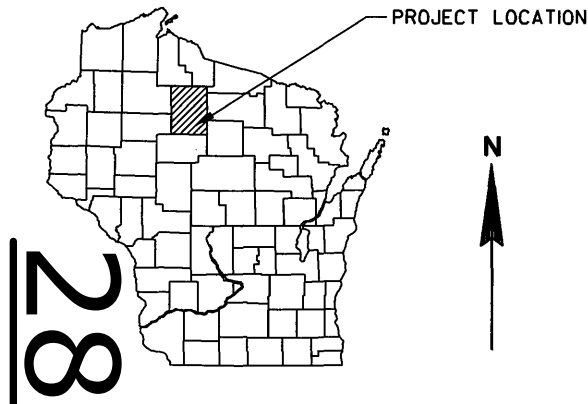


STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
9476-00-70	WISC 2014115	1

PLAN OF PROPOSED IMPROVEMENT

STH 86 - PRENTICE
STH 86 TO CLAUSEN ROAD
CTH C
PRICE COUNTY

TOTAL SHEETS = 48



A.A.D.T.	2014	=	135
A.A.D.T.	2034	=	180
D.H.V.		=	74
D.D.		=	59/41
T.		=	10.5%
DESIGN SPEED		=	45 MPH
ESALS		=	36,500

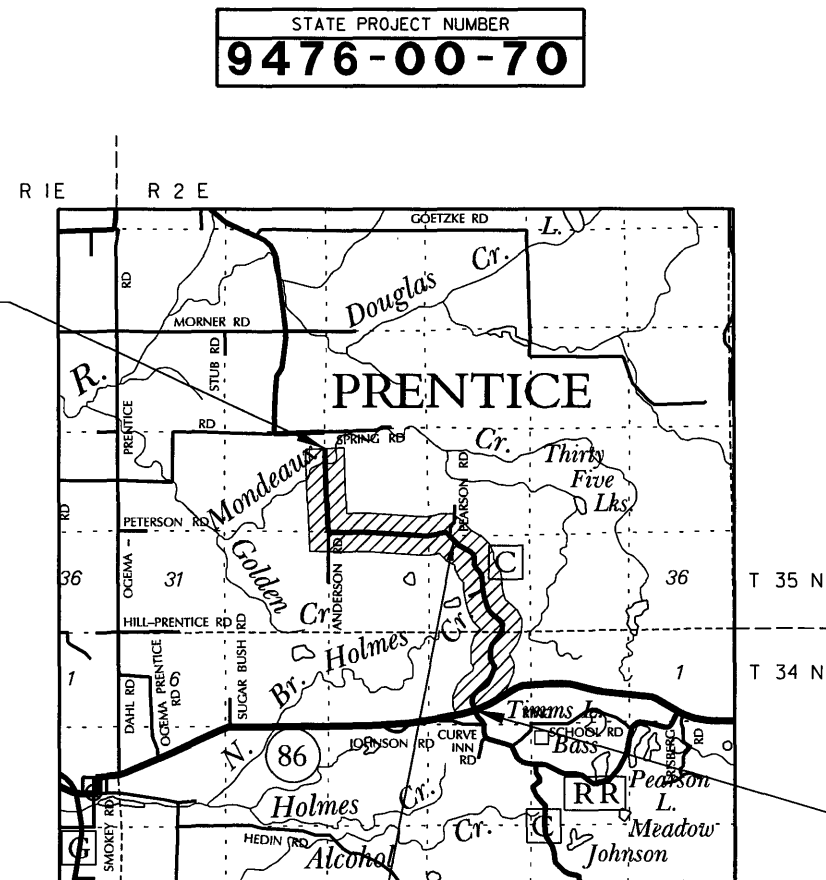
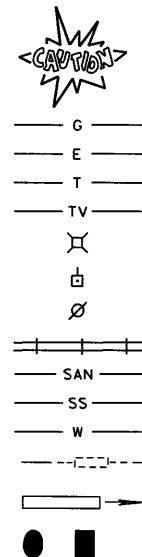
COUNTY LINE
CORPORATE LIMITS
PROPERTY LINE
LOT LINE
LIMITED EASEMENT
EARTHWORK BALANCE POINT
EXISTING RIGHT OF WAY
PROPOSED OR NEW R/W LINE
SURVEY LINE

SLOPE INTERCEPT
ORIGINAL GROUND
MARSH OR ROCK PROFILE
(To be noted as such)

MARSH AREA

WOODED OR SHRUB AREA

COMBUSTIBLE FLUIDS
UNDERGROUND UTILITIES
GAS
ELECTRIC
TELEPHONE OR TELEGRAPH
TV/CABLE
SERVICE PEDESTAL
POWER POLE
TELEPHONE POLE
RAILROAD
SANITARY SEWER
STORM SEWER
WATER
EXISTING CULVERT
PROPOSED CULVERT
(Box or Pipe)
CULVERT (Profile View)



EQUATION
STA 1402+47.59 BK =
STA 1402+99.21 AH

BEGIN PROJECT 9476-00-70
STA 1300+87.00

LAYOUT

SCALE 0 1 MI



TOTAL NET LENGTH OF CENTERLINE = 4.037 MI TOTAL

Coordinates on this plan are referenced to the Wisconsin County
Coordinate System (WCCS), PRICE County.

ACCEPTED FOR

COUNTY of PRICE

10-24-13 *J. M. Miller*

DATE:

ORIGINAL PLANS PREPARED BY:
SHORT ELLIOTT HENDRICKSON, INC



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor _____ SEH

Designer _____ SEH

Management Consultant _____ CEDAR CORPORATION

APPROVED FOR DISTRICT OFFICE
DATE: 10-31-13 [Signature]
(Management Consultant Signature)

STANDARD ABBREVIATIONS

ABUT	ABUTMENT	HYD	HYDRANT
AC	ACRE	ID	INSIDE DIAMETER
AGG	AGGREGATE	INV	INVERT
AECPRC	APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE	IP	IRON PIPE ON PIN
		LHF	LEFT-HAND FORWARD
ASPH	ASPHALTIC	L	LENGTH OF CURVE
AVG	AVERAGE	LF	LINEAR FOOT
ADT	AVERAGE DAILY TRAFFIC	LC	LONG CHORD OF CURVE
BF	BACK FACE	LS	LUMP SUM
BM	BENCH MARK	MH	MANHOLE
BR	BRIDGE	MOR	MID POINT OF RADIUS
CE	COMMERCIAL ENTRANCE	NC	NORMAL CROWN
CL OR C/L OR ☿	CENTER LINE	NO	NUMBER
Δ	CENTRAL ANGLE OR DELTA	OBLIT	OBLITERATE
CONC	CONCRETE	PAVT	PAVEMENT
CPRC	CULVERT PIPE REINFORCED CONCRETE	PE	PRIVATE ENTRANCE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL	PVRC	POINT OF VERTICAL REVERSE CURVE
		QOR	QUARTER POINT OF RADIUS
CR	CREEK	R	RADIUS
CY	CUBIC YARD	REQ'D	REQUIRED
C & G	CURB AND GUTTER	RES	RESIDENCE OR RESIDENTIAL
D	DEGREE OF CURVE	RHF	RIGHT-HAND FORWARD
DHV	DESIGN HOUR VOLUME	R/W	RIGHT-OF-WAY
DISCH	DISCHARGE	R	RIVER
DG	DITCH GRADE	RDWY	ROADWAY
DWY	DRIVEWAY	R/L OR R	REFERENCE LINE
X	EAST GRID COORDINATE	SALV	SALVAGED
EAT	STEEL PLATE BEAM GUARD	SAN	SANITARY SEWER
	ENERGY ABSORBING TERMINAL	SF	SQUARE FEET
EOR	END POINT OF RADIUS	SY	SQUARE YARD
EL	ELEVATION	SDD	STANDARD DETAIL DRAWINGS
ENT	ENTRANCE	STA	STATION
ESALS	EQUIVALENT SINGLE AXLE LOADS	SS	STORM SEWER
EXC	EXCAVATION	SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
EBS	EXCAVATION BELOW SUBGRADE	SE	SUPERELEVATION RATE
EXIST	EXISTING	TC	TOP OF CURB
FC	FACE OF CURB	T OR TN	TOWN
FF	FACE TO FACE	T	TRUCKS (PERCENT OF)
FERT	FERTILIZE	TYP	TYPICAL
FE	FIELD ENTRANCE	VAR	VARIABLE
FL	FLOW LINE	VC	VERTICAL CURVE
FO	FIBER OPTIC	Y	NORTH GRID COORDINATE
CWT	HUNDREDWEIGHT	YD	YARD

GENERAL NOTES

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE APPROXIMATE USGS DATUM.

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

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

CURVE DATA IS BASED ON THE ARC DEFINITION.

BEARINGS SHOWN ON THE PLANS ARE PROJECT BEARINGS TO THE NEAREST SECOND.

GRADE TO MATCH PROPOSED CROSS SLOPE AND SUPER ELEVATION.

BEARINGS SHOWN ON THE PLAN ARE REFERENCED TO THE EXISTING ROADWAY CENTERLINE AND ARE ASSUMED.

ALIGNMENT WAS CREATED USING EXISTING PLANS AND IS APPROXIMATE. ACTUAL SURVEY WAS COMPLETED FROM APPROXIMATELY STA 1502+00 TO STA 1507+00.

JOINT TIES REQUIRED FOR CONCRETE PIPE AND ENDWALL INSTALLATION.

UTILITY CONTACTS

CENTURYLINK
400 W 9TH ST N, SUITE #5
LADYSMITH, WI 54848
TELEPHONE: 715.532.0032
ATTENTION: BRIAN HUHN
EMAIL: BRIAN.HUHN@CENTURYLINK.COM

PRICE ELECTRIC COOPERATIVE
508 N LAKE AVE
PO BOX 110
PHILLIPS, WI 54555
TELEPHONE: 715.339.2155
ATTENTION: JASON WEIK
EMAIL: JWEIK@PRICE-ELECTRIC.COM



DESIGN CONTACT

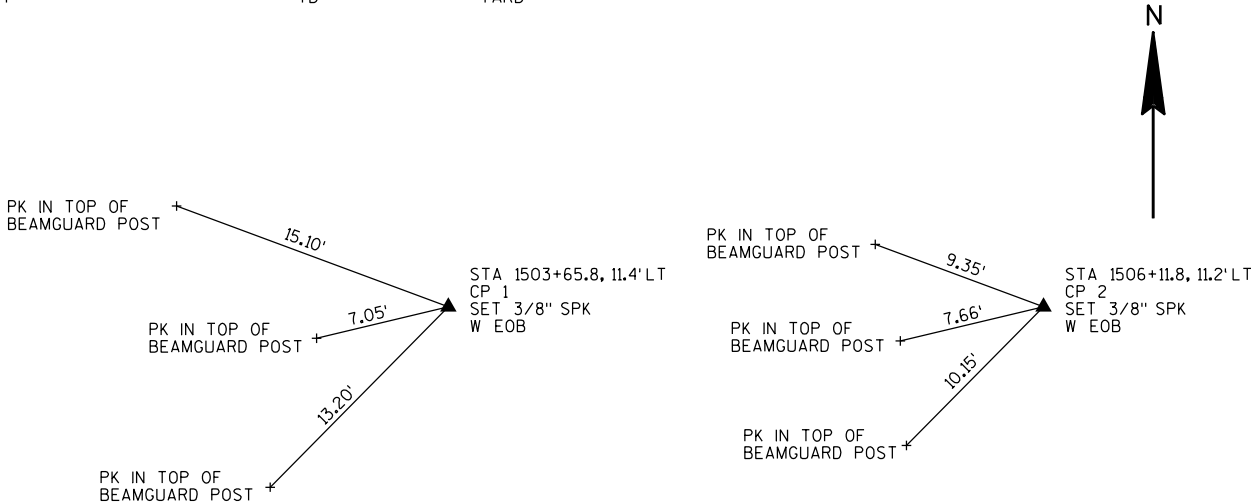
SEH INC.
421 FRENETTE DRIVE
CHIPPEWA FALLS, WI 54729
TELEPHONE: 715.720.6267
ATTENTION: DAN GUSTAFSON
EMAIL: DGUSTAFSON@SEHINC.COM

W.D.N.R. CONTACT

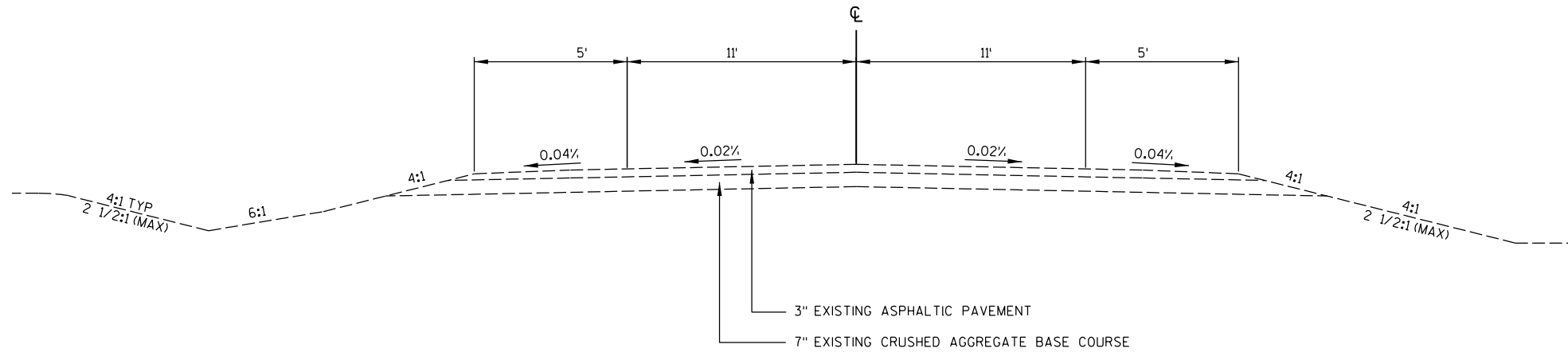
WI DEPT. OF NATURAL RESOURCES
810 W. MAPLE STREET
SPOONER, WI 54801
TELEPHONE: 715.635.4228
ATTENTION: SHAWN HASELEU
EMAIL: SHAWN.HASELEU@WISCONSIN.GOV

MUNICIPALITY CONTACT

PRICE COUNTY HIGHWAY DEPARTMENT
704 NORTH LAKE AVENUE, PO BOX 169
PHILLIPS, WI 54555
TELEPHONE: 715.339.3081
ATTENTION: DON GRANDE
EMAIL: DON.GRANDE@CO.PRICE.WI.US



ALIGNMENT TIES

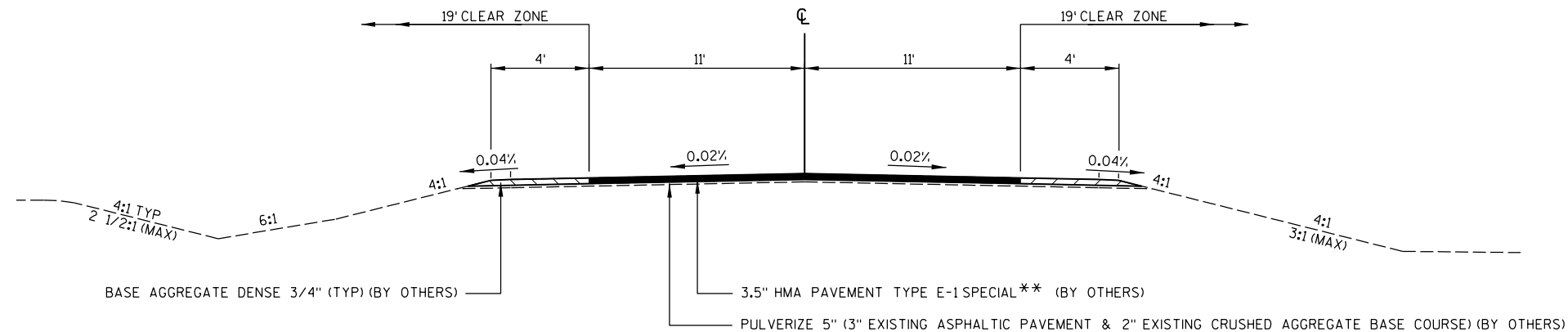
**TYPICAL EXISTING SECTION**

CTH C
STA 1300+87.00 TO 1402+47.59 BK*
STA 1402+99.21 AH TO 1514+00.00

*STA 1402+47.59 BK = STA 1402+99.21 AH



EQUATION

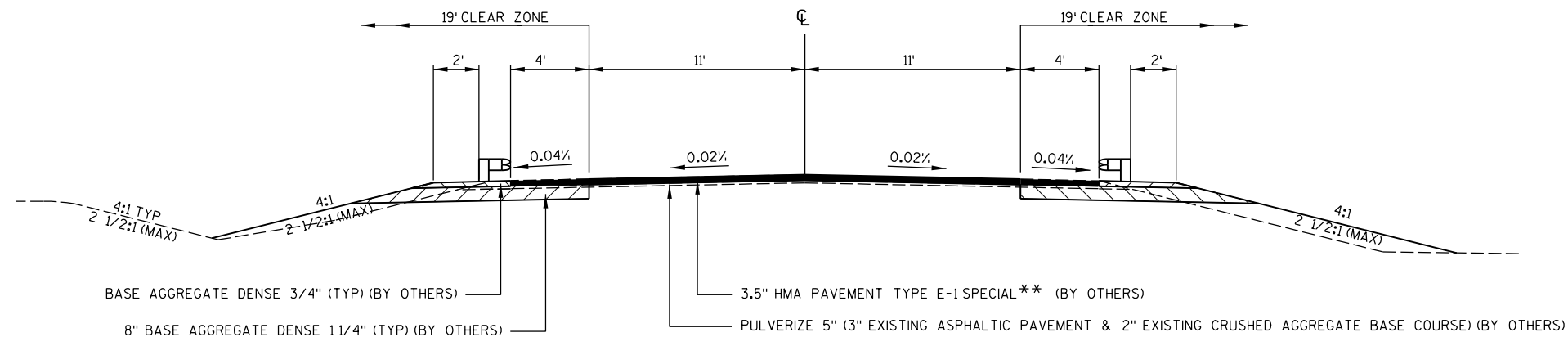
**TYPICAL PROPOSED SECTION**

CTH C
STA 1300+87.00 TO 1402+47.59 BK*
STA 1402+99.21 AH TO 1502+29.64
STA 1509+90.81 TO 1514+00.00

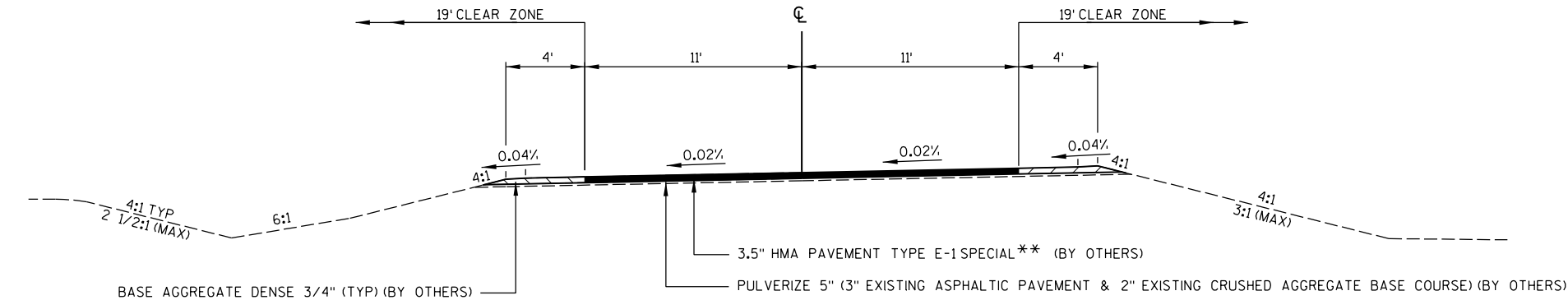
*STA 1402+47.59 BK = STA 1402+99.21 AH



EQUATION

**TYPICAL PROPOSED BEAMGUARD SECTION**

CTH C
STA 1502+29.64 TO 1506+90.81



TYPICAL SUPERELEVATED SECTION

SuperElevation Transition Points :

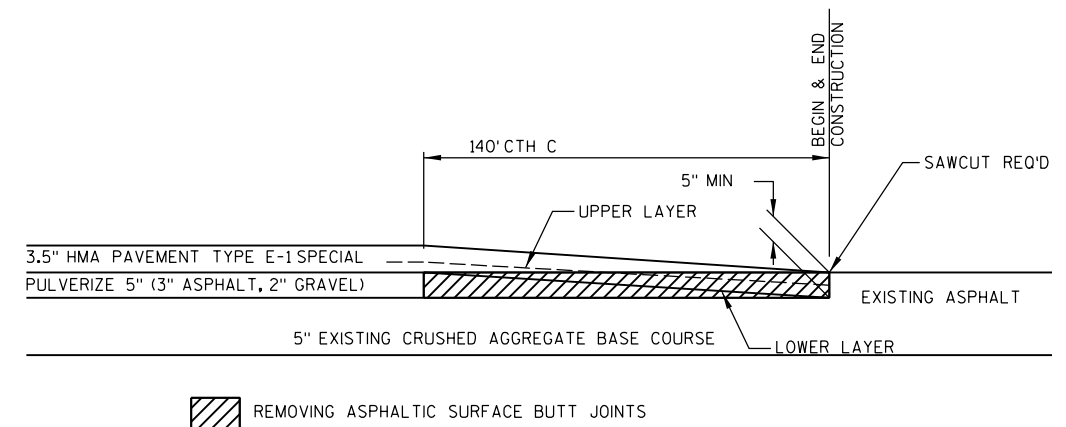
Station	Type	Left	Right	Shoulder Left	Shoulder Right
1302+10.36	Sh End NC	-0.020000	-0.020000	-0.040000	-0.040000
1302+54.71	End NC	-0.020000	-0.020000	-0.020000	-0.040000
1302+99.07	Zero Super	0.000000	-0.020000	-0.040000	-0.040000
1303+43.42	Rev. Crown	0.020000	-0.020000	0.020000	-0.040000
1303+87.77	Sh. Trans.	0.040000	-0.040000	0.040000	-0.040000
1304+31.48	Begin FS	0.059707	-0.059707	0.059707	-0.059707
1312+09.10	End FS	0.059707	-0.059707	0.059707	-0.059707
1312+52.81	Sh. Trans.	0.040000	-0.040000	0.040000	-0.040000
1312+97.16	Rev. Crown	0.020000	-0.020000	0.020000	-0.040000
1313+41.52	Zero Super	0.000000	-0.020000	0.000000	-0.040000
1313+72.54	Zero Super	-0.020000	0.000000	-0.040000	0.000000
1314+16.89	Rev. Crown	-0.020000	0.020000	-0.040000	0.020000
1314+61.24	Sh. Trans.	-0.040000	0.040000	-0.040000	0.040000
1315+04.95	Begin FS	-0.059707	0.059707	-0.059707	0.059707
1318+98.83	End FS	-0.059707	0.059707	-0.059707	0.059707
1319+42.53	Sh. Trans.	-0.040000	0.040000	-0.040000	0.040000
1319+86.89	Rev. Crown	-0.020000	0.020000	-0.040000	0.020000
1320+31.24	Zero Super	-0.020000	0.000000	-0.040000	0.000000
1320+75.60	Begin NC	-0.020000	-0.020000	-0.040000	-0.020000
1321+19.95	Sh Begin NC	-0.020000	-0.020000	-0.040000	-0.040000
1322+91.54	Sh End NC	-0.020000	-0.020000	-0.040000	-0.040000
1323+35.89	End NC	-0.020000	-0.020000	-0.040000	-0.020000
1323+80.25	Zero Super	-0.020000	0.000000	-0.040000	0.000000
1324+24.60	Rev. Crown	-0.020000	0.020000	-0.040000	0.020000
1324+68.95	Sh. Trans.	-0.040000	0.040000	-0.040000	0.040000
1325+12.66	Begin FS	-0.059707	0.059707	-0.059707	0.059707
1327+26.52	End FS	-0.059707	0.059707	-0.059707	0.059707
1327+70.23	Sh. Trans.	-0.040000	0.040000	-0.040000	0.040000
1328+14.58	Rev. Crown	-0.020000	0.020000	-0.040000	0.020000
1328+58.94	Zero Super	-0.020000	0.000000	-0.040000	0.000000
1329+03.29	Begin NC	-0.020000	-0.020000	-0.040000	-0.020000
1329+47.65	Sh Begin NC	-0.020000	-0.020000	-0.040000	-0.040000
1331+28.88	Sh End NC	-0.020000	-0.020000	-0.040000	-0.040000
1331+73.20	End NC	-0.020000	-0.020000	-0.020000	-0.040000
1332+17.53	Zero Super	0.000000	-0.020000	0.000000	-0.040000
1332+61.85	Rev. Crown	0.020000	-0.020000	0.020000	-0.040000
1333+06.18	Sh. Trans.	0.040000	-0.040000	0.040000	-0.040000
1333+30.29	Begin FS	0.050882	-0.050882	0.050882	-0.050882
1341+83.17	End FS	0.050882	-0.050882	0.050882	-0.050882
1342+07.29	Sh. Trans.	0.040000	-0.040000	0.040000	-0.040000
1342+51.61	Rev. Crown	0.020000	-0.020000	0.020000	-0.040000
1342+95.93	Zero Super	0.000000	-0.020000	0.000000	-0.040000
1343+29.25	Zero Super	-0.020000	0.000000	-0.040000	0.000000
1343+73.61	Rev. Crown	-0.020000	0.020000	-0.040000	0.020000
1344+17.96	Sh. Trans.	-0.040000	0.040000	-0.040000	0.040000
1344+61.67	Begin FS	-0.059707	0.059707	-0.059707	0.059707
1354+43.50	End FS	-0.059707	0.059707	-0.059707	0.059707
1354+87.20	Sh. Trans.	-0.040000	0.040000	-0.040000	0.040000
1355+31.55	Rev. Crown	-0.020000	0.020000	-0.040000	0.020000
1355+75.91	Zero Super	-0.020000	0.000000	-0.040000	0.000000
1356+03.11	Zero Super	0.000000	-0.020000	0.000000	-0.040000
1356+47.63	Rev. Crown	0.020000	-0.020000	0.020000	-0.040000
1356+92.14	Sh. Trans.	0.040000	-0.040000	0.040000	-0.040000
1357+21.41	Begin FS	0.053150	-0.053150	0.053150	-0.053150
1363+01.66	End FS	0.053150	-0.053150	0.053150	-0.053150
1363+30.93	Sh. Trans.	0.040000	-0.040000	0.040000	-0.040000
1363+75.44	Rev. Crown	0.020000	-0.020000	0.020000	-0.040000
1364+19.96	Zero Super	0.000000	-0.020000	0.000000	-0.040000
1364+64.47	Begin NC	-0.020000	-0.020000	-0.020000	-0.040000
1365+37.00	End NC	-0.020000	-0.020000	-0.020000	-0.040000
1365+81.57	Zero Super	0.000000	-0.020000	0.000000	-0.040000
1366+26.13	Rev. Crown	0.020000	-0.020000	0.020000	-0.040000
1366+47.99	Begin FS	0.029809	-0.029809	0.029809	-0.040000
1373+46.20	End FS	0.029809	-0.029809	0.029809	-0.040000
1373+68.06	Rev. Crown	0.020000	-0.020000	0.020000	-0.040000

SuperElevation Transition Points :

Station	Type	Left	Right	Shoulder Left	Shoulder Right
1403+13.18	Sh End NC	-0.020000	-0.020000	-0.040000	-0.040000
1403+57.53	End NC	-0.020000	-0.020000	-0.040000	-0.020000
1404+01.88	Zero Super	-0.020000	0.000000	-0.040000	0.000000
1404+46.24	Rev. Crown	-0.020000	0.020000	-0.040000	0.020000
1404+90.59	Sh. Trans.	-0.040000	0.040000	-0.040000	0.040000
1405+34.30	Begin FS	-0.059707	0.059707	-0.059707	0.059707
1411+85.41	End FS	-0.059707	0.059707	-0.059707	0.059707
1412+29.12	Sh. Trans.	-0.040000	0.040000	-0.040000	0.040000
1412+73.47	Rev. Crown	-0.020000	0.020000	-0.040000	0.020000
1413+17.82	Zero Super	-0.020000	0.000000	-0.040000	0.000000
1413+62.18	Begin NC	-0.020000	-0.020000	-0.040000	-0.020000
1414+06.53	Sh Begin NC	-0.020000	-0.020000	-0.040000	-0.040000
1415+18.20	Sh End NC	-0.020000	-0.020000	-0.040000	-0.040000
1415+62.59	End NC	-0.020000	-0.020000	-0.020000	-0.040000
1416+06.97	Zero Super	0.000000	-0.020000	0.000000	-0.040000
1416+51.35	Rev. Crown	0.020000	-0.020000	0.020000	-0.040000
1416+95.74	Sh. Trans.	0.040000	-0.040000	0.040000	-0.040000
1417+08.22	Begin FS	0.045627	-0.045627	0.045627	-0.045627
1420+37.33	End FS	0.045627	-0.045627	0.045627	-0.045627
1420+49.82	Sh. Trans.	0.040000	-0.040000	0.040000	-0.040000
1420+94.20	Rev. Crown	0.020000	-0.020000	0.020000	-0.040000
1421+38.58	Zero Super	0.000000	-0.020000	0.000000	-0.040000
1421+82.97	Begin NC	-0.020000	-0.020000	-0.020000	-0.040000
1422+27.35	Sh Begin NC	-0.020000	-0.020000	-0.040000	-0.040000
1450+12.29	Sh End NC	-0.020000	-0.020000	-0.040000	-0.040000
1450+17.09	End NC	-0.020000	-0.020000	-0.040000	-0.020000
1450+21.89	Zero Super	-0.020000	0.000000	-0.040000	0.000000
1450+23.89	Begin FS	-0.008332	0.008332	-0.040000	0.008332
1455+00.22	End FS	-0.008332	0.008332	-0.040000	0.008332
1455+02.22	Zero Super	-0.020000	0.000000	-0.040000	0.000000
1455+07.02	Begin NC	-0.020000	-0.020000	-0.040000	-0.020000
1455+11.82	Sh Begin NC	-0.020000	-0.020000	-0.040000	-0.040000
1461+84.73	Sh End NC	-0.020000	-0.020000	-0.040000	-0.040000
1462+29.09	End NC	-0.020000	-0.020000	-0.020000	-0.040000
1462+73.44	Zero Super	0.000000	-0.020000	0.000000	-0.040000
1463+17.80	Rev. Crown	0.020000	-0.020000	0.020000	-0.040000
1463+62.15	Sh. Trans.	0.040000	-0.040000	0.040000	-0.040000
1464+05.86	Begin FS	0.059707	-0.059707	0.059707	-0.059707
1473+75.31	End FS	0.059707	-0.059707	0.059707	-0.059707
1474+19.01	Sh. Trans.	0.040000	-0.040000	0.040000	-0.040000
1474+63.37	Rev. Crown	0.020000	-0.020000	0.020000	-0.040000
1475+07.72	Zero Super	0.000000	-0.020000	0.000000	-0.040000
1475+52.08	Begin NC	-0.020000	-0.020000	-0.020000	-0.040000
1475+96.43	Sh Begin NC	-0.020000	-0.020000	-0.040000	-0.040000

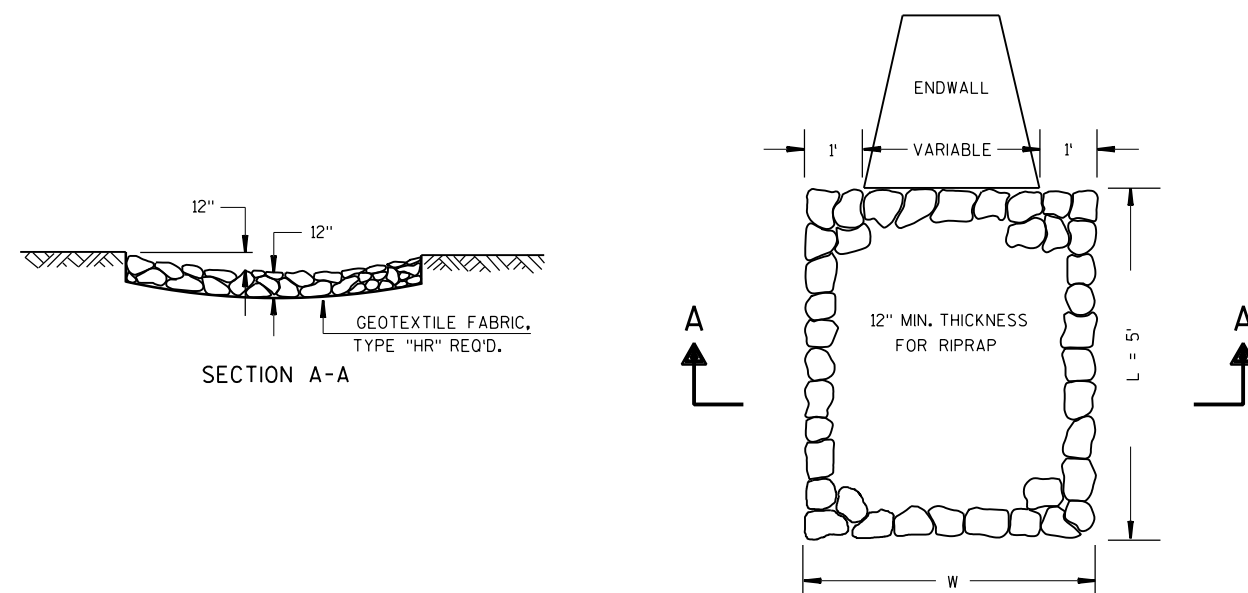
SuperElevation Transition Points (Continued) :

Station	Type	Left	Right	Shoulder Left	Shoulder Right
1374+12.63	Zero Super	0.000000	-0.020000	0.000000	-0.040000
1374+57.20	Begin NC	-0.020000	-0.020000	-0.020000	-0.040000
1375+01.76	Sh Begin NC	-0.020000	-0.020000	-0.040000	-0.040000
1375+53.89	Sh End NC	-0.020000	-0.020000	-0.040000	-0.040000
1375+98.24	End NC	-0.020000	-0.020000	-0.040000	-0.020000
1376+42.60	Zero Super	-0.020000	0.000000	-0.040000	0.000000
1376+86.95	Rev. Crown	-0.020000	0.020000	-0.040000	0.020000
1377+31.31	Sh. Trans.	-0.040000	0.040000	-0.040000	0.040000
1377+75.01	Begin FS	-0.059707	0.059707	-0.059707	0.059707
1381+09.18	End FS	-0.059707	0.059707	-0.059707	0.059707
1381+52.88	Sh. Trans.	-0.040000	0.040000	-0.040000	0.040000
1381+97.24	Rev. Crown	-0.020000	0.020000	-0.040000	0.020000
1382+41.59	Zero Super	-0.020000	0.000000	-0.040000	0.000000
1382+76.32	Zero Super	0.000000	-0.020000	0.000000	-0.040000
1383+20.67	Rev. Crown	0.020000	-0.020000	0.020000	-0.040000
1383+65.03	Sh. Trans.	0.040000	-0.040000	0.040000	-0.040000
1384+08.73	Begin FS	0.059707	-0.059707	0.059707	-0.059707
1386+05.61	End FS	0.059707	-0.059707	0.059707	-0.059707
1386+49.32	Sh. Trans.	0.040000	-0.040000	0.040000	-0.040000
1386+93.67	Rev. Crown	0.020000	-0.020000	0.020000	-0.040000
1387+38.03	Zero Super	0.000000	-0.020000	0.000000	-0.040000
1387+72.90	Zero Super	-0.020000	0.000000	-0.040000	0.000000
1388+17.26	Rev. Crown	-0.020000	0.020000	-0.040000	0.020000
1388+61.61	Sh. Trans.	-0.040000	0.040000	-0.040000	0.040000
1389+05.32	Begin FS	-0.059707	0.059707	-0.059707	0.059707
1394+45.27	End FS	-0.059707	0.059707	-0.059707	0.059707
1394+88.97	Sh. Trans.	-0.040000	0.040000	-0.040000	0.040000
1395+33.32	Rev. Crown	-0.020000	0.020000	-0.040000	0.020000
1395+77.68	Zero Super	-0.020000	0.000000	-0.040000	0.000000
1396+22.03	Begin NC	-0.020000	-0.020000	-0.040000	-0.020000
1396+66.39	Sh Begin NC	-0.020000	-0.020000	-0.040000	-0.040000
1397+67.06	Sh End NC	-0.020000	-0.020000	-0.040000	-0.040000
1398+11.42	End NC	-0.020000	-0.020000	-0.020000	-0.040000
1398+55.77	Zero Super	0.000000	-0.020000	0.000000	-0.040000
1399+00.13	Rev. Crown	0.020000	-0.020000	0.020000	-0.040000
1399+44.48	Sh. Trans.	0.040000	-0.040000	0.040000	-0.040000
1399+88.19	Begin FS	0.059707	-0.059707	0.059707	-0.059707
1402+03.45	End FS	0.059707	-0.059707	0.059707	-0.059707
1402+47.15	Sh. Trans.	0.040000	-0.040000	0.040000	-0.040000
1402+91.51	Rev. Crown	0.020000	-0.020000	0.020000	-0.040000
1403+35.86	Zero Super	0.000000	-0.020000	0.000000	-0.040000
1403+80.21	Begin NC	-0.020000	-0.020000	-0.020000	-0.040000
1404+24.57	Sh Begin NC	-0.020000	-0.020000	-0.040000	-0.040000

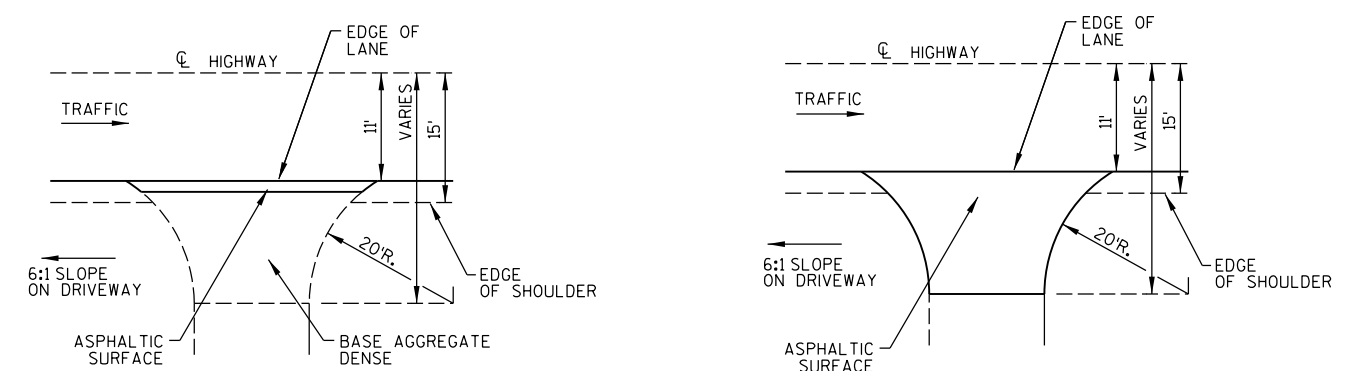


DETAIL OF BUTTED JOINT (BY OTHERS)

STA 1300+87
STA 1514+00



RIPRAP TREATMENT AT CULVERTS



PLAN VIEW

(PAVED SHOULDER ON HIGHWAY)

PROPOSED RURAL DRIVEWAY INTERSECTION DETAIL

DATE 13FEB14		E S T I M A T E O F Q U A N T I T I E S			
LINE				9476-00-70	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0010	203.0100	REMOVING SMALL PIPE CULVERTS	EACH	3.000	3.000
0020	205.0100	EXCAVATION COMMON	CY	110.000	110.000
0030	208.0100	BORROW	CY	180.000	180.000
0040	213.0100	FINISHING ROADWAY (PROJECT) 01.	EACH	1.000	1.000
		9476-00-70			
0050	520.9700.S	CULVERT PIPE LINERS (SIZE) 01. 20-INCH	LF	1,138.000	1,138.000
0060	520.9700.S	CULVERT PIPE LINERS (SIZE) 02. 26-INCH	LF	289.000	289.000
0070	520.9750.S	CLEANING CULVERT PIPES FOR LINER	EACH	19.000	19.000
		VERIFICATION			
0080	521.1024	APRON ENDWALLS FOR CULVERT PIPE STEEL	EACH	38.000	38.000
		24-INCH			
0090	521.1030	APRON ENDWALLS FOR CULVERT PIPE STEEL	EACH	6.000	6.000
		30-INCH			
0100	522.0148	CULVERT PIPE REINFORCED CONCRETE CLASS	LF	20.000	20.000
		III 48-INCH			
0110	522.1048	APRON ENDWALLS FOR CULVERT PIPE	EACH	4.000	4.000
		REINFORCED CONCRETE 48-INCH			
0120	530.0124	CULVERT PIPE CORRUGATED POLYETHYLENE	LF	173.000	173.000
		24-INCH			
0130	606.0200	RIPRAP MEDIUM	CY	14.000	14.000
0140	614.0920	SALVAGED RAIL	LF	600.000	600.000
0150	614.2300	MGS GUARDRAIL 3	LF	125.000	125.000
0160	614.2340	MGS GUARDRAIL 3 L	LF	225.000	225.000
0170	614.2610	MGS GUARDRAIL TERMINAL EAT	EACH	4.000	4.000
0180	619.1000	MOBILIZATION	EACH	1.000	1.000
0190	625.0500	SALVAGED TOPSOIL	SY	1,000.000	1,000.000
0200	627.0200	MULCHING	SY	1,425.000	1,425.000
0210	628.1504	SILT FENCE	LF	1,380.000	1,380.000
0220	628.1520	SILT FENCE MAINTENANCE	LF	2,760.000	2,760.000
0230	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	1.000	1.000
0240	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	1.000	1.000
0250	628.2008	EROSION MAT URBAN CLASS I TYPE B	SY	400.000	400.000
0260	629.0205	FERTILIZER TYPE A	CWT	1.000	1.000
0270	630.0120	SEEDING MIXTURE NO. 20	LB	35.000	35.000
0280	630.0200	SEEDING TEMPORARY	LB	35.000	35.000
0290	642.5001	FIELD OFFICE TYPE B	EACH	1.000	1.000
0300	643.0100	TRAFFIC CONTROL (PROJECT) 01. 9476-00-70	EACH	1.000	1.000
0310	643.0900	TRAFFIC CONTROL SIGNS	DAY	480.000	480.000
0320	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	30.000	30.000
0330	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	42,050.000	42,050.000
0340	646.0406	PAVEMENT MARKING SAME DAY EPOXY 4-INCH	LF	32,525.000	32,525.000
0350	648.0100	LOCATING NO-PASSING ZONES	MI	4.037	4.037
0360	650.6000	CONSTRUCTION STAKING PIPE CULVERTS	EACH	3.000	3.000
0370	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL	LS	1.000	1.000
		CONTROL (PROJECT) 01. 9476-00-70			
0380	ASP.1T0A	ON-THE-JOB TRAINING APPRENTICE AT \$5.	HRS	1,200.000	1,200.000
		00/HR			
0390	ASP.1T0G	ON-THE-JOB TRAINING GRADUATE AT \$5.00/HR	HRS	600.000	600.000

3

REMOVALS

203.0100 REMOVING SMALL PIPE CULVERTS EACH		
STATION	LOCATION	
CTH C		
1302+23	LT & RT	1
1367+72	LT & RT	1
1382+05	LT & RT	1
ITEM TOTAL		3

EXCAVATION

		205.0100 COMMON CY	AIR FILL CY	*EXPANDED FILL CY	208.0100 BORROW CY
STATION	LOCATION				
CTH C					
1502+00 - 1507+22	LT & RT	110	218	290	180
ITEM TOTAL		110	218	290	180

*NOTE: EXPANSION FACTOR = 1.3

FINISHING ROADWAY (9476-00-70)

213.0100 EACH		
STATION	LOCATION	
CTH C		
1300+87 - 1514+00	LT & RT	1
ITEM TOTAL		1

RIPRAP ITEMS

		606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE FABRIC TYPE HR SY
STATION	LOCATION		
CTH C			
1504+48	LT & RT	7	15
1505+04	LT & RT	7	15
ITEM TOTAL		14	30

PIPE CULVERTS

		520.9700.S.01 CULVERT PIPE LINERS 20-INCH LF	520.9700.S.02 CULVERT PIPE LINERS 26-INCH LF	520.9750.S CLEANING CULVERT PIPES FOR LINER VERIFICATION EACH	521.1024 APRON ENDWALLS FOR CULVERT PIPE STEEL 24-INCH EACH	521.1030 APRON ENDWALLS FOR CULVERT PIPE STEEL 30-INCH EACH	522.0148* CULVERT PIPE REINFORCED CONCRETE CLASS III 48-INCH LF	522.1048* APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 48-INCH EACH	530.0124 CULVERT PIPE CORRUGATED POLYETHYLENE 24-INCH LF	REMARKS
CTH C										
1302+23					2				55	SLOPE: 1.6 %
1313+43		51		1	2					SLOPE: 3.9 %
1320+00			65	1		2				SLOPE: 5.9 %
1326+00		96		1	2					SLOPE: 10.0 %
1335+30			112	1			2			SLOPE: 1.0 %
1335+30			112	1			2			SLOPE: 1.0 %
1342+77		85		1	2					SLOPE: 0.8 %
1352+30		94		1	2					SLOPE: 1.6 %
1362+80		61		1	2					SLOPE: 4.7 %
1367+72					2				63	SLOPE: 1.9 %
1375+18		112		1	2					SLOPE: 3.7 %
1382+05					2				55	SLOPE: 1.1 %
1404+32		57		1	2					SLOPE: 0.0 %
1416+22		63		1	2					SLOPE: 0.3 %
1424+00		70		1	2					SLOPE: 0.5 %
1438+77		65		1	2					SLOPE: 1.0 %
1441+37		57		1	2					SLOPE: 0.6 %
1456+32		46		1	2					SLOPE: 0.0 %
1465+37		55		1	2					SLOPE: 0.4 %
1472+77		88		1	2					SLOPE: 1.7 %
1479+92		92		1	2					SLOPE: 1.7 %
1484+68		46		1	2					SLOPE: 1.4 %
1504+48							10	2		SLOPE: 1.1 %
1505+04							10	2		SLOPE: 1.1 %
ITEM TOTALS		1138	289	19	38	6	20	4	173	

*JOINT TIES REQUIRED FOR CONCRETE PIPE AND ENDWALL INSTALLATION
**VERIFY PIPE CULVERT LENGTHS AND PIPE CULVERT LINER LENGTHS

GUARDRAIL ITEMS

		614.0920 SALVAGED RAIL LF	614.2300 MGS GUARDRAIL 3 LF	614.2340 MGS GUARDRAIL L LF	614.2610 MGS TERMINAL EAT EACH
STATION	LOCATION				
CTH C					
1503+16 - 1506+32	LT & RT	600			
1503+19.6 - 1503+72.7	RT				1
1503+50.9 - 1504+04.0	LT				1
1503+72.7 - 1504.22.7	RT		50		
1504+04.0 - 1504+16.5	LT		12.5		
1504+16.5 - 1505+29.0	LT			112.5	
1504+22.7 - 1505+35.2	RT			112.5	
1505+29.0 - 1505+79.0	LT		50		
1505+35.2 - 1505+47.7	RT		12.5		
1505+47.7 - 1506+00.9	RT				1
1505+79.0 - 1506+32.1	LT				1
ITEM TOTALS		600	125	225	4

MOBILIZATION

		619.1000 EACH
STATION	LOCATION	
CTH C		
1300+87 - 1514+00	LT & RT	1
ITEM TOTAL		1

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE FOR
ENGINEER ESTIMATE CATEGORY 0010, UNLESS OTHERWISE NOTED.

3

3

EROSION CONTROL					
STATION	LOCATION	628.1504	628.1520	628.2008	REMARKS
		SILT FENCE LF	SILT FENCE MAINTENANCE LF	EROSION MAT URBAN CLASS I TYPE B SY	
CTH C					
1503+75 - 1505+75	LT & RT	400	800	400	PIPE REPLACEMENT & LINER LOCATIONS
1300+87 - 1514+00	LT & RT	880	1760		
1300+87 - 1514+00	UNDISTRIBUTED	100	200		
ITEM TOTALS		1380	2760	400	

MOBILIZATION EROSION CONTROL			
STATION		628.1905	628.1910
		EROSION CONTROL EACH	EROSION CONTROL EACH
CTH C			
1300+87 - 1514+00		1	1
ITEM TOTALS		1	1

FINISHING ITEMS					
STATION - STATION	625.0500	627.0200	629.0205	630.0120	630.0200
	SALVAGED TOPSOIL SY	MULCHING SY	FERTILIZER TYPE A CWT	SEEDING MIXTURE NO. 20 LB	SEEDING TEMPORARY LB
CTH C					
1502+00 - 1507+22	750	1050	0.70	25	25
1302+23	50	75	0.05	2	2
1367+72	50	75	0.05	2	2
1382+05	50	75	0.05	2	2
UNDISTRIBUTED	100	150	0.15	5	5
TOTALS	1000	1425	1.00	35	35

FIELD OFFICE TYPE B			
STATION	LOCATION	642.5001	
		EACH	
CTH C			
1300+87 - 1514+00	LT & RT	1	
ITEM TOTAL		1	

TRAFFIC CONTROL (9476-00-70)				
STATION	LOCATION	643.0100	643.0900	REMARKS
		EACH	SIGNS DAY	
CTH C				
1300+87 - 1514+00	LT & RT	1	480	15 SIGNS/DAY, 32 CALENDAR DAYS
ITEM TOTAL		1	480	

PAVEMENT MARKING				
STATION	LOCATION	646.0106	646.0406	REMARKS
		EPOXY 4-INCH LF	SAME DAY EPOXY 4-INCH LF	
CTH C				
1300+87 - 1514+00	LT & RT	42050		WHITE DOUBLE YELLOW SOLID YELLOW W/ SKIPS YELLOW SKIPS
1300+87 - 1514+00	~		26525	
1300+87 - 1514+00	~		5000	
1300+87 - 1514+00	~		1000	
ITEM TOTALS		42050	32525	

LOCATING NO-PASSING ZONES		
STATION	LOCATION	648.0100
		MI
CTH C		
1300+87 - 1514+00	LT & RT	4.037
ITEM TOTAL		4.037

CONSTRUCTION STAKING			
STATION	LOCATION	650.6000	650.9910
		PIPE CULVERTS EACH	SUPPLEMENTAL CONTROL (9476-00-70) LS
CTH C			
1300+87 - 1514+00	LT & RT		1
1302+23	LT & RT	1	
1367+72	LT & RT	1	
1382+05	LT & RT	1	
ITEM TOTALS		3	1

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE FOR
ENGINEER ESTIMATE CATEGORY 0010, UNLESS OTHERWISE NOTED.

ALL UTILITY LOCATIONS ARE APPROXIMATE. FIELD LOCATES WILL BE DONE PRIOR TO CONSTRUCTION BY CONTRACTOR

STA 1302+23
EXIST 24"x55'RCCP TO BE REMOVED
1-24"x55' CPCP REQ'D
2-24" STEEL AEW REQ'D

STA 1304+20 LT
CONSTRUCT AGG PE

STA 1308+40 LT
CONSTRUCT AGG FE

REPLACE (BY OTHERS)



REPLACE (BY OTHERS)



REPLACE (BY OTHERS)



REPLACE (BY OTHERS)



REMAINS

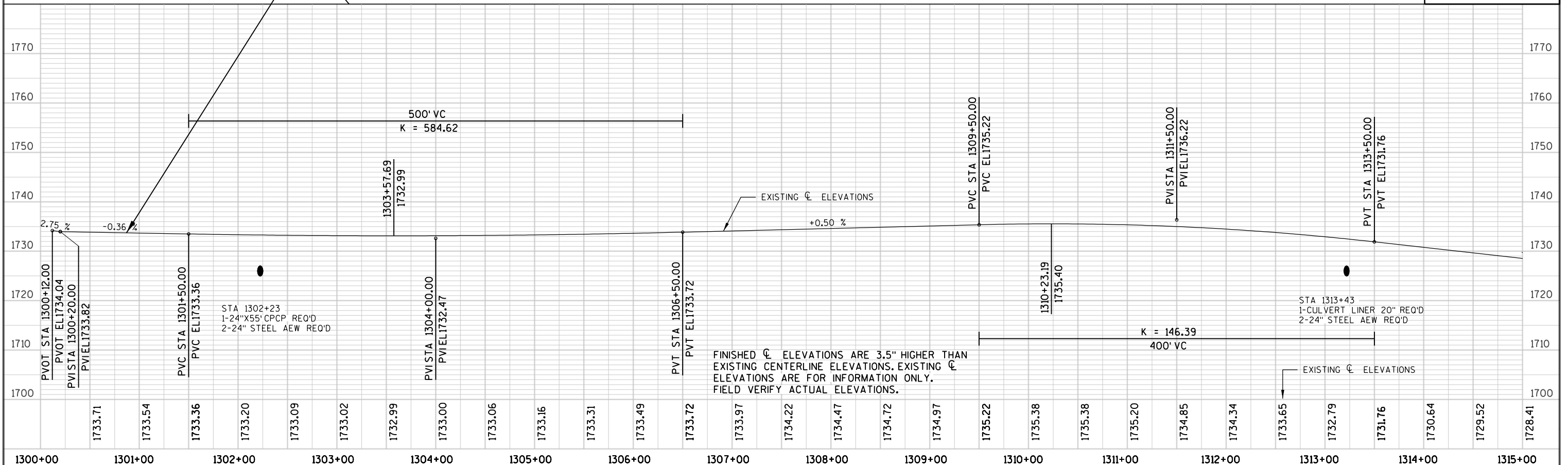


BEGIN PROJECT
STA 1300+87.00
MATCH EXISTING
SAWCUT REQ'D

CURVE DATA
DELTA =73°36'11" (RT)
D =8°29'60"
T =504.30
L =865.92
E =167.76
R =674.07
PC STA 1303+87.33
PI STA 1308+91.63
PT STA 1312+53.25
SE =0.06 '/

STA 1313+43
EXIST 24"x51'RCCP CLASS III TO REMAIN
1-20"x51' CP LINER REQ'D
2-24" STEEL AEW REQ'D

LEGEND



PROJECT NO: 9476-00-70

HWY: CTH C

COUNTY: PRICE

PLAN AND PROFILE

SHEET

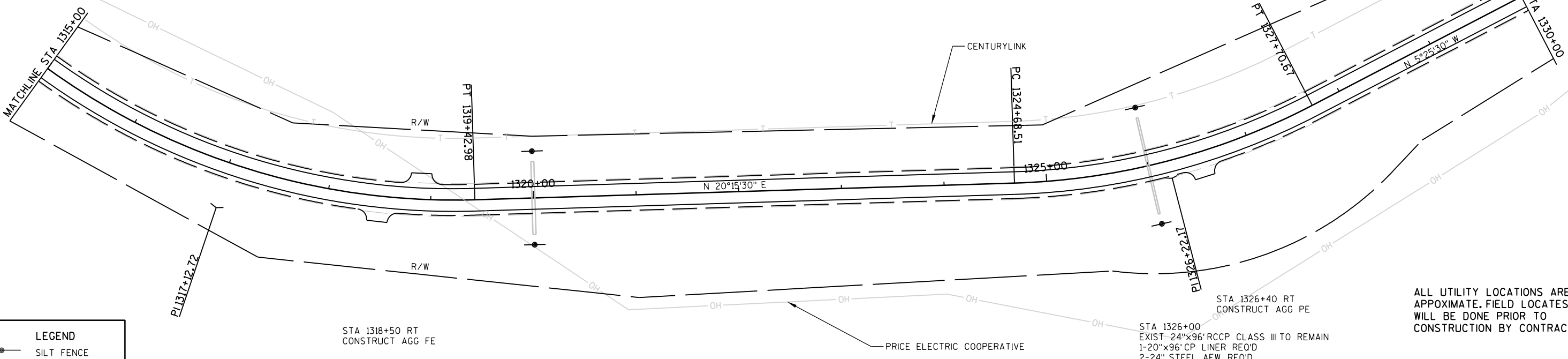
E

CURVE DATA
DELTA =40°59'05" (LT)
D =8°29'60"
T =251.92
L =482.17
E =45.54
R =674.07
PC STA 1314+60.80
PI STA 1317+12.72
PT STA 1319+42.98
SE =0.06 '/'

STA 1318+90 LT
CONSTRUCT AGG PE

STA 1320+00
EXIST 30"x65'RCCP CLASS III TO REMAIN
1-26"x65'CP LINER REQ'D
2-30" STEEL AEW REQ'D

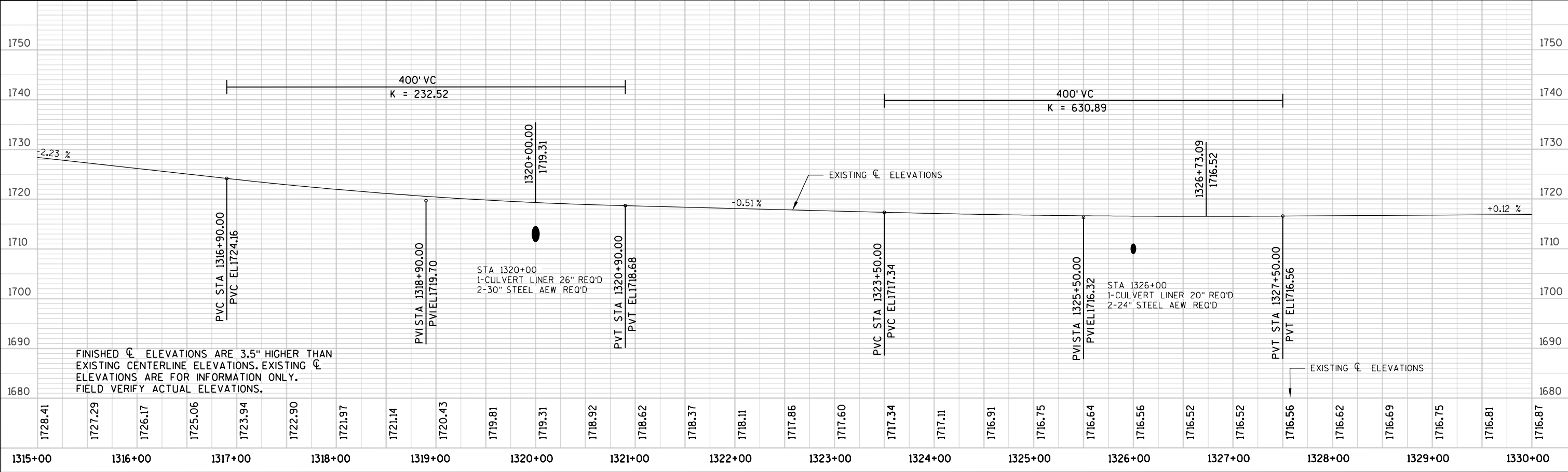
CURVE DATA
DELTA =25°41'00" (LT)
D =8°29'60"
T =153.66
L =302.16
E =17.29
R =674.07
PC STA 1324+68.51
PI STA 1326+22.17
PT STA 1327+70.67
SE =0.06 '/'



LEGEND

● SILT FENCE

ALL UTILITY LOCATIONS ARE
APPROXIMATE. FIELD LOCATES
WILL BE DONE PRIOR TO
CONSTRUCTION BY CONTRACTOR



1332+10 LT
CONSTRUCT AGG FE

STA 1335+30
EXIST 2'-26"x112' RCCP CLASS III TO REMAIN
2'-26"x112' CP LINERS REQ'D
4'-30" STEEL AEW REQ'D

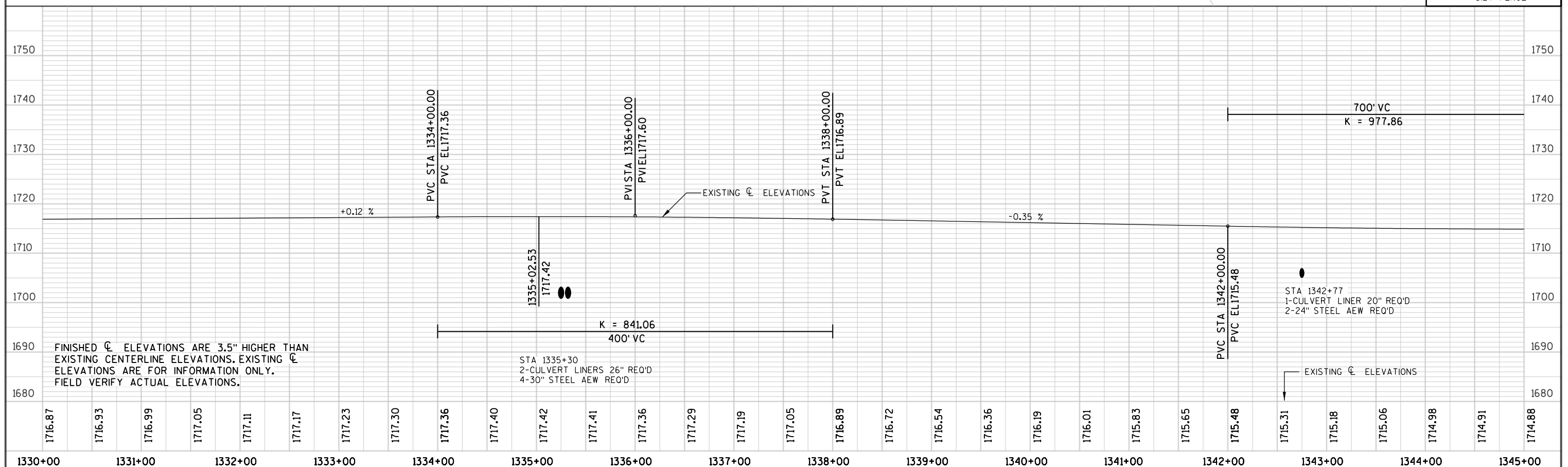
1339+10 LT
CONSTRUCT AGG PE

CURVE DATA
DELTA =46°24'12" (RT)
D =4°59'60"
T =491.18
L =928.07
E =100.83
R =1145.92
PC STA 1332+92.70
PI STA 1337+83.88
PT STA 1342+20.76
SE =0.059 1/1

STA 1342+77
EXIST 1-20"x85' RCCP CLASS III TO REMAIN
1-20"x85' CP LINER REQ'D
2-24" STEEL AEW REQ'D

1343+00 RT
CONSTRUCT AGG FE

LEGEND
SILT FENCE



3

ALL UTILITY LOCATIONS ARE
APPOXIMATE. FIELD LOCATES
WILL BE DONE PRIOR TO
CONSTRUCTION BY CONTRACTOR

STA 1352+30
EXIST 1-24"x94'RCCP CLASS III TO REMAIN
1-20"x94'CP LINER REQ'D
2-24" STEEL AEW REQ'D

CURVE DATA
DELTA =90°57'37" (LT)
D =8°29'60"
T =685.46
L =1070.12
E =287.30
R =674.07
PC STA 1344+17.52
PISTA 1351+02.98
PT STA 1354+87.64
SE =0.06 '/'

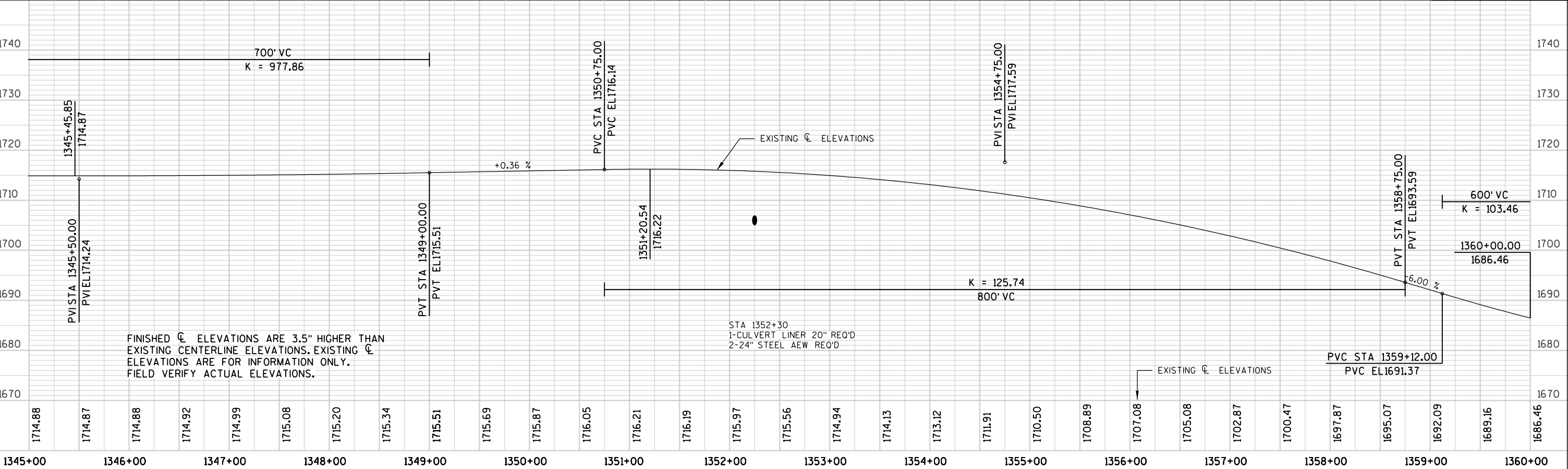
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D =5°30'00"
T =341.02
L =659.13
E =54.40
R =1041.74
PC STA 1356+81.97
PISTA 1360+22.99
PT STA 1363+41.10
SE =0.06 '/'

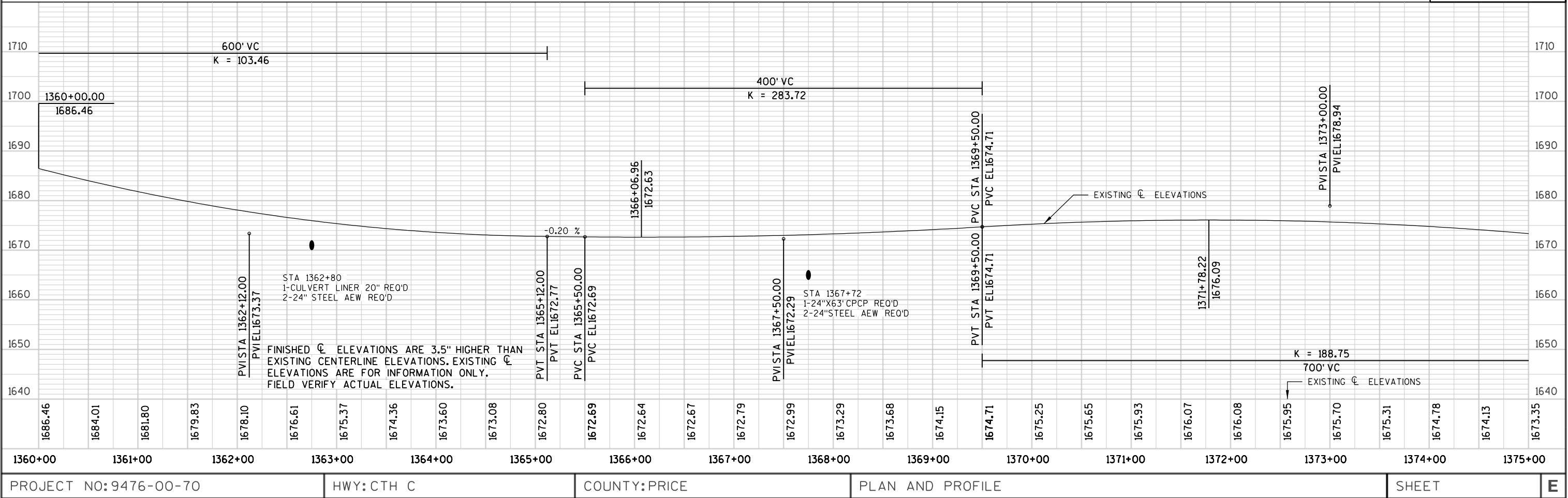
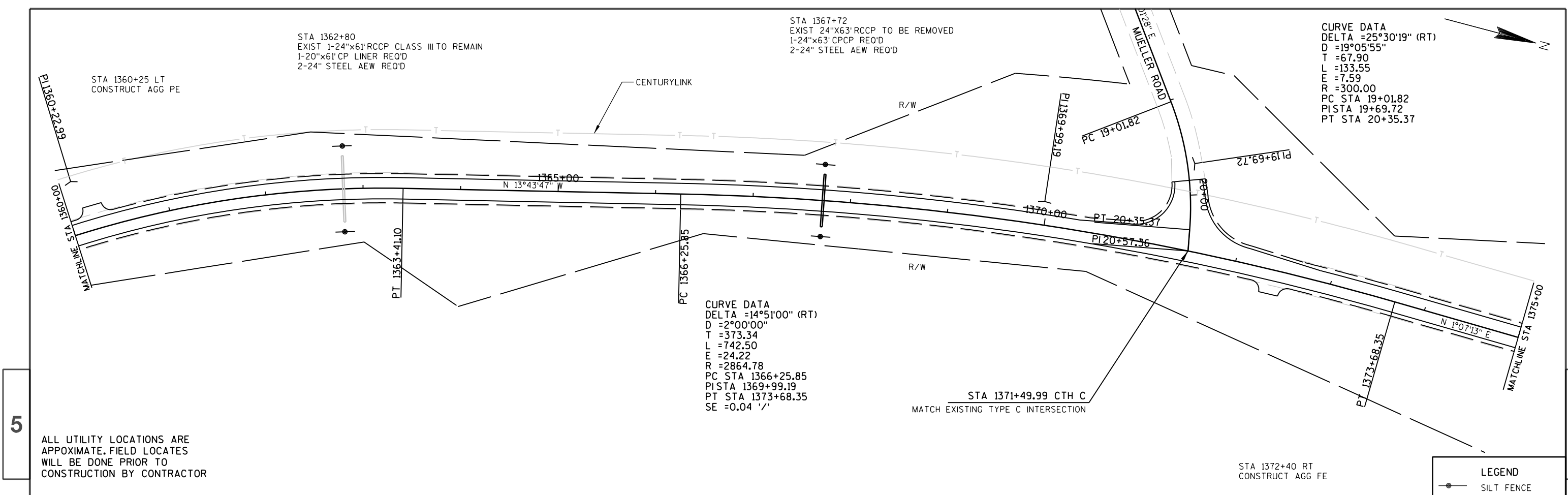
STA 1347+10 RT
CONSTRUCT AGG PE

STA 1347+50 RT
CONSTRUCT AGG PE

STA 1355+90 RT
CONSTRUCT AGG PE

LEGEND
● SILT FENCE



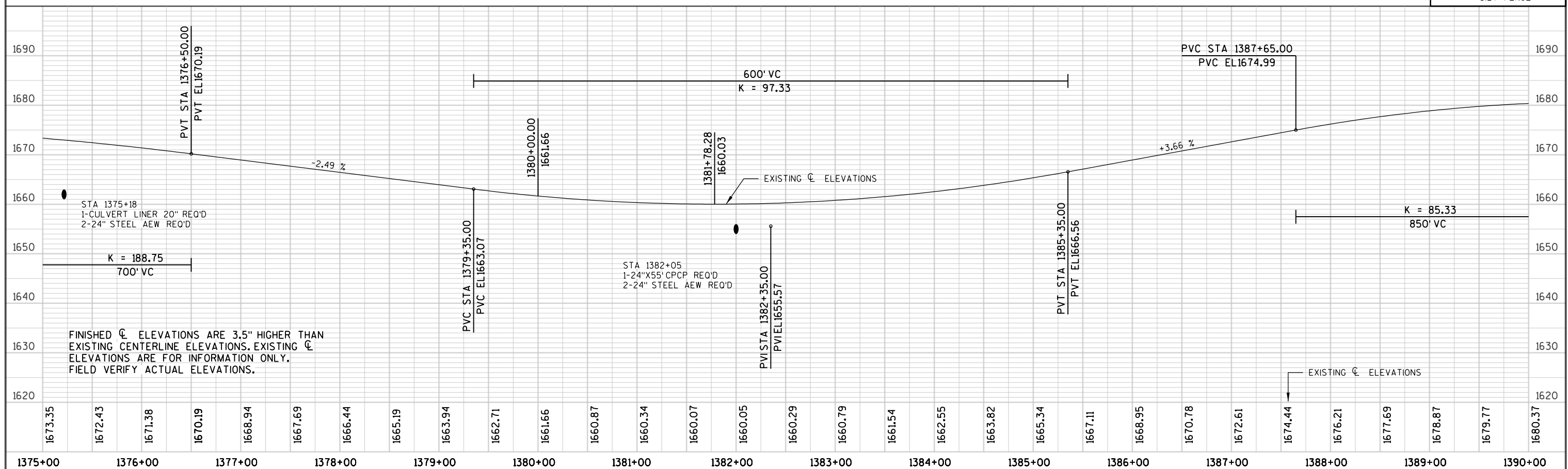
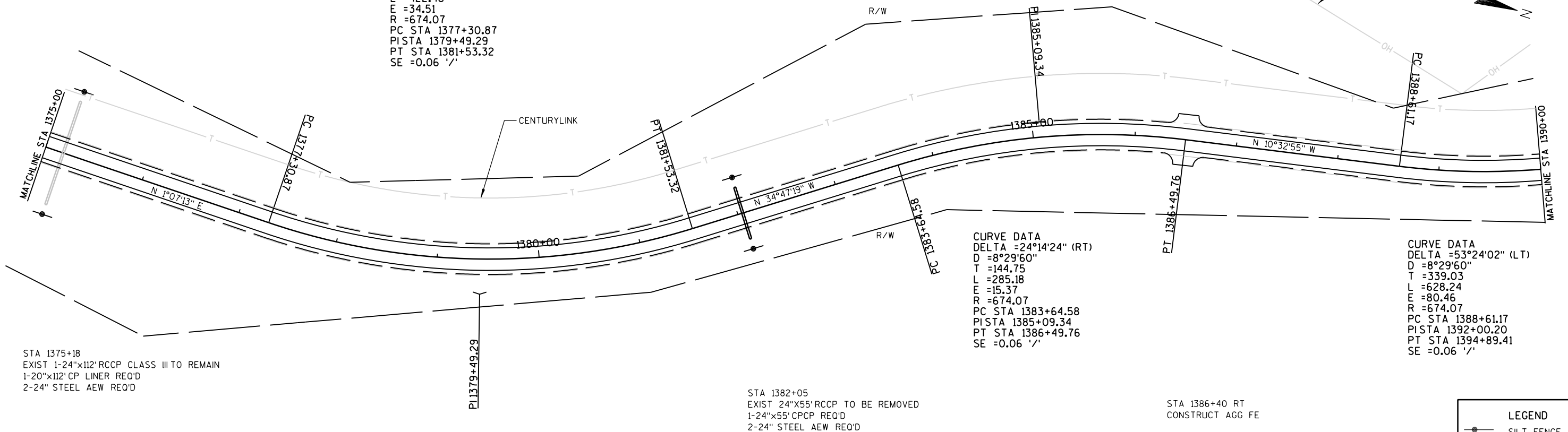


ALL UTILITY LOCATIONS ARE
APPROXIMATE. FIELD LOCATES
WILL BE DONE PRIOR TO
CONSTRUCTION BY CONTRACTOR

CURVE DATA
DELTA =35°54'32" (LT)
D =8°29'60"
T =218.43
L =422.46
E =34.51
R =674.07
PC STA 1377+30.87
PISTA 1379+49.29
PT STA 1381+53.32
SE =0.06 '/'

STA 1386+40 LT
CONSTRUCT AGG PE

PRICE ELECTRIC COOPERATIVE



ALL UTILITY LOCATIONS ARE
APPOXIMATE. FIELD LOCATES
WILL BE DONE PRIOR TO
CONSTRUCTION BY CONTRACTOR

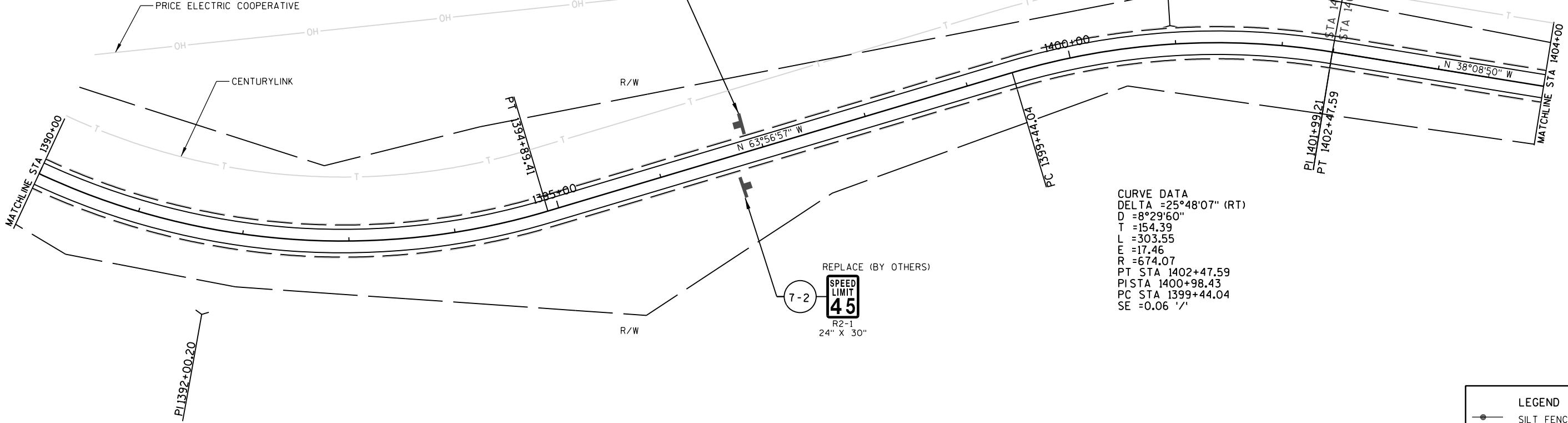
REPLACE (BY OTHERS)

SPEED
LIMIT
45

R2-1
24" X 30"

7-1

EQUATION



CURVE DATA
DELTA = 25°48'07" (RT)
D = 8°29'60"
T = 154.39
L = 303.55
E = 17.46
R = 674.07
PT STA 1402+47.59
PI STA 1400+98.43
PC STA 1399+44.04
SE = 0.06 ' / '

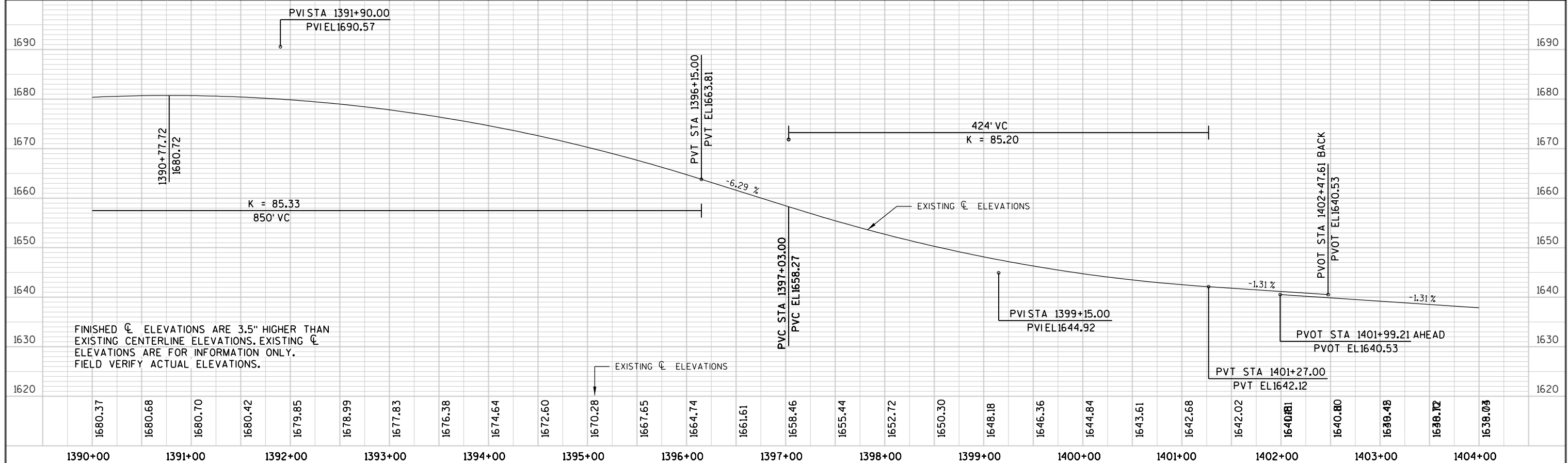
REPLACE (BY OTHERS)

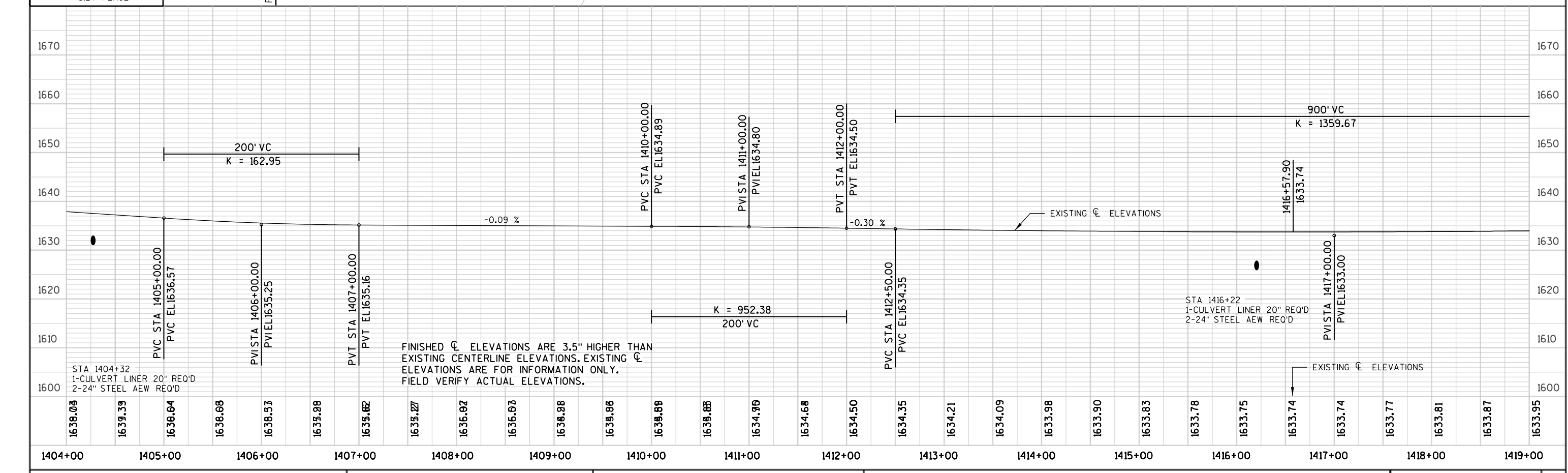
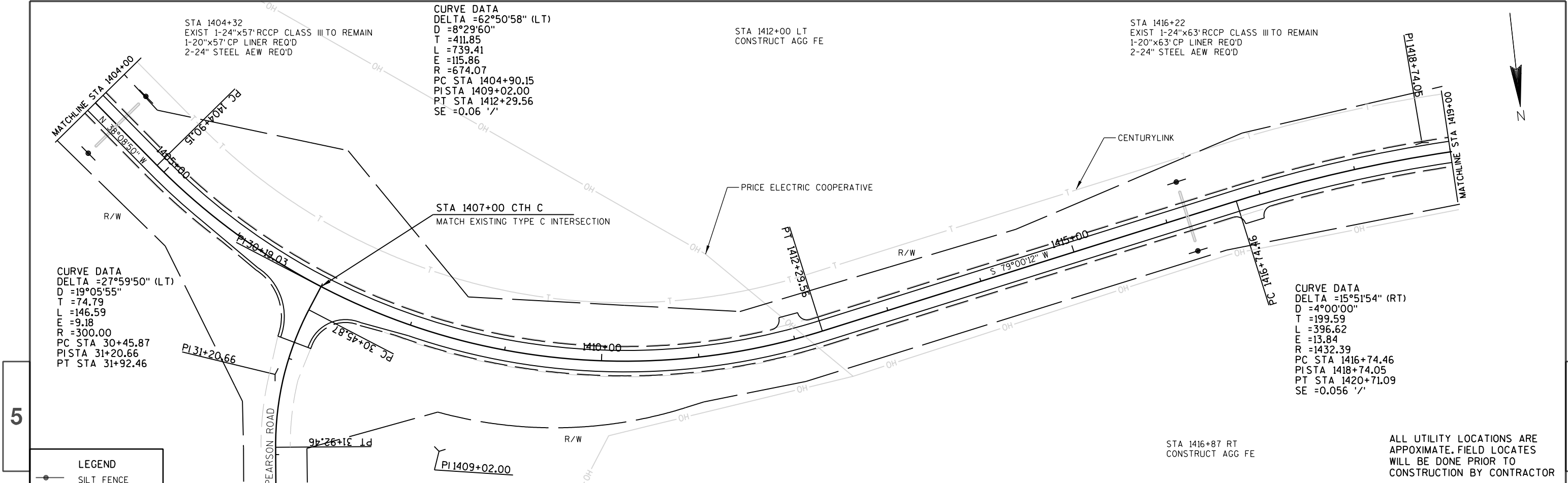
SPEED
LIMIT
45

R2-1
24" X 30"

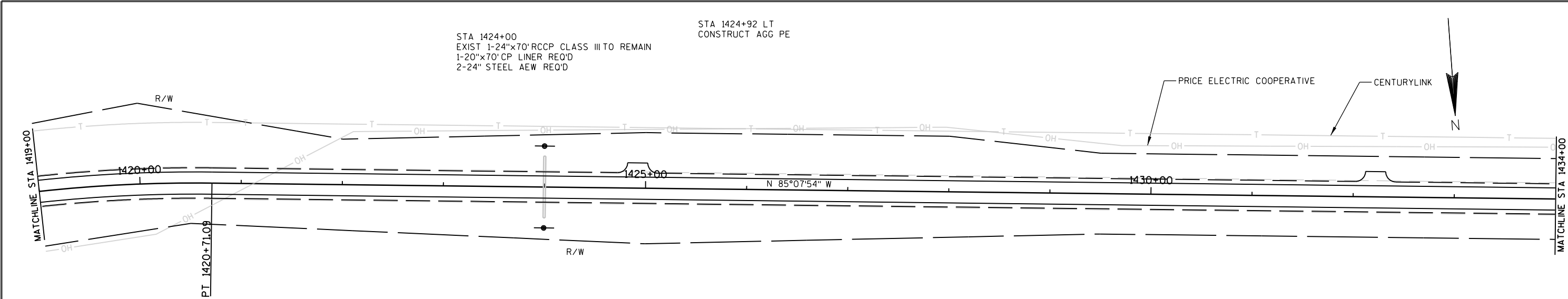
7-2

LEGEND
● SILT FENCE





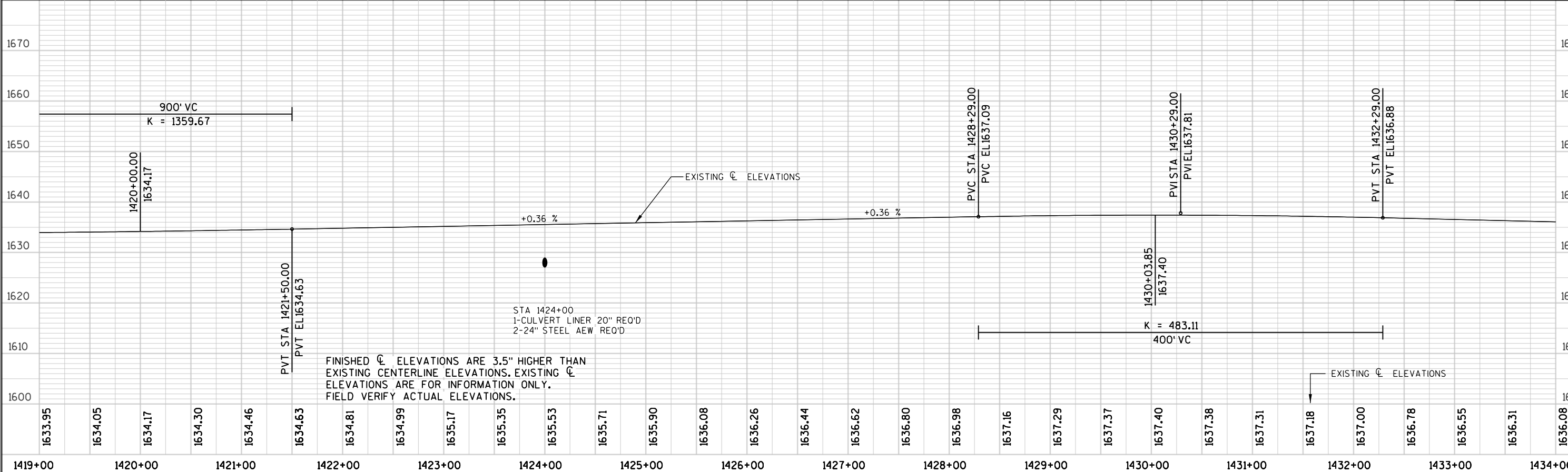
ALL UTILITY LOCATIONS ARE APPROXIMATE. FIELD LOCATES WILL BE DONE PRIOR TO CONSTRUCTION BY CONTRACTOR



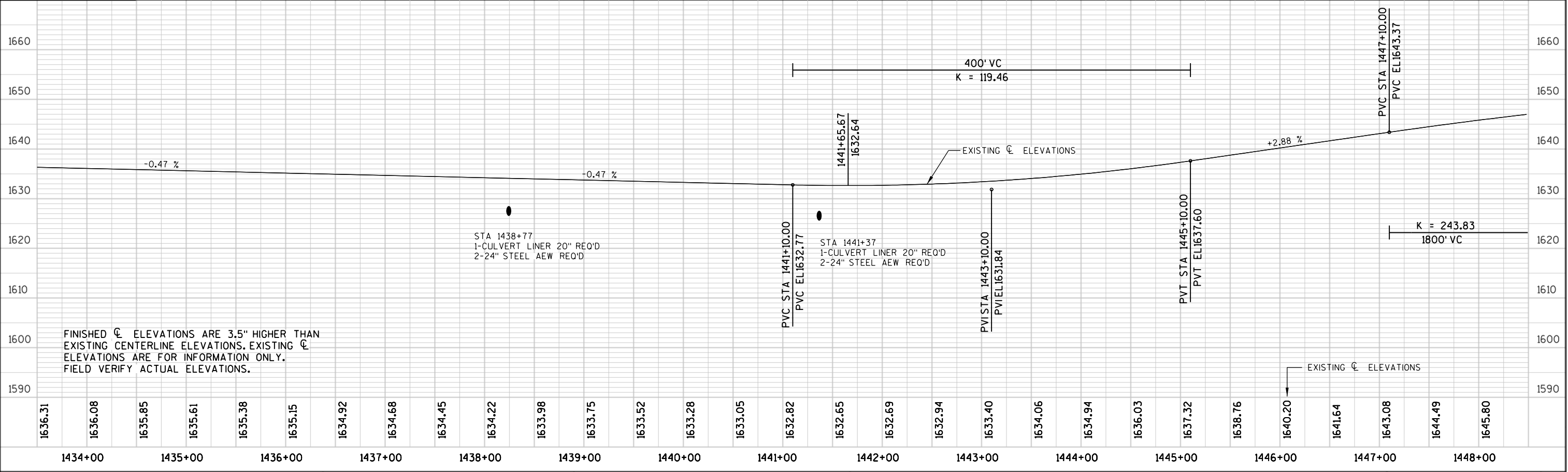
STA 1432+22 LT
CONSTRUCT AGG FE

LEGEND

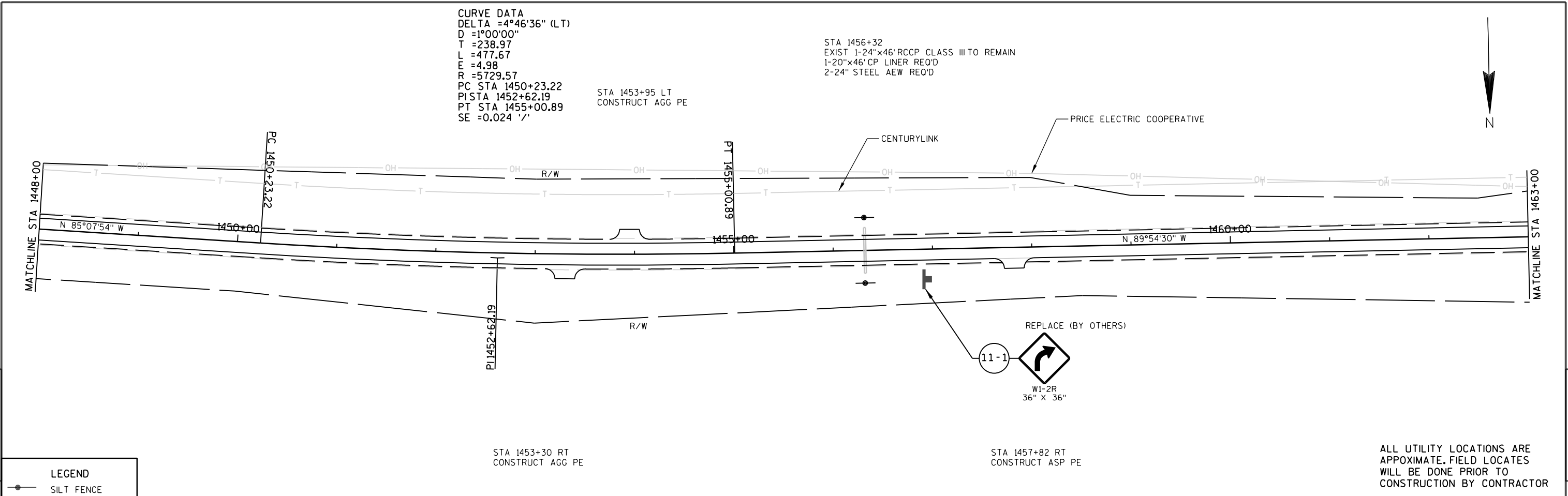
● SILT FENCE



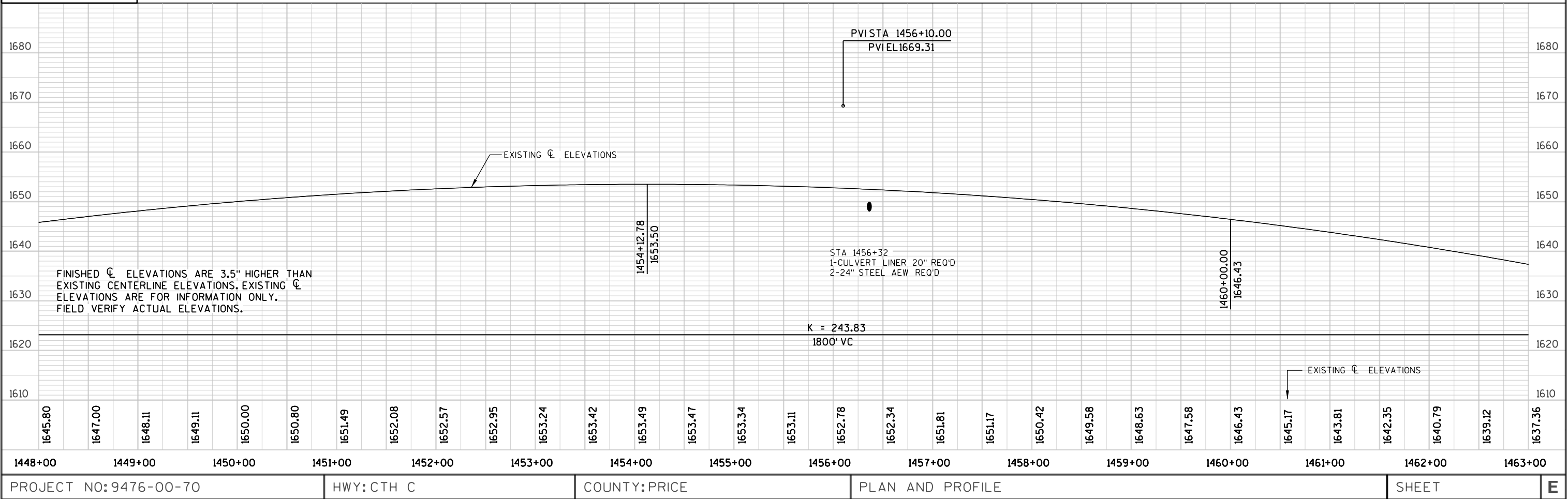
LEGEND
● SILT FENCE

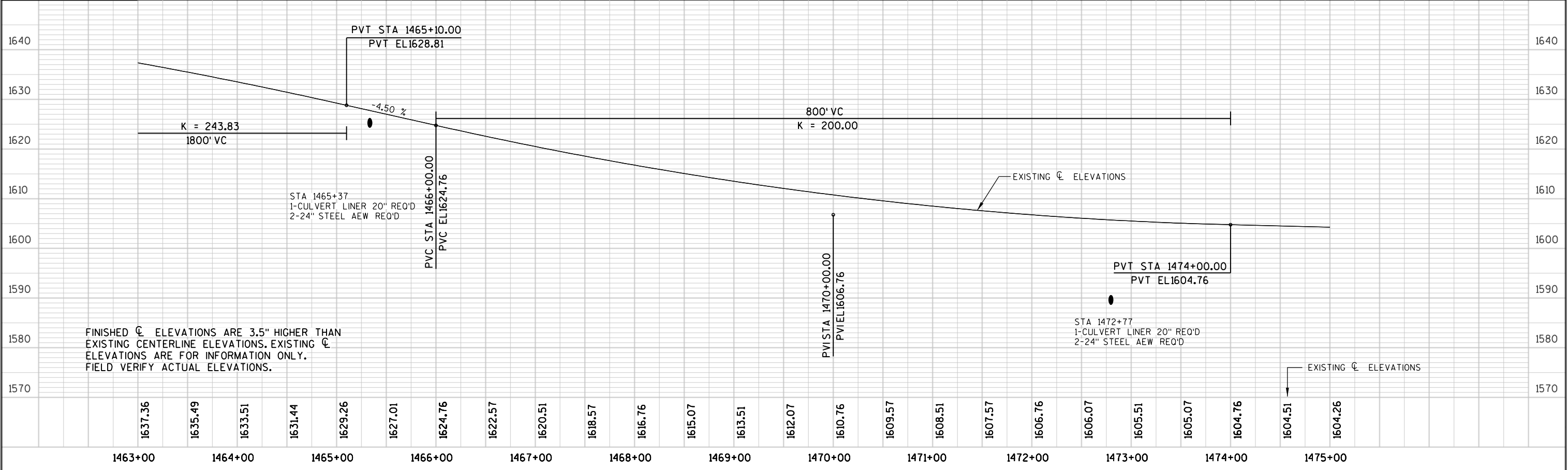
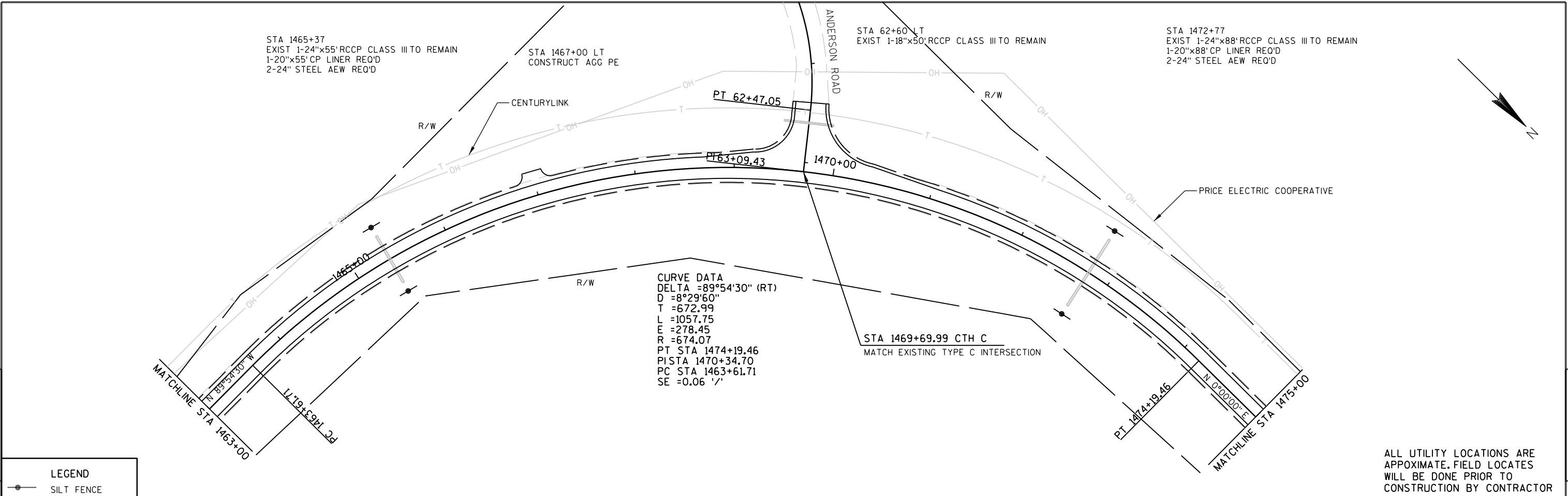


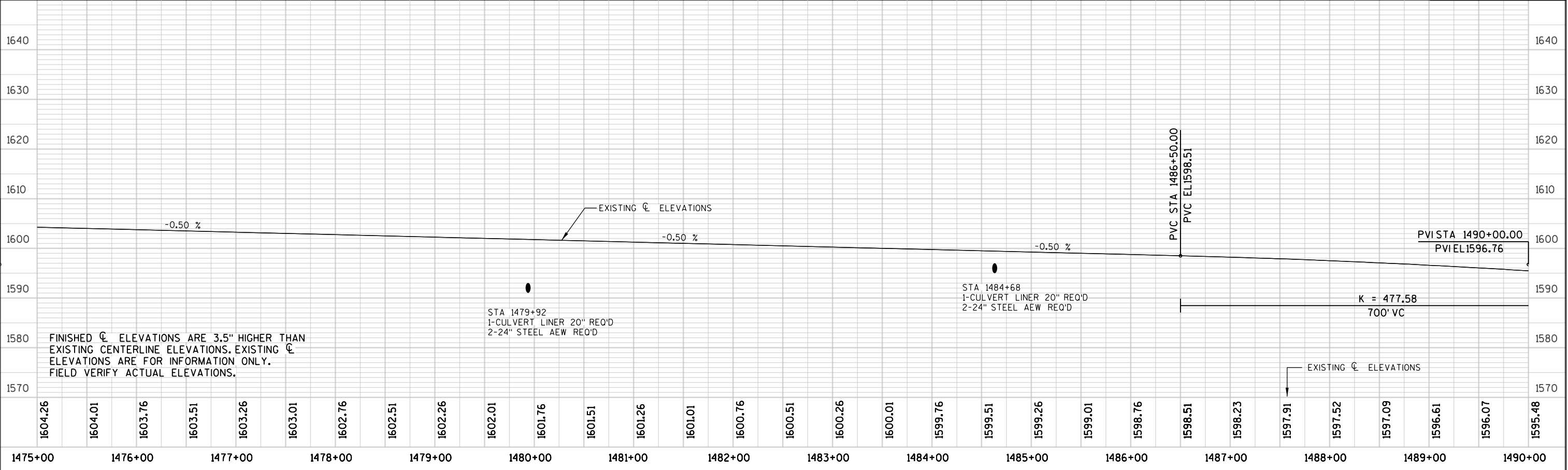
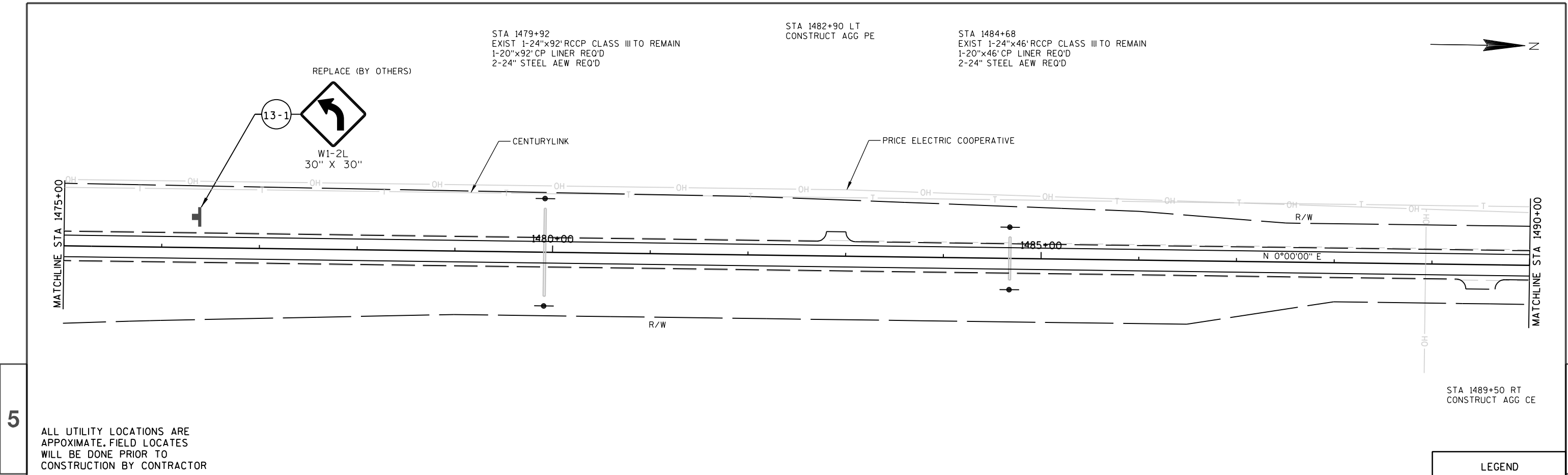
5



5

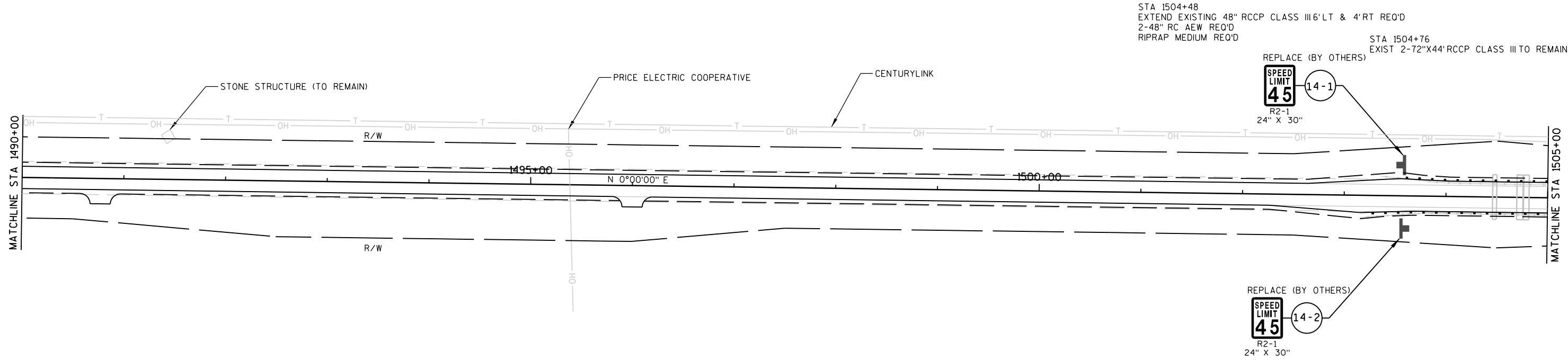






PROJECT NO: 9476-00-70	HWY: CTH C	COUNTY: PRICE	PLAN AND PROFILE	SHEET	E
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ALL UTILITY LOCATIONS ARE
APPOXIMATE. FIELD LOCATES
WILL BE DONE PRIOR TO
CONSTRUCTION BY CONTRACTOR

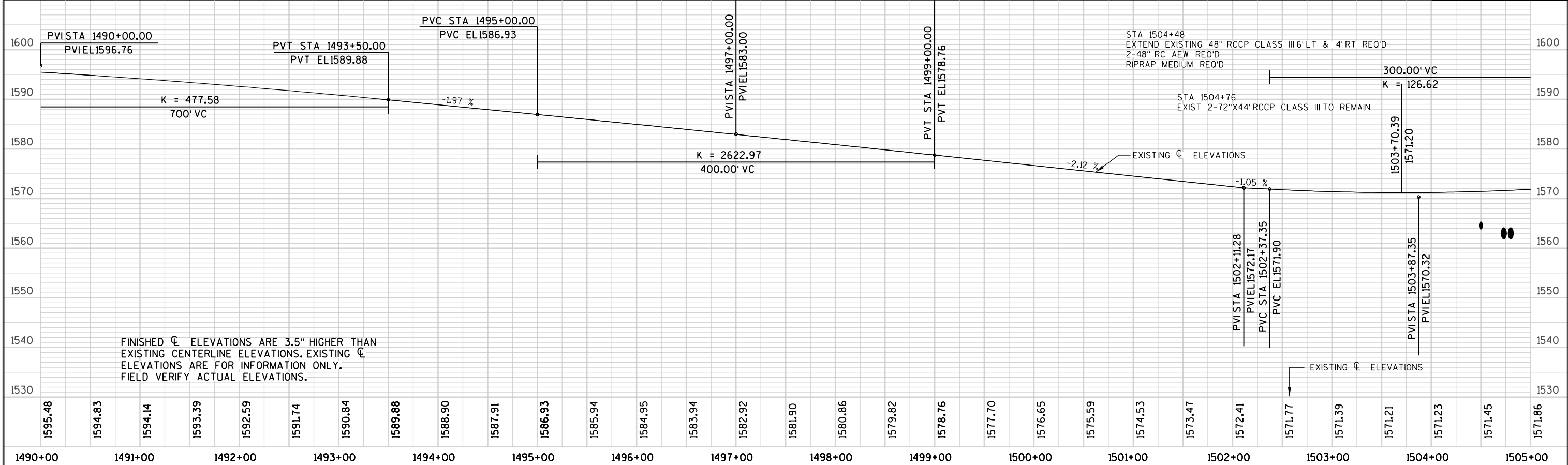


STA 1490+77 RT
CONSTRUCT AGG PE

STA 1496+00 RT
CONSTRUCT ASP PE

LEGEND

● SILT FENCE

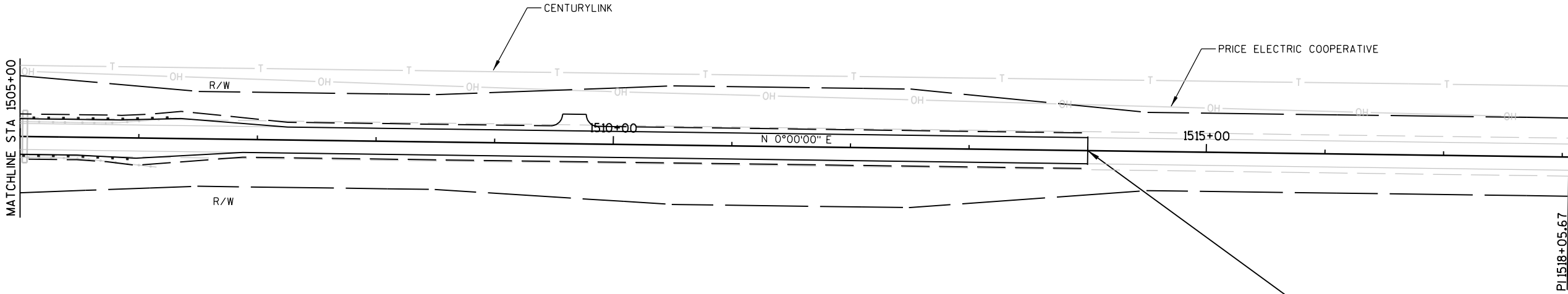


ALL UTILITY LOCATIONS ARE
APPOXIMATE. FIELD LOCATES
WILL BE DONE PRIOR TO
CONSTRUCTION BY CONTRACTOR



STA 1505+04
EXTEND EXISTING 48" RCCP CLASS III 6' LT & 4' RT REQ'D
2-48" RC AEW REQ'D
RIPRAP MEDIUM REQ'D

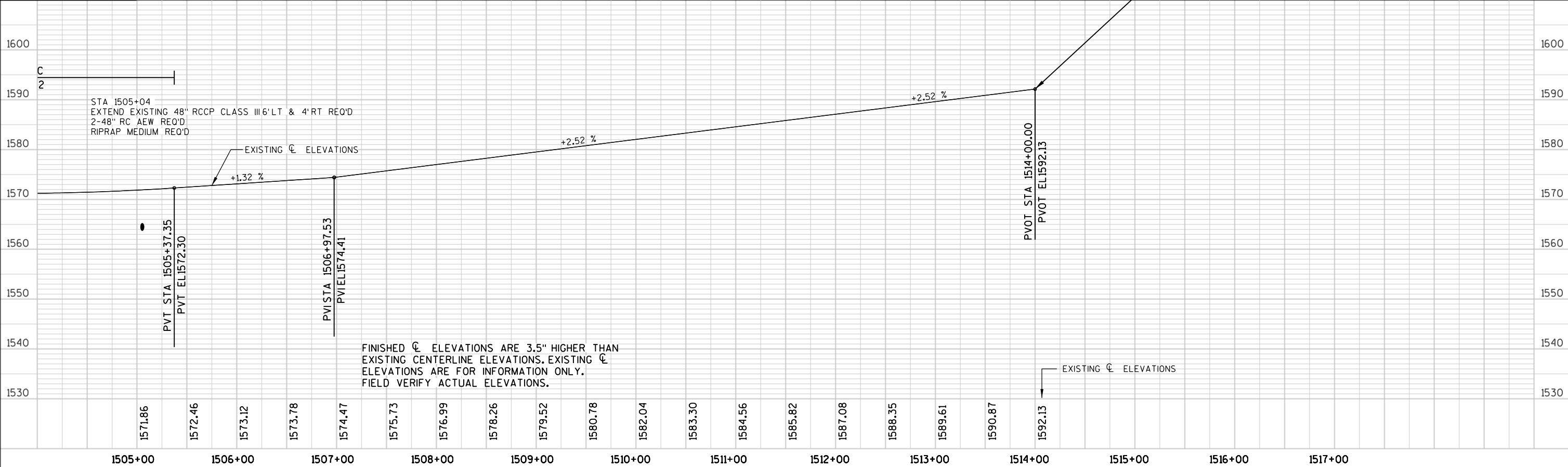
STA 1509+67 LT
CONSTRUCT AGG PE



END PROJECT
STA 1514+00.00
MATCH EXISTING
SAWCUT REQ'D

LEGEND

● SILT FENCE



PROJECT NO: 9476-00-70

HWY: CTH C

COUNTY: PRICE

PLAN AND PROFILE

SHEET

E

MGS GUARDRAIL LONG SPAN (L) REQ'D*
STA 1504+16.5 TO STA 1505+29.0, LT
STA 1504+22.7 TO STA 1505+35.2, RT

MGS GUARDRAIL 3, REQ'D*
STA 1504+04.0 TO STA 1504+16.5, LT
STA 1503+72.7 TO STA 1504+22.7, RT
STA 1505+29.0 TO STA 1505+79.0, LT
STA 1505+35.2 TO STA 1505+47.7, RT

MGS GUARDRAIL TERMINAL EAT, REQ'D*
STA 1503+50.9 TO STA 1504+04.0, LT
STA 1503+19.6 TO STA 1503+72.7, RT
STA 1505+79.0 TO STA 1506+32.1, LT
STA 1505+47.7 TO STA 1506+00.8, RT

*ALL POSTS ARE 1/2 SPACING UTILIZING LONGER POSTS

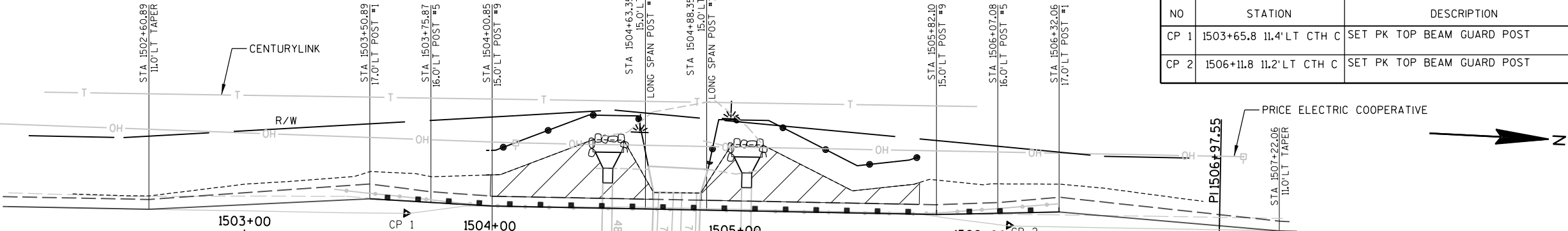
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X=809670.9704

BEGIN GUARDRAIL GRADING
STA 1502+29.64

ALL UTILITY LOCATIONS ARE APPROXIMATE. FIELD LOCATES WILL BE DONE PRIOR TO CONSTRUCTION BY CONTRACTOR

BENCHMARK TABLE

NO	STATION	DESCRIPTION	ELEV
CP 1	1503+65.8 11.4' LT CTH C	SET PK TOP BEAM GUARD POST	1570.93
CP 2	1506+11.8 11.2' LT CTH C	SET PK TOP BEAM GUARD POST	1572.82



Y=341454.7976
X=809656.4806

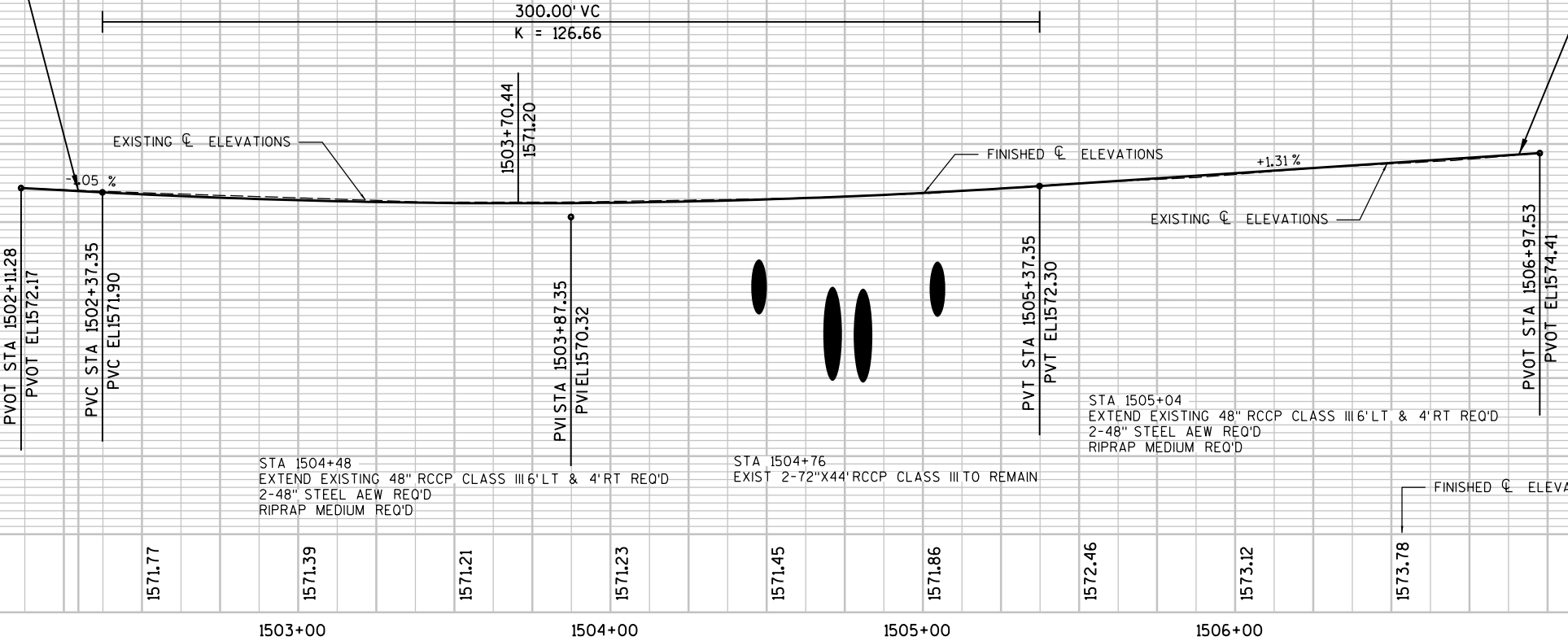
END GUARDRAIL GRADING
STA 1506+90.81

LEGEND

- MGS GUARDRAIL
- SILT FENCE
- EROSION MAT URBAN CLASS I TYPE B
- RIPRAP MEDIUM WITH GEOTEXTILE FABRIC TYPE HR (TYP)

EARTHWORK SUMMARY

STA 1502+00 TO STA 1507+22		
CUT	=	110 CY
FILL	=	219 CY
FILL AT 1.3 EXP	=	285 CY
WASTE	=	0 CY
BORROW	=	175 CY
COMMON EXC	=	110 CY



FINISHED ELEVATIONS ARE 3.5" HIGHER THAN EXISTING CENTERLINE ELEVATIONS. EXISTING ELEVATIONS ARE FOR INFORMATION ONLY. FIELD VERIFY ACTUAL ELEVATIONS.

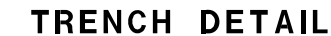
SEE CROSS SECTIONS FOR ELEVATION IN THIS LOCATION

Standard Detail Drawing List

08E09-06	SILT FENCE
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
14B42-02A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B43-03A	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-03B	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-03C	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B44-01A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
15C04-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)



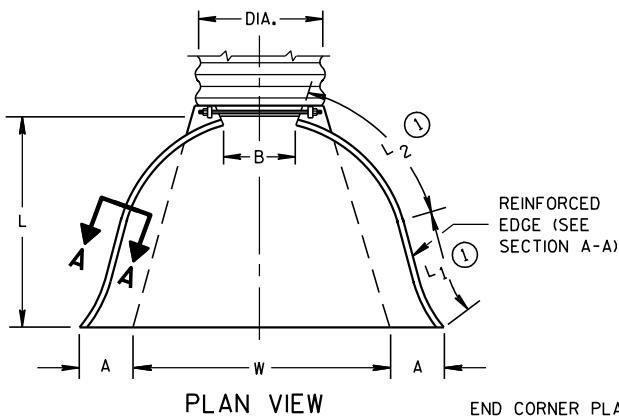
- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" 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 DATE	/S/ Beth Canestra CHIEF ROADWAY DEVELOPMENT ENGINEER

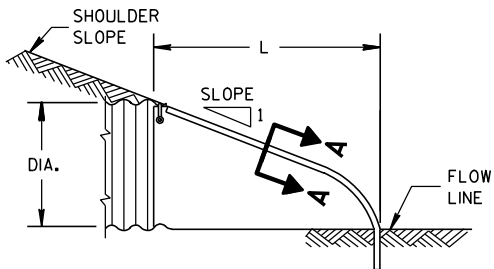
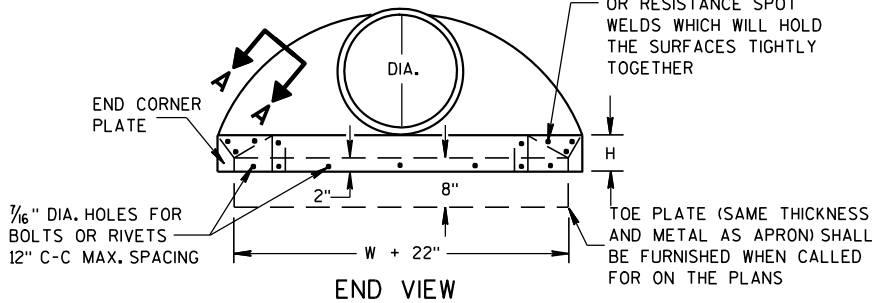
METAL APRON ENDWALLS												
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE		BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")			
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1		1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1		1 Pc.
18	.064	.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

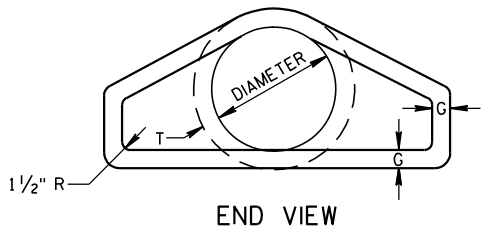
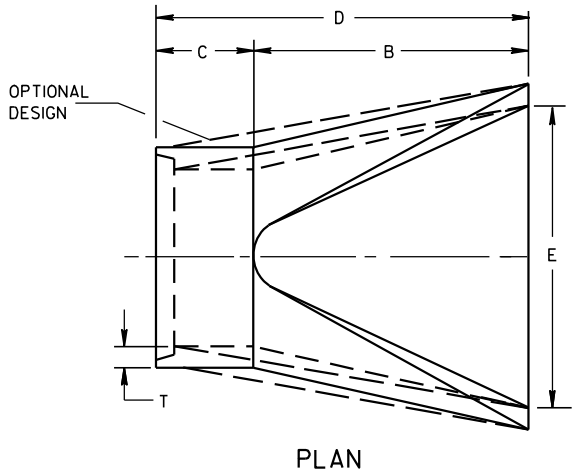
TOE PLATE (SAME THICKNESS AND METAL AS APRON) SHALL BE FURNISHED WHEN CALLED FOR ON THE PLANS



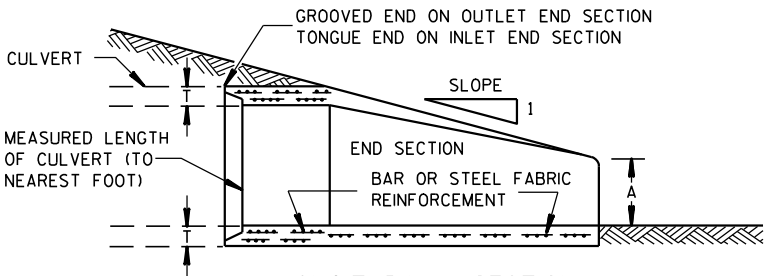
SIDE ELEVATION
METAL ENDWALLS

REINFORCED CONCRETE APRON ENDWALLS												
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE				
	T	A	B	C	D	E	G					
12	2	4	24	48 7/8	72 7/8	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 2/5 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				

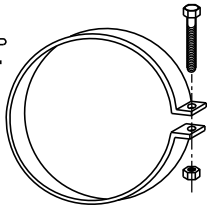
* MINIMUM
** MAXIMUM



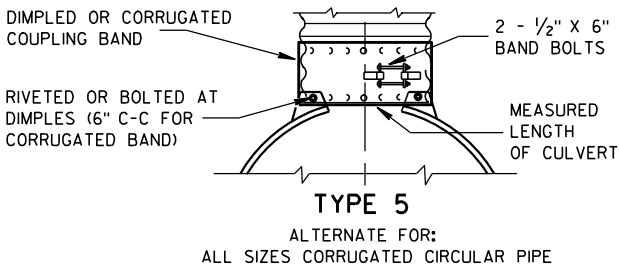
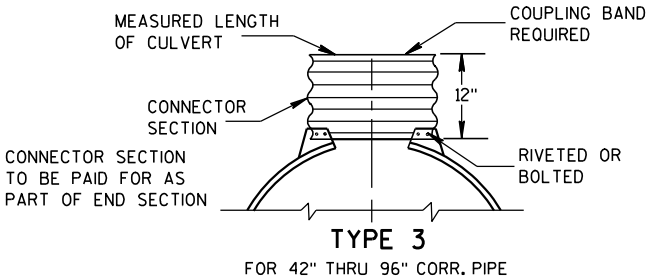
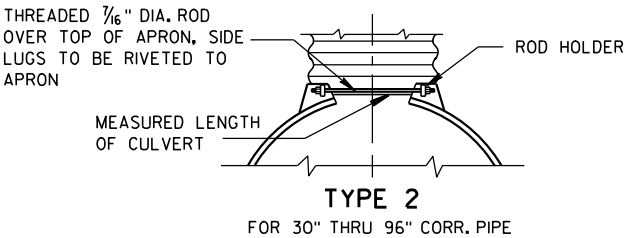
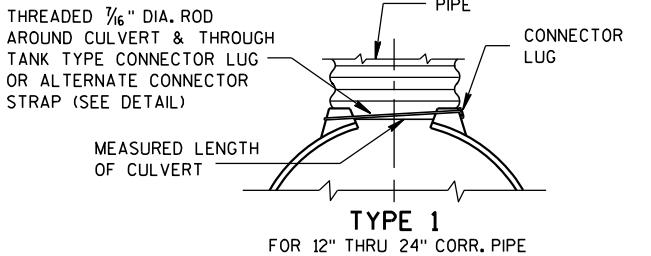
LONGITUDINAL SECTION
CONCRETE ENDWALLS



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



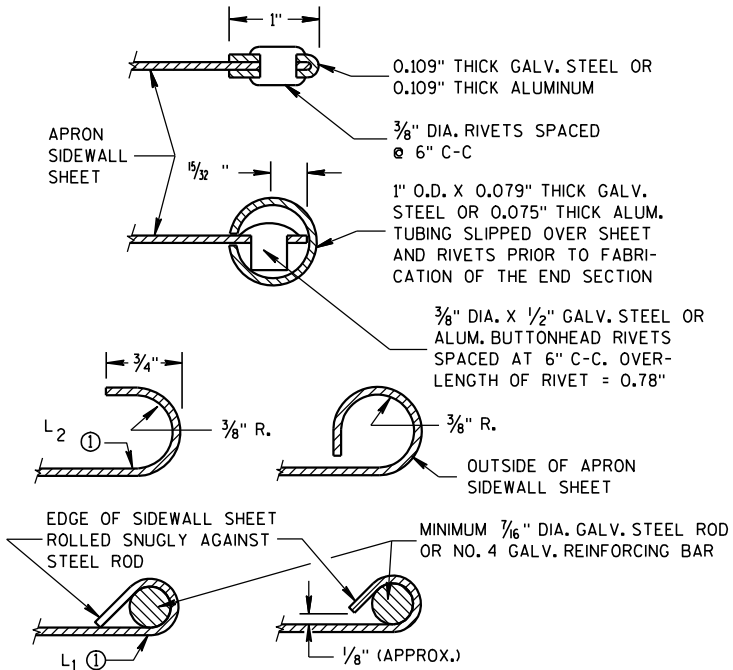
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

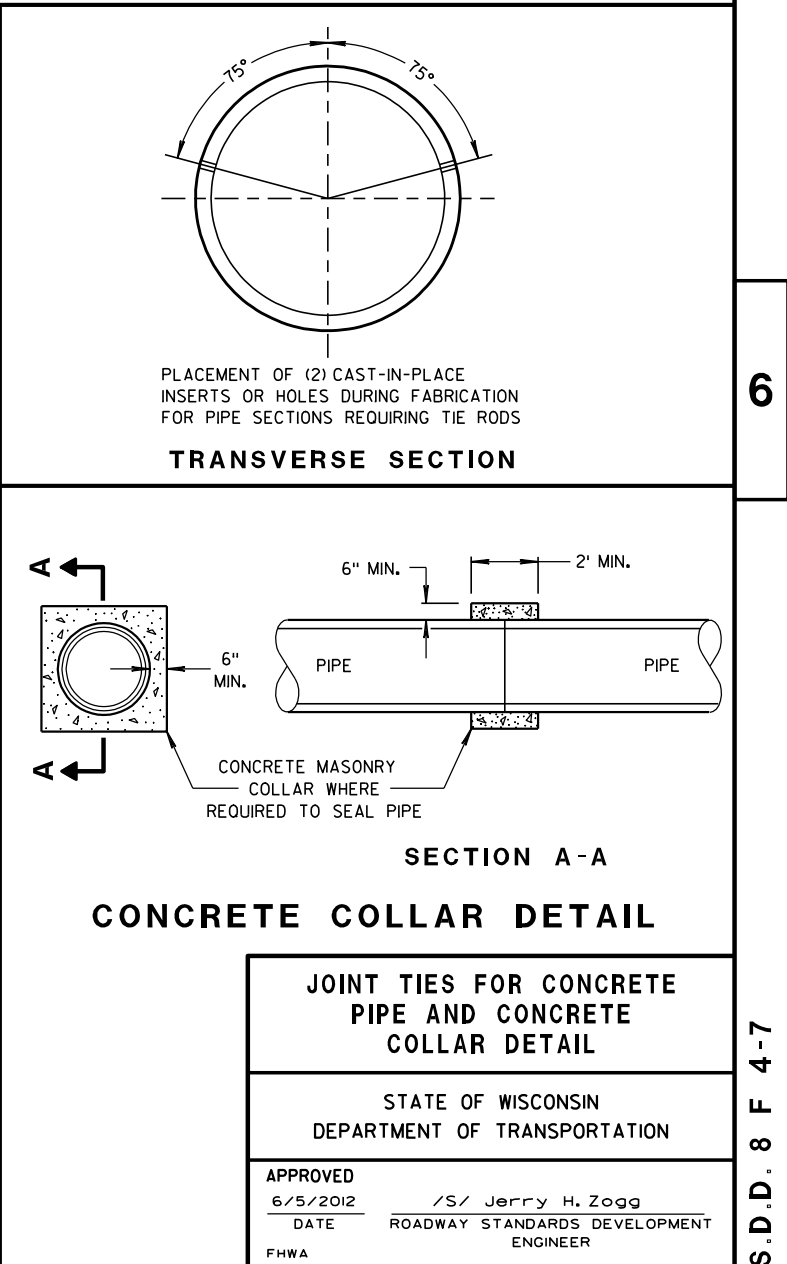
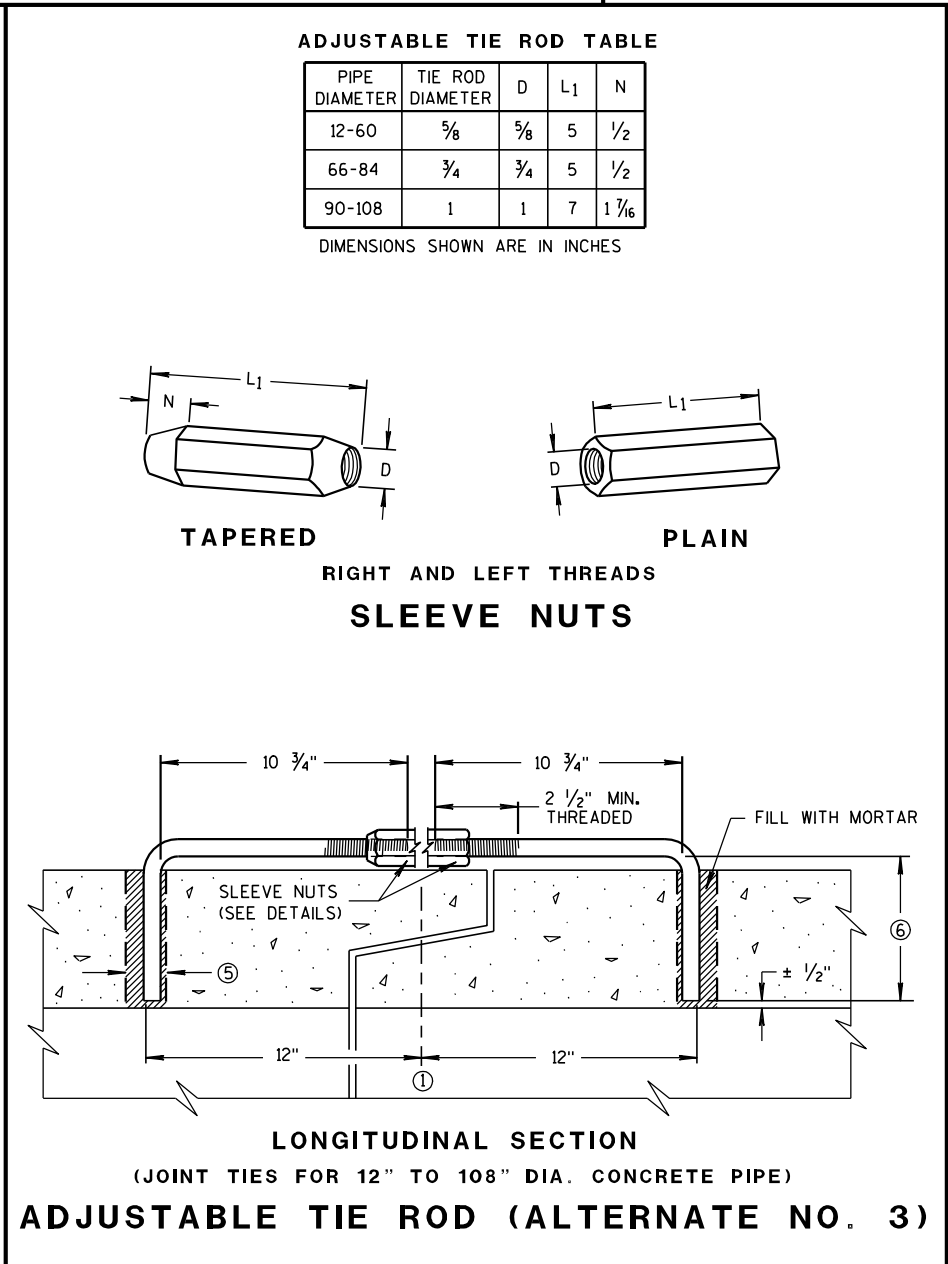
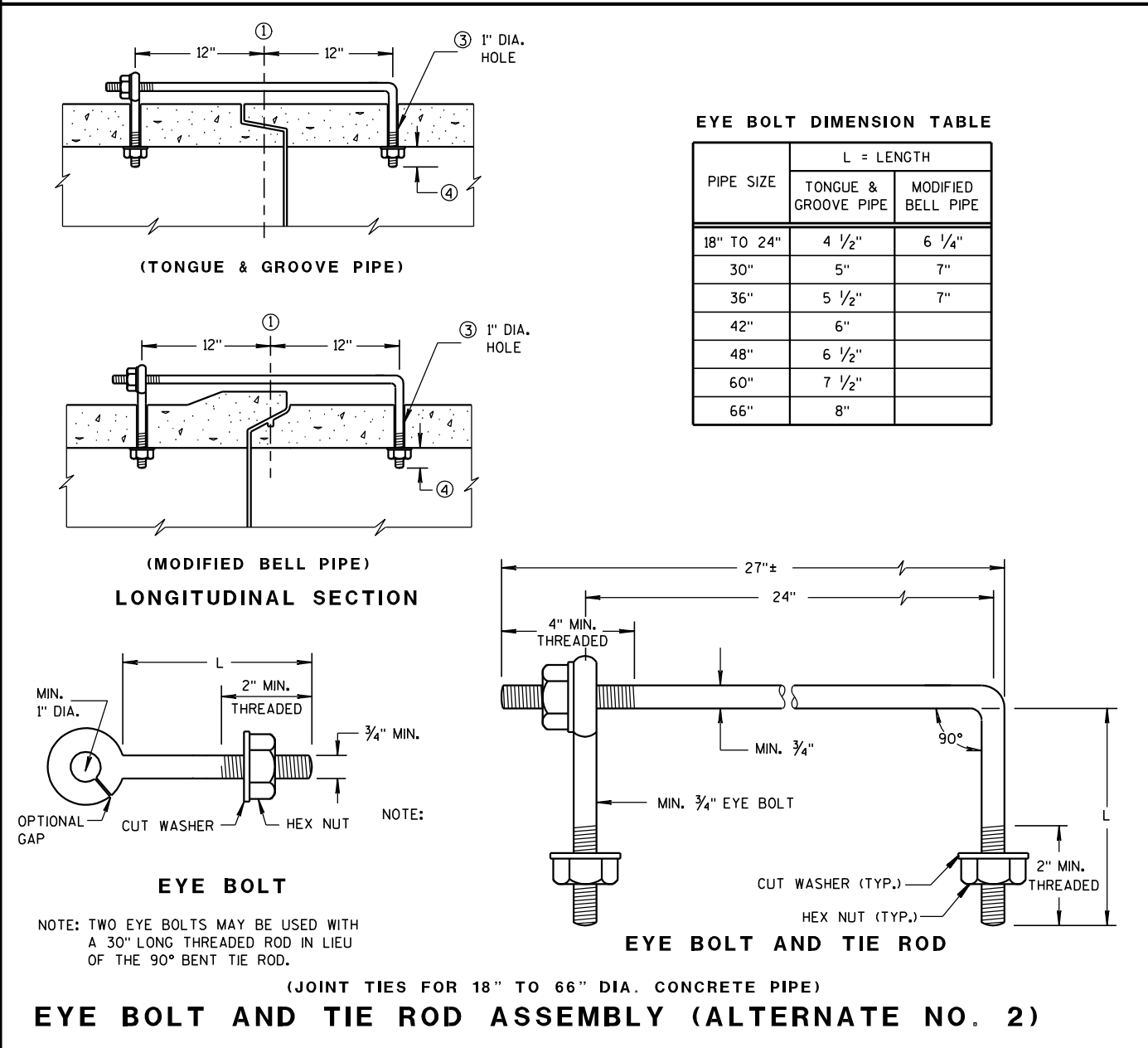
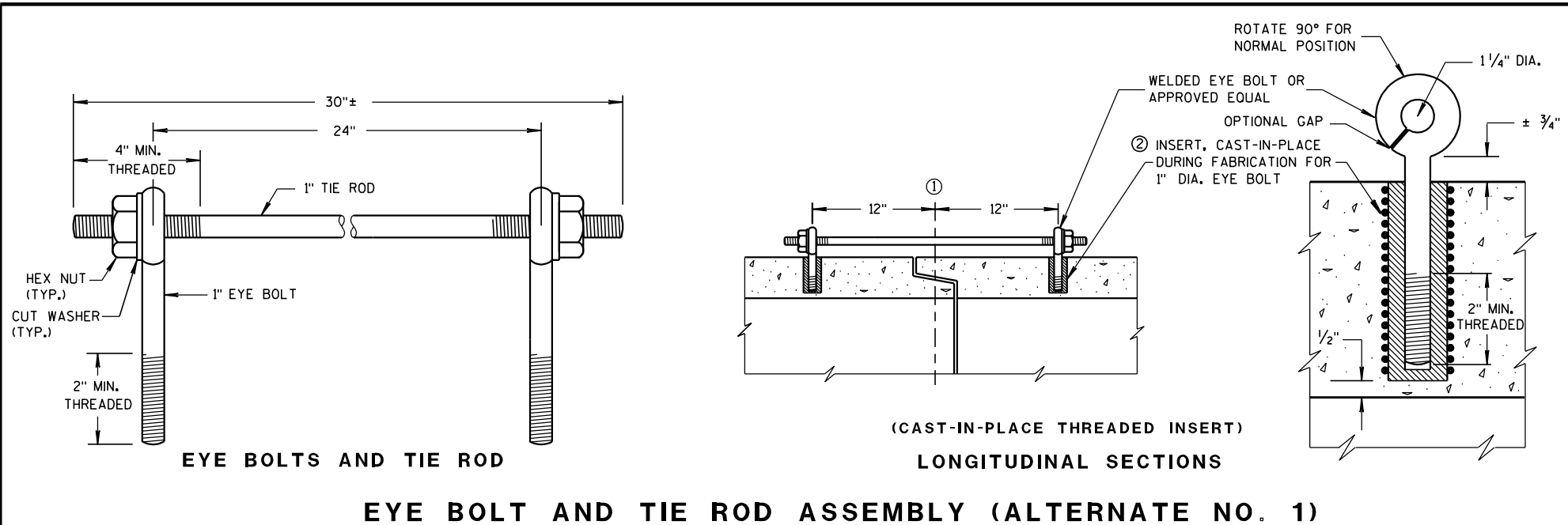
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

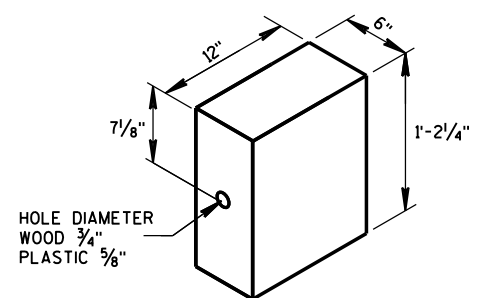
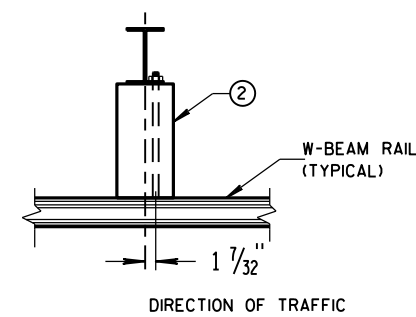
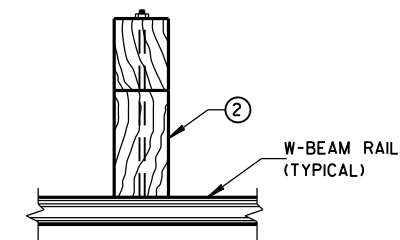
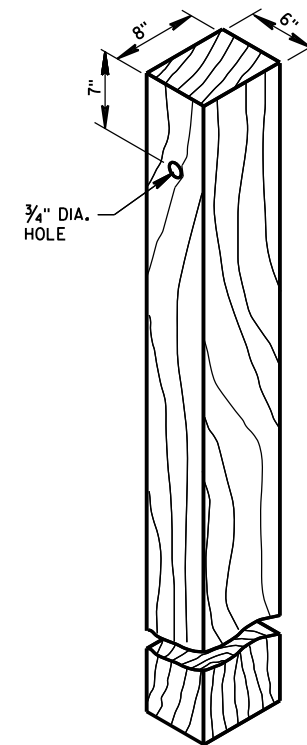
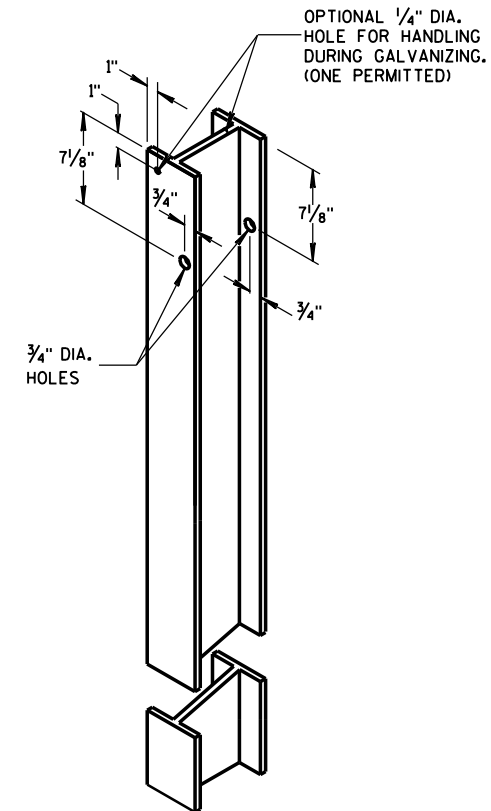
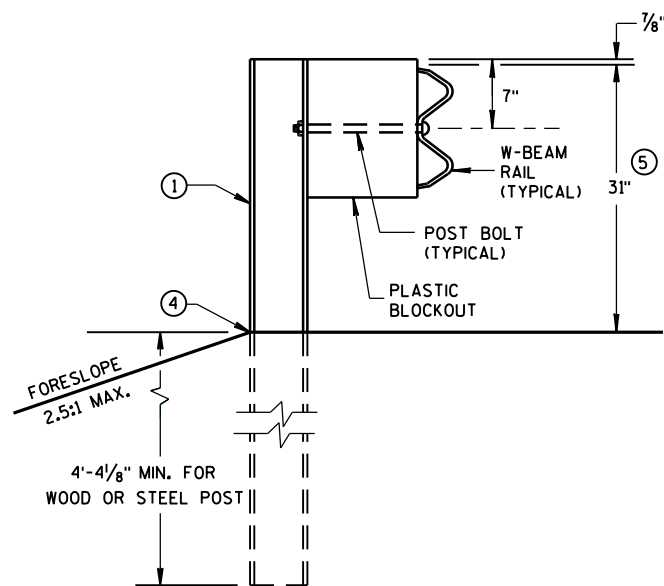
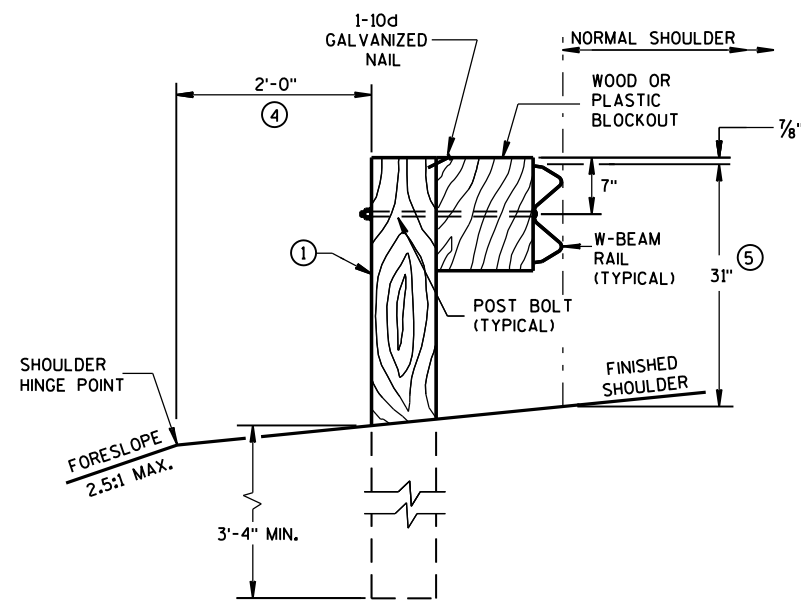
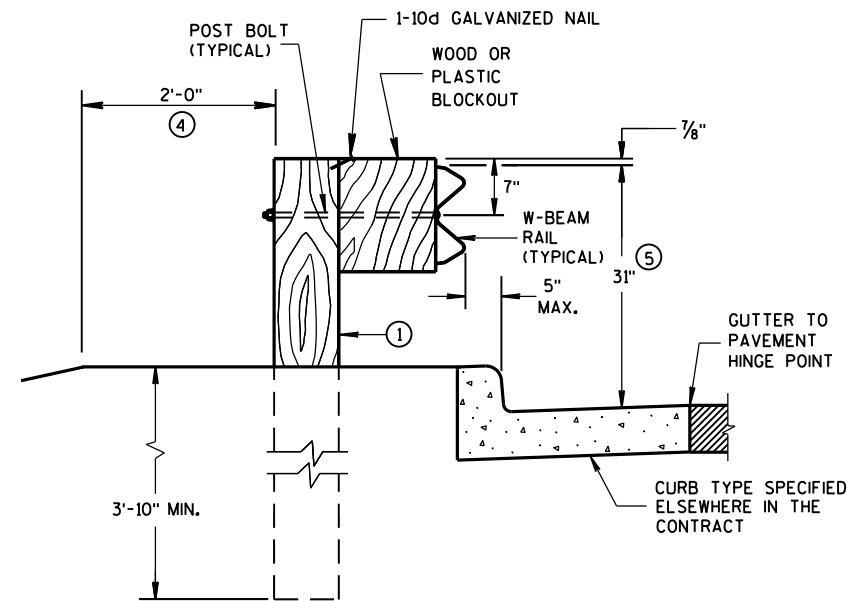
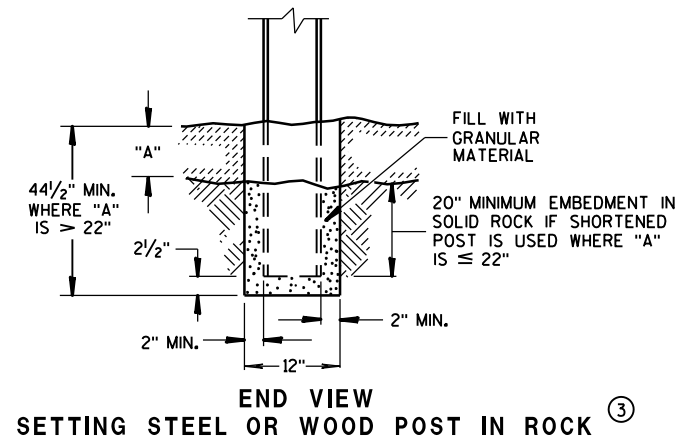
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94
DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



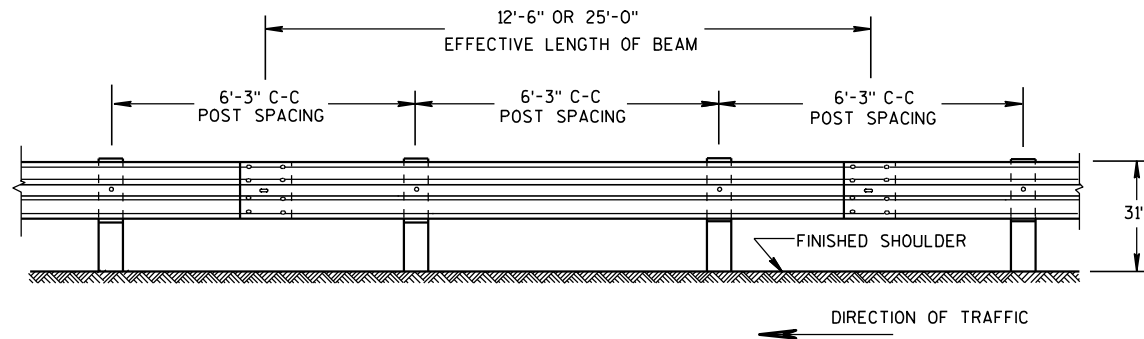
S.D.D. 14 B 42-2a

- S.D.D. 14 B 42-2a**

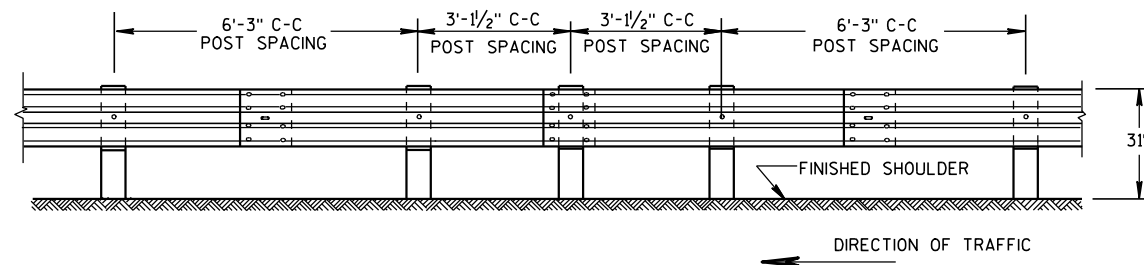


**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

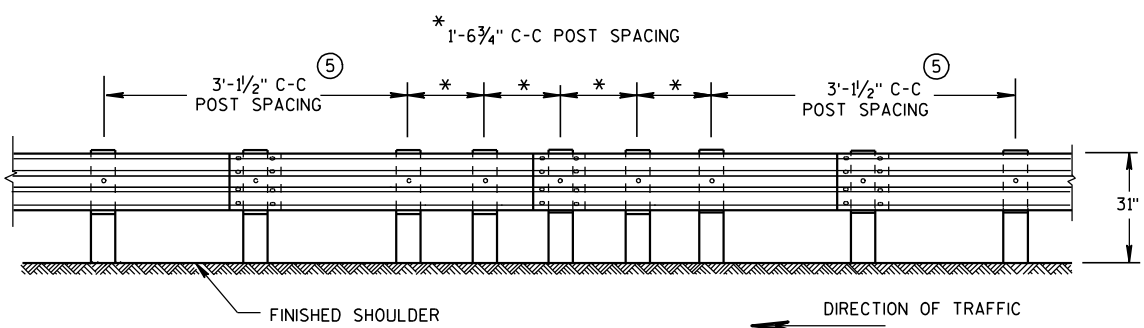
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



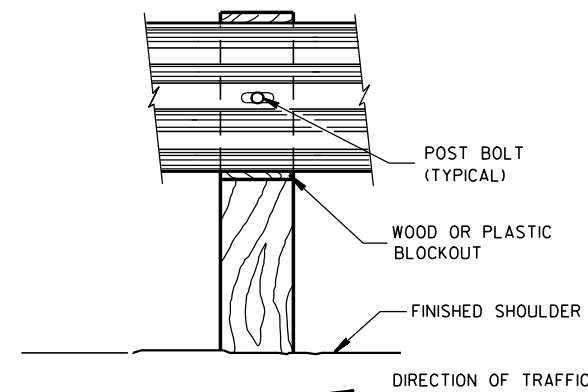
FRONT VIEW
POST SPACING STANDARD INSTALLATION



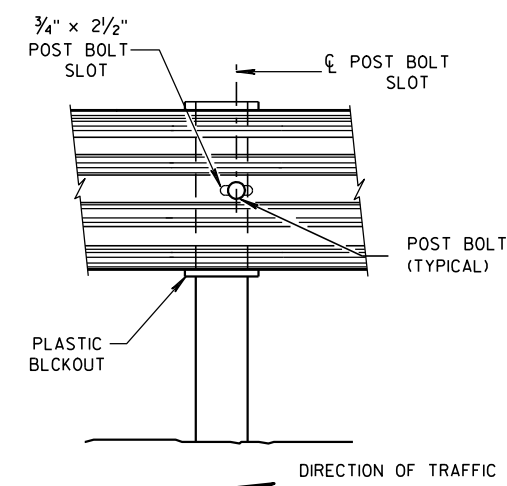
FRONT VIEW
**HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



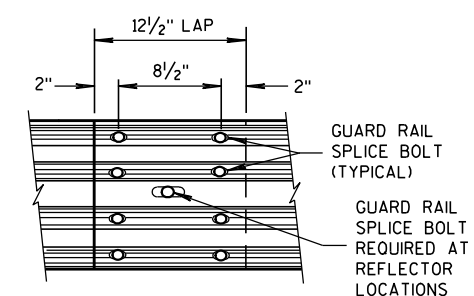
FRONT VIEW
QUARTER POST SPACING (QS)



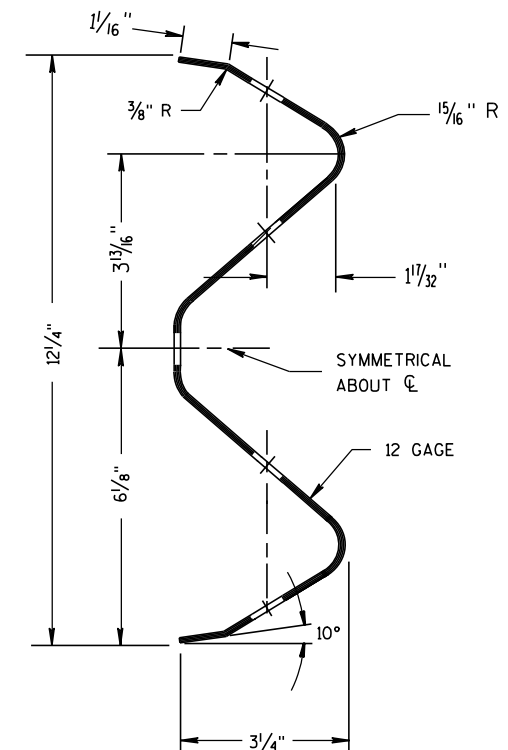
FRONT VIEW AT WOOD POST



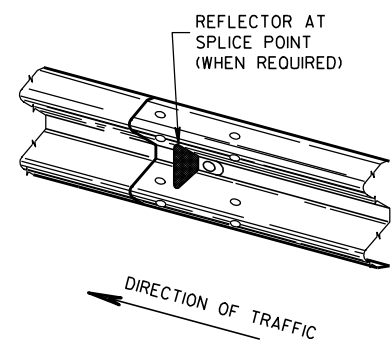
FRONT VIEW AT STEEL POST



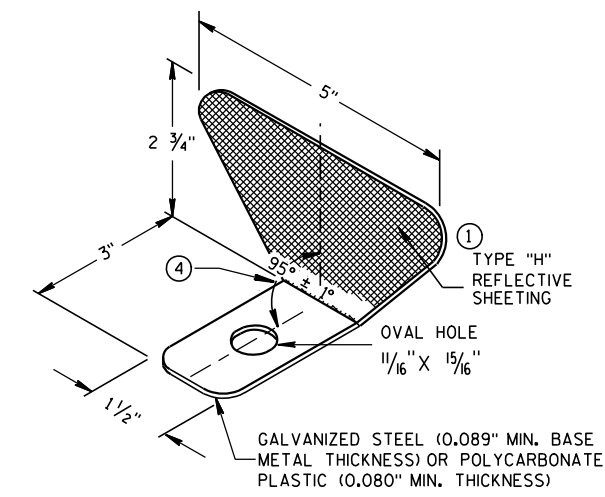
**FRONT VIEW
MID-SPAN BEAM SPLICE**



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION



GENERAL NOTES

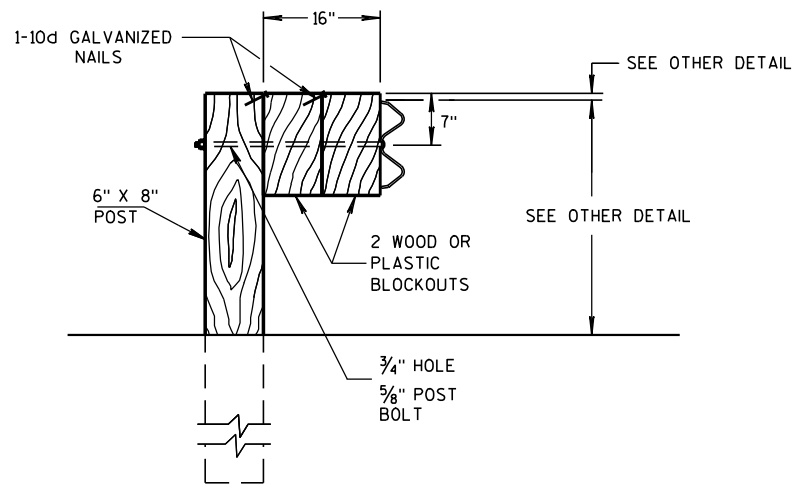
- ① PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.
 - ② DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.
 - ③ REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
 - ④ PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.
 - ⑤ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.
- POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.
- GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

REFLECTOR SPACING

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 ③	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2 ④	3
	> 200'	100' C-C	2	

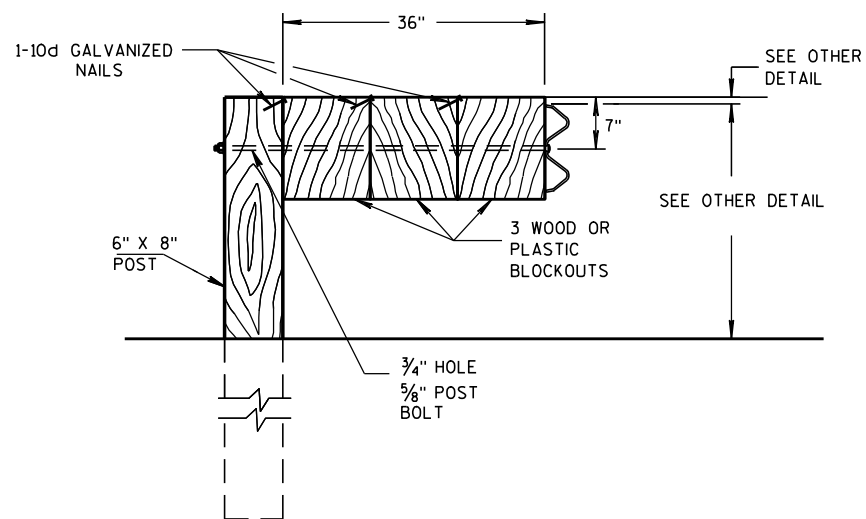
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR 16" BLOCKOUT DEPTH

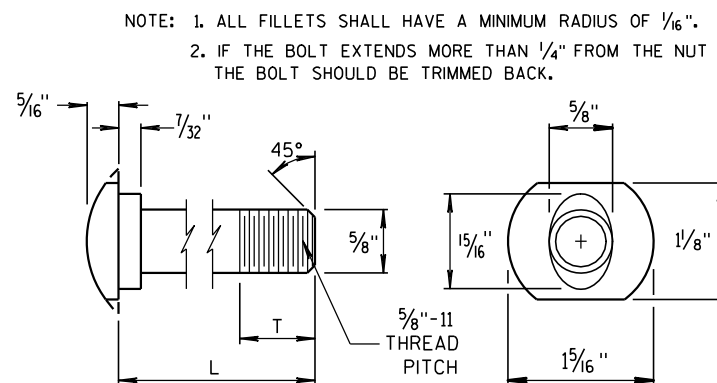
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.



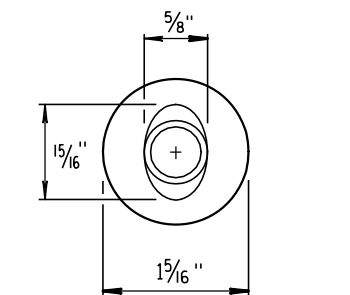
DETAIL FOR 36" BLOCKOUT DEPTH

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.

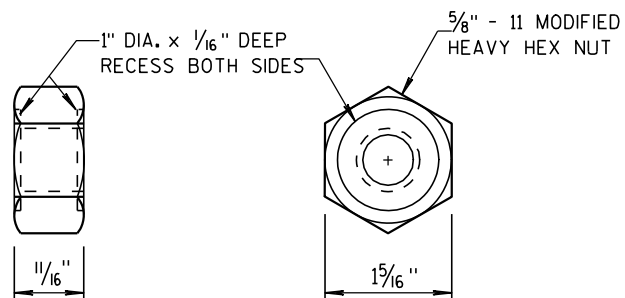
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.



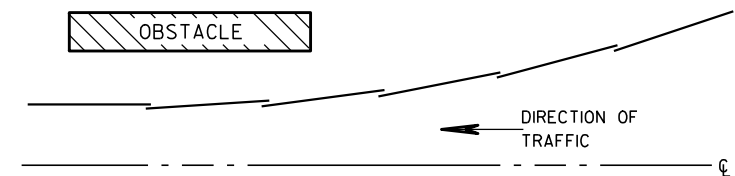
POST BOLT TABLE



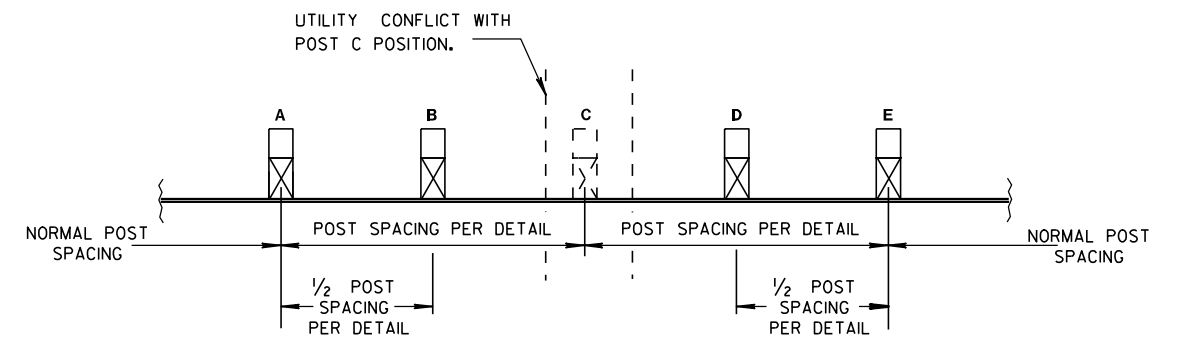
ALTERNATE BOLT HEAD



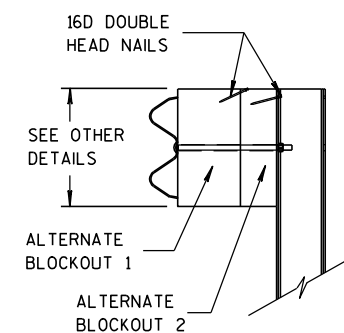
POST BOLT AND RECESS NUT



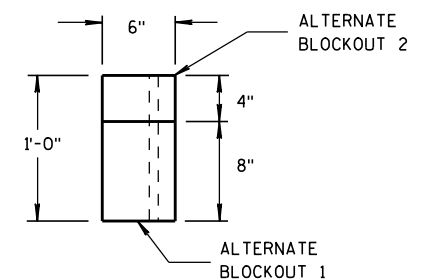
PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/15/2011
DATE

FHWA

/S/ Jerry H. Zogg

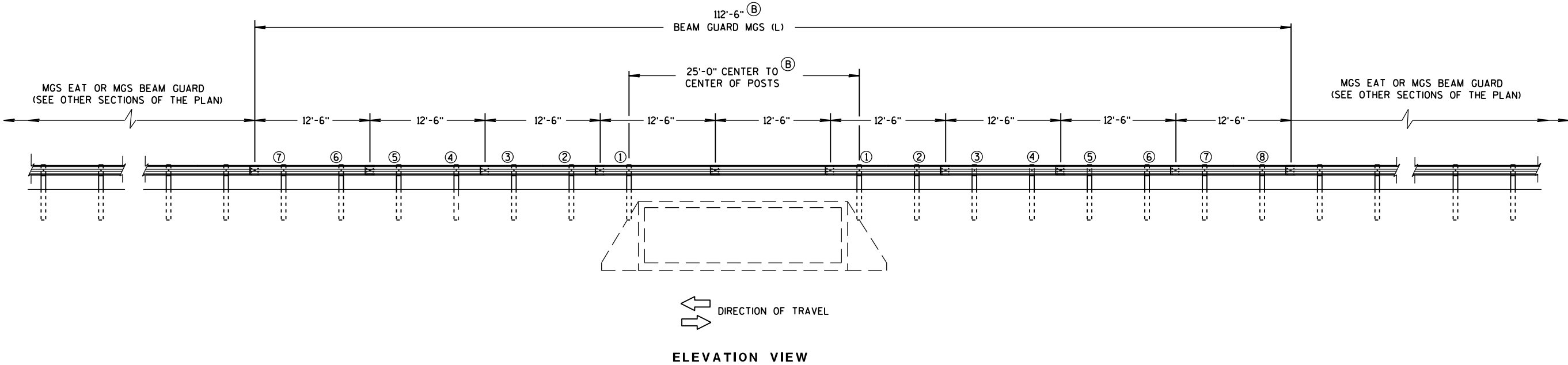
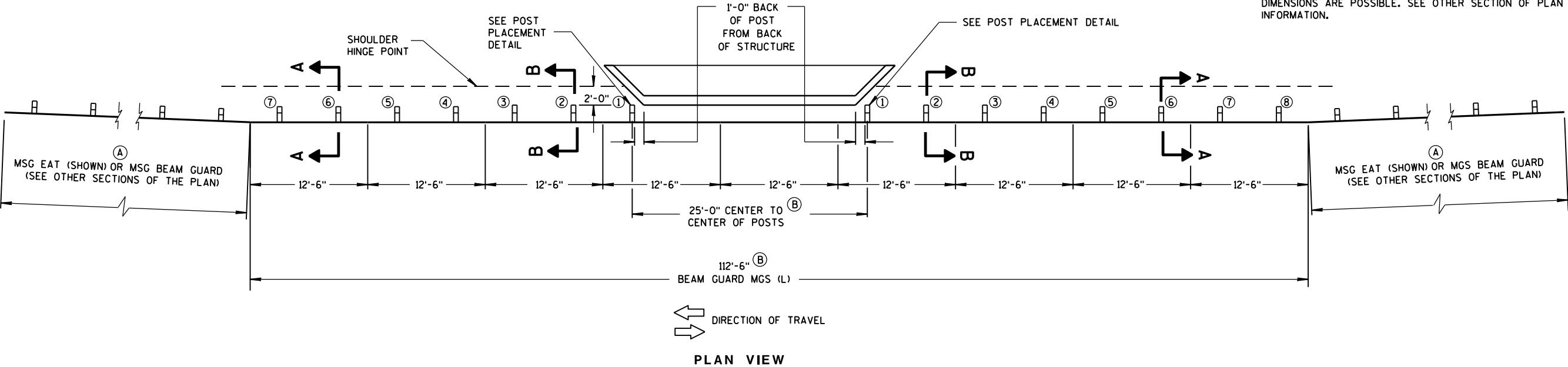
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

GENERAL NOTES

POSTS 1 THROUGH 3 ARE CRT POSTS.
ALL OTHER POSTS SHALL BE WOOD OR STEEL.

SEE SDD 14 B 42 FOR MORE DETAILS.

- (A) FLARE FOR MGS EAT SHOWN. IF INSTALLING MGS NO FLARE NEEDED.
- (B) VALUES SHOWN ON DRAWING REPRESENT THE MAXIMUM LENGTH. SHORTER DIMENSIONS ARE POSSIBLE. SEE OTHER SECTION OF PLAN FOR MORE INFORMATION.



MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) TWO-WAY TRAFFIC

MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)

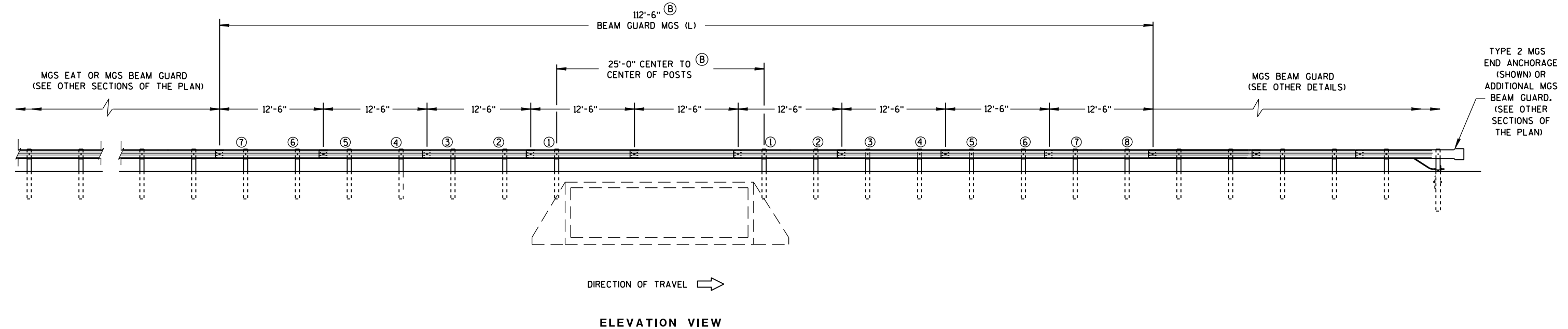
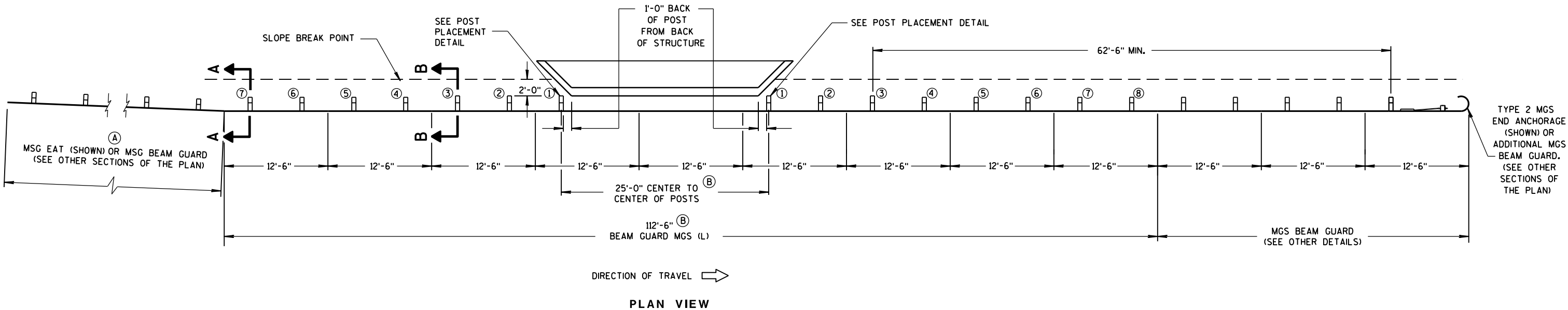
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

POSTS 1 THROUGH 3 ARE CRT POSTS.
ALL OTHER POSTS SHALL BE WOOD OR STEEL.

SEE SDD 14 B 42 FOR MORE DETAILS.

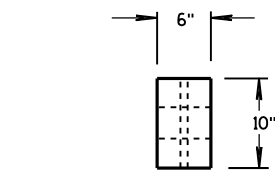
- (A) FLARE FOR MGS EAT SHOWN. IF INSTALLING MGS NO FLARE NEEDED.
- (B) VALUES SHOWN ON DRAWING REPRESENT THE MAXIMUM LENGTH. SHORTER DIMENSIONS ARE POSSIBLE. SEE OTHER SECTION OF PLAN FOR MORE INFORMATION.



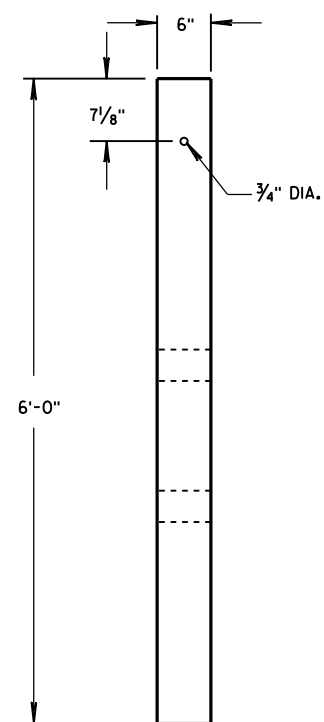
MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) ONE-WAY TRAFFIC

MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

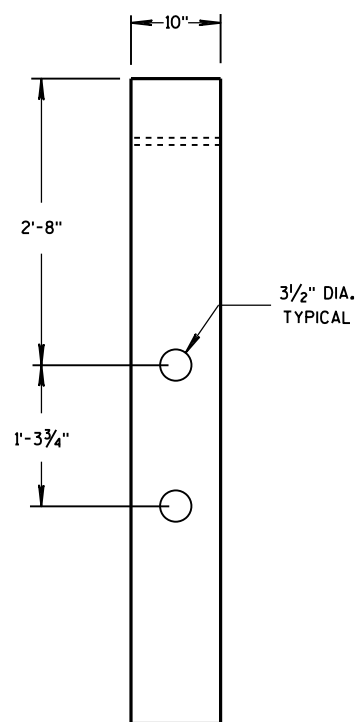


PLAN VIEW

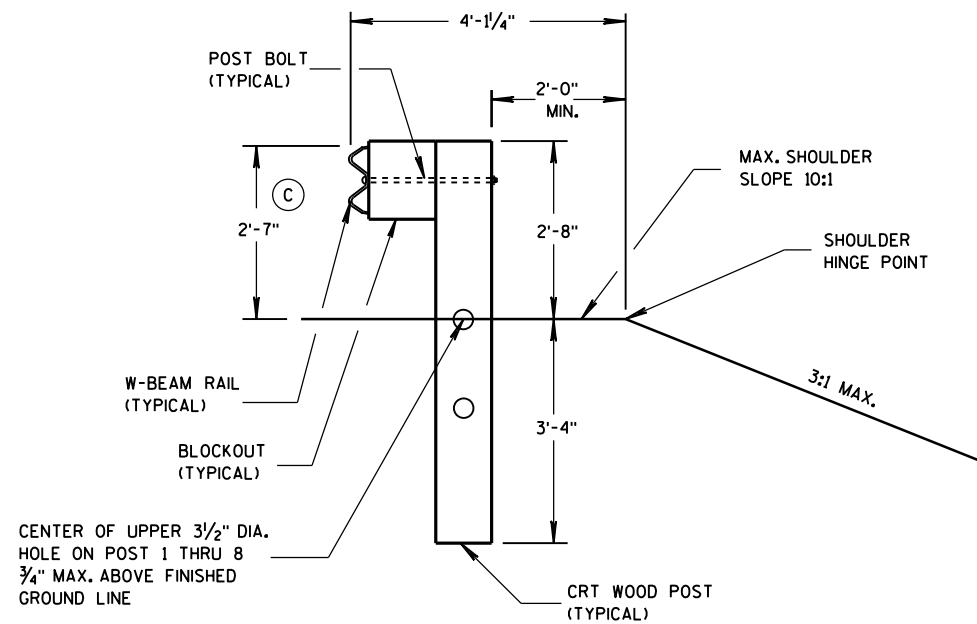


FRONT VIEW

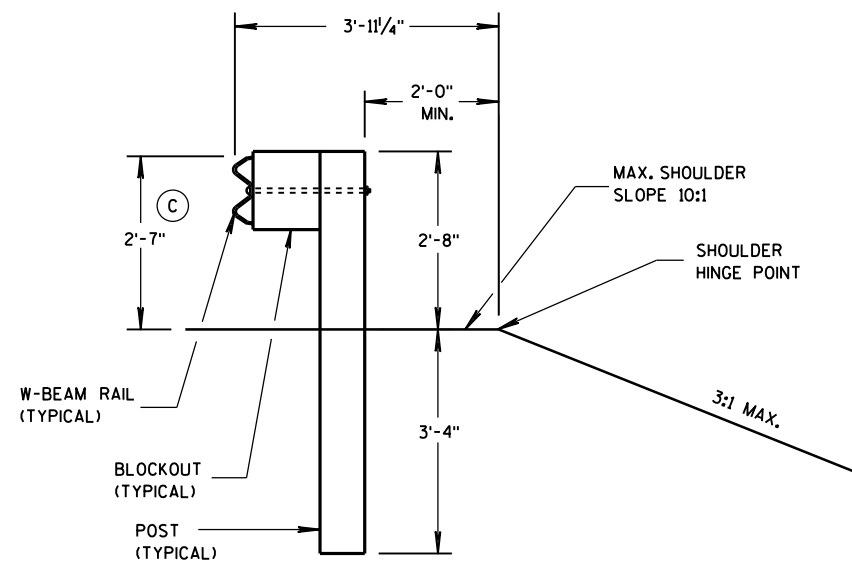
CRT WOOD POST



SIDE VIEW

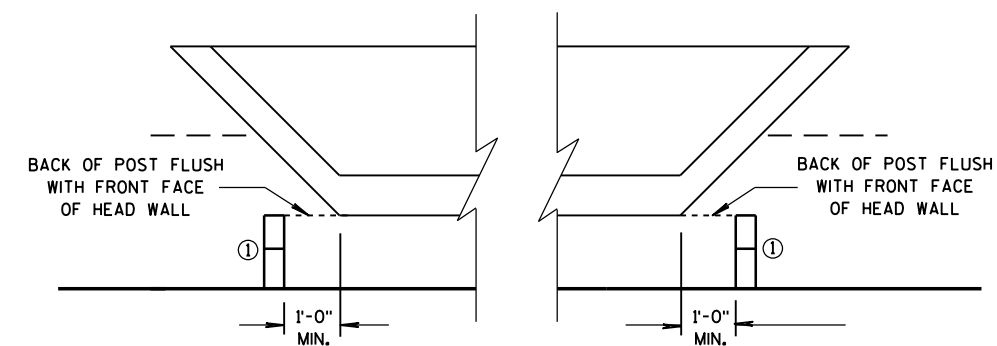
SECTION B-B
POSTS NO. 1-3

SEE OTHER DETAILS

SECTION A-A
POSTS NO. 4-8

SEE OTHER DETAILS

GENERAL NOTES

(C) TOLERANCE FOR TOP OF W-BEAM RAIL IS $\pm 1"$.

POST PLACEMENT DETAIL

MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATIONAPPROVED
5/10/2013
DATE
FHWA/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

GENERAL NOTES

- (A) THE SLOPE IN THE AREA BOUNDED BY THE EXTENDED VEHICLE RUNOUT PATH (EVRP), 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 MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.
- (D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.
- (E) SHEETING IS ATTACHED TO 0.040 ALUMINUM SHEET AND ATTACHED TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER OF E.A.T.
- (F) 1/2" DIAMETER X 3" LONG LAG BOLT AND WASHER.
- (H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.
- (I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

SEE SDD 14B42 FOR MORE INFORMATION.

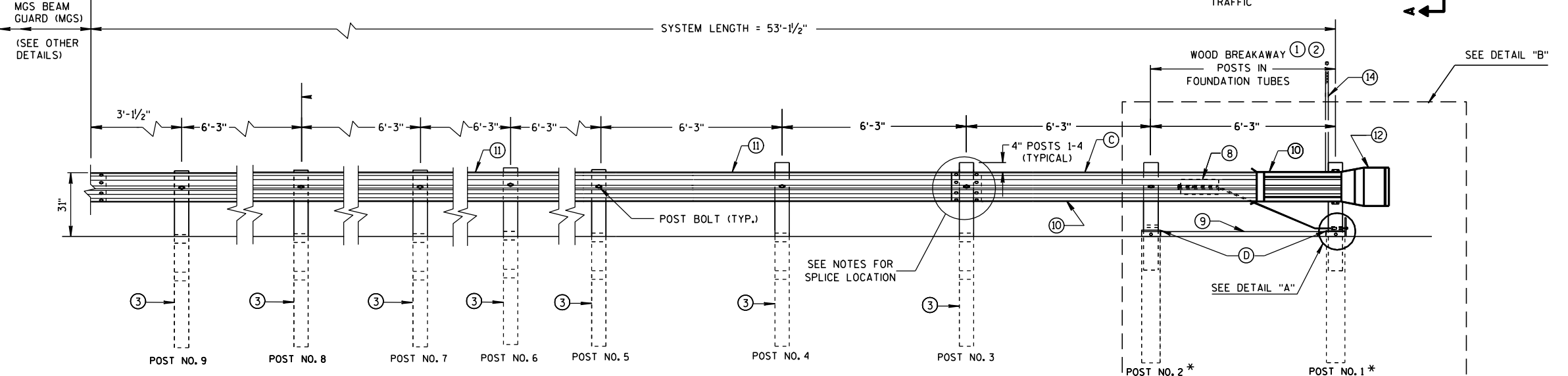
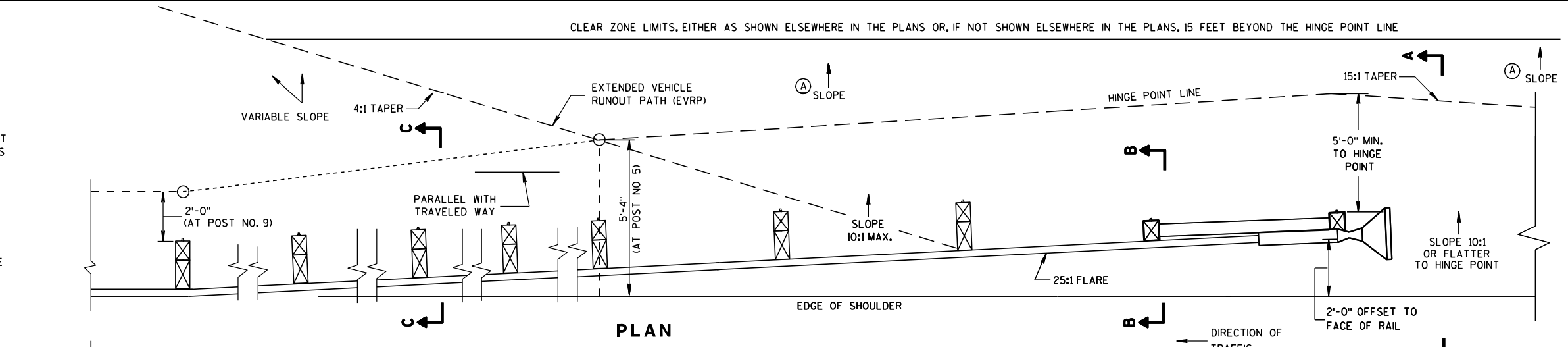
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

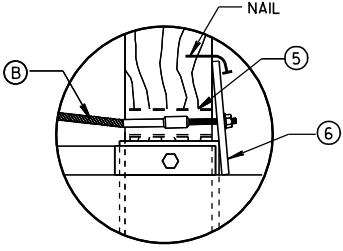
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

PATTERN AND COLORS ON REFLECTIVE SHEETING TYPE H ARE TO CONFORM TO OM3-L OR OM3-R OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

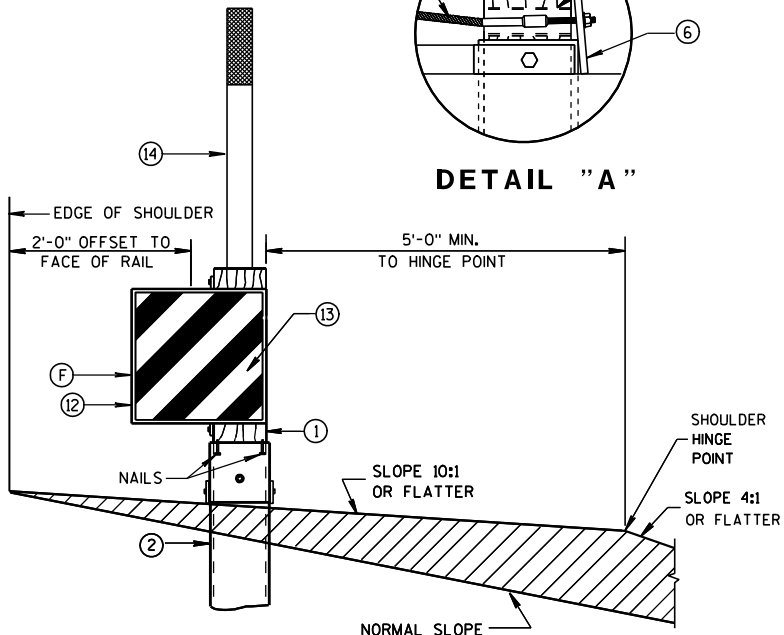
THE CENTER OF THE UPPER 3/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE ($\pm \frac{3}{4}$ ")



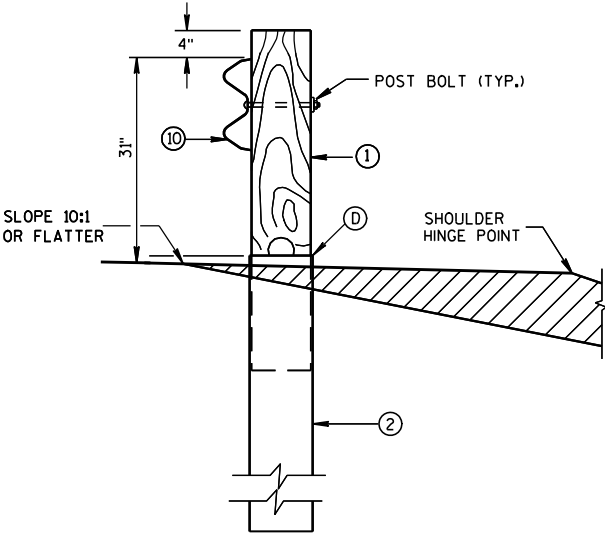
ELEVATION



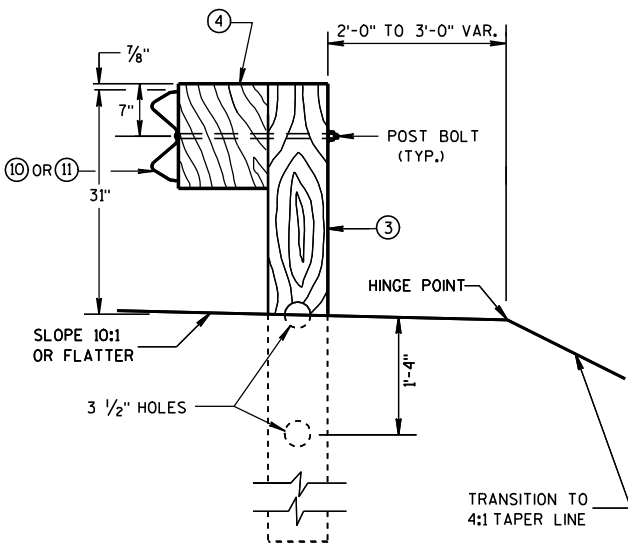
DETAIL "A"



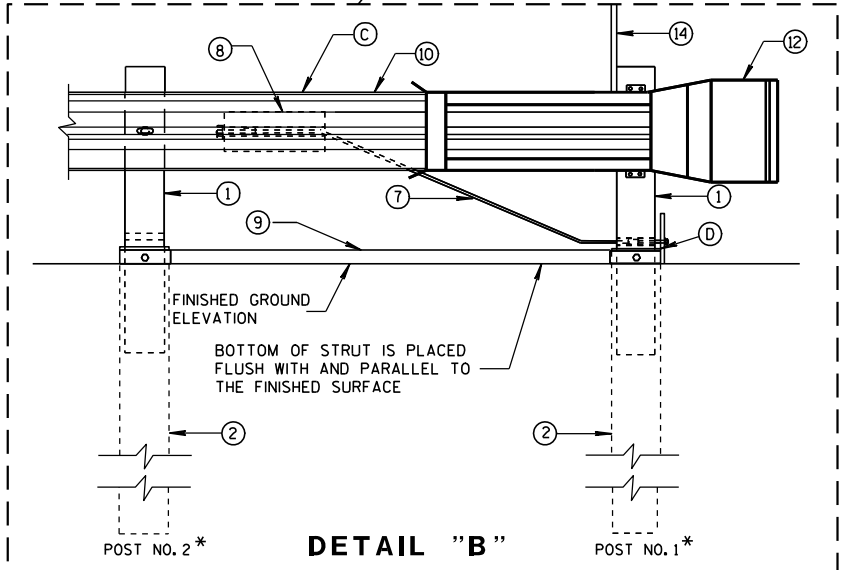
SECTION A-A
TYPICAL AT POST NO. 1*



SECTION B-B
TYPICAL AT POST NO. 2*



SECTION C-C
TYPICAL AT POST NOS. 3-9

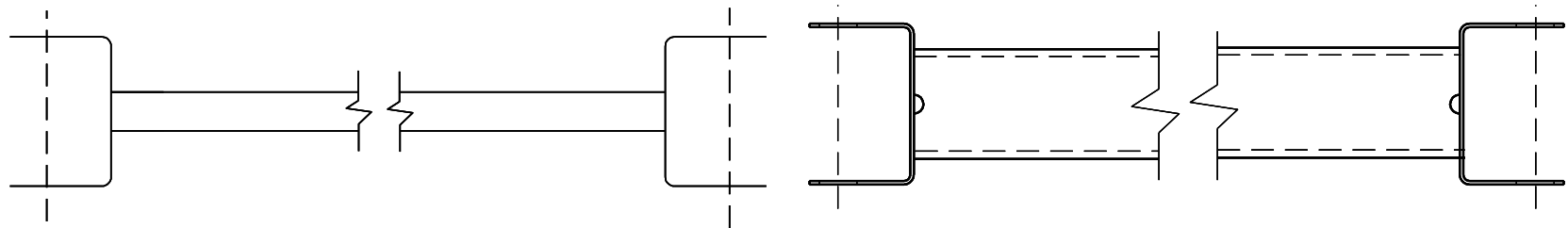


DETAIL "B"

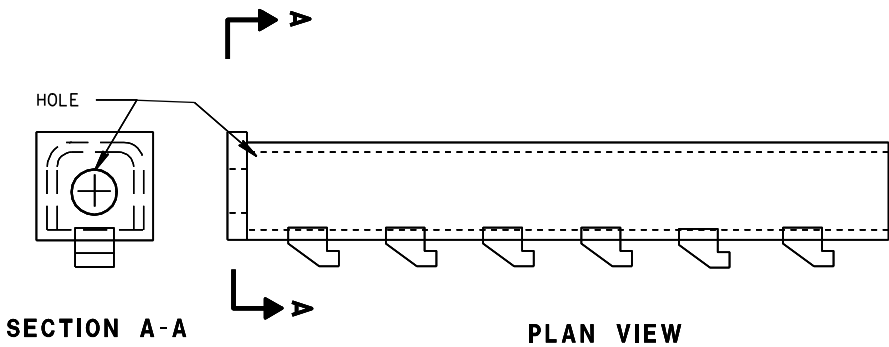
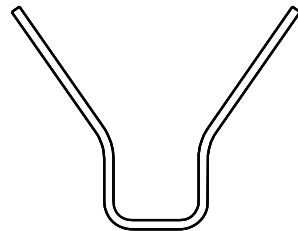
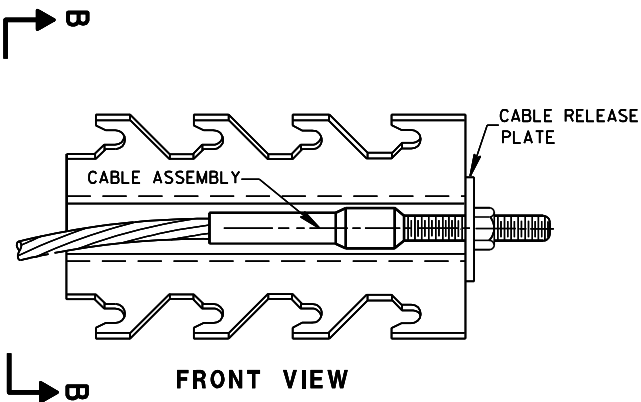
MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

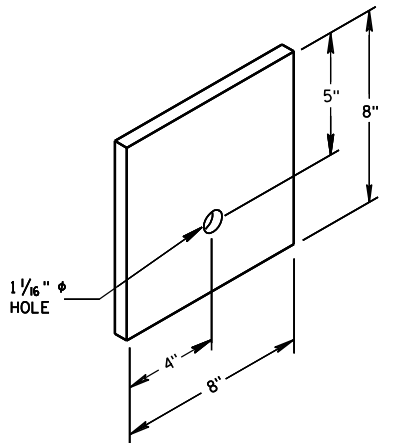
BILL OF MATERIALS	
PART NO.	DESCRIPTION
MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.	
①	WOOD BREAKAWAY POST
②	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR 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	END SECTION EAT
⑬	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE H (ONLY THE SHEETING IS SUPPLIED BY THE MANUFACTURER)
⑭	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



⑨ ⑨
GENERIC GROUND STRUT



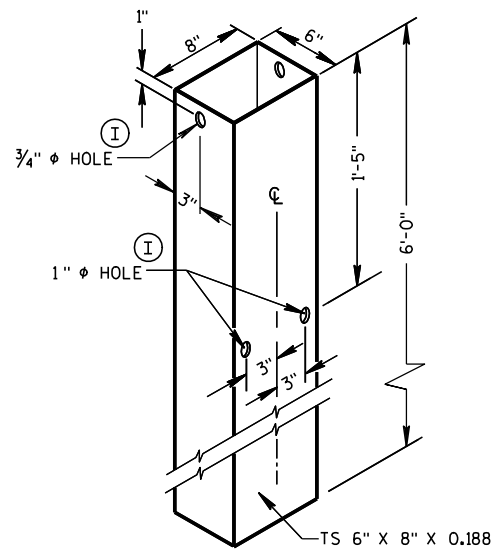
⑧ ⑧
GENERIC ANCHOR CABLE BOX



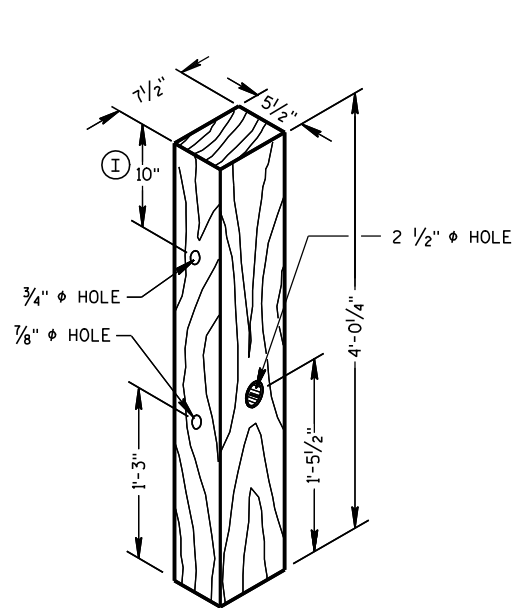
⑥
BEARING PLATE

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

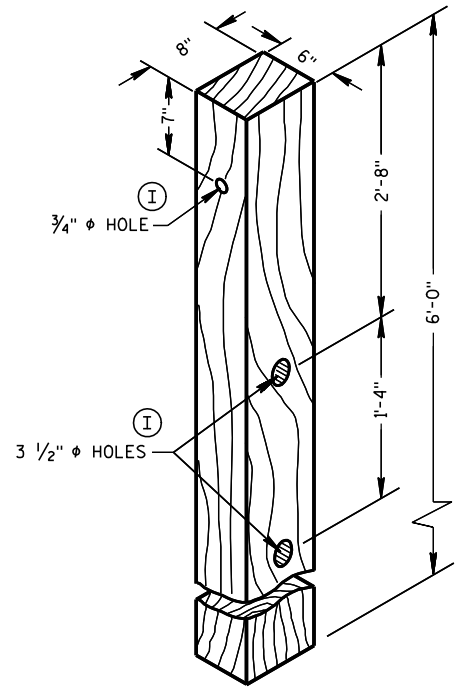
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



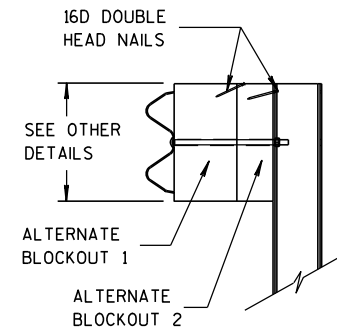
FOUNDATION TUBE ②



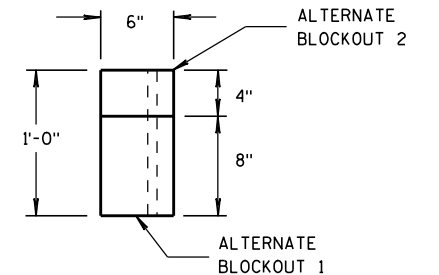
WOOD BREAKAWAY POST ①



WOOD CRT POST ③

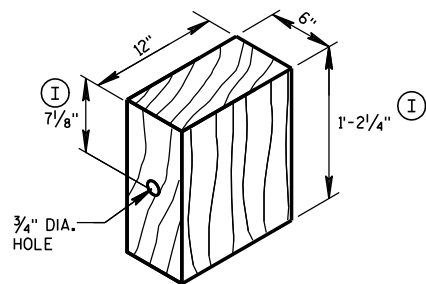


SIDE VIEW



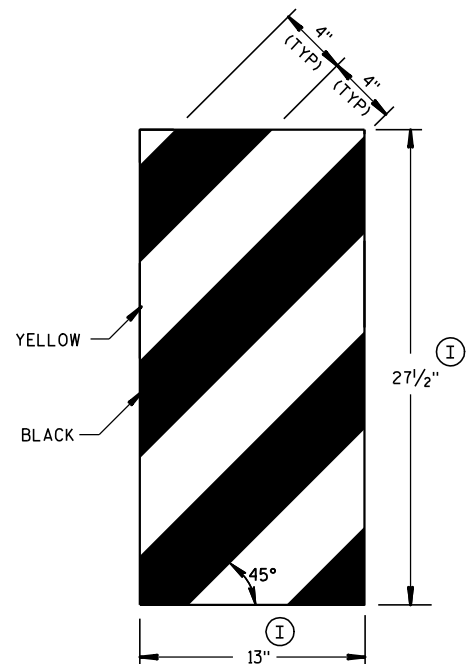
TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

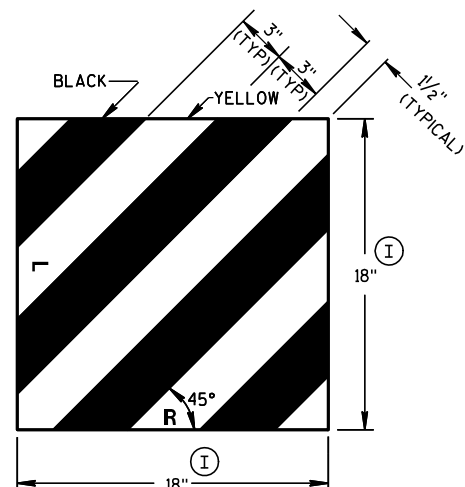


WOOD BLOCKOUT ④

YELLOW REFLECTIVE TAPE
3" X 9" TYPE H
REFLECTIVE SHEETING



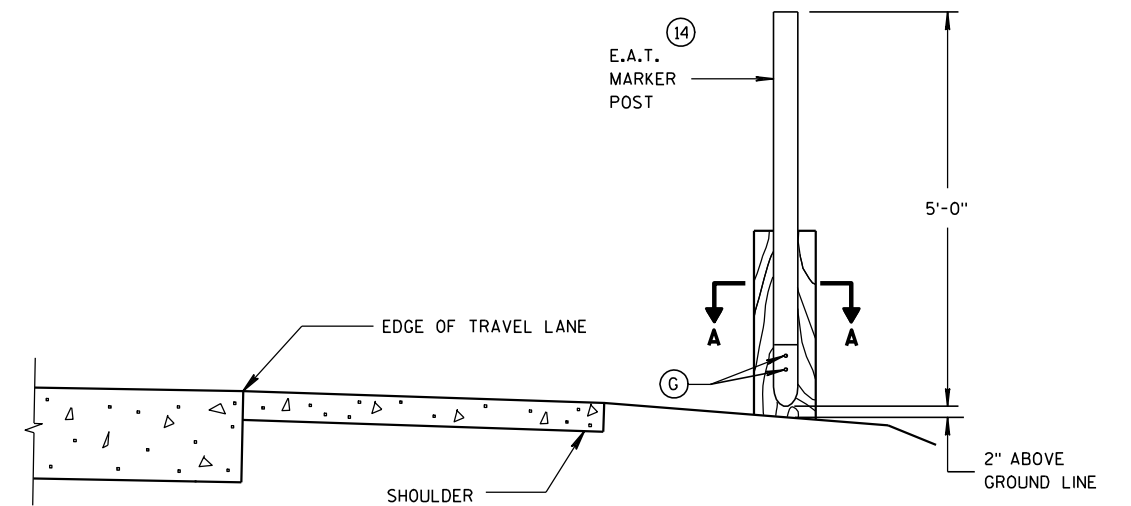
GENERIC REFLECTIVE SHEETING ⑬ ④



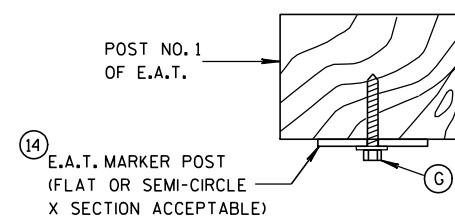
FRONT VIEW

SIDE VIEW

E.A.T. MARKER POST ⑭



TYPICAL INSTALLATION OF E.A.T.
MARKER POST BACKSIDE OF POST NO. 1
(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

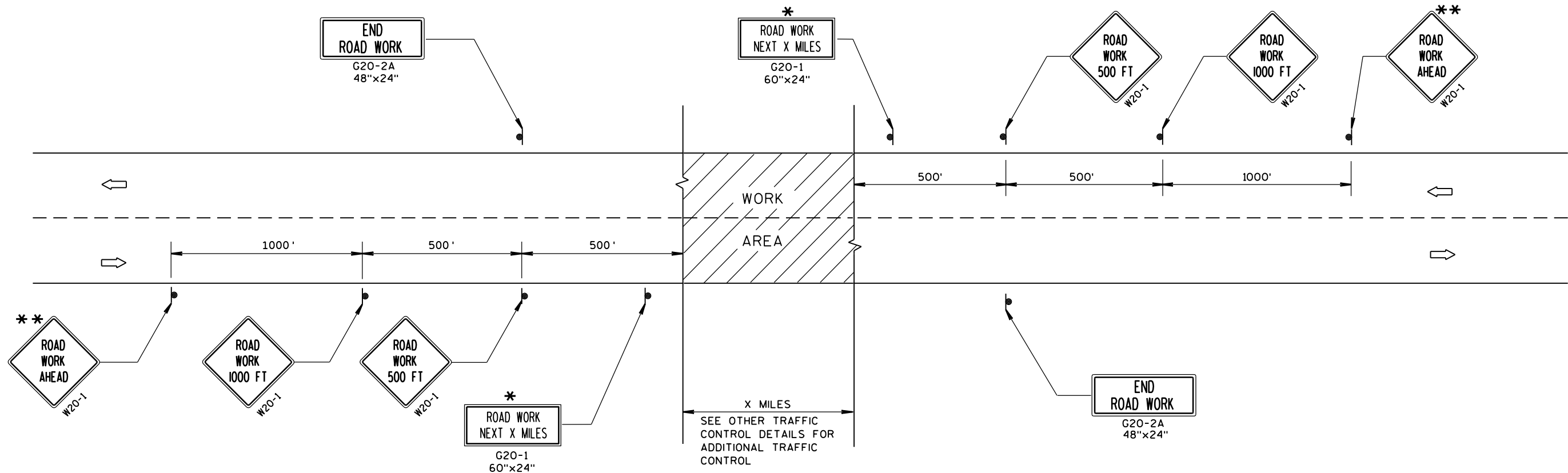
APPROVED

5/23/2011

DATE

FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

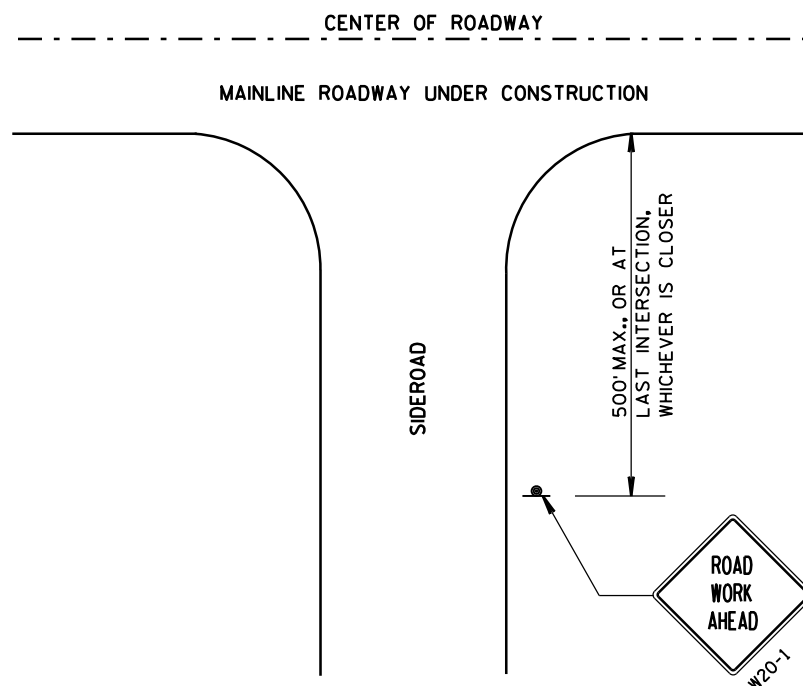
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

** PLACE ADDITIONAL W20-1 "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL, ADVANCE
WARNING SIGNS 45 M.P.H.
OR GREATER TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

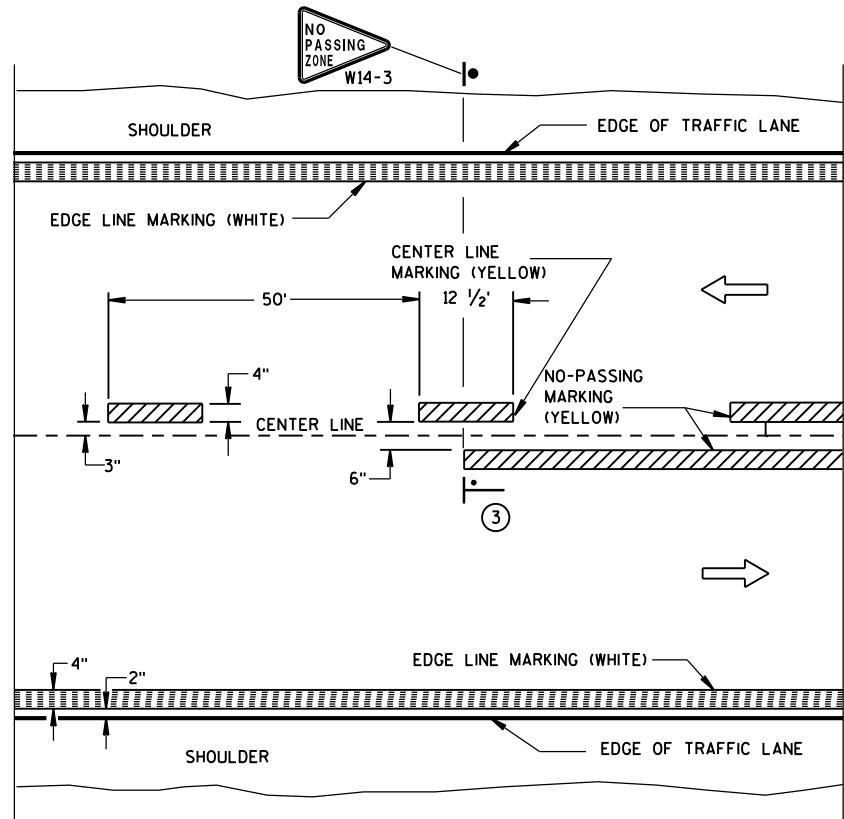
APPROVED

8/2013

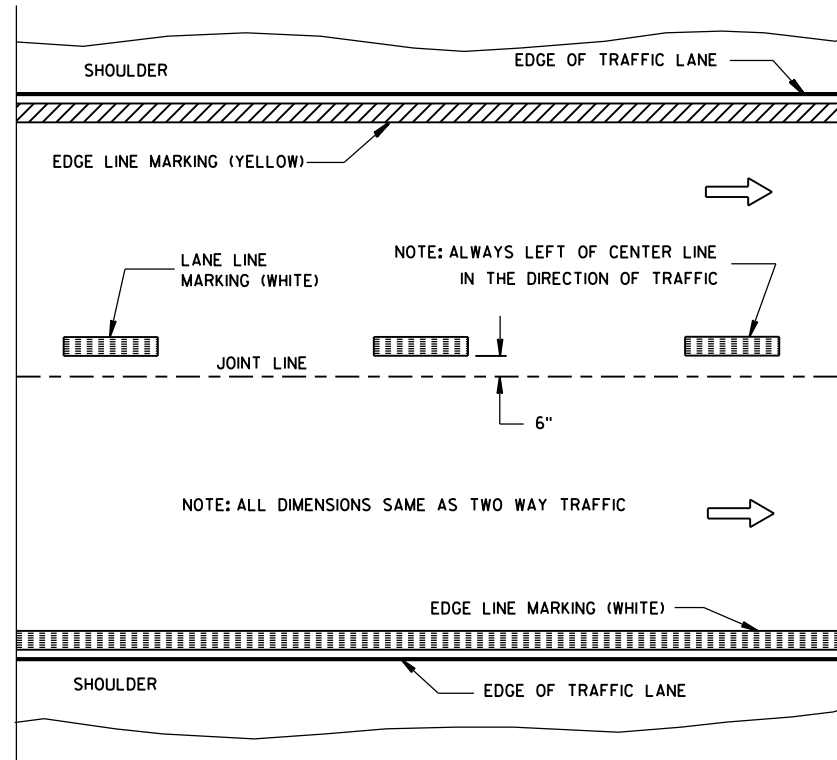
DATE

FHWA

/S/ Travis Feltes
STATE TRAFFIC ENGINEER OF DESIGN

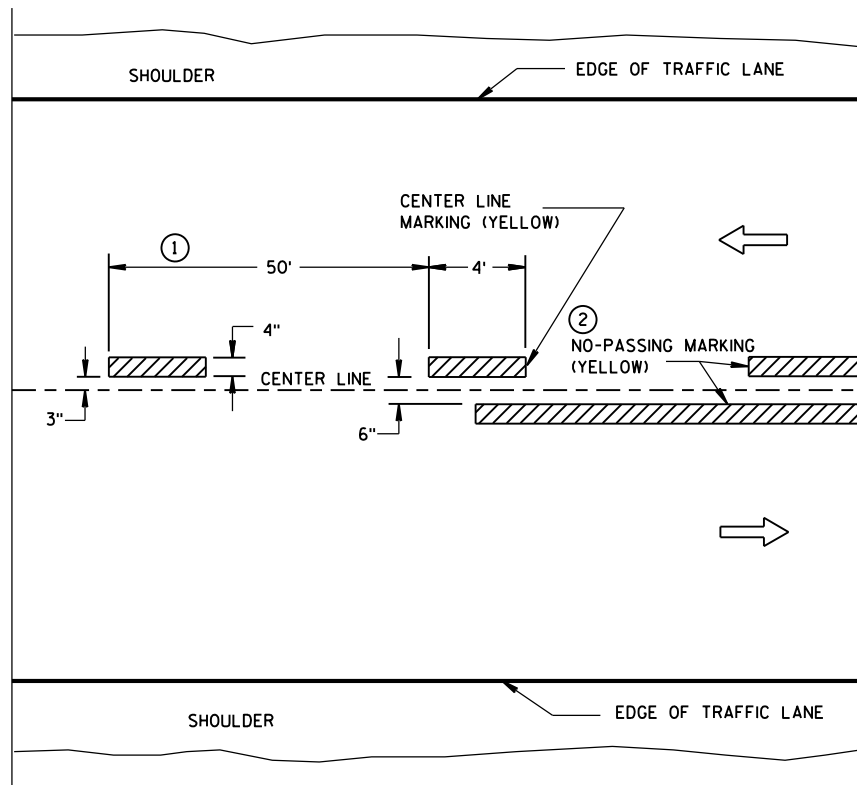


TWO WAY TRAFFIC

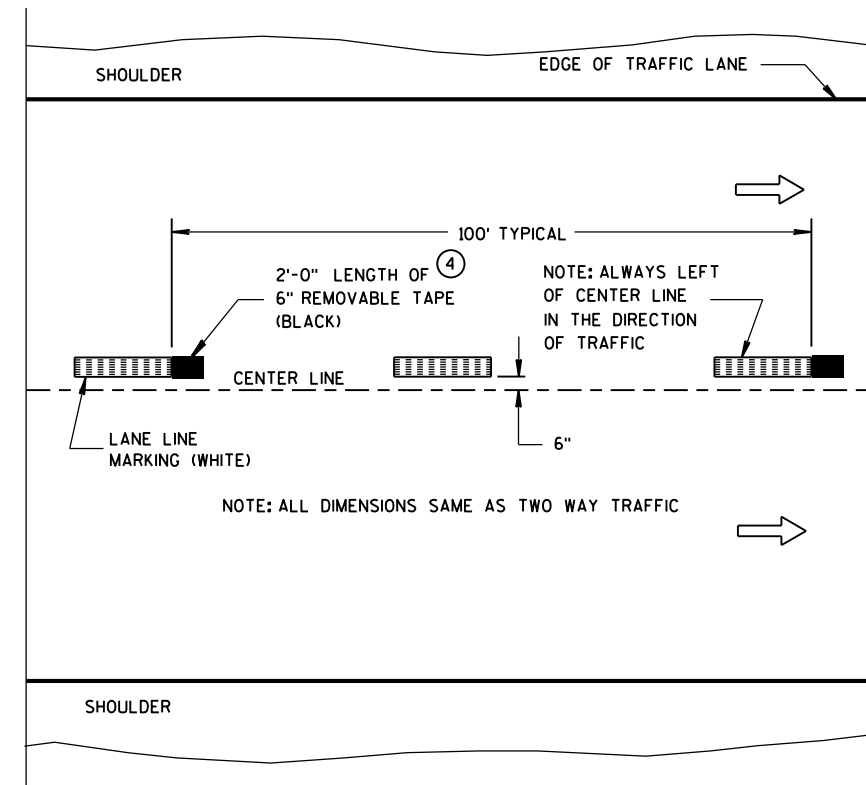


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING
(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

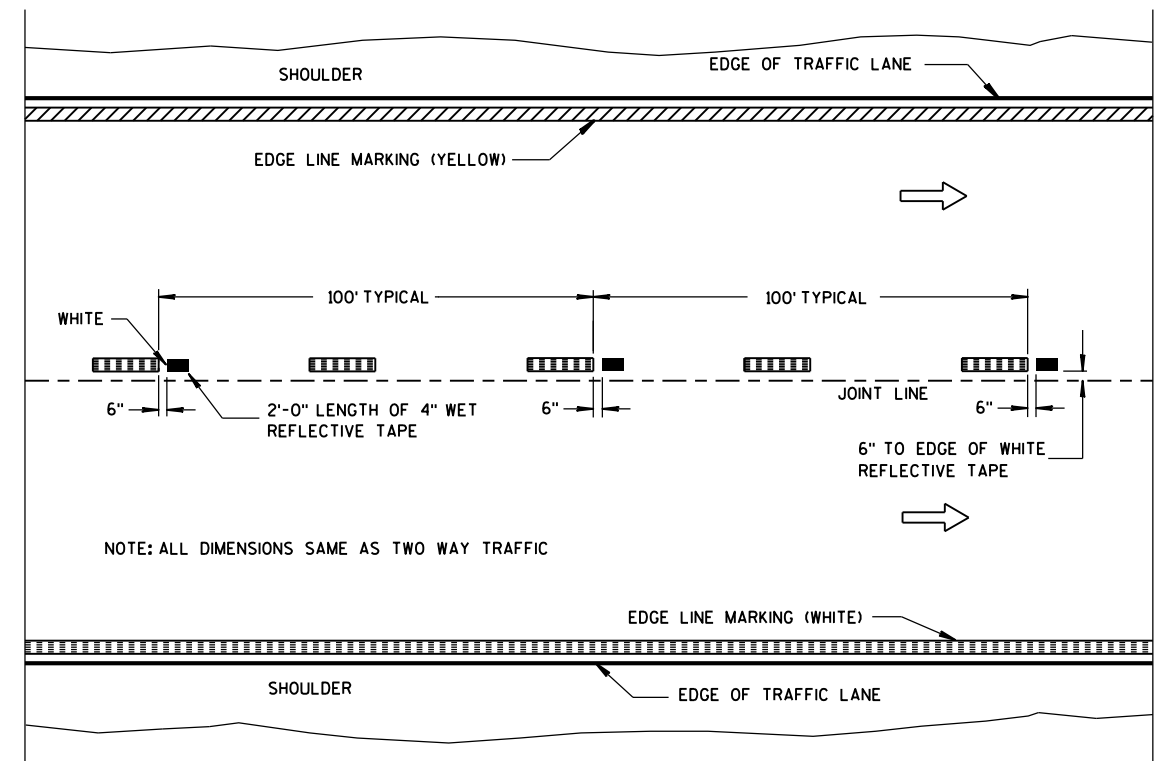
GENERAL NOTES

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

- 1 HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
- 2 NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
- 3 NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
- 4 CONCRETE ONLY.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

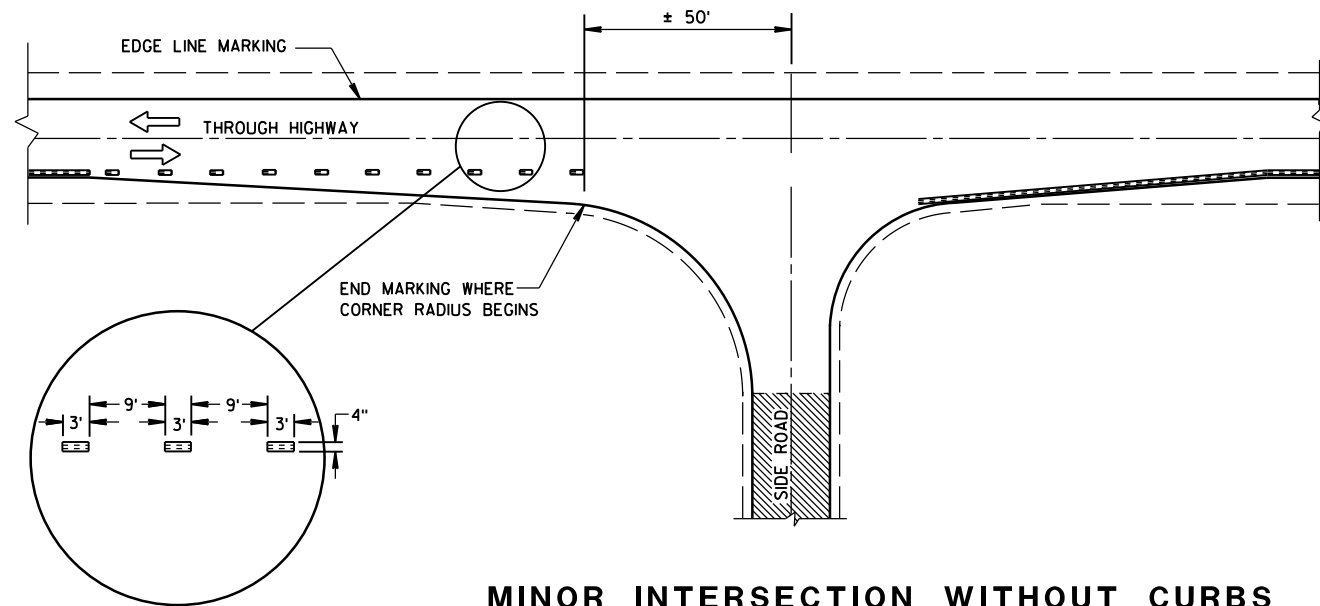
LEGEND

- "T" MARKING
- POST MOUNTED SIGN

PAVEMENT MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

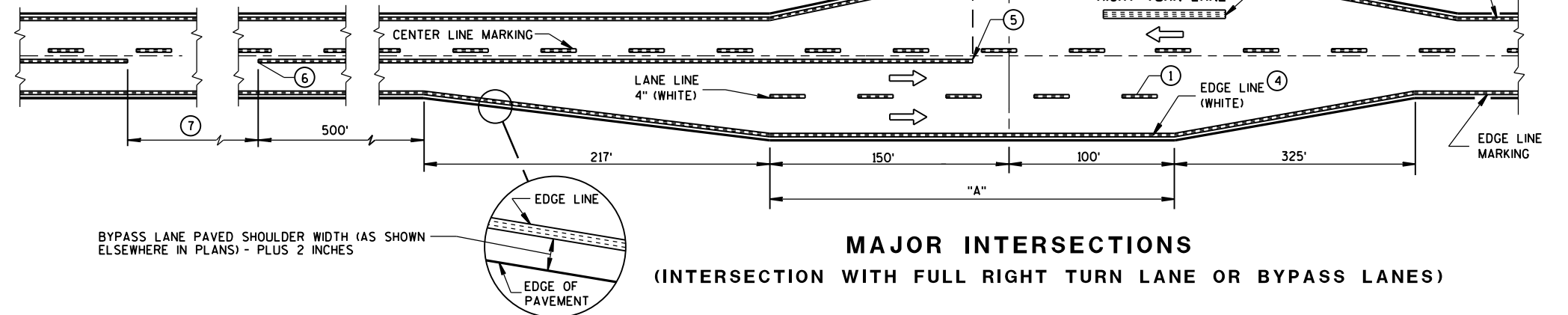
APPROVED
5-13-2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER
FHWA



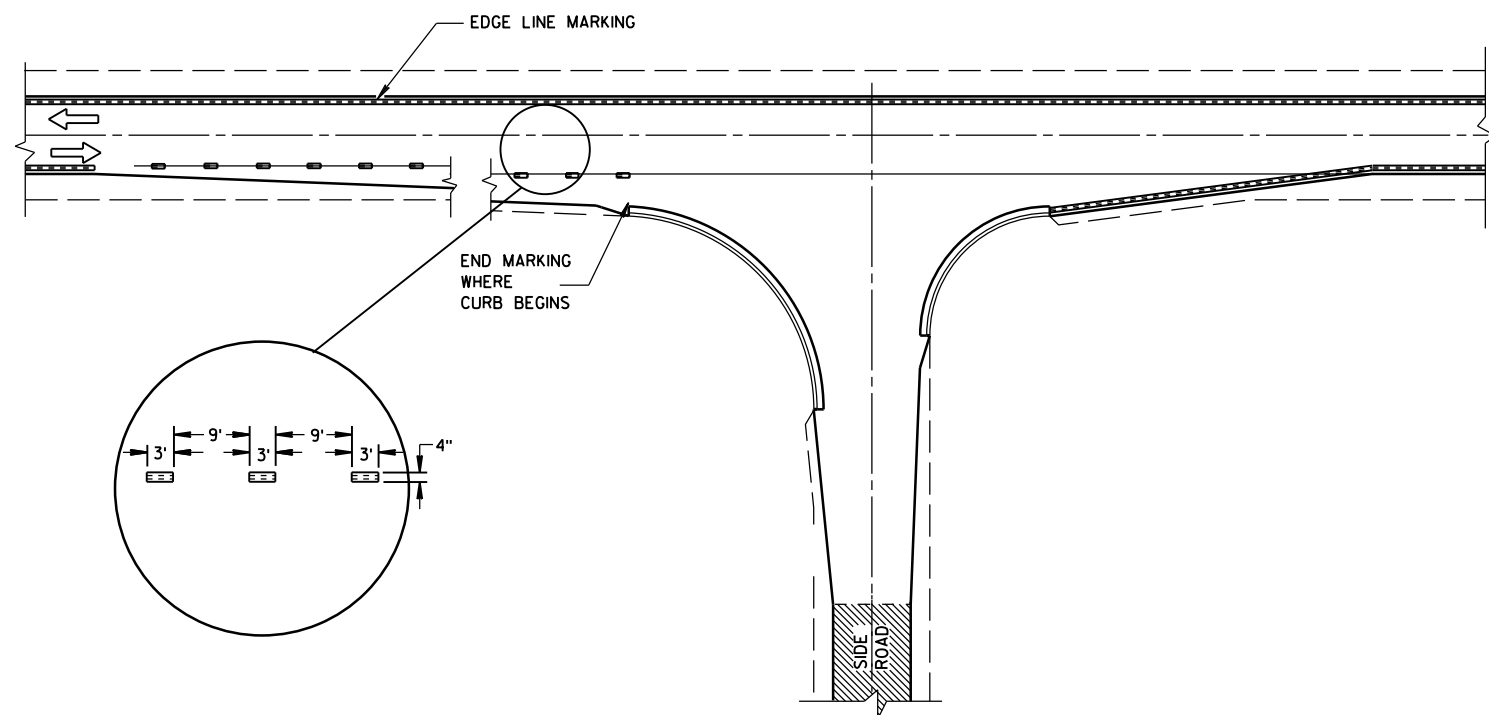
MINOR INTERSECTION WITHOUT CURBS

⑦

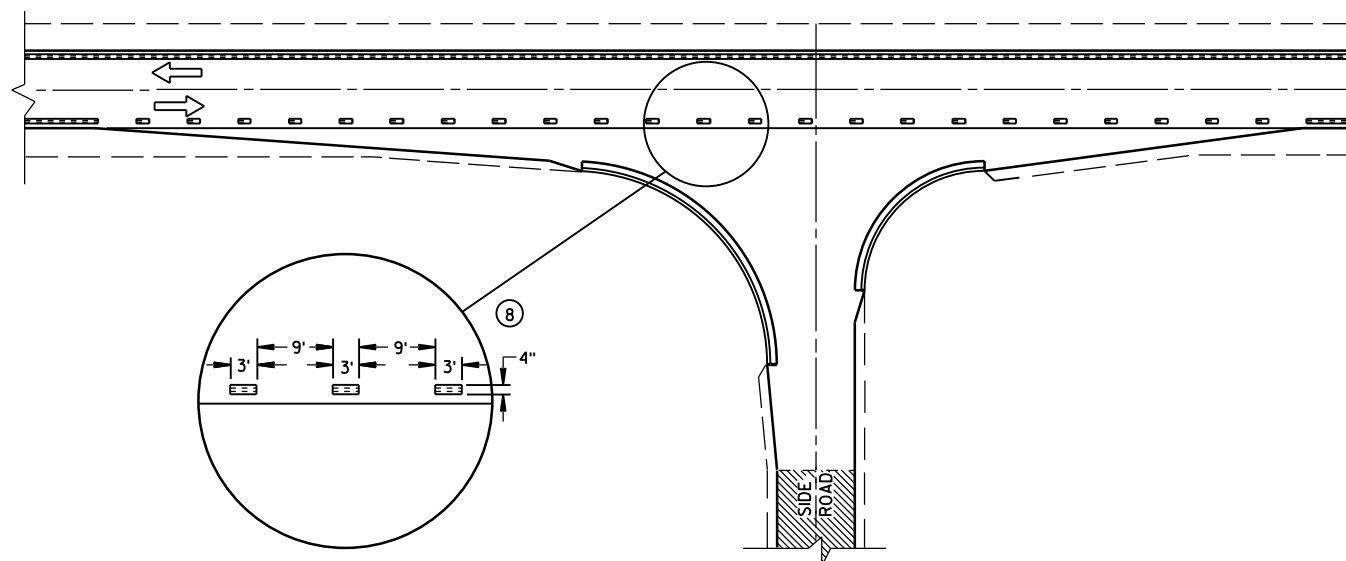
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



MAJOR INTERSECTIONS
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS
(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS
③ (FOR SPECIAL CONDITIONS AS SPECIFIED)

GENERAL NOTES

- EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
 - ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
 - ③ ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.
 - ④ THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.
 - ⑤ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.
 - ⑥ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
 - ⑦ IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.
 - ⑧ 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

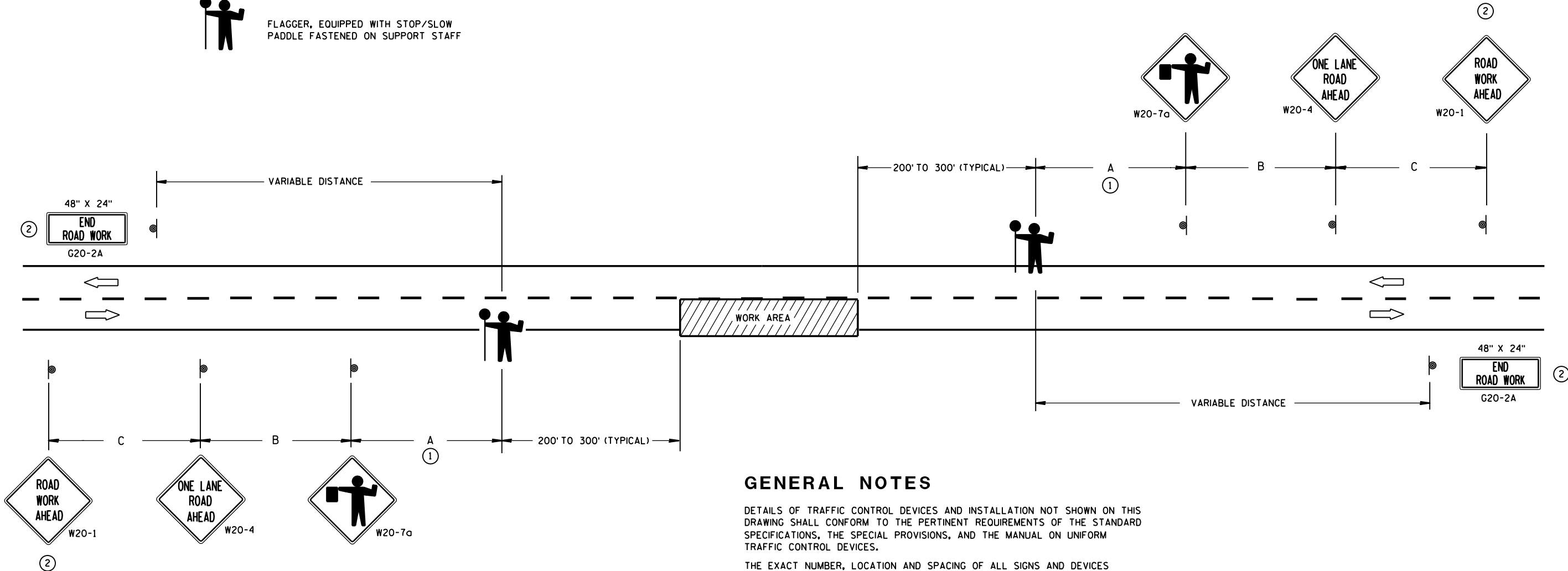
-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

SPEED LIMIT	SIGN SPACING A,B,C
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

- ① FOR A MOVING WORK OPERATION, SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

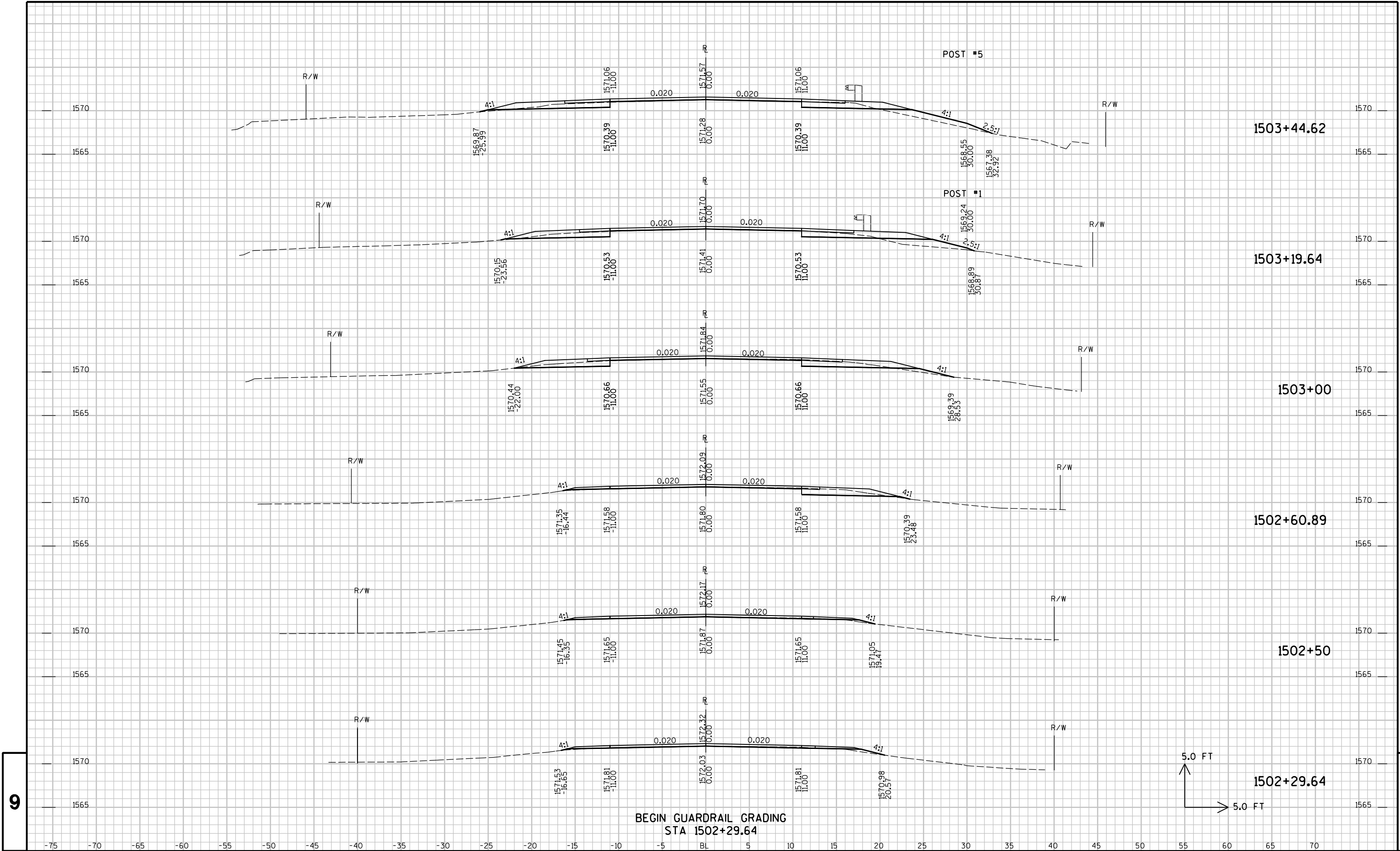
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA

CTH C EARTHWORK

* EXPANDED 30%

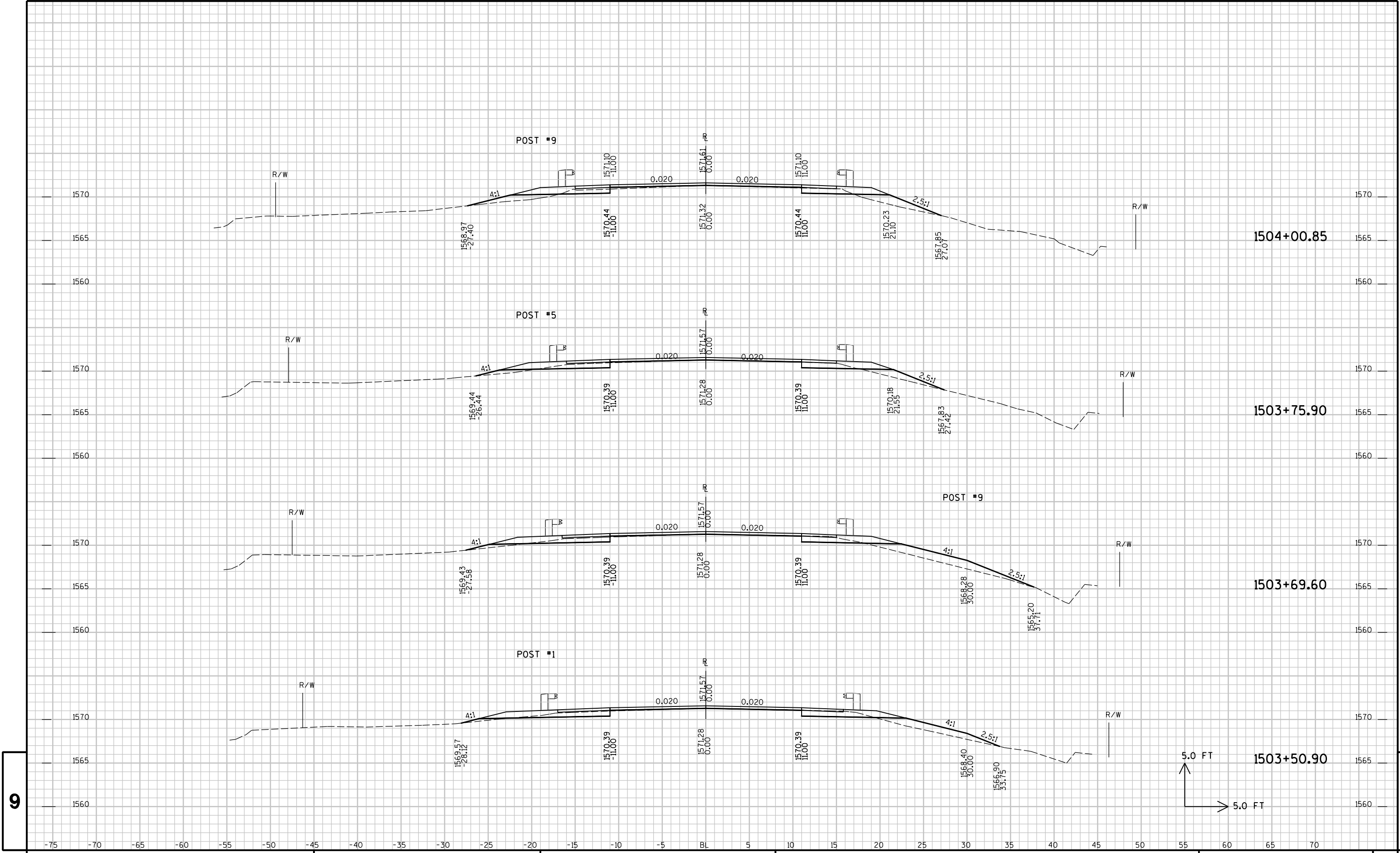
STATION	AREA (SF)		INCREMENTAL VOLUME		CUMULATIVE VOLUME		MASS ORDINATE (CY)
	CUT (SF)	FILL (SF)	CUT (CY)	FILL (CY)	CUT (CY)	*FILL (CY)	
1502+00	0	0	0	0	0	0	0
1502+30	0.8	1	0	1	0	1	0
1502+50	0.9	0.5	1	1	1	1	0
1502+61	0.8	0.3	0	0	1	2	0
1503+00	10.1	1.4	8	1	9	3	6
1503+20	8.6	5.8	7	3	16	7	9
1503+45	9.3	6.6	8	6	24	14	10
1503+51	9.1	9.2	2	2	27	17	10
1503+70	7.4	14.5	6	8	32	27	5
1503+76	6.7	6.1	2	2	34	30	4
1504+01	5.3	10.3	6	8	39	40	-1
1504+48	8.3	42.2	12	46	51	100	-48
1504+63	7.8	4.9	5	14	56	117	-61
1504+71	7.9	2.7	2	1	58	119	-60
1504+81	8.1	1.5	3	1	61	120	-58
1504+88	8.4	1.6	2	0	63	120	-57
1505+04	8.3	66.4	5	20	68	146	-78
1505+51	5.7	15.7	12	71	80	238	-158
1505+76	6.6	9.8	6	12	86	253	-167
1505+82	7.1	8.9	2	2	88	256	-169
1506+01	7	9.7	5	6	93	265	-172
1506+07	7	8.6	2	2	94	267	-173
1506+32	5.9	5.2	6	6	100	276	-176
1506+50	5.9	2.8	4	3	104	279	-175
1506+91	2.8	1	7	3	111	283	-172
1507+22	0	0	2	1	112	284	-171
Column Total	156	237	110	218		290	-180



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PROJECT NO : 9476-00-70	HWY : CTH C	COUNTY : PRICE	CROSS SECTIONS -	SHEET NO:	E
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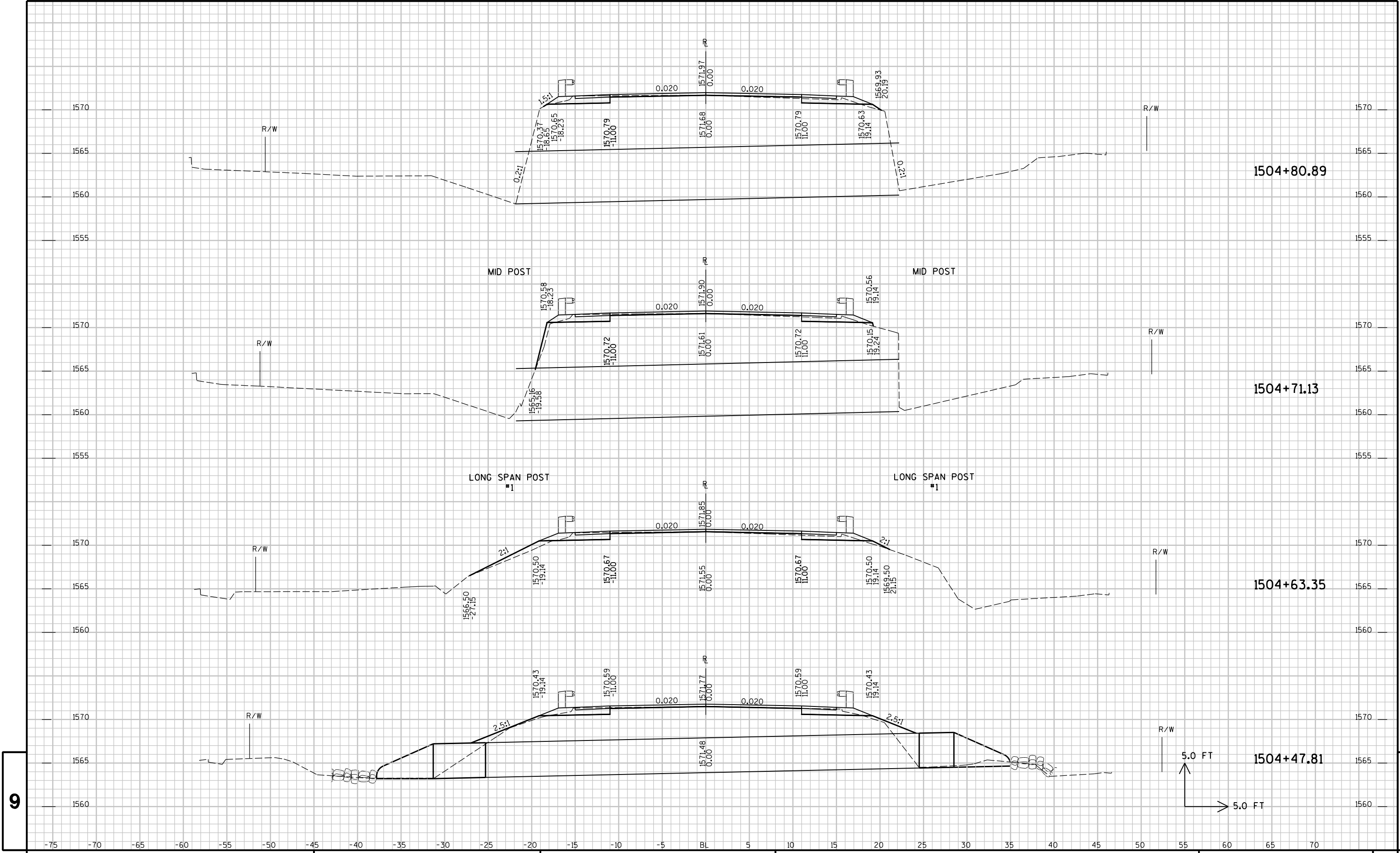


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PROJECT NO : 9476-00-70				HWY : CTH C				COUNTY : PRICE				CROSS SECTIONS -				SHEET NO:				E			
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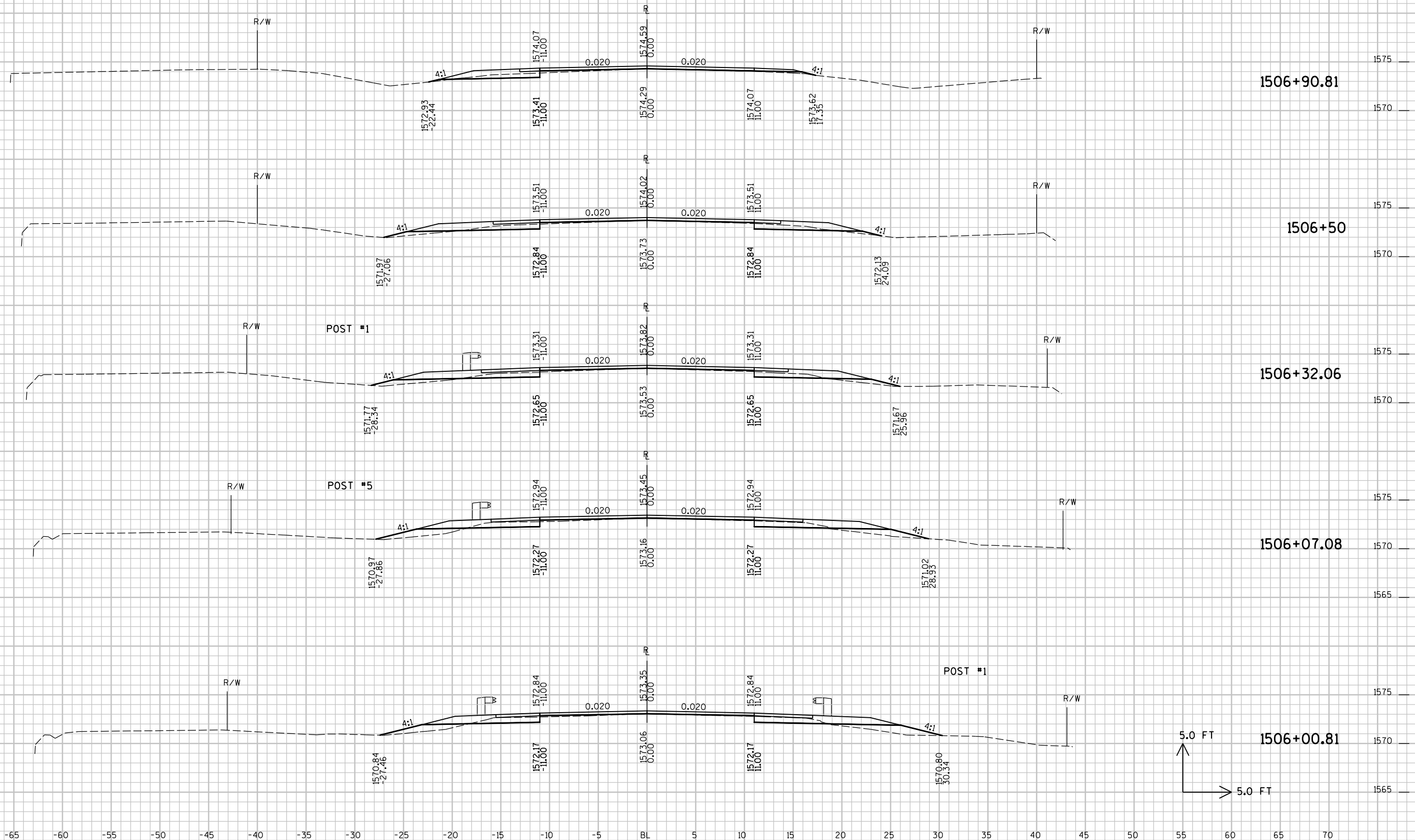
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END GUARDRAIL GRADING
STA 1506+97.55



PROJECT NO : 9476-00-70

HWY : CTH C

COUNTY : PRICE

CROSS SECTIONS -

SHEET NO:

E

FILE NAME : P:\PT\Price\124683\5-final-dsgn\51-drawings\40-TransHwy\CAD - LET\XBCTHC01.DGN

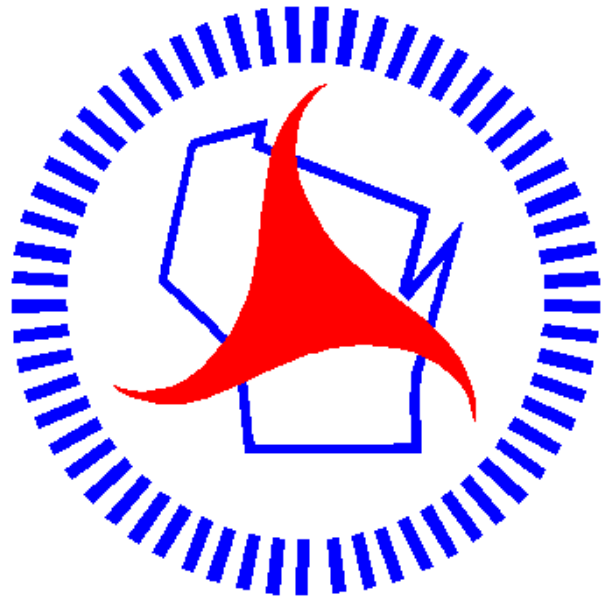
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PLOT BY : SEH

PLOT NAME :

PLOT SCALE : N/A



Wisconsin Department of Transportation

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