

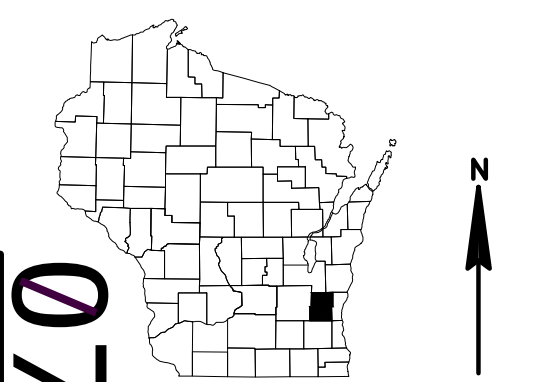
WKE PROJECT ID: 1100-13-71 WITH: 2290-08-71, 3110-07-70 COUNTY: WASHINGTON

APRIL 2018

ORDER OF SHEETS

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

TOTAL SHEETS = 70



DESIGN DESIGNATION	STH 60	IH 41
A.A.D.T. 2018	= 25,900	45,700
A.A.D.T. 2038	= 30,100	52,500
D.H.V.	= 2,820	5,210
D.D.	= 59-41	60-40
T.	= 5.3%	22.2%
DESIGN SPEED	= 55 MPH	70 MPH
ESALS	= N/A	N/A

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

OVERHEAD UTILITY

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

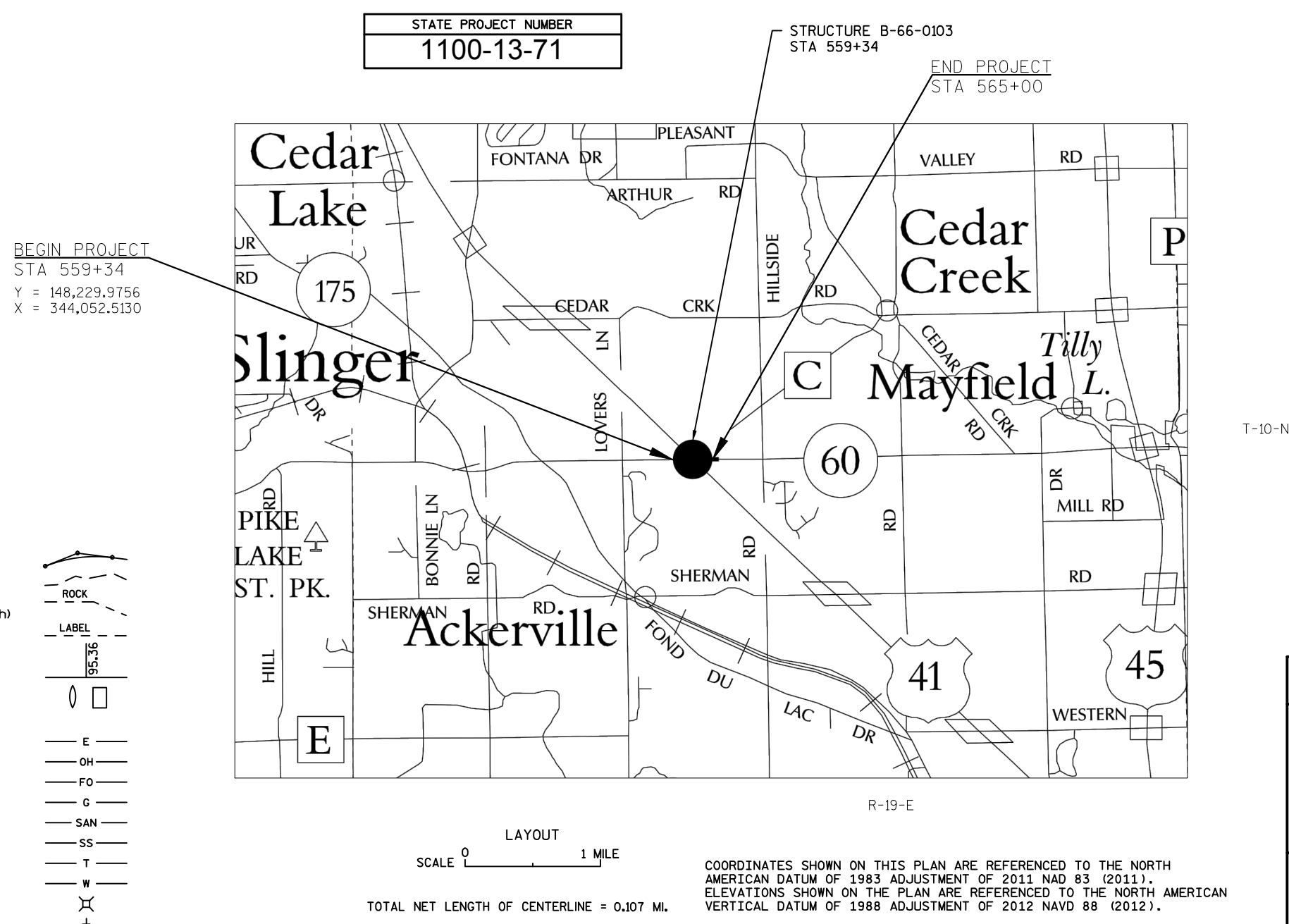
IH 41 NB LOOP RAMP & STH 60

MILWAUKEE TO FOND DU LAC ROAD

OFF 41

WASHINGTON COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1100-13-71	WISC 2018191	1



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor WISDOT

Designer BRETT MATHENY

Project Manager BRIAN PLUEMER

Regional Examiner

Regional Supervisor REEM SHAHIN

APPROVED FOR THE DEPARTMENT

DATE: 11-1-17 Brian Plumer (Signature)

STANDARD ABBREVIATIONS

AADT	ANNUAL AVERAGE DAILY TRAFFIC
BM	BENCHMARK
C/L	CENTER LINE
CONC	CONCRETE
D	DEGREE OF CURVE
DHV	DESIGN HOUR VOLUME
DD	DIRECTIONAL DISTRIBUTION
E	EAST
X	EAST GRID COORDINATE
EB	EASTBOUND
ESALS	EQUIVALENT SINGLE AXLE LOADS
FT	FOOT
INL	INLET
LT	LEFT
L	LENGTH OF CURVE
LF	LINEAR FOOT
MH	MANHOLE
MB	MESSAGE BOARD
N	NORTH
Y	NORTH GRID COORDINATE
NB	NORTHBOUND
PCC	POINT OF COMPOUND CURVE
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
R	RADIUS
R	RANGE
S	SOUTH
SB	SOUTHBOUND
SF	SQUARE FEET
SY	SQUARE YARD
SDD	STANDARD DETAIL DRAWING
STH	STATE TRUNK HIGHWAY
STA	STATION
SS	STORM SEWER
T	TANGENT
T	TOWN
T	TRUCKS (PERCENT OF)
USH	UNITED STATES HIGHWAY
VAR	VARIABLE
W	WEST
WB	WESTBOUND

CONTACTS

WISDOT REGION CONTACT

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PHONE: 262-335-6881
FAX: 262-335-4171
scott.schmidt@co.washington.wi.us

VILLAGE OF SLINGER DIRECTOR OF PUBLIC WORKS

JAMES HAGGERTY
300 SLINGER ROAD
SLINGER, WI 53086
PHONE: 262-644-5265 Ext. 135
FAX: 262-644-6341

ORDER OF SECTION 2 SHEETS

PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PLAN DETAIL & EROSION CONTROL
PAVEMENT MARKING
TRAFFIC CONTROL & DETOUR ROUTE
ALIGNMENT

GENERAL NOTES

THERE ARE NO KNOWN UTILITY FACILITIES WITHIN THE PROJECT AREA. IDENTIFY ALL UTILITIES IN THE AREA BY CONTACTING DIGGERS HOTLINE.

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

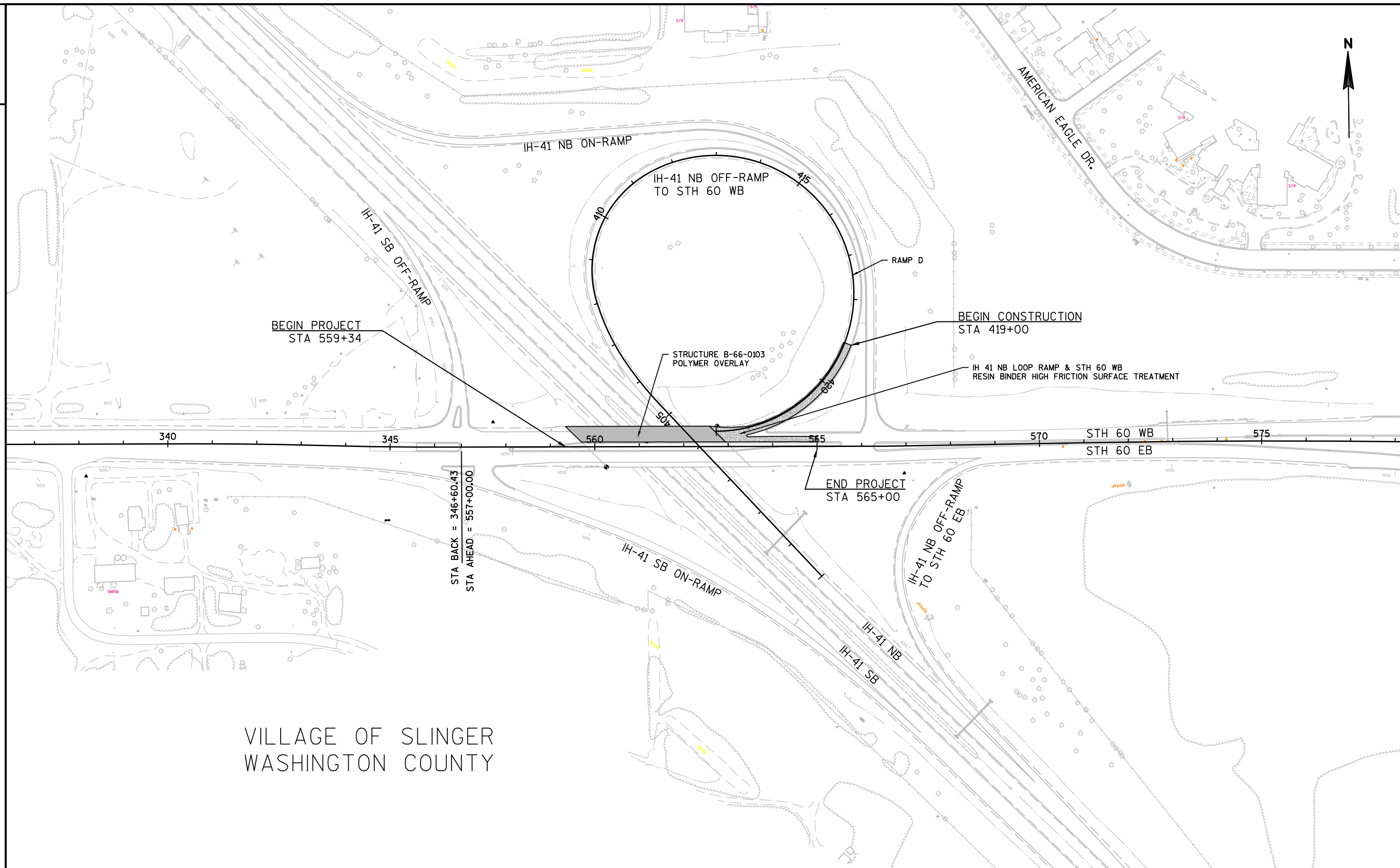
DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE FERTILIZED, SEEDED AND MULCHED.

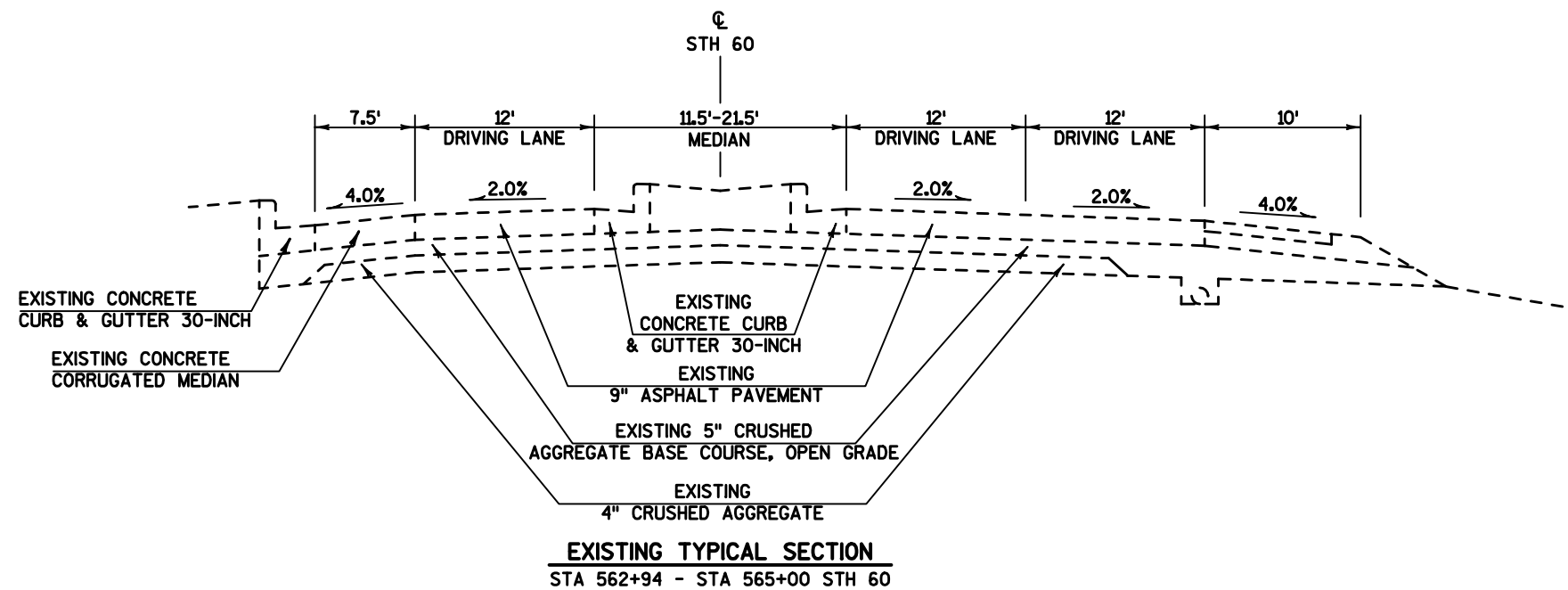
EXCAVATION, BORROW, TOPSOIL, MULCH, FERTILIZER, AND SEEDING ALL PAID AS PART OF BARRIER SYSTEM GRADING SHAPING FINISHING

CONTRACTOR MUST CONTACT THE PROJECT ENGINEER AND THE WASHINGTON COUNTY SURVERYOR - SCOTT SCHMIDT, AT LEAST TWO WEEKS PRIOR TO WORK NEAR ANY PUBLIC SURVERY MONUMENT.

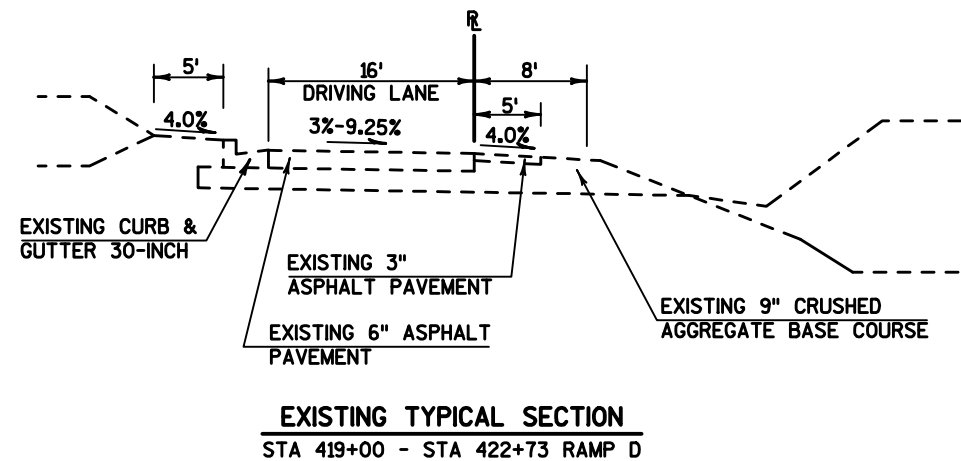
REFER TO THE EROSION CONTROL SPECIAL PROVISIONS FOR FURTHER REQUIREMENTS ON EROSION CONTROL.

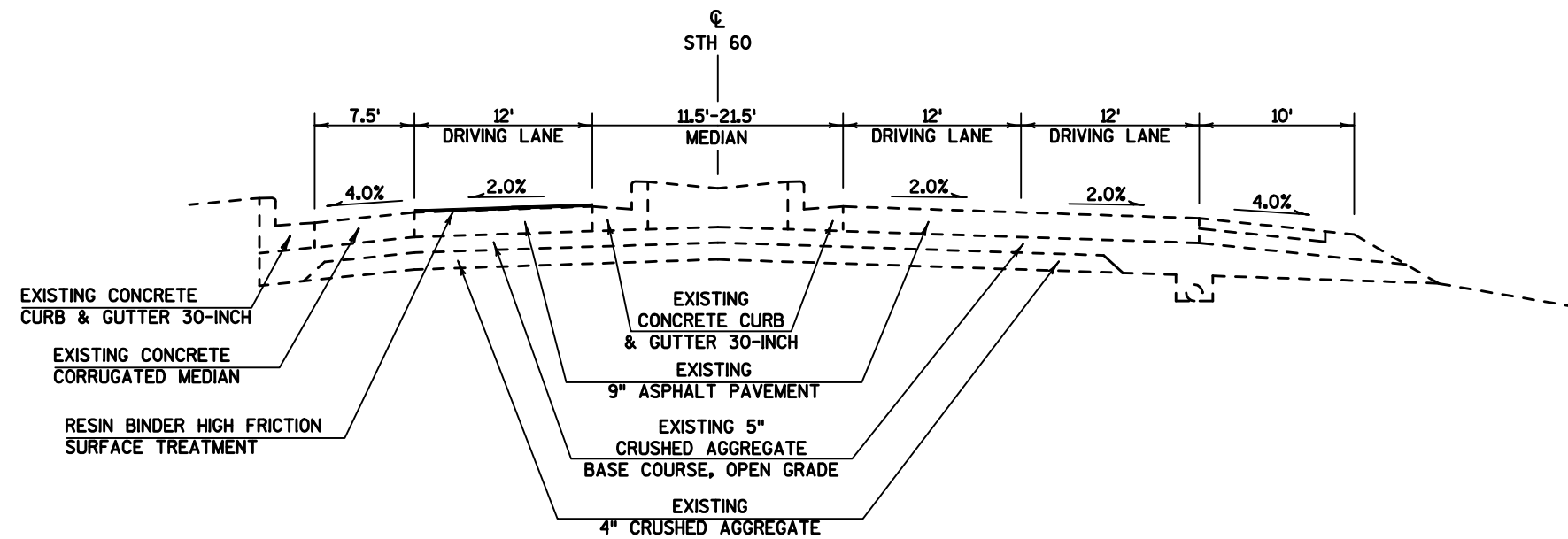






*SEE STRUCTURE PLAN FOR BRIDGE TYPICAL SECTION

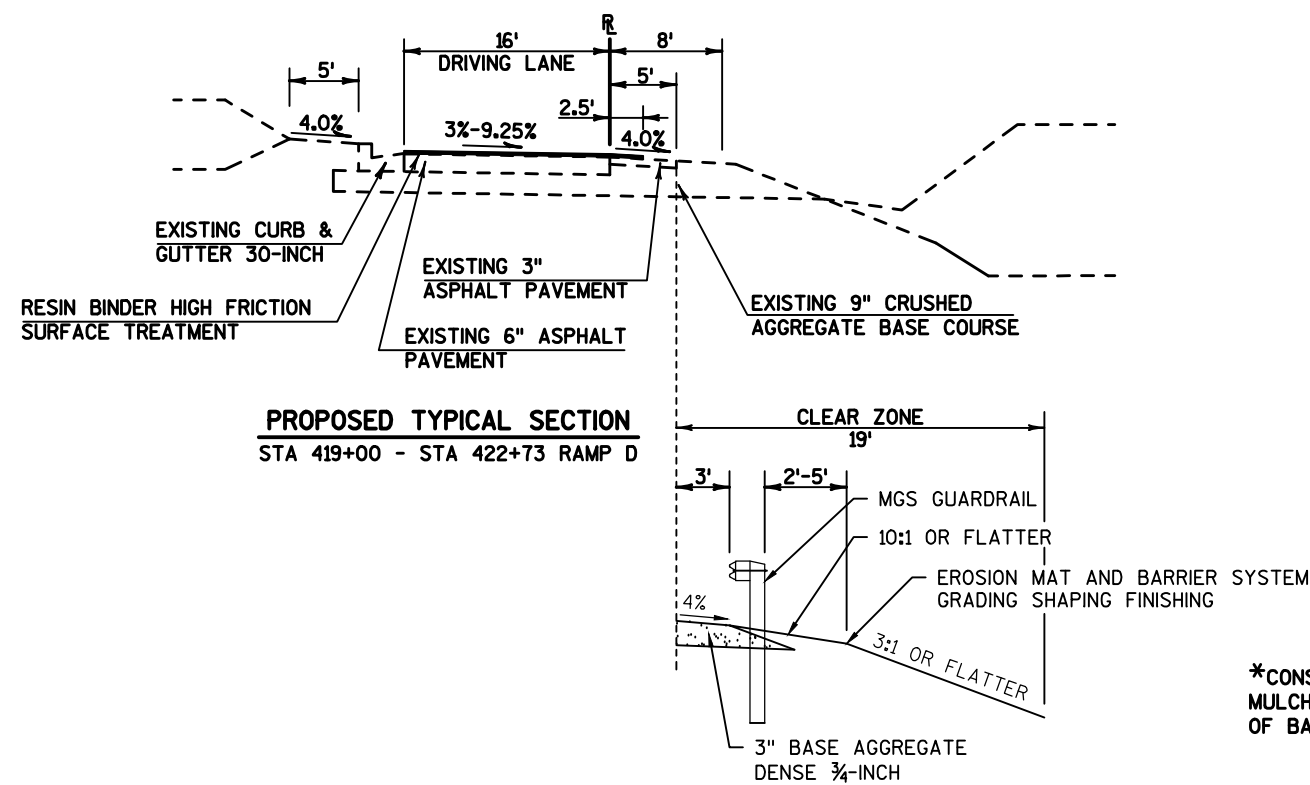




PROPOSED TYPICAL SECTION

STA 562+94 - STA 565+00 STH 60

*SEE STRUCTURE PLAN FOR BRIDGE TYPICAL SECTION



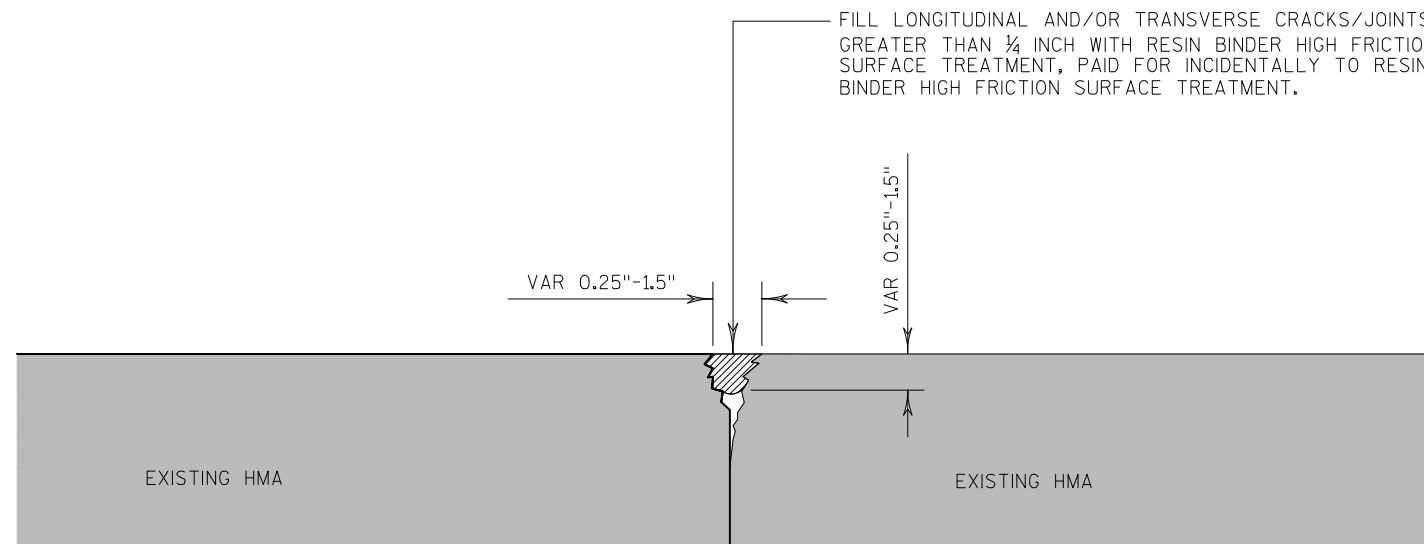
PROPOSED TYPICAL SECTION

STA 419+00 - STA 422+73 RAMP D

SHOULDER WITH MGS GUARDRAIL

STA 420+87 - STA 422+61 RAMP D

*CONSTRUCTION STAKING, EXCAVATION, BORROW, TOPSOIL, MULCH, FERTILIZER, AND SEEDING ALL PAID AS PART OF BARRIER SYSTEM GRADING SHAPING FINISHING



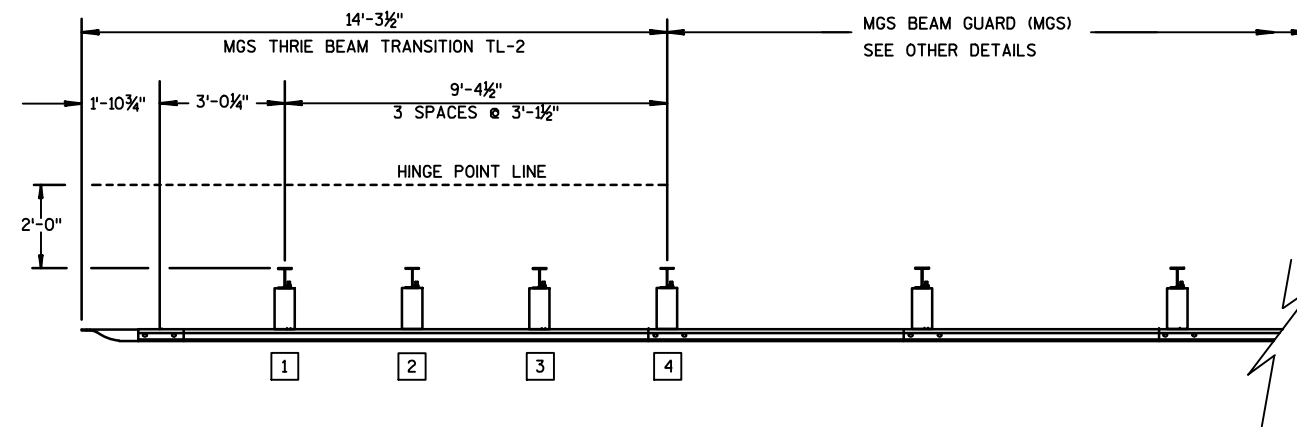
RESIN BINDER HIGH FRICTION SURFACE TREATMENT
PAVEMENT SURFACE PREPERATION

JOINT AND CRACK SEALING LOCATIONS TO BE DETERMINED
IN THE FIELD BY THE ENGINEER

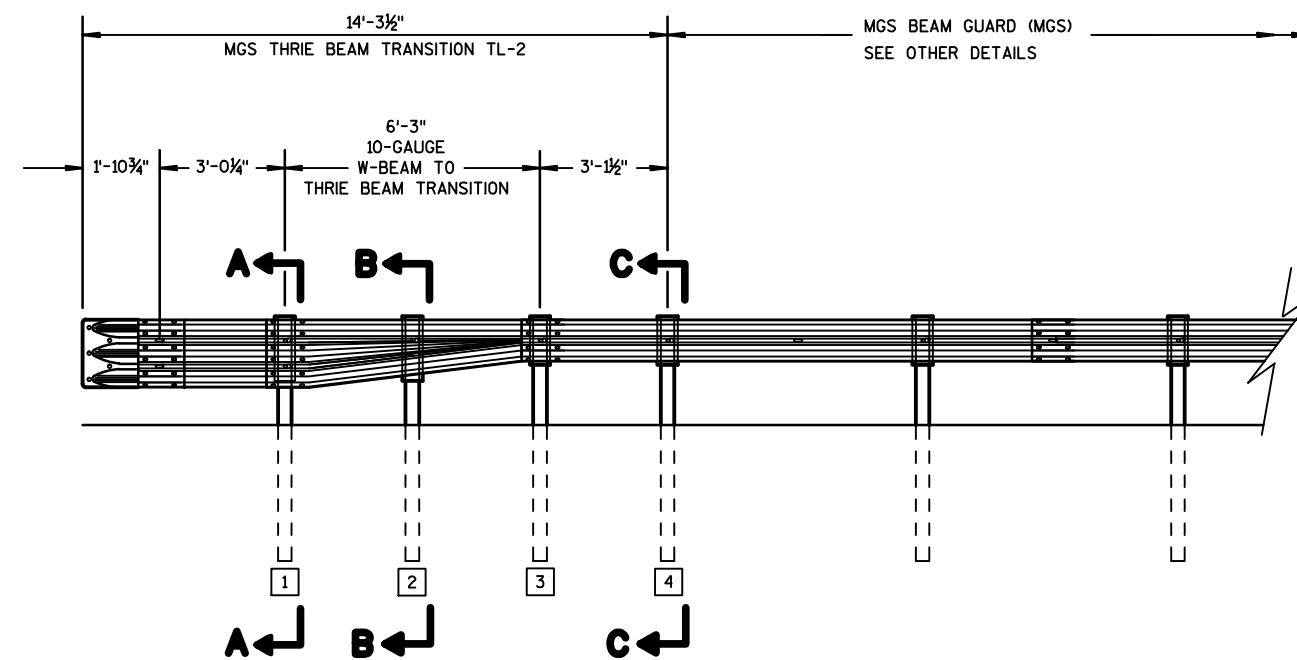
GENERAL NOTES

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS $2\frac{1}{2}$ ", AND 12" DIAMETER AROUND POST.

TRANSITION USES STEEL POSTS ONLY.



PLAN VIEW



ELEVATION VIEW

MGS THRIE BEAM TRANSITION TL-2

GENERAL NOTES

- ① POST BOLTS ARE $\frac{5}{8}$ " DIAMETER ASTM A307 BUTTON HEAD BOLT. A POST BOLT REQUIRES A $\frac{5}{8}$ " DIAMETER A563A DOUBLE RECESSED (OR) HEAVY HEX AND $\frac{5}{8}$ " DIAMETER F844 FLAT WASHER. LENGTH OF POST BOLT MAY VARY.
- ② WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- ③ TOLERANCE FOR TOP OF W-BEAM RAIL IS + 1".

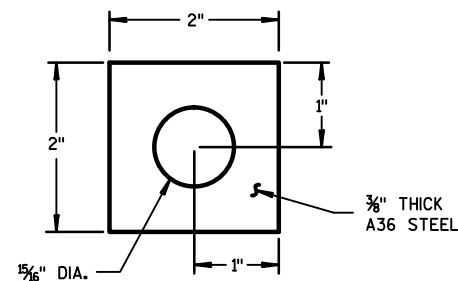
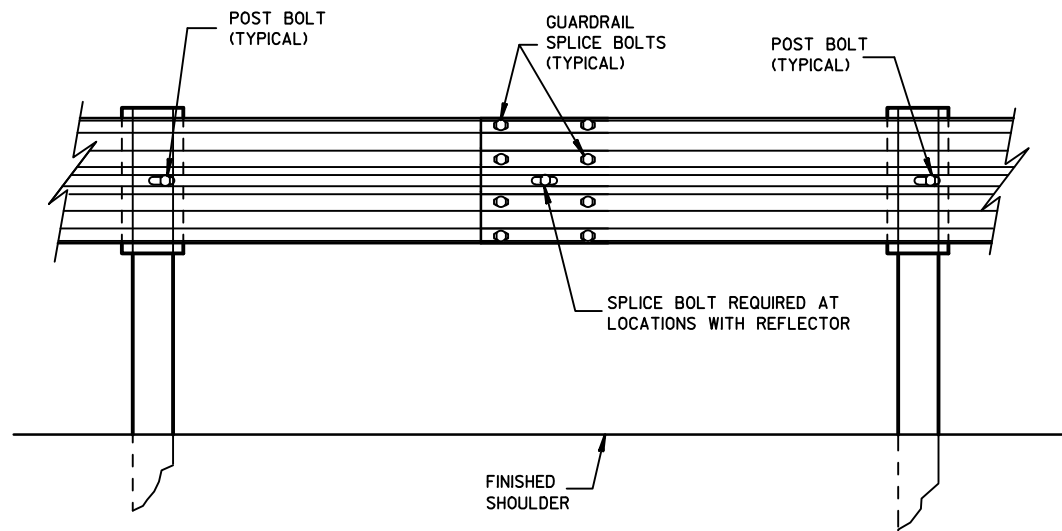
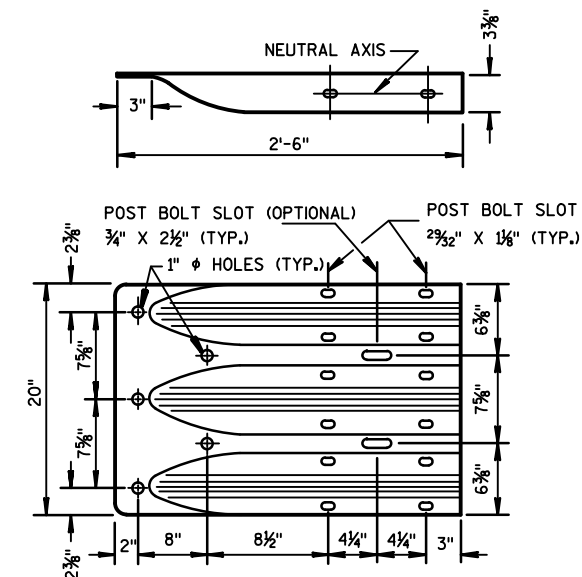
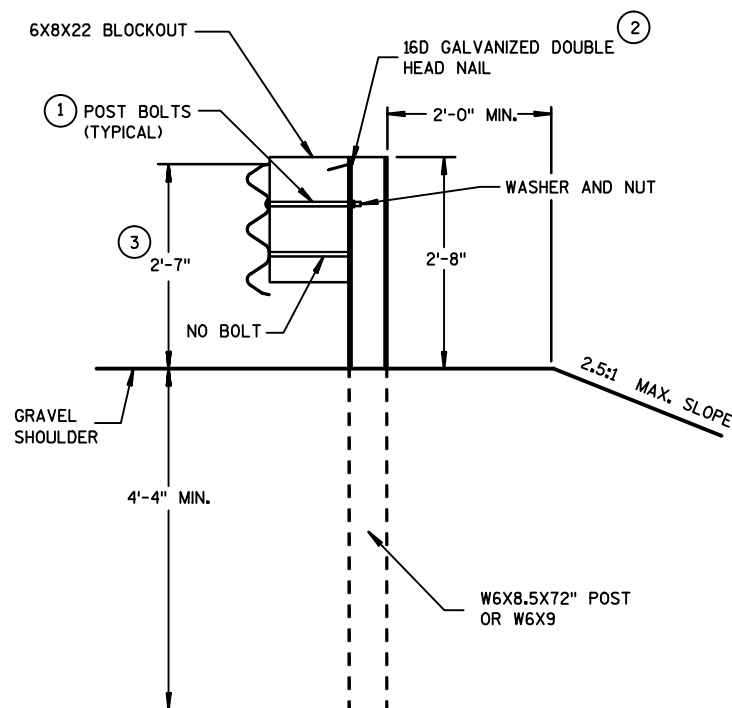
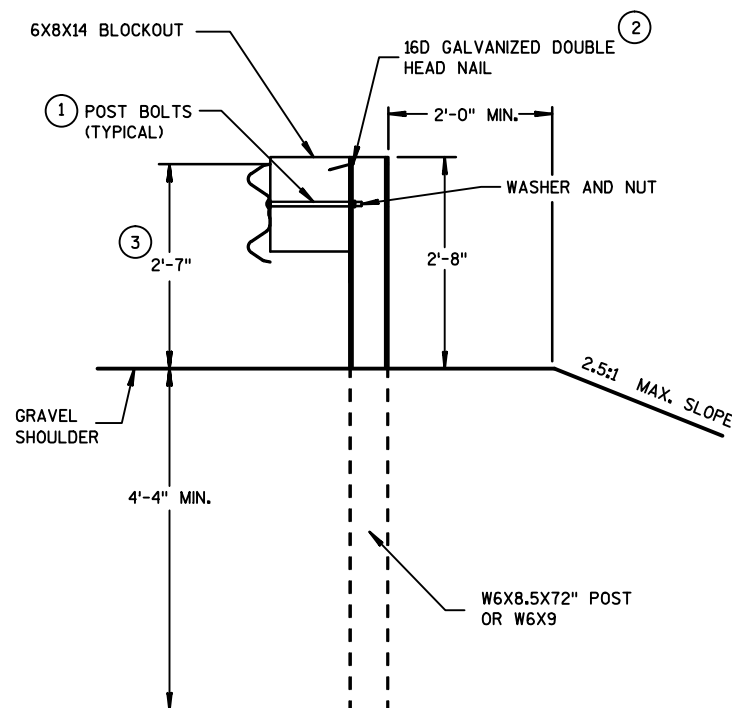
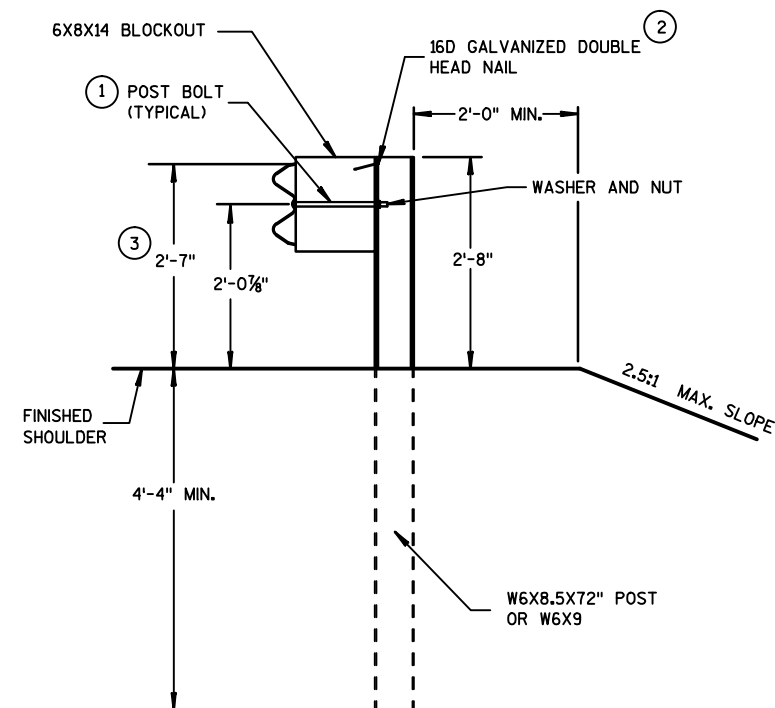
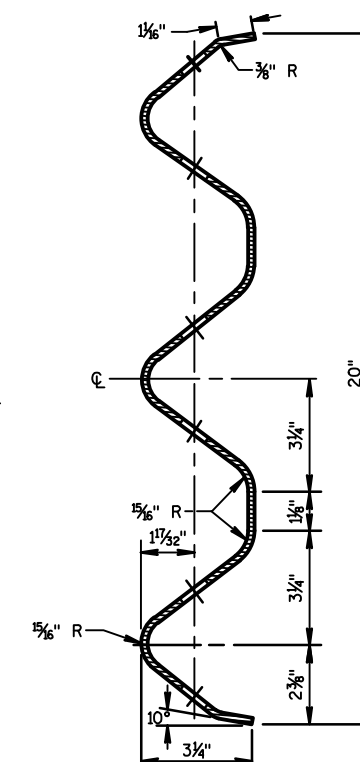


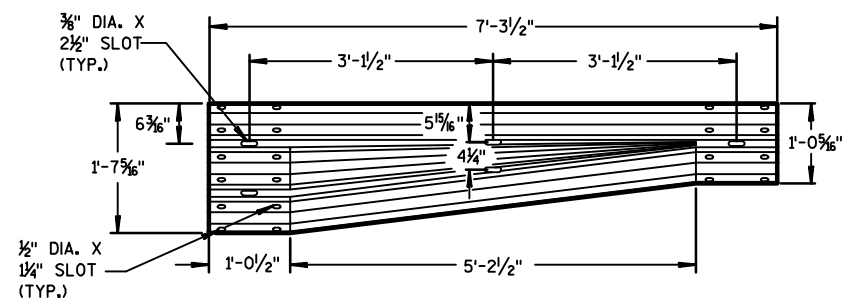
PLATE WASHER DETAIL



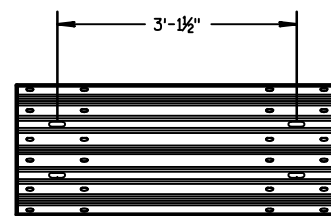
SPLICE DETAIL

THRIE BEAM
TERMINAL CONNECTORSECTION A-A
POST 1SECTION B-B
POST 2SECTION C-C
POSTS 3-4SECTION THRU THRIE
BEAM RAIL ELEMENT

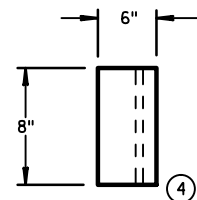
MGS THRIE BEAM TRANSITION TL-2



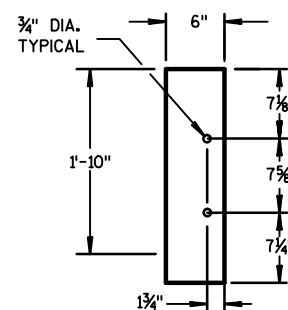
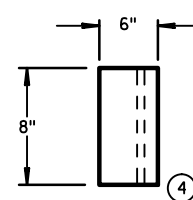
10 GAUGE W-BEAM TO THRIE BEAM TRANSITION SECTION



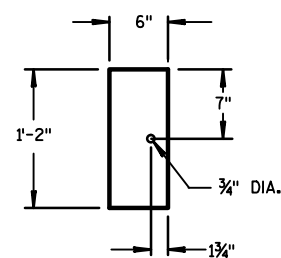
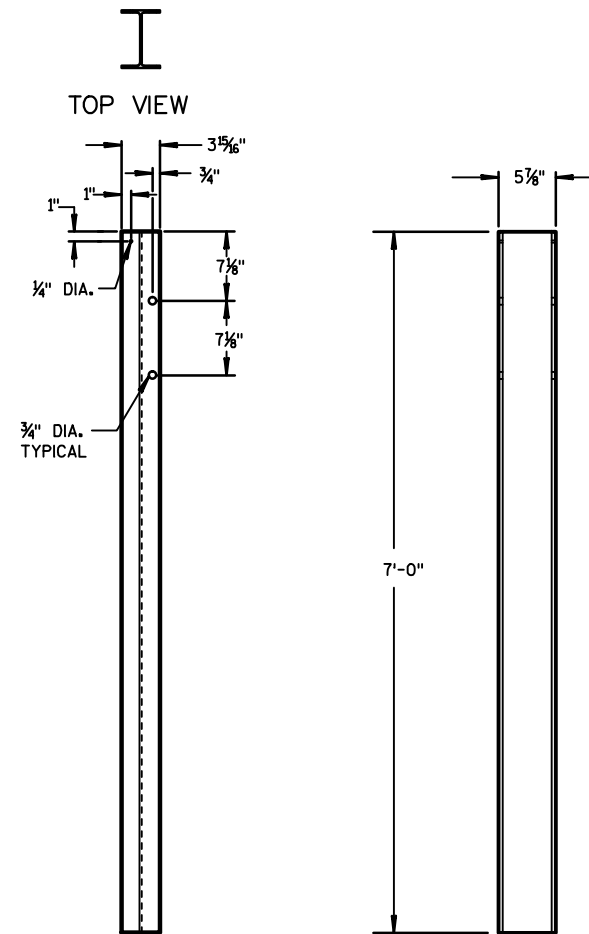
10 GAUGE THRIE BEAM SECTION



TOP VIEW

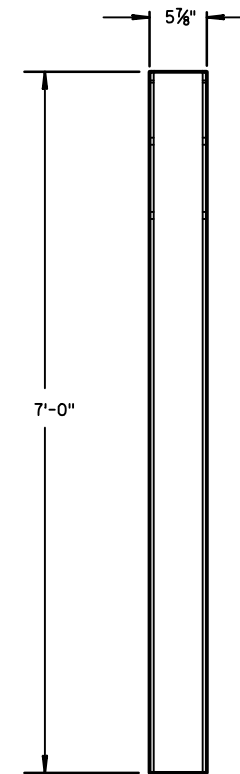
FRONT VIEW
BLOCKOUT
POST 1

TOP VIEW

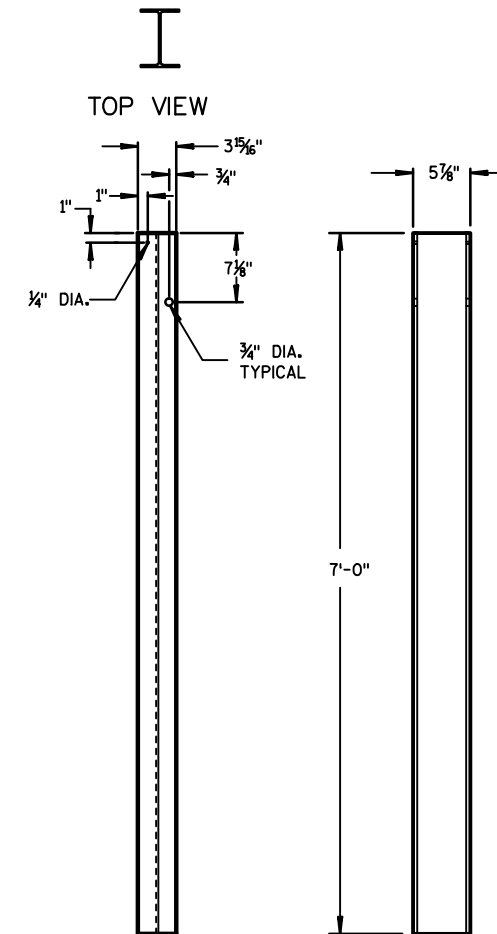
FRONT VIEW
BLOCKOUT
POSTS 2-4

FRONT VIEW

STEEL POSTS 1-2

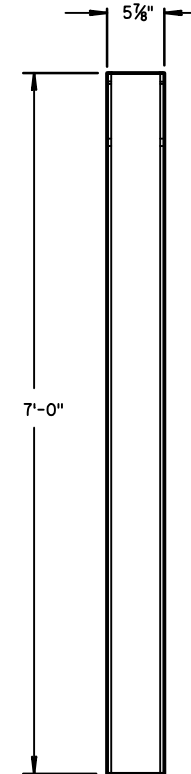


SIDE VIEW



FRONT VIEW

STEEL POSTS 3-4



SIDE VIEW

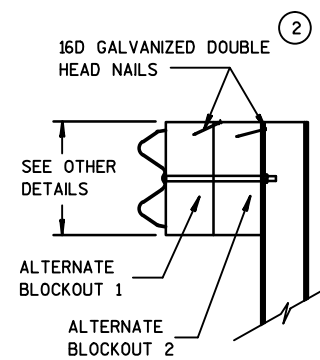
GENERAL NOTES

STEEL POSTS ARE W6X8.5 OR W6X9.

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

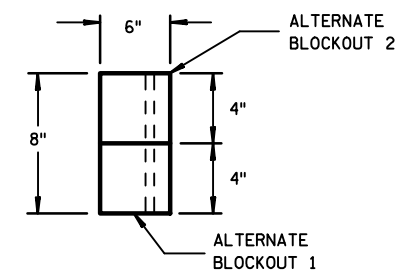
② WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

④ WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.



SIDE VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



TOP VIEW

MGS THRIE BEAM TRANSITION TL-2

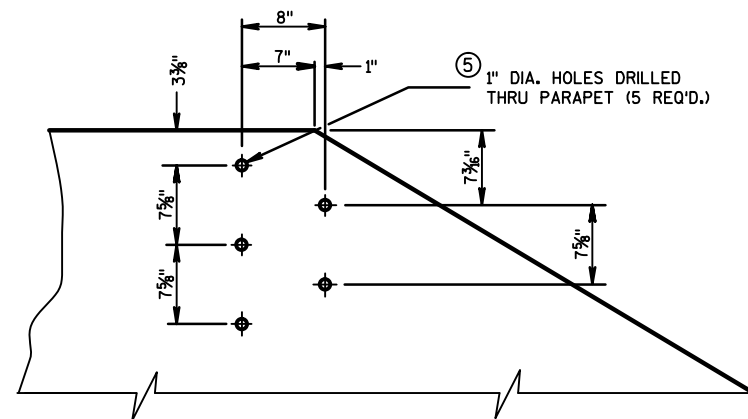
GENERAL NOTES

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

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

TRANSITION USES STEEL POSTS ONLY.

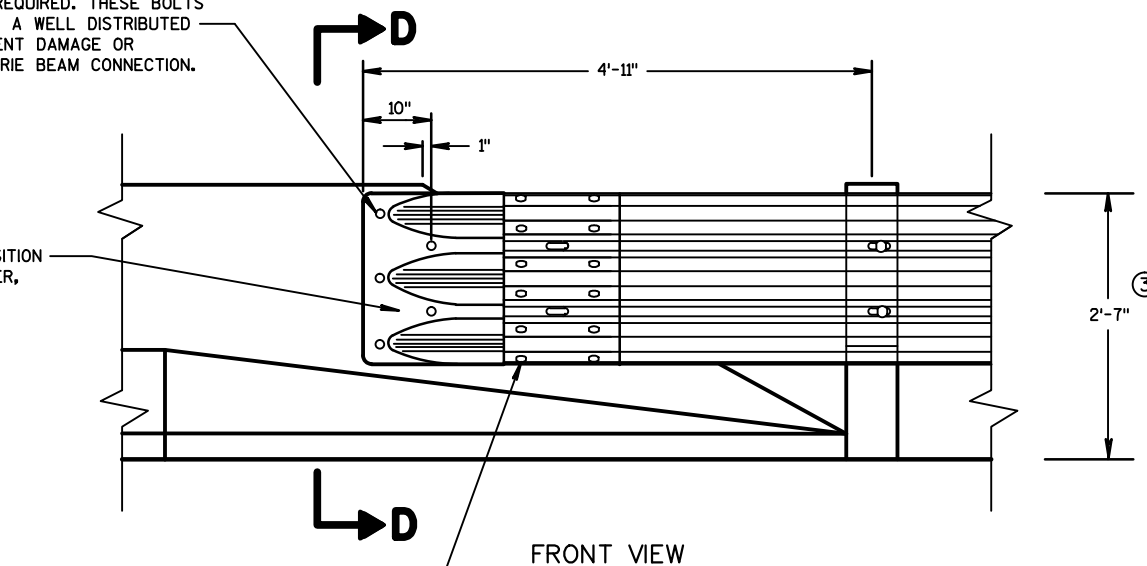
- ③ TOLERANCE FOR TOP OF W-BEAM RAIL IS $\pm 1"$.
- ⑤ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ⑥ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X $\frac{5}{8}"$ THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION

- ⑤ ⑥ 1" DIA. HOLES DRILLED THROUGH PARAPET. FIVE $\frac{3}{8}"$ DIA. H.S. HEX BOLTS AND NUTS WITH ONE $1\frac{3}{4}"$ O.D. FLAT WASHER UNDER EACH BOLT HEAD AND NUT REQUIRED. THESE BOLTS MUST BE TIGHTENED IN A WELL DISTRIBUTED PATTERN SO TO PREVENT DAMAGE OR DISTORTION OF THE THRIE BEAM CONNECTION.

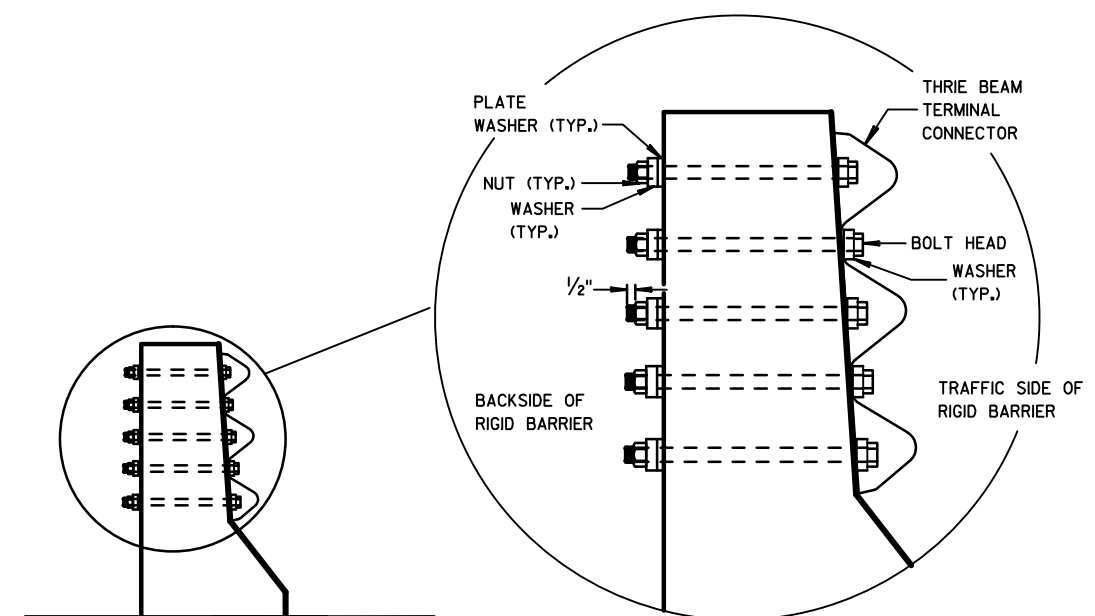
WHEN RETROFITTING A TRANSITION TO AN EXISTING RIGID BARRIER, INSTALL PLATE WASHERS ON BACKSIDE OF RIGID BARRIER.



FRONT VIEW

THRIE BEAM CONNECTION TO BRIDGE
PARAPETS WITH SLOPED ENDS

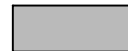
$1\frac{1}{4}"$ BUTTON HEAD BOLT AND RECESSED GUARDRAIL NUT ATTACHING AT ALL RAIL SPLICES. PLACE RECTANGULAR WASHERS UNDER GUARDRAIL NUTS AT TRANSITION RAIL TO END SHOE CONNECTION.



SECTION D-D

MGS THRIE BEAM TRANSITION TL-2

LEGEND

RESIN BINDER HIGH FRICTION
SURFACE TREATMENTPOLYMER OVERLAY B-66-0103
(SEE STRUCTURE PLAN)

INLET PROTECTION TYPE C



SILT FENCE

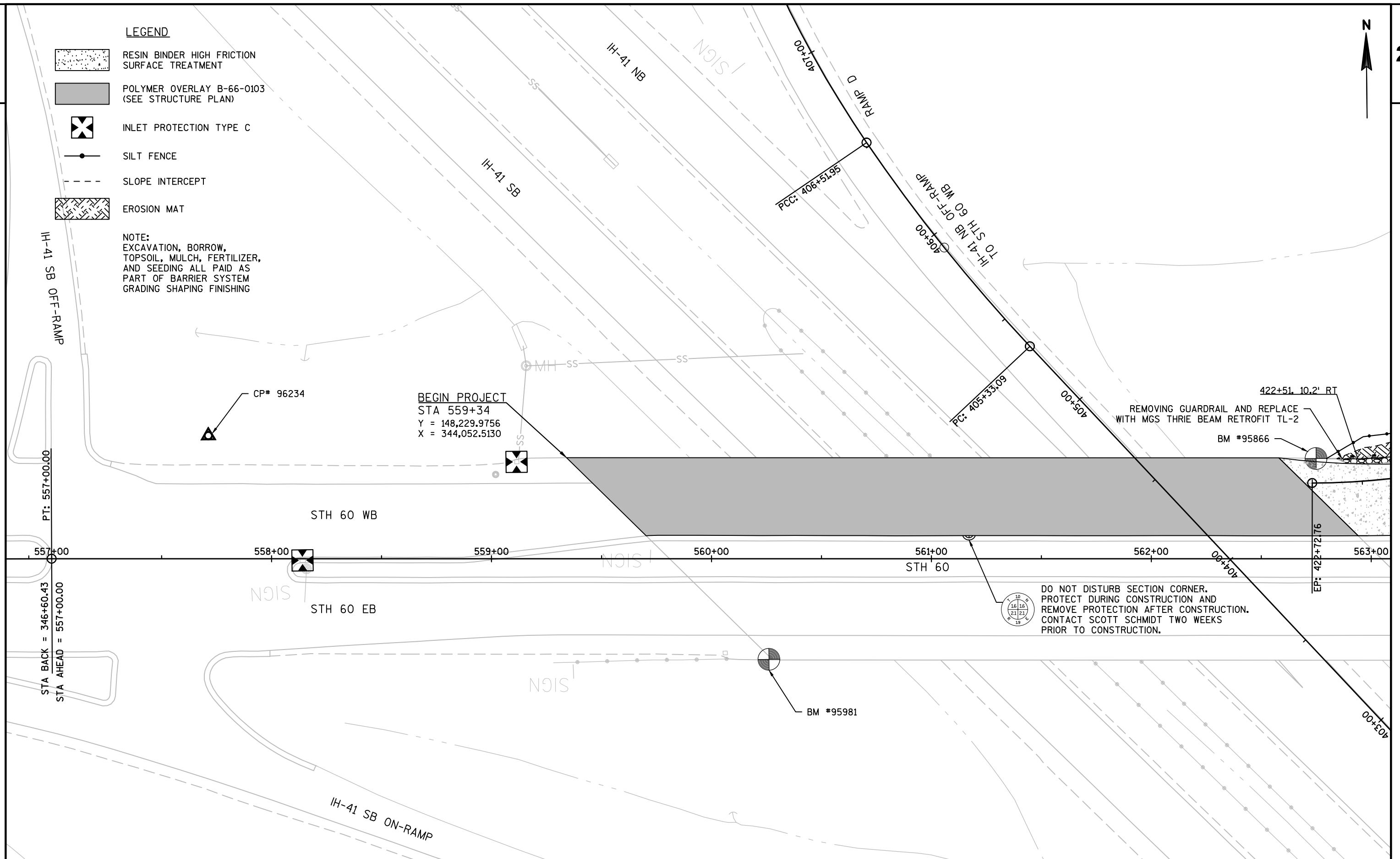


SLOPE INTERCEPT



EROSION MAT

NOTE:
EXCAVATION, BORROW,
TOPSOIL, MULCH, FERTILIZER,
AND SEEDING ALL PAID AS
PART OF BARRIER SYSTEM
GRADING SHAPING FINISHING



PROJECT NO: 1100-13-71

HWY: IH-41

COUNTY: WASHINGTON

PLAN DETAIL & EROSION CONTROL

SHEET

E

FILE NAME : \\WKERTOV\FILPI01\N3PUBLIC\PD5\C3D\CAD\11001301\021201_PD.DWG
LAYOUT NAME - 021201_PD - 021201_PD

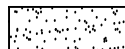
PLOT DATE : 10/19/2017 11:16 AM

PLOT BY : MATHENY, ROBERT B

PLOT NAME :

PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

RESIN BINDER HIGH FRICTION
SURFACE TREATMENT

POLYMER OVERLAY B-66-0103
(SEE STRUCTURE PLAN)



INLET PROTECTION TYPE C

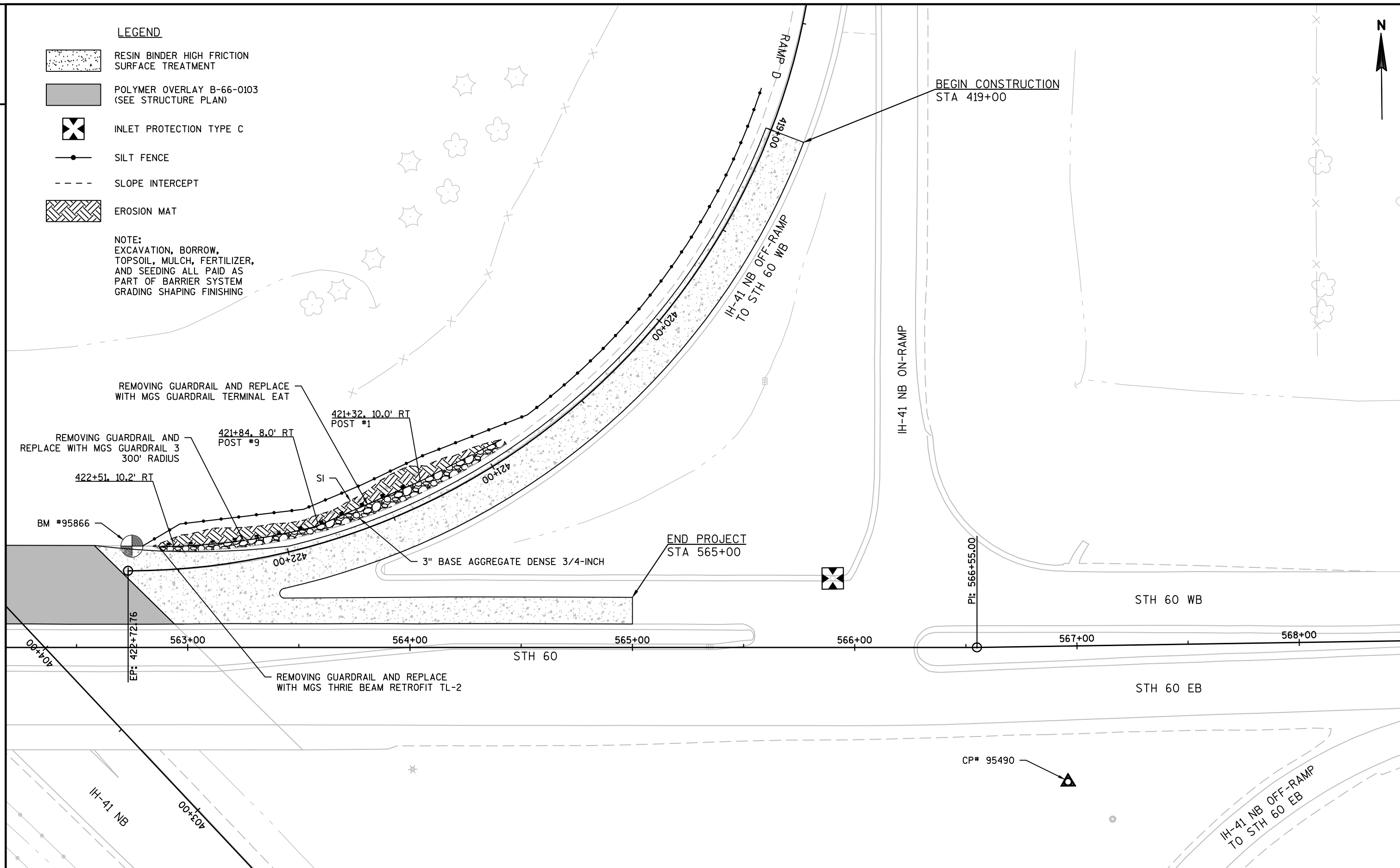


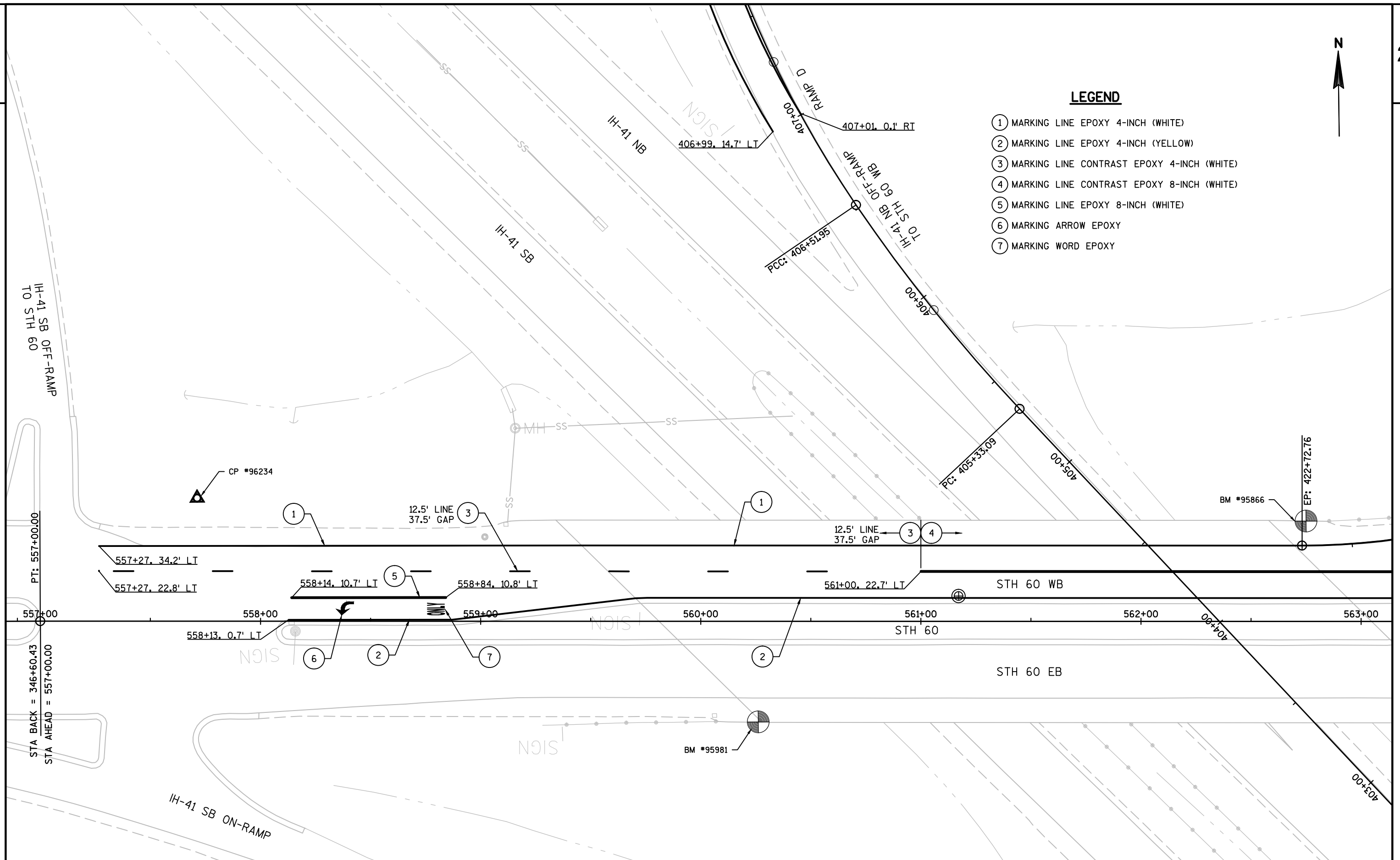
SILT FENCE

[illegible]

EROSION MAT

NOTE:
EXCAVATION, BORROW,
TOPSOIL, MULCH, FERTILIZER,
AND SEEDING ALL PAID AS
PART OF BARRIER SYSTEM
GRADING SHAPING FINISHING

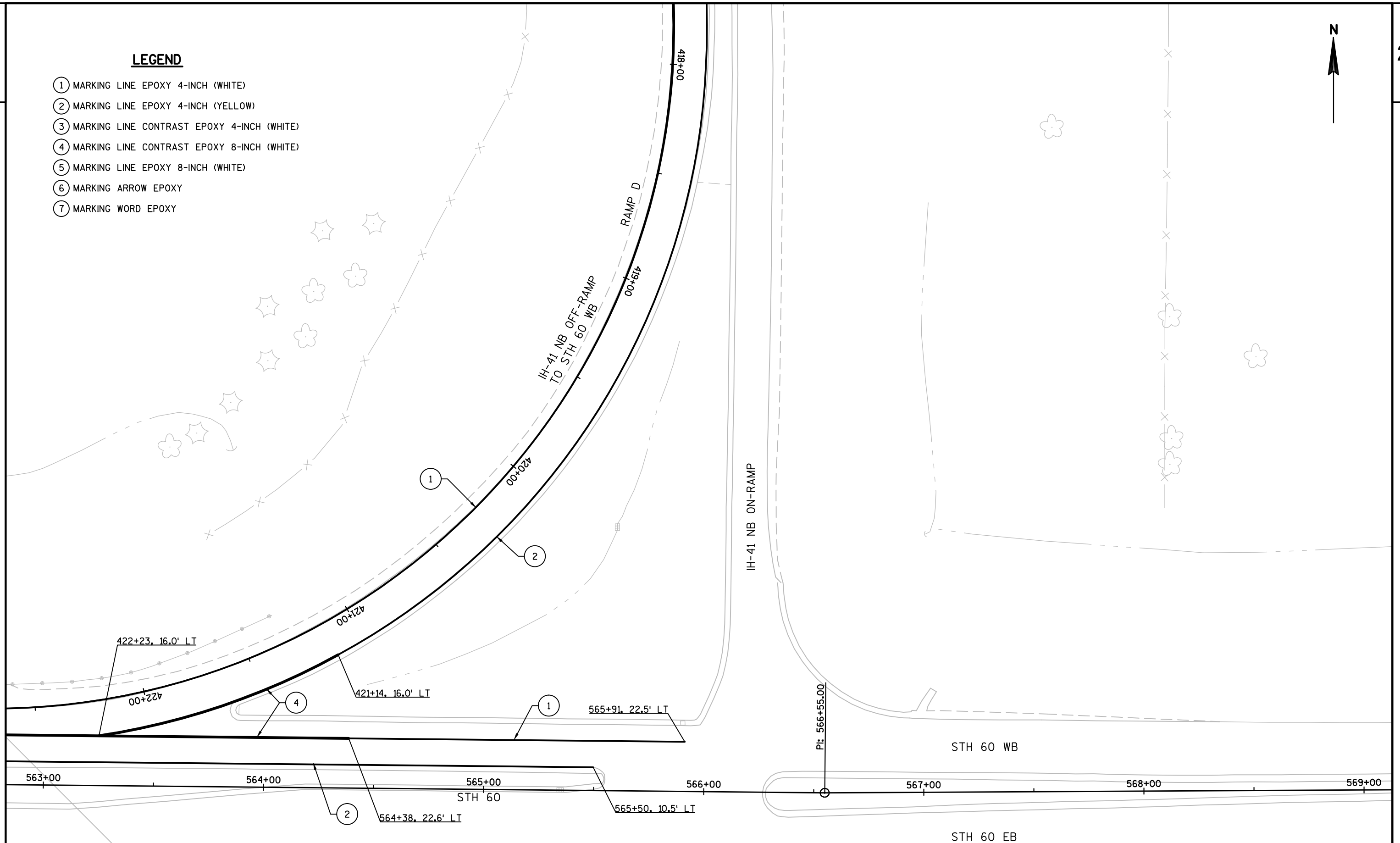


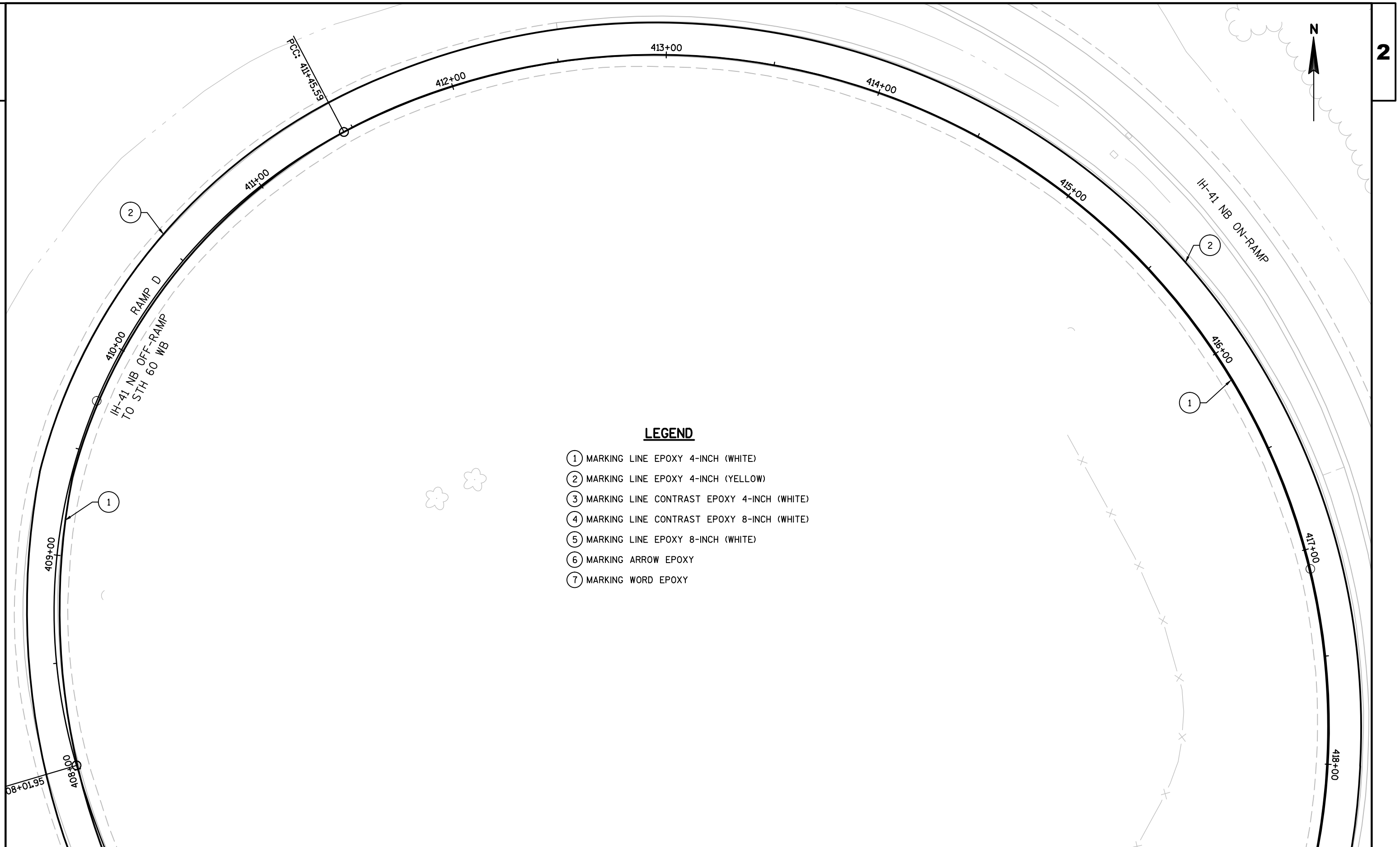


PROJECT NO: 1100-13-71	HWY: IH-41	COUNTY: WASHINGTON	PAVEMENT MARKING	SHEET	E
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LEGEND

- ① MARKING LINE EPOXY 4-INCH (WHITE)
- ② MARKING LINE EPOXY 4-INCH (YELLOW)
- ③ MARKING LINE CONTRAST EPOXY 4-INCH (WHITE)
- ④ MARKING LINE CONTRAST EPOXY 8-INCH (WHITE)
- ⑤ MARKING LINE EPOXY 8-INCH (WHITE)
- ⑥ MARKING ARROW EPOXY
- ⑦ MARKING WORD EPOXY

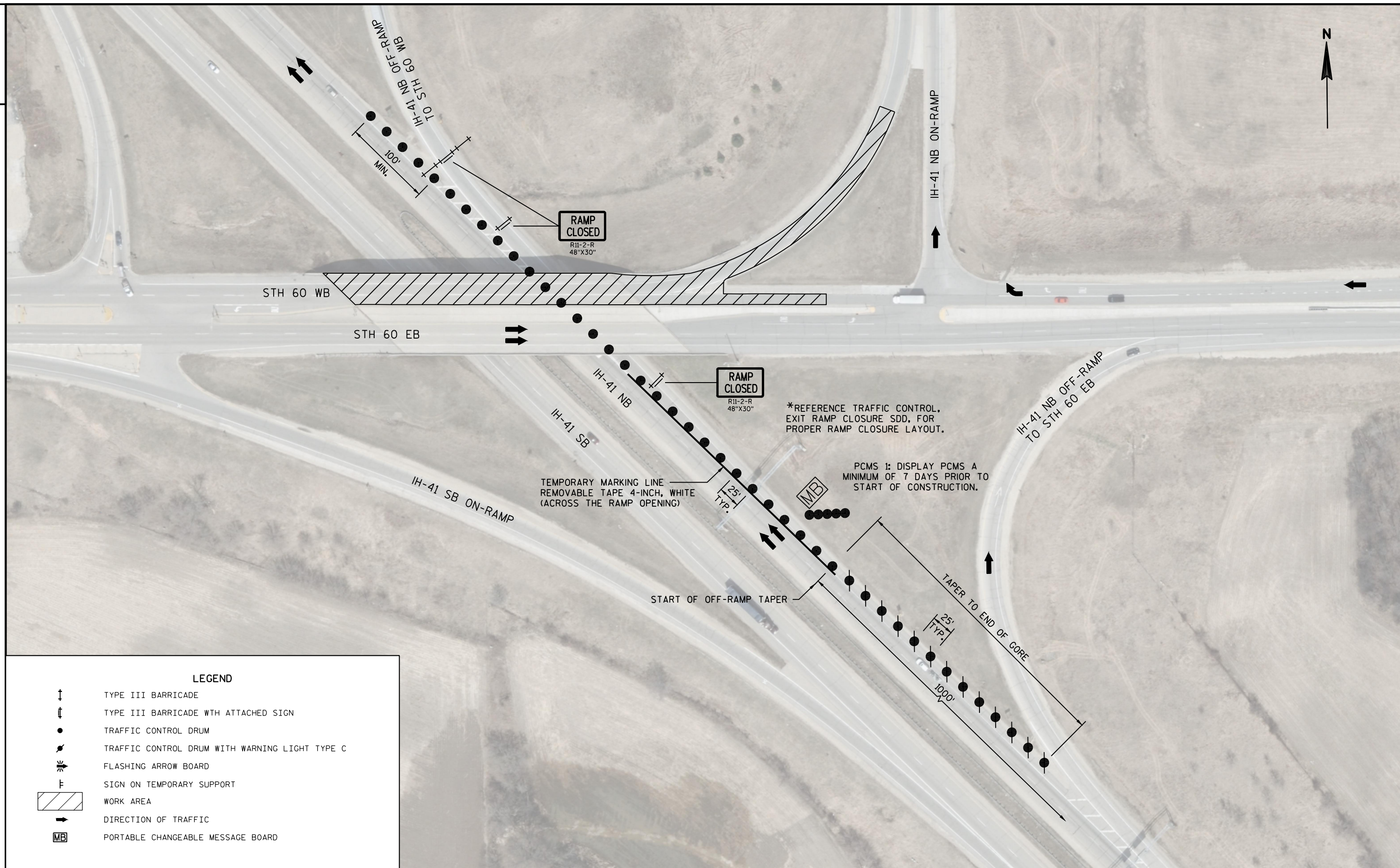




GENERAL NOTES FOR TRAFFIC CONTROL

- 1) ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
- 2) "W0" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- 3) THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- 4) THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.
- 5) SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SIGNS.
- 6) ALL TYPE III BARRICADES SHALL BE 8' WIDE, UNLESS OTHERWISE NOTED, AND EQUIPPED WITH TWO TYPE "A" (LOW INTENSITY FLASHING) LIGHTS.
- 7) INSTALL PROPOSED TRAFFIC CONTROL SIGNS ON BOTH OUTSIDE SHOULDER AND MEDIAN SIDE OF ALL DIVIDED ROADWAYS OR AS DIRECTED BY THE ENGINEER.
- 8) DUE TO WORK OPERATIONS ASSUME ALL WORK ACTIVITIES WILL BE LESS THAN 4 DAYS. DO NOT REMOVE PAVEMENT MARKING PER TRAFFIC CONTROL, LANE CLOSURE.



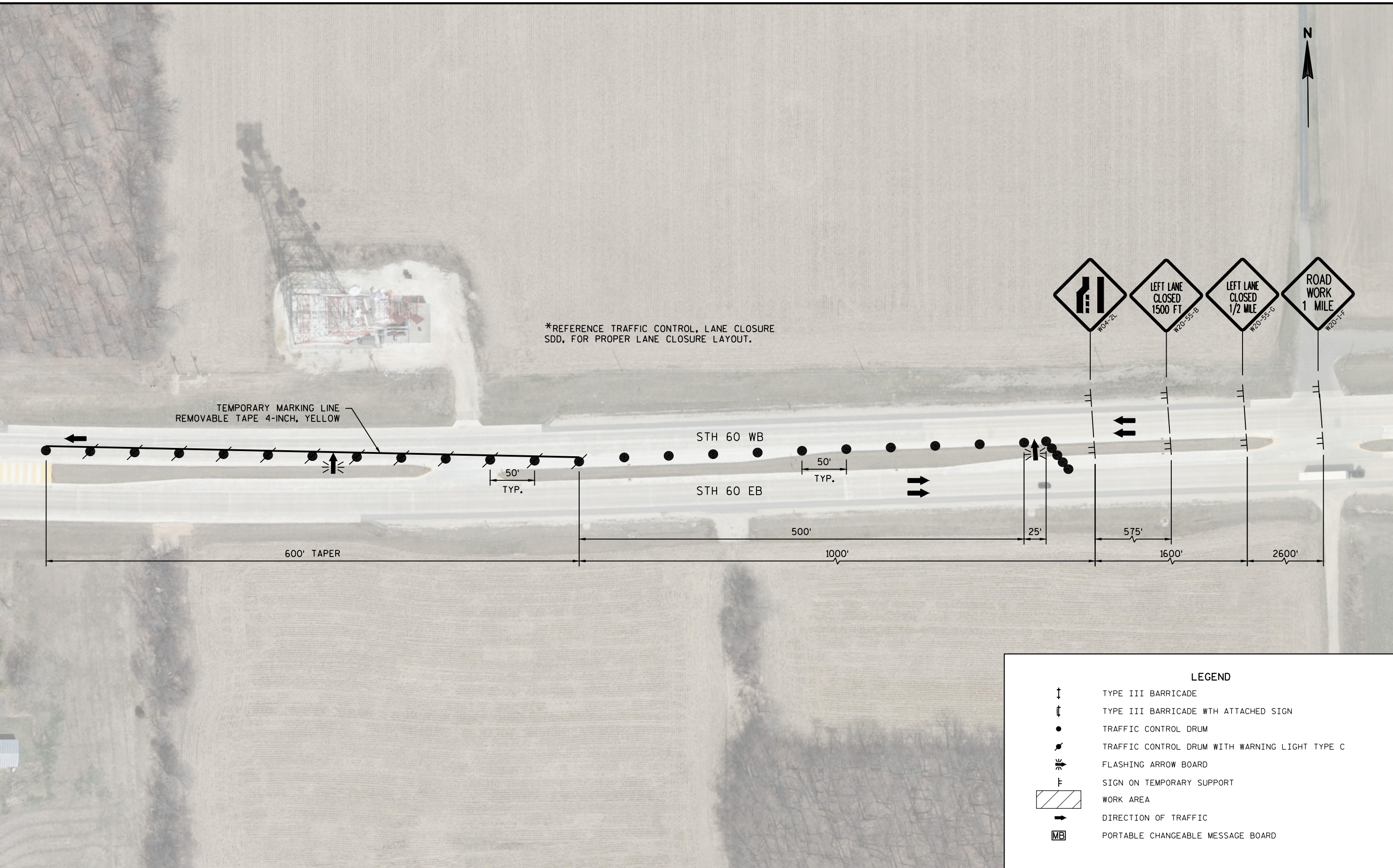


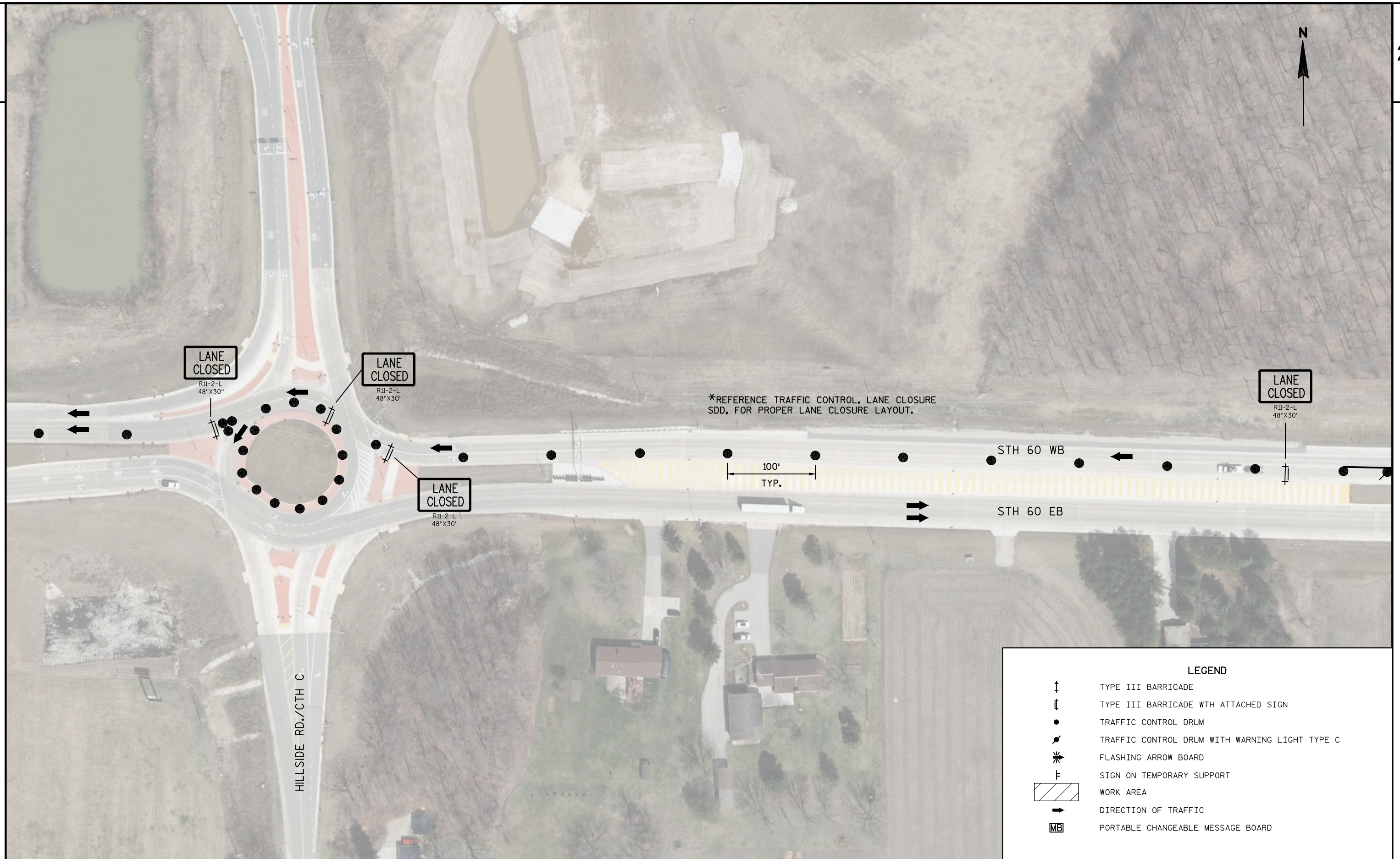


LEGEND

- ↑ TYPE III BARRICADE
- ↑ TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH WARNING LIGHT TYPE C
- ⚡ FLASHING ARROW BOARD
- F SIGN ON TEMPORARY SUPPORT
- ▨ WORK AREA
- ➡ DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD









PCMS 2: DISPLAY PCMS A
MINIMUM OF 7 DAYS PRIOR TO
START OF CONSTRUCTION.

*REFERENCE TRAFFIC CONTROL, LANE CLOSURE
SDD, FOR PROPER LANE CLOSURE LAYOUT.

MB

LANE
CLOSED










R11-2-L
48"X30"

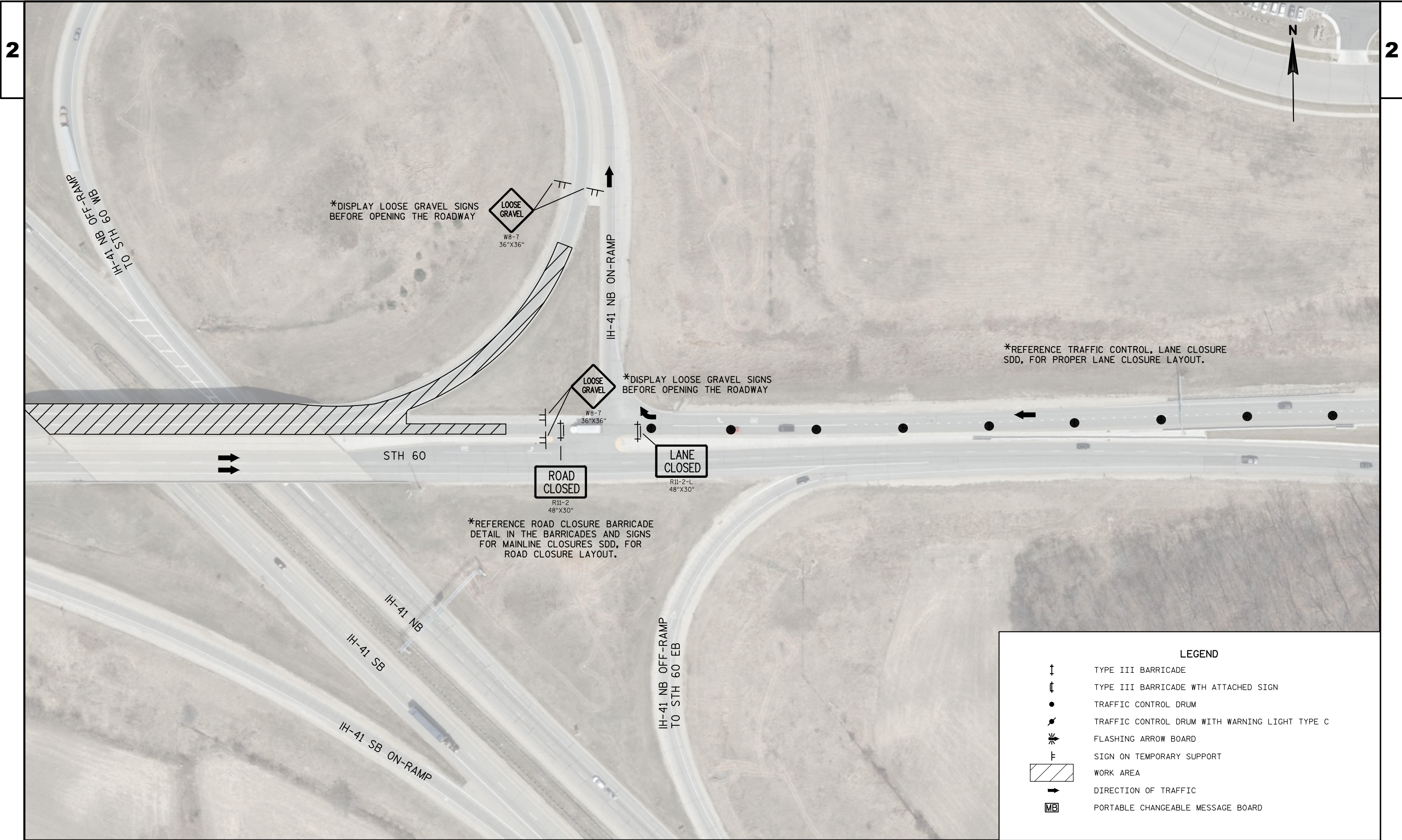
STH 60 WB

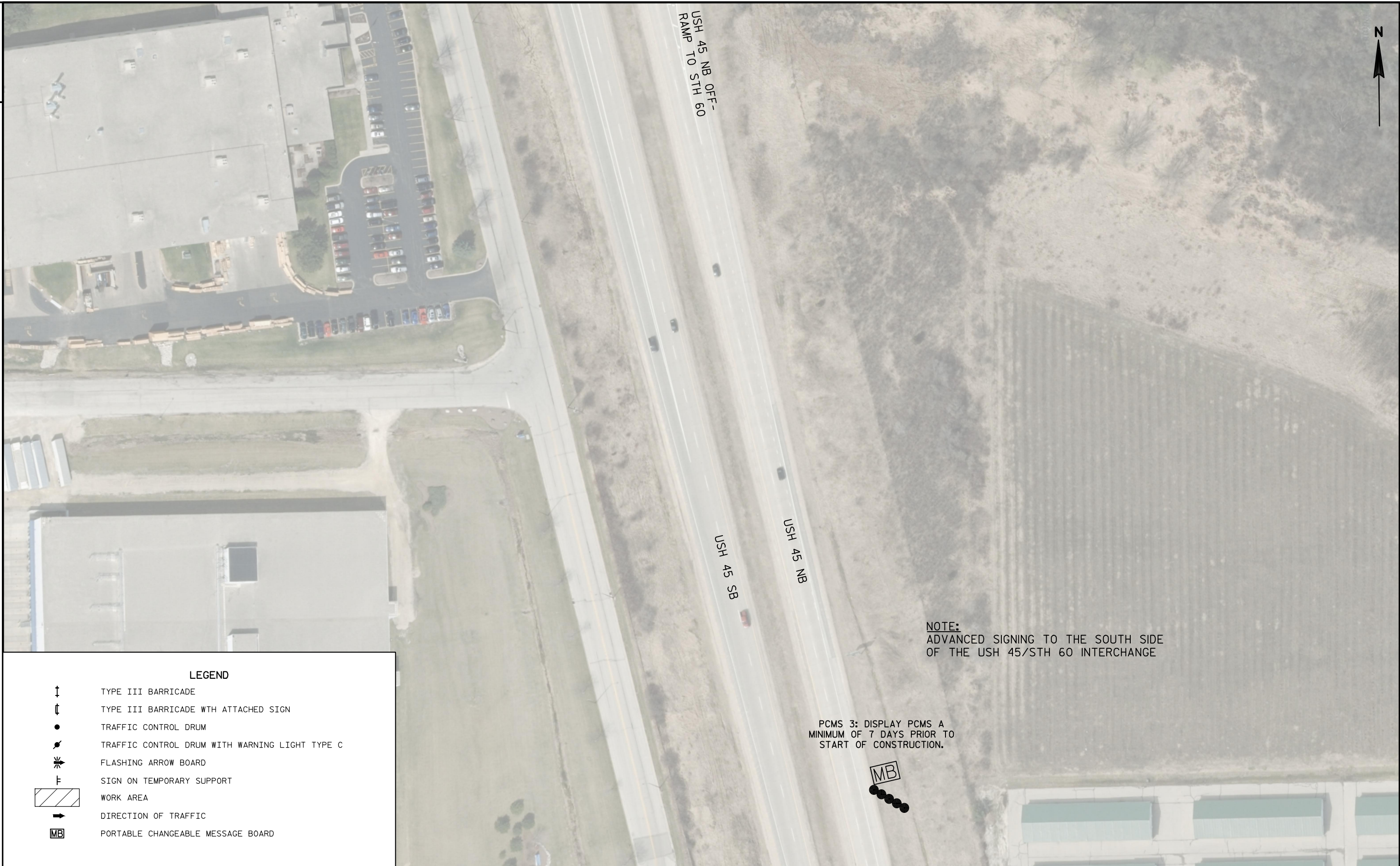
STH 60 EB

100'
TYP.

LEGEND

-  TYPE III BARRICADE
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH WARNING LIGHT TYPE C
-  FLASHING ARROW BOARD
-  SIGN ON TEMPORARY SUPPORT
-  WORK AREA
-  DIRECTION OF TRAFFIC
-  PORTABLE CHANGEABLE MESSAGE BOARD





LEGEND

↑↓

TYPE III BARRICADE

↑↓

TYPE III BARRICADE WTH ATTACHED SIGN

●

TRAFFIC CONTROL DRUM

⚡

TRAFFIC CONTROL DRUM WITH WARNING LIGHT TYPE C

⚡

FLASHING ARROW BOARD

F

SIGN ON TEMPORARY SUPPORT

▨

WORK AREA

➡

DIRECTION OF TRAFFIC

MB

PORTABLE CHANGEABLE MESSAGE BOARD

PCMS 4: DISPLAY PCMS A
MINIMUM OF 7 DAYS PRIOR TO
START OF CONSTRUCTION.










NOTE:
ADVANCED SIGNING TO THE NORTH SIDE
OF THE USH 45/STH 60 INTERCHANGE

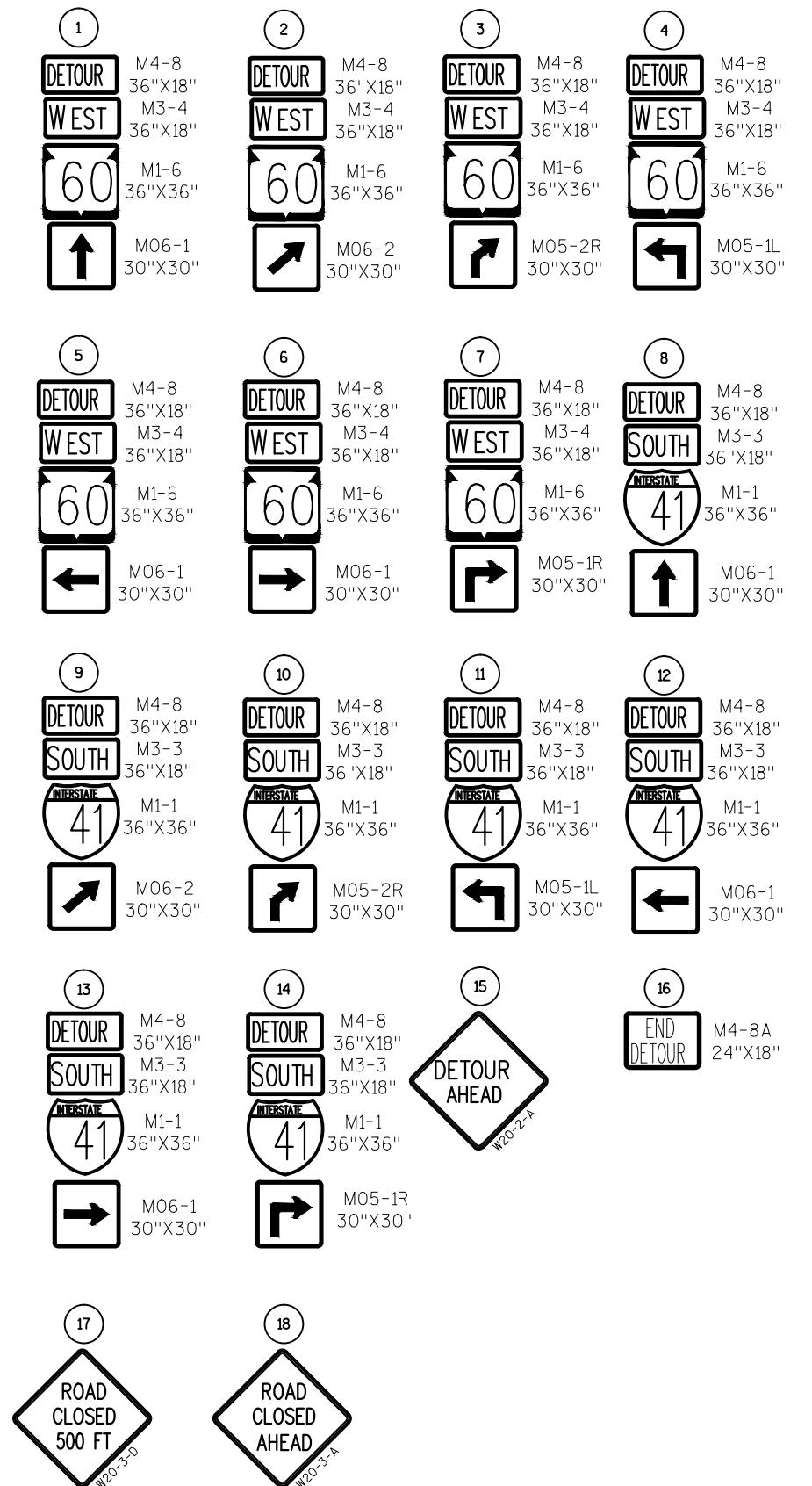
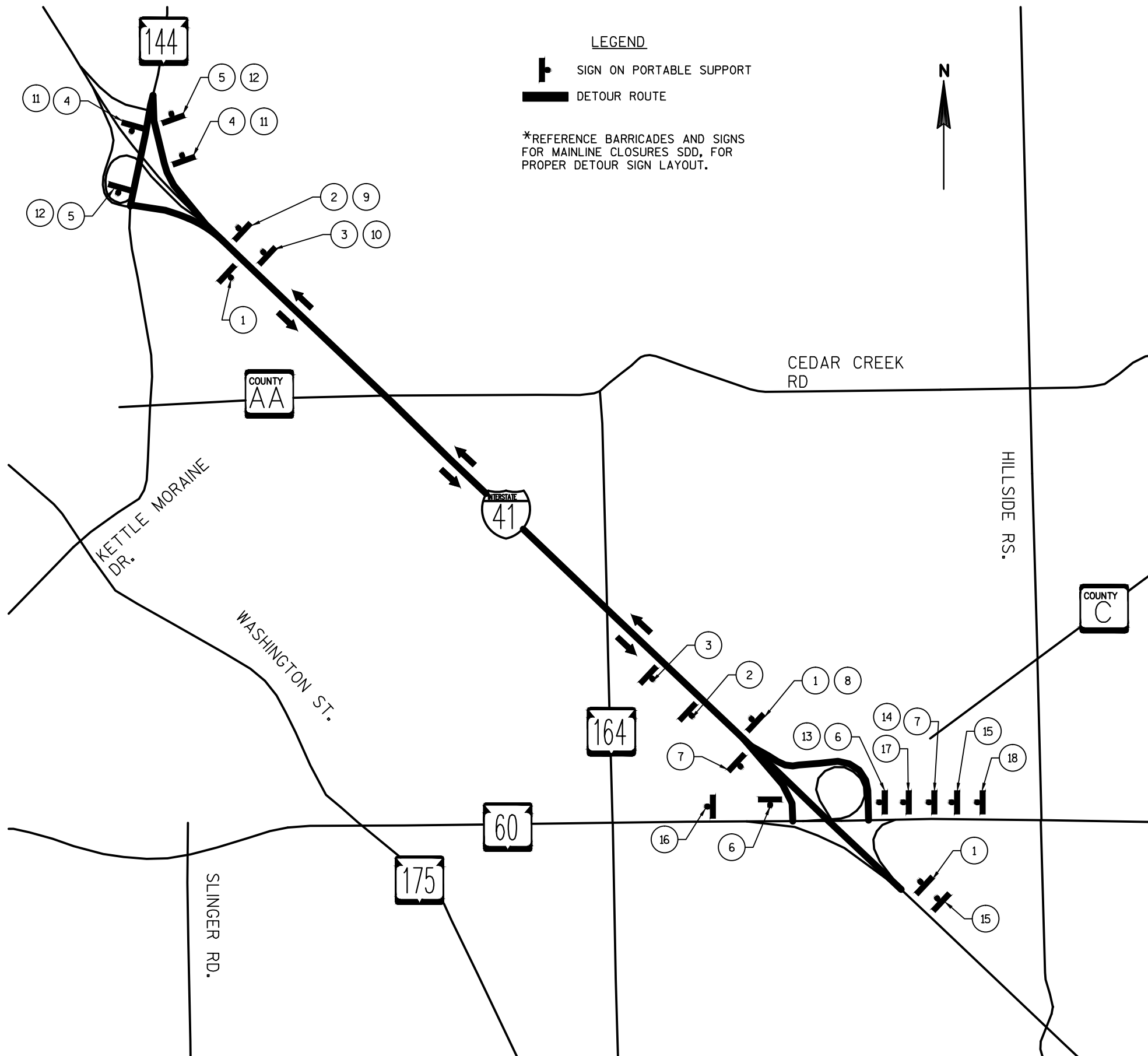
USH 45 SB

USH 45 NB

USH 45 SB OFF-
RAMP TO STH 60

LEGEND

	TYPE III BARRICADE
	TYPE III BARRICADE WITH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH WARNING LIGHT TYPE C
	FLASHING ARROW BOARD
	SIGN ON TEMPORARY SUPPORT
	WORK AREA
	DIRECTION OF TRAFFIC
	PORTABLE CHANGEABLE MESSAGE BOARD



MESSAGE PRIOR TO CLOSURE

MESSAGE DURING CLOSURE

PCMS 1
(7 DAYS PRIOR)

EXIT 64B
CLOSED
JULY XX

PCMS 1

FRAME 1

EXIT 64B
CLOSED

FRAME 2

FOLLOW
DETOUR

PCMS 2
(7 DAYS PRIOR)

BRIDGE
CLOSED
JULY XX

PCMS 2

BRIDGE
CLOSED
AHEAD

FOLLOW
DETOUR

PCMS 3
(7 DAYS PRIOR)

FRAME 1

STH 60
OVER
I-41

FRAME 2

CLOSED
JULY XX

PCMS 3

STH 60
OVER I-41
CLOSED

PCMS 4
(7 DAYS PRIOR)

STH 60
OVER
I-41

CLOSED
JULY XX

PCMS 4

STH 60
OVER I-41
CLOSED





EXISTING SIGN

HOSPITAL
~~SECOND RIGHT~~

EXIT 66 (2)

PLACE "EXIT 66" FIXED MESSAGE SIGN #2
OVER "SECOND RIGHT" ON EXISTING TYPE I
SIGN LOCATED JUST PAST MILE MARKER 63.2

IH-41 NB
IH-41 SB

EXISTING SIGN

EXITS 64 A-B

60

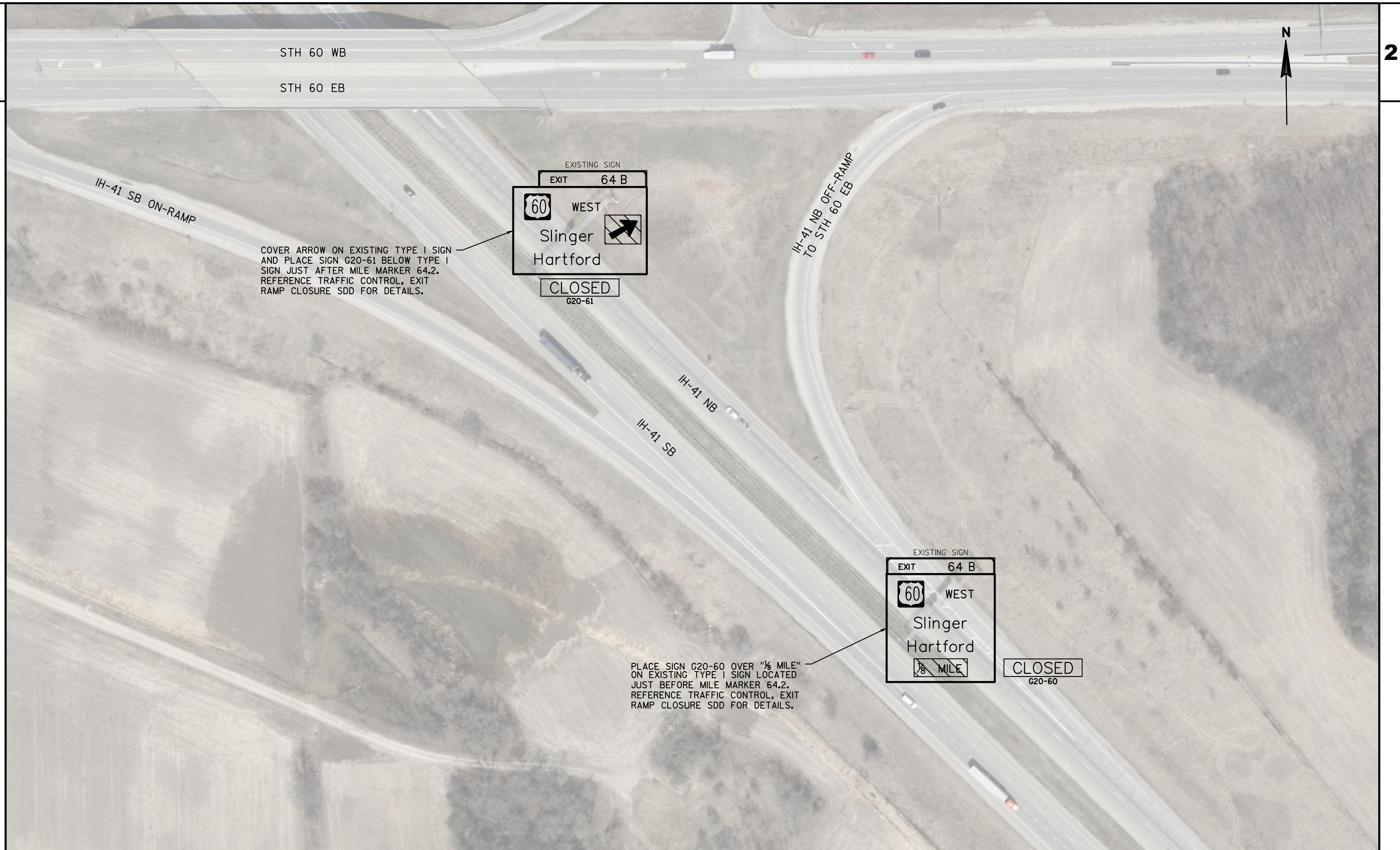
Jackson
~~Hartford~~

1 MILE

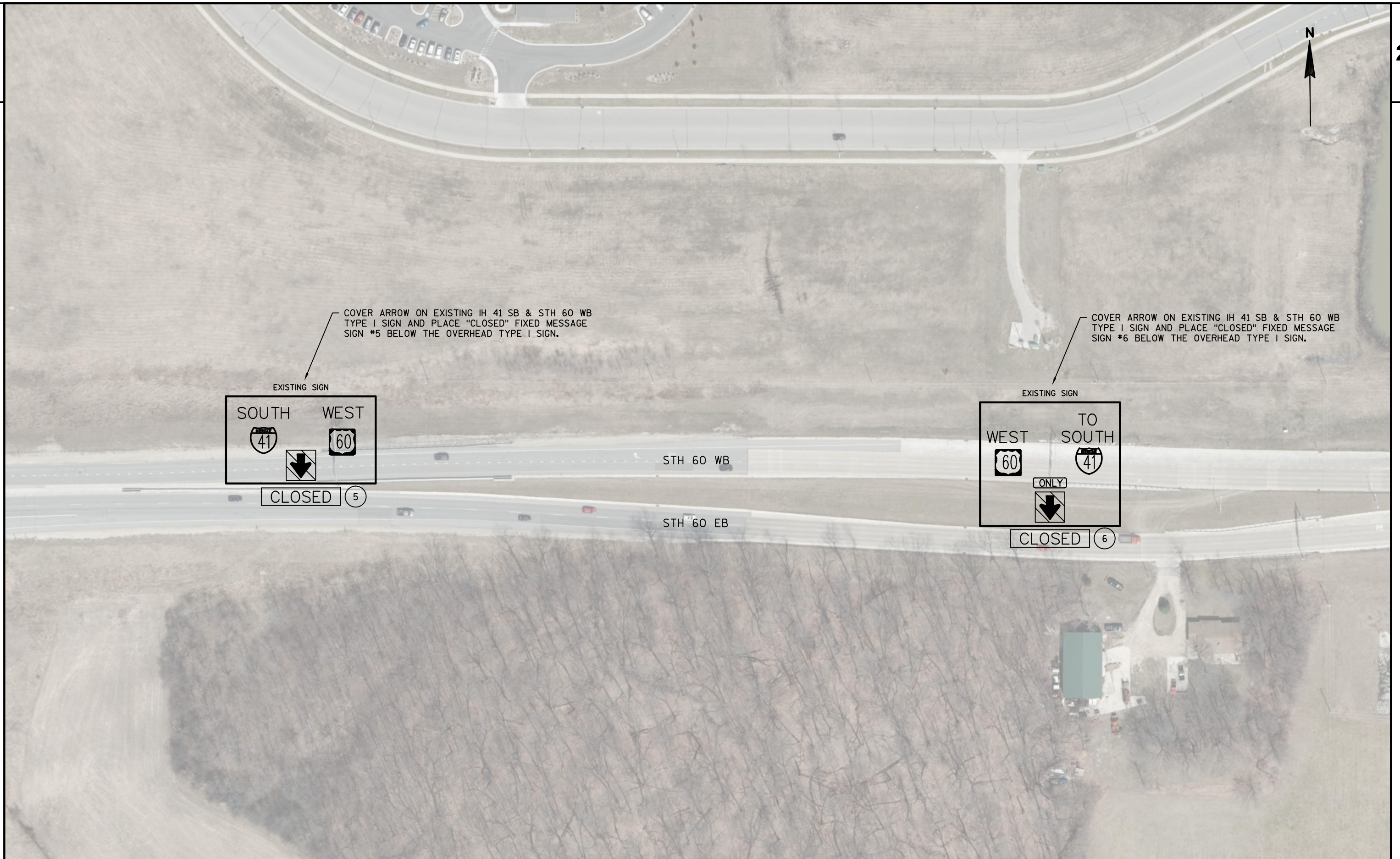
COVER "HARTFORD" AND "-B" ON EXISTING TYPE I
SIGN LOCATED JUST PAST MILE MARKER 63

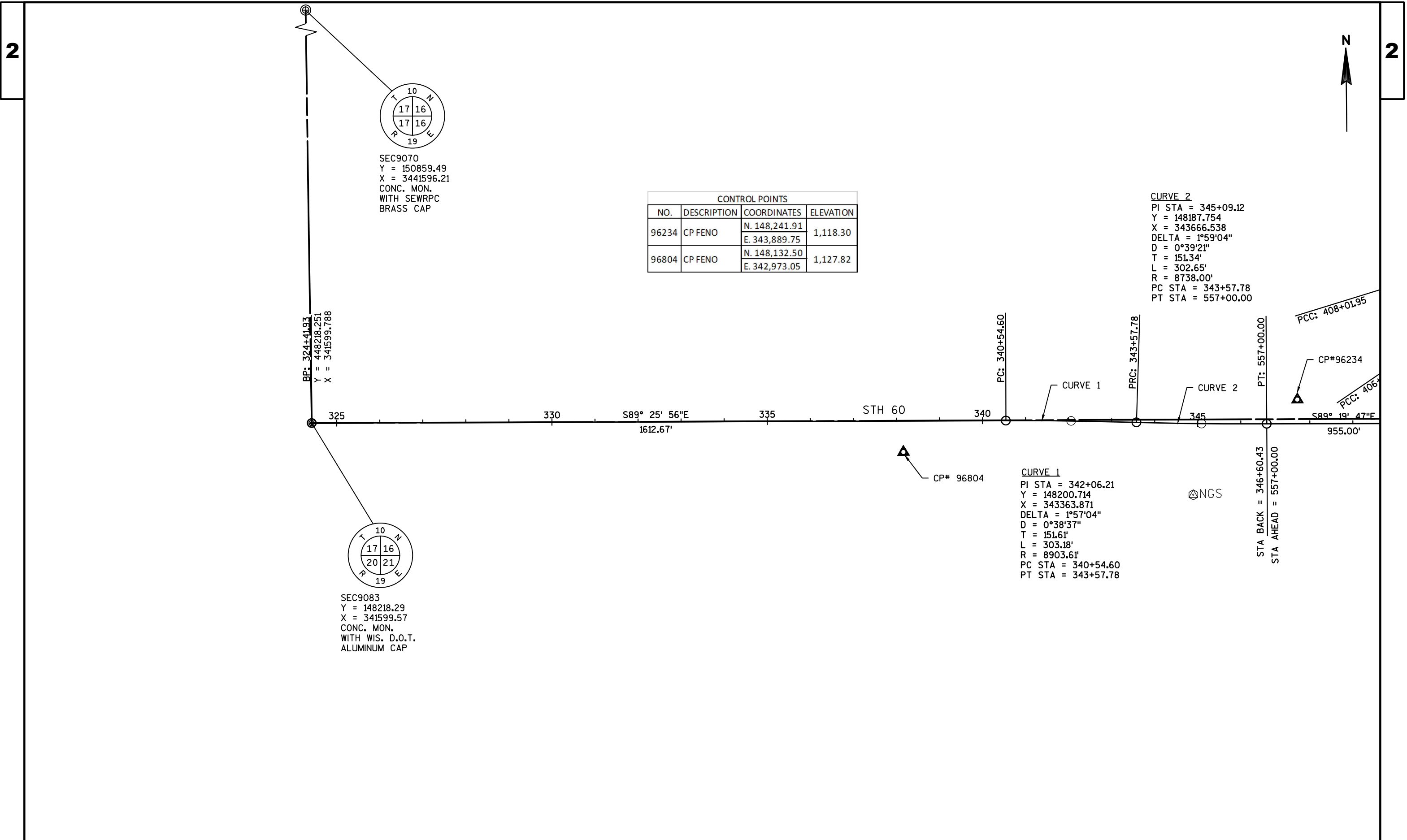


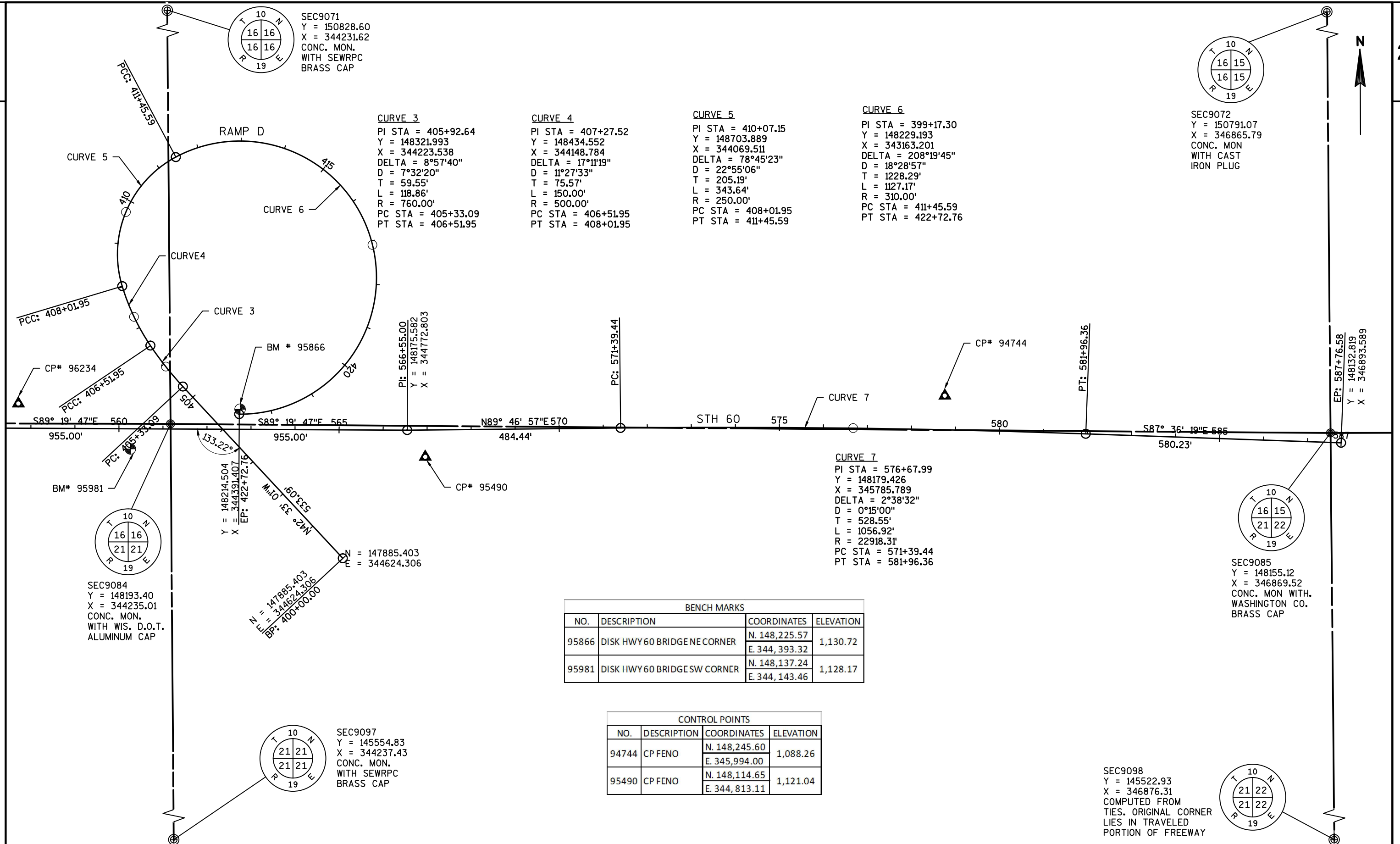












Estimate Of Quantities By Plan Sets

1100-13-71

Line	Item	Item Description	Unit	Total	Qty
0006	204.0165	Removing Guardrail	LF	125.000	125.000
0008	213.0100	Finishing Roadway (project) 01. 1100-13-71	EACH	1.000	1.000
0012	305.0110	Base Aggregate Dense 3/4-Inch	TON	12.000	12.000
0018	509.0301	Preparation Decks Type 1	SY	1.000	1.000
0020	509.1500	Concrete Surface Repair	SF	10.000	10.000
0022	509.2100.S	Concrete Masonry Deck Repair	CY	1.000	1.000
0024	509.5100.S	Polymer Overlay	SY	1,307.000	1,307.000
0032	614.0010	Barrier System Grading Shaping Finishing	EACH	1.000	1.000
0034	614.2300	MGS Guardrail 3	LF	62.500	62.500
0036	614.2610	MGS Guardrail Terminal EAT	EACH	1.000	1.000
0038	619.1000	Mobilization	EACH	0.330	0.330
0042	624.0100	Water	MGAL	0.100	0.100
0044	628.1504	Silt Fence	LF	370.000	370.000
0046	628.1905	Mobilizations Erosion Control	EACH	1.000	1.000
0048	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0050	628.2002	Erosion Mat Class I Type A	SY	90.000	90.000
0052	628.7015	Inlet Protection Type C	EACH	3.000	3.000
0076	643.0300	Traffic Control Drums	DAY	730.000	730.000
0080	643.0420	Traffic Control Barricades Type III	DAY	80.000	80.000
0082	643.0705	Traffic Control Warning Lights Type A	DAY	160.000	160.000
0084	643.0715	Traffic Control Warning Lights Type C	DAY	125.000	125.000
0086	643.0800	Traffic Control Arrow Boards	DAY	10.000	10.000
0088	643.0900	Traffic Control Signs	DAY	1,180.000	1,180.000
0090	643.0910	Traffic Control Covering Signs Type I	EACH	5.000	5.000
0092	643.0920	Traffic Control Covering Signs Type II	EACH	1.000	1.000
0094	643.1000	Traffic Control Signs Fixed Message	SF	73.750	73.750
0096	643.1050	Traffic Control Signs PCMS	DAY	48.000	48.000
0098	643.5000	Traffic Control	EACH	0.330	0.330
0100	646.1020	Marking Line Epoxy 4-Inch	LF	6,008.000	6,008.000
0102	646.3020	Marking Line Epoxy 8-Inch	LF	70.000	70.000
0104	646.5020	Marking Arrow Epoxy	EACH	1.000	1.000
0106	646.5120	Marking Word Epoxy	EACH	1.000	1.000
0116	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	925.000	925.000
0120	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0122	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	300.000	300.000
0124	SPV.0090	Special 01. Marking Line Contrast Epoxy 4-Inch	LF	129.000	129.000
0126	SPV.0090	Special 02. Marking Line Contrast Epoxy 8-Inch	LF	906.000	906.000
0128	SPV.0090	Special 03. MGS Thrie Beam Transition TL-2	LF	14.000	14.000
0130	SPV.0090	Special 04. Sawing Pavement Deck Preparation Areas	LF	10.000	10.000
0132	SPV.0180	Special 01. Resin Binder High Friction Surface	SY	1,081.000	1,081.000

Estimate Of Quantities By Plan Sets

1100-13-71

Treatment

REMOVING GUARDRAIL					GRADING SHAPING FINISHING									
					614. 0010		FOR INFORMATION ONLY						628. 2002	
					BARRIER SYSTEM		GRADING SHAPING AND FINISHING FOR BEAM GUARD							
							EXCAVATION		TOPSOIL	MULCHING	FERTILIZER	SEEDING	EROSION MAT	
							COMMON				TYPE B	MIXTURE	CLASS I	
												NO. 30	TYPE A	

TRAFFIC CONTROL													
643. 0300 643. 0420 643. 0705 643. 0715 643. 0800 643. 1050													
TRAFFIC CONTROL TRAFFIC CONTROL TRAFFIC CONTROL TRAFFIC CONTROL TRAFFIC CONTROL TRAFFIC CONTROL													
DRUMS TYPE III LIGHTS TYPE A LIGHTS TYPE C BOARDS SIGNS PCMS													
LOCATION	DAYS	EACH*	DAY	EACH*	DAY	EACH*	DAY	EACH*	DAY	EACH*	DAY	EACH*	DAY
BEFORE CONSTRUCTION	7	20	140	-	-	-	-	-	-	-	-	4	28
DURING CONSTRUCTION	5	118	590	16	80	32	160	25	125	2	10	4	20
TOTAL 0010			730		80		160		125		10		48
*FOR INFORMATION ONLY. ACTUAL NUMBER OF DEVICES TO BE DETERMINED IN THE FIELD BY THE ENGINEER													

TRAFFIC CONTROL COVERING SIGNS TYPE I						
643. 0910						
SIGN	LOCATION	NUMBER OF SIGNS	NUMBER OF CYCLES	EACH	REMARKS	
JACKSON-HARTFORD 1 MILE	JUST PAST MILE MARKER 63	2	1	2	COVER "HARTFORD" & "- B"	
STH 60 WB EXIT SIGN	JUST PAST MILE MARKER 64. 2	1	1	1	COVER ARROW	
IH 41 SOUTH/STH 60 WB OVERHEAD SIGNS	STH 60 WB	2	1	2	COVER ARROW	
TOTAL 0010				5		

TRAFFIC CONTROL SIGNS				
643. 0900				
SIGN CODE	SIGN MESSAGE	EACH*	DAYS*	DAY
TRAFFIC SIGNS				
R11- 2	ROAD CLOSED	1	5	5
R11- 2L	LANE CLOSED	6	5	30
R11- 2R	RAMP CLOSED	3	5	15
W04- 2L	MERGE RIGHT	2	5	10
W20- 1A	ROAD WORK AHEAD	2	5	10
W20- 1F	ROAD WORK 1 MILE	2	5	10
W20- 53A	RAMP CLOSED AHEAD	2	5	10
W20- 53C	RAMP CLOSED 1000'	2	5	10
W20- 55B	LEFT LANE CLOSED 1500'	2	5	10
W20- 55G	LEFT LANE CLOSED 1/2 MI.	2	5	10
W8- 7	LOOSE GRAVEL	4	5	20
G20- 2A	END ROAD WORK	5	5	25
G20- 60	CLOSED	1	5	5
G20- 61	CLOSED	1	5	5
DETOUR SIGNS				
M1- 1	IH 41	18	5	90
M1- 4	STH 60	30	5	150
M3- 3	SOUTH	18	5	90
M3- 4	WEST	30	5	150
M4- 8	DETOUR	48	5	240
M4- 8A	END DETOUR	1	5	5
M05- 1L	LEFT AHEAD	8	5	40
M05- 1R	RIGHT AHEAD	6	5	30
M05- 2R	SLIGHT RIGHT AHEAD	6	5	30
M06- 1	STRAIGHT, LEFT, OR RIGHT	22	5	110
M06- 2	SLIGHT RIGHT	6	5	30
W20- 2A	DETOUR AHEAD	4	5	20
W20- 3A	ROAD CLOSED AHEAD	2	5	10
W20- 3D	ROAD CLOSED 500'	2	5	10
TOTAL 0010				1180
*FOR INFORMATION ONLY				

TRAFFIC CONTROL COVERING SIGNS TYPE II					
643. 0920					
SIGN	LOCATION	NUMBER OF SIGNS	NUMBER OF CYCLES	EACH	
EXIT 64B SIGN	AT MILE MARKER 64. 4	1	1	1	
TOTAL 0010				1	

TRAFFIC CONTROL SIGNS FIXED MESSAGE				
643. 1000				
SIGN #	MESSAGE	LOCATION	SF	REMARKS
1	EAST	JUST PAST MILE MARKER 61	6. 75	PLACE TO THE RIGHT OF STH 60 SYMBOL
2	EXIT 66	JUST PAST MILE MARKER 63. 2	20	PLACE OVER "SECOND RIGHT"
3	EXIT 66	JUST BEFORE MILE MARKER 63. 4	20	PLACE OVER "EXIT 64B"
4	EXIT 66	JUST PAST MILE MARKER 63. 8	20	PLACE OVER "SECOND RIGHT"
5	CLOSED	STH 60 WB	3. 5	BELOW TYPE I SIGN
6	CLOSED	STH 60 WB	3. 5	BELOW TYPE I SIGN
TOTAL 0010			73. 75	

PAVEMENT MARKING										
		646. 1020	646. 3020	646. 5020	646. 5120	*	*	SPV. 0090. 01	SPV. 0090. 02	
		MARKING	MARKING	MARKING	MARKING	MARKING	MARKING	MARKING LINE	MARKING LINE	
		LINE EPOXY	LINE EPOXY	ARROW	WORD	REMOVAL	REMOVAL	CONTRAST	CONTRAST	
		4- INCH	8- INCH	EPOXY	EPOXY	LINE 4- INCH	LINE 8- INCH	EPOXY 4- INCH	EPOXY 8- INCH	
STATION TO STATION	LOCATION	LF	LF	EACH	EACH	LF	LF	LF	LF	REMARKS
BEFORE OPENING TO TRAFFIC										
559+46 - 419+00	OUTSIDE EDGE LINE - RAMP TO BRIDGE	700	-	-	-	700	-	-	-	WHITE
559+58 - 561+00	LANE LINE SKIPS - STH 60	-	-	-	-	36	-	36	-	WHITE
561+00 - 564+38	CHANNELIZING LINE - RAMP TO BRIDGE	-	-	-	-	-	338	-	338	WHITE
564+38 - 565+00	OUTSIDE EDGE LINE - STH 60	62	-	-	-	62	-	-	-	WHITE
559+70 - 565+00	INSIDE EDGE LINE - STH 60	530	-	-	-	530	-	-	-	YELLOW
419+00 - 421+14	INSIDE EDGE LINE - RAMP	225	-	-	-	225	-	-	-	YELLOW
421+14 - 422+23	CHANNELIZING LINE - RAMP	-	-	-	-	-	115	-	115	WHITE
AFTER FINAL SWEEP										
557+27 - 407+00	OUTSIDE EDGE LINE - RAMP TO BRIDGE	2117	-	-	-	-	-	-	-	WHITE
557+27 - 561+00	LANE LINE SKIPS - STH 60	-	-	-	-	-	-	93	-	WHITE
561+00 - 564+38	CHANNELIZING LINE - RAMP TO BRIDGE	-	-	-	-	-	-	-	338	WHITE
564+38 - 565+91	OUTSIDE EDGE LINE - STH 60	153	-	-	-	-	-	-	-	WHITE
558+13 - 565+50	INSIDE EDGE LINE - STH 60	737	-	-	-	-	-	-	-	YELLOW
418+00 - 407+00	INSIDE EDGE LINE - RAMP	1484	-	-	-	-	-	-	-	YELLOW
421+14 - 422+23	CHANNELIZING LINE - RAMP	-	-	-	-	-	-	-	115	WHITE
558+14 - 558+84	LEFT TURN LANE TO IH 41 SOUTH	-	70	1	1	-	-	-	-	WHITE
TOTAL 0010		6008	70	1	1	1553	453	129	906	

*FOR INFORMATION ONLY. PAID FOR INCIDENTAL TO RESIN BINDER HIGH FRICTION SURFACE TREATMENT

TEMPORARY MARKING LINE
REMOVABLE TAPE 4- INCH

LOCATION	649. 0150 LF	REMARKS
WB STH 60 ON RAMP	325	WHITE
WB STH 60 TAPER	600	YELLOW
TOTAL 0010	925	

RESIN BINDER HIGH FRICTION
SURFACE TREATMENT

LOCATION	SPV. 0180. 01 SY
STH 60 WB ON RAMP	1081
TOTAL 0010	1081

Standard Detail Drawing List

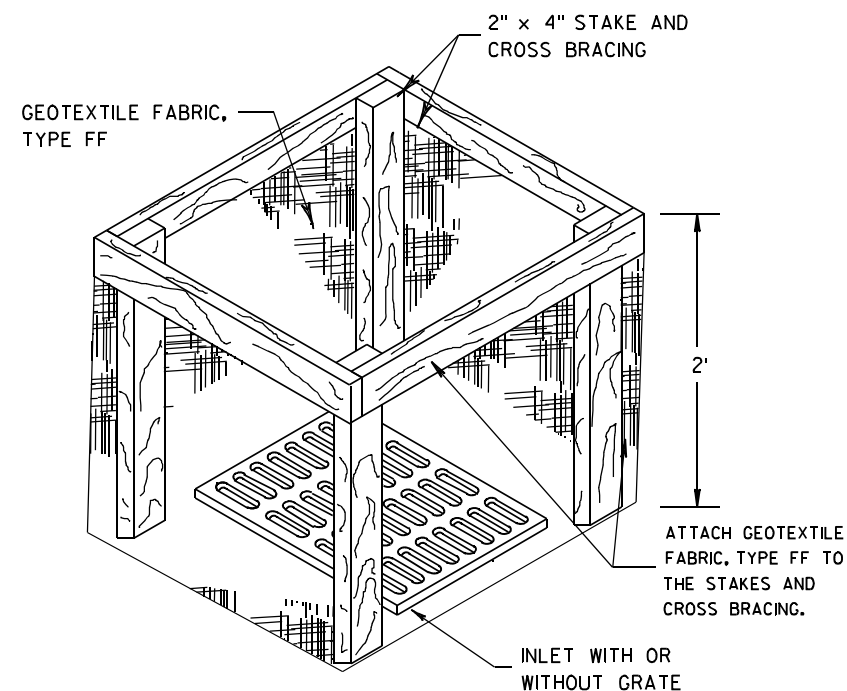
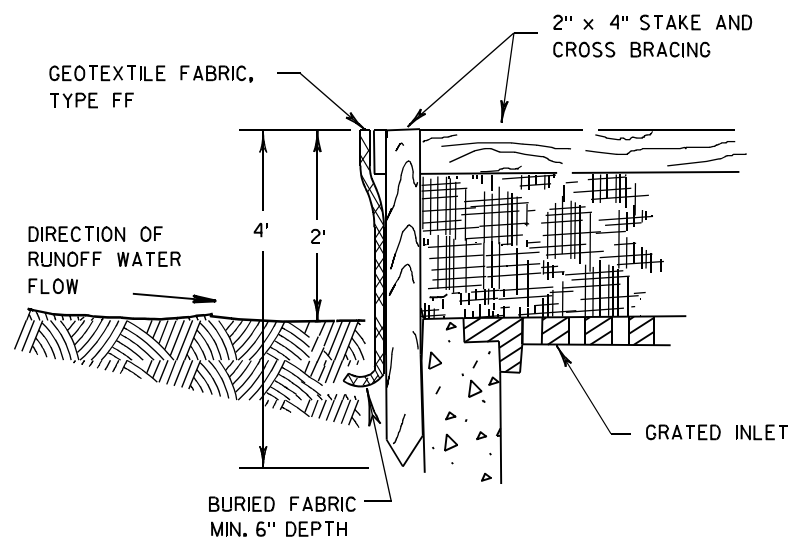
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
14B42-05A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-05B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-05C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14D42-05D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-03A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-03B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-03C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C07-14B	PAVEMENT MARKING WORDS
15C07-14C	PAVEMENT MARKING ARROWS
15C08-18A	LONGITUDINAL MARKING (MAINLINE)
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-06	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C31-02C	PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP
15D12-06A	TRAFFIC CONTROL, LANE CLOSURE
15D16-03	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



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



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



INLET PROTECTION, TYPE A

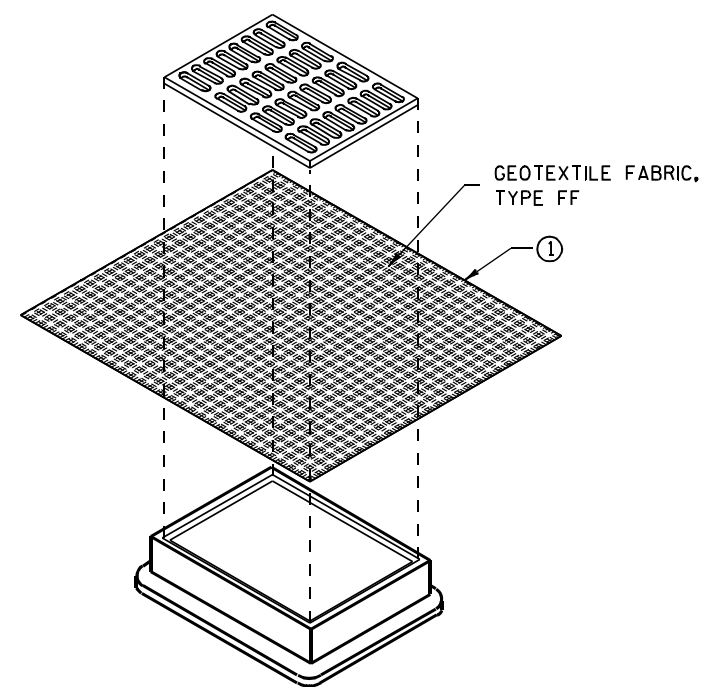
GENERAL NOTES

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.

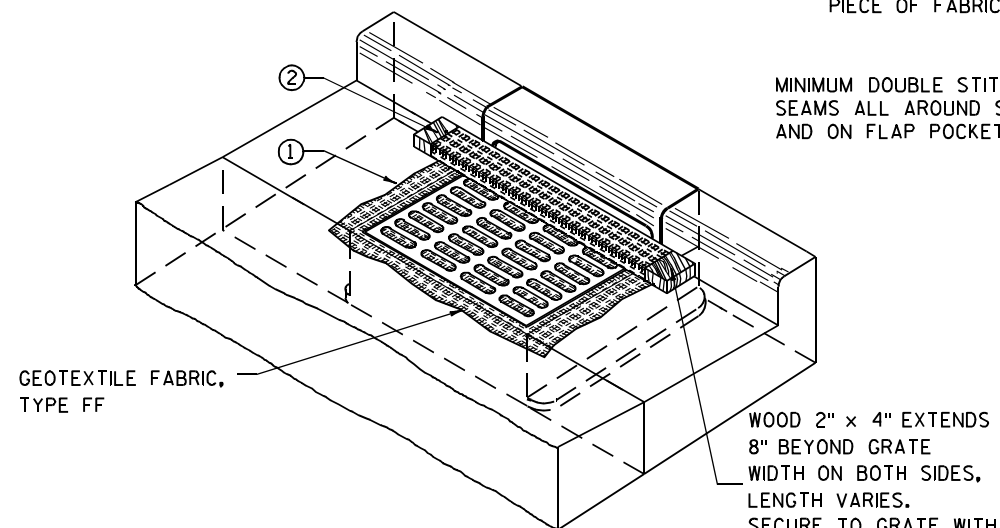
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- 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.

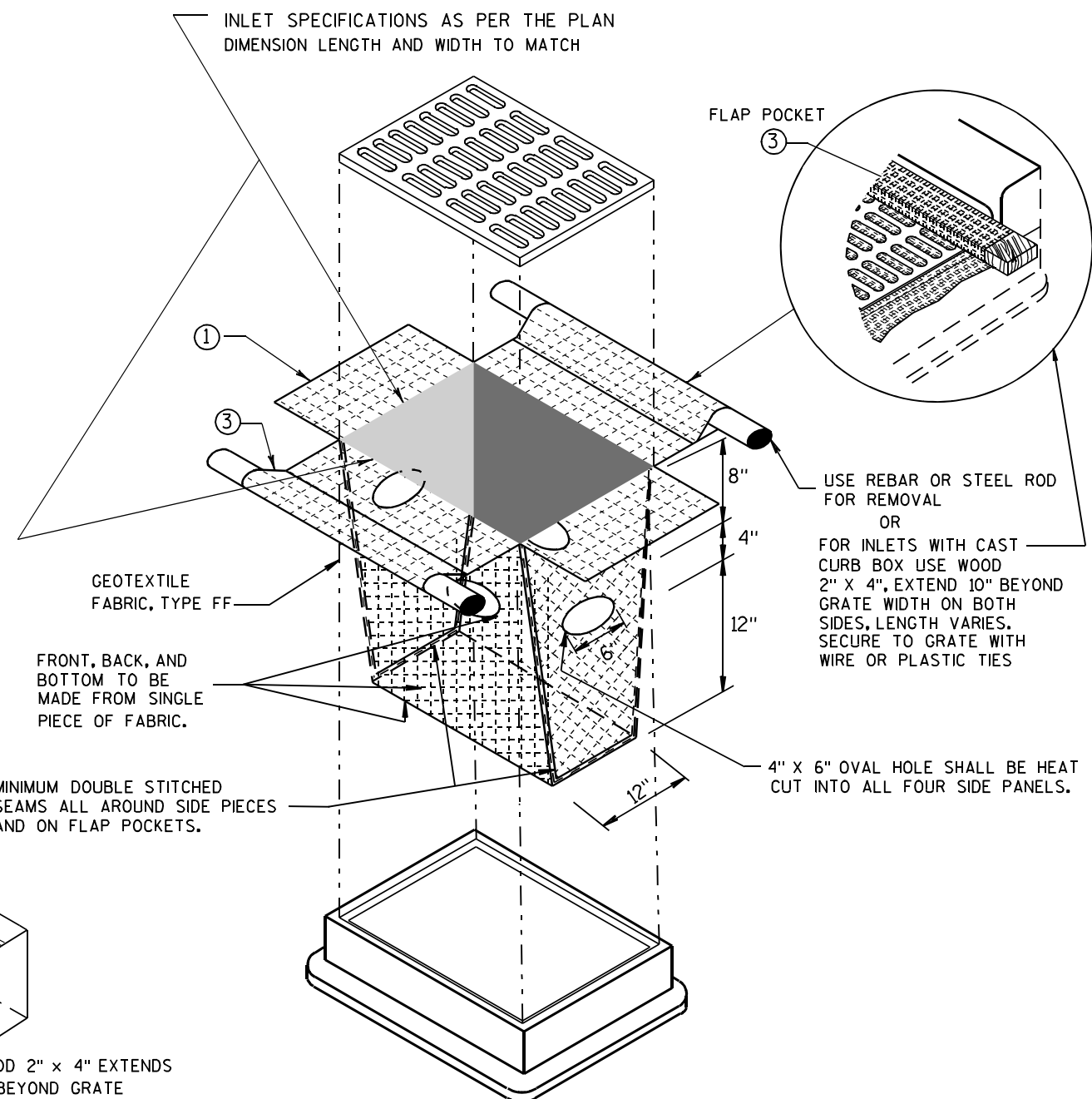
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

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

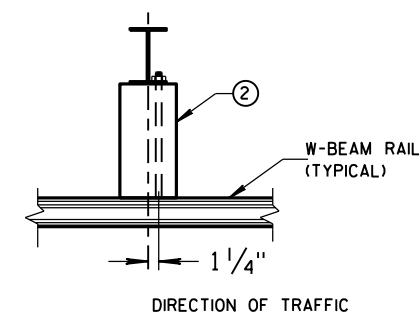
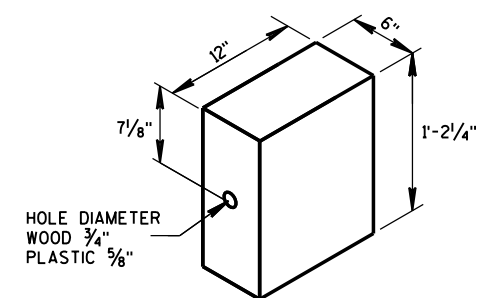
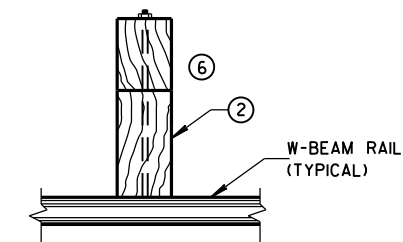
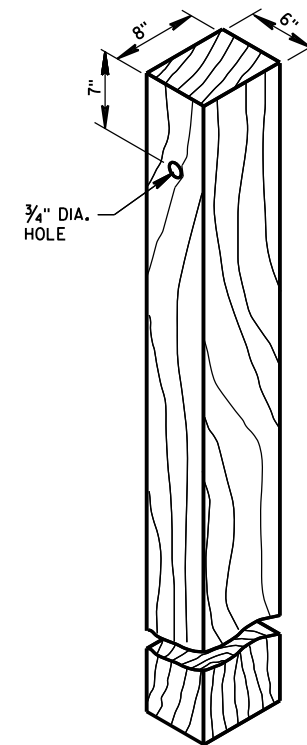
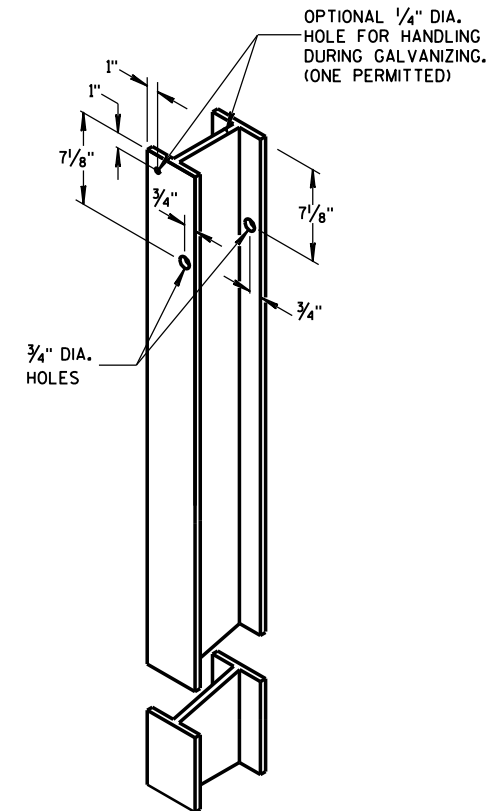
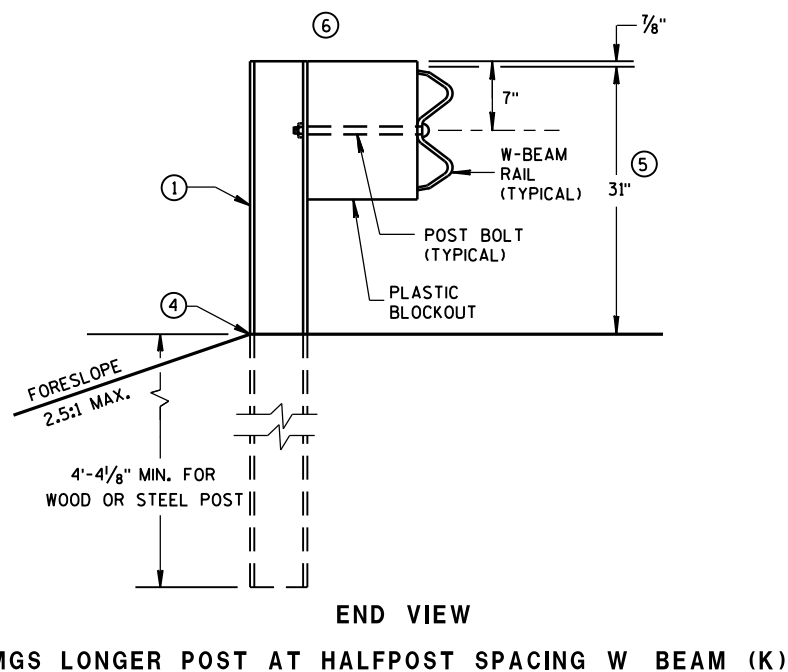
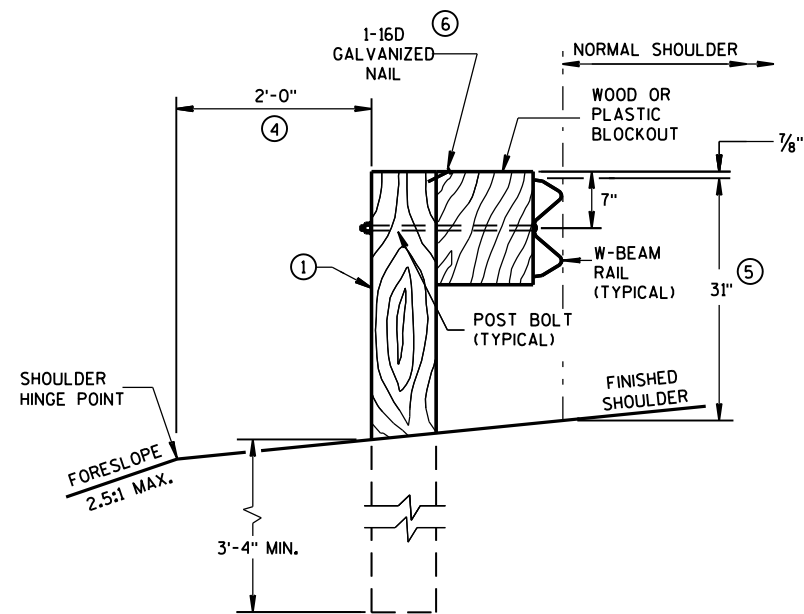
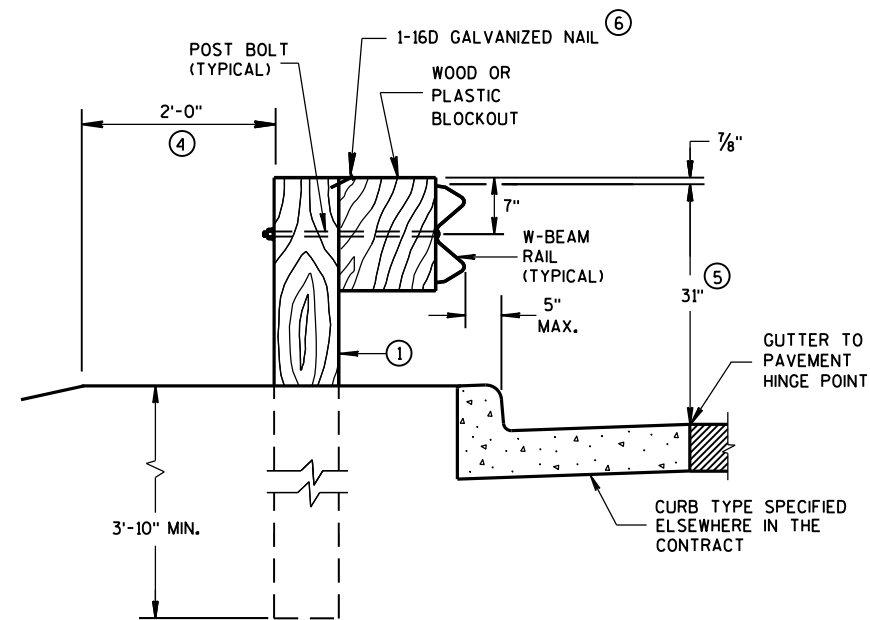
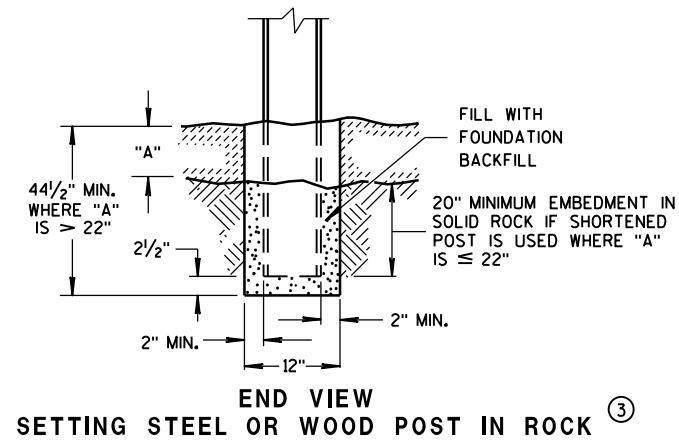
(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

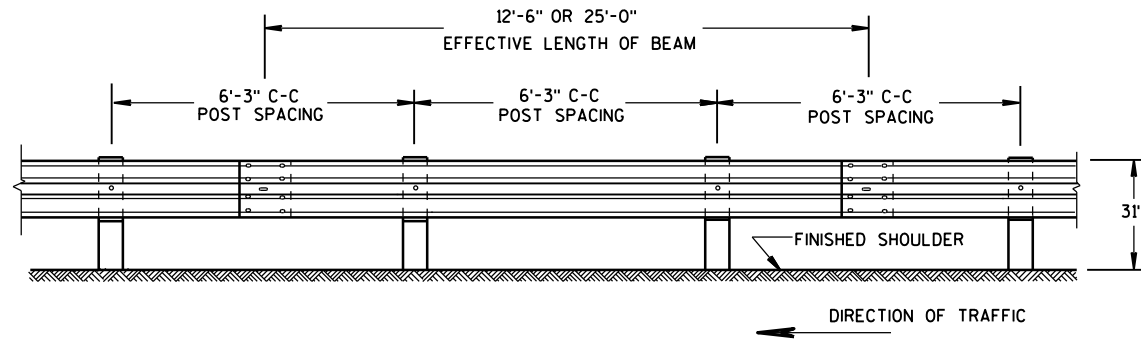
APPROVED
10/16/02 /S/ Beth Cannestra
DATE
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER

- ① WOOD OR STEEL POSTS (W6X9 OR W6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.
- ③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2 INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS TO LENGTH AND INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.
- ④ WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).
- ⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS $\pm 1"$. FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 3/4" TO 32".
- ⑥ WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



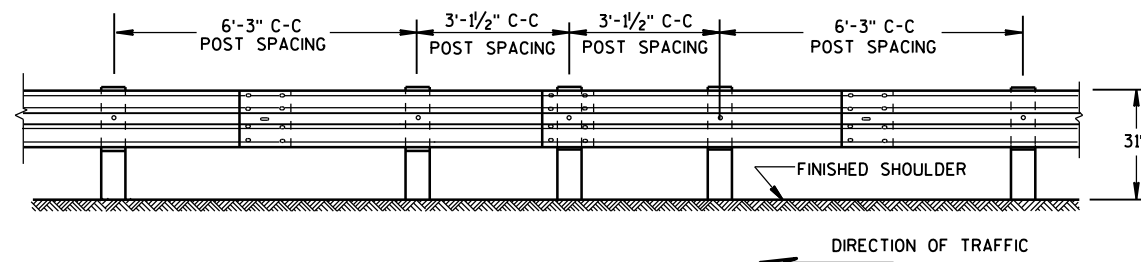
**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



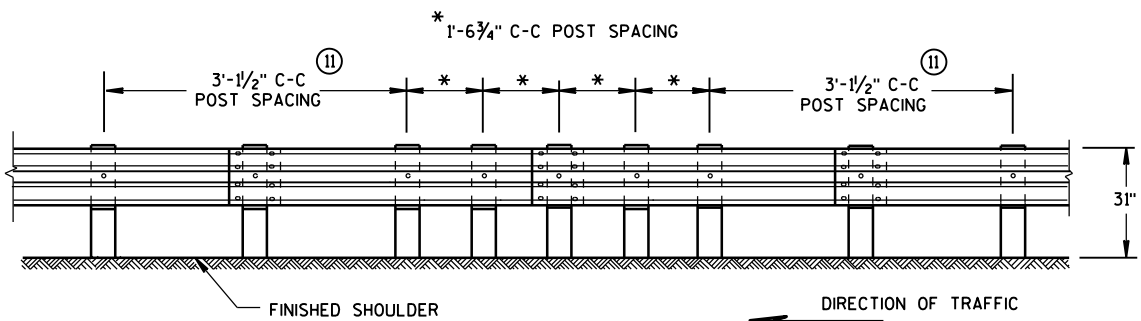
FRONT VIEW

POST SPACING STANDARD INSTALLATION



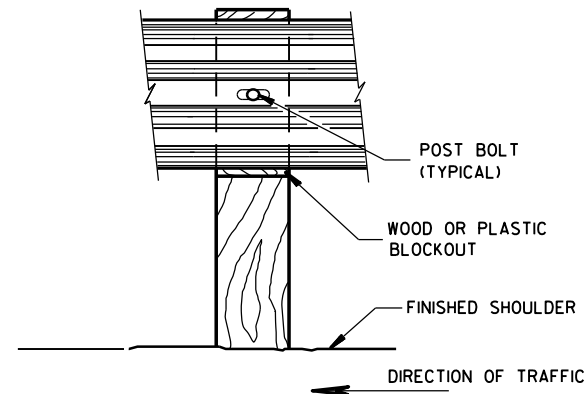
FRONT VIEW

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

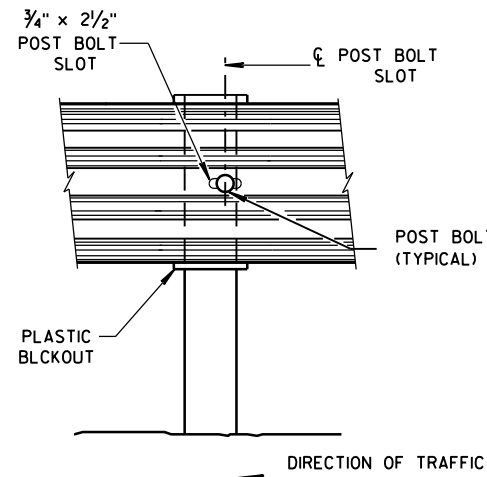


FRONT VIEW

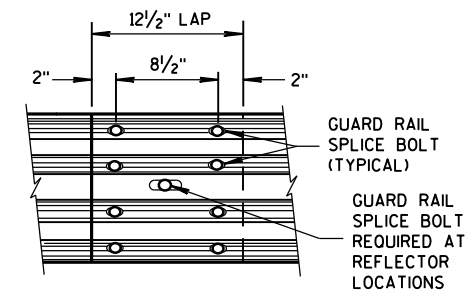
QUARTER POST SPACING (QS)



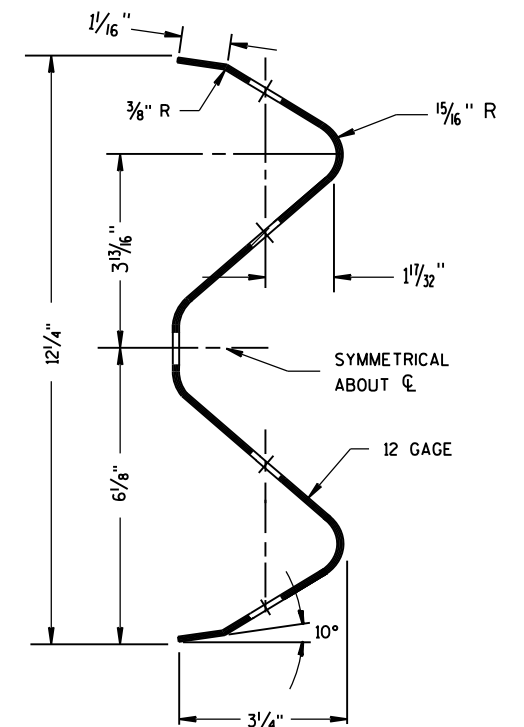
FRONT VIEW AT WOOD POST



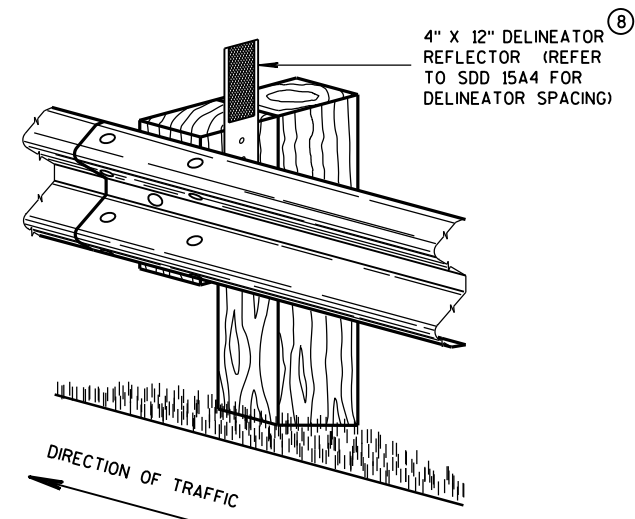
FRONT VIEW AT STEEL POST



FRONT VIEW
MID-SPAN BEAM SPLICE



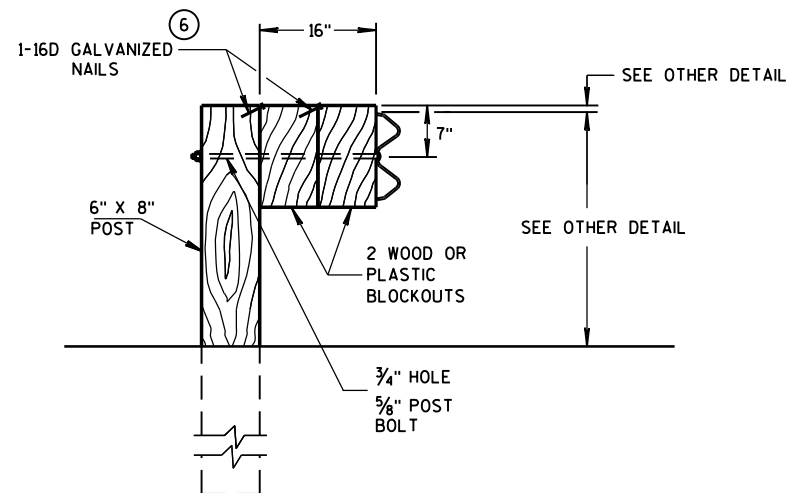
SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

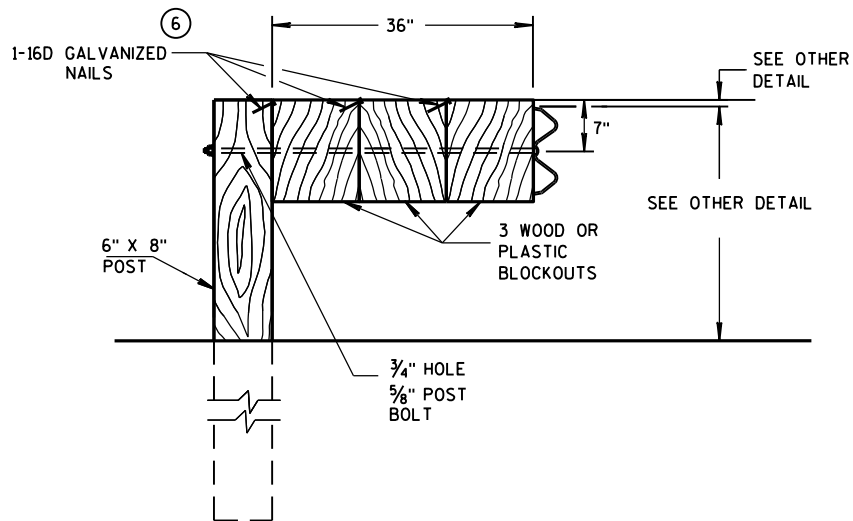
GENERAL NOTES

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



DETAIL FOR 16" BLOCKOUT DEPTH

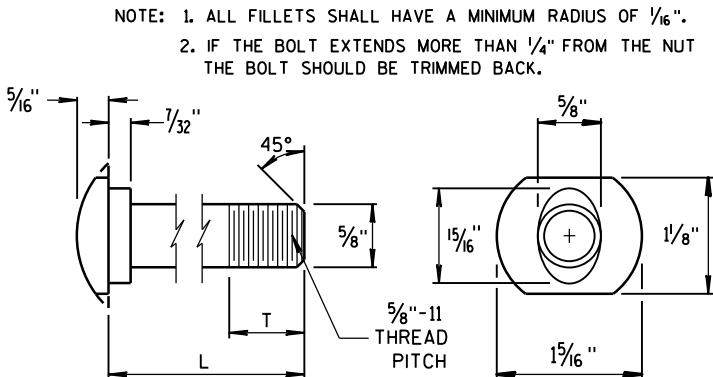
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.



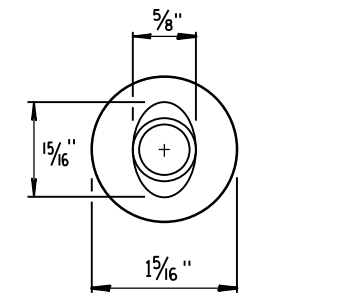
DETAIL FOR 36" BLOCKOUT DEPTH

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

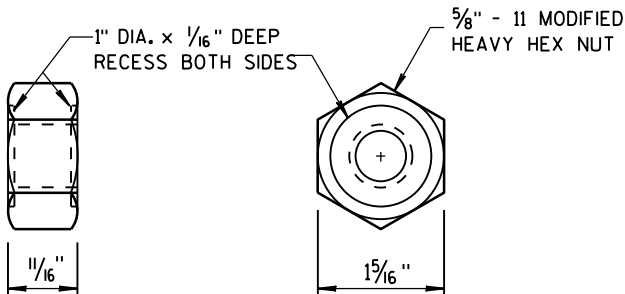
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.



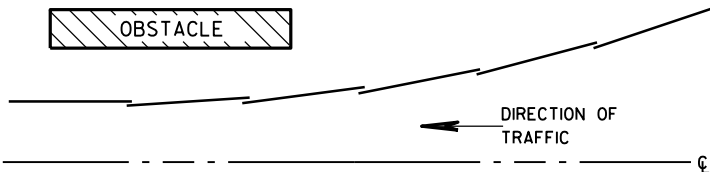
POST BOLT TABLE



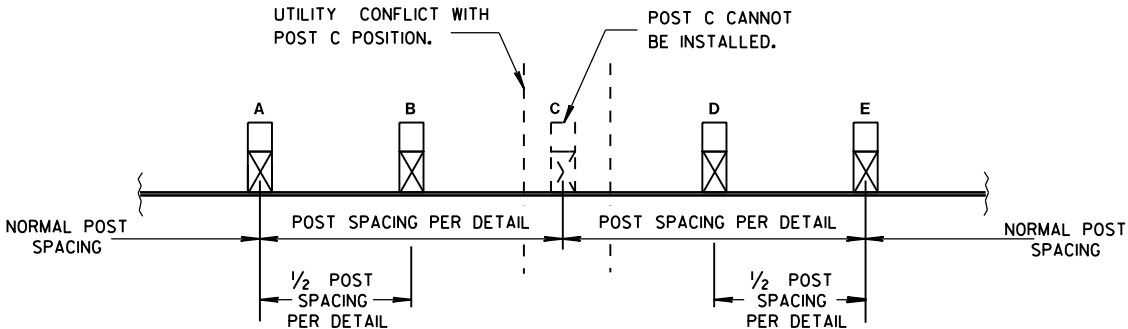
ALTERNATE BOLT HEAD



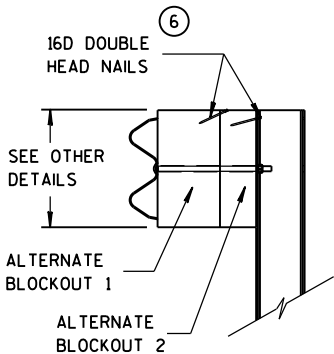
POST BOLT, SPLICE BOLT AND RECESS NUT



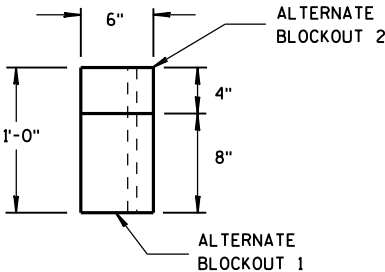
PLAN VIEW BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW

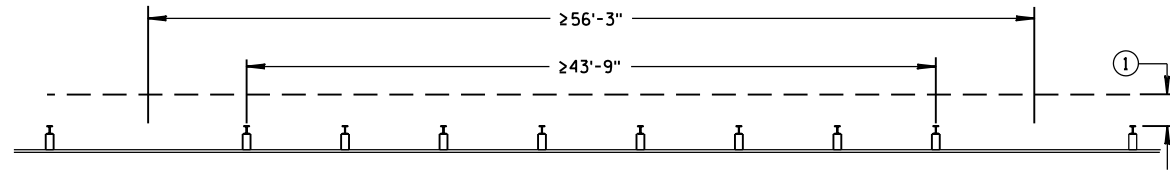


TOP VIEW

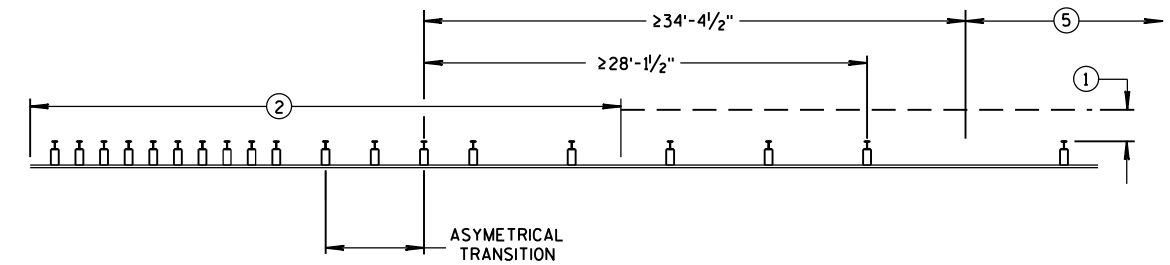
ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

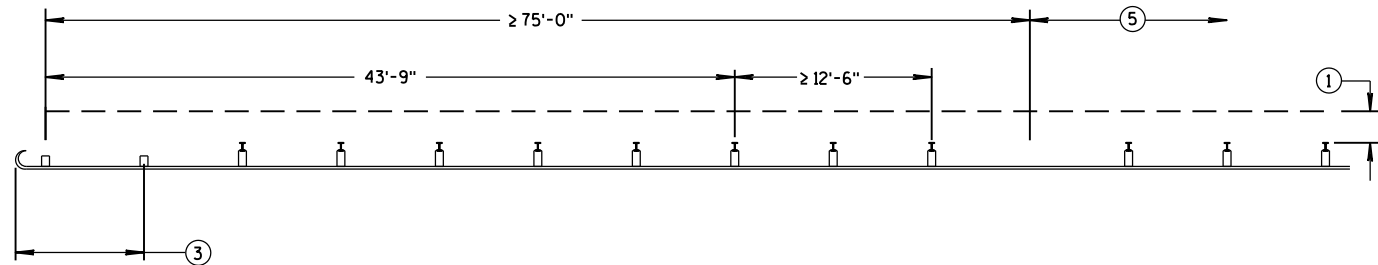
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



MISSING POST IN NORMAL BEAM GUARD RUN

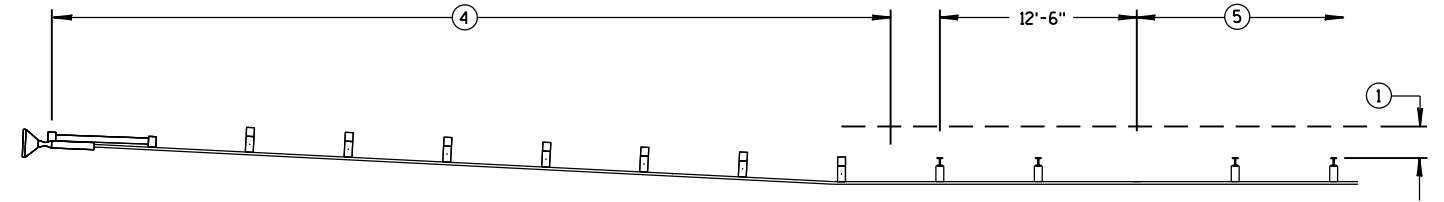


MISSING POST NEAR APPROACH THRIE BEAM TRANSITION

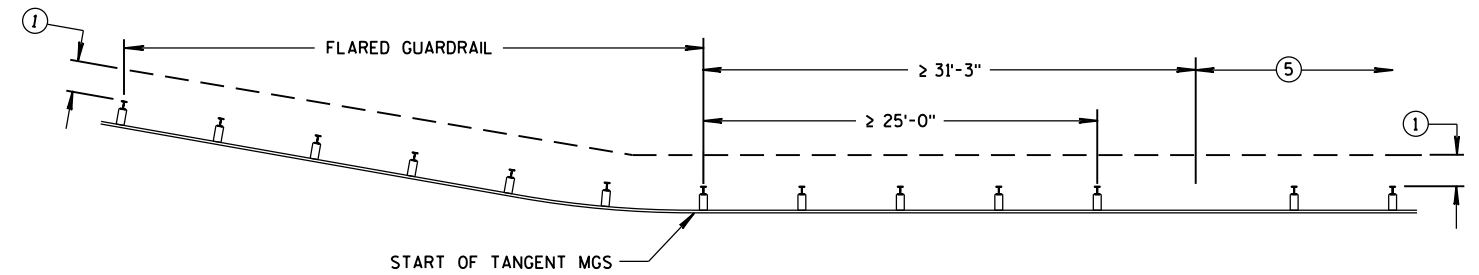


MISSING POST IN NORMAL BEAM GUARD RUN
NEAR TYPE 2 TERMINAL

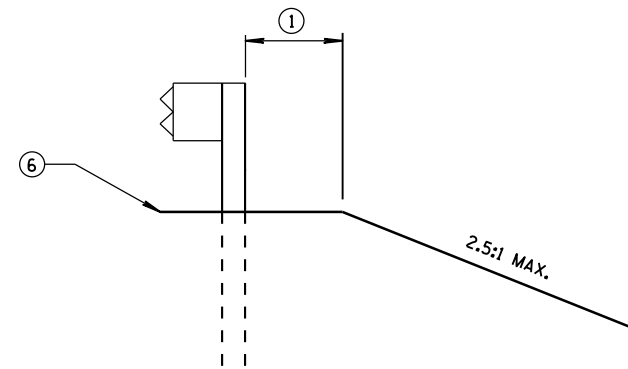
- ① MINIMUM OF 2 FEET OF GRADING BEHIND POST.
- ② SEE SDD 14B45 FOR MORE DETAILS.
- ③ SEE SDD 14B47 FOR MORE DETAILS.
- ④ SEE SDD 14B44 FOR MORE DETAILS.
- ⑤ SEE MISSING POST IN NORMAL BEAM GUARD RUN FOR DISTANCE TO NEXT MISSING POST AND AREA FOR WELL DRAINED, COMPACTED SOILS.
- ⑥ SEE PLAN FOR SHOULDER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



MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



MISSING POST IN NORMAL BEAM GUARD RUN
NEAR FLARED BEAM GUARD



CROSS SECTION VIEW

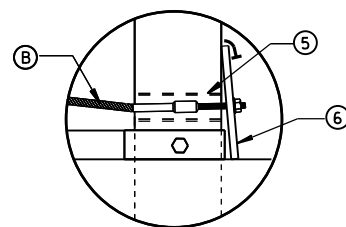
MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

THE CENTER OF THE UPPER 3 1/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.



Technical drawing of a wing spar cross-section. The drawing shows a rectangular spar with a central vertical line representing the hinge point. Dimensions include a top flange width of 7/8", a top flange height of 7", and a total height of 31". A horizontal dimension of 2'-0" TO 3'-0" VAR. is shown. A vertical dimension of 2'-4" is shown. The drawing includes labels for "POST BOLT (TYP.)", "HINGE POINT", "SLOPE 10:1 OR FLATTER", "3 1/2" HOLES", and "TRANSITION TO 4:1 TAPER LINE". Callouts (10) OR (11), (3), and (4) are present.

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

Diagram illustrating the assembly and dimensions of a W5-59 marker post:

- W5-59**: The main marker post body.
- (F)**: Flag attached to the post.
- (12)**: The post body below the flag.
- (1)**: The base of the post.
- (2)**: Soil plate at the base.
- (13)**: The post body above the base.
- (14)**: Soil plate at the base.
- Dimensions and Features:**
 - 5'-0" MIN. TO HINGE POINT**: Minimum distance from the top of the post to the hinge point.
 - 1'-0"**: Distance from the top of the post to the hinge point.
 - 4'-0"**: Distance from the hinge point to the base of the post.
 - 2'-0" OFFSET TO FACE OF RAIL**: Offset distance from the edge of the shoulder to the face of the rail.
 - EDGE OF SHOULDER**: The edge of the shoulder.
 - SLOPE 10:1 OR FLATTER**: Slope of the shoulder.
 - SHOULDER HINGE POINT**: The hinge point on the shoulder.
 - SLOPE 4:1 OR FLATTER**: Slope of the shoulder.
 - 1'-6" MIN. BELOW GRADE**: Minimum distance below grade to the base of the post.
 - NORMAL SLOPE**: The normal slope of the ground.

8 C 10 12

15 9 7 1

FINISHED GROUND ELEVATION

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

14 2

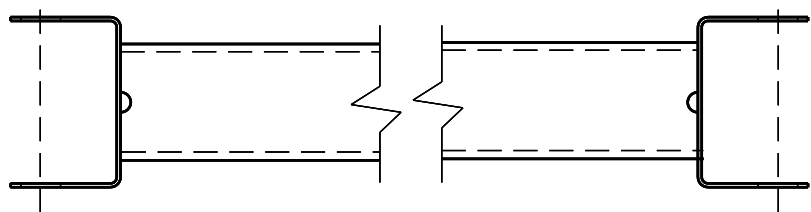
16

POST NO. 2*

DETAIL "B"

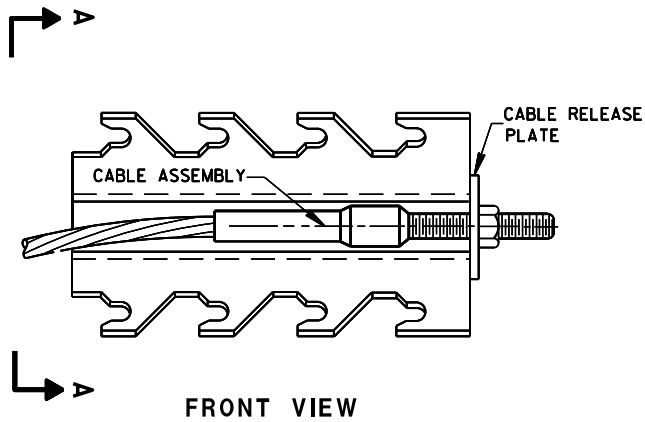
POST NO. 1*

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



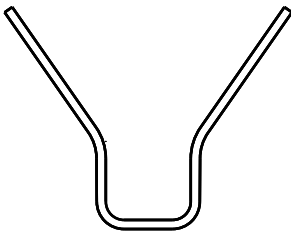
GENERIC GROUND STRUT

9 H

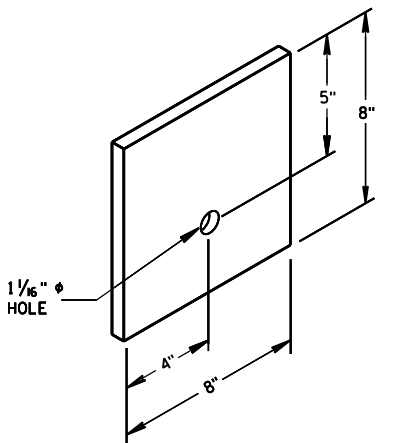


GENERIC ANCHOR CABLE BOX

8 H



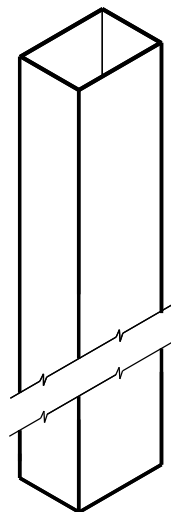
SECTION A-A



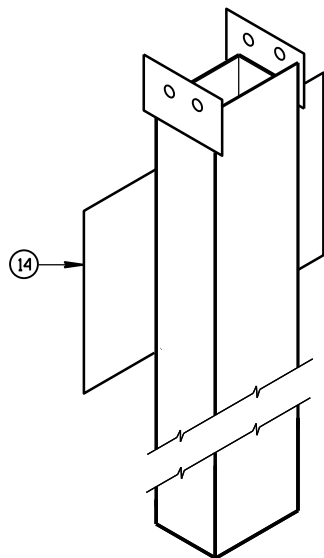
BEARING PLATE

6

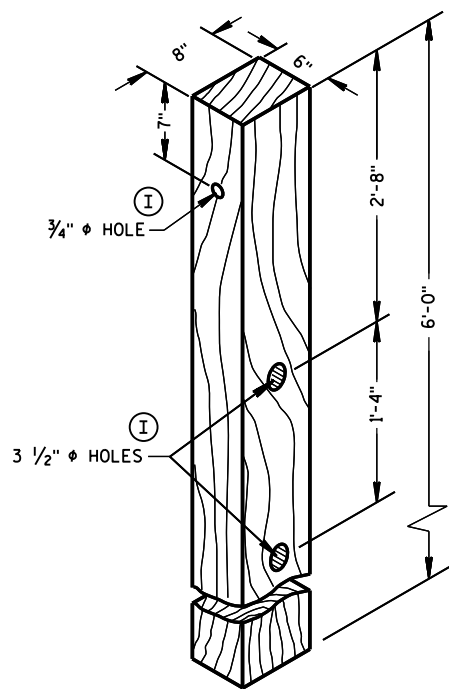
PART NO.	DESCRIPTION
MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.	
①	UPPER POST NO.1 6" X 6" TUBE
②	LOWER POST NO.1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL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



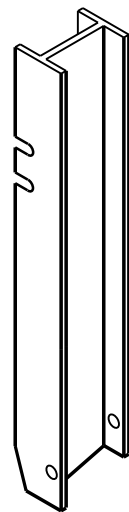
UPPER POST NO. 1⁽¹⁾



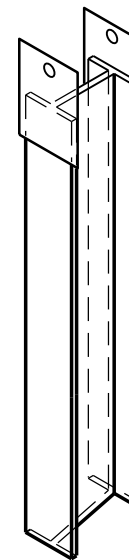
LOWER POST NO. 1⁽²⁾



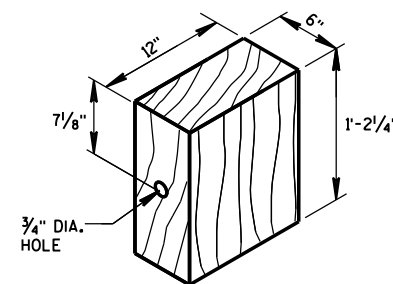
POSTS NUMBER 3-9
WOOD CRT POST⁽³⁾



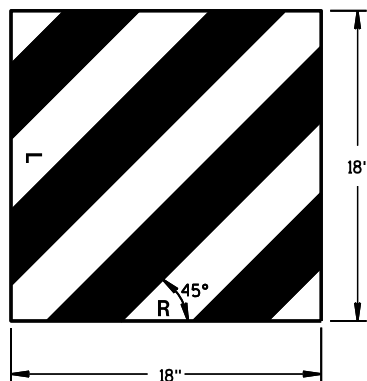
UPPER POST NO. 2⁽¹⁵⁾



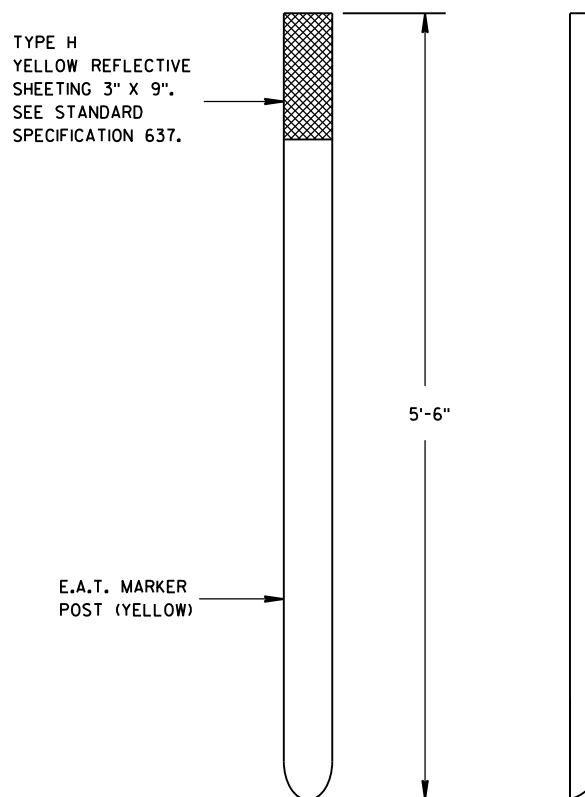
LOWER POST NO. 2⁽¹⁶⁾



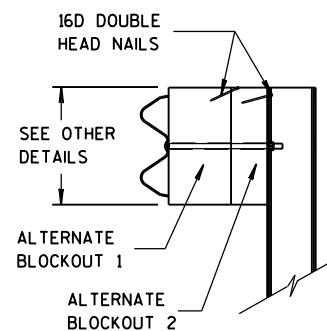
WOOD BLOCKOUT⁽⁴⁾
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



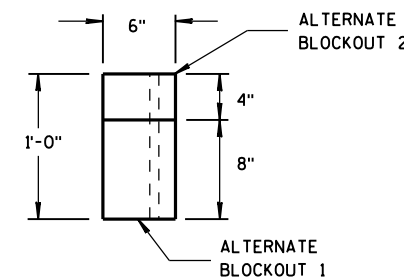
REFLECTIVE SHEETING DETAIL^(H)



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



SIDE VIEW



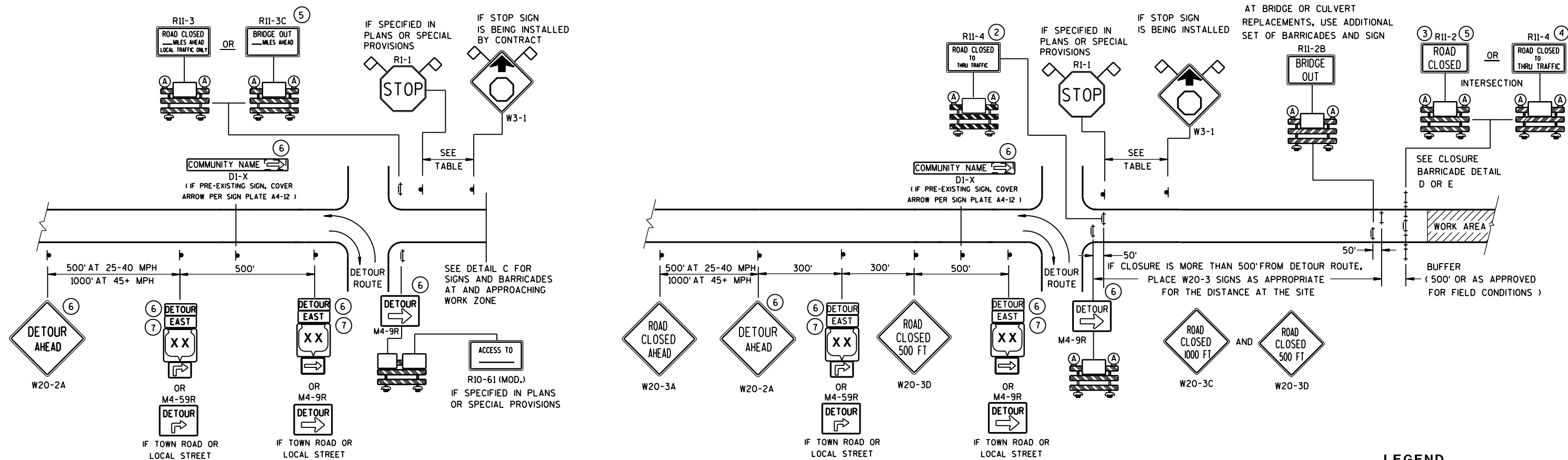
TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

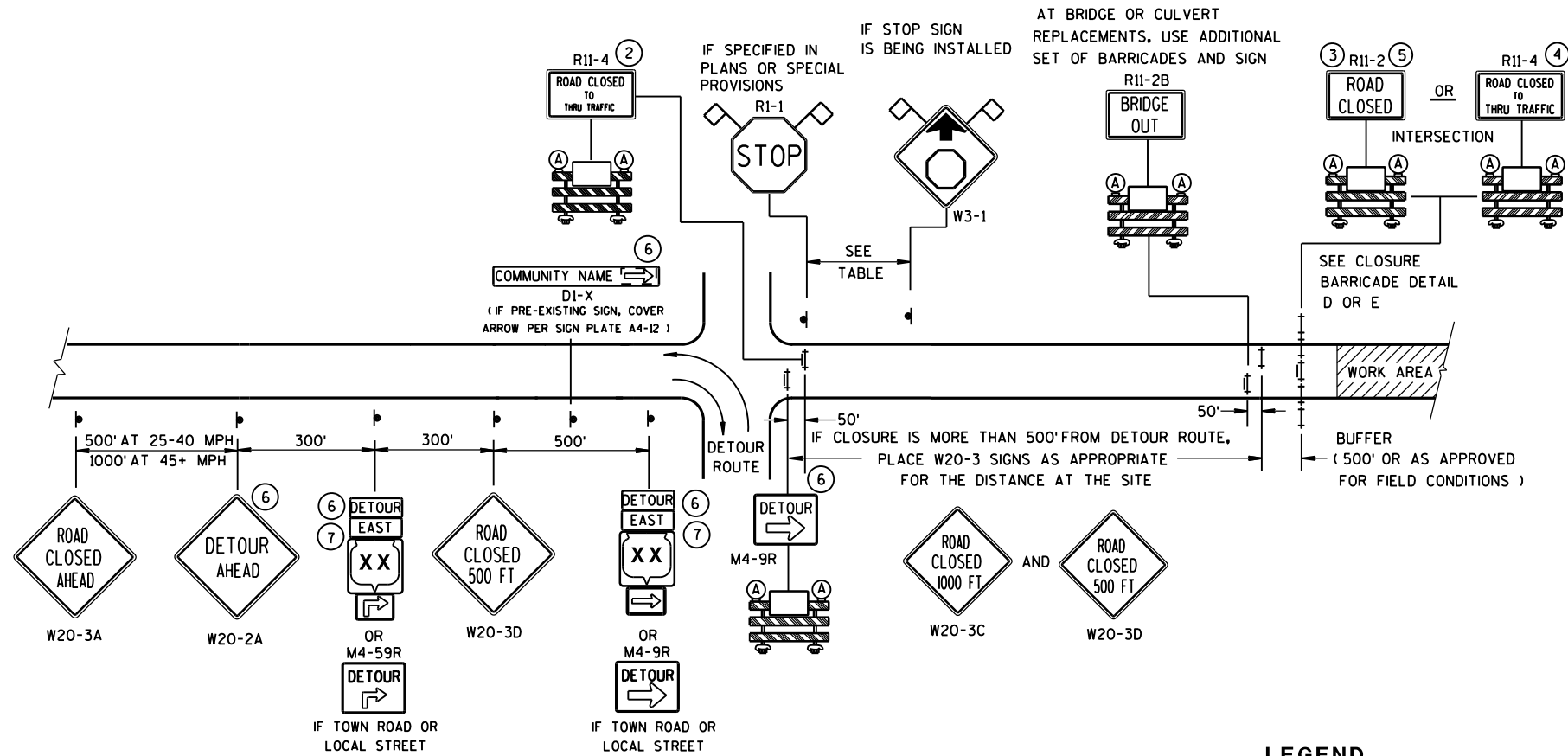
APPROVED
June 2017 DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



DETAIL A

MAINLINE CLOSURE WITH POSTED DETOUR

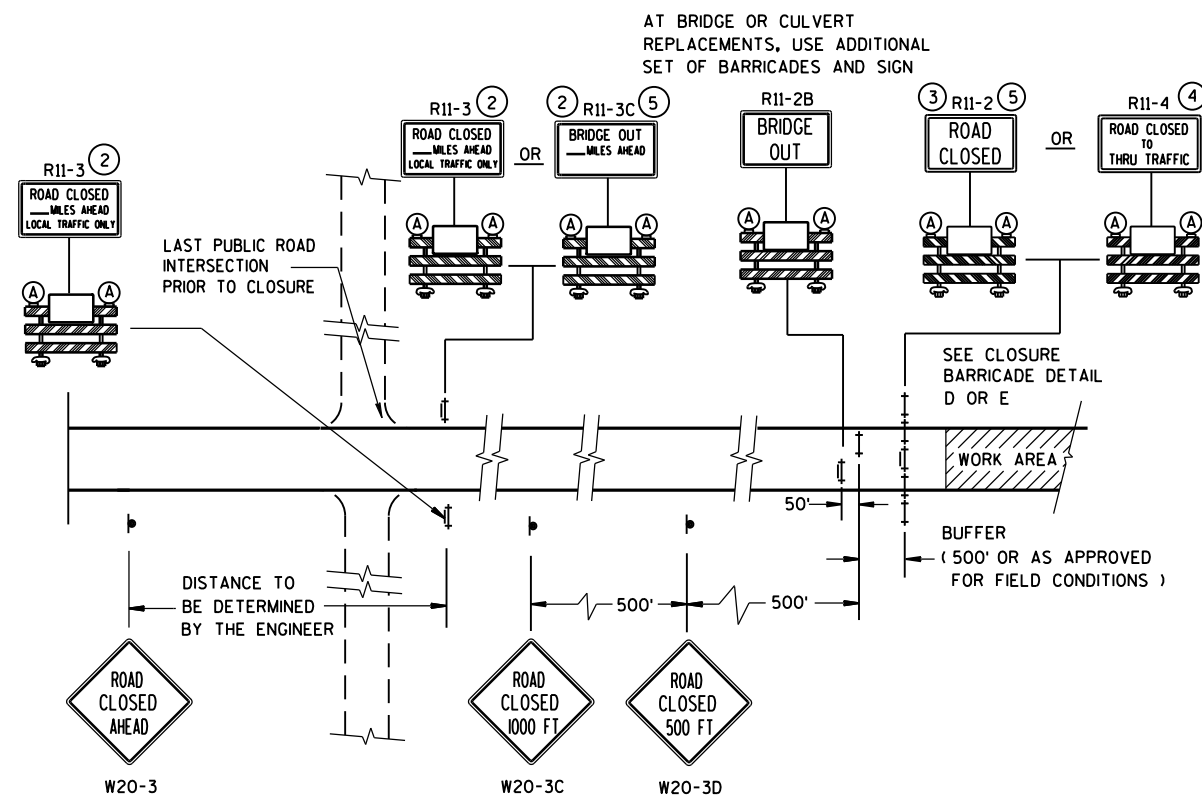
WORK ZONE GREATER THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



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

LEGEND


- | | |
|---|---------------------------------------|
|  | SIGN ON PERMANENT SUPPORT |
|  | TYPE III BARRICADE |
|  | TYPE III BARRICADE WITH ATTACHED SIGN |
|  | TYPE "A" WARNING LIGHT (FLASHING) |

 WORK AREA

 M4-8
 M3-X
 M1-4
OR
 M1-5A
OR
 M1-6

 OR 

M05-1 M06-1

 FLAGS, 16" X 16" MIN., (ORANGE)

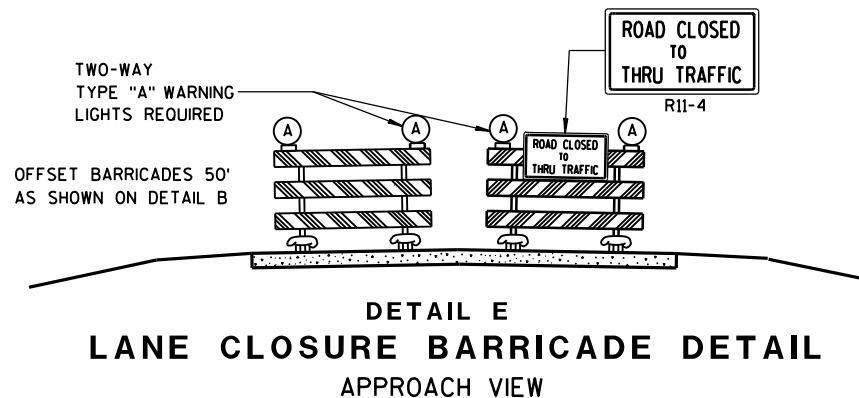
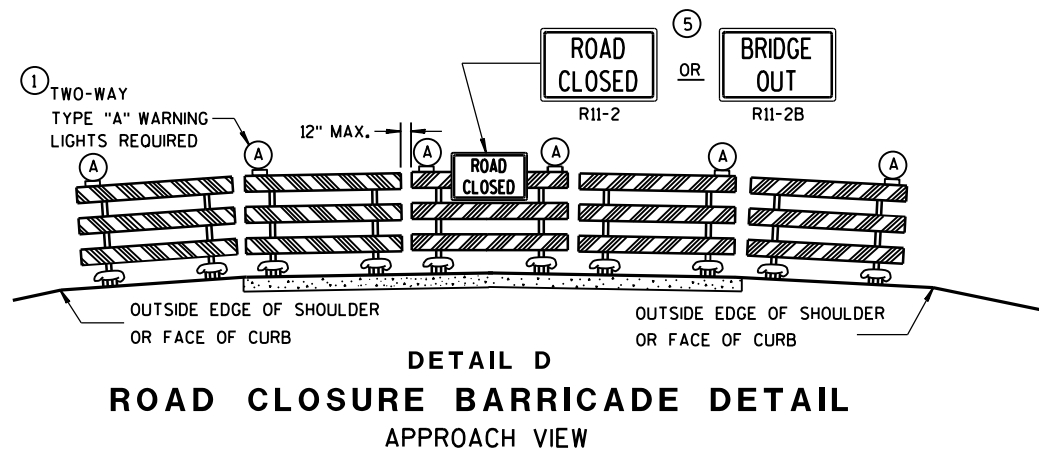
SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015	/S/ Peter Amakobe Atepe
DATE	STATEWIDE WORK ZONE TRAFFIC
FHWA	SAFETY ENGINEER



SEE SDD 15C2-SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

R11-2 SHALL BE 48" X 30".

R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".

M4-9 SHALL BE 30" X 24".

M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)

M4-8 SHALL BE 24" X 12". (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.)

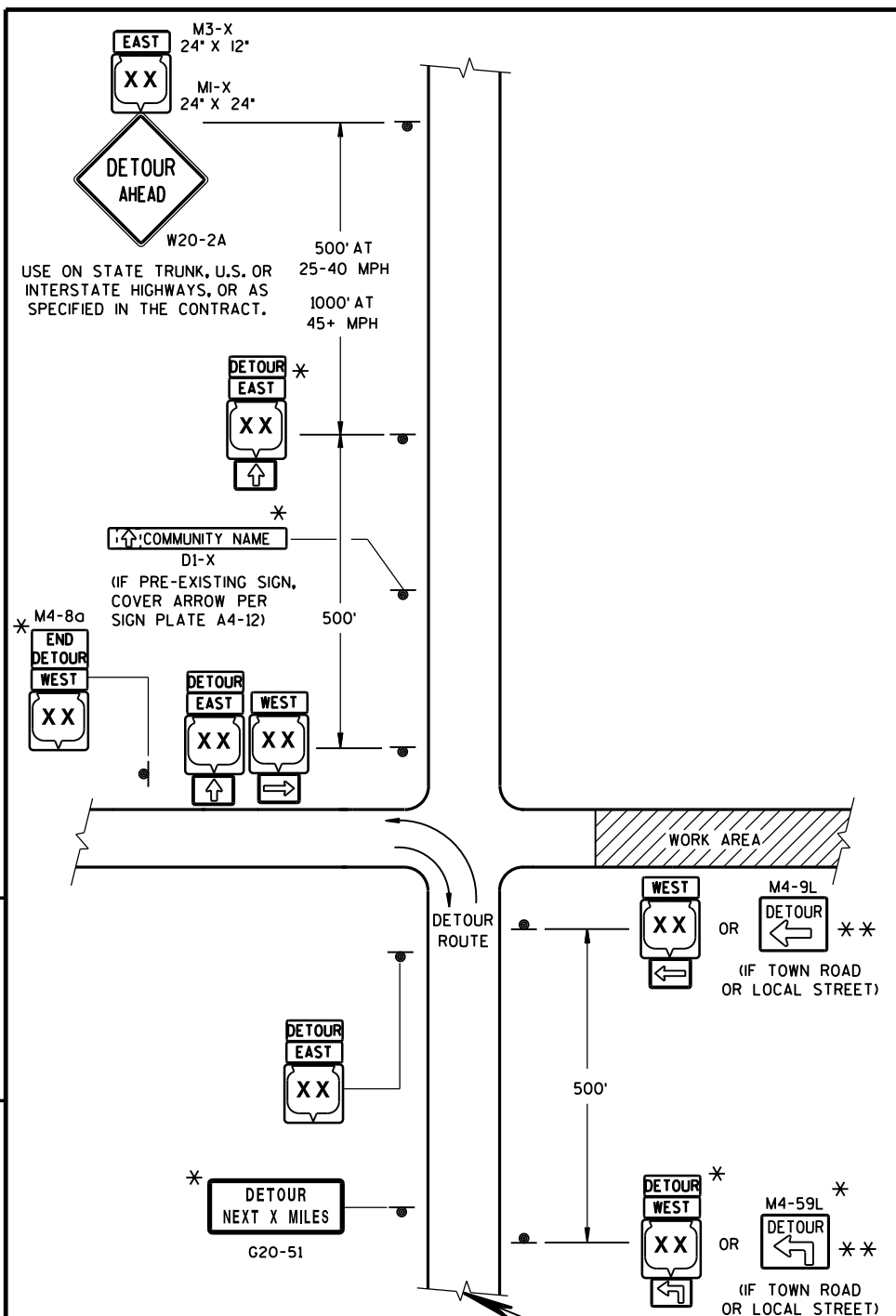
M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)

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	
Sept. 2015 DATE	/S/ Peter Amokobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	



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

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.

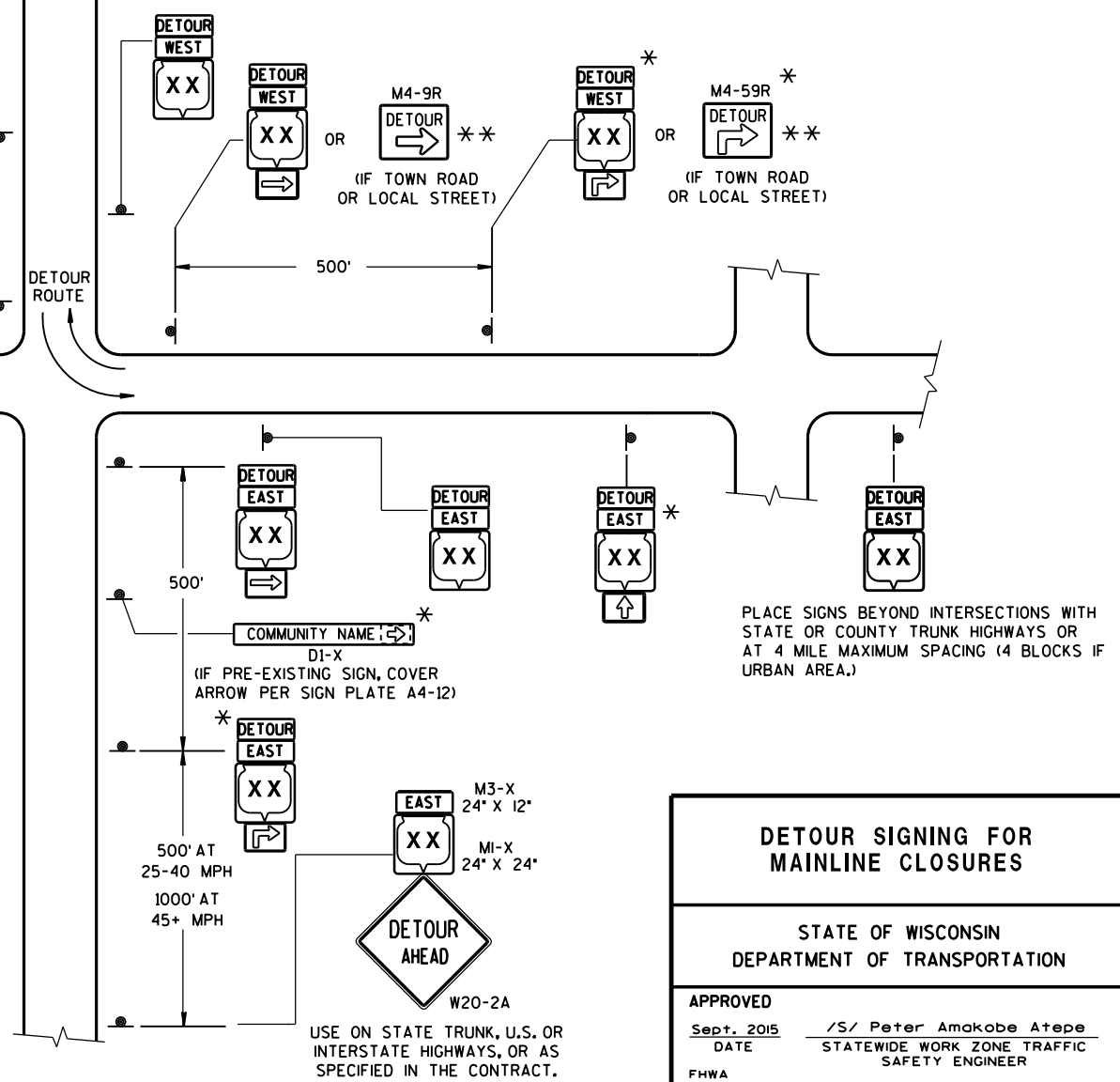
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- 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.

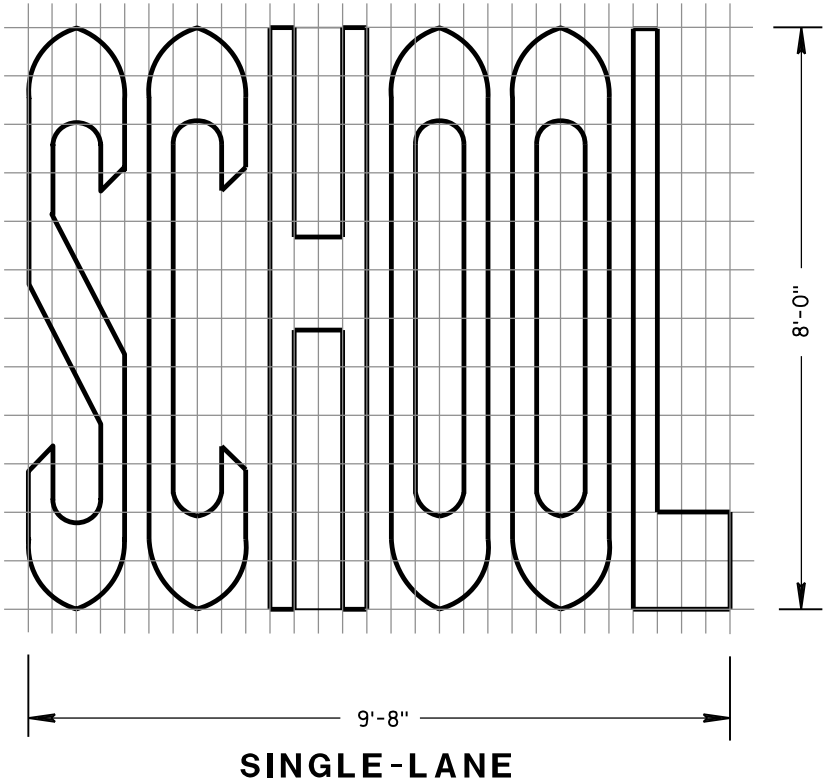
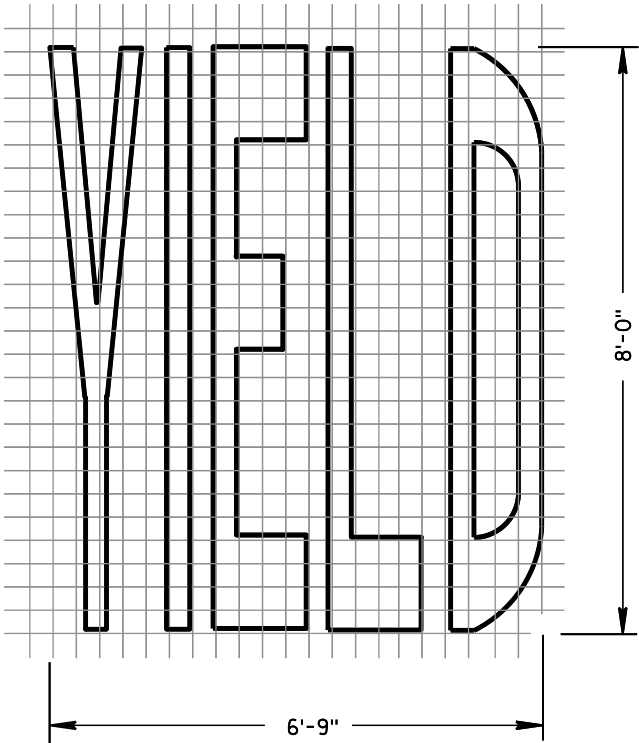
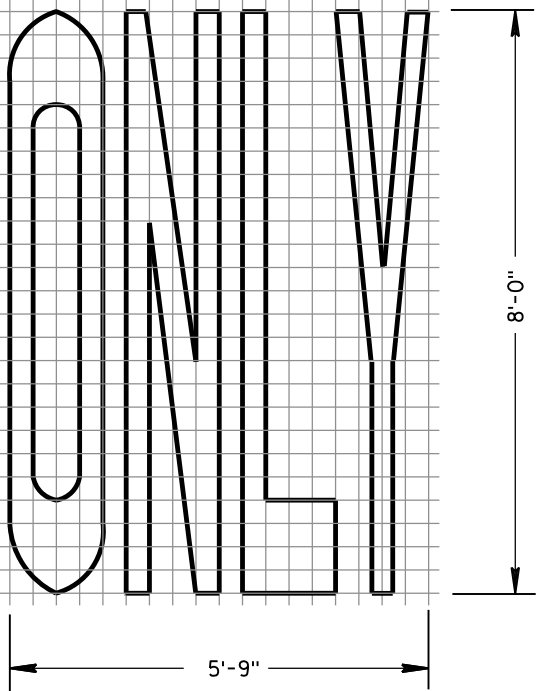
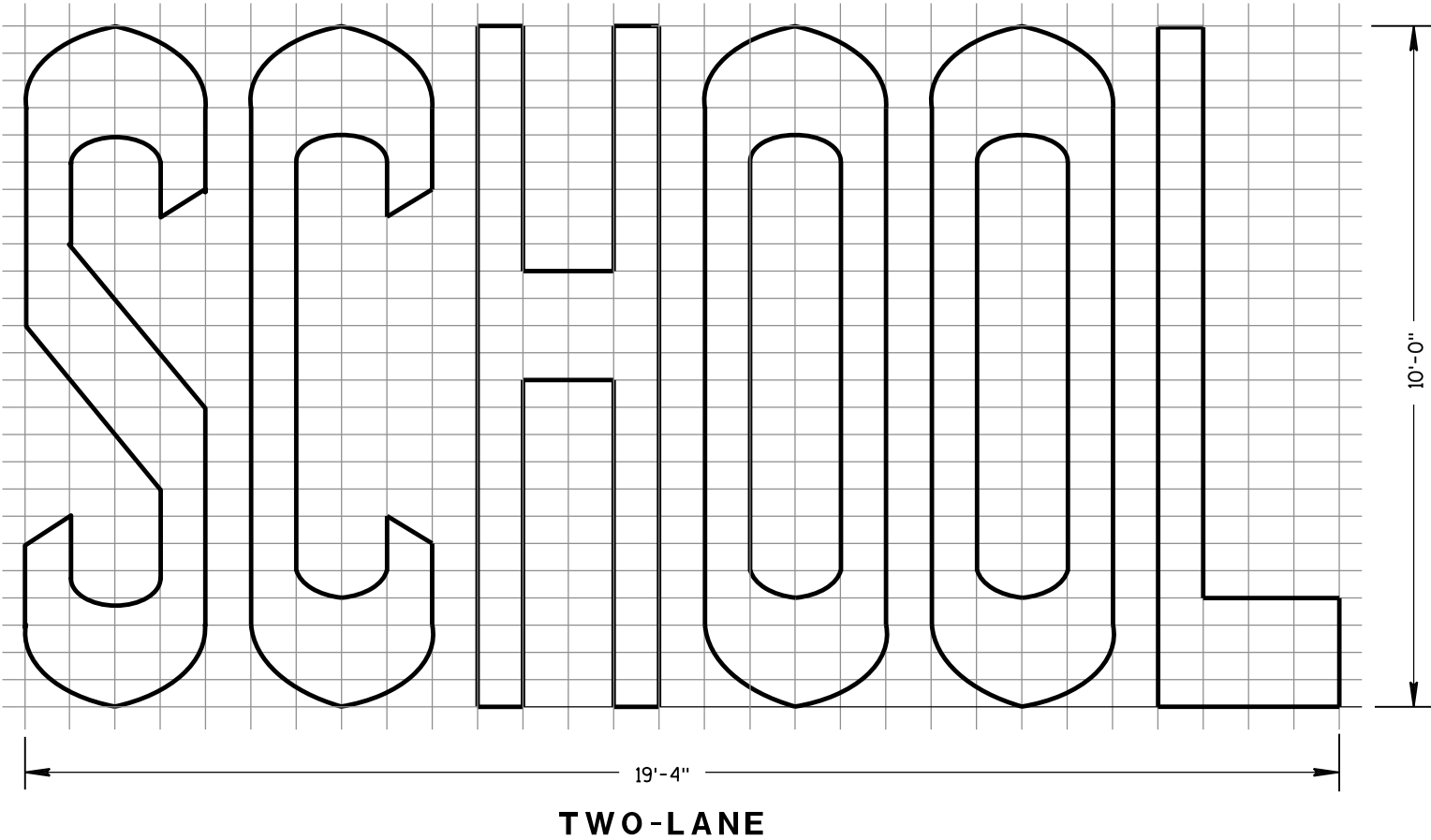
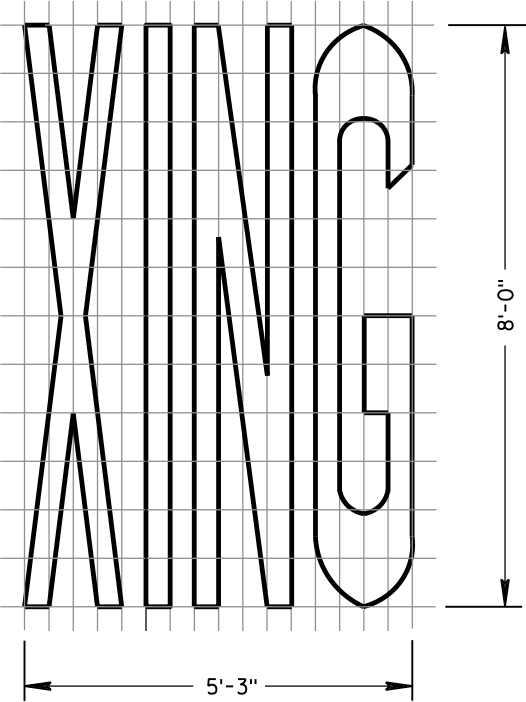
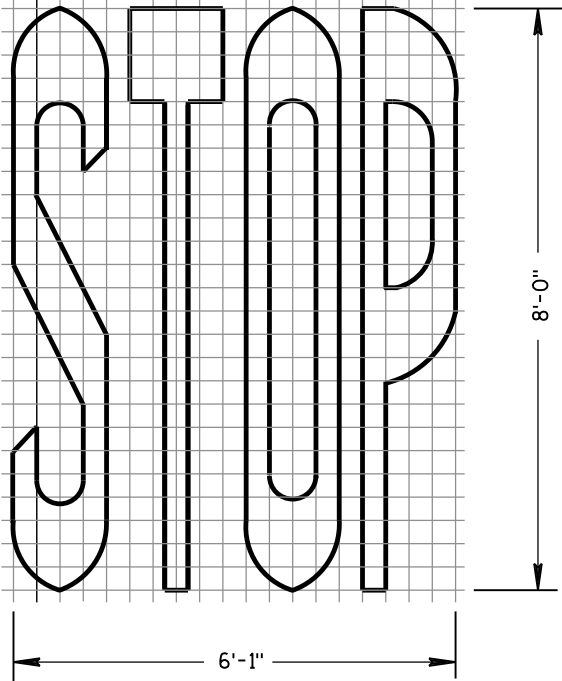
** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



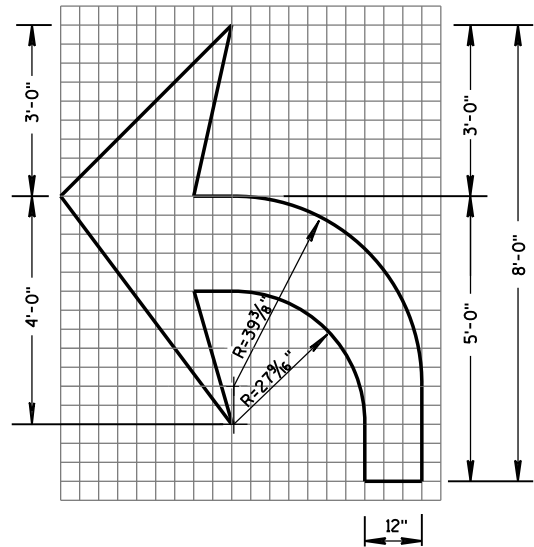
DETOUR SIGNING FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE FWHA	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

GENERAL NOTES

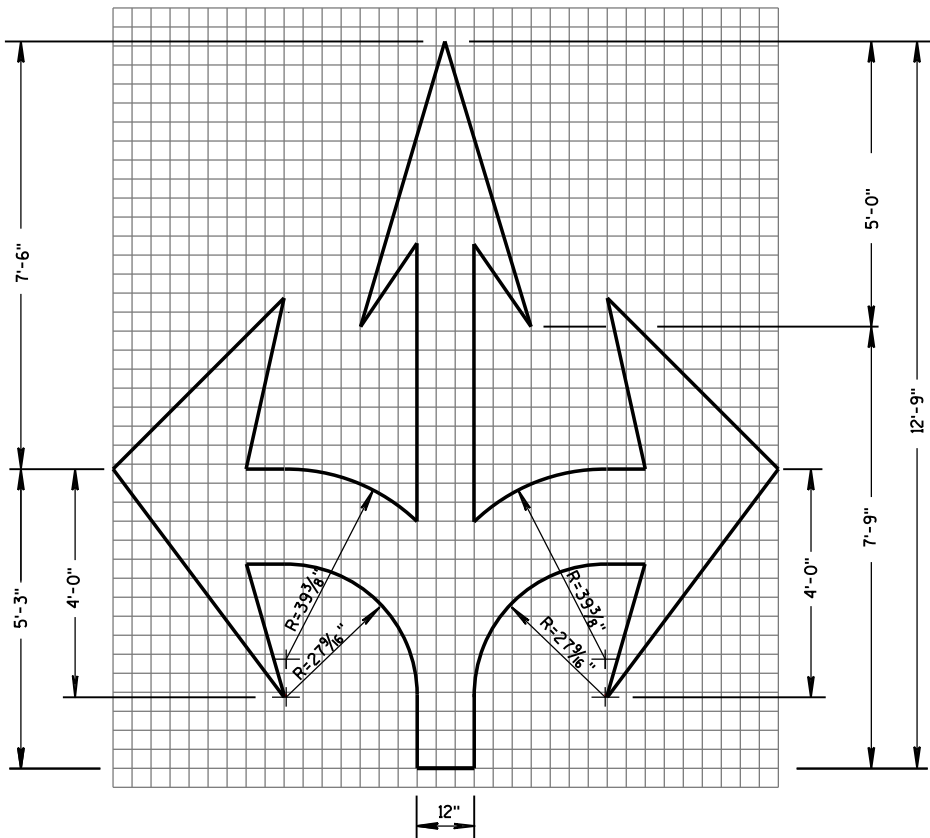
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



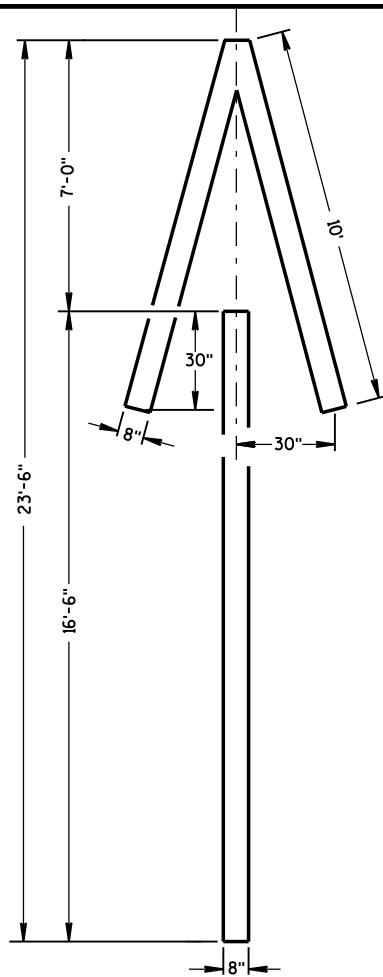
PAVEMENT MARKING WORDS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Matthew R. Rauch STATE SIGNING AND MARKING ENGINEER
FHWA	



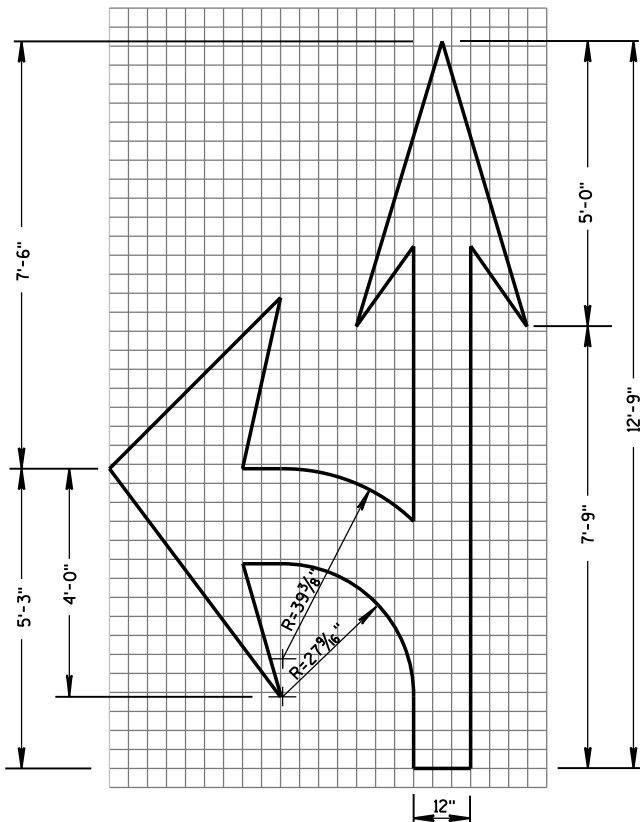
TYPE 2



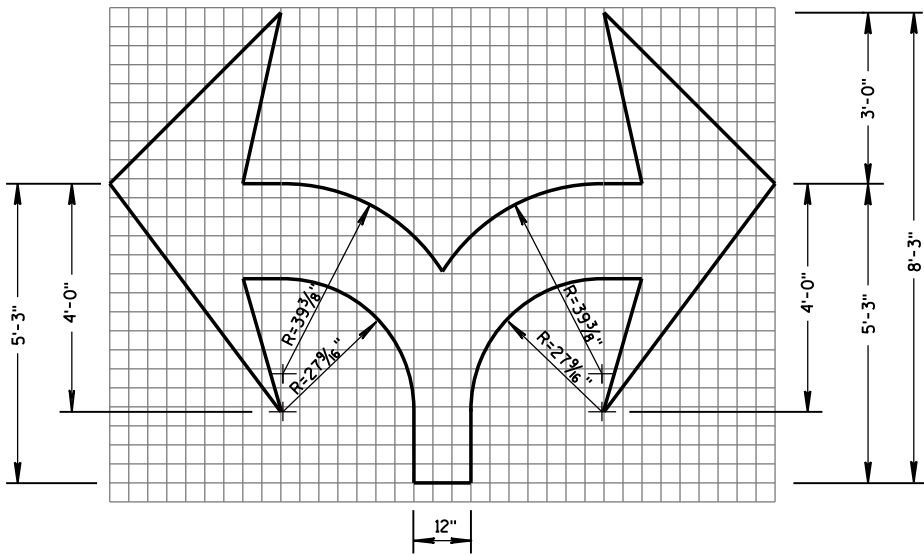
TYPE 6



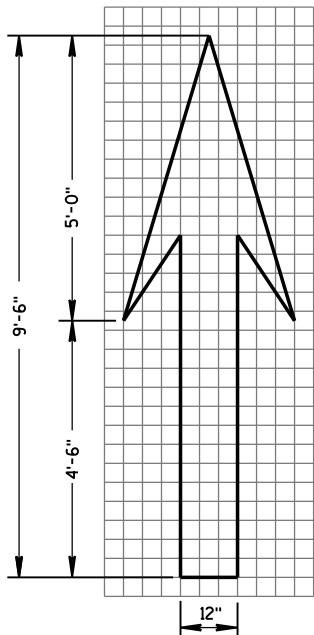
TYPE 4



TYPE 3



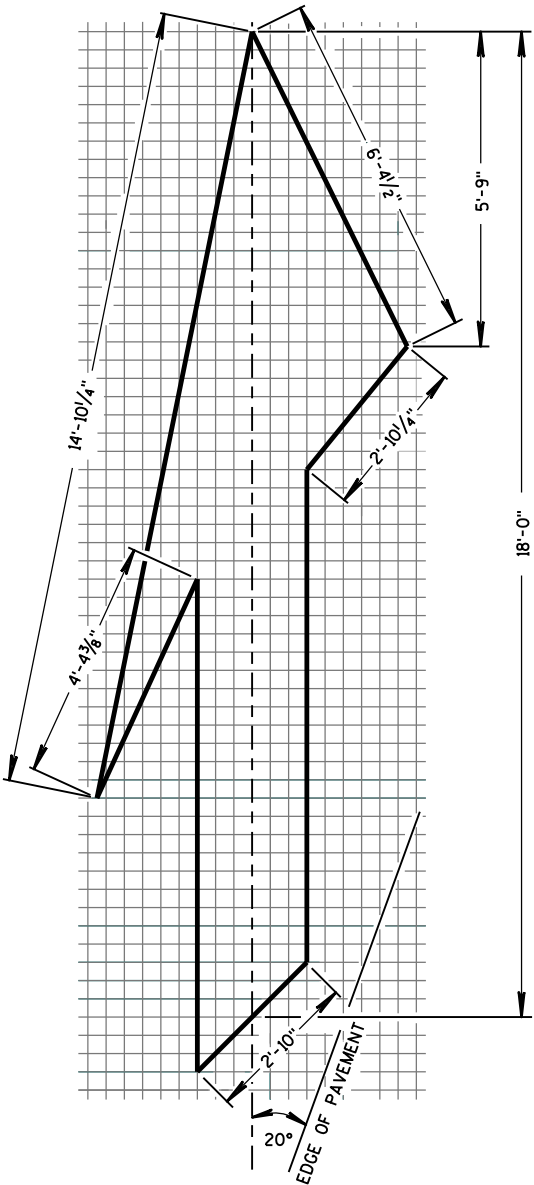
TYPE 7



TYPE 1

GENERAL NOTES

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

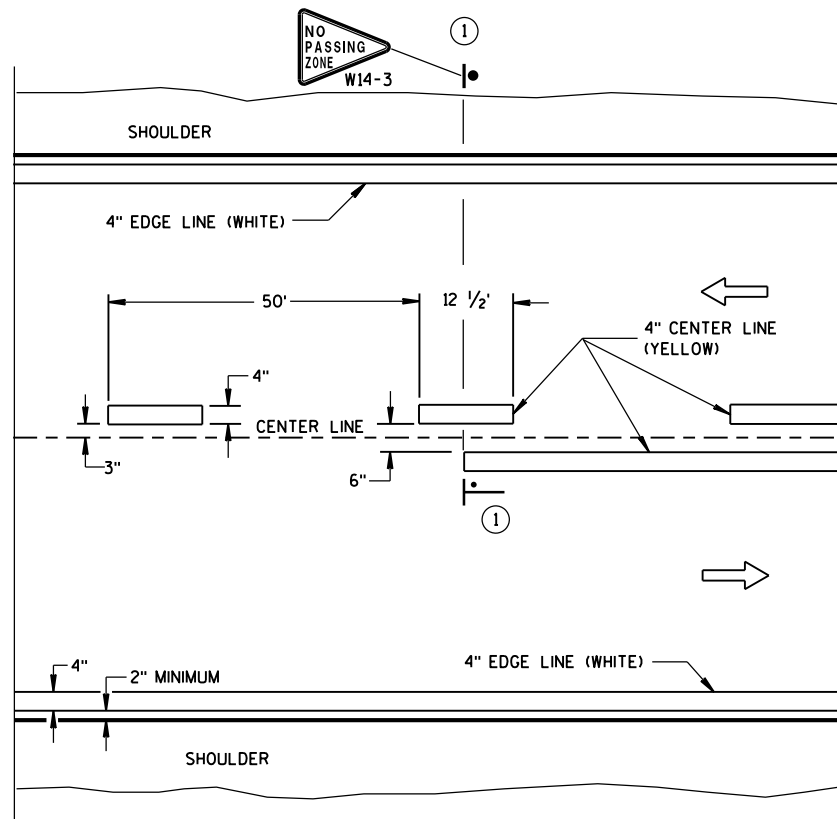


TYPE 5 LANE DROP ARROW

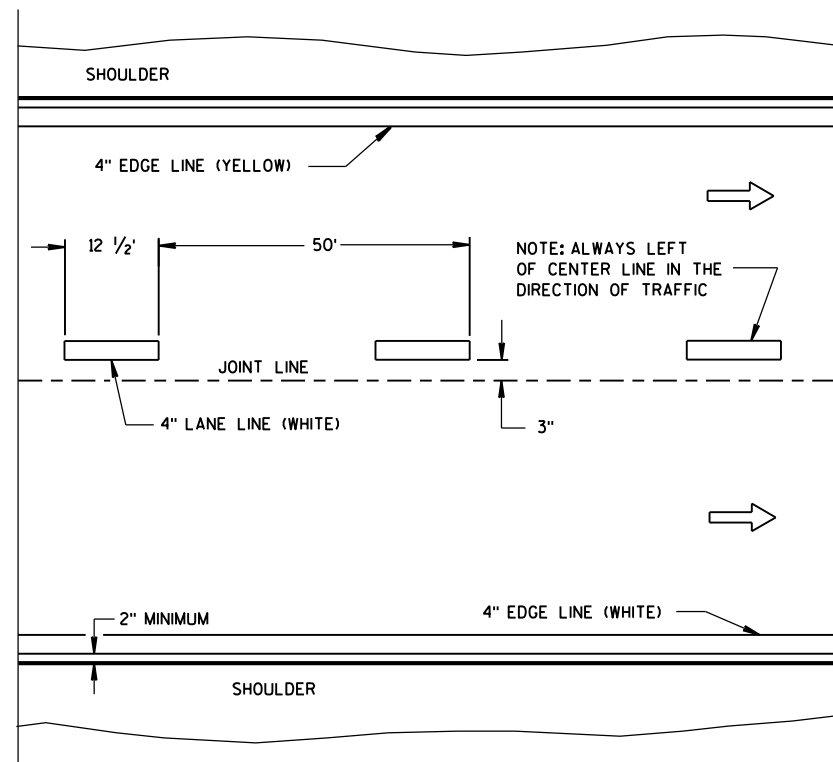
PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

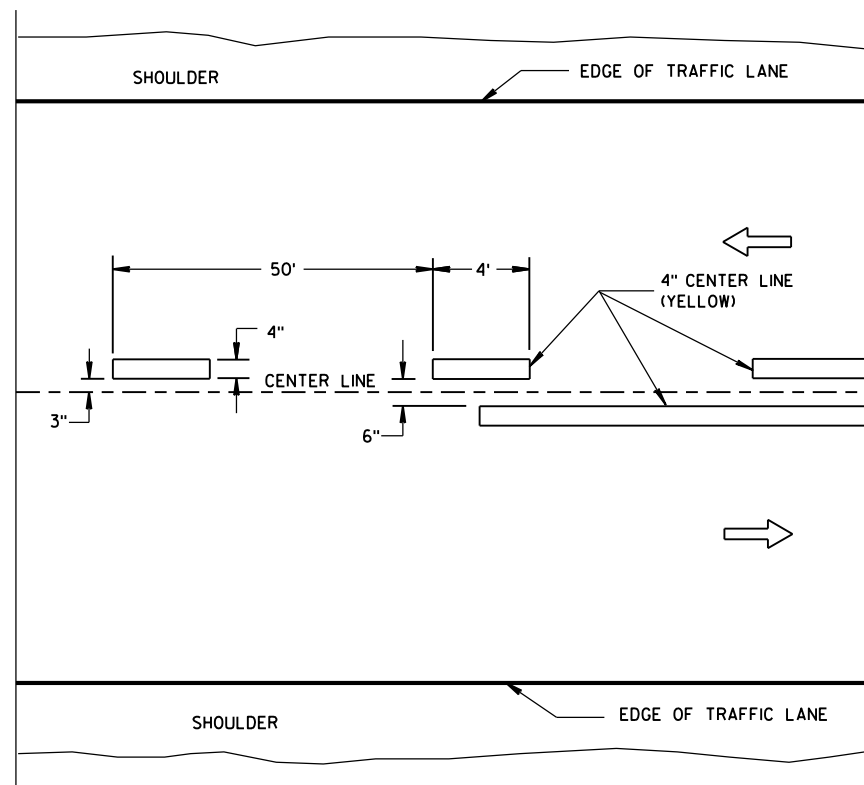


TWO WAY TRAFFIC

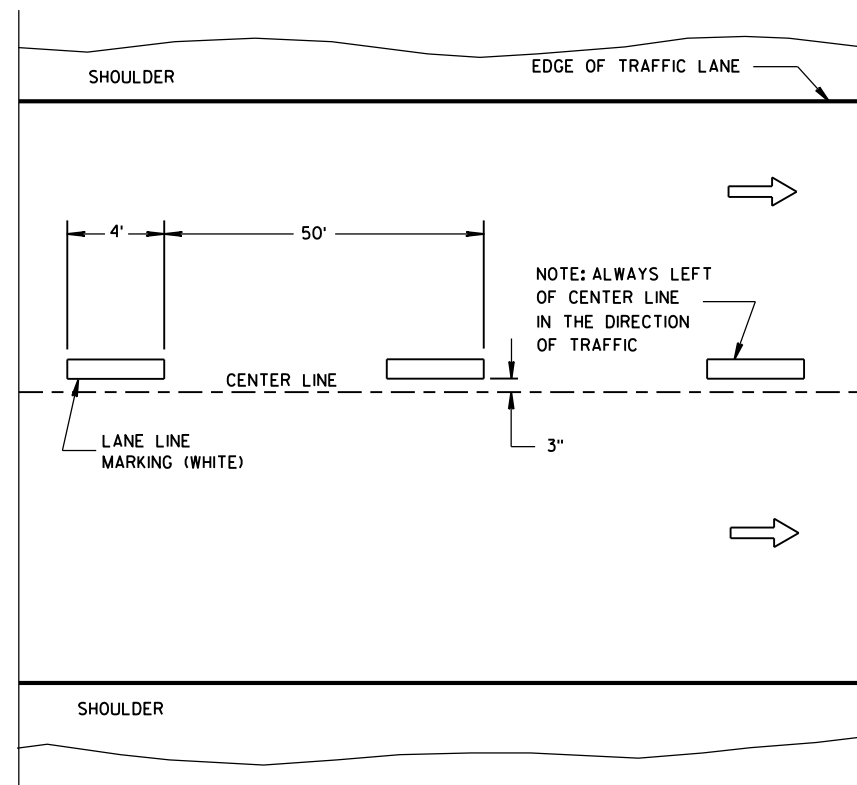


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

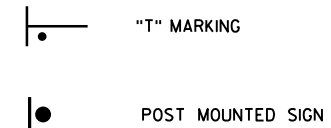
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

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

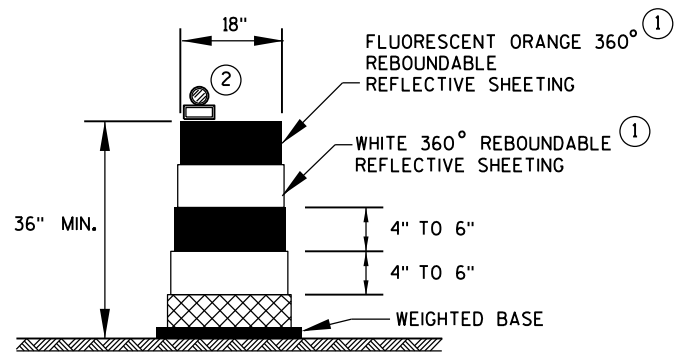
NOTE

ARROW SYMBOL () SHOWS DIRECTION OF TRAVEL

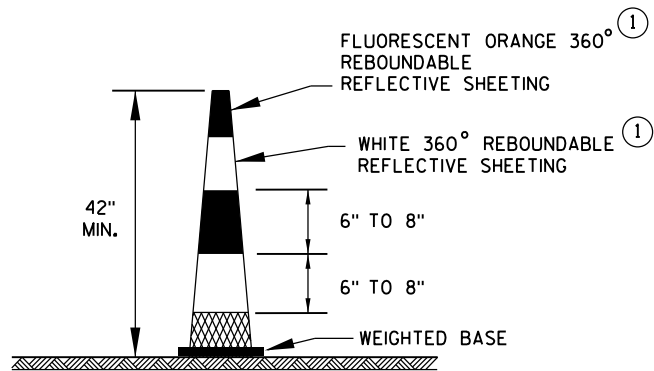
LEGEND



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



DRUM

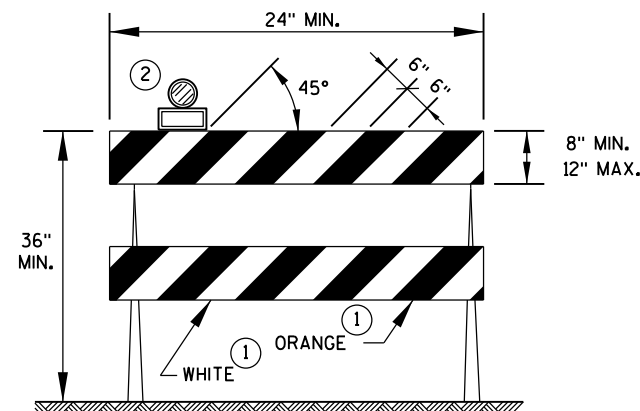


42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS

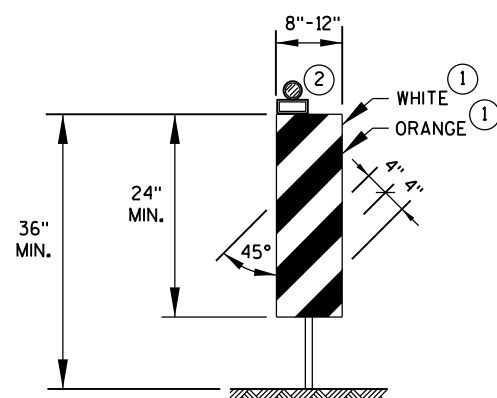
GENERAL NOTES

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



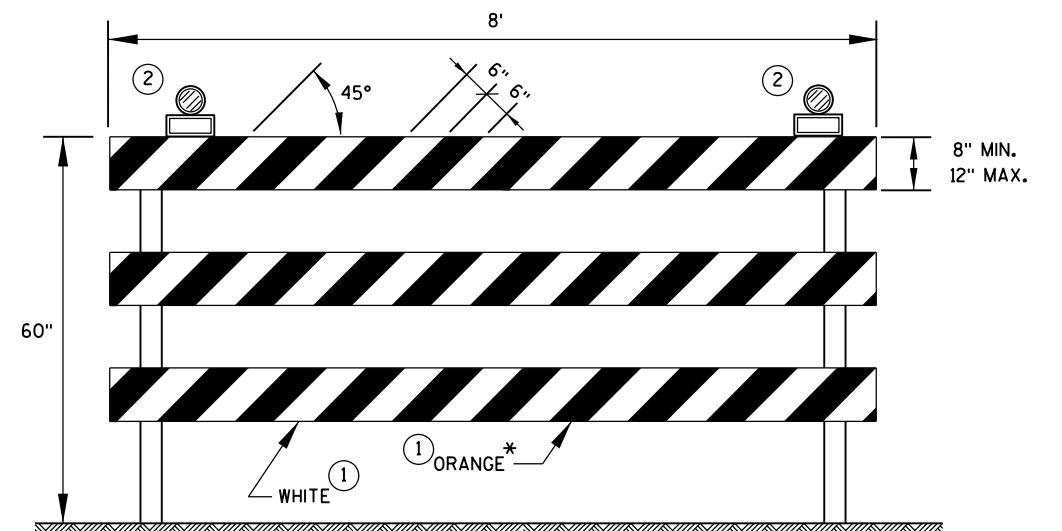
TYPE 2 BARRICADE

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



VERTICAL PANEL

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



TYPE 3 BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION, USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

LEGEND

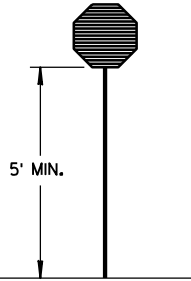
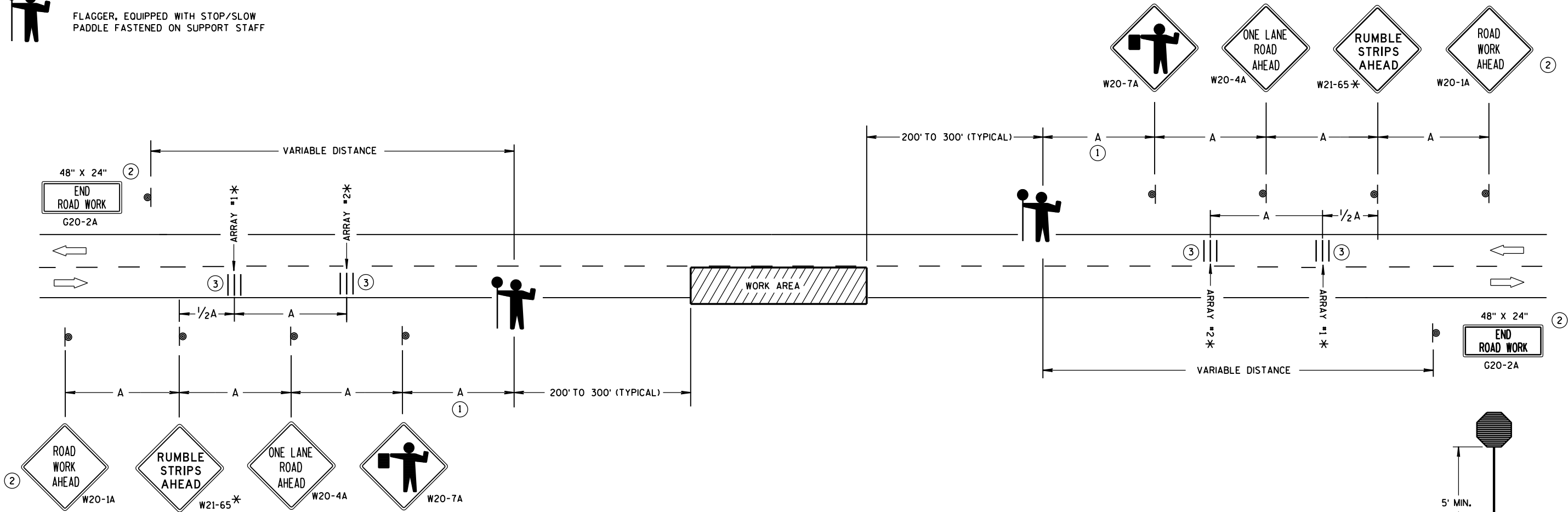
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



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



STOP/SLOW PADDLE ON SUPPORT STAFF

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

GENERAL NOTES

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

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

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

"W0" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS. PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, REMOVE TEMPORARY RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

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

- ① FOR A MOVING WORK OPERATION, SIGNING AND TEMPORARY RUMBLE STRIPS (IF USED) SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3,500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.
- ③ EACH TEMPORARY RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 /S/ Andrew Heldtke
DATE WORK ZONE ENGINEER
FHWA

① 1/2 LENGTH OF FULL WIDTH ACCELERATION LANE.



APPROVED
Sept., 2016 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMENENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIREABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

"W0" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

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. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

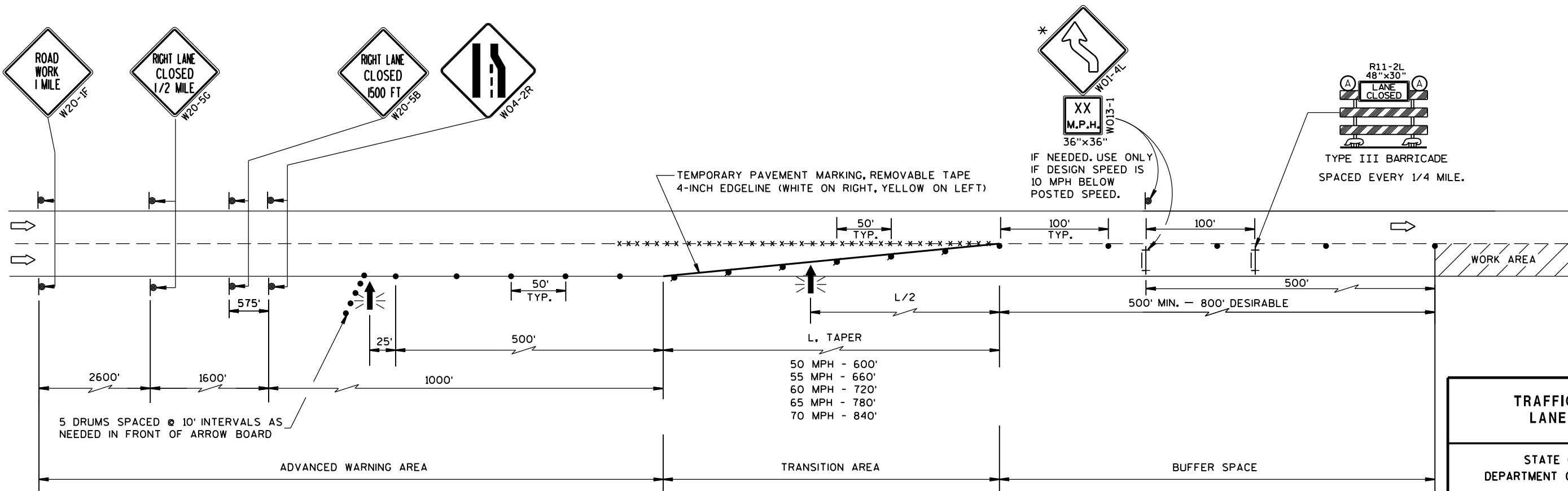
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* THE LEFT REVERSE CURVE SIGN (W01-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.

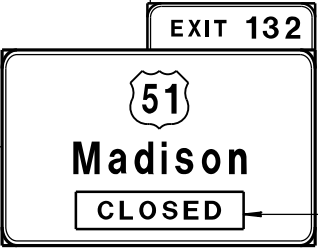


TRAFFIC CONTROL, LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March 2016 DATE	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	



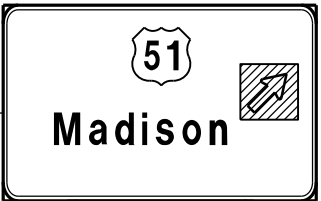
G20-60
108"x24"

OR



G20-60
108"x24"

PLACE SIGN G20-60 OVER MILEAGE
ON EXISTING E1-1A SIGN



COVER ARROW ON
EXISTING E4-1A
SIGN (COVERING
SIGNS TYPE I)

G20-61
120"x30"

GENERAL NOTES

THIS RAMP CLOSURE DETAIL IS TYPICAL FOR CLOSING A RIGHT SIDE EXIT RAMP. FOR A LEFT SIDE EXIT RAMP, REVERSE THE TRAFFIC CONTROL.

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

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

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

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

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

PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF RAMP CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROPOFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN THE WORK IS NOT IN PROGRESS.

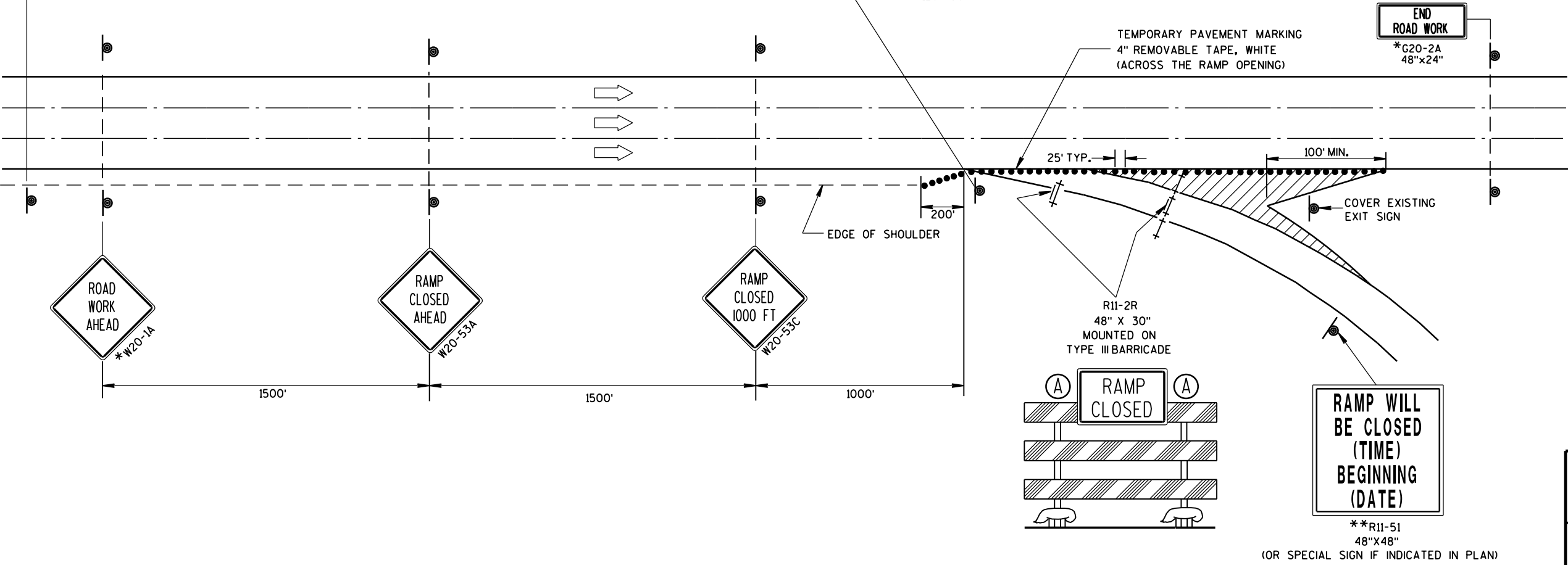
WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12-HOUR DURATION.

* W20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE RAMP CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

** PLACE "RAMP WILL BE CLOSED" SIGN 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.

6

6



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL, EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015 /S/ Peter Amakobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER

S.D.D. 15 D 16-3

S.D.D. 15 D 16-3

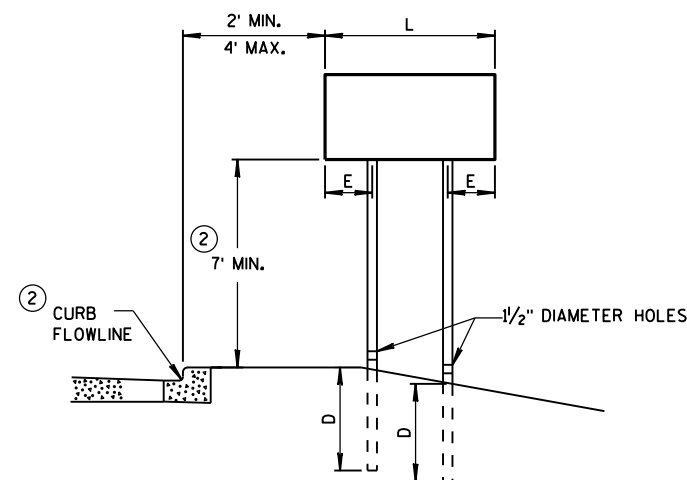
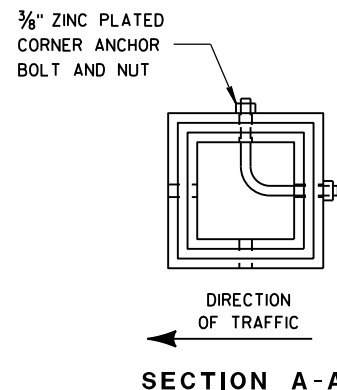


DETAIL OF TUBULAR STEEL SIGN POST

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).
SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

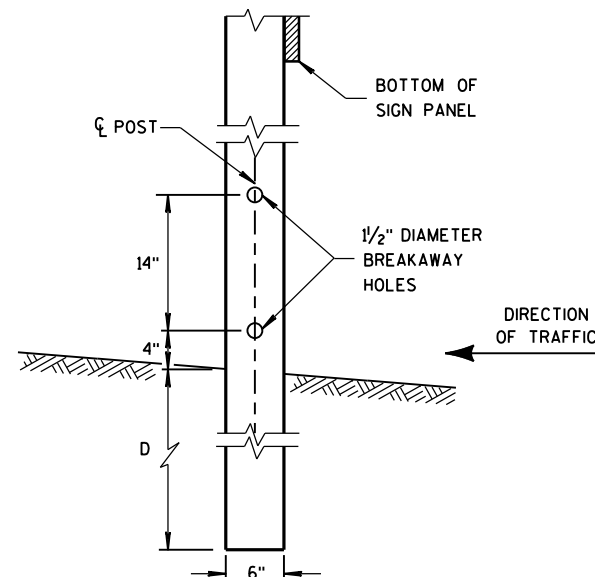


URBAN AREA

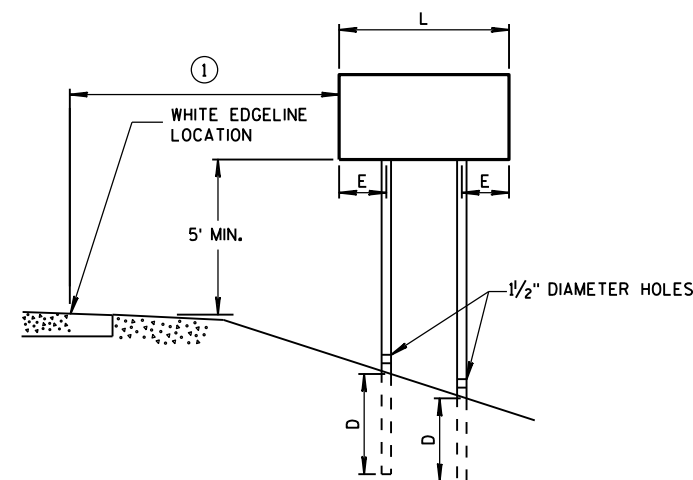
POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST EMBEDMENT DEPTH

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



4" x 6" WOOD POST MODIFICATION



RURAL AREA

4" X 6" WOOD POST

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

SEE NOTE ③

GENERAL NOTES

- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- ② THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

- A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3
- B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

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

- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" x 3-1/4" LENGTH W/ NUTS
 - RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

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

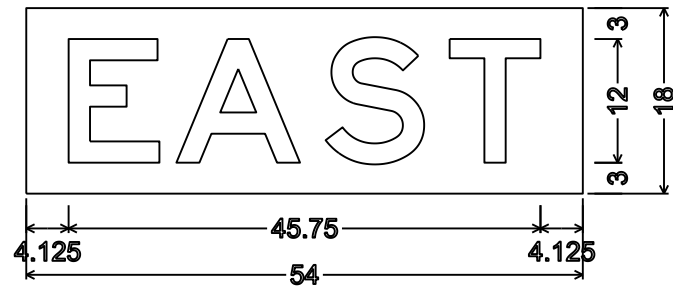
* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

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

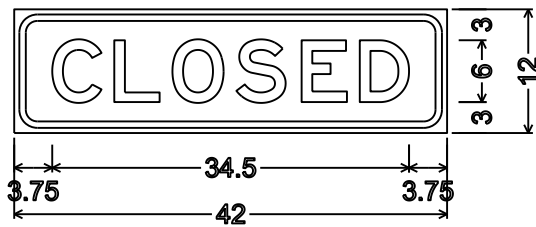
NOTES

- 1. Fixed Message Type II Signs - Type F Reflective
- 2. Color:
Background - Orange
Message - Black
- 3. Message Series - E
- 4. Signs without borders base material is .040" aluminum

Sign on .040" aluminum

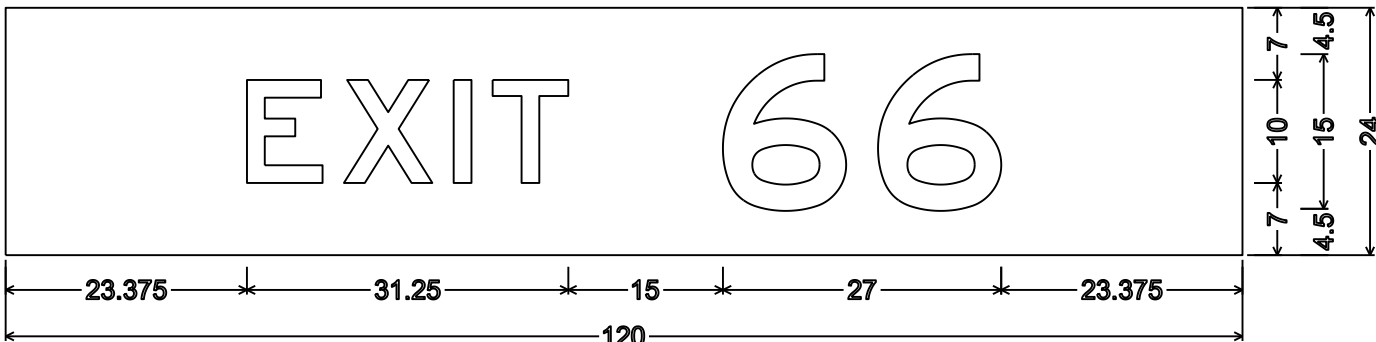


No border,



2.250" Radius, 0.625" Border, 0.500" Indent

Sign on .040" aluminum

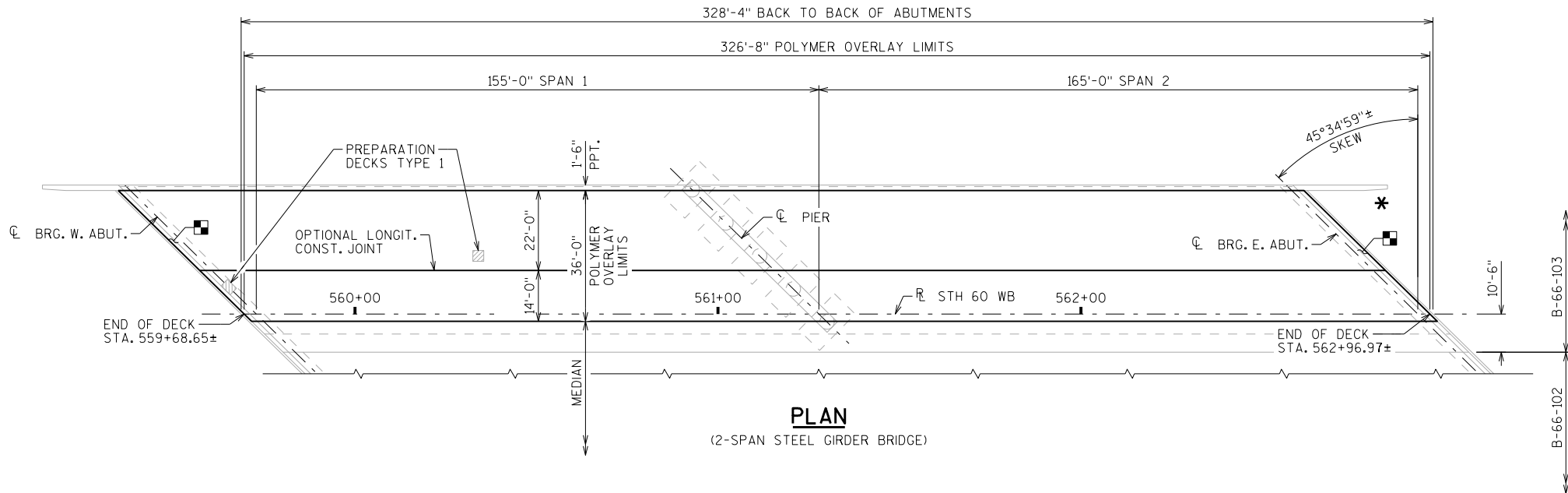
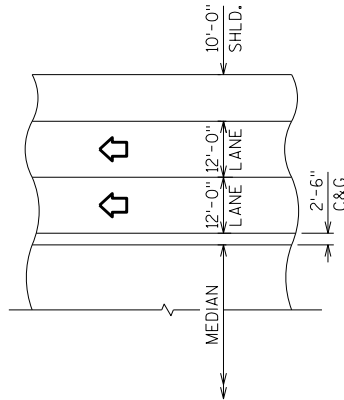


No border

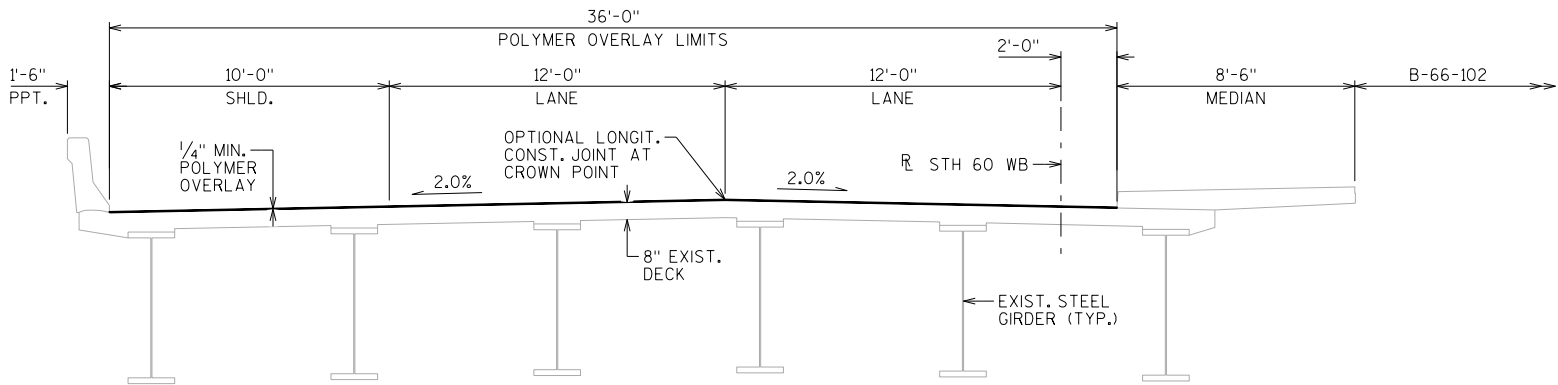
* PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT, AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".

STATE PROJECT NUMBER

1100-13-71



PRESERVE AND PROTECT EXISTING STRIP SEAL EXPANSION JOINT BEFORE PLACING POLYMER OVERLAY.



CROSS SECTION THRU ROADWAY
(LOOKING EAST)

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS-20
INVENTORY RATING: HS-25
OPERATIONAL RATING: HS-41
MAXIMUM STANDARD PERMIT VEHICLE LOAD: 250 KIPS

MATERIAL PROPERTIES:
CONCRETE MASONRY:
DECK REPAIR — f'c = 4,000 P.S.I.

TRAFFIC VOLUME

STH 60
ADT = 19,300 (2037)
R.D.S. = 55 M.P.H.

IH 41
ADT = 48,800 (2037)
R.D.S. = 70 M.P.H.

LIST OF DRAWINGS

1. POLYMER OVERLAY

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
509.0301	PREPARATION DECKS TYPE 1	SY	1
509.1500	CONCRETE SURFACE REPAIR	SF	10
509.2100.S	CONCRETE MASONRY DECK REPAIR	CY	1
509.5100.S	POLYMER OVERLAY	SY	1,307
SPV.0090	SAWING PAVEMENT DECK PREPARATION AREAS	LF	10

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.


DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

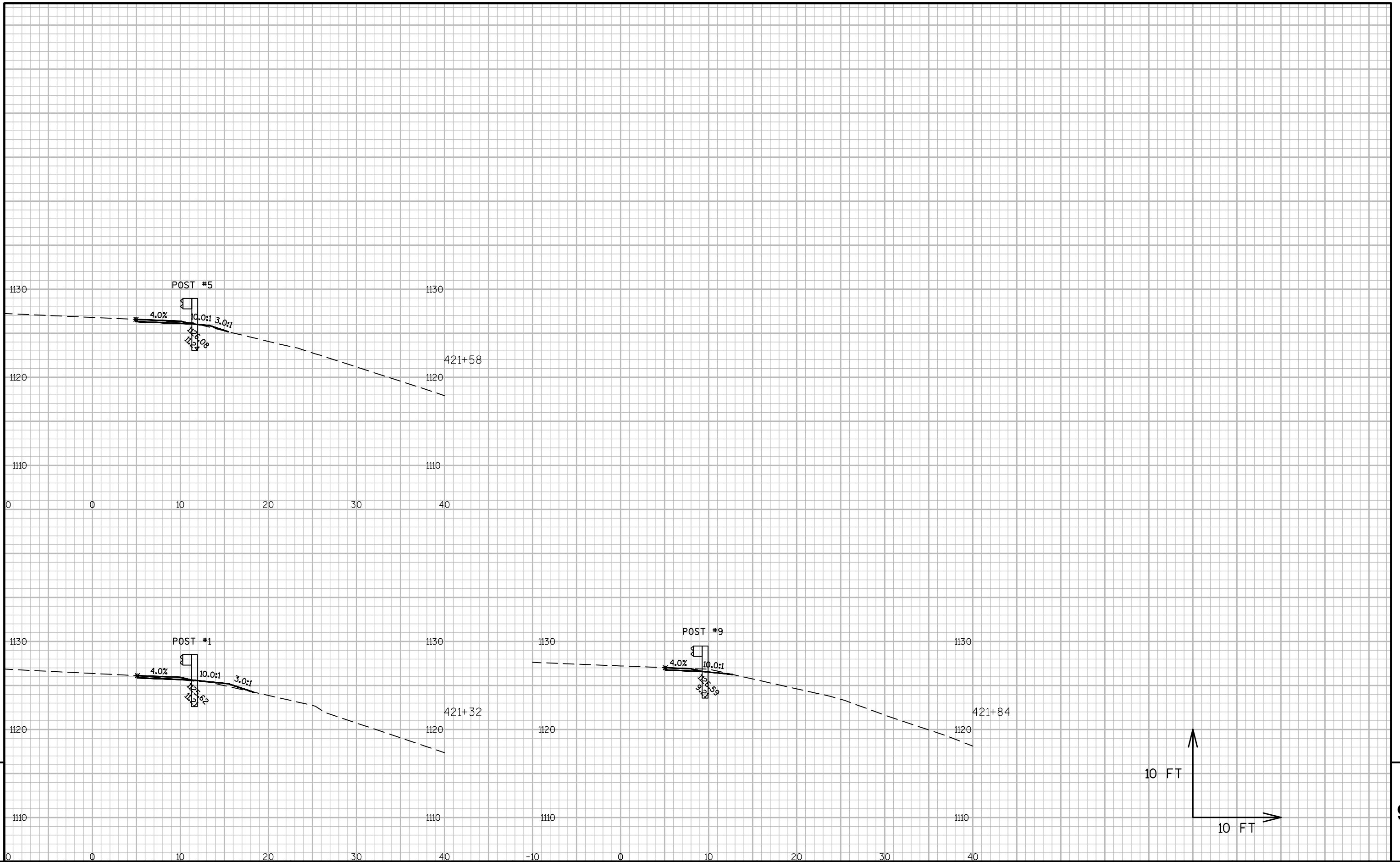
DECK SURFACE PREPARATION IS INCLUDED IN THE BID ITEM "POLYMER OVERLAY".

ANY EXCAVATION NECESSARY TO COMPLETE THE OVERLAY AT THE ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "POLYMER OVERLAY".

AREAS OF "PREPARATION DECKS TYPE 1" AND "CONCRETE SURFACE REPAIR" ARE BASED ON THE PLANS AND AS DETERMINED BY THE ENGINEER. REPAIRED AREAS SHALL BE FILLED WITH "CONCRETE MASONRY DECK REPAIR."

STRUCTURE DESIGN CONTACTS:
MICAH BROOKS (608) 266-5080
LAURA SHADEWALD (608) 267-9592

NO.	DATE	REVISION	BY
 BUREAU OF STRUCTURES			
ACCEPTED		11/27/17	
CHIEF STRUCTURES DESIGN ENGINEER		DATE	
STRUCTURE B-66-103			
STH 60 WB OVER IH 41			
COUNTY	WASHINGTON	TOWN	POLK
DESIGN SPEC. REHABILITATION N/A			
DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
MWB	MJL	MWB	
POLYMER OVERLAY			SHEET 1 OF 1



Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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

WKE

PROJECT ID: 2290-08-71

WITH: 1100-13-71, 3110-07-70

COUNTY: RACINE

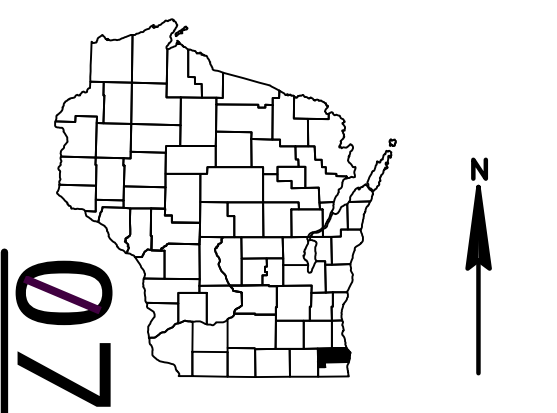
APRIL 2018

ORDER OF SHEETS

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

TOTAL SHEETS = 68

.



DESIGN DESIGNATION

A.A.D.T.	2016	=	CTH K	10,000	STH 38 NORTH LEG	6,850	STH 38 EAST LEG	14,600
A.A.D.T.		=						
D.H.V.		=						
D.D.		=						
T.		=	5.3%		5.3%		5.3%	
DESIGN SPEED		=	50 MPH		50 MPH		50 MPH	
ESALS		=						

CONVENTIONAL SYMBOLS

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

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

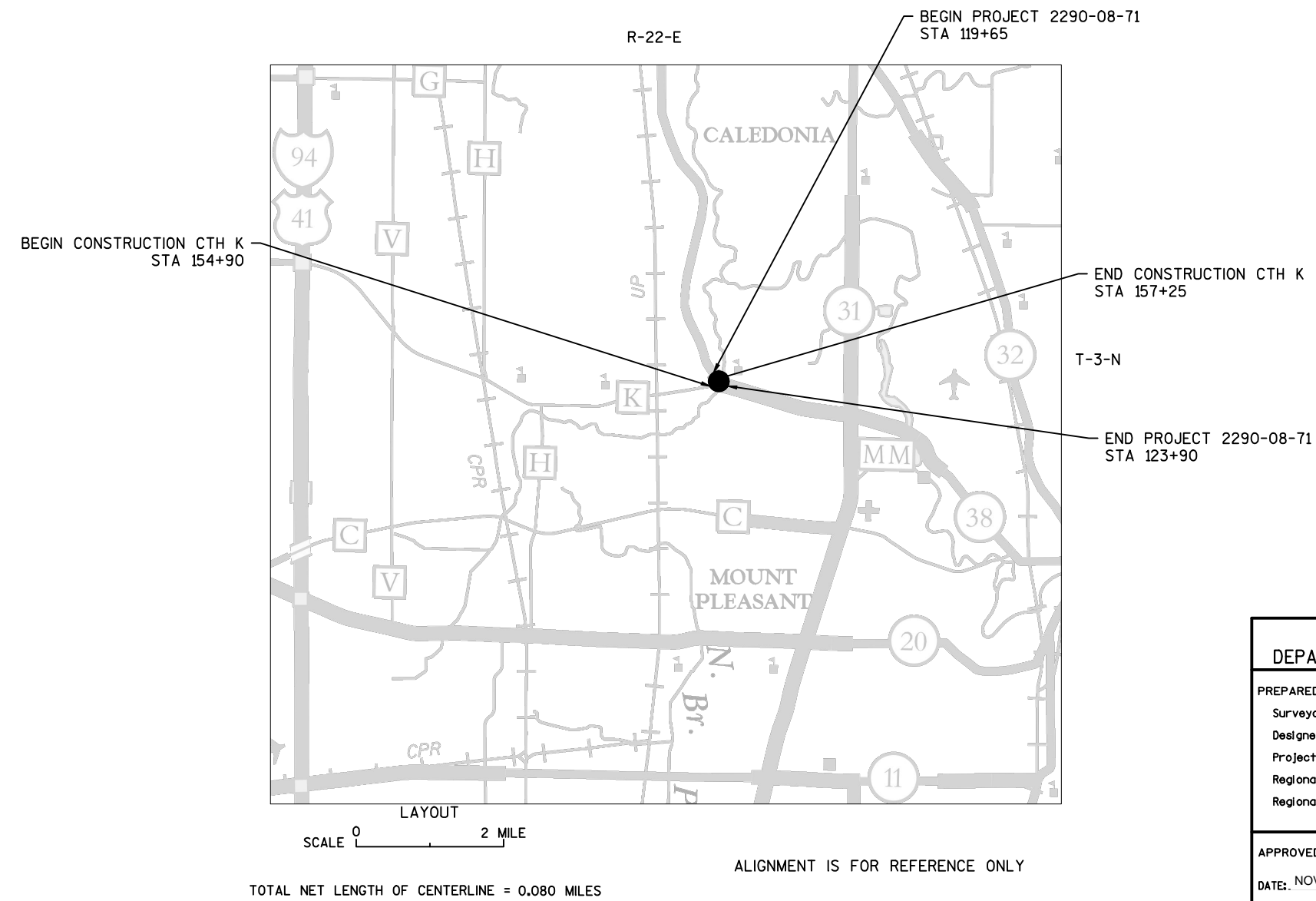
STH 38

INTERSECTION WITH CTH K

RACINE COUNTY

STATE PROJECT NUMBER
2290-08-71

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2290-08-71	WISC 2018193	1



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT
Designer	MALATHI KARRI
Project Manager	JUSTIN SUYDAM
Regional Examiner	RICHARD HERRICK
Regional Supervisor	JANET CANNON

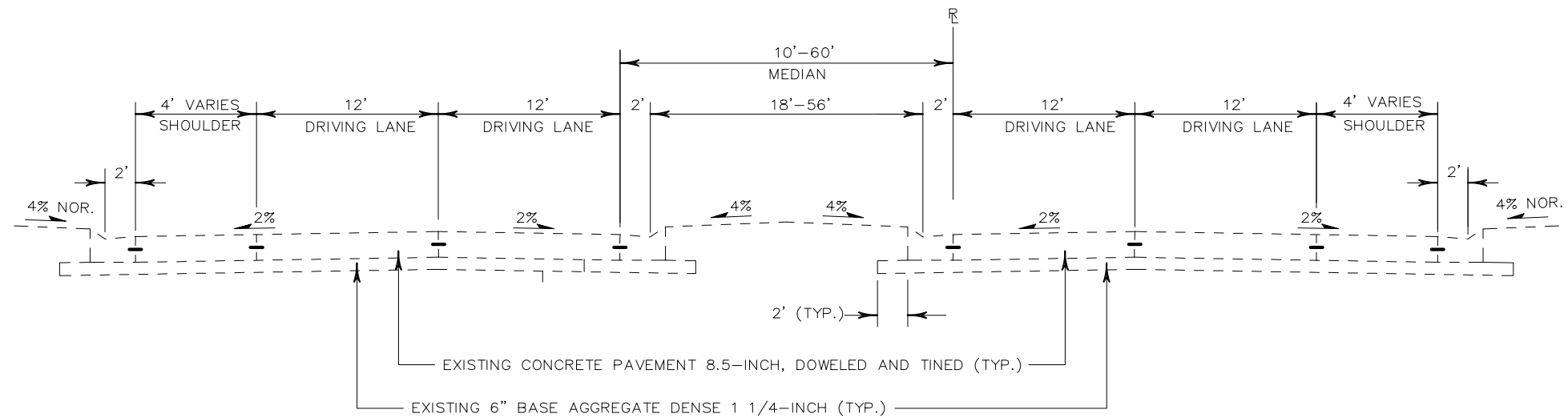
APPROVED FOR THE DEPARTMENT

DATE: NOVEMBER 1, 2017

(signature)

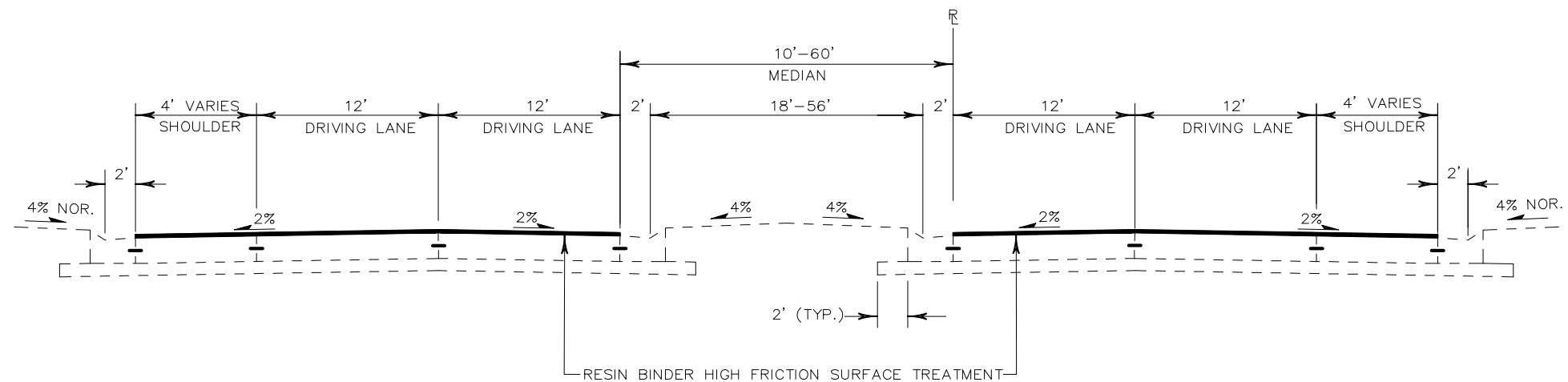
E

2	<div><div><div>STANDARD ABBREVIATIONS</div><div><div>AADT</div><div>ANNUAL AVERAGE DAILY TRAFFIC</div></div><div><div>BM</div><div>BENCHMARK</div></div><div><div>BMP</div><div>BEST MANAGEMENT PRACTICE</div></div><div><div>C/L</div><div>CENTERLINE</div></div><div><div>CONC</div><div>CONCRETE</div></div><div><div>CTH</div><div>COUNTY TRUNK HIGHWAY</div></div><div><div>CY</div><div>CUBIC YARD</div></div><div><div>D</div><div>DEGREE OF CURVE</div></div><div><div>DHV</div><div>DESIGN HOUR VOLUME</div></div><div><div>DIA</div><div>DIAMETER</div></div><div><div>DD</div><div>DIRECTIONAL DISTRIBUTION</div></div><div><div>X</div><div>EAST GRID COORDINATE</div></div><div><div>EB</div><div>EASTBOUND</div></div><div><div>ESALS</div><div>EQUIVALENT SINGLE AXLE LOADS</div></div><div><div>FT</div><div>FOOT</div></div><div><div>INL</div><div>INLET</div></div><div><div>LT</div><div>LEFT</div></div><div><div>L</div><div>LENGTH OF CURVE</div></div><div><div>LF</div><div>LINEAR FOOT</div></div><div><div>LS</div><div>LUMP SUM</div></div><div><div>MGR</div><div>MANAGER</div></div><div><div>MH</div><div>MANHOLE</div></div><div><div>N</div><div>NORTH</div></div><div><div>Y</div><div>NORTH GRID COORDINATE</div></div><div><div>NB</div><div>NORTHBOUND</div></div><div><div>PAVT</div><div>PAVEMENT</div></div><div><div>PT</div><div>POINT</div></div><div><div>PCC</div><div>POINT OF COMPOUND CURVE</div></div><div><div>PC</div><div>POINT OF CURVATURE</div></div><div><div>PI</div><div>POINT OF INTERSECTION</div></div><div><div>PRC</div><div>POINT OF REVERSE CURVATURE</div></div><div><div>PT</div><div>POINT OF TANGENCY</div></div><div><div>PROJ</div><div>PROJECT</div></div><div><div>R</div><div>RADIUS</div></div><div><div>SB</div><div>SOUTHBOUND</div></div><div><div>SY</div><div>SQUARE YARD</div></div><div><div>SDD</div><div>STANDARD DETAIL DRAWING</div></div><div><div>STH</div><div>STATE TRUNK HIGHWAY</div></div><div><div>STA</div><div>STATION</div></div><div><div>T</div><div>TANGENT</div></div><div><div>T</div><div>TRUCKS (PERCENT OF)</div></div><div><div>VAR</div><div>VARIABLE</div></div><div><div>WB</div><div>WESTBOUND</div></div></div></div>	<div><div><div>PROJECT CONTACT:</div><div><div>JUSTIN SUYDAM, P.E.</div><div>WISDOT PROJECT MANAGER</div><div>141 NW BARSTOW STREET</div><div>WAUKESHA, WI 53187</div><div>PHONE: (262) 548-8745</div><div>CELL: (414) 750-1877</div><div>JUSTIN.SUYDAM@DOT.WI.GOV</div></div></div><div><div><div>HIGHWAY MAINTENANCE CONTACTS:</div><div><div>PAUL AMBROSE</div><div>MAINTENANCE PROGRAM ENGINEER</div><div>141 NW BARSTOW ST</div><div>WAUKESHA, WI 53188</div><div>PHONE: (414) 750-0658</div><div>PAUL.AMBROSE@DOT.WI.GOV</div></div></div><div><div><div>DNR CONTACT:</div><div><div>KRISTINA BETZOLD</div><div>ENVIRONMENTAL ANALYSIS & REVIEW SPECIALIST</div><div>2300 N. DR. MARTIN LUTHER KING JR. DRIVE</div><div>MILWAUKEE, WI 53212</div><div>PHONE: (414) 263-8517</div><div>KRISTINA.BETZOLD@WISCONSIN.GOV</div></div></div></div></div></div>	<div><div><div>UTILITY CONTACTS</div><div><div>MARK EDER</div><div>AT&T WISCONSIN</div><div>2005 PEWAUKEE RD</div><div>WAUKESHA, WI 53188-2443</div><div>(262) 896-7434</div><div>ME1754@ATT.COM</div></div><div><div>MARY FISHER</div><div>WINDSTREAM KDL, LLC</div><div>13935 BISHOPS DR</div><div>BROOKFIELD, WI 53005</div><div>(262) 792-7938</div><div>MARY.B.FISHER@WINDSTREAM.COM</div></div><div><div>NATHAN BECKER</div><div>PAETEC COMMUNICATIONS, LLC</div><div>13935 BISHOPS DR</div><div>BROOKFIELD, WI 53005</div><div>(262) 792-7938</div><div>NATHAN.BECKER@WINDSTREAM.COM</div></div><div><div>BOB LUI</div><div>VILLAGE OF CALEDONIA UTILITY DISTRICT</div><div>333 4 1/2 MILE ROAD</div><div>RACINE, WI 53402</div><div>(262) 681-3900</div><div>BLUI@CALEDONIAWIUTILITY.COM</div></div><div><div>ERIC PEREA</div><div>WISDOT STREET LIGHTING</div><div>141 NW BARSTOW STREET</div><div>WAUKESHA, WI 53807-0798</div><div>(262) 574-5422</div><div>ERIC.PEREA@DOT.WI.GOV</div></div></div></div>	<div><div><div>GENERAL NOTES</div><div><div>THE LOCATIONS OF EXISTING UTILITIES, AS NOTED ON THE PLANS, ARE FOR INFORMATION ONLY. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.</div><div>THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPALITY OR PUBLIC AGENCY WHICH IS NOT A MEMBER OF DIGGERS HOTLINE MUST BE CONTACTED SEPERATELY.</div><div>DIMENSIONS GIVEN FOR EXISTING FEATURES SHALL BE CONSIDERED AS APPROXIMATE AND MEASURED IN FIELD FOR MATCHING PURPOSES.</div><div>A SAWED JOINT IS REQUIRED WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT.</div><div>TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. NO WORK MAY BEGIN UNTIL PROPER TRAFFIC CONTROL DEVICES ARE PLACED AND APPROVED BY THE ENGINEER.</div><div>THE CONTRACTOR IS RESPONSIBLE FOR RESHAPING AND FINISHING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY THEIR OPERATION OUTSIDE THE NORMAL CONSTRUCTION LIMITS.</div></div></div></div>	2	
			<div><div><div>STEVEN CRAMER</div><div>CHARTER COMMUNICATIONS</div><div>1320 N DR MARTIN LUTHER KING JR DR</div><div>MILWAUKEE, WI 53212-4002</div><div>(414) 277-4045</div><div>WIS.ENGINEERING@CHARTER.COM</div></div><div><div>DAN SANDE</div><div>WE ENERGIES GAS AND ELECTRIC</div><div>333 WEST EVERETT ST, ROOM A291</div><div>MILWAUKEE, WI 53203</div><div>(414) 221-4578</div><div>DAN.SANDE@WE-ENERGIES.COM</div></div><div><div>RICHARD TRGOVEC</div><div>MIDWEST FIBER NETWORKS LLC</div><div>6070 NORTH FLINT RD</div><div>GLENDALE, WI 53209</div><div>(414) 459-3554</div><div>RTRGOVEC@MIDWESTFIBERNETWORKS.COM</div></div></div>	<div><div><div>OTHER CONTACTS</div><div><div>DANIEL WARREN</div><div>CHIEF OF POLICE, VILLAGE OF CALEDONIA</div><div>6900 NICHOLSON RD</div><div>CALEDONIA, WI 53108</div><div>(262) 835-4423</div><div>DWARREN@CALEDONIAWIPD.COM</div></div><div><div>RICHARD ROEDER</div><div>FIRE CHIEF, VILLAGE OF CALEDONIA</div><div>6900 NICHOLSON RD</div><div>CALEDONIA, WI 53108</div><div>(262)835-2050</div><div>CFDSEC@CALEDONIAWIFD.COM</div></div></div></div>		
	<div><div><div>ORDER OF SECTION 2 DETAIL SHEETS</div><div><div>GENERAL NOTES</div><div>TYPICAL SECTIONS</div><div>CONSTRUCTION DETAIL</div><div>PLAN DETAIL</div><div>UTILITY DETAIL</div><div>EROSION CONTROL</div><div>PAVEMENT MARKING</div><div>TRAFFIC CONTROL AND DETOUR</div></div></div></div>	<div><div><div>EROSION CONTROL GENERAL NOTES</div><div><div>EROSION CONTROL ITEMS ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR'S EROSION CONTROL IMPLEMENTATION PLAN AND BY THE ENGINEER. EROSION CONTROL ITEMS SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE ITEM IS NO LONGER REQUIRED.</div><div>WHEN PERFORMING ROADWAY CLEANING OPERATIONS, THE CONTRACTOR SHALL USE EQUIPMENT HAVING VACUUM OR WATERSPRAY MECHANISM TO ELIMINATE THE DISPERSION OF DUST. IF VACUUM EQUIPMENT IS EMPLOYED, IT SHALL HAVE SUITABLE SELF-PARTICULATE COLLECTIONS TO PREVENT DISCHARGE FROM THE COLLECTION BIN INTO THE ATMOSPHERE.</div><div>INLET PROTECTION IS REQUIRED AT ALL INLETS AS PER DETAIL OR AS DIRECTED BY THE ENGINEER.</div><div>REFER TO EROSION CONTROL SPECIAL PROVISIONS FOR FURTHER REQUIREMENTS.</div><div>CONSTRUCTION LIMITS ARE 5 FEET OUTSIDE THE CURBLINE. NO SOIL OR LOOSE MATERIAL SHALL BE PLACED OUTSIDE THE LIMITS.</div></div></div></div>		<div><div><div>DIGGERSHOTLINE</div><div>Dial 811 or (800) 242-8511</div><div>www.DiggersHotline.com</div></div></div>		
PROJECT NO: 2290-08-71		HWY: STH 38	COUNTY: RACINE	GENERAL NOTES	SHEET:	E



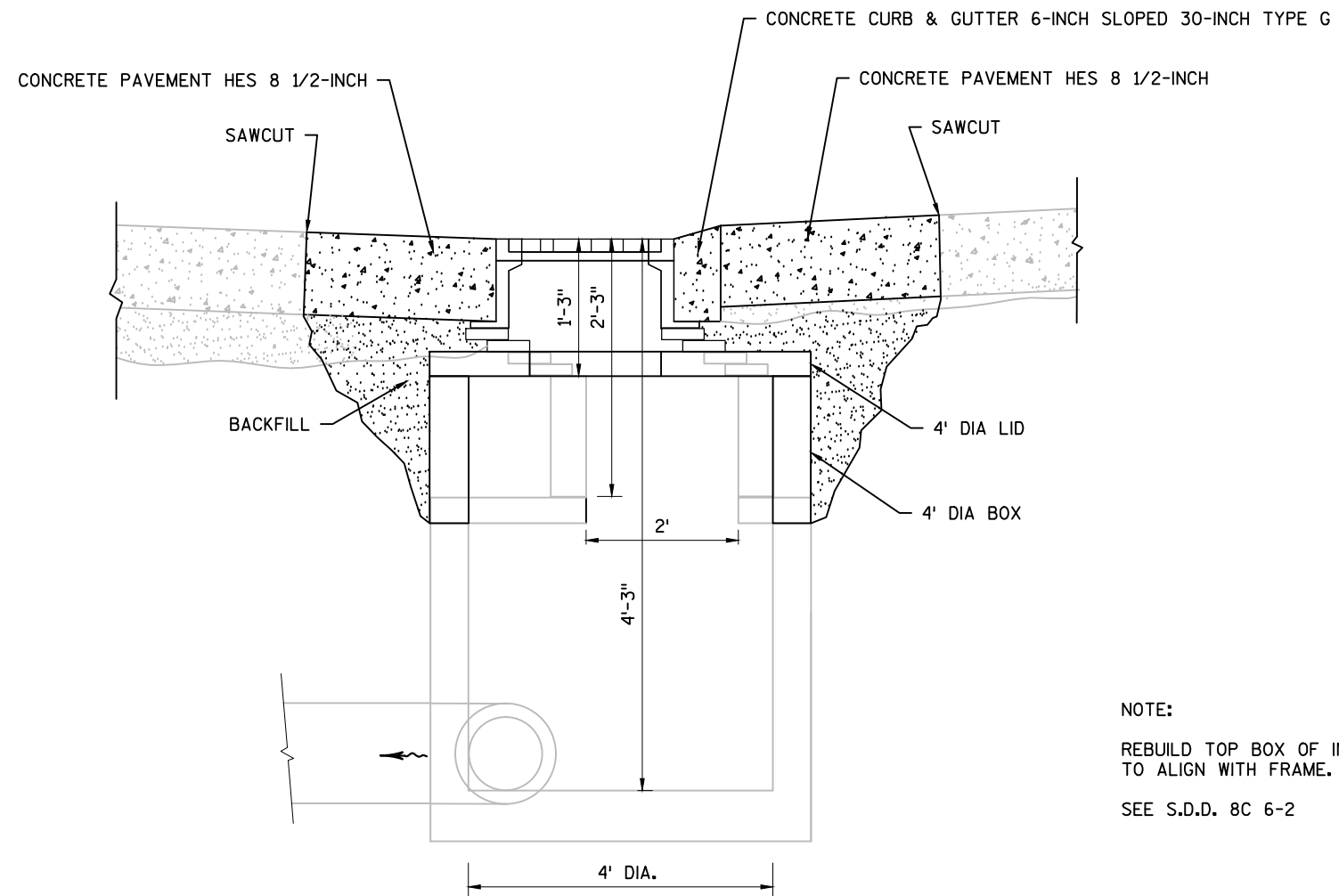
EXISTING TYPICAL SECTION STH 38 & CTH K

STA. 122+25 - STA. 122+75 (STH 38)
STA. 155+75 - STA. 156+25 (CTH K)



TYPICAL FINISHED SECTION STH 38 & CTH K

STA. 122+25 - STA. 122+75 (STH 38)
STA. 155+75 - STA. 156+25 (CTH K)

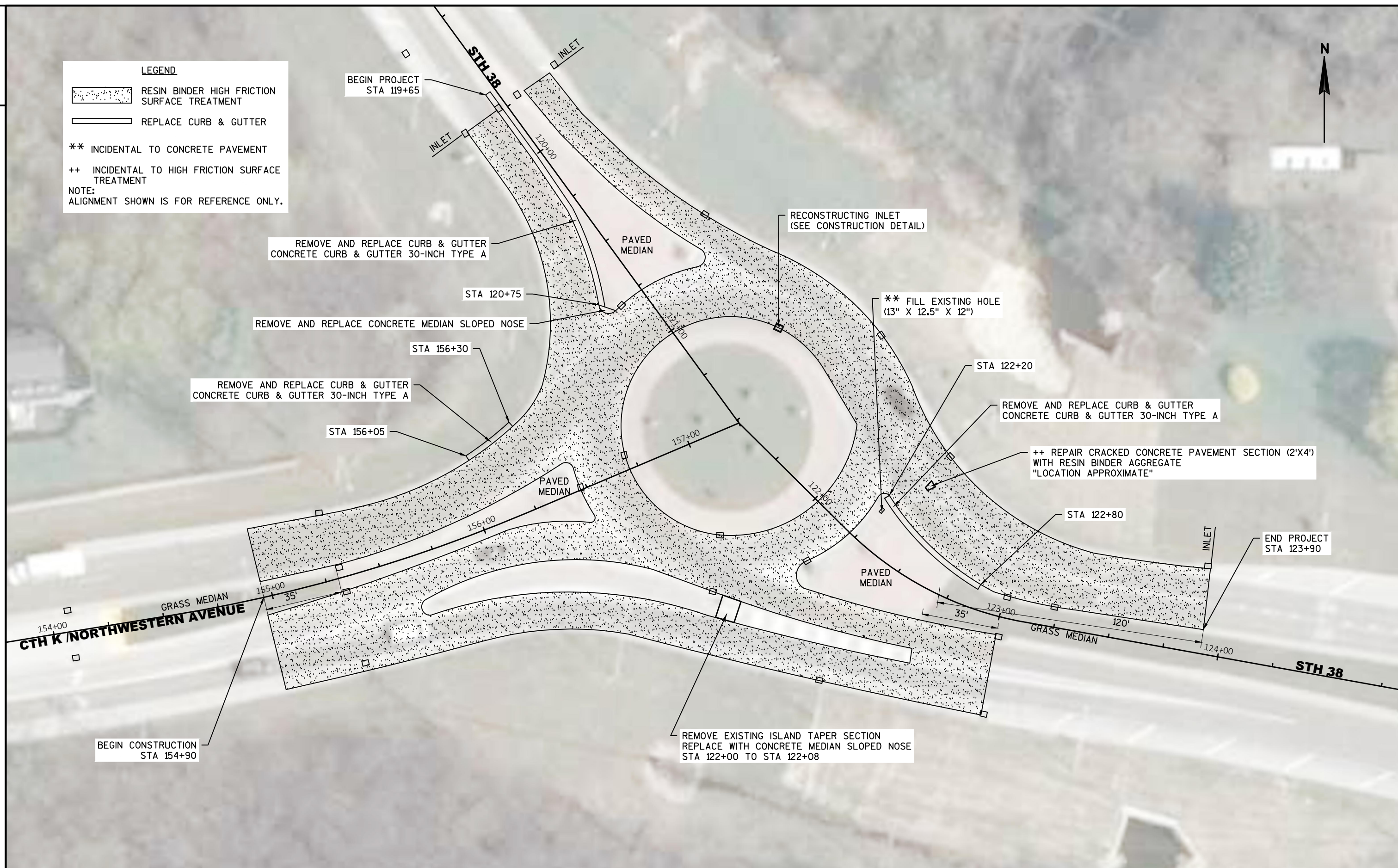


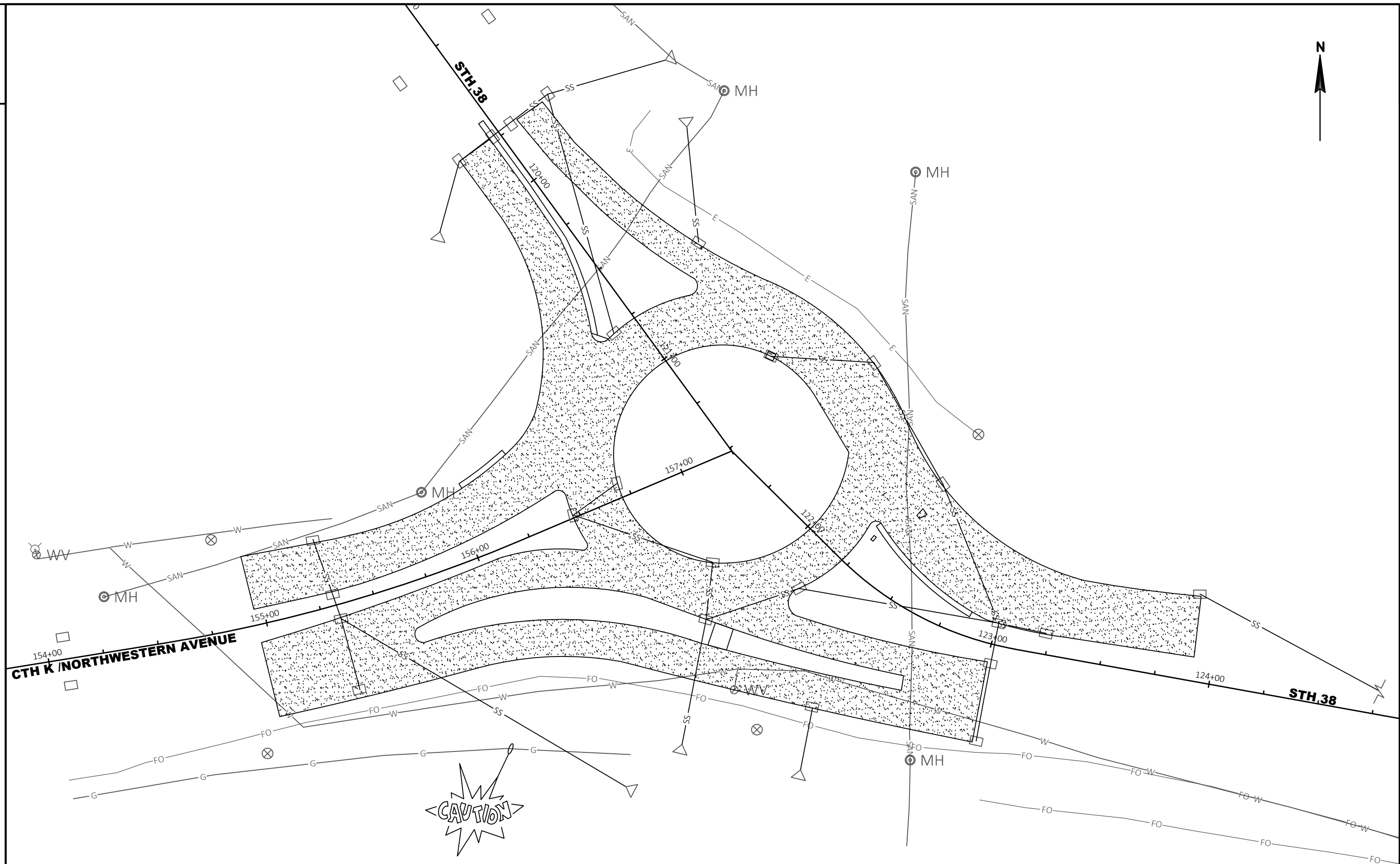
NOTE:

REBUILD TOP BOX OF INLET
TO ALIGN WITH FRAME.

SEE S.D.D. 8C 6-2

INLET 4-FT DIA



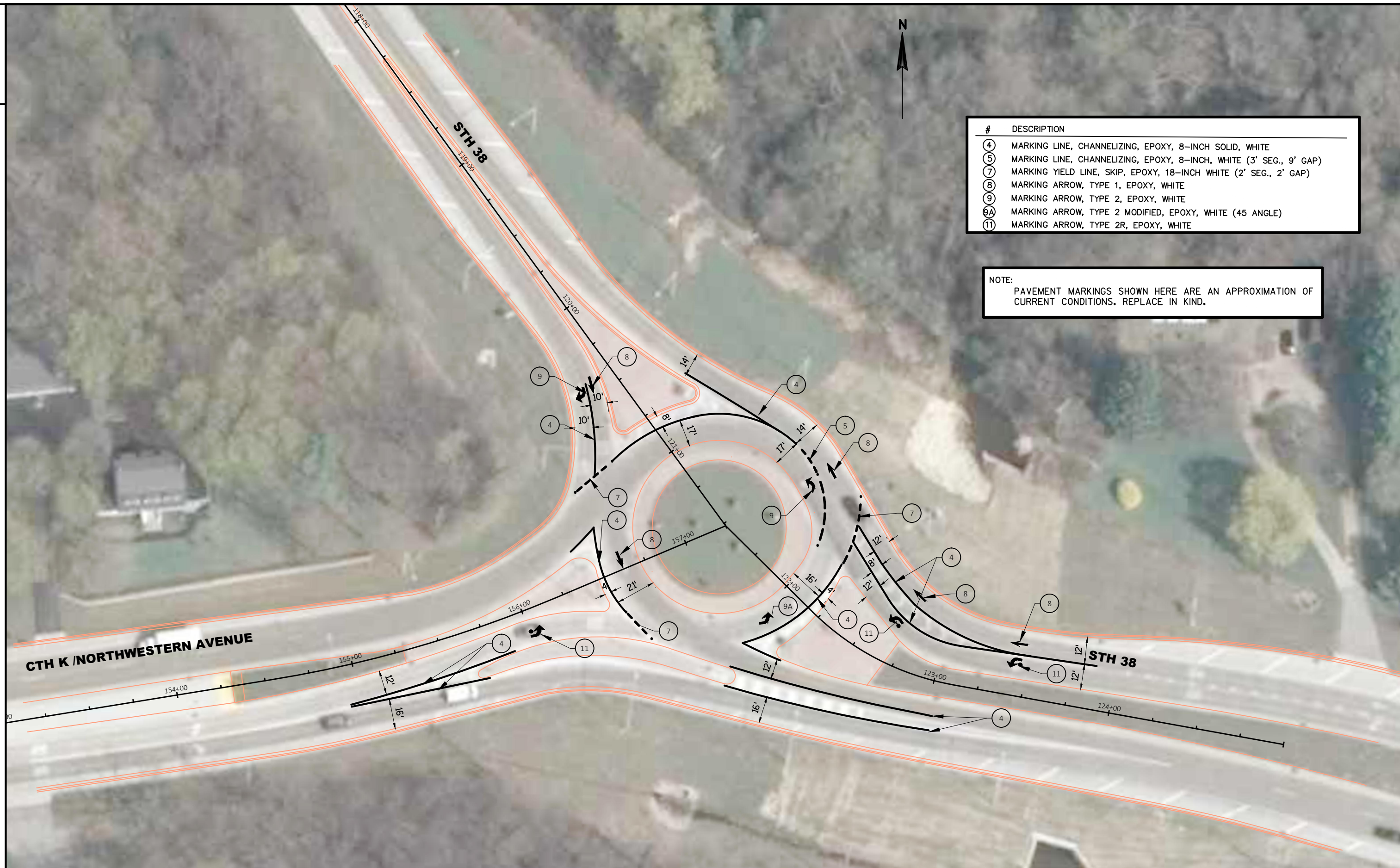


PROJECT NO:2290-08-71	HWY:STH 38	COUNTY:RACINE	UTILITY DETAIL - FOR INFORMATION PURPOSES ONLY	SHEET	E
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LEGEND

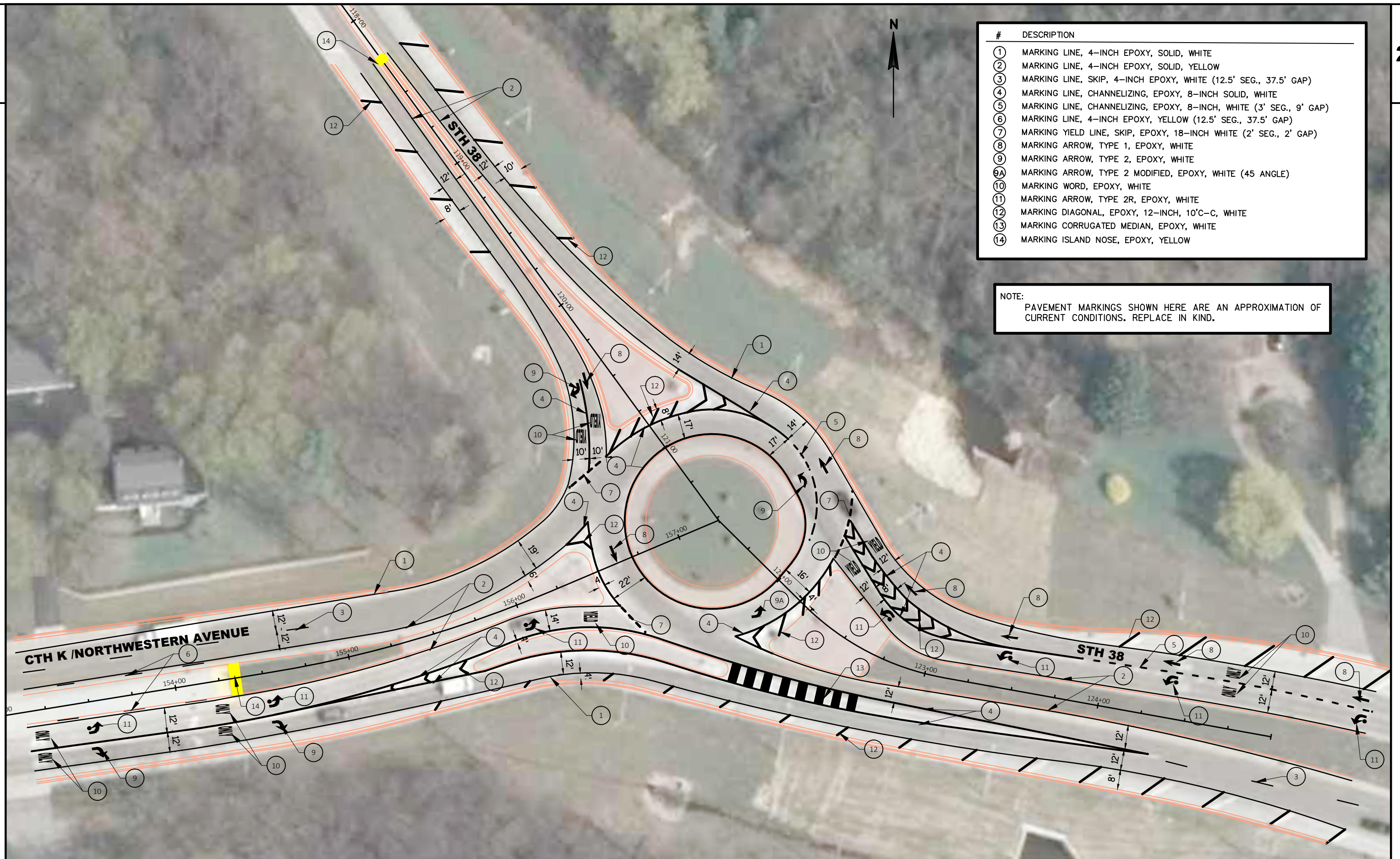
- TYPE "C"
INLET PROTECTION
- STORM SEWER
FLOW DIRECTION
- APRON ENDWALL
- SURFACE WATER
FLOW DIRECTION





#	DESCRIPTION
④	MARKING LINE, CHANNELIZING, EPOXY, 8-INCH SOLID, WHITE
⑤	MARKING LINE, CHANNELIZING, EPOXY, 8-INCH, WHITE (3' SEG., 9' GAP)
⑦	MARKING YIELD LINE, SKIP, EPOXY, 18-INCH WHITE (2' SEG., 2' GAP)
⑧	MARKING ARROW, TYPE 1, EPOXY, WHITE
⑨	MARKING ARROW, TYPE 2, EPOXY, WHITE
⑨A	MARKING ARROW, TYPE 2 MODIFIED, EPOXY, WHITE (45 ANGLE)
⑪	MARKING ARROW, TYPE 2R, EPOXY, WHITE

NOTE:
PAVEMENT MARKINGS SHOWN HERE ARE AN APPROXIMATION OF
CURRENT CONDITIONS. REPLACE IN KIND.

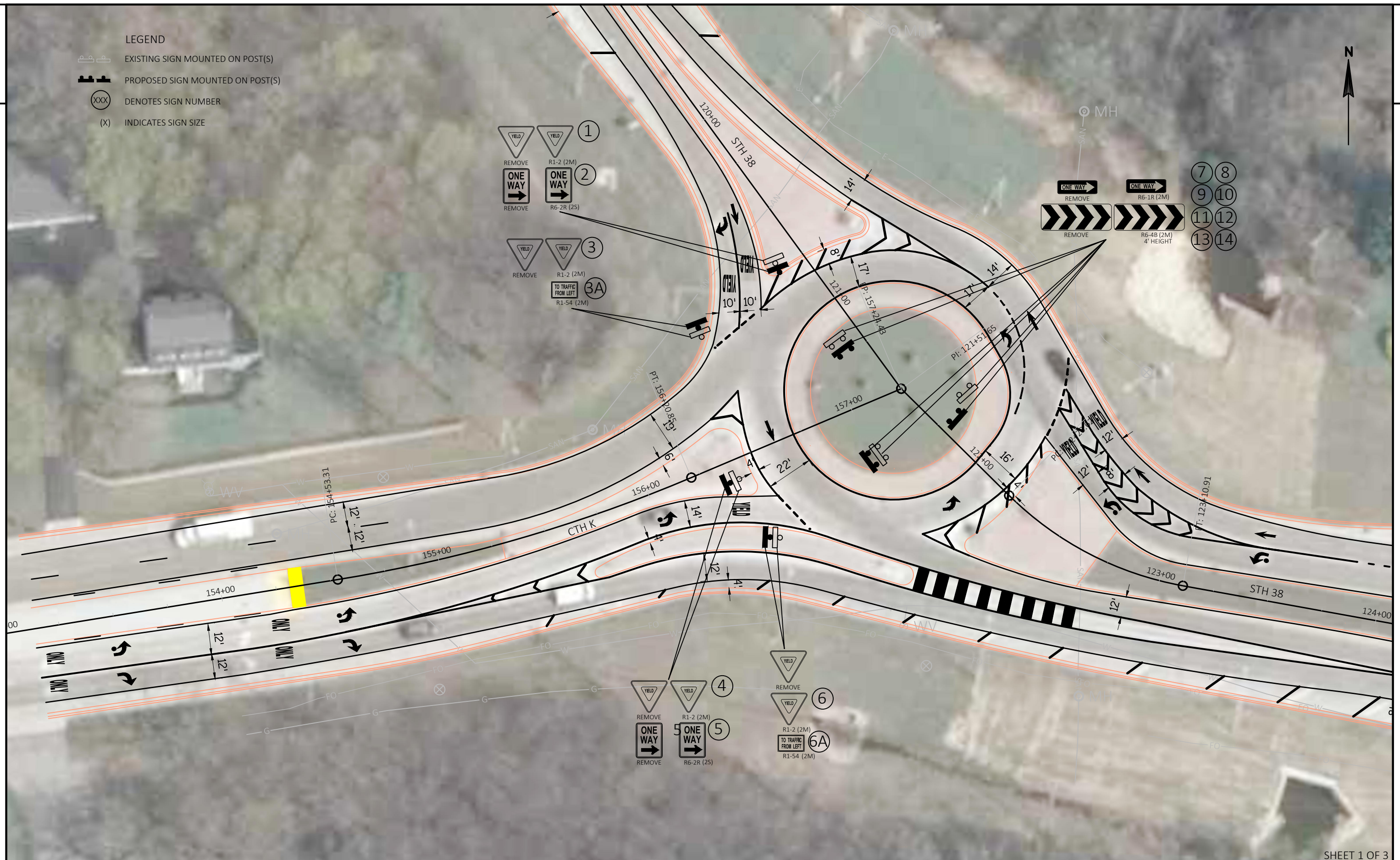


#	DESCRIPTION
①	MARKING LINE, 4-INCH EPOXY, SOLID, WHITE
②	MARKING LINE, 4-INCH EPOXY, SOLID, YELLOW
③	MARKING LINE, SKIP, 4-INCH EPOXY, WHITE (12.5' SEG., 37.5' GAP)
④	MARKING LINE, CHANNELIZING, EPOXY, 8-INCH SOLID, WHITE
⑤	MARKING LINE, CHANNELIZING, EPOXY, 8-INCH, WHITE (3' SEG., 9' GAP)
⑥	MARKING LINE, 4-INCH EPOXY, YELLOW (12.5' SEG., 37.5' GAP)
⑦	MARKING YIELD LINE, SKIP, EPOXY, 18-INCH WHITE (2' SEG., 2' GAP)
⑧	MARKING ARROW, TYPE 1, EPOXY, WHITE
⑨	MARKING ARROW, TYPE 2, EPOXY, WHITE
⑨A	MARKING ARROW, TYPE 2 MODIFIED, EPOXY, WHITE (45 ANGLE)
⑩	MARKING WORD, EPOXY, WHITE
⑪	MARKING ARROW, TYPE 2R, EPOXY, WHITE
⑫	MARKING DIAGONAL, EPOXY, 12-INCH, 10'C-C, WHITE
⑬	MARKING CORRUGATED MEDIAN, EPOXY, WHITE
⑭	MARKING ISLAND NOSE, EPOXY, YELLOW

NOTE:
PAVEMENT MARKINGS SHOWN HERE ARE AN APPROXIMATION OF
CURRENT CONDITIONS. REPLACE IN KIND.

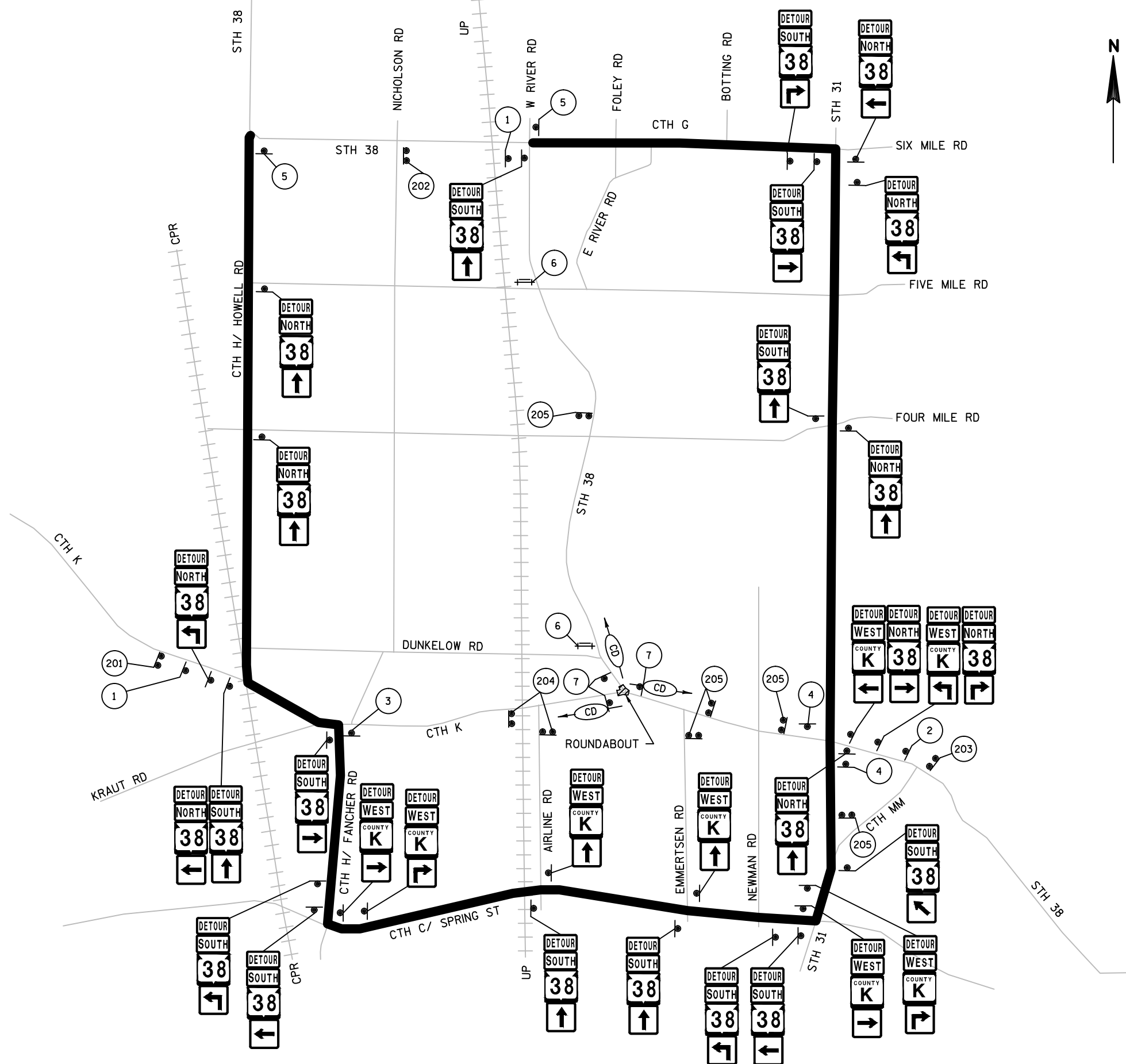
LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- DENOTES SIGN NUMBER
- INDICATES SIGN SIZE



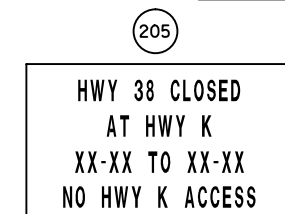
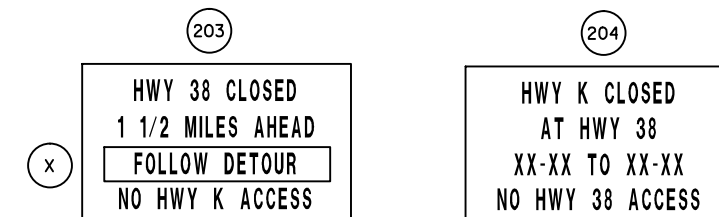
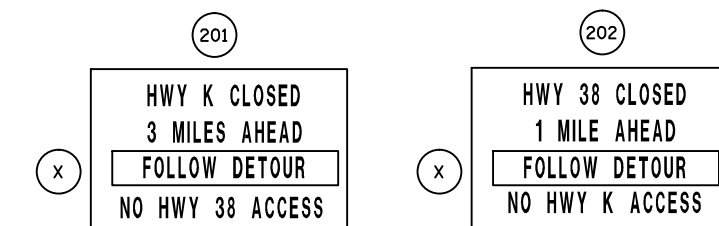
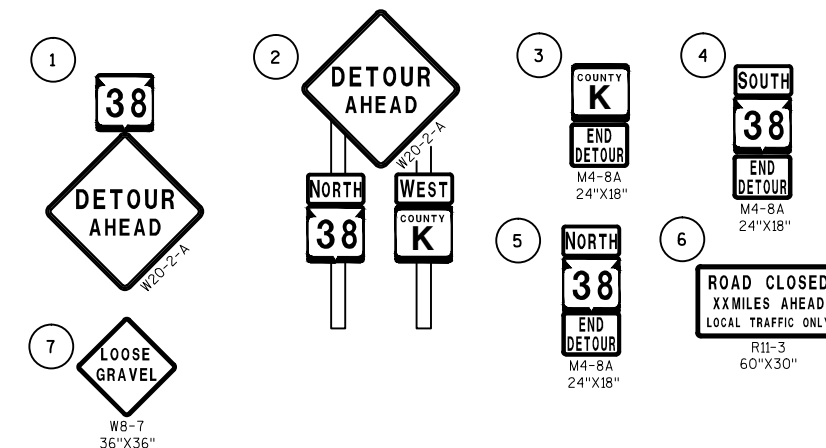
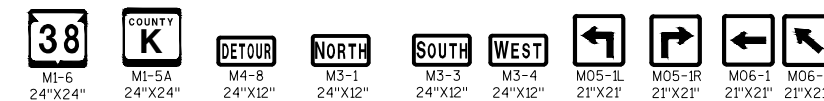






LEGEND

- SIGN ON PERMANENT SUPPORT
| TYPE III BARRICADE W/SIGN & TYPE A LIGHTS
— DETOUR ROUTE
▨ WORK AREA



(X) XX-XX TO XX-XX PLACE XX-XX TO XX-XX PANEL OVER "FOLLOW DETOUR" WHEN SIGN IS ERECTED, WHICH SHALL BE AT LEAST 7 DAYS PRIOR TO STARTING WORK. PANEL SHALL BE REMOVED WHEN HWY 38 AND HWY K ROUNDABOUT IS CLOSED.

(CD) SEE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" DETAILS C AND D

Estimate Of Quantities By Plan Sets

2290-08-71

Line	Item	Item Description	Unit	Total	Qty
0002	204.0100	Removing Pavement	SY	14.000	14.000
0004	204.0150	Removing Curb & Gutter	LF	220.000	220.000
0010	213.0100	Finishing Roadway (project) 02. 2290-08-71	EACH	1.000	1.000
0014	415.1085	Concrete Pavement HES 8 1/2-Inch	SY	4.000	4.000
0016	416.0610	Drilled Tie Bars	EACH	149.000	149.000
0026	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	204.000	204.000
0028	601.0413	Concrete Curb & Gutter 6-Inch Sloped 30-Inch Type G	LF	8.000	8.000
0030	611.0430	Reconstructing Inlets	EACH	1.000	1.000
0038	619.1000	Mobilization	EACH	0.340	0.340
0040	620.0300	Concrete Median Sloped Nose	SF	118.000	118.000
0046	628.1905	Mobilizations Erosion Control	EACH	1.000	1.000
0052	628.7015	Inlet Protection Type C	EACH	28.000	28.000
0058	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	8.000	8.000
0060	634.0620	Posts Wood 4x6-Inch X 20-FT	EACH	9.000	9.000
0062	634.0818	Posts Tubular Steel 2x2-Inch X 18-FT	EACH	20.000	20.000
0064	637.0620	Sign Flags Permanent Type II	EACH	6.000	6.000
0066	637.2210	Signs Type II Reflective H	SF	201.000	201.000
0068	637.2230	Signs Type II Reflective F	SF	100.000	100.000
0070	638.2102	Moving Signs Type II	EACH	1.000	1.000
0072	638.2602	Removing Signs Type II	EACH	25.000	25.000
0074	638.3000	Removing Small Sign Supports	EACH	22.000	22.000
0080	643.0420	Traffic Control Barricades Type III	DAY	150.000	150.000
0082	643.0705	Traffic Control Warning Lights Type A	DAY	300.000	300.000
0084	643.0715	Traffic Control Warning Lights Type C	DAY	234.000	234.000
0088	643.0900	Traffic Control Signs	DAY	1,068.000	1,068.000
0092	643.0920	Traffic Control Covering Signs Type II	EACH	61.000	61.000
0094	643.1000	Traffic Control Signs Fixed Message	SF	324.000	324.000
0098	643.5000	Traffic Control	EACH	0.340	0.340
0100	646.1020	Marking Line Epoxy 4-Inch	LF	4,126.000	4,126.000
0102	646.3020	Marking Line Epoxy 8-Inch	LF	3,359.000	3,359.000
0104	646.5020	Marking Arrow Epoxy	EACH	30.000	30.000
0106	646.5120	Marking Word Epoxy	EACH	11.000	11.000
0108	646.6320	Marking Dotted Extension Epoxy 18-Inch	LF	84.000	84.000
0110	646.7120	Marking Diagonal Epoxy 12-Inch	LF	645.000	645.000
0112	646.8020	Marking Corrugated Median Epoxy	SF	394.000	394.000
0114	646.8220	Marking Island Nose Epoxy	EACH	2.000	2.000
0118	690.0250	Sawing Concrete	LF	291.000	291.000
0132	SPV.0180	Special 01. Resin Binder High Friction Surface Treatment	SY	3,865.000	3,865.000

REMOVING PAVEMENT			204.0100
STATION	LOCATION	SY	
120+75	STH 38 NORTH LEG SLOPED NOSE	3	
121+20	STH 38 ROUNDABOUT AT INLET	8	
122+10	STH 38 SPLITTER ISLAND	3	
TOTAL 0010		14	

REMOVING CURB & GUTTER			204.0150
STATION TO STATION	LOCATION	LF	
119+65 - 120+75	STH 38 NORTH LEG	115	
122+20 - 122+80	STH 38 SOUTH LEG	63	
156+05 - 156+30	CTH K ROUNDABOUT EXIT	26	
121+18 - 121+25	STH 38 ROUNDABOUT AT INLET	8	
122+08 - 122+16	STH 38 SPLITTER ISLAND	8	
TOTAL 0010		220	

CONCRETE PAVEMENT HES 8 ½- INCH		415.1085
LOCATION	SY	
STH 38 ROUNDABOUT AT INLET	4	
TOTAL 0010	4	

DRILLED TIE BARS			416.0610
STATION TO STATION	LOCATION	EACH	
119+65 - 120+75	STH 38 NORTH LEG	53	
122+20 - 122+80	STH 38 SOUTH LEG	31	
156+05 - 156+30	CTH K ROUNDABOUT EXIT	18	
121+18 - 121+25	STH 38 ROUNDABOUT AT INLET	14	
120+75	STH 38 NORTH LEG SLOPED NOSE	17	
122+08 - 122+16	STH 38 SPLITTER ISLAND	16	
TOTAL 0010		149	

CONCRETE CURB & GUTTER 30-INCH TYPE A			601.0409
STATION TO STATION	LOCATION	LF	
119+65 - 120+75	STH 38 NORTH LEG	115	
122+20 - 122+80	STH 38 SOUTH LEG	63	
156+05 - 156+30	CTH K ROUNDABOUT EXIT	26	
TOTAL 0010		204	

CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE G			601.0413
STATION TO STATION	LOCATION	LF	
121+18 - 121+25	STH 38 ROUNDABOUT AT INLET	8	
TOTAL 0010		8	

RECONSTRUCTING INLETS			611.0430
LOCATION	EACH		
INSIDE ROUNDABOUT	1		
TOTAL 0010	1		

CONCRETE MEDIAN SLOPED NOSE			620.0300
STATION	LOCATION	SF	
120+75	STH 38 NORTH LEG	50	
122+10	STH 38 SPLITTER ISLAND	68	
TOTAL 0010		118	

MOBILIZATIONS EROSION CONTROL		628.1905
LOCATION	EACH	
STH 38	1	
TOTAL 0010	1	

INLET PROTECTION TYPE C 628.7015		TRAFFIC CONTROL											
		643.0420		643.0705		643.0900		643.0920		643.1000			
		BARRICADES TYPE III		WARNING LIGHTS TYPE A		SIGNS		COVERING SIGNS TYPE II		SIGNS FIXED MESSAGE			
								NUMBER OF		NUMBER OF			
		STAGE	DAYS	COUNT*	DAY	COUNT*	DAY	COUNT*	DAY	SIGNS	CYCLES	EACH	SF
LOCATION	EACH	INITIAL CLOSURE	5	25	125	39	195	176	880	26	1	26	324
STH 38	28	ROAD OPEN	4	-	-	-	-	3	12	9	1	9**	-
TOTAL 0010	28	FINAL CLOSURE	1	25	25	39	39	176	176	26	1	26	-
		TOTAL 0010			150		234		1068			61	324
* FOR INFORMATION ONLY. ACTUAL NUMBER OF DEVICES TO BE DETERMINED IN THE FIELD BY THE ENGINEER.										** COVERING FIXED MESSAGE SIGNS			

	MARKING											
	646.1020				646.3020		646.5020	646.5120	646.6320	646.7120	646.8020	646.8220
	LINE EPOXY 4-INCH				LINE EPOXY 8-INCH		ARROW EPOXY	WORD EPOXY	DOTTED EXTENSION	DIAGONAL	CORRUGATED	ISLAND NOSE
	YELLOW	YELLOW	WHITE	WHITE	WHITE	WHITE	WHITE	WHITE	EPOXY 18-INCH	EPOXY 12-INCH	MEDIAN EPOXY	EPOXY
	12.5' SKIPS	12.5' SKIPS	3' SKIPS									
	LF	LF	LF	LF	LF	LF	EACH	EACH	LF	LF	SF	EACH
PAVEMENT MARKING – INITIAL AFTER PLACING HFST	-	-	-	-	1074	20	11	-	42	-	-	-
PAVEMENT MARKING – FINAL AFTER FINAL SWEEP	1862	75	2102	88	2133	132	19	11	42	645	394	2
TOTAL 0010		4126			3359		30	11	84	645	394	2

3

TYPE II PERMANENT SIGNING

2290-08-71 STH 38

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W x H [IN.] x [IN.]	637.2210 SIGN TYPE II REFLC H [SF]	637.2230 SIGN TYPE II REFLC F [SF]	638.2602 REMOVING SIGN TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]*	634.0618 WOOD POSTS 4"X6"x18' [EA]	634.0620 WOOD POSTS 4" X 6" X 20' EACH	634.0818 POSTS TUBULAR STEEL 2 X 2 INCH X 18 FT EACH	638.2102 MOVE SIGN TYPE II [EA]	637.0620 SIGN FLAGS PERMANENT TYPE II EACH	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
1	R1-2(2M)		48 X 42	7.000		1.000	1			2				
2	R6-2R(2S)		24 X 30	5.000		1.000							1	
3	R1-2(2M)		48 X 42	7.000		1.000	1			2				
3A	R1-54(2M)		24 X 15	2.500									3	
4	R1-2(2M)		48 X 42	7.000		1.000	1			2				
5	R6-2R(2S)		24 X 30	5.000		1.000							4	
6	R1-2(2M)		48 X 42	7.000		1.000	1			2				
7	R6-4B(2M)		60 X 24	10.000		1.000	2			2				
8	R6-1R(2M)		54 X 18	6.750		1.000							7	
9	R6-4B(2M)		60 X 24	10.000		1.000	2			2				
10	R6-1R(2M)		54 X 18	6.750		1.000							9	
11	R6-4B(2M)		60 X 24	10.000		1.000	2			2				
12	R6-1R(2M)		54 X 18	6.750		1.000							11	
13	R6-4B(2M)		60 X 24	10.000		1.000	2			2				
14	R6-1R(2M)		54 X 18	6.750		1.000							13	
15	W1-6					1.000								LIGHT POLE 4 FOOT MOUNTING HEIGHT 4 FOOT MOUNTING HEIGHT 4 FOOT MOUNTING HEIGHT
16	W1-8(3)		24 X 30		5.000			1						
17	W1-8(3)		24 X 30		5.000			1						
18	W1-8(3)		24 X 30		5.000			1						
19	W1-8(3)		24 X 30		5.000			1						4 FOOT MOUNTING HEIGHT 4 FOOT MOUNTING HEIGHT
20	W1-8(3)		24 X 30		5.000			1						
21	R1-2(2M)		48 X 42	7.000		1.000	1			2				
22	R6-2R(2S)		24 X 30	5.000		1.000							21	
23	R1-2(2M)		48 X 42	7.000		1.000	1			2				
24	R1-54(2M)		24 X 15	2.500		1.000							23	
25	R3-8JJ						1	1			1			
26	J3-2					1.000	1							
27	W3-2(4)		48 X 48		16.000				2			2		
28	W13-1(4)	15 MPH	36 X 36		9.000								27	
29	W3-2(4)	15 MPH	48 X 48		16.000				2			2		PLAQUE IS PART OF REMOVAL
30	W13-1(4)		36 X 36		9.000								29	
31	W1-1R					1.000	1							
32	J2-2(2M)		48 X 60	20.000				2						
	M1--5A	CTH K	24 X 24											
	M4-20L		24 X 24											
	M3-1		24 X 12											
	M1-6	STH 38	24 X 24											
	M4-20R		24 X 24											
33	W3-2					1.000	1							

3

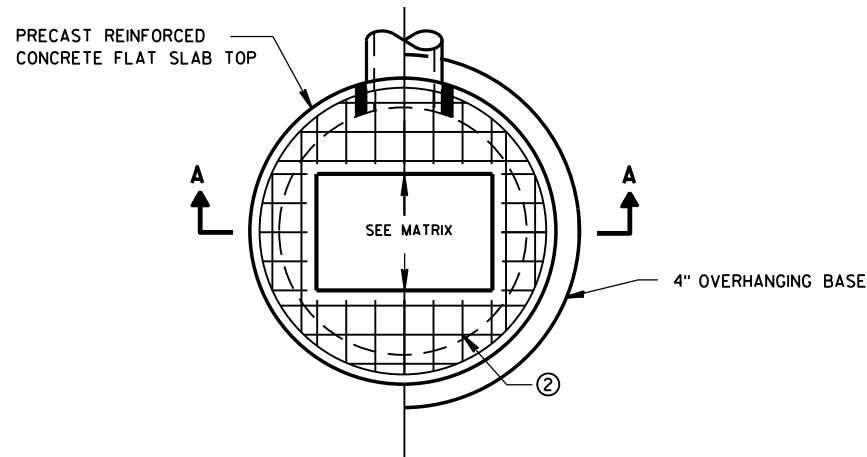
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SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W x H [IN.] x [IN.]	637.2210 SIGNS TYPE II REFLC H [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]*	634.0618 WOOD POSTS 4"X6"x18' [EA]	634.0620 WOOD POSTS 4" X 6" X 20' EACH	634.0818 POSTS TUBULAR STEEL 2 X 2 INCH X 18 FT EACH	638.2102 MOVE SIGNS TYPE II [EA]	637.0620 SIGN FLAGS PERMANENT TYPE II EACH	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
34	W3-2	DIAGRAMMATIC	96 x 78	52.000		1.000	1							
35	D1-62								3					
36	W2-6(4)					1.000	1		2			2		
37	W13-1(4)					9.000							36	
38	D1-1					1.000	2							
TOTALS				201.000	100.000	25.000	22	8	9	20	1	6		

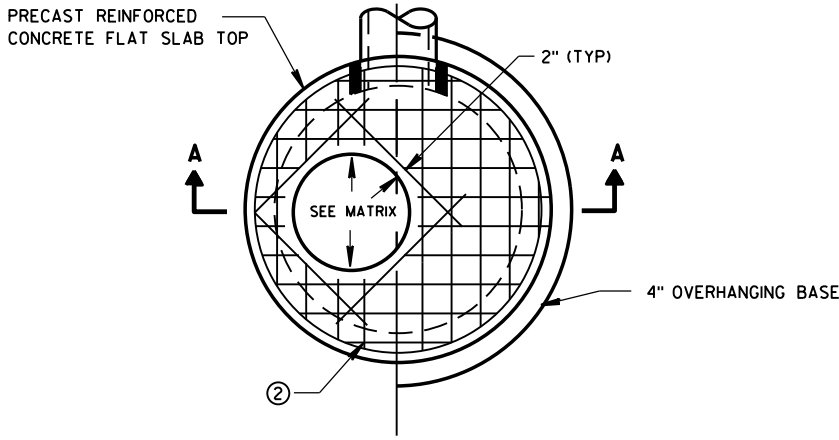
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Standard Detail Drawing List

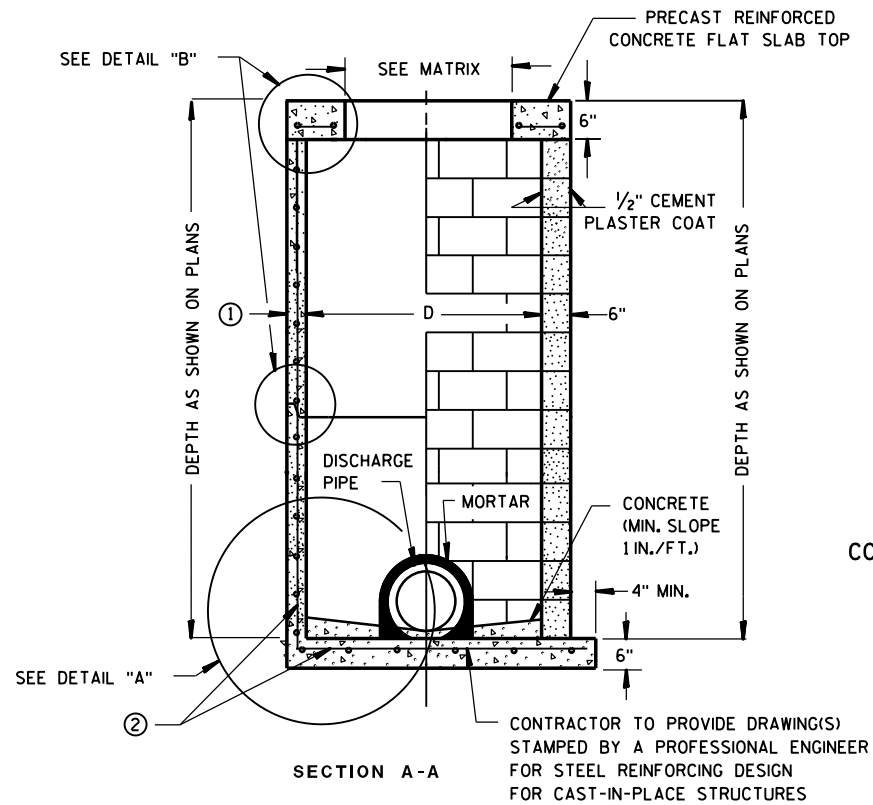
08C06-02	I NLETS 3-FT AND 4-FT DIAMETER
08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLI CATIONS
08E10-02	I NLET PROTECTION TYPE A, B, C AND D
11B01-05	CONCRETE CORRUGATED MEDIAN
11B02-02	CONCRETE MEDIAN NOSE
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C07-14B	PAVEMENT MARKING WORDS
15C07-14C	PAVEMENT MARKING ARROWS
15C07-14D	ROUNDAABOUT ARROWS
15C08-18A	LONGI TUDINAL MARKING (MAINLINE)
15C11-07B	CHANNELI ZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C18-04	MEDIAN I SLAND MARKING
15C27-02B	PAVEMENT MARKING (I SLANDS)
15D38-01A	TEMPORARY TRAFFI C CONTROL FI XED MESSAGE SIGNS
15D38-02A	TEMPORARY TRAFFI C CONTROL SIGN MOUNTI NG



PLAN VIEW RECTANGULAR OPENING

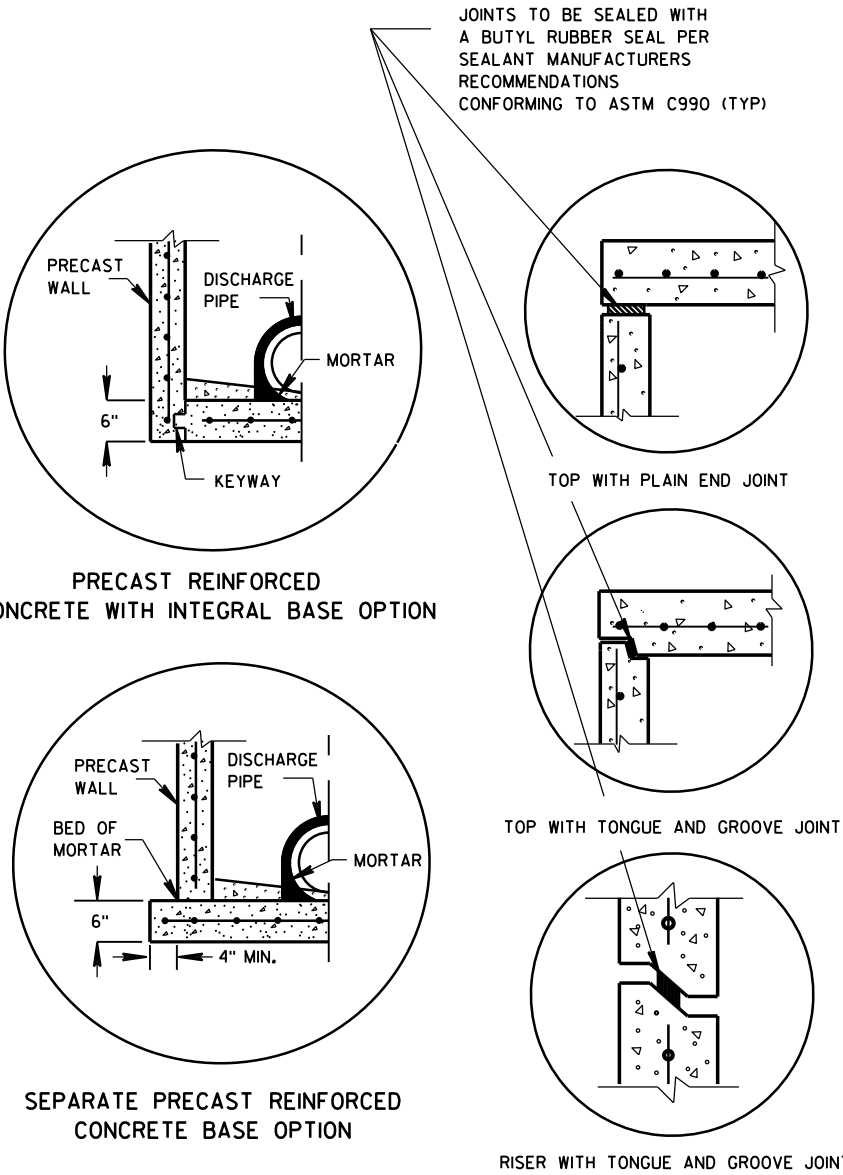


PLAN VIEW CIRCULAR OPENING



PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE OR CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

CIRCULAR INLETS W/ FLAT TOP



DETAIL "A"

DETAIL "B"

INLETS 3-FT AND 4-FT DIAMETER

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.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

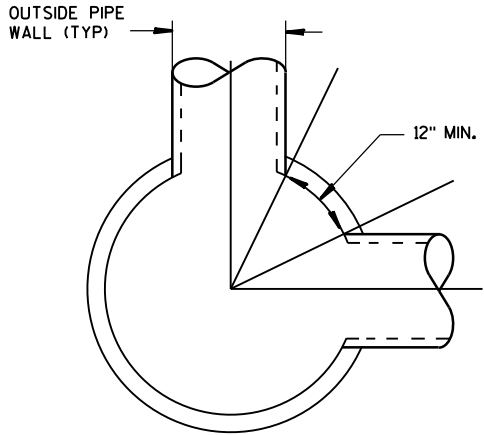
4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

- ① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.
- ② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

INLET COVER OPENING MATRIX

	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
INLET SIZE	OPENING SIZE (FT)											
3-FT	2 DIA.				X							X
	2X2	X	X					X		X		
4-FT	2 DIA.				X							X
	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2X3						X					
	2.5X3					X						



DETAIL "C"

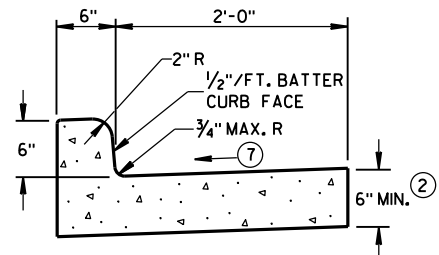
PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

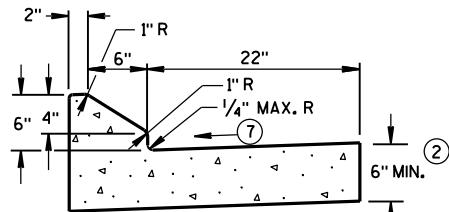
INLETS 3-FT AND 4-FT DIAMETER

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

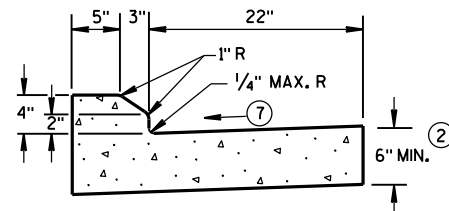
APPROVED
Sept., 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



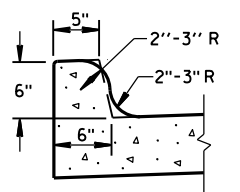
TYPES A^① & D



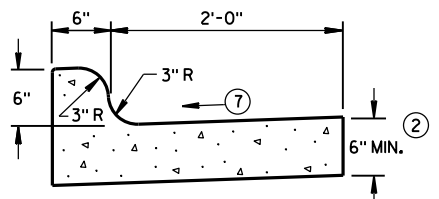
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

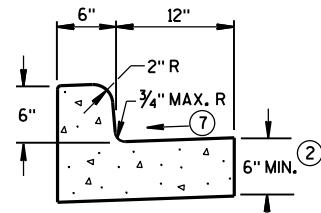


TYPES K^① & L
(OPTIONAL CURB SHAPE)



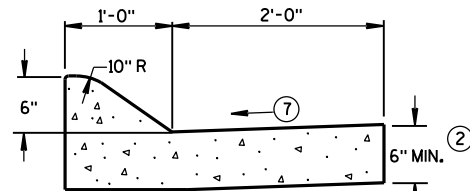
TYPES K^① & L

CONCRETE CURB & GUTTER 30"

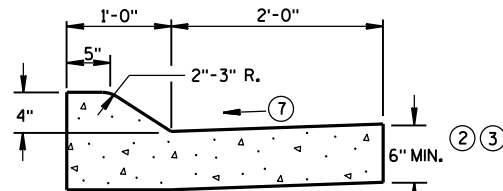


TYPES A^① & D

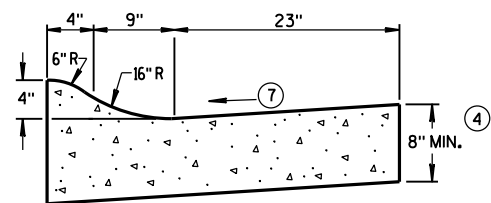
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A^① & D

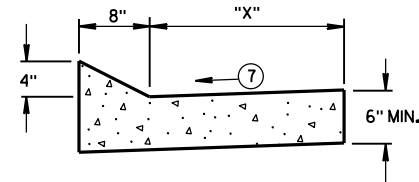


4" SLOPED CURB TYPES A^① & D



4" SLOPED CURB TYPES R^① & T^⑤

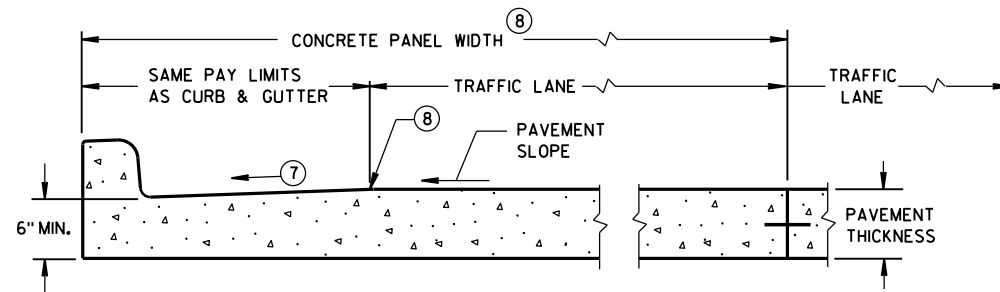
CONCRETE CURB & GUTTER 36"



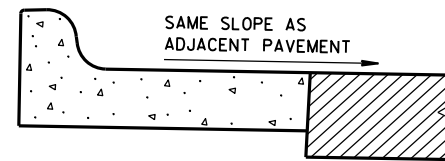
TYPES TBT & TBTT^①

CONCRETE CURB & GUTTER

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



PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



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

GENERAL NOTES

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

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

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

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

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

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

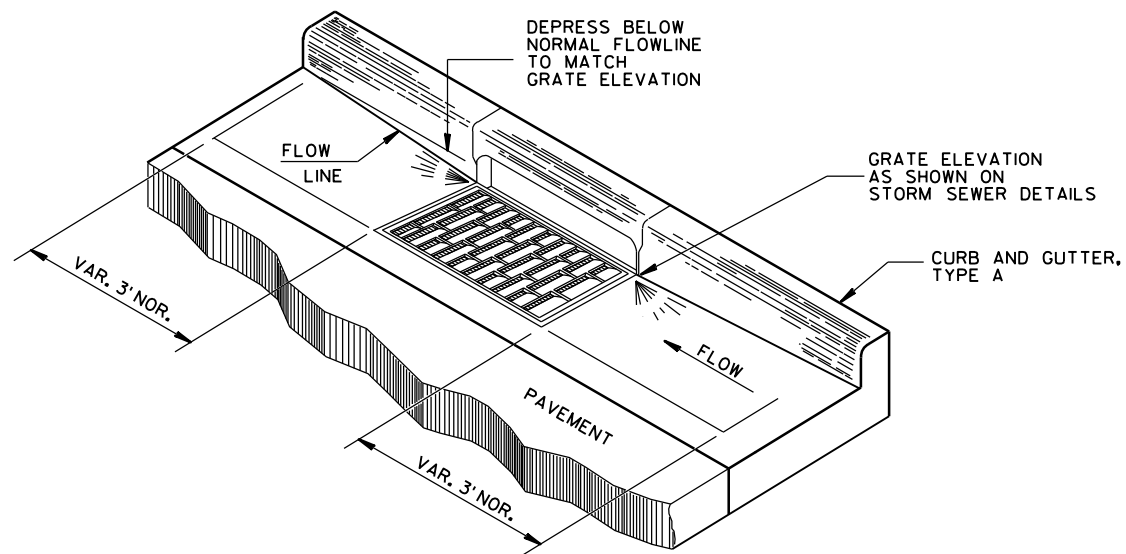
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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

* BIKE LANE IS NOT SHOWN.

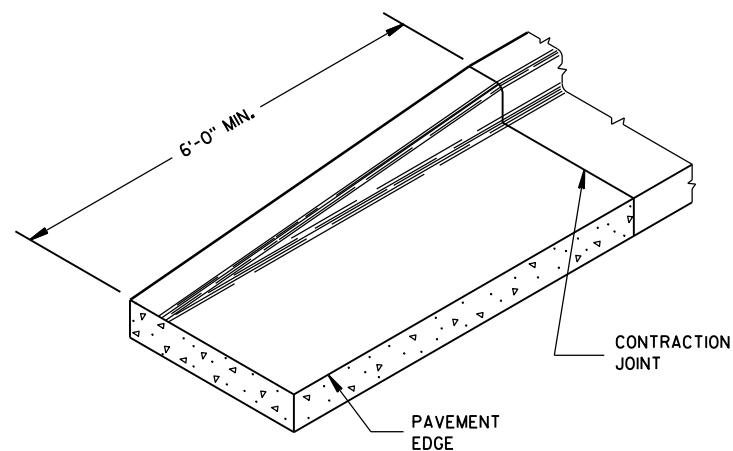
CONCRETE CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

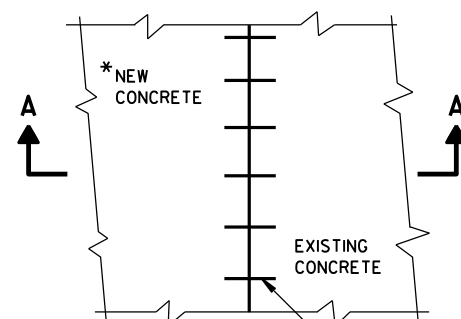


DETAIL OF CURB AND GUTTER AT INLETS

(TYPE H INLET COVER SHOWN)

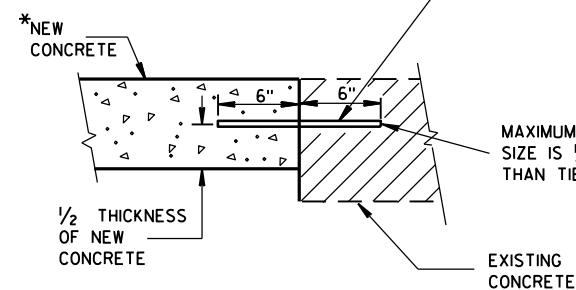


END SECTION CURB & GUTTER



PLAN VIEW

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



TIE BARS DRILLED INTO EXISTING PAVEMENT

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

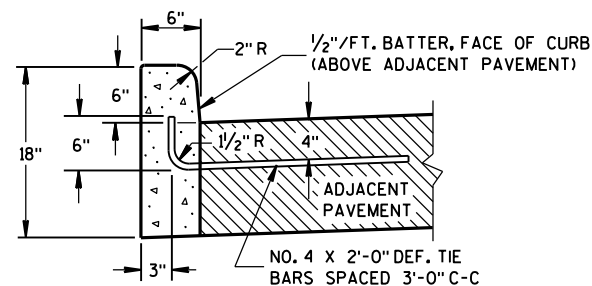
GENERAL NOTES

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

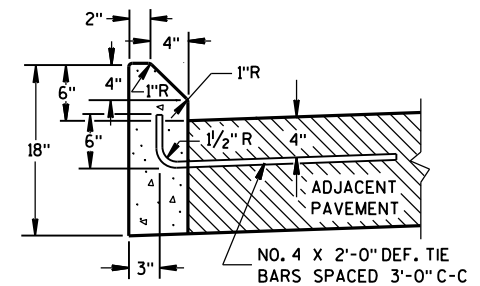
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑨ REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

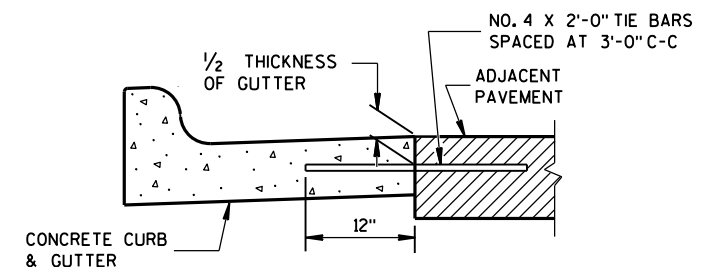


TYPES A^① & D

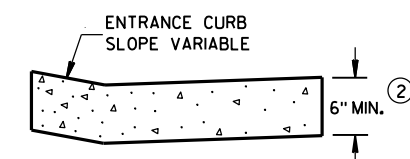


TYPES G^① & J

CONCRETE CURB



TYPICAL TIE BAR LOCATION^①



DRIVEWAY ENTRANCE CURB^⑨

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June, 2017

DATE

FHWA

/S/ Rodney Taylor

ROADWAY STANDARDS DEVELOPMENT

UNIT SUPERVISOR



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.



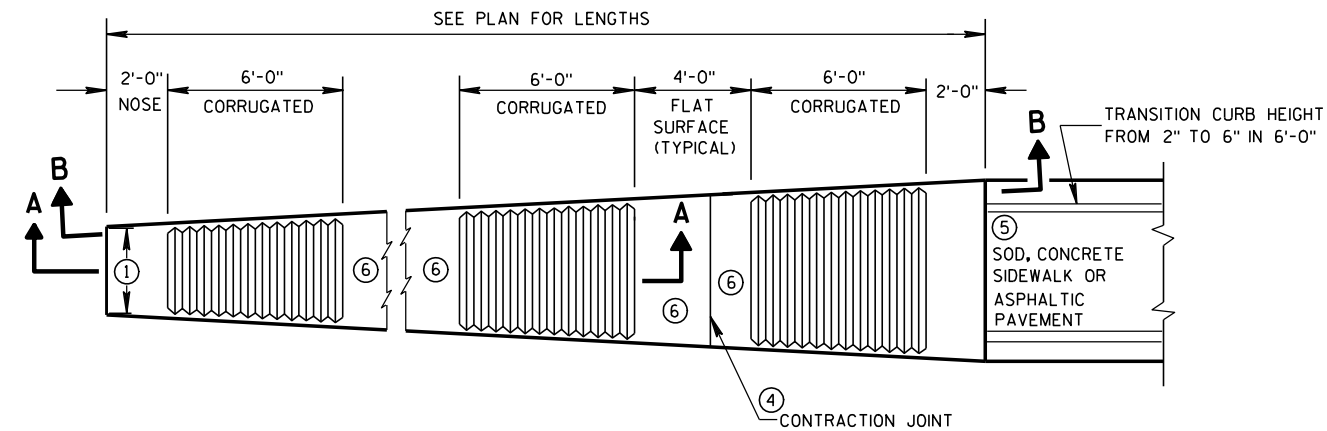
INLET PROTECTION, TYPE D

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

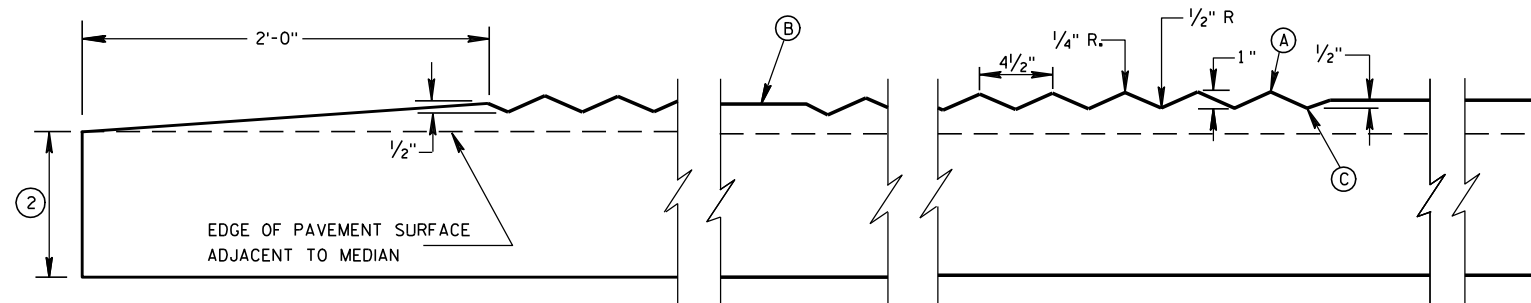
**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

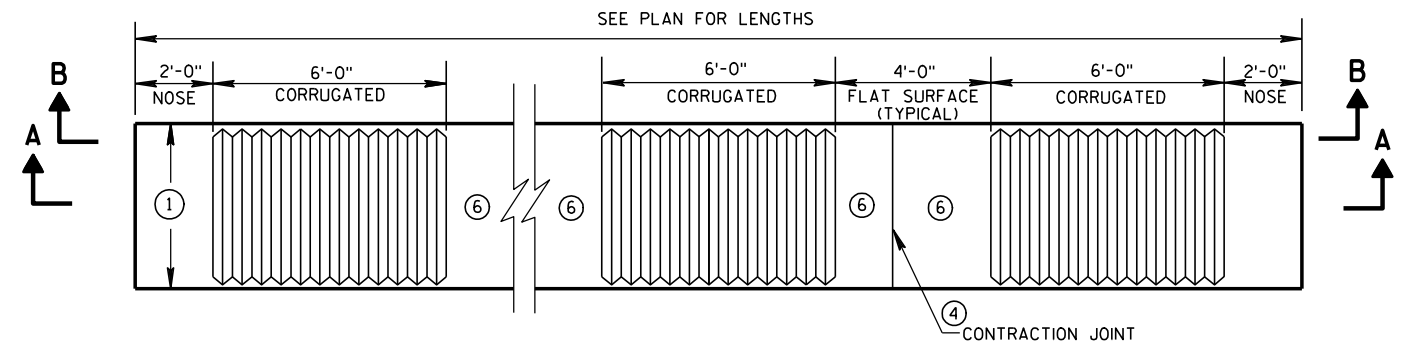
APPROVED
10/16/02 /S/ Beth Cannestra
DATE
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER



PLAN VIEW
VARIABLE WIDTH CONCRETE CORRUGATED MEDIAN



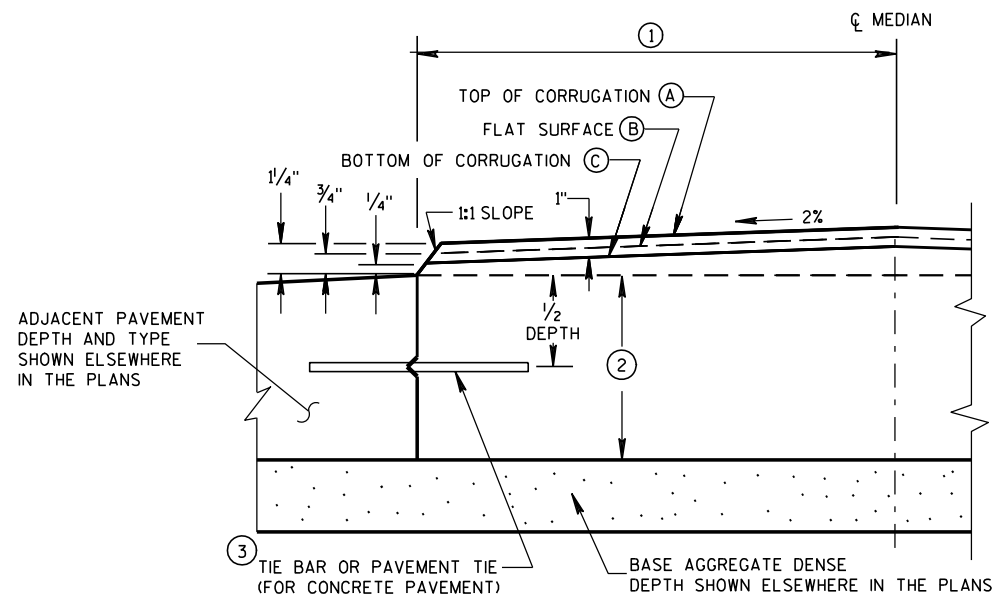
SECTION A-A
LONGITUDINAL SECTION



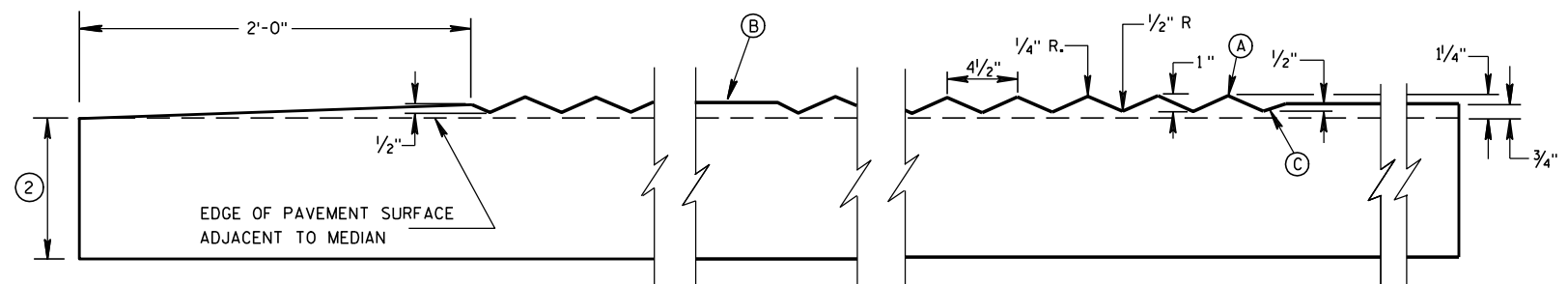
PLAN VIEW
UNIFORM WIDTH CONCRETE CORRUGATED MEDIAN

GENERAL NOTES

- ① SEE PLANS FOR CONSTANT OR VARIABLE WIDTH.
- ② THE DEPTH OF THE CONCRETE CORRUGATED MEDIAN SHALL BE 9-INCHES UNLESS SHOWN OTHERWISE IN THE PLAN. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN IN THE PLAN. TYPICAL OPTIONS ARE:
 - (1) NEW OR EXISTING CONCRETE PAVEMENT.
 - (2) ASPHALTIC CONCRETE OVER NEW OR EXISTING CONCRETE BASE COURSE, OR PAVEMENT.
 - (3) ASPHALTIC PAVEMENT OVER BASE AGGREGATE DENSE.
- ③ TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C. INSTALL TIE BARS TO MAINTAIN A MINIMUM OF 3-INCHES OF COVER BETWEEN THE TIE BAR AND THE CONCRETE SURFACE (BOTTOM AND TOP). PAVEMENT TIES REQUIRED IN EXISTING CONCRETE PAVEMENT OR CONCRETE BASE COURSE, PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.
- ④ CONCRETE CORRUGATED MEDIAN CONTRACTION JOINTS SHALL BE CONSTRUCTED TO MATCH THE JOINTS IN ADJACENT CONCRETE PAVEMENT. WHERE ADJACENT PAVEMENT IS ASPHALT WITH BASE AGGREGATE DENSE, TRANSVERSE CONTRACTION JOINTS SHALL BE PROVIDED AT 20 FOOT INTERVALS.
- ⑤ SURFACE TYPE AND DETAILS ARE DEFINED ELSEWHERE IN THE PLAN.
- ⑥ YELLOW MARKING ON FLAT SURFACE WHEN MEDIAN SEPARATES OPPOSING TRAFFIC.



HALF CROSS SECTION
② CONCRETE CORRUGATED MEDIAN AND ADJACENT PAVEMENT



SECTION B-B
LONGITUDINAL SECTION

CONCRETE CORRUGATED MEDIAN

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

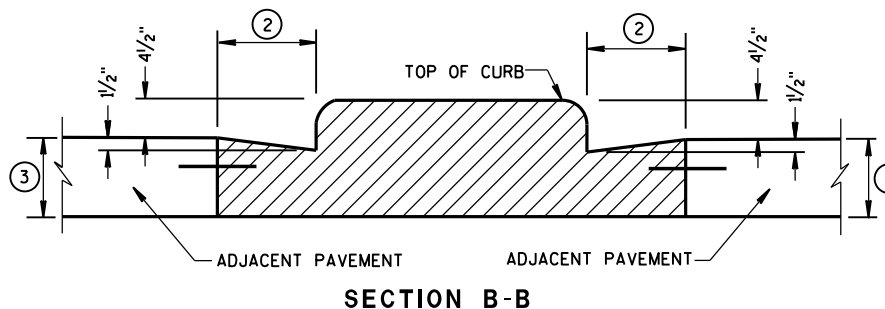
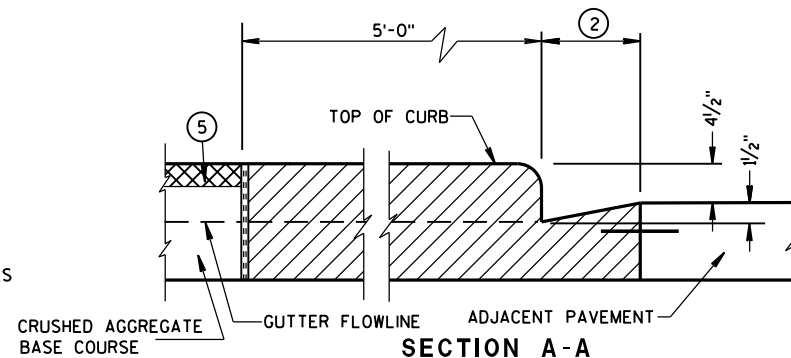
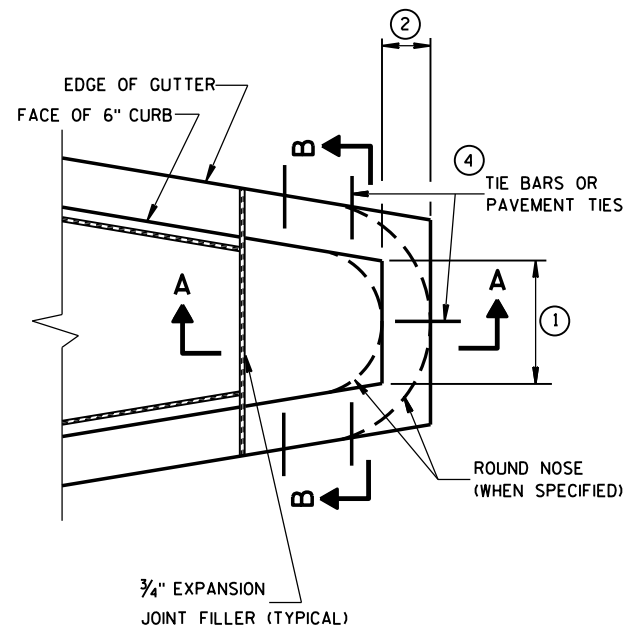
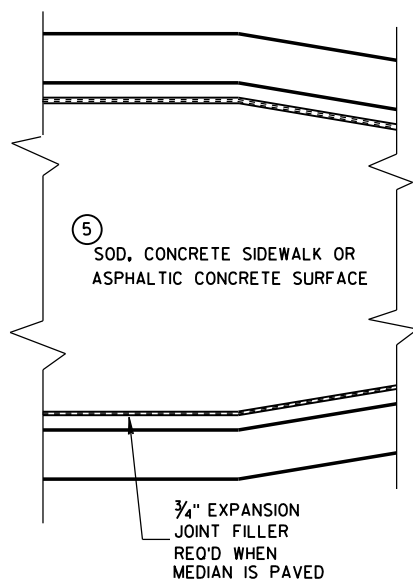
APPROVED

12/17/07

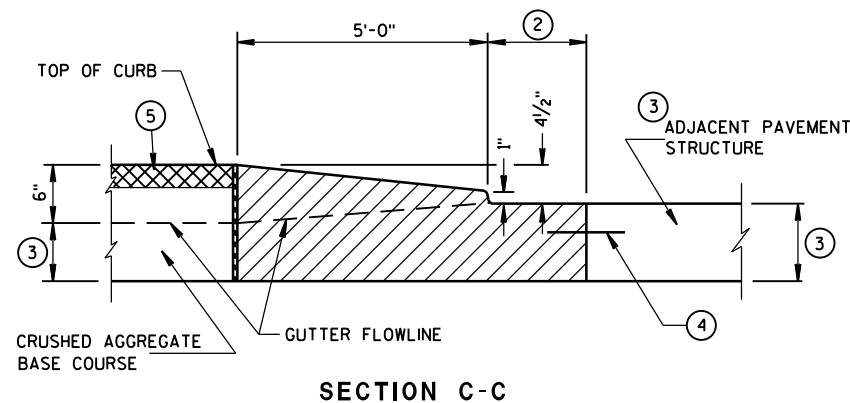
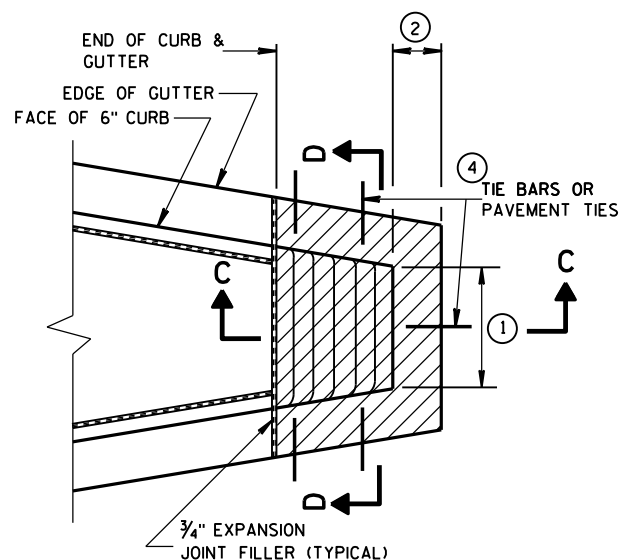
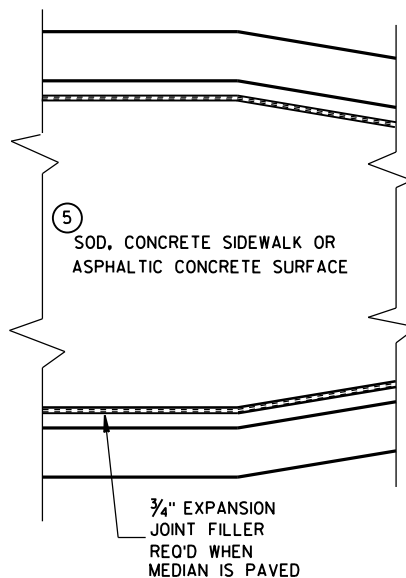
DATE

FHWA

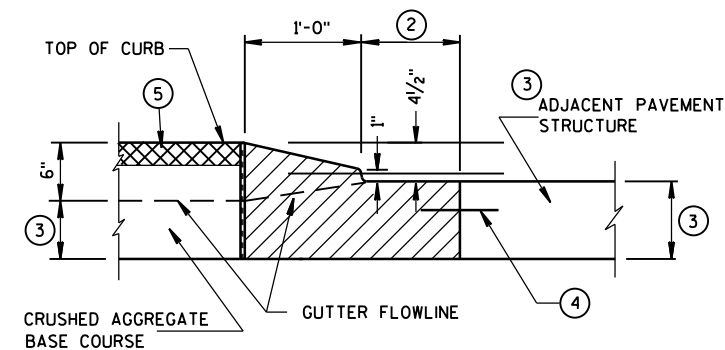
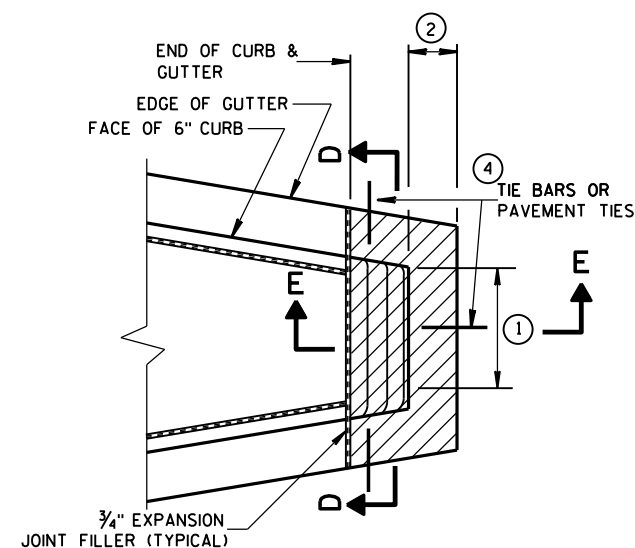
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



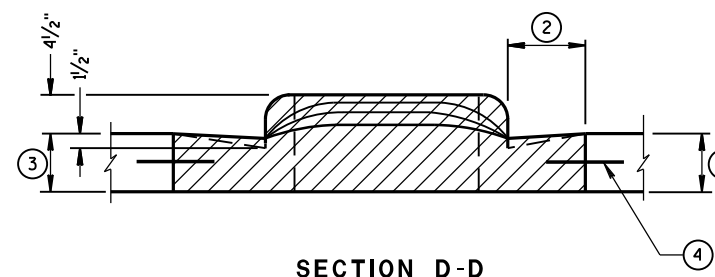
CONCRETE MEDIAN BLUNT NOSE DETAIL



CONCRETE MEDIAN SLOPED NOSE TYPE 1



CONCRETE MEDIAN SLOPED NOSE TYPE 2



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 SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).
- ② WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.
- ③ DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:
 - (1) NEW OR EXISTING CONCRETE PAVEMENT.
 - (2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.
 - (3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

- ④ TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

- ⑤ SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

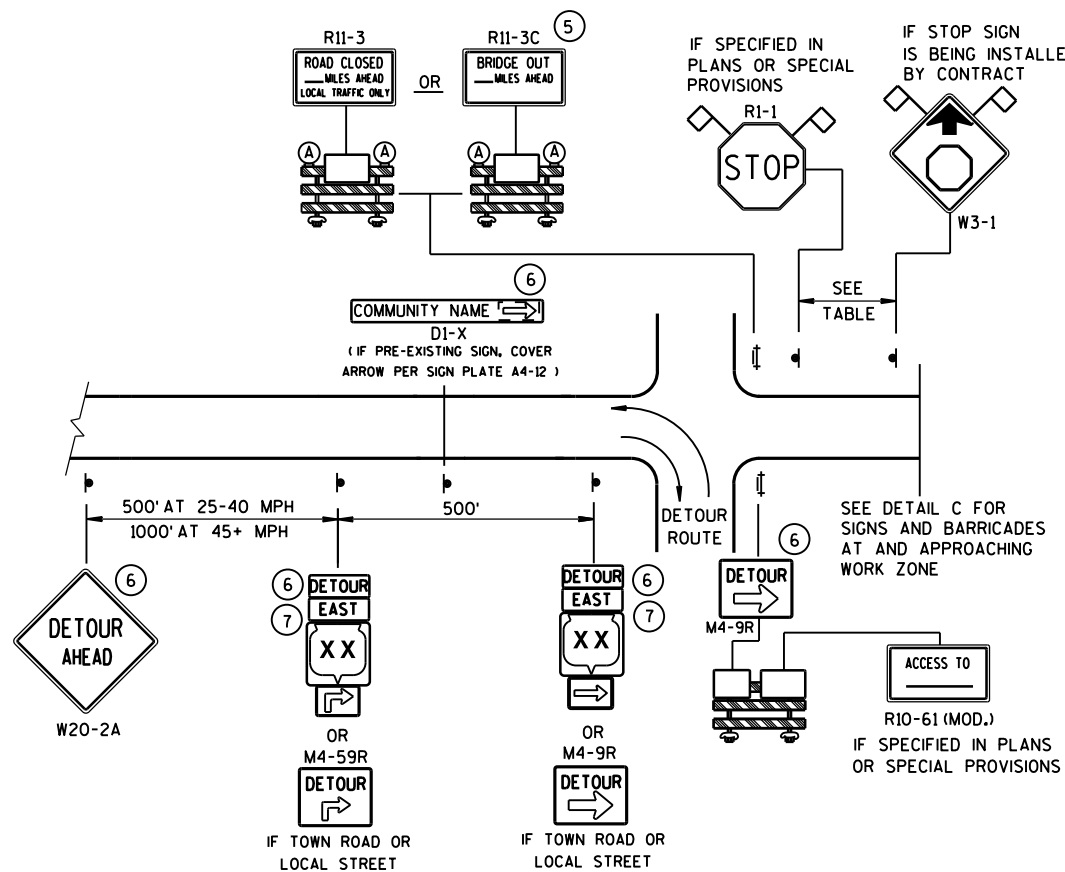
APPROVED

6/8/2006

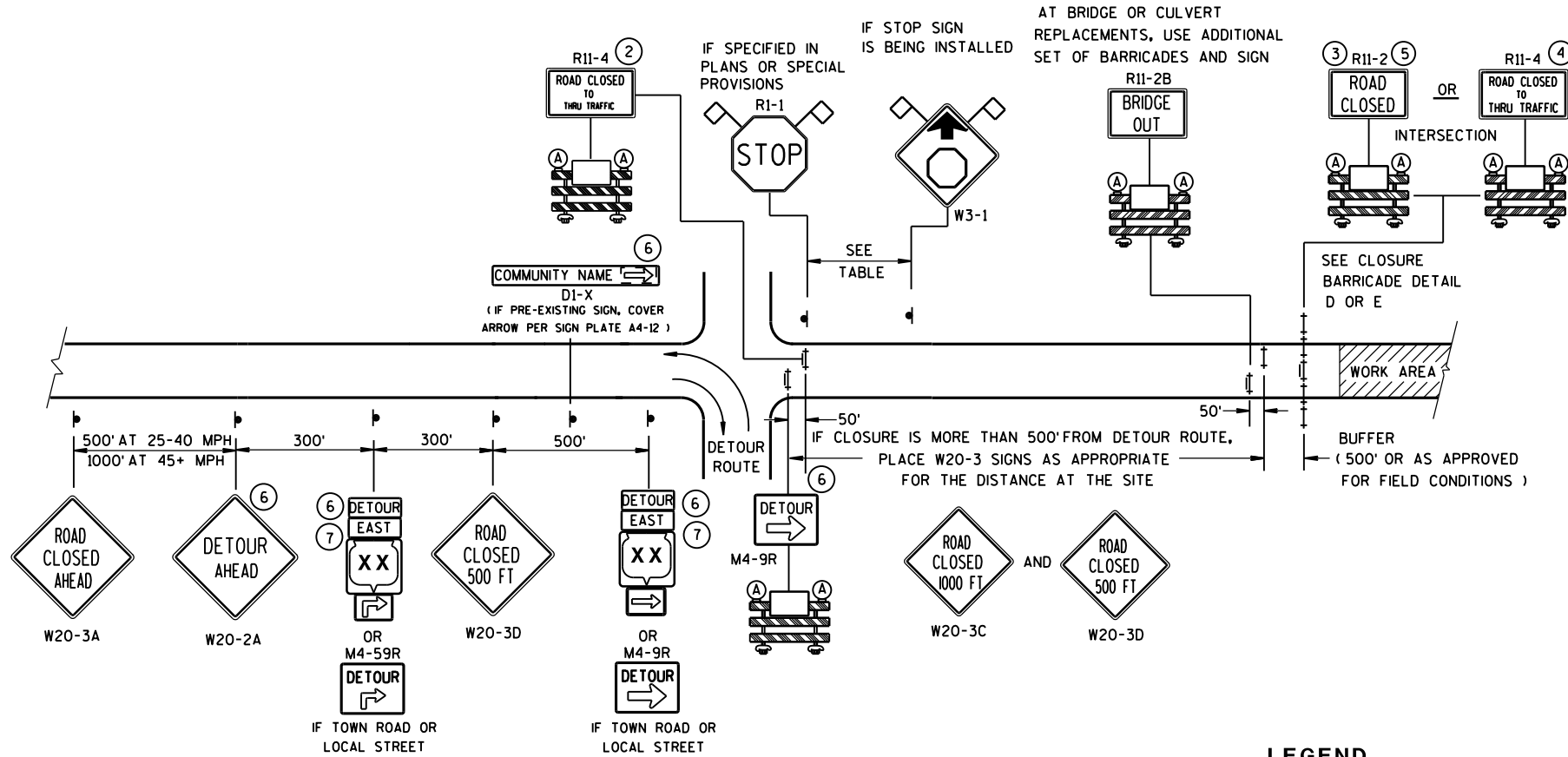
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FHWA

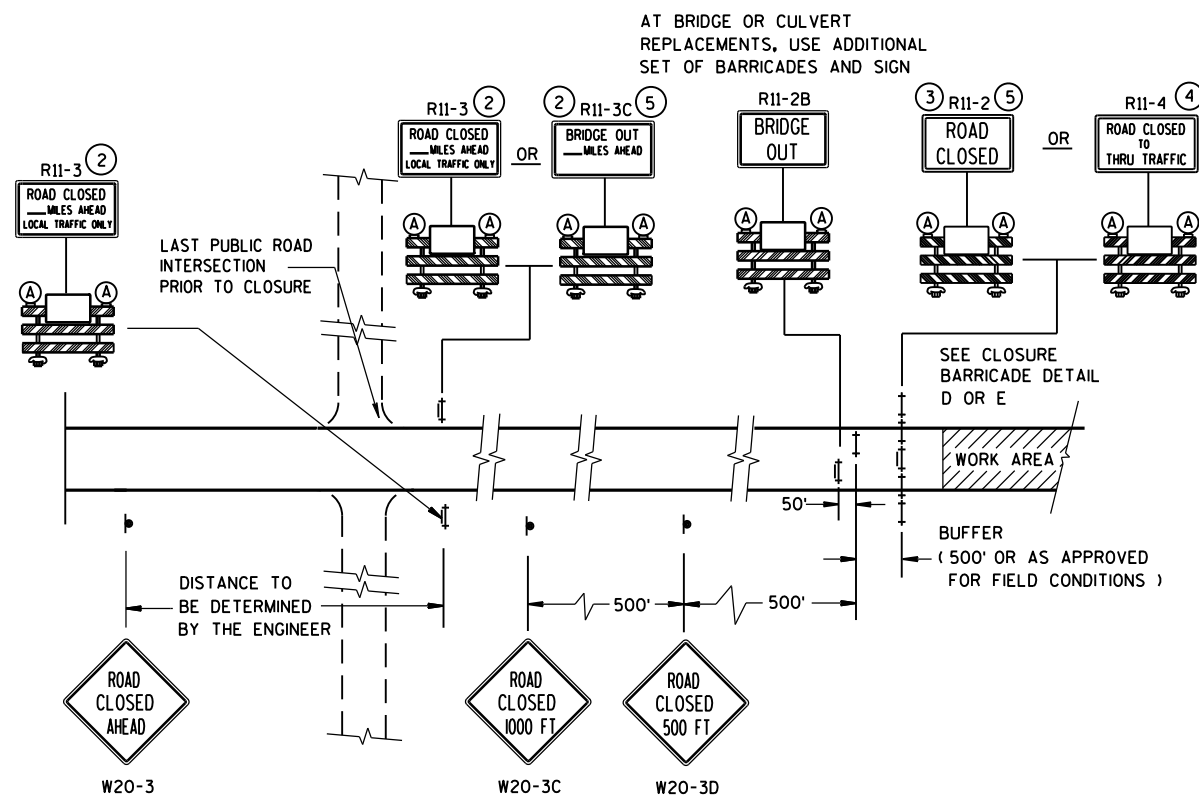
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



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

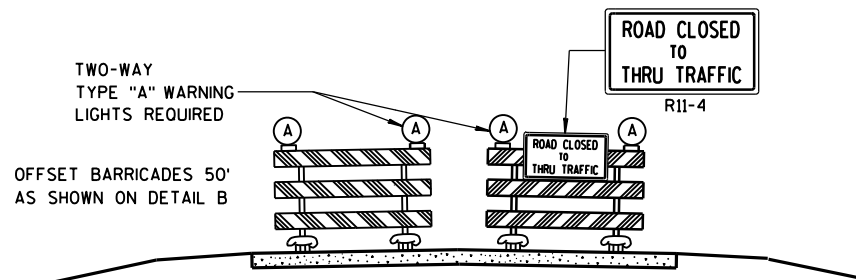
SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
Sept. 2015 DATE	/S/ Peter Amokobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2-SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

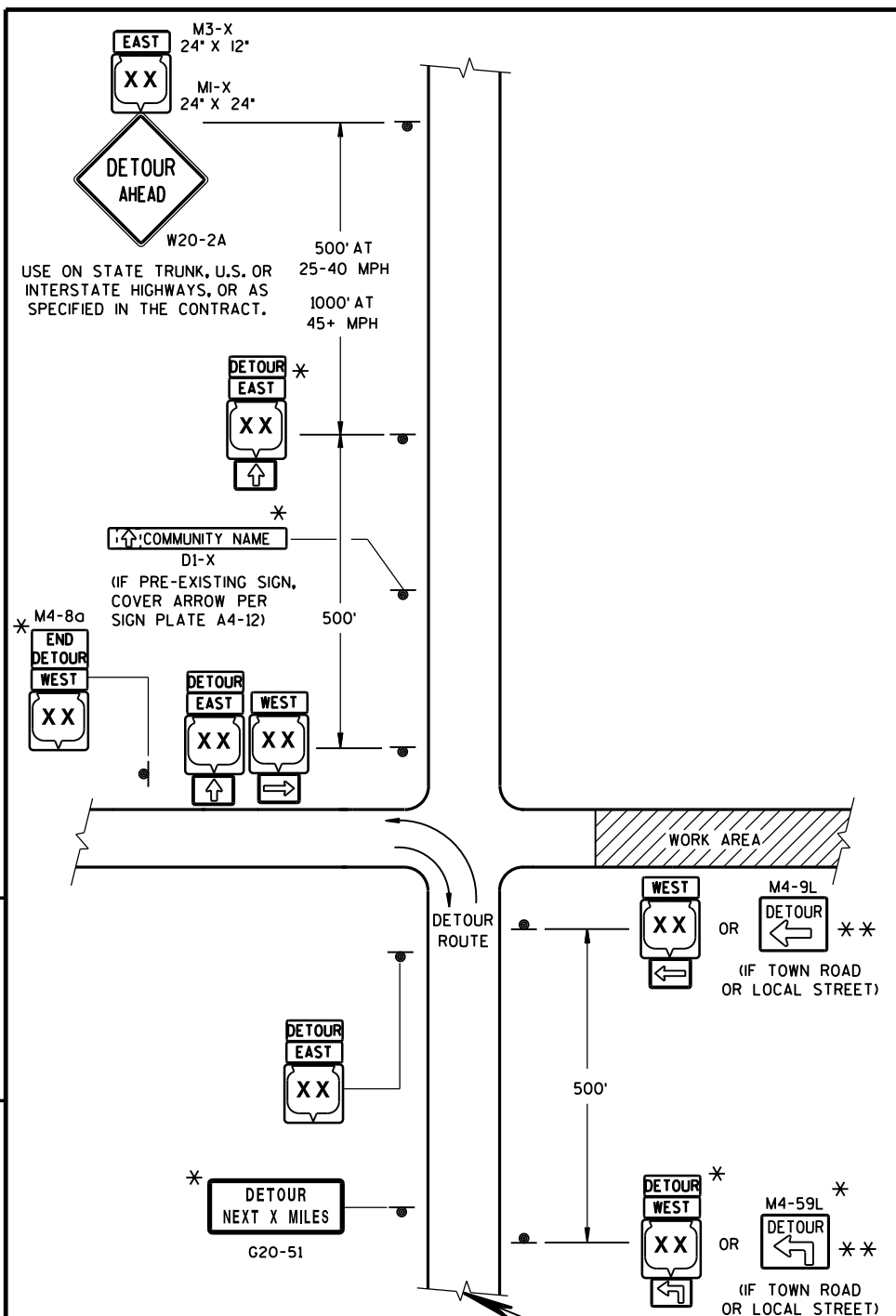
"WO" AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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

- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (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	
Sept. 2015 DATE	/S/ Peter Amokobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	



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

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.

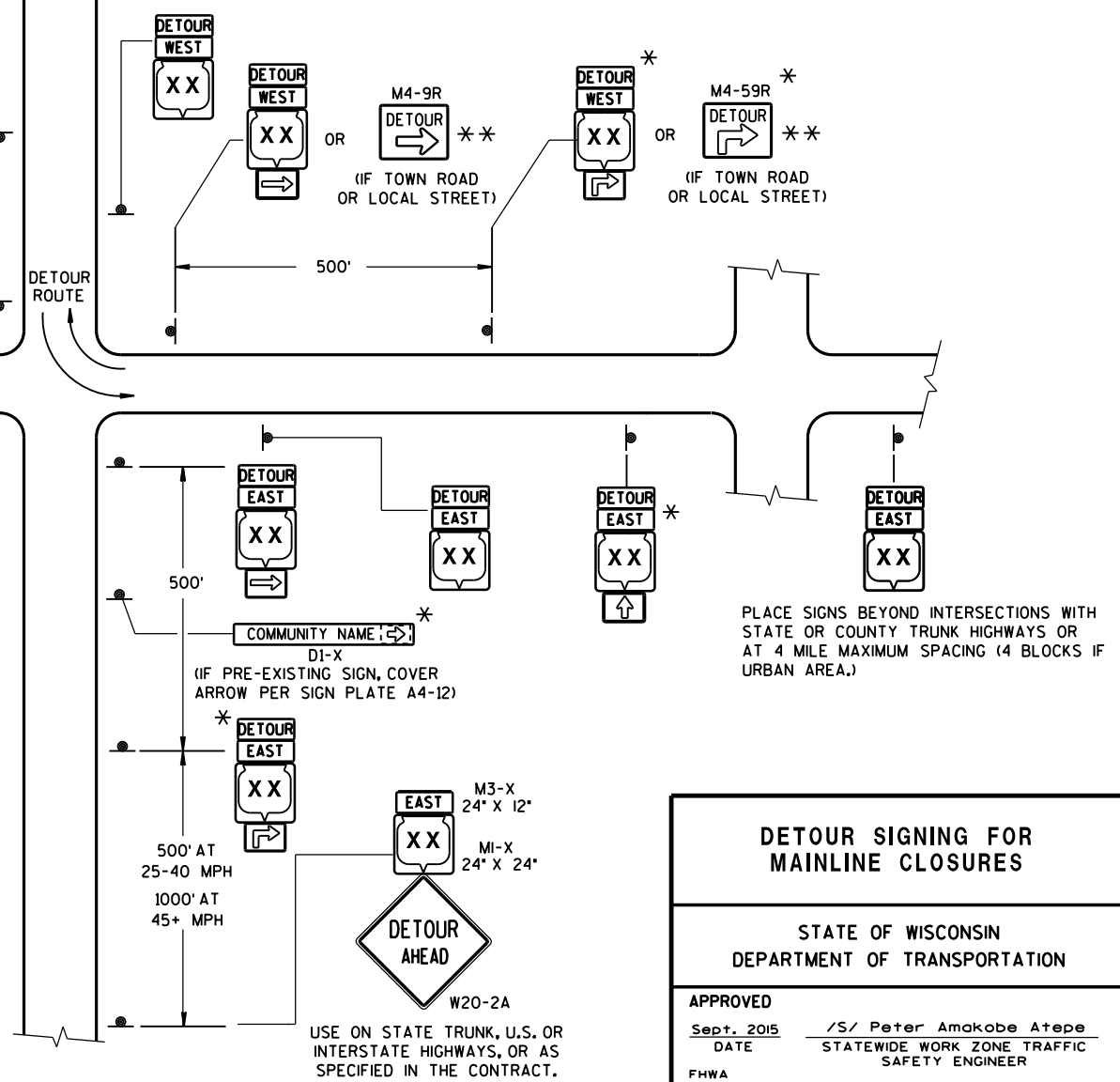
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- 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.

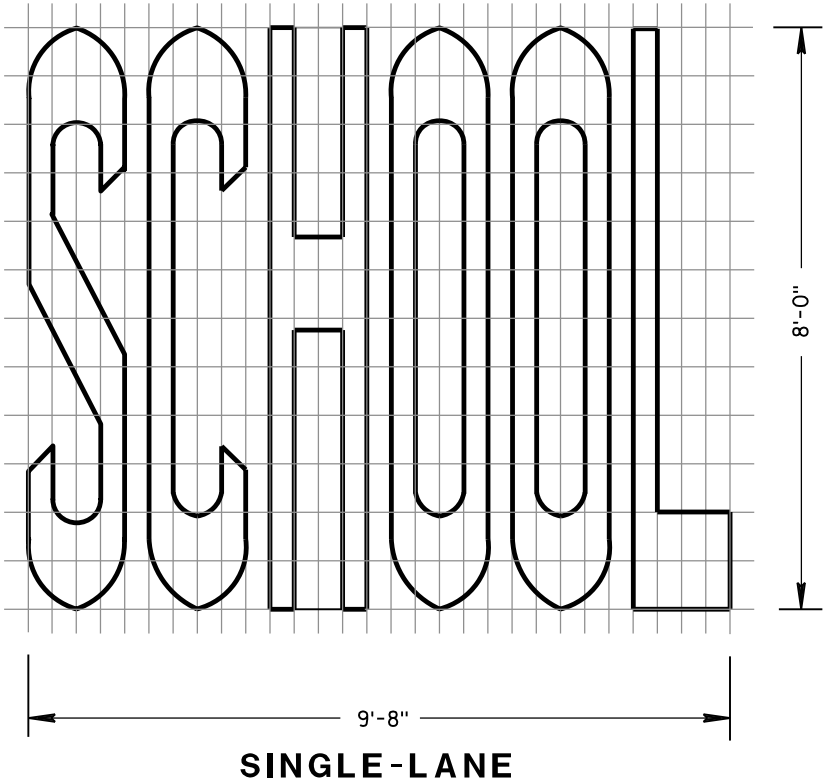
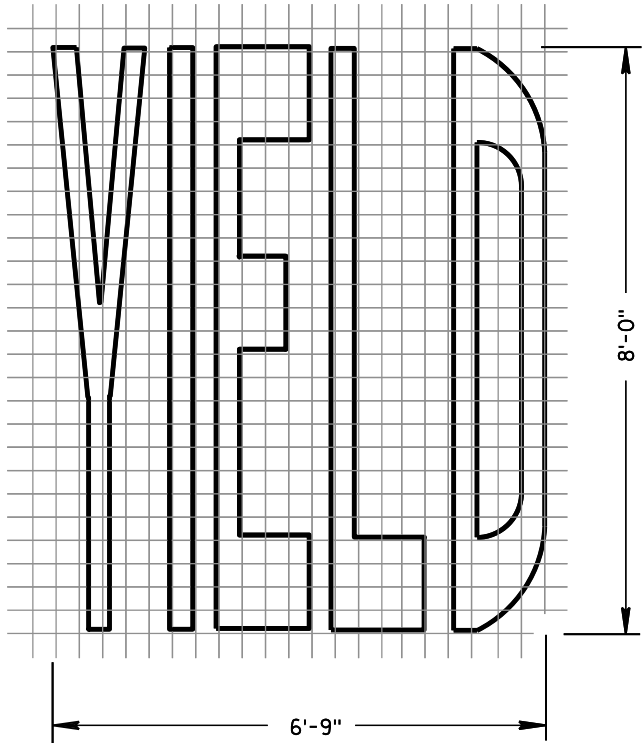
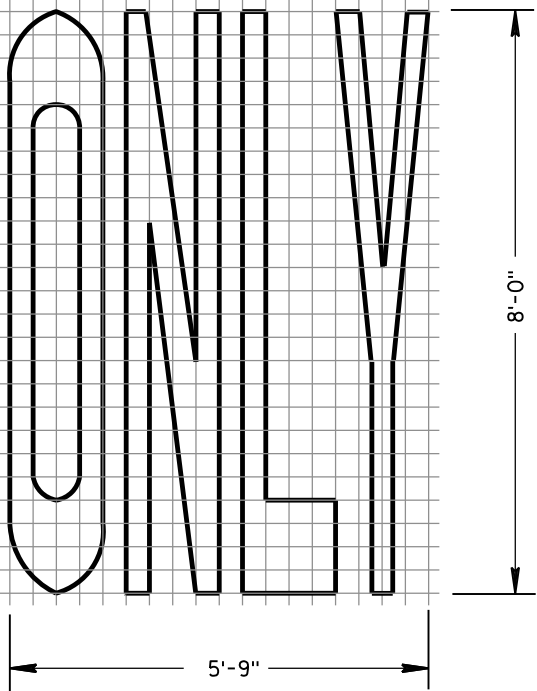
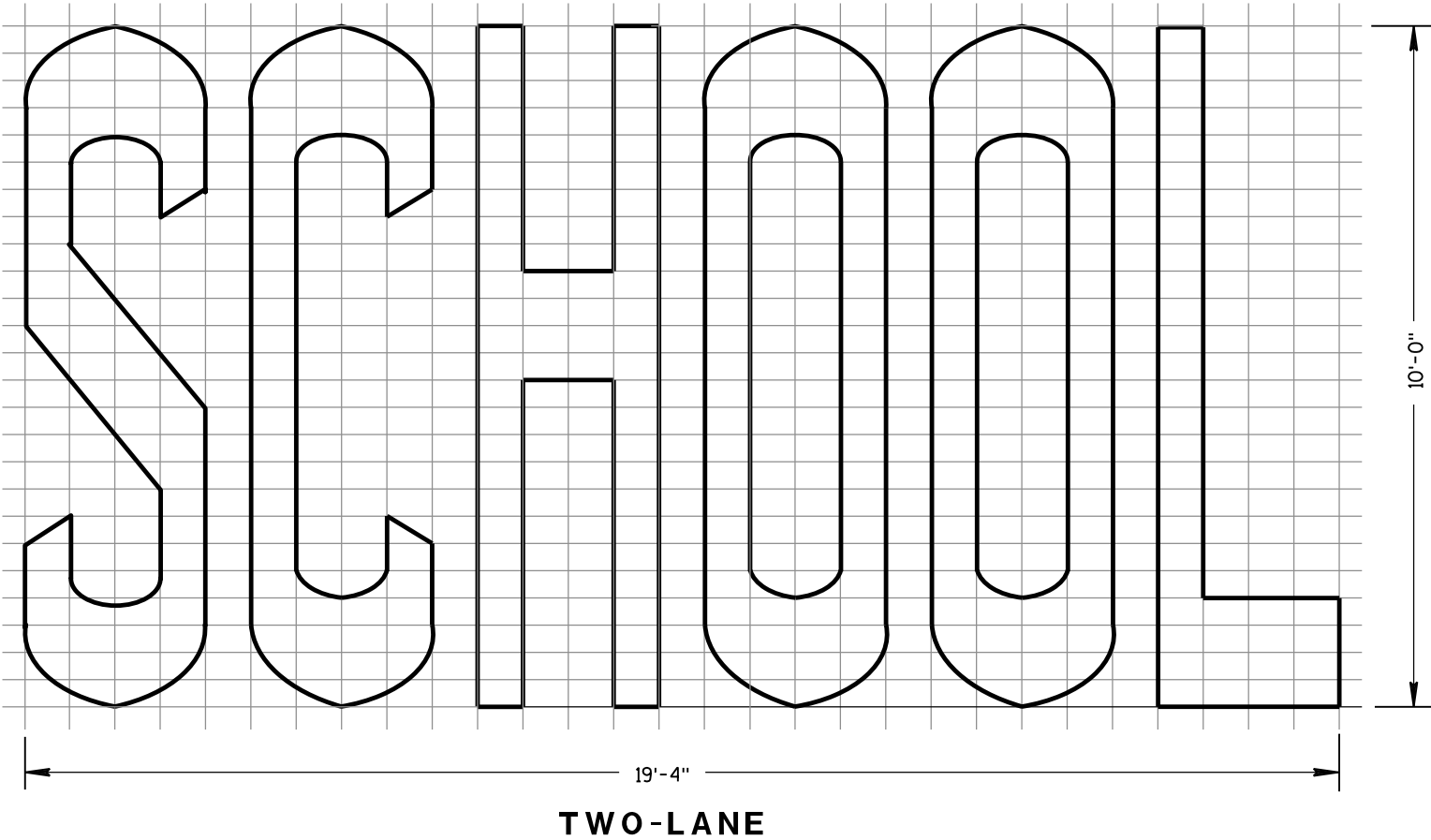
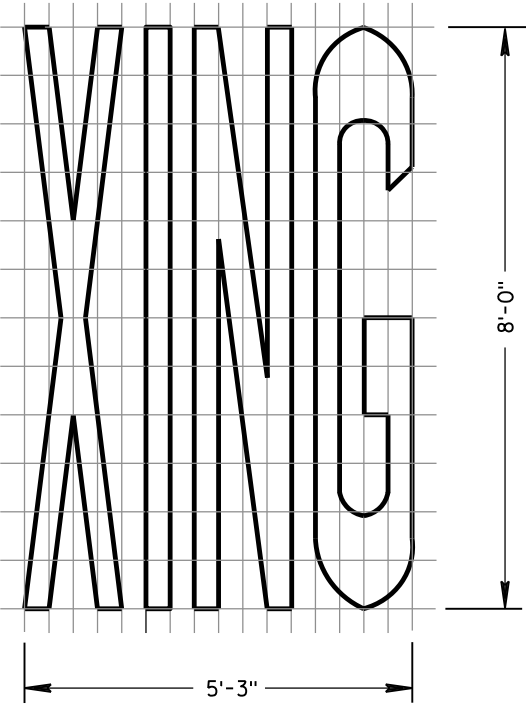
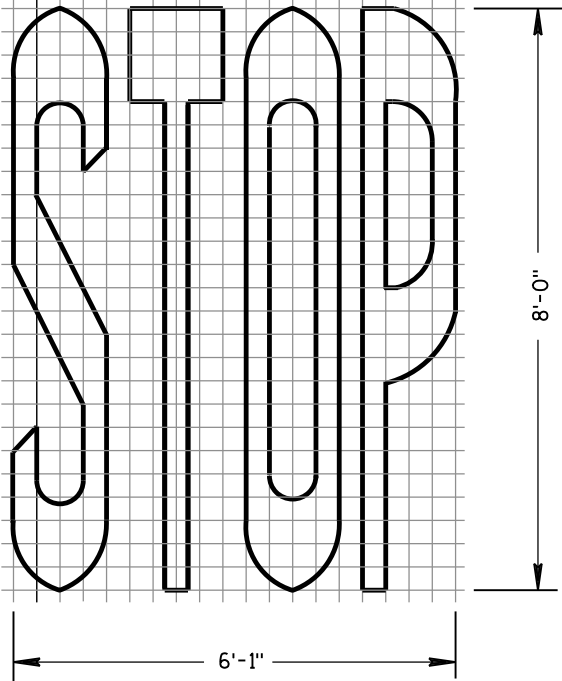
** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



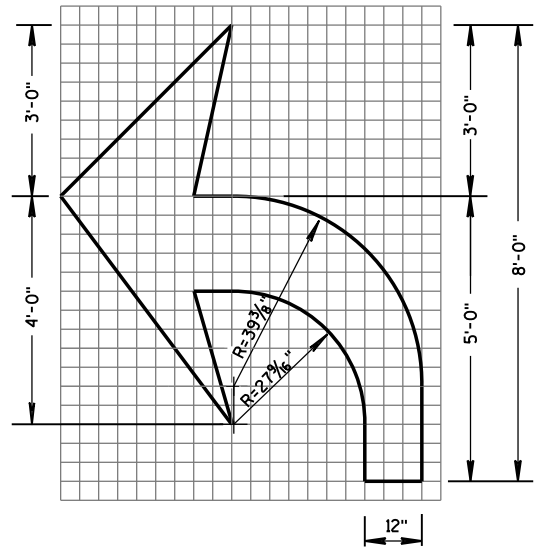
DETOUR SIGNING FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	

GENERAL NOTES

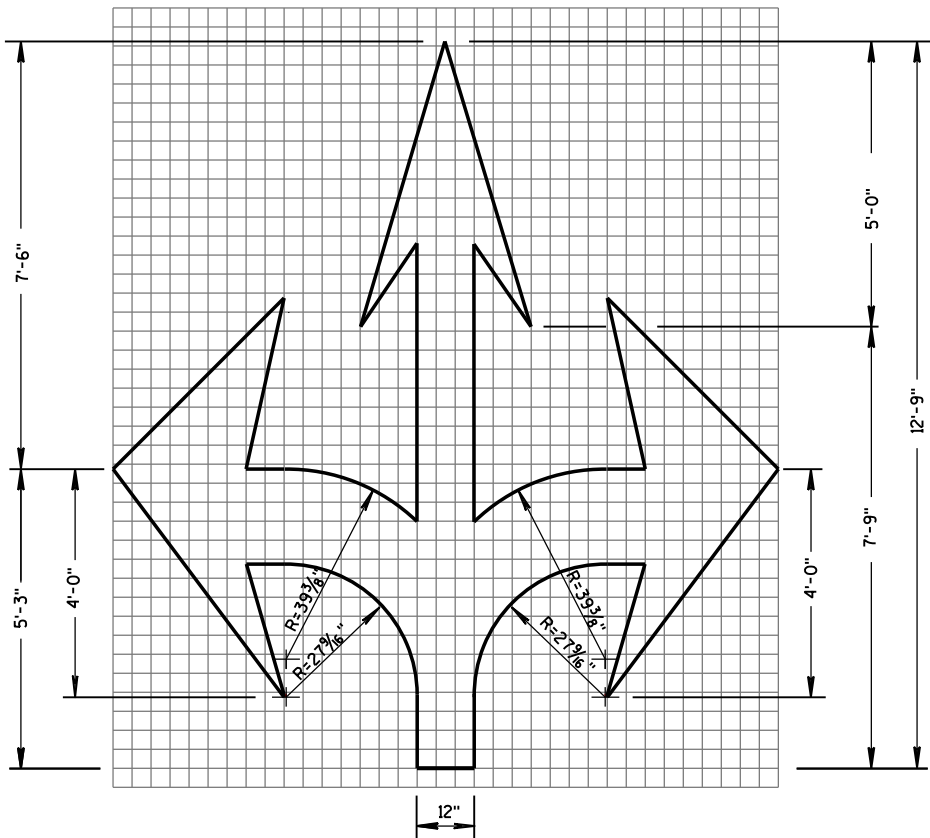
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



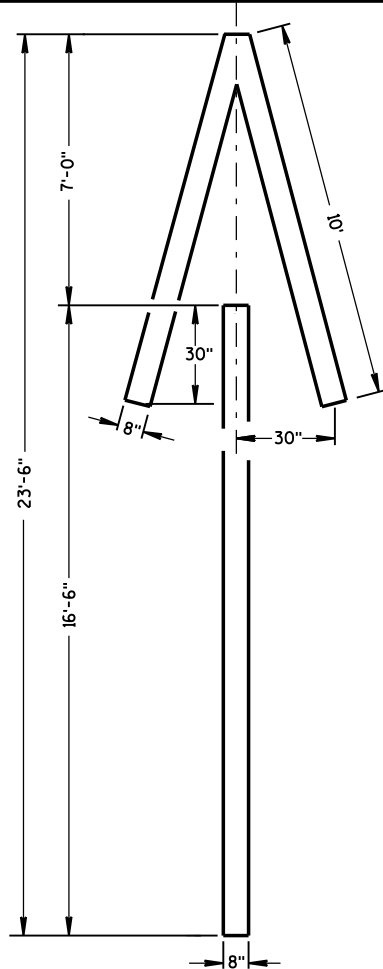
PAVEMENT MARKING WORDS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Matthew R. Rauch STATE SIGNING AND MARKING ENGINEER
FHWA	



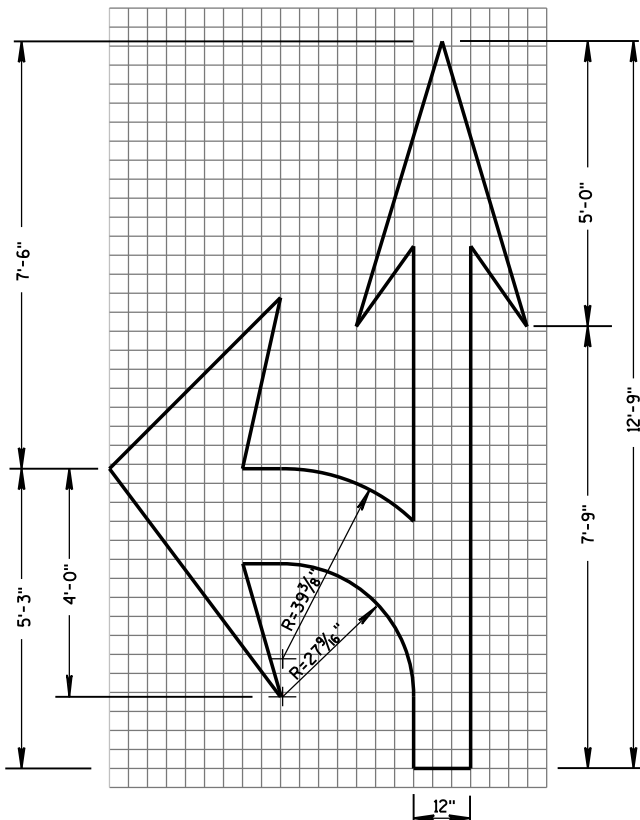
TYPE 2



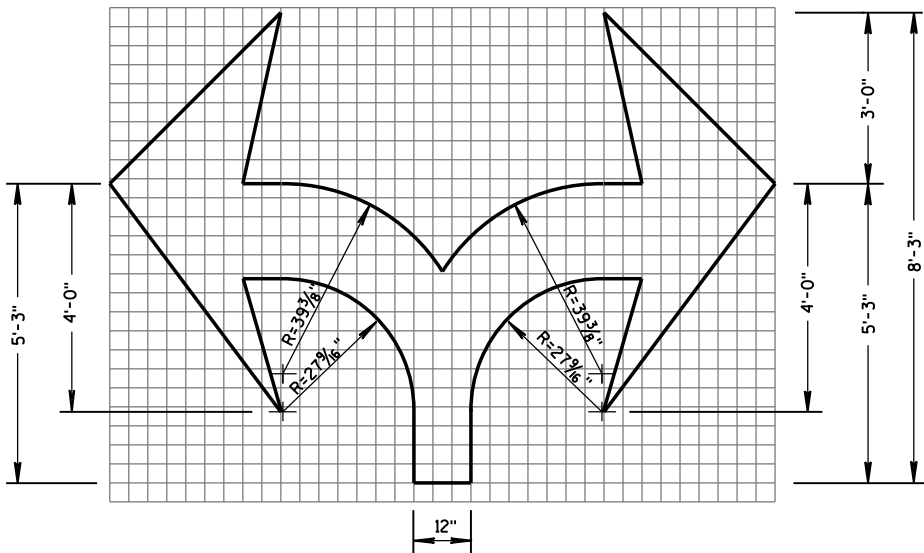
TYPE 6



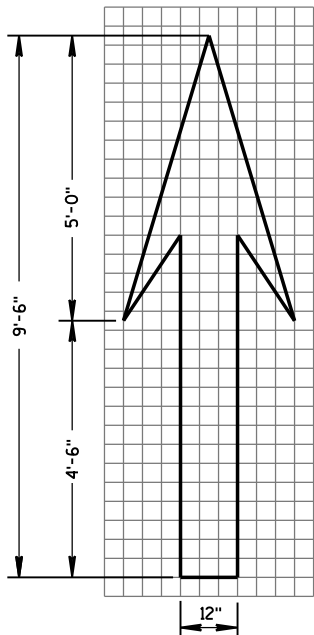
TYPE 4



TYPE 3



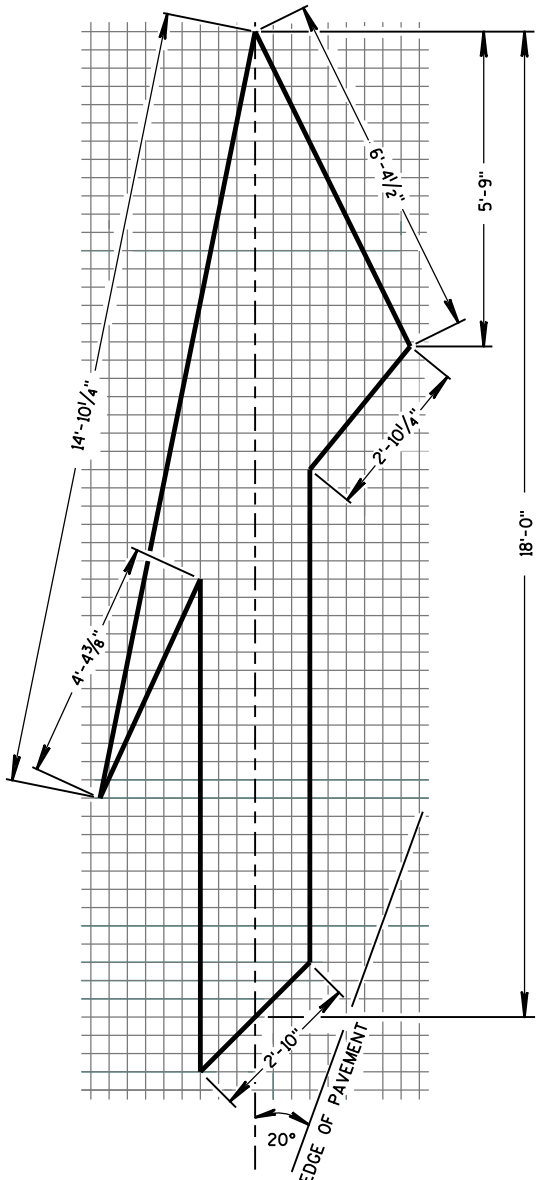
TYPE 7



TYPE 1

GENERAL NOTES

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

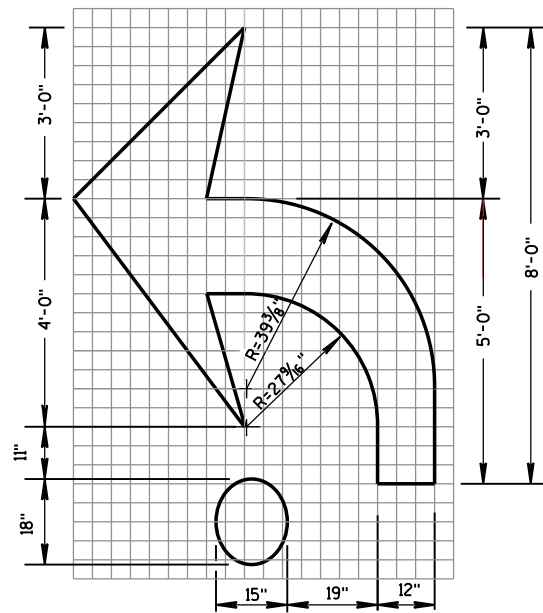


TYPE 5 LANE DROP ARROW

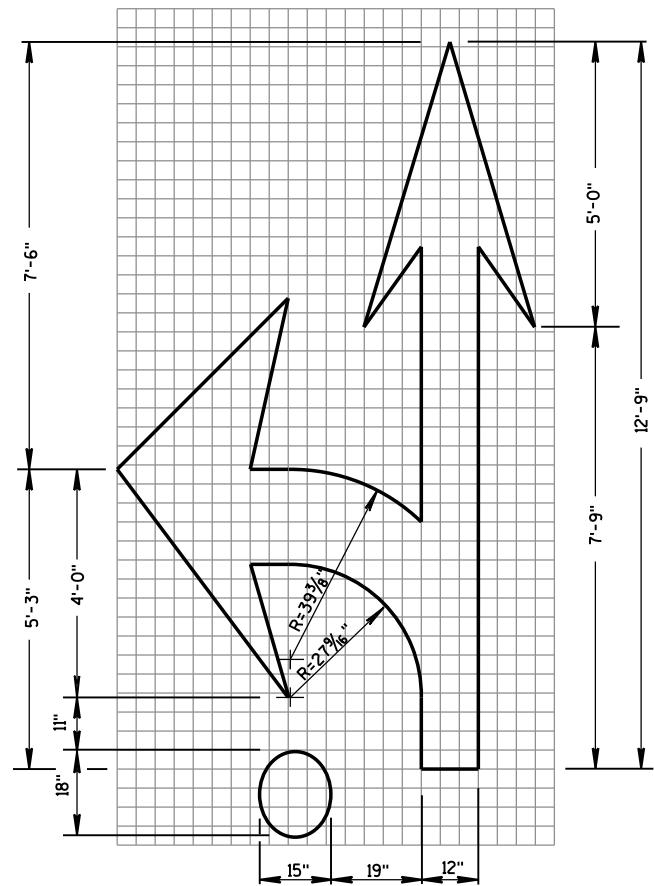
PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

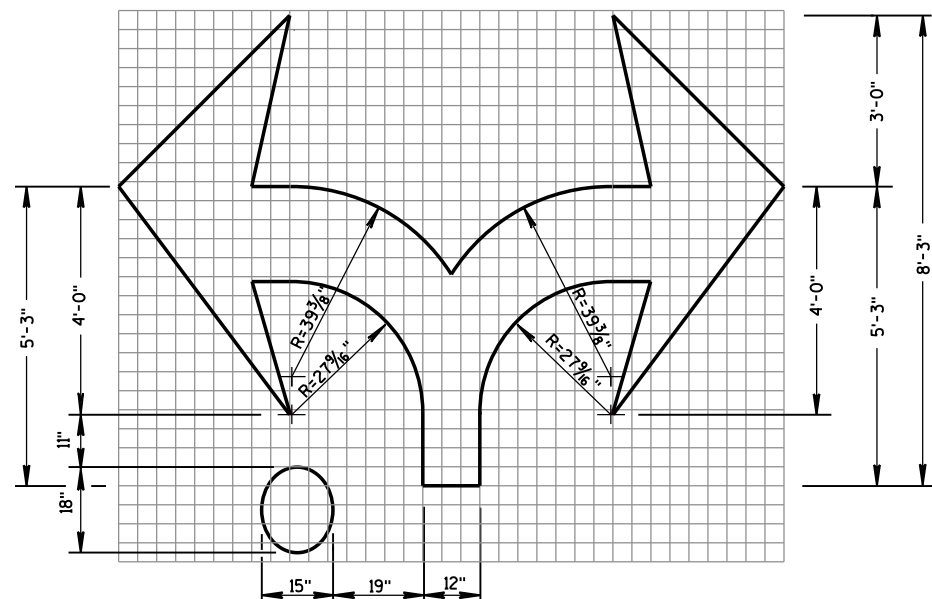
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DATE STATE SIGNING AND MARKING ENGINEER
FHWA



TYPE 2R



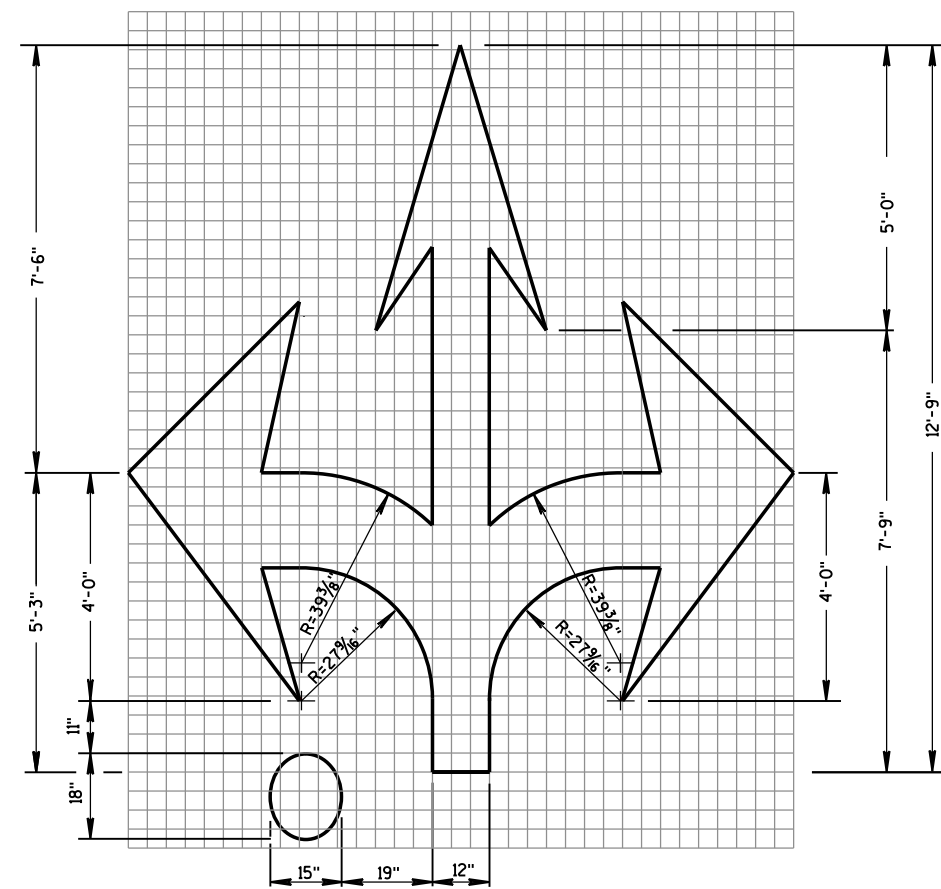
TYPE 3R



TYPE 7R

GENERAL NOTES

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



TYPE 6R

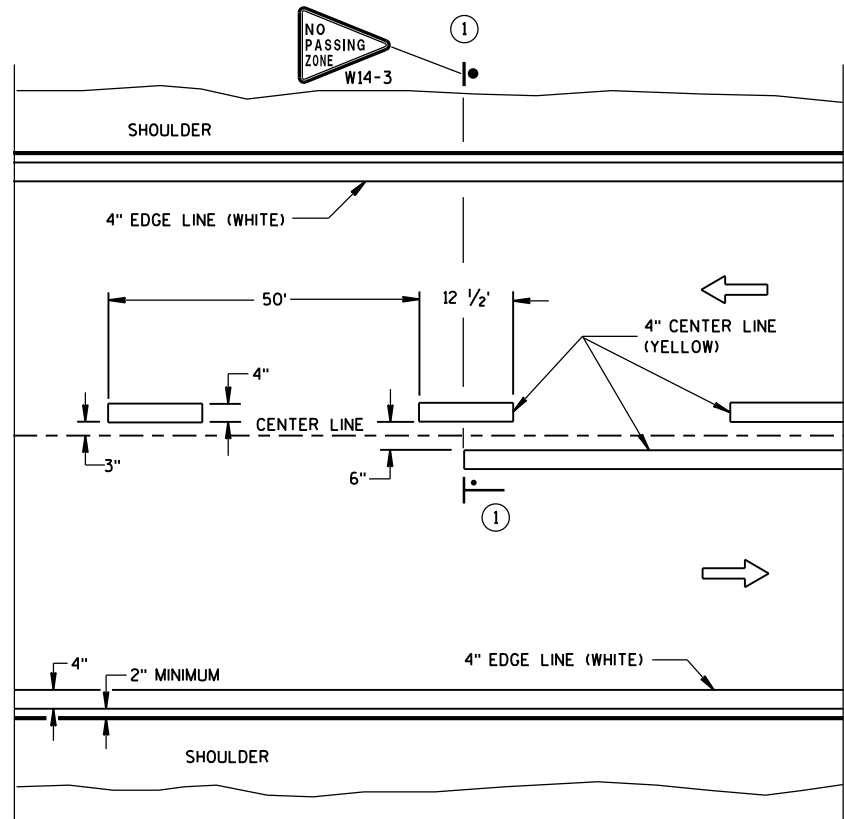
ROUNABOUT ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

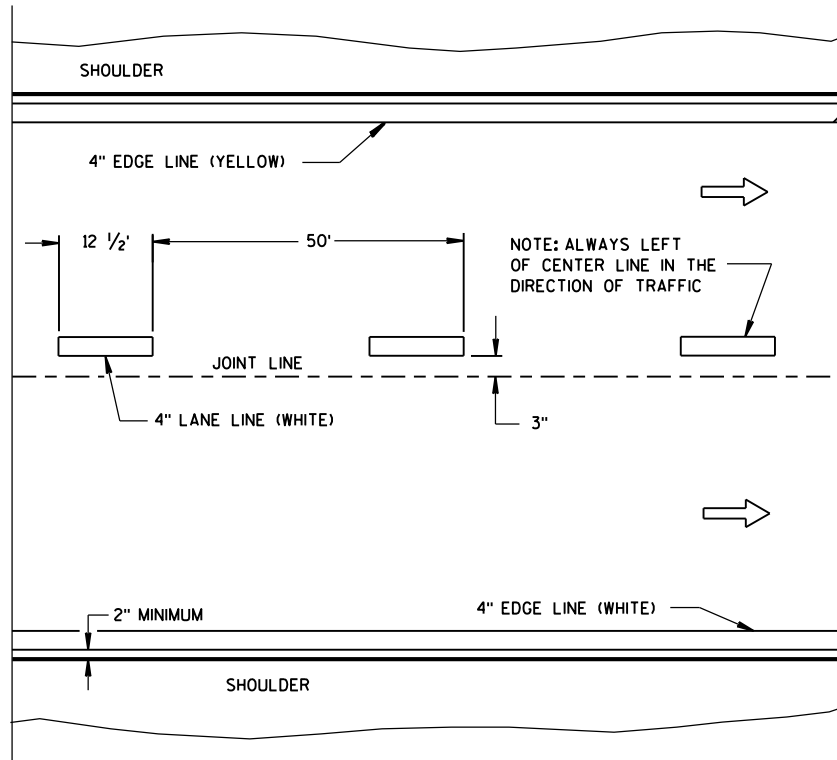
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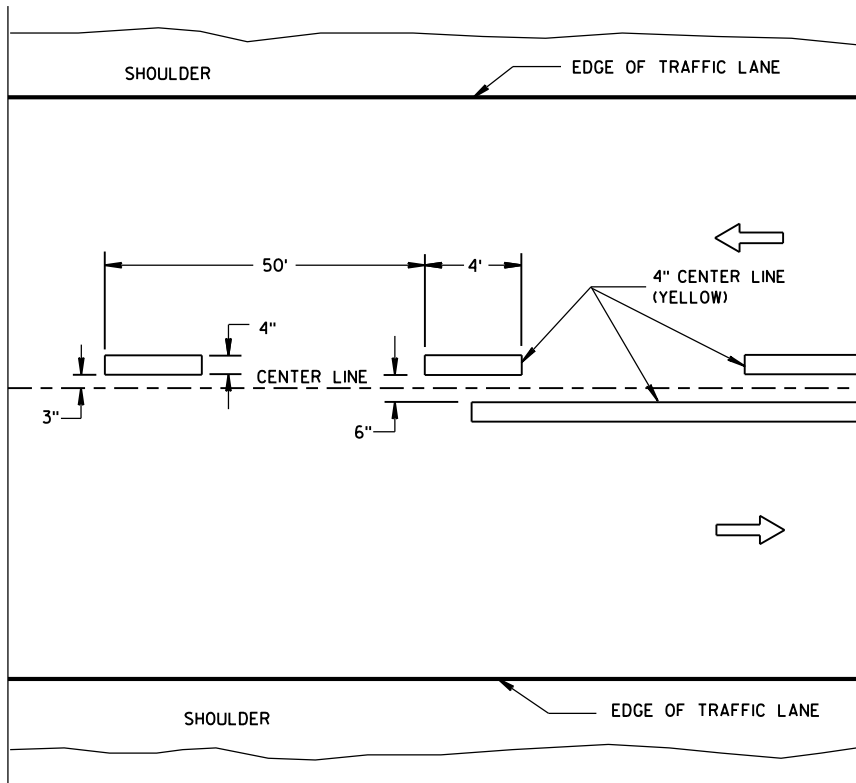


TWO WAY TRAFFIC

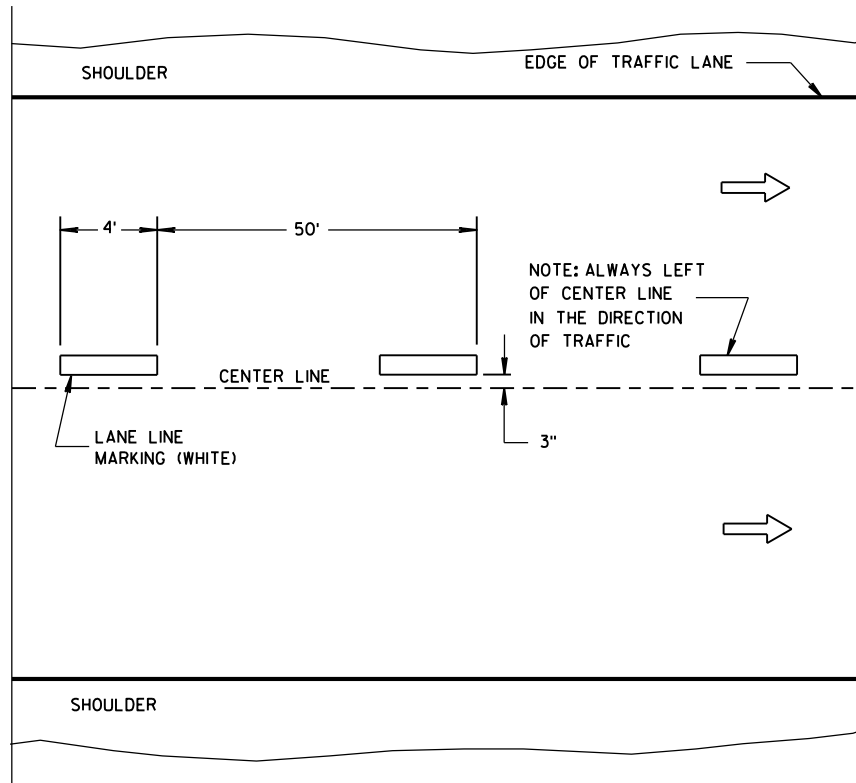


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

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

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

LEGEND

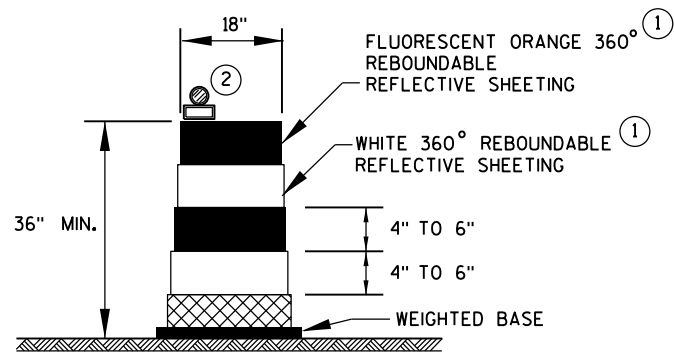
├── "T" MARKING

● POST MOUNTED SIGN

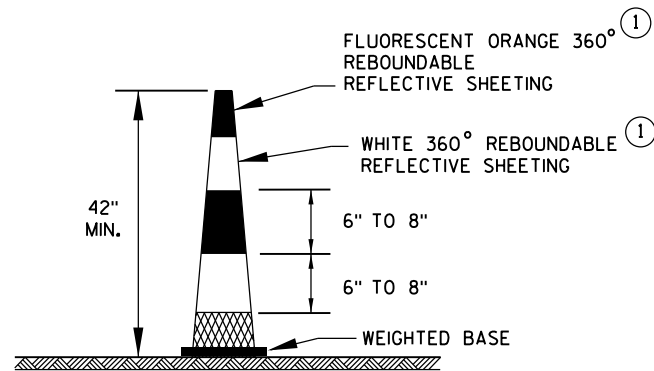
LONGITUDINAL MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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DATE STATE SIGNING AND MARKING ENGINEER
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DRUM

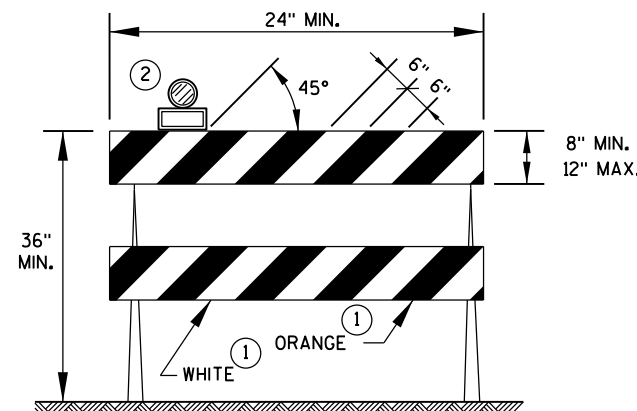


42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS

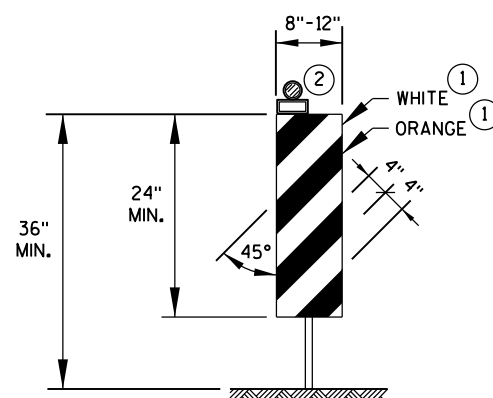
GENERAL NOTES

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



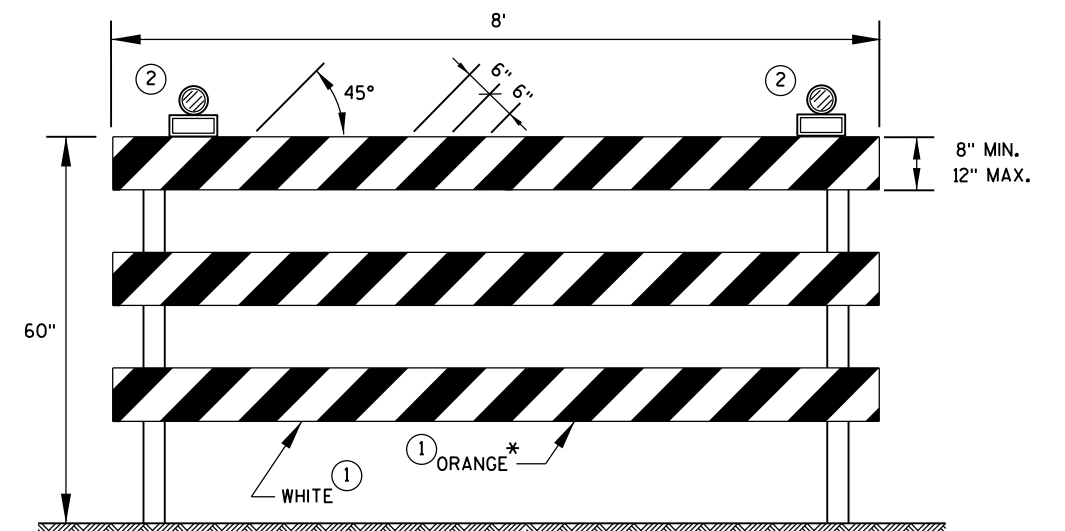
TYPE 2 BARRICADE

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



VERTICAL PANEL

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



TYPE 3 BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION, USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

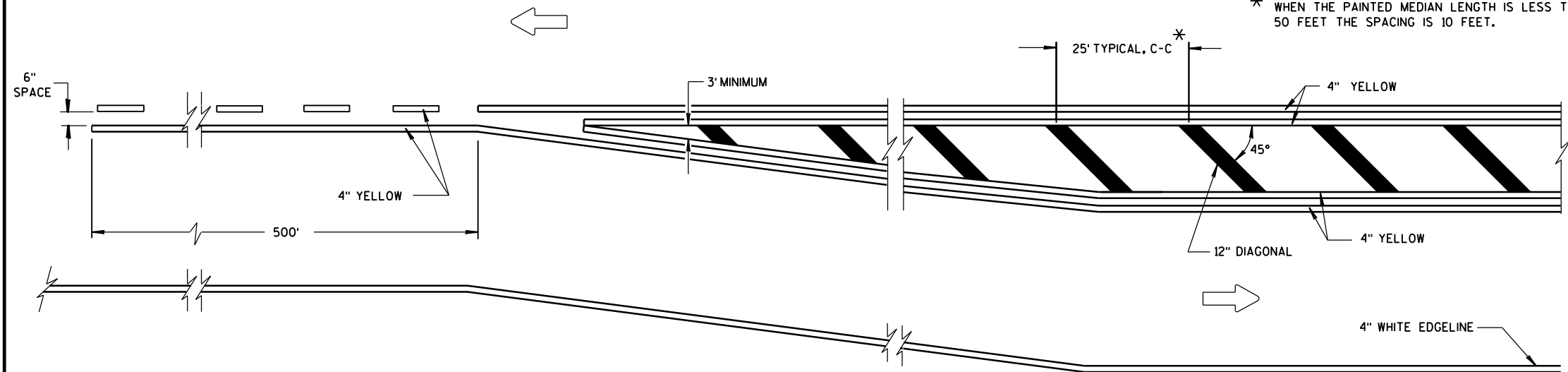
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017
DATE

FHWA

/S/ Andrew Heidtke
WORK ZONE ENGINEER

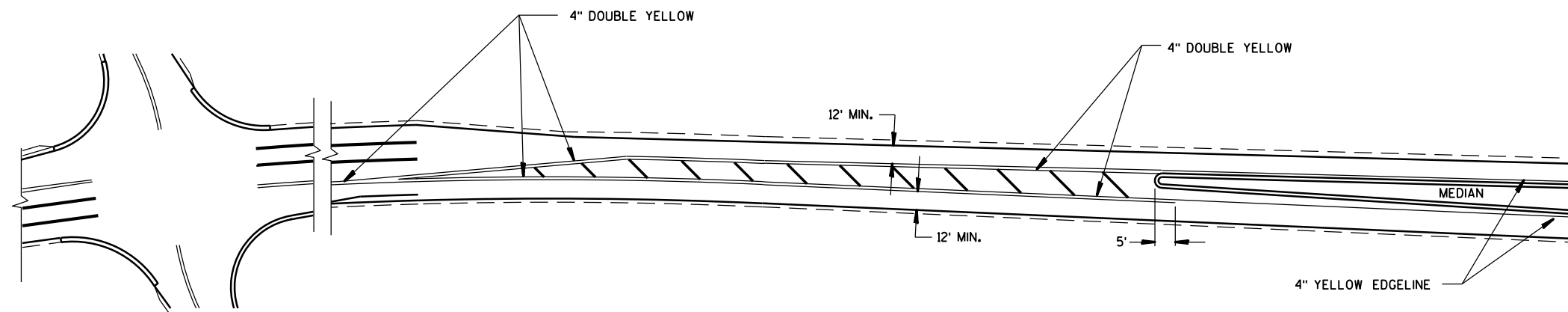


MEDIAN ISLAND DETAIL

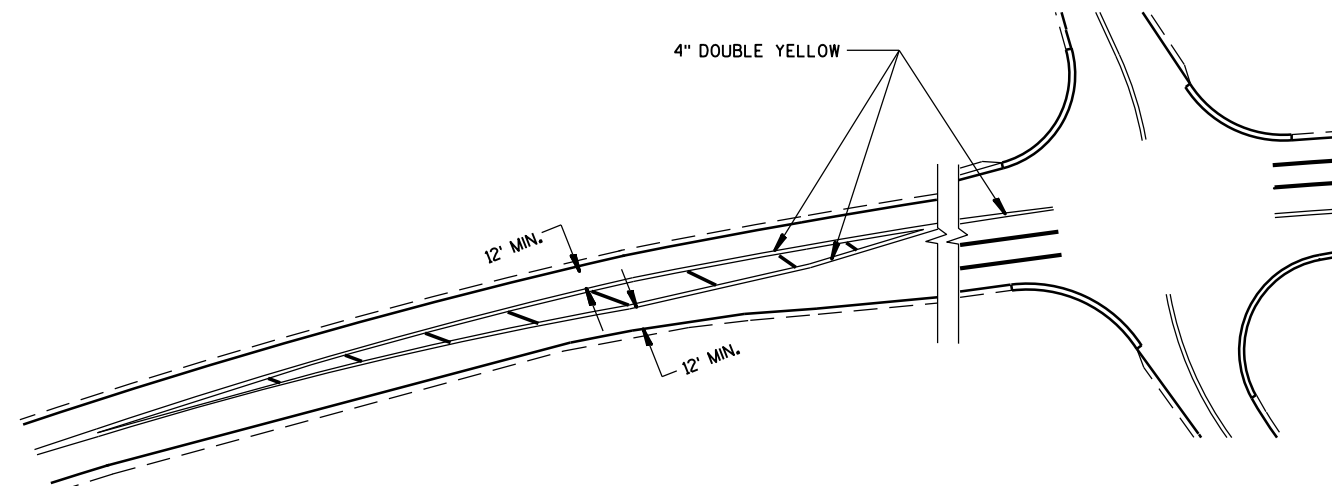
GENERAL NOTE

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

➡ DIRECTION OF TRAVEL



APPROACH MARKINGS FOR OTHER MEDIAN TYPES

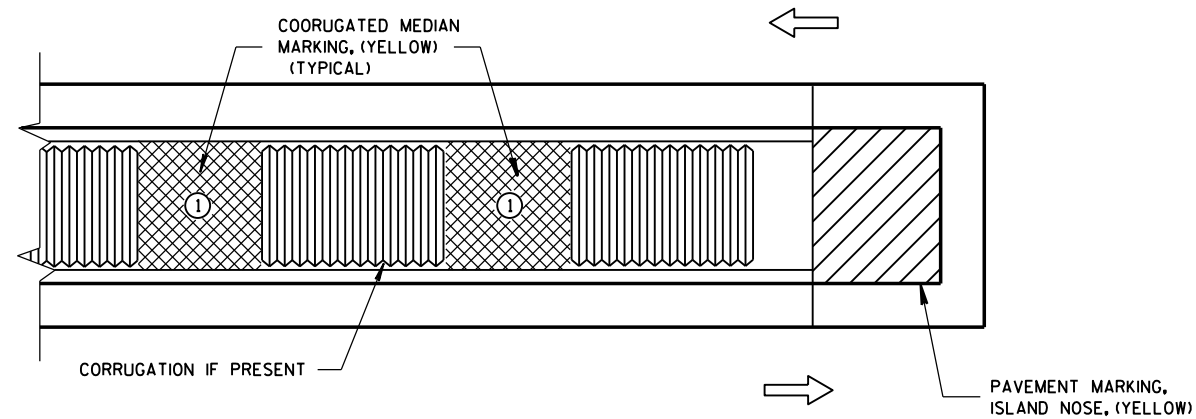


NON APPROACH MARKINGS

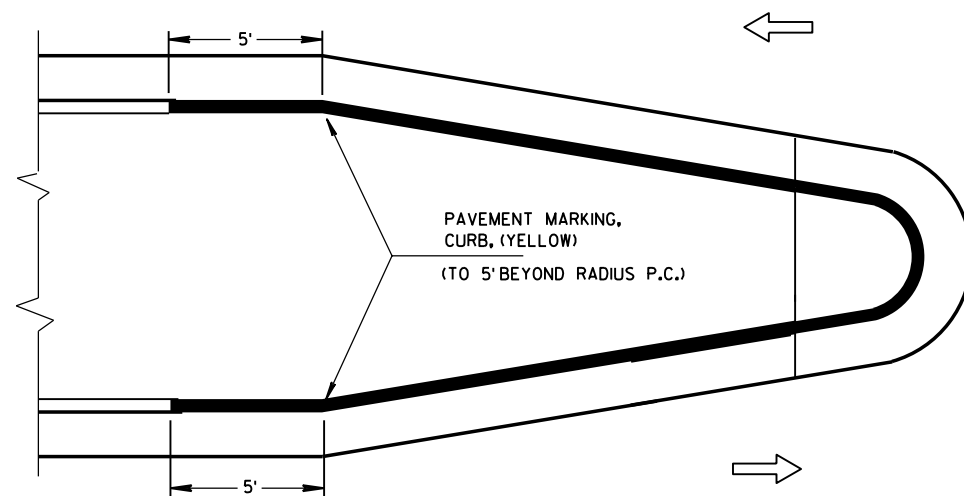
MEDIAN ISLAND MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

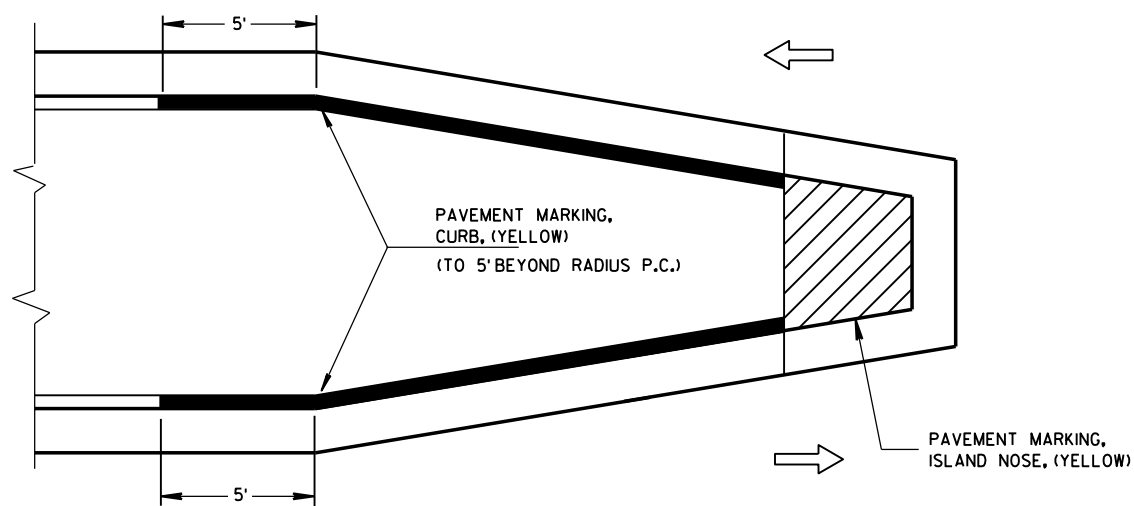
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MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE

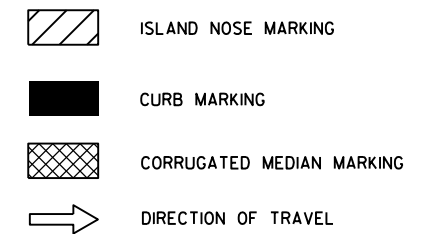


MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

GENERAL NOTES

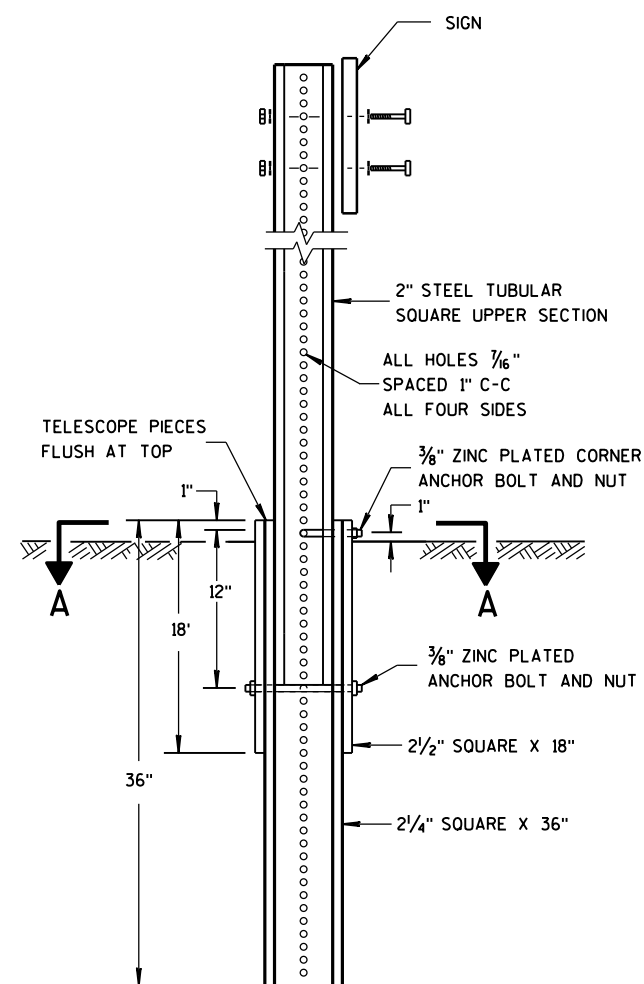
- ① WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



PAVEMENT MARKING (ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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DATE STATE SIGNING AND MARKING ENGINEER
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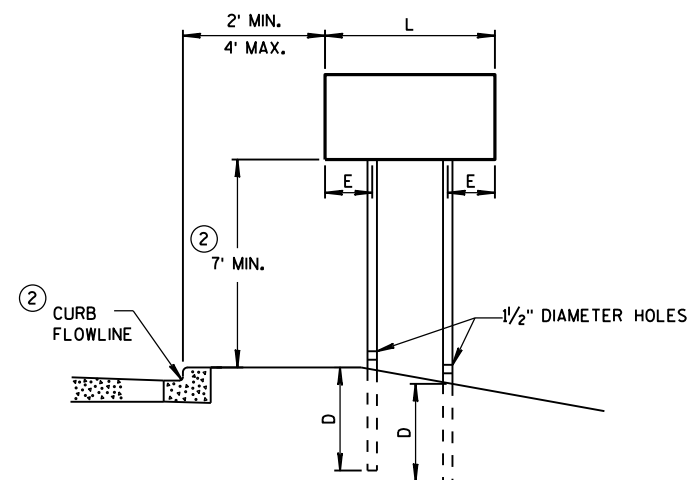
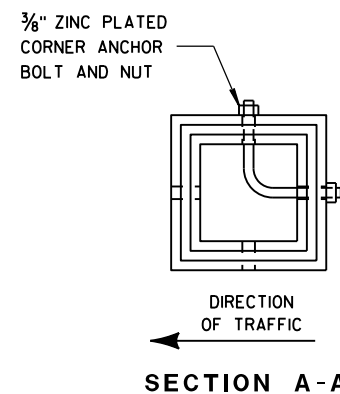
DETAIL OF TUBULAR STEEL SIGN POST

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

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

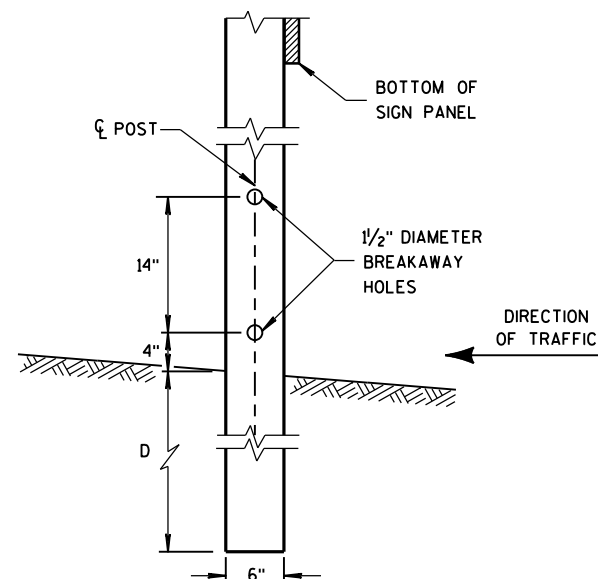


URBAN AREA

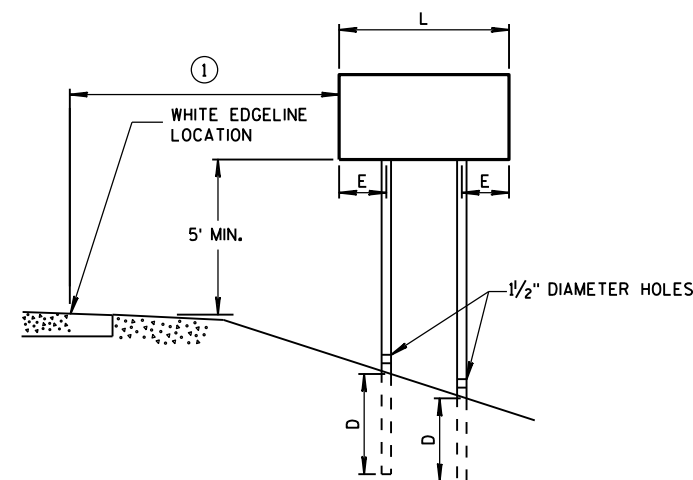
POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST
EMBEDMENT DEPTH

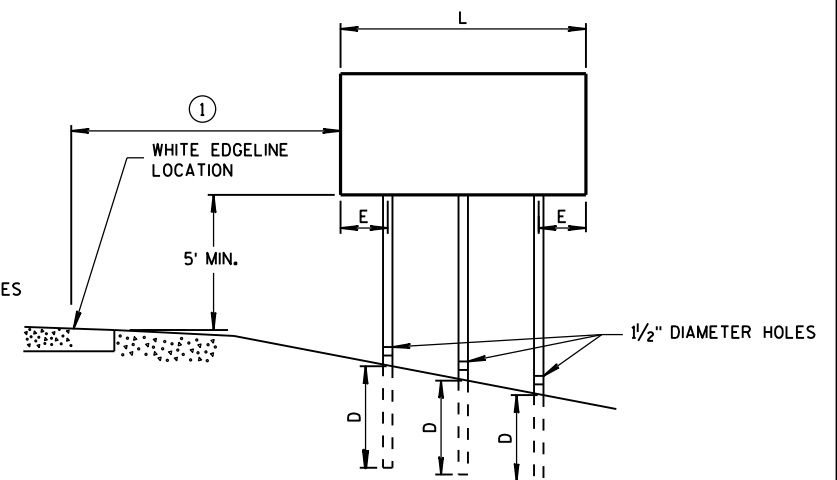
AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'



4"x6" WOOD POST MODIFICATION



RURAL AREA



4" X 6" WOOD POST

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

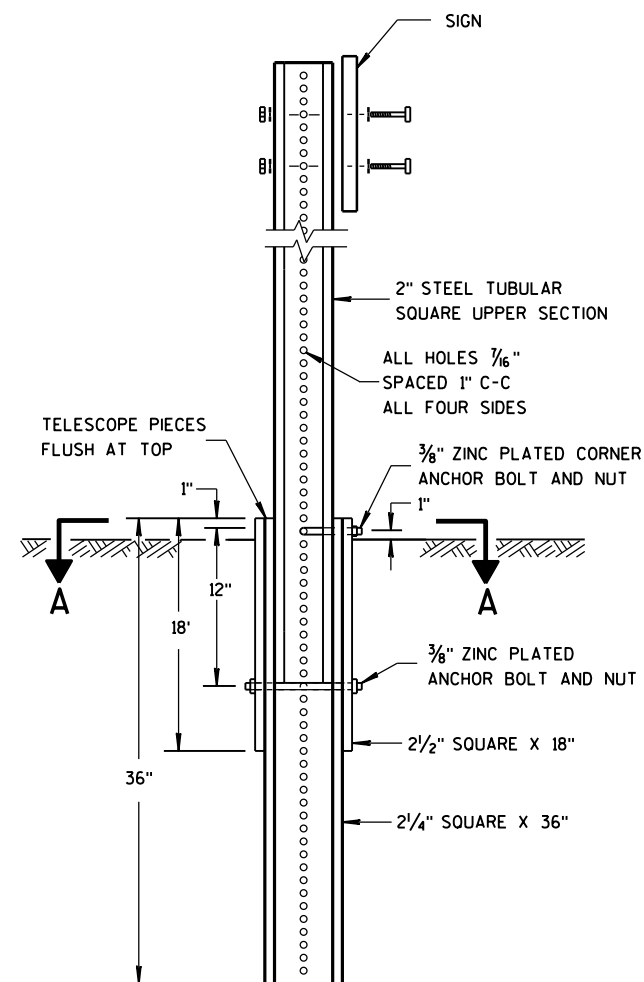
SEE NOTE (3)

GENERAL NOTES

- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- ② THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



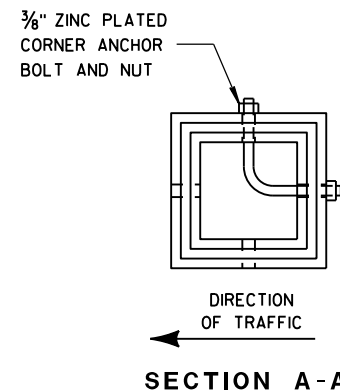
DETAIL OF TUBULAR
STEEL SIGN POST

TUBULAR STEEL POSTS

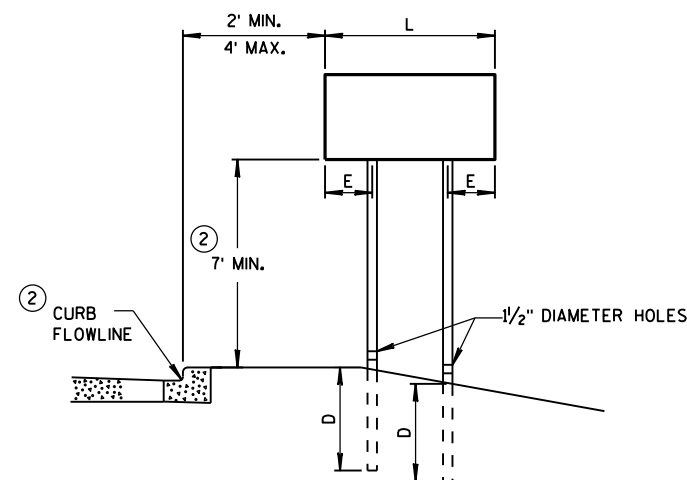
AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL
BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

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



SECTION A-A

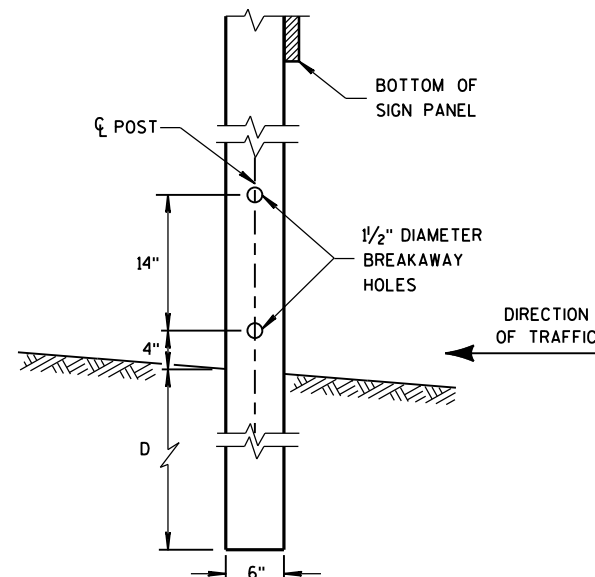


URBAN AREA

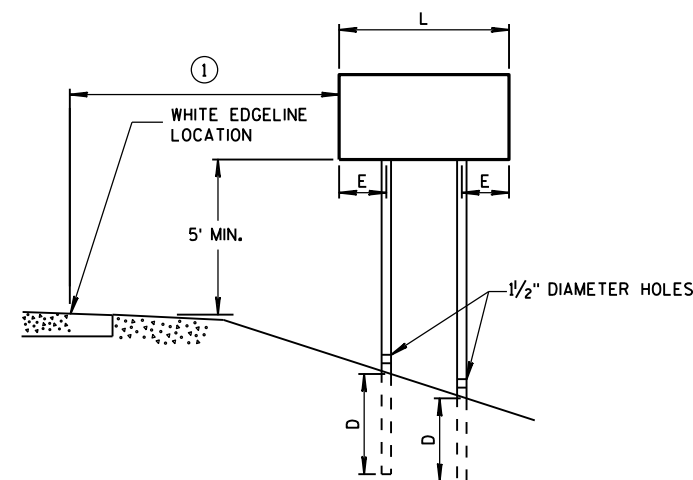
POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST
EMBEDMENT DEPTH

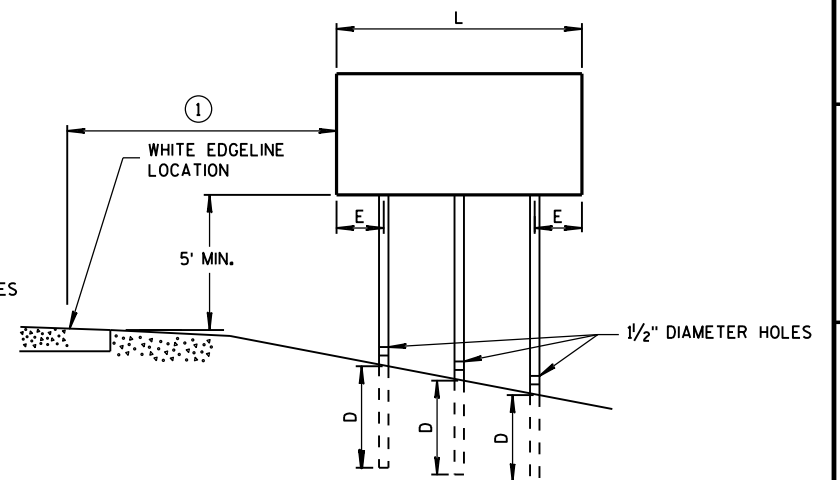
AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'



4 "x6 " WOOD POST
MODIFICATION



RURAL AREA



4 " X 6 " WOOD POST

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

SEE NOTE ③

GENERAL NOTES

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- ② THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

TEMPORARY TRAFFIC CONTROL
SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

NOTES

1. Fixed Message Type II Signs - Type F Reflective

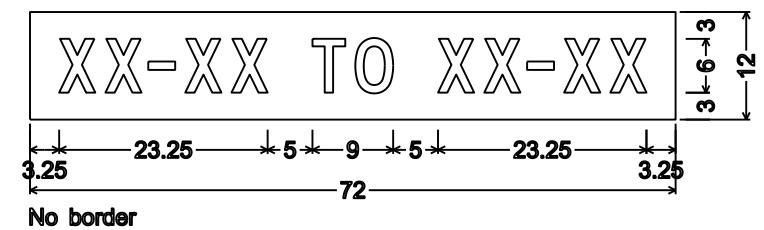
2. Color:

Background - Orange

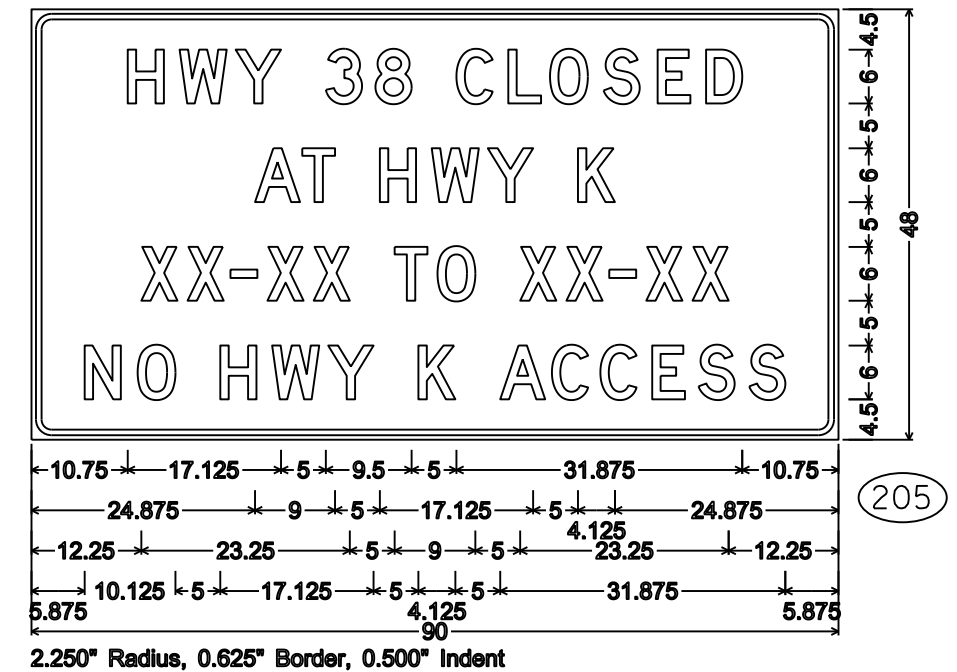
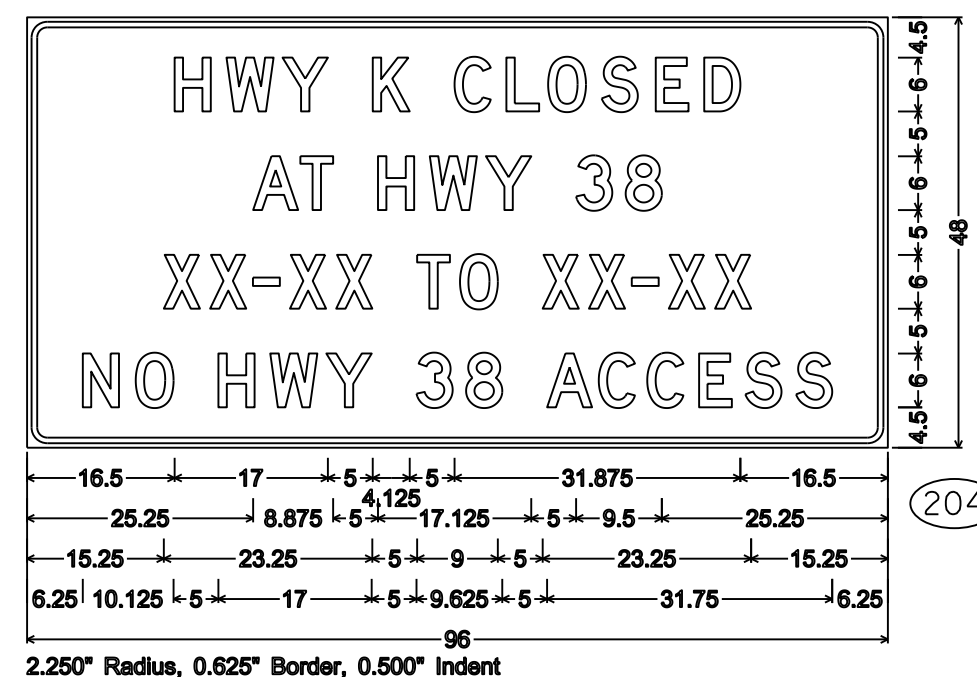
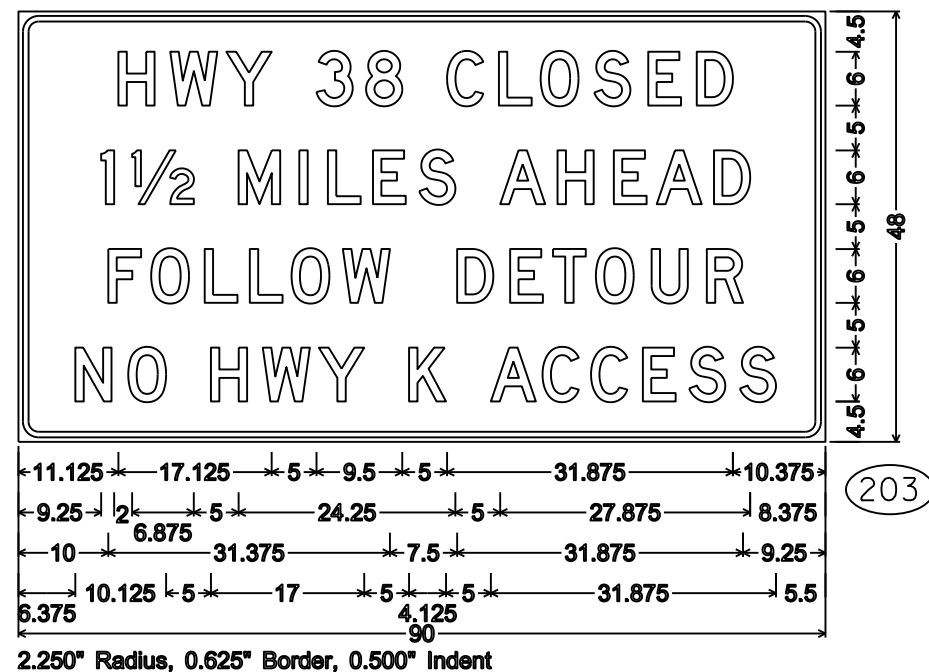
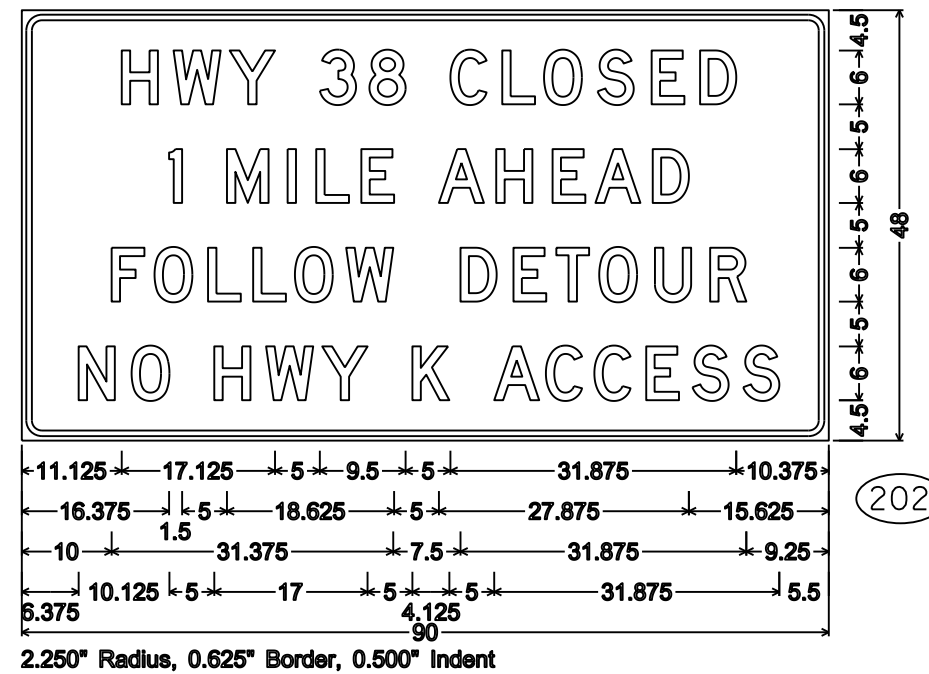
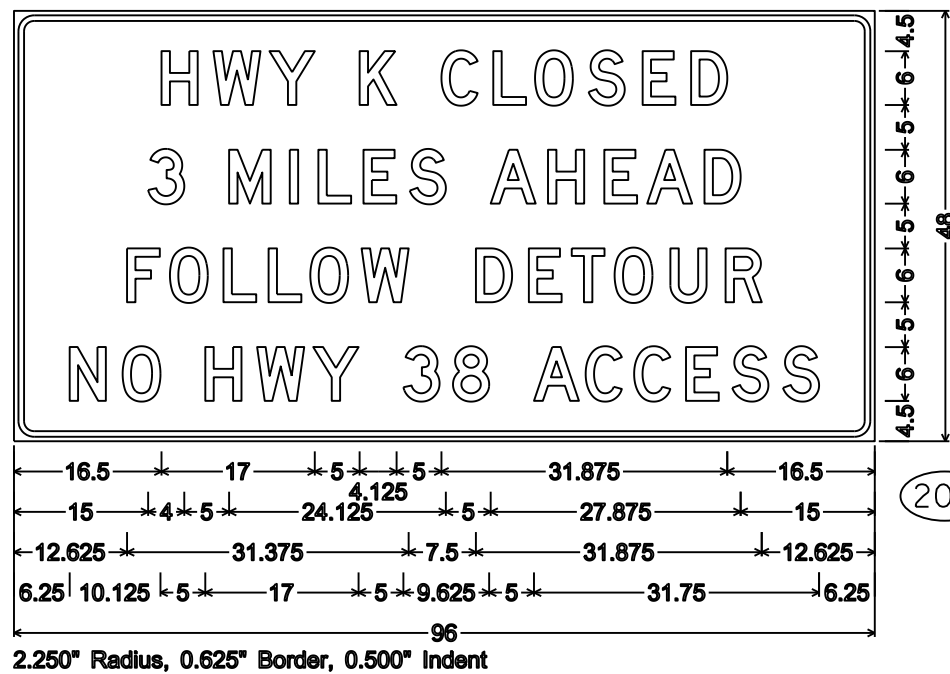
Message - Black

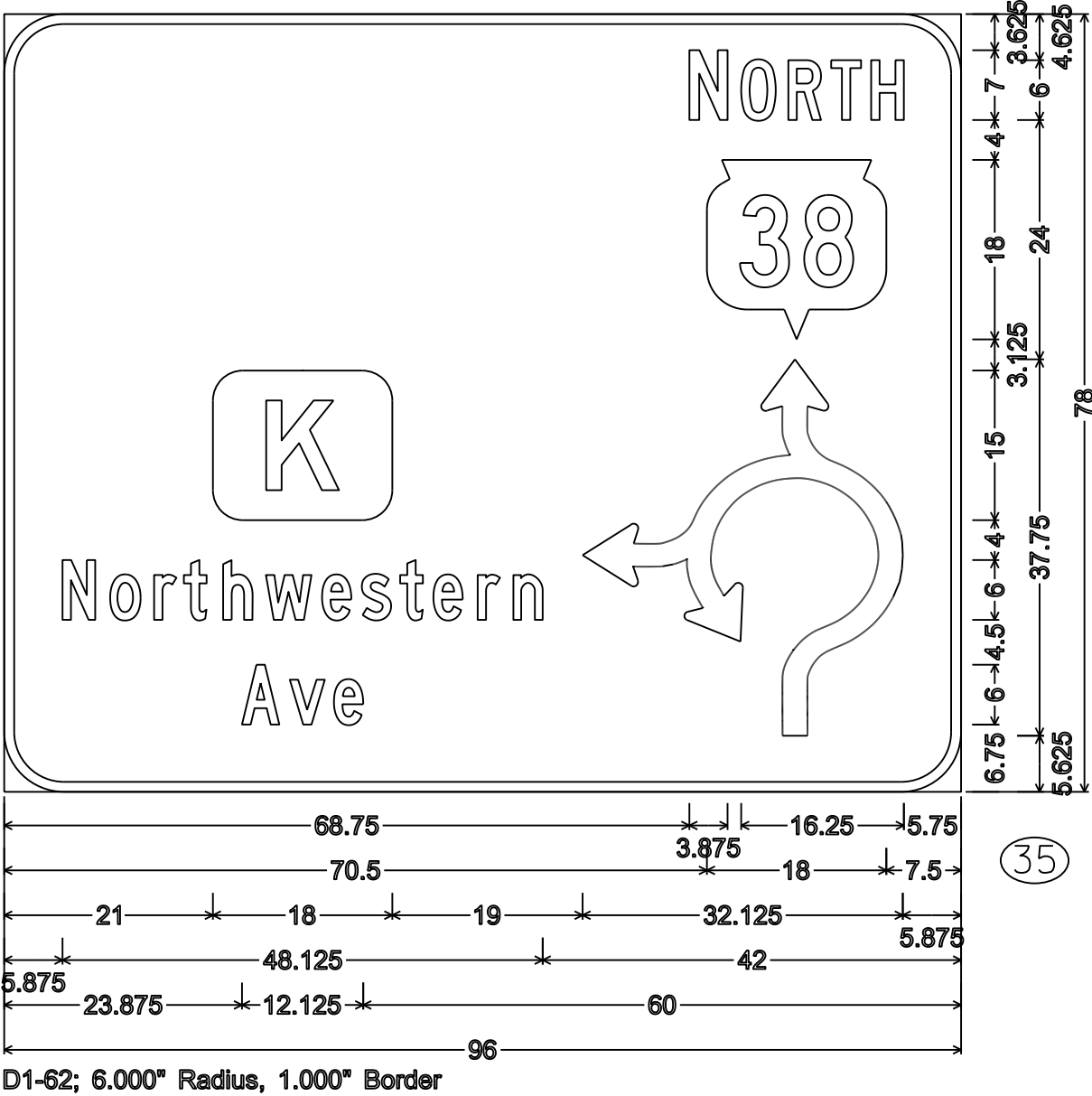
3. Message Series - D

Base Material is .040" aluminum



No border

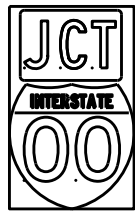




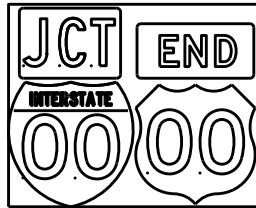
NOTES

- 1. Signs are Type II- Type H Reflective
- 2. Color:
 - Background - Green
 - Message - White
- 3. Message Series - C

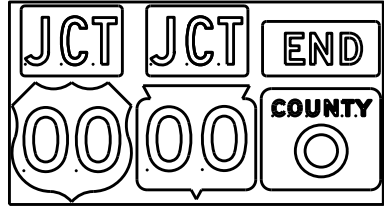
TYPICAL ASSEMBLIES



J1-1



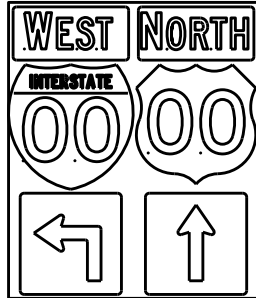
J1-2



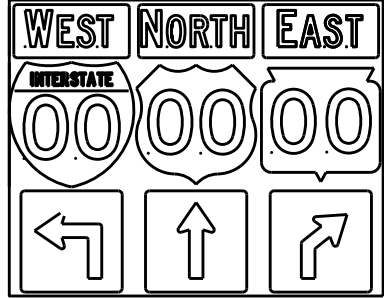
J1-3



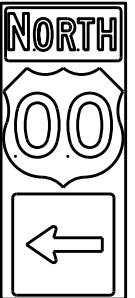
J2-1



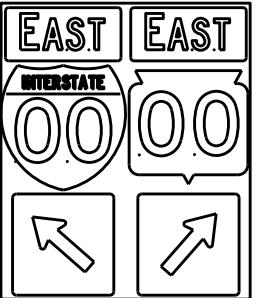
J2-2



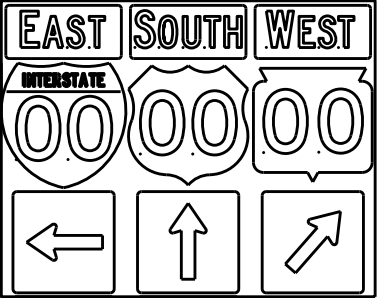
J2-3



J3-1



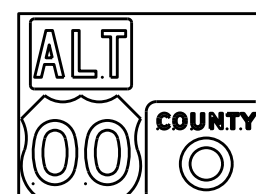
J3-2



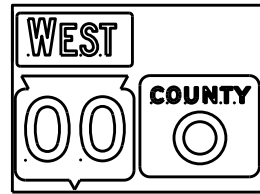
J3-3



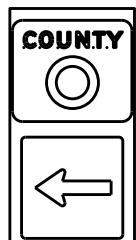
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1



J23-1

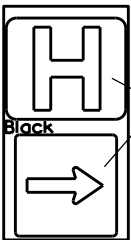


J22-1



JV

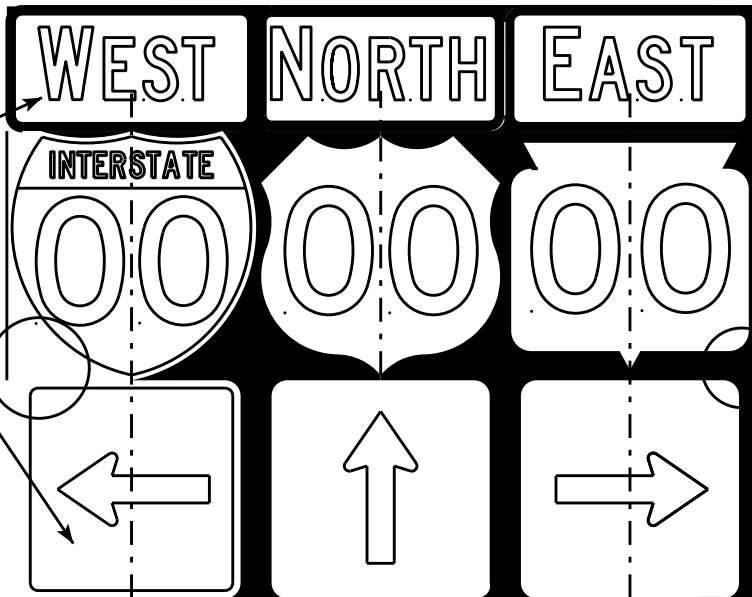
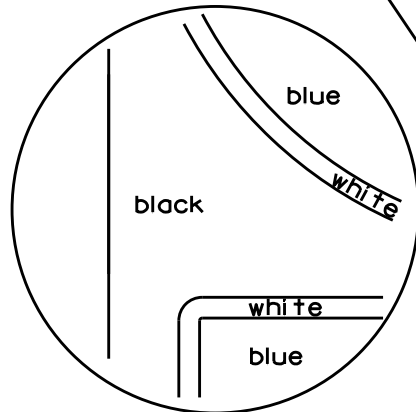
(Typical Vertical J-Assembly
See Note 10 and 11)



JH-1

Blue Background

[blue background
with interstate]



[black background]

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

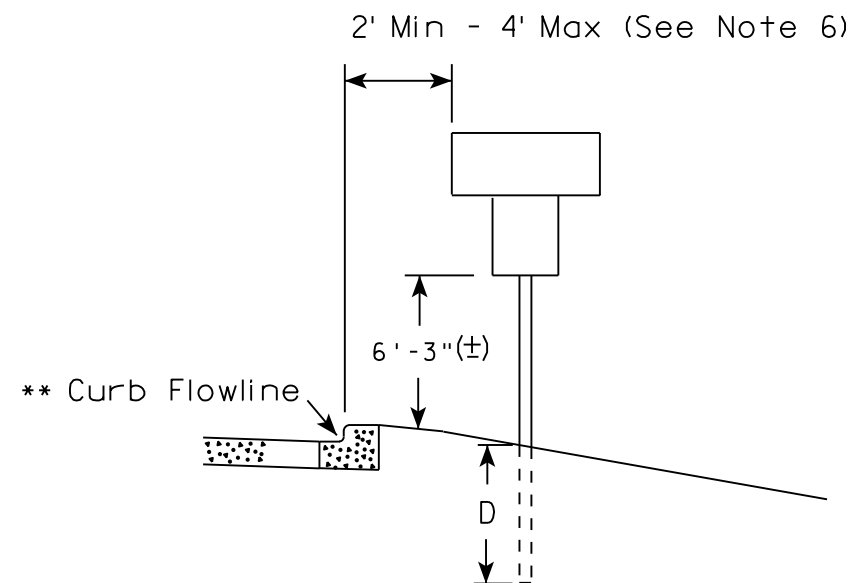
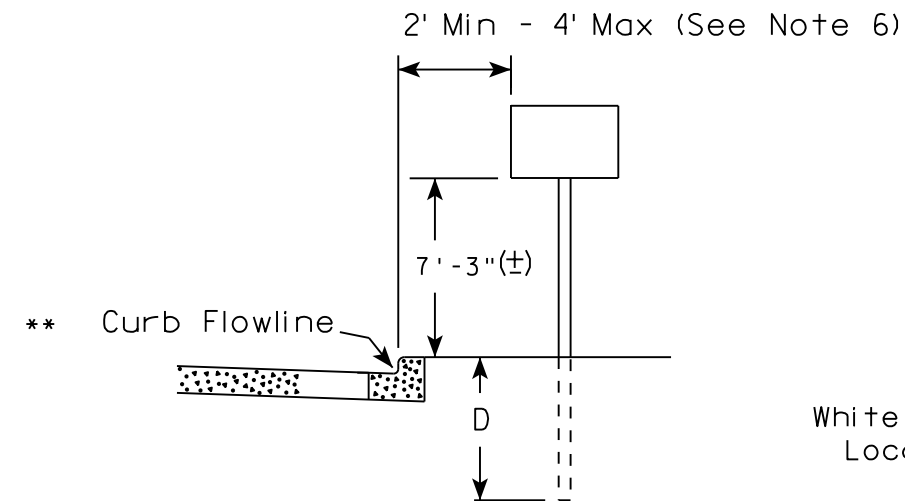
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

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

NOTES

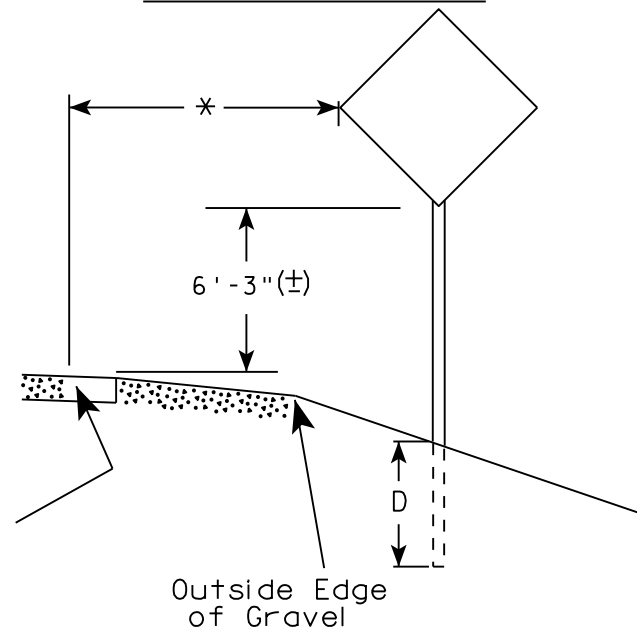
1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Black Non-reflective
Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood.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

URBAN AREA

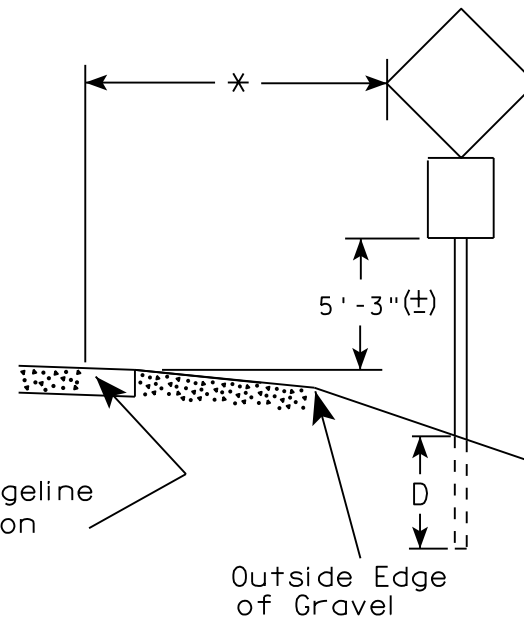


White Edgeline
Location

RURAL AREA (See Note 2)



White Edgeline
Location



Outside Edge
of Gravel

POST EMBEDMENT DEPTH

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

* 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.

GENERAL NOTES

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

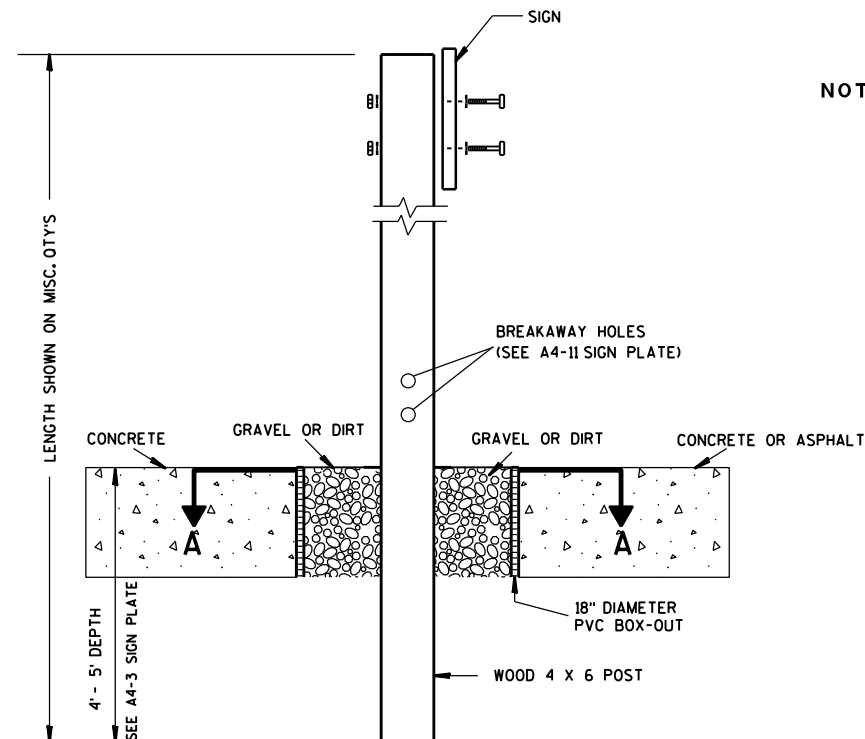
** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs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

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

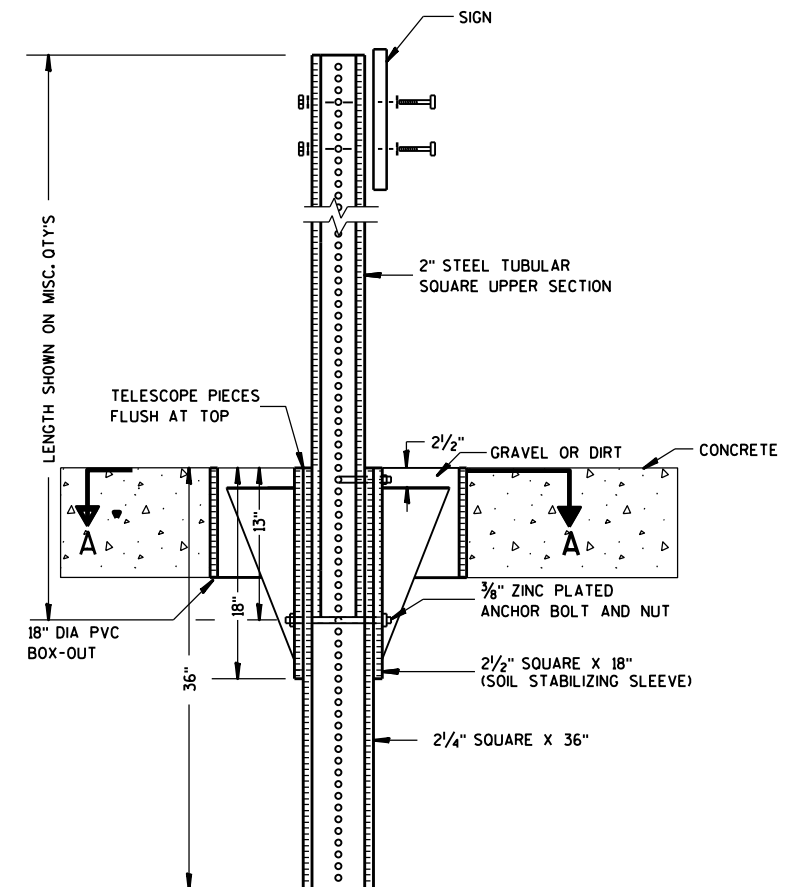
DATE 8/21/17 PLATE NO. A4-3.21



ELEVATION VIEW

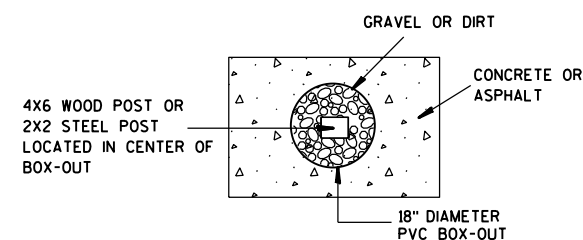
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST
BOX-OUTS
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

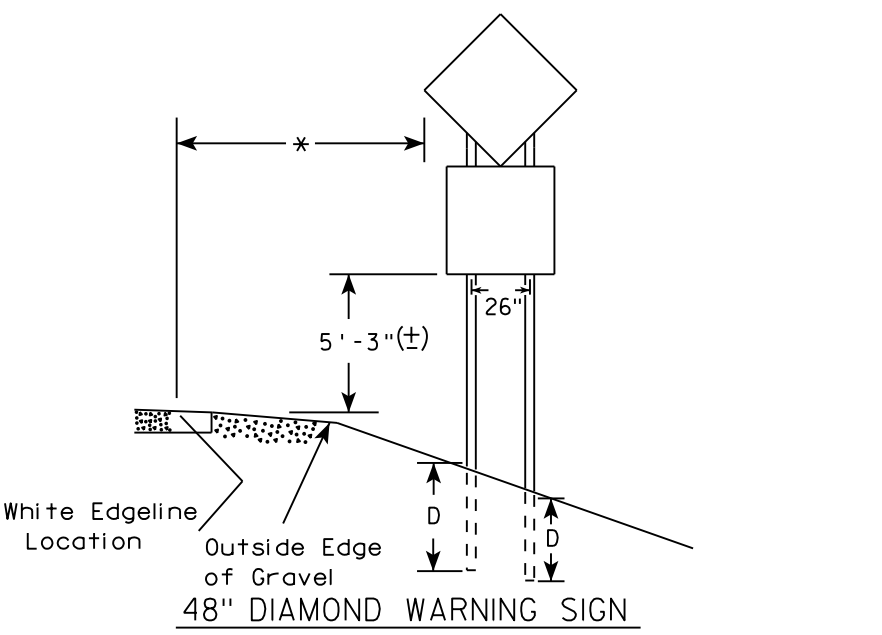
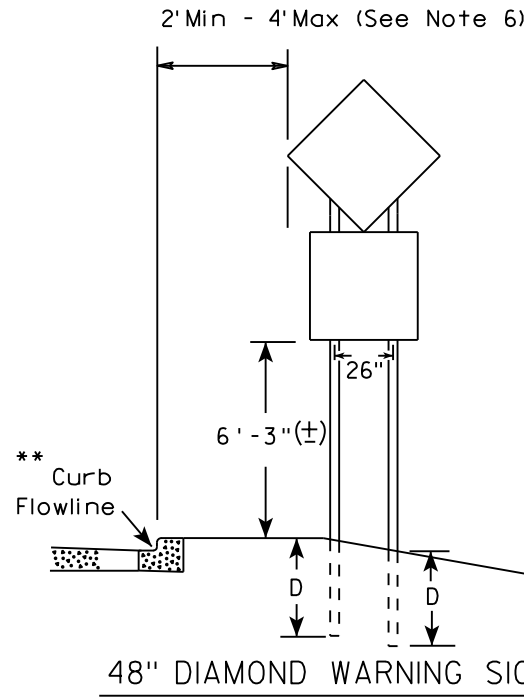
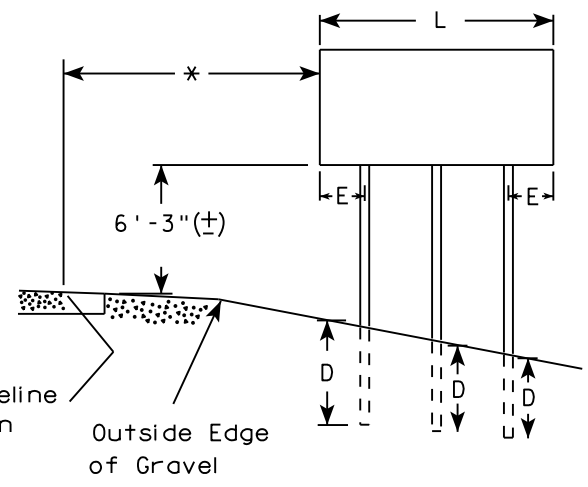
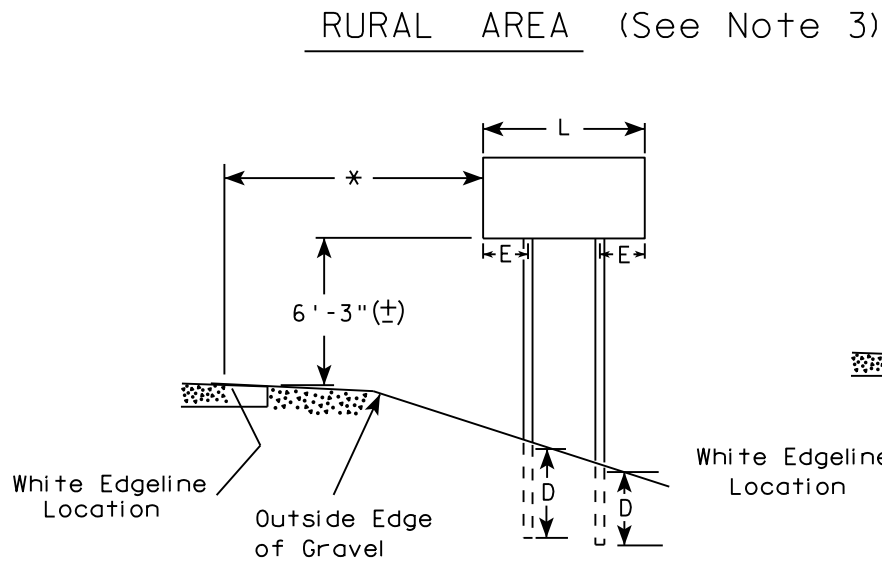
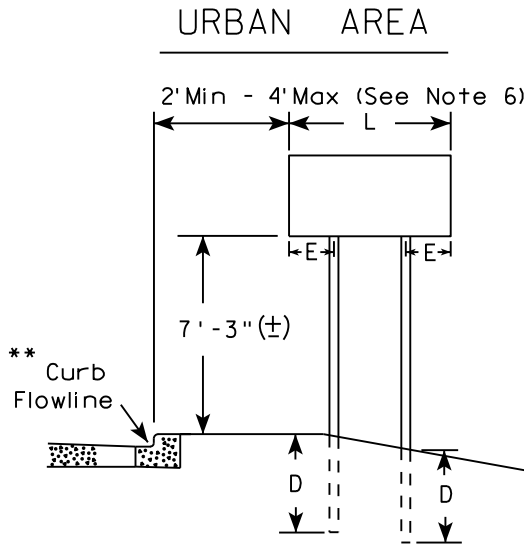
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



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

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

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

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

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

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

POST EMBEDMENT DEPTH

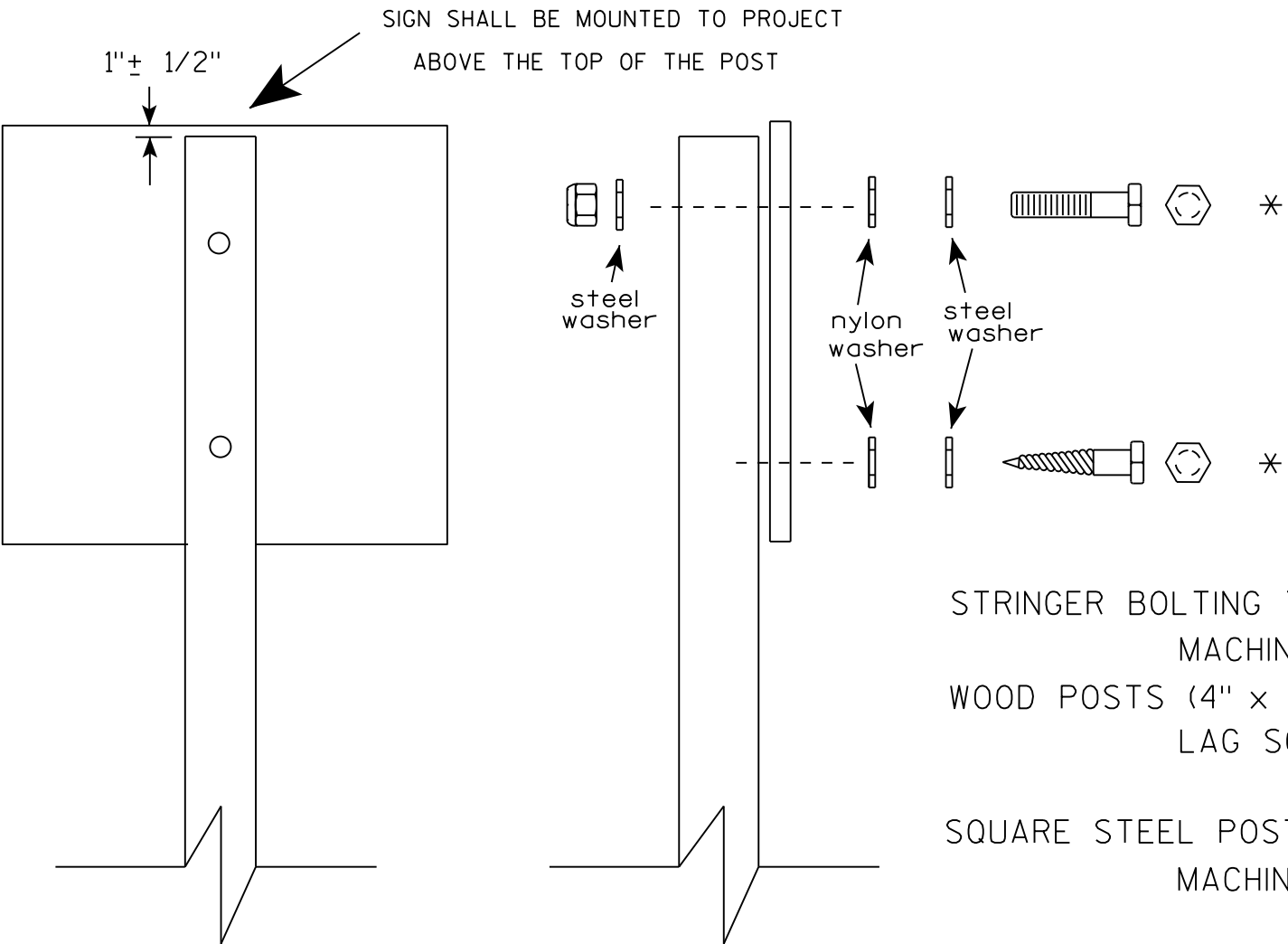
Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



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

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

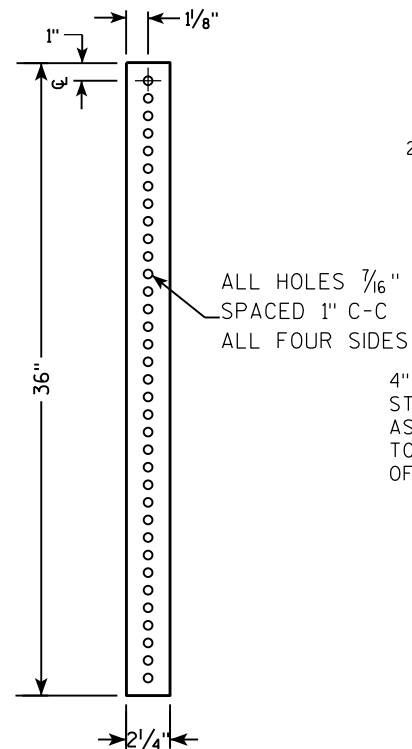
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

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

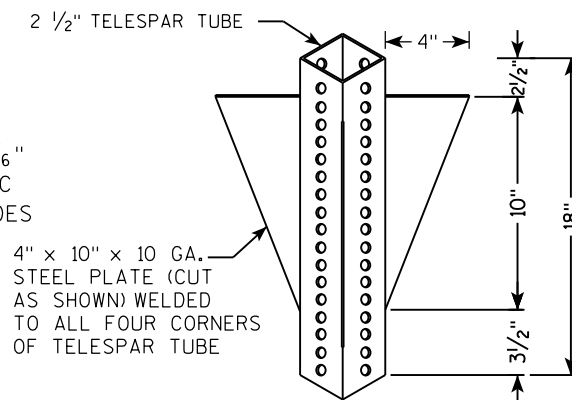
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

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

**2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH**



**2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH**



LENGTH SHOWN ON MISC. QTY'S
 18" DIA SCHEDULE 40 PVC BOX-OUT
 TELESCOPE PIECES FLUSH AT TOP
 36"
 18"
 13"
 2 1/2"
 2 1/4" SQUARE X 36"
 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)
 3/8" ZINC PLATED ANCHOR BOLT AND NUT
 3/8" ZINC PLATED CORNER ANCHOR BOLT AND NUT
 ALL HOLES 7/16" SPACED 1" C-C ALL FOUR SIDES
 2" STEEL TUBULAR SQUARE UPPER SECTION
 SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL
 SIGN
 2 1/2" GRAVEL OR DIRT

LENGTH SHOWN ON MISC. QTY'S

SIGN

SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL

2" STEEL TUBULAR SQUARE UPPER SECTION

ALL HOLES $\frac{7}{16}$ " SPACED 1" C-C ALL FOUR SIDES

$\frac{3}{8}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT

TELESCOPE PIECES FLUSH AT TOP

1"

$\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT

2 $\frac{1}{2}$ " SQUARE X 18" (SOIL STABILIZING SLEEVE)

2 $\frac{1}{4}$ " SQUARE X 36"

36"

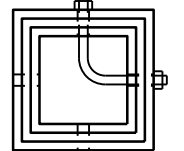
18"

12"

A

B

3/8" ZINC PLATED CORNER
ANCHOR BOLT AND NUT



DIRECTION
OF TRAFFIC

SECTION A-A

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

TUBULAR STEEL
SIGN POST
A4-9

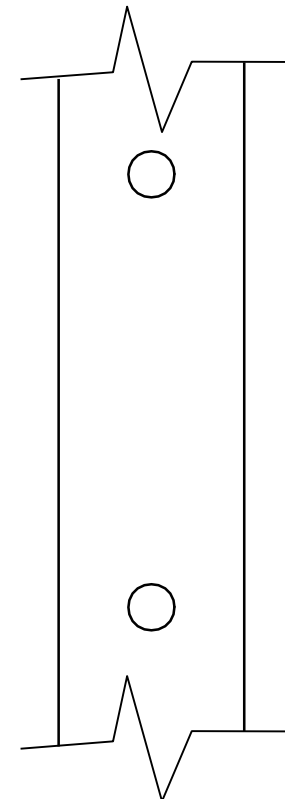
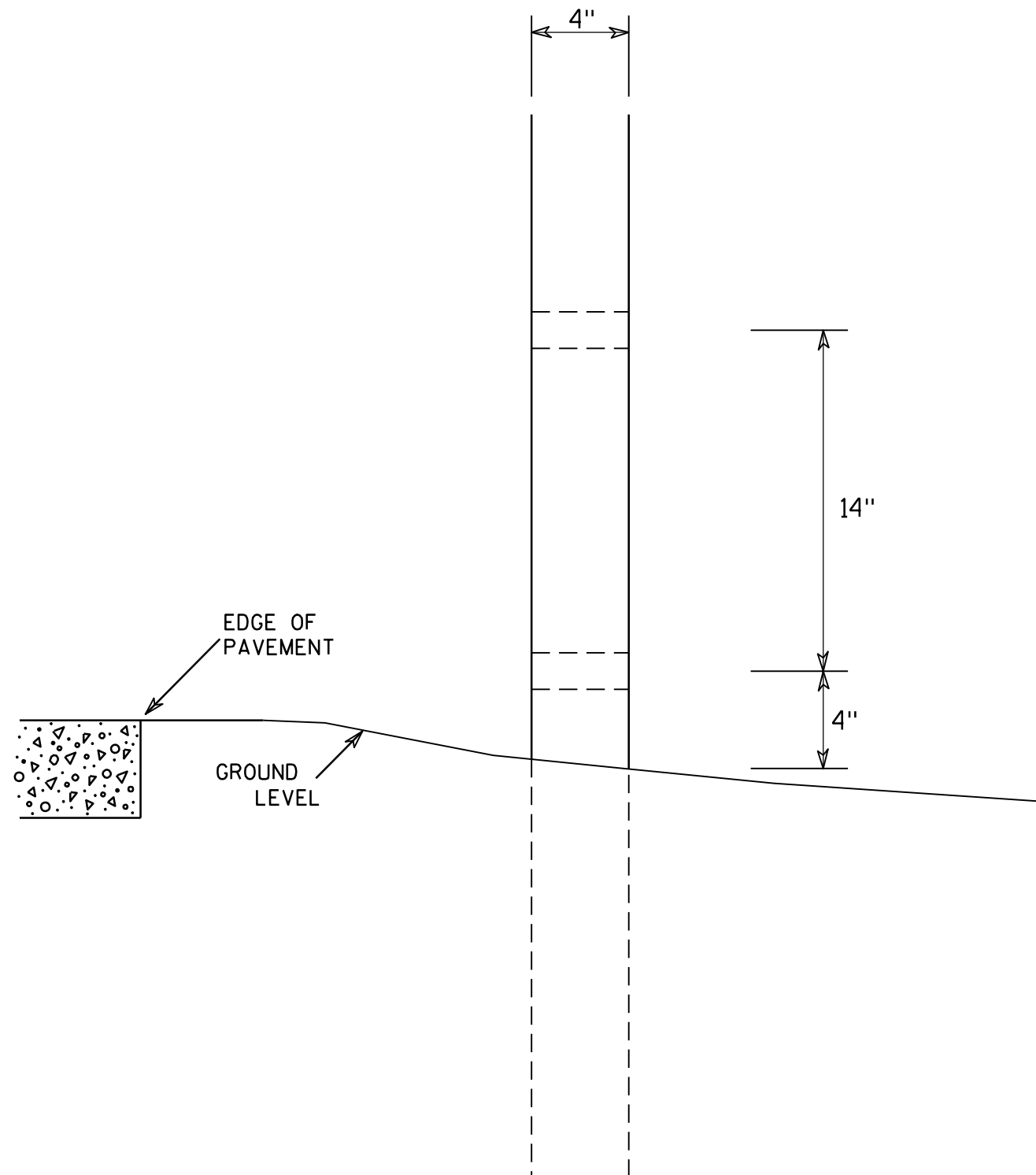
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthieu R. Rauch

for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E
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SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1 1/2" diameter holes drilled perpendicular to the roadway centerline.

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

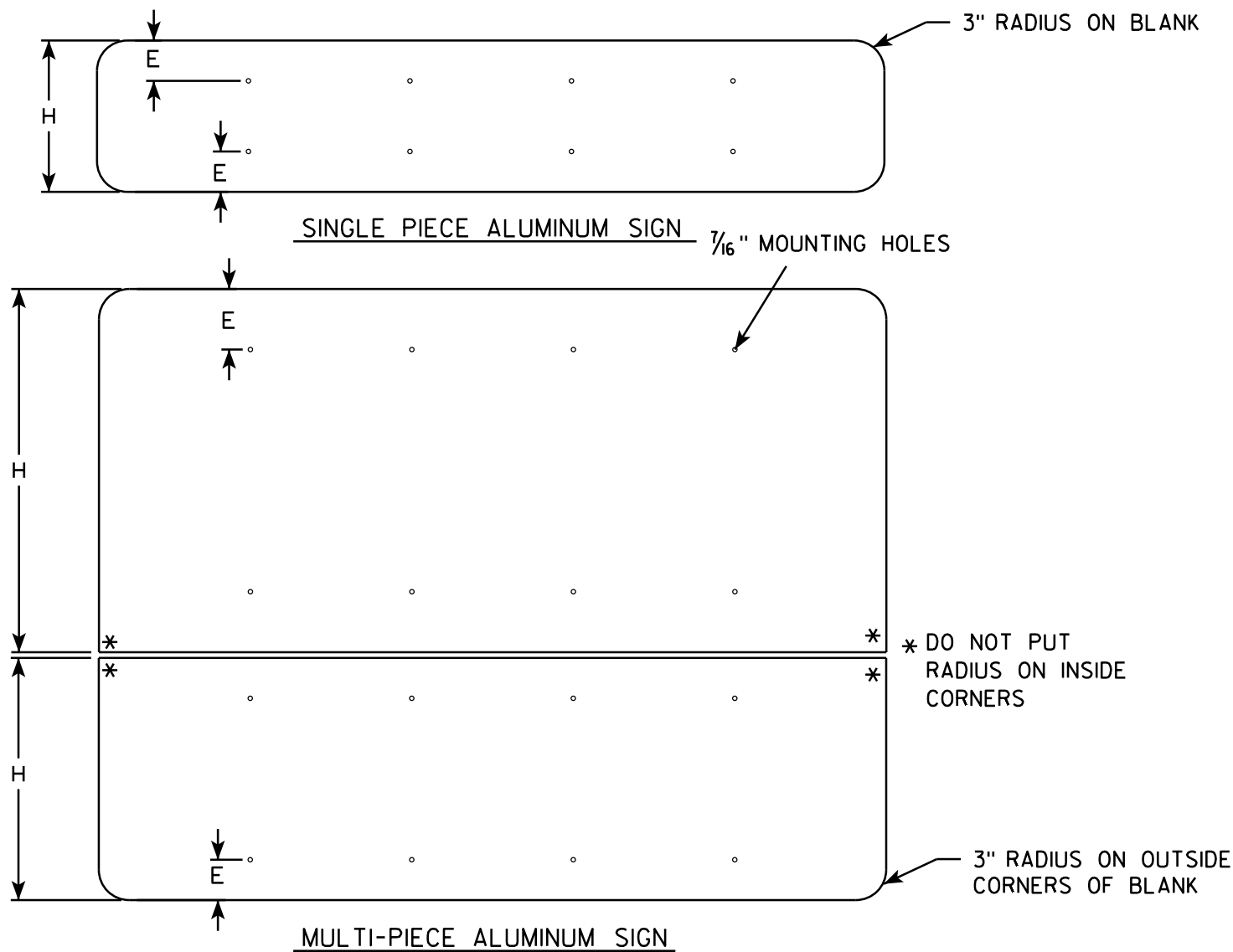
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

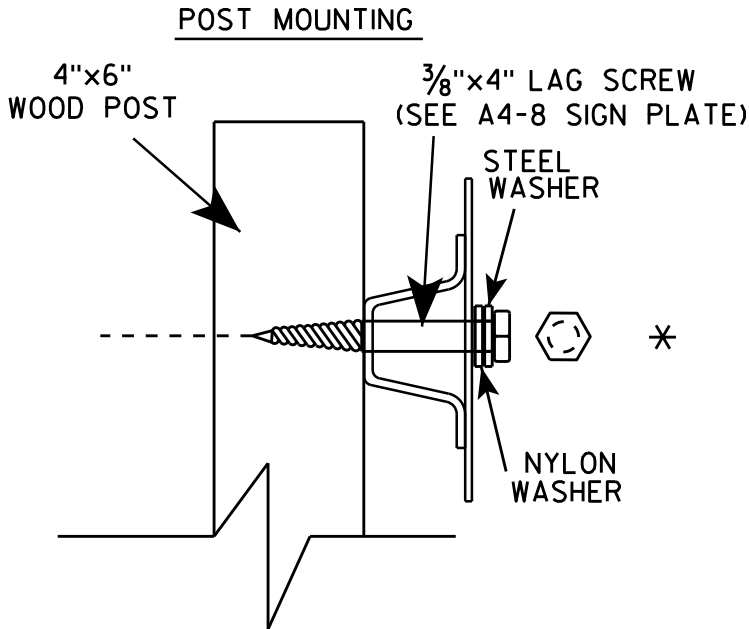
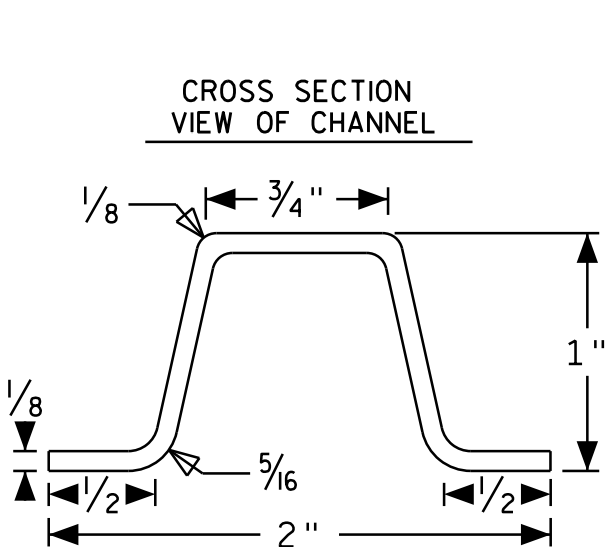
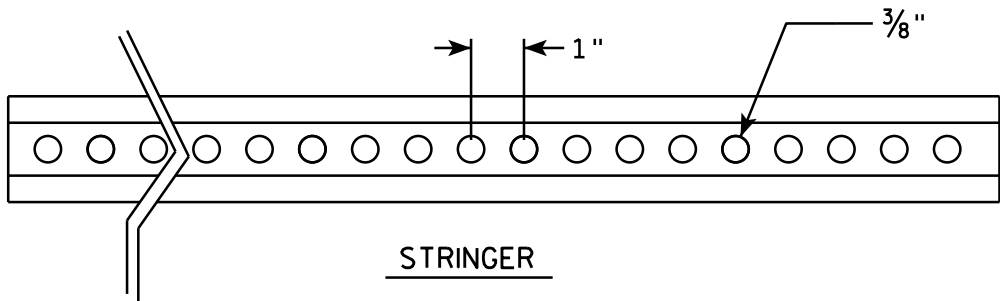
E



GENERAL NOTES

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

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



SIGN STRINGER
MOUNTING REQUIREMENTS

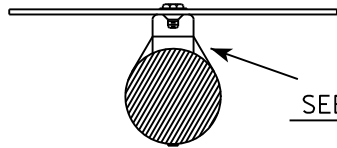
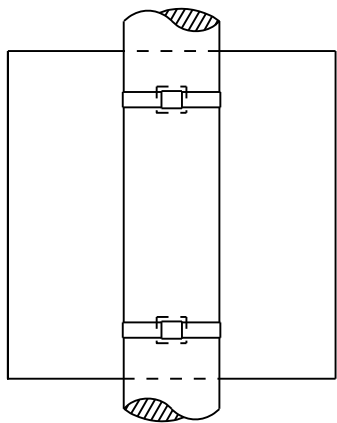
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

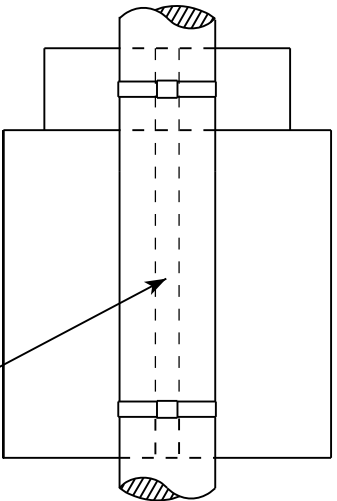
BANDING

SINGLE SIGN

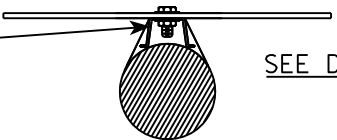


SEE DETAIL A

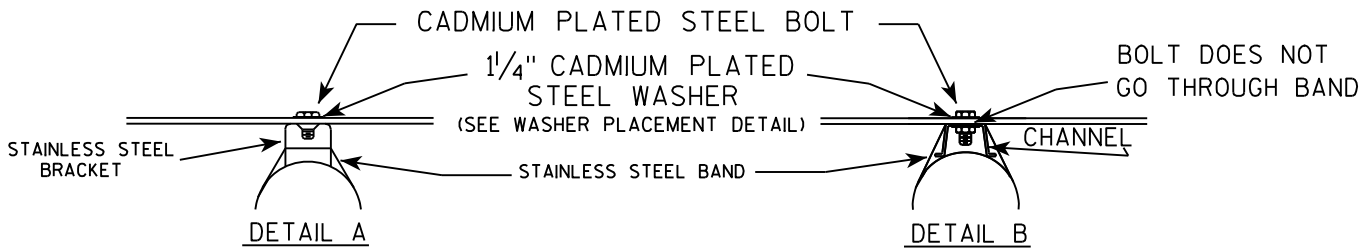
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



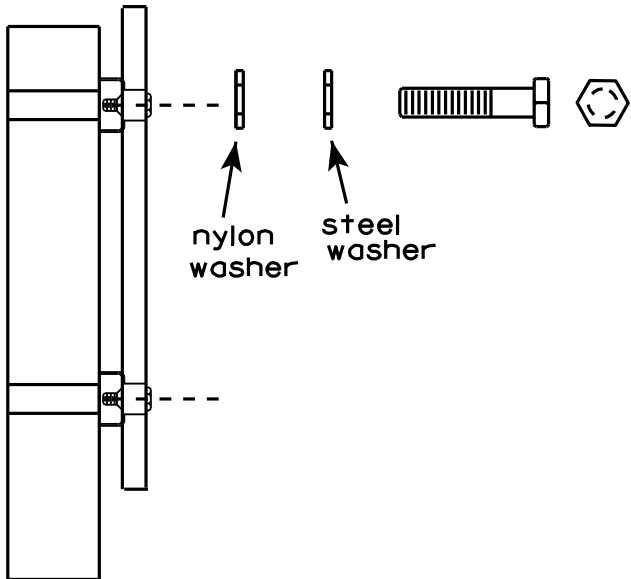
SEE DETAIL B



GENERAL NOTES

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

WASHER PLACEMENT



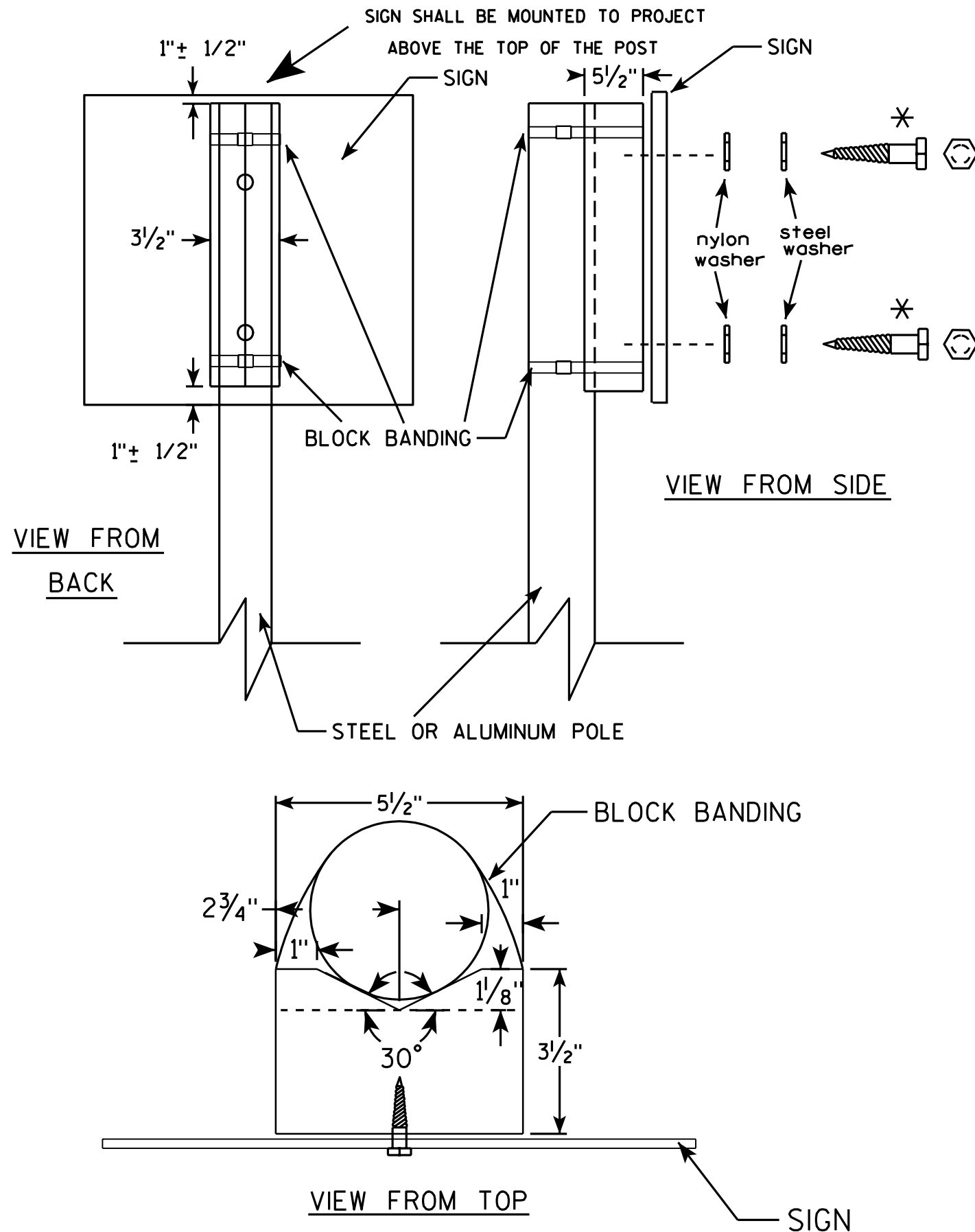
WASHERS (ALL POSTS) -
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3



GENERAL NOTES

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

✱ LAG BOLTS SHALL BE 3/8" X 2 1/2"

BLOCK BANDING DETAIL
(V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

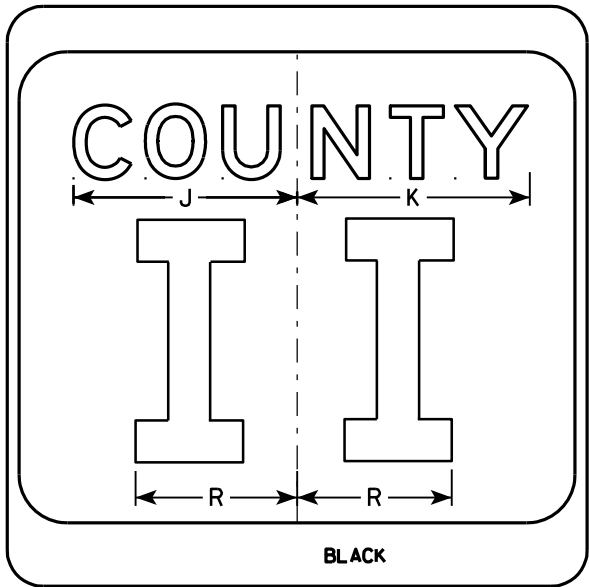
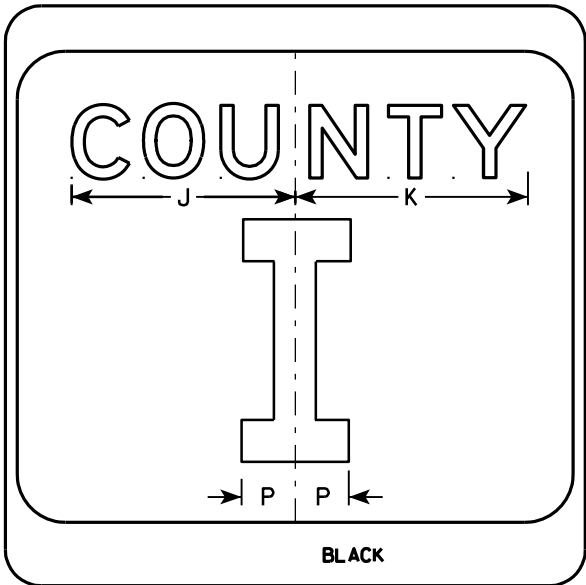
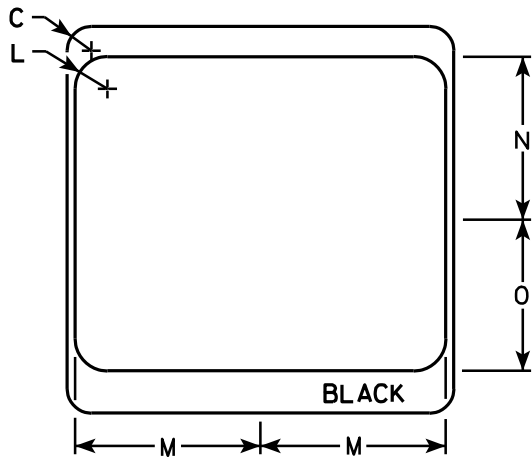
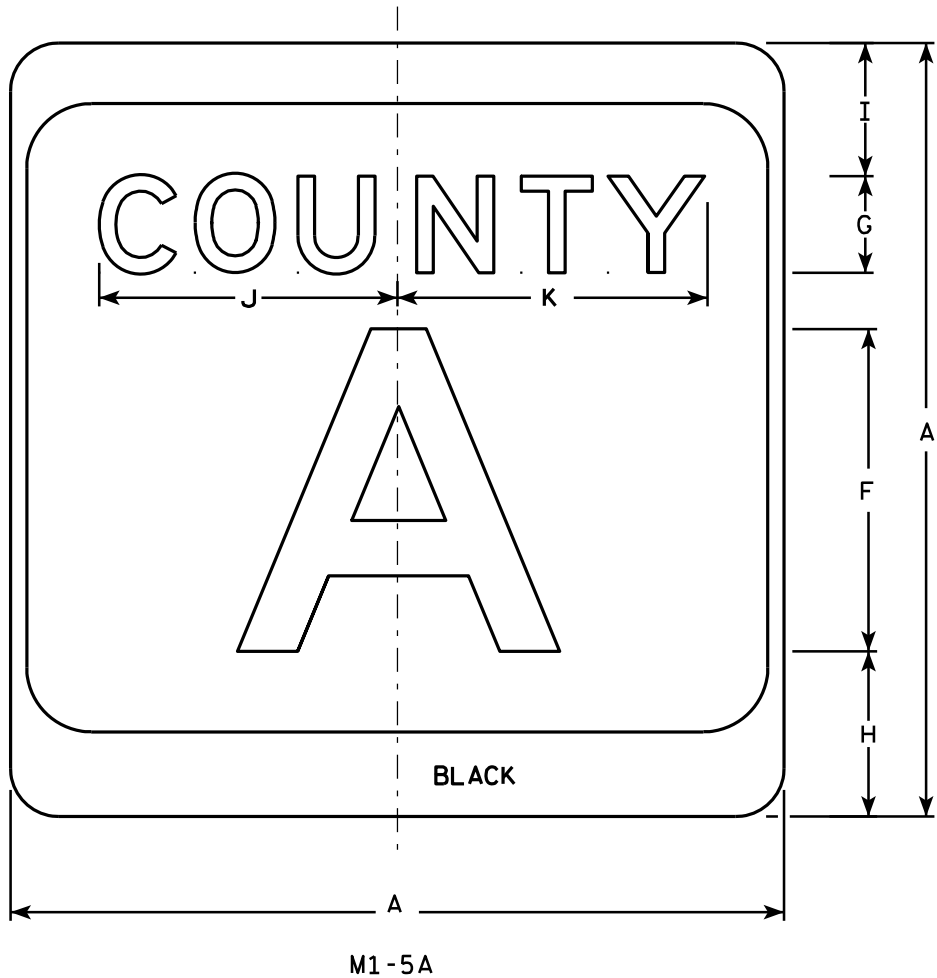
DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO:

SHEET NO:

E

7



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

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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CTH MARKER

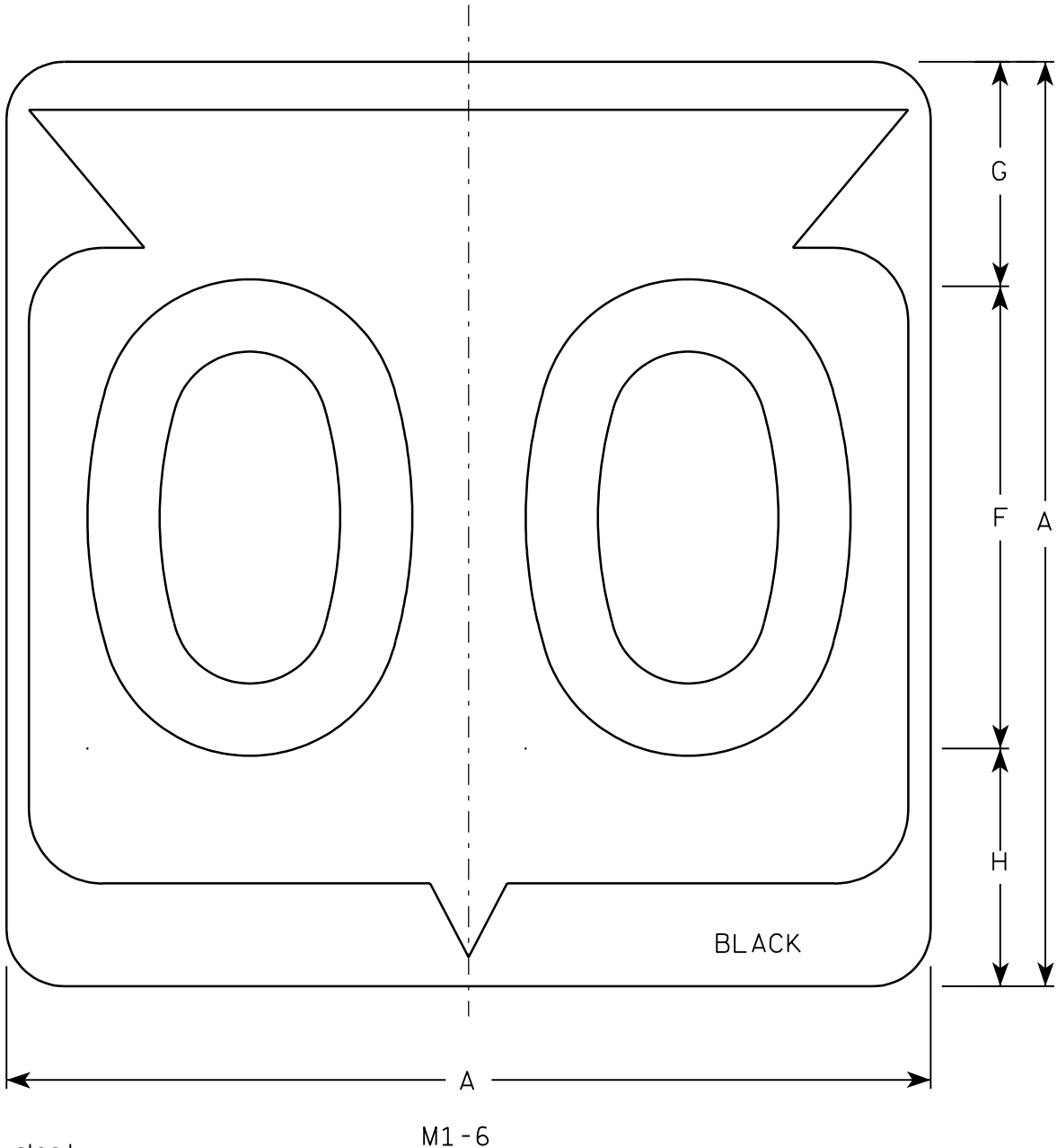
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

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

7



Metric equivalent
for this sign is:

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

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

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

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

PLOT DATE : 13-OCT-2005 14:55

PLOT BY : DITJPH

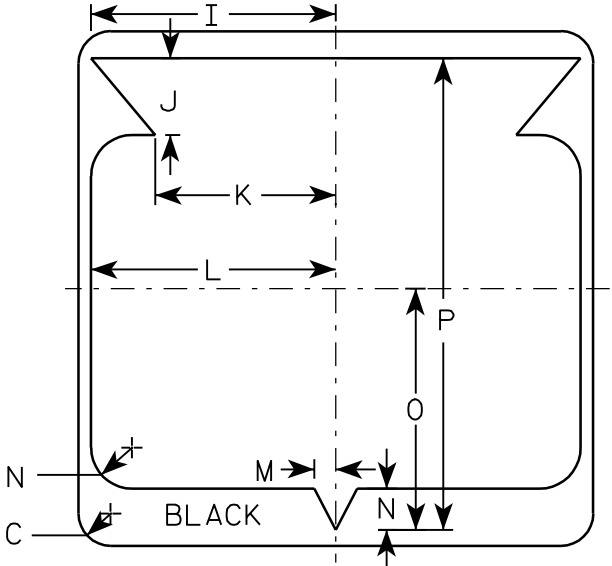
PLOT NAME :

PLOT SCALE : 6.715871:1.000000

WISDOT/CADDs SHEET 42

NOTES

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



STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

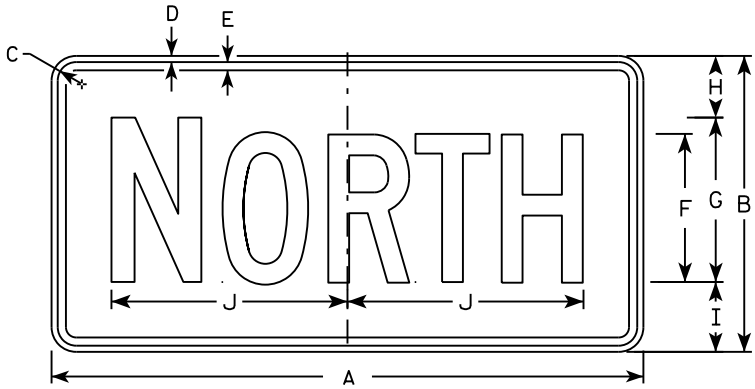
WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/20/02

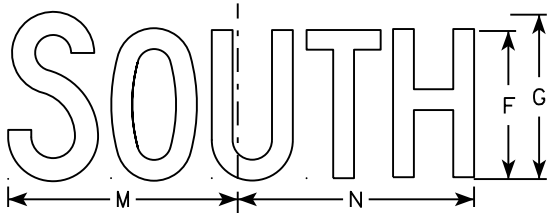
PLATE NO. M1-6.9



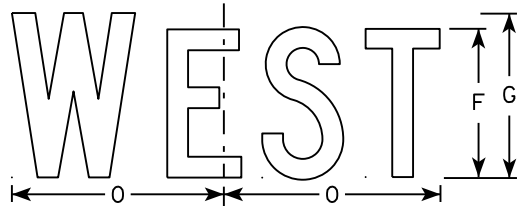
M3-1
MM3-1
MP3-1



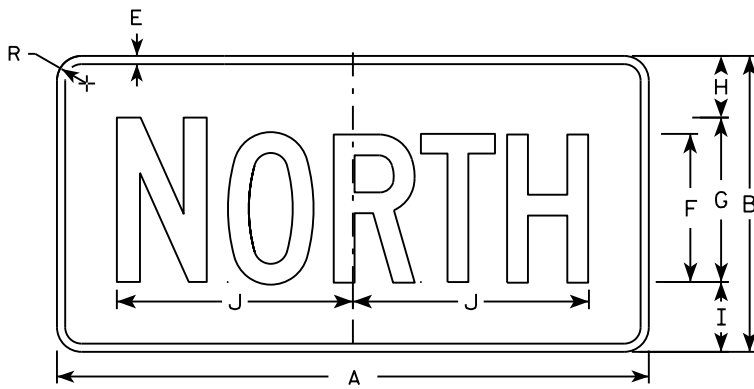
M3-2
MM3-2
MP3-2



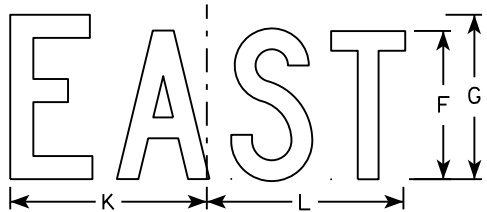
M3-3
MM3-3
MP3-3



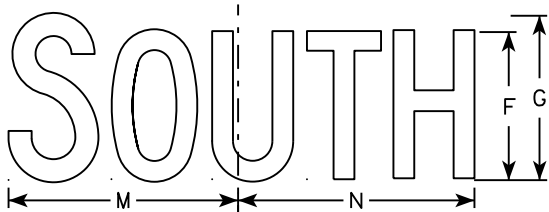
M3-4
MM3-4
MP3-4



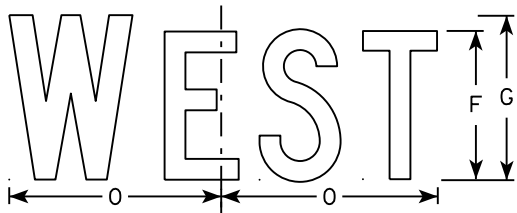
MB3-1
MK3-1
MN3-1



MB3-2
MK3-2
MN3-2



MB3-3
MK3-3
MN3-3



MB3-4
MK3-4
MN3-4

NOTES

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

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

STANDARD SIGNS
M3-1 thru M3-4
SERIES

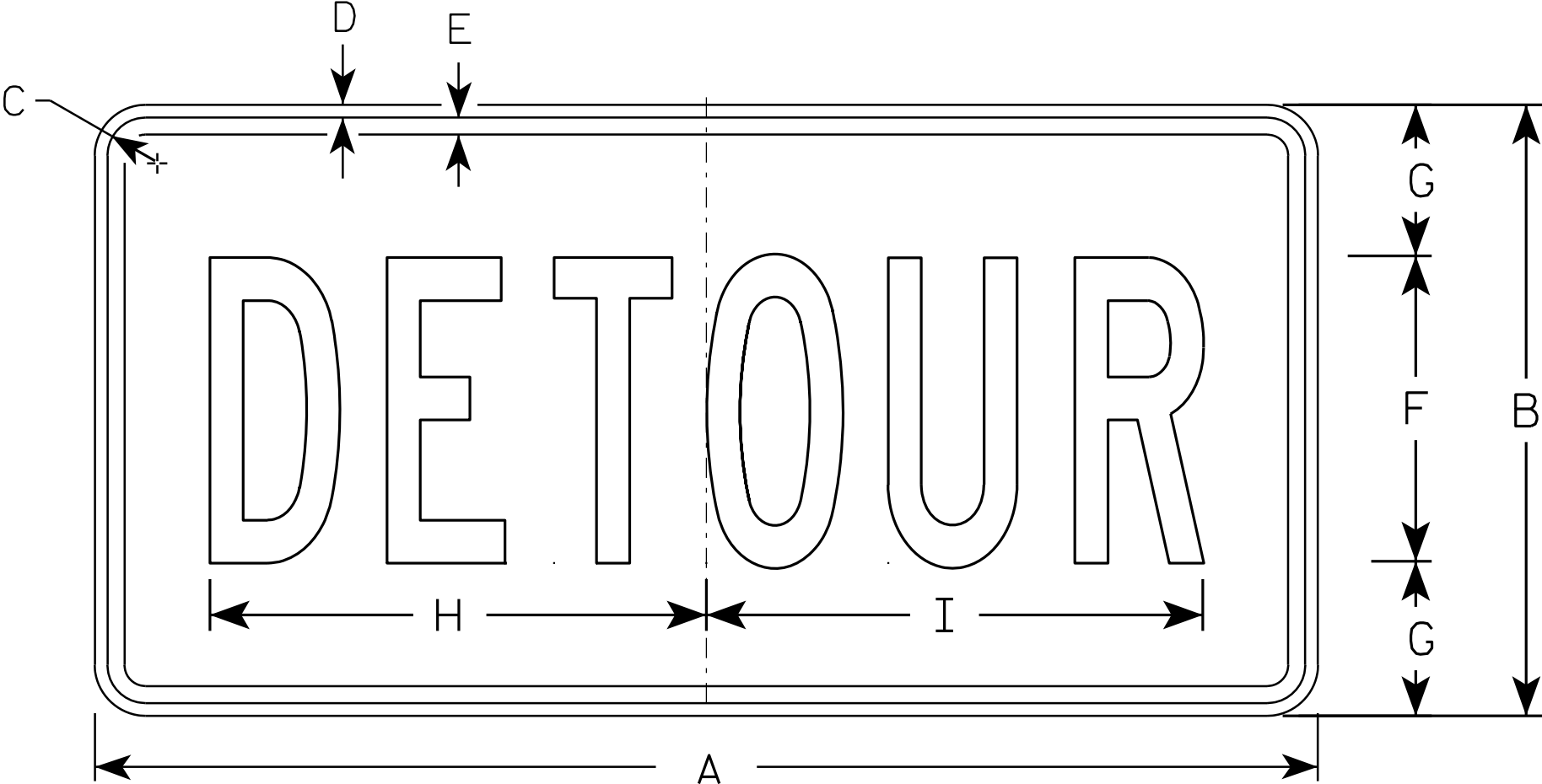
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

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

NOTES

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



M4 - 8

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	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

STANDARD SIGN
M4 - 8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

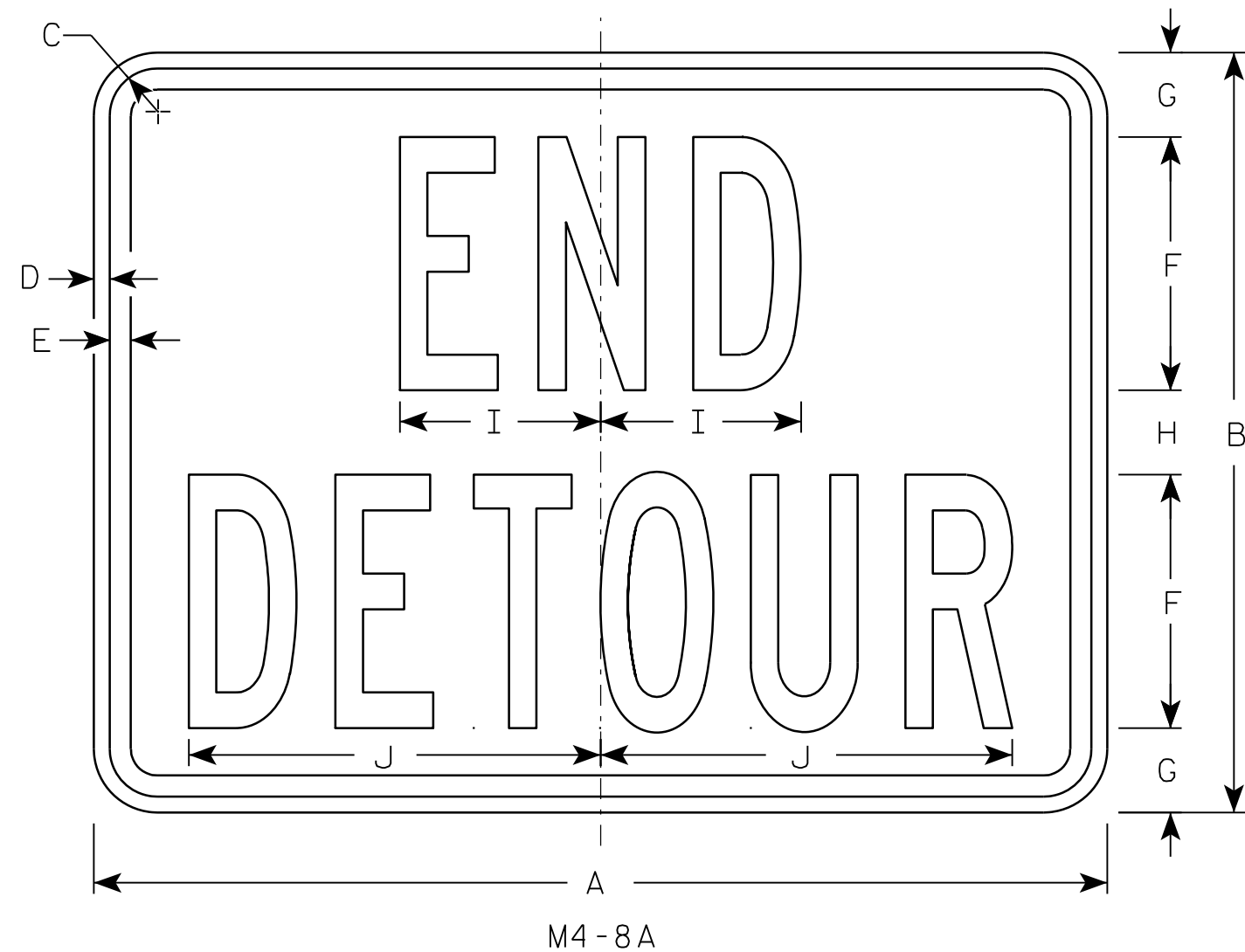
PROJECT NO:

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

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	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

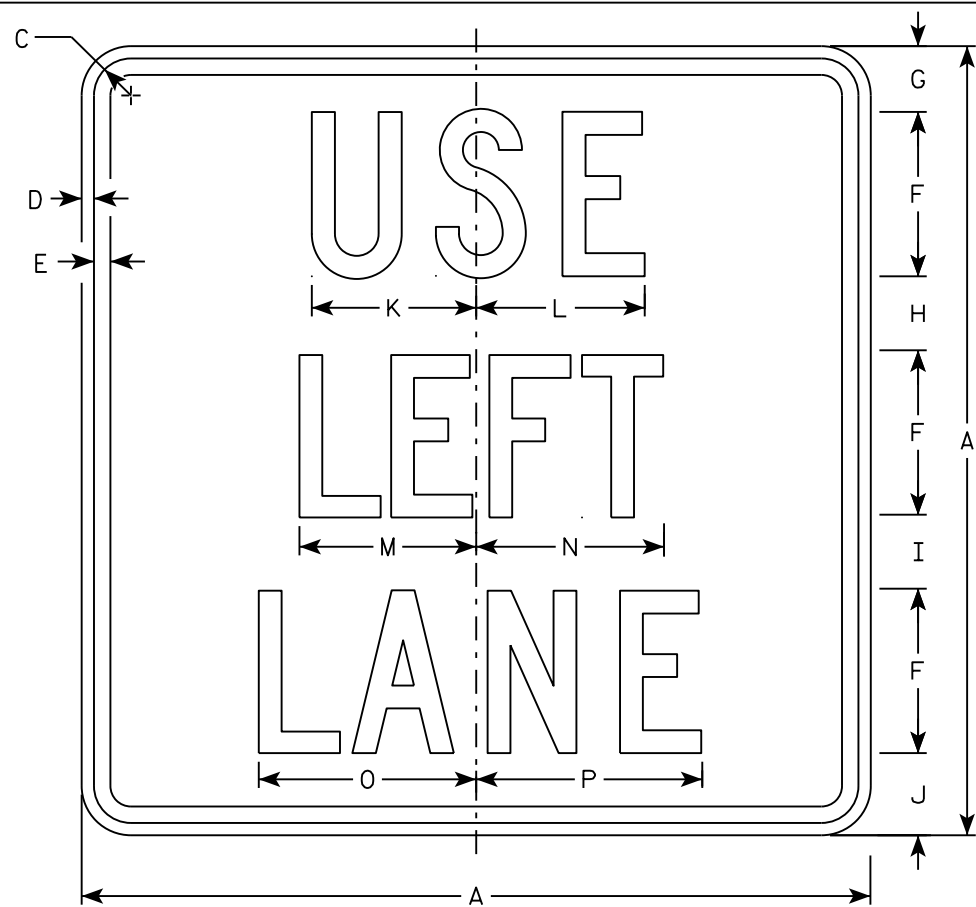
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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STANDARD SIGN
M4-8A

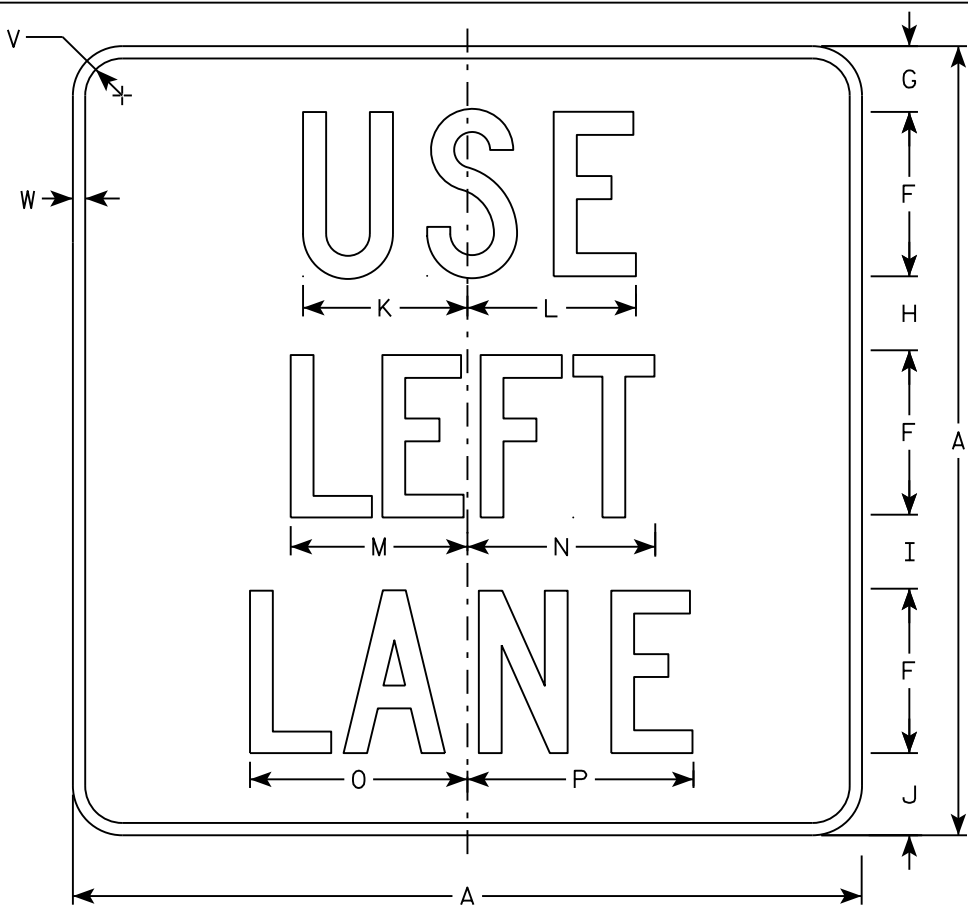
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

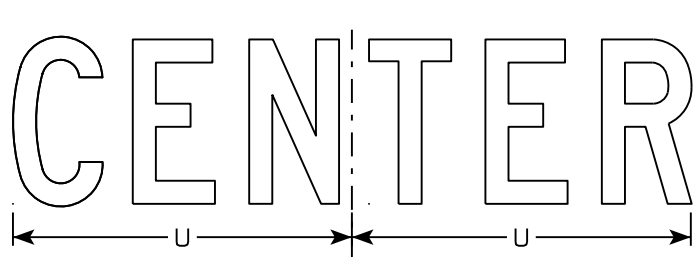
DATE 3/9/11 PLATE NO. M4-8A.2



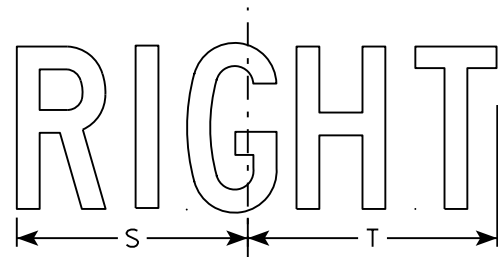
M4-20L
MM4-20L
M04-20L
MP4-20L



MB4-20L
MK4-20L
MN4-20L
MR4-20L



M4-20C
MB4-20C
MK4-20C
MM4-20C
MN4-20C
M04-20C
MP4-20C
MR4-20C



M4-20R
MB4-20R
MK4-20R
MM4-20R
MN4-20R
M04-20R
MP4-20R
MR4-20R

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 1/8	3/8	1/2	5	2	2 1/4	2 1/4	2 1/2	5	5 1/8	5 3/8	5 3/4	6 5/8	6 7/8			7	7 5/8	10 1/4	1 1/2	1/2				4.0
3	36		1 5/8	5/8	3/4	7	4	3	3 1/2	4 1/2	7 1/2	7 3/4	8	8 5/8	9 7/8	10 1/4			10 3/8	11 3/8	14 3/8	1 7/8	1/2				9.0
4																											
5																											

NOTES

1. Sign is Type II - Type H except as Shown
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. M4-20 Background - White

Message - Black

MB4-20 Background - Blue

Message - White

MK4-20 Background - Green

Message - White

MM4-20 Background - White

Message - Green

MN4-20 Background - Brown

Message - White

M04-20 Background - Orange - Type F Reflective

Message - Black

MP4-20 Background - White

Message - Blue

MR4-20 Background - Brown

Message - Yellow

STANDARD SIGN
M4-20

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M4-20.5

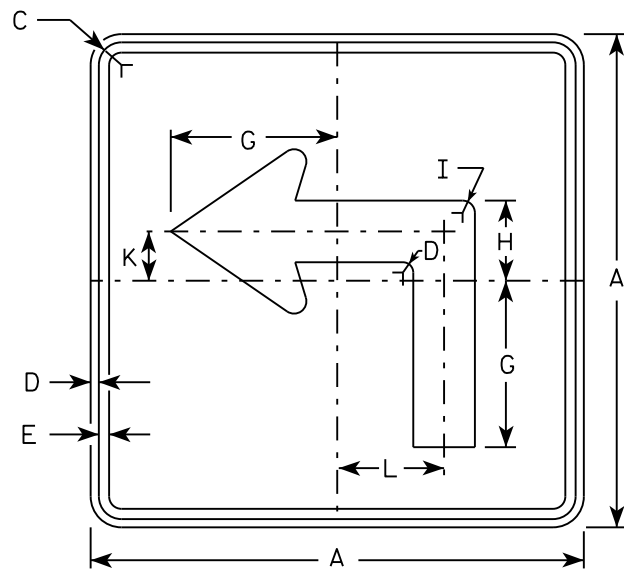
PROJECT NO:

HWY:

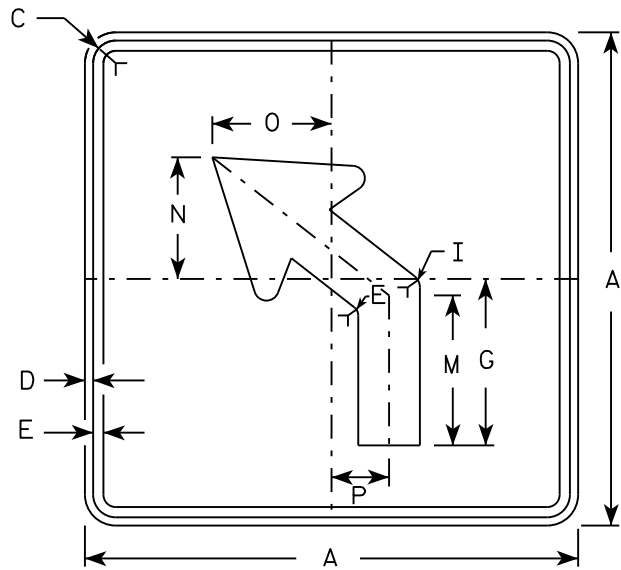
COUNTY:

SHEET NO:

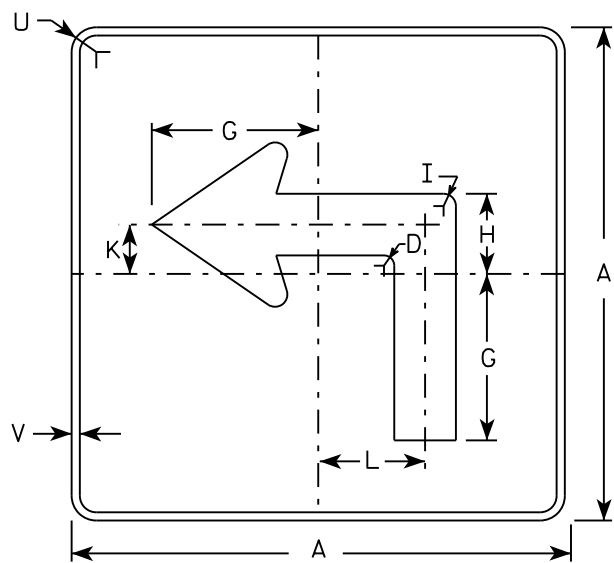
E



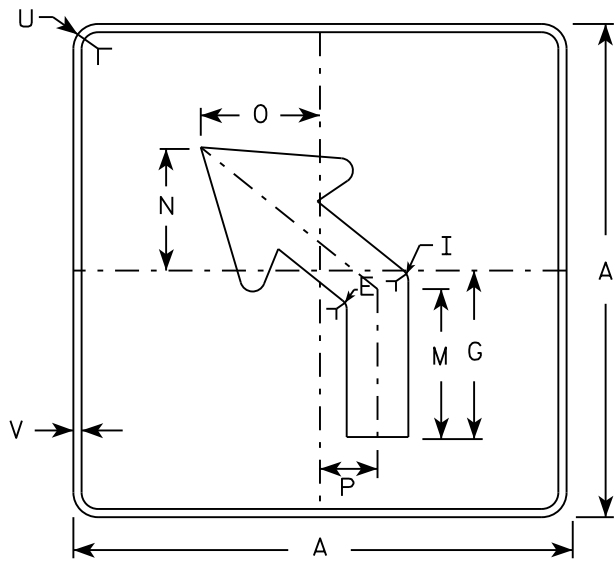
M5-1L
MM5-1L
M05-1L
MP5-1L



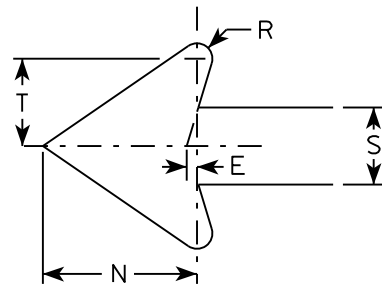
M5-2L
MM5-2L
M05-2L
MP5-2L



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



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



NOTES

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

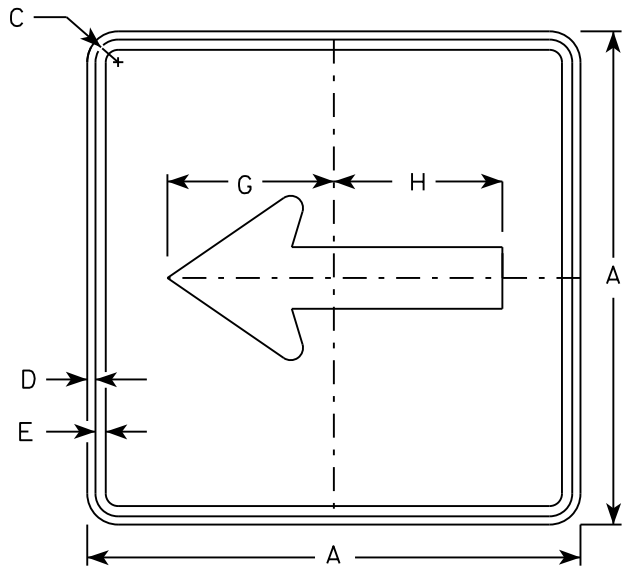
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25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

STANDARD SIGN
M5-1 & M5-2

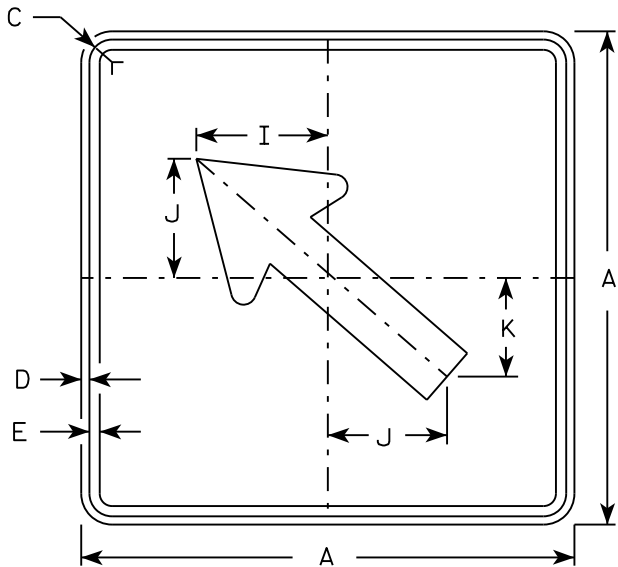
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

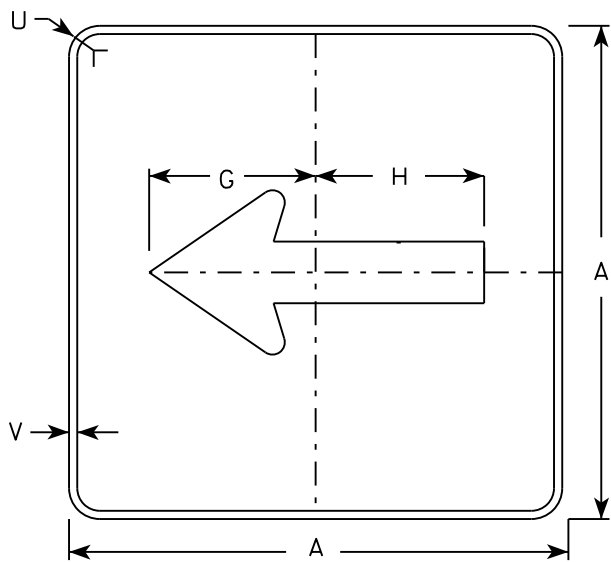
DATE 10/15/15 PLATE NO. M5-1.13



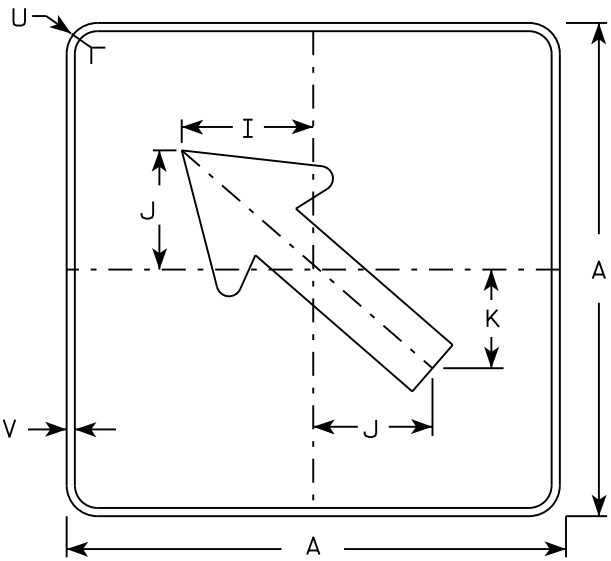
M6 - 1
MM6 - 1
M06 - 1
MP6 - 1



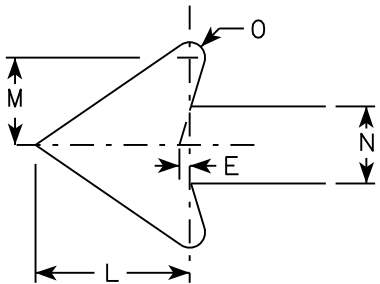
M6 - 2
MM6 - 2
M06 - 2
MP6 - 2



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



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



NOTES

- 1. Signs are Type II - Type H except as Shown
- 2. Color:
 - Background - See note 4
 - Message - See note 4
- 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. M6-1 and M6-2 Background - White
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White
MK6-1 and MK6-2 Background - Green
Message - White
MM6-1 and MM6-2 Background - White
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White
M06-1 and M06-2 Background - Orange - Type F Reflective
Message - Black
MP6-1 and MP6-2 Background - White
Message - Blue
MR6-1 and MR6-2 Background - Brown
Message - Yellow

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

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

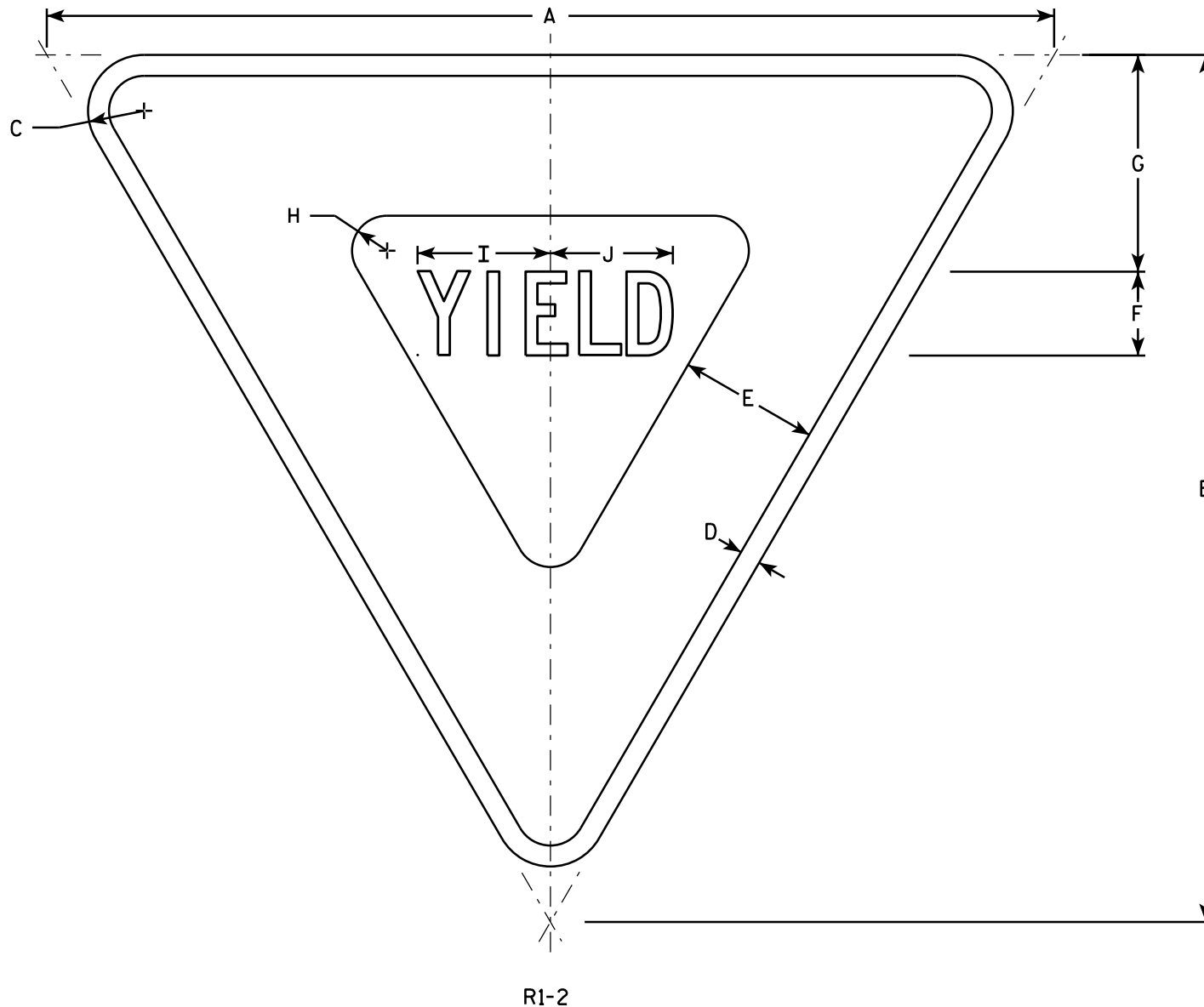
E

STANDARD SIGN
M6 - 1 & M6 - 2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

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



NOTES

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 - 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. The border strip and word message are reflectorized red.

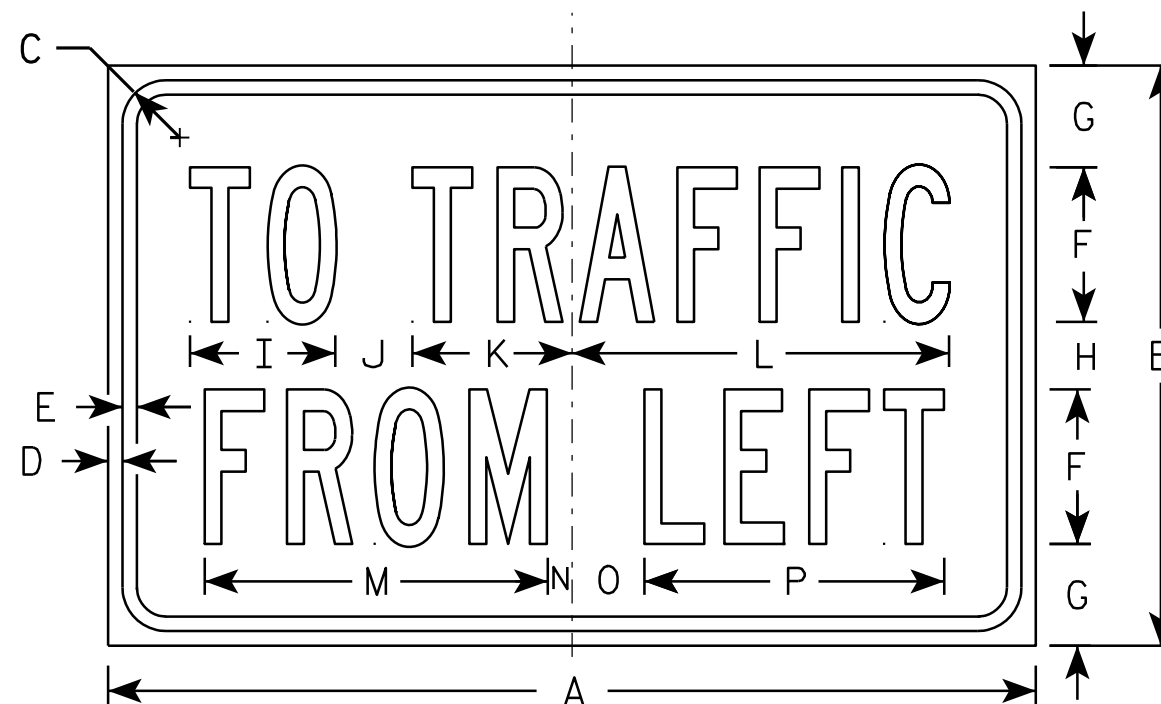
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6																											
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

STANDARD SIGN
R1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 10/13/14 PLATE NO. R1-2.12



R1-54

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 - B

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	15	1 1/8	3/8	3/8	4	2 5/8	1 3/4	3 3/4	2	4 1/8	9 3/4	8 7/8	5/8	1 7/8	7 3/4											2.5
2M	24	15	1 1/8	3/8	3/8	4	2 5/8	1 3/4	3 3/4	2	4 1/8	9 3/4	8 7/8	5/8	1 7/8	7 3/4											2.5
3																											
4																											
5																											

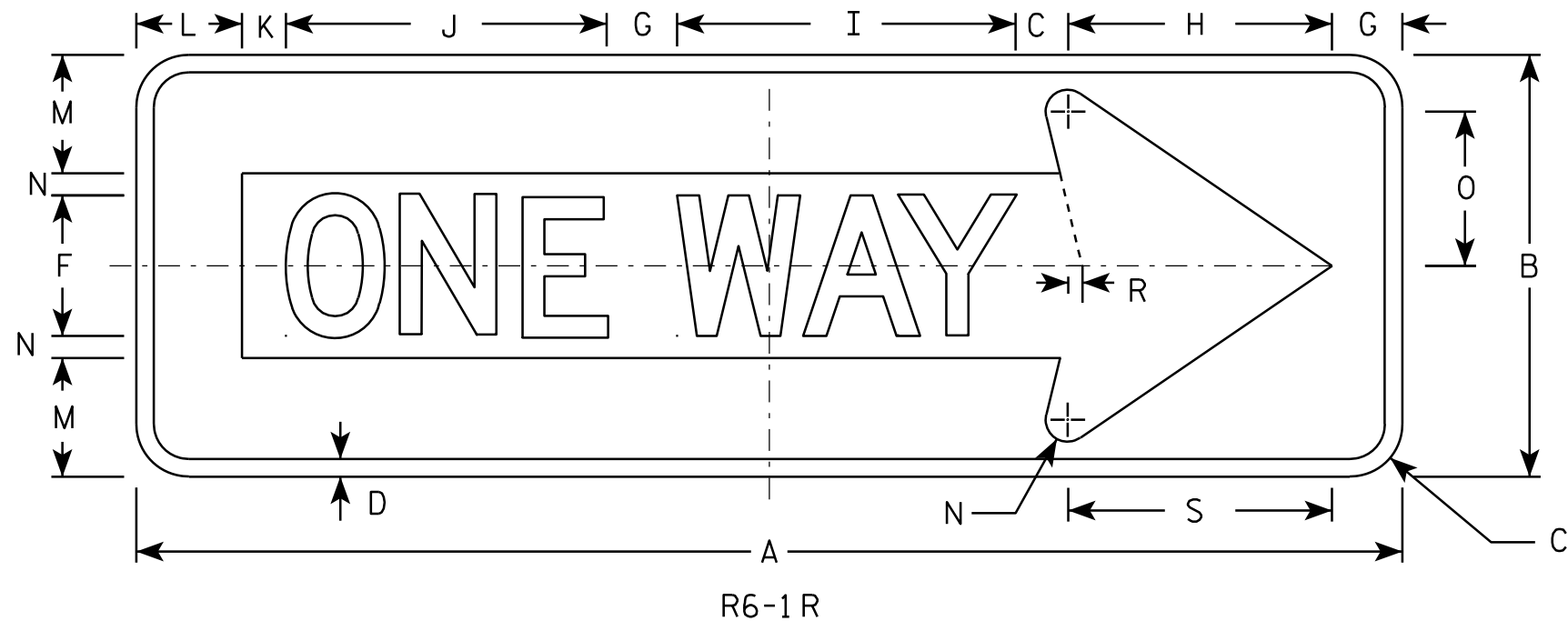
STANDARD SIGN
R1-54

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch
for State Traffic Engineer

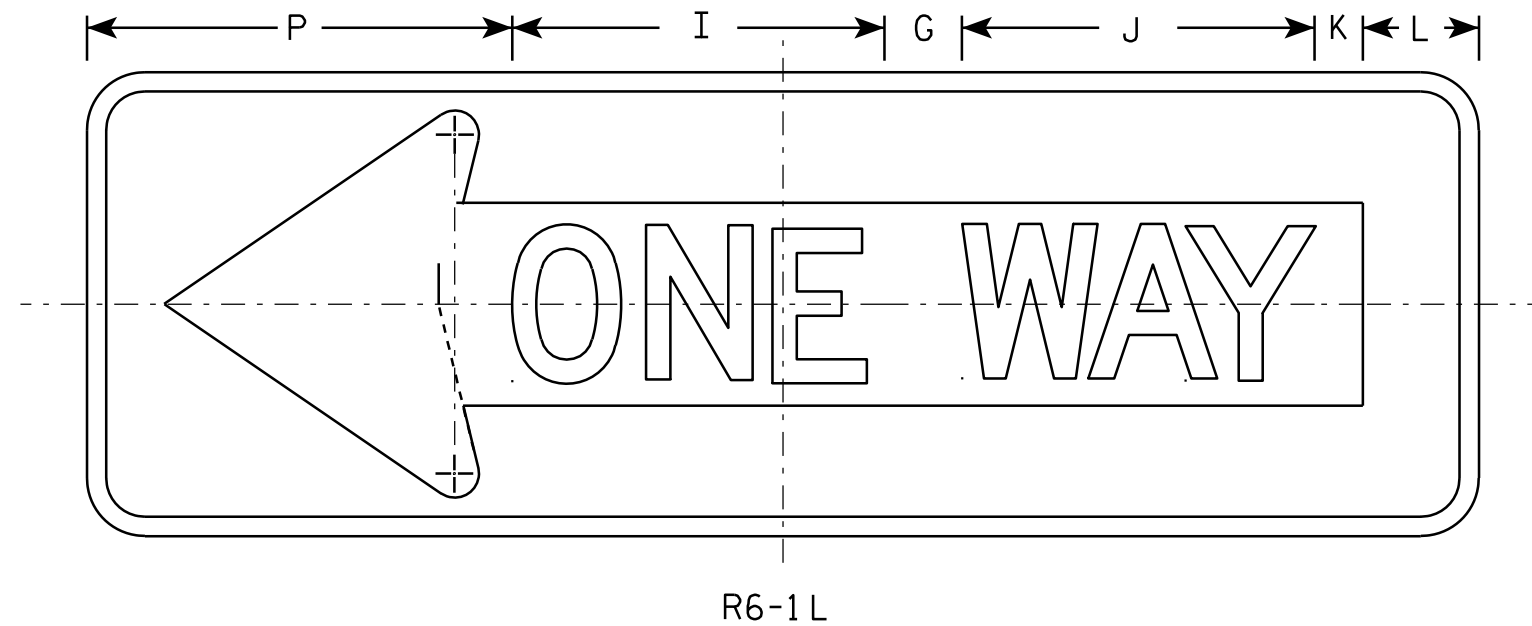
DATE 12/03/10 PLATE NO. R1-54.2

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

- Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - BLACK
Message - BLACK LEGEND & WHITE ARROW & BORDER
- Message Series - D
- 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	36	12	1 1/2	1/2		4	2	7 1/2	9 5/8	9 1/8	1 1/4	3	3 3/8	5/8	4 3/8	11		3/8	7 1/2								3.0
2M	54	18	2 1/4	3/4		6	3	11 1/4	14 1/2	13 5/8	1 7/8	4 1/2	5	1	6 1/2	16 1/2		5/8	11 1/4								6.75
3	54	18	2 1/4	3/4		6	3	11 1/4	14 1/2	13 5/8	1 7/8	4 1/2	5	1	6 1/2	16 1/2		5/8	11 1/4								6.75
4	54	18	2 1/4	3/4		6	3	11 1/4	14 1/2	13 5/8	1 7/8	4 1/2	5	1	6 1/2	16 1/2		5/8	11 1/4								6.75
5																											

STANDARD SIGN R6-1 L & R

WISCONSIN DEPT OF TRANSPORTATION

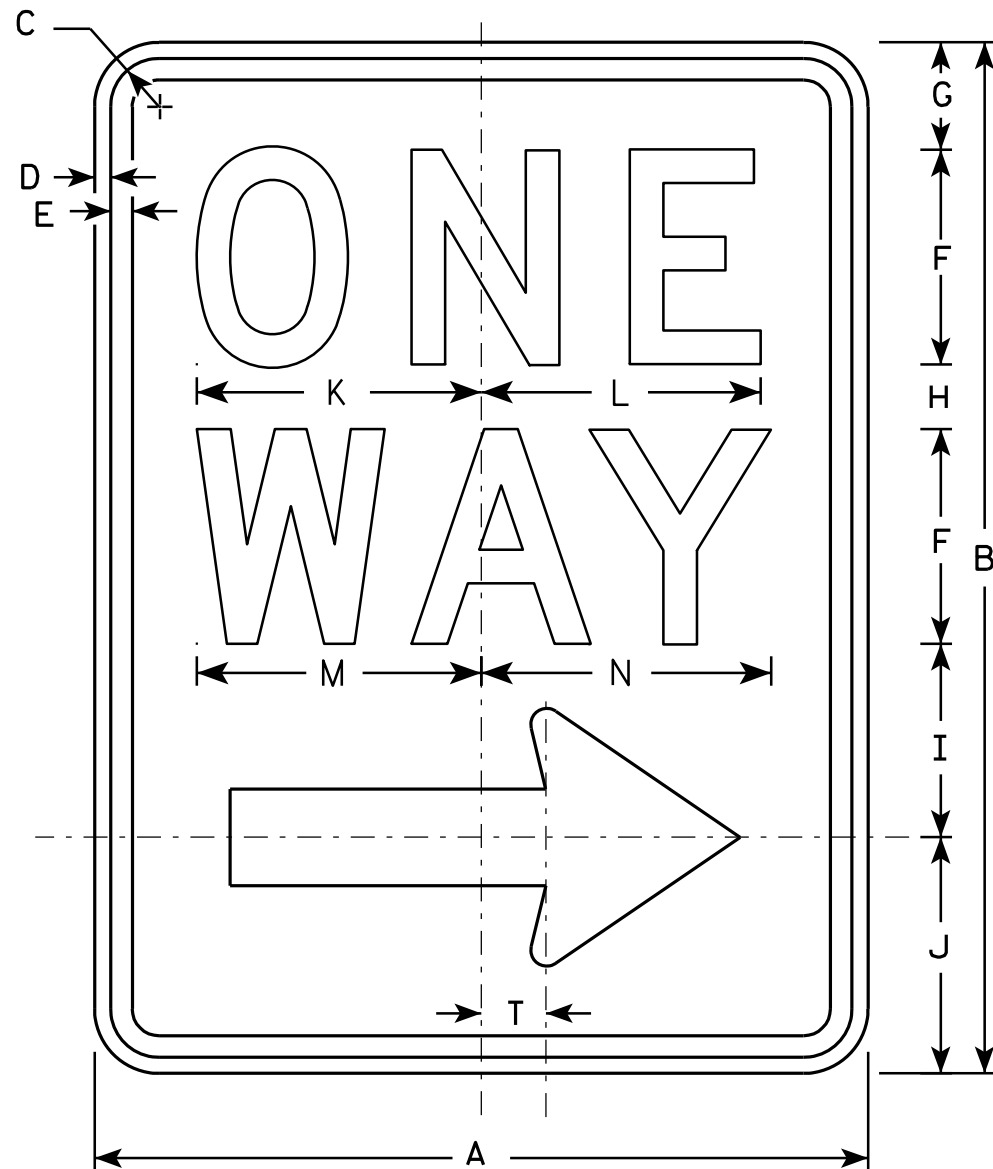
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 12/17/10 PLATE NO. R6-1.2

PROJECT NO:

SHEET NO:

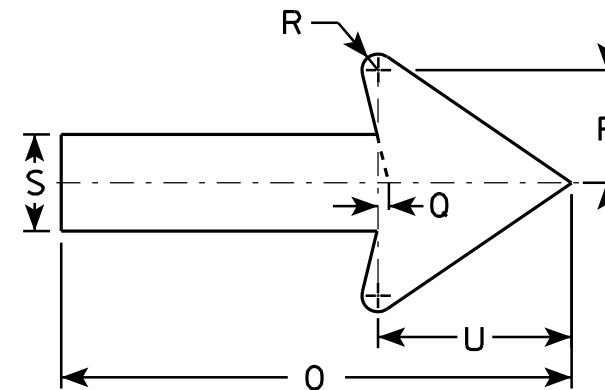
E



R6-2R

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.
5. R6-2L same as R6-2R except arrow points to the left.



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
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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STANDARD SIGN

R6-2 R&L

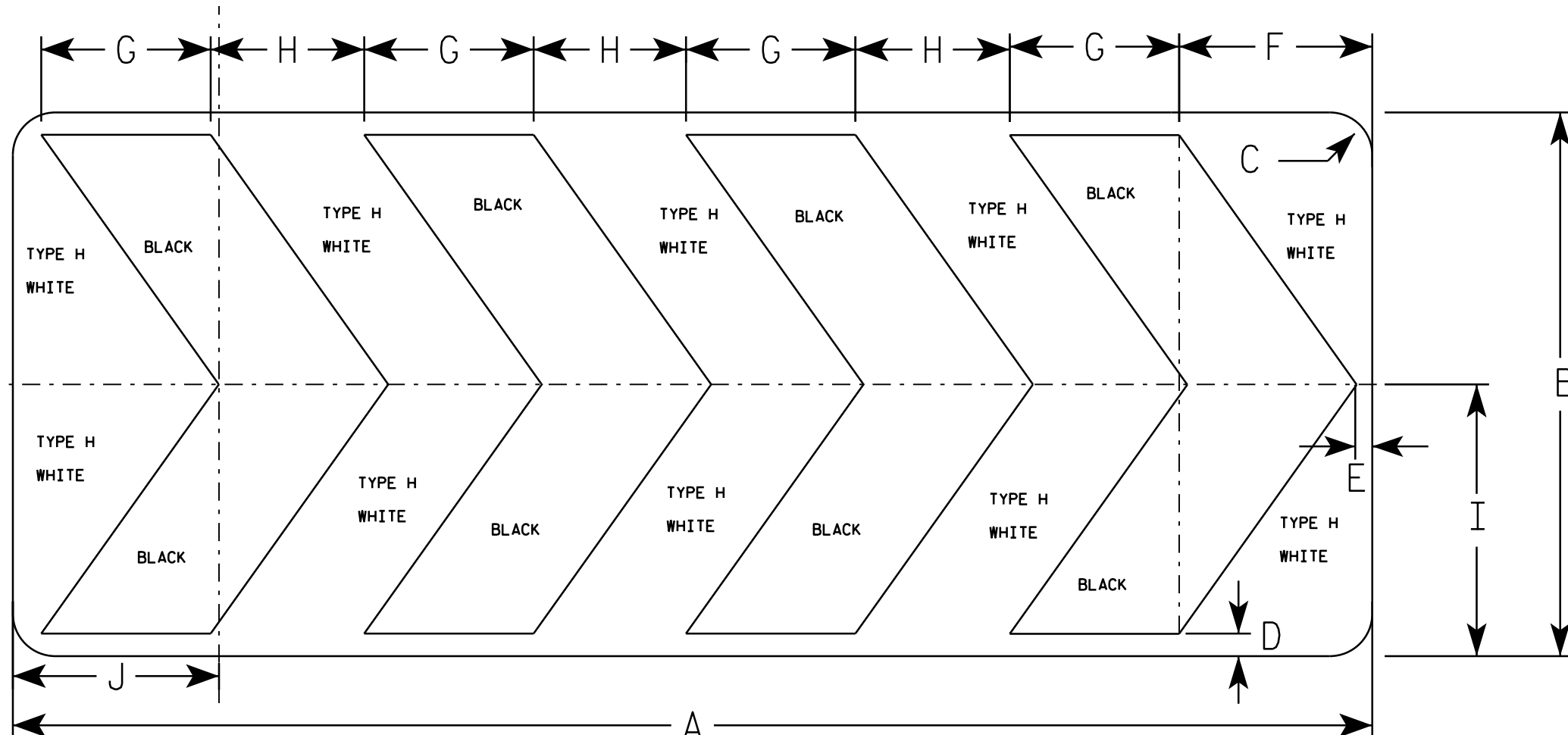
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

NOTES

- Sign is Type II - Type H Reflective
- Color:
 - Background - WHITE
 - Message - BLACK
- 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.



R6-4B

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	60	24	1 7⁄8	1	¾	8 ½	7 ½	6 ¾	12	9 ⅛																	10.0
2M	60	24	1 7⁄8	1	¾	8 ½	7 ½	6 ¾	12	9 ⅛																	10.0
3																											
4																											
5																											

STANDARD SIGN R6-4B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 8/21/14 PLATE NO. R6-4.3

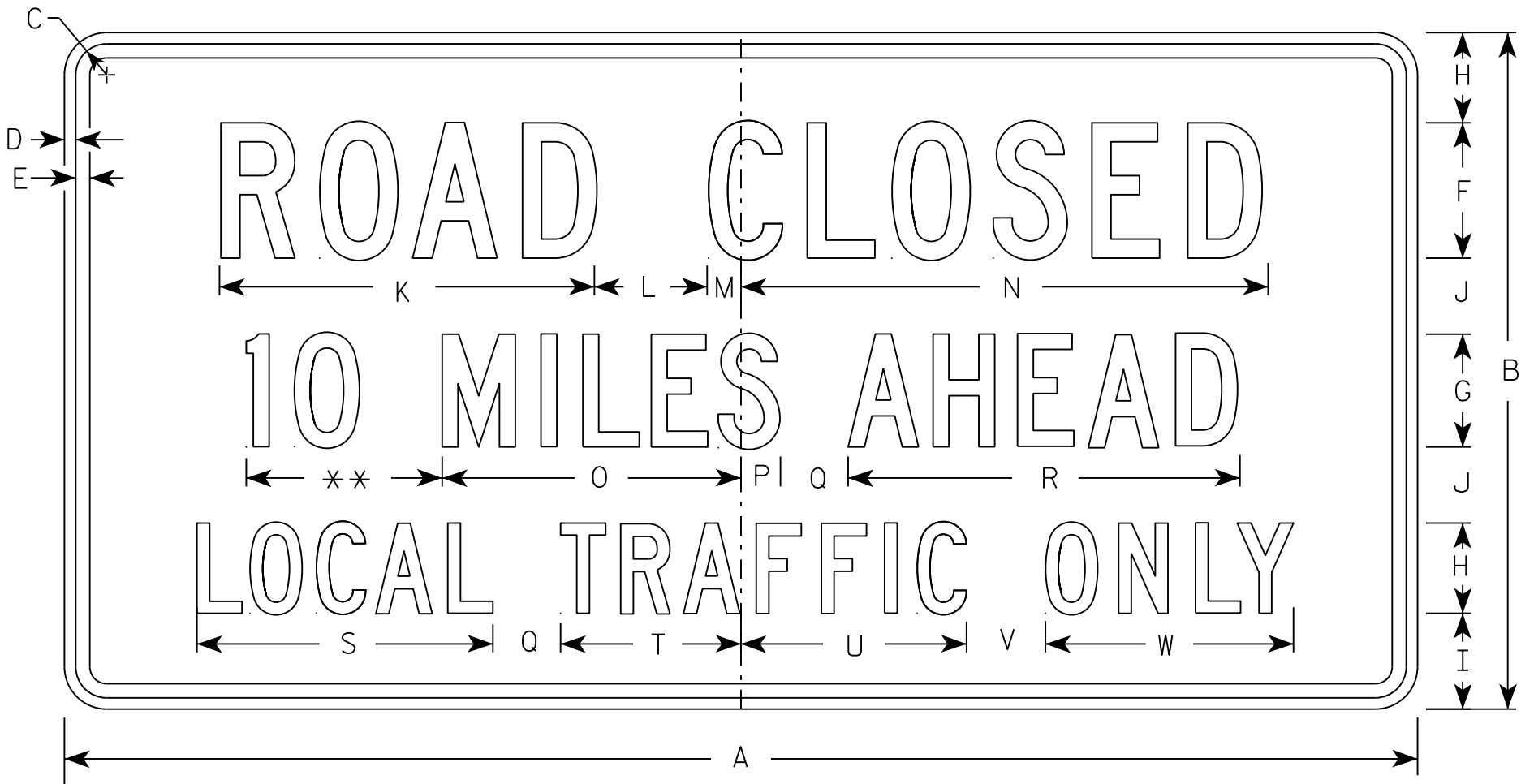
PROJECT NO:

SHEET NO:

E

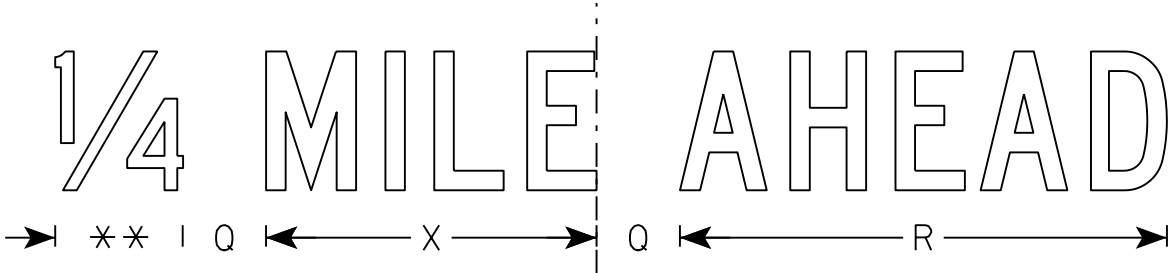
NOTES

- 1. Sign is Type II - Type H Reflective
- 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.
- 5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.



R11-3

** See Note 5

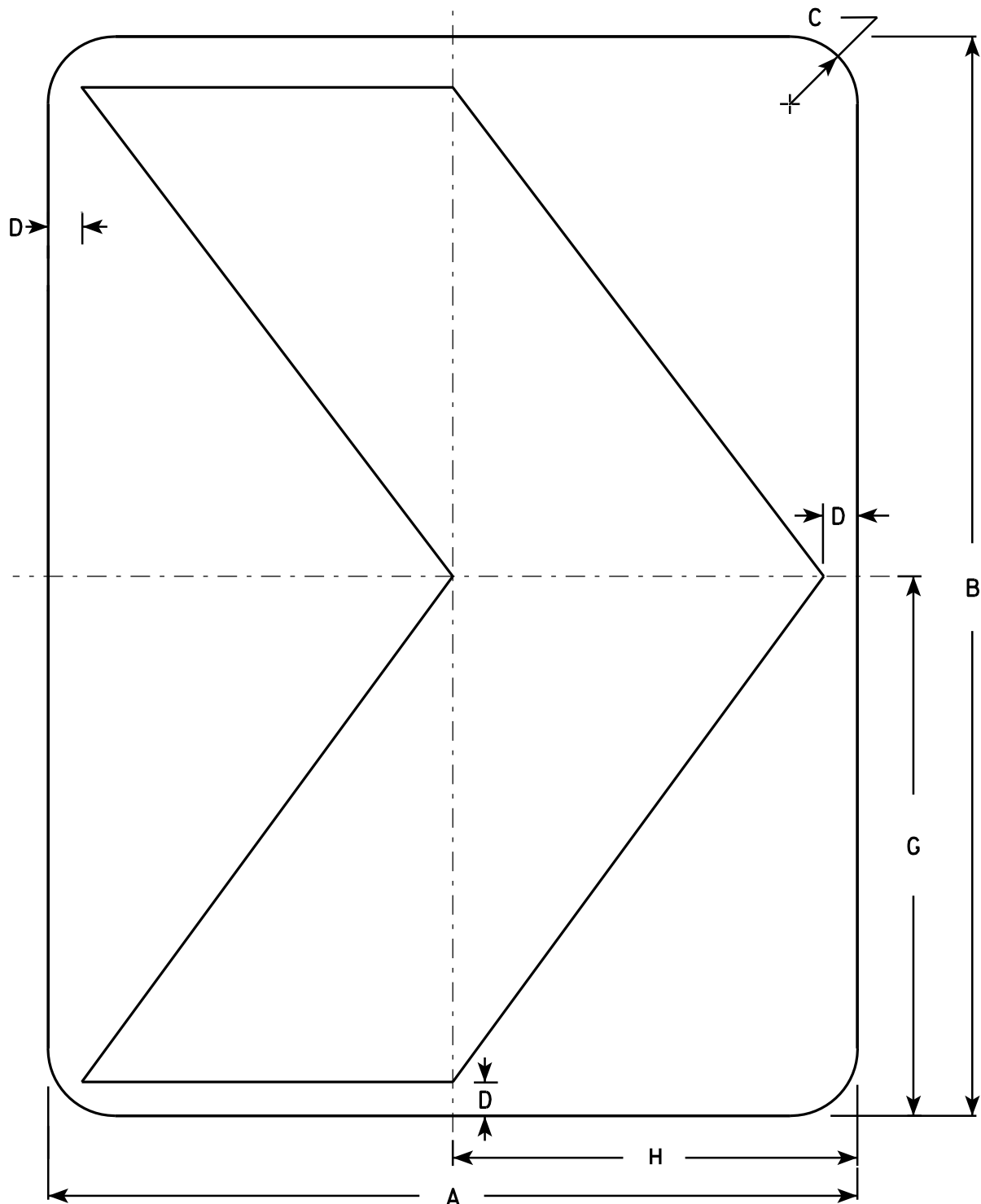


SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 3/8	1/2	5/8	4	3	2 1/2	2	2	11 1/8	3	1 1/8	15 1/4	8	1 1/2	2	10 3/4	8 3/8	4 3/4	6 1/2	2	6 3/4	7 1/8			4.5
2S	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
3																											
4																											
5																											

STANDARD SIGN
R11-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 3/15/17 PLATE NO. R11-3.8



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. 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.

W1-8

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 1/2	1/2			9	6																			1.5
2S	18	24	1 1/2	3/4			12	9																			3.0
2M	18	24	1 1/2	3/4			12	9																			3.0
3	24	30	1 1/2	1			15	12																			5.0
4	30	36	1 7/8	1 1/4			18	15																			7.5
5	36	48	2 1/4	1 1/2			24	18																			12.0

STANDARD SIGN

W1-8

WISCONSIN DEPT OF TRANSPORTATION

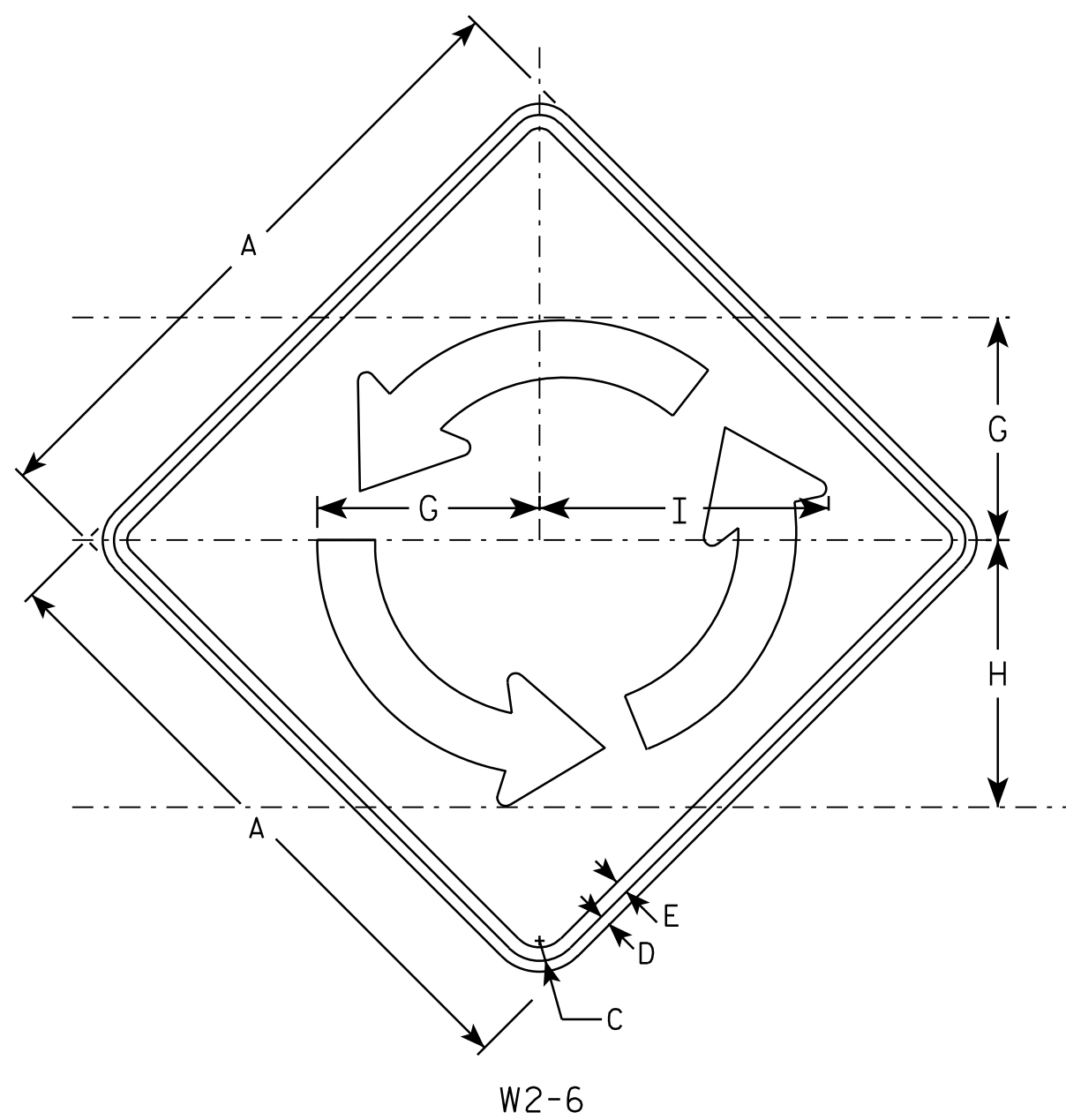
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-8.6

PROJECT NO:

SHEET NO:

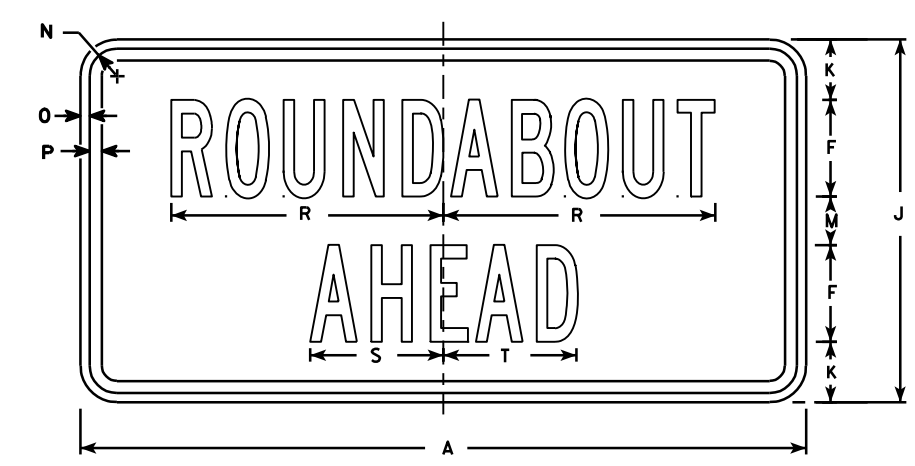
E



W2-6

NOTES

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



W2-6P

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

STANDARD SIGN

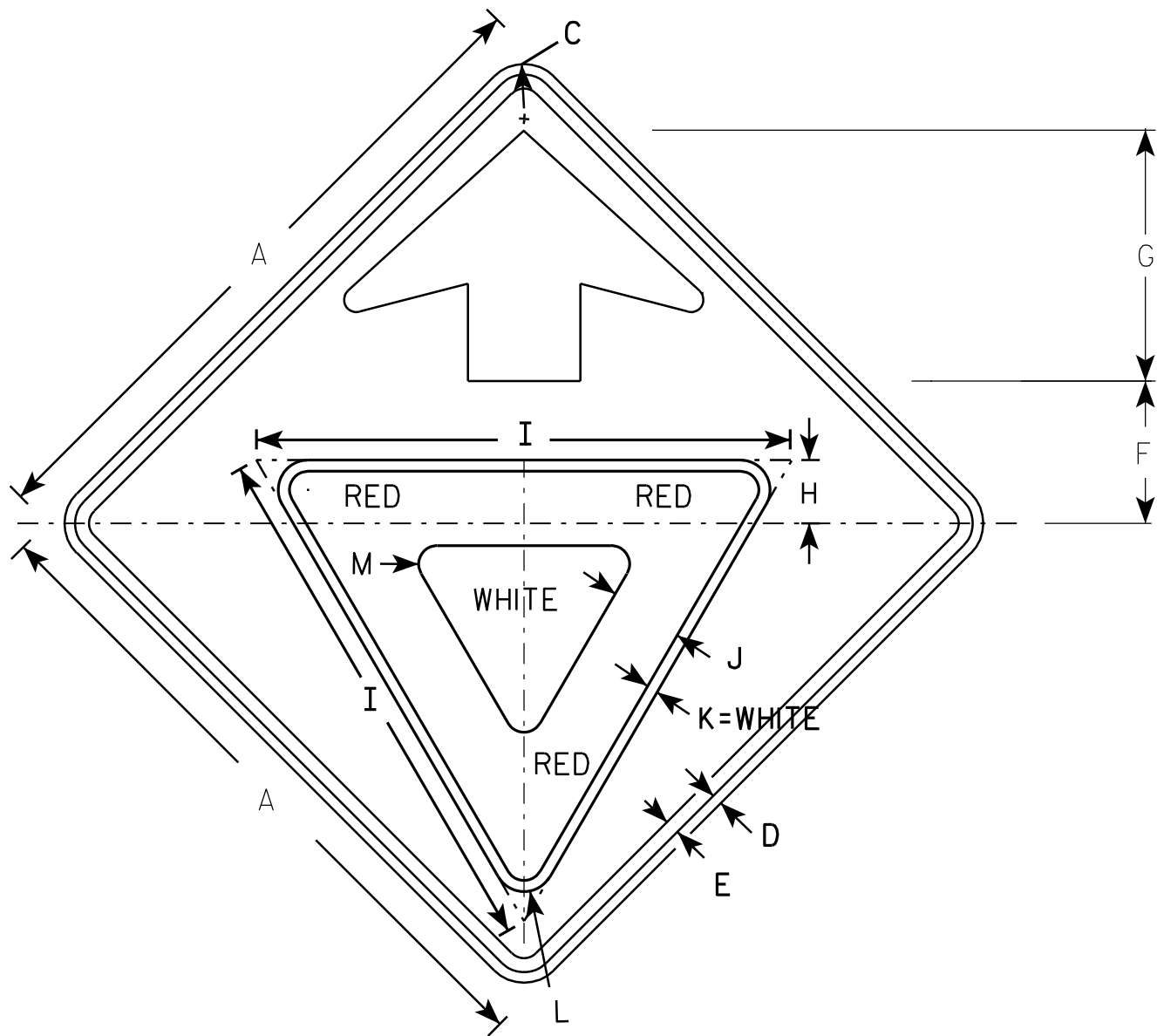
W2-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*

for State Traffic Engineer

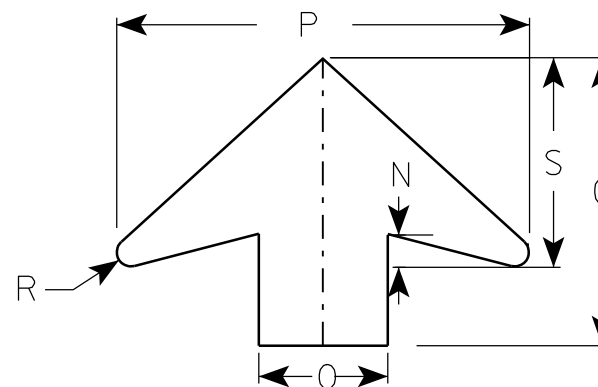
DATE 6/29/12 PLATE NO. W2-6.5



W3-2

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - YELLOW
Arrow & Border - BLACK
Yield Symbol - WHITE BORDER ON RED BACKGROUND



ARROW DETAIL

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	30		1 3/8	1/2	5/8	6 1/4	11 1/4	3	25	3 3/8	1/2	1 3/8	7/8	1 1/4	5	16		1/2	8								6.25
2S	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 3/8	28	3 3/4	5/8	1 1/2	1	1 5/8	6	19 1/4		5/8	9 3/4								9.0
2M	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 3/8	28	3 3/4	5/8	1 1/2	1	1 5/8	6	19 1/4		5/8	9 3/4								9.0
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 3/8	28	3 3/4	5/8	1 1/2	1	1 5/8	6	19 1/4		5/8	9 3/4								9.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0

PROJECT NO:

STANDARD SIGN
W3-2

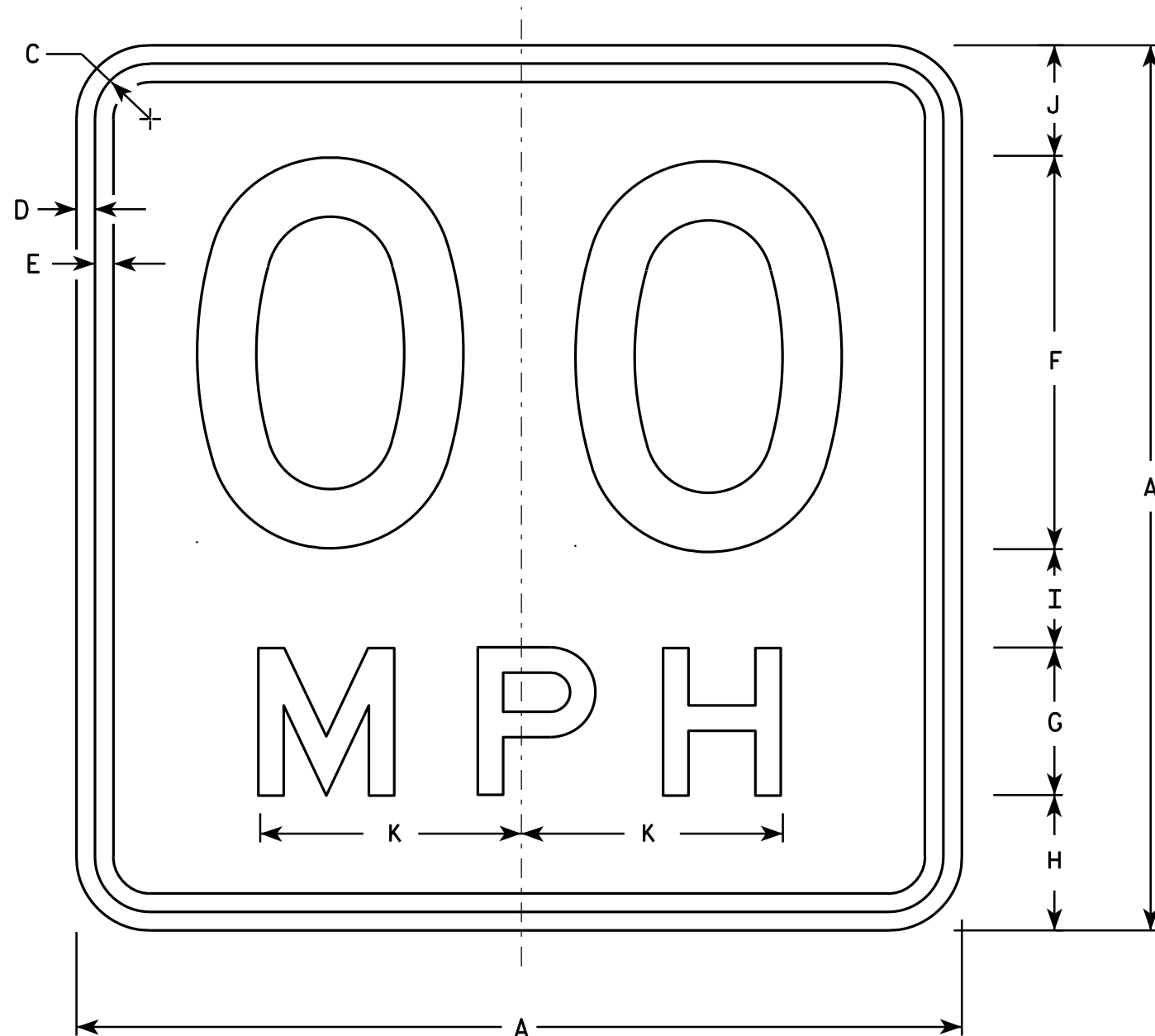
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-2..9

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
Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
Line 2 is Series E

W13-1

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

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

STANDARD SIGN

W13-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

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

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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

WKE
PROJECT ID:
WITH: 1100-13-71 / 2290-08-71

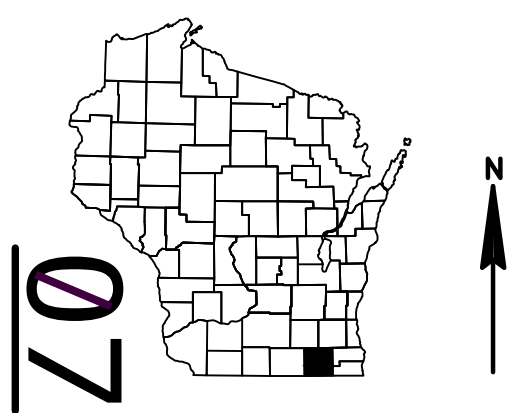
3110-07-70

COUNTY:
WALWORTH

APRIL 2018
ORDER OF SHEETS

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

TOTAL SHEETS = 18



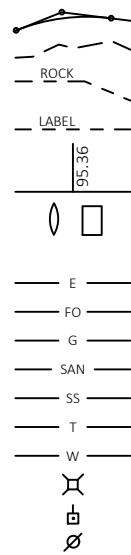
DESIGN DESIGNATION

A.A.D.T.	2018	=	3,600
A.A.D.T.		=	
D.H.V.		=	
D.D.		=	
T.		=	
DESIGN SPEED		=	55 MPH
ESALS		=	

CONVENTIONAL SYMBOLS

<u>PLAN</u>	
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	

<u>PROFILE</u>	
GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
CULVERT (Profile View)	
<u>UTILITIES</u>	
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

STH 59

CURVE EAST OF CONVERSE ROAD

WALWORTH COUNTY

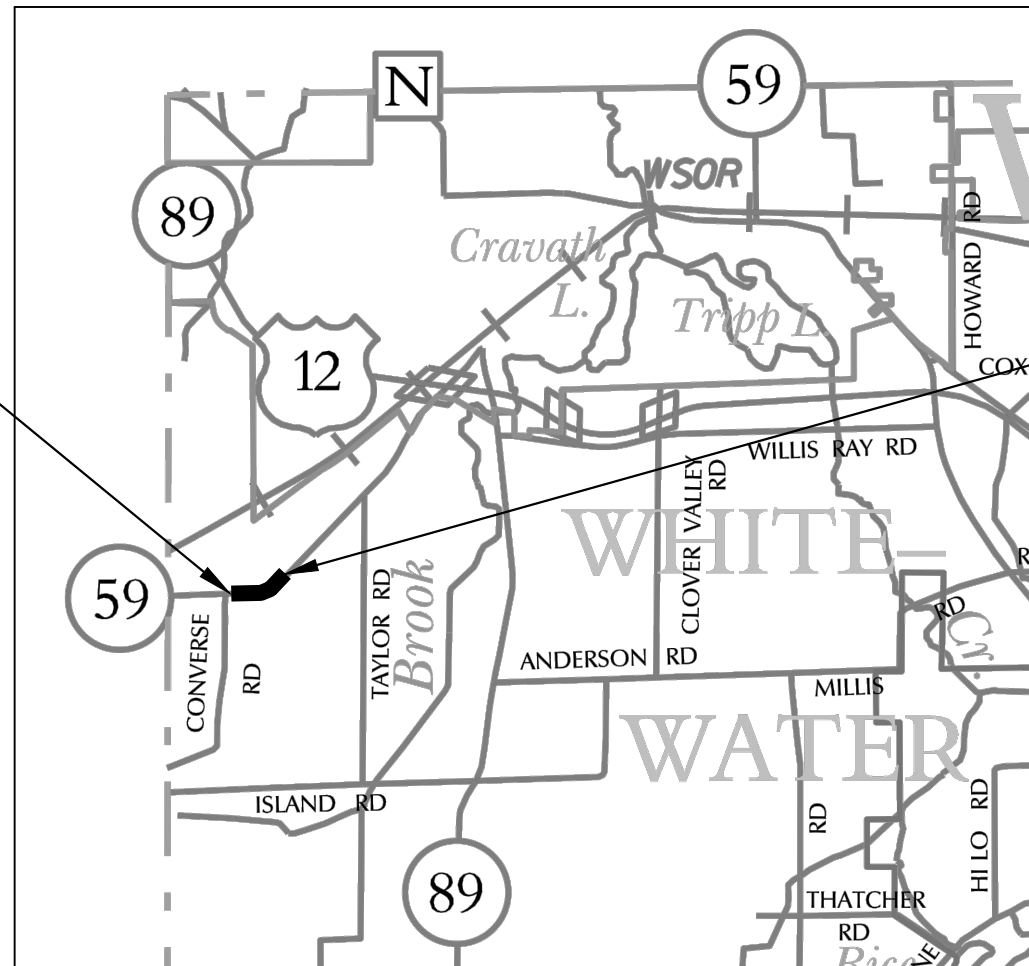
STATE PROJECT NUMBER
3110-07-70

R-15-E

BEGIN PROJECT 3110-07-70
STA. 30+00

T-4-N

END PROJECT 3110-07-70
STA. 43+50



LAYOUT
SCALE 0 1 MI
TOTAL NET LENGTH OF CENTERLINE = 0.256 MILES

ALIGNMENT SHOWN IS FOR REFERENCE ONLY.

STATE PROJECT

3110-07-70

FEDERAL PROJECT

PROJECT

WISC 2018195

CONTRACT

1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT
Designer	MALATHI KARRI
Project Manager	GARY METZER
Regional Examiner	RICHARD HERRICK
Regional Supervisor	JANET CANNON

APPROVED FOR THE DEPARTMENT

DATE: 11/01/2017 (Signature)

E

STANDARD ABBREVIATIONS

AADT	ANNUAL AVERAGE DAILY TRAFFIC
BM	BENCHMARK
BMP	BEST MANAGEMENT PRACTICE
C/L	CENTER LINE
CONC	CONCRETE
CTH	COUNTY TRUNK HIGHWAY
CY	CUBIC YARD
D	DEGREE OF CURVE
DHV	DESIGN HOUR VOLUME
DD	DIRECTIONAL DISTRIBUTION
X	EAST GRID COORDINATE
EB	EASTBOUND
ECIP	EROSION CONTROL IMPLEMENTATION PLAN
ESALS	EQUIVALENT SINGLE AXLE LOADS
FT	FOOT
INL	INLET
LT	LEFT
L	LENGTH OF CURVE
LF	LINEAR FOOT
LS	LUMP SUM
MGR	MANAGER
MH	MANHOLE
N	NORTH
Y	NORTH GRID COORDINATE
NB	NORTHBOUND
PAVT	PAVEMENT
PT	POINT
PCC	POINT OF COMPOUND CURVE
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PROJ	PROJECT
R	RADIUS
SB	SOUTHBOUND
SY	SQUARE YARD
SDD	STANDARD DETAIL DRAWING
STH	STATE TRUNK HIGHWAY
STA	STATION
T	TANGENT
T	TRUCKS (PERCENT OF)
USH	UNITED STATES HIGHWAY
VAR	VARIABLE
WB	WESTBOUND

ORDER OF SECTION 2 DETAIL SHEETS

TYPICAL SECTIONS
CONSTRUCTION DETAIL
PLAN DETAIL
PAVEMENT MARKING
TRAFFIC CONTROL

PROJECT CONTACT:

GARY METZER, P.E.
WISDOT PROJECT MANAGER
141 NW BARSTOW STREET
WAUKESHA, WI 53187
PHONE: (262) 548-5685
CELL: (414) 750-1633
GARY.METZER@DOT.WI.GOV

DNR CONTACT:

CRAIG WEBSTER
141 NW BARSTOW STREET, ROOM 180
WAUKESHA, WI 53188
PHONE: (262) 574-2141
CELL: (414) 303-3011
CRAIG.WEBSTER@WI.GOV

GENERAL NOTES

NO UTILITY FACILITIES ARE IDENTIFIED IN THE PLAN. IDENTIFY ALL UTILITIES IN THE AREA BY CONTACTING DIGGERS HOTLINE OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA, AS REQUIRED PER STATUTES.

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. NO WORK MAY BEGIN UNTIL PROPER TRAFFIC CONTROL DEVICES ARE PLACED AND APPROVED BY THE ENGINEER.

THE CONTRACTOR IS RESPONSIBLE FOR RESHAPING AND FINISHING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY THEIR OPERATION OUTSIDE THE NORMAL CONSTRUCTION LIMITS.

EROSION CONTROL GENERAL NOTES

EROSION CONTROL ITEMS ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR’S ECIP AND BY THE ENGINEER. EROSION CONTROL ITEMS SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE ITEM IS NO LONGER REQUIRED.

WHEN PERFORMING ROADWAY CLEANING OPERATIONS, THE CONTRACTOR SHALL USE EQUIPMENT HAVING VACUUM OR WATERSPRAY MECHANISM TO ELIMINATE THE DISPERSION OF DUST. IF VACUUM EQUIPMENT IS EMPLOYED, IT SHALL HAVE SUITABLE SELF-PARTICULATE COLLECTIONS TO PREVENT DISCHARGE FROM THE COLLECTION BIN INTO THE ATMOSPHERE.

REFER TO EROSION CONTROL SPECIAL PROVISIONS FOR FURTHER REQUIREMENTS.

DIGGERS



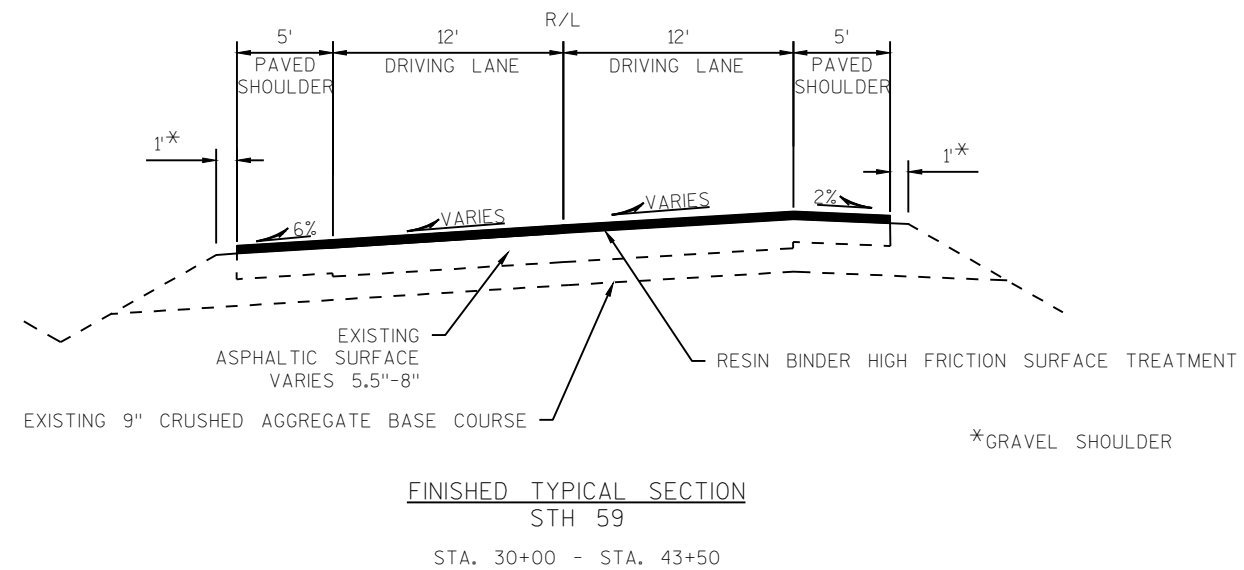
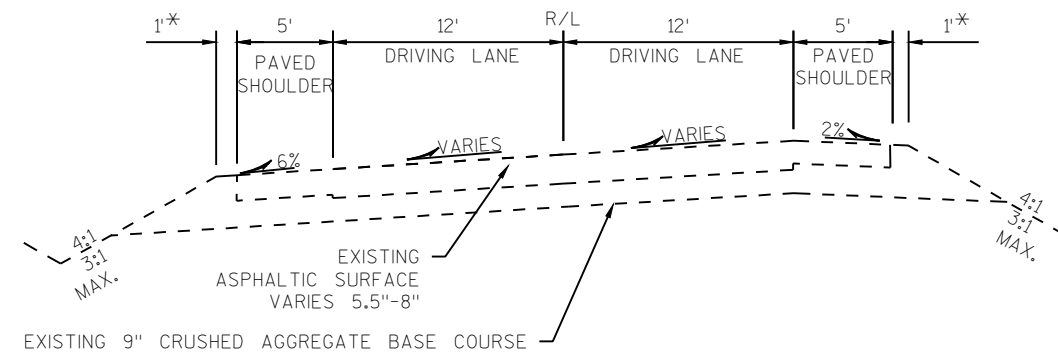
HOTLINE

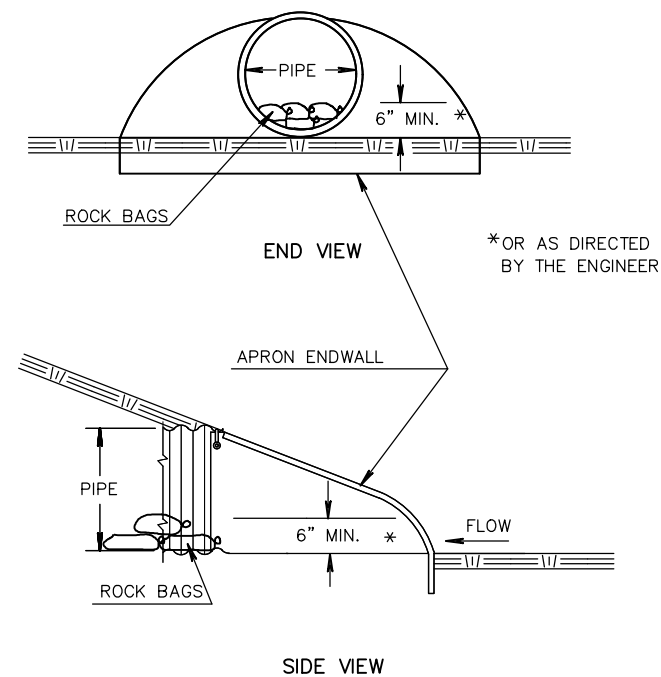
Dial



or (800) 242-8511

www.DiggersHotline.com





CULVERT PIPE CHECK
PLACE AT UPSTREAM
END OF CULVERTS

ROCK BAG DETAIL

ESTIMATED BAG SIZE 18"X12"X6"	
PIPE SIZE	ESTIMATED NUMBER OF BAGS
12"	1
15"	2
18"	2
24"	3
30"	5
36"	7
42"	7





2

2



LEGEND

- 1 MARKING LINE, EPOXY 4-INCH (WHITE)
- 2 MARKING LINE, EPOXY 4-INCH (YELLOW)
- 3 MARKING LINE, EPOXY 4-INCH (YELLOW SKIPS-12.5' LINE, 37.5' GAP)

NOTE: MATCH EXISTING "NO PASSING ZONE"

PROJECT NO: 3110-07-70

HWY: STH 59

COUNTY: WALWORTH

PAVEMENT MARKING PLAN

SHEET

E

FILE NAME : N:\PDS\C3D\CAD\31100700\024501_PM.DWG
LAYOUT NAME - 024502_PM

PLOT DATE : 10/16/2017 5:00 PM

PLOT BY : HAYNES, RONNIE

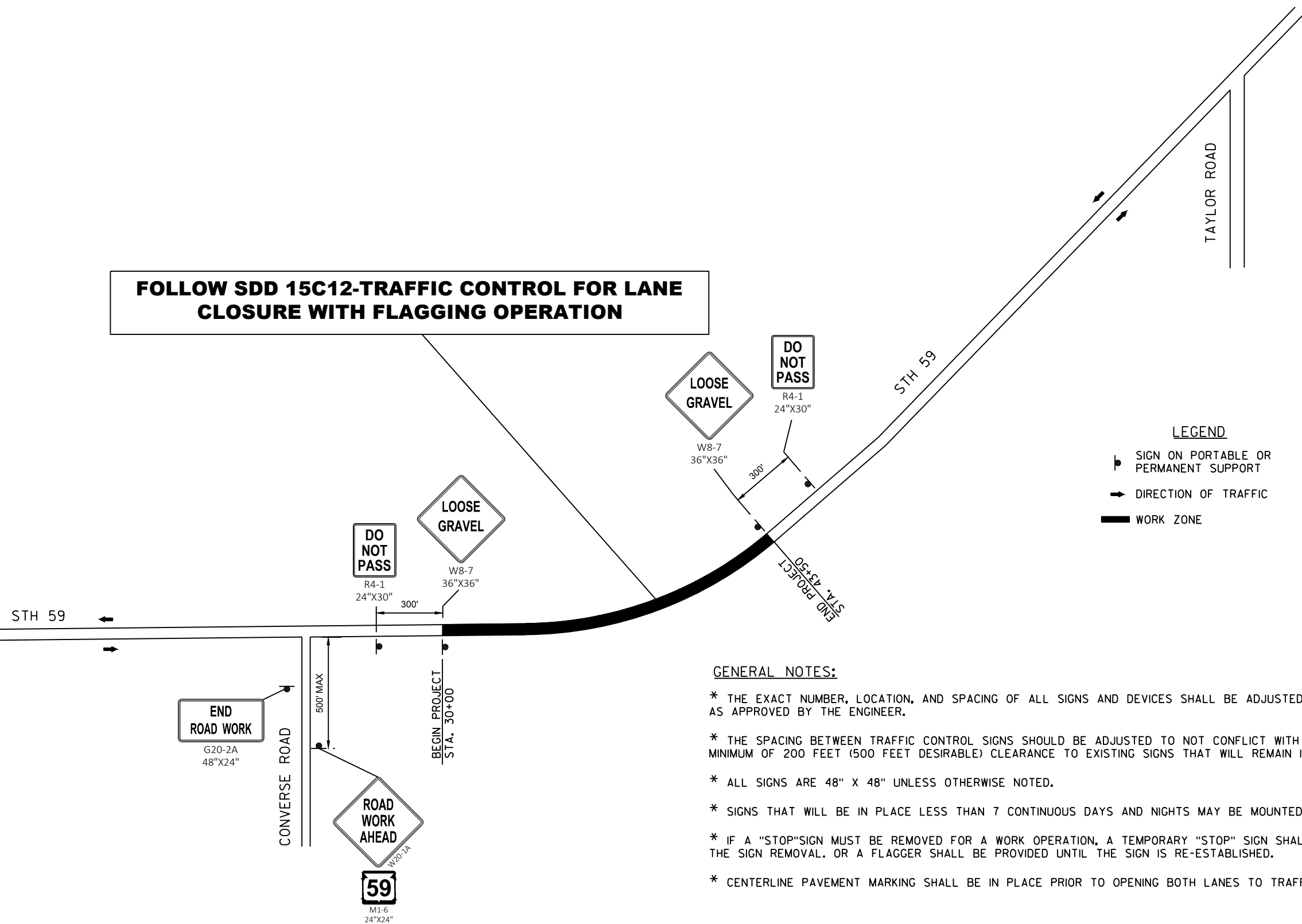
PLOT NAME :

PLOT SCALE : #####

WISDOT/CADDs SHEET 42



**FOLLOW SDD 15C12-TRAFFIC CONTROL FOR LANE
CLOSURE WITH FLAGGING OPERATION**



LEGEND

- SIGN ON PORTABLE OR PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK ZONE

GENERAL NOTES:

- * THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS, AS APPROVED BY THE ENGINEER.
- * THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.
- * ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
- * SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.
- * IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.
- * CENTERLINE PAVEMENT MARKING SHALL BE IN PLACE PRIOR TO OPENING BOTH LANES TO TRAFFIC.

NOT TO SCALE

PROJECT NO: 3110-07-70

HWY: STH 59

COUNTY: WALWORTH

TRAFFIC CONTROL

SHEET

E

Estimate Of Quantities By Plan Sets

3110-07-70

Line	Item	Item Description	Unit	Total	Qty
0038	619.1000	Mobilization	EACH	0.330	0.330
0046	628.1905	Mobilizations Erosion Control	EACH	1.000	1.000
0054	628.7504	Temporary Ditch Checks	LF	20.000	20.000
0056	628.7555	Culvert Pipe Checks	EACH	7.000	7.000
0078	643.0310.S	Temporary Portable Rumble Strips	LS	1.000	1.000
0088	643.0900	Traffic Control Signs	DAY	32.000	32.000
0098	643.5000	Traffic Control	EACH	0.330	0.330
0100	646.1020	Marking Line Epoxy 4-Inch	LF	7,812.000	7,812.000
0132	SPV.0180	Special 01. Resin Binder High Friction Surface Treatment	SY	5,100.000	5,100.000

<u>MOBILIZATIONS EROSION CONTROL</u>	
	628.1905
<u>LOCATION</u>	<u>EACH</u>
<u>STH 59</u>	<u>1</u>
TOTAL 0010	1

<u>TEMPORARY DITCH CHECKS</u>	
	628.7504
<u>LOCATION</u>	<u>LF</u>
<u>STA 30+00</u>	<u>20</u>
TOTAL 0010	20

<u>CULVERT PIPE CHECKS</u>	
	628.7555
<u>LOCATION</u>	<u>EACH</u>
<u>STA 39+50</u>	<u>3</u>
<u>STA 42+25</u>	<u>2</u>
TOTAL 0010	5

<u>TEMPORARY PORTABLE RUMBLE STRIPS</u>	
	643.0310.S
<u>LOCATION</u>	<u>LS</u>
<u>STH 59</u>	<u>1</u>
TOTAL 0010	1

<u>TRAFFIC CONTROL SIGNS</u>	
	643.0900
	<u>DAYS</u>
<u>3110-07-70</u>	<u>32</u>
TOTAL 0010	32

<u>MARKING LINE EPOXY 4-INCH*</u>				
				646.1020
<u>STATION TO</u>	<u>STATION</u>	<u>LOCATION</u>		<u>LF</u>
29+00	-	44+50	STH 59 EB EDGE LINE	1550
29+00	-	44+50	STH 59 WB EDGE LINE	1550
29+00	-	44+50	STH 59 CENTERLINE	4712
TOTAL 0010				7812

<u>RESIN BINDER HIGH FRICTION SURFACE TREATMENT **</u>	
	SPV.0180.01
<u>LOCATION</u>	<u>SY</u>
<u>STH 59</u>	<u>5100</u>
TOTAL 0010	5100

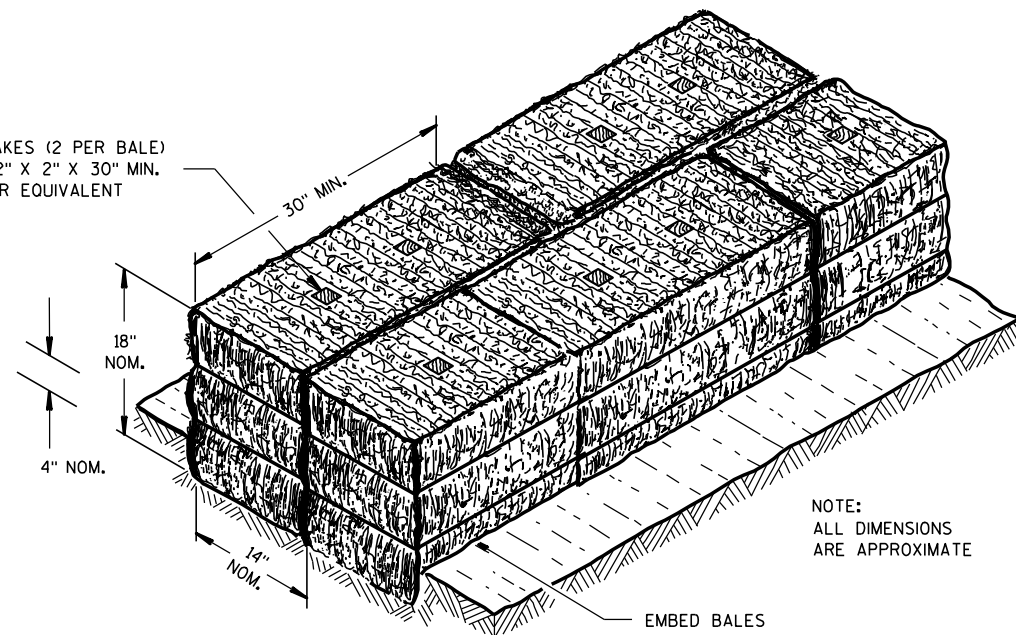
*CENTERLINE TO BE PLACED TWICE - AFTER PLACING HFST AND AFTER FINAL SWEEP. EDGELINES TO BE PLACED AFTER FINAL SWEEP.

**PAVEMENT MARKING REMOVALS ARE INCIDENTAL TO ITEM SPV.0180.01, PER SPECIAL PROVISION.

Standard Detail Drawing List

08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
15C08-18A	LONGITUDINAL MARKING (MAINLINE)
15C12-06	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-04A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

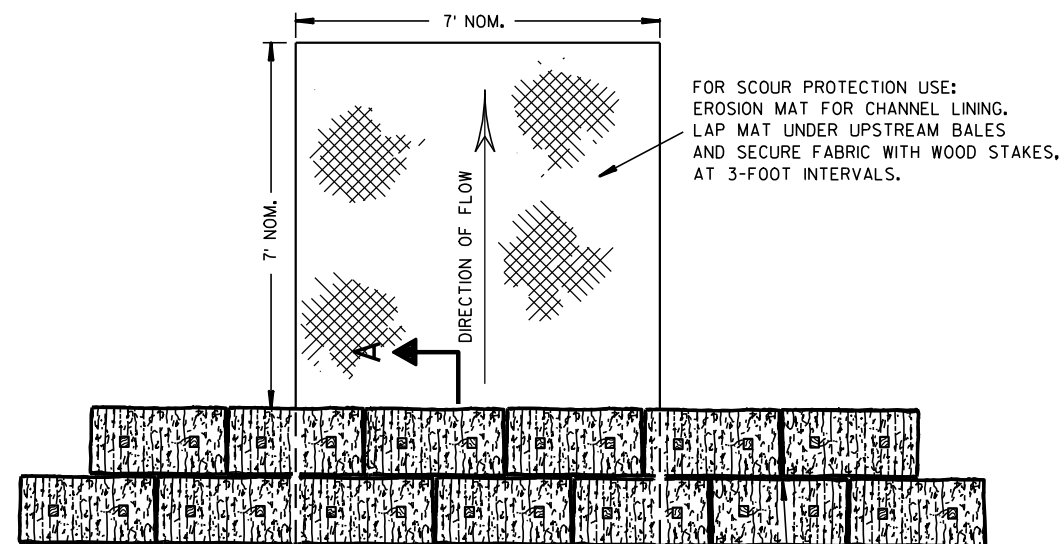
WOOD STAKES (2 PER BALE)
NOMINAL 2" X 2" X 30" MIN.
LENGTH OR EQUIVALENT



NOTE:
ALL DIMENSIONS
ARE APPROXIMATE

EMBED BALES

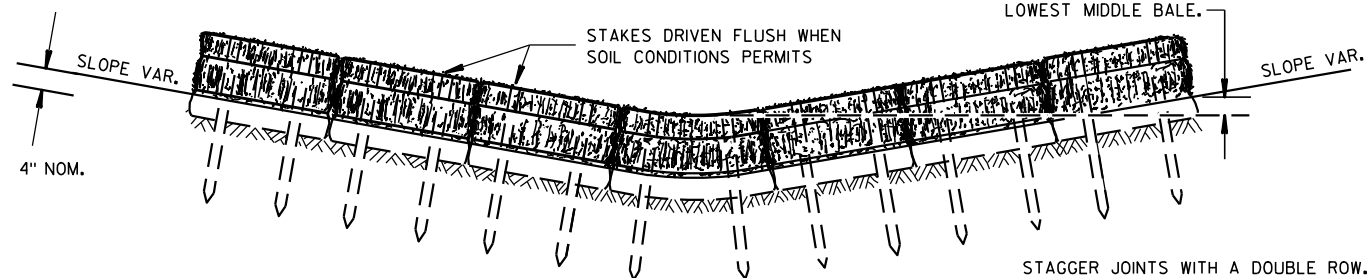
SECTION A-A



PLAN VIEW

STAGGER JOINTS BETWEEN ADJACENT
ROWS OF BALES.

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



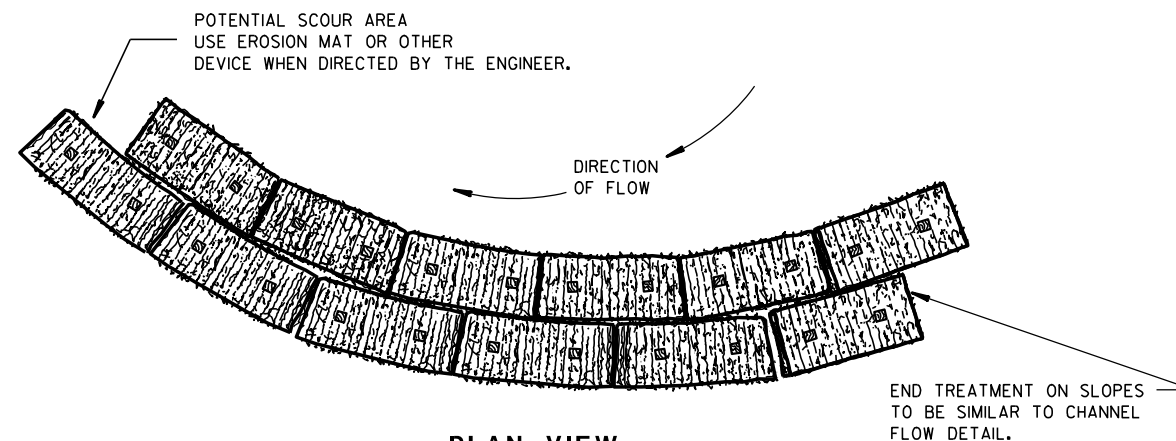
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

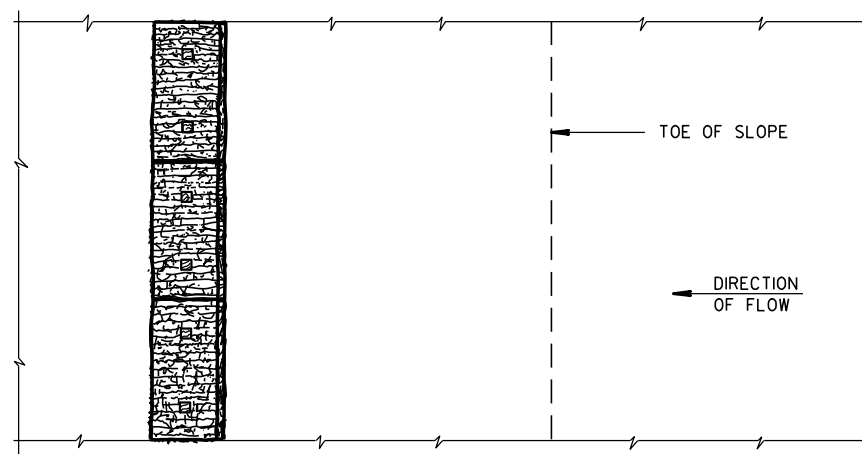
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

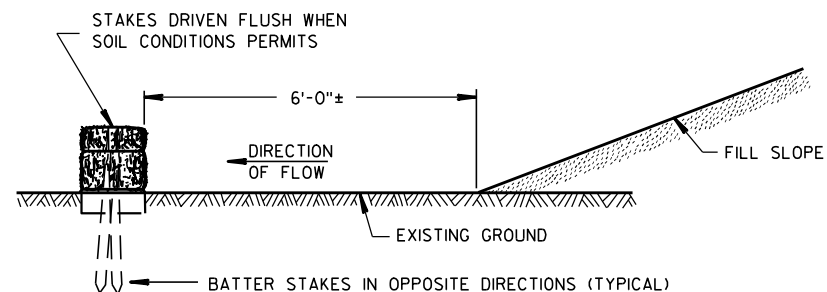


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

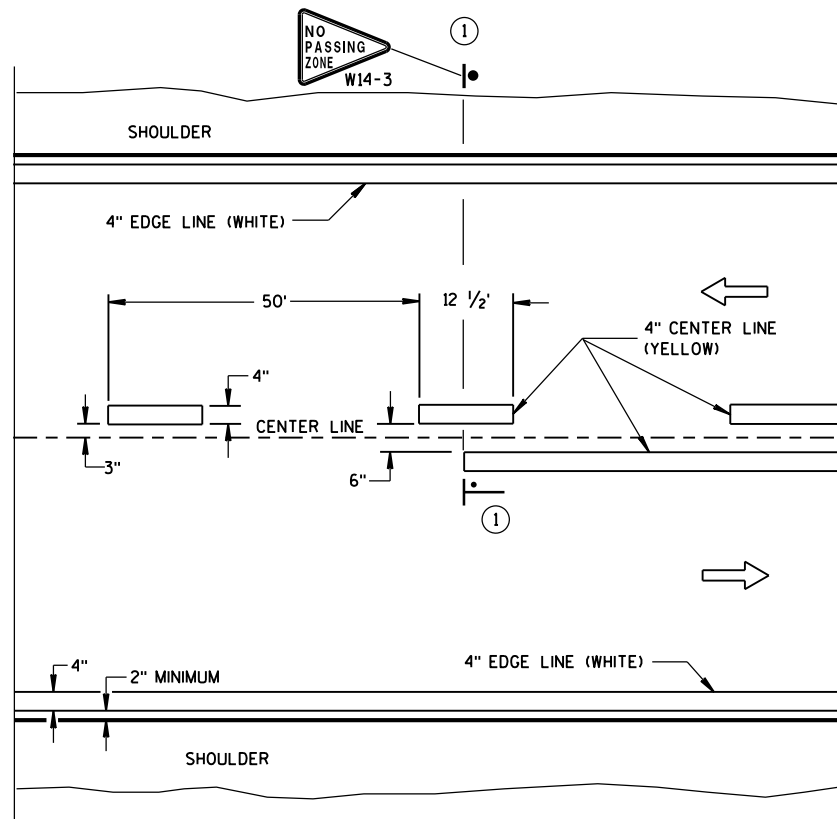
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

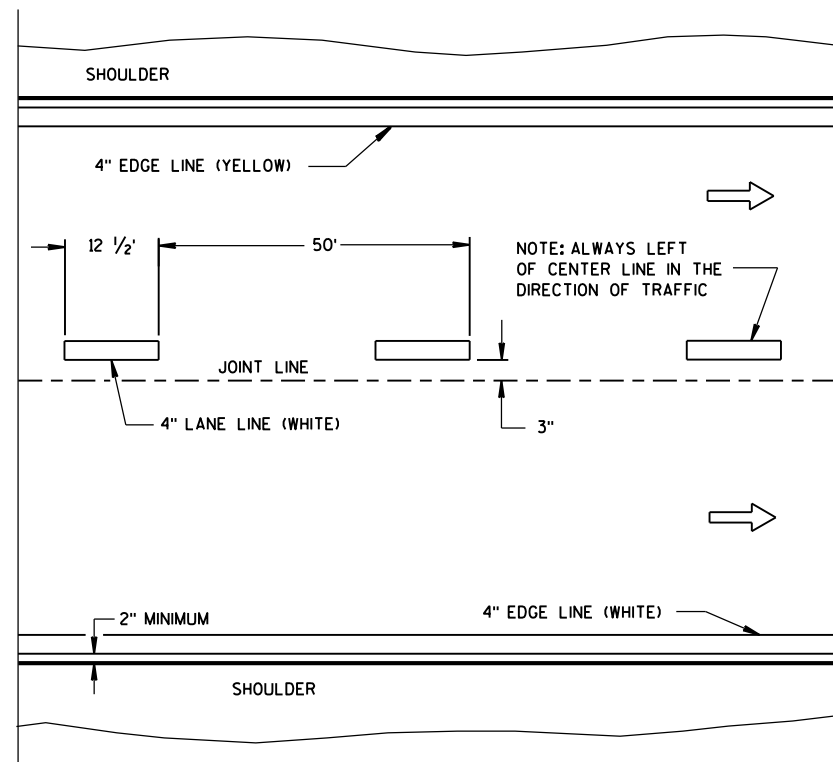
6/04/02
DATE

FHWA

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

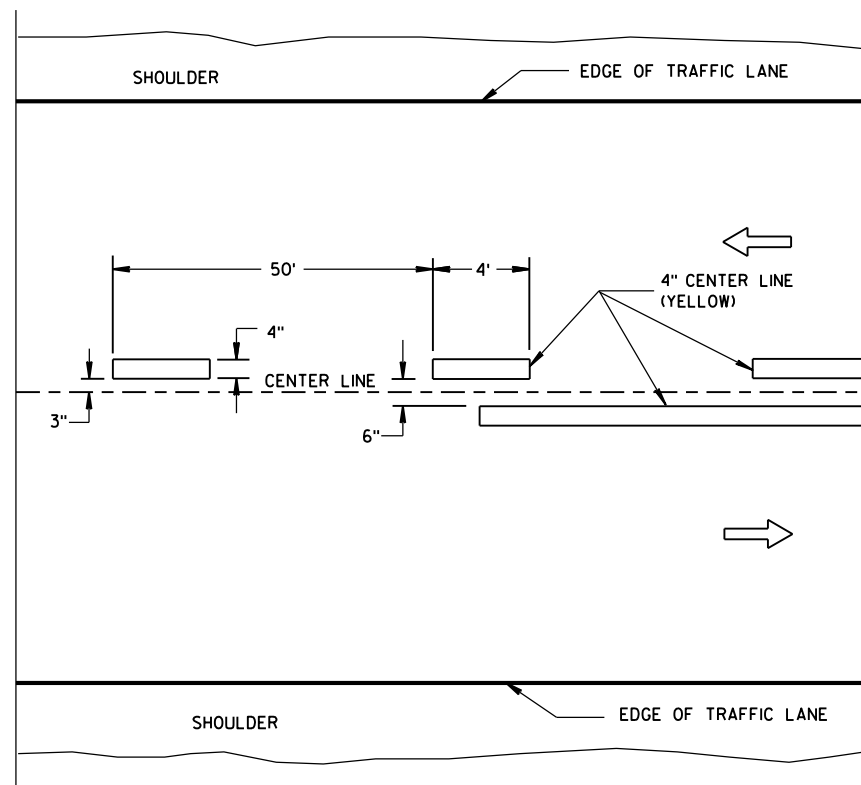


TWO WAY TRAFFIC

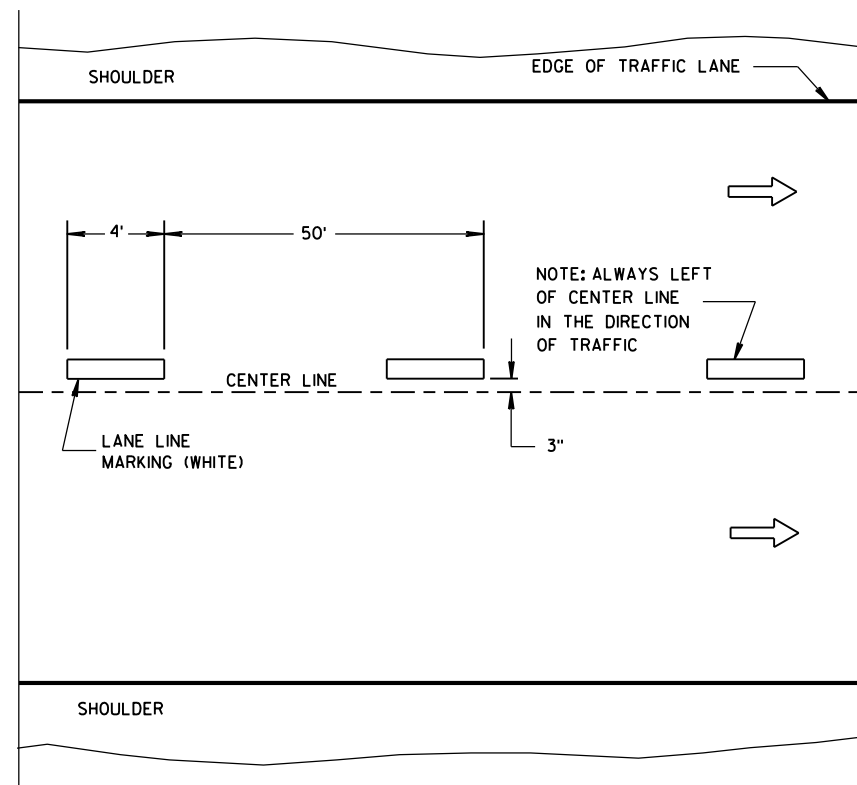


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

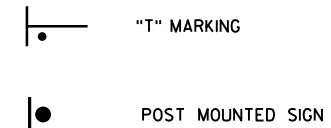
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

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

NOTE

ARROW SYMBOL () SHOWS DIRECTION OF TRAVEL

LEGEND



LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

LEGEND

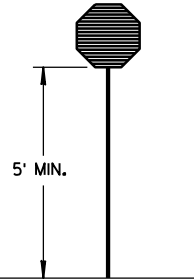
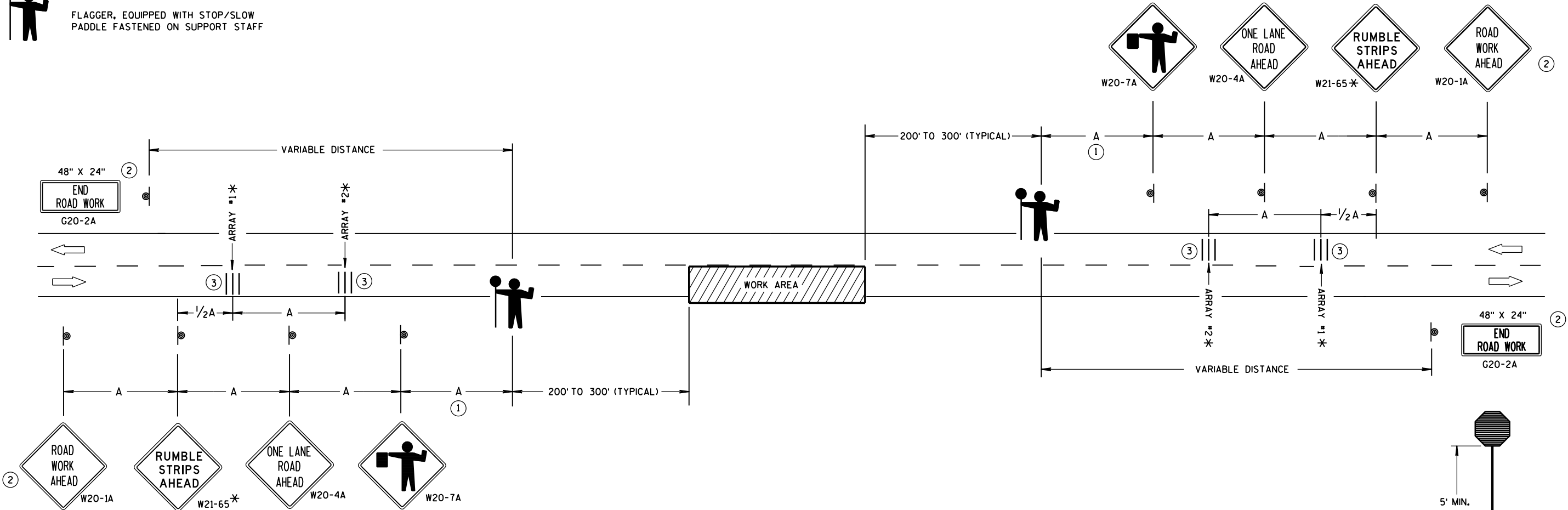
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



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



STOP/SLOW PADDLE ON SUPPORT STAFF

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

GENERAL NOTES

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

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

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

"W0" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS. PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, REMOVE TEMPORARY RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

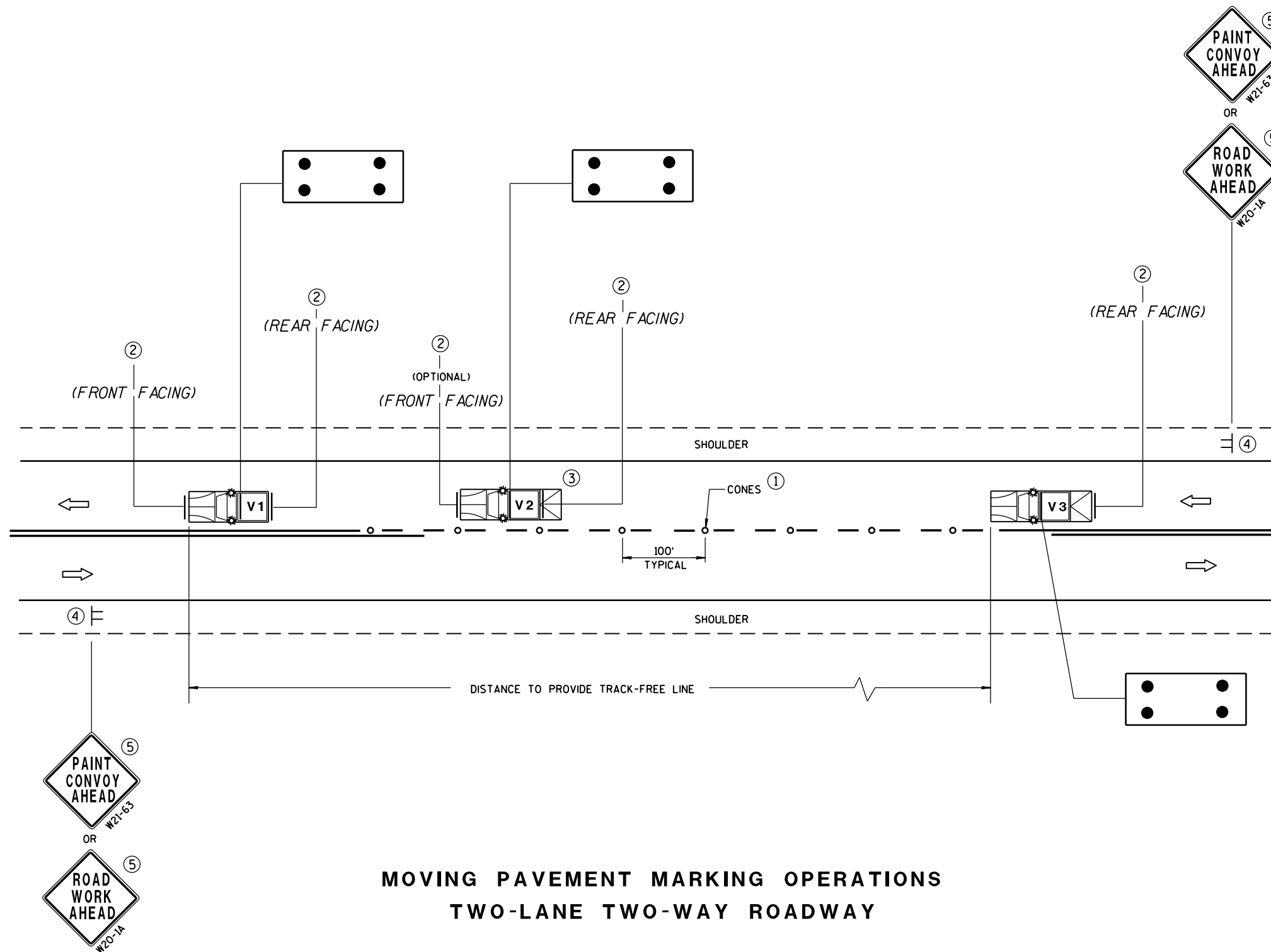
* UTILIZE TEMPORARY RUMBLE STRIPS WHEN FLAGGING OPERATION IS ANTICIPATED TO BE STATIONARY IN EXCESS OF TWO HOURS.

- ① FOR A MOVING WORK OPERATION, SIGNING AND TEMPORARY RUMBLE STRIPS (IF USED) SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3,500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.
- ③ EACH TEMPORARY RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 /S/ Andrew Heldtke
DATE WORK ZONE ENGINEER
FHWA



MOVING PAVEMENT MARKING OPERATIONS TWO-LANE TWO-WAY ROADWAY

GENERAL NOTES

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

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

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

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

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

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

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

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

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

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

② USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.



OR



③ OPTIONAL TRUCK-MOUNTED ATTENUATOR.

④ SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

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

LEGEND

V1 LEAD VEHICLE

V2 SHADOW VEHICLE

V3 TRAIL VEHICLE WITH TMA

TMA TRUCK-MOUNTED ATTENUATOR

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC

CONES

FLASHING ARROW PANEL (CAUTION)

MOVING PAVEMENT MARKING
OPERATION
TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016
DATE
FHWA

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER



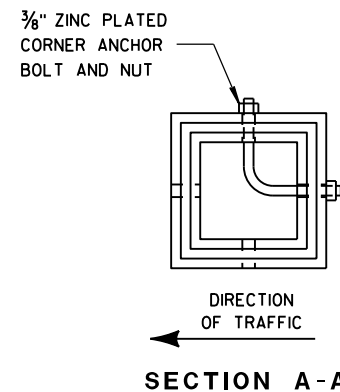
DETAIL OF TUBULAR
STEEL SIGN POST

TUBULAR STEEL POSTS

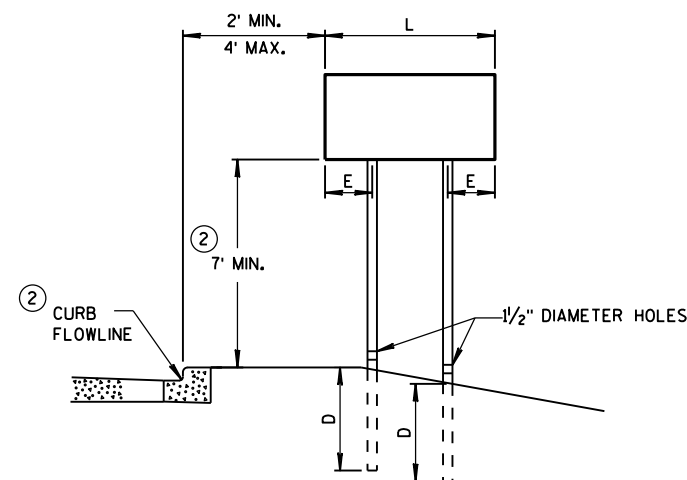
AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL
BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

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



SECTION A-A

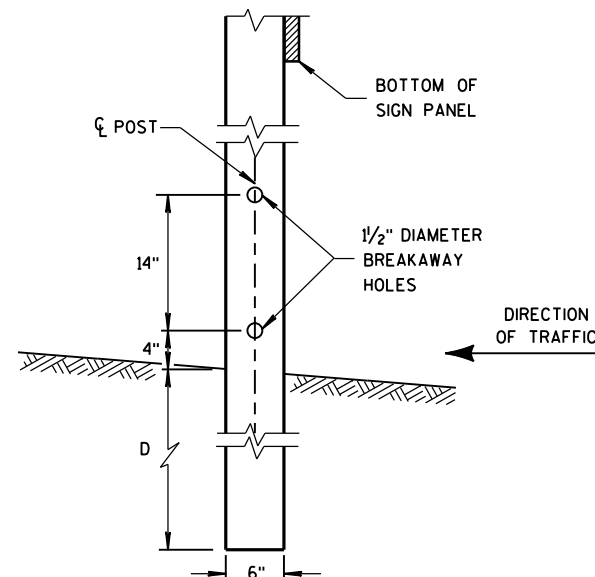


URBAN AREA

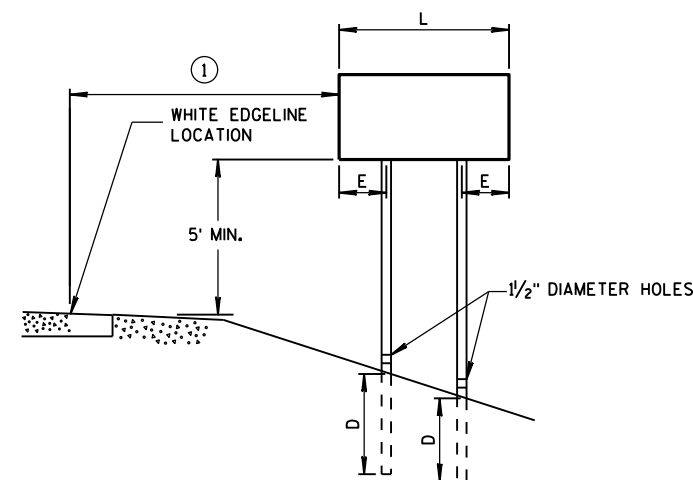
POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST
EMBEDMENT DEPTH

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



4 "x6 " WOOD POST
MODIFICATION



RURAL AREA

4 " X 6 " WOOD POST

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

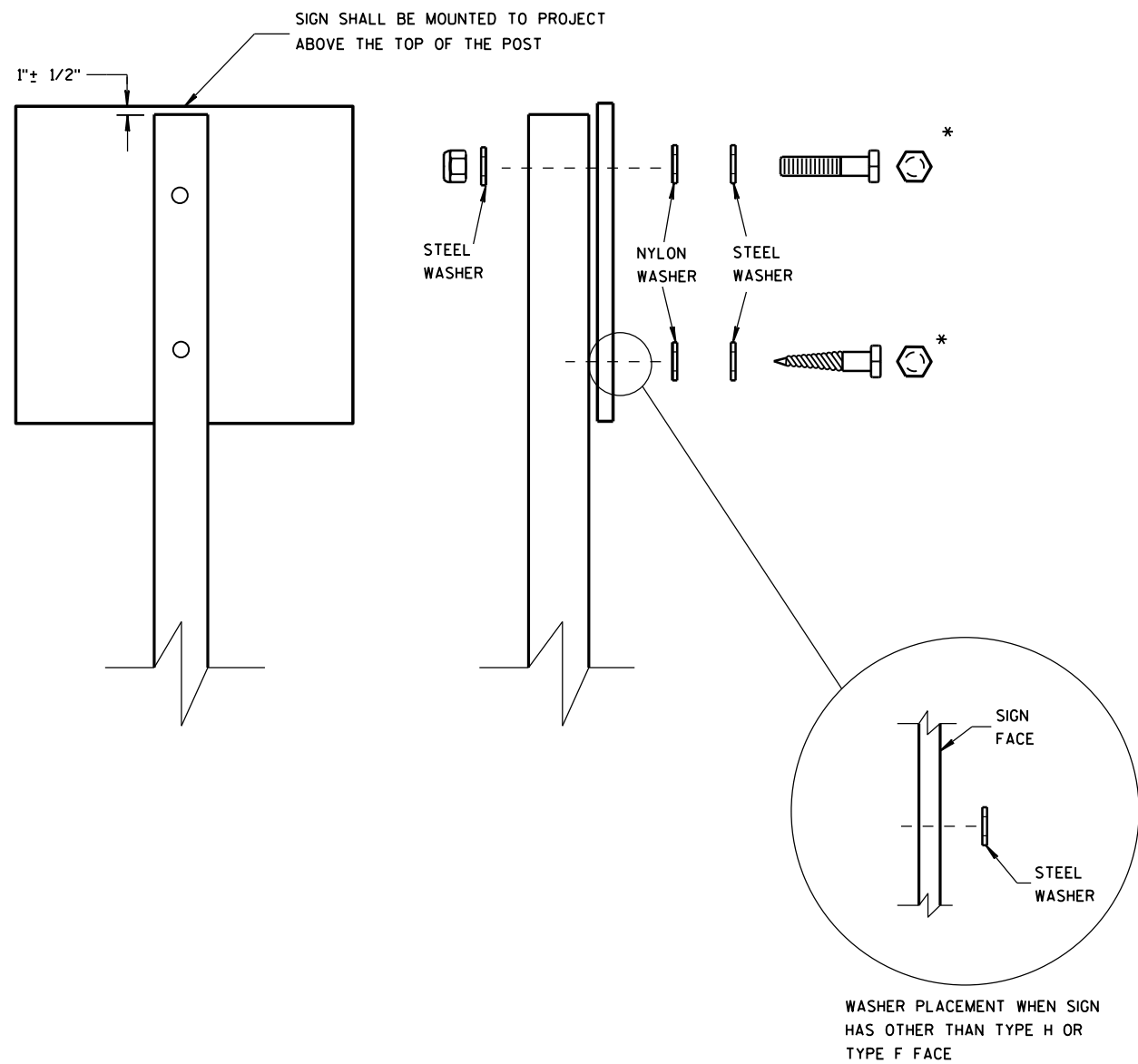
SEE NOTE ③

GENERAL NOTES

- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- ② THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

TEMPORARY TRAFFIC CONTROL
SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

- A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3
- B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

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

- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" x 3-1/4" LENGTH W/ NUTS
 - RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

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

* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

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



Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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