

EAU

PROJECT ID:
WITH: N/A

7868-03-70

COUNTY:
PEPIN

APRIL 2025
ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	Right of Way Plat
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
Section No.	8	Structure Plans
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 106



DESIGN DESIGNATION 7868-03-00

A.A.D.T.	(2025)	=	213
A.A.D.T.	(2045)	=	213
D.H.V.		=	31
D.D.		=	50/50
T.		=	21%
DESIGN SPEED		=	55 MPH
ESALS		=	81,000

CONVENTIONAL SYMBOLS

PLAN	
CORPORATE LIMITS	
PROPERTY LINE	
LOT LINE	
LIMITED HIGHWAY EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SLOPE INTERCEPT	
REFERENCE LINE	
EXISTING CULVERT	
PROPOSED CULVERT (Box or Pipe)	
COMBUSTIBLE FLUIDS	
MARSH AREA	
WOODED OR SHRUB AREA	

PROFILE	
GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
CULVERT (Profile View)	
UTILITIES	
ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

	ROCK
	LABEL
	95.36
	E
	FO
	G
	SAN
	SS
	T
	W

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

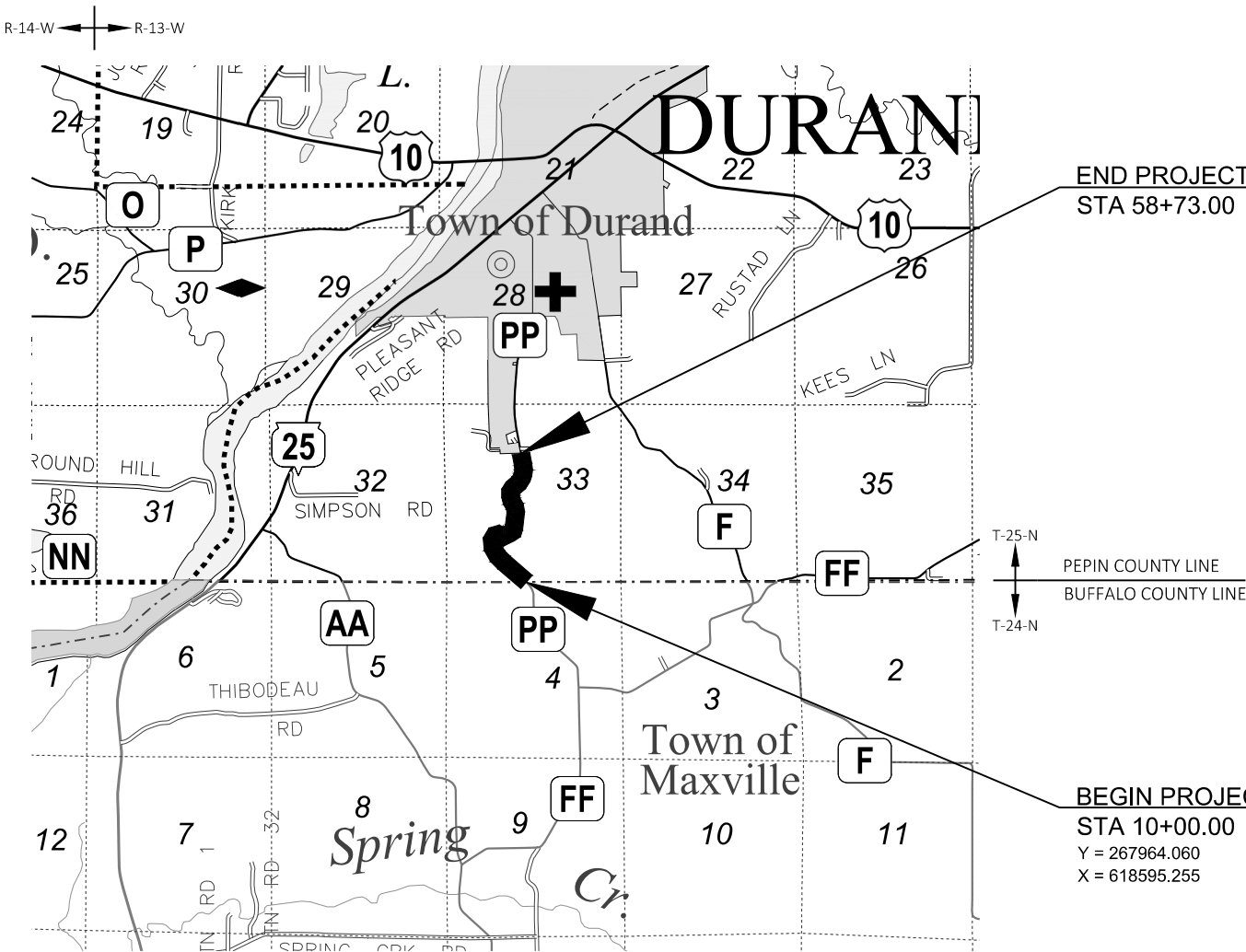
PLAN OF PROPOSED IMPROVEMENT

SOUTH COUNTY LINE - USH 10

SOUTH COUNTY LINE TO V SCHUH LANE

CTH PP
PEPIN COUNTY

STATE PROJECT NUMBER
7868-03-70



LAYOUT
SCALE 0 1 MI
TOTAL NET LENGTH OF CENTERLINE = 0.923 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), PEPIN COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES.

ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 09.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7868-03-70	WISC 2025429	1

ACCEPTED FOR
PEPIN COUNTY
Date: 10/15/24
(Signature and Title of Official)
Highway Commission
ORIGINAL PLANS PREPARED BY
CORRE ENGINEERING
MADISON | EAU CLAIRE | WAUKESHA | APPLETON | TOMAH | WAUBSAU
KEVIN L. MEYER
E-38300-006
ELK MOUND
WI
10/14/24
DATE: (Signature)
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PREPARED BY
Surveyor: CORRE, INC.
Designer: CORRE, INC.
Project Manager: MATTHEW BERG, PE
Regional Examiner: TONY YANG, PE
Regional Supervisor: MATTHEW BERG, PE
APPROVED FOR THE DEPARTMENT
DATE: 10/16/24
(Signature)
E

GENERAL NOTES

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LBS/SY/IN.

NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.

THE CONTRACTOR IS TO WORK WITH UTMOST CARE AND PROTECT ALL SURVEY MARKERS. REMOVAL OF ANY SURVEY MARKER IS TO BE WITH THE APPROVAL OF THE ENGINEER.

WHEN THE QUANTITY OF THE ITEMS OF BASE AGGREGATE, SUBBASE OR HMA PAVEMENT IS MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE LAYERS SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT APPROXIMATE LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S EROSION CONTROL IMPLEMENTATION PLAN (ECIP) AND APPROVED BY THE ENGINEER. MAINTAIN EROSION CONTROL MEASURES UNTIL SUCH A TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

PRIOR TO PLACEMENT OF BEAM GUARD THE SHOULDERS SHALL BE IN PLACE, SHAPED AND COMPACTED.

PRIOR TO ORDERING DRAINAGE PIPES, THE CONTRACTOR SHALL FIELD VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN WITH THE ENGINEER.

ORDER OF SECTION 2 DETAIL SHEETS

- GENERAL NOTES
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS

UTILITIES CONTACTS

NELSON COMMUNICATIONS COOPERATIVE
COMMUNICATIONS
MATT HOYT
318 3RD AVE W
DURAND, WI 54736
PHONE: 715-672-4204
EMAIL: MATT@NTEC.NET

RIVERLAND ENERGY CO-OP
ELECTRICITY
JOSH ABRAMCZAK
N28988 STATE ROAD 93, PO BOX 277
ARCADIA, WI 54612
PHONE: 715-829-3402
EMAIL: JABRAMCZAK@RIVERLANDENERGY.COM

DIGGERSHOTLINE

Dial 811 or (800)242-8511

www.DiggersHotline.com

CTH PP BORING LOG

BORING NO	STATION	LANE	ASPHALTIC PAVEMENT DEPTH (IN)	RECYCLED BITUMINOUS PAVEMENT DEPTH (IN)
B-1	13+00	SB	3.0	2.5
B-2	28+00	SB	1.75	1.25
B-5	36+00	SB	1.5	2.0
B-6	58+00	SB	2.5	1.25

COUNTY HIGHWAY COMMISSIONER

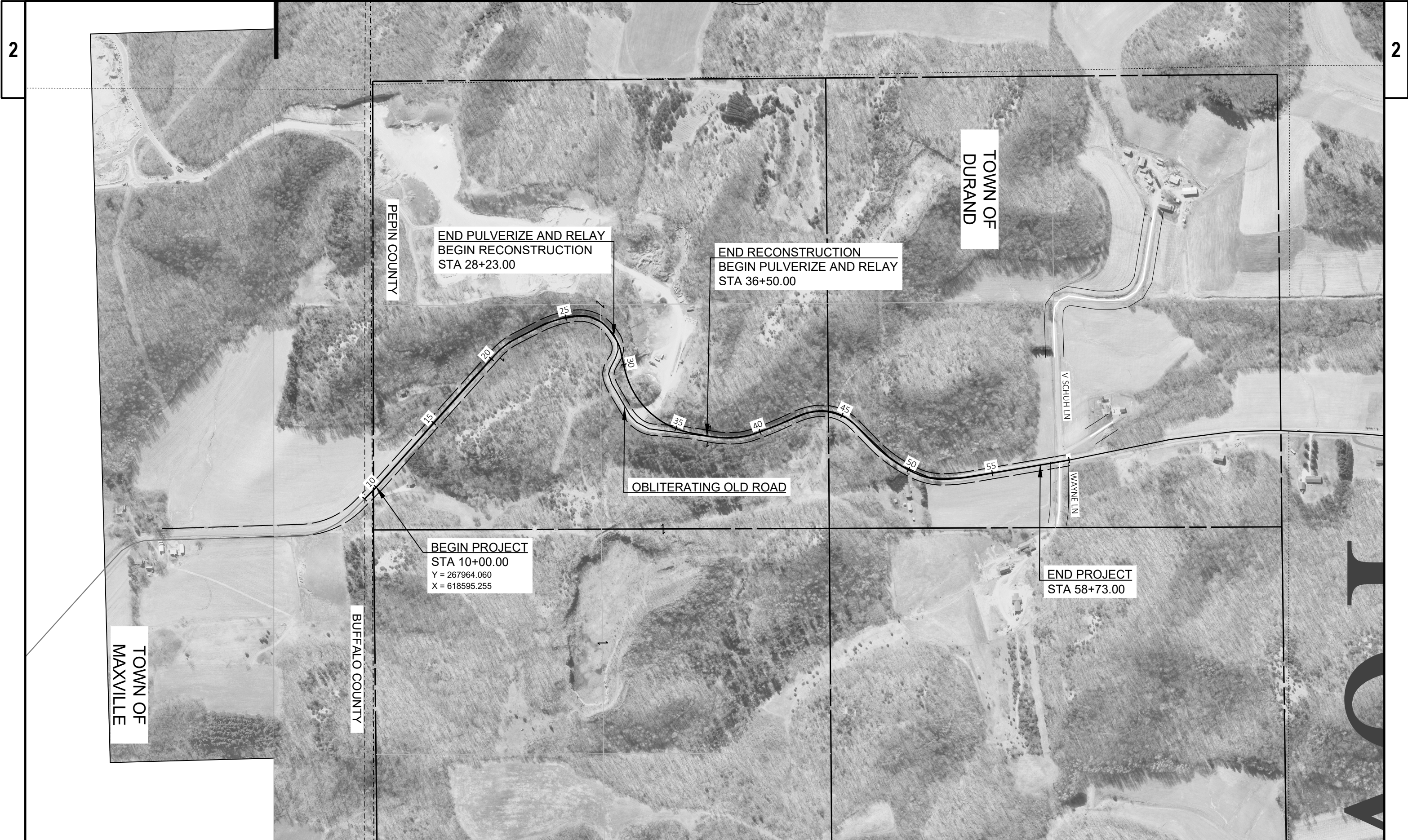
CHRIS BATES
PEPIN COUNTY
N5585 COUNTY RD N
ARKANSAW, WI 54721
PHONE: 715-285-5550
EMAIL: CBATES@CO.PEPIN.WI.US

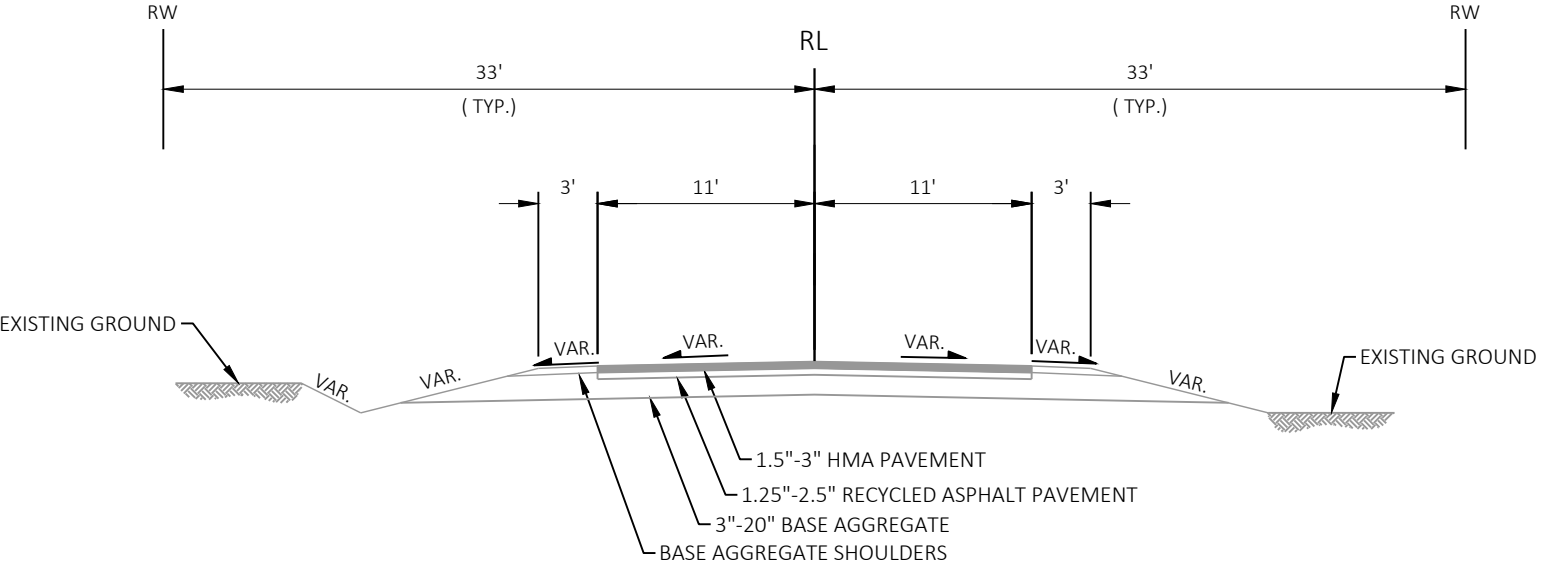
WISCONSIN DNR LIAISON

AMY LESIK
DNR WEST CENTRAL REGION HEADQUARTERS
1300 WEST CLAIREMONT AVE
EAU CLAIRE, WI 54701
PHONE: 715-495-1903
EMAIL: AMY.LESIK@WISCONSIN.GOV

DESIGN PROJECT MANAGER

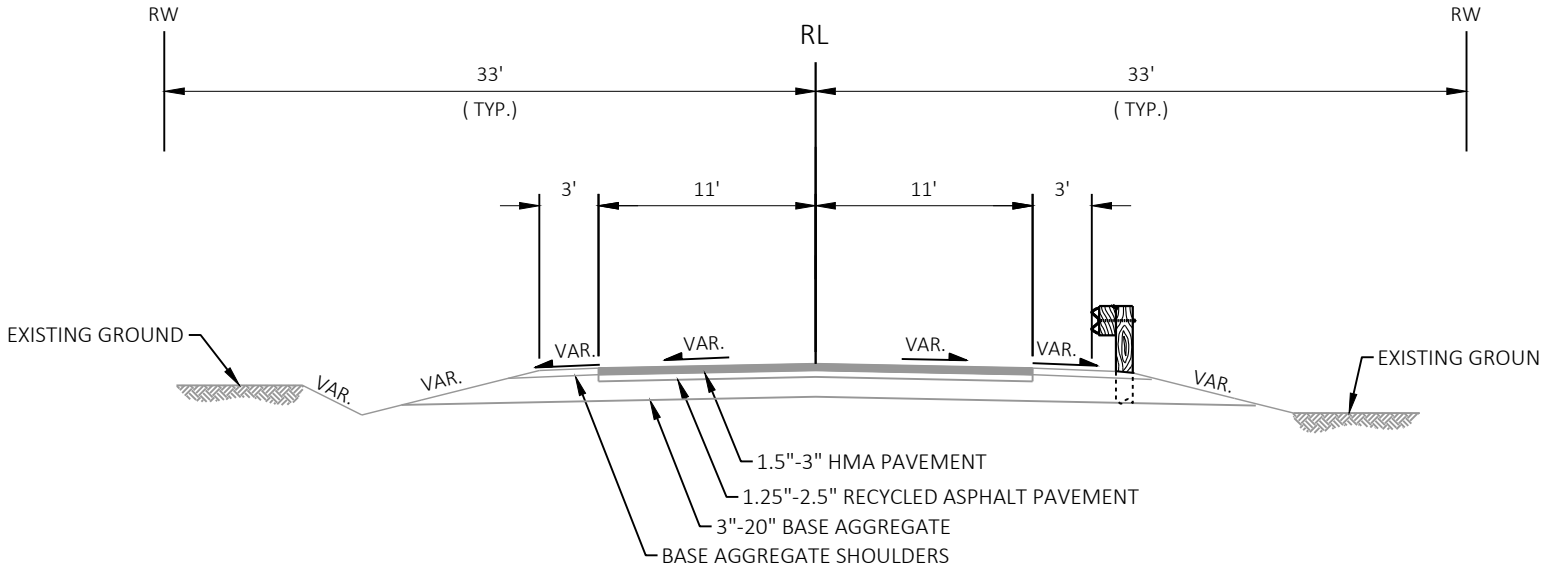
CORRE, INC.
KEVIN MEYER, P.E.
1802 WARDEN STREET
EAU CLAIRE, WI 54703
PHONE: 715-299-1894
EMAIL: KMEYER@CORREINC.COM





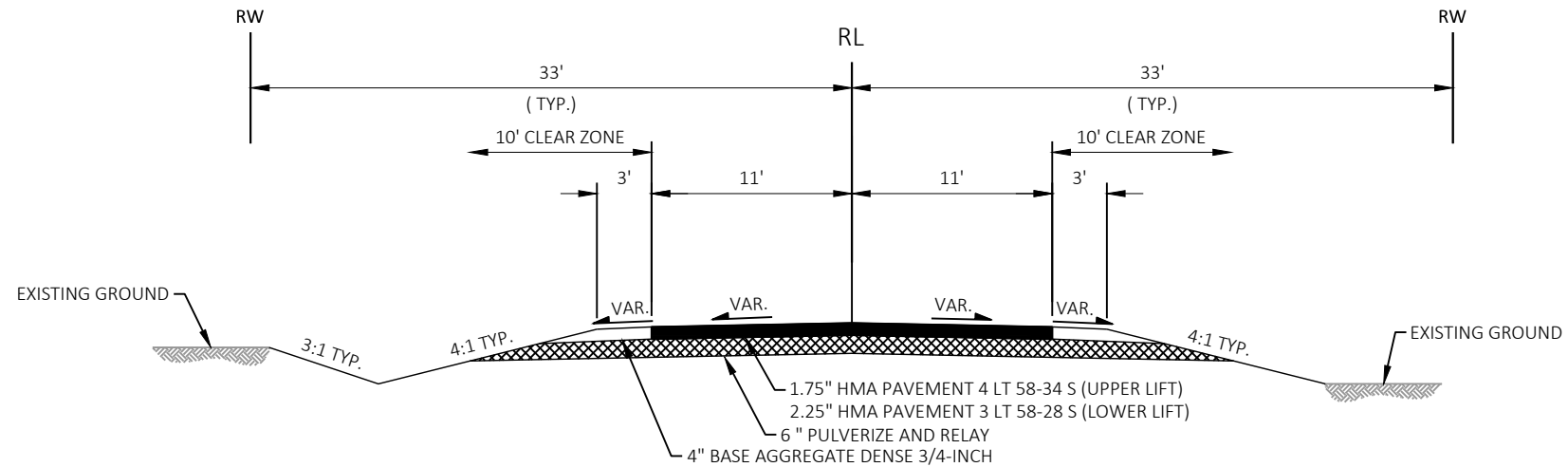
CTH PP EXISTING TYPICAL SECTION

STA 10+00 - 20+57
STA 29+71 - 31+39
STA 42+82 - 58+73



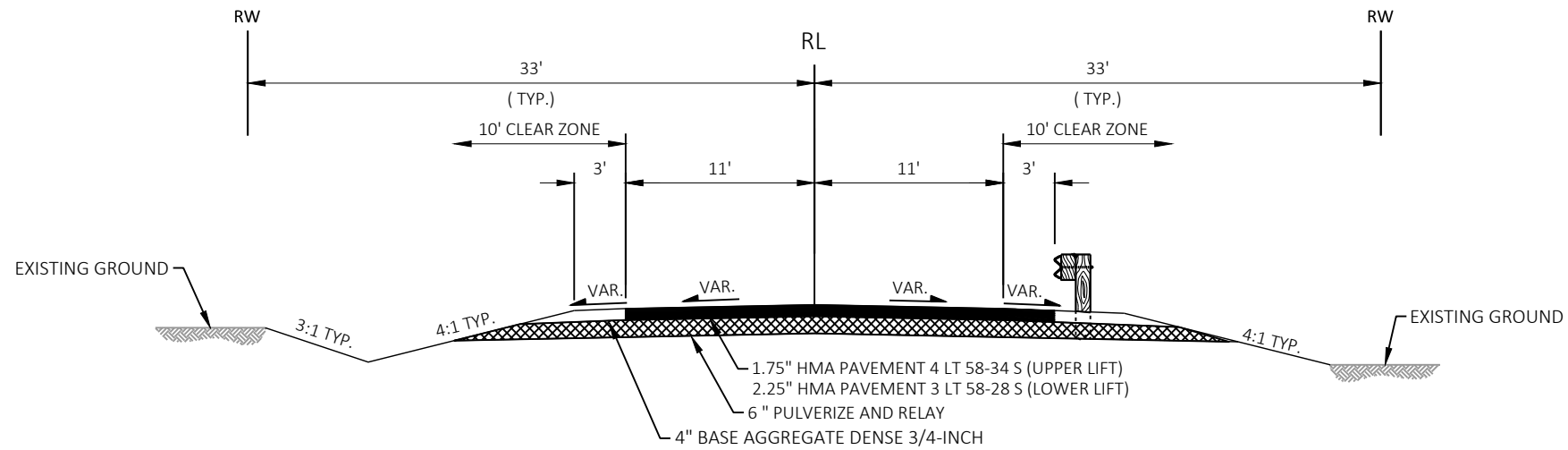
CTH PP EXISTING TYPICAL SECTION

STA 20+57 - 29+71
STA 31+39 - 42+82



CTH PP FINISHED TYPICAL SECTION - PAVEMENT REPLACEMENT

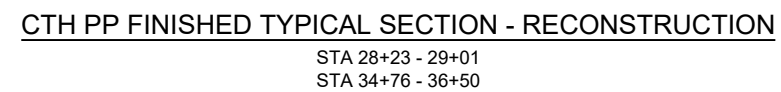
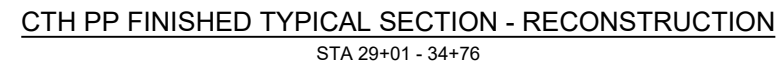
STA 10+00 - 20+07
STA 43+62 - 58+73



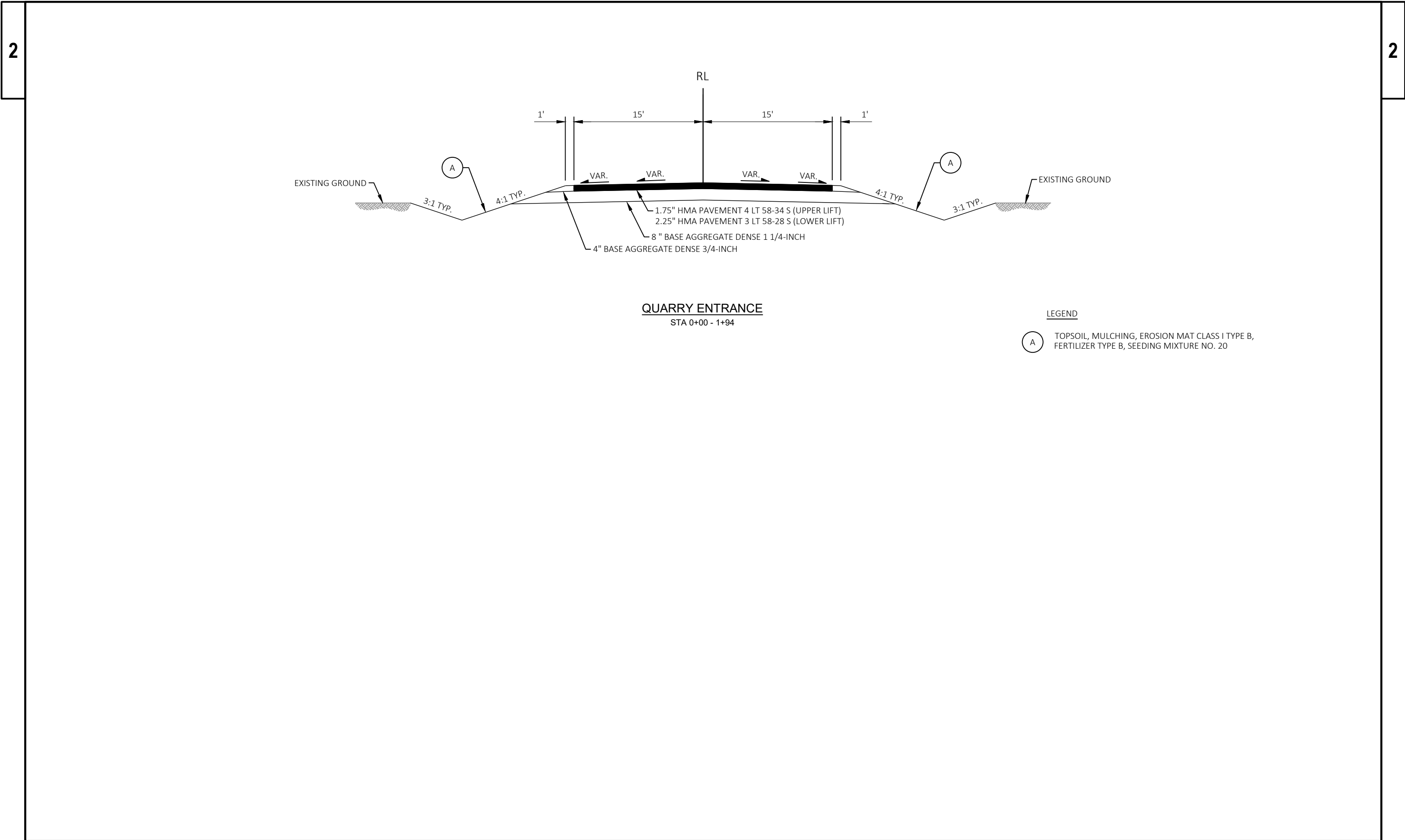
CTH PP FINISHED TYPICAL SECTION - PAVEMENT REPLACEMENT

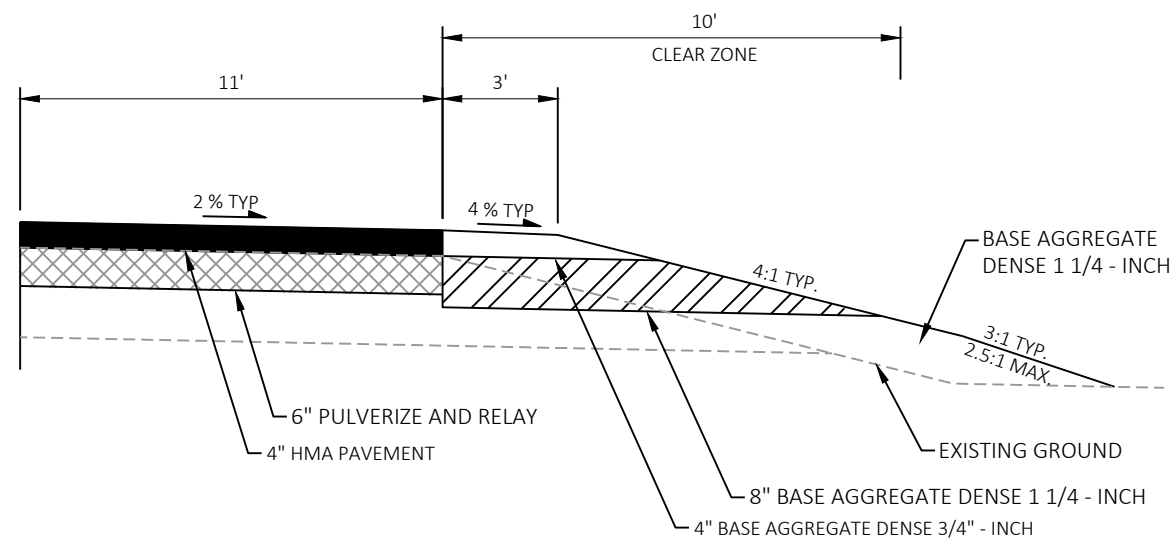
STA 20+07 - 28+23
STA 36+50 - 43+62

2



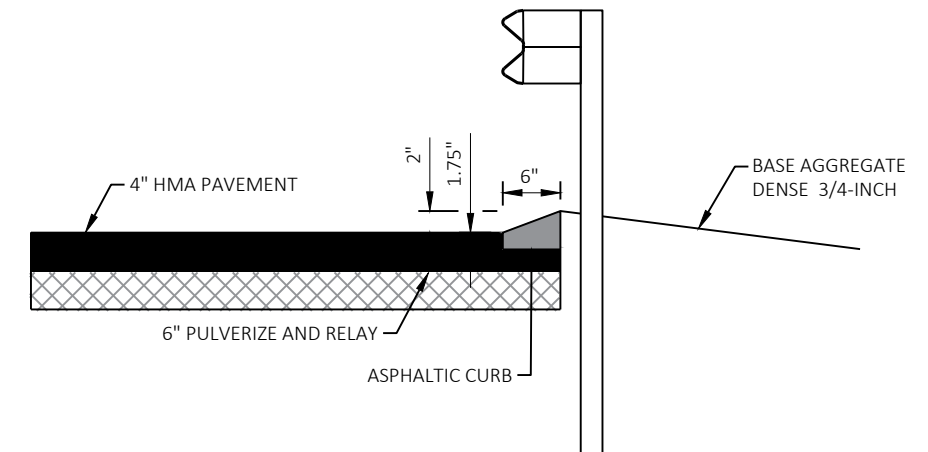
(A) TOPSOIL, MULCHING, EROSION MAT CLASS I TYPE B,
FERTILIZER TYPE B, SEEDING MIXTURE NO. 20





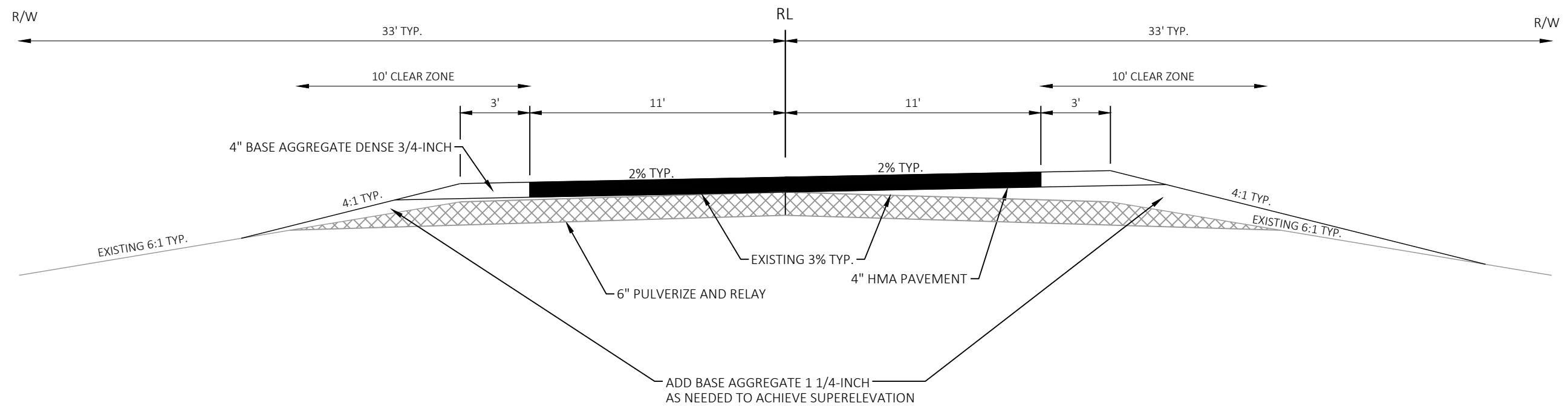
SHOULDER WIDENING

STA 10+00 - 17+00, LT
STA 16+50 - 19+50, RT
STA 51+00 - 57+00, RT



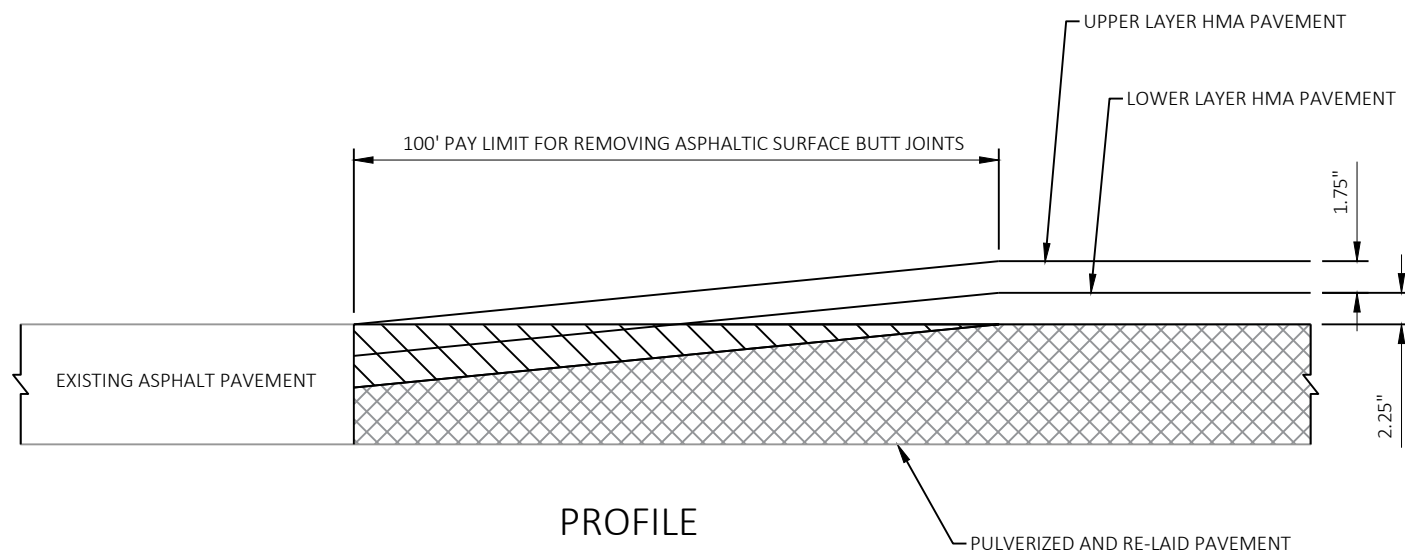
ASPHALTIC CURB

STA 20+07 - 29+01
STA 34+76 - 43+62



SUPERELEVATION CORRECTION - CTH PP

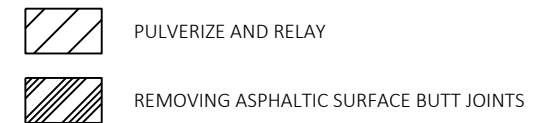
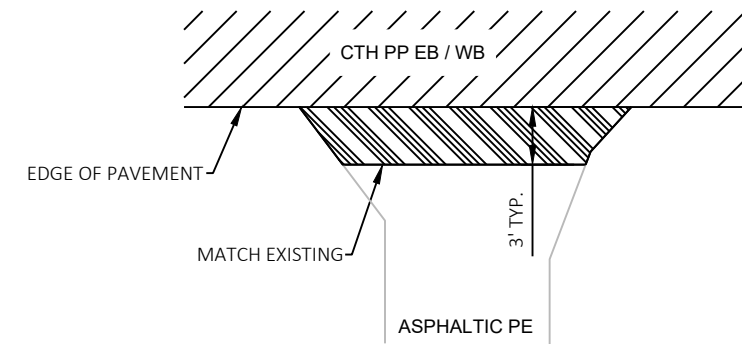
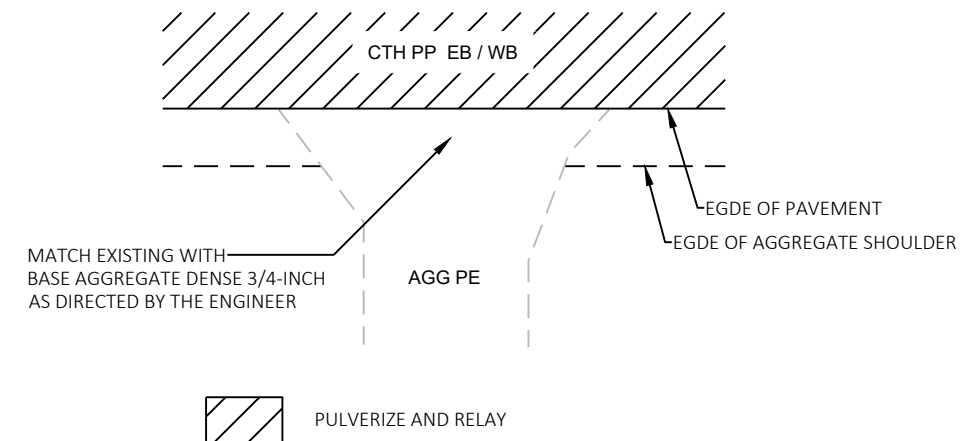
STA 10+00 - 28+23, LT & RT
STA 36+50 - 58+73, LT & RT

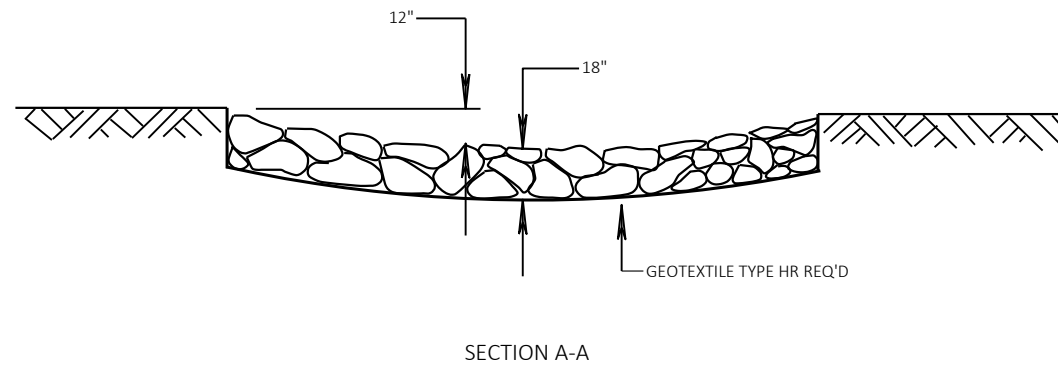


PROFILE

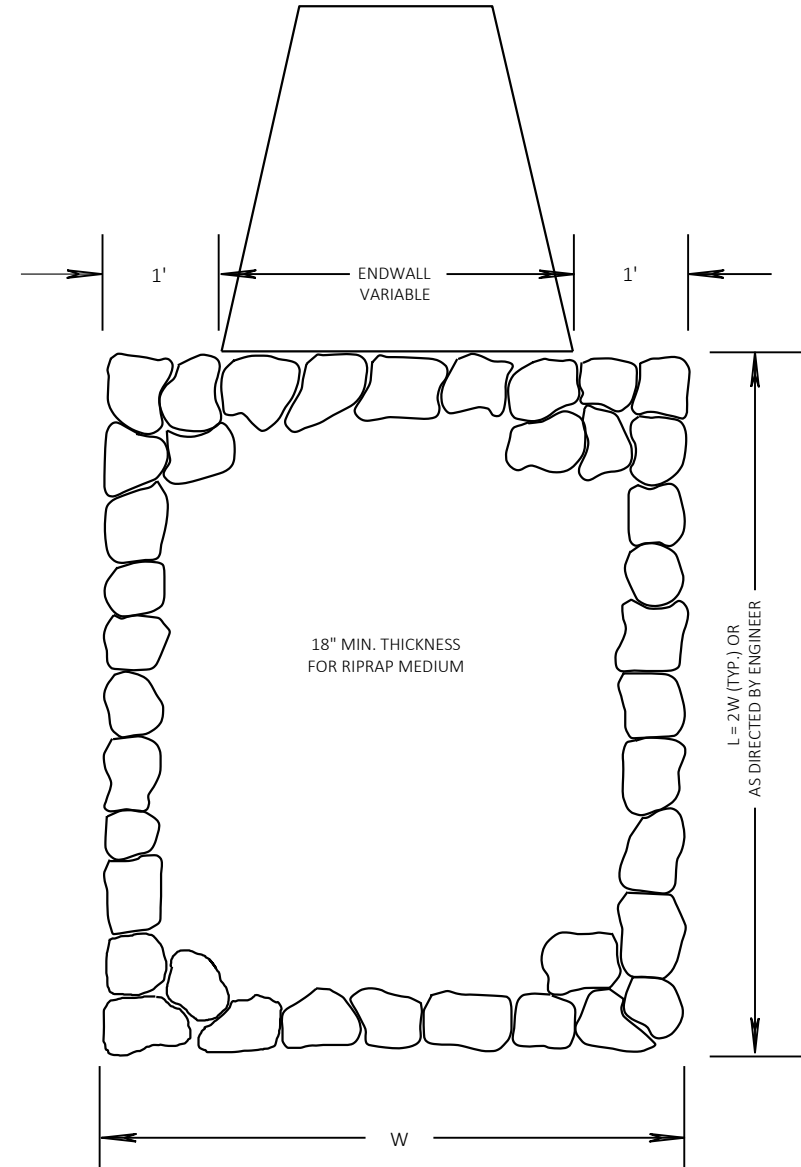
REMOVING ASPHALTIC SURFACE BUTT JOINTS

STA 10+00 - 11+00
STA 57+73 - 58+73

ASPHALTIC PE DETAILAGG PE DETAIL



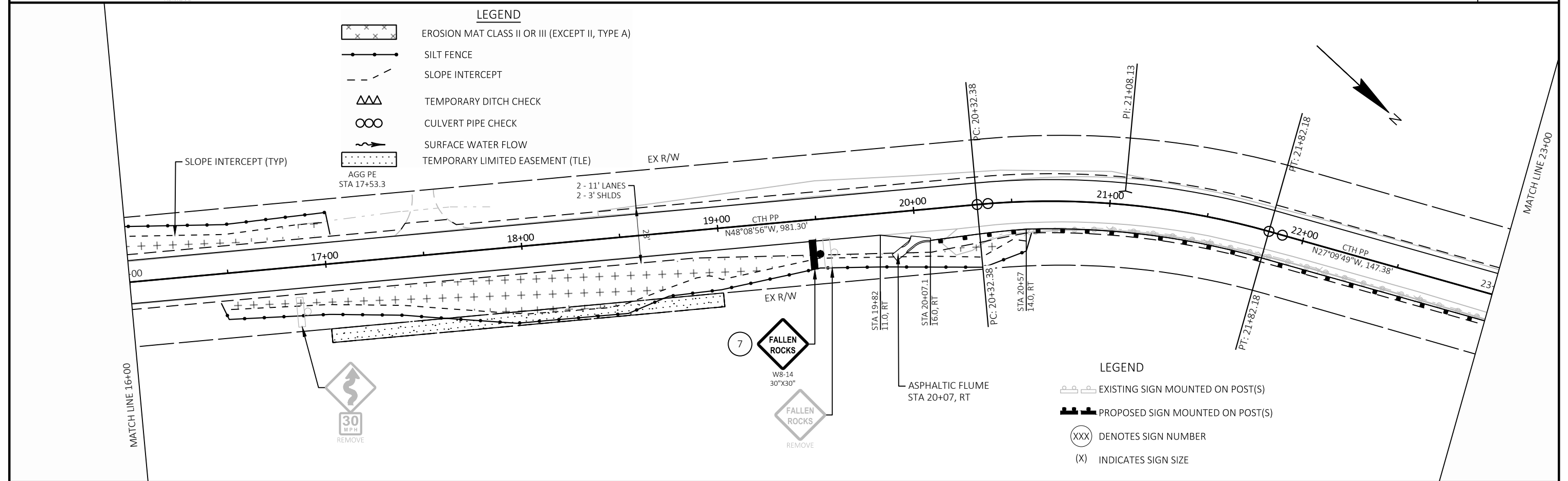
A

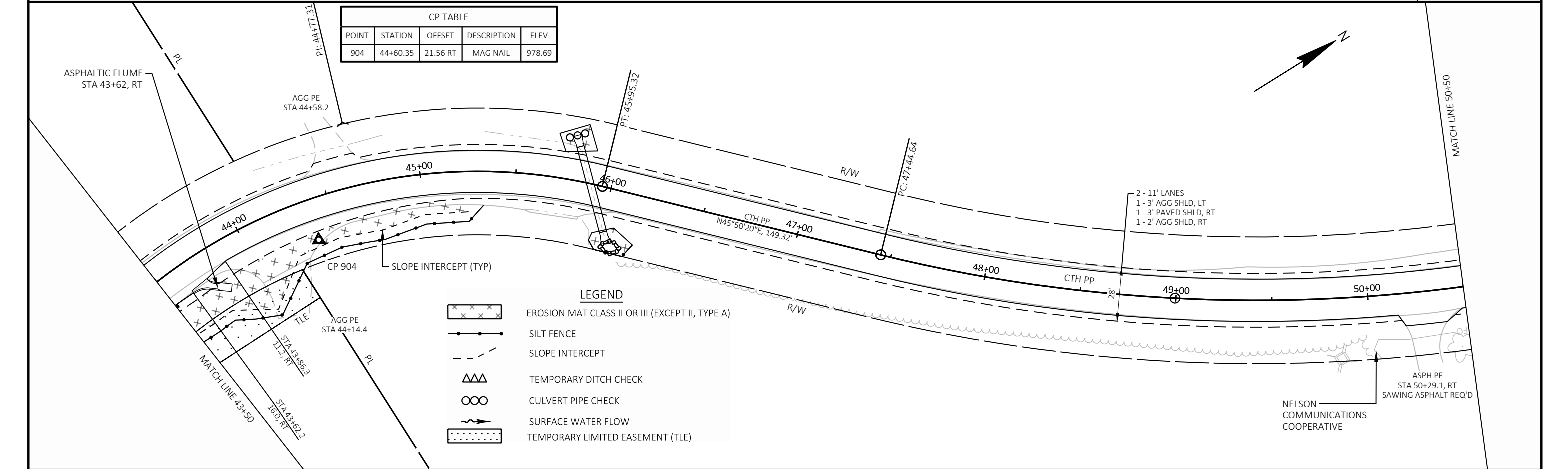
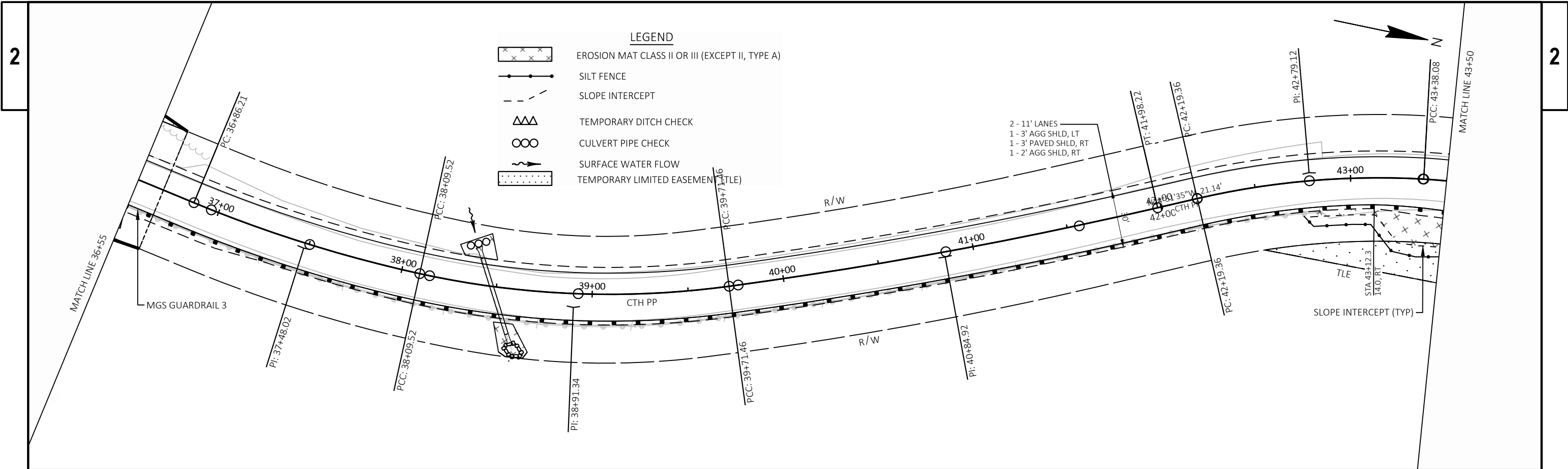


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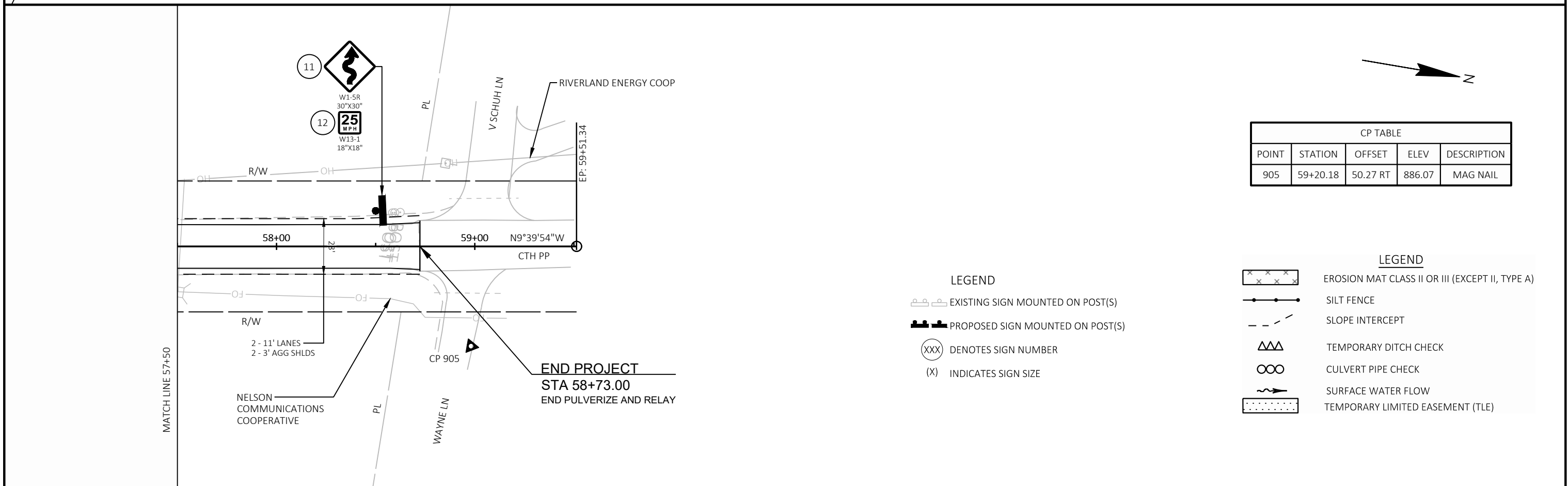


RIPRAP TREATMENT AT CULVERTS





CP TABLE				
POINT	STATION	OFFSET	DESCRIPTION	ELEV
904	44+60.35	21.56 RT	MAG NAIL	978.69



Estimate Of Quantities

7868-03-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0205	Grubbing	STA	11.000	11.000
0004	203.0100	Removing Small Pipe Culverts	EACH	3.000	3.000
0006	204.0115	Removing Asphaltic Surface Butt Joints	SY	500.000	500.000
0008	204.0165	Removing Guardrail	LF	2,150.000	2,150.000
0010	205.0100	Excavation Common	CY	25,058.000	25,058.000
0012	205.0200	Excavation Rock	CY	2,207.000	2,207.000
0014	213.0100	Finishing Roadway (project) 01. 7868-03-70	EACH	1.000	1.000
0016	214.0100	Obliterating Old Road	STA	9.600	9.600
0018	305.0110	Base Aggregate Dense 3/4-Inch	TON	990.000	990.000
0020	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	3,694.000	3,694.000
0022	325.0100	Pulverize and Relay	SY	11,640.000	11,640.000
0024	455.0605	Tack Coat	GAL	790.000	790.000
0026	460.2000	Incentive Density HMA Pavement	DOL	1,880.000	1,880.000
0028	460.5223	HMA Pavement 3 LT 58-28 S	TON	1,650.000	1,650.000
0030	460.5244	HMA Pavement 4 LT 58-34 S	TON	1,280.000	1,280.000
0032	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	9.000	9.000
0034	465.0310	Asphaltic Curb	LF	1,780.000	1,780.000
0036	465.0315	Asphaltic Flumes	SY	18.000	18.000
0038	521.1012	Apron Endwalls for Culvert Pipe Steel 12-Inch	EACH	2.000	2.000
0040	521.3112	Culvert Pipe Corrugated Steel 12-Inch	LF	22.000	22.000
0042	522.0412	Culvert Pipe Reinforced Concrete Class IV 12-Inch	LF	46.000	46.000
0044	522.0418	Culvert Pipe Reinforced Concrete Class IV 18-Inch	LF	42.000	42.000
0046	522.0430	Culvert Pipe Reinforced Concrete Class IV 30-Inch	LF	36.000	36.000
0048	522.1012	Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	EACH	2.000	2.000
0050	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	2.000	2.000
0052	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	2.000	2.000
0054	522.2424	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 24x38-Inch	LF	46.000	46.000
0056	522.2624	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 24x38-Inch	EACH	2.000	2.000
0058	606.0200	Riprap Medium	CY	29.000	29.000
0060	614.2300	MGS Guardrail 3	LF	175.000	175.000
0062	614.2330	MGS Guardrail 3 K	LF	1,375.000	1,375.000
0064	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0066	618.0100	Maintenance and Repair of Haul Roads (project) 01. 7868-03-70	EACH	1.000	1.000
0068	619.1000	Mobilization	EACH	1.000	1.000
0070	624.0100	Water	MGAL	73.000	73.000
0072	625.0100	Topsoil	SY	18,095.000	18,095.000
0074	627.0200	Mulching	SY	3,930.000	3,930.000
0076	628.1504	Silt Fence	LF	3,838.000	3,838.000
0078	628.1520	Silt Fence Maintenance	LF	3,838.000	3,838.000
0080	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0082	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0084	628.2004	Erosion Mat Class I Type B	SY	14,337.000	14,337.000
0086	628.7504	Temporary Ditch Checks	LF	75.000	75.000
0088	628.7555	Culvert Pipe Checks	EACH	23.000	23.000
0090	629.0210	Fertilizer Type B	CWT	12.000	12.000
0092	630.0120	Seeding Mixture No. 20	LB	497.000	497.000
0094	630.0200	Seeding Temporary	LB	497.000	497.000
0096	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	1.000	1.000
0098	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	7.000	7.000

Estimate Of Quantities

7868-03-70

Line	Item	Item Description	Unit	Total	Qty
0100	637.2230	Signs Type II Reflective F	SF	64.500	64.500
0102	638.2602	Removing Signs Type II	EACH	12.000	12.000
0104	638.3000	Removing Small Sign Supports	EACH	12.000	12.000
0106	642.5001	Field Office Type B	EACH	1.000	1.000
0108	643.0420	Traffic Control Barricades Type III	DAY	1,080.000	1,080.000
0110	643.0705	Traffic Control Warning Lights Type A	DAY	1,680.000	1,680.000
0112	643.0900	Traffic Control Signs	DAY	840.000	840.000
0114	643.5000	Traffic Control	EACH	1.000	1.000
0116	645.0120	Geotextile Type HR	SY	93.000	93.000
0118	646.1020	Marking Line Epoxy 4-Inch	LF	9,746.000	9,746.000
0120	648.0100	Locating No-Passing Zones	MI	0.930	0.930
0122	650.4500	Construction Staking Subgrade	LF	2,856.000	2,856.000
0124	650.5000	Construction Staking Base	LF	2,856.000	2,856.000
0126	650.6000	Construction Staking Pipe Culverts	EACH	5.000	5.000
0128	650.8000	Construction Staking Resurfacing Reference	LF	4,046.000	4,046.000
0130	650.9911	Construction Staking Supplemental Control (project) 01. 7868-03-70	EACH	1.000	1.000
0132	650.9920	Construction Staking Slope Stakes	LF	2,856.000	2,856.000
0134	690.0150	Sawing Asphalt	LF	141.000	141.000
0136	740.0440	Incentive IRI Ride	DOL	3,692.000	3,692.000
0138	999.1501.S	Crack and Damage Survey	EACH	1.000	1.000
0140	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0142	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	300.000	300.000

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1)	AVAILABLE MATERIAL (5)	205.0200 ROCK EXCAVATION (7)	EXPANDED ROCK (12)	UNEXPANDED FILL	EXPANDED FILL (13)	MASS ORDINATE +/- (14)	WASTE	COMMENT
			CUT (2)			FACTOR 1.10		FACTOR 1.25			
CTH PP	10+00.00/57+00.00		20,660	20,660	1,667	1,834	2,445	764	19,896	19,896	
QUARRY DR	0+35.00/1+83.40		4,398	4,398	540	594	0	-743	5,141	5,141	
TOTAL COMMON EXC			25,058	25,058	2,207	2,428	2,445	22	25,036	25,036	

NOTES:

- (1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
- (2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
- (5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL
- (7) ROCK EXCAVATION ITEM NUMBER 205.0200
- (12) EXPANDED ROCK FACTOR = 1.10
- (13) EXPANDED FILL FACTOR =1.25
- EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK) * FILL FACTOR
- (14) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.
- (15) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

201.0205 GRUBBING					203.0100 REMOVING SMALL PIPE CULVERTS			204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS					204.0165 REMOVING GUARDRAIL					
STATION	TO	STATION	LOCATION	STA	STATION	LOCATION	EACH	STATION	TO	STATION	LOCATION	SY	STATION	TO	STATION	LOCATION	LF	
28+23	-	36+50	CTH PP LT/RT	9	10+41	CTH PP	1	10+00	-	11+00	CTH PP	250	20+57	-	29+71	CTH PP, RT	910	
0+35	-	1+94	QUARRY LT/RT	2	38+49	CTH PP	1	57+73	-	58+73	CTH PP	250	31+39	-	42+82	CTH PP, RT	1,240	
TOTAL 0010				11	TOTAL 0010			3	TOTAL 0010				500	TOTAL 0010				2,150

214.0100 OBLITERATING OLD ROAD					305.0110 BASE AGGREGATE DENSE 3/4-INCH		305.0120 BASE AGGREGATE DENSE 1 1/4-INCH		624.0100 WATER		325.0100 PULVERIZE AND RELAY						
STATION	TO	STATION	LOCATION	STA	STATION	TO	STATION	LOCATION	TON	TON	MGAL	REMARKS	STATION	TO	STATION	LOCATION	SY
28+23	-	36+50	CTH PP	9.6	10+00	-	28+23	LT/RT	340	670	16	1 1/4-INCH MISC. FOR SUPERELEVATION CORRECTION	10+00	-	28+23	CTH PP	5,010
TOTAL 0010				9.6	28+23	-	36+50	LT/RT	240	1,760	30	RECONSTRUCT AREA	36+50	-	58+73	ML	6,630
					36+50	-	58+73	LT/RT	410	810	19	1 1/4-INCH MISC. FOR SUPERELEVATION CORRECTION	TOTAL 0010				11,640
					10+00	-	17+00	LT	-	200	3	SHOULDER WIDENING					
					16+50	-	19+50	RT	-	84	2	SHOULDER WIDENING					
					51+00	-	57+00	RT	-	170	3	SHOULDER WIDENING					
					TOTAL 0010		990	3,694	73								

3

				455.0605	460.5223	460.5244	465.0120	
					HMA PAVEMENT	HMA PAVEMENT	ASPHALTIC	
					3 LT 58-28 S	4 LT 58-34 S	SURFACE	
				TACK COAT			DRIVEWAYS	
				GAL	TON	TON	AND FIELD	
							ENTRANCES	
STATION	TO	STATION	LOCATION				TON	REMARKS
10+00	-	58+73	CTH PP/QUARRY ENTRANCE	-	1,650	-	5	LOWER LIFT
10+00	-	58+73	CTH PP/QUARRY ENTRANCE	790	-	1,280	4	UPPER LIFT
TOTAL 0010				790	1,650	1,280	9	

STATION	TO	STATION	LOCATION	465.0310
				ASPHALTIC
				CURB
				LF
20+07	-	29+01	RT	894
34+76	-	43+62	RT	886
TOTAL 0010				1,780

CATEGORY	STATION	LOCATION	465.0315
			FLUMES
			SY
0010	20+07	RT	9
0010	43+62	RT	9
0010	TOTAL 0010		18

		606.0200	645.0120
		RIPRAP MEDIUM	GEOTEXTILE TYPE
		CY	HR
STATION	LOCATION		SY
10+41	LT	8	24
30+84	ML	3	12
33+25	ML	8	24
38+49	ML	4	14
45+89	ML	6	19
TOTAL 0010		29	93

		521.1012	521.3112	522.0412	522.0418	522.0430	522.1012	522.1018	522.1030	522.2424	522.2624
		APRON	CULVERT PIPE	CULVERT PIPE	CULVERT PIPE	CULVERT PIPE	ENDWALLS FOR	ENDWALLS FOR	ENDWALLS FOR	CULVERT PIPE	ENDWALLS FOR
		ENDWALLS	CORRUGATED	REINFORCED	REINFORCED	REINFORCED	CULVERT PIPE	CULVERT PIPE	CULVERT PIPE	REINFORCED	CULVERT PIPE
		FOR CULVERT	STEEL 12-	CONCRETE	CONCRETE	CONCRETE	REINFORCED	REINFORCED	REINFORCED	CONCRETE	REINFORCED
		PIPE STEEL 12-	STEEL 12-	CLASS IV 12-	CLASS IV 18-	CLASS IV 30-	CONCRETE 12-	CONCRETE 18-	CONCRETE 30-	HORIZONTAL	CONCRETE
		INCH	INCH	INCH	INCH	INCH	INCH	INCH	INCH	ELLIPTICAL	HORIZONTAL
		EACH	LF	LF	LF	LF	EACH	EACH	EACH	24X38-INCH	ELLIPTICAL
STATION	LOCATION										
10+39	ML	-	-	-	-	36	-	-	2	-	-
30+84	RT	2	22	-	-	-	-	-	-	-	-
33+25	LT	-	-	46	-	-	2	-	-	-	-
38+49	ML	-	-	-	42	-	-	2	-	-	-
45+89	ML	-	-	-	-	-	-	-	-	46	2
TOTAL 0010		2	22	46	42	36	2	2	2	46	2

		614.2300	614.2330	614.2610
		MGS	MGS	MGS
		GUARDRAIL 3	GUARDRAIL 3 K	GUARDRAIL
		LF	LF	TERMINAL EAT
				EACH
STATION	TO	STATION	LOCATION	
20+07	-	29+01	RT	-
34+76	-	43+62	RT	175
TOTAL 0010				175
				1,375
				4

					625.0100	627.0200	628.1504	628.1520	628.2004	628.7504	628.7555	629.0210	630.0120	630.0200	
								SILT FENCE	EROSION MAT	TEMPORARY	CULVERT PIPE	FERTILIZER TYPE	SEEDING	SEEDING	
					TOPSOIL	MULCHING	SILT FENCE	MAINTENANCE	CLASS I TYPE B	DITCH CHECKS	CHECKS	B	MIXTURE NO. 20	TEMPORARY	
CATEGORY	STATION	TO	STATION	LOCATION	SY	SY	LF	LF	SY	LF	EACH	CWT	LB	LB	REMARKS
0010	10+00	-	17+00	LT	1,000	-	730	730	1,000	-	4	0.7	27	27	
0010	16+50	-	20+57	RT	375	-	430	430	375	-	-	0.3	11	11	
0010	28+23	-	36+50	LT/RT	10,200	-	980	980	6,990	60	6	6.4	280	280	
0010	28+70	-	35+60	RT	-	3,140	-	-	-	-	-	-	-	-	OBLITERATING OLD ROAD CULVERT
0010	38+40	-	38+58	LT/RT	-	-	18	18	98	-	2	-	-	-	
0010	42+77	-	45+25	RT	2,200	-	260	260	2,200	-	-	1.4	60	60	
0010	45+80	-	46+02	LT/RT	-	-	30	30	104	-	2	-	-	-	CULVERT
0010	51+00	-	57+00	RT	700	-	620	620	700	-	-	0.5	19	19	
0010	PROJECT				-	-	-	-	-	-	4	-	-	-	ADD'L CULVERTS
0010	PROJECT				3,620	790	770	770	2,870	15	5	2.4	100	100	UNDISTRIBUTED
TOTAL 0010					18,095	3,930	3,838	3,838	14,337	75	23	12.0	497	497	

		643.0420	643.0705	643.0900
		TRAFFIC	TRAFFIC	
		CONTROL	CONTROL	
		BARRICADES	WARNING	TRAFFIC
		TYPE III	LIGHTS TYPE A	CONTROL SIGNS
		DAY	DAY	DAY
PROJECT		1,080	1,680	840
TOTAL 0010		1,080	1,680	840

STATION	LOCATION	SIGN #	SIGN CODE	SIZE IN X IN	634.0616	634.0618	637.2230	MOUNT ON SAME POST	DESCRIPTION
					POSTS WOOD 4X6- INCH X 16-FT	POSTS WOOD 4X6- INCH X 18-FT	SIGNS TYPE II REFLECTIVE F		
					EACH	EACH	SF	AS SIGN #	
0+20	RT	1	W1-1L	36 X 36	-	1	9.00	-	ROAD TURNS LEFT
0+20	RT	2	W13-1	18 X 18	-	-	2.25	1	25 MPH
15+26	LT	3	W1-1R	36 X 36	-	1	9.00	-	ROAD TURNS RIGHT
15+26	LT	4	W13-1	18 X 18	-	-	2.25	3	25 MPH
15+57	RT	5	W1-5R	30 X 30	-	1	6.25	-	ROAD SHARP CURVES
15+57	RT	6	W13-1	18 X 18	-	-	2.25	5	25 MPH
19+51	RT	7	W8-14	30 X 30	-	1	6.25	-	FALLEN ROCKS
29+50	RT	8	W7-1	30 X 30	1	-	6.25	-	HILL SYMBOL
29+60	LT	9	W7-1	30 X 30	-	1	6.25	-	HILL SYMBOL
30+00	LT	10	W8-14	30 X 30	-	1	6.25	-	FALLEN ROCKS
58+50	LT	11	W1-5R	30 X 30	-	1	6.25	-	ROAD SHARP CURVES
58+50	LT	12	W13-1	18 X 18	-	-	2.25	11	25 MPH
TOTAL 0010					1	7	64.50		

STATION	TO	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH LF	648.0100 LOCATING NO- PASSING ZONES MI
10+00	-	58+73	ML	9,746	0.93
TOTAL 0010				9,746	0.93

STATION	LOCATION	690.0150 SAWING ASPHALT LF
10+00	ML	23
28+23	ML	26
36+50	ML	28
50+29	RT	22
50+72	RT	16
58+73	ML	26
TOTAL 0010		141

STATION	LOCATION	638.2602	638.3000	REMARKS
		REMOVING SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH	
0+95	RT	1	1	LEFT CURVE, 35 MPH
12+90	LT	1	1	RIGHT CURVE, 35 MPH
16+89	RT	1	1	WINDING ROAD, 30 MPH
19+51	RT	1	1	WATCH FOR FALLING ROCKS
29+09	LT	1	1	WATCH FOR FALLING ROCKS
30+14	RT	1	1	ONE-DIRECTION LARGE ARROW
30+22	RT	1	1	TRUCKS ENTERING HIGHWAY
30+37	RT	1	1	ONE-DIRECTION LARGE ARROW
30+48	RT	1	1	HILL AND PLAQUE
30+75	RT	1	1	HILL AND PLAQUE
36+05	LT	1	1	TRUCKS ENTERING HIGHWAY
56+96	LT	1	1	WINDING ROAD, 30 MPH
TOTAL 0010		12	12	

STATION	TO	STATION	LOCATION	650.4500	650.5000	650.6000	650.8000	650.9920
				CONSTRUCTION STAKING SUBGRADE LF	CONSTRUCTION STAKING BASE LF	CONSTRUCTION STAKING PIPE CULVERTS EACH	CONSTRUCTION STAKING RESURFACING REFERENCE LF	CONSTRUCTION STAKING SLOPE STAKES LF
10+00	-	20+57	CTH PP	1,057	1,057	1	1,057	1,057
20+57	-	28+23	CTH PP	-	-	-	766	-
28+23	-	36+50	CTH PP	827	827	1	-	827
36+50	-	43+12	CTH PP	-	-	1	662	-
43+12	-	45+25	CTH PP	213	213	-	213	213
45+25	-	51+00	CTH PP	-	-	1	575	-
51+00	-	57+00	CTH PP	600	600	-	600	600
57+00	-	58+73	CTH PP	-	-	-	173	-
0+35	-	1+94	QUARRY DR	159	159	1	-	159
TOTAL 0010				2,856	2,856	5	4,046	2,856

STATION	LOCATION	999.1501.S CRACK AND DAMAGE SURVEY EACH
10+00	RT	1
TOTAL 0010		1

CONVENTIONAL SYMBOLS			
SECTION LINE	---	PARCEL NUMBER	25
QUARTER LINE	---	UTILITY NUMBER	40
SIXTEENTH LINE	---		
NEW REFERENCE LINE	---	SECTION CORNER	28
NEW R/W LINE	---		
EXISTING R/W LINE	---	NOTATION FOR COMBUSTIBLE FLUIDS	CAUTION
PROPERTY LINE	---	NOTATION FOR HIGH VOLTAGE TRANSMISSION LINES	CAUTION
LOT, TIE, AND OTHER MINOR LINES	---		
SLOPE INTERCEPT	---		
CORPORATE LIMITS	---		
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC.)	---		
FEE ACQUISITION AREA (HATCHING VARIES BY OWNER)	---		
TEMP. LIMITED EASEMENT AREA	---		
EASEMENT AREA (HIGHWAY, PERMANENT LIMITED, OR RESTRICTED DEVELOPMENT)	---		
TRANSMISSION STRUCTURES	---		
BUILDING	---		
BUILDING (TO BE REMOVED)	---		
BRIDGE	---		
CONVENTIONAL UTILITY SYMBOLS			
WATER	---		
GAS	---		
TELEPHONE	---		
OVERHEAD TRANSMISSION LINES	---		
ELECTRIC	---		
CABLE TELEVISION	---		
FIBER OPTIC	---		
SANITARY SEWER	---		
STORM SEWER	---		
ELECTRIC TOWER	---		
CURVE DATA ABBREVIATIONS			
LONG CHORD	LCH		
LONG CHORD BEARING	LCB		
RADIUS	R		
DEGREE OF CURVE	D		
CENTRAL ANGLE	Δ/Delta		
LENGTH OF CURVE	L		
TANGENT	T		
DIRECTION AHEAD	DA		
DIRECTION BACK	DB		

	NON-COMPENSABLE	COMPENSABLE	
POWER POLE			
TELEPHONE POLE			
TELEPHONE PEDESTAL			
CONVENTIONAL ABBREVIATIONS			
ACCESS RIGHTS	AR	OUTLOT	OL
ACRES	AC	PAGE	P
AHEAD	AH	POINT OF TANGENCY	PT
ALUMINUM	ALUM	PROPERTY LINE	PL
AND OTHERS	ET AL	RECORDED AS	(100')
BACK	BK	REEL / IMAGE	R/I
BLOCK	BLK	REFERENCE LINE	R/L
CENTERLINE	C/L	PERMANENT LIMITED EASEMENT	PLE
CERTIFIED SURVEY MAP	CSM	POINT OF BEGINNING	POB
CONCRETE	CONC	POINT OF CURVATURE	PC
COUNTY	CO	POINT OF COMPOUND CURVE	PCC
COUNTY TRUNK HIGHWAY	CTH	POINT OF INTERSECTION	PI
DISTANCE	DIST	REMAINING	REM
CORNER	COR	RESTRICTIVE DEVELOPMENT EASEMENT	RDE
DOCUMENT NUMBER	DOC	RIGHT	RT
EASEMENT	EASE	RIGHT OF WAY	R/W
EXISTING	EX	SECTION	SEC
GAS VALVE	GV	SEPTIC VENT	SEPV
GRID NORTH	GN	SQUARE FEET	SF
HIGHWAY EASEMENT	HE	STATE TRUNK HIGHWAY	STH
IDENTIFICATION	ID	STATION	STA
LAND CONTRACT	LC	TELEPHONE PEDESTAL	TP
LEFT	LT	TEMPORARY LIMITED EASEMENT	TLE
MONUMENT	MON	TRANSPORTATION PROJECT PLAT	TPP
NATIONAL GEODETIC SURVEY	NGS	UNITED STATES HIGHWAY	USH
NUMBER	NO	VOLUME	V

NOTES:

COORDINATES AND BEARINGS ON THIS PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WISCRS), PEPIN COUNTY, NAD 83 (2011) ADJUSTMENT. THE COORDINATES SHOWN ARE GRID COORDINATES AND ARE TO BE USED AS GRID OR GROUND VALUES ON THIS PLAT.

RIGHT OF WAY MONUMENTS ARE TYPE 2 MONUMENTS, UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

RIGHT OF WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY OR OTHER SURVEYS OF PUBLIC RECORD.

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

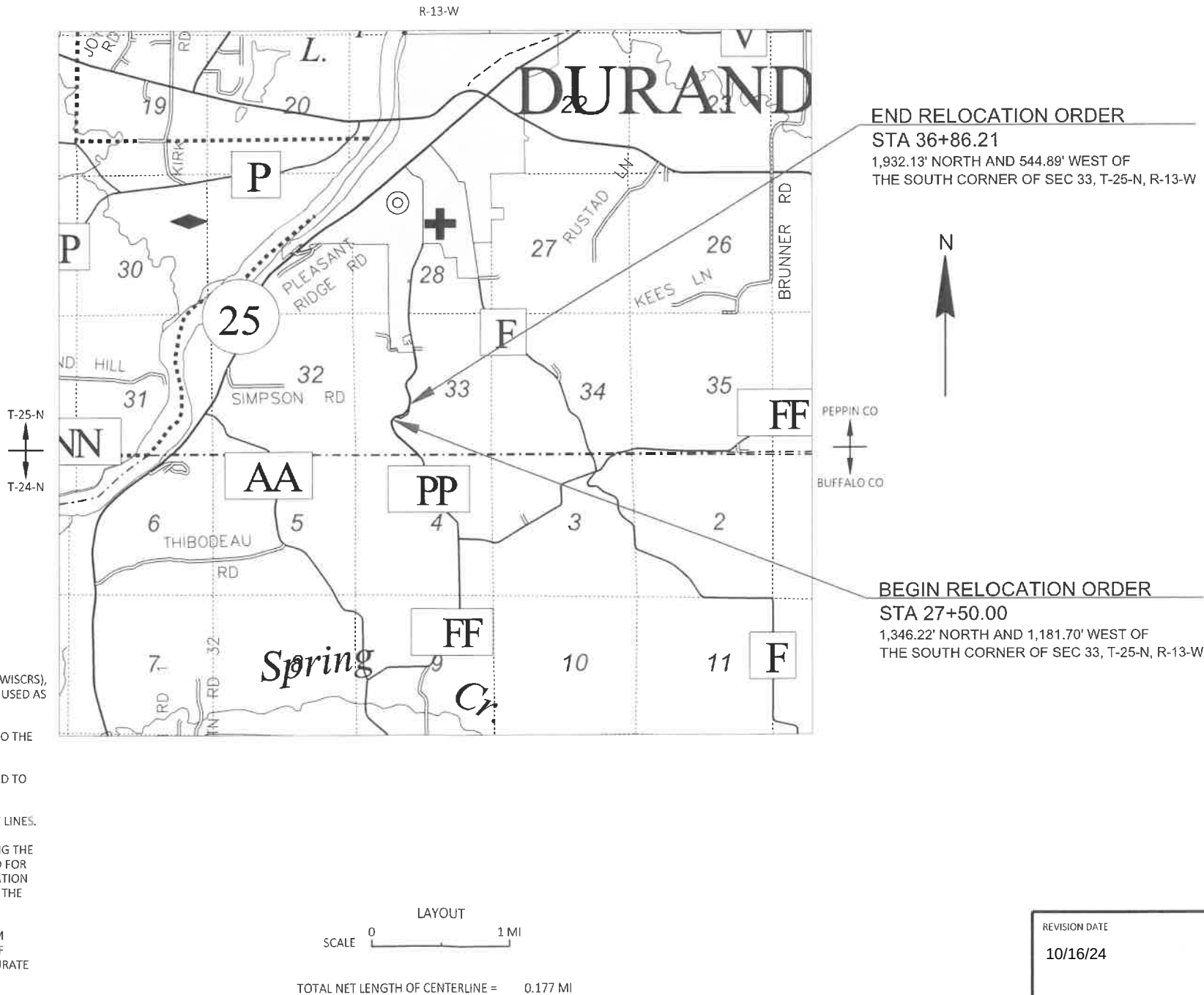
A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON, THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE. ALL (TLEs) ON THIS PLAT EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

PROPERTY LINES SHOWN ON THIS PLAT FOR PROPERTIES BEING IMPACTED ARE DRAWN FROM DATA DERIVED FROM FILED/RECORDED MAPS AND DOCUMENTS OF PUBLIC RECORD. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

ALL RIGHT-OF-WAY LINES DEPICTED IN THE NON-ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, CENTERLINE OF EXISTING PAVEMENTS AND/OR EXISTING OCCUPATIONAL LINES.

CAUTION:
THIS PLAT IS FOR ILLUSTRATIVE PURPOSES ONLY. DEEDS
MUST BE CHECKED TO DETERMINE PROPERTY BOUNDARIES.

R/W PROJECT NUMBER 7868-03-00	SHEET NUMBER	TOTAL SHEETS
CONSTRUCTION PROJECT NUMBER 7868-03-70	4.01	2
PLAT OF RIGHT OF WAY REQUIRED FOR SOUTH COUNTY LINE - USH 10 SOUTH COUNTY LINE TO V SCHUH LANE		
CTH PP	PEPIN COUNTY	



CORRE
ENGINEERING
MADISON | EAU CLAIRE | WAUKESHA | APPLETON | TOMAH | WAUSAU

WISCONSIN
BRYON J. MOTSZKO
S-2846
MENOMONIE, WI
LAND SURVEYOR

I, BRYON J. MOTSZKO, PROFESSIONAL LAND SURVEYOR, S-2846,
HEREBY CERTIFY THAT I HAVE SURVEYED THE LAND DESCRIBED
HEREON AND THAT THE MAP HEREON IS A CORRECT REPRESENTATION
OF THAT SURVEY TO THE BEST OF MY KNOWLEDGE AND BELIEF
DATE: 5/16/24 *Bryon J. Motzko*
(Signature)

REVISION DATE
10/16/24

PEPIN COUNTY
APPROVED FOR THE COUNTY
DATE: 6/11/2024 *Ch. R.*
(Signature) 21

TOWN

4

NW- SW

RIGHT OF WAY POINT TABLE		
POINT	Y	X
PRW100	269655.41	618300.93
PRW101	269858.16	618326.69
PRW102	269870.40	618261.83
PRW103	269711.44	618194.44
PRW104	269462.45	617895.43
PRW105	269440.31	617795.88
PRW106	269432.40	617767.28
PRW107	269347.92	617668.82
PRW108	269293.84	617706.74
PRW109	269323.17	617821.94
PRW110	269345.31	617921.48

PI STA = 26+85.24
Y = 269245.821
X = 617584.464
DELTA = 62°26'16" RT
D = 27°11'48"
T = 127.68'
L = 229.58'
R = 210.67'
PC STA = 25+57.55
PT STA = 27+87.13

PI STA = 28+78.80
Y = 269371.763
X = 617764.060
DELTA = 22°29'59" RT
D = 24°48'12"
T = 45.95'
L = 90.71'
R = 231.00'
PC STA = 28+32.86
PT STA = 29+23.57

PI STA = 33+45.15
Y = 269473.276
X = 618220.437
DELTA = 66°46'06" LT
D = 11°48'49"
T = 319.61'
L = 565.18'
R = 485.00'
PC STA = 30+25.55
PT STA = 35+90.73

END RELOCATION ORDER
STA 36+86.21

Y = 269881.15
X = 618297.44

EXISTING UTILITY EASEMENT TO BE RELEASED

- 80 NELSON TELEPHONE COOPERATIVE
(dba NELSON COMMUNICATION COOPERATIVE OR NTEC)
PARCEL 1 - DOC. NO. 71028
- 81 RIVERLAND ENERGY COOPERATIVE
PARCEL 1 - NO RECORDED EASEMENT

TKC REAL ESTATE HOLDINGS, LLC.

TLE FOR
DRIVEWAY GRADING

RIVERLAND ENERGY
COOPERATIVE

BEGIN RELOCATION ORDER

STA 27+50.00

Y = 269295.25
X = 617660.63

SW- SW

NE- SW

SE- SW

SCHEDULE OF LAND & INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE COUNTY.

PARCEL NUMBER	OWNER	INTEREST REQ'D	R/W REQUIRED			T.L.E.
			NEW (ACRES)	EXISTING (ACRES)	TOTAL (ACRES)	
1	TKC REAL ESTATE HOLDINGS, LLC.	FEE / TLE	1.50	0.44	1.96	0.58

UTILITY INTERESTS REQUIRED

UTILITY NUMBER	OWNER	INTEREST REQUIRED
80	NELSON TELEPHONE COOPERATIVE	RELEASE OF RIGHTS
81	RIVERLAND ENERGY COOPERATIVE	RELEASE OF RIGHTS

COURSE TABLE

PNT - PNT	BEARING	DISTANCE
PRW100 - PRW101	N07° 14' 22"E	204.38'
PRW101 - PRW102	N79° 18' 31"W	66.00'
PRW102 - PRW103	S22° 58' 21"W	172.66'
PRW103 - PRW104	CURVE DATA	
PRW104 - PRW105	S77° 27' 35"W	101.98'
PRW105 - PRW106	S74° 32' 13"W	29.68'
PRW106 - PRW107	S49° 22' 21"W	129.74'
PRW107 - PRW108	S35° 02' 24"E	66.05'
PRW108 - PRW109	N75° 43' 03"E	118.88'
PRW109 - PRW110	N77° 27' 35"E	101.98'
PRW110 - PRW100	CURVE DATA	
PRW102 - TLE202	S22° 58' 21"W	94.48'
TLE202 - TLE201	S58° 03' 31"W	221.57'
TLE201 - TLE200	S23° 11' 28"W	201.00'
TLE200 - PRW103	CURVE DATA	
PRW103 - TLE 202	N22° 58' 21"E	78.18'

OF

TKC REAL ESTATE HOLDINGS, LLC.

EXISTING CTH PP RIGHT-OF-WAY EASEMENT LOCATED OUTSIDE OF NEWLY PROPOSED RIGHT-OF-WAY LIMITS IS NOT REQUIRED FOR FUTURE ROAD MAINTENANCE AFTER COMPLETION OF THIS PROJECT. (0.79 AC.)

DURAND

NOTE:
EXISTING CTH PP RIGHT-OF-WAY CENTERED ON EXISTING ROAD CENTERLINE
(WISCONSIN STATUTE 82.31)

REVISION DATE	10/16/24

DATE	05/06/24
GRID FACTOR	



HWY:	CTH PP
COUNTY:	PEPIN

STATE R/W PROJECT NUMBER: 7868-03-00

CONSTRUCTION PROJECT NUMBER: 7868-03-70

PLAT SHEET 4.02

PS&E SHEET

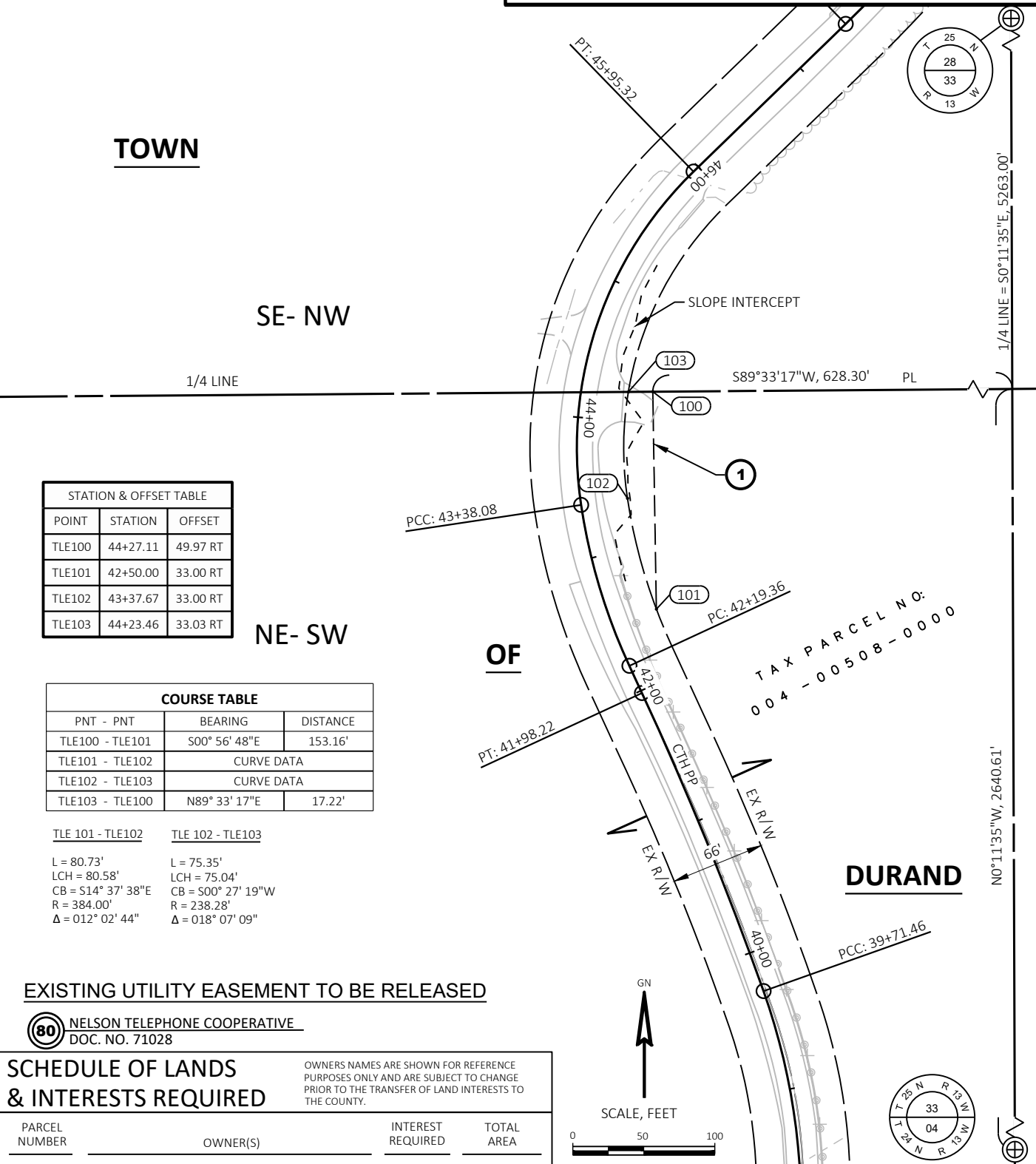
22

E

PURPOSE OF ALL TLE'S ARE FOR ROADWAY SLOPE GRADING, UNLESS OTHERWISE NOTED.

TLE ACQUISITION EXHIBIT
SOUTH COUNTY LINE - USH 10
SOUTH COUNTY LINE TO V SCHUH LANE

PART OF THE NORTHEAST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 33, TOWNSHIP 25 NORTH, RANGE 13 WEST, TOWN OF DURAND, PEPIN COUNTY, WISCONSIN.



EXISTING UTILITY EASEMENT TO BE RELEASED



SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE
PURPOSES ONLY AND ARE SUBJECT TO CHANGE
PRIOR TO THE TRANSFER OF LAND INTERESTS TO
THE COUNTY.

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	TOTAL AREA
1	TKC REAL ESTATE HOLDINGS, LLC.	TLE	0.05 AC.

UTILITY INTERESTS REQUIRED

UTILITY NUMBER	UTILITY OWNER(S)	INTEREST REQUIRED
80	NELSON TELEPHONE COOPERATIVE (dba NTEC)	RELEASE OF RIGHTS

THIS MAP IS APPROVED FOR PEPIN COUNTY.

SIGNATURE: _____ DATE: _____

PRINT NAME: _____

FILE NAME : 040101-TLE.DWG

PLOT DATE : 10/17/2024 3:17 PM

R/W PROJECT: 2265-11-22

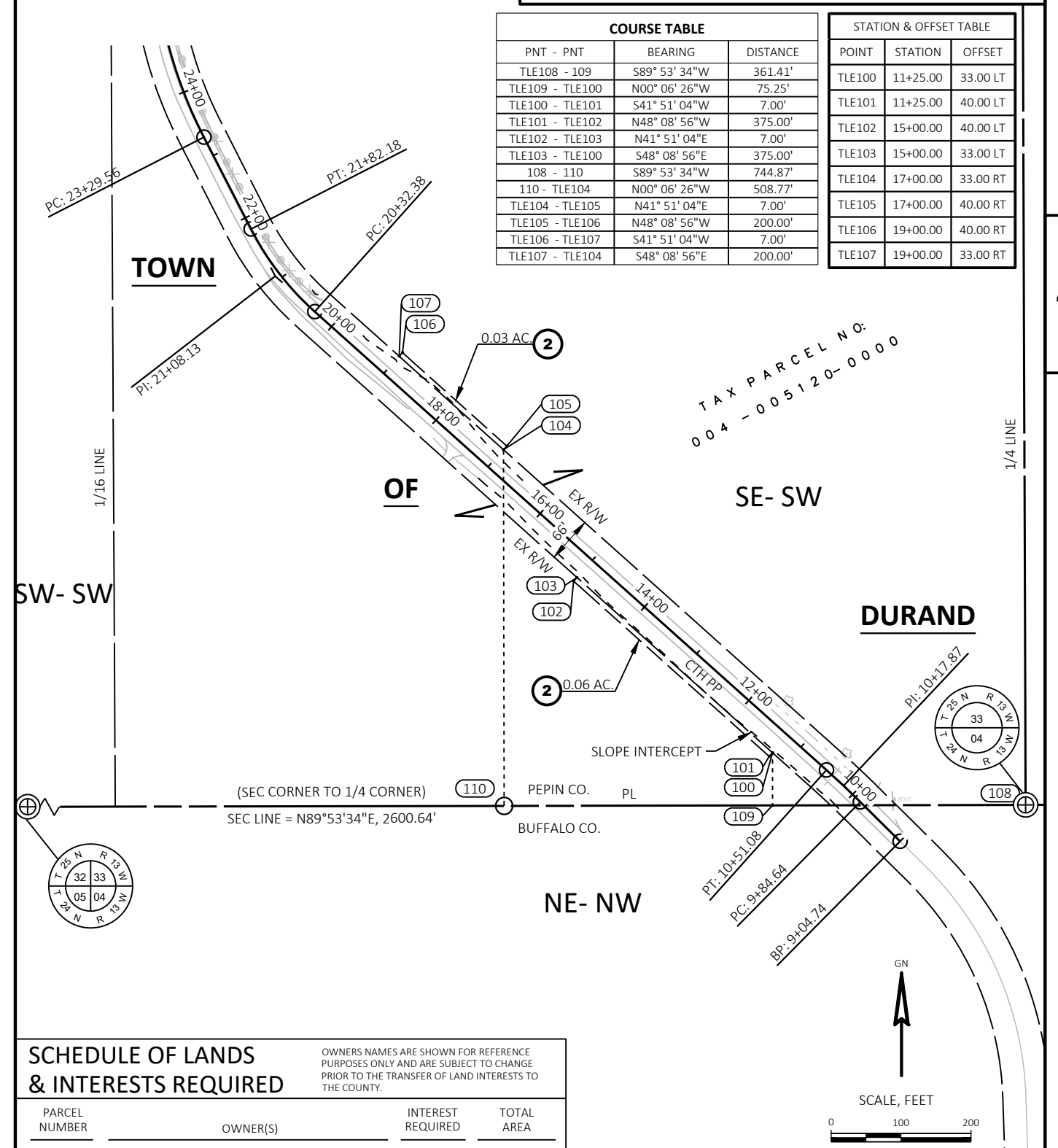
PURPOSE OF ALL TLE's ARE FOR ROADWAY SLOPE GRADING, UNLESS OTHERWISE NOTED.

TLE ACQUISITION EXHIBIT
SOUTH COUNTY LINE - USH 10
SOUTH COUNTY LINE TO V SCHUH LANE

PART OF THE SOUTHEAST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 33, TOWNSHIP 25 NORTH, RANGE 13 WEST, TOWN OF DURAND, PEPIN COUNTY, WISCONSIN.

COURSE TABLE		
PNT - PNT	BEARING	DISTANCE
TLE108 - 109	S89° 53' 34"W	361.41'
TLE109 - TLE100	N00° 06' 26"W	75.25'
TLE100 - TLE101	S41° 51' 04"W	7.00'
TLE101 - TLE102	N48° 08' 56"W	375.00'
TLE102 - TLE103	N41° 51' 04"E	7.00'
TLE103 - TLE100	S48° 08' 56"E	375.00'
108 - 110	S89° 53' 34"W	744.87'
110 - TLE104	N00° 06' 26"W	508.77'
TLE104 - TLE105	N41° 51' 04"E	7.00'
TLE105 - TLE106	N48° 08' 56"W	200.00'
TLE106 - TLE107	S41° 51' 04"W	7.00'
TLE107 - TLE104	S48° 08' 56"E	200.00'

STATION & OFFSET TABLE		
POINT	STATION	OFFSET
TLE100	11+25.00	33.00 LT
TLE101	11+25.00	40.00 LT
TLE102	15+00.00	40.00 LT
TLE103	15+00.00	33.00 LT
TLE104	17+00.00	33.00 RT
TLE105	17+00.00	40.00 RT
TLE106	19+00.00	40.00 RT
TLE107	19+00.00	33.00 RT



SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE
PURPOSES ONLY AND ARE SUBJECT TO CHANGE
PRIOR TO THE TRANSFER OF LAND INTERESTS TO
THE COUNTY.

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	TOTAL AREA
2	BENEDICT & KATHLEEN L. MANOR	TLE	0.09 AC.

UTILITY INTERESTS REQUIRED

UTILITY NUMBER	UTILITY OWNER(S)	INTEREST REQUIRED
N/A	N/A	N/A

THIS MAP IS APPROVED FOR PEPIN COUNTY.

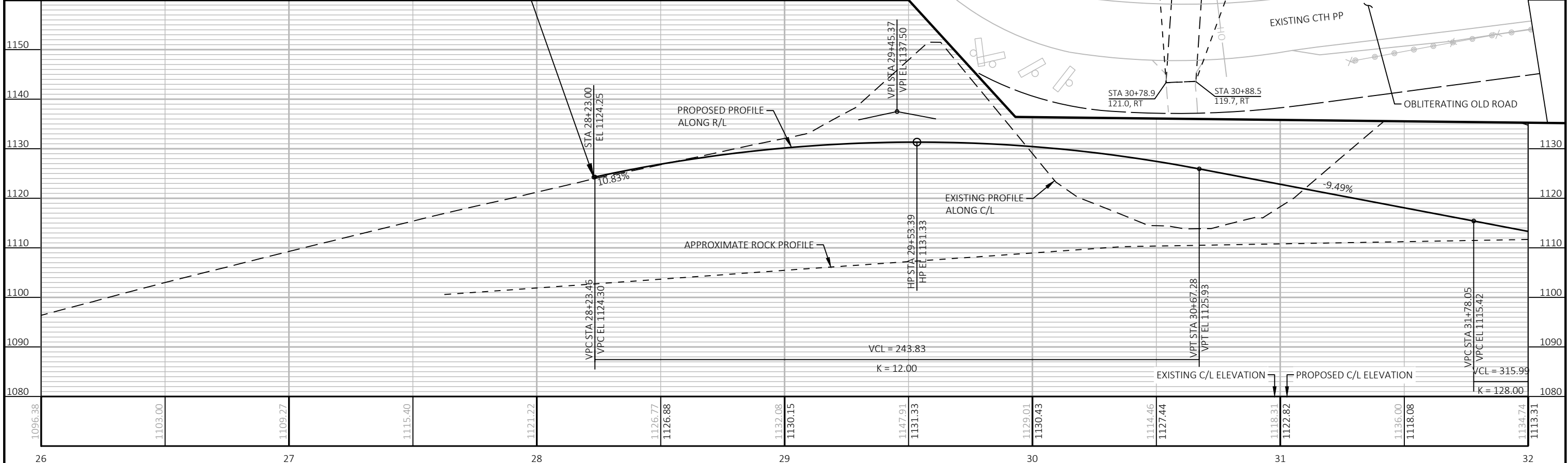
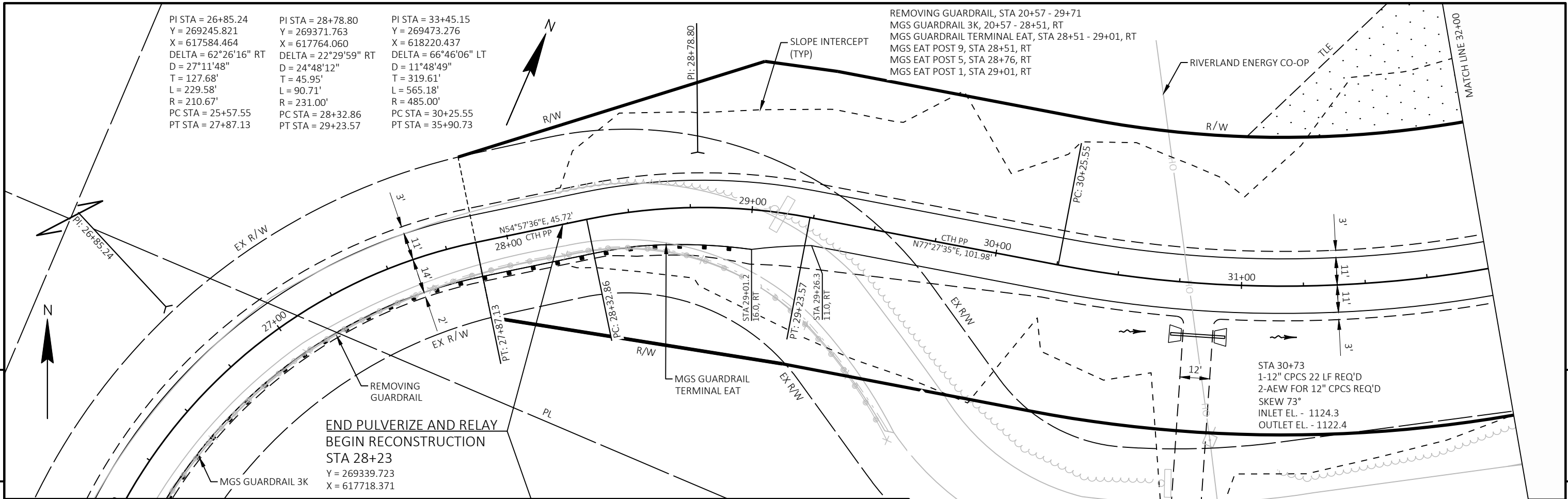
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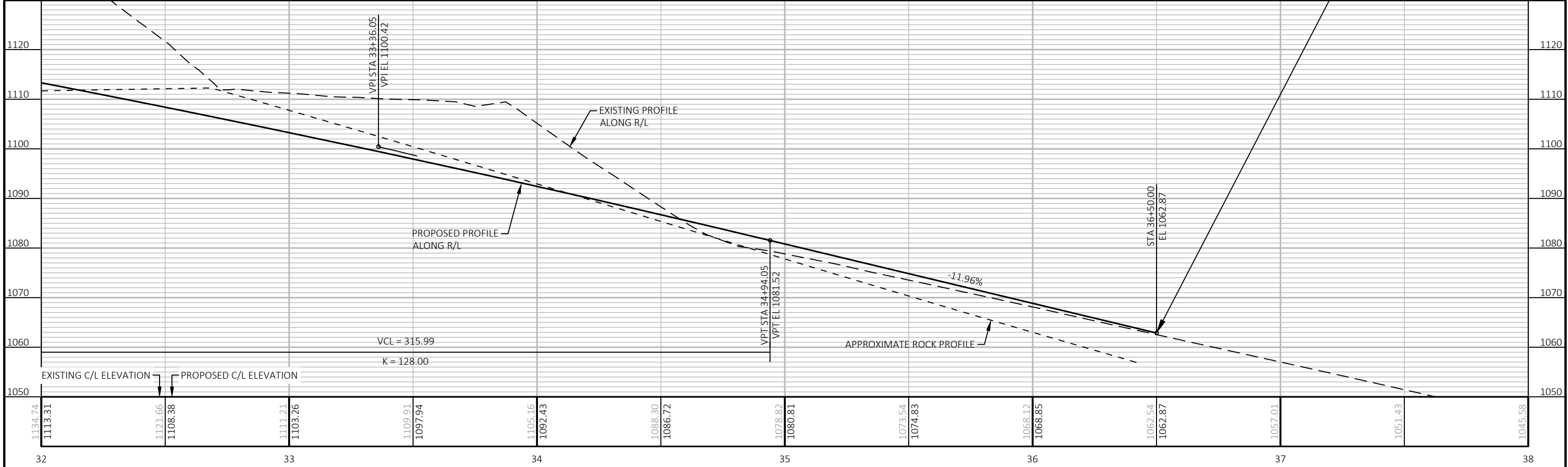
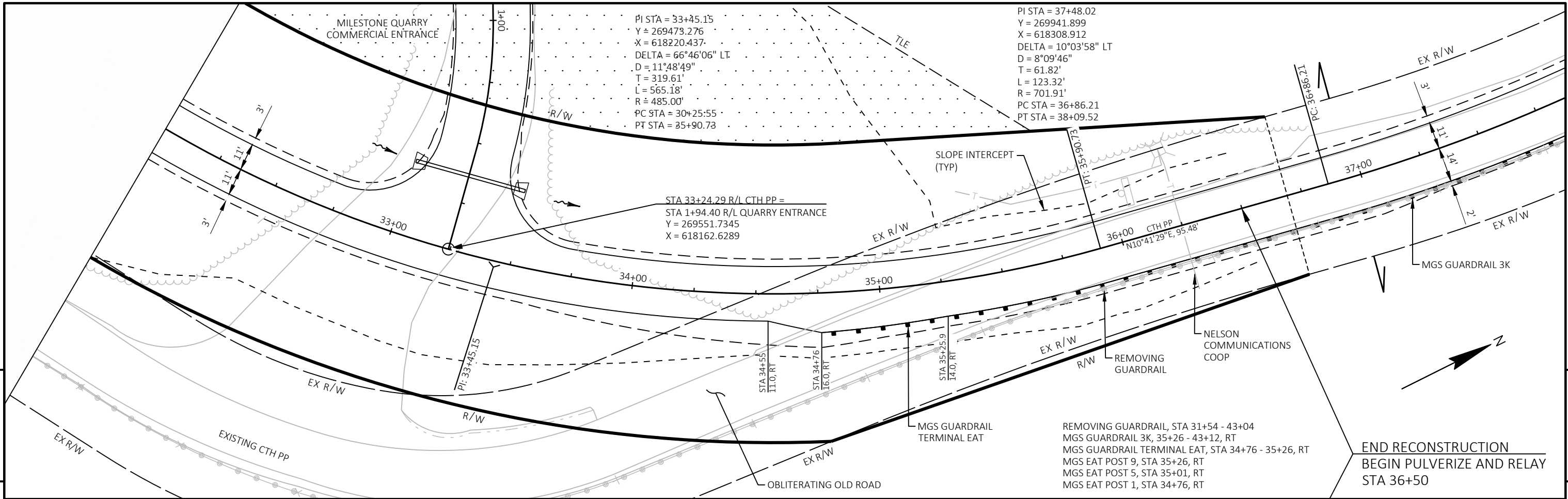
PRINT NAME: _____

FILE NAME : 040101-TLE.DWG

PLOT DATE : 10/17/2024 3:17 PM

R/W PROJECT: 2265-11-22





RADII STATION & OFFSET TABLE									
POINT	ALIGNMENT	STATION	OFFSET	ALIGNMENT	STATION	OFFSET	Y	X	RADIUS
1	CTH PP	32+75.00	41.00'	QUARRY DRIVE	1+50.00	45.00'	269547.438	618100.337	30'
2	CTH PP	33+74.00	41.00'	QUARRY DRIVE	1+52.00	45.00'	269614.133	618160.744	30'

PI STA = 1+26.96
Y = 269597.250
X = 618112.374
DELTA = 16°12'12" RT
D = 29°55'30"
T = 27.26'
L = 54.15'
R = 191.47'
PC STA = 0+99.71
PT STA = 1+53.85

BEGIN CONSTRUCTION
STA 0+35
Y = 269637.511
X = 618029.693

MATCH EXISTING
Y = 269630.532
X = 618044.026

MILESTONE QUARRY
COMMERCIAL ENTRANCE

Y = 269652.834
X = 617998.226
BP: 0+00.00

QUARRY DR.
S64°02'11"E, 99.71'

STA 32+74.9
134.8' LT

QUARRY DR.
S47°50'00"E, 40.55'

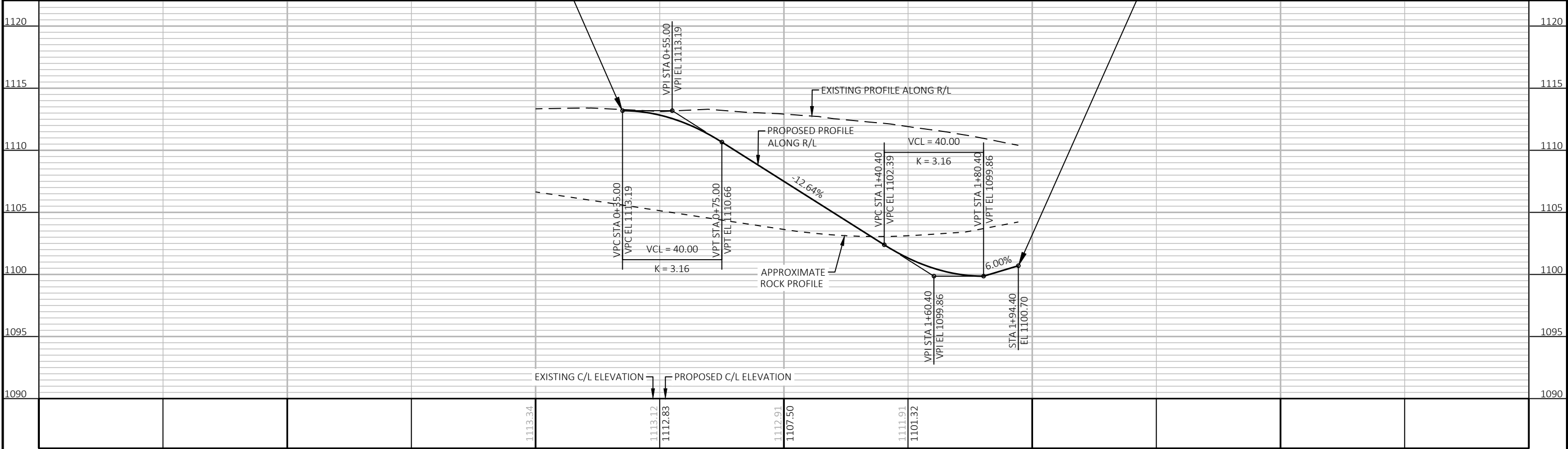
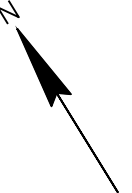
STA 33+24.29
144.9' LT

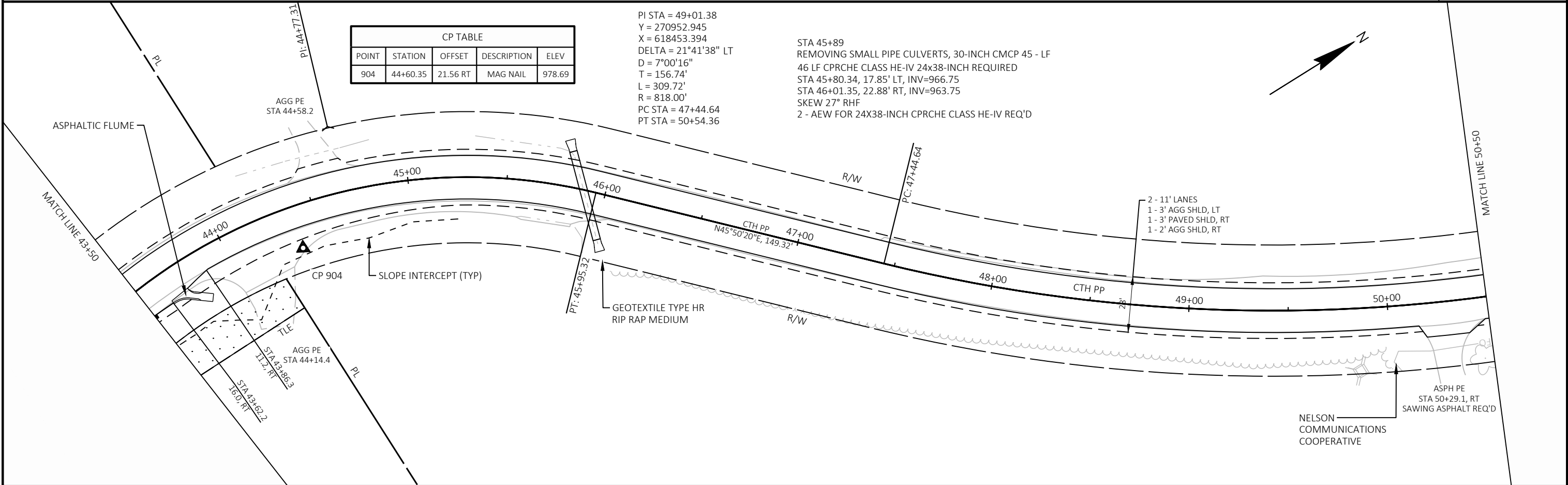
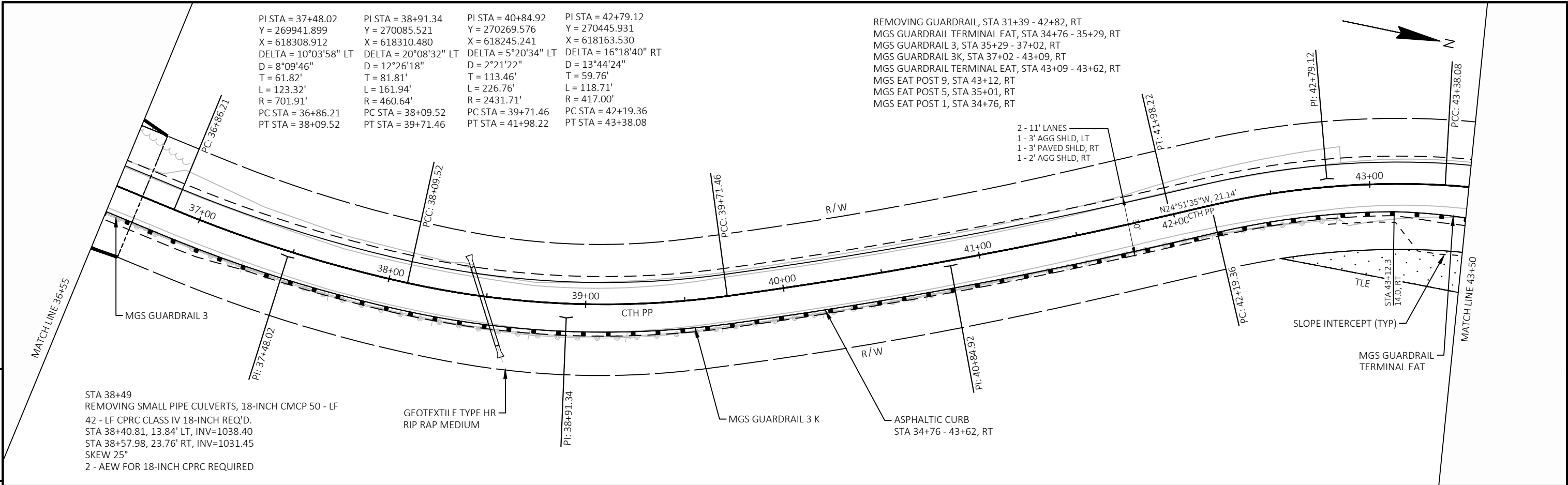
SAWING ASPHALT REQ'D

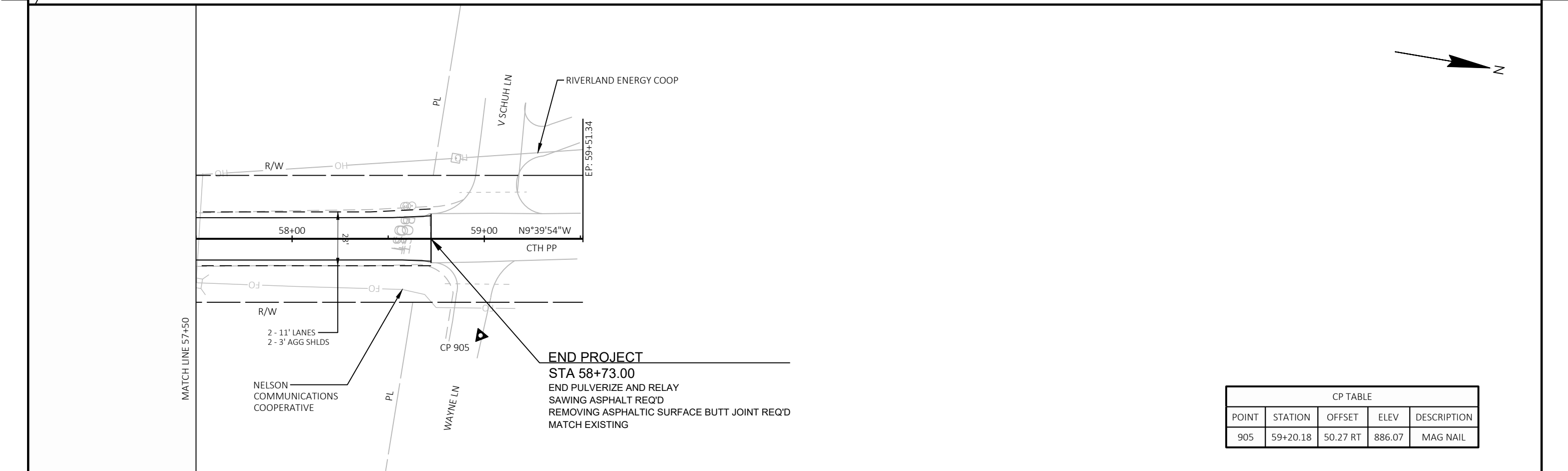
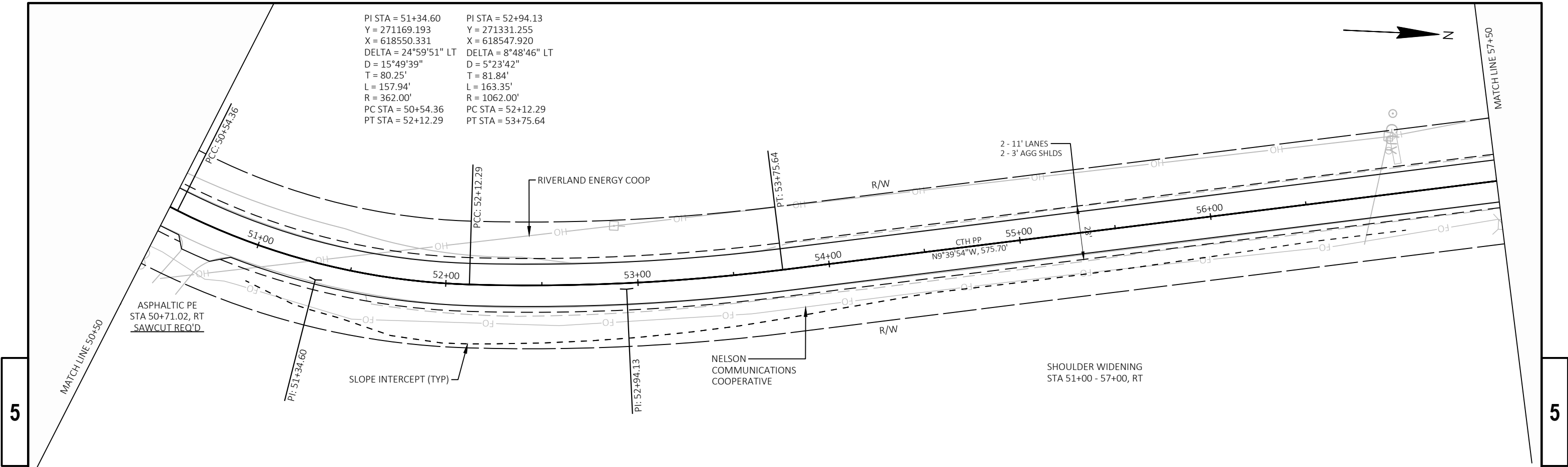
END CONSTRUCTION
STA 1+94.40

STA 1+64
REMOVING SMALL PIPE CULVERTS, 24-INCH CMCP 33 LF
46 - LF CPRC CLASS IV 12-INCH REQ'D.
STA 1+63.61, 22.10' RT, INV=1098.20
STA 1+63.55, 23.44' LT, INV=1096.15
SKEW 0°

OBLITERATING
OLD ROAD







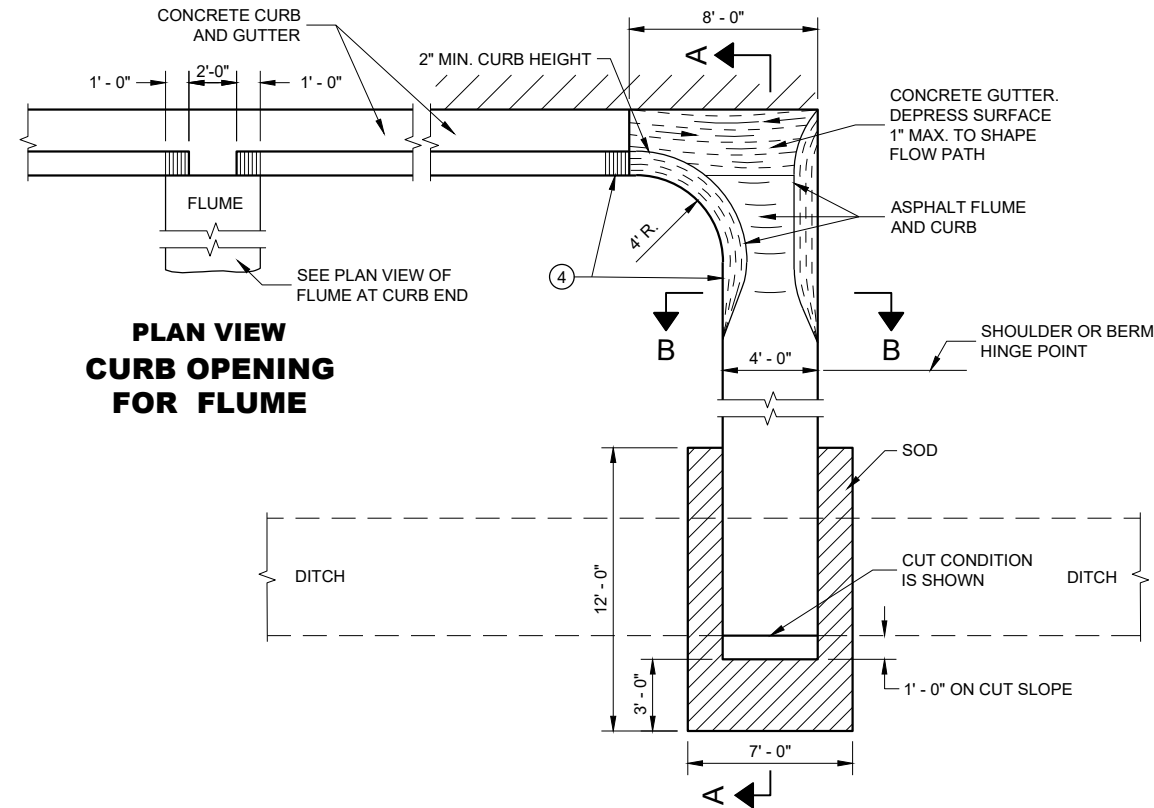
CP TABLE				
POINT	STATION	OFFSET	ELEV	DESCRIPTION
905	59+20.18	50.27 RT	886.07	MAG NAIL

Standard Detail Drawing List

08D04-07	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
13C19-03	HMA LONGITUDINAL JOINTS
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

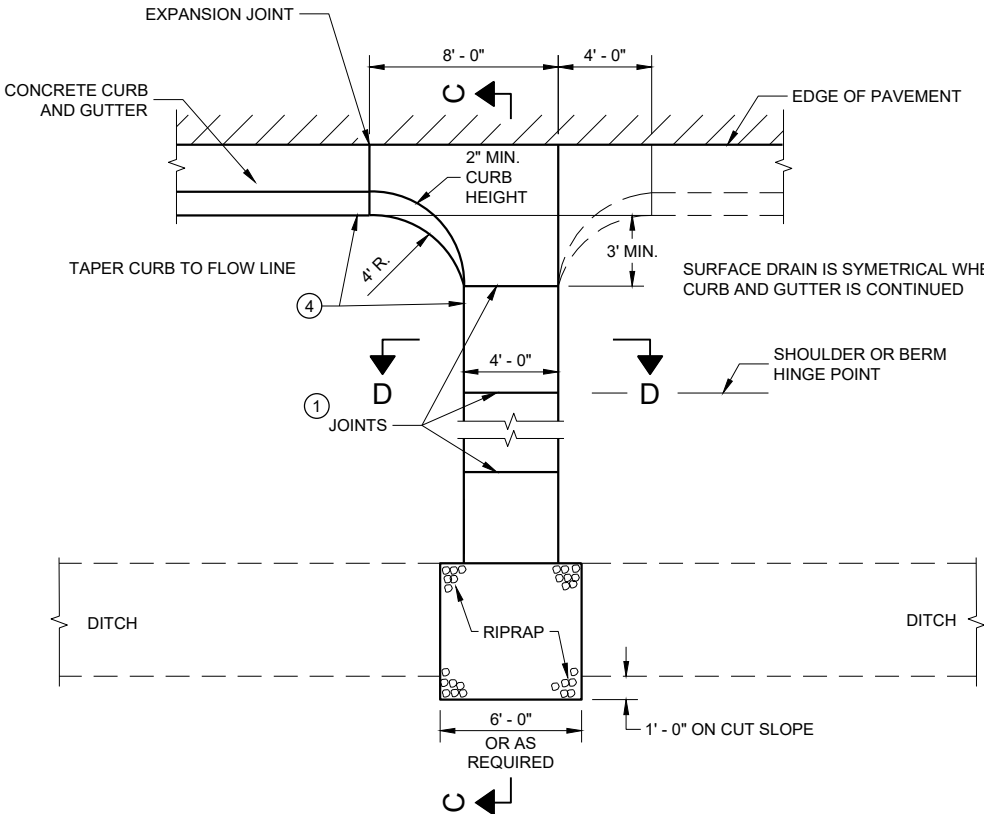
NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

ASPHALTIC FLUME



PLAN VIEW
CURB OPENING
FOR FLUME

PLAN VIEW
FLUME AT CURB END



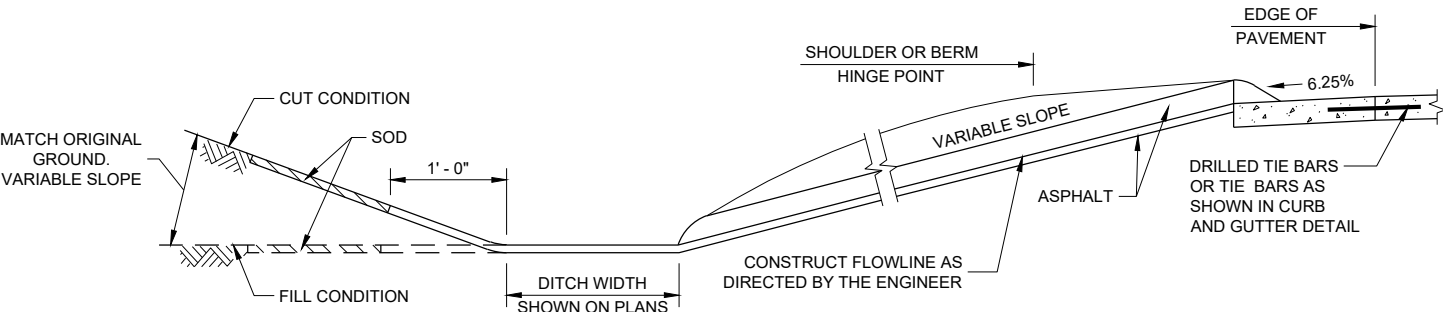
PLAN VIEW
CONCRETE SURFACE DRAIN

GENERAL NOTES

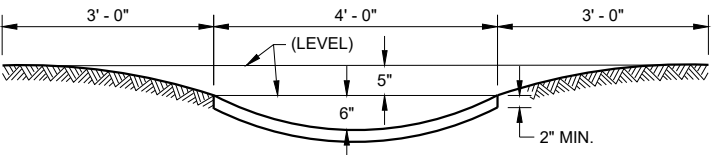
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

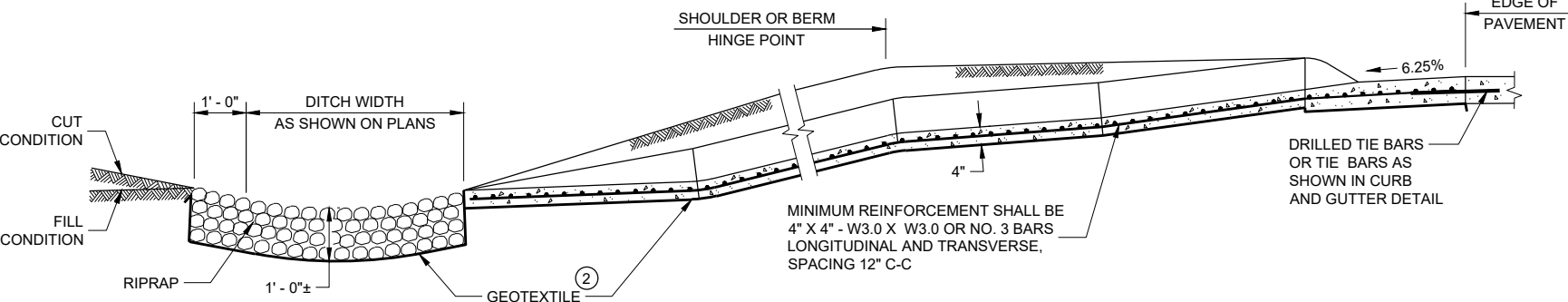
- ① JOINTS SHALL BE 1/8" TO 1/4" WIDE BY 1 1/2" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
- ④ ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.



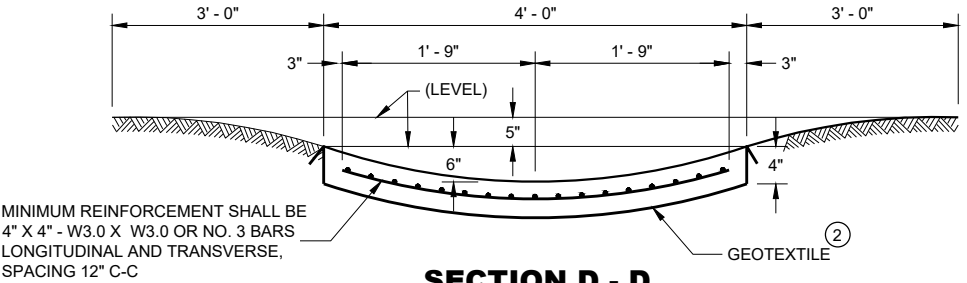
SECTION A - A



SECTION B - B



SECTION C - C



SECTION D - D

CONCRETE SURFACE
DRAINS AND
ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

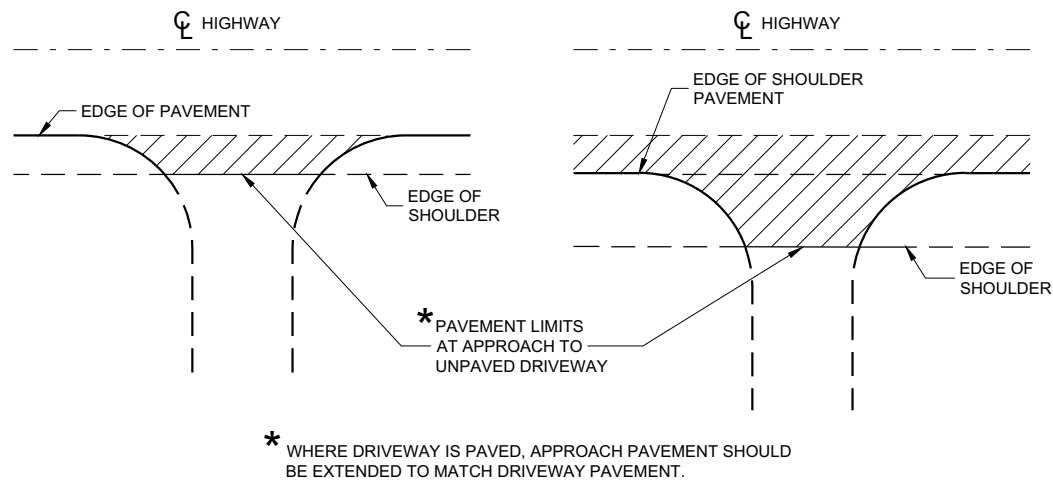
May 2023

DATE

FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT ENGINEER

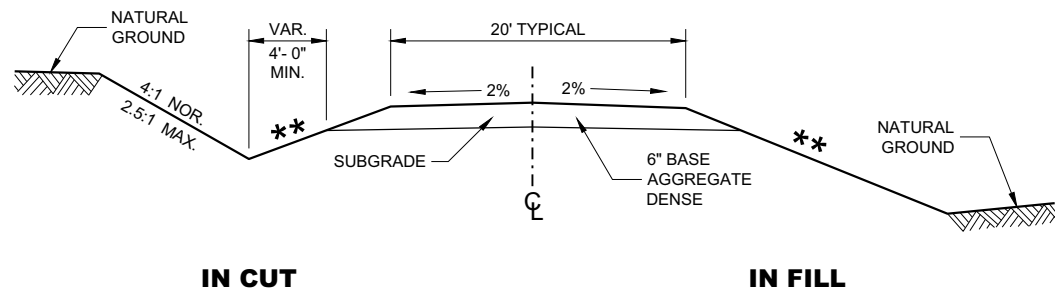
32



PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

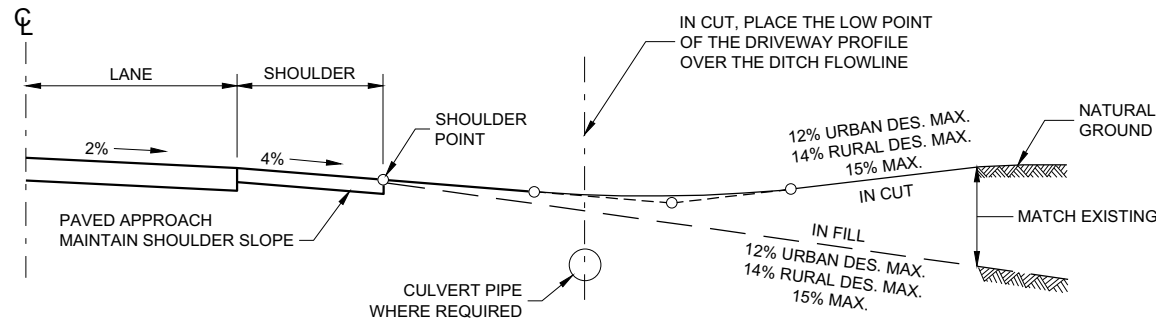
**RURAL DRIVEWAY INTERSECTION DETAIL
(NO CURB AND GUTTER OR SIDEWALK)**



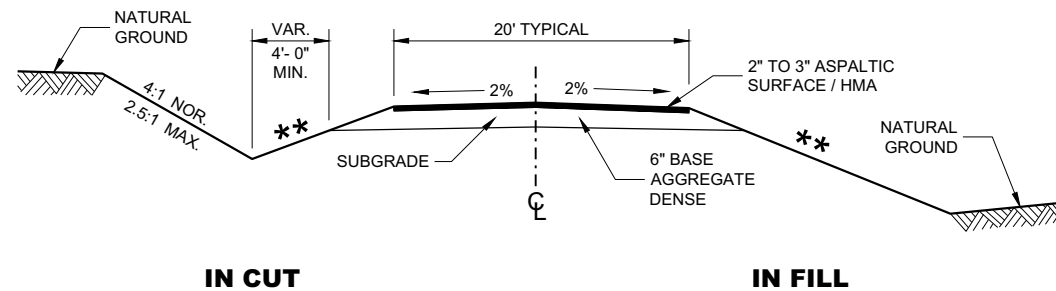
**TYPICAL CROSS SECTION FOR
PRIVATE DRIVE OR FIELD ENTRANCE
AGGREGATE SURFACE**

** SLOPE CAN VARY WITH SPEED. SEE 11-45-30.6.2

POSTED SPEED MPH	MAX. SLOPE
<35	4:1
≥ 35 TO < 60	6:1
≥60	10:1



TYPICAL DRIVEWAY PROFILES



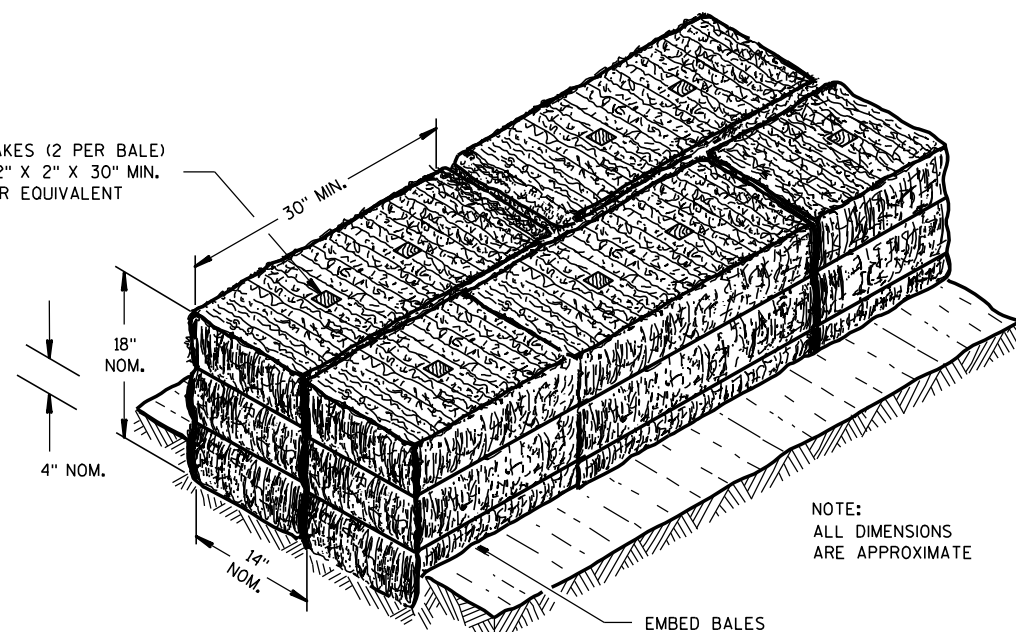
**TYPICAL CROSS SECTION FOR
PRIVATE DRIVE OR FIELD ENTRANCE
ASPHALTIC SURFACE**

**DRIVEWAYS WITHOUT
CURB AND GUTTER**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

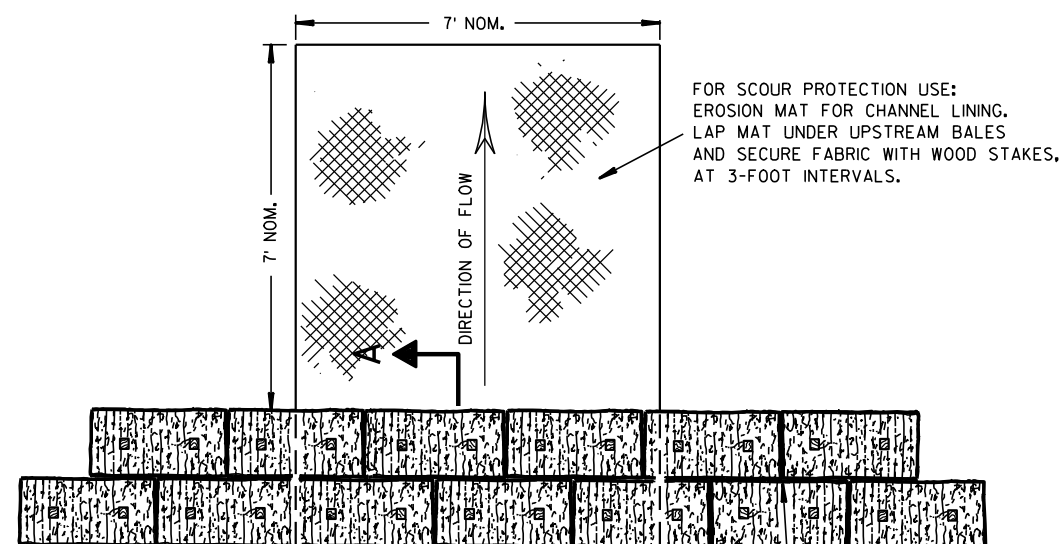
APPROVED
December 2017 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA

WOOD STAKES (2 PER BALE)
NOMINAL 2" X 2" X 30" MIN.
LENGTH OR EQUIVALENT



NOTE:
ALL DIMENSIONS
ARE APPROXIMATE

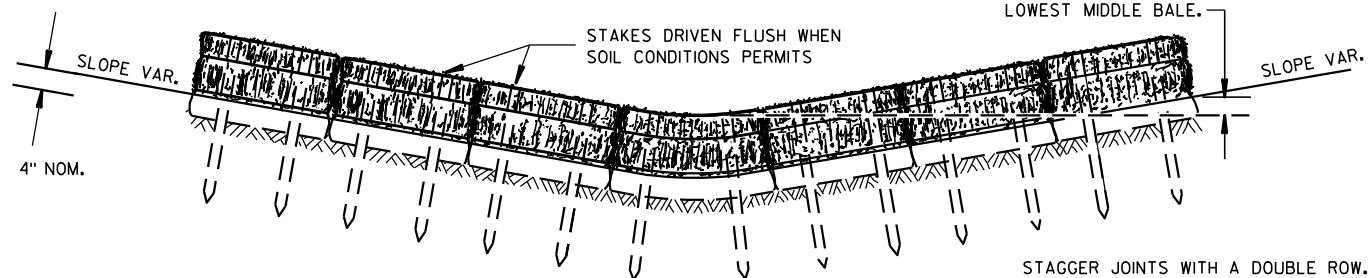
SECTION A-A



PLAN VIEW

STAGGER JOINTS BETWEEN ADJACENT
ROWS OF BALES.

BOTTOM ELEVATION OF END BALE SHALL
BE EQUAL TO OR GREATER THAN TOP OF
LOWEST MIDDLE BALE.



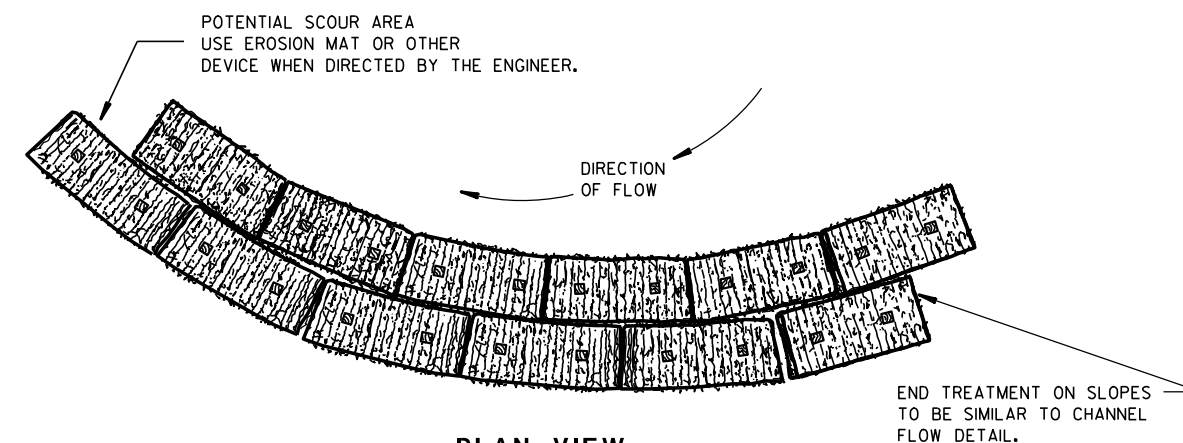
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

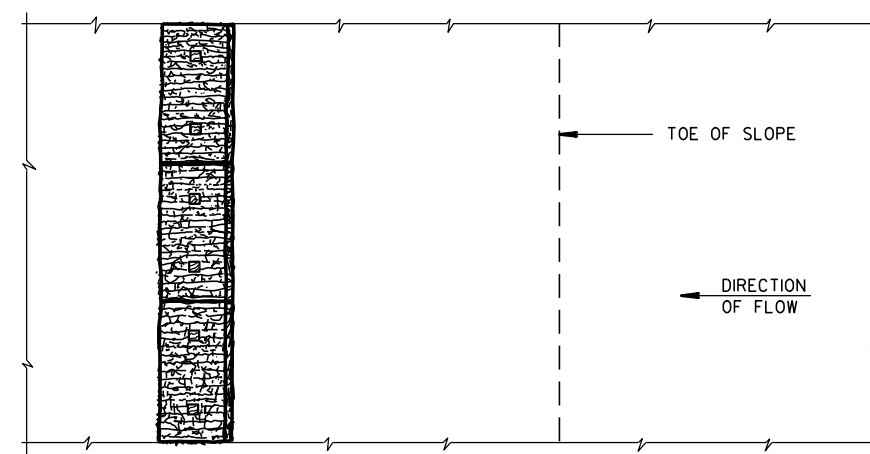
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- ① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

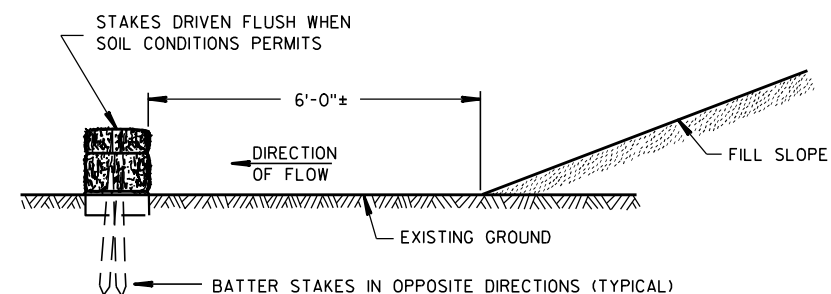


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02
DATE

/S/ Beth Connors
CHIEF ROADWAY DEVELOPER 34 ENGINEER

FHWA



- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1½" X 1½" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

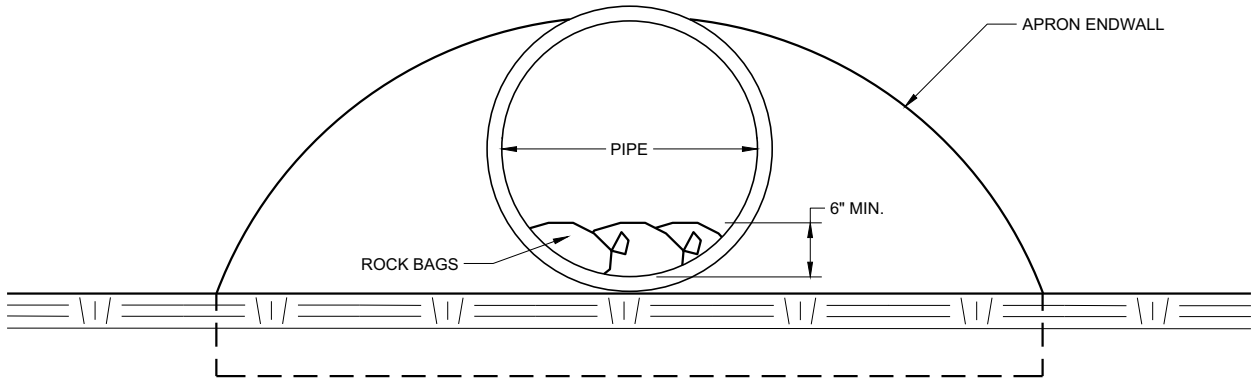


SILT FENCE

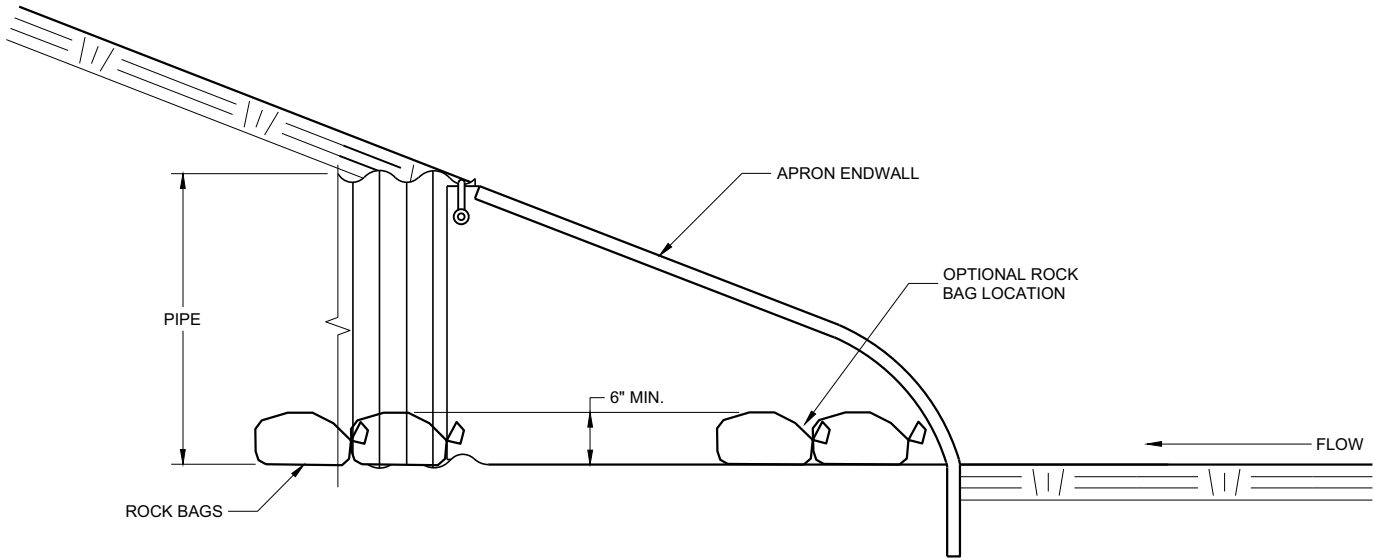
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05 /S/ Beth Connolly
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA



END VIEW



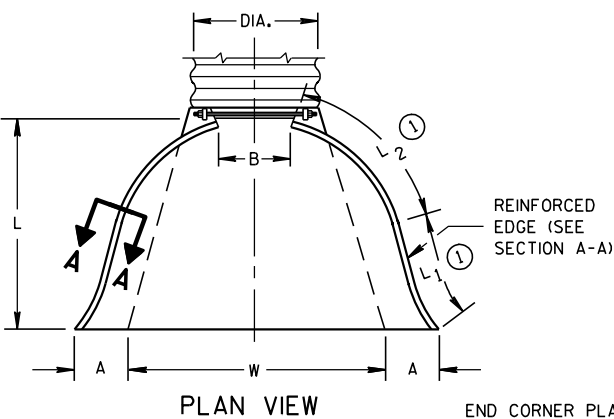
SIDE VIEW

CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

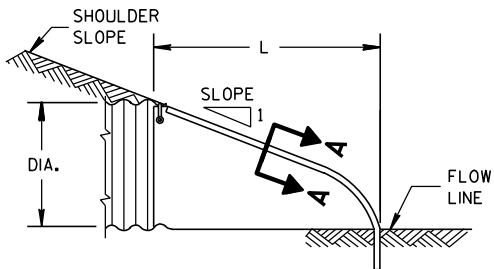
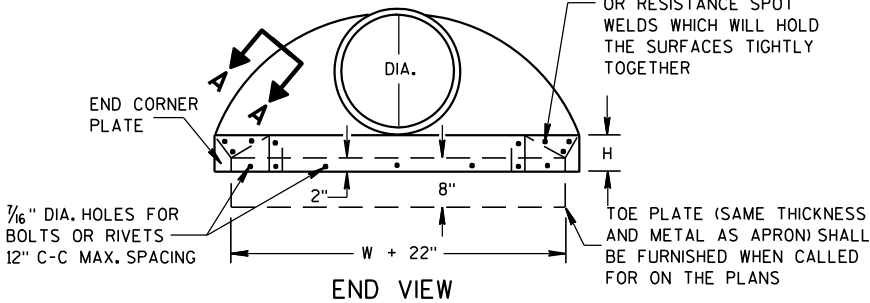
CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGI 36

METAL APRON ENDWALLS												
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE		BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")			
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1		1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1		1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1		1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1		1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1		1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1		1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1		2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1		2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1		3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1		3 Pc.
60	.109x	.105x	18	33	12	87	—	—	114	2 to 1		3 Pc.
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1		3 Pc.
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1		3 Pc.
78	.109x	.105x	18	42	12	87	—	—	132	1 1/2 to 1		3 Pc.
84	.109x	.105x	18	45	12	87	—	—	138	1 1/2 to 1		3 Pc.
90	.109x	.105x	18	37	12	87	—	—	144	1 1/2 to 1		3 Pc.
96	.109x	.105x	18	35	12	87	—	—	150	1 1/2 to 1		3 Pc.

* EXCEPT CENTER PANEL
SEE GENERAL NOTES



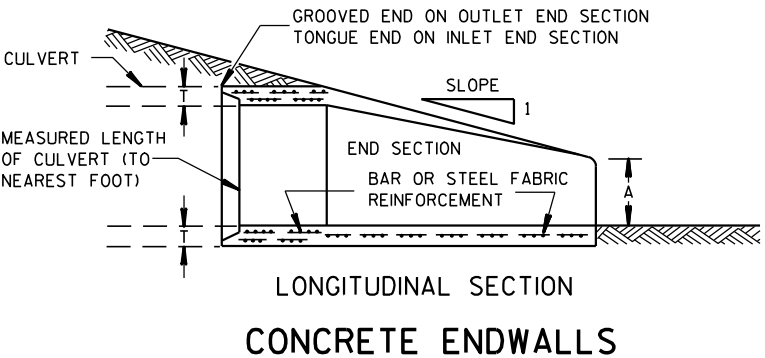
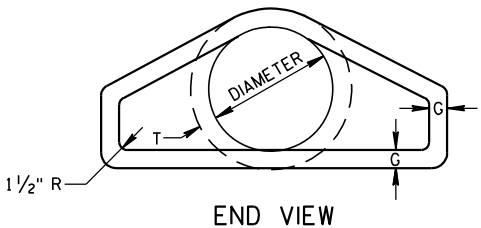
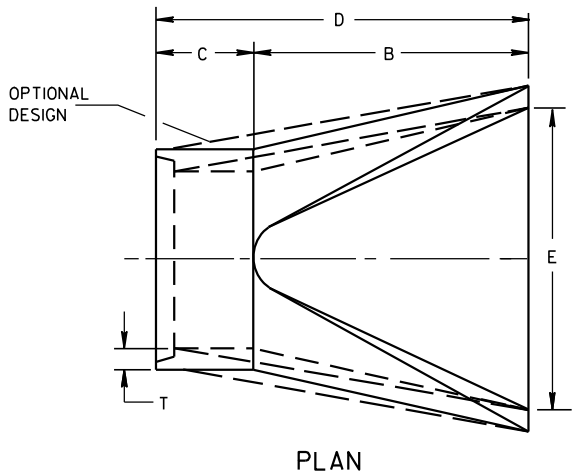
END CORNER PLATES MAY
BE FASTENED TO APRON
PROPER BY BOLTS, RIVETS,
OR RESISTANCE SPOT
WELDS WHICH WILL HOLD
THE SURFACES TIGHTLY
TOGETHER



SIDE ELEVATION
METAL ENDWALLS

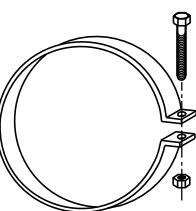
REINFORCED CONCRETE APRON ENDWALLS												
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE				
	T	A	B	C	D	E	G					
12	2	4	24	48 1/8	72 1/8	24	2	3 to 1				
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1				
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1				
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1				
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1				
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1				
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1				
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1				
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1				
48	5	24	72	26	98	84	5	3 to 1				
54	5 1/2	27	65	33 1/4-35	98 1/4-100	90	5 1/2	2 1/2 to 1				
60	6	30-35	60	39	99	96	5	2 to 1				
66	6 1/2	24-30	72-78	21-27	99	102	5 1/2	2 to 1				
72	7	24-36	78	21	99	108	6	2 to 1				
78	7 1/2	24-36	78	21	99	114	6 1/2	2 to 1				
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1				
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1				

* MINIMUM
** MAXIMUM

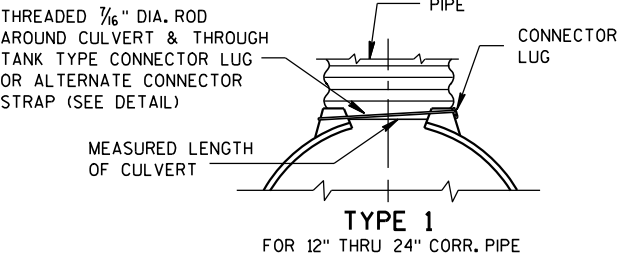


LONGITUDINAL SECTION
CONCRETE ENDWALLS

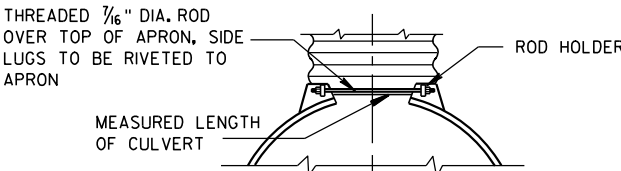
1" WIDE, 12 GA. (0.109"
THICK) GALVANIZED STRAP
WITH STANDARD 6" X 1/2"
BAND BOLT AND NUT



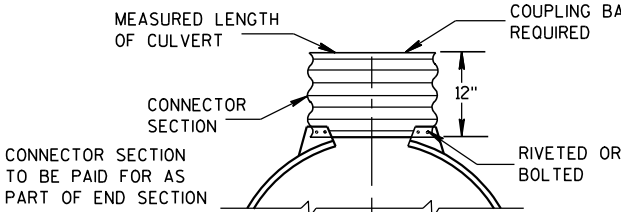
ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



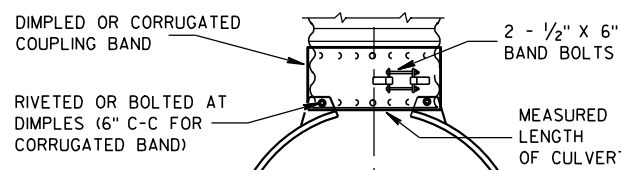
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

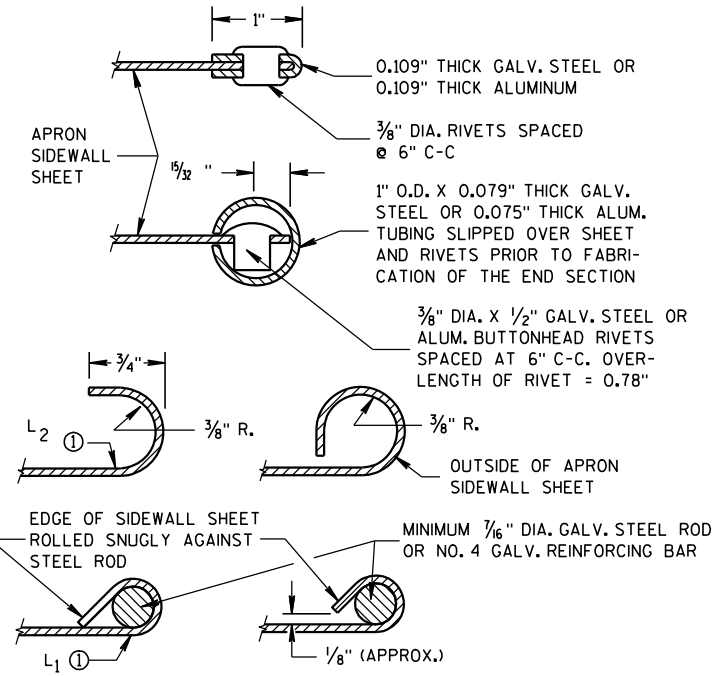
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL,
AND CORRUGATED BAND FITS INSIDE ENDWALL.
DIMPLED BAND MAY BE USED WITH HELICALLY
CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE
ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5
AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL
CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO
CIRCUMFERENTIAL CORRUGATIONS AT EACH END
USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON
THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE
STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL
OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR
ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE
OF THE SAME METAL.

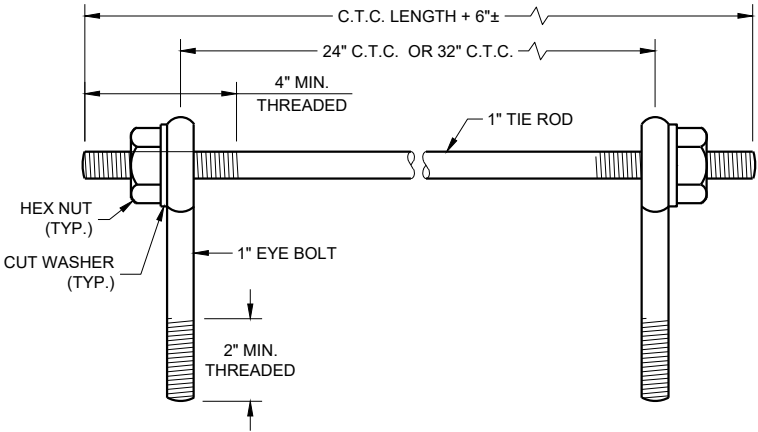
ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND
LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL
THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND
LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH
OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE
PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS
FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS.
FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED
EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH
GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE
ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM
NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT
TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT
TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

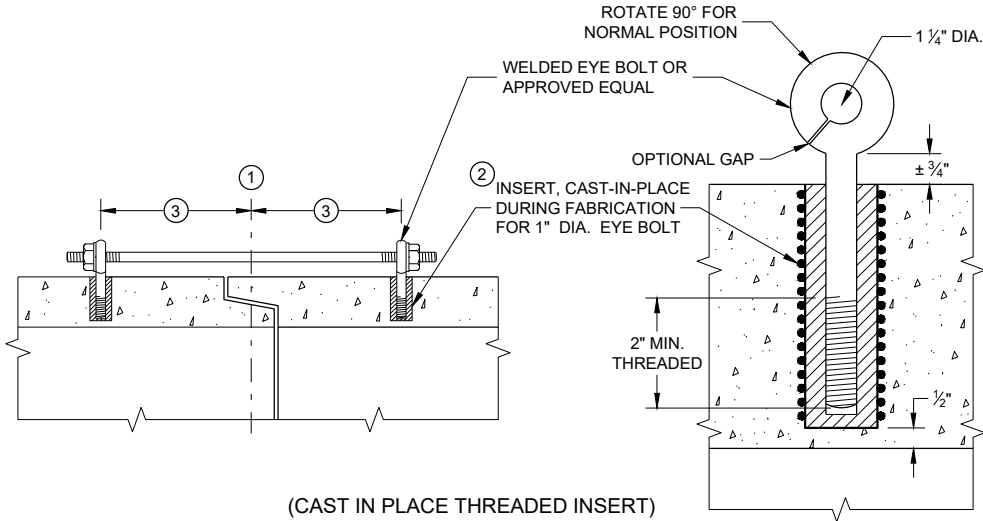
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED
INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
APPROVED 11/30/94 DATE	/S/ Rory L. Rhinehart CHIEF ROADWAY DEVELOP	37	NEER
FHWA			



EYE BOLTS AND TIE ROD

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)



(CAST IN PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

GENERAL NOTES

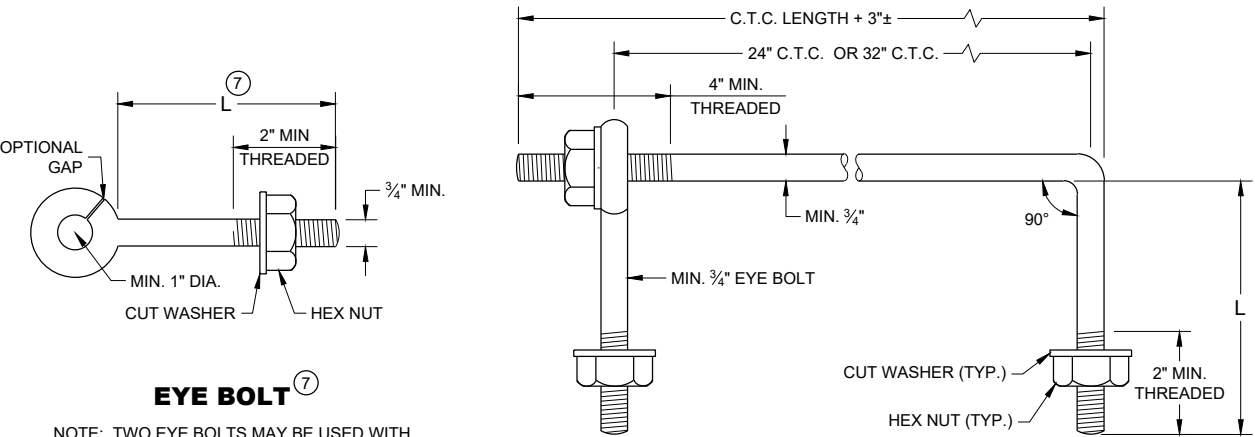
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

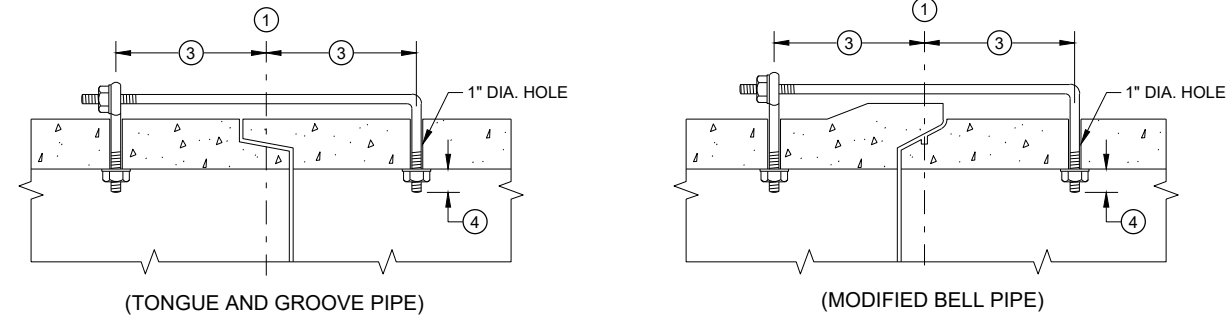
JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

- ① CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- ② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
- ③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.
- ④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.
- ⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.
- ⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.
- ⑦ EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.



EYE BOLT AND TIE ROD

EYE BOLT ⑦
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



LONGITUDINAL SECTION

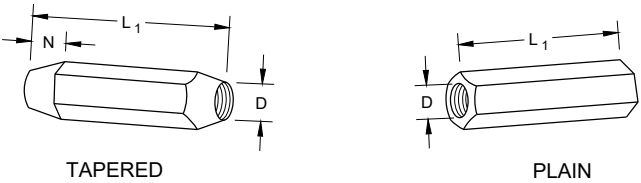
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

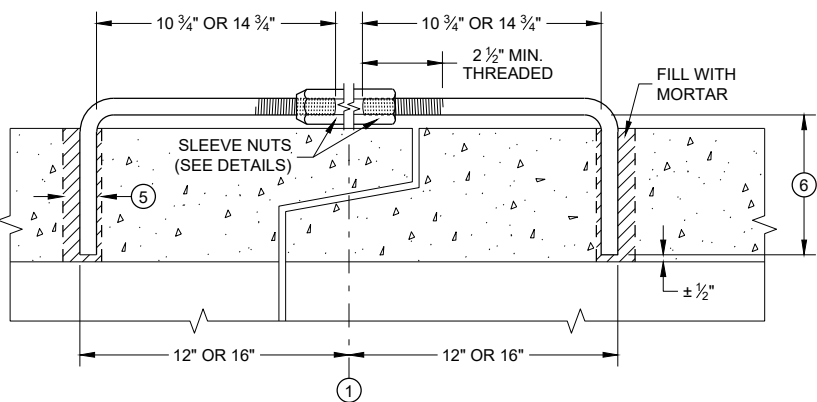
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L ₁	N
12 - 60	5/8	5/8	5	1/2
66 - 84	3/4	3/4	5	1/2
90 - 144	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES

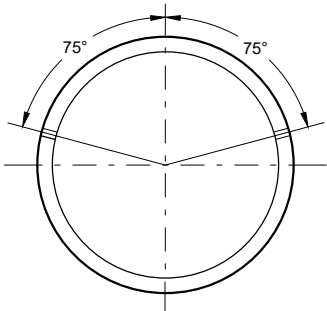


RIGHT AND LEFT THREADS
SLEEVE NUTS



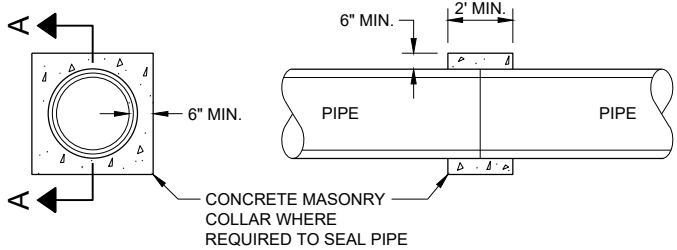
LONGITUDINAL SECTION

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



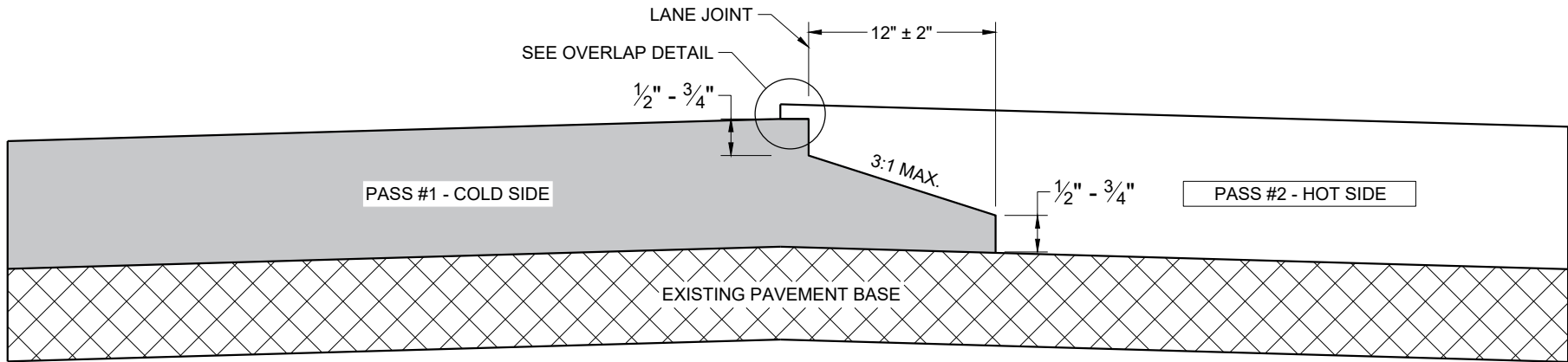
SECTION A - A

CONCRETE COLLAR DETAIL

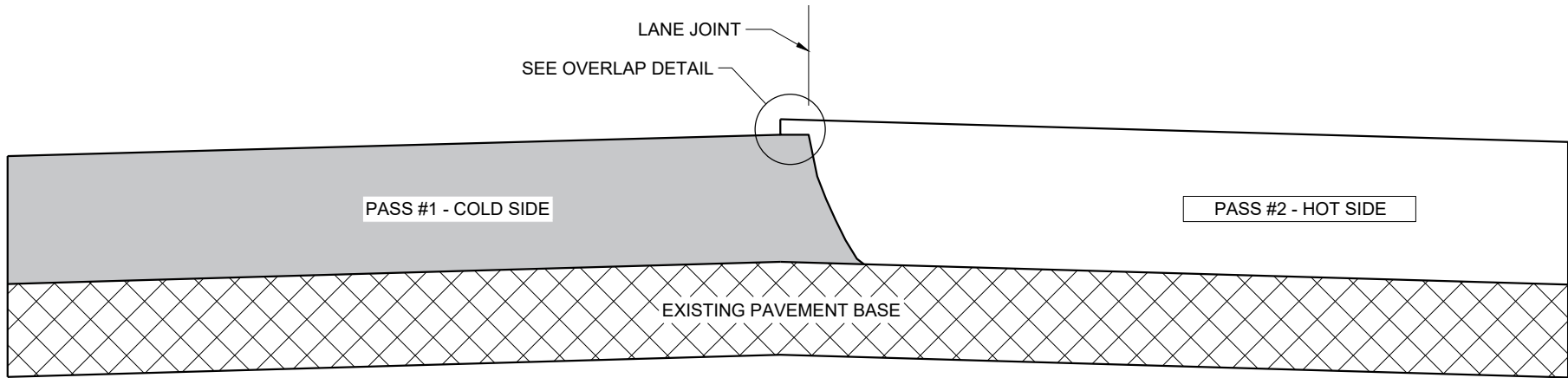
JOINT TIES FOR CONCRETE
PIPE AND CONCRETE
COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

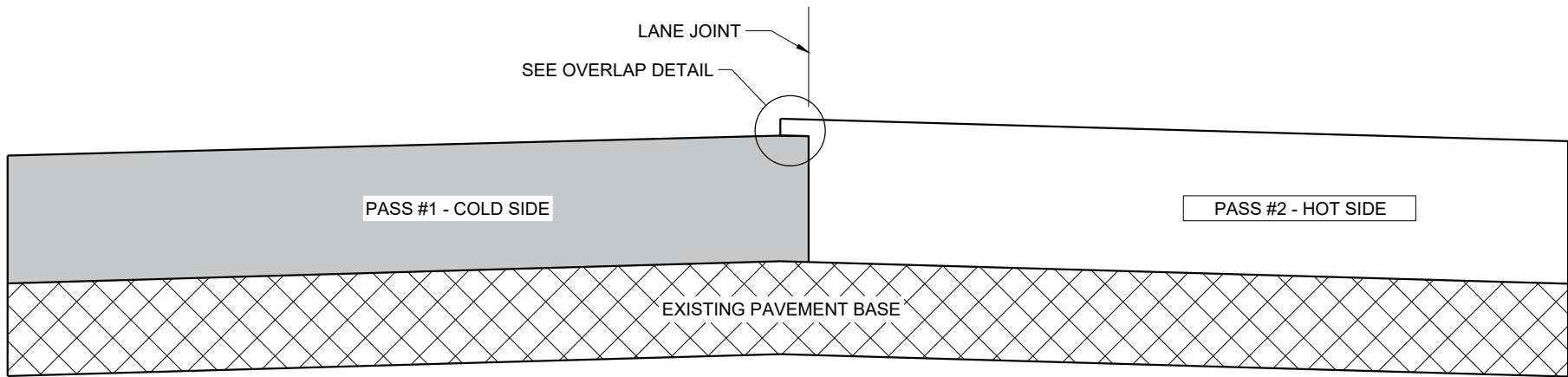
APPROVED
November 2021 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER 38
FHWA



**TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)**

GENERAL NOTES

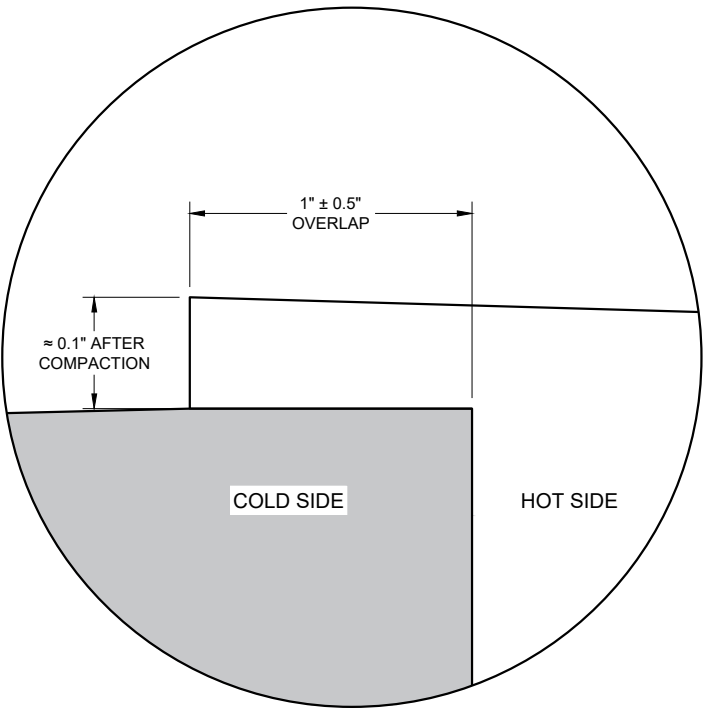
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY 1" ± 0.5" AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY 0.1" AFTER FINAL COMPACTION. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

ONLY REMOVE THE LONGITUDINAL NOTCHED WEDGE JOINT FOR SMA PAVEMENT OR AS DIRECTED BY THE ENGINEER TO ADDRESS SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC.

WHEN MILLING BACK OR REMOVING ANY LONGITUDINAL JOINT, LIMIT THE MATERIAL REMOVED TO 2" FROM THE TOP NOTCH OR FROM THE VERTICAL JOINT EDGE ON THE COLD SIDE OF THE JOINT.

USE LONGITUDINAL MILLED JOINT AS PLANS SHOW OR THE AS THE ENGINEER DIRECTS.



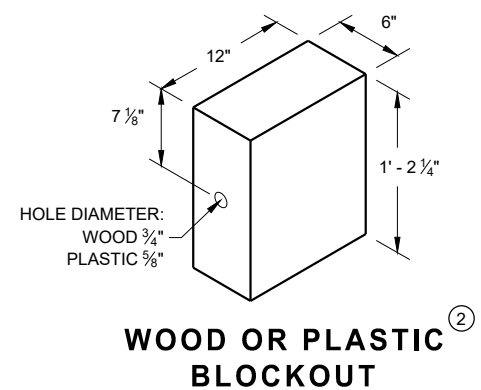
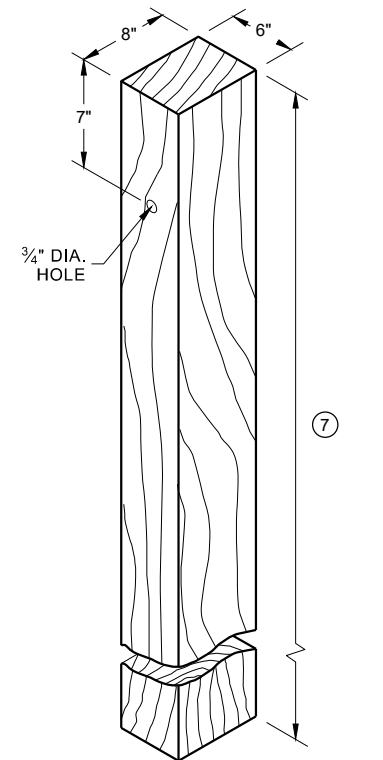
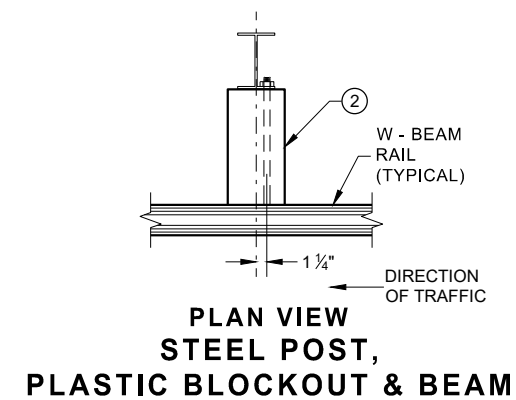
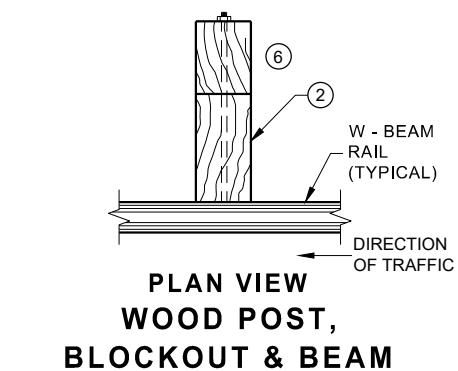
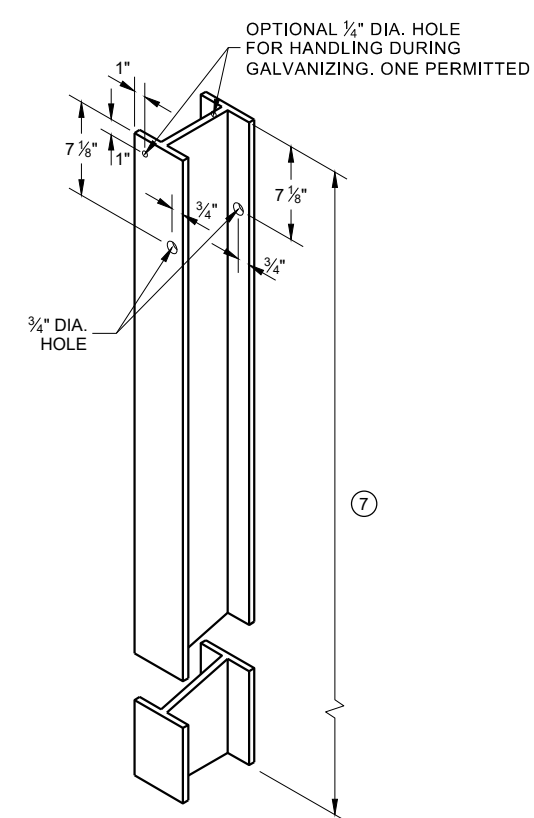
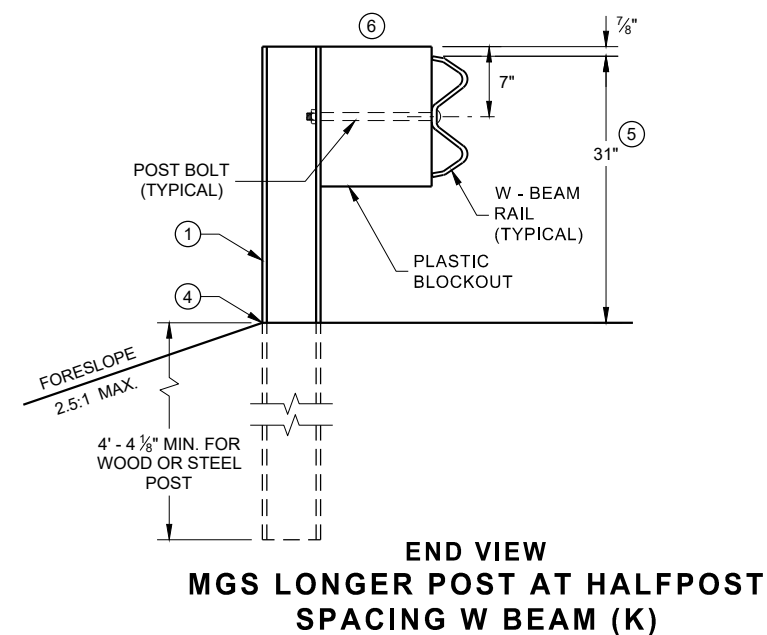
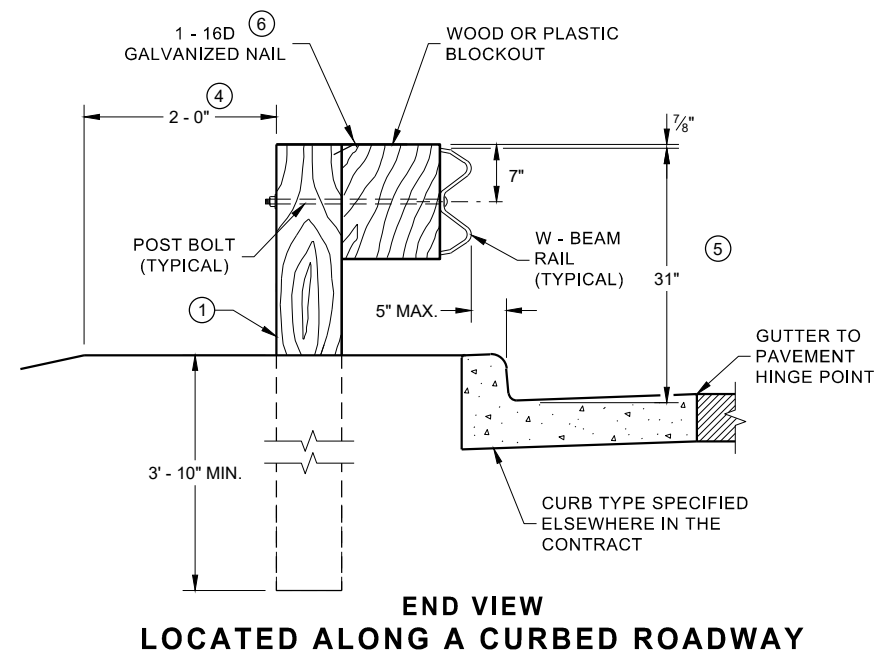
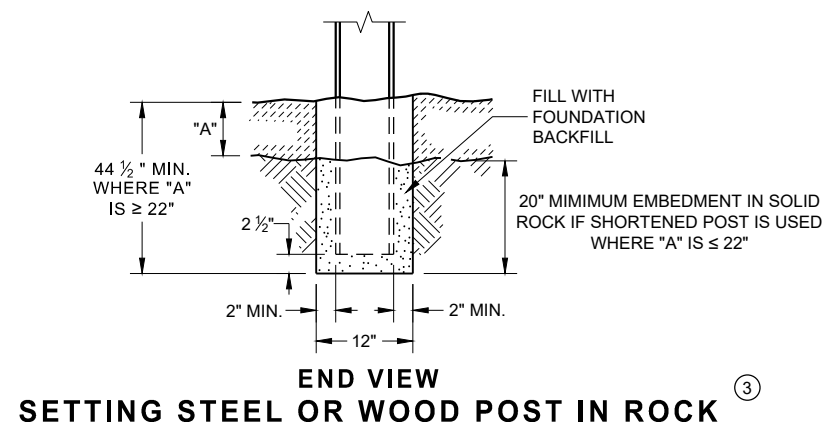
OVERLAP DETAIL (TYPICAL)

HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

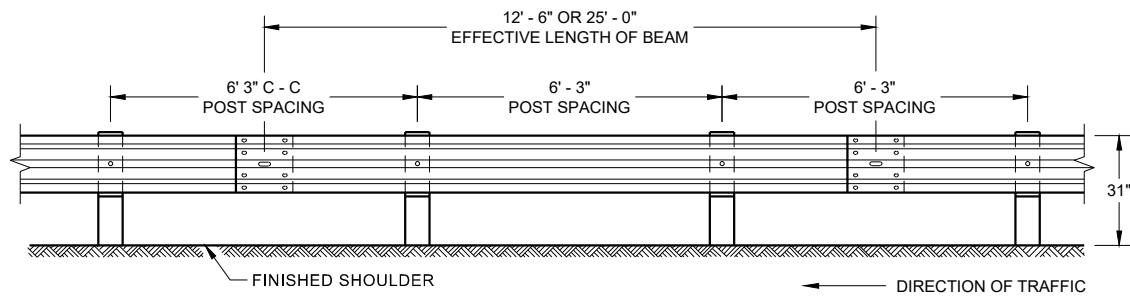
APPROVED
November 2020 /S/ Steven Hefel
DATE HMA PAVEMENT ENGIN 39
FHWA

- WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.
- IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.
- WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).
- FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS $\pm 1"$. FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 3/4" TO 32".
- WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".

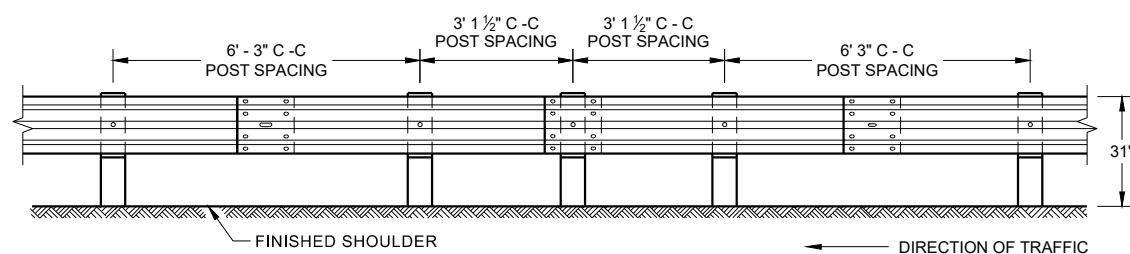


MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

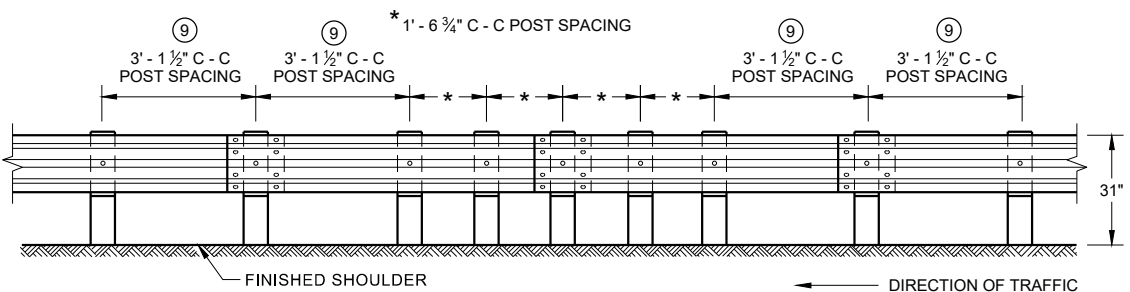
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



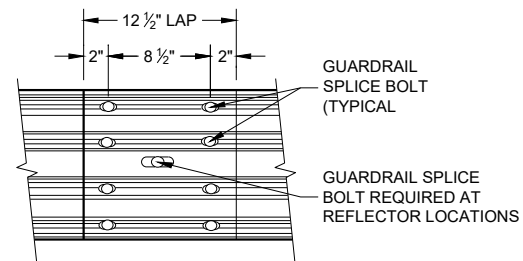
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



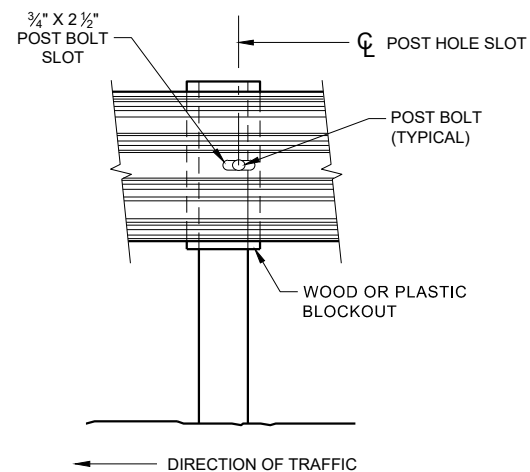
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



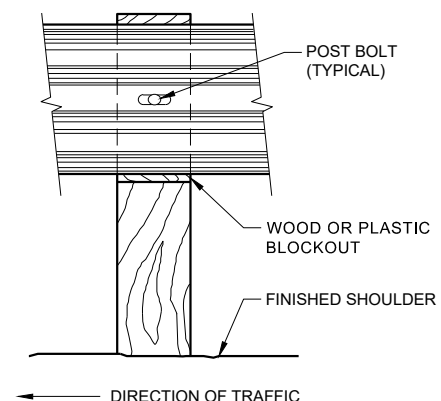
**FRONT VIEW
QUARTER POST SPACING (QS)**



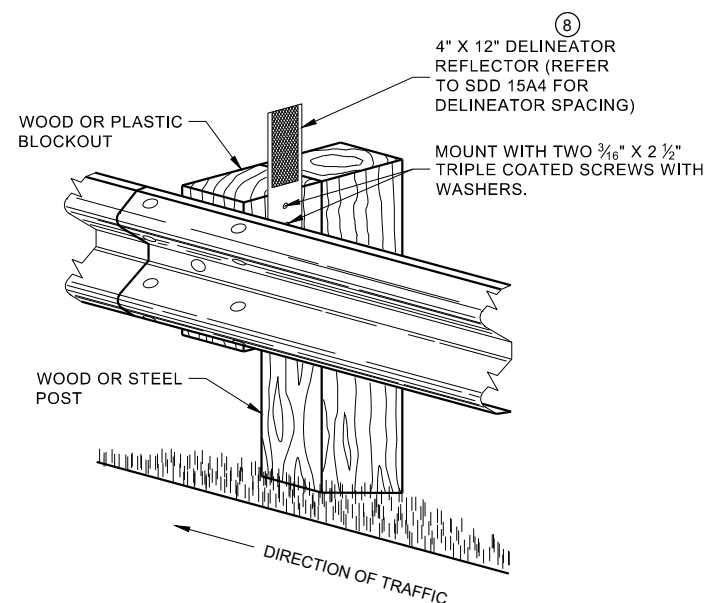
**FRONT VIEW
MID-SPAN BEAM SPLICE**



FRONT VIEW AT STEEL POST



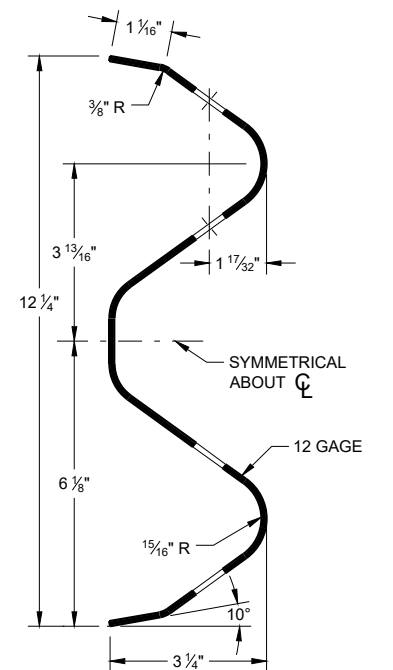
FRONT VIEW AT WOOD POST



**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

GENERAL NOTES

- ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
 - ⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.
- POST BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 3/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 3/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.
- GUARD RAIL SPLICE BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 3/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



SECTION THRU W-BEAM RAIL

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

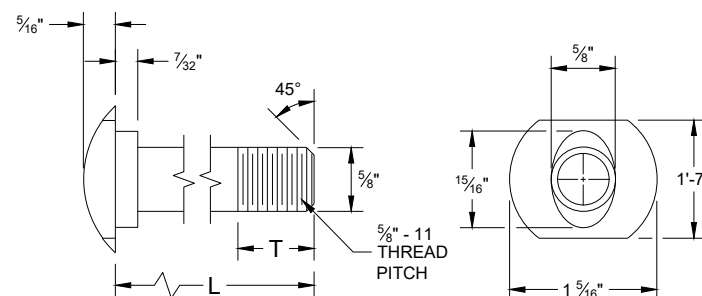


NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

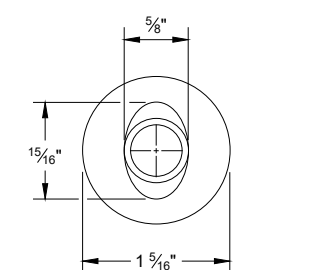
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF $\frac{3}{16}$ ".
2. IF THE BOLT EXTENDS MORE THAN $\frac{1}{4}$ " FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

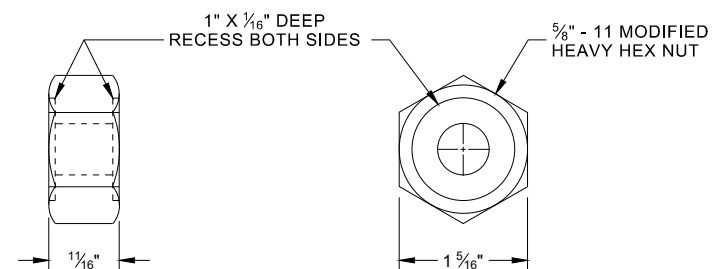


POST BOLT TABLE

L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 ⅙"
18"	4"
21"	4 ⅙"
25"	4"

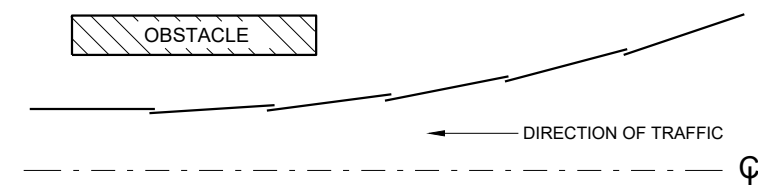


ALTERNATE BOLT HEAD

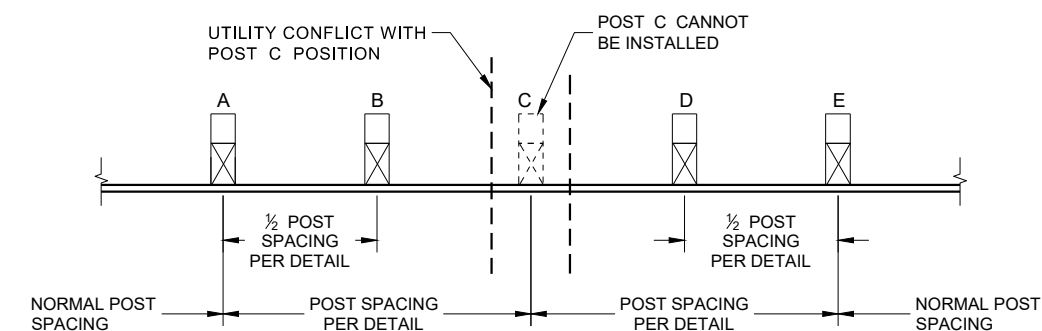


POST BOLT, SPLICE BOLT AND RECESS NUT

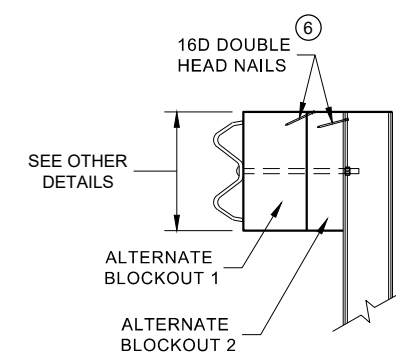
⑥ WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



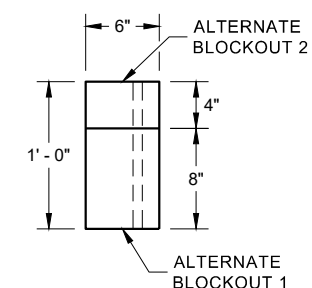
PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW

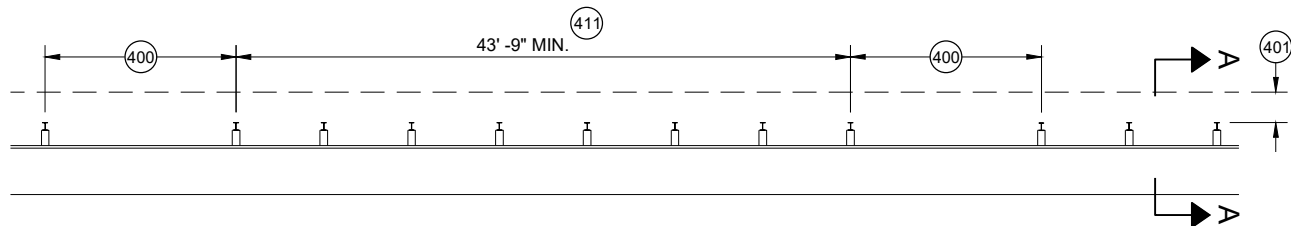


PLAN VIEW

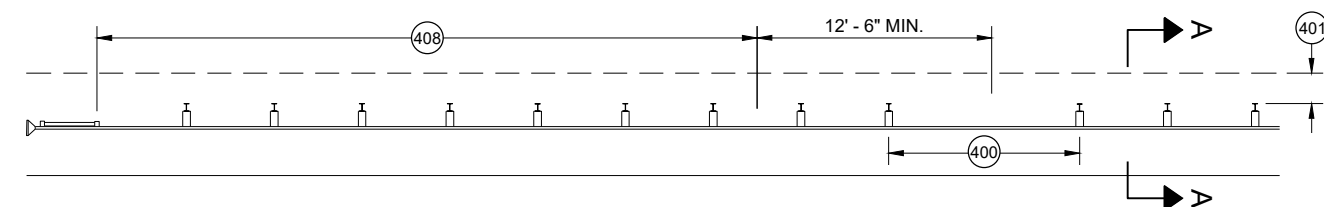
ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

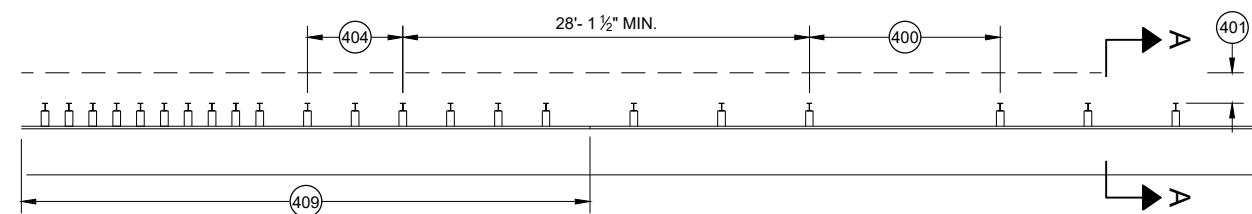
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 42



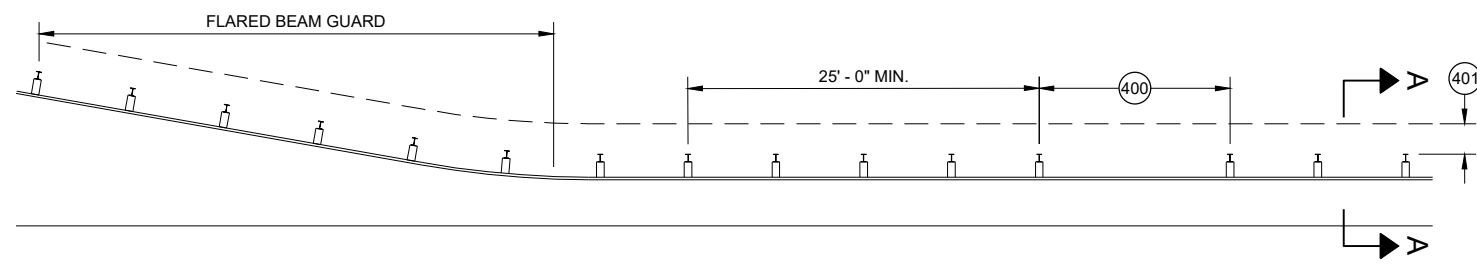
MISSING POST IN MGS GUARDRAIL



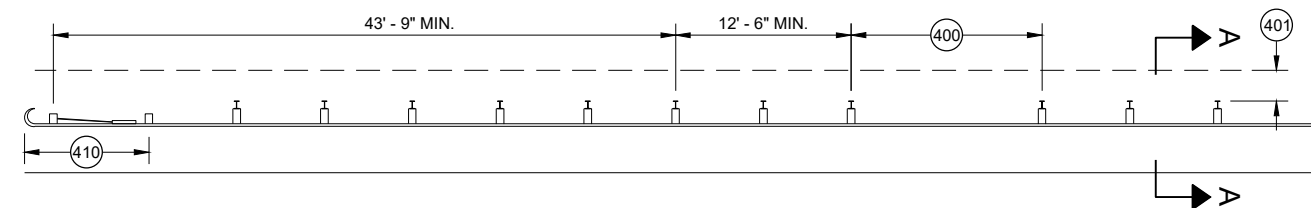
MISSING POST IN MGS GUARDRAIL NEAR EAT



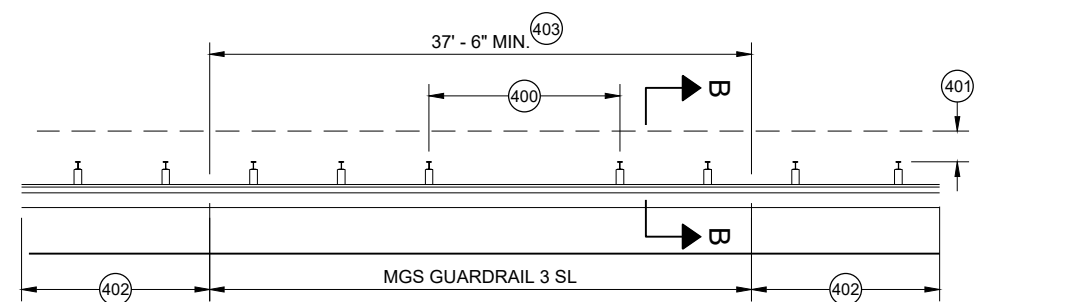
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

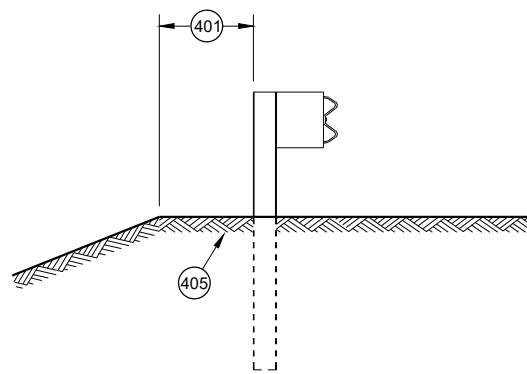


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

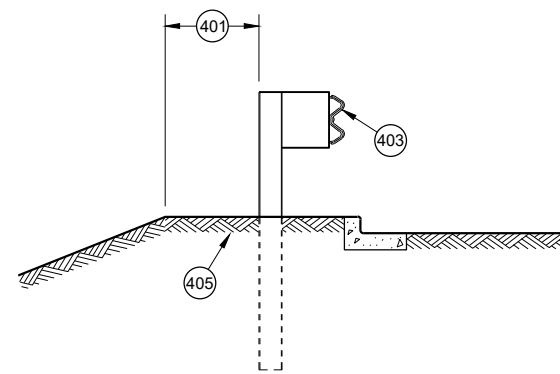


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)

- (400) MAX SPAN 12' - 6"
- (401) 2' MIN.
- (402) MGS GUARDRAIL 3
- (403) NESTING BEAM GUARD
- (404) ASYMMETRIC TRANSITION
- (405) SOIL WELL DRAINED AND COMPACTED
- (406) SEE OTHER DRAWINGS IN THIS SDD
- (407) SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
- (408) SEE SDD 14B44
- (409) SEE SDD 14B45
- (410) SEE SDD 14B47
- (411) MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A



SECTION B - B

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

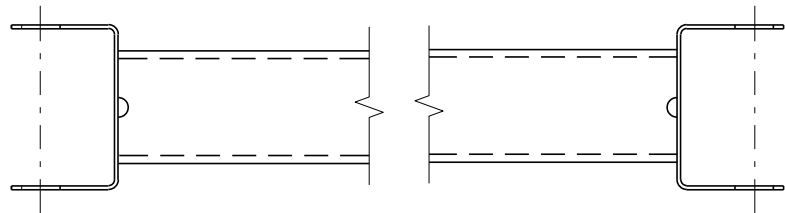
FHWA

- (A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
- (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED
- (C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.
- (D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS, ONE SCREW PER CORNER.
- (E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

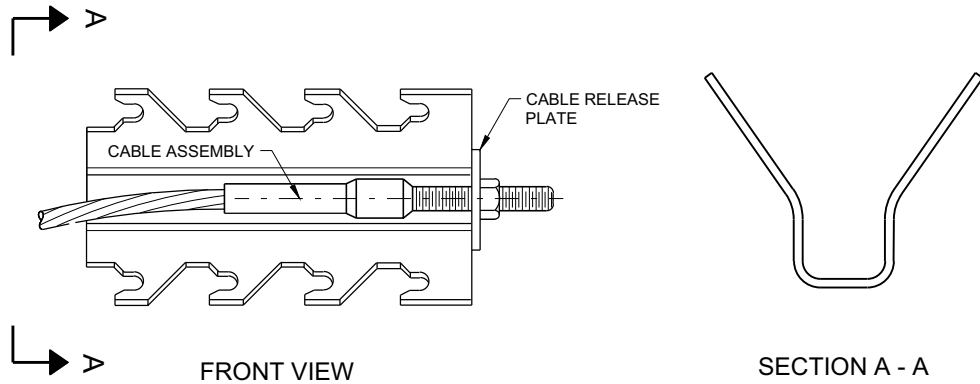
THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.

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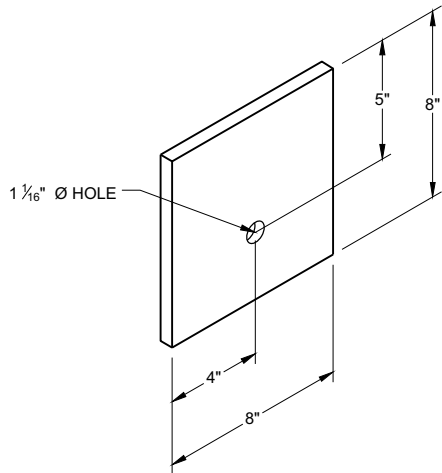


GENERIC GROUND STRUT ⁹ ^E

BILL OF MATERIALS	
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	IMPACT HEAD
⑬	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
⑭	SOIL PLATE
⑮	UPPER POST NO. 2
⑯	LOWER POST NO. 2



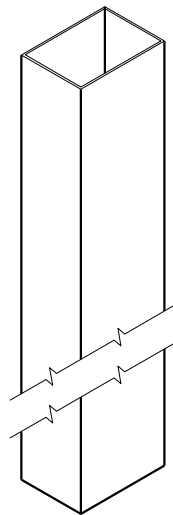
GENERIC ANCHOR CABLE BOX ⁹ ^E



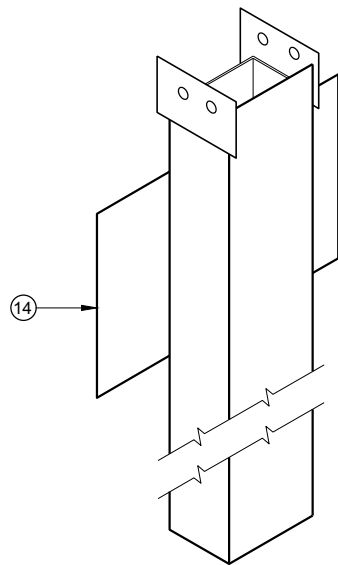
BEARING PLATE ⁶ ^E

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

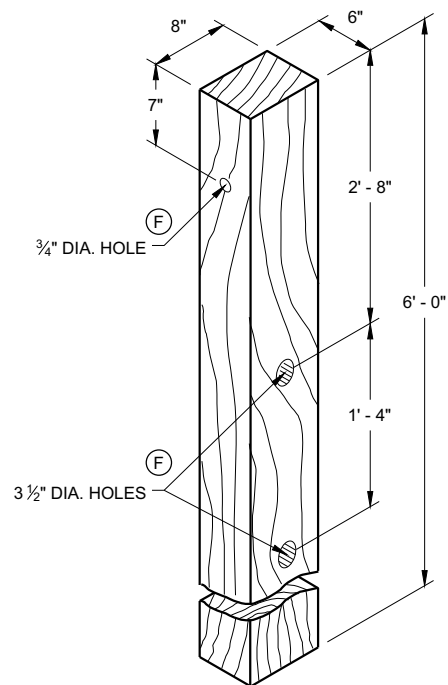
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



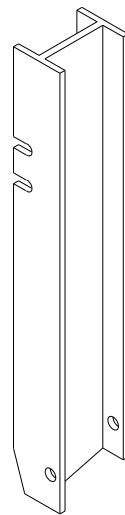
UPPER POST NO. 1 ⁽¹⁾ (E)



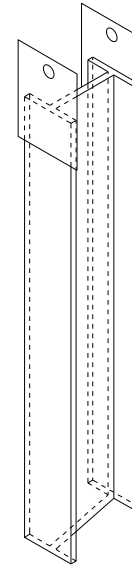
LOWER POST NO. 1 ⁽²⁾ (E)



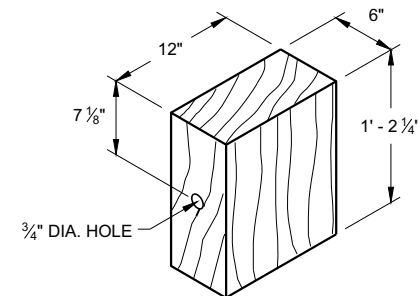
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-9



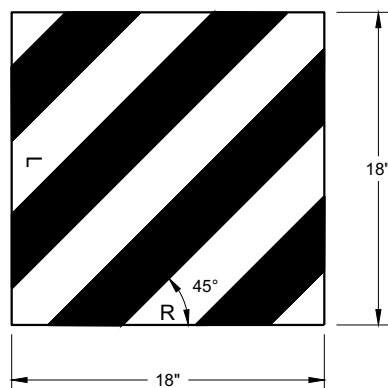
UPPER POST NO. 2 ⁽¹⁵⁾ (E)



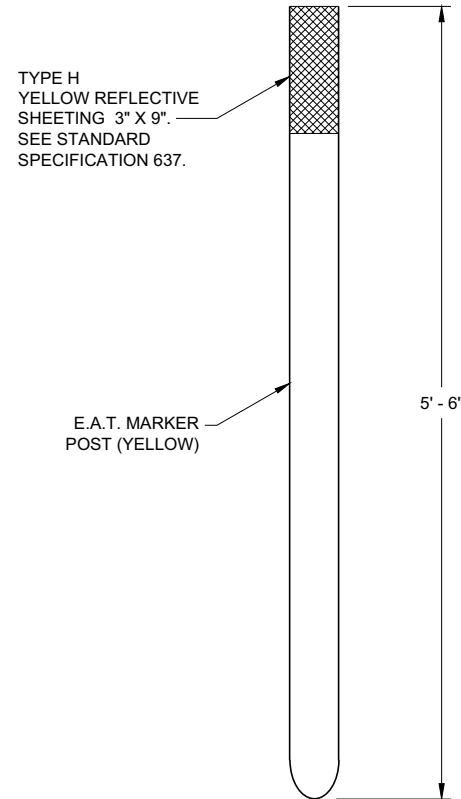
LOWER POST NO. 2 ⁽¹⁶⁾ (E)



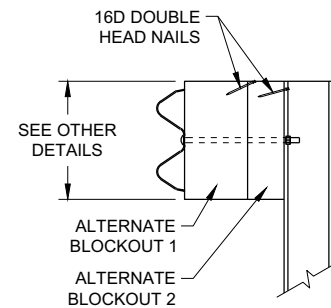
WOOD BLOCKOUT ⁽⁴⁾
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



REFLECTIVE SHEETING DETAIL ^(E)

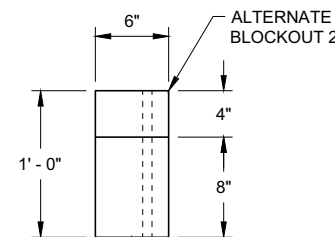


E.A.T. MARKER POST ⁽¹³⁾



SIDE VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

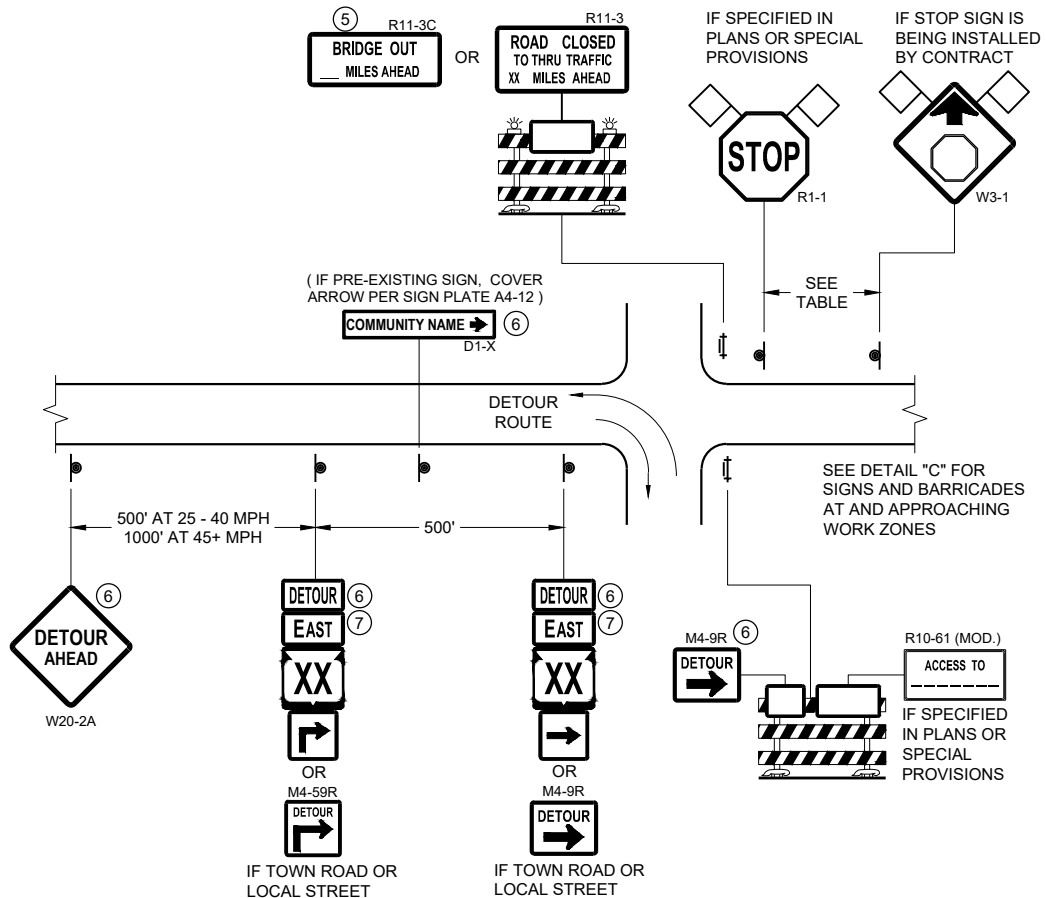


TOP VIEW

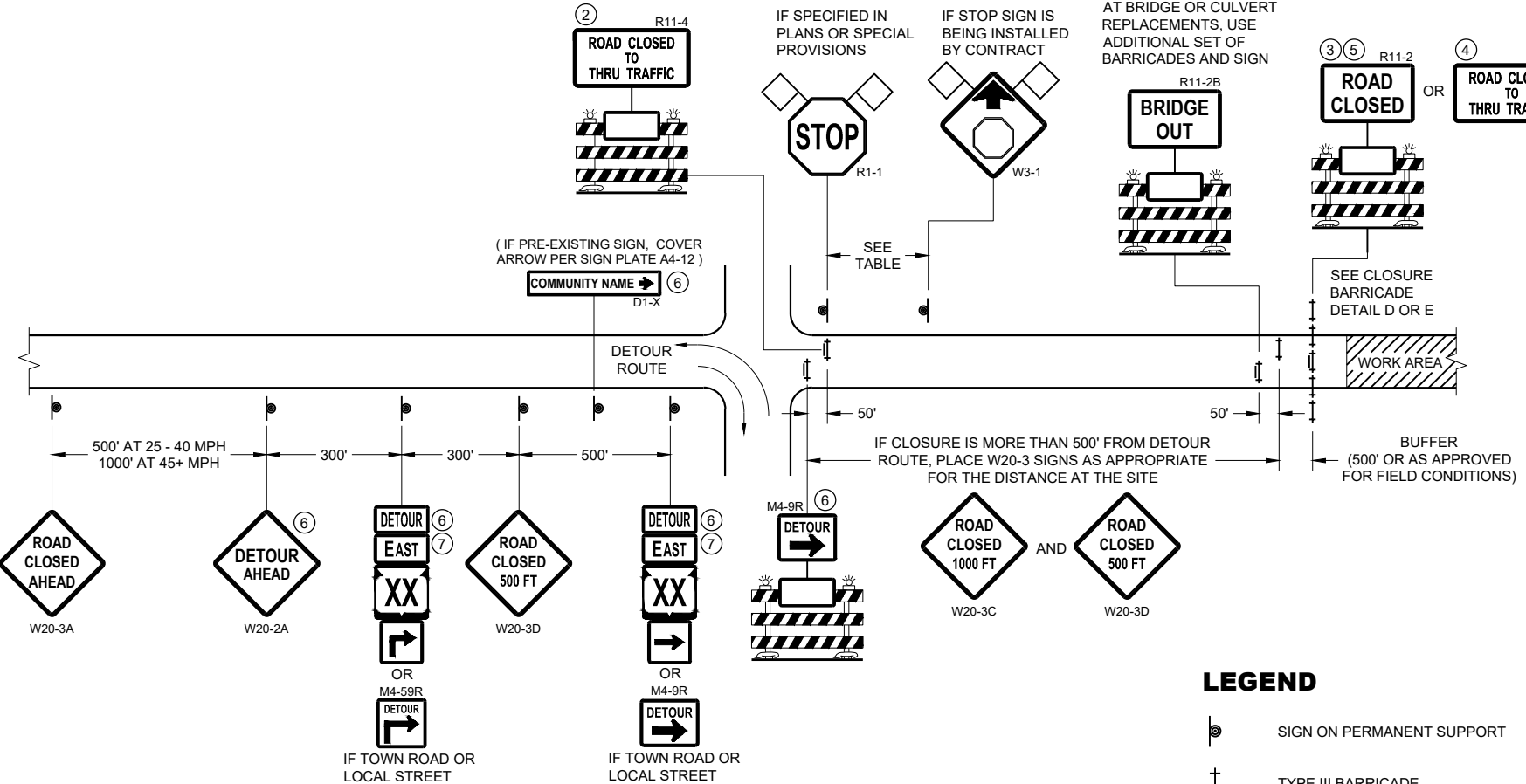
MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA 46



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE LESS THAN ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

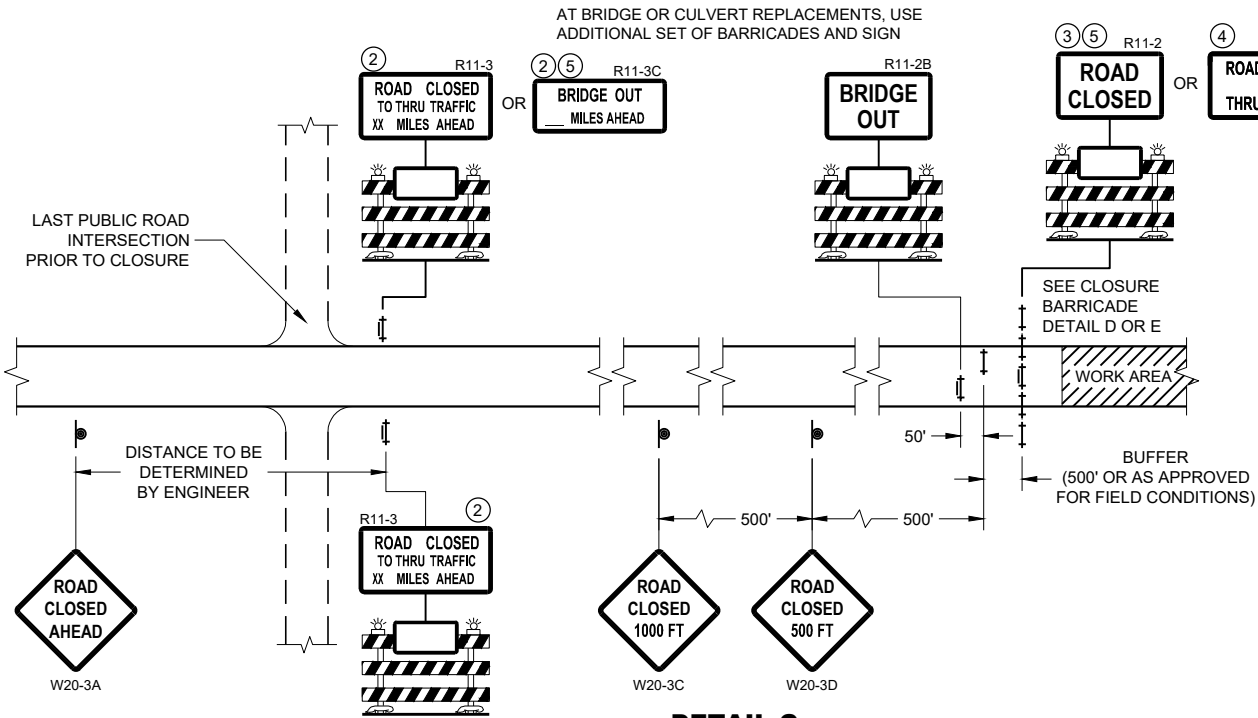
LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)

DETOUR M4 - 8
EAST M3 - X
XX OR **XX** OR **COUNTY X**
M1 - 4 M1 - 6 M1 - 5A
→ OR **→**
M05 - 1 M06 - 1

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-SHEET "b"
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦



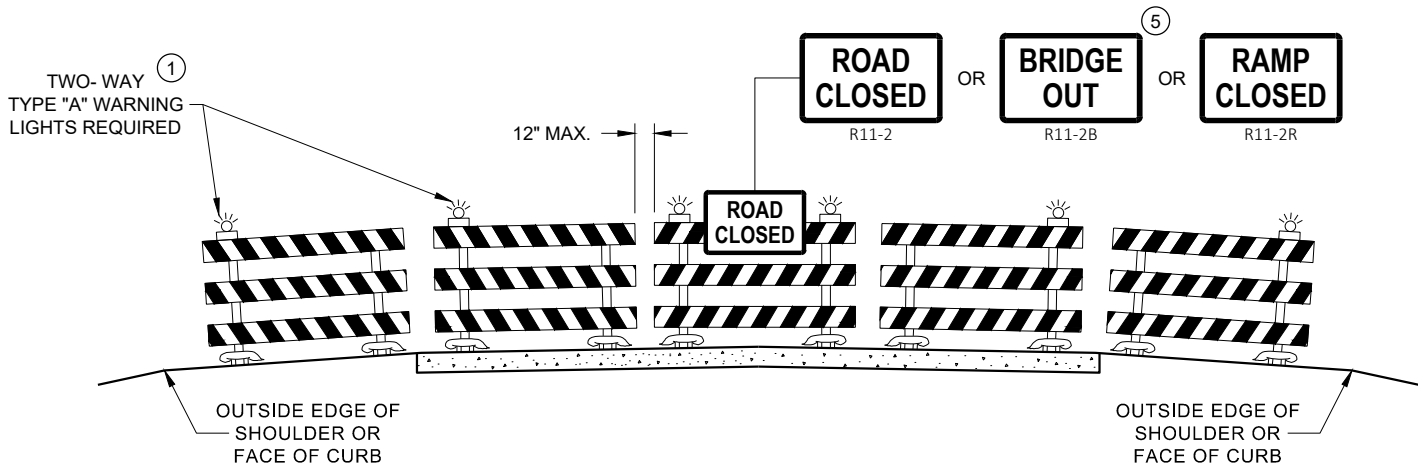
DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

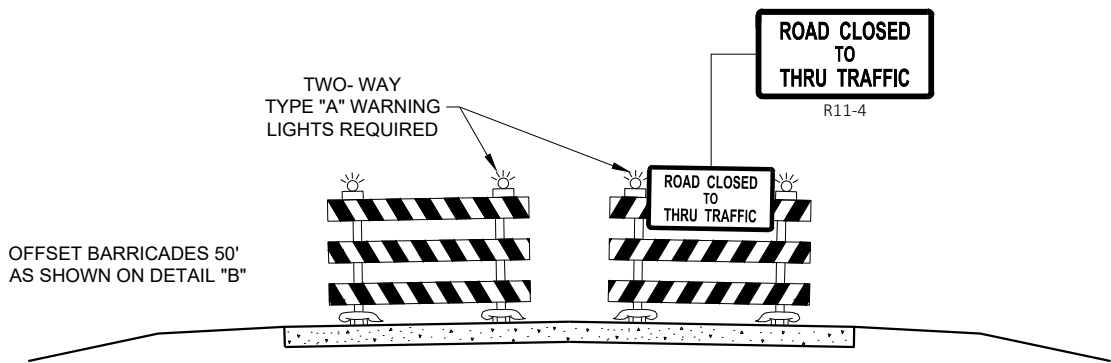
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 47

FHWA



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE", SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW - INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

"WO" AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

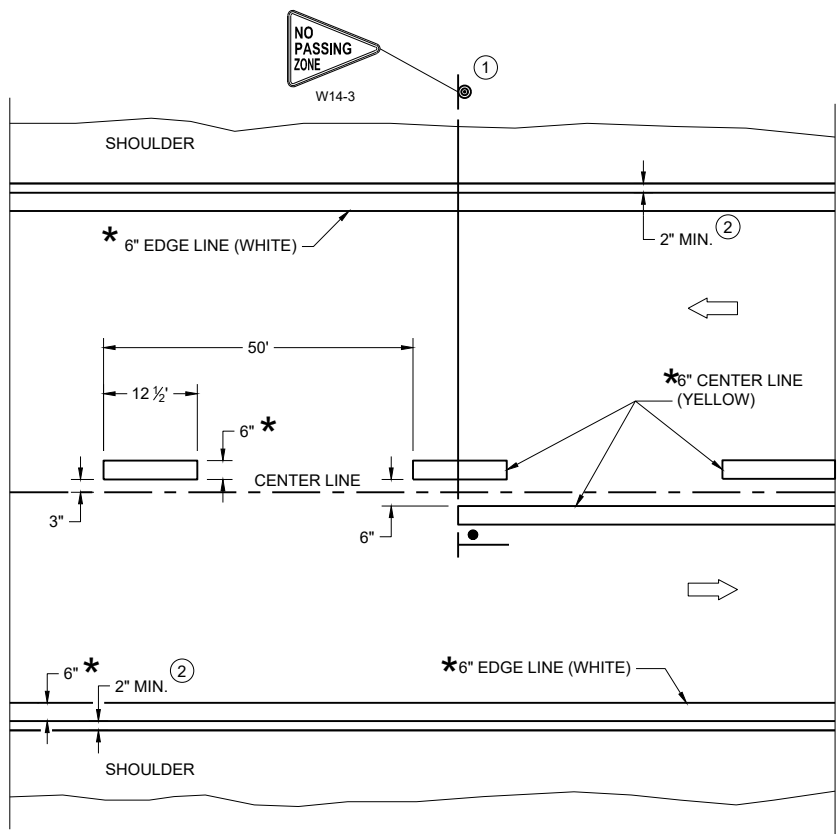
- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- 2 THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- 3 FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
- 4 FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
- 5 FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
- 6 INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- 7 "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS
FOR
VARIOUS CLOSURES

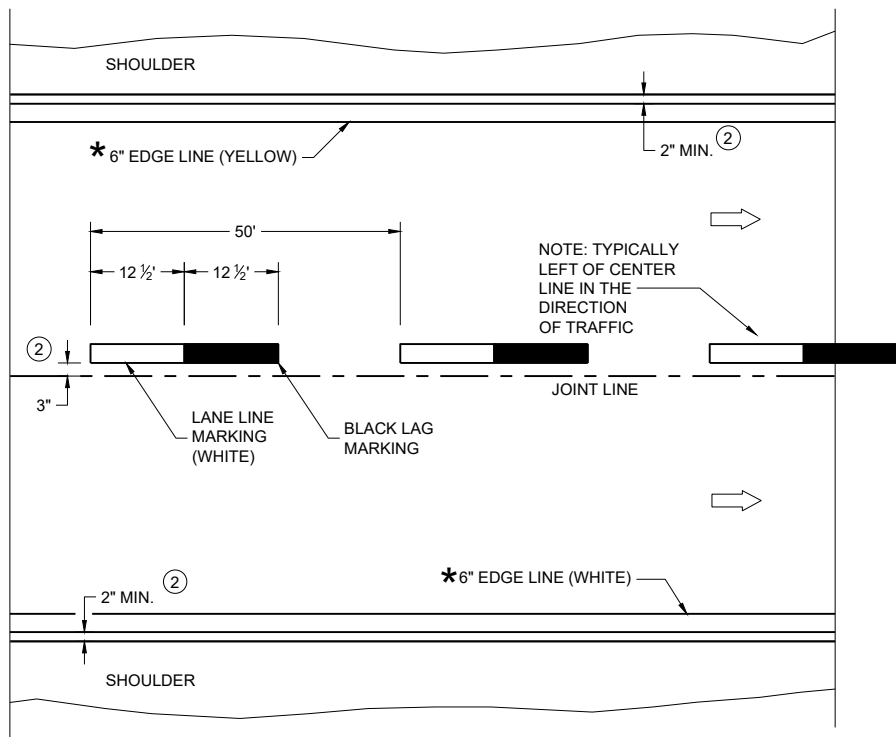
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 48

FHWA



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

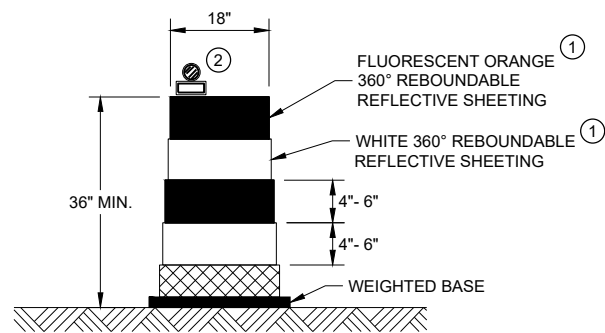
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

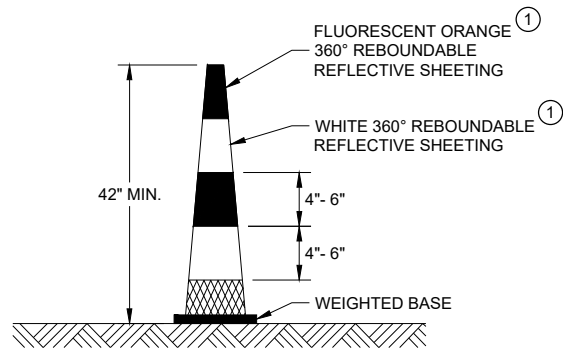
- "T" MARKING
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC

PERMANENT LONGITUDINAL PAVEMENT MARKINGS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Jeannie Silver Statewide Pavement Marking Engineer
FHWA 49	



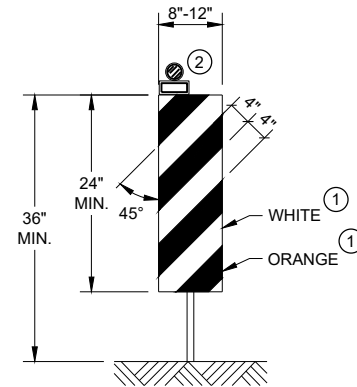
DRUM

BALLAST WIDTHS
RANGE FROM 24"-36"



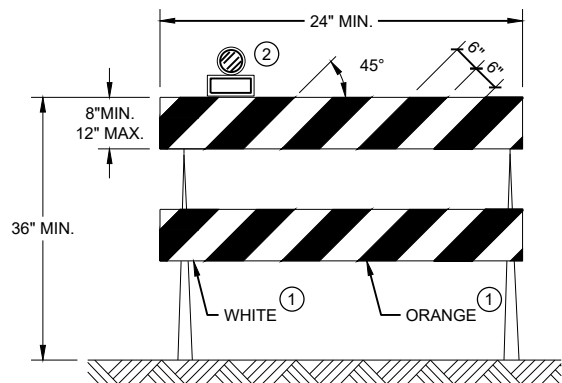
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS
BALLAST WIDTHS
RANGE FROM 14"-20"



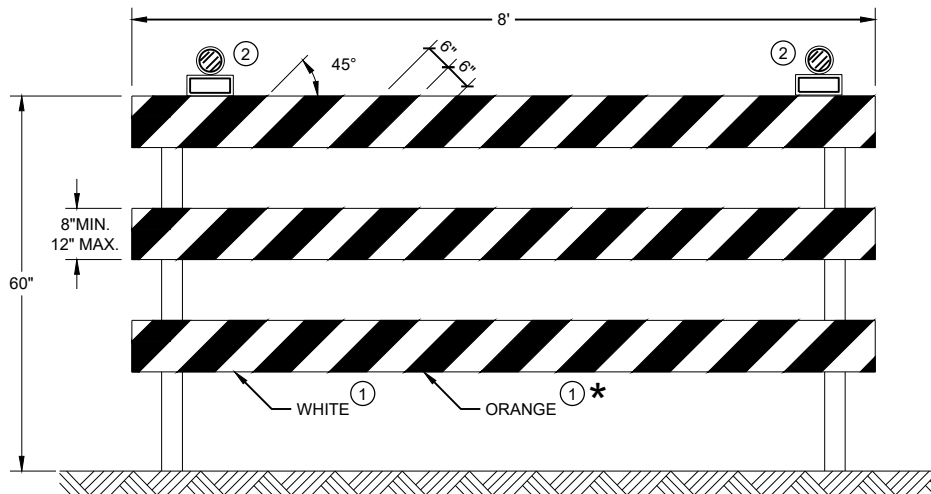
VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO
THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD
TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

GENERAL NOTES

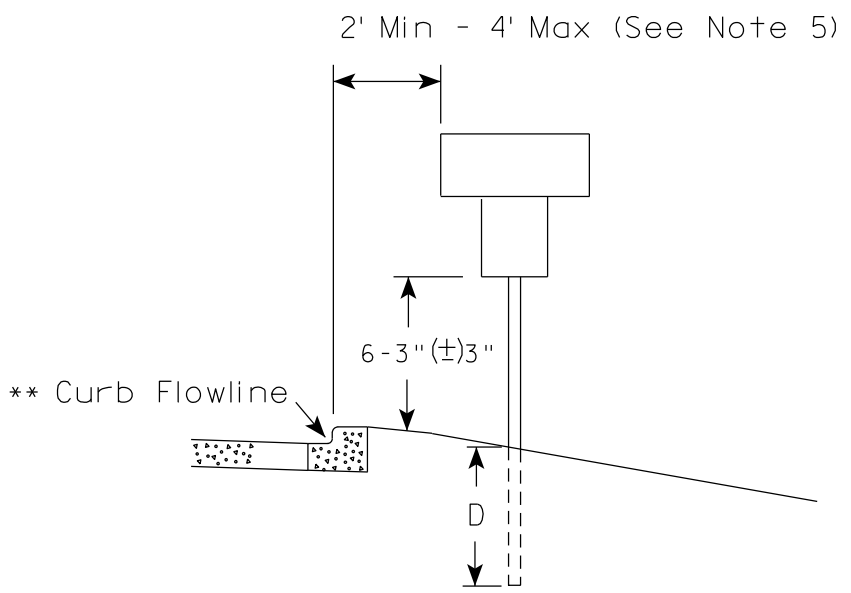
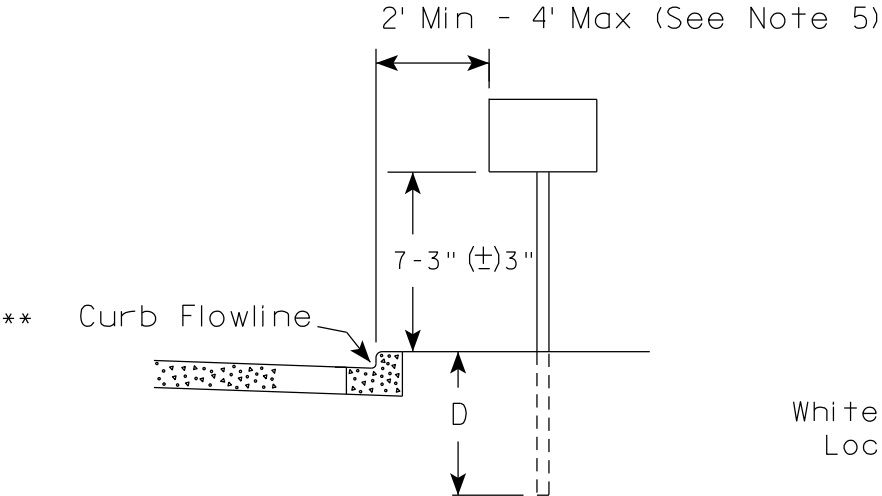
- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.

**CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS**

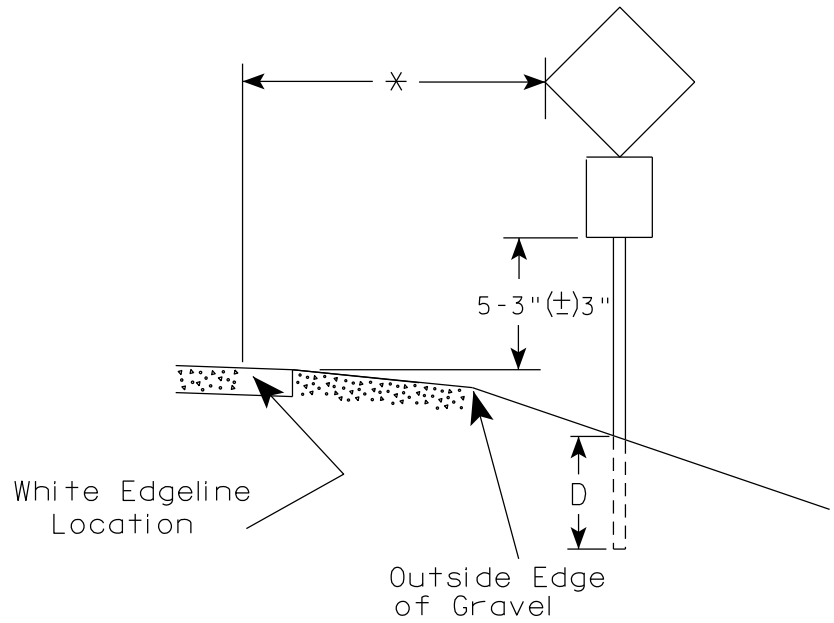
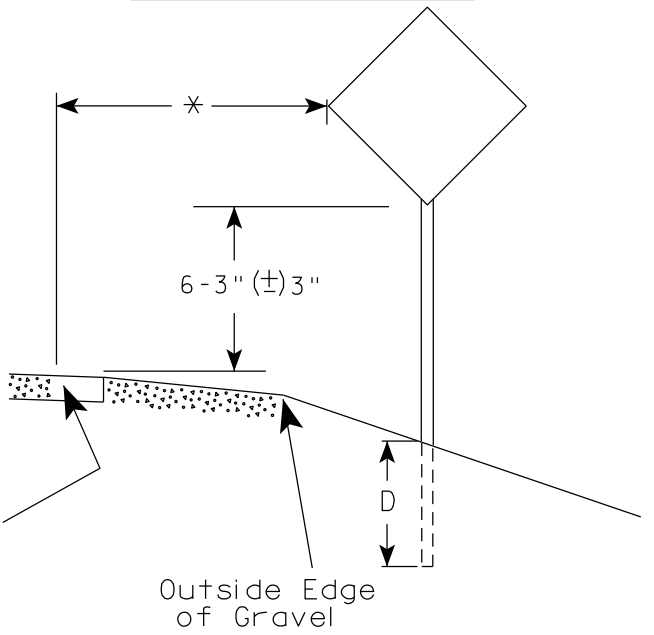
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 50
FHWA

URBAN AREA



RURAL AREA (See Note 2)



GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±) 3". The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±) 3".
3. For expressways and freeways, mounting height is 7'- 3" (±) 3" or 6'-3" (±) 3" depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±) 3".
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directed by the Engineer.

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

* * The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

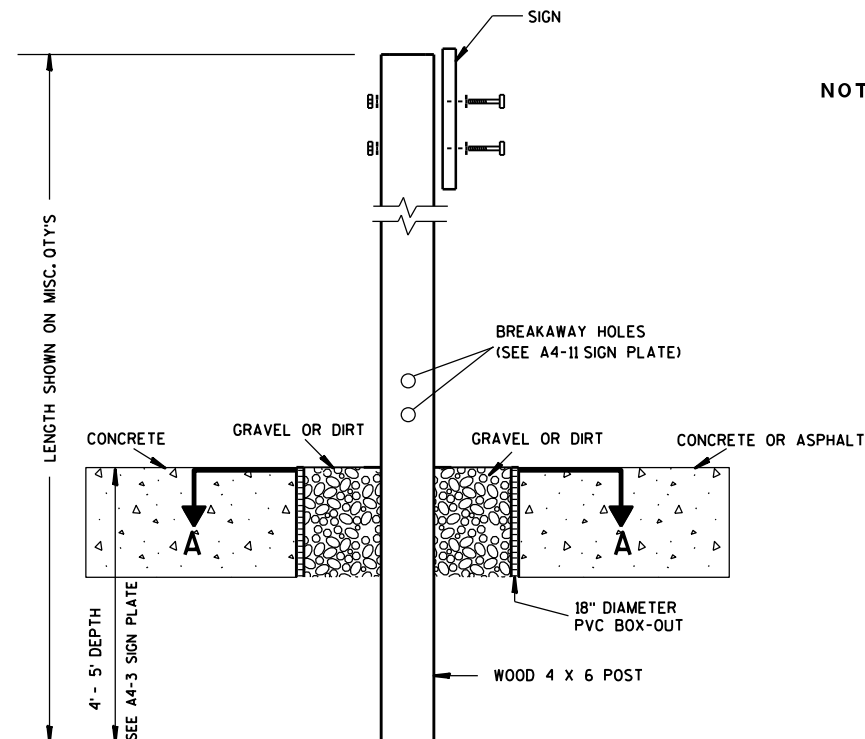
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

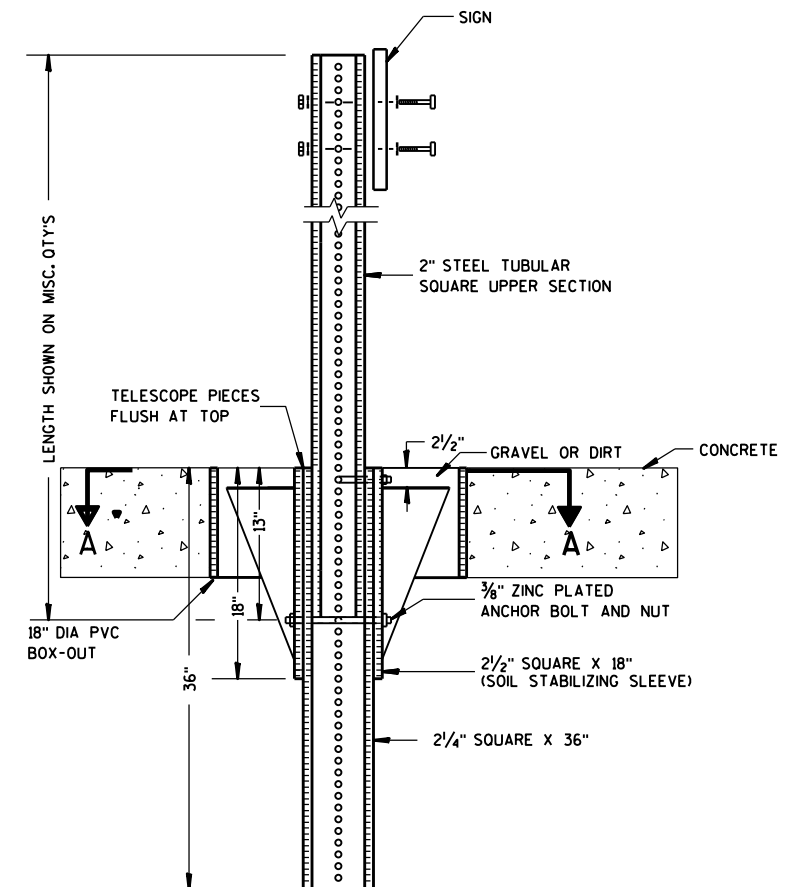
DATE 12/6/23 PLATE NO. A4-3.23



ELEVATION VIEW

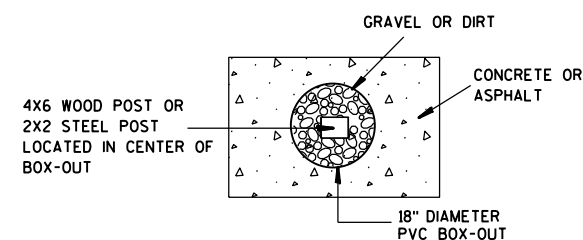
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- NOTES:**
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
 2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
 3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

**SIGN POST
BOX-OUTS
A4-3B**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/27/14 PLAT 52 A4-3B.1

PROJECT NO:

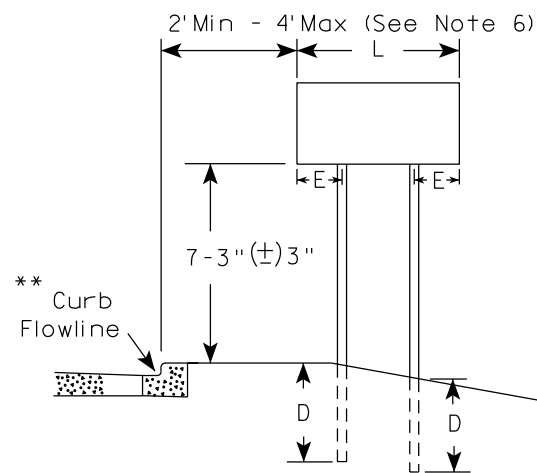
HWY:

COUNTY:

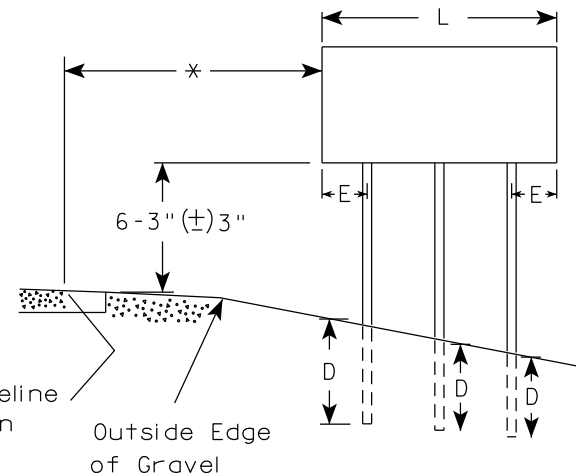
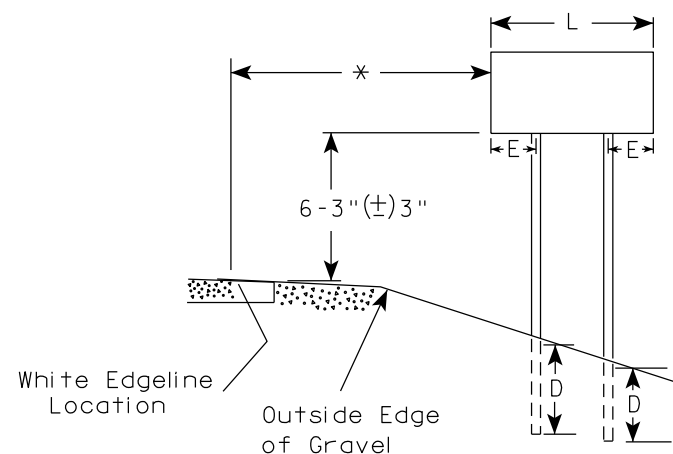
SHEET NO:

E

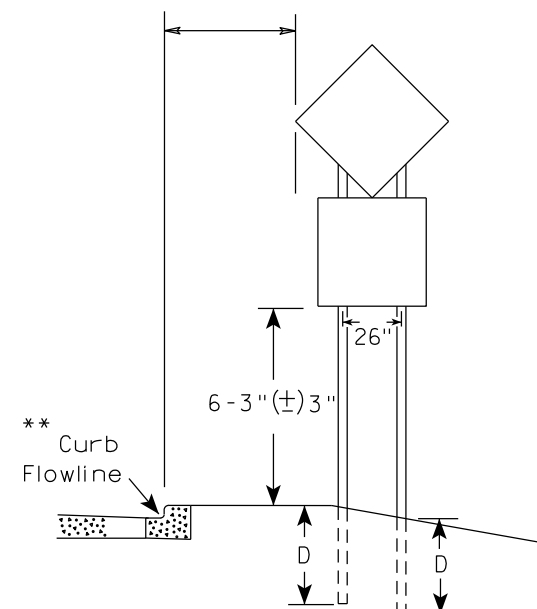
URBAN AREA



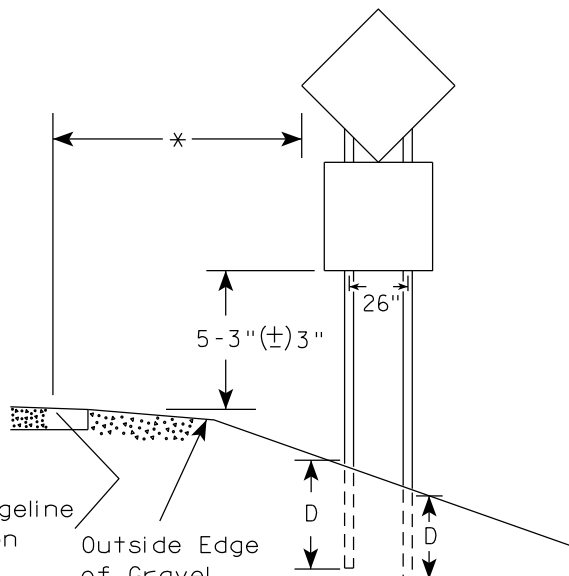
RURAL AREA (See Note 3)



2' Min - 4' Max (See Note 6)



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq.Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 12/6/23 PLATE NO. A4-4.16

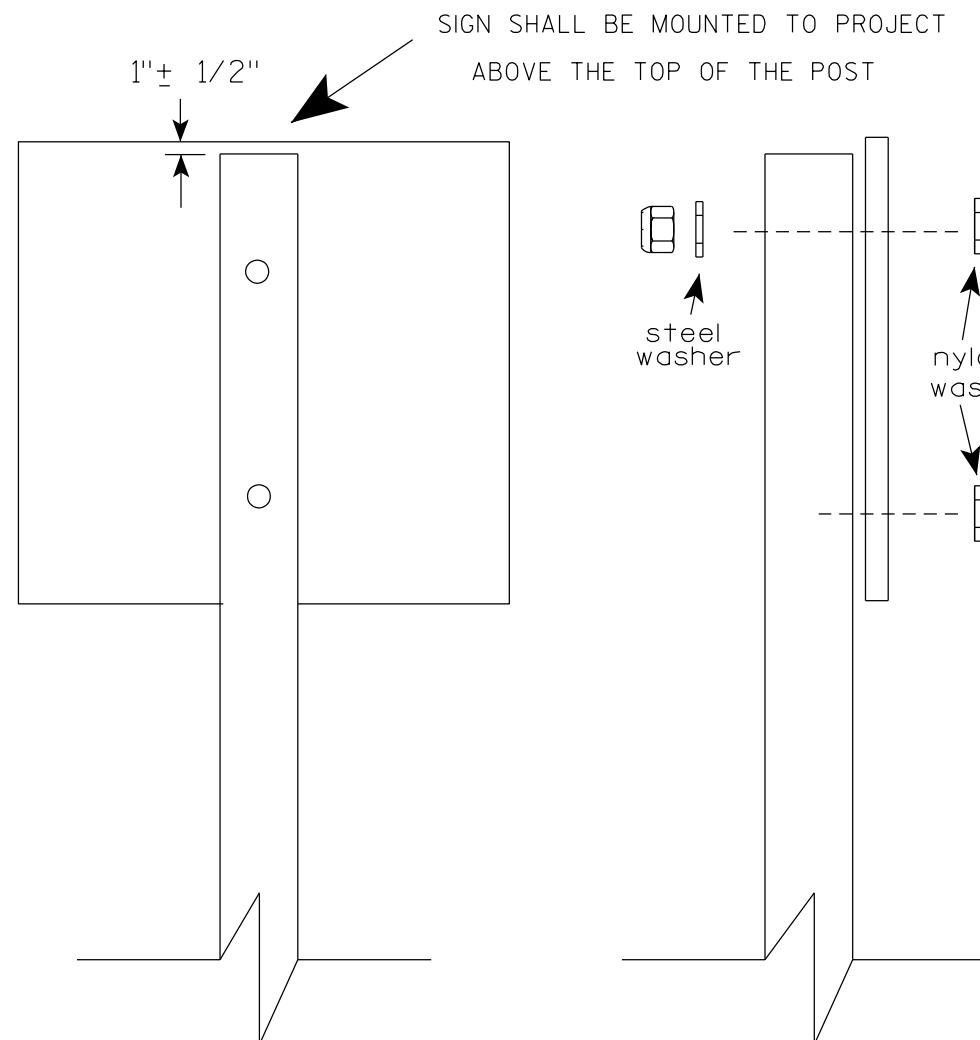
GENERAL NOTES

- For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
- See tables below for required number of posts.
- For expressways and freeways, mounting height is 7'-3" (±) 3" or 6'-3" (±) 3" depending upon existence of sub-sign.
- The (±) tolerance for mounting height is 3 inches.
- J-Assemblies are considered to be one sign for mounting height.
- Offset distance shall be consistent with existing signs or consistent throughout length of project.
- Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directed by the engineer.
- The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±) 3". The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±) 3".

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

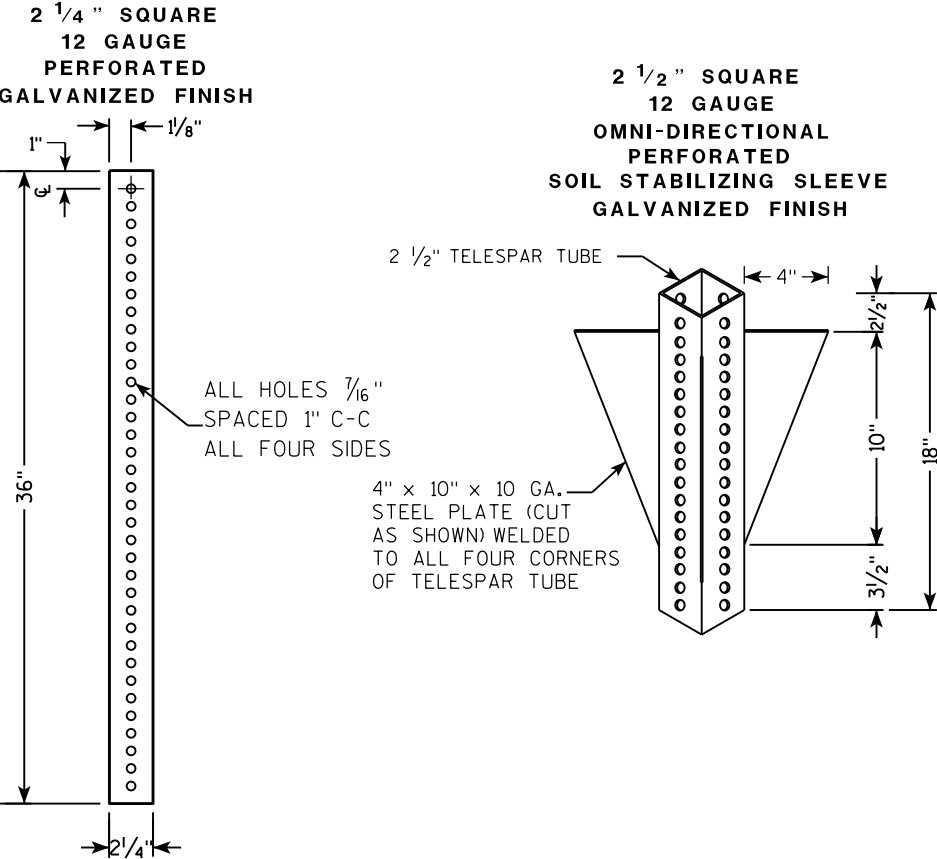
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS - $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
 $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - $\frac{9}{32}$ " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
 - 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON

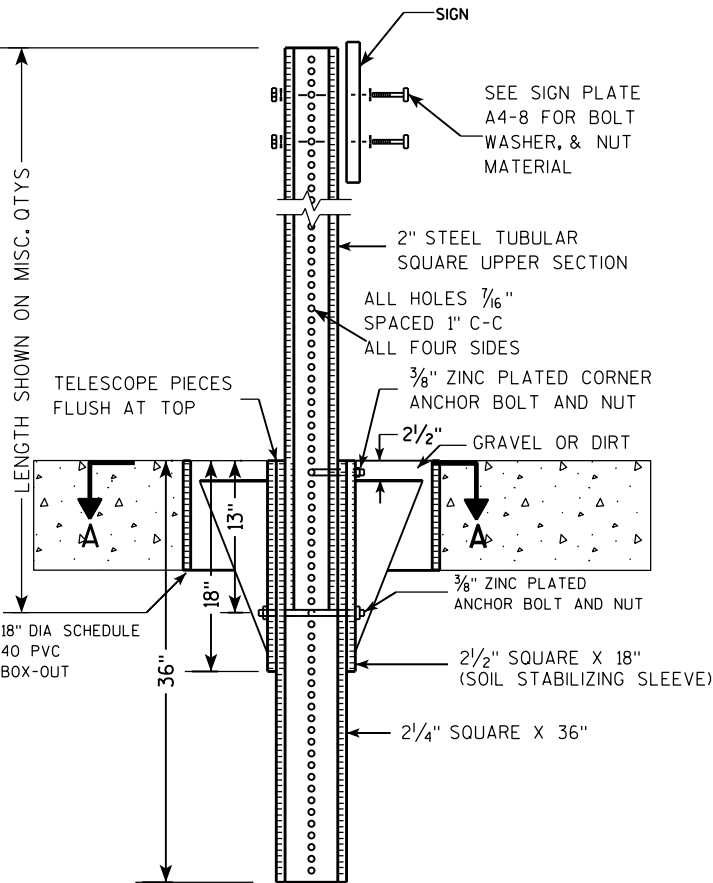
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

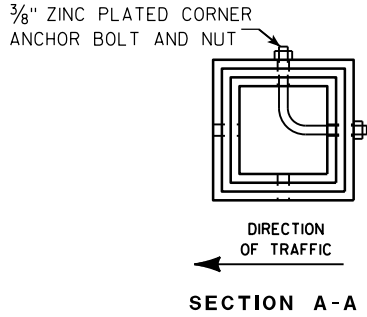
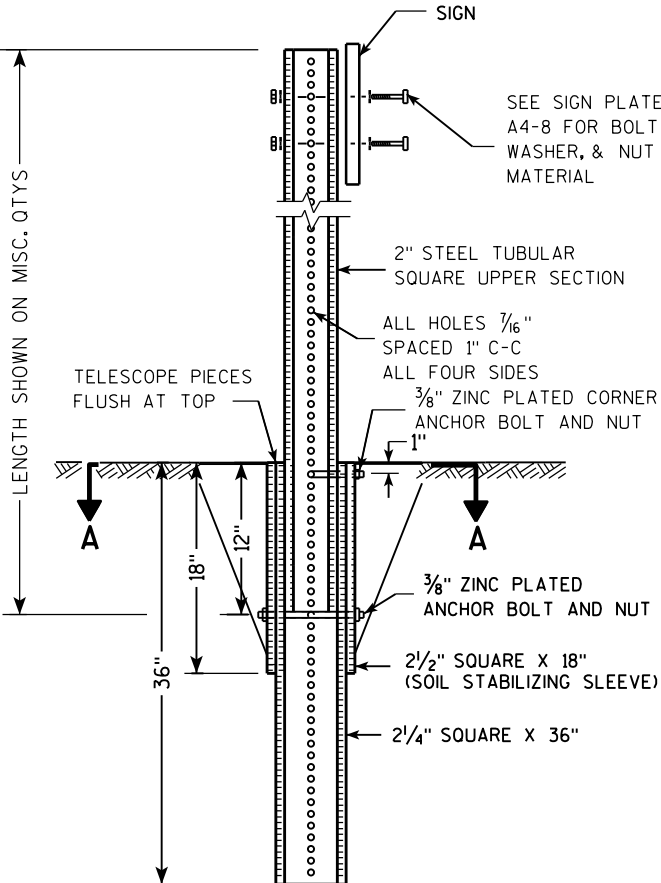
TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM



DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)



Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

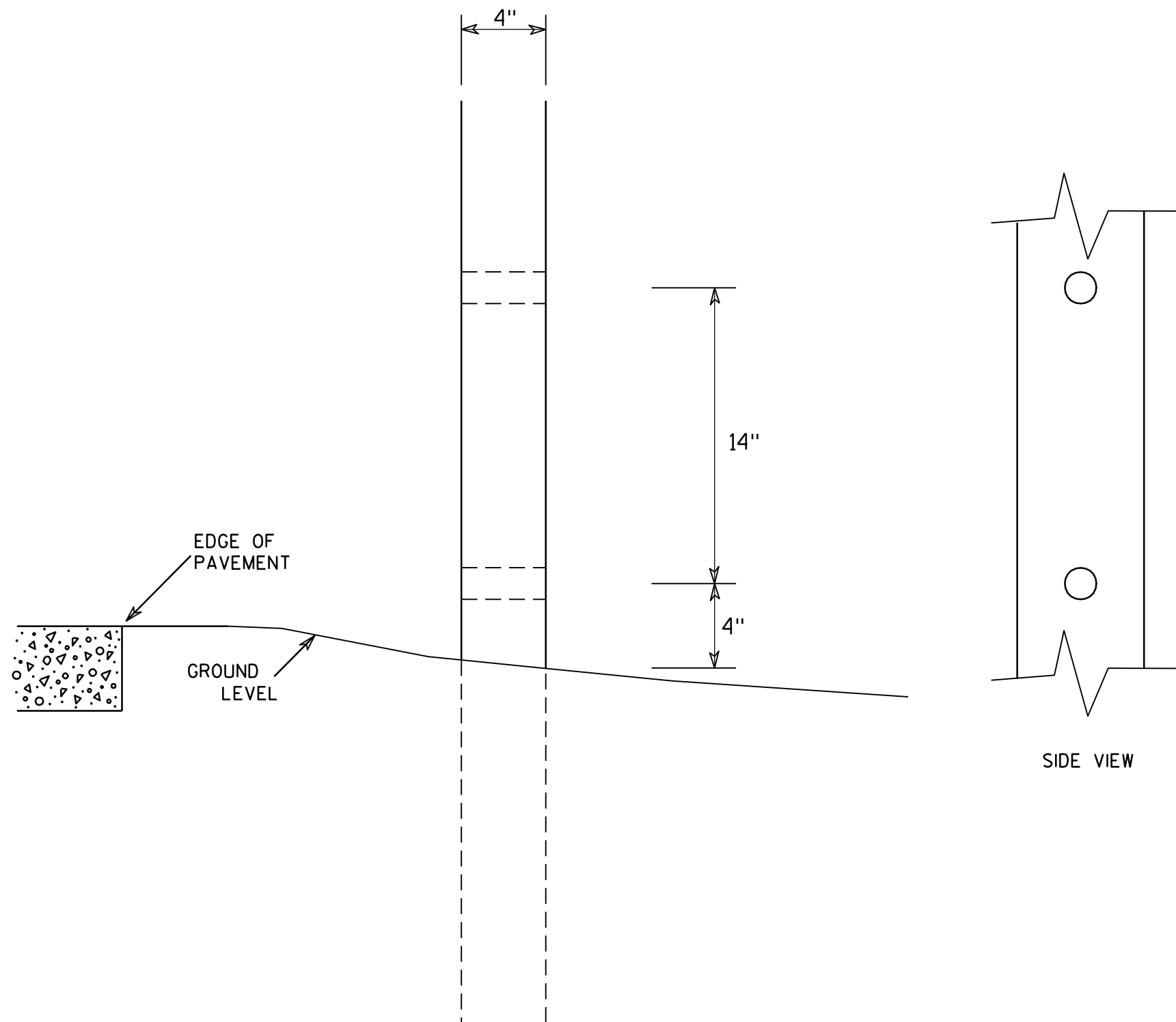
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/05/15 PLAT 55 14-9.9

7



GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

HWY:

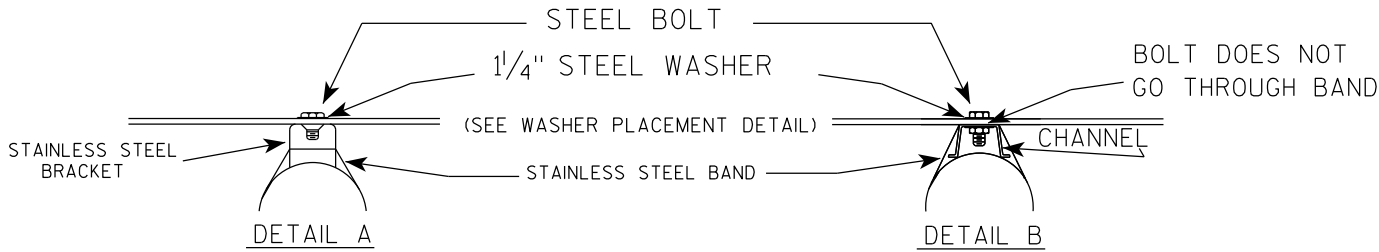
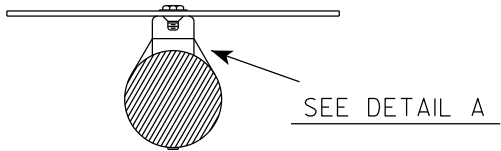
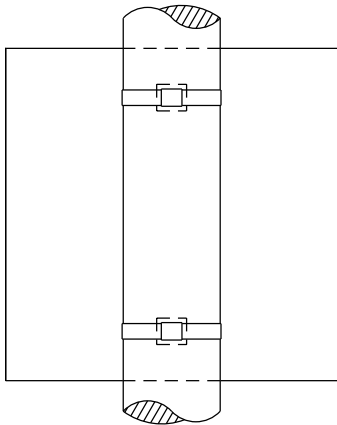
COUNTY:

SHEET NO: 56

E

BANDING

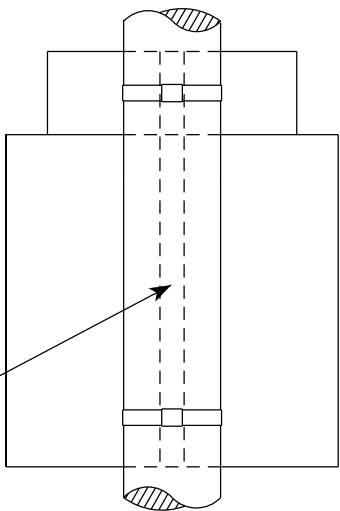
SINGLE SIGN



GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be $\frac{3}{4}$ " in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

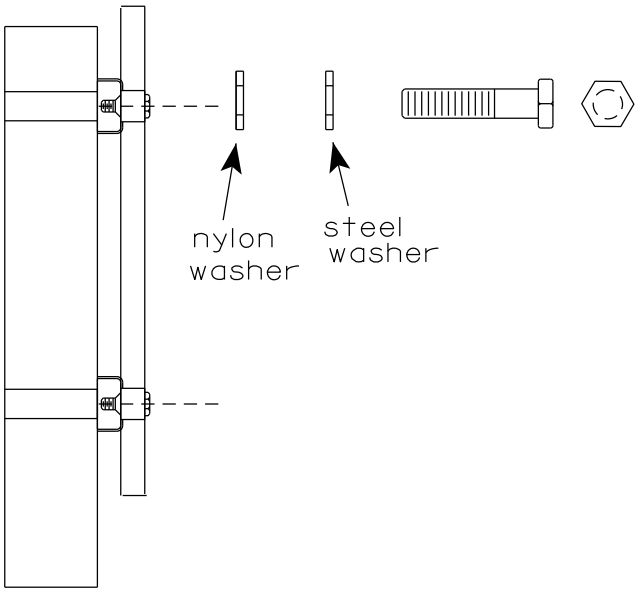
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET

SEE DETAIL B

WASHER PLACEMENT

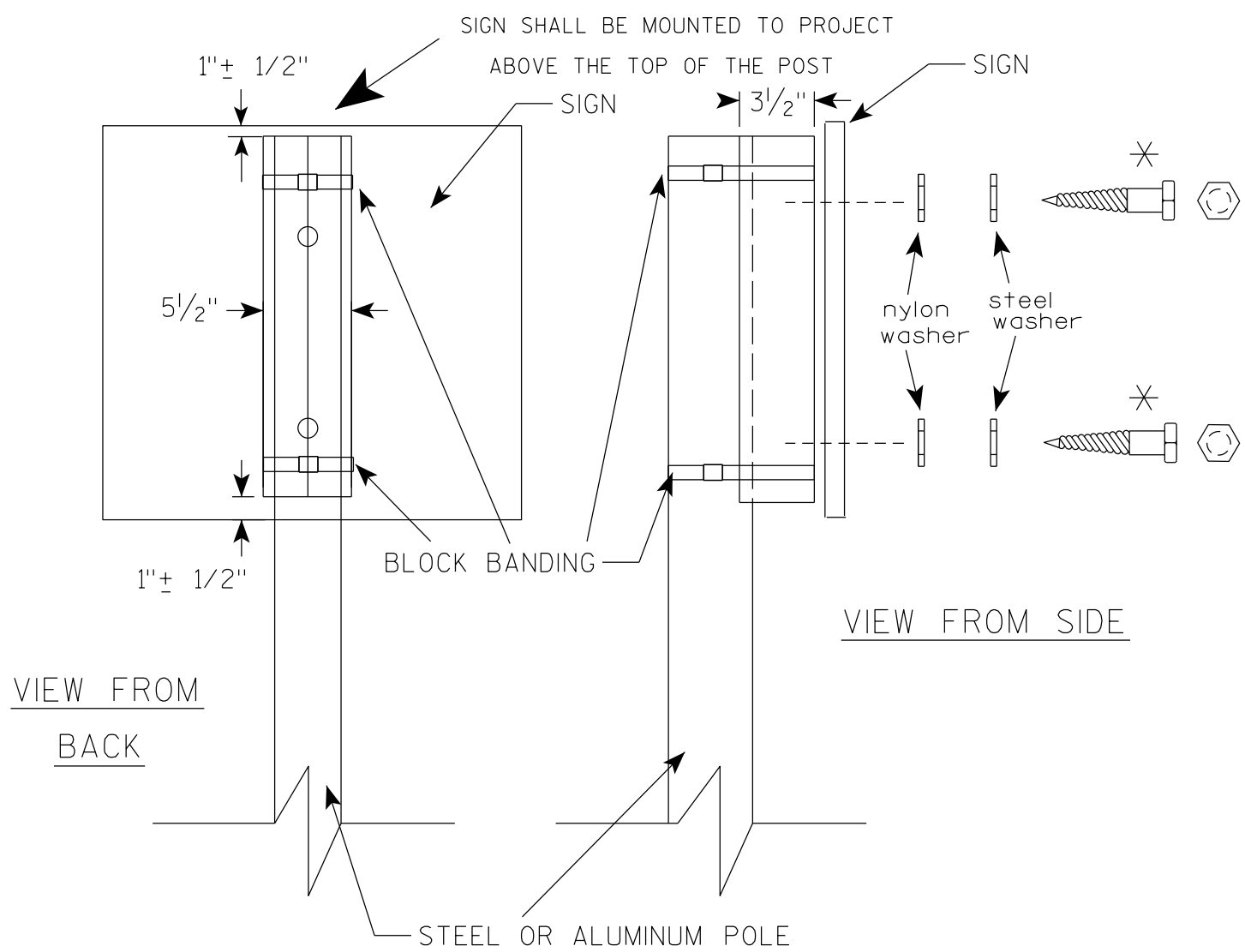


WASHERS (ALL POSTS) -
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

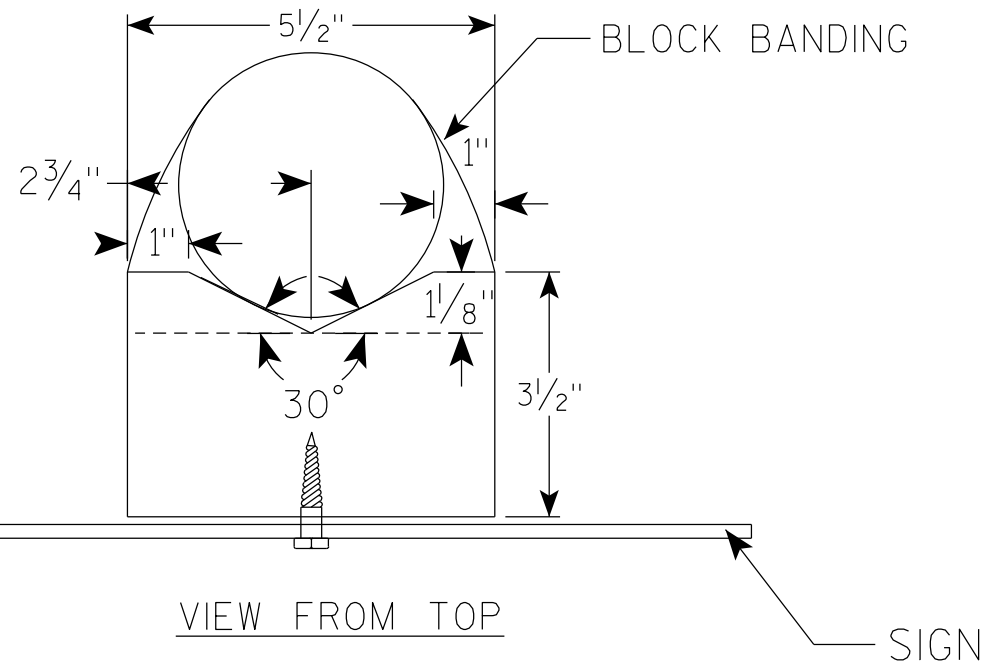
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/10/19 PLATE NO. A5-9.4



VIEW FROM
BACK

VIEW FROM SIDE



VIEW FROM TOP

GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WISDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, $\frac{3}{4}$ " WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE $\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ "
8. NYLON WASHERS SHALL BE $\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE $\frac{3}{8}$ " X $2\frac{1}{2}$ "

BLOCK BANDING DETAIL
(V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

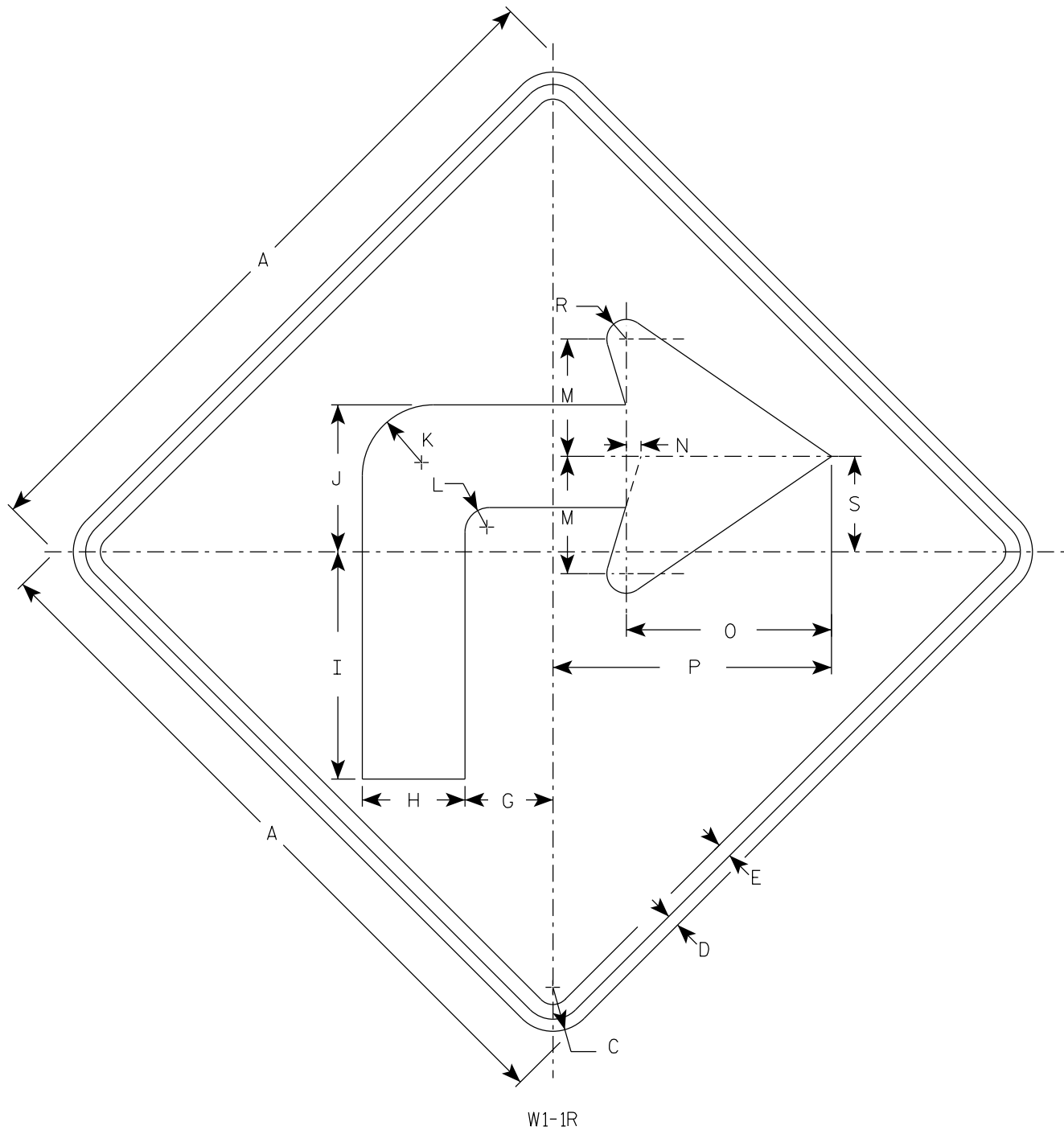
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 58

E



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Yellow
Message - Black
3. W1-1L is the same as W1-1R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/2	3/8	1/2		3	3 1/2	7 3/4	5	2 1/2	7/8	4	1/2	7	9 1/2		5/8	3 1/4								4.0
2S	36		2 1/4	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
2M	36		2 1/4	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
3	36		2 1/4	5/8	3/4		4 1/2	5 1/4	11 5/8	7 1/2	3 5/8	1 1/4	6	3/4	10 1/2	14 1/4		1	4 7/8								9.0
4	48		3	3/4	1		6	7	15 1/2	10	4 7/8	1 5/8	8	1	14	19		1 1/4	6 1/2								16.0
5	48		3	3/4	1		6	7	15 1/2	10	4 7/8	1 5/8	8	1	14	19		1 1/4	6 1/2								16.0

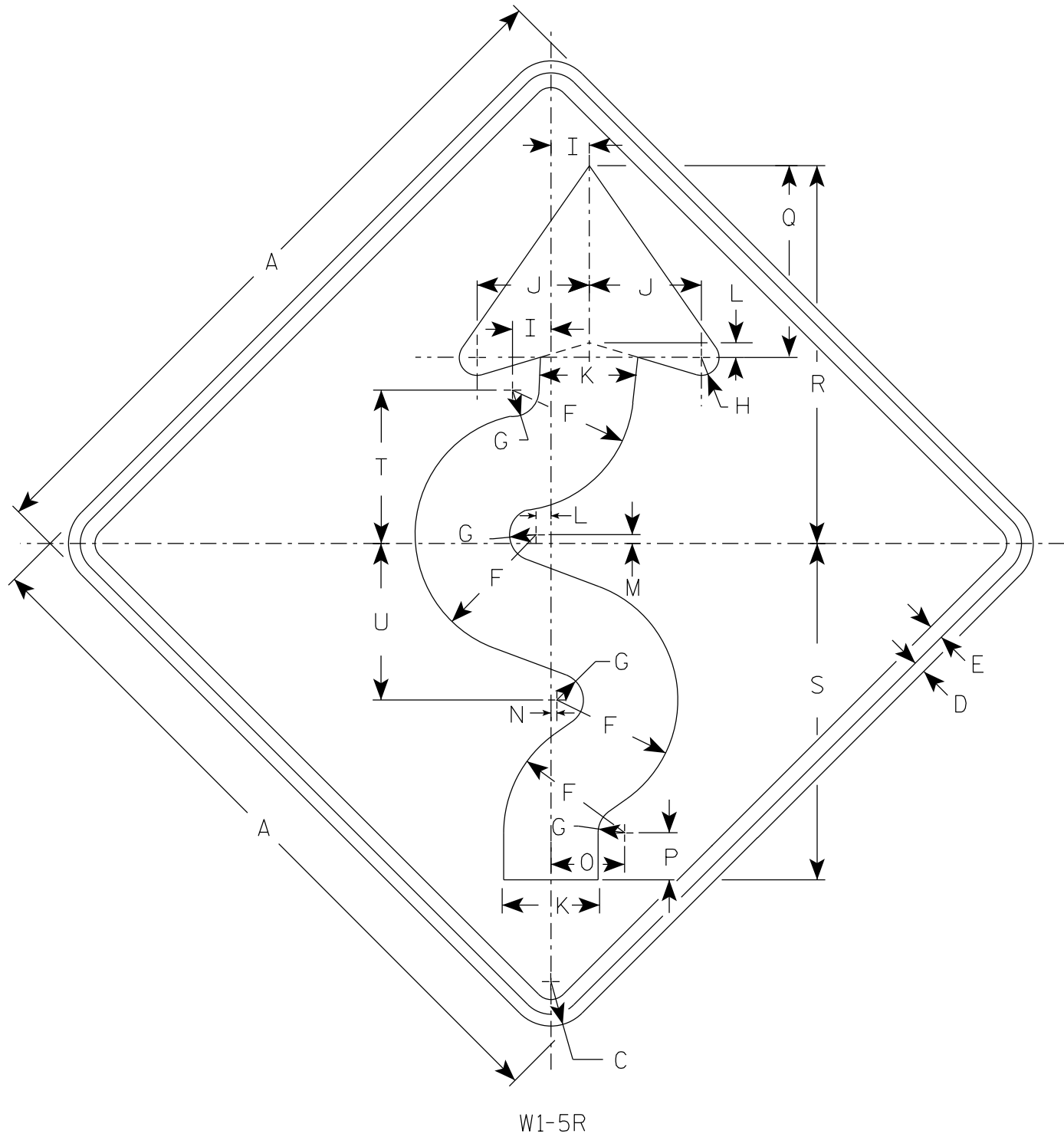
STANDARD SIGN
W1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/22/2023 PLATE NO. W1-1.12

PROJECT NO:	HWY:	COUNTY:	SHEET NO: 59	E
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NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Yellow
Message - Black
- 3. W1-5L is the same as W1-5R except the arrow is reversed along the vertical centerline.
- 4. If used with W13-1 of 30 MPH or less, use 36" sign for Size 2S.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/2	3/8	1/2	4 1/8	7/8	5/8	1 1/4	3 3/4	3 1/4	1/2	1/4	1/8	2 1/2	1 5/8	6 1/2	12 3/4	11 3/8	5 1/4	5 1/4						4.0
2S	30		1 7/8	1/2	5/8	5 1/8	1 1/8	3/4	1 5/8	4 3/4	4 1/8	5/8	3/8	1/4	3 1/8	2	8 1/8	16	14 1/4	6 1/2	6 5/8						6.25
2M	36		2 1/4	5/8	3/4	6 1/4	1 3/8	1	1 7/8	5 5/8	4 7/8	3/4	3/8	1/4	3 3/4	2 7/8	9 3/4	19 1/8	17 1/8	7 3/4	7 7/8						9.0
3	36		2 1/4	5/8	3/4	6 1/4	1 3/8	1	1 7/8	5 5/8	4 7/8	3/4	3/8	1/4	3 3/4	2 7/8	9 3/4	19 1/8	17 1/8	7 3/4	7 7/8						9.0
4	36		2 1/4	5/8	3/4	6 1/4	1 3/8	1	1 7/8	5 5/8	4 7/8	3/4	3/8	1/4	3 3/4	2 7/8	9 3/4	19 1/8	17 1/8	7 3/4	7 7/8						9.0
5	48		3	3/4	1	8 1/4	1 3/4	1 1/4	2 1/2	7 1/2	6 1/2	1	1/2	3/8	5	3 1/4	13	25 1/2	22 3/4	10 3/8	10 1/2						16.0

STANDARD SIGN

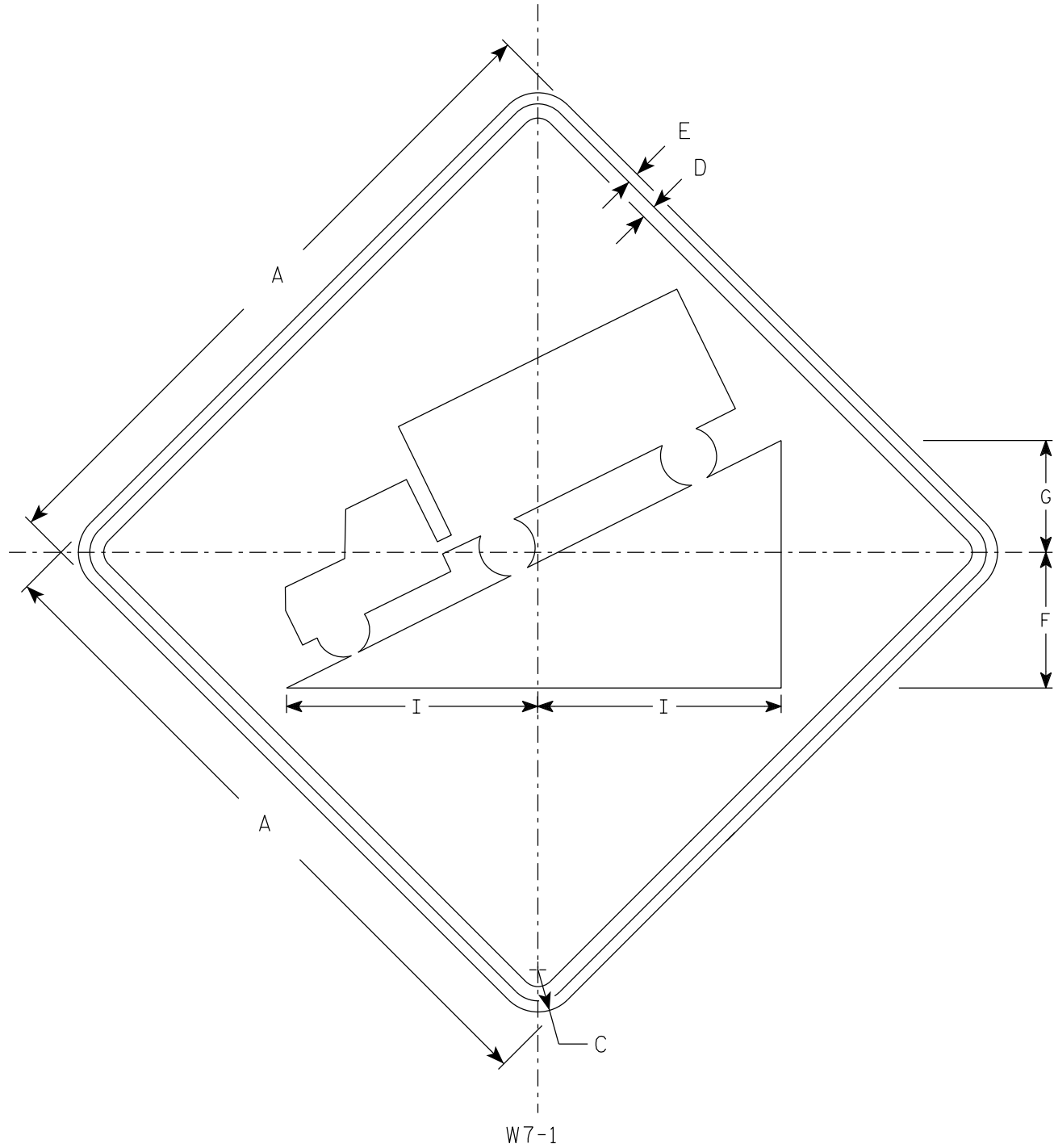
W1-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/11/2023 PLATE NO. W1-5.10

7



NOTES

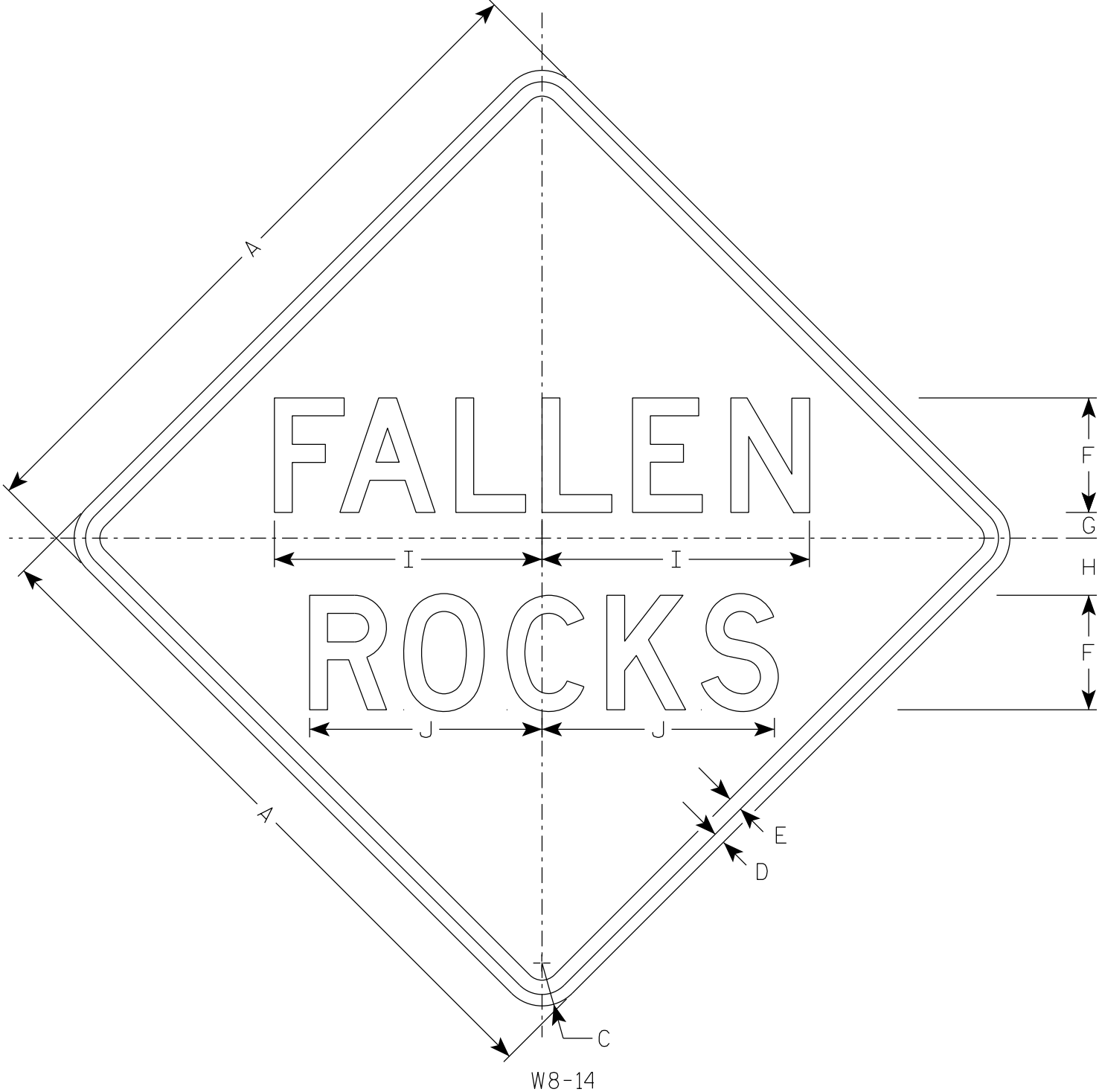
- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Yellow
Message - Black
- 3. Message Series - D

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/2	3/8	3/8	5	4		8 3/4																		4.0
2S	30		1 7/8	1/2	5/8	6	5		11																		6.25
2M	36		2 1/4	5/8	3/4	7 1/4	6		13 1/4																		9.0
3	36		2 1/4	5/8	3/4	7 1/4	6		13 1/4																		9.0
4	36		2 1/4	5/8	3/4	7 1/4	6		13 1/4																		9.0
5	48		3	3/4	1	9 3/4	8		17 1/2																		16.0

STANDARD SIGN
W7-1

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 9/6/2023 PLATE NO. W7-1.14



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Yellow
Message - Black
- 3. Message Series - D

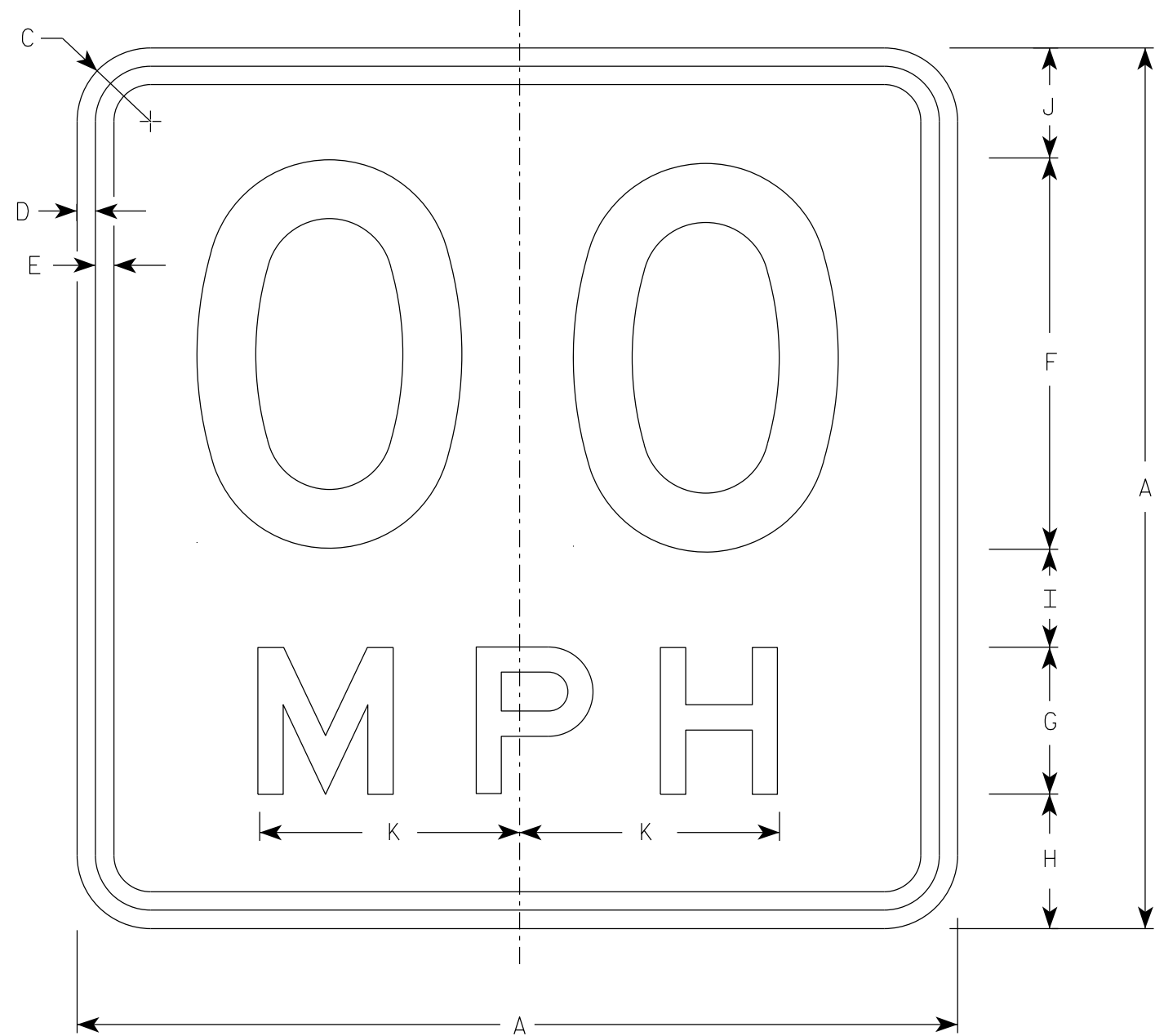
7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7⁄8	1⁄2	5⁄8	5	1 1⁄8	2 1⁄2	11 3⁄4	10 1⁄8																	6.25
2M	36		2 1⁄4	5⁄8	3⁄4	6	1 3⁄8	3	14	12 1⁄8																	9.0
3	36		2 1⁄4	5⁄8	3⁄4	6	1 3⁄8	3	14	12 1⁄8																	9.0
4	36		2 1⁄4	5⁄8	3⁄4	6	1 3⁄8	3	14	12 1⁄8																	9.0
5	48		3	3⁄4	1	8	1 3⁄4	4	18 3⁄4	16 1⁄4																	16.0

STANDARD SIGN
W8-14

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 10/26/2023 PLATE NO. W8-14.3



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Yellow
Message - Black
3. Message Series - See Note 5
4. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
5. Line 1 is Series D
Line 2 is Series E

W13-1

* For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.
For 36" x 36" Warning Signs, use 24" x 24" W13-1 signs.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
✱ 2S	1	18		1 1/2	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8															2.25
	2	18		1 1/2	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8															2.25
✱ 2M	3	18		1 1/2	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8															2.25
	4	24		1 1/2	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8															4.00
	5	36		2 1/4	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8															9.00
	6	36		2 1/4	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8															9.00

STANDARD SIGN W13-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch
For State Traffic Engineer

DATE 1/8/2024 PLATE NO. W13-1.17

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

63

E

DIVISION 1 - CTH PP

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)			
			CUT	FILL	ROCK EXC	CUT	FILL	ROCK EXC	CUT	EXPANDED FILL	EXPANDED ROCK	MASS ORDNATE
									1.00	1.25	1.10	
						NOTE 1	NOTE 3		NOTE 1			NOTE 8
10+00.00	1000.00	0.00	1.18	8.03	0.00	0	0	0	0	0	0	0
10+39.00	1039.00	39.00	4.45	22.40	0.00	4	22	0	4	28	0	-24
10+50.00	1050.00	11.00	1.10	10.52	0.00	1	7	0	5	36	0	-31
11+00.00	1100.00	50.00	0.01	19.14	0.00	1	27	0	6	70	0	-64
11+50.00	1150.00	50.00	0.00	23.36	0.00	0	39	0	6	119	0	-113
12+00.00	1200.00	50.00	0.00	25.89	0.00	0	46	0	6	176	0	-170
12+50.00	1250.00	50.00	0.00	21.93	0.00	0	44	0	6	231	0	-225
13+00.00	1300.00	50.00	0.01	16.82	0.00	0	36	0	6	276	0	-270
13+50.00	1350.00	50.00	0.25	12.93	0.00	0	28	0	6	311	0	-305
14+00.00	1400.00	50.00	0.65	13.52	0.00	1	24	0	7	341	0	-334
14+50.00	1450.00	50.00	0.59	10.11	0.00	1	22	0	8	369	0	-361
15+00.00	1500.00	50.00	0.79	6.95	0.00	1	16	0	9	389	0	-380
15+50.00	1550.00	50.00	1.00	5.10	0.00	2	11	0	11	403	0	-392
16+00.00	1600.00	50.00	1.13	3.46	0.00	2	8	0	13	413	0	-400
16+50.00	1650.00	50.00	4.86	0.61	0.00	6	4	0	19	418	0	-399
17+00.00	1700.00	50.00	3.19	1.84	0.00	7	2	0	26	420	0	-394
17+00.10	1700.10	0.10	2.03	0.89	0.00	0	0	0	26	420	0	-394
17+50.00	1750.00	49.90	0.86	11.02	0.00	3	11	0	29	434	0	-405
18+00.00	1800.00	50.00	0.40	22.04	0.00	1	31	0	30	473	0	-443
18+50.00	1850.00	50.00	0.66	25.76	0.00	1	44	0	31	528	0	-497
18+87.00	1887.00	37.00	1.48	5.51	0.00	1	21	0	32	554	0	-522
19+00.00	1900.00	13.00	1.11	6.49	0.00	1	3	0	33	558	0	-525
19+82.00	1982.00	82.00	0.02	0.94	0.00	2	11	0	35	571	0	-536
20+00.00	2000.00	18.00	0.00	1.51	0.00	0	1	0	35	573	0	-538
20+07.00	2007.00	7.00	0.00	1.01	0.00	0	0	0	35	573	0	-538
20+32.00	2032.00	25.00	0.00	3.79	0.00	0	2	0	35	575	0	-540
20+50.00	2050.00	18.00	0.12	0.22	0.00	0	1	0	35	576	0	-541
20+57.00	2057.00	7.00	0.38	0.18	0.00	0	0	0	35	576	0	-541
28+23.00	2823.00	0.00	24.53	0.00	0.00	0	0	0	35	576	0	-541
28+25.00	2825.00	2.00	25.50	0.00	0.00	2	0	0	37	576	0	-539
28+51.21	2851.21	26.21	92.51	0.00	0.00	57	0	0	94	576	0	-482
28+75.00	2875.00	23.79	184.24	0.00	0.00	122	0	0	216	576	0	-360
28+76.10	2876.10	1.10	190.96	0.03	0.00	8	0	0	224	576	0	-352
29+00.00	2900.00	23.90	410.41	0.00	0.00	266	0	0	490	576	0	-86
29+01.21	2901.21	1.21	419.87	0.00	0.00	19	0	0	509	576	0	-67
29+25.00	2925.00	23.79	614.00	0.00	0.00	455	0	0	964	576	0	388
29+26.21	2926.21	1.21	629.31	0.00	0.00	28	0	0	992	576	0	416
29+50.00	2950.00	23.79	1095.57	0.00	0.00	760	0	0	1,752	576	0	1,176
29+75.00	2975.00	25.00	1247.93	0.00	0.00	1,085	0	0	2,837	576	0	2,261
30+00.00	3000.00	25.00	183.17	9.10	0.00	663	4	0	3,500	581	0	2,919
30+21.21	3021.21	21.21	0.00	439.64	0.00	72	176	0	3,572	801	0	2,771
30+25.00	3025.00	3.79	0.00	543.16	0.00	0	69	0	3,572	888	0	2,685
30+50.00	3050.00	25.00	0.00	649.56	0.00	0	552	0	3,572	1,578	0	1,995
30+75.00	3075.00	25.00	0.00	445.67	0.00	0	507	0	3,572	2,211	0	1,361
30+83.86	3083.86	8.86	507.58	363.47	0.00	83	133	0	3,655	2,378	0	1,278

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDNATE	CUT - ((FILL - EXPANDED ROCK) * FILL FACTOR)]

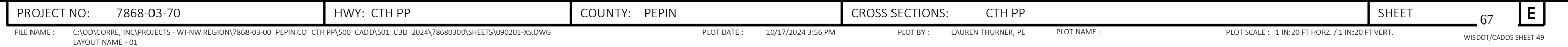
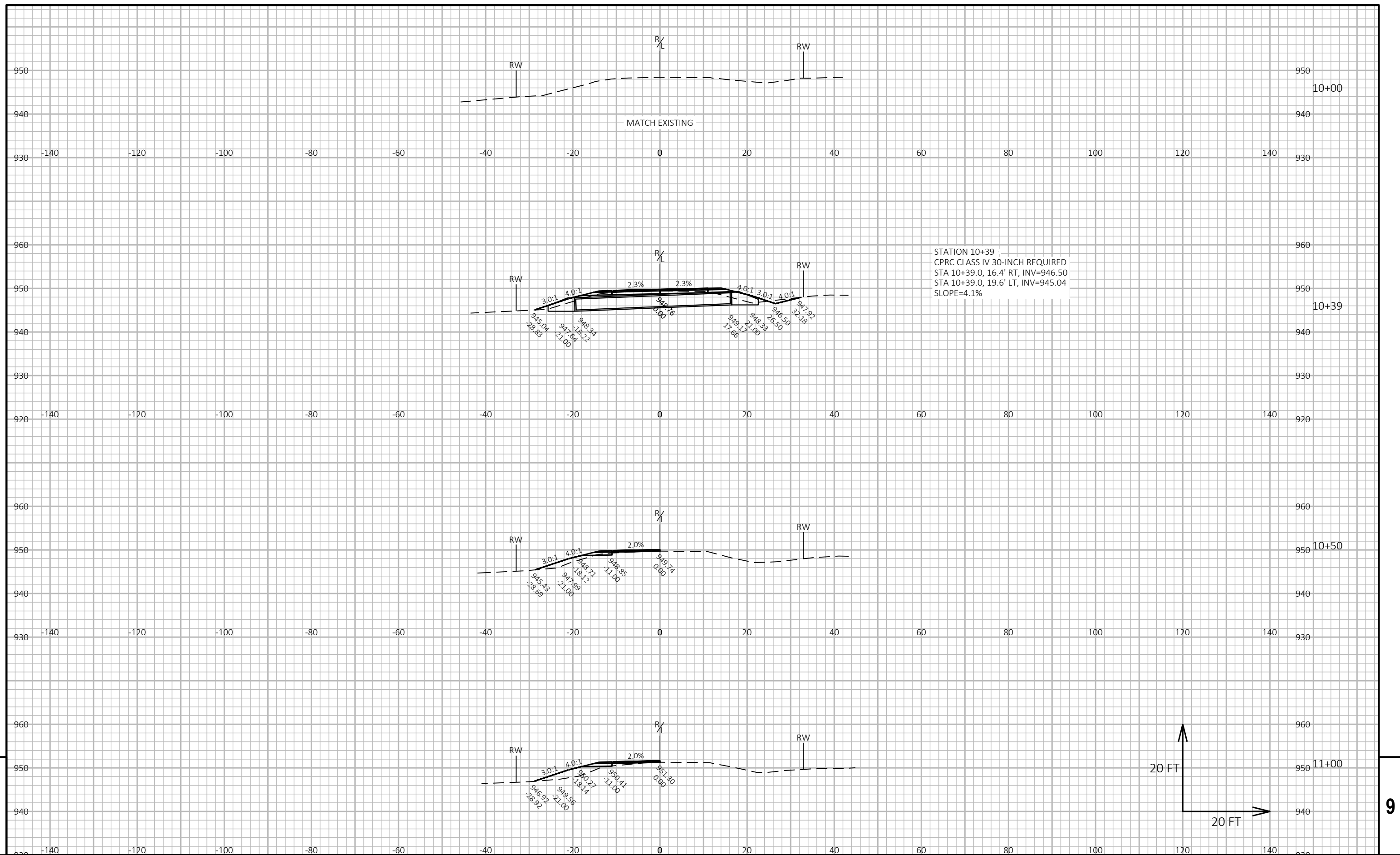
31+00.00	3100.00	16.14	260.67	152.35	0.00	230	154	0	3,885	2,570	0	1,315
31+25.00	3125.00	25.00	1109.88	0.00	0.00	635	71	0	4,520	2,659	0	1,861
31+50.00	3150.00	25.00	2139.88	0.00	0.00	1,505	0	0	6,025	2,659	0	3,366
31+75.00	3175.00	25.00	2393.29	0.00	0.00	2,099	0	0	8,124	2,659	0	5,465
32+00.00	3200.00	25.00	2336.46	0.00	8.82	2,190	0	4	10,314	2,653	4	7,661
32+25.00	3225.00	25.00	1949.17	0.00	124.84	1,984	0	62	12,298	2,568	73	9,730
32+50.00	3250.00	25.00	1131.29	0.00	313.41	1,426	0	203	13,724	2,289	296	11,435
32+75.00	3275.00	25.00	195.67	0.00	462.55	614	0	359	14,338	1,795	691	12,543
33+00.00	3300.00	25.00	117.00	0.00	248.76	145	0	329	14,483	1,343	1,053	13,140
33+25.00	3325.00	25.00	255.57	0.00	190.45	172	0	203	14,655	1,064	1,276	13,591
33+50.00	3350.00	25.00	378.10	0.00	137.44	293	0	152	14,948	855	1,443	14,093
33+55.96	3355.96	5.96	394.19	0.00	125.53	85	0	29	15,033	815	1,475	14,218
33+75.00	3375.00	19.04	1030.35	0.00	166.34	502	0	103	15,535	673	1,588	14,862
34+00.00	3400.00	25.00	1696.85	0.00	95.65	1,263	0	121	16,798	507	1,722	16,291
34+25.00	3425.00	25.00	1477.84	0.00	42.09	1,470	0	64	18,268	419	1,792	17,849
34+50.00	3450.00	25.00	1156.83	17.50	15.94	1,220	8	27	19,488	392	1,822	19,096
34+54.96	3454.96	4.96	1010.80	20.08	12.54	199	3	3	19,687	391	1,825	19,296
34+75.00	3475.00	20.04	546.78	27.46	4.22	578	18	6	20,265	406	1,832	19,859
34+75.96	3475.96	0.96	507.09	27.72	4.01	19	1	0	20,284	407	1,832	19,877
35+00.00	3500.00	24.04	104.16	31.62	0.83	272	26	2	20,556	437	1,834	20,119
35+00.96	3500.96	0.96	97.58	31.79	0.76	4	1	0	20,560	438	1,834	20,122
35+25.00	3525.00	24.04	1.95	33.70	0.00	44	29	0	20,604	474	1,834	20,130
35+25.96	3525.96	0.96	0.00	33.57	0.00	0	1	0	20,604	475	1,834	20,129
35+50.00	3550.00	24.04	0.12	24.28	0.00	0	26	0	20,604	508	1,834	20,096
35+75.00	3575.00	25.00	0.41	12.02	0.00	0	17	0	20,604	529	1,834	20,075
36+00.00	3600.00	25.00	5.65	9.50	0.00	3	10	0	20,607	542	1,834	20,065
36+25.00	3625.00	25.00	12.44	5.73	0.00	8	7	0	20,615	550	1,834	20,065
36+50.00	3650.00	25.00	18.48	2.25	0.00	14	4	0	20,629	555	1,834	20,074
43+12.27	4312.27	0.00	0.43	0.17	0.00	0	0	0	20,629	555	1,834	20,074
43+25.00	4325.00	12.73	0.14	7.45	0.00	0	2	0	20,629	558	1,834	20,071
43+37.27	4337.27	12.27	0.01	10.54	0.00	0	4	0	20,629	563	1,834	20,066
43+50.00	4350.00	12.73	0.00	11.69	0.00	0	5	0	20,629	569	1,834	20,060
43+62.27	4362.27	12.27	0.00	13.62	0.00	0	6	0	20,629	577	1,834	20,052
43+75.00	4375.00	12.73	0.00	15.85	0.00	0	7	0	20,629	585	1,834	20,044
43+87.27	4387.27	12.27	0.21	22.70	0.00	0	9	0	20,629	597	1,834	20,032
44+00.00	4400.00	12.73	0.31	27.72	0.00	0	12	0	20,629	612	1,834	20,017
44+25.00	4425.00	25.00	0.20	2.63	0.00	0	14	0	20,629	629	1,834	20,000
44+50.00	4450.00	25.00	0.00	4.16	0.00	0	3	0	20,629	633	1,834	19,996
44+75.00	4475.00	25.00	0.00	3.08	0.00	0	3	0	20,629	637	1,834	19,992
45+00.00	4500.00	25.00	0.00	2.16	0.00	0	2	0	20,629	639	1,834	19,990
45+24.96	4524.96	24.96	0.06	0.80	0.00	0	1	0	20,629	640	1,834	19,989
51+00.00	5100.00	0.00	1.68	0.37	0.00	0	0	0	20,629	640	1,834	19,989
51+50.00	5150.00	50.00	0.91	4.21	0.00	2	4	0	20,631	645	1,834	19,986
52+00.00	5200.00	50.00	0.57	9.12	0.00	1	12	0	20,632	660	1,834	19,972
52+50.00	5250.00	50.00	0.46	10.75	0.00	1	18	0	20,633	683	1,834	19,950
53+00.00	5300.00	50.00	0.19	12.16	0.00	1	21	0	20,634	709	1,834	19,925
53+50.00	5350.00	50.00	0.12	10.91	0.00	0	21	0	20,634	735	1,834	19,899
54+00.00	5400.00	50.00	1.03	3.57	0.00	1	13	0	20,635	752	1,834	19,883
54+50.00	5450.00	50.00	2.91	0.52	0.00	4	4	0	20,639	757	1,834	19,882
55+00.00	5500.00	50.00	2.53	1.13	0.00	5	2	0	20,644	759	1,834	19,885
55+50.00	5550.00	50.00	2.09	1.17	0.00	4	2	0	20,648	762	1,834	19,886
56+00.00	5600.00	50.00	2.19	0.41	0.00	4	1	0	20,652	763	1,834	19,889
56+50.00	5650.00	50.00	2.11	0.16	0.00	4	1	0	20,656	764	1,834	19,892
57+00.00	5700.00	50.00	2.10	0.29	0.00	4	0	0	20,660	764	1,834	19,896

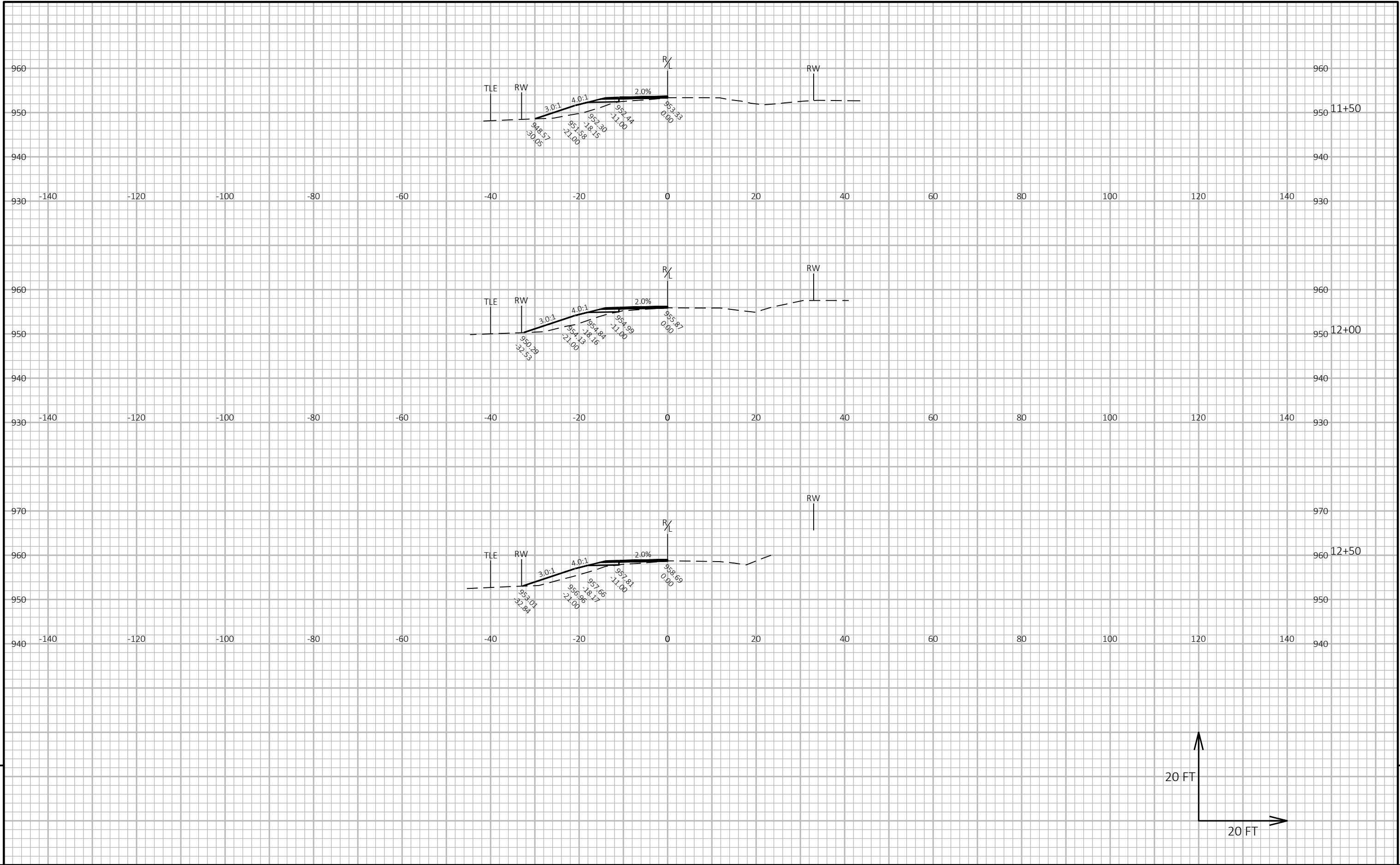
NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	CUT - ((FILL - EXPANDED ROCK) * FILL FACTOR)]

DIVISION 1 - QUARRY DR

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)			
			CUT	FILL	ROCK EXC	CUT	FILL	ROCK EXC	CUT	EXPANDED FILL	EXPANDED ROCK	MASS ORDINATE
									1.00	1.25	1.10	
						NOTE 1	NOTE 3		NOTE 1			NOTE 8
0+35.00	35.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0
0+50.94	50.94	15.94	109.69	0.00	0.00	32	0	0	32	0	0	32
0+75.00	75.00	24.06	771.81	0.00	0.00	393	0	0	425	0	0	425
1+00.00	100.00	25.00	1335.66	0.00	5.75	976	0	3	1,401	-4	3	1,405
1+25.00	125.00	25.00	1266.13	0.00	92.16	1,205	0	45	2,606	-66	53	2,672
1+50.00	150.00	25.00	879.49	0.00	270.88	993	0	168	3,599	-297	238	3,896
1+83.40	183.40	33.40	412.30	0.00	252.66	799	0	324	4,398	-743	594	5,141

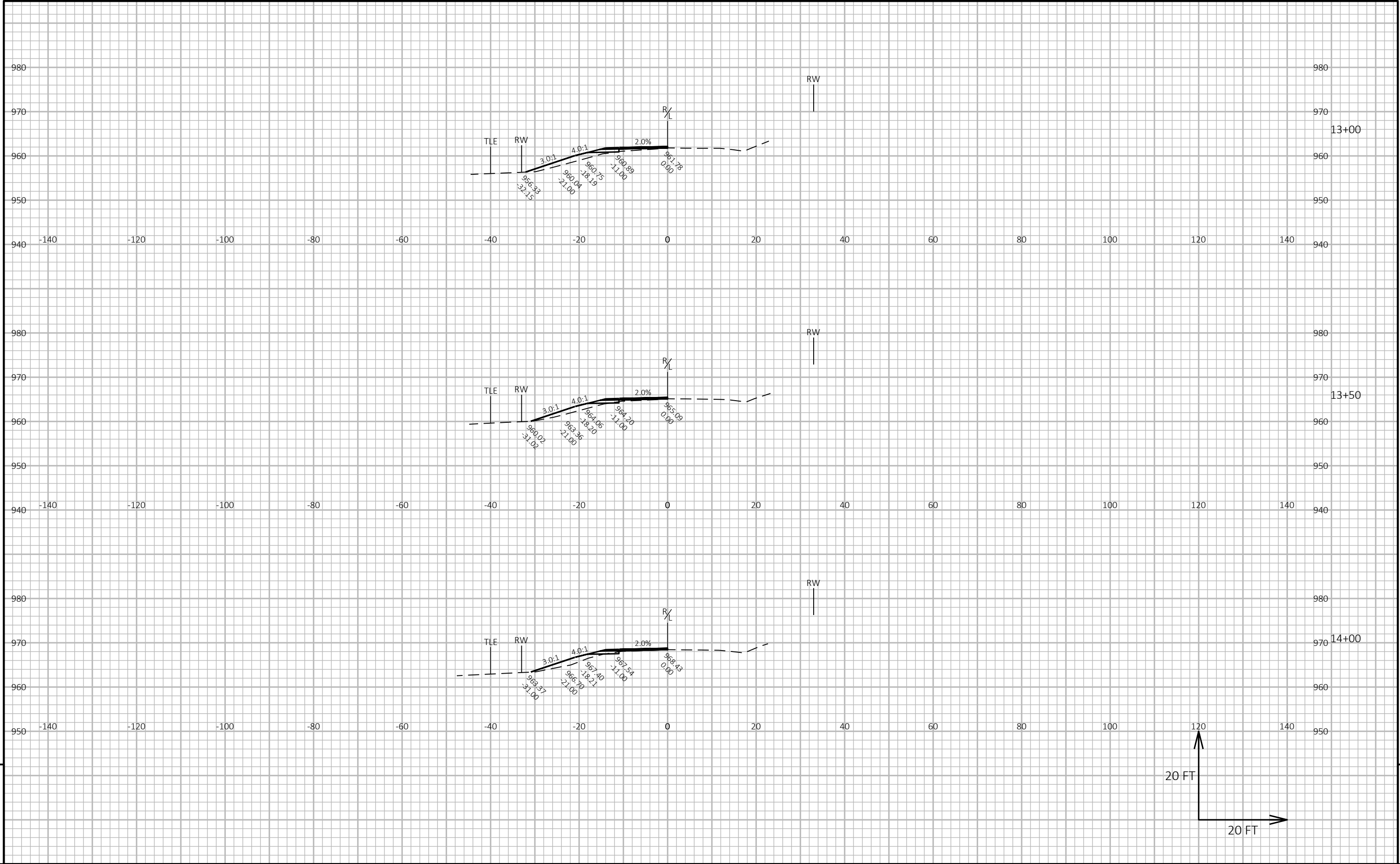
NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	CUT - ((FILL - EXPANDED ROCK) * FILL FACTOR)]





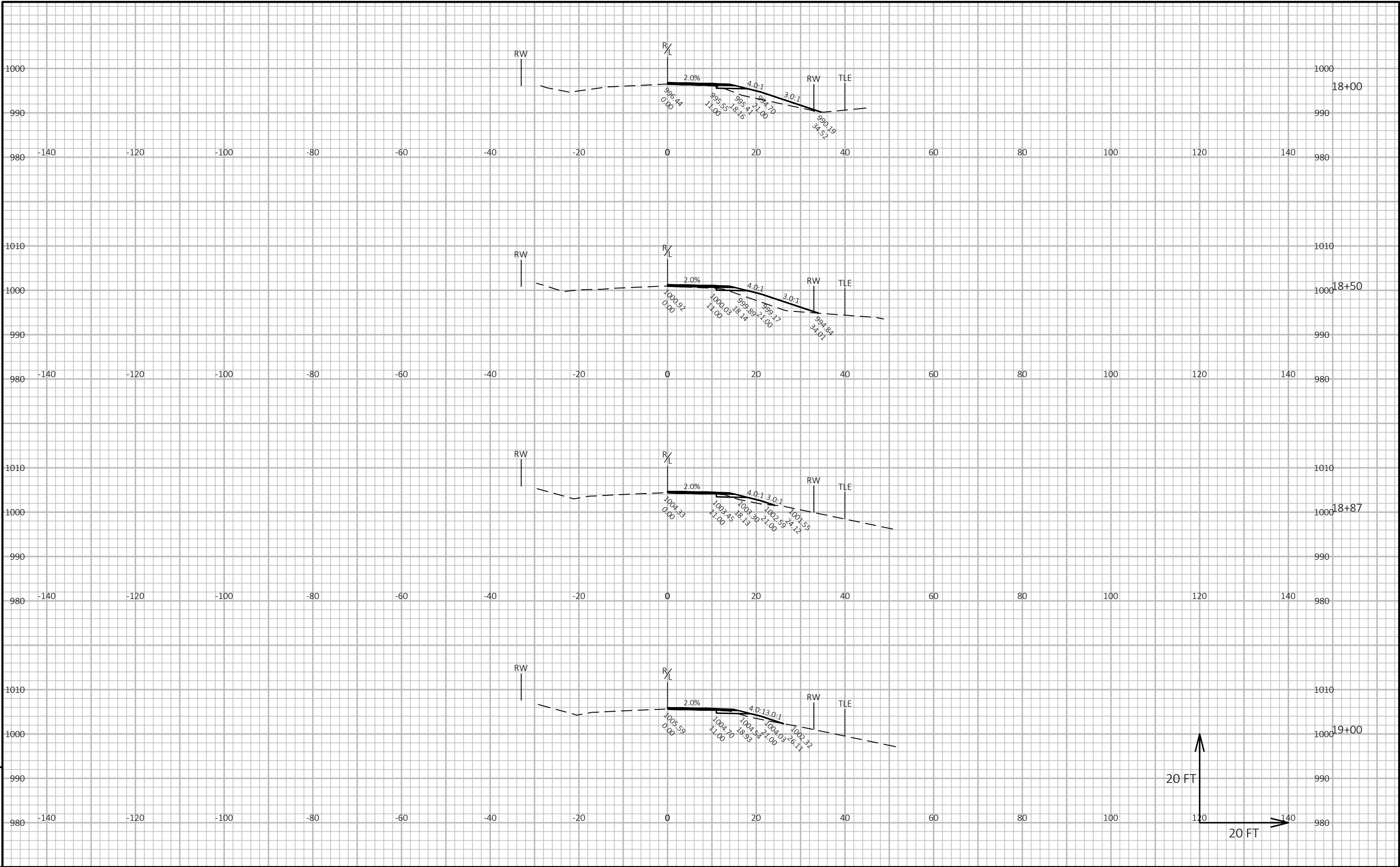
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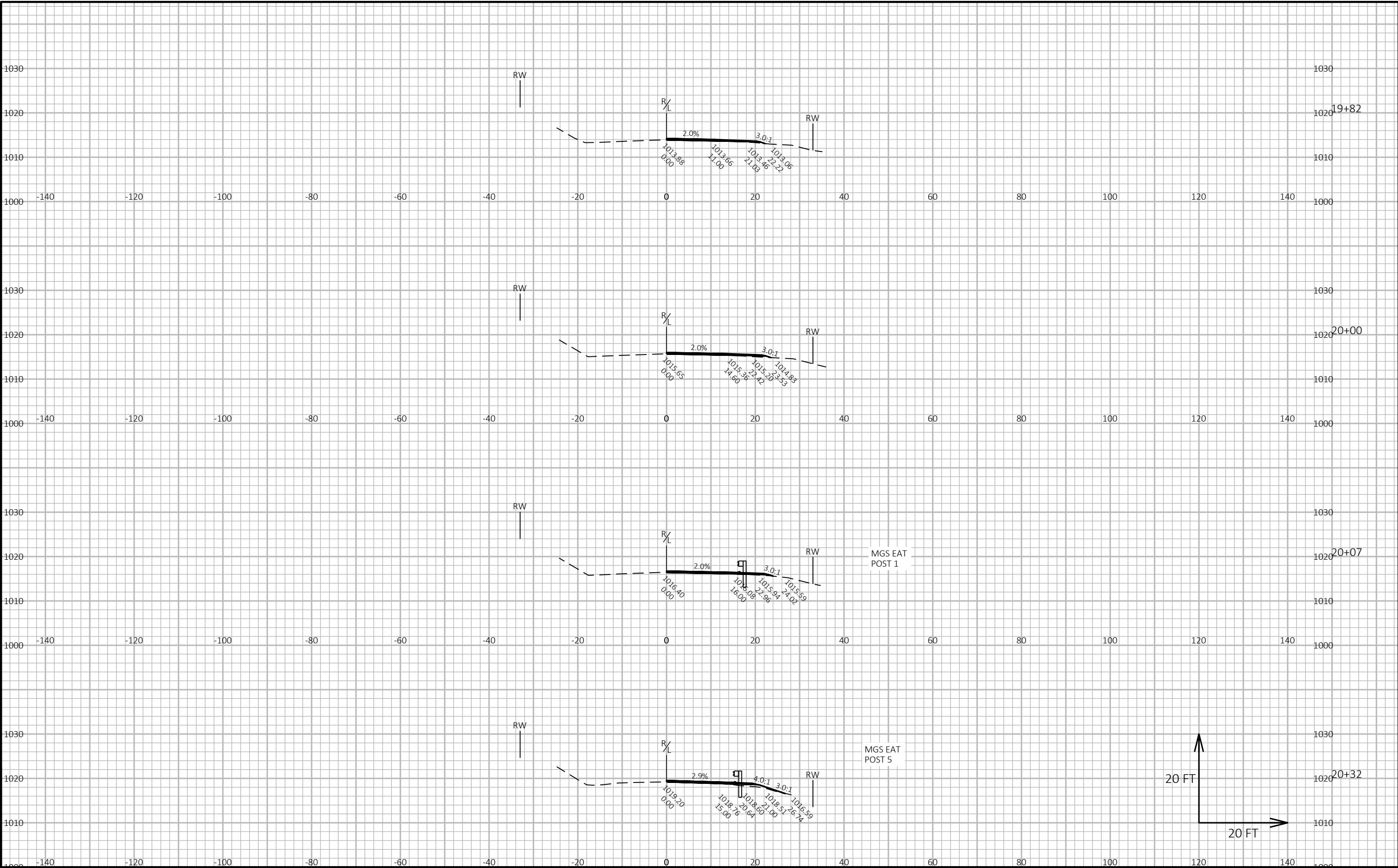
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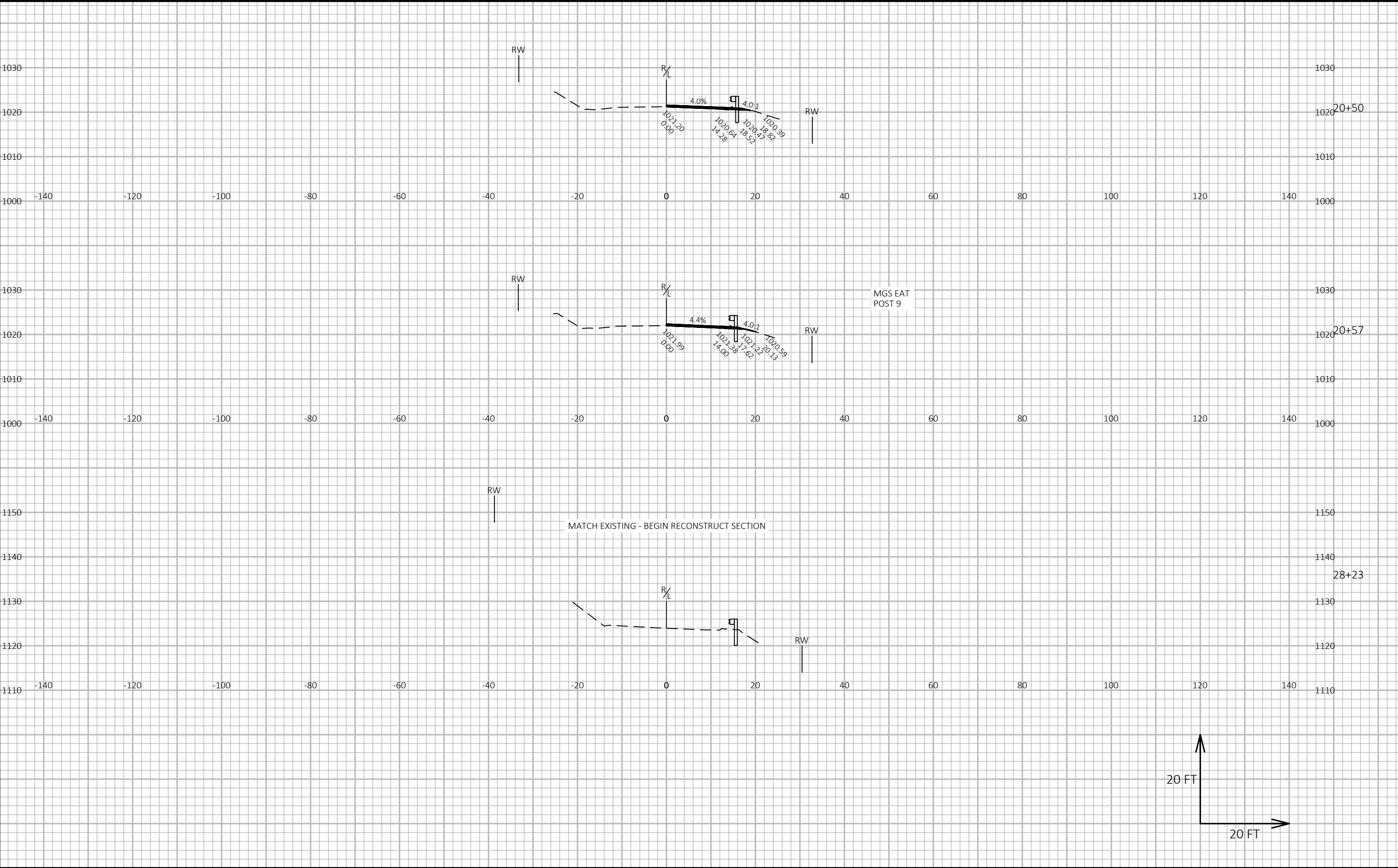


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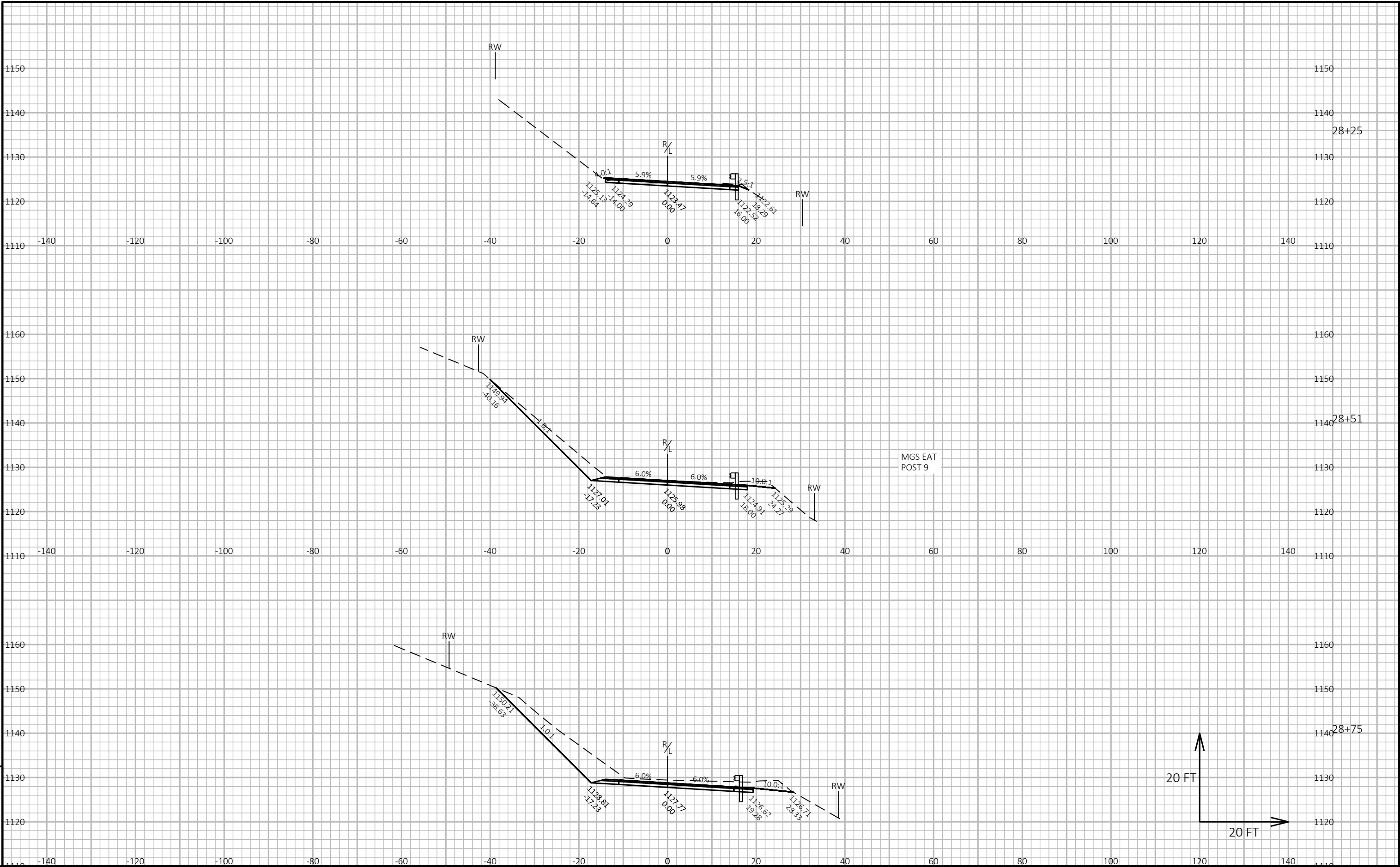


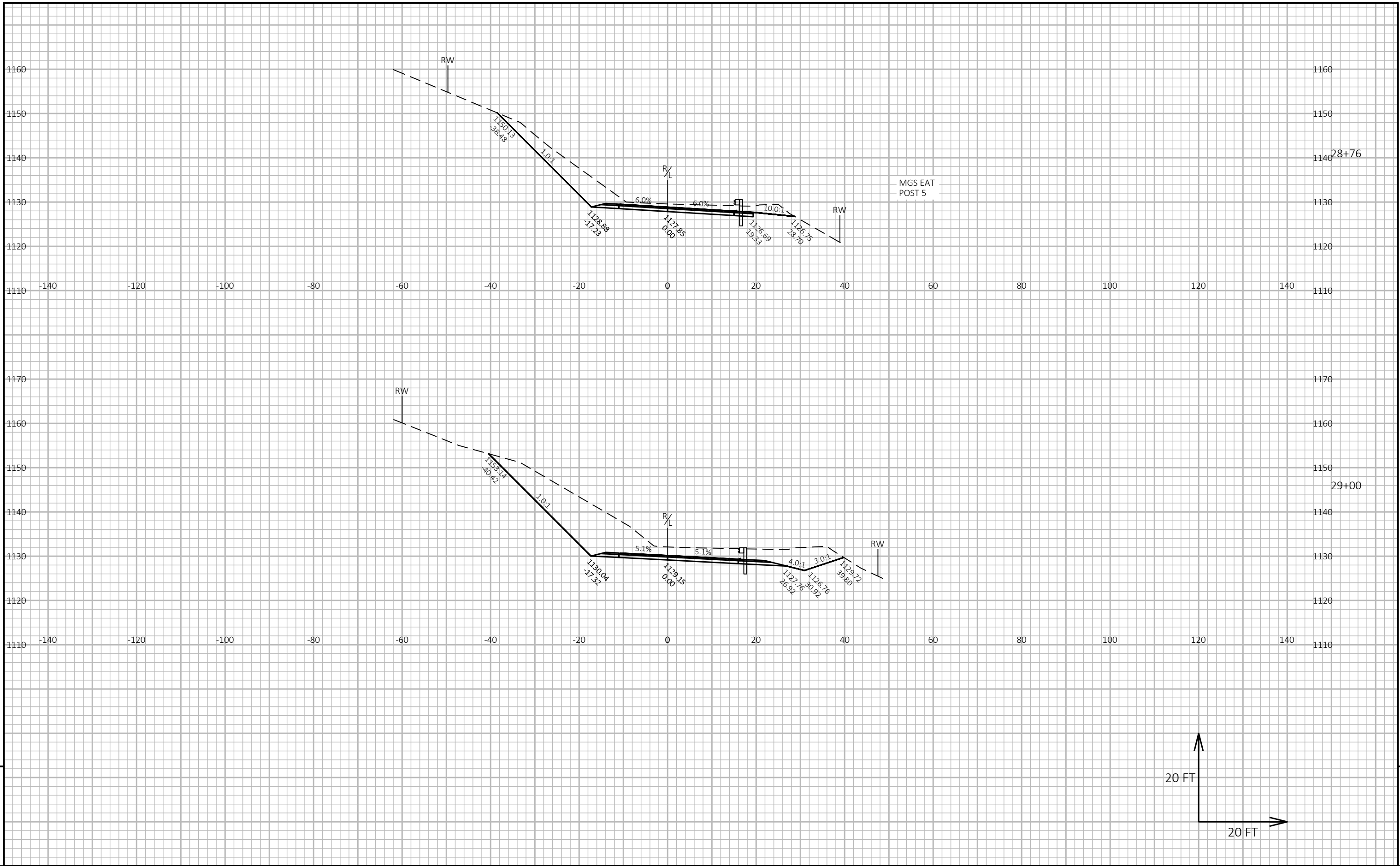


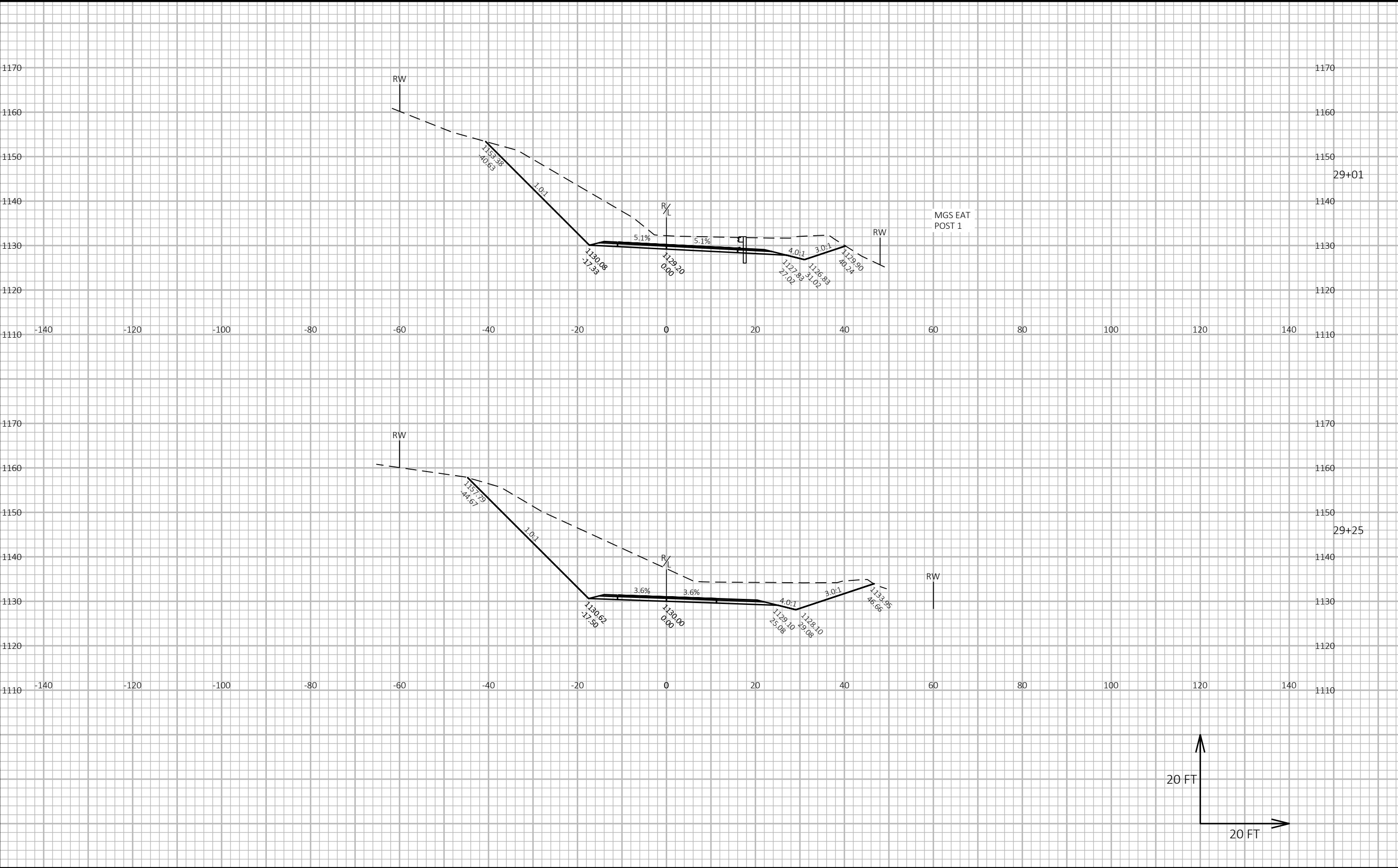
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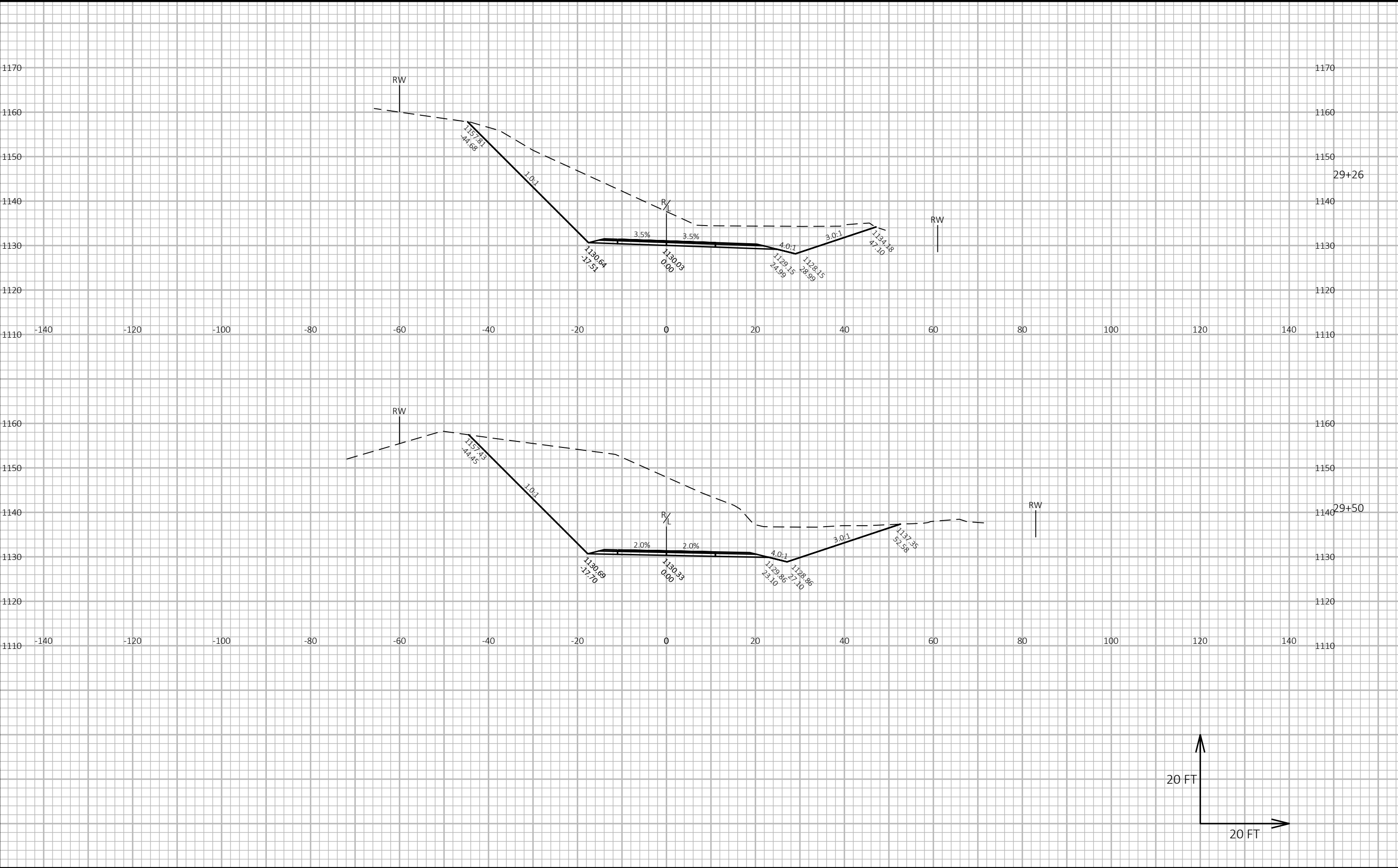
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PROJECT NO: 7868-03-70	HWY: CTH PP	COUNTY: PEPIN	CROSS SECTIONS: CTH PP	SHEET 74	E
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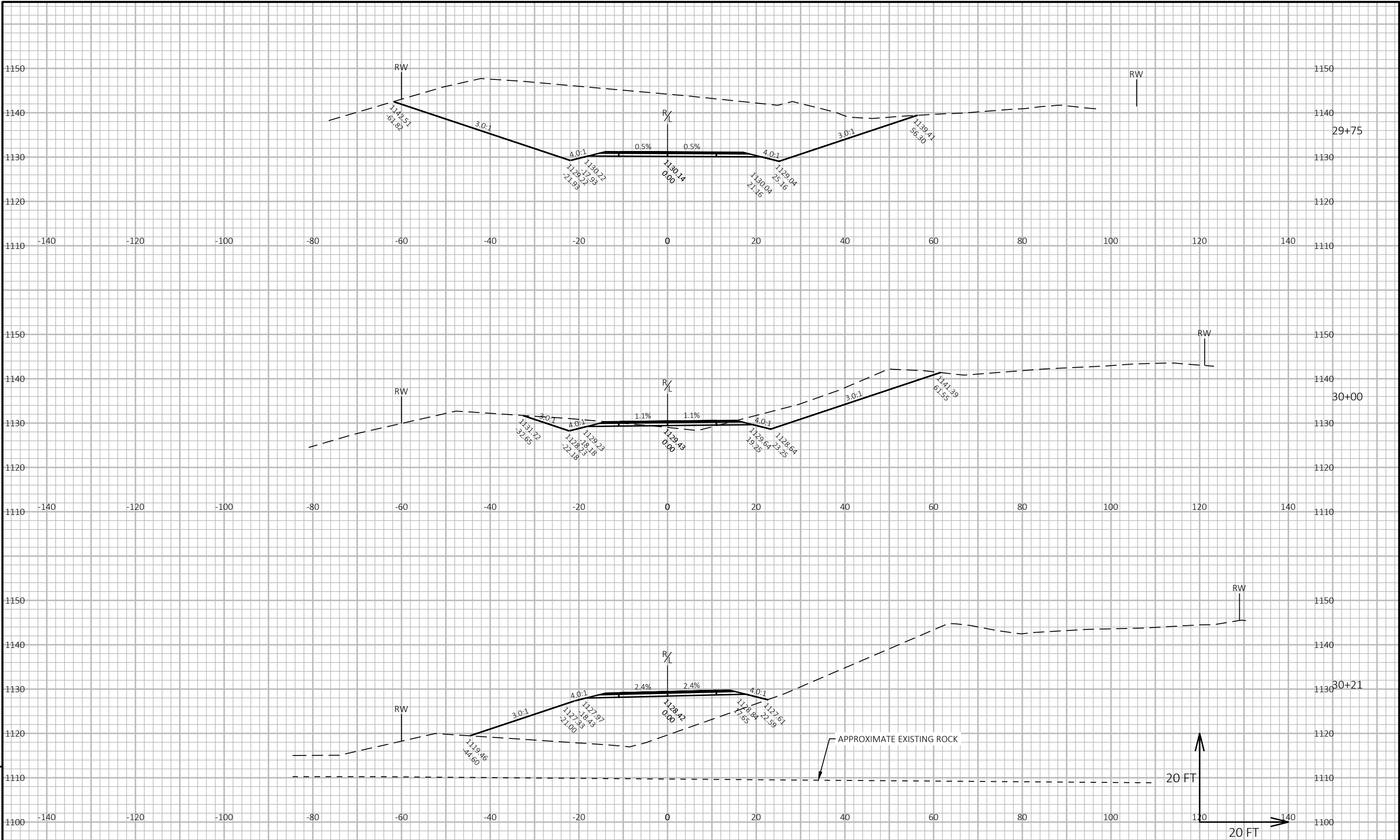


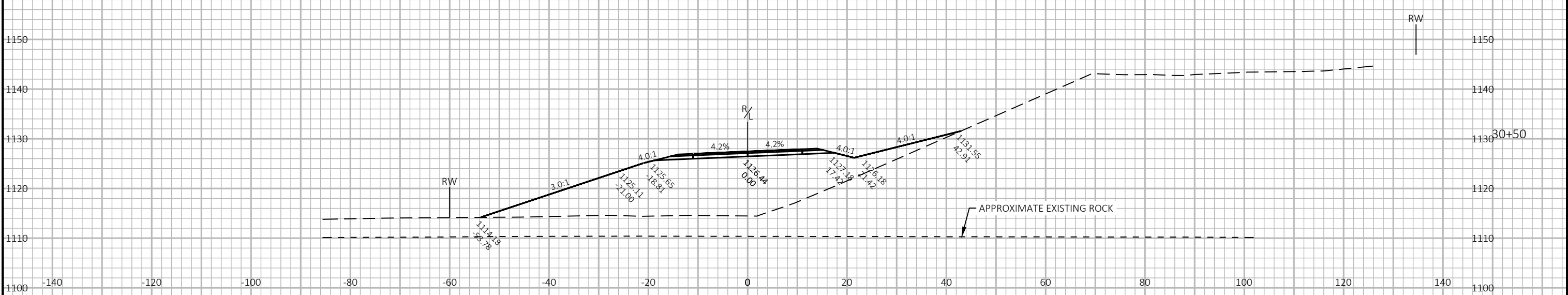
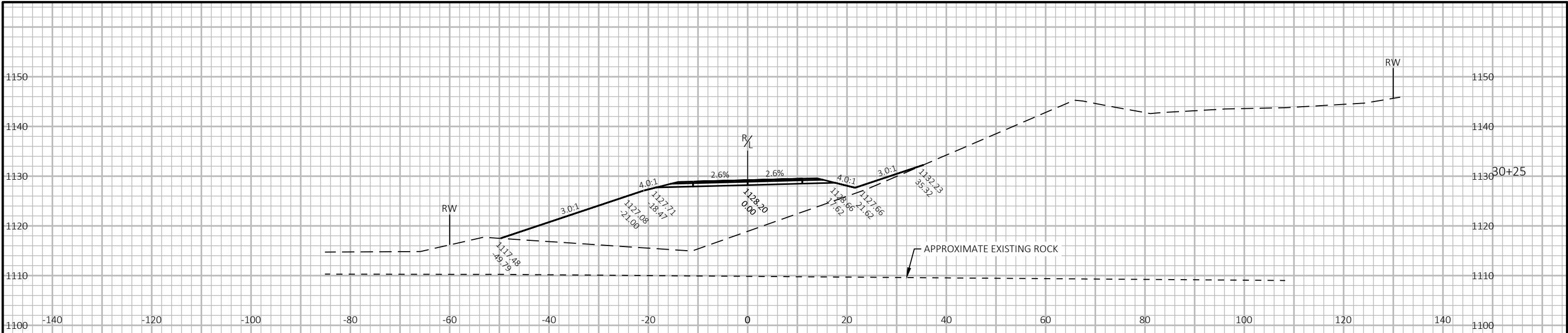




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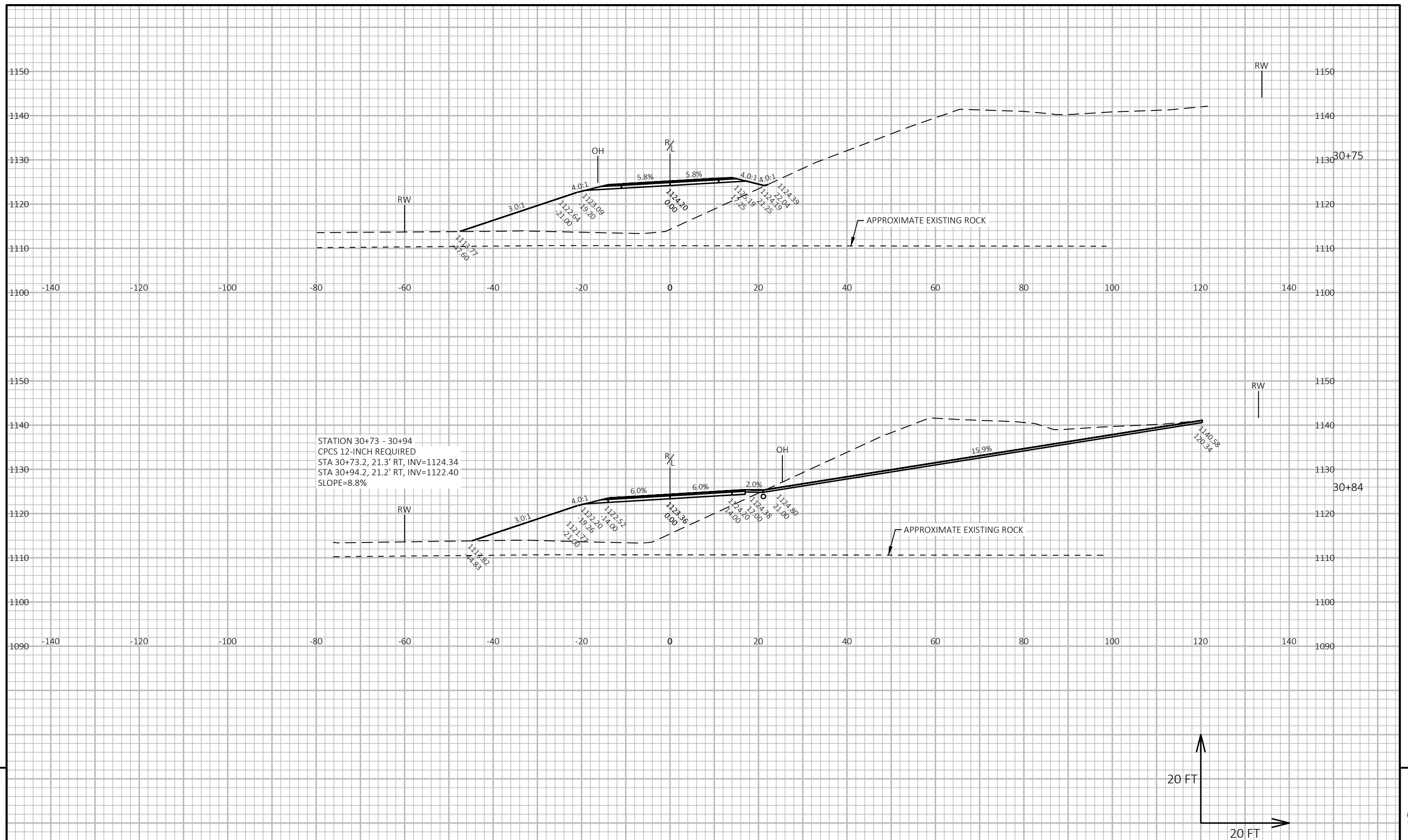
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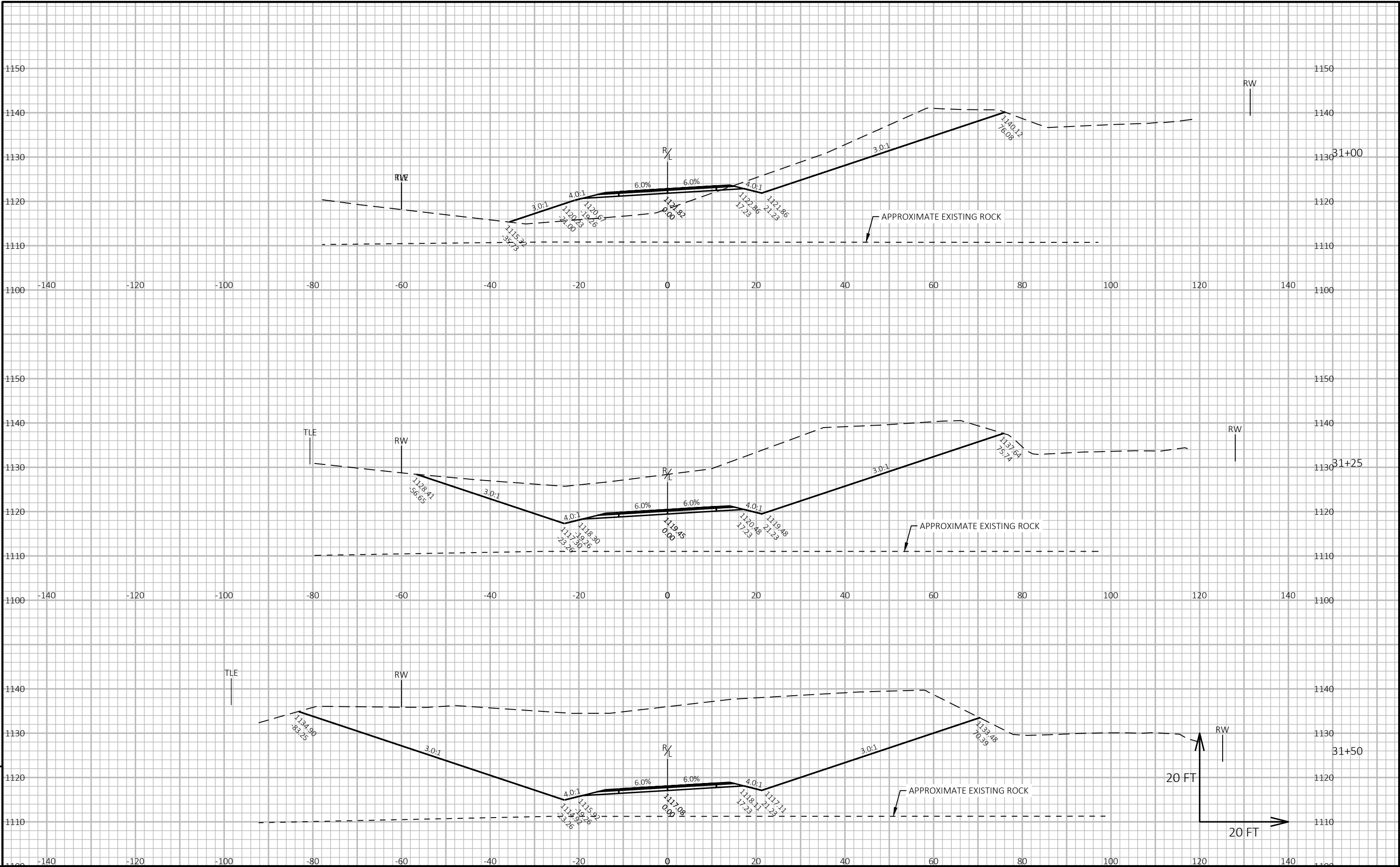


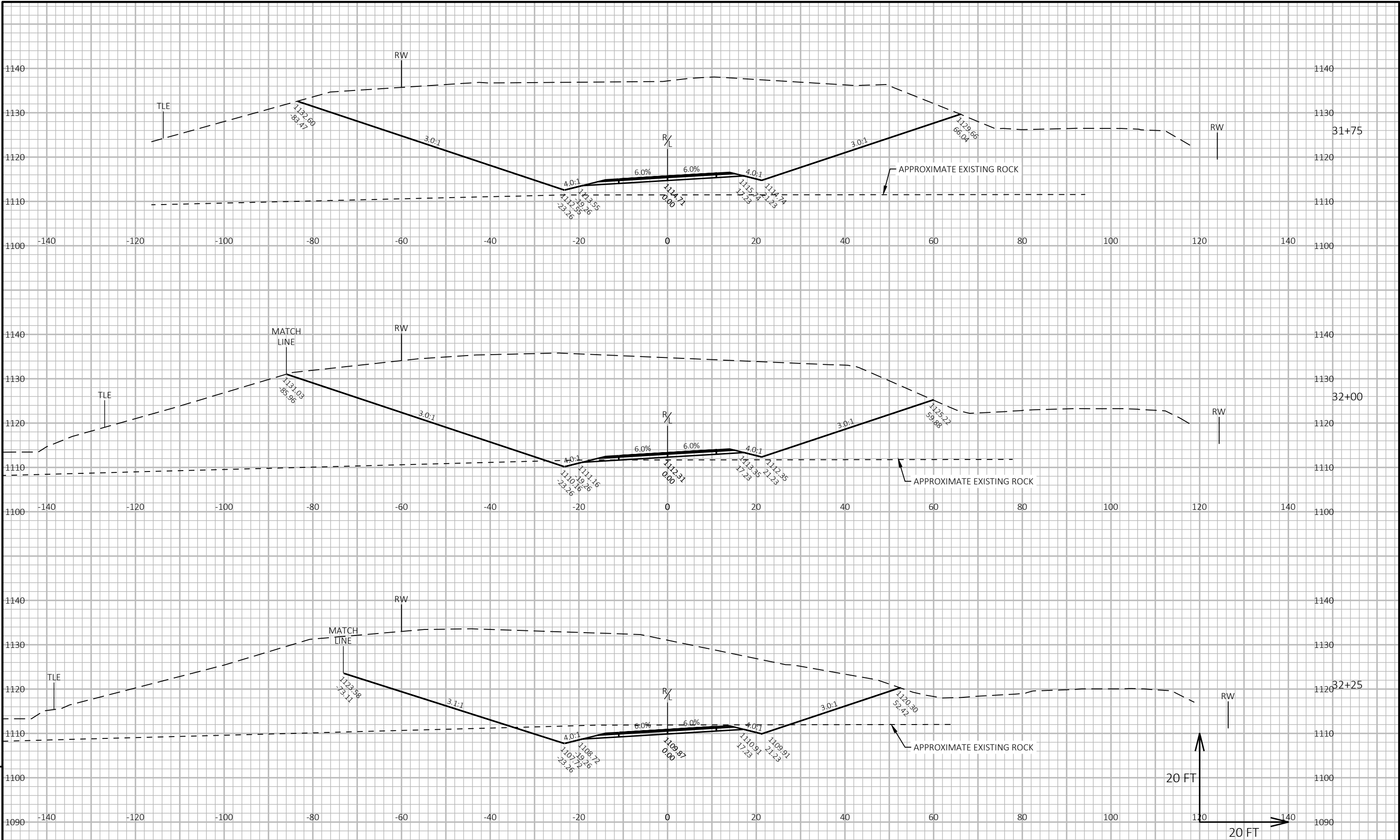


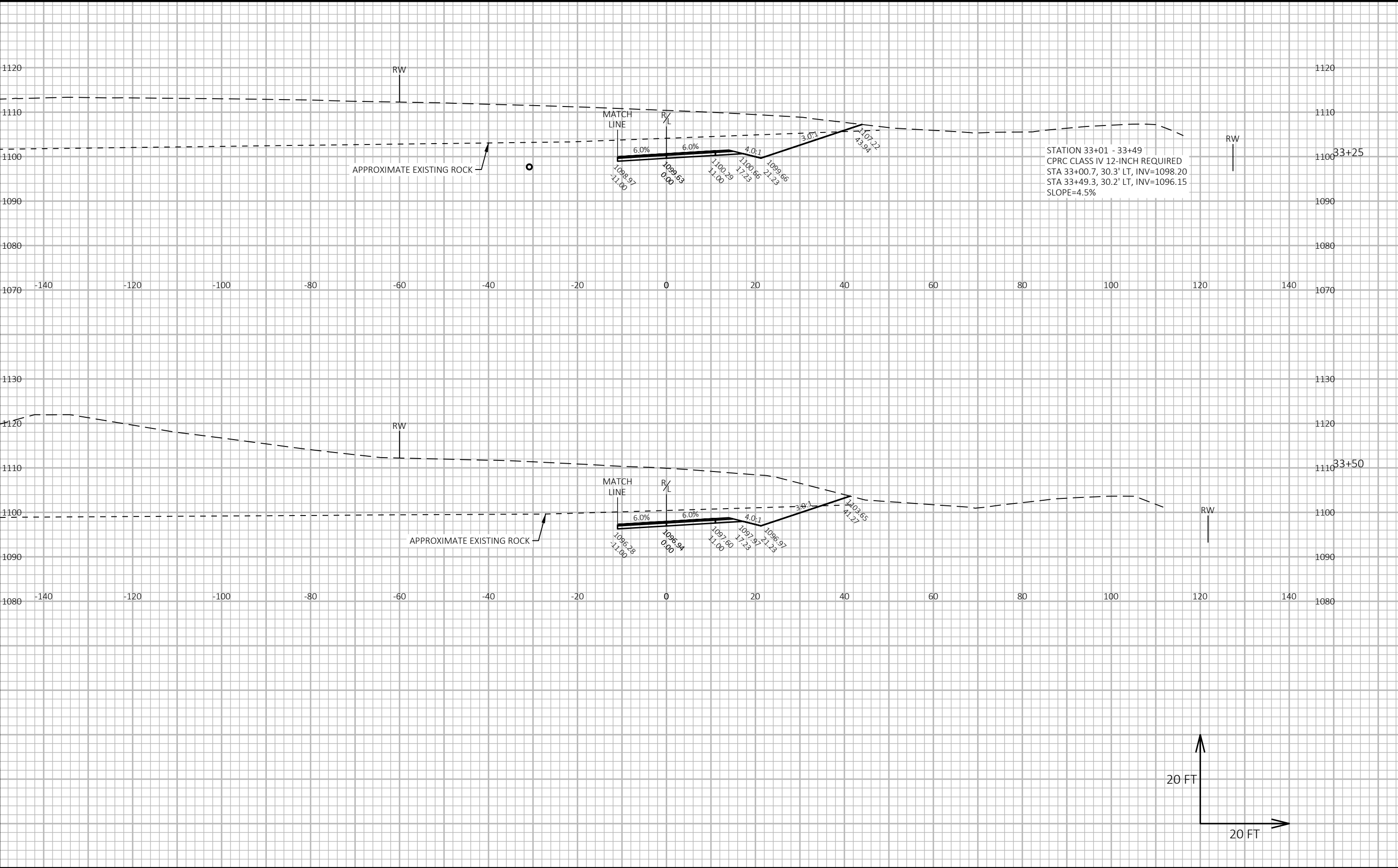
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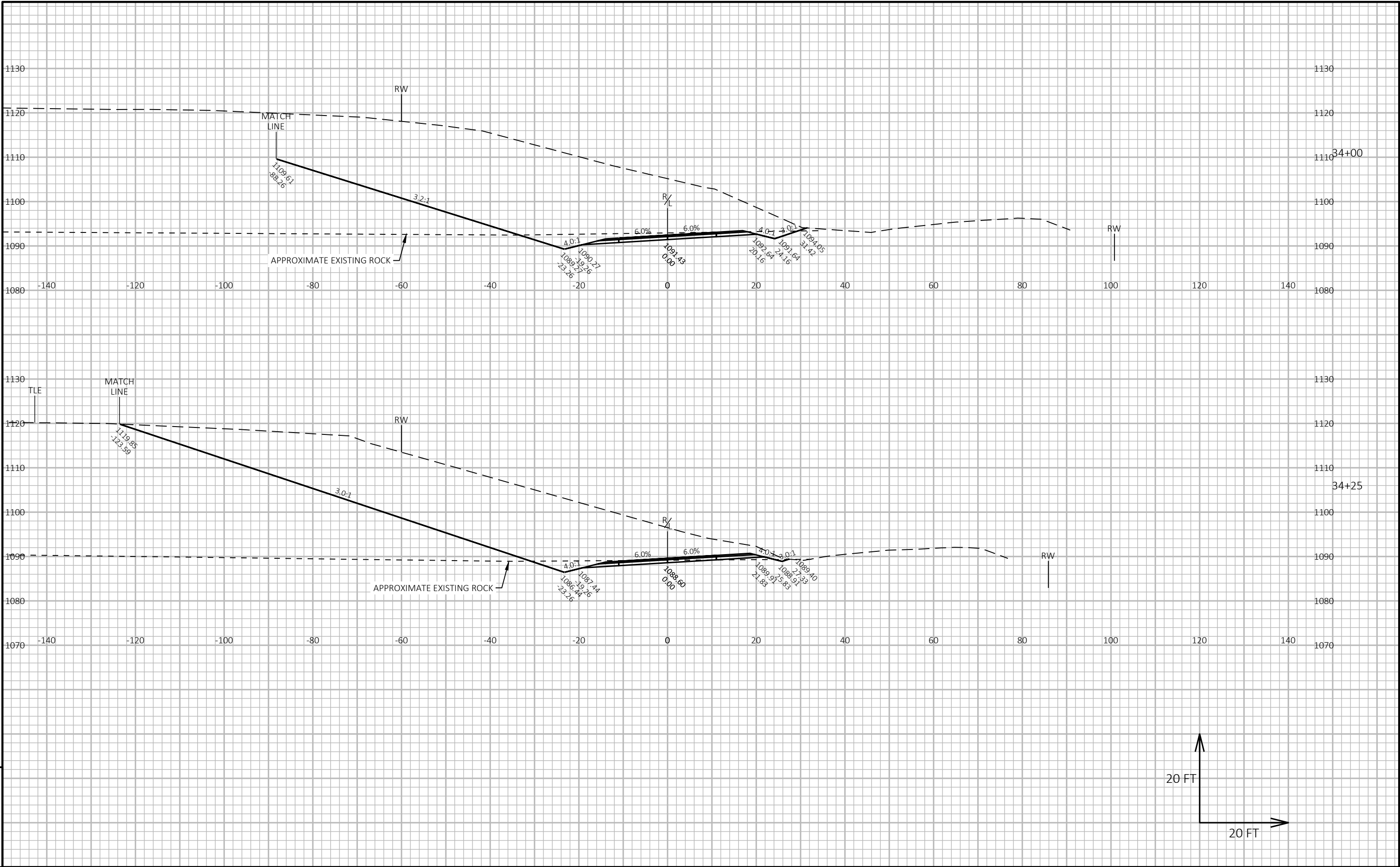


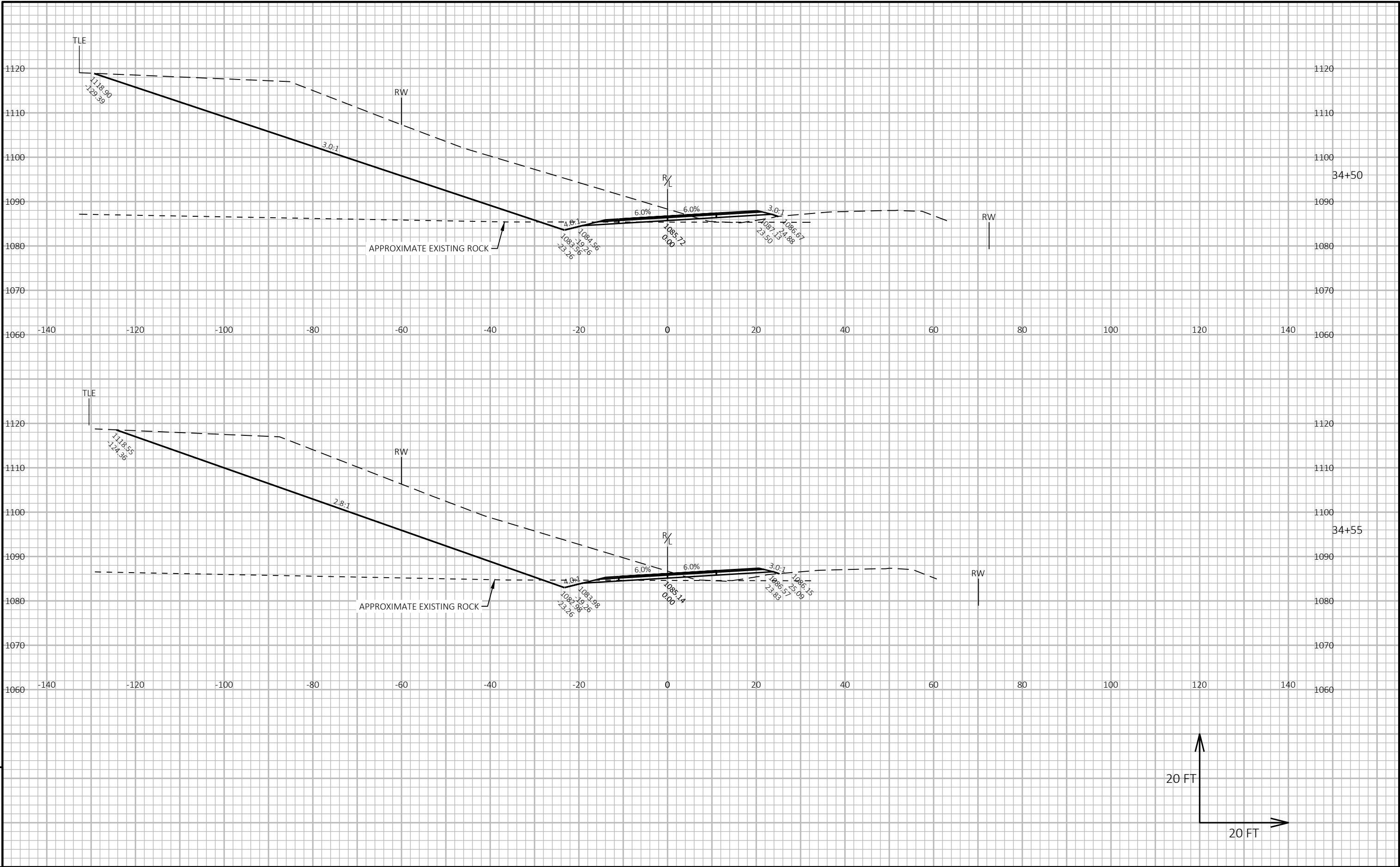


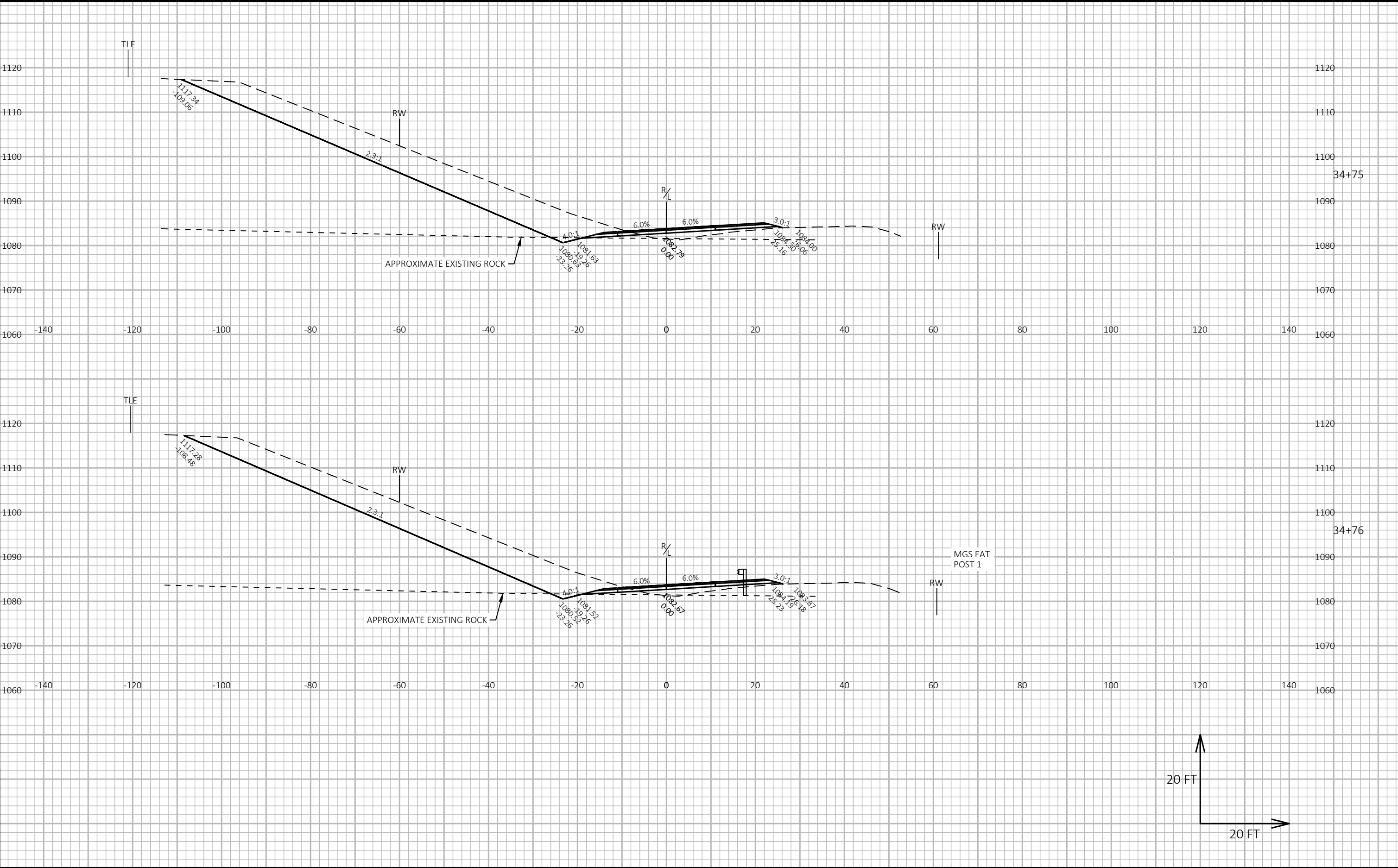


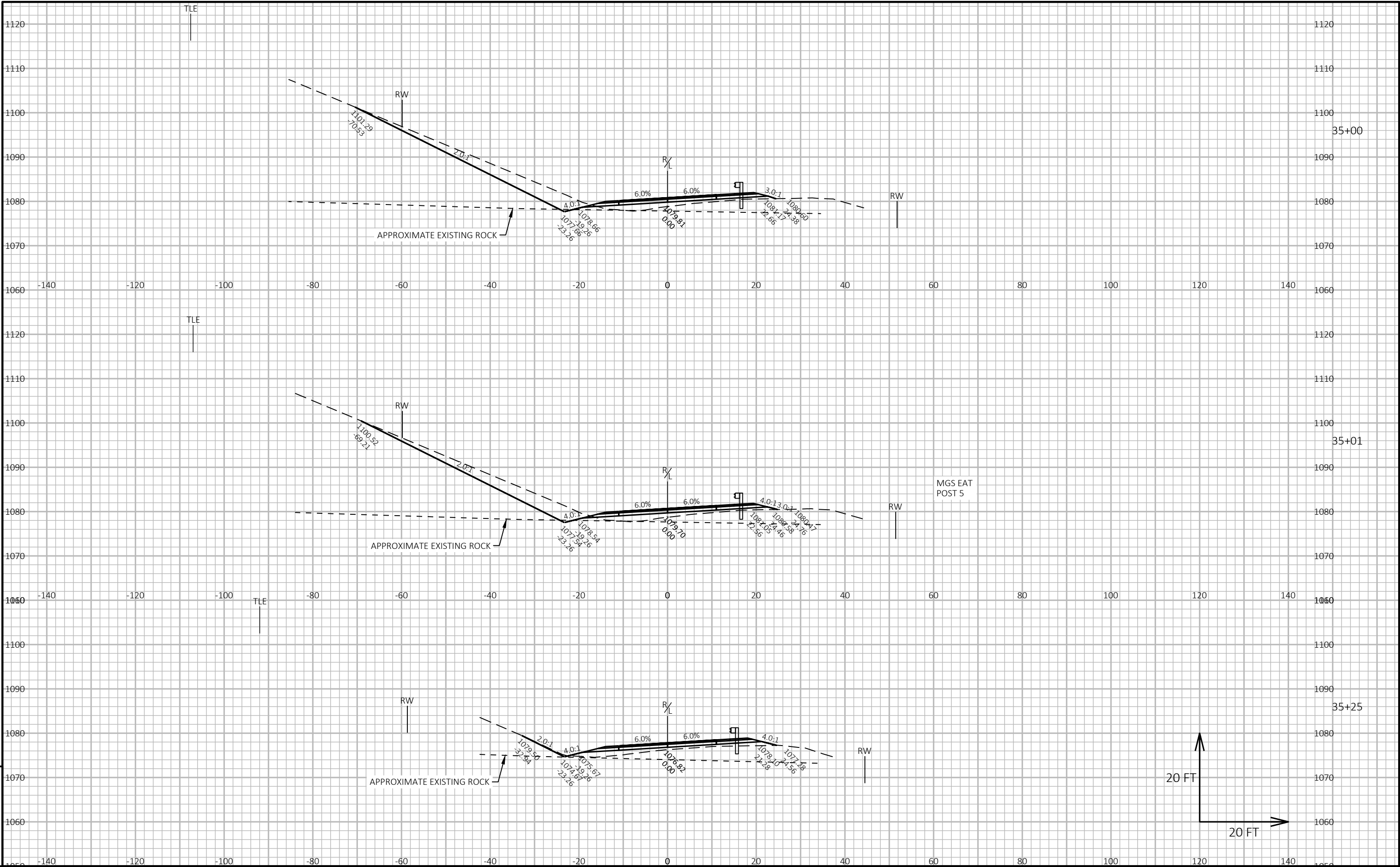
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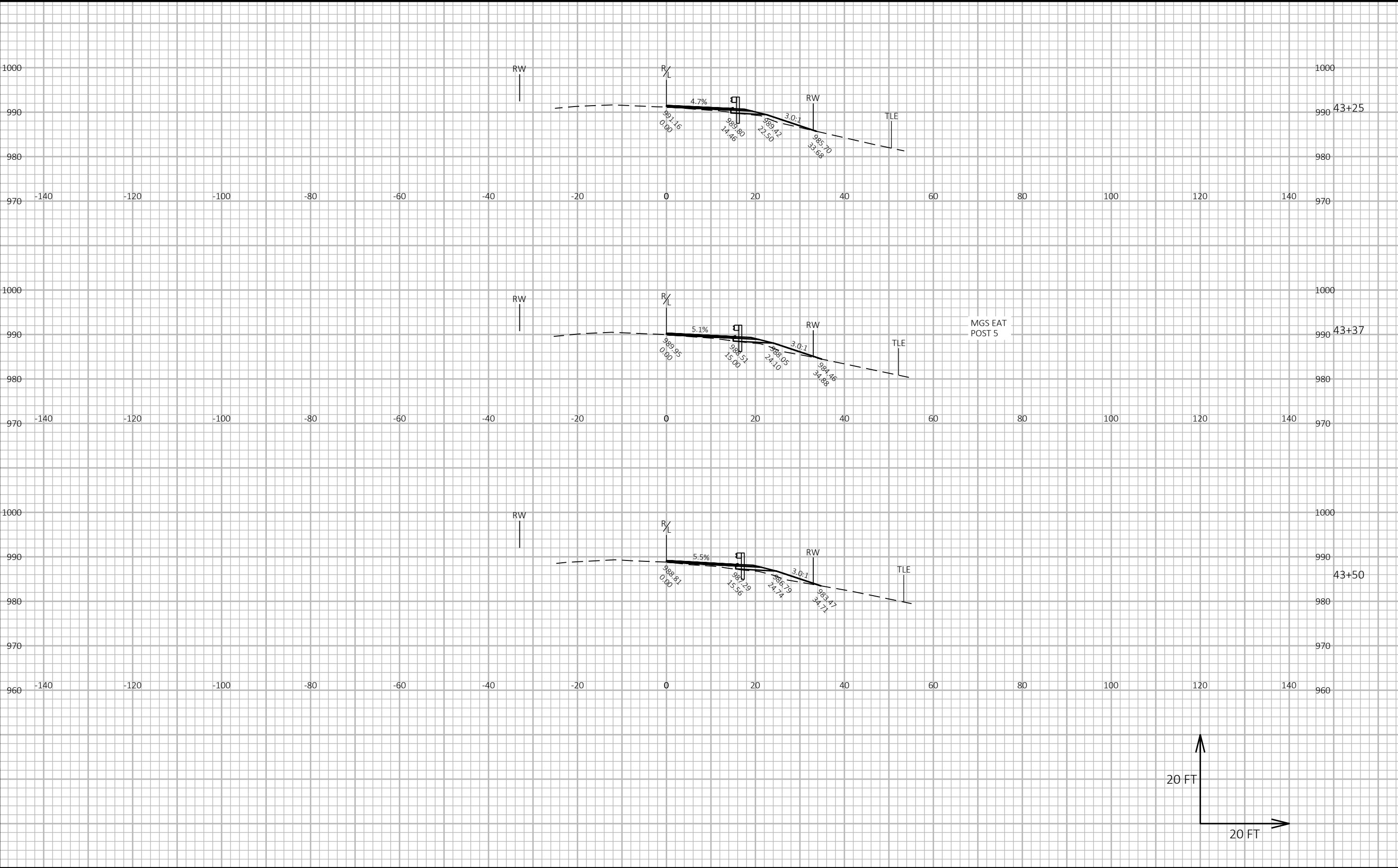
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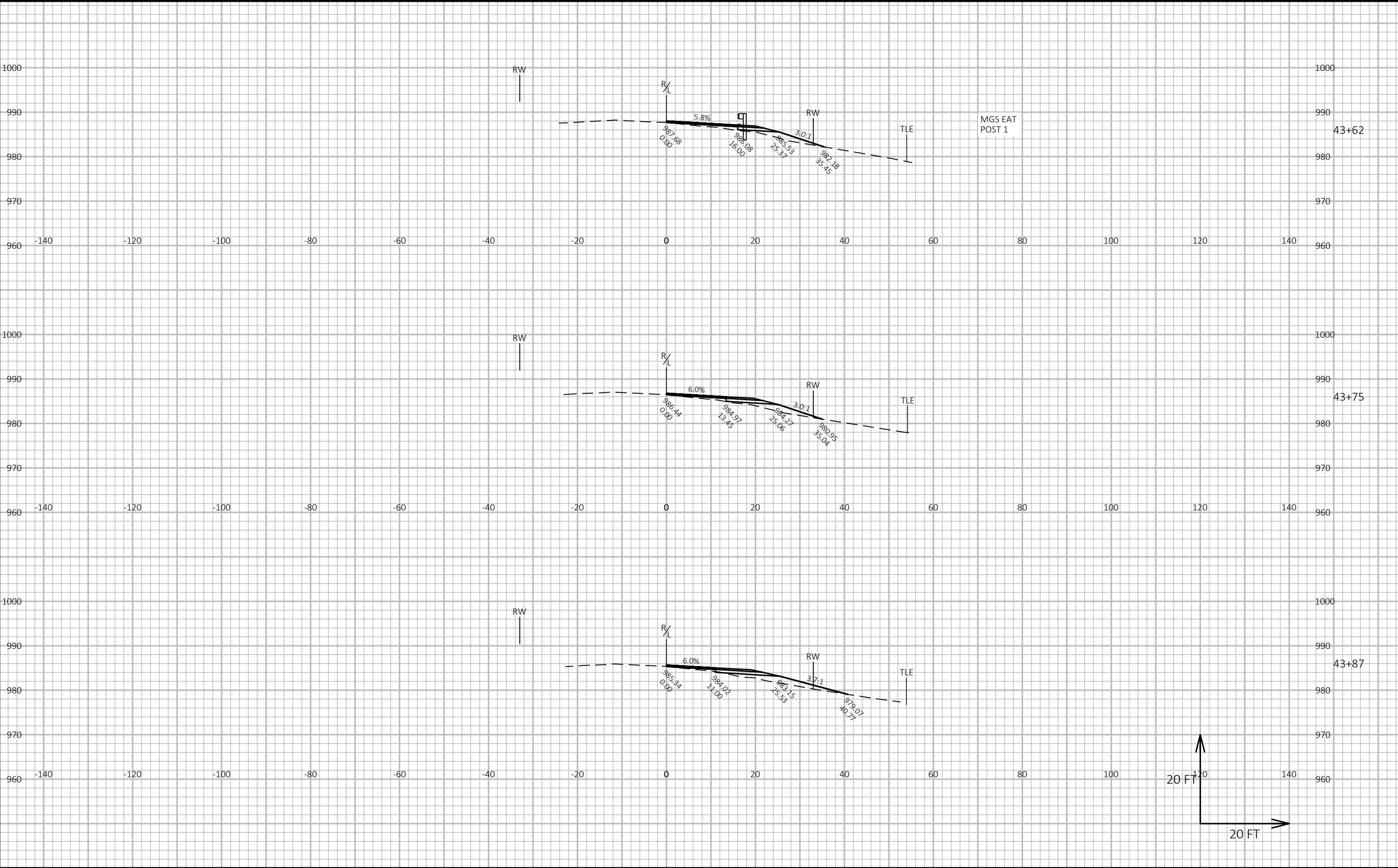


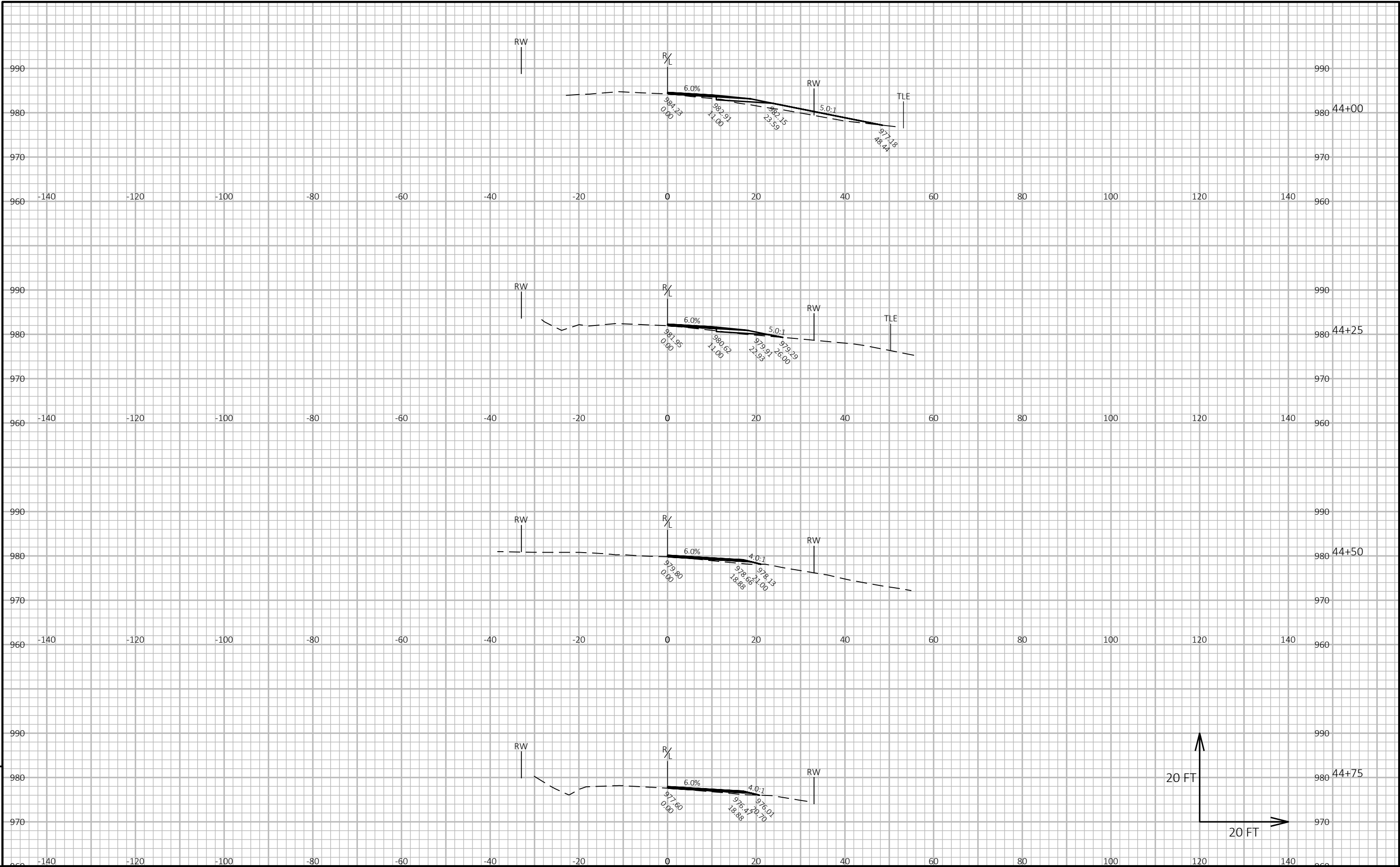


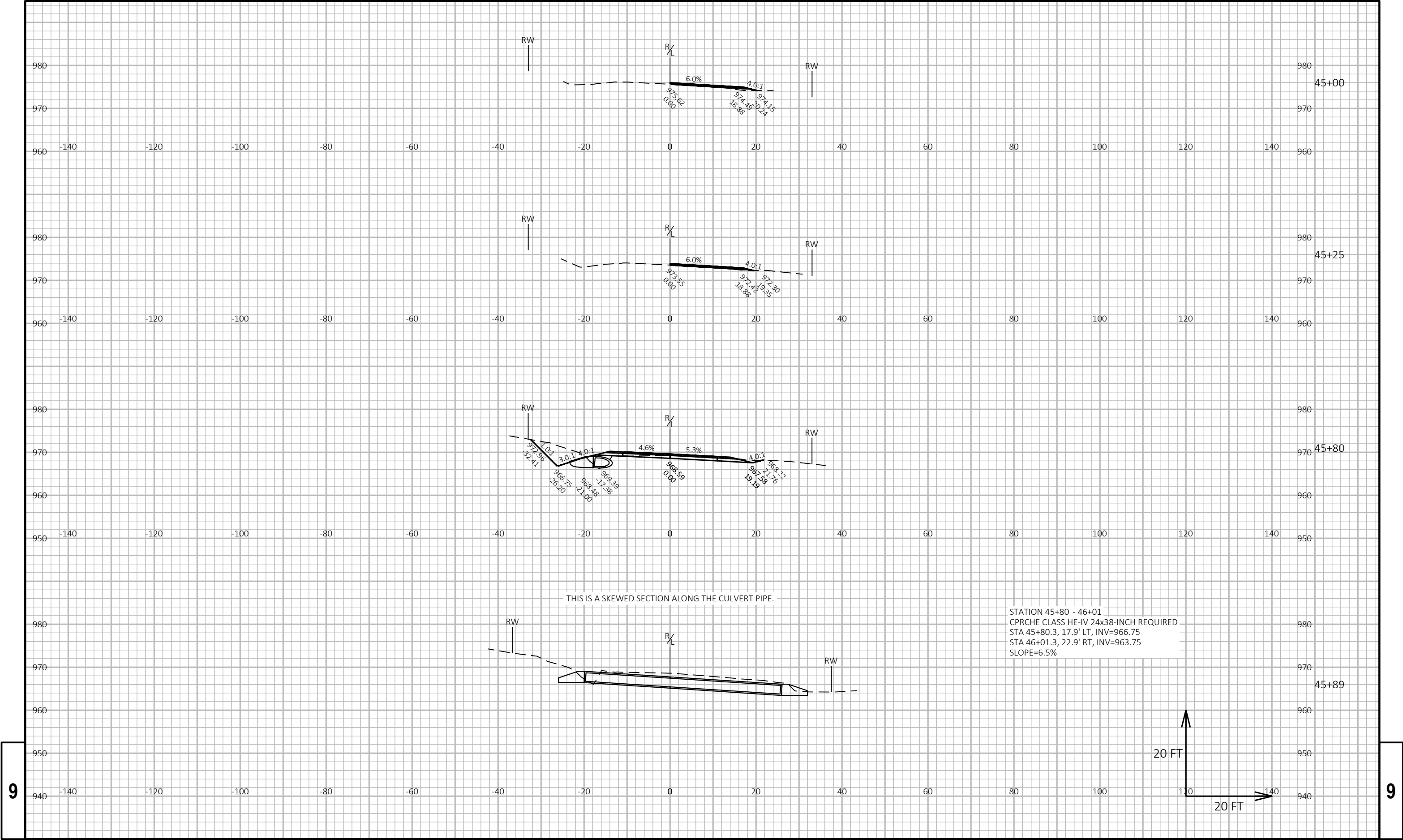


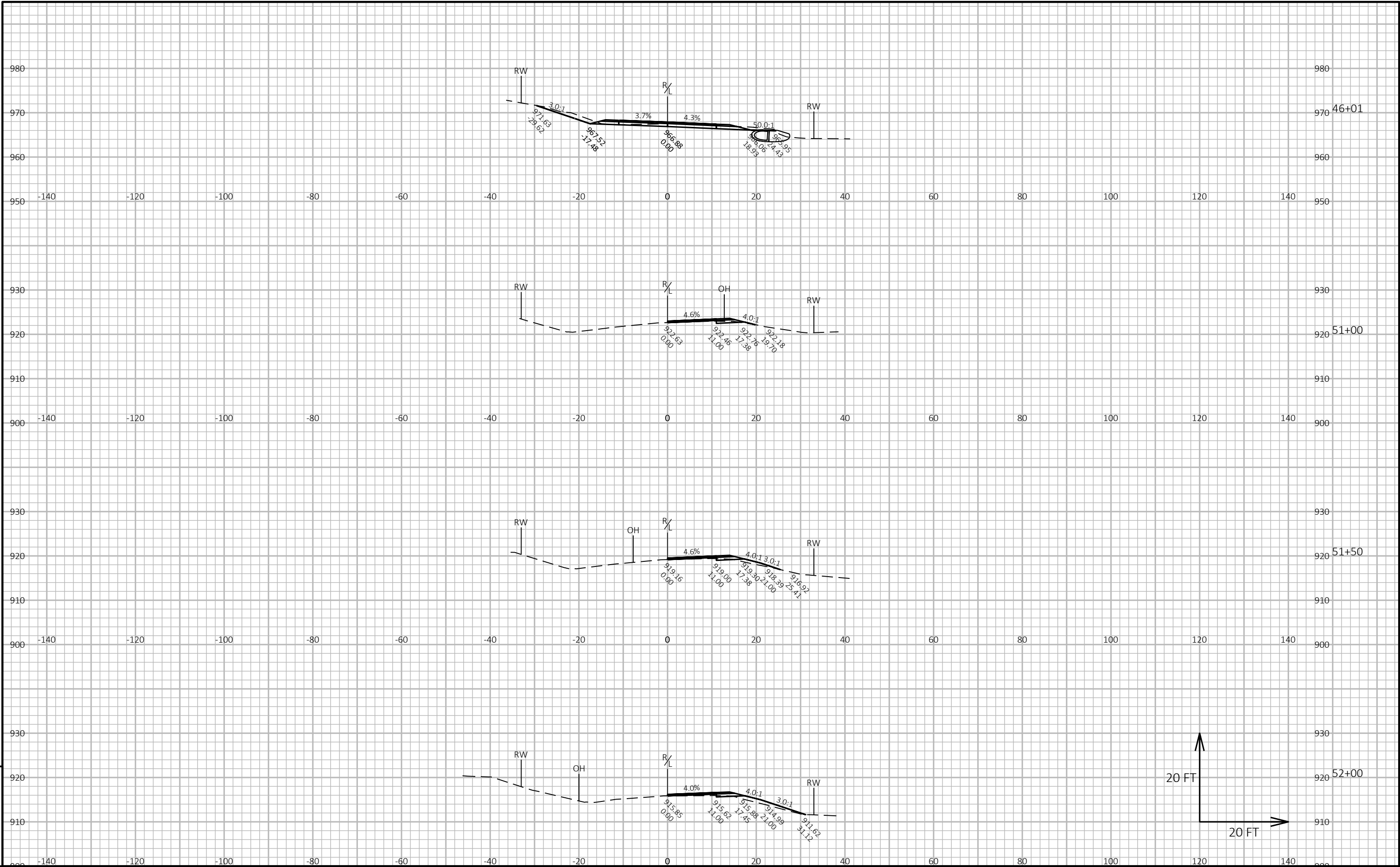


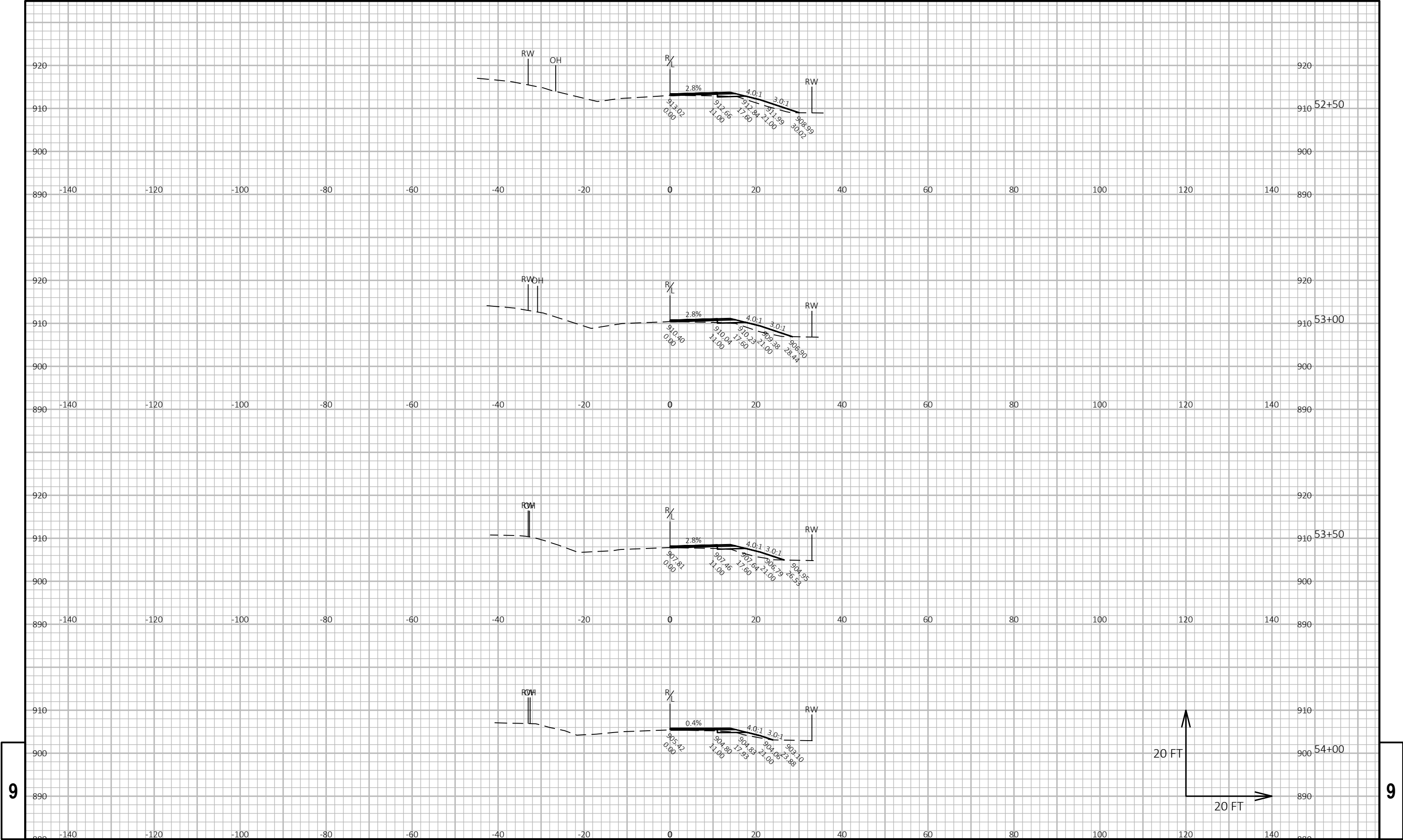






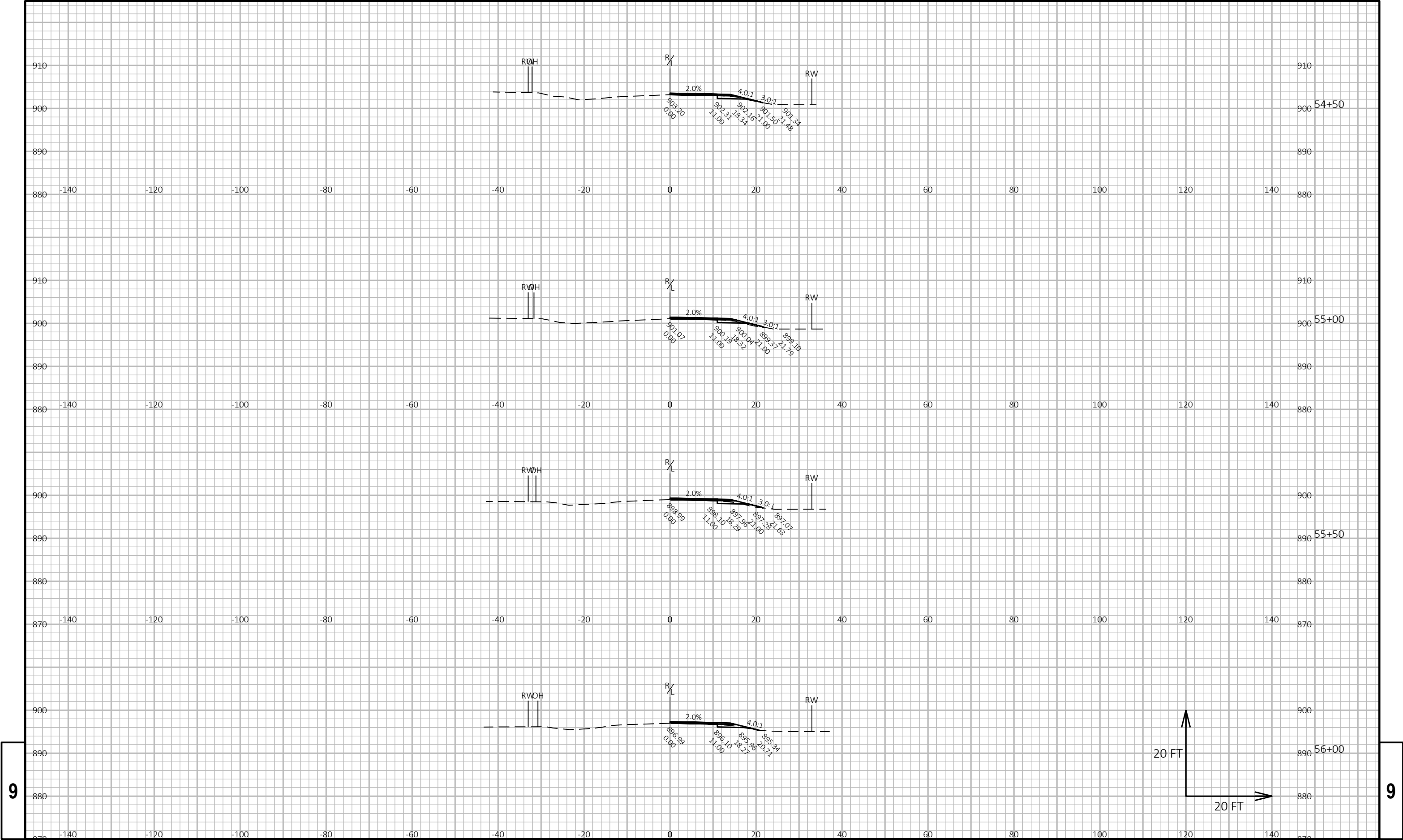






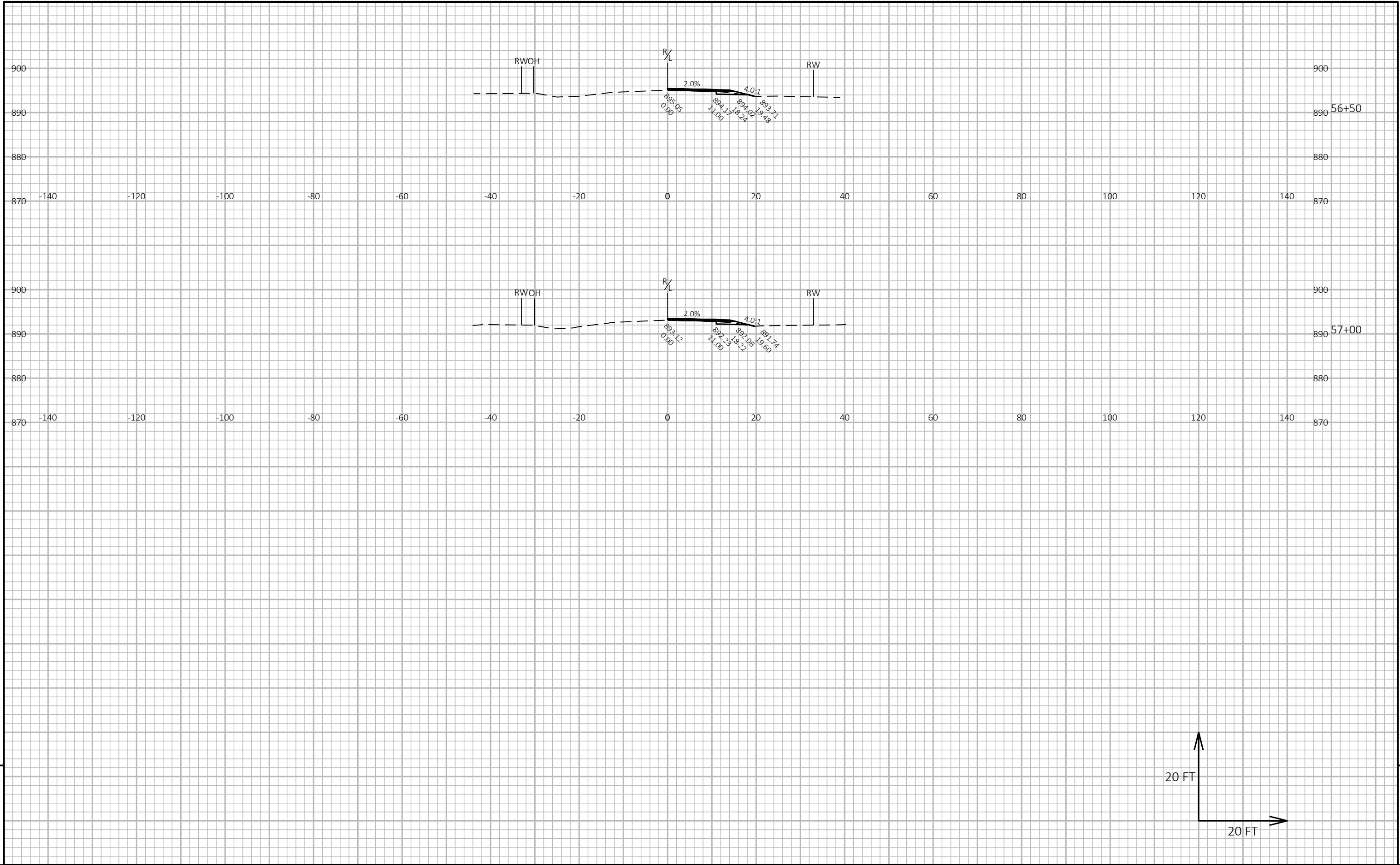
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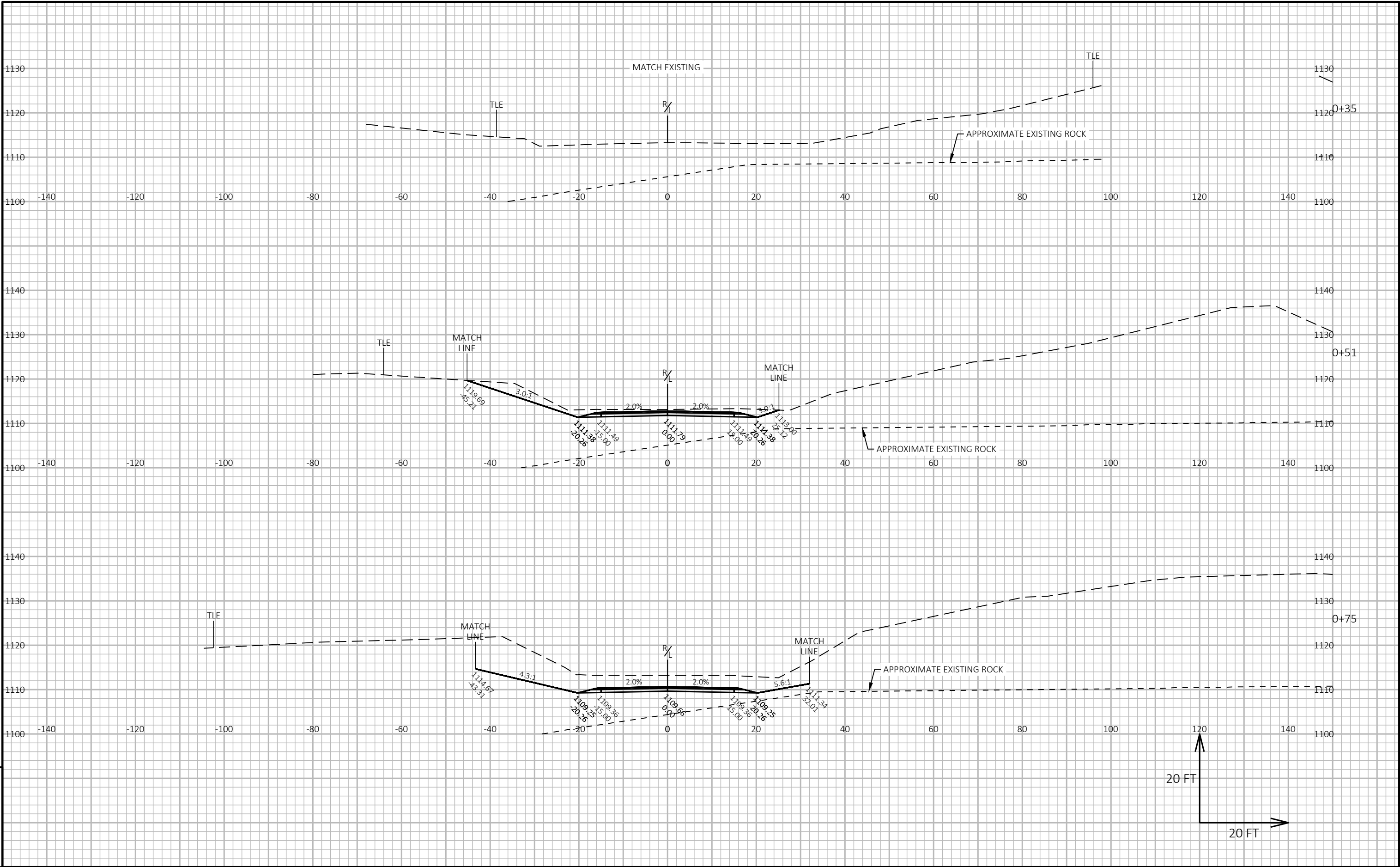
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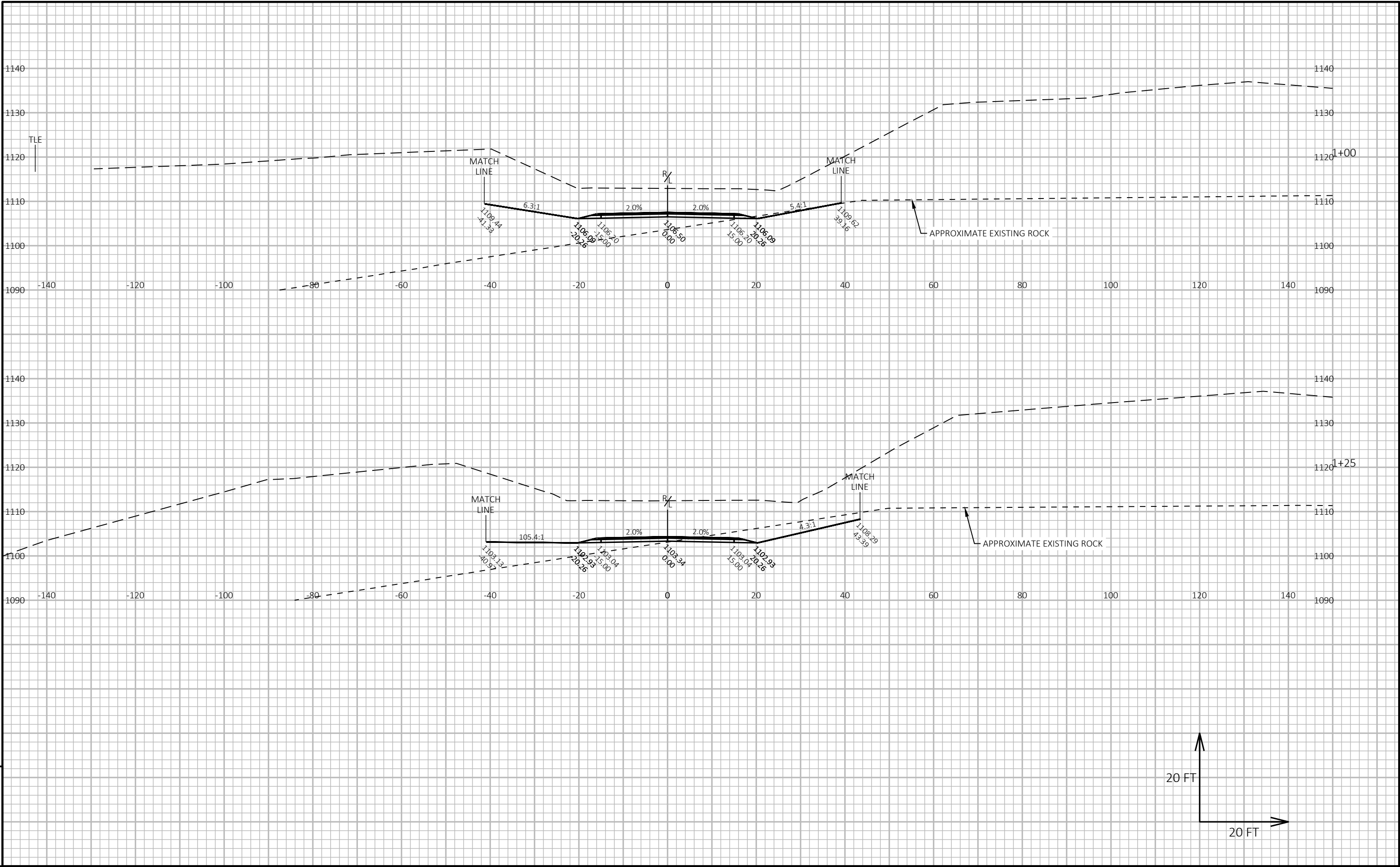
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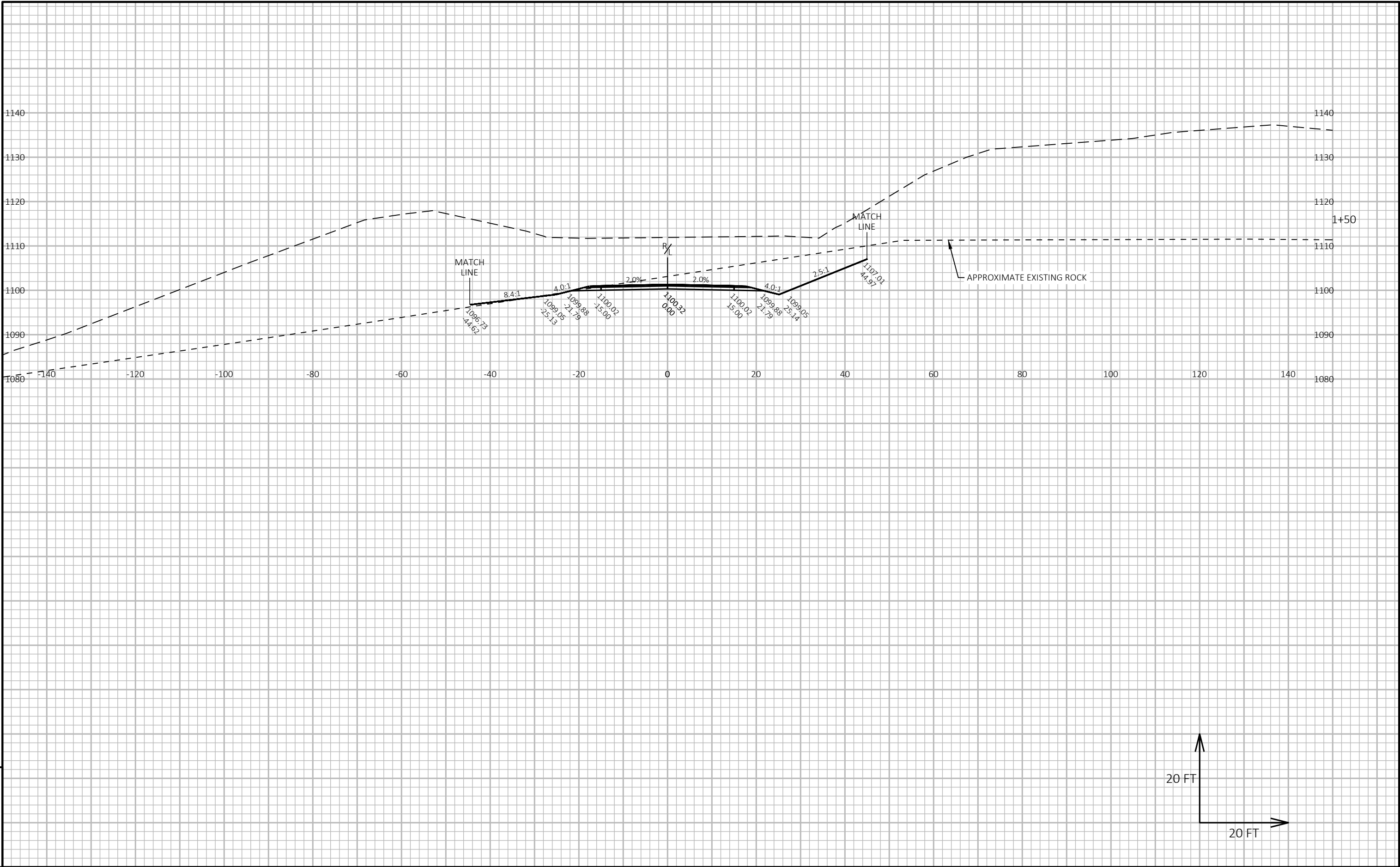
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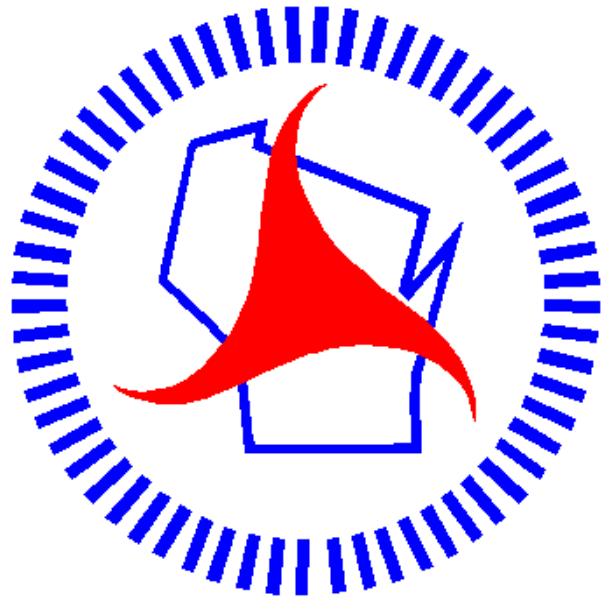




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Notes



Wisconsin Department of Transportation

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<http://www.dot.wisconsin.gov>