

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

V WRIGHTSTOWN, ALISON CT

HIGHLAND ST - CLAY ST

**LOCAL STREET
BROWN COUNTY**

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
4519-20-70	WISC 2023039	1

ORDER OF SHEETS

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

TOTAL SHEETS = 26



PROJECT LOCATION

DESIGN DESIGNATION

A.A.D.T. (2023)	=	300
A.A.D.T. (2043)	=	400
D.H.V.	=	100
D.D.	=	50150
T.	=	3.3%
DESIGN SPEED	=	30 m.p.h.
ESALS	=	22,000

CONVENTIONAL SYMBOLS

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

STATE PROJECT NUMBER
4519-20-70



BEGIN PROJECT 4519-20-70
STA 20+36
X= 62,190.16
Y= 499,530.75

END PROJECT 4519-20-70
STA 50+39

ACCEPTED FOR
VILLAGE OF WRIGHTSTOWN
Date: 7/25/22 *[Signature]*
(Signature and Title of Official)

ORIGINAL PLANS PREPARED BY
Robert H. Trzinski Associates, Inc.
ENGINEERING, SURVEYING, ENVIRONMENTAL SERVICES
1250 COUNTY ROAD 2000, GREEN BAY, WI 54303
920-832-9841
RYAN H. TRZINSKI
E-42371
GREEN BAY WI
PROFESSIONAL ENGINEER
DATE: 7/20/22 *[Signature]*
(Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	REL
Designer	REL
Project Manager	DOUG KIRST
Regional Examiner	REGIONAL EXAMINER
Regional Supervisor	BRIAN EDWARDS

APPROVED FOR THE DEPARTMENT
DATE: 7/26/2022 *[Signature]*
(Signature)

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), BROWN COUNTY NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES.

ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 18

PROJECT ID: 4519-20-70

COUNTY: BROWN



GENERAL NOTES

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
2. PROPERTY LINES AS SHOWN ARE APPROXIMATE.
3. ALL CURB RADII DIMENSIONS ON THE PLAN ARE MEASURED TO FLANGE LINE.

UTILITIES

AT&T (COMMUNICATIONS)
 VICTORIA KASSAB
 435 S 95TH ST
 MILWAUKEE, WI 53124
 VK325D@ATT.COM
 (920) 401-7512

US SIGNAL (COMMUNICATIONS)
 RYAN MIEDEMA
 20 MONROE AVE NW, STE 450
 GRAND RAPIDS, MI 49503
 (616) 233-7144
 RJMIEDEMA@USSIGNAL.COM

TIME WARNER CABLE (COMMUNICATIONS)
 KURT LITTLE
 12405 POWERSCOURT DR
 ST LOUIS, MO 63131
 CHTR.WI.CONST@CHARTER.COM
 (920) 831-9227

SANITARY, WATER
 VILLAGE OF WRIGHTSTOWN
 SUPERINTENDENT OF PUBLIC WORKS
 ANDY VICKMAN
 352 HIGH STREET
 WRIGHTSTOWN, WI 54180
 (920) 532-0434 EXT 42
 AVICKMAN@WRIGHTSTOWN.US

WISCONSIN PUBLIC SERVICE CORP -
 ELECTRIC AND GAS
 WENDY CHRIST
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 GREEN BAY, WI 54307
 (920) 617-5173
 UTILITIESRELOCATION@WISCONSINPUBLICSERVICE.COM

CONTACTS

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 1250 CENTENNIAL CENTRE BOULEVARD
 HOBART, WI. 54155
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 JLIIMATTA@RELEEINC.COM

WDNR CONTACT
 JIM DOPERLASKI, JR.
 2984 SHAWANO AVE
 GREEN BYA, WI 54313
 (920)412-0165
 JAMES.DOPERLASKI@WISCONSIN.GOV

RUNOFF COEFFICIENT TABLE

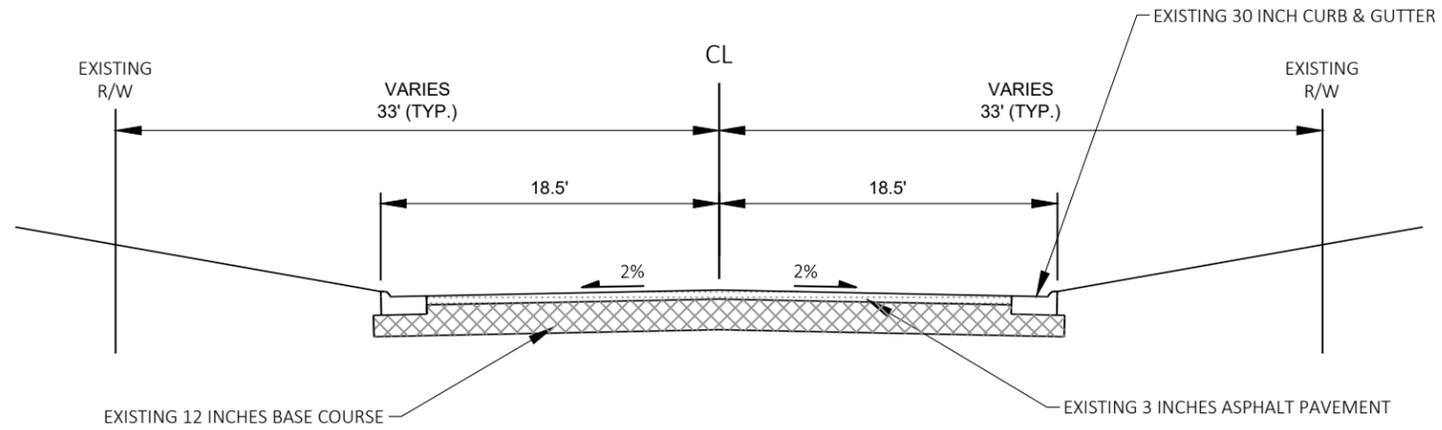
LAND USE:	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
	0-2	2-6	6 & OVER									
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP-TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE-TURF			.25 .32			.27 .34			.28 .36			.30 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

STANDARD ABBREVIATIONS

GR	GRAVEL	WM	WATERMAIN	VPC	VERTICAL POINT OF CURVATURE	R/W	RIGHT OF WAY
BIT	BITUMINOUS	HYD	HYDRANT	VPI	VERTICAL POINT OF INTERSECTION	T/C	TOP OF CURB
ASPH	ASPHALT PAVEMENT	WV	WATER VALVE	VPT	VERTICAL POINT OF TANGENCY	F/L	FLOW LINE
CONC	CONCRETE	SAN	SANITARY SEWER	PC	POINT OF CURVATURE	C/L	CENTERLINE
SW	SIDEWALK	MH	MANHOLE	PI	POINT OF INTERSECTION	P/L	PROPERTY LINE
BLDG	BUILDING	ST	STORM SEWER	PT	POINT OF TANGENCY	R/L	REFERENCE LINE
HSE	HOUSE	CB	CATCH BASIN	R	RADIUS	INV	INVERT
PED	PEDESTAL	TELE	TELEPHONE	EX	EXISTING	CMP	CORRUGATED METAL PIPE
PP	POWER POLE	ELEC	ELECTRIC	PR	PROPOSED	RCP	REINFORCED CONCRETE PIPE
LP	LIGHT POLE	TV	TELEVISION	EOR	END OF RADIUS	CULV	CULVERT
BM	BENCH MARK	STA	STATION	B-B	BACK TO BACK (OF CURB)	PE	PERSONAL ENTRANCE
CE	COMMERCIAL ENTRANCE	FE	FIELD ENTRANCE	E.O.P.	EDGE OF PAVEMENT		

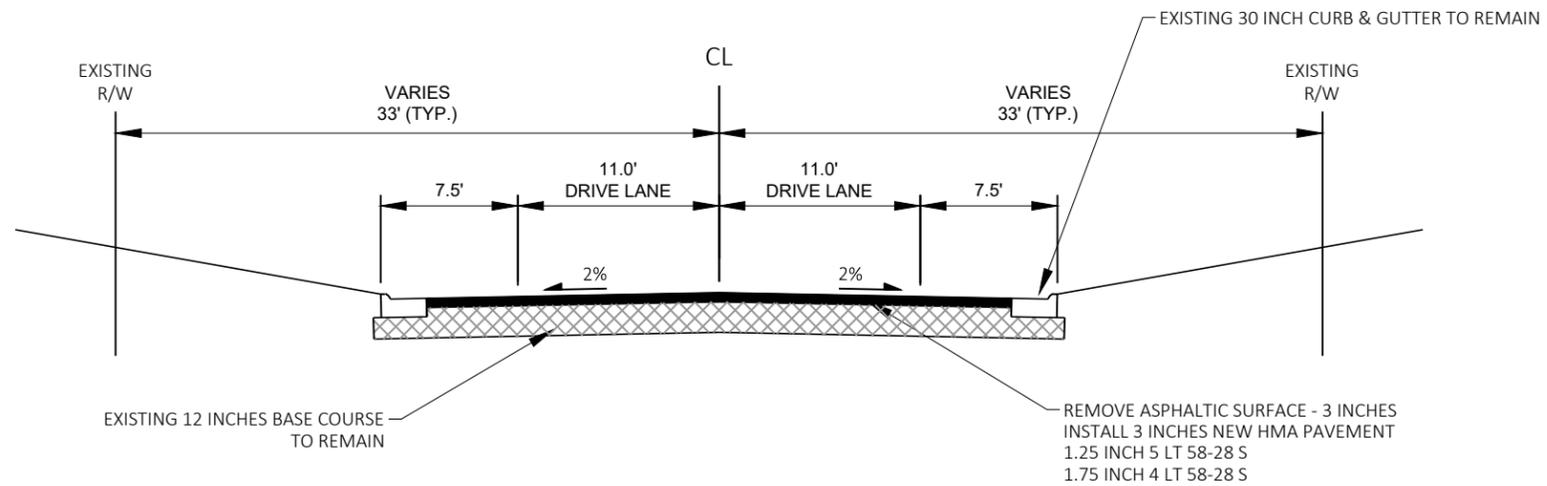
TOTAL PROJECT AREA = 1.14 ACRES
 TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.0 ACRES

PROJECT NO: 4519-20-70	HWY: ALISON COURT	COUNTY: BROWN	PLAN: GENERAL NOTES	SHEET	E
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TYPICAL EXISTING SECTION

ALISON COURT STA. 20+36 TO STA. 26+18.29
SHARLA STREET STA. 50+39 TO STA. 58+24.47



PROPOSED TYPICAL SECTION

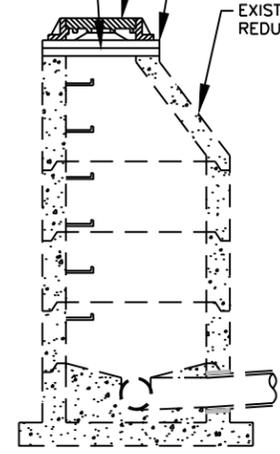
ALISON COURT STA. 20+36 TO STA. 26+18.29
SHARLA STREET STA. 50+39 TO STA. 58+24.47

TWO CONTINUOUS STRIPS OF 1/2" JOINT SEAL OR EQUAL BETWEEN ADJUSTING RINGS AND CASTING. COAT OUTSIDE OF ADJUSTING RINGS ONLY WITH SEWER JOINT COMPOUND AND WRAP WITH MIN. 6 MIL POLYETHYLENE.

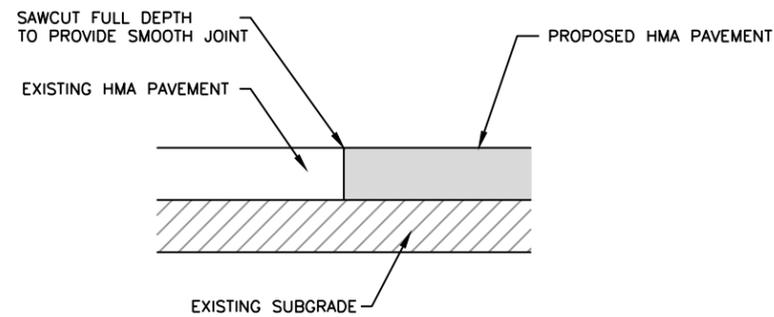
EXISTING MANHOLE CASTING & LID OR AS SPECIFIED.

CONCRETE ADJUSTING RINGS AS REQUIRED. (4" MIN. AND 12" MAX. UNLESS OTHERWISE NOTED. ALL ADJUSTING RINGS LESS THAN 4" SHALL BE RUBBER.)

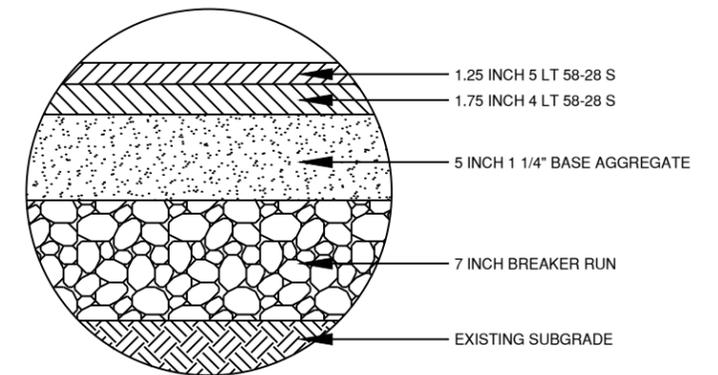
EXISTING ECCENTRIC REDUCING CONE



ADJUSTING SANITARY MANHOLE COVERS



BUTT JOINT DETAIL



BASE REPLACEMENT DETAIL

STA. 25+25 TO STA. 25+90
 STA. 26+35 TO STA. 26+78

* STATIONING IS APPROXIMATE. ENGINEER TO FIELD VERIFY BASE REPLACEMENT LIMITS.

Estimate Of Quantities

4519-20-70

Line	Item	Item Description	Unit	Total	Qty
0002	204.0110	Removing Asphaltic Surface	SY	5,650.000	5,650.000
0004	205.0100	Excavation Common	CY	300.000	300.000
0006	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 4519-20-70	EACH	1.000	1.000
0008	213.0100	Finishing Roadway (project) 01. 4519-20-70	EACH	1.000	1.000
0010	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	290.000	290.000
0012	311.0110	Breaker Run	TON	340.000	340.000
0014	455.0605	Tack Coat	GAL	400.000	400.000
0016	460.2000	Incentive Density HMA Pavement	DOL	678.400	678.400
0018	460.5224	HMA Pavement 4 LT 58-28 S	TON	610.000	610.000
0020	460.5225	HMA Pavement 5 LT 58-28 S	TON	450.000	450.000
0022	618.0100	Maintenance And Repair of Haul Roads (project) 01. 4519-20-70	EACH	1.000	1.000
0024	619.1000	Mobilization	EACH	1.000	1.000
0026	624.0100	Water	MGAL	4.000	4.000
0028	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0030	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0032	628.7015	Inlet Protection Type C	EACH	4.000	4.000
0034	642.5001	Field Office Type B	EACH	1.000	1.000
0036	643.0300	Traffic Control Drums	DAY	320.000	320.000
0038	643.0420	Traffic Control Barricades Type III	DAY	45.000	45.000
0040	643.0705	Traffic Control Warning Lights Type A	DAY	90.000	90.000
0042	643.0900	Traffic Control Signs	DAY	70.000	70.000
0044	643.5000	Traffic Control	EACH	1.000	1.000
0046	650.5000	Construction Staking Base	LF	145.000	145.000
0048	650.8000	Construction Staking Resurfacing Reference	LF	1,428.000	1,428.000
0050	650.9911	Construction Staking Supplemental Control (project) 01. 4519-20-70	EACH	1.000	1.000
0052	690.0150	Sawing Asphalt	LF	64.000	64.000
0054	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	600.000	600.000
0056	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	300.000	300.000
0058	SPV.0060	Special 01. Adjusting Sanitary Manhole Covers	EACH	4.000	4.000
0060	SPV.0060	Special 02. Adjusting Water Valve Boxes	EACH	1.000	1.000

3

PAVEMENT REMOVAL

		204.0110		211.0101	
		REMOVING ASPHALTIC SURFACE		PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT)	
CATEGORY	STA TO STA	LOCATION	SY	EA	
0010	20+36 - 50+39	4519-20-70	--	1	
0010	20+36 - 26+78	ALISON CT	2,787	--	
0010	50+39 - 58+25	SHARLA ST	2,795	--	
0010	UNDISTRIBUTED		68	--	
TOTAL			5,650	1	

EXCAVATION COMMON

		205.0100	
		EXCAVATION COMMON	
CATEGORY	STA TO STA	LOCATION	CY
0010	25+25 - 25+90	ALISON CT	78
0010	26+35 - 26+78	CUL DE SAC	169
0010	UNDISTRIBUTED		53
TOTAL			300

FINISHING ROADWAY

		213.0100	
CATEGORY	PROJECT	EACH	
0010	4519-20-70	1	
TOTAL		1	

3

BASE AGGREGATE

		305.0120		311.0110		624.0100	
		BASE AGGREGATE DENSE 1 1/4-INCH		BREAKER RUN		WATER	
CATEGORY	STA TO STA	LOCATION	TON	TON	MGAL		
0010	25+25 - 25+90	ALISON CT	65	81	1		
0010	26+35 - 26+78	CUL DE SAC	141	177	2		
0010	UNDISTRIBUTED		84	82	1		
TOTALS			290	340	4		

HMA PAVEMENT

		455.0605		460.5224		460.5225	
		TACK COAT		HMA PAVEMENT 4 LT 58-28 S		HMA PAVEMENT 5 LT 58-28 S	
CATEGORY	STA TO STA	LOCATION	GAL	TON	TON		
0010	20+36 - 26+78	ALISON CT	196	281	201		
0010	50+39 - 58+25	SHARLA ST	196	282	201		
0010	UNDISTRIBUTED		8	47	48		
TOTALS			400	610	450		

MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT)

		618.0100	
CATEGORY	PROJECT	EACH	
0020	4519-20-70	1	
TOTAL		1	

MOBILIZATION

		619.1000	
CATEGORY	PROJECT	EACH	
0010	4519-20-70	1	
TOTAL		1	

PROJECT NO: 4519-20-70

HWY: ALISON CT

COUNTY: BROWN

MISCELLANEOUS QUANTITIES

SHEET

E

EROSION CONTROL MOBILIZATIONS

CATEGORY	PROJECT	628.1905	628.1910
		EROSION CONTROL	EROSION EMERGENCY CONTROL
0010	4519-20-70	2	1
TOTALS		2	1

EROSION CONTROL DEVICES

CATEGORY	STA	TO	STA	LOCATION	628.7015
					INLET PROTECTION TYPE C
0010	20+36	-	26+78	ALISON CT	2
0010	50+39	-	58+25	SHARLA ST	2
TOTAL					4

FIELD OFFICE TYPE B

CATEGORY	PROJECT	642.5001
		EACH
0010	4519-20-70	1
TOTAL		1

TRAFFIC CONTROL ITEMS

CATEGORY	LOCATION	PROJECT DURATION	643.0300	643.0420	643.0705	643.0900
			TRAFFIC CONTROL DRUMS*	TRAFFIC CONTROL BARRICADES TYPE III	TRAFFIC CONTROL WARNING LIGHTS TYPE A	TRAFFIC CONTROL SIGNS
0010	4519-20-70	10	29	4	8	6
0010	UNDISTRIBUTED		30	5	10	10
TOTALS			320	45	90	70

TRAFFIC CONTROL

CATEGORY	PROJECT	643.5000
		EACH
0010	4519-20-70	1
TOTAL		1

*NOTE: TRAFFIC CONTROL DRUMS AVAILABLE FOR PROTECTING MANHOLES, WATER VAVLE BOXES, BASE REPLACEMENT AREAS, OR OTHER MISCELLANEOUS NEEDS FOR CONSTRUCTION OPERATIONS

3

3

CONSTRUCTION STAKING

	650.5000	650.8000	650.9911
CONSTRUCTION STAKING BASE	CONSTRUCTION STAKING RESURFACING REFERENCE	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT)	

CATEGORY	STA	TO	STA	LOCATION	LF	LF	EA
0010	20+36	-	26+78	ALISON CT	145	642	1
0010	50+39	-	58+25	SHARLA ST	--	786	--
TOTALS					145	1,428	1

SAWING ASPHALT

690.0150
SAWING
ASPHALT

CATEGORY	STATION	LOCATION	LF
0010	20+36	HIGHLAND ST	32
0010	50+39	CLAY ST	32
TOTAL			64

ADJUSTING UTILITIES

	SPV.0060.01	SPV.0060.02
ADJUSTING SANITARY MANHOLE COVERS	ADJUSTING WATER VALVE BOXES	

CATEGORY	STA	TO	STA	LOCATION	EA	EA
0020	20+36	-	26+78	ALISON CT	2	--
0020	50+39	-	58+25	SHARLA ST	2	1
TOTALS					4	1

PROJECT NO: 4519-20-70

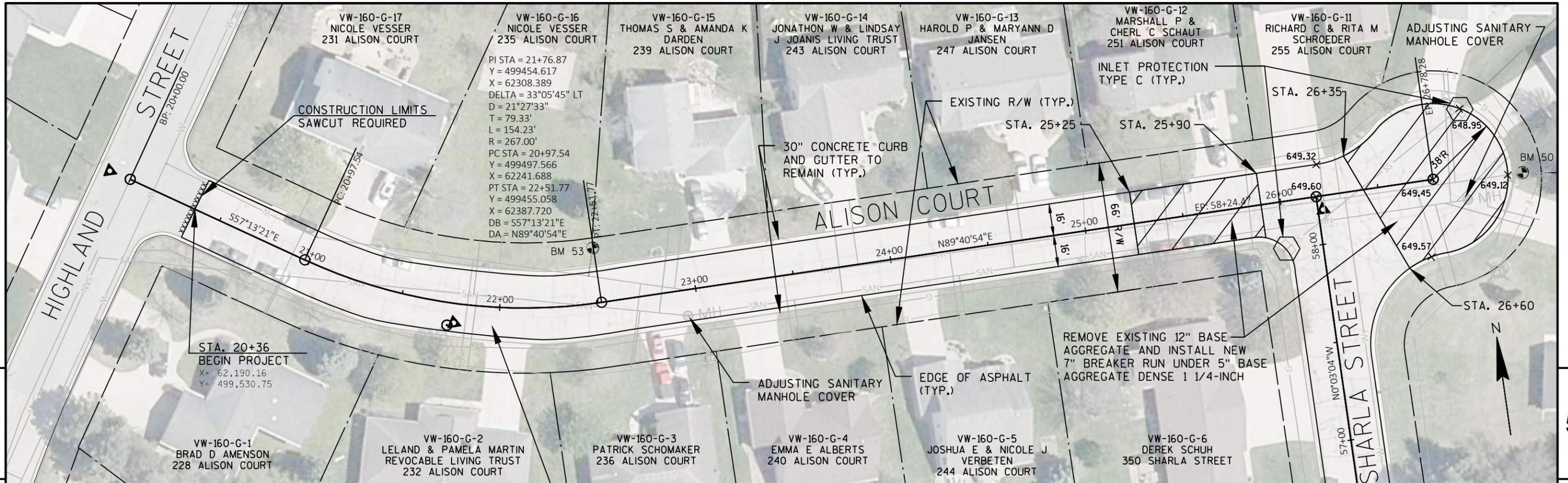
HWY: ALISON CT

COUNTY: BROWN

MISCELLANEOUS QUANTITIES

SHEET

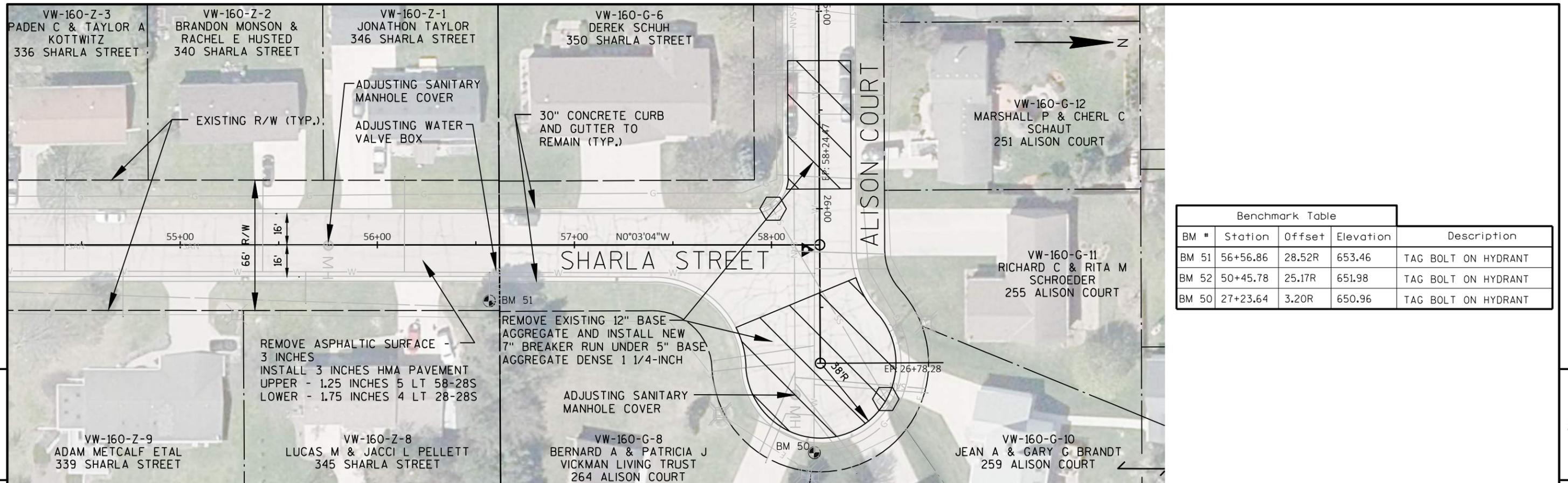
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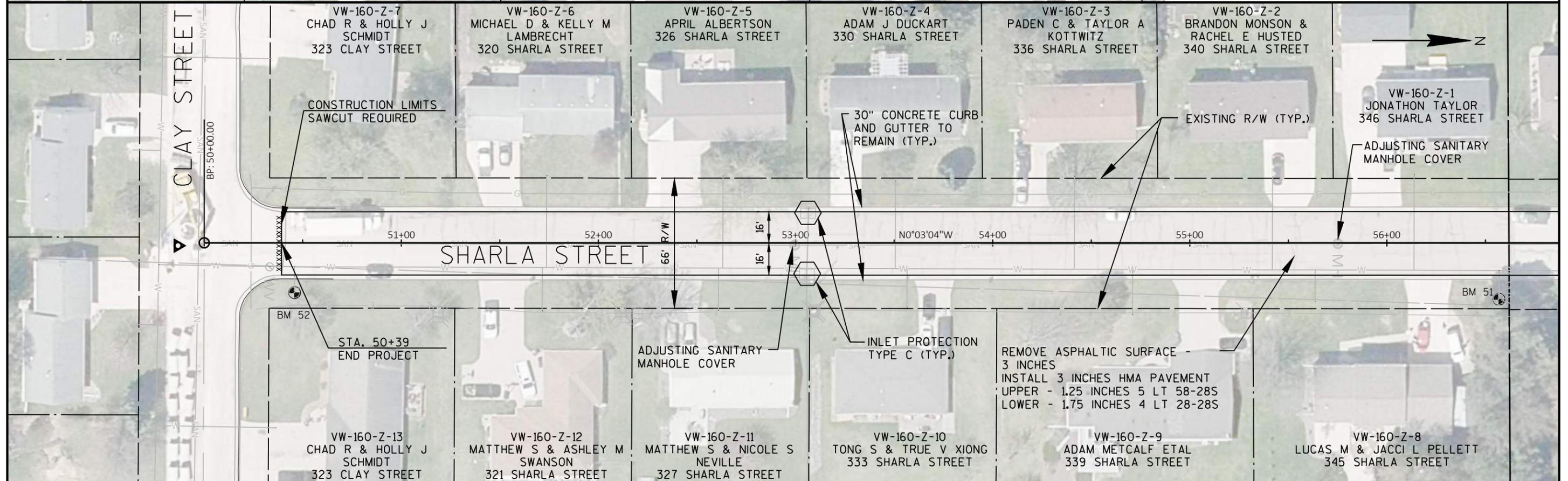
STA. 20+36
BEGIN PROJECT
X = 62,190.16
Y = 499,530.75

REMOVE ASPHALTIC SURFACE -
3 INCHES
INSTALL 3 INCHES HMA PAVEMENT
UPPER - 1.25 INCHES 5 LT 58-28S
LOWER - 1.75 INCHES 4 LT 28-28S

Benchmark Table				
BM #	Station	Offset	Elevation	Description
BM 53	22+51.77	27.84L	653.28	FLAG BOLT ON HYDRANT
BM 50	27+23.64	3.20R	650.96	TAG BOLT ON HYDRANT



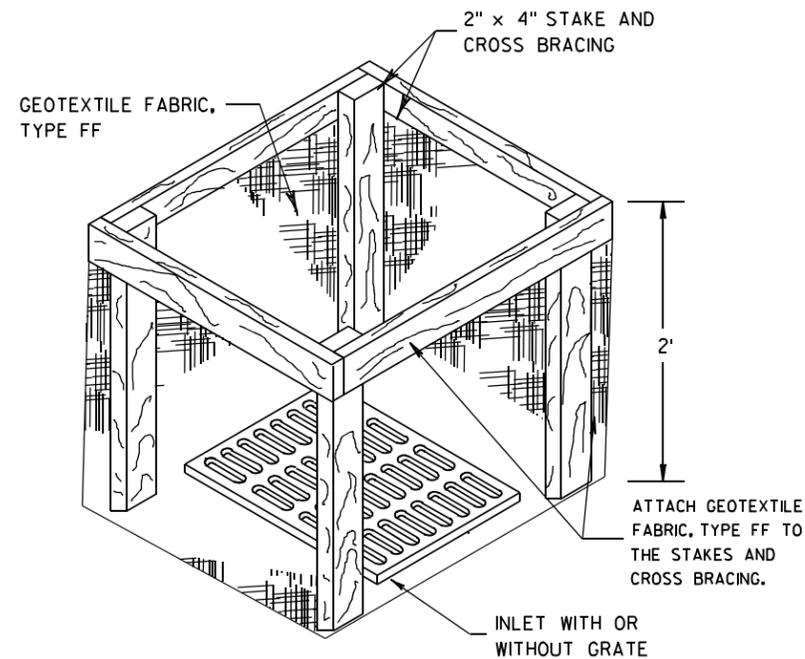
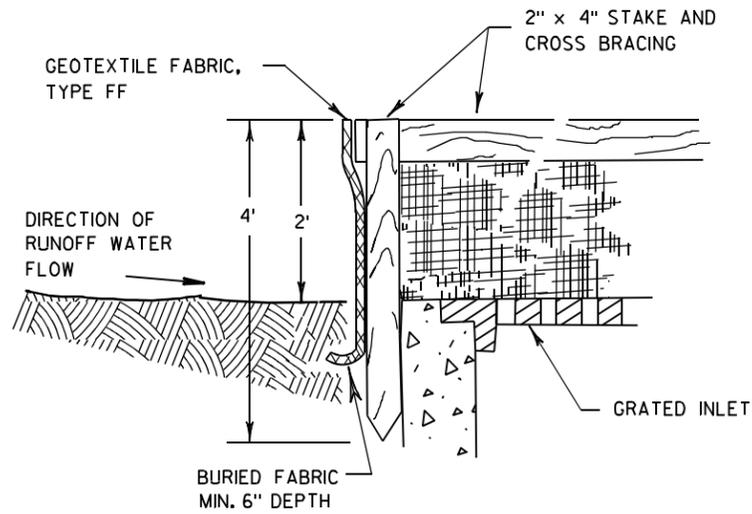
Benchmark Table				
BM #	Station	Offset	Elevation	Description
BM 51	56+56.86	28.52R	653.46	TAG BOLT ON HYDRANT
BM 52	50+45.78	25.17R	651.98	TAG BOLT ON HYDRANT
BM 50	27+23.64	3.20R	650.96	TAG BOLT ON HYDRANT



PROJECT NO: 4519-20-70 HWY: ALISON COURT COUNTY: BROWN PLAN: SHARLA STREET SHEET: 5

Standard Detail Drawing List

08E10-02	INLET PROTECTION TYPE A, B, C AND D
13C19-03	HMA LONGITUDINAL JOINTS
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS



INLET PROTECTION, TYPE A

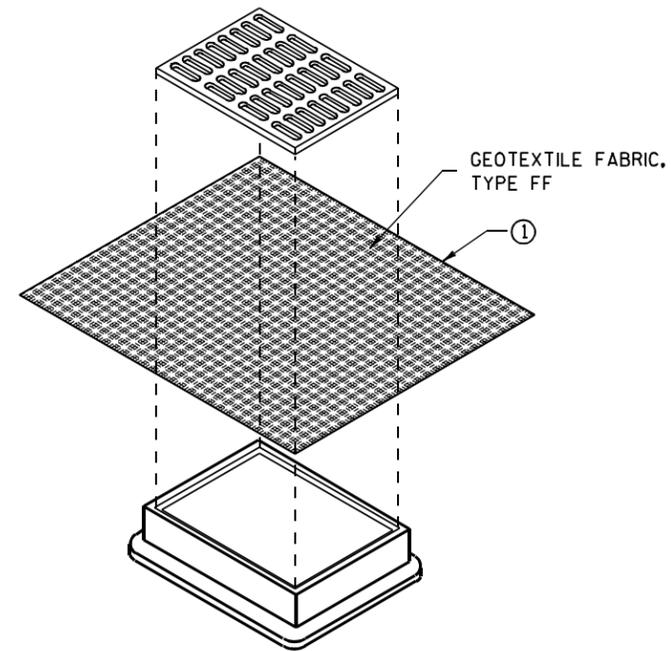
GENERAL NOTES

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.

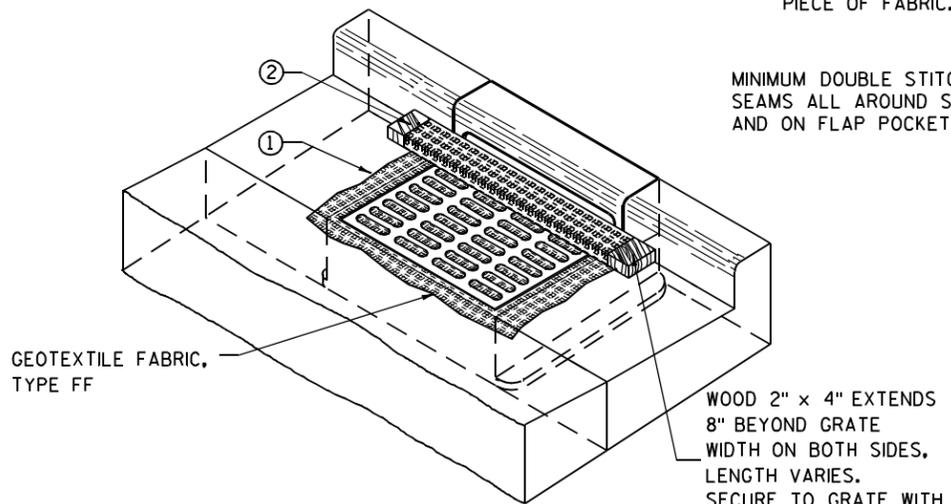
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- 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.

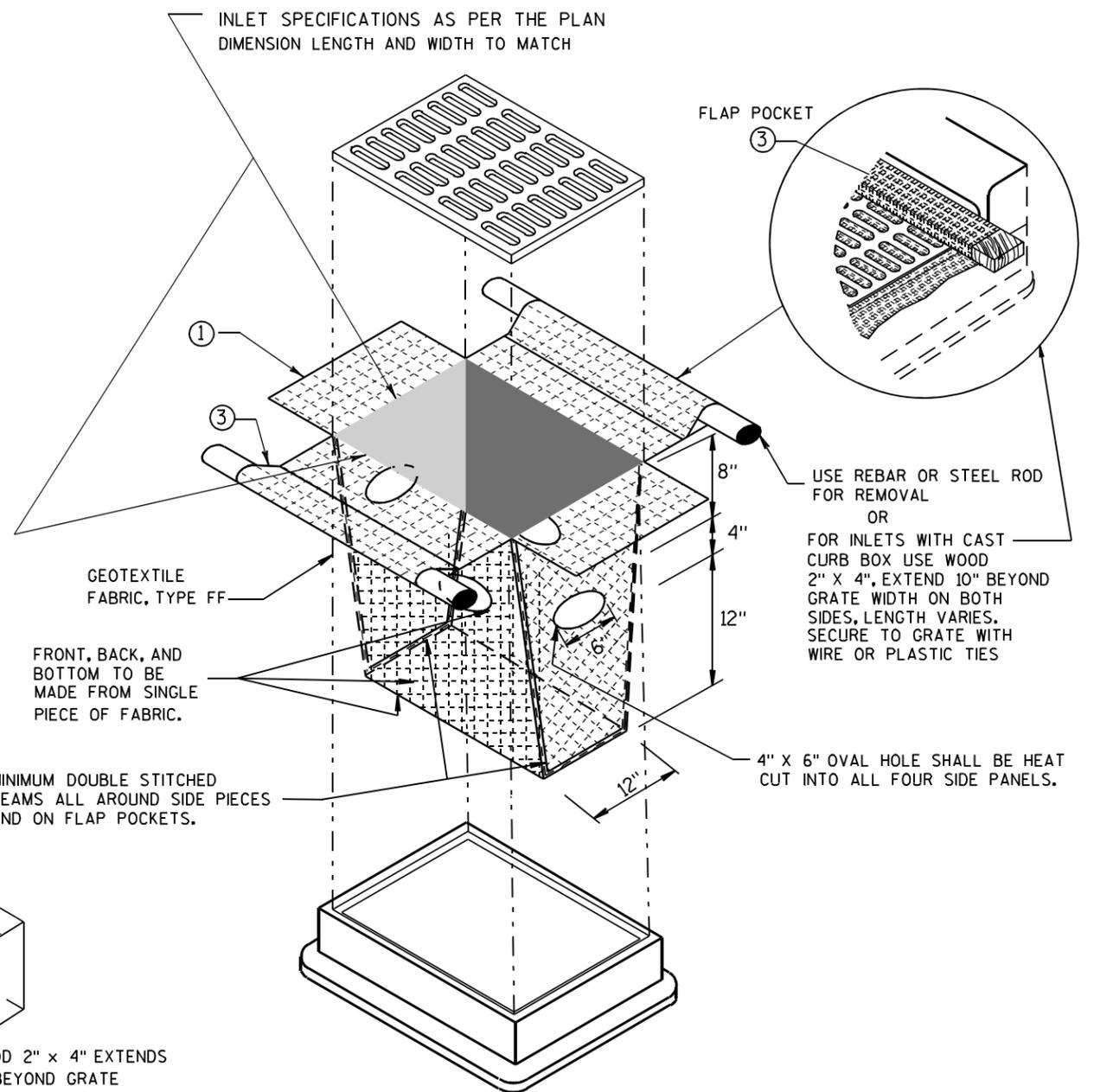
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

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.



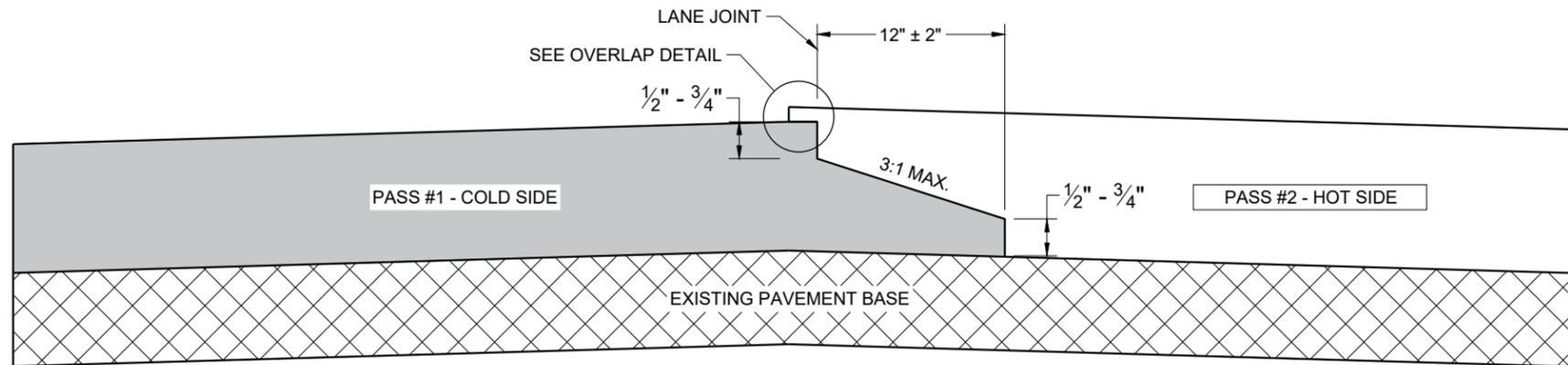
INLET PROTECTION, TYPE D

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

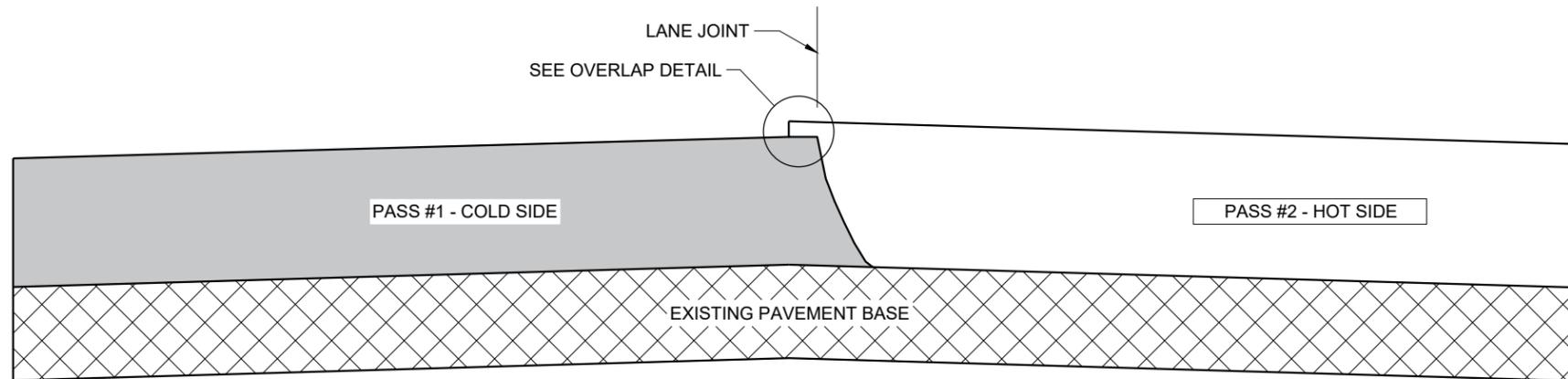
**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

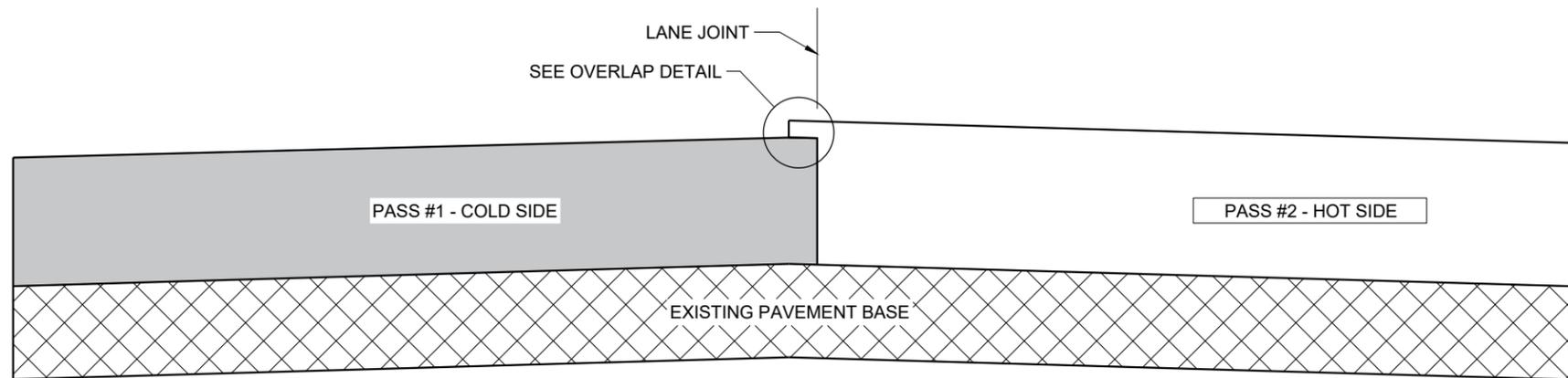
APPROVED
10/16/02 /S/ Beth Connestra
DATE
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



**TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)**

GENERAL NOTES

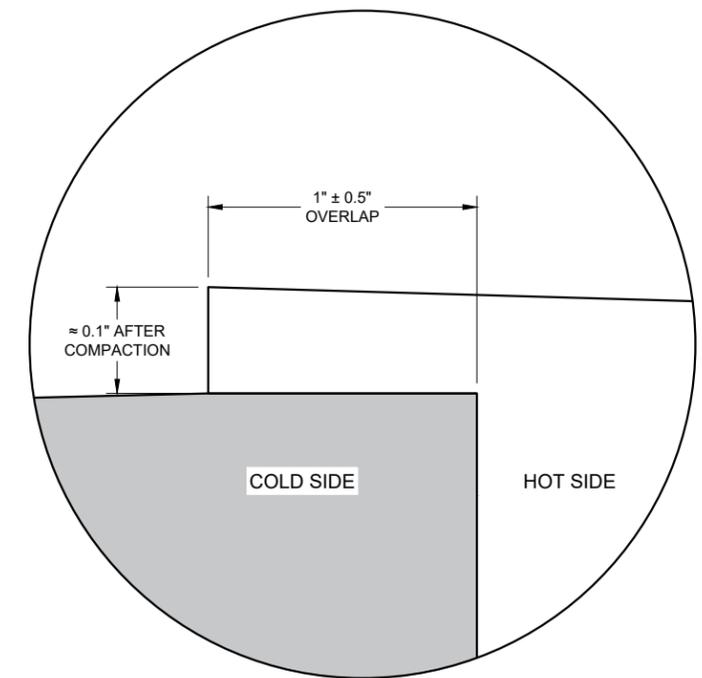
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY $1" \pm 0.5"$ AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY $0.1"$ AFTER FINAL COMPACTION. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

ONLY REMOVE THE LONGITUDINAL NOTCHED WEDGE JOINT FOR SMA PAVEMENT OR AS DIRECTED BY THE ENGINEER TO ADDRESS SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC.

WHEN MILLING BACK OR REMOVING ANY LONGITUDINAL JOINT, LIMIT THE MATERIAL REMOVED TO $2"$ FROM THE TOP NOTCH OR FROM THE VERTICAL JOINT EDGE ON THE COLD SIDE OF THE JOINT.

USE LONGITUDINAL MILLED JOINT AS PLANS SHOW OR THE AS THE ENGINEER DIRECTS.



OVERLAP DETAIL (TYPICAL)

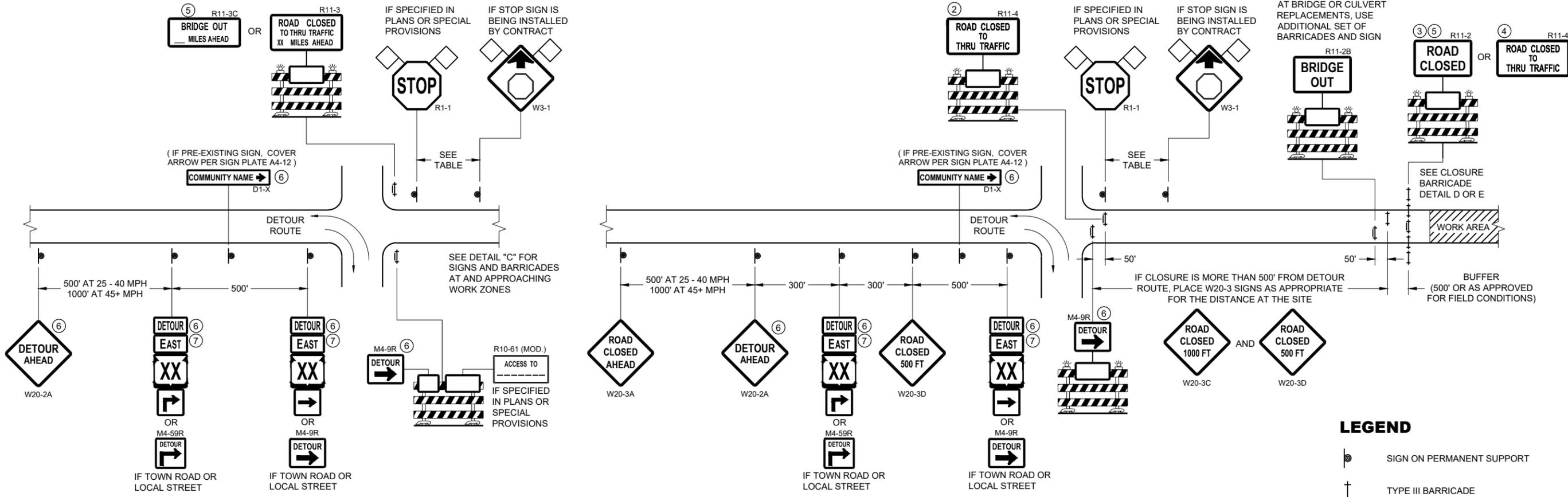
6

6

SDD 13C19 - 03

SDD 13C19 - 03

HMA LONGITUDINAL JOINTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2020 DATE	/S/ Steven Hefel HMA PAVEMENT ENGINEER
FHWA	



**DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR**

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

**DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR**

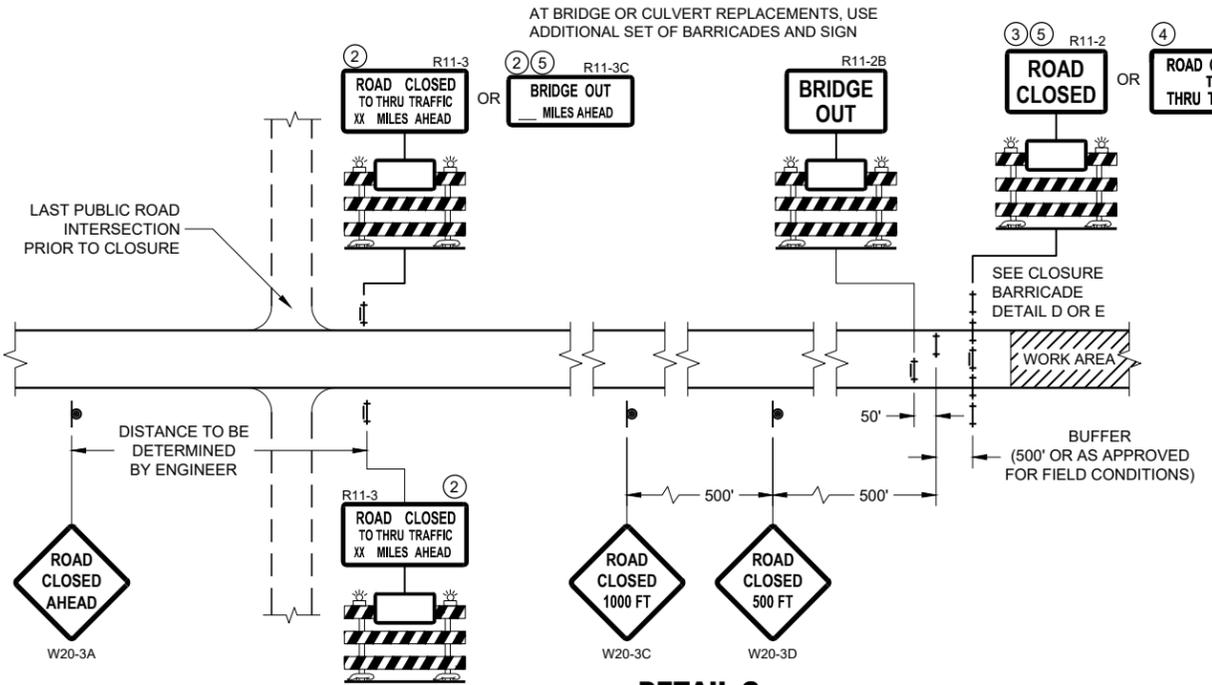
WORK ZONE LESS THAN 1/2 MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

LEGEND

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

- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1



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

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

APPROVED
February 2020 /S/ Andrew Heidtke
DATE DATE WORK ZONE ENGINEER

FHWA

GENERAL NOTES

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

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

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

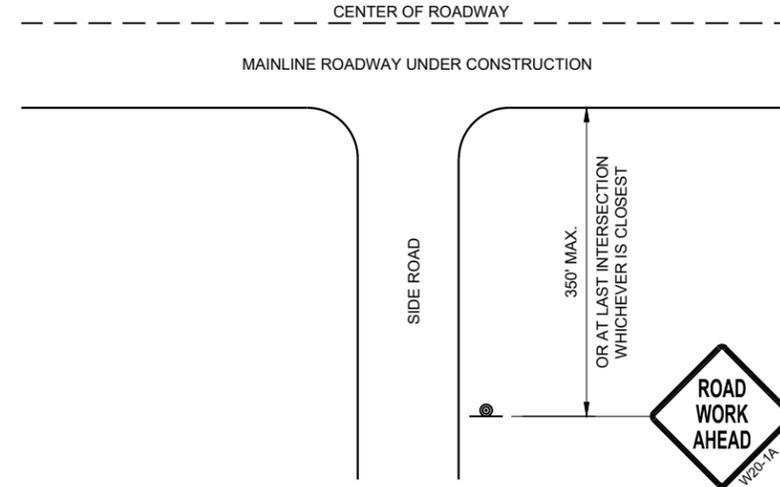
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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 REESTABLISHED.

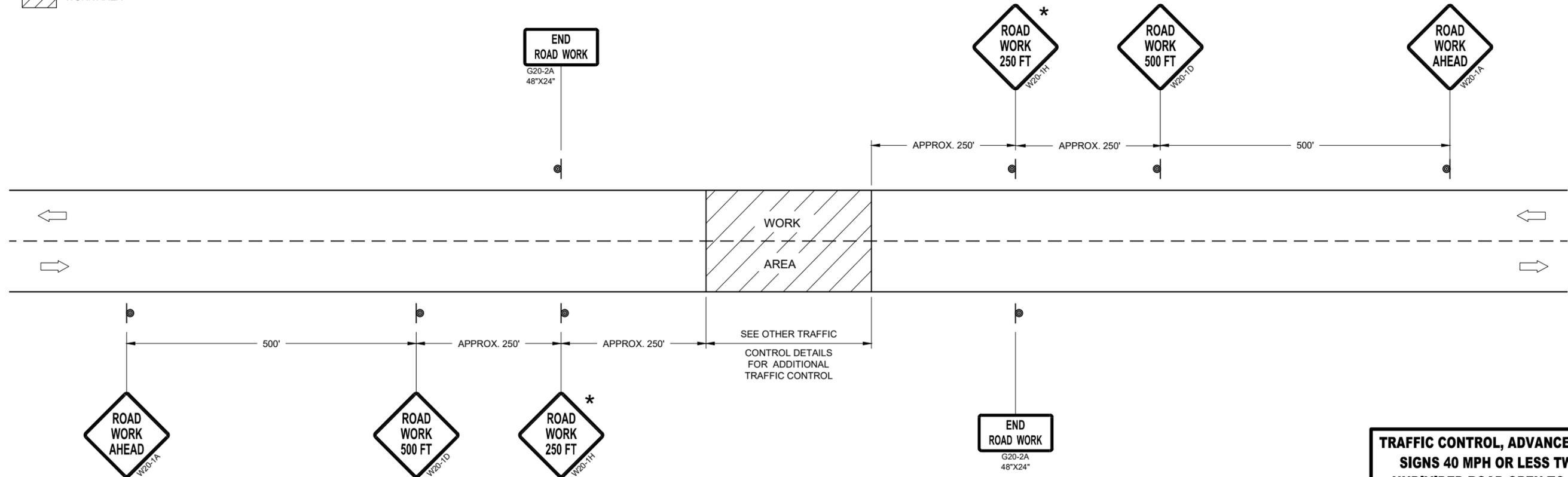
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

LEGEND

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



**TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL**



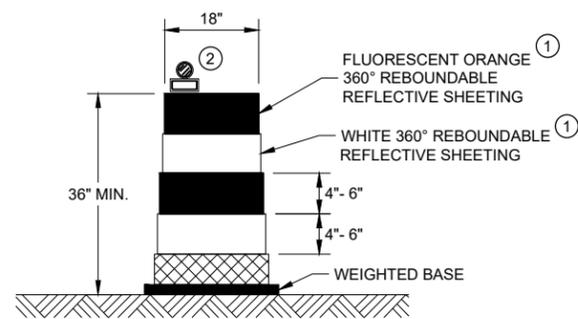
TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

**TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 40 MPH OR LESS TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC**

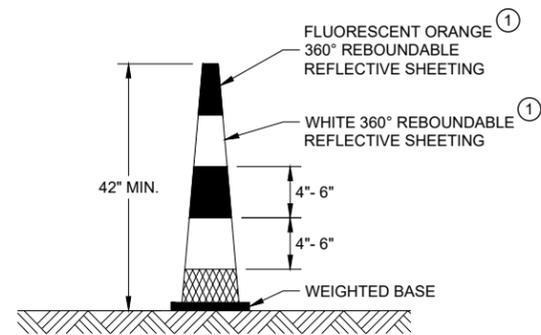
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE July 2018 /S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

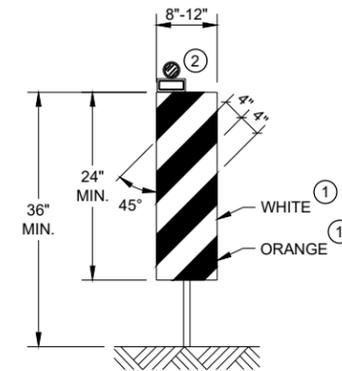


DRUM



42" CONE

DO NOT USE IN TAPERS
 1/2 SPACING OF DRUMS

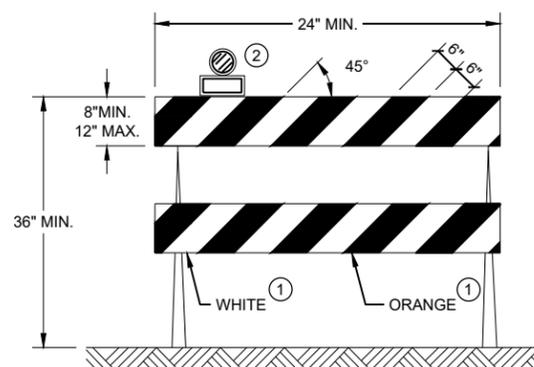


VERTICAL PANEL

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

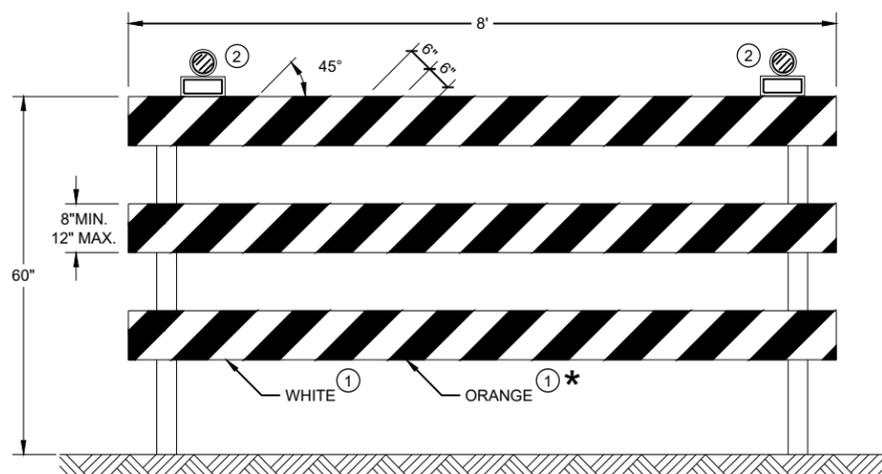
GENERAL NOTES

- 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 II BARRICADE

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



TYPE III BARRICADE

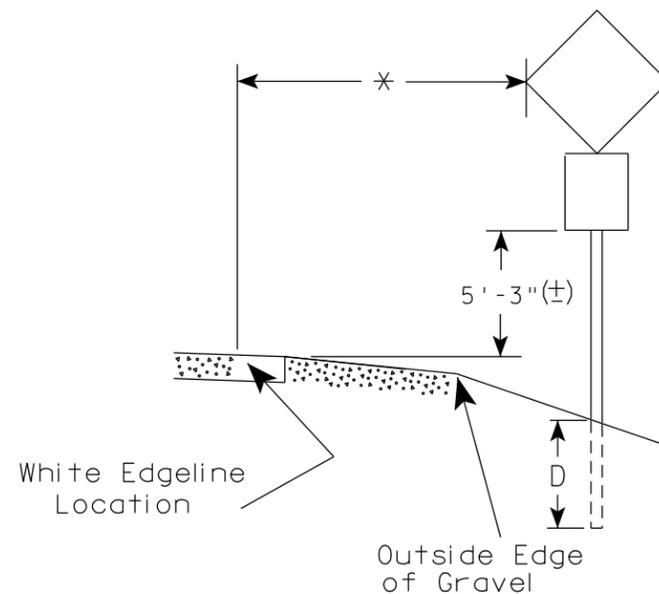
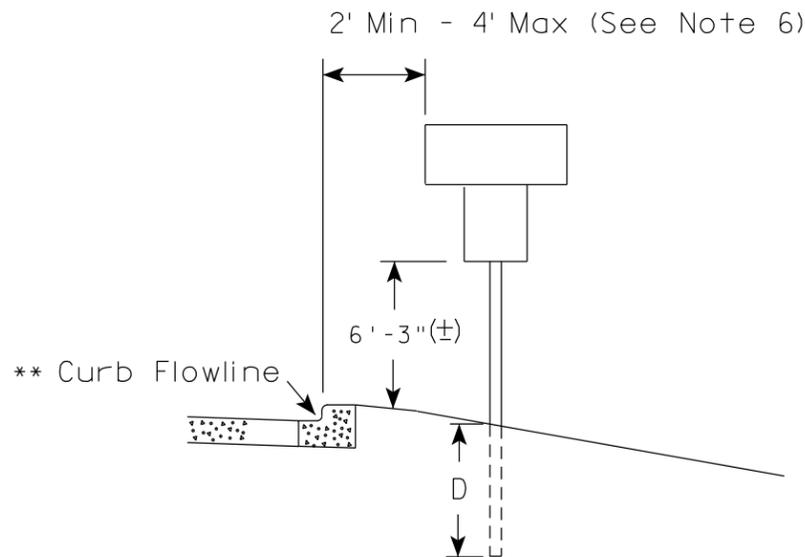
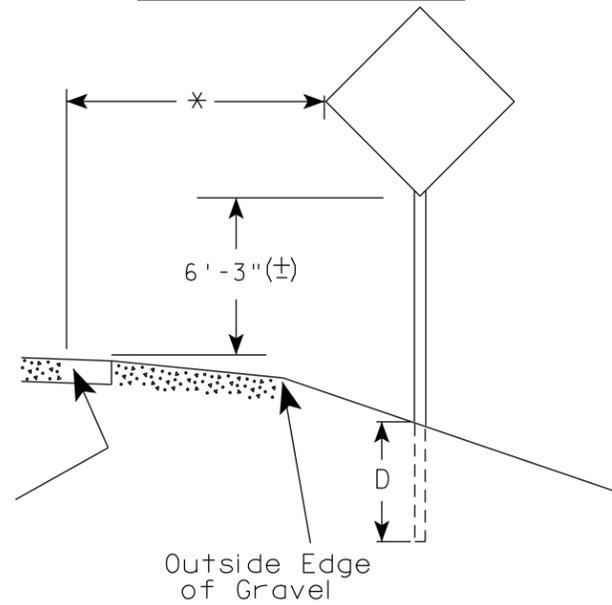
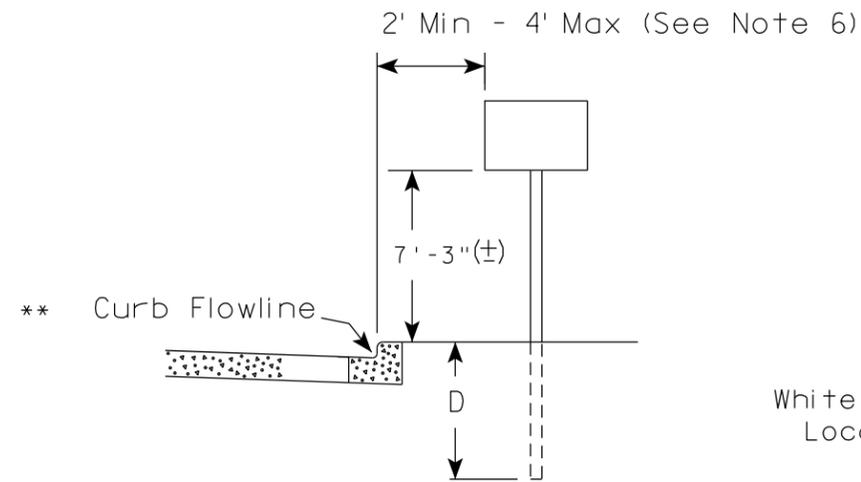
IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2021 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

URBAN AREA

RURAL AREA (See Note 2)



POST EMBEDMENT DEPTH

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

- 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 or behind barrier wall, see A4-10 sign plate.
The Double Arrow sign (W12-1D) 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" (±).
 3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
 4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
 5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
 6. The (±) tolerance for mounting height is 3 inches.
 7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the 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.

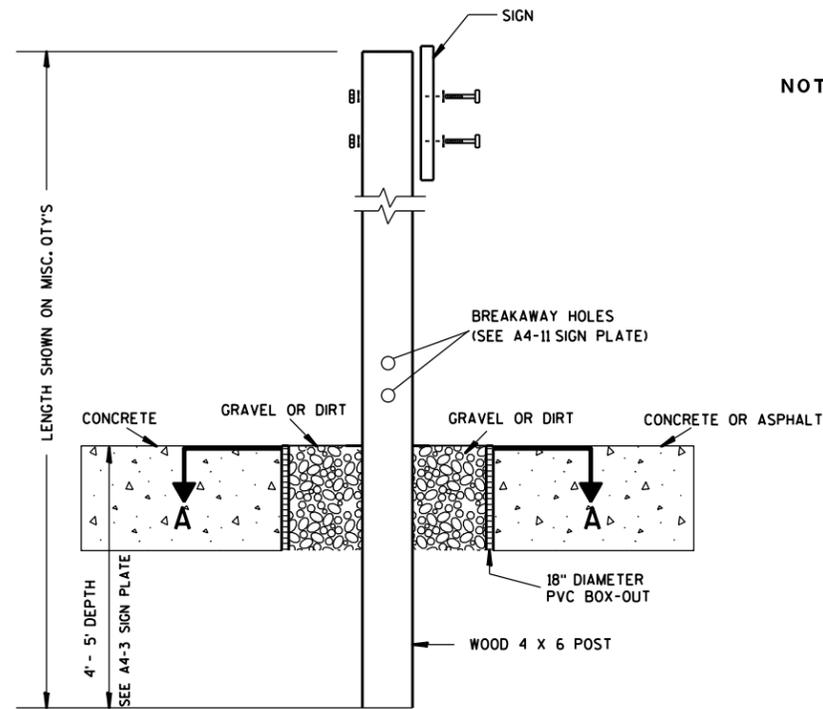
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

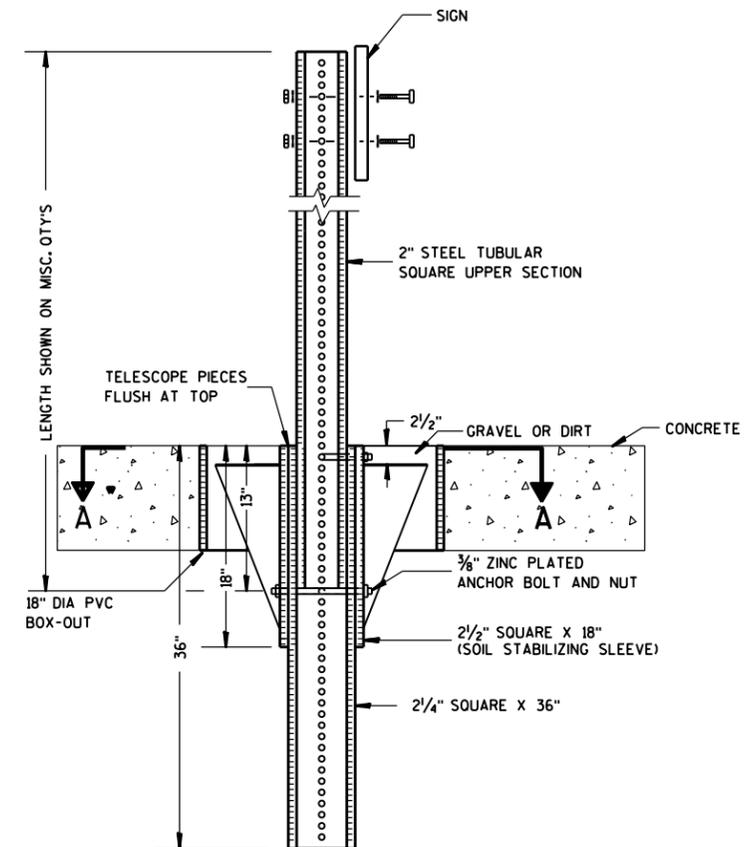
DATE 5/13/2020 PLATE NO. A4-3.22



ELEVATION VIEW

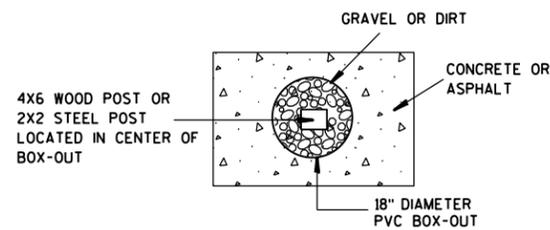
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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

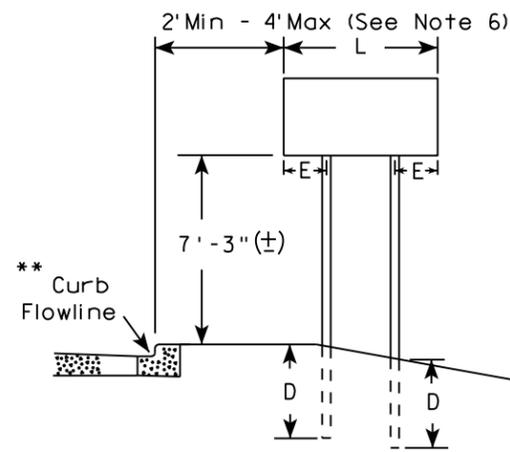
7

7

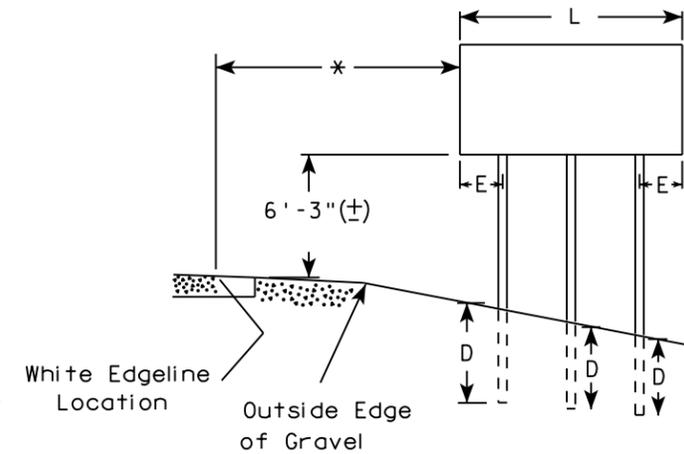
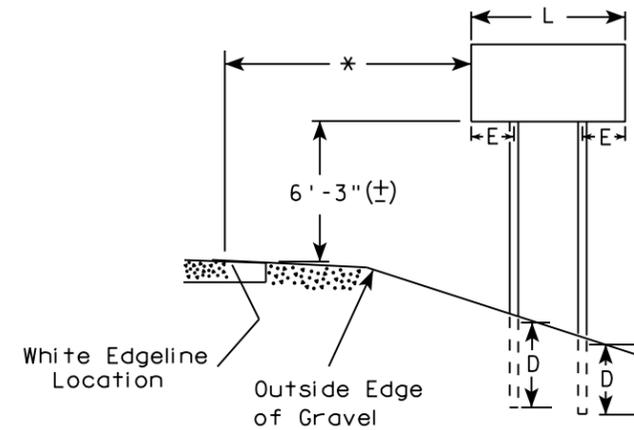
GENERAL NOTES

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" (±).

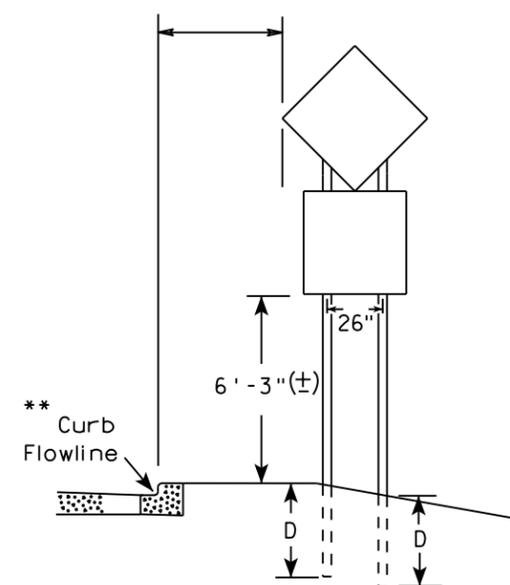
URBAN AREA



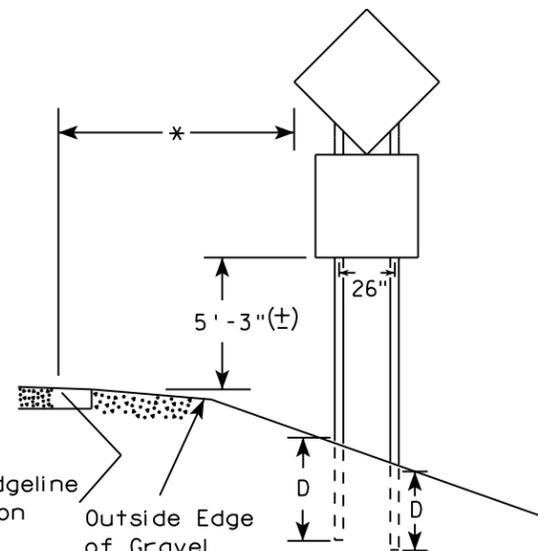
RURAL AREA (See Note 3)



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



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

* 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

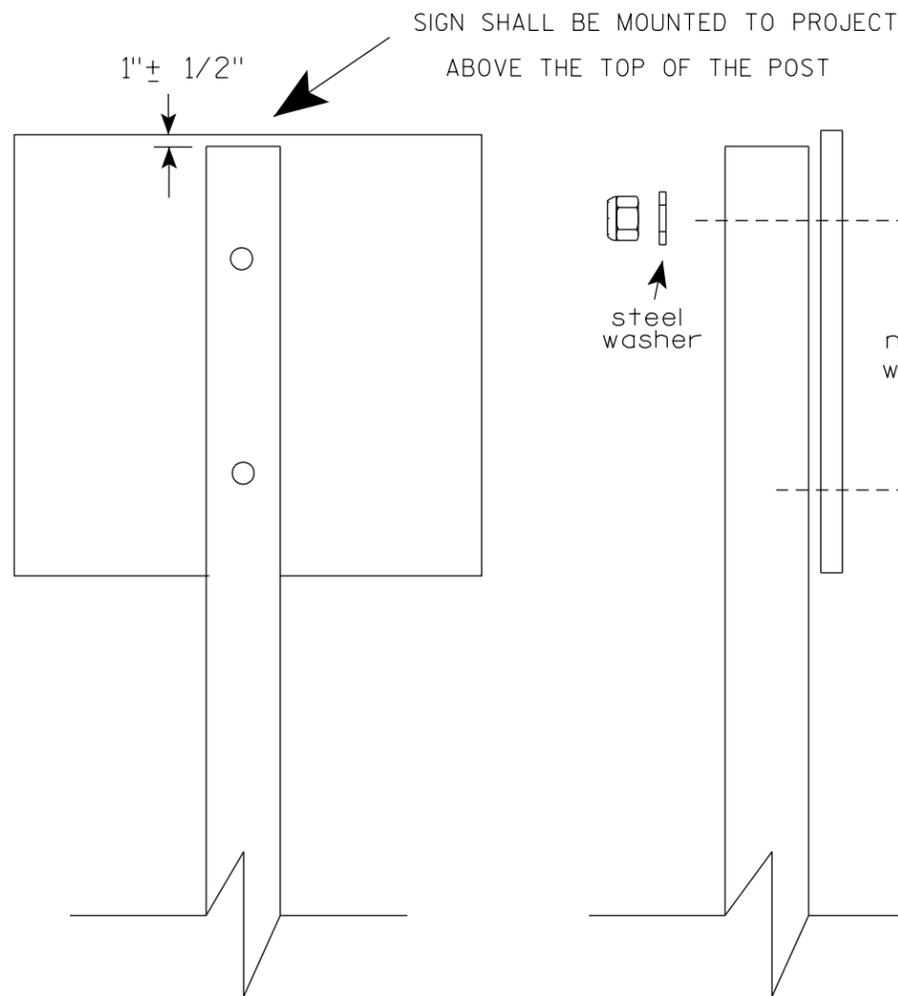
SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

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 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) -

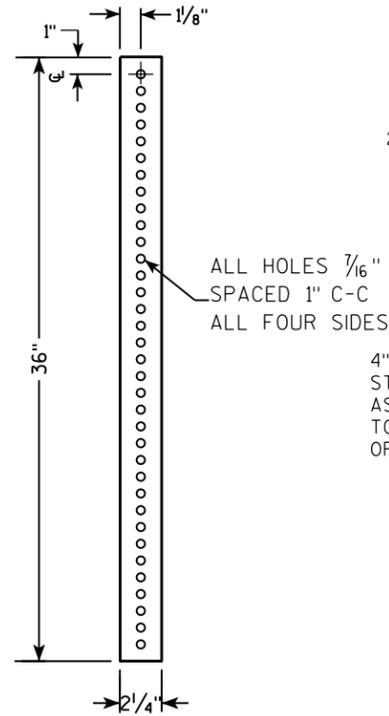
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
 1-1/4" O.D. X 3/8" I.D. X .080 NYLON

* 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.

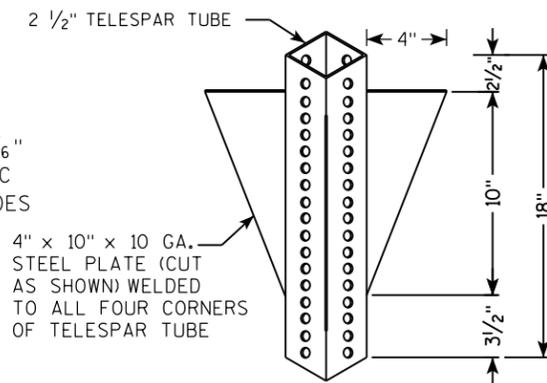
ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM**

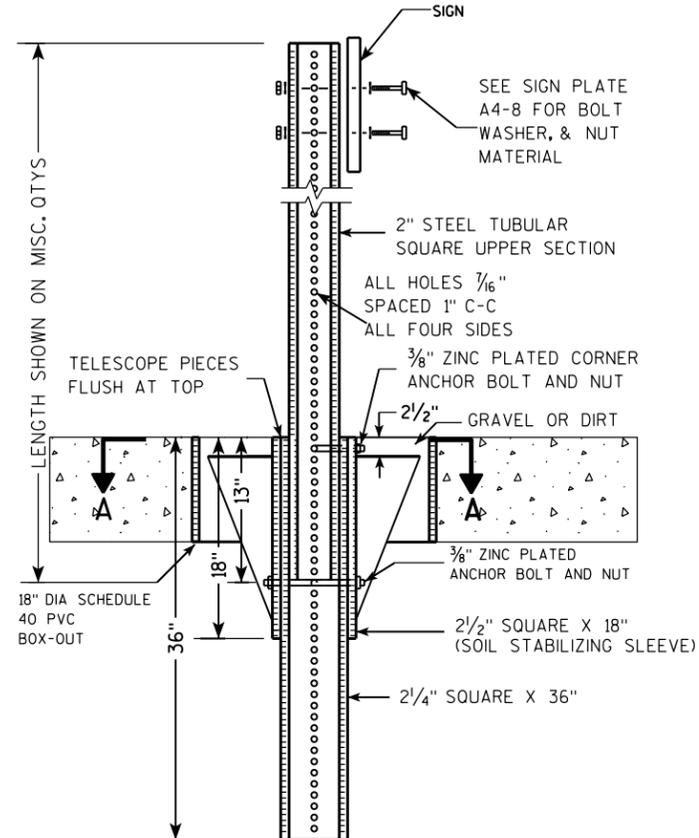
2 1/4" SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



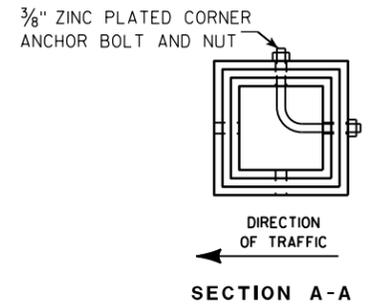
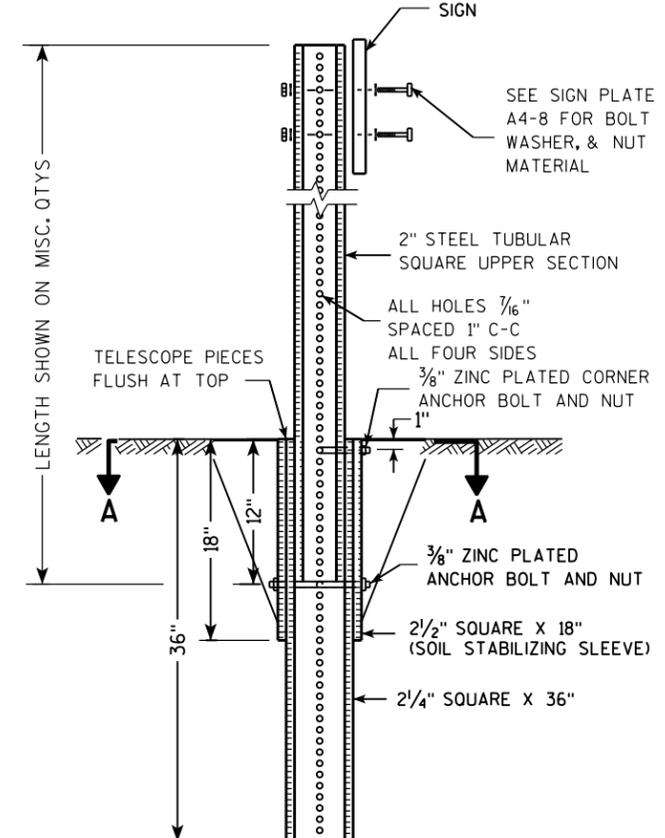
2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH



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



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



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

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

**TUBULAR STEEL
SIGN POST
A4-9**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

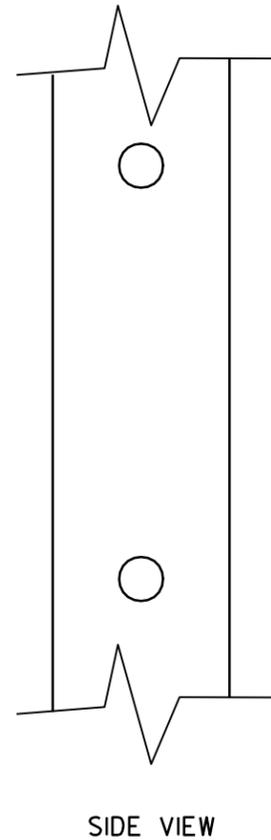
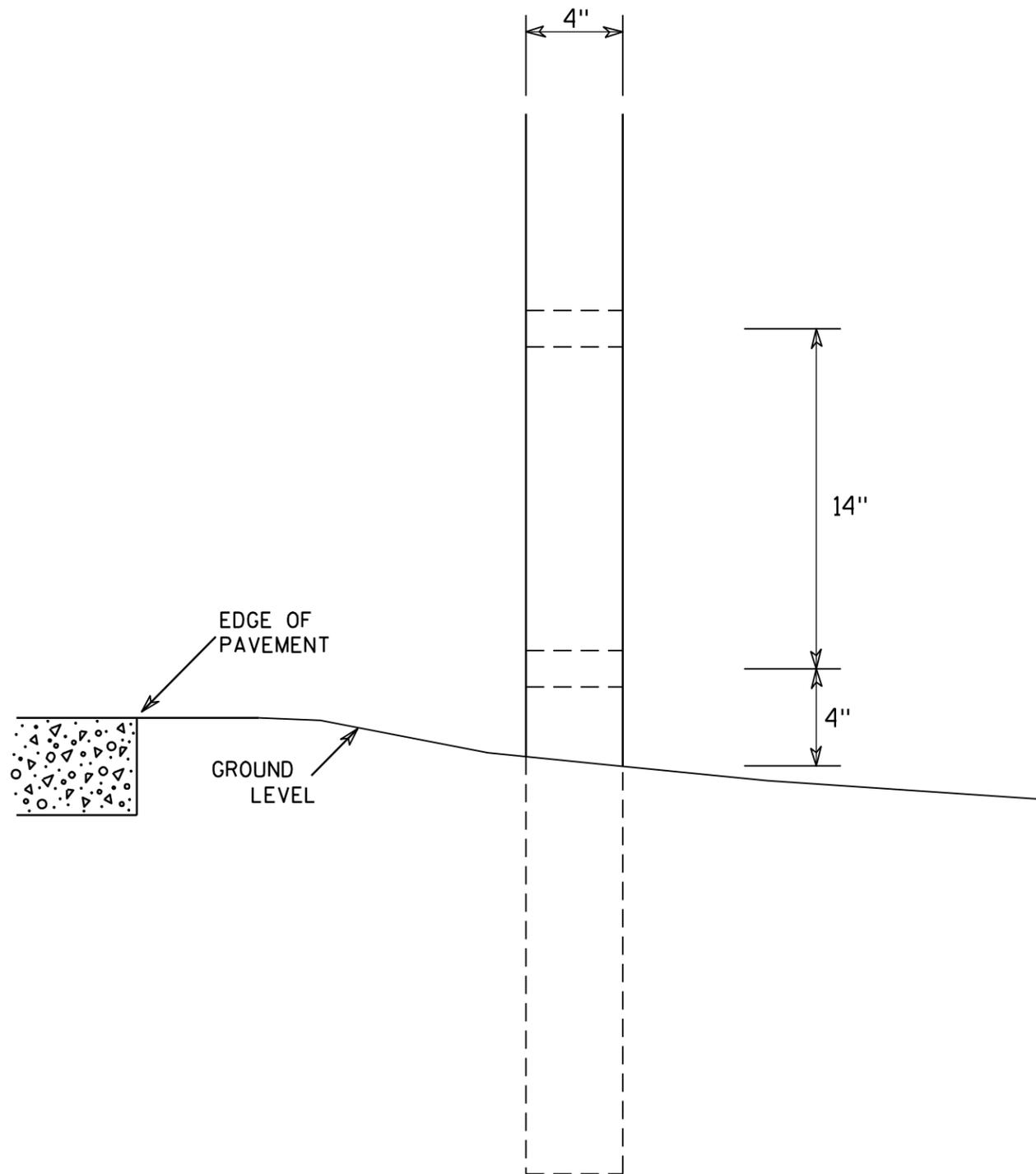
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



GENERAL NOTES

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

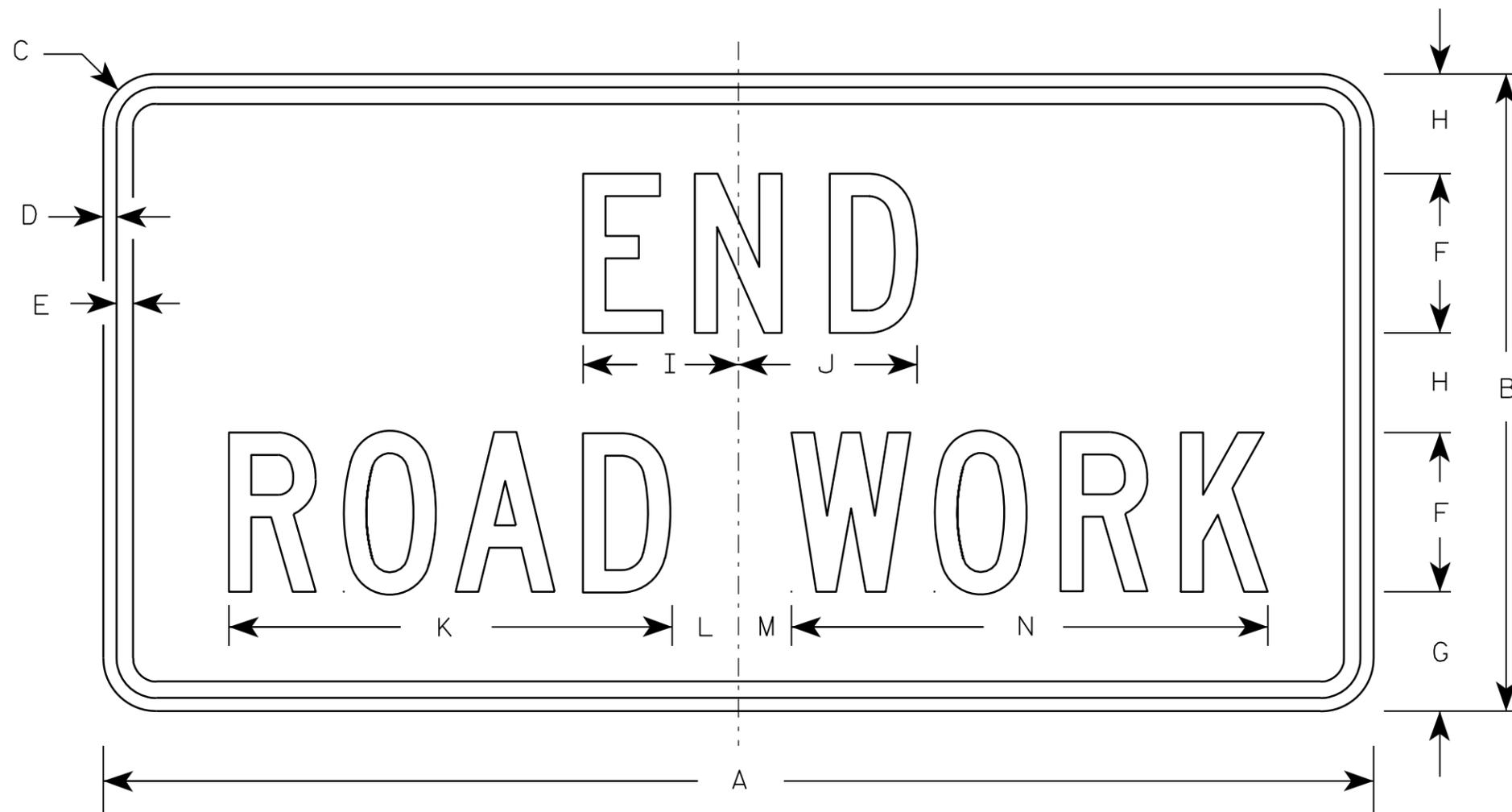
7

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4 X 6 WOOD POST MODIFICATIONS	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	<i>Chester J Spang</i> for State Traffic Engineer
DATE <u>3/27/97</u>	PLATE NO. <u>A4-11.2</u>

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 - 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.



G20-2A

7

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Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

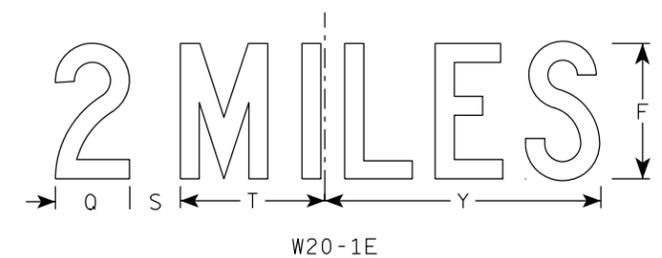
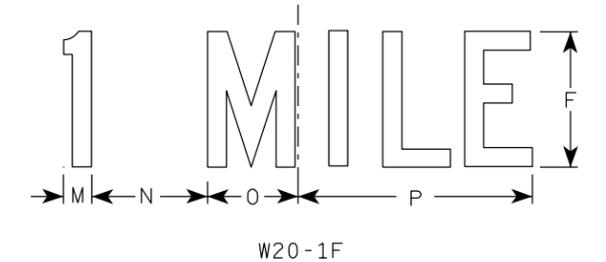
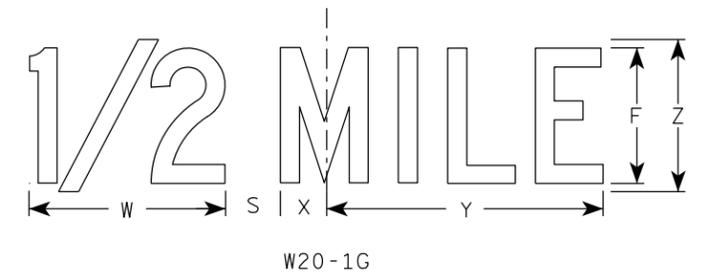
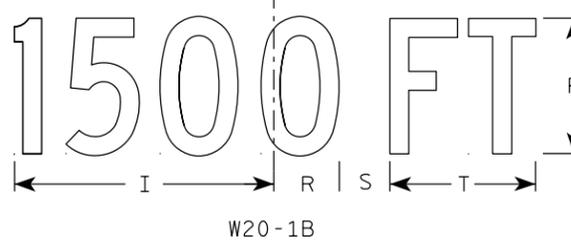
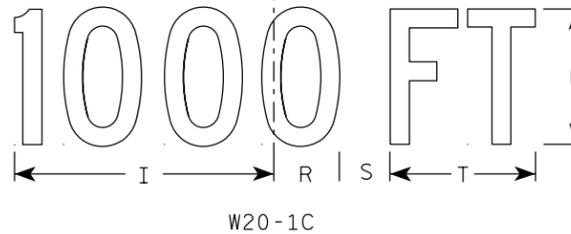
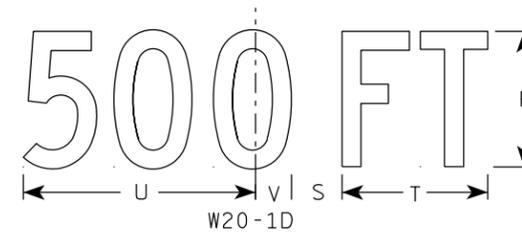
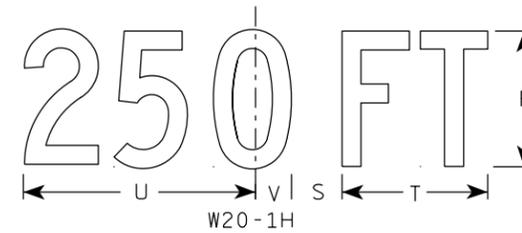
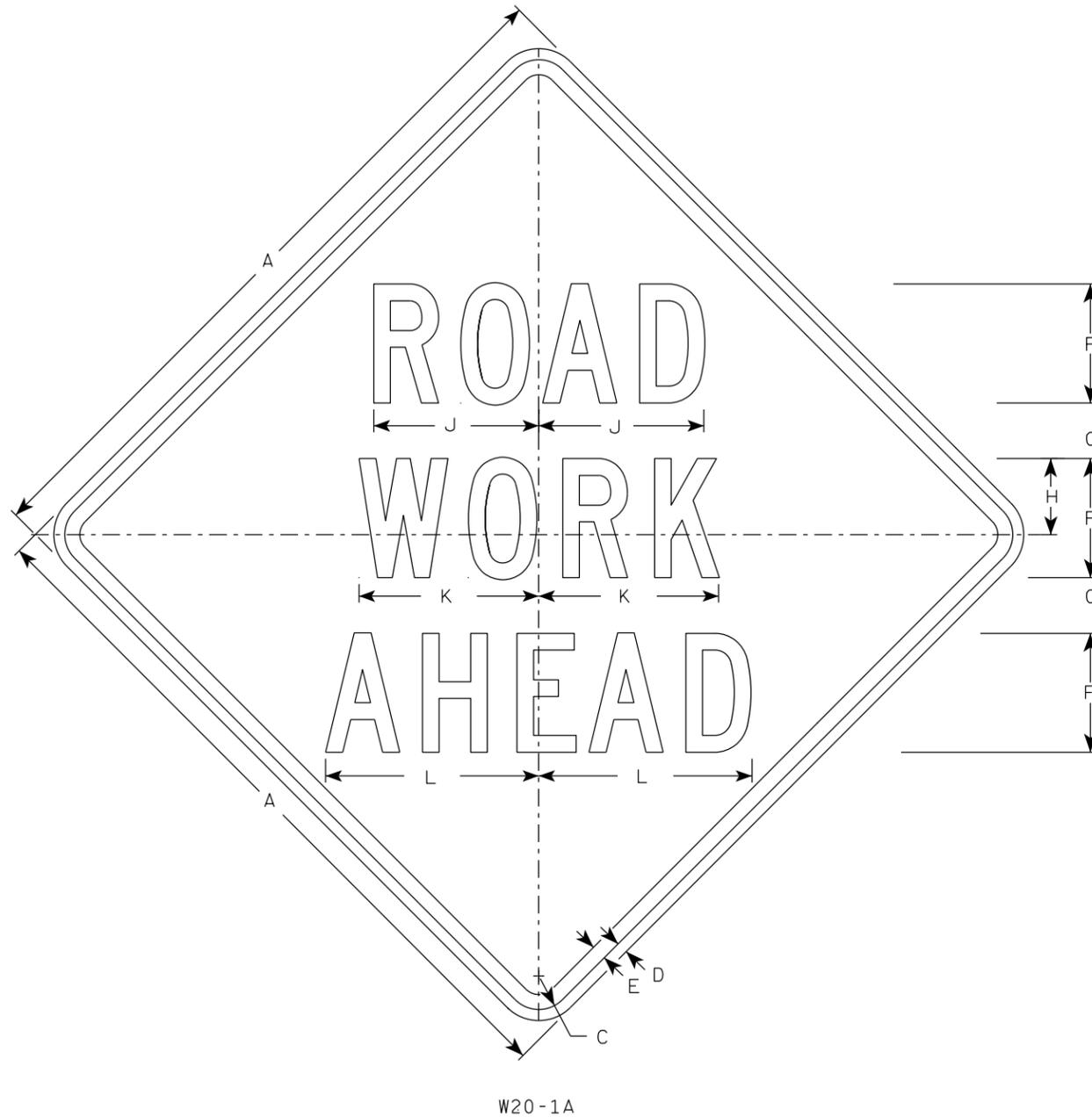
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area sq. m.
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

STANDARD SIGN G20-2A	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 9/30/09	PLATE NO. G20-2A.8

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

1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
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.



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		1 5/8	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

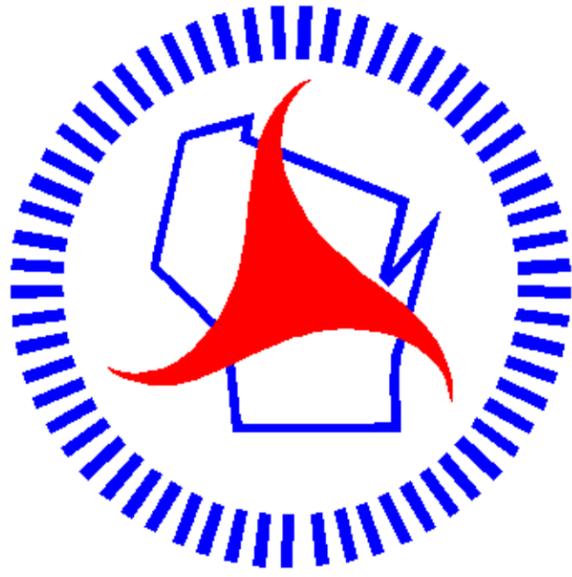
STANDARD SIGN
W20-1A, B, C, D, E, F, G & H

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/25/2020 PLATE NO. W20-1.11

Notes



Wisconsin Department of Transportation

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