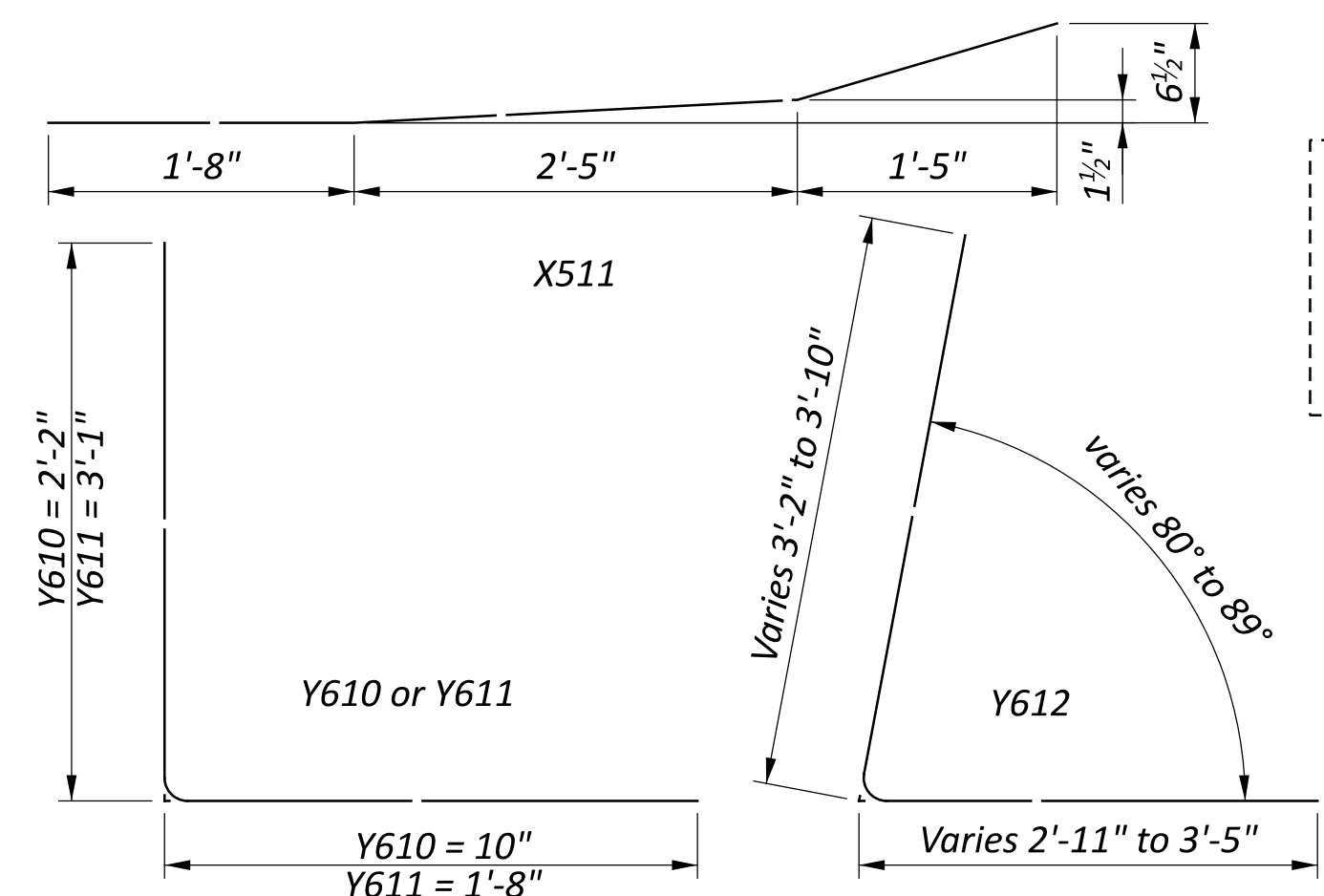
PLAN



ELEVATION

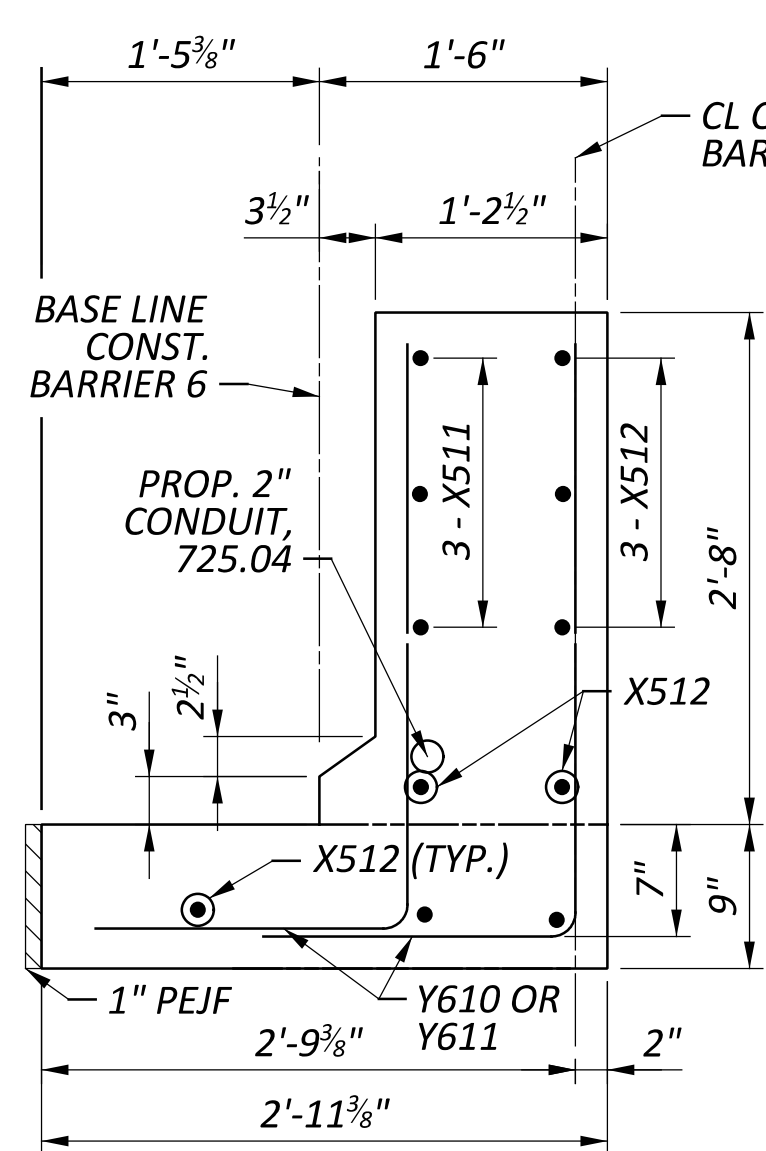
NOTES:

1. FOR ADDITIONAL NOTES AND DETAILS, SEE ST DWG RM-4.3.
2. FOR ADDITIONAL JUNCTION BOX AND CONDUIT NOTES AND DETAILS, SEE ST DWG HL-30.31.
3. ALL EX. DIMENSIONS ARE ±.
4. 2. PAYMENT FOR THE CONCRETE BARRIER END SECTION SHALL BE MADE AT THE UNIT PRICE FOR ITEM 622 - CONCRETE BARRIER, 81" SSB, END SECTION, 32" TO 81" AND SHALL INCLUDE ALL MATERIALS, LABOR, AND REINFORCING STEEL REQUIRED TO CONSTRUCT THE BARRIER END SECTION AS SHOWN.

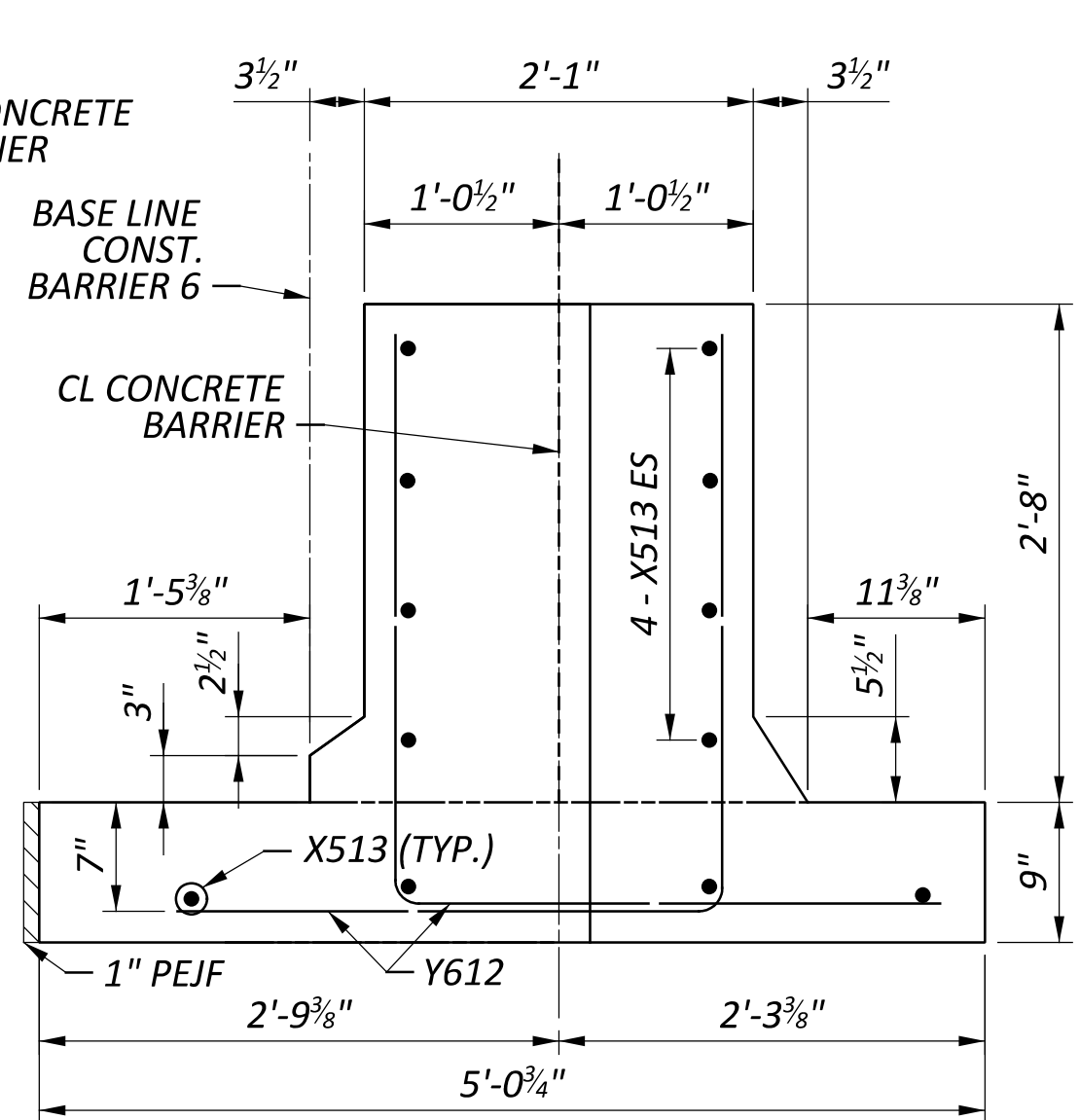


BENDING DIAGRAMS

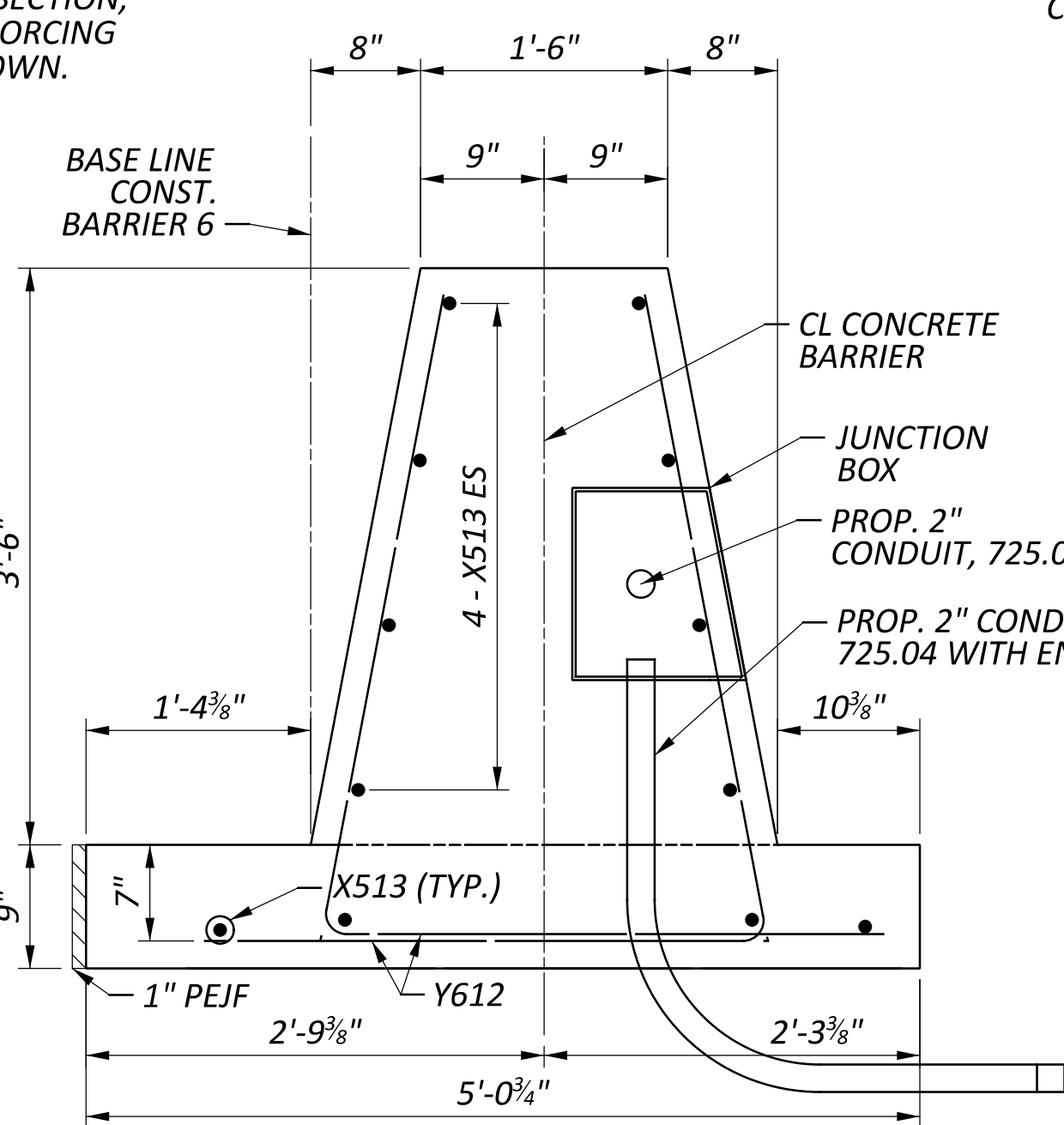
STEEL LIST (For Estimating Purposes Only)					
Mark	Bar	Shape	No.	Length	Weight (lb)
X511	#5	Bent	3	5'-6"	17
X512	#5	Straight	8	5'-6"	46
X513	#5	Straight	12	11'-1"	139
X514	#5	Straight	14	40'-3"	588
Y610	#6	Bent	2	2'-10"	9
Y611	#6	Bent	8	4'-7"	55
Y612	#6	Bent	2 SERIES OF 5	Varies 5'-11" to 7'-1"	98
Total =					955



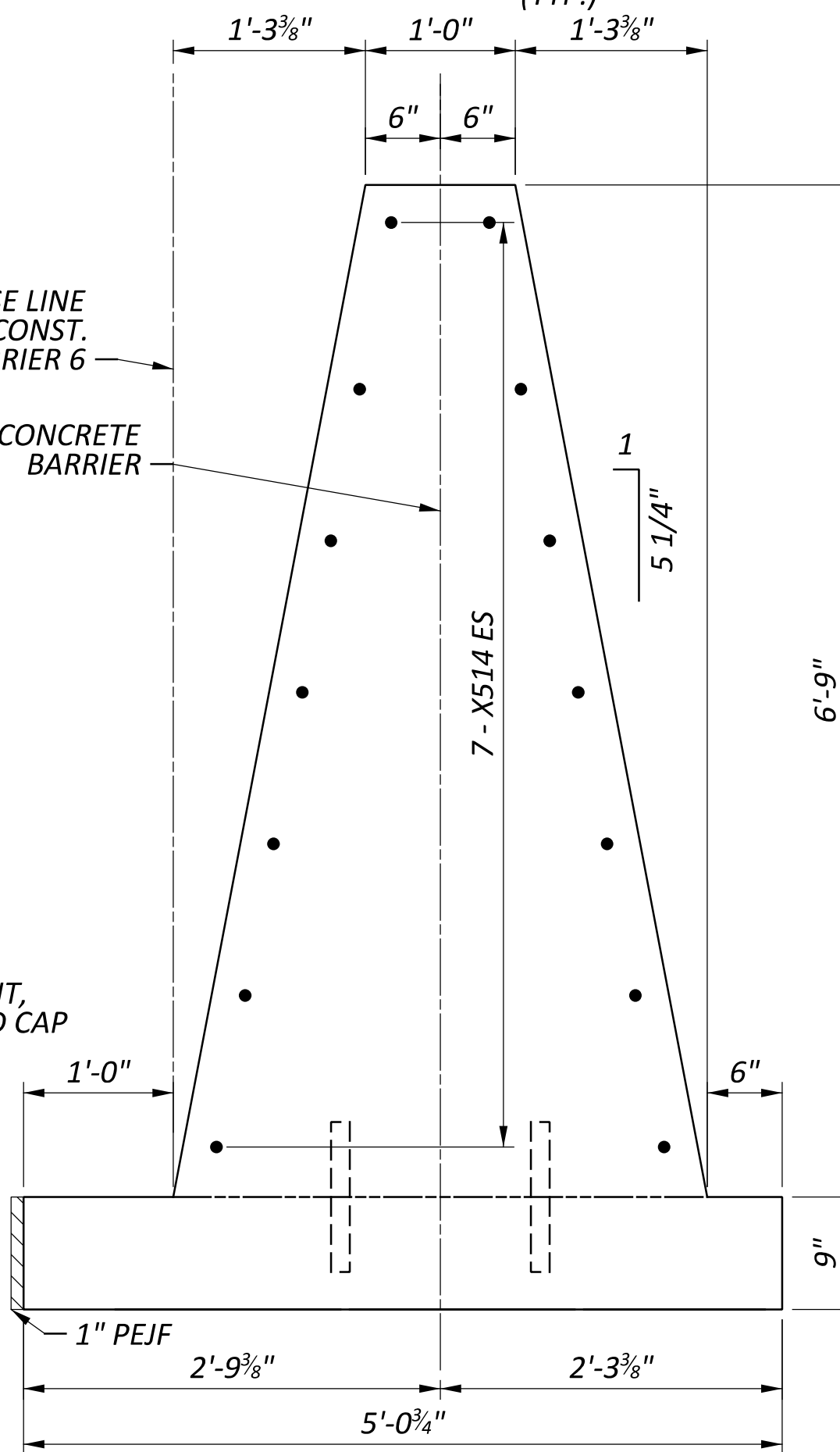
SECTION D-D



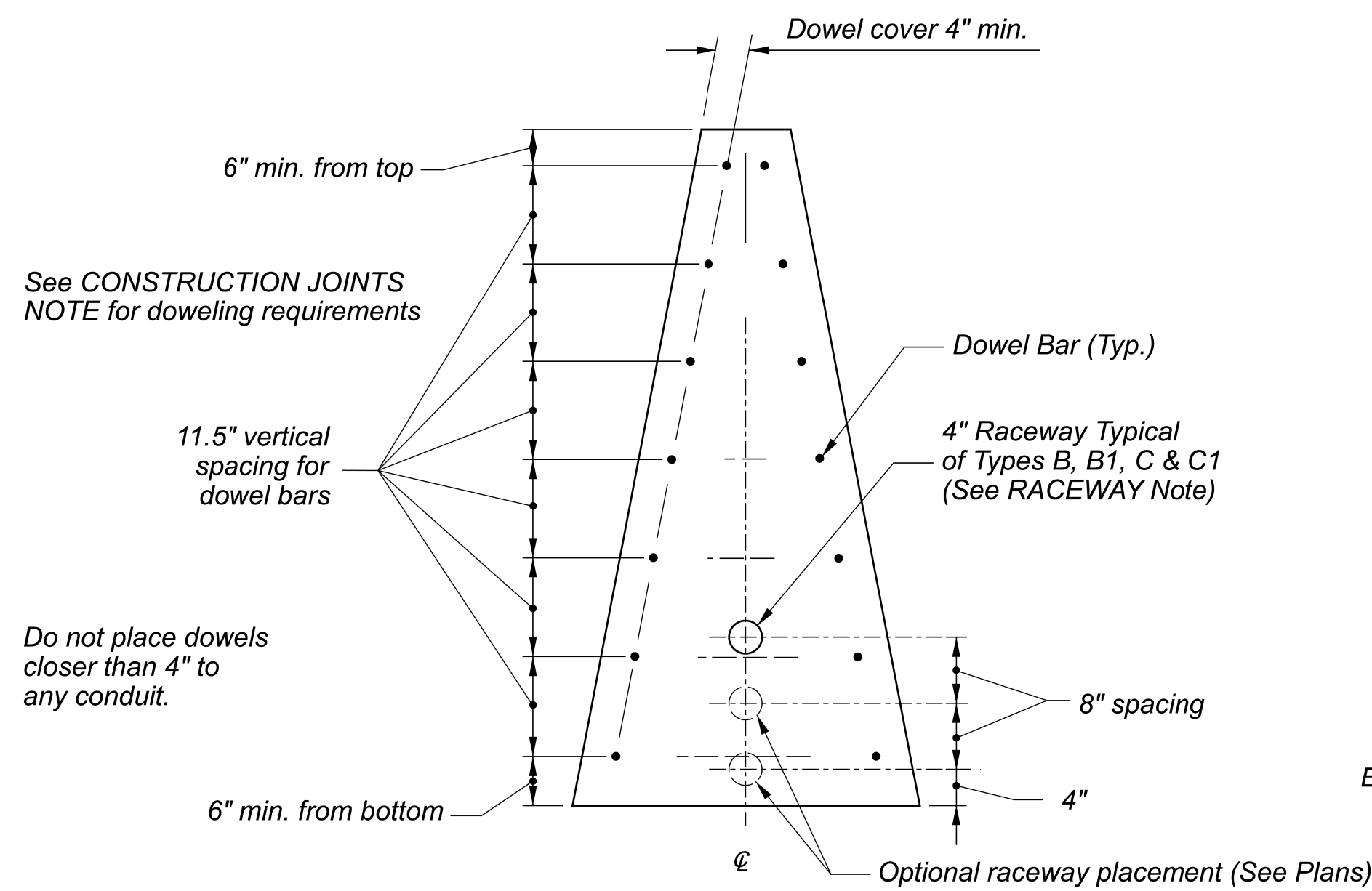
SECTION E-E



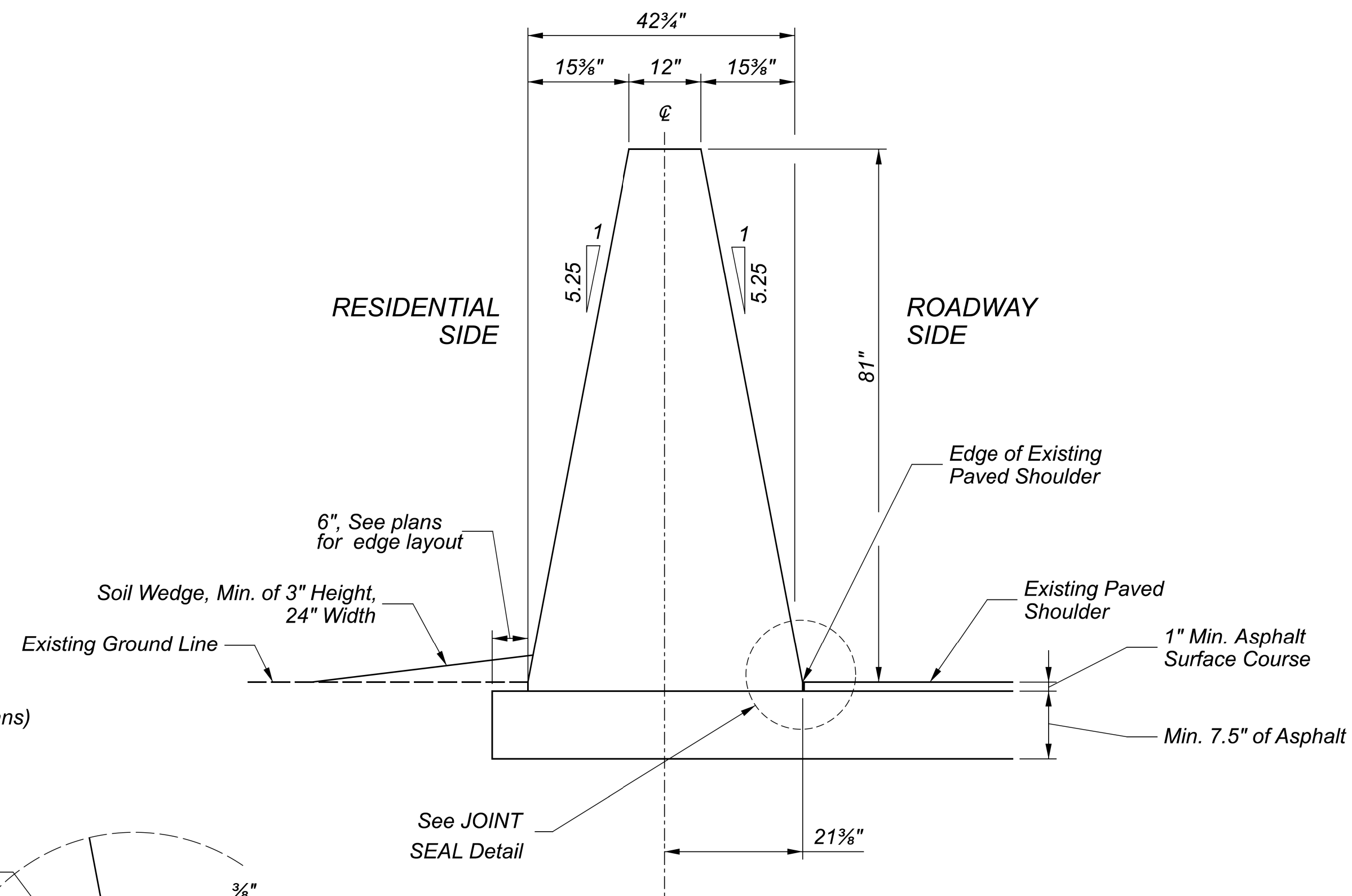
SECTION F-F



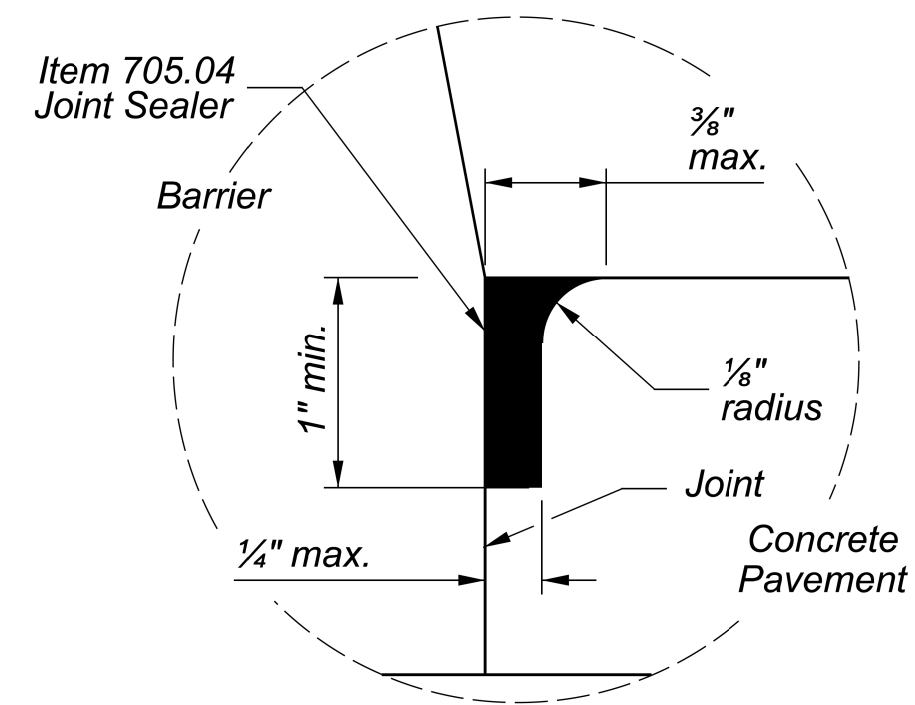
SECTION G-G



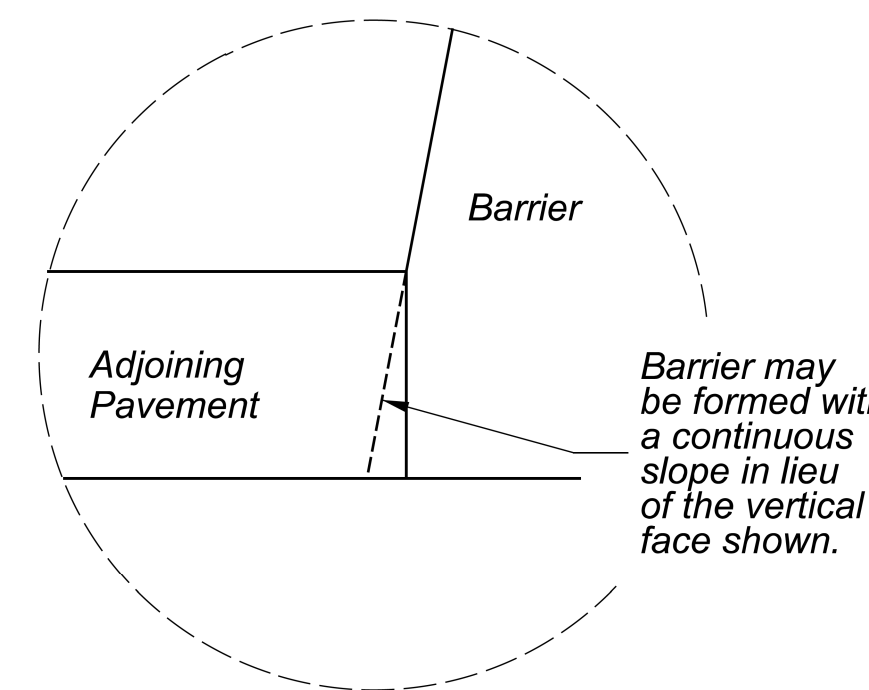
RACEWAY AND DOWEL BAR PLACEMENT



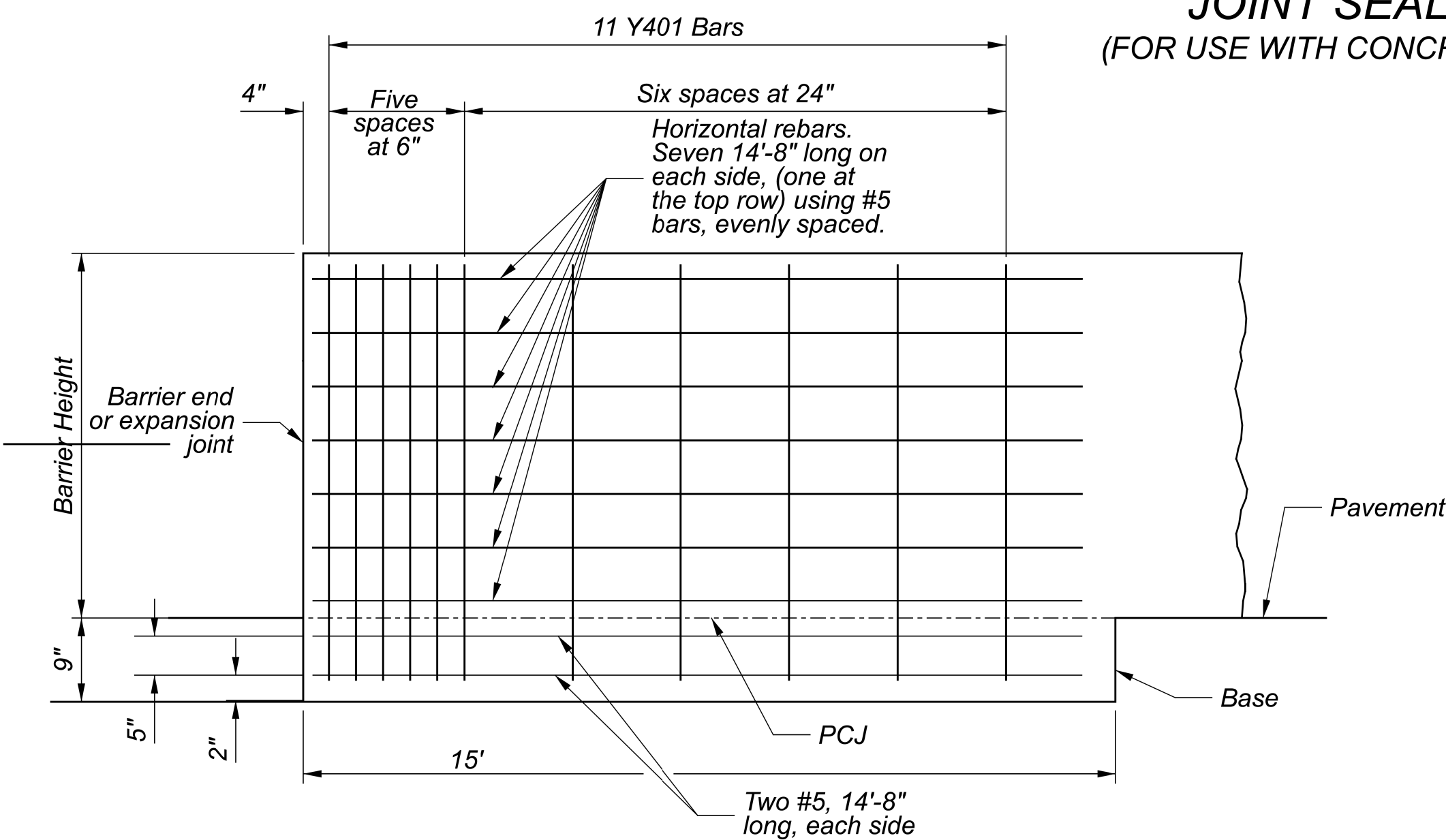
DETAIL FOR ASPHALT PAVEMENT



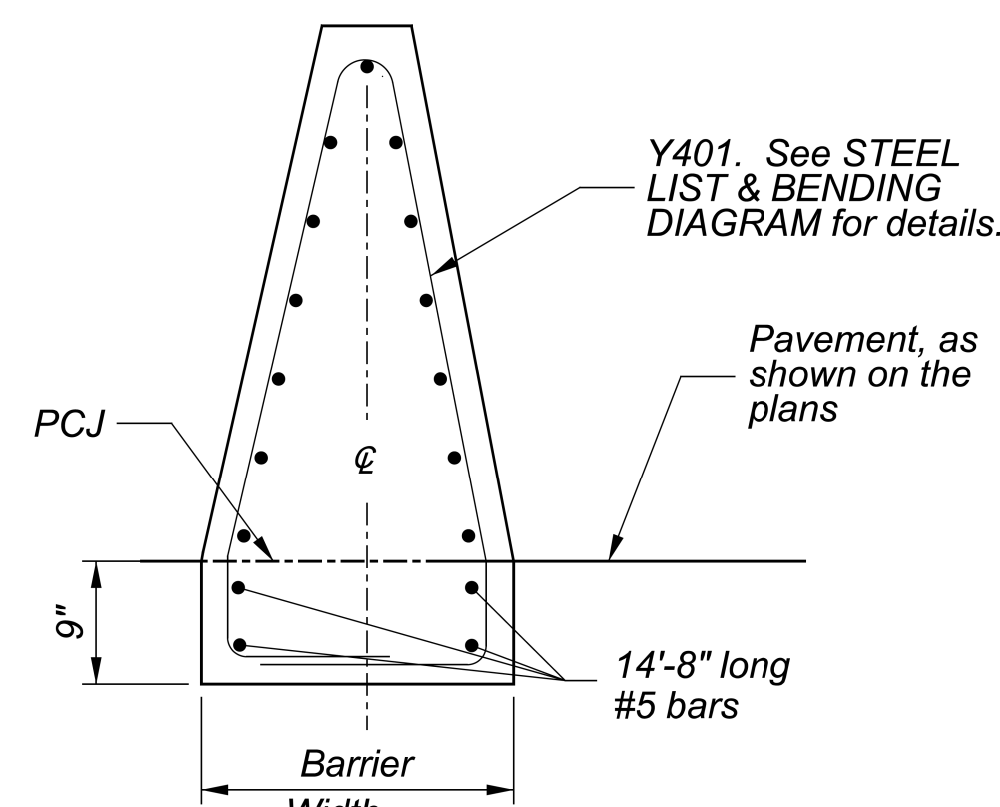
JOINT SEAL DETAIL (FOR USE WITH CONCRETE PAVEMENT)



ALTERNATE TOE DETAIL



ELEVATION



SECTION

END ANCHORAGE

Dimensions for Y401 (English)

x	y	z	Length
74"	37"	9"	18'-8"

Y401 STEEL LIST & BENDING DIAGRAM

REINFORCED END ANCHORAGES are required at the ends of concrete barrier runs and at interruptions in barrier caused by expansion joints. When barrier does not abut another barrier run, construct the last 15' using the END ANCHORAGE Detail as shown here. At expansion joints, construct an End Anchorage on both sides of joint, with a maximum gap of 2" for the open joint. The maximum expansion joint spacing shall be 800'. This anchorage is not needed at construction joints, provide dowel bar connections instead. See CONSTRUCTION JOINT NOTE for doweling details.

NOTES

81" SINGLE SLOPE BARRIER may be cast-in-place or slip formed.

MATERIALS: Construct using concrete with a minimum design strength of 4000 psi conforming to the requirements of CMS 499. Construct top and end edges with either a 1" radius or 3/4" chamfer, except at light pole foundations.

CONTRACTION JOINTS: Maximum allowable spacing of unsealed joints is 20' throughout the run of the barrier. Construct joints by using metal inserts inside the forms, preformed full width joint filler, a grooving tool, or by sawing. Inserts, tooled, or sawed joints will have a 3" depth. Construct all joints for the full height of the barrier. Saw as soon as curing will allow to prevent spalling. When used in conjunction with concrete pavement, match joints to those in the concrete pavement but not exceeding the maximum allowable spacing.

ADJOINING PAVEMENT: When the barrier is constructed in conjunction with new asphalt pavement, place it directly on the intermediate course. Construct the surface course directly against the barrier. Set barrier placed on existing pavement with a continuous wedge of surface material tapering from a 1" minimum thickness at the toe of the barrier to zero. For bidirectional installations construct the wedge on both sides of the barrier. For unidirectional installations, construct the wedge on the traveled way side and the width may be reduced to 12" minimum.

When the barrier is constructed in conjunction with new concrete pavement, place it directly on the base material. Construct the concrete slab against the barrier.

Barrier may be placed on top of existing concrete pavement and doweled as shown in DOWELING DETAILS (see Sheet 2). When pavement is to be constructed on one side of the barrier only, then compacted soil on the opposite side must be placed against the barrier at a minimum height of 3".

TRANSITIONS: Make linear transitions between different types of barrier within a 20' length.

CONSTRUCTION JOINTS: Barrier runs with abutting vertical surfaces at either required or permissible construction joints are to be doweled to each other by use of 3/4" dia. by 18" long epoxy coated deformed dowel bars as per CMS 622.02. Bars are to be placed as shown on the RACEWAY and DOWEL BAR PLACEMENT detail on this sheet. Provide a 4" clearance to barrier surfaces and to any raceways.

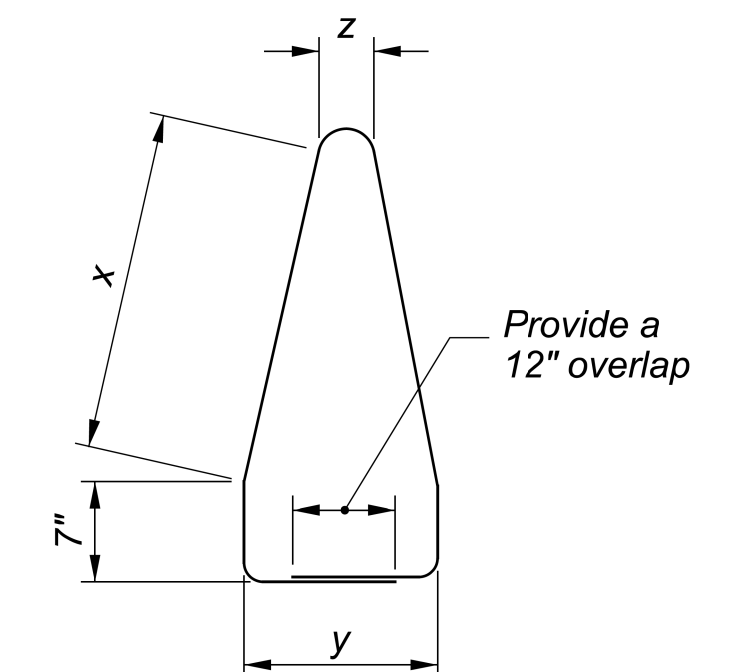
STATION MARKINGS: Impress markings in the "green" concrete on both sides at the top of the barrier. The cost is incidental to the unit cost bid for this barrier.

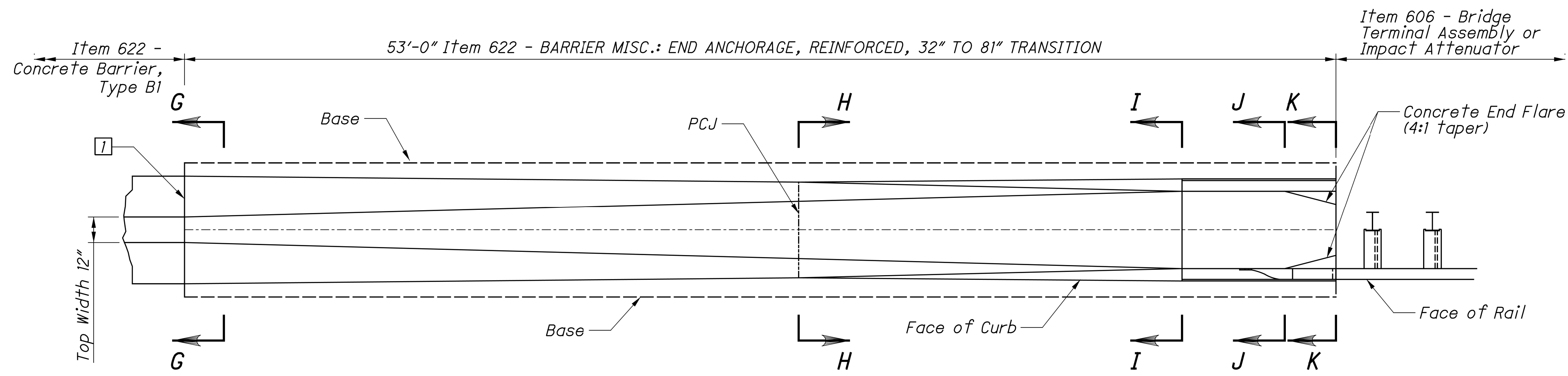
RACEWAY: Locate as shown on in RACEWAY PLACEMENT Detail, unless otherwise directed by the Engineer. Ensure that the electrical raceway is clear of obstructions.

Cost of the 4" polyvinyl chloride raceway is included where shown on the plans. The cost for additional raceways and No. 10 AWG copperclad or aluminum-clad wire is also included where shown on the plans for future installation of circuits.

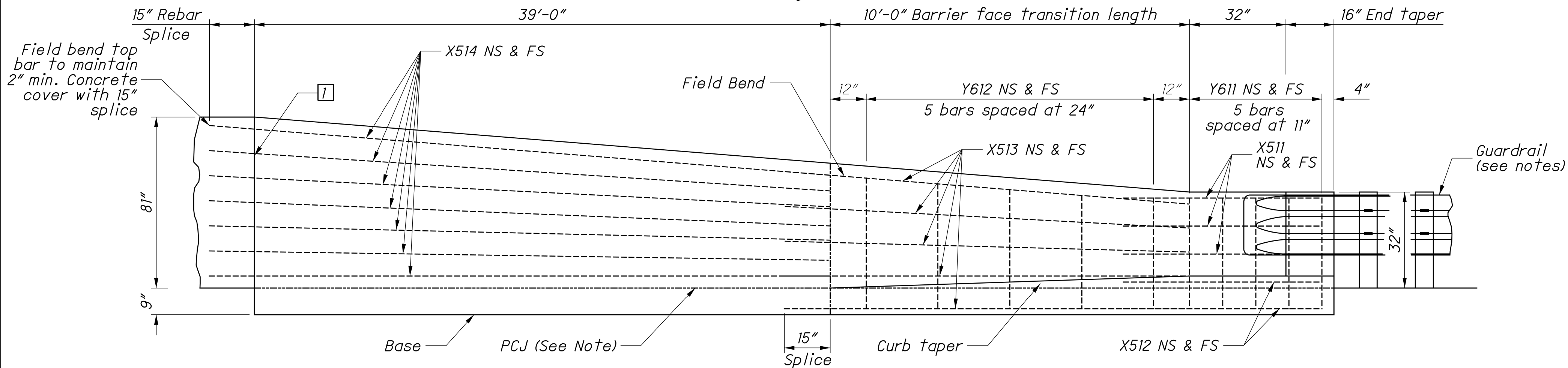
PAYMENT: will be made at the unit price bid per Foot for ITEM 622 - BARRIER, MISC.: 81" SSB. Include all materials, labor, raceways, dowel holes, markings and other incidentals necessary to construct the barrier.

Payment for any reinforced end anchors, as shown on the END ANCHORAGE details will be made at the unit price bid per Each for ITEM 622 - BARRIER, MISC.: 81" SSB, END ANCHORAGE, REINFORCED. This includes all materials, labor, and other incidentals necessary to construct this anchor.





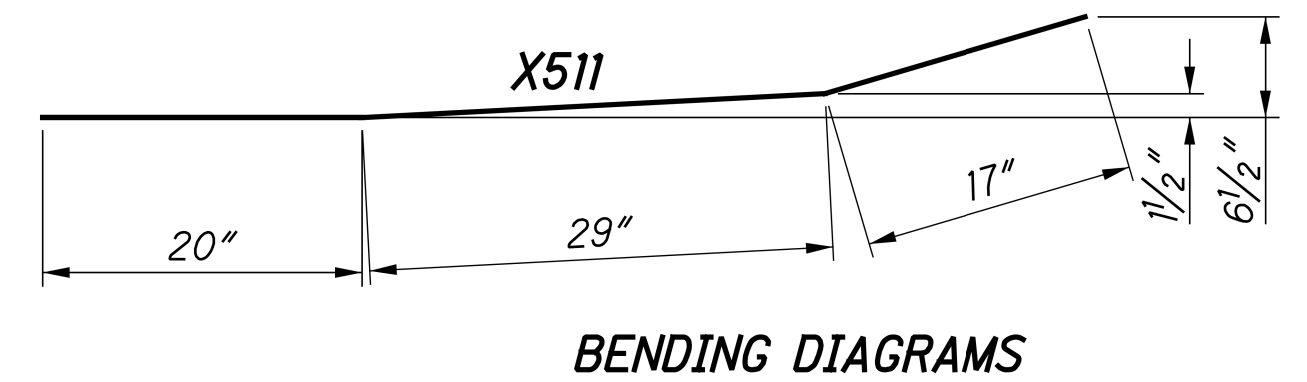
PLAN
Reinforcing not shown



ELEVATION

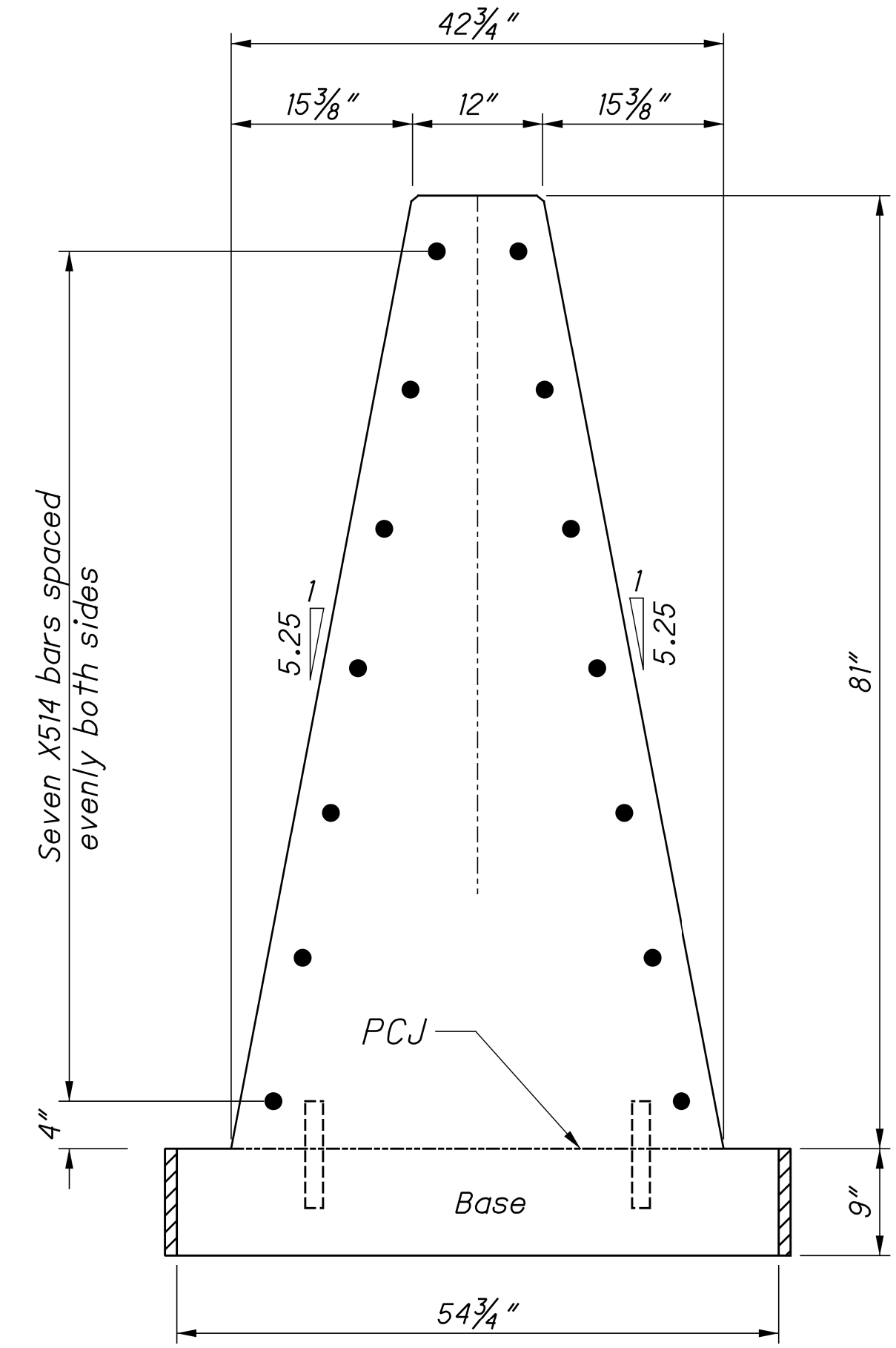
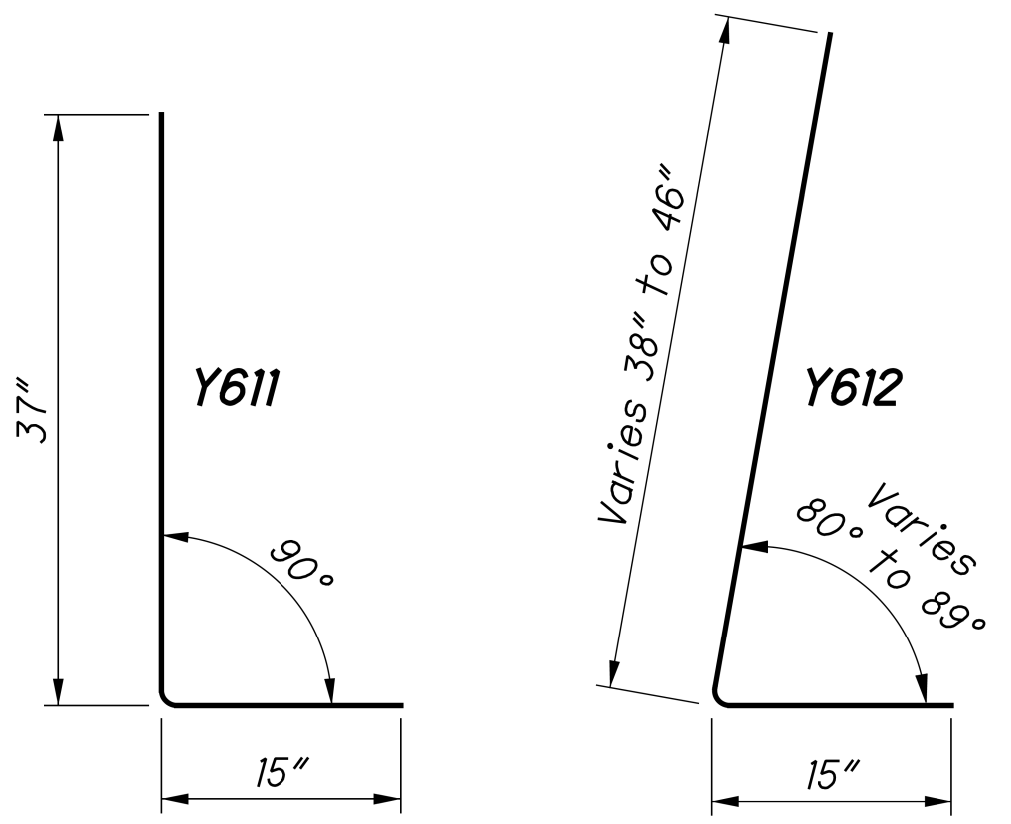
NS = Near Side
 FS = Far Side

□ Contraction Joint. See NOTES on 1/8. Provide rebar cover of 3/2".

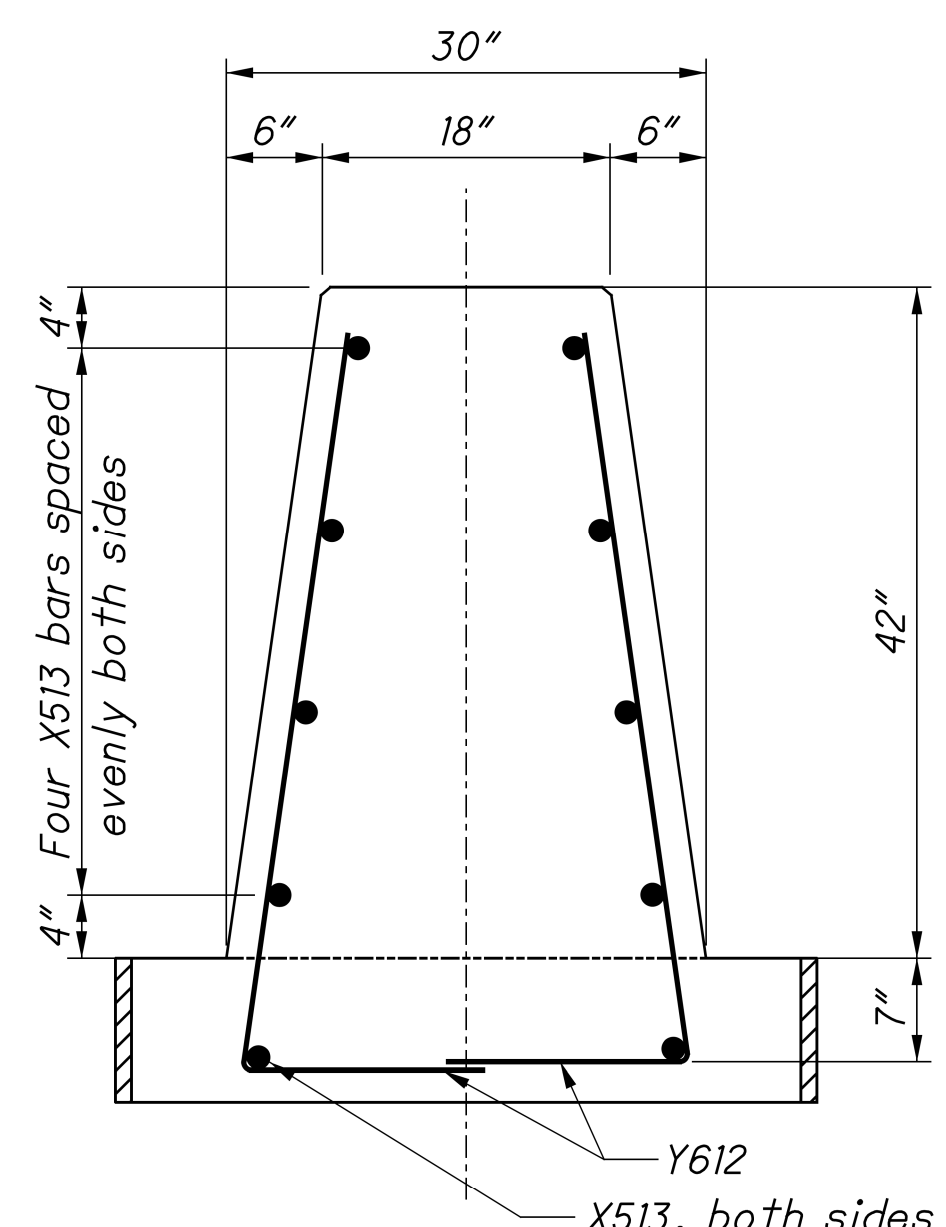


BENDING DIAGRAMS

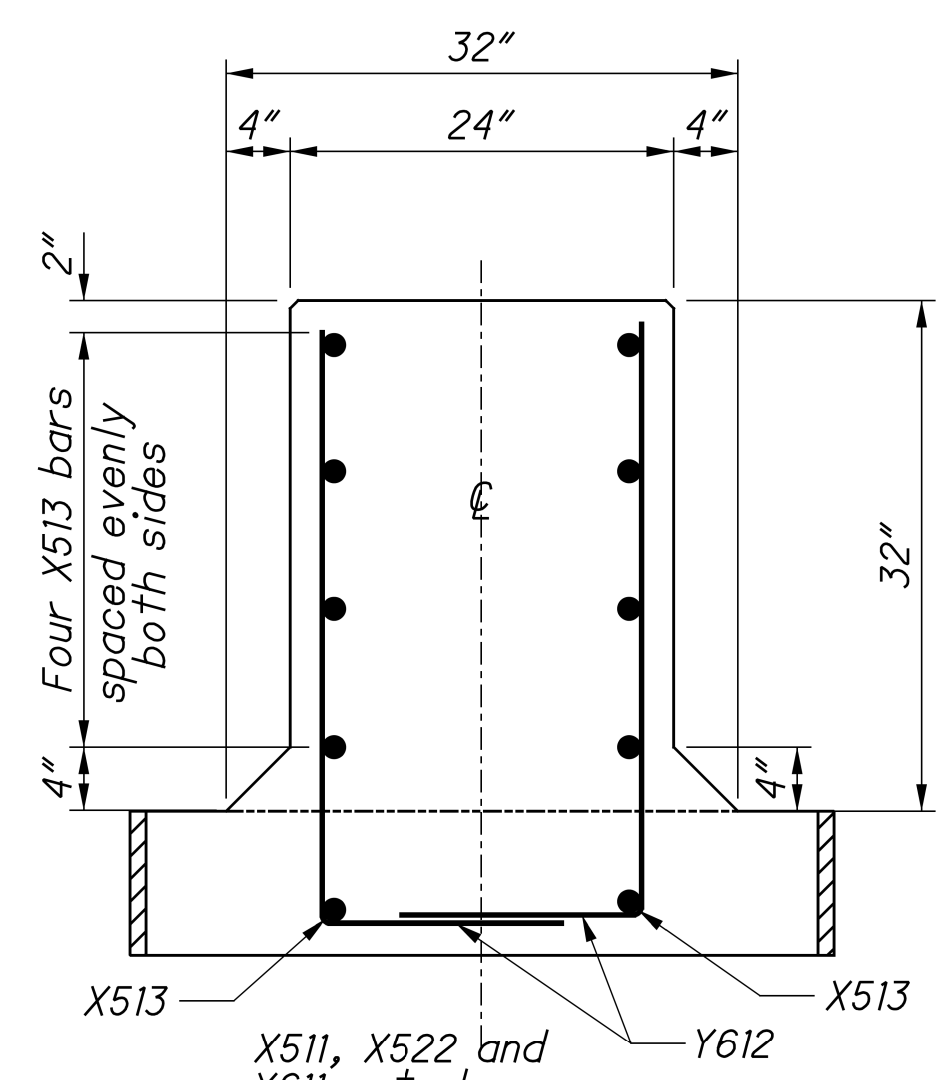
TYPE B1 STEEL LIST				
Mark	Bar	Shape	No.	Length
X511	#5	Bent	6	5'-6"
X512	#5	Straight	4	5'-6"
X513	#5	Straight	10	11'-1"
X514	#5	Straight	10	40'-3"
Y611	#6	Bent	10	4'-2"
Y612	#6	Bent	2 series of 5	Varies 4'-3" to 5'-3"



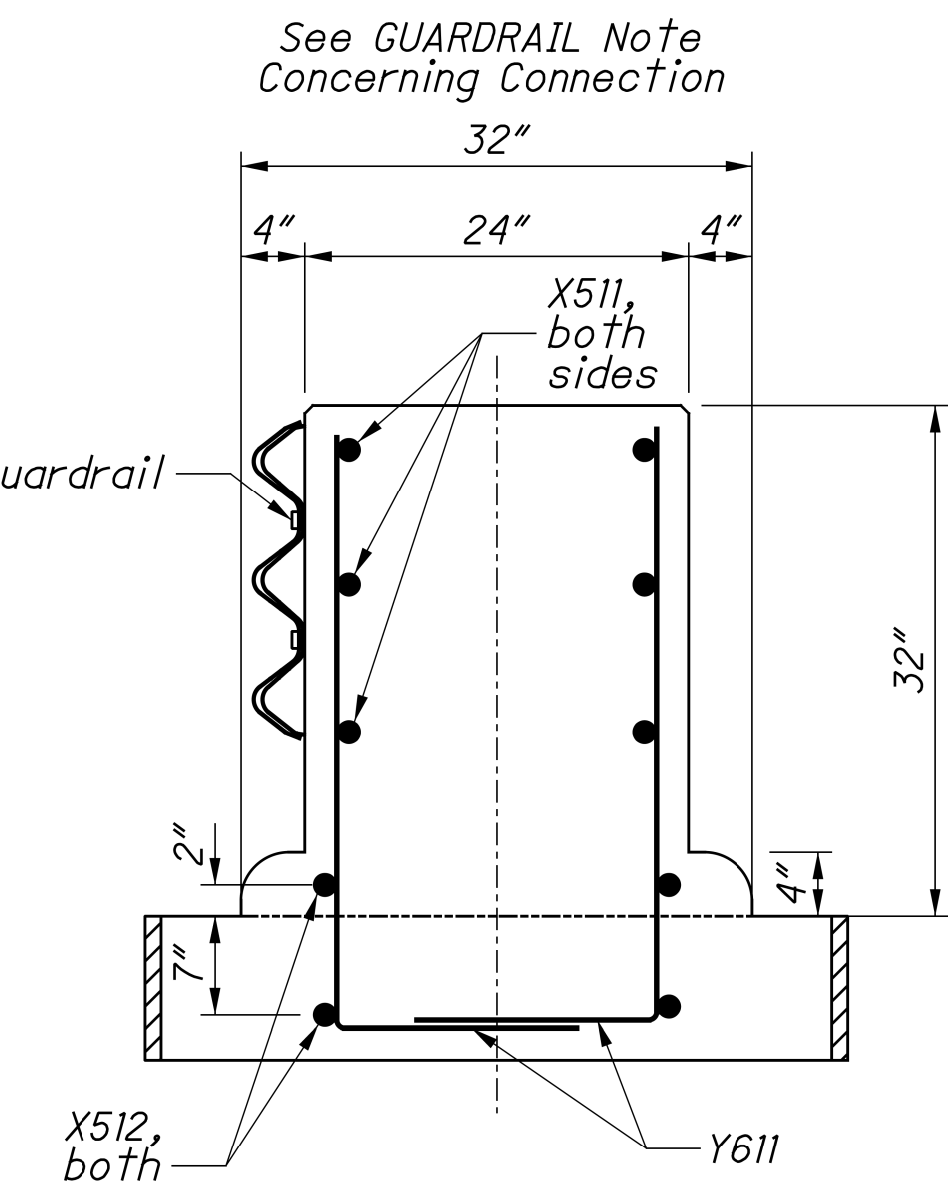
SECTION G-G



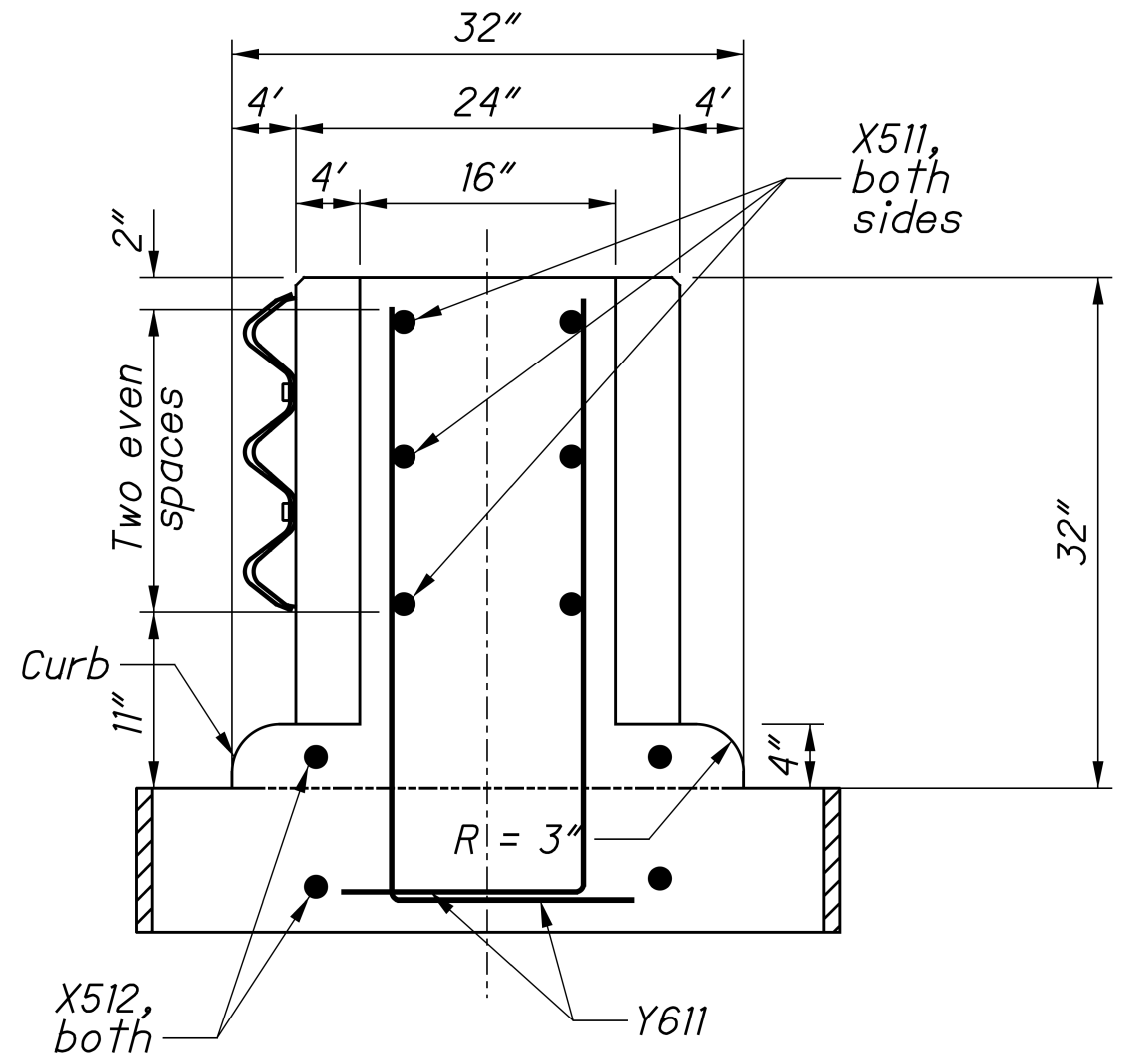
SECTION H-H



SECTION I-I



SECTION J-J



SECTION K-K

NOTES

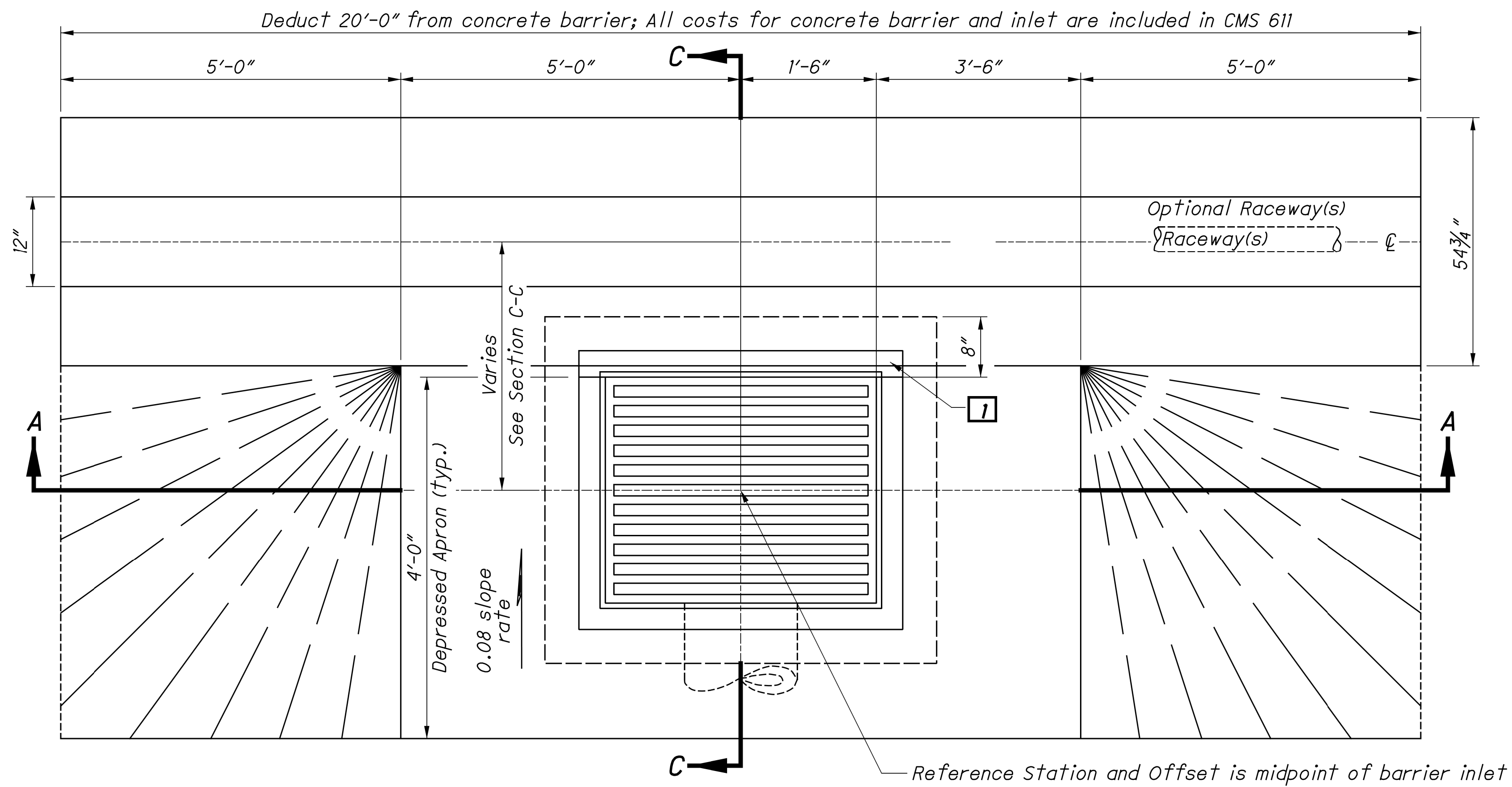
GENERAL: See P.224 for 81" Single Slope Barrier details and materials. Provide 2" concrete cover over rebars, except as noted.

GUARDRAIL: For Bridge Terminal Assembly and attachment details see SCD MGS-1.1 (SCD GR-3.5 if connecting to Type 5 Guardrail). Information on Impact Attenuators is found in the Location and Design Manual, Volume 1, Section 603.

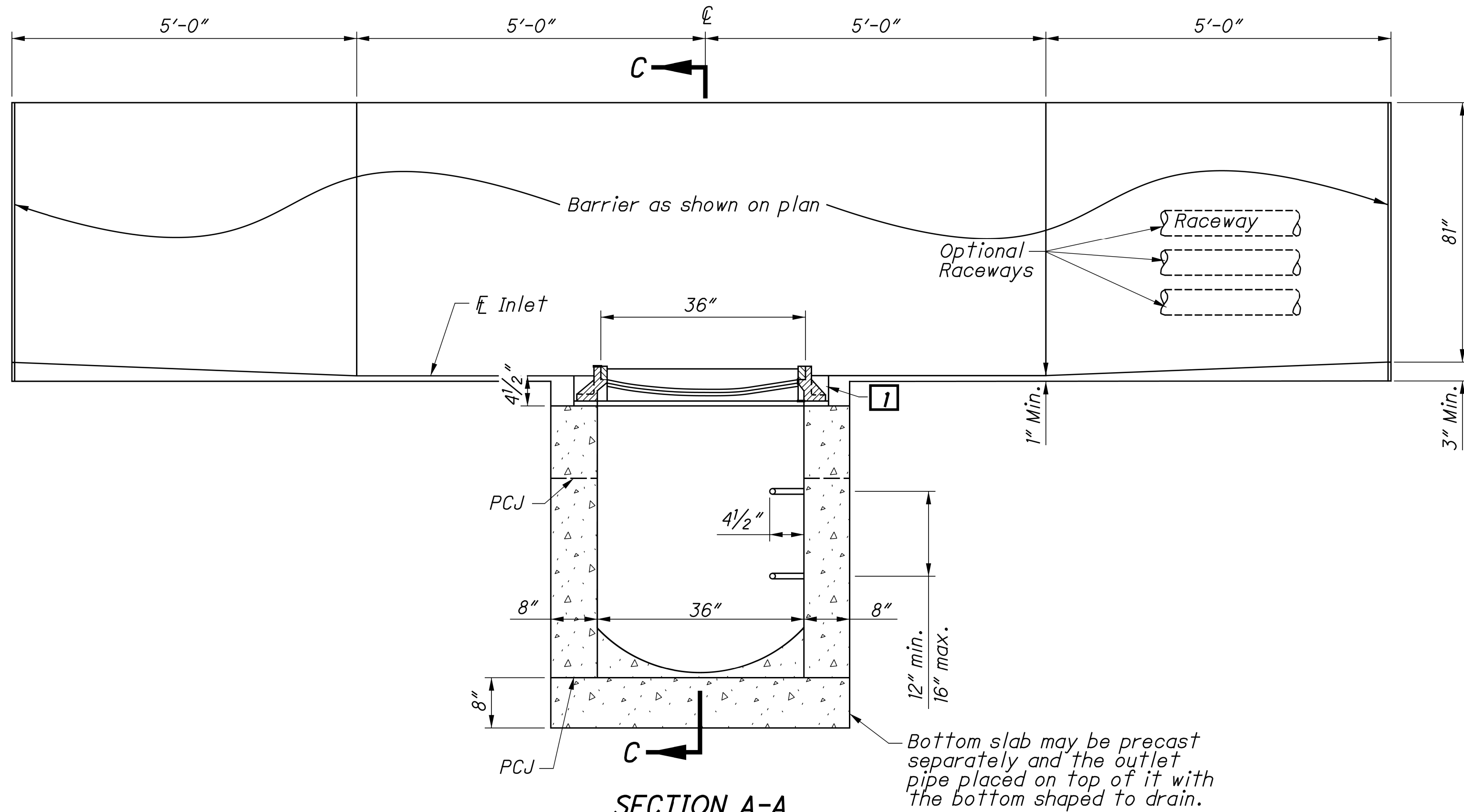
BARRIER FACE TRANSITIONS: To prevent vehicle snagging, smooth transitions from vertical faces to the single slope faces are made over a 10' distance.

PCJ: Permissible Construction Joint. In the unreinforced base section, barrier may be placed on top of concrete base if doweled as shown on SCD RM-4.3.

PAYMENT: Payment for the Concrete End Section shall be made at the unit price for Item 622 - BARRIER, MISC.: 81" SSB, END SECTION, 32" TO 81" and shall include all materials, labor, and reinforcing steel required to construct the barrier end section as shown.



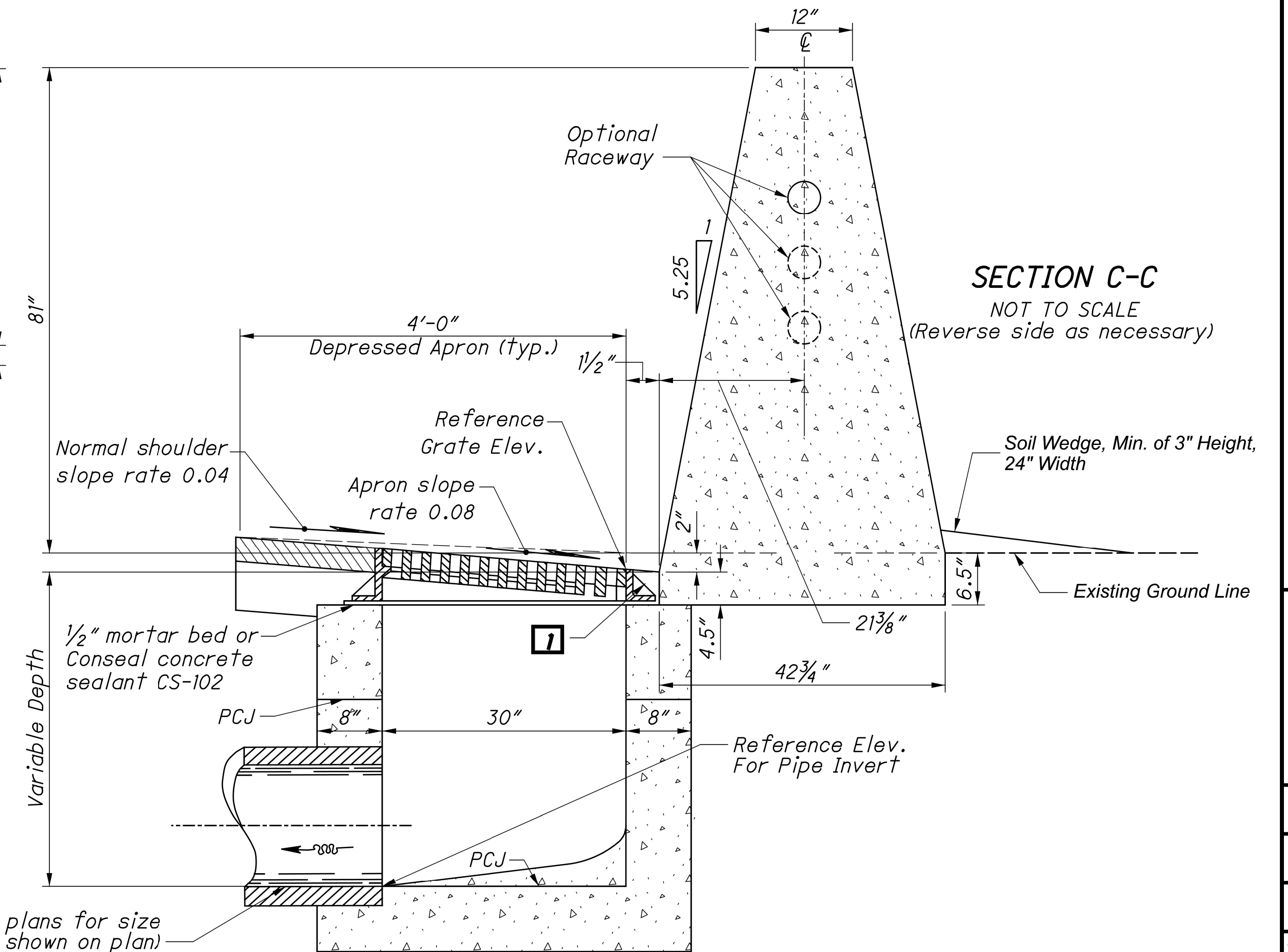
PLAN VIEW
NOT TO SCALE



SECTION A-A
NOT TO SCALE

1 After casting is placed, fill void with 4000 psi compressive strength concrete.

LEGEND



SECTION C-C
NOT TO SCALE
(Reverse side as necessary)

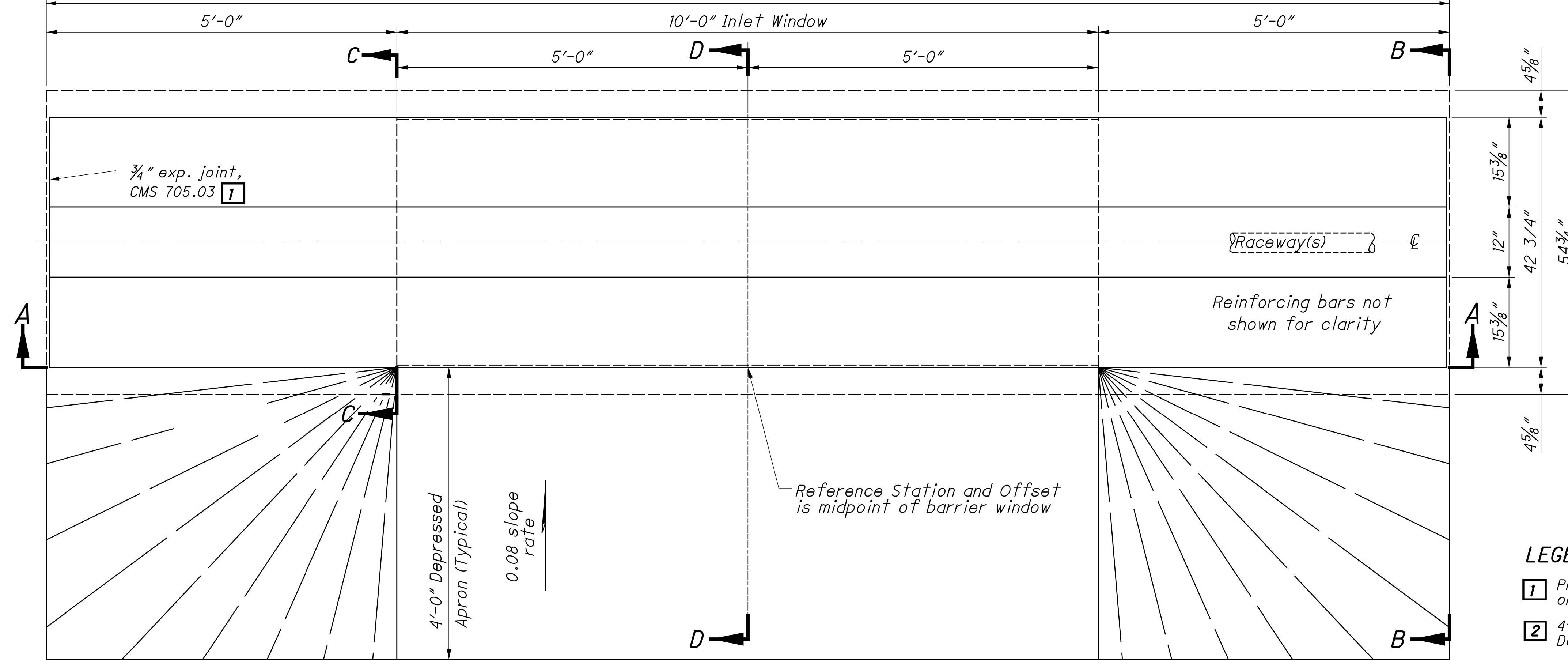
Outlet pipe, see plans for size (reverse side as necessary as shown on plan)

NOTES

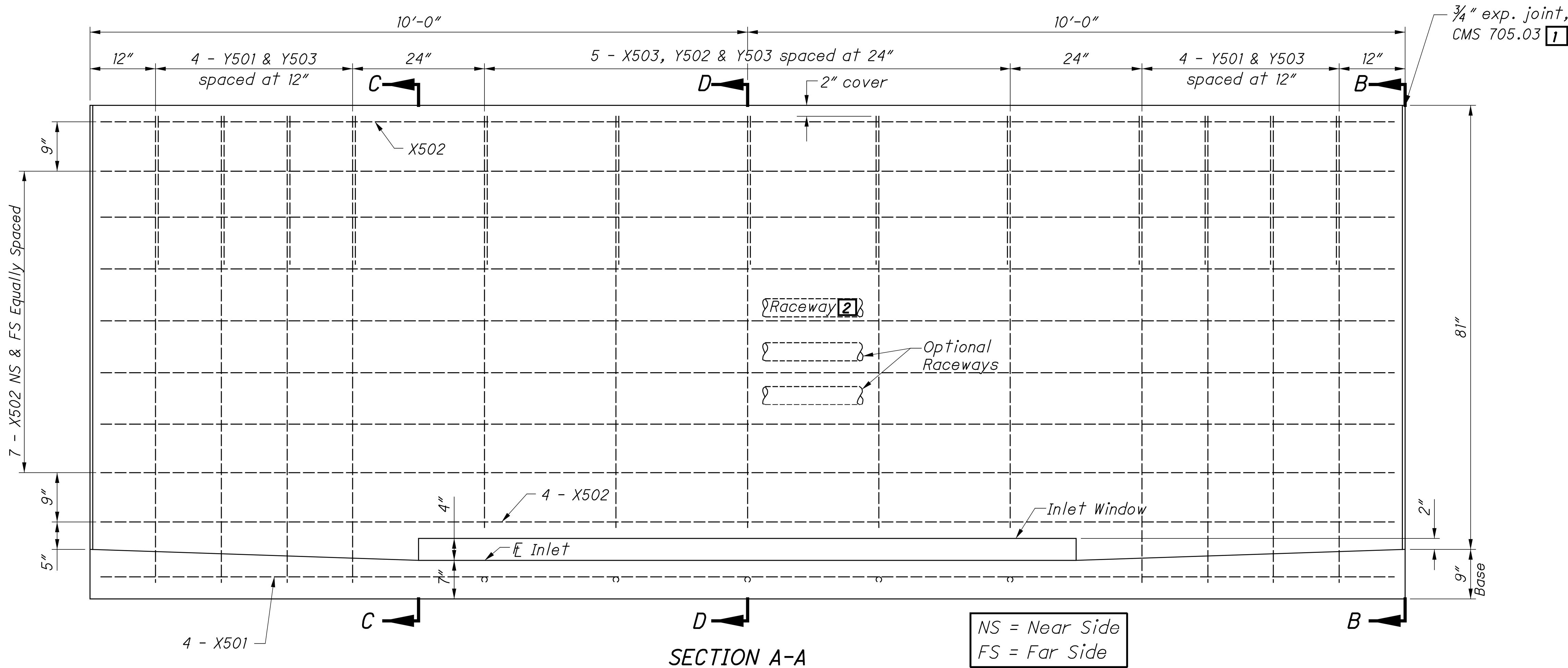
- GENERAL:** For details of 81" Single Slope Barrier, see Sheet P.224
- WALLS:** The walls between the bottom slab and the upper permissible construction joint may be built of brick, concrete block or cast-in-place concrete, 8" nominal thickness for depths of 12' or less. Precast walls have a minimum thickness of 6" and are reinforced sufficiently to permit shipping and handling without damage. The unit above the upper permissible construction joint may be precast or cast-in-place.
- CONCRETE:** Provide 4000 psi compressive strength concrete for cast-in-place structures. When precast, provide concrete that meets the requirements of CMS 706.13. Mark the inlet number on the structure. Seal the exposed concrete surfaces of the barrier per CMS Item 512 when specified in the plans.
- REINFORCING STEEL:** Provide epoxy coated reinforcing steel in accordance with CMS 509.09.
- CASTINGS:** Provide casting according to SCD I-3B.
- INLETS OVER 12 FEET IN DEPTH:** Provide precast or cast-in-place concrete for inlets over 12 feet in depth. Reinforce with #5 bars on 12" centers both vertically and horizontally with 2" clearance from the inside wall face.
- OPENINGS:** Pipe openings are the outside diameter of the pipe being supplied plus 2" when fabricated or field cut. Fill any voids per CMS 611.
- PCJ:** Permissible construction joint.
- STEPS:** Provide steps according to SCD MH-1.
- PAYMENTS:** Payment will be made at the unit price bid per Each for ITEM 611 - INLET, MISC.: BARRIER INLET, 81" SSB and includes all materials, reinforcing steel, castings, raceways, wiring and labor required to construct the inlet as shown. Sealing of exposed concrete and sealing of the barrier will be paid for under Item 512 when specified in the plans.

DESIGN AGENCY	
ARCADIS	
8101 NORTH HIGGINS SUITE 100 COLUMBIA, MO 65203 616.441.4900 www.arcadis.com	
DESIGNER	JMK
REVIEWER	JDH
PROJECT ID	117607
SHEET	TOTAL
P.226	P.295

Deduct 20'-0" from concrete barrier; All costs for concrete barrier and window section are included in CMS 622



PLAN VIEW



SECTION A-A

NS = Near Side
 FS = Far Side

NOTES

1. For additional notes and details, see SCD I-3B.
2. For sections B-B, C-C, & D-D, see sheet P.228

PAYMENT: Payment for the Concrete Barrier Window Section shall be made at the unit price bid for ITEM 622 - BARRIER, MISC.: 81" SSB, WINDOW SECTION, Each and shall includes all materials, reinforcing steel, castings, labor and incidentals required to construct the Concrete Barrier Window Section as shown.

Tied Concrete Block Mat with Type 1 Underlayment is paid at the contract unit price bid for Item 601 - Tied Concrete Block Mat with Type 2 Underlayment

LEGEND

- 1 Provide a 1/2" minimum exp. joint in concrete pavement or concrete shoulders.
- 2 4" electrical raceway. See Sheet 6/8 for RACEWAY PLACEMENT Details.

DESIGN AGENCY

ARCADIS
 8101 NORTH HIGGINS SUITE 100
 COLUMBIA, MO 65203
 (646) 441-4900
 www.arcadis.com

DESIGNER

JMK

REVIEWER

JDH 03-27-24

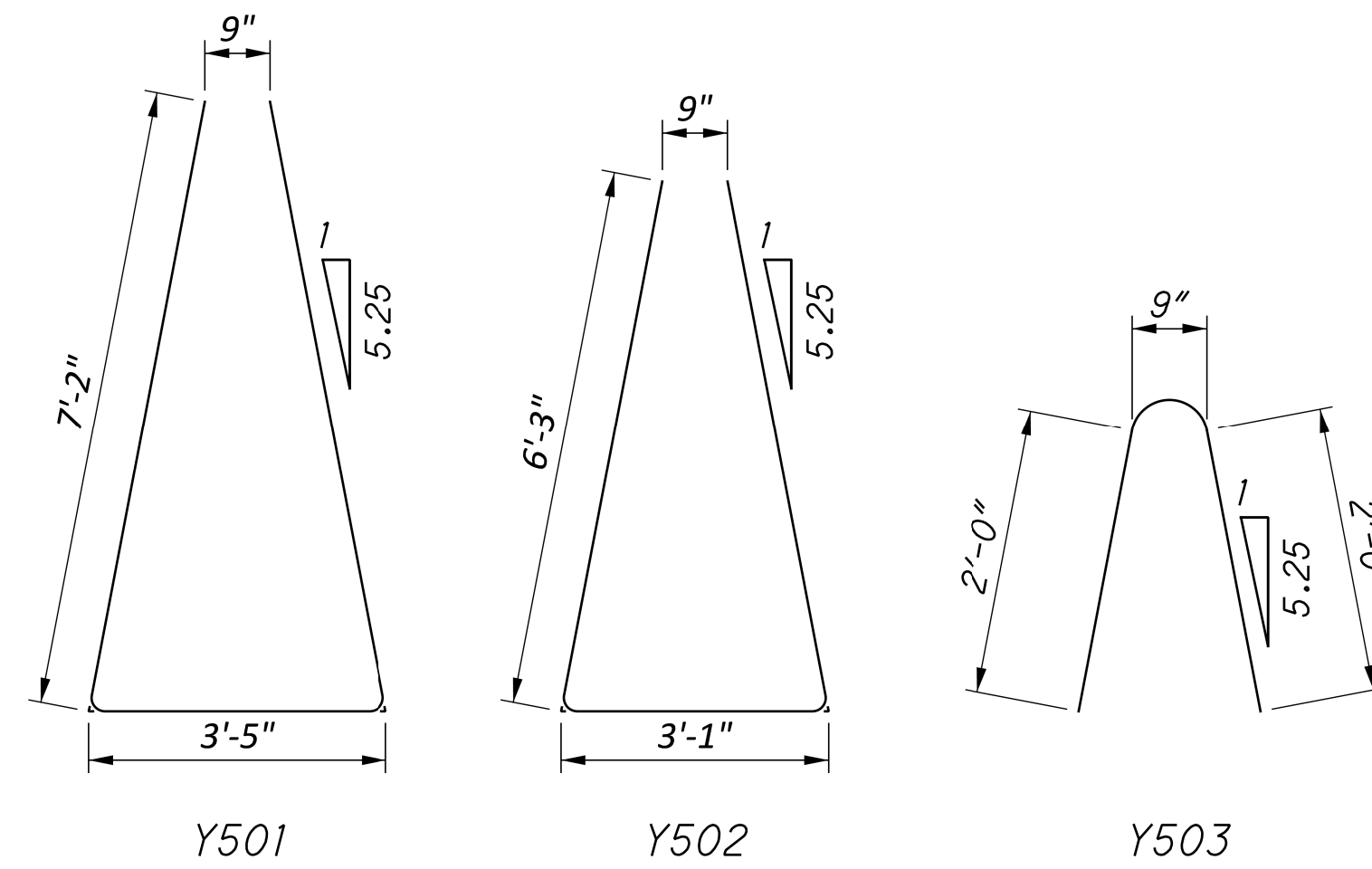
PROJECT ID

117607

SHEET TOTAL

P.227 P.295

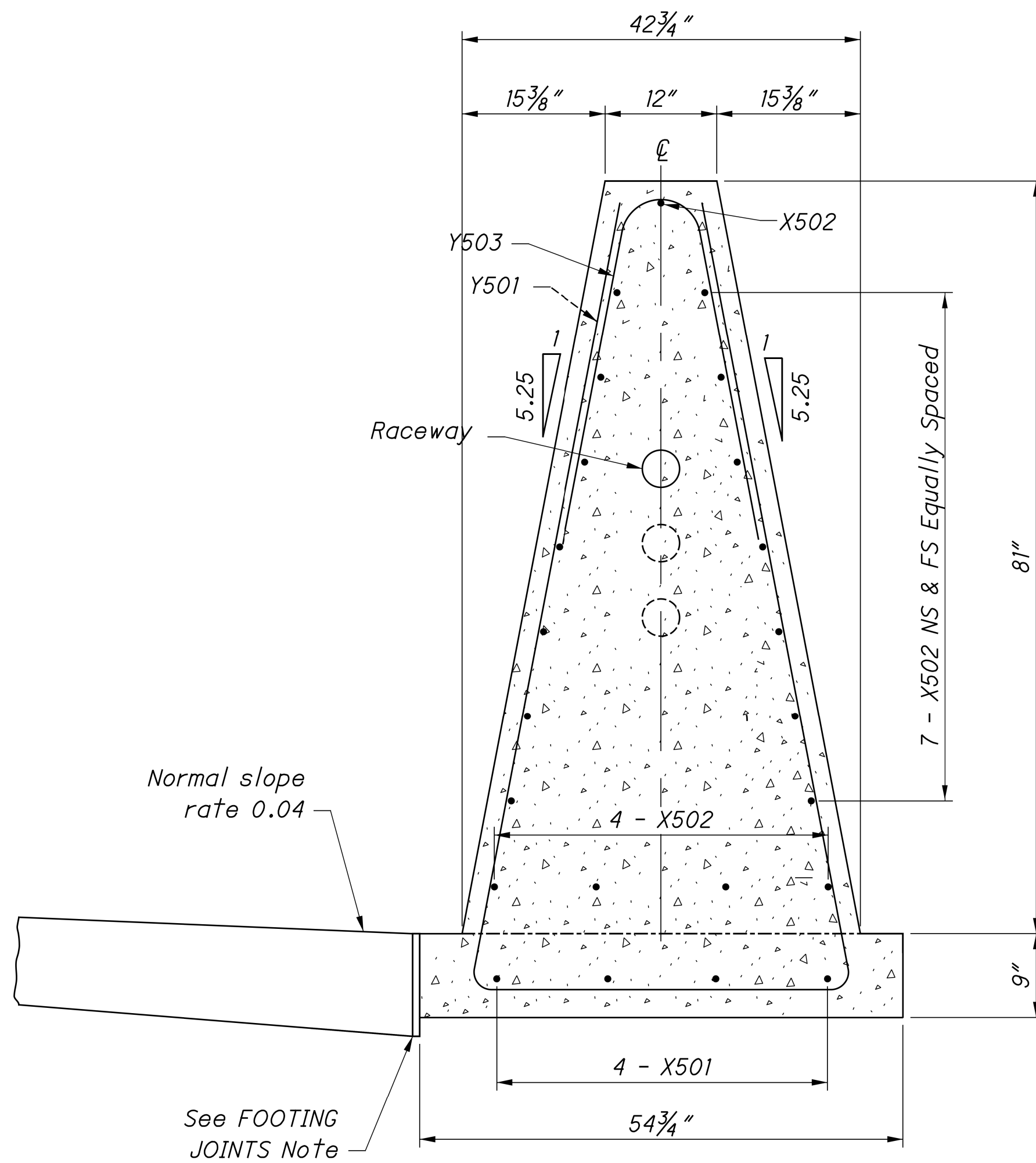
STEEL LIST (For Estimating Purposes Only)											
X501		X502		X503		Y501		Y502		Y503	
#5 Bar		#5 Bar		#5 Bar		#5 Bar		#5 Bar		#5 Bar	
Straight		Straight		Straight		Bent		Bent		Bent	
No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length
4	19'-8"	19	19'-6"	5	4'-0"	8	17'-6"	5	15'-4"	13	5'-2"



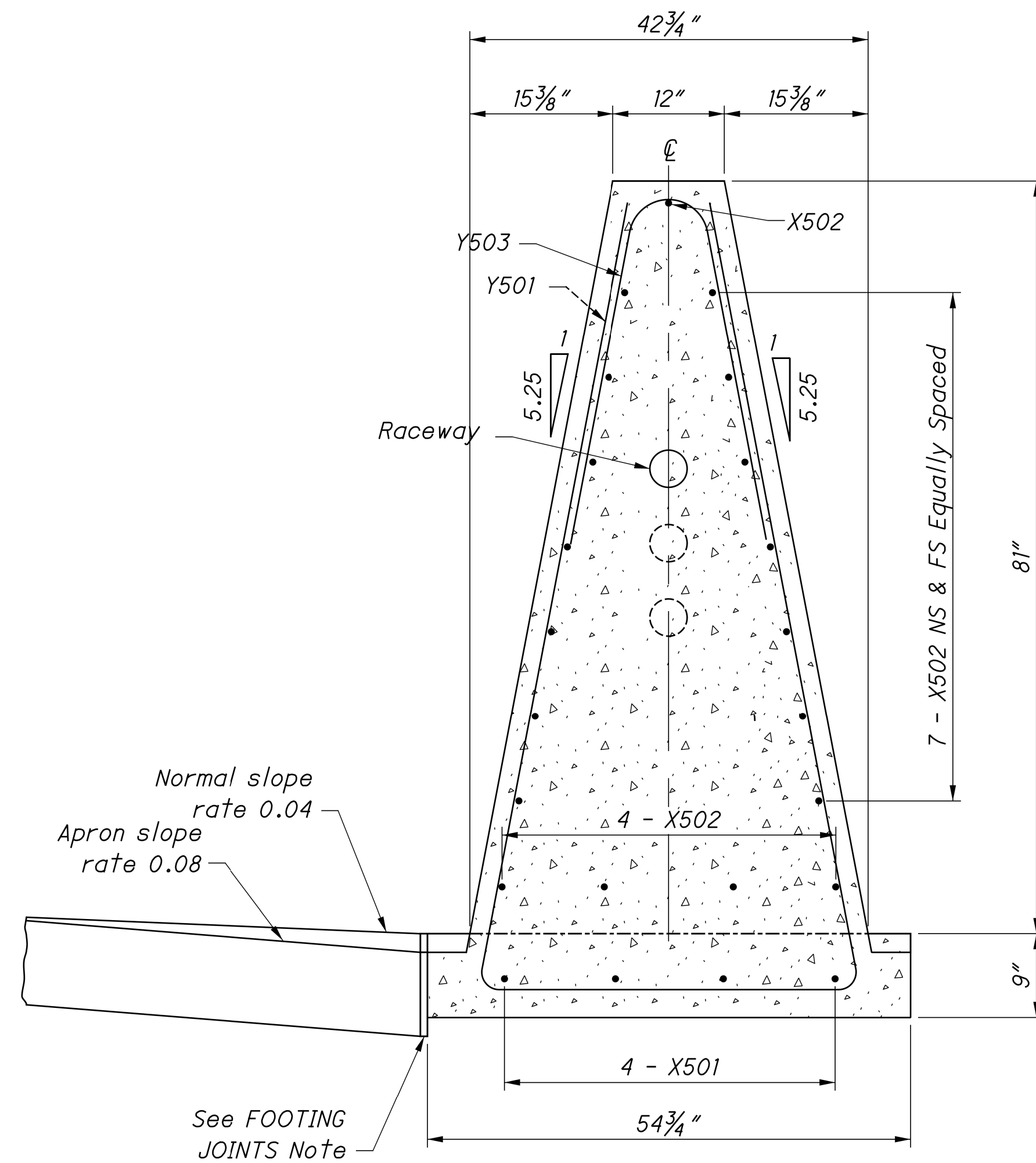
BENDING DIAGRAMS

NOTES

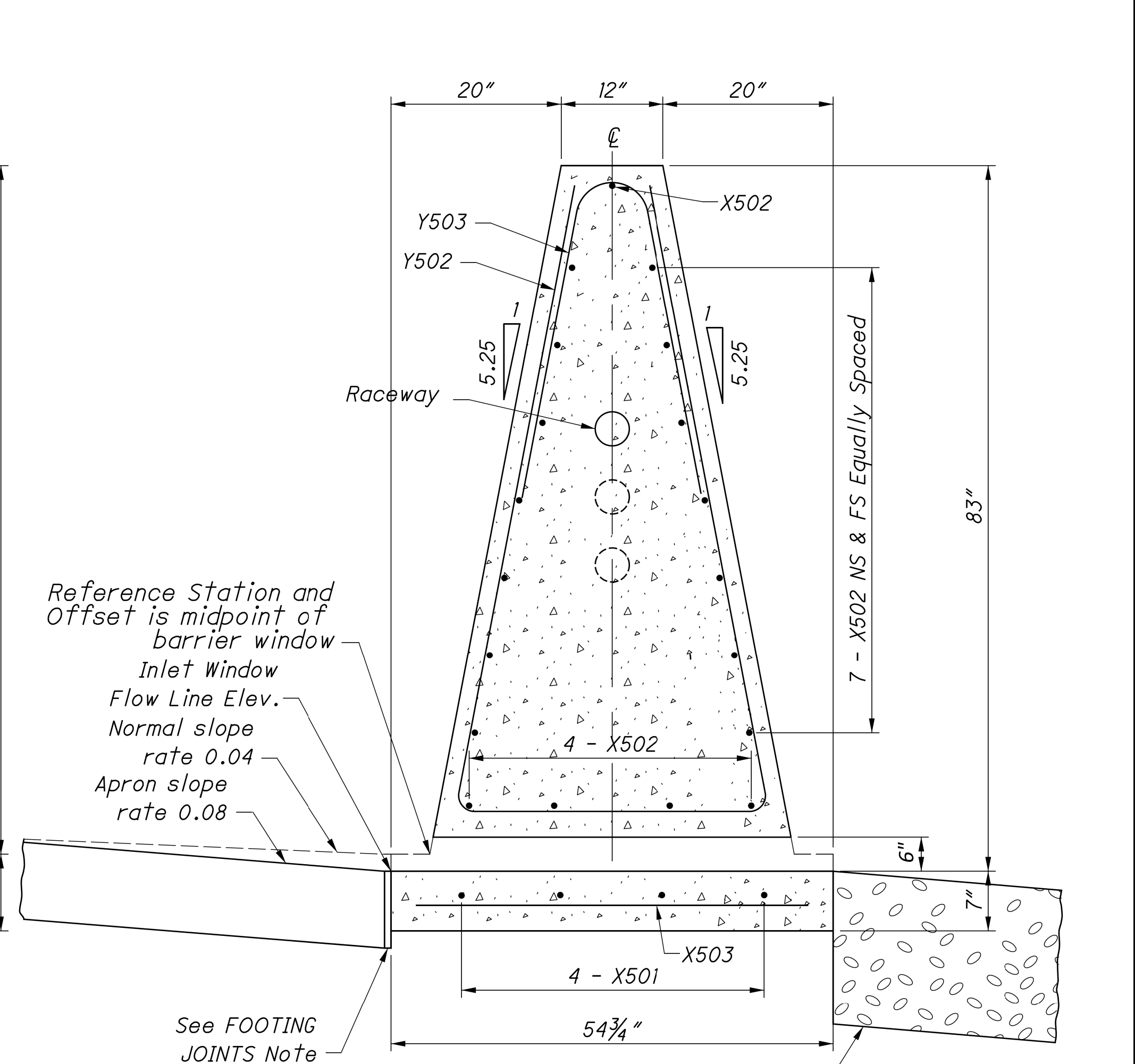
- For additional notes and details, see SCD I-3B.
 - For location of sections A-A, B-B & C-C, see sheet P.226.
 - Reinforcing Steel: Provide epoxy coated reinforcing steel in accordance with CMS 509.09.
- FOOTING JOINTS:** Provide a sealed joint with the vertical walls between the barrier footing and a concrete pavement or concrete base as detailed on SCD RM-4.3.



SECTION B-B



SECTION C-C

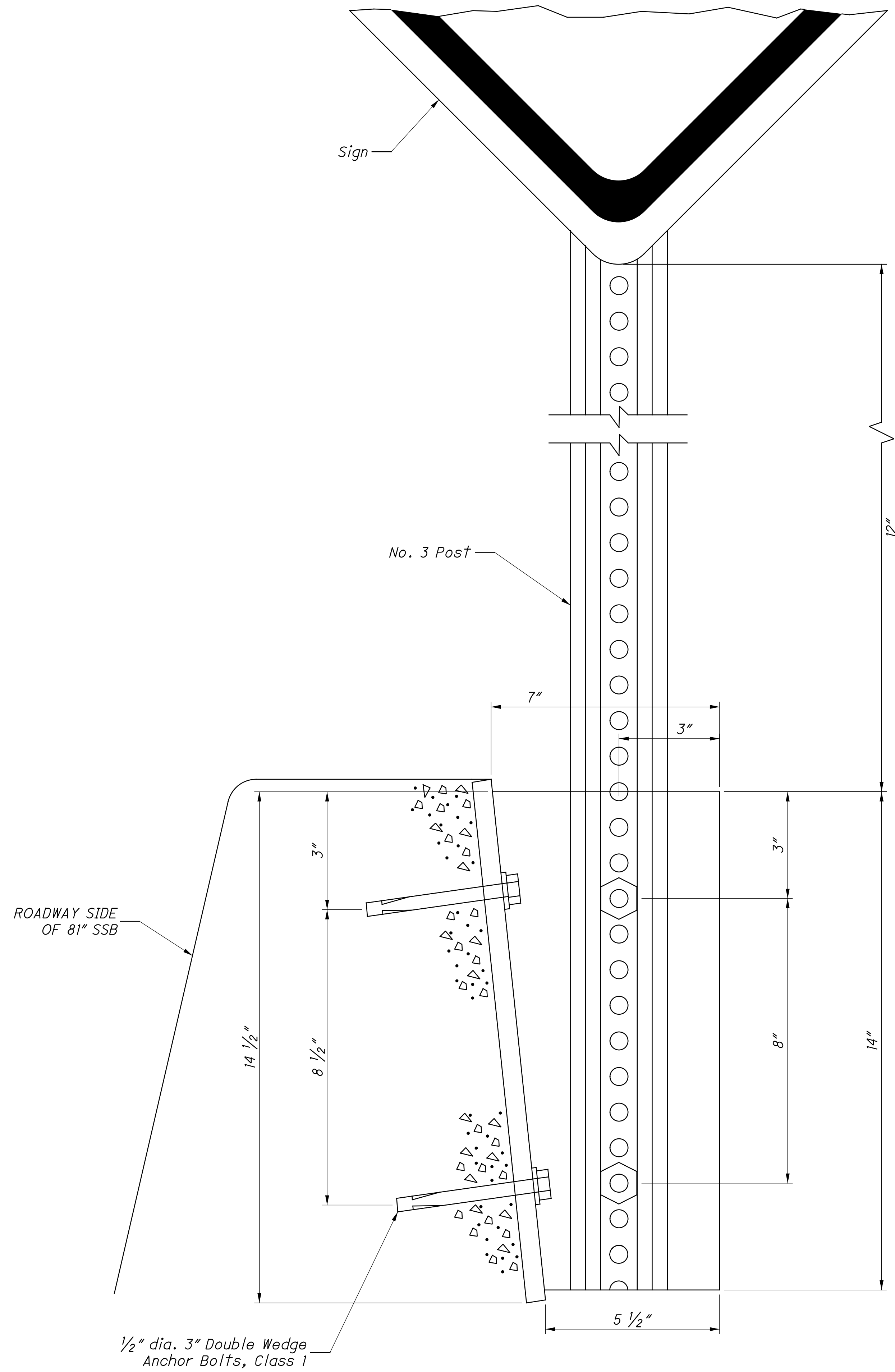
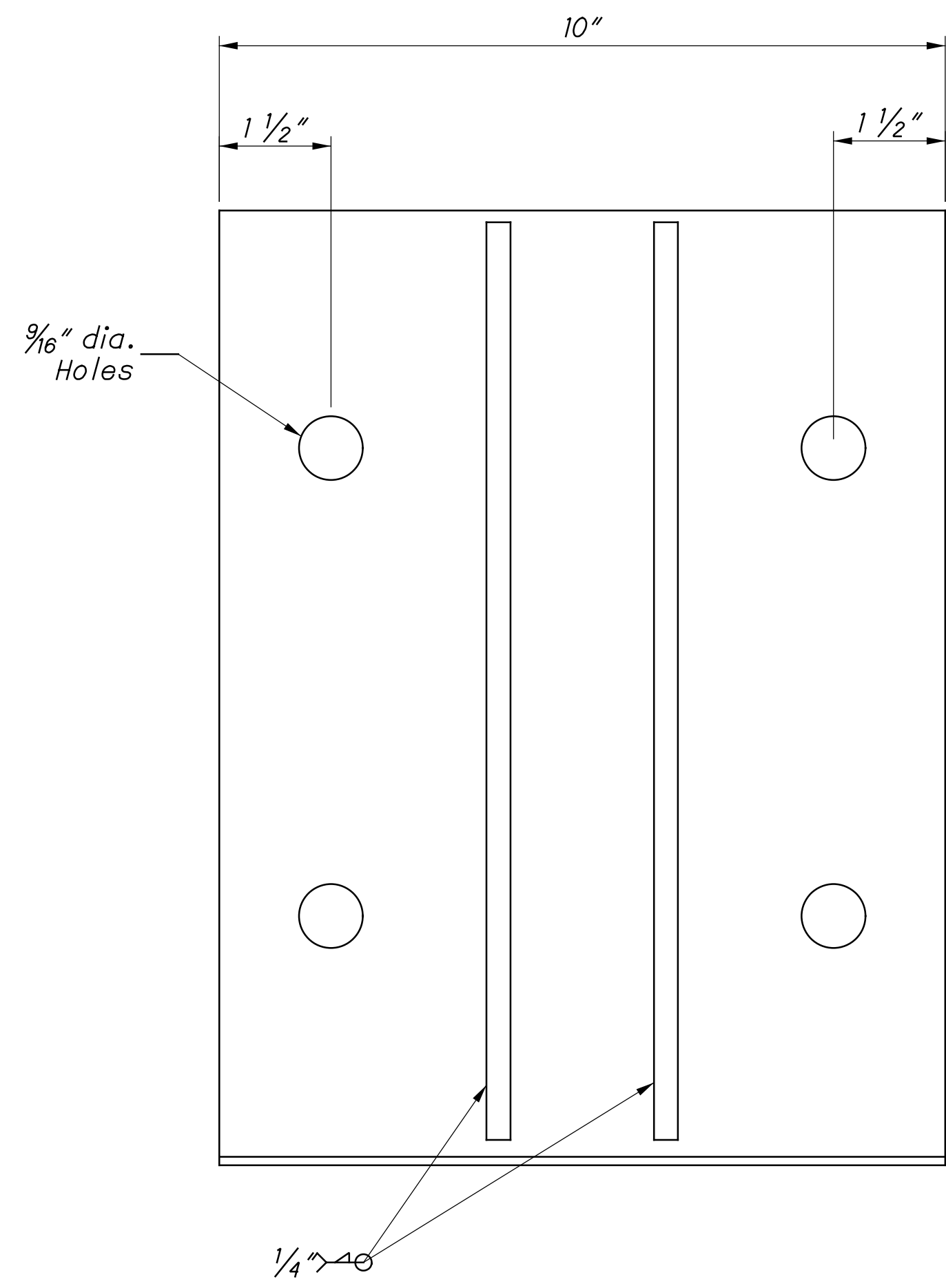
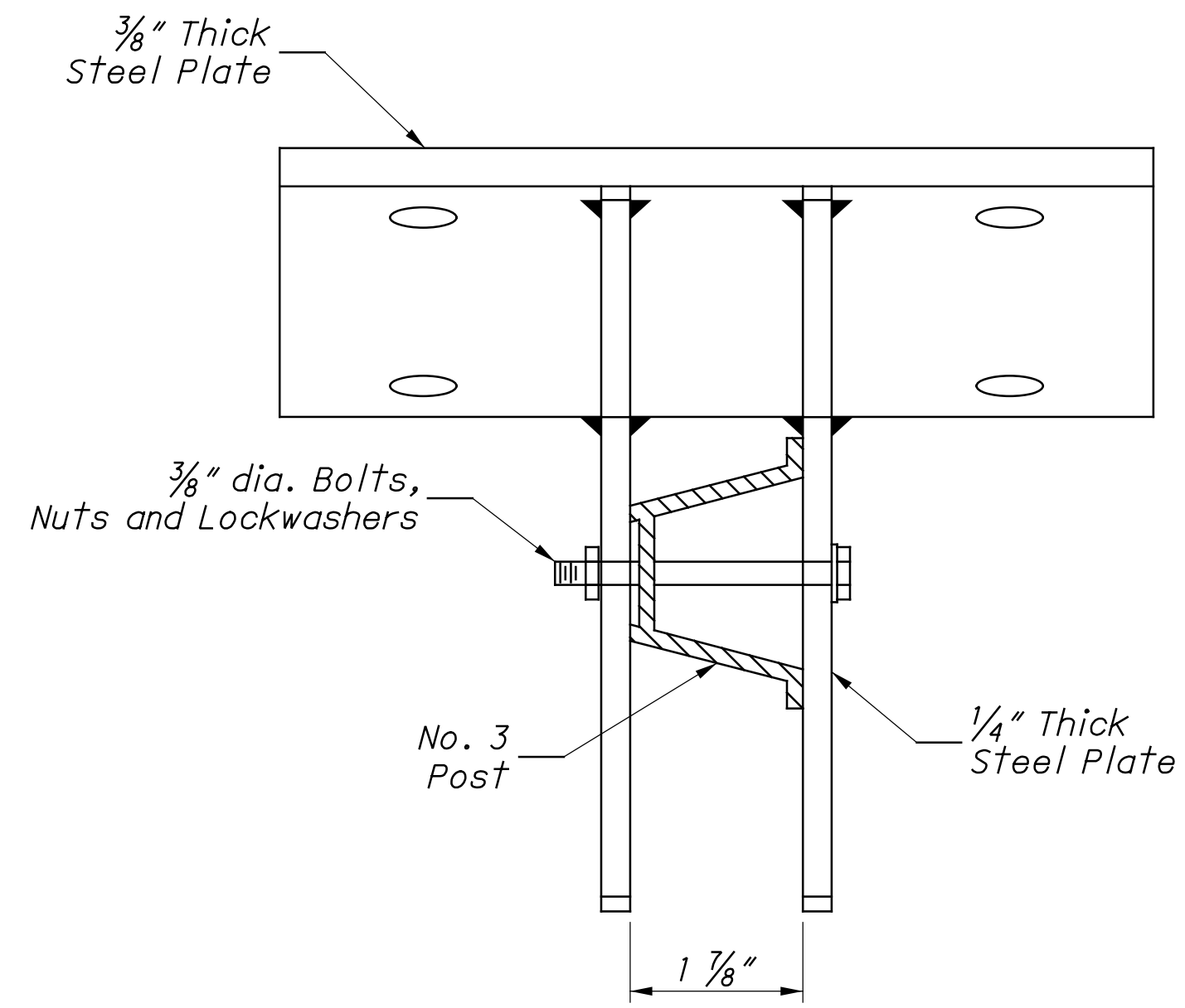


SECTION D-D

Reference Station and Offset is midpoint of barrier window
 Inlet Window
 Flow Line Elev.
 Normal slope rate 0.04
 Apron slope rate 0.08

FRA-161-15.80 NOISE WALLS

MODEL: Sheet_SurvFl_PAPER SIZE: 34x22 (in.) DATE: 2024-03-22 TIME: 8:56:05 PM USER: jennifer.kelley
 p:\arcadis-us-pw\entlery.com\arcadis-us-01\Documents\01 Active Projects\143720400_CAD\400-Engineering\Roadway\Sheets\117607_GR009.dgn



NOTES:

1. Unit shall be galvanized after fabrication.

THIS DRAWING REPLACES PIS 202022 DATED 11-27-2006.

DESIGN AGENCY	
8101 NORTH HIGGINS SITE 100 COLUMBIA, MO 65203 616.448.4900 www.arcadis.com	
DESIGNER	
JMK	
REVIEWER	
JDH 03-27-24	
PROJECT ID	
117607	
SHEET	TOTAL
P.229	P.295

CONCRETE MEDIAN BARRIER SIGN BRACKET, AS PER PLAN (PIS-202022)

PROJECT DESCRIPTION

THE PROJECT CONSISTS OF THE CONSTRUCTION OF EIGHT (8) NEW NOISE WALLS ALONG SR 161 BETWEEN ULRU ROAD NAD US 62 IN FRANKLIN COUNTY, OHIO. BASED ON THE AVAILABLE PROJECT INFORMATION, IT IS UNDERSTOOD THAT THE WALLS WILL RANGE FROM 497 TO 2,226 FEET IN LENGTH AND WILL BE 14 FEET HIGH. NOISE WALLS 3, 6, 8, 9, 11, 12 AND 15, AS DESIGNATED AND SHOWN ON THE PROJECT DOCUMENTS, ARE INCLUDED AS PART OF THIS INVESTIGATION.

HISTORIC RECORDS

HISTORIC GEOTECHNICAL RECORDS WERE OBTAINED FROM ODOT'S TRANSPORTATION INFORMATION MAPPING SYTEM (TIMS). RESULTS OF THESE EXPLORATIONS INDICATED THAT PREDOMINANTLY EXISTING COHESIVE AND GRANULAR SOILS ARE PRESENT BELOW THE EXISTING GROUND SURFACE, AND ARE UNDERLAIN BY AND SHALE BEDROCK. THESE RESULTS WERE NOT UTILIZED DURING THE CURRENT DESIGN

GEOLOGY

PHYSIOGRAPHICALLY, THE PROJECT SITE FALLS WITHIN GALION GLACIATED LOW PLATEAU. THIS REGION IS CHARACTERIZED BY ROLLING UPLANDS WHICH ARE TRANSITIONAL BETWEEN THE GENTLY ROLLING TILL PLAINS AND HILL GLACIATED ALLEGHENY PLATEAU. THE SOILS CONSIST OF THIN TO THICK DRIFT WITH MODERATE RELIEF.

BASED ON BEDROCK GEOLOGY AND TOPOGRAPHY MAPS OF THE AREA FROM THE OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR), THE UNDERLYING BEDROCK BENEATH THE SITE IS MISSISSIPPIAN-AGE SHALES AND SANDSTONES THE BEDROCK SURFACE IN THE VICINITY OF THE SITE RANGES BETWEEN APPROXIMATELY 5 TO 25 FEET BELOW THE EXISTING SURFACE GRADE.

RECONNAISSANCE

FIELD RECONNAISSANCE WAS COMPLETED BY PERSONNELL FROM RESOURCE INTERNATIONAL, INC (RII) BETWEEN OCTBER 18 AND NOVEMBER 15, 2023. THE PROJECT SITE IS LOCATED ALONG SR 161 IN FRANKLIN COUNTY, OHIO. THE PROJECT SITE EXTENDS FROM URLU ROAD TO APPROXIMATELY 0.3 MILES WEST OF US 62. SR 161 WITHIN THE PROJECT LIMITS IS A BIDIRECTIONAL, DIVIDED, ASPHALT PAVED ROADWAY WITH TWO LANES IN EACH DIRECTION. ALONG THE PROJECT ALIGNMENT, THE LAND USE SURROUNDING SR 161 IS PRIMARILY RESIDENTIAL WITH SOME COMMERCIAL AND/OR INDUSTRIAL PURPOSE. SURFACE DRAINAGE APPEARS TO BE COLLECTED IN THE DRAINAGE DITCHES ALONG THE MAJORITY OF THE ROADWAY ALIGNMENT.

SUBSURFACE EXPLORATION

BETWEEN OCTOBER 23 AND DECEMBER 5, 2023, A TOTAL OF FIFTY-THREE (53) BORINGS, DESIGNATED AS B-001-0-23 THROUGH B-053-0-23, WERE PERFORMED AS PART OF THE SUBSURFACE EXPLORATION. THE BORINGS WERE DRILLED AND SAMPLED WITH DIEDRICH D50 TRACK MOUNTED DRILL RIG UTILIZING 3.25-INCH HOLLOW STEM AUGERS TO ADVANCE THE HOLES. STANDARD PENETRATION TESTING (SPT) AND SPLIT SPOON SAMPLING WERE PERFORMED AT 2.5-FOOT INTERVALS IN ALL BORINGS EITHER TO THE BORING TERMINATION DEPTHS OR TO AUGER REFUSAL ON BEDROCK. THE HAMMER UTILIZED IN DIEDRICH D50 TRACK RIG WAS CALIBRATED ON MARCH 21, 2022 AND HAD AN ENERGY RATIO OF 86.4 PERCENT.

THE DEPTH TO BEDROCK WAS DETERMINED BY SPLIT SPOON SAMPLER REFUSAL AND/OR AUGER REFUSAL ON BEDROCK. WHERE THE BORINGS WERE EXTENDED INTO THE BEDROCK, AN NQ2 SIZED, DOUBLE TUBE, DIAMOND BIT CORE BARREL (UTILIZING WIRE LINE EQUIPMENT) WAS USED TO CORE THE BEDROCK. THE ROCK CORES OBTAINED FROM THE BORINGS WERE LOGGED IN THE FIELD AND VISUALLY CLASSIFIED IN THE LABORATORY. THE RETRIEVED CORES WERE ANALYZED TO IDENTIFY THE TYPE OF ROCK, COLOR, MINERAL CONTENT, BEDDING PLANES AND OTHER GEOLOGICAL AND MECHANICAL FEATURES OF INTEREST IN THIS PROJECT.

EXPLORATION FINDINGS

THE BORINGS WERE GENERALLY PERFORMED IN THE VICINITY OF THE PROPOSED NOISE WALL ALIGNMENTS. ALL BORINGS, EXCEPT B-038-0-23, ENCOUNTERED TOPSOIL THICKNESSES BETWEEN 1 INCH AND 10 INCHES. BORING B-038-0-23 ENCOUNTERED 3.0 INCHES OF ASPHALT OVERLYING 6.5 INCHES OF CONCRETE OVERLYING 3.5 INCHES OF AGGREGATE BASE.

UNDERLYING THE SURFICIAL SOILS, THE NATURAL SOILS WERE ENCOUNTERED, CONSISTING OF BOTH COHESIVE AND GRANULAR DEPOSITS. THE NATURAL COHESIVE SOILS WERE DESCRIBED AS SANDY SILT, SILT AND CLAY, SILTY CLAY, AND CLAY (ODOT A-4A, A-6A, A-6B, A-7-6). THE SHEAR STRENGTH AND CONSISTENCY OF THE COHESIVE SOILS ARE PRIMARILY DERIVED FROM THE HAND PENETROMETER VALUES (HP). THE COHESIVE SOILS ENCOUNTERED RANGED FROM MEDIUM STIFF (0.5 < HP 1.0 TSF) TO HARD (HP 4.0 TSF). THE UNCONFINED COMPRESSIVE STRENGTH OF THE COHESIVE SOIL SAMPLES TESTED, OBTAINED FROM THE HAND PENETROMETER, RANGED FROM 0.75 TO OVER 4.5 TSF (LIMIT OF THE INSTRUMENT).

THE GRANULAR SOILS WERE DESCRIBED AS GRAVEL, GRAVEL WITH SAND, GRAVEL WITH SAND AND SILT, GRAVEL WITH SAND AND SILT AND CLAY, AND COARSE AND FINE SAND (ODOT A-1-A, A-1B, A-2-4, A-2-6, A-3A). THE RELATIVE DENSITY OF GRANULAR SOILS IS PRIMARILY DERIVED FROM SPT BLOW COUNTS (N₆₀). BASED ON THE SPT BLOW COUNTS OBTAINED, THE GRANULAR SOILS ENCOUNTERED RANGED FROM LOOSE (5 < N₆₀ < 10 BLOWS PER FOOT (BPF)) TO VERY DENSE (N₆₀ > 50 BPF). BLOW COUNTS RECORDED FROM THE SPT SAMPLING WITHIN THE GRANULAR SOIL DEPOSITS RANGED FROM 9 TO 96 BPF.

COBBLES WERE ENCOUNTERED WITHIN THE OVERBURDEN SOILS AT VARIOUS BORING LOCATIONS AT VARYING DEPTHS.

GROUNDWATER SEEPAGE WAS ENCOUNTERED IN THREE (3) OF THE BORINGS AT DEPTHS RANGING FROM 14.0 TO 22.4 FEET BELOW THE GROUND SURFACE. SIGNIFICANT GROUND WATER FLOW WAS ENCOUNTERED DURING DRILLING IN TWENTY-SIX (26) OF THE BORINGS AT DEPTHS RANGING FROM 12.0 TO 21.0 FEET BELOW THE EXISTING GROUND SURFACE. MEASURABLE GROUNDWATER WAS OBSERVED AT THE COMPLETION OF DRILLING IN SEVENTEEN (17) OF THE BORINGS AT DEPTHS RANGING FROM 7.8 TO 20.5 FEET BELOW EXISTING GRADE ""

LEGEND		ODOT CLASS	CLASSIFIED MECH./VISUAL	
DESCRIPTION				
	GRAVEL AND/OR STONE FRAGMENTS	A-1-a	2	4
	GRAVEL AND/OR STONE FRAGMENTS WITH SAND	A-1-b	11	23
	GRAVEL AND/OR STONE FRAGS. WITH SAND & SILT	A-2-4	12	57
	GR. AND/OR ST. FRAGS. WITH SAND, SILT & CLAY	A-2-6	-	2
	COARSE AND FINE SAND	A-3a	1	9
	SANDY SILT	A-4a	18	58
	SILT AND CLAY	A-6a	26	102
	SILTY CLAY	A-6b	12	38
	CLAY	A-7-6	7	9
		TOTAL	89	302
	SANDSTONE	VISUAL		
	SHALE	VISUAL		
	SILTSTONE	VISUAL		
	PAVEMENT OR BASE = X = APPROXIMATE THICKNESS	VISUAL		
	SOD AND TOPSOIL = X = APPROXIMATE THICKNESS	VISUAL		
	BORING LOCATION - PLAN VIEW.			
	DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.			
WC	INDICATES WATER CONTENT IN PERCENT.			
N ₆₀	INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.			
X/Y/Z	NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (SPT): X= NUMBER OF BLOWS FOR FIRST 6 INCHES. Y= NUMBER OF BLOWS FOR SECOND 6 INCHES. Z= NUMBER OF BLOWS FOR THIRD 6 INCHES.			
W	INDICATES FREE WATER ELEVATION.			
●	INDICATES A PLASTIC MATERIAL WITH A MOISTURE CONTENT EQUAL TO OR GREATER THAN THE LIQUID LIMIT MINUS 3.			
⊕	INDICATES A NON-PLASTIC MATERIAL WITH A MOISTURE CONTENT GREATER THAN 25 % OR GREATER THAN 19 % WITH A WET APPEARANCE.			
SS	INDICATES A SPLIT SPOON SAMPLE.			
NP	INDICATES A NON-PLASTIC SAMPLE.			

EXPLORATION FINDINGS (CON'T)

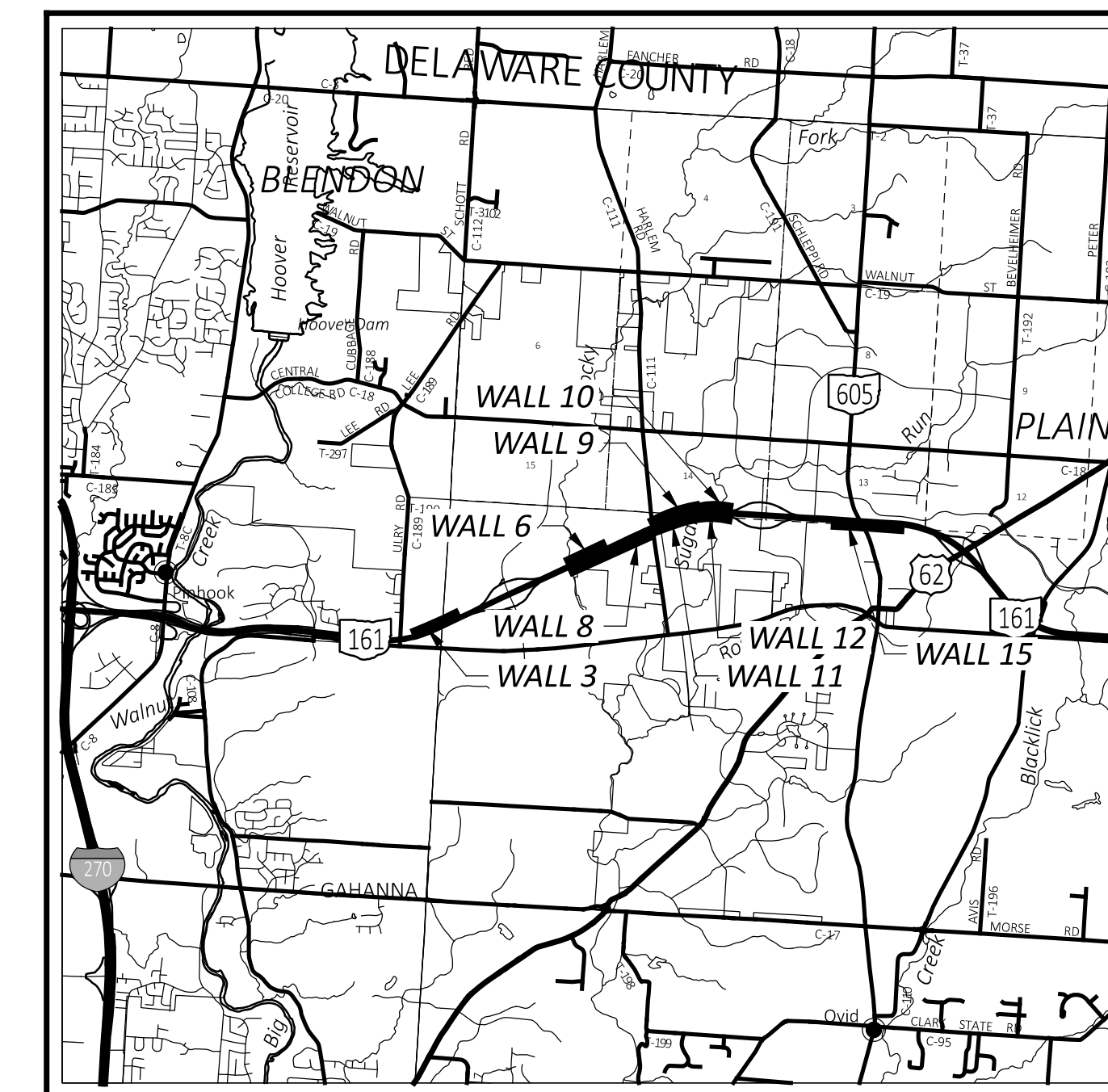
BEDROCK WAS ENCOUNTERED IN BORINGS B-001-0-23 TO B-004-0-23, B-018-0-23, B-024-0-23 B-027-0-23, B-028-0-23, B-038-0-23 TO B-053-0-23 AT DEPTHS RANGING FROM 4.3 TO 23.0 FEET BENEATH THE EXISTING GROUND SURFACE. THE BEDROCK WAS DESCRIBED AS HIGHLY WEATHERED GRAY AND BROWN SANDSTONE, HIGHLY WEATHERED TO SEVERELY WEATHERED GRAY AND BLACK SILTSTONE, AND HIGHLY WEATHERED GRAY SHALESTONE.

SPECIFICATIONS

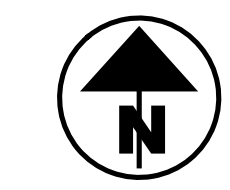
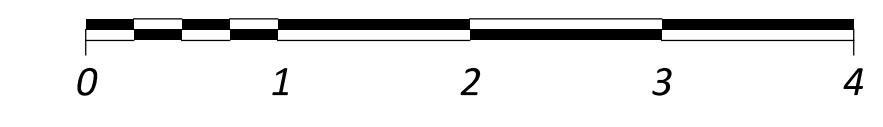
THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JULY 2022.

AVAILABLE INFORMATION

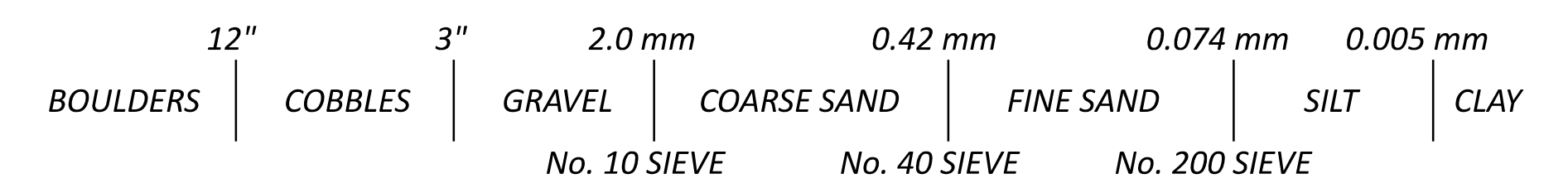
THE SOIL, BEDROCK, AND GROUNDWATER INFORMATION COLLECTED FOR THIS SUBSURFACE EXPLORATION THAT CAN BE CONVENIENTLY DISPLAYED ON THE GEOTECHNICAL PROFILE SHEETS HAS BEEN PRESENTED. GEOTECHNICAL REPORTS, IF PREPARED, ARE AVAILABLE FOR REVIEW ON THE OFFICE OF CONTRACT SALES WEBSITE.



LOCATION MAP
SCALE IN MILES



PARTICLE SIZE DEFINITIONS



INDEX OF SHEETS			
SUMMARY OF SOIL TEST DATA, SHEETS 2 - 5.			
LOCATION FROM STA.	TO STA.	PLAN	PROFILE
CONST. SR 161 NOISE WALL 3			
2130+00	2135+00	6	6
2135+00	2140+00	7	7
NOISE WALL 6			
2192+00	2197+00	8	8
2197+00	2202+00	9	9
NOISE WALL 8			
2192+00	2197+00	10	10
2197+00	2202+00	11	11
2202+00	2207+00	12	12
2207+00	2212+00	13	13
2212+00	2217+00	14	14
NOISE WALL 9			
2217+00	2222+00	15	15
2222+00	2227+00	16	16
2227+00	2232+00	17	17

INDEX OF SHEETS (CON'T)			
LOCATION FROM STA.	TO STA.	PLAN	PROFILE
CONST. SR 161 NOISE WALL 11			
2216+00	2221+00	18	18
2221+00	2226+00	19	19
2226+00	2231+00	20	20
2231+00	2236+00	21	21
NOISE WALL 12			
2239+00	2244+00	22	22
2244+00	2249+00	23	23
NOISE WALL 15			
2286+00	2291+00	24	24
2291+00	2296+00	25	25
2296+00	2301+00	26	26
2301+00	2306+00	27	27
2306+00	2311+00	28	28

BORING LOGS, SHEETS 29 - 66.

BEDROCK TEST SUMMARY					
BORING ID	SAMPLE ELEVATION	SAMPLE DEPTH	UCS	POINT LOAD	LITHOLOGY
			Qu (PSI)	Qu (PSI)	
B-001-0-23	952.3'	14.0'	4400	-	SANDSTONE
B-003-0-23	955.3'	13.8'	6891	-	SANDSTONE
B-023-0-23	955.3' - 953.5'	21.5' - 23.5'	-	856	SHALE
B-039-0-23	971.4' - 966.4'	15.0' - 20.0'	-	57	SHALE
B-043-0-23	1014.0'	21.0'	6208	-	SANDSTONE
B-046-0-23	1017.1'	22.0'	7887	-	SANDSTONE
B-050-0-23	1017.0'	21.0'	8484	-	SANDSTONE
B-051-0-23	1016.9'	21.2'	8429	-	SANDSTONE

DRILLING - TG 10/23 - 12/05/2023
DRAWN - JAS, KSJ 01/18/2023
REVIEWED - DEK 01/18/2023

DESIGN AGENCY

 8350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949
 DESIGNER
JAS
 REVIEWER
DEK 1/19/24
 PROJECT ID
117607
 SUBSET TOTAL
1 66
 SHEET TOTAL
P.230 295



RESOURCE INTERNATIONAL, INC.
Engineering Consultants

6350 Presidential Gateway, 9885 Rockside Road, 4480 Lake Forest Drive
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**Unconfined Compressive Strength
of Intact Rock Core Specimens**
(ASTM D 7012-14)

Project: FRA-161-15.80
Project No.: W-23-107
Date of Testing: 1/8/2024
Test Performed by: KL/EM

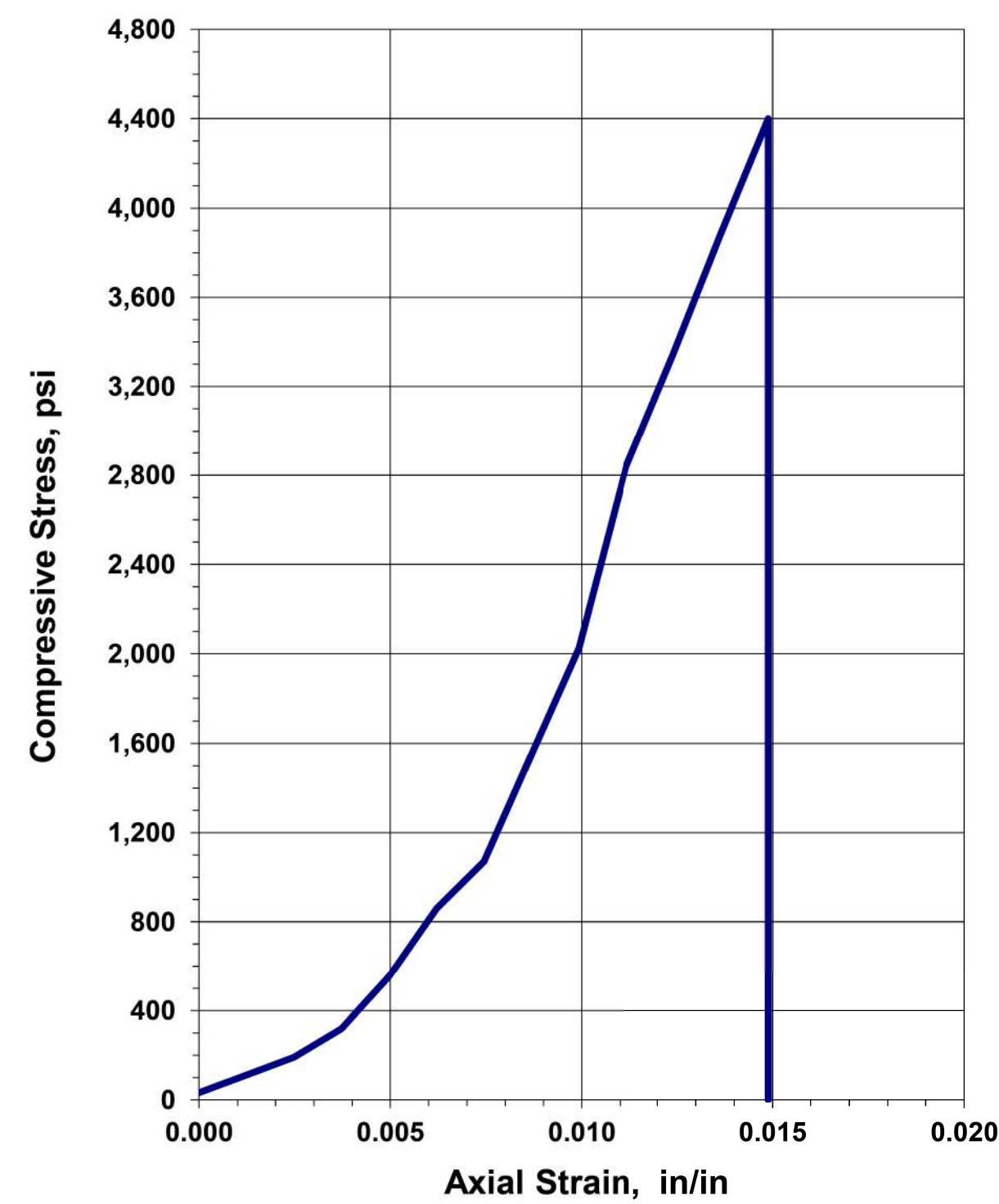
Rock Description: Gray Sandstone
Rock Formation: _____

Boring No.:	<u>B-001-0-23</u>	Average Length:	<u>4.030</u>	in
Sample No.:	<u>RC-2</u>	Average Diameter:	<u>1.993</u>	in
Depth (ft):	<u>14.0'</u>	Length to diameter ratio:	<u>2.022</u>	
Moisture condition:	<u>As received</u>	Cross Sectional Area:	<u>3.120</u>	in ²
Sample Mass:	<u>470.86</u>	Volume:	<u>0.0073</u>	ft ³
Testing Temperature:	<u>23</u>	Unit Weight (sample specimen)*:	<u>142.68</u>	lbs/ft ³
Rate of Loading:	<u>62.1</u>	Failure Load:	<u>13,727</u>	lbs
Testing Time:	<u>221</u>	Axial Strain at Failure:	<u>0.0149</u>	in/in
(Rate 2-15 min)		Compressive Strength:	<u>4,400</u>	psi

Sample Preparation: Per ASTM D4543

*Actual test sample used for unit weight prior to testing.

Unconfined Compression Test



Before Testing



After Failure



REMARKS: _____



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**Unconfined Compressive Strength
of Intact Rock Core Specimens**
(ASTM D 7012-14)

Project: FRA-161-15.80
Project No.: W-23-107
Date of Testing: 1/8/2024
Test Performed by: KL/EM

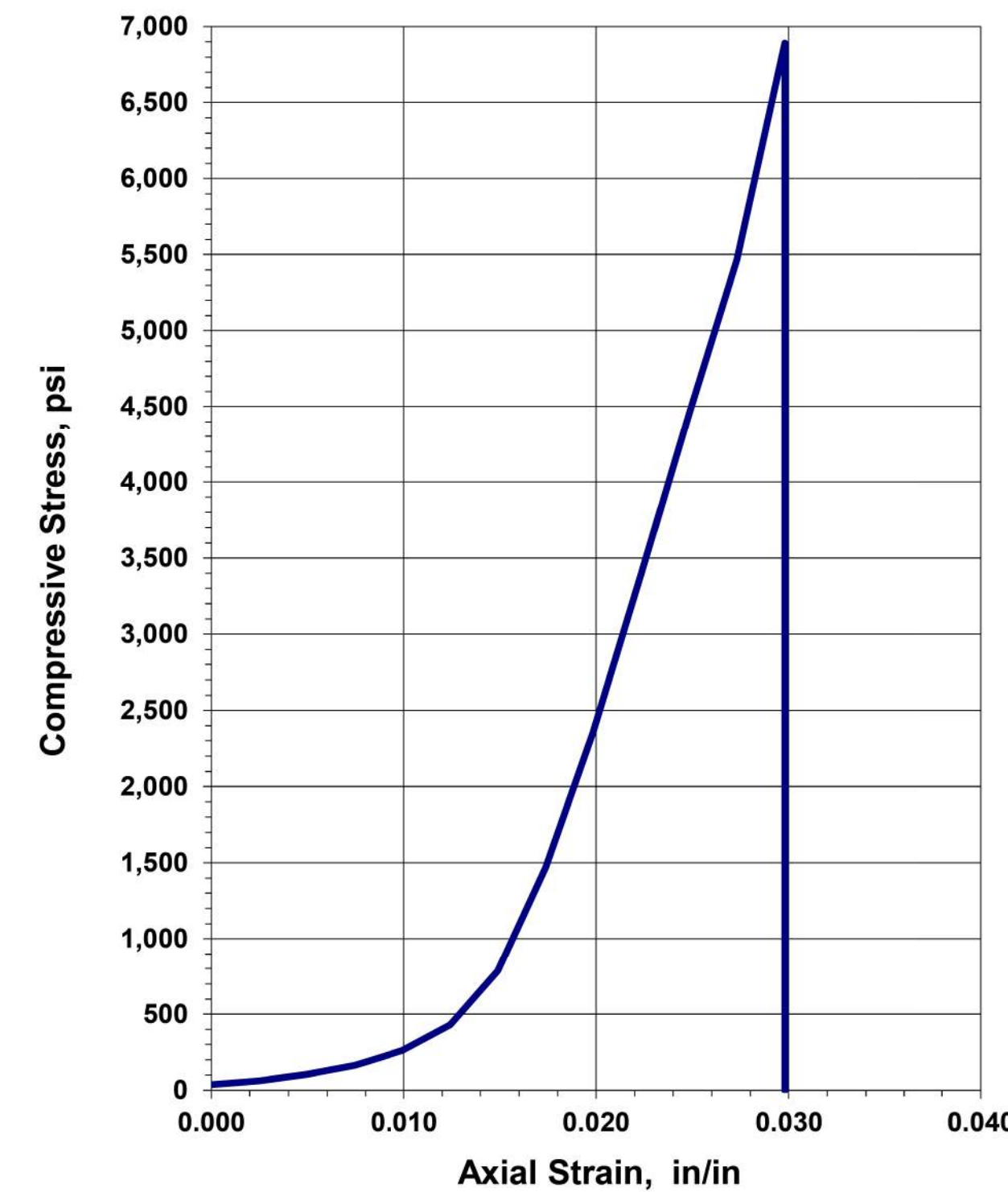
Rock Description: Gray Sandstone
Rock Formation: _____

Boring No.:	<u>B-003-0-23</u>	Average Length:	<u>4.028</u>	in
Sample No.:	<u>RC-2</u>	Average Diameter:	<u>1.995</u>	in
Depth (ft):	<u>13.8'</u>	Length to diameter ratio:	<u>2.019</u>	
Moisture condition:	<u>As received</u>	Cross Sectional Area:	<u>3.126</u>	in ²
Sample Mass:	<u>480.55</u>	Volume:	<u>0.0073</u>	ft ³
Testing Temperature:	<u>23</u>	Unit Weight (sample specimen)*:	<u>145.39</u>	lbs/ft ³
Rate of Loading:	<u>75.1</u>	Failure Load:	<u>21,542</u>	lbs
Testing Time:	<u>287</u>	Axial Strain at Failure:	<u>0.0298</u>	in/in
(Rate 2-15 min)		Compressive Strength:	<u>6,891</u>	psi

Sample Preparation: Per ASTM D4543

*Actual test sample used for unit weight prior to testing.

Unconfined Compression Test



Before Testing



After Failure



REMARKS: _____



DESIGN AGENCY	RESOURCE INTERNATIONAL
DESIGNER	JAS
REVIEWER	DEK
PROJECT ID	117607
SUBSET	2
TOTAL	66
SHEET	P.231
TOTAL	295



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**Unconfined Compressive Strength
of Intact Rock Core Specimens**
(ASTM D 7012-14)

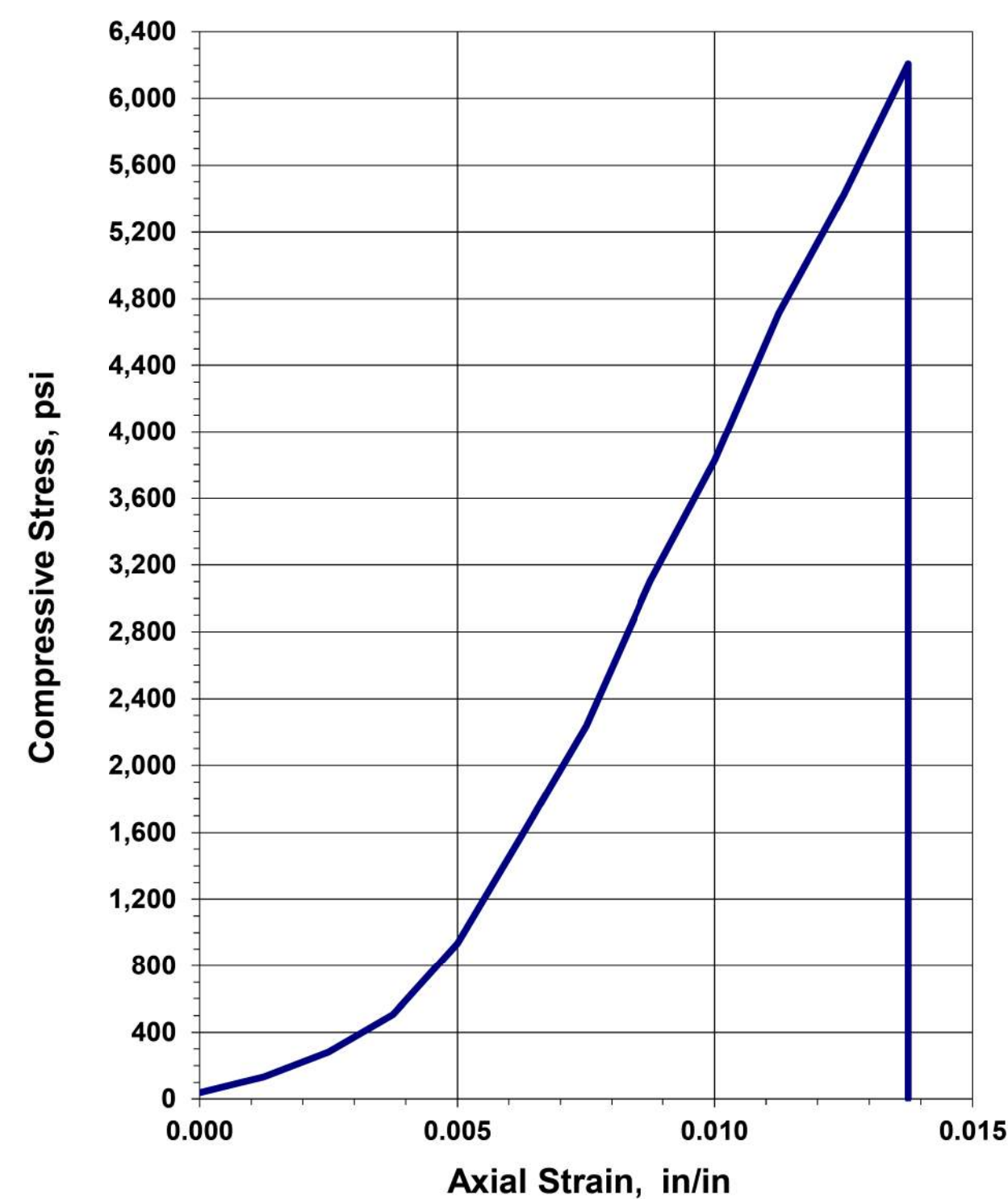
Project: FRA-161-15.80
Project No.: W-23-107
Date of Testing: 1/8/2024
Test Performed by: KL/EM

Rock Description: Gray Sandstone
Rock Formation: _____

Boring No.:	<u>B-043-0-23</u>	Average Length:	<u>4.000</u>	in
Sample No.:	<u>RC-2</u>	Average Diameter:	<u>1.988</u>	in
Depth (ft):	<u>21.00</u>	Length to diameter ratio:	<u>2.012</u>	
Moisture condition:	<u>As received</u>	Cross Sectional Area:	<u>3.104</u>	in ²
Sample Mass:	<u>460.53</u>	Volume:	<u>0.0072</u>	ft ³
Testing Temperature:	<u>23</u>	Unit Weight (sample specimen)*:	<u>141.30</u>	lbs/ft ³
Rate of Loading:	<u>87.2</u>	Failure Load:	<u>19,269</u>	lbs
Testing Time:	<u>221</u>	Axial Strain at Failure:	<u>0.0138</u>	in/in
(Rate 2-15 min)		Compressive Strength:	<u>6,208</u>	psi

Sample Preparation: Per ASTM D4543 *Actual test sample used for unit weight prior to testing.

Unconfined Compression Test



Before Testing



After Failure



REMARKS: _____



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**Unconfined Compressive Strength
of Intact Rock Core Specimens**
(ASTM D 7012-14)

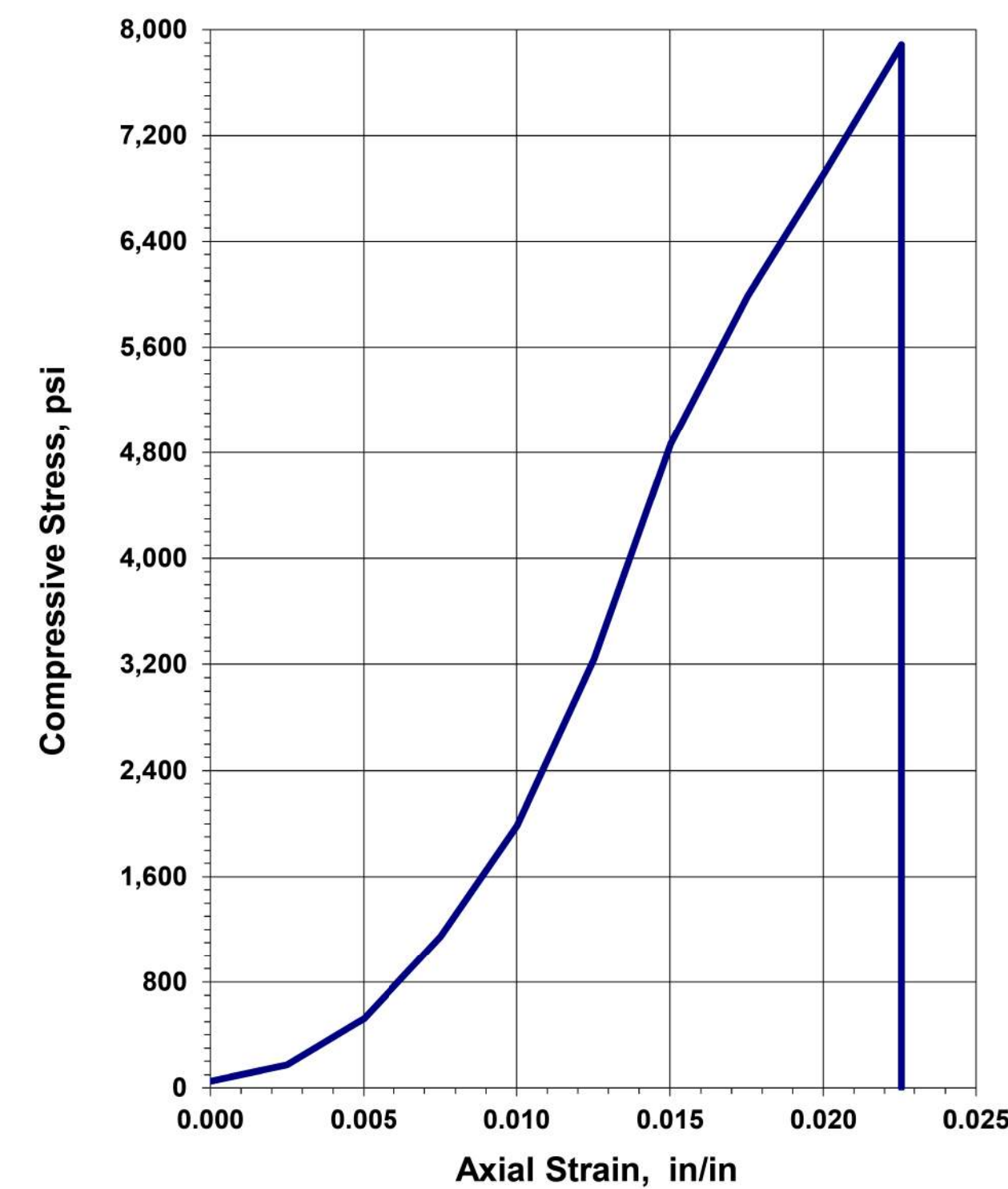
Project: FRA-161-15.80
Project No.: W-23-107
Date of Testing: 1/8/2024
Test Performed by: KL/EM

Rock Description: Gray Sandstone
Rock Formation: _____

Boring No.:	<u>B-046-0-23</u>	Average Length:	<u>3.992</u>	in
Sample No.:	<u>RC-2</u>	Average Diameter:	<u>1.995</u>	in
Depth (ft):	<u>22.0'</u>	Length to diameter ratio:	<u>2.001</u>	
Moisture condition:	<u>As received</u>	Cross Sectional Area:	<u>3.126</u>	in ²
Sample Mass:	<u>519.17</u>	Volume:	<u>0.0072</u>	ft ³
Testing Temperature:	<u>23</u>	Unit Weight (sample specimen)*:	<u>158.49</u>	lbs/ft ³
Rate of Loading:	<u>101.9</u>	Failure Load:	<u>24,655</u>	lbs
Testing Time:	<u>242</u>	Axial Strain at Failure:	<u>0.0225</u>	in/in
(Rate 2-15 min)		Compressive Strength:	<u>7,887</u>	psi

Sample Preparation: Per ASTM D4543 *Actual test sample used for unit weight prior to testing.

Unconfined Compression Test



Before Testing



After Failure



REMARKS: _____



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**Unconfined Compressive Strength
of Intact Rock Core Specimens**
(ASTM D 7012-14)

Project: FRA-161-15.80
Project No.: W-23-107
Date of Testing: 1/8/2024
Test Performed by: KL/EM

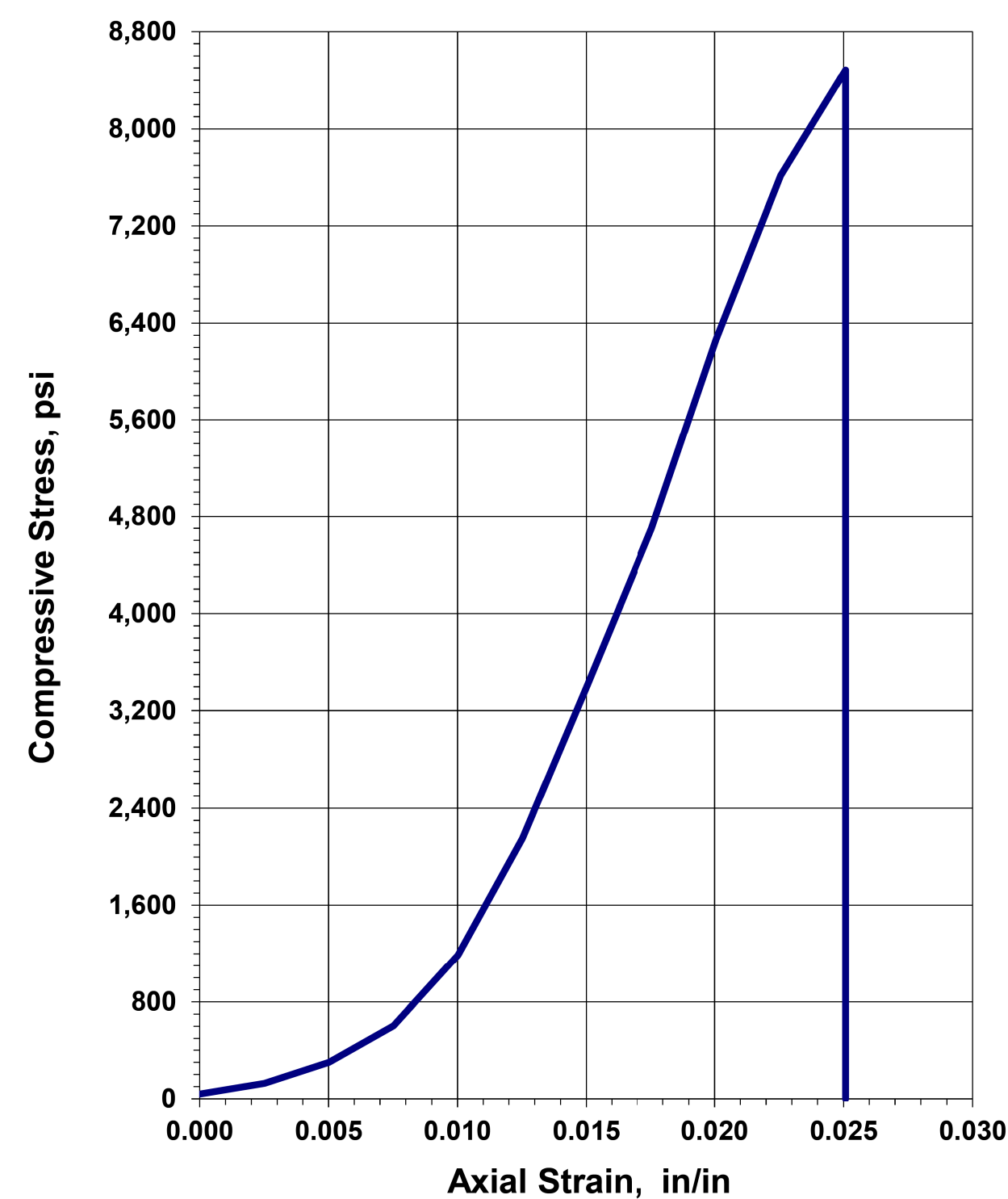
Rock Description: Gray Sandstone
Rock Formation: _____

Boring No.:	<u>B-050-0-23</u>	Average Length:	<u>3.988</u>	in	
Sample No.:	<u>RC-2</u>	Average Diameter:	<u>1.985</u>	in	
Depth (ft):	<u>21.0'</u> feet	Length to diameter ratio:	<u>2.009</u>		
Moisture condition:	<u>As received</u>	Cross Sectional Area:	<u>3.095</u>	in ²	
Sample Mass:	<u>455.36</u>	grams	Volume:	<u>0.0071</u>	ft ³
Testing Temperature:	<u>23</u>	°C	Unit Weight (sample specimen)*:	<u>140.56</u>	lbs/ft ³
Rate of Loading:	<u>108.5</u>	lbs/sec	Failure Load:	<u>26,255</u>	lbs
Testing Time:	<u>242</u>	sec	Axial Strain at Failure:	<u>0.0251</u>	in/in
(Rate 2-15 min)			Compressive Strength:	<u>8,484</u>	psi

Sample Preparation: Per ASTM D4543

*Actual test sample used for unit weight prior to testing.

Unconfined Compression Test



Before Testing



After Failure



REMARKS: _____



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**Unconfined Compressive Strength
of Intact Rock Core Specimens**
(ASTM D 7012-14)

Project: FRA-161-15.80
Project No.: W-23-107
Date of Testing: 1/8/2024
Test Performed by: KL/EM

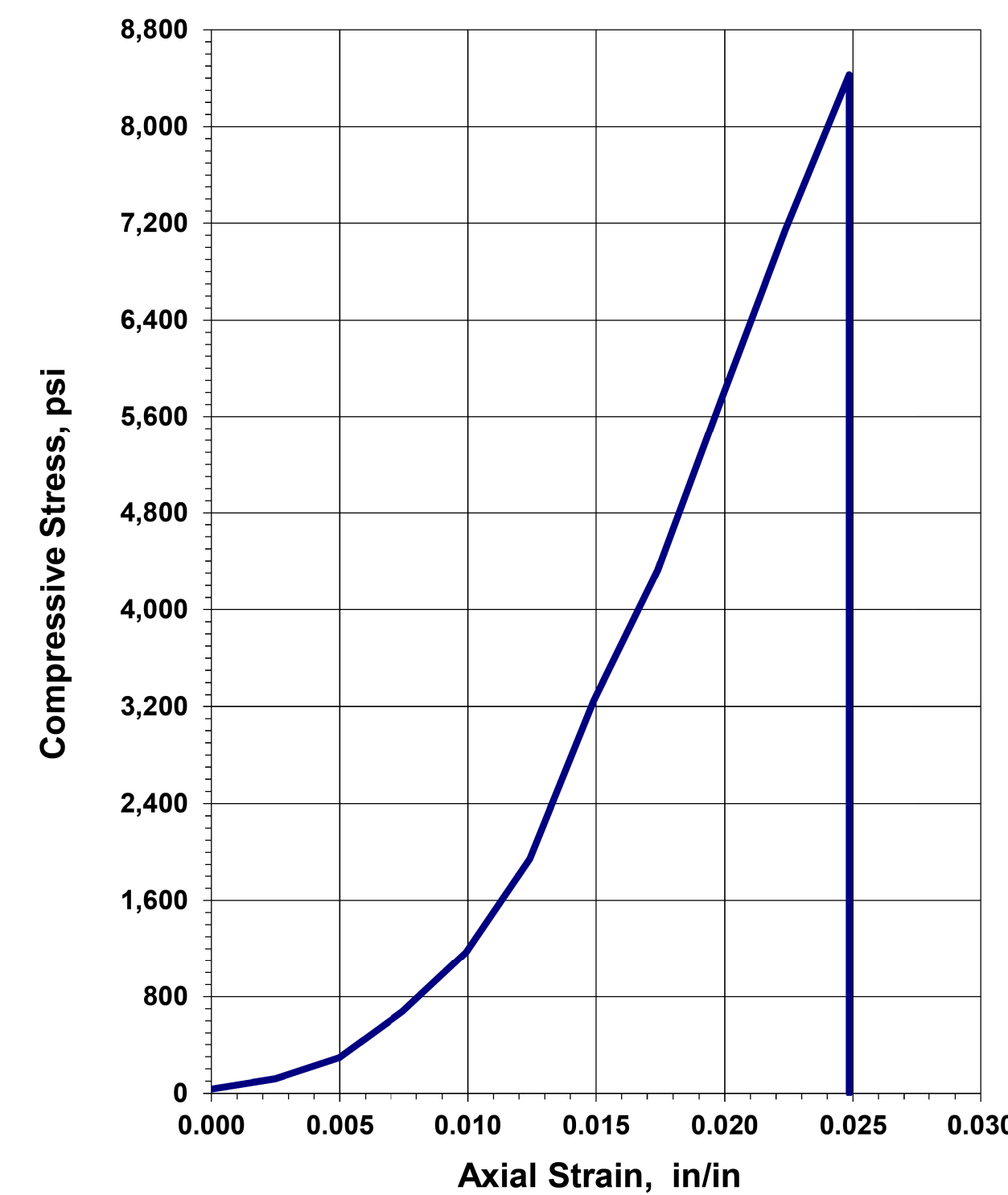
Rock Description: Gray Sandstone
Rock Formation: _____

Boring No.:	<u>B-052-0-23</u>	Average Length:	<u>4.024</u>	in	
Sample No.:	<u>RC-2</u>	Average Diameter:	<u>1.993</u>	in	
Depth (ft):	<u>21.20'</u> feet	Length to diameter ratio:	<u>2.019</u>		
Moisture condition:	<u>As received</u>	Cross Sectional Area:	<u>3.120</u>	in ²	
Sample Mass:	<u>505.98</u>	grams	Volume:	<u>0.0073</u>	ft ³
Testing Temperature:	<u>23</u>	°C	Unit Weight (sample specimen)*:	<u>153.55</u>	lbs/ft ³
Rate of Loading:	<u>112.4</u>	lbs/sec	Failure Load:	<u>26,295</u>	lbs
Testing Time:	<u>234</u>	sec	Axial Strain at Failure:	<u>0.0249</u>	in/in
(Rate 2-15 min)			Compressive Strength:	<u>8,429</u>	psi

Sample Preparation: Per ASTM D4543

*Actual test sample used for unit weight prior to testing.

Unconfined Compression Test



Before Testing



After Failure



REMARKS: _____

GEOTECHNICAL PROFILE - NOISE WALLS
 NOISE WALL 15
 LABORATORY TEST DATA - UNCONFINED COMPRESSIVE STRENGTH OF INTACT ROCK

DESIGN AGENCY

 6350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949
 DESIGNER
JAS
 REVIEWER
DEK 1/19/24
 PROJECT ID
117607
 SUBSET TOTAL
 4 | 66
 SHEET TOTAL
 P.233 | 295



RESOURCE INTERNATIONAL, INC.
Engineering Consultants

6350 Presidential Gateway,
Columbus, OH 43231
Phone (614) 823-4949

9885 Rockside Road
Cleveland, OH 44125
Phone (216) 573-0955

4480 Lake Forest Drive
Cincinnati, Ohio 45242
Phone (513) 769-6998

**Point Load Strength Index
of Rock Specimens**
(ASTM D 5731-08)

Project: FRA-161-15.80
Project No.: W-23-107
Date of Testing: 1/8/2024
Test Performed by: EMIKL

Rock Description: Gray Shale

Boring No.: B-23-0-23

Station / Offset: RC-3

Sample No. / Depth: 21.5'-23.5'

Test Apparatus: Forney-LA 0080

Serial Number: A125/AZ/0014

Date of Calibration: 4/25/2023

Sample No.	Test Type	Depth (ft)	Width (mm)	Diameter (mm)	Load (N)	D _e ² (mm ²)	D _e (mm)	F	Is (MPa)	Is ₍₅₀₎ (MPa)	σ _c (MPa)
1	a ⊥	21.5-23.5	49.7	21.1	503	1,336	36.5	0.87	0.38	0.33	4.52
2	a ⊥	21.5-23.5	49.6	25.8	783	1,631	40.4	0.91	0.48	0.44	5.76
3	a ⊥	21.5-23.5	49.7	23.1	525	1,463	38.3	0.89	0.36	0.32	4.31
4	a ⊥	21.5-23.5	49.7	28.5	814	1,802	42.5	0.93	0.45	0.42	5.42
5	a ⊥	21.5-23.5	49.7	30.0	854	1,895	43.5	0.94	0.45	0.42	5.41
6	a ⊥	21.5-23.5	49.7	25.1	916	1,589	39.9	0.90	0.58	0.52	6.92
7	a ⊥	21.5-23.5	49.7	24.6	816	1,555	39.4	0.90	0.52	0.47	6.30
8	a ⊥	21.5-23.5	49.7	22.6	798	1,429	37.8	0.88	0.56	0.49	6.70
9	a ⊥	21.5-23.5	49.7	21.5	789	1,361	36.9	0.87	0.58	0.51	6.96
10	a ⊥	21.5-23.5	49.7	22.5	801	1,427	37.8	0.88	0.56	0.49	6.73

STATISTICS

Mean Is ₍₅₀₎ ⊥	0.44 MPa (64 psi)
Mean Is ₍₅₀₎	
Ia ₍₅₀₎	

Specific Specimen Shape:

d = diametrical

a = axial

b = block

i = irregular lump

⊥ = perpendicular to bedding plane

|| = parallel to bedding plane

Estimated Uniaxial Compression, σ_c = K*Is

K = 12

Mean σ_c = 5.90 MPa (0.856 psi)

*Per Section 206.1.3 of 2011 ODOT Rock Slope Design Guide

Remarks:

1



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4480 Lake Forest Drive
Cincinnati, Ohio 45242
Phone (513) 769-6998

**Point Load Strength Index
of Rock Specimens**
(ASTM D 5731-08)

Project: FRA-161-15.80
Project No.: W-23-107
Date of Testing: 1/8/2024
Test Performed by: EMIKL

Rock Description: Gray Shale

Boring No.: B-39-0-23

Station / Offset: RC-2

Sample No. / Depth: 15.0-20.0

Test Apparatus: Forney-LA 0080

Serial Number: A125/AZ/0014

Date of Calibration: 4/25/2023

Sample No.	Test Type	Depth (ft)	Width (mm)	Diameter (mm)	Load (N)	D _e ² (mm ²)	D _e (mm)	F	Is (MPa)	Is ₍₅₀₎ (MPa)	σ _c (MPa)
1	a ⊥	17.5-18.5	49.9	21.7	50	1,381	37.2	0.88	0.04	0.03	0.43
2	a ⊥	17.5-18.5	49.5	24.4	45	1,539	39.2	0.90	0.03	0.03	0.35
3	a ⊥	17.5-18.5	50.5	20.4	40	1,309	36.2	0.86	0.03	0.03	0.37
4	a ⊥	17.5-18.5	50.6	23.9	48	1,538	39.2	0.90	0.03	0.03	0.37
5	a ⊥	17.5-18.5	50.6	22.3	49	1,440	38.0	0.88	0.03	0.03	0.41
6	a ⊥	17.5-18.5	50.6	21.1	49	1,362	36.9	0.87	0.04	0.03	0.43
7	a ⊥	17.5-18.5	50.6	22.6	53	1,455	38.1	0.89	0.04	0.03	0.44
8	a ⊥	17.5-18.5	50.6	22.6	48	1,456	38.2	0.89	0.03	0.03	0.40
9	a ⊥	17.5-18.5	50.6	35.0	51	2,255	47.5	0.98	0.02	0.02	0.27
10	a ⊥	17.5-18.5	50.6	22.2	52	1,429	37.8	0.88	0.04	0.03	0.44

STATISTICS

Mean Is ₍₅₀₎ ⊥	0.03 MPa (4 psi)
Mean Is ₍₅₀₎	
Ia ₍₅₀₎	

Specific Specimen Shape:

d = diametrical

a = axial

b = block

i = irregular lump

⊥ = perpendicular to bedding plane

|| = parallel to bedding plane

Estimated Uniaxial Compression, σ_c = K*Is

K = 12

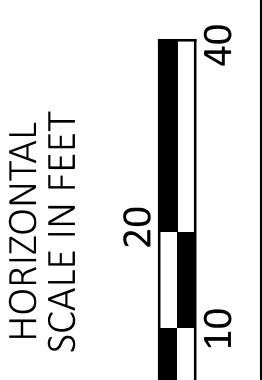
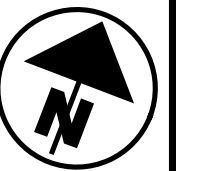
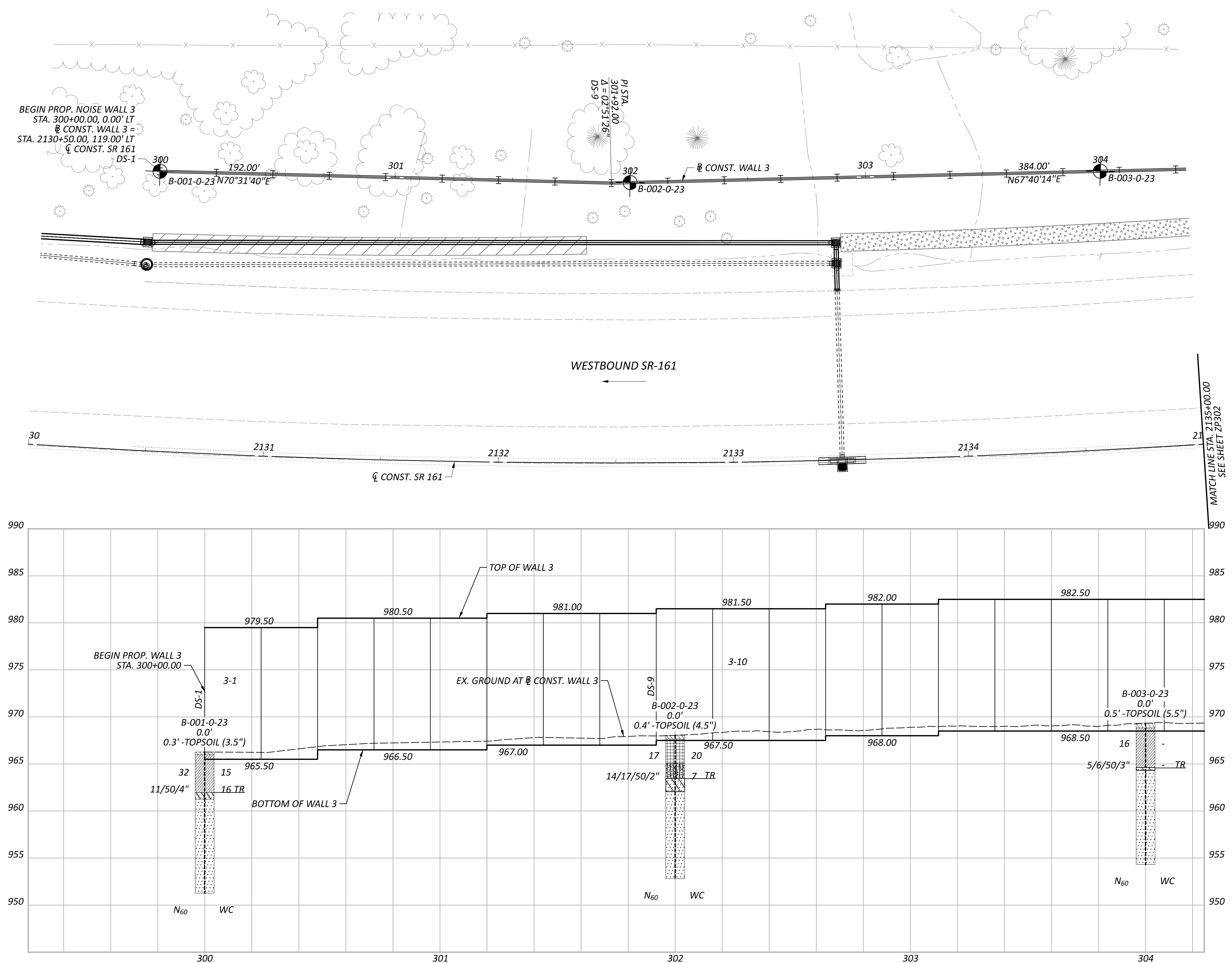
Mean σ_c = 0.39 MPa (0.057 psi)

*Per Section 206.1.3 of 2011 ODOT Rock Slope Design Guide

Remarks:

FRA-161-15.80 NOISE WALLS

MODEL: Wall 3 - Plan 2 PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 3:51:47 PM USER: juans
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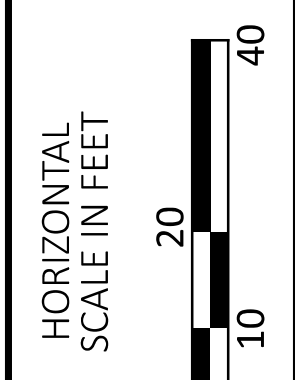
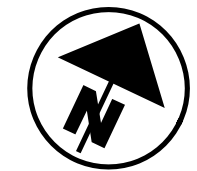
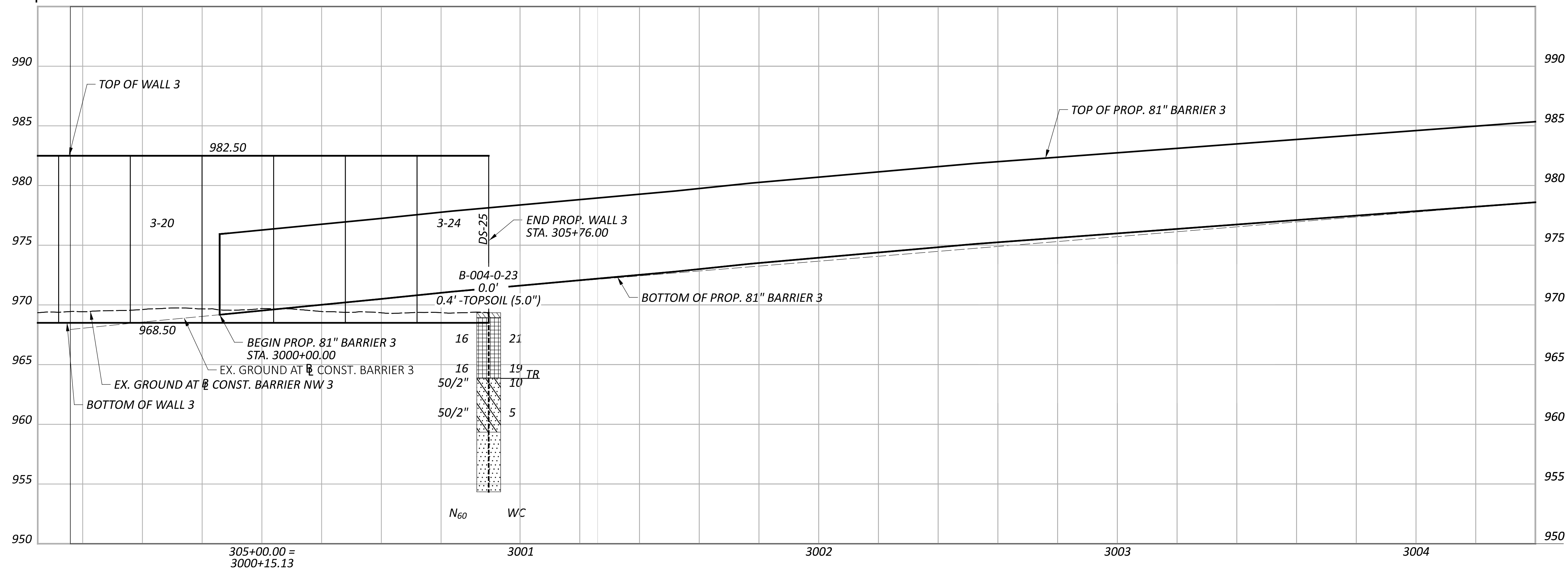
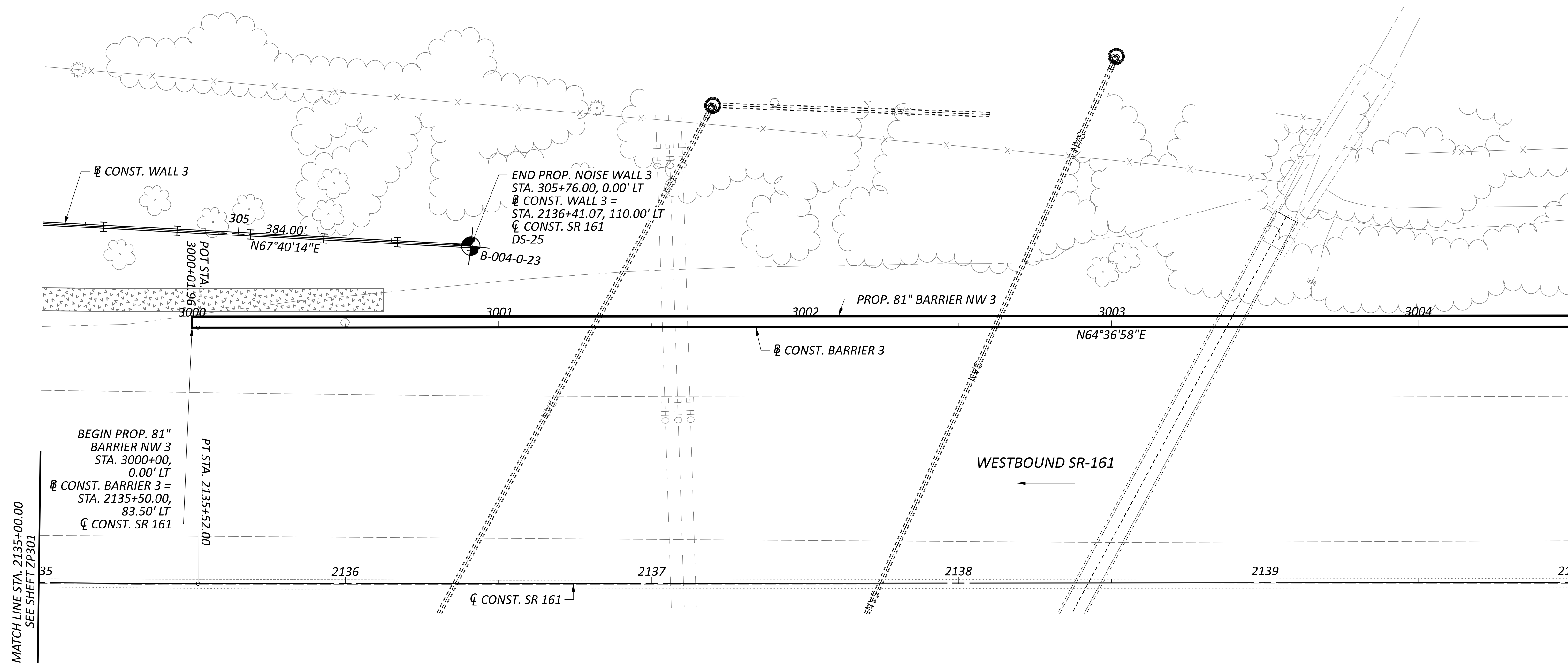


**GEOTECHNICAL PROFILE - NOISE WALL 3
 STA. 2130+00.00 TO STA. 2135+00.00**

DESIGN AGENCY	
8350 PRESIDENTIAL GATEWAY COLUMBUS, OHIO 43231 (614) 823-4949	
DESIGNER	
KSJ	
REVIEWER	
DEK 1/19/24	
PROJECT ID	
117607	
SUBSET	TOTAL
6	66
SHEET	TOTAL
P.235	295

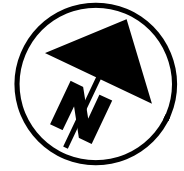
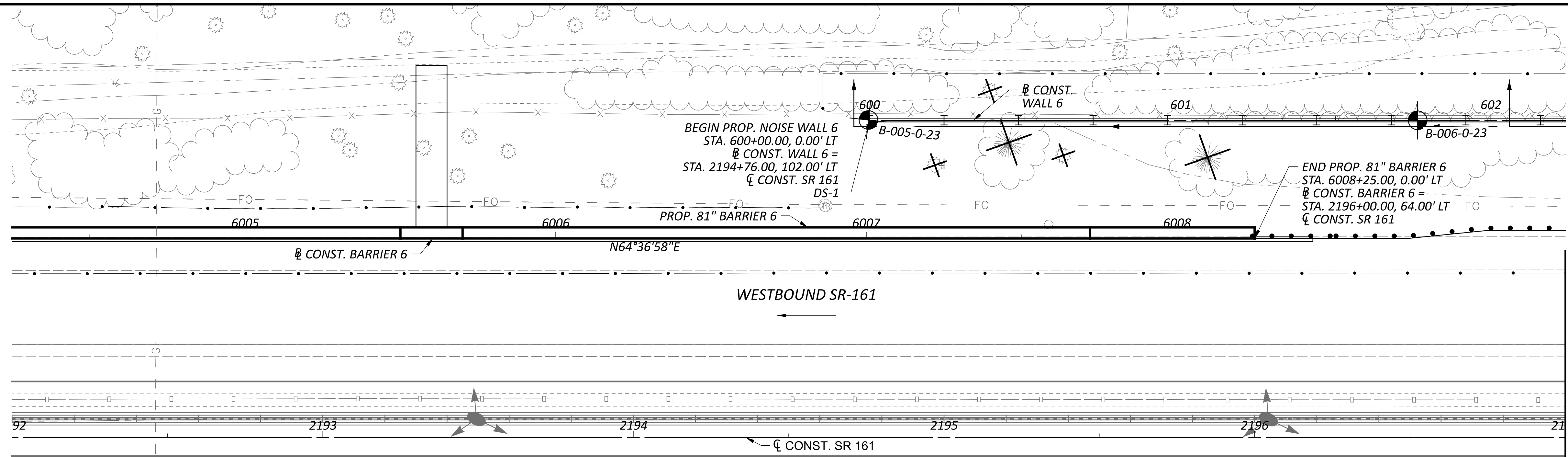
FRA-161-15.80 NOISE WALLS

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**GEOTECHNICAL PROFILE - NOISE WALL 3
 STA. 2135+00.00 TO STA. 2140+00.00**

DESIGN AGENCY	
 RESOURCE INTERNATIONAL 8350 PRESIDENTIAL GATEWAY COLUMBUS, OHIO 43231 (614) 823-4949	
DESIGNER	
KSJ	
REVIEWER	
DEK 1/19/24	
PROJECT ID	
117607	
SUBSET	TOTAL
7	66
SHEET	TOTAL
P.236	295



GEOTECHNICAL PROFILE - NOISE WALL 6
 STA. 2192+00.00 TO STA. 2197+00.00

DESIGN AGENCY

 8350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949

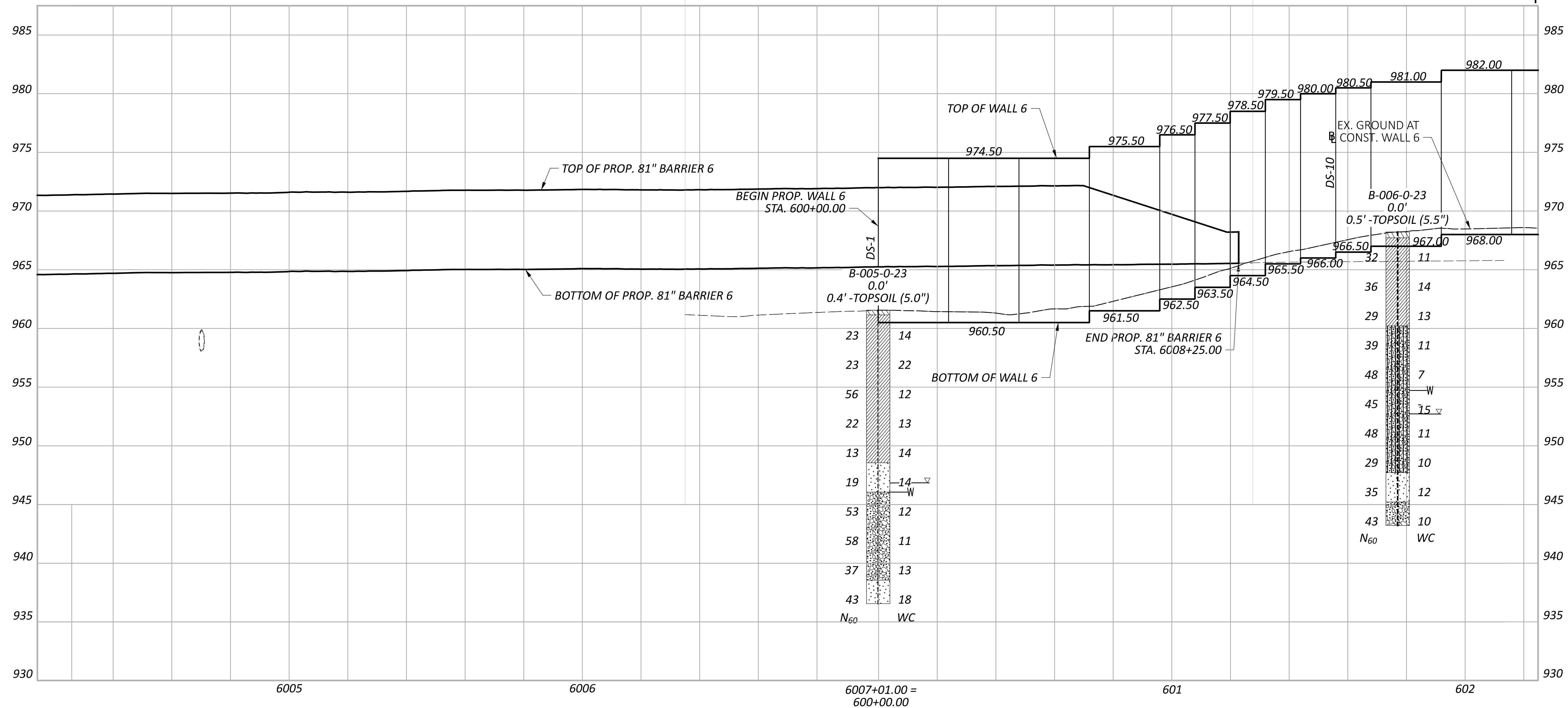
DESIGNER
 KSJ

REVIEWER
 DEK 1/19/24

PROJECT ID
 117607

SUBSET	TOTAL
8	66

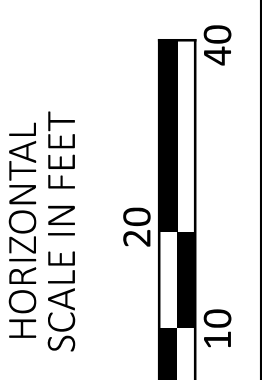
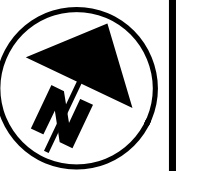
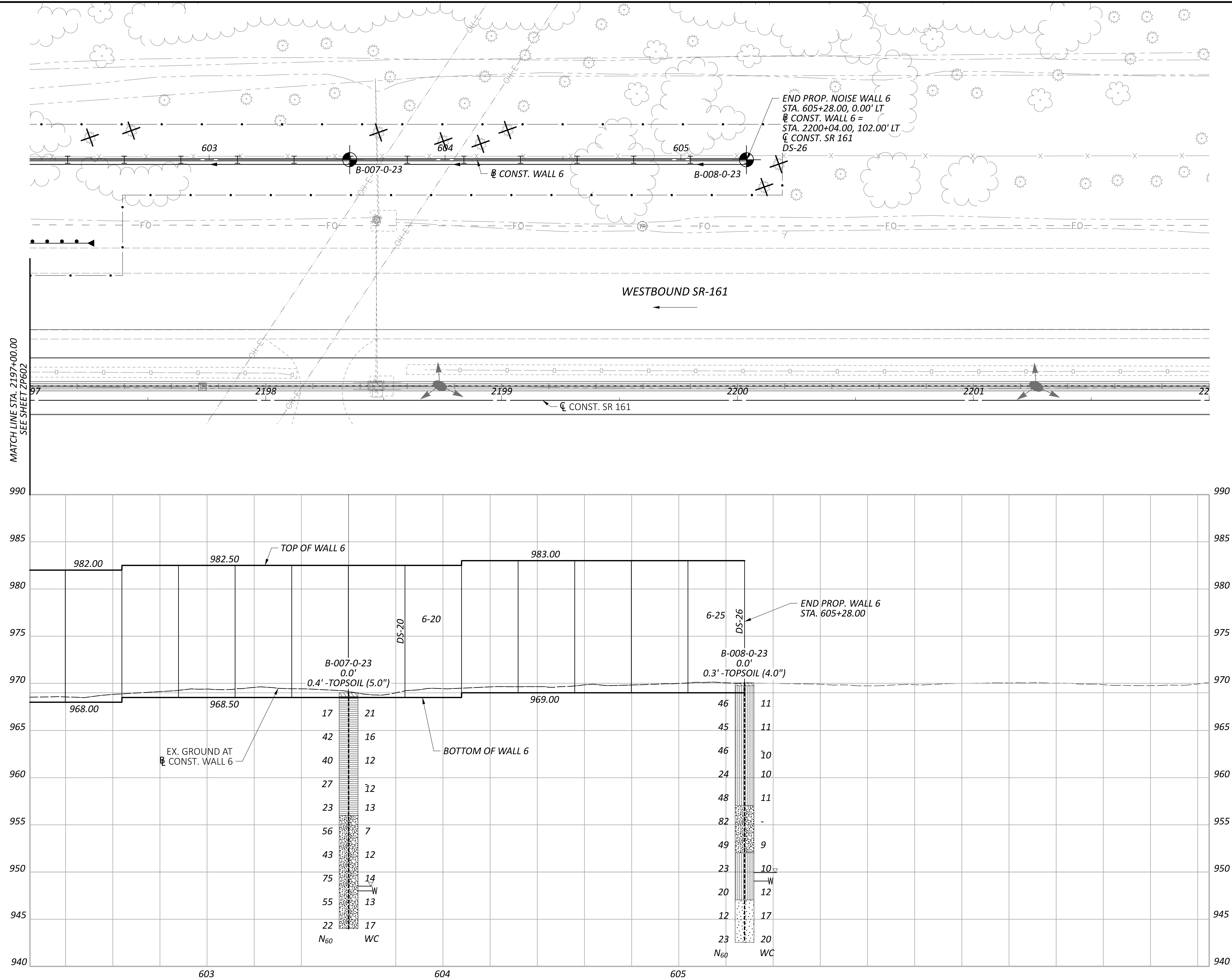
SHEET	TOTAL
P.237	295



MATCH LINE STA. 2197+00.00
 SEE SHEET ZP603

FRA-161-15.80 NOISE WALLS

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**GEOTECHNICAL PROFILE - NOISE WALL 6
 STA. 2197+00.00 TO STA. 2202+00.00**

DESIGN AGENCY
RESOURCE INTERNATIONAL
 8350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949

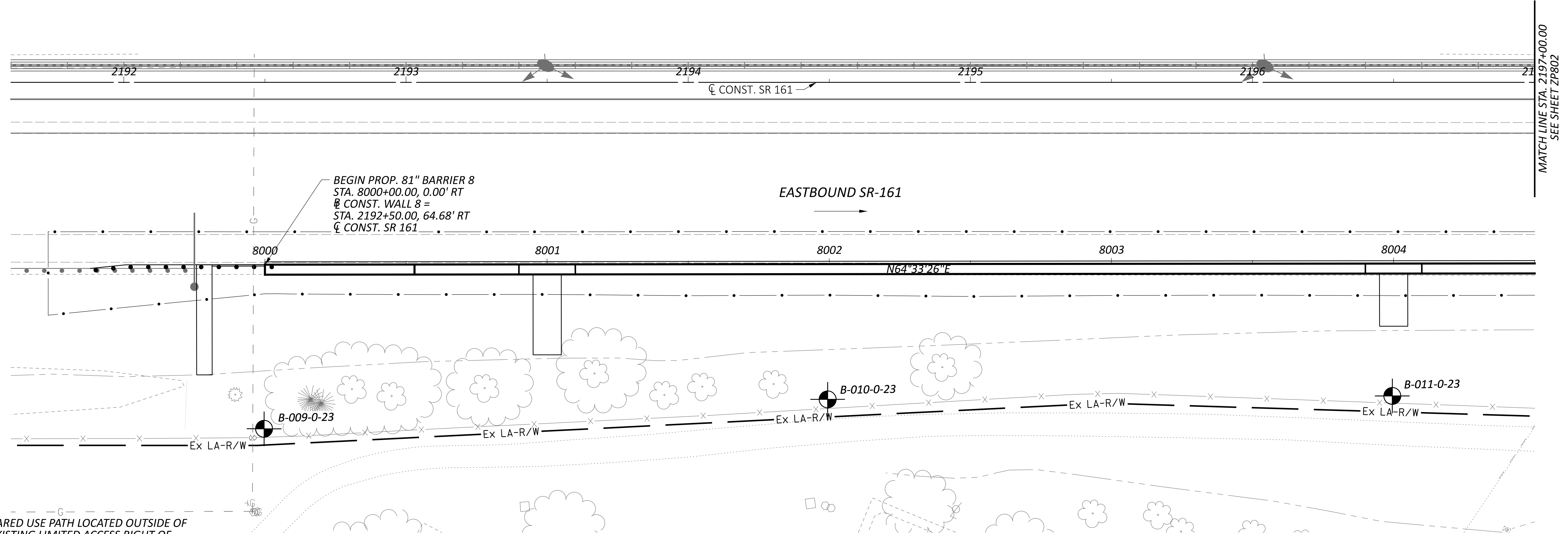
DESIGNER
KSJ

REVIEWER
DEK 1/19/24

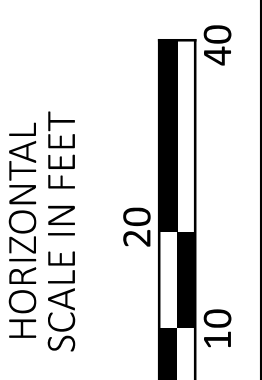
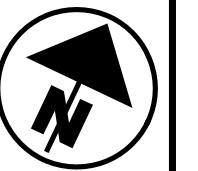
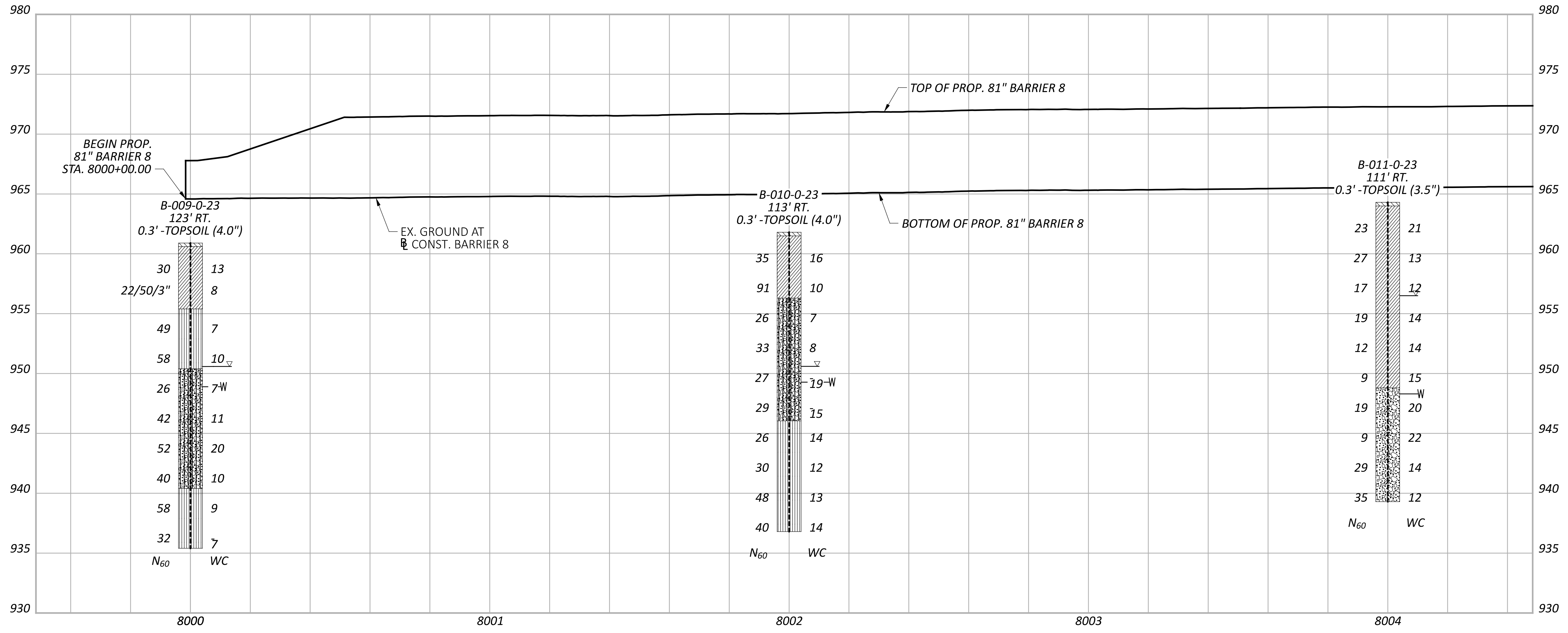
PROJECT ID
117607

SUBSET	TOTAL
9	66

SHEET	TOTAL
P.238	295



NOTES
 1.) SHARED USE PATH LOCATED OUTSIDE OF THE EXISTING LIMITED ACCESS RIGHT OF WAY OF SR-161 SHALL NOT BE USED FOR CONTRACTOR ACCESS.



GEOTECHNICAL PROFILE - NOISE WALL 8
 STA. 2192+00.00 TO STA. 2197+00.00

DESIGN AGENCY
RESOURCE INTERNATIONAL
 8350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949

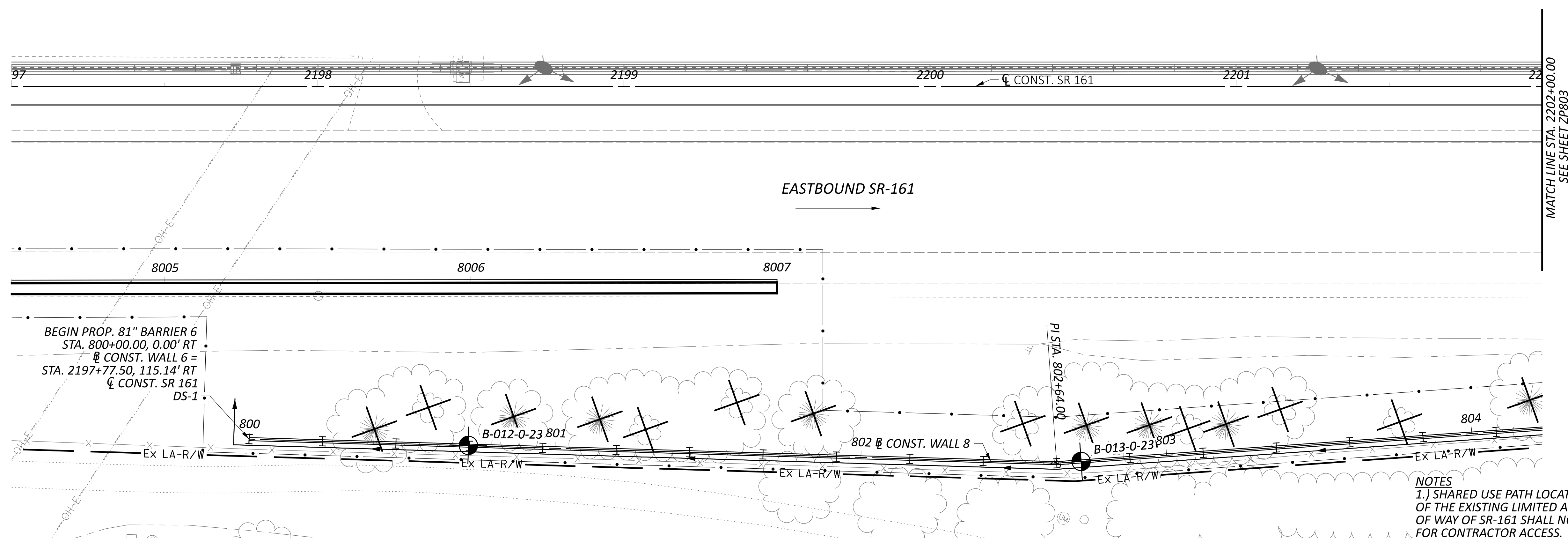
DESIGNER
 KSJ

REVIEWER
 DEK 1/19/24

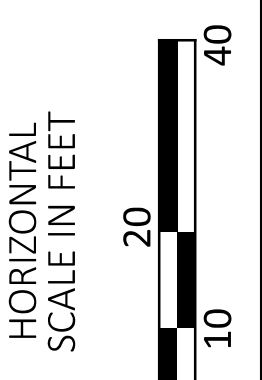
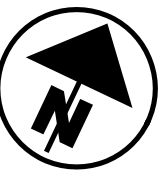
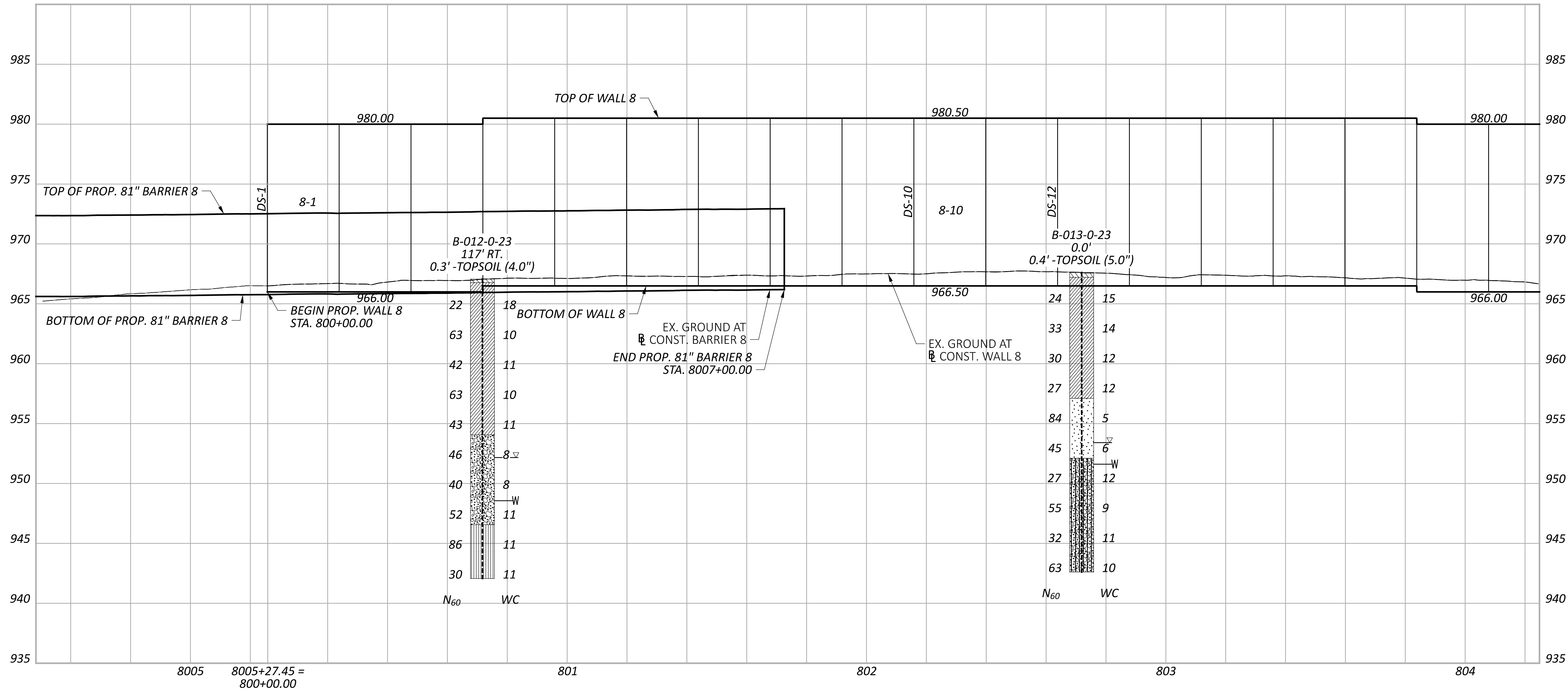
PROJECT ID
 117607

SUBSET	TOTAL
10	66

SHEET	TOTAL
P.239	295



NOTES
 1.) SHARED USE PATH LOCATED OUTSIDE OF THE EXISTING LIMITED ACCESS RIGHT OF WAY OF SR-161 SHALL NOT BE USED FOR CONTRACTOR ACCESS.



GEOTECHNICAL PROFILE - NOISE WALL 8
 STA. 2197+00.00 TO STA. 2202+00.00

DESIGN AGENCY
RESOURCE INTERNATIONAL
 8350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949

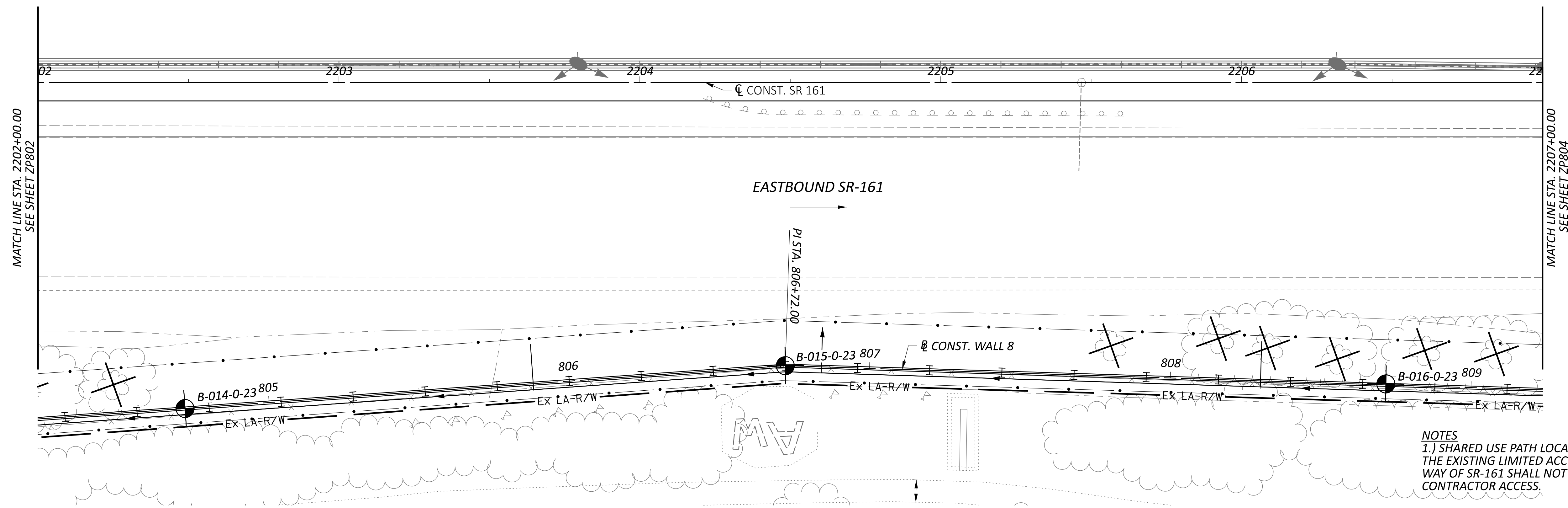
DESIGNER
 KSJ

REVIEWER
 DEK 1/19/24

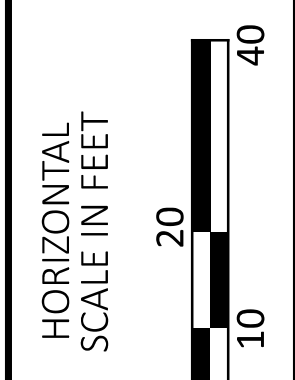
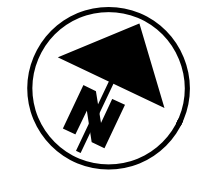
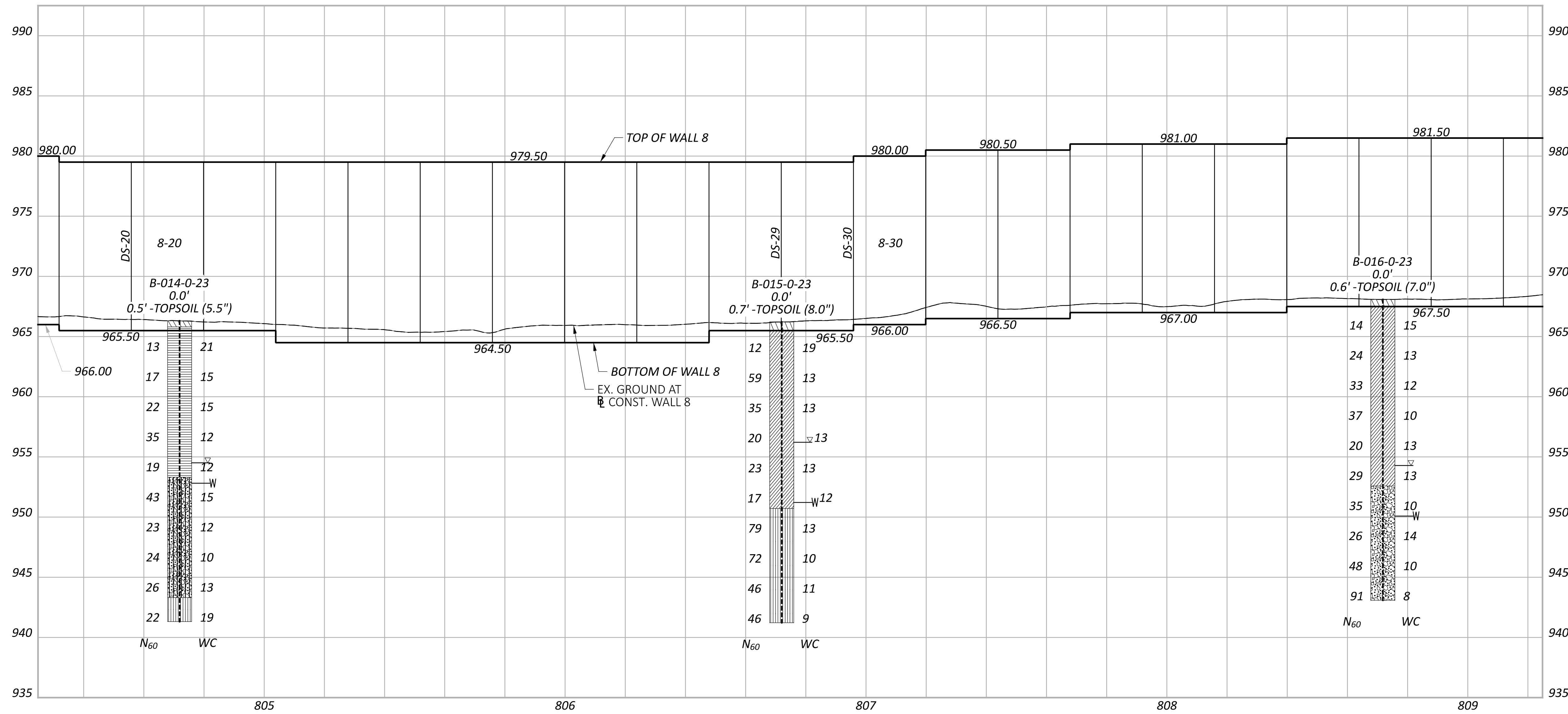
PROJECT ID
 117607

SUBSET	TOTAL
11	66

SHEET	TOTAL
P.240	295



NOTES
 1.) SHARED USE PATH LOCATED OUTSIDE OF THE EXISTING LIMITED ACCESS RIGHT OF WAY OF SR-161 SHALL NOT BE USED FOR CONTRACTOR ACCESS.



GEOTECHNICAL PROFILE - NOISE WALL 8
 STA. 2202+00.00 TO STA. 2207+00.00

DESIGN AGENCY

 8350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949

DESIGNER
 KSJ

REVIEWER
 DEK 1/19/24

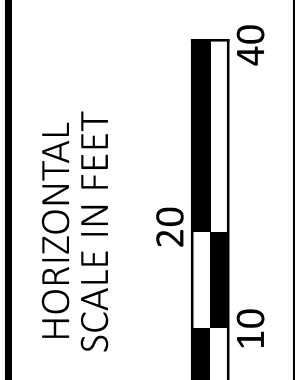
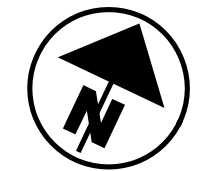
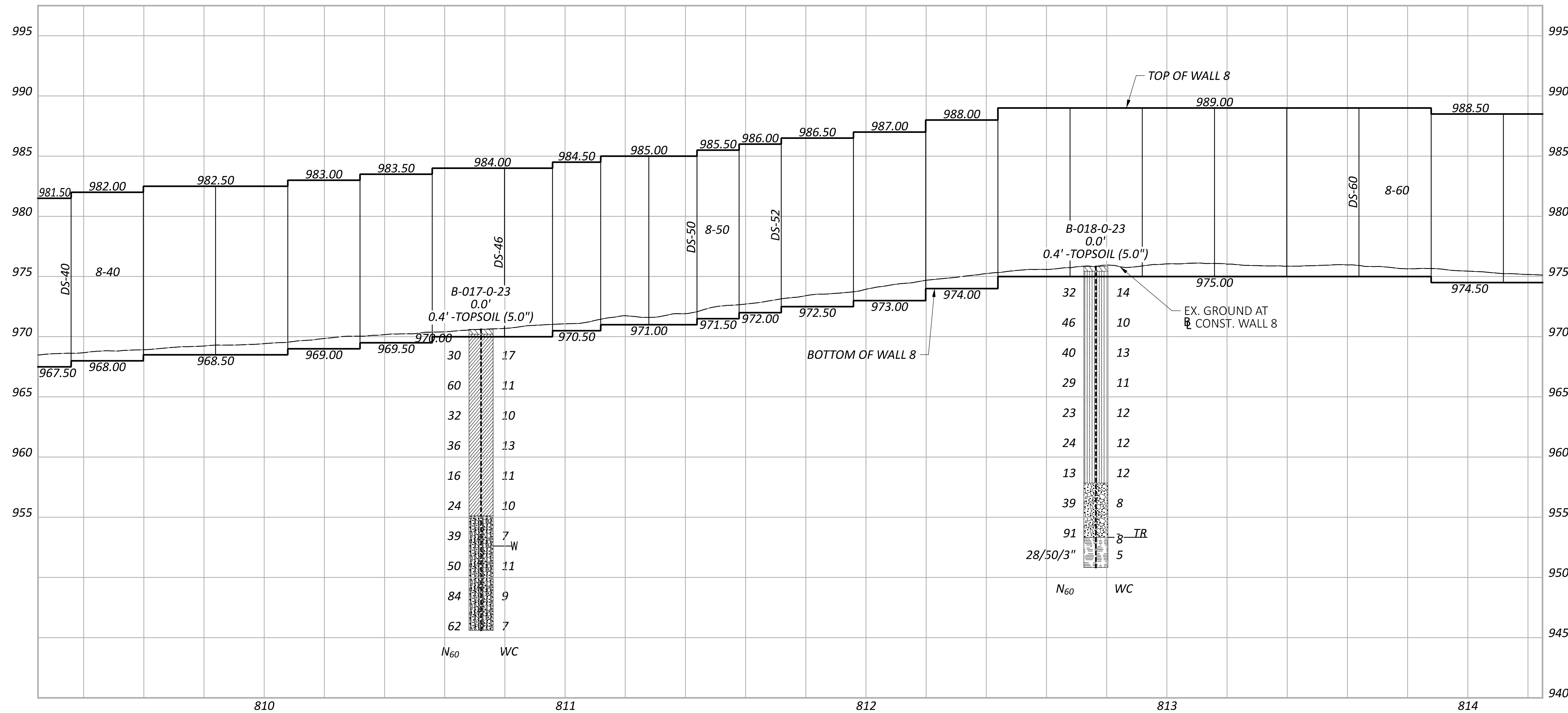
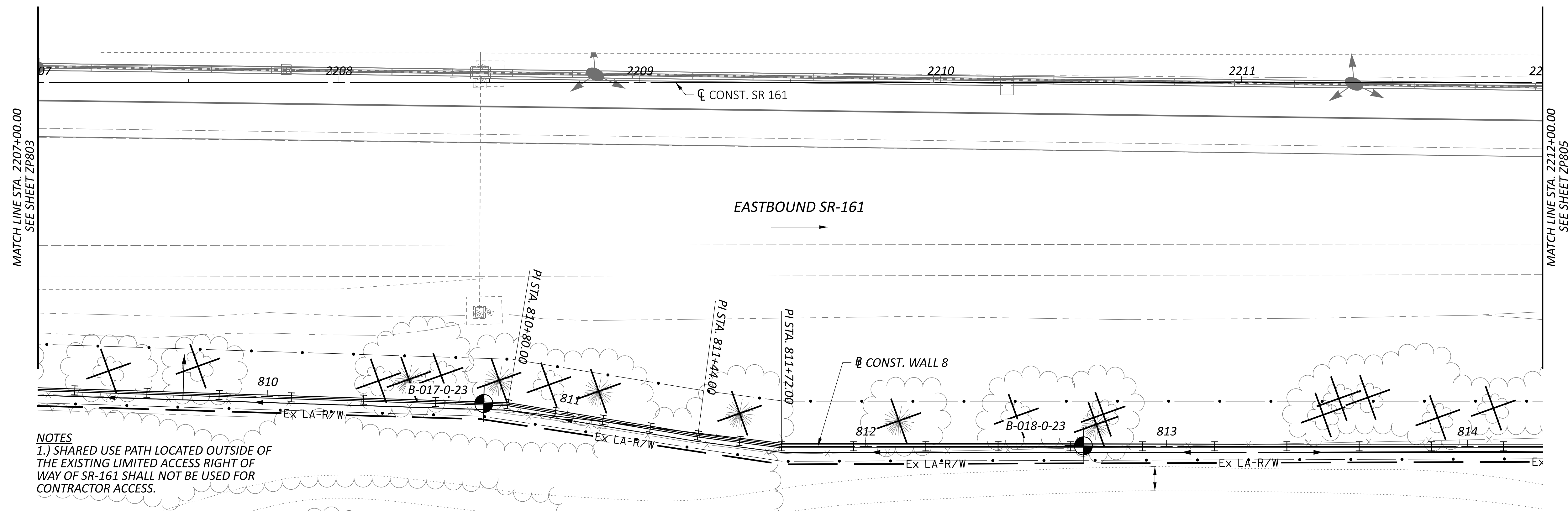
PROJECT ID
 117607

SUBSET	TOTAL
12	66

SHEET	TOTAL
P.241	295

FRA-161-15.80 NOISE WALLS

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**GEOTECHNICAL PROFILE - NOISE WALL 8
 STA. 2207+00.00 TO STA. 2212+00.00**

DESIGN AGENCY

 8350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949

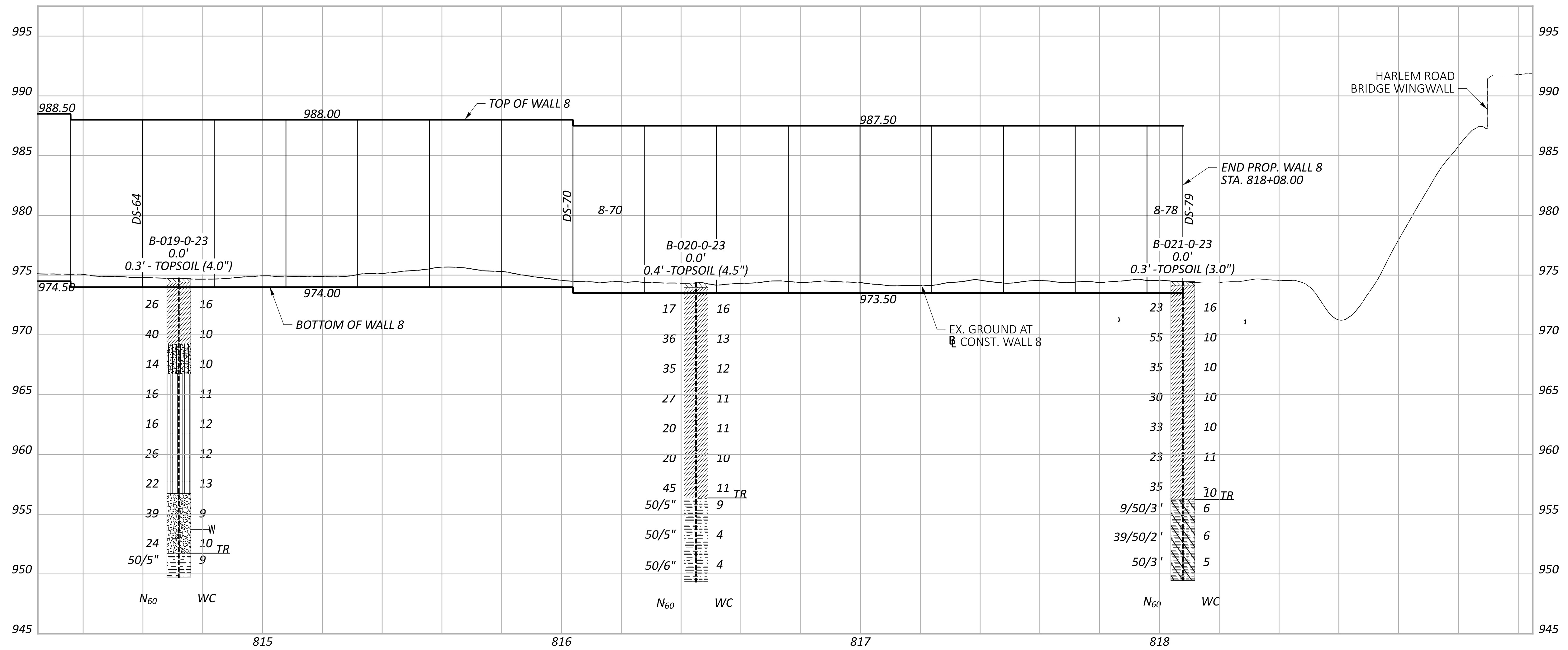
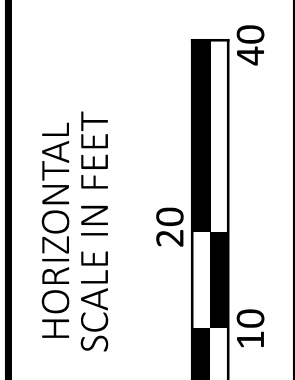
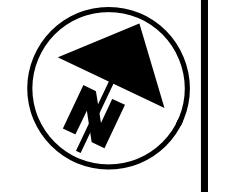
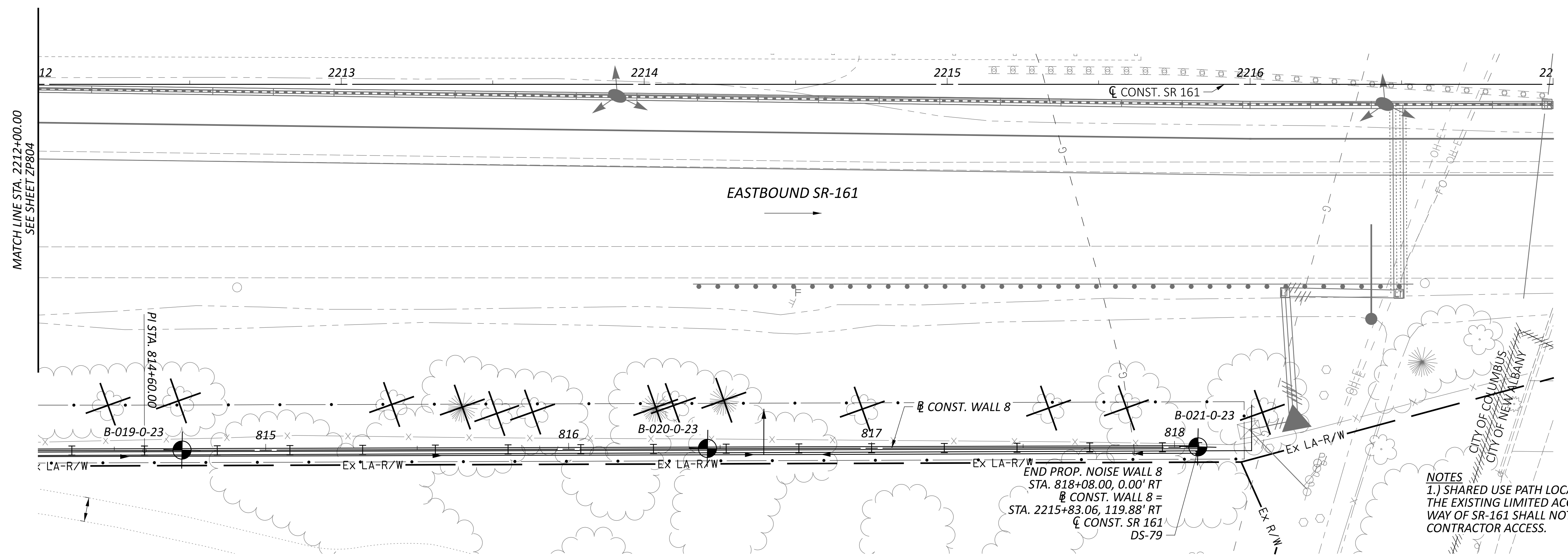
DESIGNER
 KSJ

REVIEWER
 DEK 1/19/24

PROJECT ID
 117607

SUBSET TOTAL
 13 66

SHEET TOTAL
 P.242 295



NOTES
 1.) SHARED USE PATH LOCATED OUTSIDE OF THE EXISTING LIMITED ACCESS RIGHT OF WAY OF SR-161 SHALL NOT BE USED FOR CONTRACTOR ACCESS.

GEOTECHNICAL PROFILE - NOISE WALL 8
 STA. 2212+00.00 TO STA. 2217+00.00

DESIGN AGENCY

 8350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949

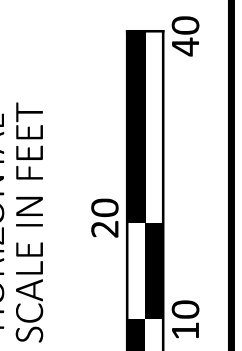
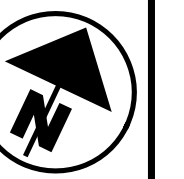
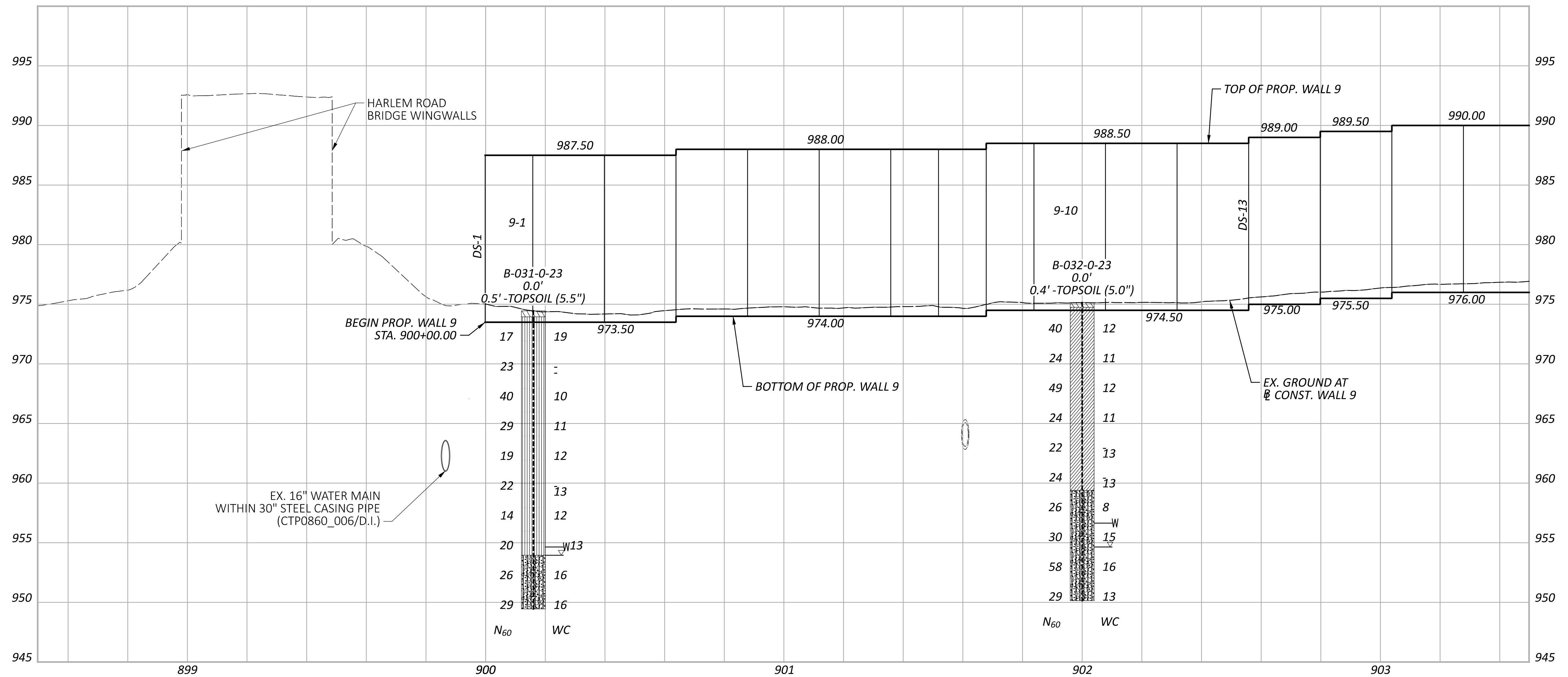
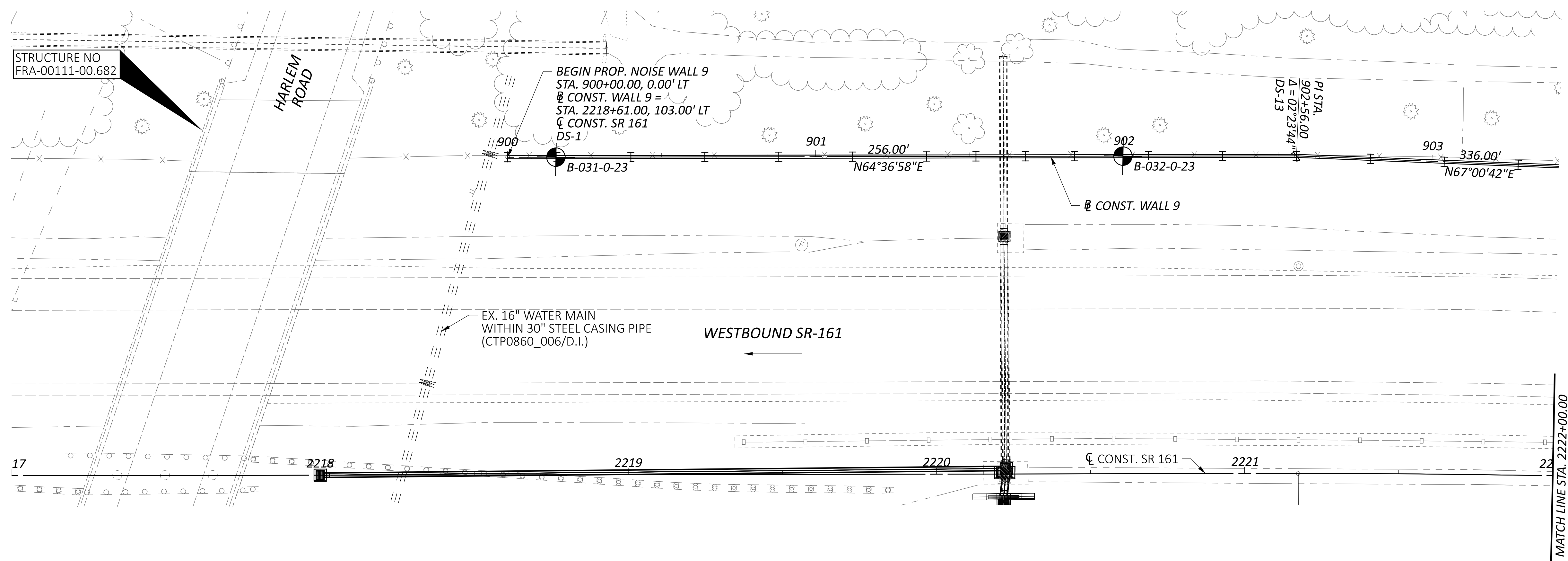
DESIGNER
 KSJ

REVIEWER
 DEK 1/19/24

PROJECT ID
 117607

SUBSET	TOTAL
14	66

SHEET	TOTAL
P.243	295



GEOTECHNICAL PROFILE - NOISE WALL 9
 STA. 2217+00.00 TO STA. 2222+00.00

DESIGN AGENCY



6350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949

DESIGNER

KSJ

REVIEWER

DEK 1/19/24

PROJECT ID

117607

SUBSET TOTAL

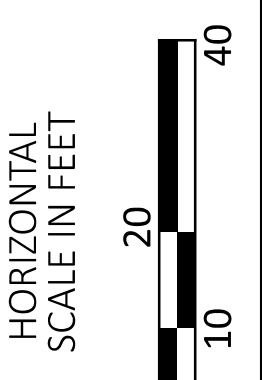
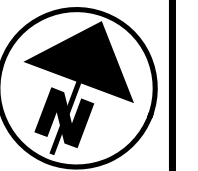
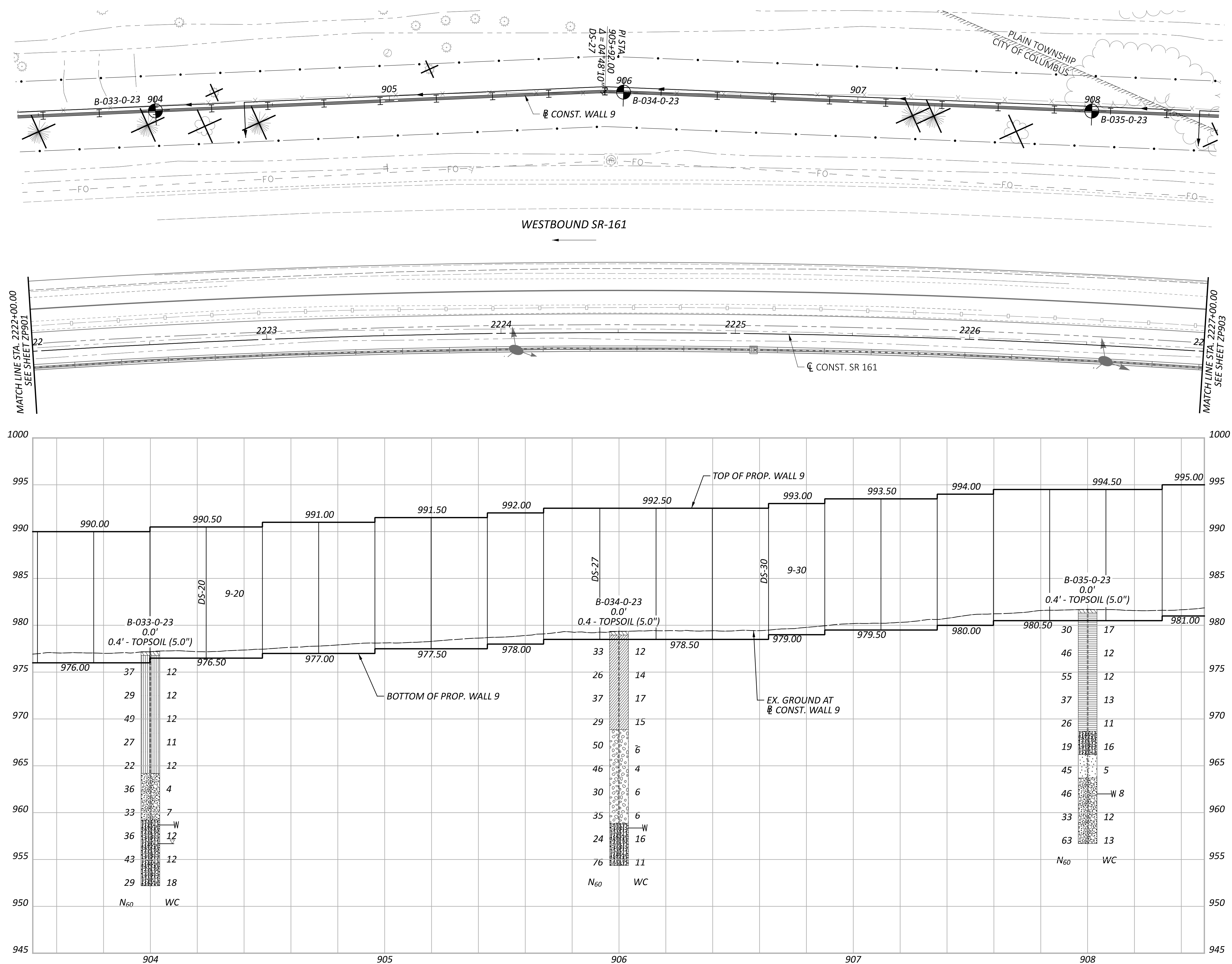
15 66

SHEET TOTAL

P.244 295

FRA-161-15.80 NOISE WALLS

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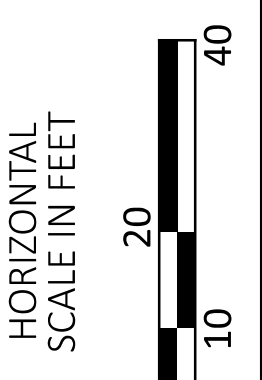
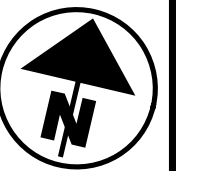
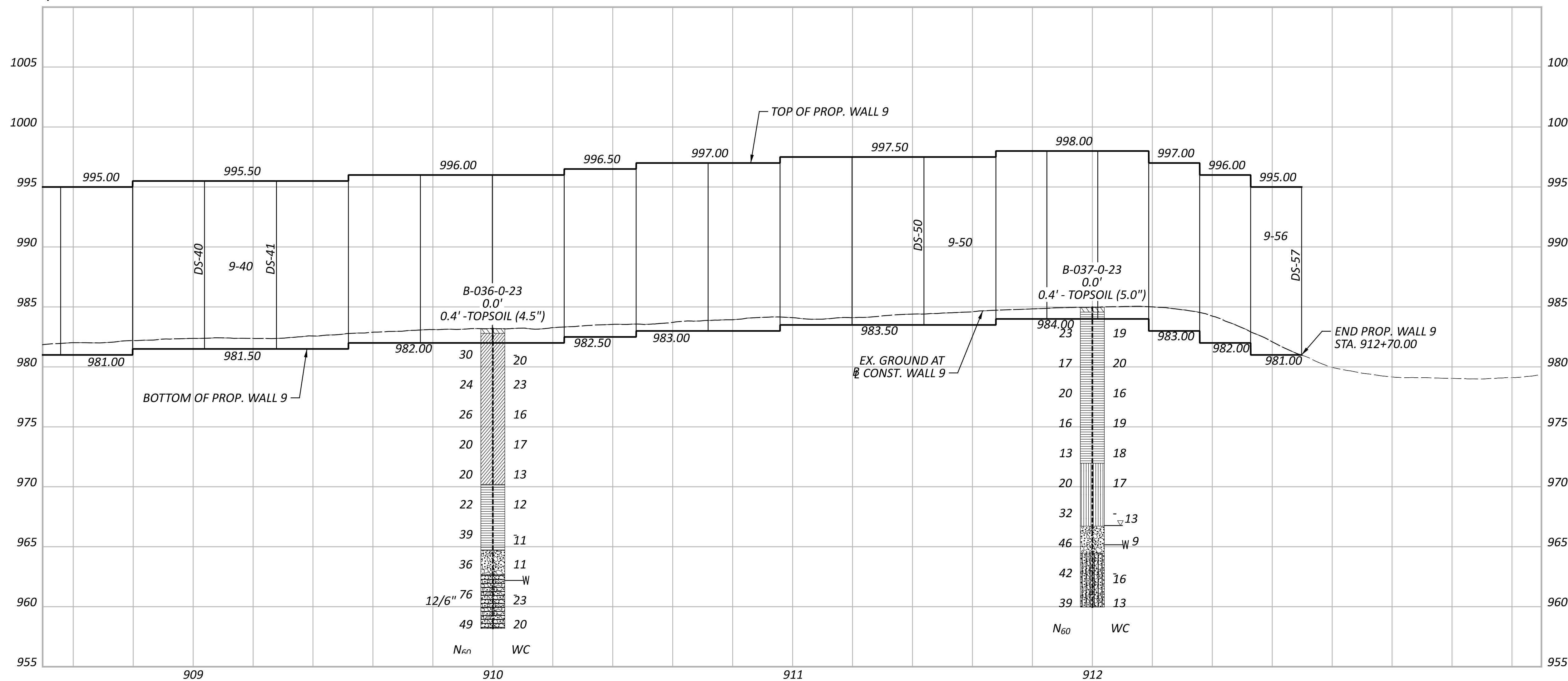
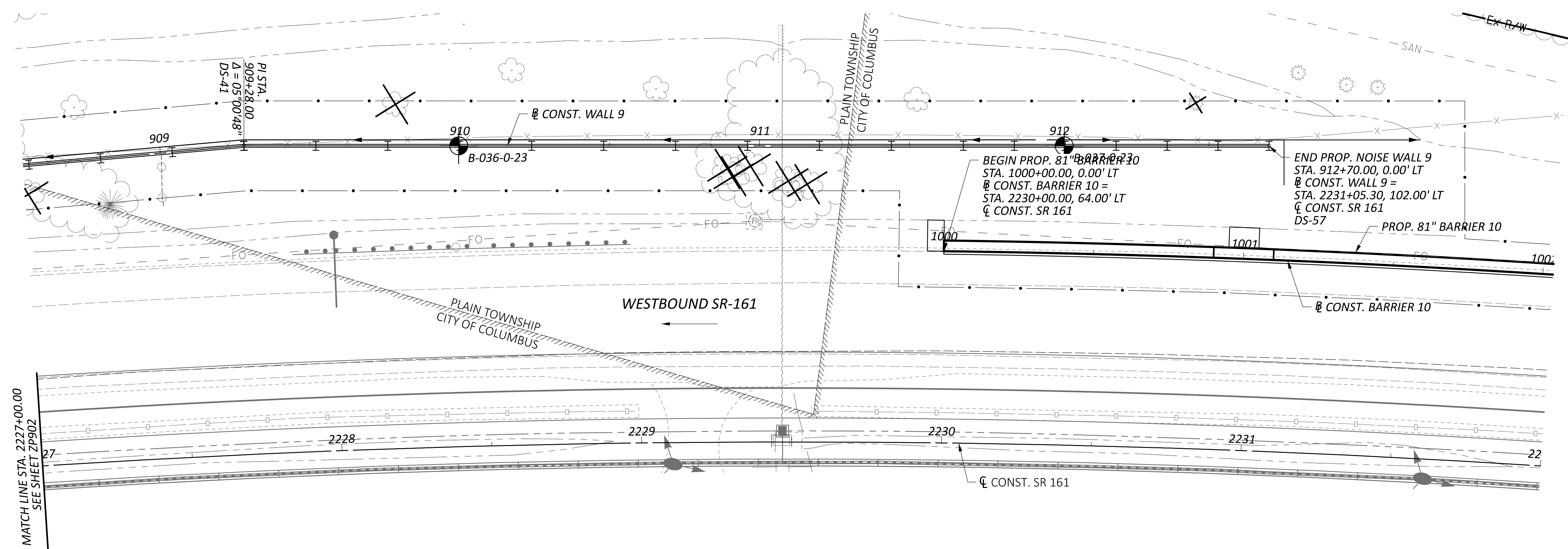


**GEOTECHNICAL PROFILE - NOISE WALL 9
 STA. 2222+00.00 TO STA. 2227+00.00**

DESIGN AGENCY	
6350 PRESIDENTIAL GATEWAY COLUMBUS, OHIO 43231 (614) 823-4949	
DESIGNER	
KSJ	
REVIEWER	
DEK 1/19/24	
PROJECT ID	
117607	
SUBSET	TOTAL
16	66
SHEET	TOTAL
P.245	295

FRA-161-15.80 NOISE WALLS

MODEL: Wall9 - Plan 14 PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 5:20:28 PM USER: juans
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_Zp903.dgn



**GEOTECHNICAL PROFILE - NOISE WALL 9
 STA. 2227+00.00 TO STA. 2232+00.00**

DESIGN AGENCY
RESOURCE INTERNATIONAL
 8350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949

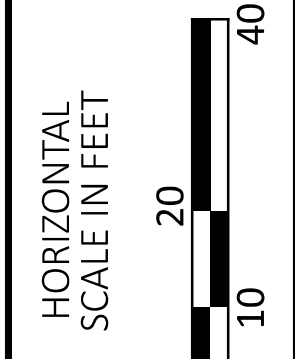
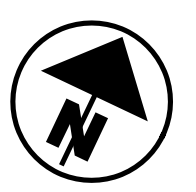
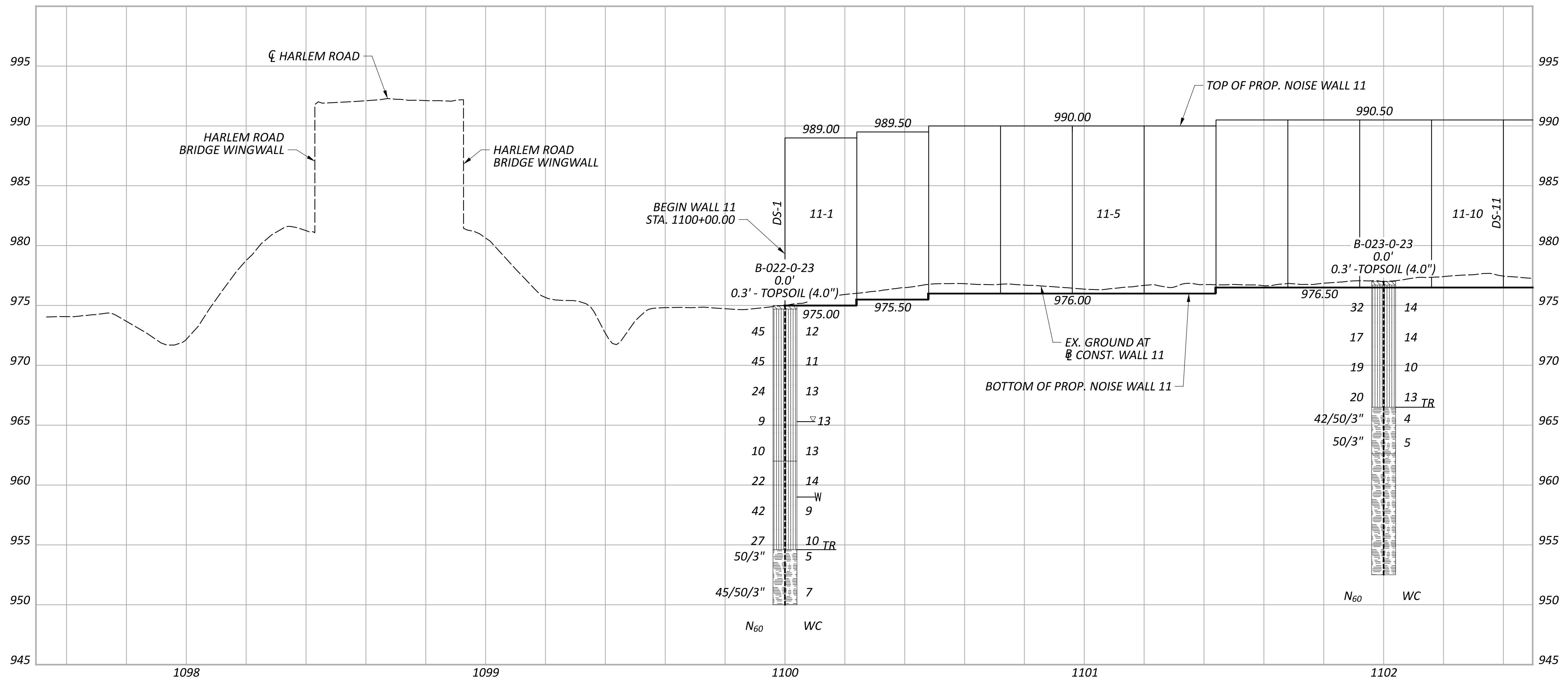
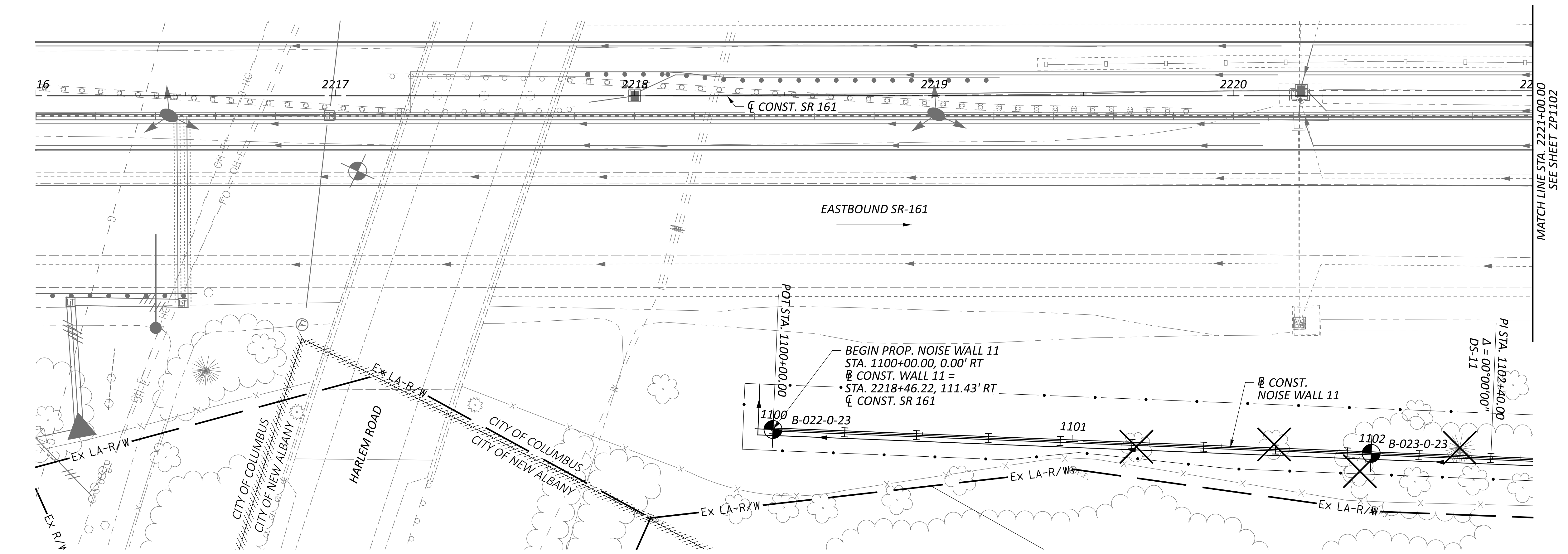
DESIGNER
KSJ

REVIEWER
DEK 1/19/24

PROJECT ID
117607

SUBSET TOTAL
 17 66

SHEET TOTAL
 P.246 295



GEOTECHNICAL PROFILE - NOISE WALL 11
 STA. 2216+00.00 TO STA. 2221+00.00

DESIGN AGENCY
RESOURCE INTERNATIONAL
 6350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949

DESIGNER
KSJ

REVIEWER
DEK 1/19/24

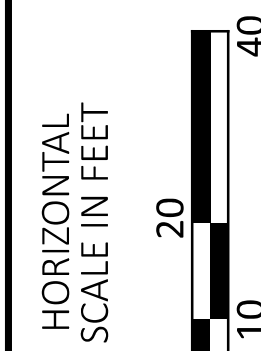
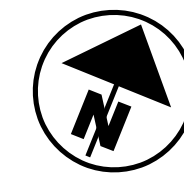
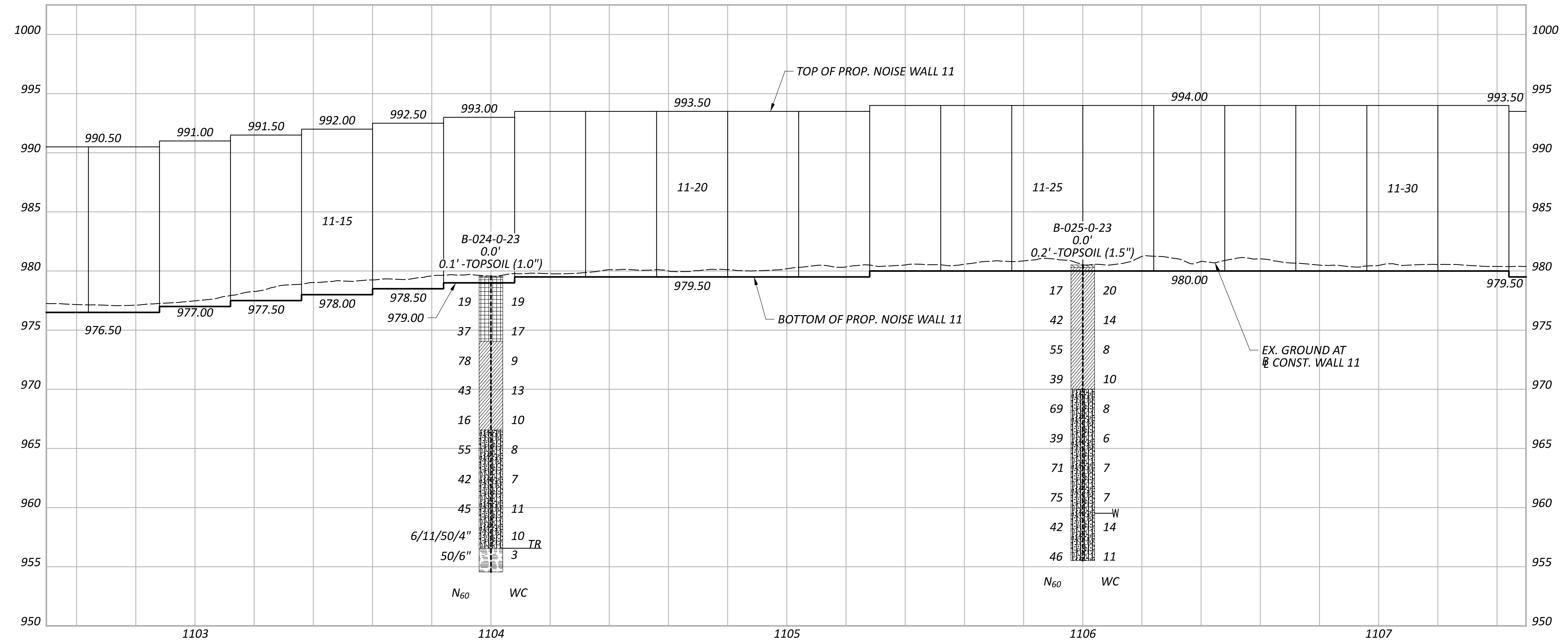
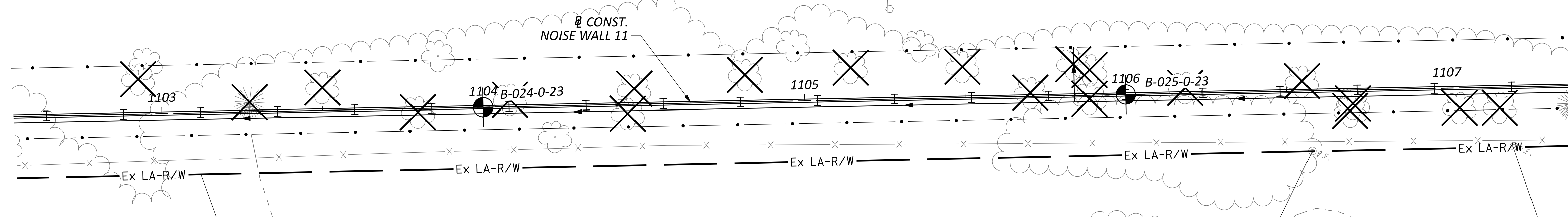
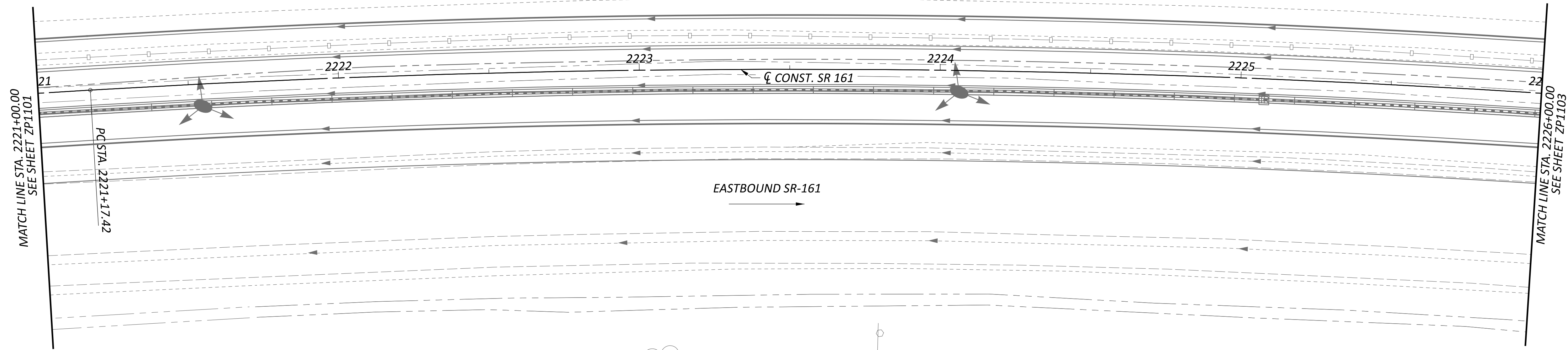
PROJECT ID
117607

SUBSET TOTAL
 18 66

SHEET TOTAL
 P.247 295

FRA-161-15.80 NOISE WALLS

MODEL: Plan-1 PAPER: 34x42 (in.) DATE: 3/14/2024 TIME: 5:26:38 PM USER: juans
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_ZP1102.dgn



**GEOTECHNICAL PROFILE - NOISE WALL 11
 STA. 2221+00.00 TO STA. 2226+00.00**

DESIGN AGENCY



6350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949

DESIGNER

KSJ

REVIEWER

DEK 1/19/24

PROJECT ID

117607

SUBSET TOTAL

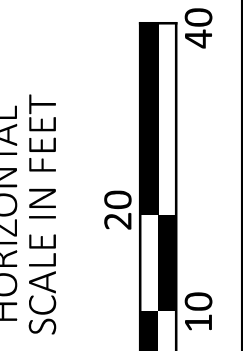
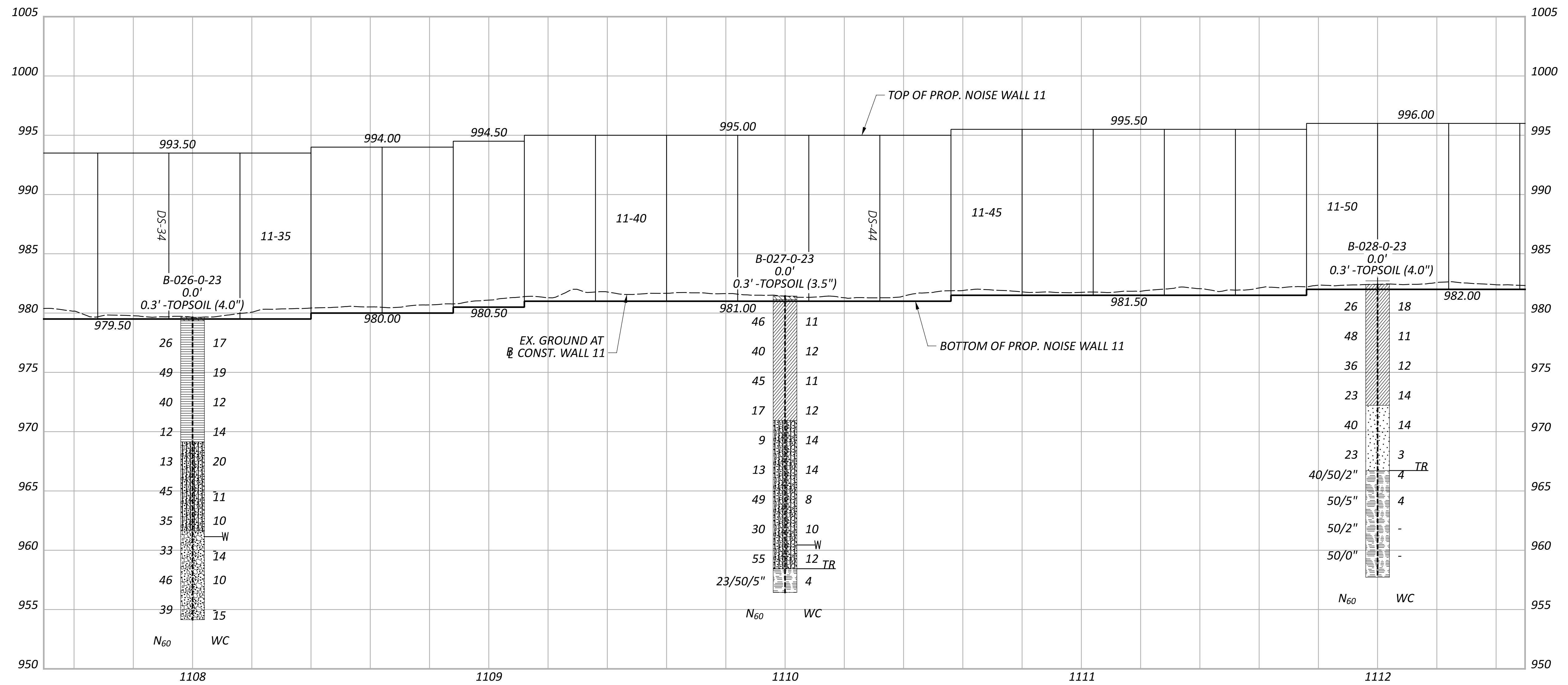
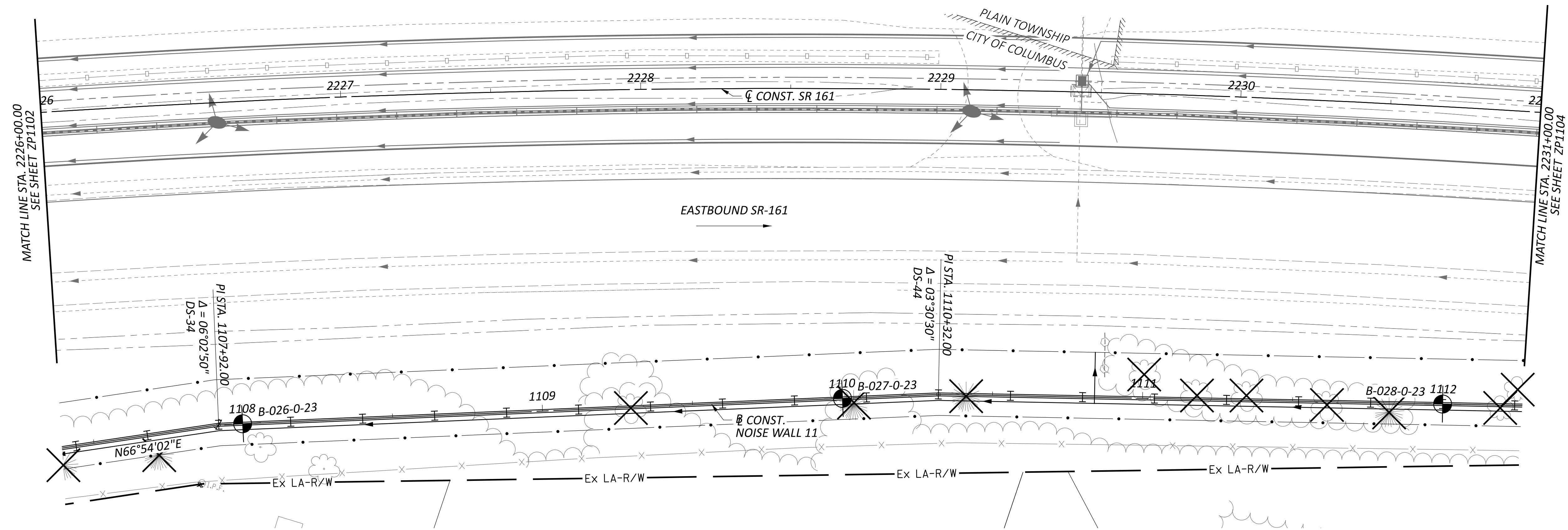
19 66

SHEET TOTAL

P.248 295

FRA-161-15.80 NOISE WALLS

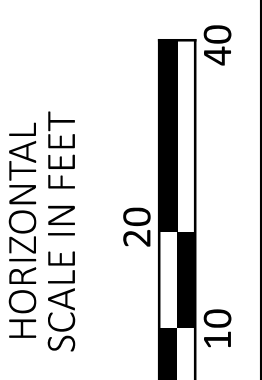
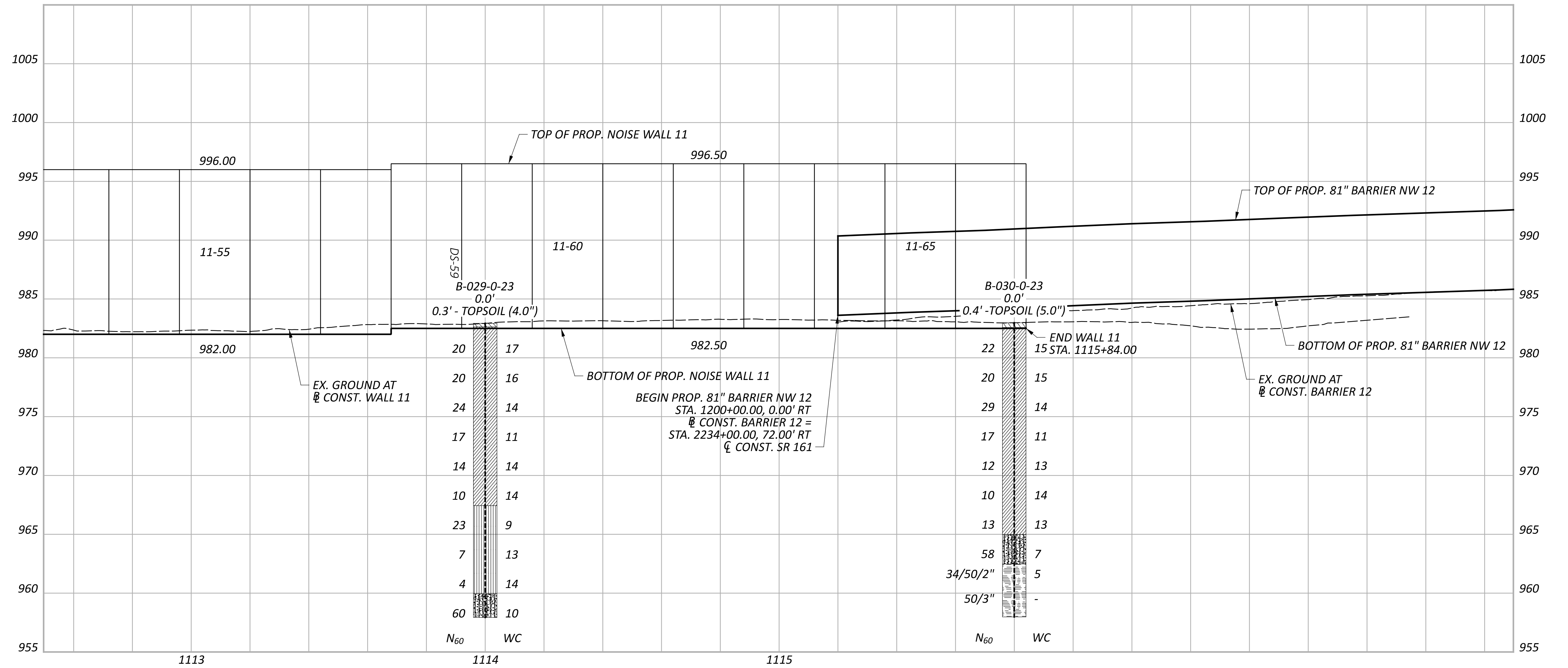
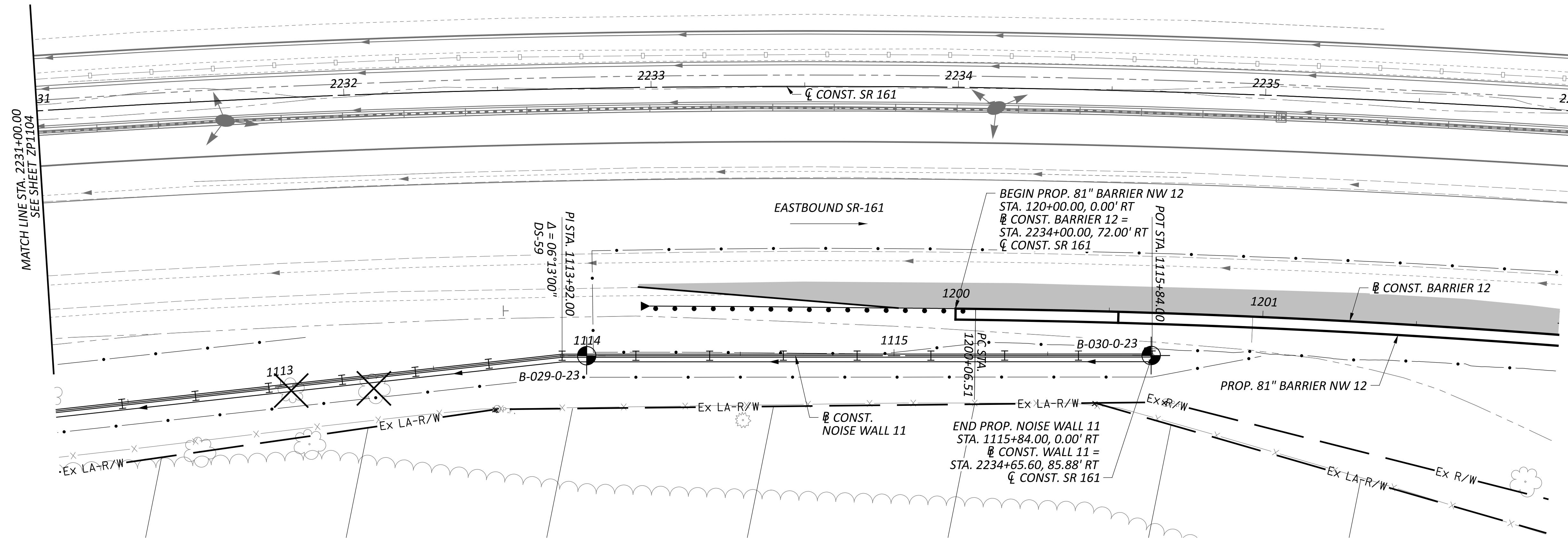
MODEL: Plan-2 PAPER SIZE: 34x42 (in.) DATE: 3/14/2024 TIME: 5:29:13 PM USER: juans
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Sheets\117607_ZP1103.dgn



**GEOTECHNICAL PROFILE - NOISE WALL 11
 STA. 2226+00.00 TO STA. 2231+00.00**

DESIGN AGENCY

 8350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949
 DESIGNER
 KSJ
 REVIEWER
 DEK 1/19/24
 PROJECT ID
 117607
 SUBSET TOTAL
 20 66
 SHEET TOTAL
 P.249 295



GEOTECHNICAL PROFILE - NOISE WALL 11
 STA. 2231+00.00 TO STA. 2236+00.00

DESIGN AGENCY

 8350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949

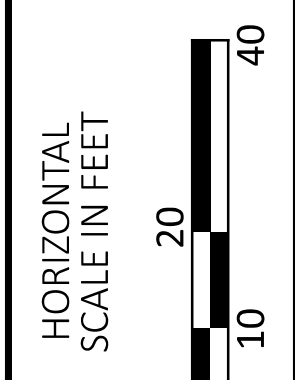
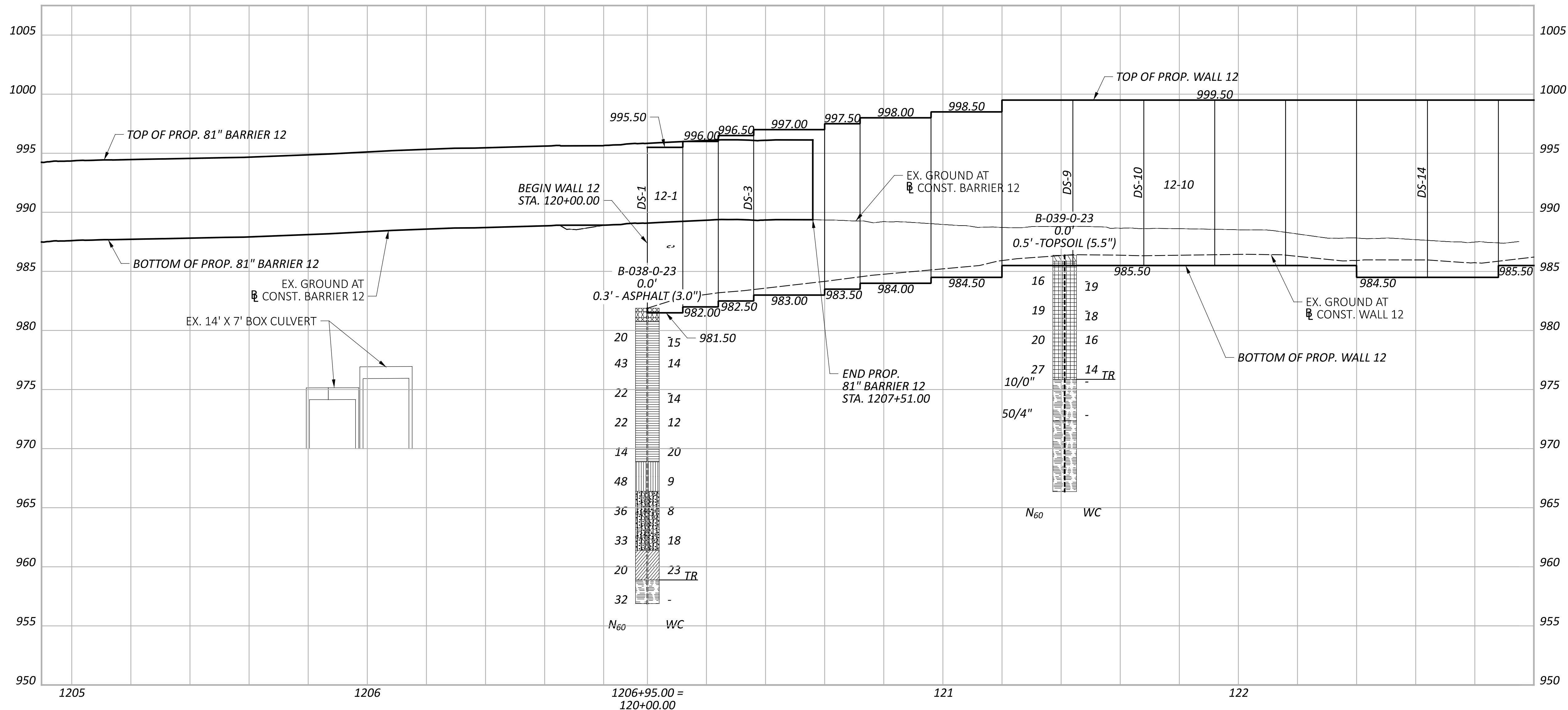
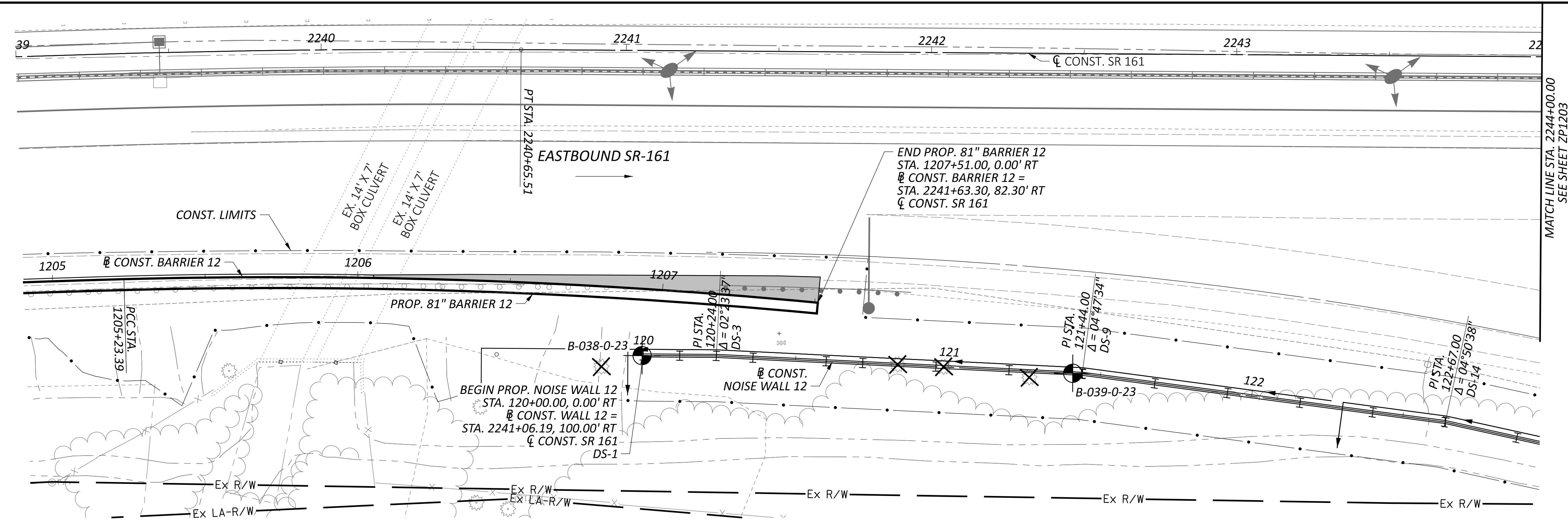
DESIGNER
 KSJ

REVIEWER
 DEK 1/19/24

PROJECT ID
 117607

SUBSET TOTAL
 21 66

SHEET TOTAL
 P.250 295

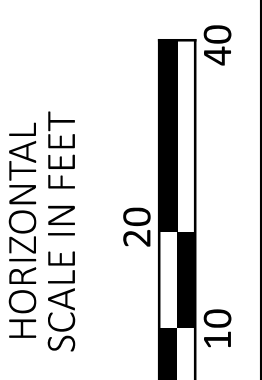
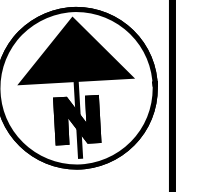
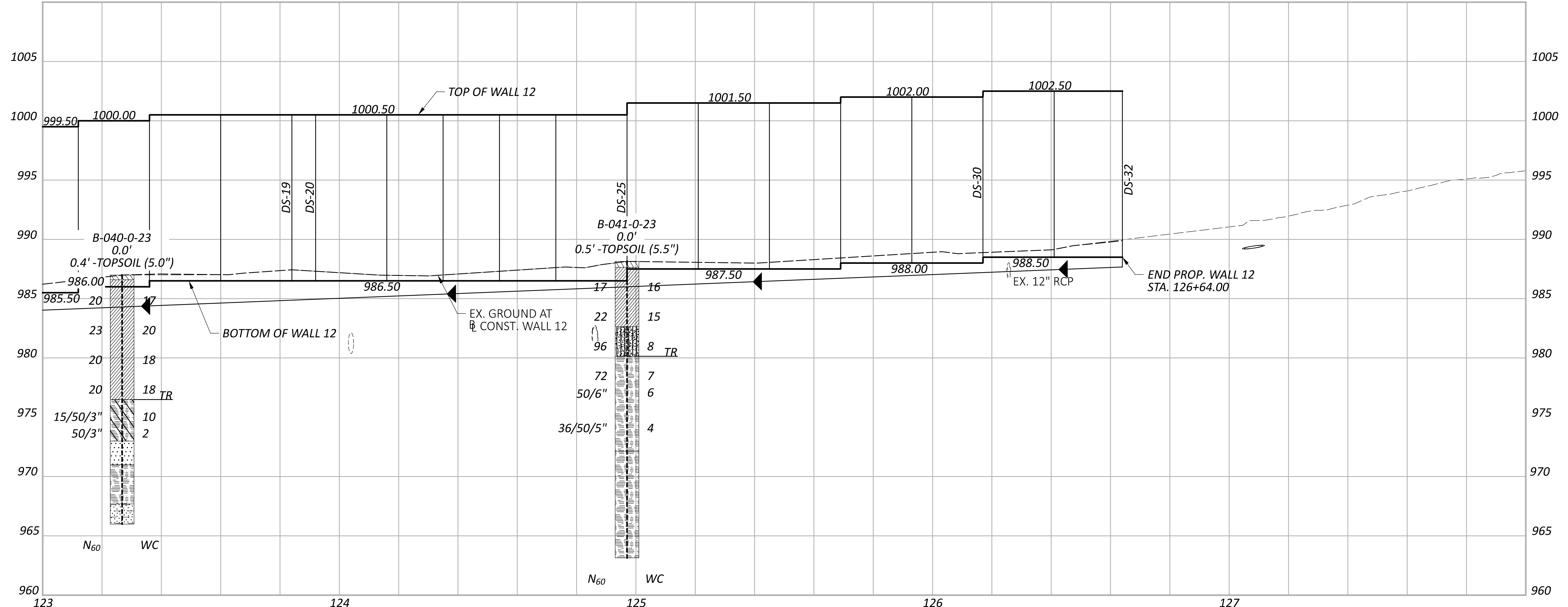
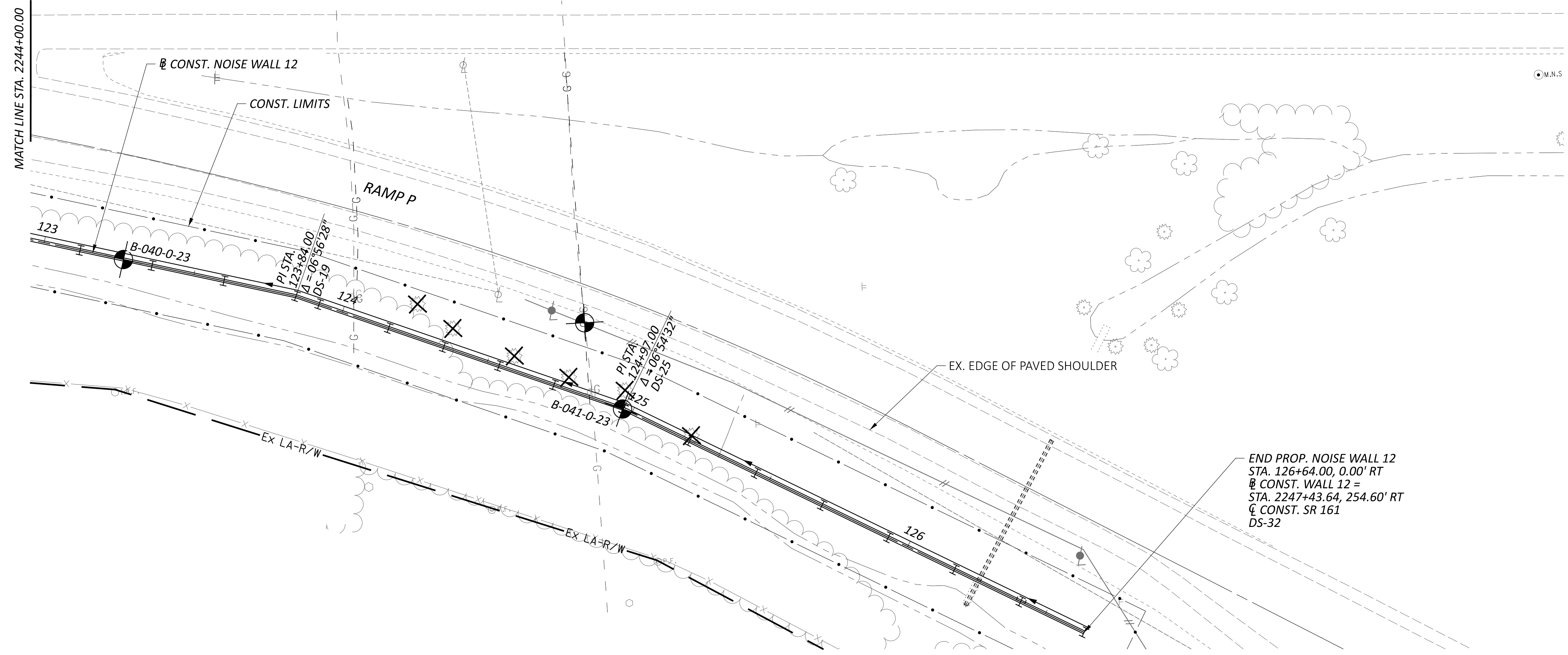


GEOTECHNICAL PROFILE - NOISE WALL 12
 STA. 2239+00.00 TO STA. 2244+00.00

DESIGN AGENCY	
6350 PRESIDENTIAL GATEWAY COLUMBUS, OHIO 43231 (614) 823-4949	
DESIGNER	
KSJ	
REVIEWER	
DEK 1/19/24	
PROJECT ID	
117607	
SUBSET	TOTAL
22	66
SHEET	TOTAL
P.251	295

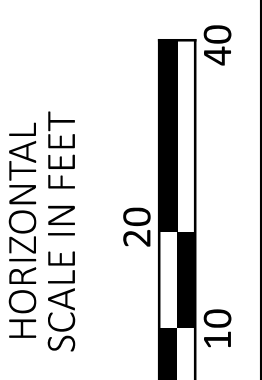
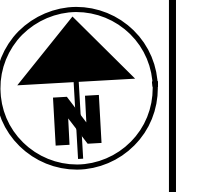
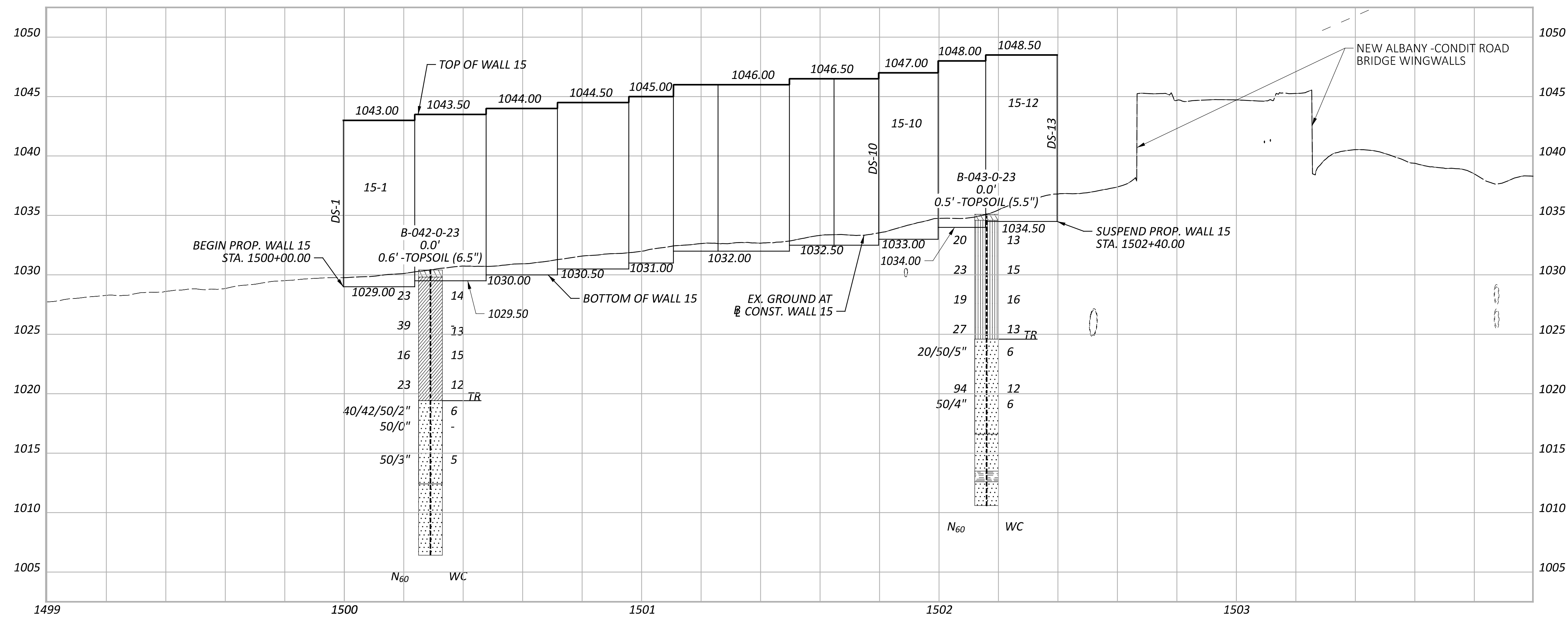
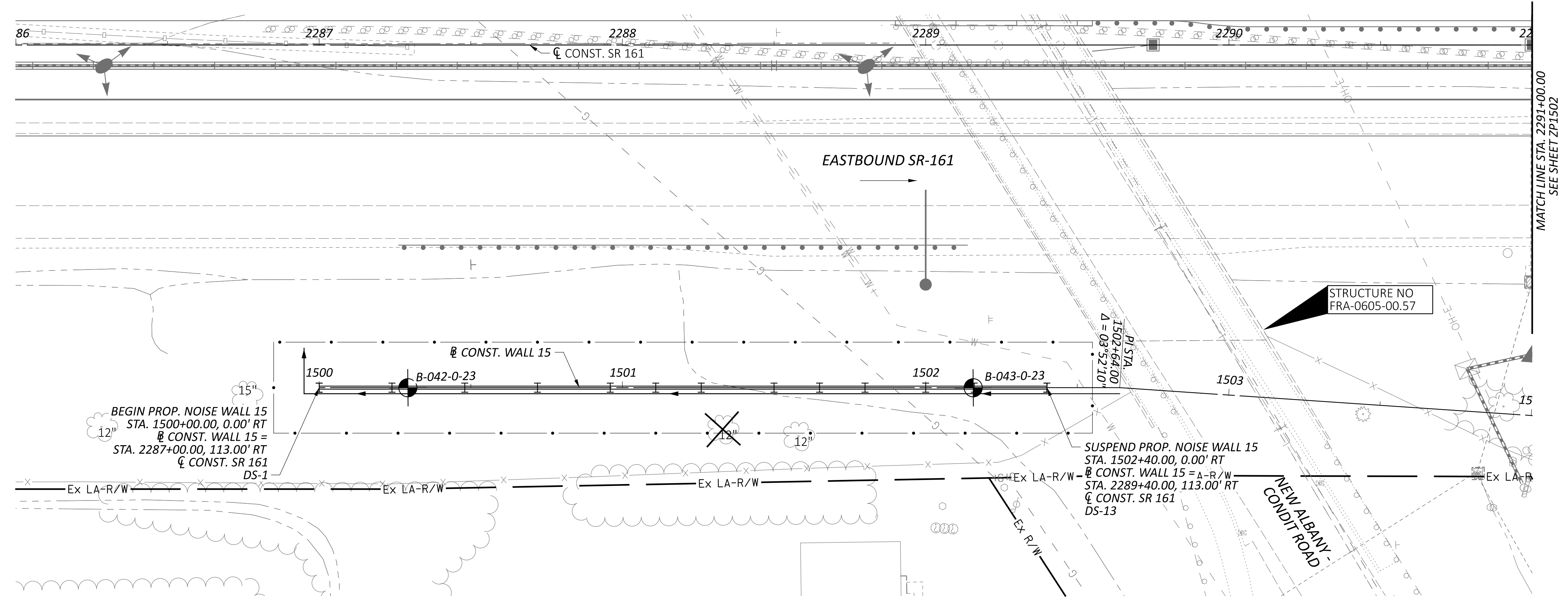
FRA-161-15.80 NOISE WALLS

MODEL: Wall 12 - Plan 21 PAPER SIZE: 34x22 (in.) DATE: 3/26/2024 TIME: 10:24:02 AM USER: juans
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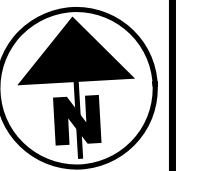
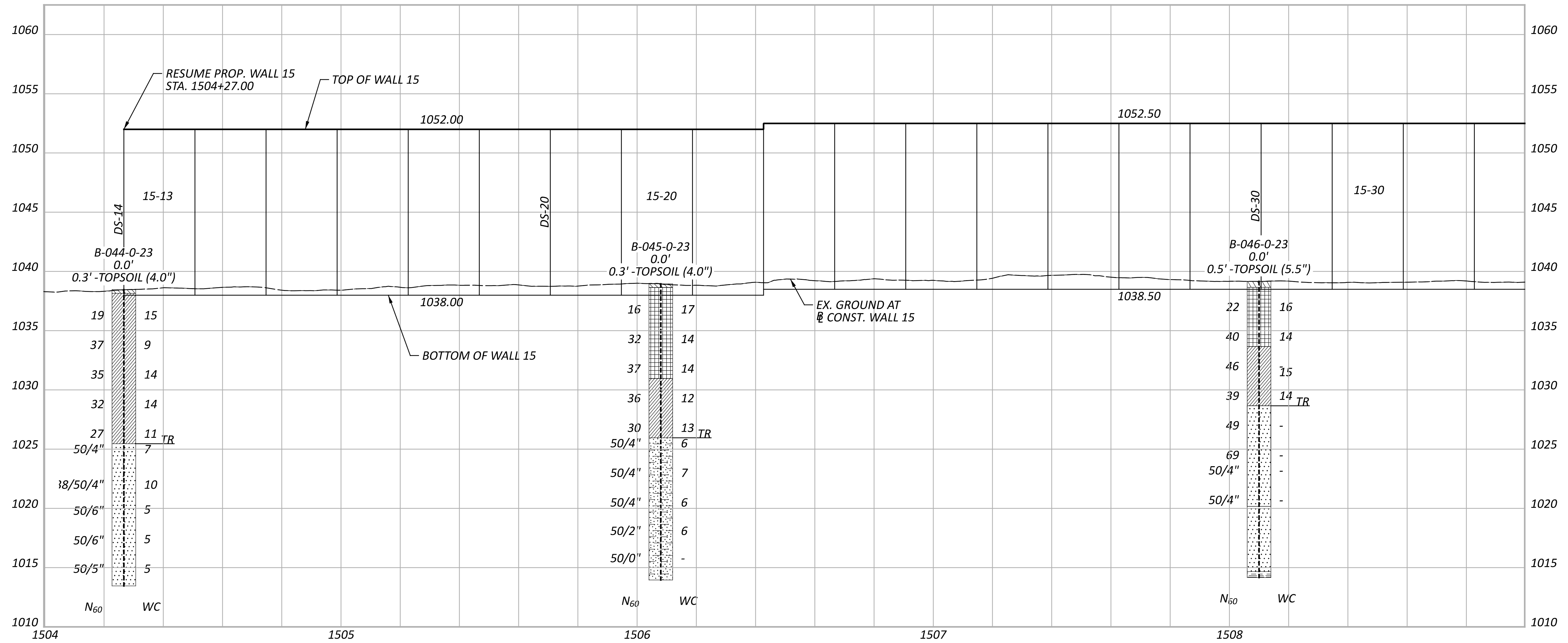
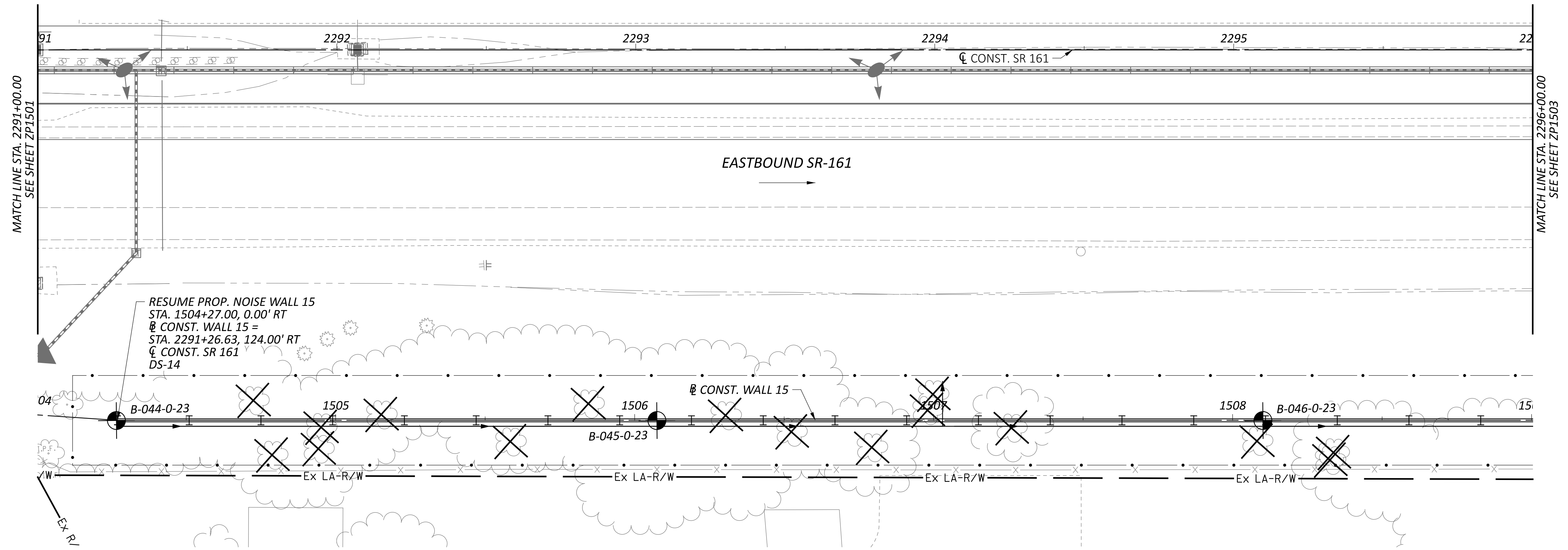
GEOTECHNICAL PROFILE - NOISE WALL 12
STA. 2244+00.00 TO STA. 2249+00.00

DESIGN AGENCY	
8350 PRESIDENTIAL GATEWAY COLUMBUS, OHIO 43231 (614) 823-4949	
DESIGNER	
KSJ	
REVIEWER	
DEK 1/19/24	
PROJECT ID	
117607	
SUBSET	TOTAL
23	66
SHEET	TOTAL
P.252	295



GEOTECHNICAL PROFILE - NOISE WALL 15
 STA. 2286+00.00 TO STA. 2291+00.00

DESIGN AGENCY	
 RESOURCE INTERNATIONAL 8350 PRESIDENTIAL GATEWAY COLUMBUS, OHIO 43231 (614) 823-4949	
DESIGNER	
KSJ	
REVIEWER	
DEK 1/19/24	
PROJECT ID	
117607	
SUBSET	TOTAL
24	66
SHEET	TOTAL
P.253	295

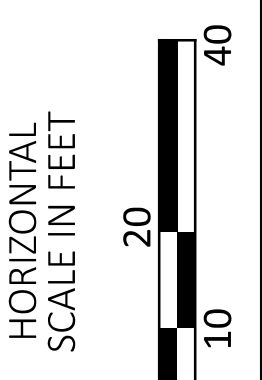
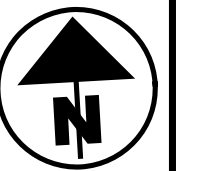
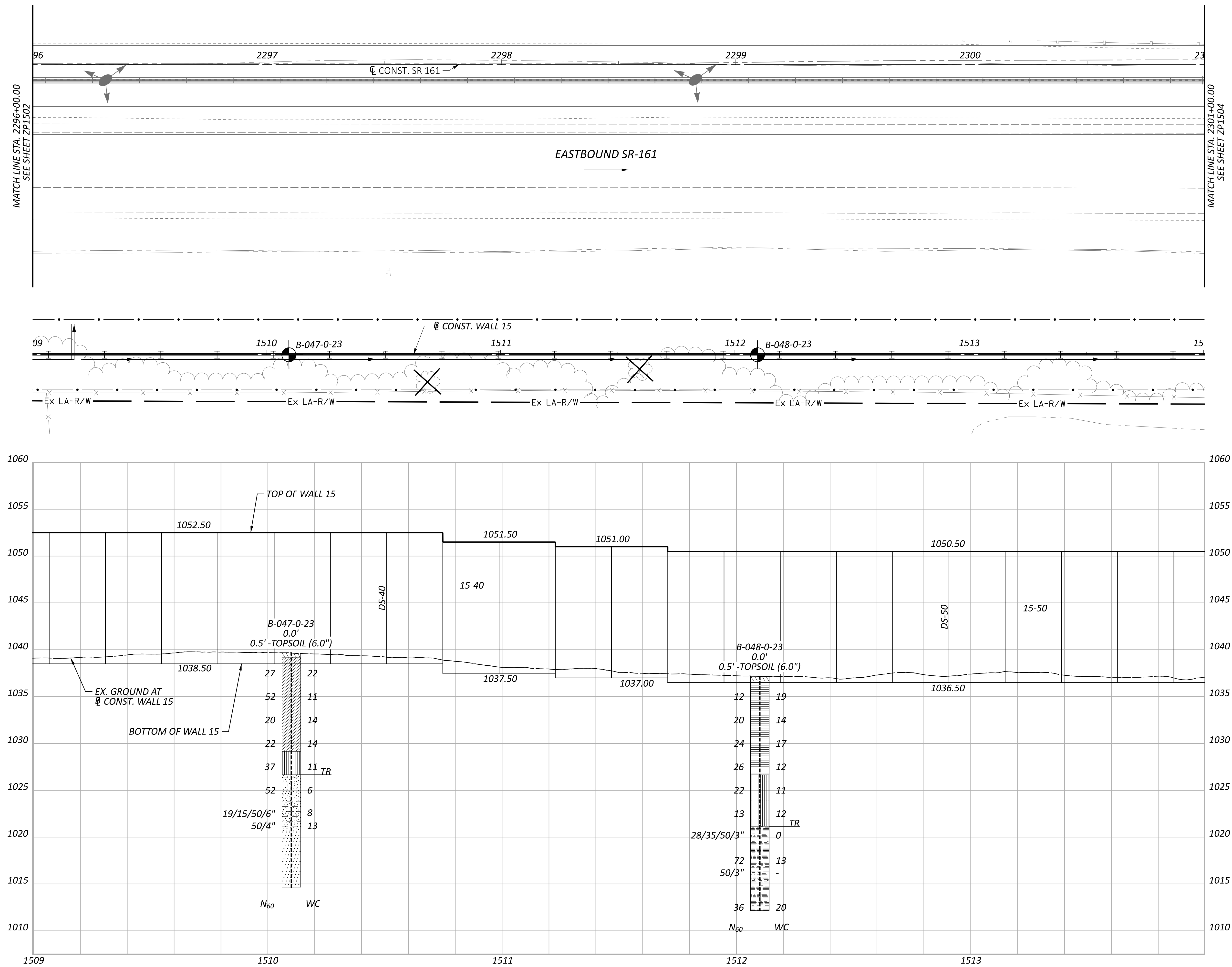


GEOTECHNICAL PROFILE - NOISE WALL 15
 STA. 2291+00.00 TO STA. 2296+00.00


DESIGN AGENCY	
 RESOURCE INTERNATIONAL 8350 PRESIDENTIAL GATEWAY COLUMBUS, OHIO 43231 (614) 823-4949	
DESIGNER	
KSJ	
REVIEWER	
DEK 1/19/24	
PROJECT ID	
117607	
SUBSET	TOTAL
25	66
SHEET	
P.254	
TOTAL	
295	

FRA-161-15.80 NOISE WALLS

MODEL: Wall 15 - Plan 24 PAPER SIZE: 34x22 (in.) DATE: 3/15/2024 TIME: 4:33:23 PM USER: juans
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_ZP1503.dgn

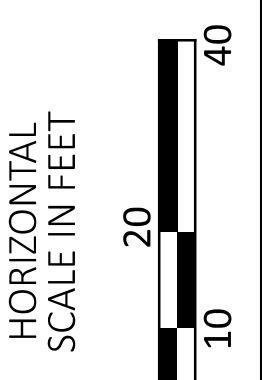
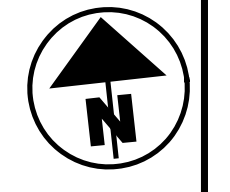
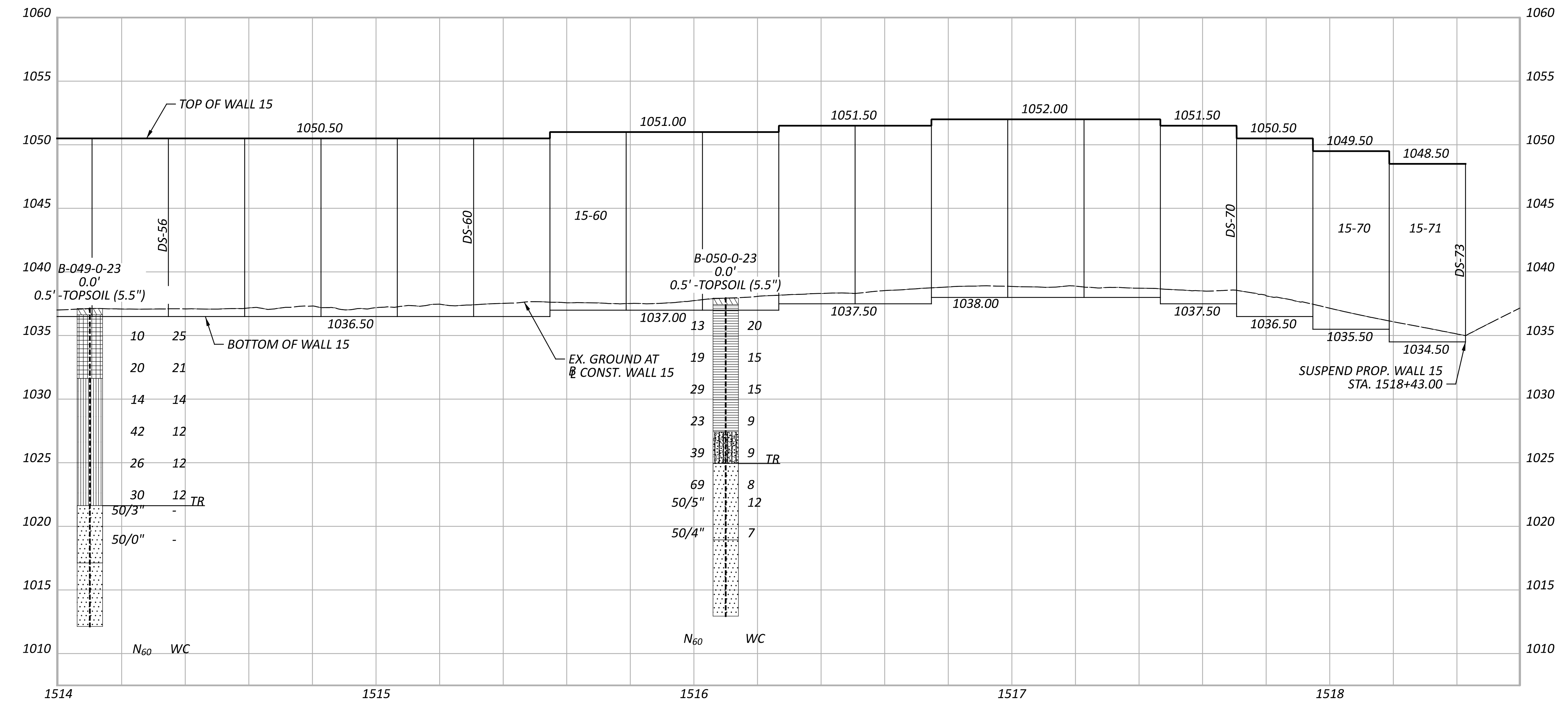
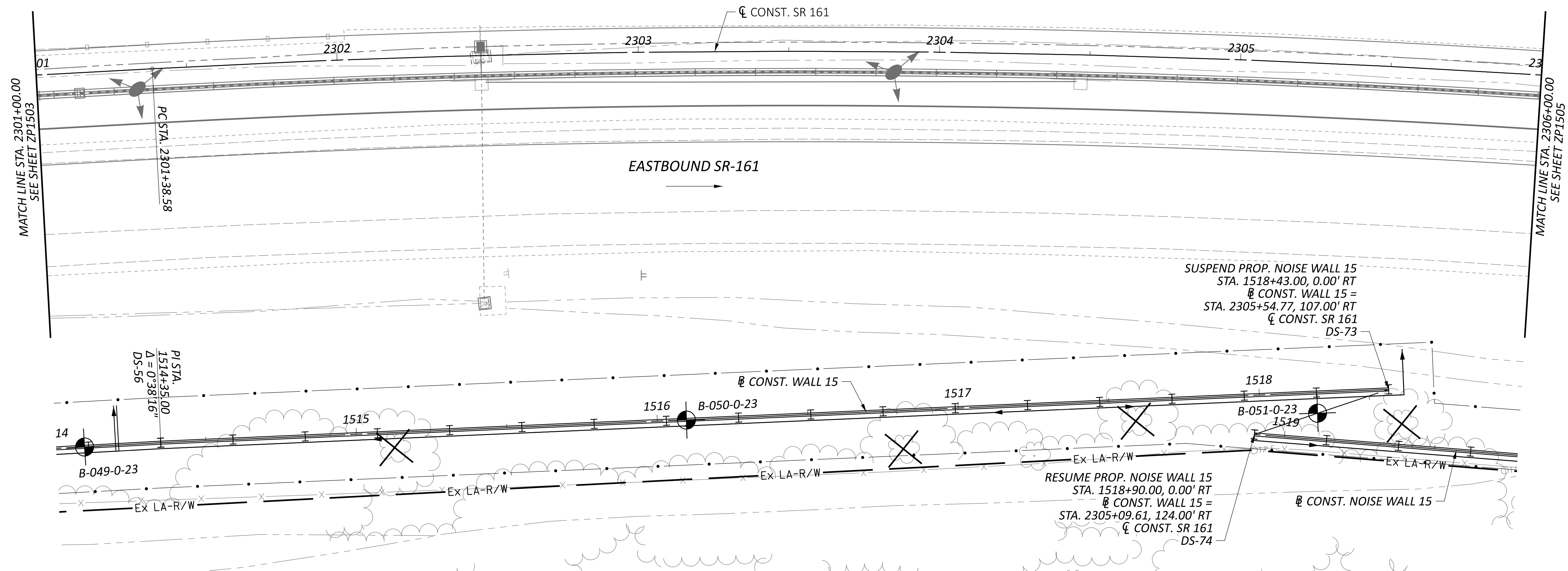


**GEOTECHNICAL PROFILE - NOISE WALL 15
 STA. 2296+00.00 TO STA. 2301+00.00**

DESIGN AGENCY	
 RESOURCE INTERNATIONAL 8350 PRESIDENTIAL GATEWAY COLUMBUS, OHIO 43231 (614) 823-4949	
DESIGNER	
KSJ	
REVIEWER	
DEK 1/19/24	
PROJECT ID	
117607	
SUBSET	TOTAL
26	66
SHEET	TOTAL
P.255	295

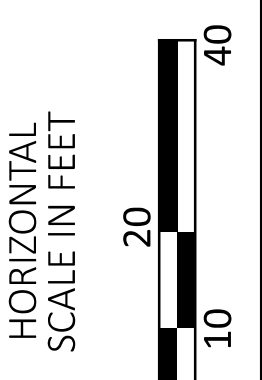
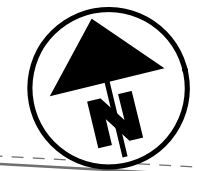
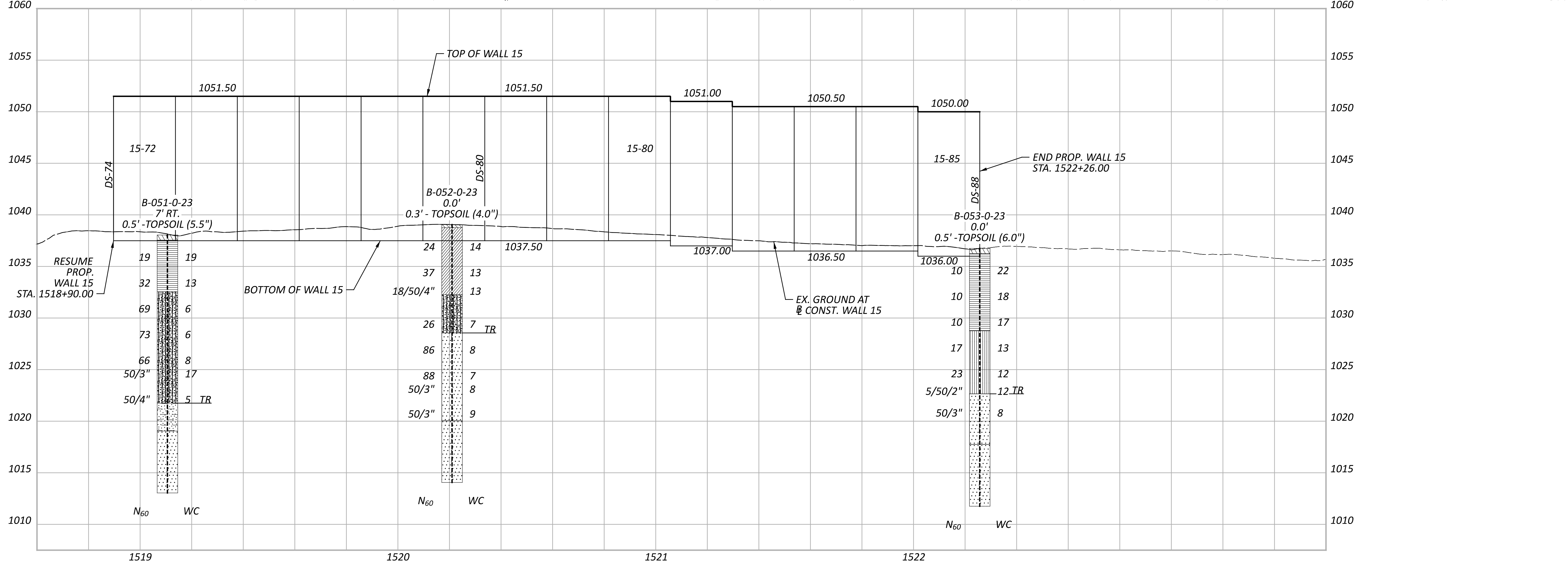
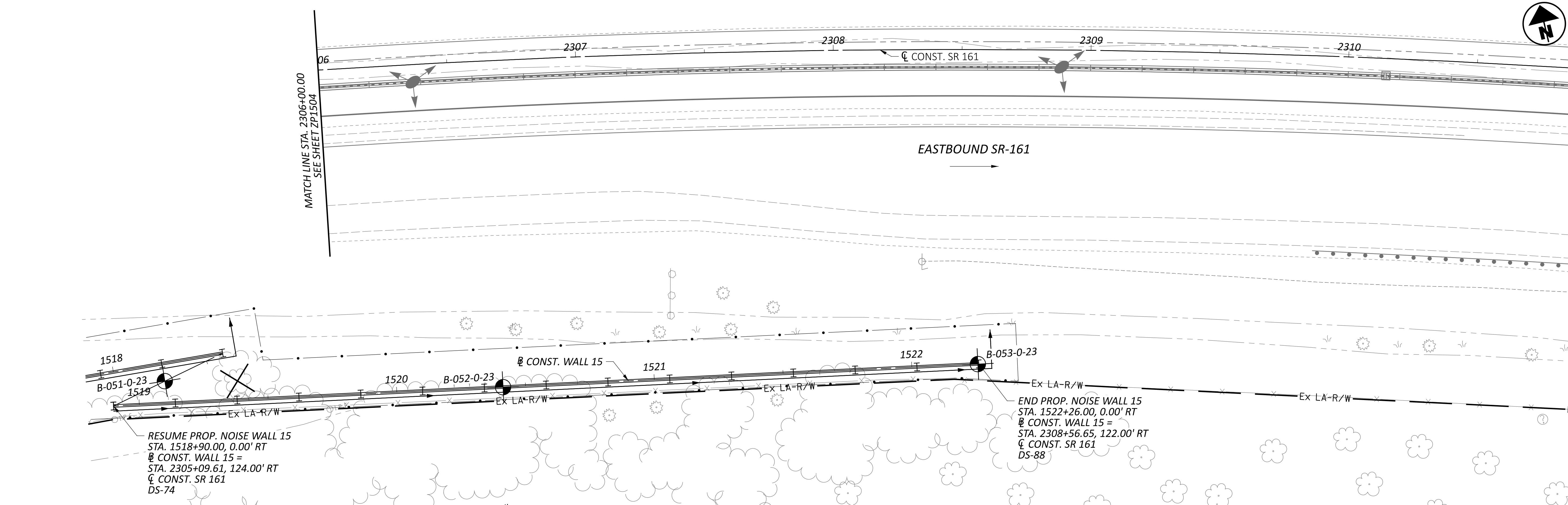
FRA-161-15.80 NOISE WALLS

MODEL: Wall 15 - Plan 25 PAPER SIZE: 34x22 (in.) DATE: 3/15/2024 TIME: 4:36:56 PM USER: juans
 J:\GEO TECH\Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_ZP1504.dgn



GEOTECHNICAL PROFILE - NOISE WALL 15
 STA. 2301+00.00 TO STA. 2306+00.00

DESIGN AGENCY	
8350 PRESIDENTIAL GATEWAY COLUMBUS, OHIO 43231 (614) 823-4949	
DESIGNER	
KSJ	
REVIEWER	
DEK 1/19/24	
PROJECT ID	
117607	
SUBSET	TOTAL
27	66
SHEET	TOTAL
P.256	295



GEOTECHNICAL PROFILE - NOISE WALL 15
 STA. 2306+00.00 TO STA. 2311+00.00

DESIGN AGENCY

 8350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949
 DESIGNER
 KSJ
 REVIEWER
 DEK 1/19/24
 PROJECT ID
 117607
 SUBSET TOTAL
 28 66
 SHEET TOTAL
 P.257 295

FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/15/2024 TIME: 8:53:57 AM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_ZL001.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 11/22/23 END: 11/22/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA / NQ2
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 300+00 / 0'
 ALIGNMENT: CL WALL 3
 ELEVATION: 966.3 (MSL) EOB: 15.0 ft.
 LAT / LONG: 40.080429, -82.864610

EXPLORATION ID
B-001-0-23

PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.3' - TOPSOIL (3.5")
 HARD, BROWN SILT AND CLAY, LITTLE GRAVEL,
 TRACE SAND, DAMP.

SANDSTONE : GRAY, HIGHLY WEATHERED.

SANDSTONE : BROWN AND GRAY, MODERATELY TO SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, IRON STAINED, PYRITIC, FRACTURED, NARROW APERTURE, SLIGHTLY ROUGH SURFACES, BLOCKY, GOOD SURFACE CONDITION.
 -HIGHLY FRACTURED AND HEAVILY IRON STAINED FROM 5.0' - 7.0'
 -@ 6.6' - 7.0' 60 DEGREE FRACTURE

-@ 10.3' - 10.8' 45 DEGREE FRACTURE AND HEAVILY IRON STAINED

-@ 10.8' - 13.6' SPECKLES OF PYRITE THROUGHOUT

DEPTH (ft)	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)							WC	HOLE SEALED
				GR	FS	SI	CL	LL	PL	PI		
1	6											
2	10	32	SS-1	4.5+	-	-	-	-	-	-	15	A-6a (V)
3	12											
4	11		SS-2	4.5+	-	-	-	-	-	-	16	A-6a (V)
5	50/4"											
6												
7												
8	0		NQ2-1									CORE
9												
10												
11												
12			NQ2-2									CORE
13	45											
14												
15												

EOB

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:55 - U:\G18\PROJECTS\2023\W-23-107.GPJ

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 23.5 LBS CEMENT / 12 LBS BENTONITE POWDER / 20 GAL WATER

Project Name: FRA-161-15.80

Location:
 Franklin County, Ohio



Photo No.
1

Boring:
 B-001-0-23

RC-1: 5.0'-10.0'
 REC (%):80
 RQD (%):10

RC-2: 10.0'-15.0'
 REC (%):100
 RQD (%):45

DESIGN AGENCY

 8350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949
 DESIGNER
 JAS
 REVIEWER
 DEK 1/19/24
 PROJECT ID
 117607
 SUBSET TOTAL
 29 66
 SHEET TOTAL
 P.258 295

GEOTECHNICAL PROFILE - NOISE WALLS
 NOISE WALL 3
 BORING LOG & ROCK CORE PHOTO FOR B-001-0-23

FRA-161-15.80 NOISE WALLS

MODEL: Sheet PAPER: 34x22 (in.) DATE: 3/14/2024 TIME: 6:46:43 PM USER: juans
 J:\GEO\GEO\GEOtech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_ZL002.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 11/22/23 END: 11/22/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA / NQ2
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 302+00 / 0'
 ALIGNMENT: CL WALL 3
 ELEVATION: 968.1 (MSL) EOB: 15.3 ft.
 LAT / LONG: 40.080609, -82.863925

EXPLORATION ID
B-002-0-23
 PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.4' - TOPSOIL (4.5')
 HARD, BROWN-GRAY CLAY, SOME SILT, LITTLE COARSE TO FINE SAND, TRACE SAND AND GRAVEL, MOIST.
 -@2.8' - 3.4' COBBLES
 VERY DENSE, GRAY GRAVEL WITH SAND AND SILT, DAMP.
SANDSTONE : GRAY, HIGHLY WEATHERED.
SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, PYRITIC, FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACES, BLOCKY, GOOD SURFACE.
 -@6.0' - 9.7' APPROXIMATELY 4MM PYRITE NODULES THROUGHOUT
 -@9.7' CLAY SEAM
 -@10.25' - 12.0' MANY PYRITE FLECKS THROUGHOUT
 -@11.0' - 15.75' FEW PYRITE FLECKS

DEPTH (ft)	ELEV.	SPT / RQD	REC SAMPLE ID	HP (tsf)	GR	GRADATION (%)							WC	HOLE SEALED	
						FS	SI	CL	LL	PL	PI	ATTERBERG			
1	968.1	3													
2	967.7	5													
3	965.1	7													
4	963.5	14													
5	962.1	17													
6		50/2"													
7															
8		0													
9															
10															
11															
12															
13															
14															
15	952.9	53													

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 23.5 LBS CEMENT / 12 LBS BENTONITE POWDER / 20 GAL WATER

Project Name: FRA-161-15.80

Location:
 Franklin County, Ohio

Photo No. 2	
Boring: B-002-0-23	
RC-1: 6.0-10.25' REC (%):68 RQD (%):10	
RC-2: 10.25-15.25' REC (%):96 RQD (%):53	



FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:47:03 PM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_ZL003.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 11/20/23 END: 11/22/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA / NQ2
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 304+00 / 0'
 ALIGNMENT: CL WALL 3
 ELEVATION: 969.1 (MSL) EOB: 15.0 ft.
 LAT / LONG: 40.080806, -82.863307

EXPLORATION ID
B-003-0-23
 PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.5' - TOPSOIL (5.5')
 HARD, BROWN SILT AND CLAY, TRACE GRAVEL

SANDSTONE : BROWN, HIGHLY WEATHERED.
SANDSTONE : BROWN TO GRAY, MODERATELY TO SLIGHTLY WEATHERED; STRONG; FINE GRAINED, THIN BEDDED, PYRITIC, FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, GOOD SURFACE.
 -@7.0' - 9.0' HIGHLY FRACTURED, RED IRON OXIDE STAINING IN FRACTURES

-@10.0' - 11.0' 4MM PYRITE NODULES THROUGHOUT
 -@11.0' - 11.2' CLAY SEAM
 -@11.2' - 13.5' MANY TINY PYRTIE SPECKS THROUGHOUT

-@13.5' - 15.0' LITTLE PYRITE

DEPTH (ft)	ELEV.	SPT / RQD	N ₆₀	REC SAMPLE ID	HP (tsf)	GRADATION (%)						WC	HOLE SEALED	
						GR	CS	FS	SI	CL	LL			PL
1	969.1	3												
2	968.6	5	16	SS-1	4.5+									
3		6												
4	964.4	5												
5	964.1	6		SS-2	4.5+									
6		50/3"												
7		0		NQ2-1										CORE
8														
9														
10														
11														
12														
13		55		NQ2-2										CORE
14	954.1													
15	EOB													

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:55 - U:\G18\PROJECTS\2023\W-23-107.GPJ

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 23.5 LBS CEMENT / 12 LBS BENTONITE POWDER / 20 GAL WATER

Project Name: FRA-161-15.80

Location:
 Franklin County, Ohio

Photo No.
3


Boring:
 B-003-0-23


RC-1: 5.0'-10.0'
 REC (%):80
 RQD (%):0



FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:47:22 PM USER: juans
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_Z1004.dgn

Project Name: FRA-161-15.80		Location: Franklin County, Ohio
Photo No. 4		
Boring: B-003-0-23		
RC-2: 10.0-15.0' REC (%):100 RQD (%):55		

DESIGN AGENCY

 8350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949
 DESIGNER
 JAS
 REVIEWER
 DEK 1/19/24
 PROJECT ID
 117607

SUBSET	TOTAL
32	66
SHEET	TOTAL
P.261	295

GEOTECHNICAL PROFILE - NOISE WALLS
 NOISE WALL 3
 BORING LOG & ROCK CORE PHOTO FOR B-003-0-23

FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:47:35 PM USER: juans
 J:\GEO\GEO\GEOtech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_ZL005.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 11/20/23 END: 11/20/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA / NQ2
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 305+76 / 0'
 ALIGNMENT: CL WALL 3
 ELEVATION: 969.2 (MSL) EOB: 15.0 ft.
 LAT / LONG: 40.081003, -82.862692

EXPLORATION ID
B-004-0-23

PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.4' TOPSOIL (5.0")
 HARD, MOTTLED BROWN CLAY, SOME SILT, TRACE COARSE TO FINE SAND, MOIST.

SANDSTONE : GRAY, HIGHLY WEATHERED.

SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, PYRITIC, FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, GOOD SURFACE.
 -@11.8' - 12.4' FRACTURE
 -@13.3' - 15.0' MANY TINY PYRITE NODULES THROUGHOUT

DEPTH (ft)	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)				ATTERBERG				WC	HOLE SEALED	
				GR	CS	FS	SI	CL	LL	PL	PI			
1	3													
2	4	16	4.5+	0	1	6	35	58	52	20	32	21	A-7-6 (18)	
3	7													
4	4	16	50	SS-2	4.5+	-	-	-	-	-	-	19	A-7-6 (V)	
5	7													
6	50/2"		100	SS-3	--	--	--	--	--	--	--	10	Rock (V)	
7														
8	50/2"		100	SS-4	--	--	--	--	--	--	--	5	Rock (V)	
9														
10														
11														
12	0		75	NQ2-1									CORE	
13														
14														
15														

EOB

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:55 - U:\G18\PROJECTS\2023\W-23-107.GPJ

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 23.5 LBS CEMENT / 12 LBS BENTONITE POWDER / 20 GAL WATER

Project Name: FRA-161-15.80

Location:
 Franklin County, Ohio

Photo No.
5

Boring:
 B-004-0-23

RC-1: 10.0-15.0'
 REC (%):75
 RQD (%):0



DESIGN AGENCY

 8350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949

DESIGNER
 JAS

REVIEWER
 DEK 1/19/24

PROJECT ID
 117607

SUBSET TOTAL
 33 66

SHEET TOTAL
 P.262 295

GEOTECHNICAL PROFILE - NOISE WALLS
NOISE WALL 3
BORING LOG & ROCK CORE PHOTO FOR B-004-0-23

FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:47:55 PM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_ZL006.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
TYPE: NOISE WALLS
PID: 117607 SFN: NA
START: 11/20/23 END: 11/20/23

DRILLING FIRM / OPERATOR: RII / TG
SAMPLING FIRM / LOGGER: RII / MJ
DRILLING METHOD: 3.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
HAMMER: AUTOMATIC
CALIBRATION DATE: 3/21/22
ENERGY RATIO (%): 86.4

STATION / OFFSET: 600+00 / 0'
ALIGNMENT: CL WALL 6
ELEVATION: 961.5 (MSL) EOB: 25.0 ft.
LAT / LONG: 40.087831, -82.843714

EXPLORATION ID
B-005-0-23

PAGE
1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.4' - TOPSOIL (5.0")
VERY STIFF TO HARD, DARK BROWN TO BROWNISH GRAY SILT AND CLAY, LITTLE COARSE TO FINE SAND, TRACE GRAVEL, DAMP TO MOIST.

MEDIUM DENSE, DARK GRAY COARSE AND FINE SAND, LITTLE SILT, TRACE GRAVEL, WET.

DENSE TO VERY DENSE, DARK GRAY GRAVEL WITH SAND, LITTLE SILT, TRACE CLAY, WET.

DENSE, DARK GRAY COARSE AND FINE SAND, TRACE FINE GRAVEL, TRACE SILT, WET.

ELEV. 961.5

961.1

DEPTH	SPT / RQD	N ₆₀	REC SAMPLE (%)	HP ID	GR	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)		
1	6	8	72	SS-1	4.5+	-	-	-	-	-	-	14	A-6a (V)		
2	8	8													
3															
4	5	6	56	SS-2	4.5+	-	-	-	-	-	-	22	A-6a (V)		
5	10														
6	8	16	100	SS-3	4.5+	-	-	-	-	-	-	12	A-6a (V)		
7	23														
8															
9	7	7	56	SS-4	4.5+	9	11	16	31	33	28	16	12	13	A-6a (7)
10															
11	4	4	33	SS-5	2.50	-	-	-	-	-	-	-	14	A-6a (V)	
12	5														
13	4	5													
14	5	19	47	SS-6	-	-	-	-	-	-	-	-	14	A-3a (V)	
15	8														
16	21	21	53	SS-7	-	-	-	-	-	-	-	-	12	A-1-b (V)	
17	16														
18															
19	31	15	58	SS-8	-	-	-	-	-	-	-	-	11	A-1-b (V)	
20	25														
21	9	10	37	SS-9	-	51	17	10	13	9	NP	NP	NP	NP	A-1-b (0)
22	16														
23															
24	8	12	43	SS-10	-	-	-	-	-	-	-	-	18	A-3a (V)	
25	18														

EOB -25

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 15.5' AND UPON COMPLETION @ 14.7'. CAVE-IN DEPTH @ 11.8'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
TYPE: NOISE WALLS
PID: 117607 SFN: NA
START: 11/20/23 END: 11/20/23

DRILLING FIRM / OPERATOR: RII / TG
SAMPLING FIRM / LOGGER: RII / MJ
DRILLING METHOD: 3.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
HAMMER: AUTOMATIC
CALIBRATION DATE: 3/21/22
ENERGY RATIO (%): 86.4

STATION / OFFSET: 601+77 / 0'
ALIGNMENT: CL WALL 6
ELEVATION: 968.1 (MSL) EOB: 25.0 ft.
LAT / LONG: 40.088035, -82.843136

EXPLORATION ID
B-006-0-23

PAGE
1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.5' - TOPSOIL (5.5")
HARD, BROWN SILT AND CLAY, SOME CLAY, TRACE FINE GRAVEL, DAMP.

DENSE TO MEDIUM DENSE, BROWN GRAY GRAVEL WITH SAND, SILT, AND CLAY, MOIST.

ELEV. 968.1

967.6

DEPTH	SPT / RQD	N ₆₀	REC SAMPLE (%)	HP ID	GR	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)		
1	6	10	32	SS-1	4.5+	-	-	-	-	-	-	11	A-6a (V)		
2	10	12													
3															
4	7	12	36	SS-2	4.5+	7	11	16	32	34	29	17	12	14	A-6a (7)
5	13														
6	7	9	29	SS-3	4.5+	-	-	-	-	-	-	-	13	A-6a (V)	
7	11														
8															
9	6	11	39	SS-4	-	-	-	-	-	-	-	-	11	A-2-4 (V)	
10	16														
11	7	17	48	SS-5	-	-	-	-	-	-	-	-	7	A-2-4 (V)	
12	16														
13															
14	9	15	45	SS-6	-	-	-	-	-	-	-	-	-	-	
15	16														
16	13	-	67	2S-6A	-	-	-	-	-	-	-	-	15	A-2-4 (V)	
17	21	18	48	SS-7	-	36	19	14	19	12	24	17	7	11	A-2-4 (0)
18	15														
19	16	12	29	SS-8	-	-	-	-	-	-	-	-	10	A-2-4 (V)	
20	8														
21	10	12	35	SS-9	-	-	-	-	-	-	-	-	12	A-3a (V)	
22	12	12													
23															
24	16	15	43	SS-10	-	-	-	-	-	-	-	-	10	A-1-b (V)	
25	15														

EOB -25

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 13.5' AND UPON COMPLETION @ 15.5'. CAVE-IN DEPTH @ 12.2'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY
RESOURCE INTERNATIONAL
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNER
JAS

REVIEWER
DEK 1/19/24

PROJECT ID
117607

SUBSET TOTAL
34 66

SHEET TOTAL
P.263 295

GEOTECHNICAL PROFILE - NOISE WALLS
NOISE WALL 6
BORING LOGS B-005-0-23 AND B-006-0-23

FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:48:20 PM USER: juans
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_ZL007.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 11/17/23 END: 11/17/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 603+60 / 0'
 ALIGNMENT: CL WALL 6
 ELEVATION: 969.0 (MSL) EOB: 25.0 ft.
 LAT / LONG: 40.088248, -82.842572

EXPLORATION ID
B-007-0-23

PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.4' TOPSOIL (5.0")
 HARD, BROWN TO BROWNISH GRAY SILTY CLAY, LITTLE COARSE TO FINE SAND, TRACE GRAVEL, DAMP TO MOIST.

SPT / RQD	N ₆₀	REC SAMPLE ID	HP (tsf)	GRADATION (%)				ATTERBERG				WC	ODOT CLASS (GI)	BACK FILL
				GR	CS	FS	SI	CL	LL	PL	PI			
5	17	SS-1	4.5+	4	10	13	31	42	34	18	16	21	A-6b (10)	
12	42	SS-2	4.5+	-	-	-	-	-	-	-	-	16	A-6b (V)	
8	40	SS-3	4.5+	-	-	-	-	-	-	-	-	12	A-6b (V)	
9	27	SS-4	-	-	-	-	-	-	-	-	-	-		
22	-	2S-4A	4.5+	-	-	-	-	-	-	-	-	12	A-6b (V)	
8	23	SS-5	4.5+	-	-	-	-	-	-	-	-	13	A-6b (V)	
12	56	SS-6	-	-	-	-	-	-	-	-	-	7	A-1-b (V)	
13	43	SS-7	-	24	39	15	12	10	NP	NP	NP	12	A-1-b (0)	
15	75	SS-8	-	-	-	-	-	-	-	-	-	14	A-1-b (V)	
16	55	SS-9	-	-	-	-	-	-	-	-	-	13	A-1-b (V)	
5	22	SS-10	-	-	-	-	-	-	-	-	-	17	A-1-b (V)	

944.0 EOB

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 21.0' AND UPON COMPLETION @ 20.5'; CAVE-IN DEPTH @ 13.1'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 11/17/23 END: 11/17/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 605+28 / 0'
 ALIGNMENT: CL WALL 6
 ELEVATION: 970.0 (MSL) EOB: 27.5 ft.
 LAT / LONG: 40.088448, -82.842015

EXPLORATION ID
B-008-0-23

PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.3' TOPSOIL (4.0")
 HARD BROWN TO BROWN/GRAY SANDY SILT, SOME CLAY, LITTLE FINE GRAVEL, DAMP.

SPT / RQD	N ₆₀	REC SAMPLE ID	HP (tsf)	GRADATION (%)				ATTERBERG				WC	ODOT CLASS (GI)	BACK FILL
				GR	CS	FS	SI	CL	LL	PL	PI			
10	46	SS-1	4.5+	-	-	-	-	-	-	-	-	11	A-4a (V)	
10	45	SS-2	4.5+	-	-	-	-	-	-	-	-	11	A-4a (V)	
13	46	SS-3	-	-	-	-	-	-	-	-	-	-		
28	-	2S-3A	4.5+	-	-	-	-	-	-	-	-	10	A-4a (V)	
5	24	SS-4	4.5+	13	11	16	30	30	16	14	2	10	A-4a (5)	
5	48	SS-5	4.5+	-	-	-	-	-	-	-	-	11	A-4a (V)	
29	82	SS-6	-	-	-	-	-	-	-	-	-	-		
10	49	SS-7	-	-	-	-	-	-	-	-	-	9	A-1-b (V)	
6	23	SS-8	4.5+	27	10	13	27	23	24	14	10	10	A-4a (3)	
10	20	SS-9	3.50	-	-	-	-	-	-	-	-	12	A-4a (V)	
3	12	SS-10	-	-	-	-	-	-	-	-	-	17	A-3a (V)	
3	23	SS-11	-	-	-	-	-	-	-	-	-	20	A-3a (V)	

942.5 EOB

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 21.0' AND UPON COMPLETION @ 20.1'; CAVE-IN DEPTH @ 13.1'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY

 6350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949
 DESIGNER
JAS
 REVIEWER
 DEK 1/19/24
 PROJECT ID
 117607
 SUBSET TOTAL
 35 66
 SHEET TOTAL
 P.264 295

GEOTECHNICAL PROFILE - NOISE WALLS
NOISE WALL 6
BORING LOGS B-007-0-23 AND B-008-0-23

FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:48:45 PM USER: jluans
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_ZL008.dgn

RESOURCE INTERNATIONAL, INC.

PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 11/2/23 END: 11/2/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 2192+50 / 123' RT
 ALIGNMENT: CL SR 161
 ELEVATION: 960.9 (MSL) EOB: 25.5 ft.
 LAT / LONG: 40.086999, -82.844104

EXPLORATION ID
B-009-0-23

PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.3' TOPSOIL (4.0")
 HARD, BROWN SILT AND CLAY, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.
 -COBBLES @ 4.0'
 DENSE TO VERY DENSE, LIGHT BROWN SANDY SILT, LITTLE CLAY, TRACE GRAVEL, DAMP.
 MEDIUM DENSE TO VERY DENSE, DARK GRAY TO GRAY GRAVEL WITH SAND AND SILT, MOIST.
 DENSE TO VERY DENSE, GRAY SILTY SAND, TRACE CLAY, TRACE FINE GRAVEL, MOIST.

DEPTH	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)							WC	ODOT CLASS (GI)	
				GR	CS	FS	SI	CL	LL	PL			
1	5												
2	8	30	4.5+									13	A-6a (V)
3	13												
4	22		4.5+									8	A-6a (V)
5	50/3*												
6	9	15											
7	15	49										7	A-4a (V)
8	19												
9	24	26											
10	26	58										10	A-4a (V)
11	9	10										7	A-2-4 (V)
12	10	26											
13	11	42										11	A-2-4 (V)
14	13	33											
15	16												
16	15	52										20	A-2-4 (V)
17	18												
18	18												
19	10	40										10	A-2-4 (V)
20	14												
21	12	58										9	A-4a (V)
22	20	20											
23	20												
24	5	9											
25	13	32											
25	21											7	A-4a (V)

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 12.0' AND UPON COMPLETION @ 10.3'; CAVE-IN DEPTH @ 19.1'
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

RESOURCE INTERNATIONAL, INC.

PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 11/3/23 END: 11/3/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 2194+49 / 112' RT
 ALIGNMENT: CL SR 161
 ELEVATION: 961.8 (MSL) EOB: 25.0 ft.
 LAT / LONG: 40.087252, -82.843476

EXPLORATION ID
B-010-0-23


PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.3' TOPSOIL (4.0")
 HARD, BROWN SILT AND CLAY, LITTLE COARSE TO FINE SAND, TRACE GRAVEL, DAMP TO MOIST.
 -COBBLES FROM 3.8' - 4.5'
 MEDIUM DENSE TO DENSE, BROWN GRAVEL WITH SAND AND SILT, WET.
 HARD, BROWN SANDY SILT, LITTLE CLAY, TRACE FINE GRAVEL, DAMP.

DEPTH	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)							WC	ODOT CLASS (GI)	
				GR	CS	FS	SI	CL	LL	PL			
1	8												
2	12	35	4.5+										
3	12												
4	15	91	4.5+										
5	45	42											
6	11	26											
7	9	56											
8	9												
9	11	33										8	A-2-4 (V)
10	12												
11	6	27											
12	8	0											
13	7												
14	10	29											
15	10												
16	5											15	A-2-4 (V)
17	7	26	4.5+									14	A-4a (V)
18	8	26											
19	5	30	4.5+									12	A-4a (6)
20	8	30											
21	9	48	4.5+										
22	16	78										13	A-4a (V)
23	17												
24	10	40	4.5+										
25	15	67										14	A-4a (V)

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 12.5' AND UPON COMPLETION @ 11.2'; CAVE-IN DEPTH @ 13.1'
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY

 8350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949
 DESIGNER
 JAS
 REVIEWER
 DEK 1/19/24
 PROJECT ID
 117607
 SUBSET TOTAL
 36 66
 SHEET TOTAL
 P.265 295

GEOTECHNICAL PROFILE - NOISE WALLS
BORING LOGS B-009-0-23 AND B-010-0-23

FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:49:10 PM USER: juans
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607-400-Engineering\Geotechnical\Sheets\117607_ZL009.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 11/3/23 END: 11/3/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 2196+50 / 111' RT
 ALIGNMENT: CL SR 161
 ELEVATION: 964.3 (MSL) EOB: 25.0 ft.
 LAT / LONG: 40.087493, -82.842814

EXPLORATION ID
B-011-0-23

PAGE
 1 OF 1

MATERIAL DESCRIPTION
 AND NOTES

0.3' TOPSOIL (3.5")
 STIFF TO HARD, BROWN TO GRAY SILT AND CLAY,
 "AND" COARSE TO FINE SAND, LITTLE FINE GRAVEL,
 DAMP TO MOIST.

LOOSE TO DENSE, BROWN GRAVEL WITH SAND,
 TRACE SILT, TRACE CLAY, WET.

-HEAVE @ 21.0' AND 23.0'

SPT/ RQD	N ₆₀	REC SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	BACK FILL	
				GR	CS	FS	SI	CL	LL	PL	PI				
1	5														
2	7	23	53	SS-1	4.5+	-	-	-	-	-	-	-	21	A-6a (V)	
3															
4	9	27	61	SS-2	4.5+	-	-	-	-	-	-	-	13	A-6a (V)	
5	10														
6	4	17	81	SS-3	4.5+	17	11	15	30	27	16	11	12	A-6a (5)	
7	6	6													
8															
9	5	19	89	SS-4	3.75	-	-	-	-	-	-	-	14	A-6a (V)	
10	8														
11	2	3	56	SS-5	2.50	-	-	-	-	-	-	-	14	A-6a (V)	
12	5														
13															
14	1	2	53	SS-6	1.25	-	-	-	-	-	-	-	15	A-6a (V)	
15	4														
16	3	6	39	SS-7	-	-	-	-	-	-	-	-	20	A-1-b (V)	
17	7														
18															
19	2	9	67	SS-8	-	68	17	1	5	NP	NP	NP	22	A-1-b (0)	
20	4														
21															
22	5	9	29	SS-9	-	-	-	-	-	-	-	-	14	A-1-b (V)	
23	11														
24	7	10	35	SS-10	-	-	-	-	-	-	-	-	12	A-1-b (V)	
25	14														

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 16.0' AND UPON COMPLETION @ 7.8'. CAVE-IN DEPTH @ 13.9'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 11/3/23 END: 11/3/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 800+72 / 117' RT
 ALIGNMENT: CL SR 161
 ELEVATION: 967.1 (MSL) EOB: 25.0 ft.
 LAT / LONG: 40.087734, -82.842176

EXPLORATION ID
B-012-0-23

PAGE
 1 OF 1

MATERIAL DESCRIPTION
 AND NOTES

0.3' TOPSOIL (4.0")
 HARD, LIGHT BROWN SILT AND CLAY, SOME COARSE
 TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.

-COBBLES FROM 4.8' - 5.2'
 -AUGER REFUSAL @ 5.2'. OFFSET 7.0' SW, CONTINUED
 SAMPLING AT 6.0'

DENSE TO VERY DENSE, DARK GRAY GRAVEL WITH
 SAND, LITTLE SILT, TRACE CLAY, MOIST.

HARD, BROWN SANDY SILT, LITTLE CLAY, TRACE FINE
 GRAVEL, MOIST.

SPT/ RQD	N ₆₀	REC SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	BACK FILL	
				GR	CS	FS	SI	CL	LL	PL	PI				
1	5														
2	6	22	53	SS-1	4.5+	-	-	-	-	-	-	-	18	A-6a (V)	
3	9														
4	14	63	72	SS-2	4.5+	-	-	-	-	-	-	-	10	A-6a (V)	
5	28														
6	11	42	78	SS-3	4.5+	8	10	15	33	34	30	17	11	A-6a (8)	
7	13														
8	16														
9	20	63	47	SS-4	-	-	-	-	-	-	-	-	10	A-6a (V)	
10	16														
11	5	18	43	SS-5	4.5+	-	-	-	-	-	-	-	11	A-6a (V)	
12	12														
13															
14	7	14	46	SS-6	-	46	21	8	18	7	NP	NP	8	A-1-b (0)	
15	18														
16	15	40	72	SS-7	-	-	-	-	-	-	-	-	8	A-1-b (V)	
17	18														
18	17	52	61	SS-8	-	-	-	-	-	-	-	-	11	A-1-b (V)	
19	18														
20															
21	18	86	50	SS-9	4.5+	-	-	-	-	-	-	-	11	A-4a (V)	
22	34														
23	26														
24	6	9	30	SS-10	4.5+	-	-	-	-	-	-	-	11	A-4a (V)	
25	12														

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 18.5' AND UPON COMPLETION @ 14.9'. CAVE-IN DEPTH @ 18.5'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY

 6350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949
 DESIGNER
 JAS
 REVIEWER
 DEK 1/19/24
 PROJECT ID
 117607
 SUBSET TOTAL
 37 66
 SHEET TOTAL
 P.266 295

GEOTECHNICAL PROFILE - NOISE WALLS
 NOISE WALL 8
 BORING LOGS B-011-0-23 AND B-012-0-23

FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:49:34 PM USER: juans
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_ZL010.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 11/3/23 END: 11/3/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 802+72 / 0'
 ALIGNMENT: CL WALL 8
 ELEVATION: 967.4 (MSL) EOB: 25.0 ft.
 LAT / LONG: 40.087953, -82.841539

EXPLORATION ID
B-013-0-23

PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.4' TOPSOIL (5.0")
 HARD, LIGHT BROWN TO BROWN SILT AND CLAY, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.

DENSE TO VERY DENSE, GRAY COARSE AND FINE SAND, TRACE FINE GRAVEL, TRACE SILT, DAMP.

MEDIUM DENSE TO VERY DENSE, GRAY GRAVEL WITH SAND AND SILT, MOIST.

-AUGER LOST IN BORING @ 18.5' - 23.5'

DEPTH (ft)	SPT / RQD	REC SAMPLE (%)	HP ID	GRADATION (%)						ATTERBERG			WC	ODOT CLASS (GI)	BACK FILL	
				GR	CS	FS	SI	CL	LL	PL	PI					
1	5															
2	7	24	SS-1	4.5+											15	A-6a (V)
3	10															
4	9	33	SS-2	4.5+											14	A-6a (V)
5	13															
6	11	30	SS-3	4.5+											12	A-6a (V)
7	10															
8	11															
9	7	27	SS-4	4.5+	9	8	16	35	32	28	15	13			12	A-6a (8)
10	11															
11	10	84	SS-5	-											5	A-3a (V)
12	17	41														
13																
14	18	45	SS-6	-											6	A-3a (V)
15	15															
16	5	27	SS-7	-											12	A-2-4 (V)
17	8															
18																
19	14	55	SS-8	-											9	A-2-4 (V)
20	24	14														
21	9	32	SS-9	-	65	10	6	12	7	23	16	7			11	A-2-4 (0)
22	12															
23	10															
24	23	63	SS-10	-											10	A-2-4 (V)
25	23	21														

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 16.0' AND UPON COMPLETION @ 14.2'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 11/6/23 END: 11/2/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 804+72 / 0'
 ALIGNMENT: CL WALL 8
 ELEVATION: 966.4 (MSL) EOB: 25.0 ft.
 LAT / LONG: 40.088209, -82.840922

EXPLORATION ID
B-014-0-23

PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.5' TOPSOIL (5.5")
 HARD, LIGHT BROWN TO GRAY SILTY CLAY, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.

MEDIUM DENSE TO DENSE, GRAY GRAVEL WITH SAND AND SILT, WET.

MEDIUM DENSE, GRAY SANDY SILT, TRACE CLAY, TRACE FINE GRAVEL, MOIST.

DEPTH (ft)	SPT / RQD	REC SAMPLE (%)	HP ID	GRADATION (%)						ATTERBERG			WC	ODOT CLASS (GI)	BACK FILL	
				GR	CS	FS	SI	CL	LL	PL	PI					
1	3															
2	3	13	SS-1	4.5+											21	A-6b (V)
3	6															
4	5	17	SS-2	4.5+												
5	7															
6	4	22	SS-3	4.5+											15	A-6b (V)
7	9															
8																
9	16	35	SS-4	4.5+											12	A-6b (V)
10	14															
11	5	19	SS-5	4.25											12	A-6b (V)
12	8															
13																
14	8	43	SS-6	-											15	A-2-4 (V)
15	16															
16	5	23	SS-7	-	43	25	11	13	8	28	20	8			12	A-2-4 (0)
17	8															
18	6	24	SS-8	-											10	A-2-4 (V)
19	8															
20	9															
21	8	26	SS-9	-											13	A-2-4 (V)
22	10															
23																
24	5	22	SS-10	-											19	A-4a (V)
25	7	8														

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 13.5' AND UPON COMPLETION @ 11.8'; CAVE-IN DEPTH @ 12.3'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY

 6350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949
 DESIGNER
JAS
 REVIEWER
DEK 1/19/24
 PROJECT ID
117607
 SUBSET TOTAL
38 66
 SHEET TOTAL
P.267 295

GEOTECHNICAL PROFILE - NOISE WALLS
NOISE WALL 8
BORING LOGS B-013-0-23 AND B-014-0-23

FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:49:59 PM USER: juans
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_ZL01.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 10/23/23 END: 10/23/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 806+72 / 0'
 ALIGNMENT: CL WALL 8
 ELEVATION: 966.5 (MSL) EOB: 25.0 ft.
 LAT / LONG: 40.088482, -82.840308

EXPLORATION ID
B-015-0-23

PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.7' -TOPSOIL (8.0")

VERY STIFF, BROWNISH GRAY TO GRAY SILTY CLAY, SOME COARSE TO FINE SAND, TRACE GRAVEL AND SAND, DAMP TO MOIST.

ELEV. 966.5

DEPTHS

SPT/ RQD

REC SAMPLE ID

GRADATION (%)

ATTERBERG

ODOT CLASS (GI)

BACK FILL

DEPTH	SPT/ RQD	REC SAMPLE ID	GRADATION (%)	ATTERBERG	ODOT CLASS (GI)	BACK FILL
1	3					
2	4	SS-1	-	-	19	A-6b (V)
3	4					
4	30	SS-2	-	-	13	A-6b (V)
5	11					
6	11	SS-3	8 13 33 30	34 18 16	13	A-6b (8)
7	13					
8						
9	6	SS-4	-	-	13	A-6b (V)
10	8					
11	6	SS-5	-	-	13	A-6b (V)
12	10					
13						
14	6	SS-6	-	-	12	A-6b (V)
15	5					
16	17					
17	30	SS-7	-	-	13	A-4a (V)
18	25					
19	19	SS-8	42 13 8 24 13	26 17 9	10	A-4a (0)
20	26					
21	10	SS-9	-	-	11	A-4a (V)
22	18					
23	14					
24	9	SS-10	-	-	9	A-4a (V)
25	17					

ELEV. 951.0

DEPTHS

SPT/ RQD

REC SAMPLE ID

GRADATION (%)

ATTERBERG

ODOT CLASS (GI)

BACK FILL

DEPTH	SPT/ RQD	REC SAMPLE ID	GRADATION (%)	ATTERBERG	ODOT CLASS (GI)	BACK FILL
16	17					
17	30	SS-7	-	-	13	A-4a (V)
18	25					
19	19	SS-8	42 13 8 24 13	26 17 9	10	A-4a (0)
20	26					
21	10	SS-9	-	-	11	A-4a (V)
22	18					
23	14					
24	9	SS-10	-	-	9	A-4a (V)
25	17					

NOTES: SEEPAGE @ 14.0'. GROUNDWATER INITIALLY ENCOUNTERED @ 15.0' AND UPON COMPLETION @ 10.0'. CAVE-IN DEPTH @ 14.1'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:56 - U:\G18\PROJECTS\2023\W-23-107.GPJ

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 10/23/23 END: 10/23/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 808+72 / 0'
 ALIGNMENT: CL WALL 8
 ELEVATION: 968.4 (MSL) EOB: 25.0 ft.
 LAT / LONG: 40.088693, -82.839666

EXPLORATION ID
B-016-0-23

PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.6' -TOPSOIL (7.0")

VERY STIFF TO HARD, LIGHT BROWN TO BROWN SILT AND CLAY, SOME COARSE TO FINE GRAVEL, LITTLE FINE GRAVEL, DAMP TO MOIST.

ELEV. 968.4

DEPTHS

SPT/ RQD

REC SAMPLE ID

GRADATION (%)

ATTERBERG

ODOT CLASS (GI)

BACK FILL

DEPTH	SPT/ RQD	REC SAMPLE ID	GRADATION (%)	ATTERBERG	ODOT CLASS (GI)	BACK FILL
1	5					
2	5	SS-1	4.5+	-	15	A-6a (V)
3	5					
4	8	SS-2	4.5+	-	13	A-6a (V)
5	9					
6	11	SS-3	4.5+	-	12	A-6a (V)
7	12					
8						
9	13	SS-4	4.5+	14 11 15 33 27 28 16 12	10	A-6a (6)
10	13					
11	7	SS-5	3.00	-	13	A-6a (V)
12	7					
13						
14	5	SS-6	3.00	-	13	A-6a (V)
15	9					
16	12	SS-7	-	50 23 9 12 6 23 17 6	10	A-1-b (0)
17	12					
18						
19	11	SS-8	-	-	14	A-1-b (V)
20	9					
21	16	SS-9	-	-	10	A-1-b (V)
22	17					
23						
24	13	SS-10	-	-	8	A-1-b (V)
25	32					

ELEV. 952.9

DEPTHS

SPT/ RQD

REC SAMPLE ID

GRADATION (%)

ATTERBERG

ODOT CLASS (GI)

BACK FILL

DEPTH	SPT/ RQD	REC SAMPLE ID	GRADATION (%)	ATTERBERG	ODOT CLASS (GI)	BACK FILL
16	12	SS-7	-	-	10	A-1-b (0)
17	12					
18						
19	11	SS-8	-	-	14	A-1-b (V)
20	9					
21	16	SS-9	-	-	10	A-1-b (V)
22	17					
23						
24	13	SS-10	-	-	8	A-1-b (V)
25	32					

NOTES: SEEPAGE @ 17.5'. GROUNDWATER INITIALLY ENCOUNTERED @ 18.0' AND UPON COMPLETION @ 13.6'. CAVE-IN DEPTH @ 21.0'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:56 - U:\G18\PROJECTS\2023\W-23-107.GPJ

DESIGN AGENCY

 8350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949
 DESIGNER
 JAS
 REVIEWER
 DEK 1/19/24
 PROJECT ID
 117607
 SUBSET TOTAL
 39 66
 SHEET TOTAL
 P.268 295

**GEOTECHNICAL PROFILE - NOISE WALLS
 NOISE WALL 8
 BORING LOGS B-015-0-23 AND B-016-0-23**

FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:50:22 PM USER: juans
 J:\GEO TECH\Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_ZL012.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 10/23/23 END: 10/23/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 810+72 / 0'
 ALIGNMENT: CL WALL 8
 ELEVATION: 970.7 (MSL) EOB: 25.0 ft.
 LAT / LONG: 40.088908, -82.839020

EXPLORATION ID
B-017-0-23

PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.4' TOPSOIL (5.0')

HARD TO VERY STIFF, BROWN TO GRAY SILT AND CLAY, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.

DENSE TO VERY DENSE, GRAY GRAVEL WITH SAND AND SILT, TRACE CLAY, DAMP TO MOIST.

DEPTH	ELEV.	SPT / RQD	REC SAMPLE (%)	HP ID	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	BACK FILL
					GR	FS	SI	CL	LL	PL	PI				
1	970.7	6													
2	970.3	9	30	SS-1	4.5+	-	-	-	-	-	-	-	17	A-6a (V)	
3		12													
4		20	60	SS-2	4.5+	-	-	-	-	-	-	-	11	A-6a (V)	
5		22	20												
6		12	32	SS-3	4.5+	9	10	16	37	28	17	11	10	A-6a (6)	
7		11	11												
8															
9		7	36	SS-4	4.5+	-	-	-	-	-	-	-	13	A-6a (V)	
10		10	15												
11		5	16	SS-5	4.00	-	-	-	-	-	-	-	11	A-6a (V)	
12		6													
13															
14	955.2	5	24	SS-6	3.50	-	-	-	-	-	-	-	10	A-6a (V)	
15		12													
16		10	39	SS-7	-	-	-	-	-	-	-	-	7	A-2-4 (V)	
17		12	15												
18															
19		10	50	SS-8	-	45	15	12	22	6	NP	NP	11	A-2-4 (0)	
20		15	20												
21		15	84	SS-9	-	-	-	-	-	-	-	-	9	A-2-4 (V)	
22		30	28												
23															
24	945.7	13	62	SS-10	-	-	-	-	-	-	-	-	7	A-2-4 (V)	
25		17	26												

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 18.0'
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 10/23/23 END: 10/23/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 812+76 / 0'
 ALIGNMENT: CL WALL 8
 ELEVATION: 975.5 (MSL) EOB: 25.0 ft.
 LAT / LONG: 40.089106, -82.838365

EXPLORATION ID
B-018-0-23

PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.4' TOPSOIL (5.0')

VERY STIFF TO HARD, BROWN TO GRAY SANDY SILT, SOME CLAY, LITTLE FINE GRAVEL, DAMP TO MOIST.

DENSE TO VERY DENSE, BROWN-GRAY TO GRAY GRAVEL WITH SAND, LITTLE SILT, TRACE CLAY, MOIST.

SHALE : GRAY, HIGHLY WEATHERED.

DEPTH	ELEV.	SPT / RQD	REC SAMPLE (%)	HP ID	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	BACK FILL
					GR	FS	SI	CL	LL	PL	PI				
1	975.5	6													
2		10	32	SS-1	4.5+	-	-	-	-	-	-	-	14	A-4a (V)	
3		12													
4		12	46	SS-2	4.5+	-	-	-	-	-	-	-	10	A-4a (V)	
5		13	19												
6		17	40	SS-3	4.5+	-	-	-	-	-	-	-	13	A-4a (V)	
7		13	15												
8		8	29	SS-4	4.5+	-	-	-	-	-	-	-	11	A-4a (V)	
9		9	11												
10															
11		7	23	SS-5	3.25	13	11	15	35	26	24	15	12	A-4a (5)	
12		8	8												
13															
14		6	24	SS-6	3.25	-	-	-	-	-	-	-	12	A-4a (V)	
15		8	9												
16		3	13	SS-7	2.50	-	-	-	-	-	-	-	12	A-4a (V)	
17		4	5												
18	957.5														
19		8	39	SS-8	-	61	15	8	11	5	26	20	8	A-1-b (0)	
20		14													
21		11	91	SS-9	-	-	-	-	-	-	-	-	-	-	
22	953.0	29	34												
23		38	-	2S-9A	-	-	-	-	-	-	-	-	8	Rock (V)	
24		28	-	SS-10	-	-	-	-	-	-	-	-	5	Rock (V)	
25	950.5	50/3'													

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 16.4'
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY

 8350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949
 DESIGNER
JAS
 REVIEWER
DEK 1/19/24
 PROJECT ID
117607
 SUBSET TOTAL
 40 66
 SHEET TOTAL
 P.269 295

GEOTECHNICAL PROFILE - NOISE WALLS
NOISE WALL 8
BORING LOGS B-017-0-23 AND B-018-0-23

FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:50:47 PM USER: juans
 J:\GEOtech\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_ZL013.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 10/23/23 END: 10/23/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 814+72 / 0'
 ALIGNMENT: CL WALL 8
 ELEVATION: 974.9 (MSL) EOB: 25.0 ft.
 LAT / LONG: 40.089329, -82.837734

EXPLORATION ID
B-019-0-23

PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

DEPTHS	ELEV.	SPT / RQD	REC SAMPLE ID	HP (tsf)	GR	GRADATION (%)			ATTERBERG			WC	ODOT CLASS (GI)	BACK FILL	
						FS	SI	CL	LL	PL	PI				
1	974.9	7													
2	974.6	9		4.5+											
3															
4		12		4.5+											
5	969.4	16													
6		4													
7		7													
8	966.9	3													
9		5		4.25	12	11	17	35	25	24	14	10	11	A-4a (5)	
10		6													
11		4													
12		5		2.50											
13		6													
14		8		2.50											
15		10													
16	956.9	5		3.50											
17		6													
18		9													
19		10			53	18	10	13	6	24	18	6	9	A-1-b (0)	
20		12													
21		15													
22		8													
23	951.9	9													
24		50/5"		100											Rock (V)
25	949.9														

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 21.0' AND DRY UPON COMPLETION; CAVE-IN DEPTH @ 17.1'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:56 - U:\G18\PROJECTS\2023\W-23-107 GP1

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 10/27/23 END: 10/27/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 816+46 / 0'
 ALIGNMENT: CL WALL 8
 ELEVATION: 974.3 (MSL) EOB: 25.0 ft.
 LAT / LONG: 40.089531, -82.837178

EXPLORATION ID
B-020-0-23

PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

DEPTHS	ELEV.	SPT / RQD	REC SAMPLE ID	HP (tsf)	GR	GRADATION (%)			ATTERBERG			WC	ODOT CLASS (GI)	BACK FILL	
						FS	SI	CL	LL	PL	PI				
1	974.3	5													
2	973.9	7		4.5+											
3															
4		10		4.5+											
5		15													
6		10													
7		35		4.5+	8	10	15	34	33	29	17	12	12	A-6a (7)	
8		14													
9		9													
10		10		4.5+											
11		6													
12		8		4.5+											
13		4													
14		6		4.5+	11	11	15	34	29	26	15	11	10	A-6a (6)	
15		8													
16		4													
17		16		4.5+											
18	956.3	15													
19		50/5"		67											Rock (V)
20															
21		50/5"		56											Rock (V)
22															
23		73													
24		50/6"													Rock (V)
25	949.3														

SHALE : GRAY, HIGHLY WEATHERED.

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 17.2'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:56 - U:\G18\PROJECTS\2023\W-23-107 GP1

DESIGN AGENCY

 6350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949
 DESIGNER
 JAS
 REVIEWER
 DEK 1/19/24
 PROJECT ID
 117607
 SUBSET TOTAL
 41 66
 SHEET TOTAL
 P.270 295

GEOTECHNICAL PROFILE - NOISE WALLS
NOISE WALL 8
BORING LOGS B-019-0-23 AND B-020-0-23

FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:51:10 PM USER: juans
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607_ZL014.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 10/27/23 END: 10/27/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 818+03 / 0'
 ALIGNMENT: CL WALL 8
 ELEVATION: 974.1 (MSL) EOB: 25.0 ft.
 LAT / LONG: 40.089729, -82.836617

EXPLORATION ID
B-021-0-23

PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.3' - TOPSOIL (3.0")
 HARD, BROWN TO GRAY SILT AND CLAY, SOME COARSE TO FINE SAND, TRACE TO LITTLE FINE GRAVEL, DAMP TO MOIST.

DEPTH	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)							WC	ODOT CLASS (GI)
				GR	CS	FS	SI	CL	LL	PL		
1	6											
2	8	23	4.5+									16 A-6a (V)
3	8											
4	17	55	4.5+									
5	19											
6	10	35	4.5+									10 A-6a (V)
7	12											
8	9	30	4.5+									10 A-6a (V)
9	12											
10	9	72	4.5+									
11	8	33	4.5+									10 A-6a (V)
12	10											
13	13											
14	6	23	4.5+									11 A-6a (5)
15	7	9										
16	12											
17	12	35	0									
18	12											
19	9	50/3"	100									6 Rock (V)
20												
21	39											6 Rock (V)
22	50/2"											
23												
24	50/3"		100									5 Rock (V)
25												

TR

EOB

SHALE : GRAY, HIGHLY WEATHERED.

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 19.7'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 10/30/23 END: 10/30/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1100+00 / 0'
 ALIGNMENT: CL WALL 11
 ELEVATION: 975.0 (MSL) EOB: 25.0 ft.
 LAT / LONG: 40.090031, -82.835639

EXPLORATION ID
B-022-0-23

PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.3' - TOPSOIL (4.0")
 VERY STIFF TO HARD, BROWN SANDY SILT, SOME CLAY, LITTLE FINE GRAVEL, DAMP TO MOIST.

DEPTH	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)							WC	ODOT CLASS (GI)
				GR	CS	FS	SI	CL	LL	PL		
1	9											
2	14	45	67	4.5+								12 A-4a (V)
3	17											
4	11	45	44	4.5+								11 A-4a (V)
5	17											
6	8	24	39	4.5+								13 A-4a (V)
7	8	9										
8												
9	3	9	56	3.00								13 A-4a (6)
10	3	3										
11	3	10	39	2.50								13 A-4a (V)
12	4											
13												
14	5	7	78	SS-6								14 A-4a (V)
15	8											
16	7											
17	14	42	50	SS-7								9 A-4a (1)
18	15											
19	5	9	72	SS-8								10 A-4a (V)
20	10											
21	50/3"		33	SS-9								5 Rock (V)
22												
23												
24	45		83	SS-10								7 Rock (V)
25	50/3"											

TR

EOB

SHALE : GRAY, HIGHLY WEATHERED.

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 16.0' AND UPON COMPLETION @ 9.7'; CAVE-IN DEPTH @ 17.6'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY

 8350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949
 DESIGNER
JAS
 REVIEWER
DEK 1/19/24
 PROJECT ID
117607
 SUBSET TOTAL
 42 66
 SHEET TOTAL
 P.271 295

GEOTECHNICAL PROFILE - NOISE WALLS
NOISE WALLS 8 AND 11
BORING LOGS B-021-0-23 AND B-022-0-23

FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:51:34 PM USER: juans
 J:\GEO TECH\Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_ZL015.dgn

RESOURCE INTERNATIONAL, INC.

PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 10/30/23 END: 10/30/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA / NQ2
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1102+00 / 0'
 ALIGNMENT: CL WALL 11
 ELEVATION: 977.0 (MSL) EOB: 24.5 ft.
 LAT / LONG: 40.090244, -82.835195

EXPLORATION ID
B-023-0-23

PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

DEPTH (ft)	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)						WC	HOLE SEALED
				GR	FS	SI	CL	LL	PL		
1	7										
2	10		4.5+								
3	12										
4	6			11	16	39	26	25	16	9	14 A-4a (6)
5	6										
6	4										
7	5		4.00								10 A-4a (V)
8	8										
9	4										
10	5		3.50								13 A-4a (V)
11	9										
12	42										4 Rock (V)
13	50/3"		100								
14	50/3"		100								5 Rock (V)
15	0		0								CORE
16											
17	0		35								CORE
18											
19											
20											
21											
22	0		100								CORE
23											
24											

0.3' - TOPSOIL (4.0')
 VERY STIFF TO HARD, BROWN TO GRAY SANDY SILT, SOME CLAY, TRACE FINE GRAVEL, DAMP TO MOIST.

SHALE : GRAY, HIGHLY WEATHERED.

SHALE : BLACK, HIGHLY WEATHERED, WEAK, VERY FINE GRAINED, LAMINATED, HIGHLY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, DISTURBED, SEAMY, VERY POOR SURFACE.

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 16.1'
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 47 LBS CEMENT, 25 LBS BENTONITE POWDER AND 40 GAL WATER

Project Name: FRA-161-15.80

Location:
 Franklin County, Ohio

Photo No. 6	
Boring: B-023-0-23	
RC-1: 14.4-15.0' REC (%):0 RQD (%):0	
RC-2: 15.0-19.5' REC (%):35 RQD (%):0	

FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:54:39 PM USER: juans
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_Z1016.dgn

Project Name: FRA-161-15.80

Location:
Franklin County, Ohio

<p>Photo No. 7</p>	<p>Boring: B-023-0-23</p>	<p>RC-3: 19.5-24.5' REC (%):100 RQD (%):0</p>
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FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:54:54 PM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_ZL017.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
TYPE: NOISE WALLS

PID: 117607 SFN: NA
START: 10/31/23 END: 10/31/23

DRILLING FIRM / OPERATOR: RII / TG
SAMPLING FIRM / LOGGER: RII / MJ

DRILLING METHOD: 3.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
HAMMER: AUTOMATIC

ALIGNMENT: CL WALL 11
ELEVATION: 979.6 (MSL) EOB: 25.0 ft.
LAT / LONG: 40.090471, -82.834551

STATION / OFFSET: 1104+00 / 0'
EXPLORATION ID: B-024-0-23
PAGE: 1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.1' - TOPSOIL (1.0')
HARD, BROWN CLAY, SOME SILT, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.

VERY STIFF TO HARD, BROWN SILT AND CLAY, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.

DENSE TO VERY DENSE, GRAY TO BLACK GRAVEL WITH SAND AND SILT, LITTLE CLAY, MOIST.

SHALE : GRAY, HIGHLY WEATHERED.

DEPTH (ft)	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)				ATTERBERG				WC	ODOT CLASS (GI)	BACK FILL	
				GR	FS	SI	CL	LL	PL	PI					
1	5														
2	5	19	47	SS-1	4.5+	-	-	-	-	-	-	-	19	A-7-6 (V)	
3	8														
4	10	37	78	SS-2	4.5+	3	4	10	35	48	42	20	22	17	A-7-6 (13)
5	16														
6	17	28	78	SS-3	4.5+	-	-	-	-	-	-	-	-	9	A-6a (V)
7	26														
8															
9	28	18	43	SS-4	4.5+	-	-	-	-	-	-	-	-	13	A-6a (V)
10	12														
11	5	6	16	SS-5	2.50	-	-	-	-	-	-	-	-	10	A-6a (V)
12	5														
13															
14	10	17	55	SS-6	-	-	-	-	-	-	-	-	-	8	A-2-4 (V)
15	21														
16	10	14	42	SS-7	-	-	-	-	-	-	-	-	-	7	A-2-4 (V)
17	15														
18															
19	6	14	45	SS-8	-	40	14	12	21	13	25	18	7	11	A-2-4 (0)
20	17														
21	6	11	-	SS-9	-	-	-	-	-	-	-	-	-	10	A-2-4 (V)
22	50/4"														
23															
24	50/6"			SS-10	-	-	-	-	-	-	-	-	-	3	Rock (V)
25															

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 18.5'
ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
TYPE: NOISE WALLS

PID: 117607 SFN: NA
START: 10/31/23 END: 10/31/23

DRILLING FIRM / OPERATOR: RII / TG
SAMPLING FIRM / LOGGER: RII / MJ

DRILLING METHOD: 3.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
HAMMER: AUTOMATIC

ALIGNMENT: CL WALL 11
ELEVATION: 980.2 (MSL) EOB: 25.0 ft.
LAT / LONG: 40.090688, -82.833893

STATION / OFFSET: 1106+00 / 0'
EXPLORATION ID: B-025-0-23
PAGE: 1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.2' - TOPSOIL (1.5')
HARD BROWN SILT AND CLAY, LITTLE GRAVEL AND SAND, DAMP.

DENSE TO VERY DENSE, BROWN GRAVEL WITH SAND AND SILT, TRACE CLAY, DAMP TO MOIST.

-SHALE FRAGMENTS PRESENT THROUGHOUT

DEPTH (ft)	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)				ATTERBERG				WC	ODOT CLASS (GI)	BACK FILL	
				GR	FS	SI	CL	LL	PL	PI					
1	4														
2	5	17	50	SS-1	4.5+	-	-	-	-	-	-	-	-	20	A-6a (V)
3	7														
4	8	12	42	SS-2	4.5+	-	-	-	-	-	-	-	-	14	A-6a (V)
5	17														
6	12	17	55	SS-3	4.5+	10	10	16	34	30	27	16	11	8	A-6a (6)
7	21														
8															
9	10	13	39	SS-4	4.5+	-	-	-	-	-	-	-	-	10	A-6a (V)
10	14														
11	18	21	69	SS-5	-	-	-	-	-	-	-	-	-	8	A-2-4 (V)
12	27														
13															
14	9	12	39	SS-6	-	38	23	12	17	10	27	20	7	6	A-2-4 (0)
15	15														
16	14	21	71	SS-7	-	-	-	-	-	-	-	-	-	7	A-2-4 (V)
17	28														
18															
19	12	22	75	SS-8	-	-	-	-	-	-	-	-	-	7	A-2-4 (V)
20	30														
21	12	16	42	SS-9	-	-	-	-	-	-	-	-	-	14	A-2-4 (V)
22	13														
23															
24	8	15	46	SS-10	-	-	-	-	-	-	-	-	-	11	A-2-4 (V)
25	17														

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 21.0' AND DRY UPON COMPLETION; CAVE-IN DEPTH @ 15.3'
ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY
RESOURCE INTERNATIONAL
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNER
JAS

REVIEWER
DEK 1/19/24

PROJECT ID
117607

SUBSET TOTAL
45 66

SHEET TOTAL
P.274 295

GEOTECHNICAL PROFILE - NOISE WALLS
NOISE WALL 11
BORING LOGS B-024-0-23 AND B-025-0-23

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:56 - U:\G18\PROJECTS\2023\W-23-107.GPJ

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:56 - U:\G18\PROJECTS\2023\W-23-107.GPJ

FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:55:17 PM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_ZL018.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 10/31/23 END: 10/31/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1108+00 / 0'
 ALIGNMENT: CL WALL 11
 ELEVATION: 979.8 (MSL) EOB: 25.5 ft.
 LAT / LONG: 40.090906, -82.833225

EXPLORATION ID
B-026-0-23

PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.3' TOPSOIL (4.0")
 VERY STIFF TO HARD, LIGHT BROWN SILTY CLAY, "AND" FINE TO COARSE SAND, LITTLE FINE GRAVEL, DAMP TO MOIST.

ELEV. 979.8
 979.5

SPT / RQD
 4
 5
 13

GRADATION (%)
 GR CS FS SI CL LL PL PI WC
 - - - - - - - - -
 17 A-6b (V)

BACK FILL

MEDIUM DENSE TO DENSE, BROWN TO DARK GRAY GRAVEL WITH SAND AND SILT, TRACE CLAY, MOIST.

ELEV. 969.3
 961.3

SPT / RQD
 4
 4
 4
 12
 50
 4.00
 4.5+

GRADATION (%)
 GR CS FS SI CL LL PL PI WC
 - - - - - - - - -
 19 A-6b (V)

BACK FILL

DENSE, GRAY TO BLACK GRAVEL WITH SAND, LITTLE SILT, TRACE CLAY, MOIST.
 -SHALE FRAGMENTS PRESENT THROUGHOUT

ELEV. 961.8
 961.3

SPT / RQD
 9
 9
 14
 33
 0
 4.5+

GRADATION (%)
 GR CS FS SI CL LL PL PI WC
 - - - - - - - - -
 20 A-2.4 (V)

BACK FILL

LOOSE TO VERY DENSE, GRAY GRAVEL WITH SAND AND SILT, TRACE TO LITTLE CLAY, DAMP.

ELEV. 971.0
 981.2

SPT / RQD
 7
 13
 19
 46
 61
 4.5+

GRADATION (%)
 GR CS FS SI CL LL PL PI WC
 - - - - - - - - -
 11 A-6a (V)

BACK FILL

SHALE : GRAY, HIGHLY WEATHERED.

ELEV. 958.5
 956.5

SPT / RQD
 12
 14
 24
 55
 78
 27

GRADATION (%)
 GR CS FS SI CL LL PL PI WC
 - - - - - - - - -
 12 A-2.4 (V)

BACK FILL

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 18.5' AND DRY UPON COMPLETION; CAVE-IN DEPTH @ 13.5'
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 11/1/23 END: 11/1/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1110+00 / 0'
 ALIGNMENT: CL WALL 11
 ELEVATION: 981.5 (MSL) EOB: 25.0 ft.
 LAT / LONG: 40.091062, -82.832539

EXPLORATION ID
B-027-0-23

PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.3' TOPSOIL (3.5")
 HARD, LIGHT BROWN SILT AND CLAY, LITTLE COARSE TO FINE SAND, TRACE GRAVEL, DAMP.

ELEV. 981.5
 981.2

SPT / RQD
 7
 13
 19

GRADATION (%)
 GR CS FS SI CL LL PL PI WC
 - - - - - - - - -
 11 A-6a (V)

BACK FILL

LOOSE TO VERY DENSE, GRAY GRAVEL WITH SAND AND SILT, TRACE TO LITTLE CLAY, DAMP.

ELEV. 971.0
 981.2

SPT / RQD
 11
 13
 15
 40
 67
 4.5+

GRADATION (%)
 GR CS FS SI CL LL PL PI WC
 - - - - - - - - -
 12 A-6a (V)

BACK FILL

SHALE : GRAY, HIGHLY WEATHERED.

ELEV. 958.5
 956.5

SPT / RQD
 4
 4
 5
 13
 58
 35

GRADATION (%)
 GR CS FS SI CL LL PL PI WC
 - - - - - - - - -
 14 A-2.4 (0)

BACK FILL

SHALE : GRAY, HIGHLY WEATHERED.

ELEV. 956.5
 956.5

SPT / RQD
 23
 50/5'

GRADATION (%)
 GR CS FS SI CL LL PL PI WC
 - - - - - - - - -
 4 Rock (V)

BACK FILL

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 21.0' AND DRY UPON COMPLETION; CAVE-IN DEPTH @ 16.1'
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY

 6350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949
 DESIGNER
 JAS
 REVIEWER
 DEK 1/19/24
 PROJECT ID
 117607
 SUBSET TOTAL
 46 66
 SHEET TOTAL
 P.275 295

GEOTECHNICAL PROFILE - NOISE WALLS
NOISE WALL 11
BORING LOGS B-026-0-23 AND B-027-0-23

FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:56:05 PM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_ZL020.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
TYPE: NOISE WALLS
PID: 117607 SFN: NA
START: 11/1/23 END: 11/1/23

DRILLING FIRM / OPERATOR: RII / TG
SAMPLING FIRM / LOGGER: RII / MJ
DRILLING METHOD: 3.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
HAMMER: AUTOMATIC
CALIBRATION DATE: 3/21/22
ENERGY RATIO (%): 86.4

STATION / OFFSET: 1115+84 / 0'
ALIGNMENT: CL WALL 11
ELEVATION: 983.0 (MSL) EOB: 25.0 ft.
LAT / LONG: 40.091378, -82.830480

EXPLORATION ID
B-030-0-23
PAGE
1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.4' TOPSOIL (5.0")
VERY STIFF TO HARD, BROWN TO DARK BROWN TO GRAY SILT AND CLAY, SOME COARSE TO FINE SAND, TRACE TO LITTLE FINE GRAVEL, DAMP TO MOIST.

ELEV. 983.0

DEPTHS

SPT / RQD

REC SAMPLE ID

GRADATION (%)

ATTERBERG

ODOT CLASS (GI)

BACK FILL

DEPTH	SPT / RQD	REC SAMPLE ID	GRADATION (%)	ATTERBERG	ODOT CLASS (GI)	BACK FILL
1	3					
2	6	SS-1			15	A-6a (V)
3	9					
4	6	SS-2			15	A-6a (7)
5	8					
6	4	SS-3			14	A-6a (V)
7	12					
8	4					
9	5	SS-4			11	A-6a (V)
10	7					
11	2					
12	3	SS-5			13	A-6a (V)
13	5					
14	2	SS-6			14	A-6a (5)
15	5					
16	2					
17	4	SS-7			13	A-6a (V)
18	5					
19	8	SS-8			7	A-2-4 (V)
20	20					
21	34	SS-9			5	Rock (V)
22	50/2'					
23	50/3'	SS-10				Rock (V)
24						
25						

ELEV. 965.0

DEPTHS

SPT / RQD

REC SAMPLE ID

GRADATION (%)

ATTERBERG

ODOT CLASS (GI)

BACK FILL

DEPTH	SPT / RQD	REC SAMPLE ID	GRADATION (%)	ATTERBERG	ODOT CLASS (GI)	BACK FILL
1	3					
2	6	SS-1			15	A-6a (V)
3	9					
4	6	SS-2			15	A-6a (7)
5	8					
6	4	SS-3			14	A-6a (V)
7	12					
8	4					
9	5	SS-4			11	A-6a (V)
10	7					
11	2					
12	3	SS-5			13	A-6a (V)
13	5					
14	2	SS-6			14	A-6a (5)
15	5					
16	2					
17	4	SS-7			13	A-6a (V)
18	5					
19	8	SS-8			7	A-2-4 (V)
20	20					
21	34	SS-9			5	Rock (V)
22	50/2'					
23	50/3'	SS-10				Rock (V)
24						
25						

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 22.3'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
TYPE: NOISE WALLS
PID: 117607 SFN: NA
START: 11/16/23 END: 11/16/23

DRILLING FIRM / OPERATOR: RII / TG
SAMPLING FIRM / LOGGER: RII / MJ
DRILLING METHOD: 3.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
HAMMER: AUTOMATIC
CALIBRATION DATE: 3/21/22
ENERGY RATIO (%): 86.4

STATION / OFFSET: 900+16 / 0'
ALIGNMENT: CL WALL 9
ELEVATION: 974.5 (MSL) EOB: 25.0 ft.
LAT / LONG: 40.090580, -82.836109

EXPLORATION ID
B-031-0-23
PAGE
1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.5' TOPSOIL (5.5")
HARD, BROWN TO GRAY SANDY SILT, SOME CLAY, LITTLE FINE GRAVEL, DAMP TO MOIST.

ELEV. 974.5

DEPTHS

SPT / RQD

REC SAMPLE ID

GRADATION (%)

ATTERBERG

ODOT CLASS (GI)

BACK FILL

DEPTH	SPT / RQD	REC SAMPLE ID	GRADATION (%)	ATTERBERG	ODOT CLASS (GI)	BACK FILL
1	4					
2	5	SS-1			19	A-4a (V)
3	7					
4	18	SS-2				
5	9					
6	30	SS-3			10	A-4a (V)
7	16					
8	12					
9	13	SS-4			11	A-4a (V)
10	10					
11	6	SS-5			12	A-4a (6)
12	7					
13						
14	6	SS-6				
15	7					
16	12	SS-6A			13	A-4a (V)
17	4	SS-7			12	A-4a (V)
18	5					
19	3	SS-8			13	A-4a (V)
20	4					
21	8	SS-9			16	A-1-b (0)
22	10					
23						
24	8	SS-10			16	A-1-b (V)
25	12					

ELEV. 954.0

DEPTHS

SPT / RQD

REC SAMPLE ID

GRADATION (%)

ATTERBERG

ODOT CLASS (GI)

BACK FILL

DEPTH	SPT / RQD	REC SAMPLE ID	GRADATION (%)	ATTERBERG	ODOT CLASS (GI)	BACK FILL
1	4					
2	5	SS-1			19	A-4a (V)
3	7					
4	18	SS-2				
5	9					
6	30	SS-3			10	A-4a (V)
7	16					
8	12					
9	13	SS-4			11	A-4a (V)
10	10					
11	6	SS-5			12	A-4a (6)
12	7					
13						
14	6	SS-6				
15	7					
16	12	SS-6A			13	A-4a (V)
17	4	SS-7			12	A-4a (V)
18	5					
19	3	SS-8			13	A-4a (V)
20	4					
21	8	SS-9			16	A-1-b (0)
22	10					
23						
24	8	SS-10			16	A-1-b (V)
25	12					

MEDIUM DENSE, DARK GRAY GRAVEL WITH SAND, TRACE SILT, TRACE CLAY, MOIST.

-SHALE FRAGMENTS PRESENT THROUGHOUT

-1.5' OF HEAVING SANDS @23.5'

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 19.8' AND UPON COMPLETION @ 20.5'; CAVE-IN DEPTH @ 13.8'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY
RESOURCE INTERNATIONAL
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949
DESIGNER
JAS
REVIEWER
DEK 1/19/24
PROJECT ID
117607
SUBSET TOTAL
48 66
SHEET TOTAL
P.277 295

GEOTECHNICAL PROFILE - NOISE WALLS
NOISE WALLS 11 AND 9
BORING LOGS B-030-0-23 AND B-031-0-23

FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:56:26 PM USER: juans
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_Z1021.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 11/16/23 END: 11/16/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 902+00 / 0'
 ALIGNMENT: CL WALL 9
 ELEVATION: 975.2 (MSL) EOB: 25.0 ft.
 LAT / LONG: 40.090809, -82.835481

EXPLORATION ID
B-032-0-23
 PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.4' TOPSOIL (5.0")
 HARD, BROWN SILT AND CLAY, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.

ELEV. 975.2
 974.8

DEPTHS

SPT / RQD

REC SAMPLE ID

GRADATION (%)

ATTERBERG

ODOT CLASS (GI)

BACK FILL

DEPTH	SPT / RQD	REC SAMPLE ID	GRADATION (%)	ATTERBERG	ODOT CLASS (GI)	BACK FILL
1	9					
2	14	SS-1	4.5+			12 A-6a (V)
3	14					
4	8	SS-2	4.5+	10 19 34 28	11	11 A-6a (6)
5	9					
6	7	SS-3	4.5+			12 A-6a (V)
7	20					
8	14					
9	5	SS-4	4.5+			11 A-6a (V)
10	8					
11	9					
12	7	SS-5				
13	8	2S-5A	4.5+			13 A-6a (V)
14	12					
15	6	SS-6				
16	8	2S-6A	4.5+			13 A-6a (V)
17	12					
18	4	SS-7		41 14 12 21 12 24 16 8	8	A-2-4 (0)
19	9					
20	8	SS-8				15 A-2-4 (V)
21	10					
22	11					
23	15	SS-9				16 A-2-4 (V)
24	22					
25	18					
26	5	SS-10				13 A-2-4 (V)
27	8					
28	12					
29	8					
30	12					
31	5					
32	8					
33	12					
34	5					
35	8					
36	12					
37	5					
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236	8					
237	12					
238	5					
239	8					
240	12					
241	5					
242	8					
243	12					
244	5					
245	8					
246	12					
247	5					
248	8					
249	12					
250	5					
251	8					
252	12					
253	5					
254	8					
255	12					
256	5					
257	8					
258	12					
259	5					
260	8					
261	12					
262	5					
263	8					
264	12					
265	5					
266	8					
267	12					
268	5					
269	8					
270	12					
271	5					
272	8					
273	12					
274	5					
275	8					
276	12					
277	5					
278	8					

FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:56:50 PM USER: juans
 J:\GEO\GEO\Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_ZL022.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 11/16/23 END: 11/16/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 906+00 / 0'
 ALIGNMENT: CL WALL 9
 ELEVATION: 979.3 (MSL) EOB: 25.0 ft.
 LAT / LONG: 40.091273, -82.834170

EXPLORATION ID
B-034-0-23

PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.4' - TOPSOIL (5.0")
 HARD, BROWN SILT AND CLAY, LITTLE GRAVEL AND SAND, DAMP.

-ROOT FIBERS IN SS-4

DENSE TO VERY DENSE, GRAY GRAVEL, LITTLE COARSE TO FINE SAND, TRACE SILT, DAMP.

MEDIUM DENSE TO VERY DENSE, BLACK GRAVEL WITH SAND AND SILT, MOIST.
 -SHALE FRAGMENTS PRESENT THROUGHOUT

ELEV. 979.3

978.9

968.8

958.8

954.3

EOB

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

SPT / RQD

6

10

13

7

8

10

12

14

9

10

7

15

20

18

20

14

14

10

12

14

12

7

10

8

11

42

REC SAMPLE ID

SS-1

SS-2

SS-3

SS-4

SS-5

2S-5A

SS-6

SS-7

SS-8

SS-9

SS-10

GRADATION (%)

4.5+

4.5+

4.5+

4.5+

-

100

69

72

39

75

69

76

69

ATTERBERG

12

14

17

15

-

6

4

6

6

16

11

ODOT CLASS (GI)

A-6a (V)

A-6a (7)

A-6a (V)

A-6a (V)

-

A-1-a (V)

A-1-a (0)

A-1-a (V)

A-1-a (V)

A-2-4 (V)

A-2-4 (V)

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 11/15/23 END: 11/15/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 908+00 / 0'
 ALIGNMENT: CL WALL 9
 ELEVATION: 981.4 (MSL) EOB: 25.0 ft.
 LAT / LONG: 40.091443, -82.833496

EXPLORATION ID
B-035-0-23

PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.4' - TOPSOIL (5.0")
 HARD, BROWN TO GRAY SILTY CLAY, SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, DAMP.

-CHERT FRAGMENTS IN SS-5

MEDIUM DENSE, BROWN TO BLACK GRAVEL WITH SAND AND SILT, TRACE CLAY, DAMP.
 -SHALE FRAGMENTS IN SS-6

DENSE, GRAY COARSE AND FINE SAND, LITTLE GRAVEL, TRACE SILT, DAMP.

DENSE TO VERY DENSE, DARK GRAY GRAVEL WITH SAND, LITTLE SILT, TRACE CLAY, MOIST.

ELEV. 981.4

981.0

968.4

965.9

963.4

956.4

EOB

25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

SPT / RQD

7

9

12

10

15

17

13

18

20

6

12

14

8

9

6

7

6

13

18

10

14

5

11

12

18

24

20

REC SAMPLE ID

SS-1

SS-2

SS-3

SS-4

SS-5

SS-6

SS-7

SS-8

SS-9

SS-10

GRADATION (%)

4.5+

4.5+

4.5+

4.5+

-

89

83

39

89

47

69

64

50

63

50

ATTERBERG

17

12

13

11

16

5

8

12

13

ODOT CLASS (GI)

A-6b (V)

A-6b (9)

A-6b (V)

A-6b (V)

-

A-6b (V)

A-6b (V)

A-2-4 (V)

A-3a (V)

A-1-b (0)

A-1-b (V)

A-1-b (V)

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 19.7' AND DRY UPON COMPLETION; CAVE-IN DEPTH @ 14.3'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY

 6350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949
 DESIGNER
JAS
 REVIEWER
DEK 1/19/24
 PROJECT ID
117607
 SUBSET TOTAL
 50 66
 SHEET TOTAL
 P.279 295

GEOTECHNICAL PROFILE - NOISE WALLS
NOISE WALL 9
BORING LOGS B-034-0-23 AND B-035-0-23

FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:57:14 PM USER: juans J:\GEOtech\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_ZL023.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
TYPE: NOISE WALLS
PID: 117607 SFN: NA
START: 11/15/23 END: 11/15/23

DRILLING FIRM / OPERATOR: RII / TG
SAMPLING FIRM / LOGGER: RII / MJ
DRILLING METHOD: 3.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
HAMMER: AUTOMATIC
CALIBRATION DATE: 3/21/22
ENERGY RATIO (%): 86.4

STATION / OFFSET: 910+00 / 0'
ALIGNMENT: CL WALL 9
ELEVATION: 983.2 (MSL) EOB: 25.0 ft.
LAT / LONG: 40.091597, -82.832807

EXPLORATION ID
B-036-0-23
PAGE
1 OF 1

MATERIAL DESCRIPTION AND NOTES

DEPTHS	ELEV.	SPT / RQD	REC SAMPLE ID	HP (tsf)	GR	GRADATION (%)						WC	ODOT CLASS (GI)	BACK FILL	
						FS	SI	CL	LL	PL	PI				
1	983.2	9													
2	982.8	10	SS-1	-											
3		11													
4		12	2S-1A	4.5+									20	A-6a (V)	
5		6													
6		11	SS-2	4.25										23	A-6a (V)
7	970.2	9													
8		9													
9		7													
10		7													
11		7													
12		7													
13		7													
14		5			33	15	13	29	10	38	21	17	12	A-6b (2)	
15		7													
16		10													
17		10	SS-7	-											
18	964.7	17													
19		20													
20		11													
21	962.2	10													
22		18													
23		35													
24		12													
25	958.2	17													

0.4' - TOPSOIL (4.5")

HARD, BROWN SILT AND CLAY, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.

SOFT, DARK BROWN SILTY CLAY, SOME FINE TO COARSE SAND, SOME FINE GRAVEL, DAMP.

DENSE, DARK GRAY GRAVEL WITH SAND, LITTLE SILT, TRACE CLAY, MOIST.

DENSE TO VERY DENSE, GRAY GRAVEL WITH SAND, SILT, AND CLAY, WET.

0.4' - TOPSOIL (4.5")

VERY STIFF TO HARD, LIGHT BROWN SILTY CLAY, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.

MEDIUM DENSE TO DENSE, BROWN SANDY SILT, SOME CLAY AND GRAVEL, MOIST TO DAMP.

DENSE, GRAY GRAVEL WITH SAND, TRACE SILT, MOIST.

DENSE, DARK GRAY GRAVEL WITH SAND AND SILT, TRACE CLAY, MOIST.

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 21.0' AND DRY UPON COMPLETION; CAVE-IN DEPTH @ 14.3'
ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
TYPE: NOISE WALLS
PID: 117607 SFN: NA
START: 11/15/23 END: 11/15/23

DRILLING FIRM / OPERATOR: RII / TG
SAMPLING FIRM / LOGGER: RII / MJ
DRILLING METHOD: 3.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
HAMMER: AUTOMATIC
CALIBRATION DATE: 3/21/22
ENERGY RATIO (%): 86.4

STATION / OFFSET: 912+00 / 0'
ALIGNMENT: CL WALL 9
ELEVATION: 984.9 (MSL) EOB: 25.0 ft.
LAT / LONG: 40.091724, -82.832101

EXPLORATION ID
B-037-0-23
PAGE
1 OF 1

MATERIAL DESCRIPTION AND NOTES

DEPTHS	ELEV.	SPT / RQD	REC SAMPLE ID	HP (tsf)	GR	GRADATION (%)						WC	ODOT CLASS (GI)	BACK FILL	
						FS	SI	CL	LL	PL	PI				
1	984.9	5													
2	984.5	7													
3		9													
4		4													
5		5													
6		4													
7		5													
8		9													
9		6													
10		5													
11		4													
12		4													
13	971.9	5													
14		4													
15		7													
16		3													
17		9													
18	966.7	13													
19		16													
20	964.4	16													
21		9													
22		14													
23		15													
24		14													
25	959.9	12													

0.4' - TOPSOIL (4.5")

VERY STIFF TO HARD, LIGHT BROWN SILTY CLAY, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.

MEDIUM DENSE TO DENSE, BROWN SANDY SILT, SOME CLAY AND GRAVEL, MOIST TO DAMP.

DENSE, GRAY GRAVEL WITH SAND, TRACE SILT, MOIST.

DENSE, DARK GRAY GRAVEL WITH SAND AND SILT, TRACE CLAY, MOIST.

NOTES: GROUNDWATER INITIALLY ENCOUNTERED @ 19.8' AND UPON COMPLETION @ 18.2'; CAVE-IN DEPTH @ 19.0'
ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY
RESOURCE INTERNATIONAL
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNER
JAS

REVIEWER
DEK 1/19/24

PROJECT ID
117607

SUBSET TOTAL
51 66

SHEET TOTAL
P.280 295

GEOTECHNICAL PROFILE - NOISE WALLS
NOISE WALL 9
BORING LOGS B-036-0-23 AND B-037-0-23

FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:57:37 PM USER: juans J:\GEO\GEO\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_Z1024.dgn

RESOURCE INTERNATIONAL, INC.

PROJECT: FRA-161-15.80 NOISE WALLS
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 12/5/23 END: 12/5/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 120+00 / 0'
 ALIGNMENT: CL WALL 12
 ELEVATION: 979.3 (MSL) EOB: 25.0 ft.
 LAT / LONG: 40.091445, -82.828386

EXPLORATION ID
B-038-0-23

PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.3' - ASPHALT (3.0")
 0.5' - CONCRETE (6.5")
 0.3' - AGGREGATE BASE (3.5")
 VERY STIFF TO HARD, BROWN TO GRAY SILTY CLAY, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.

LOOSE TO MEDIUM DENSE, BROWN SANDY SILT, SOME FINE GRAVEL, LITTLE CLAY, MOIST.

LOOSE TO MEDIUM DENSE, GRAY GRAVEL WITH SAND AND SILT, TRACE CLAY, MOIST.


VERY STIFF, BROWN SILT AND CLAY, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.

SHALE : BLACK, HIGHLY WEATHERED.

DEPTH	ELEV.	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			ODOT CLASS (GI)	BACK FILL
					GR	CS	FS	SI	CL	LL	PL	PI		
1	979.3													
2	978.5	6	SS-1	-	-	-	-	-	-	-	-	-	-	
3	978.2	7	2S-1A	4.5+	-	-	-	-	-	-	-	-	-	
4		9												
5		10	SS-2	4.5+	-	-	-	-	-	-	-	-	-	15 A-6b (V)
6		20												14 A-6b (V)
7		6												
8		6	SS-3	-	-	-	-	-	-	-	-	-	-	
9		9	2S-3A	4.5+	17	9	10	32	32	39	18	21	14	A-6b (10)
10		14												
11		5	SS-4	4.5+	-	-	-	-	-	-	-	-	-	12 A-6b (V)
12		6												
13		9												
14	966.3	4	SS-5	4.00	-	-	-	-	-	-	-	-	-	20 A-6b (V)
15		5												
16		7	SS-6	-	-	-	-	-	-	-	-	-	-	9 A-4a (V)
17		13												
18		20												
19		14	SS-7	4.5+	50	13	7	22	8	26	21	5	8	A-2-4 (0)
20		15												
21		10												
22		9	SS-8	-	-	-	-	-	-	-	-	-	-	18 A-2-4 (V)
23		18												
24		5	SS-9	-	-	-	-	-	-	-	-	-	-	23 A-2-4 (V)
25		6												
TR	956.3	8												
EOB	954.3	11												Rock (V)

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 14.3'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS. PAVEMENT PATCHED WITH COLD PATCH ASPHALT.

DESIGN AGENCY

 8350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949
 DESIGNER
JAS
 REVIEWER
DEK 1/19/24
 PROJECT ID
117607
 SUBSET TOTAL
 52 | 66
 SHEET TOTAL
 P.281 | 295

GEOTECHNICAL PROFILE - NOISE WALLS
NOISE WALL 12
BORING LOGS B-038-0-23

FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:57:54 PM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\117607-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_Z1025.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 12/4/23 END: 12/4/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA / NQ2
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 121+41.21 / 0'
 ALIGNMENT: CL WALL 12
 ELEVATION: 986.4 (MSL) EOB: 20.0 ft.
 LAT / LONG: 40.091317, -82.827731

EXPLORATION ID
B-039-0-23

PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.5' - TOPSOIL (5.5')
 HARD, BROWN CLAY, LITTLE COARSE TO FINE SAND,
 TRACE FINE GRAVEL, MOIST.

SHALE : GRAY, HIGHLY WEATHERED.

SHALE : GRAY, MODERATELY WEATHERED, WEAK,
 VERY FINE GRAINED, LAMINATED, FRACTURED,
 NARROW APERTURES, SLIGHTLY ROUGH SURFACE,
 BLOCKY, DISTURBED, SEAMY, POOR SURFACE.

DEPTH (ft)	SPT / RQD	N ₆₀	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)							WC	ODOT CLASS (GI)	HOLE SEALED
						GR	FS	SI	CL	LL	PL	PI			
1	7														
2	5	16	0	SS-1	-	-	-	-	-	-	-	-	-	-	
3	9		100	2S-1A	4.5+	-	-	-	-	-	-	-	19	A-7.6 (V)	
4	6	19	0	SS-2	-	-	-	-	-	-	-	-	-	-	
5	10		50	2S-2A	4.5+	-	-	-	-	-	-	-	18	A-7.6 (V)	
6	8	20	81	SS-3	4.5+	28	9	7	25	31	50	20	30	16	A-7.6 (13)
7															
8															
9	9	27	75	SS-4	4.5+	-	-	-	-	-	-	-	14	A-7.6 (V)	
10	10														
11	10/0"														Rock (V)
12															
13															
14	50/4"		0	SS-6	-	-	-	-	-	-	-	-	-	-	Rock (V)
15	0		0	NQ2-1											CORE
16															
17	43		100	NQ2-2											CORE
18															
19															
20															

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 11.2'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 47 LBS CEMENT, 25 LBS BENTONITE POWDER AND 40 GAL WATER

Project Name: FRA-161-15.80

Location:
 Franklin County, Ohio



Photo No.
8

Boring:
 B-039-0-23

RC-1: 14.0'-15.0'
 REC (%):0
 RQD (%):0

RC-2: 15.0'-20.0'
 REC (%):100
 RQD (%):43

FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:58:14 PM USER: juans
 J:\GEO\GEO\GEOtech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_Z1026.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 12/4/23 END: 12/4/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA / NQ2
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 123+26.79 / 0'
 ALIGNMENT: CL WALL 12
 ELEVATION: 987.0 (MSL) EOB: 21.0 ft.
 LAT / LONG: 40.091207, -82.827079

EXPLORATION ID
B-040-0-23
 PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.4' TOPSOIL (5.0")
 HARD, BROWN TO GRAY SILT AND CLAY, LITTLE TO TRACE SAND AND GRAVEL, DAMP TO MOIST.

SHALE : GRAY, HIGHLY WEATHERED.

SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, MODERATELY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, GOOD SURFACE.
 -@14.3' IRON STAINING IN FRACTURE
 -@15.0' - 15.2' ZONE OF FRACTURES
 -@15.7' CLAY SEAM

SHALE : GRAY, MODERATELY WEATHERED, WEAK, FINE GRAINED, LAMINATED, FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, DISTURBED, SEAMY, POOR SURFACE.

SILTSTONE : GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG, VERY FINE GRAINED, VERY THIN, HIGHLY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, DISTURBED, SEAMY, FAIR SURFACE.

DEPTH (ft)	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)							WC	HOLE SEALED
				GR	FS	SI	CL	LL	PL	PI		
1	3											
2	6											
3	8											
4	7	SS-1	4.5+								17	A-6a (V)
5	9											
6	6	SS-2	4.5+								20	A-6a (V)
7	8											
8	4	SS-3	4.5+	9	15	37	32	33	18	15	18	A-6a (9)
9	6											
10	8	SS-4	4.5+								18	A-6a (V)
11	8											
12	15										10	Rock (V)
13	50/3"											
14	60/3"	SS-6									2	Rock (V)
15	0	NQ2-1										CORE
16												
17												
18	0	NQ2-2										CORE
19												
20												
21												

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 94 LBS CEMENT / 25 LBS BENTONITE POWDER / 40 GAL WATER.

Project Name: FRA-161-15.80

Location:
 Franklin County, Ohio

Photo No.
 9

Boring:
 B-040-0-23

RC-1: 14.0-16.0'
 REC (%):37
 RQD (%):0

RC-2: 16.0-21.0'
 REC (%):100
 RQD (%):0



FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:58:35 PM USER: juans
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_Z1027.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 12/4/23 END: 12/4/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA / NQ2
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 124+97.00 / 0'
 ALIGNMENT: CL WALL 12
 ELEVATION: 988.2 (MSL) EOB: 25.0 ft.
 LAT / LONG: 40.091033, -82.826474

EXPLORATION ID
B-041-0-23
 PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

DEPTHS	ELEV.	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)							WC	HOLE SEALED	
					GR	FS	SI	CL	LL	PL	PI			
1	988.2	4												
2	987.7	5	SS-1	3.50	-	-	-	-	-	-	-	16	A-6a (V)	
3		7												
4		5	SS-2	3.00	6	12	19	34	29	30	17	13	15	A-6a (7)
5	982.7	10												
6		13												
7		32	SS-3	-	-	-	-	-	-	-	-	8	A-2-4 (V)	
8	980.2	35												
9		10	SS-4	-	-	-	-	-	-	-	-	7	Rock (V)	
10		21												
11		29												
12		50/6"	SS-5	-	-	-	-	-	-	-	-	6	Rock (V)	
13		36												
14		50/5"	SS-6	-	-	-	-	-	-	-	-	4	Rock (V)	
15														
16	972.2													
17														
18		20	NQ2-1	68										CORE
19														
20														
21														
22		40	NQ2-2	100										CORE
23														
24														
25	963.2													

0.5' -TOPSOIL (5.5')
 VERY STIFF, BROWN SILTY CLAY, SOME TO LITTLE SAND, LITTLE GRAVEL, MOIST.

VERY DENSE, GRAY GRAVEL WITH SAND AND SILT, TRACE CLAY, MOIST.

SHALE : GRAY, HIGHLY WEATHERED.

SHALE : GRAY, MODERATELY TO SLIGHTLY WEATHERED, WEAK, FINE GRAINED, LAMINATED TO THIN BEDDED, FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACES, BLOCKY, DISTURBED, SEAMY, POOR TO GOOD SURFACE.
 -0.3' CLAYSTONE SEAM @ 16.0'
 -@17.4' CLAY SEAM
 -@18.0' CLAY SEAM

-SILTSTONE SEAM @ 21.4'-23.0'

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 12.1'
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 94 LBS CEMENT / 25 LBS BENTONITE POWDER / 40 GAL WATER.

Project Name: FRA-161-15.80

Location:
 Franklin County, Ohio

Photo No.
10

Boring:
 B-041-0-23

RC-1: 16.0-20.0'
 REC (%):68
 RQD (%):20

RC-2: 20.0-25.0'
 REC (%):100
 RQD (%):40



FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:58:56 PM USER: juans
 J:\GEO\GEO\Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_Z1028.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 11/9/23 END: 11/9/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA / NQ2
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1500+29 / 0'
 ALIGNMENT: CL WALL 15
 ELEVATION: 1030.3 (MSL) EOB: 24.0 ft.
 LAT / LONG: 40.090577, -82.811738

EXPLORATION ID
B-042-0-23
 PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.6' TOPSOIL (6.5")
 HARD, BROWN SILT AND CLAY, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.

SANDSTONE : GRAY, HIGHLY WEATHERED.

SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, MODERATLY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACES, BLOCKY, GOOD SURFACE.

DEPTH (ft)	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)							WC	ODOT CLASS (GI)	HOLE SEALED
				GR	FS	SI	CL	LL	PL	PI			
1	3												
2	8	23	4.5+								14	A-6a (V)	
3	8												
4	14	39											
5	13												
6	17		4.5+								13	A-6a (V)	
7	4	5	4.5+								15	A-6a (6)	
8	6												
9	4	8	4.5+								12	A-6a (V)	
10	8	23											
11	40										6	Rock (V)	
12	42												
13	50/2'												
14	50/0"												
15													
16	50/3"										5	Rock (V)	
17													
18	58												
19													
20													
21													
22	68												
23													
24													

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 16.9'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 47 LBS CEMENT, 25 LBS BENTONITE POWDER AND 40 GAL WATER

Project Name: FRA-161-15.80

Location:
 Franklin County, Ohio

<p>Photo No. 11</p>	
<p>Boring: B-042-0-23</p>	
<p>RC-1: 18.0'-19.0' REC (%):75 RQD (%):58</p>	
<p>RC-2: 19.0'-24.0' REC (%):92 RQD (%):68</p>	

FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:59:17 PM USER: juans J:\GEO\GEO\GEOtech Connect Projects\2023\117607-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_Z1029.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 11/9/23 END: 11/9/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA / NQ2
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1502+16 / 0'
 ALIGNMENT: CL WALL 15
 ELEVATION: 1035.0 (MSL) EOB: 24.5 ft.
 LAT / LONG: 40.090545, -82.811039

EXPLORATION ID
B-043-0-23
 PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.5' - TOPSOIL (5.5')
 HARD, BROWN SANDY SILT, SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, MOIST TO DAMP.

SANDSTONE : GRAY, HIGHLY WEATHERED.

SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, MODERATELY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, GOOD SURFACE.

SHALE : GRAY, MODERATELY WEATHERED, WEAK, FINE GRAINED, LAMINATED, FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, DISTURBED, SEAMY, POOR SURFACE.

SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, MODERATELY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, GOOD SURFACE.

DEPTH (ft)	SPT / RQD	N ₆₀	REC SAMPLE (%)	HP (tsf)	GRADATION (%)							WC	ODOT CLASS (GI)	HOLE SEALED
					GR	CS	FS	SI	CL	LL	PL			
1	3													
2	5	20	72	4.5+	-	-	-	-	-	-	-	13	A-4a (V)	
3	9													
4	7	23	72	4.5+	-	-	-	-	-	-	-	15	A-4a (V)	
5	8													
6	3	19	100	4.5+	14	11	14	34	27	17	10	16	A-4a (5)	
7	5	8												
8														
9	4	27	61	4.5+	-	-	-	-	-	-	-	13	A-4a (V)	
10	14													
11	20	50/5"										6	Rock (V)	
12			55	SS-5	-	-	-	-	-	-	-			
13														
14	20	94	67	SS-6	-	-	-	-	-	-	-	12	Rock (V)	
15	30	35												
16	50/4"		38	SS-7	-	-	-	-	-	-	-	6	Rock (V)	
17														
18														
19	0		75	NQ2-1									CORE	
20														
21														
22	33		68	NQ2-2									CORE	
23														
24														

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 15.2'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 47 LBS CEMENT, 25 LBS BENTONITE POWDER AND 40 GAL WATER

Project Name: FRA-161-15.80

Location:
 Franklin County, Ohio

Photo No. 12	
Boring: B-043-0-23	
RC-1: 18.5-19.5' REC (%):75 RQD (%):10	
RC-2: 19.5-24.5' REC (%):68 RQD (%):33	

FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 6:59:37 PM USER: juans J:\GEO TECH\Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_ZL030.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
TYPE: NOISE WALLS
PID: 117607 SFN: NA
START: 11/14/23 END: 11/14/23

DRILLING FIRM / OPERATOR: RII / TG
SAMPLING FIRM / LOGGER: RII / MJ
DRILLING METHOD: 3.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
HAMMER: AUTOMATIC
CALIBRATION DATE: 3/21/22
ENERGY RATIO (%): 86.4

STATION / OFFSET: 1504+27 / 0'
ALIGNMENT: CL WALL 15
ELEVATION: 1038.3 (MSL) EOB: 25.0 ft.
LAT / LONG: 40.090479, -82.810313

EXPLORATION ID
B-044-0-23
PAGE
1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.3' TOPSOIL (4.0")
HARD, LIGHT BROWN SILT AND CLAY, SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, DAMP TO MOIST.

DEPTH	ELEV.	SPT / RQD	REC SAMPLE ID	HP (tsf)	GR	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)
1	1038.3	4											
2	1038.0	7	SS-1	4.5+								15	A-6a (V)
3		6											
4		12	SS-2									9	A-6a (V)
5		13											
6		10	SS-3	4.5+					30	17	13	14	A-6a (6)
7		12											
8		8	SS-4	4.5+								14	A-6a (V)
9		9											
10		13											
11		6	SS-5	4.5+								11	A-6a (V)
12	1025.3	10											
13		50/4"	SS-6									7	Rock (V)
14													
15													
16		38	SS-7									10	Rock (V)
17		50/4"											
18													
19		50/6"	SS-8									5	Rock (V)
20													
21		50/6"	SS-9									5	Rock (V)
22													
23		50/5"	SS-10									5	Rock (V)
24	1013.3												
25													

SANDSTONE : GRAY, HIGHLY WEATHERED.

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 12.8'
ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
TYPE: NOISE WALLS
PID: 117607 SFN: NA
START: 11/14/23 END: 11/14/23

DRILLING FIRM / OPERATOR: RII / TG
SAMPLING FIRM / LOGGER: RII / MJ
DRILLING METHOD: 3.25" HSA
SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
HAMMER: AUTOMATIC
CALIBRATION DATE: 3/21/22
ENERGY RATIO (%): 86.4

STATION / OFFSET: 1506+08 / 0'
ALIGNMENT: CL WALL 15
ELEVATION: 1038.9 (MSL) EOB: 25.0 ft.
LAT / LONG: 40.090452, -82.809651

EXPLORATION ID
B-045-0-23
PAGE
1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.3' TOPSOIL (4.0")
HARD, LIGHT BROWN TO BROWN CLAY, "AND" SILT, TRACE COARSE TO FINE SAND, DAMP.

DEPTH	ELEV.	SPT / RQD	REC SAMPLE ID	HP (tsf)	GR	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)
1	1038.9	5											
2	1038.9	16	SS-1	4.5+								17	A-7-6 (17)
3		6											
4		9	SS-2	4.5+								14	A-7-6 (V)
5		10											
6		12											
7		13	SS-3	4.5+								14	A-7-6 (V)
8		10											
9	1030.9	36	SS-4						28	17	11	12	A-6a (5)
10		13											
11		4	SS-5									13	A-6a (V)
12		6											
13		15											
14	1025.9	50/4"	SS-6									6	Rock (V)
15													
16		50/4"	SS-7									7	Rock (V)
17													
18		50/4"	SS-8									6	Rock (V)
19													
20													
21		50/2"	SS-9									6	Rock (V)
22													
23													
24	1013.9	50/0"	SS-10										Rock (V)
25													

SILTSTONE : GRAY TO DARK GRAY, HIGHLY WEATHERED.

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER; CAVE-IN DEPTH @ 13.9'
ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

DESIGN AGENCY
RESOURCE INTERNATIONAL
8350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949
DESIGNER
JAS
REVIEWER
DEK 1/19/24
PROJECT ID
117607
SUBSET TOTAL
58 66
SHEET TOTAL
P.287 295

GEOTECHNICAL PROFILE - NOISE WALLS
NOISE WALL 15
BORING LOGS B-044-0-23 AND B-045-0-23

FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 7:00:05 PM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_ZL031.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
TYPE: NOISE WALLS
PID: 117607 SFN: NA
START: 11/10/23 END: 11/10/23

DRILLING FIRM / OPERATOR: RII / TG
SAMPLING FIRM / LOGGER: RII / MJ
DRILLING METHOD: 3.25" HSA / NQ2
SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)
HAMMER: AUTOMATIC
CALIBRATION DATE: 3/21/22
ENERGY RATIO (%): 86.4

STATION / OFFSET: 1508+10 / 0'
ALIGNMENT: CL WALL 15
ELEVATION: 1039.1 (MSL) EOB: 25.0 ft.
LAT / LONG: 40.090415, -82.808921

EXPLORATION ID
B-046-0-23
PAGE
1 OF 1

MATERIAL DESCRIPTION AND NOTES

DEPTH (ft)	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)							WC	HOLE SEALED
				GR	CS	FS	SI	CL	LL	PL		
1	5											
2	7											
3	8											
4	12											
5	14											
6	15											
7	16											
8	10											
9	8											
10	12											
11	11											
12	18											
13	16											
14	6											
15	16											
16	50/4"											
17												
18	50/4"											
19	0											
20												
21												
22	37											
23												
24												
25												

0.5' - TOPSOIL (5.5')
HARD, BROWNISH GRAY CLAY, "AND" SILT, LITTLE FINE GRAVEL, LITTLE COARSE TO FINE SAND, DAMP.

HARD, BROWNISH GRAY SILT AND CLAY, SOME COARSE TO FINE SAND, SOME FINE GRAVEL, MOIST.

SANDSTONE : GRAY, HIGHLY WEATHERED.

SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, MODERATELY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACES, BLOCKY, GOOD SURFACE.
-@21.3' - 21.5' SHALE
-@22.5' CLAY SEAM
-@24.5'-25.0' SHALE

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 15.2'
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 47 LBS CEMENT, 25 LBS BENTONITE POWDER AND 40 GAL WATER

Project Name: FRA-161-15.80

Location:
Franklin County, Ohio



Photo No. 13

Boring:
B-046-0-23

RC-1: 19.0-20.0'
REC (%):33
RQD (%):10

RC-2: 20.0-25.0'
REC (%):93
RQD (%):37

DESIGN AGENCY
RESOURCE INTERNATIONAL
8350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNER
JAS

REVIEWER
DEK 1/19/24

PROJECT ID
117607

SUBSET
59 / 66

SHEET
P.288 / 295

GEOTECHNICAL PROFILE - NOISE WALLS
NOISE WALL 15
BORING LOG & ROCK CORE PHOTO FOR B-046-0-23

FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 7:00:26 PM USER: juans J:\GEO\GEO\GEOtech Connect Projects\2023\117607-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_ZL032.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 11/10/23 END: 11/10/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA / NQ2
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1510+10 / 0'
 ALIGNMENT: CL WALL 15
 ELEVATION: 1039.2 (MSL) EOB: 25.0 ft.
 LAT / LONG: 40.090391, -82.808171

EXPLORATION ID
B-047-0-23
 PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

DEPTH (ft)	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)								WC	HOLE SEALED	
				GR	FS	SI	CL	LL	PL	PI				
1	4													
2	8	27	4.5+											
3	11													
4	17	52	4.5+	11	13	36	31	31	17	14				
5	19													
6	5	6	20	75										
7	8													
8														
9	5	7	22	58										
10	8													
11														
12	14	37	61	58	14	32	18	26	17	9				
13	12													
14	15	20	52	36										
15	16													
16	19	15	54	54										
17	50/6"													
18														
19	50/4"		100											
20	0		42											
21														
22														
23	55		92											
24														
25														

0.5' TOPSOIL (6.0")
 HARD, BROWN SILT AND CLAY, SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, DAMP.

HARD, BROWN SANDY SILT, LITTLE CLAY, SOME FINE GRAVEL, DAMP.

SILTSTONE : GRAY, HIGHLY WEATHERED.

SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACES, BLOCKY, GOOD SURFACE.

-@22.4' CLAY SEAM
 -@ 19.0' - 25.0' RED IRON STAINING THROUGHOUT

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 14.9'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 47 LBS CEMENT, 25 LBS BENTONITE POWDER AND 40 GAL WATER

Project Name: FRA-161-15.80

Location:
 Franklin County, Ohio

Photo No.
 14

Boring:
 B-047-0-23

RC-1: 19.0-20.0'
 REC (%):42
 RQD (%):10

RC-2: 20.0-25.0'
 REC (%):92
 RQD (%):55



8350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949

DESIGNER	JAS
REVIEWER	DEK
REVIEW DATE	1/19/24
PROJECT ID	117607
SUBSET TOTAL	60 / 66
SHEET TOTAL	P.289 / 295

GEOTECHNICAL PROFILE - NOISE WALLS
 NOISE WALL 15
 BORING LOG & ROCK CORE PHOTO FOR B-047-0-23

FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 7:00:46 PM USER: juans
 J:\GEO\GEO\Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_Z1033.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 11/10/23 END: 11/10/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA
 SAMPLING METHOD: SPT

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1512+10 / 0'
 ALIGNMENT: CL WALL 15
 ELEVATION: 1037.4 (MSL) EOB: 25.0 ft.
 LAT / LONG: 40.090360, -82.807478

EXPLORATION ID
B-048-0-23

PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.5' - TOPSOIL (6.0')	ELEV. 1037.4	DEPTHS	SPT / RQD	REC SAMPLE ID	HP (tsf)	GR	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	BACK FILL			
HARD, BROWN TO GRAY SILTY CLAY, SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP TO MOIST.	1036.9	1	3	SS-1	4.5+	-	-	-	-	-	-	-	19	A-6b (V)	A-6b (V)			
		2	5															
		3																
		4	6	20	SS-2	4.5+	10	5	19	32	34	36	17	19		14	A-6b (10)	
		5	7															
		6	6	24	SS-3	4.5+	-	-	-	-	-	-	-	17		A-6b (V)	A-6b (V)	
		7	11															
		8																
		9	6	26	SS-4	4.5+	-	-	-	-	-	-	-	-		12	A-6b (V)	A-6b (V)
		10	10															
VERY STIFF TO HARD, GRAY SANDY SILT, SOME CLAY, LITTLE FINE GRAVEL, DAMP.	1026.9	11	5	22	SS-5	4.5+	18	11	14	33	24	26	16	10	11	A-4a (4)		
		12	6	9														
		13																
		14	3	4	13	SS-6	3.00	-	-	-	-	-	-	-	12	A-4a (V)	A-4a (V)	
		15	5															
SHALE : BROWN, SEVERELY WEATHERED.	1021.4	16	28	-	SS-7	-	-	-	-	-	-	-	-	0	Rock (V)	Rock (V)		
		17	35															
		18	50															
		19	15	24	72	SS-8	-	-	-	-	-	-	-	-	13		Rock (V)	
		20	26															
21	60																	
22																		
23																		
24	11	10	36	50	SS-10	-	-	-	-	-	-	-	20	Rock (V)	Rock (V)			
25	15																	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING; CAVE-IN DEPTH @ 16.1'
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED WITH 50 LBS. BENTONITE CHIPS AND SOIL CUTTINGS.

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:57 - U:\G18\PROJECTS\2023\W-23-107.GPJ

DESIGN AGENCY

 8350 PRESIDENTIAL GATEWAY
 COLUMBUS, OHIO 43231
 (614) 823-4949
 DESIGNER
JAS
 REVIEWER
DEK 1/19/24
 PROJECT ID
117607
 SUBSET TOTAL
61 66
 SHEET TOTAL
P.290 295

GEOTECHNICAL PROFILE - NOISE WALLS
NOISE WALL 15
BORING LOG B-048-0-23

FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 7:01:03 PM USER: juans J:\GEO TECH\Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_ZL034.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
TYPE: NOISE WALLS
PID: 117607 SFN: NA
START: 11/10/23 END: 11/10/23

DRILLING FIRM / OPERATOR: RII / TG
SAMPLING FIRM / LOGGER: RII / MJ
DRILLING METHOD: 3.25" HSA / NQ2
SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)
HAMMER: AUTOMATIC
CALIBRATION DATE: 3/21/22
ENERGY RATIO (%): 86.4

STATION / OFFSET: 1514+10 / 0'
ALIGNMENT: CL WALL 15
ELEVATION: 1038.9 (MSL) EOB: 25.0 ft.
LAT / LONG: 40.090327, -82.806756

EXPLORATION ID
B-049-0-23
PAGE
1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.5' - TOPSOIL (5.5')
VERY STIFF TO HARD, BROWN CLAY, SOME SILT, SOME FINE GRAVEL, TRACE COARSE TO FINE SAND, MOIST TO DAMP.

HARD, GRAY SANDY SILT, TRACE GRAVEL, MOIST TO DAMP.

SILTSTONE : GRAY, HIGHLY WEATHERED.

SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, MODERATELY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACES, BLOCKY, GOOD SURFACE.

DEPTH (ft)	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)							WC	ODOT CLASS (GI)	HOLE SEALED
				GR	FS	SI	CL	LL	PL	PI			
1	1												
2	3												
3	4												
4	5												
5	6												
6	8												
7	3												
8	4												
9	6												
10	13												
11	16												
12	8												
13	10												
14	5												
15	7												
16	14												
17	50/3"												
18	50/0"												
19	0												
20	0												
21													
22													
23													
24													
25													

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 17.1'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 47 LBS CEMENT, 25 LBS BENTONITE POWDER AND 40 GAL WATER

Project Name: FRA-161-15.80

Location:
Franklin County, Ohio

Photo No.
15

Boring:
B-049-0-23

RC-1: 19.0-20.0'
REC (%):0
RQD (%):0

RC-2: 20.0-25.0'
REC (%):42
RQD (%):28



8350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNER
JAS

REVIEWER
DEK 1/19/24

PROJECT ID
117607

SUBSET TOTAL
62 66

SHEET TOTAL
P.291 295

GEOTECHNICAL PROFILE - NOISE WALLS

NOISE WALL 15

BORING LOG & ROCK CORE PHOTO FOR B-049-0-23

FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 7:01:23 PM USER: juans J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_ZL035.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
TYPE: NOISE WALLS
PID: 117607 SFN: NA
START: 11/13/23 END: 11/13/23

DRILLING FIRM / OPERATOR: RII / TG
SAMPLING FIRM / LOGGER: RII / MJ
DRILLING METHOD: 3.25" HSA / NQ2
SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)
HAMMER: AUTOMATIC
CALIBRATION DATE: 3/21/22
ENERGY RATIO (%): 86.4

STATION / OFFSET: 1516+10 / 0'
ALIGNMENT: CL WALL 15
ELEVATION: 1038.0 (MSL) EOB: 25.0 ft.
LAT / LONG: 40.090286, -82.806054

EXPLORATION ID
B-050-0-23

PAGE
1 OF 1

MATERIAL DESCRIPTION AND NOTES

0.5' TOPSOIL (5.5')	ELEV. 1038.0	DEPTH 1	SPT / RQD 2	REC SAMPLE ID	GR	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	HOLE SEALED
VERY STIFF TO HARD, BROWN TO GRAY SILTY CLAY, SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, DAMP TO MOIST.	1037.5	2	4	SS-1	-	-	-	-	-	-	-	20	A-6b (V)	
		3	5											
		4	7	SS-2	13	8	13	39	27	37	19	18	A-6b (9)	
		5	6											
		6	8	SS-3	-	-	-	-	-	-	-	15	A-6b (V)	
		7	10											
		8	10											
		9	4	SS-4	4.5+	-	-	-	-	-	-	9	A-6b (V)	
		10	5											
		11	11											
DENSE, BROWN GRAVEL WITH SAND AND SILT, TRACE CLAY, DAMP.	1027.5	12	18	SS-5	-	-	-	-	-	-	-	9	A-2-4 (V)	
		13	15											
		14	12											
		15	16	SS-6	-	-	-	-	-	-	-	8	Rock (V)	
		16	32											
		17	16	SS-7	-	-	-	-	-	-	-	12	Rock (V)	
		18	50/5"											
		19	50/4"	SS-8	-	-	-	-	-	-	-	7	Rock (V)	
		20	0	NQ2-1	25								CORE	
		21												
		22	82	NQ2-2	100								CORE	
		23												
		24												
		25												

ELEV. 1038.0	DEPTH 1	SPT / RQD 2	REC SAMPLE ID	GR	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (GI)	HOLE SEALED
1037.5	2	4	SS-1	-	-	-	-	-	-	-	20	A-6b (V)	
	3	5											
	4	7	SS-2	13	8	13	39	27	37	19	18	A-6b (9)	
	5	6											
	6	8	SS-3	-	-	-	-	-	-	-	15	A-6b (V)	
	7	10											
	8	10											
	9	4	SS-4	4.5+	-	-	-	-	-	-	9	A-6b (V)	
	10	5											
	11	11											
	12	18	SS-5	-	-	-	-	-	-	-	9	A-2-4 (V)	
	13	15											
	14	12											
	15	16	SS-6	-	-	-	-	-	-	-	8	Rock (V)	
	16	32											
	17	16	SS-7	-	-	-	-	-	-	-	12	Rock (V)	
	18	50/5"											
	19	50/4"	SS-8	-	-	-	-	-	-	-	7	Rock (V)	
	20	0	NQ2-1	25									CORE
	21												
	22	82	NQ2-2	100									CORE
	23												
	24												
	25												

000-23 RII STA ODOT BORING LOG (8.5X11) - OH DOT GDT - 1/11/24 07:57 - U:\G18\PROJECTS\2023\W-23-107.GPJ

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 13.0'
ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 47 LBS CEMENT, 25 LBS BENTONITE POWDER AND 40 GAL WATER

Project Name: FRA-161-15.80

Location:
Franklin County, Ohio

Photo No. 16	Boring: B-050-0-23	RC-1: 19.0-20.0' REC (%):0 RQD (%):25	RC-2: 20.0-25.0' REC (%):100 RQD (%):82
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DESIGN AGENCY
RESOURCE INTERNATIONAL
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949

DESIGNER
JAS

REVIEWER
DEK 1/19/24

PROJECT ID
117607

SUBSET	TOTAL
63	66

SHEET	TOTAL
P.292	295

GEOTECHNICAL PROFILE - NOISE WALLS
NOISE WALL 15
BORING LOG & ROCK CORE PHOTO FOR B-050-0-23

FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 7:01:44 PM USER: juans
 J:\GEO\GEO\GEOtech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_ZL036.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 11/13/23 END: 11/13/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA / NQ2
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1519+10.6 / 8.77' LT
 ALIGNMENT: CL WALL 15
 ELEVATION: 1038.1 (MSL) EOB: 25.0 ft.
 LAT / LONG: 40.090226, -82.806530

EXPLORATION ID
B-051-0-23
 PAGE
 1 OF 1

**MATERIAL DESCRIPTION
 AND NOTES**

0.5' - TOPSOIL (5.5")
 HARD, BROWN SILTY CLAY, LITTLE GRAVEL AND SAND, DAMP.

VERY DENSE, BROWN TO GRAY GRAVEL WITH SAND AND SILT, DAMP.

-@ 6.0' - 8.0' COBBLES

SILTSTONE : GRAY, HIGHLY WEATHERED.

SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, MODERATELY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, GOOD SURFACE.

-VERTICAL FRACTURE @ 20.3', 20.9', 23.2' AND 24.7'

DEPTH (ft)	SPT / RQD	REC SAMPLE ID	HP (tsf)	GR	GRADATION (%)							WC	HOLE SEALED
					FS	SI	CL	LL	PL	PI	ATTERBERG		
1	3												
2	6												
3	7												
4	10												
5	12												
6	36												
7	26												
8	22												
9	17												
10	19												
11	32												
12	17												
13	29												
14	14												
15	50/3"												
16	50/4"												
17													
18													
19	50												
20													
21													
22	50												
23													
24													
25													

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 14.8'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 94 LBS CEMENT / 25 LBS BENTONITE POWDER / 40 GAL WATER

Project Name: FRA-161-15.80

Location:
 Franklin County, Ohio

Photo No.
 17

Boring:
 B-051-0-23

RC-1: 19.0'-20.0'
 REC (%):75
 RQD (%):50

RC-2: 20.0'-25.0'
 REC (%):97
 RQD (%):50



FRA-161-15.80 NOISE WALLS

MODEL SHEET PAPER SIZE: 34x22 (in.) DATE: 3/14/2024 TIME: 7:02:05 PM USER: jluans
 J:\GEO TECH\Geotech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_ZL037.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 11/13/23 END: 11/13/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA / NQ2
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1520+41 / 0'
 ALIGNMENT: CL WALL 15
 ELEVATION: 1038.6 (MSL) EOB: 25.0 ft.
 LAT / LONG: 40.090130, -82.804859

EXPLORATION ID
B-052-0-23
 PAGE
 1 OF 1

**MATERIAL DESCRIPTION
 AND NOTES**

DEPTH (ft)	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)								WC	HOLE SEALED	
				GR	FS	SI	CL	LL	PL	PI				
1	6													
2	7													
3	10		4.5+											14 A-6a (V)
4	12													
5	13													
6	18													
7	50/4"		4.5+											13 A-6a (V)
8														
9	12													
10	10													
11	10													
12	25													
13	35													
14	28													
15	19													
16	42													
17	50/3"													
18	50/3"													
19	92													9 Rock (V)
20														CORE
21														
22														
23														
24														
25														

0.3' - TOPSOIL (4.0')
 HARD, BROWN SILT AND CLAY, LITTLE GRAVEL AND SAND, DAMP.

MEDIUM DENSE, BROWN GRAVEL WITH SAND AND SILT, DAMP.
 -COBBLES @ 6.5'-8.0'

SILTSTONE : GRAY, HIGHLY WEATHERED.

SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, MODERATELY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, GOOD SURFACE.

-SHALE SEAMS @ 22.6', 23.0, 24.2'

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 13.8'
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 47 LBS CEMENT, 25 LBS BENTONITE POWDER AND 40 GAL WATER.

Project Name: FRA-161-15.80

Location:
 Franklin County, Ohio

<p>Photo No. 18</p>	
<p>Boring: B-052-0-23</p>	
<p>RC-1: 19.0-20.0' REC (%):92 RQD (%):92</p>	
<p>RC-2: 20.0-25.0' REC (%):93 RQD (%):77</p>	

FRA-161-15.80 NOISE WALLS

MODEL: Sheet PAPER: 34x22 (in.) DATE: 3/14/2024 TIME: 7:02:26 PM USER: juans J:\GEO\GEO\GEOtech Connect Projects\2023\W-23-107 FRA-161-15.80 NOISE WALLS\117607\400-Engineering\Geotechnical\Sheets\117607_ZL038.dgn

RESOURCE INTERNATIONAL, INC.



PROJECT: FRA-161-15.80
 TYPE: NOISE WALLS
 PID: 117607 SFN: NA
 START: 11/14/23 END: 11/14/23

DRILLING FIRM / OPERATOR: RII / TG
 SAMPLING FIRM / LOGGER: RII / MJ
 DRILLING METHOD: 3.25" HSA / NQ2
 SAMPLING METHOD: SPT / NQ2

DRILL RIG: DIETRICH D-50 (# 313)
 HAMMER: AUTOMATIC
 CALIBRATION DATE: 3/21/22
 ENERGY RATIO (%): 86.4

STATION / OFFSET: 1522+26 / 0'
 ALIGNMENT: CL WALL 15
 ELEVATION: 1036.5 (MSL) EOB: 25.0 ft.
 LAT / LONG: 40.090039, -82.804245

EXPLORATION ID
B-053-0-23
 PAGE
 1 OF 1

MATERIAL DESCRIPTION AND NOTES

DEPTH (ft)	SPT / RQD	REC SAMPLE ID	HP (tsf)	GRADATION (%)							WC	HOLE SEALED
				GR	FS	SI	CL	LL	PL	PI		
0.5' - TOPSOIL (6.0')												
VERY STIFF TO HARD, BROWN TO GRAY SILTY CLAY, SOME TO TRACE SAND, TRACE GRAVEL, MOIST.	1-5	SS-1	4.00	-	-	-	-	-	-	-	22	A-6b (V)
HARD, BROWN TO BROWN GRAY SANDY SILT, TRACE GRAVEL, DAMP TO MOIST.	3-4	SS-2	4.25	8	13	33	42	35	19	16	18	A-6b (10)
	2-3	SS-3	4.5+	-	-	-	-	-	-	-	17	A-6b (V)
SANDSTONE : GRAY, HIGHLY WEATHERED.	3-5	SS-4	4.5+	-	-	-	-	-	-	-	13	A-4a (V)
	5-7	SS-5	4.5+	13	14	29	31	25	15	10	12	A-4a (5)
SANDSTONE : GRAY, SLIGHTLY WEATHERED, STRONG, FINE GRAINED, THIN BEDDED, MODERATELY FRACTURED, NARROW APERTURES, SLIGHTLY ROUGH SURFACE, BLOCKY, GOOD SURFACE.	5-9	SS-6	-	-	-	-	-	-	-	-	12	Rock (V)
	50/3"	SS-7	-	-	-	-	-	-	-	-	8	Rock (V)
-@22.2' FRACTURE -@22.8' SHALE SEAM -@24.0 CLAY SEAM	50	NQ2-1	50									CORE
	68	NQ2-2	100									CORE
1022.4	TR											
1017.5												
1011.5												

NOTES: GROUNDWATER NOT MEASURED UPON COMPLETION DUE TO INFLUENCE OF CORE WATER. CAVE-IN DEPTH @ 15.8'

ABANDONMENT METHODS, MATERIALS, QUANTITIES: PUMPED 47 LBS CEMENT, 25 LBS BENTONITE POWDER AND 40 GAL WATER

Project Name: FRA-161-15.80

Location:
Franklin County, Ohio



Photo No.
19

Boring:
B-053-0-23

RC-1: 19.0-20.0'
REC (%):50
RQD (%):50

RC-2: 20.0-25.0'
REC (%):100
RQD (%):68