LAX

APRIL 2019

PROJECT ID: 5730-07-60

WITH: N/A

COUNTY: VERNON

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5730-07-60	WISC 2019217	1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

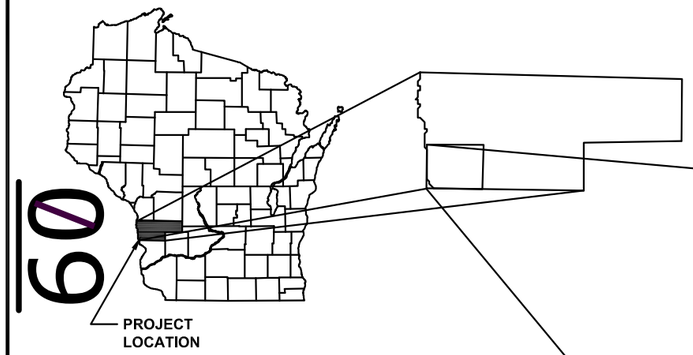
GENOA - VIROQUA

MAIN STREET TO COX CREEK

STH 56
VERNON COUNTY

ORDER OF SHEETS

TOTAL SHEETS = 90



DESIGN DESIGNATION

A.D.T. (2019)	=	830
A.D.T. (2039)	=	1030
D.H.V. (2039)	=	123
D.	=	60/40
T.	=	3.0%
DESIGN SPEED	=	60 MPH
ESALS	=	150,000

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE	P.L. + 58.1	ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	95.36
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)	
SLOPE INTERCEPT		**UTILITIES**	
REFERENCE LINE		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	ELECTRIC	E
EXISTING CULVERT		TELEPHONE	T
PROPOSED CULVERT (Box or Pipe)		FIBER OPTIC	FO
MARSH AREA		SANITARY SEWER	SAN
WOODED OR SHRUB AREA		STORM SEWER	SS
		WATER	W
		UTILITY PEDESTAL	
		POWER POLE	
		TELEPHONE POLE	

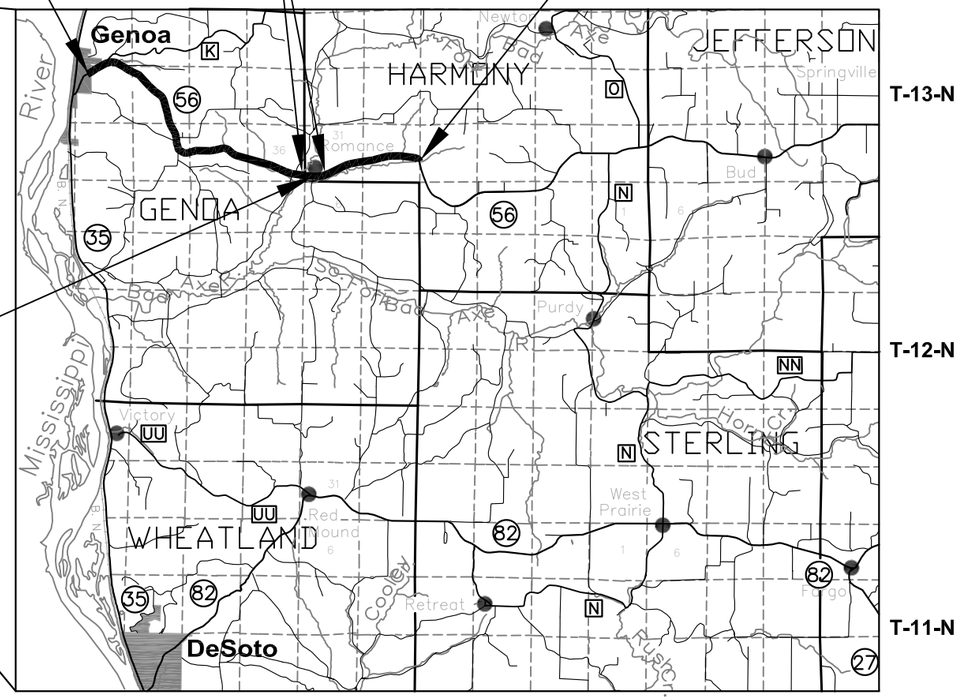
STATE PROJECT NUMBER
5730-07-60

BEGIN PROJECT
STA 6+39.87
Y = 156980.115
X = 613126.320

EXCEPTION TO NET C/L LENGTH
STA 256+44 - STA 265+15

END PROJECT
STA 369+71.31
Y = 149581.426
X = 643477.612

STRUCTURE
B-62-0239



N

LAYOUT

SCALE 0 1 MI. 2 MI.

TOTAL NET LENGTH OF CENTERLINE = 6.716 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), VERNON COUNTY NAD 83 (2011) ADJ.

ORIGINAL PLANS PREPARED BY

TEAM ENGINEERING
Transportation | Environmental | Agricultural | Municipal and Land Surveying

WISCONSIN
JEREMY F. KRACHEY
E-37258
WAUZEKA
WIS.
PROFESSIONAL ENGINEER

11/10/18 (Date)

(Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	TEAM ENGINEERING
Designer	TEAM ENGINEERING
Project Manager	Tim Maedke, PE
Regional Examiner	SW Region
Regional Supervisor	Reiny Yahnke, PE

APPROVED FOR THE DEPARTMENT

10/18/18 (Date)

(Signature)

E

LIST OF STANDARD ABBREVATIONS

ABUT.	Abutment
AC	Acre
AGG.	Aggregate
AH	Ahead
<	Angle
ASPH	Asphaltic
AVG.	Average
A.D.T.	Average Daily Traffic
BAD	Base Aggregate Dense
BK.	Back
BF	Back Face
B.M	Bench Mark
BR.	Bridge
C/L	Center Line
CC	Center to Center
CTH	County Trunk Highway
CR.	Creek
CY OR CU YD	Crushed
CP	Cubic Yard
C & G	Culvert Pipe
D	Curb and Gutter
DHV	Degree of Curve
DIA	Design Hour Volume
E	Diameter
X	East
ELEC	East Grid Coordinate
EL OR ELEV	Electric
ESALS	Elevation
EBS	Equivalent Single Axle Loads
FF	Excavation Below Subgrade
FE	Face to Face
F	Field Entrance
FG	Fill
FL OR F/L	Finished Grade
FT	Flow Line
FTG	Foot
GN	Footing
HT	Grid North
CWT	Height
HYD	Hundredweight
INL	Hydrant
ID	Inlet
INV	Inside Diameter
IP	Invert
IRS	Iron Pipe or Pin
	Iron Rod Set

JT	Joint
JCT	Junction
LHF	Left–Hand Forward
L	Length of Curve
LIN FT OR LF	Linear Foot
LC	Long Chord of Curve
MH	Manhole
MB	Mailbox
ML OR M/L	Match Line
N	North
Y	North Grid Coordiante
OD	Outside Diameter
PLE	Permanent Limited Easement
PT	Point
PC	Point of Curvature
PI	Point of Intersection
PRC	Point of Reverse Curvature
PT	Point of Tangency
POC	Point on curve
POT	Point on Tangent
PVC	Polyvinyl Chloride
PCC	Portland Cement Concrete
LB	Pound
PSI	Pounds Per Square Inch
PE	Private Entrance
R	Radius
RR	Railroad
RL OR R/L	Reference Line
RP	Reference Point
RCCP	Reinforced Concrete Culvert Pipe
REQD	Required
RES	Residence or Residential
RW	Retaining Wall
RT	Right
RHF	Right–Hand Forward
R/W	Right–of–Way
R	River
RD	Road
RDWY	Roadway
SALV	Salvaged
SAN S	Sanitary Sewer

SEC	Section
SHLDR	Shoulder
SHR	Shrinkage
SW	Sidewalk
S	South
SQ	Square
SF OR SQ FT	Square feet
SY OR SQ YD	Square Yard
STD	Standard
SDD	Standard Detail Drawings
STH	State Trunk Highways
STA	Station
SS	Storm Sewer
SG	Subgrade
SE	Superelevation
SL OR S/L	Survey Line
SV	Septic Vent
T	Tangent
TEL	Telephone
TEMP	Temporary
TI	Temporary Interest
TLE	Temporary Limited Easement
t	Ton
T OR TN	Town
TRANS	Transition
TL OR T/L	Transit Line
T	Trucks (percent of)
TYP	Typical
UNCL	Unclassified
UG	Underground Cable
USH	United States Highway
VAR	Variable
V	Velocity or Design Speed
VERT	Vertical
VC	Vertical Curve
VOL	Volume
WM	Water Main
WV	Water Valve
W	West
WB	Westbound
YD	Yard

DESIGNER

TEAM ENGINEERING, INC.
210 GUARD ST.
WAUZEKA, WI 53826
ATTN: JEREMY KRACHEY, P.E.
PH: (608) 875–5075
jkrachey@teamenginc.com

WISDOT

PROJECT MANGAGER
TIM MAEDKE
WISDOT SW REGION
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
PH: (608) 789–6317
Timothy.Maedke@dot.wi.gov

DNR CONTACT

DEPARTMENT OF NATURAL RESOURCES
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
ATTN: KAREN KALVELAGE
ENVIRONMENTAL ANALYSIS & REVIEW SPECIALIST
PH: (608) 785–9115
karen.kalvelage@wisconsin.gov

MUNICIPALITY CONTACT

VERNON COUNTY HIGHWAY DEPARTMENT
602 N. MAIN ST.
VIROQUA, WI 54665
ATTN: PHIL HEWITT, COMMISSIONER
PH: (608) 637–5452
phil.hewitt@vernoncounty.org

DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

* – NOT A MEMBER OF DIGGER'S HOTLINE.

UTILITIES

DAIRYLAND POWER COOPERATIVE – ELEC.
3200 EAST AVE.
P.O. BOX 817
LA CROSSE, WI 54602–0817
ATTN: ROB MALY
PH: (608) 788–4000
rob.maly@dairylandpower.com

WINDSTREAM NTI, LLC – COMMUNICATION LINE
1858 WRIGHT STREET
MADISON, WI 53704
ATTN: KEVIN PARRIS
PH: (608) 819–5016
kevin.j.parris@windstream.com

VERNON COMMUNICATION COOPERATIVE – COMMUNICATION LINE
103 NORTH MAIN STREET
WESTBY, WI 54667
ATTN: SCOTT FREDERICK
PH: (608) 634–3136
sfrederick@vernoncom.coop

VERNON ELECTRIC COOPERATIVE – ELECTRICITY
110 SAUGSTAD ROAD
WESTBY, WI 54667–1199
ATTN: CRAIG BUROS
PH: (608) 634–3121
cburos@vernonelectric.org

GENERAL NOTES

FINISHING ITEMS SHALL BE PLACED TO THE SLOPE INTERCEPT WITH THE ORIGINAL GROUND AS SHOWN ON THE TYICAL SECTIONS AND ON ALL DISTURBED AREAS.

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS SUCH TREES OR SHRUBS HAVE FIRST BEEN INDICATED FOR REMOVAL BY THE ENGINEER IN THE FIELD.

PRIOR TO THE PLACEMENT OF MGS GUARDRAIL, THE SHOULDERS SHALL BE IN PLACE, SHAPED AND COMPACTED UNLESS SHOWN OTHERWISE

DISTURBED AREAS SHOWN WITHIN THE RIGHT–OF–WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE FERTILIZED (TYPE B), SEEDED (USE SEEDING MIXTURE #20 OR MIXTURE #40 AND SEEDING TEMPORARY), AND E–MATTED AS DIRECTED BY THE ENGINEER IN THE FIELD.

THE LOCATIONS OF SILT FENCE, SEEDING MIX #20, SEEDING MIX #40, SEEDING TEMPORARY, E–MAT AND TEMPORARY DITCH CHECKS ARE APPROXIMATE. LOCATIONS ARE TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

REMOVAL OF ASPHALTIC SURFACES WHERE AN ABUTTING ASPHALTIC SURFACE IS TO REMAIN IN PLACE SHALL REQUIRE A SAWCUT MEETING THE APPROVAL OF THE ENGINEER IN THE FIELD.

THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE HIS/HER CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO CONSTRUCTION. EROSION CONTROL ITEMS ON THE PLAN ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS AND DIMENSIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD. ALL EROSION CONTROL DEVICES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER IN THE FIELD DEEMS THE DEVICES NO LONGER NECESSARY.

3.5–INCH HMA PAVEMENT TYPE 4 LT 58–28 S SHALL BE CONSTRUCTED WITH A 1.75–INCH UPPER LAYER AND 1.75–INCH LOWER LAYER.

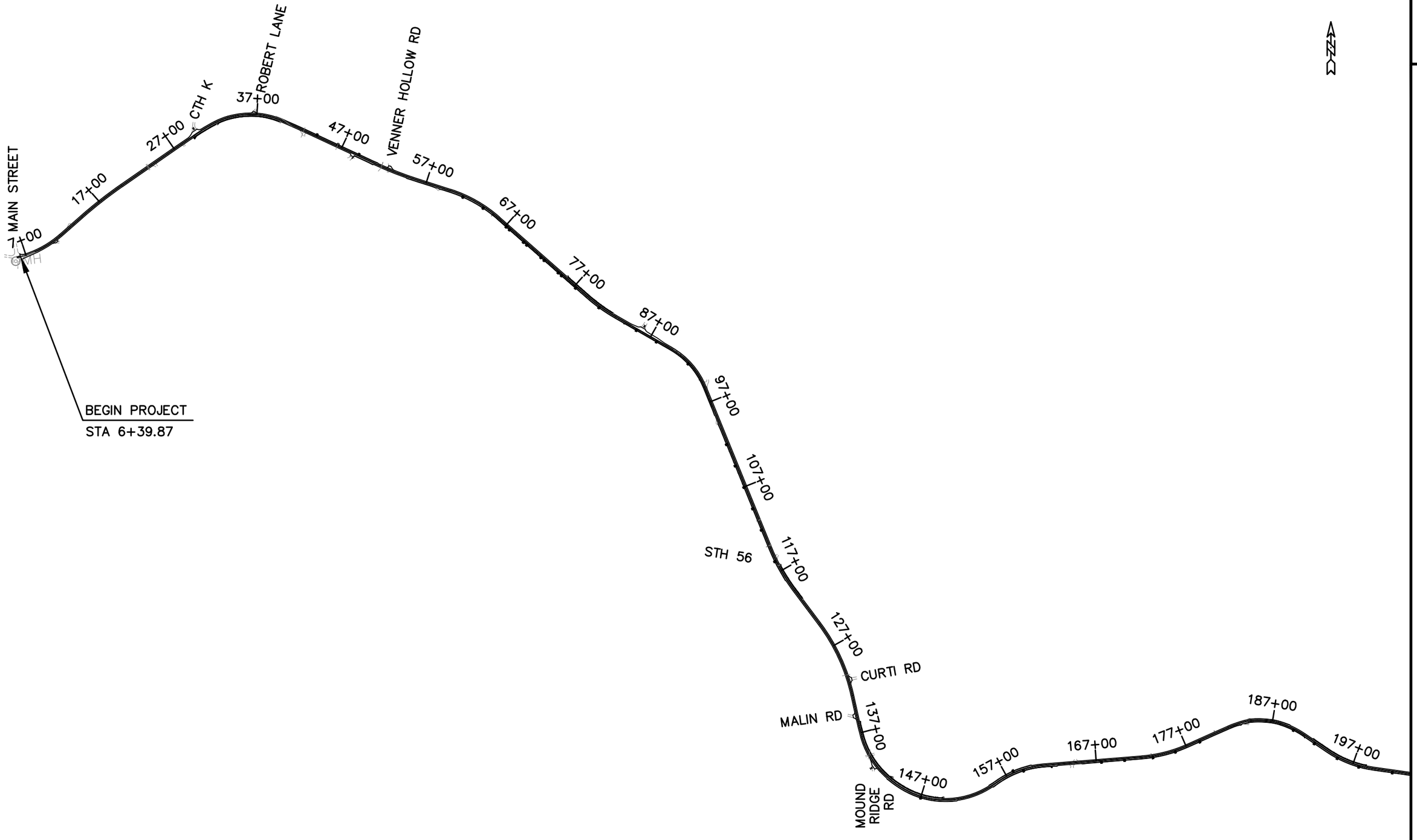
THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, BIKE OR PARKING LANE.

WHEN THE QUANTITIES OF ASPHALTIC SURFACE IS MEASURED FOR PAYMENT BY THE TON, THE THICKNESS OF THE MATERIAL THAT IS SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

ASPHALTIC SURFACE WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.

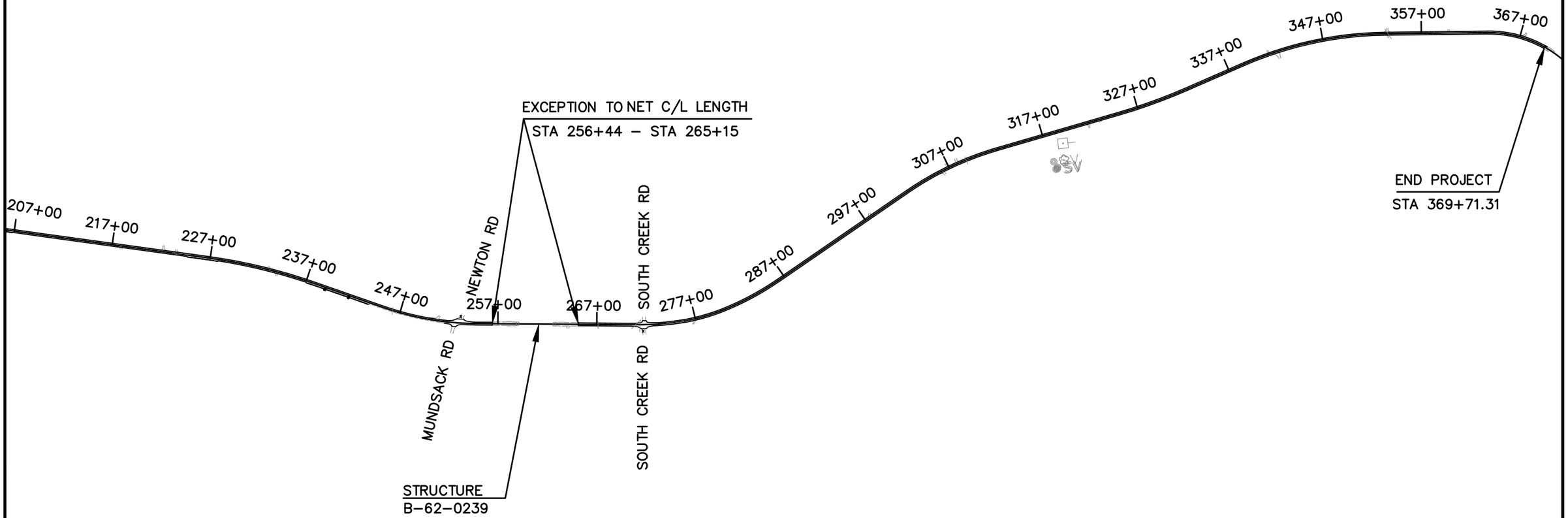
LOCATIONS FOR CURB AND GUTTER ARE REFERENCED TO THE FLAG LINE UNLESS OTHERWISE NOTED.

2

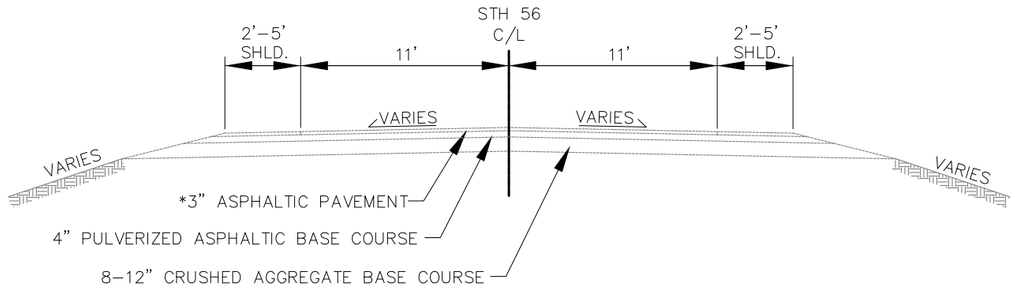


PROJECT NO: 5730-07-60	HWY: STH 56	COUNTY: VERNON	PROJECT OVERVIEW	SHEET 3	E

2



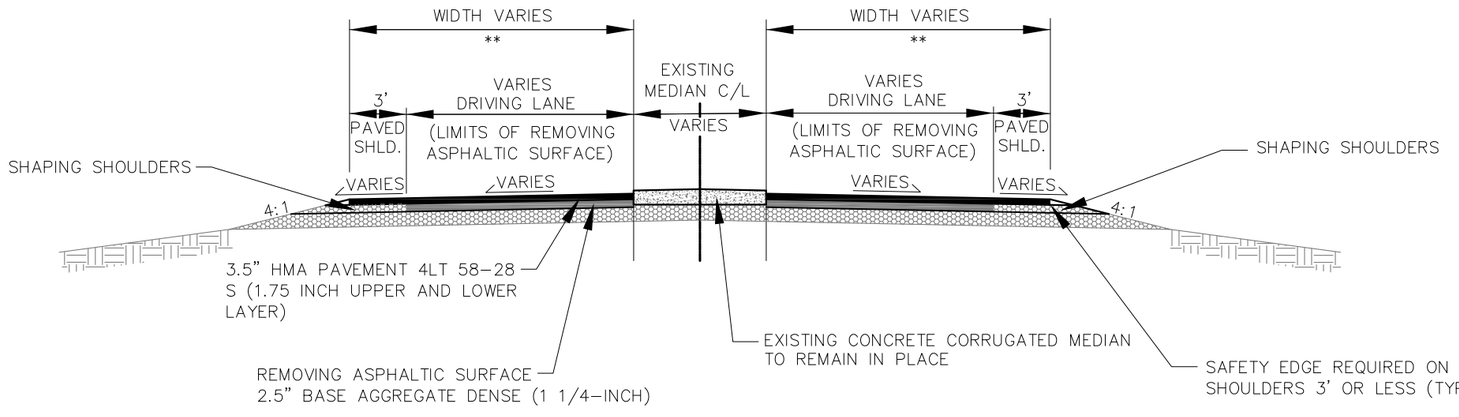
PROJECT NO: 5730–07–60	HWY: STH 56	COUNTY: VERNON	PROJECT OVERVIEW	SHEET 4	E



* EXISTING PAVEMENT DEPTHS VARY
SEE BORING LOG SUMMARY FOLLOWING
TYPICAL SECTIONS

TYPICAL EXISTING SECTION

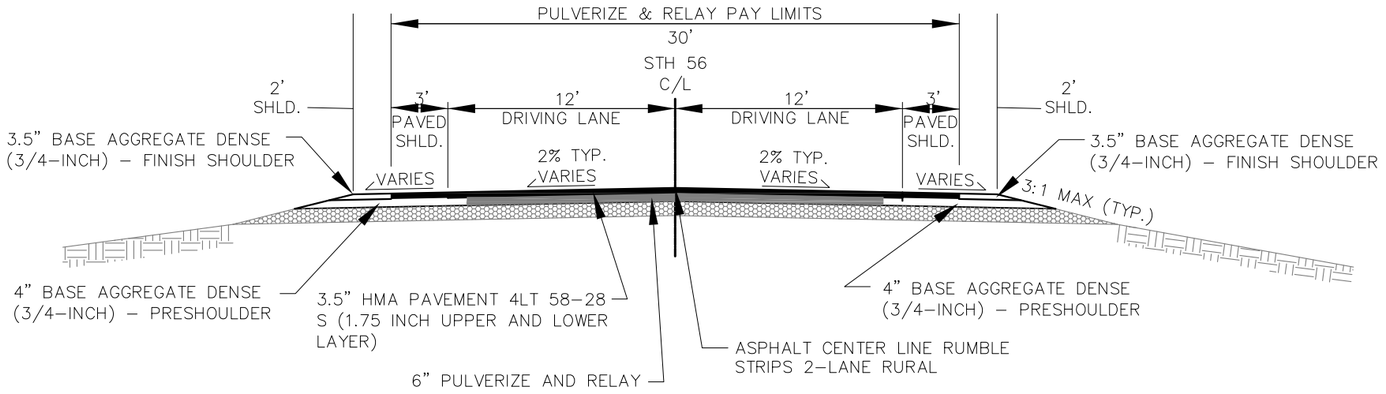
STH 56



TYPICAL FINISHED SECTION

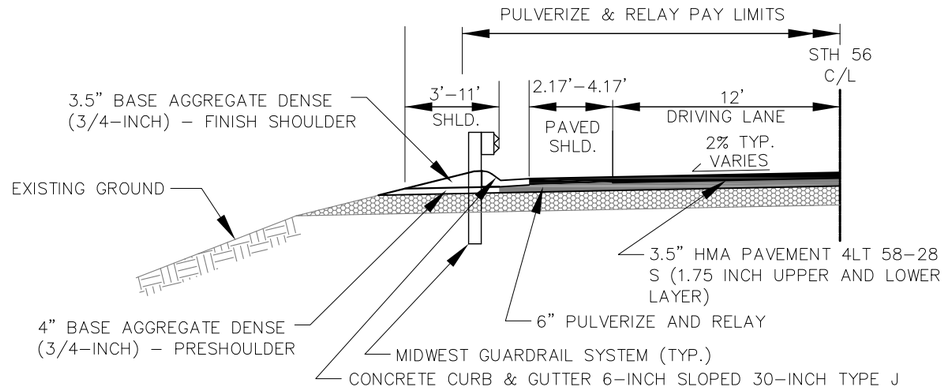
STH 56
STA. 6+40 – STA. 8+02

** REMOVING ASPHALTIC SURFACE AND
REPLACE WITH HMA PAVEMENT 4LT
58–28 S AT SAME EXISTING ELEVATION
TO MATCH MEDIAN LOCATION



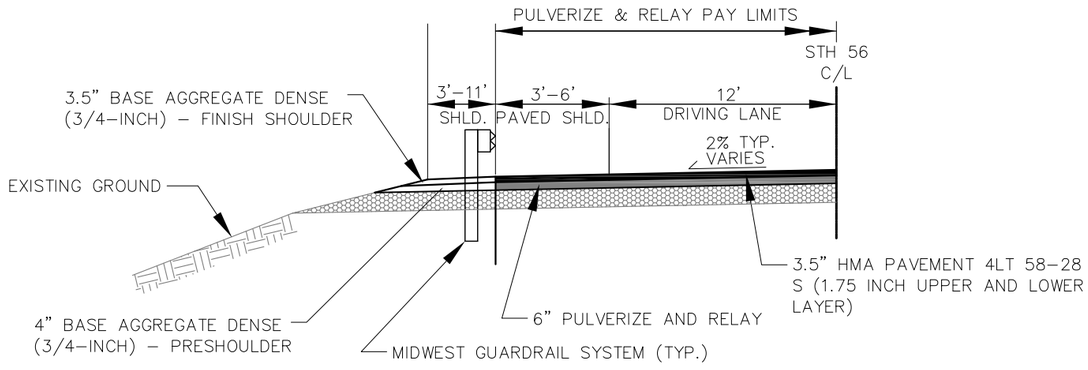
TYPICAL FINISHED SECTION

STA. 8+02 – STA. 256+44
STA. 265+15 – STA. 369+71
(EXCLUDING TYPICAL HALF SECTIONS AS NOTED)



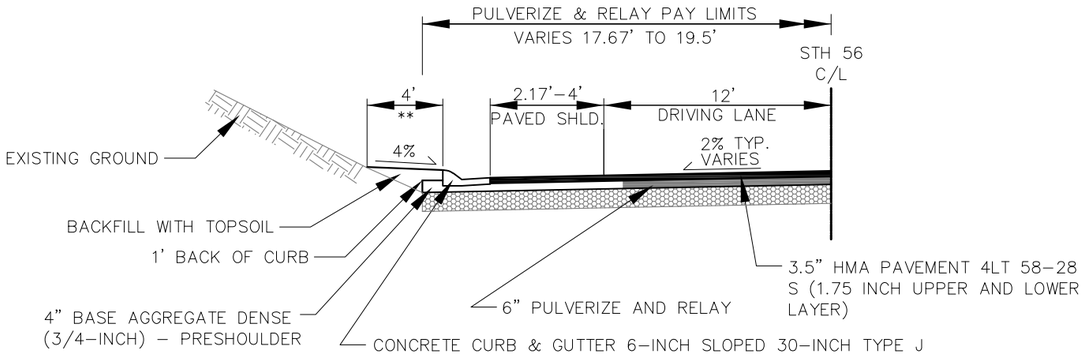
TYPICAL FINISHED BEAM GUARD WITH CURB HALF SECTION

STA. 65+18 – STA. 77+25, RT
STA. 83+95 – STA. 97+56, RT
STA. 156+50 – STA. 161+97, RT
STA. 182+25 – STA. 183+30, RT
STA. 184+37 – STA. 190+92, RT



TYPICAL FINISHED BEAM GUARD HALF SECTION

STA. 39+72 – STA. 51+28, LT
STA. 48+75 – STA. 51+35, RT
STA. 54+85 – STA. 58+16, RT
STA. 58+60 – STA. 65+18, RT
STA. 77+25 – STA. 83+95, RT
STA. 97+56 – STA. 98+53, RT
STA. 99+60 – STA. 118+16, RT
STA. 142+85 – STA. 150+91, RT
STA. 154+85 – STA. 159+91, LT
STA. 155+15 – STA. 156+50, RT
STA. 161+97 – STA. 162+71, RT
STA. 165+47 – STA. 182+25, RT
STA. 183+30 – STA. 183+53, RT
STA. 183+85 – STA. 184+37, RT
STA. 184+47 – STA. 188+91, LT
STA. 190+92 – STA. 206+78, RT
STA. 224+72 – STA. 227+78, RT
STA. 237+10 – STA. 243+66, RT



TYPICAL FINISHED CURB HALF SECTION

STA. 29+78 – STA. 39+68, RT
STA. 65+18 – STA. 77+25, RT
STA. 75+89 – STA. 82+20, LT
STA. 116+56 – STA. 120+80, LT
STA. 135+96 – STA. 149+18, LT
STA. 191+85 – STA. 198+30, LT

** LIMITS OF SEEDING, TEMPORARY SEEDING, FERTILIZER, TOPSOIL & EROSION MAT

BORING NO.	APPROX STATION	OFFSET	BIT. THICKNESS (INCHES)	BASE AGG. THICKNESS (INCHES)	REMARKS
	6+40				STH 56 - MAIN STREET INTERSECTION
B-1	9+57	6' RT	6.5	6.0	FILL SECTION
B-2	21+18	6' LT	6.0	10.0	FILL SECTION
	30+16				CTH K
B-3	35+44	9' RT	8.0	8.0	CUT SECTION
B-4	51+28	3' RT	6.0	11.0	FILL SECTION
B-5	62+90	6' RT	4.5	12.0	CUT SECTION
B-6	80+32	9' RT	4.0	4.0	CUT SECTION (4"/4"/4" BIT/4" BAD)
B-7	98+80	6' LT	5.0	11.5	CUT SECTION
B-8	112+00	9' LT	7.0	11.0	CUT SECTION
B-9	125+73	3' LT	4.5	10.0	CUT SECTION
	131+54				CURTI RD
B-10	136+82	9' RT	7.0	11.0	CUT SECTION
B-11	151+60	6' RT	5.0	11.0	CUT SECTION
B-12	166+38	9' LT	6.0	11.0	CUT SECTION
B-13	183+28	6' LT	6.0	12.0	CUT SECTION
B-14	198+06	3' LT	7.0	0.0	CUT SECTION
B-15	112+85	12' RT	3.0	6.0	FILL SECTION
B-16	224+99	3' RT	6.0	3.0	FILL SECTION (6"/3"/12" RAP/9" BAD)
B-17	236+61	6' RT	6.0	12.0	CUT SECTION (3.5" BIT/2/5" RAP/12" BAD)
B-18	247+17	6' LT	7.0	6.0	CUT SECTION
	252+98				MUNDSACK RD
B-19	266+70	9' LT	8.0	4.0	FILL SECTION (4" BIT/4" RAP/4" BAD)
	272+51				SOUTH CREEK RD
B-20	277+79	12' LT	8.0	6.0	CUT SECTION (4" BIT/4" RAP/6" BAD)
B-21	290+46	3' LT	5.0	12.0	FILL SECTION
B-22	300+50	6' RT	6.5	11.5	FILL SECTION
B-23	312+64	9' RT	8.0	8.0	CUT SECTION
B-24	323+20	12' RT	5.0	10.0	FILL SECTION
B-25	333+76	3' RT	5.0	10.0	FILL SECTION
B-26	344+32	6' LT	5.0	13.0	CUT/FILL SECTION
B-27	356+46	9' LT	5.0	8.0	FILL SECTION
B-28	369+66	3' LT	5.0	13.0	FILL SECTION
	369+71				COX CREEK BRIDGE
		AVERAGE	**5.9**	**9.0**	

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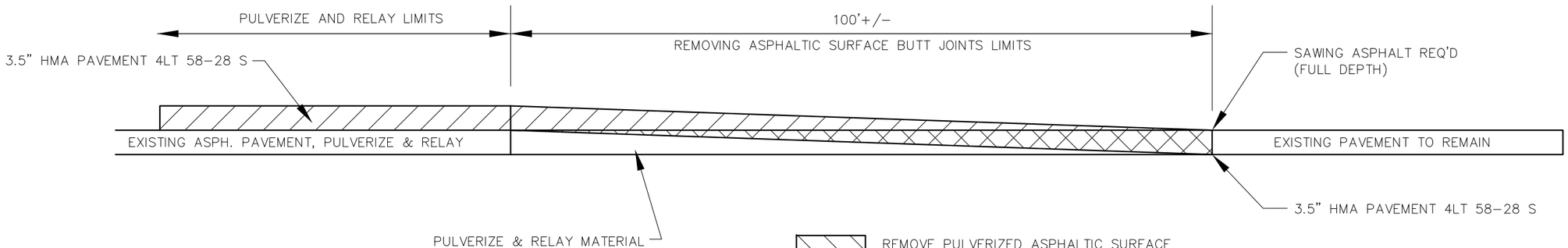

BUTT JOINT - TYPICAL TRANSITION DETAIL

STH 56
MAINLINE

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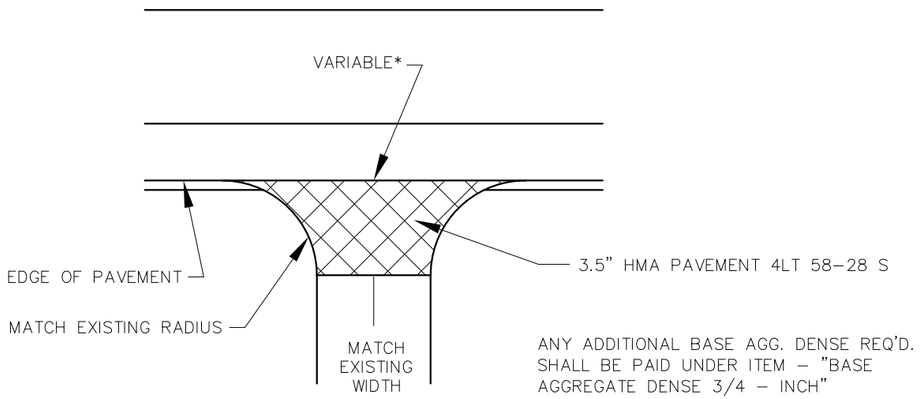
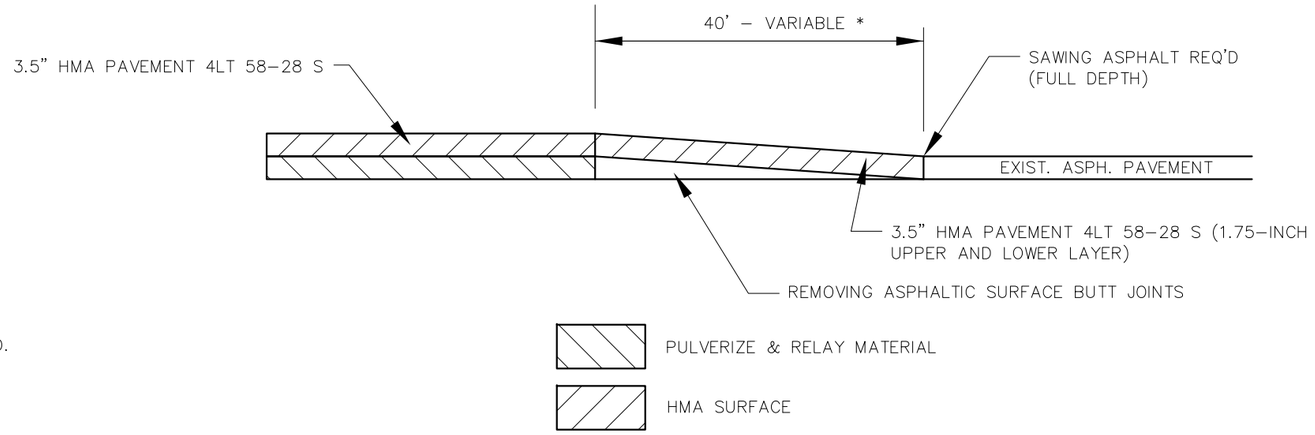


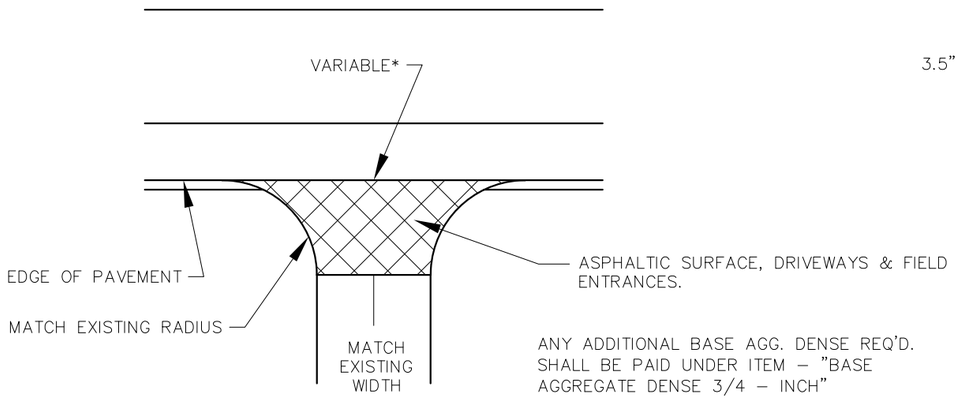
PLAN VIEW



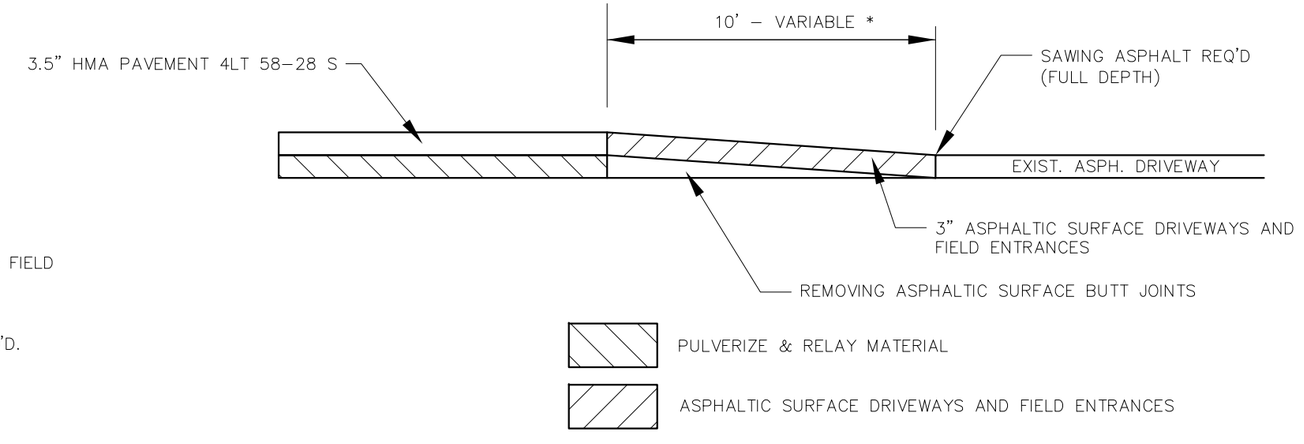
ELEVATION VIEW

PULVERIZE & RELAY - SIDEROADS DETAIL

*EXACT DIMENSIONS TO BE DETERMINED BY ENGINEER IN THE FIELD



PLAN VIEW

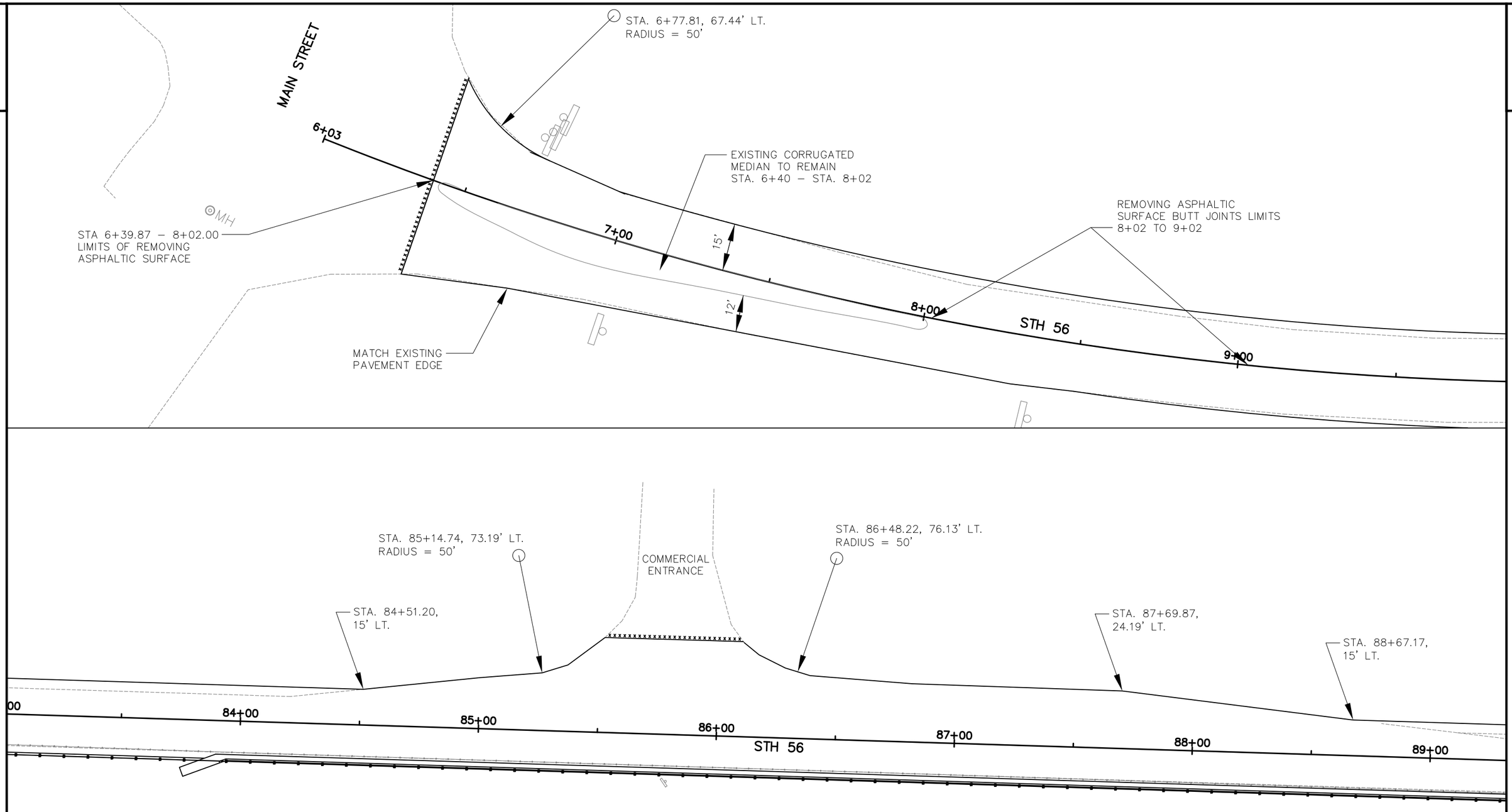


ELEVATION VIEW

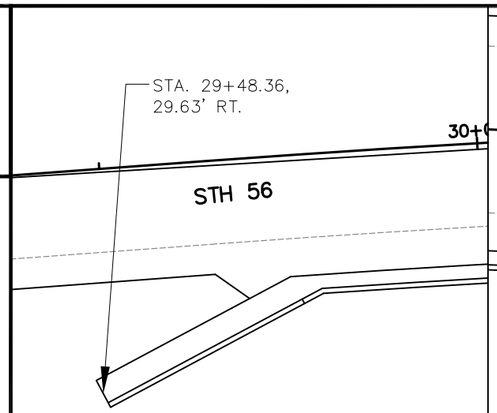
PULVERIZE & RELAY - ASPHALTIC DRIVEWAY DETAIL

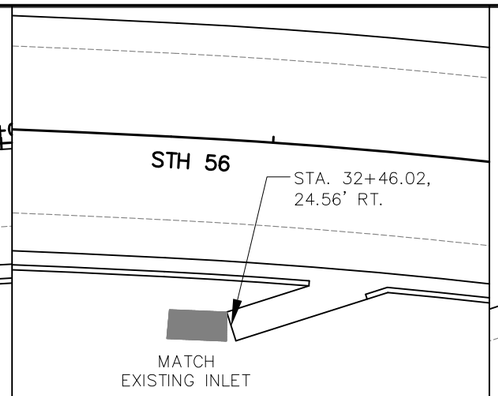
*EXACT DIMENSIONS TO BE DETERMINED BY ENGINEER IN THE FIELD

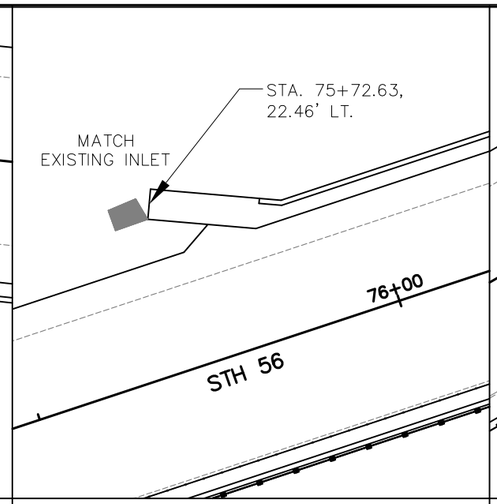
2

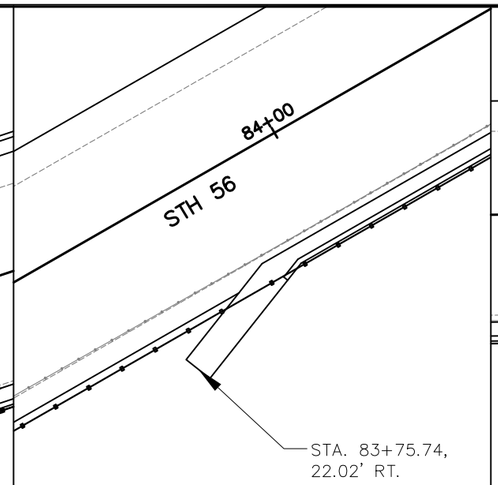


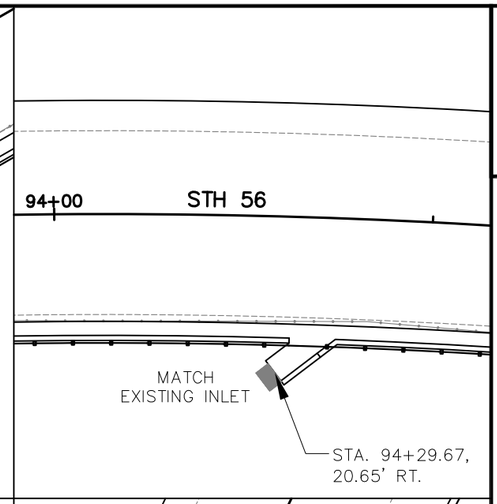
PROJECT NO: 5730–07–60	HWY: STH 56	COUNTY: VERNON	INTERSECTION DETAILS	SHEET 10	E

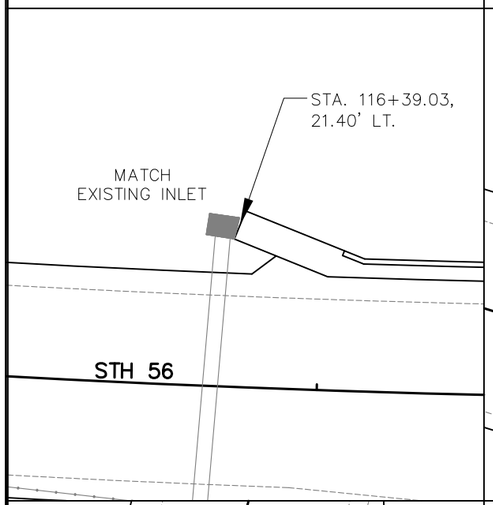


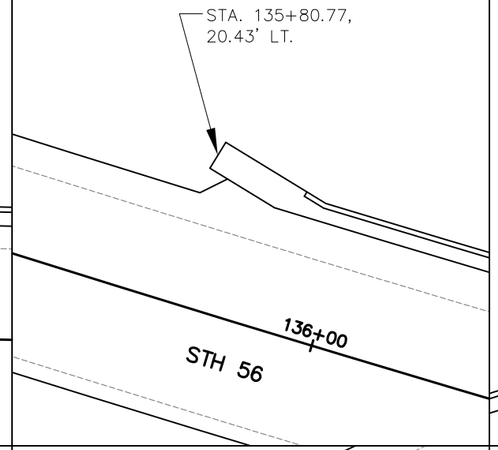


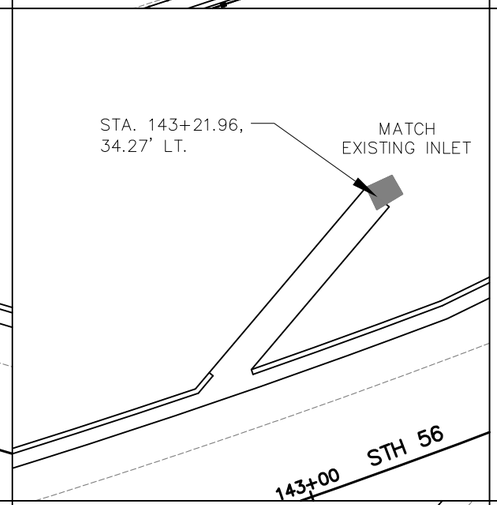


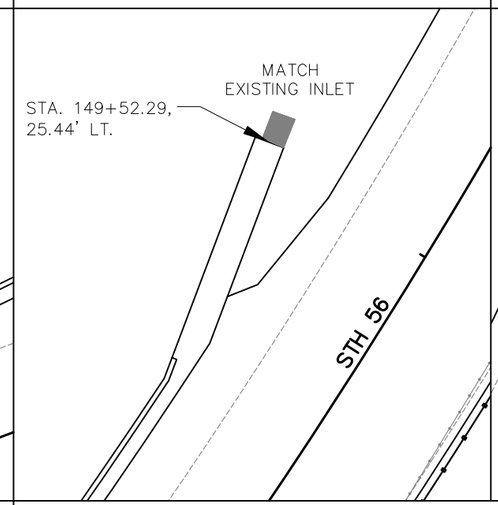


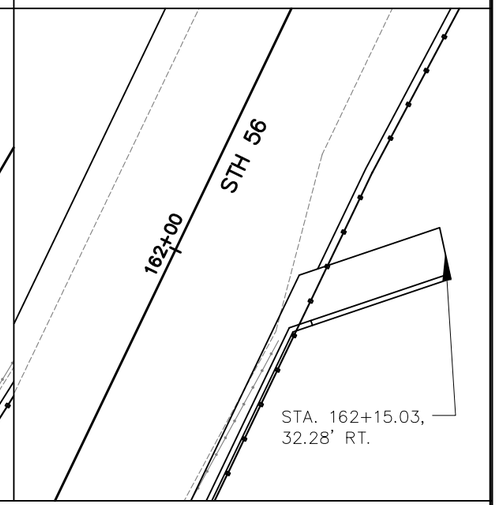


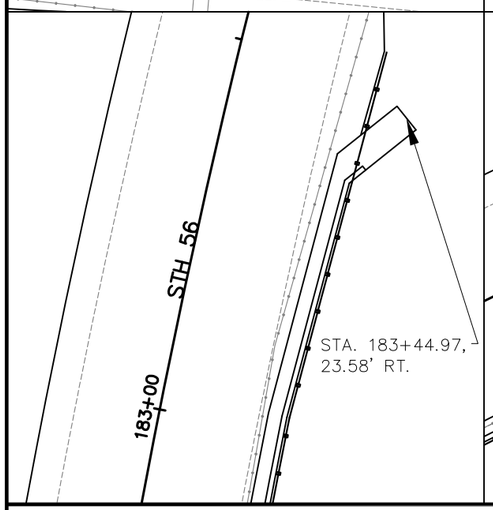


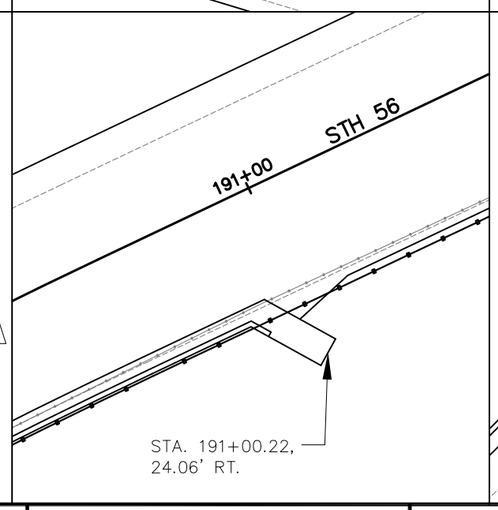


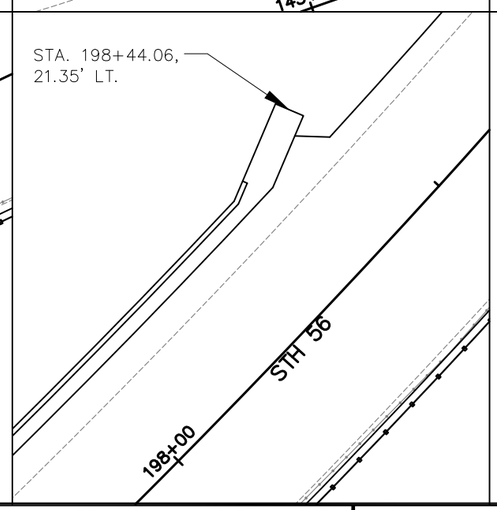












NOTE: SEE S.D.D. 14B42 – 06d FOR MISSING POST IN NORMAL BEAM GUARD RUN WHERE FLUMES ARE LOCATED UNDER PROPOSED BEAM GUARD.

FORM CURB HEAD AROUND INLET AS DIRECTED BY THE ENGINEER. PAYMENT ASSOCIATED WITH THIS WORK TO BE MEASURED AND PAID FOR UNDER THE ITEM OF CONCRETE SURFACE DRAIN. SEE S.D.D. 8D2 – 6 SECTION E–E (WIDTH TO VARY).

PROJECT NO: 5730–07–60	HWY: STH 56	COUNTY: VERNON	CONSTRUCTION DETAILS – CONCRETE SURFACE DRAINS	SHEET 11	E

					PERCENT WITHIN LIMIT (PWL) MIXTURE USE TABLE					
					LOWER LAYER, LT LANE					
									QUALITY MANAGEMENT PROGRAM TO BE USED FOR:	
LOCATION	STATION	STATION	LT/RT	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
12FT DRIVING LANE	6+39	256+44	LT	LOWER LAYER	PULVERIZED EXISTING HMA	4 LT 58-28 S	3212	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
PAVED SHOULDER	6+39	256+44	LT	LOWER LAYER	PULVERIZED EXISTING HMA	4 LT 58-28 S	873	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT., NOT ELIGIBLE FOR INCENTIVE
GAP										
12FT DRIVING LANE	265+15	369+71	LT	LOWER LAYER	PULVERIZED EXISTING HMA	4 LT 58-28 S	1366	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
PAVED SHOULDER	265+15	369+71	LT	LOWER LAYER	PULVERIZED EXISTING HMA	4 LT 58-28 S	342	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT., NOT ELIGIBLE FOR INCENTIVE
CTH K			LT	LOWER LAYER	PULVERIZED EXISTING HMA	4 LT 58-28 S	39	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT., NOT ELIGIBLE FOR INCENTIVE
ROBERT LANE			LT	LOWER LAYER	PULVERIZED EXISTING HMA	4 LT 58-28 S	9	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT., NOT ELIGIBLE FOR INCENTIVE
VENNER HOLLOW ROAD			LT	LOWER LAYER	PULVERIZED EXISTING HMA	4 LT 58-28 S	15	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT., NOT ELIGIBLE FOR INCENTIVE
CURTI COURT			LT	LOWER LAYER	PULVERIZED EXISTING HMA	4 LT 58-28 S	20	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT., NOT ELIGIBLE FOR INCENTIVE
NEWTON ROAD			LT	LOWER LAYER	PULVERIZED EXISTING HMA	4 LT 58-28 S	30	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT., NOT ELIGIBLE FOR INCENTIVE
SOUTH CREEK ROAD			LT	LOWER LAYER	PULVERIZED EXISTING HMA	4 LT 58-28 S	25	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT., NOT ELIGIBLE FOR INCENTIVE
						Total:	5931			

					PERCENT WITHIN LIMIT (PWL) MIXTURE USE TABLE					
					LOWER LAYER, RT LANE					
									QUALITY MANAGEMENT PROGRAM TO BE USED FOR:	
LOCATION	**STATION**	**STATION**	**LT/RT**	**MIXTURE USE**	**UNDERLYING SURFACE**	**BID ITEM**	**TONS**	**THICKNESS**	**MIXTURE ACCEPTANCE**	**DENSITY ACCEPTANCE**
12FT DRIVING LANE	6+39	8+02	RT	LOWER LAYER	PULVERIZED EXISTING HMA	4 LT 58-28 S	21	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
12FT DRIVING LANE	8+02	256+44	RT	LOWER LAYER	PULVERIZED EXISTING HMA	4 LT 58-28 S	3326	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
PAVED SHOULDER	6+39	256+44	RT	LOWER LAYER	PULVERIZED EXISTING HMA	4 LT 58-28 S	927	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT., NOT ELIGIBLE FOR INCENTIVE
GAP										
12FT DRIVING LANE	265+15	369+71	RT	LOWER LAYER	PULVERIZED EXISTING HMA	4 LT 58-28 S	1366	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
PAVED SHOULDER	265+15	369+71	RT	LOWER LAYER	PULVERIZED EXISTING HMA	4 LT 58-28 S	342	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT., NOT ELIGIBLE FOR INCENTIVE
MALIN ROAD			RT	LOWER LAYER	PULVERIZED EXISTING HMA	4 LT 58-28 S	14	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT., NOT ELIGIBLE FOR INCENTIVE
MOUND RIDGE ROAD			RT	LOWER LAYER	PULVERIZED EXISTING HMA	4 LT 58-28 S	30	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT., NOT ELIGIBLE FOR INCENTIVE
MUNDSACK ROAD			RT	LOWER LAYER	PULVERIZED EXISTING HMA	4 LT 58-28 S	18	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT., NOT ELIGIBLE FOR INCENTIVE
SOUTH CREEK ROAD			RT	LOWER LAYER	PULVERIZED EXISTING HMA	4 LT 58-28 S	25	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT., NOT ELIGIBLE FOR INCENTIVE
						Total:	6069			

					PERCENT WITHIN LIMIT (PWL) MIXTURE USE TABLE					
					UPPER LAYER, LT LANE					
									QUALITY MANAGEMENT PROGRAM TO BE USED FOR:	
LOCATION	**STATION**	**STATION**	**LT/RT**	**MIXTURE USE**	**UNDERLYING SURFACE**	**BID ITEM**	**TONS**	**THICKNESS**	**MIXTURE ACCEPTANCE**	**DENSITY ACCEPTANCE**
12FT DRIVING LANE	6+39	256+44	LT	UPPER LAYER	4 LT 58-28 S	4 LT 58-28 S	3212	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
PAVED SHOULDER	6+39	135+96	LT	UPPER LAYER	4 LT 58-28 S	4 LT 58-28 S	873	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT., NOT ELIGIBLE FOR INCENTIVE
GAP										
12FT DRIVING LANE	265+15	369+71	LT	UPPER LAYER	4 LT 58-28 S	4 LT 58-28 S	1366	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
PAVED SHOULDER	265+15	369+71	LT	UPPER LAYER	4 LT 58-28 S	4 LT 58-28 S	342	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT., NOT ELIGIBLE FOR INCENTIVE
CTH K			LT	UPPER LAYER	4 LT 58-28 S	4 LT 58-28 S	39	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT., NOT ELIGIBLE FOR INCENTIVE
ROBERT LANE			LT	UPPER LAYER	4 LT 58-28 S	4 LT 58-28 S	9	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT., NOT ELIGIBLE FOR INCENTIVE
VENNER HOLLOW ROAD			LT	UPPER LAYER	4 LT 58-28 S	4 LT 58-28 S	15	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT., NOT ELIGIBLE FOR INCENTIVE
CURTI COURT			LT	UPPER LAYER	4 LT 58-28 S	4 LT 58-28 S	20	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT., NOT ELIGIBLE FOR INCENTIVE
NEWTON ROAD			LT	UPPER LAYER	4 LT 58-28 S	4 LT 58-28 S	30	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT., NOT ELIGIBLE FOR INCENTIVE
SOUTH CREEK ROAD			LT	UPPER LAYER	4 LT 58-28 S	4 LT 58-28 S	25	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT., NOT ELIGIBLE FOR INCENTIVE
						Total:	5931			

					PERCENT WITHIN LIMIT (PWL) MIXTURE USE TABLE					
					UPPER LAYER, RT LANE					
									QUALITY MANAGEMENT PROGRAM TO BE USED FOR:	
LOCATION	**STATION**	**STATION**	**LT/RT**	**MIXTURE USE**	**UNDERLYING SURFACE**	**BID ITEM**	**TONS**	**THICKNESS**	**MIXTURE ACCEPTANCE**	**DENSITY ACCEPTANCE**
12FT DRIVING LANE	6+39	8+02	RT	UPPER LAYER	4 LT 58-28 S	4 LT 58-28 S	21	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
12FT DRIVING LANE	8+02	256+44	RT	UPPER LAYER	4 LT 58-28 S	4 LT 58-28 S	3326	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
PAVED SHOULDER	6+39	256+44	RT	UPPER LAYER	4 LT 58-28 S	4 LT 58-28 S	927	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT., NOT ELIGIBLE FOR INCENTIVE
GAP										
12FT DRIVING LANE	265+15	369+71	RT	UPPER LAYER	4 LT 58-28 S	4 LT 58-28 S	1366	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
PAVED SHOULDER	265+15	369+71	RT	UPPER LAYER	4 LT 58-28 S	4 LT 58-28 S	342	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT., NOT ELIGIBLE FOR INCENTIVE
MALIN ROAD			RT	UPPER LAYER	4 LT 58-28 S	4 LT 58-28 S	14	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT., NOT ELIGIBLE FOR INCENTIVE
MOUND RIDGE ROAD			RT	UPPER LAYER	4 LT 58-28 S	4 LT 58-28 S	30	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT., NOT ELIGIBLE FOR INCENTIVE
MUNDSACK ROAD			RT	UPPER LAYER	4 LT 58-28 S	4 LT 58-28 S	18	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT., NOT ELIGIBLE FOR INCENTIVE
SOUTH CREEK ROAD			RT	UPPER LAYER	4 LT 58-28 S	4 LT 58-28 S	25	1.7500	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPT., NOT ELIGIBLE FOR INCENTIVE
						Total:	6069			

SUPERELEVATION DATA – CURVE 1

CROWNS	STATIONS	CROWNS
-0.020	12+40.52	-0.020
-0.020	12+23.39	-0.010
-0.020	12+06.27	0.000
-0.020	11+89.14	0.010
-0.020	11+72.02	0.020
-0.030	11+54.89	0.030
-0.040	11+37.77	0.040
-0.050	11+20.64	0.050
-0.060	11+03.52	0.060
FS		
-0.060	6+36.93	0.060
-0.050	6+19.81	0.050
-0.040	6+02.68	0.040
-0.030	5+85.56	0.030
-0.020	5+68.43	0.020
-0.020	5+51.31	0.010
-0.020	5+34.18	0.000
-0.020	5+17.06	-0.010
-0.020	4+99.93	-0.020
CROWNS	STATIONS	CROWNS

SUPERELEVATION DATA – CURVE 2

CROWNS	STATIONS	CROWNS
-0.020	20+97.00	-0.020
-0.010	20+71.47	-0.020
0.000	20+45.94	-0.020
0.010	20+20.40	-0.020
0.020	19+94.87	-0.020
0.027	19+77.00	-0.027
FS		
0.027	14+71.55	-0.027
0.020	14+53.68	-0.020
0.010	14+28.15	-0.020
0.000	14+02.61	-0.020
-0.010	13+77.08	-0.020
-0.020	13+51.55	-0.020
CROWNS	STATIONS	CROWNS

SUPERELEVATION DATA – CURVE 3

CROWNS	STATIONS	CROWNS
-0.020	38+38.87	-0.020
-0.010	38+13.37	-0.020
0.000	37+87.87	-0.020
0.010	37+62.37	-0.020
0.020	37+36.87	-0.020
0.030	37+11.37	-0.030
0.040	36+85.87	-0.040
0.050	36+60.37	-0.050
0.060	36+34.87	-0.060
FS		
0.060	30+15.24	-0.060
0.050	29+89.74	-0.050
0.040	29+64.24	-0.040
0.030	29+38.74	-0.030
0.020	29+13.24	-0.020
0.010	28+87.74	-0.020
0.000	28+62.24	-0.020
-0.010	28+36.74	-0.020
-0.020	28+11.24	-0.020
CROWNS	STATIONS	CROWNS

SUPERELEVATION DATA – CURVE 4

CROWNS	STATIONS	CROWNS
-0.020	57+05.42	-0.020
-0.020	56+79.84	-0.010
-0.020	56+54.26	0.000
-0.020	56+28.69	0.010
-0.020	56+03.11	0.020
-0.030	55+77.53	0.030
-0.032	55+72.42	0.032
FS		
-0.032	51+27.67	0.032
-0.030	51+22.56	0.030
-0.020	50+96.98	0.020
-0.020	50+71.40	0.010
-0.020	50+45.83	0.000
-0.020	50+20.25	-0.010
-0.020	49+94.67	-0.020
CROWNS	STATIONS	CROWNS

SUPERELEVATION DATA – CURVE 5

CROWNS	STATIONS	CROWNS
-0.020	67+33.28	-0.020
-0.010	67+07.76	-0.020
0.000	66+82.23	-0.020
0.010	66+56.70	-0.020
0.020	66+31.18	-0.020
0.030	66+05.65	-0.030
0.040	65+80.13	-0.040
0.050	65+54.60	-0.050
0.056	65+39.28	-0.056
FS		
0.056	60+25.29	-0.056
0.050	60+09.97	-0.050
0.040	59+84.44	-0.040
0.030	59+58.92	-0.030
0.020	59+33.39	-0.020
0.010	59+07.87	-0.020
0.000	58+82.34	-0.020
-0.010	58+56.81	-0.020
-0.020	58+31.29	-0.020
CROWNS	STATIONS	CROWNS

SUPERELEVATION DATA – CURVE 6

CROWNS	STATIONS	CROWNS
-0.020	83+96.12	-0.020
-0.020	83+70.62	-0.010
-0.020	83+45.13	0.000
-0.020	83+19.64	0.010
-0.020	82+94.14	0.020
-0.030	82+68.65	0.030
-0.040	82+43.16	0.040
-0.050	82+17.67	0.050
-0.051	82+15.12	0.051
FS		
-0.051	79+25.44	0.051
-0.050	79+22.89	0.050
-0.040	78+97.40	0.040
-0.030	78+71.91	0.030
-0.020	78+46.42	0.020
-0.020	78+20.92	0.010
-0.020	77+95.43	0.000
-0.020	77+69.94	-0.010
-0.020	77+44.44	-0.020
CROWNS	STATIONS	CROWNS

SUPERELEVATION DATA – CURVE 7

CROWNS	STATIONS	CROWNS
-0.020	96+81.67	-0.020
-0.010	96+56.17	-0.020
0.000	96+30.67	-0.020
0.010	96+05.17	-0.020
0.020	95+79.67	-0.020
0.030	95+54.17	-0.030
0.040	95+28.67	-0.040
0.050	95+03.17	-0.050
0.060	94+77.67	-0.060
FS		
0.060	90+11.50	-0.060
0.050	89+86.00	-0.050
0.040	89+60.50	-0.040
0.030	89+35.00	-0.030
0.020	89+09.50	-0.020
0.010	88+84.00	-0.020
0.000	88+58.50	-0.020
-0.010	88+33.00	-0.020
-0.020	88+07.50	-0.020
CROWNS	STATIONS	CROWNS

SUPERELEVATION DATA – CURVE 8

CROWNS	STATIONS	CROWNS
-0.020	120+93.72	-0.020
-0.020	120+68.13	-0.010
-0.020	120+42.54	0.000
-0.020	120+16.96	0.010
-0.020	119+91.37	0.020
-0.030	119+65.78	0.030
-0.040	119+40.19	0.040
-0.048	119+19.72	0.048
FS		
-0.048	114+68.16	0.048
-0.040	114+47.69	0.040
-0.030	114+22.10	0.030
-0.020	113+96.51	0.020
-0.020	113+70.92	0.010
-0.020	113+45.34	0.000
-0.020	113+19.75	-0.010
-0.020	112+94.16	-0.020
CROWNS	STATIONS	CROWNS

SUPERELEVATION DATA – CURVE 9

CROWNS	STATIONS	CROWNS
-0.020	134+14.08	-0.020
-0.010	133+88.58	-0.020
0.000	133+63.07	-0.020
0.010	133+37.56	-0.020
0.020	133+12.05	-0.020
0.030	132+86.55	-0.030
0.040	132+61.04	-0.040
0.049	132+38.08	-0.049
FS		
0.049	124+60.94	-0.049
0.040	124+37.98	-0.040
0.030	124+12.47	-0.030
0.020	123+86.97	-0.020
0.010	123+61.46	-0.020
0.000	123+35.95	-0.020
-0.010	123+10.44	-0.020
-0.020	122+84.94	-0.020
CROWNS	STATIONS	CROWNS

SUPERELEVATION DATA – CURVE 10

CROWNS	STATIONS	CROWNS
0.000	155+58.30	0.000
-0.010	155+42.53	0.010
-0.020	155+26.76	0.020
-0.030	155+11.00	0.030
-0.040	154+95.23	0.040
-0.050	154+79.46	0.050
-0.060	154+63.69	0.060
FS		
-0.060	137+96.29	0.060
-0.050	137+70.79	0.050
-0.040	137+45.29	0.040
-0.033	135+54.20	0.033
-0.030	135+46.56	0.030
-0.020	135+21.09	0.020
-0.020	134+95.62	0.010
-0.020	134+70.14	0.000
-0.020	134+44.67	-0.010
-0.020	134+19.20	-0.020
CROWNS	STATIONS	CROWNS

SUPERELEVATION DATA – CURVE 11

CROWNS	STATIONS	CROWNS
-0.020	162+70.77	-0.020
-0.010	162+45.27	-0.020
0.000	162+19.77	-0.020
0.010	161+94.27	-0.020
0.020	161+68.77	-0.020
0.030	161+43.27	-0.030
0.040	161+17.77	-0.040
0.050	160+92.27	-0.050
0.060	160+66.77	-0.060
FS		
0.060	156+52.91	-0.060
0.050	156+37.14	-0.050
0.040	156+21.37	-0.040
0.030	156+05.61	-0.030
0.020	155+89.84	-0.020
0.010	155+74.07	-0.010
0.000	155+58.30	-0.000
CROWNS	STATIONS	CROWNS

SUPERELEVATION DATA – CURVE 12

CROWNS	STATIONS	CROWNS
-0.020	178+64.16	-0.020
-0.020	178+38.64	-0.010
-0.020	178+13.11	0.000
-0.020	177+87.58	0.010
-0.020	177+62.06	0.020
-0.030	177+36.53	0.030
-0.040	177+11.01	0.040
-0.050	176+85.48	0.050
-0.056	176+70.16	0.056
FS		
-0.056	172+49.64	0.056
-0.050	172+34.32	0.050
-0.040	172+08.79	0.040
-0.030	171+83.27	0.030
-0.020	171+57.74	0.020
-0.020	171+32.22	0.010
-0.020	171+06.69	0.000
-0.020	170+81.16	-0.010
-0.020	170+55.64	-0.020
CROWNS	STATIONS	CROWNS

SUPERELEVATION DATA – CURVE 13

CROWNS	STATIONS	CROWNS
-0.020	192+30.99	-0.020
-0.010	192+05.49	-0.020
0.000	191+79.99	-0.020
0.010	191+54.49	-0.020
0.020	191+28.99	-0.020
0.030	191+03.49	-0.030
0.040	190+77.99	-0.040
0.050	190+52.49	-0.050
0.060	190+26.99	-0.060
FS		
0.060	182+56.91	-0.060
0.050	182+31.41	-0.050
0.040	182+05.91	-0.040
0.030	181+80.41	-0.030
0.020	181+54.91	-0.020
0.010	181+29.41	-0.020
0.000	181+03.91	-0.020
-0.010	180+78.41	-0.020
-0.020	180+52.91	-0.020
CROWNS	STATIONS	CROWNS

SUPERELEVATION DATA – CURVE 14

CROWNS	STATIONS	CROWNS
-0.020	200+87.38	-0.020
-0.020	200+61.88	-0.010
-0.020	200+36.38	0.000
-0.020	200+10.88	0.010
-0.020	199+85.38	0.020
-0.030	199+59.88	0.030
-0.040	199+34.38	0.040
-0.050	199+08.88	0.050
-0.060	198+83.38	0.060
FS		
-0.060	194+36.89	0.060
-0.050	194+11.39	0.050
-0.040	193+85.89	0.040
-0.030	193+60.39	0.030
-0.020	193+34.89	0.020
-0.020	193+09.39	0.010
-0.020	192+83.89	0.000
-0.020	192+58.39	-0.010
-0.020	192+32.89	-0.020
CROWNS	STATIONS	CROWNS

SUPERELEVATION DATA – CURVE 15

CROWNS	STATIONS	CROWNS
-0.020	238+70.83	-0.020
-0.010	238+45.37	-0.020
0.000	238+19.92	-0.020
0.010	237+94.46	-0.020
0.020	237+69.01	-0.020
0.024	237+58.83	-0.024
FS		
0.024	227+05.91	-0.024
0.020	226+95.73	-0.020
0.010	226+70.28	-0.020
0.000	226+44.82	-0.020
-0.010	226+19.37	-0.020
-0.020	225+93.91	-0.020
CROWNS	STATIONS	CROWNS

SUPERELEVATION DATA – CURVE 16

CROWNS	STATIONS	CROWNS
-0.020	255+86.29	-0.020
-0.020	255+60.79	-0.010
-0.020	255+35.29	0.000
-0.020	255+09.79	0.010
-0.020	254+84.29	0.020
-0.030	254+58.79	0.030
-0.040	254+33.29	0.040
FS		
-0.040	245+71.09	0.040
-0.030	245+45.59	0.030
-0.020	245+20.09	0.020
-0.020	244+94.59	0.010
-0.020	244+69.09	0.000
-0.020	244+43.59	-0.010
-0.020	244+18.09	-0.020
CROWNS	STATIONS	CROWNS

SUPERELEVATION DATA – CURVE 17

CROWNS	STATIONS	CROWNS
-0.020	287+54.80	-0.020
-0.020	287+29.30	-0.010
-0.020	287+03.79	0.000
-0.020	286+78.28	0.010
-0.020	286+52.77	0.020
-0.030	286+27.27	0.030
-0.040	286+01.76	0.040
-0.049	285+78.80	0.049
FS		
-0.049	272+20.23	0.049
-0.040	271+97.27	0.040
-0.030	271+71.76	0.030
-0.020	271+46.26	0.020
-0.020	271+20.75	0.010
-0.020	270+95.24	0.000
-0.020	270+69.73	-0.010
-0.020	270+44.23	-0.020
CROWNS	STATIONS	CROWNS

SUPERELEVATION DATA – CURVE 18

CROWNS	STATIONS	CROWNS
-0.020	313+25.99	-0.020
-0.010	313+00.47	-0.020
0.000	312+74.95	-0.020
0.010	312+49.43	-0.020
0.020	312+23.92	-0.020
0.030	311+98.40	-0.030
0.038	311+77.99	-0.038
FS		
0.038	302+49.15	-0.038
0.030	302+28.74	-0.030
0.020	302+03.22	-0.020
0.010	301+77.71	-0.020
0.000	301+52.19	-0.020
-0.010	301+26.67	-0.020
-0.020	301+01.15	-0.020
CROWNS	STATIONS	CROWNS

SUPERELEVATION DATA – CURVE 19

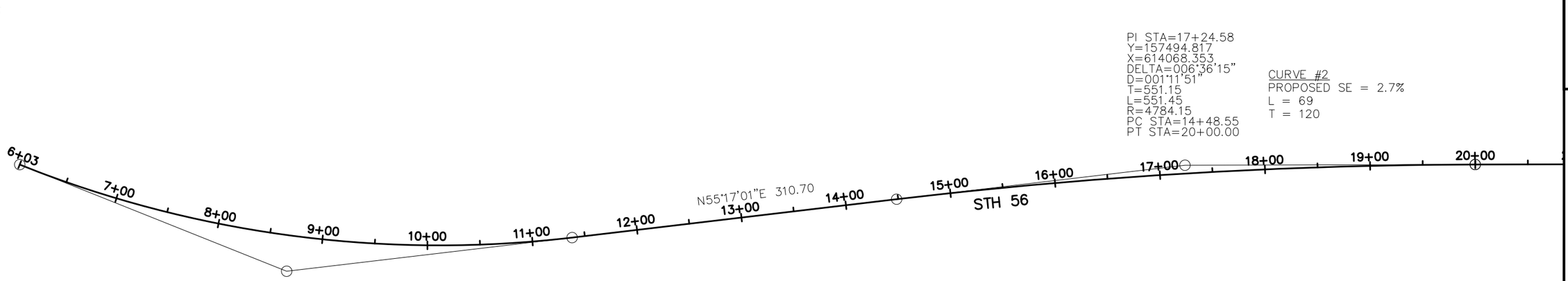
CROWNS	STATIONS	CROWNS
-0.020	33328.58	-0.020
-0.020	33303.12	-0.010
-0.020	33277.67	0.000
-0.020	33252.21	0.010
-0.020	33226.76	0.020
-0.024	33216.58	0.024
FS		
-0.024	32527.68	0.024
-0.020	32517.50	0.020
-0.020	32492.05	0.010
-0.020	32466.59	0.000
-0.020	32441.14	-0.010
-0.020	32415.68	-0.020
CROWNS	STATIONS	CROWNS

SUPERELEVATION DATA – CURVE 20

CROWNS	STATIONS	CROWNS
-0.020	354+50.48	-0.020
-0.010	354+25.01	-0.020
0.000	353+99.54	-0.020
0.010	353+74.06	-0.020
0.020	353+48.59	-0.020
0.030	353+23.12	-0.030
0.033	353+15.48	-0.033
FS		
0.033	338+87.90	-0.033
0.030	338+80.26	-0.030
0.020	338+54.79	-0.020
0.010	338+29.32	-0.020
0.000	338+03.84	-0.020
-0.010	337+78.37	-0.020
-0.020	337+52.90	-0.020
CROWNS	STATIONS	CROWNS

SUPERELEVATION DATA – CURVE 21

CROWNS	STATIONS	CROWNS
FS		
0.060	364+21.70	-0.060
0.050	363+96.20	-0.050
0.040	363+70.70	-0.040
0.030	363+45.20	-0.030
0.020	363+19.70	-0.020
0.010	362+94.20	-0.020
0.000	362+68.70	-0.020
-0.010	362+43.20	-0.020
-0.020	362+17.70	-0.020
CROWNS	STATIONS	CROWNS



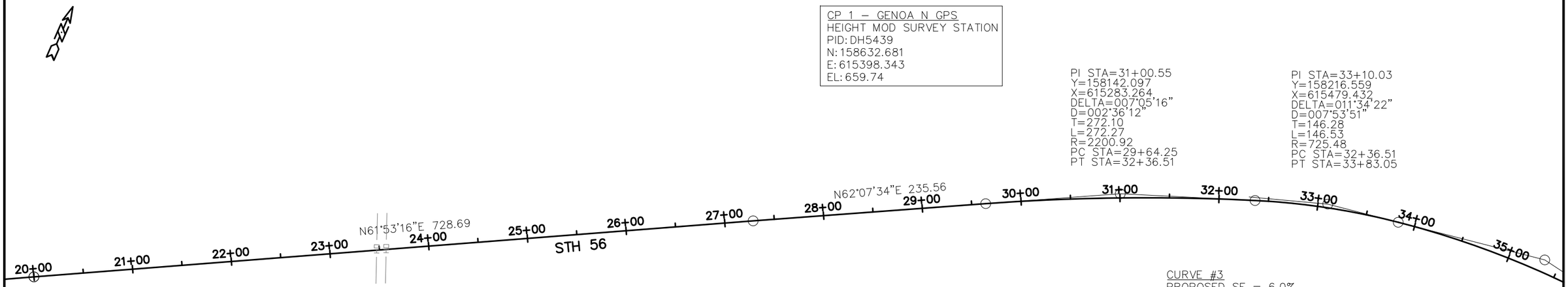
PI STA=8+75.89
Y=157005.022
X=613361.435
DELTA=028°30'59"
D=005°19'40"
T=529.74
L=535.25
R=1075.43
PC STA=6+02.60
PT STA=11+37.85

CURVE #1
PROPOSED SE = 6.0%
L = 103
T = 137

PI STA=17+24.58
Y=157494.817
X=614068.353
DELTA=006°36'15"
D=001°11'51"
T=551.15
L=551.45
R=4784.15
PC STA=14+48.55
PT STA=20+00.00

CURVE #2
PROPOSED SE = 2.7%
L = 69
T = 120

NOTE: CONTRACTOR SHALL BE RESPONSIBLE TO CHECK AND VERIFY EXISTING HORIZONTAL CENTERLINE AGAINST THE PROVIDED PLAN INFORMATION PRIOR TO STAKING ITEMS BEING PERFORMED.



CP 1 – GENOA N GPS
HEIGHT MOD SURVEY STATION
PID: DH5439
N: 158632.681
E: 615398.343
EL: 659.74

PI STA=31+00.55
Y=158142.097
X=615283.264
DELTA=007°05'16"
D=002°36'12"
T=272.10
L=272.27
R=2200.92
PC STA=29+64.25
PT STA=32+36.51

PI STA=33+10.03
Y=158216.559
X=615479.432
DELTA=011°34'22"
D=007°53'51"
T=146.28
L=146.53
R=725.48
PC STA=32+36.51
PT STA=33+83.05

CURVE #3
PROPOSED SE = 6.0%
L = 153
T = 204

PI STA=35+35.82
Y=158252.791
X=615702.803
DELTA=018°44'31"
D=006°11'21"
T=301.47
L=302.82
R=925.75
PC STA=33+83.05
PT STA=36+85.87

NOTE: CONTRACTOR SHALL BE RESPONSIBLE TO CHECK AND VERIFY EXISTING HORIZONTAL CENTERLINE AGAINST THE PROVIDED PLAN INFORMATION PRIOR TO STAKING ITEMS BEING PERFORMED.

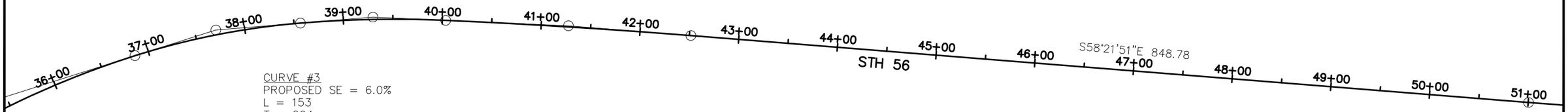
2

PI STA=37+71.53
Y=158213.320
X=6159 37.948
DELTA=012°51'43"
D=007°32'21"
T=170.24
L=170.60
R=759.96
PC STA=36+85.87
PT STA=38+56.47

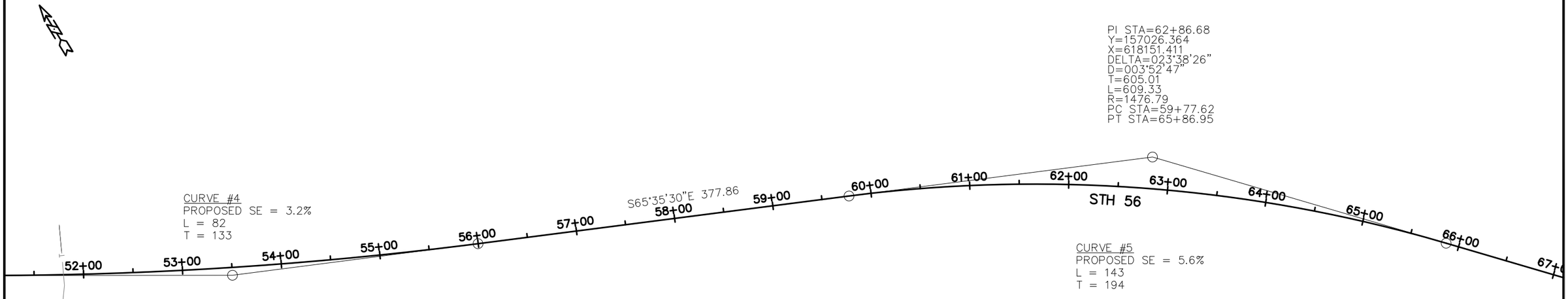
PI STA=39+30.03
Y=158152.670
X=616085.164
DELTA=007°13'26"
D=004°55'00"
T=146.83
L=146.92
R=1165.32
PC STA=38+56.47
PT STA=40+03.39

PI STA=41+27.49
Y=158054.992
X=616257.006
DELTA=002°01'17"
D=000°48'52"
T=248.17
L=248.18
R=7035.02
PC STA=40+03.39
PT STA=42+51.57

NOTE: CONTRACTOR SHALL BE RESPONSIBLE TO CHECK AND VERIFY EXISTING HORIZONTAL CENTERLINE AGAINST THE PROVIDED PLAN INFORMATION PRIOR TO STAKING ITEMS BEING PERFORMED.



CURVE #3
PROPOSED SE = 6.0%
L = 153
T = 204



CURVE #4
PROPOSED SE = 3.2%
L = 82
T = 133

PI STA=62+86.68
Y=157026.364
X=618151.411
DELTA=023°38'26"
D=003°52'47"
T=605.01
L=609.33
R=1476.79
PC STA=59+77.62
PT STA=65+86.95

CURVE #5
PROPOSED SE = 5.6%
L = 143
T = 194

PI STA=53+50.38
Y=157413.550
X=617298.193
DELTA=007°13'39"
D=001°26'50"
T=499.08
L=499.41
R=3958.99
PC STA=51+00.35
PT STA=55+99.75

NOTE: CONTRACTOR SHALL BE RESPONSIBLE TO CHECK AND VERIFY EXISTING HORIZONTAL CENTERLINE AGAINST THE PROVIDED PLAN INFORMATION PRIOR TO STAKING ITEMS BEING PERFORMED.

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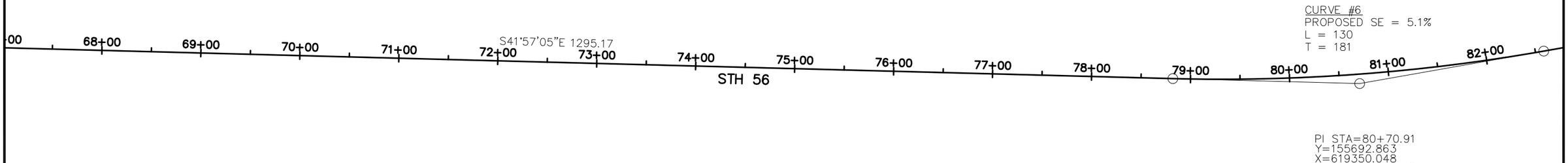
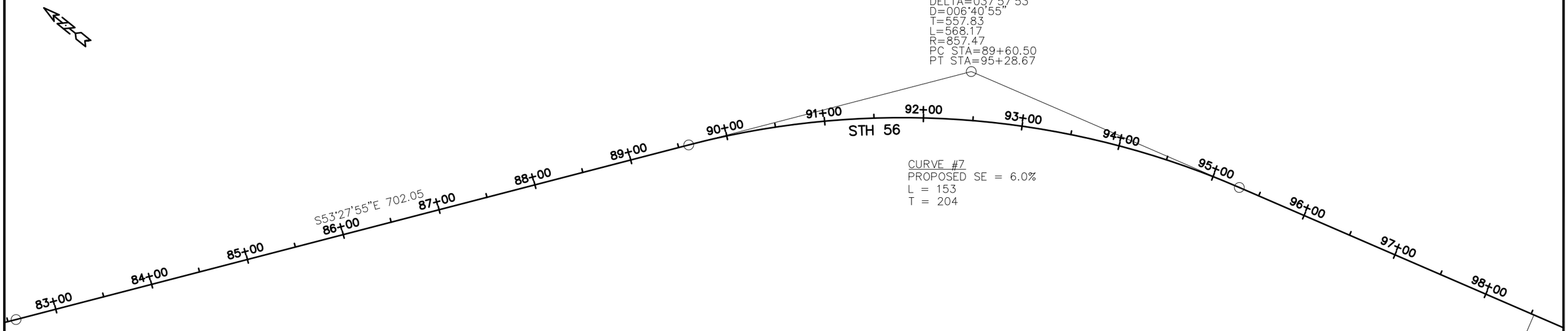
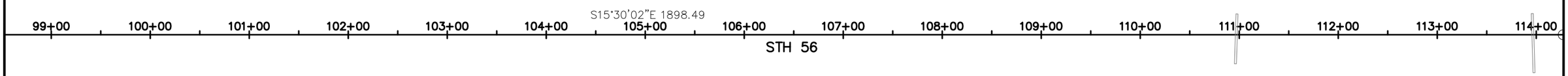
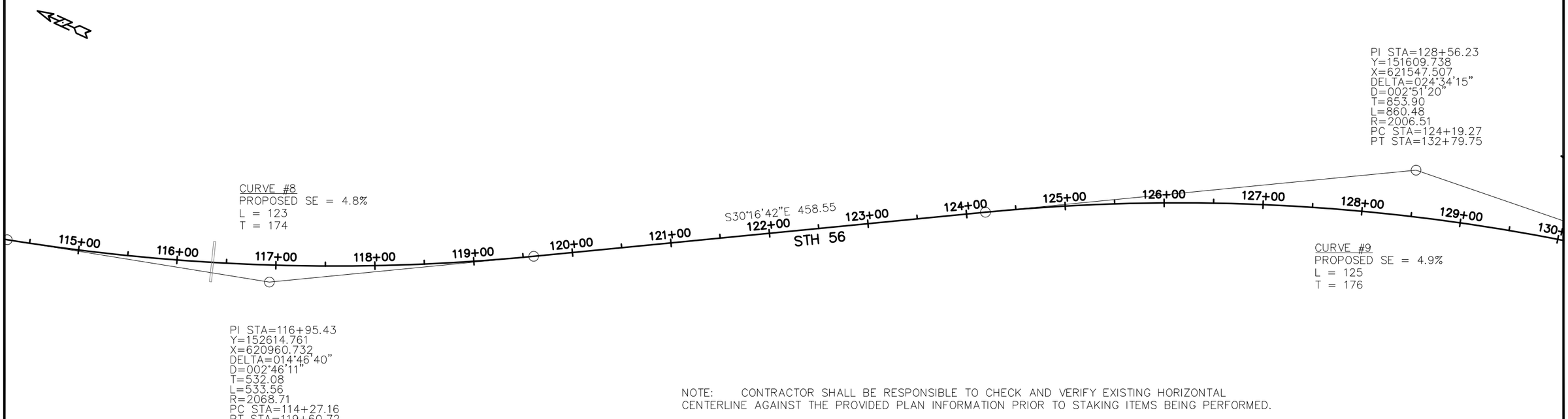




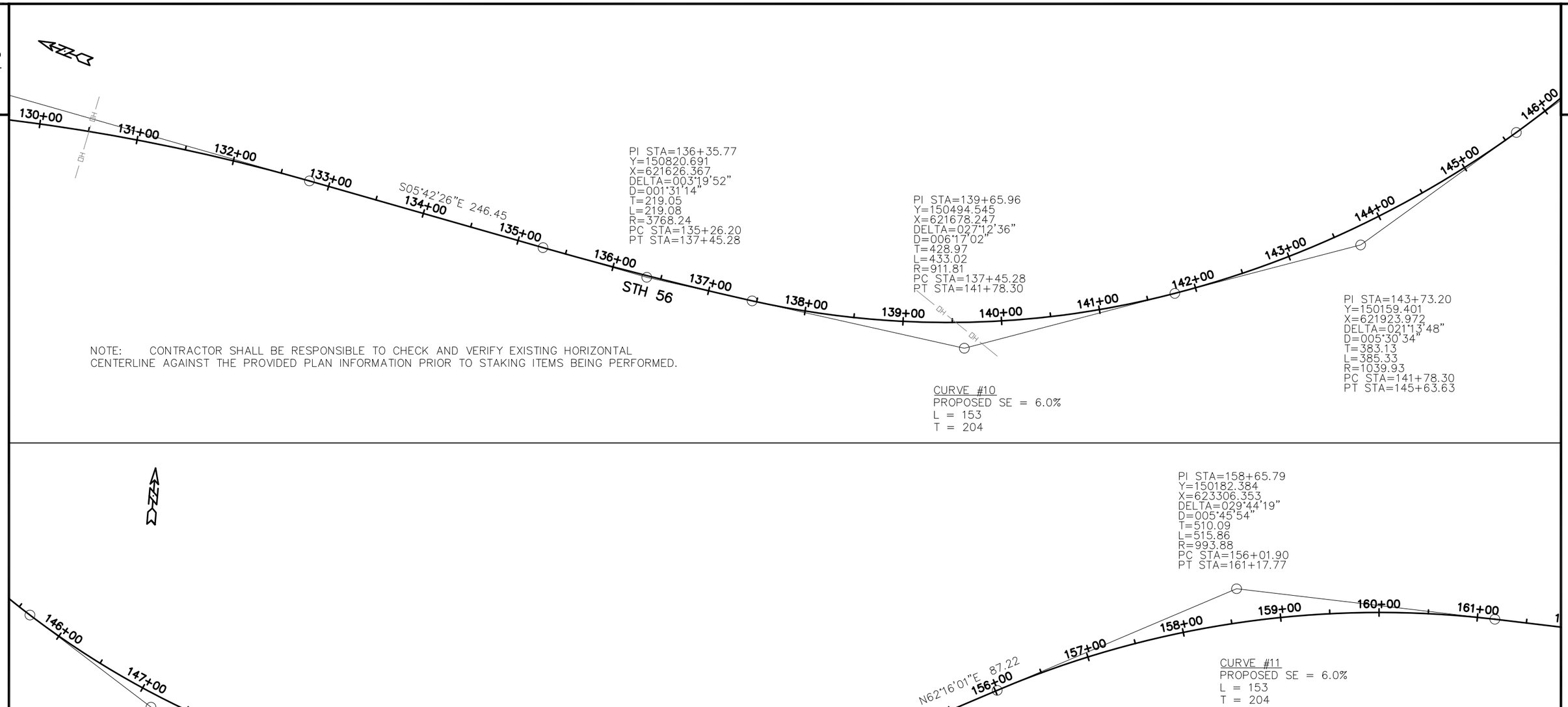
NOTE: CONTRACTOR SHALL BE RESPONSIBLE TO CHECK AND VERIFY EXISTING HORIZONTAL CENTERLINE AGAINST THE PROVIDED PLAN INFORMATION PRIOR TO STAKING ITEMS BEING PERFORMED.

NOTE: CONTRACTOR SHALL BE RESPONSIBLE TO CHECK AND VERIFY EXISTING HORIZONTAL CENTERLINE AGAINST THE PROVIDED PLAN INFORMATION PRIOR TO STAKING ITEMS BEING PERFORMED.

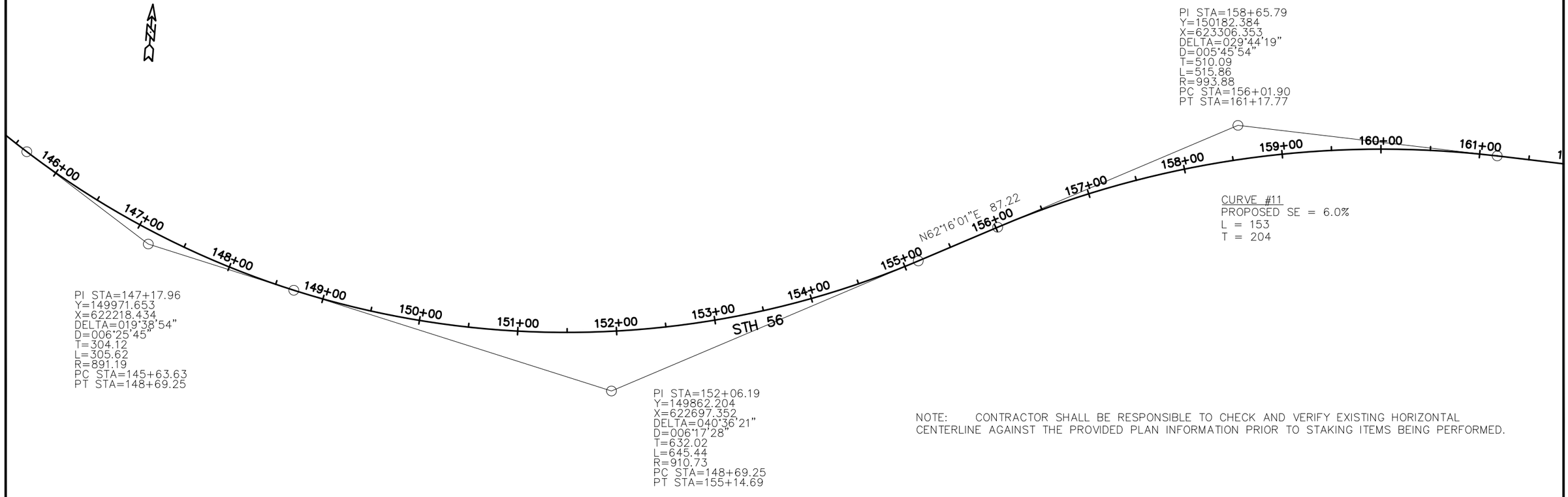




NOTE: CONTRACTOR SHALL BE RESPONSIBLE TO CHECK AND VERIFY EXISTING HORIZONTAL CENTERLINE AGAINST THE PROVIDED PLAN INFORMATION PRIOR TO STAKING ITEMS BEING PERFORMED.



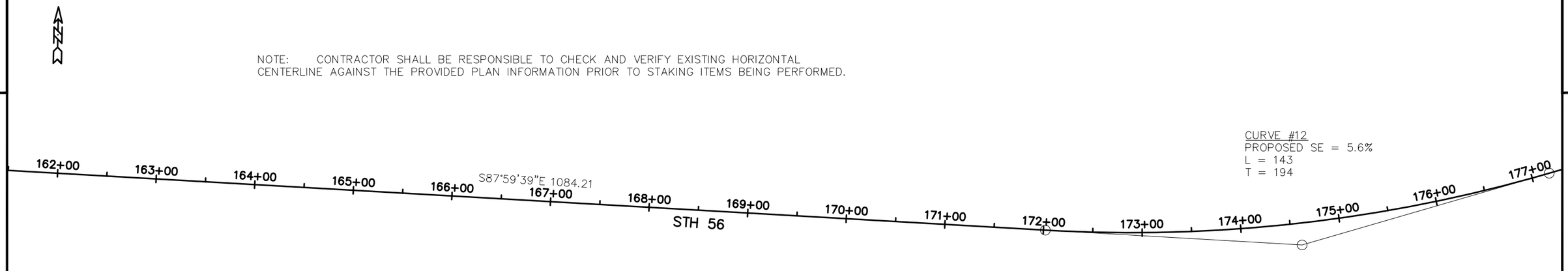
NOTE: CONTRACTOR SHALL BE RESPONSIBLE TO CHECK AND VERIFY EXISTING HORIZONTAL CENTERLINE AGAINST THE PROVIDED PLAN INFORMATION PRIOR TO STAKING ITEMS BEING PERFORMED.



NOTE: CONTRACTOR SHALL BE RESPONSIBLE TO CHECK AND VERIFY EXISTING HORIZONTAL CENTERLINE AGAINST THE PROVIDED PLAN INFORMATION PRIOR TO STAKING ITEMS BEING PERFORMED.

PROJECT NO: 5730-07-60	HWY: STH 56	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 23	E

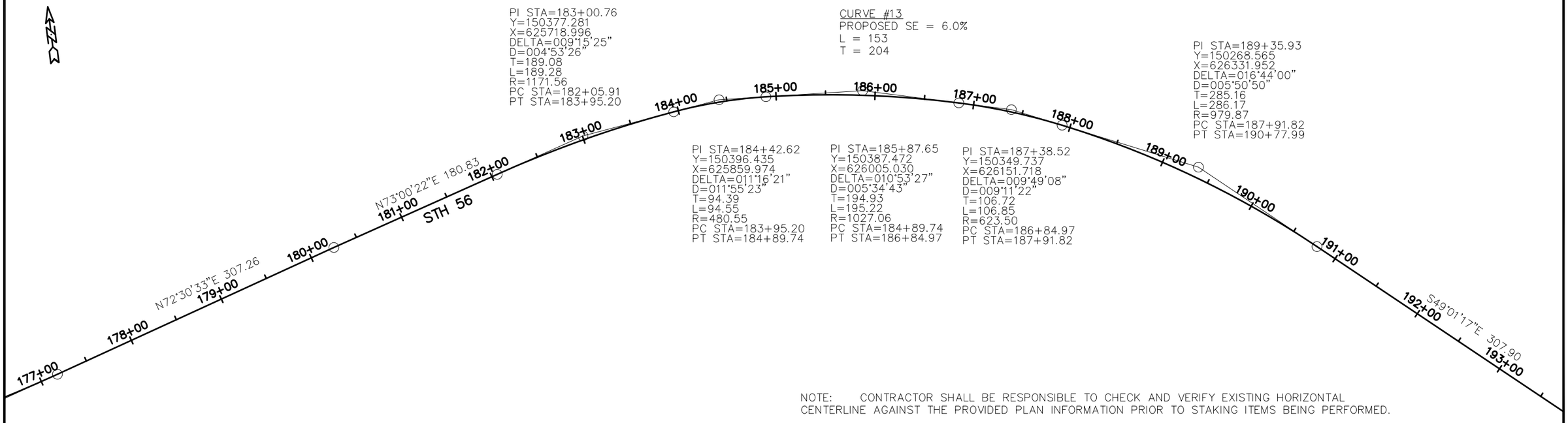
NOTE: CONTRACTOR SHALL BE RESPONSIBLE TO CHECK AND VERIFY EXISTING HORIZONTAL CENTERLINE AGAINST THE PROVIDED PLAN INFORMATION PRIOR TO STAKING ITEMS BEING PERFORMED.



CURVE #12
PROPOSED SE = 5.6%
L = 143
T = 194

CP 2 – GENOA GPS
HEIGHT MOD SURVEY STATION
PID: DH5176
N: 146562.302
E: 624498.808
EL: 1158.59

PI STA=174+62.42
Y=150126.084
X=624913.904
DELTA=019°29'48"
D=003°46'46"
T=513.38
L=515.86
R=1515.98
PC STA=172+01.97
PT STA=177+17.83



PI STA=183+00.76
Y=150377.281
X=625718.996
DELTA=009°15'25"
D=004°53'26"
T=189.08
L=189.28
R=1171.56
PC STA=182+05.91
PT STA=183+95.20

CURVE #13
PROPOSED SE = 6.0%
L = 153
T = 204

PI STA=189+35.93
Y=150268.565
X=626331.952
DELTA=016°44'00"
D=005°50'50"
T=285.16
L=286.17
R=979.87
PC STA=187+91.82
PT STA=190+77.99

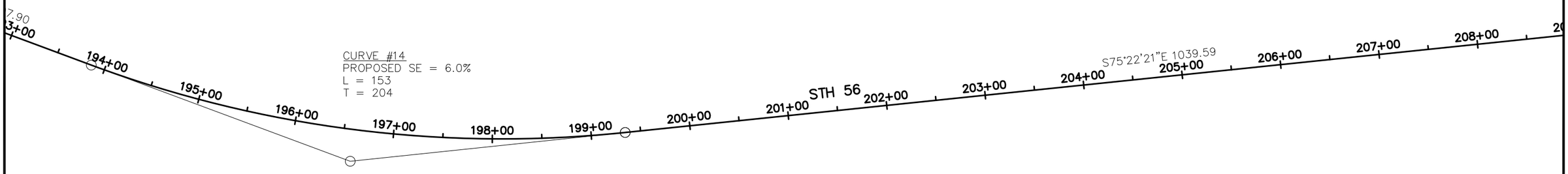
PI STA=184+42.62
Y=150396.435
X=625859.974
DELTA=011°16'21"
D=011°55'23"
T=94.39
L=94.55
R=480.55
PC STA=183+95.20
PT STA=184+89.74

PI STA=185+87.65
Y=150387.472
X=626005.030
DELTA=010°53'27"
D=005°34'43"
T=194.93
L=195.22
R=1027.06
PC STA=184+89.74
PT STA=186+84.97

PI STA=187+38.52
Y=150349.737
X=626151.718
DELTA=009°49'08"
D=009°11'22"
T=106.72
L=106.85
R=623.50
PC STA=186+84.97
PT STA=187+91.82

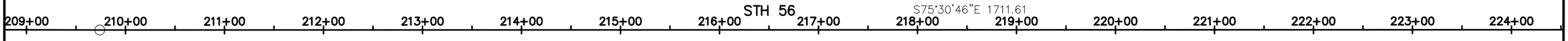
NOTE: CONTRACTOR SHALL BE RESPONSIBLE TO CHECK AND VERIFY EXISTING HORIZONTAL CENTERLINE AGAINST THE PROVIDED PLAN INFORMATION PRIOR TO STAKING ITEMS BEING PERFORMED.

NOTE: CONTRACTOR SHALL BE RESPONSIBLE TO CHECK AND VERIFY EXISTING HORIZONTAL CENTERLINE AGAINST THE PROVIDED PLAN INFORMATION PRIOR TO STAKING ITEMS BEING PERFORMED.



CURVE #14
PROPOSED SE = 6.0%
L = 153
T = 204

PI STA=196+65.11
Y=149789.040
X=626883.996
DELTA=026°26'19"
D=004°49'13"
T=543.64
L=548.49
R=1188.65
PC STA=193+85.89
PT STA=199+34.38

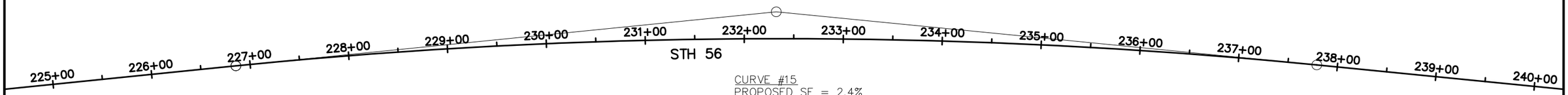


NOTE: CONTRACTOR SHALL BE RESPONSIBLE TO CHECK AND VERIFY EXISTING HORIZONTAL CENTERLINE AGAINST THE PROVIDED PLAN INFORMATION PRIOR TO STAKING ITEMS BEING PERFORMED.

PROJECT NO: 5730-07-60	HWY: STH 56	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 25	E

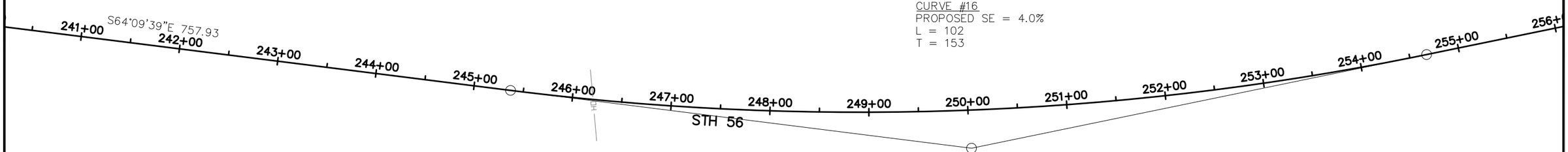
NOTE: CONTRACTOR SHALL BE RESPONSIBLE TO CHECK AND VERIFY EXISTING HORIZONTAL CENTERLINE AGAINST THE PROVIDED PLAN INFORMATION PRIOR TO STAKING ITEMS BEING PERFORMED.

PI STA=232+34.15
Y=148890.509
X=630348.353
DELTA=011°17'57"
D=001°02'00"
T=1091.81
L=1093.58
R=5545.31
PC STA=226+85.58
PT STA=237+79.16



CURVE #15
PROPOSED SE = 2.4%
L = 61
T = 112

NOTE: CONTRACTOR SHALL BE RESPONSIBLE TO CHECK AND VERIFY EXISTING HORIZONTAL CENTERLINE AGAINST THE PROVIDED PLAN INFORMATION PRIOR TO STAKING ITEMS BEING PERFORMED.



CURVE #16
PROPOSED SE = 4.0%
L = 102
T = 153

PI STA=250+06.41
Y=148116.524
X=631946.623
DELTA=018°48'02"
D=002°01'16"
T=926.03
L=930.20
R=2834.83
PC STA=245+37.09
PT STA=254+67.29

PROJECT NO: 5730-07-60	HWY: STH 56	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 26	E

NOTE: CONTRACTOR SHALL BE RESPONSIBLE TO CHECK AND VERIFY EXISTING HORIZONTAL CENTERLINE AGAINST THE PROVIDED PLAN INFORMATION PRIOR TO STAKING ITEMS BEING PERFORMED.

PI STA=270+70.54
Y=147862.046
X=634003.516
DELTA=000°45'45"
D=000°21'10"
T=216.04
L=216.04
R=16235.36
PC STA=269+62.52
PT STA=271+78.56

S82°57'41"E 1090.38

S82°54'15"E 404.85

-00 257+00 258+00 259+00 260+00 261+00 262+00 263+00 264+00 265+00 266+00 267+00 268+00 269+00 270+00 271+00

STH 56

NOTE: CONTRACTOR SHALL BE RESPONSIBLE TO CHECK AND VERIFY EXISTING HORIZONTAL CENTERLINE AGAINST THE PROVIDED PLAN INFORMATION PRIOR TO STAKING ITEMS BEING PERFORMED.

272+00 273+00 274+00 275+00 276+00 277+00 278+00 279+00 280+00 281+00 282+00 283+00 284+00 285+00 286+00 287+00

STH 56

CURVE #17
PROPOSED SE = 4.9%
L = 125
T = 176

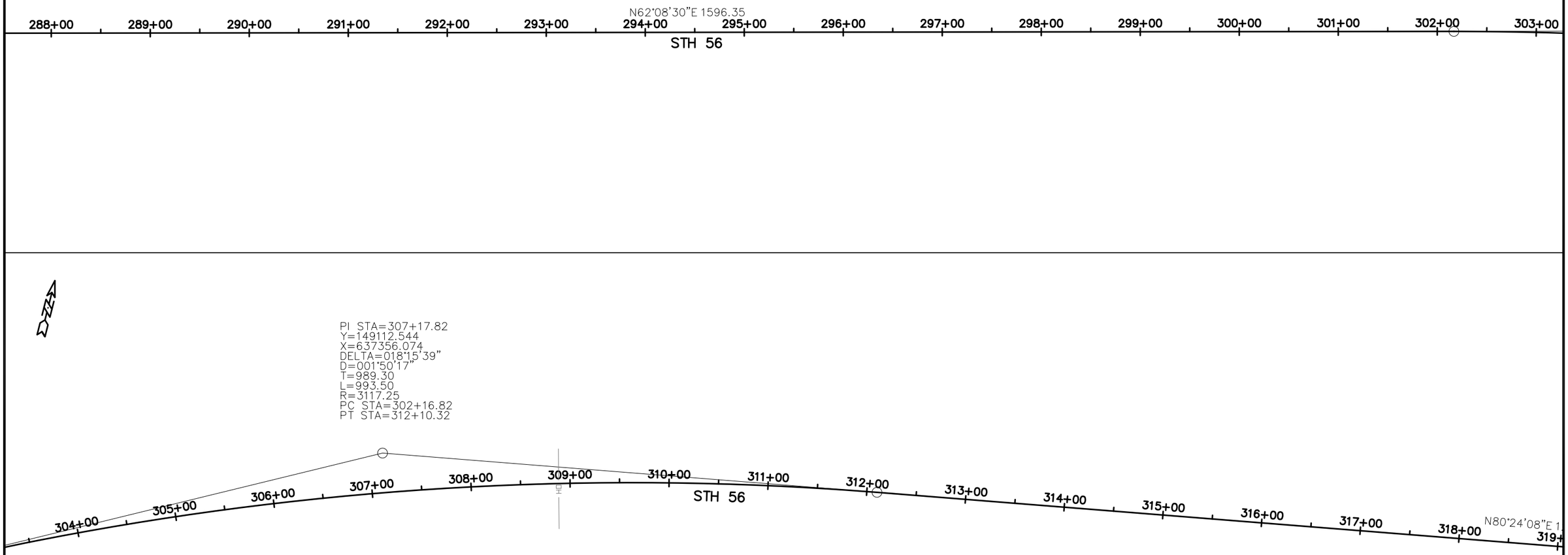
PI STA=273+80.58
Y=147827.845
X=634311.664
DELTA=009°33'40"
D=002°22'19"
T=402.63
L=403.10
R=2415.59
PC STA=271+78.56
PT STA=275+81.66

PI STA=277+91.74
Y=147851.049
X=634723.106
DELTA=011°52'59"
D=002°50'18"
T=417.90
L=418.65
R=2018.60
PC STA=275+81.66
PT STA=280+00.31

PI STA=283+11.67
Y=147986.981
X=635226.518
DELTA=012°44'52"
D=002°03'20"
T=618.88
L=620.16
R=2787.36
PC STA=280+00.31
PT STA=286+20.47

PROJECT NO: 5730-07-60	HWY: STH 56	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 27	E

NOTE: CONTRACTOR SHALL BE RESPONSIBLE TO CHECK AND VERIFY EXISTING HORIZONTAL CENTERLINE AGAINST THE PROVIDED PLAN INFORMATION PRIOR TO STAKING ITEMS BEING PERFORMED.



NOTE: CONTRACTOR SHALL BE RESPONSIBLE TO CHECK AND VERIFY EXISTING HORIZONTAL CENTERLINE AGAINST THE PROVIDED PLAN INFORMATION PRIOR TO STAKING ITEMS BEING PERFORMED.

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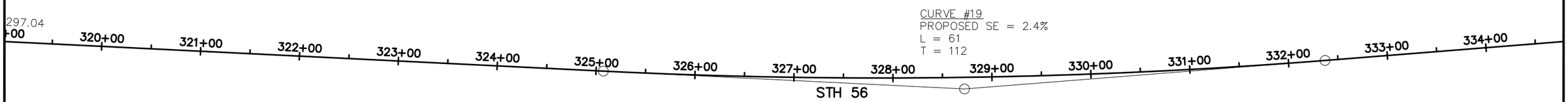
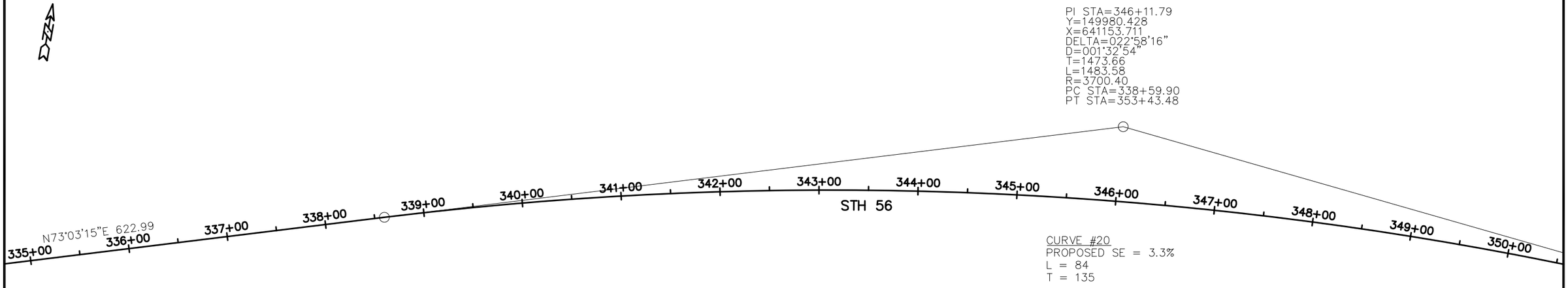


CURVE #19
PROPOSED SE = 2.4%
L = 61
T = 112

PI STA=328+72.63
Y=149473.230
X=639489.108
DELTA=007°20'53"
D=001°00'26"
T=729.06
L=729.56
R=5688.58
PC STA=325+07.36
PT STA=332+36.91

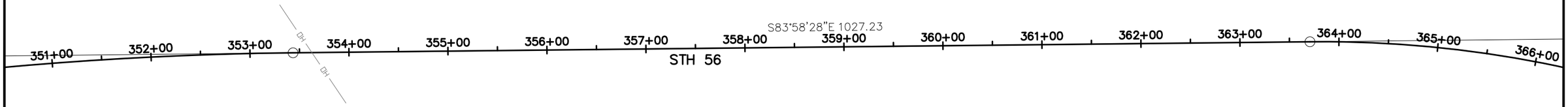
PI STA=346+11.79
Y=149980.428
X=641153.711
DELTA=022°58'16"
D=001°32'54"
T=1473.66
L=1483.58
R=3700.40
PC STA=338+59.90
PT STA=353+43.48



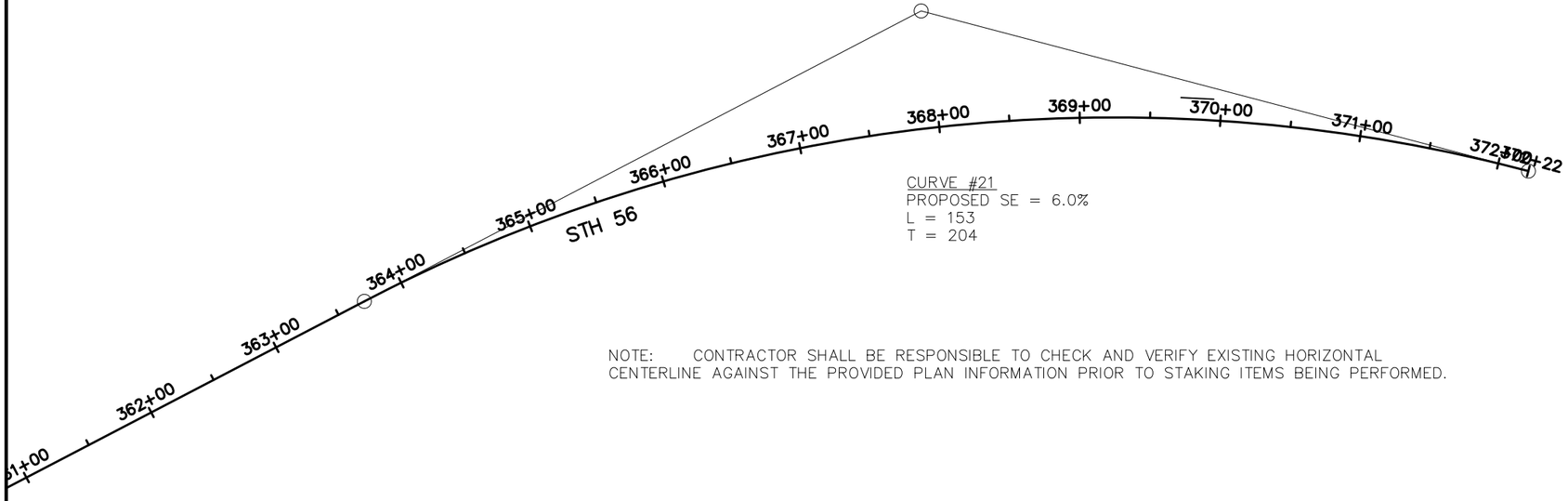
CURVE #20
PROPOSED SE = 3.3%
L = 84
T = 135

NOTE: CONTRACTOR SHALL BE RESPONSIBLE TO CHECK AND VERIFY EXISTING HORIZONTAL CENTERLINE AGAINST THE PROVIDED PLAN INFORMATION PRIOR TO STAKING ITEMS BEING PERFORMED.

NOTE: CONTRACTOR SHALL BE RESPONSIBLE TO CHECK AND VERIFY EXISTING HORIZONTAL CENTERLINE AGAINST THE PROVIDED PLAN INFORMATION PRIOR TO STAKING ITEMS BEING PERFORMED.



PI STA=368+16.80
Y=149746.848
X=643366.627
DELTA=042°17'08"
D=004°58'01"
T=832.13
L=851.32
R=1153.52
PC STA=363+70.71
PT STA=372+22.03



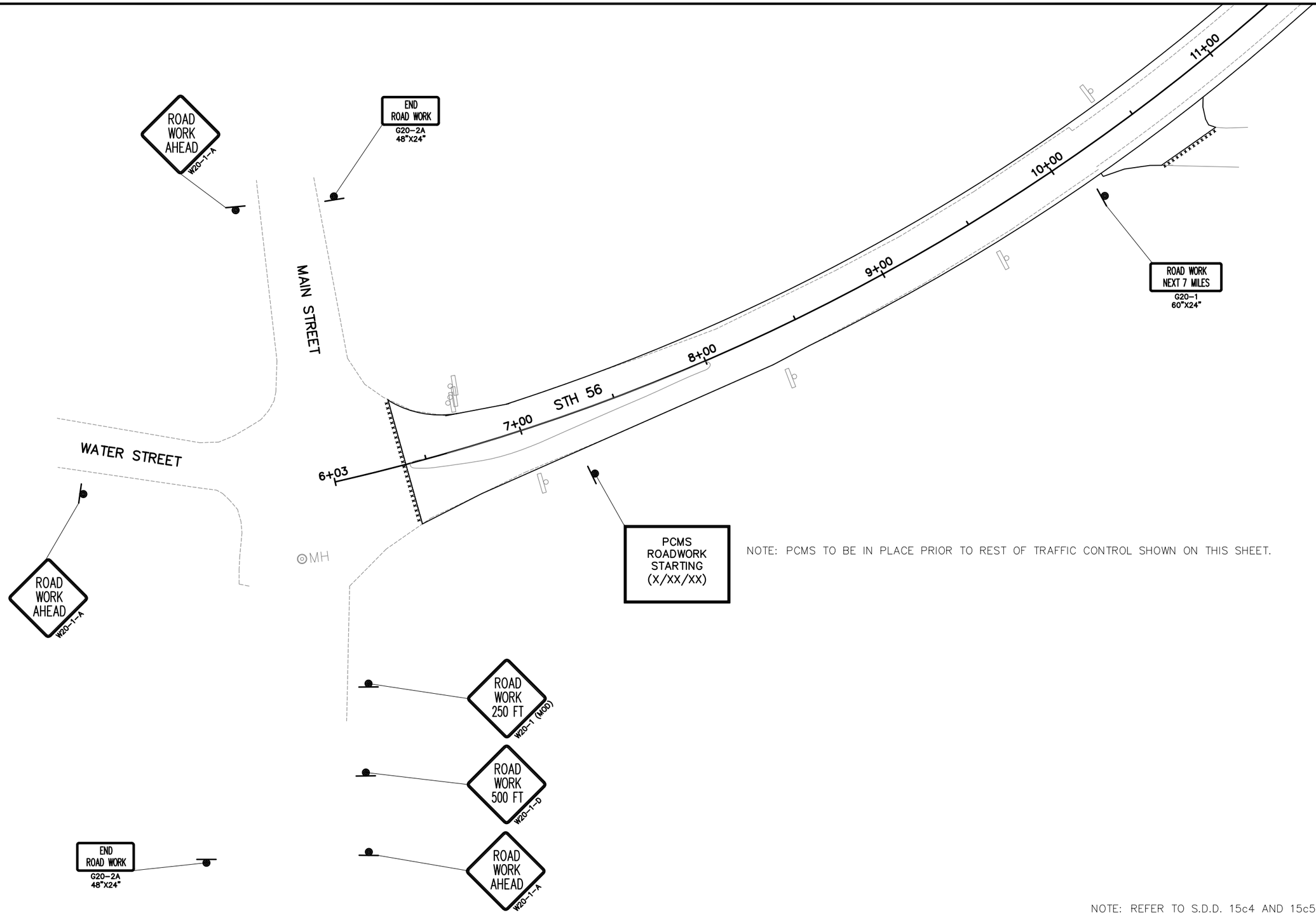
CURVE #21
PROPOSED SE = 6.0%
L = 153
T = 204

NOTE: CONTRACTOR SHALL BE RESPONSIBLE TO CHECK AND VERIFY EXISTING HORIZONTAL CENTERLINE AGAINST THE PROVIDED PLAN INFORMATION PRIOR TO STAKING ITEMS BEING PERFORMED.

CP 3 – HARMONY S GPS
HEIGHT MOD SURVEY STATION
PID: DH5175
N: 143000.261
E: 648167.336
EL: 1166.14

PROJECT NO: 5730-07-60	HWY: STH 56	COUNTY: VERNON	ALIGNMENT DETAILS	SHEET 30	E

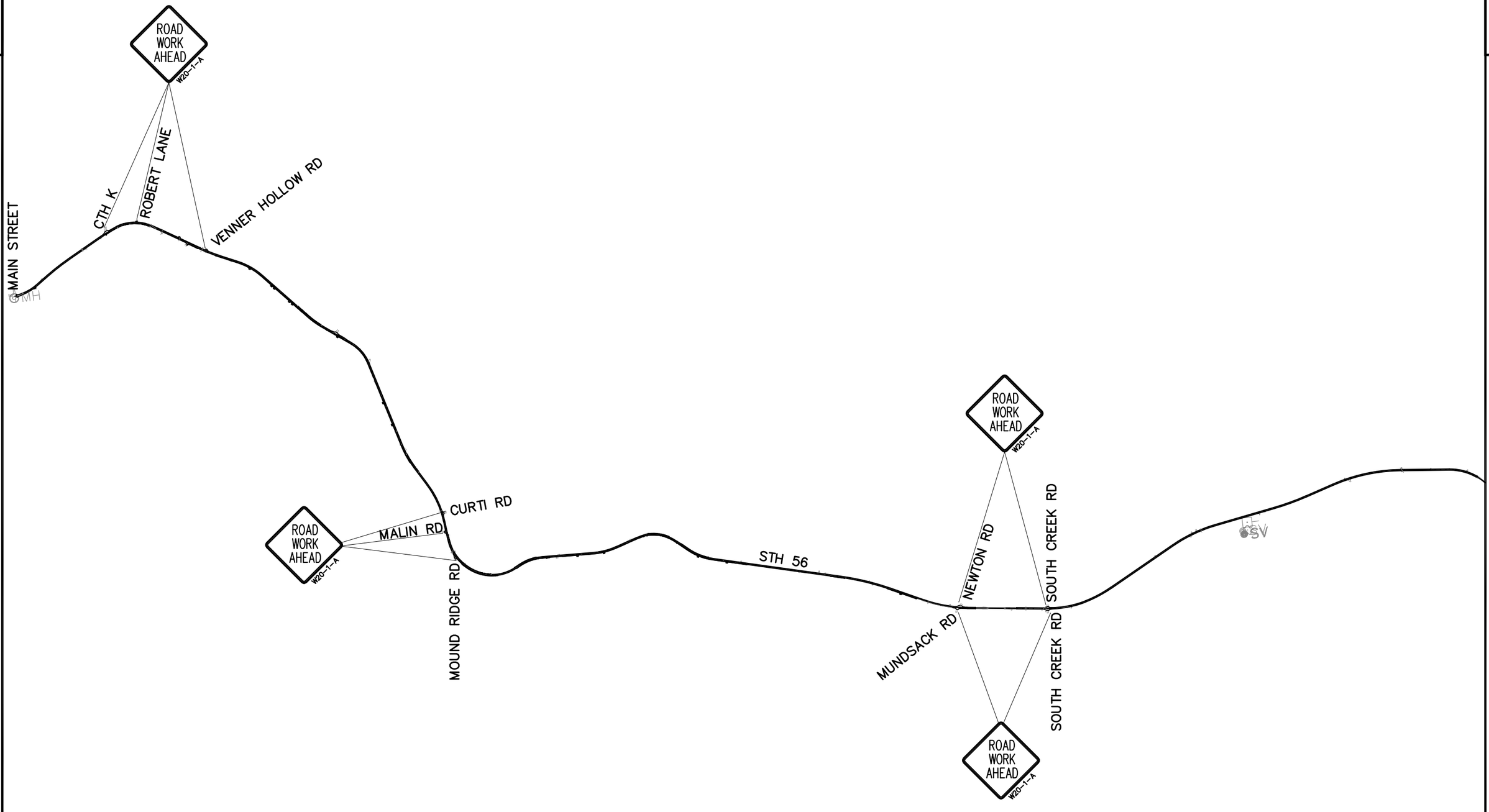
2



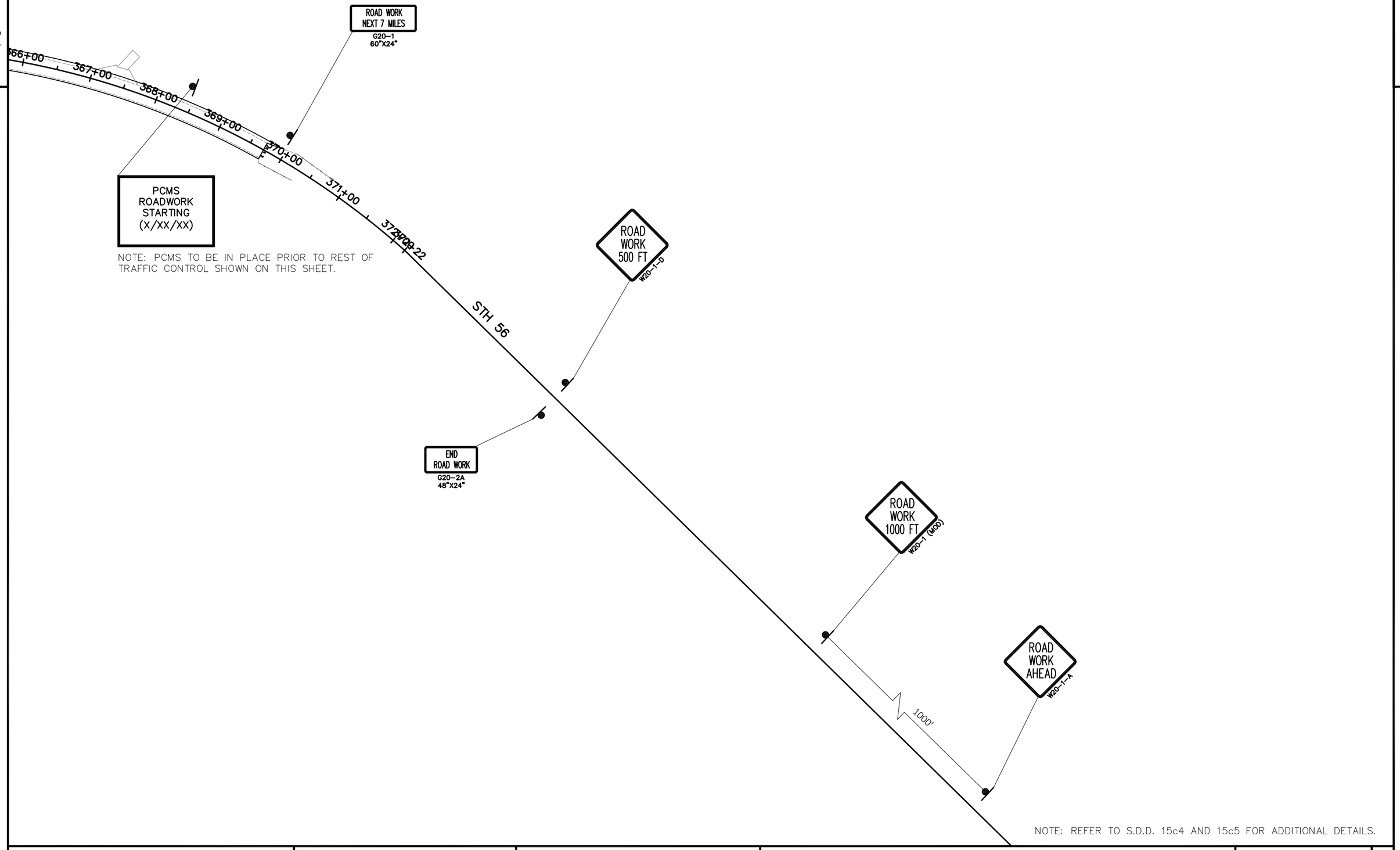
NOTE: PCMS TO BE IN PLACE PRIOR TO REST OF TRAFFIC CONTROL SHOWN ON THIS SHEET.

NOTE: REFER TO S.D.D. 15c4 AND 15c5 FOR ADDITIONAL DETAILS.

2



PROJECT NO: 5730-07-60	HWY: STH 56	COUNTY: VERNON	ADVANCED WARNING SIGNING	SHEET	E



PROJECT NO: 5730-07-60	HWY: STH 56	COUNTY: VERNON	ADVANCED WARNING SIGNING	SHEET 33	E

5730-07-60

Line	Item	Item Description	Unit	Total	Qty
0002	204.0110	Removing Asphaltic Surface	SY	570.000	570.000
0004	204.0115	Removing Asphaltic Surface Butt Joints	SY	2,477.000	2,477.000
0006	204.0165	Removing Guardrail	LF	13,069.000	13,069.000
0008	213.0100	Finishing Roadway (project) 01. 5730-07-60	EACH	1.000	1.000
0010	305.0110	Base Aggregate Dense 3/4-Inch	TON	8,430.000	8,430.000
0012	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	10,400.000	10,400.000
0014	325.0100	Pulverize and Relay	SY	120,530.000	120,530.000
0016	374.1020.S	QMP Pulverize and Relay Compaction	SY	120,530.000	120,530.000
0018	416.1010	Concrete Surface Drains	CY	22.000	22.000
0020	455.0605	Tack Coat	GAL	6,030.000	6,030.000
0022	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	2.000	2.000
0024	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	2.000	2.000
0026	460.2005	Incentive Density PWL HMA Pavement	DOL	24,000.000	24,000.000
0028	460.2010	Incentive Air Voids HMA Pavement	DOL	24,000.000	24,000.000
0030	460.4110.S	Reheating HMA Pavement Longitudinal Joints	LF	35,460.000	35,460.000
0032	460.5224	HMA Pavement 4 LT 58-28 S	TON	24,000.000	24,000.000
0034	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	140.000	140.000
0036	465.0475	Asphalt Centerline Rumble Strips 2-Lane Rural	LF	28,949.000	28,949.000
0038	601.0415	Concrete Curb & Gutter 6-Inch Sloped 30-Inch Type J	LF	7,888.000	7,888.000
0040	606.0200	Riprap Medium	CY	14.000	14.000
0042	614.0920	Salvaged Rail	LF	200.000	200.000
0044	614.0925	Salvaged Guardrail End Treatments	EACH	2.000	2.000
0046	614.2300	MGS Guardrail 3	LF	3,510.000	3,510.000
0048	614.2330	MGS Guardrail 3 K	LF	10,275.000	10,275.000
0050	614.2350	MGS Guardrail Short Radius	LF	20.000	20.000
0052	614.2610	MGS Guardrail Terminal EAT	EACH	25.000	25.000
0054	614.2630	MGS Guardrail Short Radius Terminal	EACH	1.000	1.000
0056	618.0100	Maintenance And Repair of Haul Roads (project) 01. 5730-07-60	EACH	1.000	1.000
0058	619.1000	Mobilization	EACH	1.000	1.000
0060	624.0100	Water	MGAL	92.000	92.000
0062	625.0105	Topsoil	CY	1,500.000	1,500.000
0064	628.1504	Silt Fence	LF	500.000	500.000
0066	628.1520	Silt Fence Maintenance	LF	1,000.000	1,000.000
0068	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0070	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0072	628.2004	Erosion Mat Class I Type B	SY	4,400.000	4,400.000
0074	628.2008	Erosion Mat Urban Class I Type B	SY	1,000.000	1,000.000
0076	628.7504	Temporary Ditch Checks	LF	500.000	500.000
0078	629.0210	Fertilizer Type B	CWT	4.000	4.000

5730-07-60

Line	Item	Item Description	Unit	Total	Qty
0080	630.0120	Seeding Mixture No. 20	LB	120.000	120.000
0082	630.0140	Seeding Mixture No. 40	LB	20.000	20.000
0084	630.0200	Seeding Temporary	LB	140.000	140.000
0086	638.2102	Moving Signs Type II	EACH	6.000	6.000
0088	642.5001	Field Office Type B	EACH	1.000	1.000
0090	643.0300	Traffic Control Drums	DAY	27,900.000	27,900.000
0092	643.0310.S	Temporary Portable Rumble Strips	LS	1.000	1.000
0094	643.0900	Traffic Control Signs	DAY	2,430.000	2,430.000
0096	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0098	643.5000	Traffic Control	EACH	1.000	1.000
0100	645.0130	Geotextile Type R	SY	56.000	56.000
0102	646.1020	Marking Line Epoxy 4-Inch	LF	120,355.000	120,355.000
0104	646.3020	Marking Line Epoxy 8-Inch	LF	106.000	106.000
0106	646.4505	Marking Line Same Day Paint 4-Inch	LF	47,978.000	47,978.000
0108	646.4520	Marking Line Same Day Epoxy 4-Inch	LF	47,978.000	47,978.000
0110	646.6120	Marking Stop Line Epoxy 18-Inch	LF	24.000	24.000
0112	646.8020	Marking Corrugated Median Epoxy	SF	408.000	408.000
0114	648.0100	Locating No-Passing Zones	MI	6.880	6.880
0116	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	7,888.000	7,888.000
0118	650.8000	Construction Staking Resurfacing Reference	LF	36,331.000	36,331.000
0120	650.9910	Construction Staking Supplemental Control (project) 01. 5730-07-60	LS	1.000	1.000
0122	690.0150	Sawing Asphalt	LF	670.000	670.000
0124	740.0440	Incentive IRI Ride	DOL	26,800.000	26,800.000
0126	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	700.000	700.000
0128	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	300.000	300.000

3

REMOVING ASPHALTIC SURFACE

CATEGORY	STATION–STATION	LOCATION	(204.0110) (SY)
0010	6+40–8+02	STH 56, BOP	570
		TOTALS	570

REMOVING ASPHALTIC SURFACE BUTT JOINTS

CATEGORY	STATION	LOCATION	(204.0115) (SY)
0010	8+02–9+02	STH 56, BOP	290
0010	10+50, RT	P.E.	40
0010	30+00, LT	CTH K	290
0010	52+60, LT	VENNER HOLLOW RD	133
0010	85+90, LT	C.E.	64
0010	131+00, LT	CURTI RD	140
0010	135+20, RT	MALIN RD	140
0010	140+90, RT	MOUND RIDGE RD	240
0010	253+00, LT	NEWTON RD	320
0010	252+60, RT	MUNDSACK RD	180
0010	255+44–256+44	W. BRIDGE	120
0010	265+15–266+15	E. BRIDGE	120
0010	271+75, LT	SOUTH CREEK RD	160
0010	271+75, RT	SOUTH CREEK RD	160
0010	368+21–369+21	STH 56, EOP	120
		TOTALS	2477

REMOVING GUARDRAIL

CATEGORY	STATION–STATION	LOCATION	(204.0165) (LF)
0010	41+17–50+51	STH 56, LT	934
0010	48+60–50+62	STH 56, RT	202
0010	55+56–57+87	STH 56, RT	231
0010	58+56–97+67	STH 56, RT	3,898
0010	99+83–108+61	STH 56, RT	878
0010	111+99–116+78	STH 56, RT	479
0010	143+48–150+11	STH 56, RT	674
0010	156+20–159+30	STH 56, LT	317
0010	156+22–161+94	STH 56, RT	564
0010	166+29–183+65	STH 56, RT	1,739
0010	184+19–206+75	STH 56, RT	2,250
0010	184+56–187+96	STH 56, LT	346
0010	237+50–243+07	STH 56, RT	557
		TOTALS	13,069

BASE AGGREGATE DENSE

CATEGORY	STATION–STATION	REMARKS	LOCATION	(305.0110) 3/4–INCH (TON)	(305.0120) 1 1/4–INCH (TON)
0010	6+40–256+44	PRESHOULDER	STH 56, LT	–	3770
0010	6+40–256+44	PRESHOULDER	STH 56, RT	–	2908
0010	265+15–369+21	PRESHOULDER	STH 56, LT	–	1936
0010	265+15–369+21	PRESHOULDER	STH 56, RT	–	1786
0010	6+40–256+44	FINISHED SHOULDER	STH 56, LT	2080	–
0010	6+40–256+44	FINISHED SHOULDER	STH 56, RT	2080	–
0010	265+15–369+21	FINISHED SHOULDER	STH 56, LT	870	–
0010	265+15–369+21	FINISHED SHOULDER	STH 56, RT	870	–
0010	6+40–369+21	PRIVATE ENTRANCES	LT & RT	500	–
0010	6+40–369+21	SUPER CORRECTION	STH 56, LT & RT	1000	–
0010	65+18–77+25	BEHIND CURB	STH 56, RT	135	–
0010	83+95–97+56	BEHIND CURB	STH 56, RT	200	–
0010	156+50–161+97	BEHIND CURB	STH 56, RT	80	–
0010	182+25–183+30	BEHIND CURB	STH 56, RT	15	–
0010	184+38–190+93	BEHIND CURB	STH 56, RT	100	–
0010	UNDISTRIBUTED	–	–	500	–
			TOTALS	8430	10400

PULVERIZE AND RELAY

CATEGORY	STATION–STATION	LOCATION	(325.0100) (SY)
0010	8+02–256+44	STH 56	83,347
0010	265+15–369+21	STH 56	34,688
0010	30+00, LT	CTH K	400
0010	36+70, LT	ROBERT LANE	85
0010	52+70, LT	VENNER HOLLOW RD	150
0010	131+00, LT	CURTI RD	200
0010	135+20, RT	MALIN RD	140
0010	141+00, RT	MOUND RIDGE RD	300
0010	252+50, RT	MUNDSACK RD	180
0010	253+20, LT	NEWTON RD	300
0010	271+00, LT/RT	SOUTH CREEK RD	500
0010	10+60, RT	DRIVEWAY	120
0010	48+40, RT	DRIVEWAY	120
		TOTALS	120,530

CONCRETE SURFACE DRAIN, RIP RAP MEDIUM AND GEOTEXTILE FABRIC TYPE R

CATEGORY	STATION	LOCATION	(416.1010) CONC. SURF. DRAIN (CY)	(606.0200) RIP RAP MED. (CY)	(645.0130) GEOTEXTILE FABRIC TYPE R (SY)
0010	29+60	RT	3	2.0	8.0
0010	32+50	RT	1.5	–	–
0010	75+80	LT	1.5	–	–
0010	83+90	RT	1.5	2.0	8.0
0010	94+40	RT	1.5	–	–
0010	116+50	LT	1.5	–	–
0010	135+90	LT	1.5	2.0	8.0
0010	143+00	LT	2.0	–	–
0010	149+25	LT	2.0	–	–
0010	162+00	RT	3	2.0	8.0
0010	183+40	RT	1.5	2.0	8.0
0010	190+90	RT	1.5	2.0	8.0
0010	198+30	LT	1.5	2.0	8.0
		TOTALS	22.0	14.0	56.0

TACK COAT

CATEGORY	STATION–STATION	LOCATION	(455.0605) (GAL)
0010	6+40–256+44	STH 56	4197
0010	265+15–369+21	STH 56	1715
0010	–	SIDE ROADS	118
		TOTALS	6,030

REHEATING HMA PAVEMENT LONGITUDINAL JOINTS

CATEGORY	STATION–STATION	LOCATION	(460.4110.S) (LF)
0010	6+40–256+44	STH 56	25,004
0010	265+15–369+71	STH 56	10,456
		TOTALS	35,460

HMA PAVEMENT 4 LT 58-28 S

CATEGORY	STATION–STATION	LOCATION	(460.5224) (TON)
0010	6+40–29+15	STH 56	1,486
0010	29+15–39+18	STH 56	677
0010	39+18–40+21	STH 56	70
0010	40+21–51+38	STH 56	749
0010	51+38–256+44	STH 56	13,744
0010	265+15–369+21	STH 56	6,833
0010	30+00, LT	CTH K	78
0010	36+70, LT	ROBERT LANE	17
0010	52+70, LT	VENNER HOLLOW RD	29
0010	131+00, LT	CURTI RD	39
0010	135+20, RT	MALIN RD	27
0010	141+00, RT	MOUND RIDGE RD	59
0010	252+50, RT	MUNDSACK RD	35
0010	253+20, LT	NEWTON RD	59
0010	271+00, LT/RT	SOUTH CREEK RD	98
		TOTALS	24,000

ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

CATEGORY	STATION	LOCATION	(465.0120) (TON)
0010	10+50, RT	DRIVEWAY	20
0010	48+40, RT	DRIVEWAY	20
0010	85+90, LT	C.E.	100
		TOTALS	140

ASPHALT CENTER LINE RUMBLE STRIPS 2-LANE RURAL

CATEGORY	STATION–STATION	LOCATION	(465.0475) (LF)
0010	16+00–23+30	STH 56	730
0010	25+30–28+00	STH 56	270
0010	32+00–34+50	STH 56	250
0010	38+50–41+50	STH 56	300
0010	43+50–47+40	STH 56	390
0010	49+40–50+60	STH 56	120
0010	54+60–84+75	STH 56	3015
0010	86+75–94+00	STH 56	725
0010	96+00–129+00	STH 56	3300
0010	137+10–138+70	STH 56	160
0010	142+80–221+20	STH 56	7840
0010	223+20–249+75	STH 56	2655
0010	255+00–258+64	STH 56	364
0010	263+05–269+75	STH 56	670
0010	273+75–275+90	STH 56	215
0010	277+90–296+60	STH 56	1870
0010	298+60–304+25	STH 56	565
0010	309+00–320+80	STH 56	1180
0010	322+80–340+35	STH 56	1755
0010	343+25–352+50	STH 56	925
0010	354+50–371+00	STH 56	1650
		TOTALS	28,949

3

CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE J

CATEGORY	STATION–STATION	LOCATION	(601.0415) (LF)
0010	29+78–39+68	STH 56, RT	990
0010	65+18–77+25	STH 56, RT	1,207
0010	75+89–82+20	STH 56, LT	631
0010	83+95–97+56	STH 56, RT	1,361
0010	116+55–120+80	STH 56, LT	425
0010	135+96–149+18	STH 56, LT	1,322
0010	156+50–161+97	STH 56, RT	547
0010	182+25–183+30	STH 56, RT	105
0010	184+37–190+92	STH 56, RT	655
0010	191+85–198+30	STH 56, LT	645
		TOTALS	7,888

SALVAGED RAIL

CATEGORY	STATION–STATION	LOCATION	(614.0920) (LF)
0010	225+25–227+25	STH 56, RT	200
		TOTALS	200

SALVAGED GUARDRAIL END TREATMENTS

CATEGORY	STATION–STATION	LOCATION	(614.0925) (EACH)
0010	225+27–227+27	STH 56, RT	2
		TOTALS	2

MGS GUARDRAIL 3

CATEGORY	STATION–STATION	LOCATION	(614.2300) (LF)
0010	48+75–50+32	STH 56, RT	185
0010	55+38–57+63	STH 56, RT	225
0010	108+50–112+00	STH 56, RT	350
0010	155+38–159+38	STH 56, LT	400
0010	155+68–162+18	STH 56, RT	650
0010	166+00–183+00	STH 56, RT	1700
		TOTALS	3510

MGS GUARDRAIL SHORT RADIUS

CATEGORY	STATION	LOCATION	(614.2350) (LF)
0010	48+75	STH 56, RT	20 (15' RADIUS)
		TOTALS	20

MGS GUARDRAIL 3K

CATEGORY	STATION–STATION	LOCATION	(614.2330) (LF)
0010	40+25–50+75	STH 56, LT	1,050
0010	59+13–98+00	STH 56, RT	3,887
0010	100+13–108+50	STH 56, RT	837
0010	112+00–117+63	STH 56, RT	563
0010	143+38–150+38	STH 56, RT	700
0010	184+38–206+25	STH 56, RT	2,150
0010	185+00–188+38	STH 56, LT	338
0010	225+25–227+25	STH 56, RT	200
0010	237+63–243+13	STH 56, RT	550
		TOTALS	10,275

MGS GUARDRAIL TERMINAL EAT

CATEGORY	STATION	LOCATION	(614.2610) (EACH)
0010	39+72	STH 56, LT	1
0010	51+28	STH 56, LT	1
0010	50+85	STH 56, RT	1
0010	54+85	STH 56, RT	1
0010	58+16	STH 56, RT	1
0010	58+60	STH 56, RT	1
0010	98+53	STH 56, RT	1
0010	99+60	STH 56, RT	1
0010	118+16	STH 56, RT	1
0010	142+85	STH 56, RT	1
0010	150+91	STH 56, RT	1
0010	154+85	STH 56, LT	1
0010	159+91	STH 56, LT	1
0010	155+15	STH 56, RT	1
0010	162+71	STH 56, RT	1
0010	165+47	STH 56, RT	1
0010	183+53	STH 56, RT	1
0010	183+85	STH 56, RT	1
0010	206+78	STH 56, RT	1
0010	184+47	STH 56, LT	1
0010	188+91	STH 56, LT	1
0010	224+72	STH 56, RT	1
0010	227+78	STH 56, RT	1
0010	237+10	STH 56, RT	1
0010	243+66	STH 56, RT	1
		TOTALS	25

MGS GUARDRAIL SHORT RADIUS TERMINAL

CATEGORY	STATION	LOCATION	(614.2630) (EACH)
0010	48+02	STH 56, RT	1
		TOTALS	1

FINISHING ITEMS

CATEGORY	STATION–STATION	LOCATION	(625.0105) TOPSOIL (CY)	(628.2004) EROSION MAT CLASS 1, TYPE B (SY)	(628.2008) EROSION MAT URBAN CLASS 1, TYPE B (SY)	(628.7504) TEMPORARY DITCH CHECKS (LF)	(629.0210) FERTILIZER TYPE B (CWT)	(630.0120) SEEDING MIXTURE NO. 20 (LB)	(630.0140) SEEDING MIXTURE NO. 40 (LB)	(630.0200) SEEDING TEMPORARY (LB)
0010	–	CURB AREAS	1500	3900	500	–	3.0	100	12	120
0010	–	UNDISTRIBUTED	–	500	500	500	1.0	20	8	20
		TOTALS	1500	4400	1000	500	4.0	120	20	140

WATER

CATEGORY	STATION	LOCATION	(624.0100) (MGAL)	REMARKS
0010	–	PROJECT	92	COMPACTION/DUST CONTROL
		TOTALS	92	

SILT FENCE & SILT FENCE MAINTENANCE

CATEGORY	STATION	LOCATION	(628.1504) SILT FENCE (LF)	(628.1520) SILT FENCE MAINTENANCE (LF)
0010	–	UNDISTRIBUTED	500	1000
		TOTALS	500	1000

MOBILIZATIONS EROSION CONTROL

CATEGORY	STATION	LOCATION	(628.1905) MOBILIZATION EROSION CONTROL (EACH)	(628.1910) MOBILIZATION EMERGENCY EROSION CONTROL (EACH)
0010	–	UNDISTRIBUTED	4	2
		TOTALS	4	2

TRAFFIC CONTROL

CATEGORY	STATION–STATION	LOCATION	DAYS REQ'D.	DRUMS	(643.0300) DRUMS (DAY)	SIGNS	(643.0900) SIGNS (DAY)	PCMS	(643.1050) PCMS (DAY)
0010	6+04–369+21	BEAM GUARD AREAS	90	280	25,200	–	–	–	–
0010	6+04–369+21	GENERAL PROJECT AREAS	90	30	2,700	27	2,430	–	–
0010	6+50	STH 56	14	–	–	–	–	1	7
0010	369+50	STH 56	14	–	–	–	–	1	7
		TOTALS		310	27,900	27	2,430	2	14

MARKING LINE EPOXY 8-INCH

CATEGORY	STATION–STATION	LOCATION	(646.3020) (LF)
0010	86+43–87+49	STH 56, LT	106
		TOTALS	106

MARKING LINE

CATEGORY	STATION	LOCATION	(646.4505) MARKING LINE SAME DAY PAINT 4–INCH (LF)	(646.4520) MARKING LINE SAME DAY EPOXY 4–INCH (LF)
0010	6+40–256+44	CL	34,980	34,980
0010	265+15–359+71	CL	12,998	12,998
		TOTALS	47,978	47,978

MARKING STOP LINE EPOXY 18-INCH

CATEGORY	STATION	LOCATION	(646.6120) (LF)
0010	6+40	STH 56, LT	24
		TOTALS	24

MARKING CORRUGATED MEDIAN EPOXY

CATEGORY	STATION–STATION	LOCATION	(646.8020) (SF)
0010	6+40–8+02	BOP, STH 56	408
		TOTALS	408

LOCATING NO-PASSING ZONES

CATEGORY	STATION–STATION	LOCATION	(648.0100) (MI)
0010	6+40–369+71	STH 56	6.88
		TOTALS	6.88

CONSTRUCTION STAKING

CATEGORY	STATION–STATION	LOCATION	(650.5500) CONSTRUCTION STAKING C&G (LF)	(650.8000) RESURFACING REFERENCE (LF)	(650.9910) SUPPLEMENTAL CONTROL (LS)
0010	6+40–369+71	STH 56	–	36,331	1
0010	29+78–39+68	STH 56, RT	990		
0010	65+18–77+25	STH 56, RT	1,207		
0010	75+89–82+20	STH 56, LT	631		
0010	83+95–97+56	STH 56, RT	1,361		
0010	116+55–120+80	STH 56, LT	425		
0010	135+96–149+18	STH 56, LT	1,322		
0010	156+50–161+97	STH 56, RT	547		
0010	182+25–183+30	STH 56, RT	105		
0010	184+37–190+92	STH 56, RT	655		
0010	191+85–198+30	STH 56, LT	645		
		TOTALS	7,888	36,331	1

SAWING ASPHALT

CATEGORY	STATION	LOCATION	(690.0150) (LF)
0010	6+40	STH 56, BOP	65
0010	10+50, RT	DRIVEWAY	33
0010	30+00, LT	CTH K	64
0010	48+40, RT	DRIVEWAY	34
0010	52+60, LT	VENNER HOLLOW RD	30
0010	85+90, LT	C.E.	58
0010	131+00, LT	CURTI RD	32
0010	135+20, RT	MALIN RD	32
0010	140+90, RT	MOUND RIDGE RD	53
0010	253+00, LT	NEWTON RD	71
0010	252+60, RT	MUNDSACK RD	40
0010	256+44	W. BRIDGE	30
0010	265+15	E. BRIDGE	30
0010	271+75, LT	SOUTH CREEK RD	36
0010	271+75, RT	SOUTH CREEK RD	36
0010	369+21	STH 56, EOP	26
		TOTALS	670

3

PAVEMENT MARKING

CATEGORY	STATION–STATION	LOCATION	(646.1020) MARKING LINE EPOXY 4–INCH (LF)	REMARKS
0010	6+03–38+50	CL	6,634	DOUBLE SOLID CENTERLINE
0010	6+03–134+75	RT	12,884	SOLID EDGE LINE
0010	6+03–29+62	LT	2,378	SOLID EDGE LINE
0010	30+15–36+16	LT	599	SOLID EDGE LINE
0010	37+00–84+50	LT	4,750	SOLID EDGE LINE
0010	38+50–46+50	CL	988	DASHED, SOLID CENTERLINE
0010	46+50–48+00	CL	25	DASHED CENTERLINE
0010	48+00–55+00	CL	887	DASHED, SOLID CENTERLINE
0010	55+00–63+40	CL	1,680	DOUBLE SOLID CENTERLINE
0010	63+40–71+40	CL	988	DASHED, SOLID CENTERLINE
0010	71+40–72+70	CL	37	DASHED CENTERLINE
0010	72+70–82+33	CL	1,188	DASHED, SOLID CENTERLINE
0010	82+33–97+65	CL	3,064	DOUBLE SOLID CENTERLINE
0010	86+30–130+42	LT	4,411	SOLID EDGE LINE
0010	97+65–105+50	CL	973	DASHED, SOLID CENTERLINE
0010	105+50–109+25	CL	100	DASHED CENTERLINE
0010	109+25–117+55	CL	1,030	DASHED, SOLID CENTERLINE
0010	117+55–160+30	CL	8,550	DOUBLE SOLID CENTERLINE
0010	131+21–252+31	LT	12,123	SOLID EDGE LINE
0010	135+50–140+00	RT	450	SOLID EDGE LINE
0010	140+00–141+30	RT	55	DASHED EDGE LINE
0010	141+30–252+16	RT	11,086	SOLID EDGE LINE
0010	160+30–166+50	CL	782	DASHED, SOLID CENTERLINE
0010	166+50–167+30	CL	160	DOUBLE SOLID CENTERLINE
0010	167+30–174+25	CL	870	DASHED, SOLID CENTERLINE
0010	174+25–196+79	CL	4,508	DOUBLE SOLID CENTERLINE
0010	196+79–205+25	CL	1,059	DASHED, SOLID CENTERLINE
0010	205+25–269+45	CL	1,600	DASHED CENTERLINE
0010	253+06–271+35	RT	1,833	SOLID EDGE LINE
0010	253+47–271+59	LT	1,814	SOLID EDGE LINE
0010	269+45–277+35	CL	990	DASHED, SOLID CENTERLINE
0010	272+17–372+23	LT	10,006	SOLID EDGE LINE
0010	272+39–372+23	RT	9,988	SOLID EDGE LINE
0010	277+35–282+36	CL	1,002	DOUBLE SOLID CENTERLINE
0010	282+36–291+06	CL	1,095	DASHED, SOLID CENTERLINE
0010	291+06–296+33	CL	125	DASHED CENTERLINE
0010	296+33–304+29	CL	996	DASHED, SOLID CENTERLINE
0010	304+29–312+72	CL	1,686	DOUBLE SOLID CENTERLINE
0010	312+72–320+67	CL	995	DASHED, SOLID CENTERLINE
0010	320+67–333+91	CL	338	DASHED CENTERLINE
		TOTALS	114,727	

NOTE: EXACT LOCATION OF DOUBLE YELLOW CENTER LINE SHALL BE DETERMINED AFTER COMPLETING BID ITEM LOCATION NO–PASSING ZONES

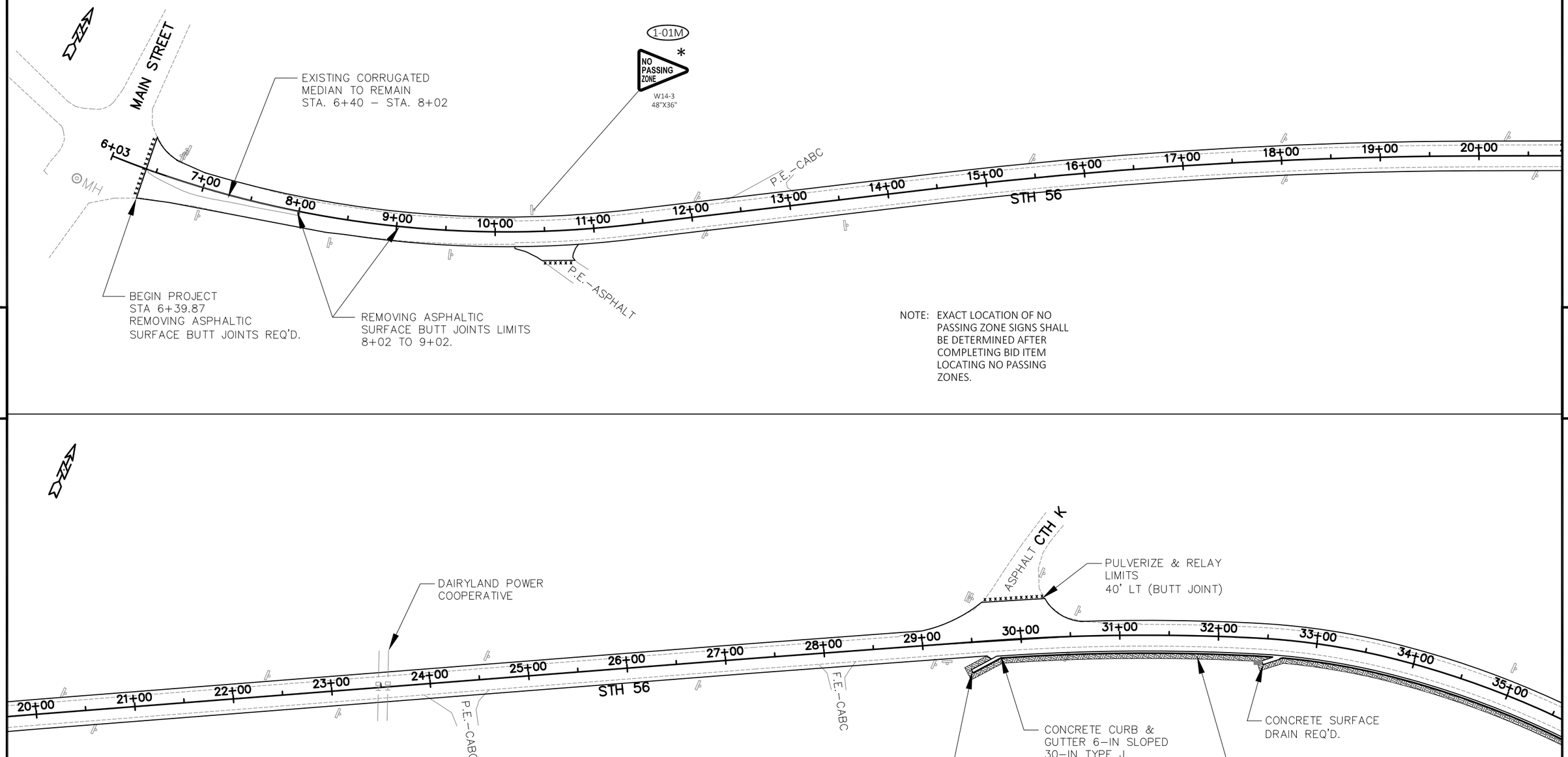
PAVEMENT MARKING

CATEGORY	STATION–STATION	LOCATION	(646.1020) MARKING LINE EPOXY 4–INCH (LF)	REMARKS
0010	333+91–343+26	CL	1,160	DASHED, SOLID CENTERLINE
0010	343+26–348+27	CL	1,002	DOUBLE SOLID CENTERLINE
0010	348+27–355+35	CL	883	DASHED, SOLID CENTERLINE
0010	355+35–356+06	CL	25	DASHED CENTERLINE
0010	356+06–364+94	CL	1,100	DASHED, SOLID CENTERLINE
0010	364+94–372+23	CL	1,458	DOUBLE SOLID CENTERLINE
		TOTALS	5,628	
		PROJECT TOTALS	120,355	

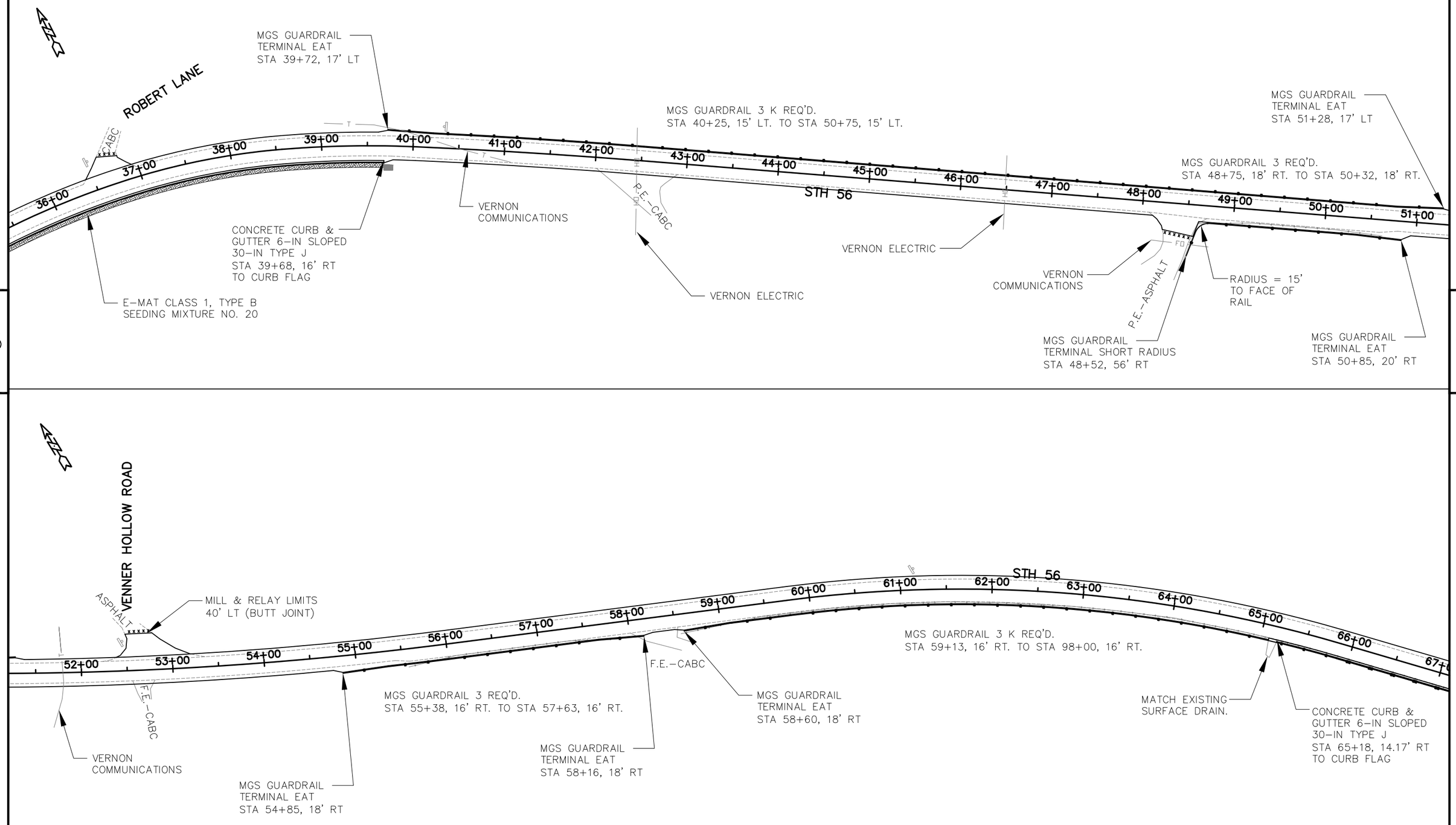
NOTE: EXACT LOCATION OF DOUBLE YELLOW CENTER LINE SHALL BE DETERMINED AFTER COMPLETING BID ITEM LOCATION NO–PASSING ZONES

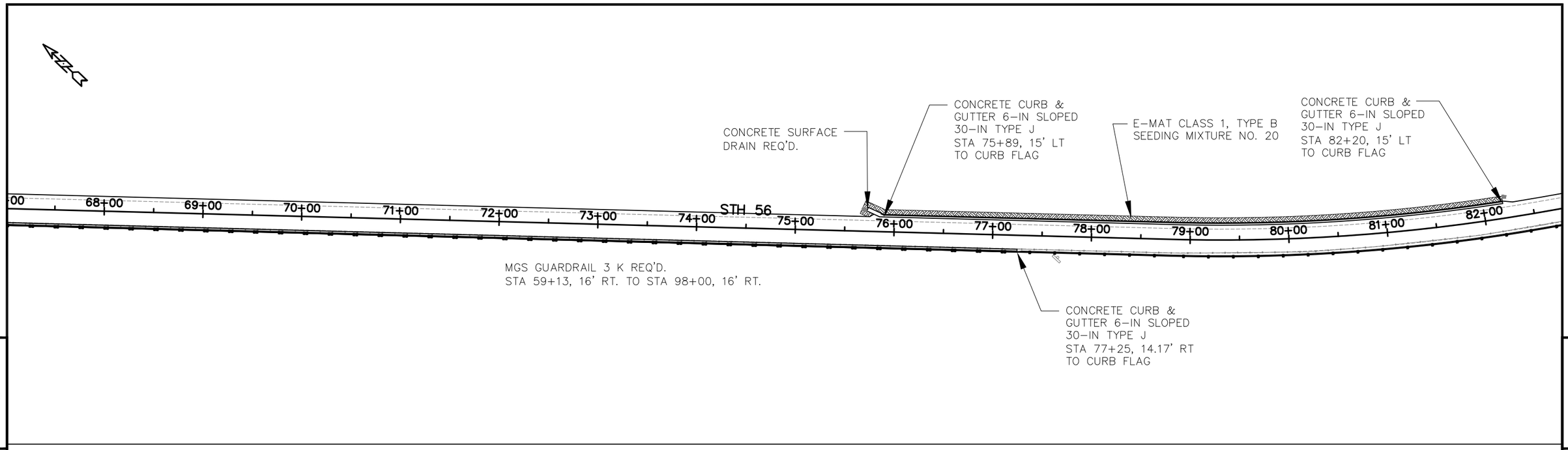
PERMANENT SIGNING

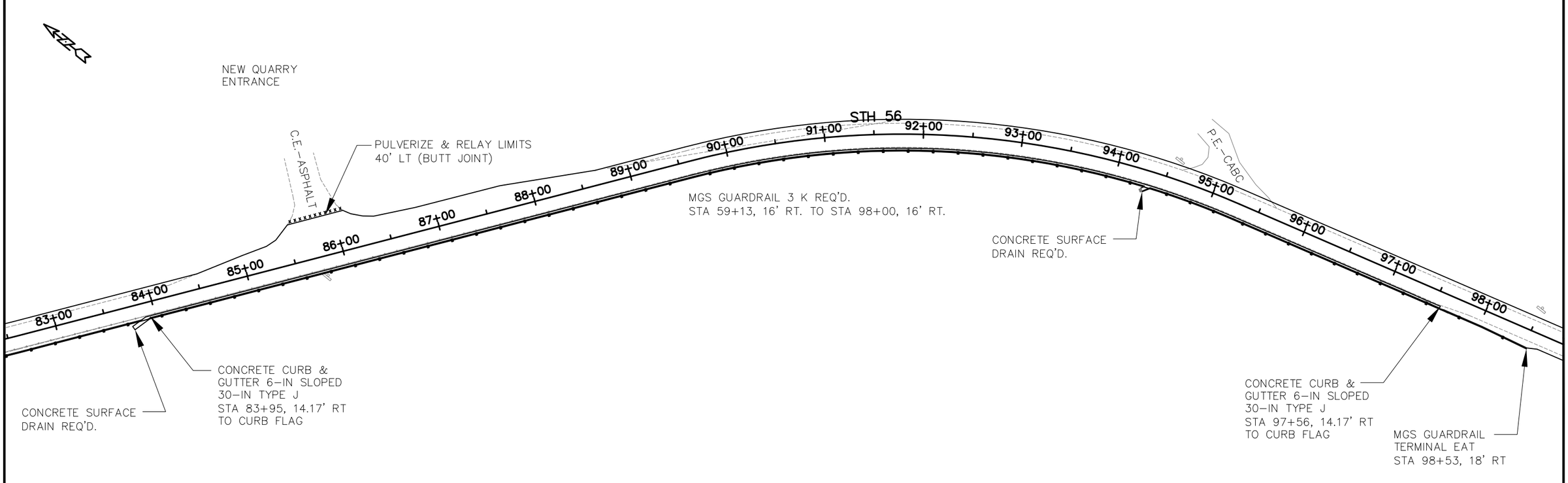
CATEGORY	APPROX. STATION	LOCATION	SIGN NO.	DESCRIPTION	SIGN CODE	(638.2102) MOVING SIGNS TYPE II (EACH)	REMARKS
0010	10+40	LT	1–01M	NO PASSING ZONE PENNANT	W14–3	1	–
0010	208+50	LT	7–01M	NO PASSING ZONE PENNANT	W14–3	1	–
0010	208+90	RT	7–02M	NO PASSING ZONE PENNANT	W14–3	1	–
0010	262+70	RT	9–01M	NO PASSING ZONE PENNANT	W14–3	1	–
0010	293+00	LT	10–01M	NO PASSING ZONE PENNANT	W14–3	1	–
0010	296+00	RT	10–02M	NO PASSING ZONE PENNANT	W14–3	1	–
					TOTAL	6	

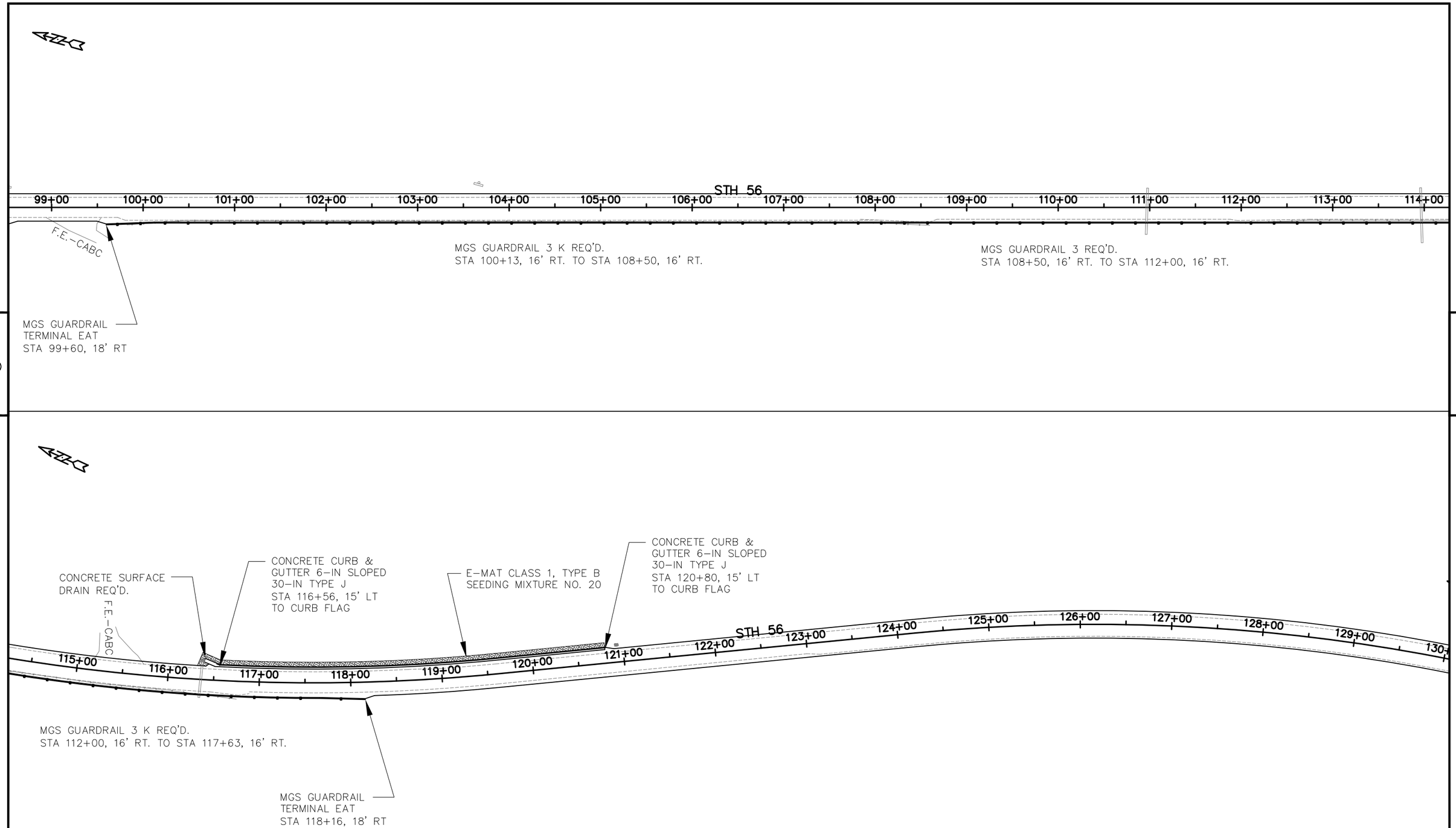


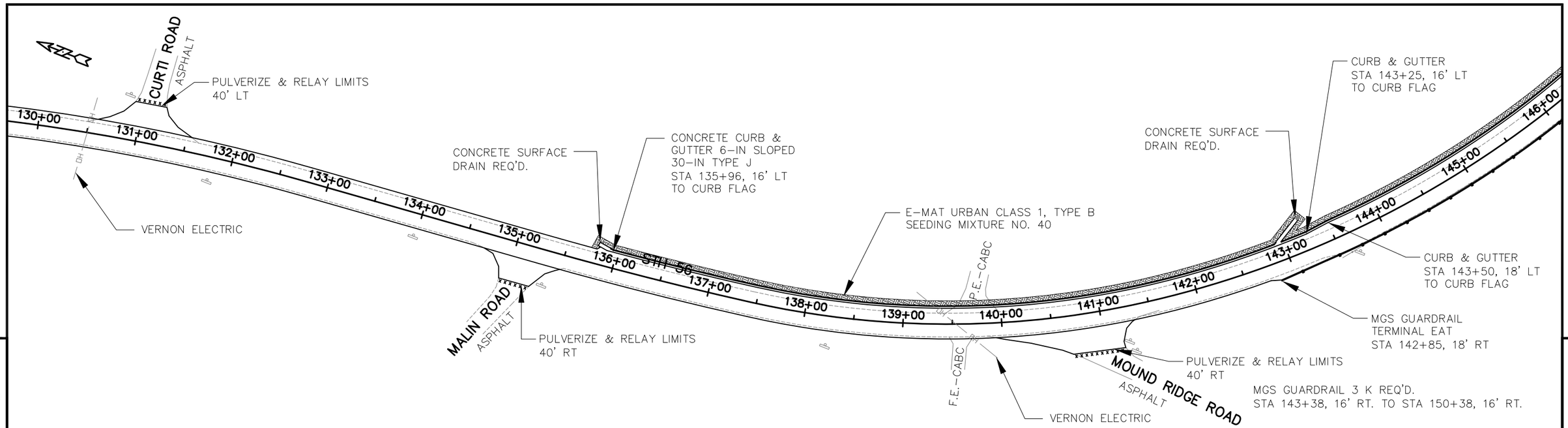
PROJECT NO: 5730–07–60	HWY: STH 56	COUNTY: VERNON	PLAN SHEETS	SHEET 42	E

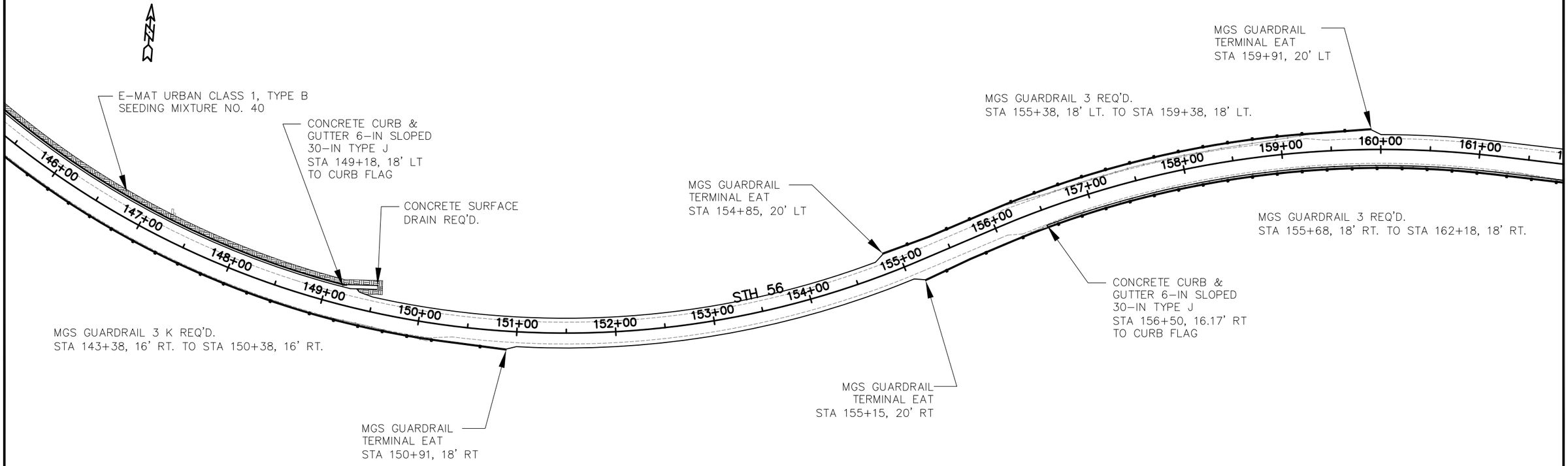

ROBERT LANE
MGS GUARDRAIL
TERMINAL EAT
STA 39+72, 17' LT
MGS GUARDRAIL 3 K REQ'D.
STA 40+25, 15' LT. TO STA 50+75, 15' LT.
MGS GUARDRAIL
TERMINAL EAT
STA 51+28, 17' LT
MGS GUARDRAIL 3 REQ'D.
STA 48+75, 18' RT. TO STA 50+32, 18' RT.
CABC
36+00
37+00
38+00
39+00
40+00
41+00
42+00
43+00
44+00
45+00
46+00
47+00
48+00
49+00
50+00
51+00
STH 56
CONCRETE CURB &
GUTTER 6-IN SLOPED
30-IN TYPE J
STA 39+68, 16' RT
TO CURB FLAG
VERNON
COMMUNICATIONS
P.E.-CABC
VERNON ELECTRIC
VERNON ELECTRIC
VERNON
COMMUNICATIONS
P.E.-ASPHALT
RADIUS = 15'
TO FACE OF
RAIL
E-MAT CLASS 1, TYPE B
SEEDING MIXTURE NO. 20
MGS GUARDRAIL
TERMINAL SHORT RADIUS
STA 48+52, 56' RT
MGS GUARDRAIL
TERMINAL EAT
STA 50+85, 20' RT
VENNER HOLLOW ROAD
ASPHALT
MILL & RELAY LIMITS
40' LT (BUTT JOINT)
52+00
53+00
54+00
55+00
56+00
57+00
58+00
59+00
60+00
61+00
62+00
63+00
64+00
65+00
66+00
67+
STH 56
F.E.-CABC
VERNON
COMMUNICATIONS
MGS GUARDRAIL
TERMINAL EAT
STA 54+85, 18' RT
MGS GUARDRAIL 3 REQ'D.
STA 55+38, 16' RT. TO STA 57+63, 16' RT.
MGS GUARDRAIL
TERMINAL EAT
STA 58+16, 18' RT
F.E.-CABC
MGS GUARDRAIL
TERMINAL EAT
STA 58+60, 18' RT
MGS GUARDRAIL 3 K REQ'D.
STA 59+13, 16' RT. TO STA 98+00, 16' RT.
MATCH EXISTING
SURFACE DRAIN.
CONCRETE CURB &
GUTTER 6-IN SLOPED
30-IN TYPE J
STA 65+18, 14.17' RT
TO CURB FLAG


CONCRETE SURFACE
DRAIN REQ'D.
CONCRETE CURB &
GUTTER 6–IN SLOPED
30–IN TYPE J
STA 75+89, 15' LT
TO CURB FLAG
E–MAT CLASS 1, TYPE B
SEEDING MIXTURE NO. 20
CONCRETE CURB &
GUTTER 6–IN SLOPED
30–IN TYPE J
STA 82+20, 15' LT
TO CURB FLAG
68+00
69+00
70+00
71+00
72+00
73+00
74+00
STH 56
75+00
76+00
77+00
78+00
79+00
80+00
81+00
82+00
MGS GUARDRAIL 3 K REQ'D.
STA 59+13, 16' RT. TO STA 98+00, 16' RT.
CONCRETE CURB &
GUTTER 6–IN SLOPED
30–IN TYPE J
STA 77+25, 14.17' RT
TO CURB FLAG

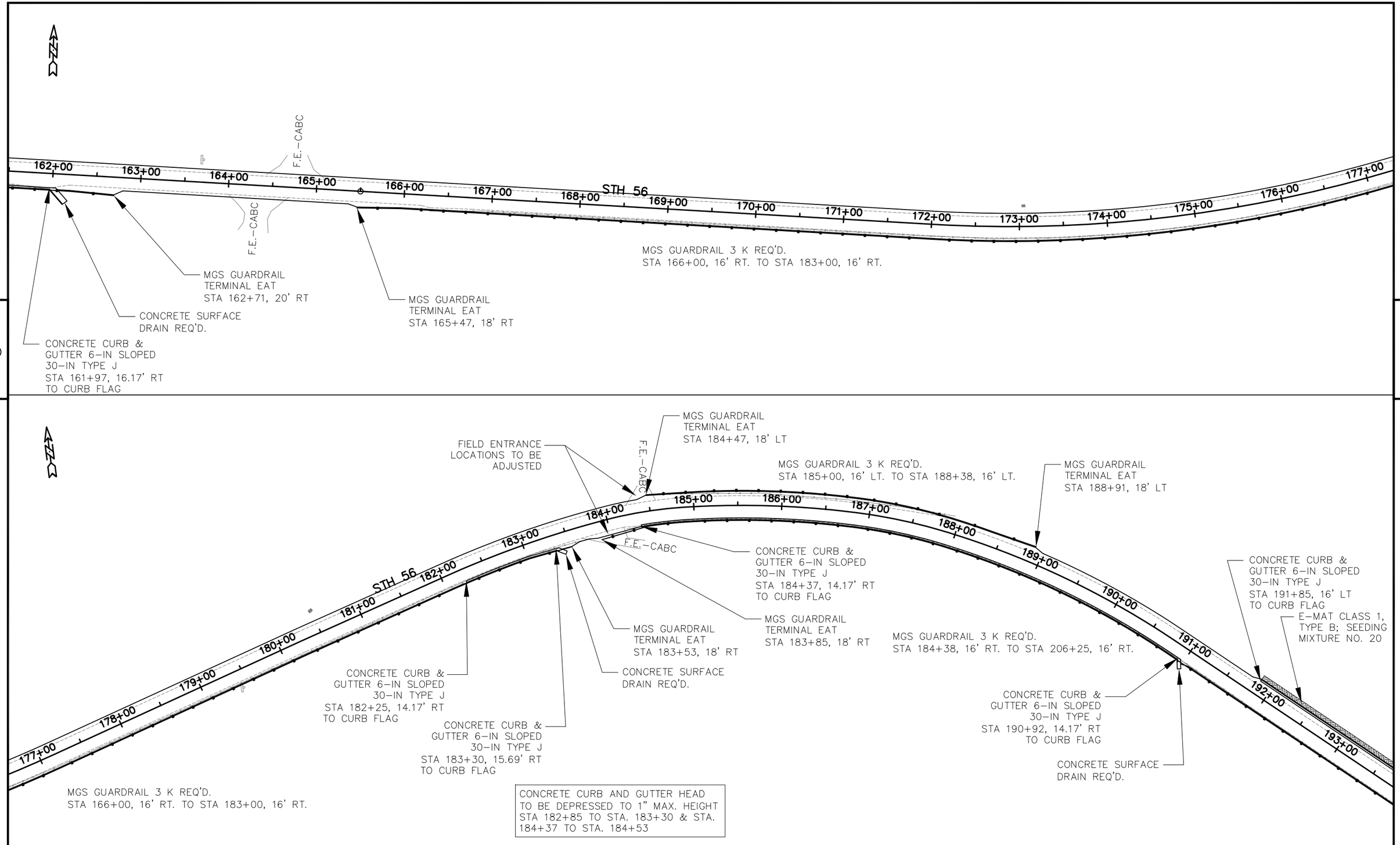

NEW QUARRY
ENTRANCE
C.E.–ASPHALT
PULVERIZE & RELAY LIMITS
40' LT (BUTT JOINT)
83+00
84+00
85+00
86+00
87+00
88+00
89+00
90+00
91+00
STH 56
92+00
93+00
94+00
95+00
96+00
97+00
98+00
P.E.–CABC
MGS GUARDRAIL 3 K REQ'D.
STA 59+13, 16' RT. TO STA 98+00, 16' RT.
CONCRETE SURFACE
DRAIN REQ'D.
CONCRETE SURFACE
DRAIN REQ'D.
CONCRETE CURB &
GUTTER 6–IN SLOPED
30–IN TYPE J
STA 83+95, 14.17' RT
TO CURB FLAG
CONCRETE CURB &
GUTTER 6–IN SLOPED
30–IN TYPE J
STA 97+56, 14.17' RT
TO CURB FLAG
MGS GUARDRAIL
TERMINAL EAT
STA 98+53, 18' RT

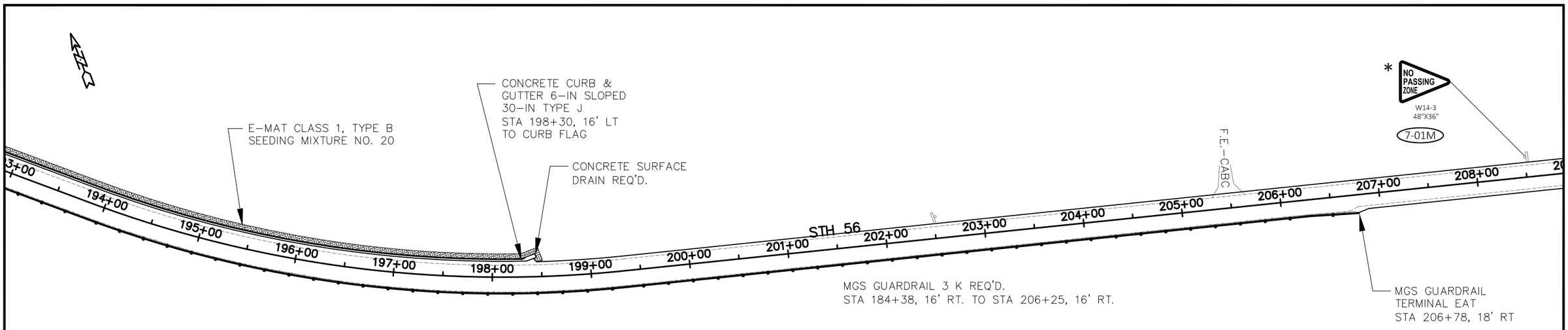

STH 56
99+00
100+00
101+00
102+00
103+00
104+00
105+00
106+00
107+00
108+00
109+00
110+00
111+00
112+00
113+00
114+00
F.E.-CABC
MGS GUARDRAIL
TERMINAL EAT
STA 99+60, 18' RT
MGS GUARDRAIL 3 K REQ'D.
STA 100+13, 16' RT. TO STA 108+50, 16' RT.
MGS GUARDRAIL 3 REQ'D.
STA 108+50, 16' RT. TO STA 112+00, 16' RT.
5
5
CONCRETE SURFACE
DRAIN REQ'D.
F.E.-CABC
CONCRETE CURB &
GUTTER 6-IN SLOPED
30-IN TYPE J
STA 116+56, 15' LT
TO CURB FLAG
E-MAT CLASS 1, TYPE B
SEEDING MIXTURE NO. 20
CONCRETE CURB &
GUTTER 6-IN SLOPED
30-IN TYPE J
STA 120+80, 15' LT
TO CURB FLAG
STH 56
115+00
116+00
117+00
118+00
119+00
120+00
121+00
122+00
123+00
124+00
125+00
126+00
127+00
128+00
129+00
MGS GUARDRAIL 3 K REQ'D.
STA 112+00, 16' RT. TO STA 117+63, 16' RT.
MGS GUARDRAIL
TERMINAL EAT
STA 118+16, 18' RT



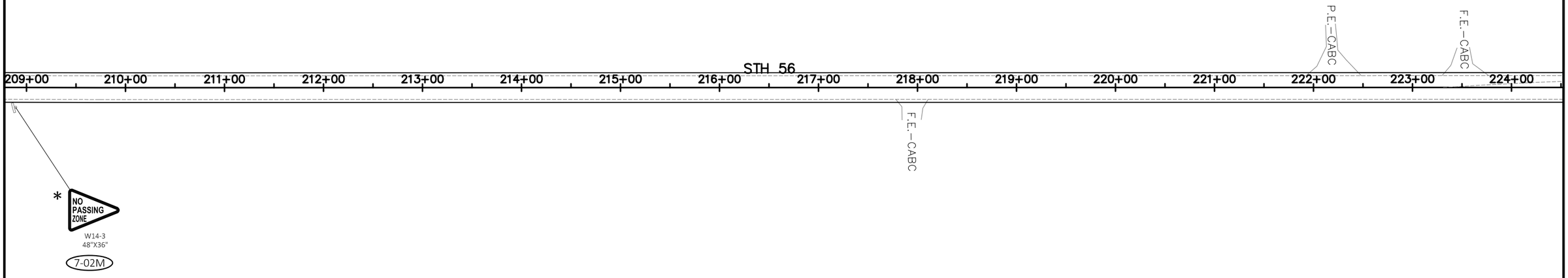


PROJECT NO: 5730-07-60	HWY: STH 56	COUNTY: VERNON	PLAN SHEETS	SHEET 46	E

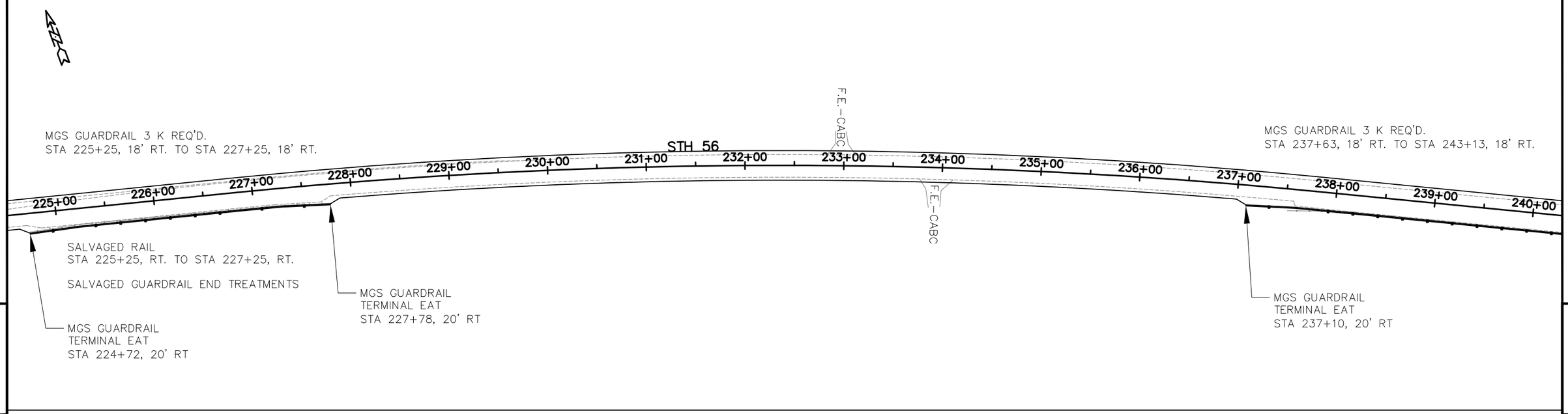

N
162+00
163+00
164+00
165+00
166+00
167+00
168+00
169+00
170+00
171+00
172+00
173+00
174+00
175+00
176+00
177+00
STH 56
F.E.–CABC
F.E.–CABC
MGS GUARDRAIL
TERMINAL EAT
STA 162+71, 20' RT
CONCRETE SURFACE
DRAIN REQ'D.
CONCRETE CURB &
GUTTER 6–IN SLOPED
30–IN TYPE J
STA 161+97, 16.17' RT
TO CURB FLAG
MGS GUARDRAIL
TERMINAL EAT
STA 165+47, 18' RT
MGS GUARDRAIL 3 K REQ'D.
STA 166+00, 16' RT. TO STA 183+00, 16' RT.
5
5
N
177+00
178+00
179+00
180+00
181+00
182+00
183+00
184+00
185+00
186+00
187+00
188+00
189+00
190+00
191+00
192+00
193+00
STH 56
FIELD ENTRANCE
LOCATIONS TO BE
ADJUSTED
F.E.–CABC
MGS GUARDRAIL
TERMINAL EAT
STA 184+47, 18' LT
MGS GUARDRAIL 3 K REQ'D.
STA 185+00, 16' LT. TO STA 188+38, 16' LT.
MGS GUARDRAIL
TERMINAL EAT
STA 188+91, 18' LT
F.E.–CABC
CONCRETE CURB &
GUTTER 6–IN SLOPED
30–IN TYPE J
STA 184+37, 14.17' RT
TO CURB FLAG
MGS GUARDRAIL
TERMINAL EAT
STA 183+85, 18' RT
MGS GUARDRAIL
TERMINAL EAT
STA 183+53, 18' RT
CONCRETE SURFACE
DRAIN REQ'D.
CONCRETE CURB &
GUTTER 6–IN SLOPED
30–IN TYPE J
STA 182+25, 14.17' RT
TO CURB FLAG
CONCRETE CURB &
GUTTER 6–IN SLOPED
30–IN TYPE J
STA 183+30, 15.69' RT
TO CURB FLAG
MGS GUARDRAIL 3 K REQ'D.
STA 184+38, 16' RT. TO STA 206+25, 16' RT.
CONCRETE CURB &
GUTTER 6–IN SLOPED
30–IN TYPE J
STA 191+85, 16' LT
TO CURB FLAG
E–MAT CLASS 1,
TYPE B; SEEDING
MIXTURE NO. 20
CONCRETE CURB &
GUTTER 6–IN SLOPED
30–IN TYPE J
STA 190+92, 14.17' RT
TO CURB FLAG
CONCRETE SURFACE
DRAIN REQ'D.
MGS GUARDRAIL 3 K REQ'D.
STA 166+00, 16' RT. TO STA 183+00, 16' RT.
CONCRETE CURB AND GUTTER HEAD
TO BE DEPRESSED TO 1" MAX. HEIGHT
STA 182+85 TO STA. 183+30 & STA.
184+37 TO STA. 184+53

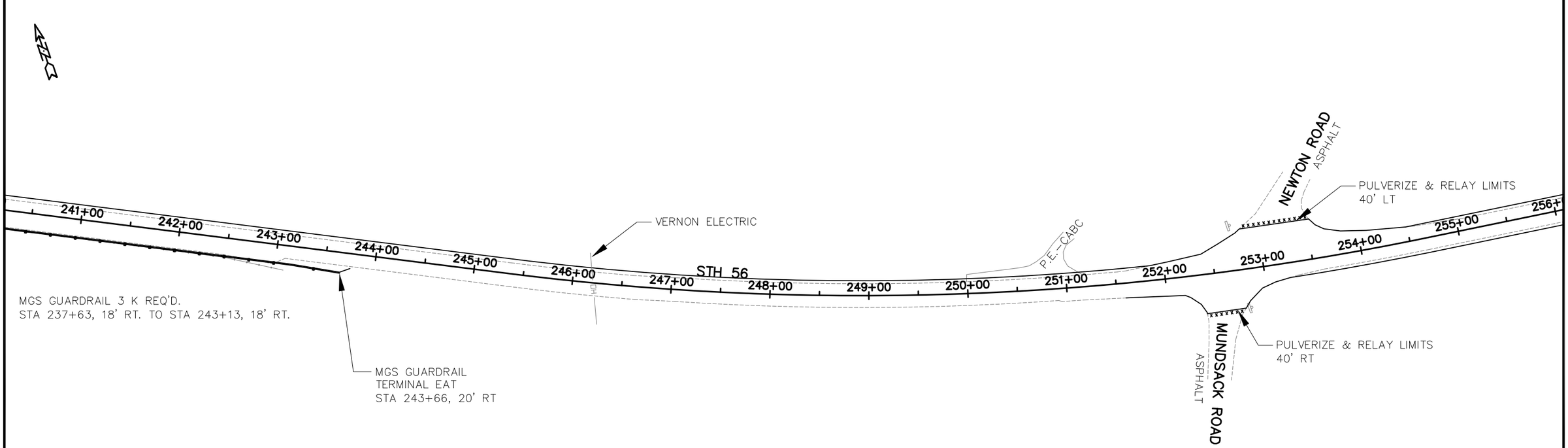


NOTE: EXACT LOCATION OF NO PASSING ZONE SIGNS SHALL BE DETERMINED AFTER COMPLETING BID ITEM LOCATING NO PASSING ZONES.

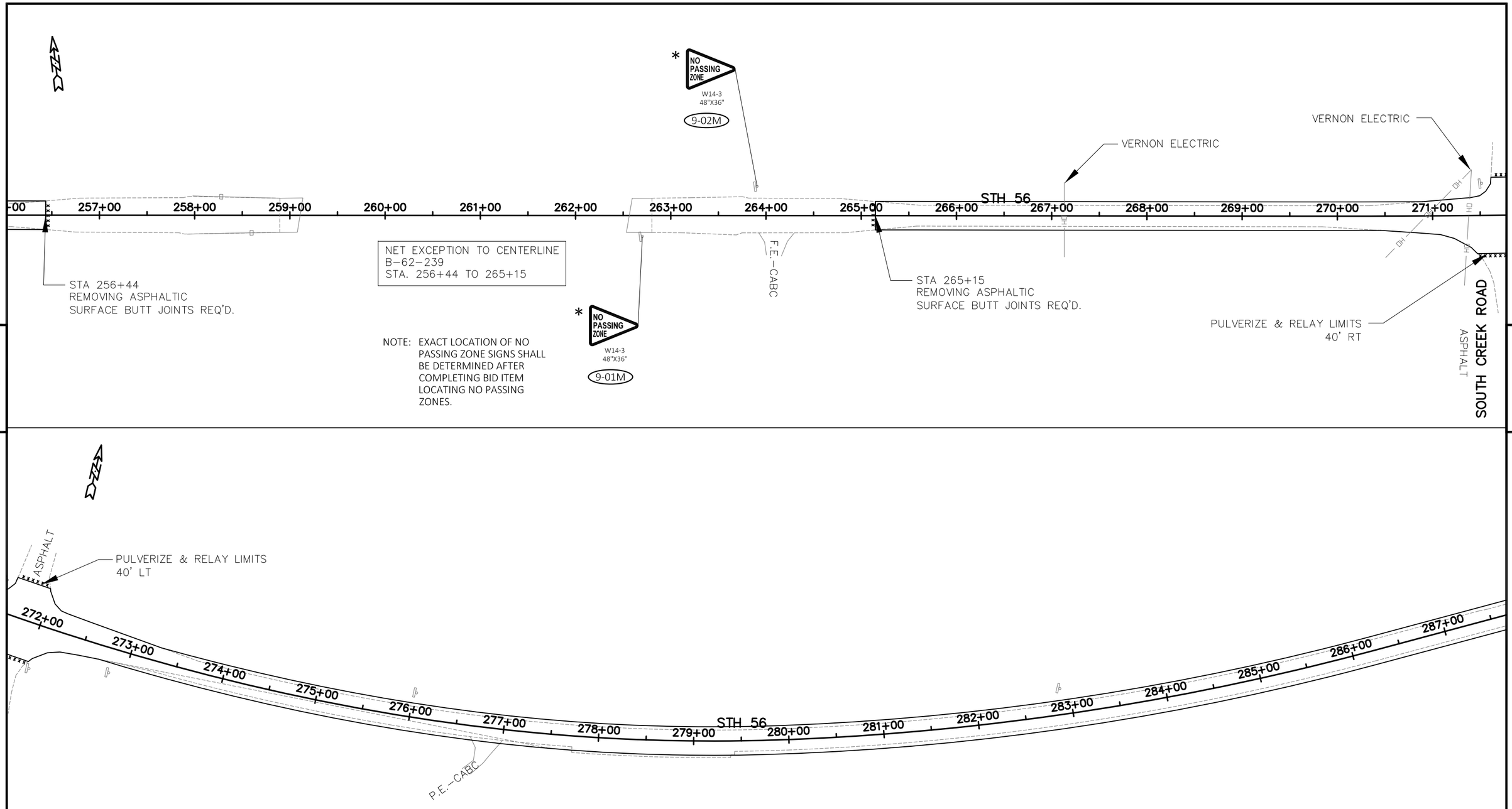


PROJECT NO: 5730-07-60	HWY: STH 56	COUNTY: VERNON	PLAN SHEETS	SHEET 48	E





PROJECT NO: 5730–07–60	HWY: STH 56	COUNTY: VERNON	PLAN SHEETS	SHEET 49	E



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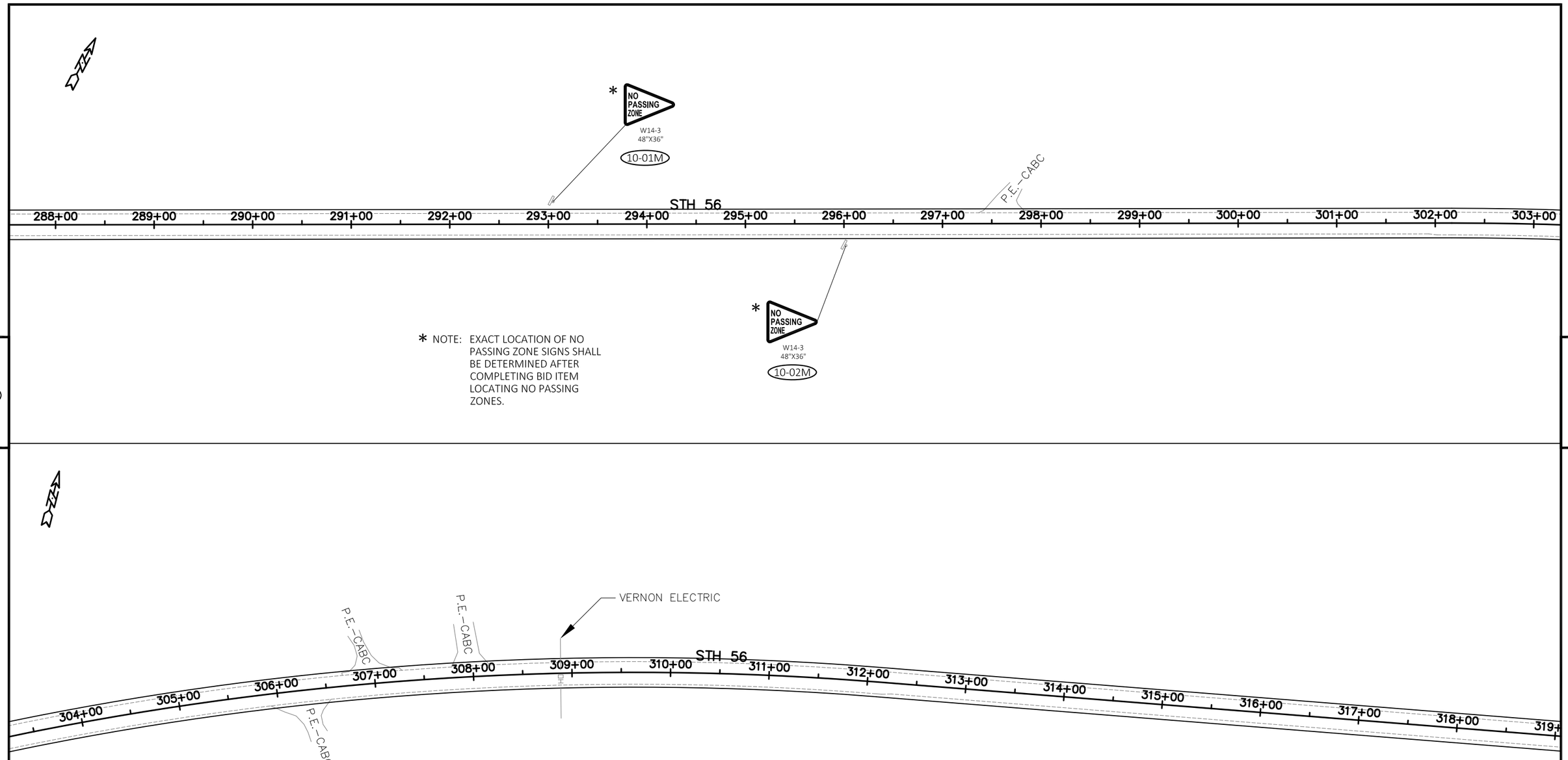
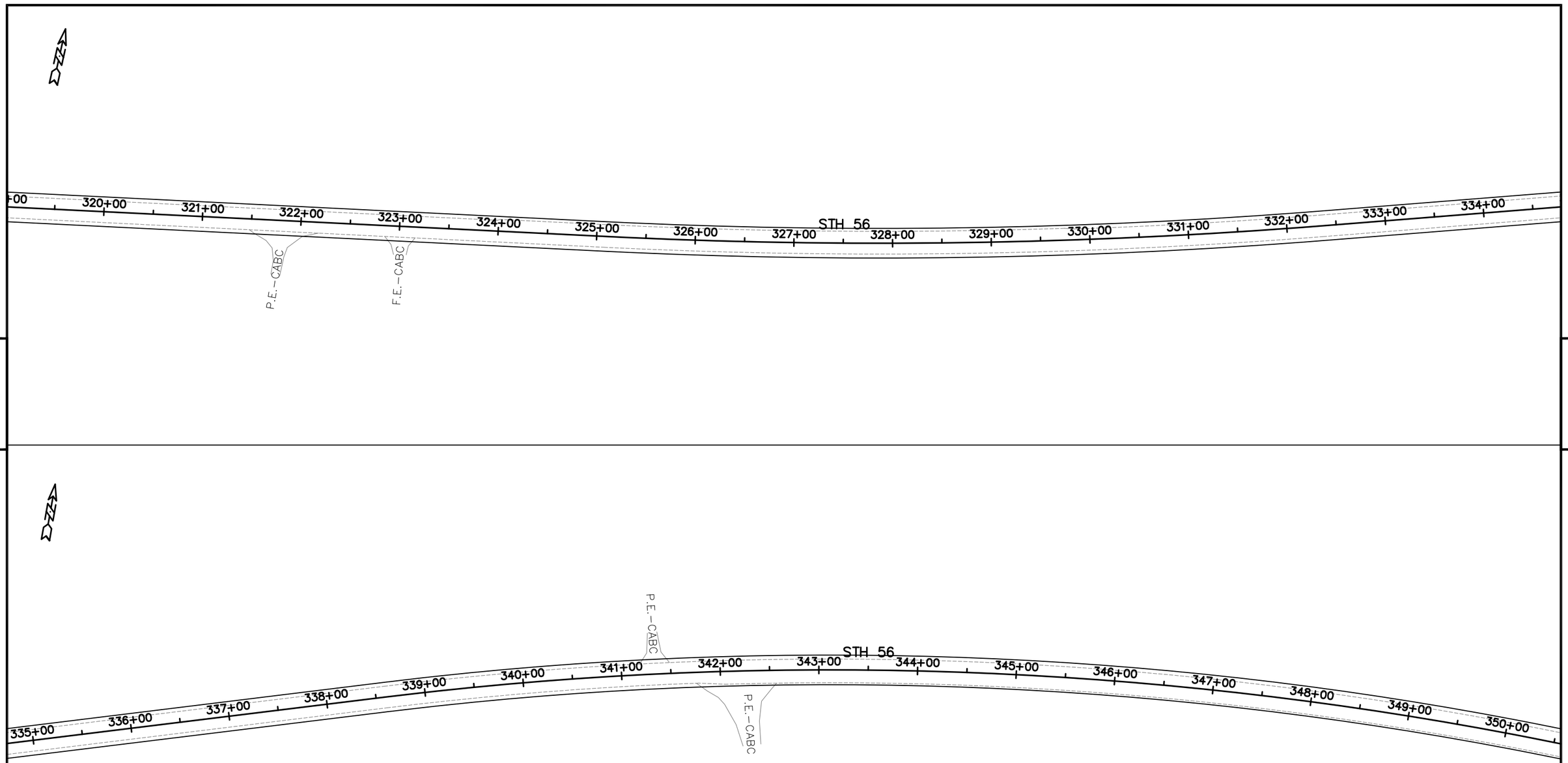


* NOTE: EXACT LOCATION OF NO PASSING ZONE SIGNS SHALL BE DETERMINED AFTER COMPLETING BID ITEM LOCATING NO PASSING ZONES.

PROJECT NO: 5730-07-60	HWY: STH 56	COUNTY: VERNON	PLAN SHEETS	SHEET 51	E



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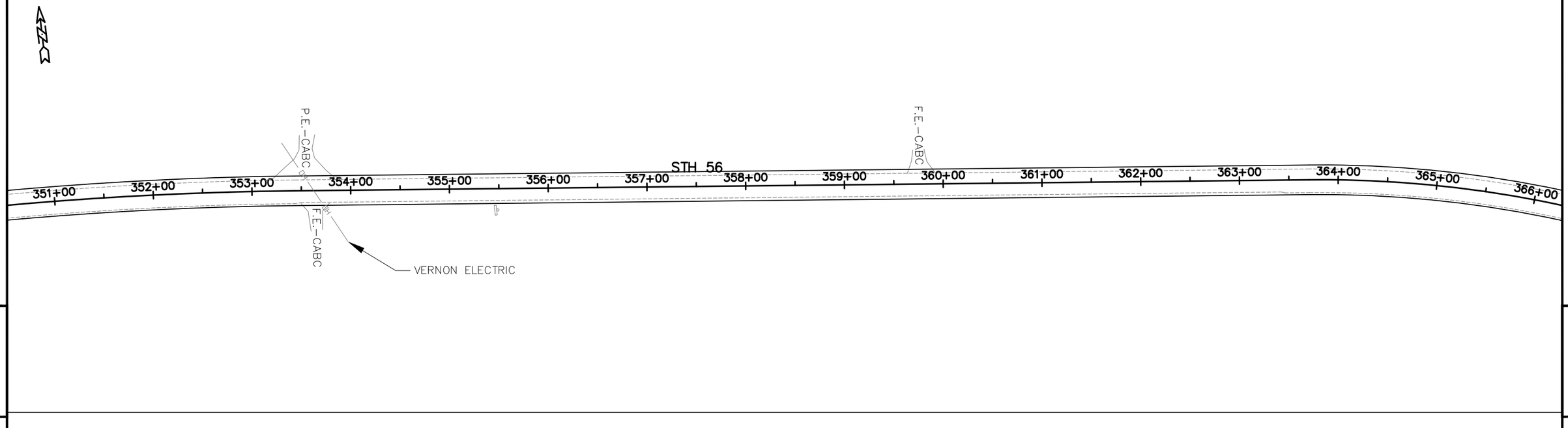

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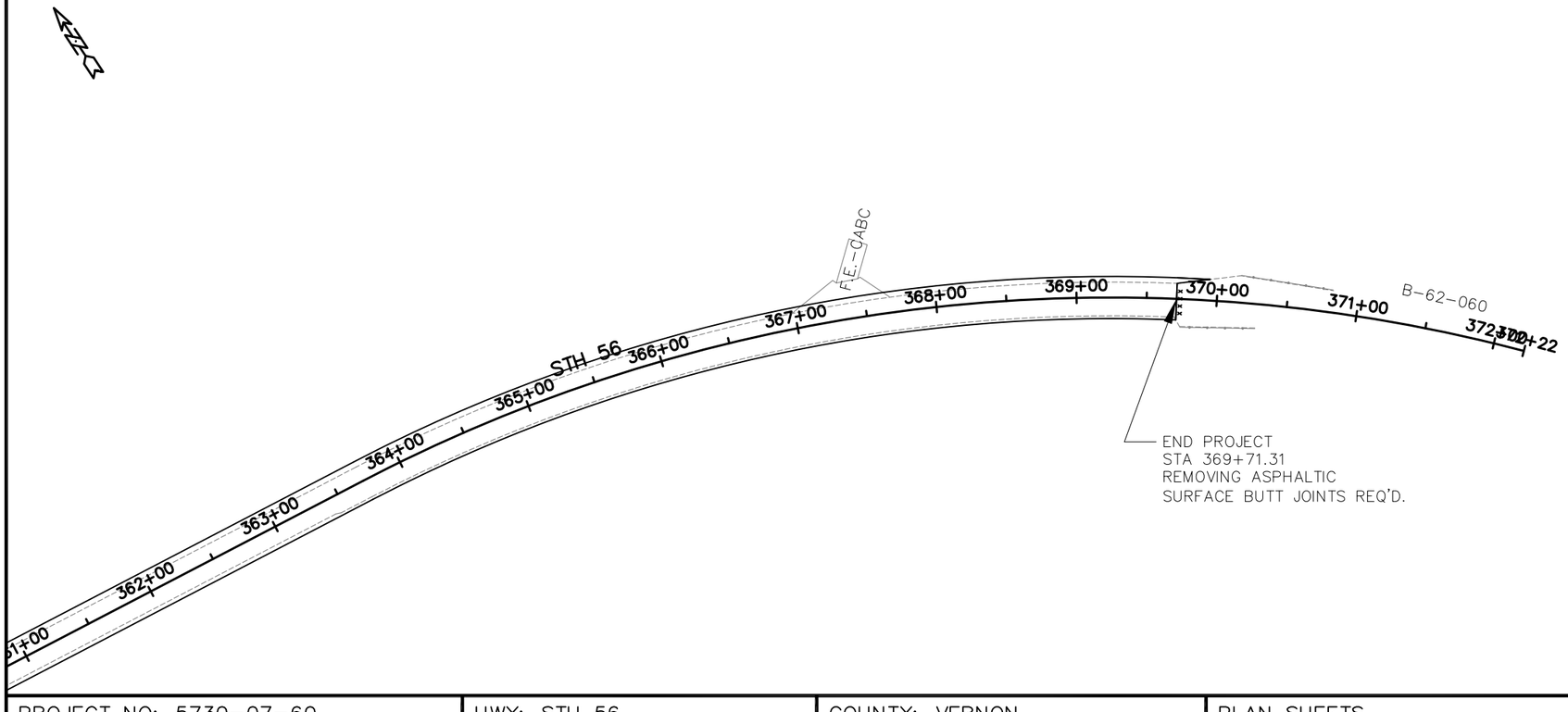
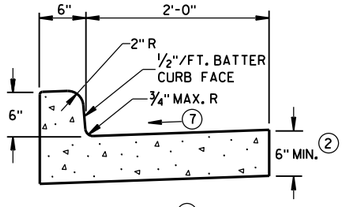


PROJECT NO: 5730–07–60	HWY: STH 56	COUNTY: VERNON	PLAN SHEETS	SHEET 53	E

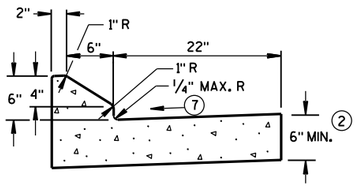
Standard Detail Drawing List

08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D02-06	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D22-01	DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
13A11-03A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-03B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
14B42-06A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06D	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)
14B53-01A	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01B	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01C	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01D	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01E	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01F	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01G	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01H	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01I	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-18A	LONGITUDINAL MARKING (MAINLINE)
15C12-06	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-05A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C35-02A	PAVEMENT MARKING (INTERSECTIONS)
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

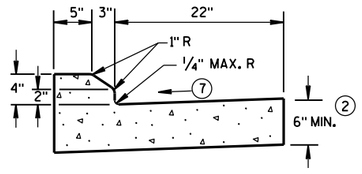
6



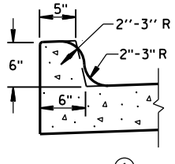
TYPES A (1) & D



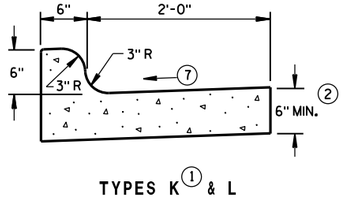
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

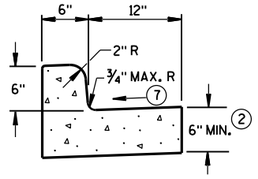


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



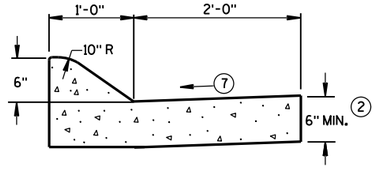
TYPES K (1) & L

CONCRETE CURB & GUTTER 30"

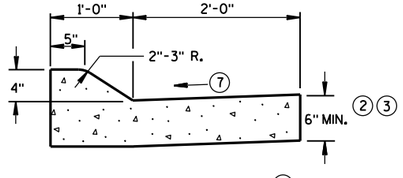


TYPES A (1) & D

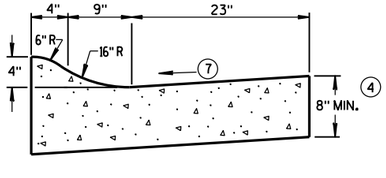
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A (1) & D

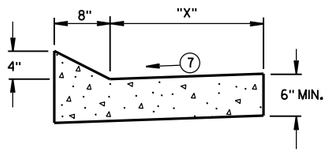


4" SLOPED CURB TYPES A (1) & D



4" SLOPED CURB TYPES R (1) & T (5)

CONCRETE CURB & GUTTER 36"



TYPES TBT & TBTT (1)

CONCRETE CURB & GUTTER

TBT & TBTT	"X"
30"	22"
36"	28"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

(4) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(5) THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

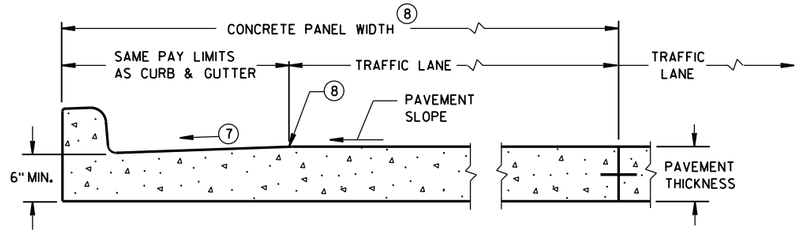
(6) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

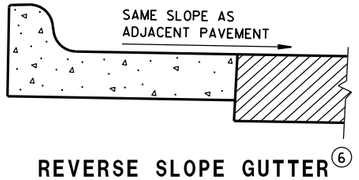
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB & GUTTER

* BIKE LANE IS NOT SHOWN.



REVERSE SLOPE GUTTER (6)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

CONCRETE CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S.D.D. 8 D 1-20a

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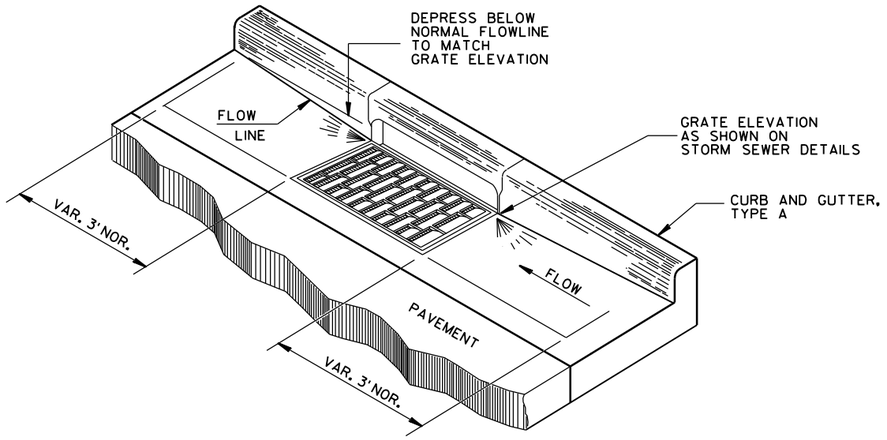


DETAIL OF CURB AND GUTTER AT INLETS

(TYPE H INLET COVER SHOWN)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

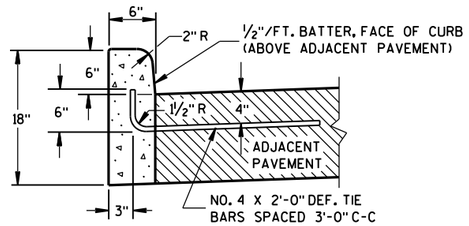
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

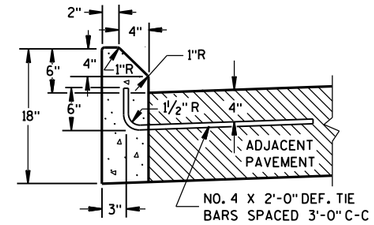
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(9) REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

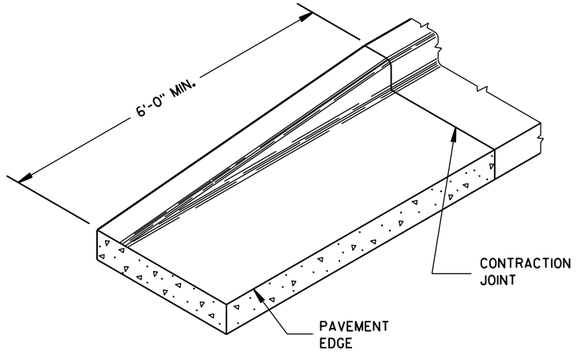


TYPES A(1) & D

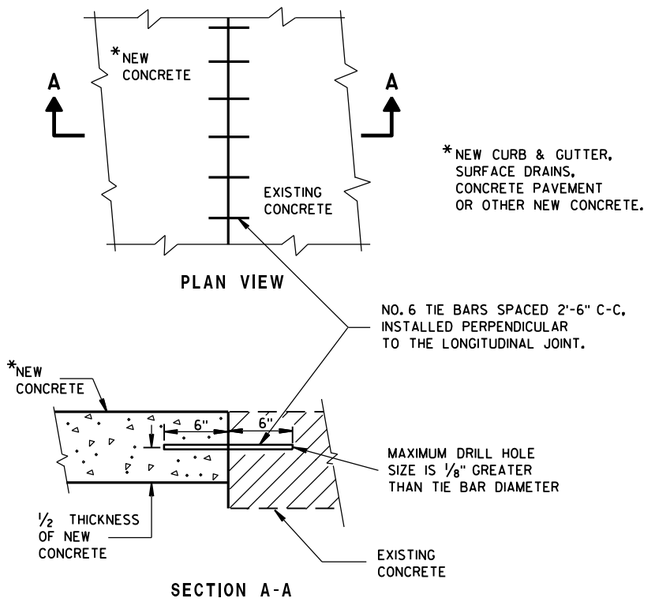


TYPES G(1) & J

CONCRETE CURB



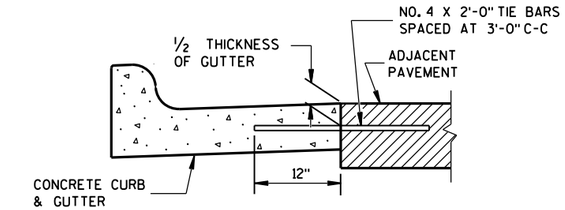
END SECTION CURB & GUTTER



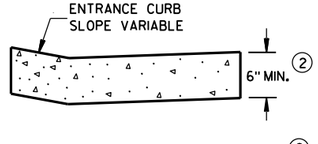
PLAN VIEW

SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (9)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2017 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVISOR
56
ENT
FHWA

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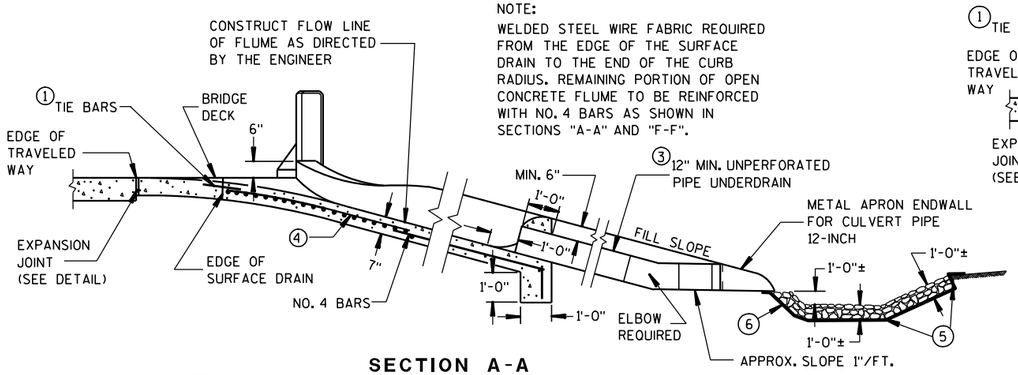
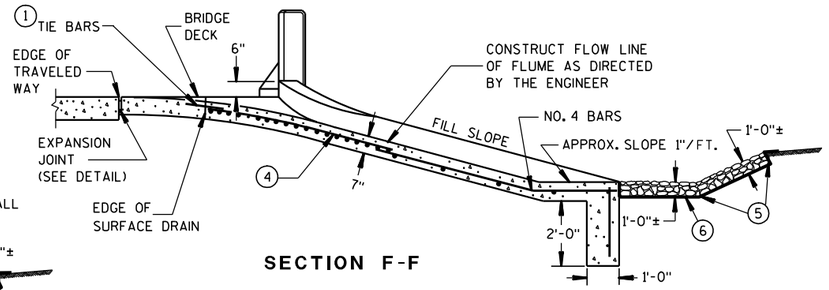
S.D.D. 8 D 1-20b



SECTION A-A



SECTION F-F

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.

ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

(1) NO. 4 X 2'-0" TIE BARS SPACED AT 3'-0" CENTERS TO BE USED ONLY WHEN ADJACENT TO P.C. CONCRETE.

(2) NO. 4 X 2'-0" TIE BARS SPACED AT 12" CENTERS TO BE PLACED BY BRIDGE CONTRACTOR, OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.

(3) PIPE UNDERDRAIN MAY BE ANY OF THE MATERIALS LISTED IN SECTION 612.2 OF THE STANDARD SPECIFICATIONS EXCEPT DRAIN TILE.

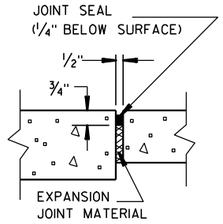
(4) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.

(5) LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.

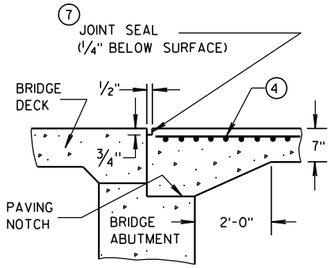
(6) GEOTEXTILE FABRIC, TYPE 'R"

(7) HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.

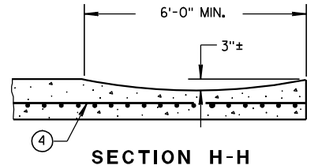
(8) THIS DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE STEEL PLATE BEAM GUARD. THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING WIDENS TO 3'-1½".



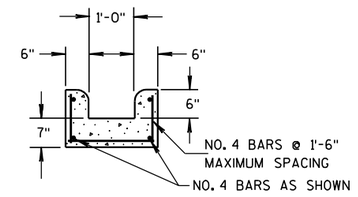
EXPANSION JOINT DETAIL



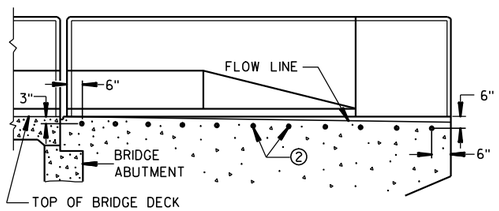
SECTION D-D



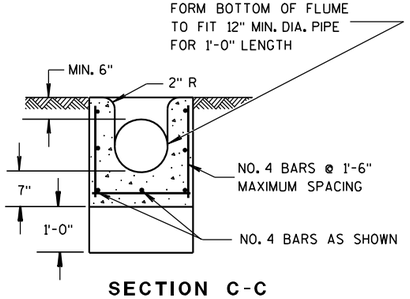
SECTION H-H



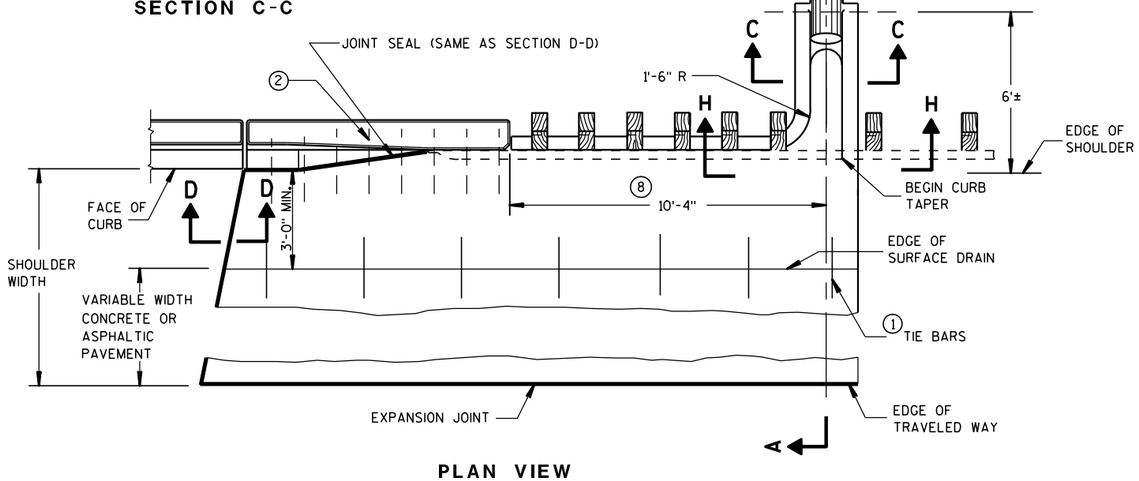
SECTION E-E



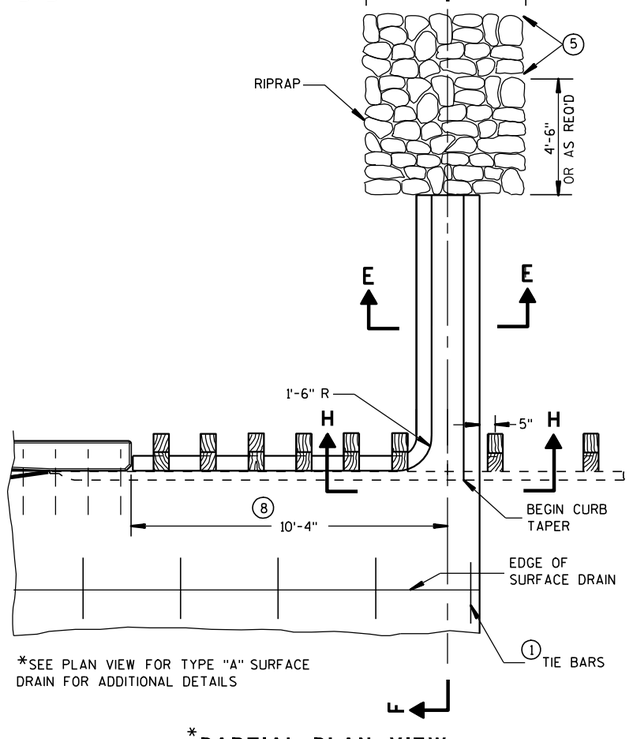
LOCATION OF TIE BARS IN WINGWALL



SECTION C-C



PLAN VIEW
SURFACE DRAIN WITH PIPE
TYPE "A"



*SEE PLAN VIEW FOR TYPE "A" SURFACE DRAIN FOR ADDITIONAL DETAILS

***PARTIAL PLAN VIEW**
SURFACE DRAIN WITHOUT PIPE
TYPE "B"

CONCRETE SURFACE DRAINS
FLUME TYPE
AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/4/08 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

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S.D.D. 8 D 2-6

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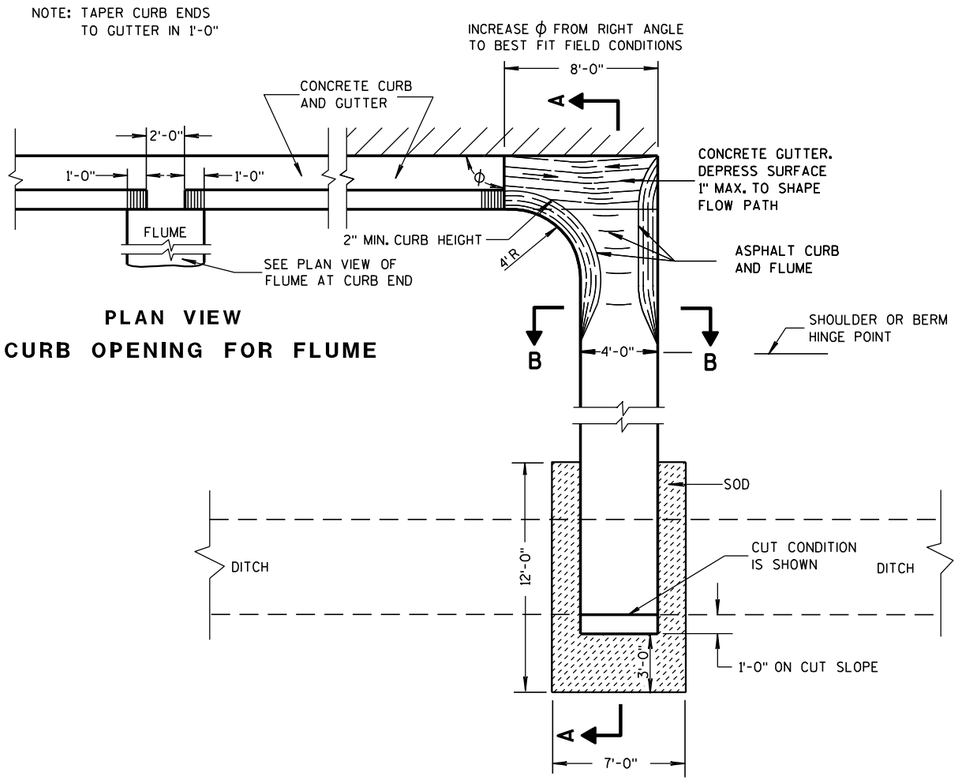
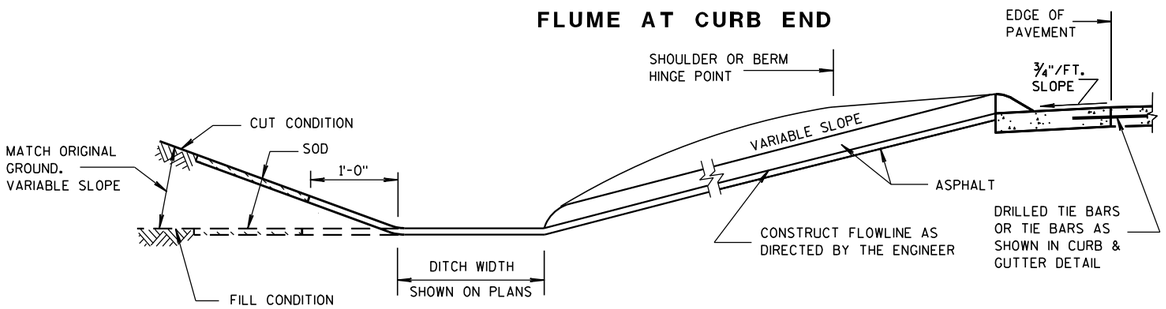
S.D.D. 8 D 2-6

ASPHALTIC FLUME

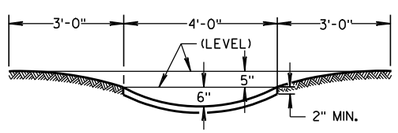


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

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.

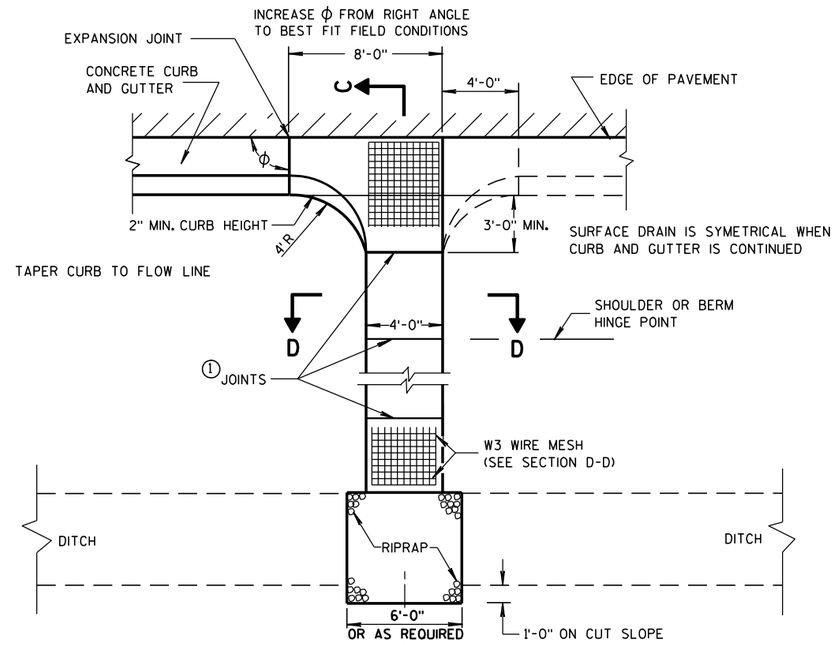
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE ⅛ TO ¼ INCH WIDE BY 1½ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

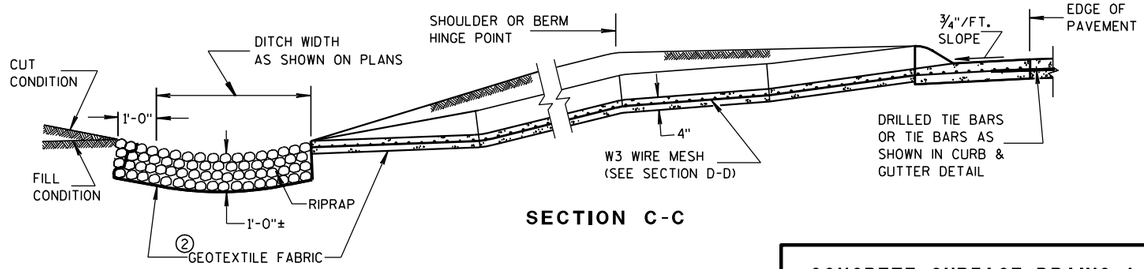
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

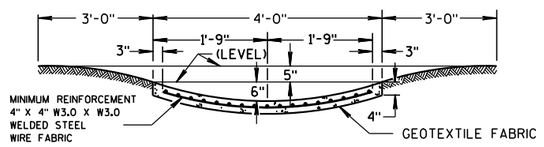
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9-4-08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
58
MENT
FHWA

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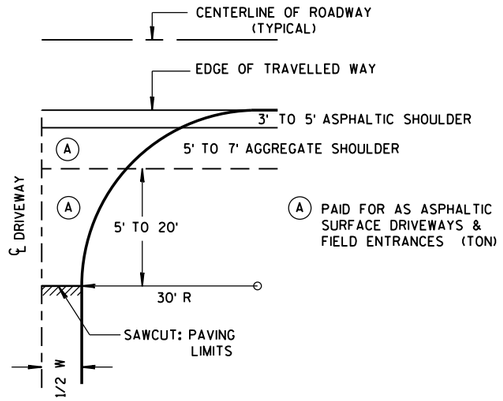
S.D.D. 8 D 4-5

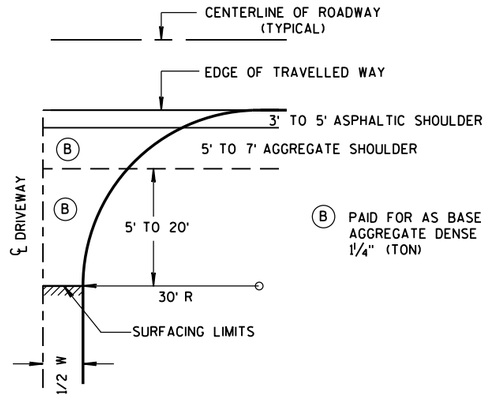
6

S.D.D. 8 D 4-5



W MIN. = 16'
W MAX. = 24'

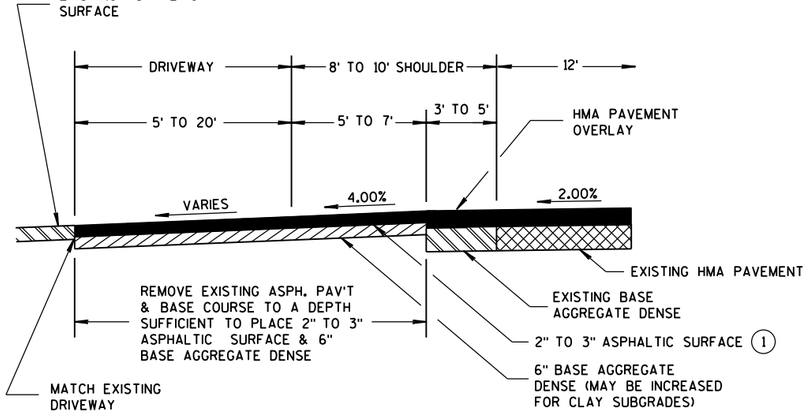
PLAN VIEW
HALF SECTION



PLAN VIEW
HALF SECTION

GENERAL NOTES

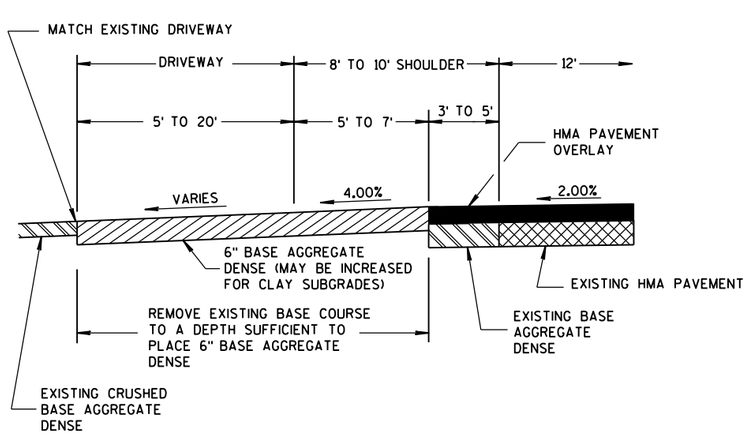
(1) DESIGN WILL DETERMINE FINAL DRIVEWAY ASPHALTIC THICKNESS BASED ON TYPE OF USAGE AND LOADINGS.



PROFILE VIEW

RURAL ENTRANCE WITH ASPHALTIC SURFACE

RESURFACING PROJECTS



PROFILE VIEW

RURAL ENTRANCE WITH AGGREGATE SURFACE

6" BASE AGGREGATE DENSE
RESURFACING PROJECTS

DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December, 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERV
ENT
FHWA

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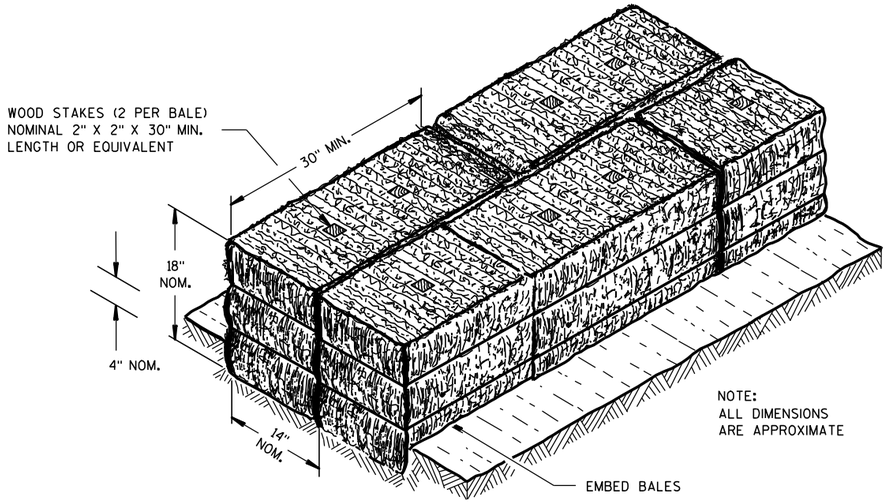
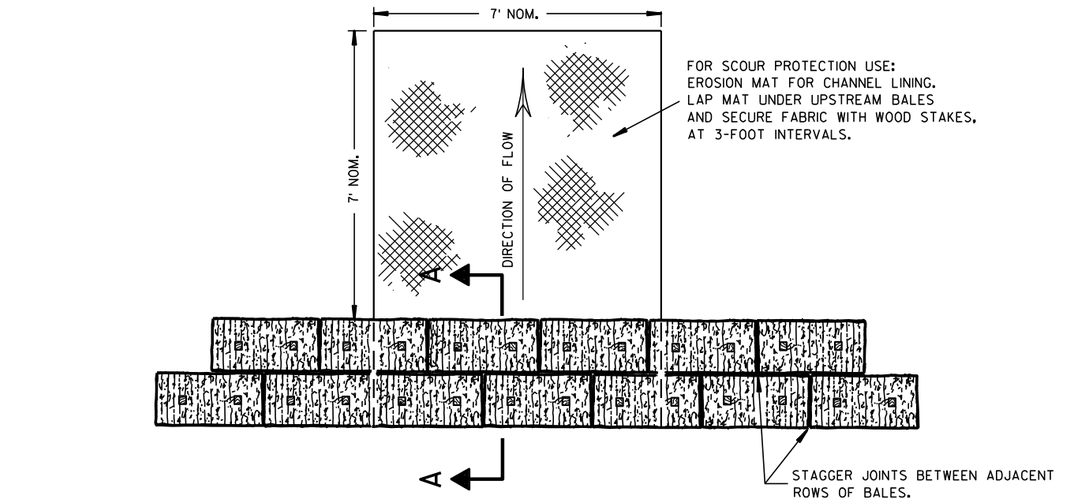
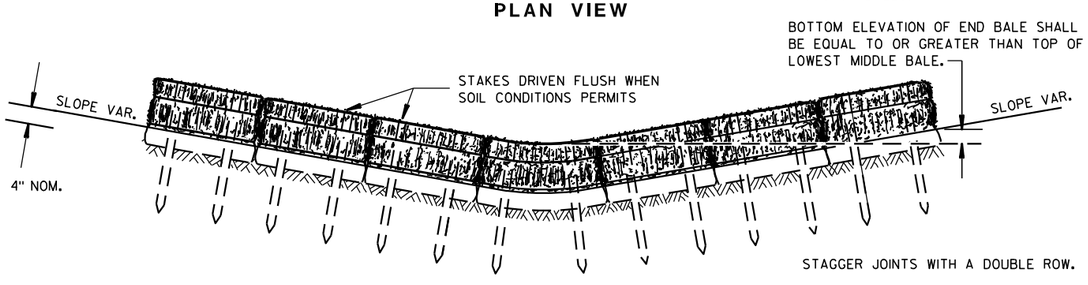
S.D.D. 8 D 22-1



SECTION A-A



PLAN VIEW



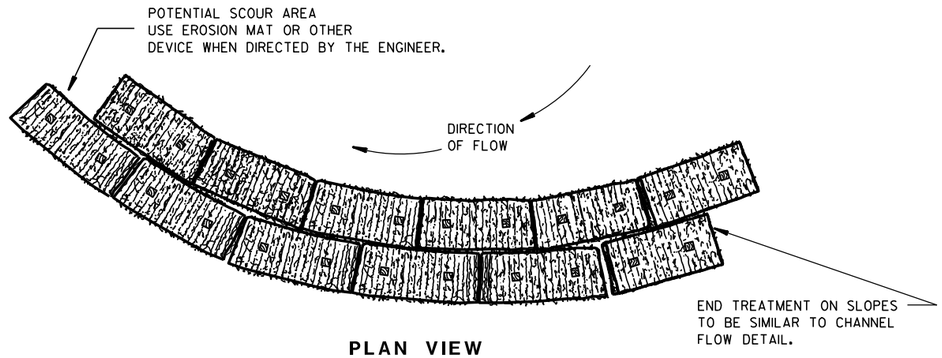
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

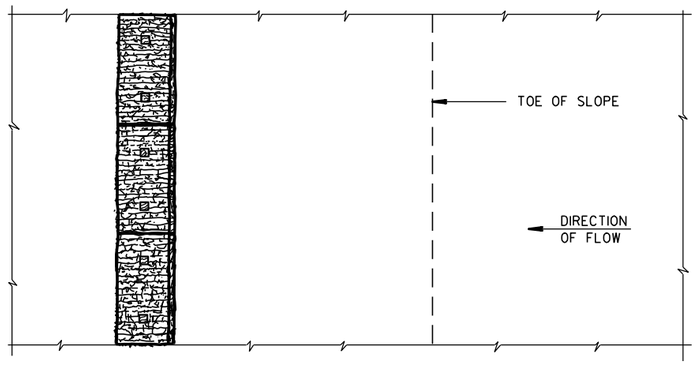
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

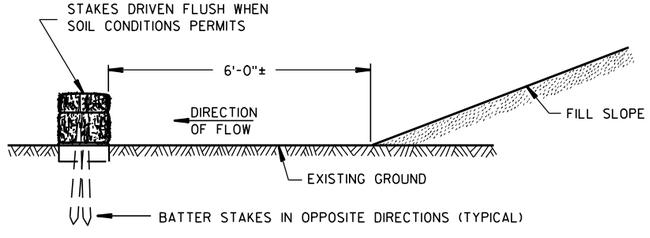


PLAN VIEW

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 Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6

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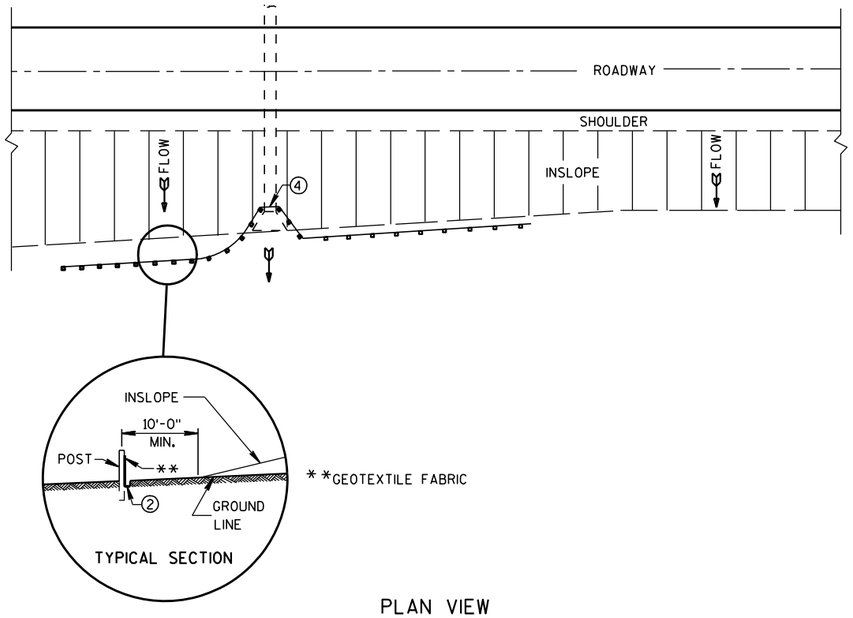
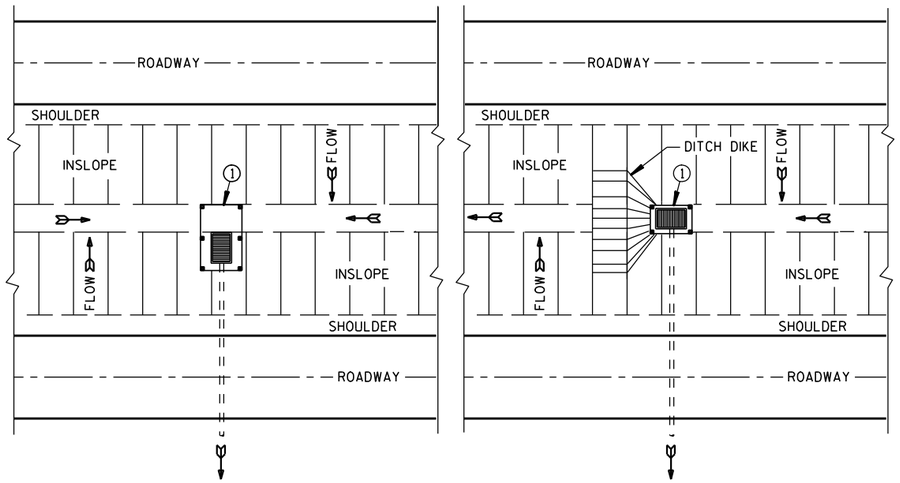


PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

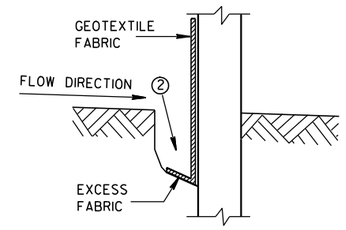
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

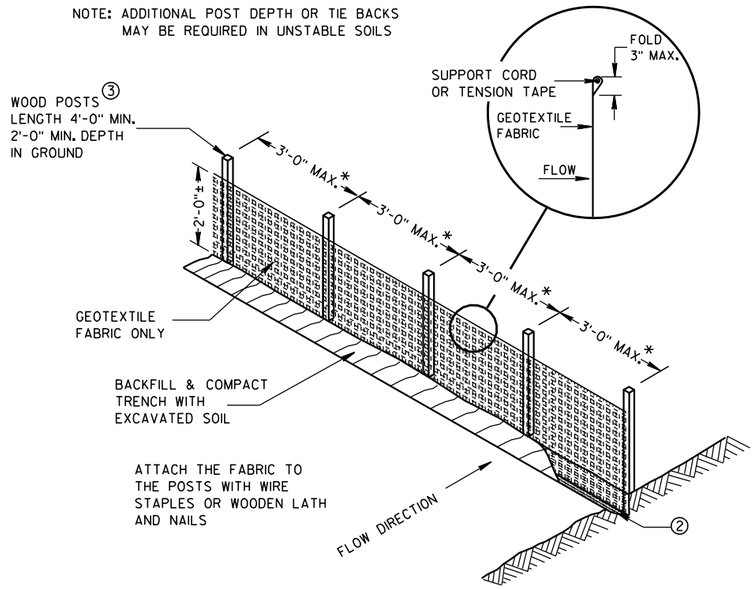
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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.

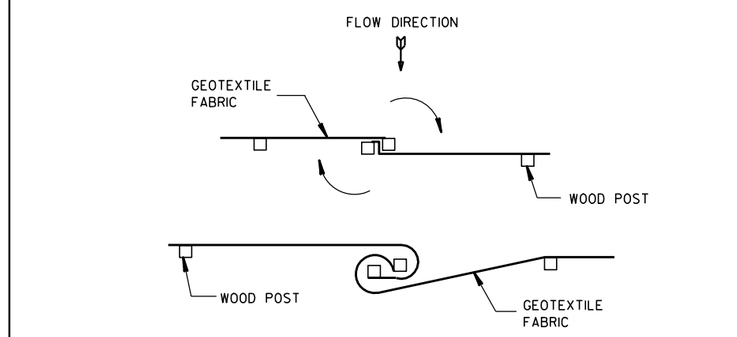


TRENCH DETAIL

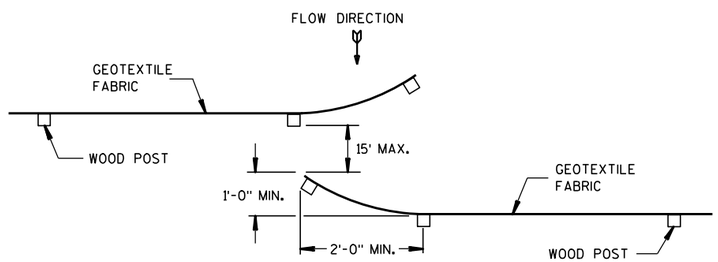


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

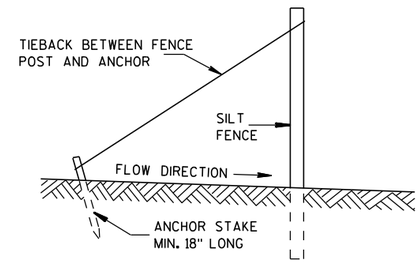


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 8 E 9-6

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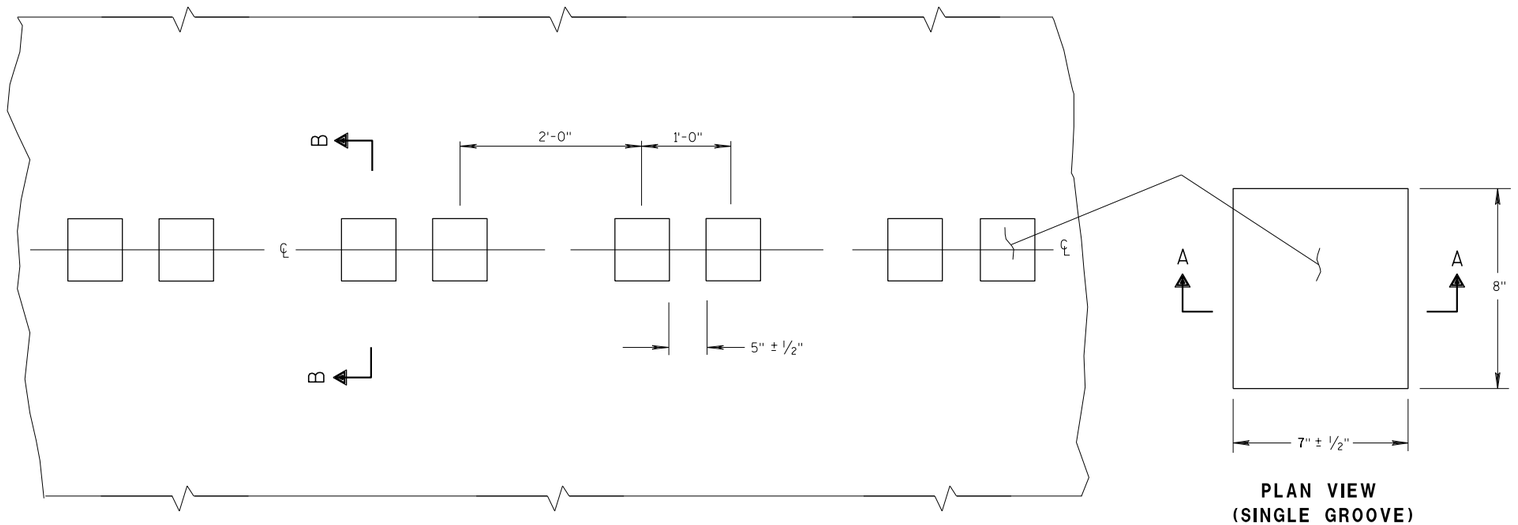
S.D.D. 8 E 9-6



PLAN VIEW
CENTER LINE WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

GENERAL NOTES

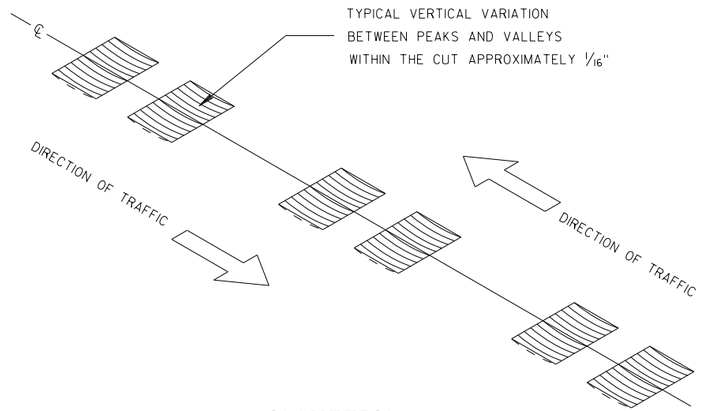
DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL CENTER LINE GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

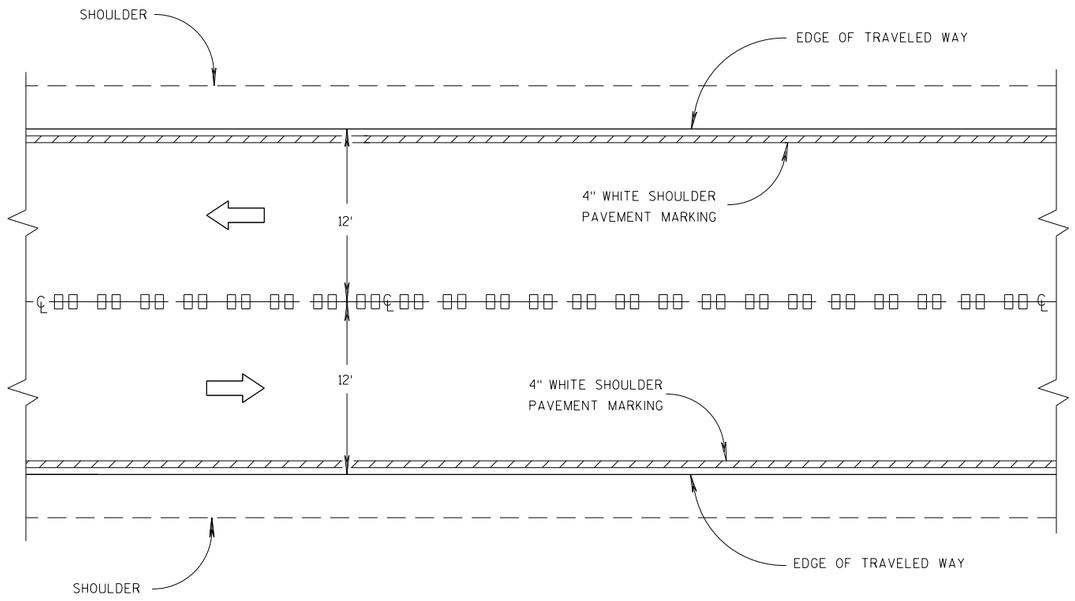
INSTALL PERMANENT MARKING EPOXY 4-INCH AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

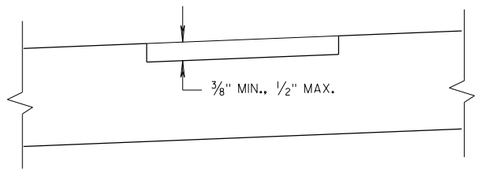
(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



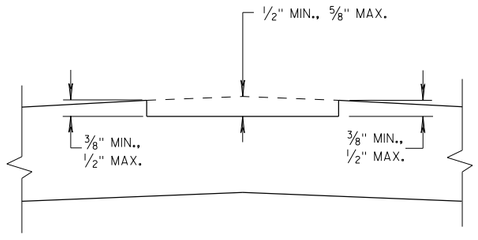
ISOMETRIC



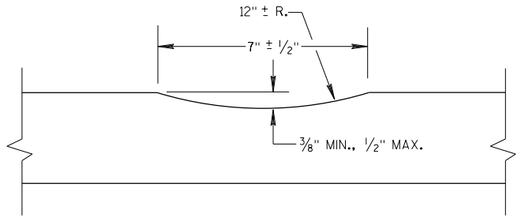
CENTER LINE GROOVES ON TWO-WAY ROADWAYS



SECTION B-B
SUPERELEVATED ROADWAY



SECTION B-B
CROWNED ROADWAY

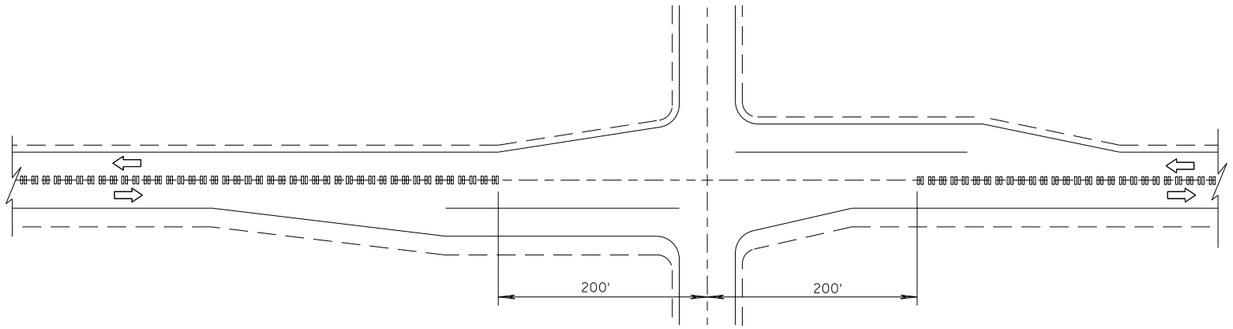


SECTION A-A

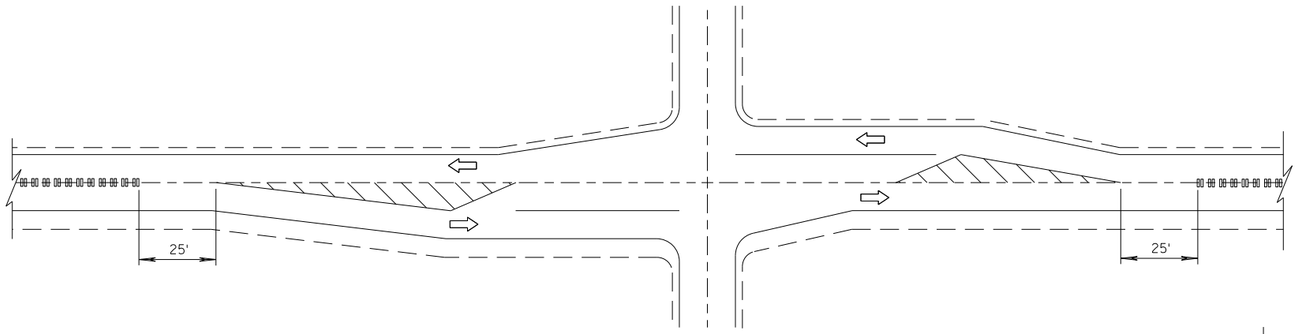
2-LANE RURAL
CENTER LINE RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

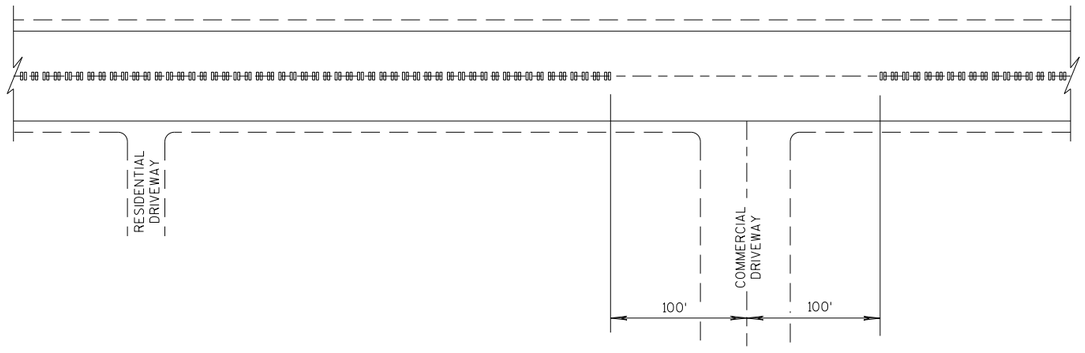
6
S.D.D. 13 A 11-3a



CENTER LINE GROOVES AT INTERSECTIONS

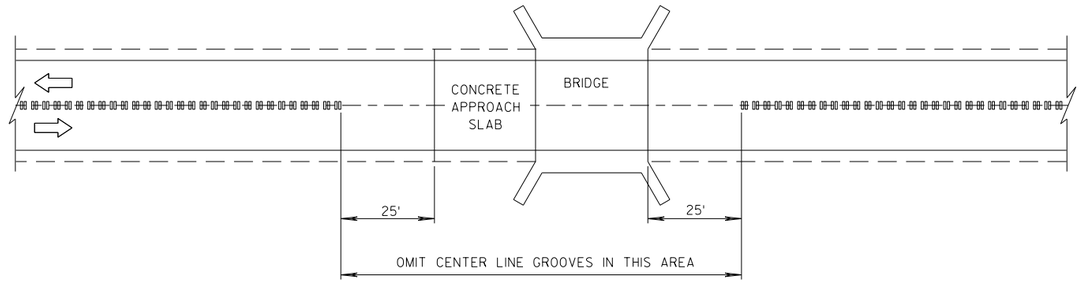


CENTER LINE GROOVES AT INTERSECTIONS (WITH LEFT TURN LANES)

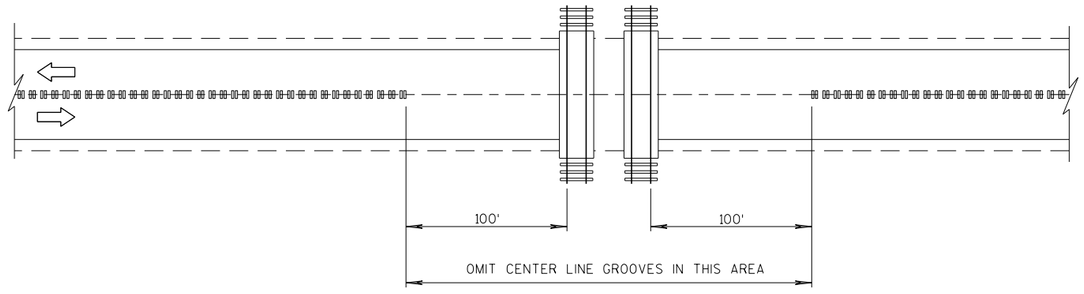


CENTER LINE GROOVES AT DRIVEWAYS (1)

(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



CENTER LINE GROOVES AT BRIDGES



CENTER LINE GROOVES AT RAILROADS

2-LANE RURAL
CENTER LINE RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018
DATE

/S/ Rodney T
ROADWAY STANDARDS DE
UNIT SUPERVISOR

IT

FHWA

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S.D.D. 13 A 11-3b

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S.D.D. 13 A 11-3b

1. 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.

2. 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.

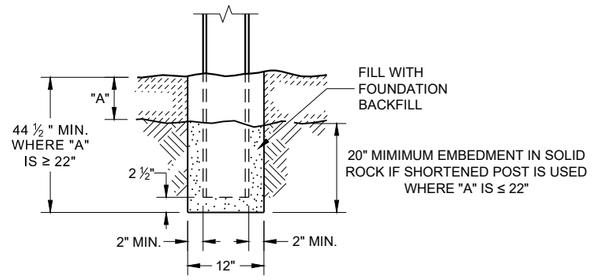
3. IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

4. WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

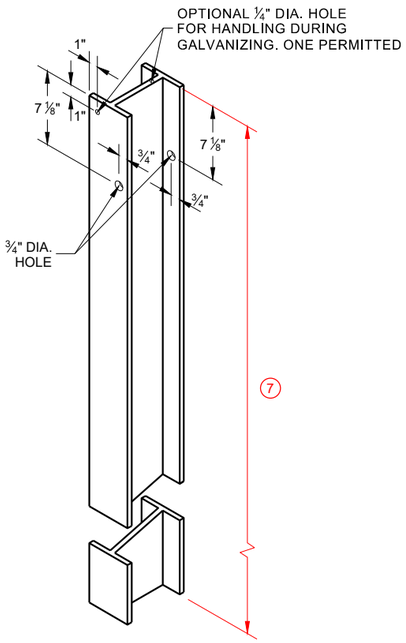
5. FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

6. 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.

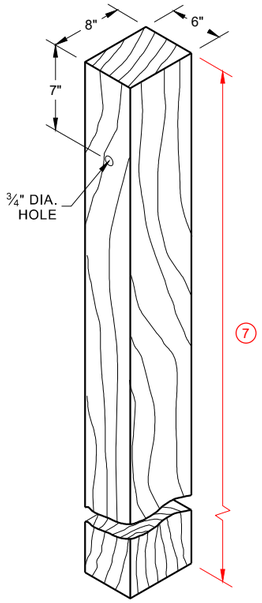
7. TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



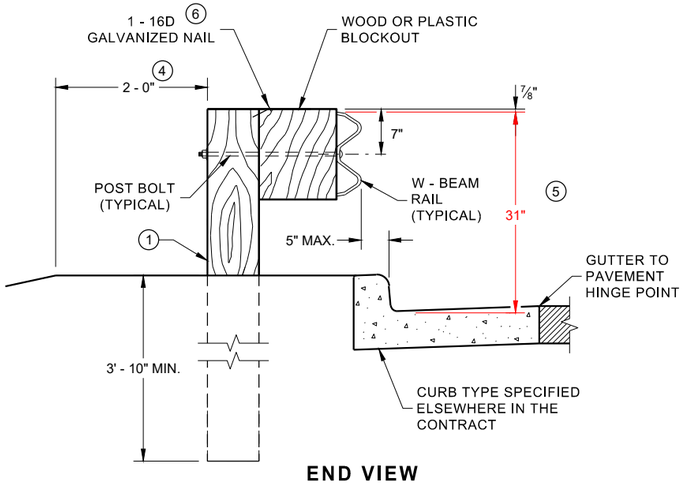
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



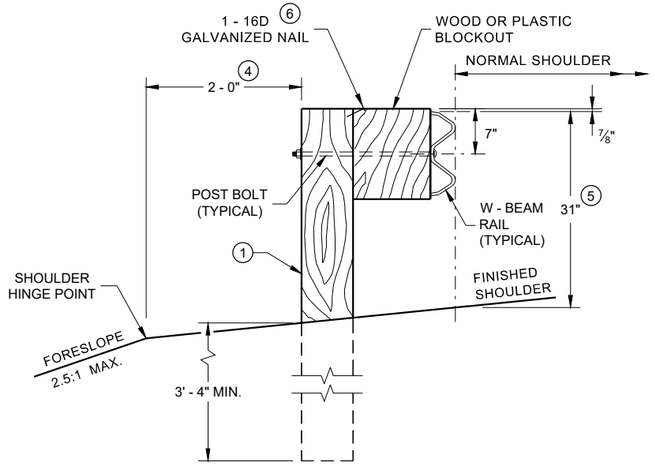
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



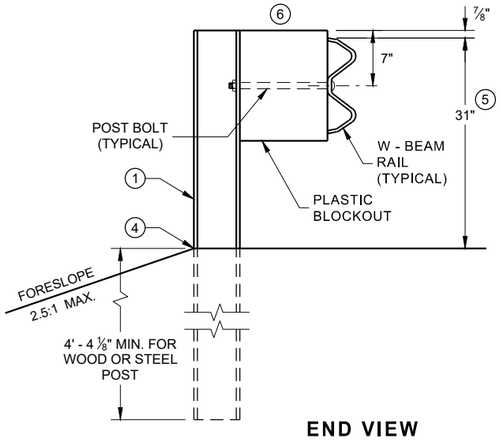
WOOD POST (6" X 8") NOMINAL (1)



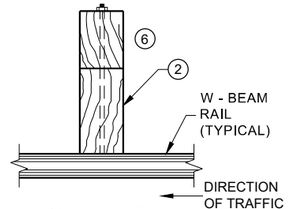
END VIEW
LOCATED ALONG A CURBED ROADWAY



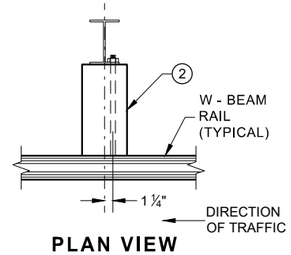
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



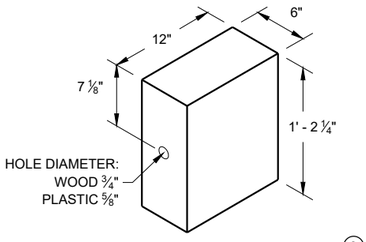
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



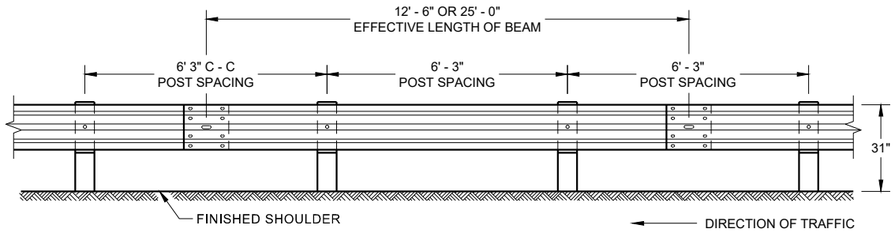
WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

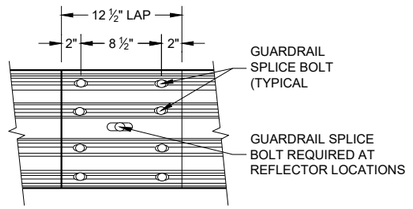
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B42 - 06a

SDD 14B42 - 06a



FRONT VIEW
POST SPACING STANDARD INSTALLATION



FRONT VIEW
MID-SPAN BEAM SPLICE

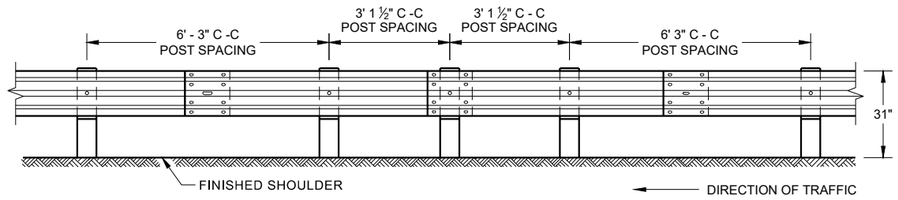
GENERAL NOTES

(8) 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.

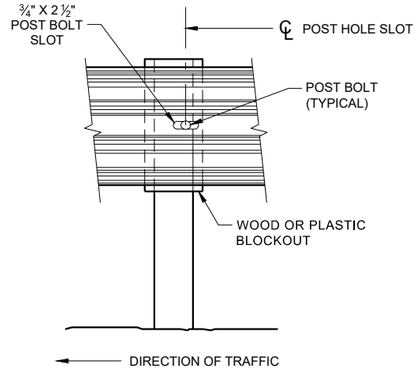
(9) 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A ¾" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

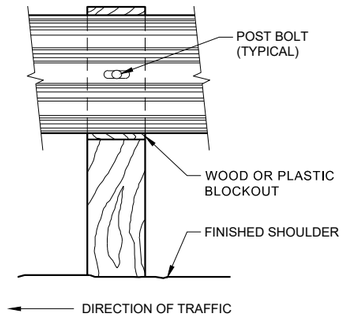
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



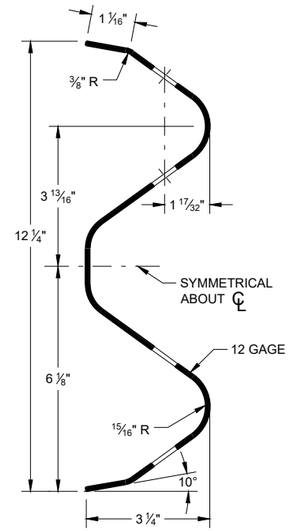
FRONT VIEW
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



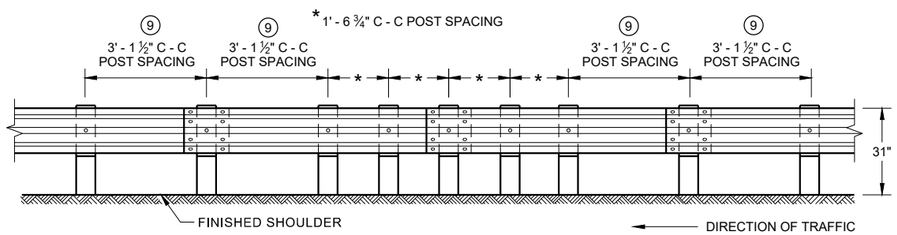
FRONT VIEW AT STEEL POST



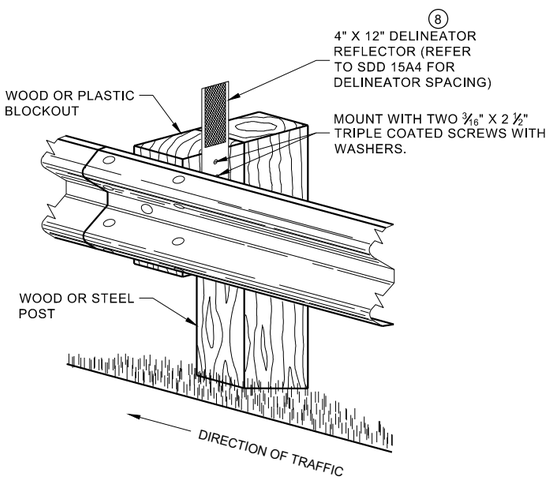
FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



FRONT VIEW
QUARTER POST SPACING (QS)

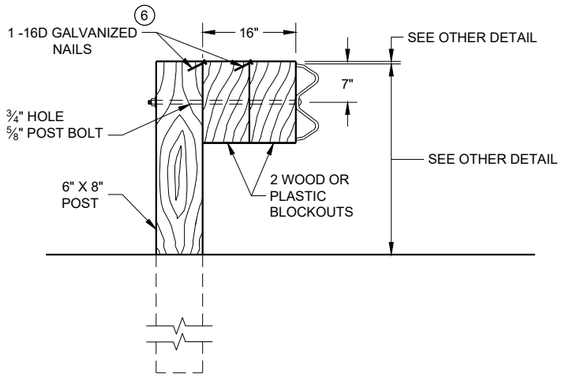


ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B42 - 06b

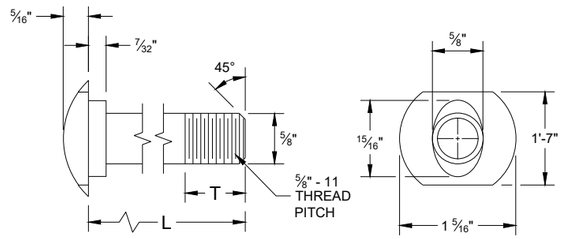


DETAIL FOR 16" BLOCKOUT DEPTH

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.

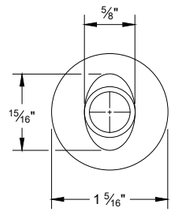
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3⁄16".
2. IF THE BOLT EXTENDS MORE THAN ¼" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

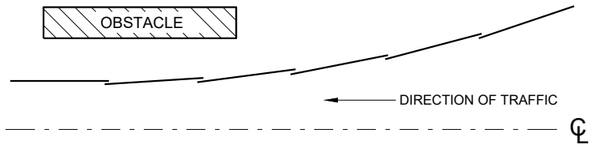


POST BOLT TABLE

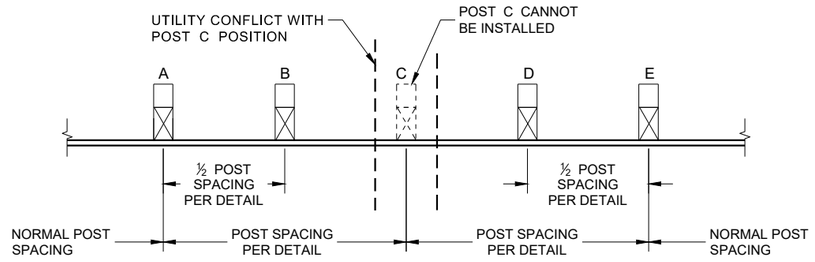
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



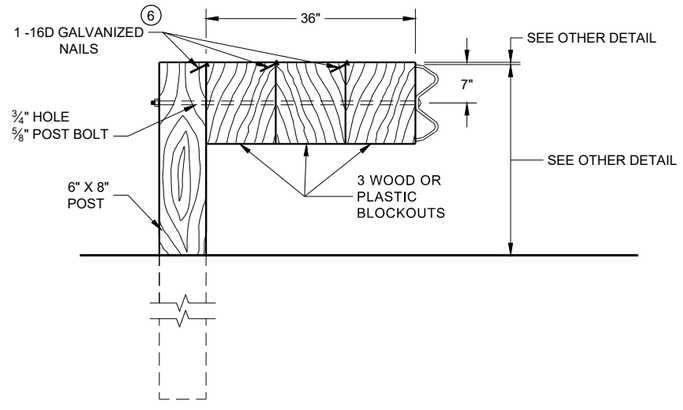
ALTERNATE BOLT HEAD



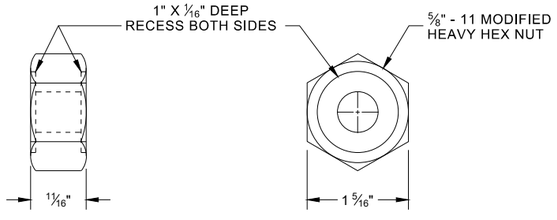
PLAN VIEW
BEAM LAPPING DETAIL



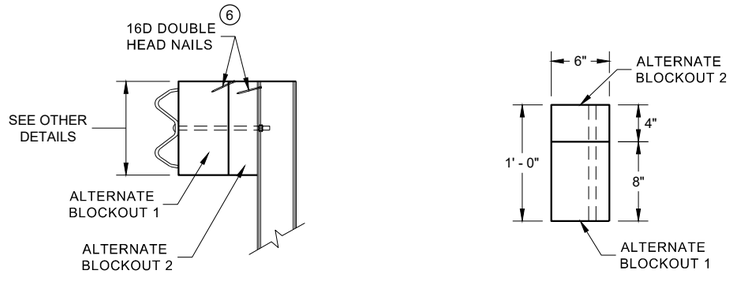
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW

PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

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.

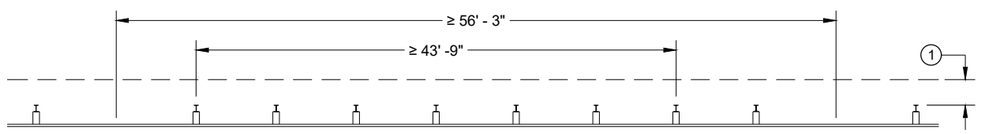
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

(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.

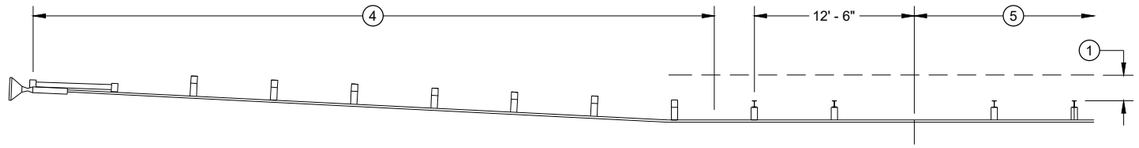
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

6

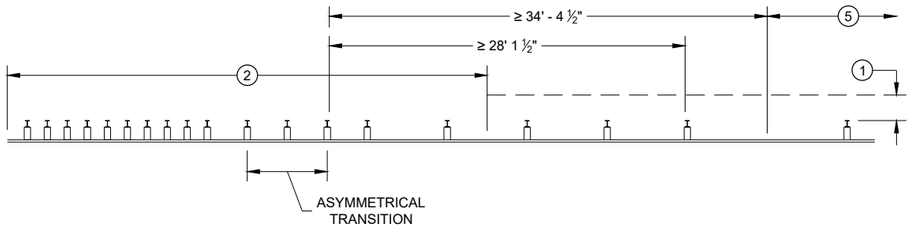
SDD 14B42 - 06c



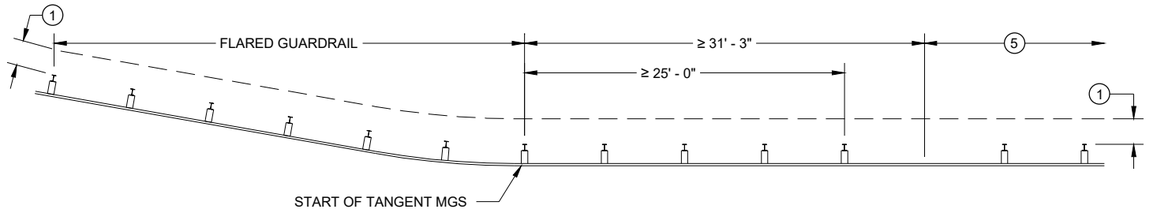
MISSING POST IN NORMAL BEAM GUARD RUN



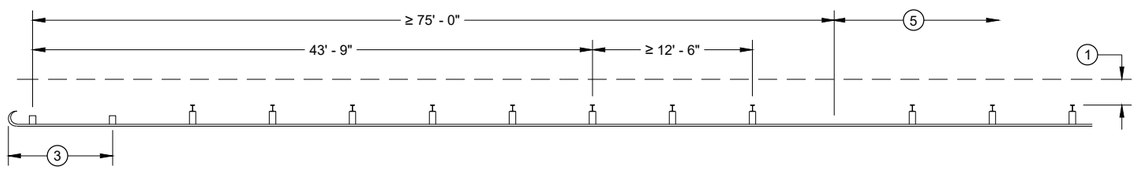
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



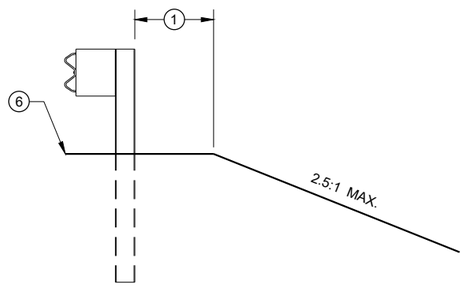
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



MISSING POST IN NORMAL BEAM GUARD RUN NEAR FLARED BEAM GUARD



MISSING POST IN NORMAL BEAM GUARD RUN NEAR TYPE 2 TERMINAL



CROSS SECTION VIEW

1. MINIMUM OF 2 FEET OF GRADING BEHIND POST.
2. SEE SDD 14B45 FOR MORE DETAILS.
3. SEE SDD 14B47 FOR MORE DETAILS.
4. SEE SDD 14B44 FOR MORE DETAILS.
5. SEE MISSING POST IN NORMAL BEAM GUARD RUN FOR DISTANCE TO NEXT MISSING POST AND AREA FOR WELL DRAINED, COMPACTED SOILS.
6. SEE PLAN FOR SHOULDER DESIGN.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

FHWA

SDD 14B42 - 06d

SDD 14B42 - 06d

GENERAL NOTES

(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.

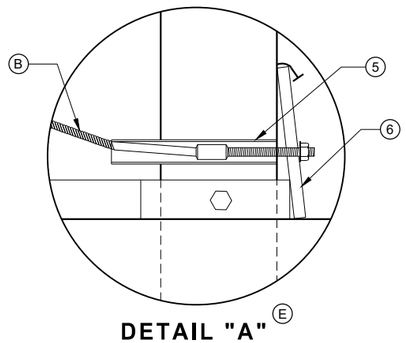
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

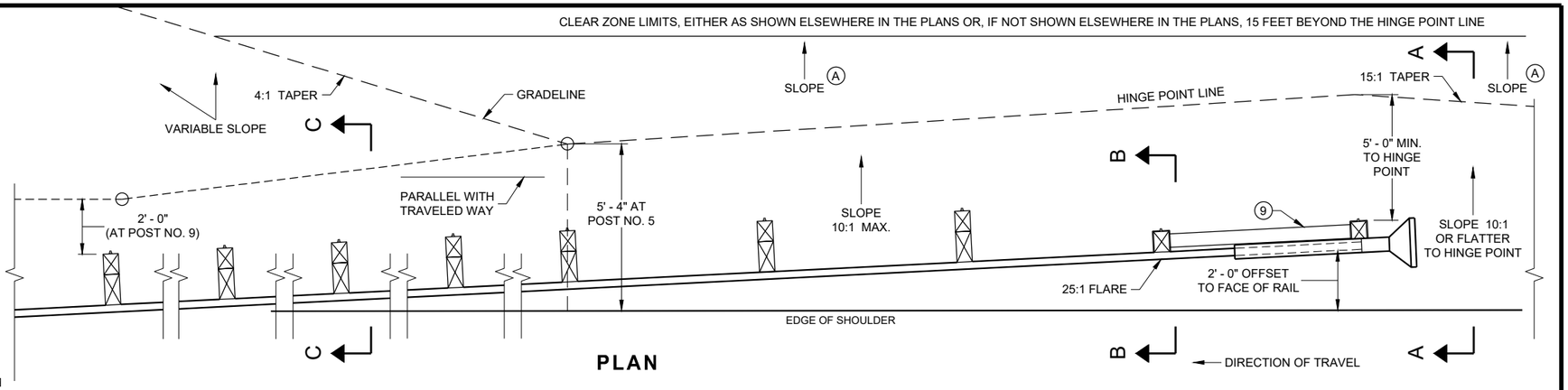
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

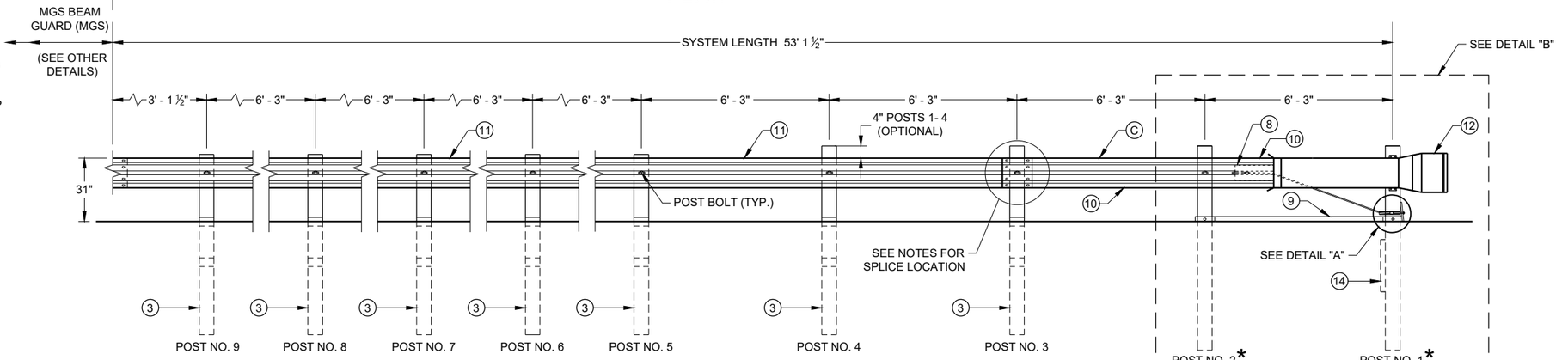
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



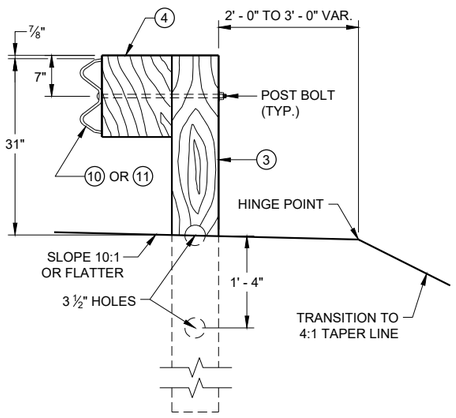
DETAIL "A" (E)



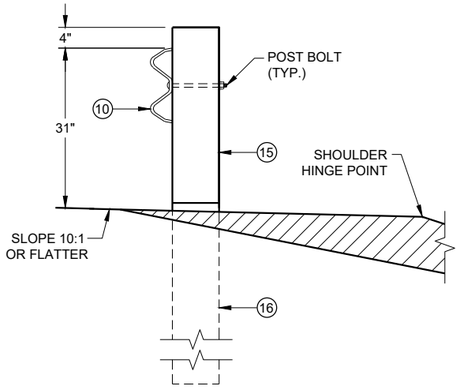
PLAN



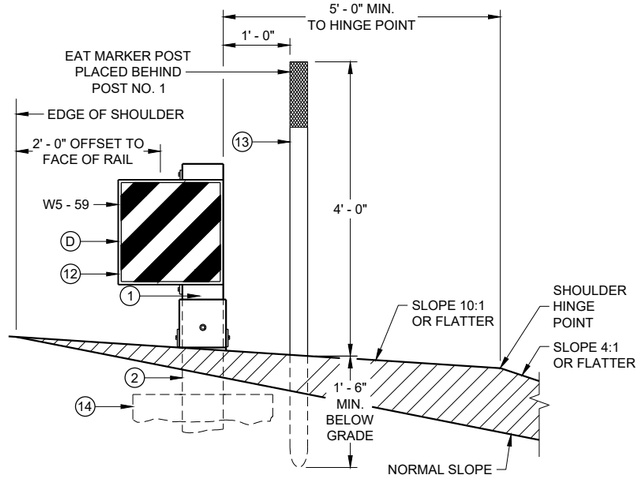
ELEVATION



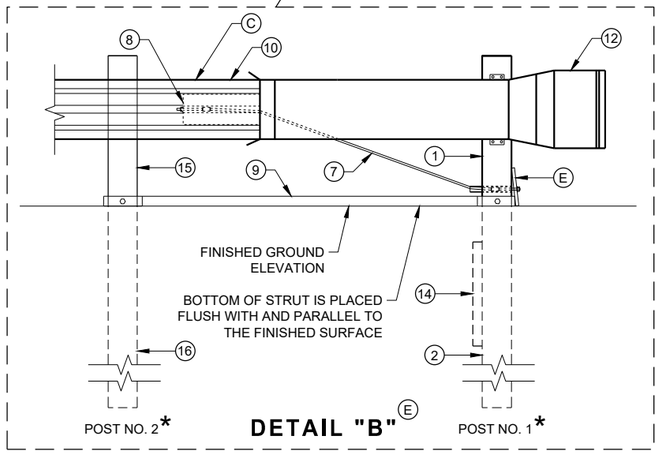
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



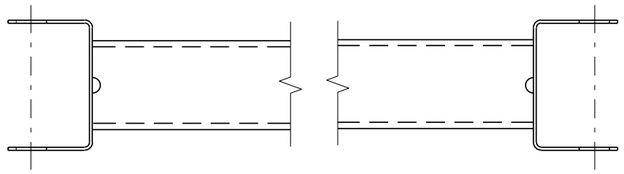
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

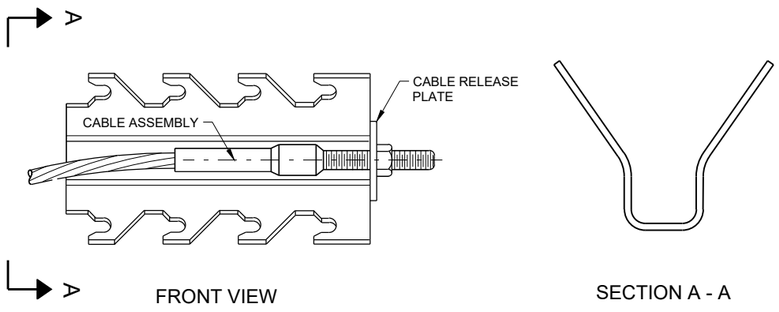
SDD 14B44 - 04a



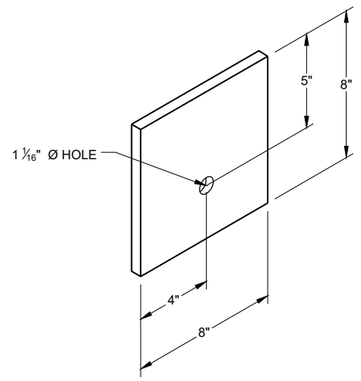
GENERIC GROUND STRUT (9) (E)

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUGACTURER'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)

6

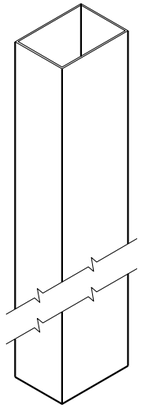
6

SDD 14B45 - 04b

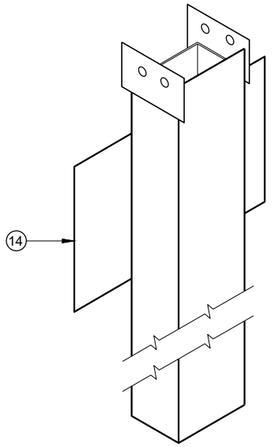
SDD 14B45 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

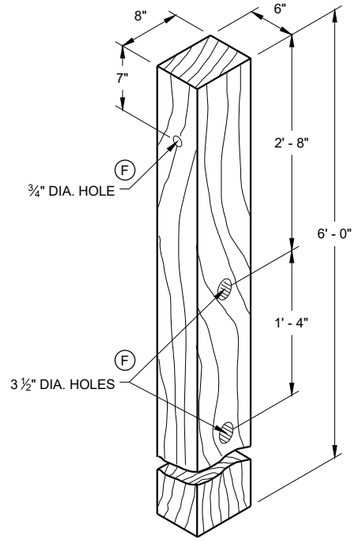
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



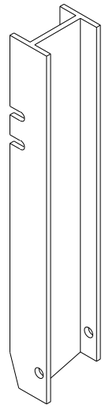
UPPER POST NO. 1 ① Ⓔ



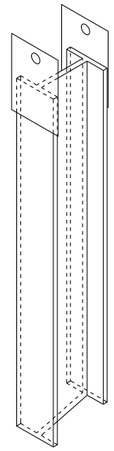
LOWER POST NO. 1 ② Ⓔ



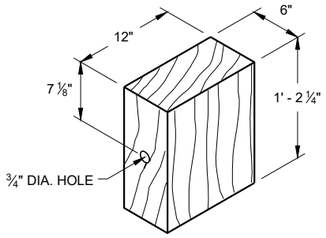
WOOD CRT POST ③ Ⓔ
POSTS NUMBER 3-9



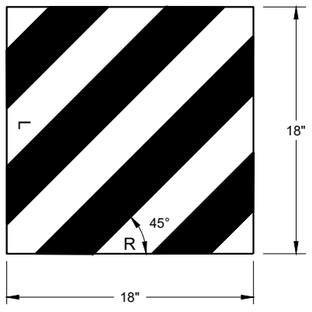
UPPER POST NO. 2 ⑮ Ⓔ



LOWER POST NO. 2 ⑯ Ⓔ

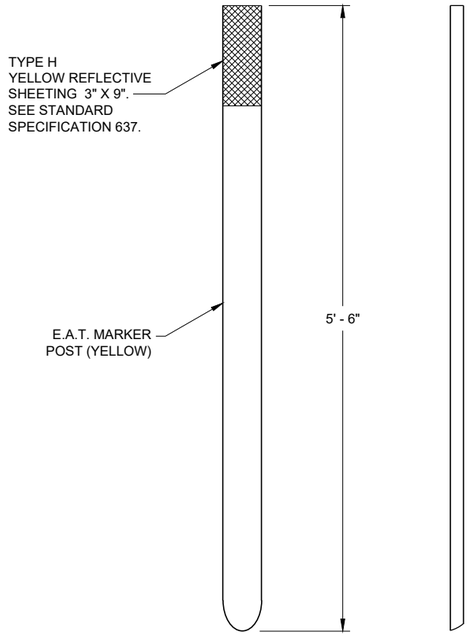


WOOD BLOCKOUT ④
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



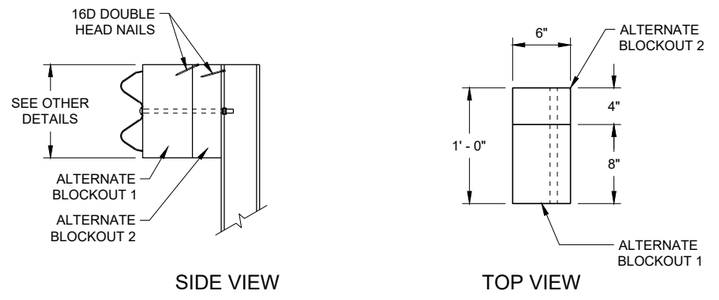
W5 - 59

REFLECTIVE SHEETING DETAIL Ⓔ



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST ⑬



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

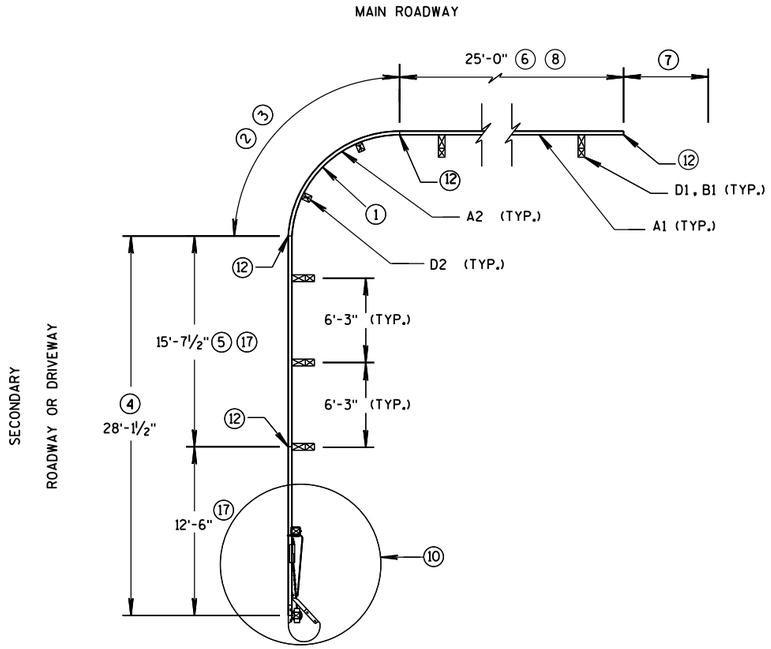
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

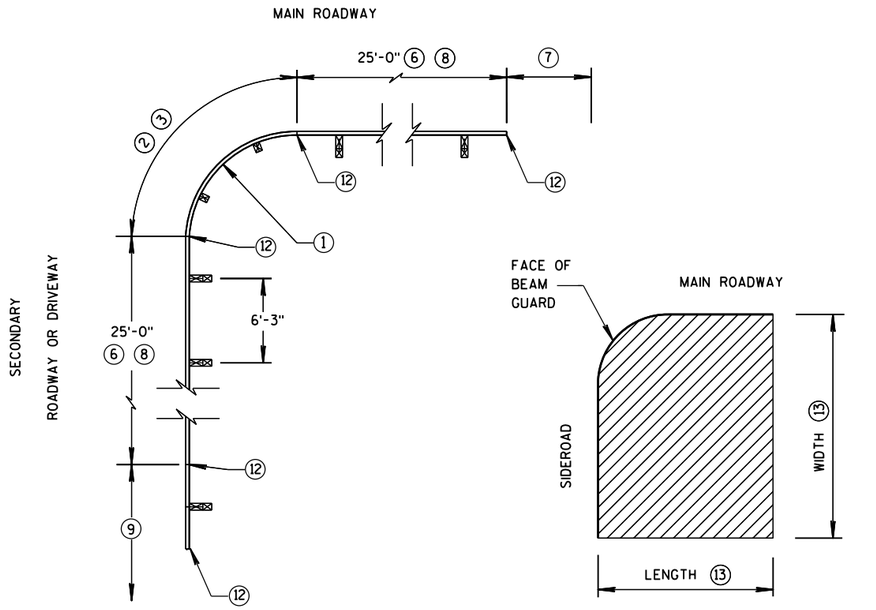
FHWA

6

SDD 14B44 - 04c



SHORT RADIUS BEAM GUARD WITH SHORT RADIUS TERMINAL ON SECONDARY ROAD OR DRIVEWAY PLAN VIEW



SHORT RADIUS BEAM GUARD WITH EAT, ADDITIONAL BEAM GUARD OR TRANSITION TO RIGID BARRIER ON SECONDARY ROAD OR DRIVEWAY PLAN VIEW

AREA FREE OF FIXED OBJECTS FOR RADIUS 32' AND LESS (16)

TABLE FOR RADIUS OF 32' AND LESS

RADIUS FT	LENGTH FT	WIDTH FT
8	25	15
16	30	15
24	40	20
32	50	30

GENERAL NOTES

SEE PLANS FOR OTHER BARRIER SYSTEM AND LOCATION SPECIFICS.

SEE 14B42 FOR MORE INFORMATION ON BEAM GUARD INSTALLATION, PARTS, MATERIALS, AND INSTALLATION INFORMATION.

GALVANIZE PARTS AFTER FABRICATION.

WELDING IS TO FOLLOW CURRENT REQUIREMENTS OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE ANSI/AWS D1.1

UNLESS NOTED OTHERWISE, ALL PLATES ARE FLAT AND FREE OF WARP.

UNLESS NOTED OTHERWISE, ALL EDGES ARE SMOOTH, STRAIGHT AND VERITCAL.

ALL CUTS AND HOLES, EXCEPT IN BEAM GUARD RAIL ARE TO BE MACHINED OR MACHINE FLAME CUTS.

UNLESS NOTED OTHERWISE CUT OR PROVIDE BOLTS THAT ARE ¼" TO ½" BEYOND THE NUT

DRAWINGS ARE NOT TO SCALE.

(1) RADIUS MEASURE FROM INSIDE OF RAIL. LENGTH OF BEAM GUARD SHORT RADIUS GUARD MEASURED ALONG TRAFFIC SIDE OF RAIL. RADIUS BETWEEN 8 FEET TO 150 FEET. SEE PLAN FOR REQUIRED RADIUS. BEAM GUARD RAIL IN RADIUS IS SHOP BENT. ODD RAIL LENGTH OR FIELD CUTS MAY BE REQUIRED.

(2) CONTROLLED RELEASE TERMINAL (CRT) POSTS ARE USED IN THE RADIUS. CONTROLLED RELEASE TERMINAL (CRT) POSTS ARE SPACED 6'-3". SEE PLAN FOR NUMBER OF CONTROLLED RELEASE TERMINAL (CRT) POSTS.

(3) WITHIN RADIUS BEAM GUARD RAILS ARE NOT BOLTED TO POSTS. BEAM GUARD RAILS RESTED ON TOP OF LAG SCREW.

(4) MINIMUM LENGTH OF BEAM GUARD ALONG SIDE ROAD OR DRIVEWAY TO INSTALL SHORT RADIUS TERMINAL. BEAM GUARD IS PAID FOR WITH BEAM GUARD ITEM.

(5) ODD LENGTH OF BEAM GUARD REQUIRED TO INSTALL SHORT RADIUS TERMINAL.

(6) MINIMUM AMOUNT OF BEAM GUARD TO BE INSTALLED PRIOR TRANSITION TO RIGID BARRIER, ADDITIONAL BEAM GUARD, OR EAT. BEAM GUARD PAID FOR WITH BEAM GUARD ITEM. SEE PLANS FOR MORE DETAIL.

(7) BEAM GUARD, EAT OR TRANSITION TO RIGID BARRIER. SEE PLAN.

(8) TOP OF BEAM GUARD BY THE RADIUS IS 27". HEIGHT OF BEAM GUARD IS 31" BY TRANSITION TO RIGID BARRIER, ADDITIONAL BEAM GUARD OR EAT.

(9) ADDITIONAL BEAM GUARD, EAT OR TRANSITION TO RIGID BARRIER. BEAM GUARD SHOWN. SEE PLAN FOR DETAILS.

(10) SHORT RADIUS TERMINAL (SEE OTHER DETAILS)

(11) HEIGHT VARIES. SEE NOTE (8) AND (17).

(12) BEAM GUARD RAIL SPLICE LOCATION. SPLICE LOCATION REQUIRE PART F1 AND F2. SEE SDD 14B42 FOR DETAILS.

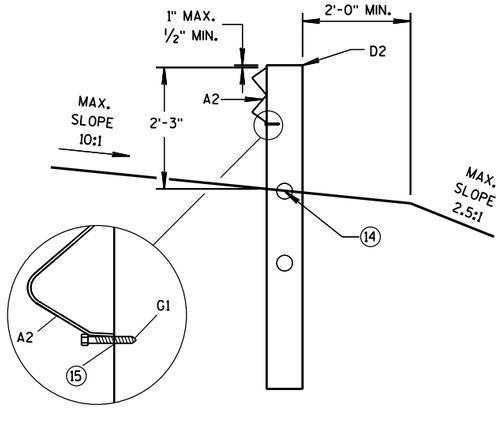
(13) SEE TABLE FOR VALUES.

(14) MAXIMUM HEIGHT FOR CENTER OF HOLE IS ¾" ABOVE FINISHED GROUND ±1".

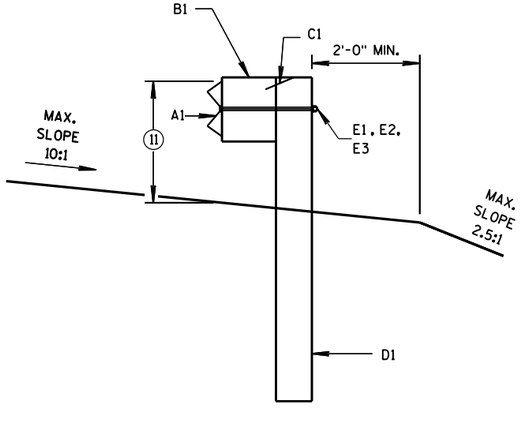
(15) DRILL 15/64" DIA. PILOT HOLE. DO NOT HAMMER LAG SCREW INTO POST.

(16) SMALL SIGNS ON BREAKAWAY HARDWARE ARE ACCEPTABLE.

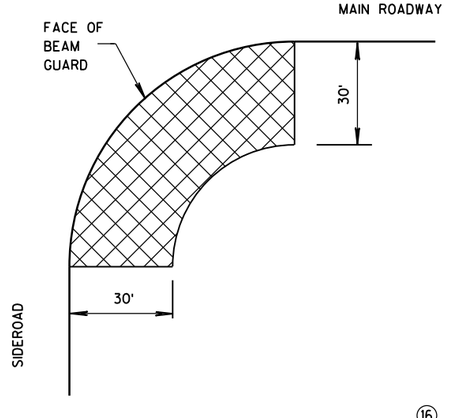
(17) TOP OF RAIL HEIGHT IS 27" WHEN USING A SHORT RADIUS TERMINAL.



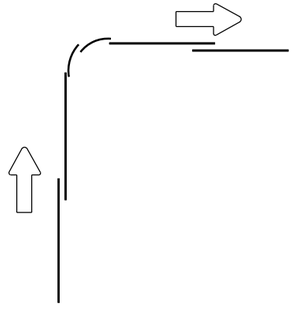
CONTROLLED RELEASE TERMINAL POST (CRT) IN RADIUS



BEAM GUARD POSTS IN HEIGHT TRANSITION



AREA FREE OF FIXED OBJECTS (16) RADIUS GREATER THAN 32'



LAP SPLICE DETAIL

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

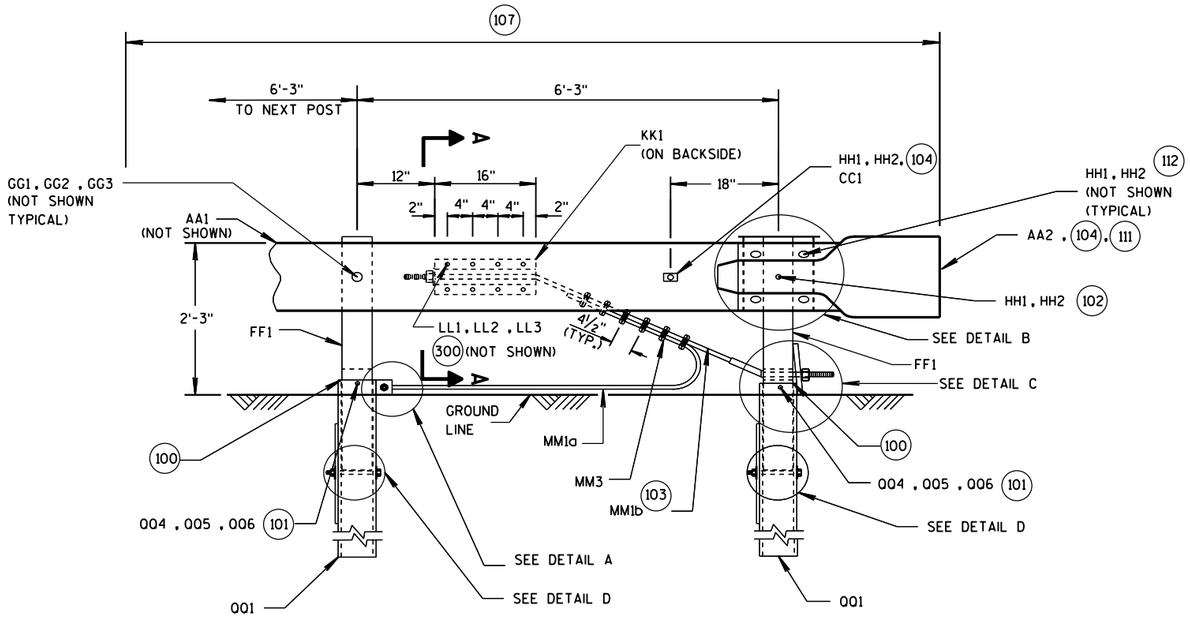
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 71

6

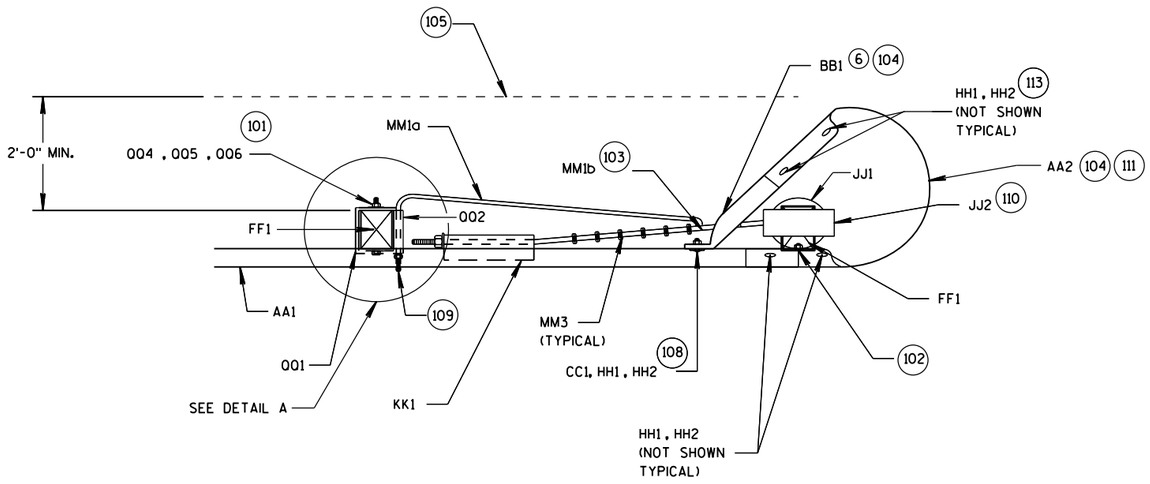
S.D.D. 14 B 53-1a

6

S.D.D. 14 B 53-1a



SHORT RADIUS TERMINAL
PROFILE VIEW



SHORT RADIUS TERMINAL
TOP VIEW

100 TOP OF FOUNDATION TUBE 2 INCHES MAXIMUM ABOVE FINISHED GROUND.

101 WASHERS REQUIRED BETWEEN BOLT HEAD AND FOUNDATION TUBE AND BETWEEN NUT AND FOUNDATION TUBE.

102 SPLICE BOLT AND NUT CONNECTS BEAM GUARD RAIL, W-BEAM END SECTION BUFFER, AND STEEL PIPE ASSEMBLY. NO WASHER REQUIRED. SEE DETAIL B.

103 CABLE IS TAUT.

104 ADJUST AA2 AND BB1 TO FIT.

105 BREAK POINT OF SHOULDER.

106 TACK WELD CABLE CONNECTOR TUBE PLATE TO CABLE CONNECTION TUBE. SEE DETAIL A PROFILE VIEW.

107 PAY LIMIT FOR BEAM GUARD.

108 SQUARE WASHER BETWEEN HEAD OF BOLT AND TRAFFIC FACE OF BEAM GUARD. ROUND WASHER REQUIRED BETWEEN NUT AND BB1.

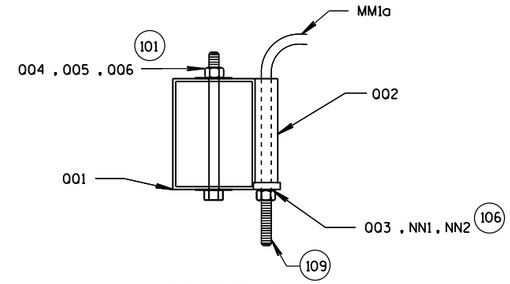
109 CUT OR PROVIDE THREADED STUD THAT IS FLUSH WITH FACE OF BEAM GUARD RAIL KK1 (PLUS OR MINUS ½" TOLERANCE). DEBURR AFTER CUTTING.

110 SEE STEEL PIPE ASSEMBLY DETAILS.

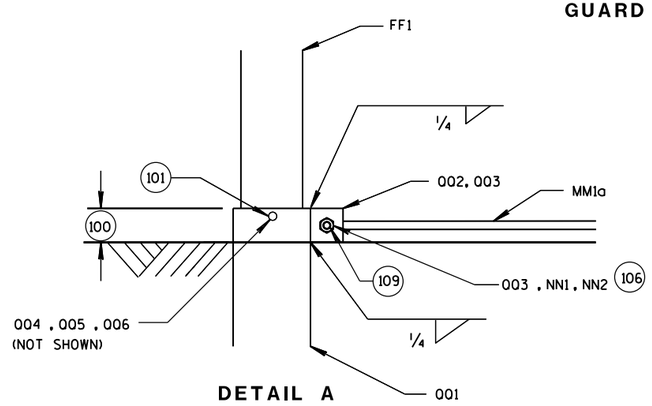
111 ATTACH UU2 WITH UU3. SHOP APPLY UU1 TO UU2.

112 FOUR HH1 AND HH2 REQUIRED TO ATTACH AA1 TO AA2.

113 FOUR HH1 AND HH2 REQUIRED TO ATTACH AA2 TO BB1.



DETAIL A
TOP VIEW
(WOOD BREAKAWAY AND BEAM GUARD RAIL POSTS NOT SHOWN)



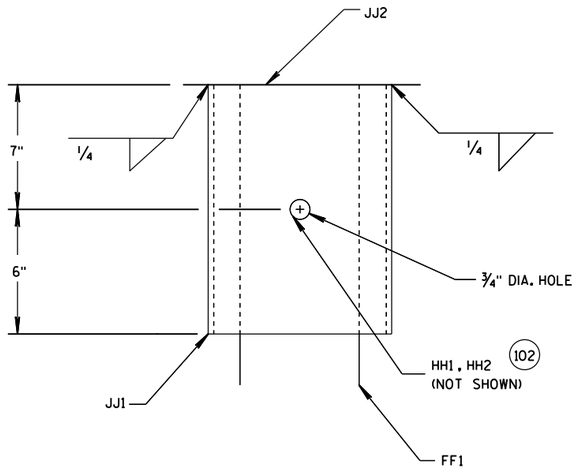
DETAIL A
PROFILE VIEW

STEEL PLATE BEAM GUARD
SHORT RADIUS TERMINAL
MGS

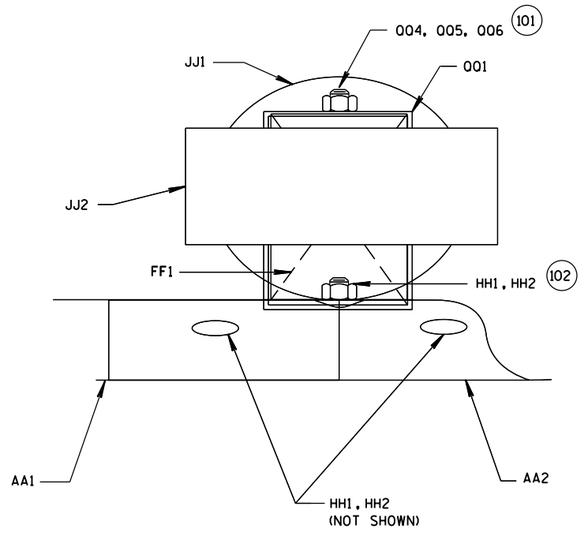
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 53-1b

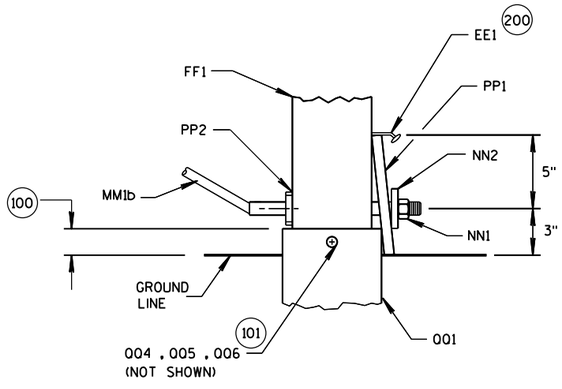


DETAIL B
PROFILE VIEW OF STEEL PIPE ASSEMBLY
(BEAM GUARD AND W-BEAM
END SECTION NOT SHOWN)

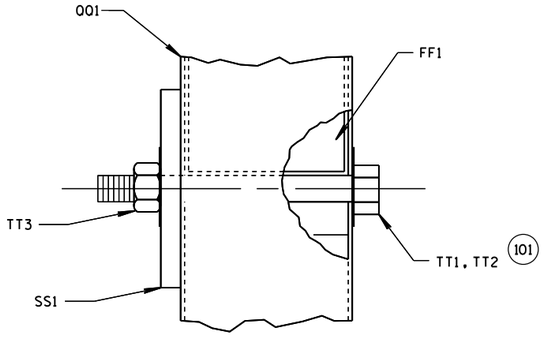


DETAIL B
PLAN VIEW OF STEEL PIPE ASSEMBLY

200 2 NAILS SPACED 4 INCHES CENTER TO CENTER.



DETAIL C
PROFILE VIEW



DETAIL D
PROFILE VIEW

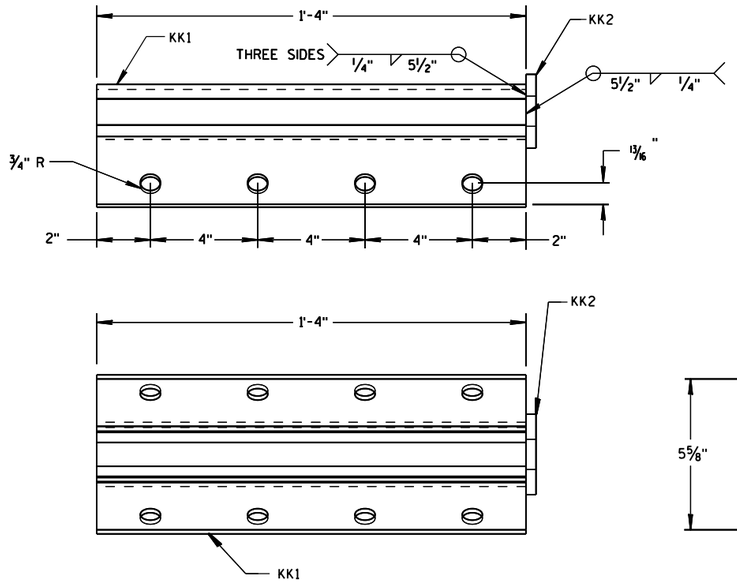
SHORT RADIUS BEAM GUARD
(MGS) SHORT RADIUS
TERMINAL (MGS)

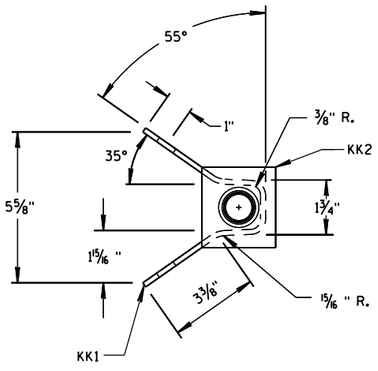
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

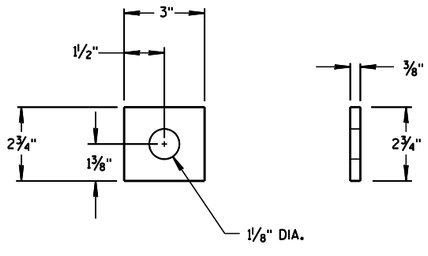
S.D.D. 14 B 53-1c

(300) WASHERS REQUIRED BETWEEN BOLT HEAD AND BEAM GUARD RAIL AND BETWEEN NUT AND ANCHOR BRACKET. EIGHT LL1 AND LL3 REQUIRED. SIXTEEN LL2 REQUIRED.

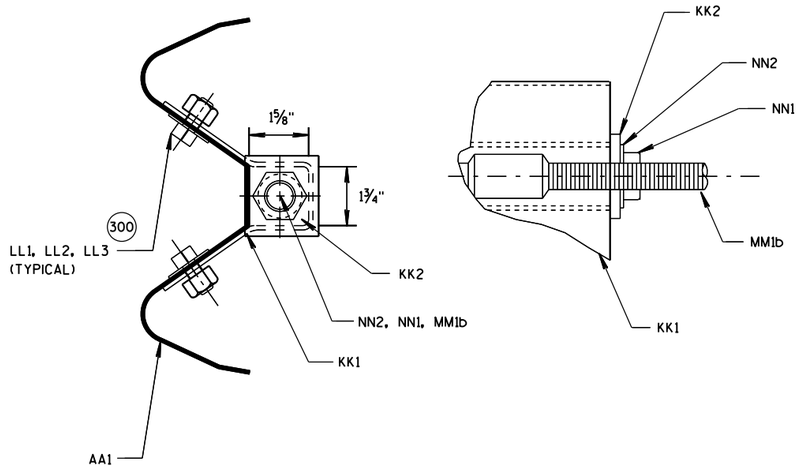




ANCHOR BRACKET (KK1, KK2)



ANCHOR BRACKET BEARING PLATE (KK2)

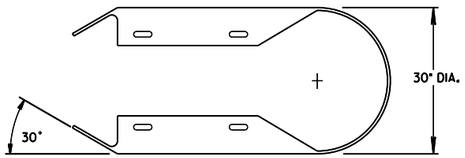


SECTION A-A

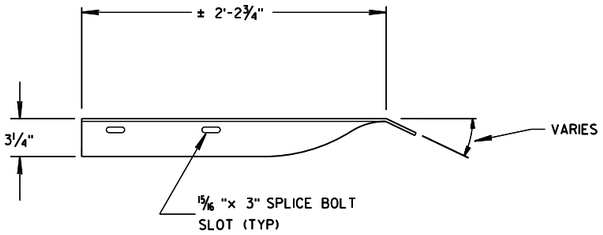
SHORT RADIUS BEAM GUARD
(MGS) SHORT RADIUS
TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 53-1d



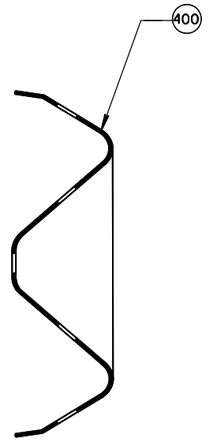
TOP VIEW



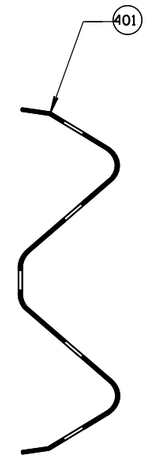
TOP VIEW

(400) CROSS SECTON OF PART IS TO FIT OVER AA1.

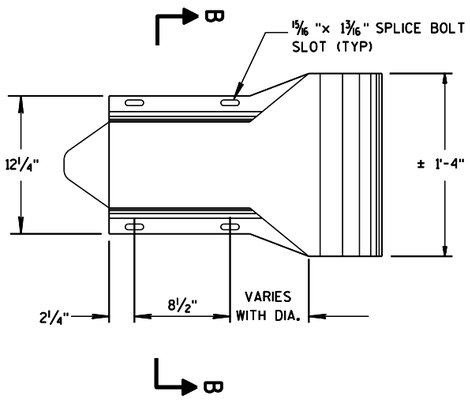
(401) CROSS SECTON OF PART IS TO FIT OVER OR UNDER AA1.



SECTION B-B

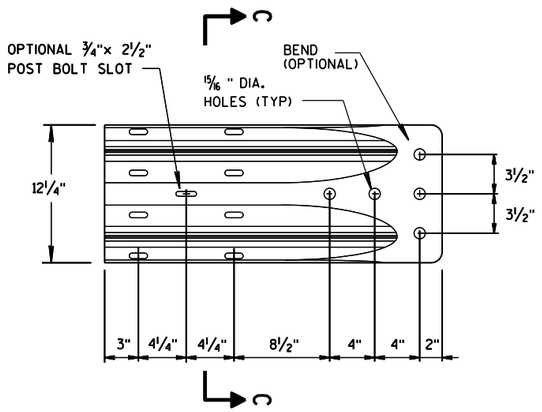


SECTION C-C



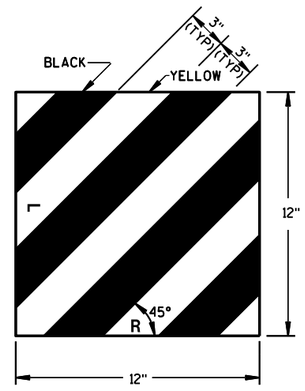
W-BEAM
END SECTION BUFFER (AA2)

PROFILE VIEW



W-BEAM
TERMINAL CONNECTOR (BB1)

PROFILE VIEW



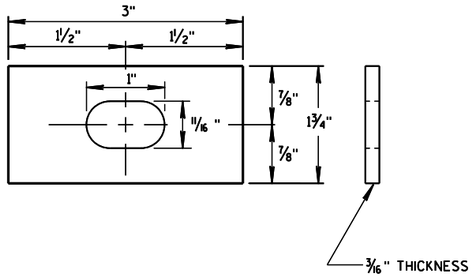
REFLECTIVE SHEETING
(UU1, UU2)

SHORT RADIUS BEAM GUARD
(MGS) SHORT RADIUS
TERMINAL (MGS)

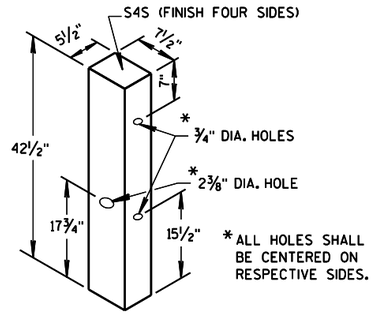
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

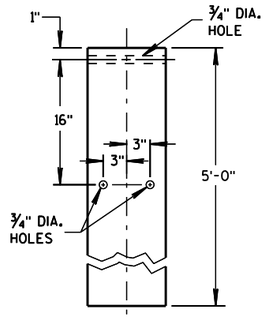
S.D.D. 14 B 53-1e



RECTANGULAR PLATE WASHER (CC1)



WOOD BREAKAWAY POST (FF1)



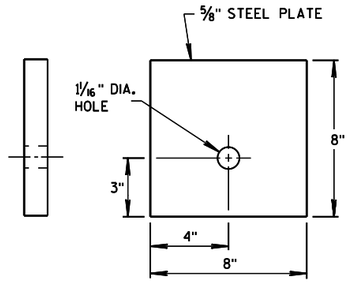
FOUNDATION TUBE (QQ1) (500)

(500) SEE DETAIL "D" FOR LOCATION AND ATTACHING SS1.

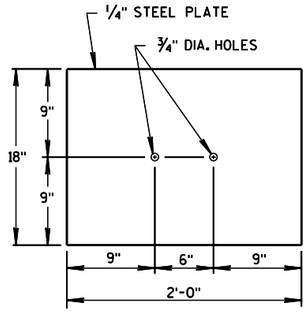
(501) FOR MM1a THREADED STUD ONLY REQUIRED ON ONE END. SWAGED FITTING REQUIRED.

(502) LOCATE HOLES ON THE CENTERLINE OF THE SIDE OF THE POST.

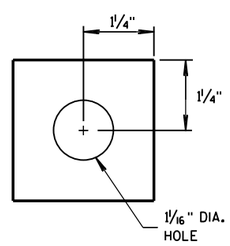
(503) MM1a MAY HAVE ONE THREADED STUD 4 INCHES LONG. SEE NOTE (109).



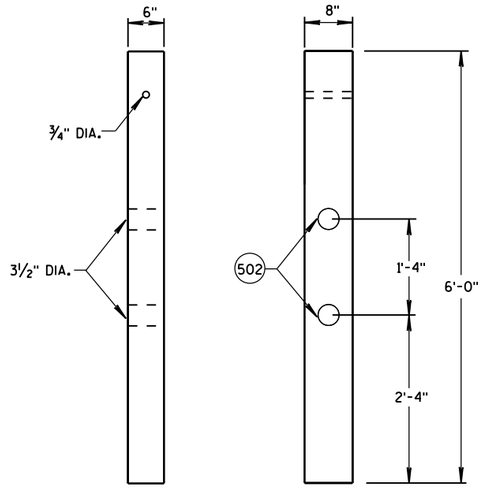
BEARING PLATE (PP1)



SOIL PLATE (SS1)

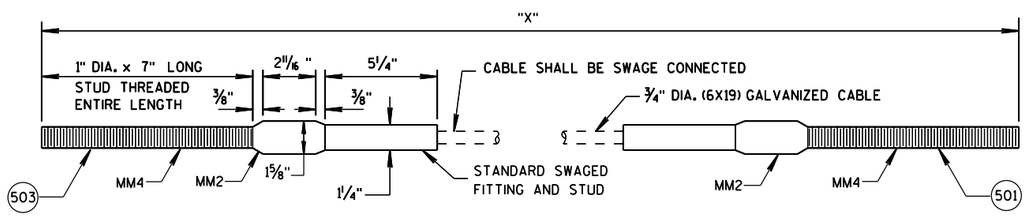


TUBE END PLATE (QQ3)



FRONT VIEW SIDE VIEW

CONTROLLED RELEASE TERMINAL POST (CRT) (D2)



"X" LENGTH	
MM1a	9'-0"
MM1b	6'-8"

CABLE ASSEMBLY (MM1a , MM1b)

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 53-1f

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	BEAM GUARD RAIL	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
A2	BEAM GUARD RAIL - SHOP BENT	INDICATE ON BACK OF RAIL RADIUS THAT RAIL WAS BENT TO. SHOP BEND RADIUS IS TO THE NEAREST FOOT. FOLLOW AASHTO M180 ON HOW TO MARK RADIUS INFORMATION.	
		AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
B1	BLOCK - WOOD	WISDOT SPEC. 614	SEE SDD 14B42
C1	NAIL	ASTM A153 HOT DIP CLASS D	
		ASTM F1667 TYPE 1 STYLE 12 (16 DOUBLE HEAD)	
D1	POST-STRONG POST-WOOD	WISDOT SPEC. 614	SEE SDD 14B42
D2	POST-CRT-WOOD	WISDOT SPEC. 614	
E1	POST BOLT	ASTM A307 GRADE A OR SAE J429 GRADE 2	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		UNC	
E2	POST BOLT-WASHER	ASTM F436 TYPE 1 (HARDEN TYPICALLY USED WITH STEEL) OR ASTM F844 (UNHARDENED TYPICALLY WITH WOOD)	5/8" DIA.
		GALV. AASHTO M111/ASTM A 123 OR GALV. HOT DIP. TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329	
E3	POST BOLT - NUT		5/8" DIA. SEE SDD 14B42 FOR GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		UNC	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		ASTM A563 GRADE A HEAVY HEX HEAD	
F1	SPLICE BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		ASTM A307 GRADE A OR SAE J429 GRADE 2	5/8" DIA. SEE SDD 14B42 FOR GEOMETRY AND OTHER INFORMATION
		UNC	
		AASHTO M180	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
F2	SPLICE BOLT - NUT	ASTM A563 GRADE A	5/8" DIA. SEE SDD 14B42 FOR GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
G1	LAG SCREW	ASTM A308 GRADE A ASTM A153 CLASS D	3/8" DIA. 3" LONG
H1	DELINEATOR - BEAM GUARD		SEE SDD 14B42 FOR MORE INFORMATION
H2	DELINEATION - SHEETING	YELLOW OR WHITE	
		WISDOT SPEC 637 TYPE SH	
		APPROVED PRODUCT LIST	
J1	FOUNDATION BACKFILL	STANDARD SPEC. 614	
AA1	BEAM GUARD RAIL - PUNCHED	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
AA2	BEAM GUARD RAIL - END SECTION BUFFER	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
BB1	BEAM GUARD RAIL - TERMINAL CONNECTOR MODIFIED	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
CC1	SHORT RADIUS - SQUARE WASHER	AASHTO M180	
		GALV. AASHTO M111 / ASTM A123	
EE1	NAIL	ASTM A153 HOT DIP CLASS D	
		ASTM F1667 TYPE 1 STYLE 12 (16 DOUBLE HEADED)	
FF1	POST - BCT - WOOD	S4S FINISH ON 4 SIDES	
		WISDOT SPEC. 614	
GG1	POST BOLT	ASTM A307 GRADE A OR SAE J429 GRADE 2	3/8" DIA. SEE SDD 14B42 FOR GEOMETRY
		AASHTO M180	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		UNC	
GG2	POST BOLT - WASHER	ASTM F436 TYPE 1 (HARDEN TYPICALLY USED WITH STEEL) OR ASTM F844 (UNHARDENED TYPICALLY WITH WOOD)	3/8" DIA.
		GALV. AASHTO M111 / ASTM A123 OR5 GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO 77

6

S.D.D. 14 B 53-1g

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
GG3	POST BOLT - NUT	ASTM A563 GRADE A	3/8" DIA.
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	SEE 14B42 FOR GEOMETRY
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		UNC	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		ASTM A563 GRADE A HEAVY HEX HEAD	
HH1	SPLICE BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	3/8" DIA. SEE 14B42 FOR GEOMETRY
		ASTM A307 GRADE A OR SAE J429 GRADE 2	
		UNC	
		AASHTO M180 HEAD GEOMETRY	
HH2	SPLICE BOLT - NUT	ASTM A563 GRADE A	3/8" DIA.
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	SEE 14B42 FOR GEOMETRY
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
JJ1	PIPE - STEEL	ASTM A53 GALVANIZED GRADE B SCHEDULE 40	10" O.D.
JJ2	TOP PLATE	ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	DIMENSIONS 3/8" X 4" X 1'-0"
		GALV. AASHTO M111 / ASTM A123	
KK1	ANCHOR BRACKET	ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	
		GALV. AASHTO M111 / ASTM A123	
KK2	ANCHOR BRACKET - BEARING PLATE	ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	
		GALV. AASHTO M111 / ASTM A123	
LL1	ANCHOR BRACKET - BOLT	ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	5/8" DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		UNC	
LL2	ANCHOR BRACKET - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	5/8" DIA.
		GALV. AASHTO M111 / ASTM A123 OR5 GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
LL3	ANCHOR BRACKET - NUT	ASTM A563 GRADE A	5/8" DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A563	
		UNC	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
MM1a	ANCHOR CABLE	AASHTO M30 / ASTM A741 INDEPENDENT WIRE CORE (IWRC) OR WIRE STRAND CORE (WCS), IMPROVED PLOW STEEL (IPS), 6X19, TYPE II OR IIc CLASS C ZINC COATED	
MM1b	ANCHOR CABLE	AASHTO M30 / ASTM A741 INDEPENDENT WIRE CORE (IWRC) OR WIRE STRAND CORE (WCS), IMPROVED PLOW STEEL (IPS), 6X19, TYPE II OR IIc CLASS C ZINC COATED	
MM2	ANCHOR CABLE - SWAGE FITTING	ASTM A576 GRADE 1035	
		SWAGE FITTINGS ARE TO BE FACTORY SWEDGED. WITH A BREAKING STRENGTH 40,000 LBS.	
		GALV. AASHTO M111 / ASTM A123	
		ASME B30.26 FORGED, CAST, OR DIE STAMPED WITH THE FOLLOWING INTO CONNECTION: NAME OF MANUFACTURER OR TRADEMARK OF CONNECTION'S MANUFACTURER, SIZE OR RATED LOAD, GRADE.	
MM3	WIRE ROPE CABLE CLAMPS	FF-C-450D TYPE 1 CLASS 1	3/4"
		ASTM A153 HOT DIP CLASS D	
MM4	ANCHOR CABLE - SWAGE FITTING - STUD	ASTM F3125 GRADE A325 TYPE 1 OR SAE GRADE 5 OR ASTM A449 TYPE 1 HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		UNC	
NN1	ANCHOR CABLE - NUT	ASTM A563 GRADE A	1" DIA.
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A563	
		UNC	
NN2	ANCHOR CABLE - NUT - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	1" DIA.
		GALV. AASHTO M111 / ASTM A123 OR5 GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
PP1	BEARING PLATE AT POST	ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	
		GALV. AASHTO M111 / ASTM A123	
PP2	PIPE - STEEL	ASTM A53 GALVANIZED GRADE B SCHEDULE 40	2" DIA. x 6" LONG
QQ1	FOUNDATION TUBE	ASTM A500 GRADE B	8" X 6" X 3/16"
		GALV. AASHTO M111 / ASTM A123	
QQ2	SHORT RADIUS - FOUNDATION TUBE - ANCHOR CABLE - TUBE	ASTM A500 GRADE B	DIMENSIONS 2 1/2" X 2 1/4" X 1/4" X 8"
		GALV. AASHTO M111 / ASTM A123	

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 14 B 53-1h

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
003	SHORT RADIUS - SOIL TUBE - ANCHOR CABLE - TUBE - END PLATE	ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	DIMENSIONS 2½" X 2½" X ¼"
		GALV. AASHTO M111 / ASTM A123	
004	GROUND STRUT AND YOKE - BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	⅝" DIA.
		ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	
		UNC	
005	GROUND PLATE AND YOKE - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	⅝" DIA.
		GALV. AASHTO M111 / ASTM A123 OR5 GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
006	GROUND STRUT AND YOKE - NUT	HEAVY HEX	⅝" DIA.
		UNC	
		ASTM A563 GRADE A	
		OVER TAPPED NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
SS1	SOIL PLATE	ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	
		GALV. AASHTO M111 / ASTM A123	
TT1	SOIL PLATE - BOLT	ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	⅝" DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		UNC	
TT2	SOIL PLATE - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	⅝" DIA.
		GALV. AASHTO M111 / ASTM A123 OR5 GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
TT3	SOIL PLATE - NUT	GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	⅝" DIA.
UU1	OBJECT MARKER - SHEETING	MUTCD / WISDOT OBJECT MARKER TYPE 3	PATTERN AND COLOR FOR SHEETING SHEETING TYPE FOR MARKER
		WISDOT SPEC 637 TYPE F	
		APPROVED PRODUCT LIST	
UU2	OBJECT MARKER - ALUMINUM PLATE	WISDOT SPEC 637 ALUMINUM PLATE	MATERIAL AND THICKNESS OF MATERIALS
UU3	OBJECT MARKER - SCREWS	STAINLESS SELF-TAPPING SCREWS	
VV1	FOUNDATION BACKFILL	WISDOT SPEC 614	

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S.D.D. 14 B 53-1i

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D UNIT SUPERVI
NT
FHWA

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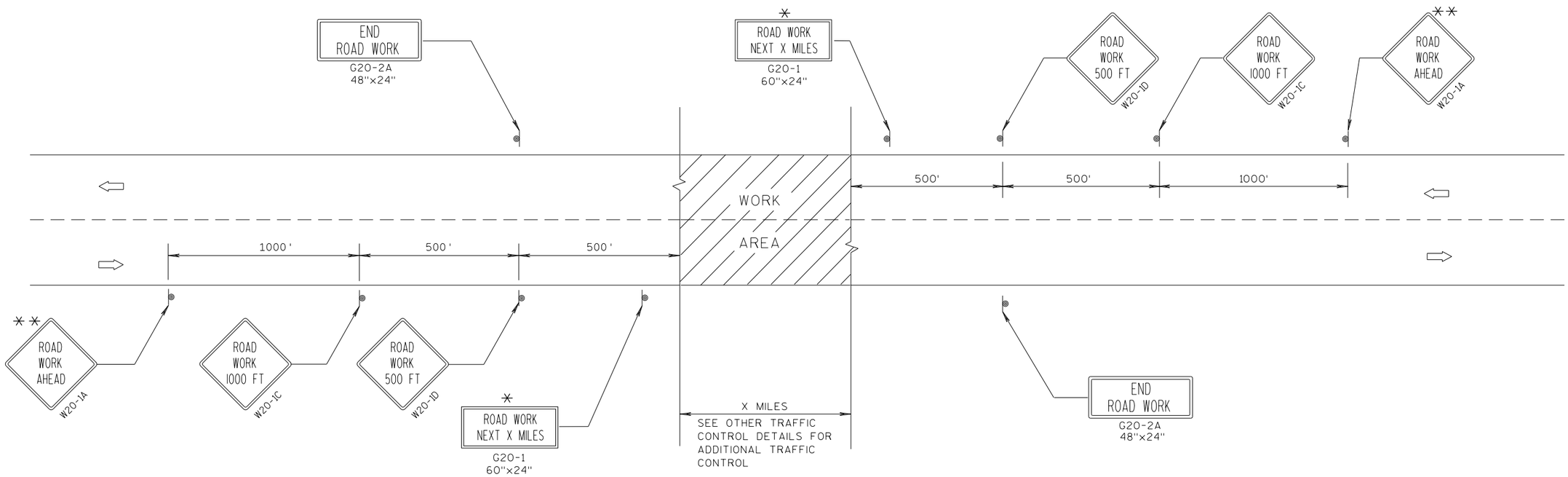
S.D.D. 14 B 53-1i

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.

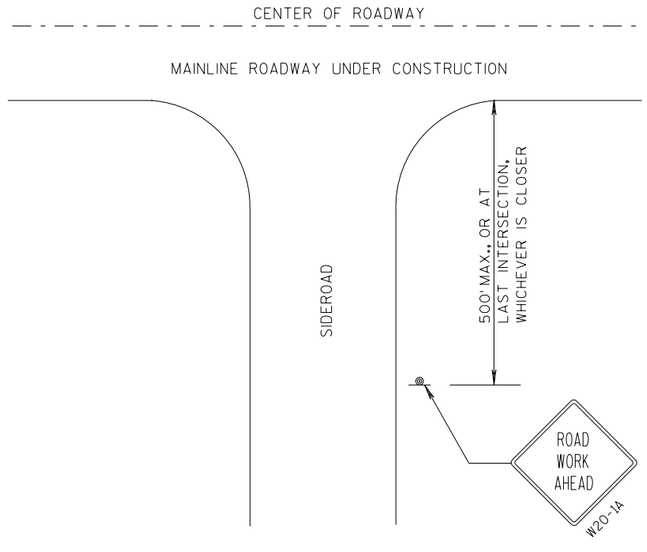
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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 W20-1A "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

7/2018
DATE

/S/ Andrew Heldtke
WORK ZONE ENGI

FHWA

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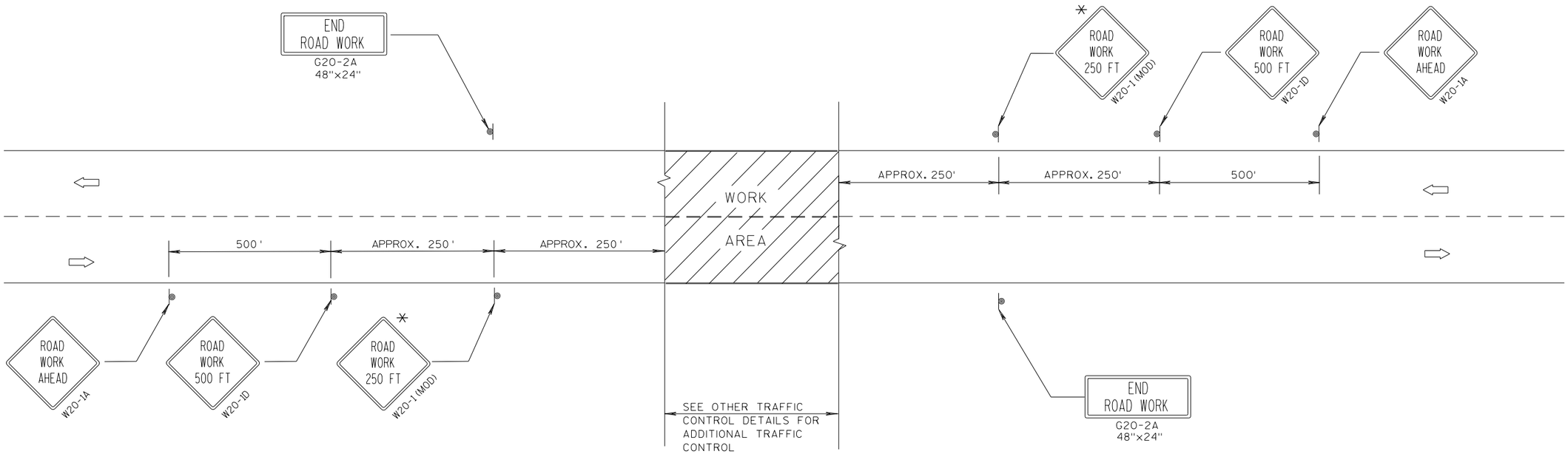
S.D.D. 15 C 4-5

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.

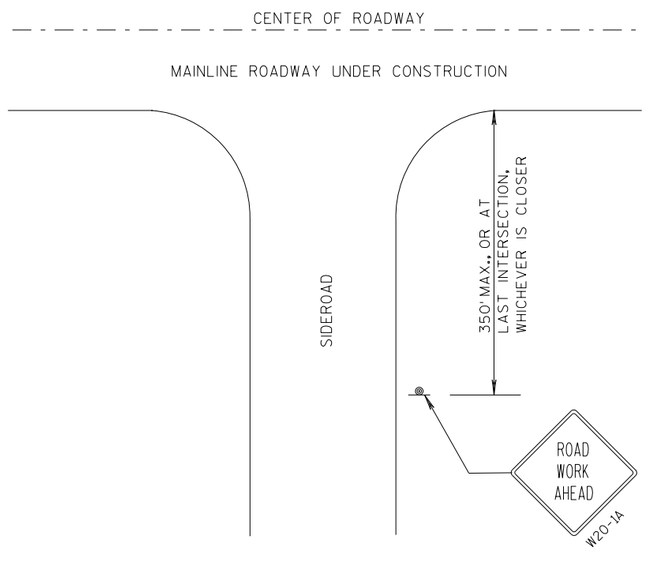
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

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.

* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FT" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



LEGEND

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

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 — DATE
/S/ Andrew Heldtke — WORK ZONE ENGI
FHWA

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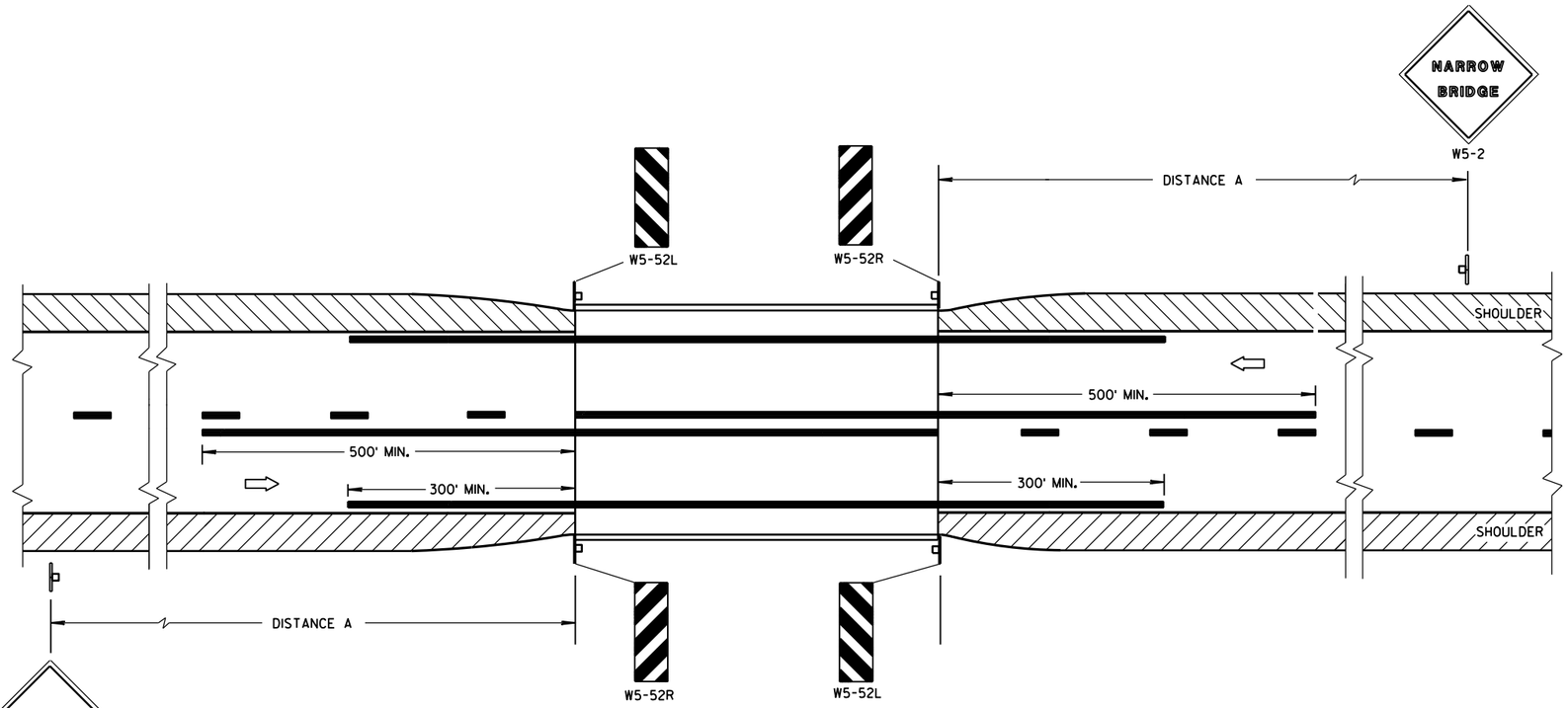
S.D.D. 15 C 5-5



SITUATION 1

WARRANTING CRITERIA:
BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET.

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	750'

GENERAL NOTES

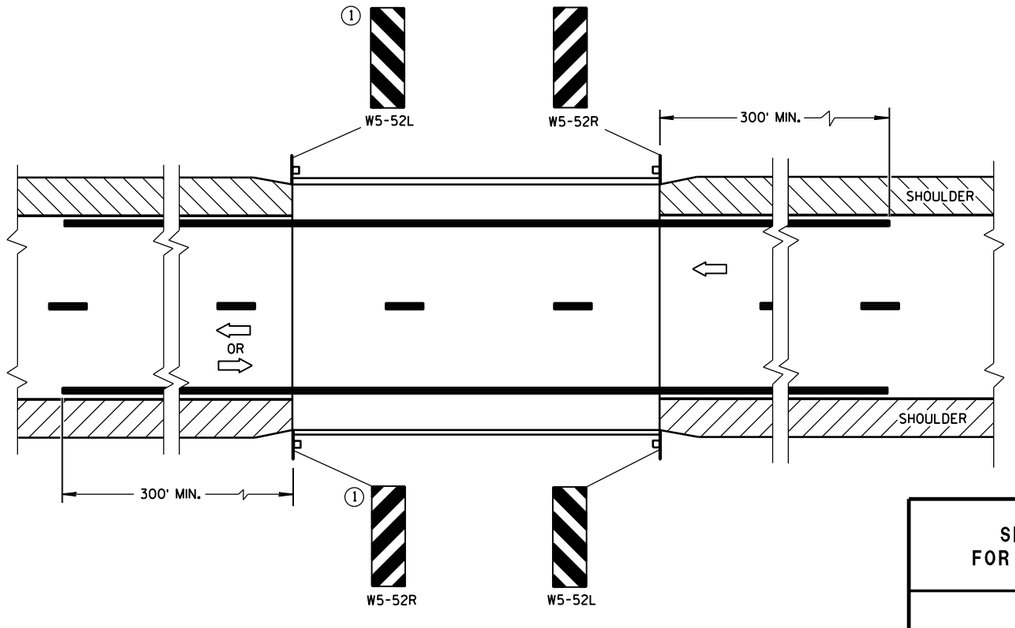
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

LOCATE W5-52 SIGN POST(S) BEHIND GUARDRAIL WHEN PRESENT.

PLACE THE EDGE OF THE W5-52 SIGN IN LINE WITH FACE OF CURB OR PARAPET.

(1) OMIT ON ONE-WAY TRAVELLED WAYS.

⇨ DIRECTION OF TRAFFIC



SITUATION 2

WARRANTING CRITERIA:

1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
2. BRIDGE SHOULDER WIDTH IS LESS THAN 6 FEET.

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR[illegible]EER
FHWA

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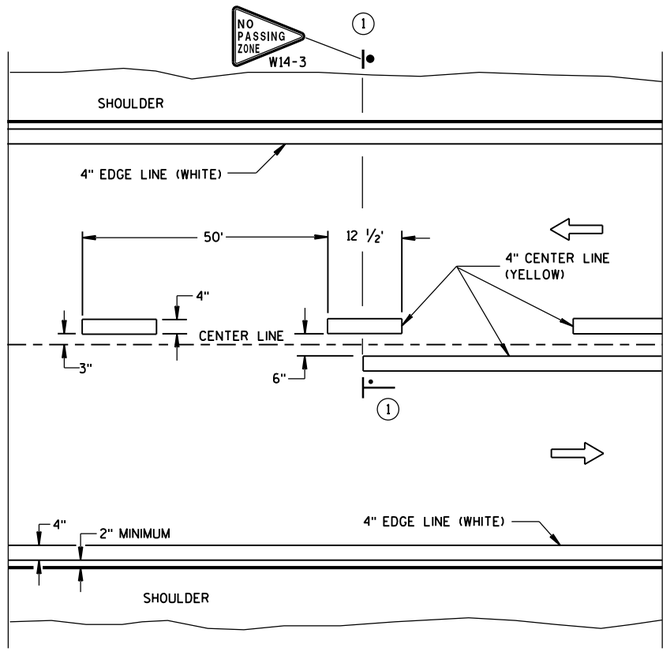
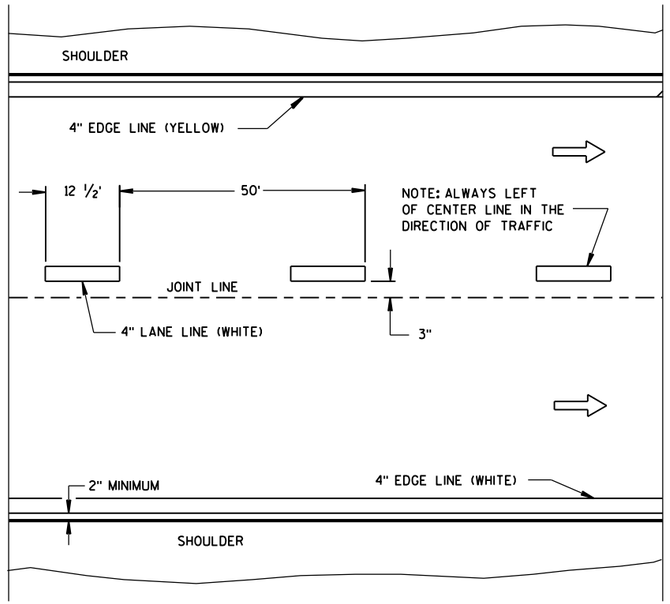
S.D.D. 15 C 6-9



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

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.

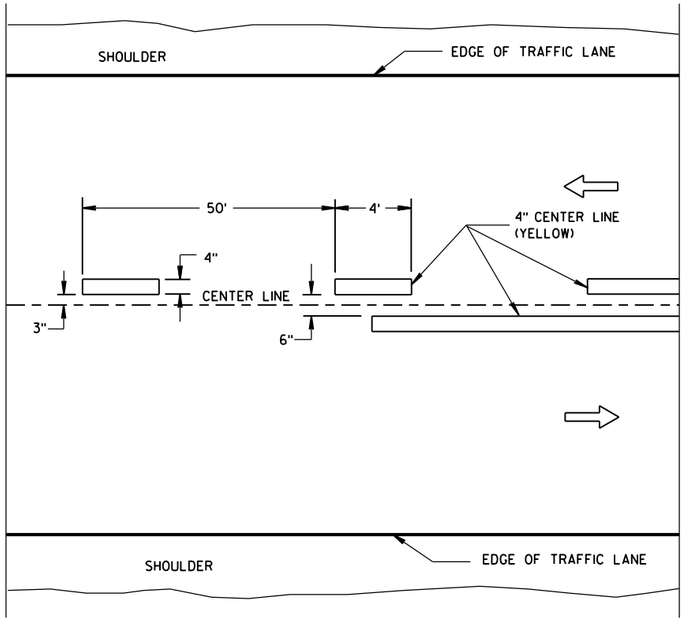
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

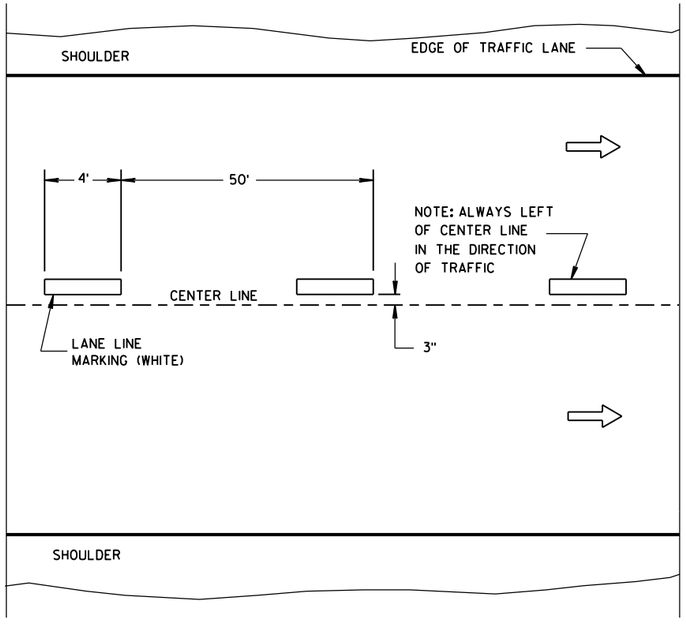
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
June 2017 (DATE)	/S/ Matthew R. Rauch (STATE SIGNING AND MARKING ENGINEER)
FHWA	

LEGEND

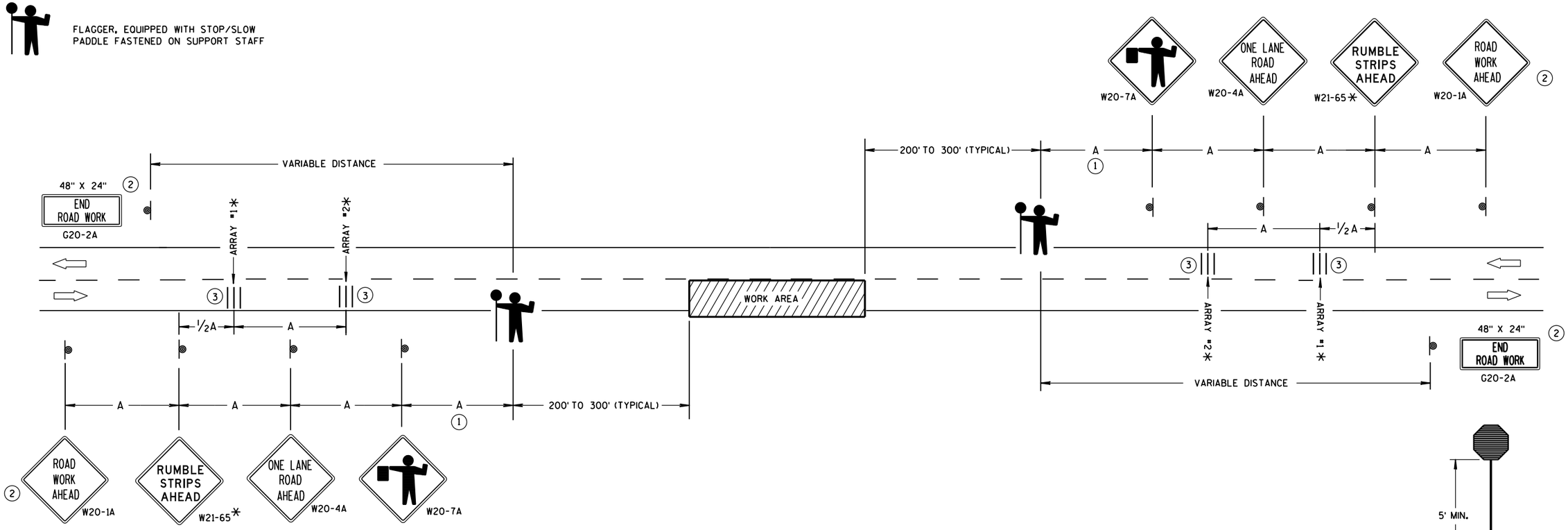
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

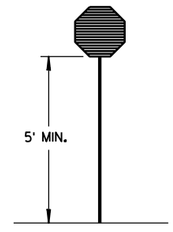
SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING A
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'

W03-4

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





STOP/SLOW PADDLE ON SUPPORT STAFF

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

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.

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

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.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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

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, REMOVE TEMPORARY RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

* UTILIZE TEMPORARY RUMBLE STRIPS WHEN FLAGGING OPERATION IS ANTICIPATED TO BE STATIONARY IN EXCESS OF TWO HOURS.

(1) FOR A MOVING WORK OPERATION, SIGNING AND TEMPORARY RUMBLE STRIPS (IF USED) SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3,500 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.

(3) EACH TEMPORARY RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Andrew Heldtke — WORK ZONE ENG
FHWA

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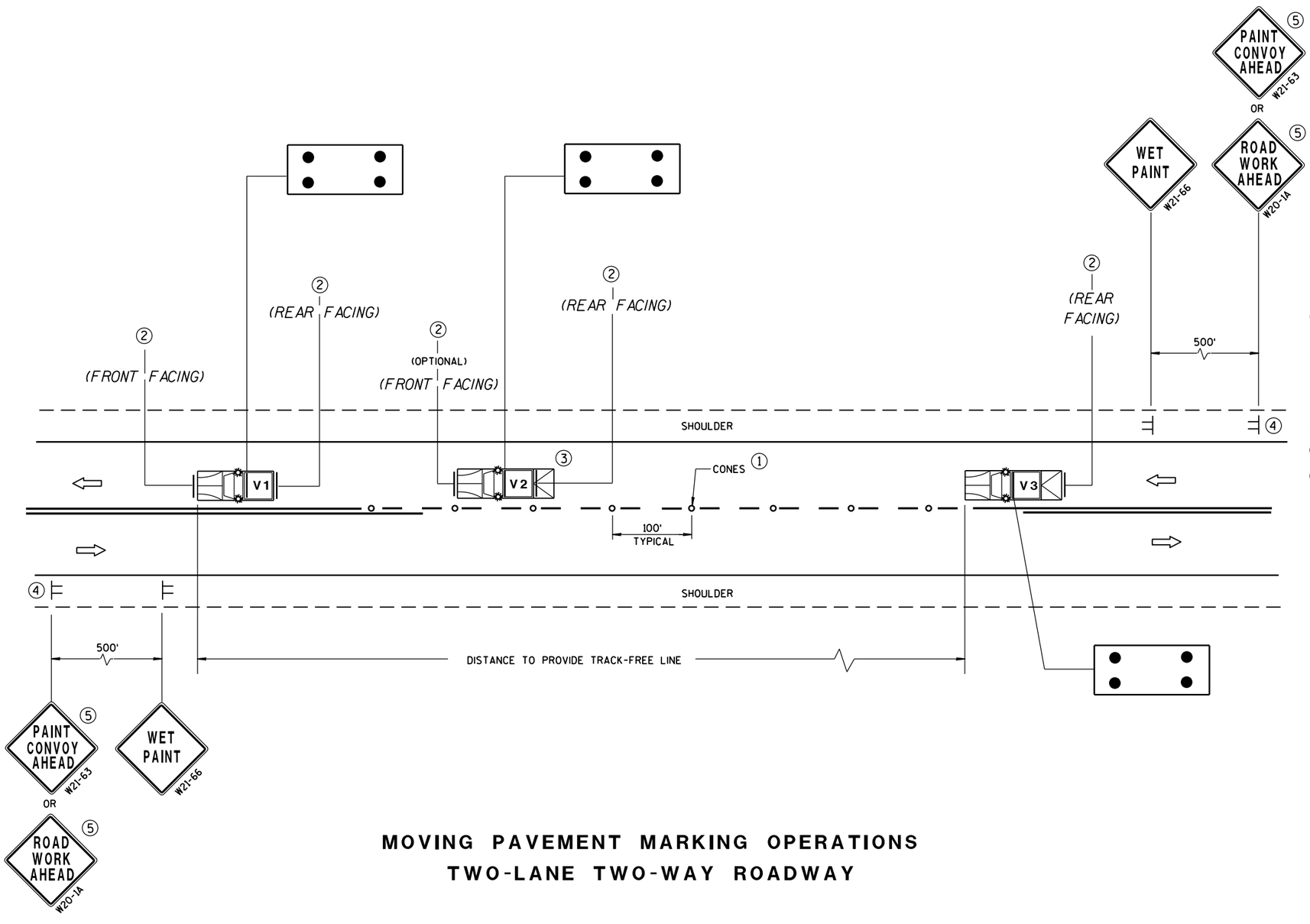
S.D.D. 15 C 12-6



MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

(1) CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

(2) USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

(3) OPTIONAL TRUCK-MOUNTED ATTENUATOR.

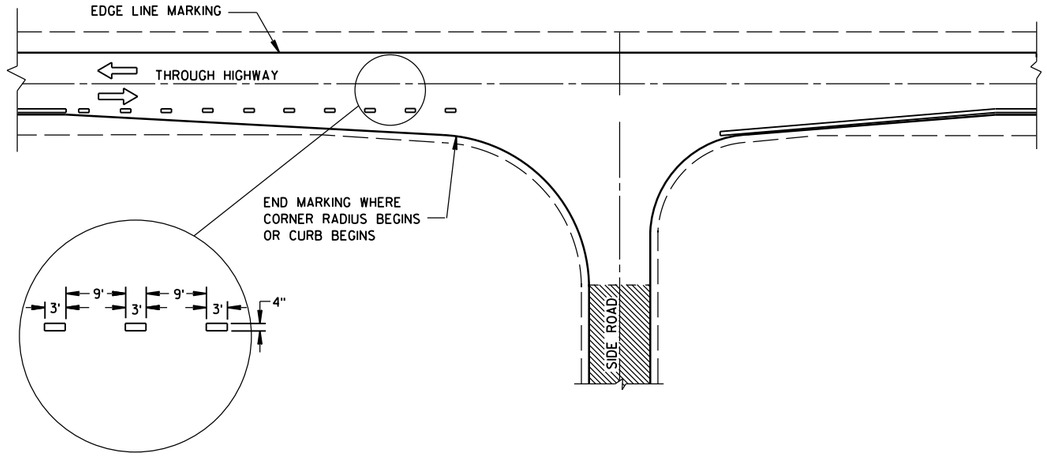
(4) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

(5) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

- **V1** LEAD VEHICLE
- **V2** SHADOW VEHICLE
- **V3** TRAIL VEHICLE WITH TMA
- **TMA** TRUCK-MOUNTED ATTENUATOR
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- CONES
- FLASHING ARROW PANEL (CAUTION)

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
Sept., 2017 DATE	/S/ Andrew Heldtke WORK ZONE ENGR
FHWA	



MINOR INTERSECTION

GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

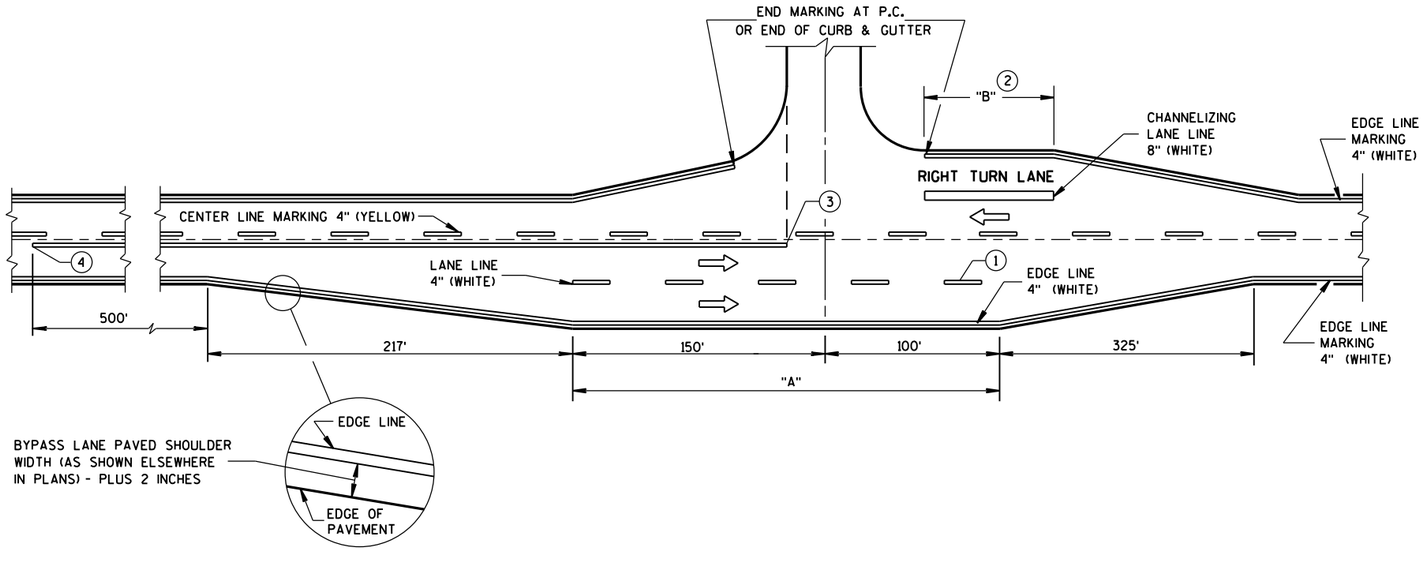
(1) WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.

(2) WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.

(3) BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.

(4) BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 15 C 35-2a

GENERAL NOTES

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

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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

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.

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

TABLE A

SHOULDER TAPER LENGTH (FEET)					BUFFER SPACE (FEET)
S \ W	4	6	8	10	
30	20	30	40	50	200
35	30	45	55	70	250
40	40	55	75	90	305
45	60	90	120	150	360
50	70	100	135	170	425
55	75	110	150	185	495

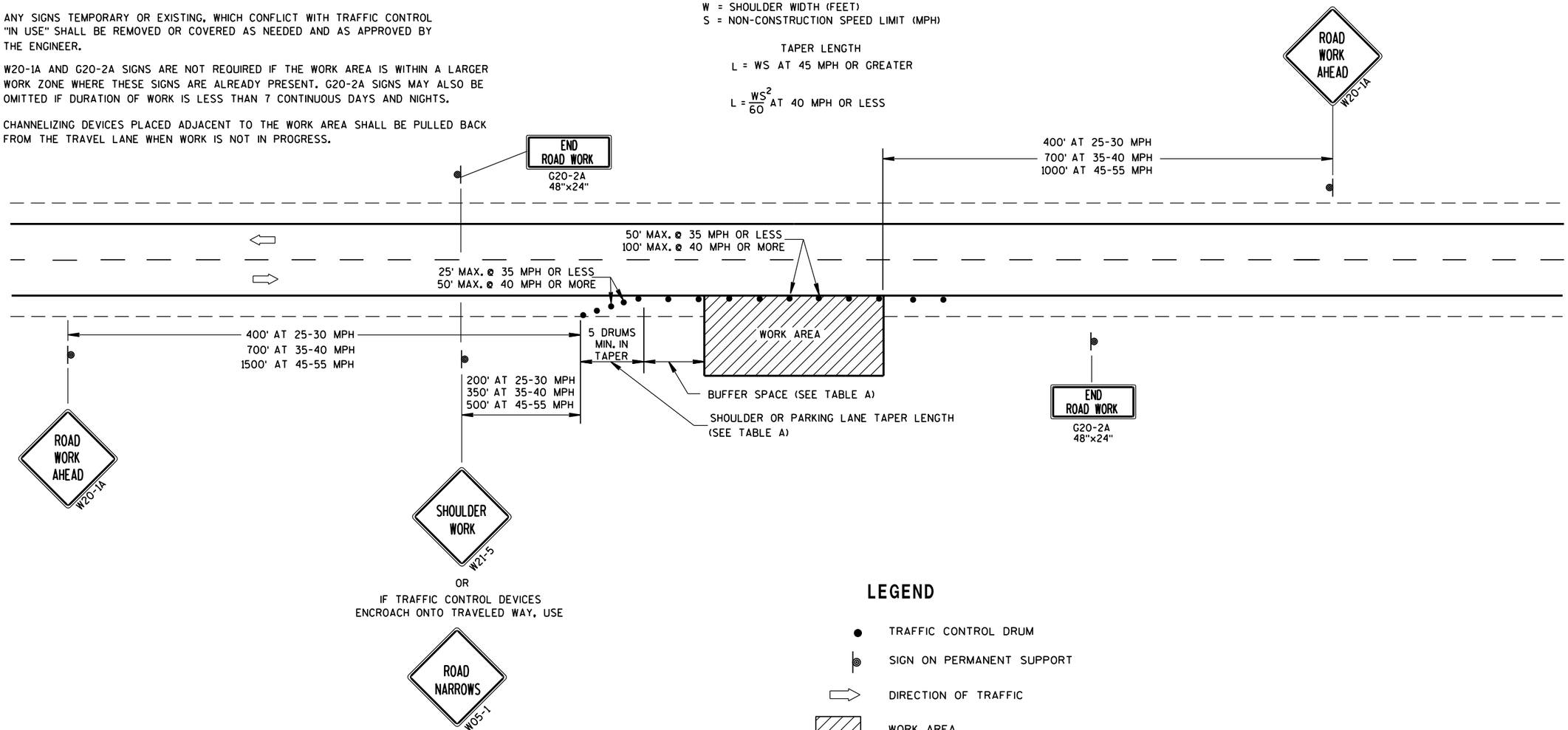
W = SHOULDER WIDTH (FEET)
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

TAPER LENGTH

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

SHOULDER TAPER LENGTH = $\frac{1}{3}L$



LEGEND

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

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

July 14, 2015 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible] SAFETY ENGI[illegible] — FIC

FHWA

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S.D.D. 15 D 28-3

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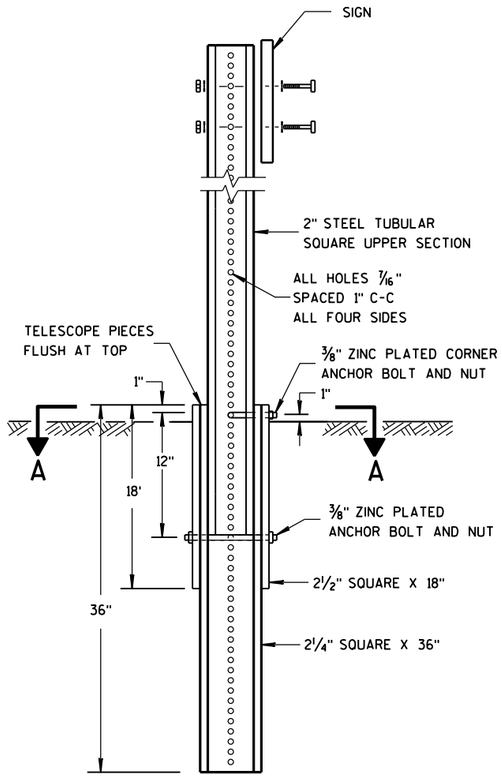
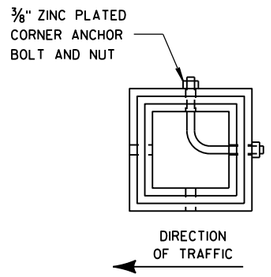
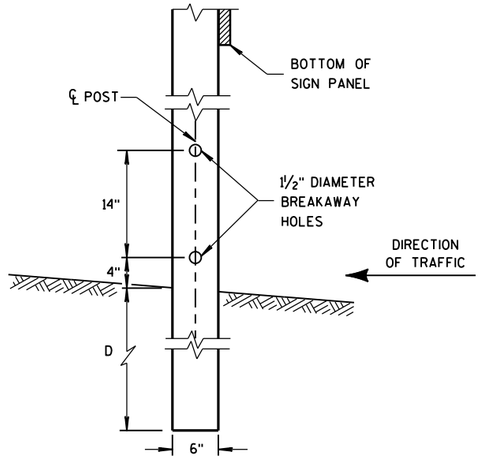


DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



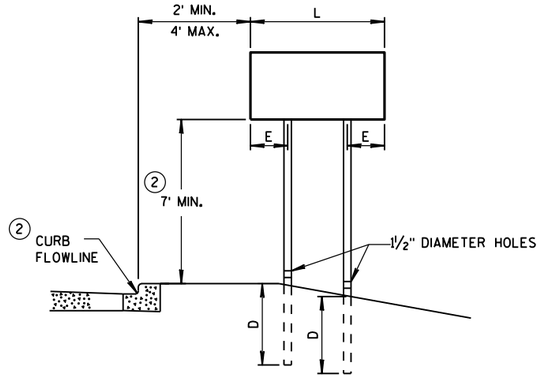
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

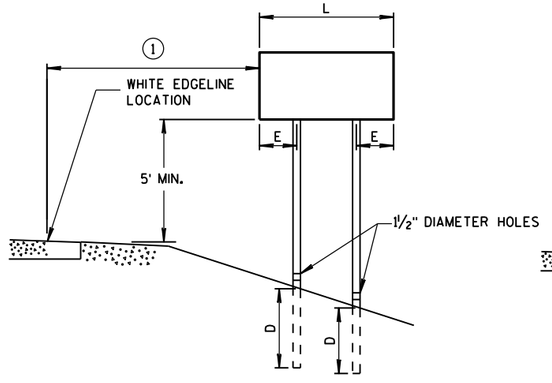
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

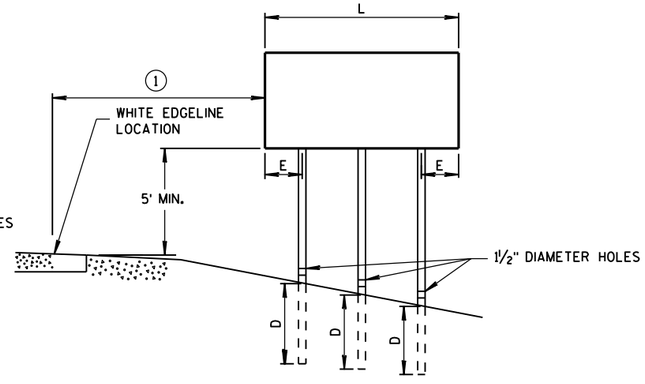
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL 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).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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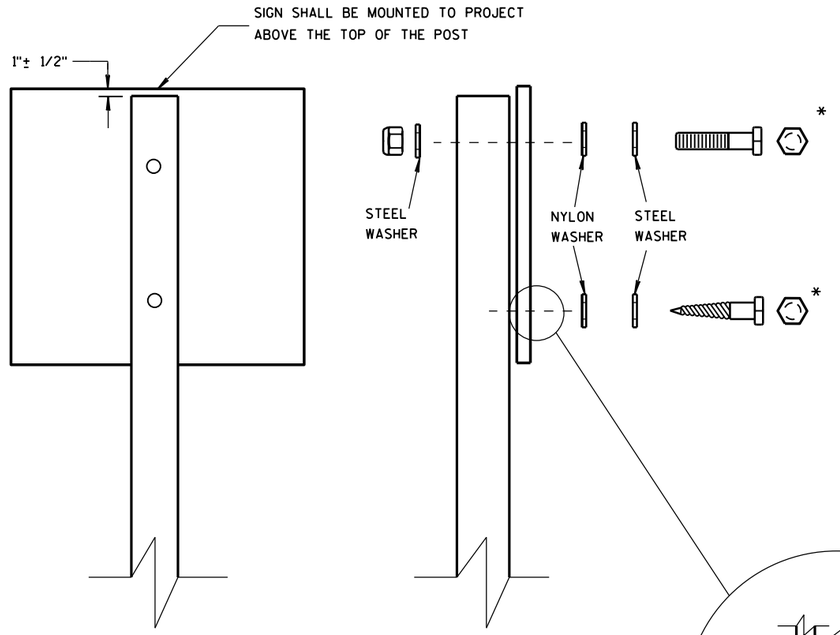
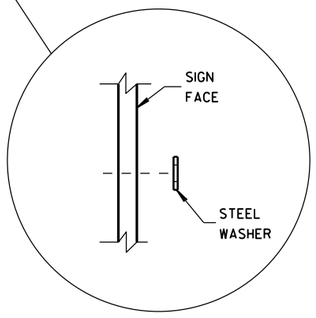
S.D.D. 15 D 38-2a





WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

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.

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

RIVETS - 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 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

* 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

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S.D.D. 15 D 38-2b

S.D.D. 15 D 38-2b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017
DATE

/S/ Andrew Heldtke
WORK ZONE ENG

FHWA

Wisconsin Department of Transportation

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