

SUP
PROJECT ID: 1180-03-74
WITH:
COUNTY: BAYFIELD

MAY 2018

ORDER OF SHEETS

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

TOTAL SHEETS = 154



DESIGN DESIGNATION 1180-03-74

A.A.D.T.	2018	=	9550
A.A.D.T.	2028	=	10,400
D.H.V.		=	1,650
D.D.		=	61/39
T.		=	12.7 %
DESIGN SPEED		=	60 MPH
ESALS		=	2,900,000

CONVENTIONAL SYMBOLS		
PLAN		PROFILE
CORPORATE LIMITS		GRADE LINE
PROPERTY LINE		ORIGINAL GROUND
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH
EXISTING RIGHT OF WAY		GRADE ELEVATION
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)
SLOPE INTERCEPT		UTILITIES
REFERENCE LINE		ELECTRIC
EXISTING CULVERT		FIBER OPTIC
PROPOSED CULVERT (Box or Pipe)		GAS
COMBUSTIBLE FLUIDS		SANITARY SEWER
MARSH AREA		STORM SEWER
WOODED OR SHRUB AREA		TELEPHONE
		WATER
		UTILITY PEDESTAL
		POWER POLE
		TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

INO - ASHLAND

USH 63 - CTH G

USH 2

BAYFIELD

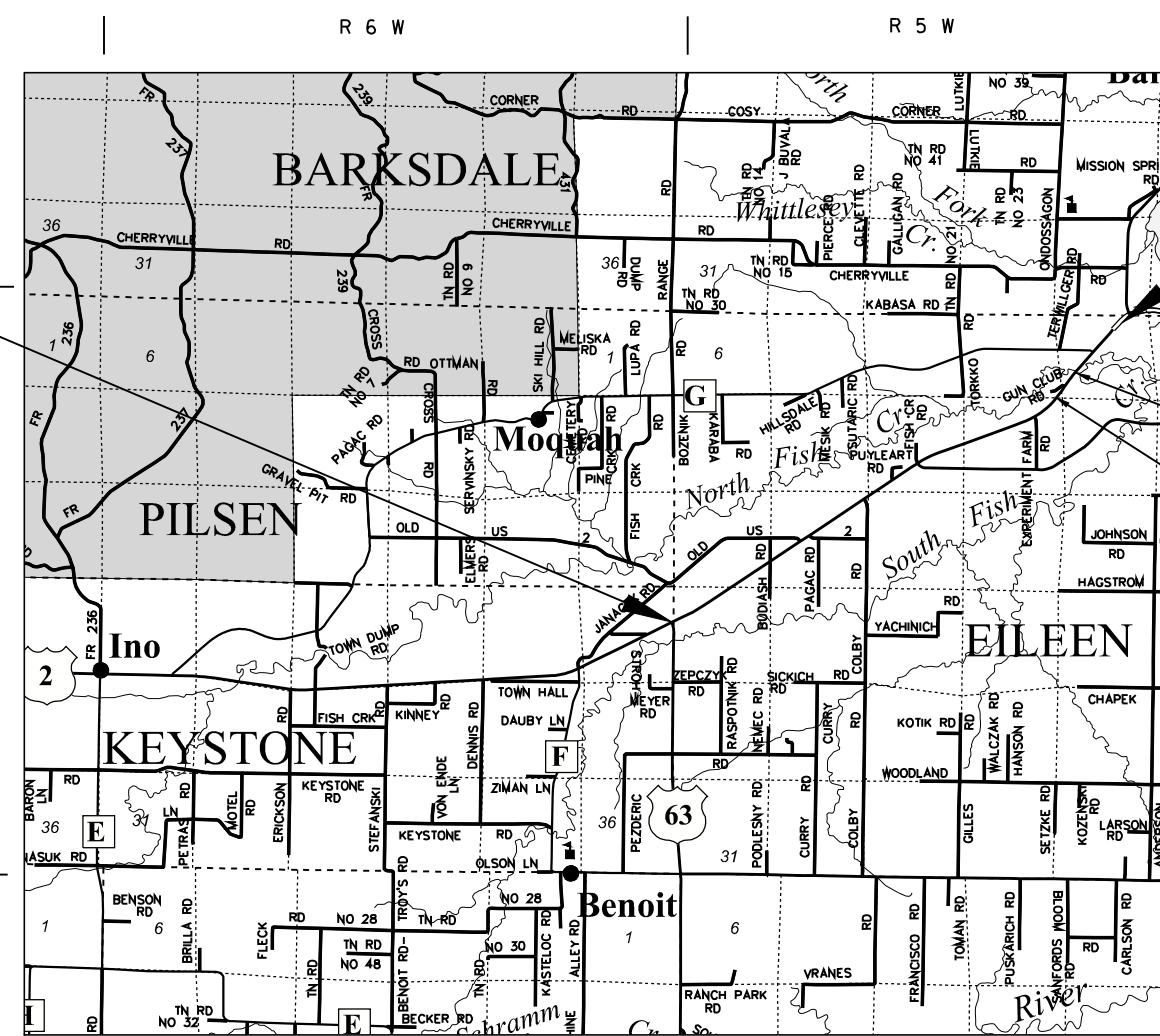
STATE PROJECT NUMBER
1180-03-74

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1180-03-74	WISC 2018255	1

BEGIN PROJECT
STA 1146+00
X = 773661.7245
Y = 439472.8572

END PROJECT
STA 1441+30
X = 799070.2558
Y = 456714.2114

EXCEPTION TO NET CL LENGTH
STA 1408+33 - 1409+71
EXCEPTION TO NET CL LENGTH
STA 1386+46 - 1389+54



LAYOUT
SCALE 0 2 MILES
TOTAL NET LENGTH OF CENTERLINE = 5.508 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, BAYFIELD COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
PREPARED BY	
Surveyor	WISDOT/EMCS
Designer	TRAVIS JENSEN
Project Manager	PHIL KEPPERS
Regional Examiner	CHRISTINE KOSKI
Regional Supervisor	DAVID OSTROWSKI
APPROVED FOR THE DEPARTMENT	
DATE: 12/11/2017	
(Signature)	

LIST OF STANDARD ABBREVIATIONS

ABUT.	ABUTMENT
AGG.	AGGREGATE
AH.	AHEAD
APPROX.	APPROXIMATE
A.E.W.	APRON ENDWALL
ASPH.	ASPHALTIC
A.D.T.	AVERAGE DAILY TRAFFIC
AZ.	AZIMUTH
BK.	BACK
BEG.	BEGIN
B.M.	BENCH MARK
C/L	CENTER LINE
CONC.	CONCRETE
CONST.	CONSTRUCTION
CO.	COUNTY
C.T.H.	COUNTY TRUNK HIGHWAY
X-SEC.	CROSS SECTION
CR.	CRUSHED
CFS	CUBIC FEET/SECOND
C.Y., CU. YD.	CUBIC YARD
CULV.	CULVERT
C.P.	CULVERT PIPE
D.O.T.	DEPARTMENT OF TRANSPORTATION
D.H.V.	DESIGN HOUR VOLUME
DIA.	DIAMETER
D.	DIRECTIONAL DISTRIBUTION
DISCH. OR DIS.	DISCHARGE
EA.	EACH
ELECT.	ELECTRIC
EL. OR ELEV.	ELEVATION
EMB.	EMBANKMENT
E.B.S.	EXCAVATION BELOW SUBGRADE
EXIST.	EXISTING
FERT.	FERTILIZE
F.E.	FIELD ENTRANCE
FIN.	FINISHED
FT.	FOOT
F.L.	FLOW LINE
GA.	GAUGE
HORIZ.	HORIZONTAL
CWT.	HUNDREDWEIGHT
INL.	INLET
LT.	LEFT
L.H.F.	LEFT-HAND FORWARD
LIN.	LINEAR
LIN. FT.	LINEAR FOOT
L.S.	LUMP SUM
MAX.	MAXIMUM
MI.	MILE
MISC.	MISCELLANEOUS
N.E.	NORTH EAST
N.W.	NORTH WEST
PAV'T	PAVEMENT
P.C.	POINT OF CURVATURE
P.I.	POINT OF INTERSECTION
P.T.	POINT OF TANGENCY
P.O.T.	POINT ON TANGENT
LB.	POUND
P.E.	PRIVATE ENTRANCE
PROJ.	PROJECT
R.	RANGE
REQ'D	REQUIRED
RT.	RIGHT
R.H.F.	RIGHT-HAND FORWARD
R/W	RIGHT OF WAY
RD.	ROAD
SHR.	SHRINKAGE
SL.	SLOPE
STD.	STANDARD
S.D.D.	STANDARD DETAIL DRAWINGS
S.T.H.	STATE TRUNK HIGHWAY
STA.	STATION
S.P.P.A.	STRUCTURAL PLATE PIPE ARCH
STRUCT.	STRUCTURE
SURF.	SURFACE
TEL.	TELEPHONE
TN.	TOWN
T.	TRUCKS (PERCENT OF)
UNCL.	UNCLASSIFIED
U.G.	UNDERGROUND
V.	VELOCITY OR DESIGN SPEED
V.C.	VERTICAL CURVE

GENERAL NOTES

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

SOME UTILITY LOCATIONS HAVE CHANGED. THE CONTRACTOR SHALL LOCATE UTILITIES PRIOR TO ANY EXCAVATION.

WHEN THE QUANTITY OF BASE AGG. DENSE AND ASPHALTIC PAVEMENT ARE MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS AS SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND UPON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER IN THE FIELD.

CURVE DATA SHOWN ON THE PLAN IS "ARC DEFINITION".

SURVEY IS REFRENCED TO THE BAYFIELD COUNTY COORDINATE SYSTEM, WISCONSIN: NAD83 (2011); NAVD88 (GEOID 12A)(2012)

ALL DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, SHALL BE SEEDED, AND STABILIZED WITHIN 7 WORKING DAYS.

CROSS SLOPES AS SHOWN ON THE TYPICAL SECTION WILL VARY AT THE INTERSECTIONS.

NO TREE SHALL BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.

EXPANSION JOINTS TO BE CONSTRUCTED AT ALL RADIUS POINTS IN CURB AND GUTTER OR AT LOCATIONS SHOWN ON THE PLAN.

ALL RADII ARE MEASURED TO EDGE OF PAVEMENT UNLESS OTHERWISE SHOWN OR NOTED ON THE PLAN.

CROSS SECTION ELEVATIONS ARE BASED ON THE AVAILABLE T.I.N. MODEL AND MAY NEED VERIFICATION IN THE FIELD. INLET AND INVERT ELEVATIONS ARE BASED ON FIELD SURVEY DATA.



UTILITIES

BAYFIELD ELEC. COOP
68460 DISTRICT ST.
IRON RIVER, WI 54847-0068
ATTN: GARY TARASEWICZ
(715)372-4287/413-0516
gary.tarasewicz@bayfieldelectric.com

ENBRIDGE ENERGY
501 EASY ST., P.O. BOX 38
IRONWOOD, MI 49938
ATTN: SCOTT PAQUETTE
PHONE: (906) 399-8253
scott.paquette@enbridge.com

GREAT LAKES GAS (GAS/PETROL)
69720 FOREST ROAD 241
IRON RIVER, WI 54847
ATTN: TONY MELASECCA
(248) 205-7567
anthony_melasecca@transcanada.com

XCEL ENERGY-ELECTRICITY
2400 FARM ROAD
ASHLAND, WI 54806
ATTN: SCOTT FROEMMING
PHONE: (715) 682-6927
scott.s.froemming@xcelenergy.com

NORTHERN NATURAL GAS (GAS/PETROLEUM)
1995 NORTHERN NATURAL GAS RD
CARLTON, MN 55718
ATTN: JEFF TELKER
PHONE: (402) 530-3466
jeff.telker@nngco.com

NORTHERN GREAT LAKES VISITOR CENTER
29270 CTH G
ASHLAND, WI 54806
PHONE: (715) 685-9983

DESIGN CONTACT
MICHAEL PEARSON
WISDOT NORTHWEST REGION
1701 N. 4TH STREET
SUPERIOR WI, 54880
PHONE: (715) 395-3024

BAYFIELD COUNTY HIGHWAY COMMISSIONER
TOM TOEPFER
311 S. FIRST AVE. E.
P.O.BOX 428
WASHBURN, WI 54891
PHONE: (715) 373-6116

TOWN OF PILSEN
CHAIRMAN: GARY JOHANIK
69595 MOQUAH SKI HILL ROAD
ASHLAND, WI 54806-6642
PHONE: (715) 746-2911

CENTURYLINK
120 E. MAIN STREET
ASHLAND, WI 54806
ATTN: MARK SCRIBNER
(715)682-0020/492-7976
mark.scribner@centurylink.com

CHARTER COMMUNICATIONS/SPECTRUM
2304 MAIN ST.
RICE LAKE, WI 54868
ATTN: TOM HAASE
PHONE: (715)719-0564/418-9317
tom.haase@charter.com

MERIT NETWORK, INC. (COMM)
SUITE 200
1000 OAKBROOK DR.
ANN ARBOR, MI 48104
ATTN: CARLOS RAMOS
PHONE: (734) 527-5767
cramosjr@merit.edu

XCEL ENERGY-ELEC. TRANSMISSION
414 NICOLLET MALL
MINNEAPOLIS, MN 55401
ATTN: BRUCE ZEMKE
PHONE: (612)330-7815
bruce.m.zemke@xcelenergy.com

XCEL (GAS/PETROLIUM)
2400 FARM ROAD
ASHLAND, WI 54806
ATTN: SCOTT FROEMMING
PHONE: (715) 682-6927
scott.s.froemming@xcelenergy.com

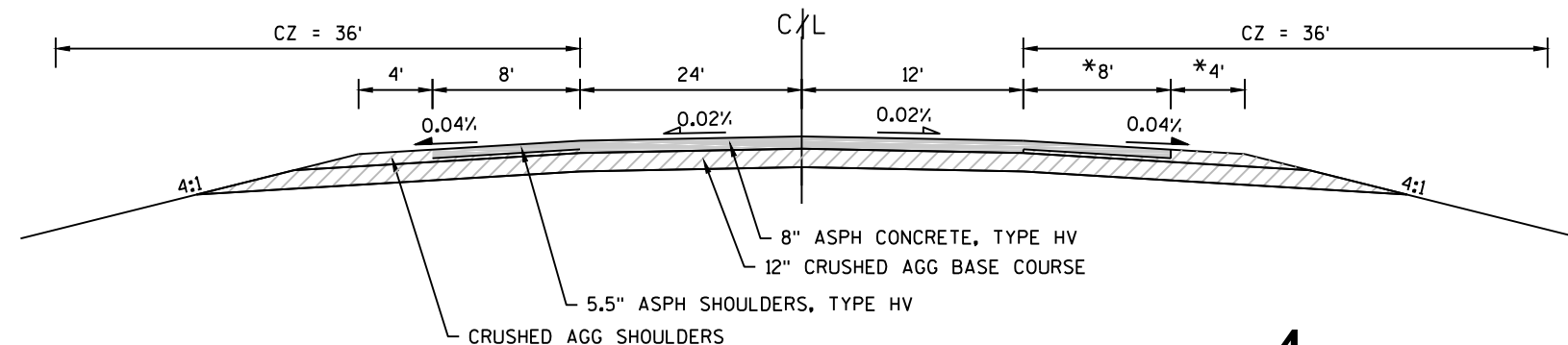
NORVADO (COMMUNICATION)
43750 USH 63
P.O.BOX 67
CABLE, WI 54821
ATTN: GUY FOLSOM
PHONE: (715) 580-8123

TOWN OF EILEEN
CHAIRMAN: MARTY MILANOWSKI
66040 USH 2
MASON, WI 54806
PHONE: (715) 682-2484

DNR CONTACT
SHAWN HASSELEU
WDNR - NORTHWEST DISTRICT HEADQUARTERS
810 WEST MAPLE STREET
SPOONER, WI 54801
PHONE: (715) 635-4071

2

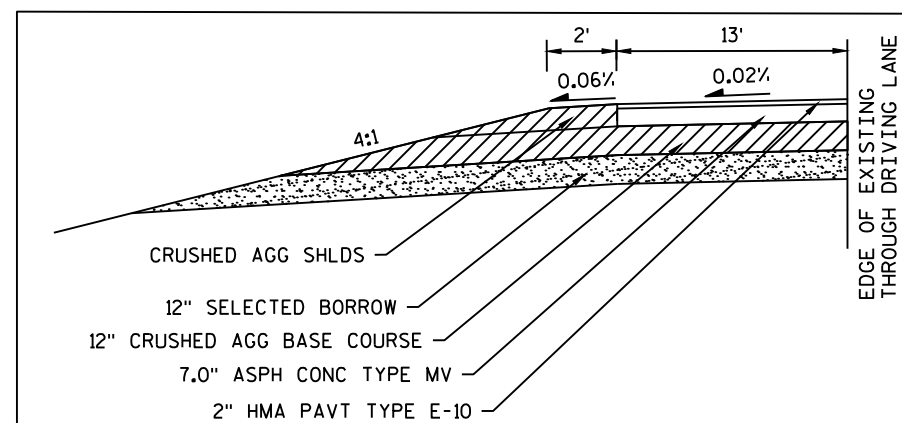
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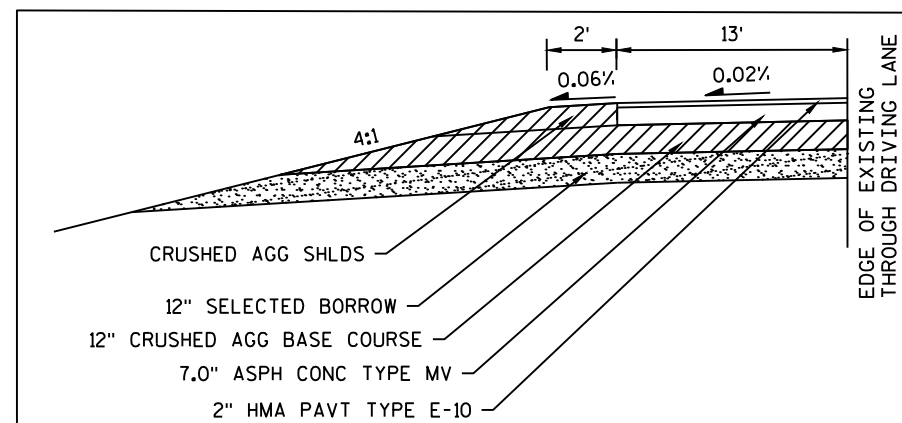
USH 2 TYPICAL EXISTING SECTION

STA: 1292+38 - 1296+62
1296+62 - 1298+00 *TAPER RT
1298+00 - 1302+00 *RT TURN LANE

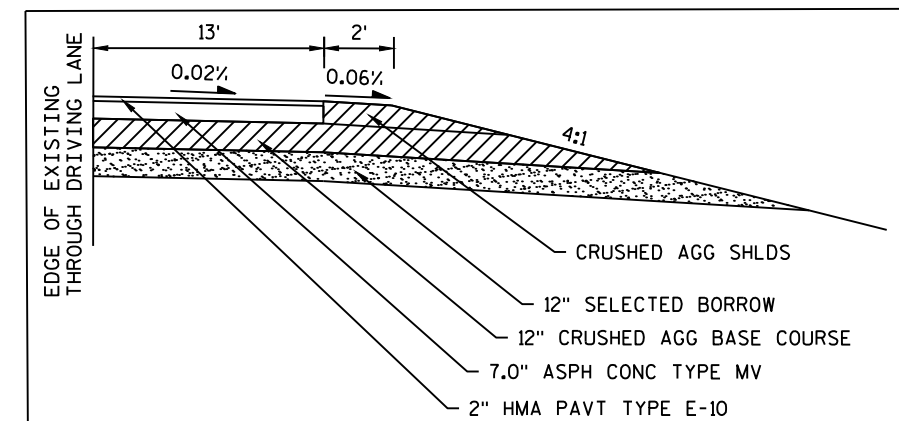
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USH 2 TYPICAL EXISTING SECTION
FOR TURNING LANE

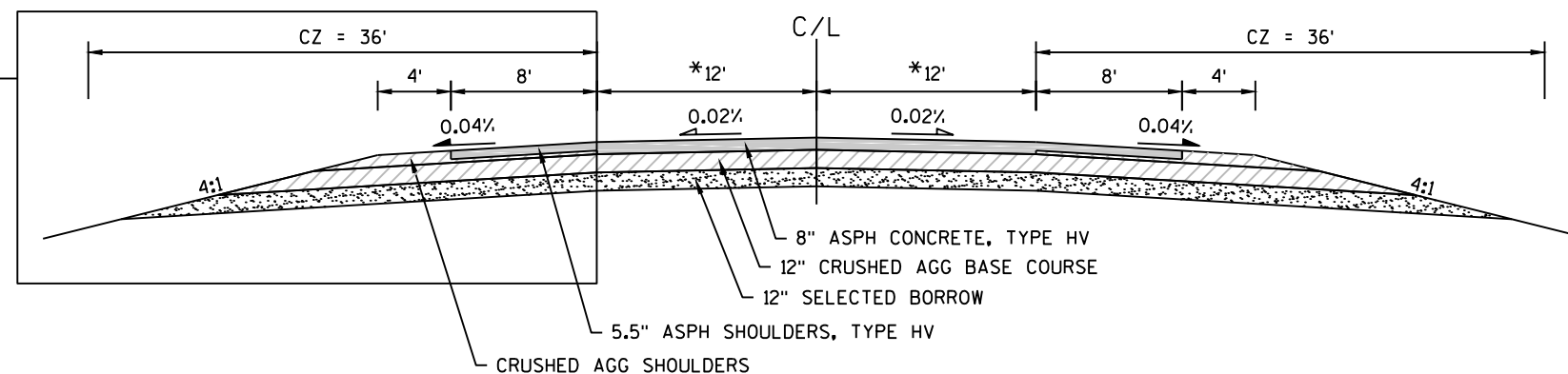
STA: 1302+00 - 1305+00 RT

USH 2 TYPICAL EXISTING SECTION
FOR BYPASS LANE

STA: 1146+32 - 1146+52
1146+52 - 1148+39 TAPER LT

USH 2 TYPICAL EXISTING SECTION
FOR BYPASS LANE

STA: 1146+00 - 1146+32

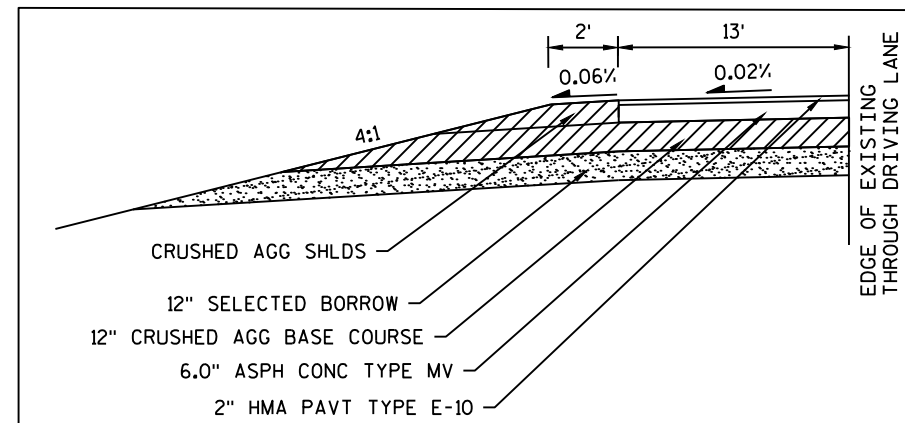


USH 2 TYPICAL EXISTING SECTION

STA: 1148+39 - 1168+00 1286+49 - 1292+38 *24' LT, TAPER RT
1302+00 - 1322+62 *24' LT 1322+62 - 1327+72 RT *TAPER LT
1327+72 - 1365+00

2

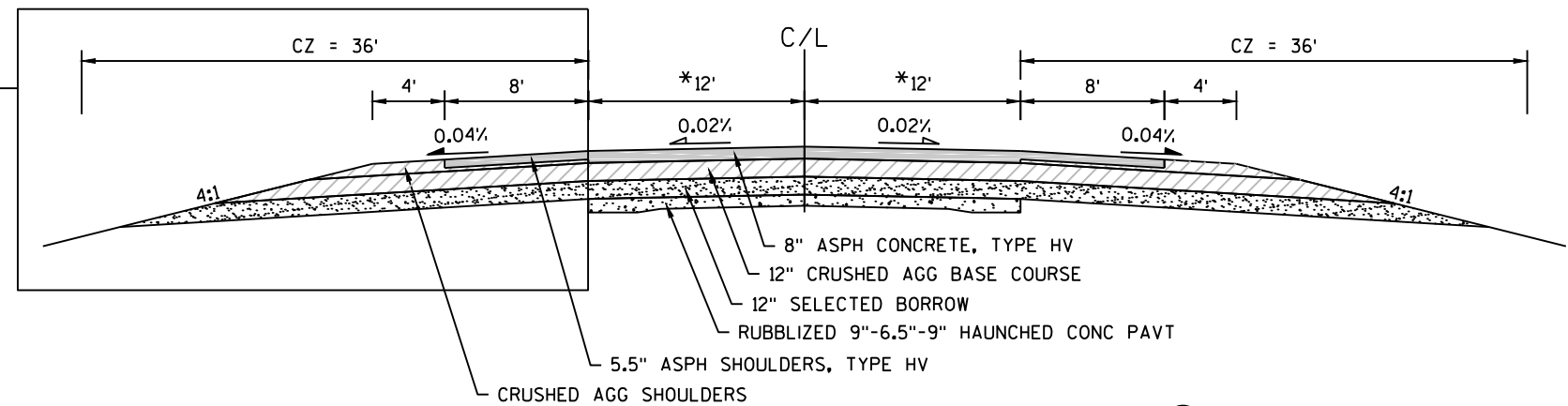
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USH 2 TYPICAL EXISTING SECTION
FOR TURN LANE

STA: 1226+54 - 1227+57 TAPER LT
1228+97 - 1229+75 LT
1229+75 - 1231+70 TAPER LT
1231+08 - 1232+63 TAPER RT
1232+63 - 1233+62 RT
1266+09 - 1267+54 TAPER RT
1267+54 - 1269+66 RT

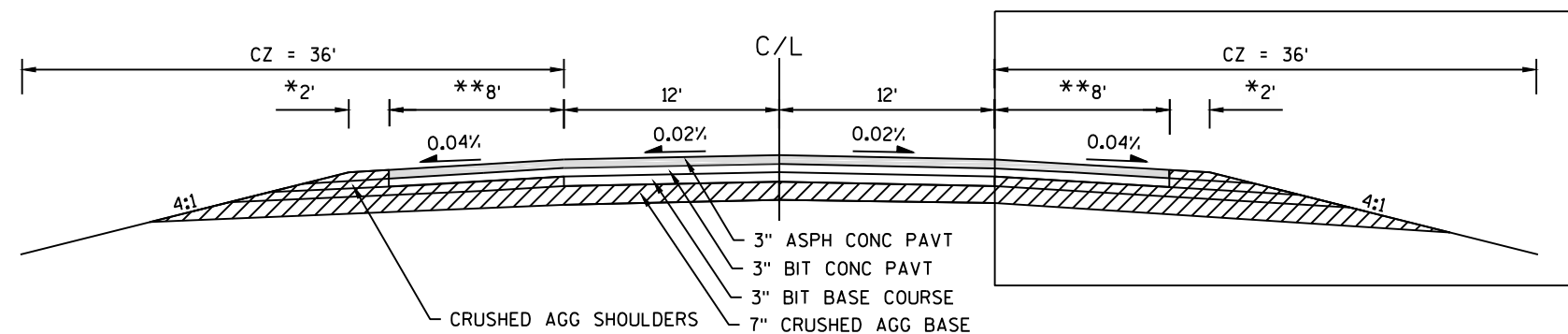
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USH 2 TYPICAL EXISTING SECTION

STA: 1168+00 - 1215+32
1215+32 - 1220+38 *TAPER RT
1220+38 - 1228+97 *24' RT
1228+97 - 1254+98 *24' RT
1254+98 - 1262+00 *TAPER LT, 24' RT
1262+00 - 1286+49 *24' LT, 24' RT

3

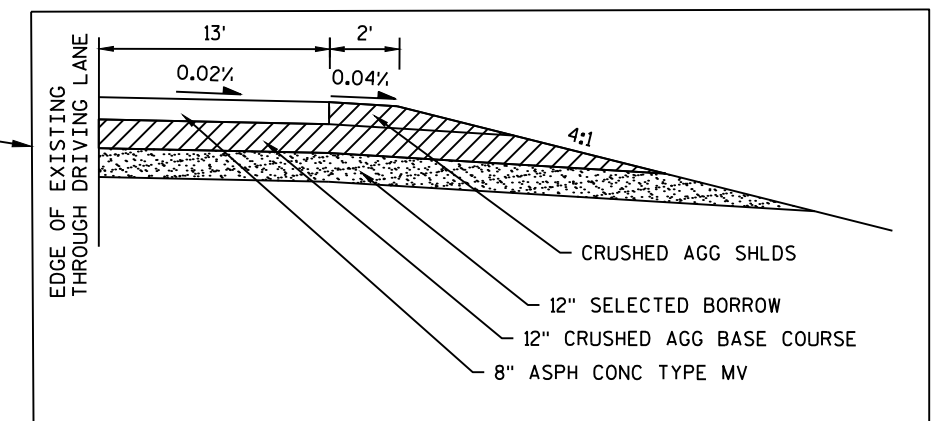


* 0-2'
**8' OR 10' - 10' IF BG IS PRESENT

USH 2 TYPICAL EXISTING SECTION

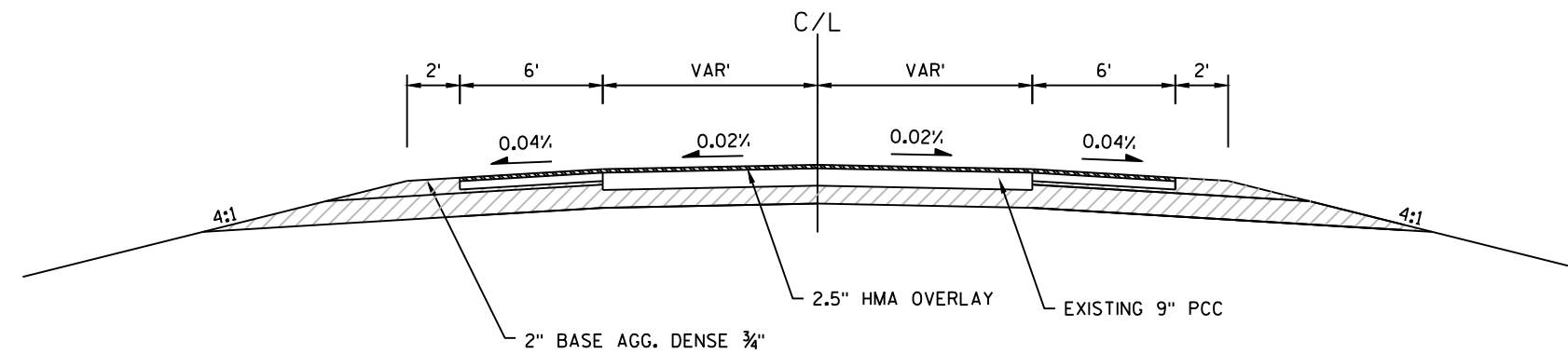
STA: 1365+00 - 1371+85
1376+88 - 1386+46
1389+54 - 1408+33
1409+71 - 1421+00
1425+32 - 1434+00

5



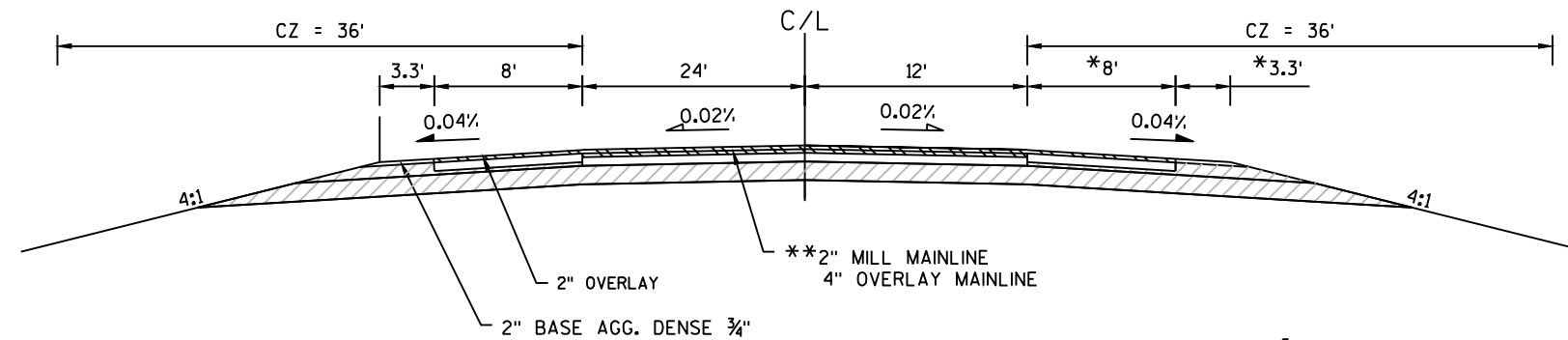
USH 2 TYPICAL EXISTING SECTION
FOR BYPASS LANE

STA: 1371+85 - 1374+08 TAPER LT
1374+08 - 1376+26 LT
1376+26 - 1376+88 TAPER LT
1421+00 - 1422+00 TAPER RT
1422+00 - 1423+92 RT
1423+92 - 1425+32 TAPER RT



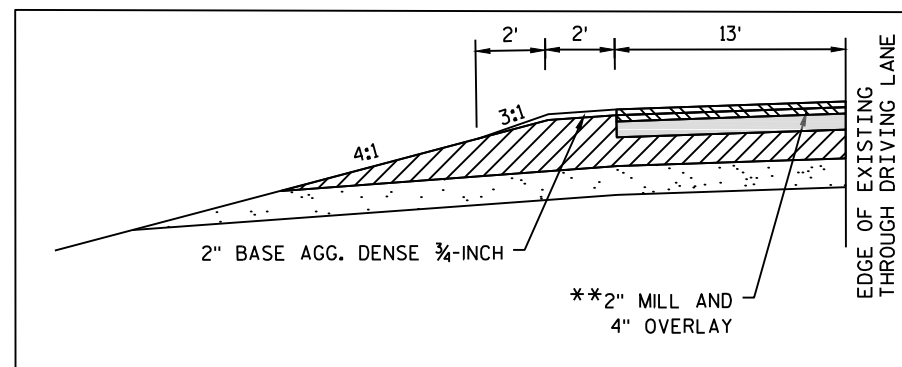
USH 2 TYPICAL EXISTING SECTION
STA: 1434+68 - 1441+30

6



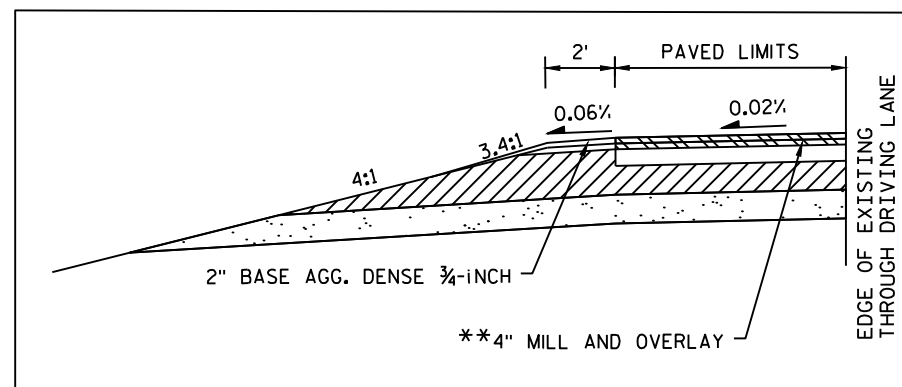
USH 2 TYPICAL FINISHED SECTION

STA: 1292+38 - 1296+62
1296+62 - 1298+00 *TAPER RT
1298+00 - 1305+00 *RT TURN LANE



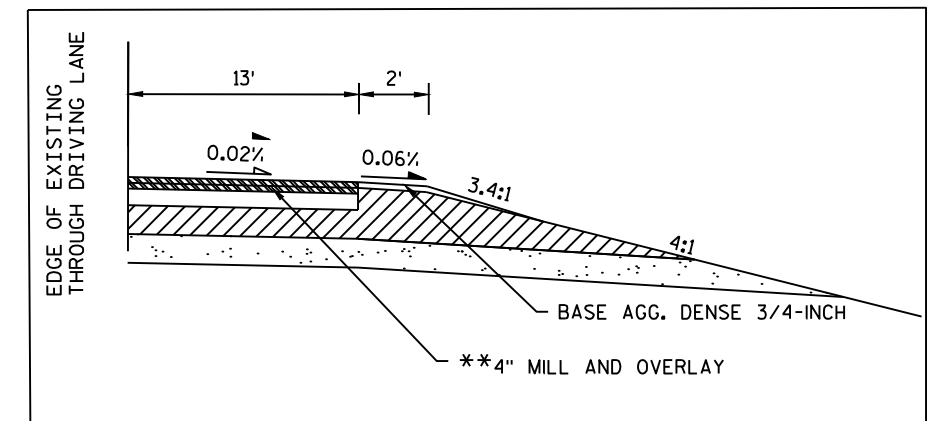
USH 2 TYPICAL FINISHED SECTION FOR TURNING LANE

STA: 1296+62 - 1305+00 RT



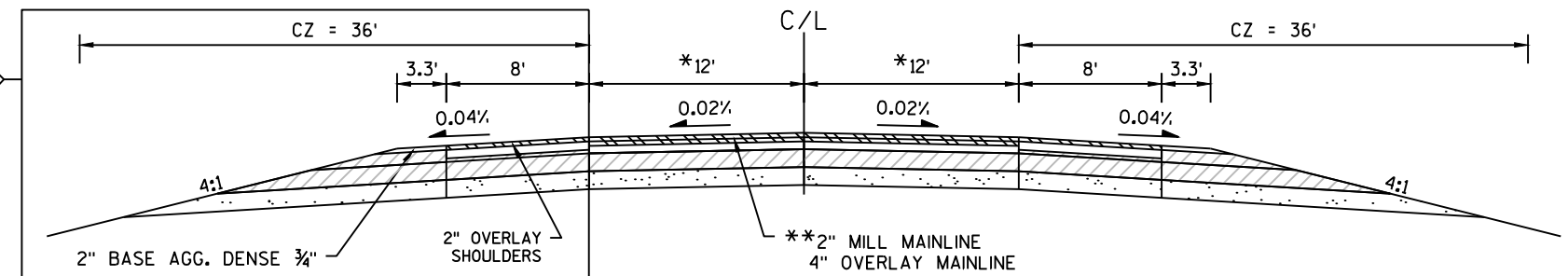
USH 2 TYPICAL FINISHED SECTION FOR BYPASS LANE

STA: 1146+00 - 1148+39



USH 2 TYPICAL FINISHED SECTION FOR BYPASS LANE

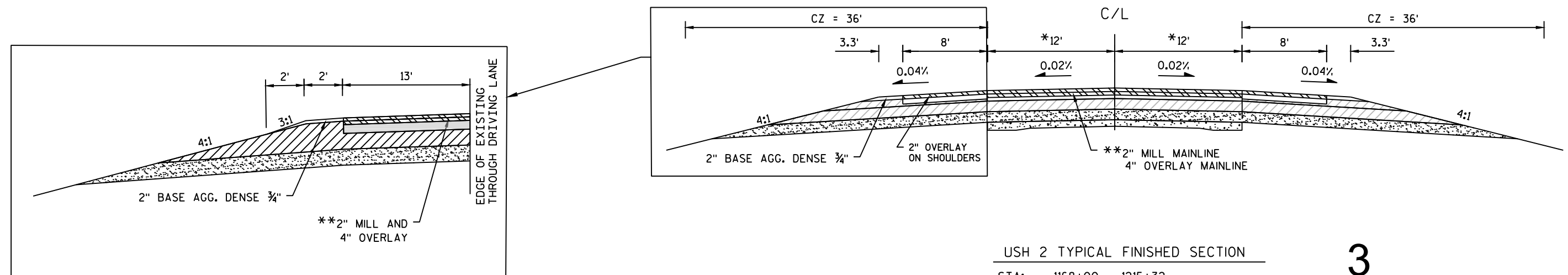
STA: 1146+00 - 1146+32



USH 2 TYPICAL FINISHED SECTION

STA: 1148+39 - 1168+00
1302+00 - 1322+62 *24' LT
1327+72 - 1365+00

1286+49 - 1292+38 *24' LT, TAPER RT
1322+62 - 1327+72 RT *TAPER LT



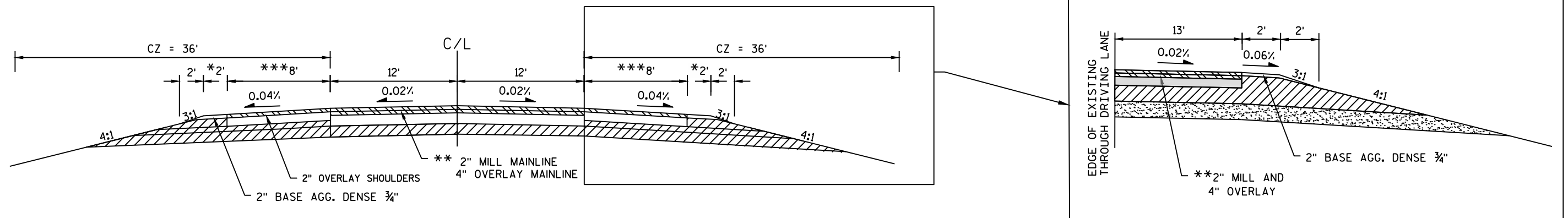
USH 2 TYPICAL FINISHED SECTION FOR TURN LANE

STA: 1226+54 - 1227+57 TAPER LT
1228+97 - 1229+75 LT
1229+75 - 1231+70 TAPER LT
1231+08 - 1232+63 TAPER RT
1232+63 - 1233+62 RT
1266+09 - 1267+54 TAPER RT
1267+54 - 1269+66 RT

USH 2 TYPICAL FINISHED SECTION

STA: 1168+00 - 1215+32
1215+32 - 1220+38 *TAPER RT
1220+38 - 1228+97 *24' RT
1228+97 - 1254+98 *24' RT
1254+98 - 1262+00 *TAPER LT, 24' RT
1262+00 - 1286+49 *24' LT, 24' RT

3



USH 2 TYPICAL FINISHED SECTION

STA: 1365+00 - 1371+85
1376+88 - 1386+46
1389+54 - 1408+33
1409+71 - 1421+00
1425+32 - 1434+00

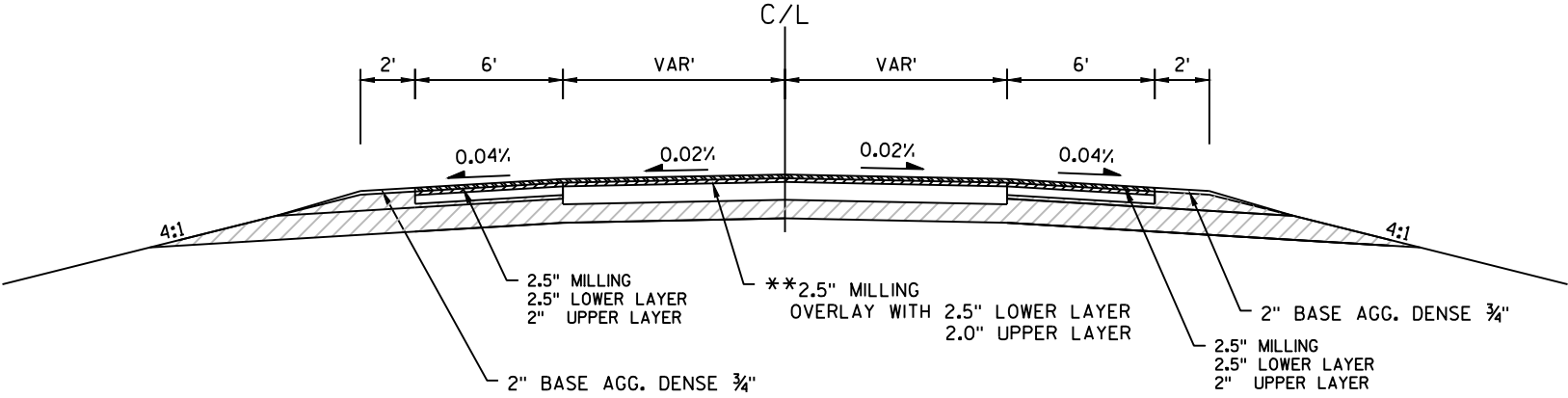
USH 2 TYPICAL FINISHED SECTION FOR BYPASS LANE

STA: 1371+85 - 1374+08 TAPER LT
1374+08 - 1376+26 LT
1376+26 - 1376+88 TAPER LT
1421+00 - 1422+00 TAPER RT
1422+00 - 1423+92 RT
1423+92 - 1425+32 TAPER RT

5

**
LOWER LAYER (2" LIFT, (2.5" 1434+68 TO 1441+30):
• HMA PAVEMENT TYPE 4MT5834S (DRIVING LANES, PASSING LANES, BYPASS LANES AND TURN LANES)

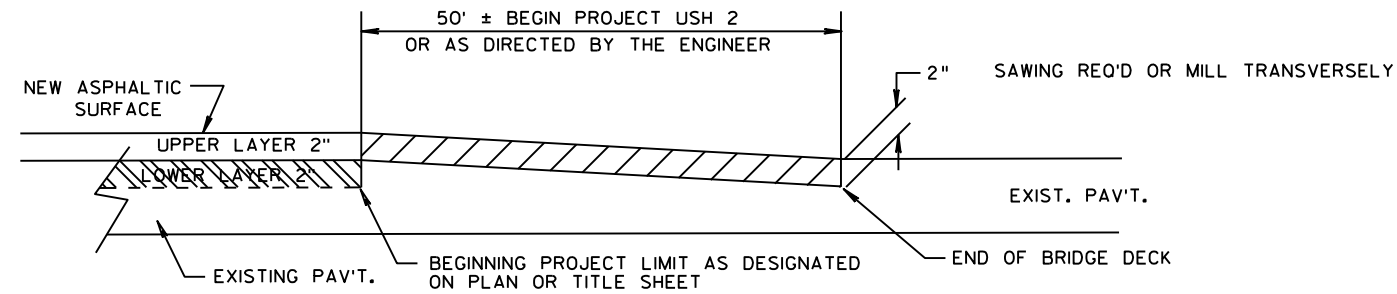
UPPER LAYER (2" LIFT):
• HMA PAVEMENT TYPE 4SMA5834V (DRIVING LANES AND PASSING LANES)
• HMA PAVEMENT TYPE 4LT5834S (SHOULDERS, BYPASS LANES AND TURN LANES)



USH 2 TYPICAL FINISHED SECTION
STA: 1434+68 - 1441+30

6

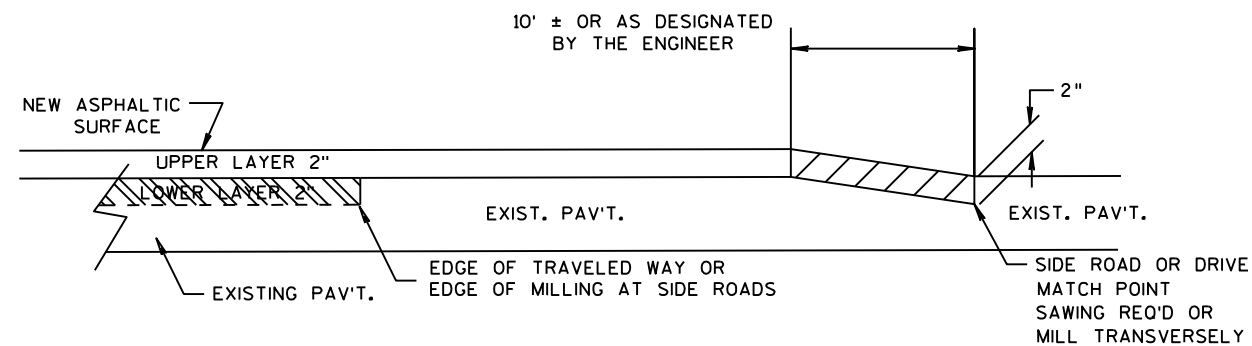
LOWER LAYER (2" LIFT, (2.5" 1434+68 TO 1441+30)):
• HMA PAVEMENT TYPE 4MT5834S (DRIVING LANES, PASSING LANES, BYPASS LANES AND TURN LANES)
UPPER LAYER (2" LIFT):
• HMA PAVEMENT TYPE 4SMA5834V (DRIVING LANES AND PASSING LANES)
• HMA PAVEMENT TYPE 4LT5834S (SHOULDERS, BYPASS LANES AND TURN LANES)



- REMOVING ASPHALTIC SURFACE BUTT JOINTS
REMOVING ASPHALTIC SURFACE MILLING

OVERLAP JOINT, BUTTED DETAIL
MAINLINE, EXCLUDING SHOULDERS STA 1146+00
AND BRIDGE DECKS OR APPROACH SLABS

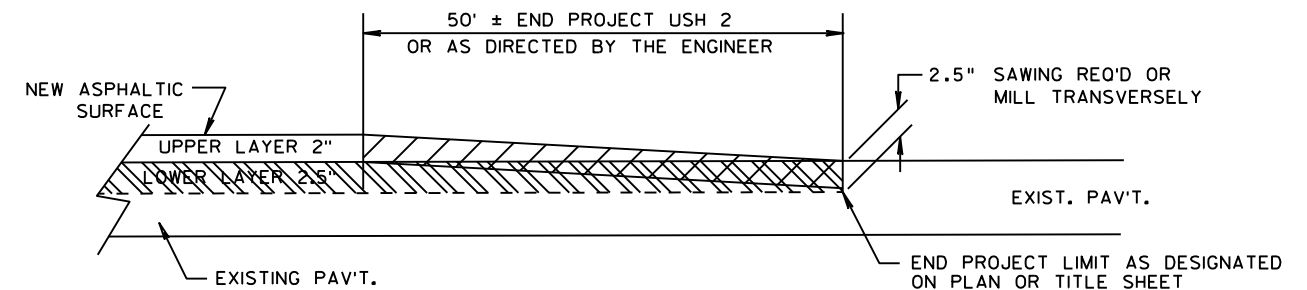
BRIDGE STATIONS
1386+46 1389+54
1408+33 1409+71



- REMOVING ASPHALTIC SURFACE BUTT JOINTS
REMOVING ASPHALTIC SURFACE MILLING

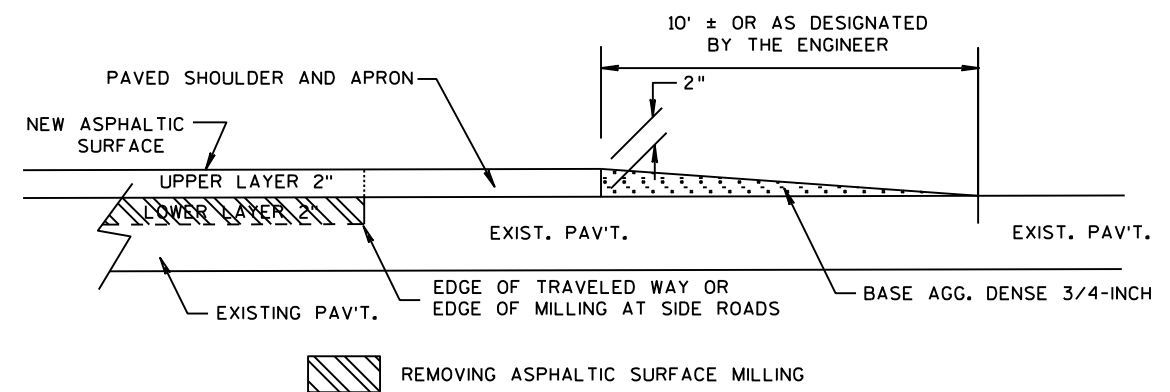
SIDE ROAD AND PAVED DRIVEWAY LOCATIONS

BUDIASH ROAD STA: 1207+75R	OLD USH 2 STA: 1228+13L
BUDIASH ROAD STA: 1208+71L	COLBY ROAD STA: 1270+58R
OLD USH 2 STA: 1234+22R	STH 137 STA: 1305+69R
PULYEART ROAD STA: 1289+14L	STATE FARM ROAD STA: 1375+08R
KANES ROAD STA: 1305+87L	CTH G STA: 1423+30L
FIORIE ROAD STA: 1398+81L	



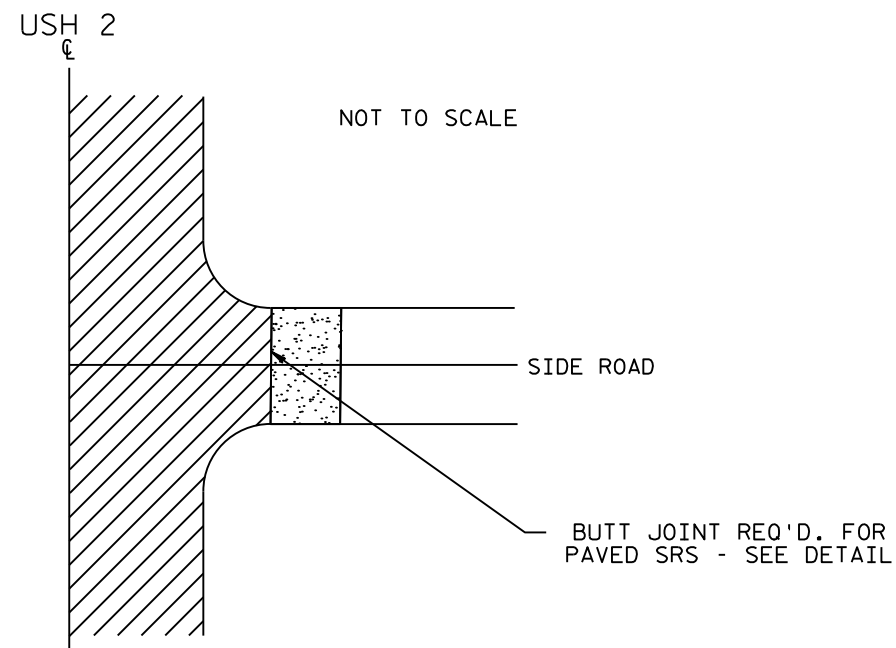
- ASPHALTIC SURFACE BUTT JOINTS
REMOVING ASPHALTIC SURFACE MILLING

BUTT JOINT ON CONC PAVT, OVERLAY
STA 1441+30



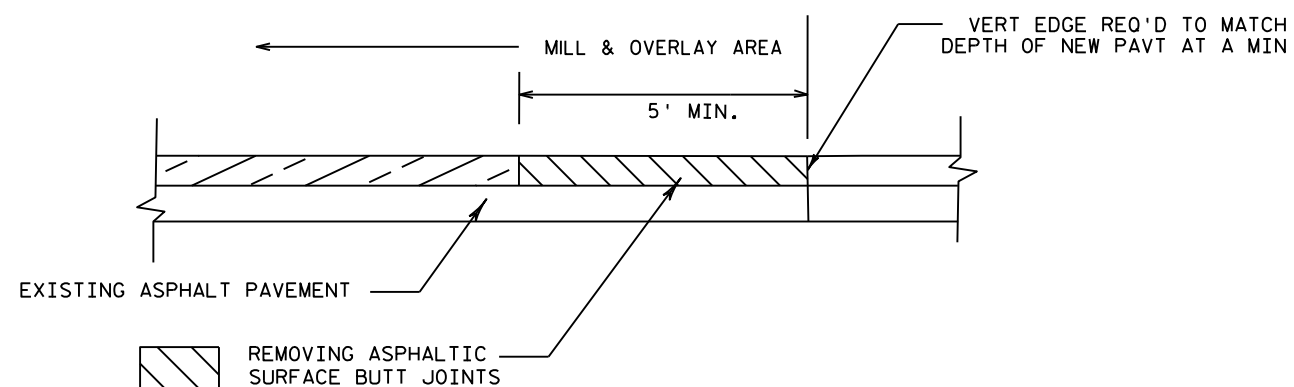
- REMOVING ASPHALTIC SURFACE MILLING

DETAIL FOR UNPAVED DRIVEWAYS

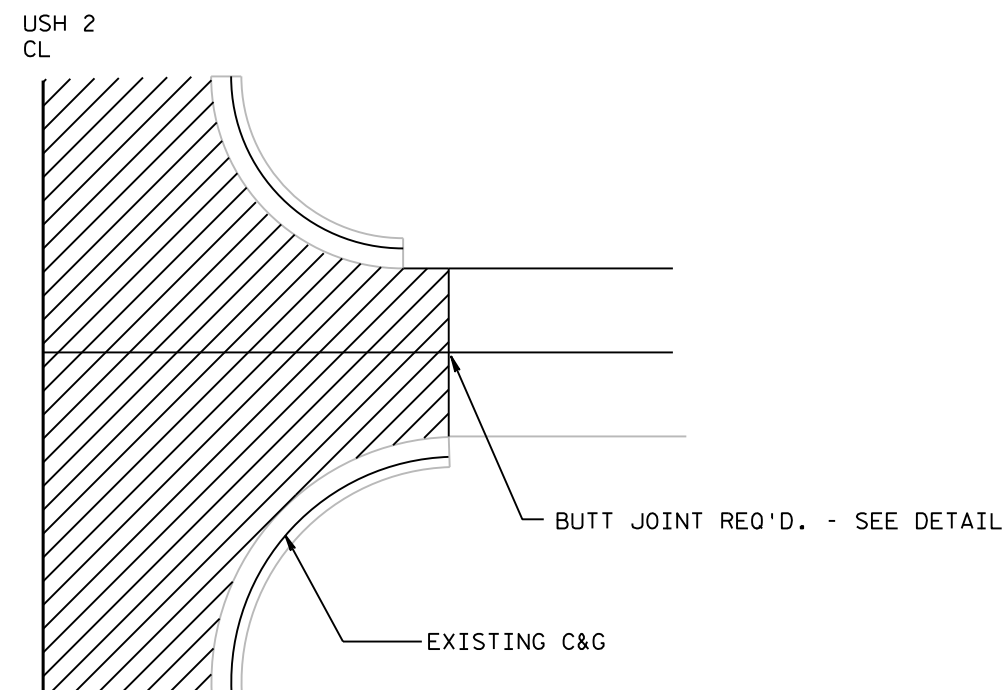


SIDE ROAD DETAIL - NO CURB & GUTTER

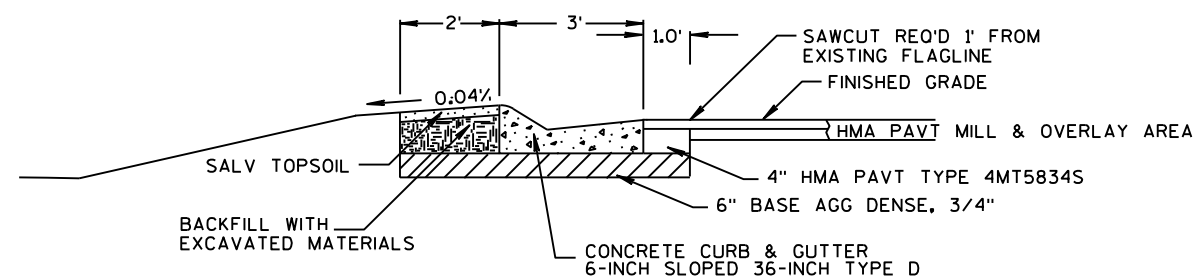
NOTE: IF THE EXISTING SIDEROAD CONSISTS OF A BASE COURSE SURFACE, THE NEW ASPHALT SHALL BE PLACED TO THE END OF THE FARTHER EXISTING SIDEROAD RADIUS.



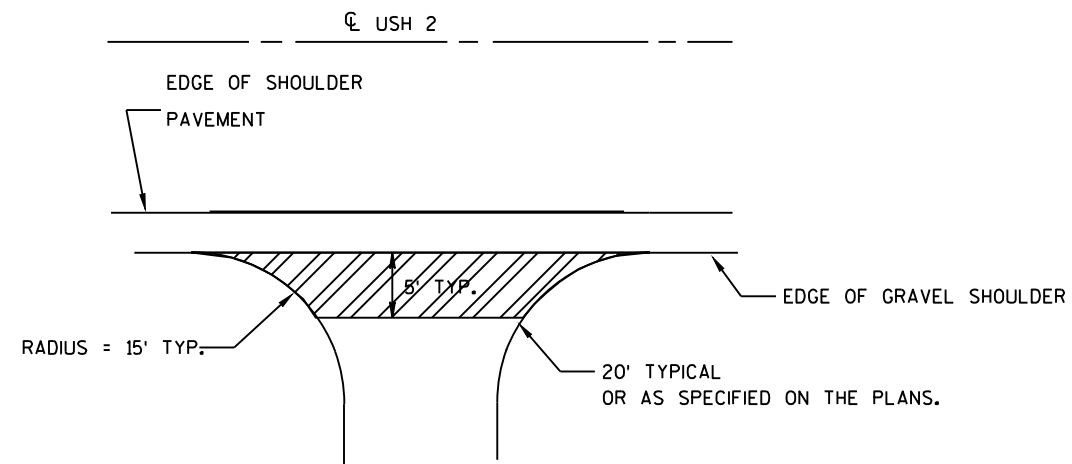
DETAIL FOR BUTT JOINTS AT ENDS OF WORK AREAS



SIDEROAD DETAIL, URBAN & RURAL - CURB & GUTTER

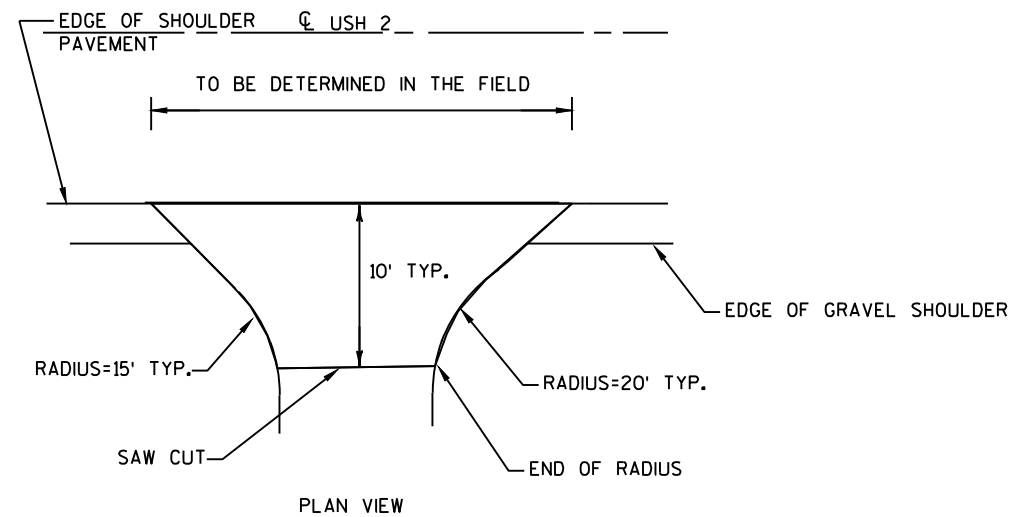


DETAIL FOR CURB & GUTTER REPLACEMENT AREAS



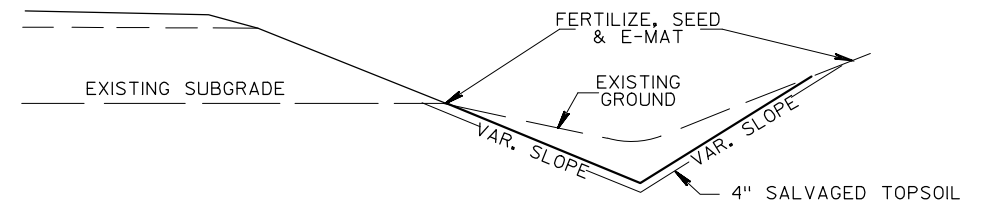
RURAL AGGREGATE DRIVEWAY DETAIL

EACH ENTRANCE SHALL RECEIVE ADEQUATE 3/4-INCH BASE AGG. DENSE AFTER MAINLINE PAVING TO BRING ENTRANCE UP TO SHOULDER PAVEMENT GRADE. MATCH EXISTING DRIVEWAY WIDTHS AND RADII.



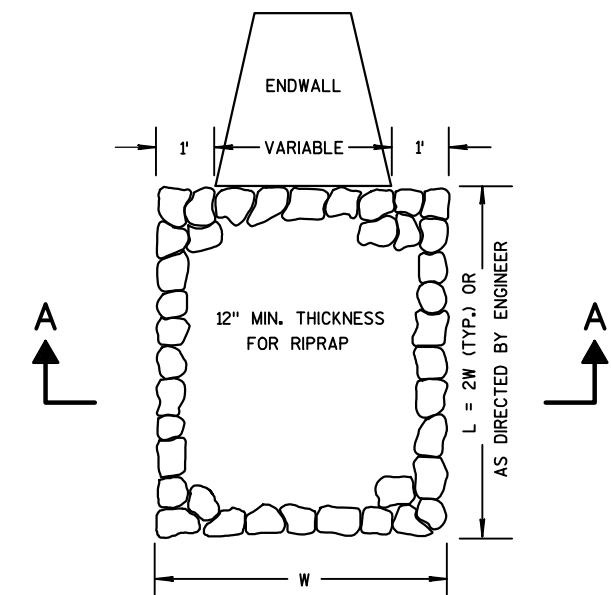
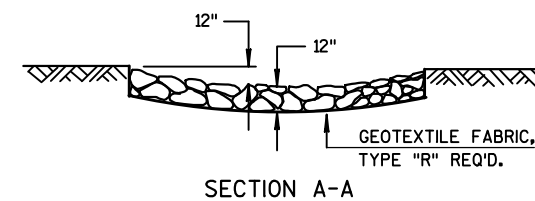
RURAL PAVED DRIVEWAY DETAIL

MATCH EXISTING WIDTH AND RADII OF DRIVEWAY.

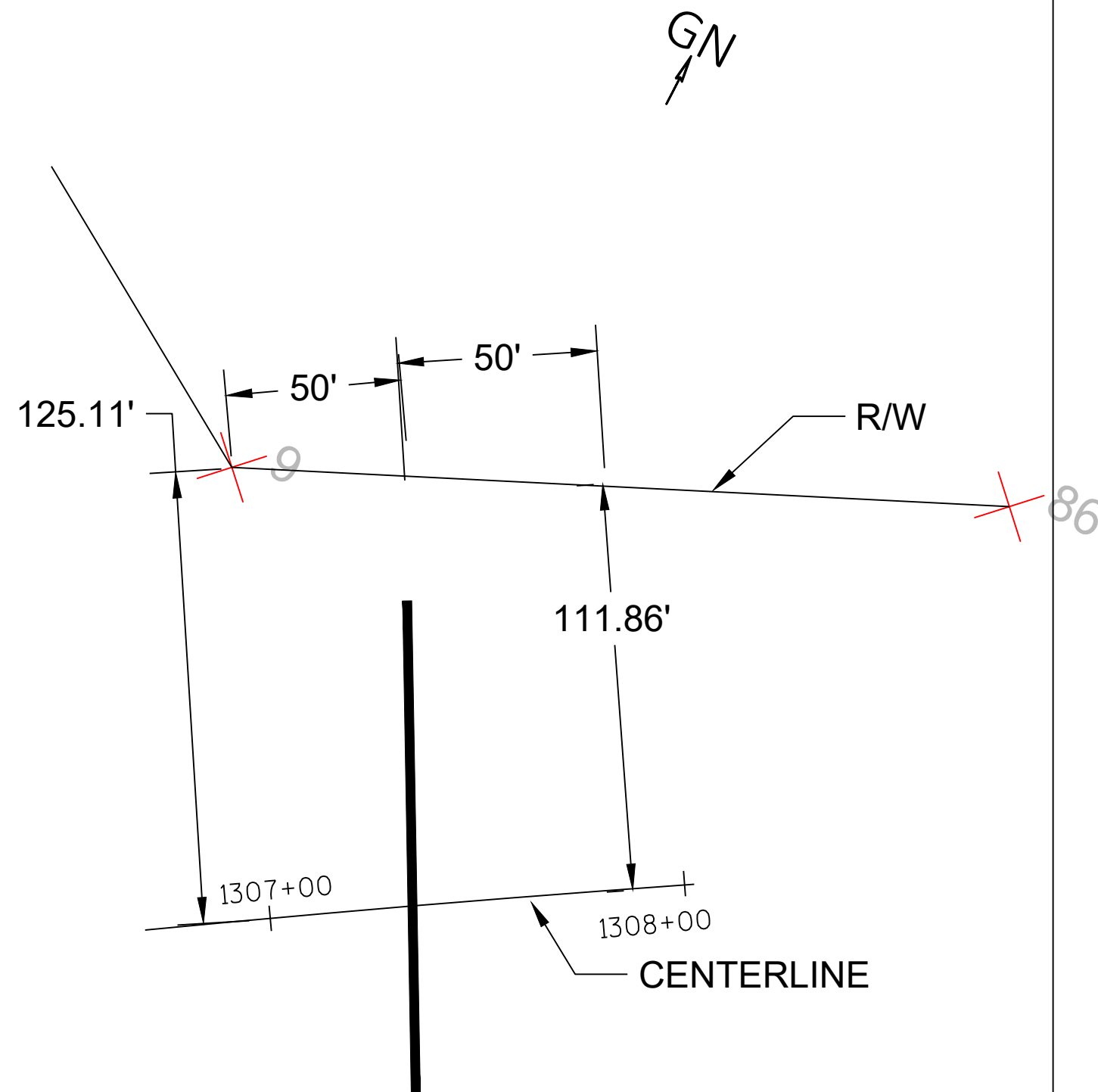


REGRADING DITCH DETAIL

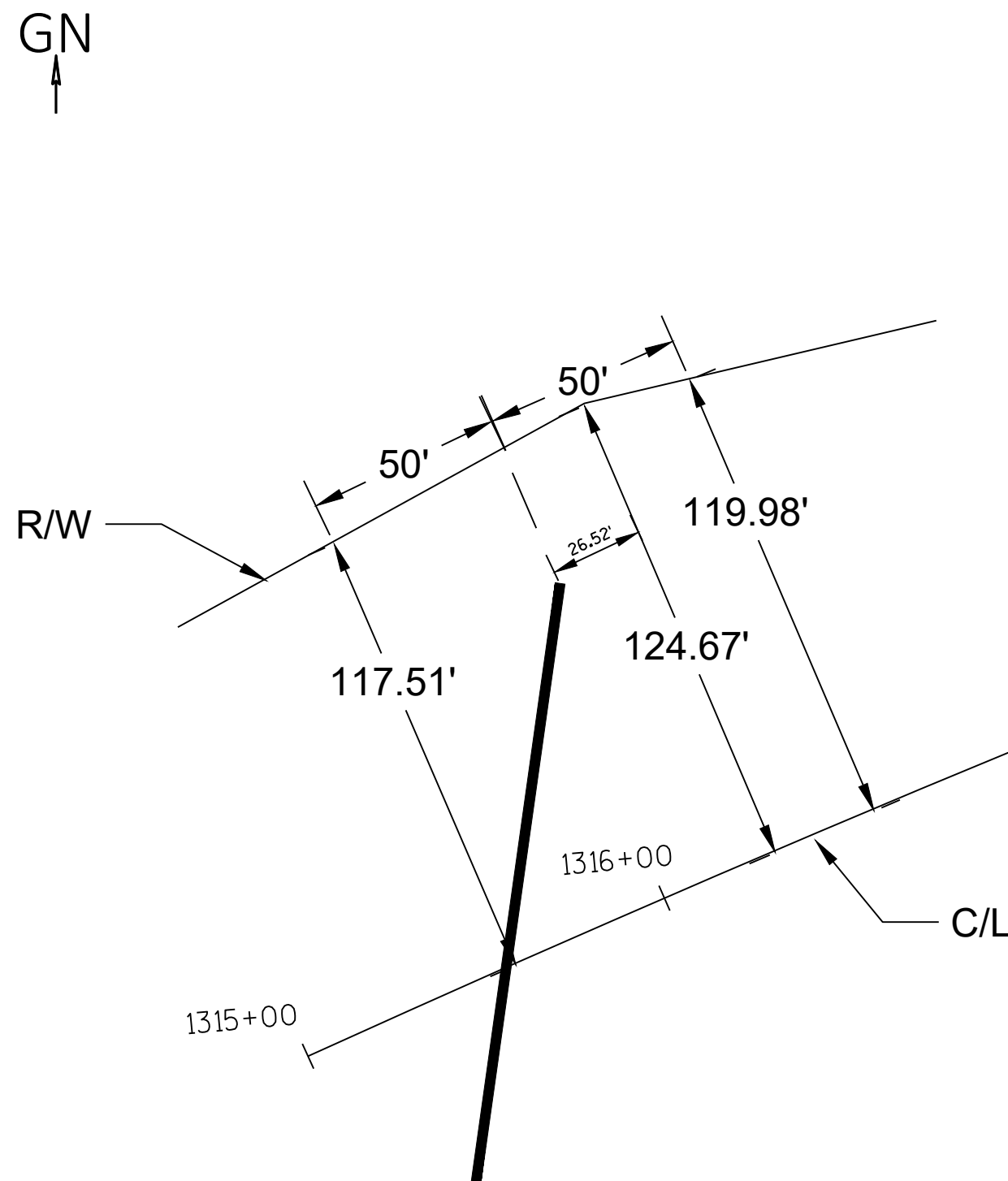
REMOVE ANY BUILT UP SEDIMENTATION, BRUSH, SMALL TREES AND WOODY OR OTHER DEBRIS WITHIN REGRADING LIMITS



RIPRAP TREATMENT AT CULVERTS



PIPE 1307+39



PIPE 1315+56

GN
↑

R/W

80'

CENTERLINE

PIPE 1351+70

GN
↑

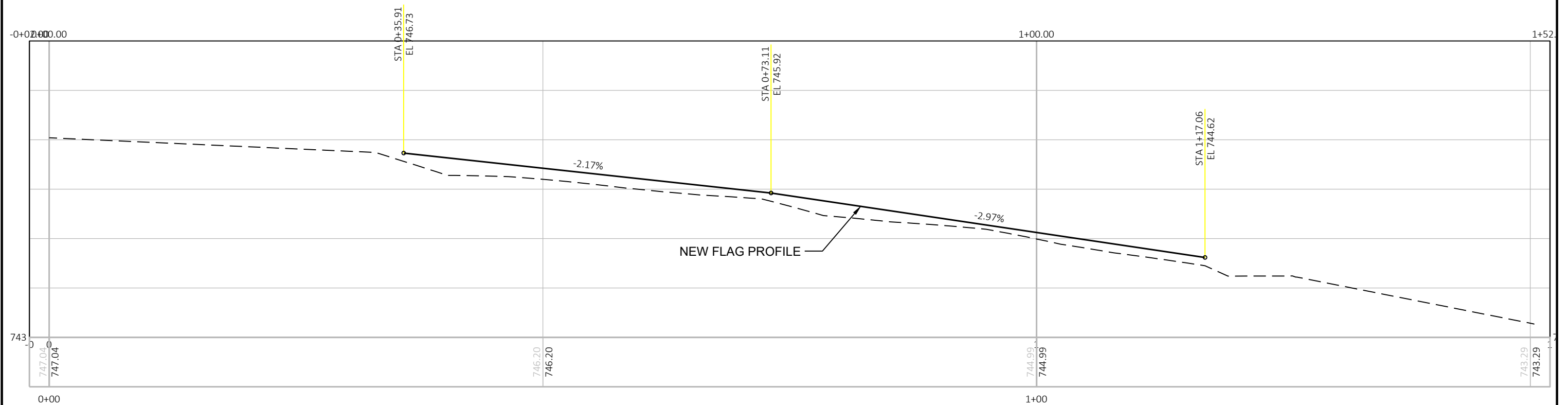
R/W

80'

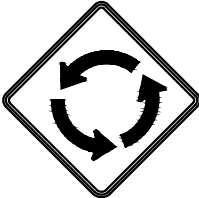
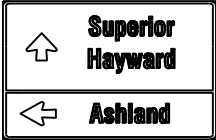
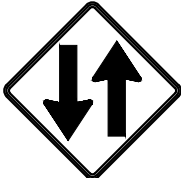
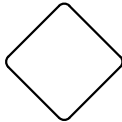
CENTERLINE

PIPE 1355+83

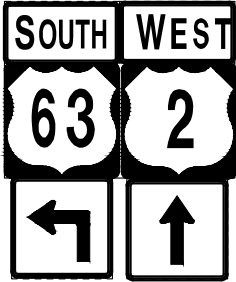
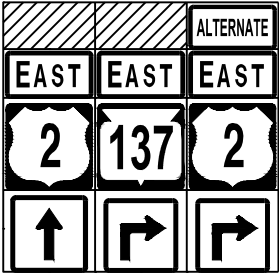
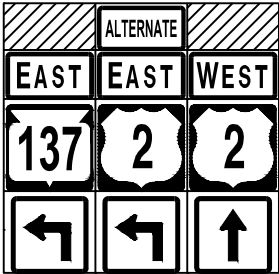
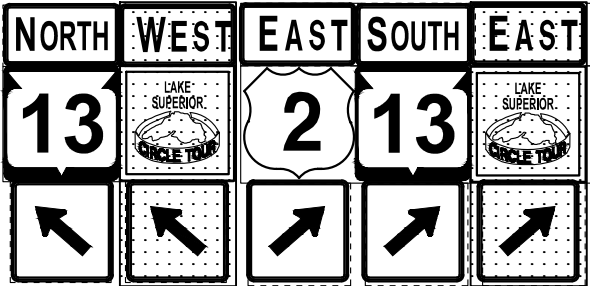
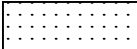
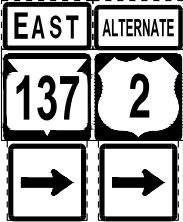
NORTH CURB RADIUS FLAG PROFILE, STH 137/USH 63 INTERSECTION

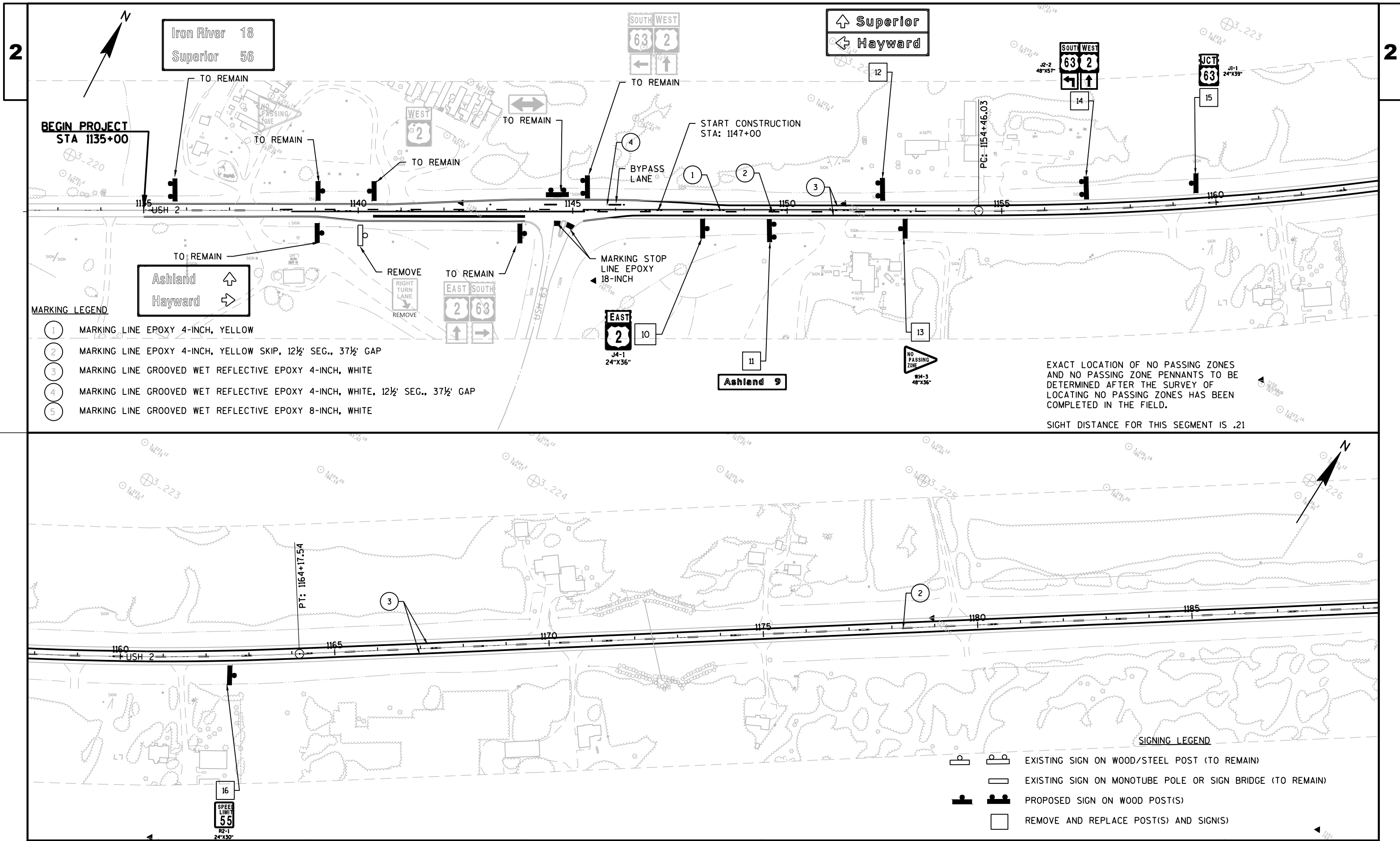


USH-2-SUPERELEVATION-TABLE						
SUPERELEVATION TRANSITION EVENT POINTS		RATE				NOTES
LOCATION	STATION	LEFT OF CROWNLINE		RIGHT OF CROWNLINE		
		LEFT SHOULDER	LEFT LANE	RIGHT_LANE	RIGHT_SHOULDER	
Curve 4						
EndNormalShoulder	1153+53.06'	-4.00%	-2.00%	-2.00%	-4.00%	
EndNormalCrown	1153+53.06'	-4.00%	-2.00%	-2.00%	-2.00%	
LevelCrown	1154+06.69'	-4.00%	-2.00%	.00%	.00%	
ReverseCrown	1154+60.33'	-4.00%	-2.00%	2.00%	2.00%	
BeginFullSuper	1154+65.69'	-4.00%	-2.20%	2.20%	2.20%	
EndFullSuper	1163+97.88'	-4.00%	-2.20%	2.20%	2.20%	
ReverseCrown	1164+03.24'	-4.00%	-2.00%	2.00%	2.00%	
LevelCrown	1164+56.88'	-4.00%	-2.00%	.00%	.00%	
BeginNormalCrown	1165+10.51'	-4.00%	-2.00%	-2.00%	-2.00%	
BeginNormalShoulder	1165+10.51'	-4.00%	-2.00%	-2.00%	-4.00%	
Curve 5						
EndNormalShoulder	1304+02.96'	-4.00%	-2.00%	-2.00%	-4.00%	
EndNormalCrown	1304+02.96'	-2.00%	-2.00%	-2.00%	-4.00%	
LevelCrown	1304+56.29'	.00%	.00%	-2.00%	-4.00%	
ReverseCrown	1305+09.62'	2.00%	2.00%	-2.00%	-4.00%	
BeginFullSuper	1305+28.29'	2.70%	2.70%	-2.70%	-4.00%	
EndFullSuper	1318+29.21'	2.70%	2.70%	-2.70%	-4.00%	
ReverseCrown	1318+47.88'	2.00%	2.00%	-2.00%	-4.00%	
LevelCrown	1319+01.21'	.00%	.00%	-2.00%	-4.00%	
BeginNormalCrown	1319+54.55'	-2.00%	-2.00%	-2.00%	-4.00%	
BeginNormalShoulder	1319+54.55'	-4.00%	-2.00%	-2.00%	-4.00%	
Curve 6						
EndNormalShoulder	1366+37.66'	-4.00%	-2.00%	-2.00%	-4.00%	
EndNormalCrown	1366+37.66'	-4.00%	-2.00%	-2.00%	-2.00%	
LevelCrown	1366+91.19'	-4.00%	-2.00%	.00%	.00%	
ReverseCrown	1367+44.72'	-4.00%	-2.00%	2.00%	2.00%	
BeginFullSuper	1367+82.19'	-4.00%	-3.40%	3.40%	3.40%	
EndFullSuper	1393+41.17'	-4.00%	-3.40%	3.40%	3.40%	
ReverseCrown	1393+78.64'	-4.00%	-2.00%	2.00%	2.00%	
LevelCrown	1394+32.17'	-4.00%	-2.00%	.00%	.00%	
BeginNormalCrown	1394+85.70'	-4.00%	-2.00%	-2.00%	-2.00%	
BeginNormalShoulder	1394+85.70'	-4.00%	-2.00%	-2.00%	-4.00%	
Curve 7						
EndNormalShoulder	1397+97.22'	-4.00%	-2.00%	-2.00%	-4.00%	
EndNormalCrown	1397+97.22'	-2.00%	-2.00%	-2.00%	-4.00%	
LevelCrown	1398+50.22'	.00%	.00%	-2.00%	-4.00%	
BeginFullSuper	1399+03.22'	2.00%	2.00%	-2.00%	-4.00%	
ReverseCrown	1399+03.22'	2.00%	2.00%	-2.00%	-4.00%	
EndFullSuper	1411+51.60'	2.00%	2.00%	-2.00%	-4.00%	
ReverseCrown	1411+51.60'	2.00%	2.00%	-2.00%	-4.00%	
LevelCrown	1412+04.60'	.00%	.00%	-2.00%	-4.00%	
BeginNormalCrown	1412+57.60'	-2.00%	-2.00%	-2.00%	-4.00%	
BeginNormalShoulder	1412+57.60'	-4.00%	-2.00%	-2.00%	-4.00%	
Curve 8						
EndNormalShoulder	1439+53.86'	-4.00%	-2.00%	-2.00%	-4.00%	
EndNormalCrown	1439+53.86'	-2.00%	-2.00%	-2.00%	-4.00%	
LevelCrown	1440+07.20'	.00%	.00%	-2.00%	-4.00%	
ReverseCrown	1440+60.53'	2.00%	2.00%	-2.00%	-4.00%	
LowShoulderMatch	1441+13.86'	4.00%	4.00%	-4.00%	-4.00%	
BeginFullSuper	1441+27.20'	4.50%	4.50%	-4.50%	-4.50%	
EndFullSuper	1469+66.13'	4.50%	4.50%	-4.50%	-4.50%	
LowShoulderMatch	1469+79.46'	4.00%	4.00%	-4.00%	-4.00%	
ReverseCrown	1470+32.80'	2.00%	2.00%	-2.00%	-4.00%	
LevelCrown	1470+86.13'	.00%	.00%	-2.00%	-4.00%	
BeginNormalCrown	1471+39.46'	-2.00%	-2.00%	-2.00%	-4.00%	
BeginNormalShoulder	1471+39.46'	-4.00%	-2.00%	-2.00%	-4.00%	

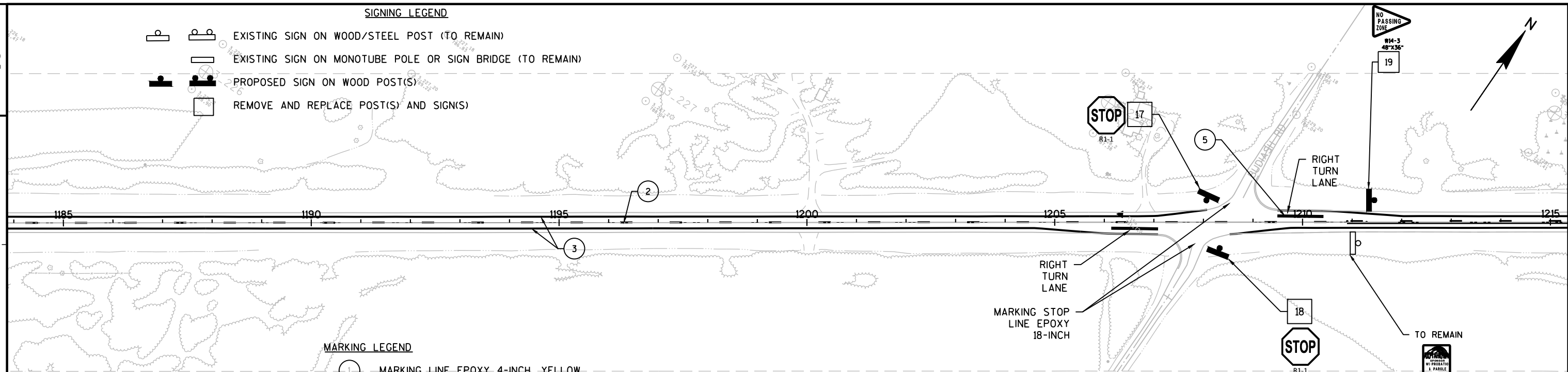
BILL OF MATERIALS															
ESTIMATE OF QUANTITIES FOR PERMANENT SIGNING															
SIGN	CODE	SIZE	QTY	SIGN	CODE	SIZE	QTY	SIGN	CODE	SIZE	QTY	SIGN	CODE	SIZE	QTY
				 W2-6P	W2-6P	30"X16"	1	 W2-6	W2-6	30"X30"	1		D1-3	66"X36"	1
 W6-2 36"X36"	W6-2	36"X36"	1	 W13-1	W13-1	18"X18"	1						D1-2	66"X30"	1
 W6-1	W6-1	36"X36"	1	 R5-1	R5-1	30"X30"	1	 R4-7	R4-7	24"X30"	1		D1-1	66"X15"	1
 W14-3	J13-1	48"X36"	7	 W6-3	W6-3	36"X36"	1	 W5-56	W5-56	18"X18"	1		I3-1	36"X24"	2

BILL OF MATERIALS															
ESTIMATE OF QUANTITIES FOR PERMANENT SIGNING															
SIGN	CODE	SIZE	QTY	SIGN	CODE	SIZE	QTY	SIGN	CODE	SIZE	QTY	SIGN	CODE	SIZE	QTY
	D1-1	66"X15"	1		D2-1	66"X15"	1		SP	78"X36"	1		D1-1	60"X15"	1
	D1-1	66"X15"	1		D2-2	72"X24"	1		SP	96"X36"	1				
	D1-1	60"X15"	1		SP	102"X 36"	1		SP	96"X36"	1	GENERAL NOTES FOR SIGNING: * SEE SIGN DETAIL SHEETS FOR SPECIFIC SIGN FABRICATION DETAILS. ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. (WMUTCD) BEFORE INSTALLING ANY SIGN POSTS, LOCATIONS ARE TO BE CLEARED WITH UTILITIES THROUGH DIGGER'S HOTLINE 1-800-242-8511 ALL SIGNS, OTHER THAN NO PASSING ZONE SIGNS, ARE TO BE PLACED AT EXISTING SIGN LONGITUDINAL LOCATIONS UNLESS OTHERWISE DIRECTED BY ENGINEER. LATERALLY POSITION THE SIGNS AS THE PLAN SHOWS OR AS DIRECTED BY THE ENGINEER. NO PERMANENT SIGNING WORK SHALL BE PERFORMED WITHOUT THE APPROVAL OF THE ENGINEER.			
	D1-1	78"X15"	1		SP	102"X 36"	1		D1-1	78"X15"	1				

BILL OF MATERIALS															
ESTIMATE OF QUANTITIES FOR PERMANENT SIGNING															
SIGN	CODE	SIZE	QTY	SIGN	CODE	SIZE	QTY	SIGN	CODE	SIZE	QTY	SIGN	CODE	SIZE	QTY
 J4-1	J4-1	24"X36"	1	 J2-2	J2-2	48"X57"	1								
 JV 72"X69"				JV		72"X57"	1								
 JV 72"X69"				JV		72"X69"	1	 JV 48"X69"	JV		48"X69"	1			
 J3-2 J3-3  GREEN BACKGROUND				J3-2		48"X57"	1	 J3-2 48"X57"	J3-2		48"X57"	1			



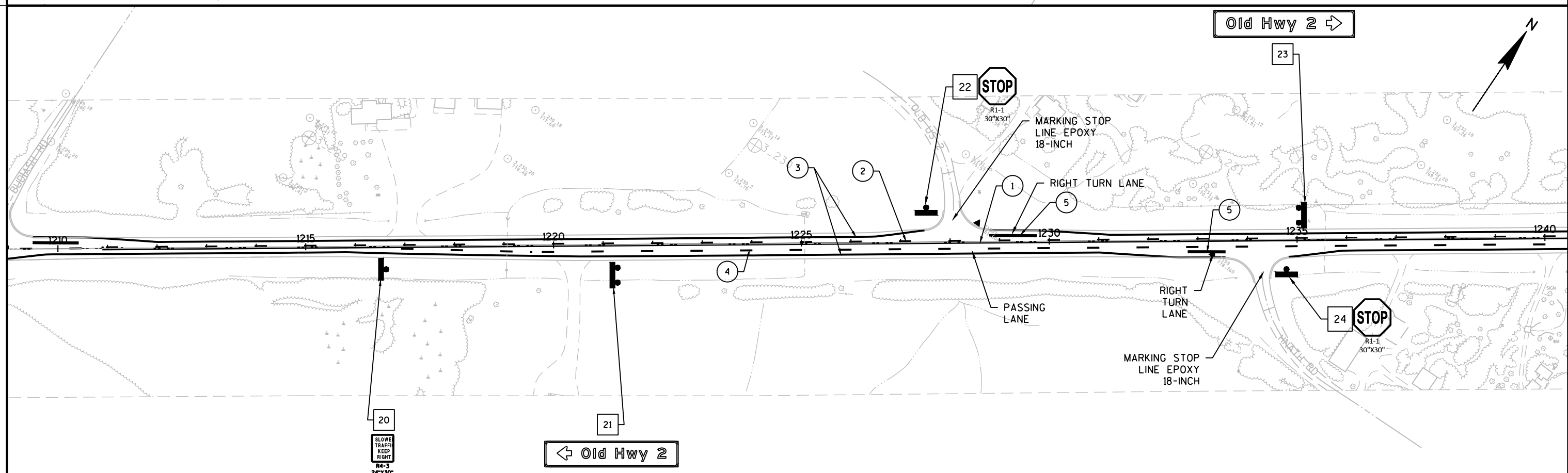
		EXISTING SIGN ON WOOD/STEEL POST (TO REMAIN)
		EXISTING SIGN ON MONOTUBE POLE OR SIGN BRIDGE (TO REMAIN)
		PROPOSED SIGN ON WOOD POST(S)
		REMOVE AND REPLACE POST(S) AND SIGN(S)



1	MARKING LINE EPOXY 4-INCH, YELLOW
2	MARKING LINE EPOXY 4-INCH, YELLOW SKIP, 12½' SEG., 37½' GAP
3	MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH, WHITE
4	MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH, WHITE, 12½' SEG., 37½' GAP
5	MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH, WHITE

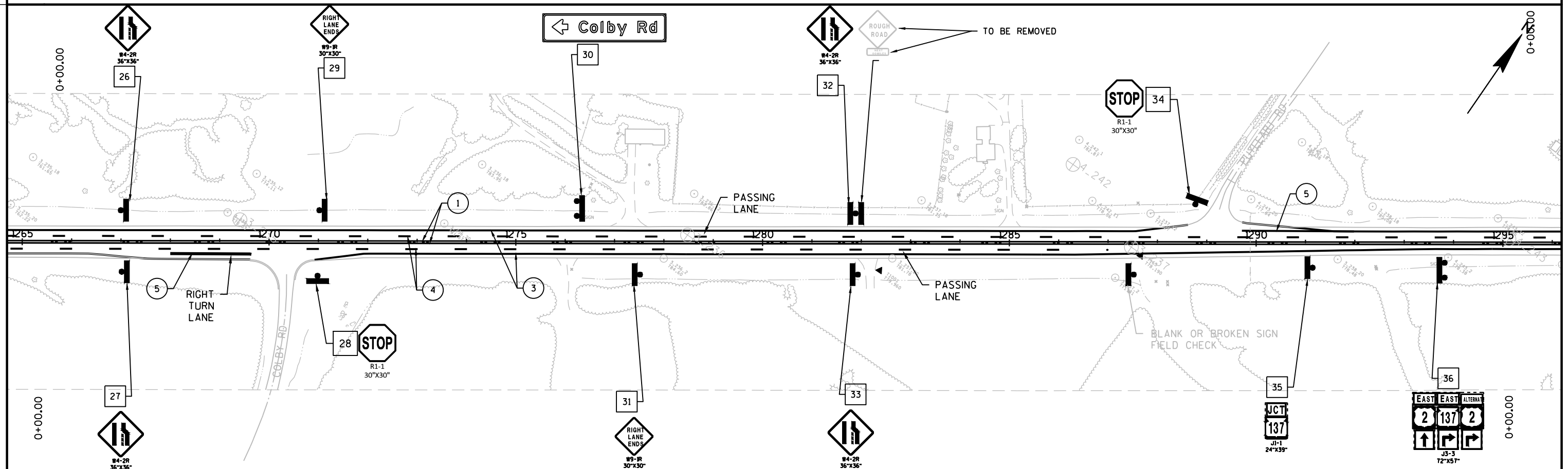
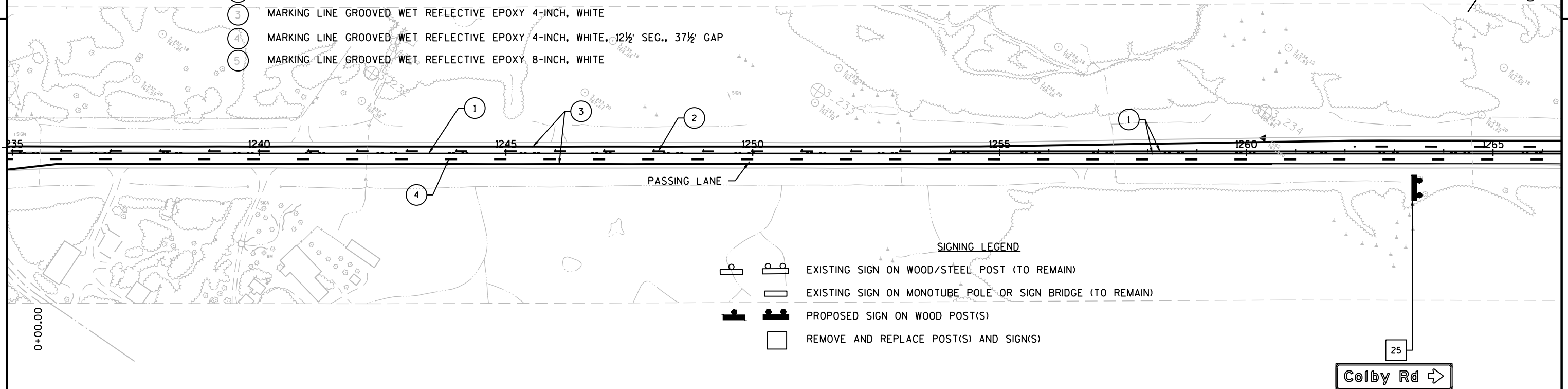
EXACT LOCATION OF NO PASSING ZONES
AND NO PASSING ZONE PENNANTS TO BE
DETERMINED AFTER THE SURVEY OF
LOCATING NO PASSING ZONES HAS BEEN
COMPLETED IN THE FIELD.

SIGHT DISTANCE FOR THIS SEGMENT IS .21



MARKING LEGEND

- 1 MARKING LINE EPOXY 4-INCH, YELLOW
- 2 MARKING LINE EPOXY 4-INCH, YELLOW SKIP, 12½' SEG., 37½' GAP
- 3 MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH, WHITE
- 4 MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH, WHITE, 12½' SEG., 37½' GAP
- 5 MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH, WHITE



PROJECT NO: 1180-03-74

HWY: USH 2

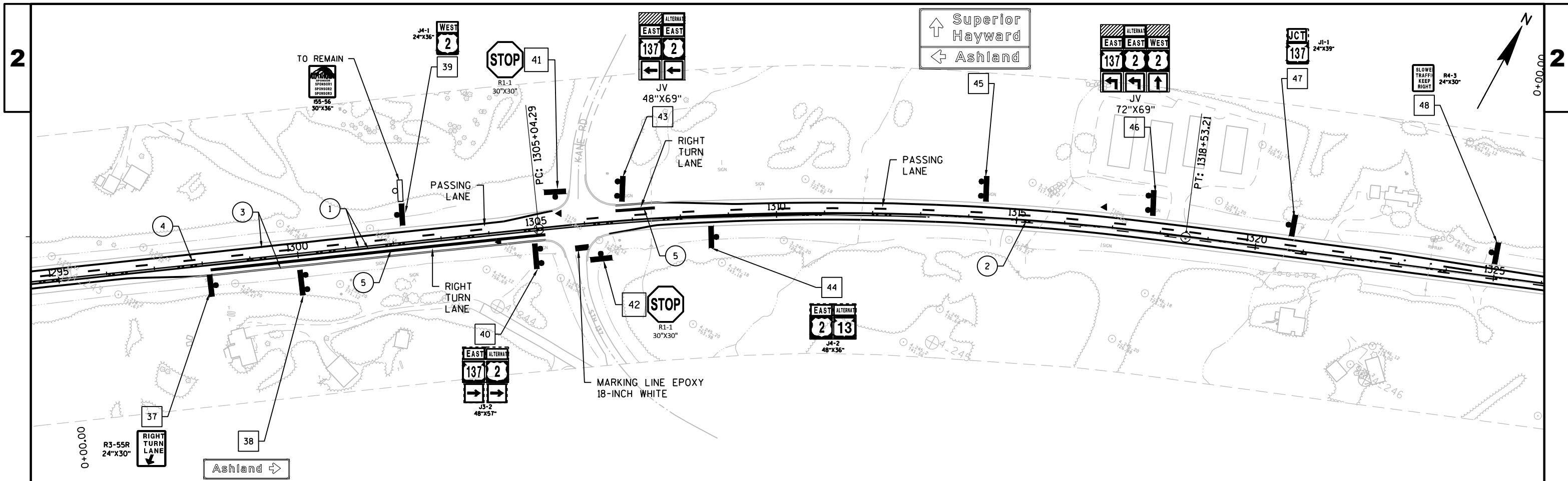
COUNTY: BAYFIELD

SIGNING & MARKING

SHEET 10 OF 132

SHEET

E



SIGNING LEGEND

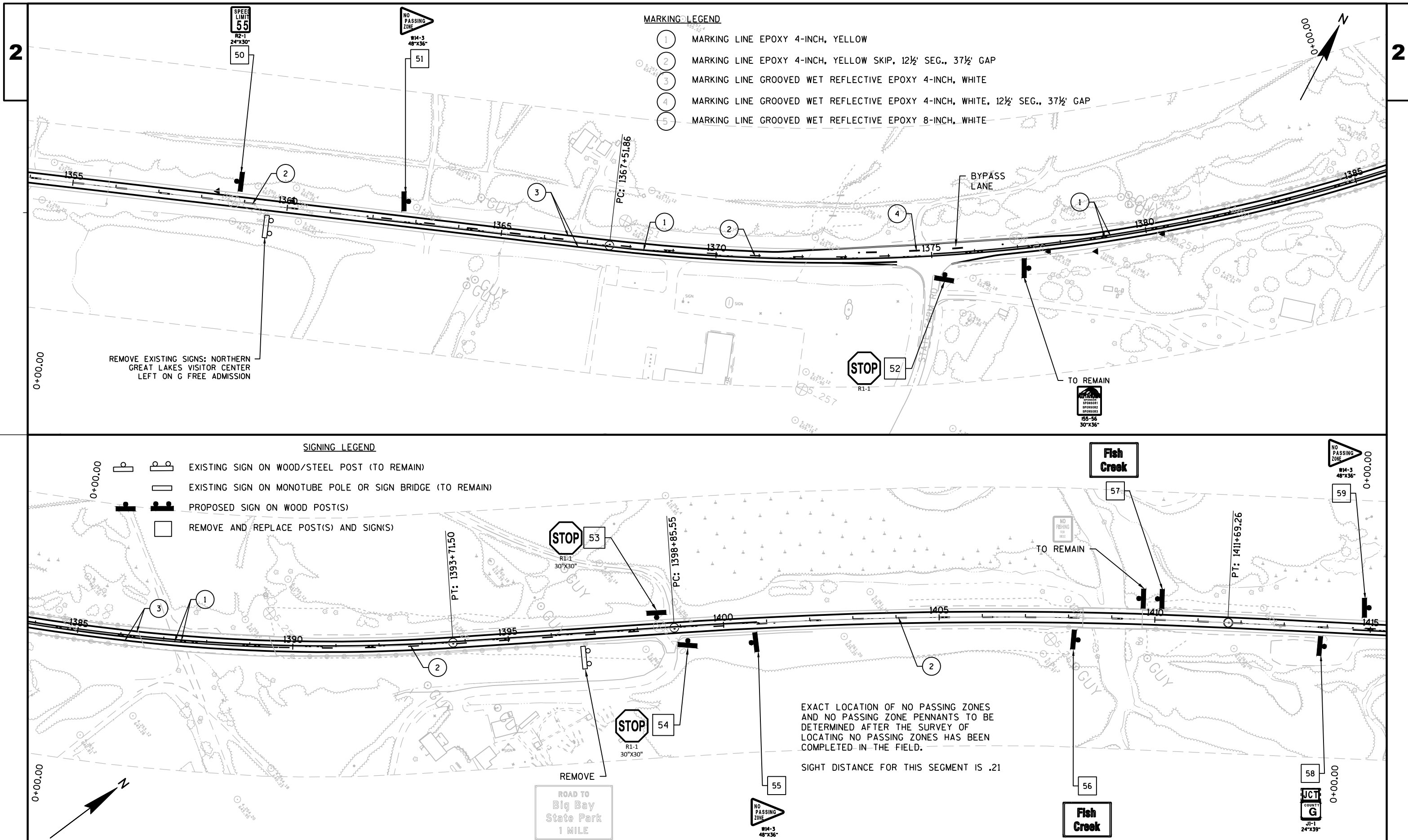
- EXISTING SIGN ON WOOD/STEEL POST (TO REMAIN)
- EXISTING SIGN ON MONOTUBE POLE OR SIGN BRIDGE (TO REMAIN)
- PROPOSED SIGN ON WOOD POST(S)
- REMOVE AND REPLACE POST(S) AND SIGN(S)

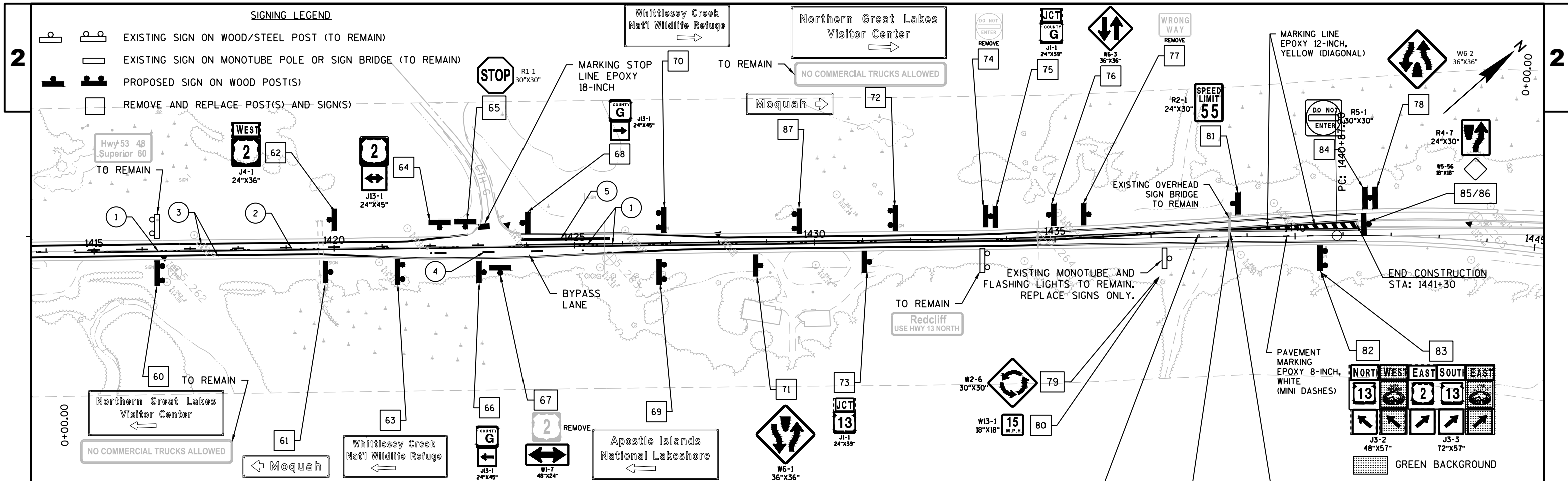
EXACT LOCATION OF NO PASSING ZONES AND NO PASSING ZONE PENNANTS TO BE DETERMINED AFTER THE SURVEY OF LOCATING NO PASSING ZONES HAS BEEN COMPLETED IN THE FIELD.

SIGHT DISTANCE FOR THIS SEGMENT IS .21

MARKING LEGEND

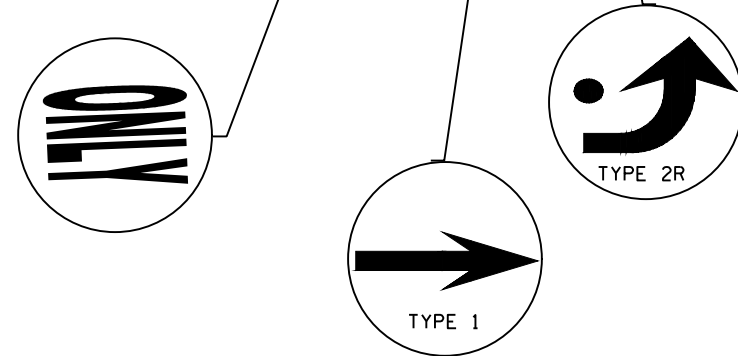
- MARKING LINE EPOXY 4-INCH, YELLOW
- MARKING LINE EPOXY 4-INCH, YELLOW SKIP, 12 1/2' SEG., 37 1/2' GAP
- MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH, WHITE
- MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH, WHITE, 12 1/2' SEG., 37 1/2' GAP
- MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH, WHITE





MARKING LEGEND

- ① MARKING LINE EPOXY 4-INCH, YELLOW
- ② MARKING LINE EPOXY 4-INCH, YELLOW SKIP, 12½' SEG., 37½' GAP
- ③ MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH, WHITE
- ④ MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH, WHITE, 12½' SEG., 37½' GAP
- ⑤ MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH, WHITE



Estimate Of Quantities

1180-03-74

Line	Item	Item Description	Unit	Total	Qty
0002	202.0105	Roadside Clearing	STA	15.000	15.000
0004	204.0115	Removing Asphaltic Surface Butt Joints	SY	906.000	906.000
0006	204.0120	Removing Asphaltic Surface Milling	SY	106,911.000	106,911.000
0008	204.0150	Removing Curb & Gutter	LF	81.000	81.000
0010	204.0165	Removing Guardrail	LF	2,489.000	2,489.000
0012	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 1180-03-74	LS	1.000	1.000
0014	213.0100	Finishing Roadway (project) 01. 1180-03-74	EACH	1.000	1.000
0016	305.0110	Base Aggregate Dense 3/4-Inch	TON	3,990.000	3,990.000
0018	305.0500	Shaping Shoulders	STA	582.000	582.000
0020	440.4410	Incentive IRI Ride	DOL	27,734.000	27,734.000
0022	455.0605	Tack Coat	GAL	16,261.000	16,261.000
0024	460.0100.S	HMA Pavement Test Strip	EACH	1.000	1.000
0026	460.2000	Incentive Density HMA Pavement	DOL	19,910.000	19,910.000
0028	460.4110.S	Reheating HMA Pavement Longitudinal Joints	LF	50,780.000	50,780.000
0030	460.5244	HMA Pavement 4 LT 58-34 S	TON	6,370.000	6,370.000
0032	460.6244	HMA Pavement 4 MT 58-34 S	TON	13,753.000	13,753.000
0034	460.8644	HMA Pavement 4 SMA 58-34 V	TON	10,976.000	10,976.000
0036	465.0110	Asphaltic Surface Patching	TON	300.000	300.000
0038	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	122.000	122.000
0040	465.0425	Asphaltic Shoulder Rumble Strips 2-Lane Rural	LF	56,002.000	56,002.000
0042	465.0475	Asphalt Centerline Rumble Strips 2-Lane Rural	LF	29,501.000	29,501.000
0044	524.0124	Culvert Pipe Salvaged 24-Inch	LF	16.000	16.000
0046	524.0624	Apron Endwalls for Culvert Pipe Salvaged 24-Inch	EACH	2.000	2.000
0048	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	81.000	81.000
0050	606.0200	Riprap Medium	CY	98.000	98.000
0052	611.8115	Adjusting Inlet Covers	EACH	2.000	2.000
0054	614.0010	Barrier System Grading Shaping Finishing	EACH	8.000	8.000
0056	614.2300	MGS Guardrail 3	LF	2,714.000	2,714.000
0058	614.2500	MGS Thrie Beam Transition	LF	312.000	312.000
0060	614.2610	MGS Guardrail Terminal EAT	EACH	8.000	8.000
0062	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1180-03-74	EACH	1.000	1.000
0064	619.1000	Mobilization	EACH	1.000	1.000
0066	624.0100	Water	MGAL	80.000	80.000
0068	625.0500	Salvaged Topsoil	SY	20.000	20.000
0070	628.1104	Erosion Bales	EACH	30.000	30.000
0072	628.1504	Silt Fence	LF	770.000	770.000
0074	628.1520	Silt Fence Maintenance	LF	500.000	500.000
0076	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000

Estimate Of Quantities

1180-03-74

Line	Item	Item Description	Unit	Total	Qty
0078	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0080	628.2027	Erosion Mat Class II Type C	SY	2,627.000	2,627.000
0082	629.0210	Fertilizer Type B	CWT	1.710	1.710
0084	630.0110	Seeding Mixture No. 10	LB	33.780	33.780
0086	630.0200	Seeding Temporary	LB	59.280	59.280
0088	633.5200	Markers Culvert End	EACH	56.000	56.000
0090	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	84.000	84.000
0092	637.2210	Signs Type II Reflective H	SF	592.880	592.880
0094	637.2230	Signs Type II Reflective F	SF	130.250	130.250
0096	638.2602	Removing Signs Type II	EACH	78.000	78.000
0098	638.3000	Removing Small Sign Supports	EACH	88.000	88.000
0100	642.5201	Field Office Type C	EACH	1.000	1.000
0102	643.0300	Traffic Control Drums	DAY	6,033.000	6,033.000
0104	643.0310.S	Temporary Portable Rumble Strips	LS	1.000	1.000
0106	643.0900	Traffic Control Signs	DAY	518.000	518.000
0108	643.5000	Traffic Control	EACH	1.000	1.000
0110	645.0130	Geotextile Type R	SY	199.000	199.000
0112	646.1020	Marking Line Epoxy 4-Inch	LF	34,392.000	34,392.000
0114	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	57,760.000	57,760.000
0116	646.1545	Marking Line Grooved Wet Ref Contrast Epoxy 4-Inch	LF	3,525.000	3,525.000
0118	646.3545	Marking Line Grooved Wet Ref Contrast Epoxy 8-Inch	LF	1,819.000	1,819.000
0120	646.4520	Marking Line Same Day Epoxy 4-Inch	LF	34,392.000	34,392.000
0122	646.5020	Marking Arrow Epoxy	EACH	2.000	2.000
0124	646.5120	Marking Word Epoxy	EACH	1.000	1.000
0126	646.6120	Marking Stop Line Epoxy 18-Inch	LF	100.000	100.000
0128	646.7120	Marking Diagonal Epoxy 12-Inch	LF	141.000	141.000
0130	648.0100	Locating No-Passing Zones	MI	6.000	6.000
0132	649.0105	Temporary Marking Line Paint 4-Inch	LF	37,917.000	37,917.000
0134	650.8000	Construction Staking Resurfacing Reference	LF	29,530.000	29,530.000
0136	650.9910	Construction Staking Supplemental Control (project) 01. 1180-03-74	LS	1.000	1.000
0138	690.0150	Sawing Asphalt	LF	560.000	560.000
0140	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	2,000.000	2,000.000
0142	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	630.000	630.000
0144	SPV.0060	Special 01. Cleaning Culvert Pipes Minimal	EACH	23.000	23.000
0146	SPV.0060	Special 02. Cleaning Culvert Pipes Full	EACH	8.000	8.000
0148	SPV.0090	Special 01. Regrading Ditch	LF	279.000	279.000
0150	SPV.0090	Special 02. Concrete Curb and Gutter Cure and Seal Treatment	LF	81.000	81.000
0152	SPV.0105	Special 01. Milling and Removing Temporary Joint	LS	1.000	1.000

Estimate Of Quantities

1180-03-74

Line	Item	Item Description	Unit	Total	Qty
		Special			
0154	SPV.0105	Special 02. Material Transfer Vehicle	LS	1.000	1.000

MISCELLANEOUS QUANTITIES

ROADSIDE CLEARING

				202.0105	LENGTH	
CAT	STATION TO	STATION	LOC	STA	FT	REMARKS
0010	1321+56	- 1322+34	ML - R	1	78.00	CLEAR TO 50' FROM CL
0010	1351+00	- 1352+00	ML - L	1	100.00	CLEAR AS NECESSARY FOR DITCH
0010	1355+00	- 1356+00	ML - L	1	100.00	CLEAR AS NECESSARY FOR DITCH
0010	1357+55	- 1357+83	ML - L	1	28.00	CLEAR TO 50' FROM CL
0010	1358+73	- 1359+33	ML - L	1	60.00	CLEAR TO 50' FROM CL
0010	1366+95	- 1367+82	ML - L	1	87.00	CLEAR TO 50' FROM CL
0010	1372+66	- 1374+07	ML - L	1	141.00	CLEAR TO 50' FROM CL
0010	1376+77	- 1377+95	ML - L	1	118.00	CLEAR TO 50' FROM CL
0010	1391+74	- 1392+01	ML - L	1	27.00	CLEAR TO 50' FROM CL
0010	1394+15	- 1395+01	ML - L	1	86.00	CLEAR TO 50' FROM CL
0010	1395+44	- 1397+46	ML - L	2	202.00	CLEAR TO 50' FROM CL
0010	1414+88	- 1415+97	ML - R	1	109.00	CLEAR TO 50' FROM CL
0010	1423+40	- 1425+20	ML - R	2	180.00	CLEAR TO 50' FROM CL
TOTAL 0010				15		

REMOVING ASPHALTIC SURFACE MILLING

		204.0120		REMARKS
CAT	STATION TO STATION	LOC	SY	
0010	114600 - 114850	MAINLINE	1250	
0010	114850 - 136500	MAINLINE	57733	
0010	136500 - 138646	MAINLINE	5723	
0010	138954 - 140833	MAINLINE	5011	
0010	140971 - 143468	MAINLINE	6659	
0010	143468 - 144130	MAINLINE	4392	
0010	121600 - 129300	pass lanes	9526	
0010	125425 - 132775	pass lanes	8870	
0010	120450 - 121000	turn lane	691	
0010	120700 - 121200	turn lane	478	
0010	122650 - 123150	turn lane	616	
0010	123100 - 123600	turn lane	601	
0010	126600 - 127200	turn lane	684	
0010	129650 - 130750	turn lane	1406	
0010	130400 - 130925	turn lane	747	
0010	142150 - 142800	turn lane	756	
0010	137150 - 137850	bypass lane	942	
0010	142000 - 142800	bypass lane	826	
TOTAL 0010			106911	

REMOVING ASPHALTIC SURFACE BUTT JOINTS

		204.0115		REMARKS
CAT	STATION	LOC	SY	
0010	1146+00	ML	167	START OF PROJECT
0010	1144+60	SR RT	317	USH 63
0010	1207+75	SR RT	9	BUDIASH RD
0010	1208+71	SR LT	8	BUDIASH RD
0010	1228+13	SR LT	10	OLD USH 2
0010	1234+22	SR RT	10	OLD USH 2
0010	1270+58	SR RT	9	COLBY RD
0010	1305+69	SR RT	82	STH 137
0010	1305+87	SR LT	10	KANES RD
0010	1375+08	SR RT	11	STATE FARM RD
0010	1386+46	ML	26	BRIDGE DECK
0010	1389+54	ML	26	BRIDGE DECK
0010	1408+33	ML	23	BRIDGE DECK
0010	1409+71	ML	23	BRIDGE DECK
0010	1423+30	SR LT	73	CTH G
0010	1434+64	ML	23	EAST END ASPH PAVT
0010	PROJECT	LT/RT	80	NINE PAVED DRIVES
TOTAL 0010			906	

REMOVING GUARDRAIL

		204.0165		REMARKS
CAT	STATION TO STATION	LOC	LF	
0010	1379+31 - 1386+19	ML - L	688	TRI COUNTY CORRIDOR
0010	1379+31 - 1386+40	ML - R	709	TRI COUNTY CORRIDOR
0010	1389+55 - 1390+22	ML - L	67	TRI COUNTY CORRIDOR
0010	1389+76 - 1397+23	ML - R	747	TRI COUNTY CORRIDOR
0010	1407+55 - 1408+26	ML - L	71	FISH CREEK
0010	1407+55 - 1408+26	ML - R	71	FISH CREEK
0010	1409+78 - 1410+46	ML - L	68	FISH CREEK
0010	1409+78 - 1410+46	ML - R	68	FISH CREEK
TOTAL 0010			2489	

MISCELLANEOUS QUANTITIES

REMOVING CURB & GUTTER

204.0150				
CAT	STATION	LOC	LF	REMARKS
0010	1305+75	RT	81	STH 137
TOTAL 0010			81	

PREPARE FOUNDATION FOR ASPHALTIC PAVING
(1180-03-74)

211.0100			
CAT	LOC	LS	REMARKS
0010	PROJECT	1	1180-03-74
TOTAL 0010		1	

FINISHING ROADWAY (1180-03-74)

213.0100			
CAT	LOC	EACH	REMARKS
0010	PROJECT	1	
TOTAL 0010		1	

INCENTIVE IRI RIDE

440.4410			
CAT	LOC	DOL	REMARKS
0010	PROJECT	27734	MAINLINE & PASS LANE
TOTAL 0010		27734	

BASE AGGREGATE DENSE 3/4-INCH

305.0110			
CAT	LOC	TON	REMARKS
0010	PROJECT	3990	INCLUDES ALL SHLDR
TOTAL 0010		3990	

SHAPING SHOULDERS

305.0500					
CAT	STATION TO	STATION	LOC	STA	REMARKS
0010	1146+00 -	1365+00	LT/RT	438	
0010	1365+00 -	1386+46	LT/RT	43	
0010	1389+54 -	1408+33	LT/RT	38	
0010	1409+71 -	1434+68	LT/RT	50	
0010	1434+68 -	1441+30	LT/RT	13	
TOTAL 0010				582	

HMA PAVEMENT TEST STRIP

460.0100.S			
CAT	LOC	EACH	REMARKS
0010	PROJECT	1	
TOTAL 0010		1	

REHEATING HMA PAVEMENT LONGITUDINAL JOINTS

460.4110.S					
CAT			LOC	LF	REMARKS
0010	1146+00 -	1441+30	UPPER	29530	MAINLINE
0010	1216+00 -	1293+00	LAYER	7700	PASSING LANE
0010	1255+00 -	1327+00	"	7200	PASSING LANE
0010	1146+00 -	1149+00	"	300	USH 64 PARTIAL
0010	1371+50 -	1378+50	"	700	STATE FARM ROAD
0010	1205+00 -	1210+00	"	500	BUDIASH
0010	1207+00 -	1212+00	"	500	BUDIASH
0010	1226+50 -	1231+50	"	500	OLD USH 2
0010	1231+00 -	1236+00	"	500	HNATH
0010	1266+50 -	1272+00	"	550	COLBY
0010	1296+50 -	1307+50	"	1100	STH 137
0010	1299+50 -	1309+00	"	950	KANES
0010	1421+50 -	1429+00	"	750	CTH G
TOTAL 0010				50780	

INCENTIVE DENSITY HMA
PAVEMENT

460.2000		
CAT	LOC	DOL
0010	PROJECT	19910
TOTAL 0010		19910

ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

465.0120				
CAT	STATION	LOC	TON	REMARKS
0010	1154+81	DRIVEWAY - L	18	
0010	1169+83	DRIVEWAY - L	12	
0010	1277+30	DRIVEWAY - L	9	
0010	1285+00	DRIVEWAY - L	14	
0010	1321+61	DRIVEWAY - R	9	
0010	1344+54	DRIVEWAY - R	16	
0010	1346+84	DRIVEWAY - R	15	
0010	1349+41	DRIVEWAY - R	11	
0010	1369+09	DRIVEWAY - R	18	FORD DEALER
TOTAL 0010			122	

MISCELLANEOUS QUANTITIES

ASPHALTIC SURFACE PATCHING

465.0110			
CAT	LOC	TON	REMARKS
0010	PROJECT	300	UNDIST
TOTAL 0010		300	

HMA PAVEMENT SUMMARY

		455.0605	460.5244	460.6243	460.8644		
		TACK	4LT	4MT	4SMA		
		COAT	58-34S	58-34S	58-34V		
CAT	STATION TO STATION	LOC	GAL	TON	TON	TON	REMARKS
0010	1146+00 - 1448+30	PROJECT	16261	6370	11934	10976	
0010	1146+00 - 1441+30	ML - LEVELING			1819		UNDISTRIBUTED
TOTAL 0010			16261	6370	13753	10976	

ASPHALTIC SHOULDER RUMBLE STRIPS 2-LANE RURAL

465.0425				
CAT	STATION TO STATION	LOC	LF	
0010	1146+00 - 1386+45	SHOULDERS	47090	
0010	1378+66 - 1408+30	SHOULDERS	4928	
0010	1409+72 - 1434+64	SHOULDERS	3984	
TOTAL 0010			56002	

ASPHALT CENTER LINE RUMBLE STRIPS 2-LANE RURAL

465.0475				
CAT	STATION TO STATION	LOC	LF	
0010	1146+00 - 1386+45	CL	24045	
0010	1378+66 - 1408+30	CL	2964	
0010	1409+72 - 1434+64	CL	2492	
TOTAL 0010			29501	

CULVERT PIPE SALVAGED 24-INCH

524.0124			
CAT	STATION	LOC	LF
0010	1315+56	L	8
0010	1372+14	R	8
TOTAL 0010			16

APRON ENDWALLS FOR CULVERT PIPE SALVAGED 24-INCH

524.0624			
CAT	STATION	LOC	EACH
0010	1315+56	L	1
0010	1372+14	R	1
TOTAL 0010			2

CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D

601.0557				
CAT	STATION	LOC	LF	REMARKS
0010	1305+75	STH 137	81	SE QUAD
TOTAL 0010			81	

RIPRAP MEDIUM

606.0200				
CAT	STATION	LOC	CY	REMARKS
0010	1323+64	L	23	CULV END
0010	1327+99	L	23	CULV END
0010	1335+64	L	23	CULV END
0010	1365+13	L	23	CULV END
0010	1372+14	R	6	CULV END
TOTAL 0010			98	

MISCELLANEOUS QUANTITIES

MGS GUARDRAIL 3

614.2300					
CAT	STATION TO STATION		LOC	LF	REMARKS
0010	1377+06	- 1386+00	R	894	S SIDE OF TCC BRIDGE
0010	1377+68	- 1385+82	L	814	S SIDE OF TCC BRIDGE
0010	1389+99	- 1390+24	L	25	N SIDE OF TCC BRIDGE
0010	1390+17	- 1396+74	R	657	N SIDE OF TCC BRIDGE
0010	1406+70	- 1407+82	R	112	S SIDE OF FISH CREEK BRIDGE
0010	1407+17	- 1407+82	L	65	S SIDE OF FISH CREEK BRIDGE
0010	1410+21	- 1410+66	R	45	N SIDE OF FISH CREEK BRIDGE
0010	1410+21	- 1411+23	L	102	N SIDE OF FISH CREEK BRIDGE
TOTAL 0010				2714	

MGS THRIE BEAM TRANSITION

614.2500				
CAT	STATION	LOC	LF	REMARKS
0010	1386+20	BRIDGE PARAPET - L	39	TRI COUNTY CORRIDOR BRIDGE
0010	1386+40	BRIDGE PARAPET - R	39	TRI COUNTY CORRIDOR BRIDGE
0010	1389+59	BRIDGE PARAPET - L	39	TRI COUNTY CORRIDOR BRIDGE
0010	1389+75	BRIDGE PARAPET - R	39	TRI COUNTY CORRIDOR BRIDGE
0010	1408+20	BRIDGE PARAPET - L/R	78	FISH CREEK BRIDGE
0010	1409+81	BRIDGE PARAPET - L/R	78	FISH CREEK BRIDGE
TOTAL 0010			312	

MAINTENANCE AND REPAIR OF
HAUL ROADS (01. 1180-03-74)

618.0100		
CAT	LOC	EACH
0010	PROJECT	1
TOTAL 0010		1

ADJUSTING INLET COVERS

611.8115			
CAT	STATION	LOC	EACH
0010	1389+56	B-04-21 L	1
0010	1409+76	B-04-22 R	1
TOTAL 0010			2

BARRIER SYSTEM GRADING SHAPING
FINISHING

614.0010			
CAT	STATION	LOC	EACH
0010	1377+50	ML - R	1
0010	1378+00	ML - L	1
0010	1391+00	ML - L	1
0010	1397+40	ML - R	1
0010	1407+00	ML - L	1
0010	1407+00	ML - R	1
0010	1411+00	ML - L	1
0010	1411+00	ML - R	1
TOTAL 0010			8

MARKERS CULVERT END

633.5200		
CAT	LOC	EACH
0010	PROJECT	56
TOTAL 0010		56

MGS GUARDRAIL TERMINAL EAT

614.2610				
CAT	STATION	LOC	EACH	REMARKS
0010	137700	L/R	2	TRI CO
0010	139100	L	1	TRI CO
0010	139700	R	1	TRI CO
0010	140700	L/R	2	FISH CR
0010	141100	L/R	2	FISH CR
TOTAL 0010			8	

WATER

624.0100			
CAT	STATION	MGAL	REMARKS
0010	PROJECT	80	BASE AGG
TOTAL 0010		80	

SALVAGED TOPSOIL

625.0500				
CAT	STATION TO STATION	LOC	SY	REMARKS
0010	1305+00 - 1306+62	RT	20	BEHIND CURB
TOTAL 0010			20	

MISCELLANEOUS QUANTITIES

EROSION CONTROL SUMMARY												
			628.1104	628.1504	628.1520	628.1905	628.1910 MOB	628.2027	629.0210	630.0110	630.0200	
			EROSION BAILS	SILT FENCE	SILT FENCE MAINT	MOB EROSION CONTROL	EMERGENCY EROSION CONTROL	EROSION MAT CLASS II TYPE C	FERTILIZER TYPE B	SEED MIX 10 LB	SEED TEMPORARY LB	REMARKS
CAT	STATION	LOC	EACH	LF	LF	EACH	EACH	SY	CWT			
0010		PROJECT	30	500	500	3	1					UNDISTRIBUTED
0010	1225+07	CULVERT END - L & R						44	0.03	0.40	0.40	CLEANING CULVERT ENDS
0010	1235+57	CULVERT END - L & R						44	0.03	0.40	0.40	CLEANING CULVERT ENDS
0010	1242+19	CULVERT END - L & R						44	0.03	0.40	0.40	CLEANING CULVERT ENDS
0010	1253+00	CULVERT END - L & R						44	0.03	0.40	0.40	CLEANING CULVERT ENDS
0010	1257+32	CULVERT END - L & R						44	0.03	0.40	0.40	CLEANING CULVERT ENDS
0010	1264+55	CULVERT END - L & R						44	0.03	0.40	0.40	CLEANING CULVERT ENDS
0010	1289+88	CULVERT END - L						22	0.03	0.40	0.40	CLEANING CULVERT ENDS
0010	1307+39	CULVERT END - L & R						44	0.03	0.40	0.40	CLEANING CULVERT ENDS
0010	1323+64	CULVERT END - R						22	0.03	0.40	0.40	CLEANING CULVERT ENDS
0010	1327+99	CULVERT END - R						22	0.03	0.40	0.40	CLEANING CULVERT ENDS
0010	1330+99	CULVERT END - L & R						44	0.03	0.40	0.40	CLEANING CULVERT ENDS
0010	1335+64	CULVERT END - R						22	0.03	0.40	0.40	CLEANING CULVERT ENDS
0010	1351+70	CULVERT END - L						50	0.03	0.88	0.88	OUT TO R/W (80' FROM CL)
0010	1355+83	CULVERT END - L						33	0.03	0.60	0.60	OUT TO SWALE IN WOODS
0010	1355+83	CULVERT END - R						22	0.03	0.40	0.40	CLEANING CULVERT ENDS
0010	1365+13	CULVERT END - R						22	0.03	0.40	0.40	CLEANING CULVERT ENDS
0010	1370+14	CULVERT END - R						22	0.03	0.40	0.40	CLEANING CULVERT ENDS
0010	1376+50	FILL SLOPES - L&R						440	0.28	5.50	11.00	FILL SLOPES AND DITCH
0010	1390+00	FILL SLOPES - L						140	0.12	3.00	6.00	SLOPES
0010	1397+00	FILL SLOPES - R						150	0.12	3.00	6.00	SLOPES
0010	1410+00	FILL SLOPES - L&R		270				1010	0.50	11.00	22.00	SLOPES
0010	1411+00	FILL SLOPES - L						210	0.12	3.00	6.00	SLOPES
0010	1425+61	CULVERT END - L & R						44	0.03	0.40	0.40	CLEANING CULVERT ENDS
0010	1434+67	CULVERT END - L & R						44	0.03	0.40	0.40	CLEANING CULVERT ENDS
TOTAL 0010			30	770	500	3	1	2627	1.71	33.78	59.28	

TRAFFIC CONTROL SUMMARY					
		643.0300	643.0610.S	643.0900	643.5000
		TRAFFIC CONTROL DRUMS	TEMPORARY PORTABLE RUMBLE STRIPS	TRAFFIC CONTROL SIGNS	TRAFFIC CONTROL
CAT	LOC	DAY	LS	DAY	EACH
0010	PROJECT		1	0	1
0010	PROJECT	225		48	
0010	PROJECT			250	
0010	PROJECT	5808		220	
TOTAL 0010		6033	1	518	1

MISCELLANEOUS QUANTITIES

PERMANENT SIGNING SUMMARY PAGE 1 OF 2										
					634.0616	637.2210	637.2230	638.2602	638.3000	
					POSTS WOOD 4X6- INCH X 16-FOOT	SIGNS TYPE II REFLECTIVE H	SIGNS TYPE II REFLECTIVE F	REMOVING SIGNS TYPE II	REMOVING SMALL SIGN SUPPORTS	
CAT	STATION	SIGN CODE	SIGN NO.	LOC	EACH	SF	SF	EACH	EACH	REMARKS
0010	1148+00	J4-1	10	R	1	6.00		1	1	EAST USH 2
0010	1148+50	D1-1	11	R	2	6.88		1	2	ASHLAND 9
0010	1152+10	D1-2	12	L	2	13.75		1	1	SUPERIOR - HAYWARD
0010	1152+80	W14-3	13	R	1		6.00	1	1	NO PASS
0010	1157+00	J2-2	14	L	1	19.00		1	1	SOUTH 63 - WEST 2
0010	1159+50	J1-1	15	L	1	6.50		1	1	JCT 63
0010	1162+60	R2-1	16	R	1	5.00		1	1	SPEED LIMIT 55
0010	1208+00	R1-1	17	L	1	5.18		1	1	STOP
0010	1208+35	R1-1	18	R	1	5.18		1	1	STOP
0010	1211+30	I-55-56								ADOPT A HIGHWAY - TO REMAIN
0010	1211+20	W14-3	19	L	1		6.00	1	1	NO PASS
0010	1216+45	R4-3	20	R	1	5.00		1	1	SLOWER TRAFFIC KEEP RIGHT
0010	1221+10	D1-1	21	R	1	7.75		1	1	OLD HIGHWAY 2
0010	1227+50	R1-1	22	L	1	5.18		1	1	STOP
0010	1232+10	D1-1	23	L	1	7.75		1	1	OLD HIGHWAY 2
0010	1234+75	R1-1	24	R	1	5.18		1	1	STOP
0010	1263+35	D1-1	25	R	1	6.88		1	1	COLBY ROAD
0010	1267+00	W4-2R	26	L	1		9.00	1	2	RIGHT LANE ENDS GRAPHIC
0010	1267+00	W4-2R	27	R	1		9.00	1	1	RIGHT LANE ENDS GRAPHIC
0010	1270+00	R1-1	28	R	1	5.18		1	1	STOP
0010	1270+10	W9-1R	29	L	1		6.25	1	1	RIGHT LANE ENDS
0010	1276+50	D1-1	30	L	1	6.88		1	1	COLBY ROAD
0010	1277+50	W9-1R	31	R	1		6.25	1	1	RIGHT LANE ENDS
0010	1281+95	W4-2R	32	L	1		9.00	1	1	RIGHT LANE ENDS GRAPHIC
0010	1281+95	W4-2R	33	R	1		9.00	1	1	RIGHT LANE ENDS GRAPHIC
0010	1281+95	W8-8, MR5-53		L				2		TO BE REMOVED
0010	1288+80	R1-1	34	L	1	5.18		1	1	STOP
0010	1291+00	J1-1	35	R	1	6.50		1	1	JCT 137
0010	1293+75	JV	36	R	1	34.50		1	1	EAST 2 - NORTH 137
0010	1298+00	R3-55R	37	R	1	5.00		1	3	RIGHT TURN LANE
0010	1298+00	D1-1	38	R	2	6.88				ASHLAND
0010	1302+11	I55-56		L				1	1	ADOPT A HIGHWAY - TO REMAIN
0010	1302+11	J4-1	39	L	1	7.50				WEST 2
0010	1305+00	J3-2	40	R	2	19.00		1	2	NORTH 137 - ALTERNATE 2
0010	1305+40	R1-1	41	L	1	5.18		1	1	STOP
0010	1306+10	R1-1	42	R	1	5.18		1	1	STOP
0010	1306+80	JV	43	L	2	23.00		1	2	NORTH 137 - ALTERNATE 2
0010	1308+65	J4-2	44	R	1	12.00		1	1	EAST 2
0010	1314+30	D1-3	45	L	2	16.50		1	2	SUPERIOR - HAYWARD - ASHLAND
0010	1317+85	JV	46	L	1	34.50		1	1	NORTH 137 - WEST 2
0010	1320+80	J1-1	47	L	1	6.50		1	1	JCT 137
0010	1325+00	R4-3	48	L	1	5.00		1	1	SLOWER TRAFFIC KEEP RIGHT
SUB-TOTALS					45	309.71	60.50	40	45	

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MISCELLANEOUS QUANTITIES

PERMANENT SIGNING SUMMARY PAGE 2 OF 2											
CAT	STATION	SIGN CODE	SIGN NO.	LOC	634.0616	637.2210	637.2230	638.2602	638.3000	REMARKS	
					POSTS WOOD 4X6- INCH X 16-FOOT	SIGNS TYPE II REFLECTIVE H	SIGNS TYPE II REFLECTIVE F	REMOVING SIGNS TYPE II	REMOVING SMALL SIGN SUPPORTS		
					EACH	SF	SF	EACH	EACH		
0010	1334+00	W14-3	49	R	1		6.00	1	1	NO PASS	
0010	1359+00	R2-1	50	L	1	5.00		1	1	SPEED LIMIT 55	
0010	1359+50	NA		R				1	2	NORTHERN GREAT LAKES VISITOR CENTER	
0010	1365+65	W14-3	51	L	1		6.00	1	1	NO PASS	
0010	1375+10	R1-1	52	R	1	5.18		1	1	STOP	
0010	1377+00	I55-56		R						ADOPT A HIGHWAY - TO REMAIN	
0010	1396+70	D7-52		R				1	2	ROAD TO BIG BAY STATE PARK-REMOVE	
0010	1398+50	R1-1	53	L	1	5.18		1	1	STOP	
0010	1399+05	R1-1	54	R	1	5.18		1	1	STOP	
0010	1400+90	W14-3	55	R	1		6.00	1	1	NO PASS	
0010	1408+00	I3-1	56	R	1	6.00		1	1	FISH CREEK	
0010	1409+80	I3-1	57	L	1	6.00		1	1	FISH CREEK	
0010	1413+90	J1-1	58	R	1	6.50		1	1	JCT G	
0010	1415+00	W14-3	59	L	1		6.00	1	1	NO PASS	
0010	1416+20	SP02	60	R	2	27.00		1	2	NORTHERN GREAT LAKES VISITOR CENTER	
0010	1419+95	D1-1	61	R	1	6.25		1	1	MOQUAH	
0010	1420+00	J4 -1	62	L	1	6.00		0	0	USH 2 WEST	
0010	1421+20	SP03	63	R	2	22.20		1	2	WHITTLESEY CREEK NATL WILDLIFE REFUGE	
0010	1421+20	J13-1	64	L	1	7.50		0	0	USH 2 DOUBLE ARROW	
0010	1422+80	R1-1	65	L	1	5.18		1	1	STOP	
0010	1423+00	J13-1	66	R	1	7.50		1	1	CTH G WITH ARROW	
0010	1423+40	W1-7	67	R			8.00	1	1	DOUBLE ARROW	
0010	1423+40	M1-4								USH 2 - REMOVE	
0010	1424+00	J13-1	68	L	1	7.50		1	1	CTH G WITH ARROW	
0010	1426+75	SP04	69	R	2	22.50		1	2	APOSTLE ISLANDS NATIONAL LAKESHORE	
0010	1427+50	SP05	70	L	2	22.50		1	2	WHITTLESEY CREEK NATL WILDLIFE REFUGE	
0010	1428+80	W6-1	71	R	1		9.00	1	1	LANES DIVIDE - GRAPHICAL	
0010	1429+75	D1-1	87	L	2	6.25		1	2	MOQUAH	
0010	1431+60	SP06	72	L	2	27.00		1	2	NORTHERN GREAT LAKES VISITOR CENTER	
0010	1431+00	J1-1	73	R	1	6.50		1	1	JCT 13	
0010	1433+50	R5-1	74	L				1	1	DO NOT ENTER - REMOVE	
0010	1433+50	J1-1	75	L	1	6.50		1	1	JCT CTH G	
0010	1435+00	W6-3	76	L	1		9.00	1	1	TWO WAY TRAFFIC ARROWS	
0010	1435+60	R5-1A	77	L				1	1	WRONG WAY - REMOVE	
0010	1437+15	N/A		R	0					EXISTING MONOTUBE AND FLASHING LIGHTS	
0010	1437+15	W2-6	79	R	1		6.25	1	0	ROUNDAABOUT ARROW SYMBOLS	
0010	1437+15	W13-1	80	R	0		2.25	1	0	15 MPH	
0010	1438+85	R2-1	81	L	1	5.00		1	1	55 MPH	
0010	1440+50	J3-2	82	R	2	47.50		2	2	NORTH 13-WEST CIRCLE-EAST 2-SOUTH-13-	
0010	1440+50	J3-3	83							" " "	
0010	1441+30	R5-1	84	L	1	6.25		1	1	DO NOT ENTER	
0010	1441+30	W6-2	78	L	0		9	0	0	END DIVIDED TRAFFIC	
0010	1441+30	R4-7	85	L	1	5.00		1	1	SHIFT RIGHT AHEAD	
0010	1441+30	W5-56	86	L	0		2.25	1	0	WARNING REFLECTOR	
SUB-TOTALS					39	283.17	69.75	38	43		
GRAND TOTALS					84	592.88	130.25	78	88		

3

MISCELLANEOUS QUANTITIES

FIELD OFFICE TYPE C

642.5201			
CAT	LOC	EACH	REMARKS
0010	PROJECT	1	1180-03-74
TOTAL 0010		1	

GEOTEXTILE TYPE R

645.0130			
CAT	STATION	LOC	SY
0010	1323+64	CULVERT END - L	47
0010	1327+99	CULVERT END - L	47
0010	1335+64	CULVERT END - L	47
0010	1365+13	CULVERT END - L	47
0010	1372+14	CULVERT END - R	11
TOTAL 0010			199

LOCATING NO-PASSING ZONES

648.0100		
CAT	LOC	MI
0010	PROJECT	6
TOTAL 0010		6

MARKING LINE SUMMARY

					646.1020	646.1040	646.1545	646.3545	646.4520	646.5020	646.5120	646.6120	646.7120	649.0105		
					MARKING LINE EPOXY	MARKING LINE GROOVED WET REF. EPOXY	MARKING LINE GROOVED WET REF. CONTRAST EPOXY	MARKING LINE GROOVED WET REF. CONTRAST EPOXY	PAVEMENT MARKING SAME DAY EPOXY	MARKING ARROW EPOXY	MARKING WORD EPOXY	MARKING STOP LINE EPOXY	MARKING DIAGONAL EPOXY	TEMPORARY MARKING LINE PAINT		
					4-INCH	4-INCH	4-INCH	8-INCH	4-INCH			18-INCH	12-INCH	4-INCH		
CAT	STATION	TO	STATION	LOC	LF	LF	LF	LF	LF	EACH	EACH	LF	LF	LF	REMARKS	
0010	1146+00	-	1434+64	ML	34392				34392					34392	YELLOW	
0010	1146+00	-	1434+64	ML			3525							3525	WHITE PASS LNS	
0010	1146+00	-	1441+30	ML		57760									WHITE EDGE LINE	
0010	1146+00	-	1141+30	ML				1819							TURN LANE LINES	
0010			1437+90	ML						1					WORDS "ONLY"	
0010			1438+60	ML					2						TYPE 2R & TYPE 1	
0010	1438+25	-	1441+30	ML-GORE PROJECT									141		YELLOW DIAGONAL STOP LINES	
TOTAL 0010					34392	57760	3525	1819	34392	2	1	100	141	37917		

CONSTRUCTION STAKING RESURFACING REFERENCE

650.8000			
CAT	LOC	LF	REMARKS
0010	PROJECT	29530	
TOTAL 0010		29530	

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (01. 1180-03-74)

650.9910			
CAT	LOC	LS	REMARKS
0010	PROJECT	1	
TOTAL 0010		1	

ASP SUMMARY

		ASP.1T0A	ASP.1T0G	REMARKS
CAT	LOC	HRS	HRS	
0010	PROJECT	2000	630	
TOTAL 0010		2000	630	

MISCELLANEOUS QUANTITIES

SAWING ASPHALT

690.0150				
CAT	STATION	LOC	LF	REMARKS
0010	1135+00	START OF PROJECT	30	BUTT JOINT
0010	1144+60	USH 63	35	BUTT JOINT
0010	1154+80	DRIVEWAY - L	35	BUTT JOINT
0010	1169+83	DRIVEWAY - L	23	BUTT JOINT
0010	1207+78	BUDIASH RD - R	28	BUTT JOINT
0010	1208+79	BUDIASH RD - L	25	BUTT JOINT
0010	1228+13	OLD USH 2 - L	29	BUTT JOINT
0010	1234+22	OLD USH 2 - R	29	BUTT JOINT
0010	1270+58	COLBY RD	27	BUTT JOINT
0010	1277+30	DRIVEWAY - L	21	BUTT JOINT
0010	1285+00	DRIVEWAY - L	11	BUTT JOINT
0010	1305+69	STH 137	30	BUTT JOINT
0010	1305+80	KANE RD	29	BUTT JOINT
0010	1321+61	DRIVEWAY - R	17	BUTT JOINT
0010	1344+54	DRIVEWAY - R	24	BUTT JOINT
0010	1346+84	DRIVEWAY - R	23	BUTT JOINT
0010	1349+41	DRIVEWAY - R	13	BUTT JOINT
0010	1369+09	DRIVEWAY - R	25	FORD DEALER
0010	1375+08	STATE FARM RD	32	BUTT JOINT
0010	1423+30	CTH G	32	BUTT JOINT
0010	1434+64	END OF PROJECT	42	BUTT JOINT
TOTAL 0010			560	

SPECIAL(01. MILLING AND REMOVING TEMPORARY WEDGE JOINT)

SPV.0105.01		
CAT	LOC	LS
0010	PROJECT	1
TOTAL 0010		1

SPECIAL(02. MATERIAL TRANSFER VEHICLE)

SPV.0105.02		
CAT	LOC	LS
0010	PROJECT	1
TOTAL 0010		1

CLEANING CULVERT ENDS

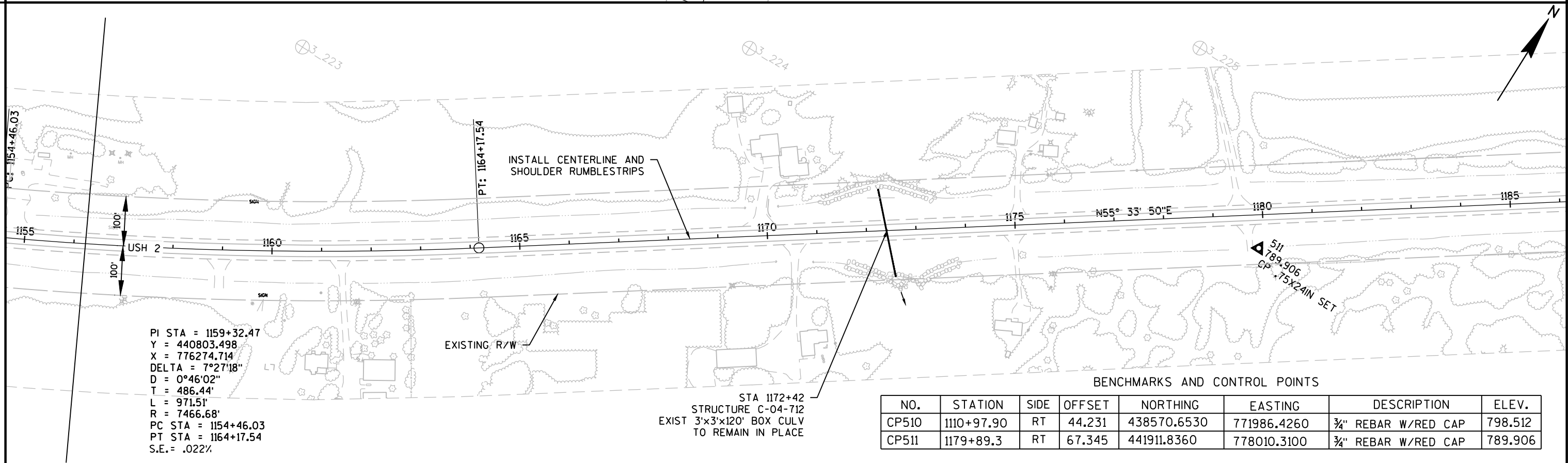
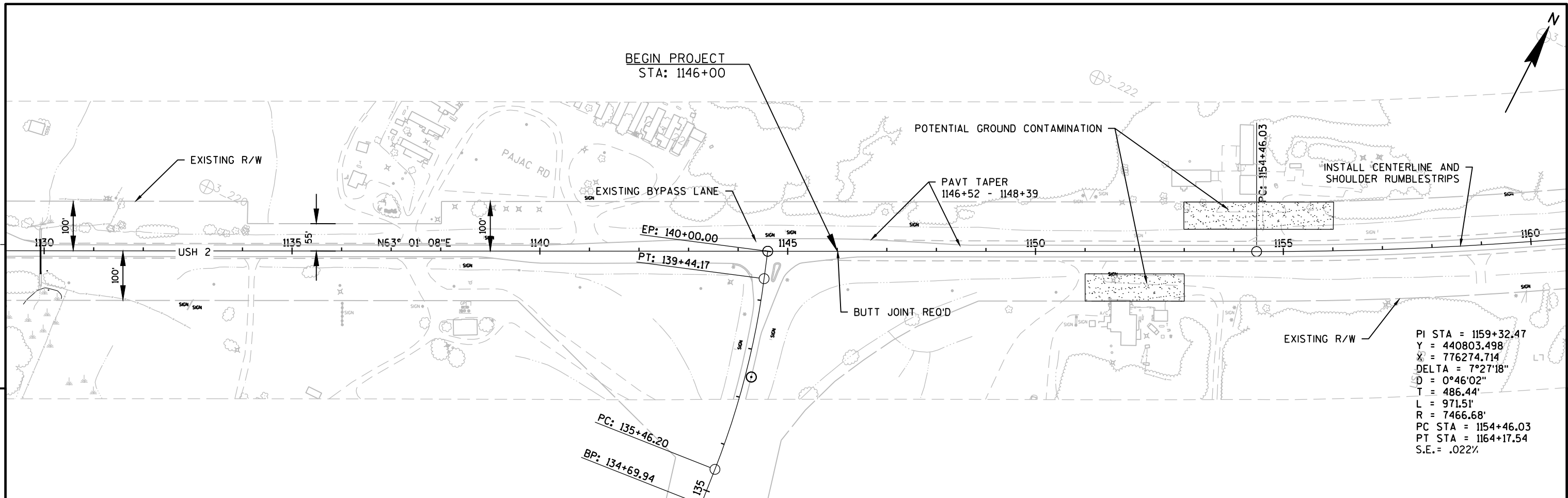
SPV.0060.01					SPV.0060.02	
			MINIMAL	FULL		
CAT	STATION	LOC	EACH	EACH	REMARKS	
0010	1225+07	L / R	1	1		
0010	1235+57	R	1	1		
0010	1242+19	L / R	2			
0010	1253+00	L / R	1	1		
0010	1257+32	L / R	1	1		
0010	1264+55	L / R	1	1		
0010	1289+88	L	1			
0010	1307+39	L / R	2			
0010	1323+64	R	1			
0010	1327+99	R	1			
0010	1330+99	L / R	1	1		
0010	1335+64	R	1			
0010	1351+70	L		1		
0010	1355+83	L / R	1	1		
0010	1365+13	L	2			
0010	1389+50	L	1		DROP INLET	
0010	1410+00	R	1		DROP INLET	
0010	1425+61	L / R	2			
0010	1434+67	L / R	2			
TOTAL 0010			23	8		

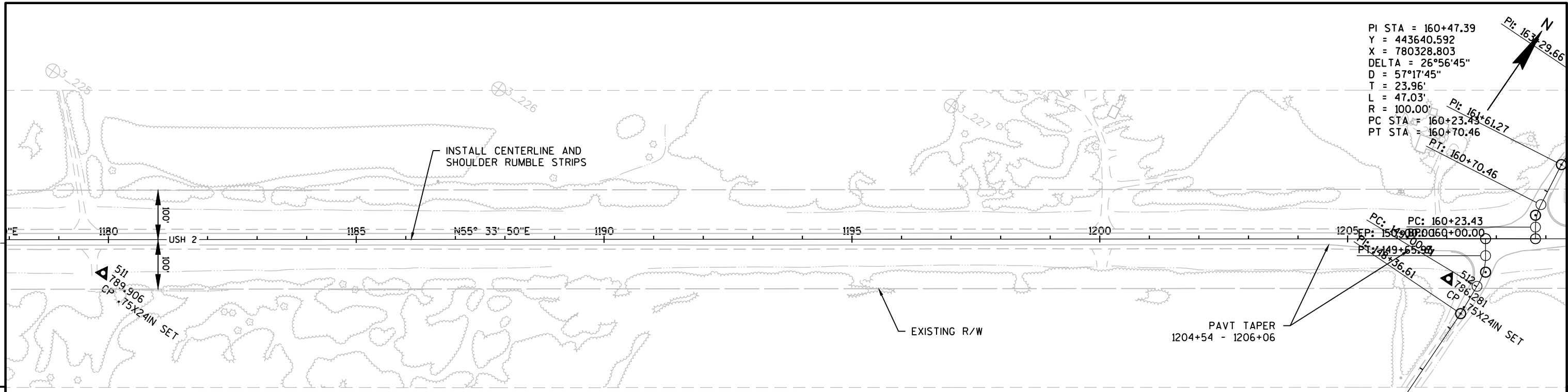
SPECIAL(01. REGRADING DITCH)

SPV.0090.01				
CAT	STATION	LOC	LF	REMARKS
0010	1225+07	CULVERT END - L	40	DITCHLINE TO UTILITY CONFLICT
0010	1253+00	CULVERT END - L	40	DITCHLINE TO R/W
0010	1257+32	CULVERT END - L	40	DITCHLINE TO R/W
0010	1264+55	CULVERT END - L	40	DITCHLINE TO R/W
0010	1351+70	CULVERT END - L	44	OUT TO R/W (80' FROM CL)
0010	1355+83	CULVERT END - L	30	OUT TO SWALE IN WOODS
0010	1376+50	SLOPE INTERCEPT	45	RESTORE FLOWLINE
TOTAL 0010			279	

SPECIAL(02. CONCRETE CURB AND GUTTER CURE AND SEAL TREATMENT)

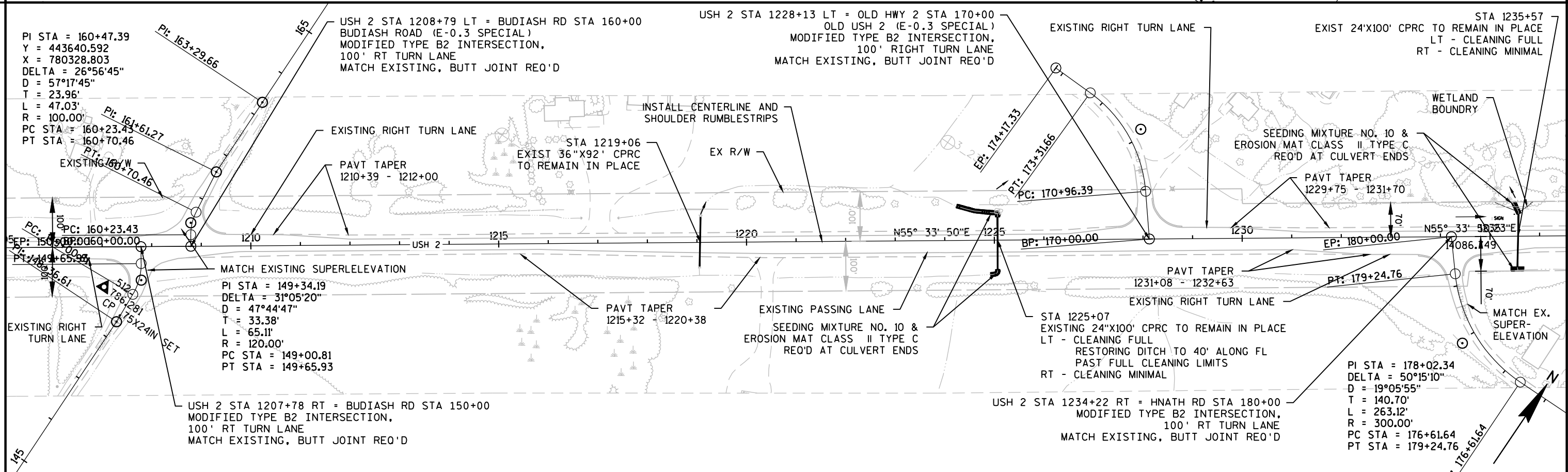
SPV.0090.02			
CAT	STATION	LOC	LF
0010	1305+75	STH 137 - SE QUAD	81
TOTAL 0010			81

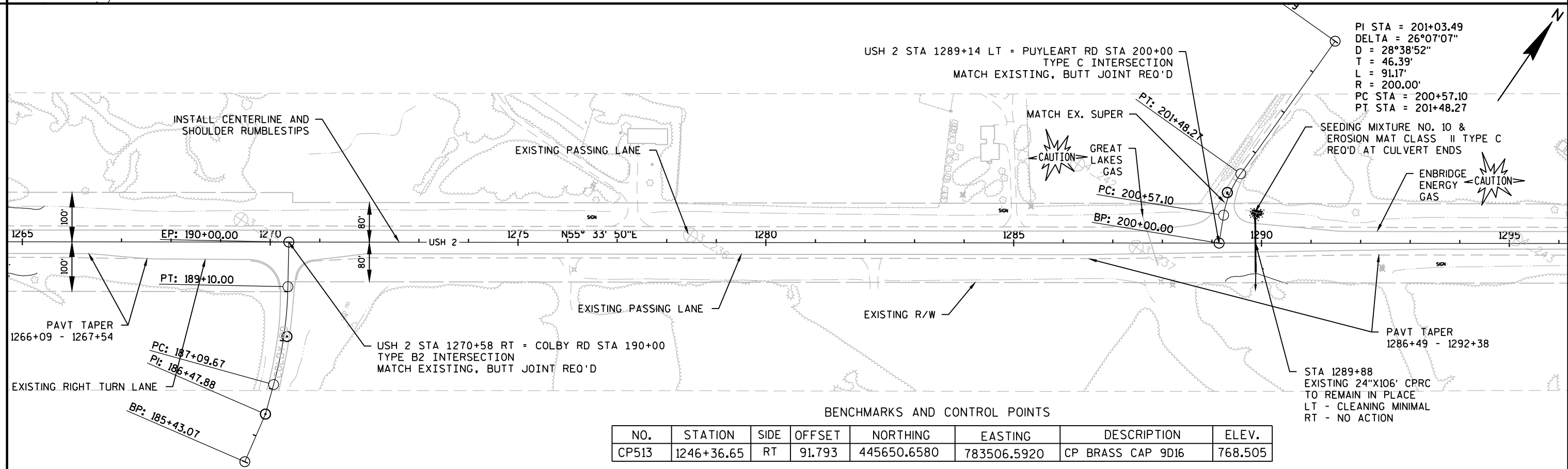
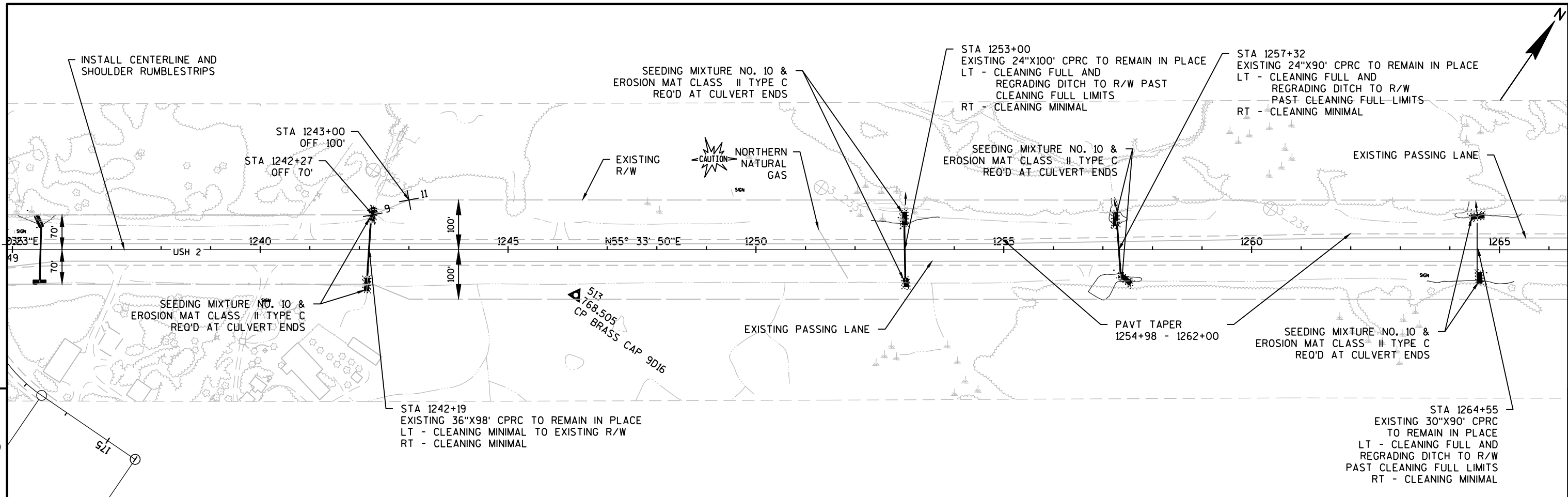




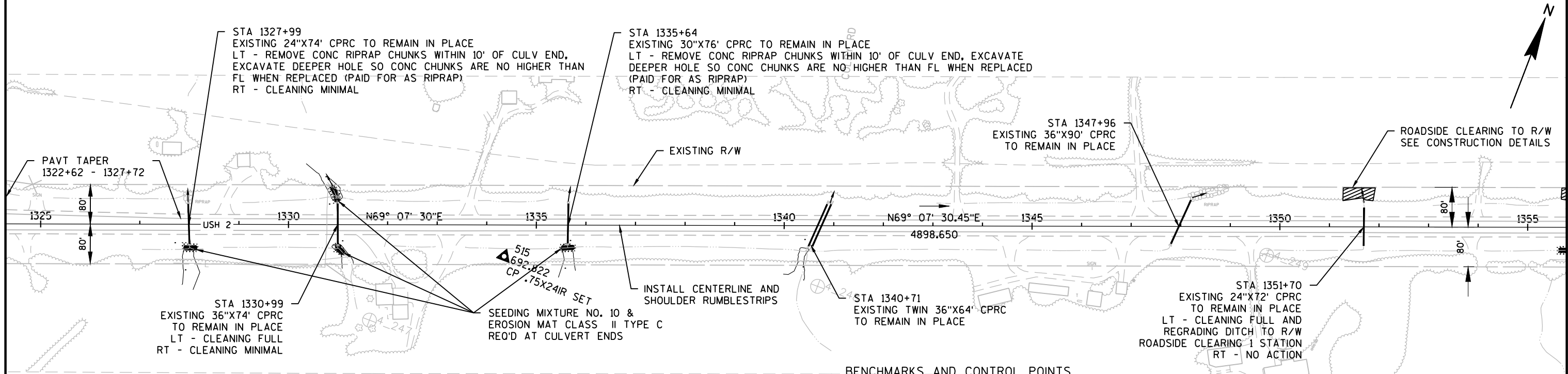
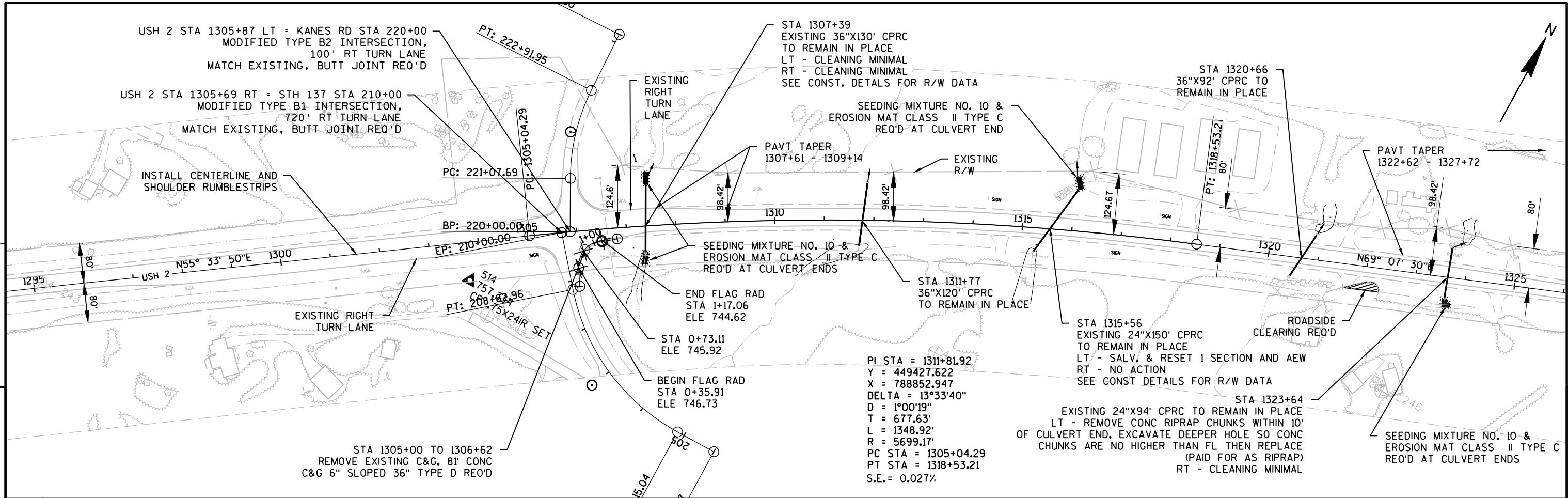
BENCHMARKS AND CONTROL POINTS

NO.	STATION	SIDE	OFFSET	NORTHING	EASTING	DESCRIPTION	ELEV.
CP512	1207+03.17	RT	80.436	443435.6970	780256.0020	¾" REBAR W/RED CAP	786.281



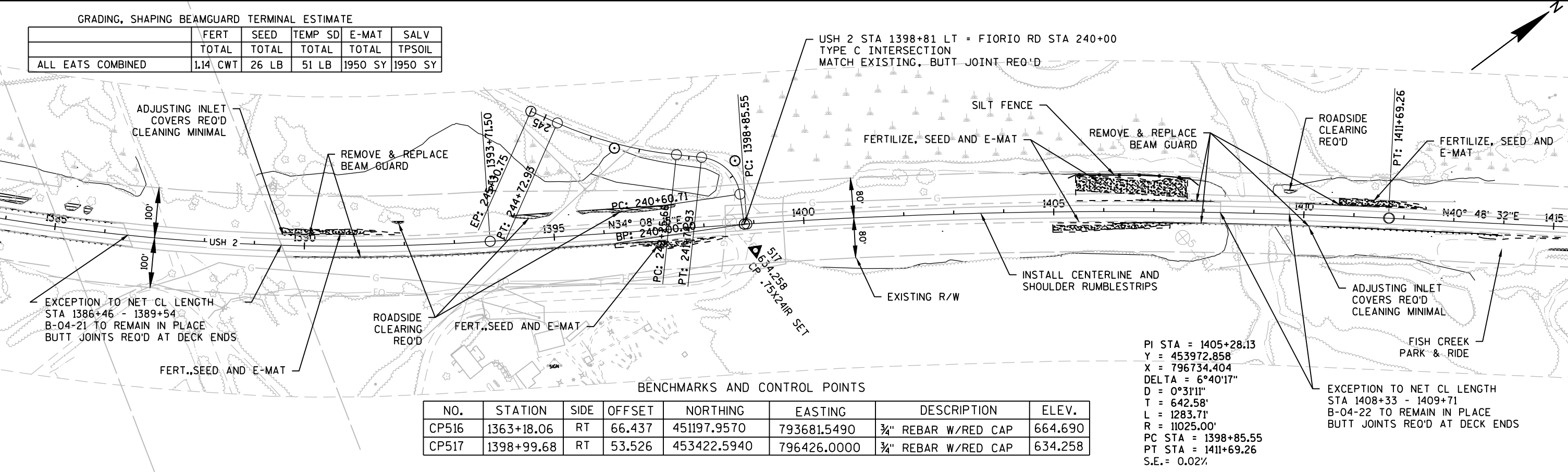
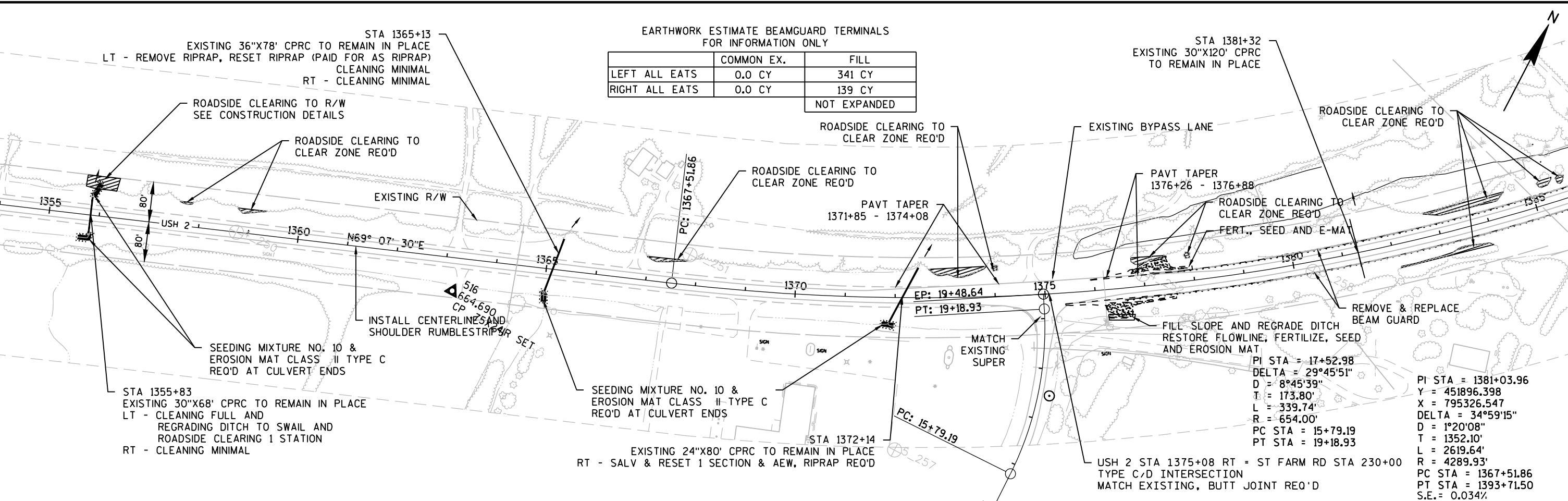


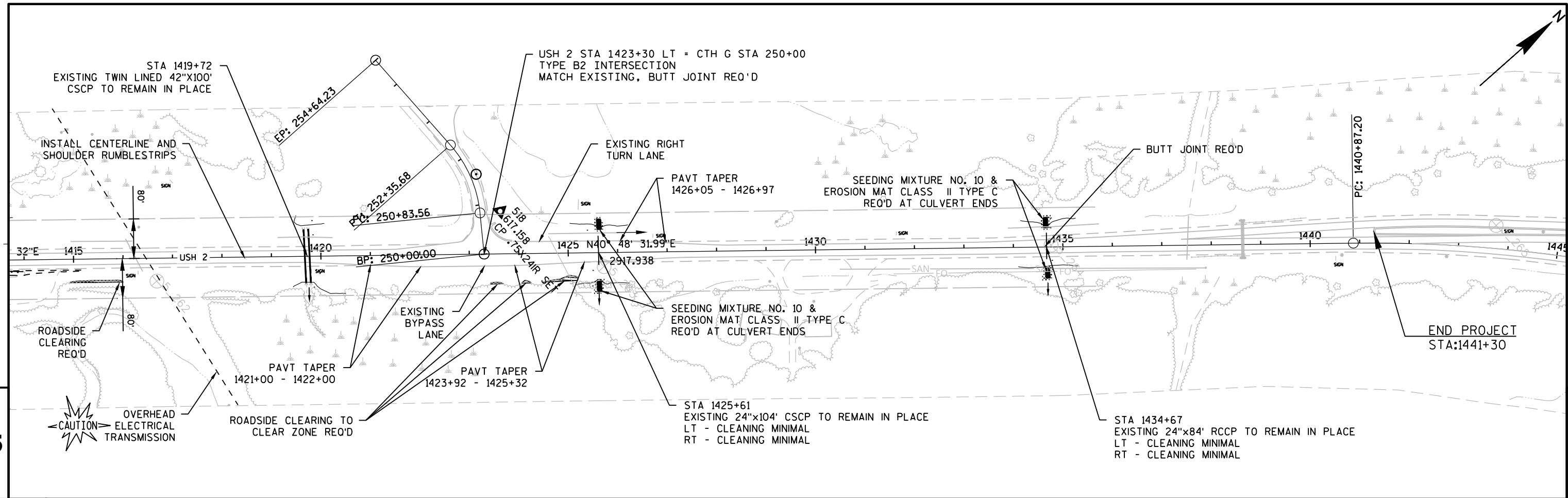
BENCHMARKS AND CONTROL POINTS							
NO.	STATION	SIDE	OFFSET	NORTHING	EASTING	DESCRIPTION	ELEV.
CP513	1246+36.65	RT	91.793	445650.6580	783506.5920	CP BRASS CAP 9D16	768.505



BENCHMARKS AND CONTROL POINTS

NO.	STATION	SIDE	OFFSET	NORTHING	EASTING	DESCRIPTION	ELEV.
CP514	1303+74.90	RT	76.675	448908.0260	788230.7090	¾" REBAR W/RED CAP	757.334
CP515	1334+35.02	RT	63.294	450173.5830	790986.6250	¾" REBAR W/RED CAP	692.822



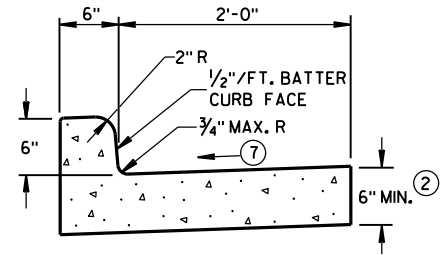


BENCHMARKS AND CONTROL POINTS

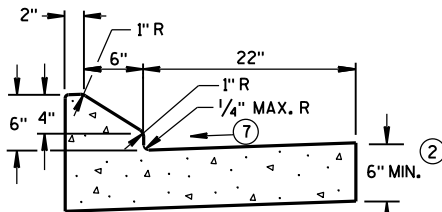
NO.	STATION	SIDE	OFFSET	NORTHING	EASTING	DESCRIPTION	ELEV.
CP518	1423+63.57	LT	86.100	455419.4580	797869.7120	¾" REBAR W/RED CAP	617.158

Standard Detail Drawing List

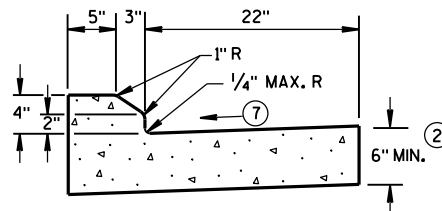
08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D02-06	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D03-07	CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F07-05	STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SIDE FRAINS
08F08-02	STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED CROSS DRAINS
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
09A01-13B	AT-GRADE SIDE ROAD INTERSECTION, TYPE "A1" & "A2"
13A10-01A	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-01B	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-01C	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-01D	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A11-02A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-02B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
14B42-05A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-05B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-05C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-05D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-03A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-03B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-03C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-04A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C03-04	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-04	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C07-14B	PAVEMENT MARKING WORDS
15C07-14C	PAVEMENT MARKING ARROWS
15C08-18A	LONGITUDINAL MARKING (MAINLINE)
15C08-18B	PAVEMENT MARKING (TURN LANES)
15C12-06	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C18-04	MEDIAN ISLAND MARKING
15C19-05A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C19-05B	MOVING PAVEMENT MARKING OPERATION MULTI-LANE UNDIVIDED ROADWAY
15C21-08	SIGNING AND MARKING FOR TWO LANE TO FOUR LANE DIVIDED TRANSITIONS
15C33-03	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-02A	PAVEMENT MARKING (INTERSECTIONS)
15C35-02B	PAVEMENT MARKING AND SIGNING (CLIMBING LANE & PASSING LANE)
15C35-02C	PAVEMENT MARKING AND SIGNING (CLIMBING LANE & PASSING LANE)
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
15D39-01	TRAFFIC CONTROL, DROP-OFF SIGNING



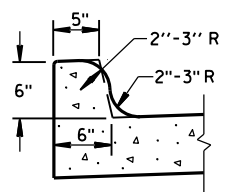
TYPES A^① & D



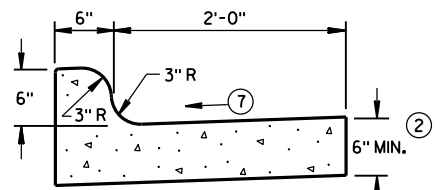
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

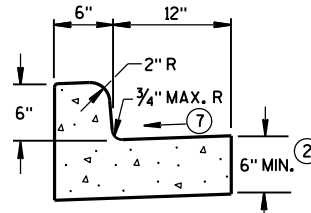


TYPES K^① & L
(OPTIONAL CURB SHAPE)



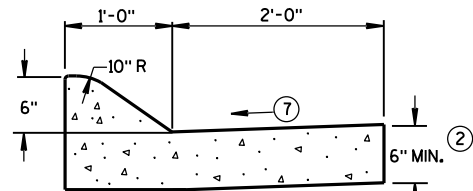
TYPES K^① & L

CONCRETE CURB & GUTTER 30"

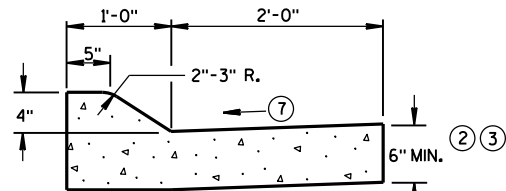


TYPES A^① & D

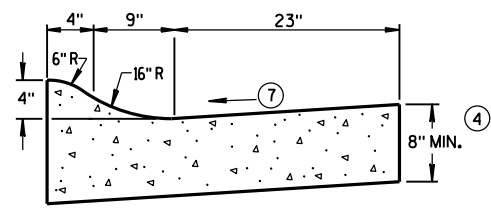
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A^① & D

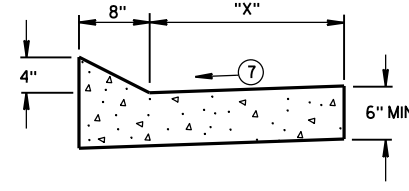


4" SLOPED CURB TYPES A^① & D



4" SLOPED CURB TYPES R^① & T^⑤

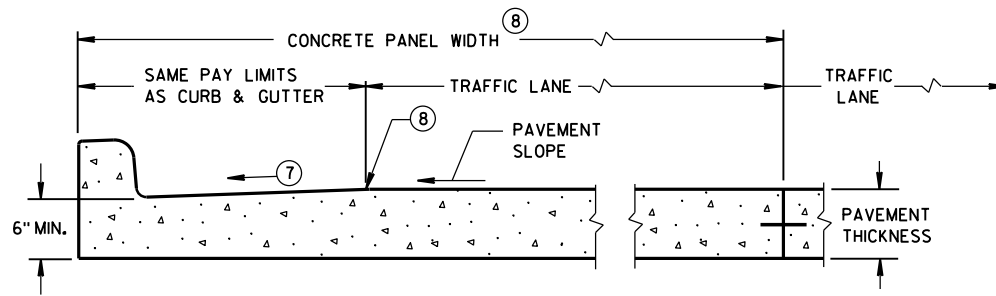
CONCRETE CURB & GUTTER 36"



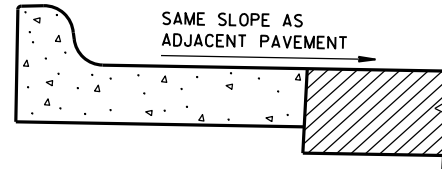
TYPES TBT & TBTT^①

CONCRETE CURB & GUTTER

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



PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



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

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.

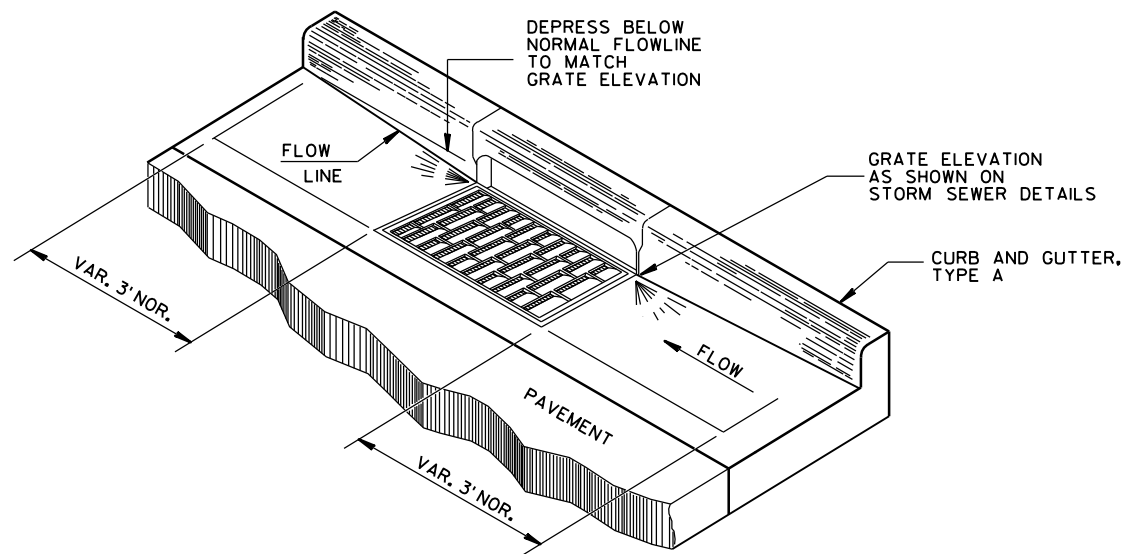
PAVEMENT THICKNESS
AND MAXIMUM CONCRETE
PANEL WIDTH TABLE

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

* BIKE LANE IS NOT SHOWN.

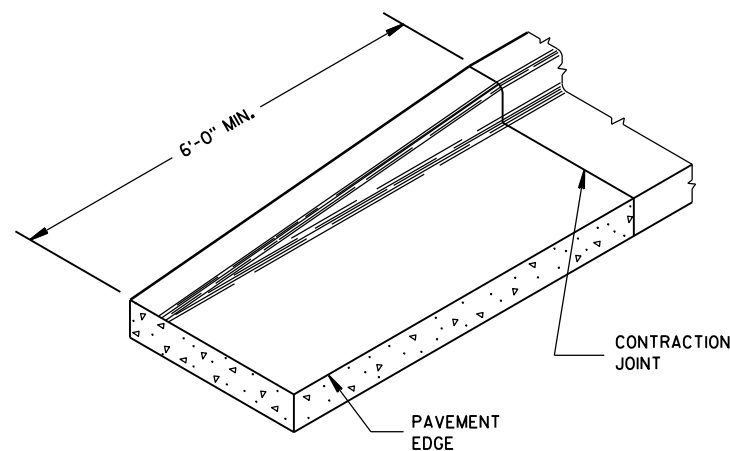
CONCRETE CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

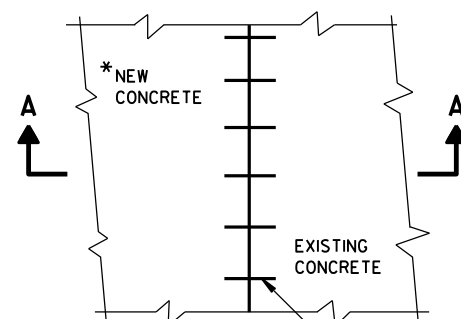


DETAIL OF CURB AND GUTTER AT INLETS

(TYPE H INLET COVER SHOWN)

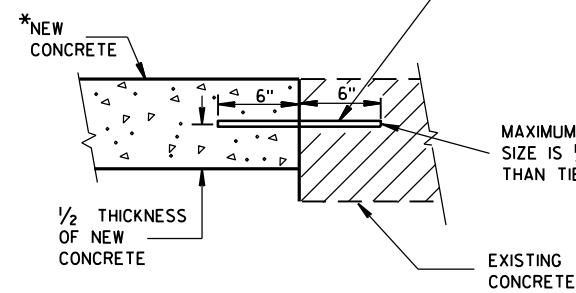


END SECTION CURB & GUTTER



PLAN VIEW

*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.



**SECTION A-A
TIE BARS DRILLED
INTO EXISTING PAVEMENT**

NO. 6 TIE BARS SPACED 2'-6" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT.

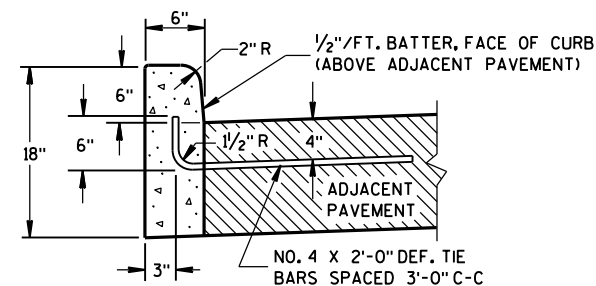
GENERAL NOTES

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

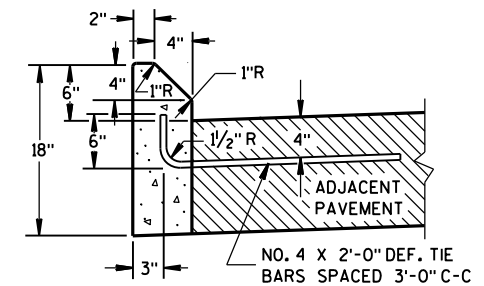
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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.

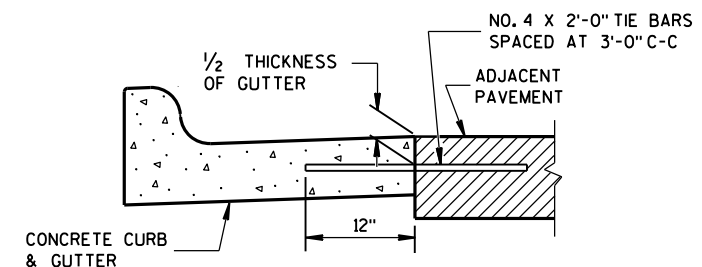


TYPES A^① & D

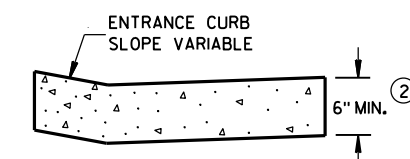


TYPES G^① & J

CONCRETE CURB



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

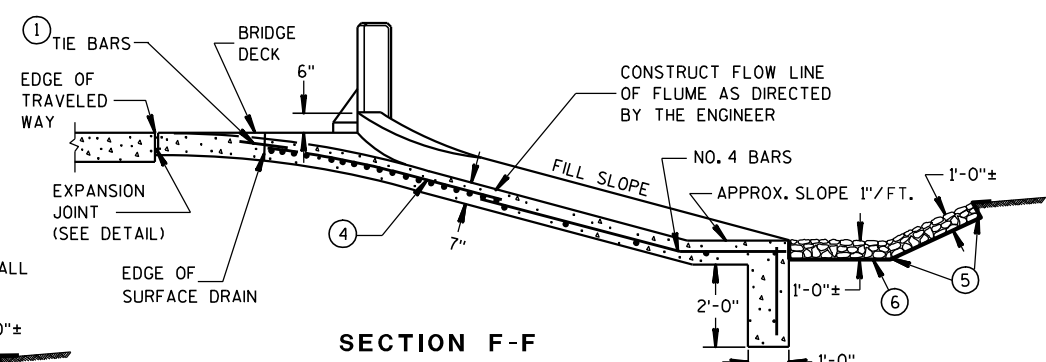
DATE

FHWA

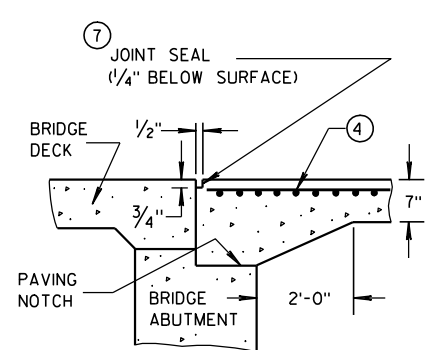
/S/ Rodney Taylor

ROADWAY STANDARDS DEVELOPMENT

UNIT SUPERVISOR

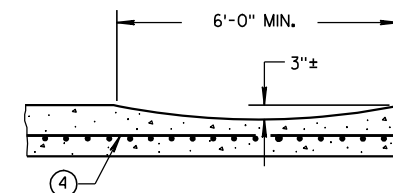


SECTION F-F

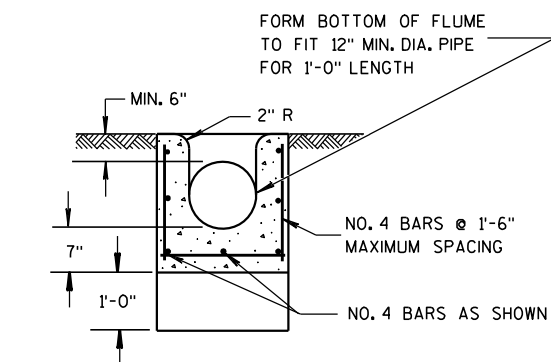


EXPANSION JOINT DETAIL

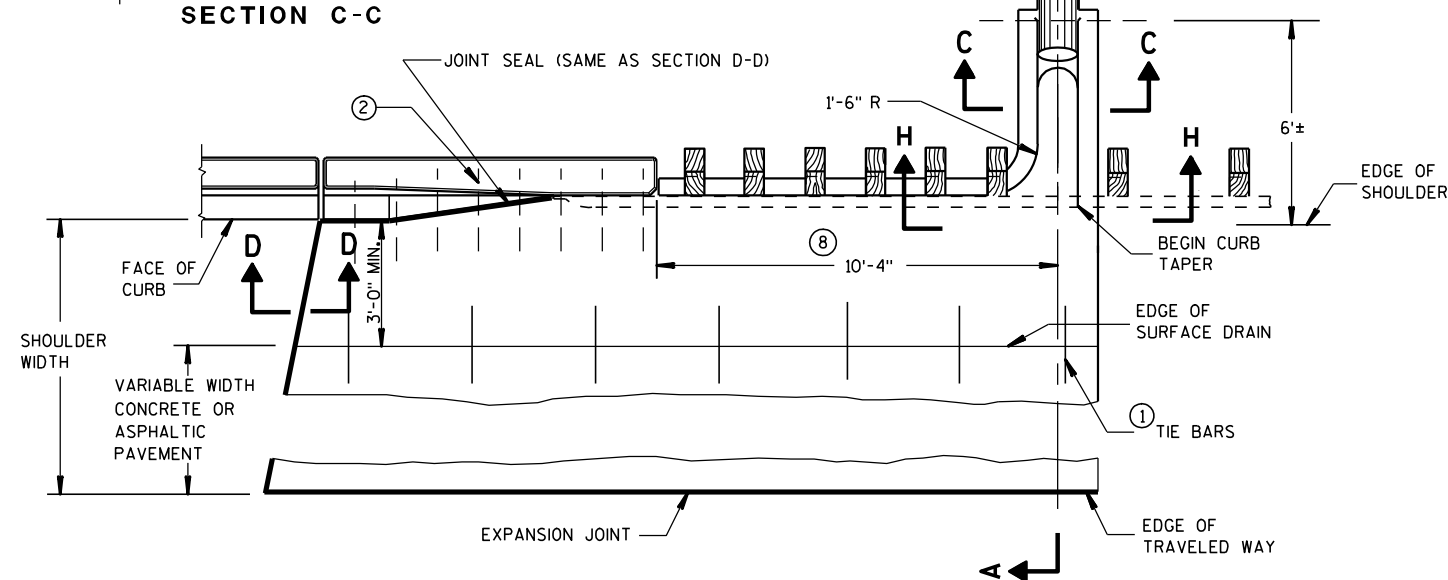
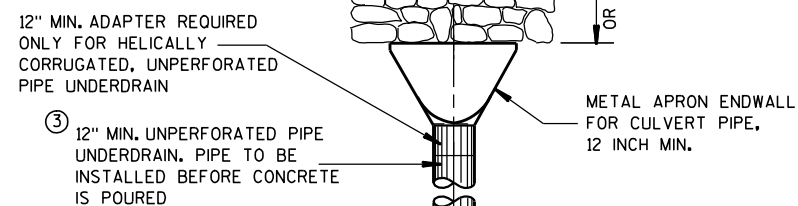
SECTION H-H



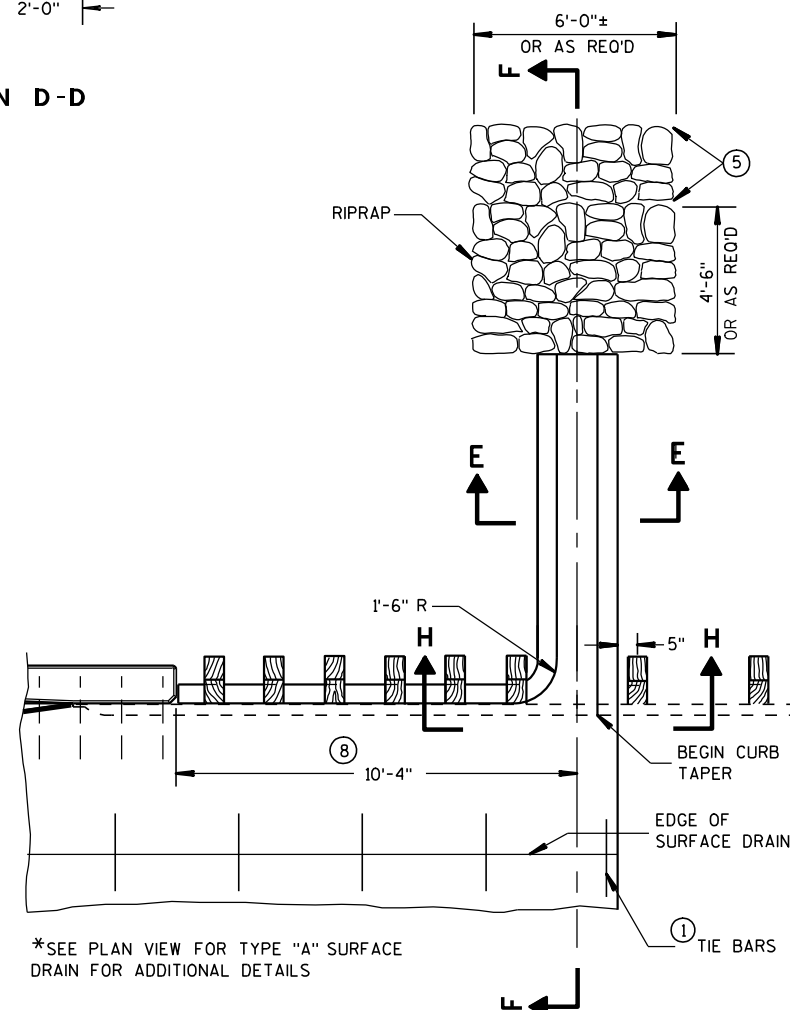
SECTION D-D



SECTION C-C



PLAN VIEW
SURFACE DRAIN WITH PIPE
TYPE "A"



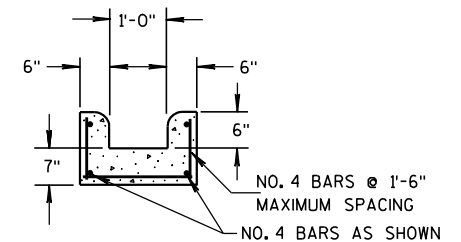
* PARTIAL PLAN VIEW
SURFACE DRAIN WITHOUT PIPE
TYPE "B"

GENERAL NOTES

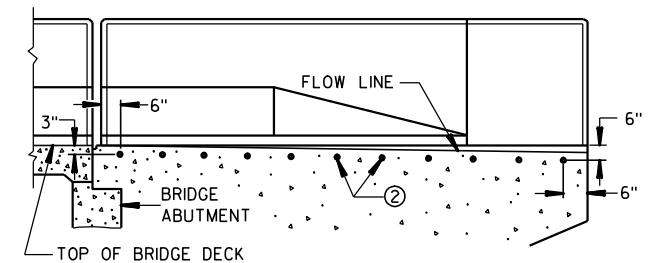
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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'-1/2".



SECTION E-E



LOCATION OF TIE BARS IN WINGWALL

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

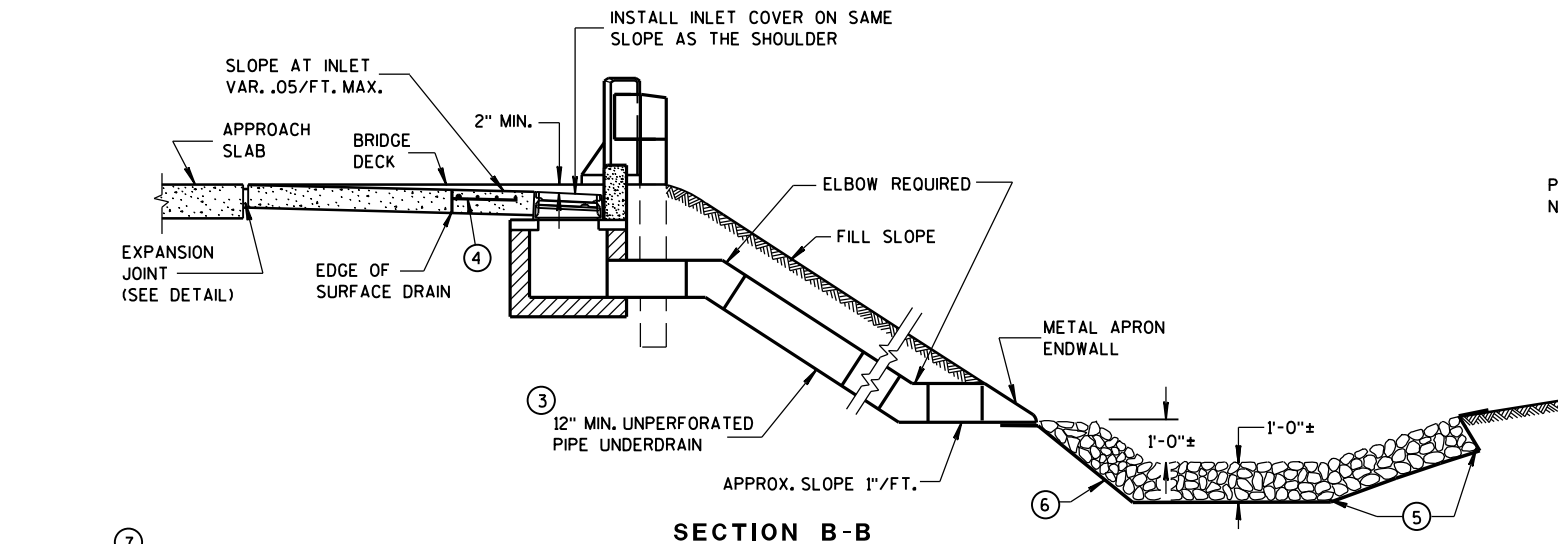
APPROVED

9/4/08

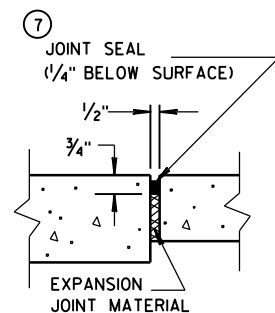
DA
FHWA

/S/ Jerry H. Zogg

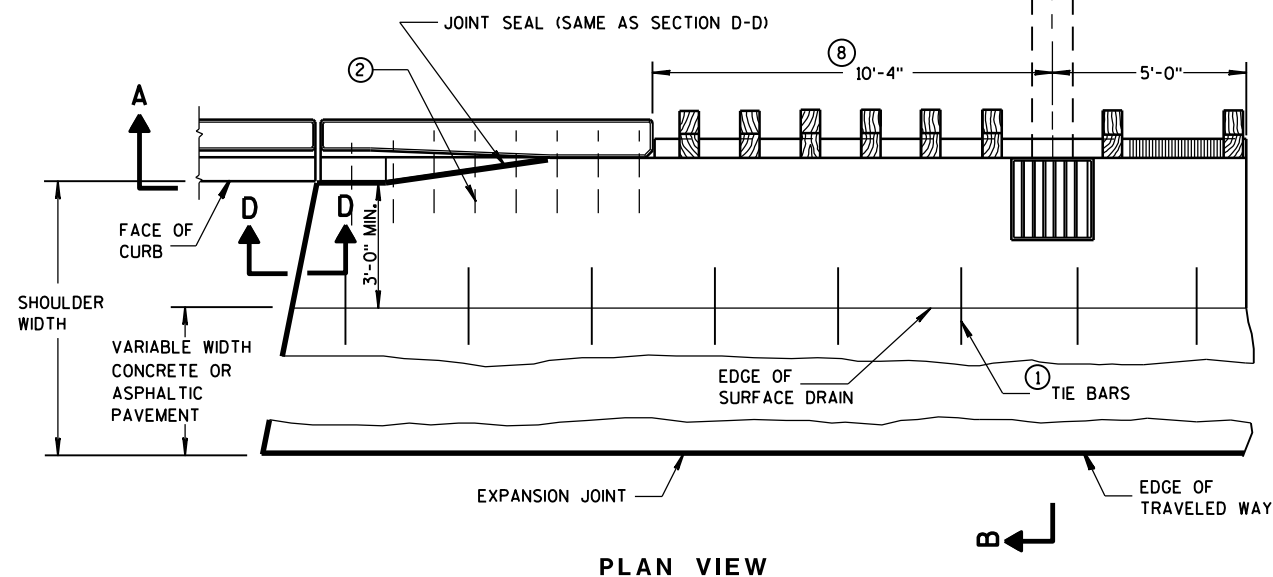
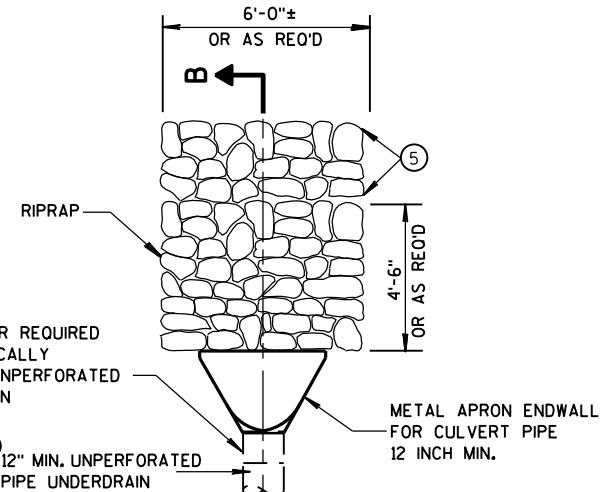
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



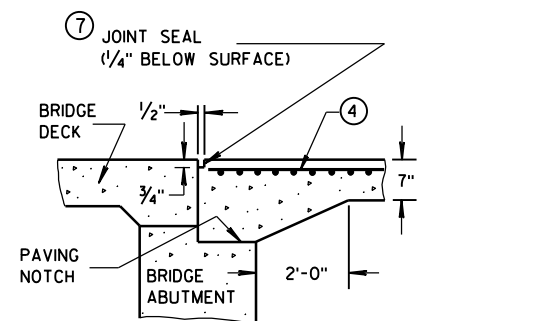
SECTION B-B



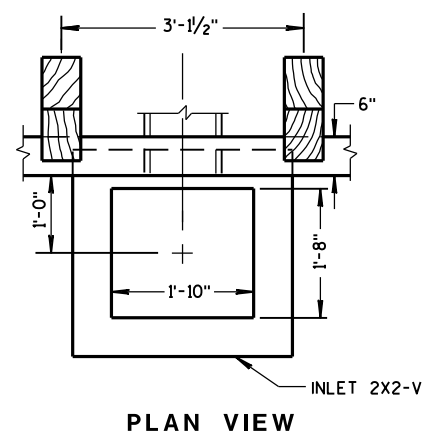
EXPANSION JOINT DETAIL



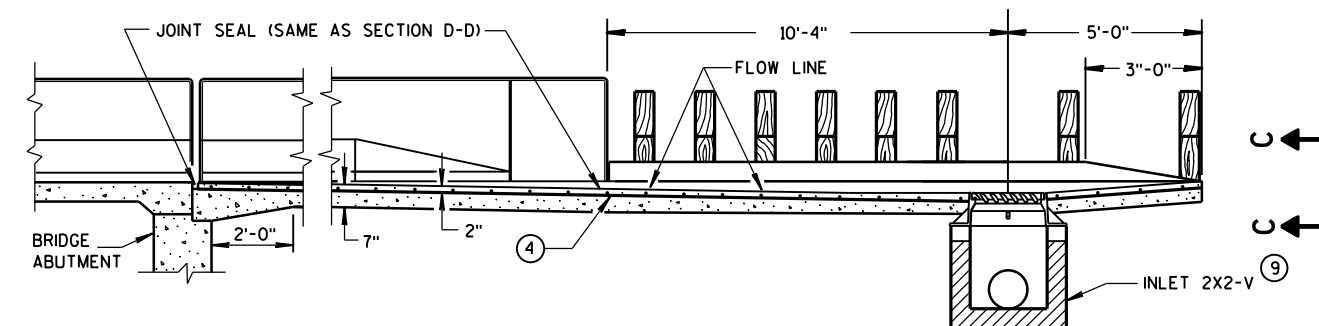
PLAN VIEW



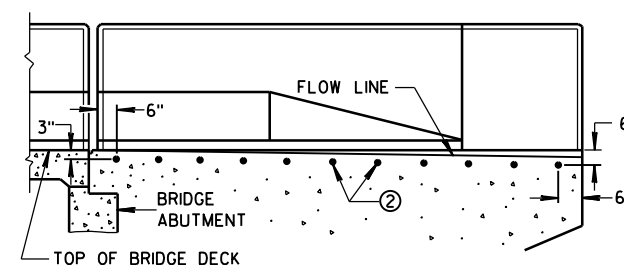
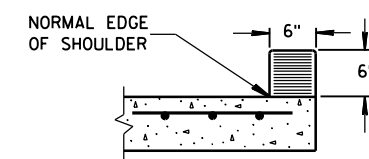
SECTION D-D



PLAN VIEW



SECTION A-A

LOCATION OF
TIE BARS IN WINGWALL

SECTION C-C

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 THE PIPE UNDERDRAIN MAY BE ANY ONE OF THE SIX MATERIALS LISTED IN THE STANDARD SPECIFICATIONS SECTION 612.2 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.
- 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'-1/2".
- ⑨ SEE CURRENT STANDARD DETAIL DRAWINGS 8A5 AND 8C7 FOR DETAILS.

CONCRETE SURFACE DRAINS
DROP INLET TYPE
AT STRUCTURES

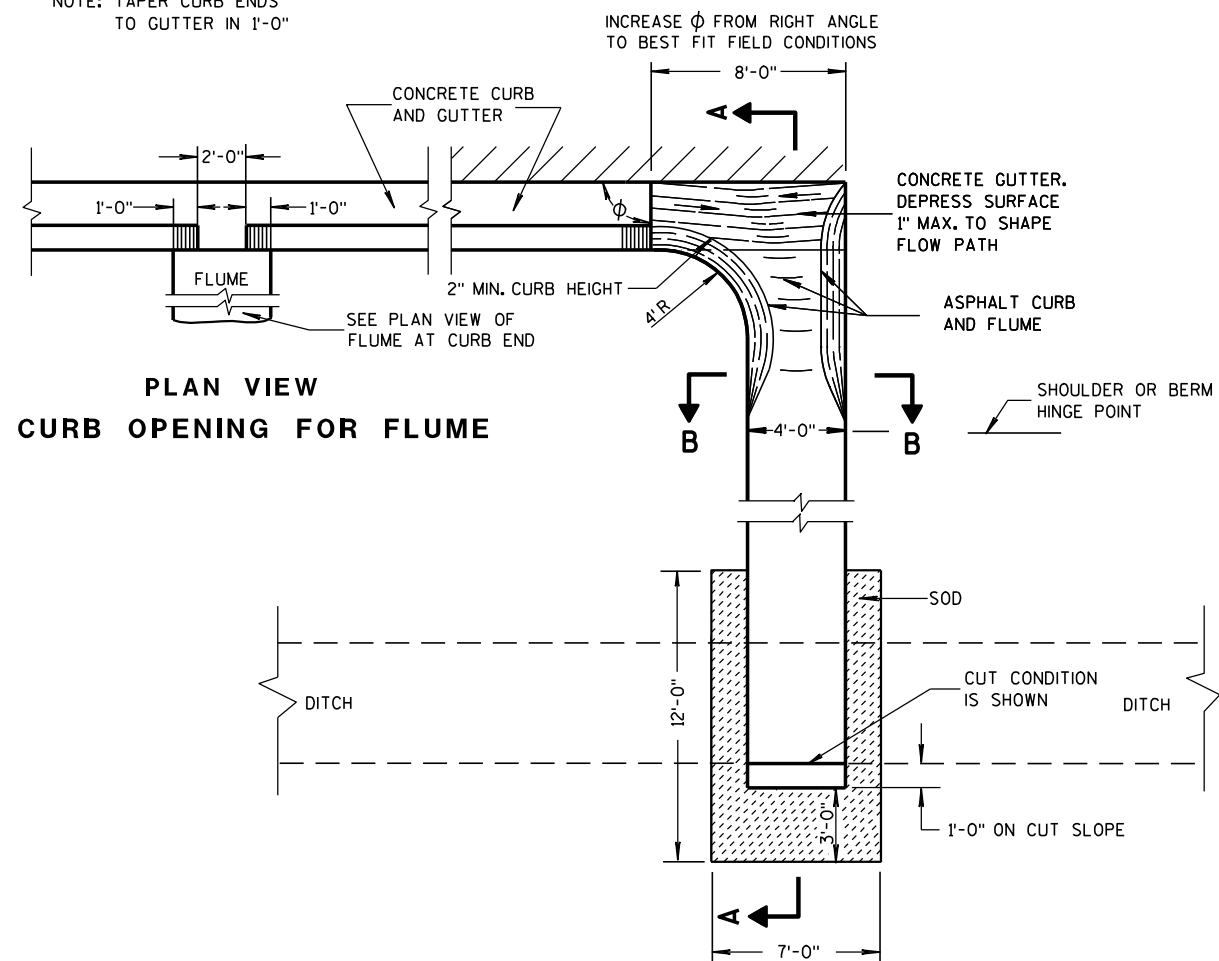
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

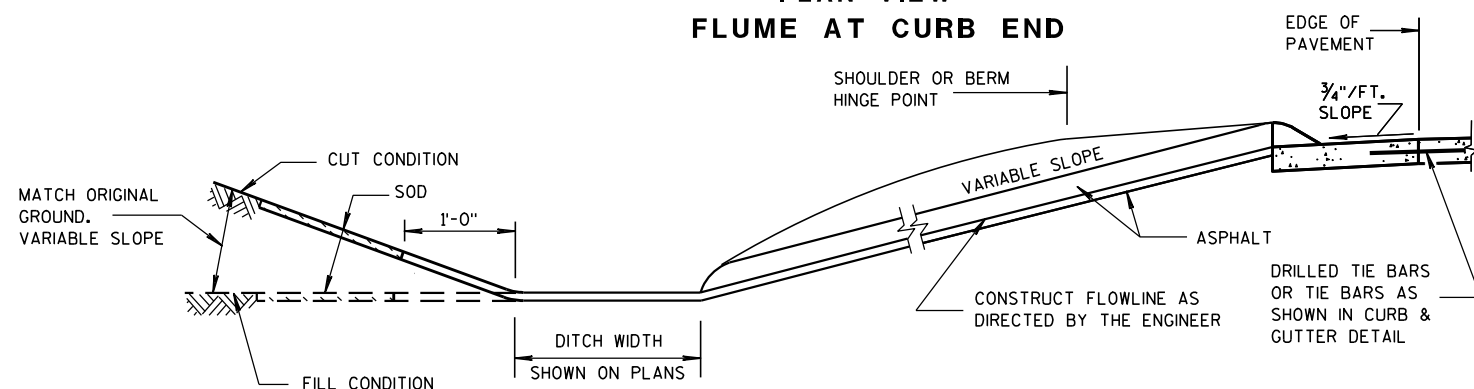
ASPHALTIC FLUME

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

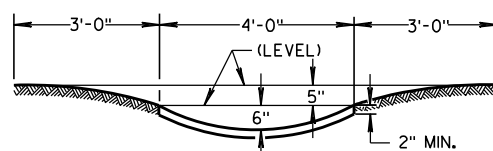


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

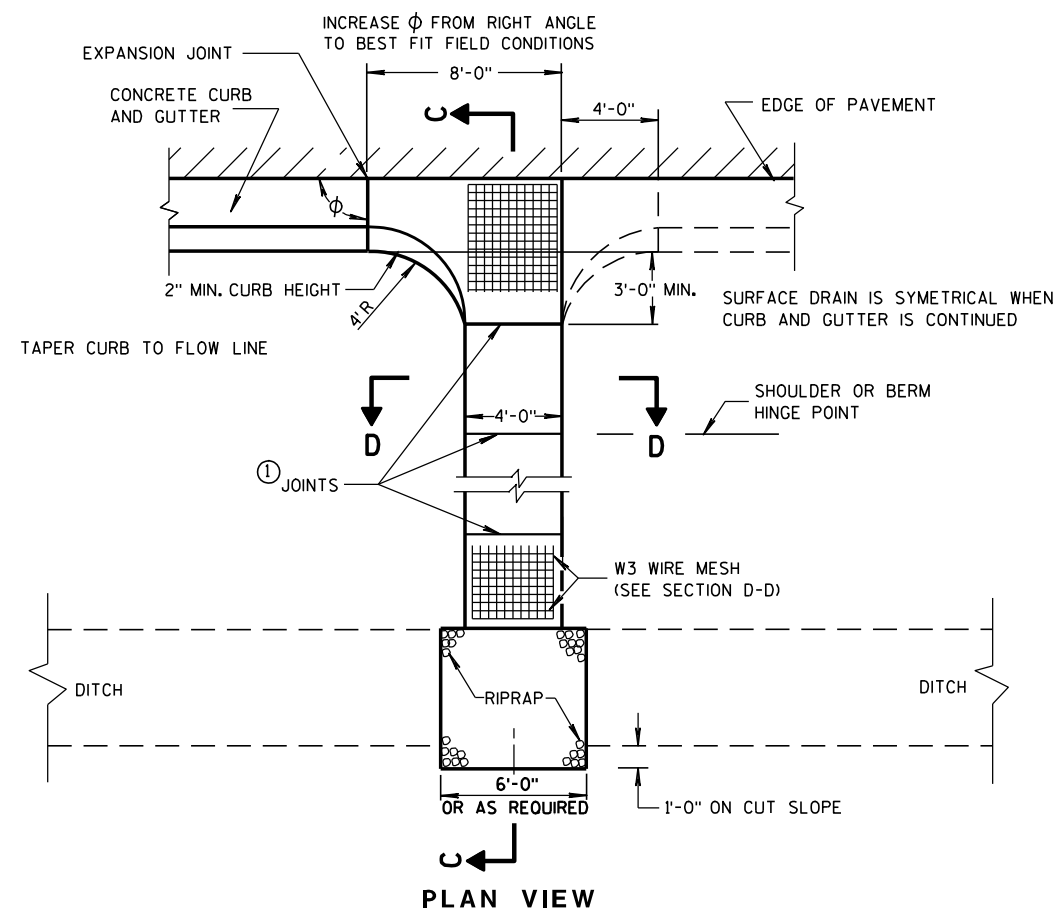
GENERAL NOTES

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

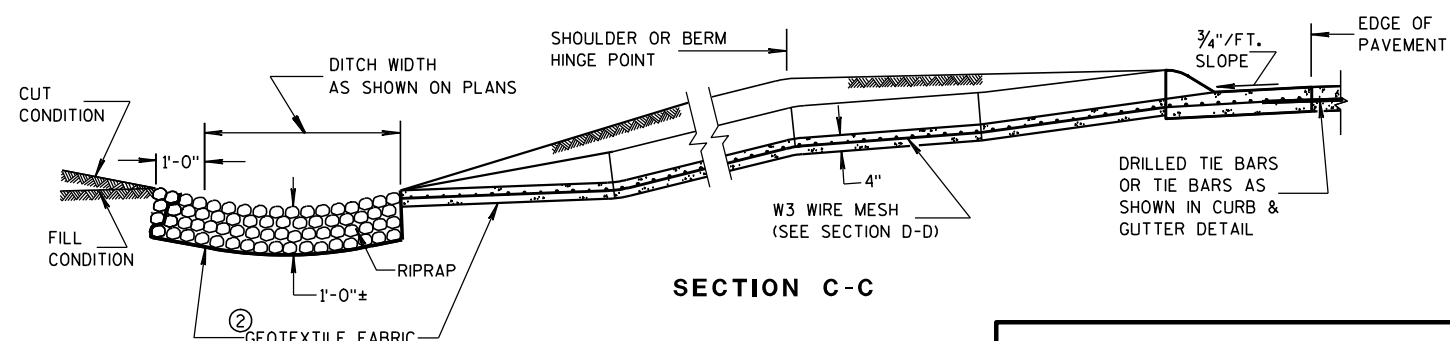
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

- ① JOINTS SHALL BE 1/8" TO 1/4" INCH WIDE BY 1 1/2" 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

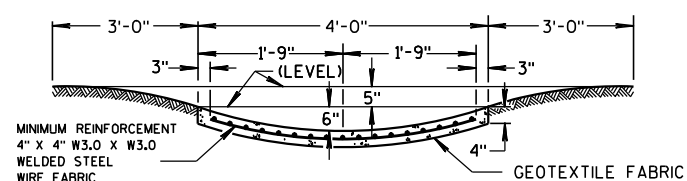
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

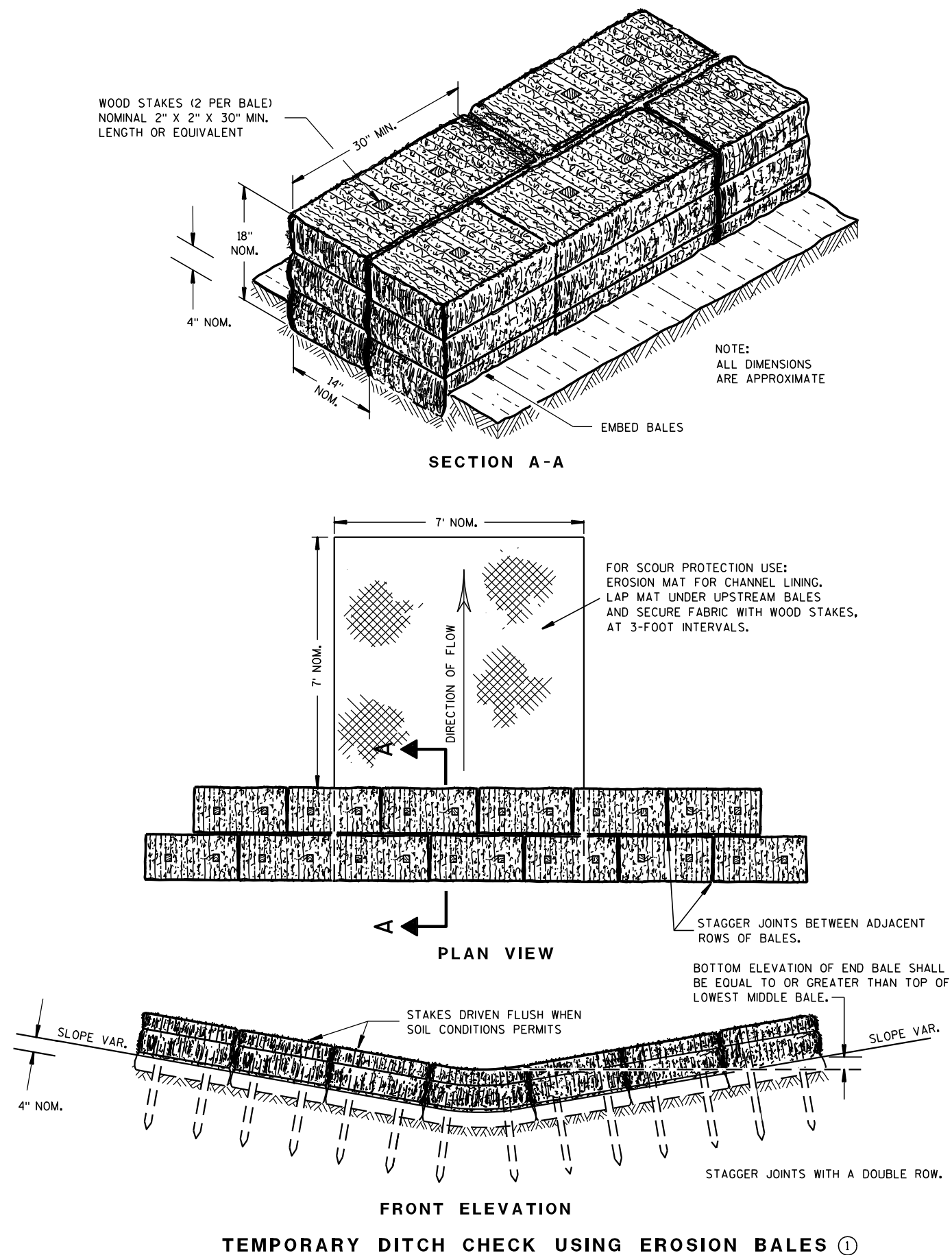
APPROVED

9-4-08

DATE

FHWA

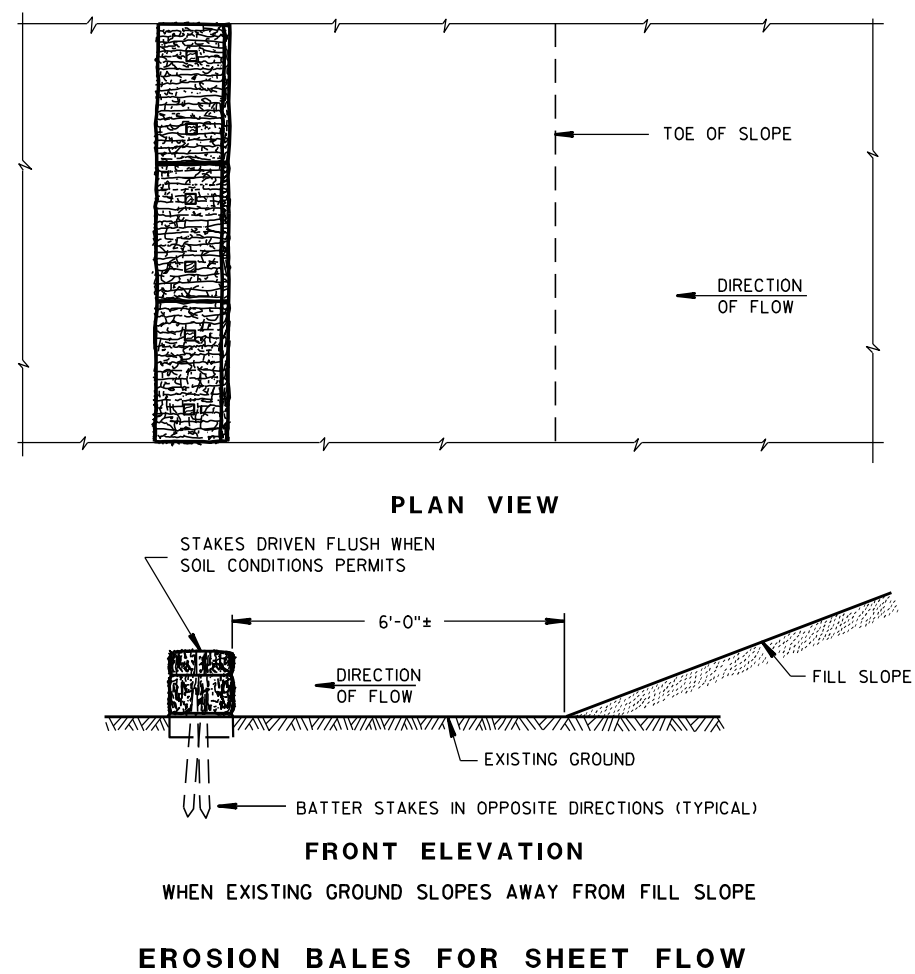
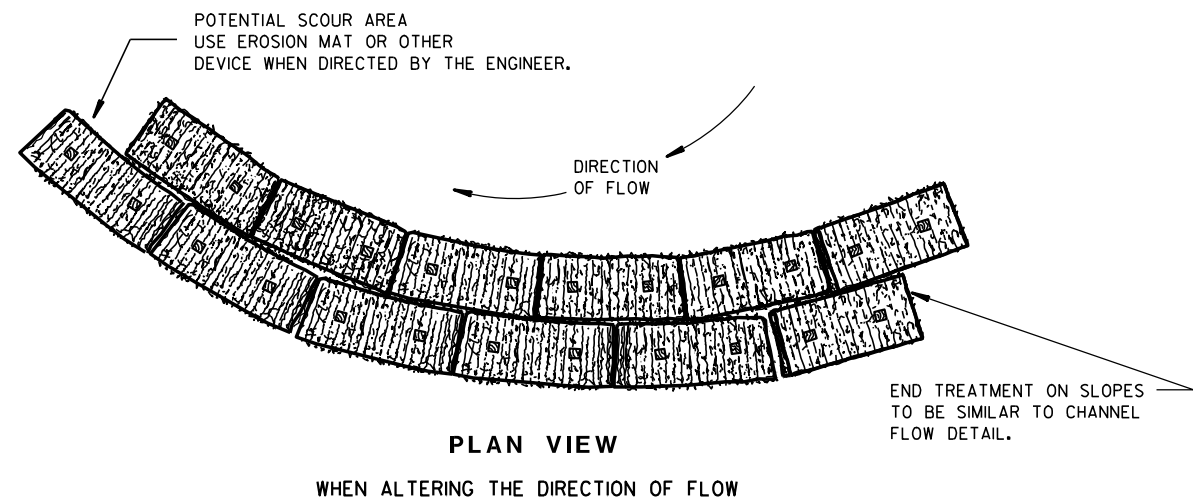
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



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.

TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

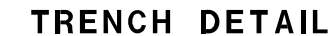
APPROVED

6/04/02
DATE/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA



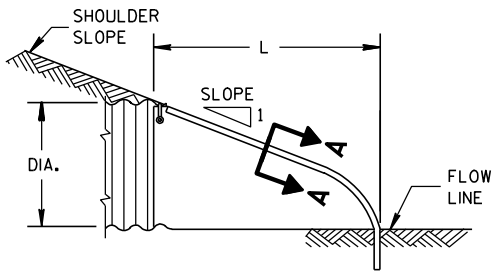
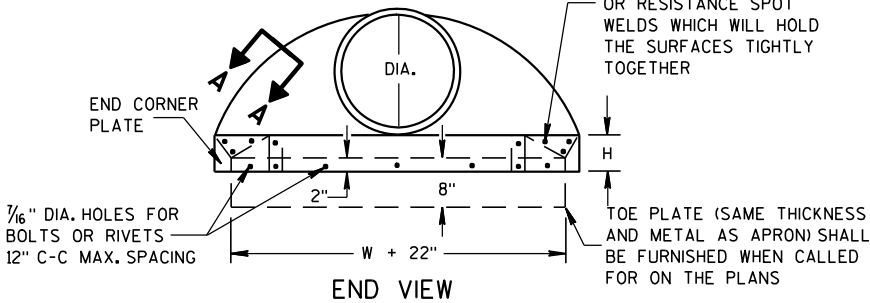
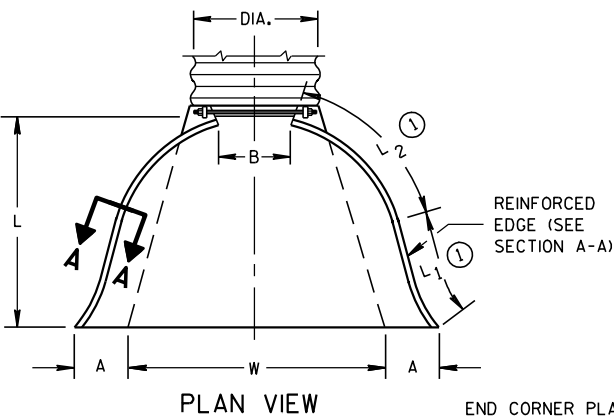
- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-29-05 DATE	/S/ <u>Beth Cannestra</u> CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

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

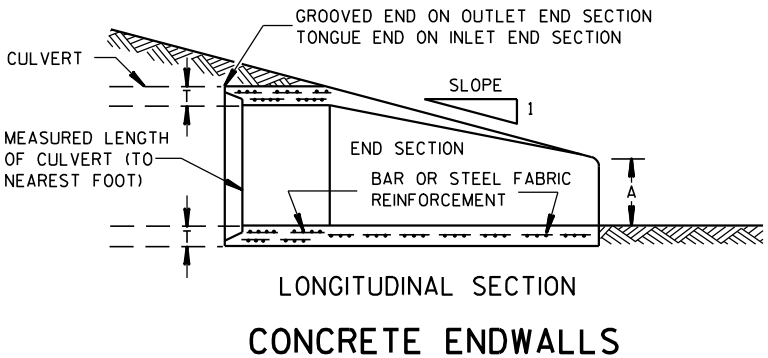
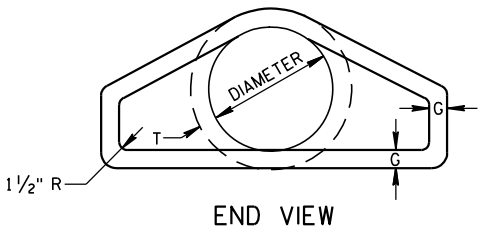
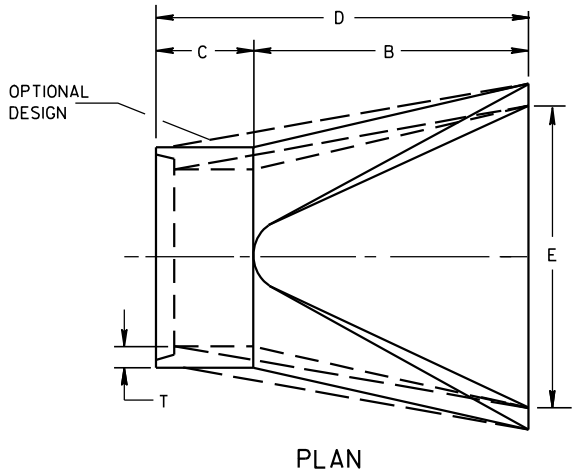
* EXCEPT CENTER PANEL
SEE GENERAL NOTES



SIDE ELEVATION
METAL ENDWALLS

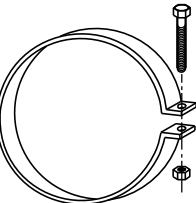
REINFORCED CONCRETE APRON ENDWALLS											
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE			
	T	A	B	C	D	E	G				
12	2	4	24	48 7/8	72 7/8	24	2	3 to 1			
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1			
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1			
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1			
24	3	9 1/2	43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

* MINIMUM
** MAXIMUM

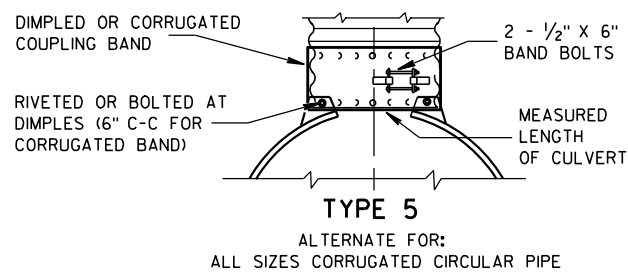
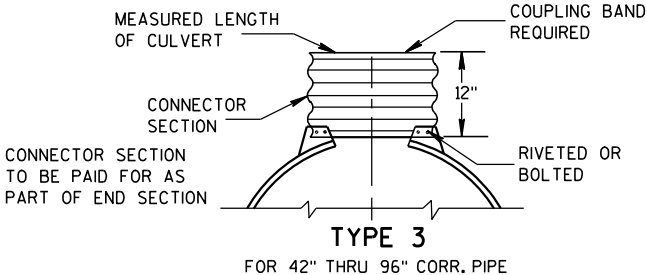
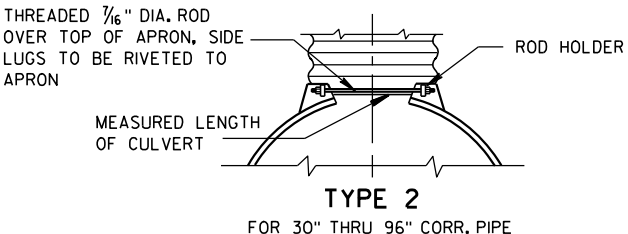
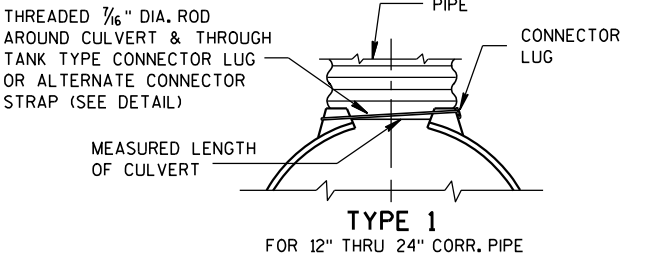


LONGITUDINAL SECTION
CONCRETE ENDWALLS

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



ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



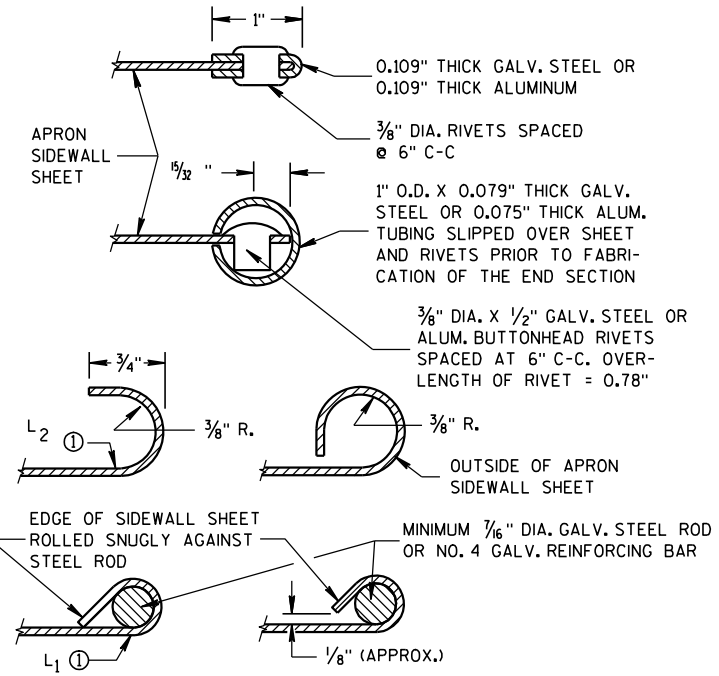
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

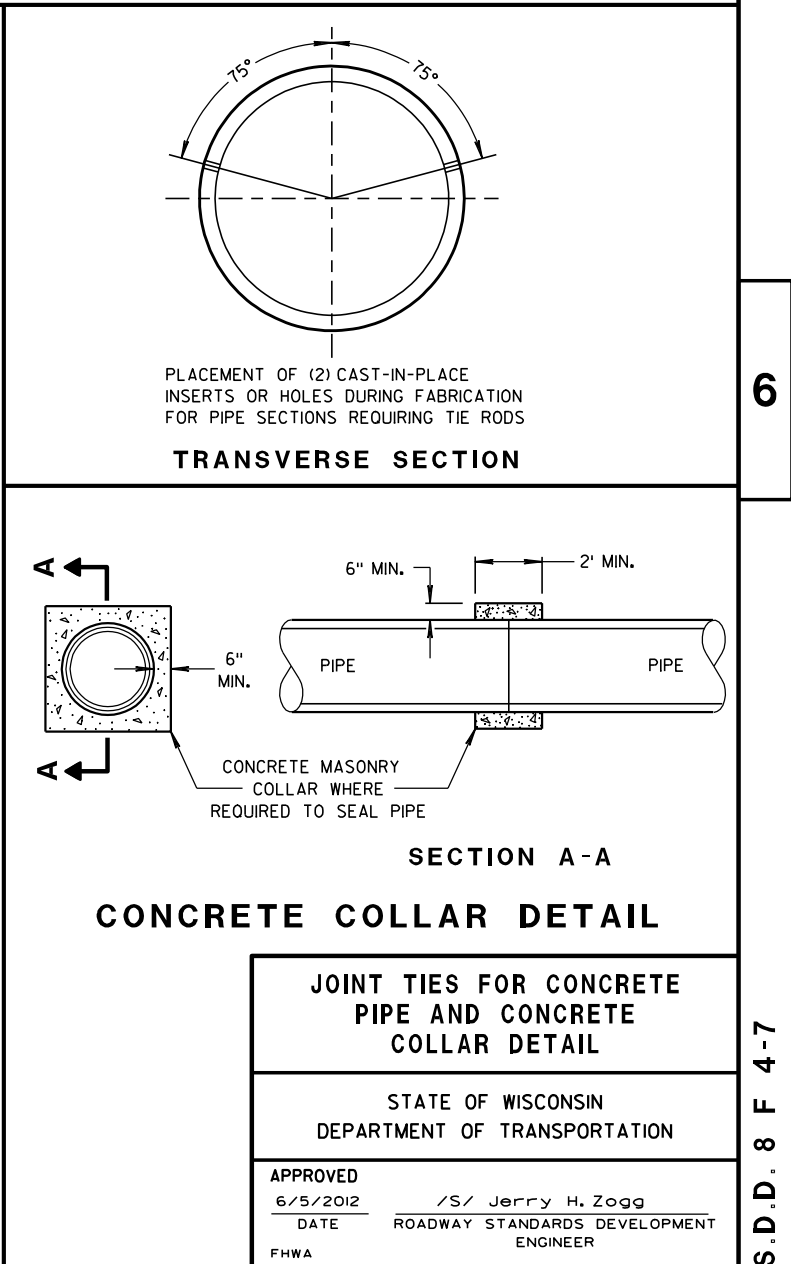
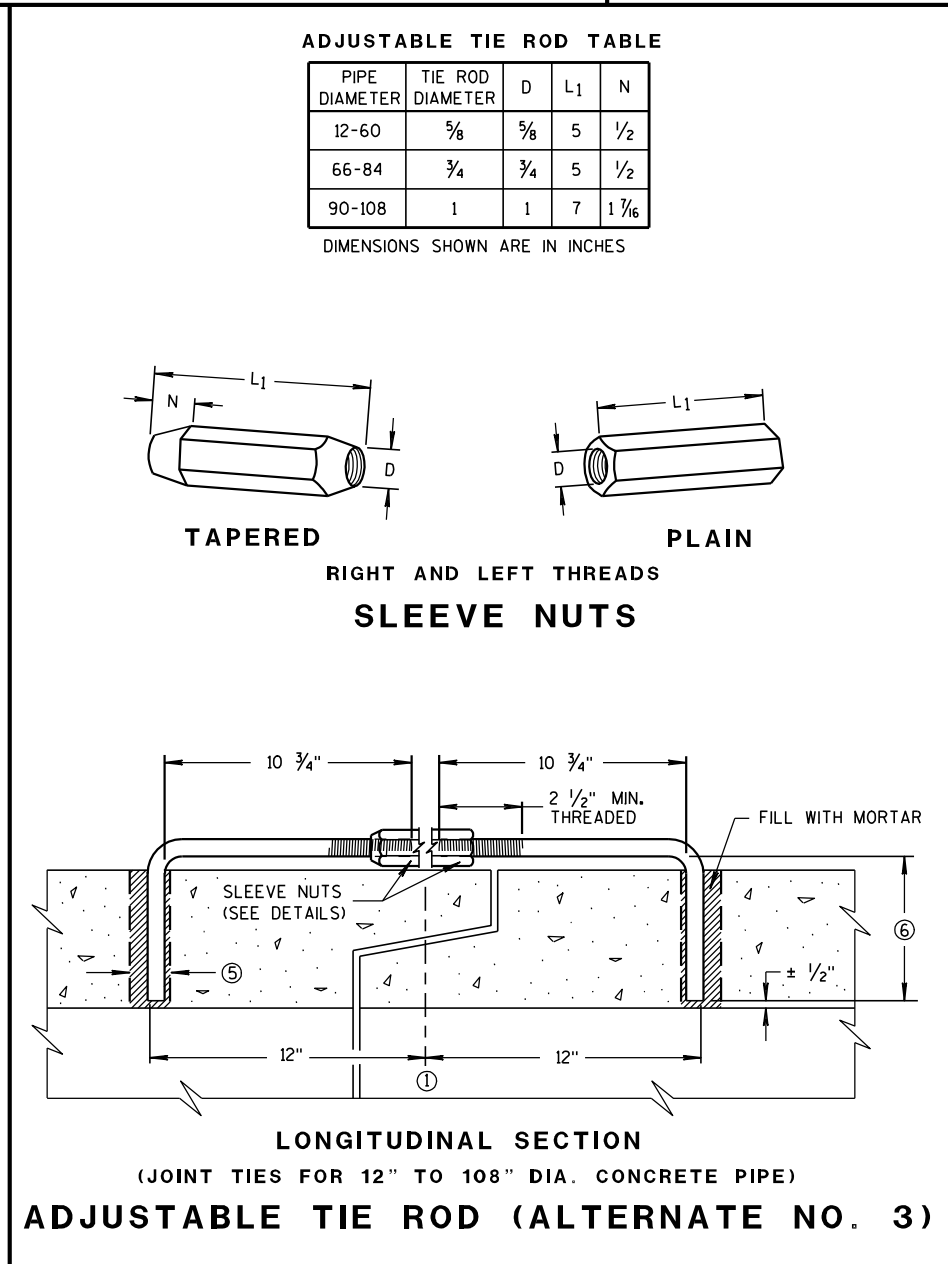
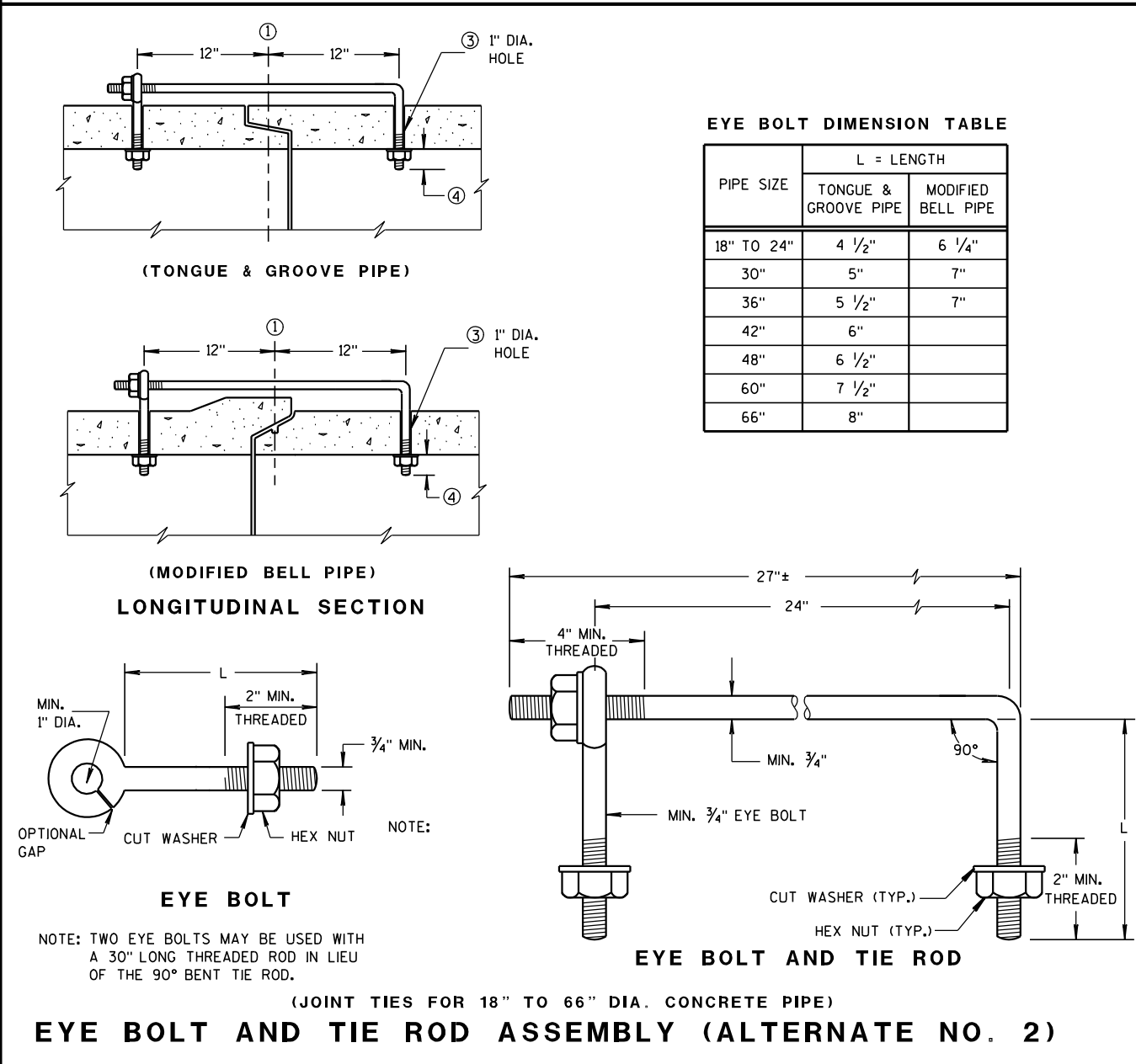
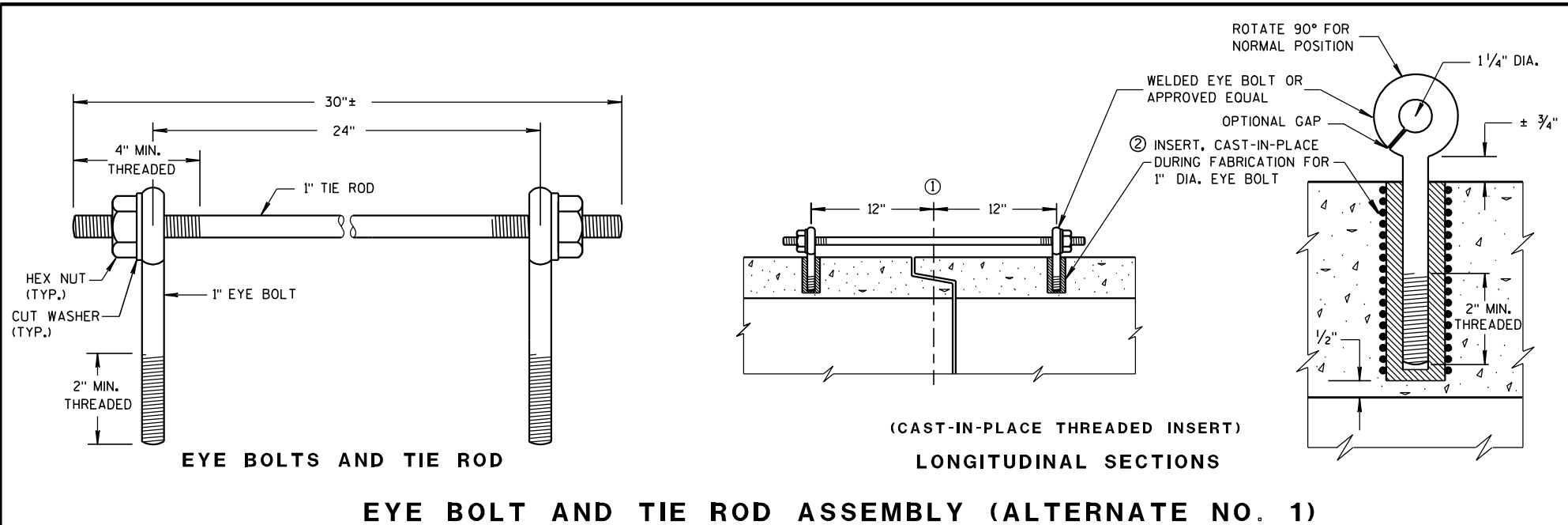
ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT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

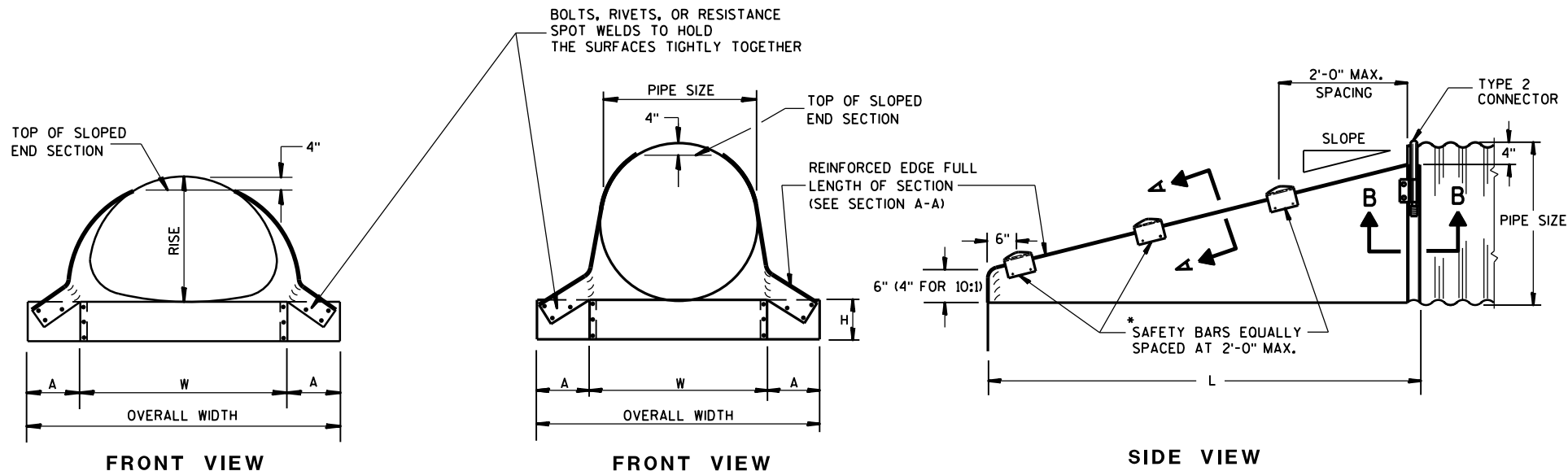
LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES.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

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

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

APRON ENDWALLS FOR CULVERT PIPE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 11/30/94 DATE	/S/ Rory L. Rhinesmith CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	





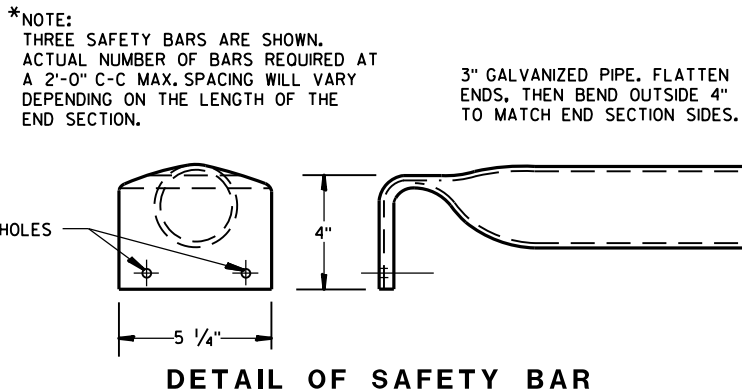
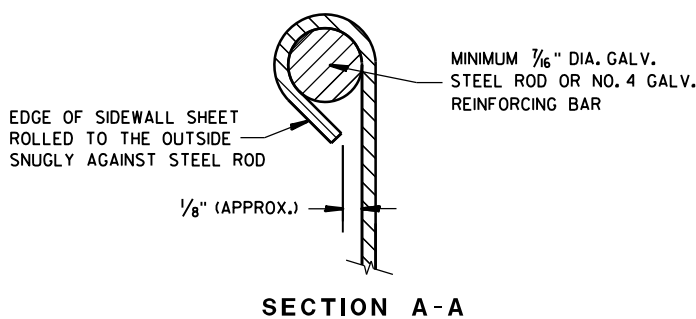
GENERAL NOTES

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.

SLOPED END SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, SECTION 521 FOR STEEL APRON ENDWALLS.

SAFETY BARS SHALL BE FABRICATED FROM GALVANIZED STEEL PIPE MEETING THE REQUIREMENTS OF ASTM A-53, GRADE B, SCHEDULE 40 OR APPROVED EQUAL.

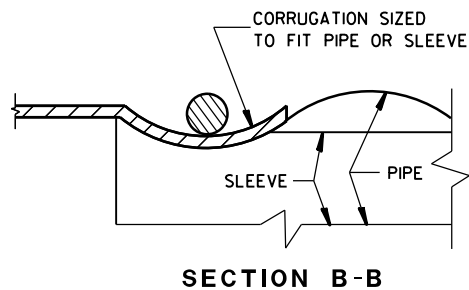
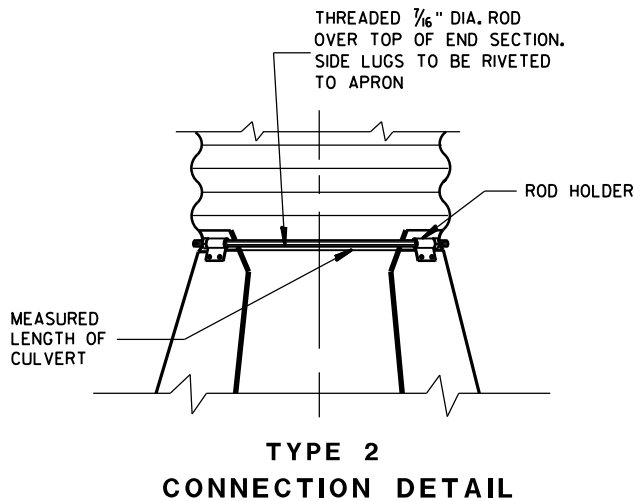
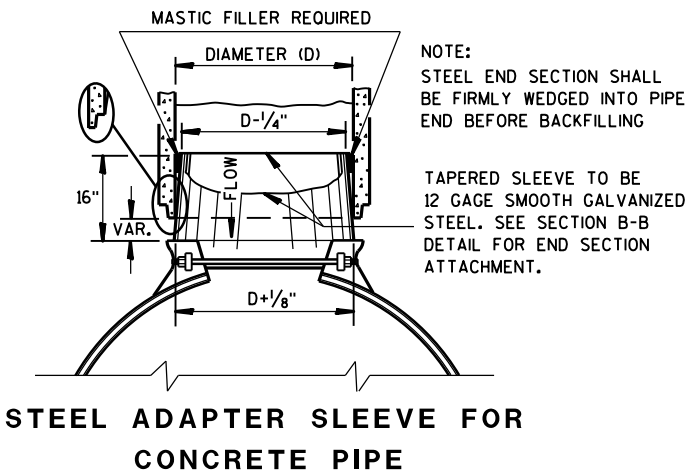
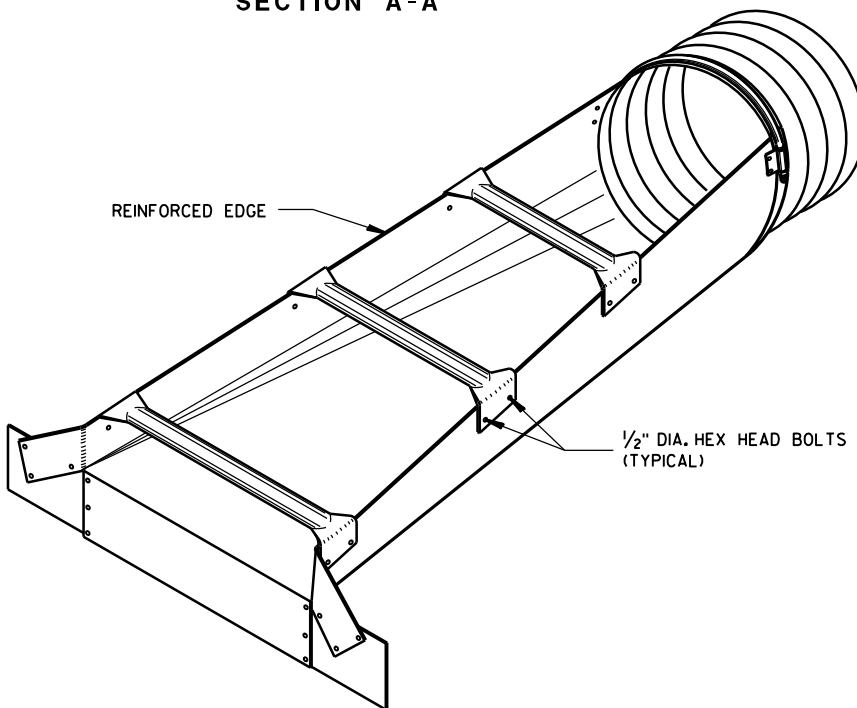
STEEL APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS											
PIPE DIA. (IN.)	MIN. THICK. (Inches)	DIMENSIONS (Inches)				L DIMENSIONS					
		A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	.064	8	6	21	37	4:1	20	6:1	30	10:1	70
18	.064	8	6	24	40	4:1	32	6:1	48	10:1	100
21	.064	8	6	27	43	4:1	44	6:1	66	10:1	130
24	.064	8	6	30	46	4:1	56	6:1	84	10:1	160
30	.109	12	9	36	60	4:1	80	6:1	120	10:1	220
36	.109	12	9	42	66	4:1	104	6:1	156	10:1	280
42	.109	16	12	48	80	4:1	128	6:1	192	—	—
48	.109	16	12	54	86	4:1	152	6:1	228	—	—
54	.109	16	12	60	92	4:1	176	6:1	264	—	—
60	.109	16	12	66	98	4:1	200	6:1	300	—	—



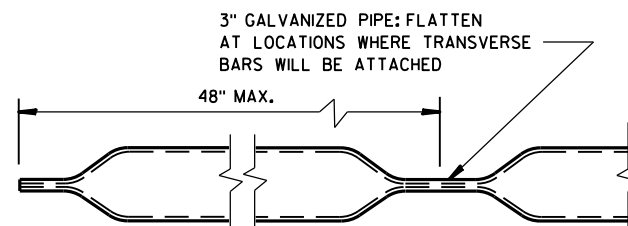
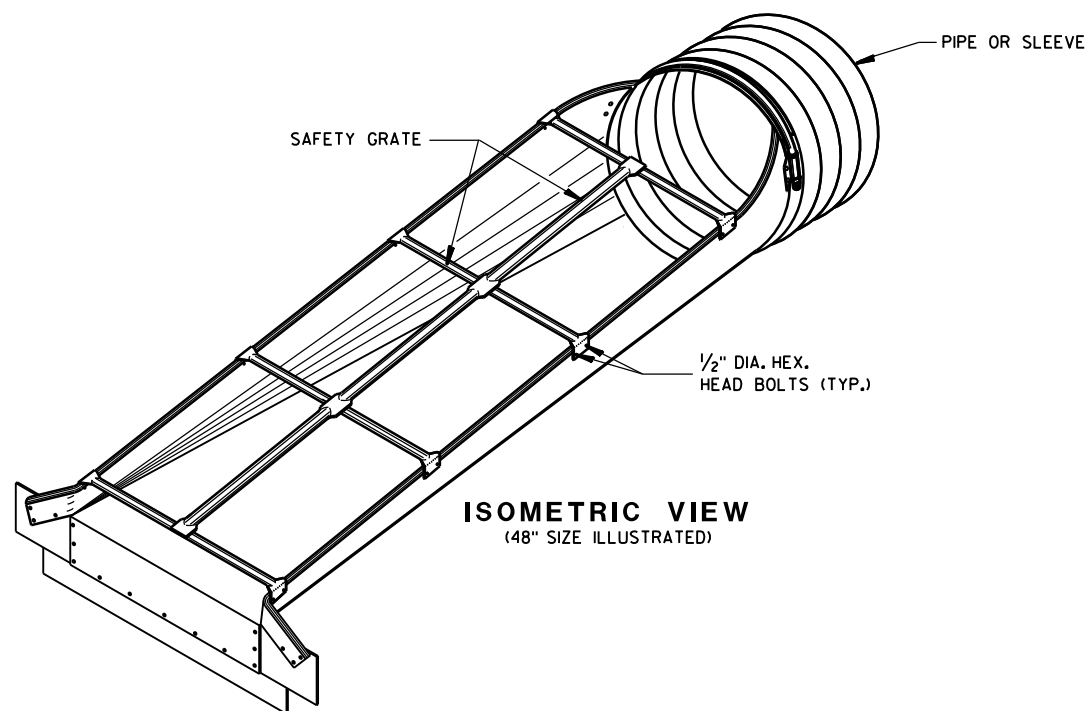
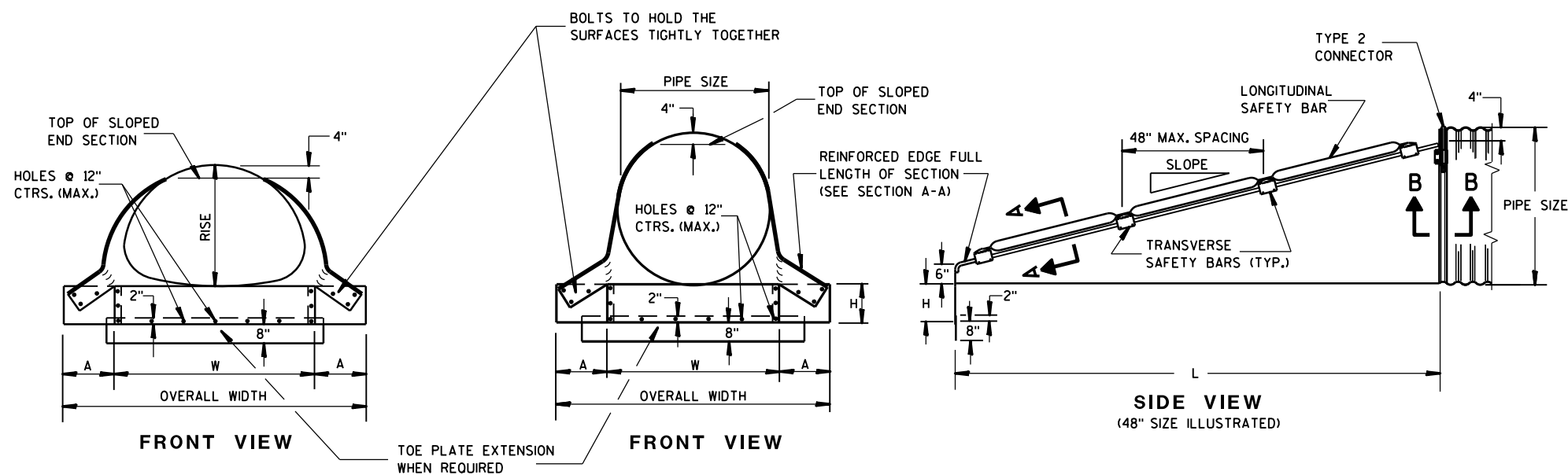
STEEL APRON ENDWALLS FOR PIPE ARCH SLOPED SIDE DRAINS											
EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches) ①	DIMENSIONS (Inches)				L DIMENSIONS			
	SPAN	RISE		A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	17	13	.064 *	7	6	30	44	4:1	19	6:1	30 10:1 ②
18	21	15	.064 *	8	6	27	43	4:1	20	6:1	30 10:1 ②
21	24	18	.064 *	8	6	30	46	4:1	32	6:1	48 10:1 ②
24	28	20	.064 *	8	6	34	50	4:1	40	6:1	60 10:1 ②
30	35	24	.079 *	12	9	41	65	4:1	56	6:1	84 10:1 ②
36	42	29	.109 *	12	9	48	72	4:1	76	6:1	114 10:1 ②
42	49	33	.109	16	12	55	87	4:1	92	6:1	138 —
48	57	38	.109	16	12	63	95	4:1	112	6:1	168 —
54	64	43	.109	16	12	70	102	4:1	132	6:1	198 —

① * MINIMUM THICKNESS OF ALL 10:1 SLOPED SIDE DRAINS IS 0.109".

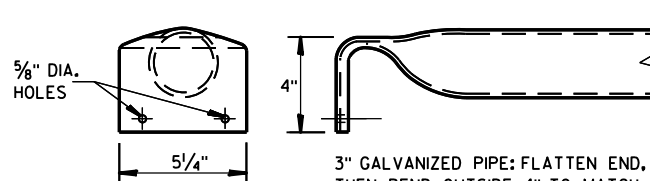
② ACTUAL SLOPE GREATER THAN 10:1.



STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SIDE DRAINS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 9/14/2012 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



LONGITUDINAL SAFETY BAR



TRANSVERSE SAFETY BAR

GENERAL NOTES

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

SAFETY GRATES SHALL BE FABRICATED FROM 3-INCH DIAMETER GALVANIZED PIPE MEETING THE REQUIREMENTS OF ASTM A-53, GRADE B, SCHEDULE 40 OR APPROVED EQUAL. THE LONGITUDINAL BAR SHALL BE WELDED TO THE TRANSVERSE BARS WHERE THE BARS CROSS. THE NUMBER OF TRANSVERSE BARS REQUIRED WILL VARY DEPENDING ON THE LENGTH OF THE END SECTION.

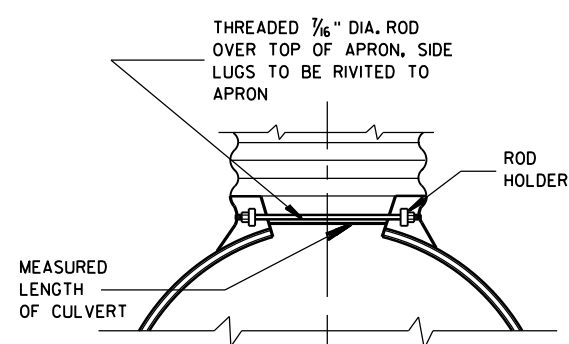
SLOPED STEEL ENDWALLS LOCATED AT THE ENDS OF CONCRETE CULVERT PIPE SHALL BE FURNISHED WITH STEEL ADAPTER SLEEVES.

STEEL APRON ENDWALLS FOR CULVERT PIPE CROSS DRAINS

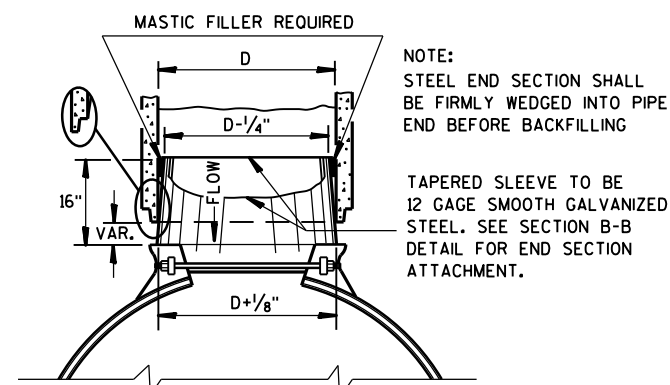
PIPE DIA. (IN.)	MIN. THICK. IN.	GAGE	DIMENSIONS (inches)				L DIMENSIONS			
			A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
36	.109	12	12	9	42	66	4:1	104	6:1	156
42	.109	12	16	12	48	80	4:1	128	6:1	192
48	.109	12	16	12	54	86	4:1	152	6:1	228
54	.109	12	16	12	60	92	4:1	176	6:1	264
60	.109	12	16	12	66	98	4:1	200	6:1	300

STEEL APRON ENDWALLS FOR PIPE ARCH SLOPED CROSS DRAINS

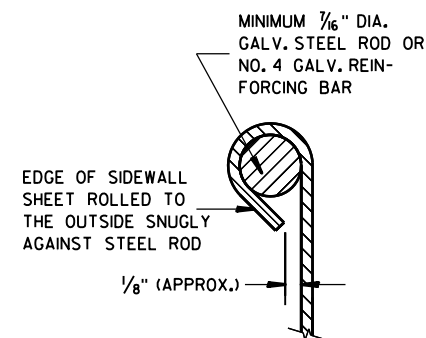
EQUIV. DIA. (IN.)	INCHES		MIN. THICK. IN.	GAGE	DIMENSIONS (inches)				L DIMENSIONS			
	SPAN	RISE			A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
30	35	24	.079	14	12	9	41	65	4:1	56	6:1	84
36	42	29	.109	12	12	9	48	72	4:1	76	6:1	114
42	49	33	.109	12	16	12	55	87	4:1	92	6:1	138
48	57	38	.109	12	16	12	63	95	4:1	112	6:1	168
54	64	43	.109	12	16	12	70	102	4:1	132	6:1	198
60	71	47	.109	12	16	12	77	109	4:1	148	6:1	222



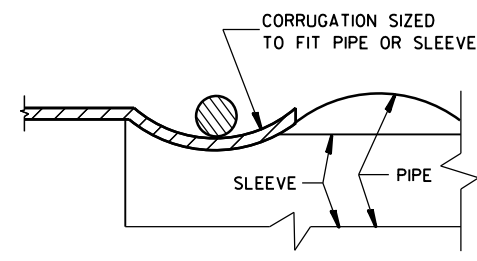
TYPE 2 CONNECTOR DETAIL



STEEL ADAPTER SLEEVE FOR CONCRETE PIPE



SECTION A-A



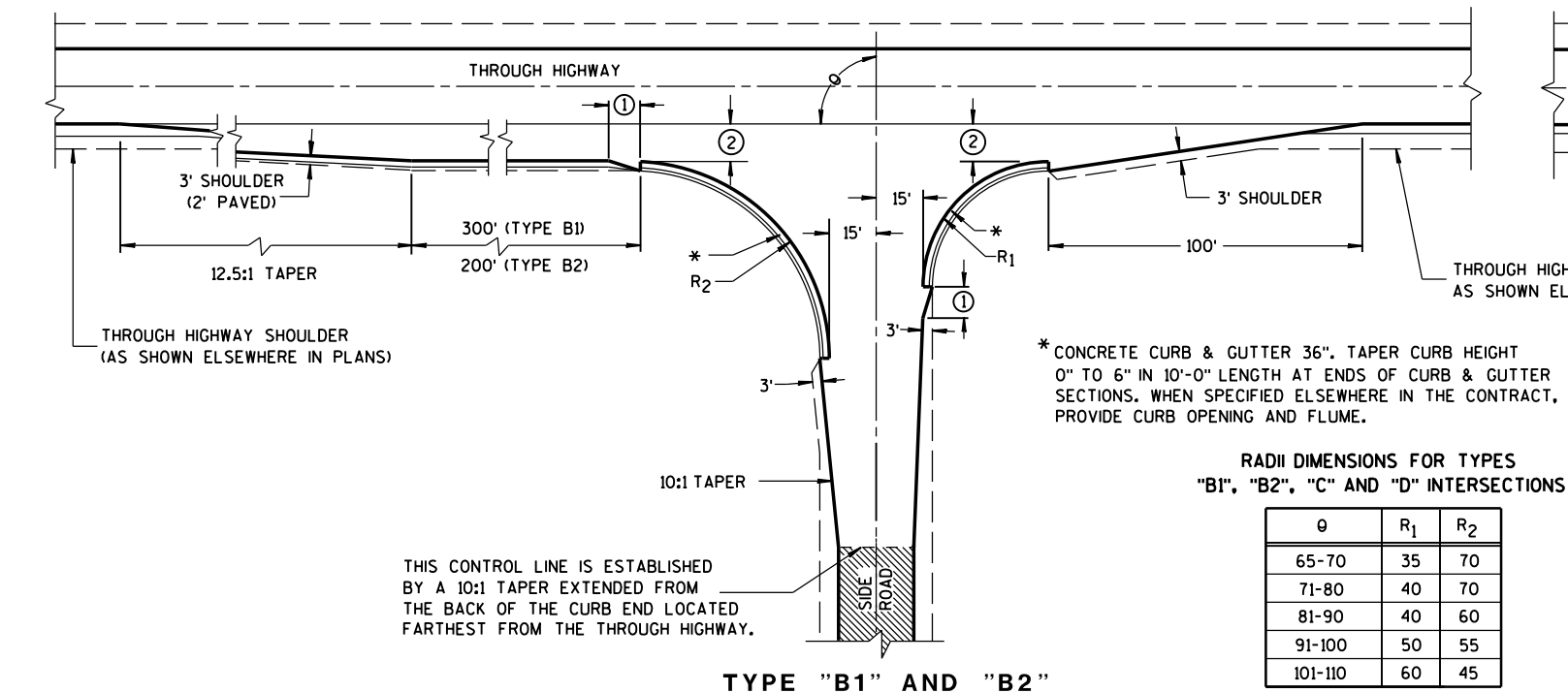
SECTION B-B

STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED CROSS DRAINS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



RADII DIMENSIONS FOR TYPES "B1", "B2", "C" AND "D" INTERSECTIONS

θ	R ₁	R ₂
65-70	35	70
71-80	40	70
81-90	40	60
91-100	50	55
101-110	60	45

GENERAL NOTES

DESIGNS MAY BE USED INTERCHANGEABLY IN COMBINATION OR SEPARATELY FOR ANY ONE COMPLETE INTERSECTION DEPENDING UPON INTERSECTION ANGLE AND SURFACING OF EACH APPROACH ROADWAY.

SIDE ROAD SURFACING NOTE

WHEN THE SIDE ROAD IS NOT PRESENTLY PAVED, PAVEMENT SHALL BE PLACED TO THE LIMITS SHOWN UNLESS OTHERWISE PROVIDED IN THE CONTRACT. WHERE THE CONSTRUCTION LIMITS ARE BEYOND THE PAVING LIMITS, CRUSHED AGGREGATE SURFACING SHALL BE PLACED BETWEEN THE PAVING LIMITS AND CONSTRUCTION LIMITS.

WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

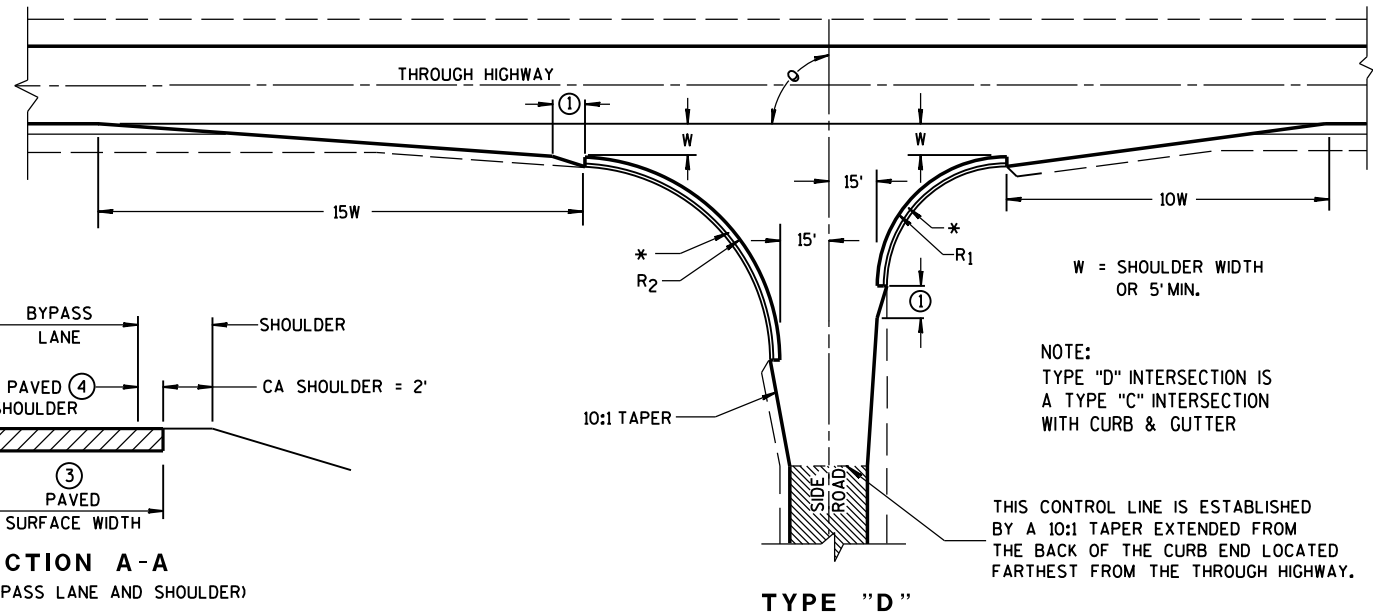
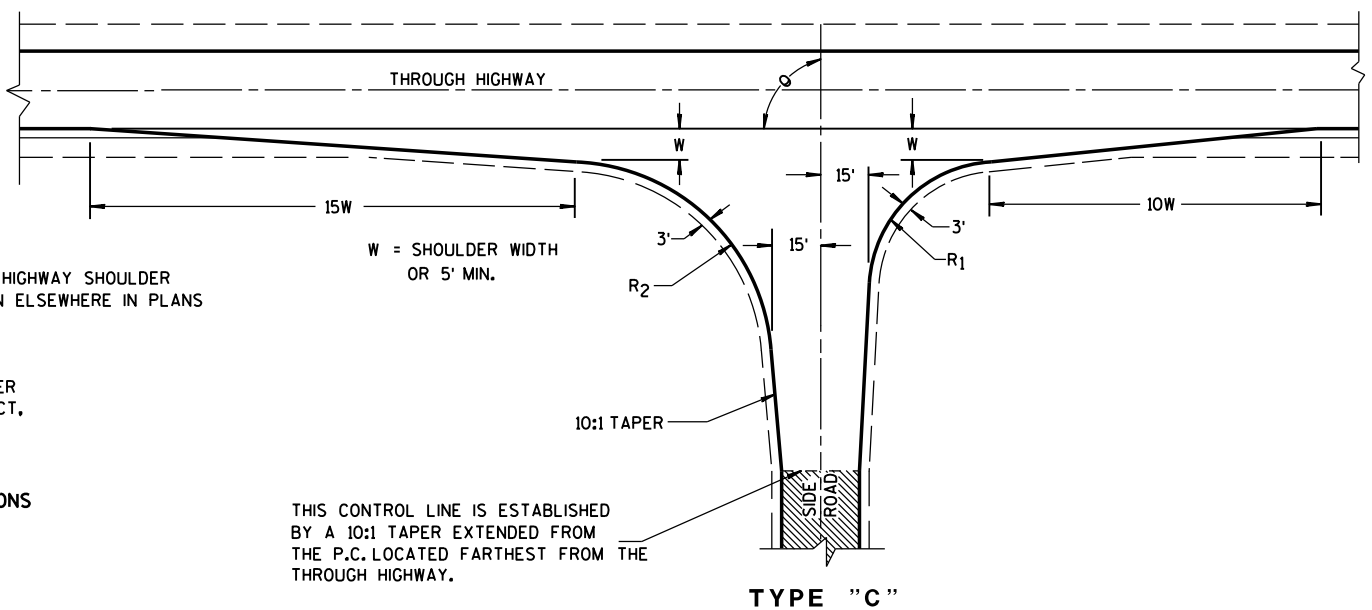
WHEN THE SIDE ROAD IS THE CONSTRUCTION PROJECT, THE INTERSECTION SURFACING SHALL BE THE SAME AS FOR THE PROJECT.

EXISTING PAVED SURFACE

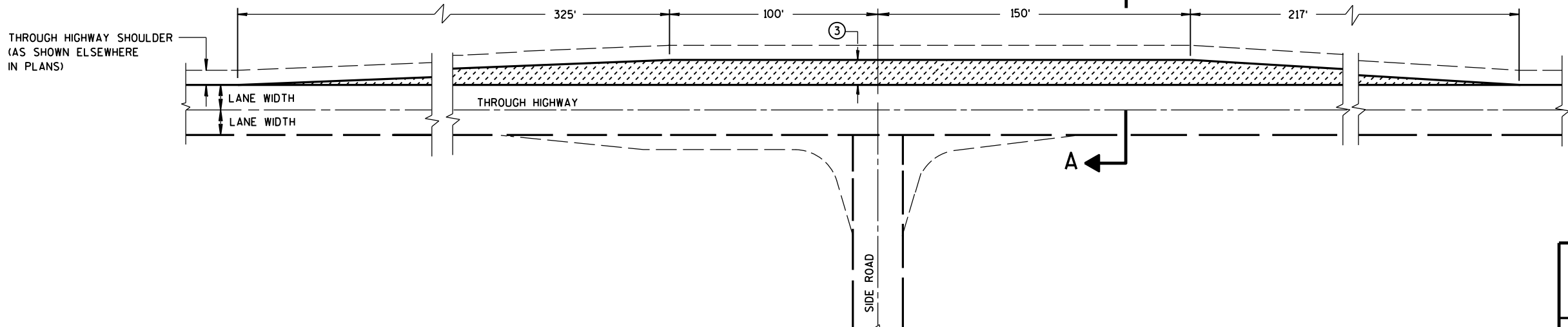
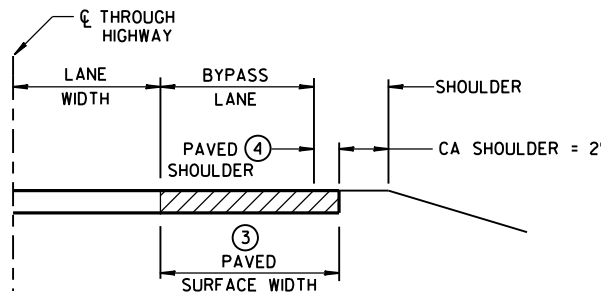
BYPASS LANE

- 10-FT TYPICAL.
- 12-FT** PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.

**10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.
- BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE
-ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH.
-PC CPNCRETE = 13-FT PLUS PAVED SHOULDER WIDTH.
- BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.



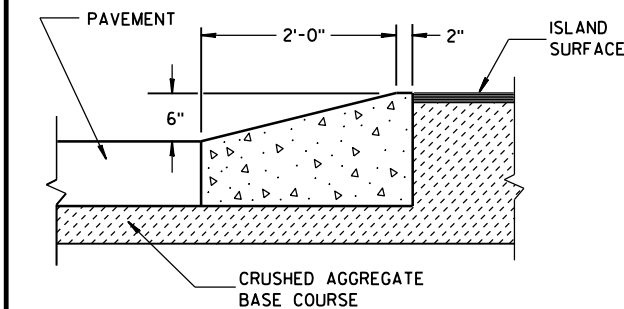
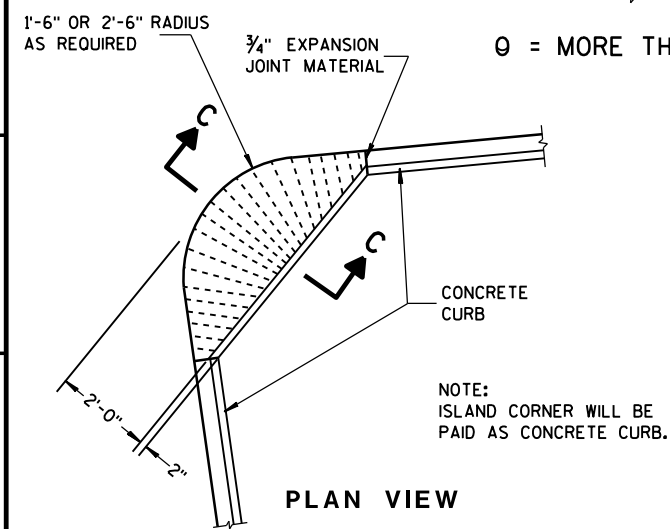
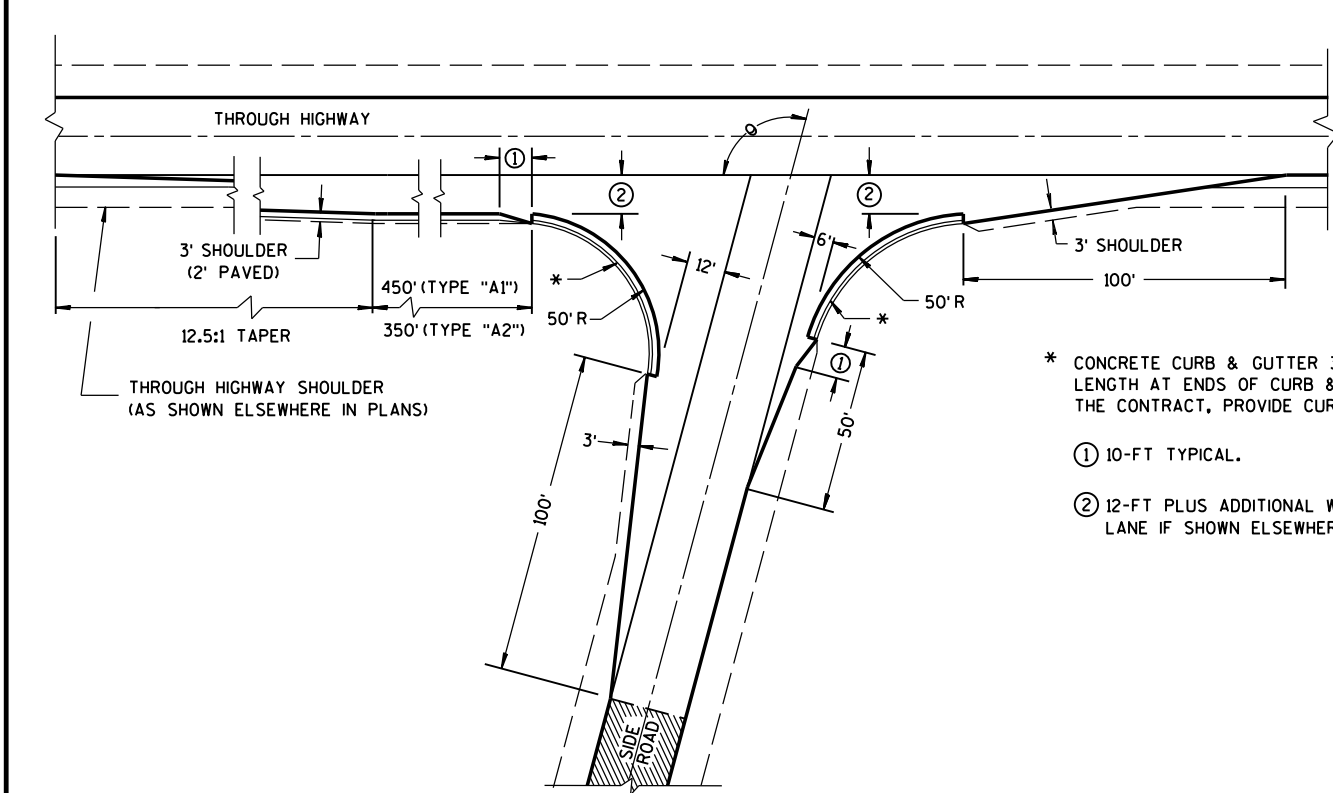
NOTE:
TYPE "D" INTERSECTION IS A TYPE "C" INTERSECTION WITH CURB & GUTTER



TEE INTERSECTION BYPASS LANE DETAIL

AT-GRADE SIDE ROAD
INTERSECTION, TYPES "B1", "B2",
"C" AND "D" AND TEE
INTERSECTION BYPASS LANE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



SECTION C-C

ISLAND CORNER DETAIL
(TO BE CONSTRUCTED AT ALL ISLAND CORNERS)

- * CONCRETE CURB & GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.
- ① 10-FT TYPICAL.
- ② 12-FT PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLANS.

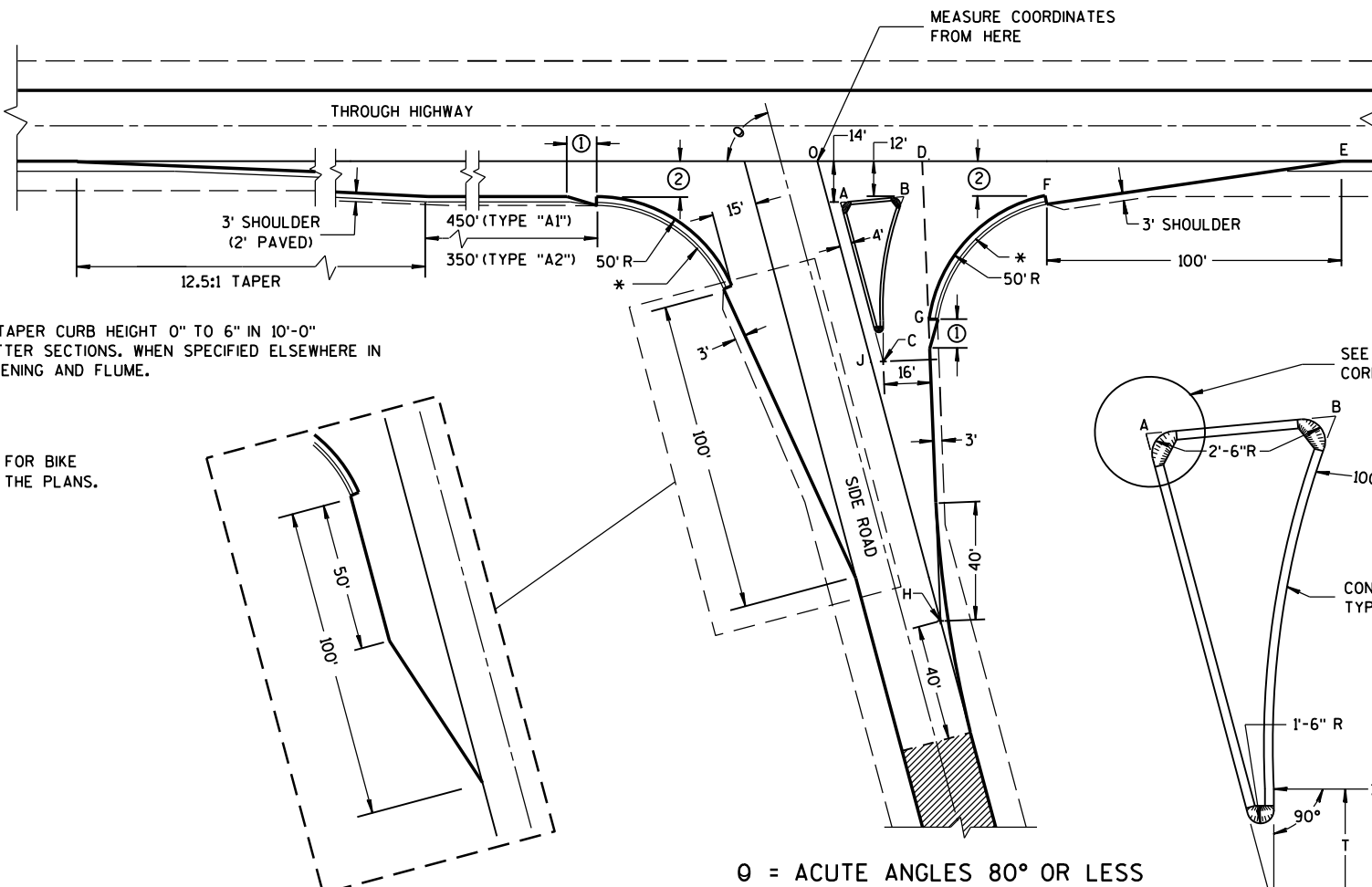


TABLE OF DIMENSIONS FOR
VARIABLE SIDE ROAD INTERSECTION ANGLES
(INTERPOLATE VALUES FOR ANGLES NOT SHOWN)

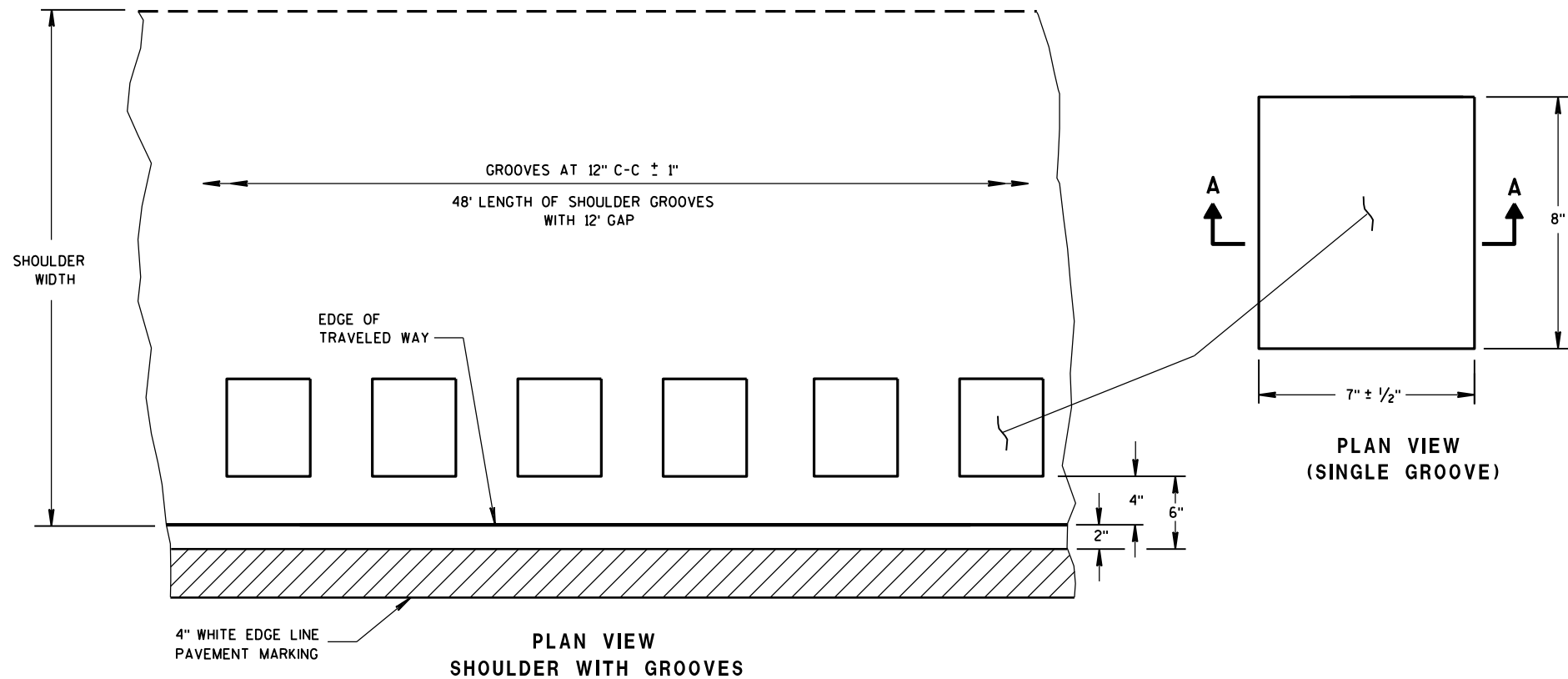
ANGLE θ DEGREES	COORDINATES IN FEET (MEASURED FROM POINT "O")								LENGTH IN FEET				
	A	B	C	D	E	F	G	H	AB	AC	T	OJ	OH
60	12.7 -14.0	44.9 -12.0	46.4 -72.4	41.9 0.0	205.0 0.0	104.6 -12.0	64.0 -75.5	85.0 -147.1	32.3	67.4	4.9	85.9	169.9
65	10.9 -14.0	39.0 -12.0	37.8 -71.6	39.4 0.0	196.1 0.0	95.7 -12.0	54.1 -71.5	70.5 -151.3	28.2	63.6	8.5	80.9	166.9
70	9.4 -14.0	33.9 -12.0	29.8 -70.1	37.4 0.0	188.3 0.0	87.8 -12.0	45.6 -67.5	56.1 -154.2	24.6	59.7	11.5	76.1	164.1
75	7.9 -14.0	29.3 -12.0	22.3 -67.9	35.7 0.0	181.2 0.0	80.7 -12.0	38.2 -63.4	41.8 -155.9	21.5	55.8	13.8	71.4	161.4
80	6.5 -14.0	25.4 -12.0	15.6 -65.2	34.4 0.0	174.8 0.0	74.4 -12.0	31.8 -59.3	27.6 -156.5	18.9	52.0	15.6	66.9	158.9

TYPE "A1" & "A2" SIDE ROAD INTERSECTION DETAILS

AT-GRADE SIDE ROAD
INTERSECTION, TYPE "A1" & "A2"

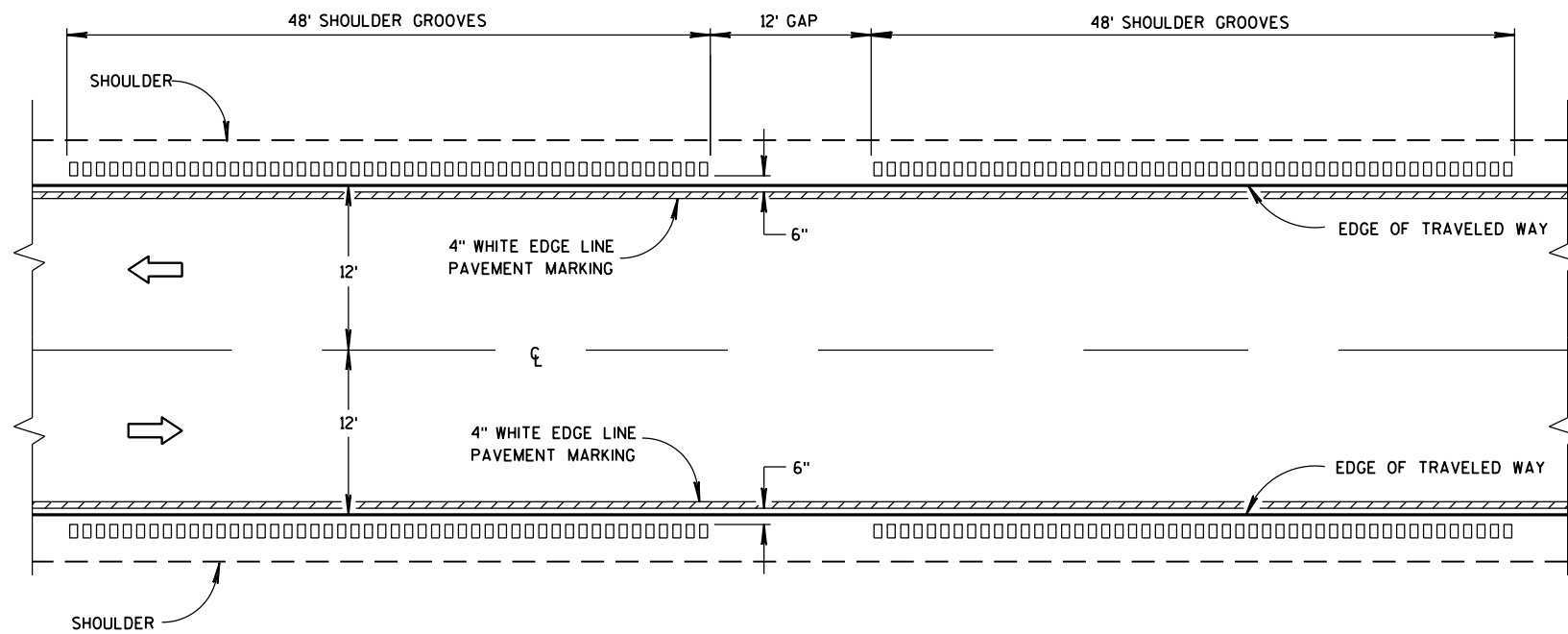
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/18/12 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



6

PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP

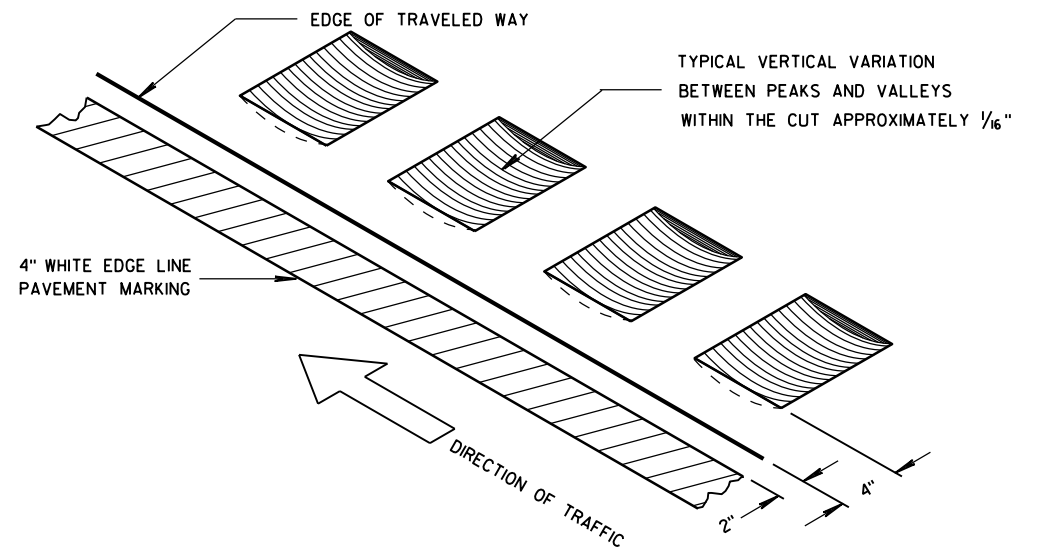


TYPE 1
2-LANE SHOULDER RUMBLE STRIP

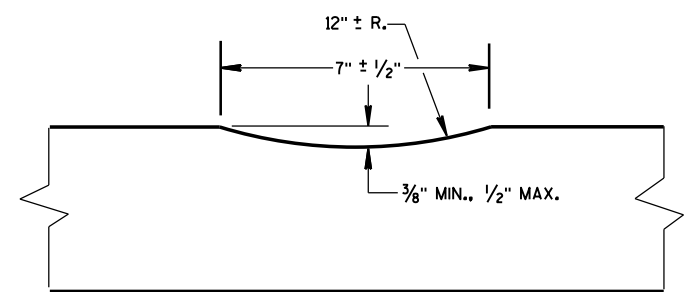
GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.
DO NOT MILL SHOULDER GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

- ① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



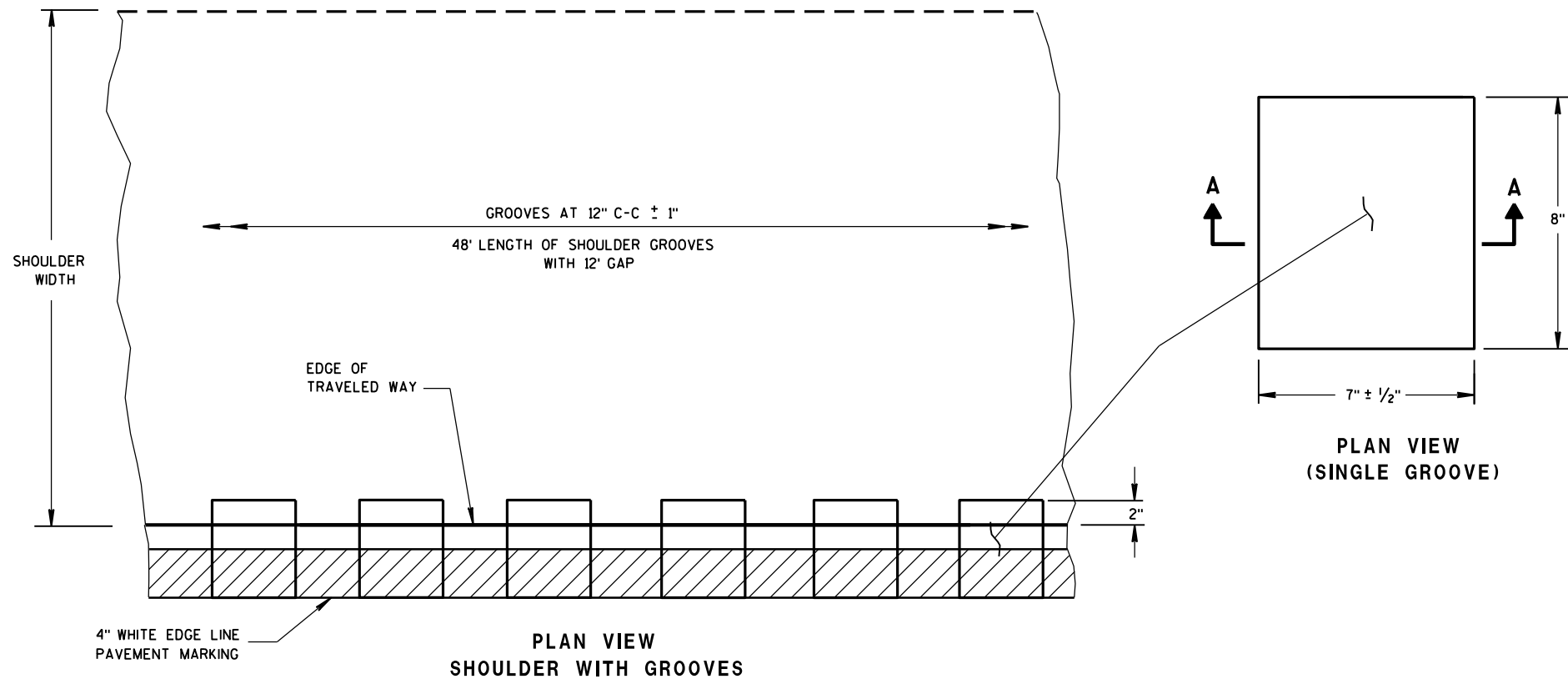
ISOMETRIC



SECTION A-A

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

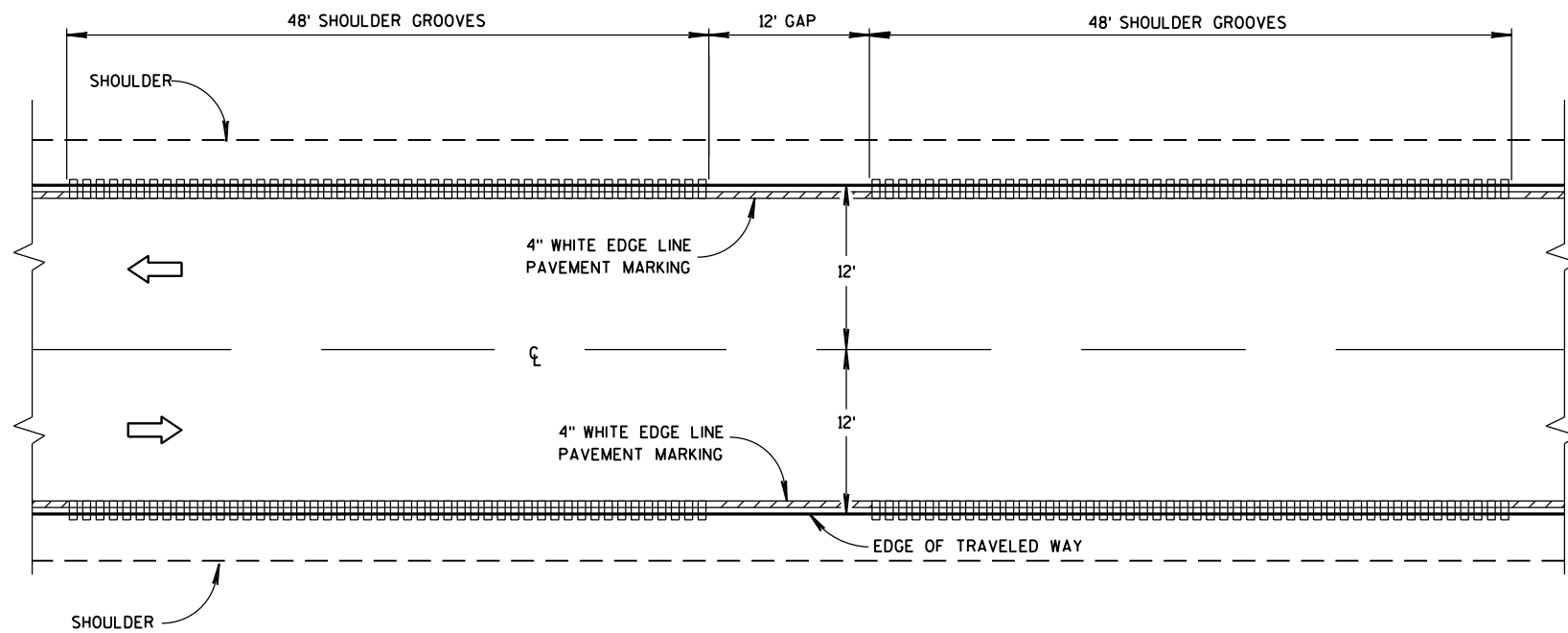
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

6
PLACEMENT DETAIL FOR TYPE 2 MILLED RUMBLE STRIP

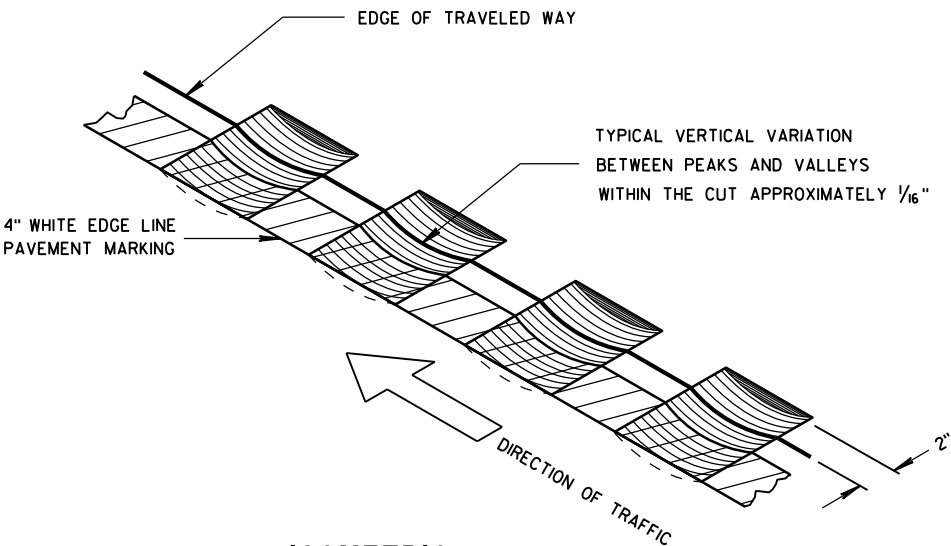


TYPE 2
2-LANE SHOULDER RUMBLE STRIP

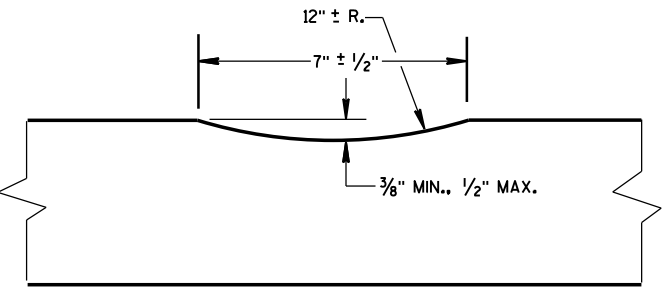
GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.
DO NOT MILL SHOULDER GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

- ① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



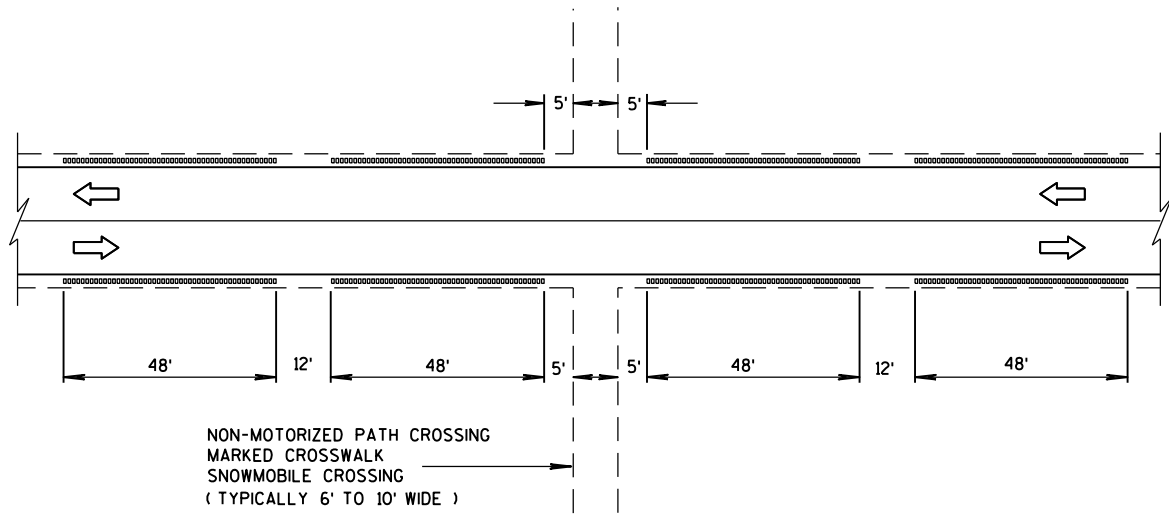
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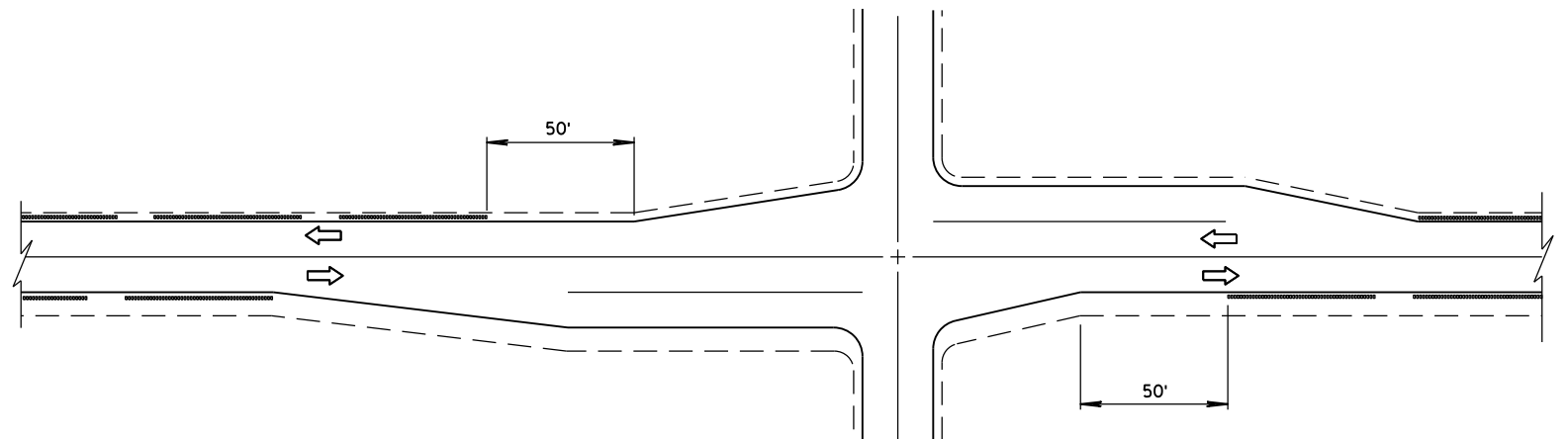
SECTION A-A

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

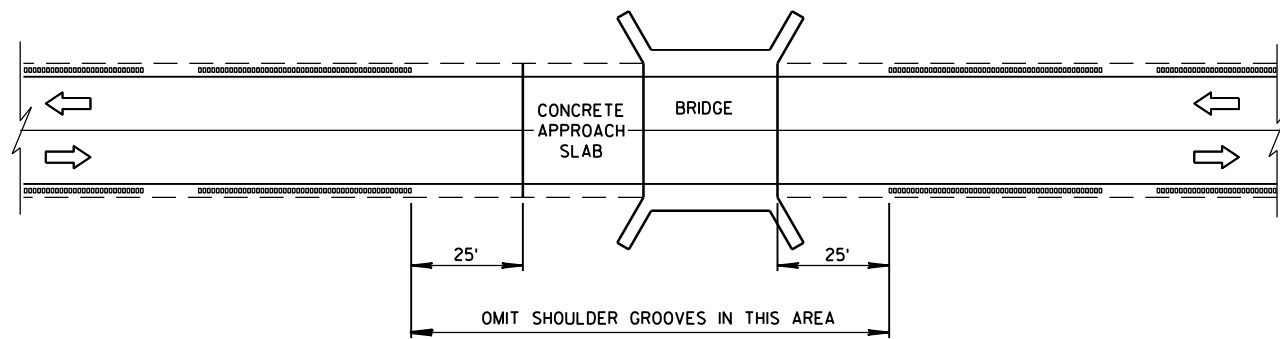
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



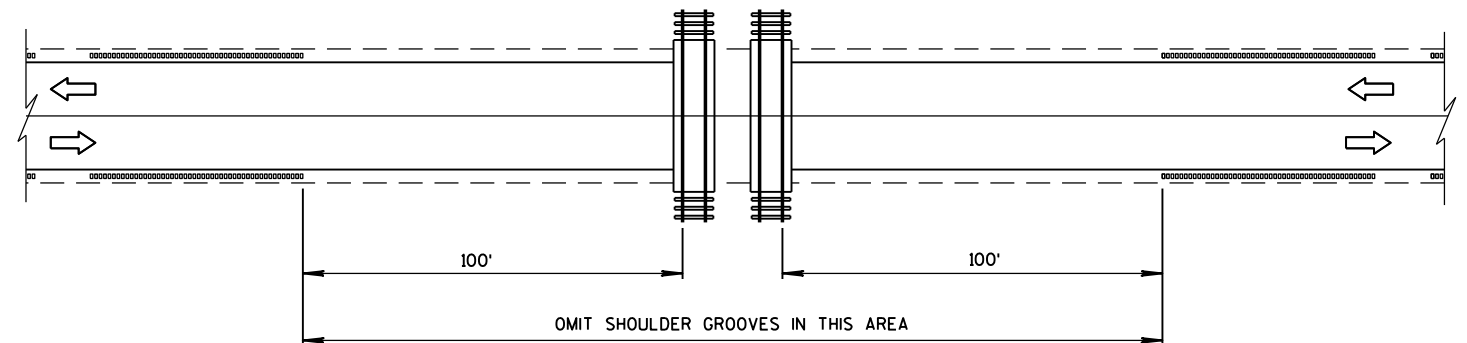
SHOULDER GROOVES AT MISCELLANEOUS CROSSINGS



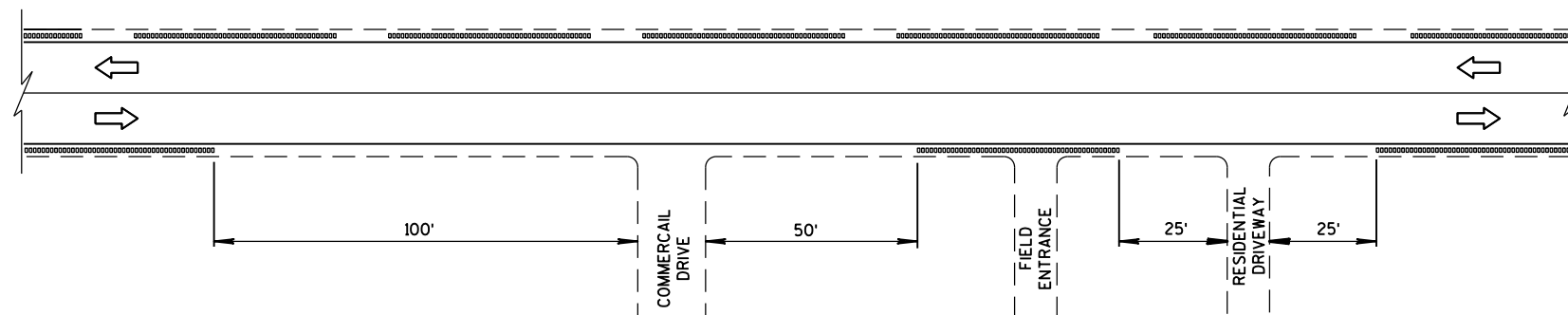
SHOULDER GROOVES AT INTERSECTIONS



SHOULDER GROOVES AT BRIDGES



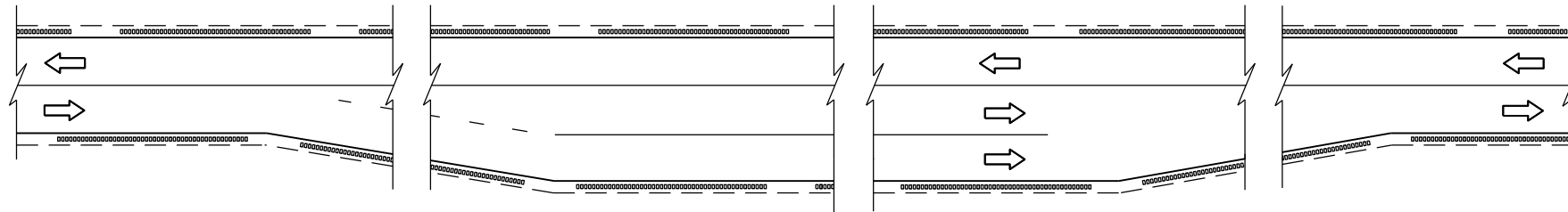
SHOULDER GROOVES AT RAILROADS



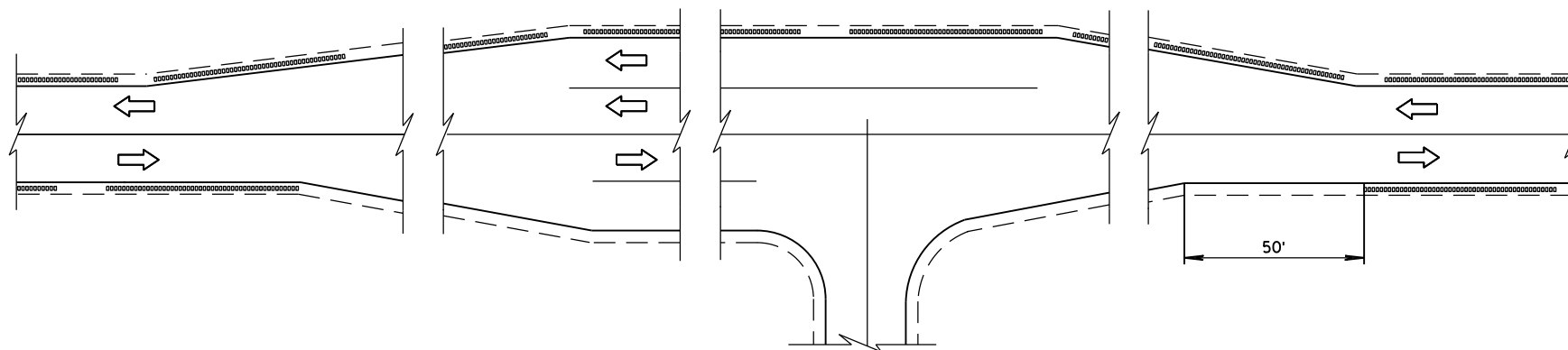
SHOULDER GROOVES AT DRIVEWAYS^①

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



SHOULDER GROOVES AT PASSING AND CLIMBING LANES



SHOULDER GROOVES AT BYPASS LANES

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/17/2012
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

GENERAL NOTES

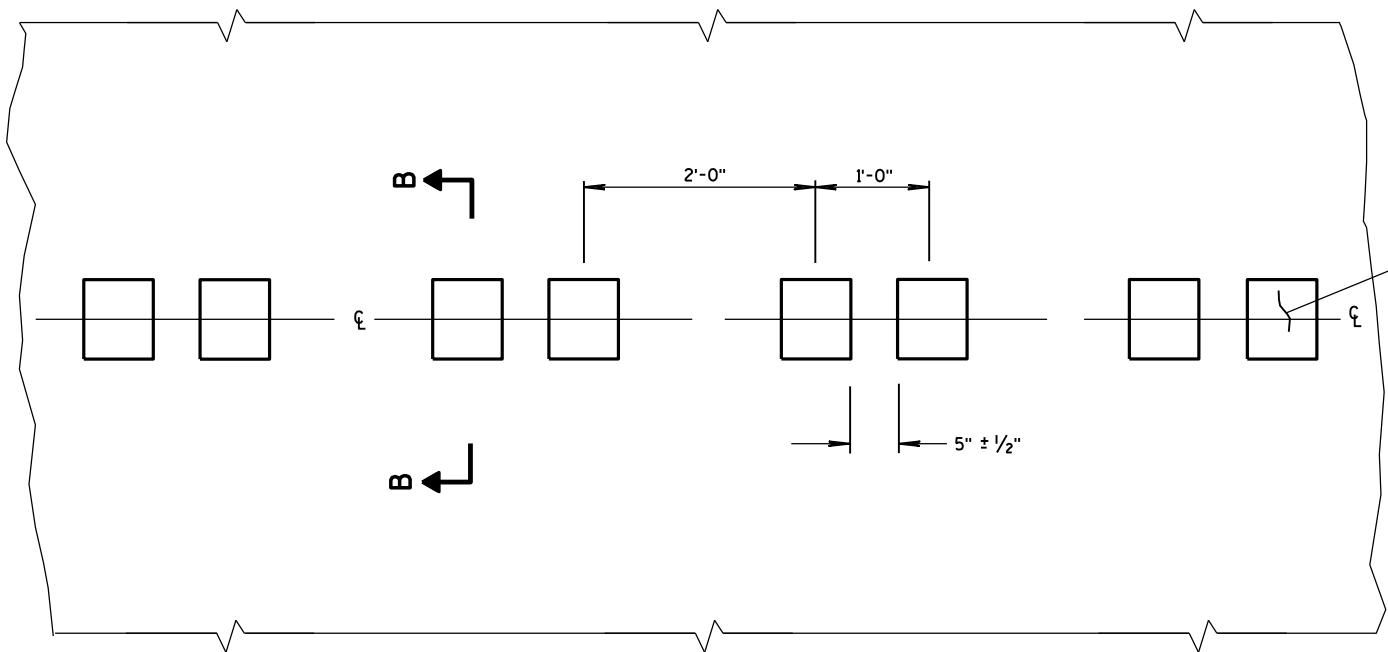
DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

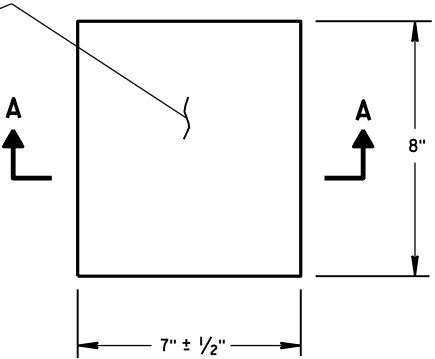
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

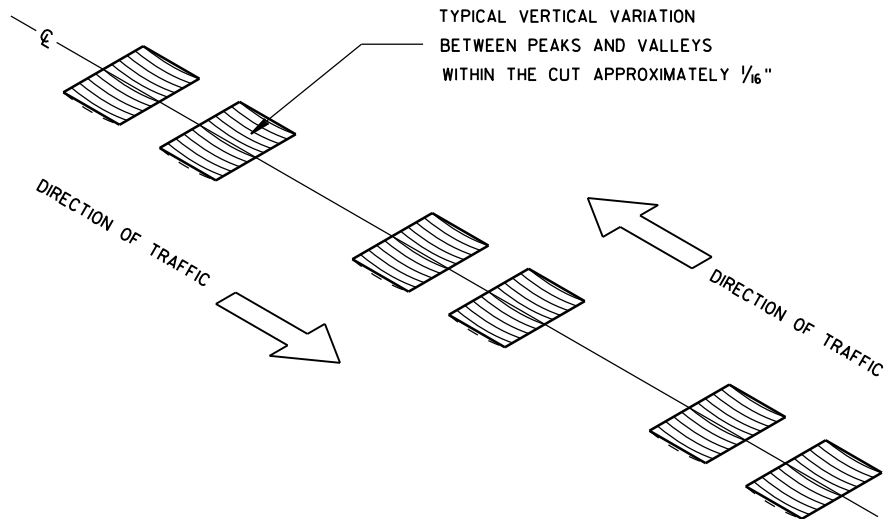
- ① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



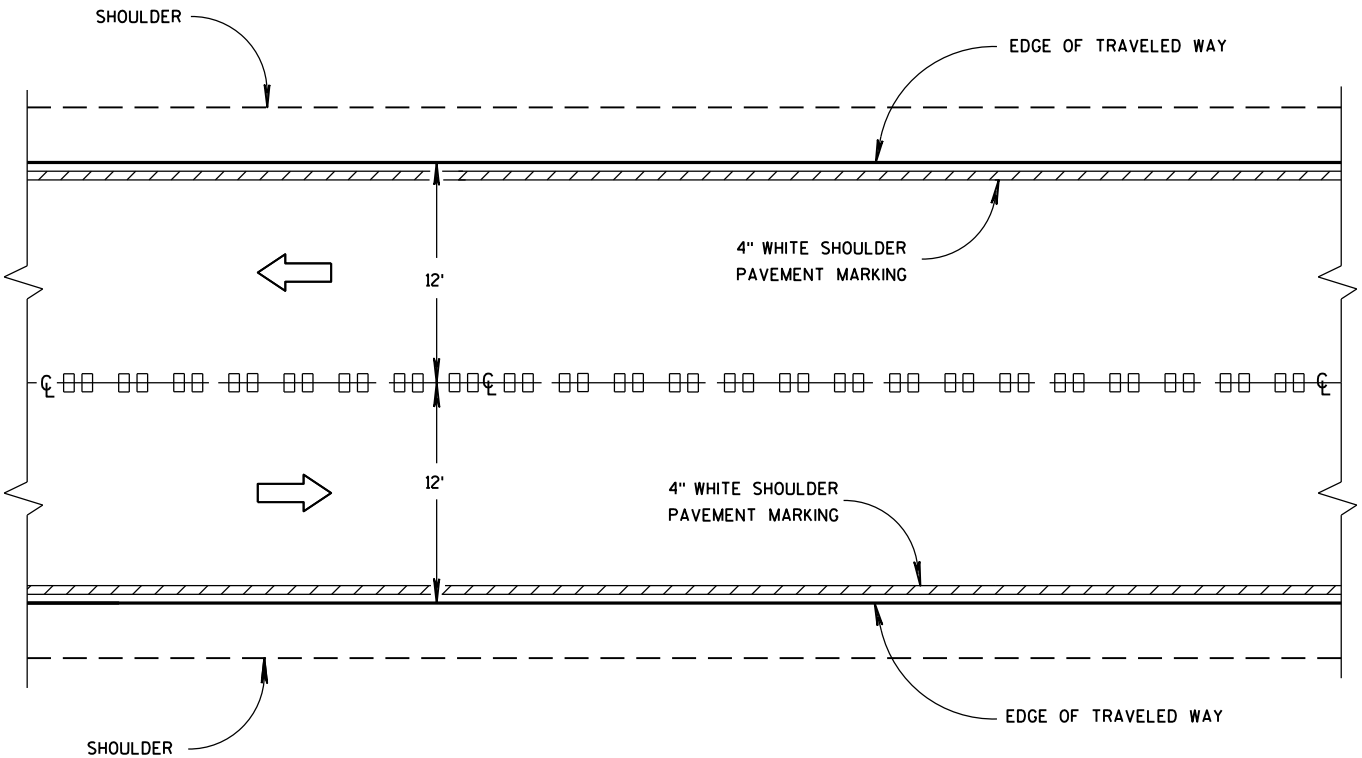
PLAN VIEW
CENTER LINE WITH GROOVES



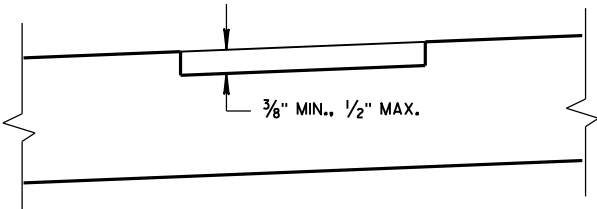
PLAN VIEW
(SINGLE GROOVE)



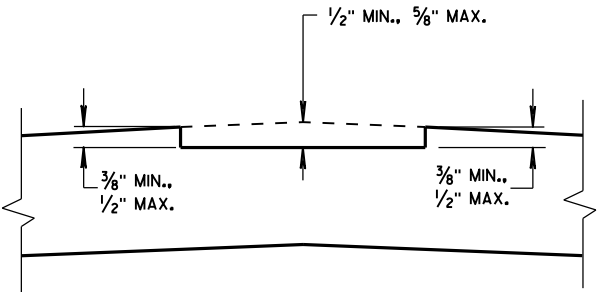
ISOMETRIC



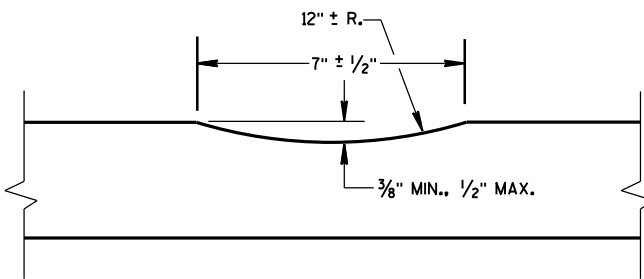
CENTER LINE GROOVES ON TWO-WAY ROADWAYS



SECTION B-B
SUPERELEVATED ROADWAY



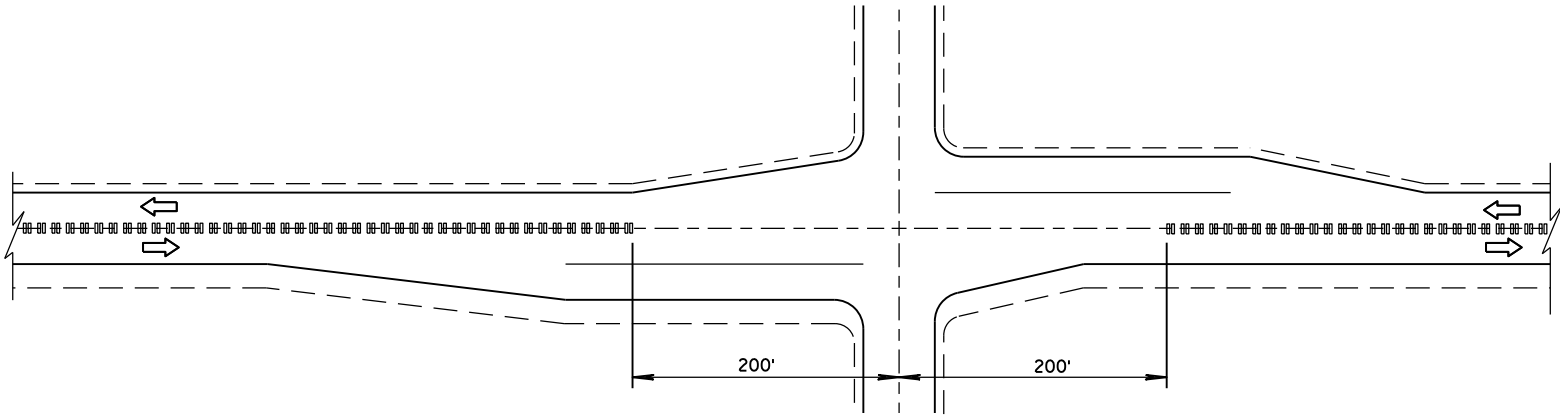
SECTION B-B
CROWNED ROADWAY



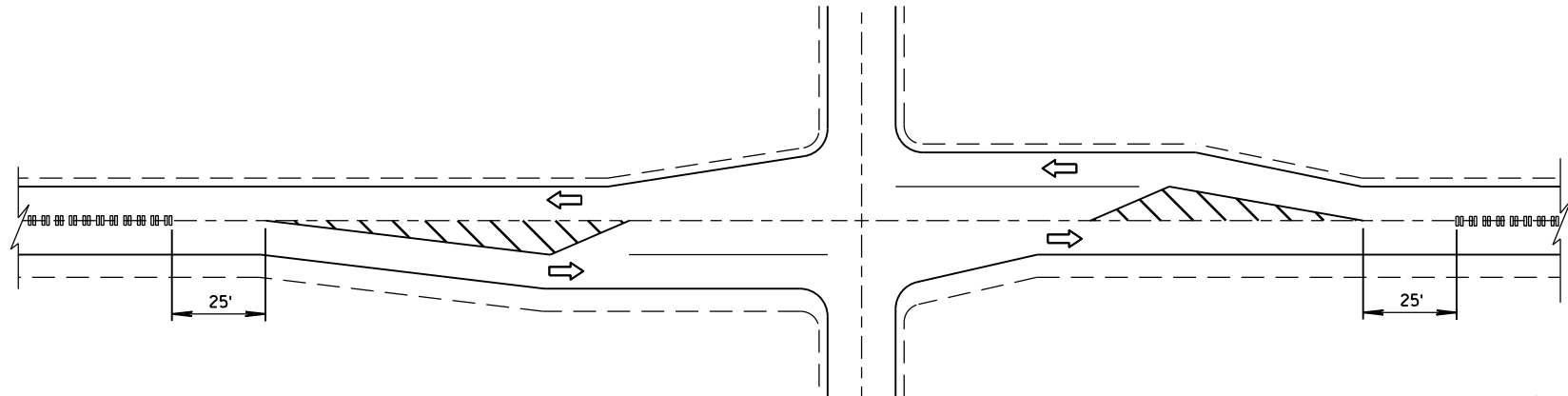
SECTION A-A

2-LANE RURAL
CENTER LINE RUMBLE STRIP,
MILLING

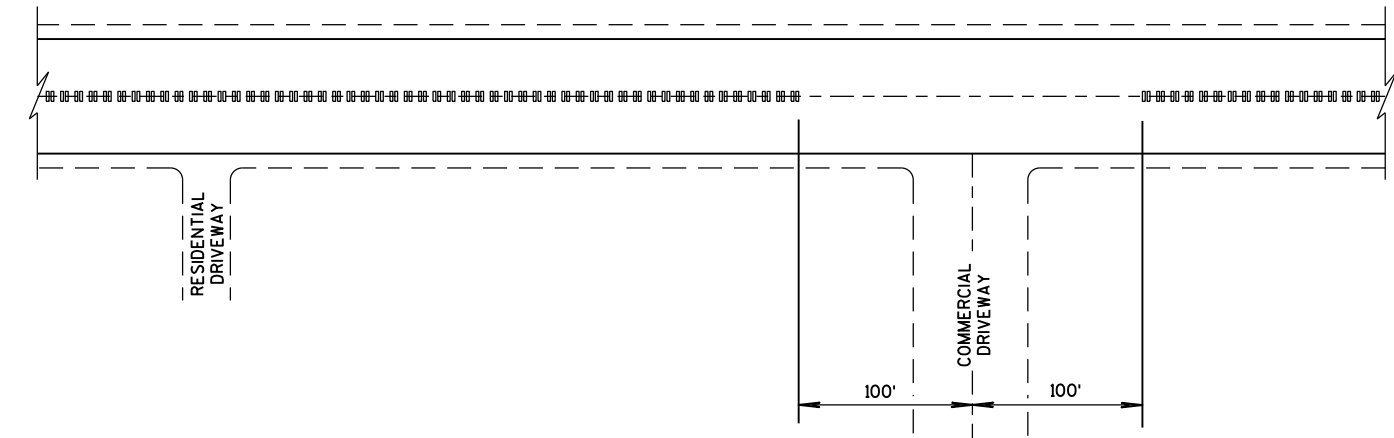
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CENTER LINE GROOVES AT INTERSECTIONS

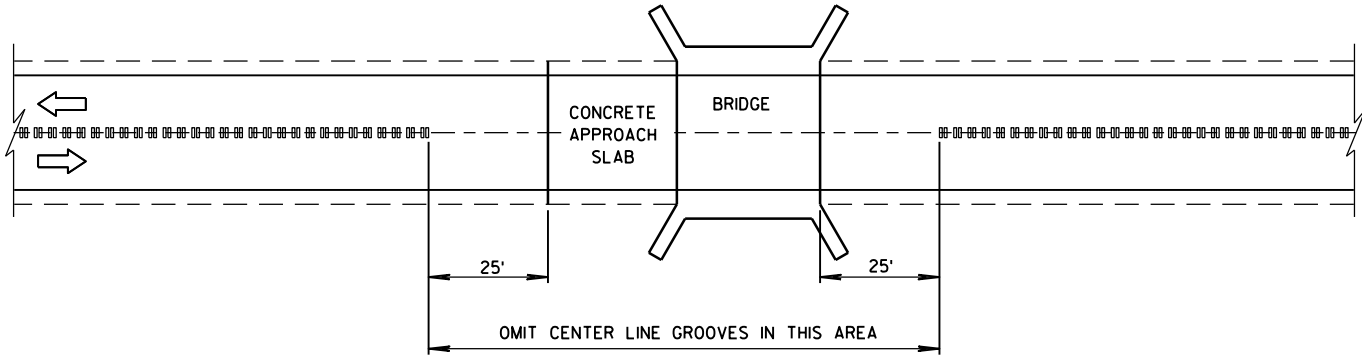


CENTER LINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)

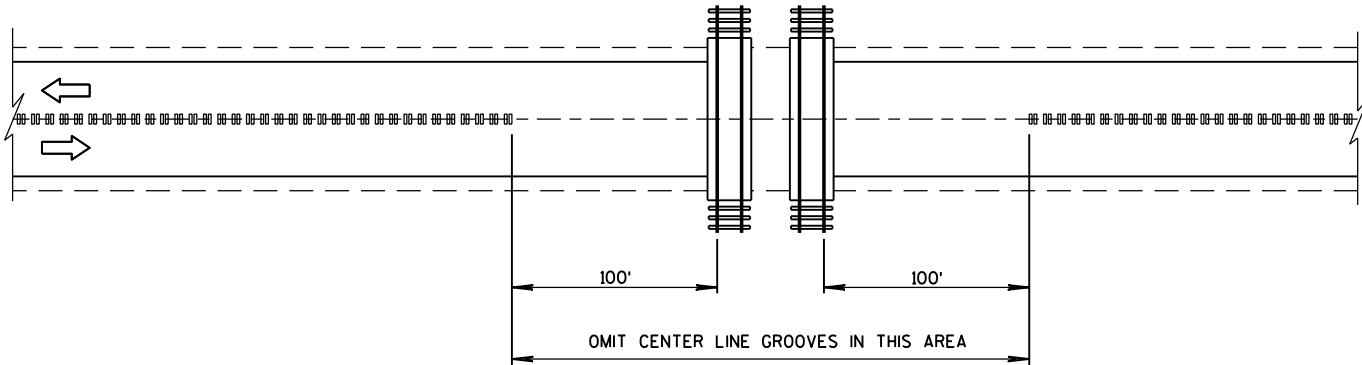


CENTER LINE GROOVES AT DRIVEWAYS^①

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



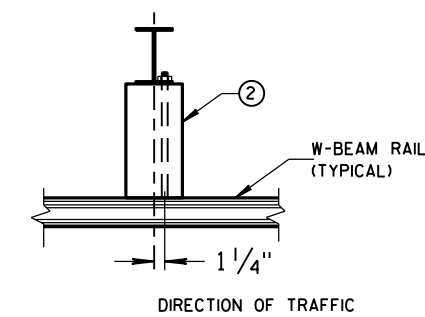
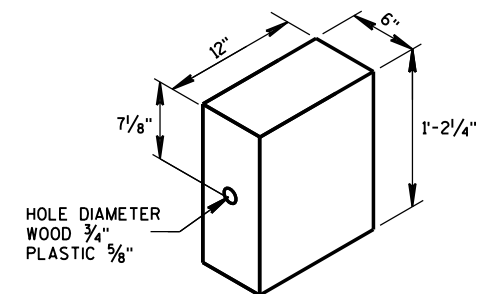
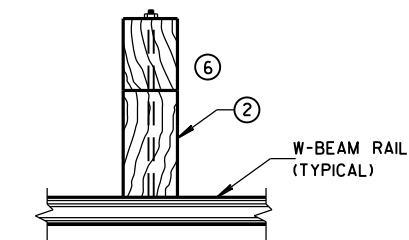
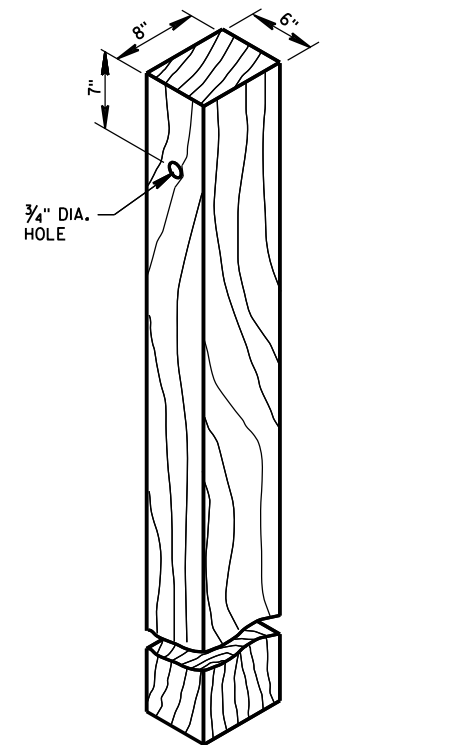
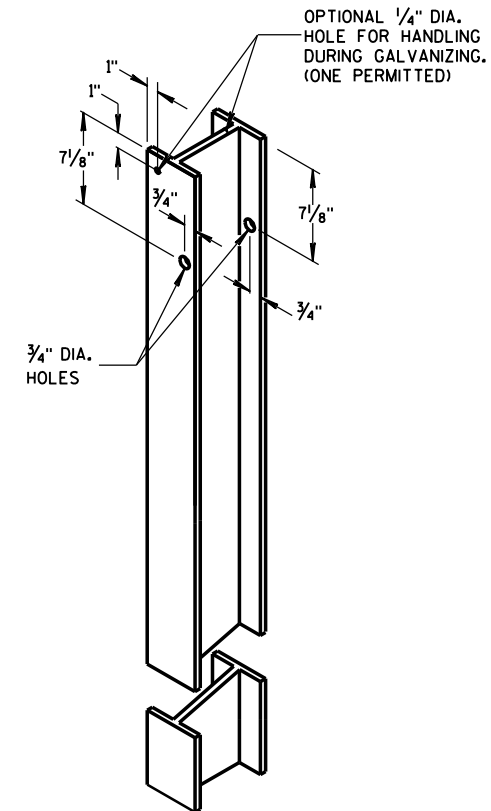
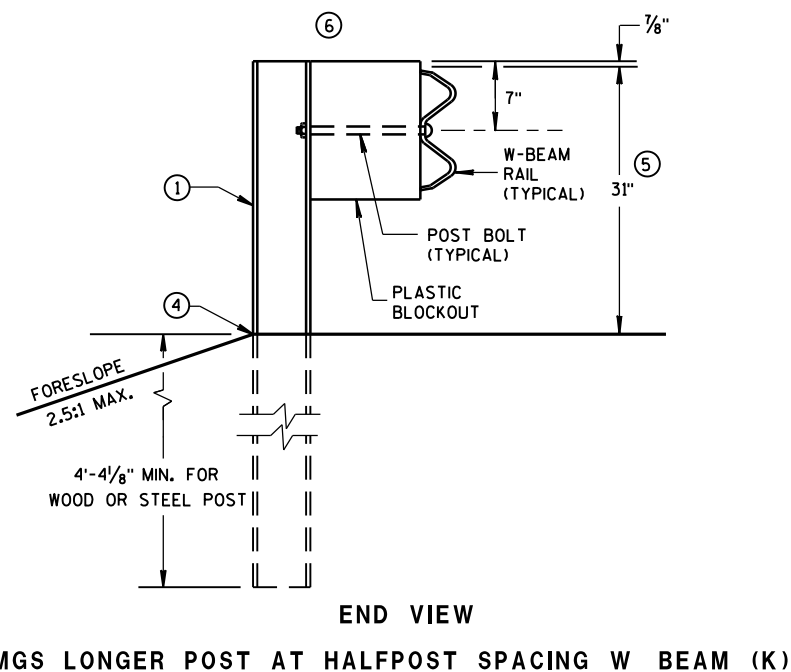
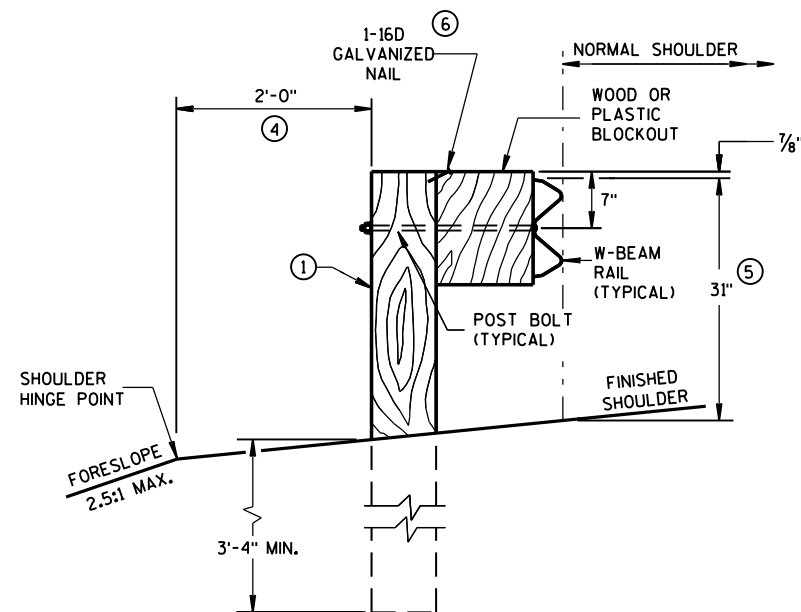
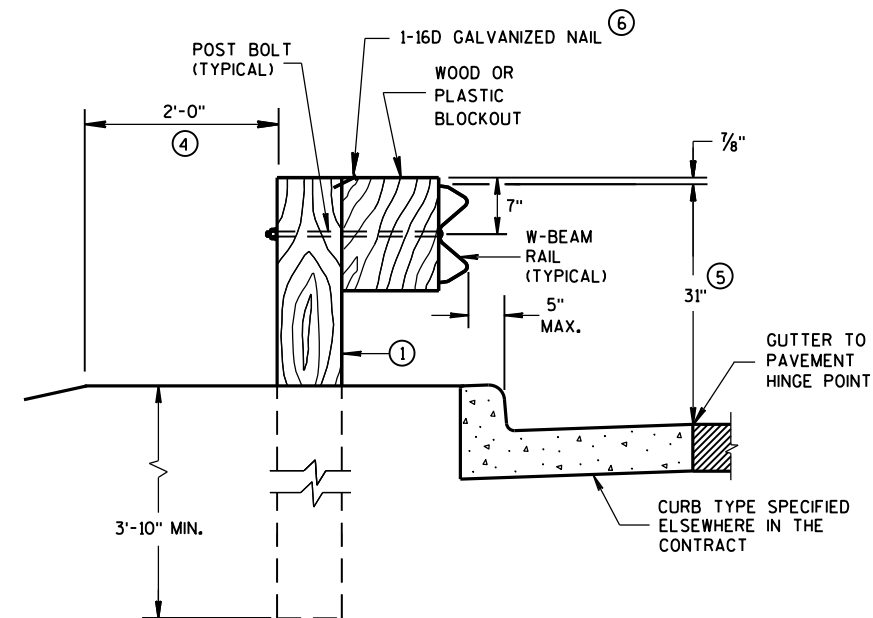
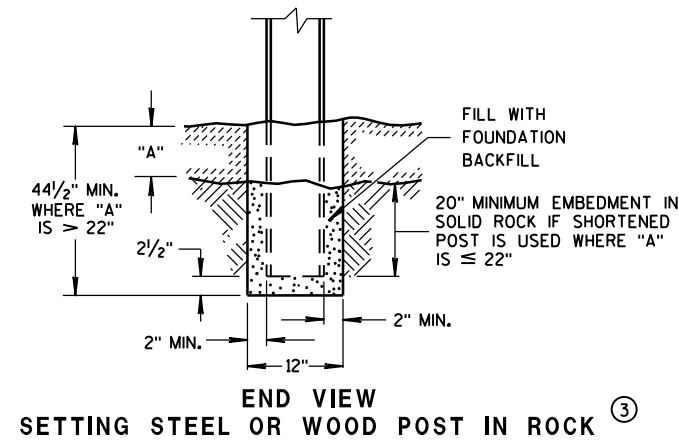
CENTER LINE GROOVES AT BRIDGES



CENTER LINE GROOVES AT RAILROADS

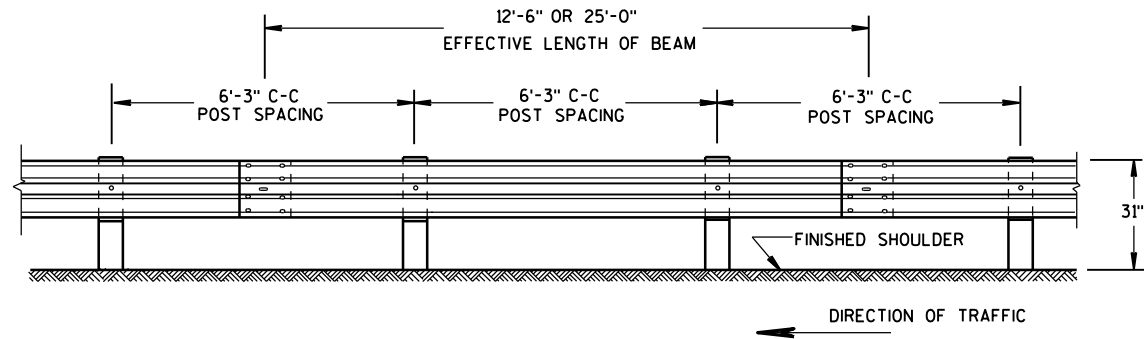
2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 5/15/2013 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

- 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 2½ INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS TO LENGTH AND 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 27¾" 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.



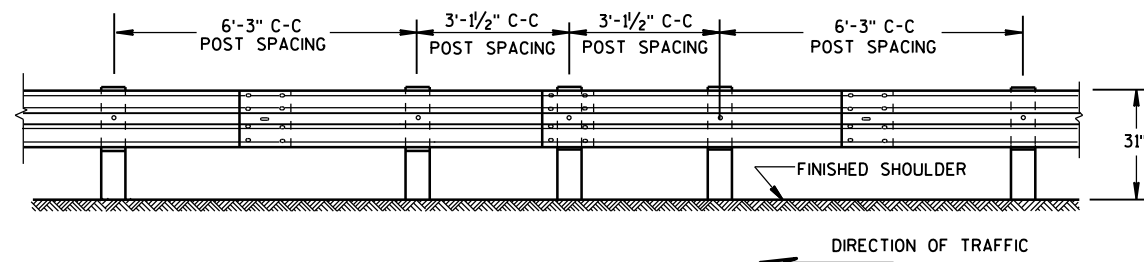
**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



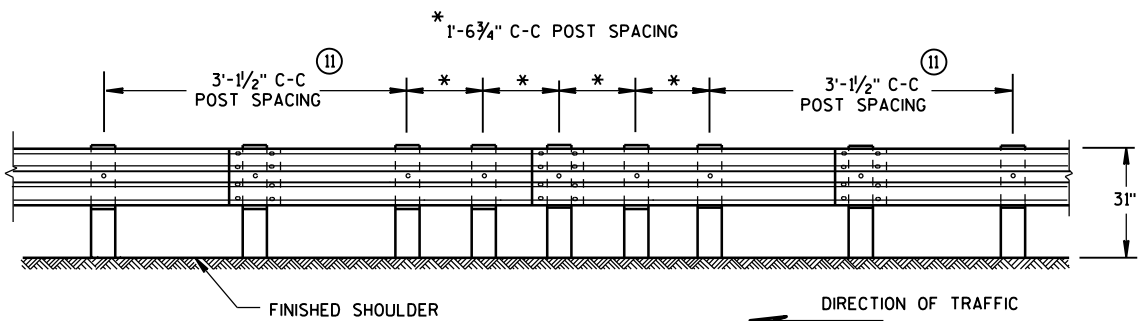
FRONT VIEW

POST SPACING STANDARD INSTALLATION



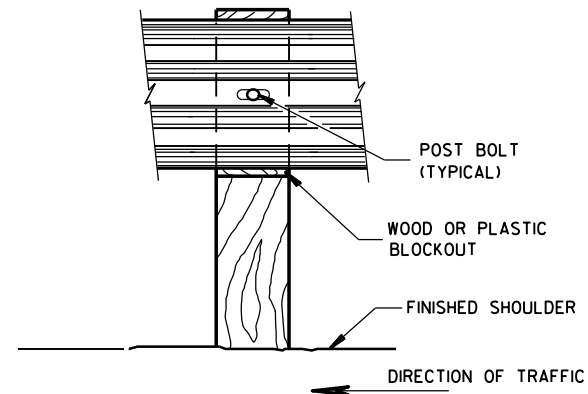
FRONT VIEW

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

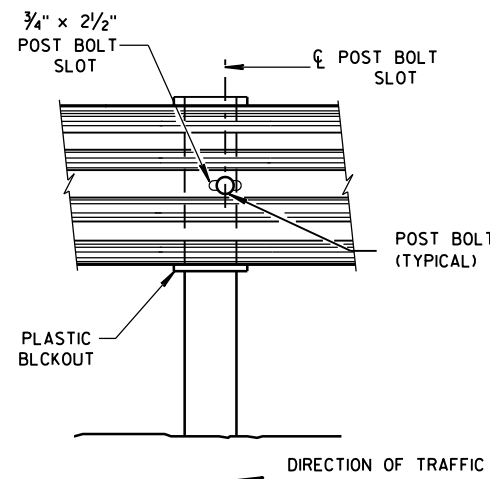


FRONT VIEW

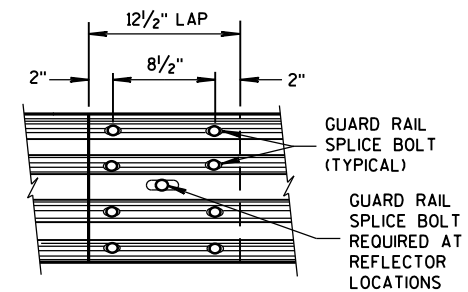
QUARTER POST SPACING (QS)



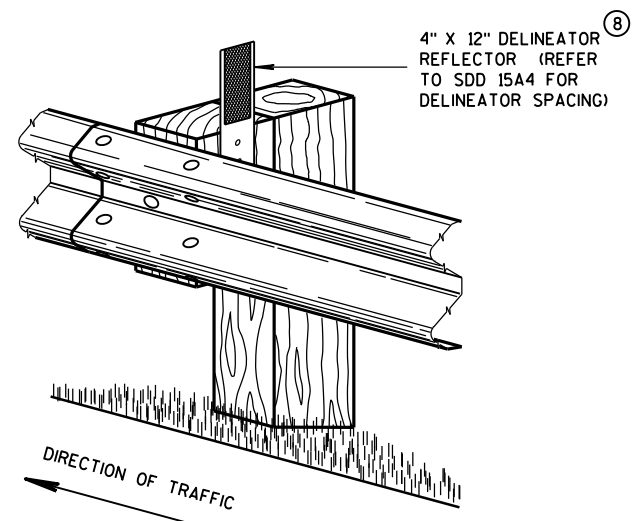
FRONT VIEW AT WOOD POST



FRONT VIEW AT STEEL POST



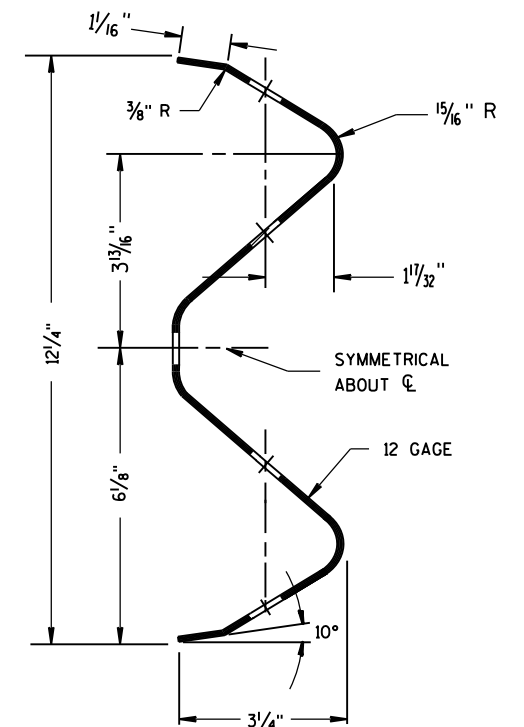
FRONT VIEW
MID-SPAN BEAM SPLICE



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

GENERAL NOTES

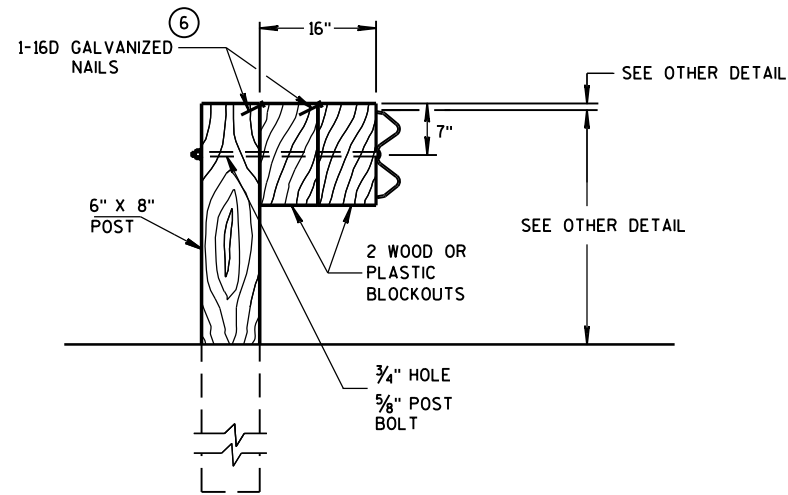
- ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.
 - ⑪ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.
- POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.
- GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



SECTION THRU W-BEAM RAIL

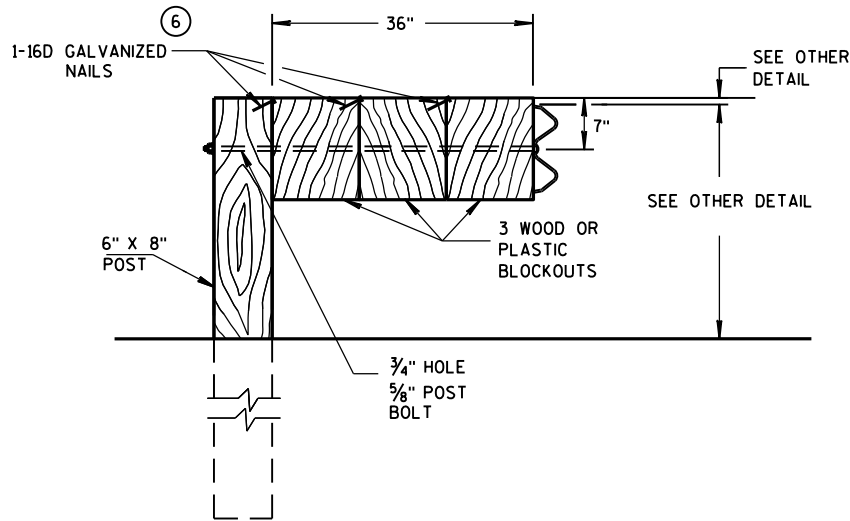
MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR 16" BLOCKOUT DEPTH

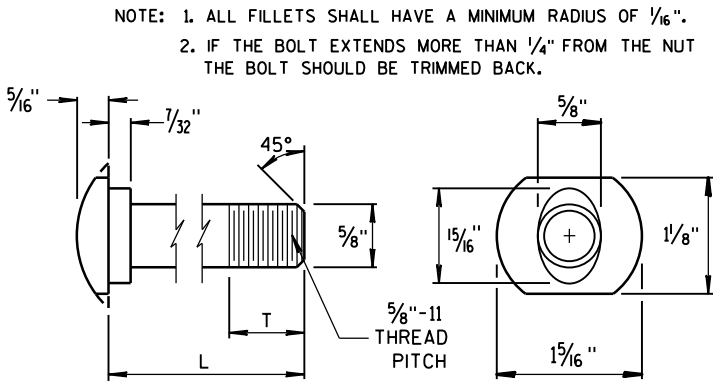
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.



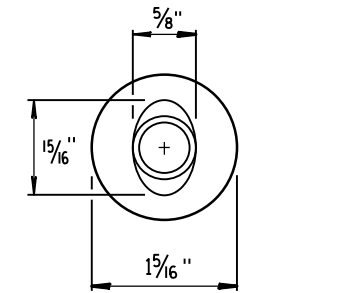
DETAIL FOR 36" BLOCKOUT DEPTH

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

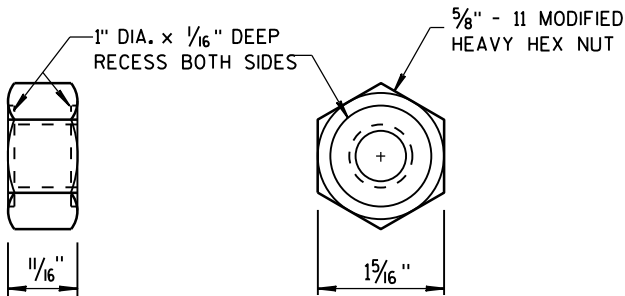
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.



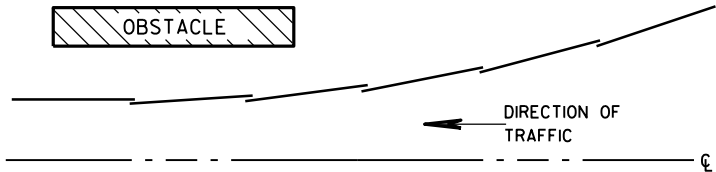
POST BOLT TABLE



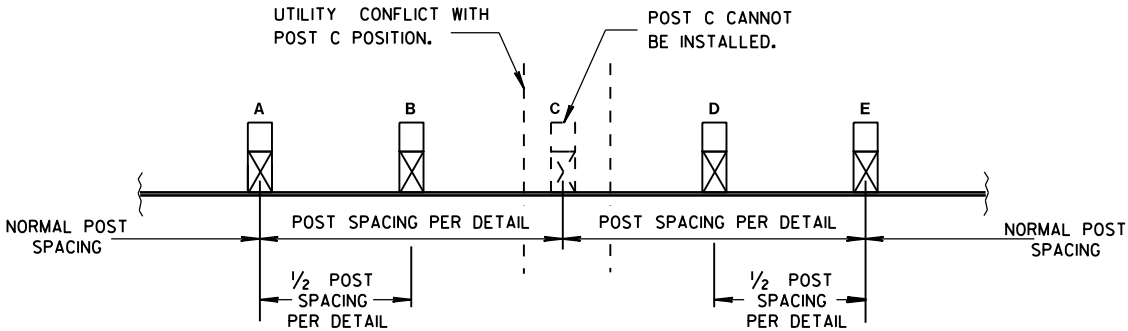
ALTERNATE BOLT HEAD



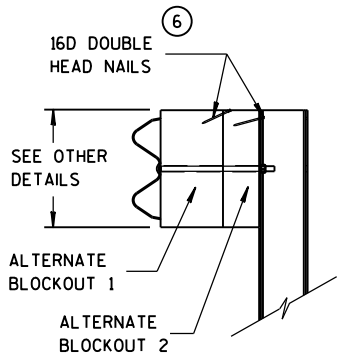
POST BOLT, SPLICE BOLT AND RECESS NUT



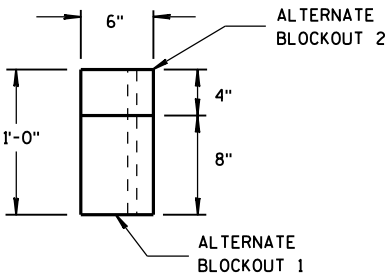
PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION



SIDE VIEW

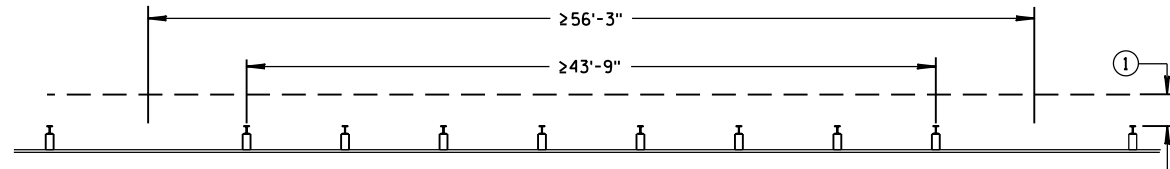


TOP VIEW

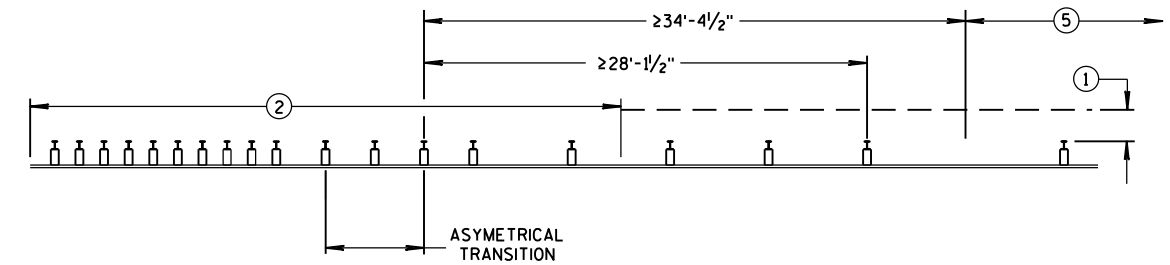
ALTERNATE WOOD
BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

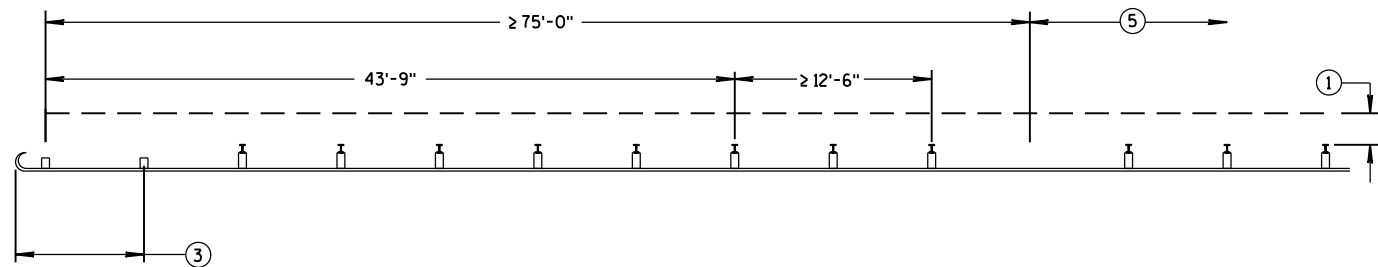
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



MISSING POST IN NORMAL BEAM GUARD RUN

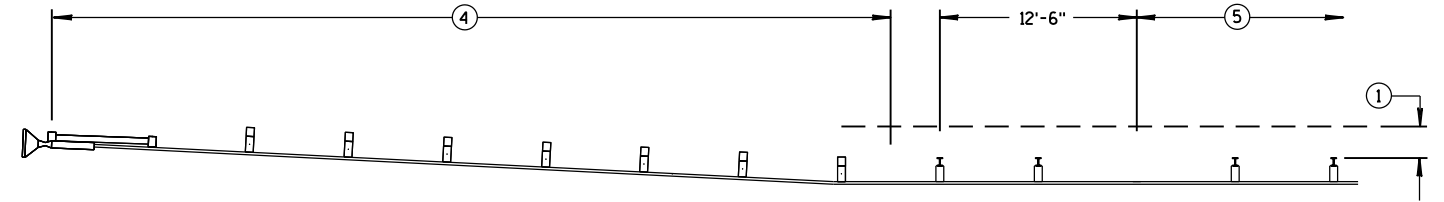


MISSING POST NEAR APPROACH THRIE BEAM TRANSITION

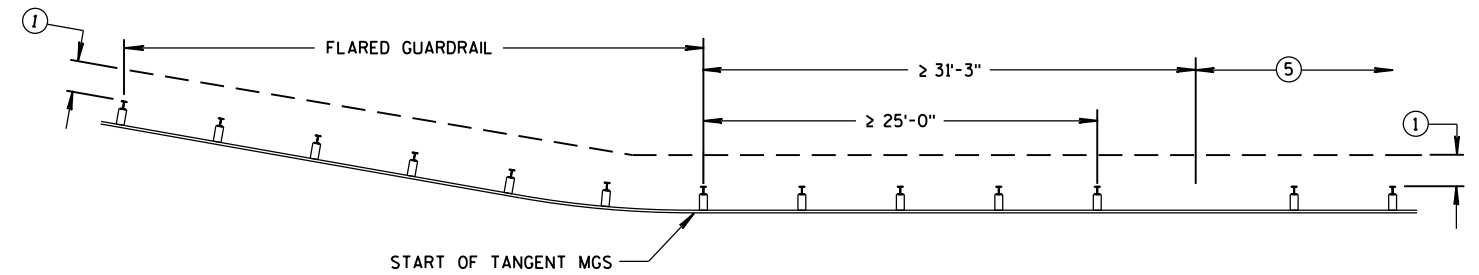


MISSING POST IN NORMAL BEAM GUARD RUN
NEAR TYPE 2 TERMINAL

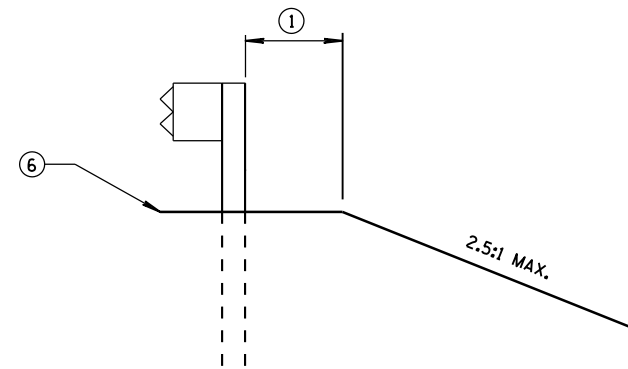
- ① MINIMUM OF 2 FEET OF GRADING BEHIND POST.
- ② SEE SDD 14B45 FOR MORE DETAILS.
- ③ SEE SDD 14B47 FOR MORE DETAILS.
- ④ SEE SDD 14B44 FOR MORE DETAILS.
- ⑤ SEE MISSING POST IN NORMAL BEAM GUARD RUN FOR DISTANCE TO NEXT MISSING POST AND AREA FOR WELL DRAINED, COMPACTED SOILS.
- ⑥ SEE PLAN FOR SHOULDER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



MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



MISSING POST IN NORMAL BEAM GUARD RUN
NEAR FLARED BEAM GUARD



CROSS SECTION VIEW

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

THE CENTER OF THE UPPER 3 1/2" 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.

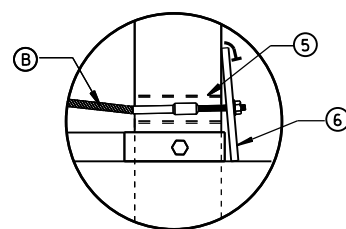
[illegible]

Diagram illustrating a vertical post bolt assembly on a sloped surface. The assembly includes a vertical post (15) and a post bolt (10). The post is secured by a post bolt (10) passing through a shoulder hinge point (16). The post is labeled "POST BOLT (TYP.)". The shoulder hinge point is labeled "SHOULDER HINGE POINT". The slope is indicated as "SLOPE 10:1 OR FLATTER". Dimensions shown include a vertical distance of 31" and a horizontal distance of 4".

Diagram illustrating the assembly of a W5-59 EAT marker post and soil plate:

- W5-59 EAT MARKER POST:** The main vertical post, labeled (13).
- POST NO. 1:** The post is labeled as POST NO. 1.
- EDGE OF SHOULDER:** The horizontal distance from the edge of the shoulder to the post is 2'-0" OFFSET TO FACE OF RAIL.
- TO HINGE POINT:** The horizontal distance from the post to the hinge point is 5'-0" MIN.
- SHOULDER HINGE POINT:** The vertical distance from the top of the post to the hinge point is 4'-0".
- SLOPE 10:1 OR FLATTER:** The slope of the shoulder is indicated as 10:1 or flatter.
- SLOPE 4:1 OR FLATTER:** The slope of the embankment is indicated as 4:1 or flatter.
- NORMAL SLOPE:** The slope of the embankment is indicated as NORMAL SLOPE.
- 1'-6" MIN. BELOW GRADE:** The vertical distance from the ground surface to the bottom of the post is 1'-6" MIN. BELOW GRADE.
- SOIL PLATE:** The horizontal plate at the base of the post is labeled (14).
- Other labels:** (1) points to the top of the post, (2) points to the soil plate, (F) points to the face of the rail, and (12) points to the side of the post.

8

C

10

12

1

7

9

15

FINISHED GROUND ELEVATION

BOTTOM OF STRUT IS PLACED FLUSH WITH AND PARALLEL TO THE FINISHED SURFACE

14

2

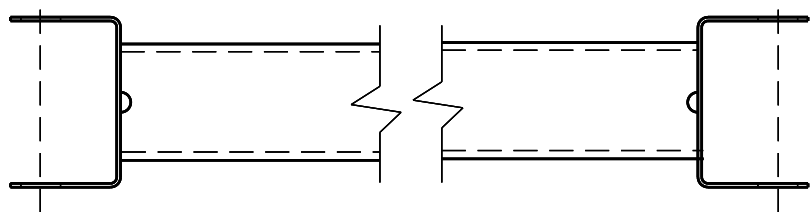
16

POST NO. 2 *

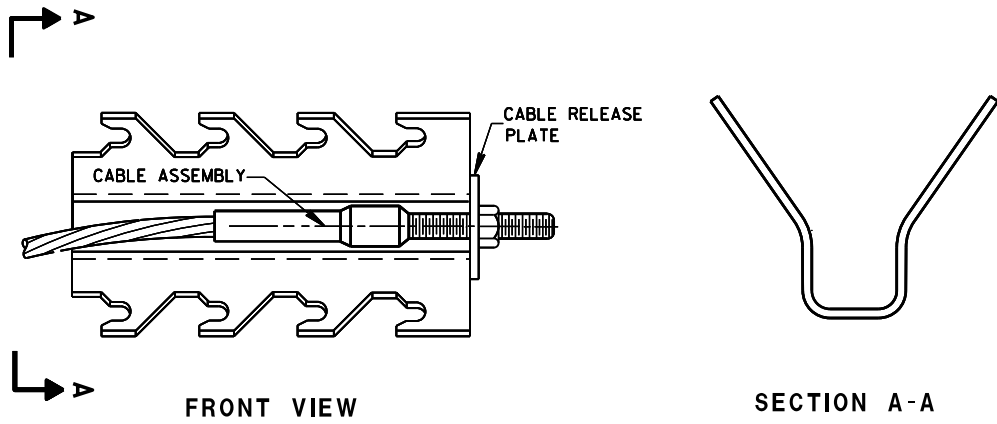
DETAIL "B"

POST NO. 1 *

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

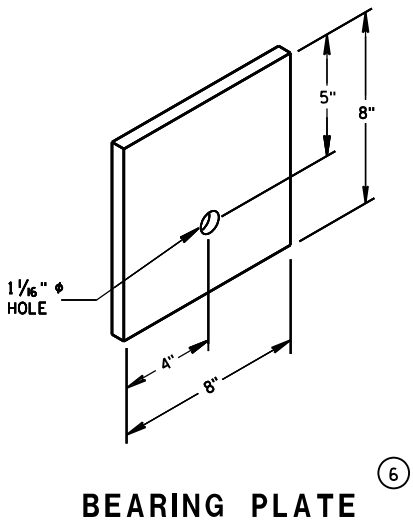


GENERIC GROUND STRUT (9) (H)

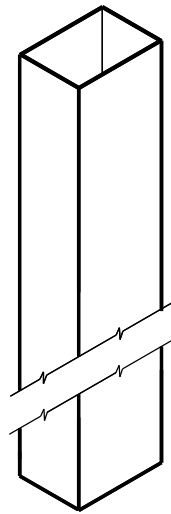


GENERIC ANCHOR CABLE BOX (8) (H)

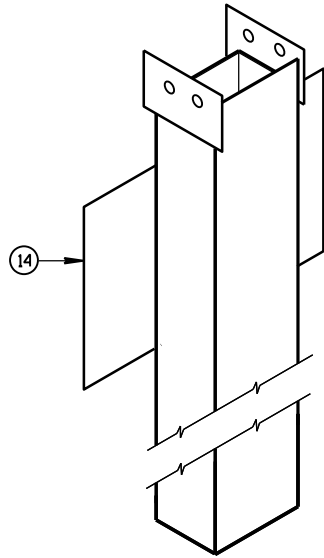
BILL OF MATERIALS	
PART NO.	DESCRIPTION
MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.	
(1)	UPPER POST NO.1 6" X 6" TUBE
(2)	LOWER POST NO.1
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND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



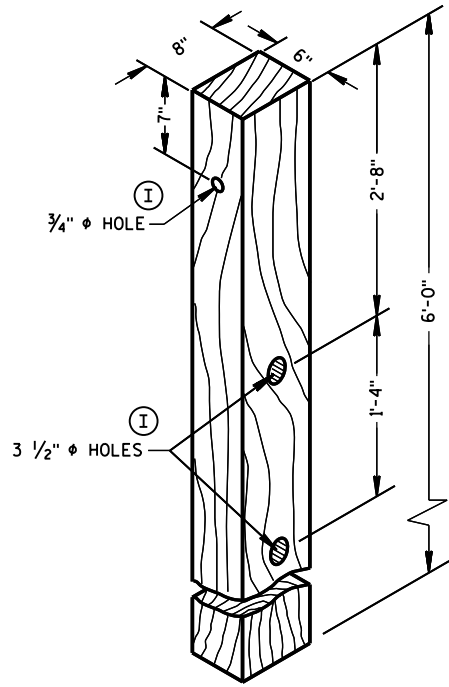
BEARING PLATE (6)



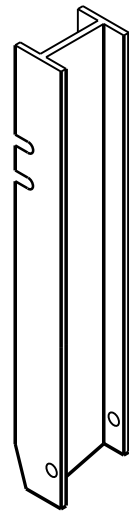
UPPER POST NO. 1⁽¹⁾



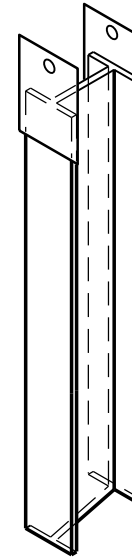
LOWER POST NO. 1⁽²⁾



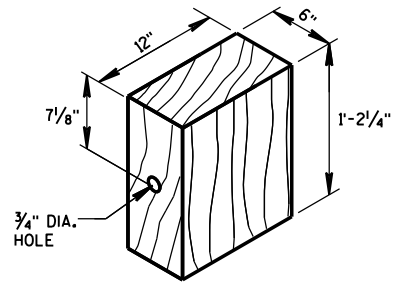
POSTS NUMBER 3-9
WOOD CRT POST⁽³⁾



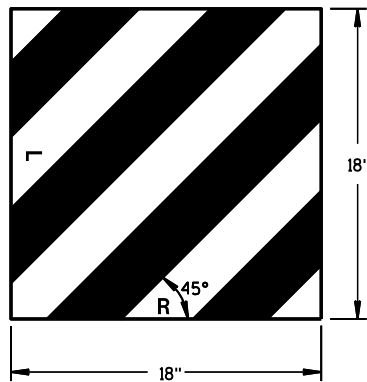
UPPER POST NO. 2⁽¹⁵⁾



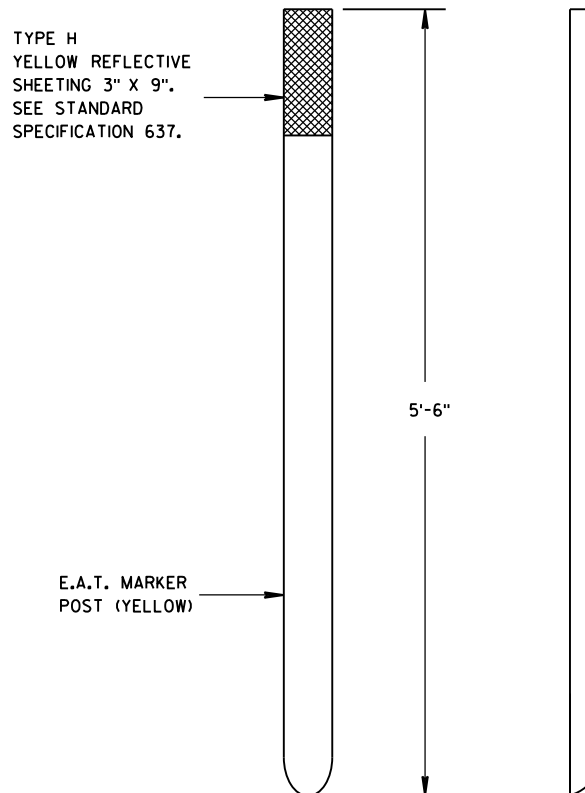
LOWER POST NO. 2⁽¹⁶⁾



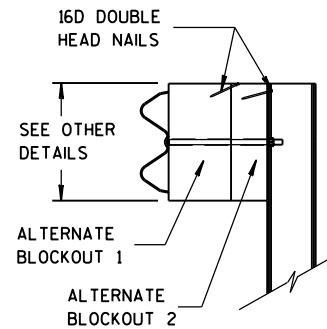
WOOD BLOCKOUT⁽⁴⁾
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



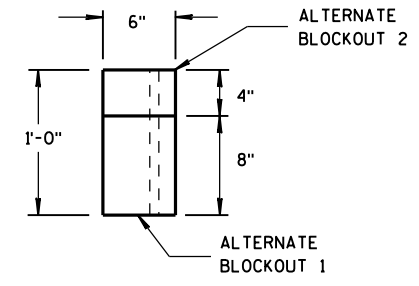
W5-59
REFLECTIVE SHEETING DETAIL^(H)



FRONT VIEW
SIDE VIEW
E.A.T. MARKER POST⁽¹³⁾



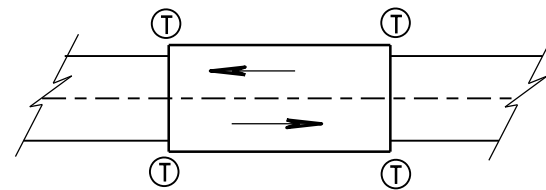
SIDE VIEW



TOP VIEW

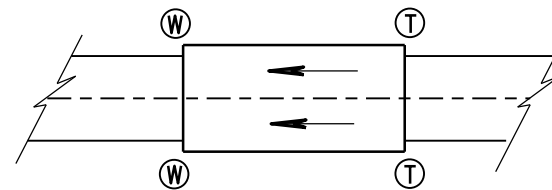
ALTERNATE WOOD
BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	



TWO WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION



ONE WAY TRAFFIC

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

GENERAL NOTES

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

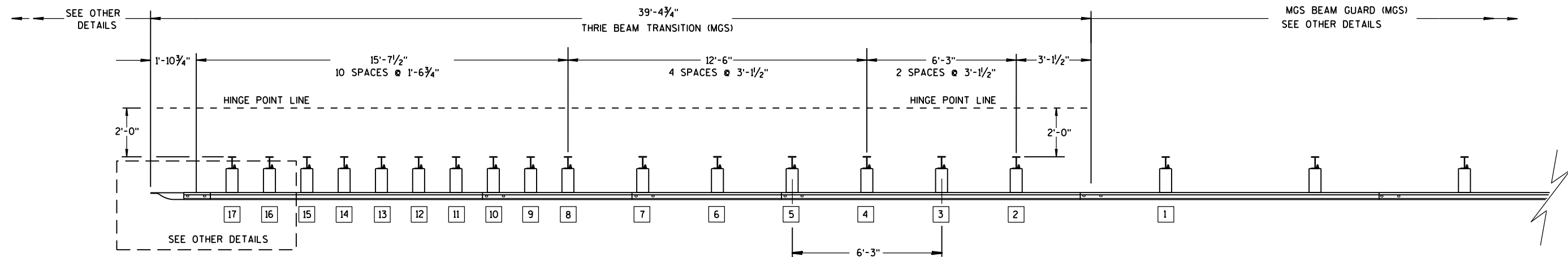
TRANSITION USES STEEL POSTS ONLY.

SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

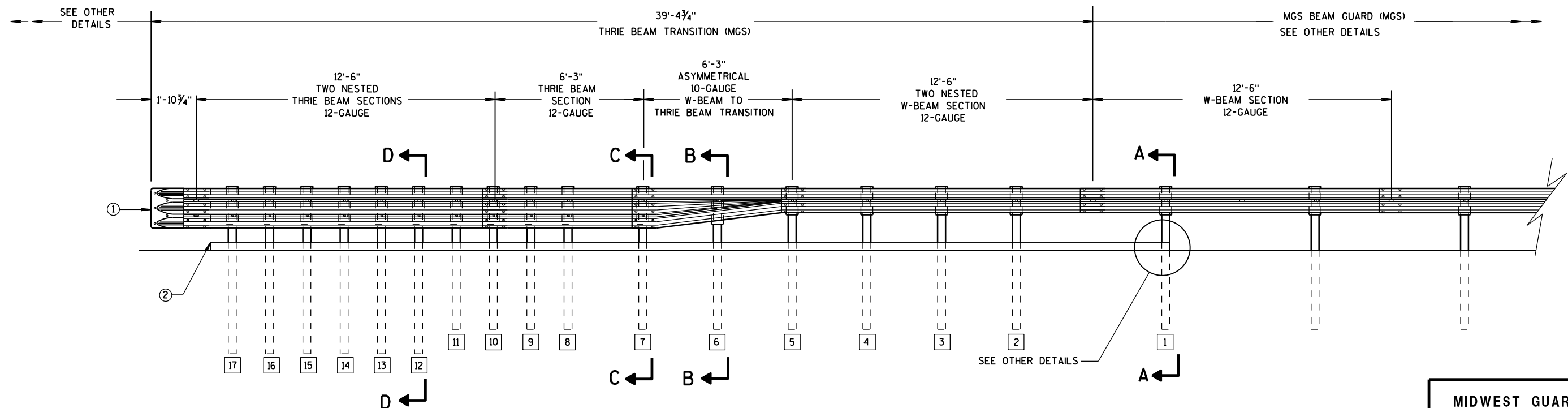
① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE



PLAN VIEW



ELEVATION VIEW

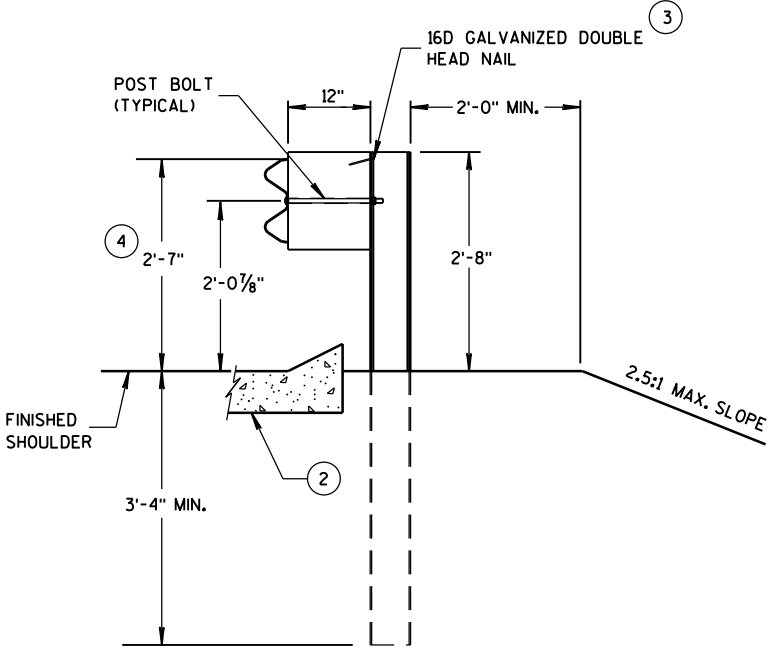
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

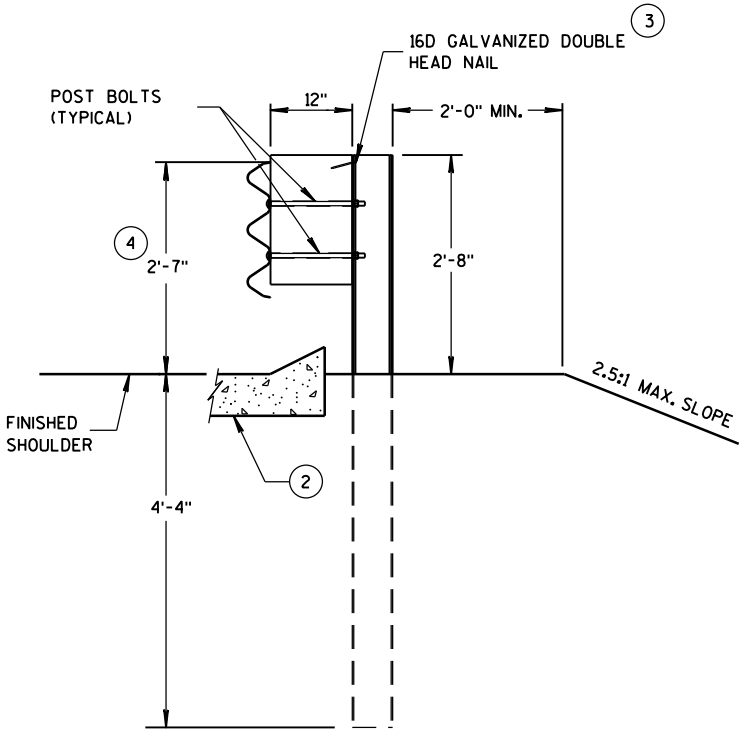
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

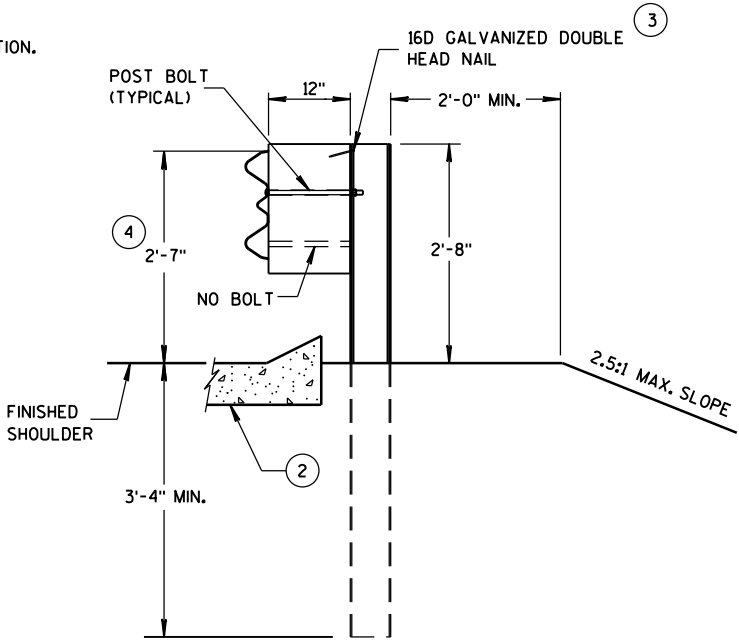
- 2 OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- 3 WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- 4 TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



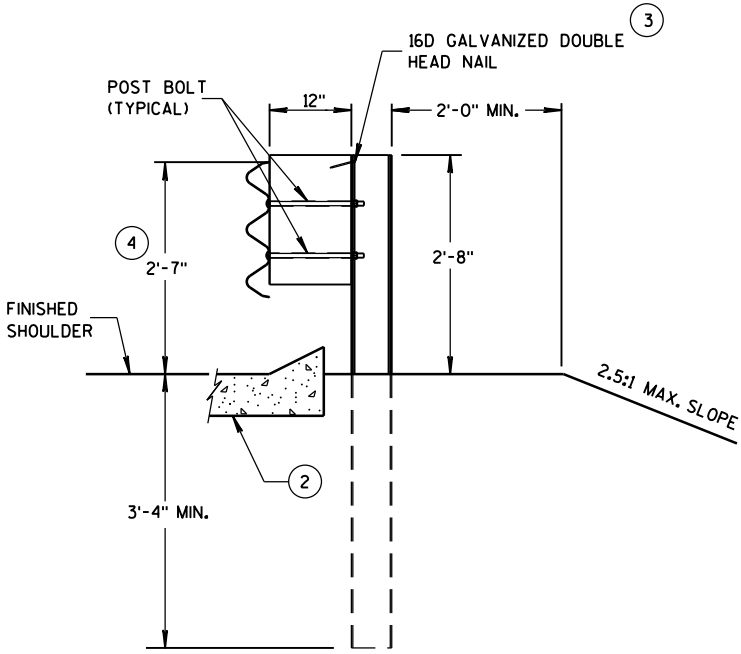
SECTION A-A
POSTS 1-5



SECTION D-D
POSTS 12-17



SECTION B-B
POST 6



SECTION C-C
POSTS 7-11

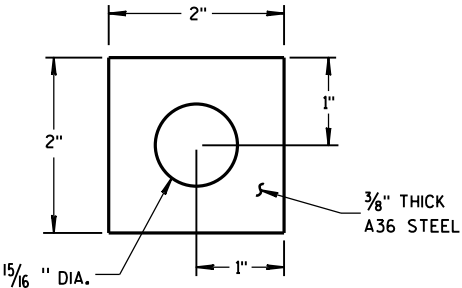
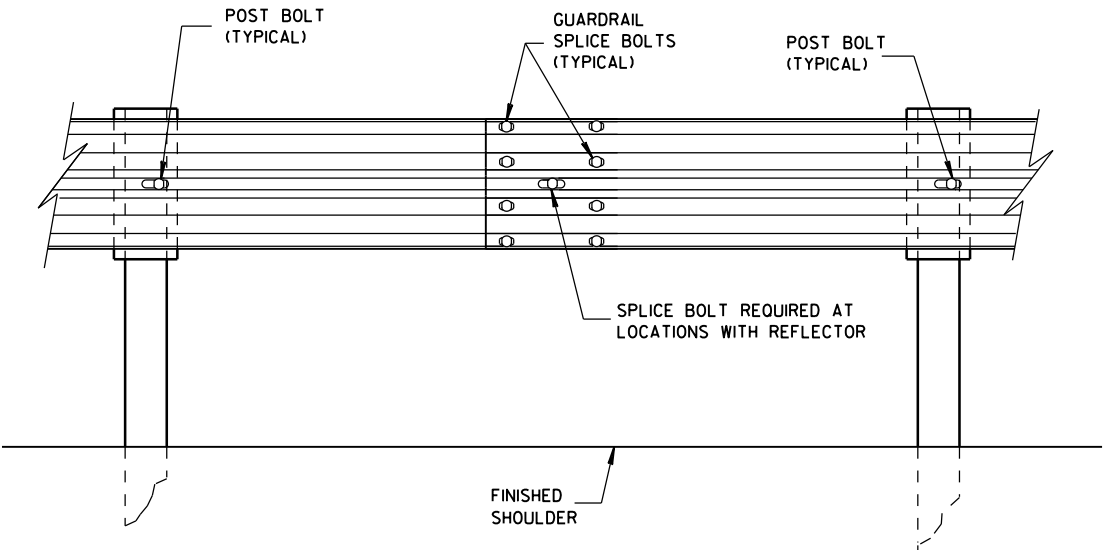
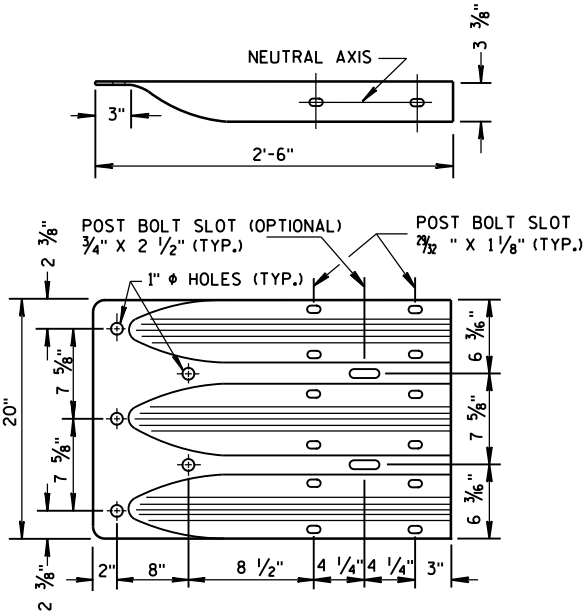


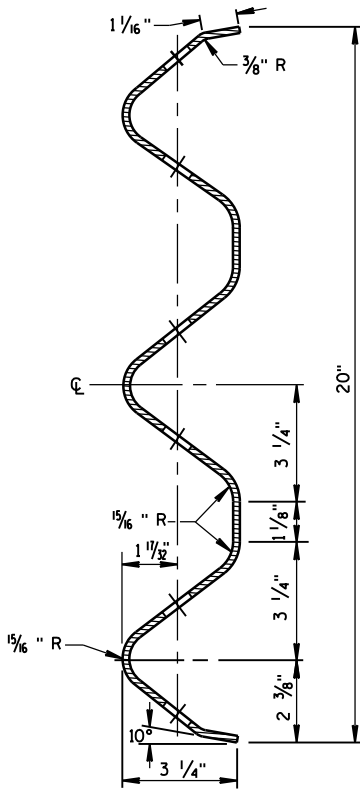
PLATE WASHER DETAIL



SPlice DETAIL



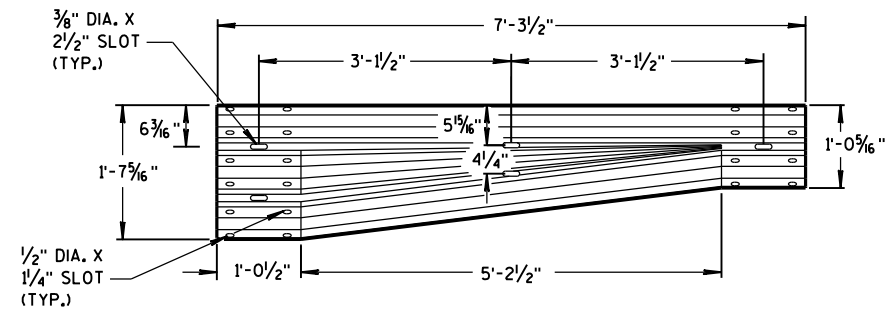
THRIE BEAM
TERMINAL CONNECTOR



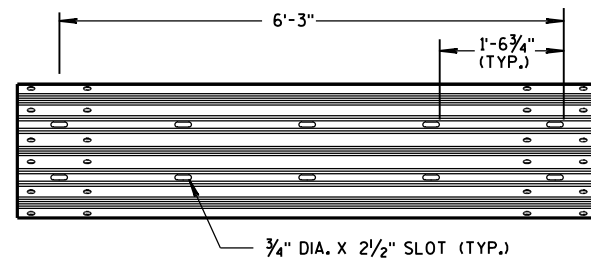
SECTION THRU THRIE
BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

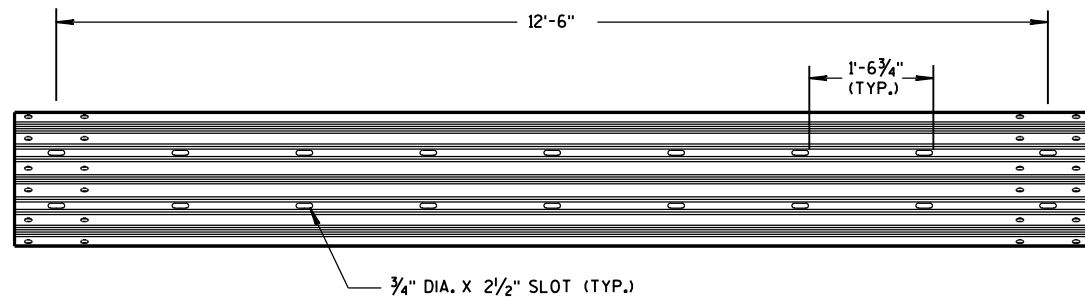
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



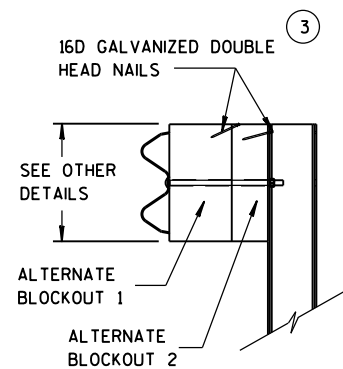
W-BEAM TO THRIE BEAM TRANSITION SECTION



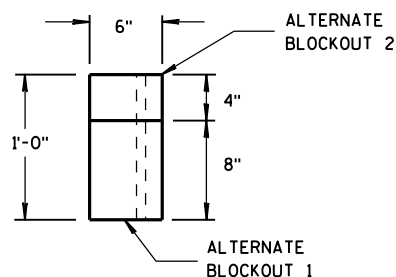
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

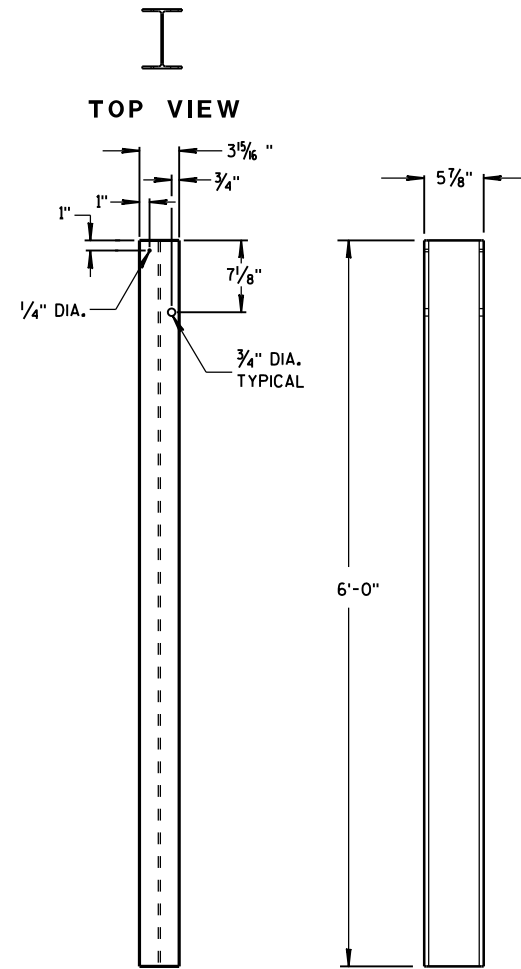


SIDE VIEW



TOP VIEW

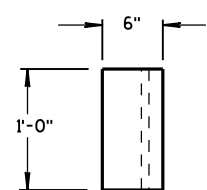
ALTERNATE WOOD BLOCKOUT DETAIL



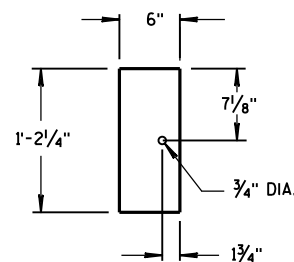
FRONT VIEW

SIDE VIEW

STEEL POSTS 1-5

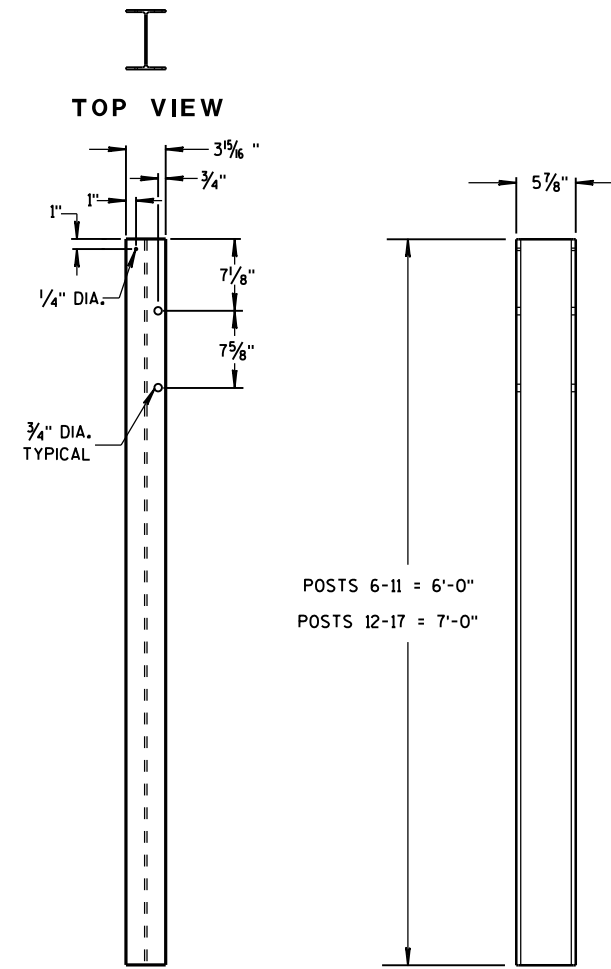


TOP VIEW



FRONT VIEW

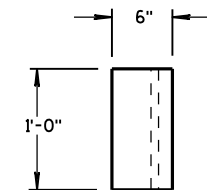
BLOCKOUT
POSTS 1-5



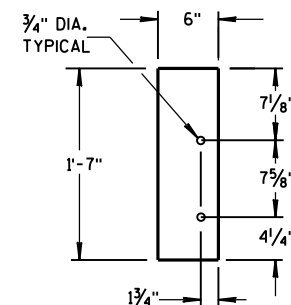
FRONT VIEW

SIDE VIEW

STEEL POSTS 6-17



TOP VIEW



FRONT VIEW

BLOCKOUT
POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

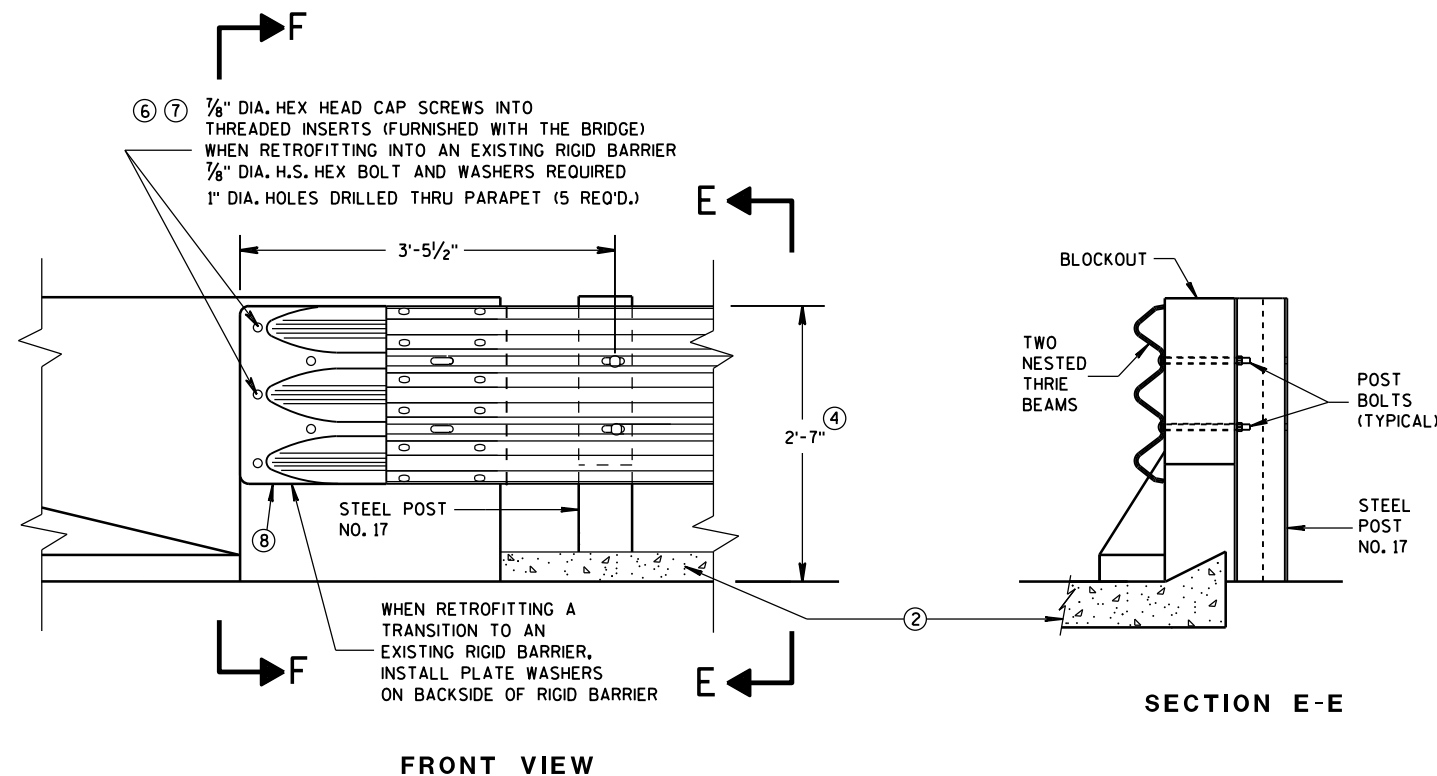
BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

③ WHEN USING STEEL POSTS 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.

⑤ WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

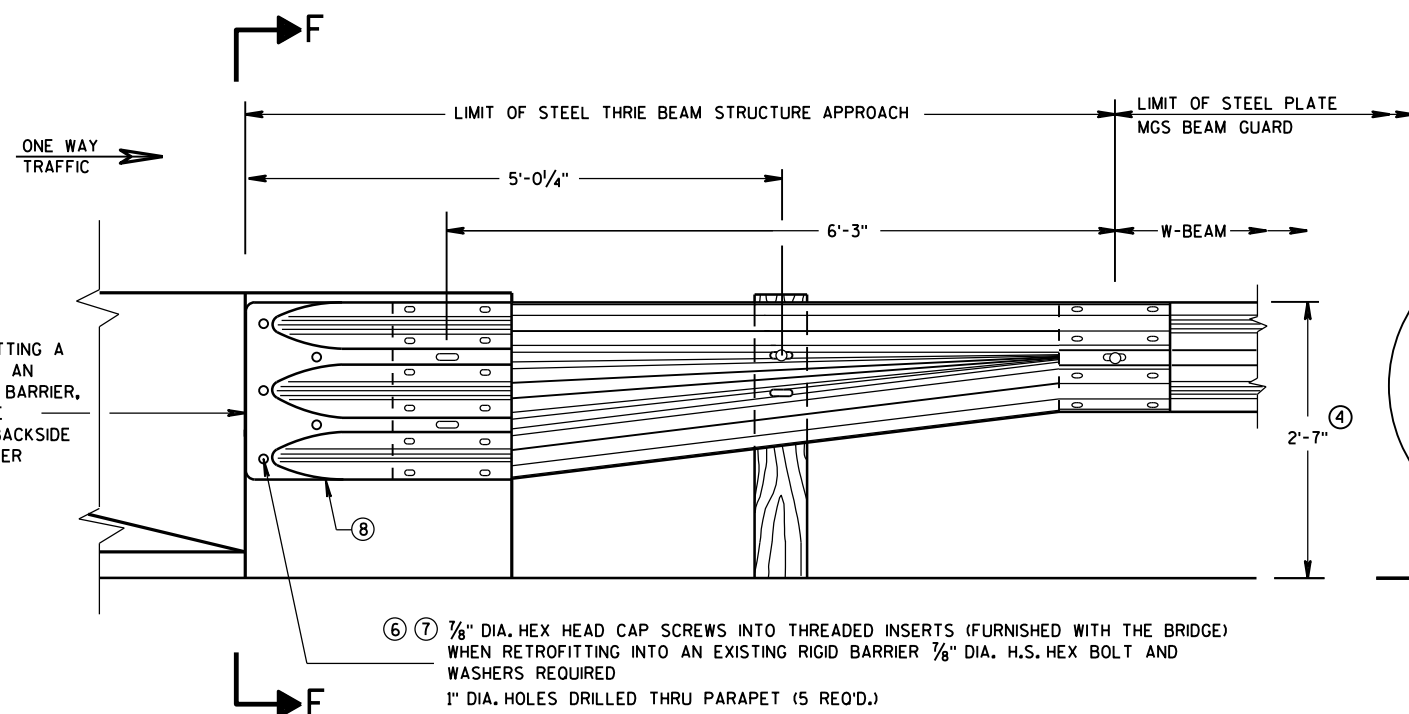
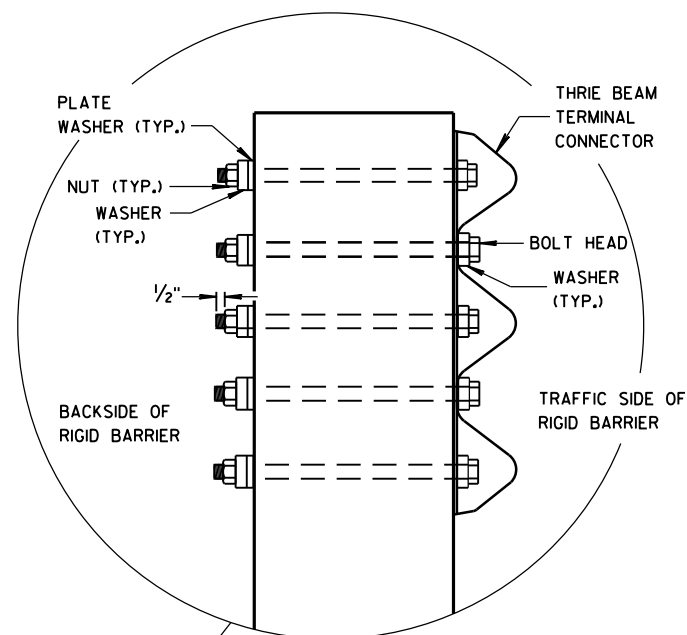


THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

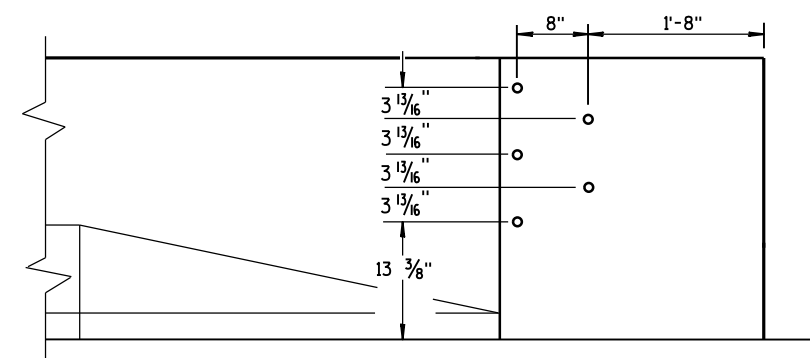
THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- ⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".



W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

SECTION F-F



DRILL HOLE LOCATION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

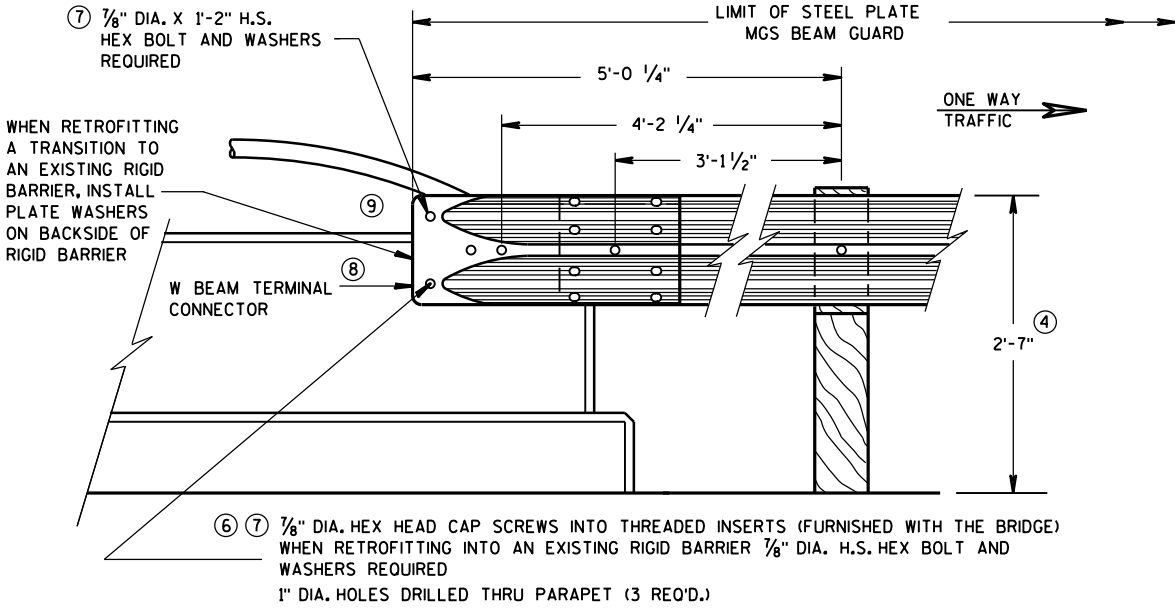
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

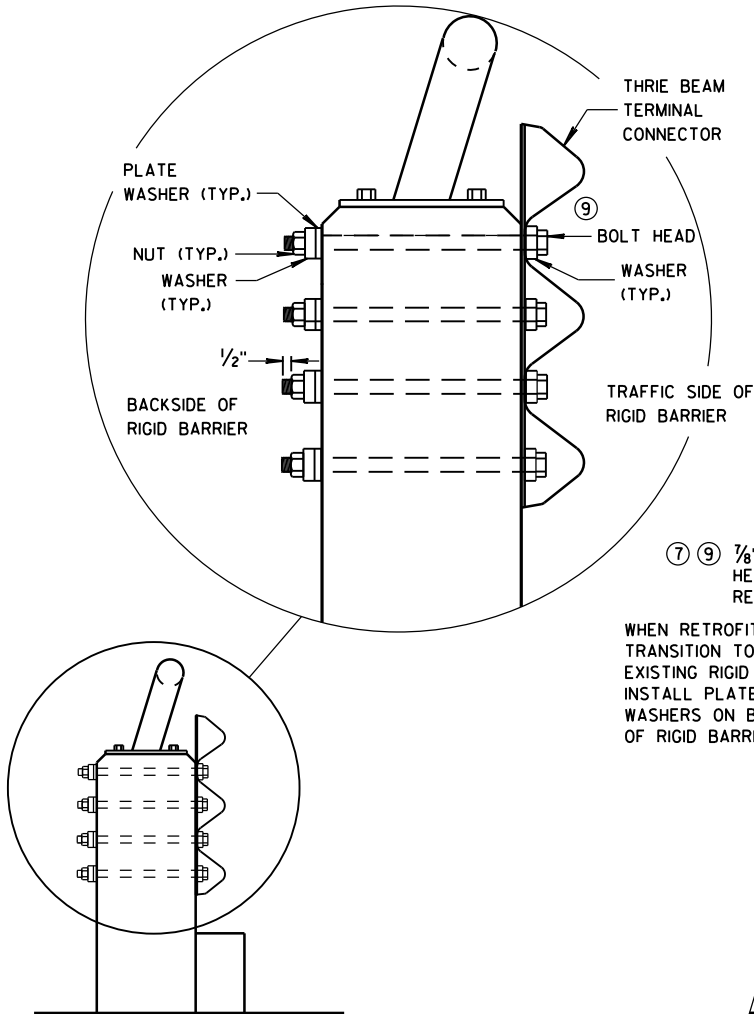
GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

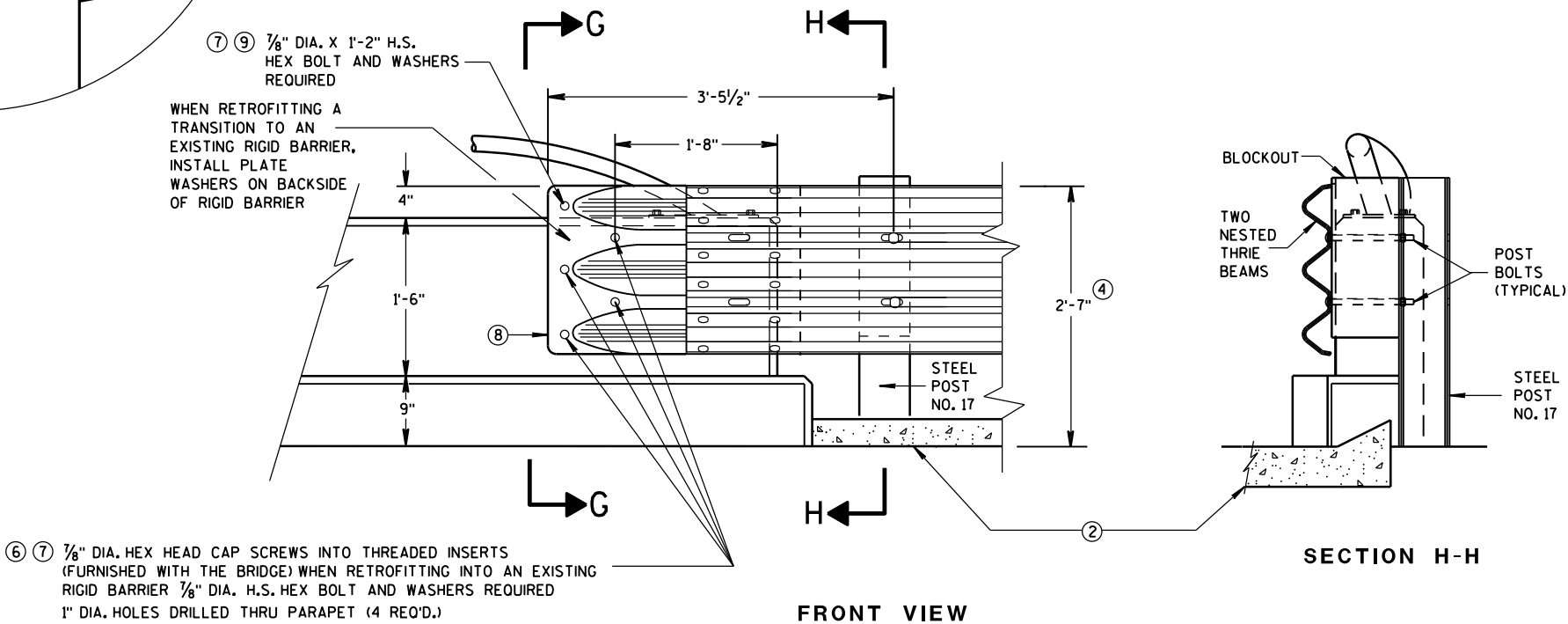
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X $\frac{5}{8}"$ THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- ⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 $\frac{1}{2}"$.
- ⑨ BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.



FRONT VIEW
W BEAM CONNECTION TO VERTICAL FACE PARAPET
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

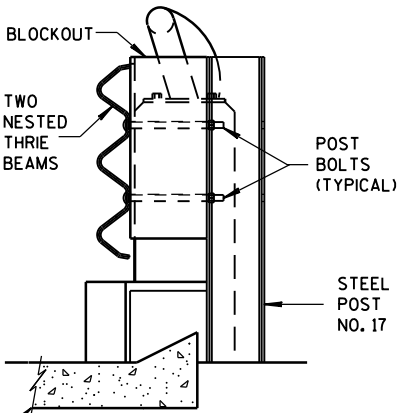


SECTION G-G



FRONT VIEW

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

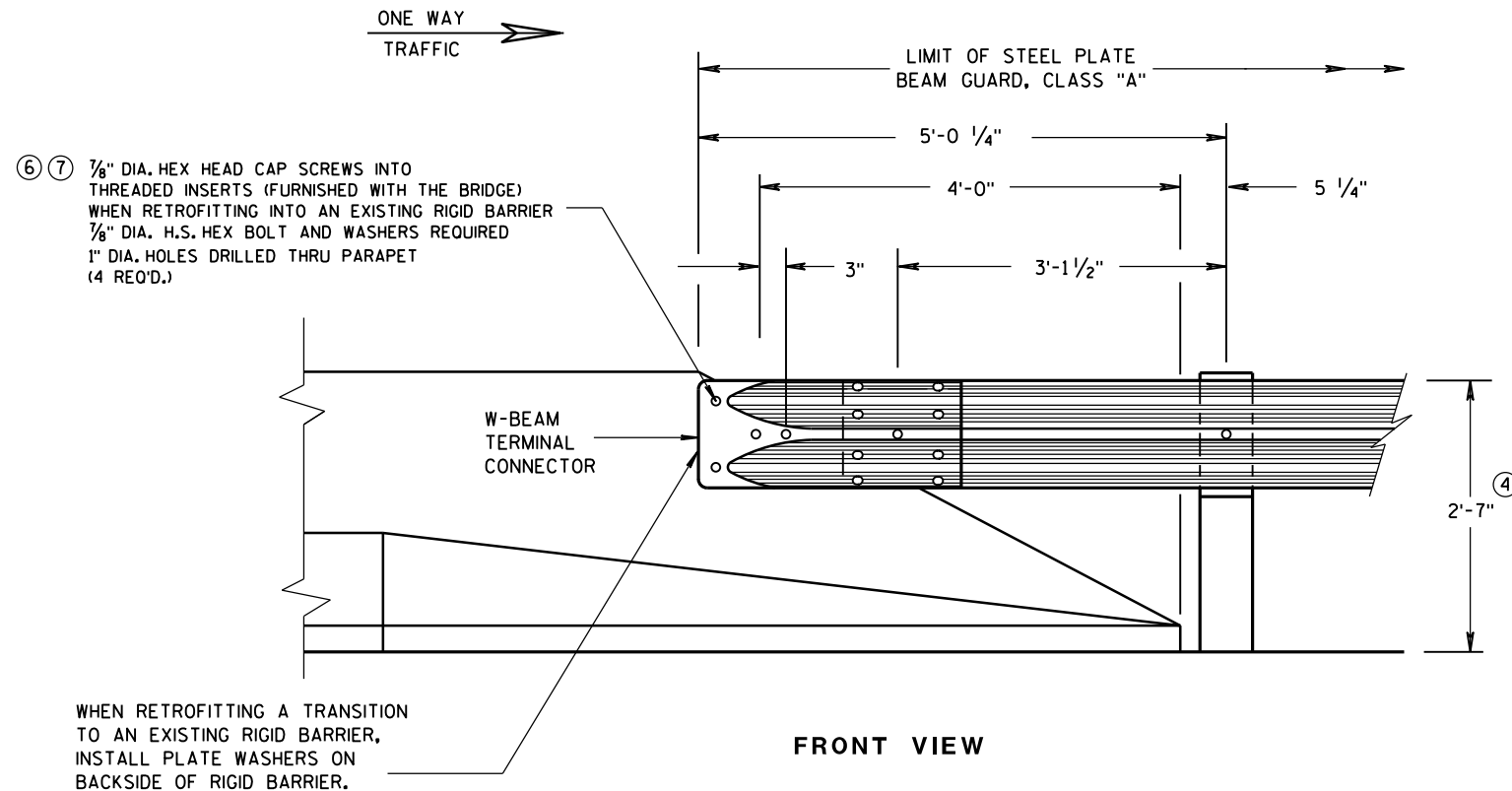


SECTION H-H

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

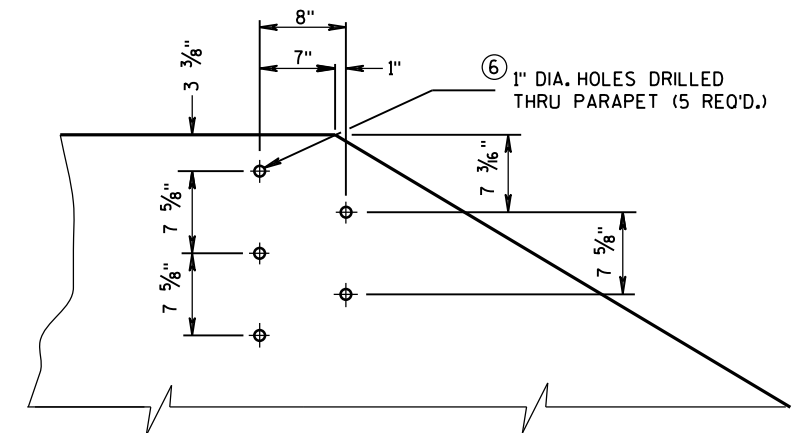
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

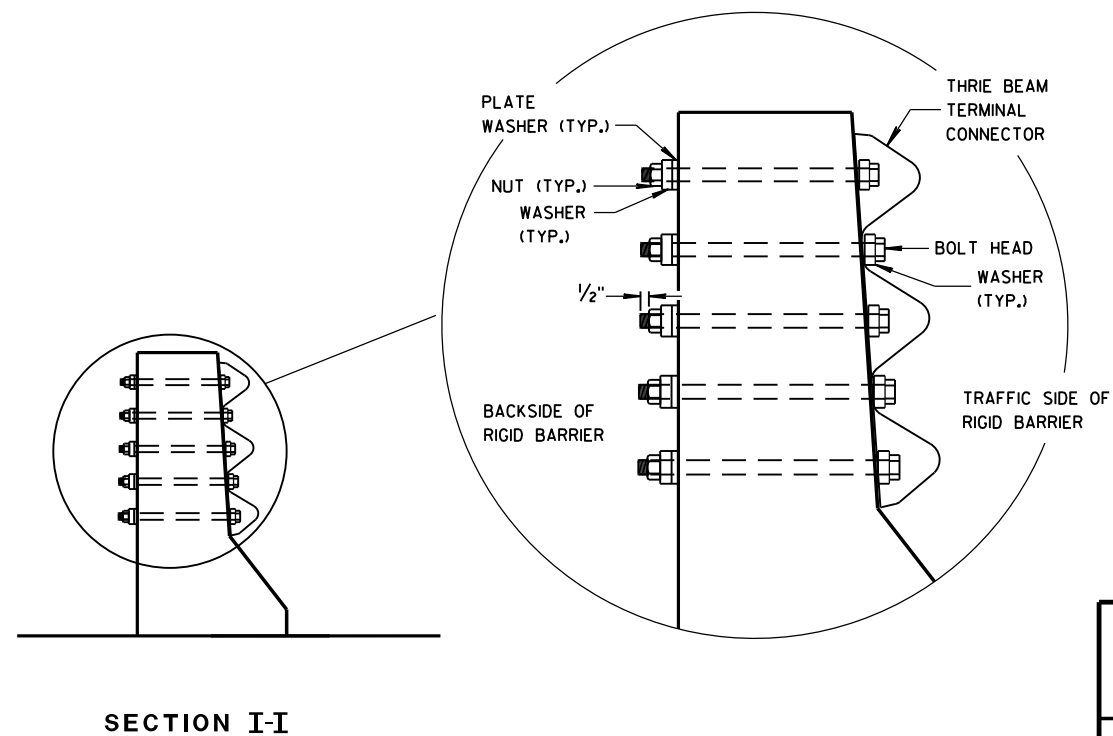
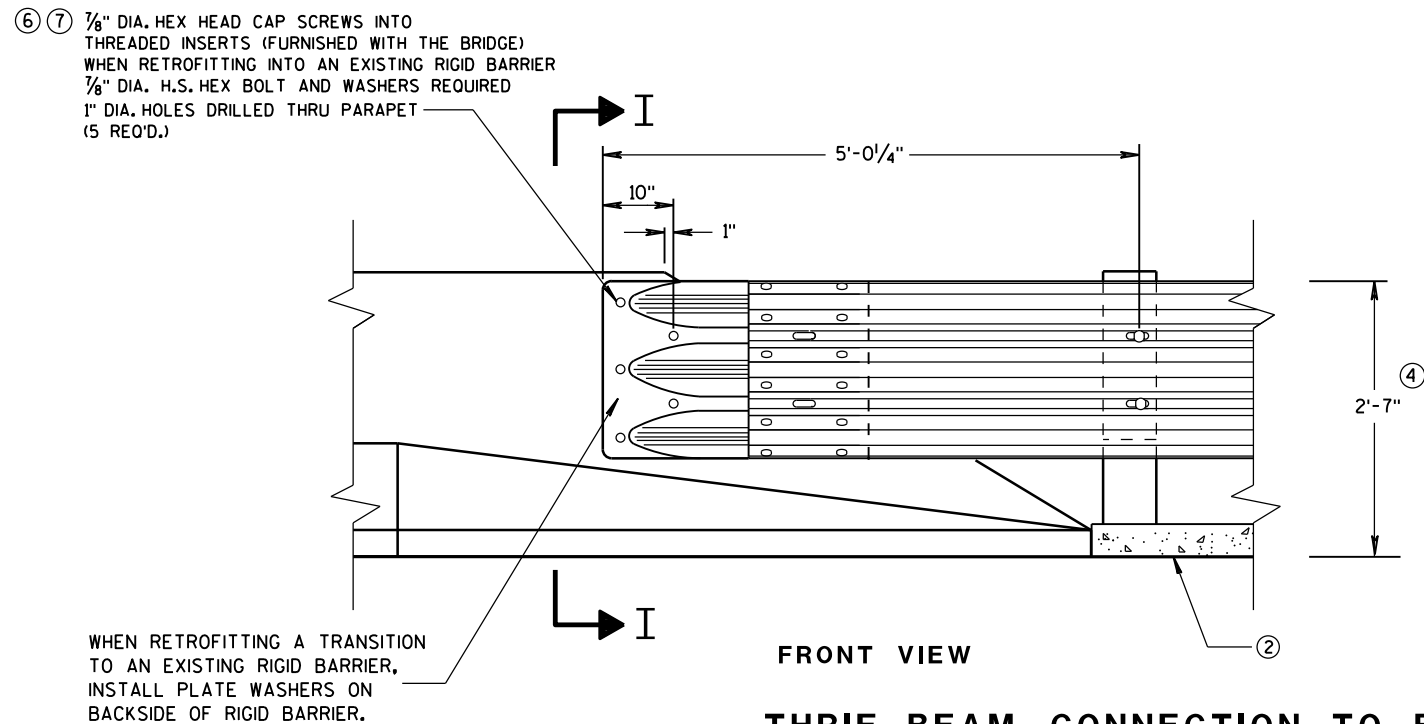


GENERAL NOTES

- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION

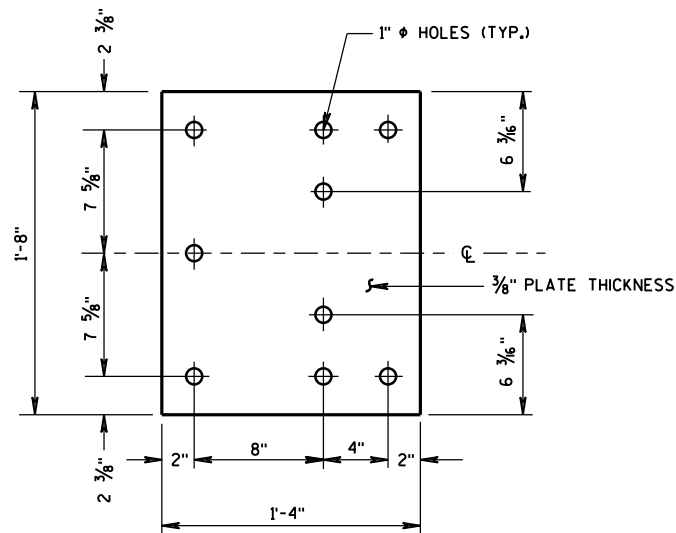


MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

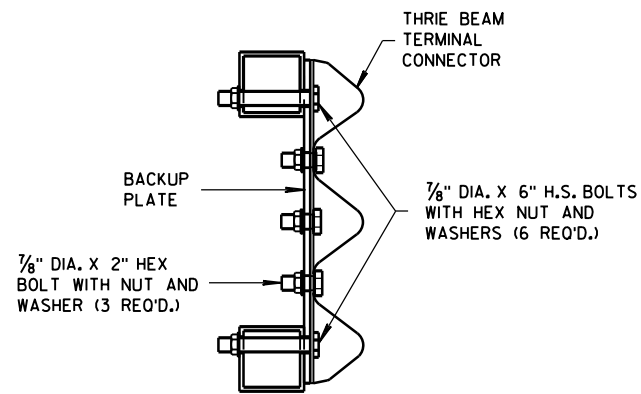
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
FHWA

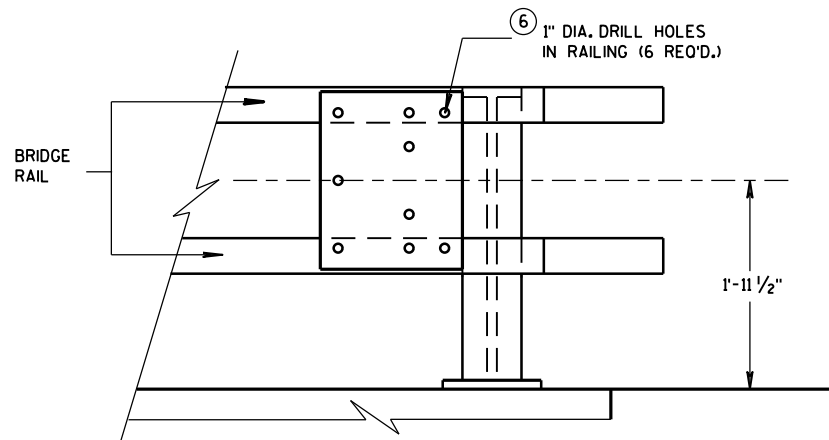
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



BACK-UP PLATE DETAIL



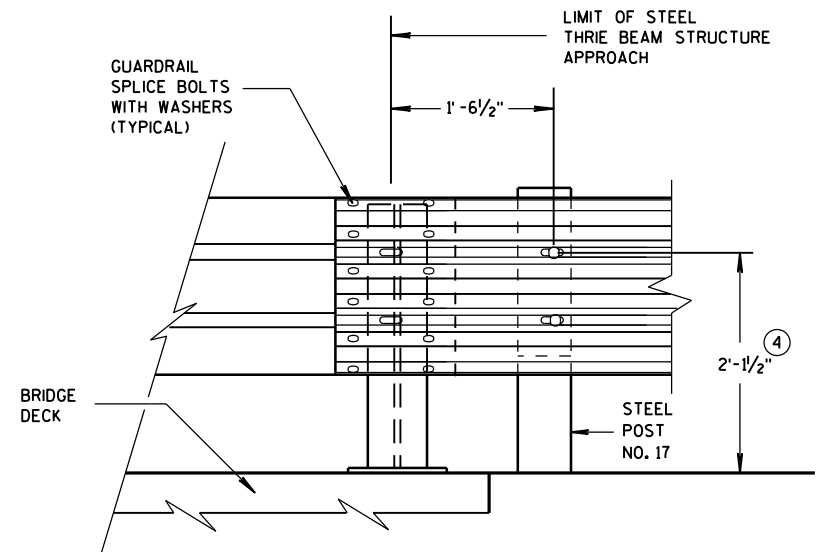
SECTION J-J



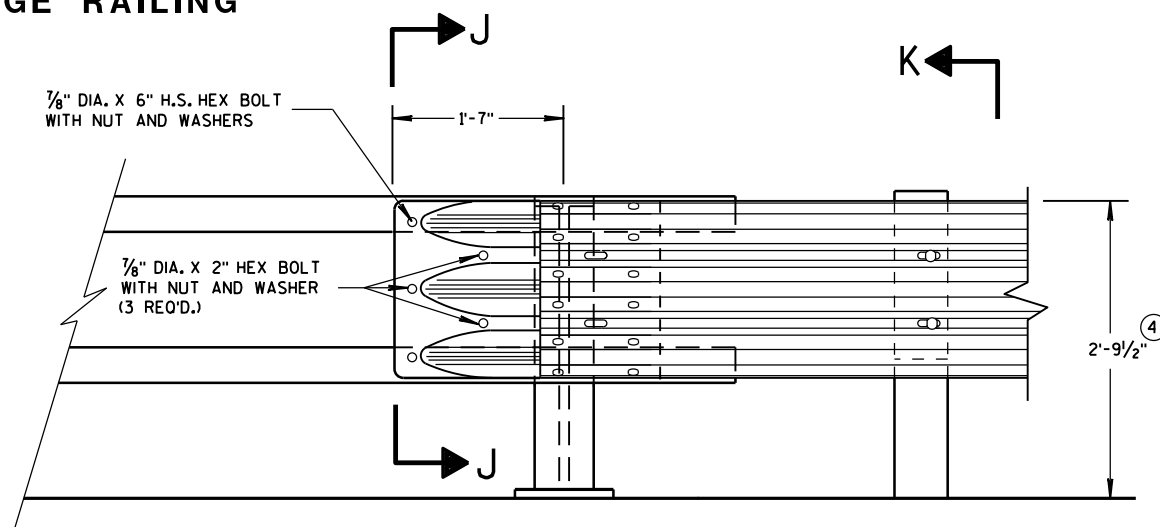
BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑥ DRILLING HOLES THROUGH THE PAPER, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

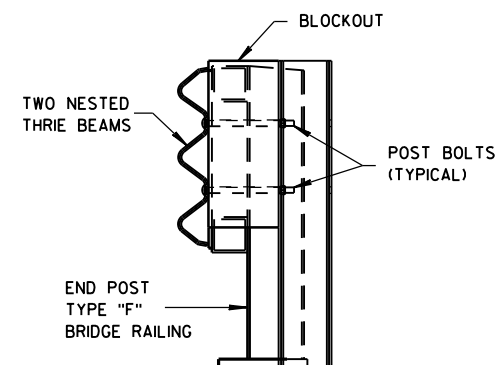


FRONT VIEW
THRIE BEAM CONNECTION TO
STEEL RAILING TYPE "W"



FRONT VIEW

THRIE BEAM CONNECTION TO
TUBULAR RAILING TYPE "F"



SECTION K-K

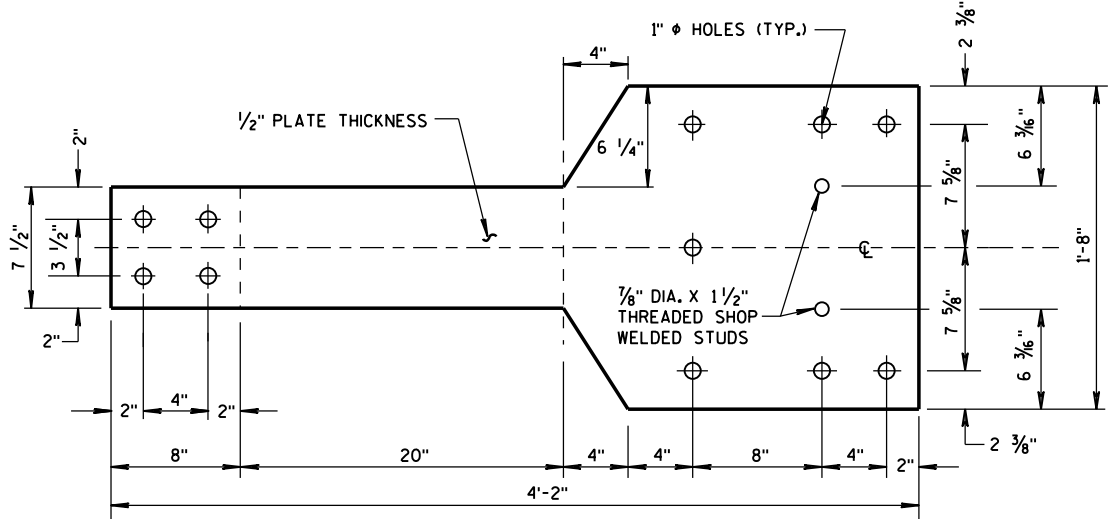
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

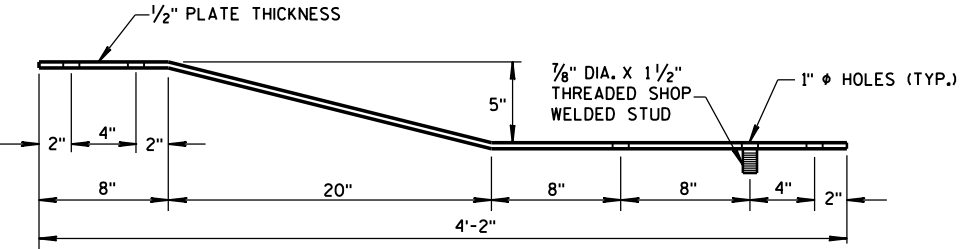
APPROVED June, 2015	/S/ Jerry H. Zogg
DATE	ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

GENERAL NOTES

④ TOLERANCE FOR TOP OF W-BEAM RAIL IS $\pm 1"$.

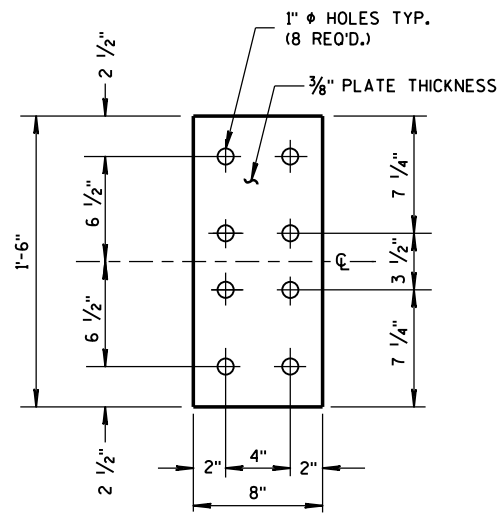


FRONT VIEW



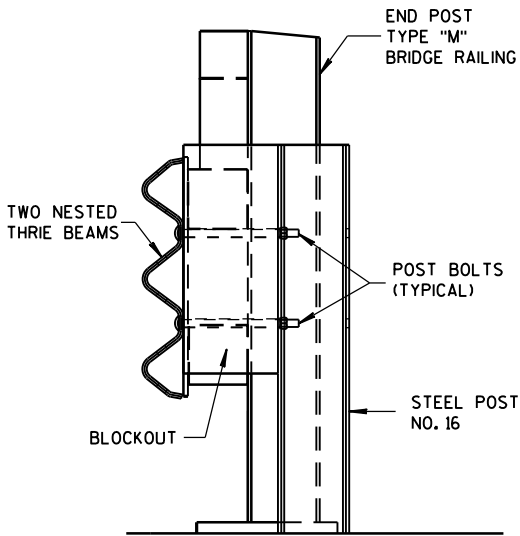
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

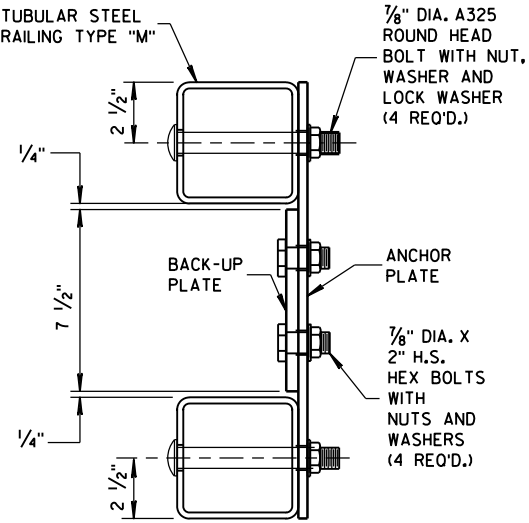


FRONT VIEW

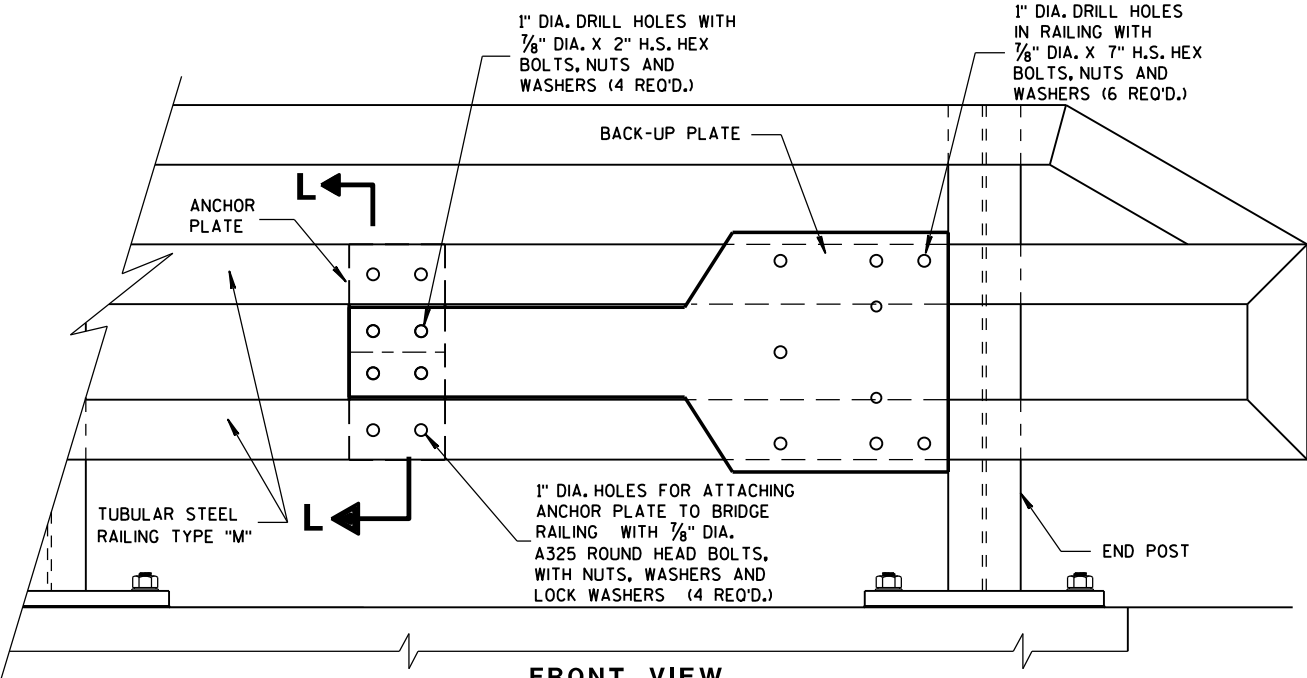
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

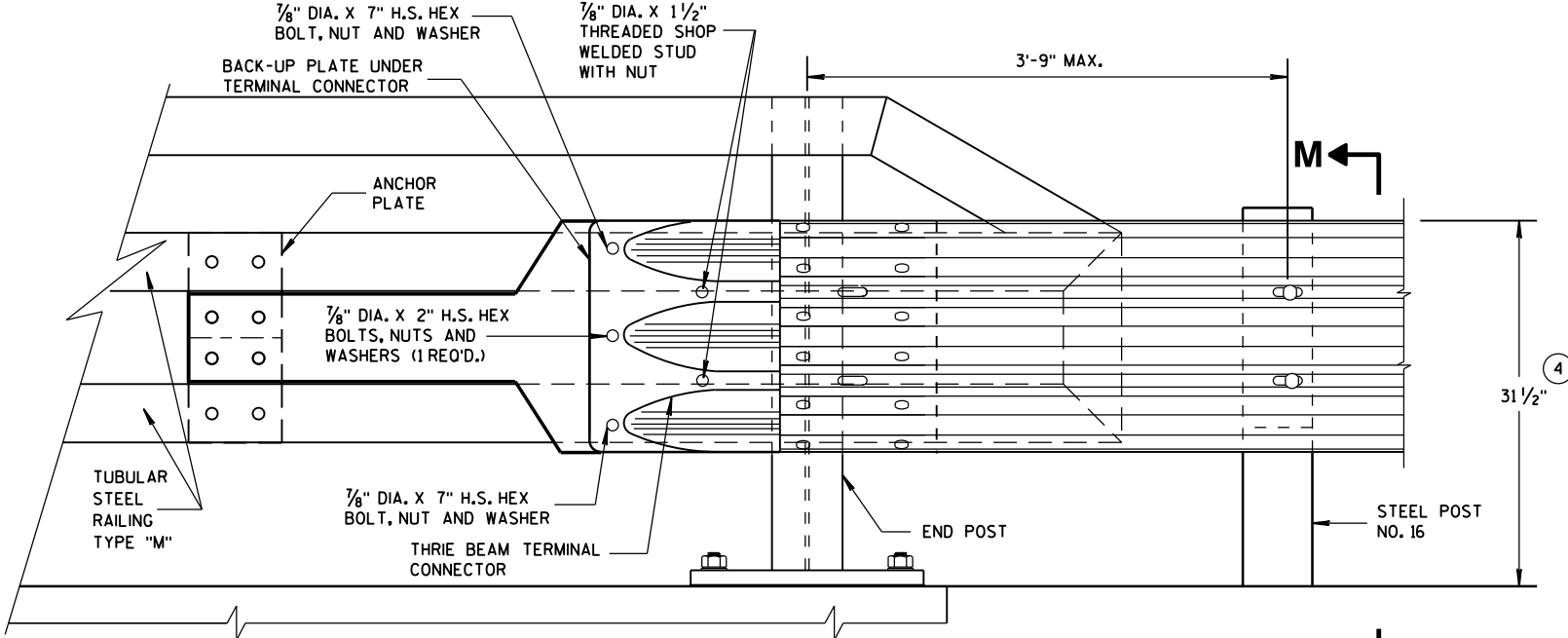


SECTION L-L

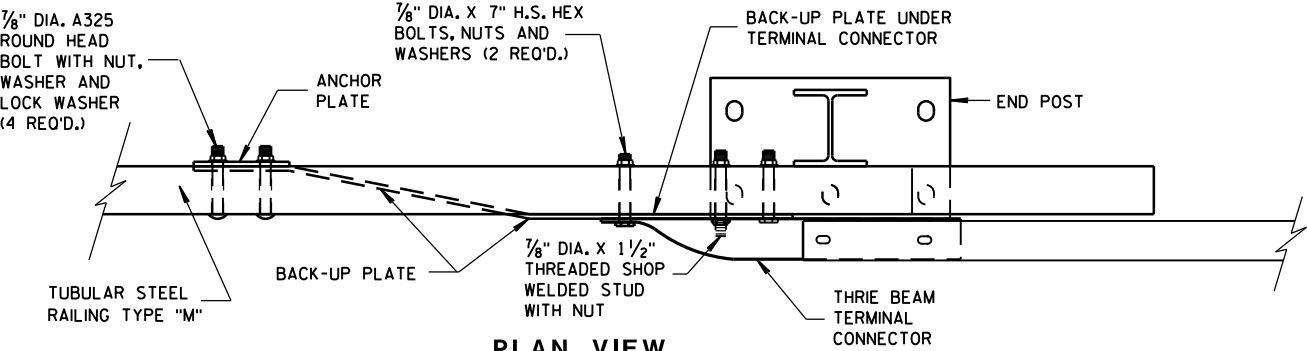


FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June, 2015

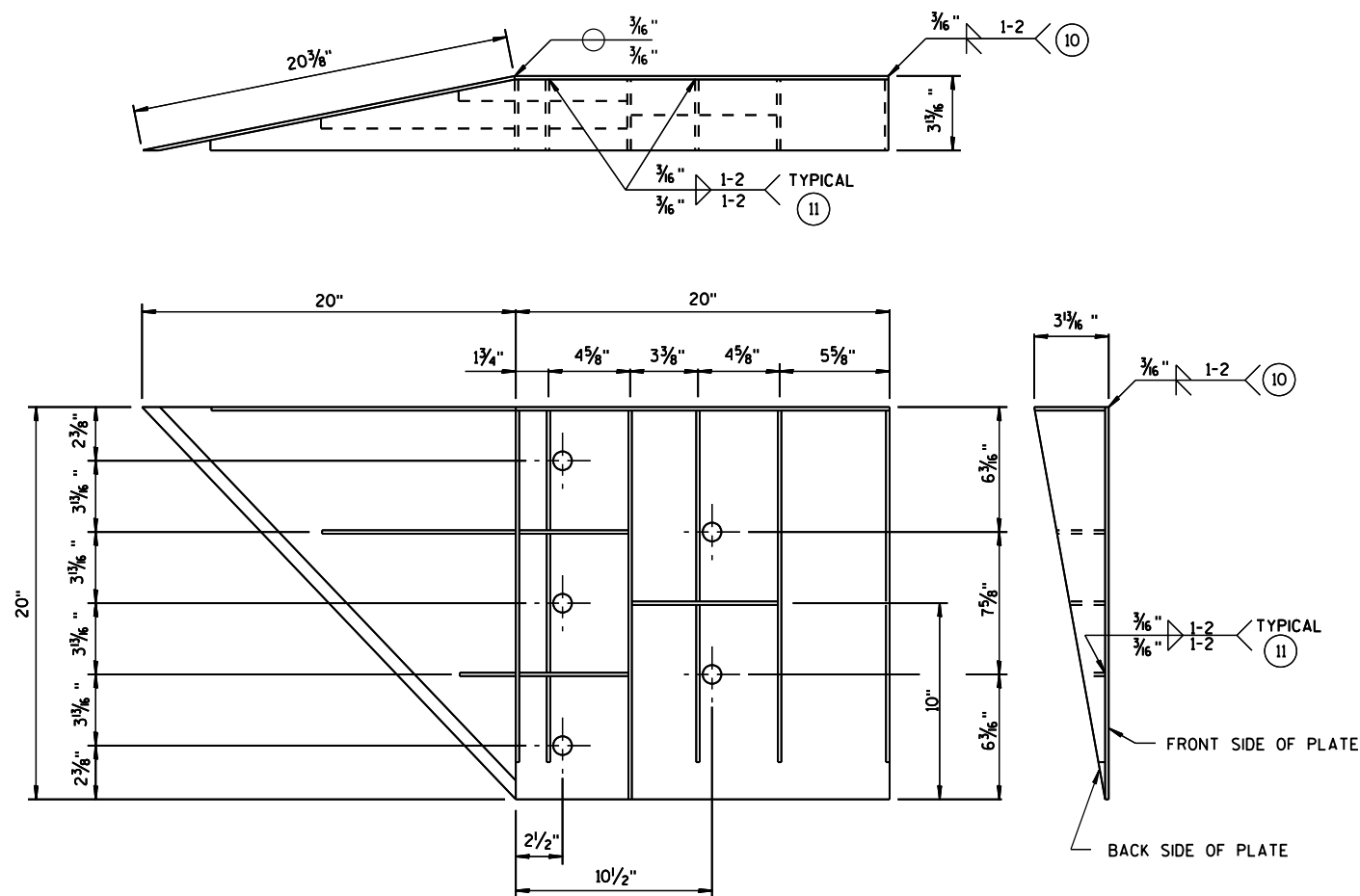
DATE

FHWA

/s/ Jerry H. Zogg

ROADWAY STANDARDS DEVELOPMENT

ENGINEER



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

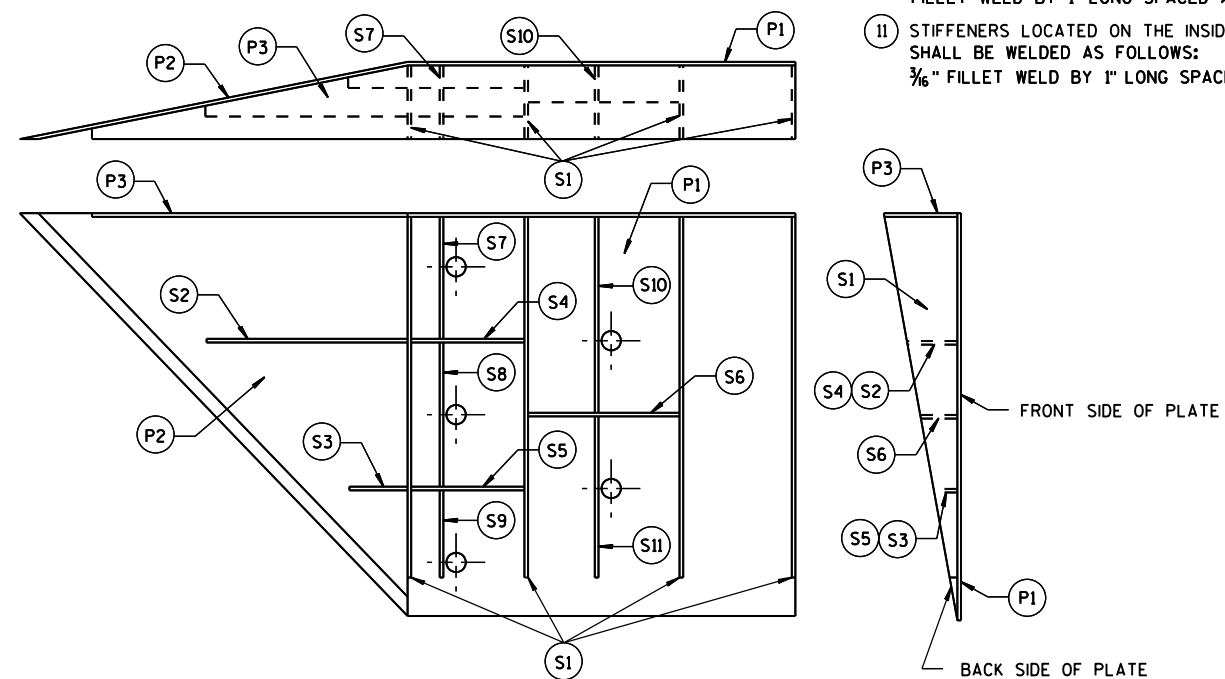


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

GENERAL NOTES

COVER PLATE PANELS ARE $\frac{3}{16}$ " THICK.

ALL STIFFENERS ARE $\frac{1}{4}$ " THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

- (10) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND $\frac{3}{16}$ " FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.
- (11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
 $\frac{3}{16}$ " FILLET WELD BY 1" LONG SPACED AT 2".

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)				
PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	$\frac{3}{16}$ "
P2	1		20" x 20" x $28\frac{3}{16}$ "	$\frac{3}{16}$ "
P3	1		39" x $3\frac{3}{8}$ " x 20" x $19\frac{3}{16}$ "	$\frac{3}{16}$ "
S1	4		$18\frac{7}{16}$ " x $3\frac{5}{8}$ " x $18\frac{3}{4}$ "	$\frac{1}{4}$ "
S2	1		$10\frac{1}{4}$ " x $2\frac{1}{16}$ " x $10\frac{3}{8}$ " x $\frac{1}{2}$ "	$\frac{1}{4}$ "
S3	1		3" x $1\frac{1}{16}$ " x $3\frac{1}{8}$ " x $\frac{1}{2}$ "	$\frac{1}{4}$ "
S4	1		$6\frac{1}{8}$ " x $2\frac{1}{16}$ "	$\frac{1}{4}$ "
S5	1		$6\frac{1}{8}$ " x $1\frac{1}{16}$ "	$\frac{1}{4}$ "
S6	1		$7\frac{3}{4}$ " x $1\frac{3}{4}$ "	$\frac{1}{4}$ "
S7	1		$2\frac{9}{16}$ " x 6" x $3\frac{3}{8}$ " x $5\frac{1}{8}$ "	$\frac{1}{4}$ "
S8	1		$1\frac{1}{32}$ " x $7\frac{1}{2}$ " x $2\frac{1}{2}$ " x $7\frac{3}{8}$ "	$\frac{1}{4}$ "
S9	1		$6\frac{1}{16}$ " x $6\frac{3}{16}$ " x $1\frac{1}{32}$ "	$\frac{1}{4}$ "
S10	1		$1\frac{1}{8}$ " x $9\frac{7}{8}$ " x $3\frac{3}{8}$ " x $9\frac{1}{16}$ "	$\frac{1}{4}$ "
S11	1		$8\frac{1}{2}$ " x $8\frac{3}{4}$ " x $1\frac{1}{16}$ "	$\frac{1}{4}$ "

SINGLE SLOPE CONNECTION PLATE

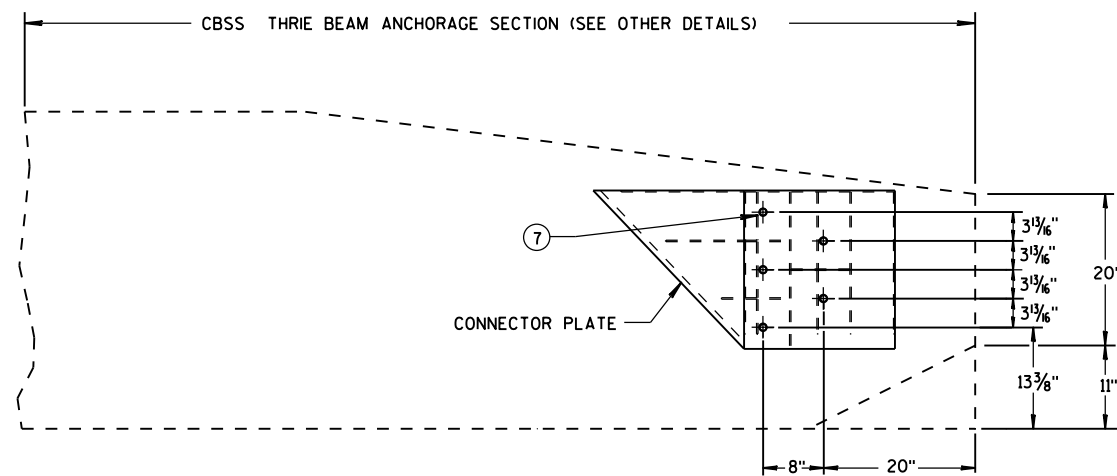
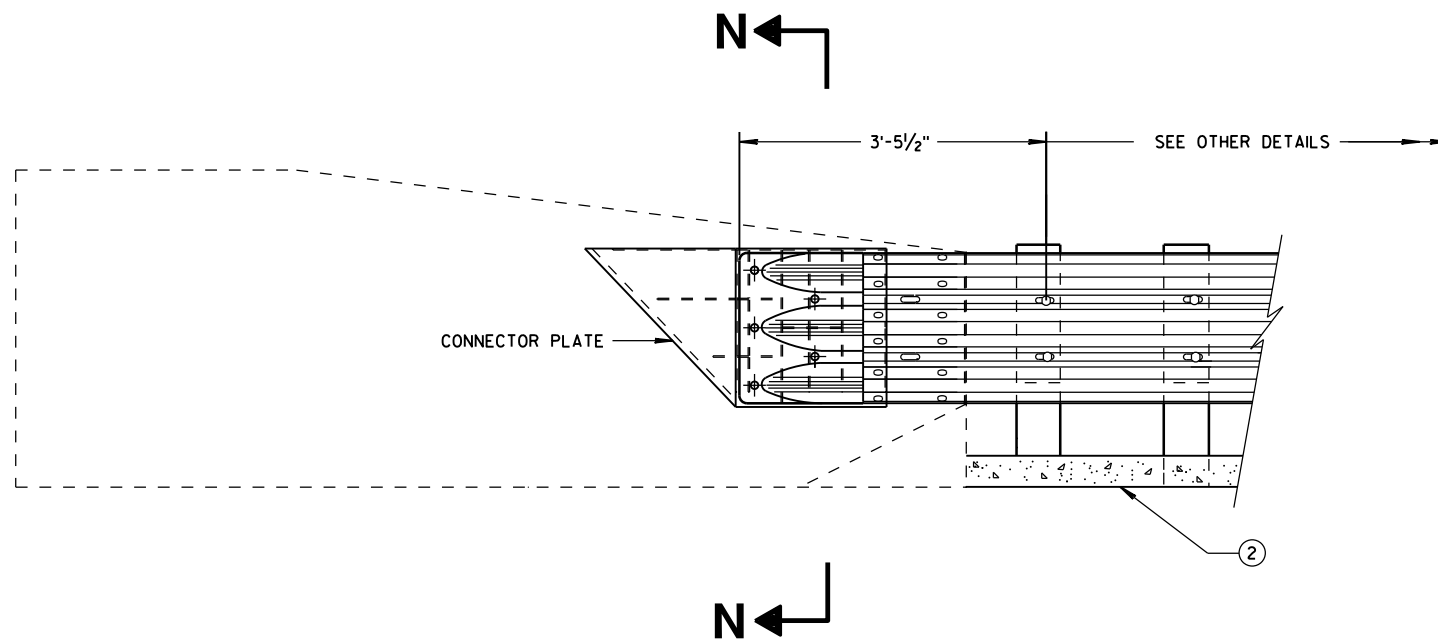
MIDWEST GUARDRAIL SYSTEM
THREE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



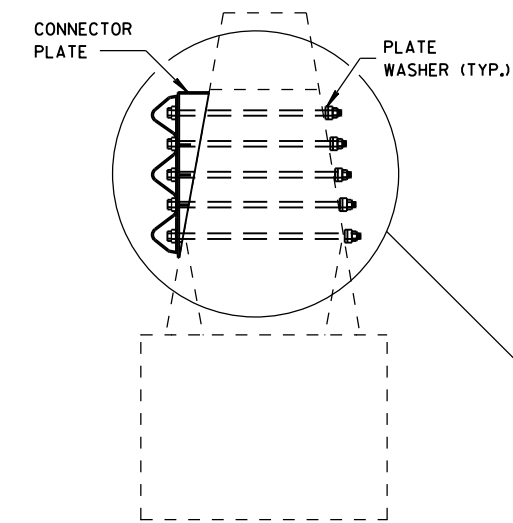
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

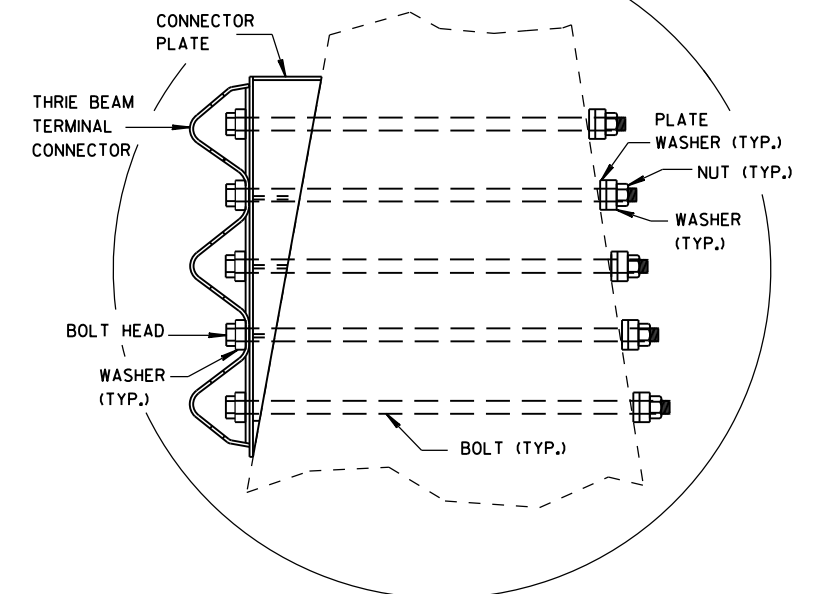
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June, 2015

DATE

FHWA

/s/ Jerry H. Zogg

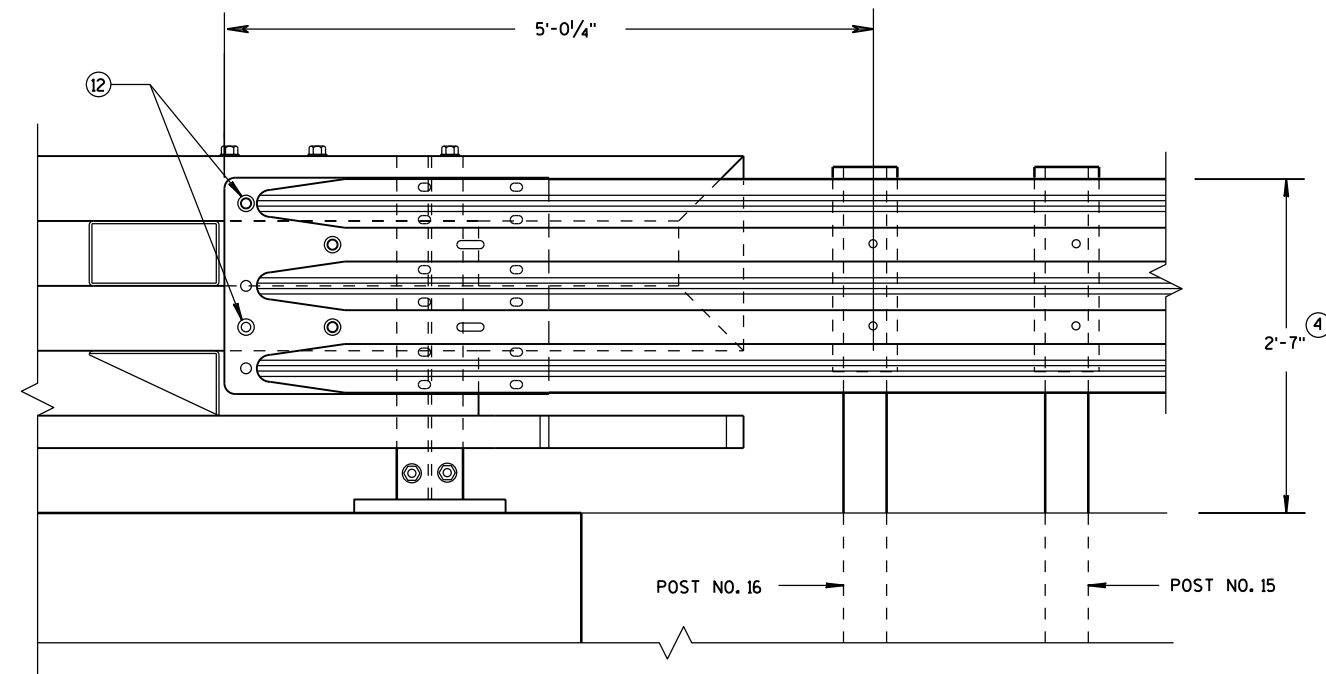
ROADWAY STANDARDS DEVELOPMENT

ENGINEER

GENERAL NOTES

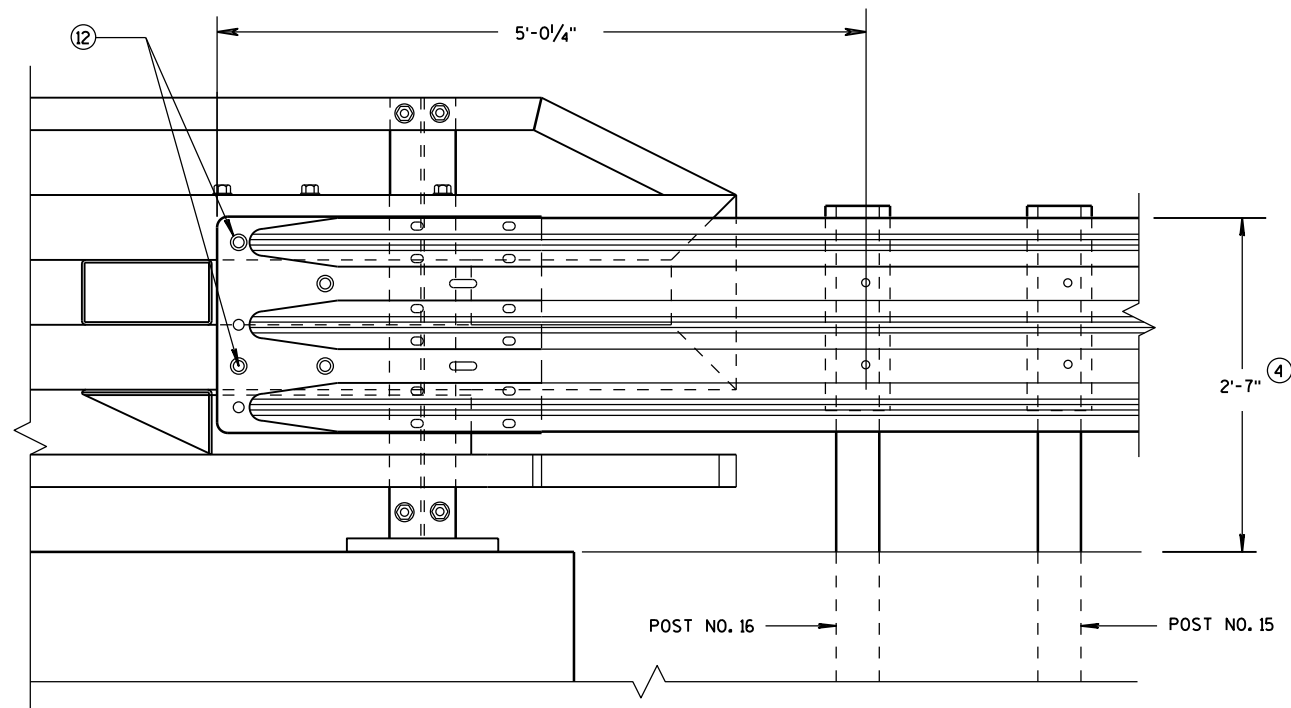
④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.

⑫ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND $\frac{1}{2}$ -INCH BEYOND NUT.



ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

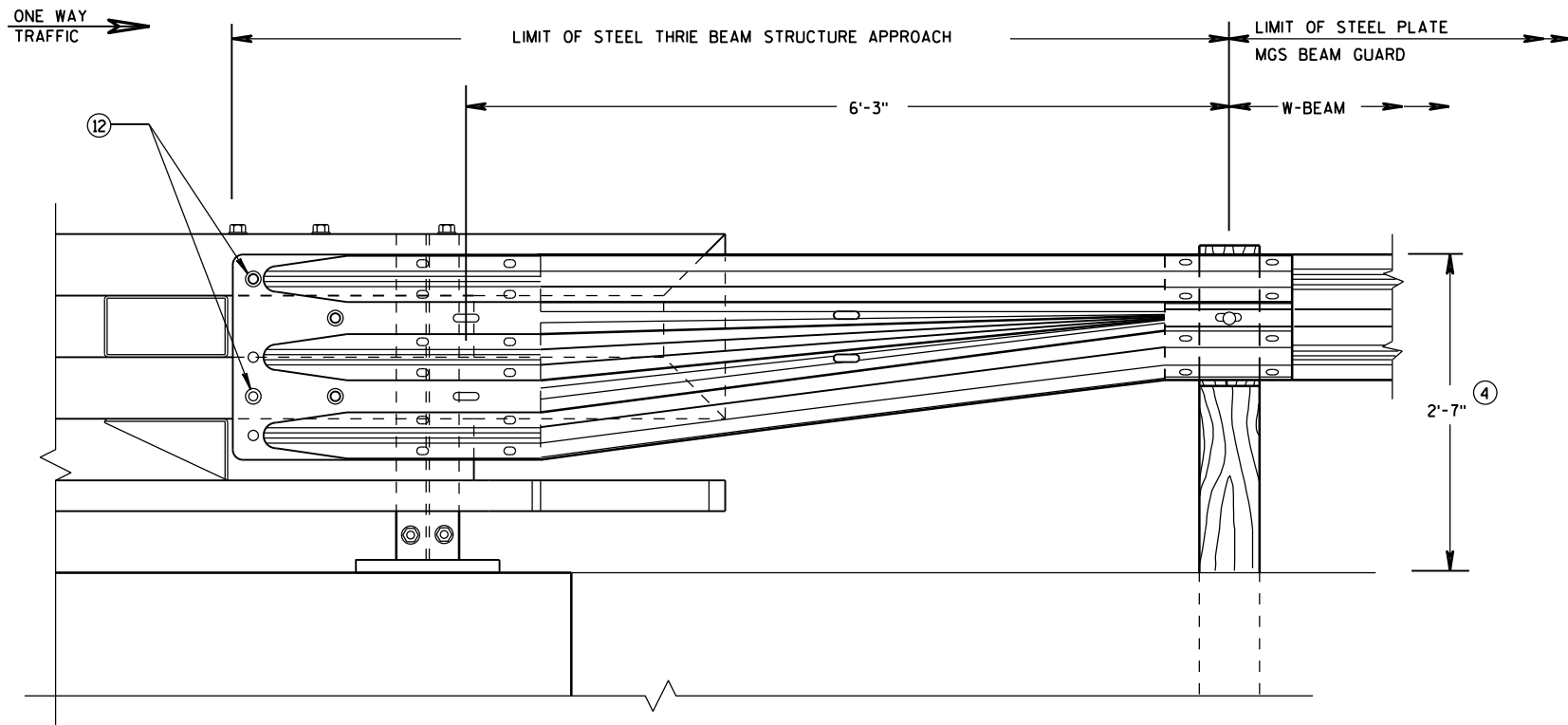
THRIE BEAM RAIL ATTACHMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

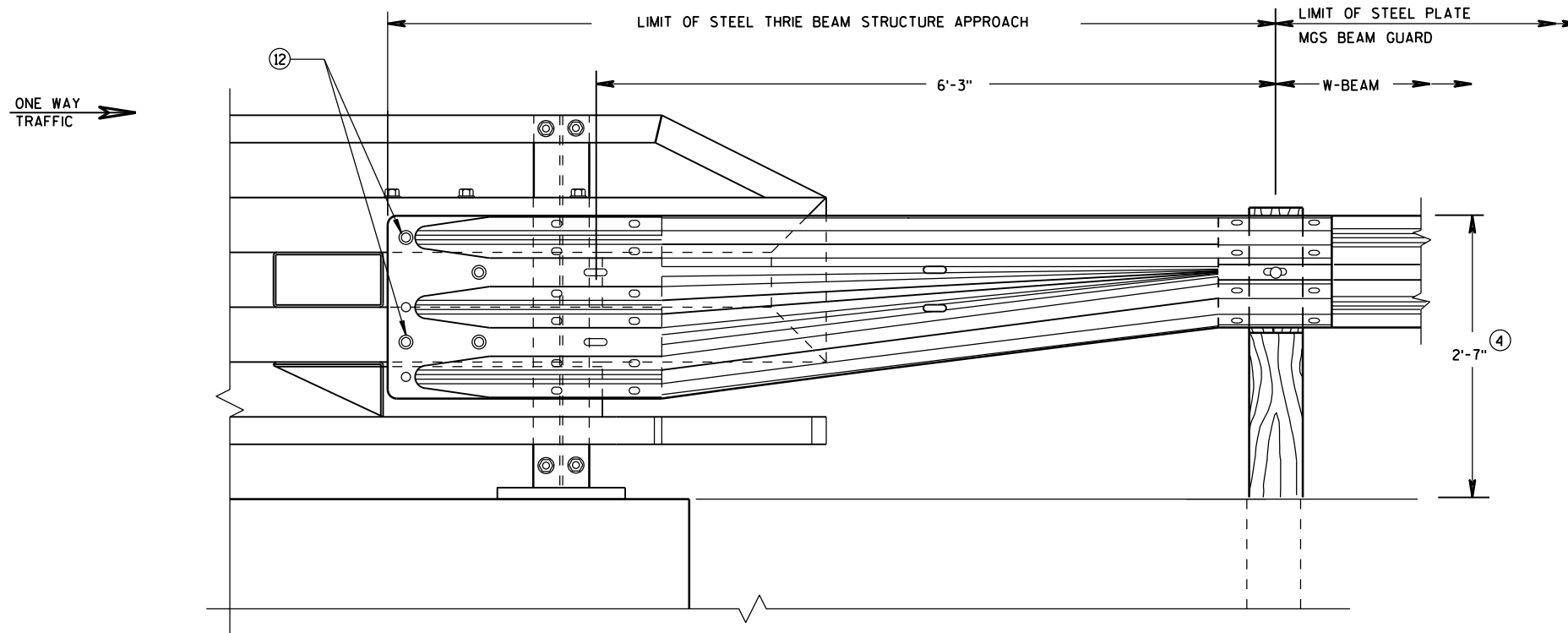


FRONT VIEW

**W BEAM TRANSITION AND
CONNECTION TO BRIDGE RAILING TYPE "NY3"**
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

GENERAL NOTES

- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑫ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND $\frac{1}{2}$ -INCH BEYOND NUT.



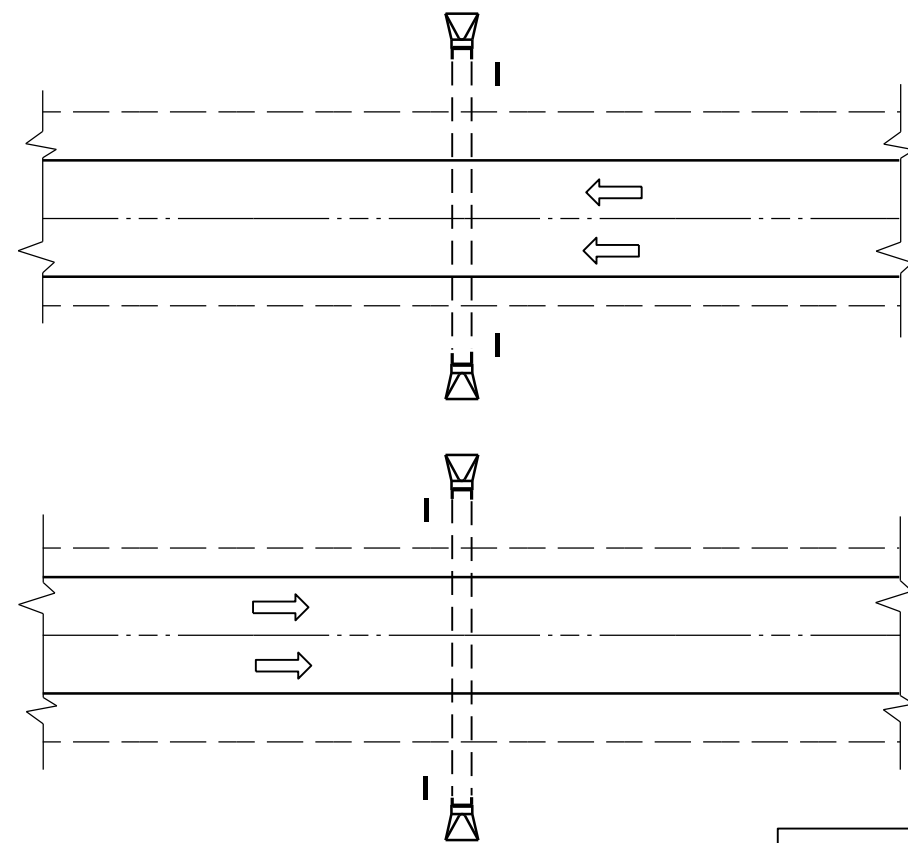
FRONT VIEW

**W BEAM TRANSITION AND
CONNECTION TO BRIDGE RAILING TYPE "NY4"**
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

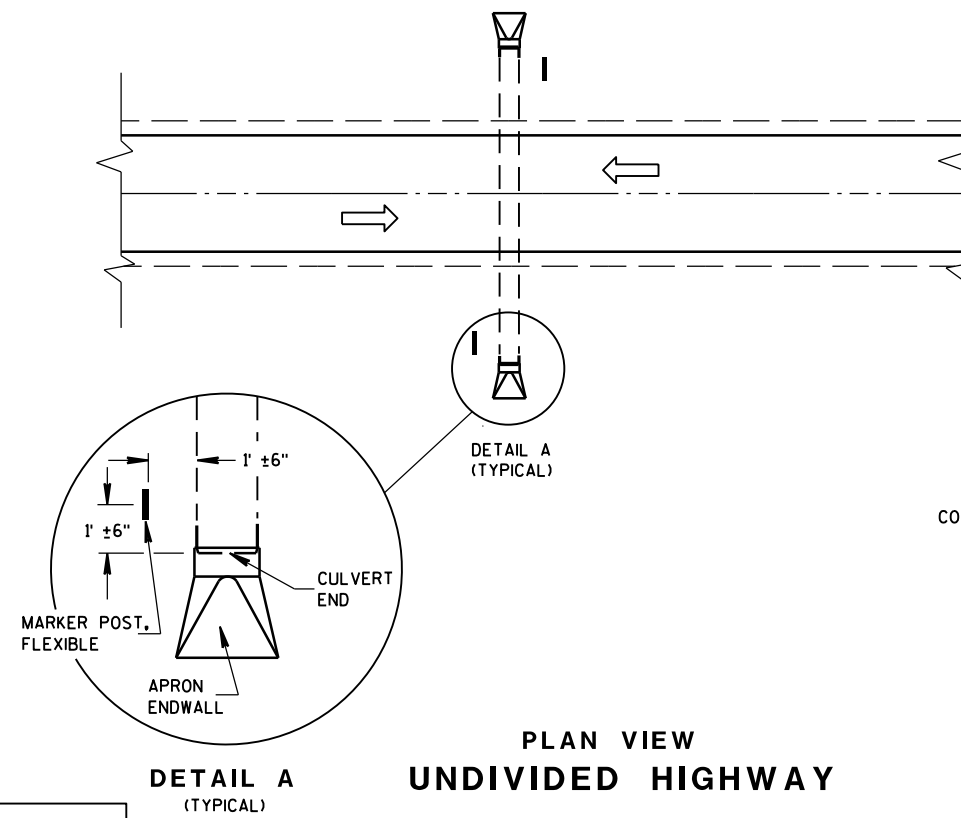
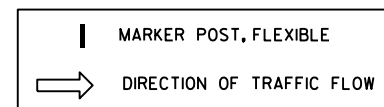
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED June, 2015	/S/ Jerry H. Zogg
DATE	ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



PLAN VIEW
DIVIDED HIGHWAY

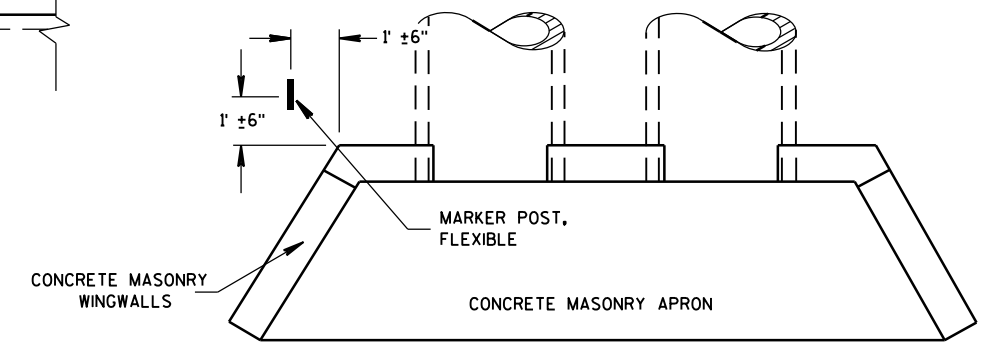


PLAN VIEW
UNDIVIDED HIGHWAY

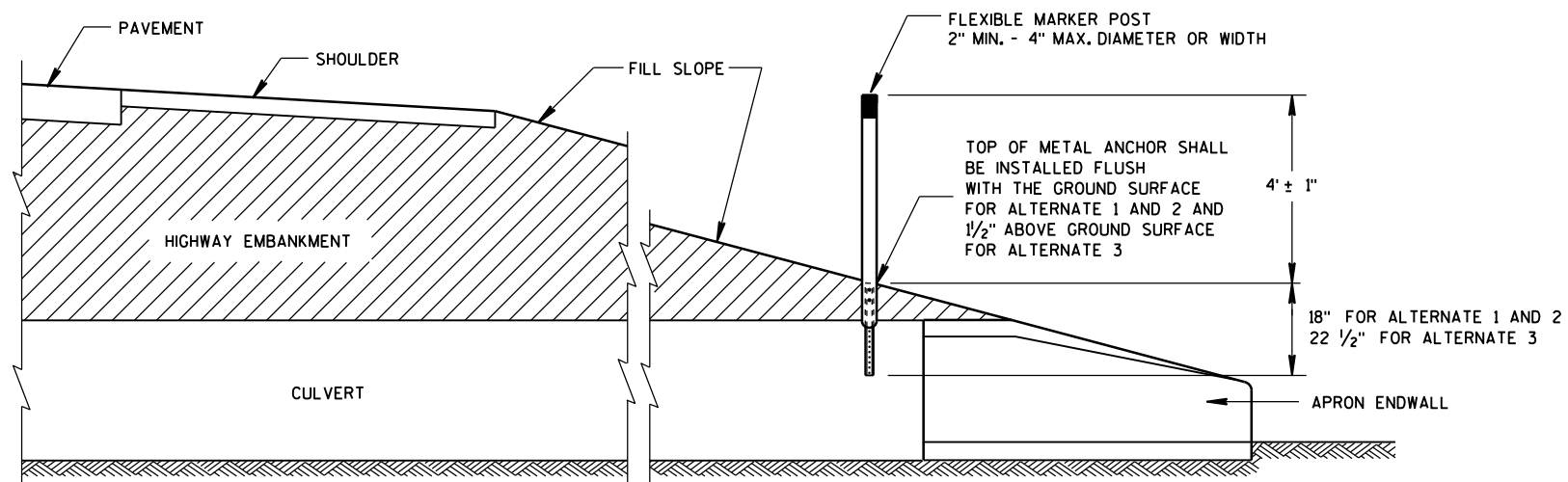
FLEXIBLE MARKER POST LOCATION

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.



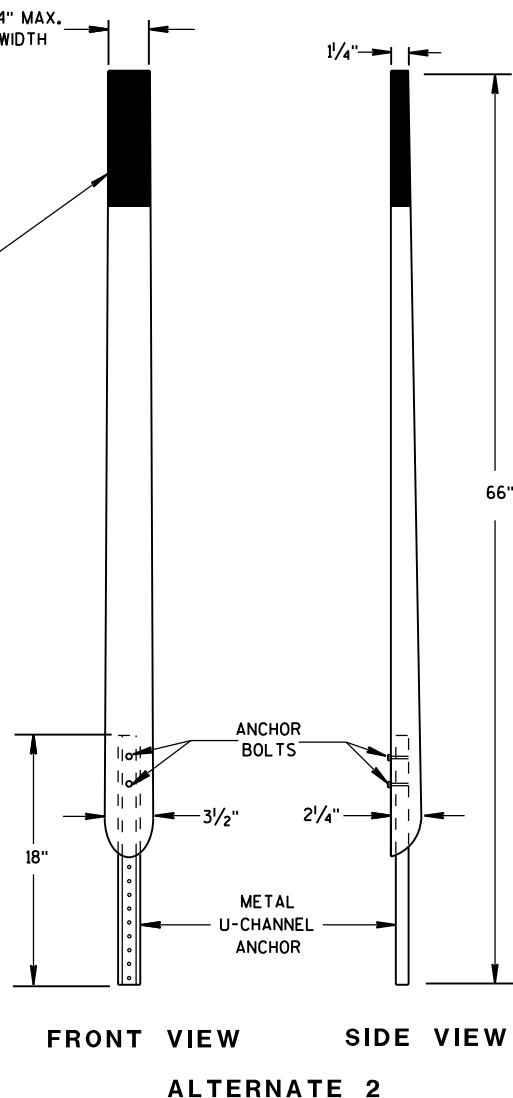
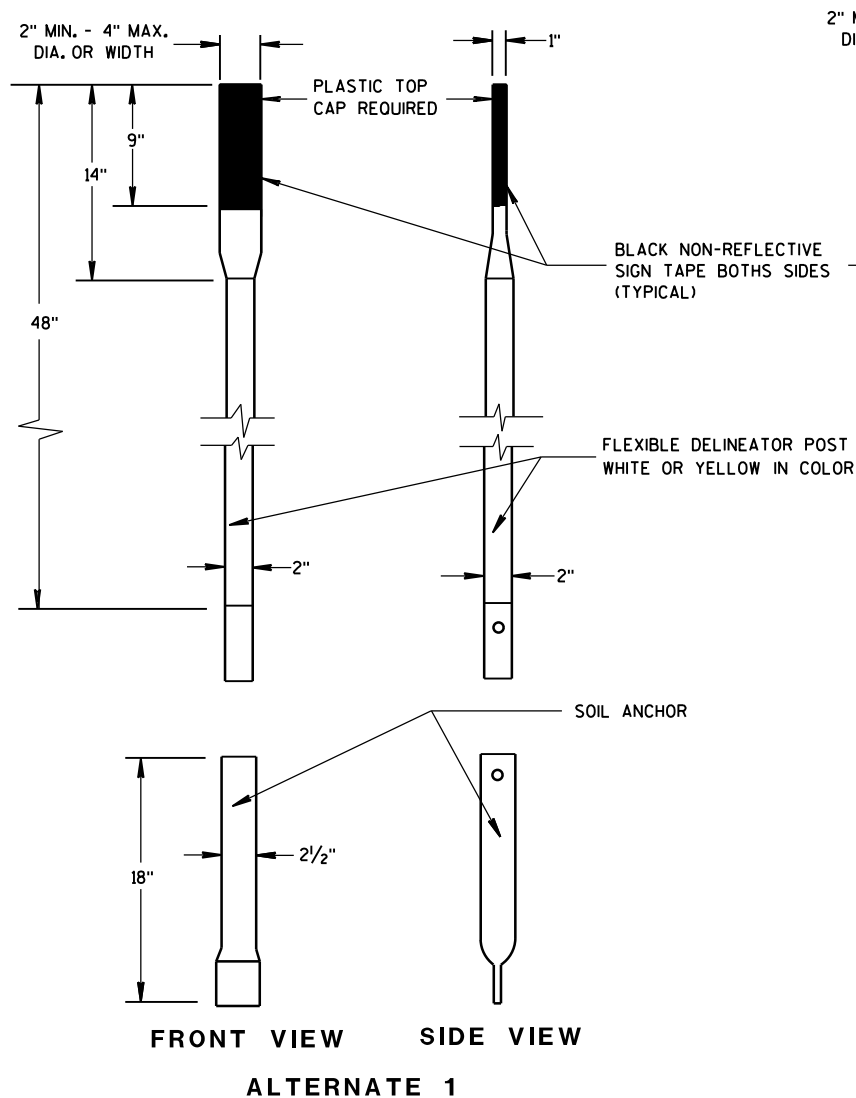
PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH



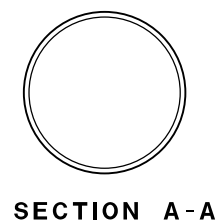
CROSS SECTION
FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

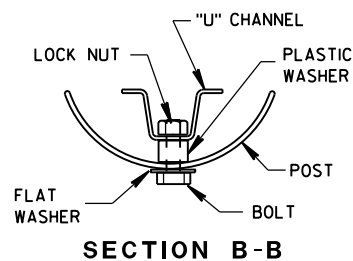
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



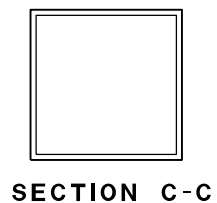
FLEXIBLE MARKER POSTS



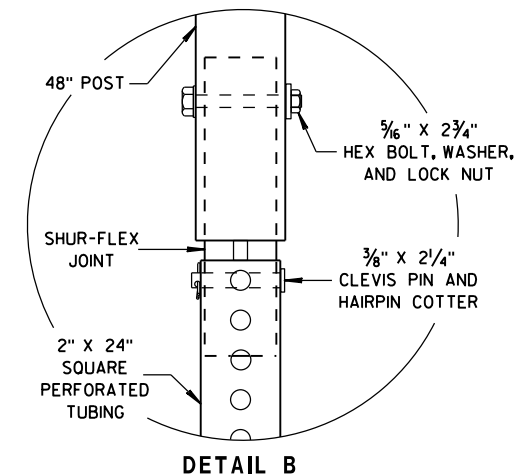
SECTION A-A



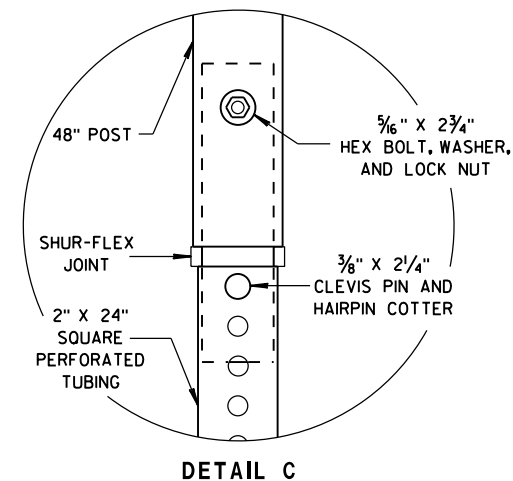
SECTION B-B



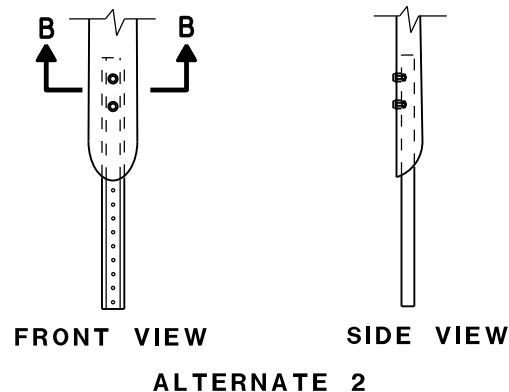
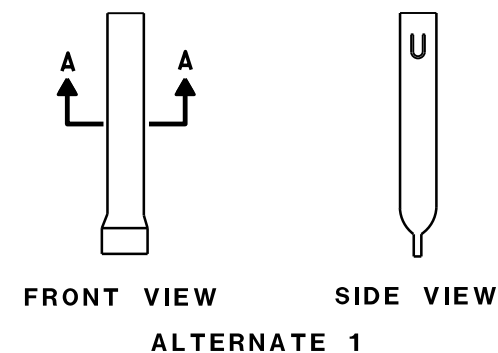
SECTION C-C



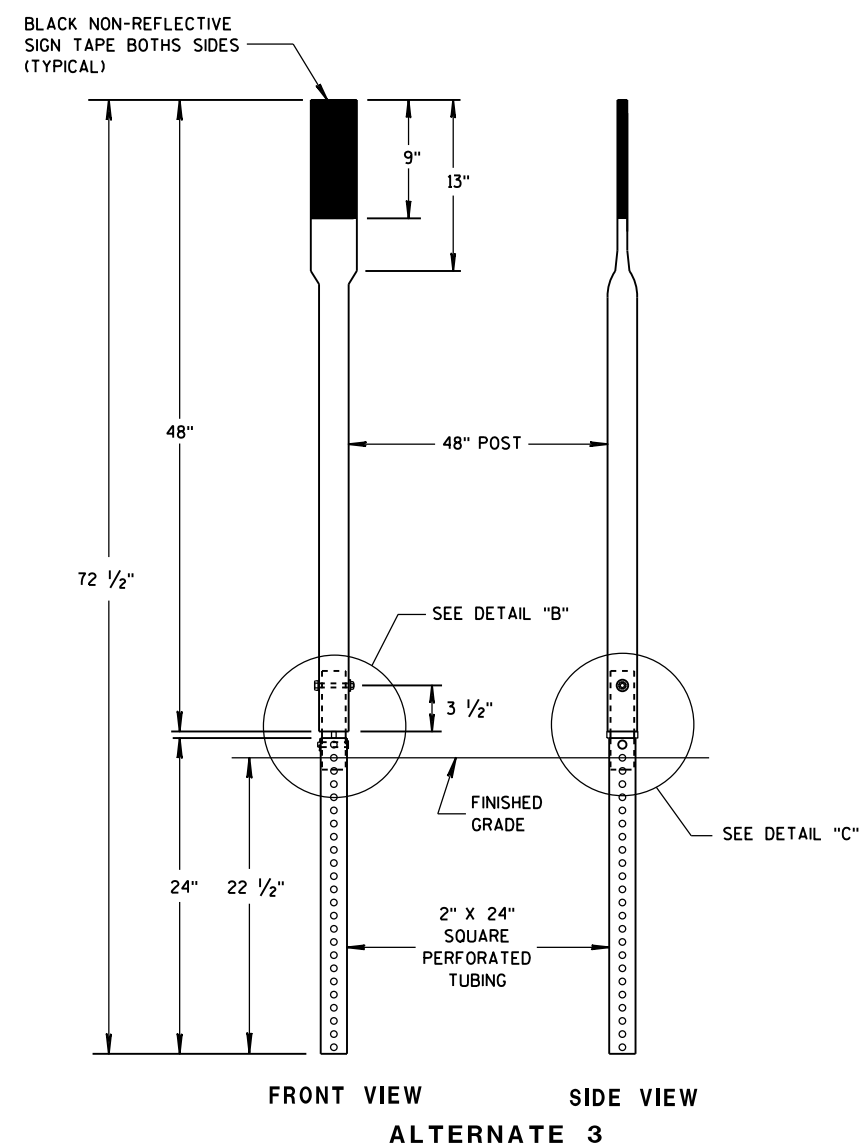
DETAIL B



DETAIL C

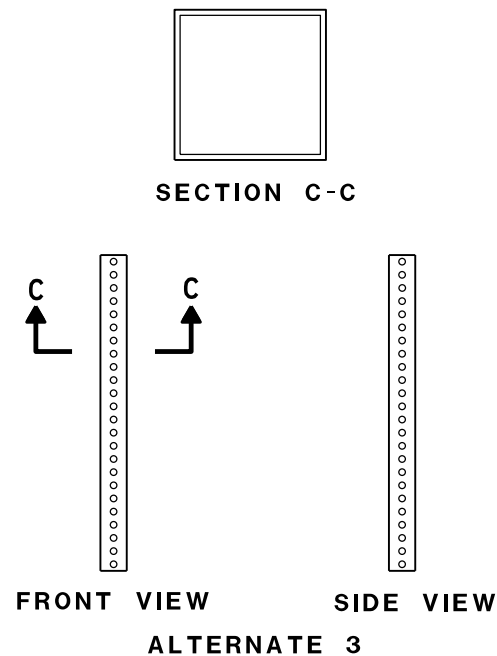


FLEXIBLE MARKER POST ANCHORS



FRONT VIEW SIDE VIEW

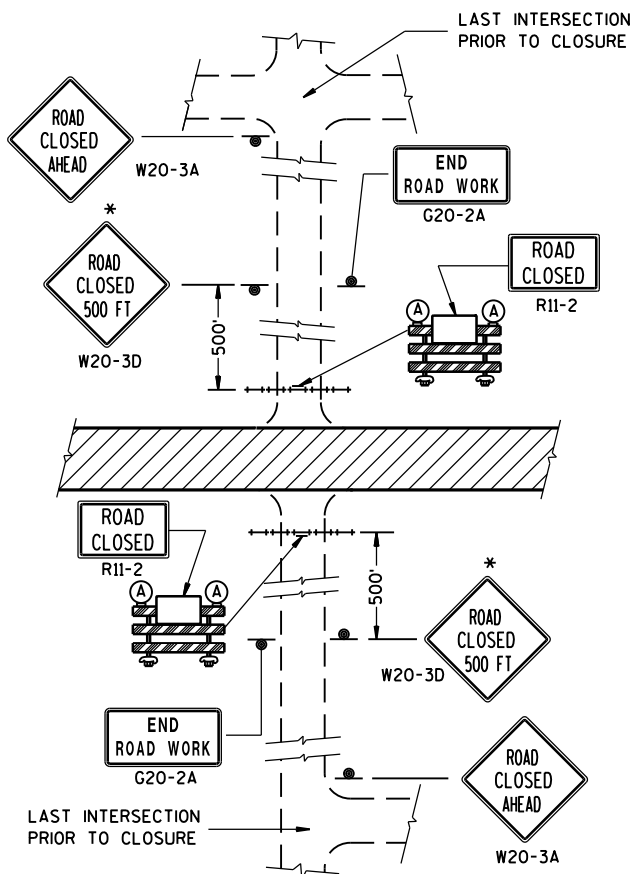
ALTERNATE 3



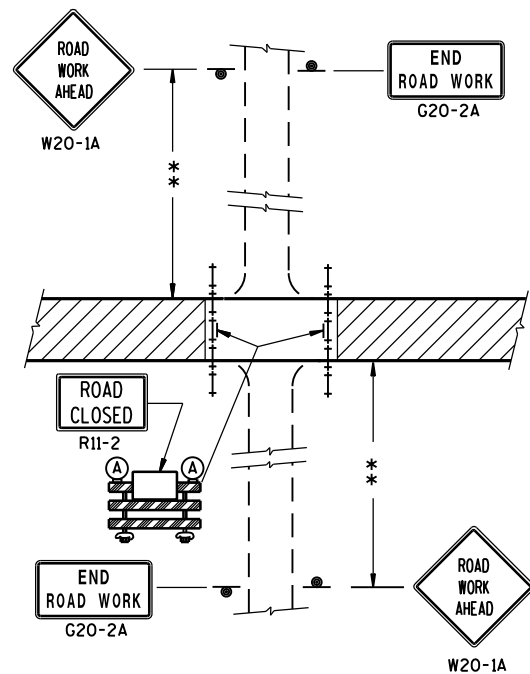
FRONT VIEW SIDE VIEW

ALTERNATE 3

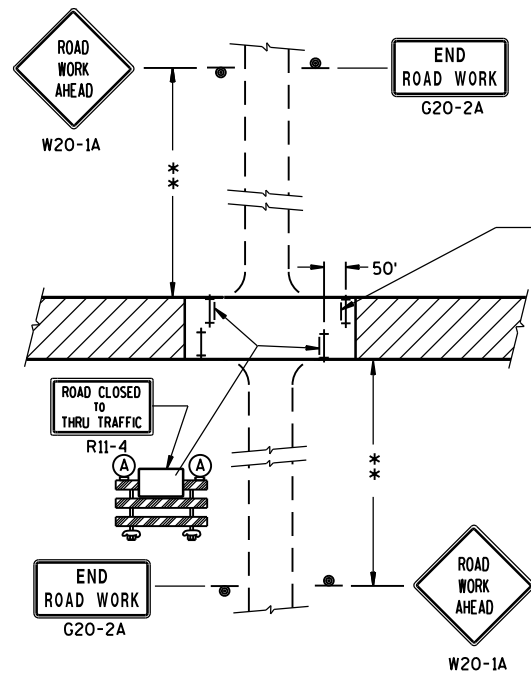
FLEXIBLE MARKER POST FOR CULVERT END	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/1/2012 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN
FHWA	



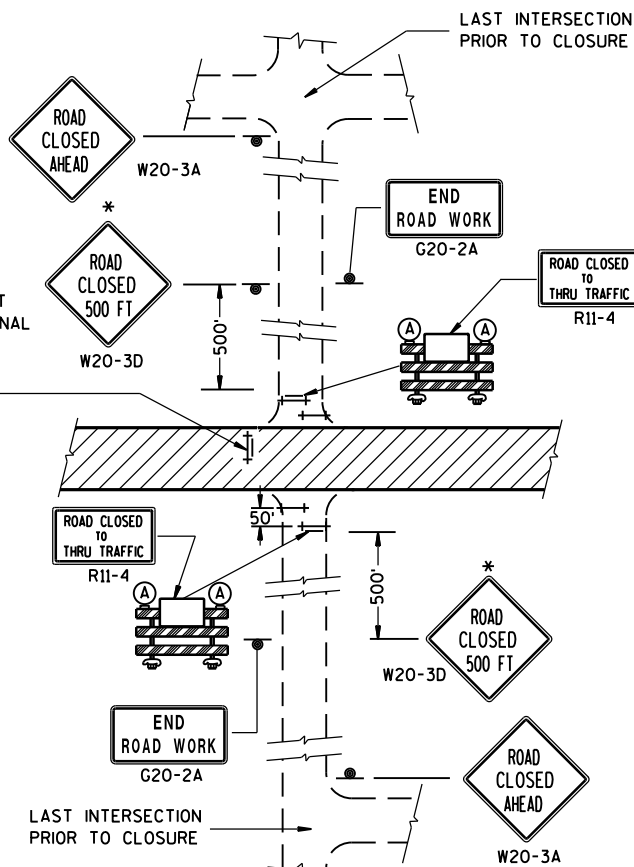
DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT).



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR,
LOCAL BUSINESS AND RESIDENT ACCESS).



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

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

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.

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

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

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

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

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

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

R11-2 SHALL BE 48" X 30".

R11-4 AND R11-3 SHALL BE 60" X 30".

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF
THE LAST INTERSECTION IS 500 FT. OR LESS
FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION
WHICHEVER IS CLOSER.

LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- ⊢ TYPE III BARRICADE
- ⊢ TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- ▨ WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

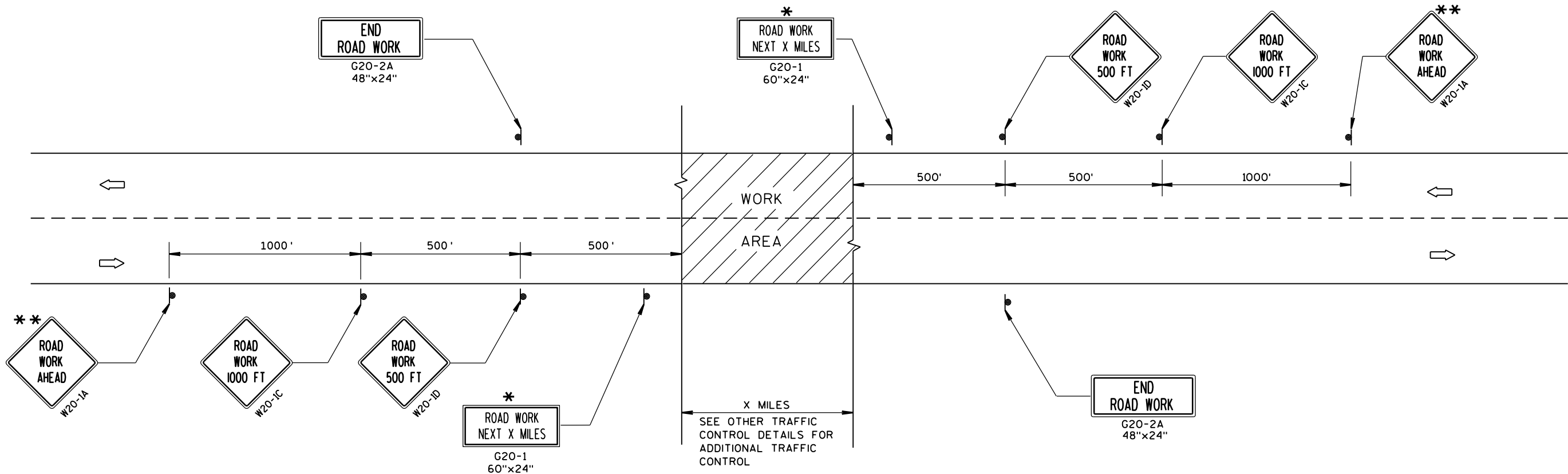
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2017
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA



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.

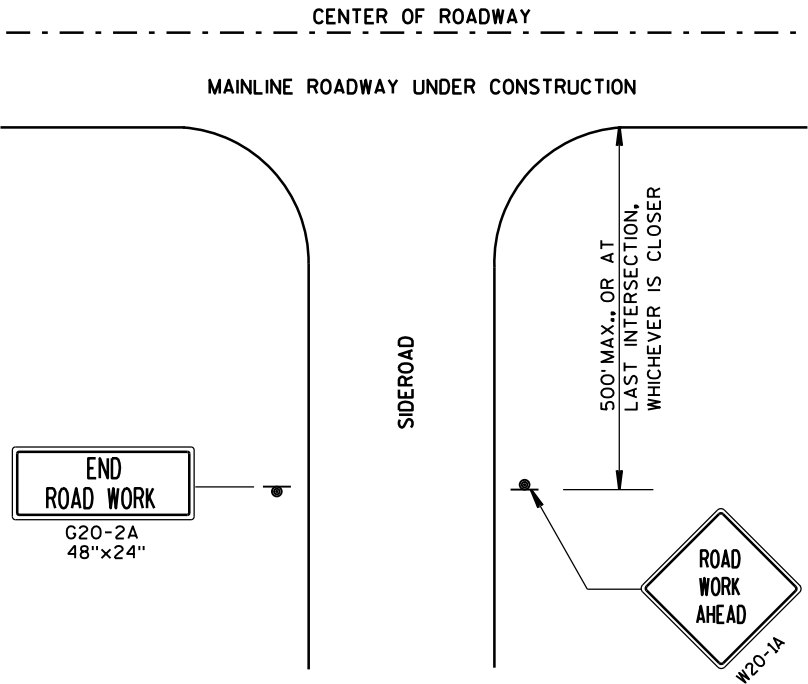
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

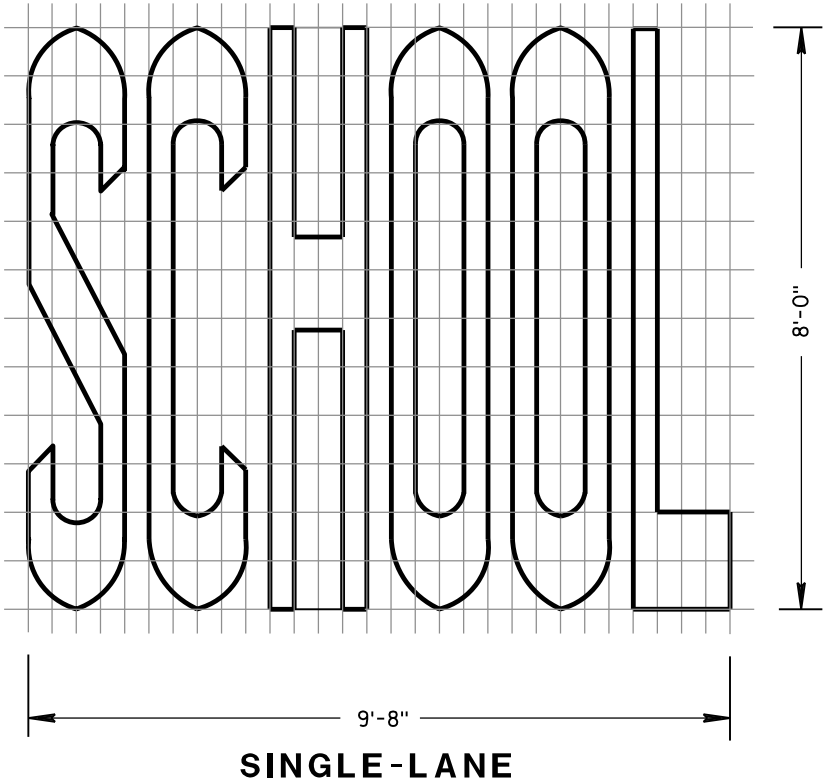
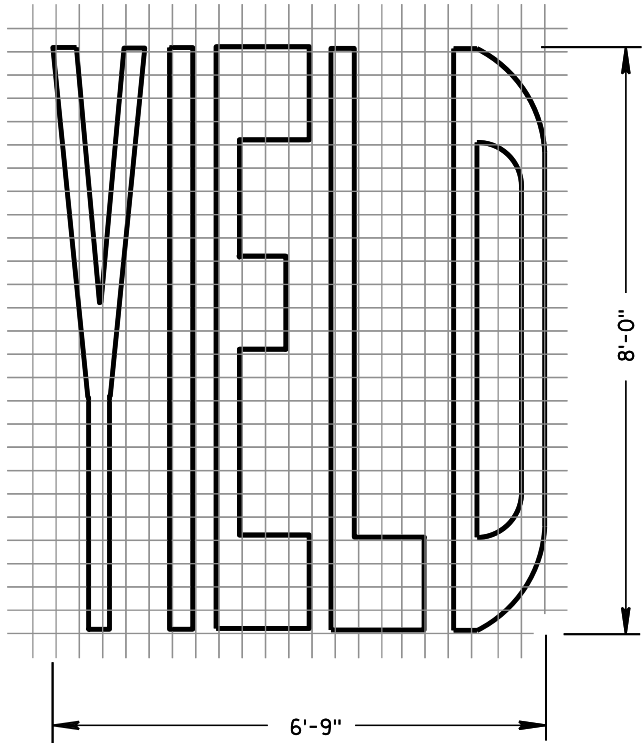
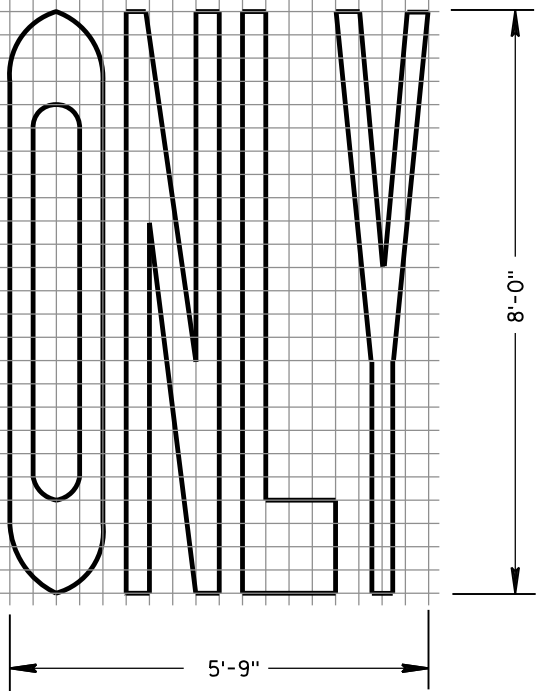
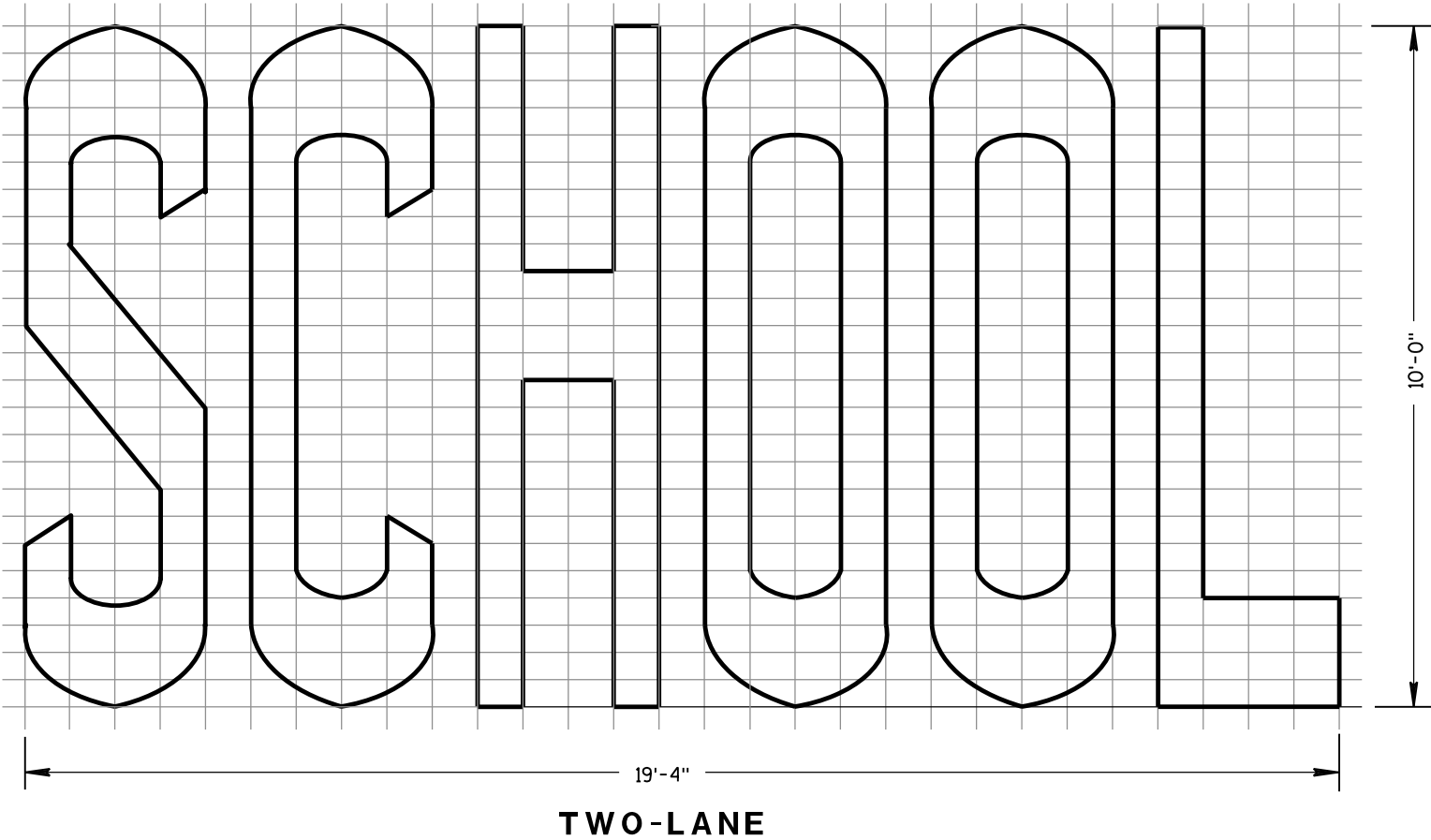
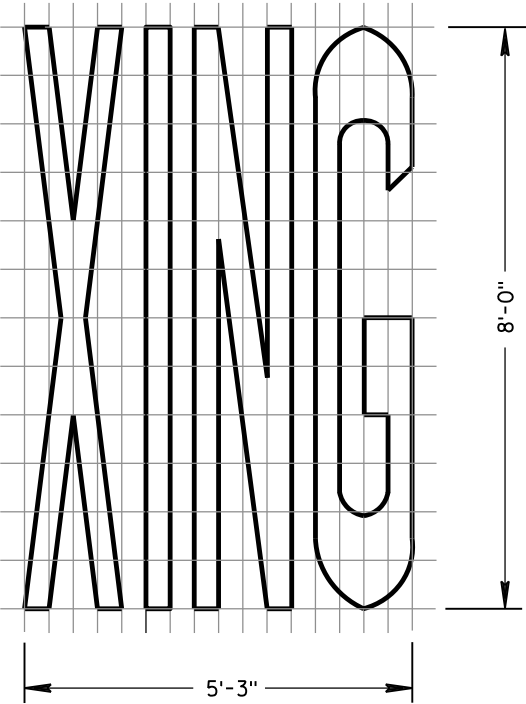
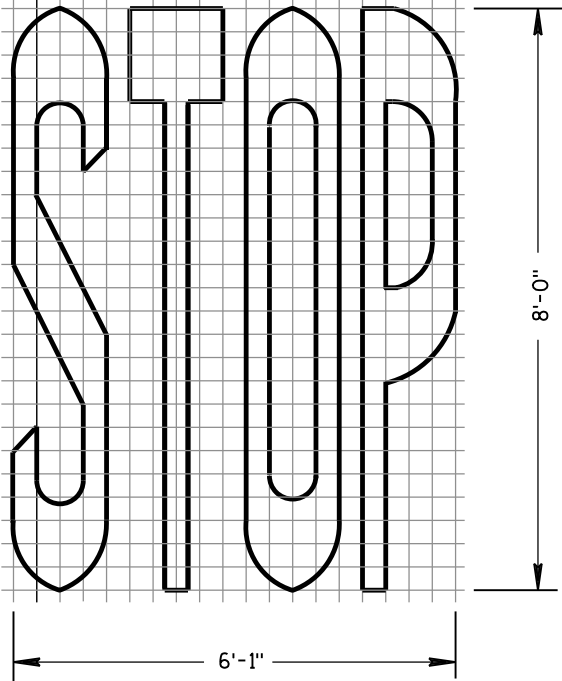
TRAFFIC CONTROL, ADVANCE
WARNING SIGNS 45 M.P.H.
OR GREATER TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

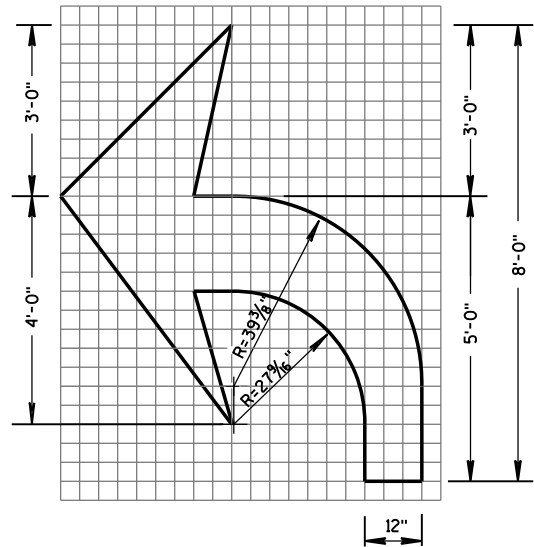
APPROVED
Sept. 2017 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA

GENERAL NOTES

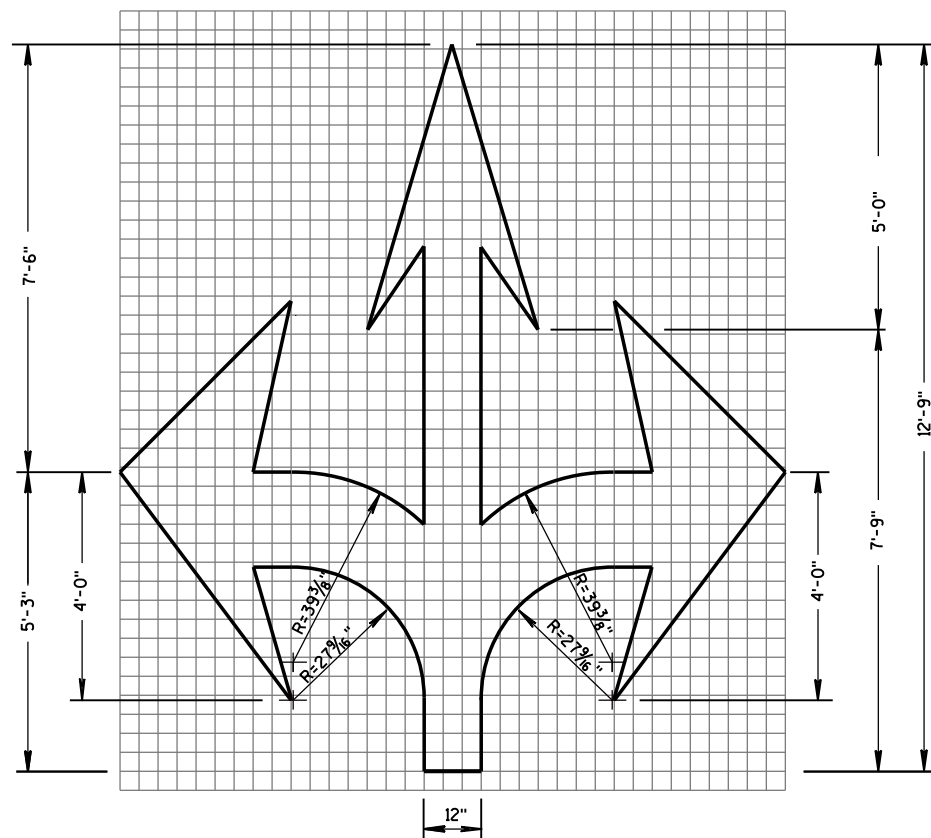
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



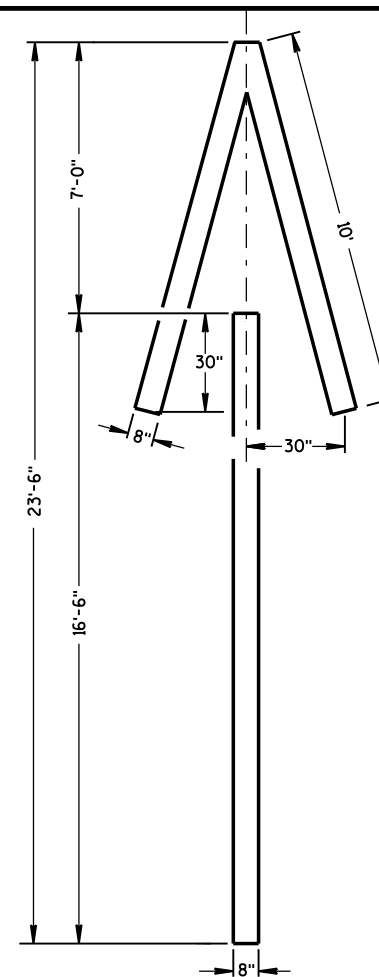
PAVEMENT MARKING WORDS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Matthew R. Rauch STATE SIGNING AND MARKING ENGINEER
FHWA	



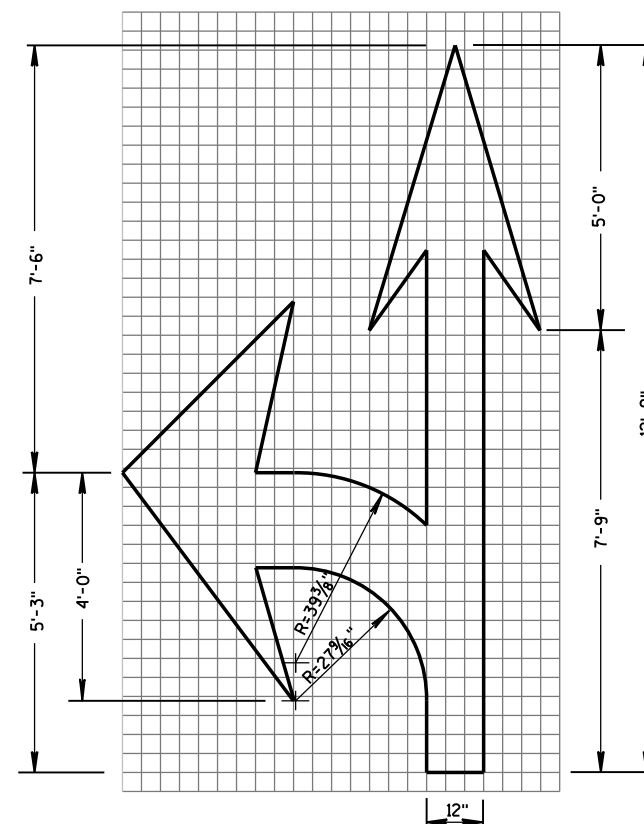
TYPE 2



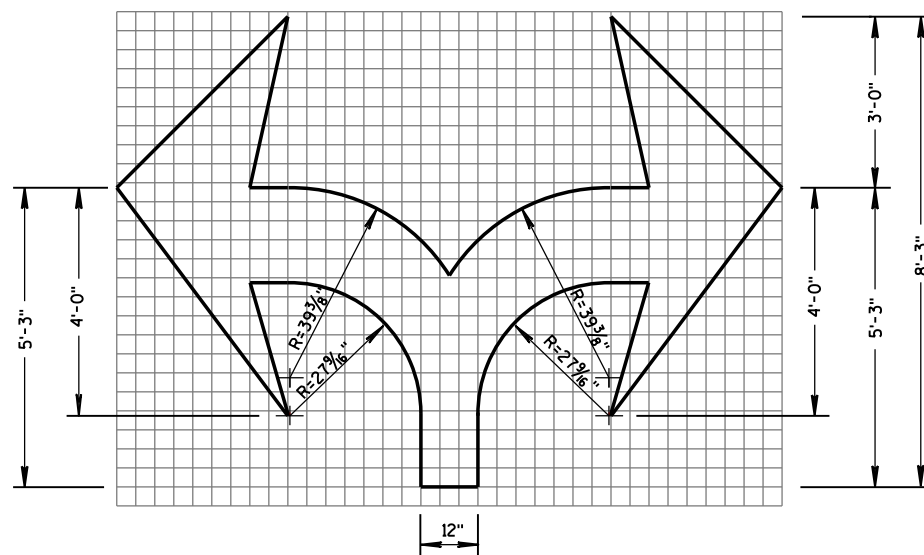
TYPE 6



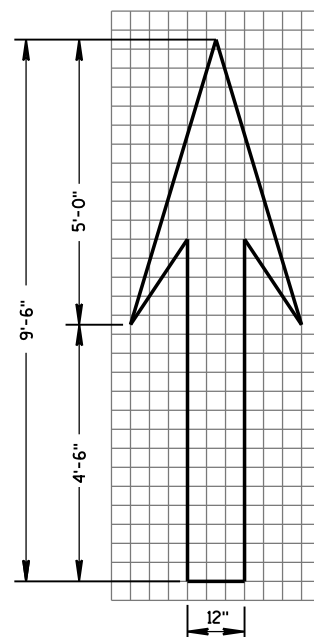
TYPE 4



TYPE 3



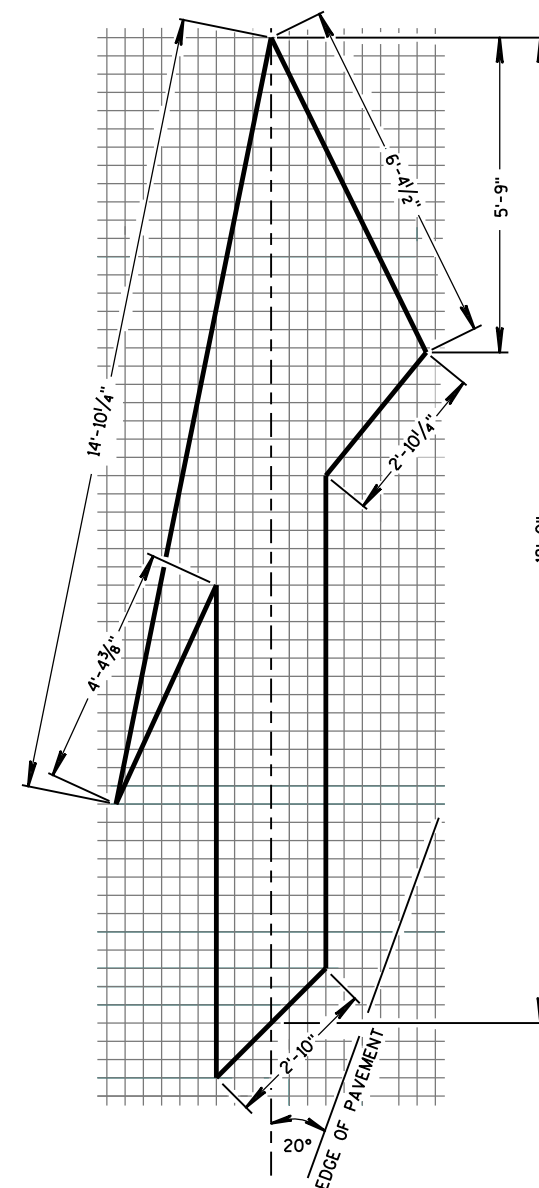
TYPE 7



TYPE 1

GENERAL NOTES

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



TYPE 5 LANE DROP ARROW

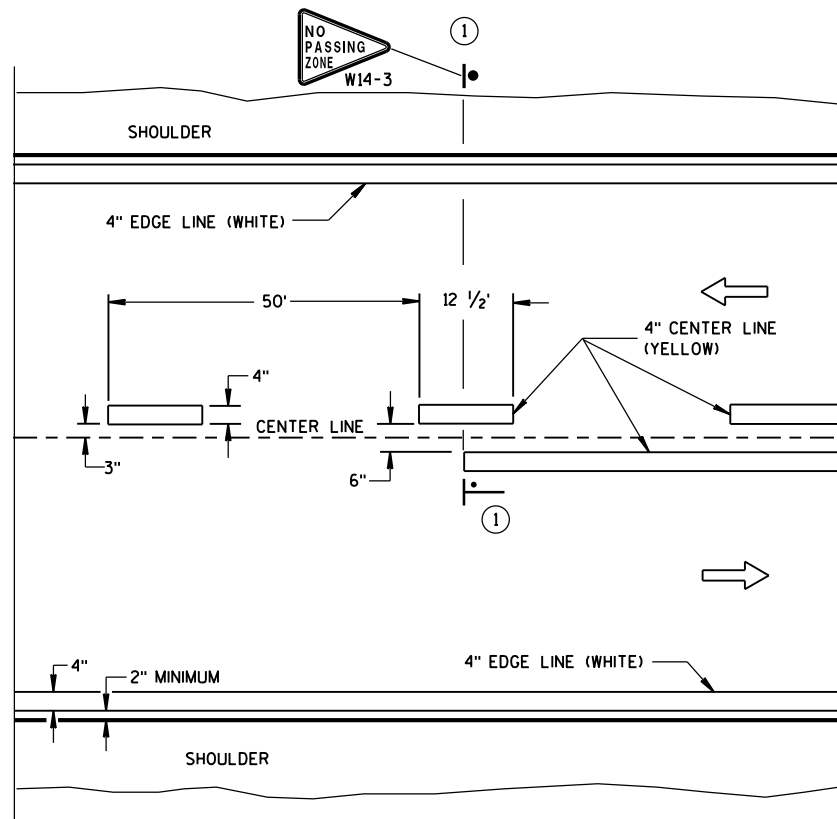
PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

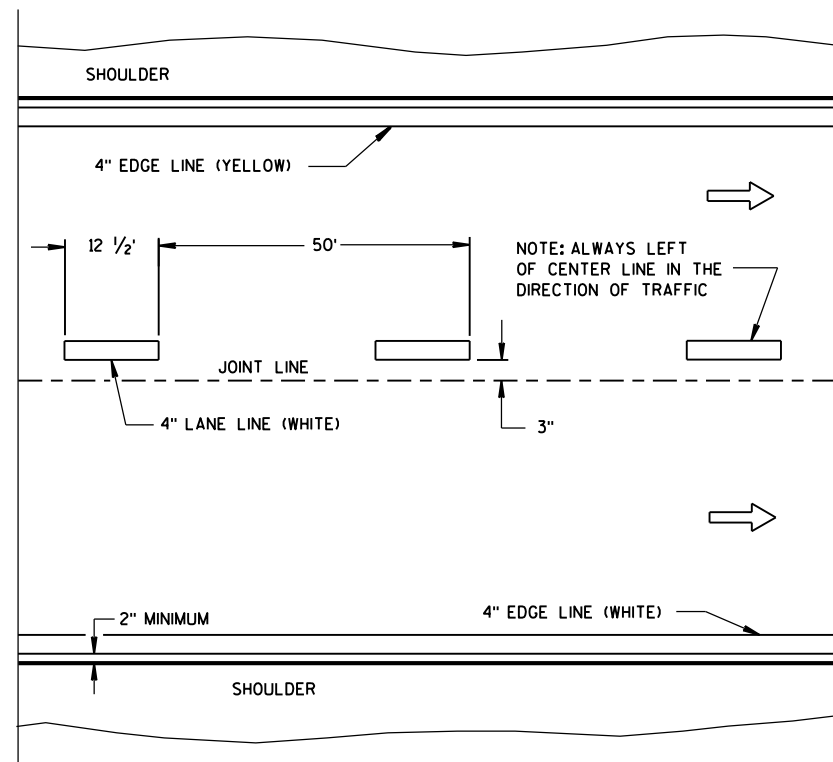
APPROVED

June 2017
DATE/S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER

FHWA

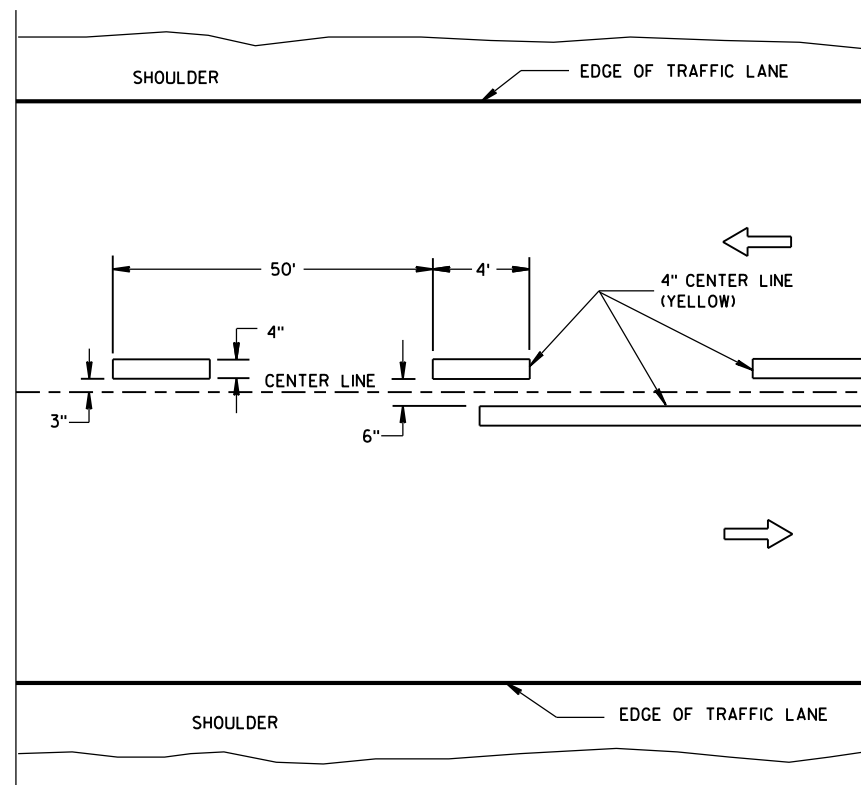


TWO WAY TRAFFIC

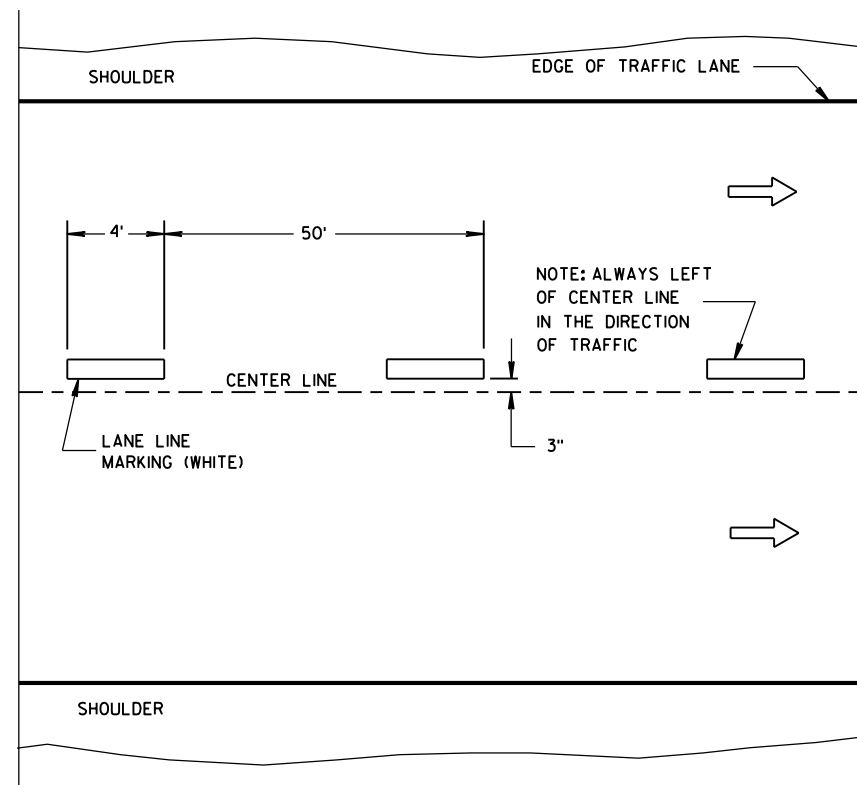


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

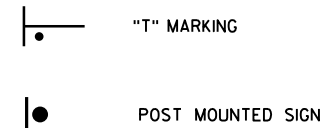
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING.

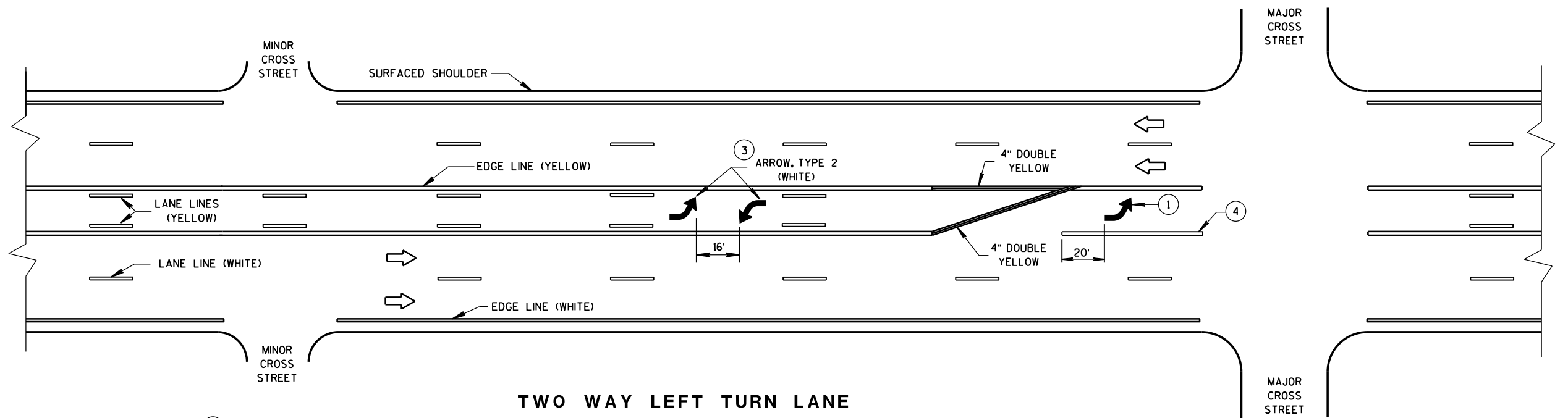
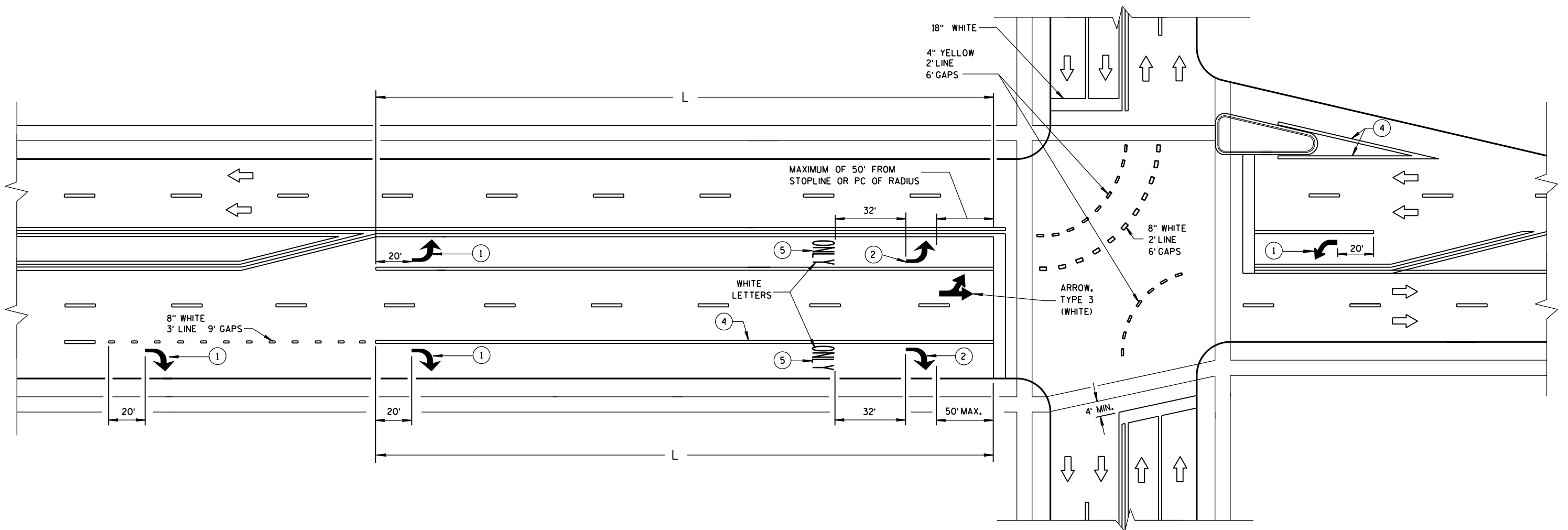
NOTE

ARROW SYMBOL () SHOWS DIRECTION OF TRAVEL

LEGEND



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



GENERAL NOTES

- ① REQUIRED ARROW, TYPE 2 (WHITE).
- ② REQUIRED ARROW, TYPE 2 (WHITE) WHEN L IS GREATER THAN 78 FEET AND LESS THAN OR EQUAL TO 166 FEET.
- ③ A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- ④ 8" WHITE
- ⑤ REQUIRED WORD ONLY WHEN L IS GREATER THAN 166 FEET.

TWO WAY LEFT TURN LANE

NOTE:
ARROW SYMBOL ()
SHOWS DIRECTION OF TRAVEL

L = LENGTH OF TURN BAY

PAVEMENT MARKING
(TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

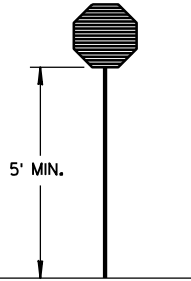
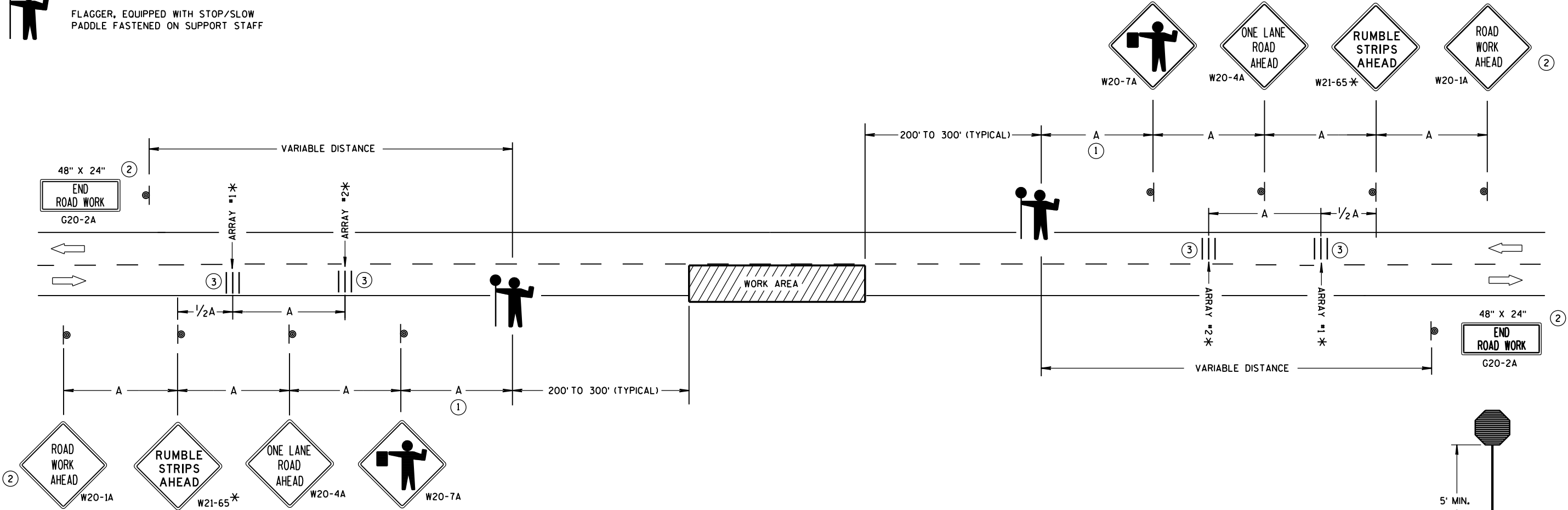
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



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

"W0" 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.

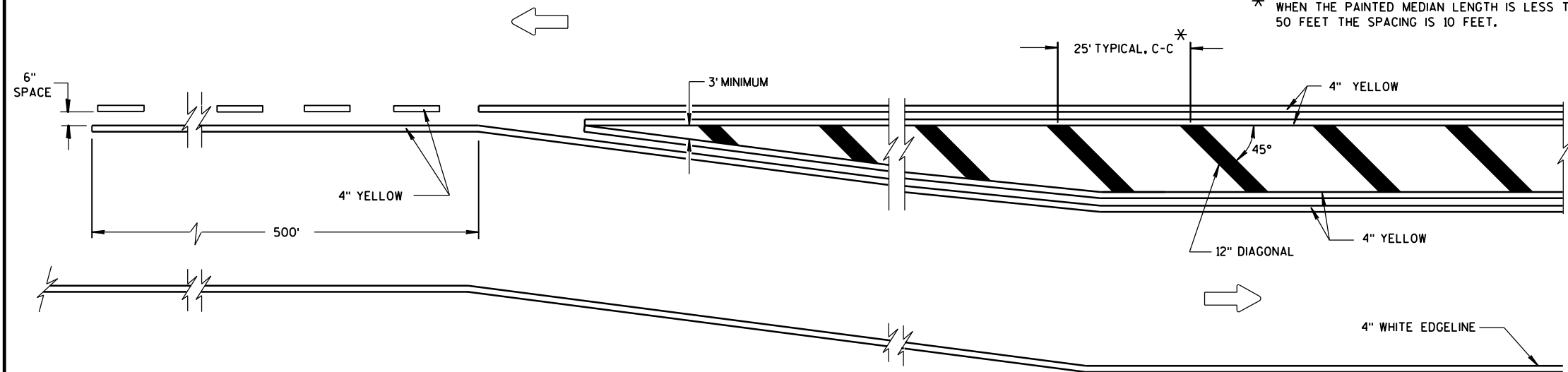
* UTILIZE TEMPORARY RUMBLE STRIPS WHEN FLAGGING OPERATION IS ANTICIPATED TO BE STATIONARY IN EXCESS OF TWO HOURS.

- 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.
- SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.
- 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 /S/ Andrew Heldtke
DATE WORK ZONE ENGINEER
FHWA

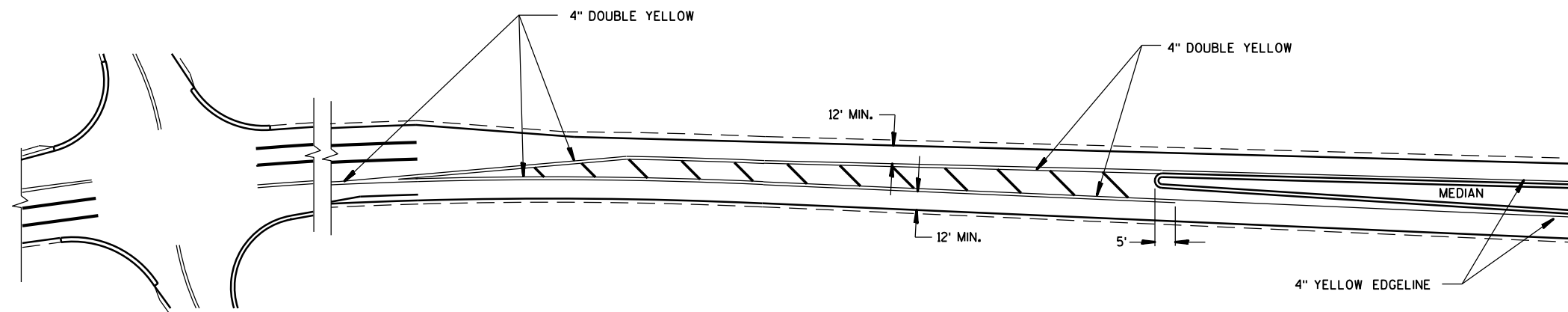


MEDIAN ISLAND DETAIL

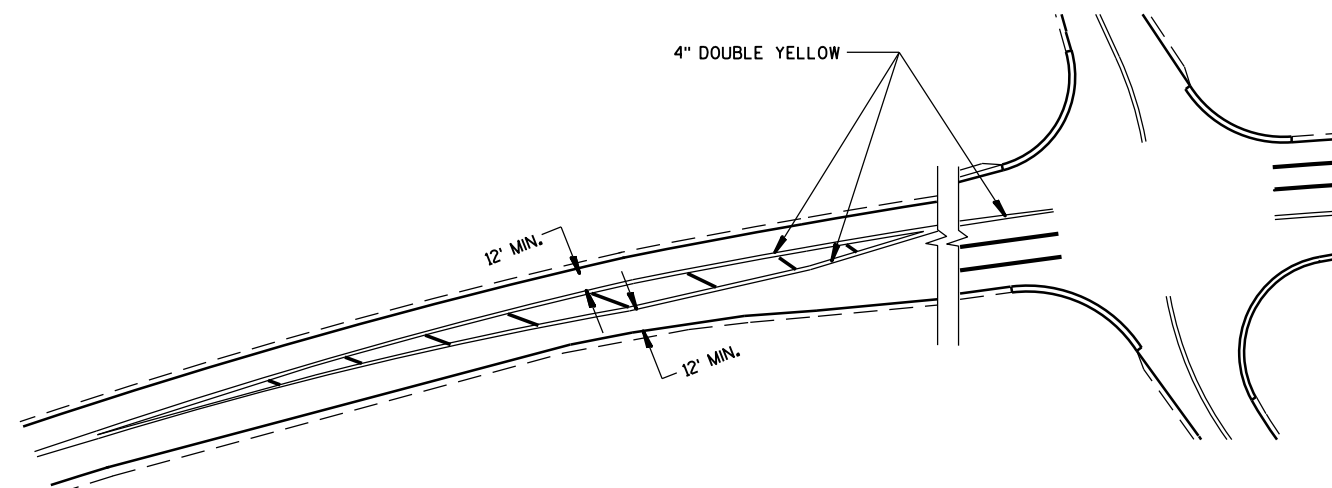
GENERAL NOTE

DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT WIDEST POINT.

➡ DIRECTION OF TRAVEL



APPROACH MARKINGS FOR OTHER MEDIAN TYPES

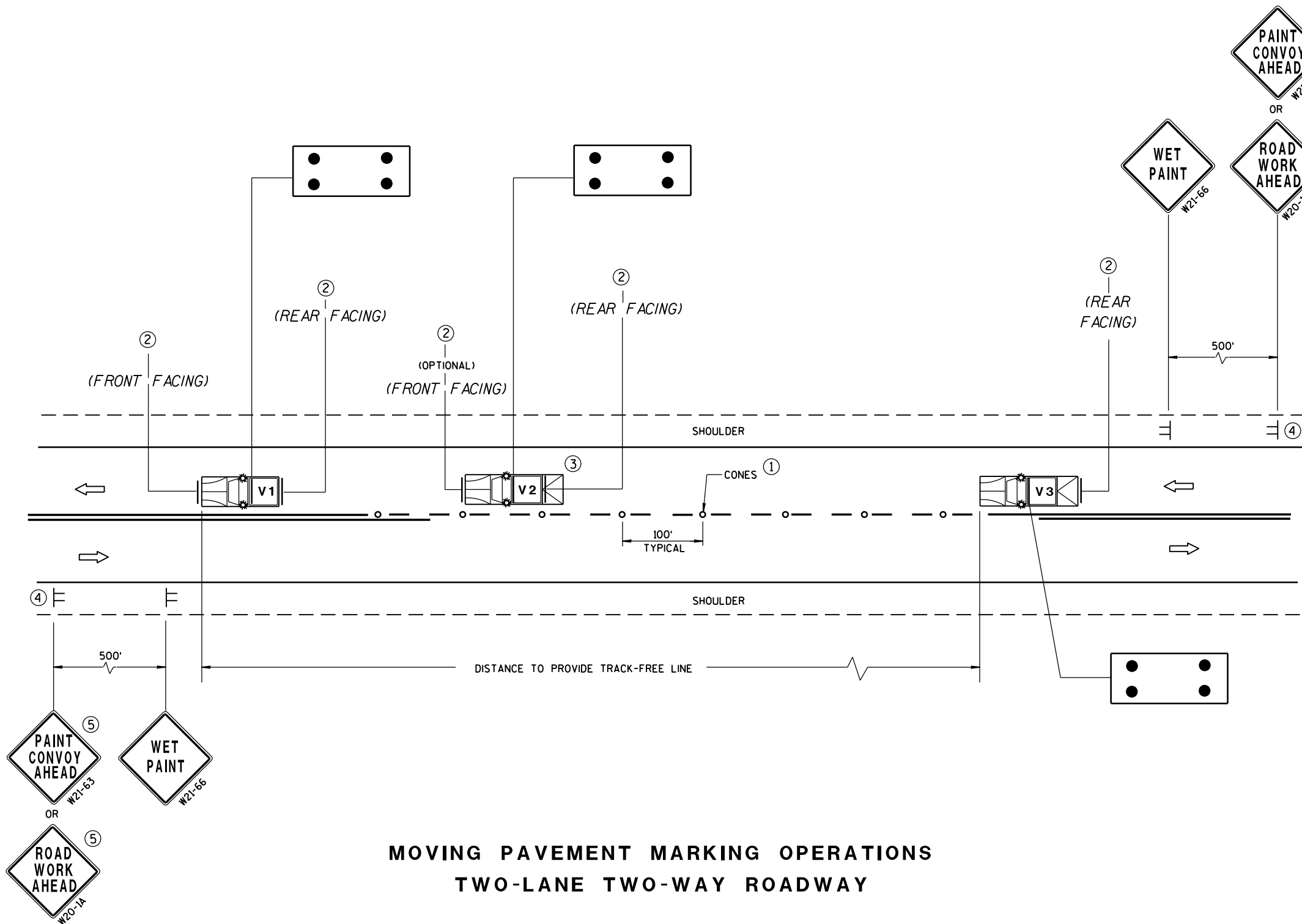


NON APPROACH MARKINGS

MEDIAN ISLAND MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA



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.

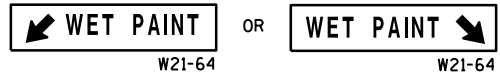
THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

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.



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

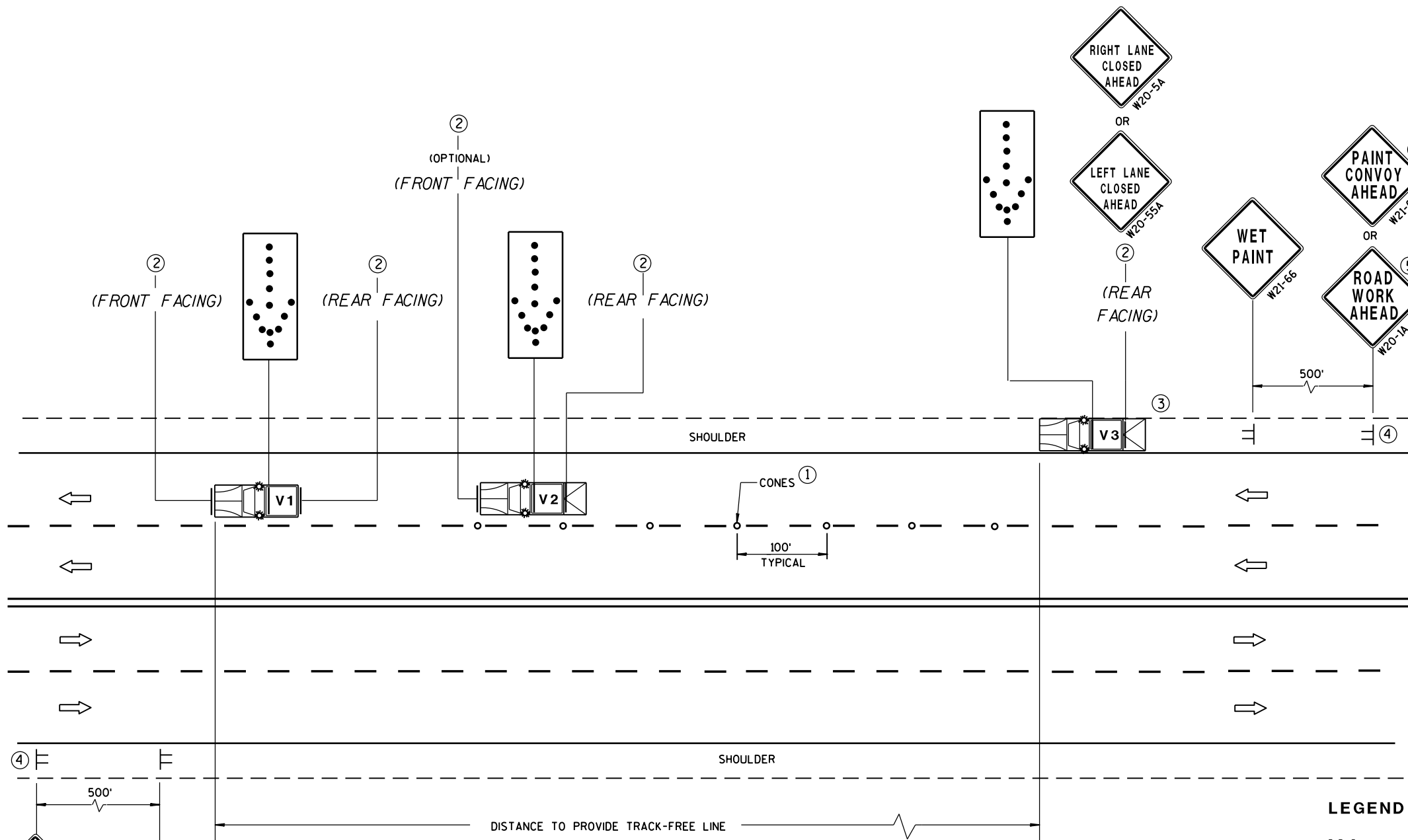
CONES

FLASHING ARROW PANEL (CAUTION)

MOVING PAVEMENT MARKING
OPERATION
TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE Sept., 2017 /S/ Andrew Heidtke
WORK ZONE ENGINEER
FHWA



MOVING PAVEMENT MARKING OPERATIONS
MULTI-LANE UNDIVIDED 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.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. 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.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

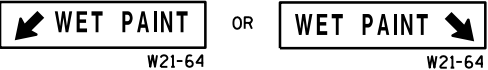
FOR EDGE LINE MARKING OR IF CONES ARE NOT USED, POSITION THE REARMOST SHADOW VEHICLE ON THE SHOULDER AS SHOWN IN THE MUTCD IF THE SHOULDER HAS ADEQUATE WIDTH.

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

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGE LINE OR LANELINE MARKING FOR MULTILANE UNDIVIDED ROADWAYS.

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.



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 (merge)

MOVING PAVEMENT MARKING
OPERATION
MULTI-LANE UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2017 /S/ Andrew Heldtke
DATE WORK ZONE ENGINEER
FHWA

GENERAL NOTES

SIGNING AND MARKING IS SHOWN AS TYPICAL PLACEMENT. FIELD CONDITIONS MAY DICTATE CHANGES IN SIGNING AND MARKING PLACEMENT.

A DISTANCE DEPENDENT ON SPEED (SEE TABLE)

1 USED ONLY WHEN APPROVED BY REGION TRAFFIC ENGINEER.

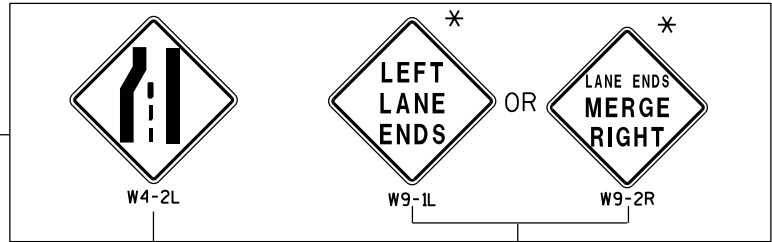
SYMBOLS

- * SIGNS MAY BE OMITTED IF SPACE DOES NOT PERMIT
- * * IF POSTED SPEED 45 MPH OR GREATER, PLACE W5-54 SIGN UNDER R4-7 SIGN. MOUNT W5-54 SIGN AT 4' MOUNTING HEIGHT (TOP OF ROADWAY TO BOTTOM OF SIGN)
- POST MOUNTED SIGN
- DIRECTION OF TRAFFIC FLOW

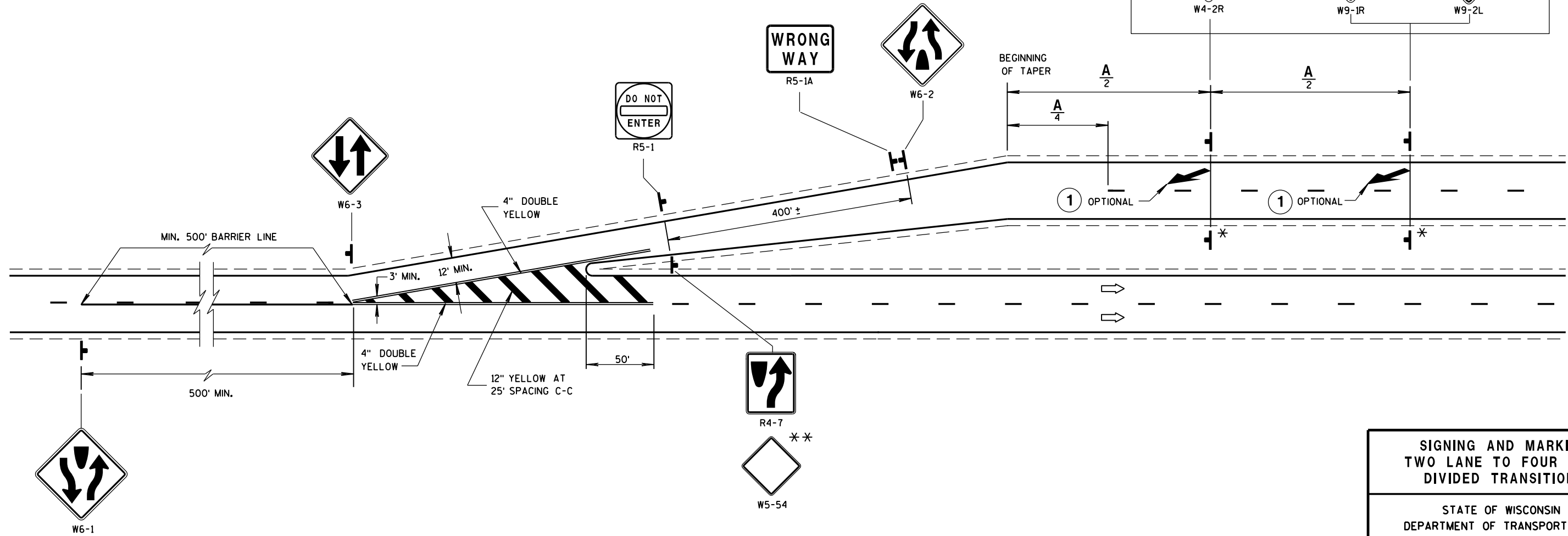
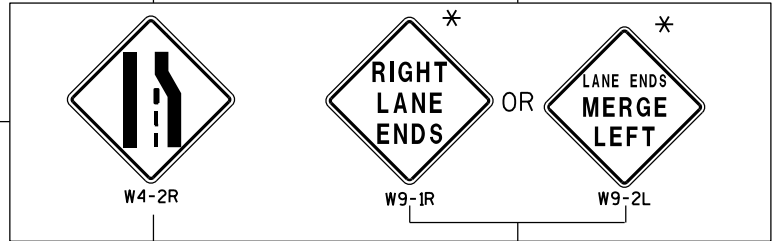
DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
25	325
30	460
35	565
40	670
45	775
50	885
55	990

OPTION 2



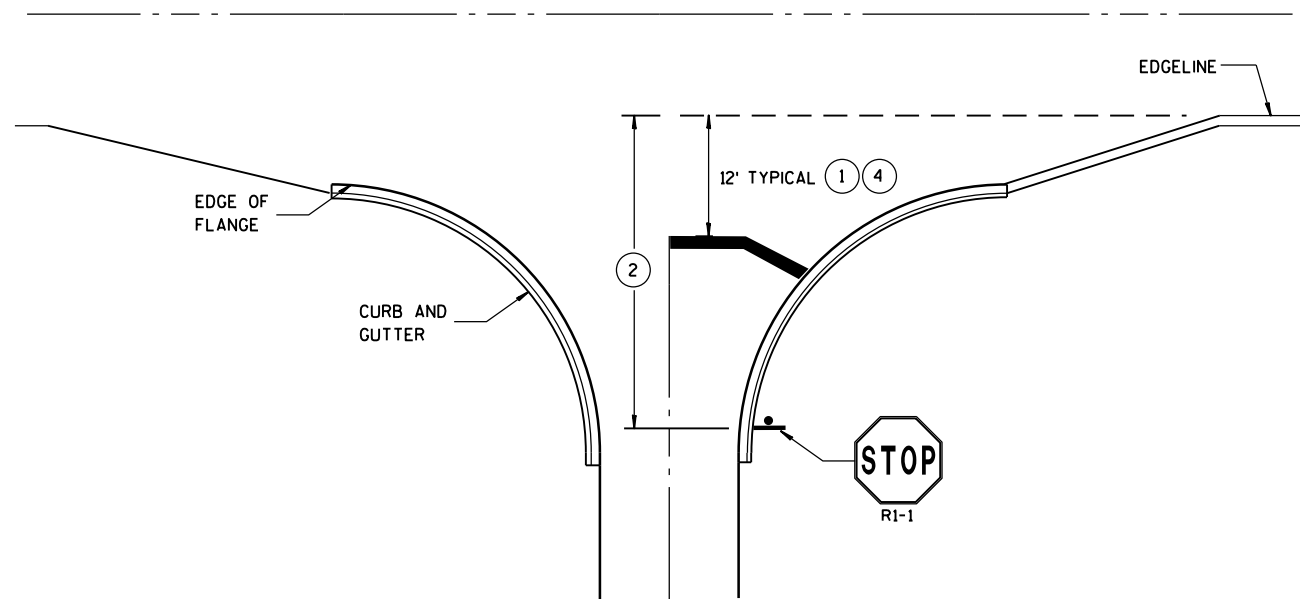
OPTION 1



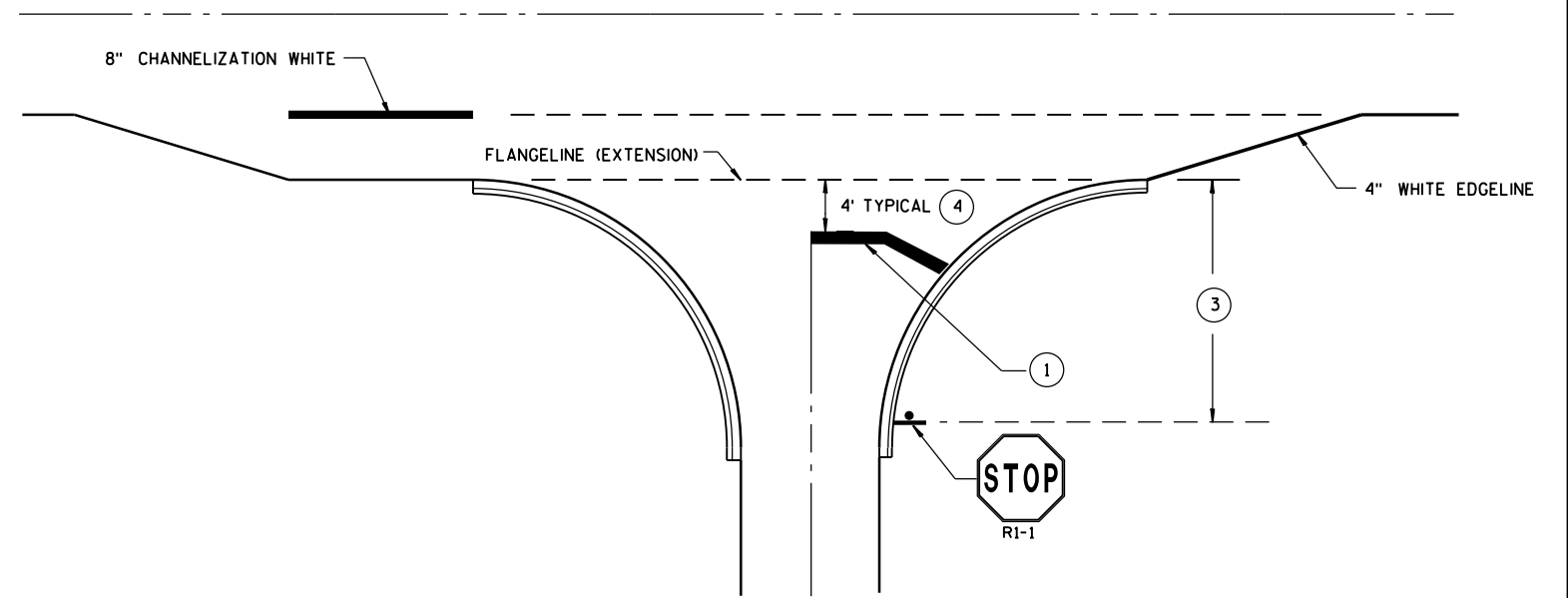
SIGNING AND MARKING
TWO LANE TO FOUR LANE
DIVIDED TRANSITIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

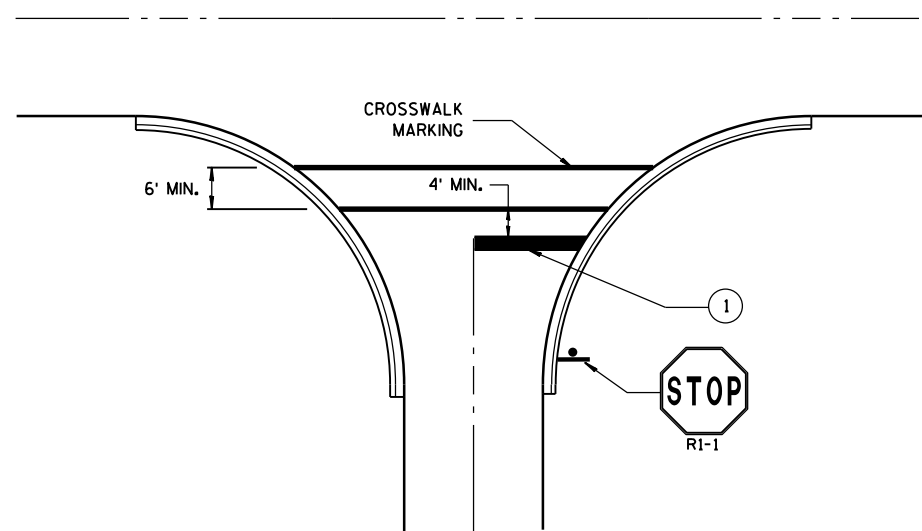
APPROVED
June 2017 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA



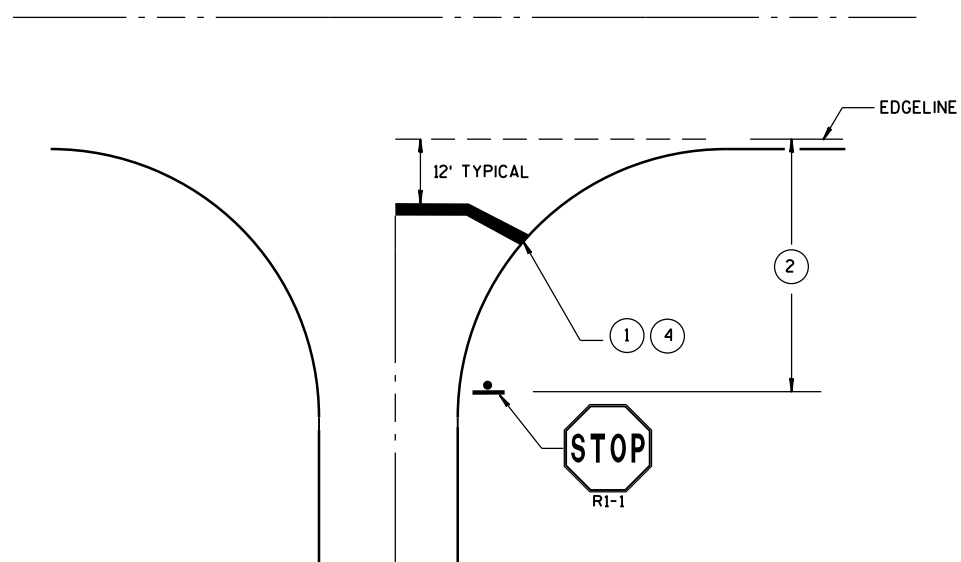
**TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER**



**TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH RIGHT TURN LANE**



**TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH CROSSWALK MARKING**



**TYPICAL STOP LINE PAVEMENT MARKING
WITHOUT CURB AND GUTTER**

GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGE LINE LOCATION.

- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGE LINE THAN NO STOP LINE IS REQUIRED.
- ③ IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
- ④ MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES. (NO CLOSER THAN 4 FEET).

**STOP LINE AND CROSSWALK
PAVEMENT MARKING**

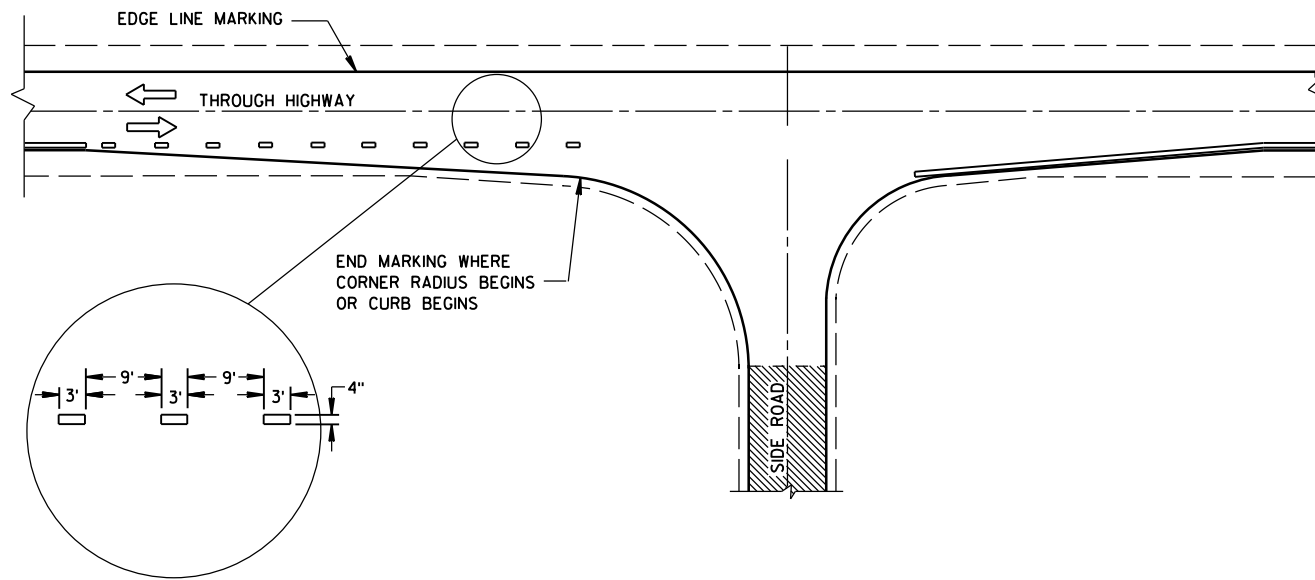
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept., 2017
DATE

FHWA

/S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER



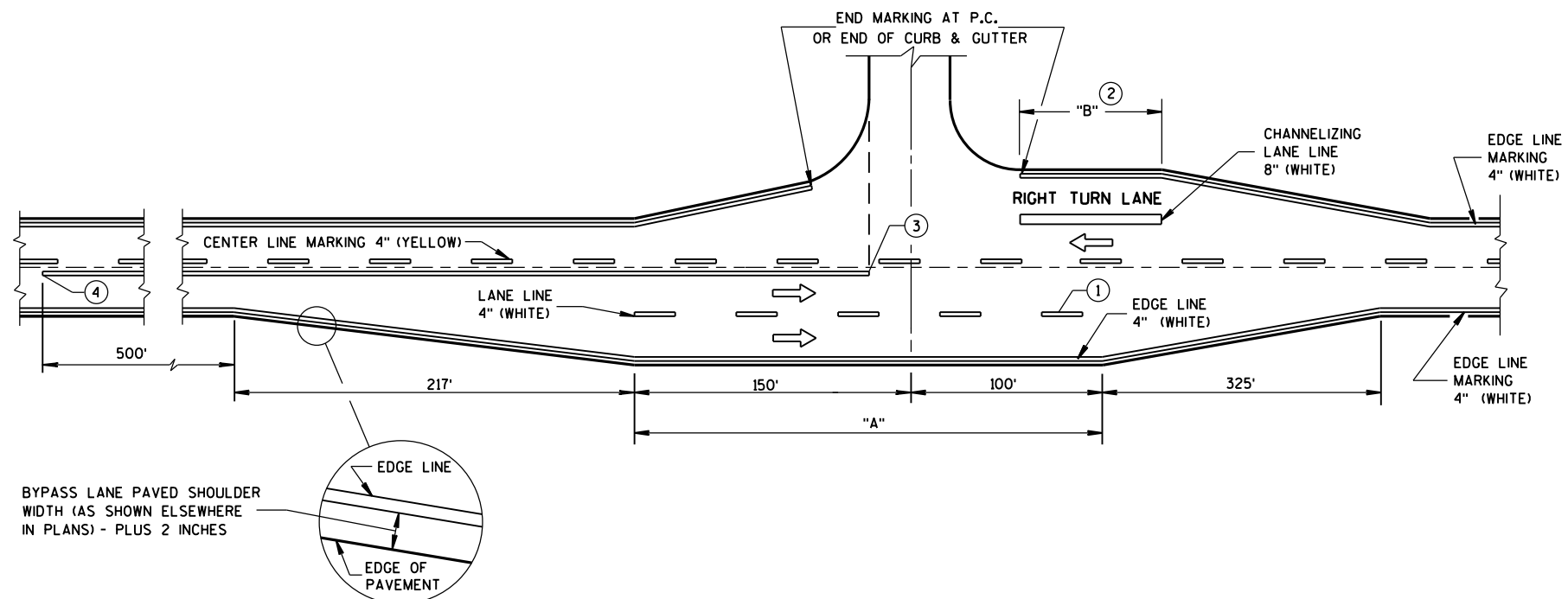
MINOR INTERSECTION

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.

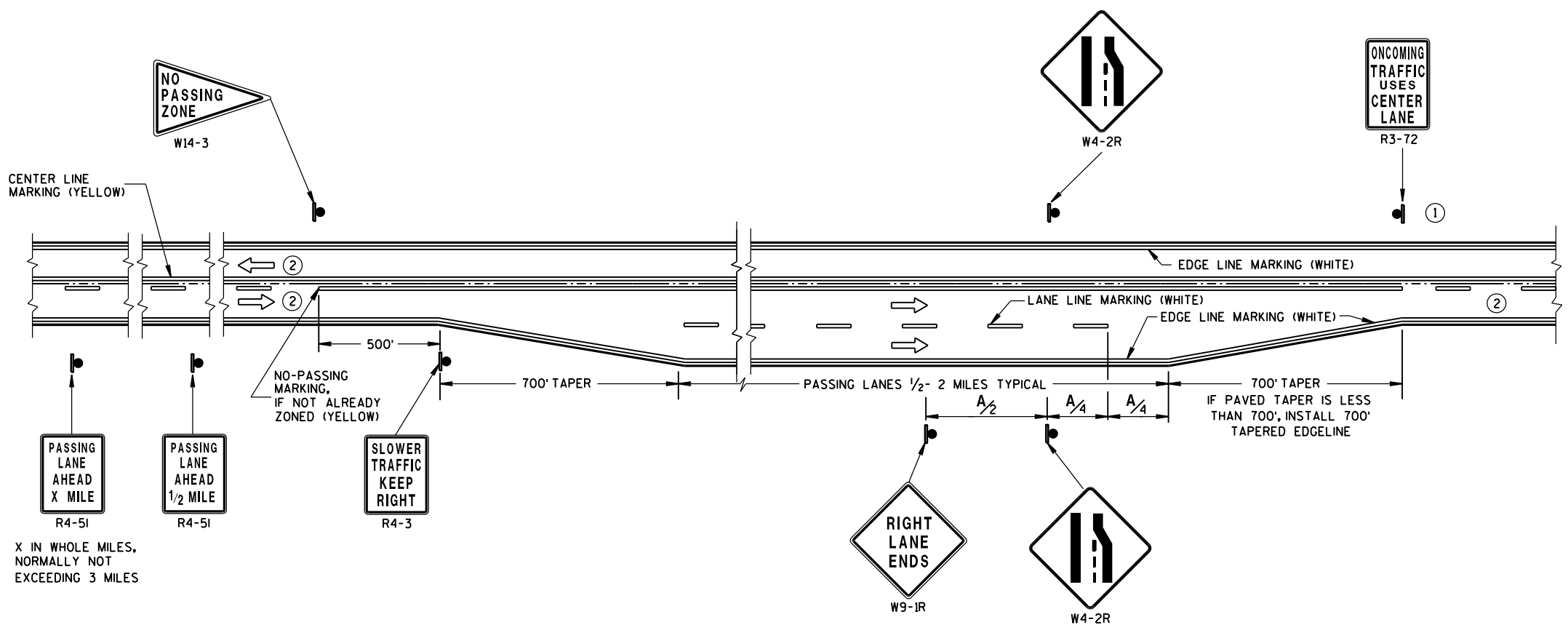
ARROW SYMBOL () SHOWS DIRECTION OF TRAVEL



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

**PAVEMENT MARKING
(INTERSECTIONS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**SOLID DOUBLE-YELLOW LINE
(THROUGHOUT ENTIRE PASSING/CLIMBING LANE)**

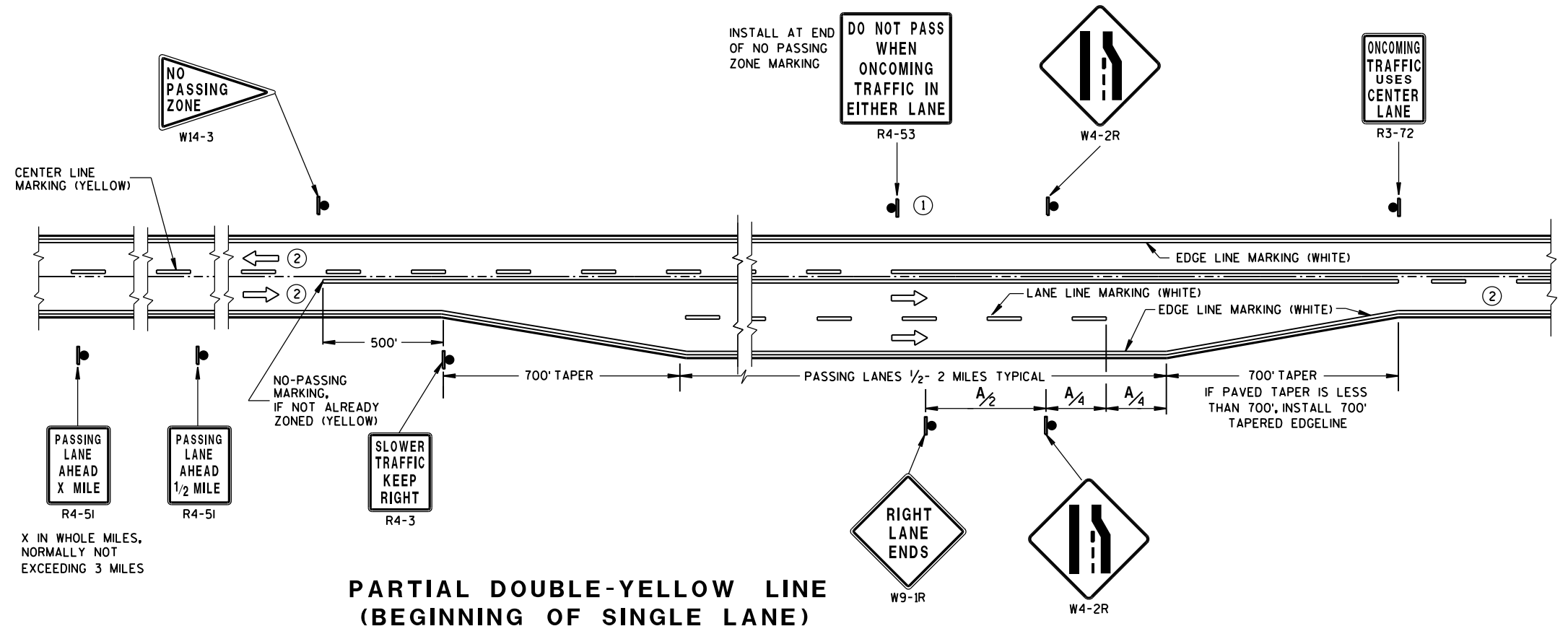
GENERAL NOTES

- ① SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- ② THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.

ARROW SYMBOL (➡) SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

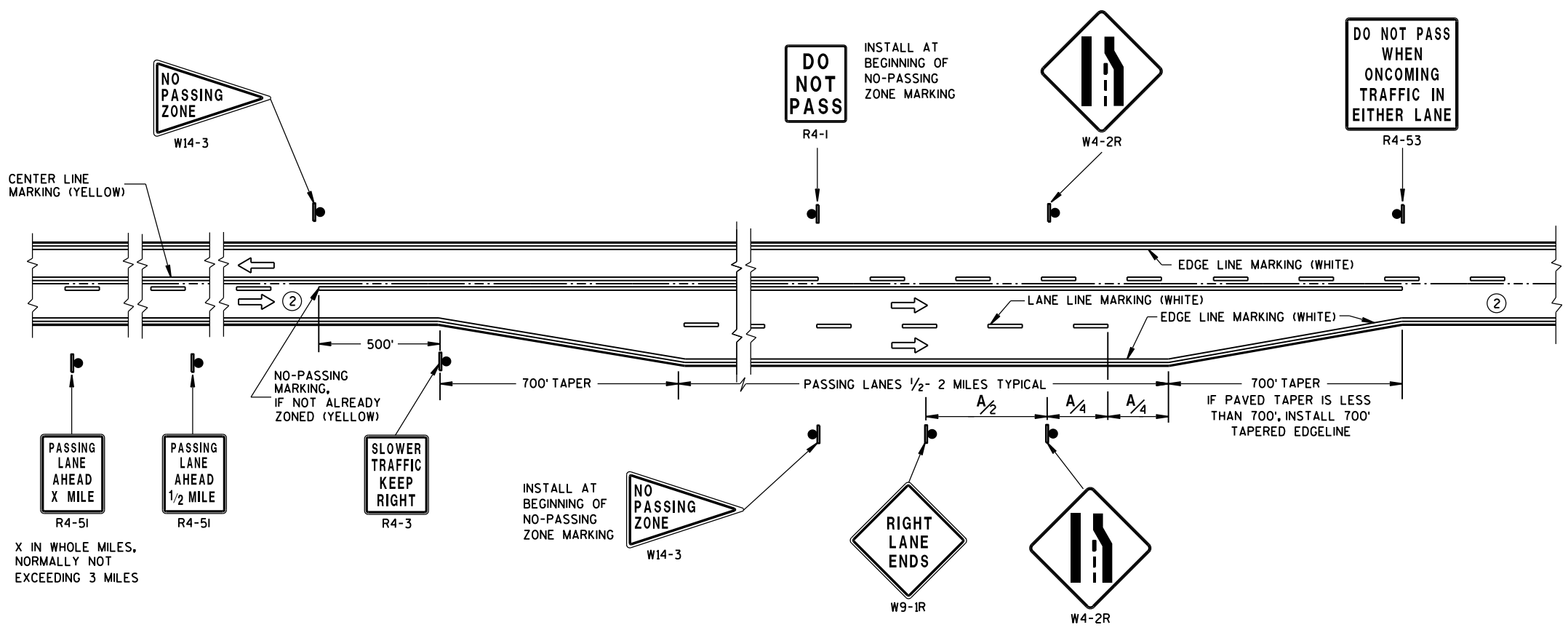
POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	775
50	850
55	950



**PARTIAL DOUBLE-YELLOW LINE
(BEGINNING OF SINGLE LANE)**

**PAVEMENT MARKING & SIGNING
(CLIMBING LANE & PASSING LANE)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**SOLID DOUBLE-YELLOW LINE
(END OF SINGLE LANE)**

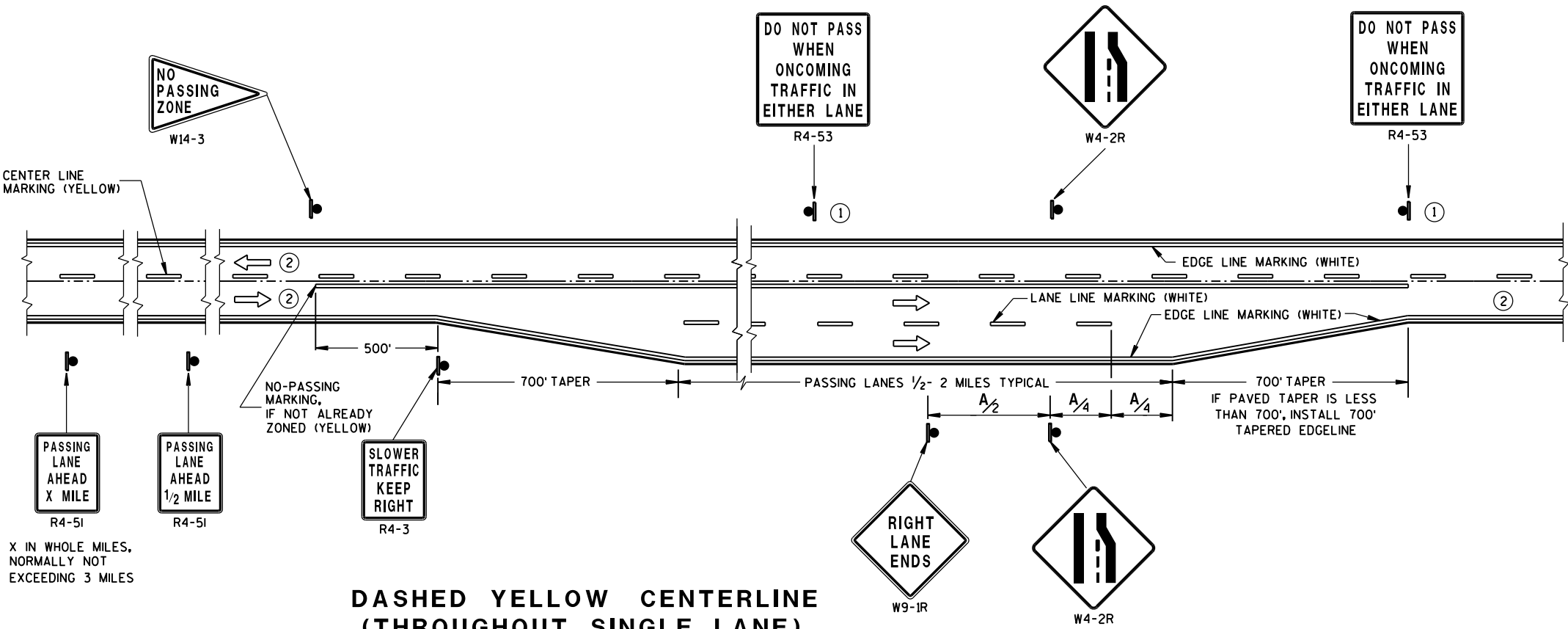
GENERAL NOTES

- ① SIGN SHALL BE REPEATED AT ONE MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- ② THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	775
50	850
55	950



**DASHED YELLOW CENTERLINE
(THROUGHOUT SINGLE LANE)**

**PAVEMENT MARKING & SIGNING
(CLIMBING LANE & PASSING LANE)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2017 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA

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

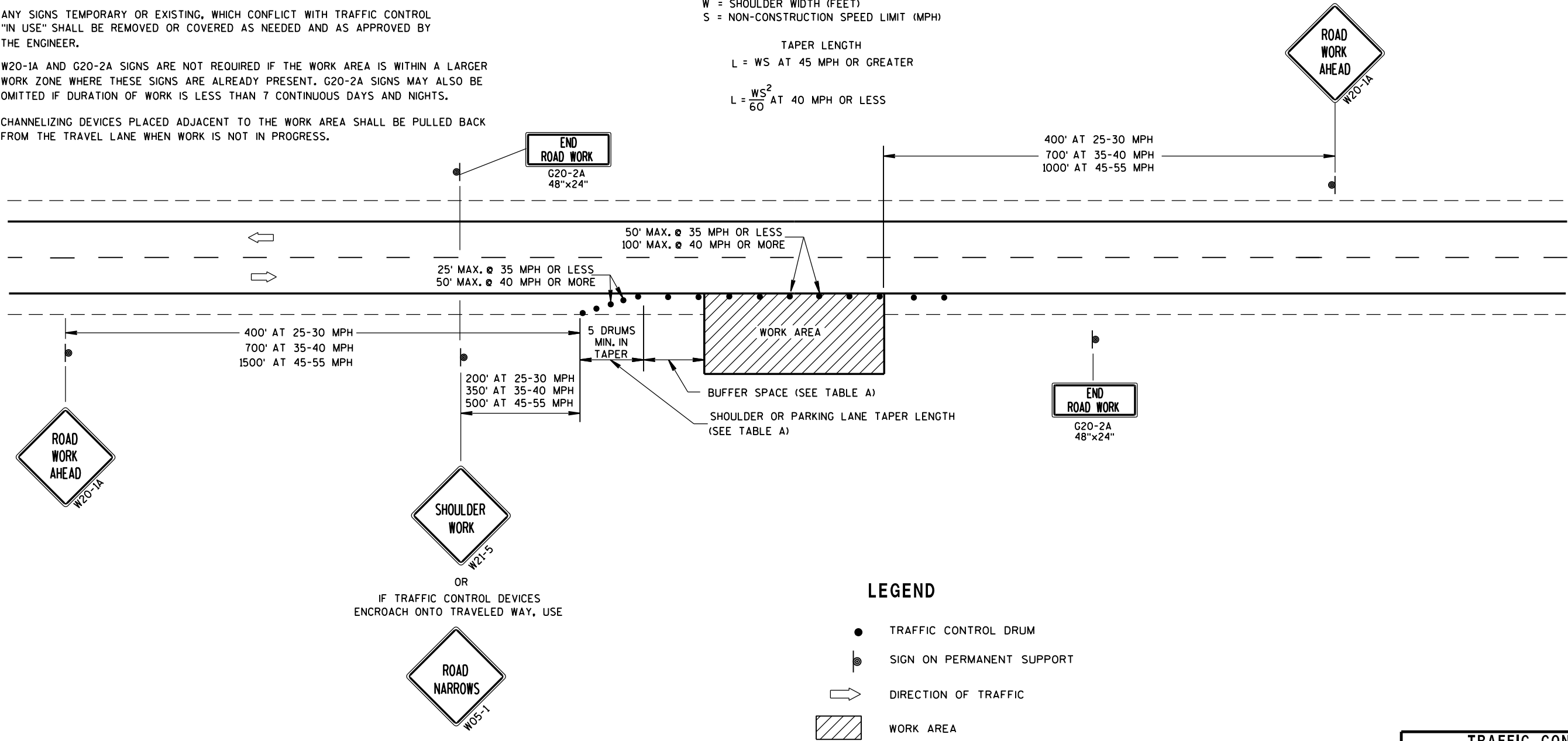
SHOULDER TAPER LENGTH (FEET)					BUFFER SPACE (FEET)
S	W	4	6	8	
30	20	30	40	50	200
35	30	45	55	70	250
40	40	55	75	90	305
45	60	90	120	150	360
50	70	100	135	170	425
55	75	110	150	185	495

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

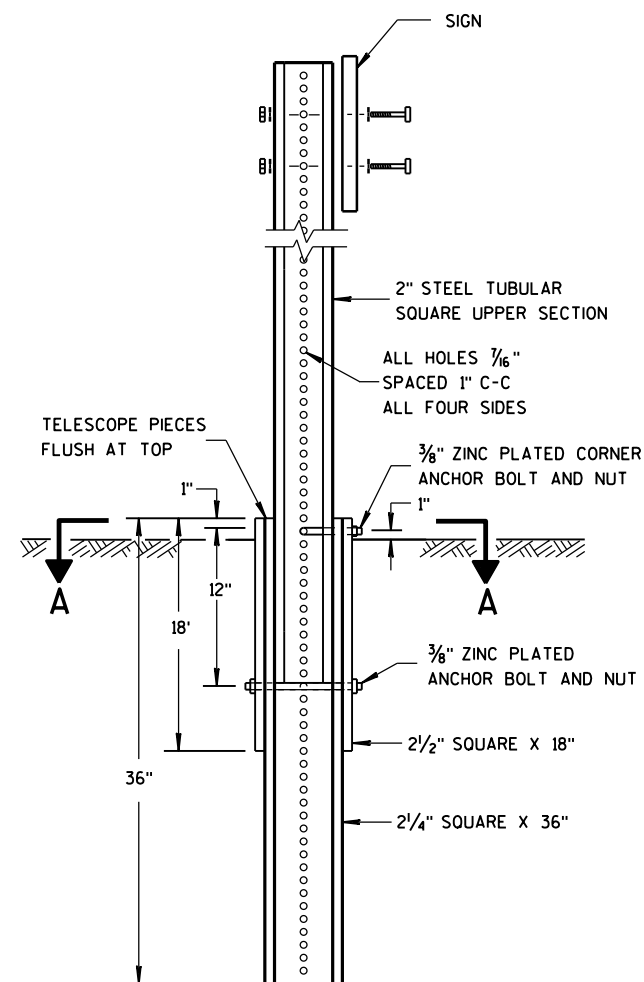
SHOULDER TAPER LENGTH = $\frac{1}{3}L$



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 ZONE TRAFFIC SAFETY ENGINEER
FHWA	

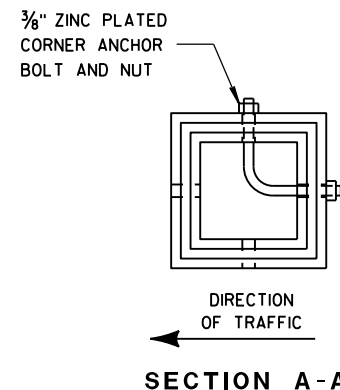


DETAIL OF TUBULAR
STEEL SIGN POST

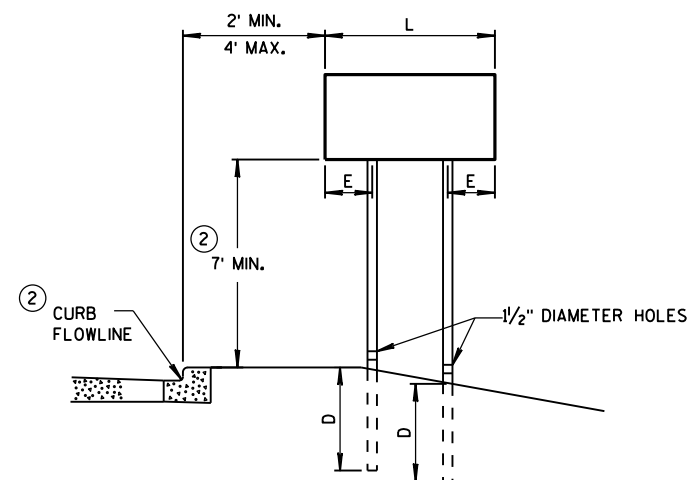
TUBULAR STEEL POSTS

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.



SECTION A-A

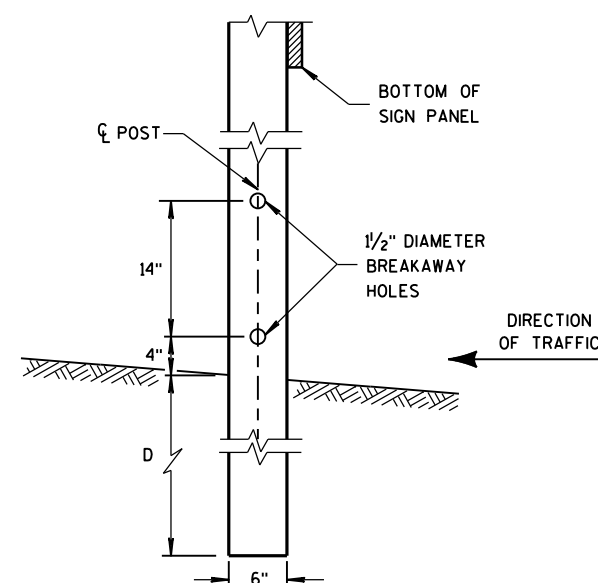


URBAN AREA

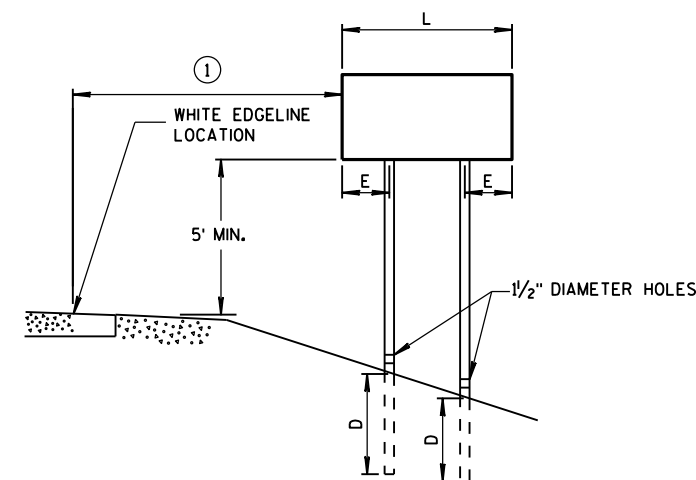
POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST
EMBEDMENT DEPTH

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



4 "x6 " WOOD POST
MODIFICATION



RURAL AREA

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

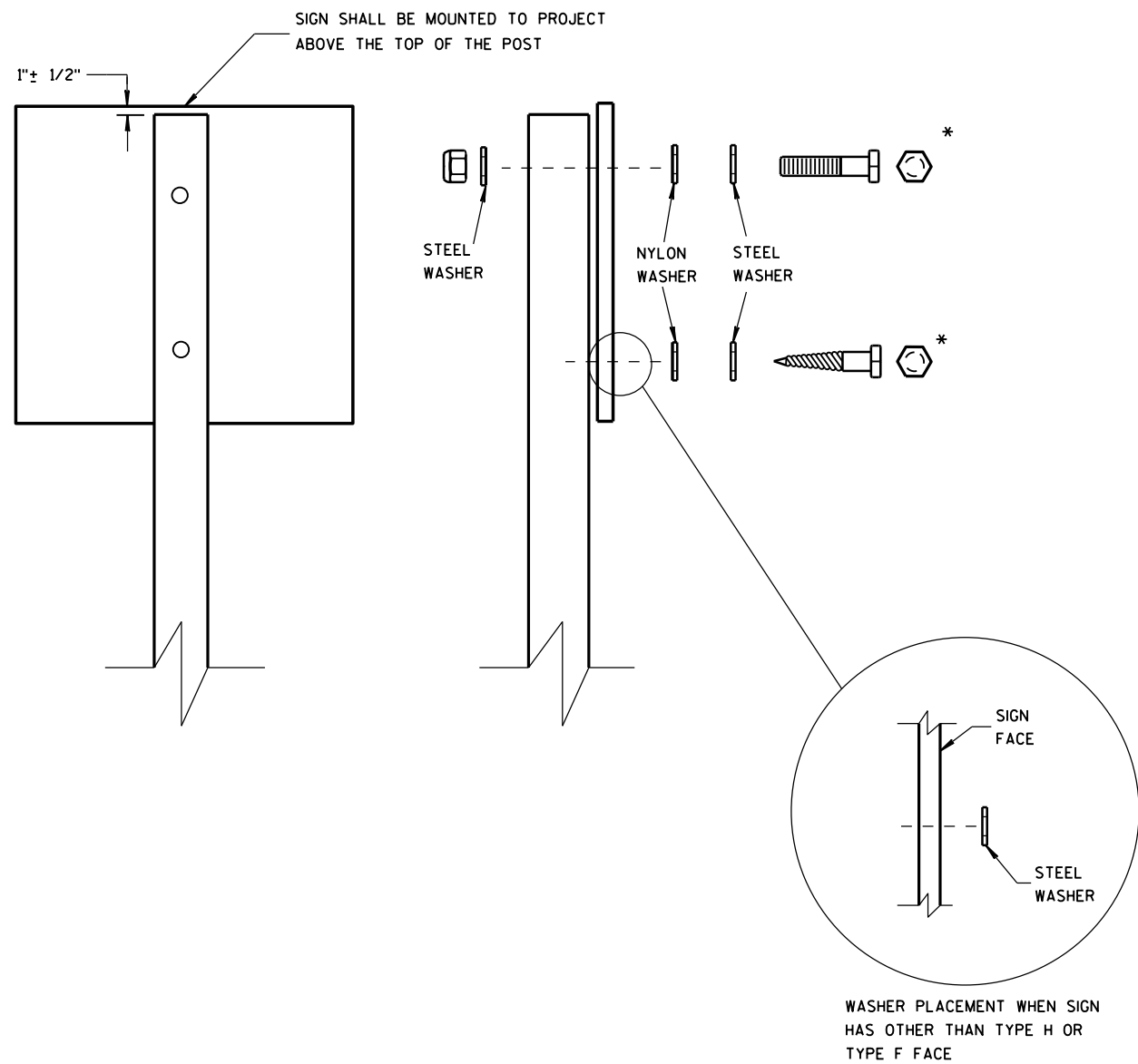
SEE NOTE ③

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.

TEMPORARY TRAFFIC CONTROL
SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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.

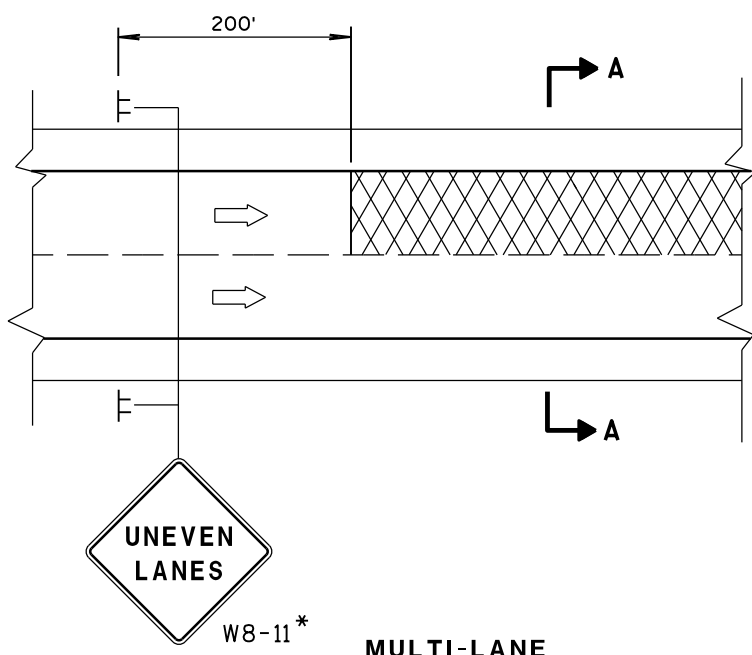
- WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - 3/8" x 3"
 - MACHINE BOLTS - 5/16" x 6-1/2" OR 7" LENGTH W/ NUTS

- 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

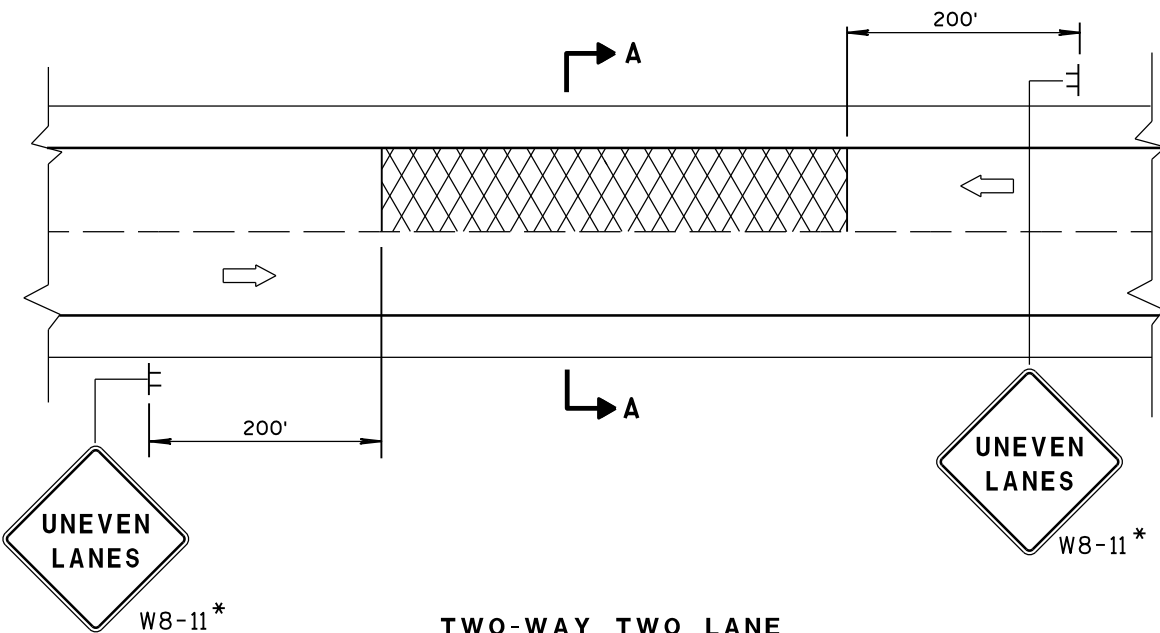
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. x 3/8" I.D. x 1/16" STEEL
 - 1-1/4" O.D. x 3/8" I.D. x .080 NYLON FOR ALL TYPE H SIGNS

* 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.

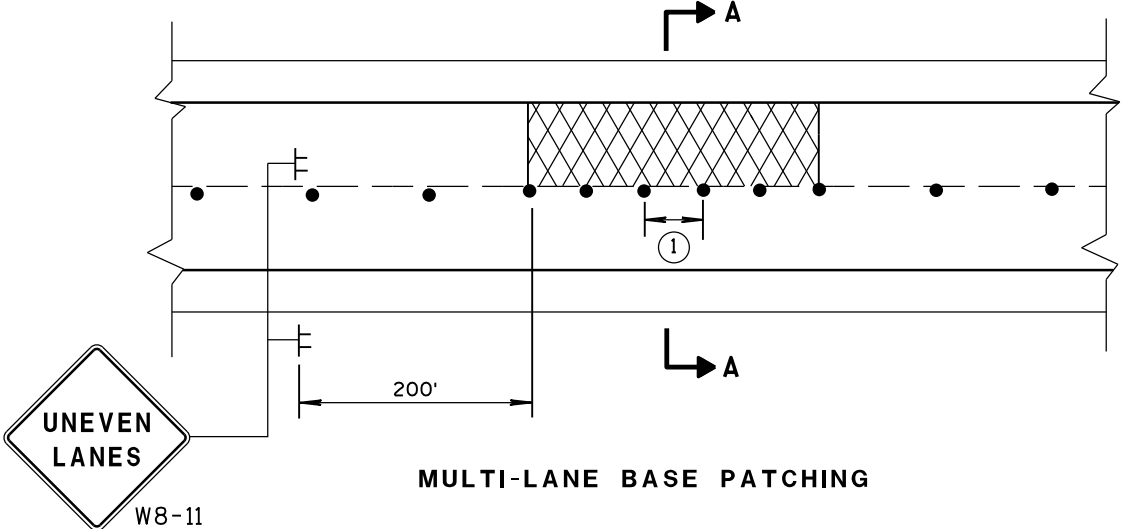
ATTACHMENT OF SIGNS TO POSTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



MULTI-LANE

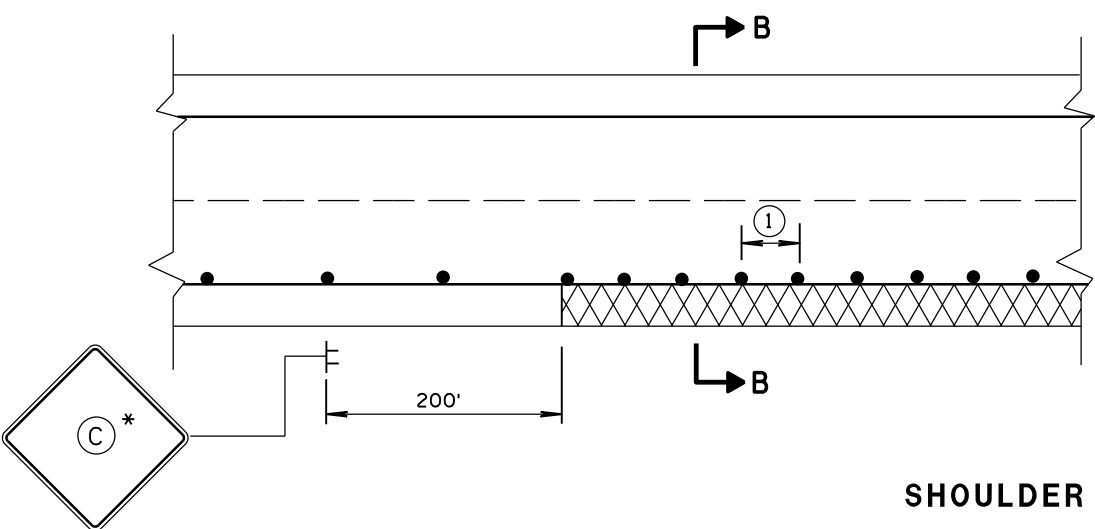
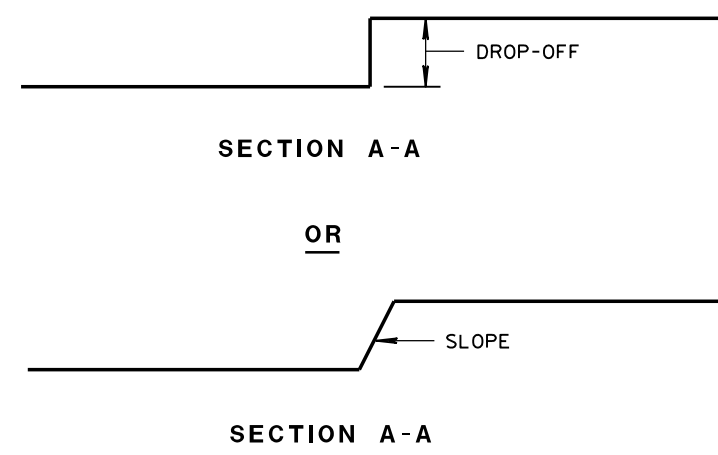


TWO-WAY TWO LANE

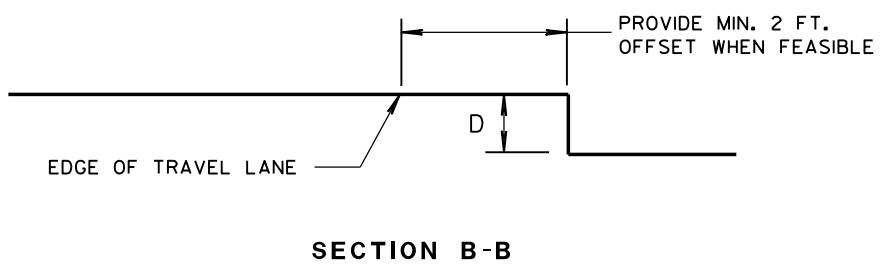


MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS



SHOULDER DROP-OFFS



SECTION B-B

GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

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

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

* IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1/2 MILE.

① USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

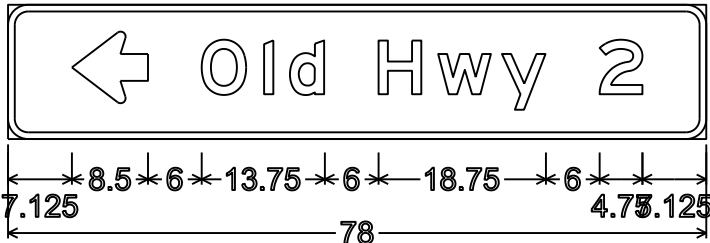
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF

D	SIGN ①
< 2" WITH A SLOPE STEEPER THAN 3:1	LOW SHOULDER W08-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	SHOULDER DROP-OFF W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

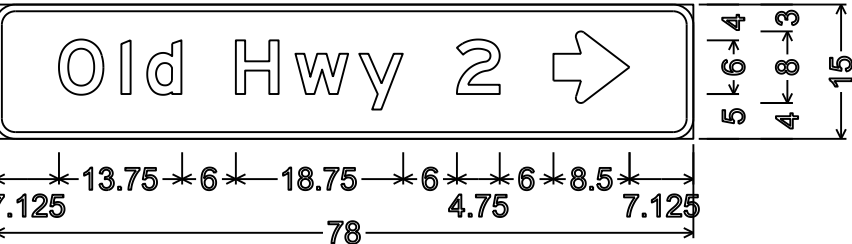
TRAFFIC CONTROL, DROP-OFF SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

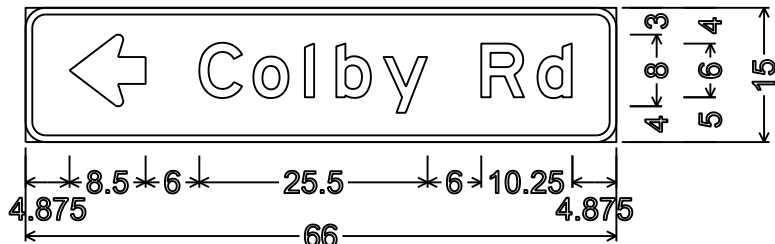
APPROVED
March, 2017 /S/ Andrew Heldtke
DATE WORK ZONE ENGINEER
FHWA



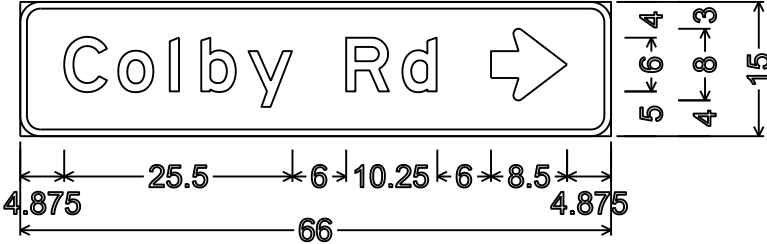
D1-1;
2.250" Radius, 0.750" Border



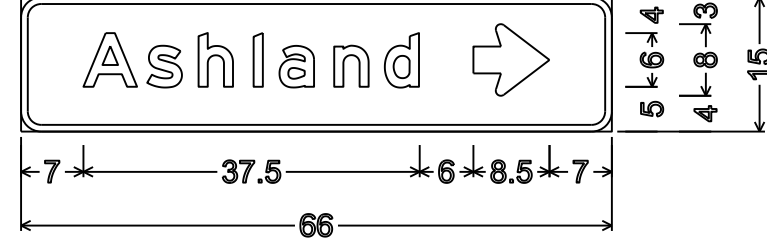
D1-1;
2.250" Radius, 0.750" Border



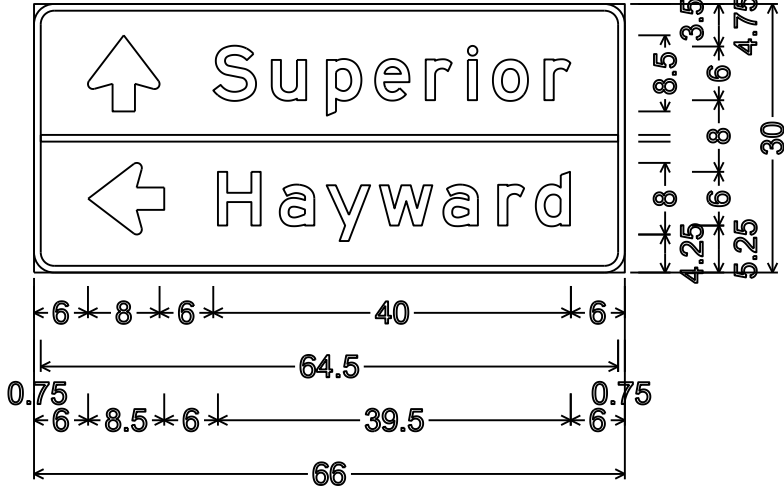
D1-1;
2.250" Radius, 0.750" Border



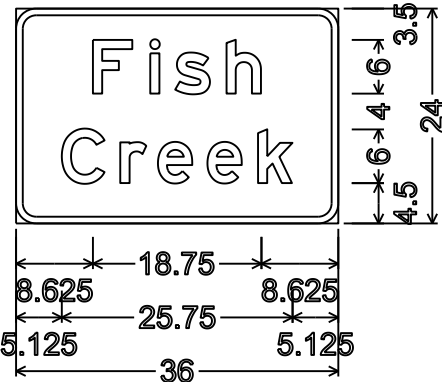
D1-1;
2.250" Radius, 0.750" Border



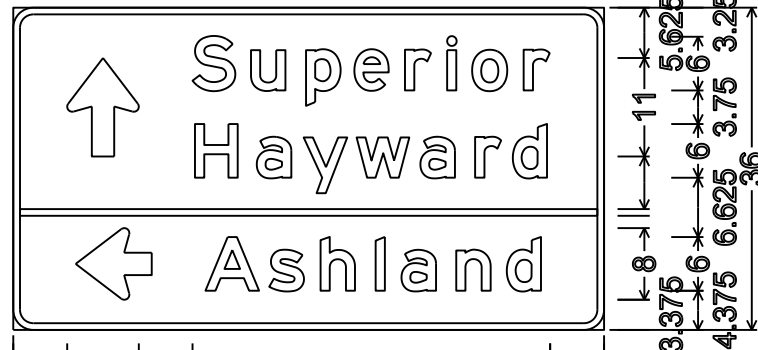
D1-1;
2.250" Radius, 0.750" Border



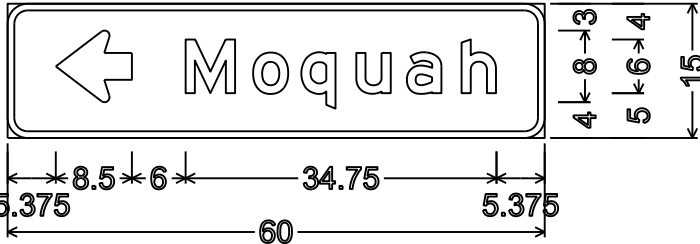
D1-2;
2.250" Radius, 0.750" Border



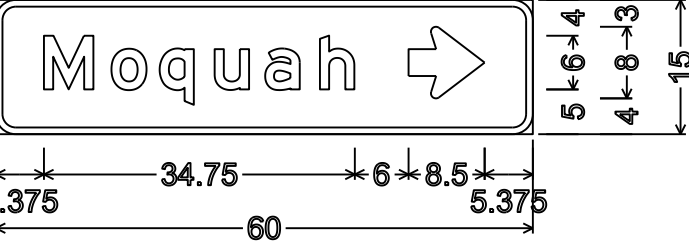
I3-1;
2.250" Radius, 0.750" Border



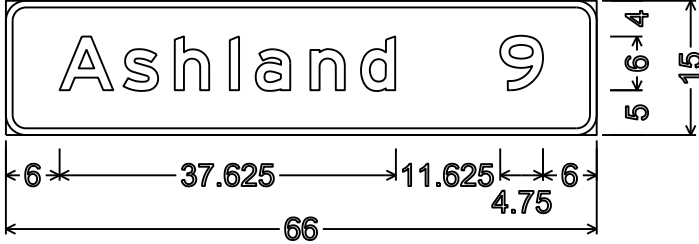
D1-3;
2.250" Radius, 0.750" Border



D1-1;
2.250" Radius, 0.750" Border



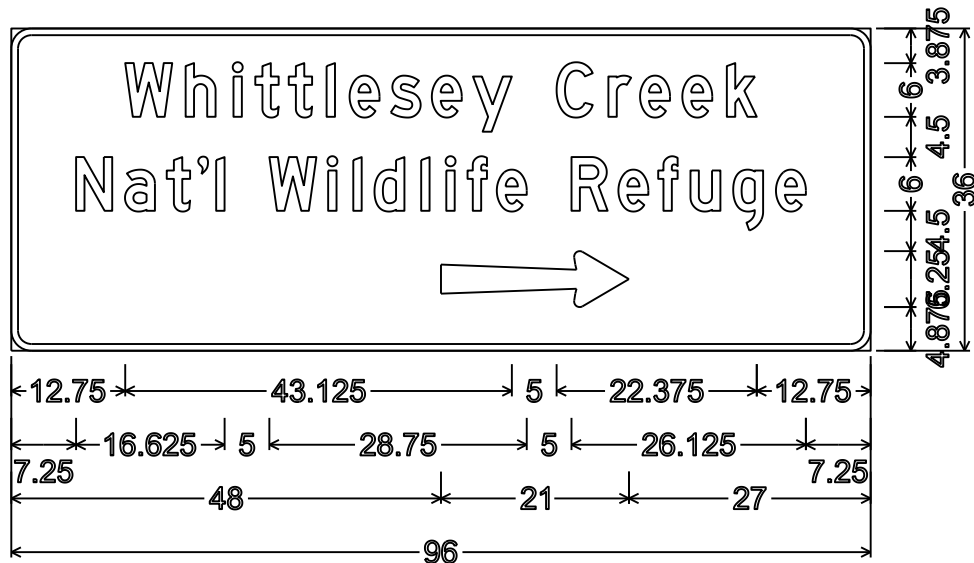
D1-1;
2.250" Radius, 0.750" Border



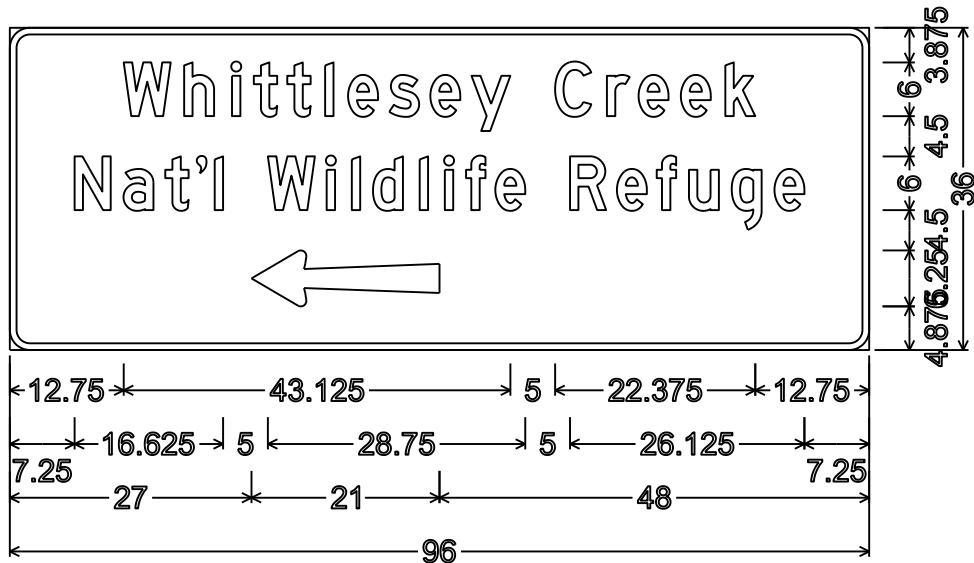
D2-1;
2.250" Radius, 0.750" Border

NOTES

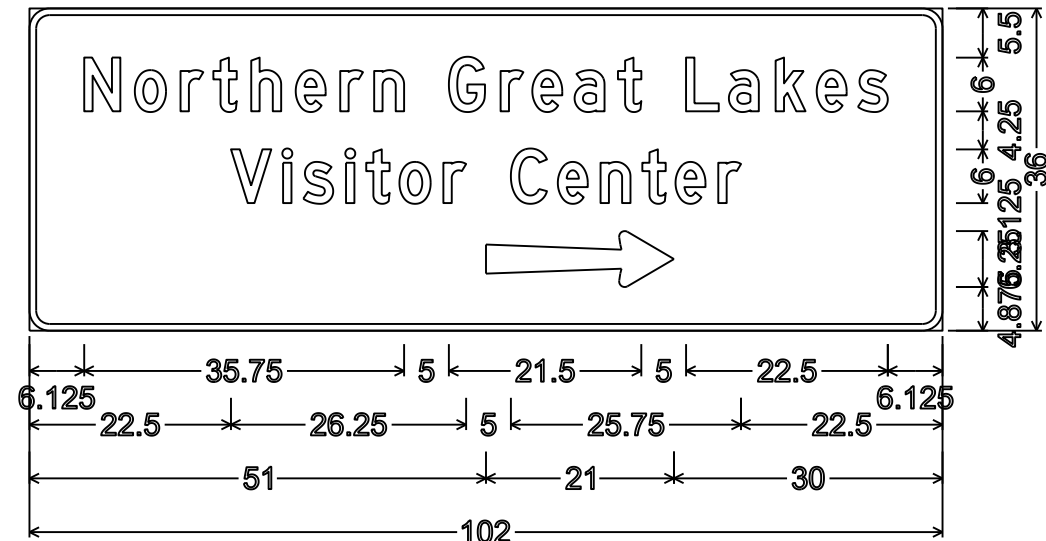
- 1. All Signs Type II - Type H Reflective
- 2. Color:
Background - GREEN
Message - WHITE
- 3. Message Series - E



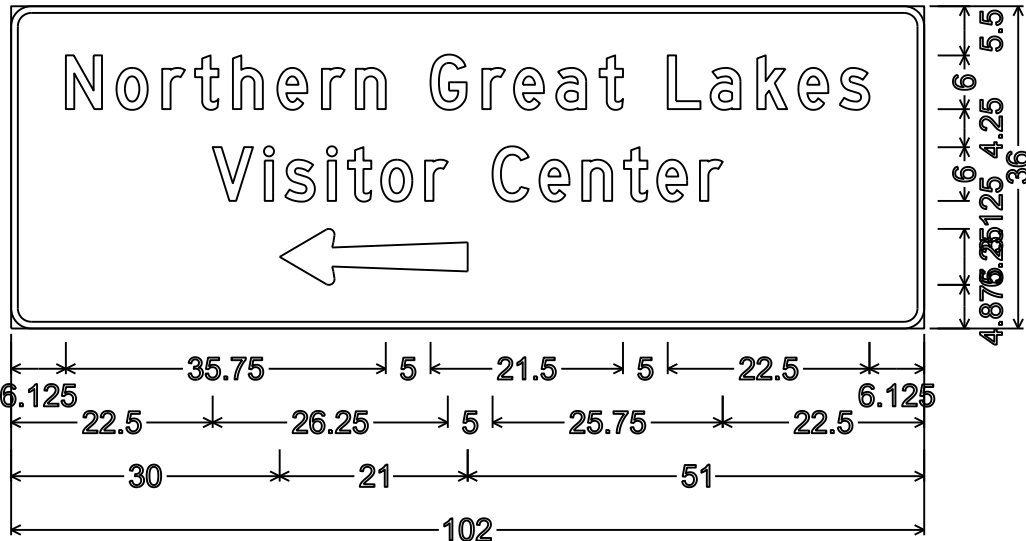
SP; 2.250" Radius, 0.750" Border, White on Brown;
"Whittlesey" D; "Creek" D; "Nat'l" D; "Wildlife" D; "Refuge" D



SP; 2.250" Radius, 0.750" Border, White on Brown;
"Whittlesey" D; "Creek" D; "Nat'l" D; "Wildlife" D; "Refuge" D



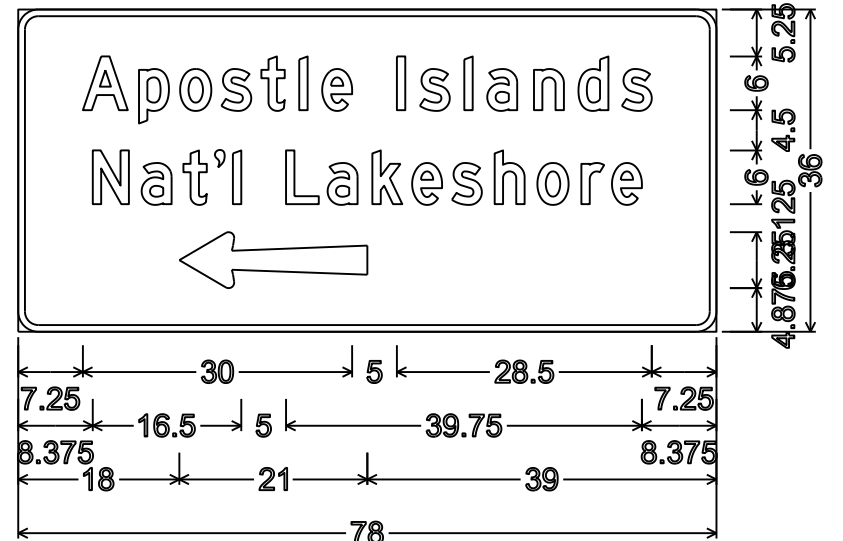
SP; 2.250" Radius, 0.750" Border, White on Brown;
"Northern" D; "Great" D; "Lakes" D; "Visitor" D; "Center" D



SP; 2.250" Radius, 0.750" Border, White on Brown;
"Northern" D; "Great" D; "Lakes" D; "Visitor" D; "Center" D

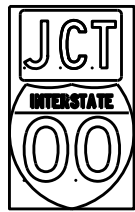
NOTES

1. All Signs Type II - Type H Reflective
2. Color:
Background - BROWN
Message - WHITE
3. Message Series - D

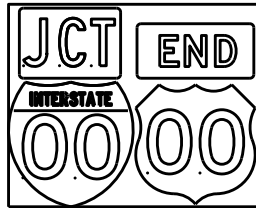


SP;
2.250" Radius, 0.750" Border, White on Brown;
"Apostle" D; "Islands" D; "Nat'l" D; "Lakeshore" D

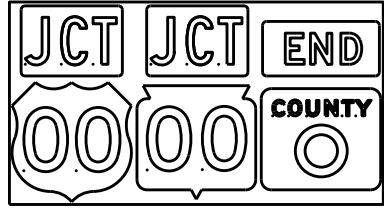
TYPICAL ASSEMBLIES



J1-1



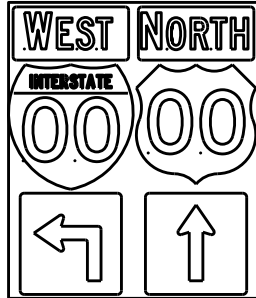
J1-2



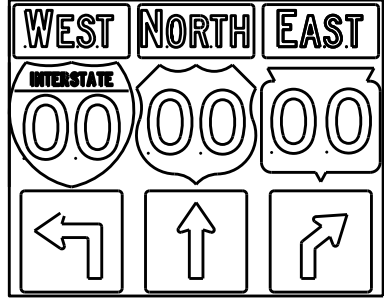
J1-3



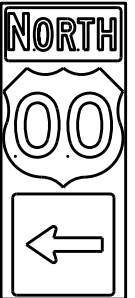
J2-1



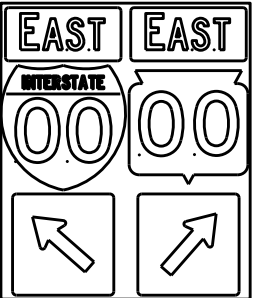
J2-2



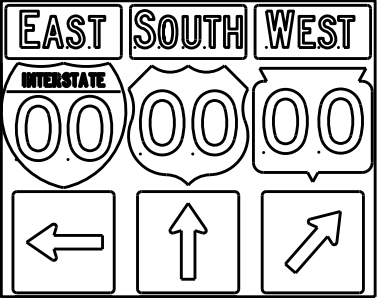
J2-3



J3-1



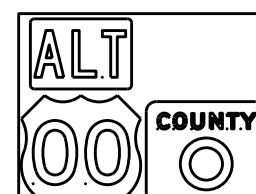
J3-2



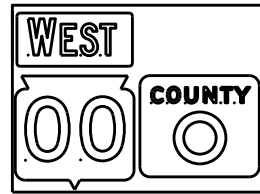
J3-3



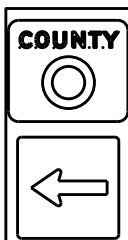
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1



J23-1

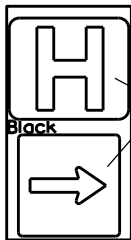


J22-1



JV

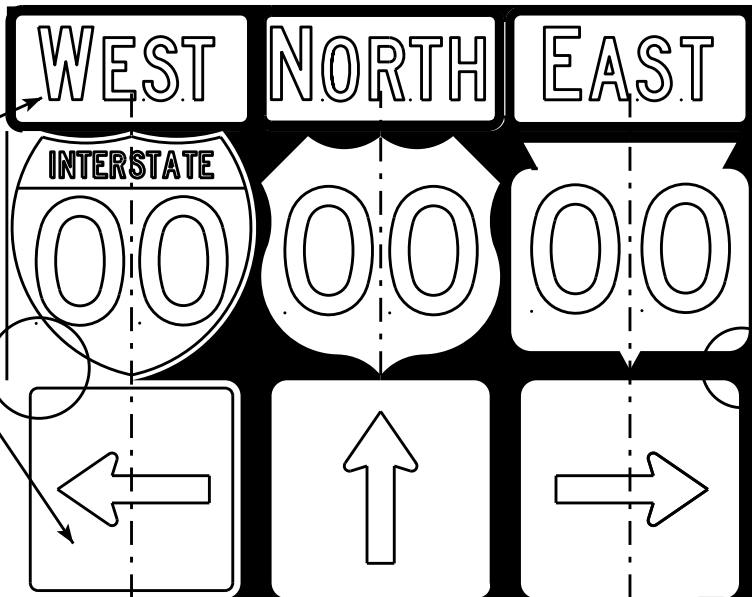
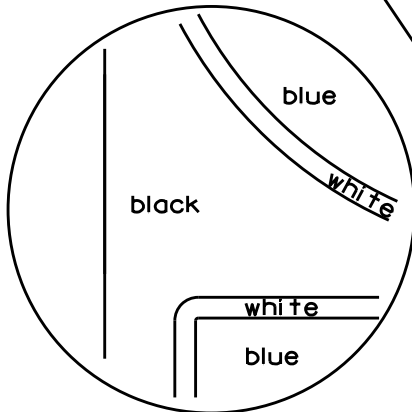
(Typical Vertical J-Assembly
See Note 10 and 11)



JH-1

Blue Background

[blue background
with interstate]



[black background]

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

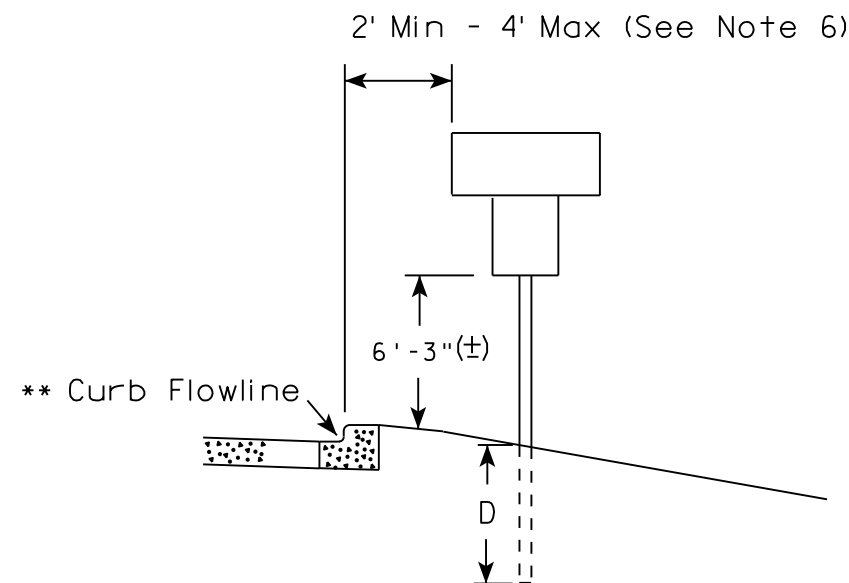
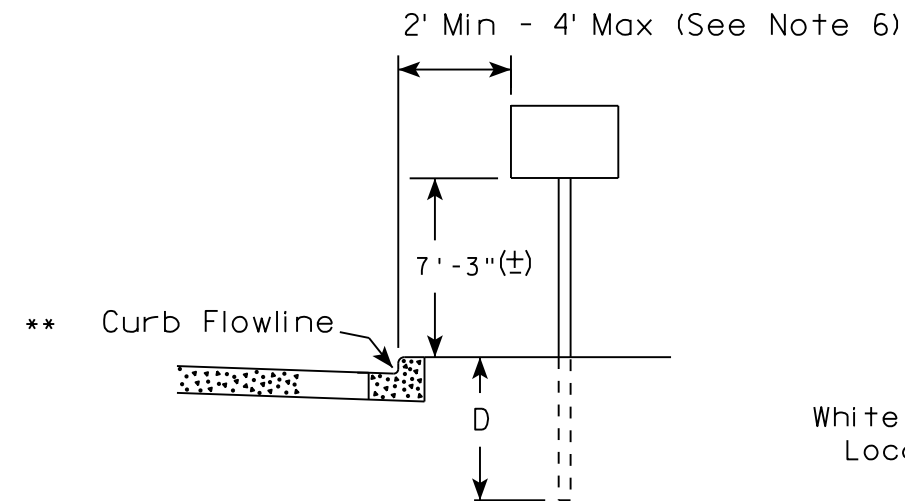
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 2/06/14 PLATE NO. A2-1S.8

NOTES

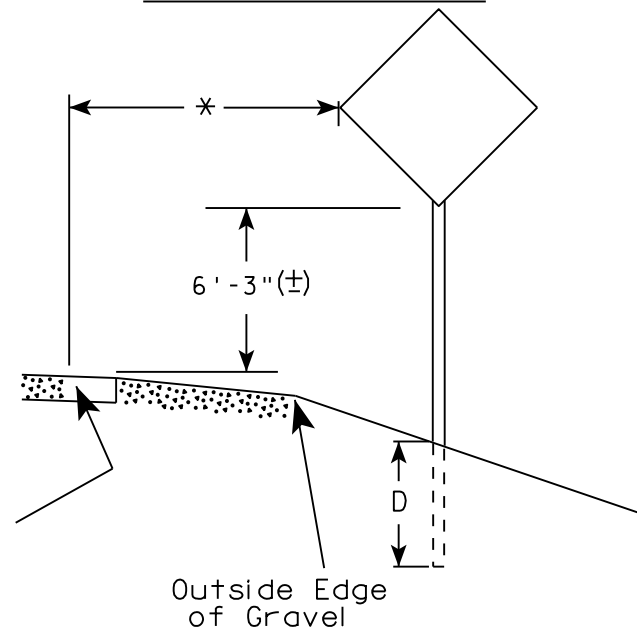
1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Black Non-reflective
Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

URBAN AREA

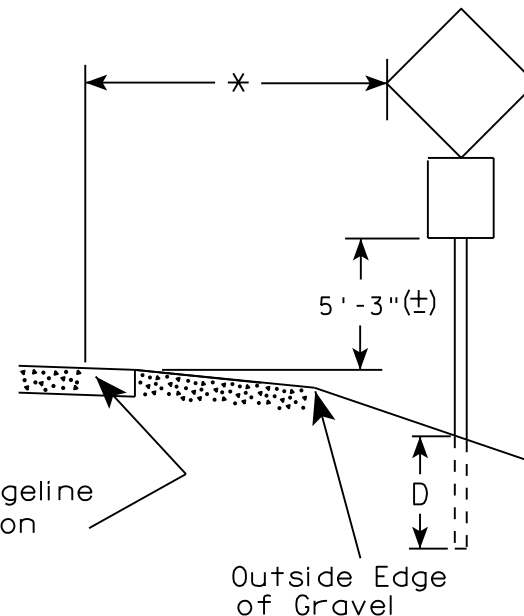


White Edgeline
Location

RURAL AREA (See Note 2)



White Edgeline
Location



Outside Edge
of Gravel

POST EMBEDMENT DEPTH

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

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

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

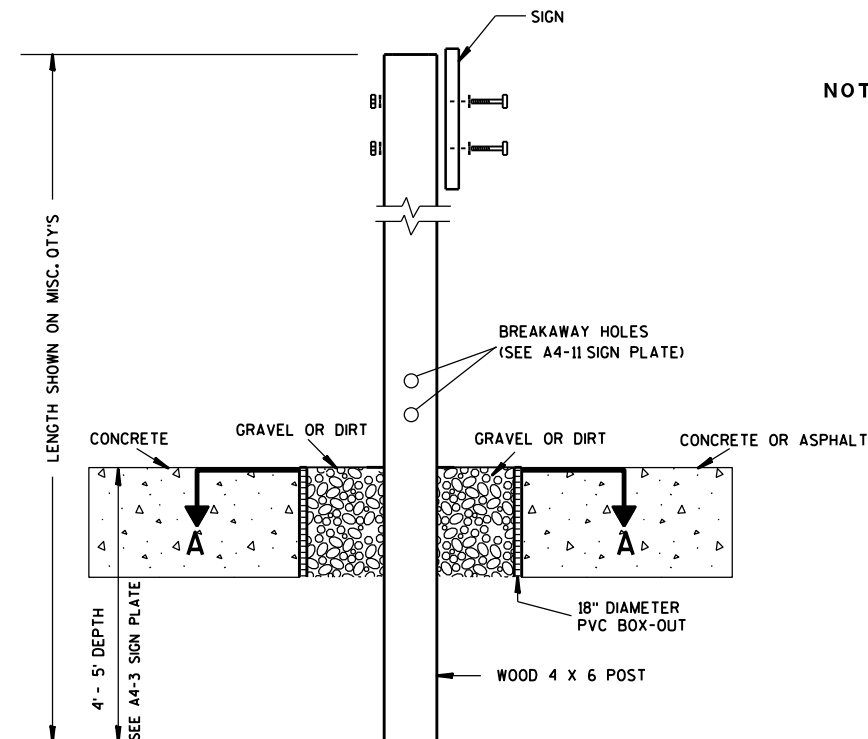
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

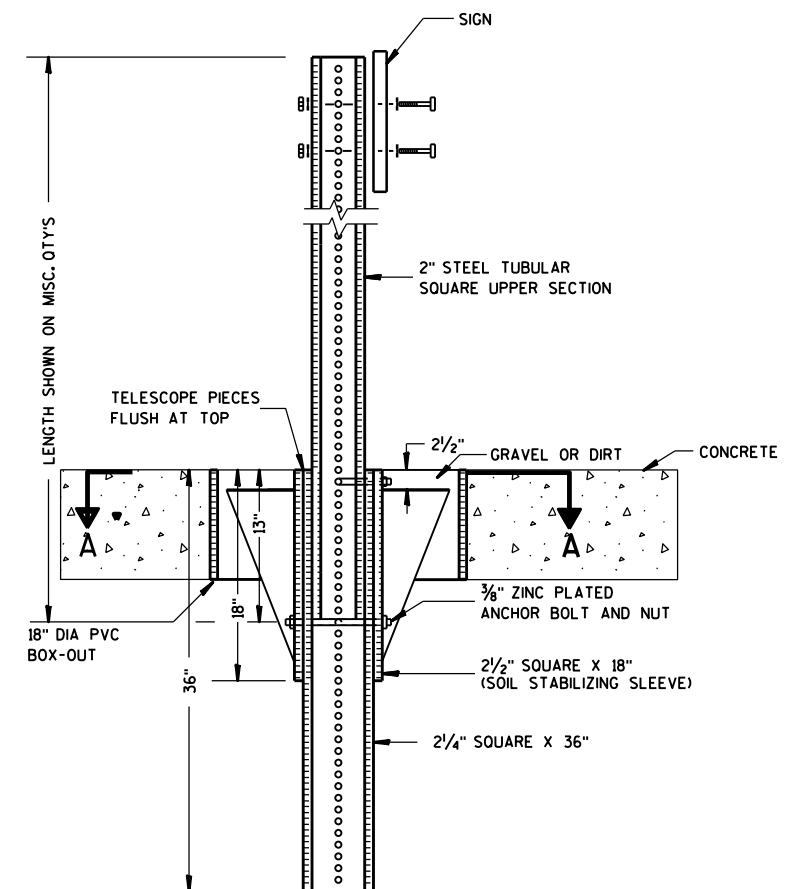
DATE 8/21/17 PLATE NO. A4-3.21



ELEVATION VIEW

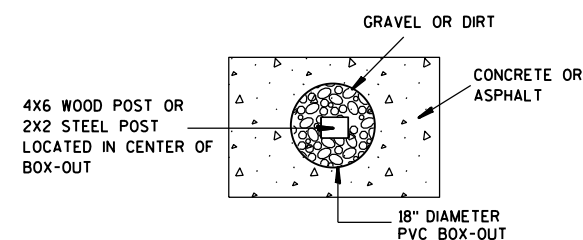
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

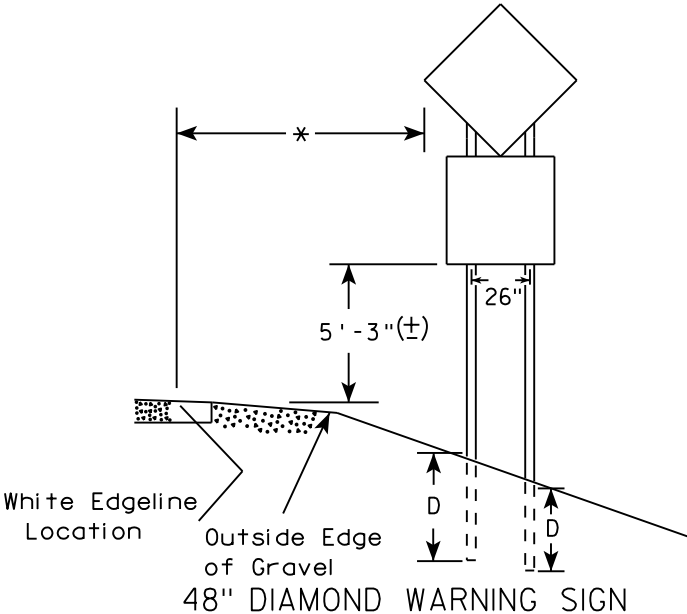
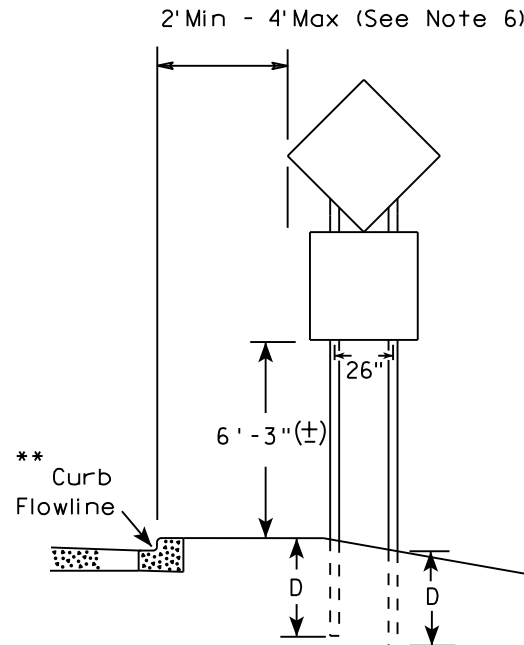
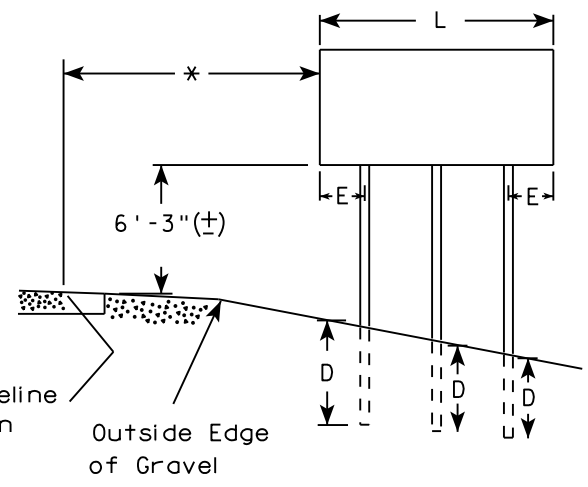
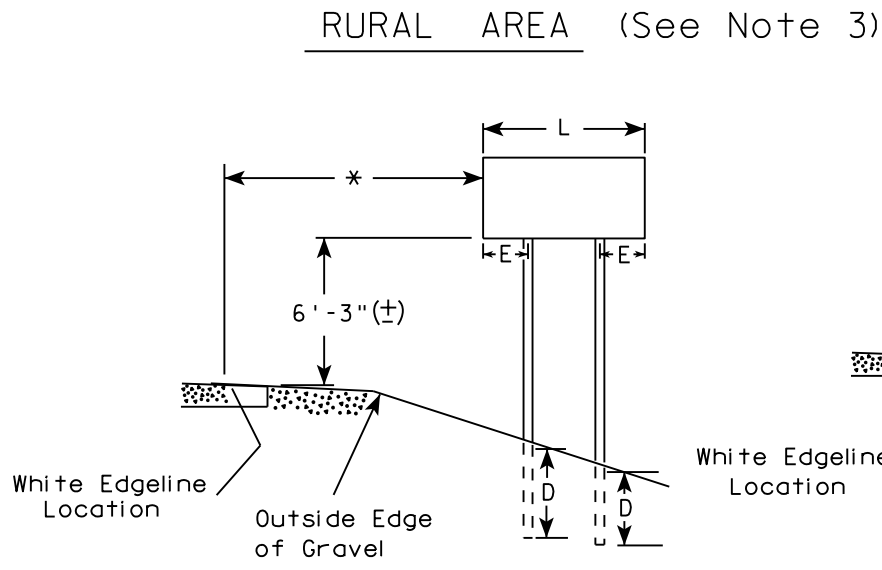
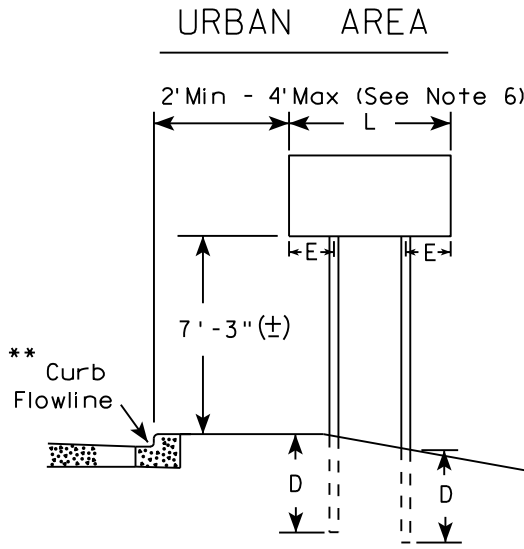
FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST
BOX-OUTS
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1



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

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

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

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

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

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

POST EMBEDMENT DEPTH

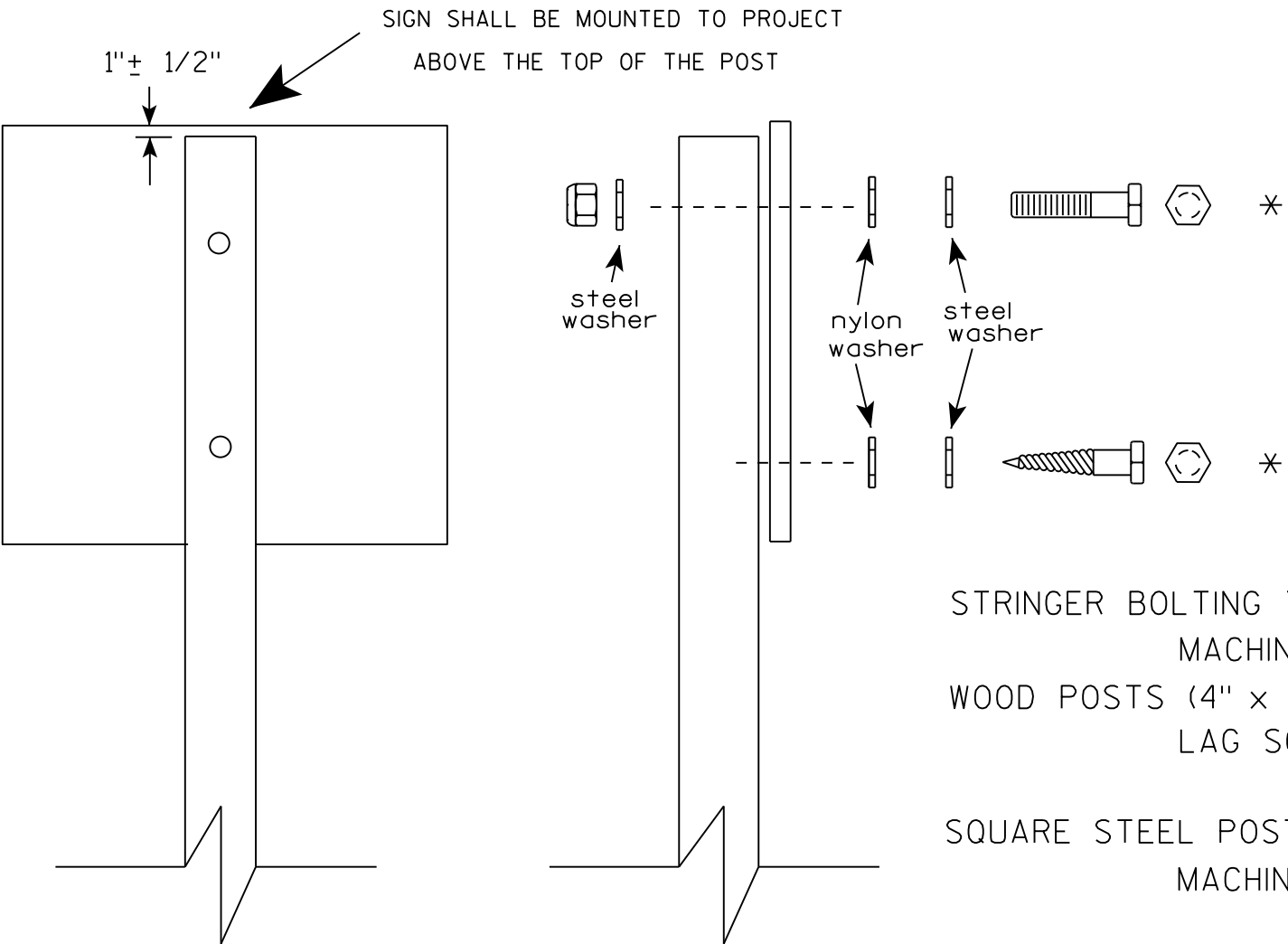
Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15



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

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

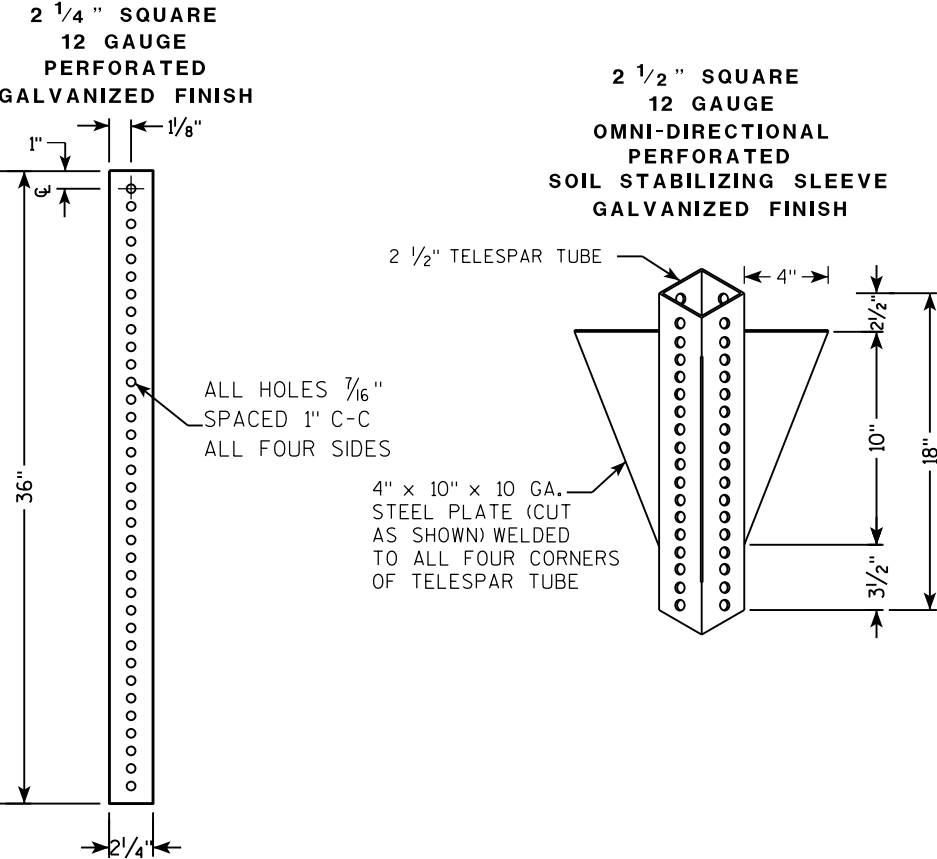
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
 - 3/8" X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 - 3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- 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

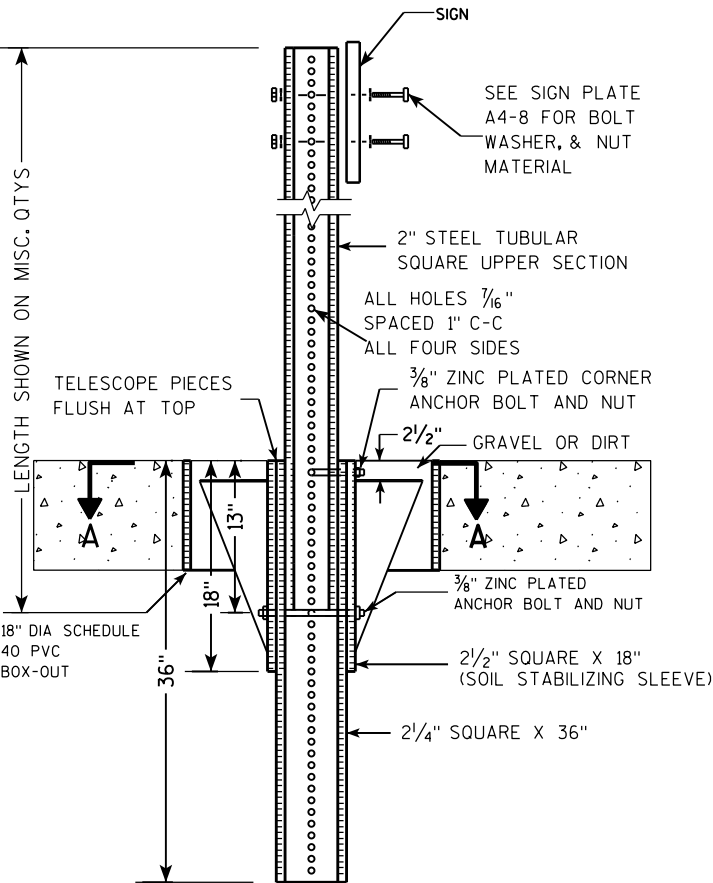
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 8/11/16	PLATE NO. A4-8.8

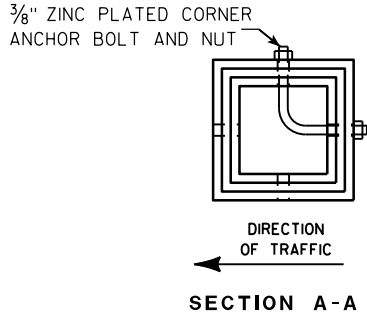
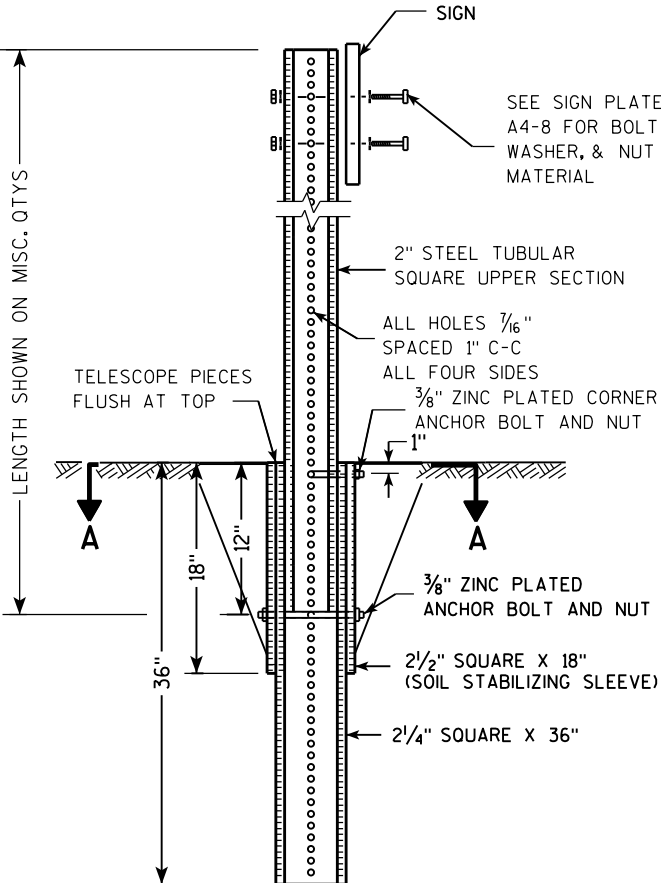
TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM



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



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



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

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

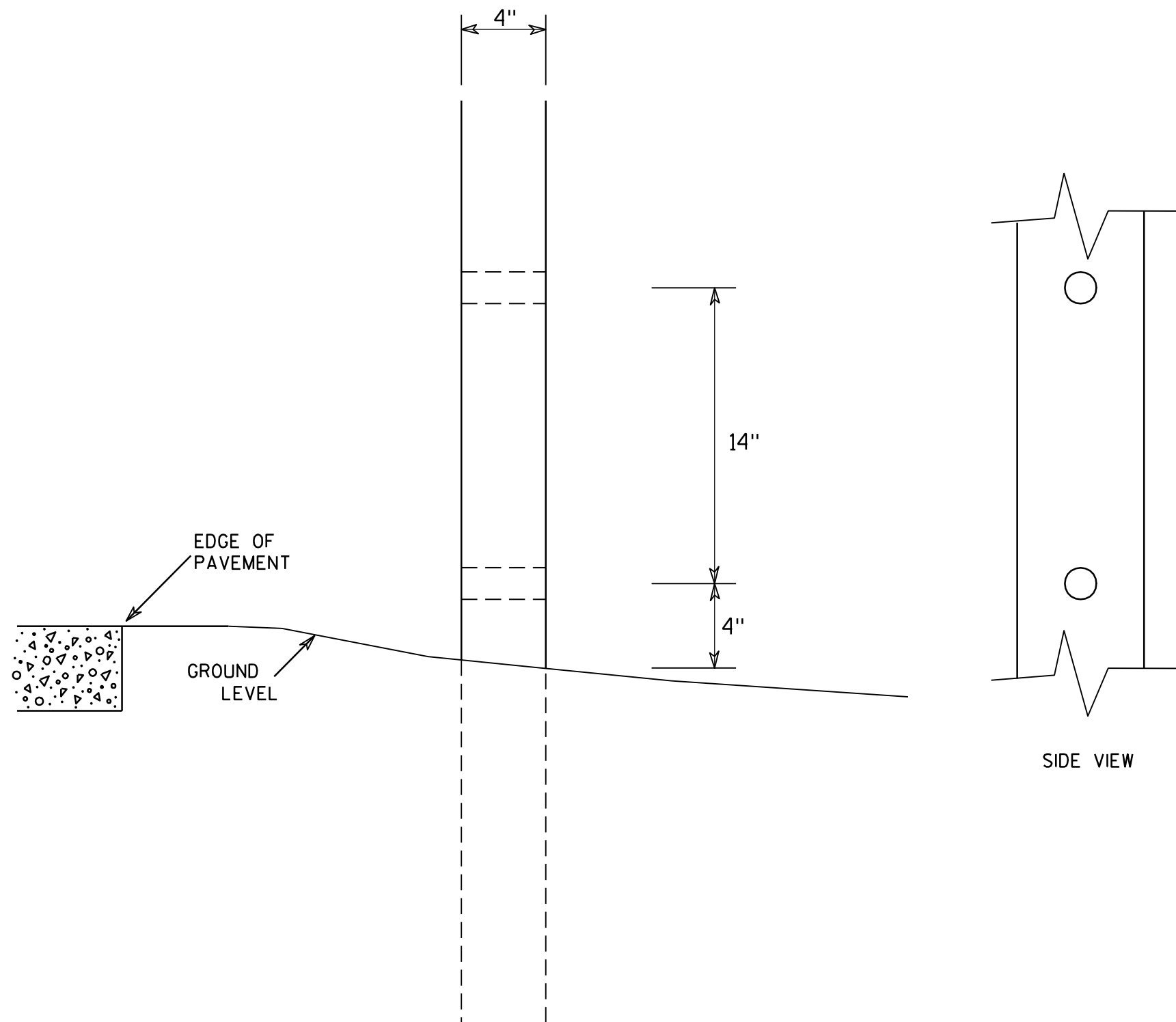
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/05/15 PLATE NO. A4-9.9

7



GENERAL NOTES

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

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

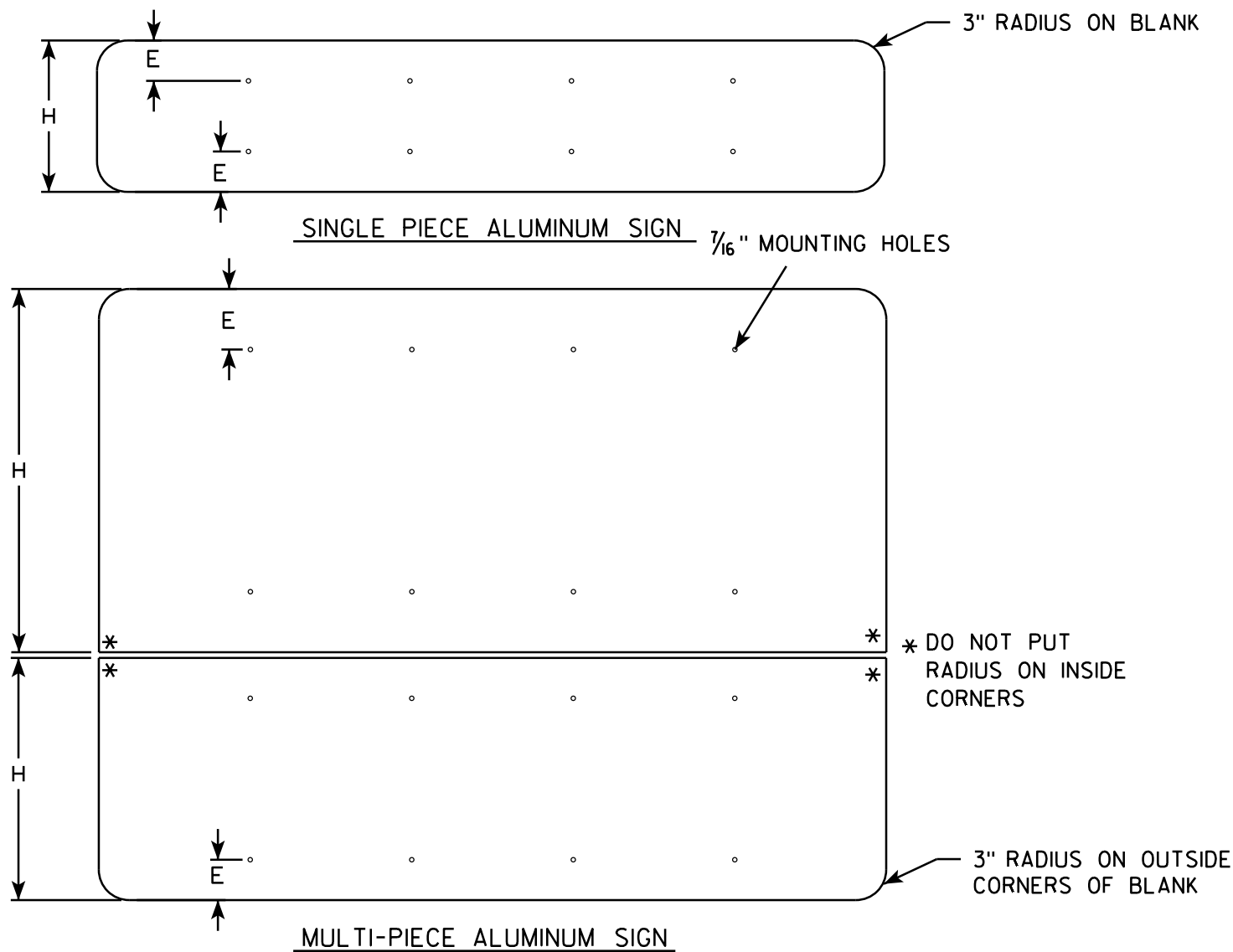
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

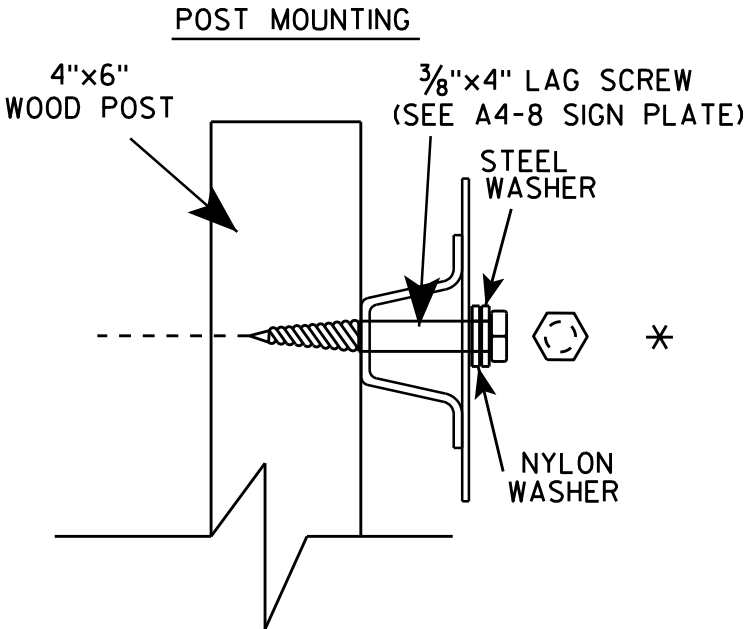
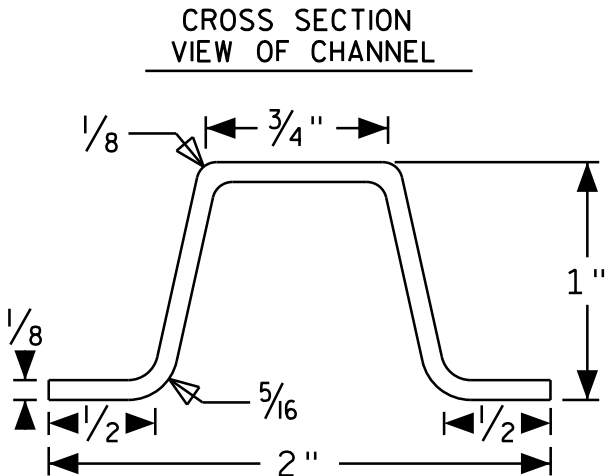
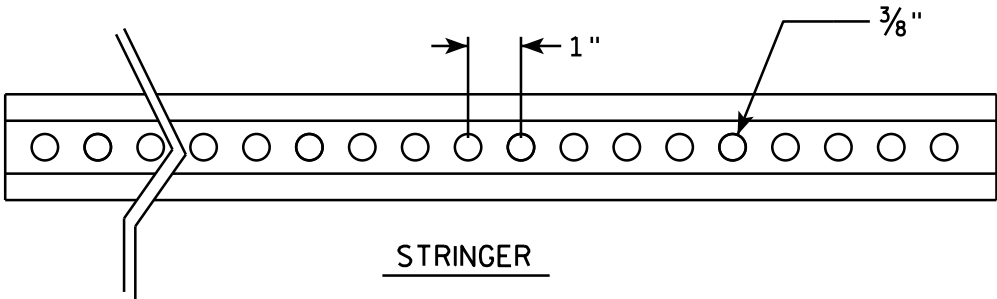
E



GENERAL NOTES

- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 36", DIMENSION E SHALL BE 4"
- SIGN STRINGER MATERIAL SHALL CONSIST OF STEEL CHANNEL POST SECTIONS, WEIGHING 1.12 LBS/FT IN ACCORDANCE WITH SECTION 633.2.1 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- SEE SIGN PLATE A4-8 FOR SIGN STRINGER BOLTING REQUIREMENTS.

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES			
78"	72"	2	16"	15"	31"	47"	63"
84"	72"	2	17"	16 1/2"	33 1/2"	50 1/2"	67 1/2"
90"	72"	2	18"	18"	36"	54"	72"
96"	90"	2	19"	19 1/2"	38 1/2"	57 1/2"	76 1/2"
102"	90"	2	20"	21"	41"	61"	81"
108"	90"	2	21"	22 1/2"	43 1/2"	64 1/2"	85 1/2"
114"	108"	3	15"	12"	27"	42"	57" 72" 87" 102"
120"	108"	3	16"	12"	28"	44"	60" 76" 92" 108"
126"	108"	3	17"	12"	29"	46"	63" 80" 97" 114"
132"	126"	3	18"	12"	30"	48"	66" 84" 102" 120"
138"	126"	3	19"	12"	31"	50"	69" 88" 107" 126"
144"	126"	3	20"	12"	32"	52"	72" 92" 112" 132"



SIGN STRINGER
MOUNTING REQUIREMENTS

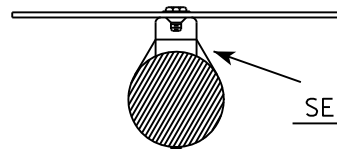
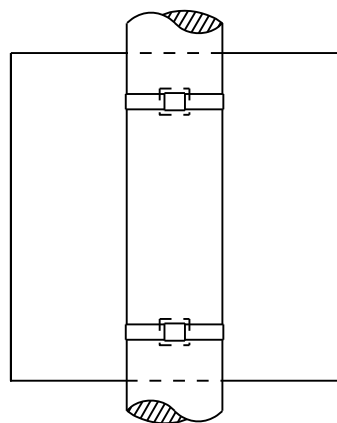
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/26/16 PLATE NO. A4-18.1

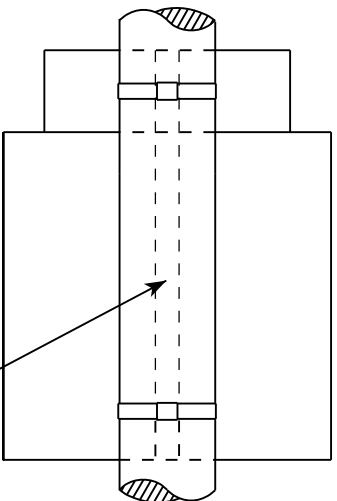
BANDING

SINGLE SIGN

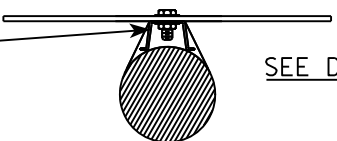


SEE DETAIL A

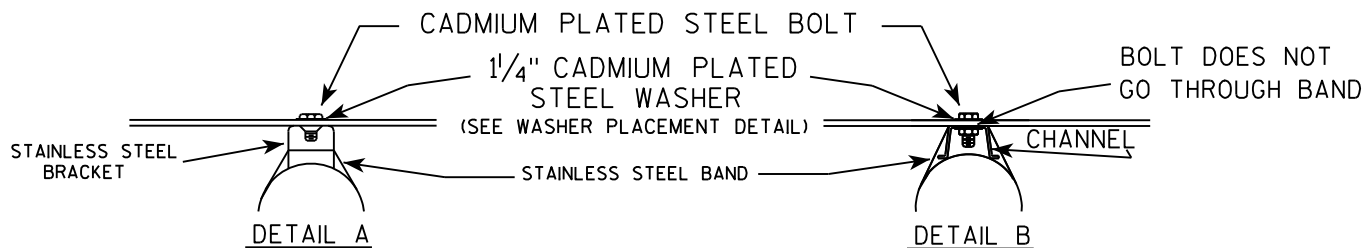
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



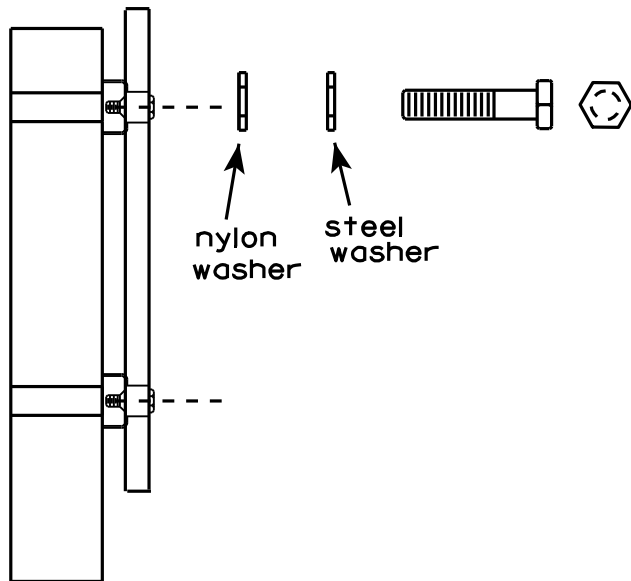
SEE DETAIL B



GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be $\frac{3}{4}$ " in width and 0.025" thickness.

WASHER PLACEMENT



nylon washer

steel washer

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

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 8/16/13

PLATE NO. A5-9.3

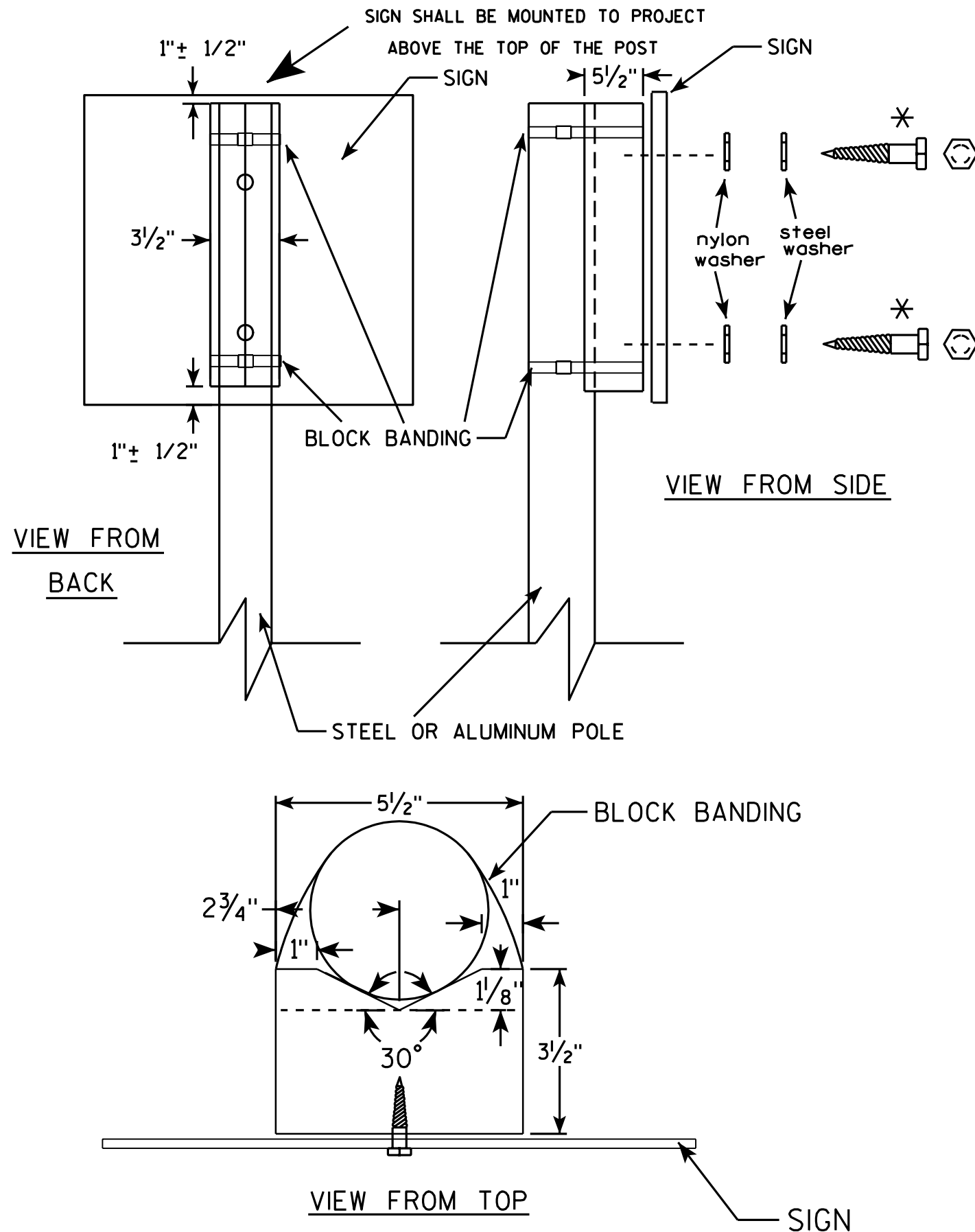
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



GENERAL NOTES

1. WOOD 4"x6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WISDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, 3/4" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
 - b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
 - c. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1 1/4" O.D. X 3/8" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1 1/4" O.D. X 3/8" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

* LAG BOLTS SHALL BE 3/8" X 2 1/2"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

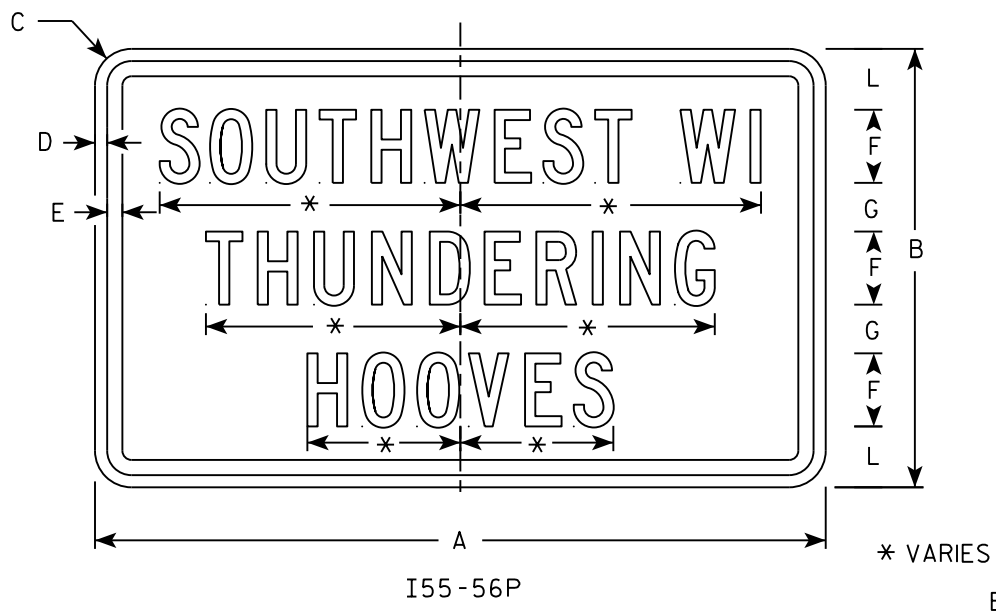
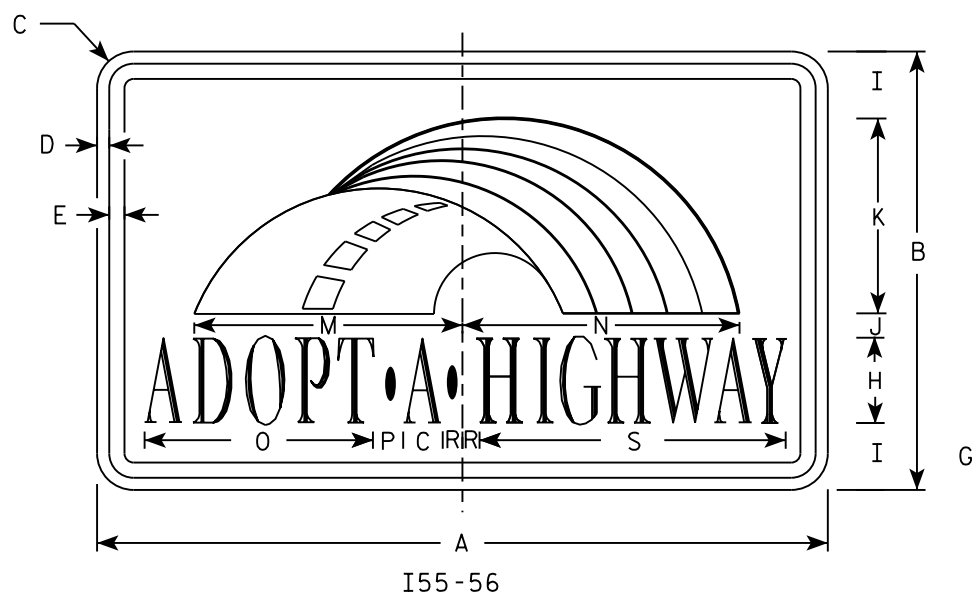
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 7/12/07 PLATE NO. A5-10.1

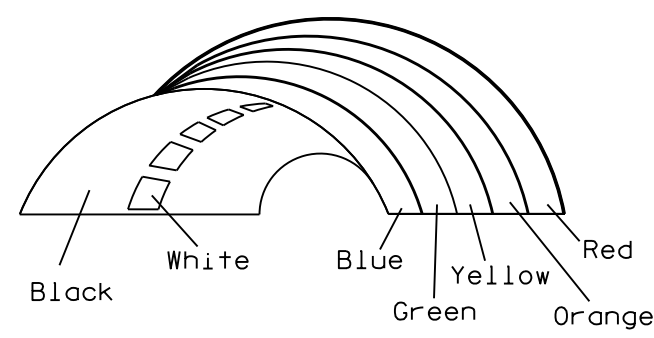
PROJECT NO:

SHEET NO:

E



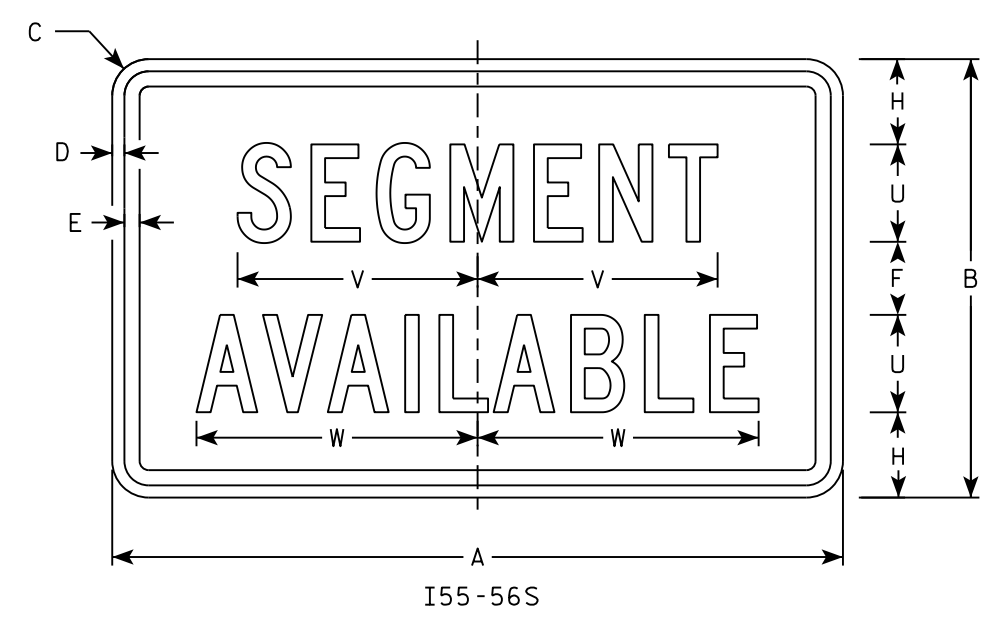
Background Colors of Symbol*



*1/4" Black Border between each color of rainbow and border of rainbow

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - (See Note 4)
3. Message Series - (See Note 5)
4. Border - Blue
Adopt a Highway - Red
All other Text - Blue
5. Adopt a Highway - Dutch 8011L
All other Text - Series C
6. Contractor shall provide and install a new post bracket in accordance with the I55-56B sign detail.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	18	1 1/2	1/2	5/8	3	2	3 1/2	2 3/4	1	8	2 1/2	11 1/4	11 1/8	9 3/8	1 1/4		3/4	12 5/8	7 1/2	4	9 7/8	11 1/2				3.75
3																											
4																											
5																											

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

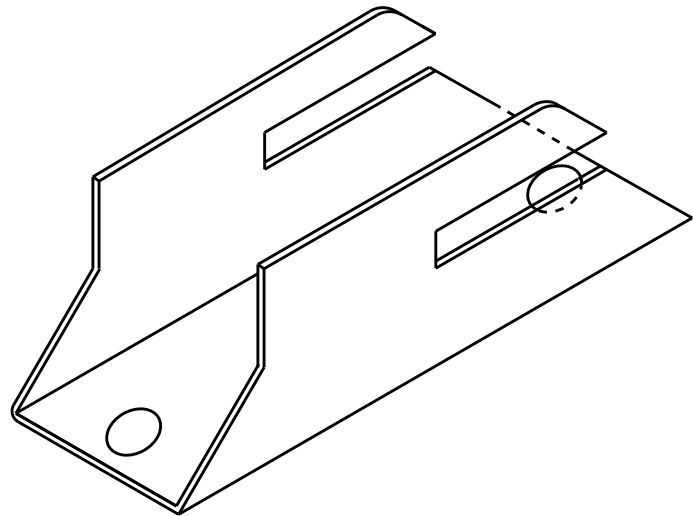
STANDARD SIGN
I55-56

WISCONSIN DEPT OF TRANSPORTATION

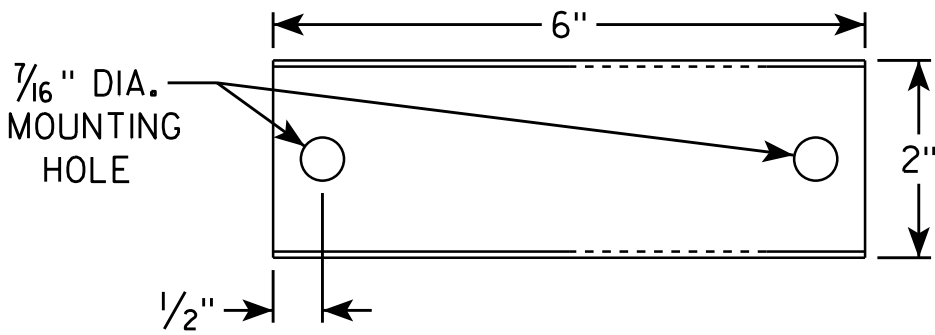
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/20/18 PLATE NO. I55-56.4

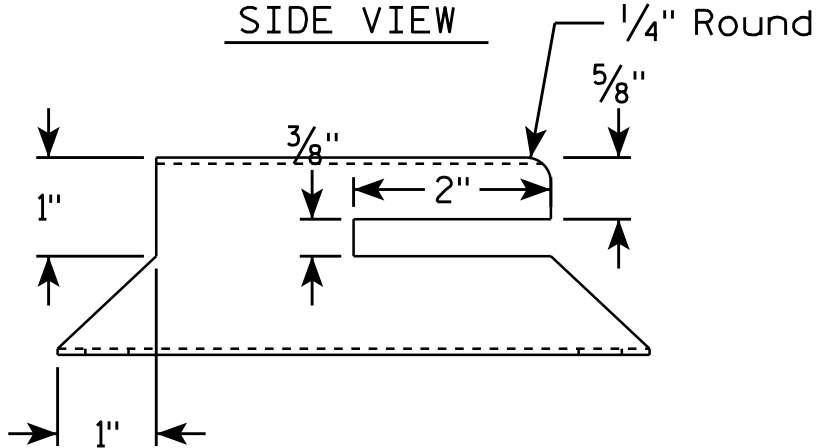
ISOMETRIC VIEW



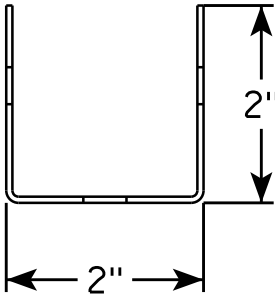
TOP VIEW



SIDE VIEW



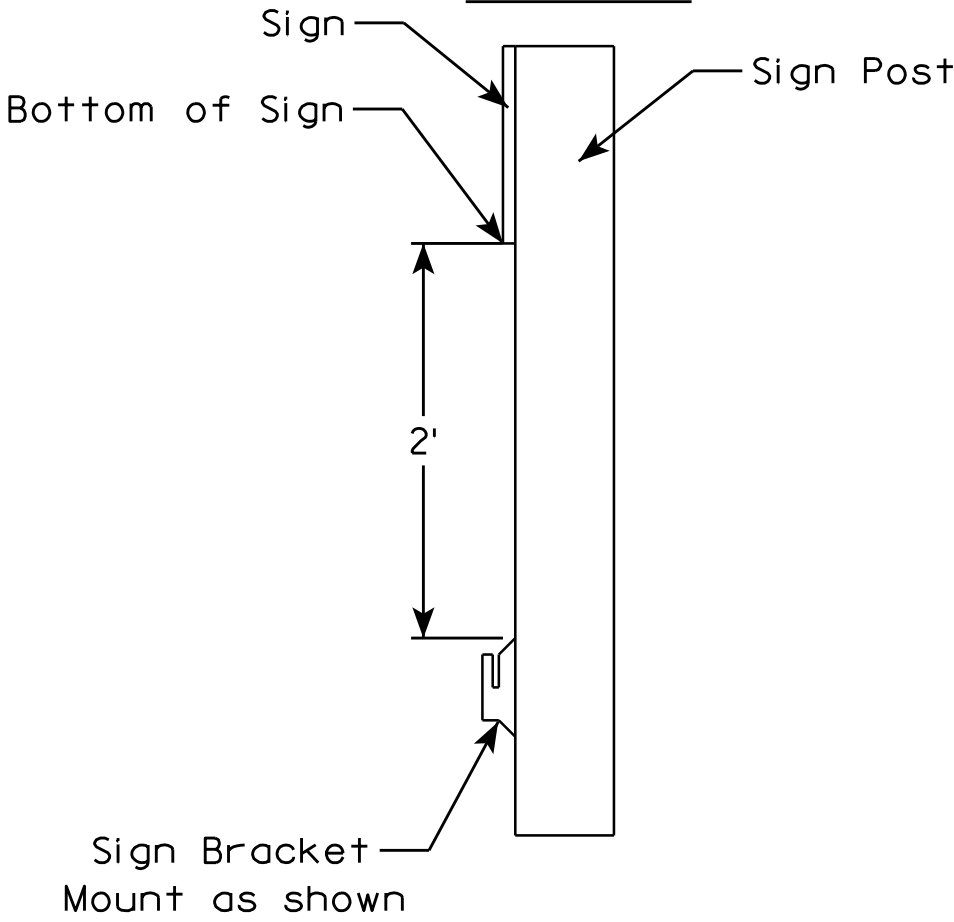
END VIEW



NOTES

1. Must be capable of permanent attachment to a wood or steel channel sign post utilizing the fastening hardware specified on the A4-8 sign plate.
2. Shall be entirely primed and painted with two coats of a black powder coated enamel paint.
3. Shall be made with 12 gauge steel, and incorporate no welds, no hinged components, no threaded lock-type components, and no parts which are loose or can be separated from the main body.
4. Shall have rounded edges with at least 1/8" radii.
5. Shall not have unrounded and uncoated metal edges which can contact the back surface of the roll-up sign.
6. Top of bracket shall be mounted 2' below the bottom of the I55-56 sign.
7. Cost of bracket and fastening hardware shall be incidental to the I55-56 sign.

SIDE VIEW

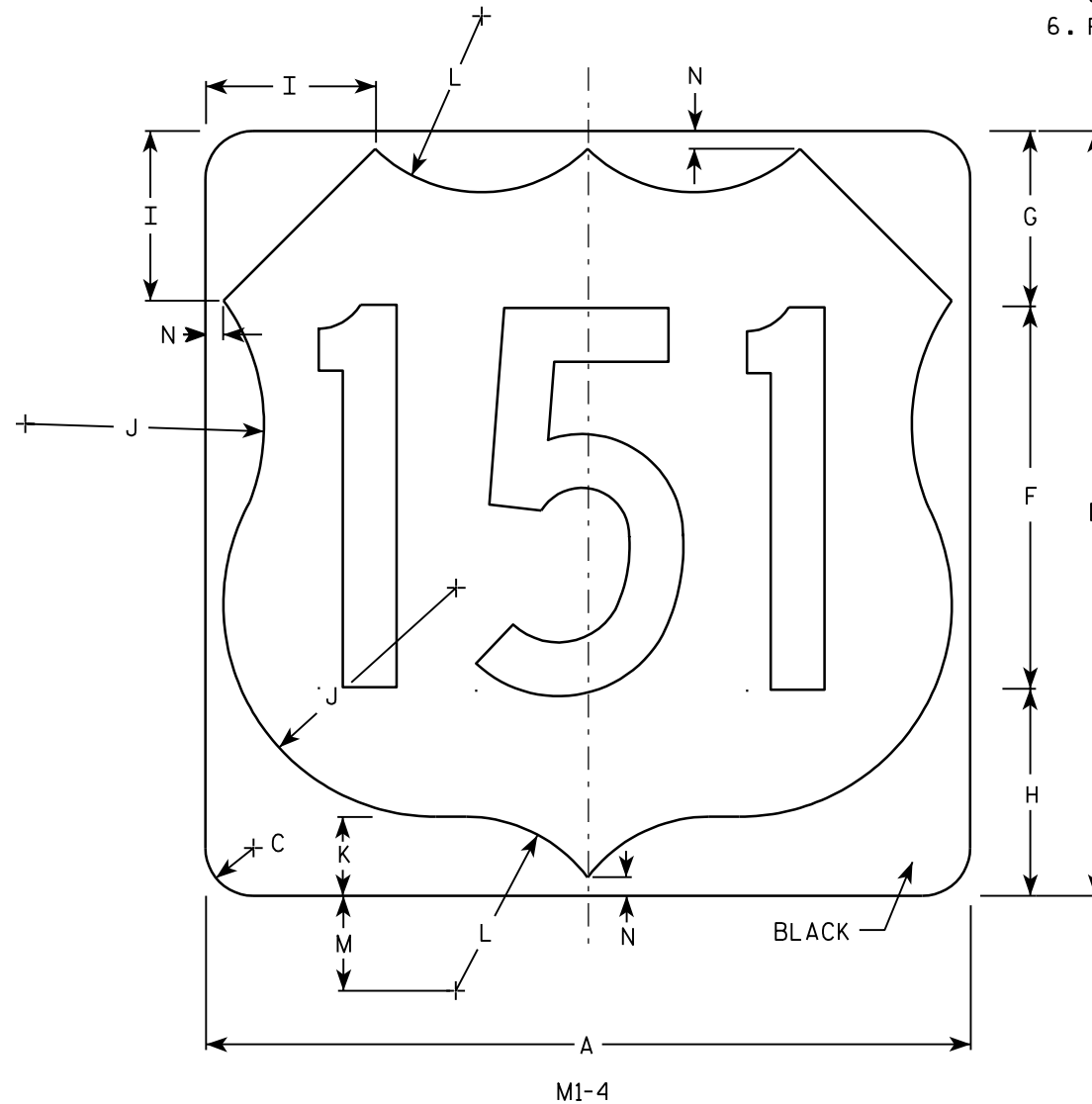
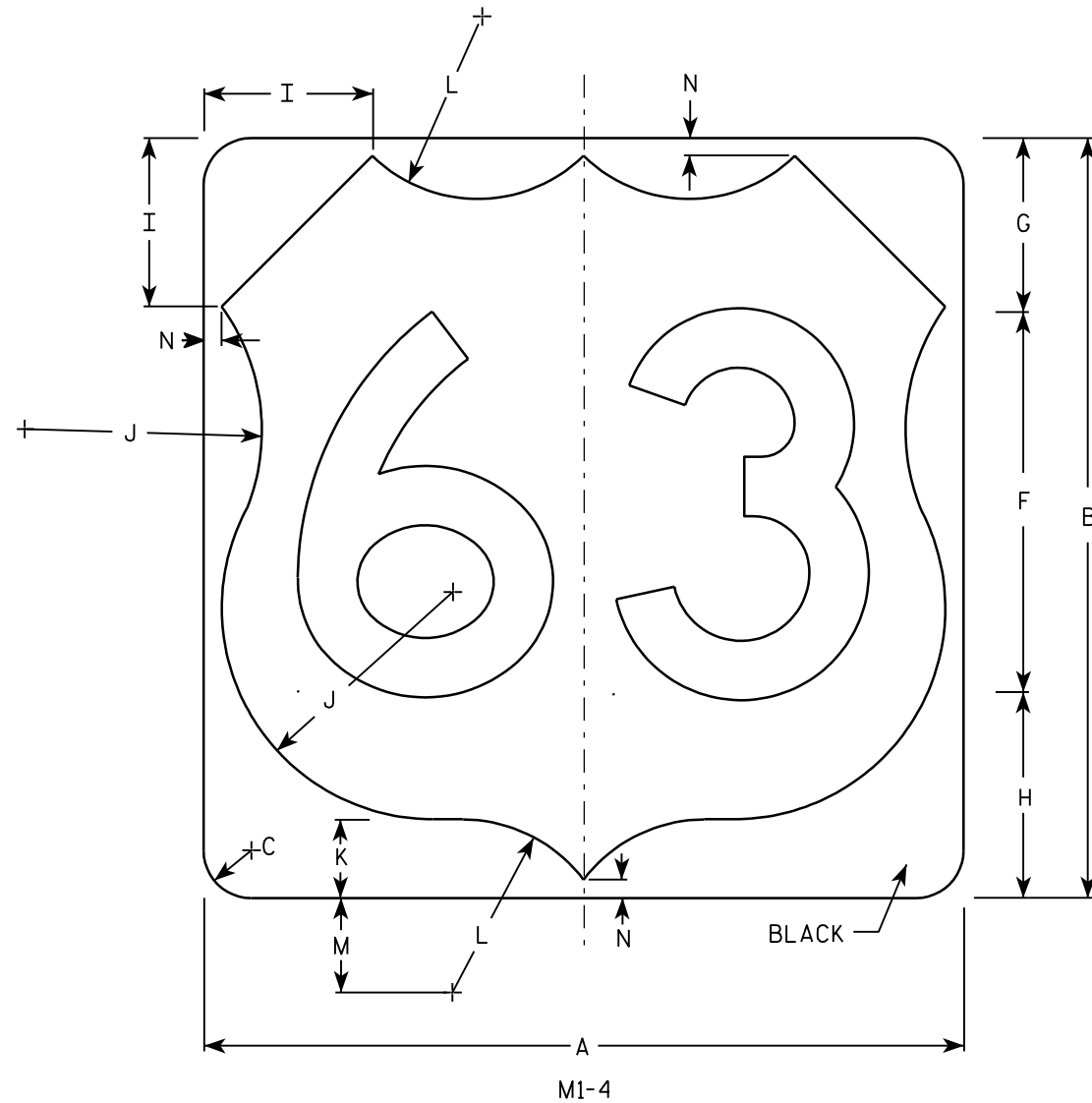


ROLLUP SIGN BRACKET
I55-56B

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 4/26/16 PLATE NO. I55-56B.2

NOTES

1. Sign is Type II - See Note 6 - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White & Black - See Note 6
Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base
material is plywood but borders shall be rounded
as shown. When base material is metal, the
corners and borders shall be rounded.
5. Substitute appropriate numerals and adjust
spacing as per Plate A10-1.
6. Permanent Signs
Background - Type H Reflective
Detour or other temporary signs
Background - Reflective



Metric equivalent
for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Areq sq. ft.	Area m ²
1																												
2	24	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0	.36
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E
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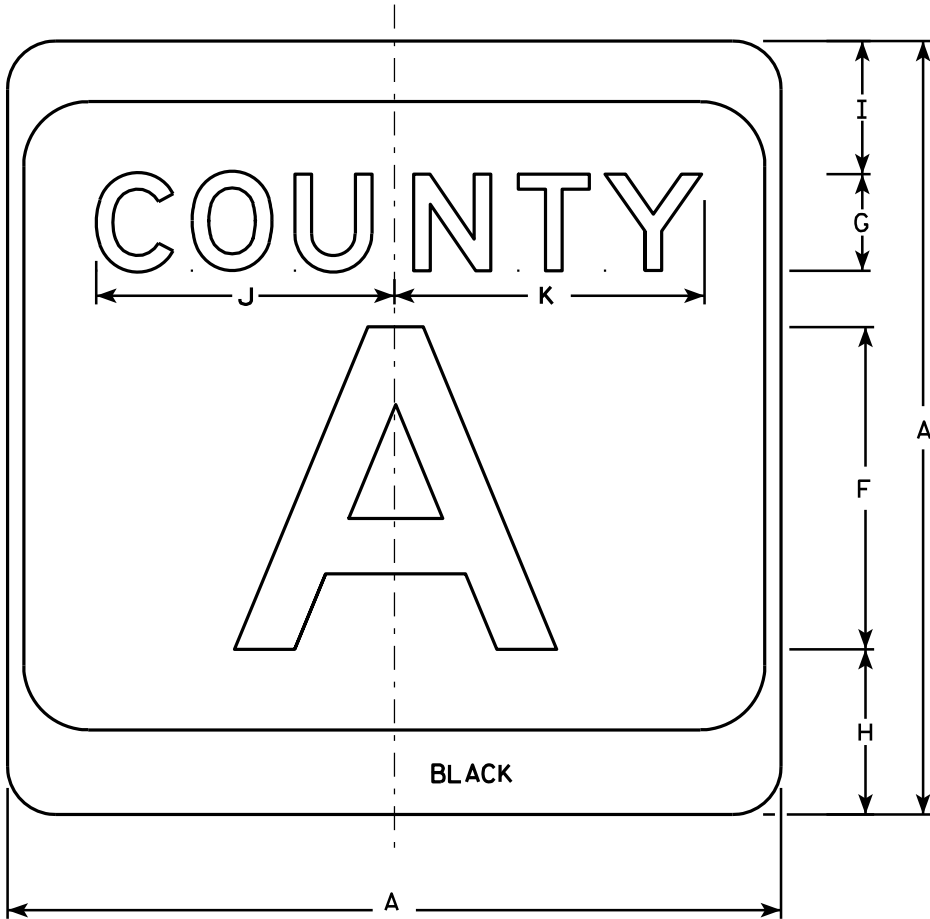
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

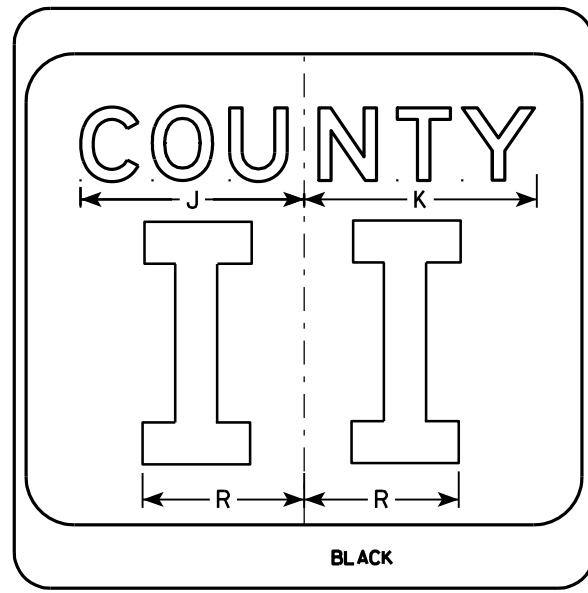
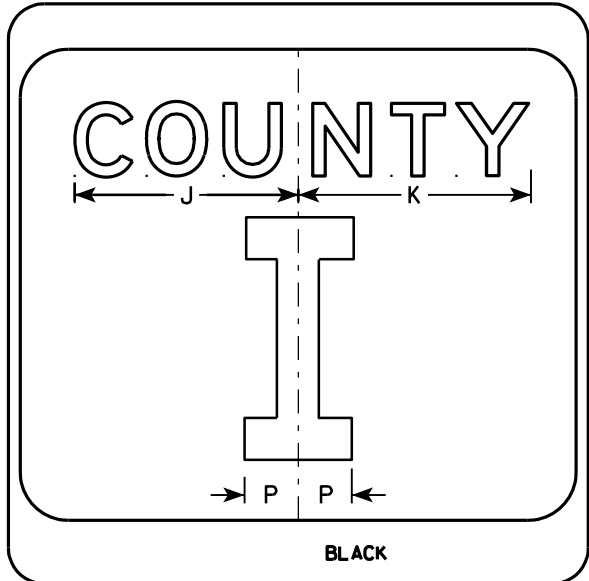
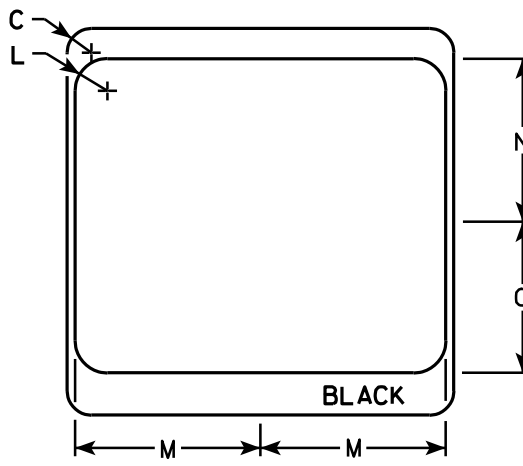
APPROVED
Matthew R. Rauch
For State Traffic Engineer

DATE 08/25/05 PLATE NO. M1-4.9

7



M1-5A



NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White & Black - See Note 7
Message - Black
3. Message Series - see Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Message Series E for 1 letter.
Message Series D for 2 letters unless message is too big then Series C.
Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
Background - Type H Reflective
Detour or temporary Signs
Background - Reflective

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

CTH MARKER

M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

PROJECT NO:

HWY:

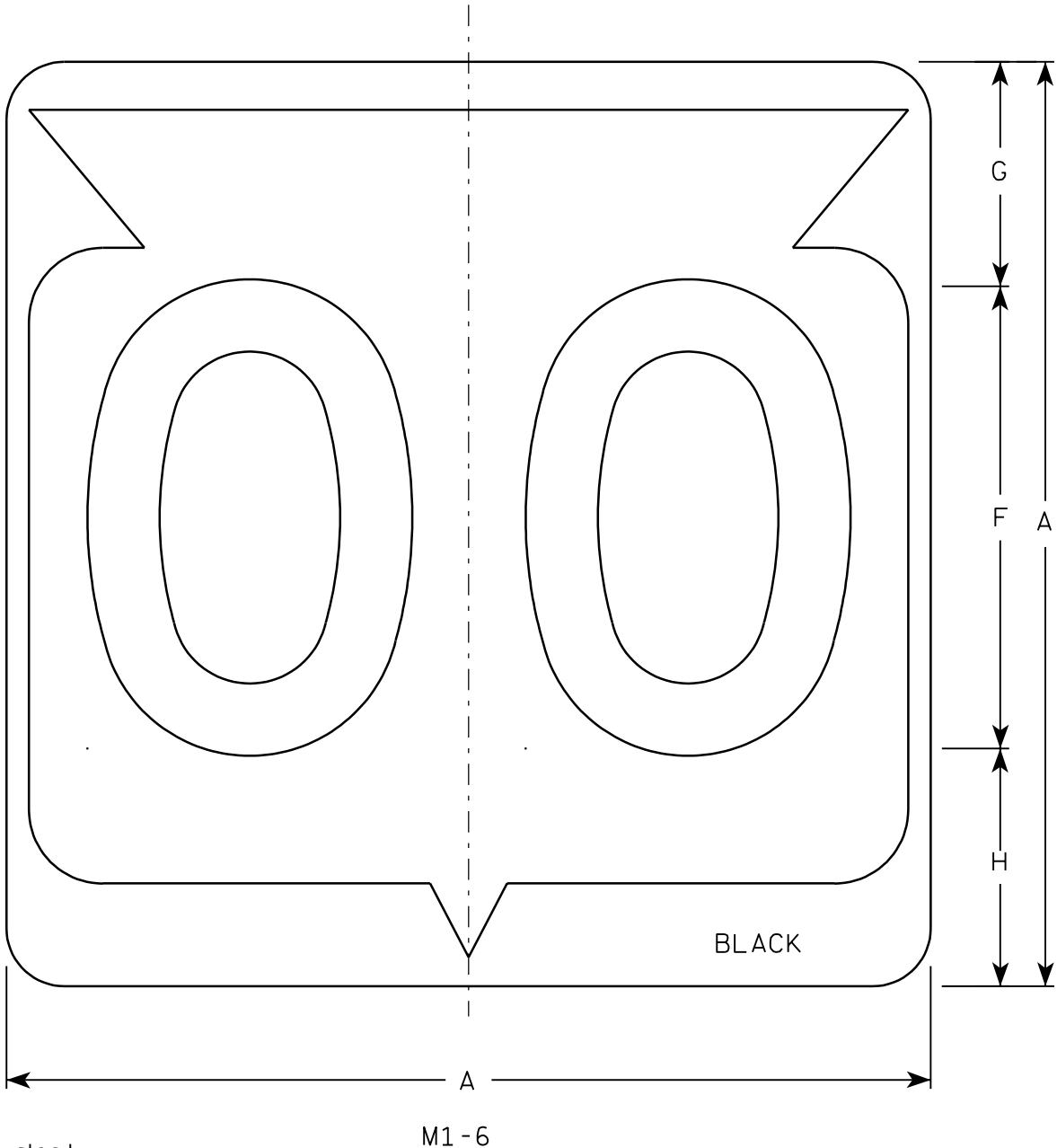
COUNTY:

SHEET NO:

E

7

7



Metric equivalent
for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m ²
1																												
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

FILE NAME : C:\Users\Projects\tr_stdp\late\M16.DGN

PLOT DATE : 13-OCT-2005 14:55

PLOT BY : DITJPH

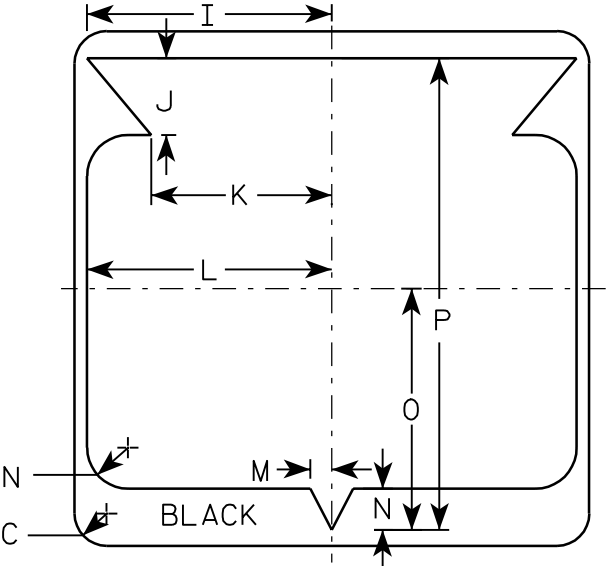
PLOT NAME :

PLOT SCALE : 6.715871:1.000000

WISDOT/CADDS SHEET 42

NOTES

1. Sign is Type II - See Note 6 - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White & Black - See Note 6
Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base
material is plywood but borders shall be rounded
as shown. When base material is metal, the
corners and borders shall be rounded.
5. Substitute appropriate Series numerals and
adjust spacing as per plate A10-1.
6. Permanent Signs
Background - Type H Reflective
Detour or temporary Signs
Background - Reflective



STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

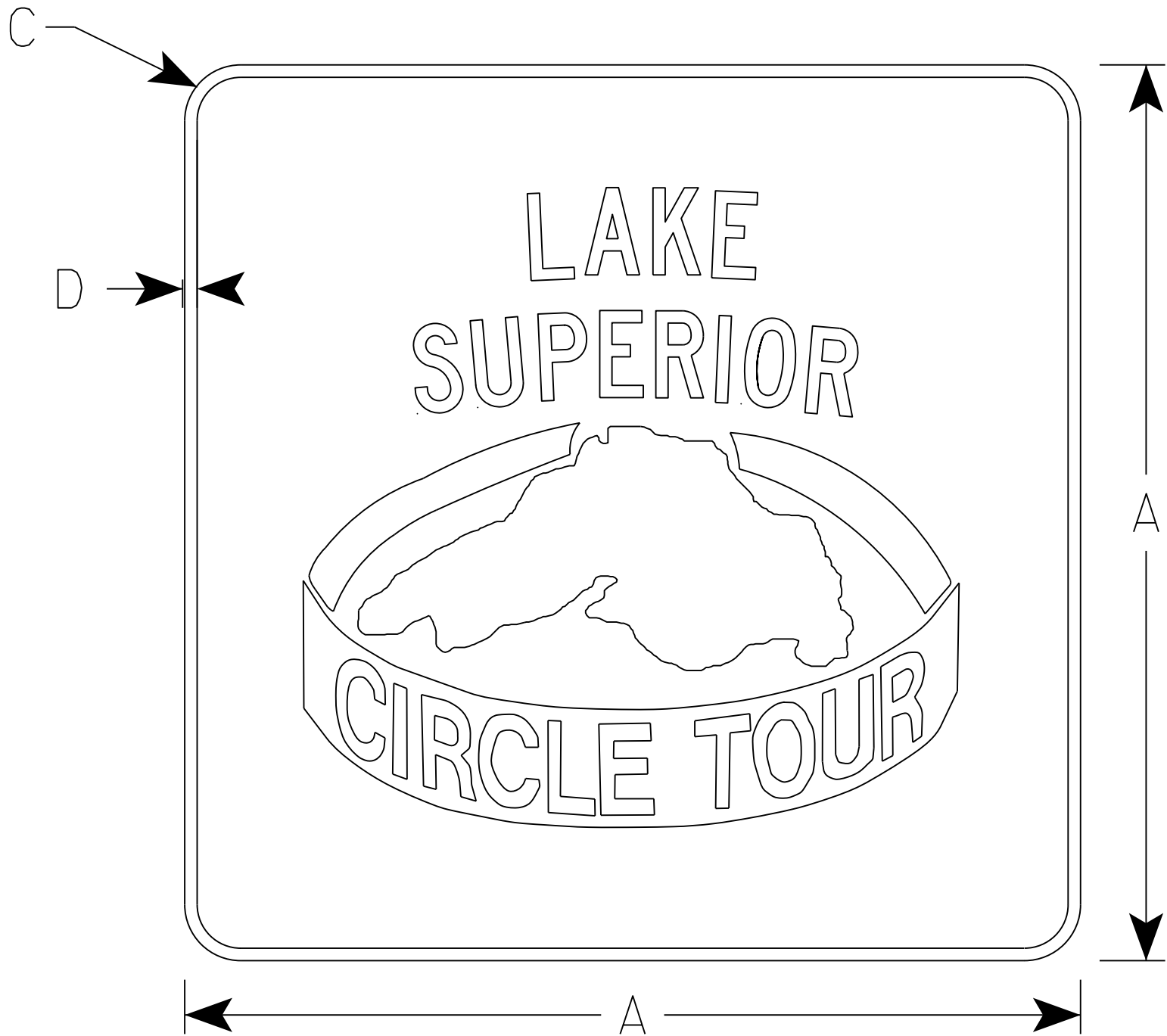
WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/20/02

PLATE NO. M1-6.9



NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
 - Background - Green
 - Message - White - Graphics - White
 - Circle Tour Message is Green
- 3. Message Series - Special
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m ²
1																												
2	24		1 1/8	1/2																							4.0	.36
3																												
4	36		1 5/8	3/4																							9.0	.81
5																												

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

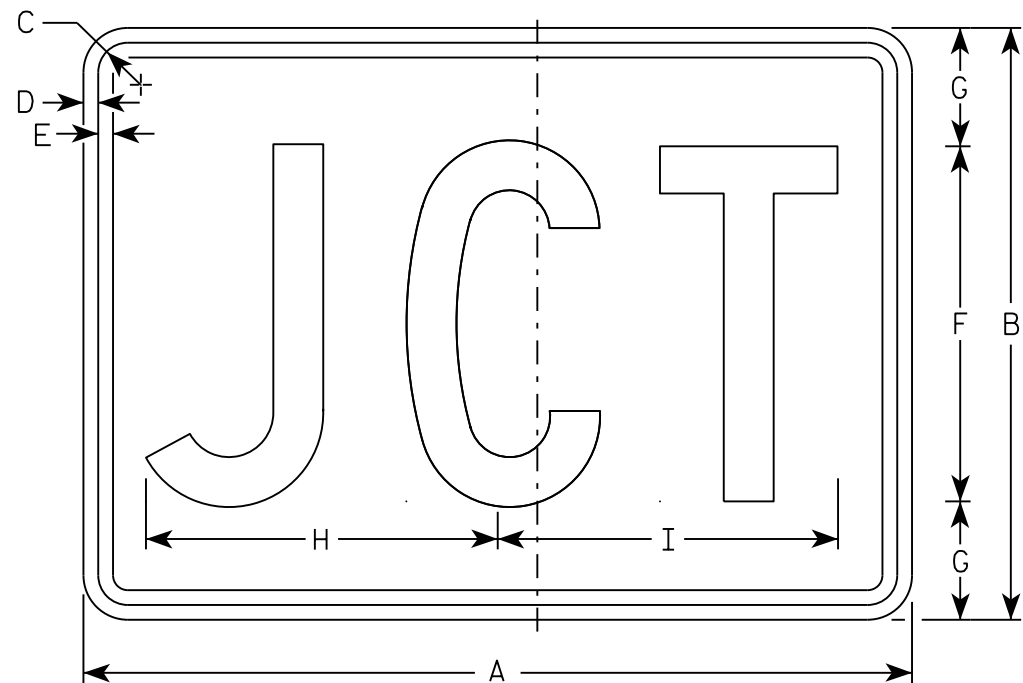
STANDARD SIGN

M1-91

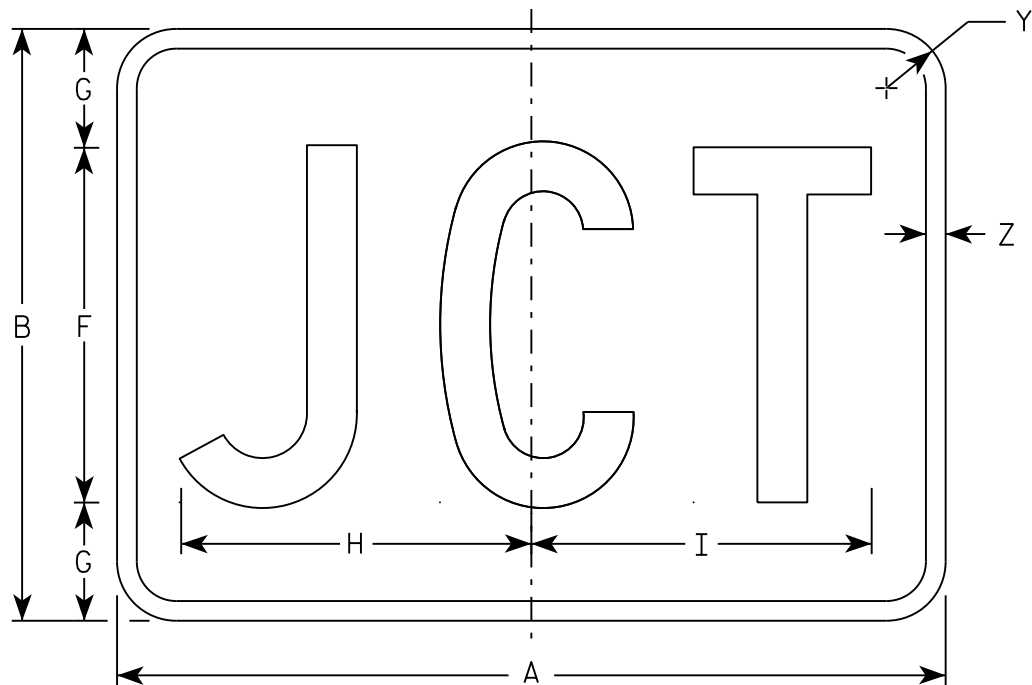
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/5/15 PLATE NO. M1-91.2



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

NOTES

- 1. Sign is Type II - Type H
- 2. Color:
 - Background - See note 5
 - Message - See note 5
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. M2-1 Background - White
 Message - Black
 MB2-1 Background - Blue
 Message - White
 MK2-1 Background - Green
 Message - White
 MM2-1 Background - White
 Message - Green
 MN2-1 Background - Brown
 Message - White
 MP2-1 Background - White
 Message - Blue
 MR2-1 Background - Brown
 Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

STANDARD SIGN

M2 - 1

WISCONSIN DEPT OF TRANSPORTATION

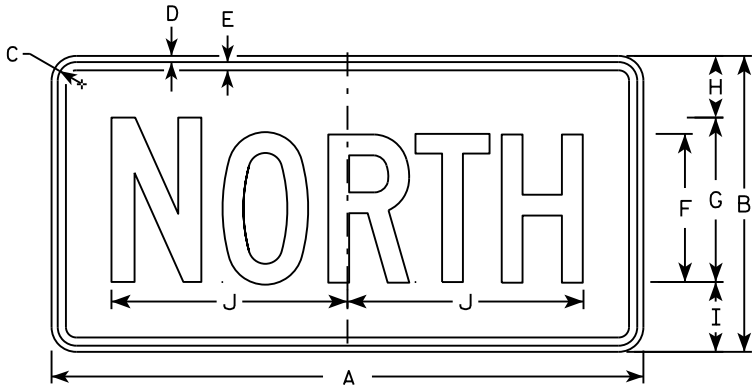
APPROVED

Matthew R. Rauch

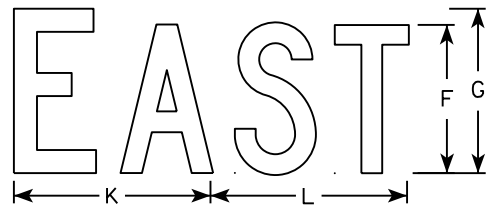
For State Traffic Engineer

DATE 10/15/15

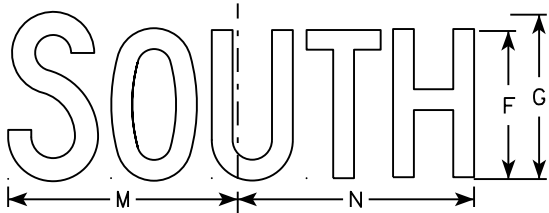
PLATE NO. M2-1.12



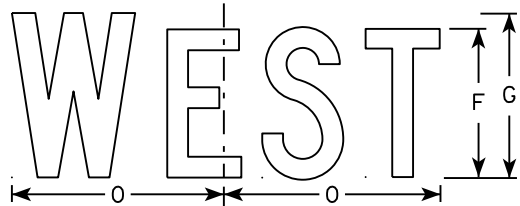
M3-1
MM3-1
MP3-1



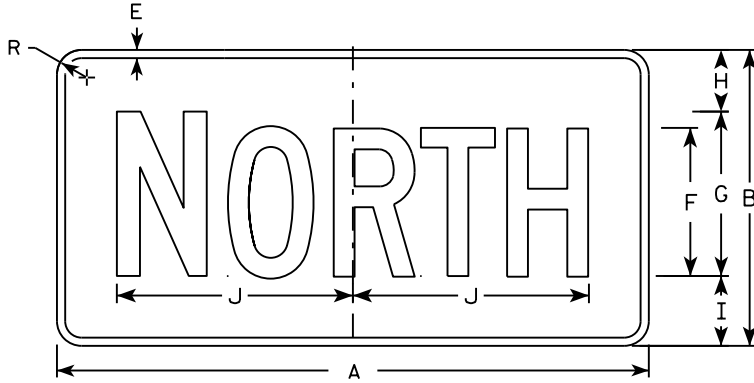
M3-2
MM3-2
MP3-2



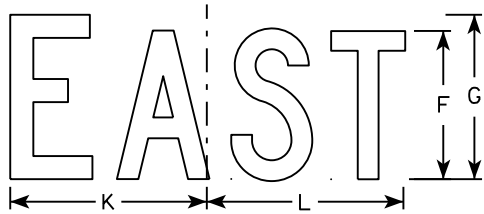
M3-3
MM3-3
MP3-3



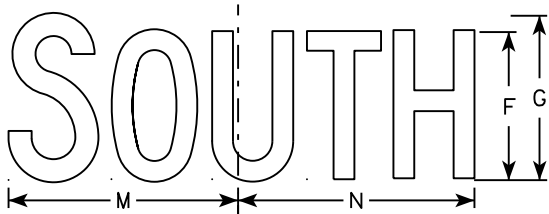
M3-4
MM3-4
MP3-4



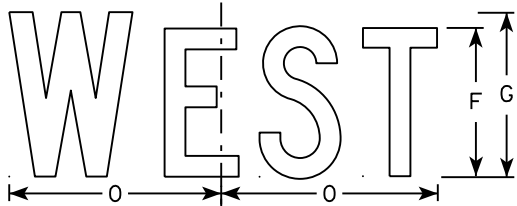
MB3-1
MK3-1
MN3-1



MB3-2
MK3-2
MN3-2



MB3-3
MK3-3
MN3-3



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
Background - See note 5
Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
Message - Black
MB3-1 thru MB3-4 Background - Blue
Message - White
MK3-1 thru MK3-4 Background - Green
Message - White
MM3-1 thru MM3-4 Background - White
Message - Green
MN3-1 thru MN3-4 Background - Brown
Message - White
MP3-1 thru MP3-4 Background - White
Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thru M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M3-1.14

NOTES

1. Sign is Type II - Type H except as Shown
2. Color:

Background - See Note 5

Message - See note 5
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-1

Background - White

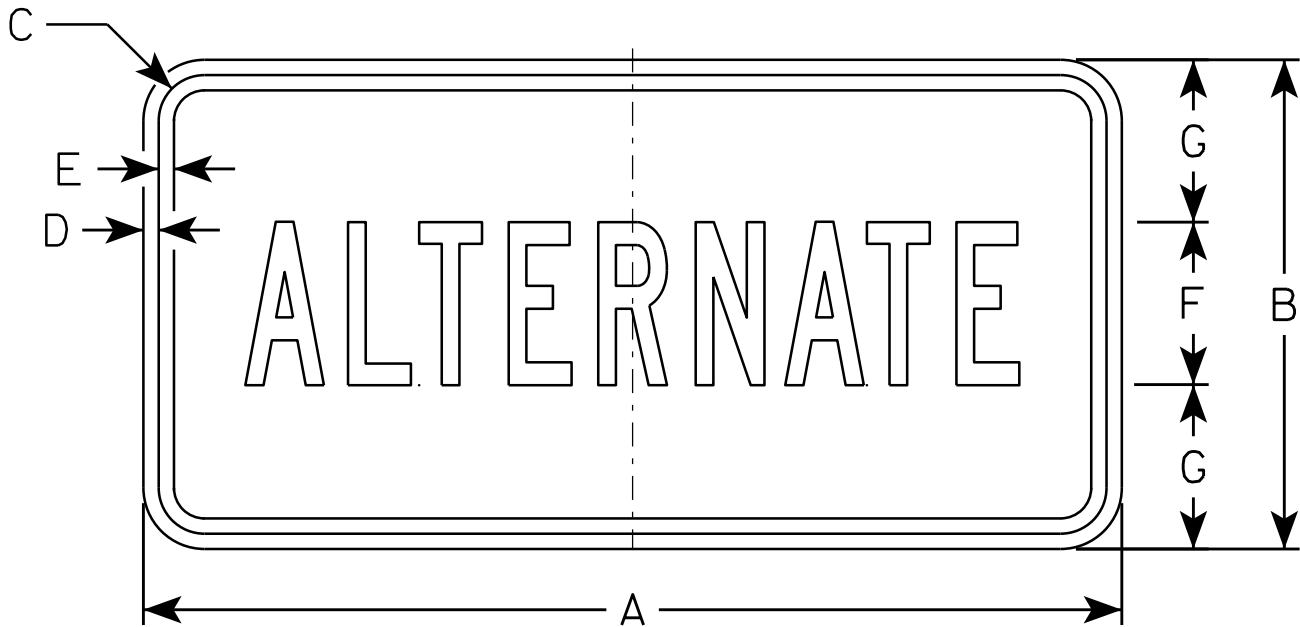
Message - Black
- MB4-1

Background - Blue

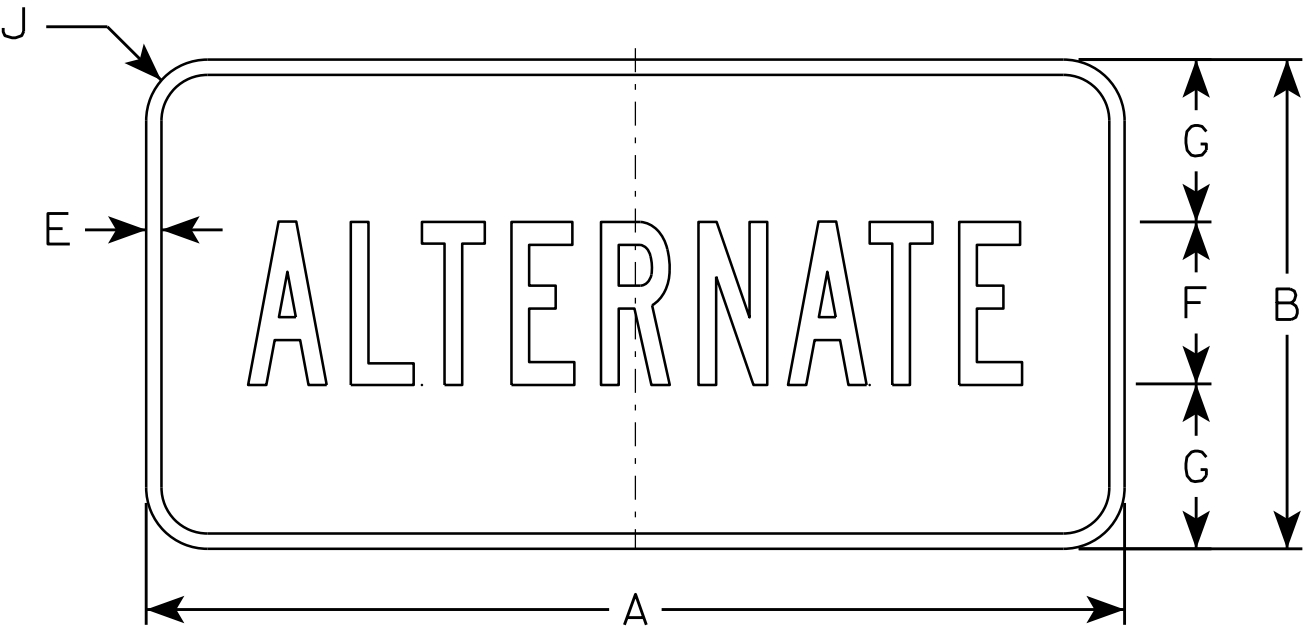
Message - White
- M04-1

Background - Orange - Type F

Message - Black



M4 - 1
M04 - 1



MB4 - 1

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	4	4	9 3/4	9 1/2	1 1/2																	2.00
3	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5
4	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5
5	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5

STANDARD SIGN

M4 - 1

WISCONSIN DEPT OF TRANSPORTATION

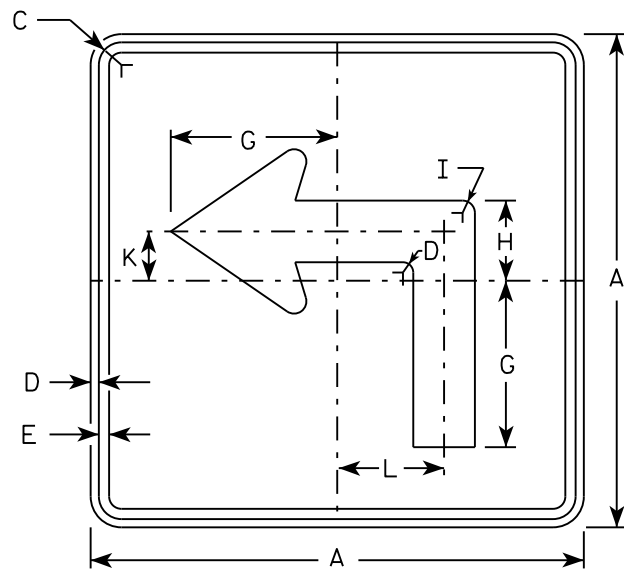
APPROVED

Matthew R. Rauch

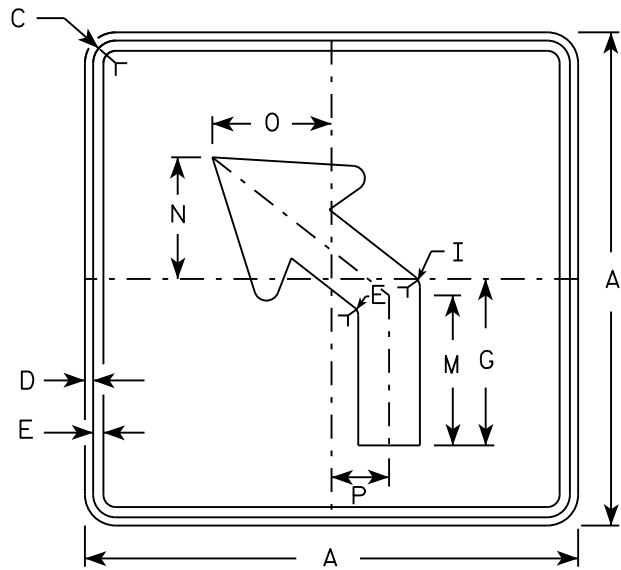
for State Traffic Engineer

DATE 6/30/14

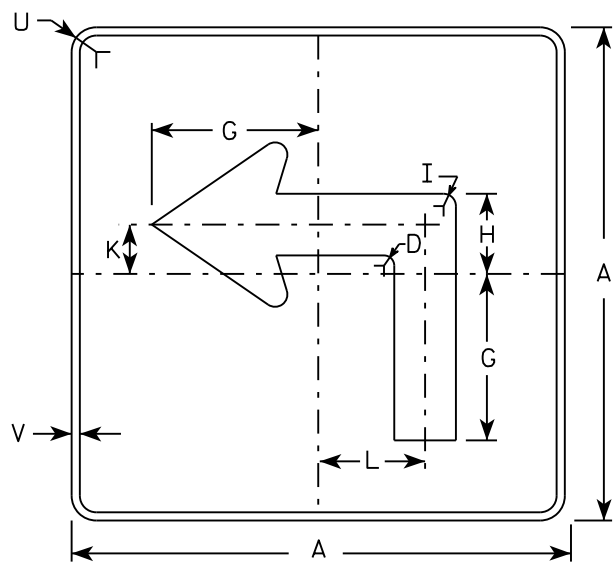
PLATE NO. M4-1.8



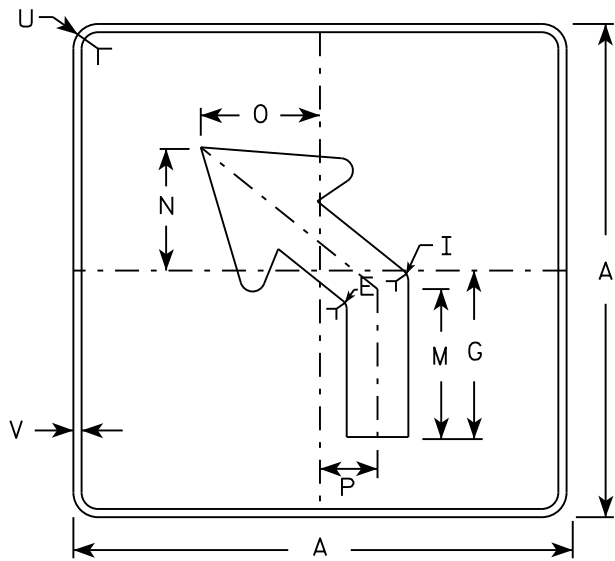
M5-1L
MM5-1L
M05-1L
MP5-1L



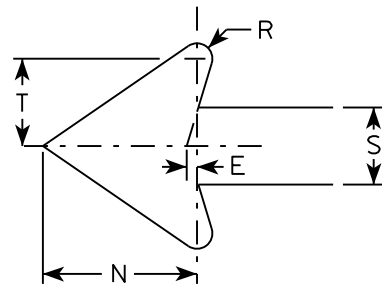
M5-2L
MM5-2L
M05-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L



MB5-2L
MK5-2L
MN5-2L
MR5-2L



NOTES

- Signs are Type II - Type H reflective except as shown
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- | | |
|-----------------|---|
| M5-1 and M5-2 | Background - White |
| | Message - Black |
| MB5-1 and MB5-2 | Background - Blue |
| | Message - White |
| MK5-1 and MK5-2 | Background - Green |
| | Message - White |
| MM5-1 and MM5-2 | Background - White |
| | Message - Green |
| MN5-1 and MN5-2 | Background - Brown |
| | Message - White |
| M05-1 and M05-2 | Background - Orange - Type F Reflective |
| | Message - Black |
| MP5-1 and MP5-2 | Background - White - Type H Reflective |
| | Message - Blue |
| MR5-1 and MR5-2 | Background - Brown |
| | Message - Yellow |
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts right.

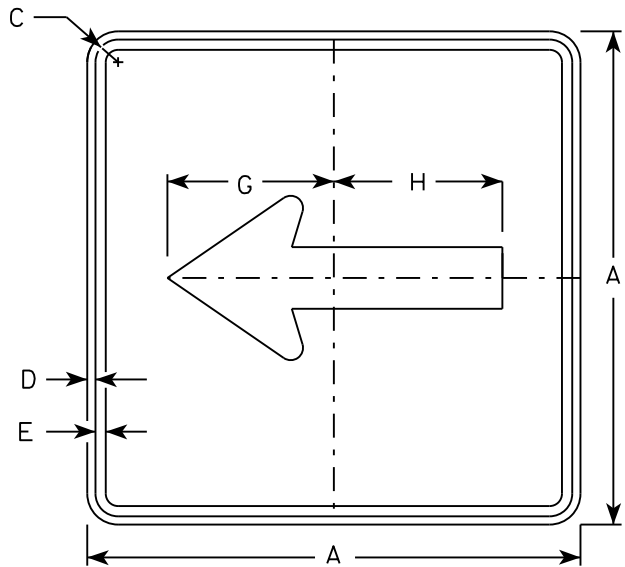
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

STANDARD SIGN
M5-1 & M5-2

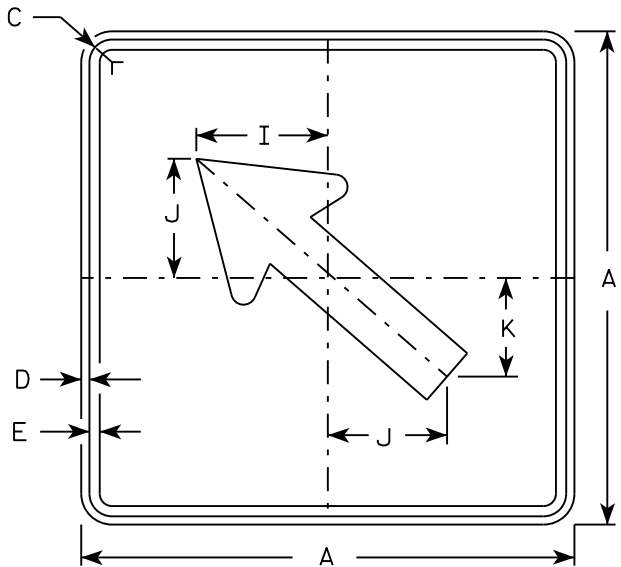
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

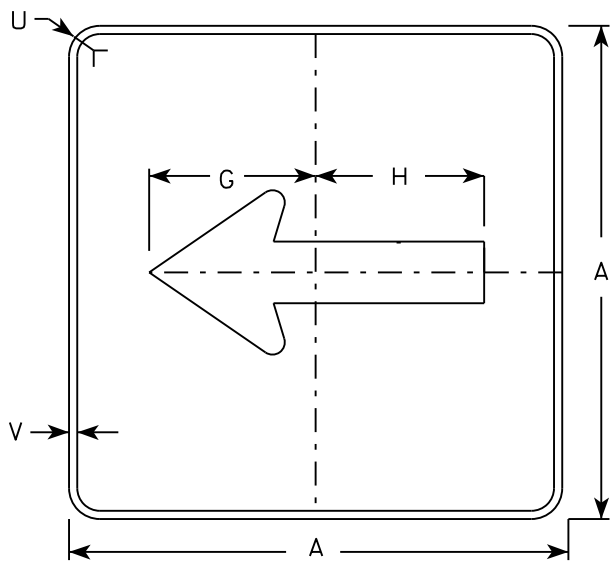
DATE 10/15/15 PLATE NO. M5-1.13



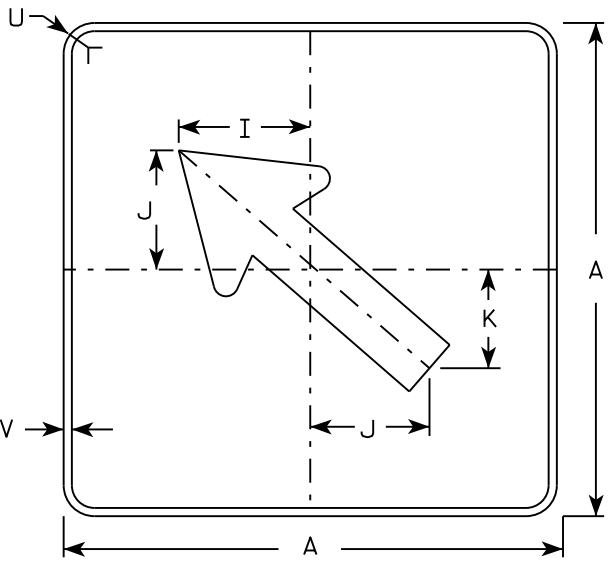
M6 - 1
MM6 - 1
M06 - 1
MP6 - 1



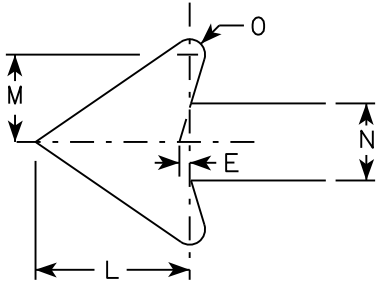
M6 - 2
MM6 - 2
M06 - 2
MP6 - 2



MB6 - 1
MK6 - 1
MN6 - 1
MR6 - 1



MB6 - 2
MK6 - 2
MN6 - 2
MR6 - 2



NOTES

- Signs are Type II - Type H except as Shown
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M6-1 and M6-2 Background - White
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White
MK6-1 and MK6-2 Background - Green
Message - White
MM6-1 and MM6-2 Background - White
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White
M06-1 and M06-2 Background - Orange - Type F Reflective
Message - Black
MP6-1 and MP6-2 Background - White
Message - Blue
MR6-1 and MR6-2 Background - Brown
Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

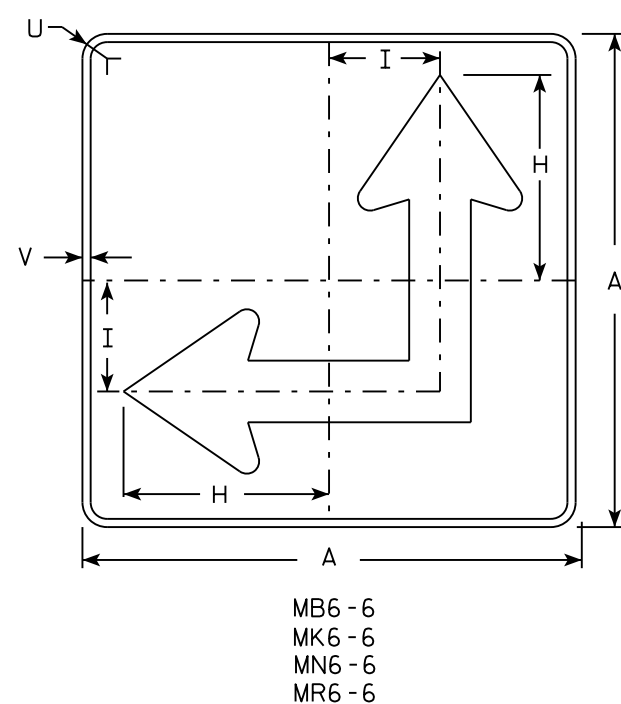
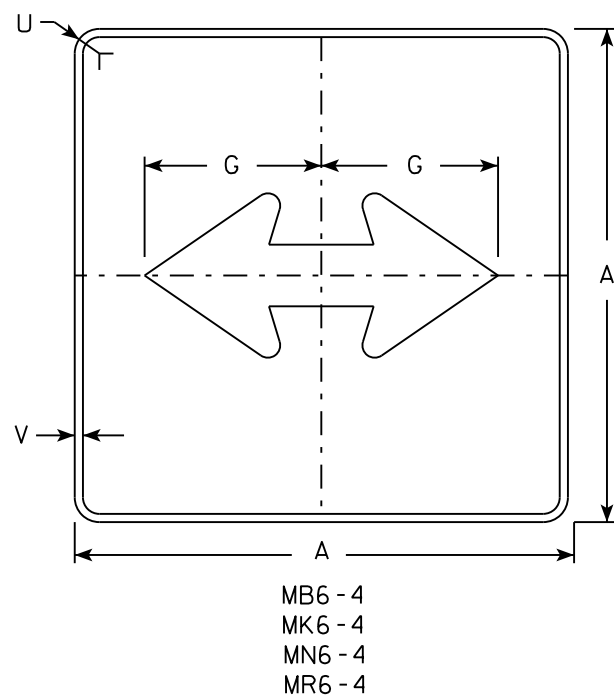
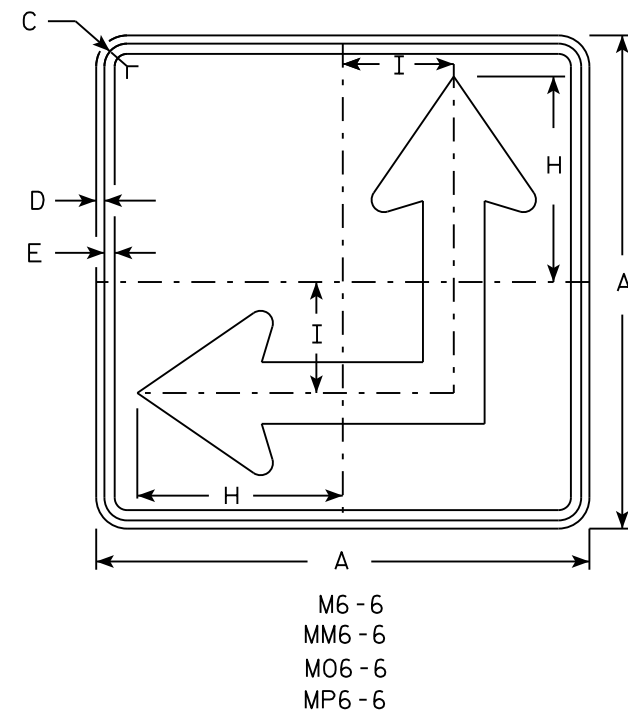
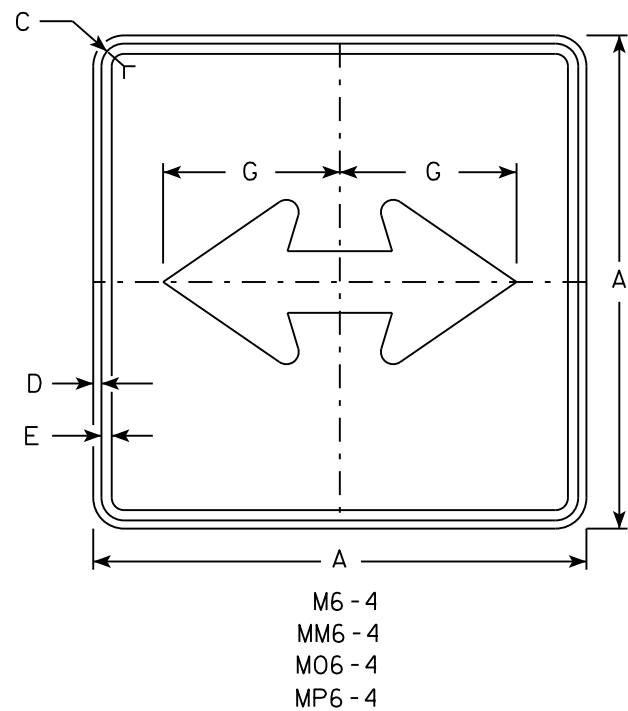
E

STANDARD SIGN
M6 - 1 & M6 - 2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

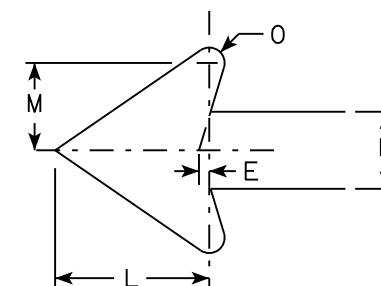
APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-1.15



NOTES

- Signs are Type II - Type H except as Shown
- Color:
Background - See Note 4
Message - See Note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M6-4 and M6-6 Background - White
Message - Black
MB6-4 and MB6-6 Background - Blue
Message - White
MK6-4 and MK6-6 Background - Green
Message - White
MM6-4 and MM6-6 Background - White
Message - Green
MN6-4 and MN6-6 Background - Brown
Message - White
M06-4 and M06-6 Background - Orange - Type F Reflective
Message - Black
MP6-4 and MP6-6 Background - White
Message - Blue
MR6-4 and MR6-6 Background - Brown
Message - Yellow
- M6-6R same as M6-6L except arrow points ahead and right.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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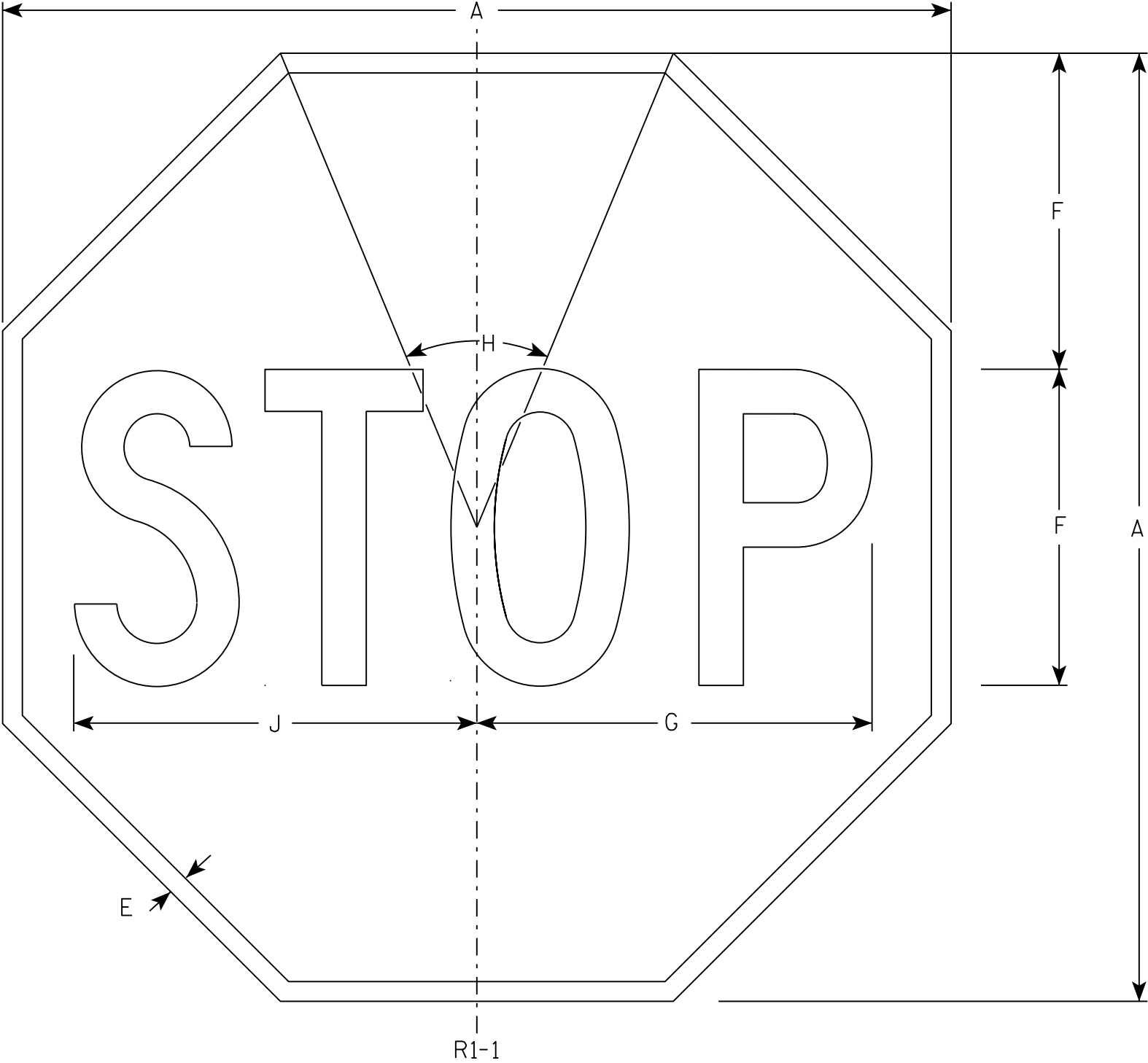
STANDARD SIGN
M6 - 4 & M6 - 6
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-4.10

7



NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Red
Message - White
- 3. Message Series - C

7

R1-1

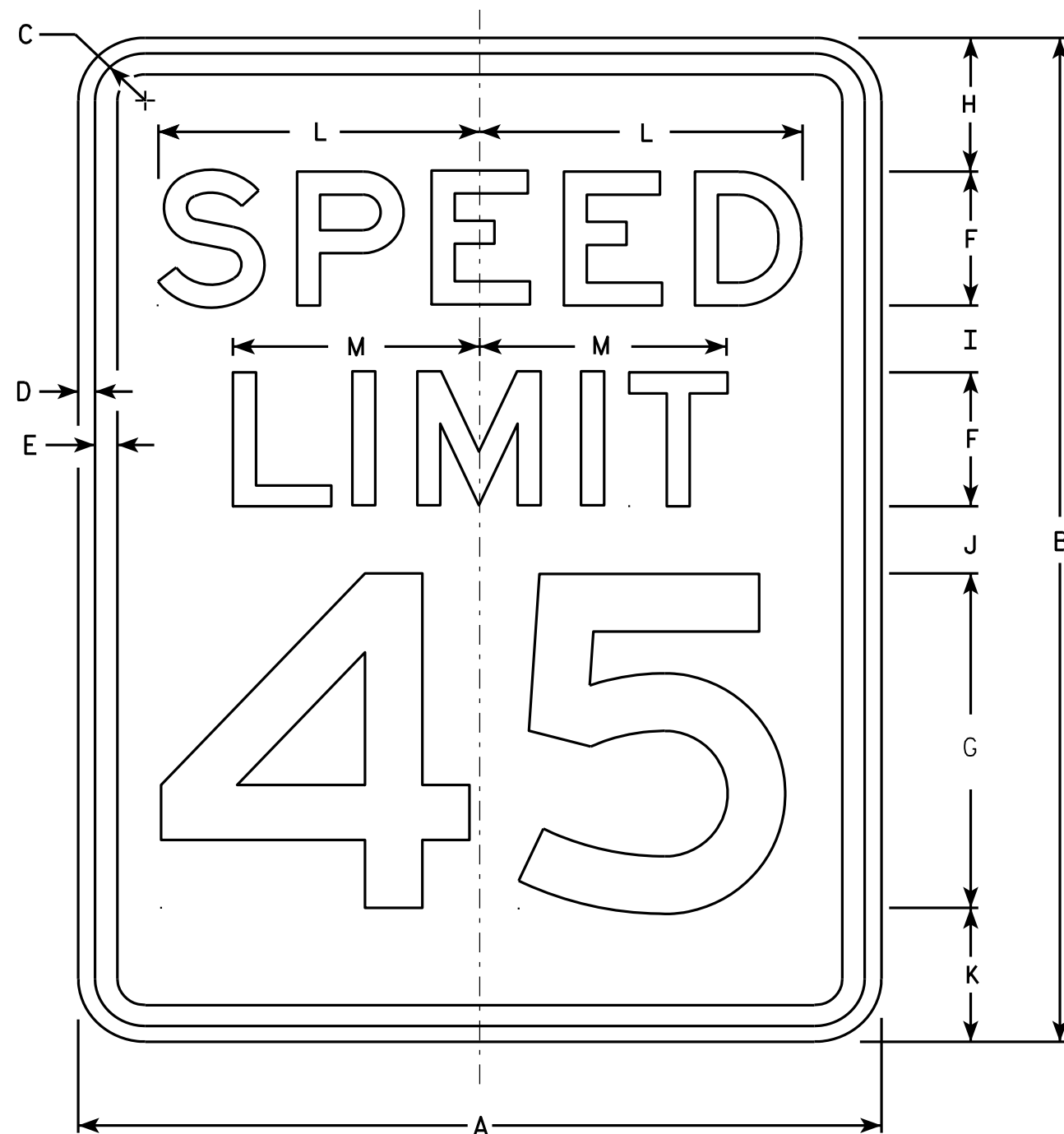
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

STANDARD SIGN
R1 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

R2-1

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

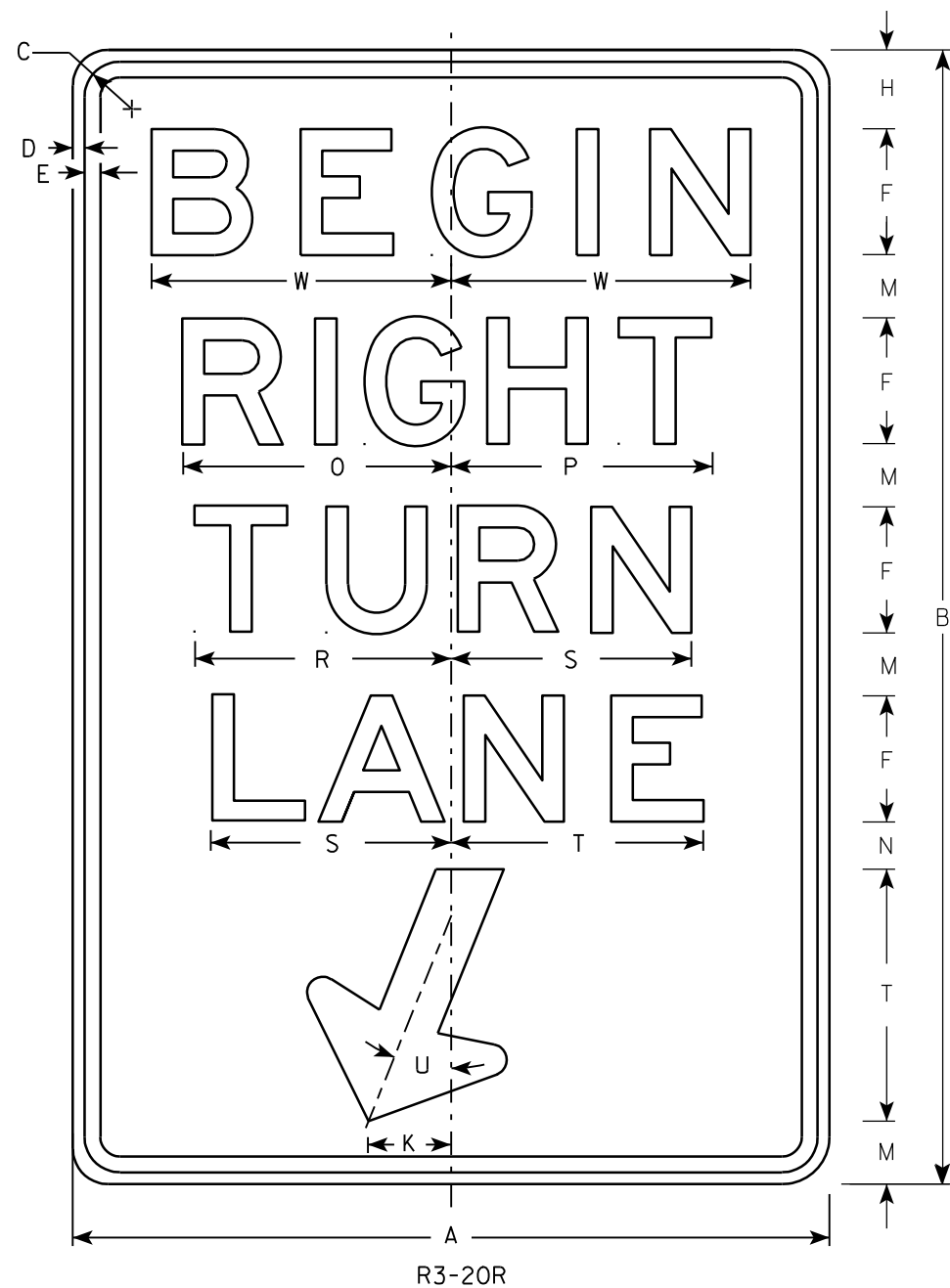
PROJECT NO:

HWY:

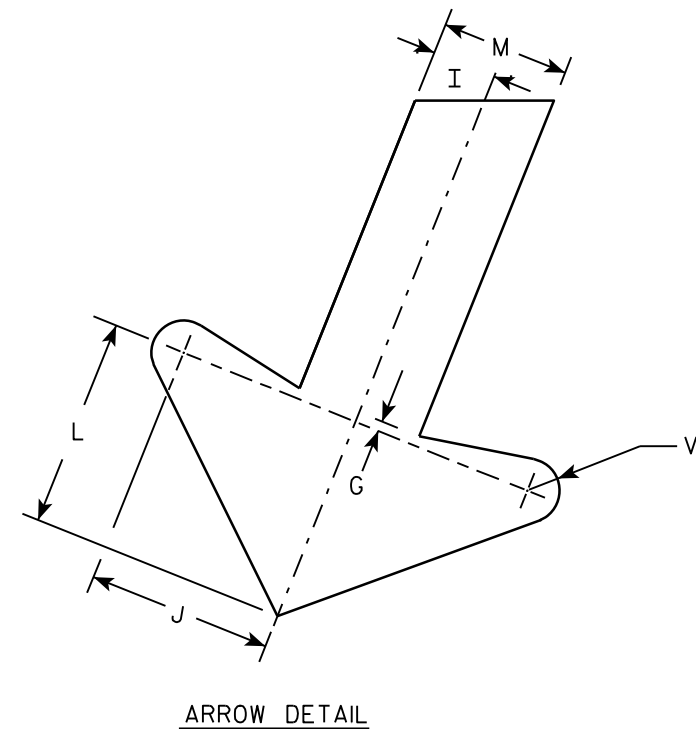
COUNTY:

SHEET NO:

E



- NOTES
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
 2. Color:
Background - White
Message - Black
 3. Message Series - E
 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	8 1/2	8 1/4		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	8 1/2	8 1/4		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	12 3/4	12 1/2		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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STANDARD SIGN
R3-20R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20R.6



R4-3

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	30	1 1/8	3/8	1/2	4	3 5/8	2 1/4	9 3/4	10	6 1/4	6 3/4	7 1/8	7 5/8													5.0
2M	24	30	1 1/8	3/8	1/2	4	3 5/8	2 1/4	9 3/4	10	6 1/4	6 3/4	7 1/8	7 5/8													5.0
3	36	48	1 5/8	5/8	3/4	6	6	4	14 5/8	15	9 3/8	10	10 3/4	11 3/8													12.0
4	36	48	1 5/8	5/8	3/4	6	6	4	14 5/8	15	9 3/8	10	10 3/4	11 3/8													12.0
5	48	60	2 1/4	3/4	1	8	7 1/4	4 1/2	19 1/2	20	12 1/2	13 1/2	14 1/4	15 1/4													20.0

STANDARD SIGN R4-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-3.8

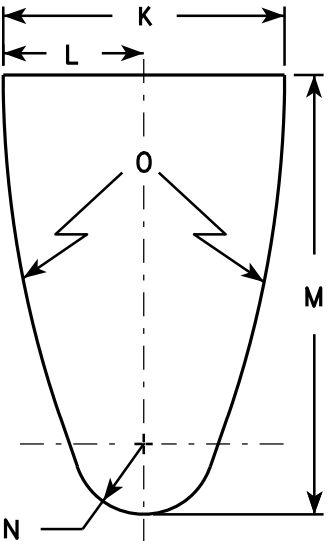
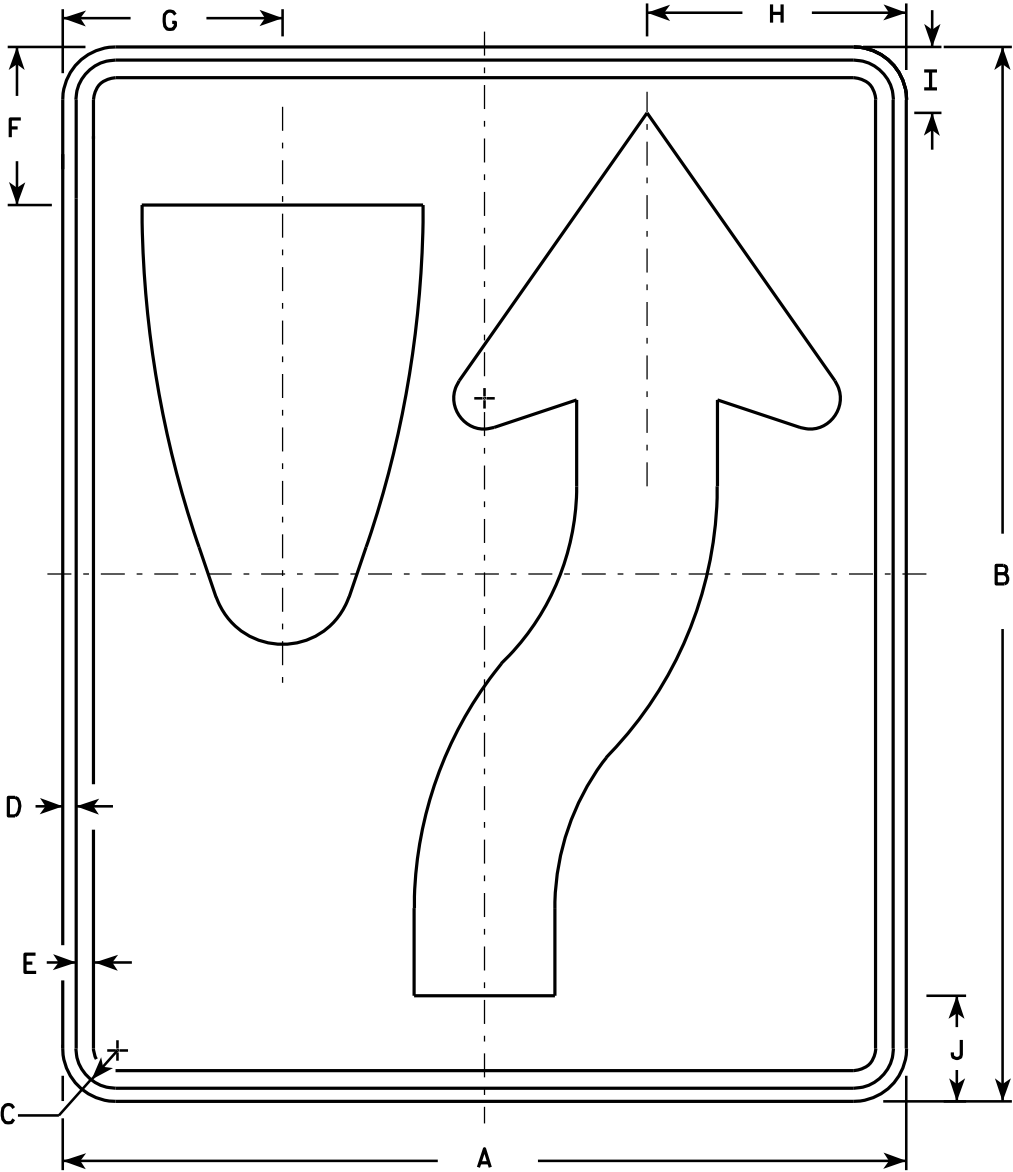
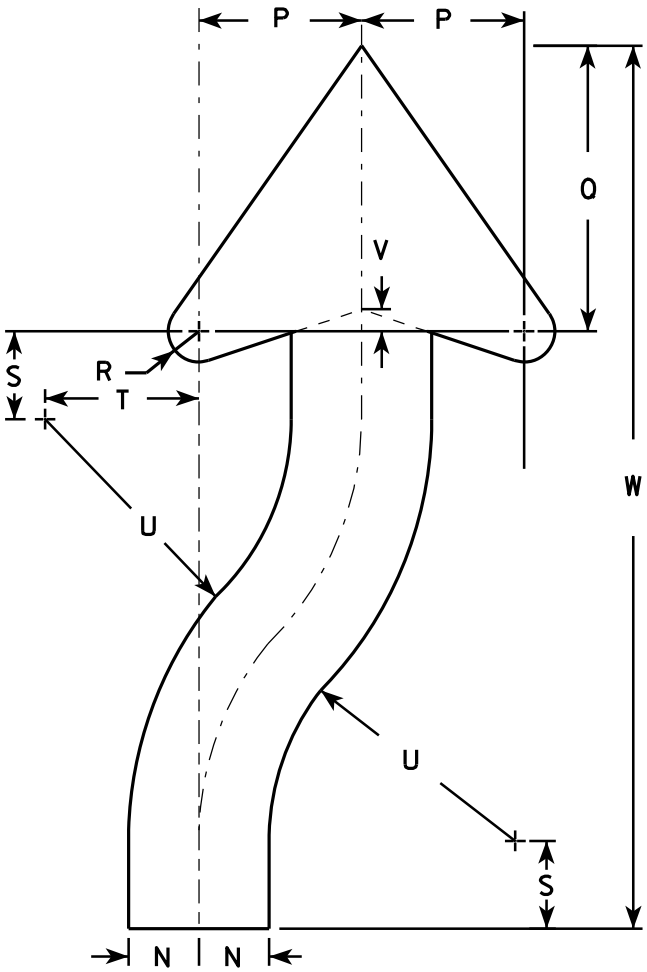
PROJECT NO:

SHEET NO:

E

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
Background - White
Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO:

HWY:

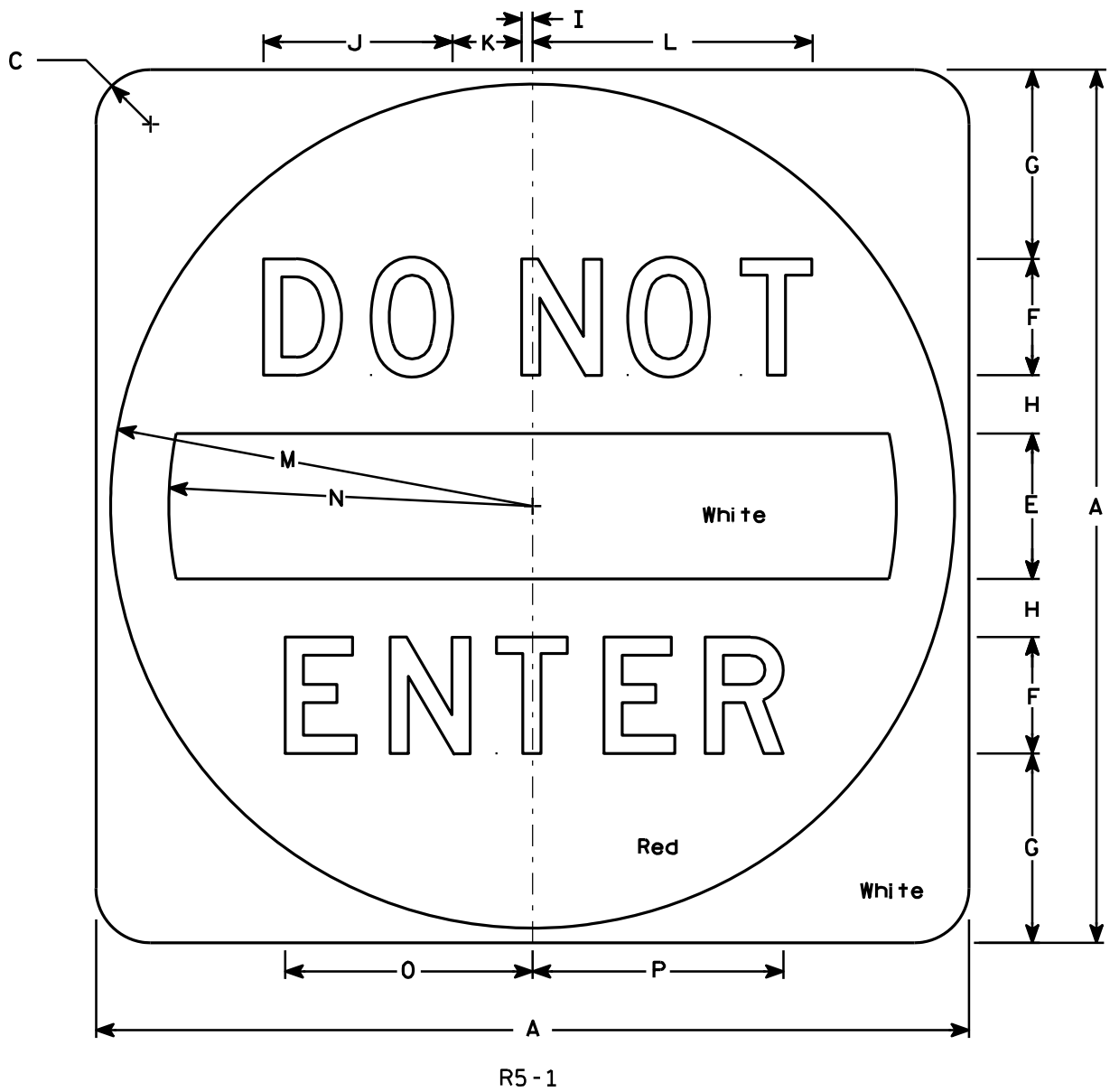
COUNTY:

SHEET NO:

E

NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
 - Background - See detail
 - Message - White - Type H Reflective
- 3. Message Series - D
- 4. Corners may be square or rounded when base material is plywood but when base material is metal, the corners shall be rounded.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7⁄8		5	4	6 1⁄2	2	3⁄8	6 1⁄2	2 3⁄8	9 5⁄8	14 1⁄2	12 1⁄2	8 1⁄2	8 5⁄8											6.26
2M	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
3	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
4	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
5	48		3		8	6	11	3	5⁄8	9 3⁄4	3 5⁄8	14 1⁄2	23 1⁄2	20	12 3⁄4	12 7⁄8											16.0

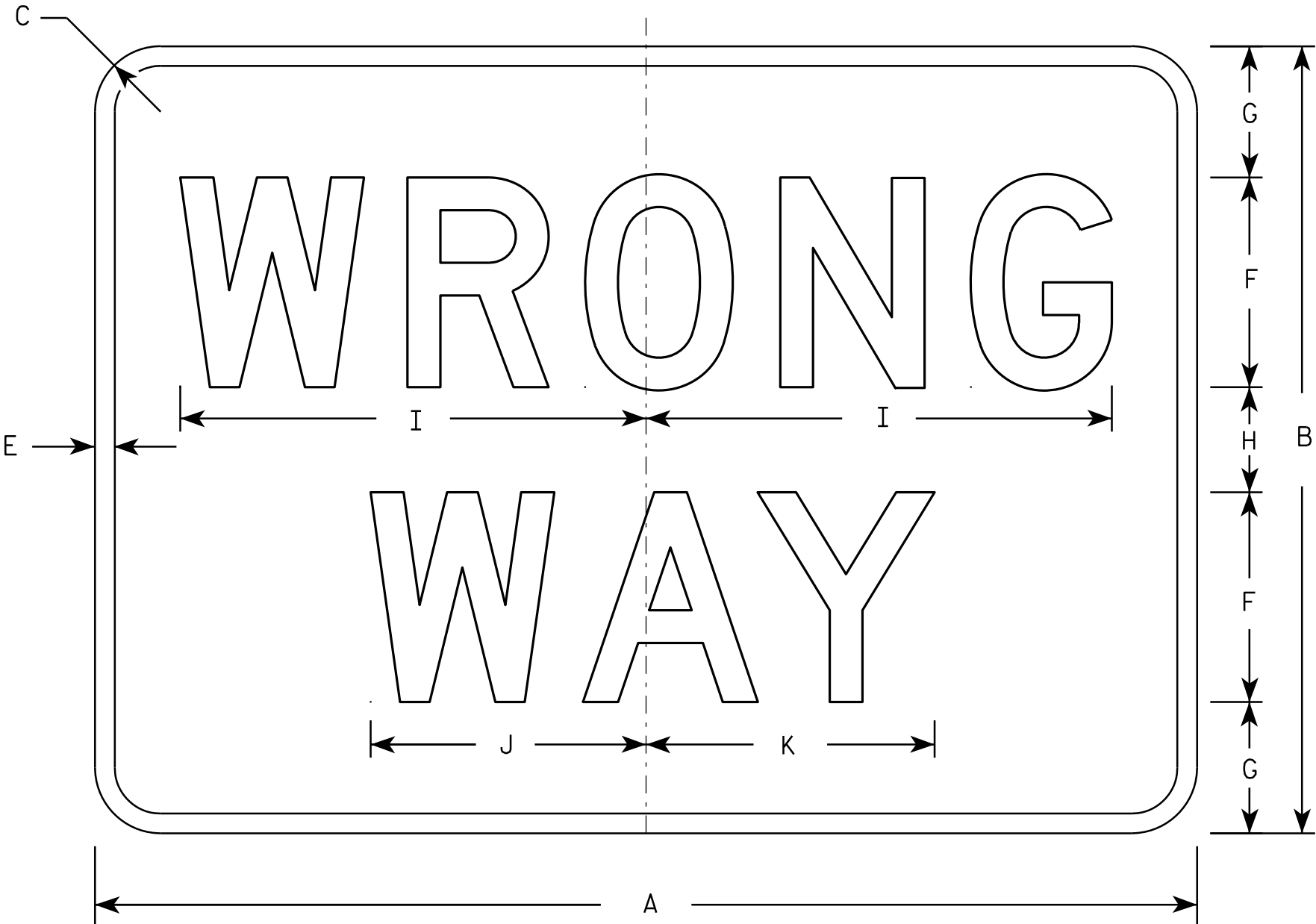
STANDARD SIGN

R5 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1.15



R5-1A

NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
 - Background - Red
 - Message - White
- 3. Message Series - D
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

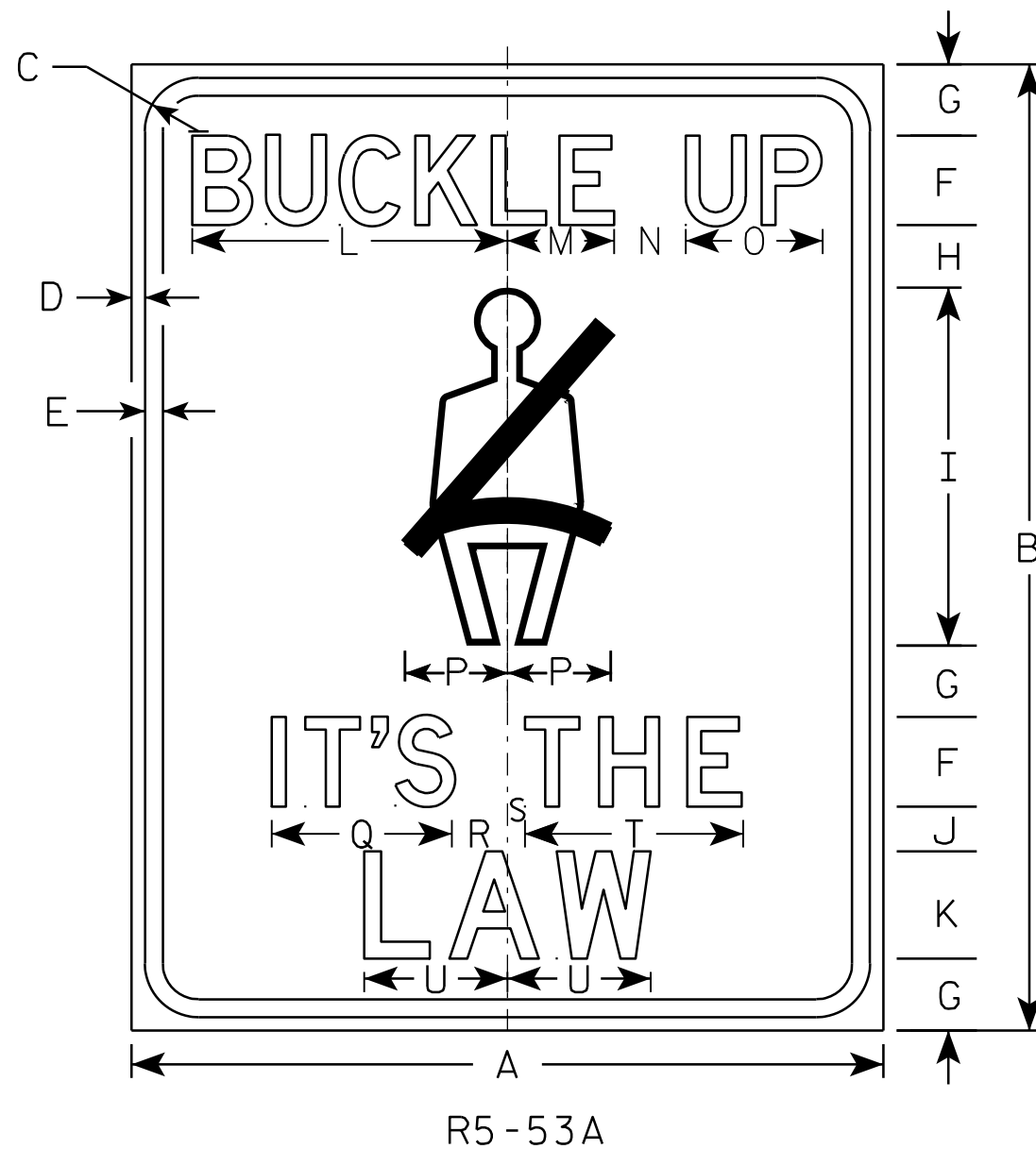
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

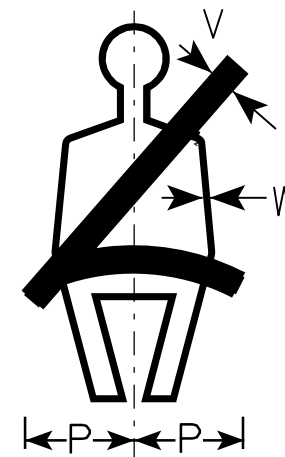
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	18	24	1 1/8	3/8	3/8	2	1 3/4	1 1/2	9	1 1/4	3	6 3/4	2 1/4	1 1/2	2 7/8	2 1/2	3 7/8	1 1/4	3/8	4 5/8	3 7/8	5/8	1/8				3.00
2M	18	24	1 1/8	3/8	3/8	2	1 3/4	1 1/2	9	1 1/4	3	6 3/4	2 1/4	1 1/2	2 7/8	2 1/2	3 7/8	1 1/4	3/8	4 5/8	3 7/8	5/8	1/8				3.00
3																											
4																											
5	42	54	2 1/4	3/4	1	5	4	3 1/2	20	2 1/2	6	17 5/8	6	4	7 5/8	5 3/4	10	3 1/2	1	12 1/4	8	1 1/2	3/8				15.75

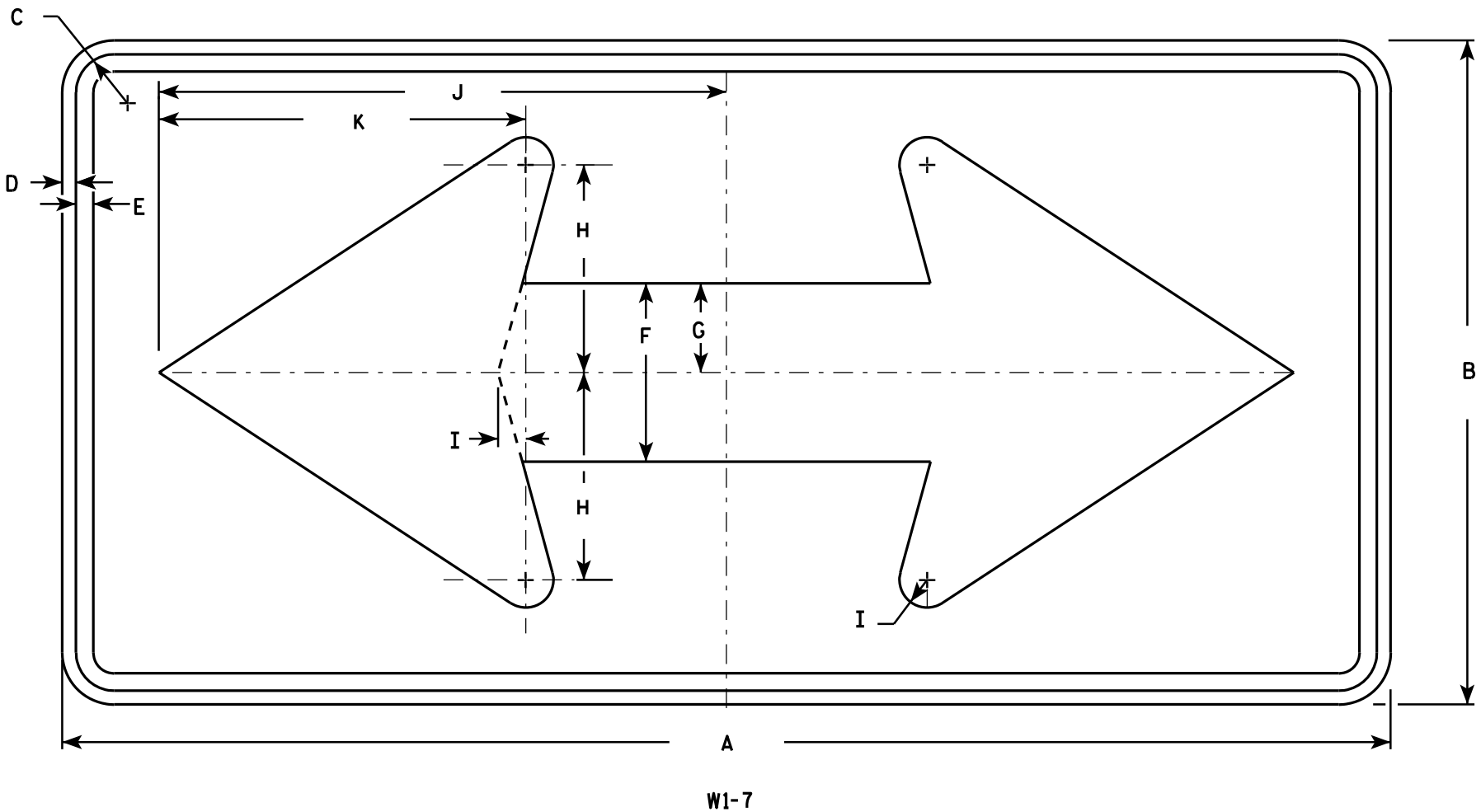
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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STANDARD SIGN
R5-53A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-53A.5



NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Yellow
Message - Black
- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

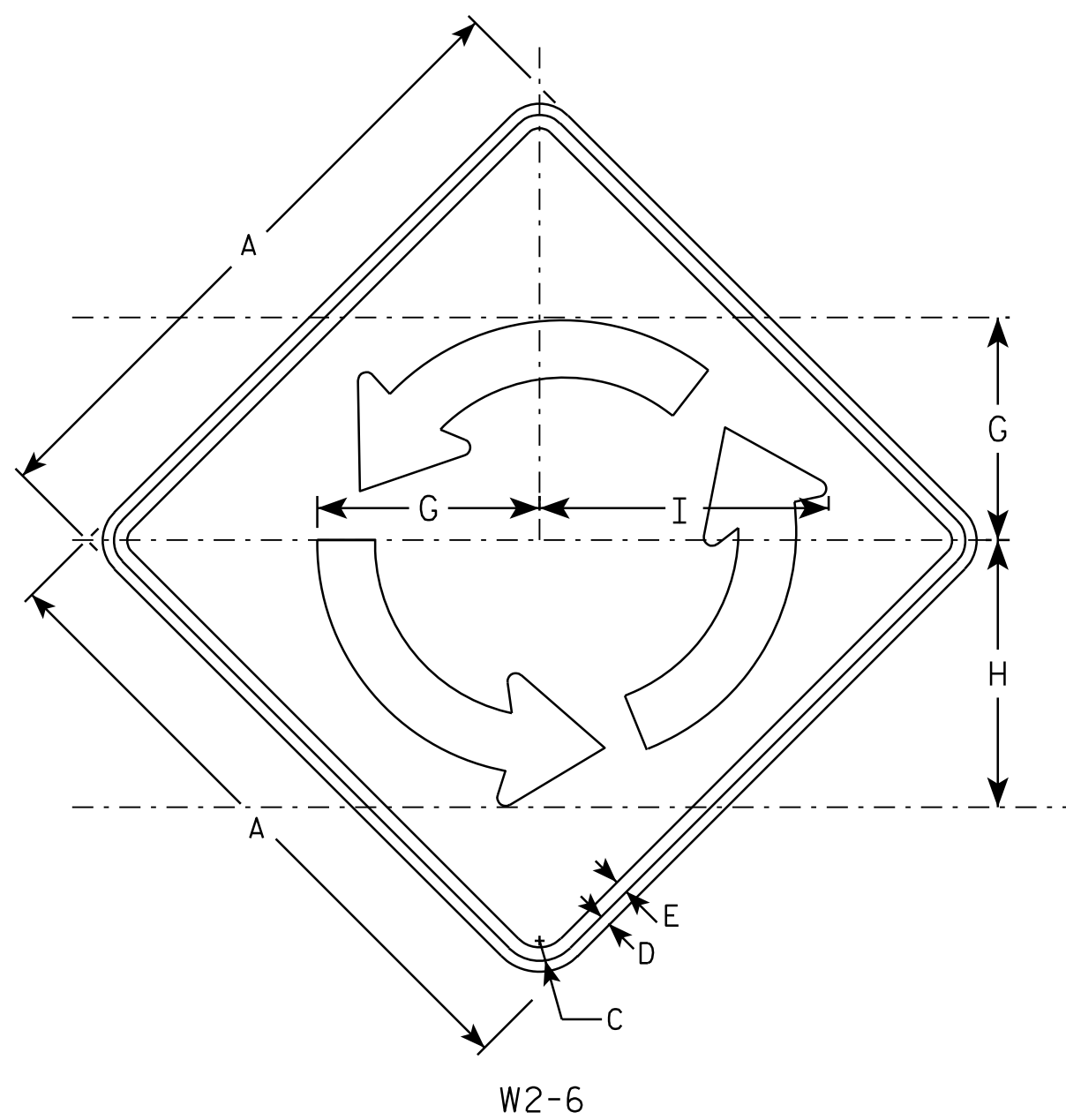
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/8	3/8	1/2	5	2 1/2	5 3/4	3/4	15 5/8	10 1/8																4.5
2S	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
2M	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
3	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
4	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
5	96	48	2 1/4	3/4	1	13	6 1/2	15	2	41	26 1/2																32.0

STANDARD SIGN
W1 - 7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

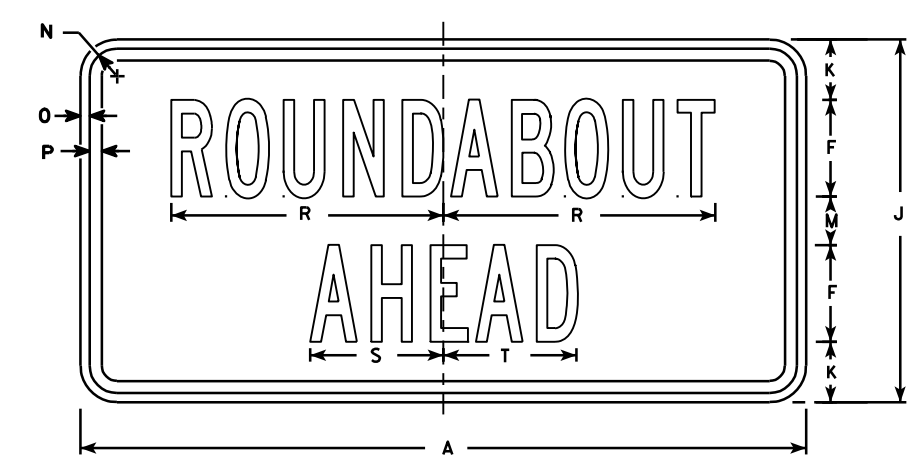
DATE 6/7/10 PLATE NO. W1-7.7



W2-6

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - YELLOW
Message - BLACK
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W2-6P

																								W2-6	W2-6P	
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Area sq. ft.	Area sq. ft.
1																										
2S	30		1 3⁄8	½	5⁄8	4	10 3⁄8	12 ½	13 ½	15	2 ½		2	1 ⅛	3⁄8	½		11 ¼	5 ½	5 ½					6.25	3.12
2M	30		1 3⁄8	½	5⁄8	4	10 3⁄8	12 ½	13 ½	15	2 ½		2	1 ⅛	3⁄8	½		11 ¼	5 ½	5 ½					6.25	3.12
3	36		1 5⁄8	5⁄8	¾	5	12 ½	15	16 ¼	18	2 5⁄8		2 ¾	1 ⅛	3⁄8	½		14	7	6 ¾					9.00	4.50
4	48		2 ¼	¾	1	6	16 5⁄8	20	16 ¼	24	4 3⁄8		3 5⁄8	1 3⁄8	½	5⁄8		17	8 ¼	8 ¼					16.0	8.0
5																										

STANDARD SIGN

W2-6

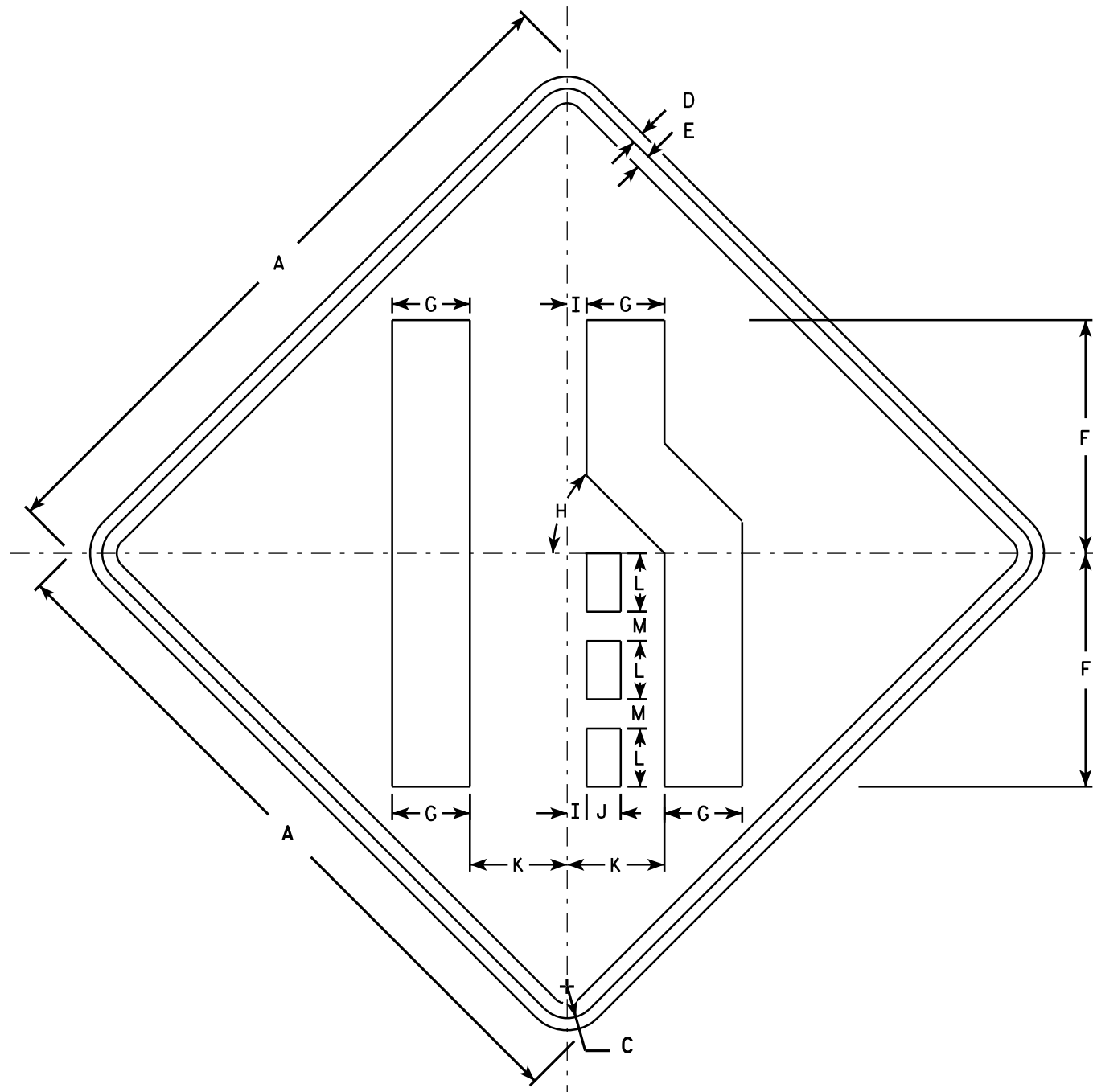
WISCONSIN DEPT OF TRANSPORTATION

APPROVED

for State Traffic Engineer

DATE 6/29/12

PLATE NO. W2-6.5



W4-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-2L is the same as W4-2R except the symbols is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3⁄8	1⁄2	5⁄8	10	3 3⁄8	45°	7⁄8	1 1⁄2	4 1⁄4	2 1⁄2	1 1⁄4														6.25
2S	36		1 5⁄8	5⁄8	3⁄4	12	4	45°	1	1 3⁄4	5	3	1 1⁄2														9.0
2M	36		1 5⁄8	5⁄8	3⁄4	12	4	45°	1	1 3⁄4	5	3	1 1⁄2														9.0
3	36		1 5⁄8	5⁄8	3⁄4	12	4	45°	1	1 3⁄4	5	3	1 1⁄2														9.0
4	48		2 1⁄4	3⁄4	1	16	5 3⁄8	45°	1 1⁄4	2 3⁄8	6 3⁄4	4	2														16.0
5	48		2 1⁄4	3⁄4	1	16	5 3⁄8	45°	1 1⁄4	2 3⁄8	6 3⁄4	4	2														16.0

STANDARD SIGN W4-2

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 3/12/13 PLATE NO. W4-2.14

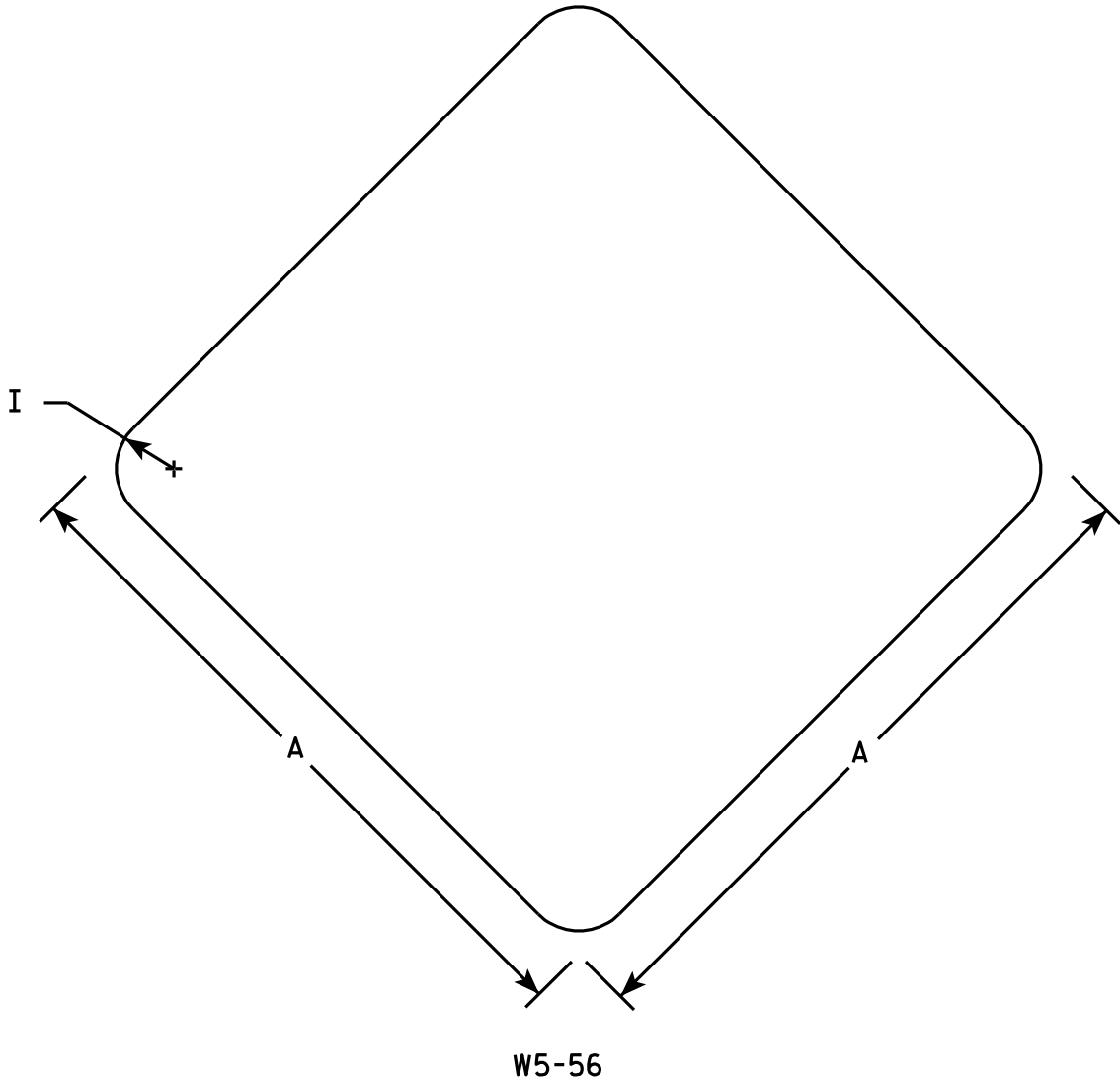
PROJECT NO:

SHEET NO:

E

NOTES

- 1. Sign is Type II - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Red
- 3. Corners may be square or rounded when base material is plywood. When base material is metal the corners shall be rounded.

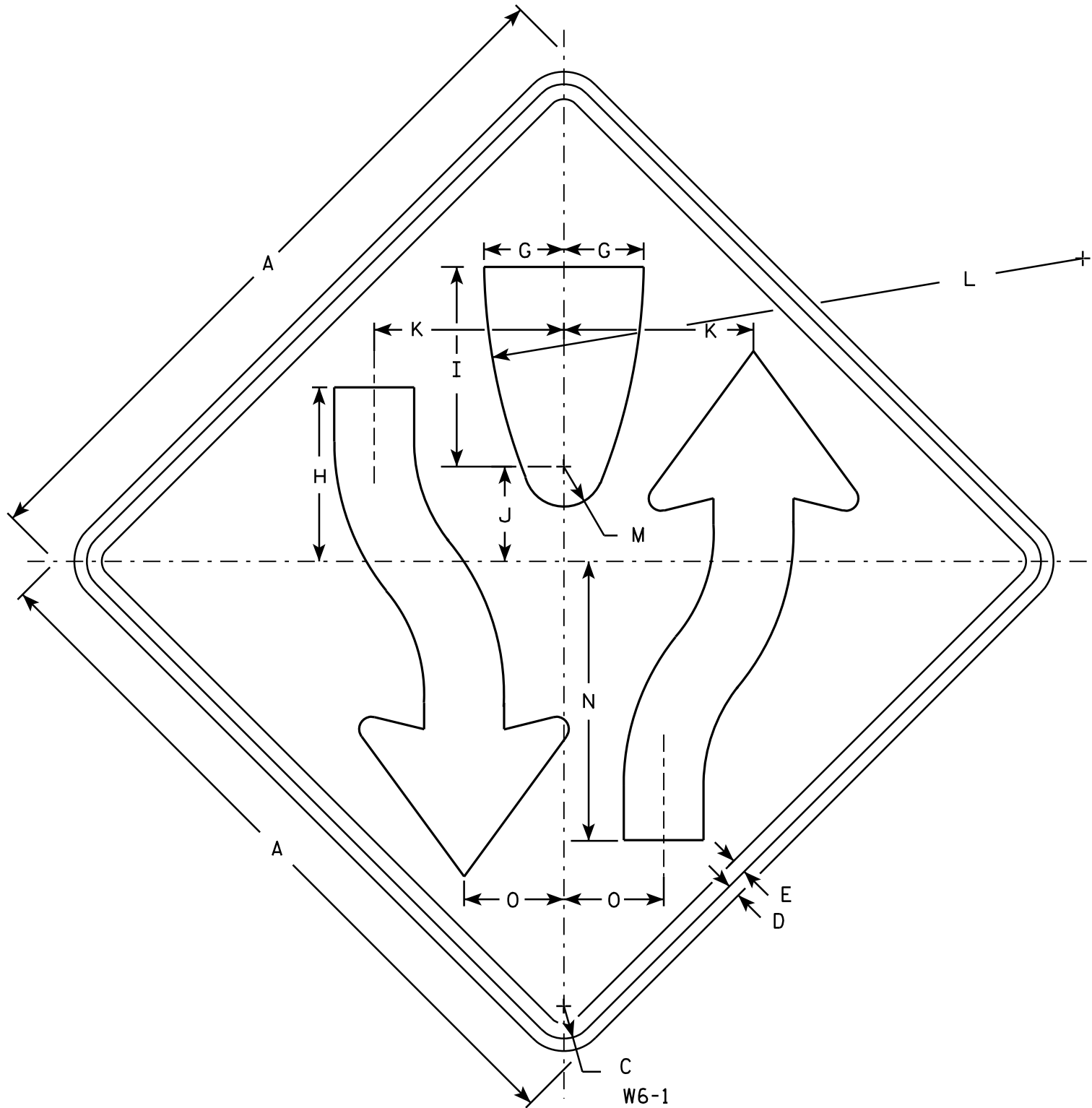


7

7

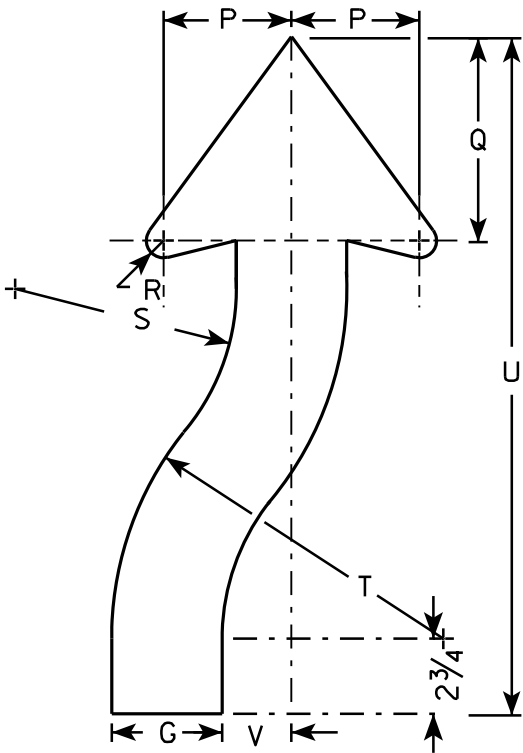
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12								1																		1.0
2S	18								1 1/2																		2.25
2M	18								1 1/2																		2.25
3																											
4																											
5																											

STANDARD SIGN	
W5 - 56	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> for State Traffic Engineer
DATE 11/2/10	PLATE NO. W5-56.6



NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Yellow
Message - Black
- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 4. W6-2 same as W6-1 but is rotated 180° when mounted.



ARROW DETAIL

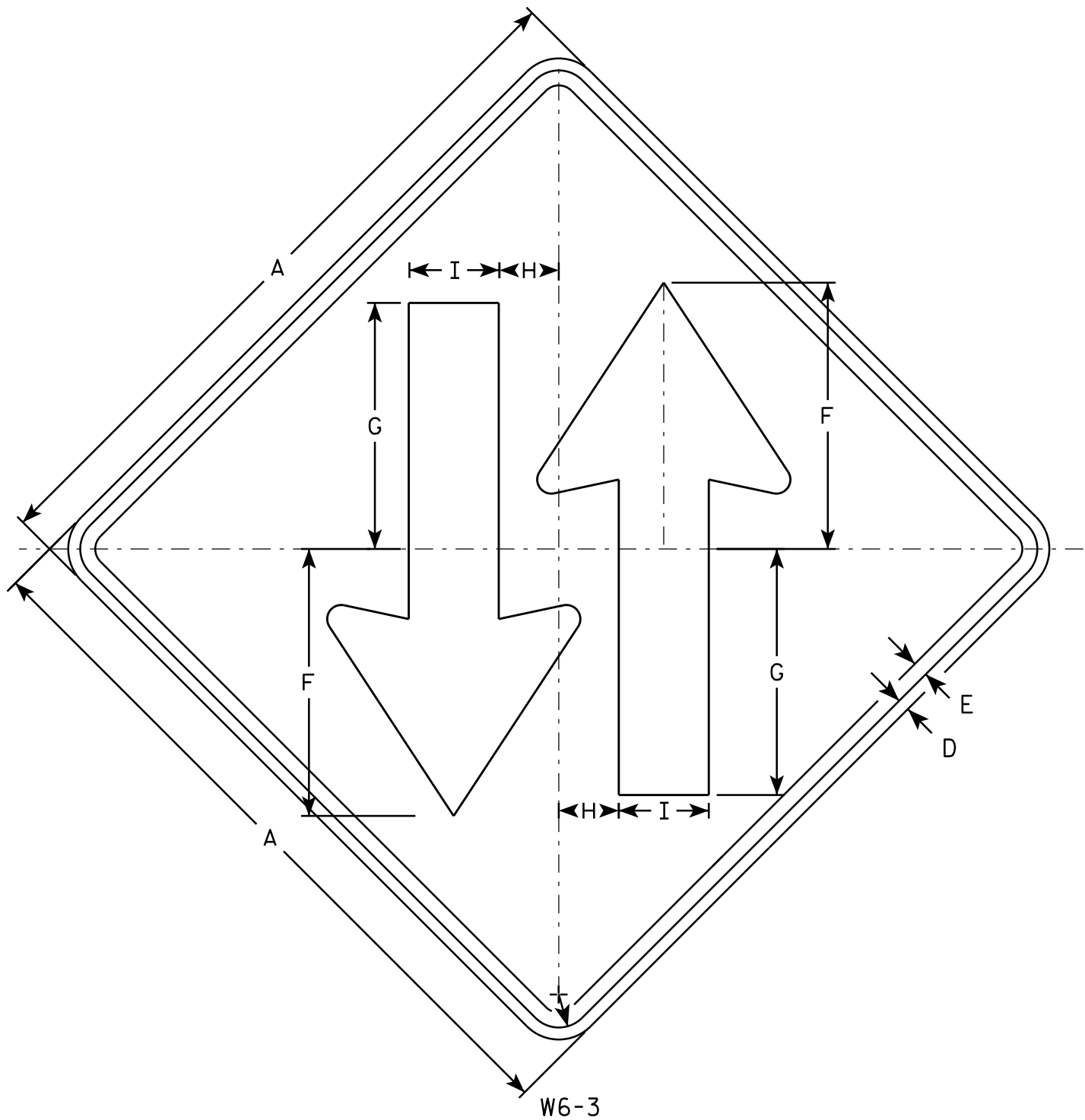
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3⁄8	1⁄2	5⁄8		3 1⁄4	8	8 1⁄4	4 1⁄8	7 7⁄8	25	1 3⁄4	11 5⁄8	4 1⁄8	3 7⁄8	6 3⁄4	5⁄8	6 5⁄8	9 7⁄8	21 5⁄8	2					6.25
2S	36		1 5⁄8	5⁄8	3⁄4		4	8 3⁄4	10	4 3⁄4	9 1⁄2	30	2	14	5	4 5⁄8	7 3⁄8	7⁄8	8	12	24 1⁄2	2 1⁄2					9.0
2M	36		1 5⁄8	5⁄8	3⁄4		4	8 3⁄4	10	4 3⁄4	9 1⁄2	30	2	14	5	4 5⁄8	7 3⁄8	7⁄8	8	12	24 1⁄2	2 1⁄2					9.0
3																											
4	48		2 1⁄4	3⁄4	1		5 3⁄8	11 5⁄8	13 3⁄8	6 3⁄8	12 5⁄8	40	2 5⁄8	18 5⁄8	6 5⁄8	6 1⁄4	9 7⁄8	1 1⁄4	10 5⁄8	16	32 5⁄8	3 3⁄8					16.0
5	48		2 1⁄4	3⁄4	1		5 3⁄8	11 5⁄8	13 3⁄8	6 3⁄8	12 5⁄8	40	2 5⁄8	18 5⁄8	6 5⁄8	6 1⁄4	9 7⁄8	1 1⁄4	10 5⁄8	16	32 5⁄8	3 3⁄8					16.0

STANDARD SIGN
W6-1 & W6-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

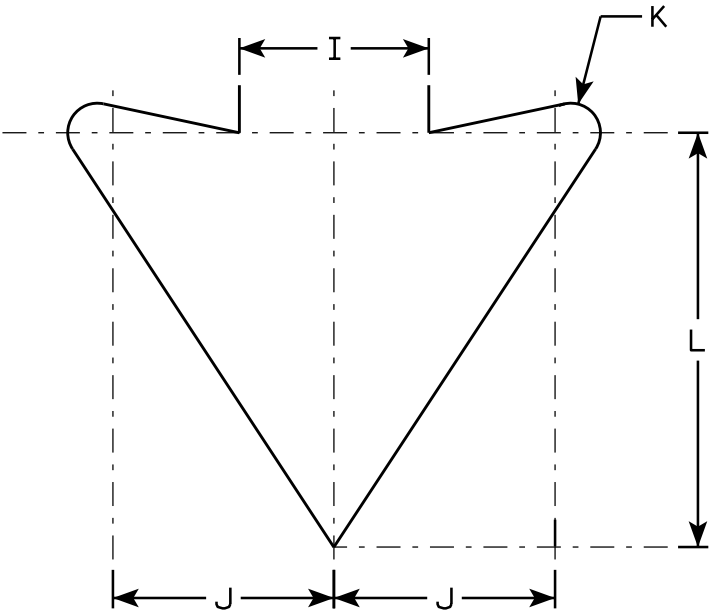
DATE 03/12/13 PLATE NO. W6-1.14



W6-3

NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Yellow
Message - Black
- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



ARROW DETAIL

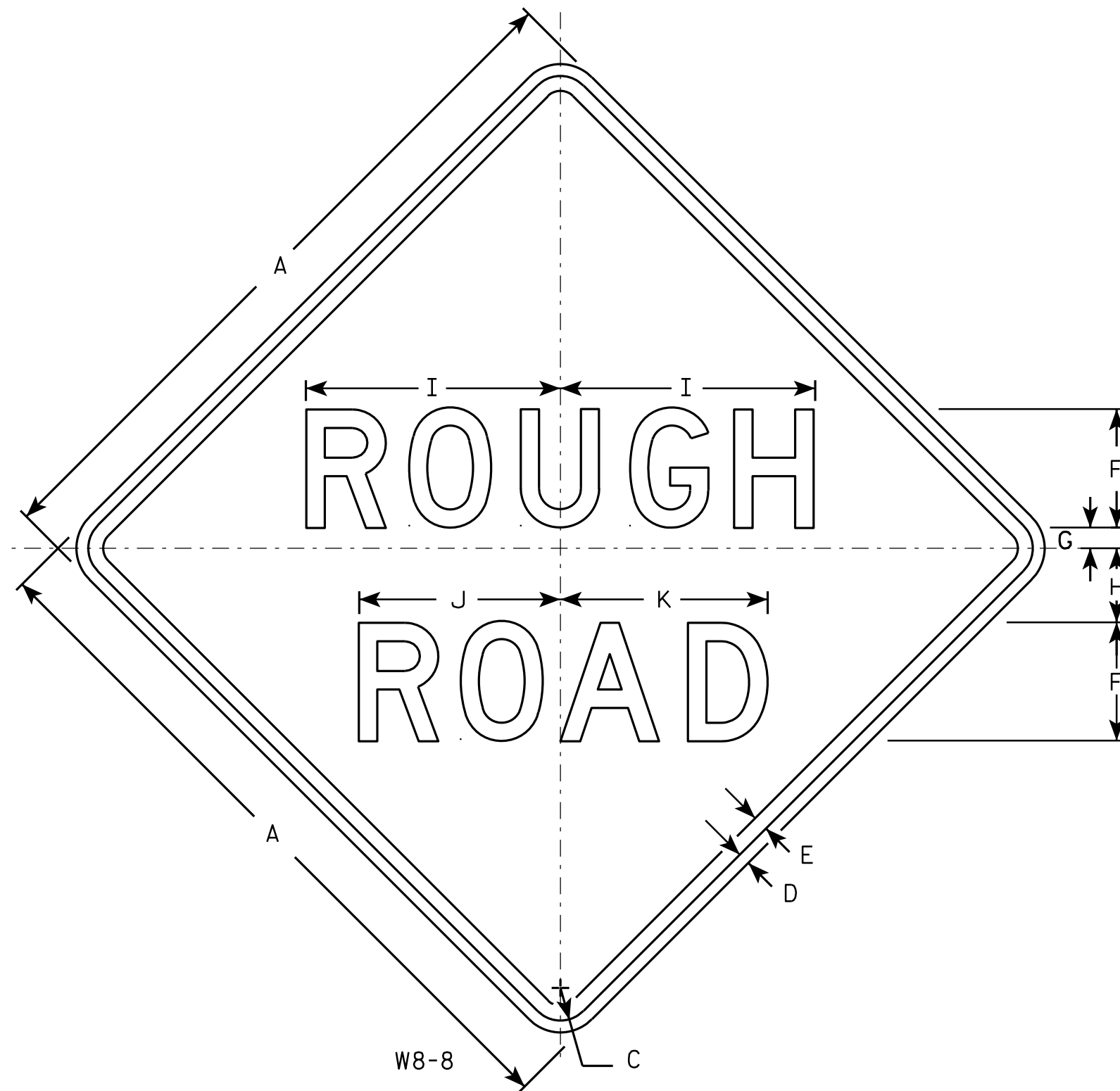
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	11 1/8	10 1/4	2 1/2	3 3/4	4 3/8	5/8	8 1/4															6.25
2S	36		1 5/8	5/8	3/4	13 3/8	12 1/4	3	4 1/2	5 1/4	3/4	9 7/8															9.0
2M	36		1 5/8	5/8	3/4	13 3/8	12 1/4	3	4 1/2	5 1/4	3/4	9 7/8														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

STANDARD SIGN
W6-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 3/10/16 PLATE NO. W6-3.11



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

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

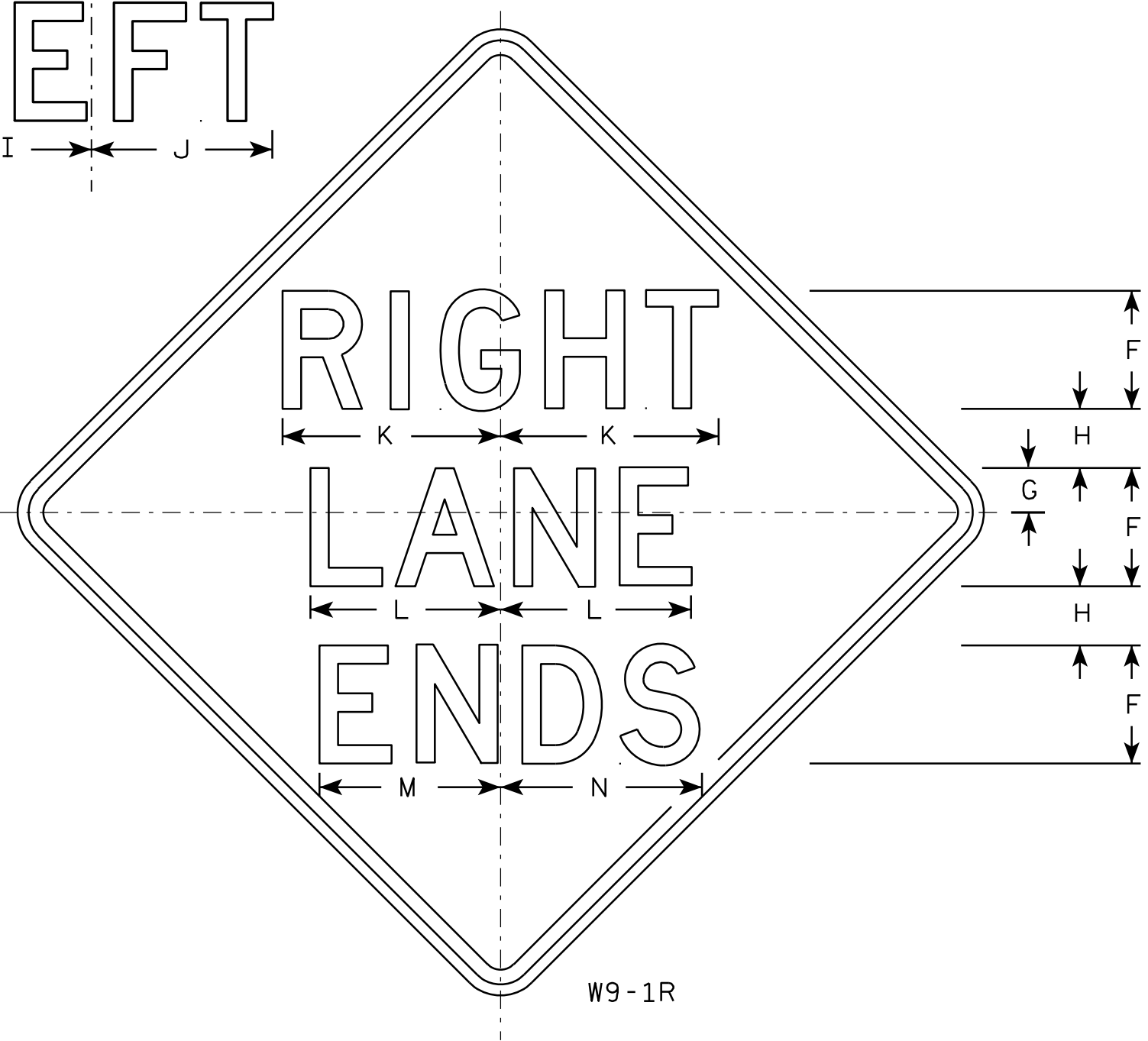
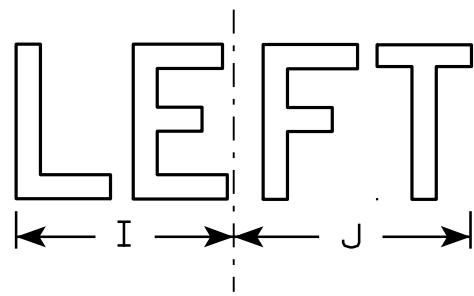
STANDARD SIGN W8-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 03/14/13 PLATE NO. W8-8.9

PROJECT NO: HWY: COUNTY: SHEET NO: E



W9-1R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. W9-1L same as W9-1R except the word Left replaces Right.

7

7

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

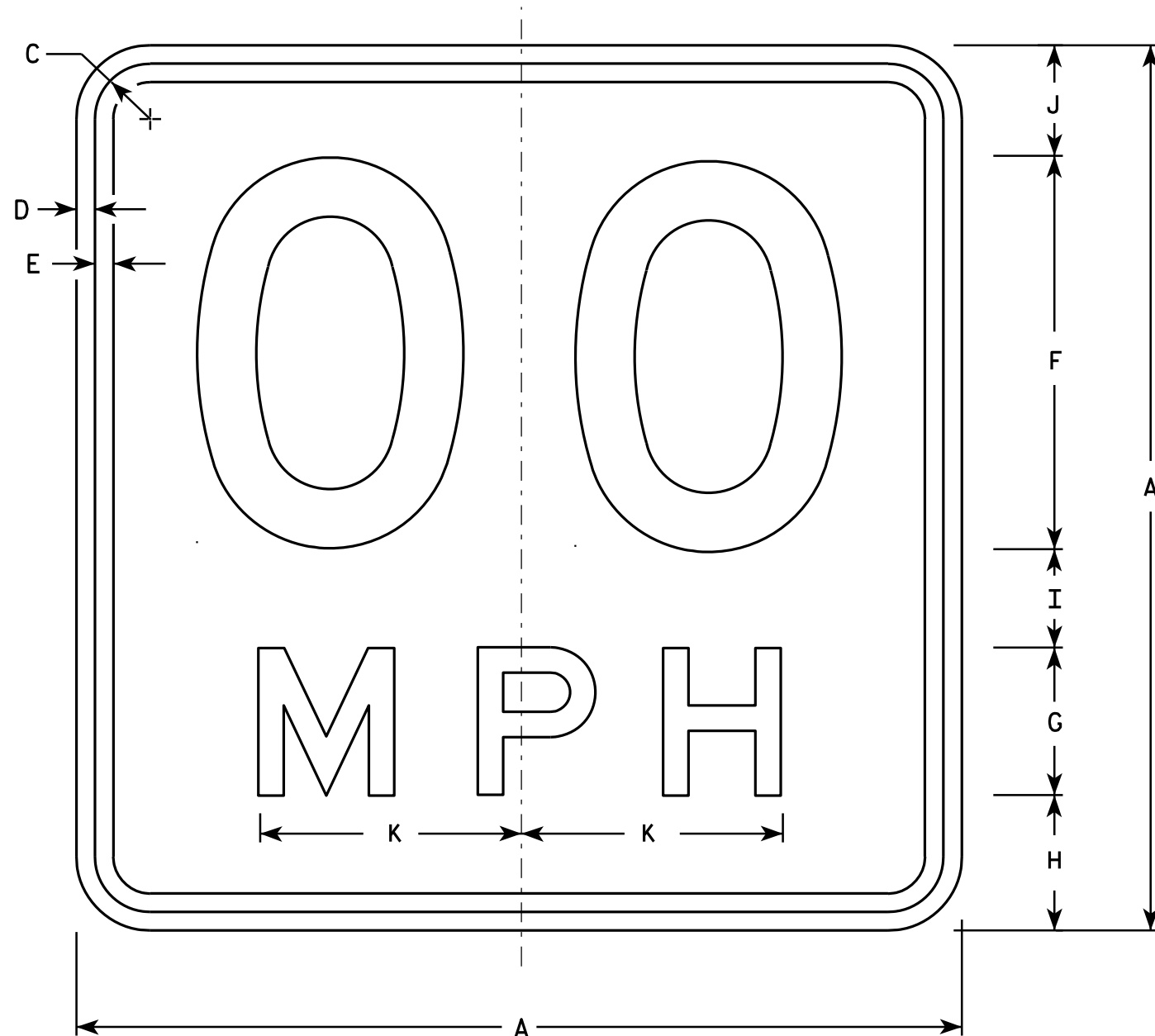
STANDARD SIGN

W9-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 03/18/13 PLATE NO. W9-1.8



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
Line 2 is Series E

W13-1

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

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

STANDARD SIGN

W13-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 5/31/12 PLATE NO. W13-1.16

PROJECT NO:

HWY:

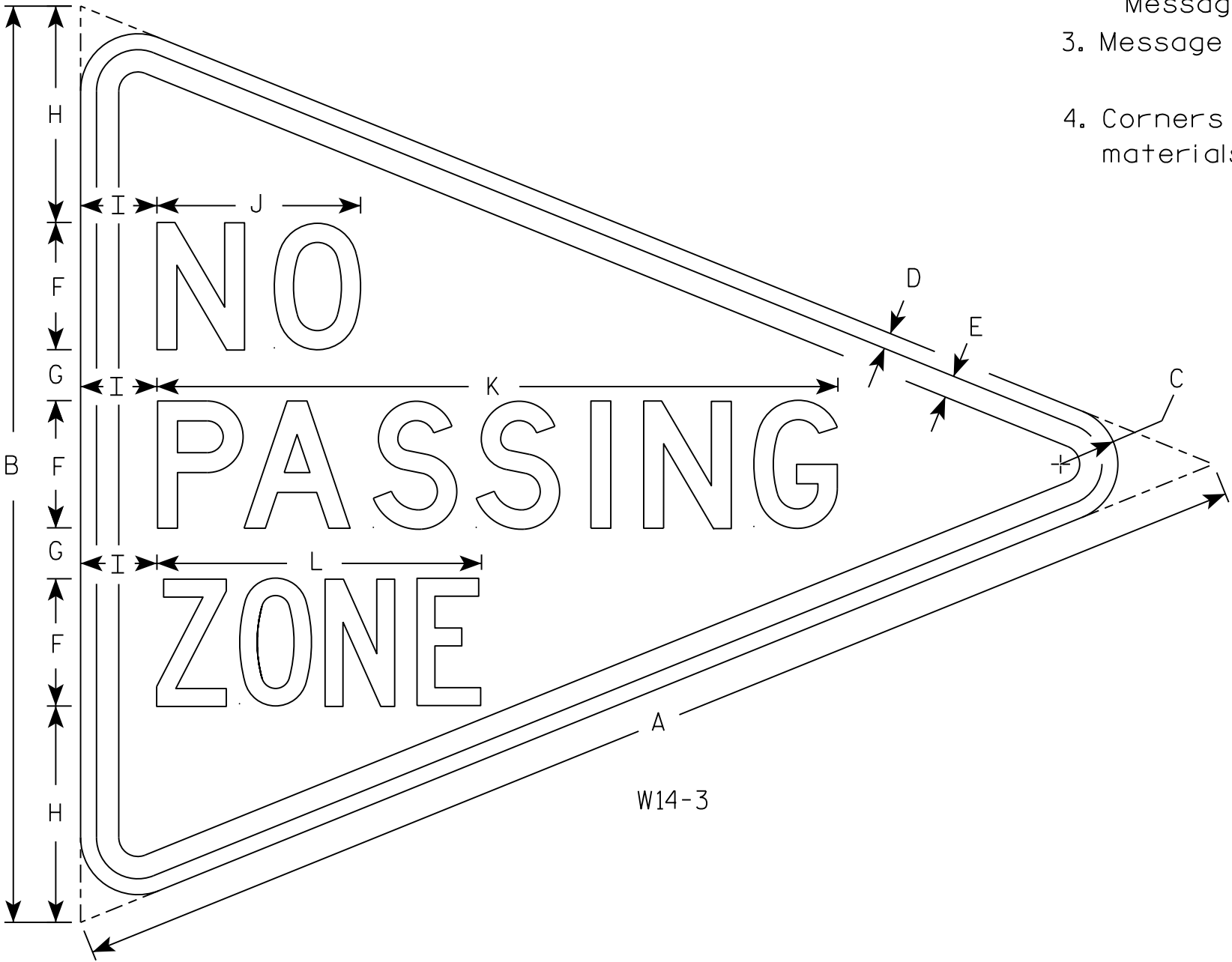
COUNTY:

SHEET NO:

E

NOTES

- 1. Sign is Type II- Type F Reflective
- 2. Color:
Background - Yellow
Message - Black
- 3. Message Series - Lines 1 and 2 are Series D.
Line 3 is series C.
- 4. Corners and borders shall be rounded on all base materials for this sign.



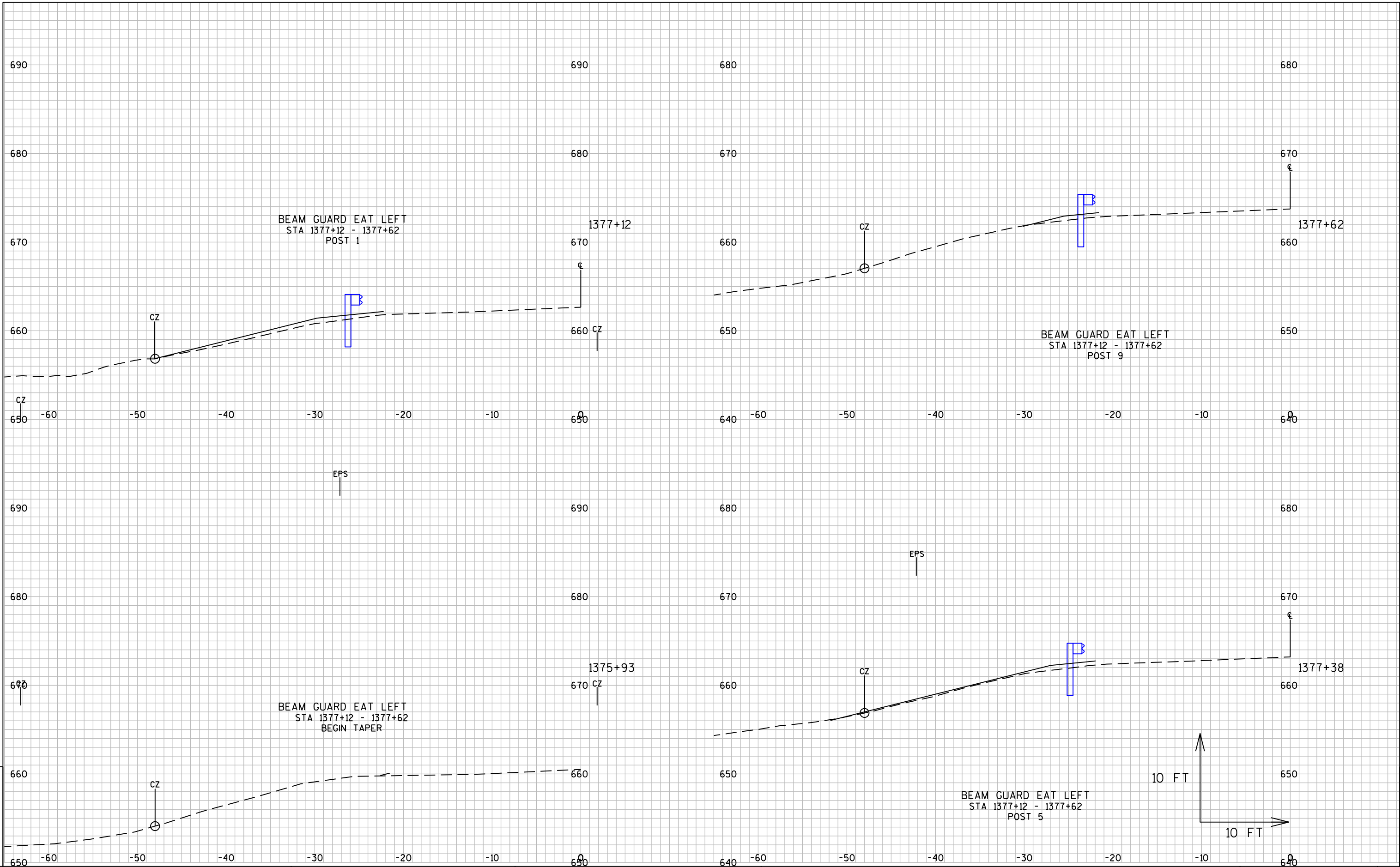
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															5.56
2M																											
3																											
4																											
5																											

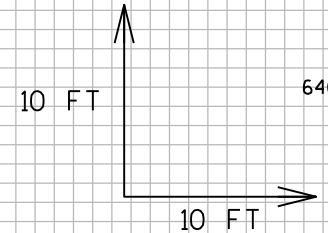
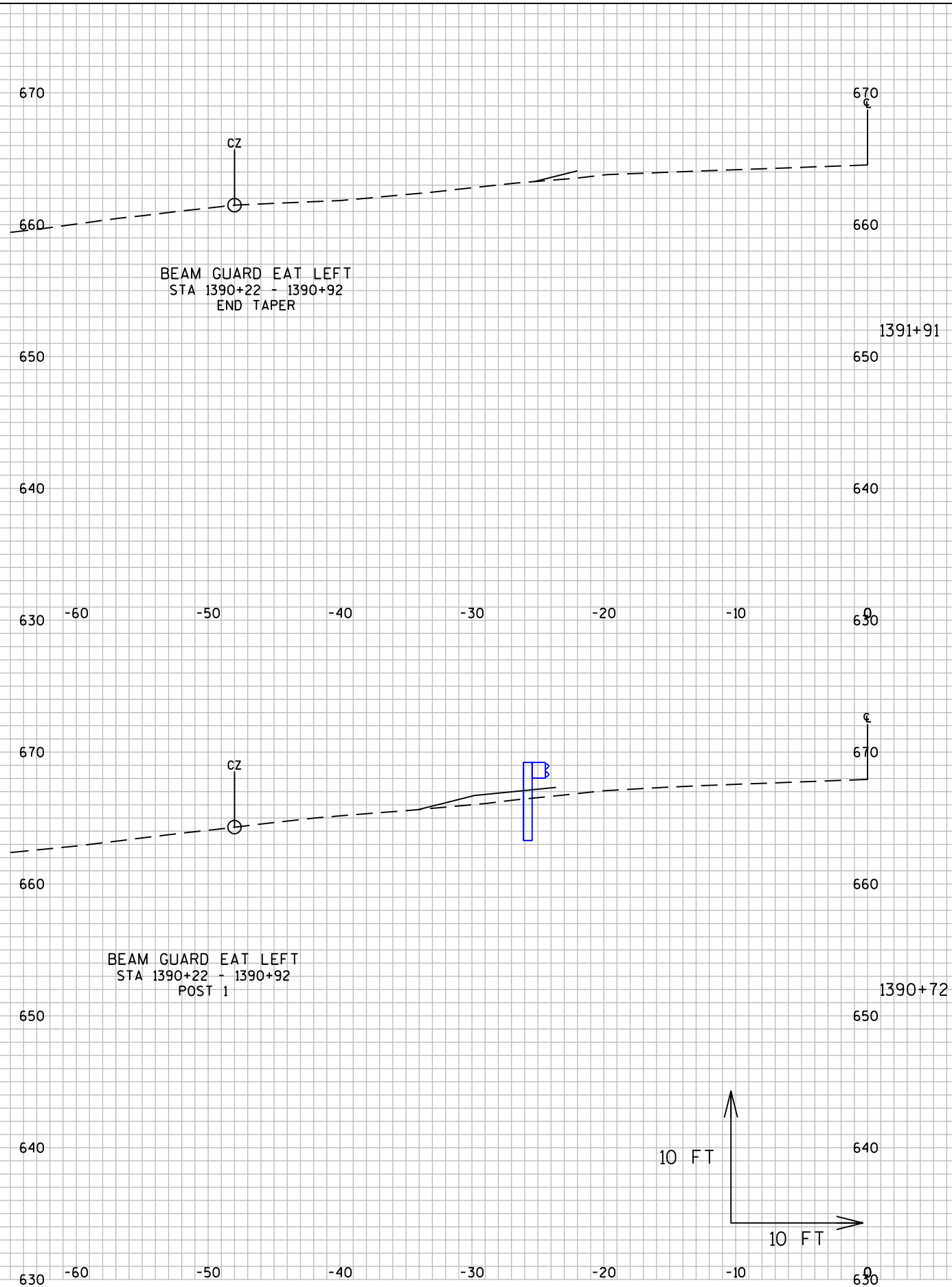
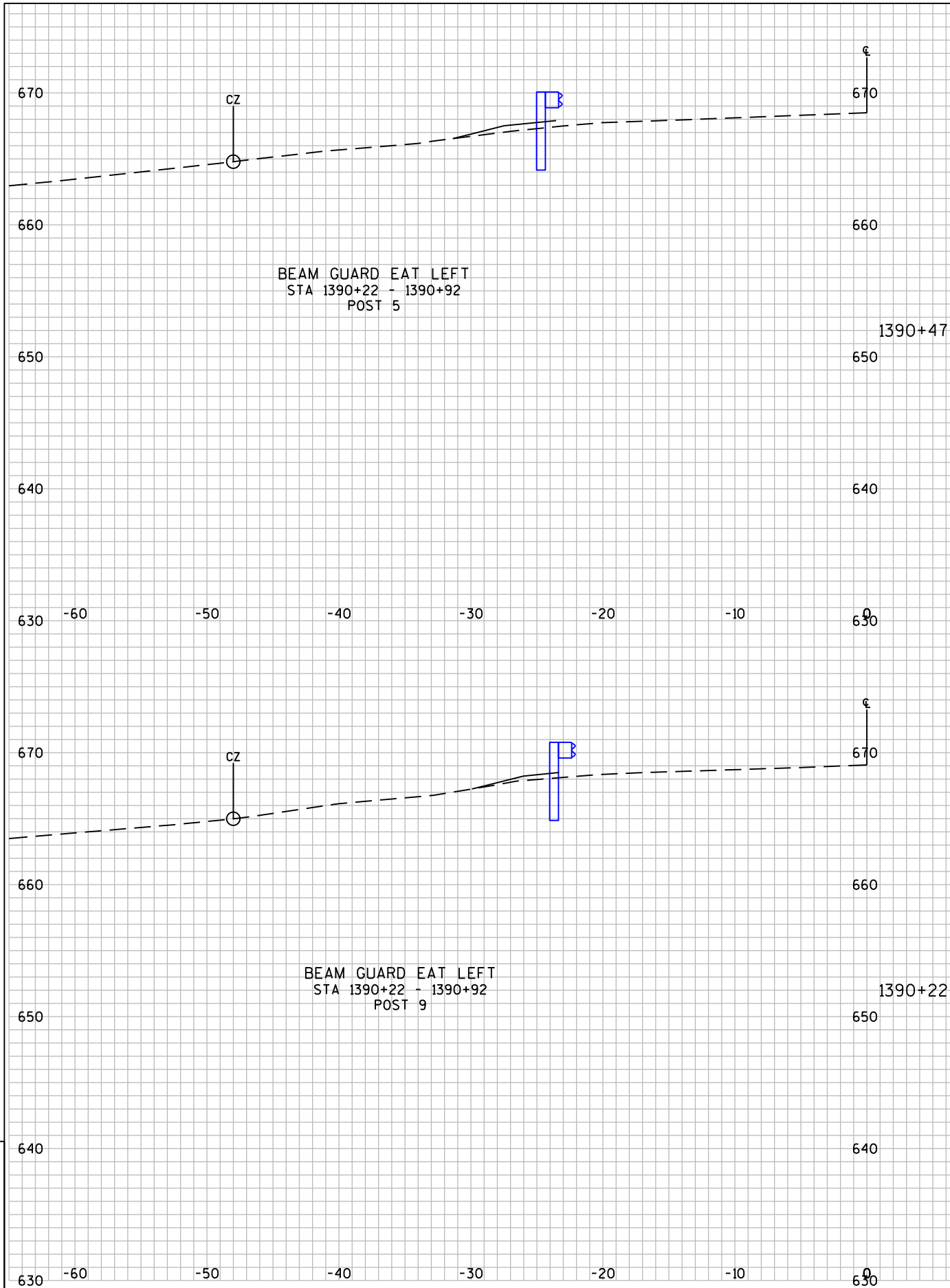
STANDARD SIGN
W14-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

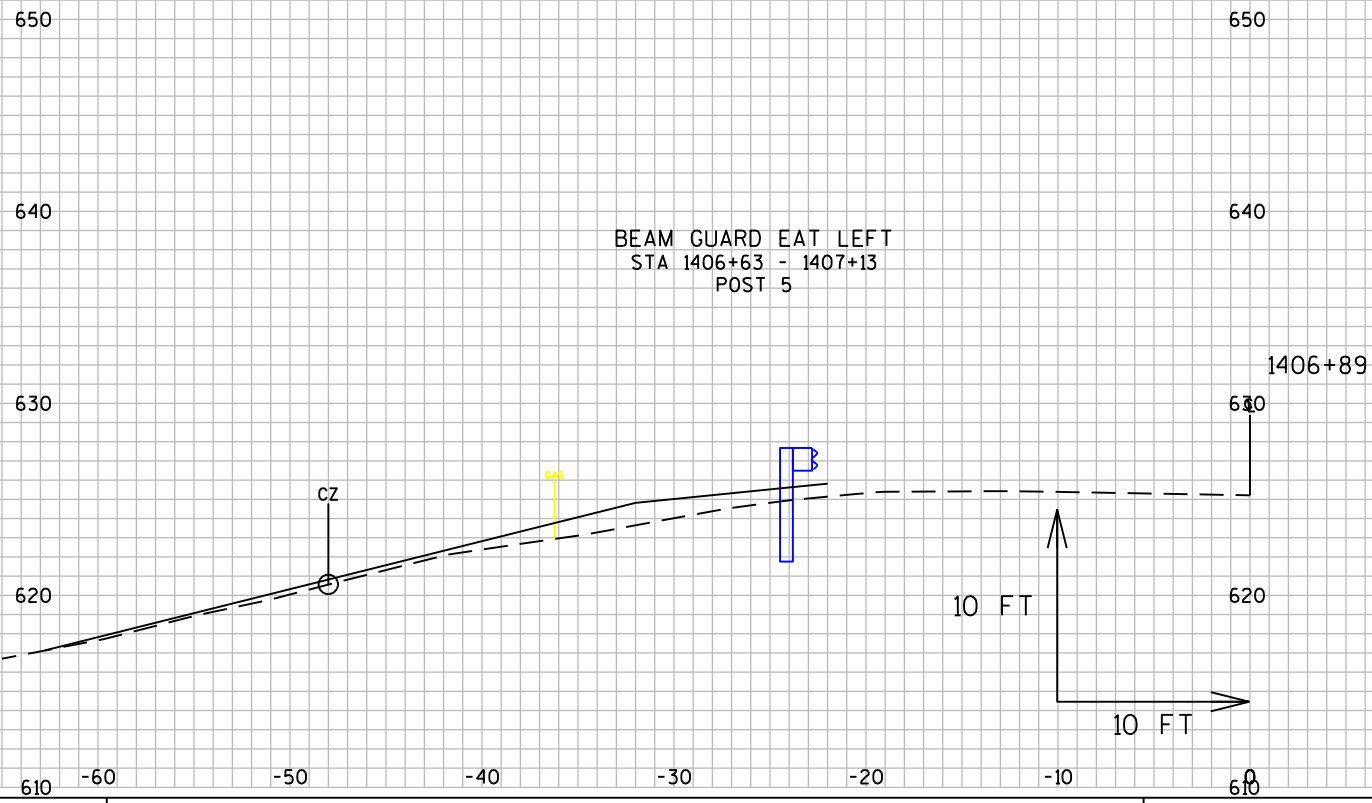
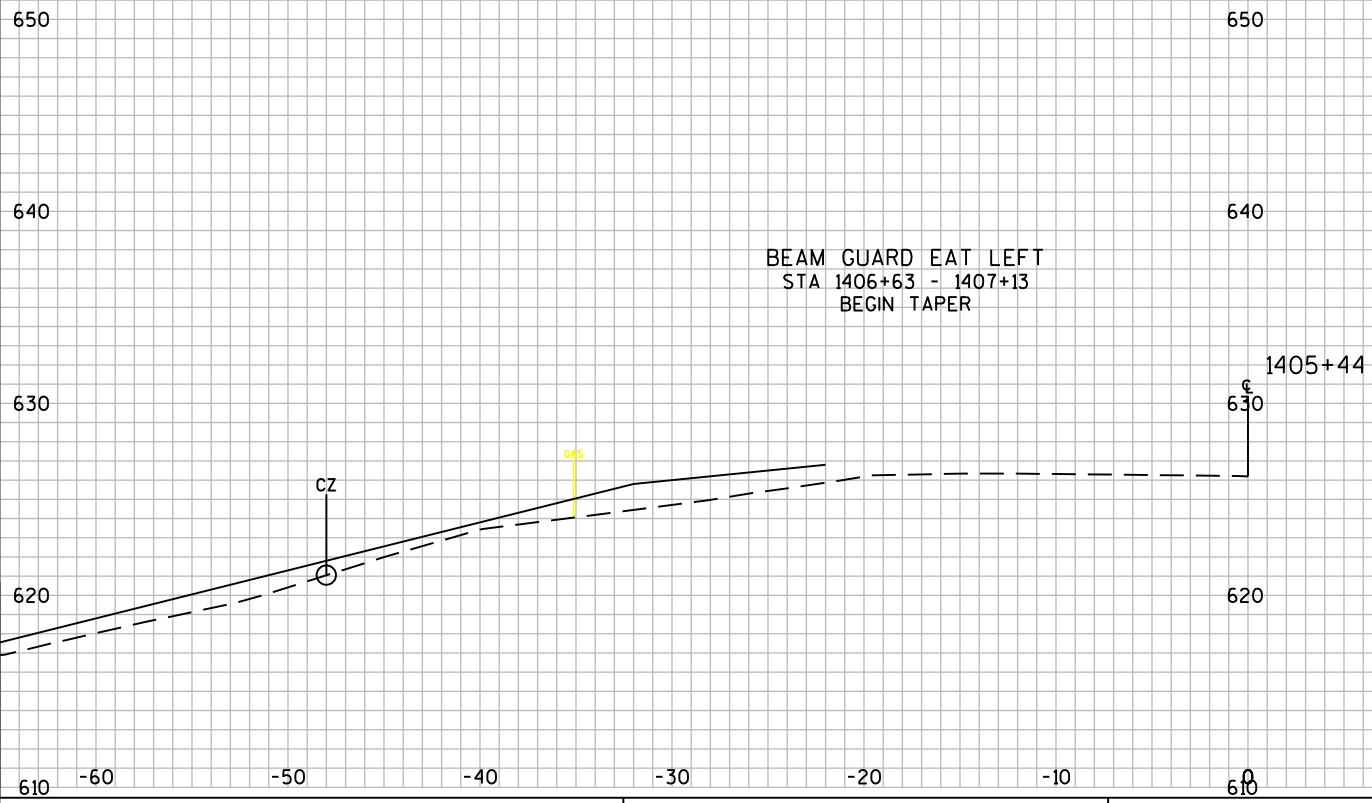
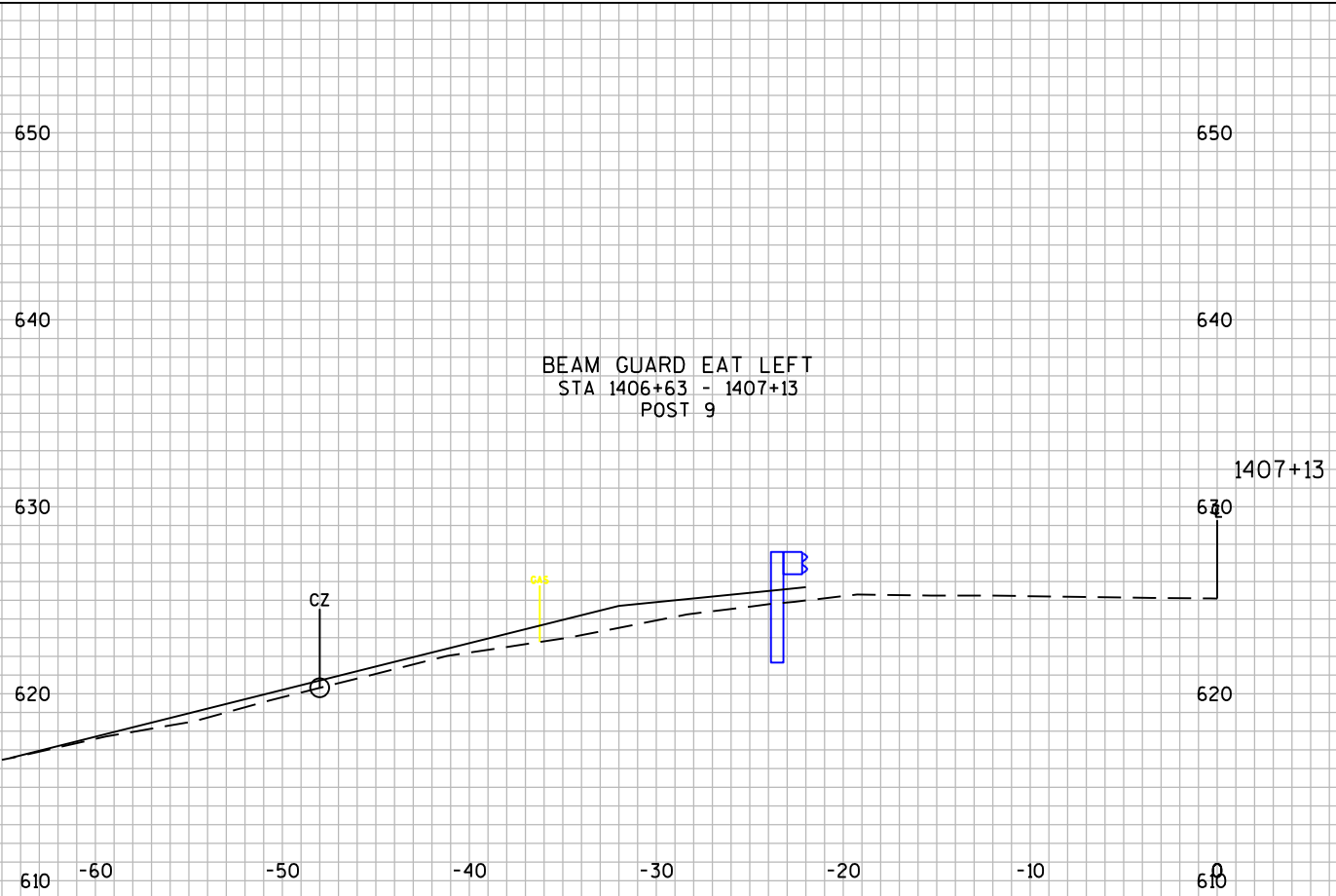
DATE 3/21/17 PLATE NO. W14-3.10





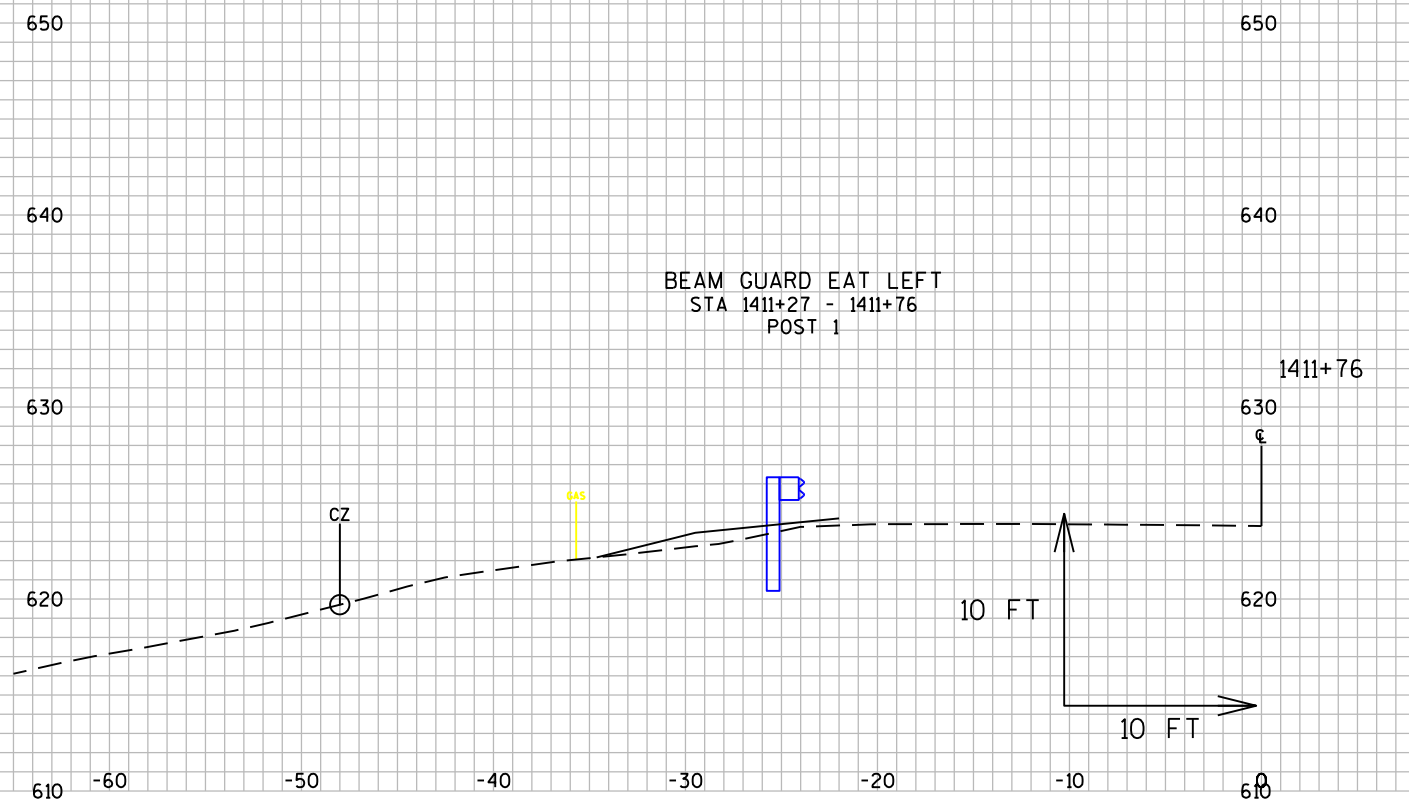
9

9



9

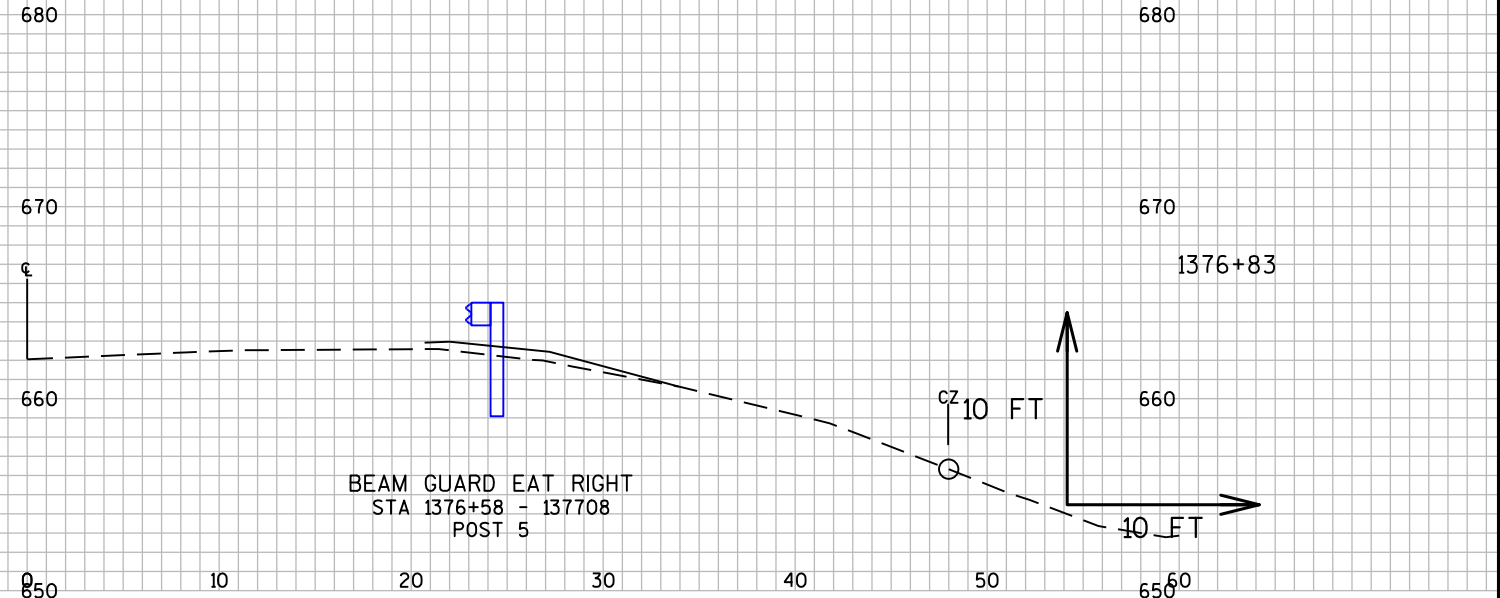
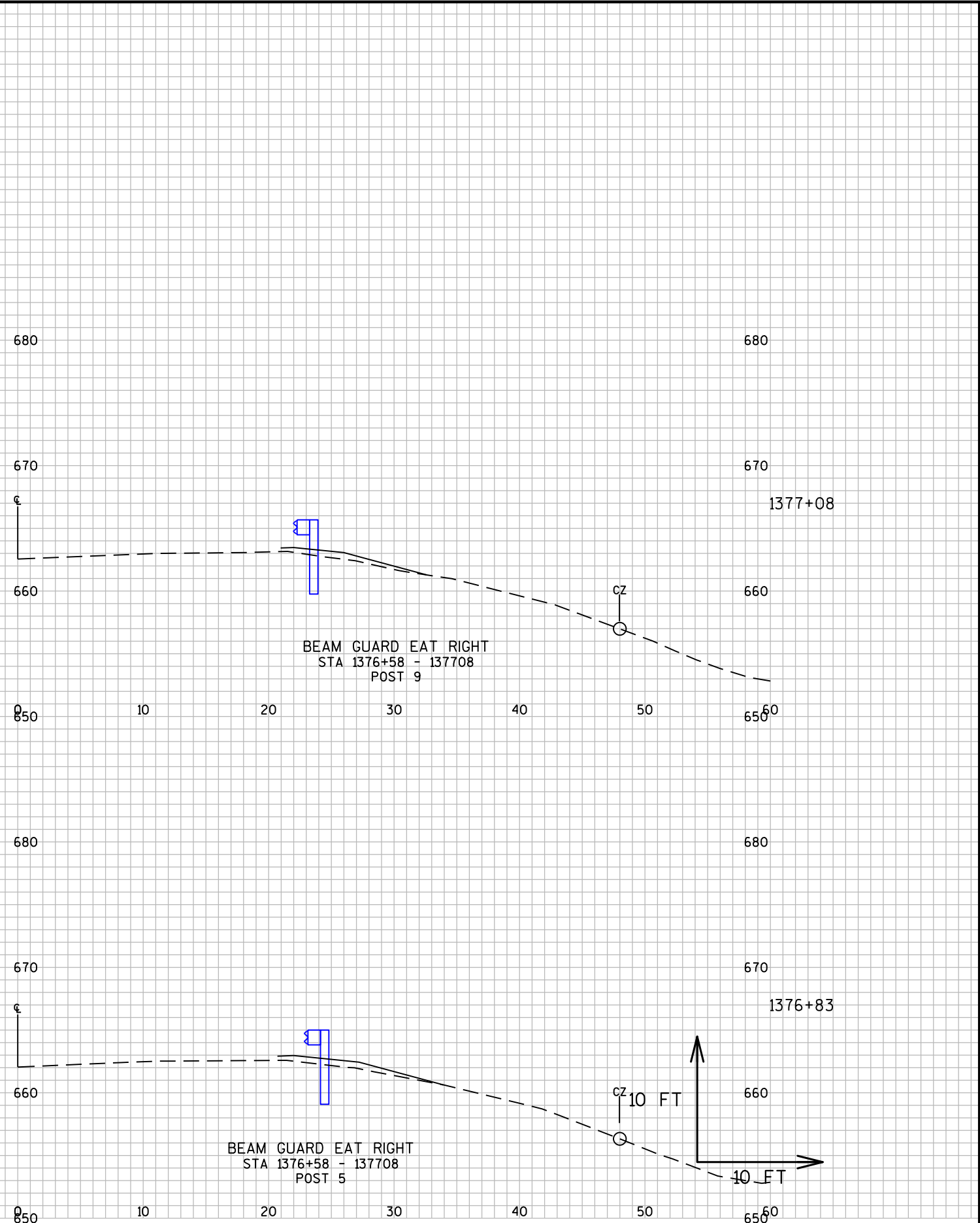
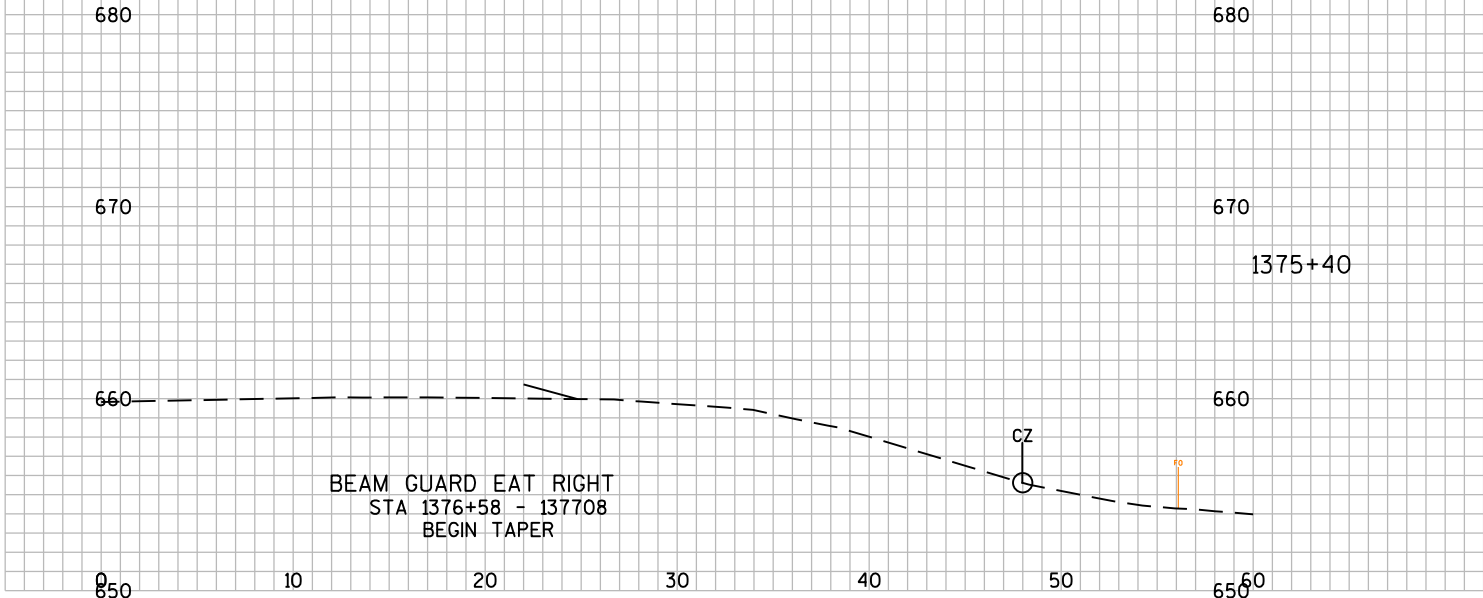
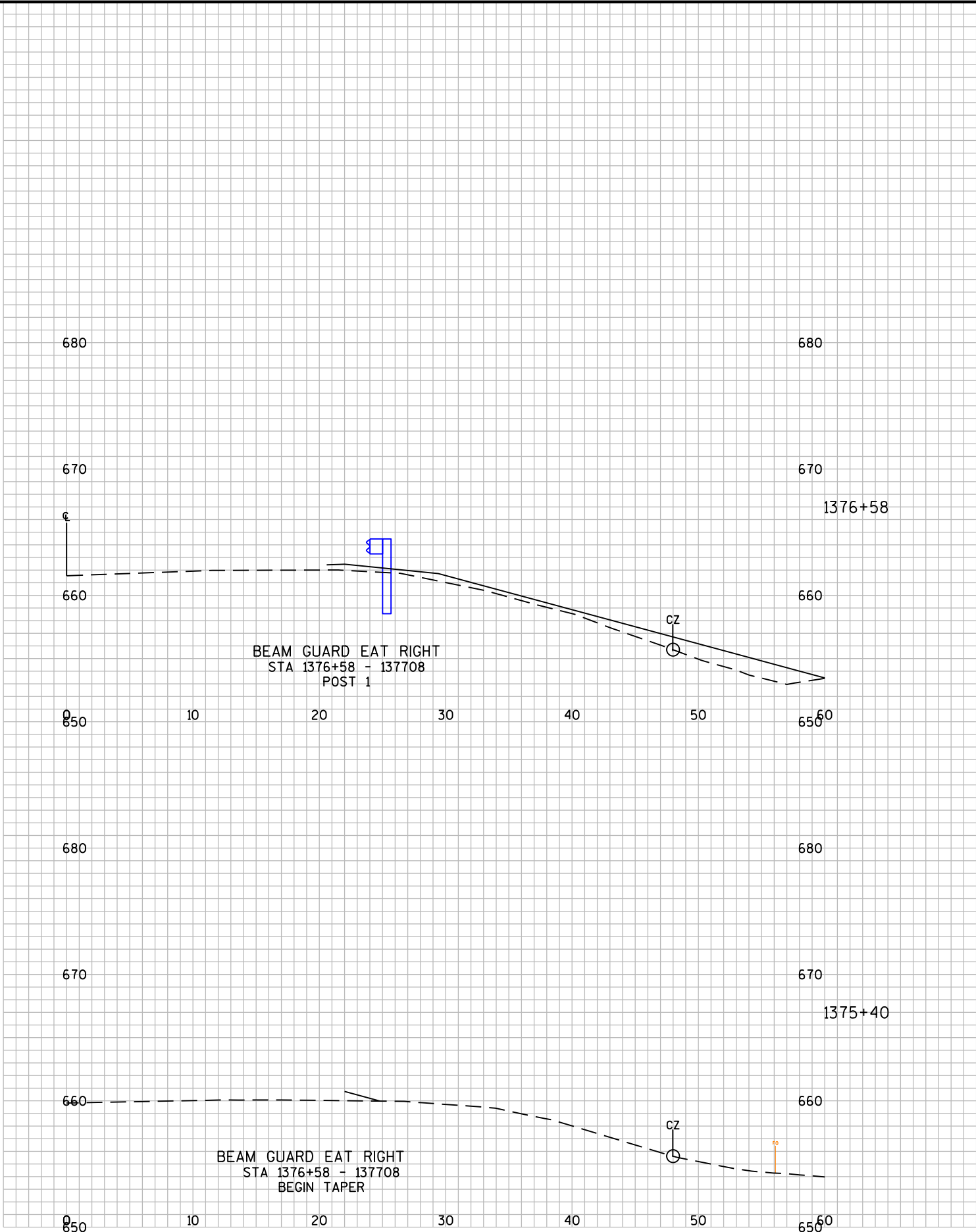
9



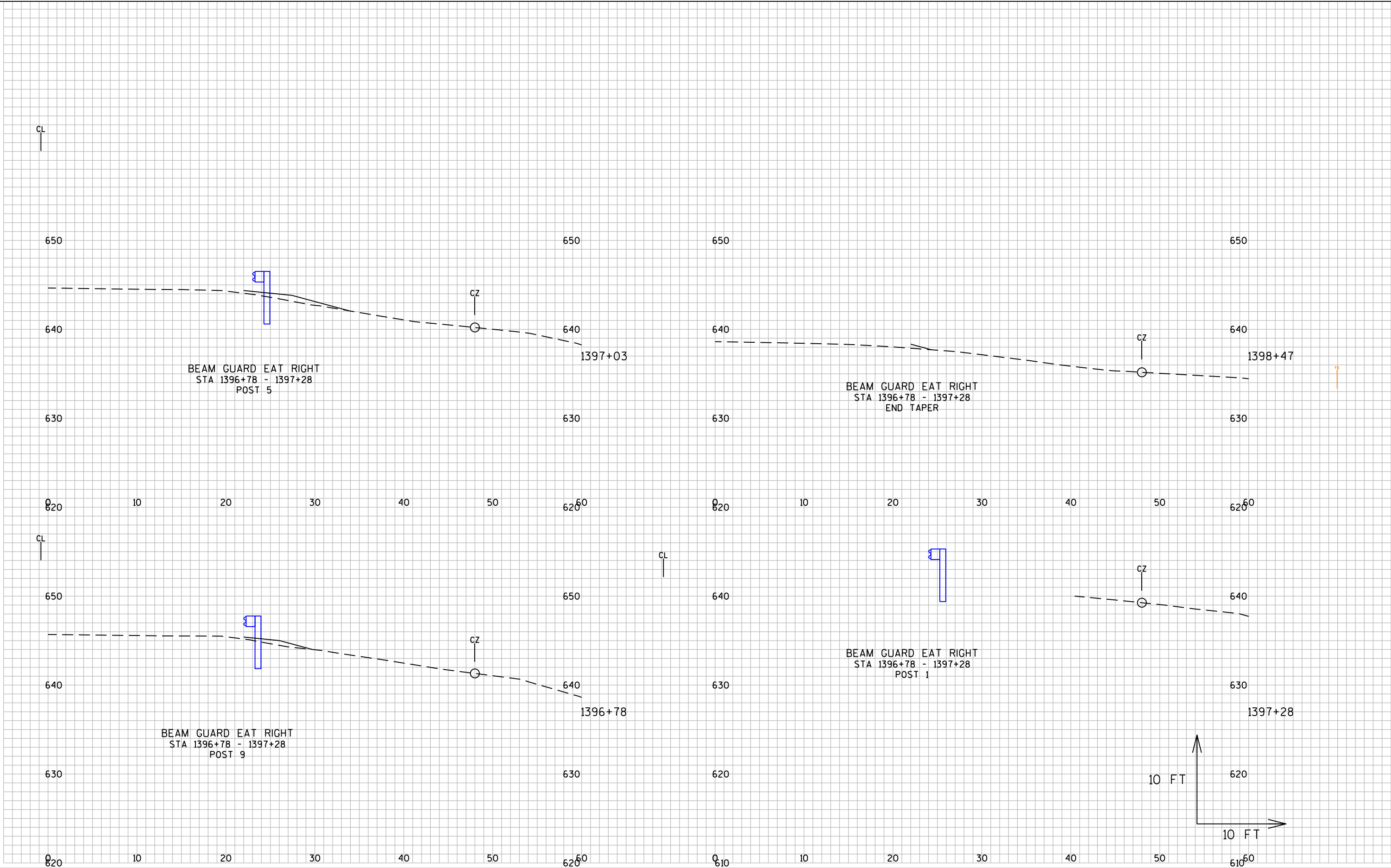
9

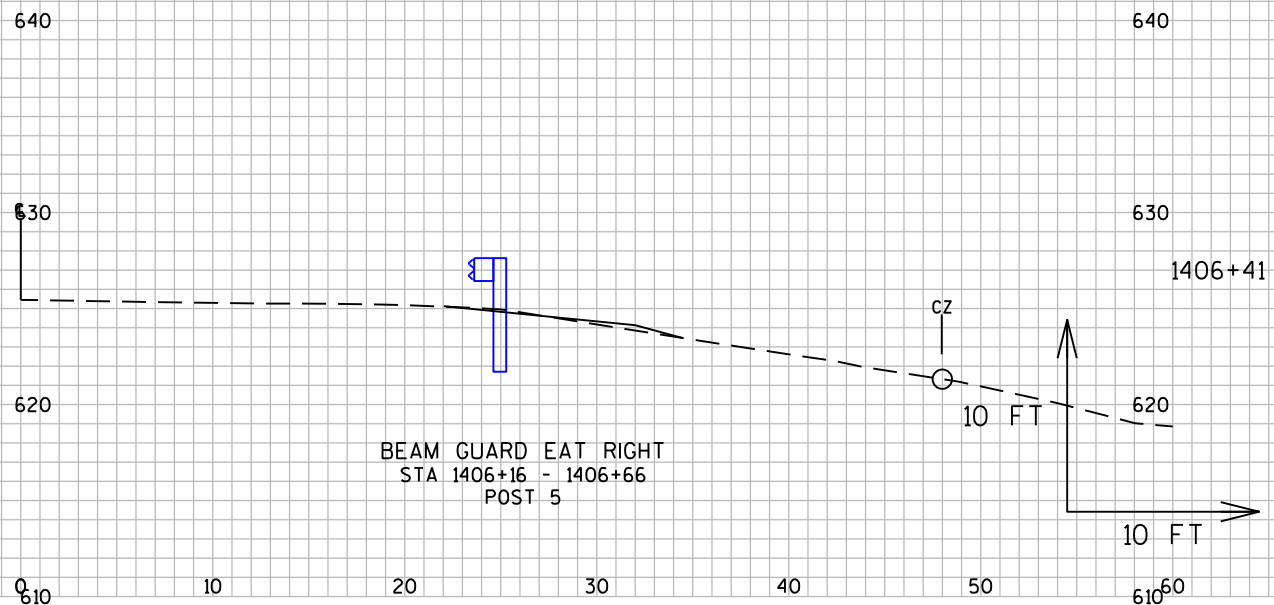
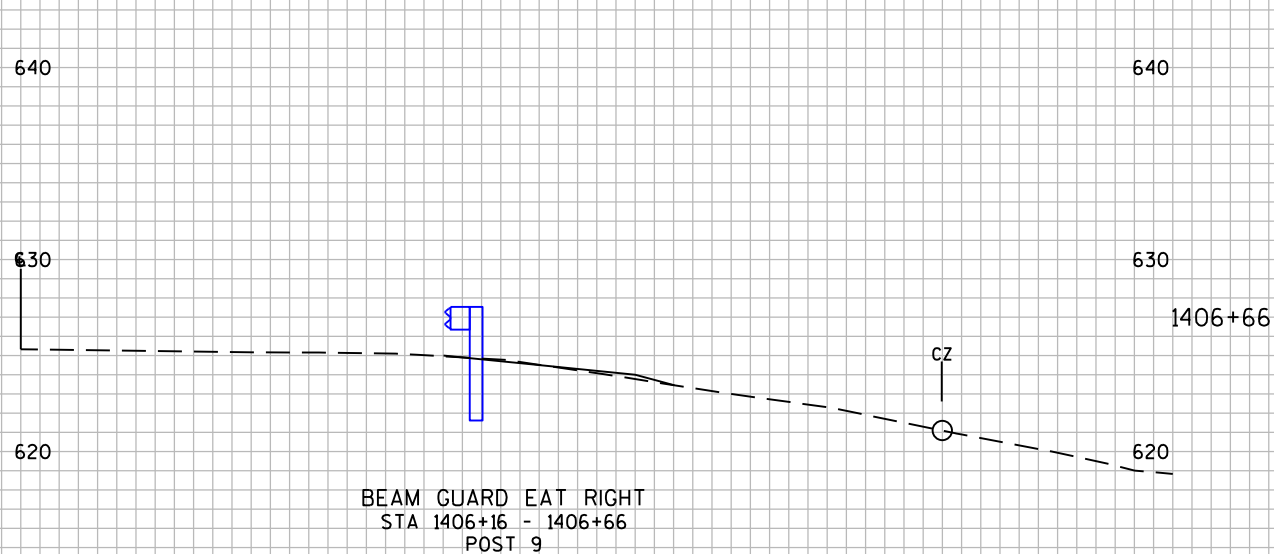
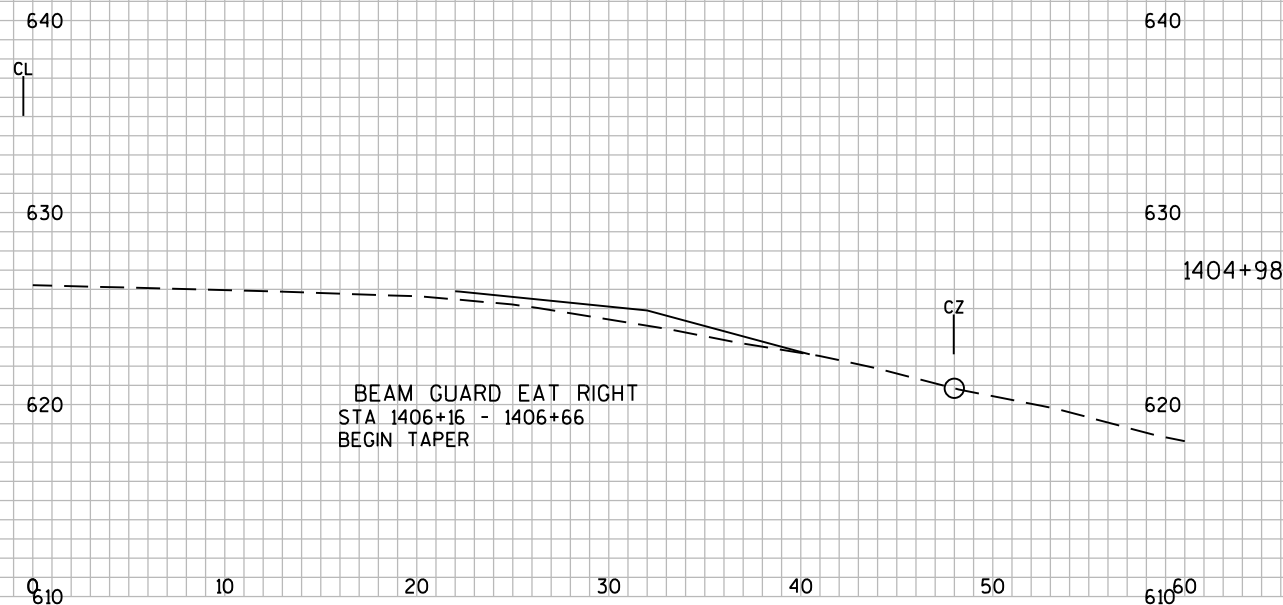
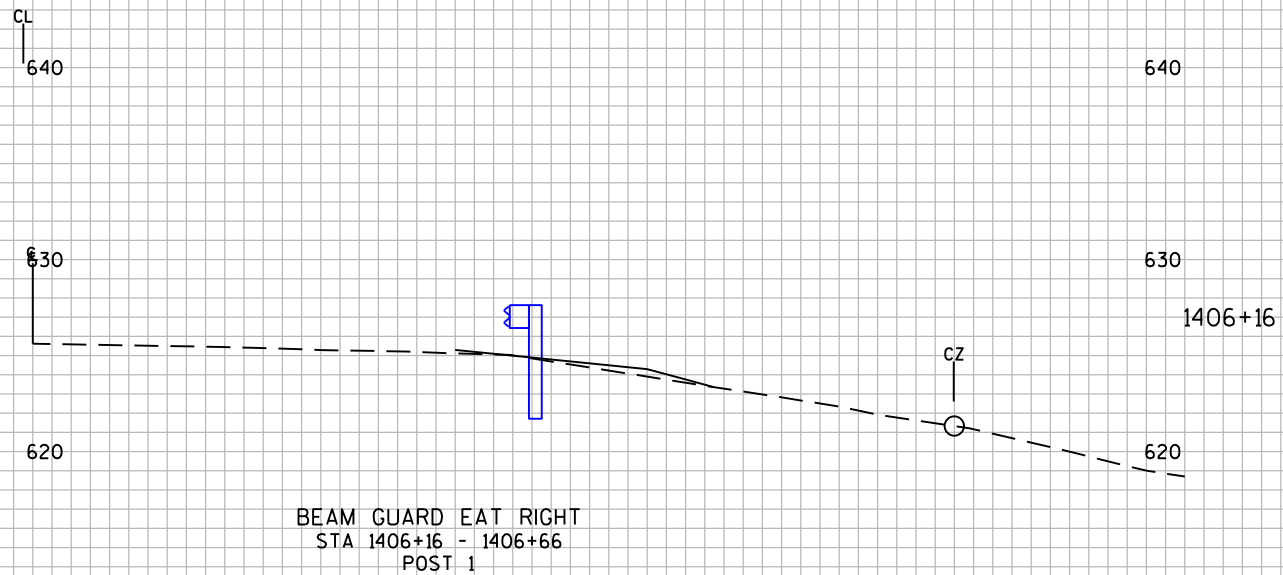
9

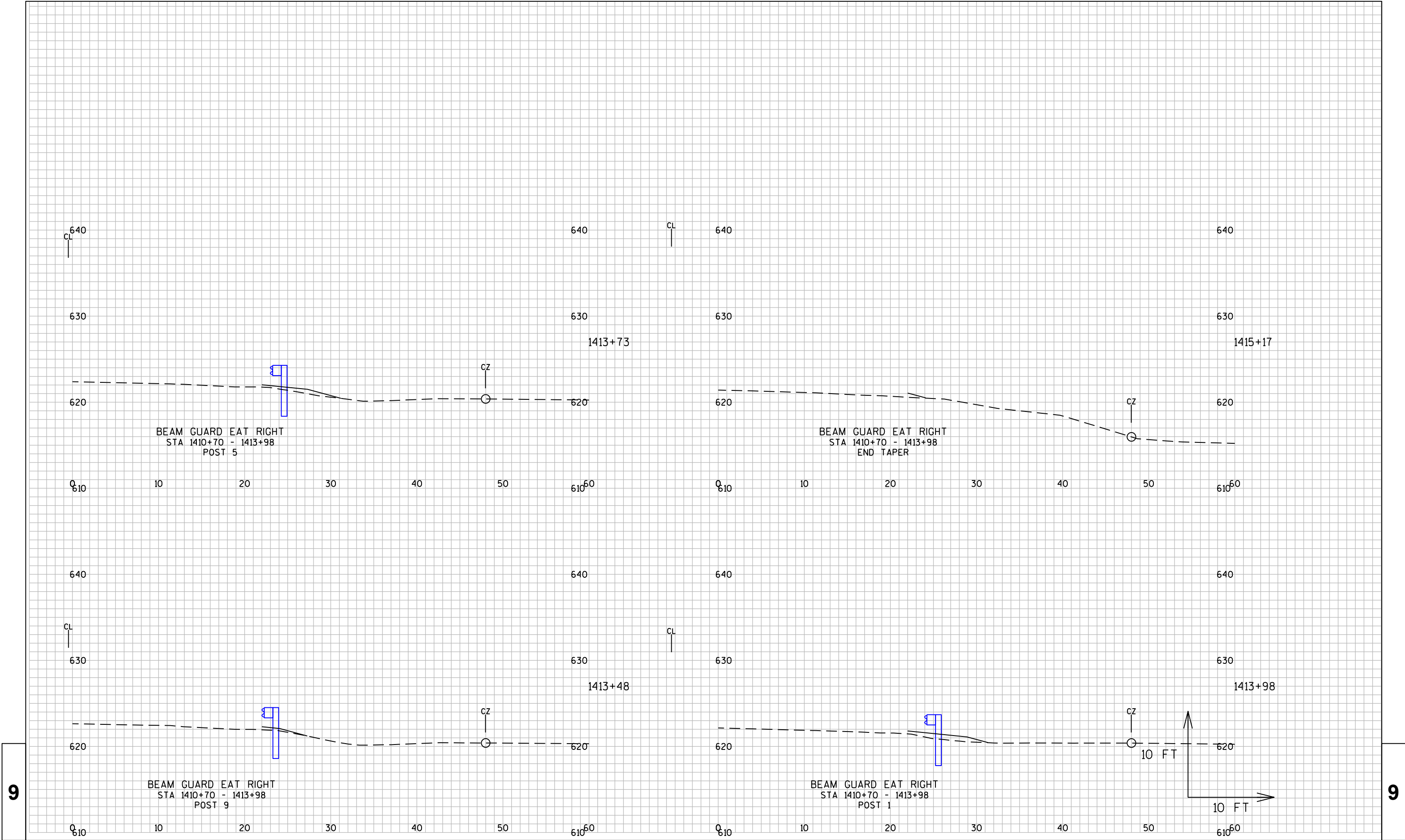
9



9

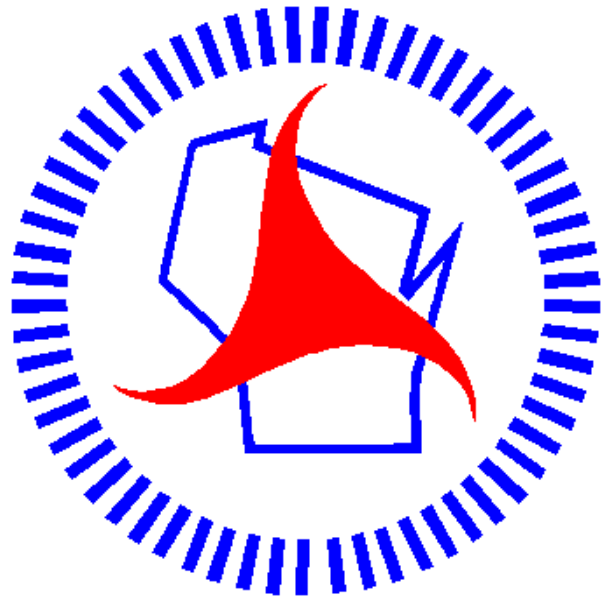






9

9



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