

PROJECT ID: 1500-28-71  
WITH: N/A

COUNTY: MANITOWOC

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
<del>Section No. 4</del>	<del>Right of Way Plat</del>
Section No. 5	Plan and Profile
Section No. 6	Standard Detail Drawings
Section No. 7	Sign Plates
Section No. 8	Structure Plans
<del>Section No. 9</del>	<del>Computer Earthwork Data</del>
<del>Section No. 9</del>	<del>Cross Sections</del>

TOTAL SHEETS = 78



DESIGN DESIGNATION

A.A.D.T. 2013	=	6,200
A.A.D.T. 2023	=	8,200
D.H.V.	=	1,263
D.D.	=	62/38
T.	=	19.2
DESIGN SPEED	=	50 MPH
ESALS	=	3,372,600

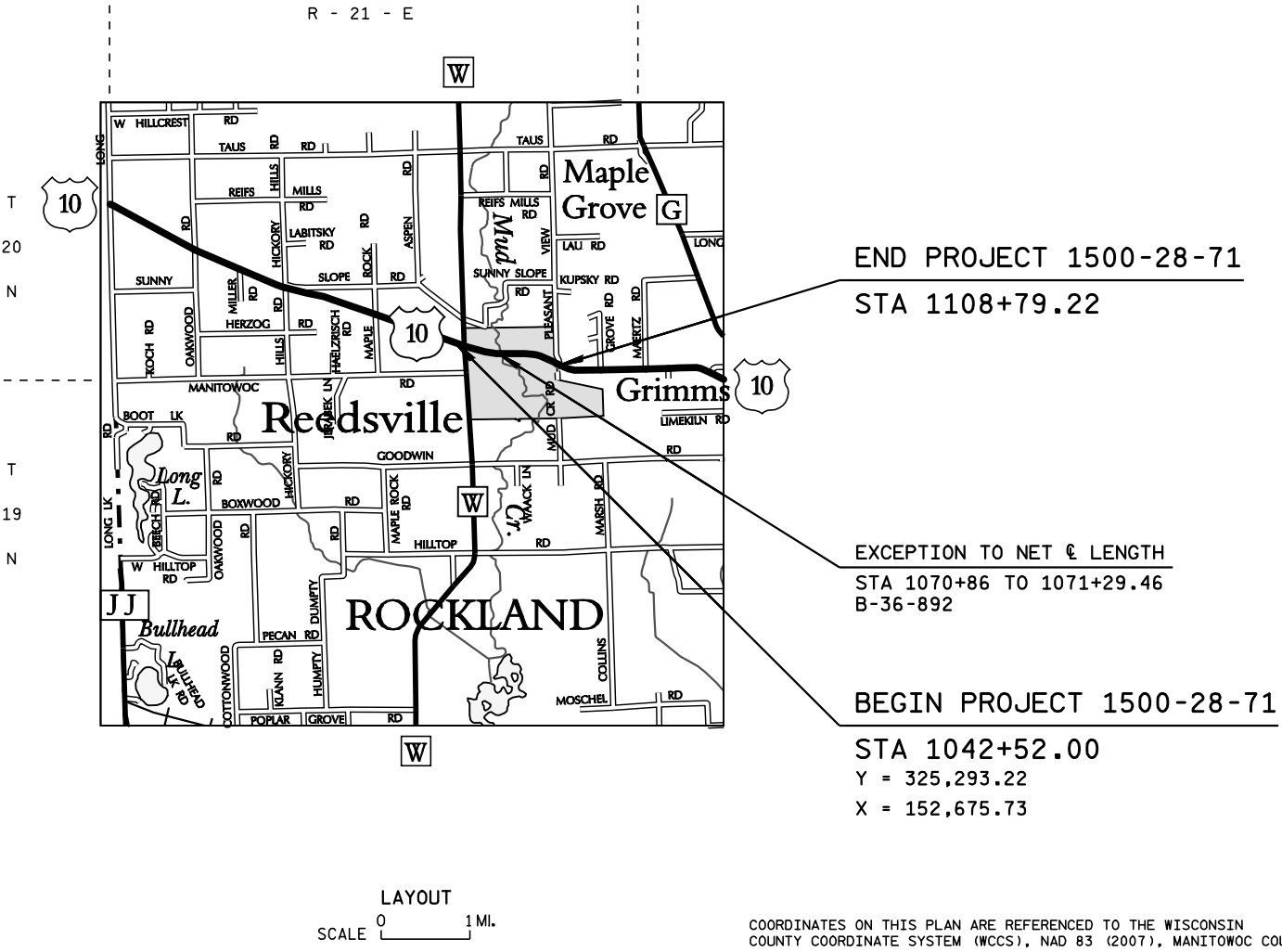
CONVENTIONAL SYMBOLS

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

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

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION  
PLAN OF PROPOSED IMPROVEMENT  
VILLAGE OF REEDSVILLE  
CTH W - EAST VILLAGE LIMITS  
U.S.H. 10  
MANITOWOC COUNTY

STATE PROJECT NUMBER  
1500-28-71



END PROJECT 1500-28-71  
STA 1108+79.22

EXCEPTION TO NET & LENGTH  
STA 1070+86 TO 1071+29.46  
B-36-892

BEGIN PROJECT 1500-28-71  
STA 1042+52.00  
Y = 325,293.22  
X = 152,675.73

TOTAL NET LENGTH OF CENTERLINE = 1.247 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), NAD 83 (2007), MANITOWOC COUNTY.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1500-28-71		

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

PREPARED BY	MEAD & HUNT, INC.
Surveyor	M. TERNES
Designer	M. HAEFS
Project Manager	R. ROOYAKKERS
Regional Examiner	Cyle Haag
Regional Supervisor	
C.O. Examiner	

APPROVED FOR THE DEPARTMENT  
DATE: 8-1-12  
(Signature)

E

GENERAL NOTES

EROSION CONTROL ITEMS SHOWN ARE SUGGESTED LOCATIONS, THE EXACT LOCATIONS ALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE EXACT LOCATIONS OF BUTT JOINTS ARE TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

HMA PAVEMENT QUANTITIES WERE CALCULATED USING 110 LB/SY-INCH. LOWER LAYER HMA PAVEMENT QUANTITIES WERE CALCULATED USING AN ADDITIONAL 20 LB/SY TO ACCOUNT FOR MILLING IRREGULARITIES.

TOPSOIL, FERTILIZER, SEED AND MULCH SHALL BE PLACED ON ALL EXPOSED DISTURBED AREAS.

THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES, IN PARTICULAR, THE AREAS OF CULVERT PIPE REPLACEMENT AND BEAMGUARD UPGRADES, WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES WHICH HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

SHOULDERS SHALL BE PAVED FULL WIDTH IN LOCATIONS WHICH REQUIRE STEEL PLATE BEAM GUARD.

COORDINATE WITH MANITOWOC COUNTY SURVEYOR A MINIMUM OF ONE MONTH PRIOR TO CONSTRUCTION FOR THE REESTABLISHMENT OF SECTION CORNER MONUMENTS.

APRON ENDWALL FOR CULVERT PIPE SALVAGED SHALL BE RESET IN ITS CURRENT LOCATION AND TIED TO THE ADJACENT PIPE.

UTILITIES

FRONTIER COMMUNICATIONS, INC. LLC  
ROB CHURCH  
100 COMMUNICATIONS DRIVE  
SUN PRAIRIE, WI 53590  
608-837-1494  
CELL 608-616-2278  
robert.church@ftr.com

REEDSVILLE WATER AND SEWER UTILITIES  
BRAD BUSSE  
217 MENASHA STREET  
REEDSVILLE, WI 54230  
920-754-4094  
CELL 920-450-1094  
utilities@reedsville.org

TIME WARNER CABLE  
LARRY PIHLSTROM  
3520 DESTINATION DRIVE  
APPLETON, WI 54915  
920-831-9211  
FAX 920-749-1154  
larry.pihlstrom@twcable.com

WISCONSIN PUBLIC SERVICE  
LORI BUTRY  
700 NORTH ADAMS STREET  
PO BOX 19001  
GREEN BAY, WI 54307-9001  
920-433-1703  
FAX 920-433-1360  
LAButry@integrysgroup.com

WISCONSIN PUBLIC SERVICE  
JEFF PELISCHEK (ELECTRIC)  
800 COLUMBUS STREET  
TWO RIVERS, WI 54241  
920-794-3216  
CELL 920-323-4836  
jspelischek@wisconsinpublicservice.com

WISCONSIN PUBLIC SERVICE  
MICHAEL LOWTHER (GAS)  
933 S WILDWOOD AVENUE  
SHEBOYGAN, WI 53081  
920-458-5719  
CELL 920-946-3198  
MLowther@wisconsinpublicservice.com

COUNTY SURVEYOR OR SURVEYS CONTACT PERSON

JOHN KROPP - MANITOWOC COUNTY  
MANITOWOC COUNTY HWY OFFICE  
3500 STH 310  
MANITOWOC, WI 54220-9659  
920-323-6512  
jmkropp@att.net

DNR AREA LIAISON

MATT SCHAEVE  
DEPARTMENT OF NATURAL RESOURCES  
2984 SHAWANO AVE  
GREEN BAY, WI 54313-6727  
920-662-5472  
MATTHEW.SCHAEVE@WISCONSIN.GOV



Call 811 3 Work Days Before You Dig  
or Toll Free (800) 242-8511  
Hearing Impaired TDD (800) 542-2289  
www.DiggersHotline.com

EMERGENCY CONTACT NUMBERS FOR WISCONSIN PUBLIC SERVICE

ELECTRIC 24 HOUR EMERGENCY SERVICE: 1-800-450-7240  
GAS 24 HOUR EMERGENCY SERVICE: 1-800-450-7280



BEGIN PROJECT  
STA 1042+52.00

CTH W

6TH ST

5TH ST

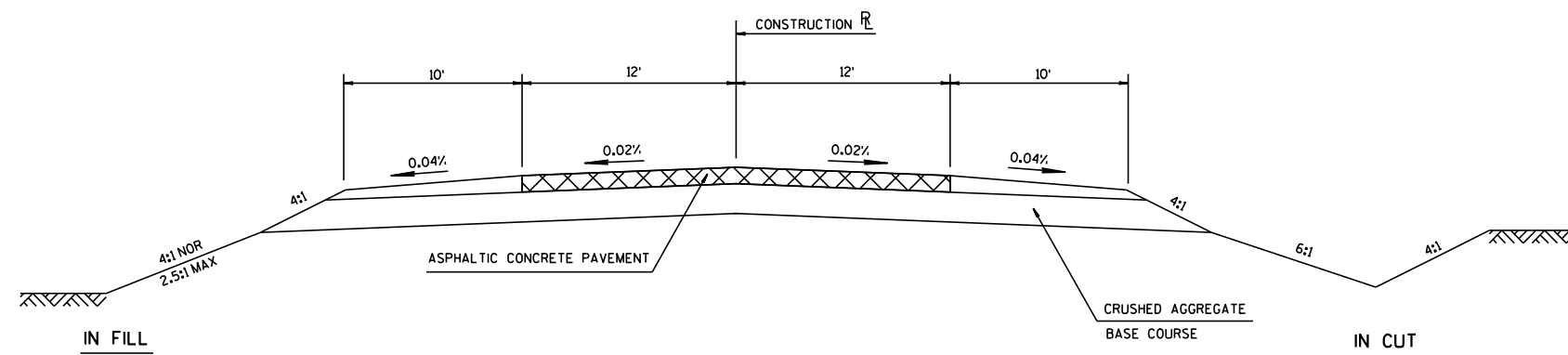
4TH ST

3RD ST

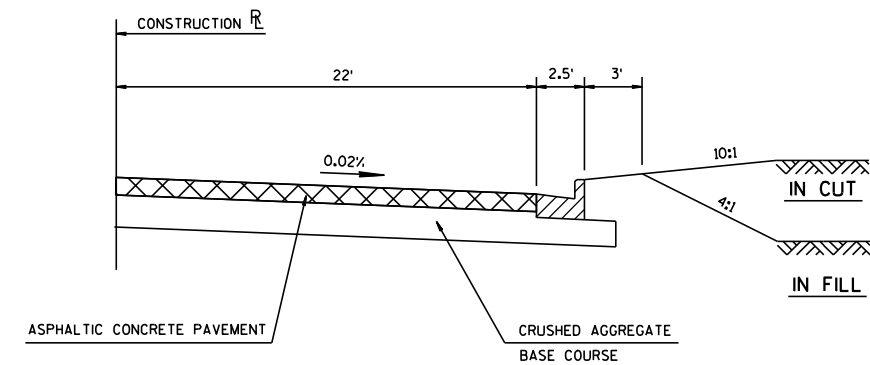
2ND ST

PLEASANT VIEW RD

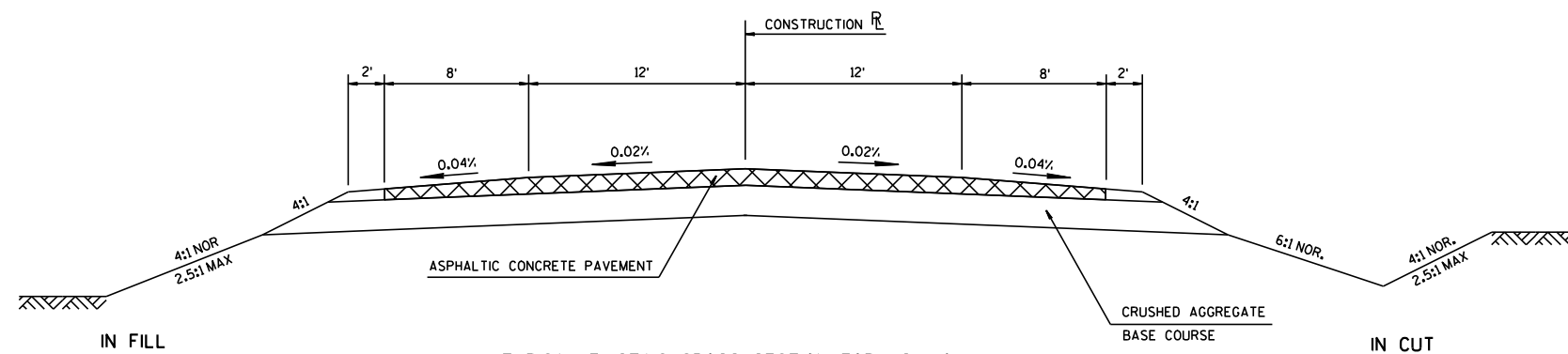
END PROJECT  
STA 1108+79.22



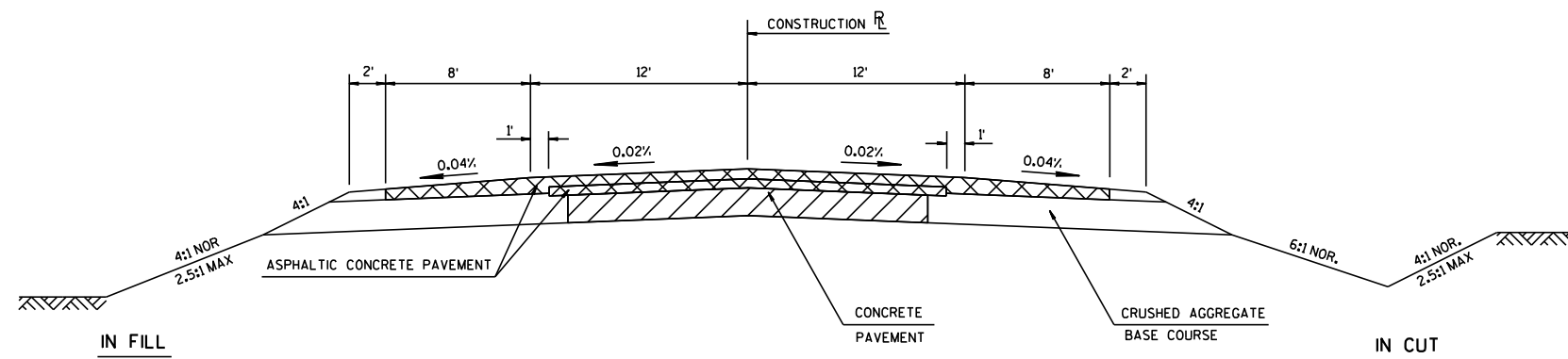
TYPICAL EXISTING CROSS SECTION FOR USH 10  
STA 1042+52 TO STA 1055+00



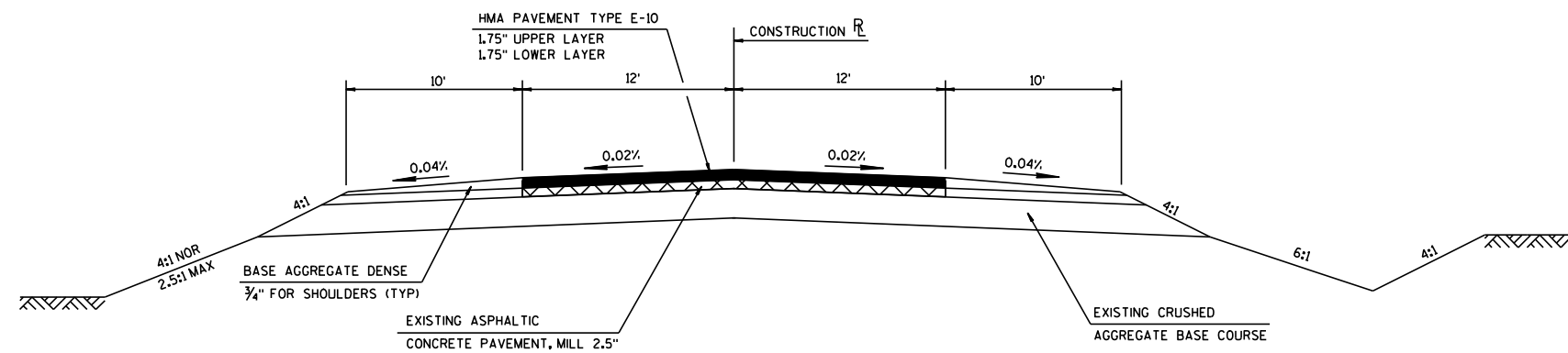
1/2 TYPICAL EXISTING CROSS SECTION FOR USH 10  
STA 1057+00 TO STA 1061+00 RT.  
STA 1061+00 TO STA 1063+50 LT.  
STA 1077+27 TO STA 1078+25 RT.  
STA 1085+13 TO STA 1088+20 RT.



TYPICAL EXISTING CROSS SECTION FOR USH 10  
STA 1055+00 TO STA 1070+86  
STA 1081+00 TO STA 1108+79.22

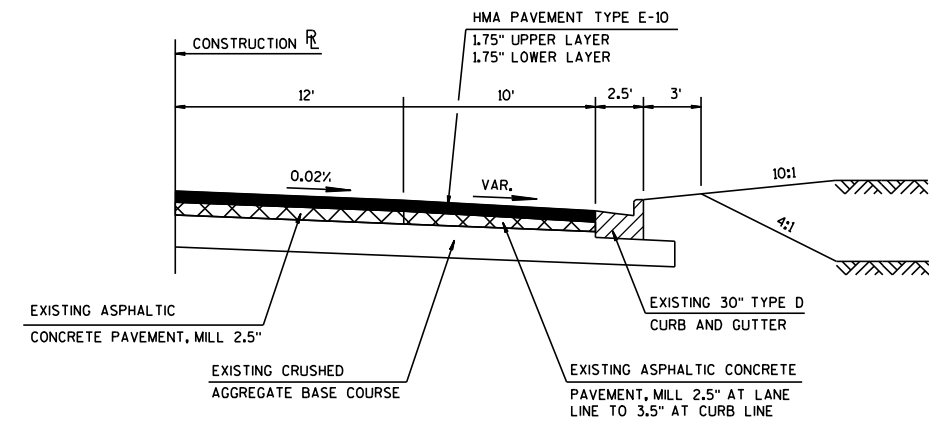


TYPICAL EXISTING CROSS SECTION FOR USH 10  
STA 1071+30 TO STA 1081+00



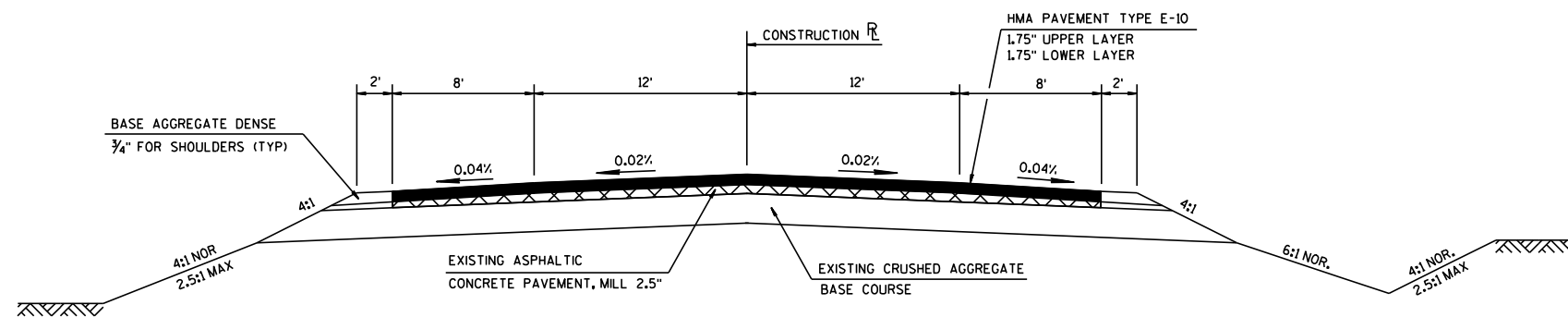
**FINISHED TYPICAL CROSS SECTION FOR USH 10**

STA 1042+52 TO STA 1055+00



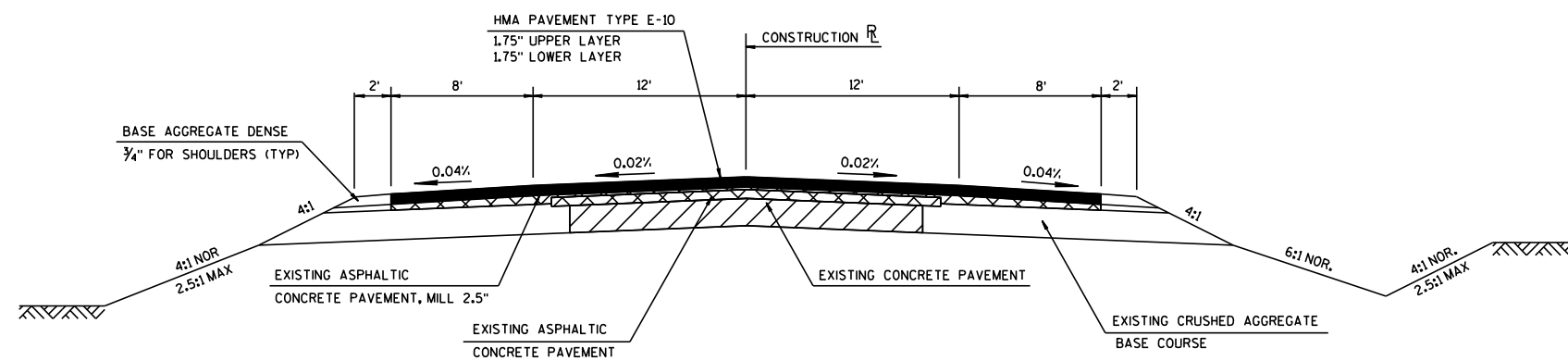
**1/2 FINISHED TYPICAL CROSS SECTION FOR USH 10**

STA 1057+00 TO STA 1061+00 RT.  
STA 1061+00 TO STA 1063+50 LT.  
STA 1077+27 TO STA 1078+25 RT.  
STA 1085+13 TO STA 1088+20 RT.



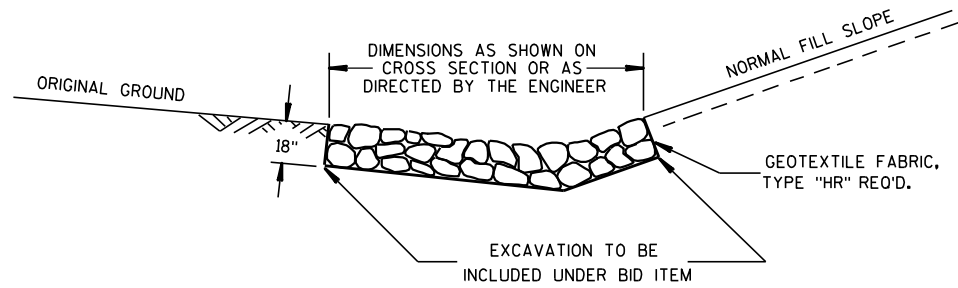
**TYPICAL FINISHED CROSS SECTION FOR USH 10**

STA 1055+00 TO STA 1070+86  
STA 1081+00 TO STA 1108+79.22

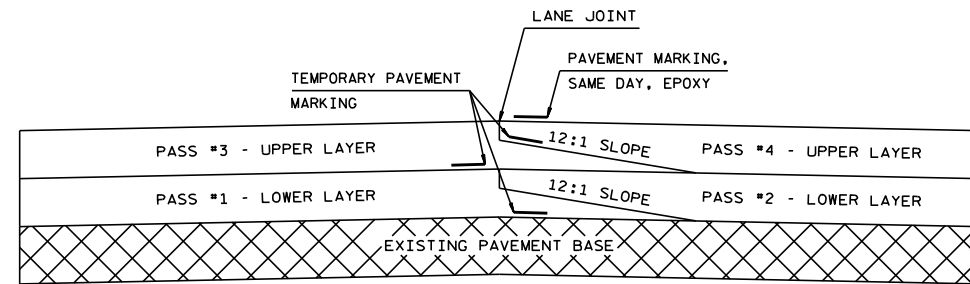


**TYPICAL FINISHED CROSS SECTION FOR USH 10**

STA 1071+30 TO STA 1081+00

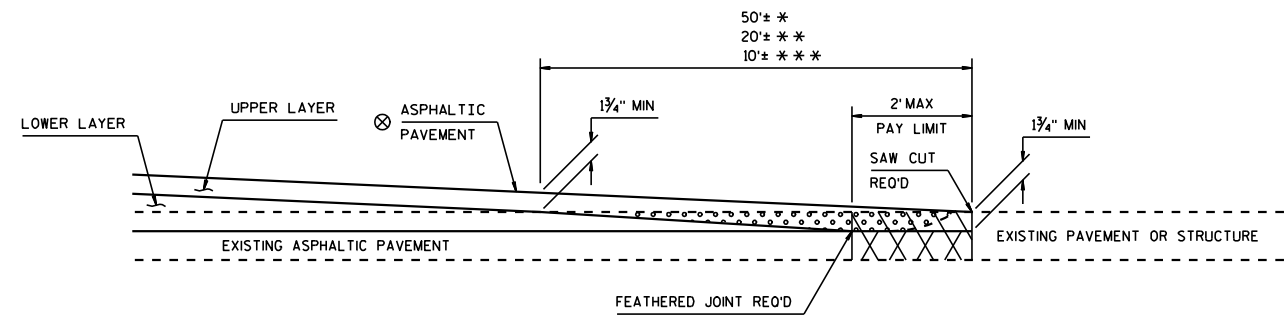


DETAIL FOR MEDIUM RANDOM RIPRAP IN DITCHES



LOWER AND UPPER LAYERS

PAVEMENT MARKING DETAIL FOR TAPERED OVERLAPPING JOINTS IN ASPHALTIC PAVEMENTS



⊗ SEE TYPICAL CROSS SECTION FOR PAVEMENT TYPE AND THICKNESS OF INDIVIDUAL LAYERS



REMOVING ASPHALTIC SURFACE, MILLING



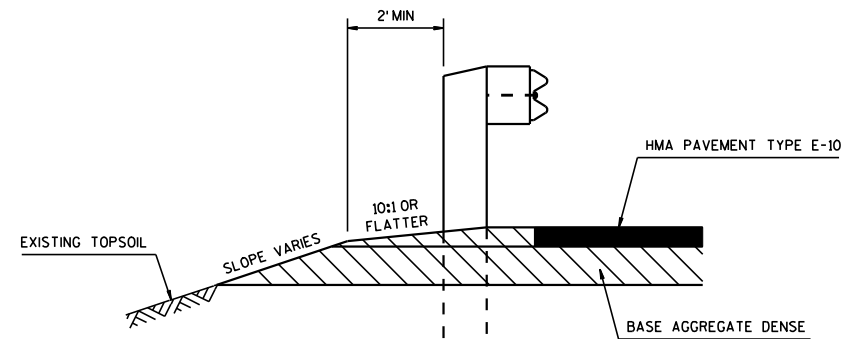
REMOVING ASPHALTIC SURFACE, BUTT JOINTS (FULL DEPTH REMOVAL OPTIONAL)



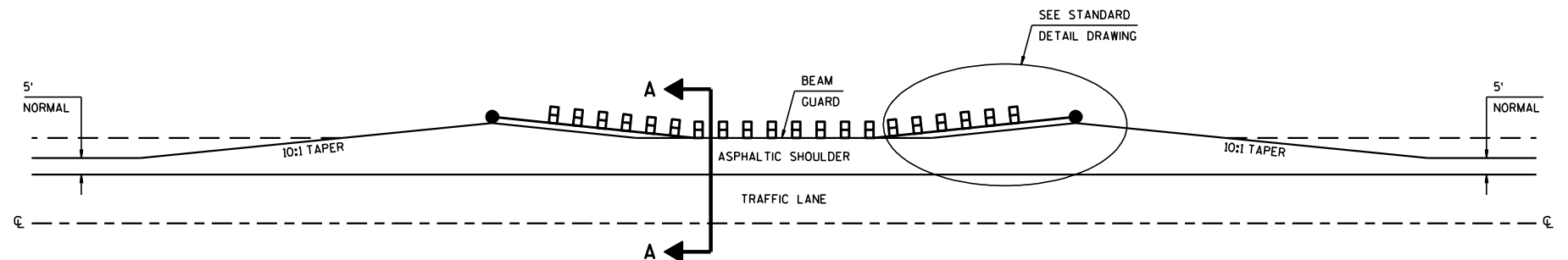
ASPHALTIC WEDGING (FULL DEPTH REMOVAL OPTION)

BUTT JOINT DETAIL FOR MILLED ASPHALTIC PAVEMENTS

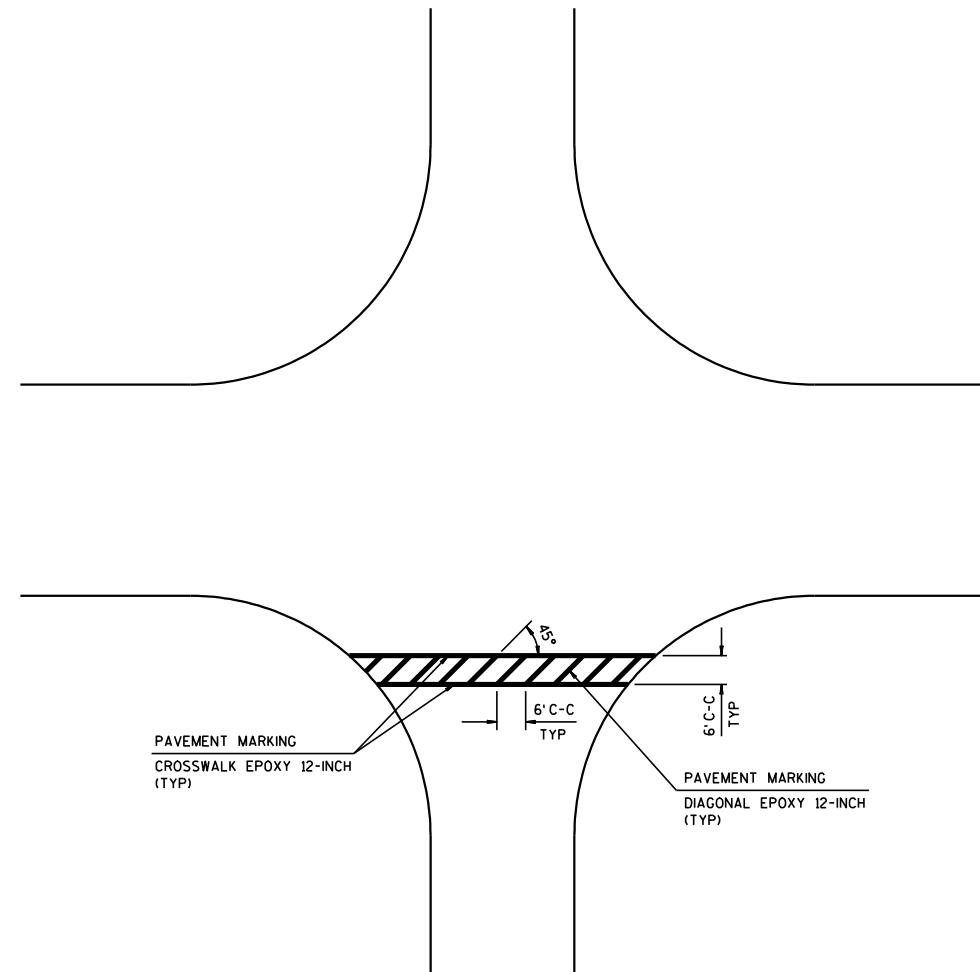
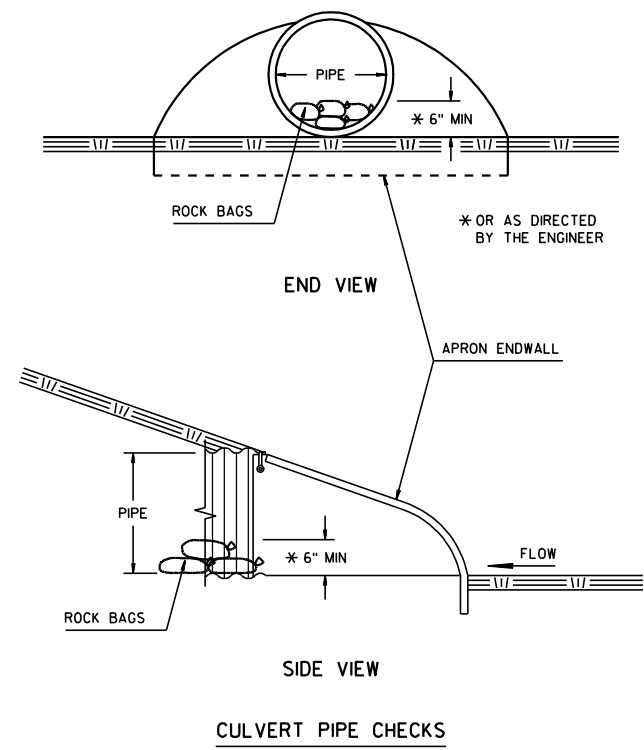
\* MAINLINE  
\*\* SIDEROADS  
\*\*\* PRIVATE ENTRANCES



SECTION A-A



DETAIL FOR ASPHALTIC SHOULDER AT GUARDRAIL



## SIGNING NOTES

THE CONTRACTOR SHALL NOTIFY THE REGIONAL TRAFFIC UNIT, 920-492-5653, A MINIMUM OF TWO WEEKS PRIOR TO THE NEED FOR SIGN PLACEMENT TO ALLOW FOR STAKING OF ANY PERMANENT SIGNING REQUIRED ON THE PROJECT.

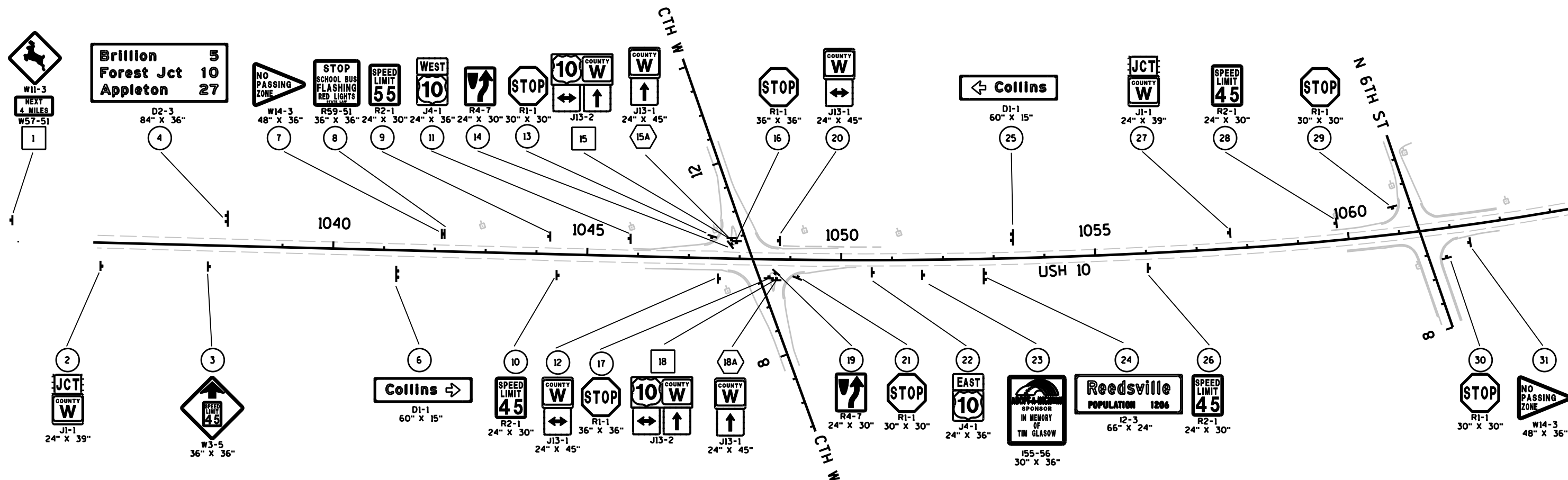
TYPE II SIGNS AND SUPPORTS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL TRAFFIC UNIT. SIGNS SHALL BE CAREFULLY REMOVED FROM THE SUPPORTS, SORTED BY BASE MATERIAL AND PALLETIZED BY MATERIAL TYPE. SUPPORTS SHALL BE SORTED BY LENGTH AND TYPE. THE REGIONAL TRAFFIC UNIT 920-492-5653, SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF SIGNS AND SUPPORTS.

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

NEW STOP SIGNS (R1-1) PLACED UNDER STAGE \* SHALL HAVE A MINIMUM OF 6'6" OF CLEARANCE ABOVE THE ROADWAY. THIS WILL ALLOW FOR THE PLACEMENT OF FUTURE SIGNS BENEATH THE STOP SIGN.

THE NUMBER OF "NO PASSING ZONE" SIGNS (W-14-3) ARE ESTIMATED AND THE ACTUAL NUMBER WILL BE DETERMINED AFTER THE ROADWAYS HAVE BEEN SPOTTED.



- SIGN-REMOVE AND REPLACE  
□ SIGN-REMOVE EXISTING  
⬡ SIGN-PLACE NEW

PLAN SHEET PRODUCED  
BY WISDOT-NE REGION



## SIGNING NOTES

THE CONTRACTOR SHALL NOTIFY THE REGIONAL TRAFFIC UNIT, 920-492-5653, A MINIMUM OF TWO WEEKS PRIOR TO THE NEED FOR SIGN PLACEMENT TO ALLOW FOR STAKING OF ANY PERMANENT SIGNING REQUIRED ON THE PROJECT.

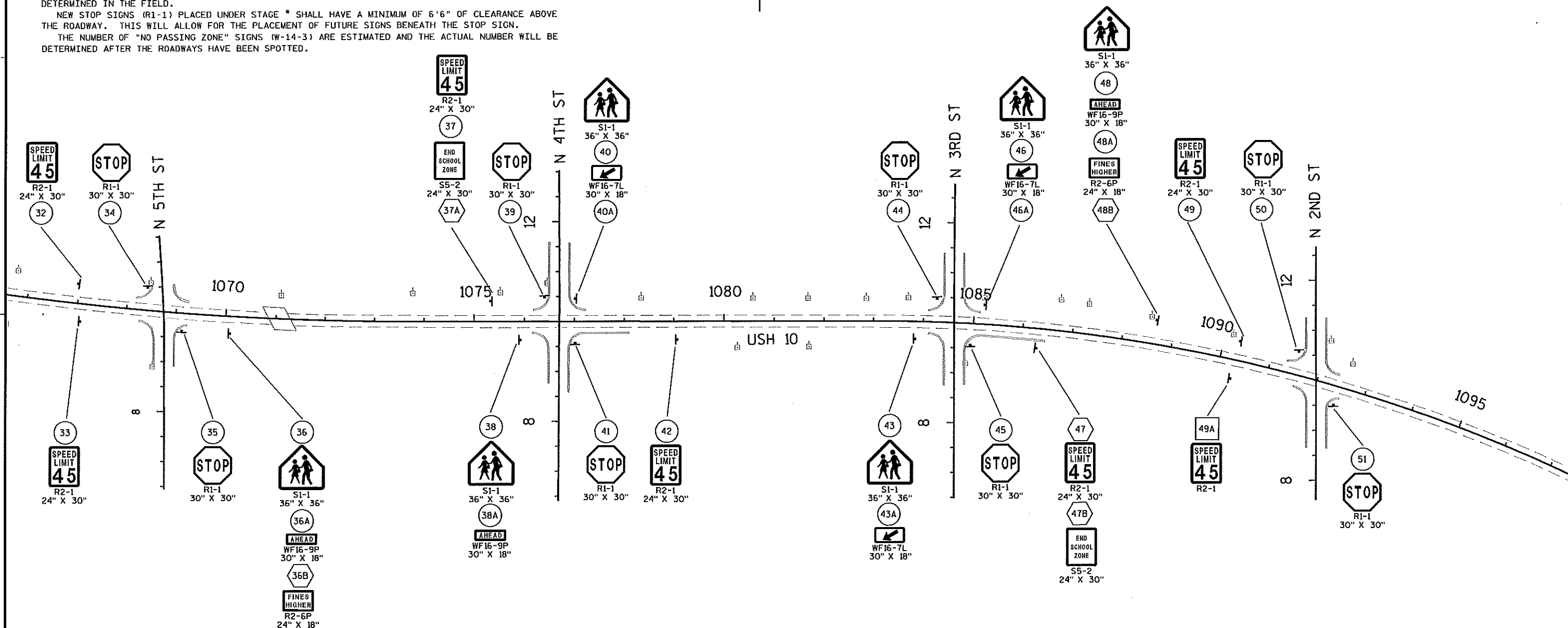
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THE NUMBER OF "NO PASSING ZONE" SIGNS (W-14-3) ARE ESTIMATED AND THE ACTUAL NUMBER WILL BE DETERMINED AFTER THE ROADWAYS HAVE BEEN SPOTTED.



-  SIGN-REMOVE AND REPLACE
-  SIGN-REMOVE EXISTING
-  SIGN-PLACE NEW

PLAN SHEET PRODUCED  
BY WISDOT-NE REGION

## SIGNING NOTES

THE CONTRACTOR SHALL NOTIFY THE REGIONAL TRAFFIC UNIT, 920-492-5653, A MINIMUM OF TWO WEEKS PRIOR TO THE NEED FOR SIGN PLACEMENT TO ALLOW FOR STAKING OF ANY PERMANENT SIGNING REQUIRED ON THE PROJECT.

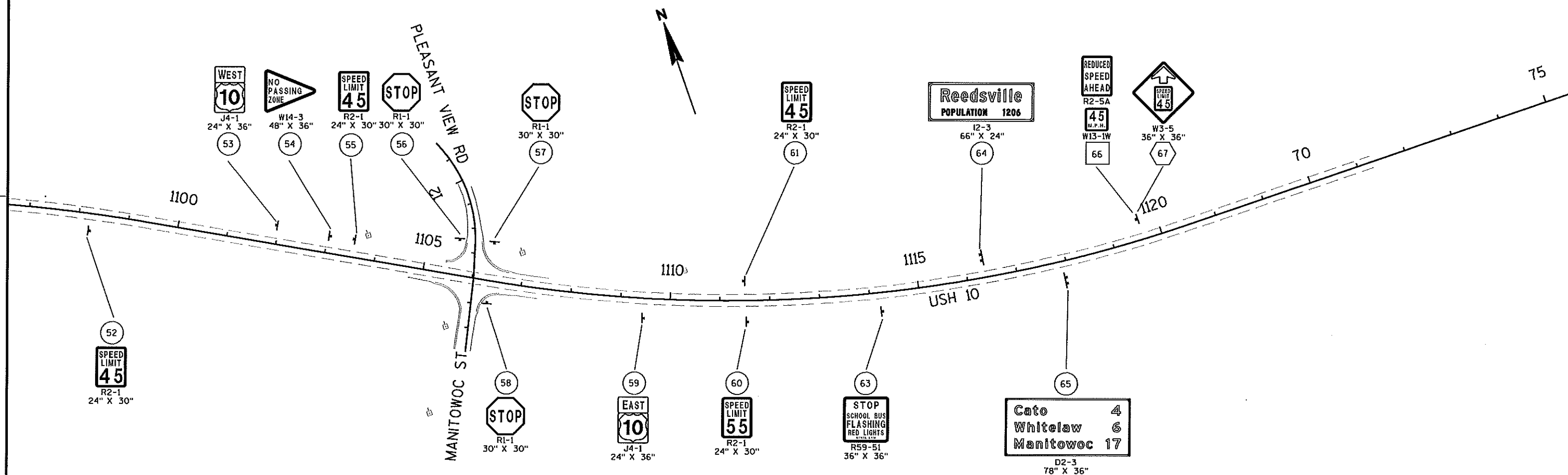
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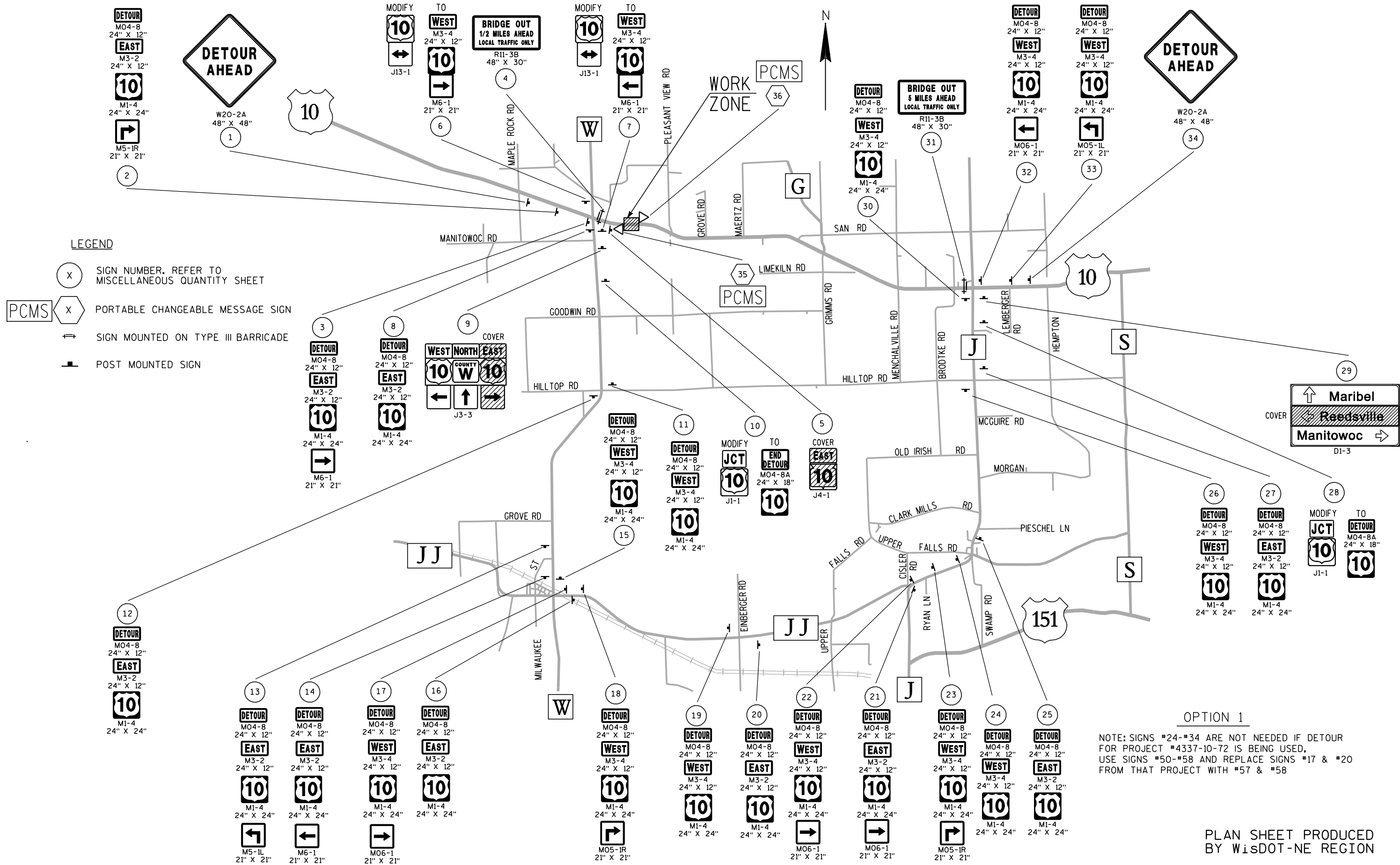
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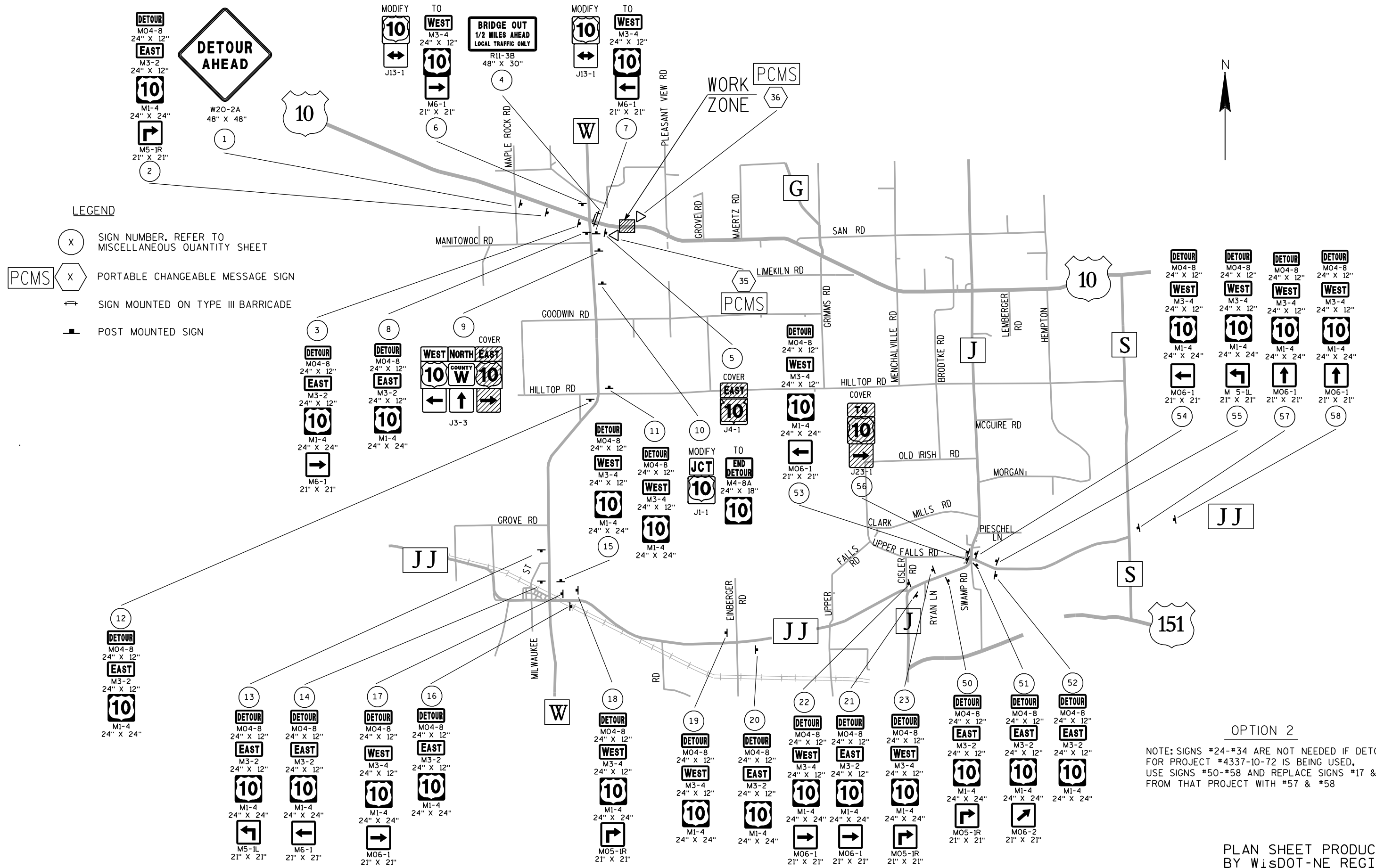
THE NUMBER OF "NO PASSING ZONE" SIGNS (W-14-3) ARE ESTIMATED AND THE ACTUAL NUMBER WILL BE DETERMINED AFTER THE ROADWAYS HAVE BEEN SPOTTED.



- SIGN-REMOVE AND REPLACE
- SIGN-REMOVE EXISTING
- SIGN-PLACE NEW

PLAN SHEET PRODUCED  
BY WISDOT-NE REGION





DATE 22DEC12		E S T I M A T E O F Q U A N T I T I E S			
LINE					1500-28-71
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0010	203.0225.S	DEBRI S CONTAINMENT (STRUCTURE) 01. B-36-892	LS	1.000	1.000
0020	204.0115	REMOVING ASPHALTIC SURFACE BUTT JOINTS	SY	204.300	204.300
0030	204.0125	REMOVING ASPHALTIC SURFACE MILLING	TON	4,709.000	4,709.000
0040	204.0150	REMOVING CURB & GUTTER	LF	20.000	20.000
0050	204.0165	REMOVING GUARDRAIL	LF	326.000	326.000
0060	211.0100	PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT) 01. 1500-28-71	LS	1.000	1.000
0070	213.0100	FINISHING ROADWAY (PROJECT) 01. 1500-28-71	EACH	1.000	1.000
0080	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	614.000	614.000
0090	305.0500	SHAPING SHOULDERS	STA	122.000	122.000
0100	440.4410.S	INCENTIVE IRI RIDE	DOL	5,000.000	5,000.000
0110	455.0115	ASPHALTIC MATERIAL PG64-22	TON	381.400	381.400
0120	455.0605	TACK COAT	GAL	1,689.200	1,689.200
0130	460.1110	HMA PAVEMENT TYPE E-10	TON	6,935.100	6,935.100
0140	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	4,400.000	4,400.000
0150	465.0120	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	TON	15.500	15.500
0160	502.3200	PROTECTIVE SURFACE TREATMENT	SY	208.000	208.000
0170	502.6500	PROTECTIVE COATING CLEAR	GAL	2.000	2.000
0180	509.0301	PREPARATION DECKS TYPE 1	SY	15.000	15.000
0190	509.0302	PREPARATION DECKS TYPE 2	SY	5.000	5.000
0200	509.0500	CLEANING DECKS	SY	208.000	208.000
0210	509.1500	CONCRETE SURFACE REPAIR	SF	10.000	10.000
0220	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	13.000	13.000
0230	509.9025.S	EPOXY INJECTION CRACK REPAIR	LF	6.000	6.000
0240	509.9026.S	CORED HOLES 2-INCH DIAMETER	EACH	1.000	1.000
0250	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 01. B-36-892	LS	1.000	1.000
0260	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 01. B-36-892	LS	1.000	1.000
0270	517.6001.S	PORTABLE DECONTAMINATION FACILITY 01. B-36-892	EACH	1.000	1.000
0280	524.0630	APRON ENDWALLS FOR CULVERT PIPE SALVAGED 30-INCH	EACH	1.000	1.000
0290	601.0411	CONCRETE CURB & GUTTER 30-INCH TYPE D	LF	20.000	20.000
0300	606.0200	RI PRAP MEDIUM	CY	5.600	5.600
0310	614.0010	BARRIER SYSTEM GRADING SHAPING FINISHING	EACH	4.000	4.000
0320	614.2300	MGS GUARDRAIL 3	LF	13.000	13.000
0330	614.2500	MGS THREE BEAM TRANSITION	LF	150.000	150.000
0340	614.2610	MGS GUARDRAIL TERMINAL EAT	EACH	4.000	4.000
0350	619.1000	MOBILIZATION	EACH	1.000	1.000
0360	624.0100	WATER	MGAL	6.100	6.100
0370	625.0500	SALVAGED TOPSOIL	SY	111.000	111.000
0380	628.1504	SILT FENCE	LF	1,130.000	1,130.000
0390	628.1520	SILT FENCE MAINTENANCE	LF	1,130.000	1,130.000
0400	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	1.000	1.000
0410	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	1.000	1.000
0420	628.2006	EROSION MAT URBAN CLASS I TYPE A	SY	111.000	111.000
0430	628.7015	INLET PROTECTION TYPE C	EACH	6.000	6.000
0440	628.7504	TEMPORARY DITCH CHECKS	LF	100.000	100.000
0450	628.7555	CULVERT PIPE CHECKS	EACH	5.000	5.000
0460	628.7570	ROCK BAGS	EACH	75.000	75.000

DATE 22DEC12			E S T I M A T E O F Q U A N T I T I E S		
LINE					1500-28-71
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0470	629.0205	FERTILIZER TYPE A	CWT	0.100	0.100
0480	630.0110	SEEDING MIXTURE NO. 10	LB	1.500	1.500
0490	630.0200	SEEDING TEMPORARY	LB	3.000	3.000
0500	634.0614	POSTS WOOD 4X6-INCH X 14-FT	EACH	62.000	62.000
0510	634.0616	POSTS WOOD 4X6-INCH X 16-FT	EACH	7.000	7.000
0520	637.0202	SIGNS REFLECTIVE TYPE II	SF	467.660	467.660
0530	638.2602	REMOVING SIGNS TYPE II	EACH	86.000	86.000
0540	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	70.000	70.000
0550	642.5001	FIELD OFFICE TYPE B	EACH	1.000	1.000
0560	643.0100	TRAFFIC CONTROL (PROJECT) 01. 1500-28-71	EACH	1.000	1.000
0570	643.0300	TRAFFIC CONTROL DRUMS	DAY	100.000	100.000
0580	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	60.000	60.000
0590	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	120.000	120.000
0600	643.0920	TRAFFIC CONTROL COVERING SIGNS TYPE II	EACH	3.000	3.000
0610	643.1050	TRAFFIC CONTROL SIGNS PCMS	DAY	14.000	14.000
0620	643.3000	TRAFFIC CONTROL DETOUR SIGNS	DAY	2,700.000	2,700.000
0630	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	11.100	11.100
0640	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	12,242.000	12,242.000
0650	646.0126	PAVEMENT MARKING EPOXY 8-INCH	LF	230.000	230.000
0660	646.0406	PAVEMENT MARKING SAME DAY EPOXY 4-INCH	LF	4,630.000	4,630.000
0670	647.0456	PAVEMENT MARKING CURB EPOXY	LF	164.000	164.000
0680	647.0766	PAVEMENT MARKING CROSSWALK EPOXY 6-INCH	LF	398.000	398.000
0690	649.0100	TEMPORARY PAVEMENT MARKING 4-INCH	LF	4,250.000	4,250.000
0700	650.8000	CONSTRUCTION STAKING RESURFACING REFERENCE	LF	6,627.000	6,627.000
0710	690.0150	SAWING ASPHALT	LF	826.000	826.000
0720	690.0250	SAWING CONCRETE	LF	5.000	5.000
0730	SPV.0090	SPECIAL 01. 16 GAUGE GALVANIZED METAL FLASHING	LF	80.000	80.000
0740	SPV.0105	SPECIAL 01. STRAPPING B-36-892	LS	1.000	1.000

REMOVING ASPHALTIC SURFACE BUTT JOINTS

LOCATION	204.0115 SY
W. PROJECT LIMITS	6.7
CTH W N.	11.8
CTH W S.	12.2
6TH STREET N.	7.6
6TH STREET S.	8.7
5TH STREET N.	9.1
5TH STREET S.	8.7
B-36-892 W.	11.1
B-36-892 E.	11.1
4TH STREET N.	8.7
4TH STREET S.	8.4
3RD STREET N.	8.2
3RD STREET S.	9.6
2ND STREET N.	8.7
2ND STREET S.	8.9
PLEASANT VIEW N.	7.1
PLEASANT VIEW S.	7.1
E. PROJECT LIMITS	9.5
PE & CE	41.1
TOTAL 0010	204.3

GRADING SHAPING & FINISHING FOR BARRIER TERMINALS

LOCATION	614.0010 EACH	* BORROW CY	* TOPSOIL SY	* EROSION MAT SY	* SEED LB	* FERTILIZER CWT
NW QUAD B-36-892	1	13.6	46.5	46.5	1.3	0.03
SW QUAD B-36-892	1	12.8	38.8	38.8	1.1	0.02
NE QUAD B-36-892	1	43.3	124.0	124.0	3.4	0.08
SE QUAD B-36-892	1	33.2	99.0	99.0	2.7	0.06
TOTAL 0010	4	102.9	308.3	308.3	8.5	0.19

\* FOR INFORMATION ONLY.  
INCIDENTAL TO ITEM 614.0010

SHAPING SHOULDERS

STATION TO STATION	LOCATION	305.0500 STA	REMARKS
1042+52 - 1057+00	USH 10	29	LT & RT
1057+00 - 1061+00	USH 10	4	RT
1061+00 - 1063+50	USH 10	3	LT
1063+50 - 1077+27	USH 10	28	LT & RT
1077+27 - 1078+25	USH 10	1	RT
1078+25 - 1085+13	USH 10	14	LT & RT
1085+13 - 1088+20	USH 10	3	RT
1088+20 - 1108+79	USH 10	41	LT & RT
TOTAL 0010		122	

REMOVING ASPHALTIC SURFACE MILLING

STATION TO STATION	LOCATION	204.0125 TON
1042+52 - B-36-892	MAINLINE	1691
B-36-892 - 1108+79	MAINLINE	2380
-	CTH W N.	67
-	CTH W S.	69
-	6TH STREET N.	52
-	6TH STREET S.	48
-	5TH STREET N.	29
-	5TH STREET S.	46
-	4TH STREET N.	62
-	4TH STREET S.	43
-	3RD STREET N.	33
-	3RD STREET S.	30
-	2ND STREET N.	48
-	2ND STREET S.	26
-	PLEASANT VIEW N.	44
-	PLEASANT VIEW S.	41
TOTAL 0010		4709

REMOVING CURB & GUTTER

STATION TO STATION	LOCATION	204.0150 LF
1058+75 - 1058+95	USH 10 RT	20
TOTAL 0010		20

REMOVING GUARDRAIL

LOCATION	204.0165 LF
NW QUAD B-36-892	76
SW QUAD B-36-892	87
NE QUAD B-36-892	87
SE QUAD B-36-892	76
TOTAL 0010	326

BASE AGGREGATE DENSE 3/4-INCH

LOCATION	305.0110 TON	624.0100 WATER MGAL
USH 10 SHOULDERS	578	5.8
SIDEROAD SHOULDERS	25	0.3
DRIVEWAYS	11	0.1
TOTAL 0010	614	6.1

PREPARE FOUNDATION FOR ASPHALTIC PAVING (1500-28-71)

LOCATION	211.0100 LS
Sta 1042+50 - 1108+79.22, LT & RT	1
TOTAL 0010	1

OMP RIDE; INCENTIVE IRI RIDE

LOCATION	440.4410.S DOL
USH 10	5000
TOTAL 0010	5000

HMA SUMMARY

STATION	TO	STATION	LOCATION	HMA PAVEMENT TYPE E-10 460.1110 TON	AC PG64-22 @ 5.5% 455.0115 TON	TACK COAT 455.0605 GAL	REMARKS
-	-	-	CTH W N.	51.7	2.8	12.2	LOWER LAYER
-	-	-	CTH W S.	53.2	2.9	12.5	LOWER LAYER
-	-	-	6TH STREET N.	40.4	2.2	9.5	LOWER LAYER
-	-	-	6TH STREET S.	36.9	2.0	8.7	LOWER LAYER
-	-	-	5TH STREET N.	22.0	1.2	5.2	LOWER LAYER
-	-	-	5TH STREET S.	35.7	2.0	8.4	LOWER LAYER
-	-	-	4TH STREET N.	47.6	2.6	11.2	LOWER LAYER
-	-	-	4TH STREET S.	33.3	1.8	7.8	LOWER LAYER
-	-	-	3RD STREET N.	25.4	1.4	6.0	LOWER LAYER
-	-	-	3RD STREET S.	23.5	1.3	5.5	LOWER LAYER
-	-	-	2ND STREET N.	37.2	2.0	8.8	LOWER LAYER
-	-	-	2ND STREET S.	20.0	1.1	4.7	LOWER LAYER
-	-	-	PLEASANT VIEW N.	33.8	1.9	8.0	LOWER LAYER
-	-	-	PLEASANT VIEW S.	31.9	1.8	7.5	LOWER LAYER
1042+52	-	B-36-892	MAINLINE	1307.0	71.9	307.0	LOWER LAYER
B-36-892	-	1108+79	MAINLINE	1839.3	101.2	432.8	LOWER LAYER
-	-	-	CTH W N.	46.8	2.6	12.2	UPPER LAYER
-	-	-	CTH W S.	48.2	2.7	12.5	UPPER LAYER
-	-	-	6TH STREET N.	36.6	2.0	9.5	UPPER LAYER
-	-	-	6TH STREET S.	33.4	1.8	8.7	UPPER LAYER
-	-	-	5TH STREET N.	19.9	1.1	5.2	UPPER LAYER
-	-	-	5TH STREET S.	32.3	1.8	8.4	UPPER LAYER
-	-	-	4TH STREET N.	43.1	2.4	11.2	UPPER LAYER
-	-	-	4TH STREET S.	30.1	1.7	7.8	UPPER LAYER
-	-	-	3RD STREET N.	23.0	1.3	6.0	UPPER LAYER
-	-	-	3RD STREET S.	21.3	1.2	5.5	UPPER LAYER
-	-	-	2ND STREET N.	33.7	1.9	8.8	UPPER LAYER
-	-	-	2ND STREET S.	18.1	1.0	4.7	UPPER LAYER
-	-	-	PLEASANT VIEW N.	30.6	1.7	8.0	UPPER LAYER
-	-	-	PLEASANT VIEW S.	28.9	1.6	7.5	UPPER LAYER
1042+52	-	B-36-892	MAINLINE	1184.0	65.1	284.9	UPPER LAYER
B-36-892	-	1108+79	MAINLINE	1666.2	91.6	432.8	UPPER LAYER
TOTAL 0010				6935.1	381.4	1689.2	

APRON ENDWALLS FOR CULVERT PIPE SALVAGED 30-INCH

STATION	LOCATION	524.0630 EACH	* JOINT TIES EACH	REMARKS
1068+43	USH 10 RT	1	2	SW QUAD USH 10 / 5TH STREET
TOTAL 0010		1	2	

\* INCIDENTAL TO ITEM

INCENTIVE DENSITY HMA PAVEMENT

LOCATION	460.2000 DOL
PROJECT	4440
TOTAL 0010	4440

ASPHALTIC SURFACE DRIVEWAYS & FIELD ENTRANCES

STATION	LOCATION	465.0120 TON	REMARKS
1043+32	USH 10 LT	4.3	CE
1052+57	USH 10 LT	4.8	CE
1063+49	USH 10 RT	4.3	CE CENEX
1064+94	USH 10 RT	4.3	CE CENEX
1081+95	USH 10 RT	2.1	PE W OF 3RD
TOTAL 0010		15.5	

CONCRETE CURB & GUTTER 30-INCH TYPE D

STATION	TO	STATION	LOCATION	601.0411 LF
1058+75	-	1058+95	USH 10 RT	20
TOTAL 0010				20

RI PRAP SUMMARY

STATION	LOCATION	RI PRAP MEDIUM 606.0200 CY	GEOTEXTILE FABRIC TYPE HR 645.0120 SY	REMARKS
1071+00	USH 10 RT	5.6	11.1	10' X10' AREA
TOTAL 0010		5.6	11.1	



MGS THRIE BEAM TRANSITION

LOCATION	614.2500 LF	REMARKS
NE QUAD B-36-892	37.5	NO TERMINAL CONNECTOR NECESSARY
NW QUAD B-36-892	37.5	NO TERMINAL CONNECTOR NECESSARY
SE QUAD B-36-892	37.5	NO TERMINAL CONNECTOR NECESSARY
SW QUAD B-36-892	37.5	NO TERMINAL CONNECTOR NECESSARY
TOTAL 0010	150.0	

MGS GUARDRAIL 3

LOCATION	614.2300 LF
NE QUAD B-36-892	6.25
SW QUAD B-36-892	6.25
TOTAL 0010	13

MGS GUARDRAIL TERMINAL EAT

LOCATION	614.2610 EACH
NE QUAD B-36-892	1
SE QUAD B-36-892	1
NW QUAD B-36-892	1
SW QUAD B-36-892	1
TOTAL 0010	4

SILT FENCE SUMMARY

LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF
NE QUAD B-36-892	280	280
NW QUAD B-36-892	150	150
SE QUAD B-36-892	275	275
SW QUAD B-36-892	175	175
STA 1055+00 LT	75	75
STA 1055+00 RT	75	75
UNDISTRIBUTED	100	100
TOTAL 0010	1130	1130

EROSION CONTROL SUMMARY

LOCATION	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.7570 ROCK BAGS EACH
UNDISTRIBUTED	100	5	75
TOTAL 0010	100	5	75

INLET PROTECTION TYPE C

LOCATION	628.7015 EACH
6TH ST	3
5TH ST	2
1086+10 RT	1
TOTAL 0010	6

LANDSCAPING SUMMARY

STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	630.0110 SEEDING MIXTURE NO. 10 LB	630.0200 SEEDING TEMPORARY LB	629.0205 FERTILIZER TYPE A CWT	628.2006 EROSION MAT URBAN CLASS I TYPE A SY	REMARKS
1068+43	USH 10 RT	111	1.5	3.0	0.1	111	SALVAGED ENDWALL AREA
	TOTAL 0010	111	1.5	3.0	0.1	111	

ERECTION & REMOVAL OF PERMANENT SIGNING, TYPE II

SIGN NO.	LOCATION	SIGN CODE	W X H	637.0202 SIGN REFLECTIVE TYPE II S. F.	634.0614 POSTS WOOD 4x6x14 EACH	634.0616 POSTS WOOD 4x6x16 EACH	638.2602 REMOVING SIGN TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
1	W. OF CTH W	W11-3					2	1	REMOVE W57-51 ALSO
2	"	J1-1	24" X 39"	6.50	1		2	1	CTH W, SEE PLAN SHEET
3	"	W3-5	36" X 36"	9.00	1		1	1	45 MPH
4	"	D2-3	84" X 36"	21.00	1	1	1	2	SEE SIGN DETAIL
5	VACANT								
6	"	D1-1	60" X 15"	6.25	2		1	2	SEE SIGN DETAIL
7	"	W14-3	48" X 36"	6.00	1		1	1	
8	"	R59-51	36" X 36"	9.00			1		MOUNT ON BACK OF SIGN #7
9	"	R2-1	24" X 30"	5.00	1		1	1	55 MPH
10	"	R2-1	24" X 30"	5.00	1		1	1	45 MPH
11	"	J4-1	24" X 36"	6.00	1		2	1	USH 10, SEE PLAN SHEET
12	"	J13-1	24" X 45"	7.50	1		2	1	CTH W, SEE PLAN SHEET
13	CTH W ISLAND N. OF USH 10	R1-1	30" X 30"	5.18	1		1	1	
14	"	R4-7	24" X 30"	5.00	1		1	1	
15	"	J13-2					3	1	
15A	"	J13-1	24" X 45"	7.50	1				CTH W, SEE PLAN SHEET
16	"	R1-1	36" X 36"	7.48	1		1	1	
17	CTH W ISLAND S. OF USH 10	R1-1	36" X 36"	7.48	1		1	1	
18	"	J13-2					3	1	
18A	"	J13-1	48" X 45"	15.00	1				CTH W, SEE PLAN SHEET
19	"	R4-7	24" X 30"	5.00	1		1	1	
20	E. OF CTH W	J13-1	24" X 45"	7.50	1		2	1	CTH W, SEE PLAN SHEET
21	CTH W	R1-1	30" X 30"	5.18	1		1	1	
22	E. OF CTH W	J4-1	24" X 36"	6.00	1		2	1	USH 10, SEE PLAN SHEET
23	"	I55-56	30" X 36"	7.50	1		1	1	SEE PLAN SHEET
24	"	I2-3	66" X 24"	11.00	1	1	1	2	SEE SIGN DETAIL
25	"	D1-1	60" X 15"	6.25	2		1	2	SEE SIGN DETAIL
26	W. OF N. 6TH ST	R1-2	24" X 30"	5.00	1		1	1	45 MPH
27	"	J1-1	24" X 39"	6.50	1		2	1	CTH W, SEE PLAN SHEET
28	"	R2-1	24" X 30"	5.00	1		1	1	45 MPH
29	N. 6TH ST	R1-1	30" X 30"	5.18	1		1	1	
30	"	R1-1	30" X 30"	5.18	1		1	1	
31	E. OF N. 6TH ST	W14-3	48" X 36"	6.00	1		1	1	
32	W. OF N. 5TH ST	R2-1	24" X 30"	5.00	1		1	1	45 MPH
33	"	R2-1	24" X 30"	5.00	1		1	1	45 MPH
34	N. 5TH ST	R1-1	30" X 30"	5.18	1		1	1	
35	"	R1-1	30" X 30"	5.18	1		1	1	
36	E. OF N. 5TH ST	S1-1	36" X 36"	6.75		1	1	1	
36A	"	WF16-9P	30" X 18"	3.75			1		MOUNT BELOW SIGN #36
36B	"	R2-6P	24" X 18"	3.00					MOUNT BELOW SIGN #36A
PROJECT SUBTOTALS				244.04	34	3	47	38	

ERECTION & REMOVAL OF PERMANENT SIGNING, TYPE II

SIGN NO.	LOCATION	SIGN CODE	W X H	637.0202 SIGNS REFLECTIVE TYPE II S.F.	634.0614 POSTS WOOD 4x6x14 EACH	634.0616 POSTS WOOD 4x6x16 EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
37	W. OF N. 4TH ST	R2-1	24" X 30"	5.00	1		1	1	45 MPH
37A	"	S5-2	24" X 30"	5.00					MOUNT BELOW SIGN #37
38	"	S1-1	36" X 36"	6.75	1		1	1	
38A	"	WF16-7L	30" X 18"	3.75			1		MOUNT BELOW SIGN #38
39	N. 4TH ST	R1-1	30" X 30"	5.18	1		1	1	
40	"	S1-1	36" X 36"	6.75	1		1	1	
40A	"	WF16-7L	30" X 18"	3.75			1		MOUNT BELOW SIGN #40
41	"	R1-1	30" X 30"	5.18	1		1	1	
42	E. OF N. 4TH ST	R2-1	24" X 30"	5.00	1		1	1	45 MPH
43	W. OF N. 3RD ST	S1-1	36" X 36"	6.75	1		1	1	
43A	"	WF16-7L	30" X 18"	3.75			1		MOUNT BELOW SIGN #43
44	N. 3RD ST	R1-1	30" X 30"	5.18	1		1	1	
45	"	R1-1	30" X 30"	5.18	1		1	1	
46	E. OF N. 3RD ST	S1-1	36" X 36"	6.75	1		1	1	
46A	"	WF16-7L	30" X 18"	3.75			1		MOUNT BELOW SIGN #46
47	"	R2-1	24" X 30"	5.00		1			45 MPH
47A	"	S5-2	24" X 30"	5.00					MOUNT BELOW SIGN #47
48	W. OF N. 2ND ST	S1-1	36" X 36"	6.75		1	1	1	
48A	"	WF16-9P	30" X 18"	3.75			1		MOUNT BELOW SIGN #48
48B	"	R2-6P	24" X 18"	3.00					MOUNT BELOW SIGN #48A
49	"	R2-1	24" X 30"	5.00	1		1	1	45 MPH
49A	"	R2-1					1	1	
50	N. 2ND ST	R1-1	30" X 30"	5.18	1		1	1	
51	"	R1-1	30" X 30"	5.18	1		1	1	
52	E. OF N. 2ND ST	R2-1	24" X 30"	5.00	1		1	1	45 MPH
53	W. OF PLEASANT VIEW RD	J4-1	24" X 36"	6.00	1		2	1	USH 10, SEE PLAN SHEET
54	"	W14-3	48" X 36"	6.00	1		1	1	
55	"	R2-1	24" X 30"	5.00	1		1	1	45 MPH
56	PLEASANT VIEW RD	R1-1	30" X 30"	5.18	1		1	1	
57	"	R1-1	30" X 30"	5.18	1		1	1	
58	"	R1-1	30" X 30"	5.18	1		1	1	
59	E. OF PLEASANT VIEW RD	J4-1	24" X 36"	6.00	1		2	1	USH 10, SEE PLAN SHEET
60	"	R2-1	24" X 30"	5.00	1		1	1	55 MPH
61	"	R2-1	24" X 30"	5.00	1		1	1	45 MPH
62	VACANT								
63	E. OF PLEASANT VIEW RD	R59-51	36" X 36"	9.00	1		1	1	
64	"	I2-3	66" X 24"	11.00	1	1	1	1	SEE SIGN DETAIL
65	"	D2-3	78" X 36"	19.50	1	1	1	2	SEE SIGN DETAIL
66	"	R2-5A					2	1	REMOVE W13-1W ALSO
67	"	W3-5	36" X 36"	9.00	1		1	1	45 MPH
PROJECT SUBTOTALS				223.62	28	4	39	32	
PROJECT TOTALS				467.66	62	7	86	70	

TRAFFIC CONTROL DETOUR SIGNS AND COVERING SIGNS

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 30 DAYS	643. 3000 DETOUR SIGNS DAYS	643. 0420 BARRICADES TYPE III DAYS	643. 0705 WARNING LIGHTS TYPE A DAYS	643. 1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	643. 0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	REMARKS
1	LT OF J1-1 (JCT W)	W20-2-A	48"x48"	1	30	30					
2	200' E OF D1-2 (LT-WAYSIDE; COLLINS-RT)	MO 4-8	24"x12"	1	30	30					
	"	M3-2	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
	"	M5-1-R	21"x21"	1	30	30					
3	RT OF J13-1 (W-DBL ARROW)	MO 4-8	24"x12"	1	30	30					
	"	M3-2	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
	"	M6-1	21"x21"	1	30	30					RIGHT
4	SE QUAD OF USH 10 & CTH W INTERSECTION	R11-3-B	48"x30"	1	30	30	30	60			1/2 MILE
5	J4-1 (EAST 10)									1	
6	MODIFY J13-1 (10-DBL ARROW) (SB-CTH W)	M3-4	24"x12"	1	30	30					
	"	M1-4	EXISTING								
	"	M6-1	21"x21"	1	30	30					LEFT
7	MODIFY J13-1 (10-DBL ARROW) (NB-CTH W)	M3-4	24"x12"	1	30	30					
	"	M1-4	EXISTING								LEFT
	"	M6-1	21"x21"	1	30	30					
8	200' S OF USH 10 INTERSECTION ON CTH W	MO 4-8	24"x12"	1	30	30					
	"	M3-2	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
9	J3-3 (W-10-LT; N-W-AH; E-10-RT)									1	EAST-10 RT ARROW
10	MODIFY J1-1 (JCT 10)	MO 4-8-A	24"x18"	1	30	30					
	"	M1-4	EXISTING								
11	200' N OF HILLTOP RD INTERSECTION ON CTH W	MO 4-8	24"x12"	1	30	30					
	"	M3-4	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
12	200' S OF HILLTOP RD INTERSECTION ON CTH W	MO 4-8	24"x12"	1	30	30					
	"	M3-2	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
13	LT OF J1-1 (JCT JJ)	MO 4-8	24"x12"	1	30	30					
	"	M3-2	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
	"	M5-1-L	21"x21"	1	30	30					
14	RT OF J13-1 (JJ-DBL ARROW)	MO 4-8	24"x12"	1	30	30					
	"	M3-2	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
	"	M6-1	21"x21"	1	30	30					LEFT
15	200' N OF CTH JJ INTERSECTION ON CTH W	MO 4-8	24"x12"	1	30	30					
	"	M3-4	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
16	200' E OF CTH W INTERSECTION ON CTH JJ	MO 4-8	24"x12"	1	30	30					
	"	M3-2	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
17	LT OF J13-2 (W-DBL ARROW; JJ-AHEAD)	MO 4-8	24"x12"	1	30	30					
	"	M3-4	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
	"	MO 6-1	21"x21"	1	30	30					RIGHT

TRAFFIC CONTROL DETOUR SIGNS AND COVERING SIGNS

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD DAYS	643. 3000 DETOUR SIGNS DAYS	643. 0420 BARRICADES TYPE III DAYS	643. 0705 WARNING LIGHTS TYPE A DAYS	643. 1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	643. 0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	REMARKS
18	LT OF J1-1 (JCT W)	MO 4-8	24"x12"	1	30	30					
	"	M3-4	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
	"	MO 5-1-R	21"x21"	1	30	30					
19	200' W OF QUARRY RD INTERSECTION ON CTH JJ	MO 4-8	24"x12"	1	30	30					
	"	M3-4	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
20	200' E OF QUARRY RD INTERSECTION ON CTH JJ	MO 4-8	24"x12"	1	30	30					
	"	M3-2	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
21	LT OF J13-2 (JJ-LT; J DBL ARROW)	MO 4-8	24"x12"	1	30	30					
	"	M3-2	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
	"	MO 6-1	21"x21"	1	30	30					RIGHT
22	RT OF J13-1 (JJ-RT)	MO 4-8	24"x12"	1	30	30					
	"	M3-4	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
	"	MO 6-1	21"x21"	1	30	30					RIGHT
23	LT OF J1-1 (JCT JJ)	MO 4-8	24"x12"	1	30	30					
	"	M3-4	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
	"	MO 5-1-R	21"x21"	1	30	30					
24	RT OF J13-1 (JJ-LEFT)	MO 4-8	24"x12"	1	30	30					
	"	M3-4	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
25	100' N OF J13-1 (J)	MO 4-8	24"x12"	1	30	30					
	"	M3-2	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
26	200' S OF HILLTOP RD INTERSECTION ON CTH J	MO 4-8	24"x12"	1	30	30					
	"	M3-4	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
27	200' N OF HILLTOP RD INTERSECTION ON CTH J	MO 4-8	24"x12"	1	30	30					
	"	M3-2	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
28	MODIFY J1-1 (JCT 10)	MO 4-8-A	24"x18"	1	30	30					
	"	M1-4	EXISTING								
29	D1-3 (AH-MARIBEL; LT-REEDSVILLE; MANITOWOC-RT)									1	LT-REEDSVILLE
30	100' S OF USH10 INTERSECTION ON CTH J	MO 4-8	24"x12"	1	30	30					
	"	M3-4	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
31	NW QUAD OF USH 10 & CTH J INTERSECTION	R11-3-B	48"x30"	1	30	30	30	60			5 MILES
32	RT OF J13-1 (J-DBL ARROW)	MO 4-8	24"x12"	1	30	30					
	"	M3-4	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
	"	MO 6-1	21"x21"	1	30	30					LEFT

TRAFFIC CONTROL DETOUR SIGNS AND COVERING SIGNS

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 30 DAYS	643.3000 DETOUR SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	REMARKS
33	100' S OF USH10 INTERSECTION ON CTH J	MO 4-8	24"x12"	1	30	30					
	"	M3-4	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
	"	MO 5-1-L	21"x21"	1	30	30					
34	500' E OF SIGN # 33	W20-2-A	48"x48"	1	30	30					
35	FOR EB TRAFFIC TO BE DETERMINED IN FIELD	PCMS		1	7				7		PRIOR TO CONST
36	FOR WB TRAFFIC TO BE DETERMINED IN FIELD	PCMS		1	7				7		PRIOR TO CONST
	TOTAL			92		2,700	60	120	14	3	SIGNS ARE COVERED/ UNCOVERED ONCE
IF DETOUR FOR PROJECT 4337-10-72 IS BEING USED DO NOT USE SIGNS 26-34, USE 50-59 INSTEAD											
50	LT OF J13-1 (JJ-AH RT)	MO 4-8	24"x12"	1	30	30					
	"	M3-2	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
	"	MO 5-1-R	21"x21"	1	30	30					
51	LT OF J13-1 (JJ-RT)	MO 4-8	24"x12"	1	30	30					
	"	M3-2	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
	"	MO 6-2	21"x21"	1	30	30					RIGHT
52	150' E OF CTH J INTERSECTION ON CTH JJ	MO 4-8	24"x12"	1	30	30					
	"	M3-2	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
53	LT OF J13-2 (JJ-LT; J-DBL ARROW)	MO 4-8	24"x12"	1	30	30					
	"	M3-4	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
	"	MO 6-1	21"x21"	1	30	30					LEFT
54	RT OF STOP SIGN	MO 4-8	24"x12"	1	30	30					
	"	M3-4	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
	"	MO 6-1	21"x21"	1	30	30					LEFT
55	RT OF J1-1 (JCT J)	MO 4-8	24"x12"	1	30	30					
	"	M3-4	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
	"	MO 5-1-L	21"x21"	1	30	30					LEFT
56	J23-1 (TO-10-RT)									1	TO-10-RT
57	SIGN # 20 PROJECT 4337-10-72 (D-W-10-AH RT)	MO 4-8	24"x12"	1	30	30					
	"	M3-4	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
	"	MO 6-1	21"x21"	1	30	30					AHEAD
58	SIGN # 17 PROJECT 4337-10-72 (D-W-10-RT)	MO 4-8	24"x12"	1	30	30					
	"	M3-4	24"x12"	1	30	30					
	"	M1-4	24"x24"	1	30	30					10
	"	MO 6-1	21"x21"	1	30	30					AHEAD
	SUBTOTAL			31		930	0		0	1	

TRAFFIC CONTROL DRUMS

LOCATION	643.0300 DAYS	REMARKS
USH 10	100	UNDISTRIBUTED
TOTAL 0010		100

PAVEMENT MARKING EPOXY 4-INCH

STATION TO STATION	LOCATION	646.0106 LF	REMARKS
1042+52 - 1108+79	USH 10	12142	WHITE EDGELINE
	CTH W	100	WHITE EDGELINE
TOTAL 0010		12242	

PAVEMENT MARKING EPOXY 8-INCH

LOCATION	646.0126 LF	REMARKS
USH 10 / CTH W INTERSECTION	230	CHANNELIZATION
TOTAL 0010		230

PAVEMENT MARKING SAME DAY EPOXY 4-INCH

STATION TO STATION	LOCATION	646.0406 LF	REMARKS
1045+00 - 1050+00	USH 10	1000	DOUBLE YELLOW
1050+00 - 1062+00	USH 10	1500	SINGLE YELLOW & SKIPS
1062+00 - 1103+00	USH 10	1025	SKIPS
1103+00 - 1108+79	USH 10	725	SINGLE YELLOW & SKIPS
	CTH W	380	DOUBLE YELLOW
TOTAL 0010		4630	

PAVEMENT MARKING CURB EPOXY

LOCATION	647.0456 LF	REMARKS
CTH W NORTH	81	ISLAND
CTH W SOUTH	83	ISLAND
TOTAL 0010		164

PAVEMENT MARKING CROSSWALK EPOXY 6-INCH

	647.0766
LOCATION	LF
USH 10 / 4TH STREET	126
USH 10 / 3RD STREET	136
USH 10 / 6TH STREET	136
TOTAL 0010	398

TEMPORARY PAVEMENT MARKING 4-INCH

STATION TO STATION	LOCATION	649.0100 LF	REMARKS
1045+00 - 1050+00	USH 10	1000	DOUBLE YELLOW
1050+00 - 1062+00	USH 10	1500	SINGLE YELLOW & SKIPS
1062+00 - 1103+00	USH 10	1025	SKIPS
1103+00 - 1108+79	USH 10	725	SINGLE YELLOW & SKIPS
TOTAL 0010		4250	

CONSTRUCTION STAKING RESURFACING REFERENCE

STATION TO STATION	LOCATION	650.8000 LF
1042+52 - 1108+79	USH 10	6627
TOTAL 0010		6627

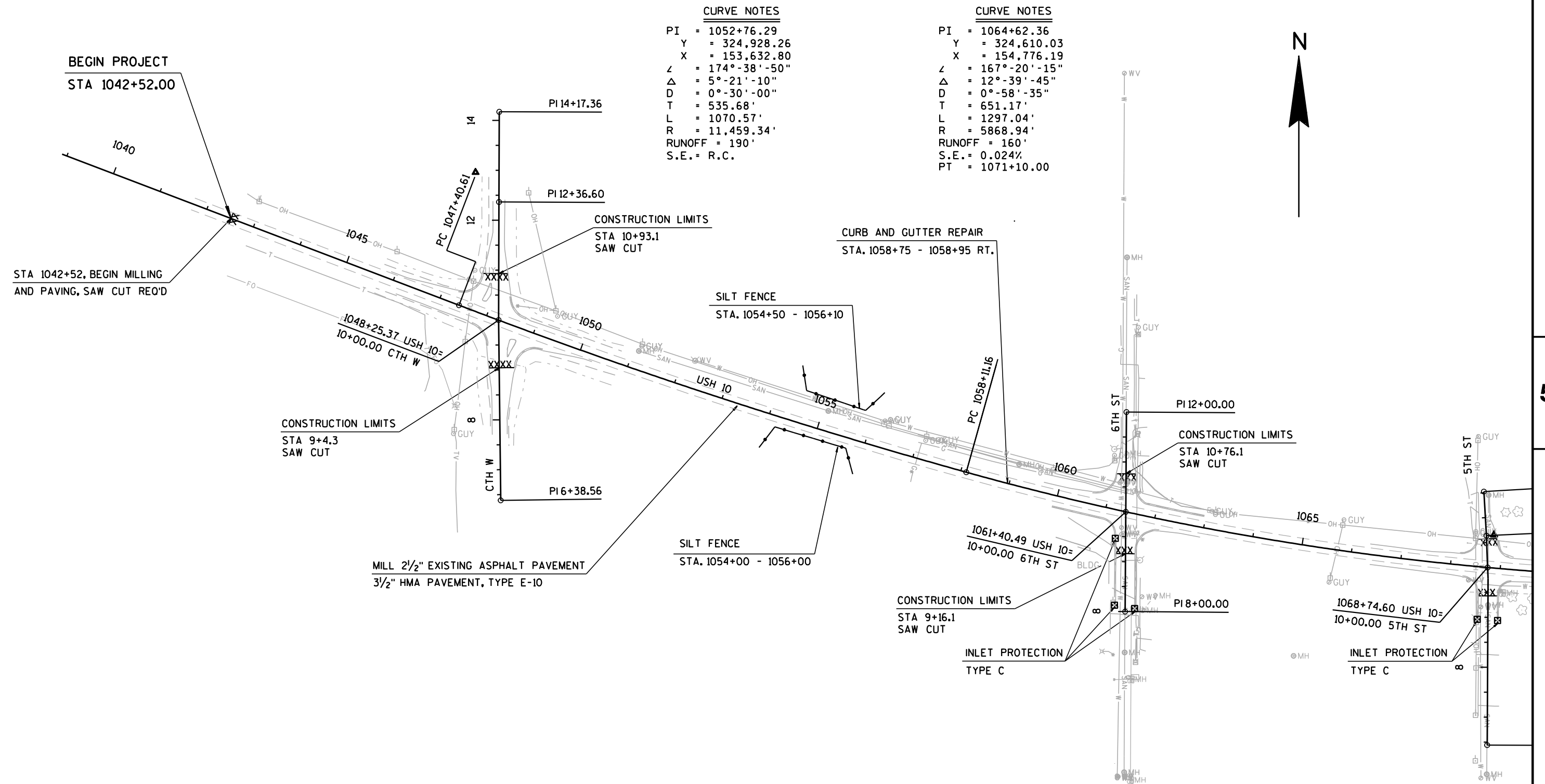
SAWING ASPHALT

LOCATION	690.0150 LF
USH 10 W PROJECT LIMITS	40
CTH W NORTH	52
CTH W SOUTH	55
6TH ST NORTH	34
6TH ST SOUTH	39
5TH ST NORTH	41
5TH ST SOUTH	39
4TH ST NORTH	38
4TH ST SOUTH	38
3RD ST NORTH	37
3RD ST SOUTH	43
2ND ST NORTH	39
2ND ST SOUTH	40
PLEASANT VIEW NORTH	32
PLEASANT VIEW SOUTH	32
USH 10 E PROJECT LIMITS	42
PE & CE	185
TOTAL 0010	826

SAWING CONCRETE

LOCATION	690.0250 LF
USH 10 RT CURB REPAIR	5
TOTAL 0010	5





BENCH MARKS	
DESCRIPTION	ELEV.
RR SPIKE IN S/S OF POWER POLE @ NW CORNER OF MAIN & 5TH	826.05
RR SPIKE IN SW/S OF 1ST PP ON N/S OF MAIN ST E OF BRIDGE.	825.54
CHIS X TOP OF WING WALL @ SW COR OF BRIDGE E OF 5TH ON MAIN ST	826.44

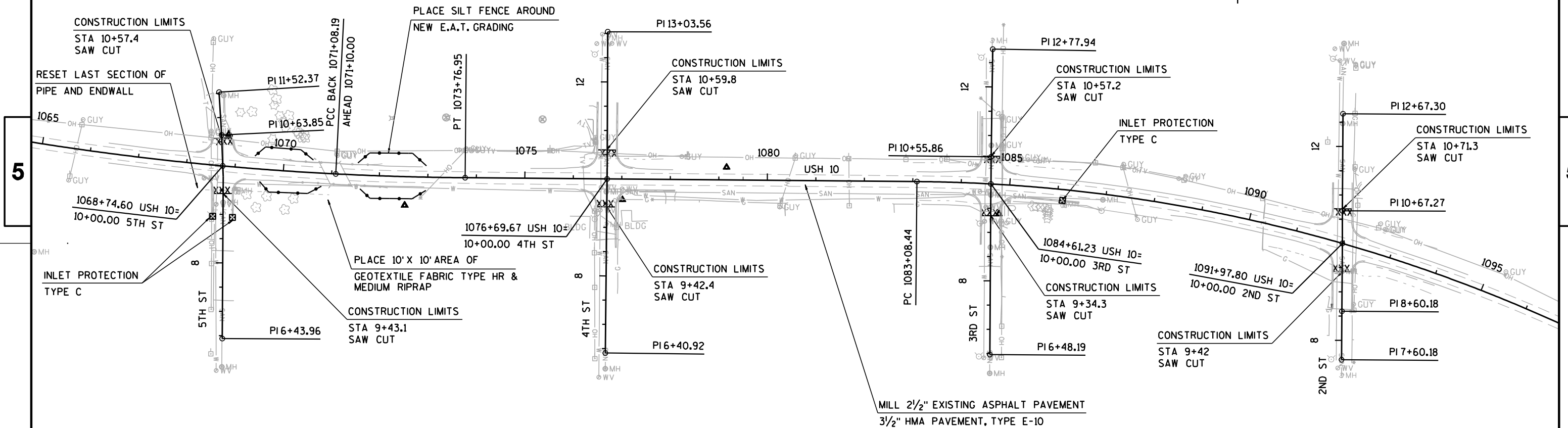
CURVE NOTES

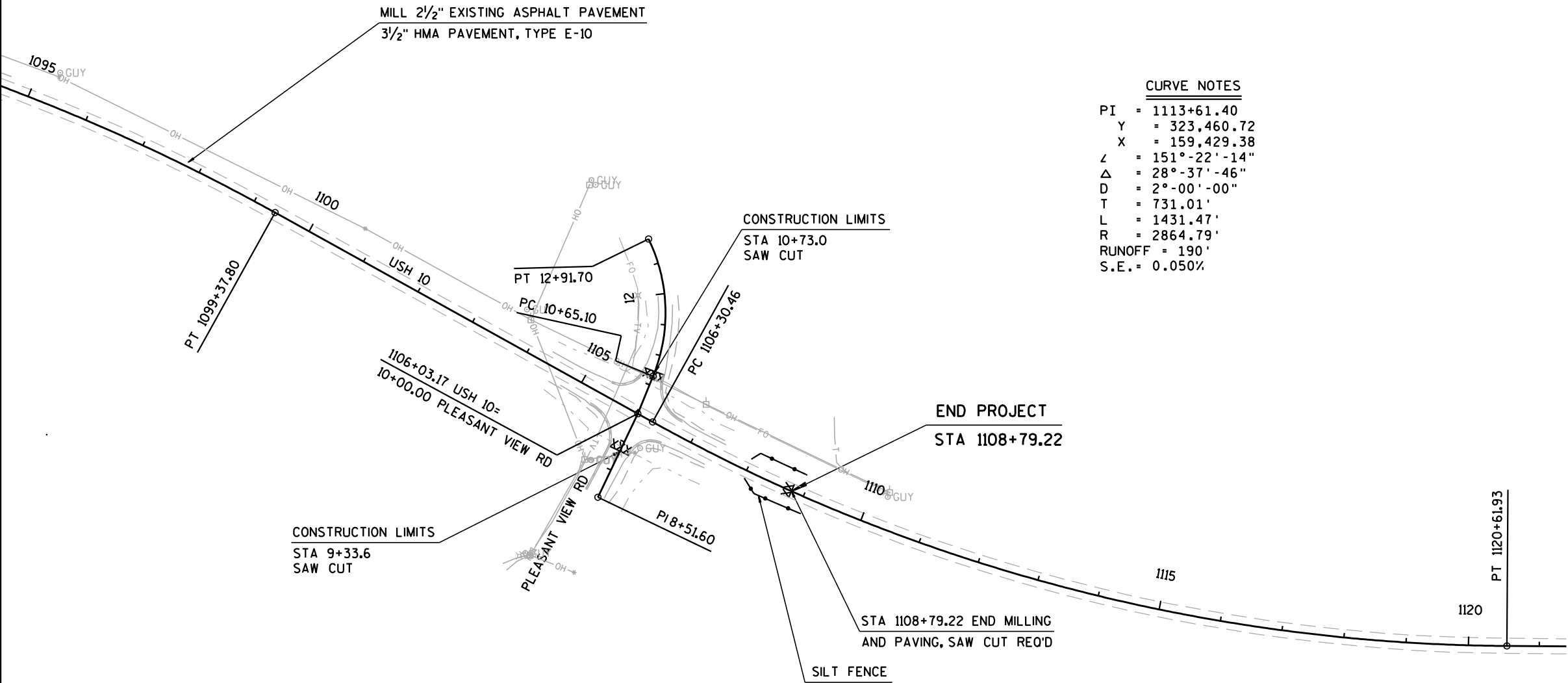
PI = 1072+41.72  
Y = 324,570.46  
X = 155,559.86  
 $\angle$  = 177°-35'-51"  
 $\Delta$  = 2°-24'-09"  
D = 0°-54'-00"  
T = 133.50'  
L = 266.95'  
R = 6366.20'  
RUNOFF = 160'  
S.E. = 0.024%

CURVE NOTES

PI = 1091+40.33  
Y = 324,554.30  
X = 157,456.66  
 $\angle$  = 208°-30'-50"  
 $\Delta$  = 28°-30'-50"  
D = 1°-45'-00"  
T = 831.92'  
L = 1629.36'  
R = 3274.04'  
RUNOFF = 150'  
S.E. = 0.0315%  
PT = 1099+37.76

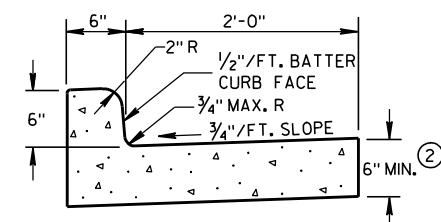
N



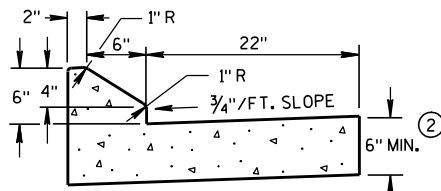


Standard Detail Drawing List

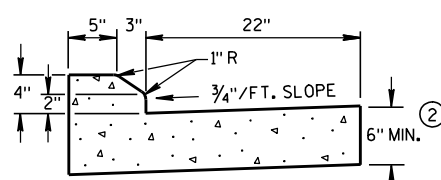
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-06	JOINT TIES FOR CONCRETE PIPE
14B15-07A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-07B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-07C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B20-10E	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPES "F" AND "W"
14B24-07A	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-07B	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-07C	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
15C02-04A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-04B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-04C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-01	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C08-14A	PAVEMENT MARKING (MAINLINE)
15C08-14B	PAVEMENT MARKING (INTERSECTIONS)
15C08-14F	PAVEMENT MARKING (ISLANDS, STOP LINE & CROSS WALK)



TYPES A & D ①



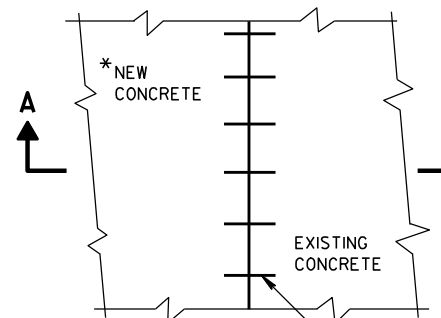
6" SLOPED CURB TYPES G & J ①



4" SLOPED CURB TYPES G & J ①

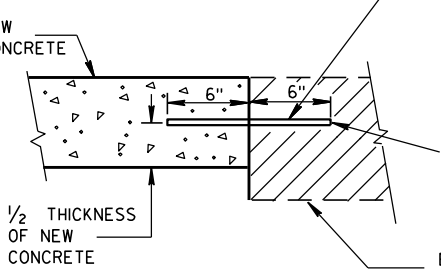
CONCRETE CURB & GUTTER 30"

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

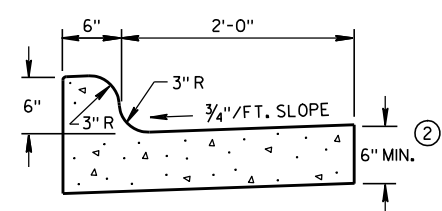


PLAN VIEW

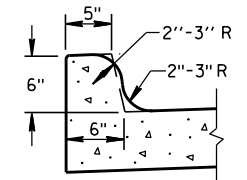
NO. 6 TIE BARS SPACED 2'-6" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT.



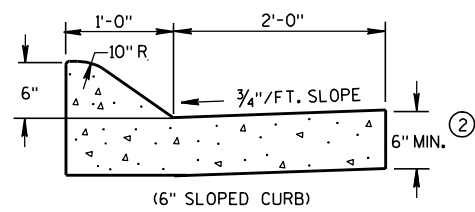
SECTION A-A  
TIE BARS DRILLED  
INTO EXISTING PAVEMENT



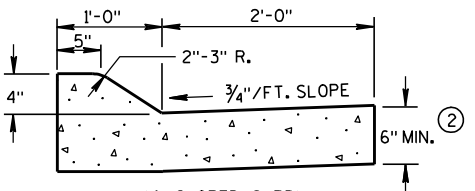
TYPES K & L ①



OPTIONAL CURB SHAPE  
FOR TYPES K & L ①

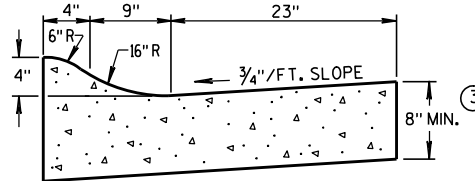


(6" SLOPED CURB)

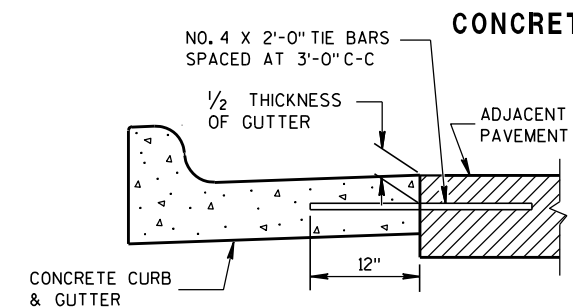


(4" SLOPED CURB)

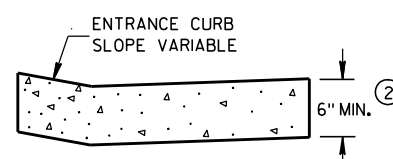
TYPES A & D ①



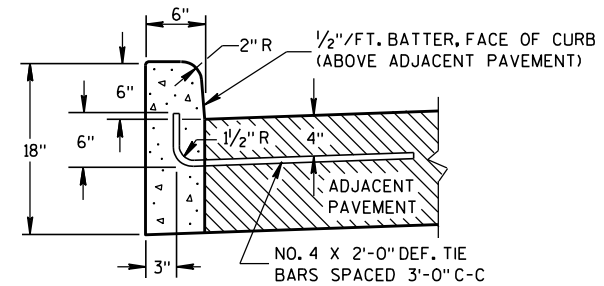
4" SLOPED CURB TYPES R & T ① ④



TYPICAL TIE BAR LOCATION ①

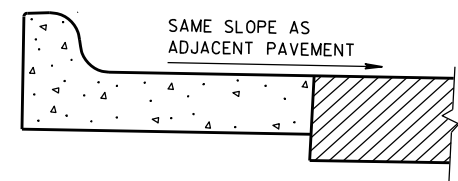


DRIVEWAY ENTRANCE CURB  
(WHEN DIRECTED BY THE ENGINEER)

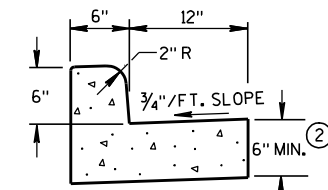


TYPES A & D ①

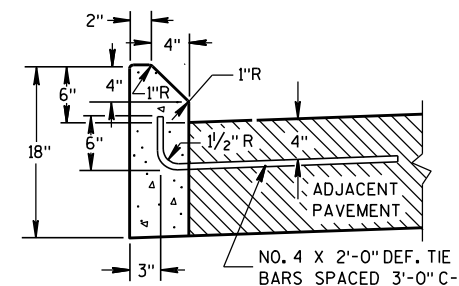
CONCRETE CURB



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



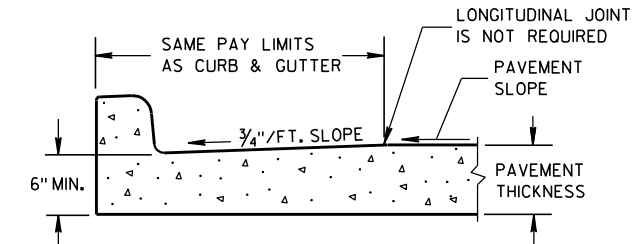
TYPES A & D  
CONCRETE CURB & GUTTER 18"



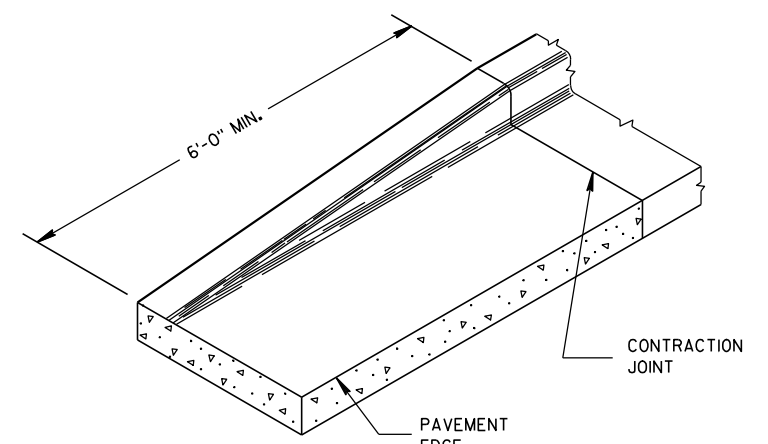
TYPES G & J ①

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. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.
- 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 AND R.
  - 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 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.
  - ④ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
  - ⑤ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



PARTIAL SECTION OF PAVEMENT  
WITH INTEGRAL CURB & GUTTER



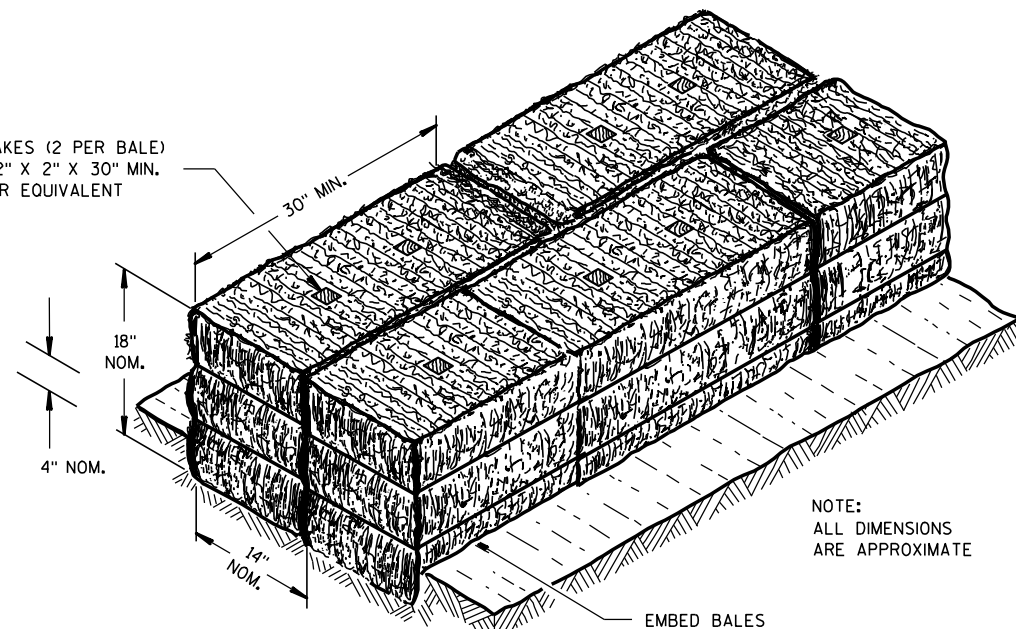
END SECTION CURB & GUTTER

CONCRETE CURB, CONCRETE  
CURB & GUTTER AND TIES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

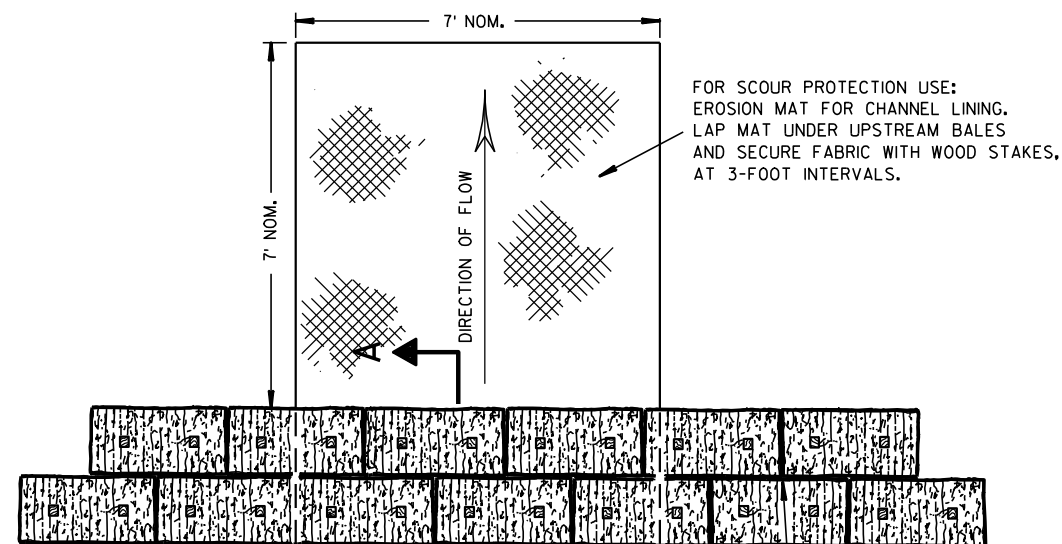
APPROVED  
9/4/08 /S/ Jerry H. Zogg  
DATE ROADWAY STANDARDS DEVELOPMENT  
ENGINEER  
FHWA

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

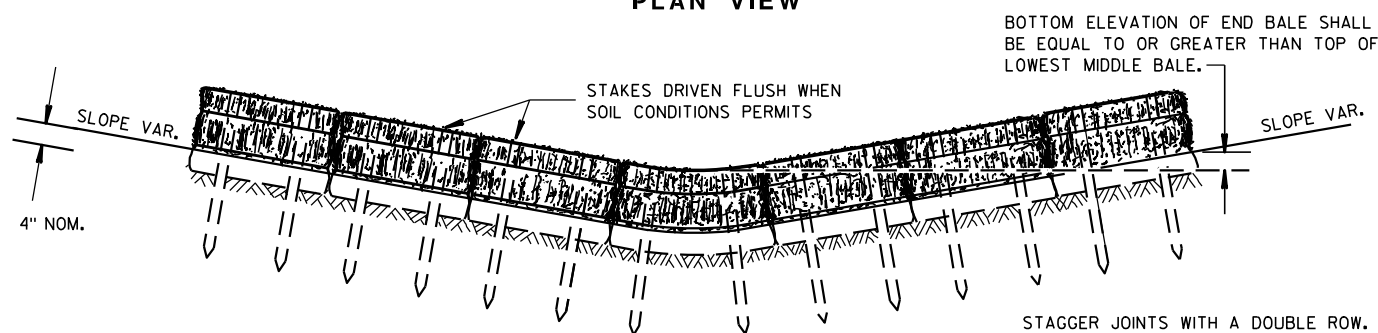


NOTE:  
ALL DIMENSIONS  
ARE APPROXIMATE

SECTION A-A



PLAN VIEW



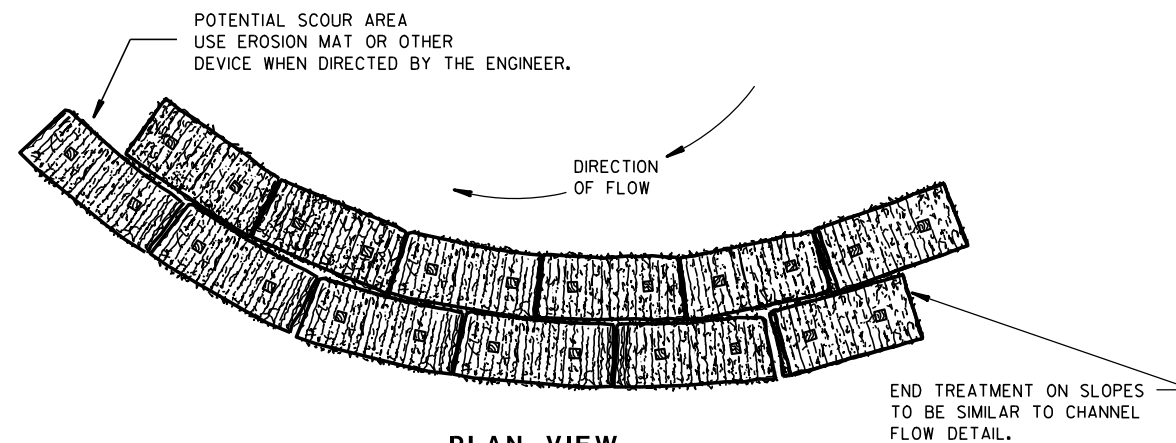
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

## GENERAL NOTES

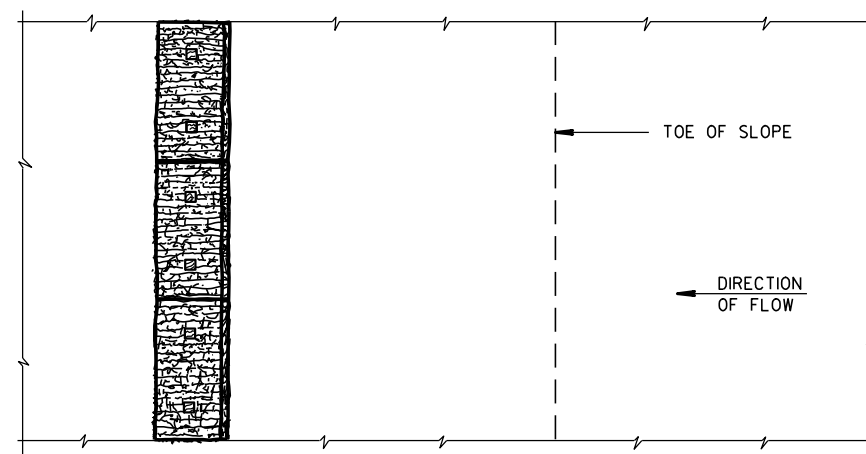
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

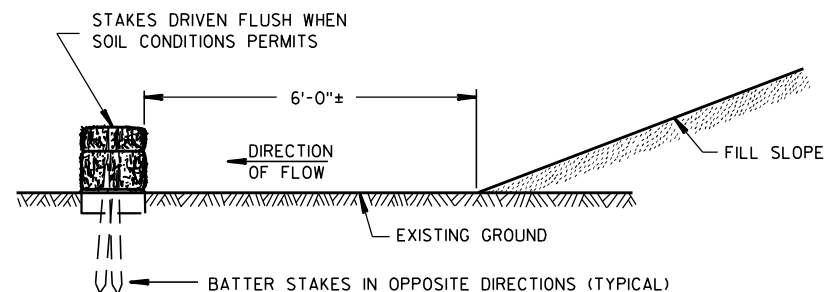


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

## TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02  
DATE

/S/ Beth Canestra  
CHIEF ROADWAY DEVELOPMENT ENGINEER

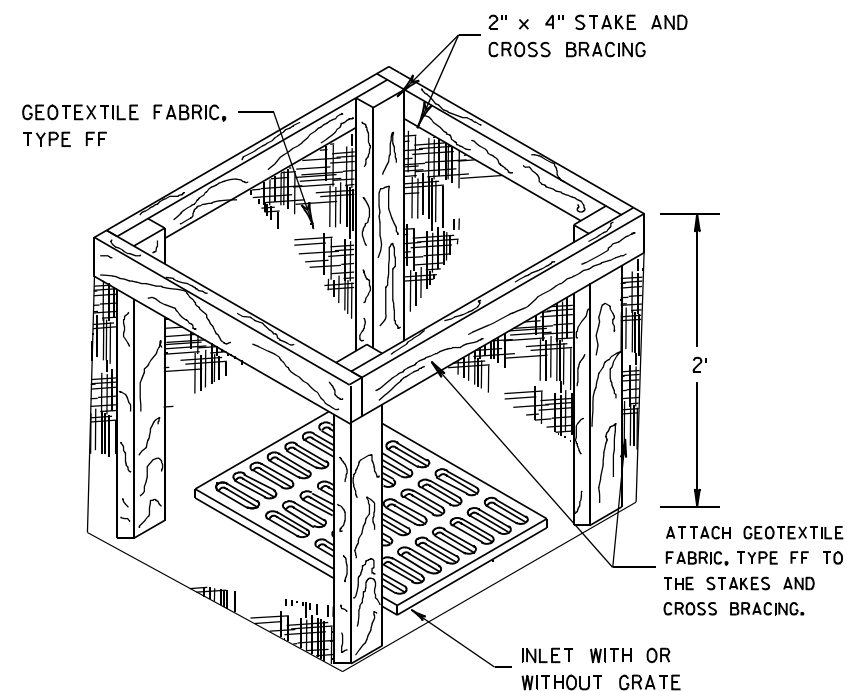
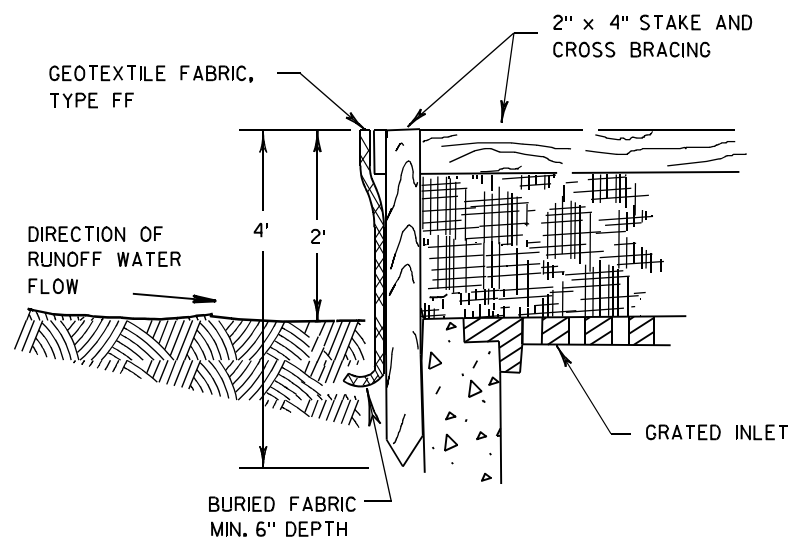
FHWA



- 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.



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



**INLET PROTECTION, TYPE A**

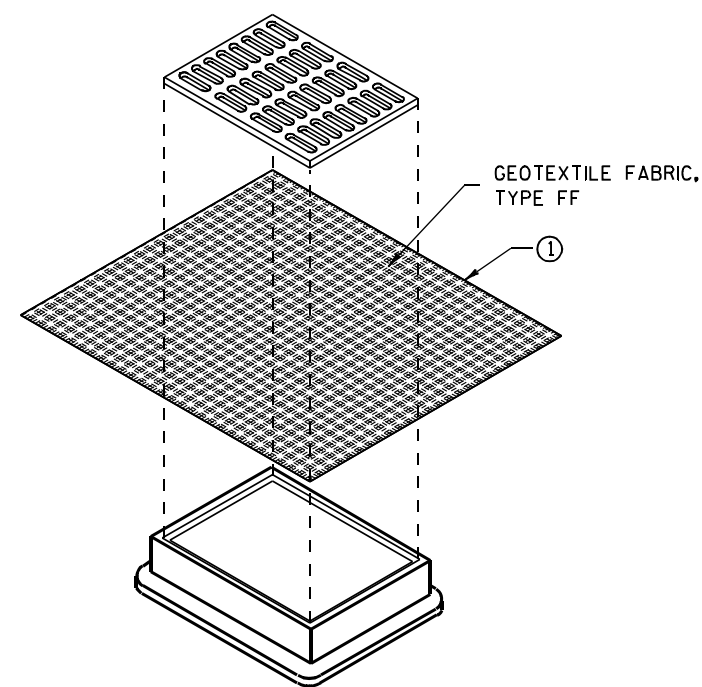
**GENERAL NOTES**

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

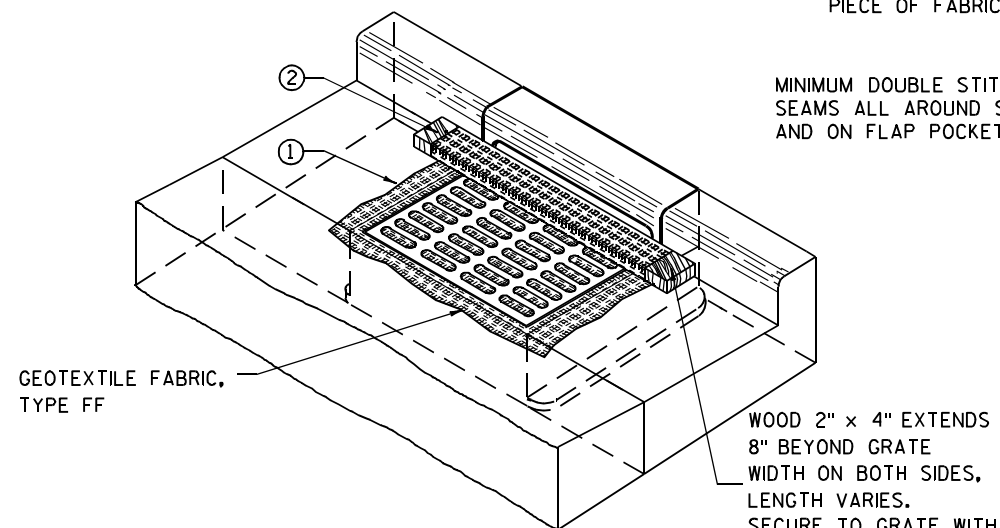
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



**INLET PROTECTION, TYPE B  
(WITHOUT CURB BOX)**

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



**INLET PROTECTION, TYPE C (WITH CURB BOX)**

**INSTALLATION NOTES**

**TYPE B & C**

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

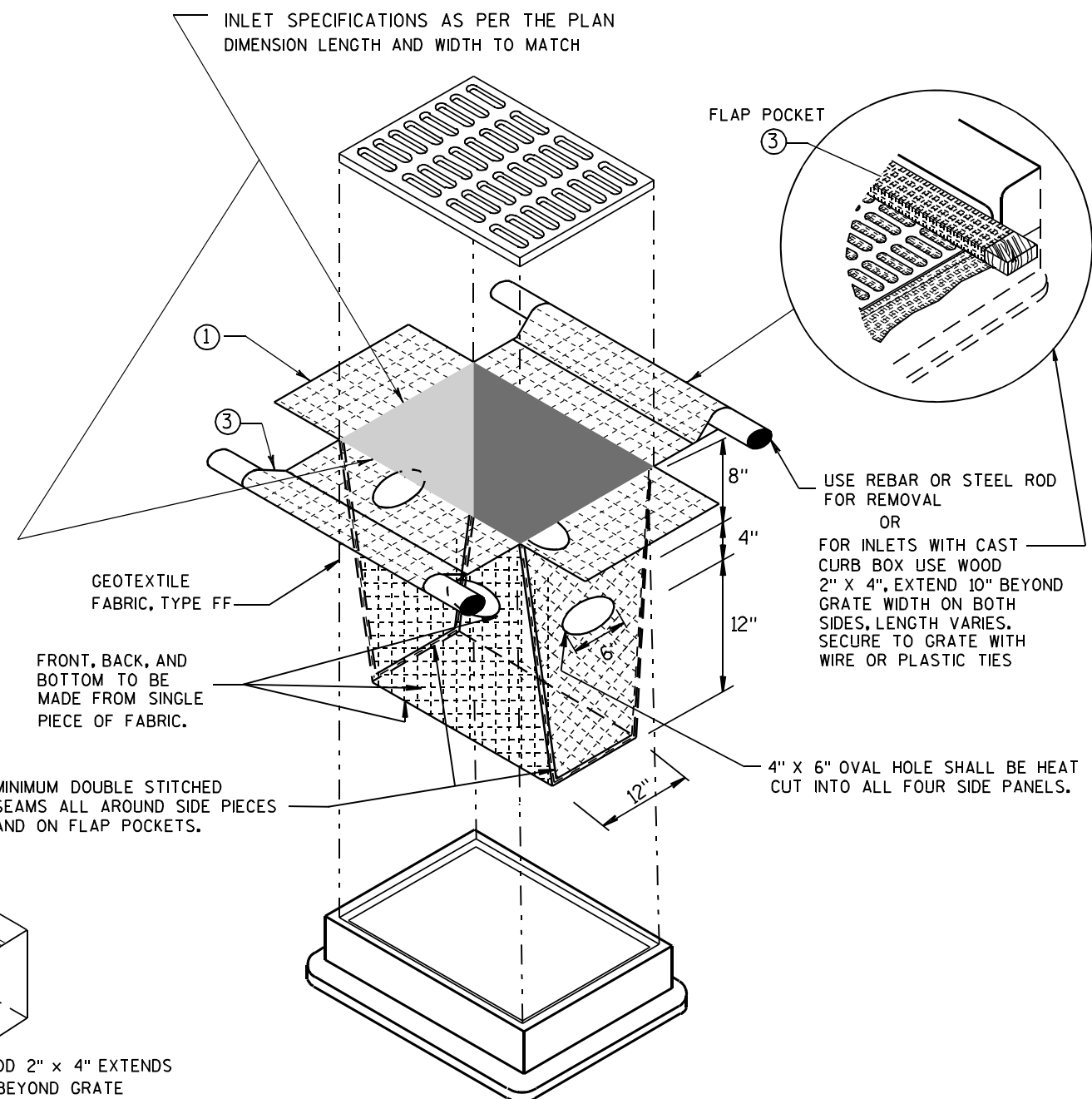
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

**TYPE D**

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.



**INLET PROTECTION, TYPE D**

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

**INLET PROTECTION  
TYPE A, B, C, AND D**

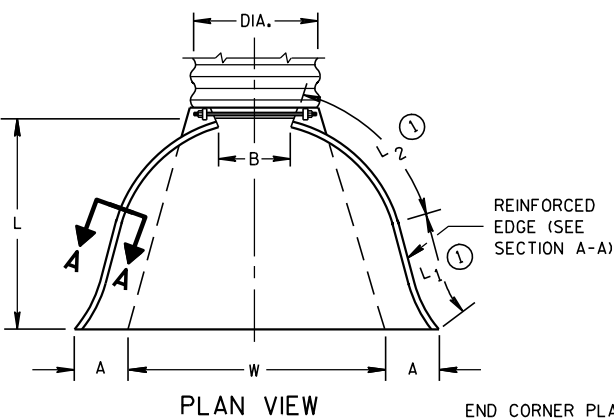
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
10/16/02 /S/ Beth Cannestra  
DATE  
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER



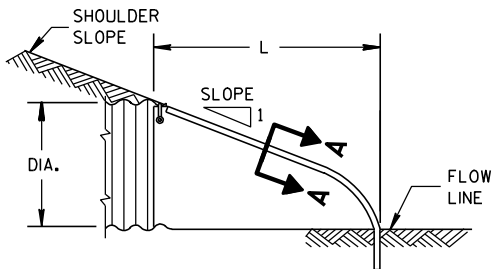
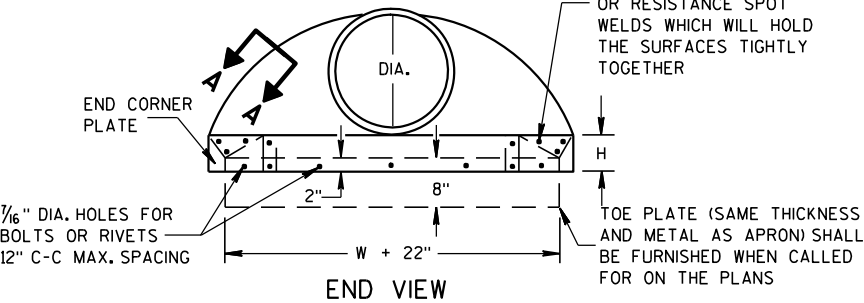
METAL APRON ENDWALLS												
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE		BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")			
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1		1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1		1 Pc.
18	.064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

\* EXCEPT CENTER PANEL  
SEE GENERAL NOTES



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

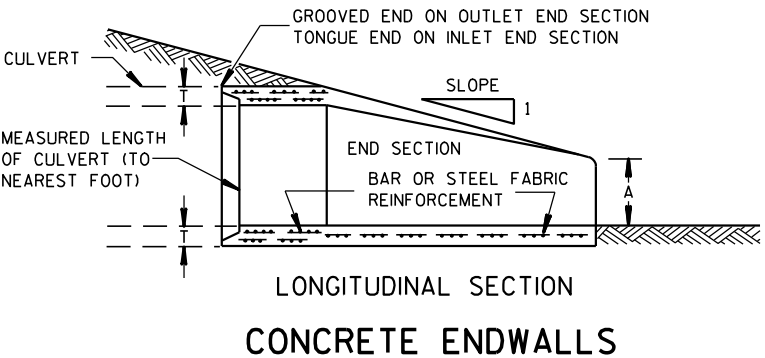
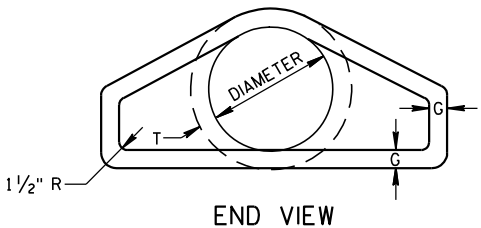
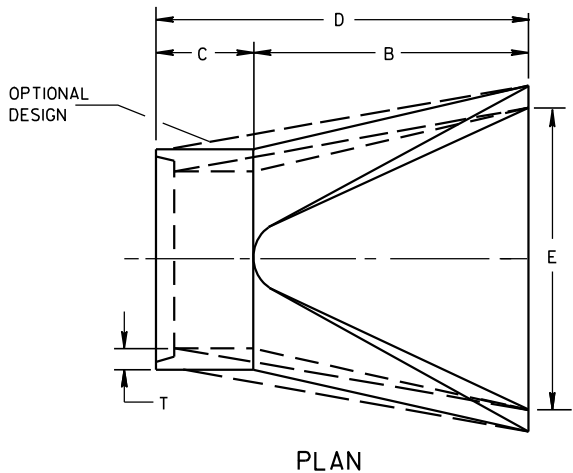
TOE PLATE (SAME THICKNESS AND METAL AS APRON) SHALL BE FURNISHED WHEN CALLED FOR ON THE PLANS



SIDE ELEVATION  
METAL ENDWALLS

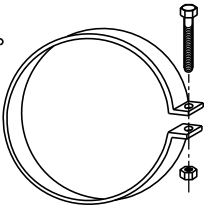
REINFORCED CONCRETE APRON ENDWALLS												
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE				
	T	A	B	C	D	E	G					
12	2	4	24	48 1/8	72 1/8	24	2	3 to 1				
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1				
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1				
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1				
24	3	9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

\* MINIMUM  
\*\* MAXIMUM

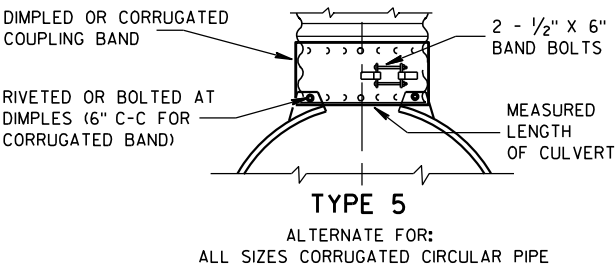
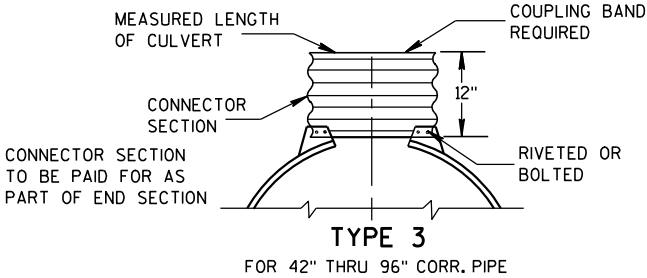
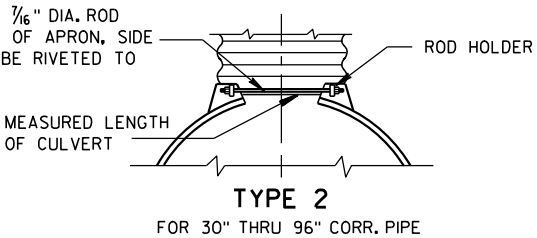
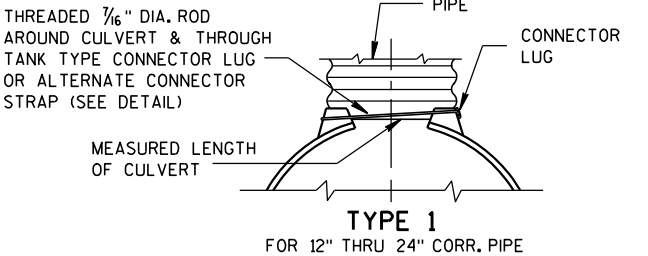


LONGITUDINAL SECTION  
CONCRETE ENDWALLS

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



ALTERNATE FOR TYPE 1 CONNECTION  
END SECTION CONNECTOR STRAP



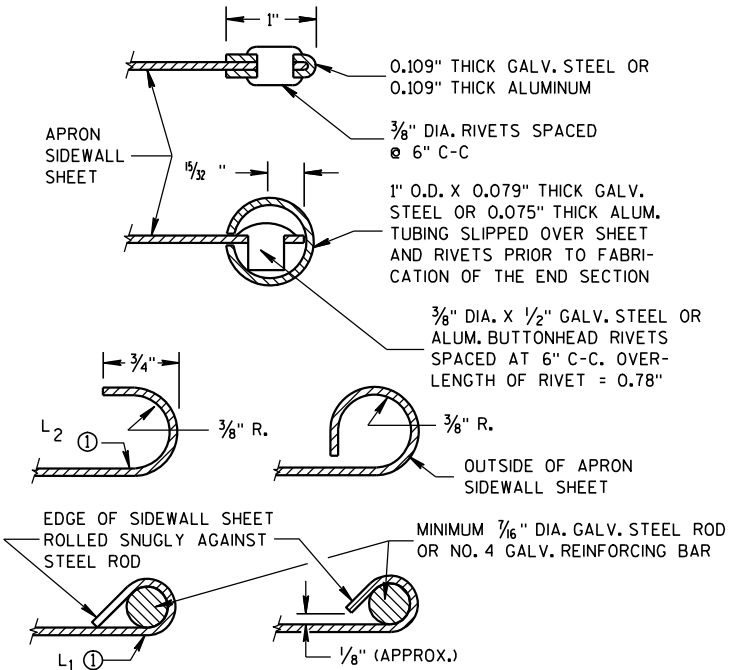
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

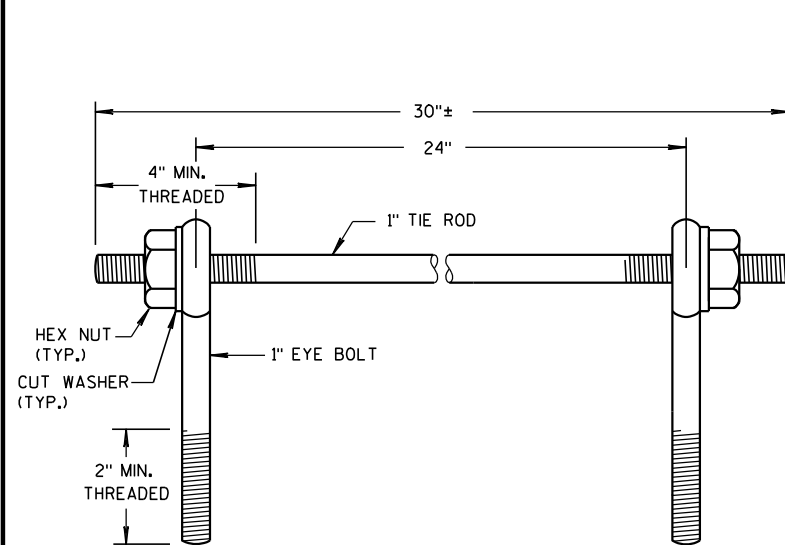
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

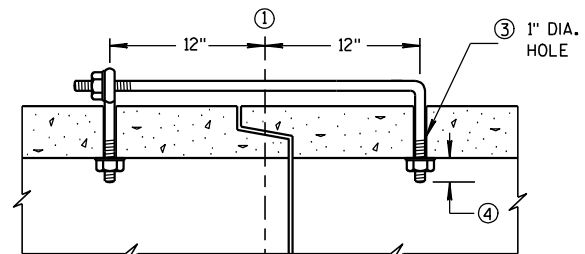
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

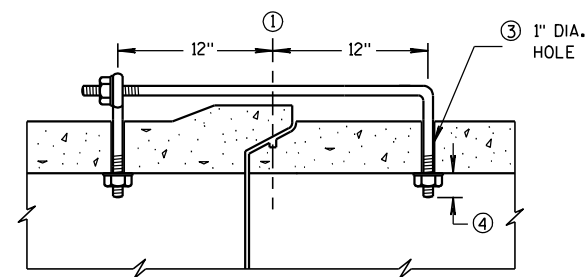


EYE BOLTS AND TIE ROD

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

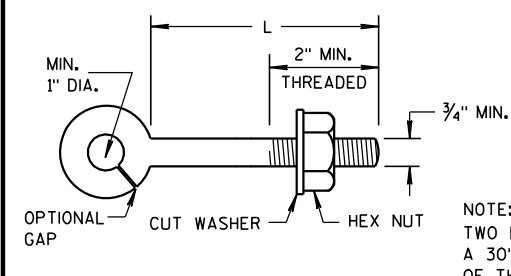


(TONGUE &amp; GROOVE PIPE)

(MODIFIED BELL PIPE)  
LONGITUDINAL SECTION

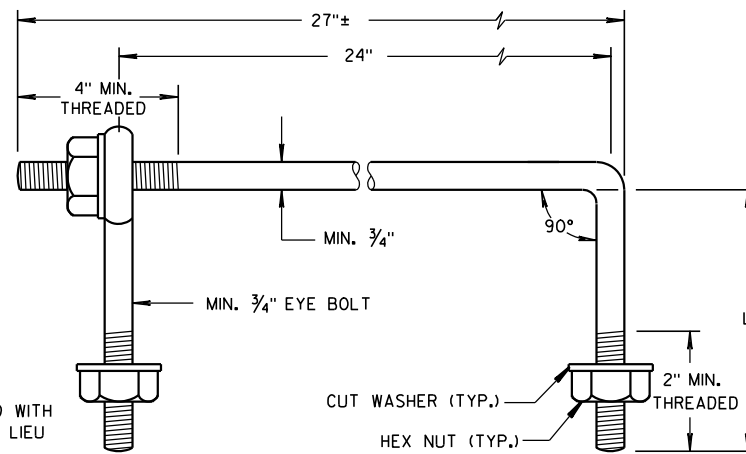
EYE BOLT DIMENSION TABLE

PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



EYE BOLT

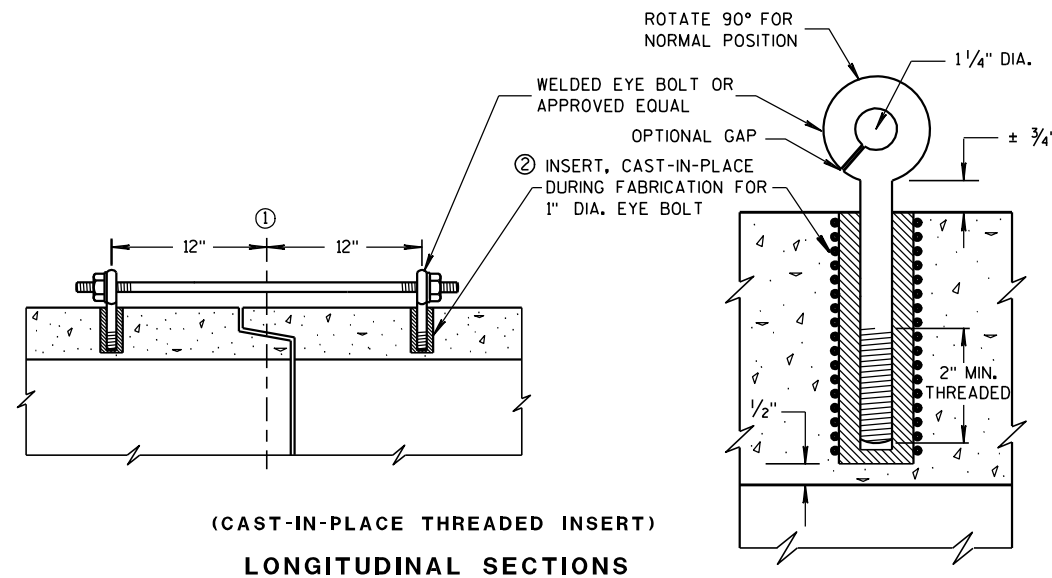
NOTE:  
TWO EYE BOLTS MAY BE USED WITH  
A 30" LONG THREADED ROD IN LIEU  
OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD

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

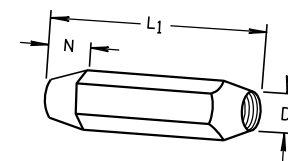
## EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

(CAST-IN-PLACE THREADED INSERT)  
LONGITUDINAL SECTIONS

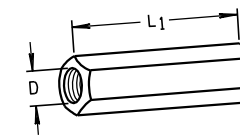
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L <sub>1</sub>	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES



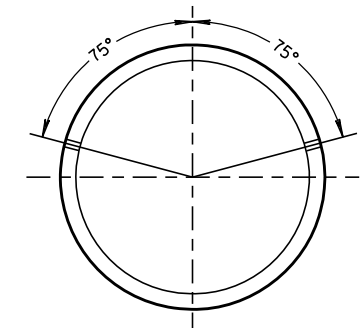
TAPERED



PLAIN

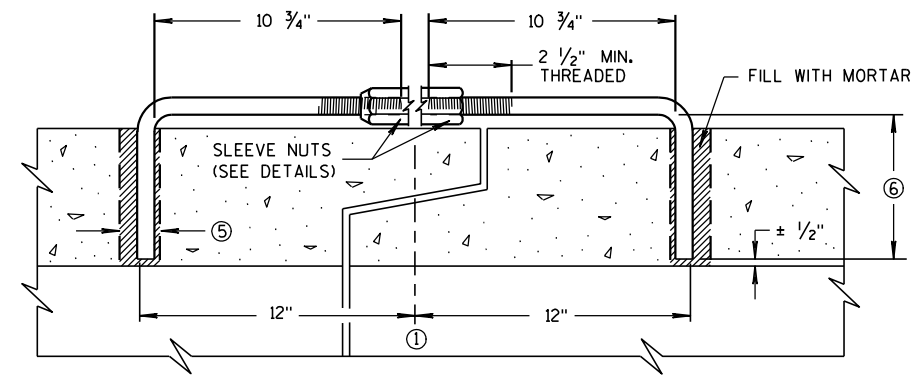
RIGHT AND LEFT THREADS

## SLEEVE NUTS



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

TRANSVERSE SECTION



LONGITUDINAL SECTION

(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

## ADJUSTABLE TIE ROD (ALTERNATE NO. 3)

## GENERAL NOTES

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

CONCRETE CULVERT PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED ON THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE CULVERT PIPE AS INDICATED ON THE PLANS AND BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO CULVERT PIPE, REINFORCED CONCRETE CULVERT PIPE, OR REINFORCED CONCRETE PIPE CATTLE PASS.

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

- ①  $\phi$  OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- ② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
- ③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM  $\phi$  OF TONGUE AND GROOVE.
- ④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.
- ⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.
- ⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.

JOINT TIES FOR  
CONCRETE PIPE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

12/17/07

DATE

FHWA

/S/ Jerry H. Zogg  
ROADWAY STANDARDS DEVELOPMENT  
ENGINEER

## 6

**S.D.D. 14 B 15-7a**

- 6

**S.D.D. 14 B 15-7a**



**S.D.D. 14 B 15-7a**



**S.D.D. 14 B 15-7a**



**S.D.D. 14 B 15-7a**



**S.D.D. 14 B 15-7a**



**S.D.D. 14 B 15-7a**



**S.D.D. 14 B 15-7a**



**S.D.D. 14 B 15-7a**

**S.D.D. 14 B 15-7a**



**S.D.D. 14 B 15-7a**



**S.D.D. 14 B 15-7a**



**S.D.D. 14 B 15-7a**



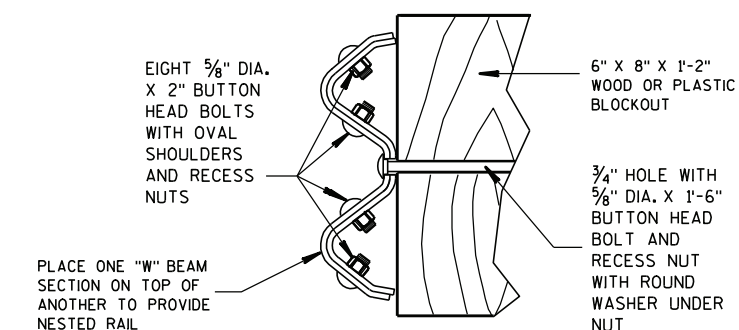
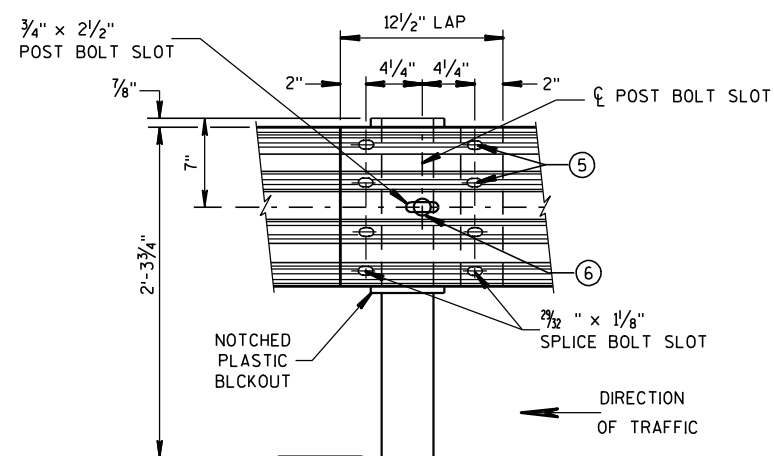
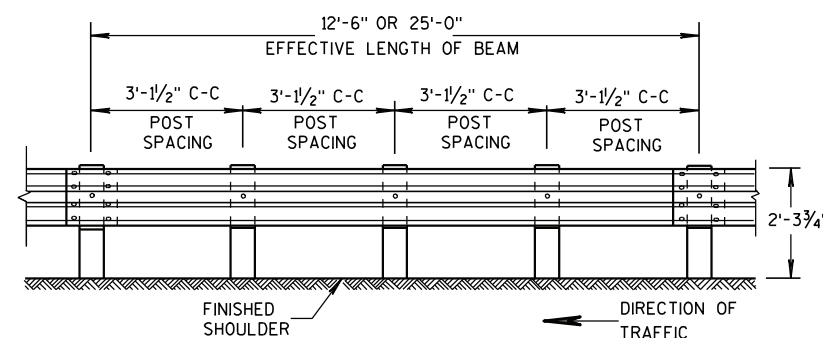
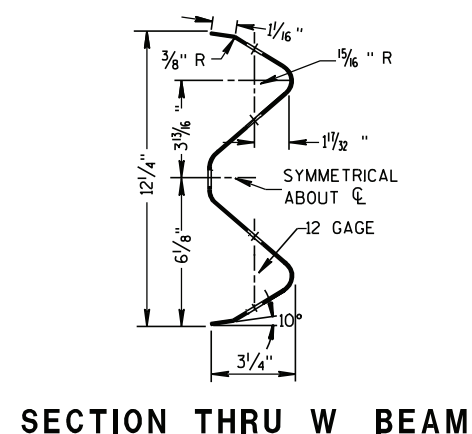
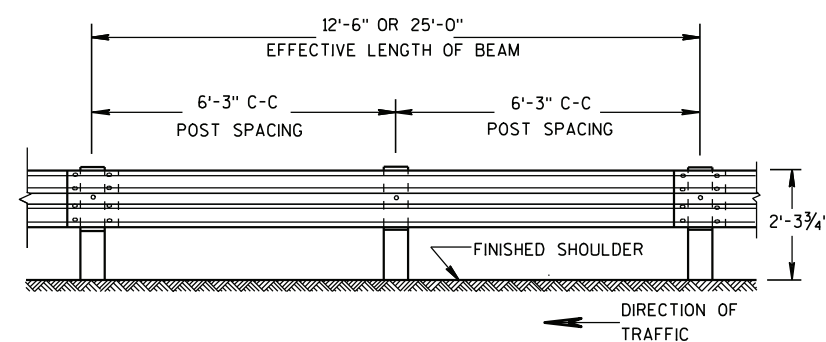
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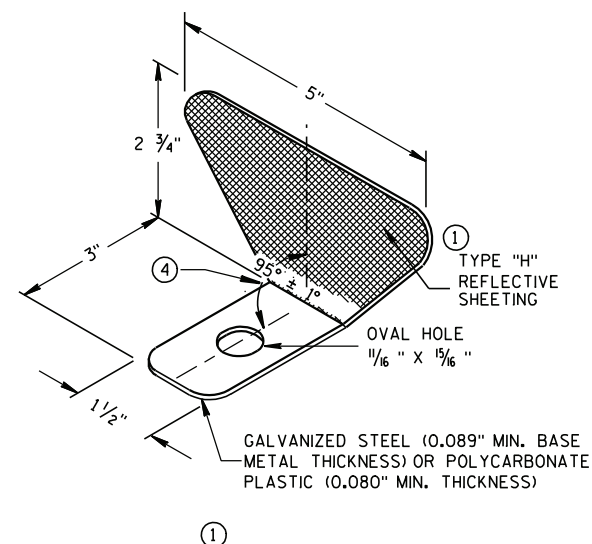
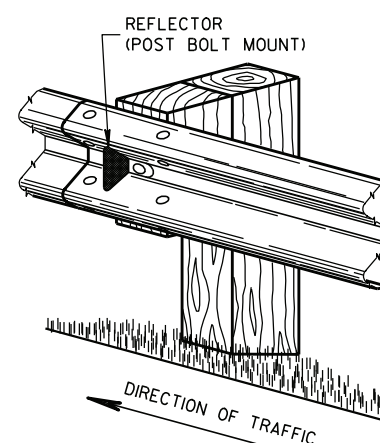
**S.D.D. 14 B 15-7a**

**S.D.D. 14 B 15-7a**

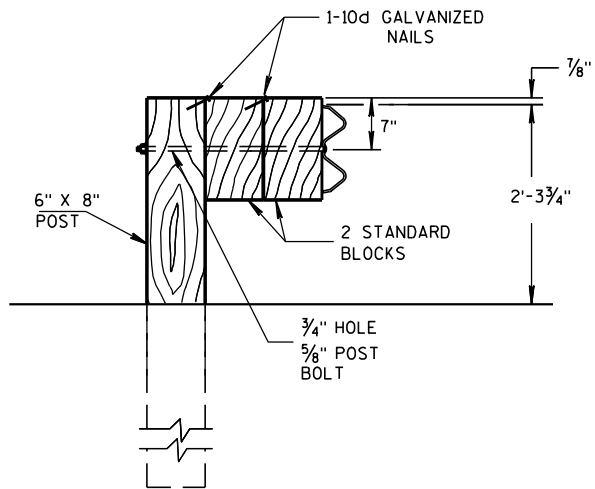
**S.D.D. 14 B 15-7a**



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

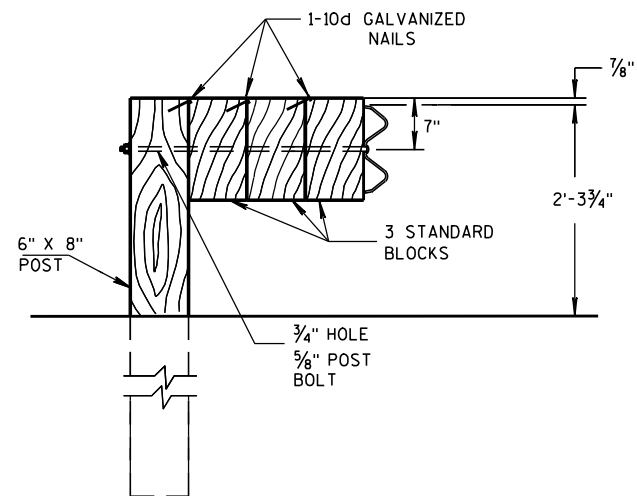


- ## GENERAL NOTES
- 1 PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.
  - 2 DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
  - 3 REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
  - 4 PROVIDE AN ANGLE OF BEND OF  $90^{\circ} \pm 1^{\circ}$  FOR TWO-SIDED REFLECTORS.
  - 5 8 -  $\frac{5}{8}$ "  $\phi$  X 2 " BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.
  - 6  $\frac{5}{8}$ "  $\phi$  X 1'-6" BUTTON HEAD BOLT AND AND RECESS NUT WITH ROUND WASHER UNDER NUT.



#### DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS  
WITHIN A BARRIER RUN IS UNLIMITED

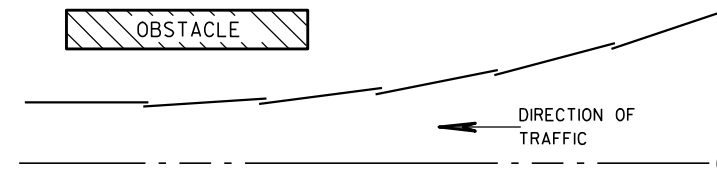


#### DETAIL FOR TRIPLE BLOCKS

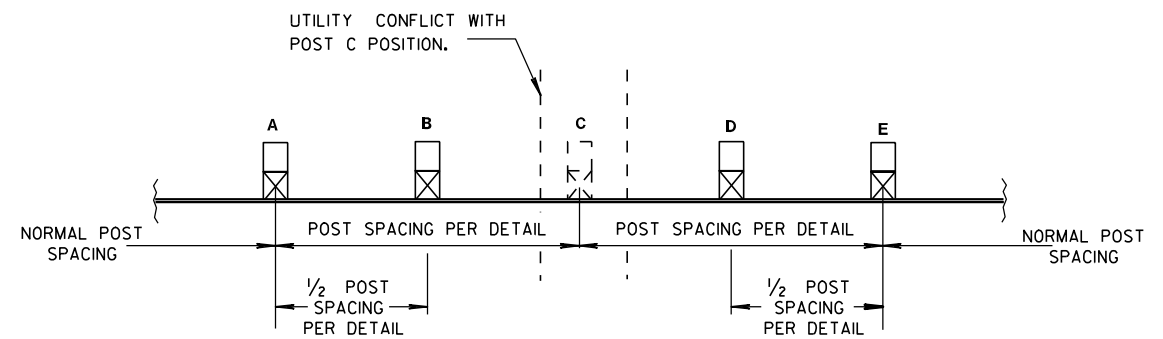
TRIPLE BLOCK DETAIL IS LIMITED TO ONE  
LOCATION WITHIN A BEAM GUARD RUN.

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES  
PREVENT THE POST FROM BEING INSTALLED.

DO NOT USE EXTRA 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.



#### PLAN VIEW BEAM LAPPING DETAIL



#### POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

#### STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

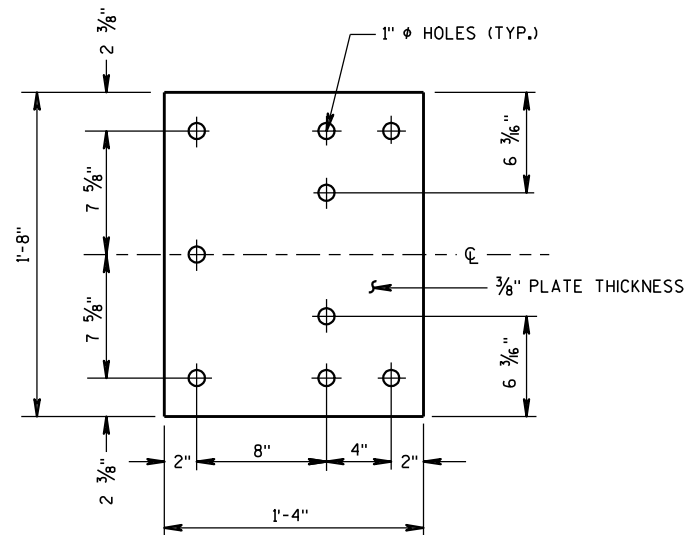
APPROVED

5/23/11

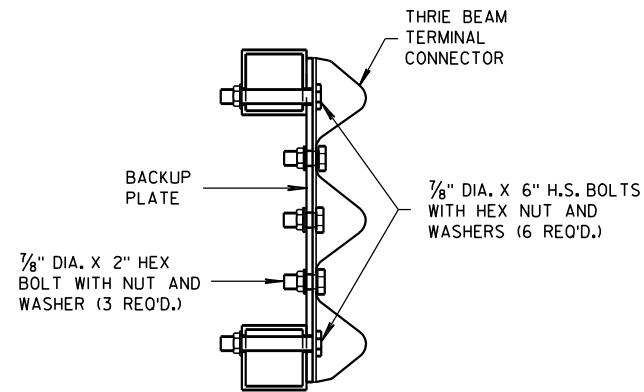
DATE

FHWA

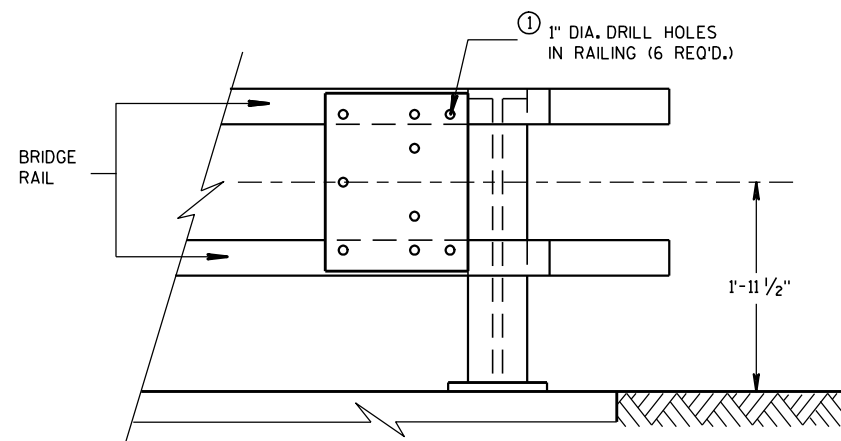
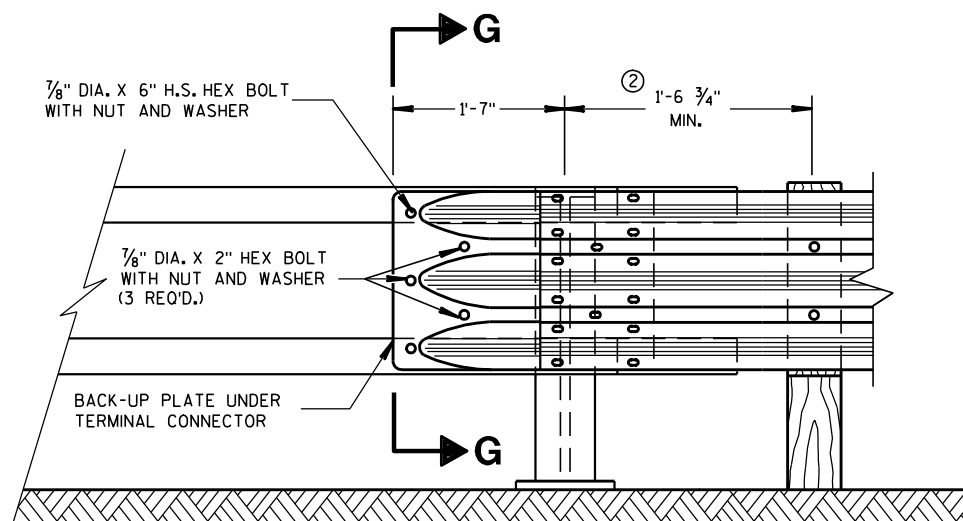
/S/ Jerry H. Zogg  
ROADWAY STANDARDS DEVELOPMENT  
ENGINEER



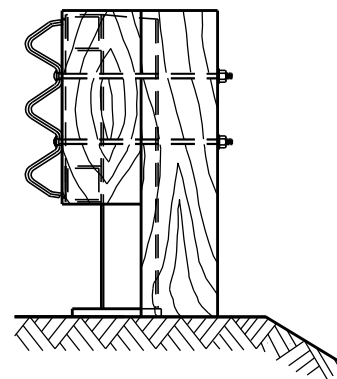
BACK-UP PLATE DETAIL



SECTION G-G

BACK-UP PLATE MOUNTING  
ONTO BRIDGE RAILING

FRONT VIEW

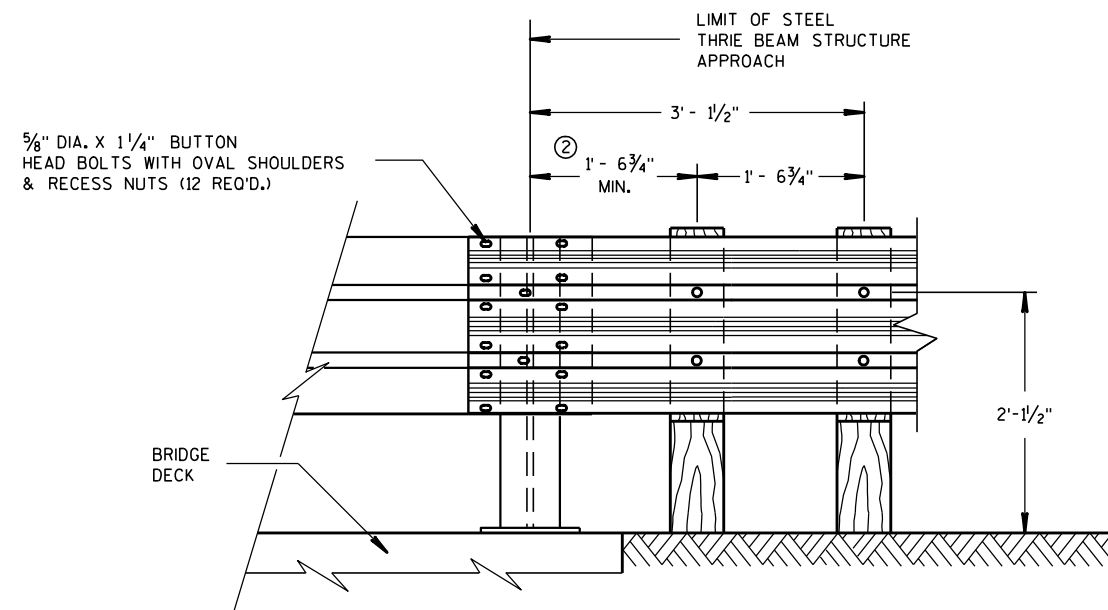
THRIE BEAM CONNECTION TO  
TUBULAR RAILING TYPE "F"

END VIEW

## GENERAL NOTES

BOLTS, PLATES, NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 325 AND BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

- ① INCLUDE THE PAYMENT FOR DRILLING HOLES IN RAILING IN THE ITEM "STEEL THRIE BEAM STRUCTURE APPROACH".
- ② VARY THIS DIMENSION DEPENDING ON ABUTMENT TYPE, WINGWALL DETAILS, AND ANGLE OF SKEW. PLACE THE FIRST WOOD POST OFF THE BRIDGE SHALL AS CLOSE AS FEASIBLE TO THE STEEL END POST.



FRONT VIEW

THRIE BEAM CONNECTION TO  
STEEL RAILING TYPE "W"

STEEL THRIE BEAM STRUCTURE  
APPROACH, CONNECTION TO BRIDGE  
RAILING TYPES "F" AND "W"

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

2-8-2012  
DATE

FHWA

/S/ Jerry H. Zegg  
ROADWAY STANDARDS DEVELOPMENT  
ENGINEER

BILL OF MATERIALS

NOTE NO.	QTY.	DESCRIPTION
①	4	WOOD BREAKAWAY TERMINAL POST: 5 1/2" X 7 1/2" X 3'-9"
②	**	STEEL TUBE: OPTION 1 - QUANTITY OF 4 TS 8" X 6" X 0.188", 4'-6" LONG OR OPTION 2 - QUANTITY OF 2 TS 8" X 6" X 0.188", 6'-0" AND 2 TS 8" X 6" X 0.188", 4'-6" LONG
③	2	SOIL PLATE: 2'-0" X 1'-6" X 1/4" **
④	4	WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"
⑤	6	WOOD OFFSET BLOCKS: 6' X 8" X 1'-2"
⑥	1	PIPE SLEEVE: 2" X 5 1/2" STANDARD PIPE
⑦	1	BEARING PLATE
⑧	1	BCT CABLE ASSEMBLY
⑨	1	CABLE ANCHOR BOX
⑩	1	STRUT & YOKE
⑪	1	STEEL PLATE BEAM, END PANEL 12 GA, 13'-6 1/2" LONG FOR SKT-350, ET-2000 AND ET-2000 PLUS
⑫	3	STEEL PLATE BEAM: 12 GA, 13'-6 1/2"
⑬	1	ET-2000/ET-2000 PLUS GUARDRAIL EXTRUDER OR SKT-350 IMPACT HEAD: AS FURNISHED BY MANUFACTURER
⑭	1	REFLECTIVE SHEETING TYPE H: 18" X 18"
⑮	1	E.A.T. MARKER POST

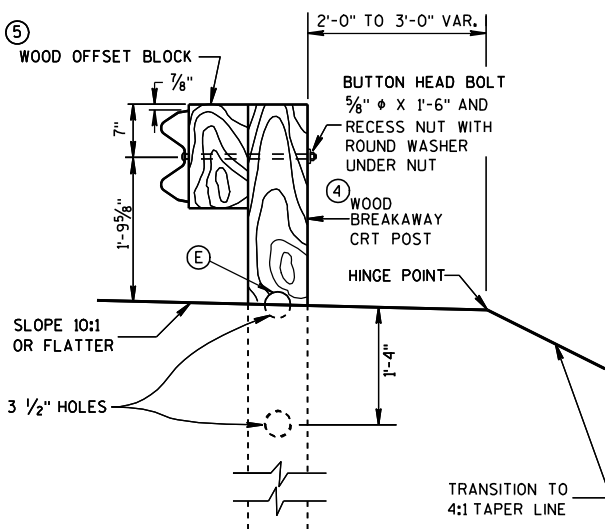
GENERAL NOTES

FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS. IF NONE ARE AVAILABLE, INSTALL 5/8"  $\phi$  X 1'-6" BUTTON HEAD BOLTS AT ALL POSTS EXCEPT FOR POST 1.

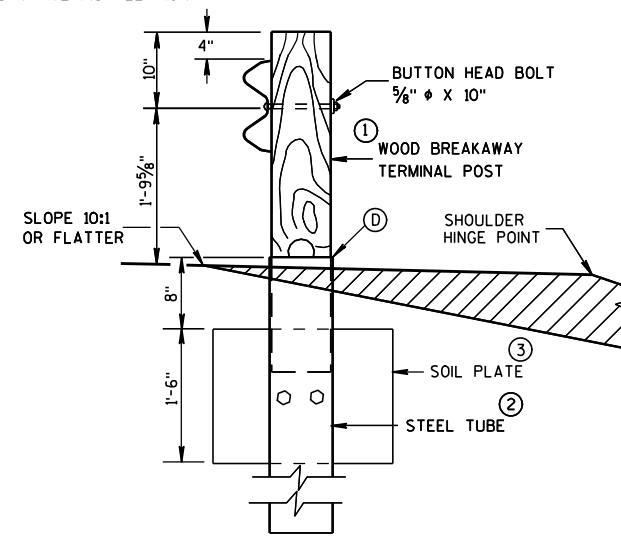
- (A) THE SLOPE IN THE AREA BOUNDED BY THE EXTENDED VEHICLE RUNOUT PATH (EVRP), THE HINGE POINT LINE (HPL), AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
- (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.
- (C) THE 13 SLOT FIRST RAIL PANEL MAY BE USED IN LIEU OF THE 3 SLOT RAIL PANEL ON SKT-350 ONLY.
- (D) THE TOP OF THE STEEL TUBE ON POSTS 1 THROUGH 4 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.
- (E) THE CENTER OF THE UPPER 3 1/2" DIAMETER HOLE ON POST 5 THROUGH 8 SHALL BE 3/4" ABOVE THE FINISHED GROUND LINE.
- (F) SHEETING IS ATTACHED TO 0.040 ALUMINUM SHEET AND ATTACHED TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS, ONE SCREW PER CORNER OF E.A.T. STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.
- DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

\* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

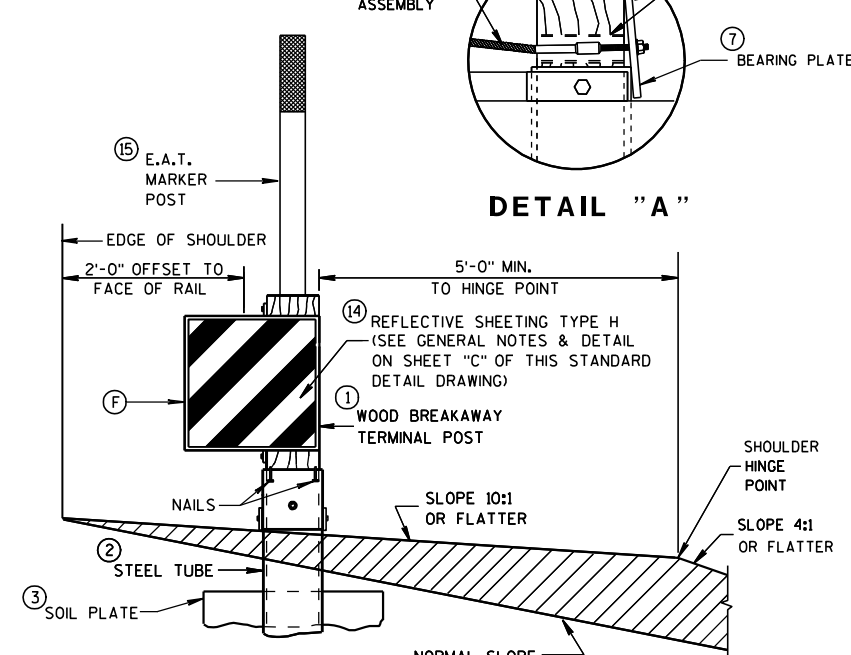
\*\* SDD SHOWS 4 - 54 INCH STEEL TUBES WITH SOIL PLATES INSTALLED ON POST 1 AND POST 2. POST 3 AND 4 DO NOT NEED SOIL PLATES. AN ALTERNATIVE INSTALLATION WOULD CONSIST OF 2 - 72 INCH STEEL TUBES ON POST 1 AND POST 2 AND 54 INCH TUBES ON POSTS 3 AND 4. THE ALTERNATIVE INSTALLATION DOES NOT REQUIRE SOIL PLATES.



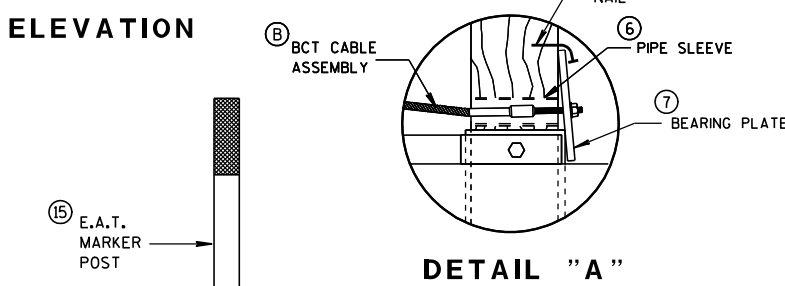
SECTION C-C  
TYPICAL AT POST NOS. 6, 8



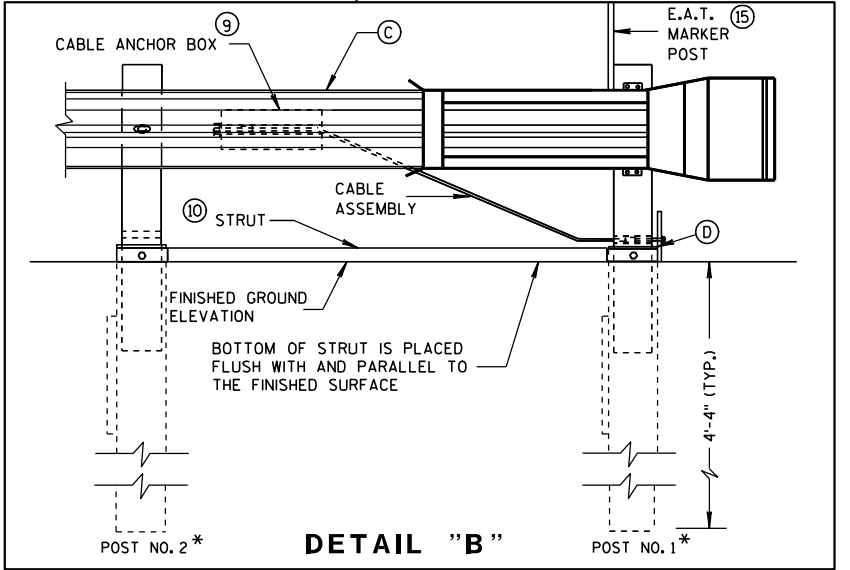
SECTION B-B  
TYPICAL AT POST NO. 2\*



SECTION A-A  
TYPICAL AT POST NO. 1\*



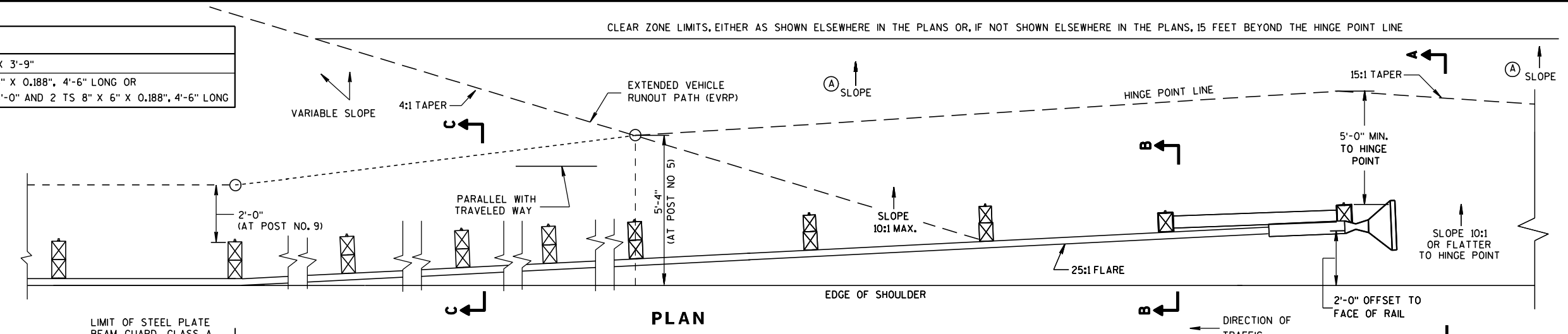
DETAIL "A"



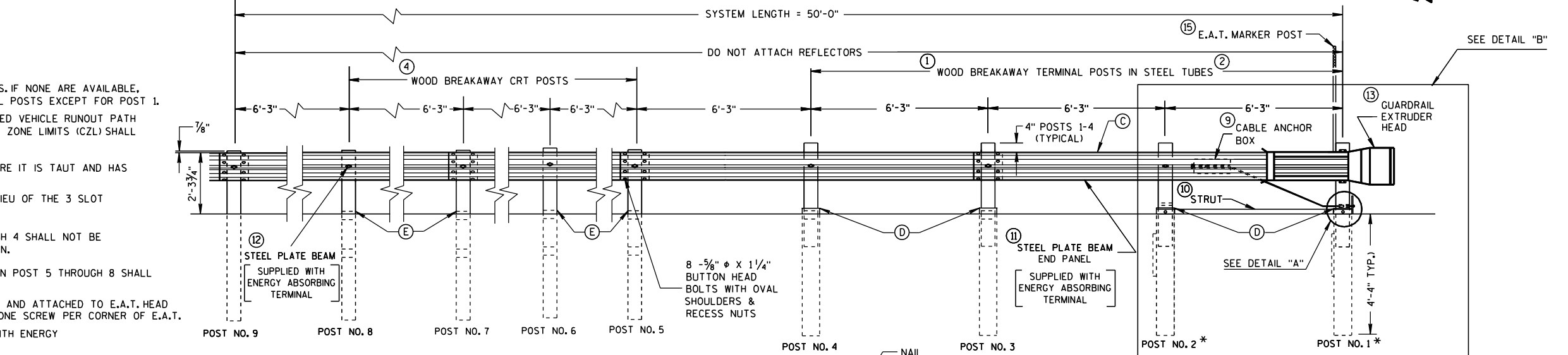
DETAIL "B"

STEEL PLATE BEAM GUARD  
ENERGY ABSORBING TERMINAL

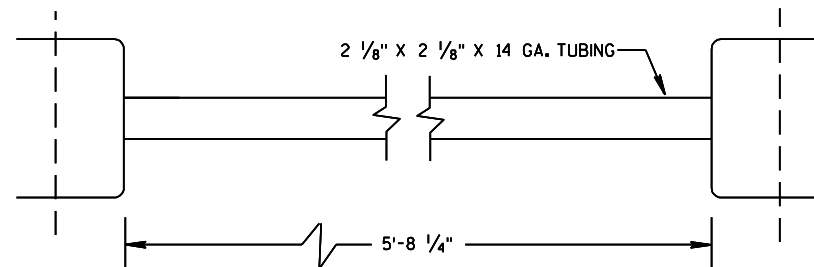
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



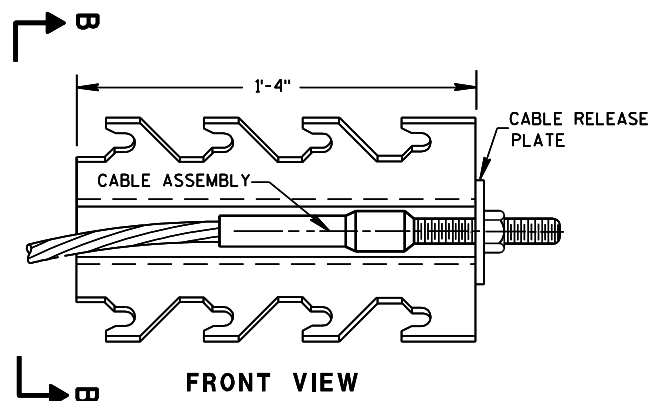
PLAN



ELEVATION

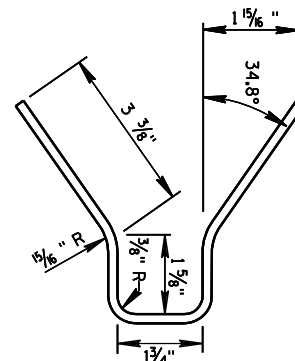


⑩ STRUT DETAIL (SKT-350)

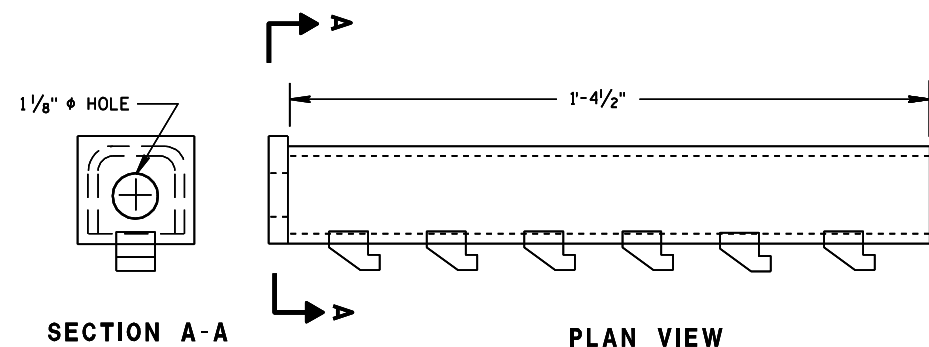


⑨ CABLE ANCHOR BOX (SKT-350)

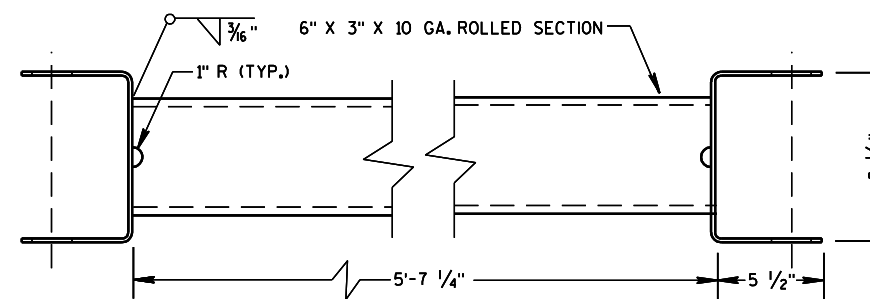
(SKT-350)



SECTION B-B

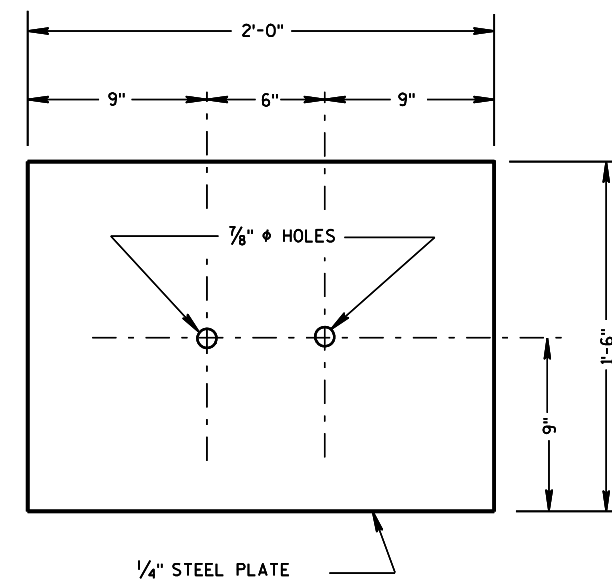


⑨ CABLE ANCHOR BOX (ET-2000/ET-2000 PLUS)

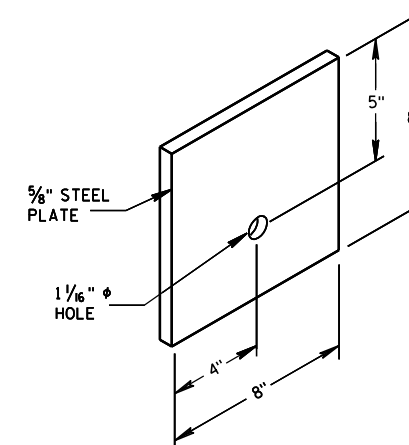


⑩ STRUT DETAIL (ET-2000/ET-2000 PLUS)

(ET-2000/ET-2000 PLUS)



③ SOIL PLATE  
(SKT-350, ET-2000/ET-2000 PLUS)

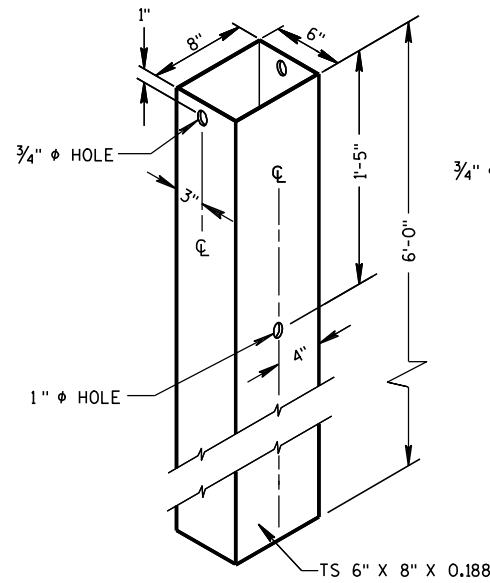


⑦ STEEL BEARING PLATE  
(SKT-350, ET-2000/ET-2000 PLUS)

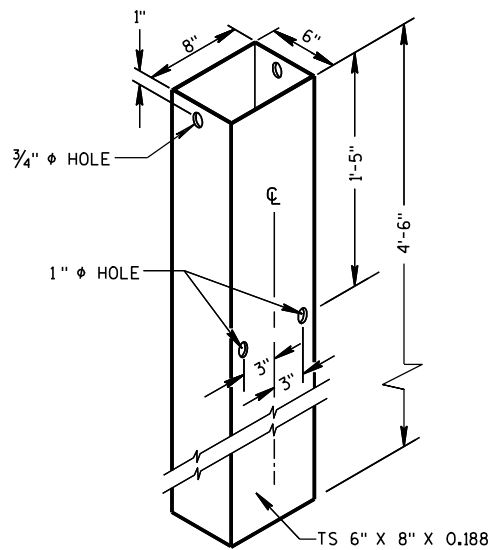
STEEL PLATE BEAM GUARD  
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

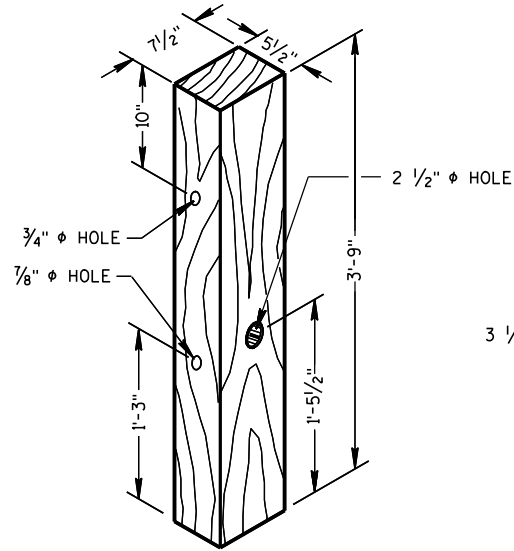




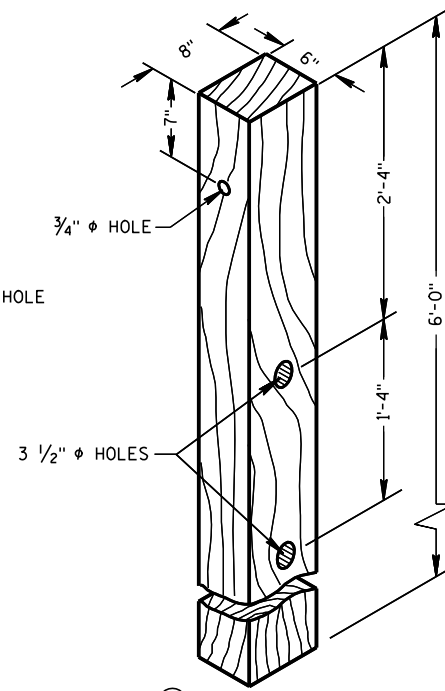
② **72" STEEL TUBE**  
(POSTS NO. 1-4)



② **54" STEEL TUBE**  
(POSTS NO. 1-4)

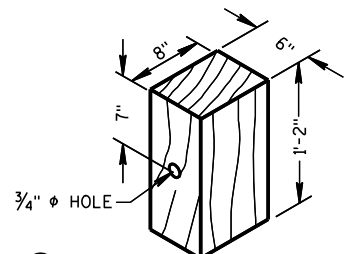


① **TERMINAL POST**  
(POSTS NO. 1-4)



④ **CRT POST**  
(POSTS NO'S 5-8)

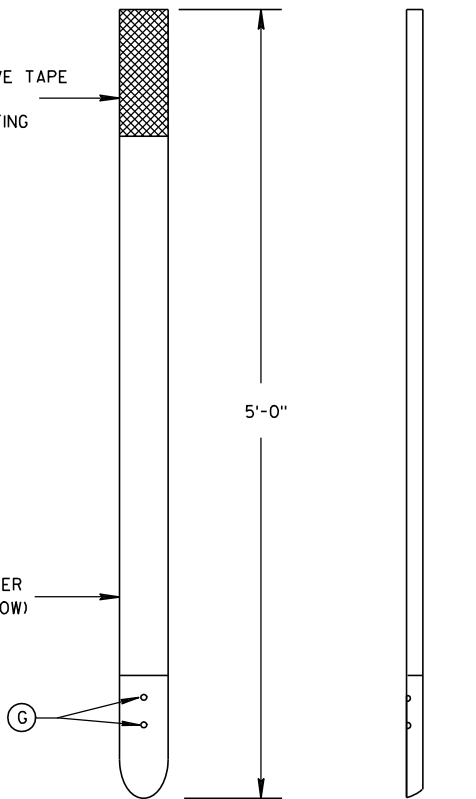
### WOOD BREAKAWAY POSTS



⑤ **WOOD OFFSET BLOCK**  
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2

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

E.A.T. MARKER  
POST (YELLOW)



FRONT VIEW  
SIDE VIEW  
⑮ **E.A.T. MARKER POST**

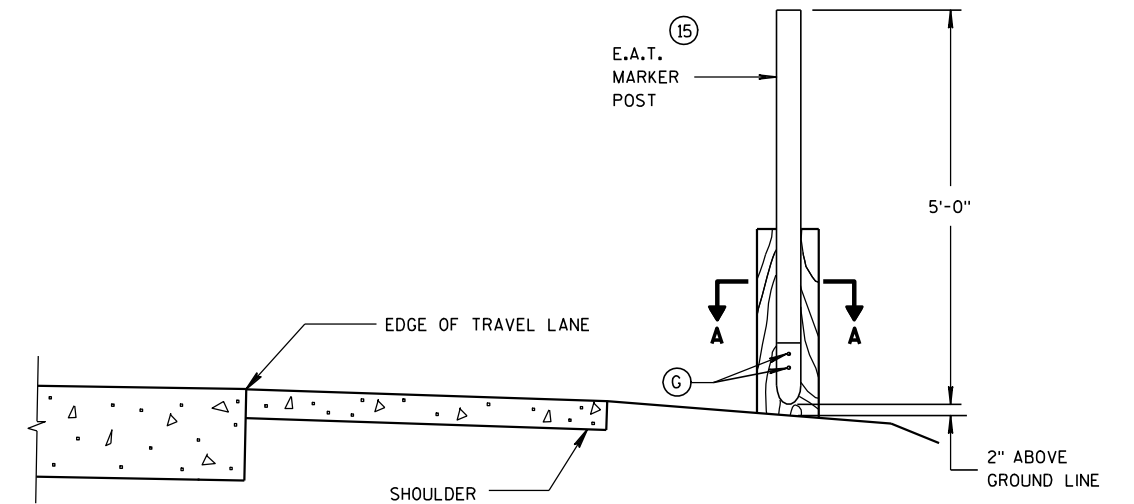
### GENERAL NOTES

STEEL PLATE BEAM GUARD, ENERGY ABSORBING TERMINAL SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH, WHICH SHALL INCLUDE HARDWARE, STEEL PLATE BEAM GUARD, POSTS, REFLECTIVE SHEETING AND INSTALLATION AS SHOWN.

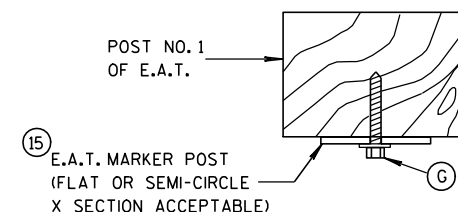
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.

SEE APPROVED PRODUCTS LIST FOR ACCEPTABLE E. A. T. MARKER POST.

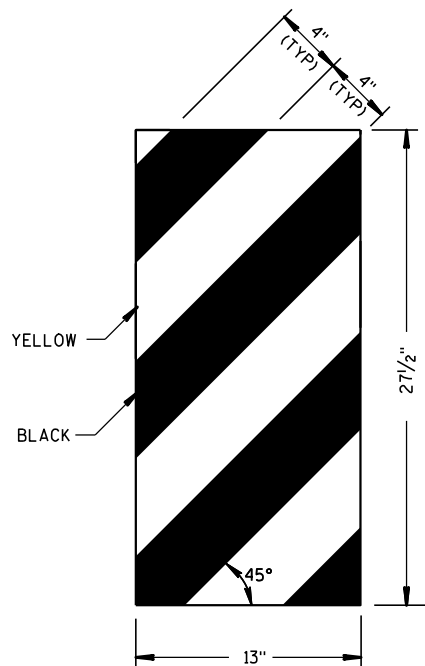
⑮ 1/2" DIA. X 3" LAG BOLT WITH WASHER.



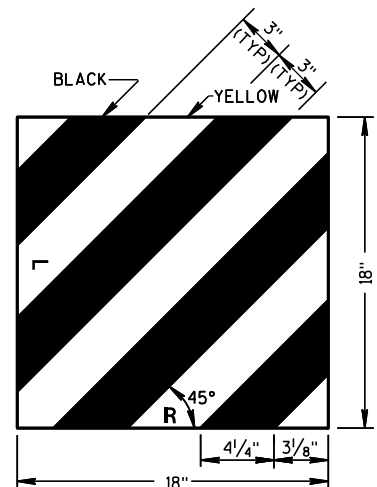
**TYPICAL INSTALLATION OF E.A.T. MARKER POST BACKSIDE OF POST NO. 1**  
(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A



**ET-2000 PLUS ONLY**



**ET-2000 AND SKT-350**

⑭ **REFLECTIVE SHEETING DETAILS**

**STEEL PLATE BEAM GUARD  
ENERGY ABSORBING TERMINAL**

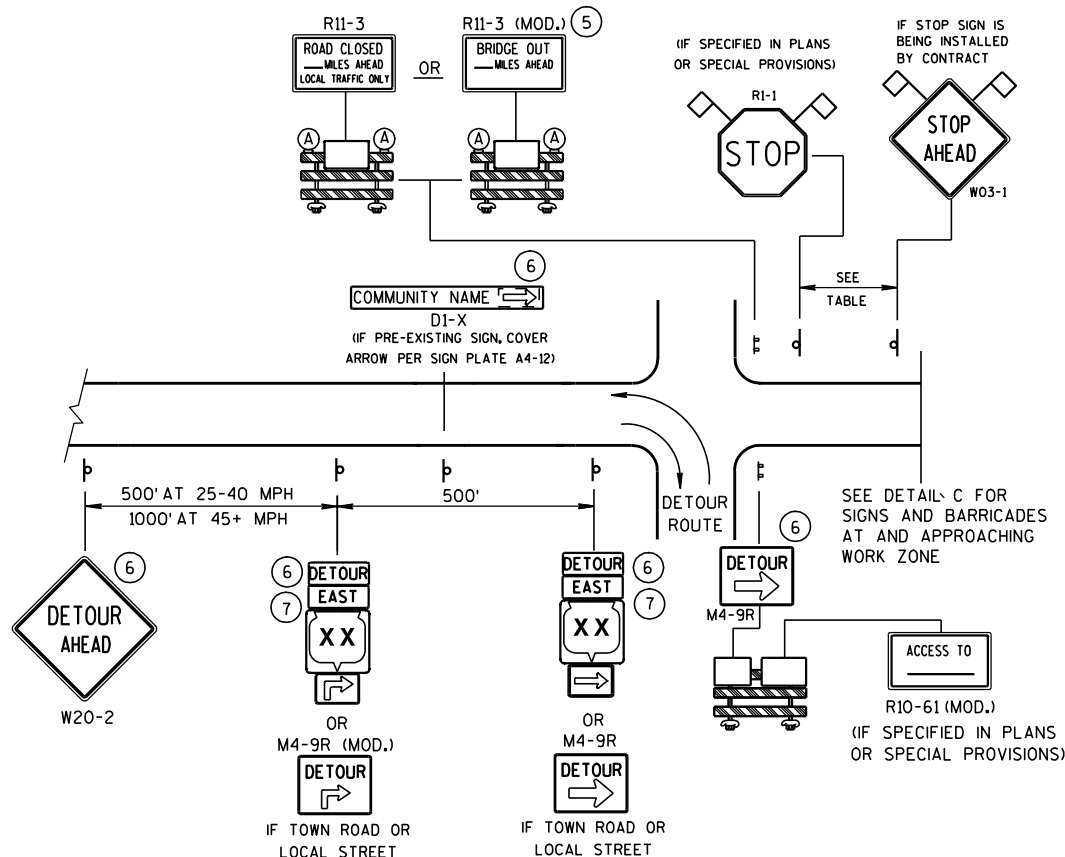
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

4-12-10  
DATE

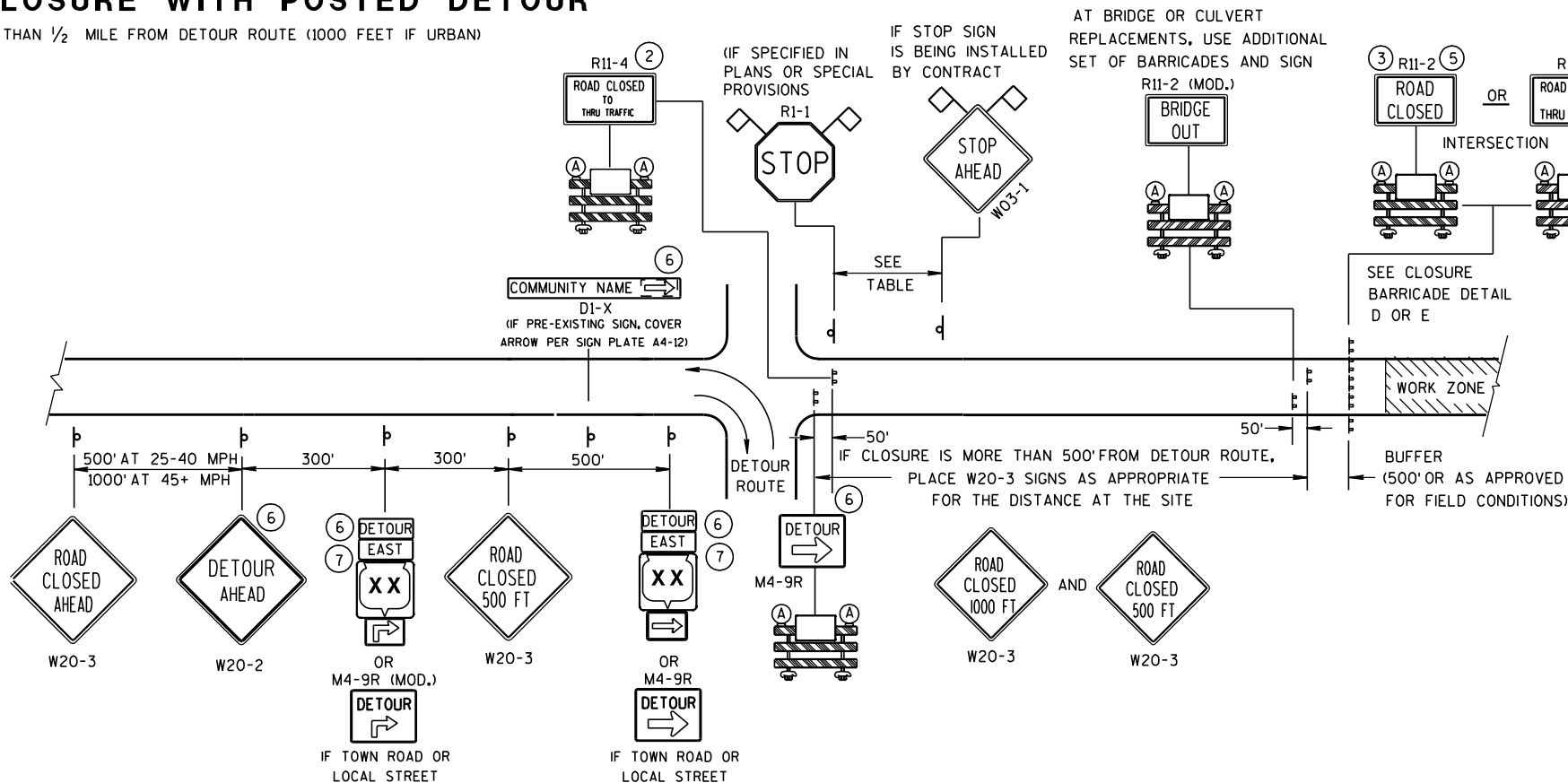
FHWA

/S/ Jerry H. Zogg  
ROADWAY STANDARDS DEVELOPMENT  
ENGINEER



**DETAIL A**  
**MAINLINE CLOSURE WITH POSTED DETOUR**

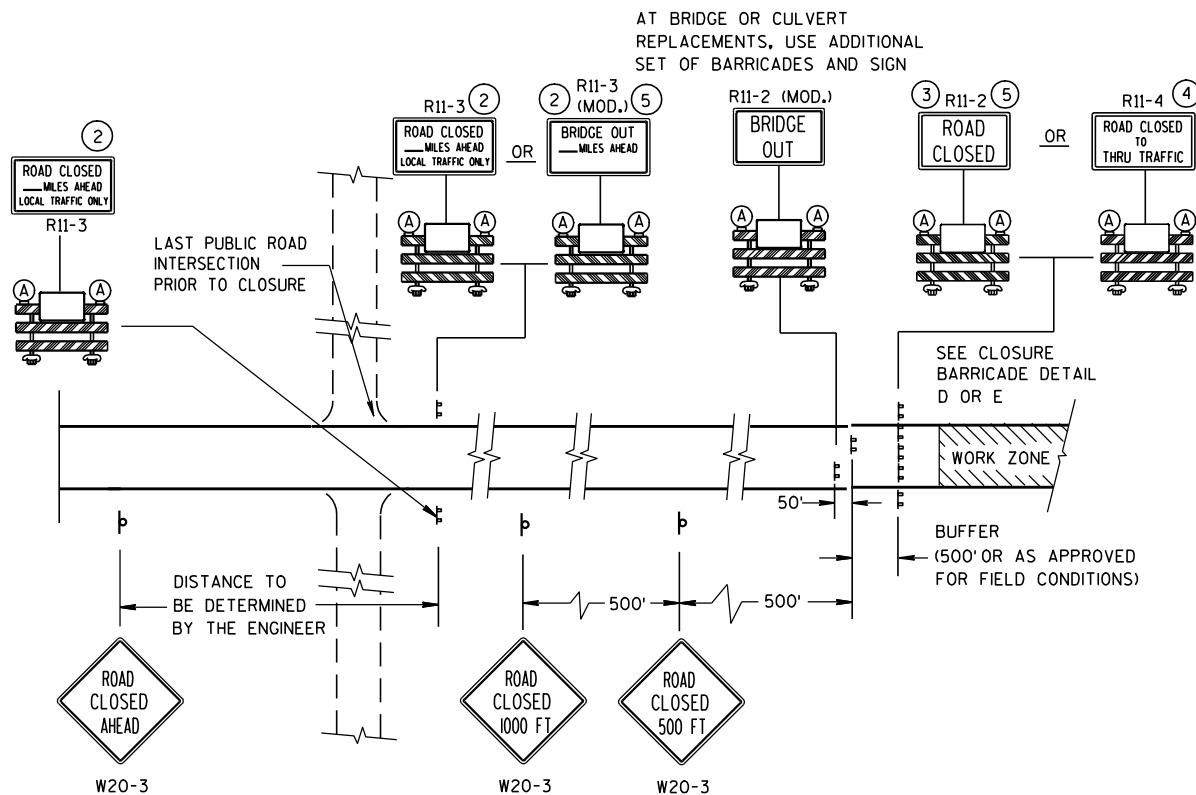
WORK ZONE GREATER THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



**DETAIL B**  
**MAINLINE CLOSURE WITH POSTED DETOUR**

WORK ZONE LESS THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

**DETAIL C**  
**MAINLINE CLOSURE, NO POSTED DETOUR**



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

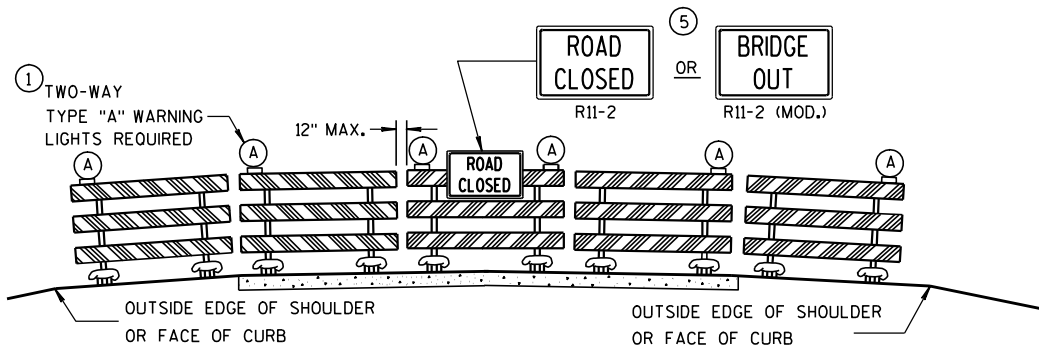
SEE SDD 15C2-4b  
FOR GENERAL NOTES  
AND FOOTNOTES ① THROUGH ⑦

**LEGEND**

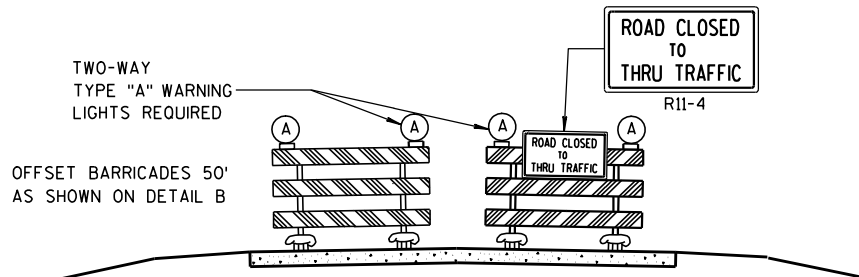
- POST MOUNTED SIGN
- TYPE III BARRICADES
- TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
- WORK ZONE
- DETOUR EAST M4-8 M3-X
- MI-4 OR MI-5A OR MI-6
- MO5-1 OR MO6-1
- FLAGS, 16" X 16" MIN., (ORANGE)

**BARRICADES AND SIGNS  
FOR  
MAINLINE CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



DETAIL D  
ROAD CLOSURE BARRICADE DETAIL  
APPROACH VIEW



DETAIL E  
LANE CLOSURE BARRICADE DETAIL  
APPROACH VIEW

SEE SDD 15C2-4a FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

THE REFLECTIVE SHEETING USED ON R11-2, R11-3, R11-4, R10-61 AND R1-1 SIGNS SHALL COMPLY WITH SUBSECTION 637.2.2.2 OF THE STANDARD SPECIFICATIONS.

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

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

- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X AND M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

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

BARRICADES AND SIGNS  
FOR  
MAINLINE CLOSURES

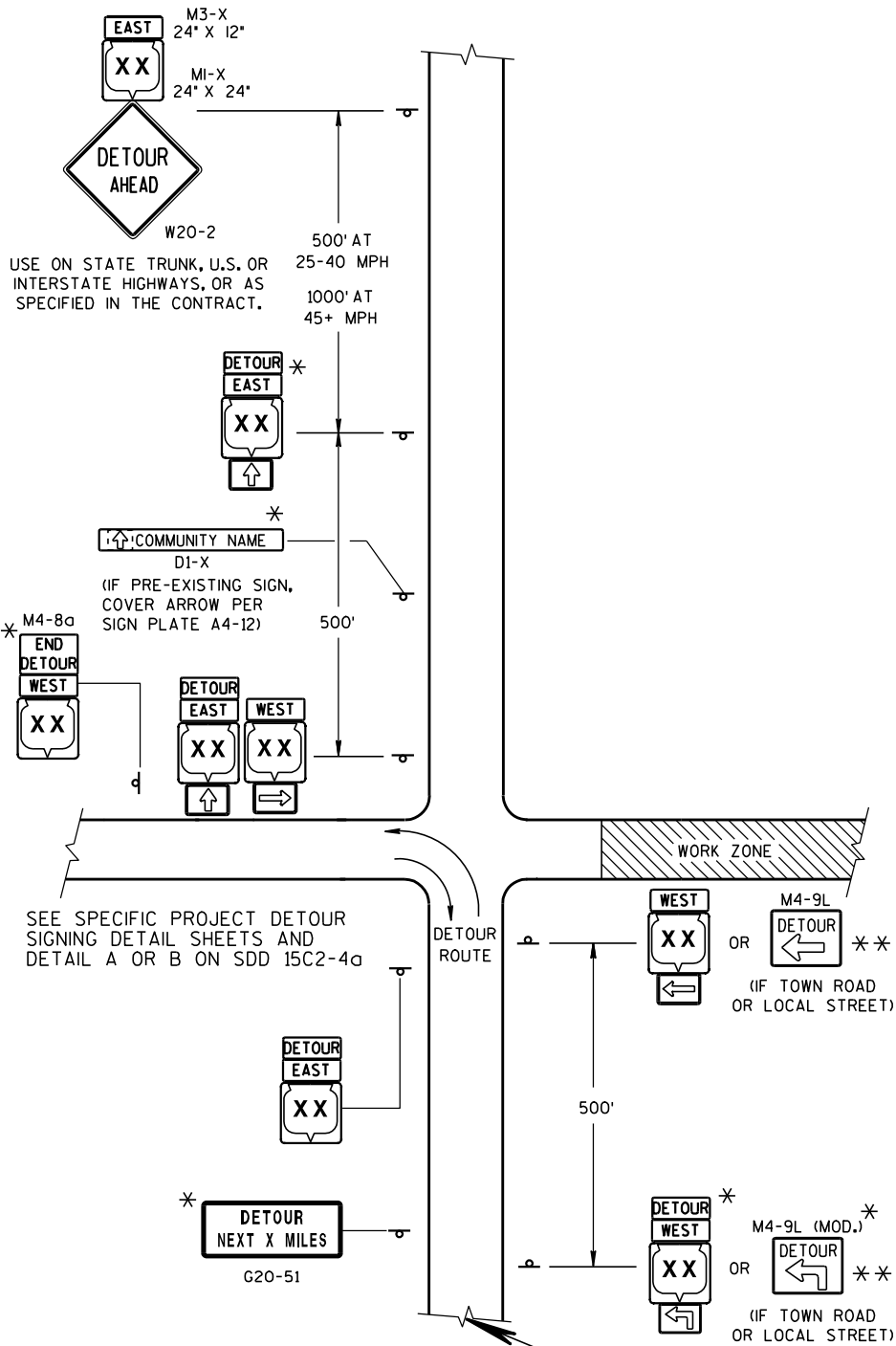
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

9/16/03  
DATE

/S/ Thomas N. Notbohm  
CHIEF SIGNS AND MARKING ENGINEER

FHWA



SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD 15C2-4a

**LEGEND**

POST MOUNTED SIGN

WORK ZONE

DETOUR EAST M4-8 M3-X

M1-4 OR COUNTY M1-5A OR M1-6

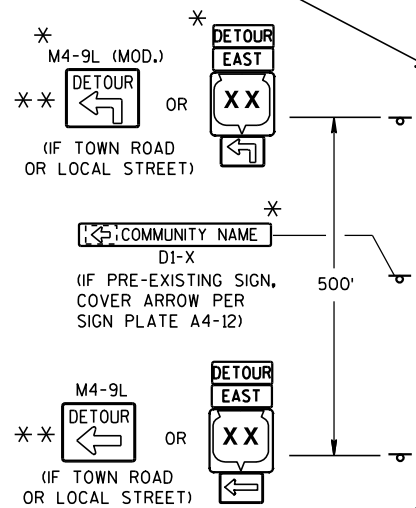
M05-1 OR M06-1 OR M06-1

**THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.**

**MATCH POINT**

**DETAIL F  
DETOUR SIGNING**

USE ON STATE TRUNK, U.S. OR INTERSTATE HIGHWAYS, OR AS SPECIFIED IN THE CONTRACT.



**GENERAL NOTES**

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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.

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

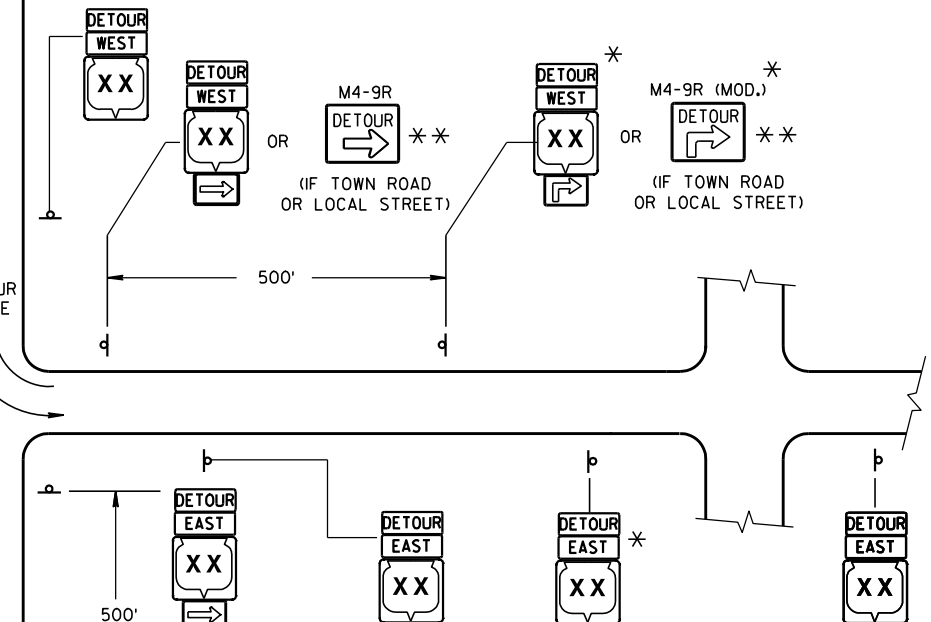
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X AND M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

\* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

\*\* FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



PLACE SIGNS BEYOND INTERSECTIONS WITH STATE OR COUNTY TRUNK HIGHWAYS OR AT 4 MILE MAXIMUM SPACING (4 BLOCKS IF URBAN AREA.)

**DETOUR SIGNING FOR  
MAINLINE CLOSURES**

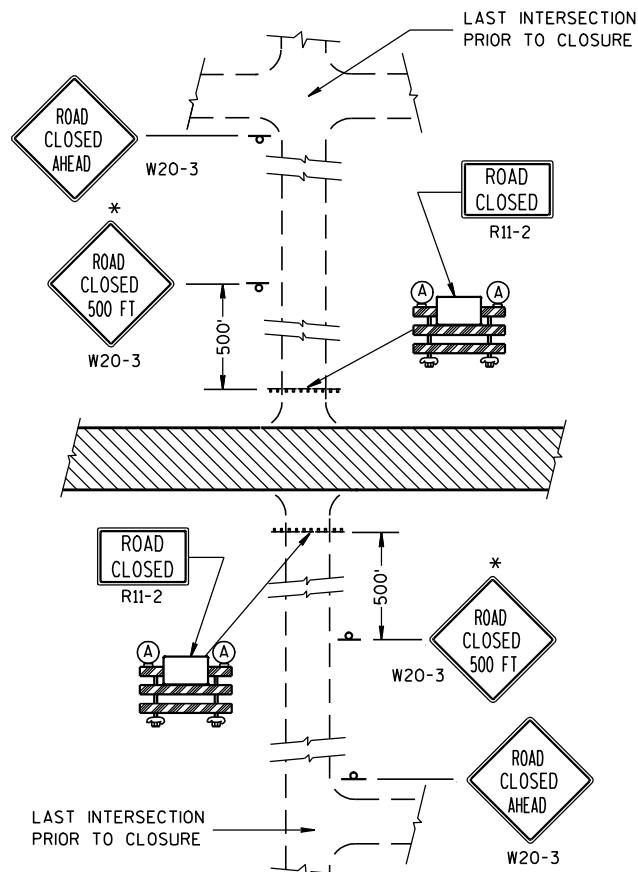
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

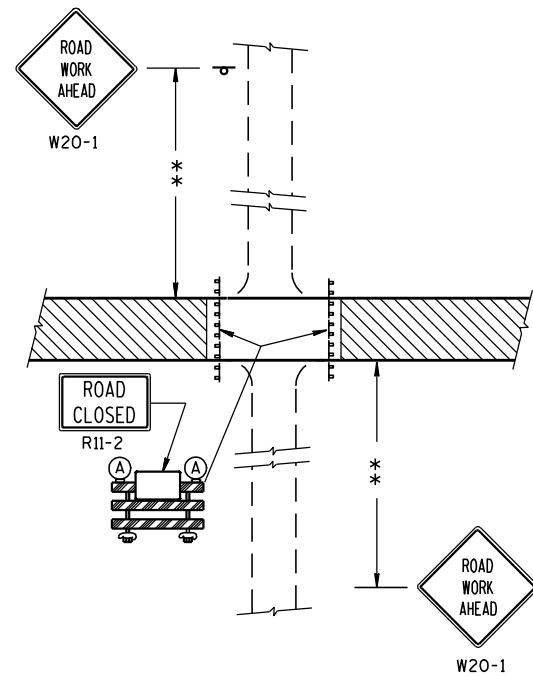
9-16-03  
DATE

FHWA

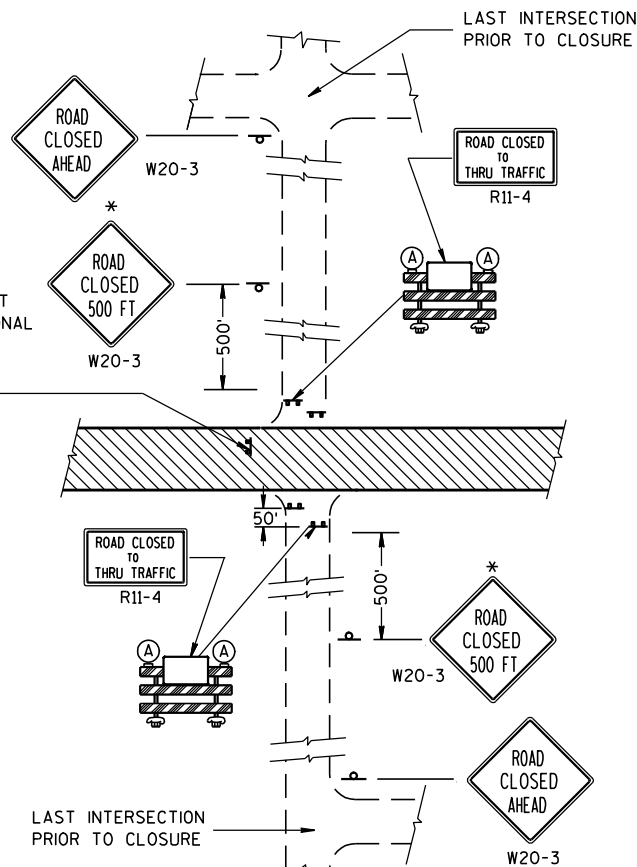
/S/ Thomas N. Notbohm  
CHIEF SIGNS AND MARKING ENGINEER



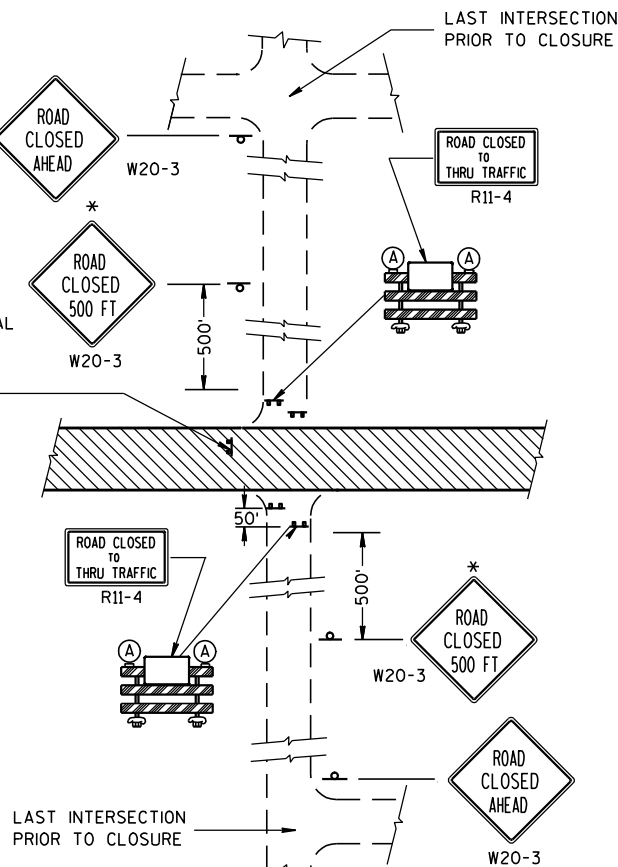
**DETAIL 1**  
(NO ACCESS TO PROJECT)



**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.

THE REFLECTIVE SHEETING USED ON R11-2, R11-3 AND R11-4 SIGNS SHALL COMPLY WITH SUBSECTION 637.2.2.2 OF THE STANDARD SPECIFICATIONS.

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**

⌋ POST MOUNTED WARNING SIGN

⌋ TYPE III BARRICADES

Ⓐ TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)

▨ WORK AREA

**BARRICADES AND SIGNS  
FOR  
SIDEROAD CLOSURES**

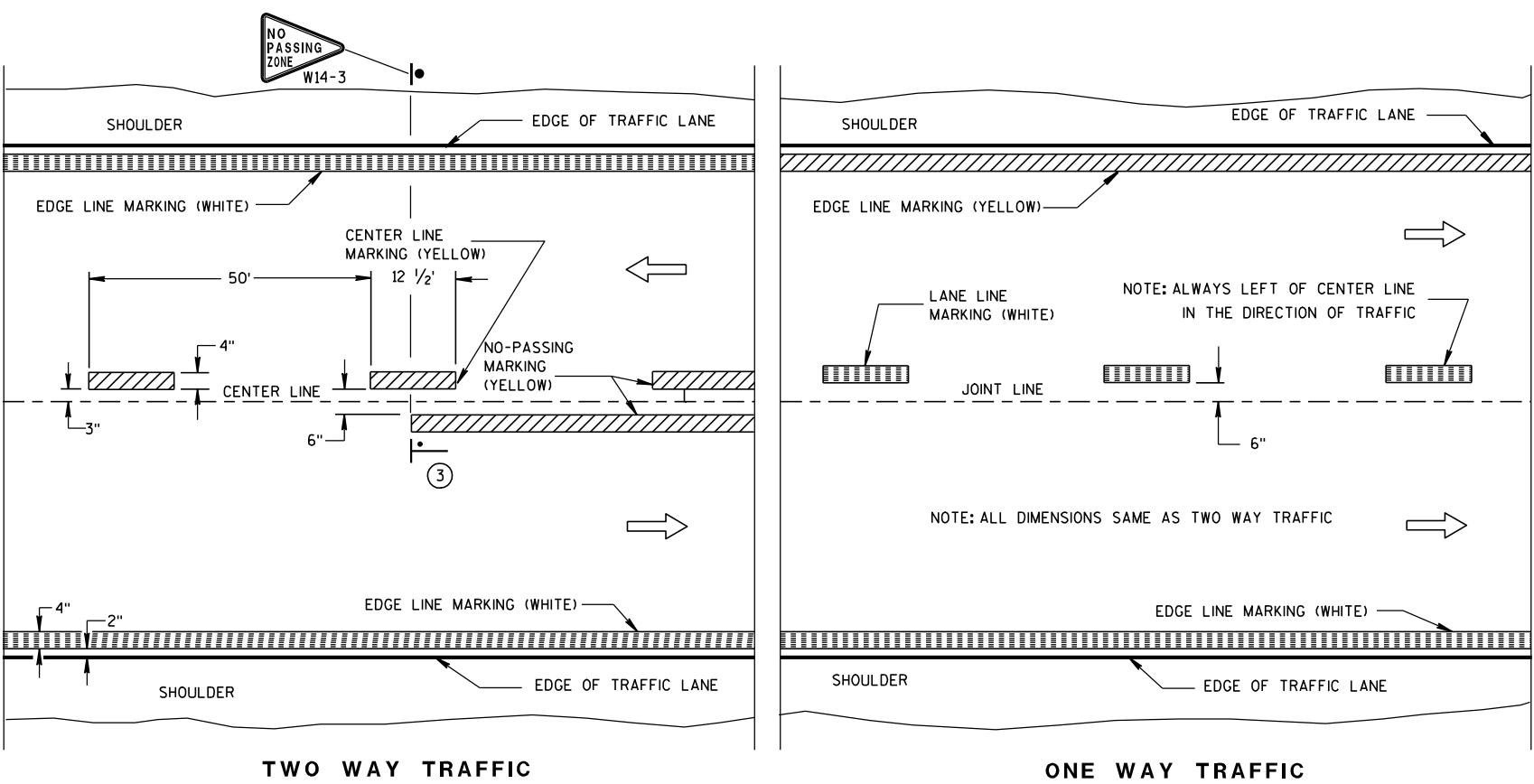
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

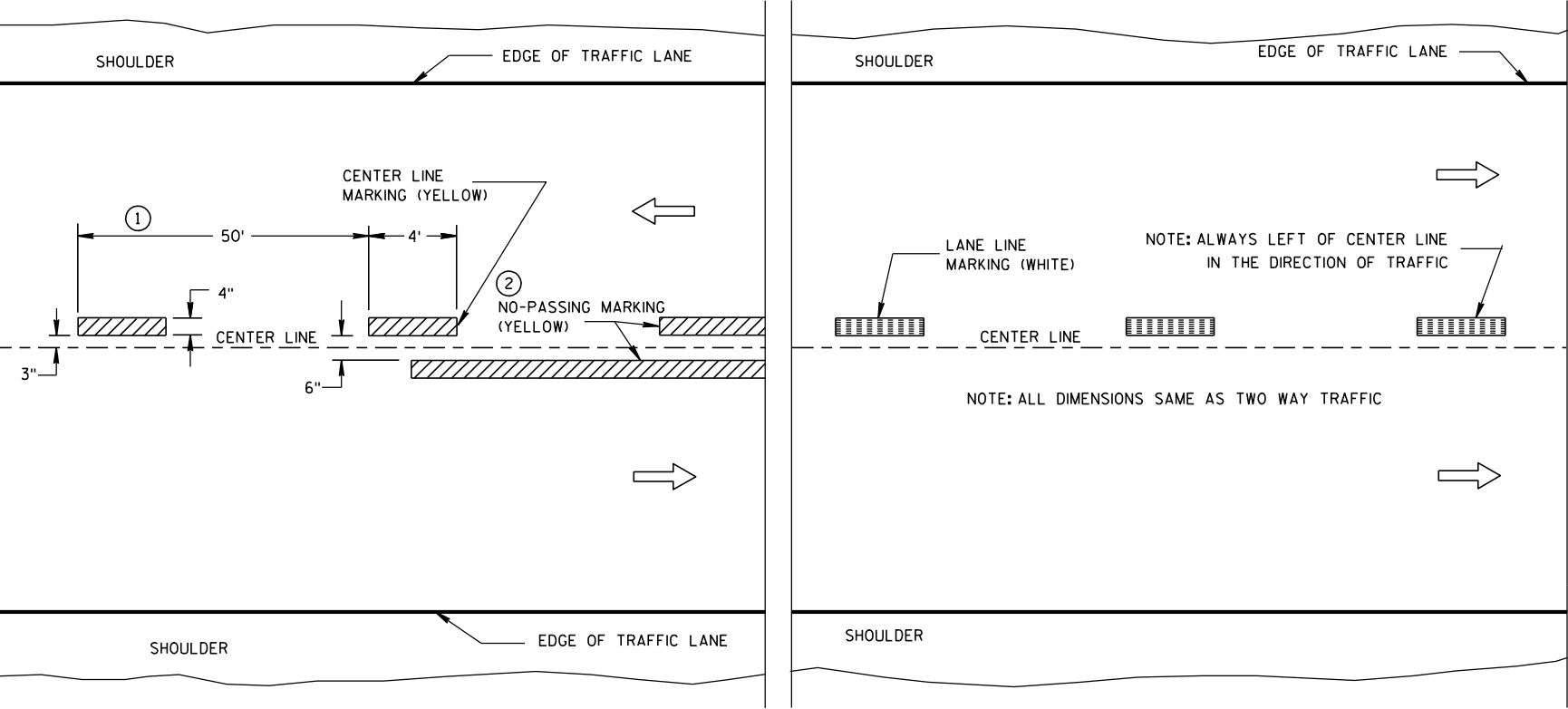
9-16-03  
DATE

/S/ Thomas N. Notbohm  
CHIEF SIGNS AND MARKING ENGINEER

FHWA



PERMANENT PAVEMENT MARKING



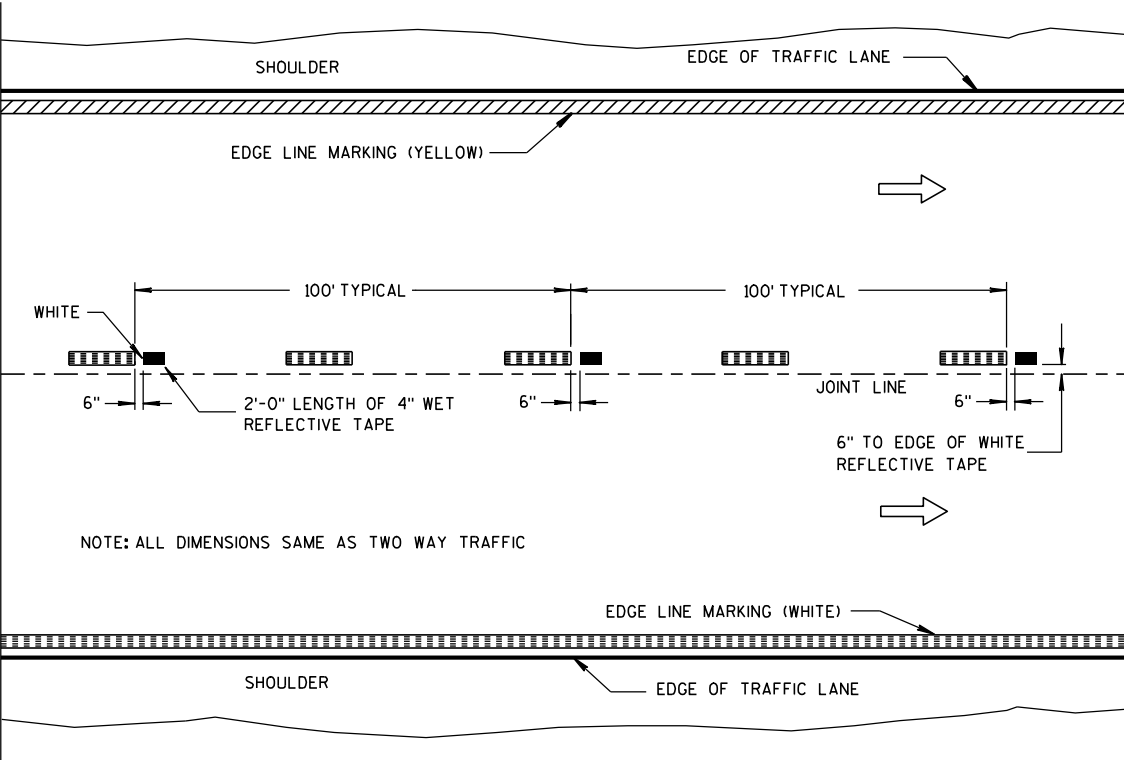
TEMPORARY (INTERMEDIATE) PAVEMENT MARKING  
(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

GENERAL NOTES

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

NOTE

ARROW SYMBOL ( → ) SHOWS DIRECTION OF TRAVEL

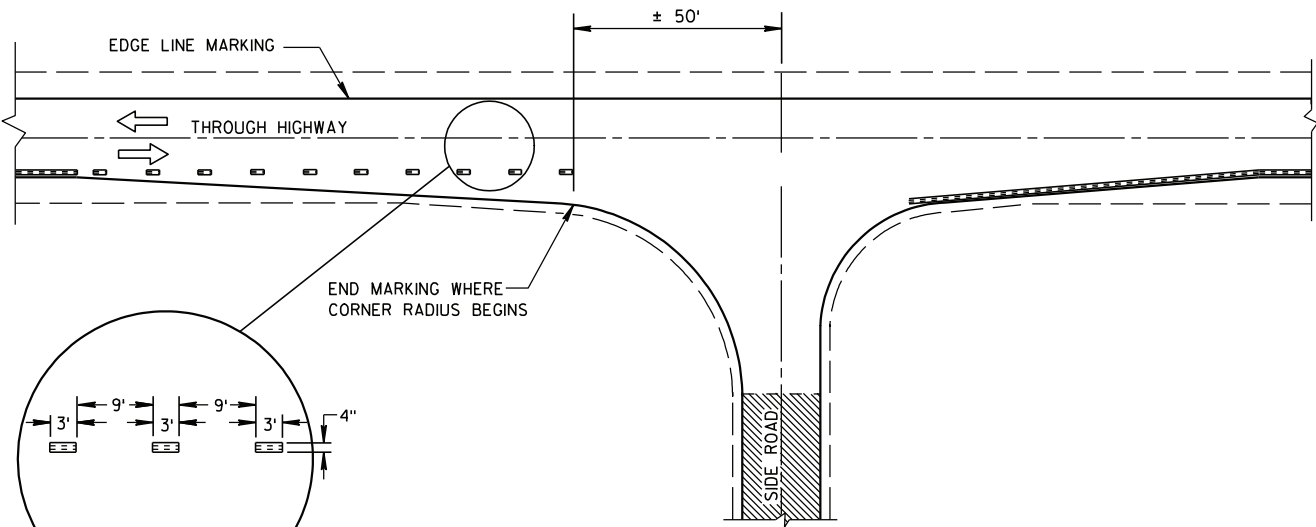


WET REFLECTIVE TAPE SUPPLEMENT TO  
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

- "T" MARKING
- POST MOUNTED SIGN

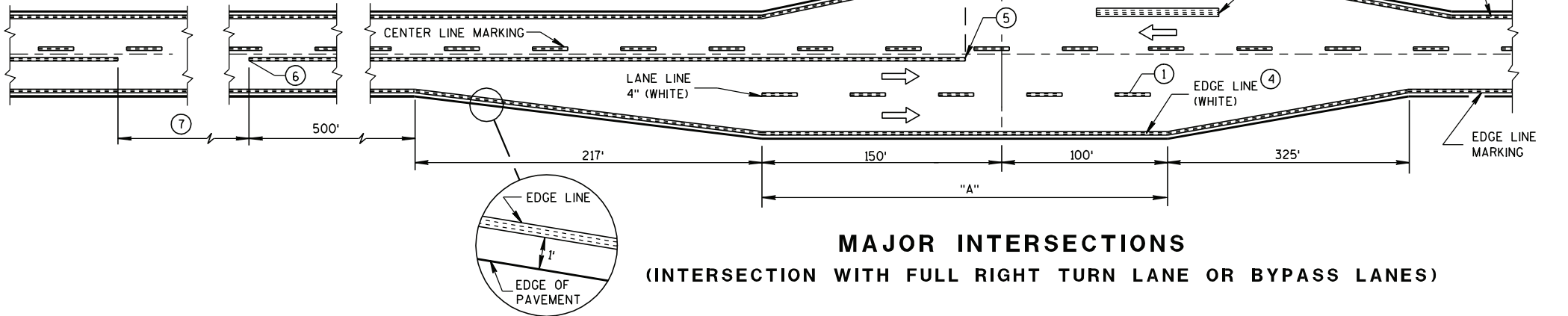
PAVEMENT MARKING (MAINLINE)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 6-23-11 DATE	/S/ Thomas N. Notbohm STATE TRAFFIC ENGINEER OF DESIGN
FHWA	



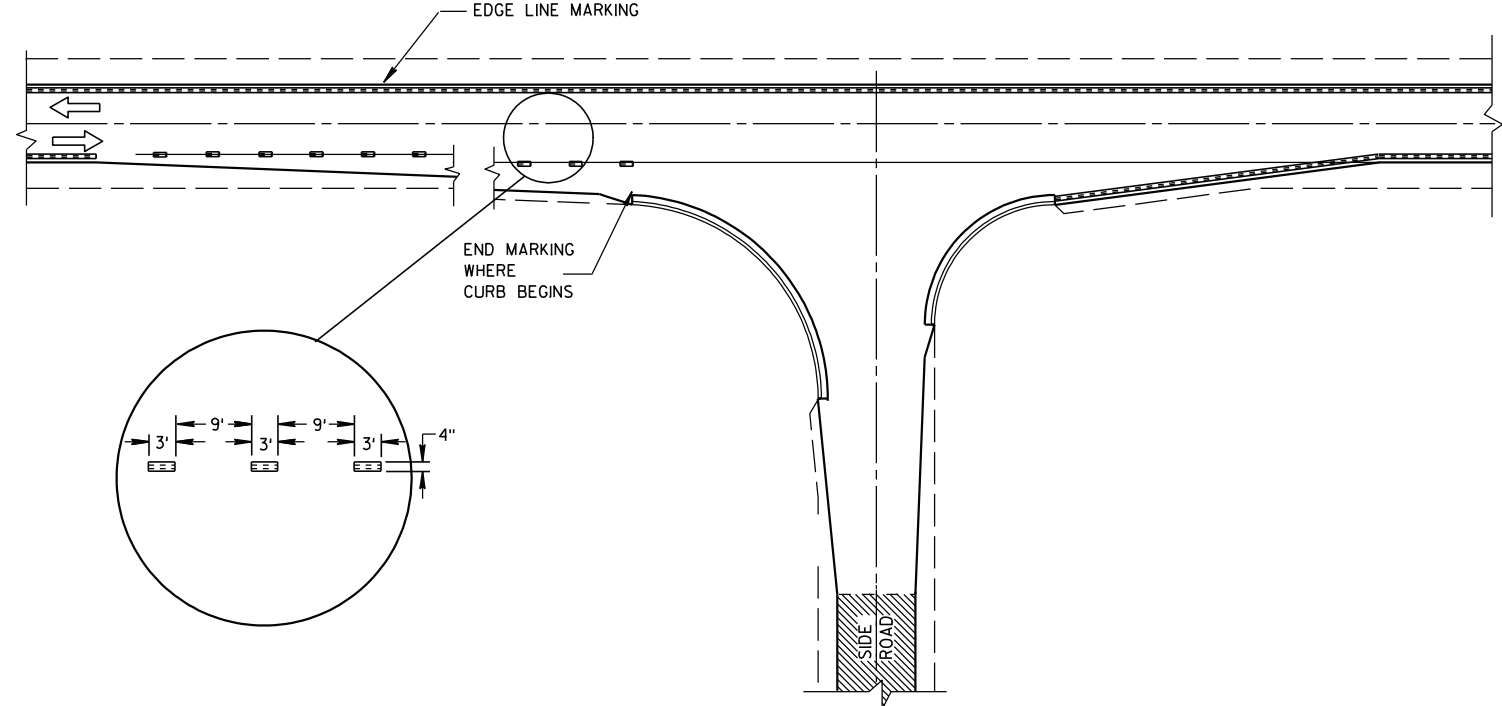
MINOR INTERSECTION WITHOUT CURBS

⑦

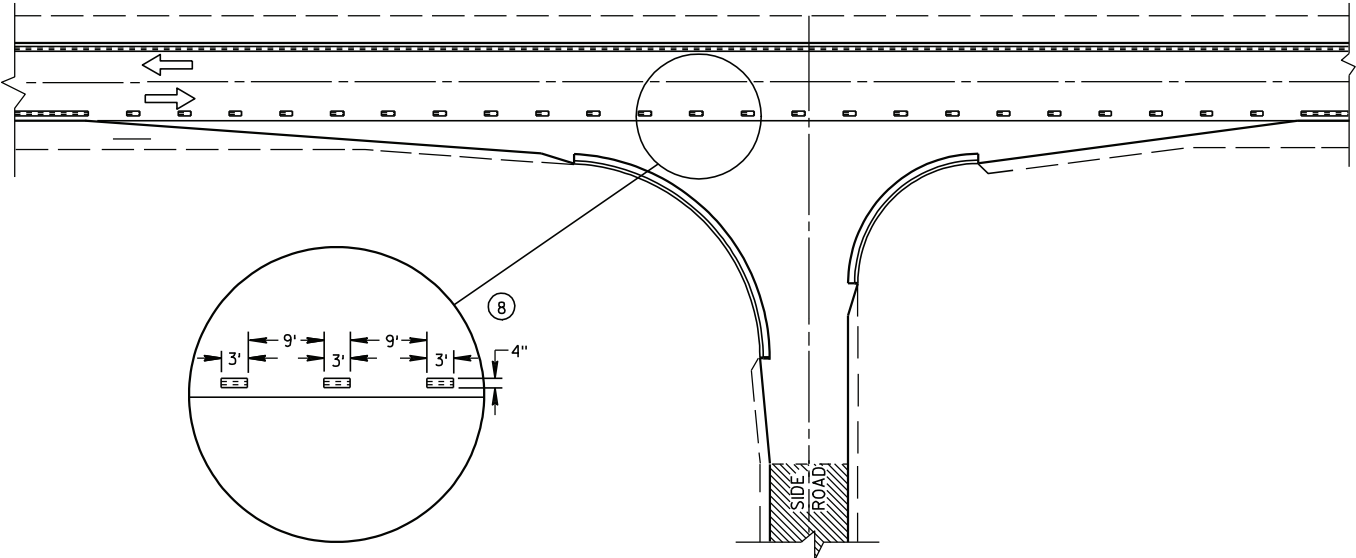
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



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



MINOR INTERSECTION WITH CURBS  
(TYPICAL MARKING)



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

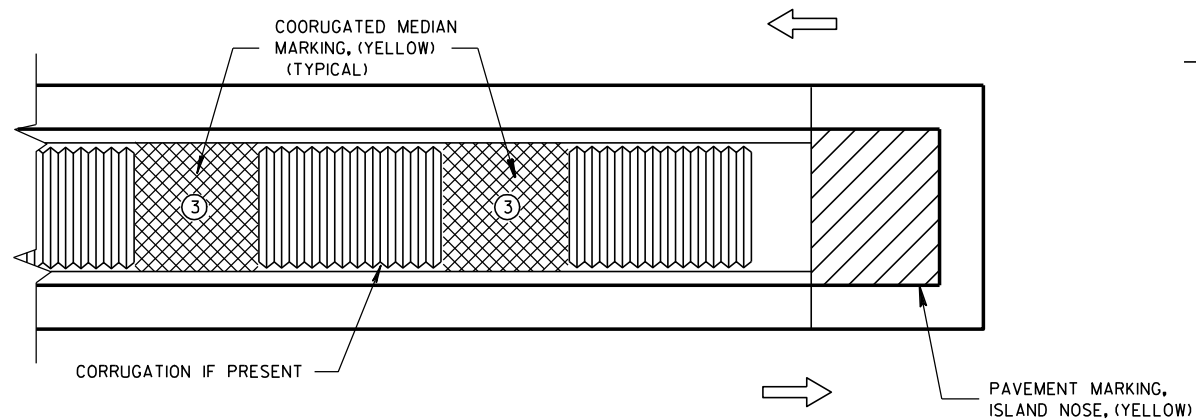
GENERAL NOTES

EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.

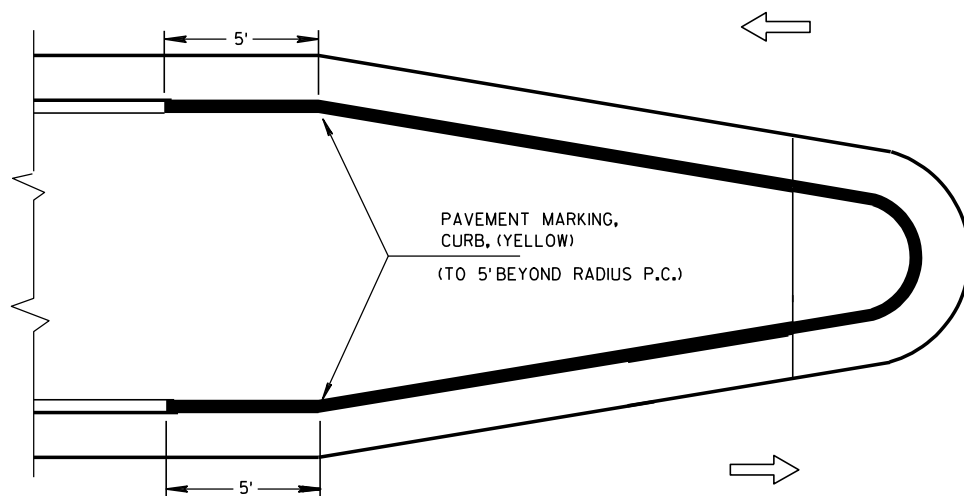
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.
- ④ THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.

- ⑤ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.
- ⑥ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
- ⑦ IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.
- ⑧ 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

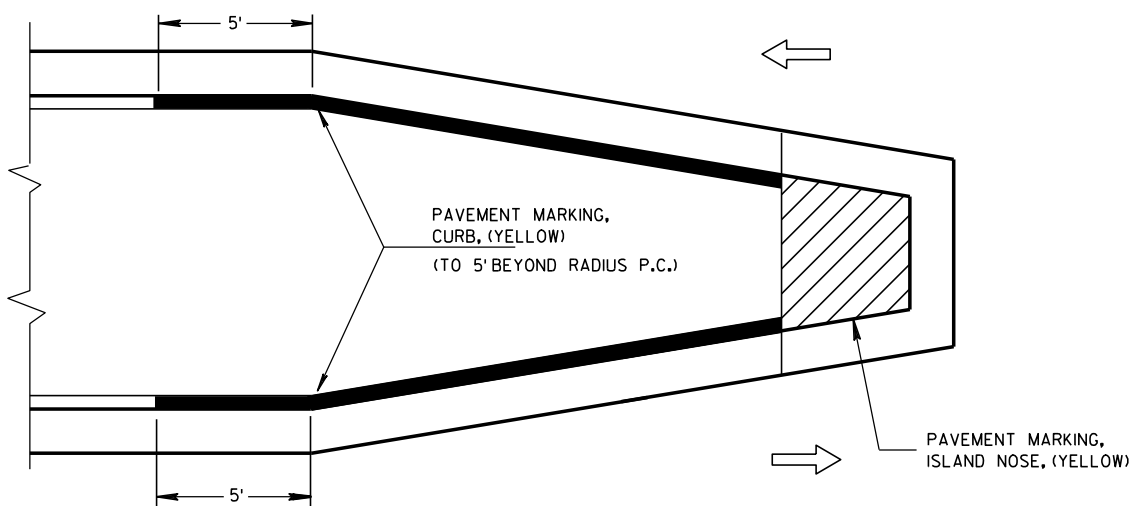
ARROW SYMBOL ( → ) SHOWS DIRECTION OF TRAVEL



**MEDIAN ISLAND WITH SQUARE BLUNT NOSE**

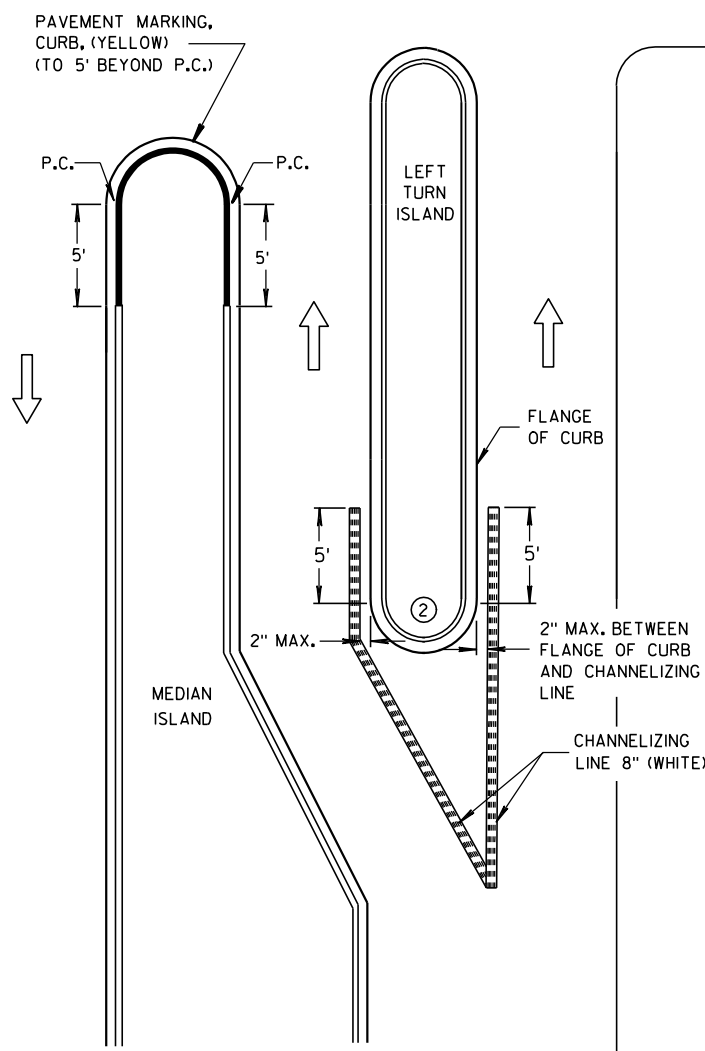


**MEDIAN ISLAND WITH ROUND BLUNT NOSE**



**MEDIAN ISLAND WITH SLOPED NOSE**

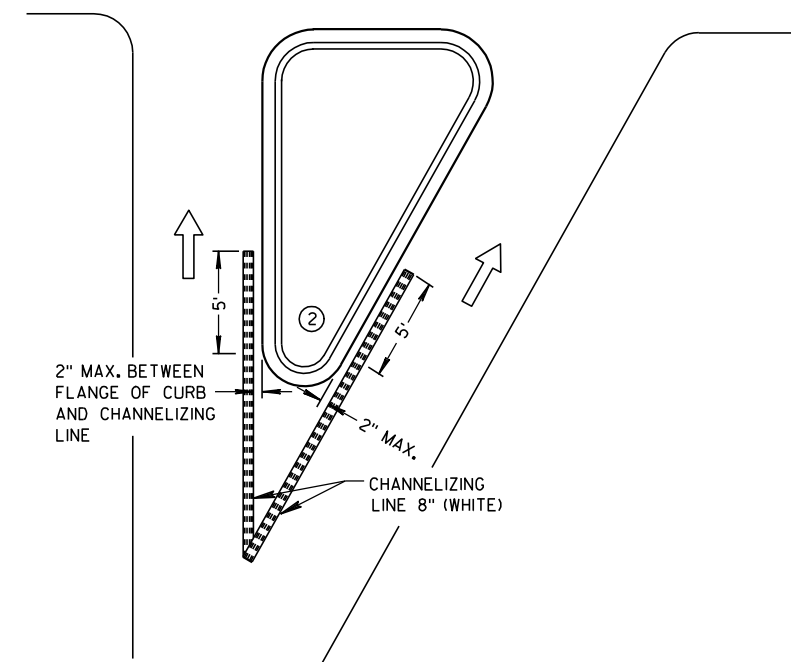
**TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS**



**LEFT TURN & MEDIAN ISLAND**

## GENERAL NOTES

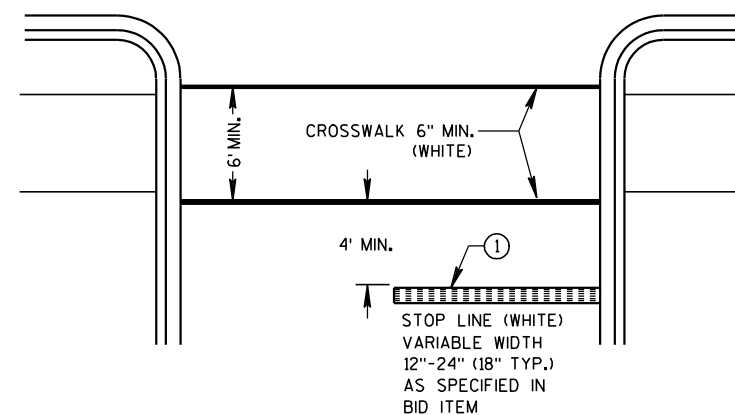
- ① STOP LINE IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
- ② DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.
- ③ WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



**RIGHT TURN ISLAND**

## LEGEND

- ISLAND NOSE MARKING
- CURB MAKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL



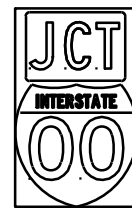
**STOP LINE AND CROSSWALK**

**PAVEMENT MARKING  
(ISLANDS, STOP LINE &  
CROSS WALK)**

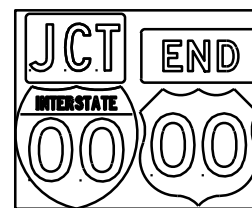
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



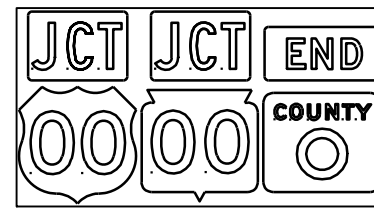
## TYPICAL ASSEMBLIES



J1-1



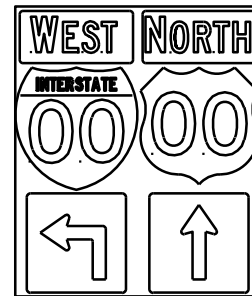
J1-2



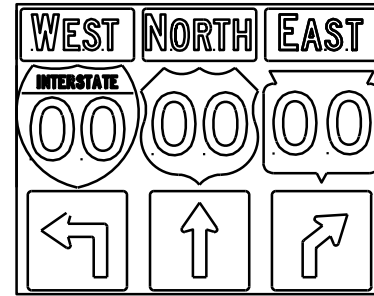
J1-3



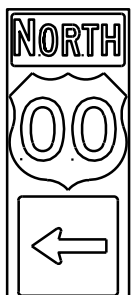
J2-1



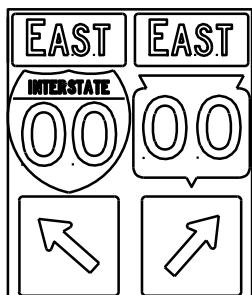
J2-2



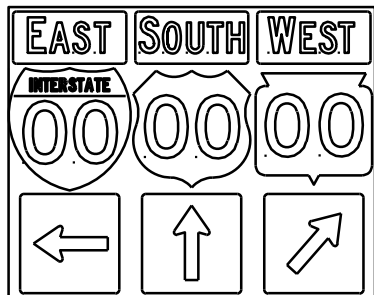
J2-3



J3-1



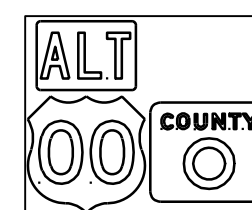
J3-2



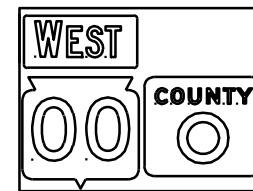
J3-3



J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1



J23-1



J22-1

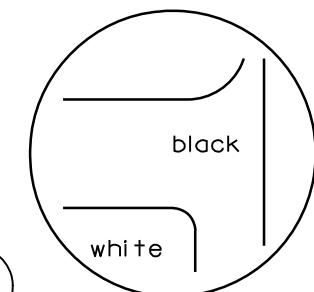
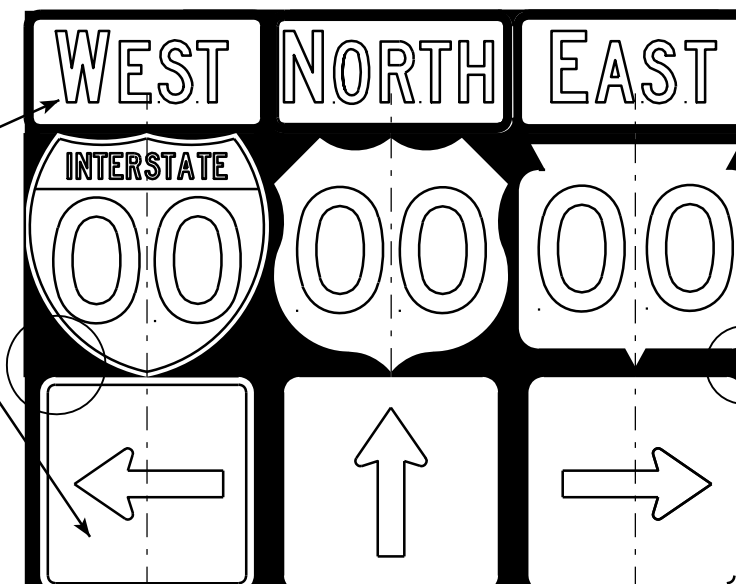
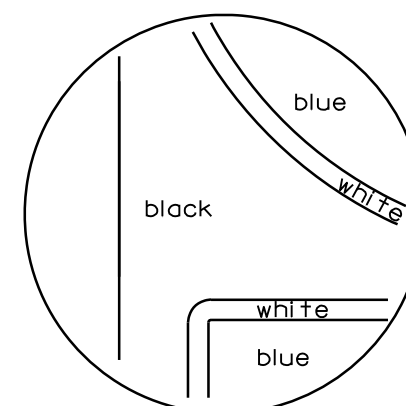


JV

## NOTES

- Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:  
Background - Black Non-reflective  
Message - see Note 5
- Message Series - See Note 5
- Corners shall be square since base material is plywood.
- The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
- 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.
- 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.
- 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.
- 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.

[blue background with interstate]



[black background]

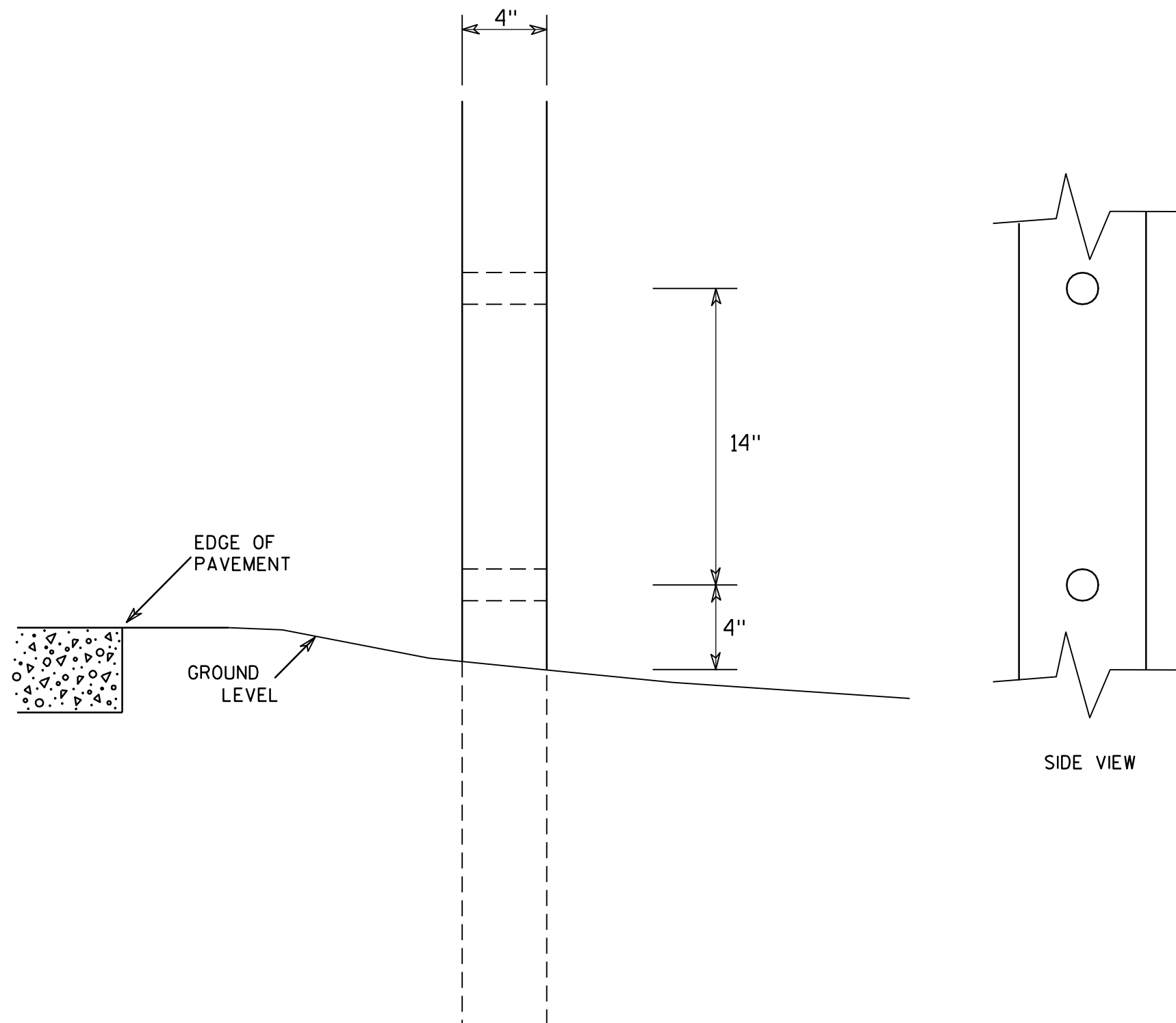
ROUTE MARKERS & COMPONENTS IN TYPICAL ASSEMBLIES	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 10/21/09	PLATE NO. A2-1S.6

PROJECT NO:

SHEET NO:

E

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:

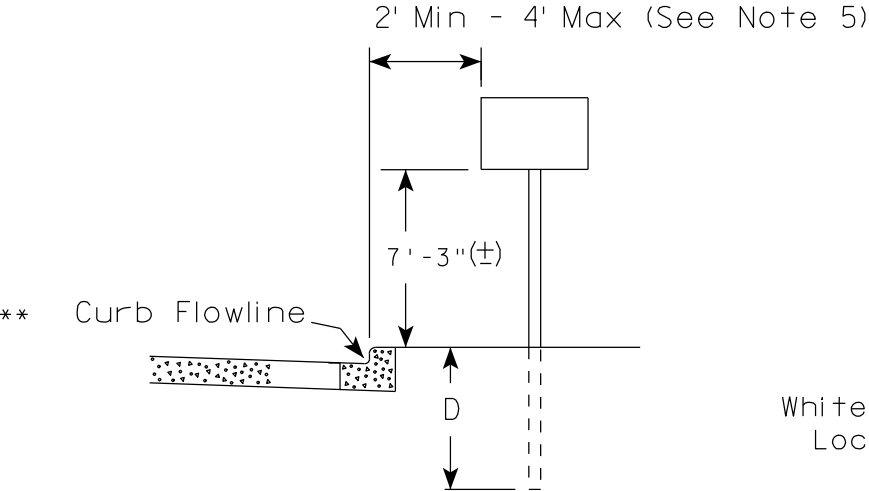
HWY:

COUNTY:

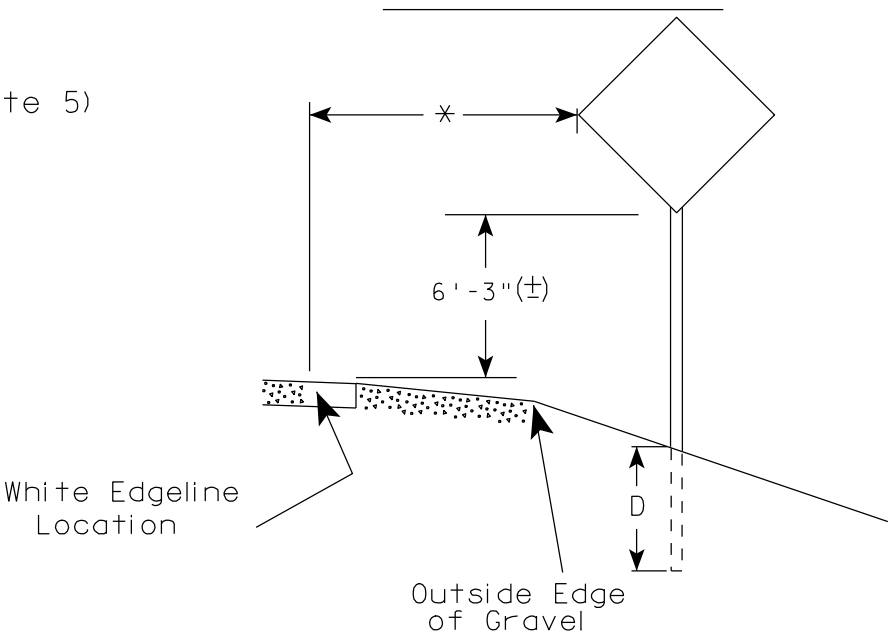
SHEET NO:

E

URBAN AREA



RURAL AREA (See Note 2)



GENERAL NOTES

1. Signs wider than 4 feet or larger than 20 sq. ft. 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. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
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 stop signs (R1-1F) 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), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (±).

POST EMBEDMENT DEPTH

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

\* 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.

TYPICAL INSTALLATION  
OF PERMANENT TYPE II  
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 9/21/2011 PLATE NO. A4-3.16

# GENERAL NOTES

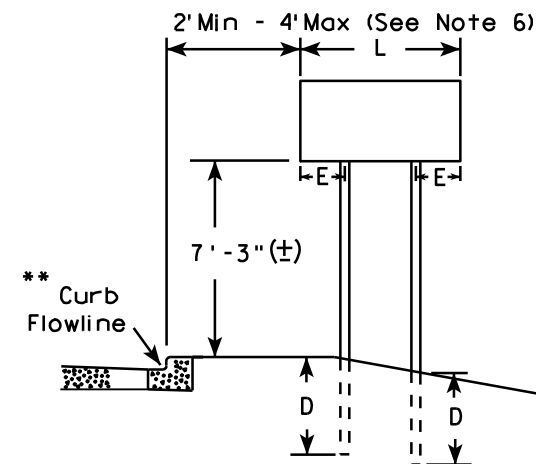
- For multiple post installations, individual post spacing shall be greater than 3'-6".
- See tables below for required number of posts.
- For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
- The (±) tolerance for mounting height is 3 inches.
- Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
- Offset distance shall be consistent with existing signs or consistent throughout length of project.
- Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
- 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) & End of Road Markers (W5-56 & W5-56A) 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.

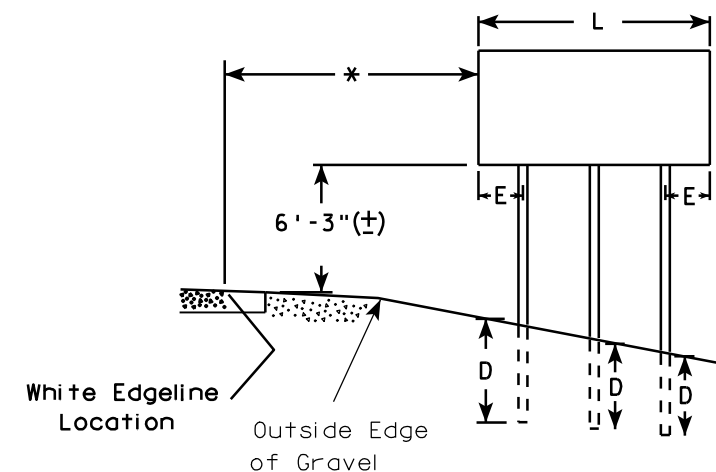
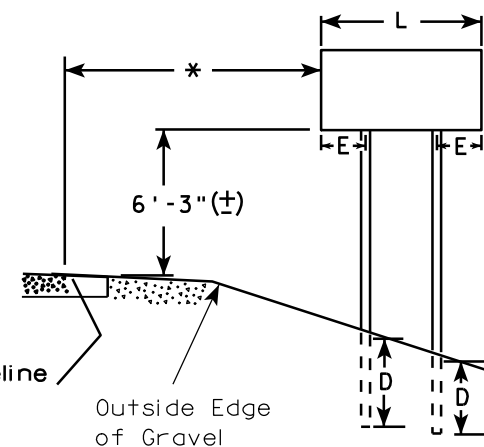
\*\* The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of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

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

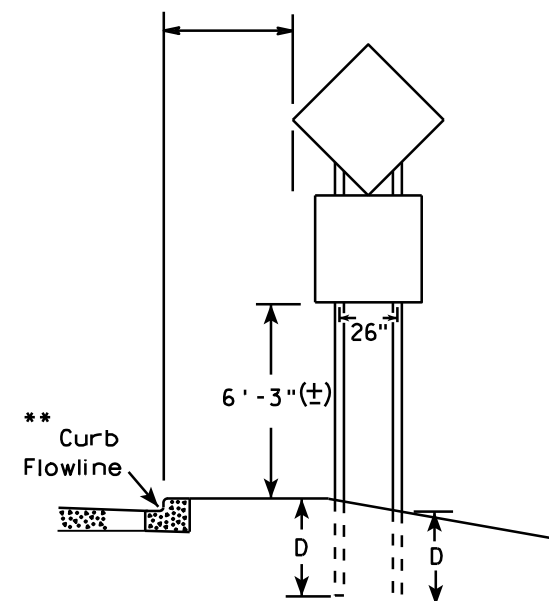
## URBAN AREA



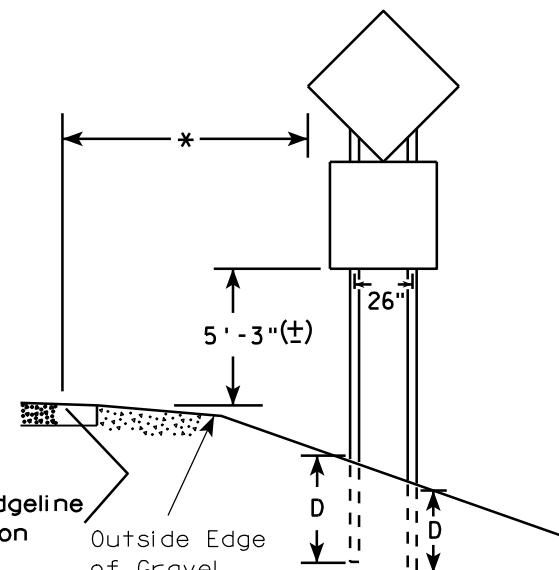
## RURAL AREA (See Note 3)



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



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

\*\*\*

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	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 9/21/2011 PLATE NO. A4-4.11

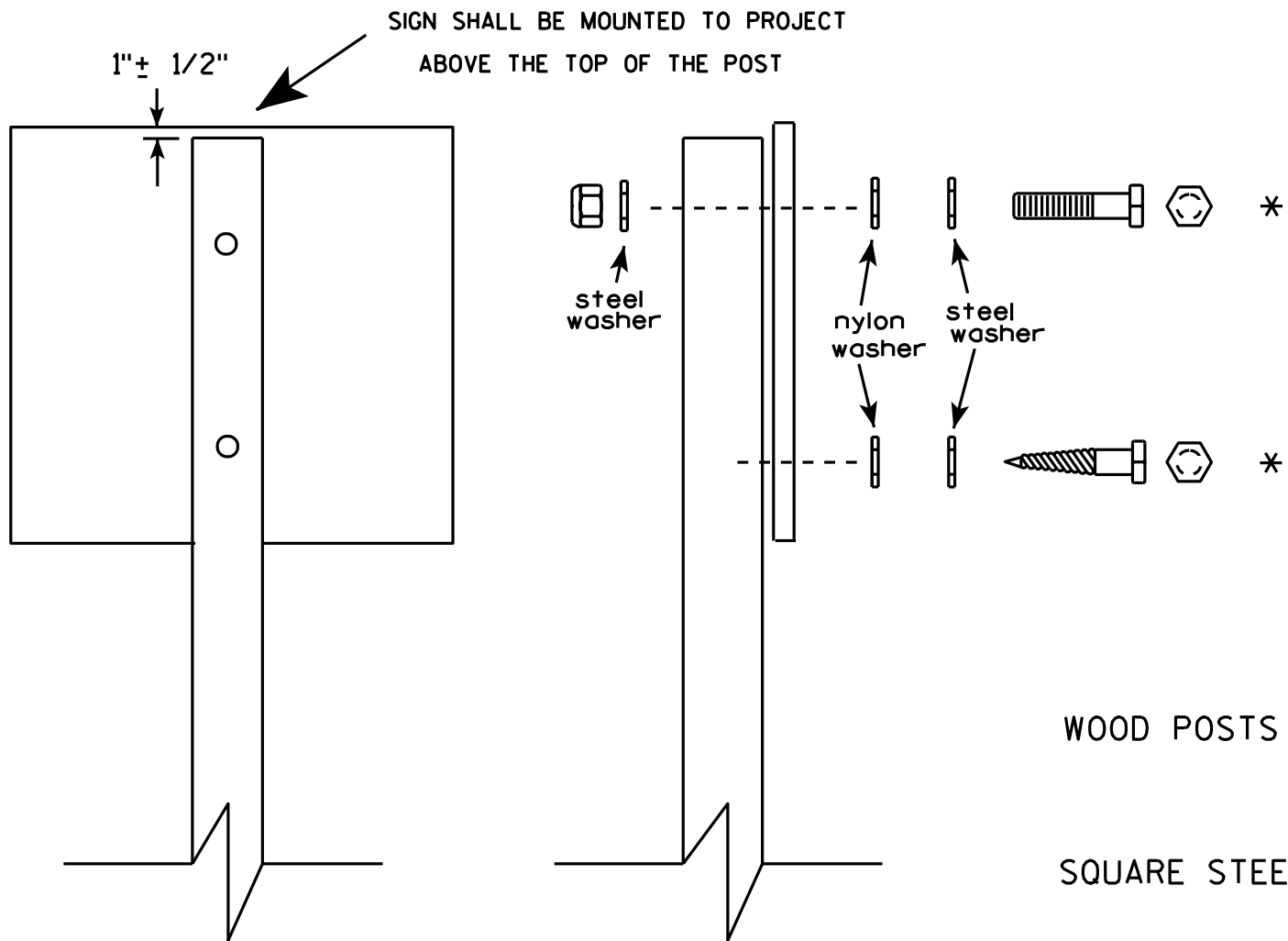
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

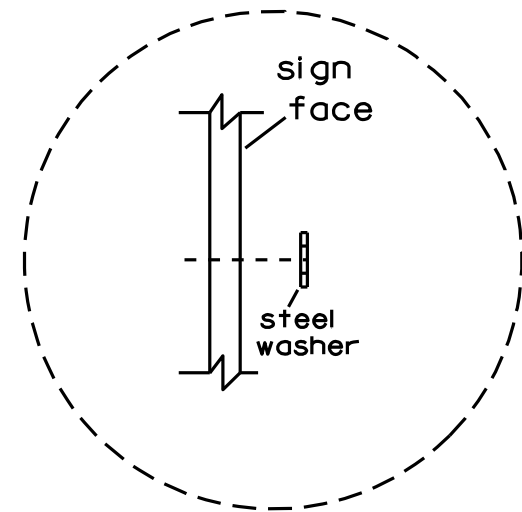


Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- 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.

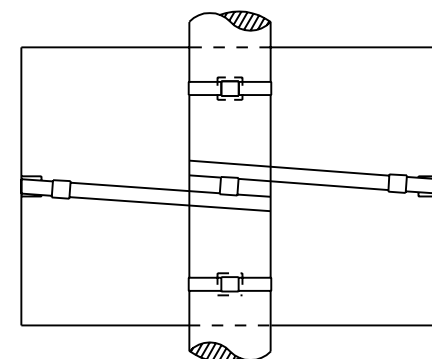
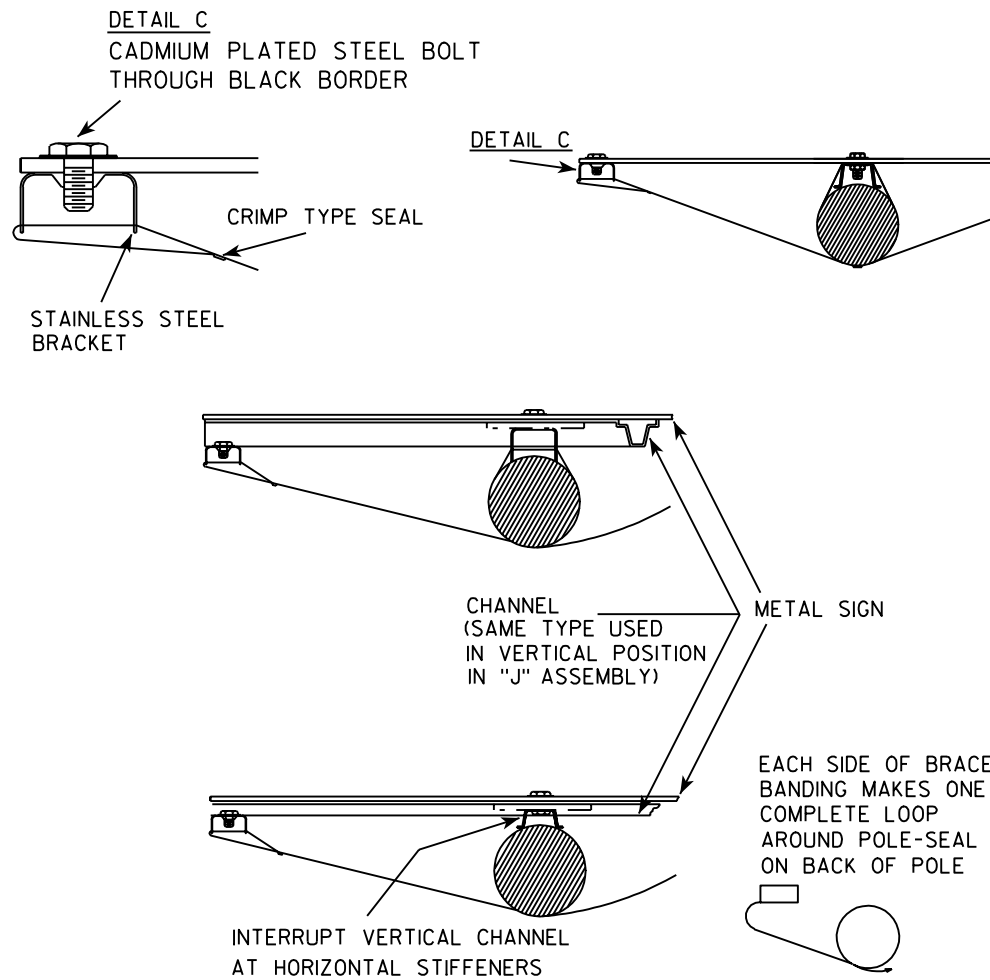


Washer Placement when Sign Has Other Than Type H or Type F Face

\* 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.

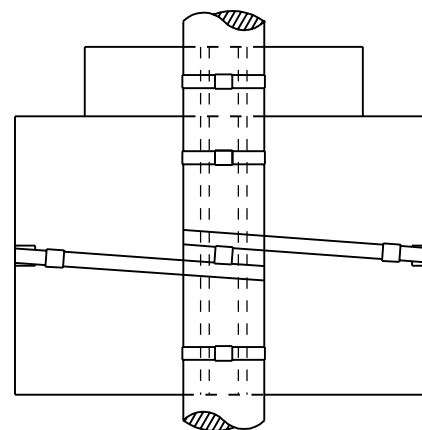
ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 3/23/10	PLATE NO. A4-8.7

# BRACE BANDING



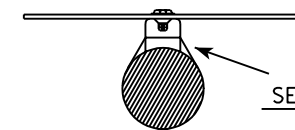
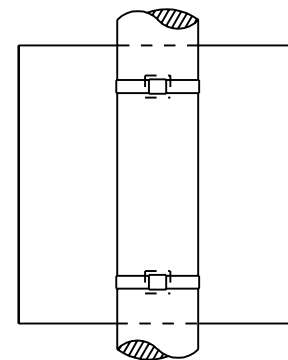
# BRACE BANDING

BRACE BANDING SHALL BE TIGHTENED FIRMLY  
BUT NOT SO TIGHT AS TO APPRECIABLY  
CURVE FACE OF SIGN.

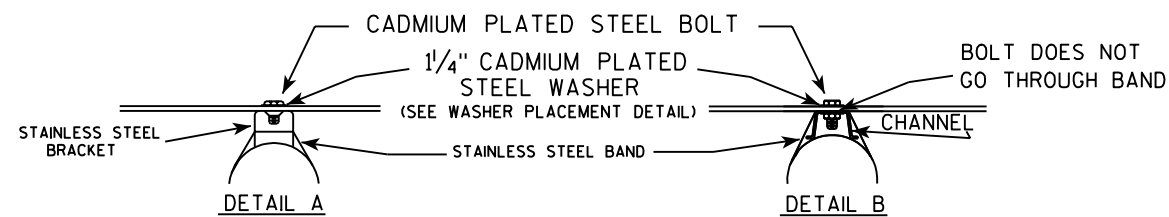


# BRACKET BANDING

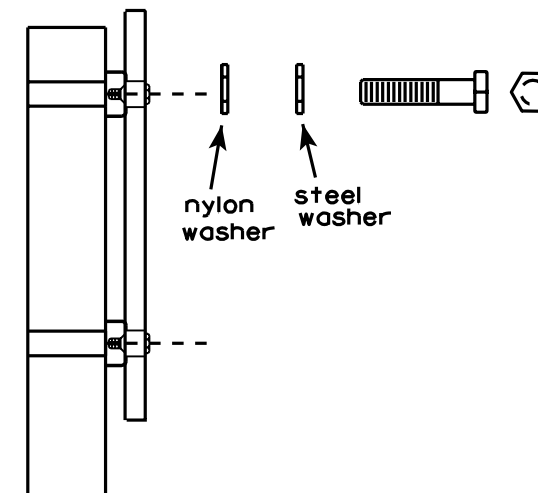
## SINGLE SIGN



SEE DETAIL A



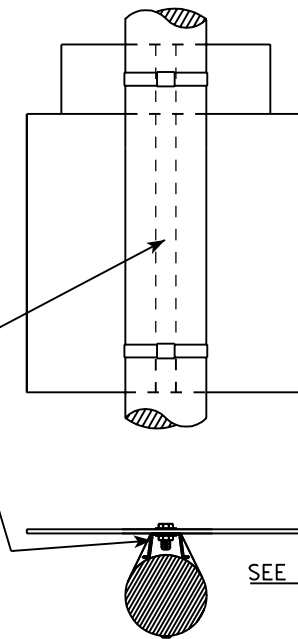
# WASHER PLACEMENT



# 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

# "J" ASSEMBLY



SEE DETAIL B

# GENERAL NOTES

1. Signs 4' or greater in width shall have one brace band installed at the center of the sign.
2. Signs 3' or greater in height shall have three bracket bands installed. Signs less than 3' in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.

# STANDARD SIGN SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 11/08/05 PLATE NO. A5-9.2

PROJECT NO:

HWY:

COUNTY:

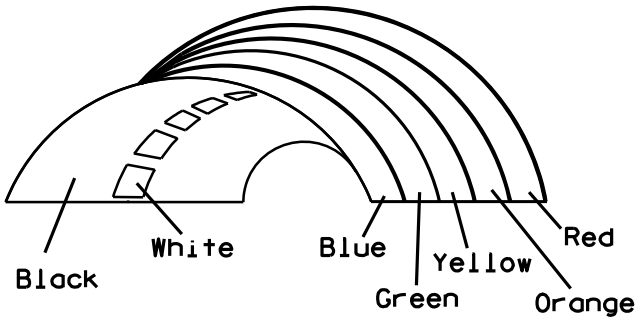
SHEET NO:

E



\* VARIES

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 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:  
Background - White  
Message - (See Note 5)
- 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. Border - Blue  
Line 1 - Red  
Line 2 - Black  
Line 3-5 - Blue
- 6. Line 1 - Dutch 8011L  
Line 2 - Series E  
Line 3-5 - Series C
- 7. 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	36	1 1/2	1/2	5/8	3	2	3 1/2	2 7/8	1	8	2 1/8	11 1/4	11 1/8	9 3/8	1 1/4		3/4	12 5/8	7 1/2							7.5
3																											
4																											
5																											

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

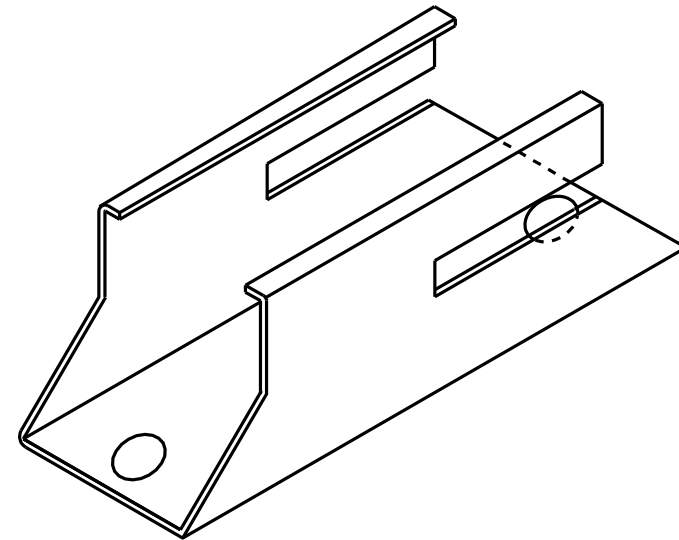
STANDARD SIGN  
I55-56

WISCONSIN DEPT OF TRANSPORTATION

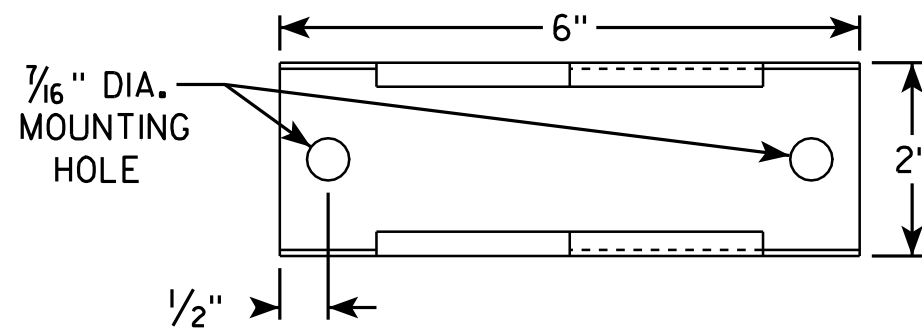
APPROVED  
*Matthew R. Rauch*  
For State Traffic Engineer

DATE 4/27/11 PLATE NO. I55-56.3

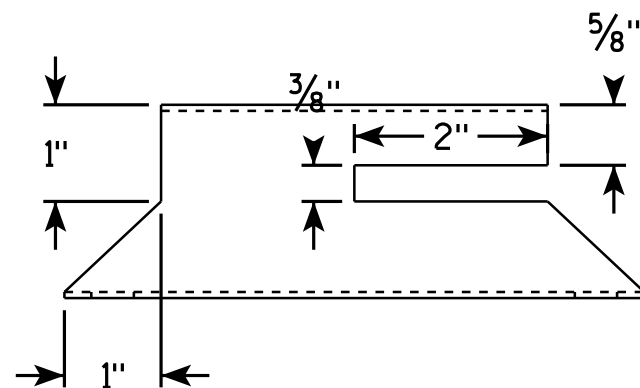
# ISOMETRIC VIEW



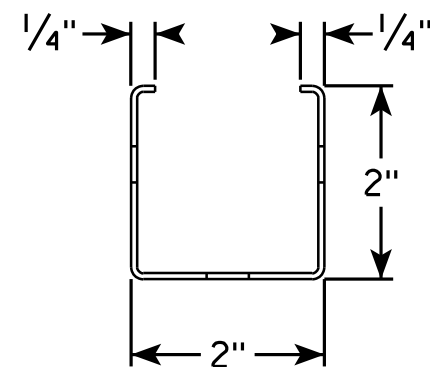
# TOP VIEW



# SIDE VIEW



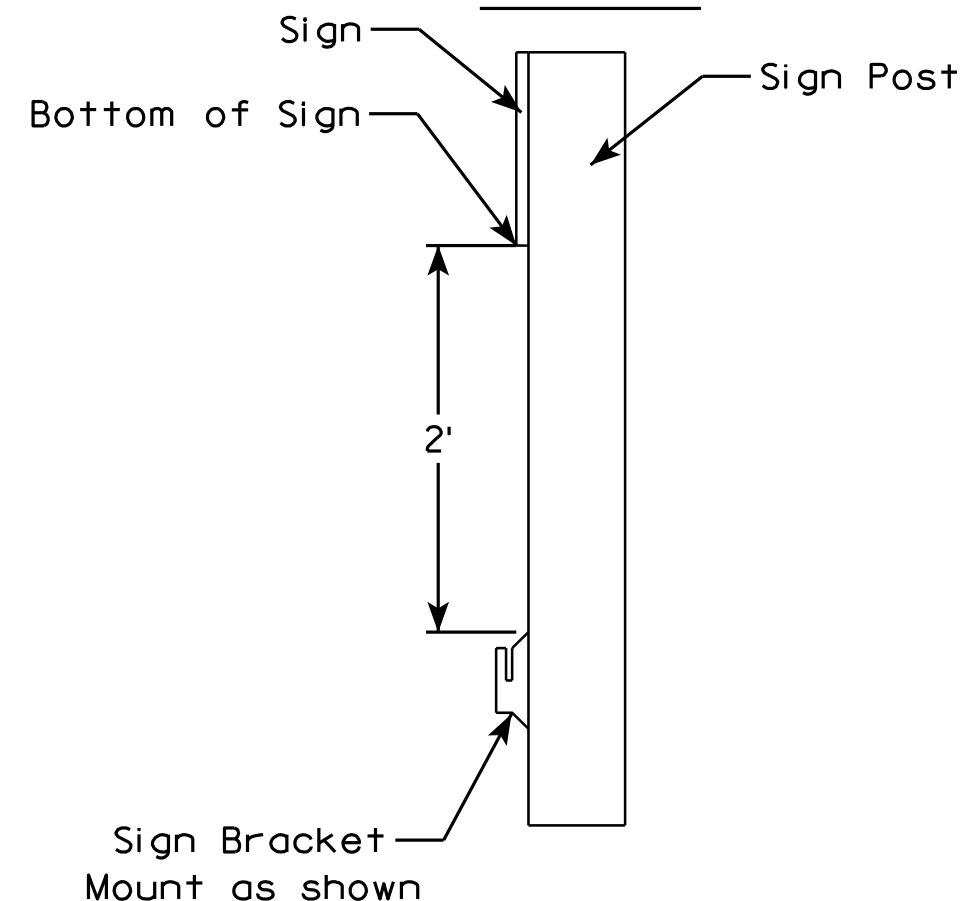
# END VIEW



# 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 2/5/10 PLATE NO. I55-56B.1

PROJECT NO:

HWY:

COUNTY:

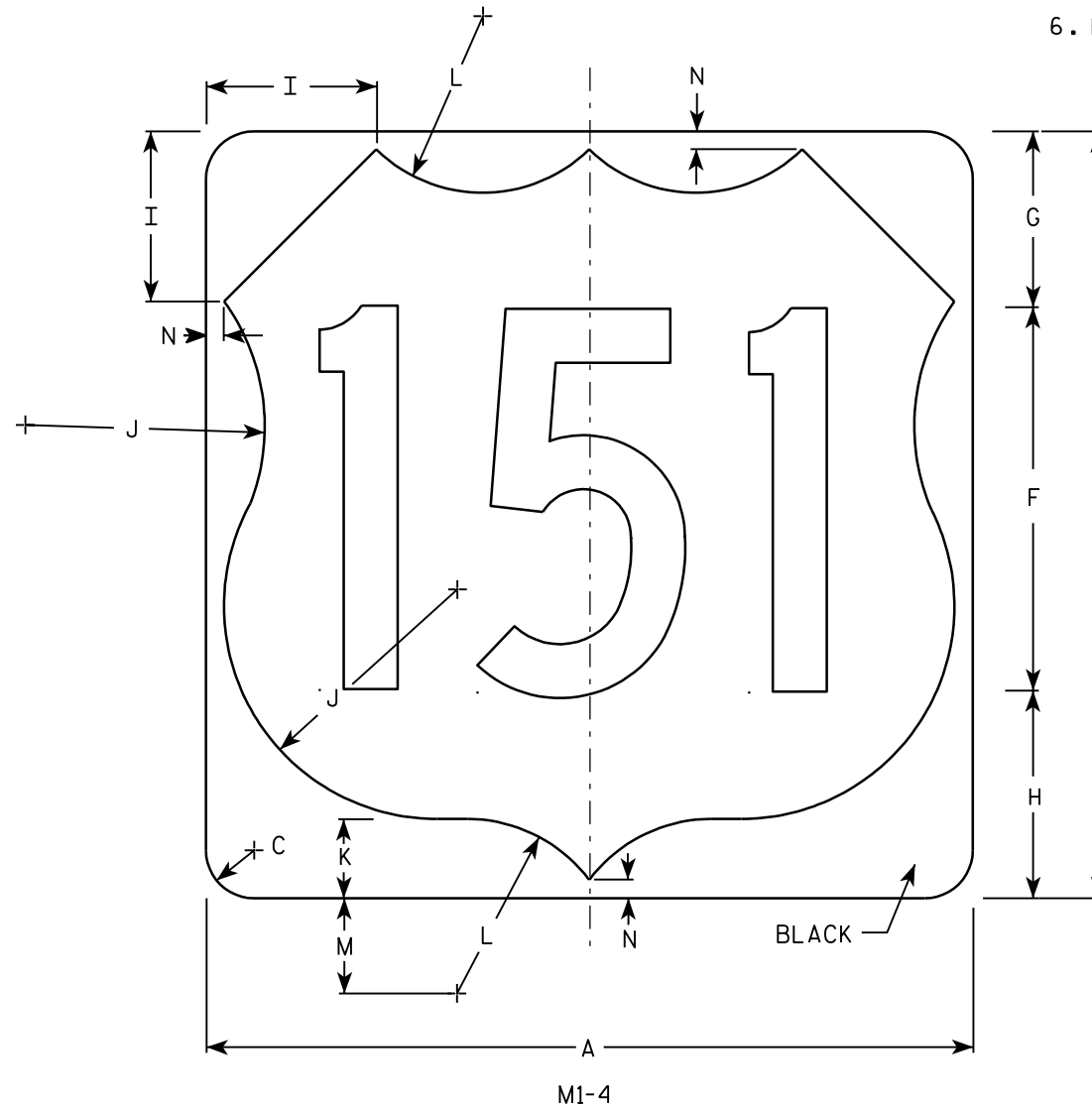
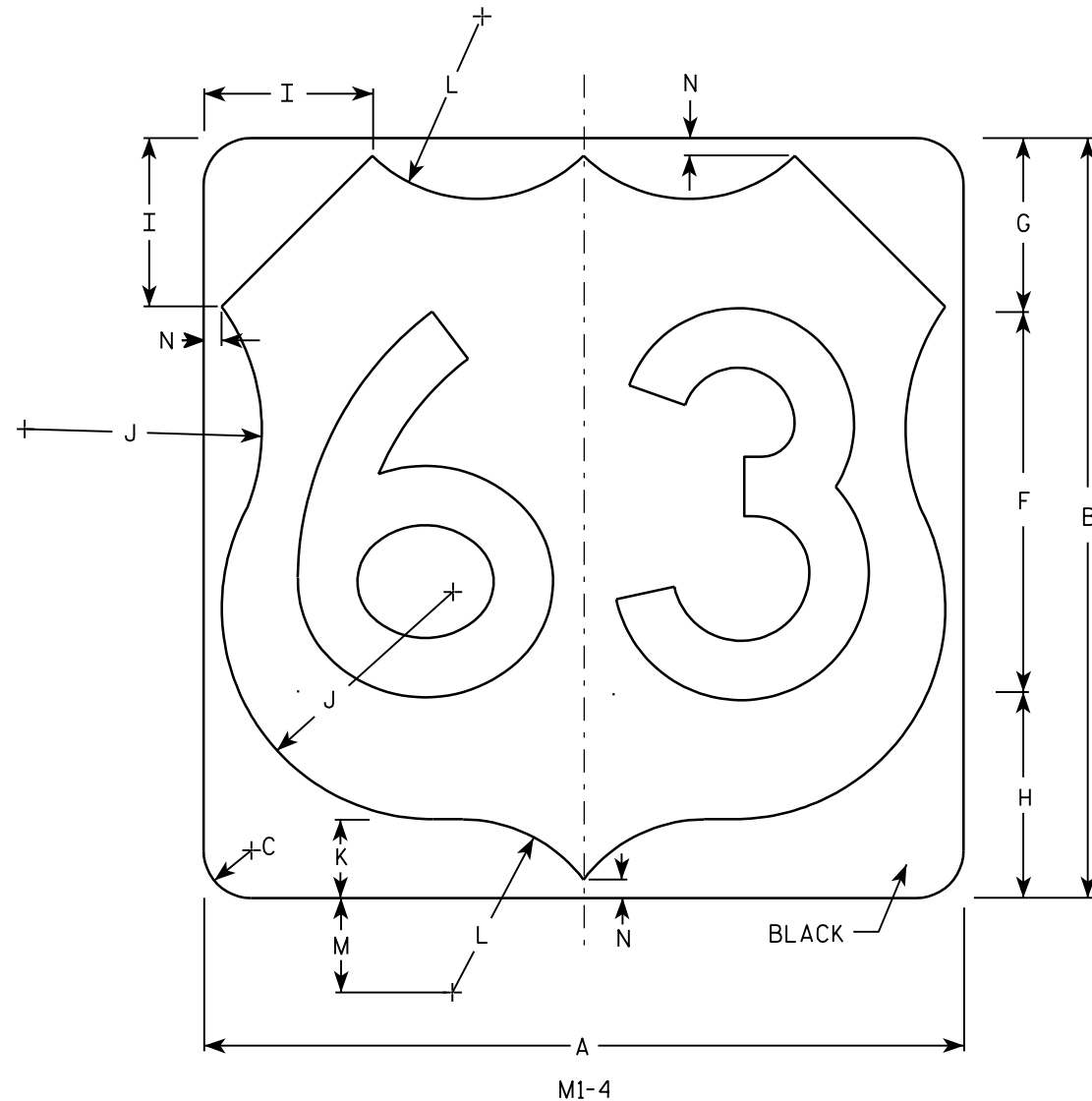
SHEET NO:

E



# NOTES

- Sign is Type II - See Note 6 - reference  
WIS DOT Standard Specification for HIGHWAY  
and STRUCTURE CONSTRUCTION latest edition.
- Color:  
Background - White & Black - See Note 6  
Message - Black
- Message Series - See note 5
- 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.
- Substitute appropriate numerals and adjust  
spacing as per Plate A10-1.
- Permanent Signs  
Background - Type H Reflective  
Detour or other temporary signs  
Background - Reflective

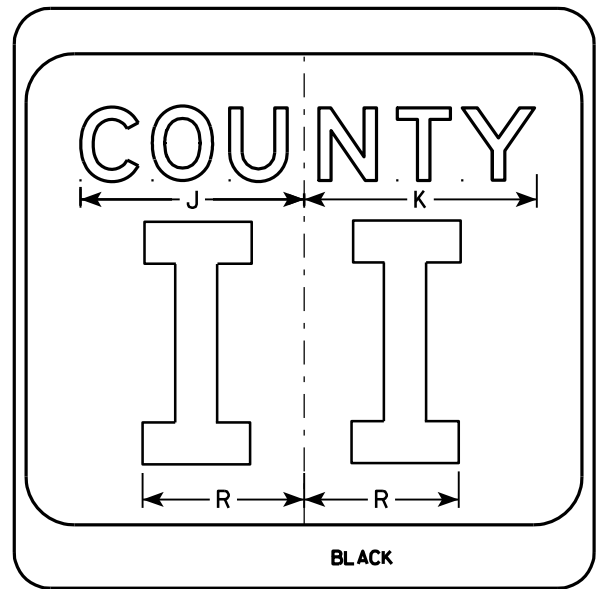
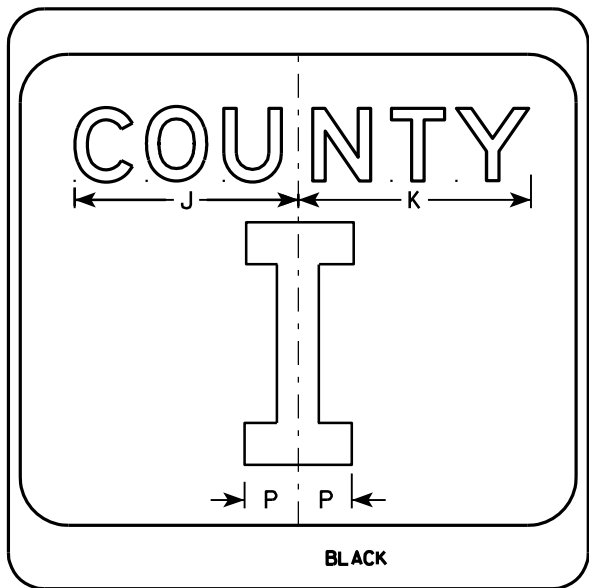
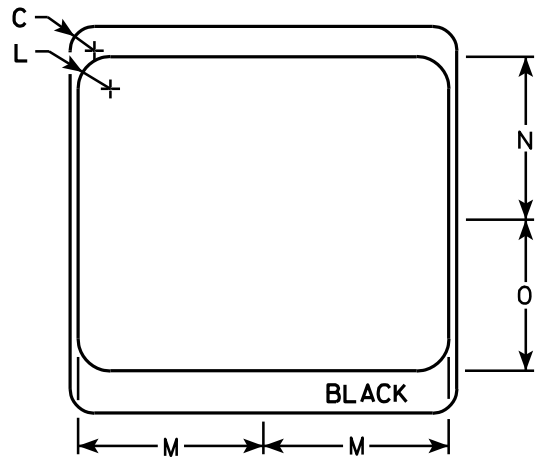
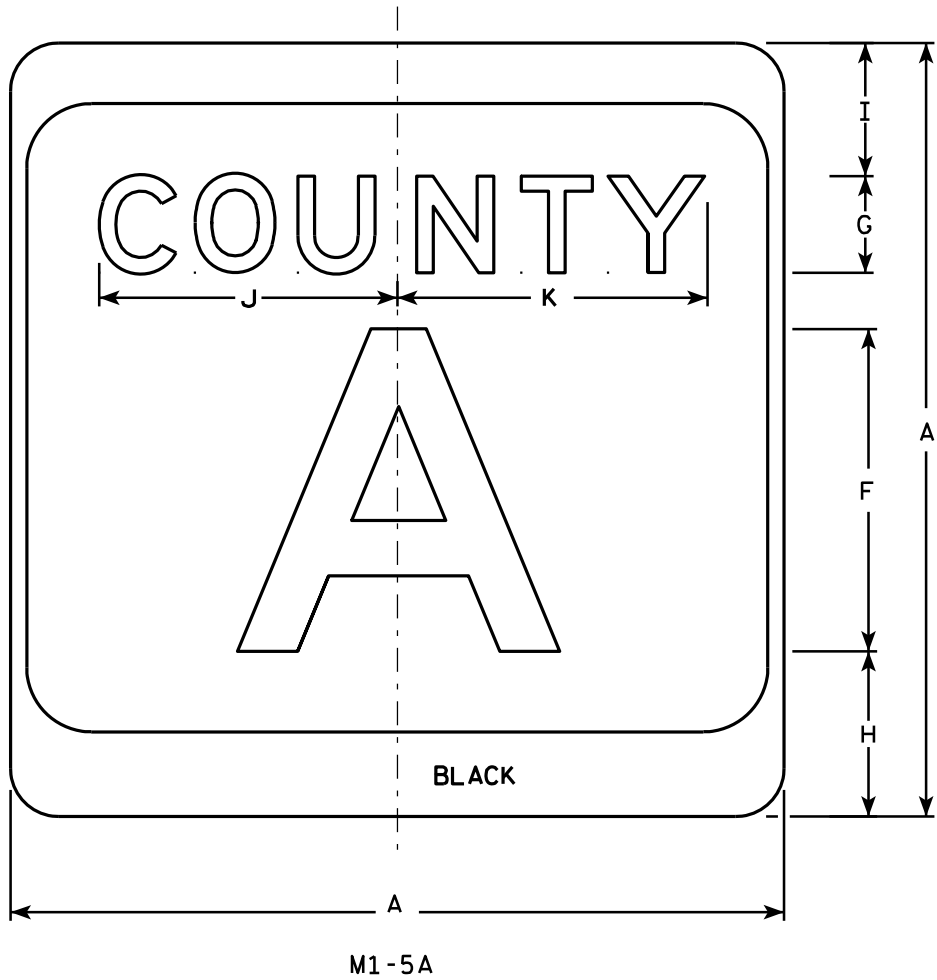


Metric equivalent  
for this sign is:

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.	Areq m <sup>2</sup>
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**



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:

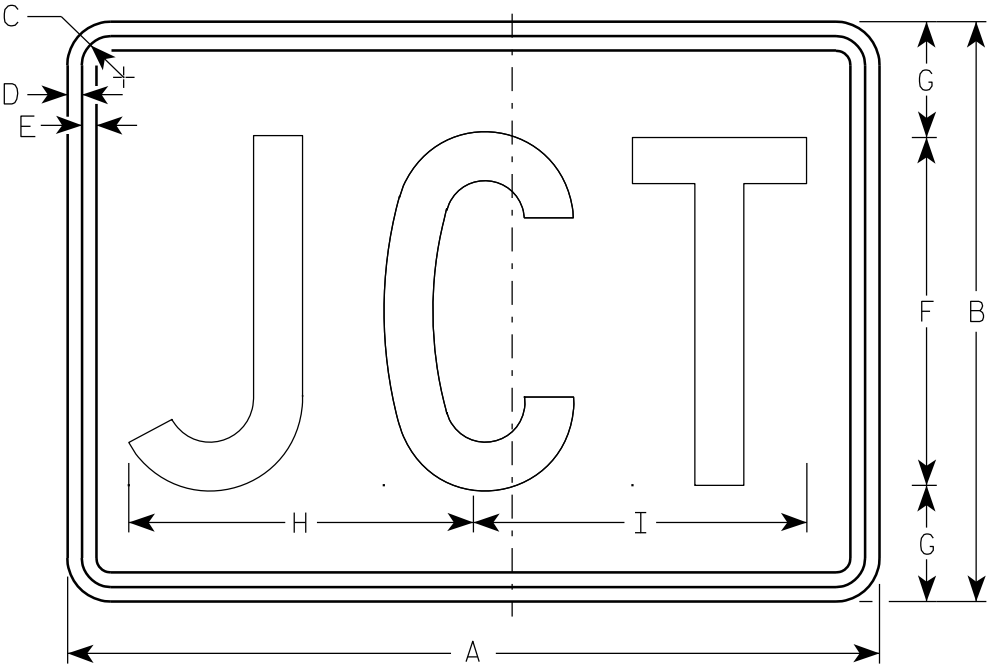
HWY:

COUNTY:

SHEET NO:

E

7



M2-1  
MK2-1  
MM2-1  
MR2-1

Metric equivalent  
for this sign is:

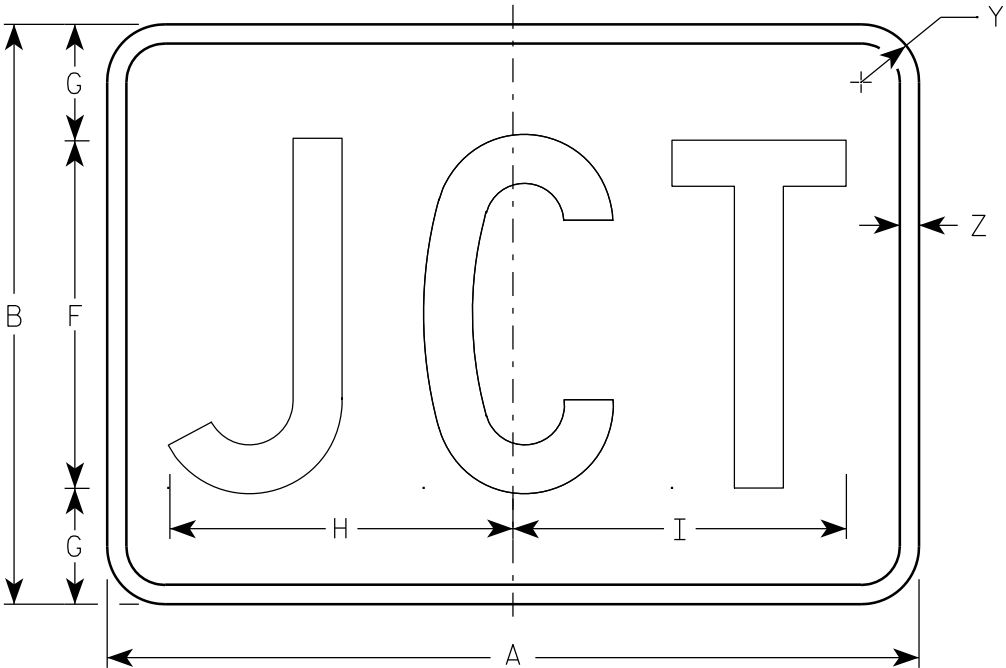
SIZE	
1	
2	525 mm X 375 mm
3	750 mm X 525 mm
4	750 mm X 525 mm
5	750 mm X 525 mm

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 <sup>2</sup>
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	0.20
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	0.20
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	0.20
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	0.20

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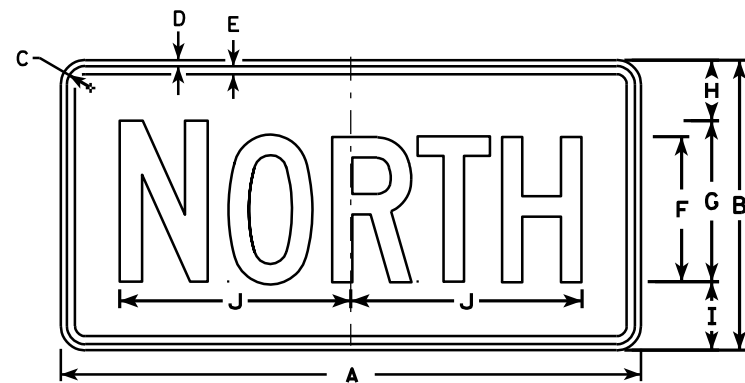
NOTES

- Sign is Type II - See Note 5 - reference  
WIS DOT Standard Specification for HIGHWAY  
and STRUCTURE CONSTRUCTION latest edition.
- Color:  
Background - See note 5  
Message - See note 5
- Message Series - C
- 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.
- M2-1 Background - White - Type H Reflective  
(Detour or temporary Signs - Reflective)  
Message - Black  
MB2-1 Background - Blue  
Message - White - Type H Reflective  
(Detour or temporary Signs - Reflective)  
MG2-1 Background - Green  
Message - White - Type H Reflective  
MK2-1 Background - Green  
Message - White - Type H Reflective  
MM2-1 Background - White - Type H Reflective  
Message - Green  
MN2-1 Background - Brown  
Message - White - Type H Reflective  
MR2-1 Background - Brown  
Message - Yellow - Type H Reflective



MB2-1  
MG2-1  
MN2-1

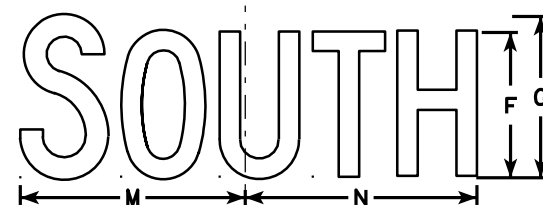
7



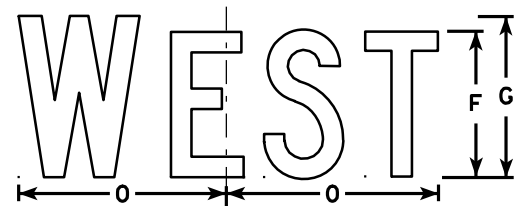
M3-1  
MK3-1  
M03-1



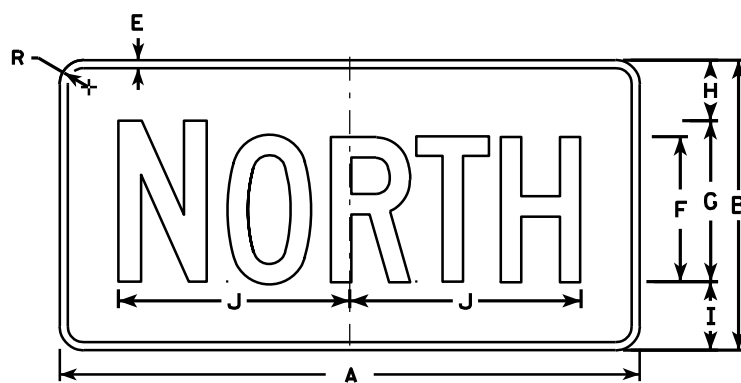
M3-2  
MK3-2  
M03-2



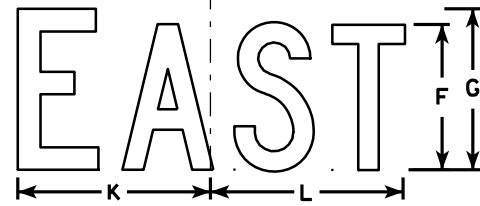
M3-3  
MK3-3  
M03-3



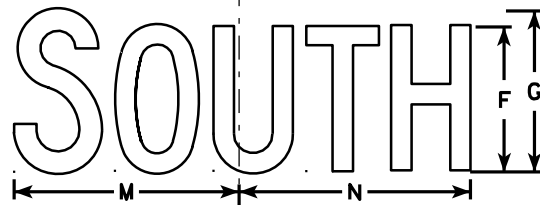
M3-4  
MK3-4  
M03-4



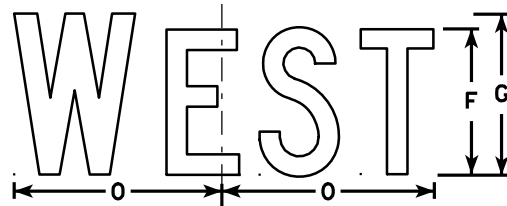
MB3-1  
MG3-1  
MM3-1  
MN3-1



MB3-2  
MG3-2  
MM3-2  
MN3-2



MB3-3  
MG3-3  
MM3-3  
MN3-3



MB3-4  
MG3-4  
MM3-4  
MN3-4

## NOTES

1. All Signs Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
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 - Type H Reflective (Detour or temporary signs - Reflective)  
Message - Black  
MB3-1 thru MB3-4 Background - Blue  
Message - White - Type H Reflective (Detour or temporary signs - Reflective)  
MG3-1 thru MG3-4 Background - Green  
Message - White - Type H Reflective  
MK3-1 thru MK3-4 Background - Green  
Message - White - Type H Reflective  
MM3-1 thru MM3-4 Background - White - Type H Reflective  
Message - Green  
MN3-1 thru MN3-4 Background - Brown  
Message - White - Type H Reflective  
M03-1 thru M03-4 Background - Orange - Reflective  
Message - Black
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

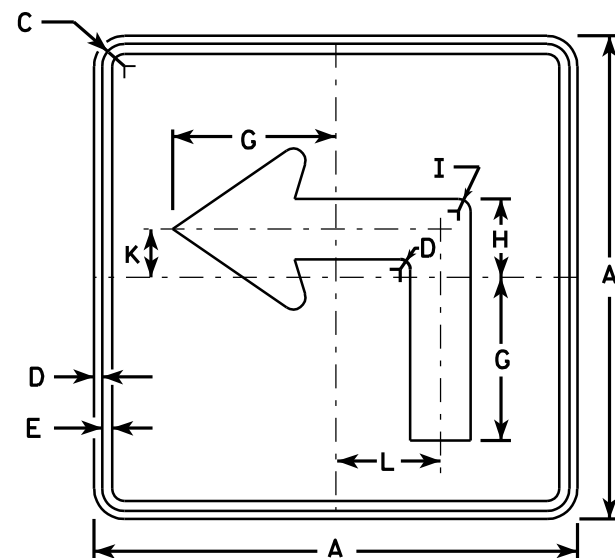
PROJECT NO: HWY: COUNTY: SHEET NO: E

## STANDARD SIGNS M3-1 thru M3-4 SERIES

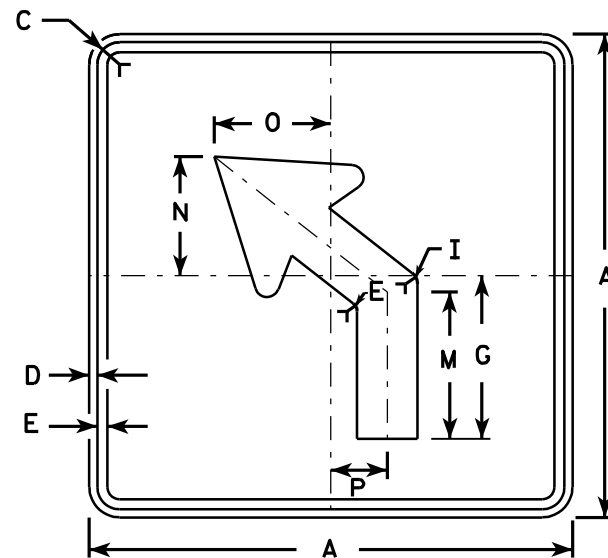
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

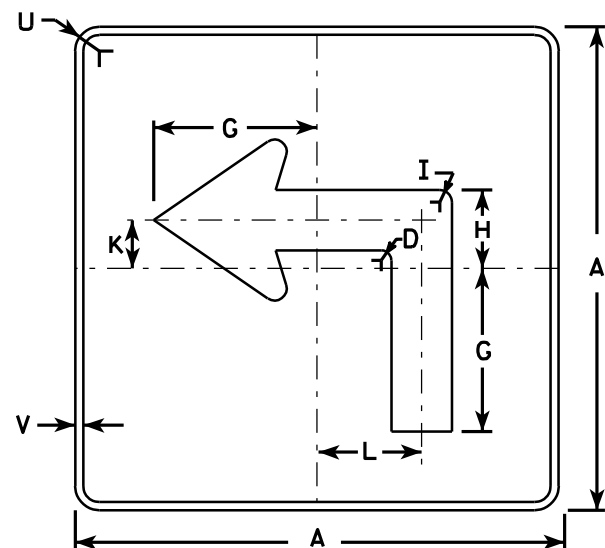
DATE 11/10/10 PLATE NO. M3-1.12



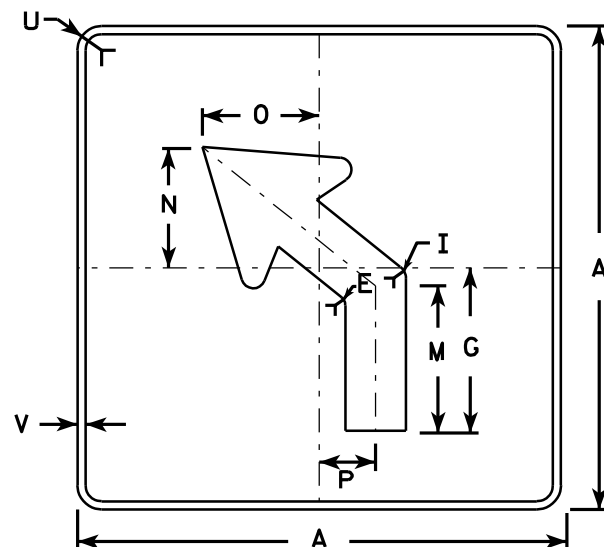
M5-1L  
MK5-1L  
MM5-1L  
MO5-1L  
MR5-1L



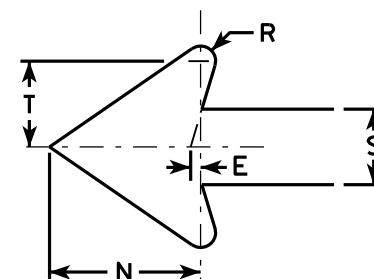
M5-2L  
MK5-2L  
MM5-2L  
MO5-2L  
MR5-2L



MB5-1L  
MG5-1L  
MN5-1L



MB5-2L  
MG5-2L  
MN5-2L



Metric equivalent  
for this sign is:

SIZE	
1	
2	525 mm X 525 mm
3	750 mm X 750 mm
4	750 mm X 750 mm
5	750 mm X 750 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 <sup>2</sup>
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	0.28
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	0.56
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	0.56
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	0.56

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

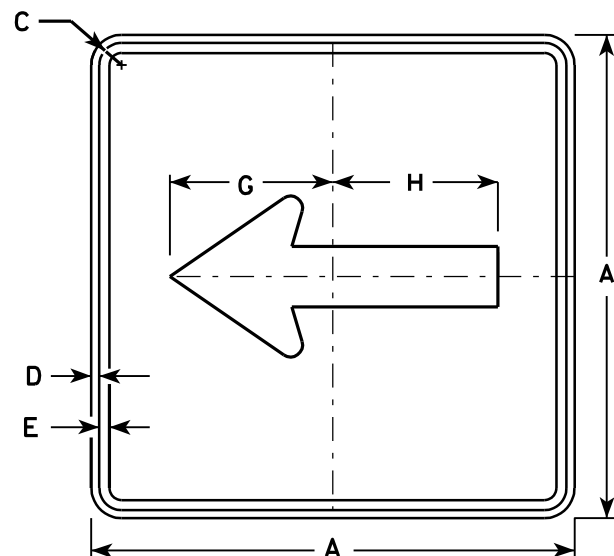
- Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:  
Background - See note 4  
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M5-1 and M5-2 Background - White - Type H Reflective (Detour or temporary Signs - Reflective)  
Message - Black  
MB5-1 and MB5-2 Background - Blue  
Message - White - Type H Reflective (Detour or temporary Signs - Reflective)  
MG5-1 and MG5-2 Background - Green  
Message - White - Type H Reflective  
MK5-1 and MK5-2 Background - Green  
Message - White Type H Reflective  
MM5-1 and MM5-2 Background - White - Type H Reflective  
Message - Green  
MN5-1 and MN5-2 Background - Brown  
Message - White - Type H Reflective  
MO5-1 and MO5-2 Background - Orange - Reflective  
Message - Black  
MR5-1 and MR5-2 Background - Brown  
Message - Yellow - Type H Reflective
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts right.

STANDARD SIGN  
M5-1 & M5-2

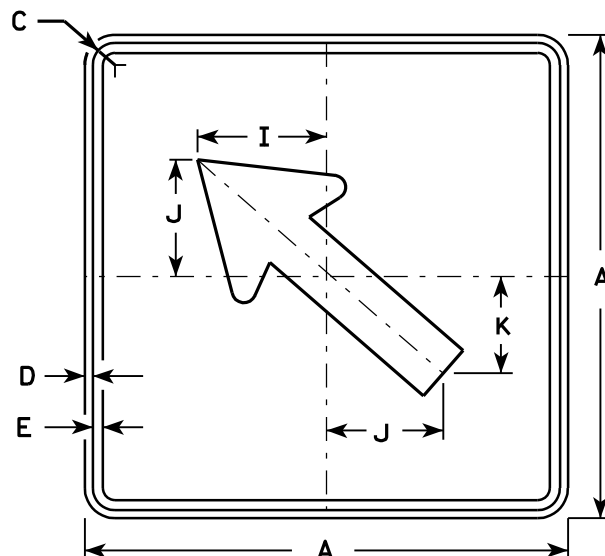
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

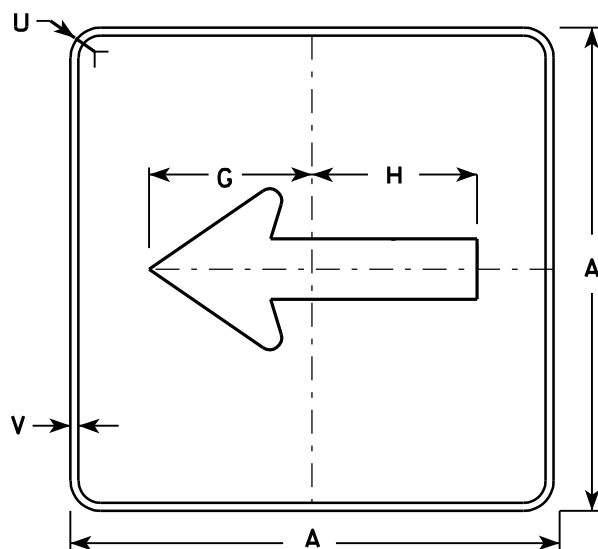
DATE 3/16/10 PLATE NO. M5-1.11



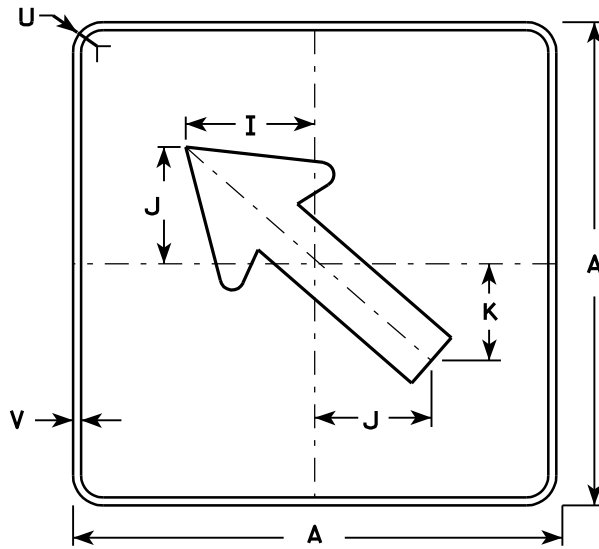
M6-1  
MK6-1  
MM6-1  
MO6-1  
MR6-1



M6-2  
MK6-2  
MM6-2  
MO6-2  
MR6-2



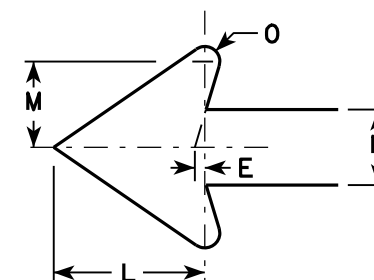
MB6-1  
MG6-1  
MN6-1



MB6-2  
MG6-2  
MN6-2

#### NOTES

- Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 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 - Type H Reflective  
(Detour or temporary Signs - Reflective)  
Message - Black  
MB6-1 and MB6-2 Background - Blue  
Message - White - Type H Reflective  
(Detour or temporary Signs - Reflective)  
MG6-1 and MG6-2 Background - Green  
Message - White - Type H Reflective  
MK6-1 and MK6-2 Background - Green  
Message - White - Type H Reflective  
MM6-1 and MM6-2 Background - White - Type H Reflective  
Message - Green  
MN6-1 and MN6-2 Background - Brown  
Message - White - Type H Reflective  
MO6-1 and MO6-2 Background - Orange - Reflective  
Message - Black  
MR6-1 and MR6-2 Background - Brown  
Message - Yellow - Type H Reflective

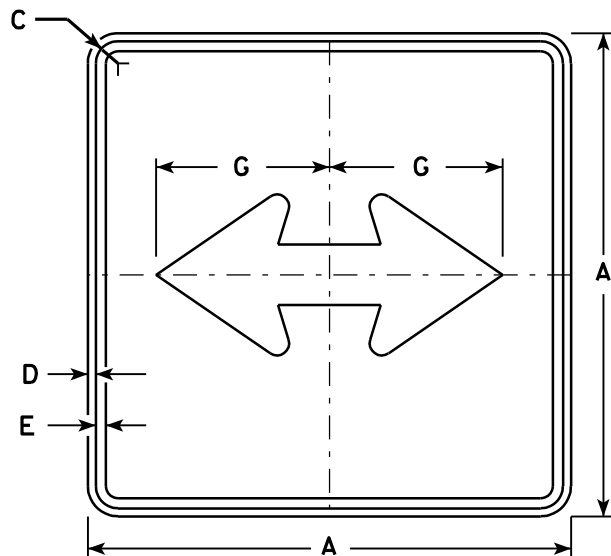


Metric equivalent  
for this sign is:

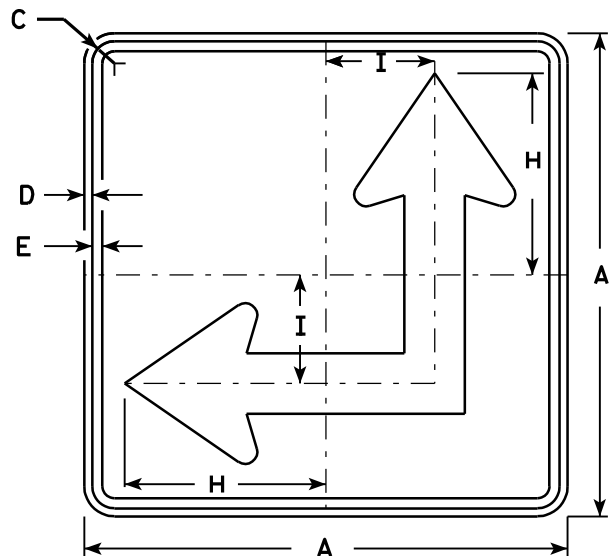
SIZE	
1	
2	525 mm X 525 mm
3	750 mm X 750 mm
4	750 mm X 750 mm
5	750 mm X 750 mm

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 m2
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	0.28
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	0.56
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	0.56
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	0.56

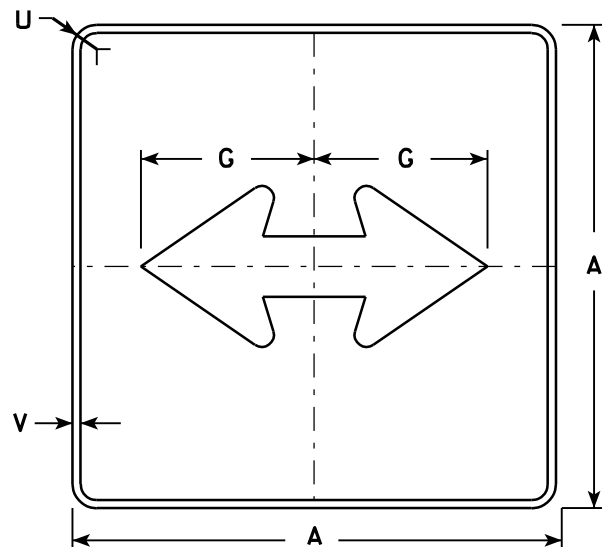
PROJECT NO: HWY: COUNTY: SHEET NO: E



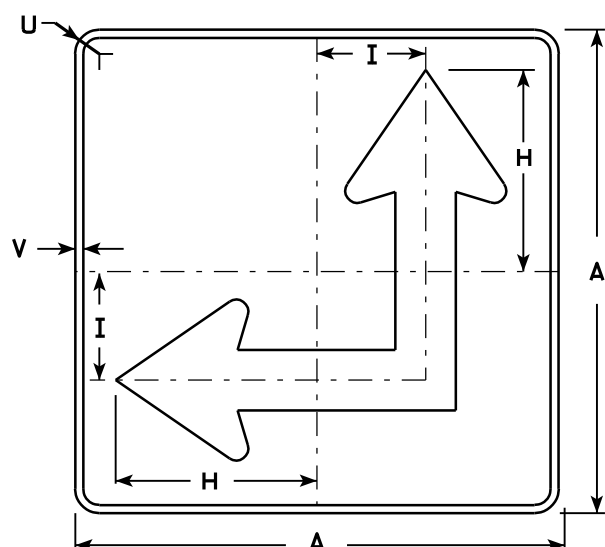
M6 - 4  
MK6 - 4  
MM6 - 4  
MO6 - 4  
MR6 - 4



M6 - 6  
MK6 - 6  
MM6 - 6  
MO6 - 6  
MR6 - 6



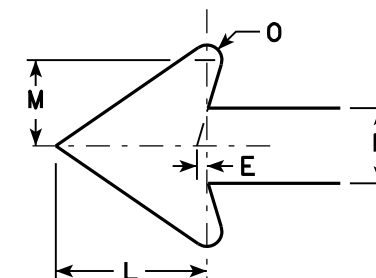
MB6 - 4  
MG6 - 4  
MN6 - 4



MB6 - 6  
MG6 - 6  
MN6 - 6

NOTES

- Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 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 - Type H Reflective  
(Detour or temporary Signs - Reflective)  
Message - Black  
MB6-4 and MB6-6 Background - Blue  
Message - White - Type H Reflective  
(Detour or temporary Signs - Reflective)  
MG6-4 and MG6-6 Background - Green  
Message - White - Type H Reflective  
MK6-4 and MK6-6 Background - Green  
Message - White - Type H Reflective  
MM6-4 and MM6-6 Background - White - Type H Reflective  
Message - Green  
MN6-4 and MN6-6 Background - Brown  
Message - White - Type H Reflective  
MO6-4 and MO6-6 Background - Orange - Reflective  
Message - Black  
MR6-4 and MR6-6 Background - Brown  
Message - Yellow - Type H Reflective
- M6-6R same as M6-6L except arrow points ahead and right.



Metric equivalent  
for this sign is:

SIZE	
1	
2	525 mm X 525 mm
3	750 mm X 750 mm
4	750 mm X 750 mm
5	750 mm X 750 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 <sup>2</sup>
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	0.28
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	0.56
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	0.56
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	0.56

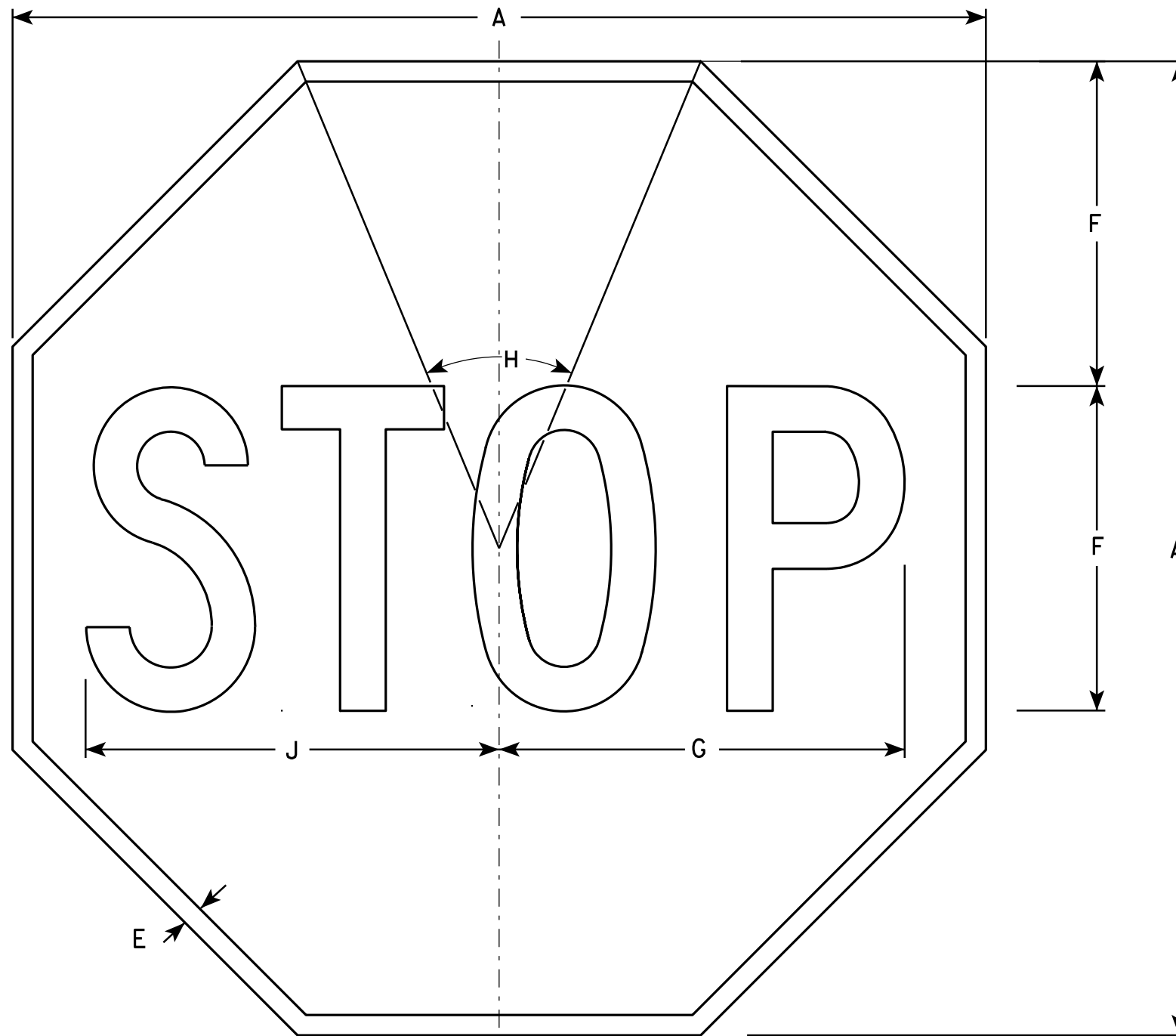
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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STANDARD SIGN  
M6 - 4 & M6 - 6  
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/16/10 PLATE NO. M6-4.7



**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

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	24				3/8	8	10	45°		10 1/4																	3.31
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 12/03/10 PLATE NO. R1-1.12

PROJECT NO:

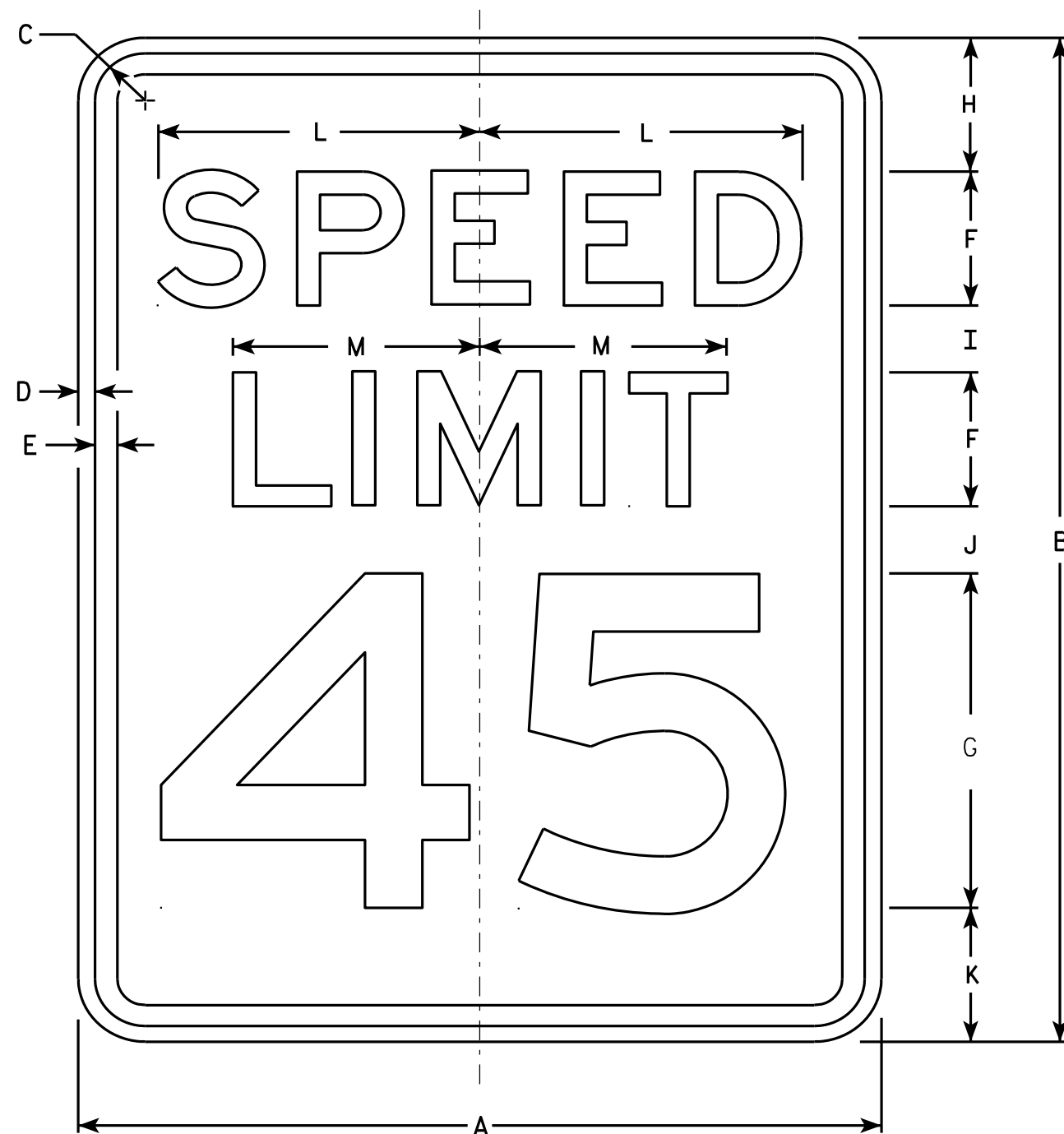
HWY:

COUNTY:

SHEET NO:

E





R2-1

### 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.

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



R2-6P

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	18	1 1/8	3/8	3/8	4	3 1/2	3	7 5/8	9 1/4																	3.0
2M	24	18	1 1/8	3/8	3/8	4	3 1/2	3	7 5/8	9 1/4																	3.0
3	36	24	1 1/8	3/8	1/2	6	4 1/8	3 3/4	12	14																	6.0
4	36	24	1 1/8	3/8	1/2	6	4 1/8	3 3/4	12	14																	6.0
5	48	36	1 3/8	1/2	5/8	8	7	6	15 1/8	19																	12.0

STANDARD SIGN  
R2-6P

WISCONSIN DEPT OF TRANSPORTATION

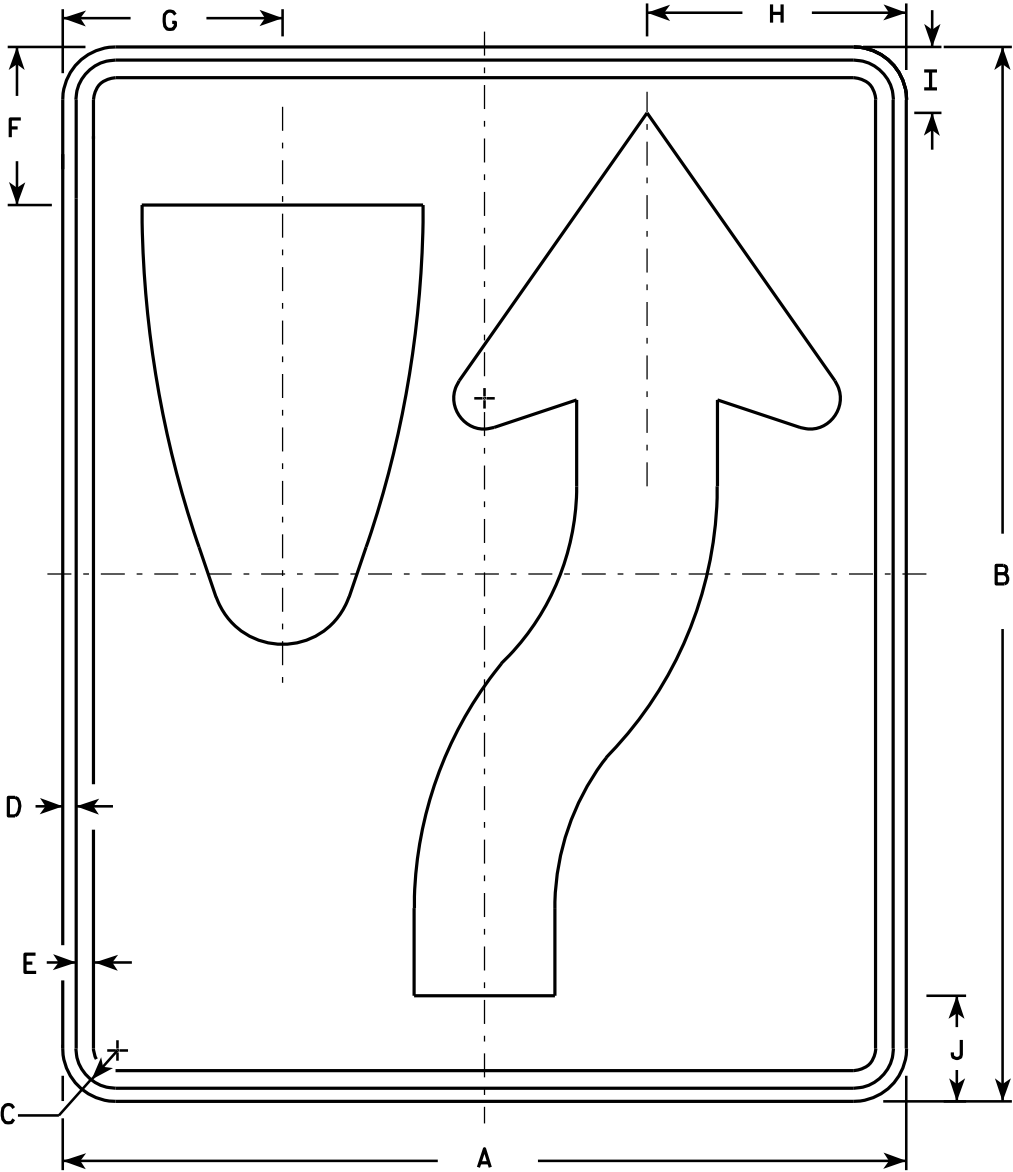
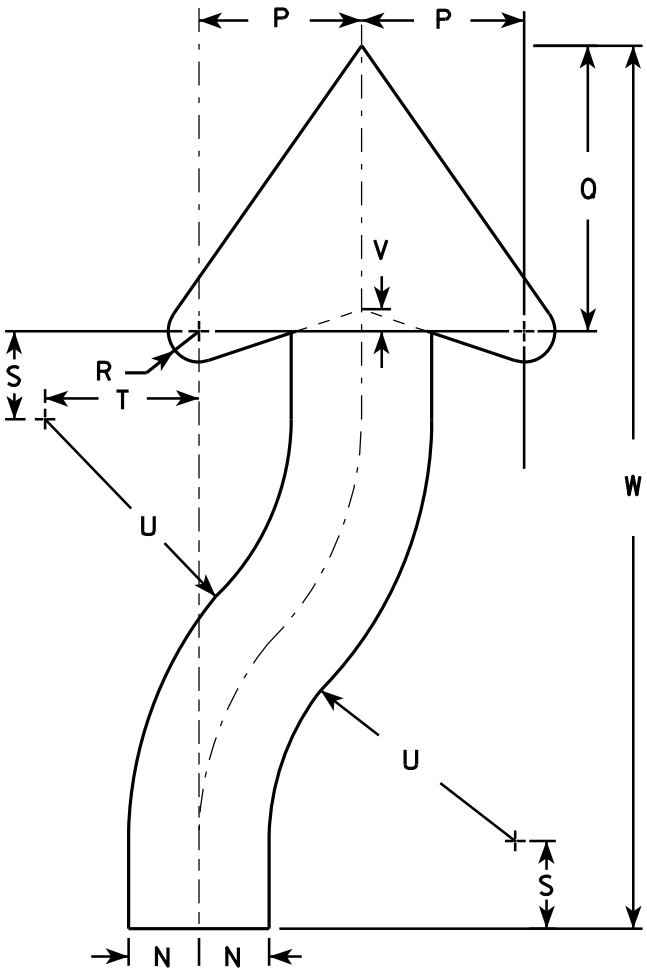
APPROVED  
*Matthew R. Rauch*  
for State Traffic Engineer

DATE 12/20/10 PLATE NO. R2-6P.2

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. 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

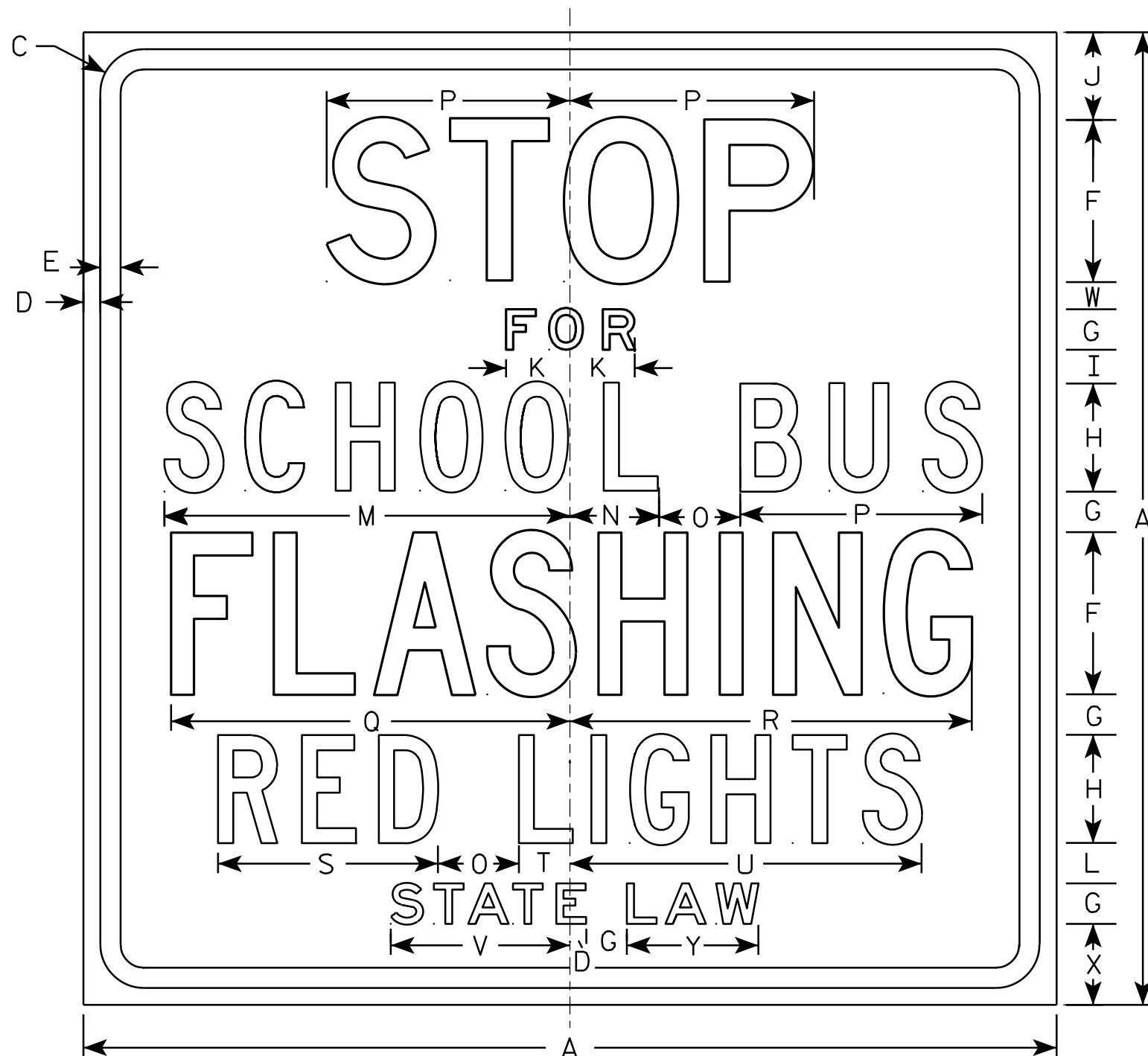
PROJECT NO:

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 - White  
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. Line 1 is Series D  
Lines 2 & 6 are Series E  
Line 3, 4 & 5 are Series C

R59-51

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	36		1 5⁄8	5⁄8	3⁄4	6	1 1⁄2	4	1 1⁄4	3 1⁄4	2 3⁄8	1 1⁄2	15	3 1⁄4	3	9	14 3⁄4	14 7⁄8	8 1⁄8	1 7⁄8	13	6 5⁄8	1	3	4 7⁄8		9.0
2M	36		1 5⁄8	5⁄8	3⁄4	6	1 1⁄2	4	1 1⁄4	3 1⁄4	2 3⁄8	1 1⁄2	15	3 1⁄4	3	9	14 3⁄4	14 7⁄8	8 1⁄8	1 7⁄8	13	6 5⁄8	1	3	4 7⁄8		9.0
3	48		2 1⁄4	3⁄4	1	8	2	6	1 1⁄4	4 3⁄4	3 1⁄4	1 1⁄2	20 1⁄4	5	3 5⁄8	12	19 1⁄2	20	11 5⁄8	3 3⁄4	19	9 1⁄2	1	3 1⁄2	6 3⁄4		16.0
4	48		2 1⁄4	3⁄4	1	8	2	6	1 1⁄4	4 3⁄4	3 1⁄4	1 1⁄2	20 1⁄4	5	3 5⁄8	12	19 1⁄2	20	11 5⁄8	3 3⁄4	19	9 1⁄2	1	3 1⁄2	6 3⁄4		16.0
5																											

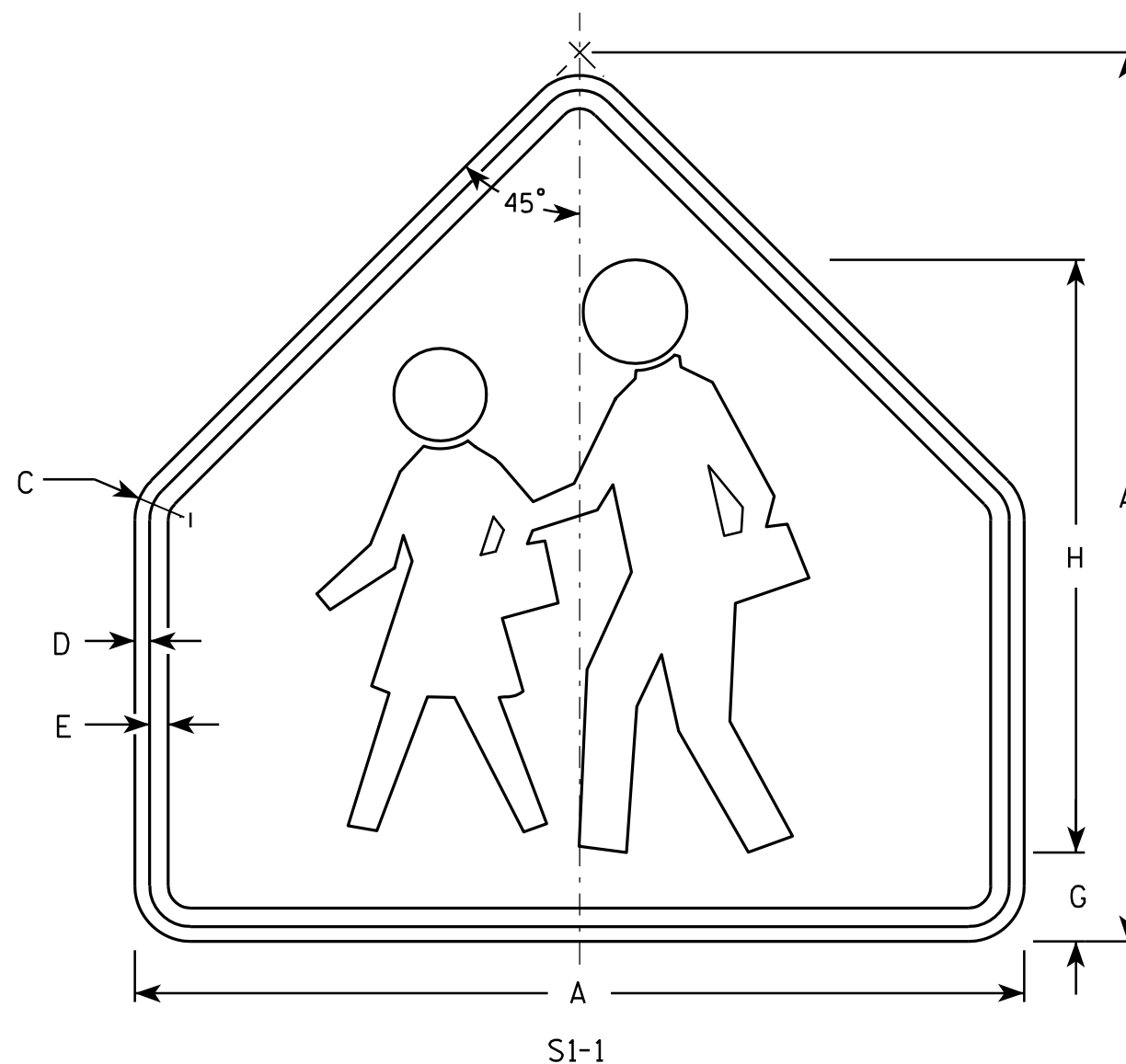
STANDARD SIGN  
R59-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 3/30/11 PLATE NO. R59-51.10

PROJECT NO: HWY: COUNTY: SHEET NO: E



# 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-Green  
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	30		1 3/8	1/2	5/8		3	20																			4.69
2	36		1 5/8	5/8	3/4		3 1/2	24																			6.75
3	36		1 5/8	5/8	3/4		3 1/2	24																			6.75
4	48		2 1/4	3/4	1		4 3/4	32																			12
5																											

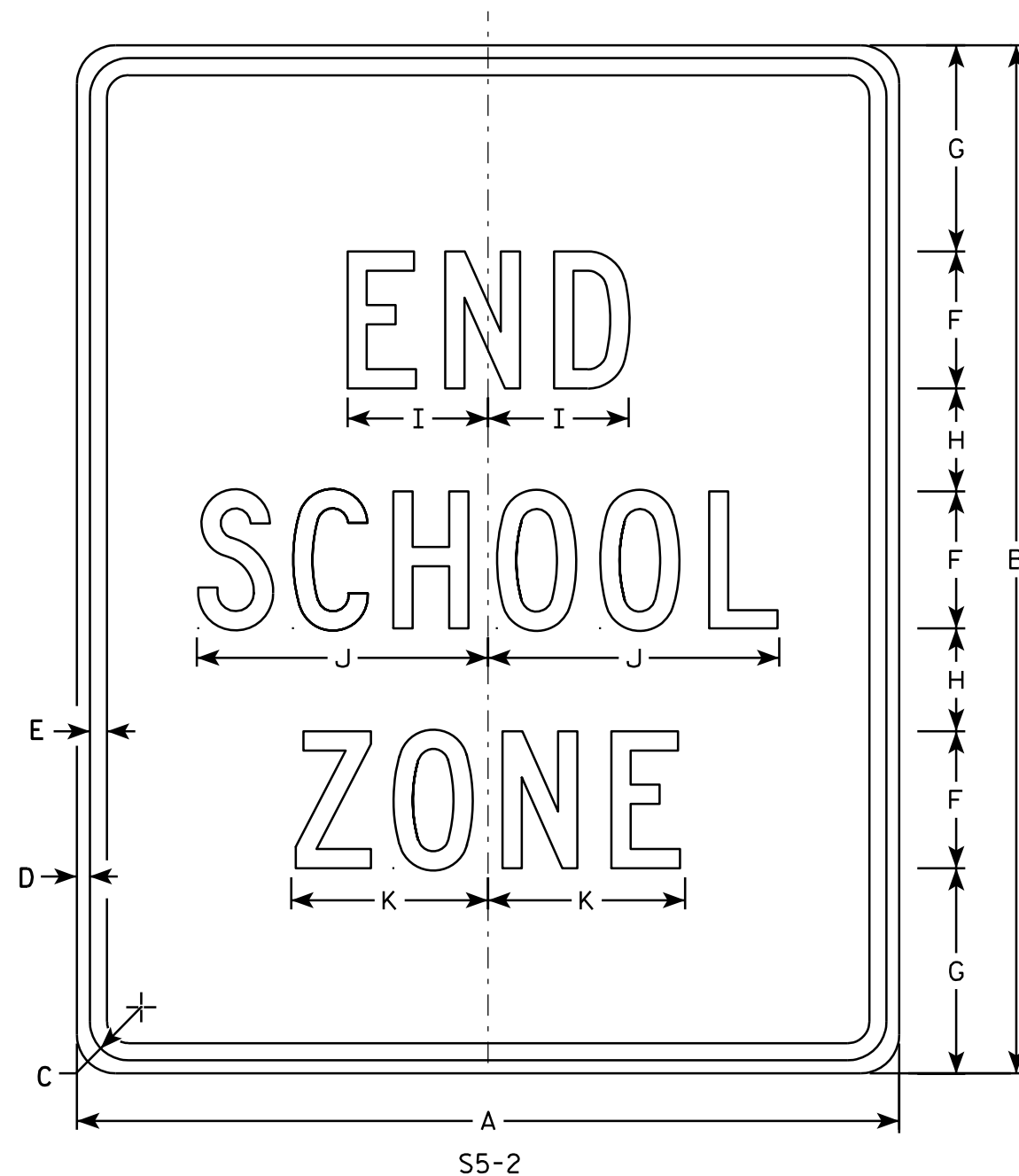
## STANDARD SIGN S1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch  
for State Traffic Engineer  
DATE 6/30/05 PLATE NO. S1-1.8

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

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 - White  
Message - Black
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.

7

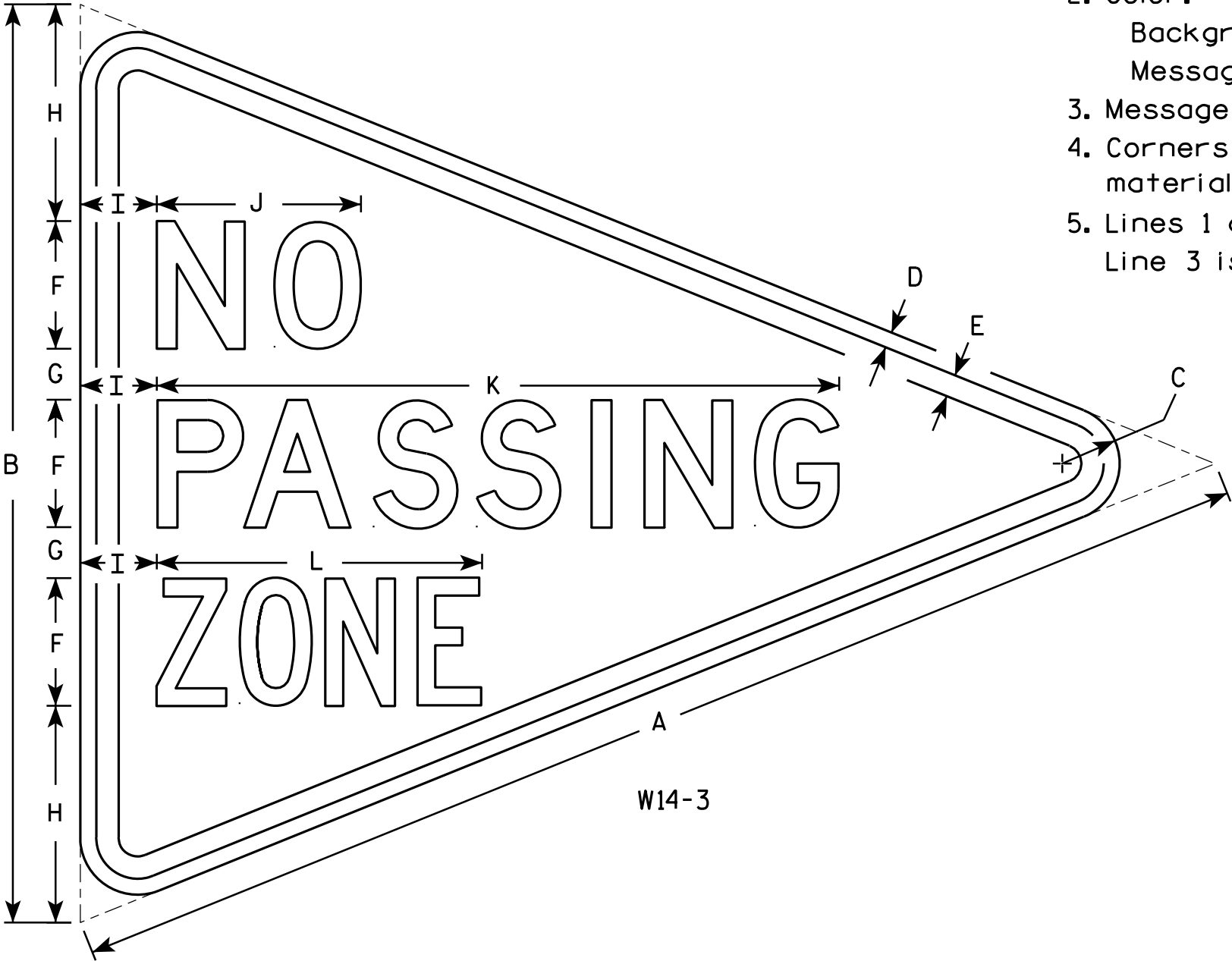
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1																											
2	24	30	1 1/8	3/8	1/2	4	6	3	4 1/8	8 1/2	5 3/4																5.0
3	36	42	1 5/8	5/8	3/4	6	7	5	6 1/8	12 5/8	8 5/8																10.5
4																											
5																											

STANDARD SIGN S5-2	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 3/8/11	PLATE NO. S5-2.2

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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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 5
- 4. Corners and borders shall be rounded on all base materials for this sign.
- 5. Lines 1 and 2 are Series D.  
Line 3 is series C.



W14-3

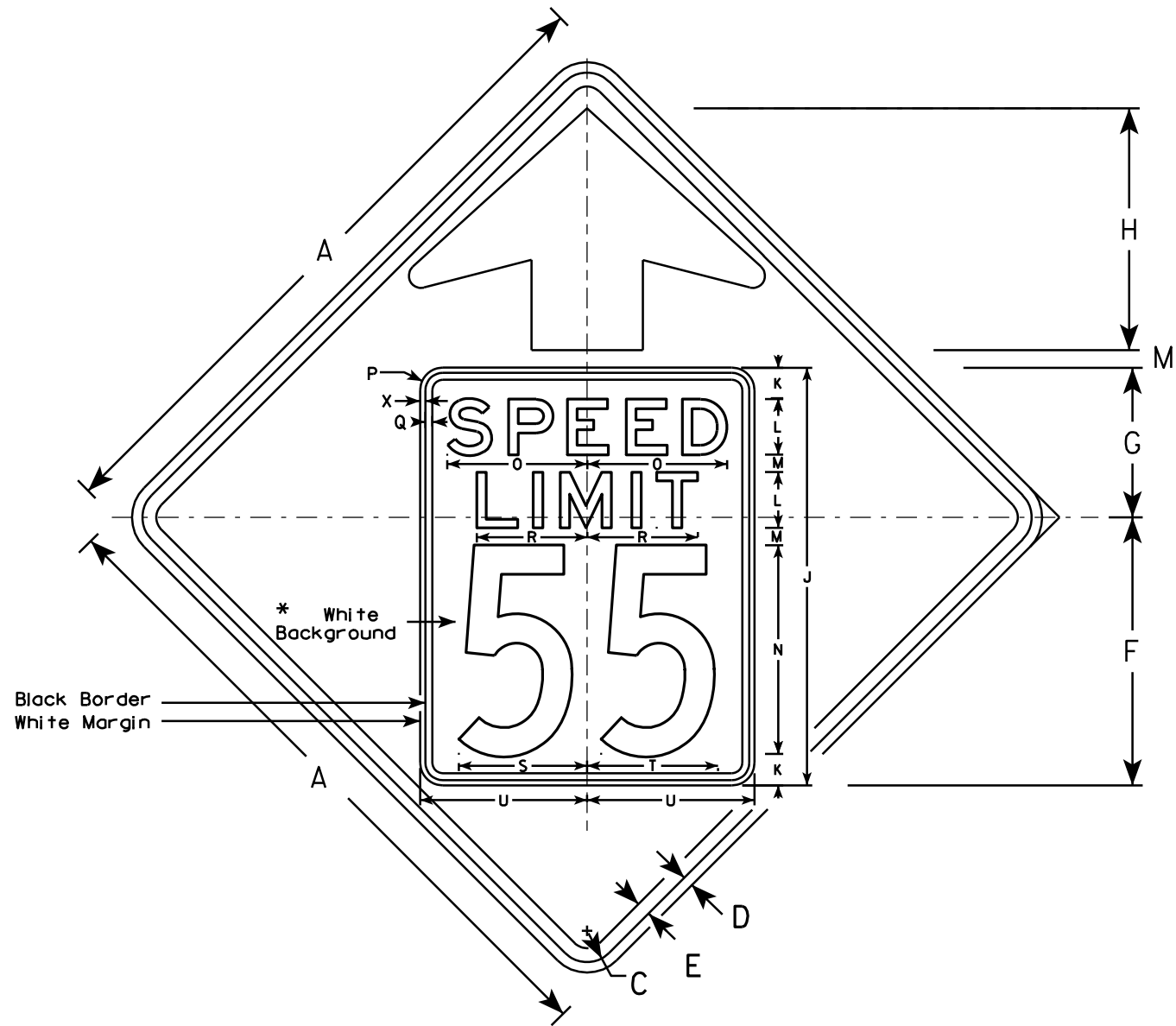
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
2M	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
3	64	48	3	3/4	1 1/4	6	3	12	4	10 3/4	33 5/8	16 1/2															10.7
4																											
5																											

STANDARD SIGN  
W14-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 6/7/10 PLATE NO. W14-3.9

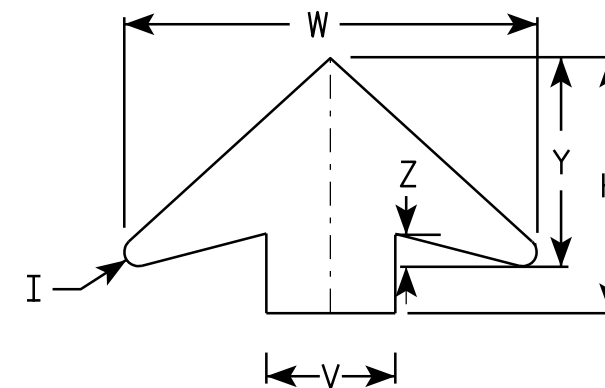


W3-5

### 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. Message Series - C for numbers Series E for wording
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

\*Speed Limit Sign shall have a White Background



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																											
2S	36		1 5⁄8	5⁄8	3⁄4	14 1⁄2	9 1⁄2	11 1⁄2	5⁄8	24	2	3	1	12	7 1⁄8	1 1⁄2	3⁄8	5 3⁄4	7 1⁄4	7 1⁄8	9	6	19 1⁄4	3⁄8	9 3⁄4	1 5⁄8	9.0
2M	36		1 5⁄8	5⁄8	3⁄4	14 1⁄2	9 1⁄2	11 1⁄2	5⁄8	24	2	3	1	12	7 1⁄8	1 1⁄2	3⁄8	5 3⁄4	7 1⁄4	7 1⁄8	9	6	19 1⁄4	3⁄8	9 3⁄4	1 5⁄8	9.0
3	36		1 5⁄8	5⁄8	3⁄4	14 1⁄2	9 1⁄2	11 1⁄2	5⁄8	24	2	3	1	12	7 1⁄8	1 1⁄2	3⁄8	5 3⁄4	7 1⁄4	7 1⁄8	9	6	19 1⁄4	3⁄8	9 3⁄4	1 5⁄8	9.0
4	48		2 1⁄4	3⁄4	1	19 1⁄4	10 3⁄4	17 3⁄8	7⁄8	30	2 1⁄4	4	1 1⁄4	15	10	1 5⁄8	1⁄2	8	9 1⁄4	9 3⁄8	12	8	25 5⁄8	3⁄8	13	2	16.0
5	48		2 1⁄4	3⁄4	1	19 1⁄4	10 3⁄4	17 3⁄8	7⁄8	30	2 1⁄4	4	1 1⁄4	15	10	1 5⁄8	1⁄2	8	9 1⁄4	9 3⁄8	12	8	25 5⁄8	3⁄8	13	2	16.0

### STANDARD SIGN

W3-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W3-5.5

PROJECT NO:

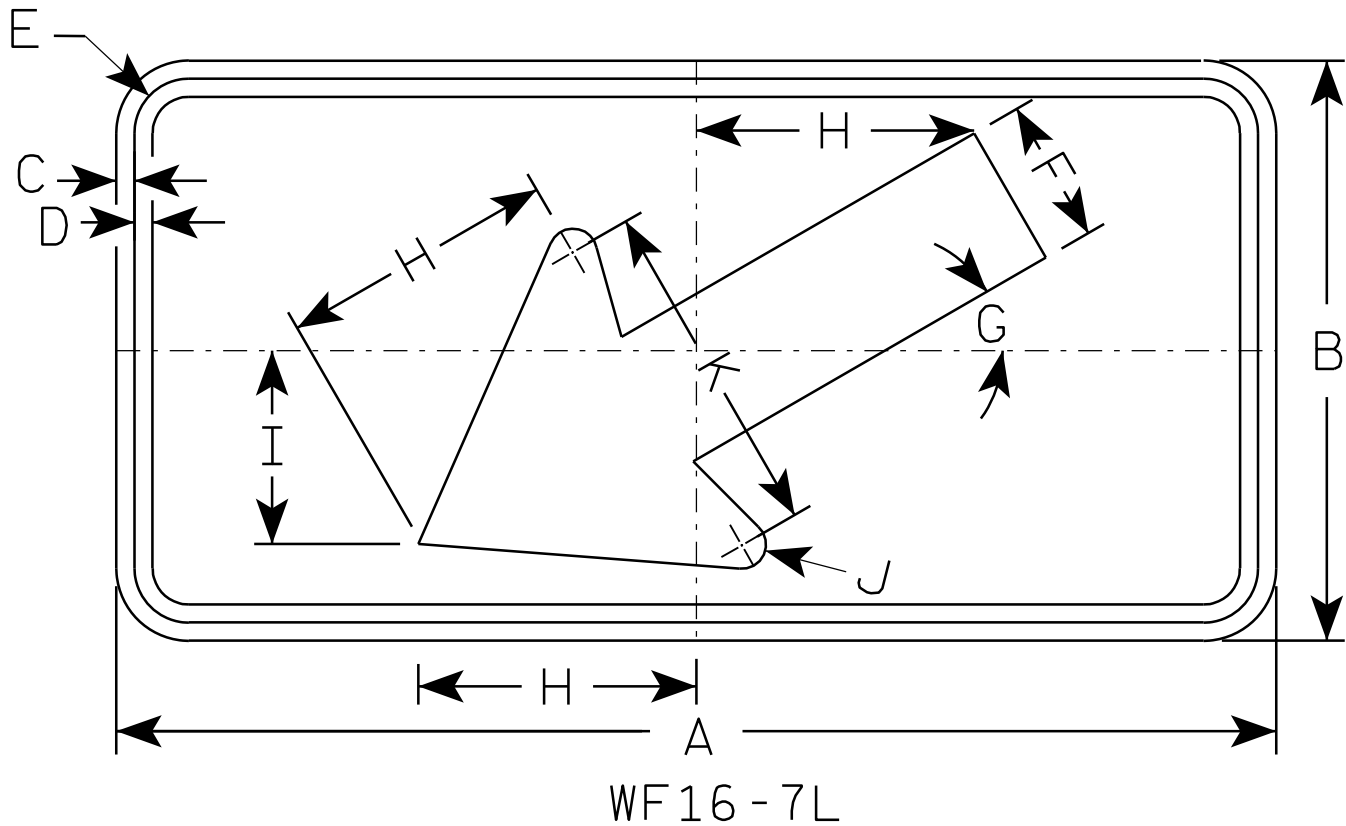
SHEET NO:

E



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-Green  
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. WF16-7R are the same as WF-16-7L except the arrow is reversed along the vertical centerline.



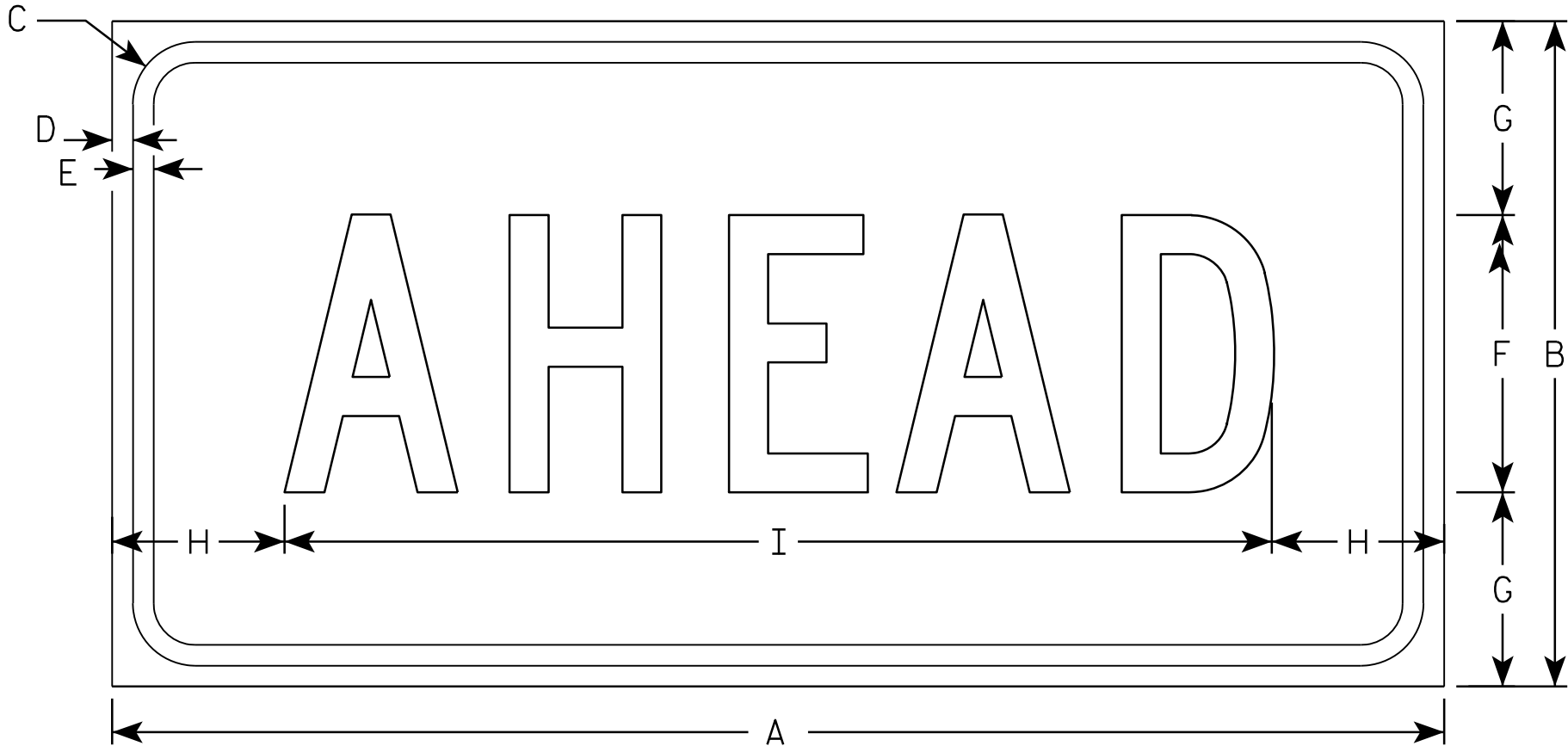
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	12	3/8	3/8	1 1/8	3	30°	5 3/4	4	1/2	7																2.0
2S	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
2M	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
3	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
4	48	24	1/2	5/8	1 3/8	6	30°	11 1/2	8	1	14																8.0
5																											

STANDARD SIGN	
WF16-7	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 12/21/10	PLATE NO. WF16-7.3

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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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-Green  
Message - Black
- 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.



WF16-9P

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	12	1 1/8	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
2S	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
2M	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
3	30	18	1 1/8	3/8	1/2	7	3 1/2	2 3/4	24 1/2																		3.75
4	48	24	1 3/8	1/2	5/8	10	7	6 1/8	35 3/4																		8.0
5																											

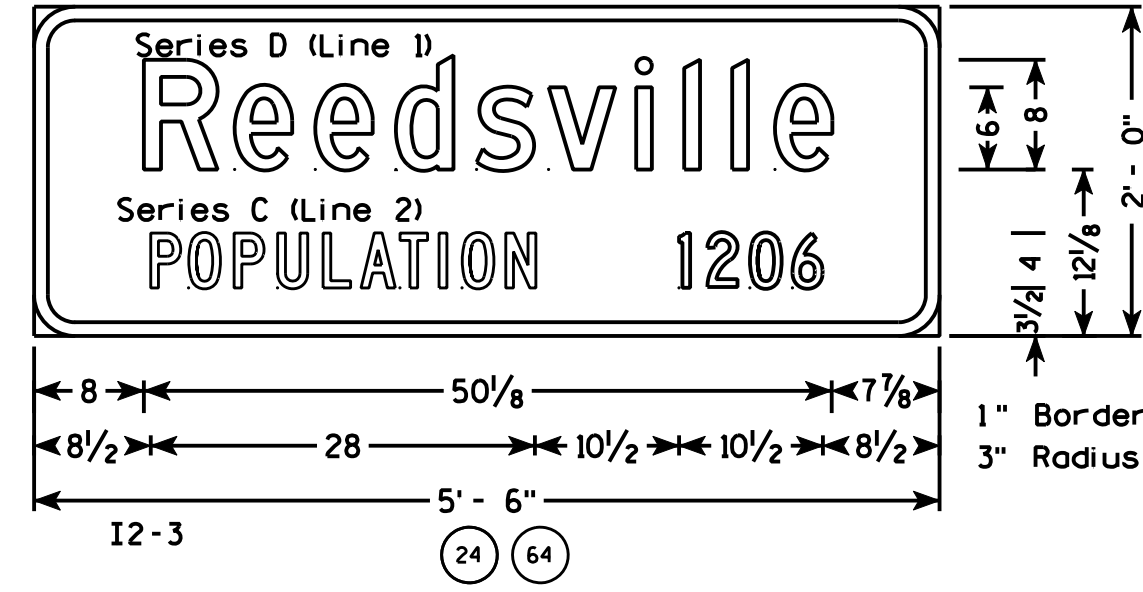
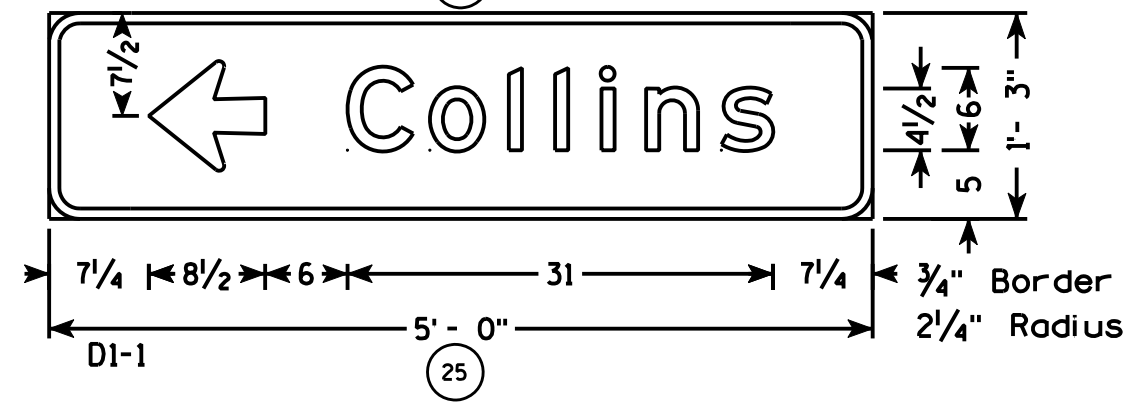
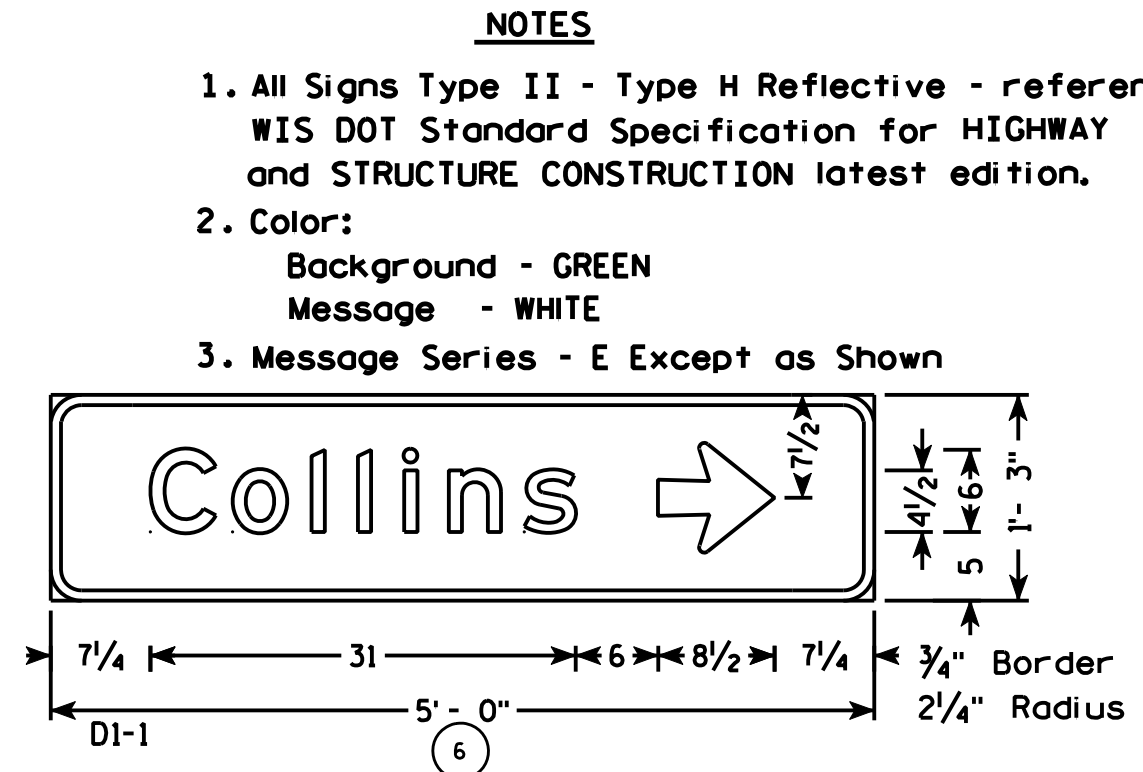
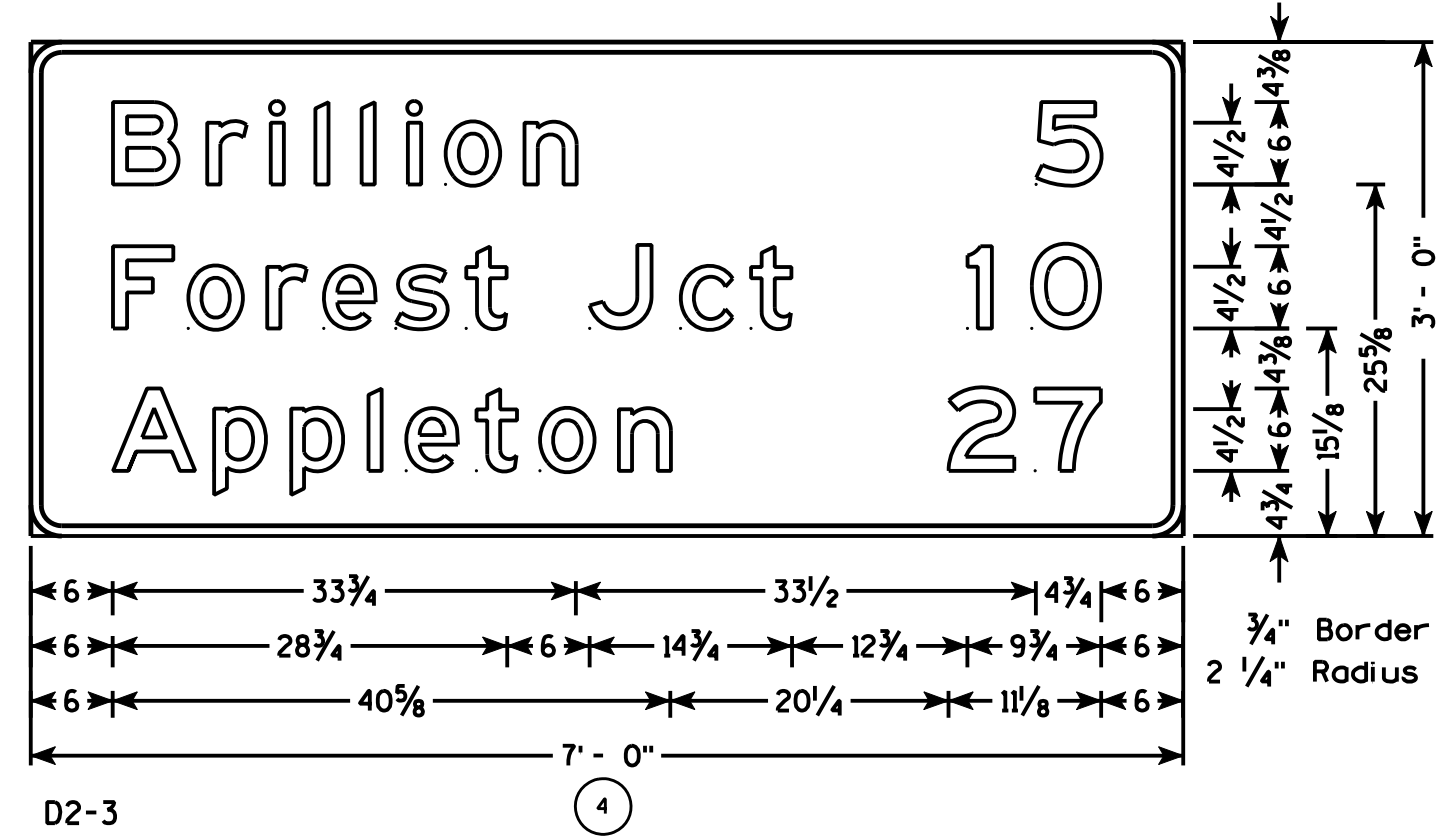
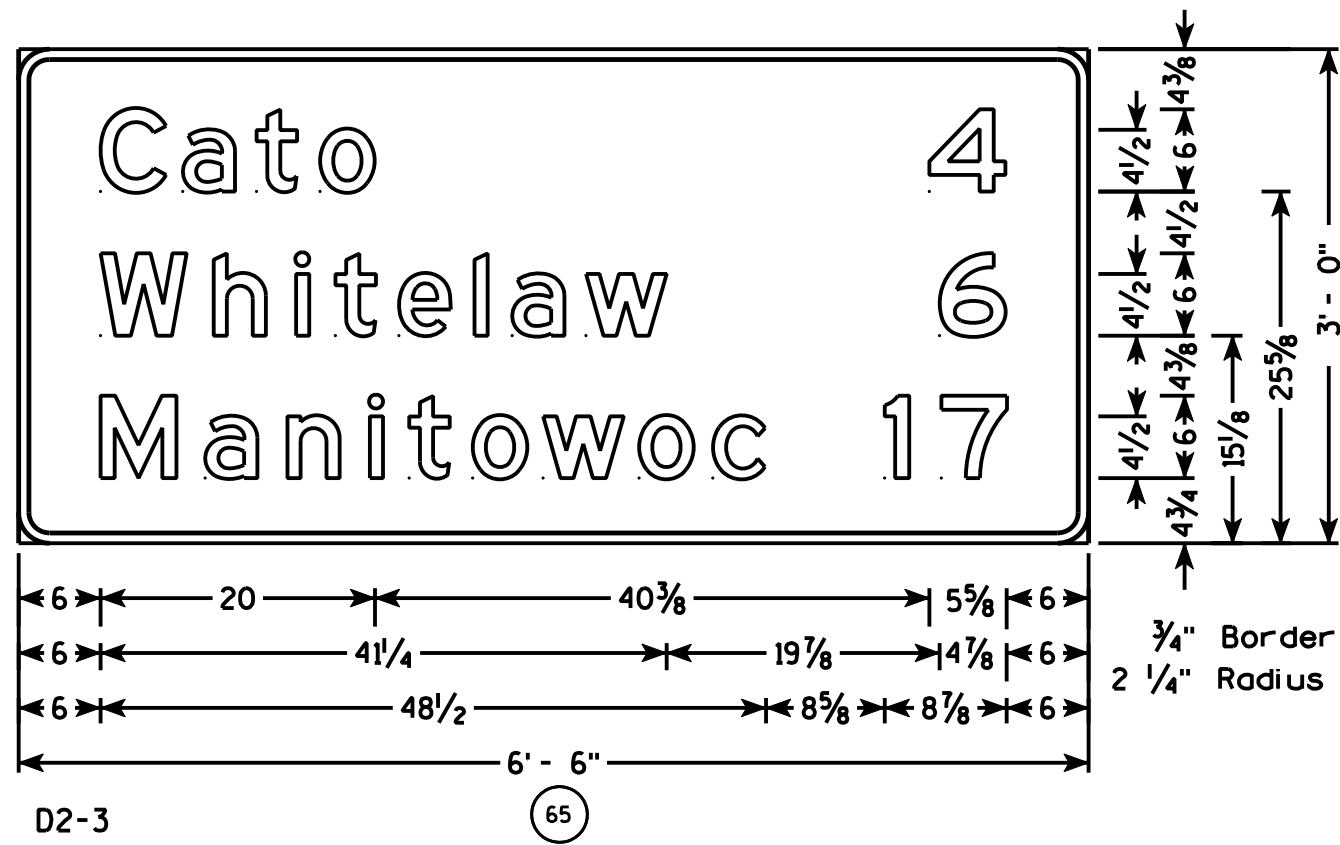
STANDARD SIGN

WF16-9P

WISCONSIN DEPT OF TRANSPORTATION

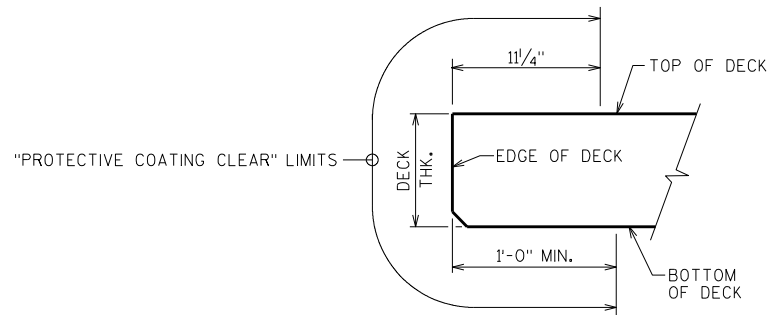
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/29/2012 PLATE NO. WF16-9P.4

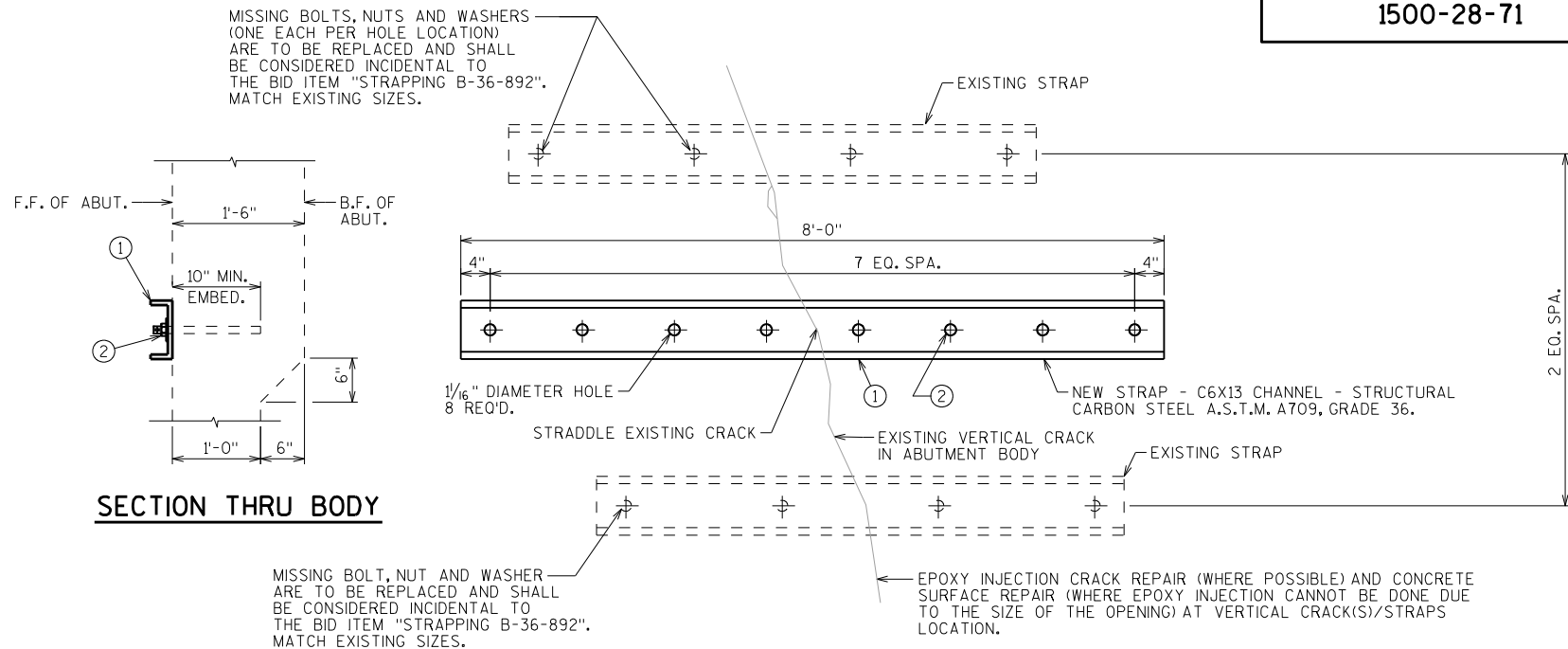


PLAN SHEET PRODUCED  
BY WISDOT-NE REGION



**PROTECTIVE COATING CLEAR DETAIL**

AT FLASHING LOCATIONS  
(PRIOR TO INSTALLATION OF THE FLASHING)

**SECTION THRU BODY****ELEVATION VIEW - LOOKING WEST****LEGEND**

- ① C6x13 WITH 1/16" DIA. HOLES FOR NO. 8.  
② CONCRETE MASONRY ANCHORS, TYPE S, 1" DIA, A490 ANCHOR BOLT WITH NUT AND WASHER (GALVANIZED), HAVING A MINIMUM PULLOUT CAPACITY OF 34 KIPS, EMBEDDED A MINIMUM OF 10 INCHES INTO CONCRETE. (8 BOLTS TOTAL)

**GENERAL NOTES**

BID ITEM SHALL BE "STRAPPING B-36-892" WHICH INCLUDES ALL ITEMS SHOWN.

CHANNEL SHALL BE GALVANIZED AFTER FABRICATION.

PRIOR TO GALVANIZING, STEEL CHANNEL SHALL BE GIVEN A NO. 6 COMMERCIAL BLAST CLEANING BY SSPC SPECS.

ALL MATERIAL USED IN FABRICATION SHALL BE MADE FROM MATERIALS CONFORMING TO ASTM DESIGNATION A709 GRADE 36 UNLESS NOTED OTHERWISE.

CAULK AROUND PERIMETER OF CHANNEL AND FILL PORTION OF HOLE AROUND ANCHOR BOLT & SHIM WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

SHIMS SHALL BE USED UNDER CHANNEL WHERE REQUIRED FOR ALIGNMENT.

**TOTAL ESTIMATED QUANTITIES**

502.3200	PROTECTIVE SURFACE TREATMENT	208	SY
502.6500	PROTECTIVE COATING CLEAR	2	GAL
509.0301	PREPARATION DECKS TYPE 1	15	SY
509.0302	PREPARATION DECKS TYPE 2	5	SY
509.0500	CLEANING DECKS	208	SY
509.1500	CONCRETE SURFACE REPAIR	10	SF
509.2500	CONCRETE MASONRY OVERLAY DECKS	13	CY
509.9025.S	EPOXY INJECTION CRACK REPAIR	6	LF
509.9026.S	CORED HOLES 2-INCH DIAMETER	1	EACH
SPV.0090	16 GAUGE GALVANIZED METAL FLASHING	80	LF
SPV.0105	STRAPPING B-36-892	1	LS

☑ BID ITEM ALSO INCLUDES CONCRETE FOR:  
"PREPARATION DECKS TYPE 1" AND  
"PREPARATION DECKS TYPE 2".

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE		B-36-892	
DRAWN BY		DDS	PLANS CK'D. JPH
QUANTITIES AND DETAILS		SHEET 2	



## *Wisconsin Department of Transportation*

Dedicated people creating transportation solutions  
through innovation and exceptional service.

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