

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION  
PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
6999-03-72	WISC 2020085	1

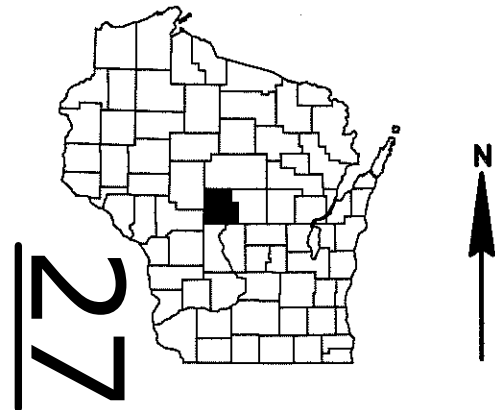
**C WISCONSIN RAPIDS, SECOND AVE SO**  
SENECA ROAD INTERSECTION  
**STH 54**  
**WOOD**

STATE PROJECT NUMBER  
**6999-03-72**

ORDER OF SHEETS

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

TOTAL SHEETS = 76



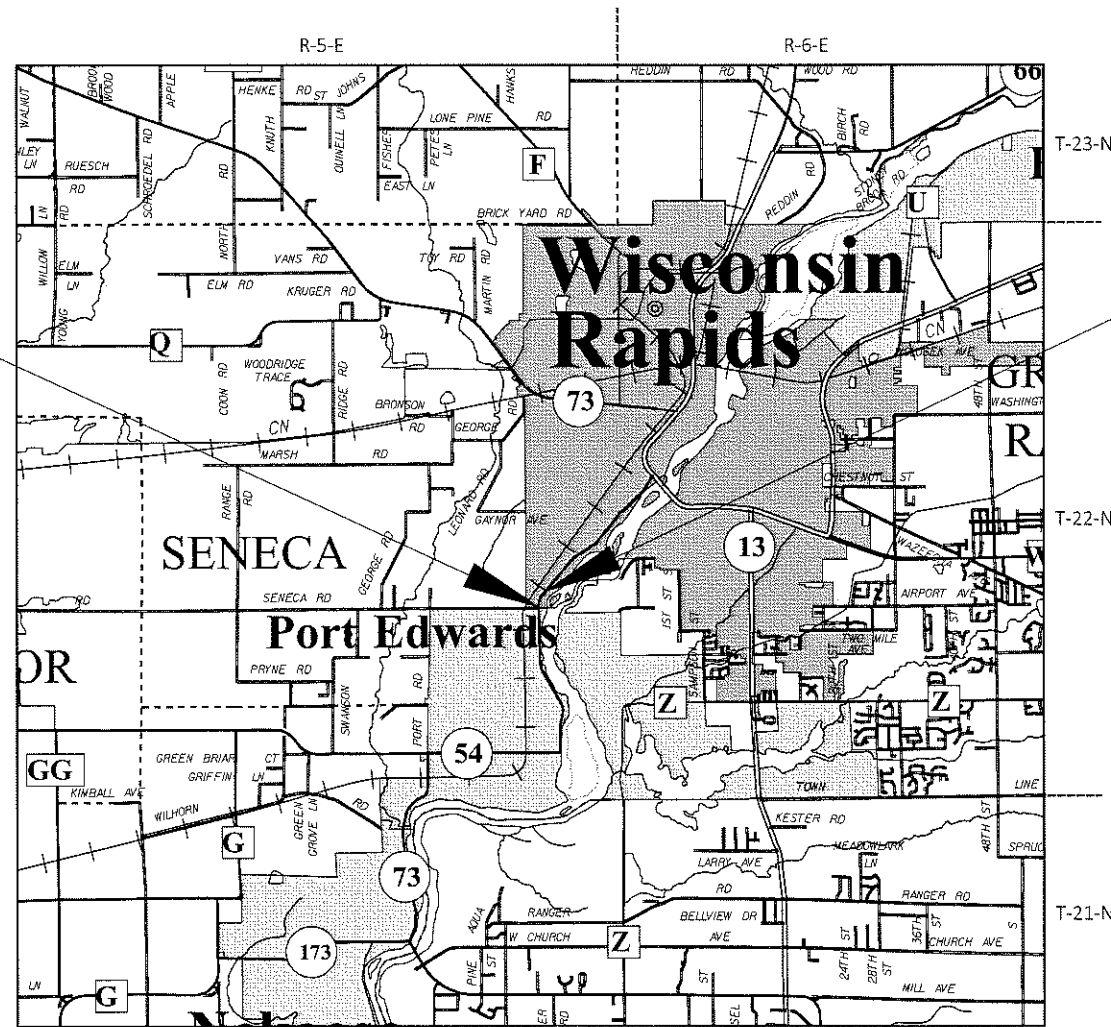
DESIGN DESIGNATION	STH 54	DESIGN DESIGNATION	SENECA ROAD
A.A.D.T.	2017 = 8100	A.A.D.T.	2017 = 2800
A.A.D.T.	2030 = 8700	A.A.D.T.	2030 = 2900
D.H.V.	= 8.4	D.H.V.	= N/A
D.D.	= 59/41	D.D.	= N/A
T.	= 9.8%	T.	= N/A
DESIGN SPEED	= 45 MPH	DESIGN SPEED	= 45 MPH
ESALS	= 240,000	ESALS	= N/A

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

BEGIN PROJECT  
STA 255+85  
X = 720096.241  
Y = 442733.511

END PROJECT  
STA 258+68  
X = 720113.316  
Y = 443017.673



LAYOUT  
SCALE 0 2 MI  
TOTAL NET LENGTH OF CENTERLINE = 0.054 MILES

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

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 NAVD 88 (2012)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	NC REGION
Designer	ERIN CHRISTIANSON
Project Manager	MARK STEIDL
Regional Examiner	CHERYL SIMON
Regional Supervisor	NICHOLE LYSNE

APPROVED FOR THE DEPARTMENT

DATE: 10/31/19 *Erin Christianson*

**GENERAL NOTES**

WHEN THE QUANTITY OF THE ITEMS OF BASE AGGREGATE, SUBBASE OR HMA PAVEMENT IS MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE LAYERS SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY HIS OPERATION OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.

TOPSOIL SHALL BE PLACED 1" BELOW THE TOP OF ADJACENT CONCRETE CURBS OR SIDEWALKS.

INLET GRATE ELEVATIONS REFERRED TO ON INLET NOTES ARE GRATE FLOW LINE ELEVATIONS.

THE LOCATION 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.

PURSUANT TO CHAPTER 59 OF THE WISCONSIN STATUTES, THE CONTRACTOR SHALL CAREFULLY MAKE A SEARCH FOR EVIDENCE OF A LANDMARK IN ALL AREAS WHERE SUCH A LANDMARK MAY EXIST.

THE CONTRACTOR IS TO WORK WITH UTMOST CARE AND PROTECT ALL SURVEY MARKERS. REMOVAL OF ANY SURVEY MARKER IS TO BE WITH THE APPROVAL OF THE ENGINEER.

**DNR CONTACT**

**BRAD BETTHAUSER**  
DNR SERVICE CENTER  
473 GRIFFITH AVENUE  
WISCONSIN RAPIDS, WI 54494  
PHONE: (715) 213-9064 MOBILE  
E-MAIL: Bradley.Betthausen@Wisconsin.gov

**UTILITIES****ALLIANT ENERGY**

MICHAEL BROLIN  
4902 NORTH BILTMORE LANE  
MADISON, WI 53713  
PHONE: (608) 458-4871  
E-MAIL: MichaelBrolin@alliantenergy.com

**CHARTER COMMUNICATIONS**

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503 EAST IZES STREET, SUITE 316  
MARSHFIELD, WI 54449  
PHONE: (715) 651-5605 MOBILE  
E-MAIL: jesse.gruny@charter.net

**PORT EDWARDS WATER UTILITY**

BEN MARTINSON  
201 MARKET STREET  
PORT EDWARDS, WI 54469  
PHONE: (715) 213-9074  
E-MAIL: martinsonracing@hotmail.com

**PORT EDWARDS WASTEWATER TREATMENT FACILITY**

BEN MARTINSON  
201 MARKET STREET  
PORT EDWARDS, WI 54469  
PHONE: (715) 213-9074  
E-MAIL: martinsonracing@hotmail.com

**SOLARUS**

DENNIS PIERCE  
440 EAST GRAND AVENUE  
WISCONSIN RAPIDS, WI 54494  
PHONE: (715) 421-8172 WORK  
PHONE: (715) 572-0152 MOBILE  
E-MAIL: pierce@solarus.net

**WISCONSIN GAS LLC d/b/a WE ENERGIES**

TAYLOR WIETING  
1621 8TH STREET SOUTH  
WISCONSIN RAPIDS, WI 54494  
PHONE: (715) 421-7277 WORK  
PHONE: (715) 213-5189 MOBILE  
E-MAIL: taylor.wieting@wecenergygroup.com

**WISCONSIN RAPIDS WATER WORKS AND LIGHTING COMMISSION - ELECTRICITY**

JACOB JOHNSON  
221 16TH STREET SOUTH  
WISCONSIN RAPIDS, WI 54494  
PHONE: (715) 423-6328 WORK  
PHONE: (715) 213-7505 MOBILE  
E-MAIL: Jacob.johnson@wrwwlc.com

**DIGGERS HOTLINE**

Dial  or (800)242-8511  
[www.DiggersHotline.com](http://www.DiggersHotline.com)



VILLAGE OF PORT EDWARDS

CITY OF WISCONSIN RAPIDS

SENECA ROAD

END PROJECT  
STA 258+68

BEGIN PROJECT  
STA 255+85

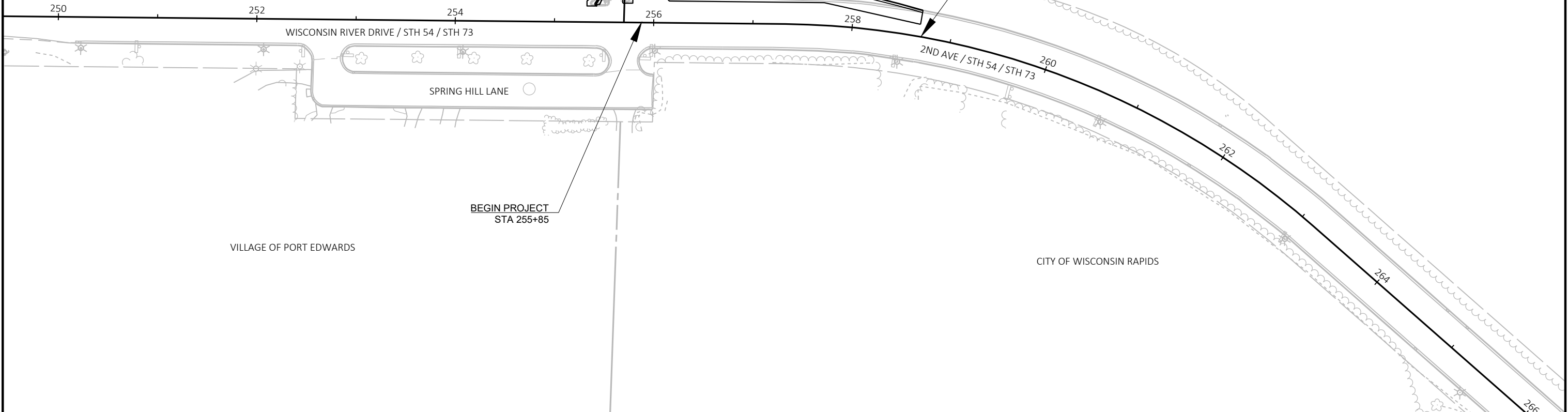
WISCONSIN RIVER DRIVE / STH 54 / STH 73

SPRING HILL LANE

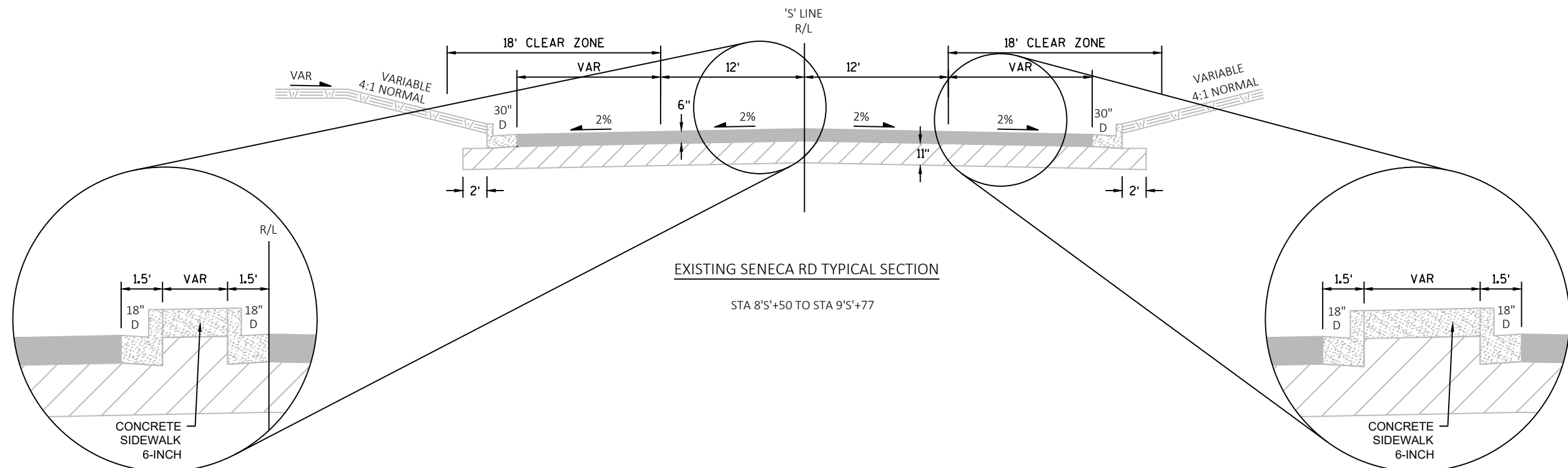
2ND AVE / STH 54 / STH 73

VILLAGE OF PORT EDWARDS

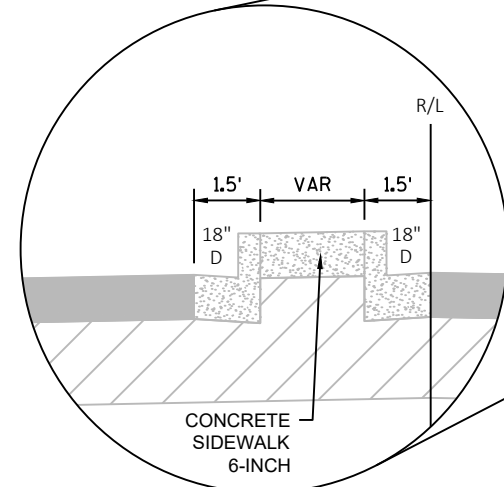
CITY OF WISCONSIN RAPIDS



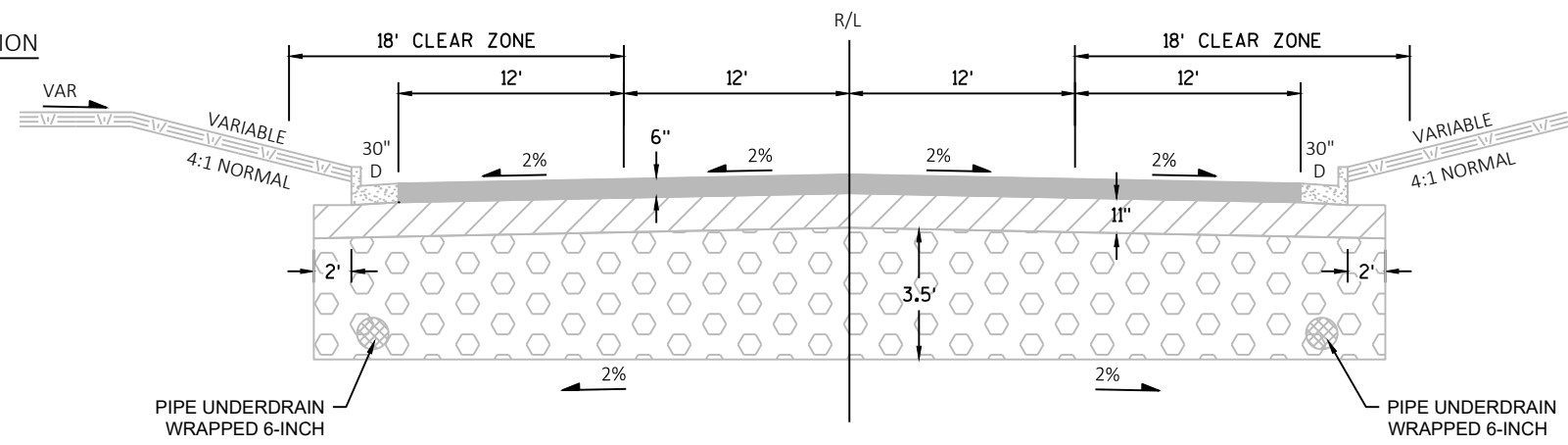
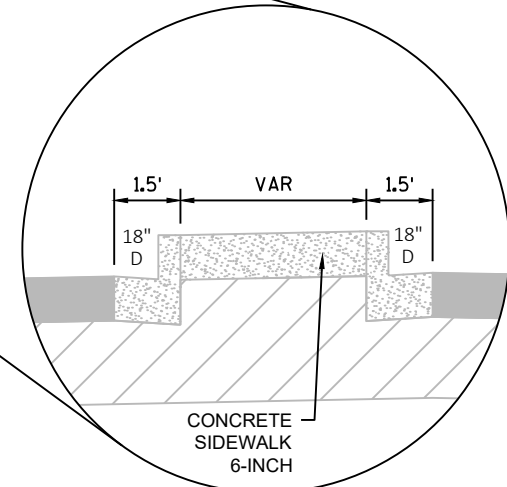
PROJECT NO: 6999-03-72	HWY: STH 54	COUNTY: WOOD	PROJECT OVERVIEW	SHEET	E
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EXISTING SENECA ROAD  
CENTER ISLAND TYPICAL SECTION  
STA 9'S'+49 TO STA 9'S'+81



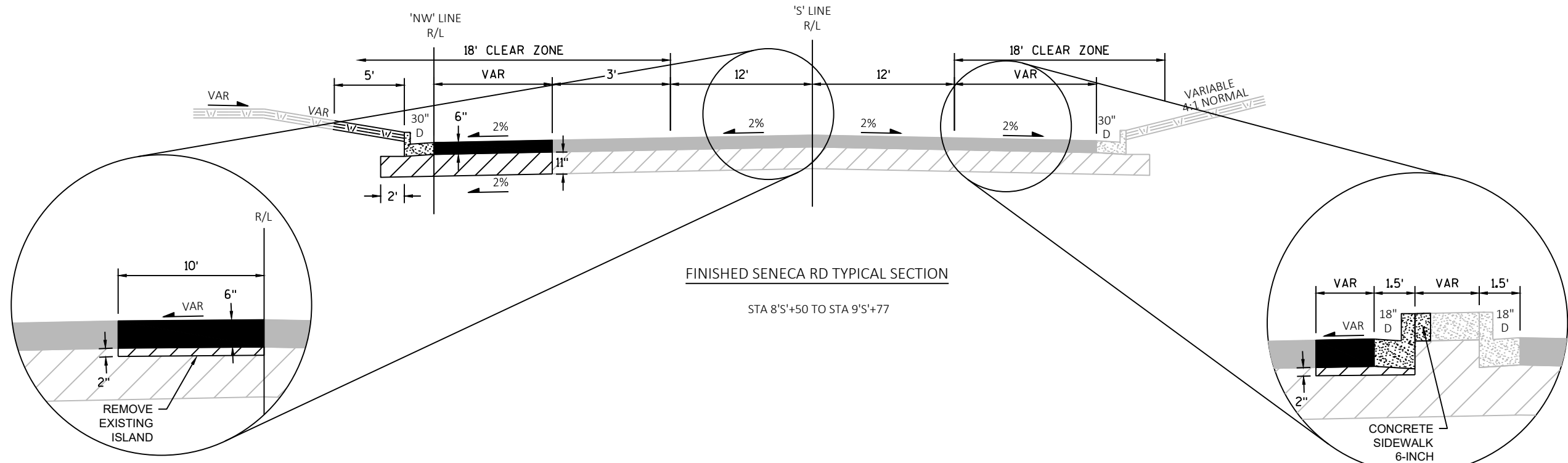
EXISTING SENECA ROAD  
TURN LANE ISLAND TYPICAL SECTION  
STA 9'S'+67 TO STA 9'S'+84



EXISTING STH 54 / 2ND AVE TYPICAL SECTION  
STA 256+16 TO STA 256+50 (GRANULAR BACKFILL TAPERED 0' - 3.5')  
STA 256+50 TO STA 258+67 (GRANULAR BACKFILL 3.5')

LEGEND

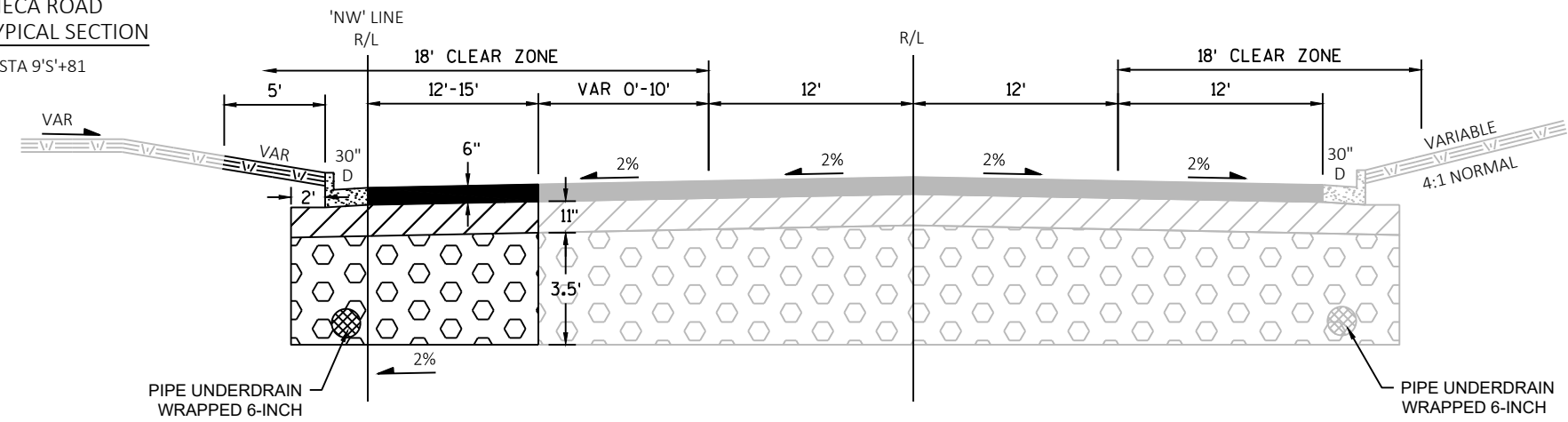
- EXISTING ASPHALTIC CONCRETE PAVEMENT
- EXISTING BASE AGGREGATE DENSE 1 1/4-INCH
- EXISTING BACKFILL GRANULAR, GRADE 1
- EXISTING GROUND
- EXISTING CONCRETE CURB AND GUTTER, 30-INCH, TYPE D
- EXISTING CONCRETE CURB AND GUTTER, 18-INCH, TYPE D



FINISHED SENECA RD TYPICAL SECTION  
STA 8'S'+50 TO STA 9'S'+77









FINISHED SENECA ROAD  
CENTER ISLAND TYPICAL SECTION  
STA 9'S'+49 TO STA 9'S'+81

FINISHED SENECA ROAD  
TURN LANE ISLAND TYPICAL SECTION  
STA 9'S'+67 TO STA 9'S'+84



FINISHED STH 54 / 2ND AVE TYPICAL SECTION  
STA 256+16 TO STA 256+50 (GRANULAR BACKFILL TAPERED 0' - 3.5')  
STA 256+50 TO STA 258+67 (GRANULAR BACKFILL 3.5')

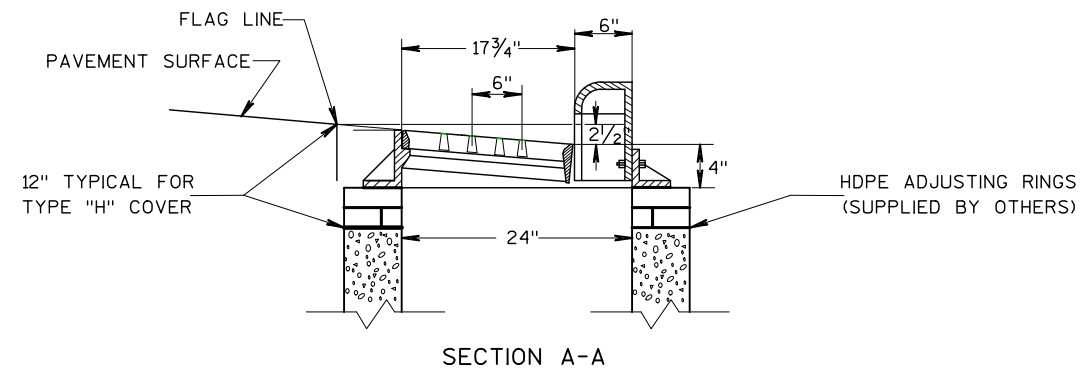
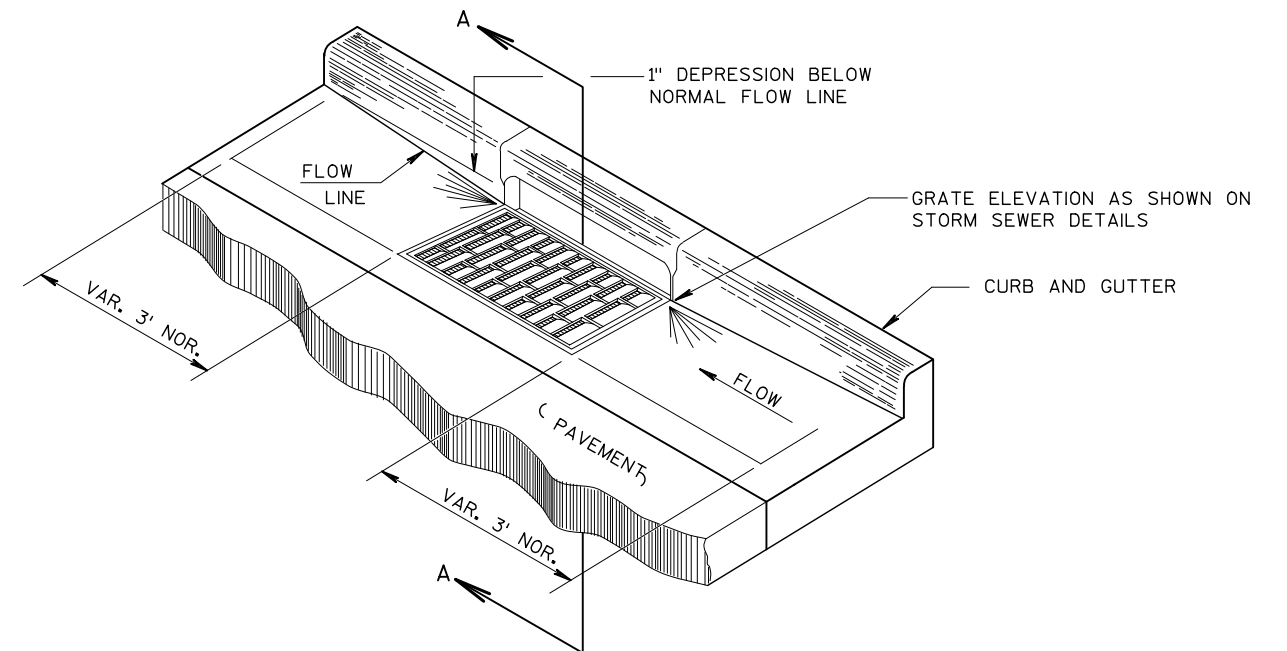
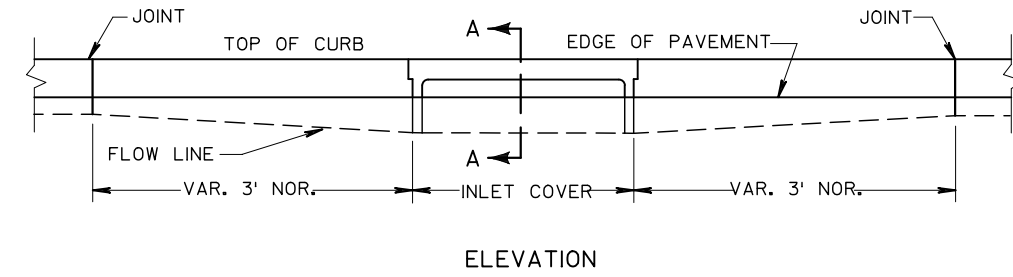
LEGEND

-  EXISTING ASPHALTIC CONCRETE PAVEMENT
-  EXISTING BASE AGGREGATE DENSE 1 1/4-INCH
-  EXISTING BACKFILL GRANULAR, GRADE 1
-  EXISTING GROUND
-  HMA PAVEMENT, 4 LT 58-28 S
-  BASE AGGREGATE DENSE, 1 1/4-INCH
-  BACKFILL GRANULAR, GRADE 1
-  TOPSOIL, SEED, FERTILIZE AND MULCH
- CONCRETE CURB AND GUTTER, 30-INCH, TYPE D

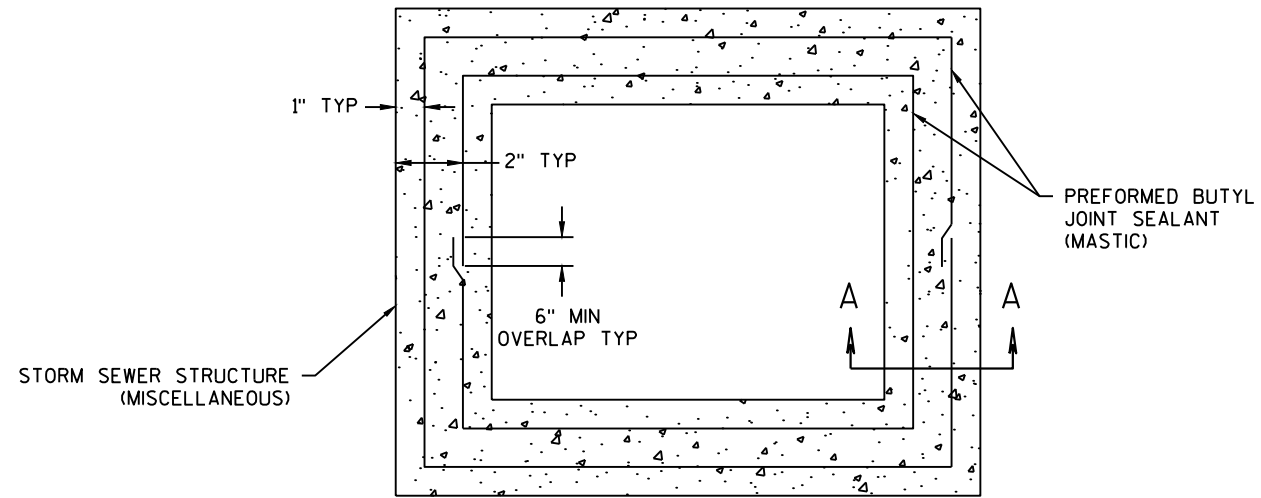
RUNOFF COEFFICIENT TABLE

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

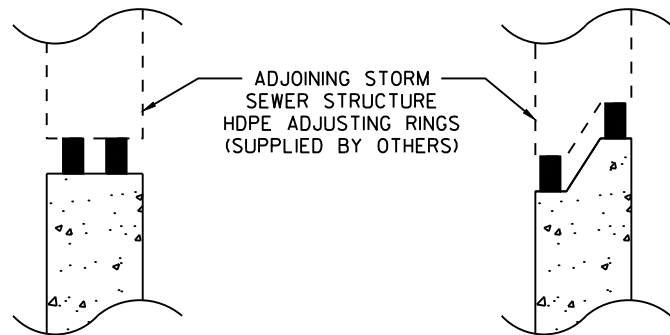
TOTAL PROJECT AREA = 0.176 ACRES  
 TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.015 ACRES



DETAIL OF CURB AND GUTTER AT INLETS  
 (TYPE 3-H INLET SHOWN)



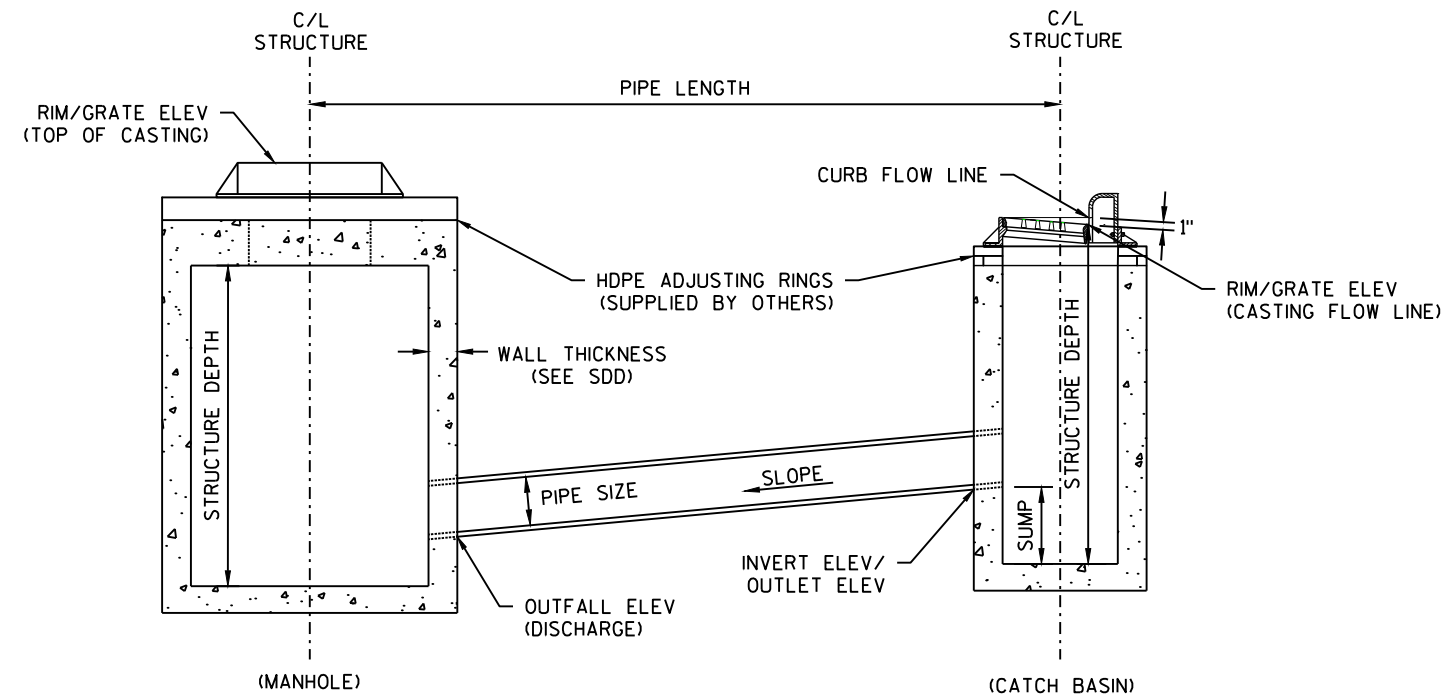
PLAN VIEW



SECTION A-A

SECTION A-A (ALTERNATE)

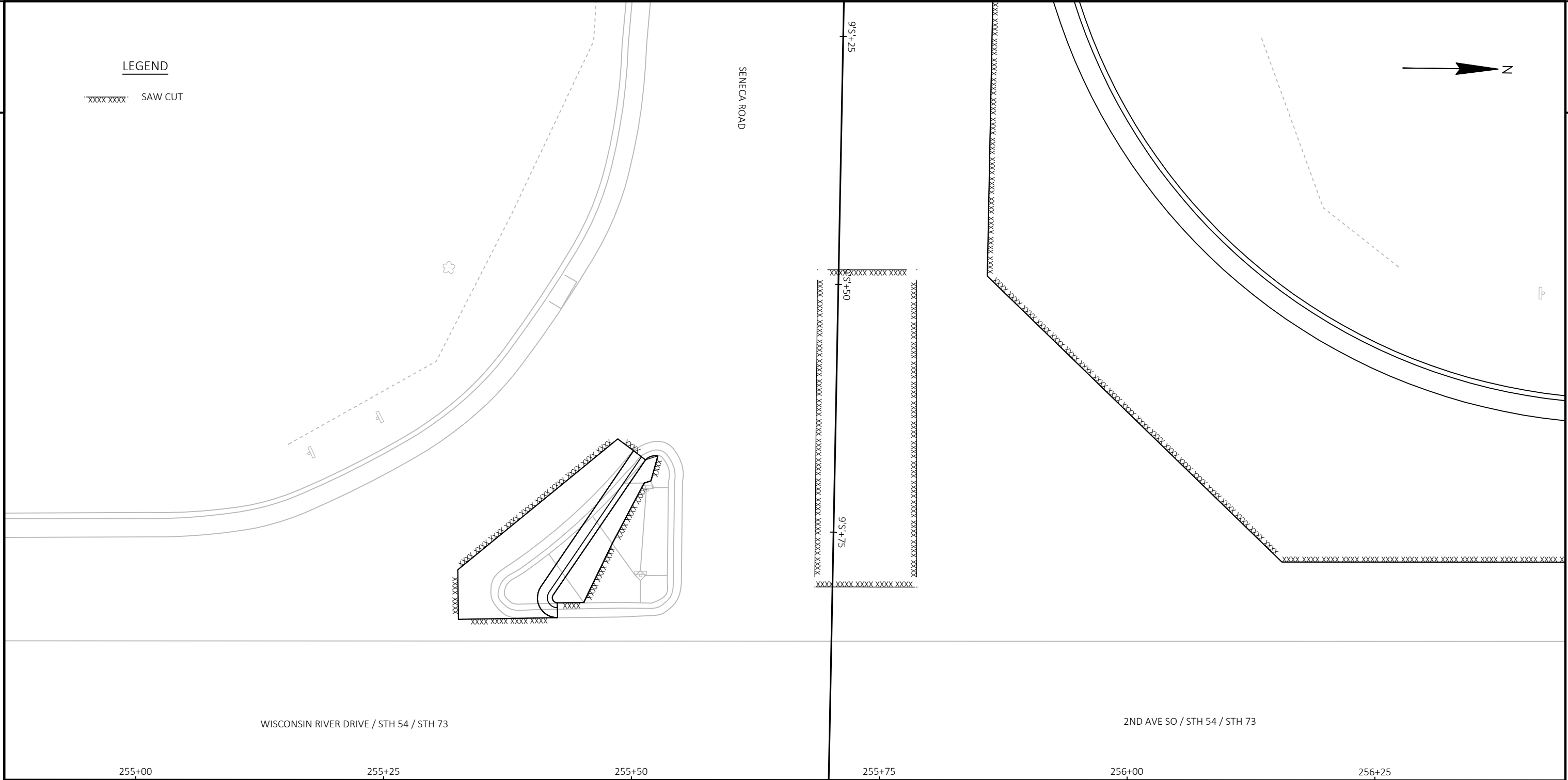
PREFORMED BUTYL JOINT SEALANT (MASTIC) CONNECTION DETAIL



STORM SEWER MEASUREMENT DETAIL

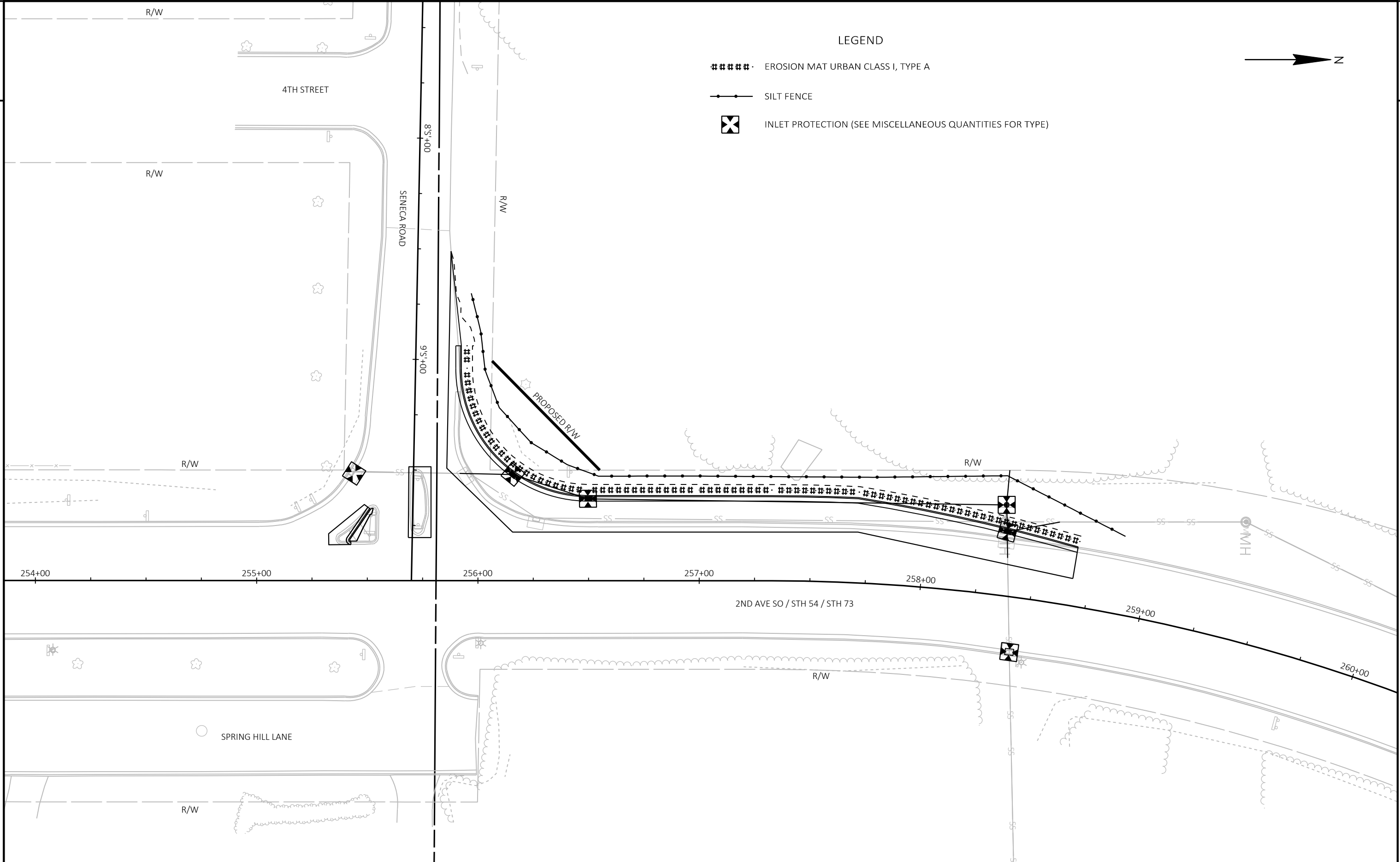
LEGEND

xxxxxxx SAW CUT

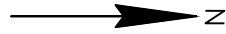


PROJECT NO: 6999-03-72	HWY: STH 54	COUNTY: WOOD	PLAN DETAILS	SHEET	<b>E</b>
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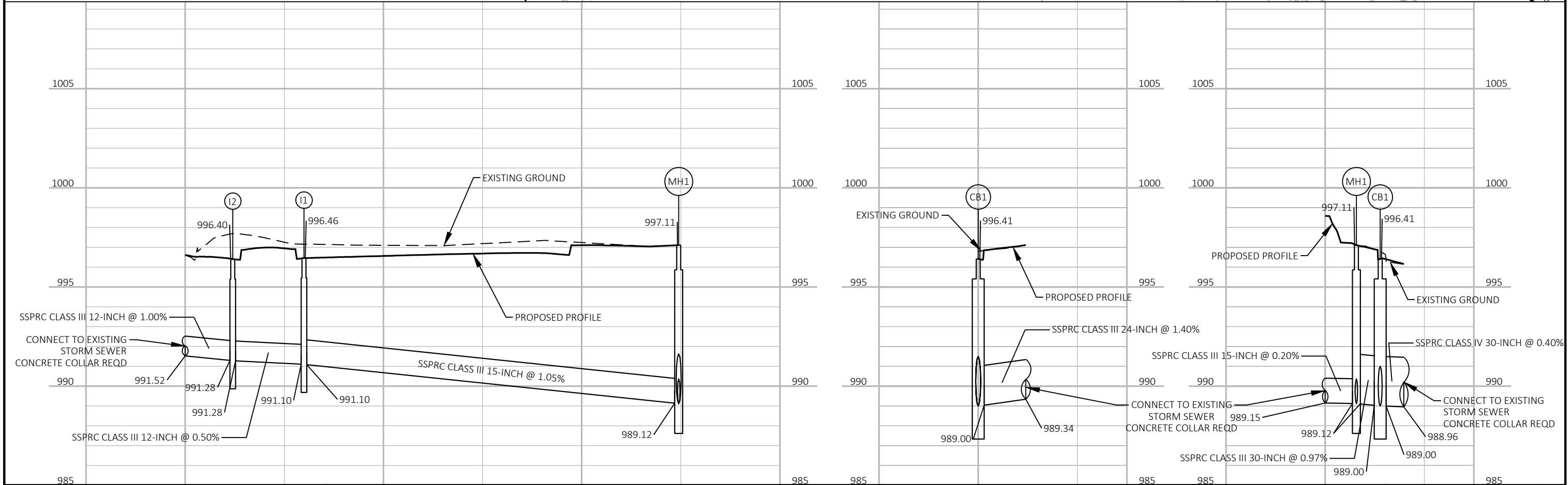
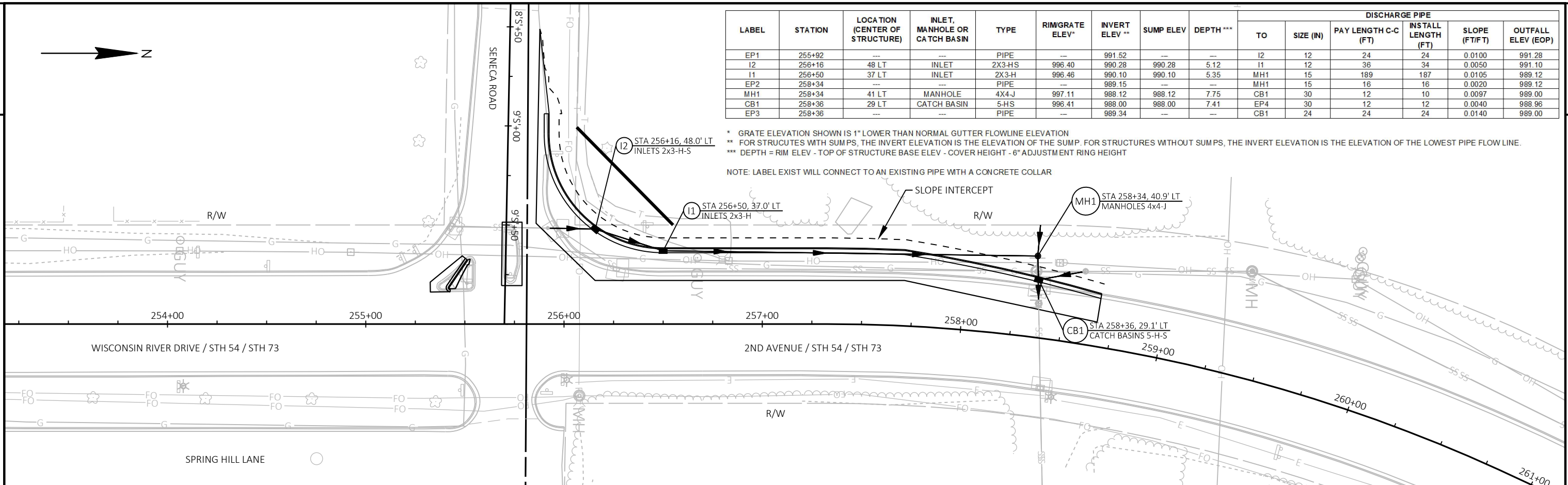
PROJECT NO: 6999-03-72	HWY: STH 54	COUNTY: WOOD	EROSION CONTROL	SHEET	<b>E</b>
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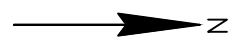


LABEL	STATION	LOCATION (CENTER OF STRUCTURE)	INLET, MANHOLE OR CATCH BASIN	TYPE	RIM/GRATE ELEV**	INVERT ELEV**	SUMP ELEV	DEPTH***	DISCHARGE PIPE					
									TO	SIZE (IN)	PAY LENGTH C-C (FT)	INSTALL LENGTH (FT)	SLOPE (FT/FT)	OUTFALL ELEV (EOP)
EP1	255+92	---	---	PIPE	---	991.52	---	---	I2	12	24	24	0.0100	991.28
I2	256+16	48 LT	INLET	2X3-HS	996.40	990.28	990.28	5.12	I1	12	36	34	0.0050	991.10
I1	256+50	37 LT	INLET	2X3-H	996.46	990.10	990.10	5.35	MH1	15	189	187	0.0105	989.12
EP2	258+34	---	---	PIPE	---	989.15	---	---	MH1	15	16	16	0.0020	989.12
MH1	258+34	41 LT	MANHOLE	4X4-J	997.11	988.12	988.12	7.75	CB1	30	12	10	0.0097	989.00
CB1	258+36	29 LT	CATCH BASIN	5-HS	996.41	988.00	988.00	7.41	EP4	30	12	12	0.0040	988.96
EP3	258+36	---	---	PIPE	---	989.34	---	---	CB1	24	24	24	0.0140	989.00

\* GRATE ELEVATION SHOWN IS 1" LOWER THAN NORMAL GUTTER FLOWLINE ELEVATION  
 \*\* FOR STRUCTURES WITH SUMPS, THE INVERT ELEVATION IS THE ELEVATION OF THE SUMP. FOR STRUCTURES WITHOUT SUMPS, THE INVERT ELEVATION IS THE ELEVATION OF THE LOWEST PIPE FLOW LINE.  
 \*\*\* DEPTH = RIM ELEV - TOP OF STRUCTURE BASE ELEV - COVER HEIGHT - 6" ADJUSTMENT RING HEIGHT

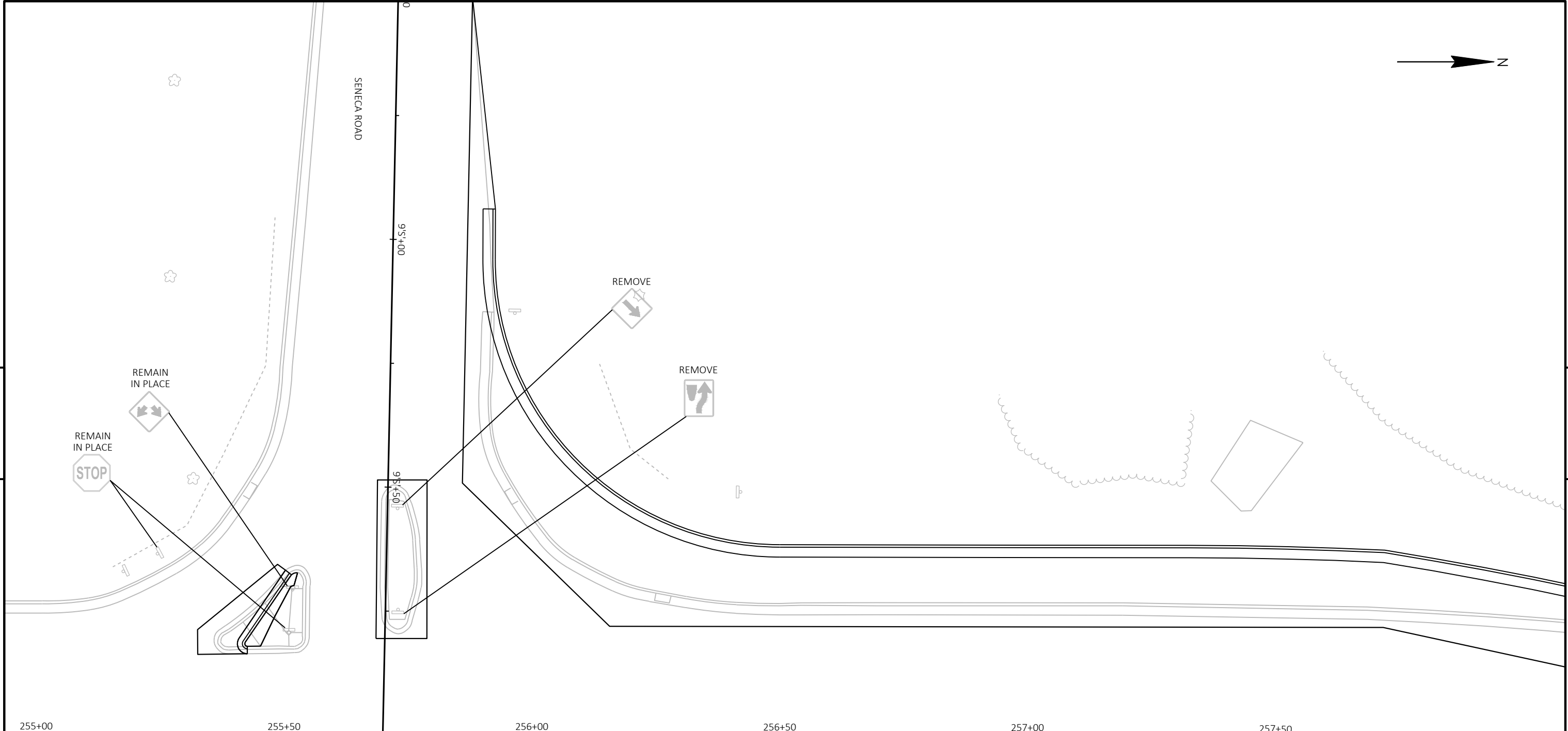
NOTE: LABEL EXIST WILL CONNECT TO AN EXISTING PIPE WITH A CONCRETE COLLAR





5

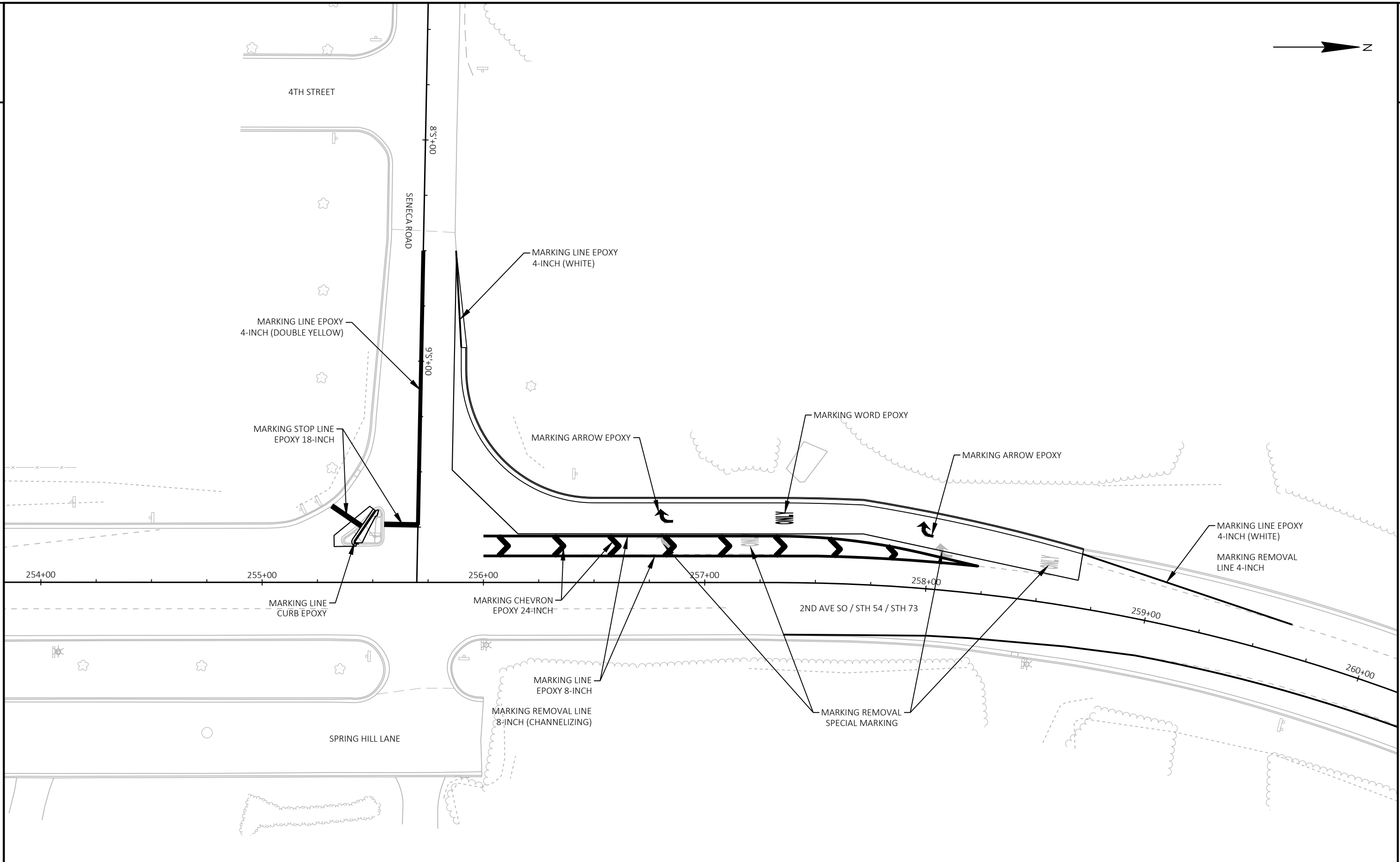
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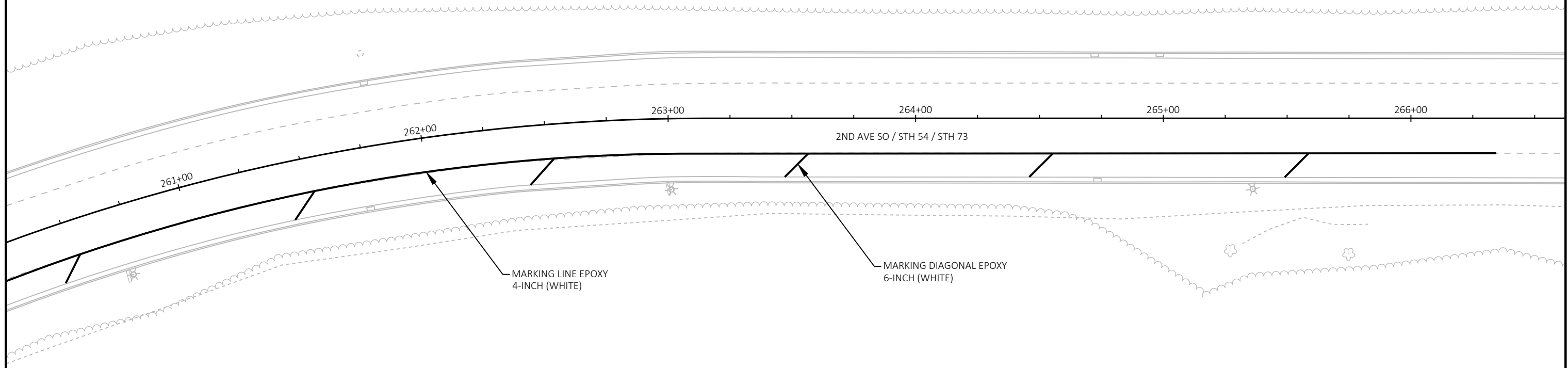
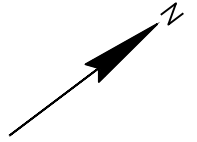


255+00      255+50      256+00      256+50      257+00      257+50      258+00

2ND AVE / STH 54 / STH 73

PROJECT NO: 6999-03-72	HWY: STH 54	COUNTY: WOOD	PERMANENT SIGNING	SHEET	<b>E</b>
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












PROJECT NO: 6999-03-72	HWY: STH 54	COUNTY: WOOD	PAVEMENT MARKING	SHEET	E
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LEGEND

-  TYPE III BARRICADE
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
-  SIGN ON PERMANENT SUPPORT
-  DELINEATOR FLEXIBLE/TUBULAR MARKER
-  TYPE A WARNING LIGHT (FLASHING)
-  WORK AREA
-  DIRECTION OF TRAFFIC

**SENECA RD  
CLOSED  
BEGINS XXX-XX**  
72"x36"

INSTALL FIXED MESSAGE SIGN  
7 DAYS PRIOR TO CONSTRUCTION  
STA 246+00 (RT)

**SENECA RD  
CLOSED AT  
HWY 54**  
60"x36"

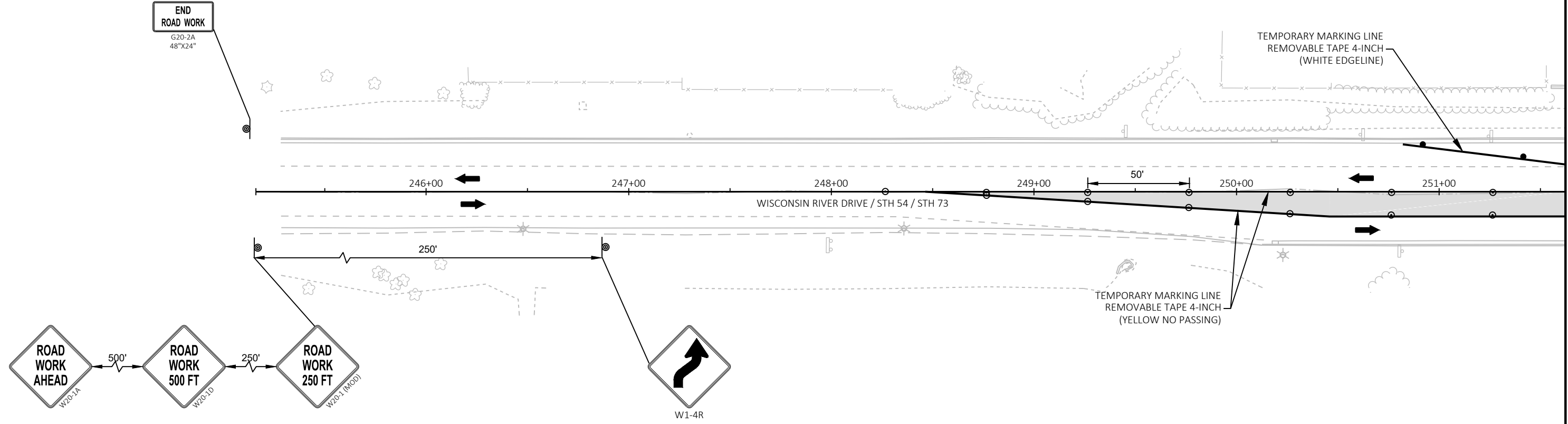
DURING CONSTRUCTION PLACE AT THE  
STH 54/73/PORT RD INTERSECTION:

STH 54 (EB) APPROACH  
STH 73 (NB) APPROACH

**END  
ROAD WORK**  
G20-2A  
48"x24"

TEMPORARY MARKING LINE  
REMOVABLE TAPE 4-INCH  
(WHITE EDGELINE)

TEMPORARY MARKING LINE  
REMOVABLE TAPE 4-INCH  
(YELLOW NO PASSING)



NOTE: FOR MORE INFORMATION SEE SDD TRAFFIC CONTROL,  
 • ADVANCE WARNING SIGNS 40 MPH OR LESS, TWO WAY  
 UNDIVIDED ROAD OPEN TO TRAFFIC  
 • WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY  
 • BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

LEGEND

- ↑ TYPE III BARRICADE
- ↑ TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- ⊥ SIGN ON PERMANENT SUPPORT
- ⊥ TEMPORARY SIGN SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- ⓐ TYPE A WARNING LIGHT (FLASHING)
- ▨ WORK AREA
- DIRECTION OF TRAFFIC

INSTALL FIXED MESSAGE SIGN  
7 DAYS PRIOR TO CONSTRUCTION  
STA 7'S+50 (RT)

SENECA RD  
CLOSED  
BEGINS XXX-XX

ROAD  
CLOSED  
AHEAD

INSTALL AT THE  
INTERSECTION OF  
PORT RD AND  
SENECA RD

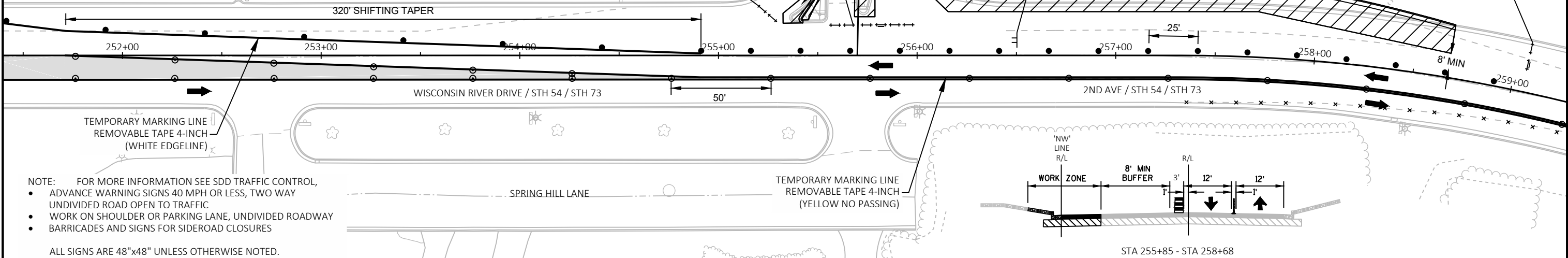
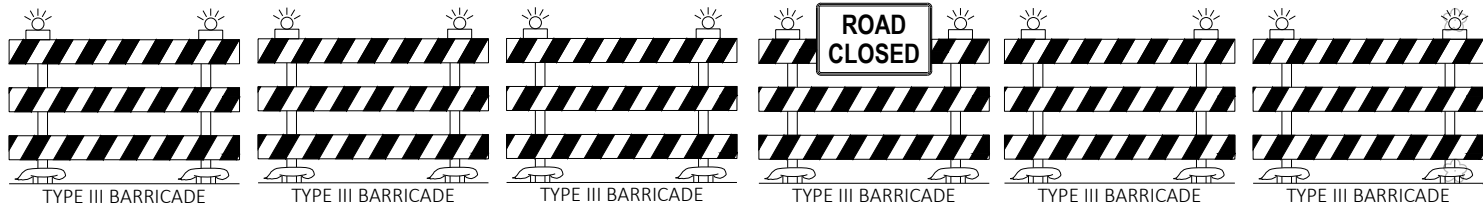
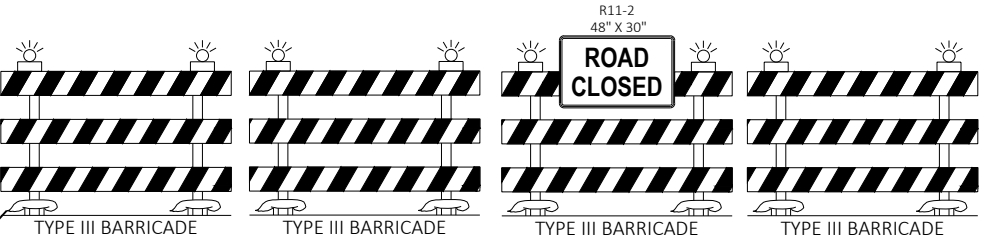
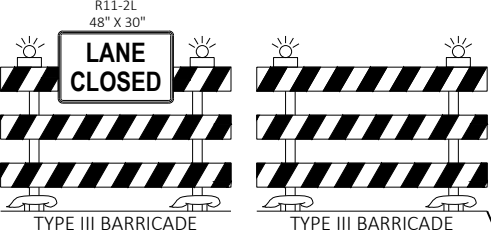
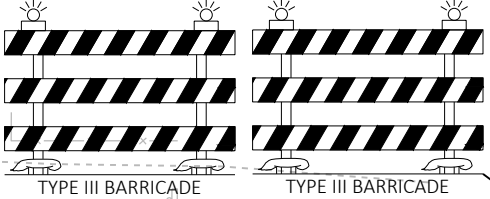
END  
ROAD WORK  
G20-2A  
48"X24"

R11-2  
48" X 30"  
ROAD  
CLOSED

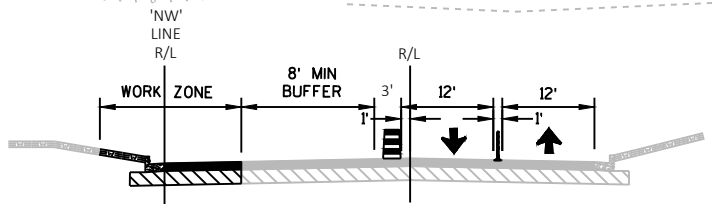
R11-2L  
48" X 30"  
LANE  
CLOSED

W1-4R  
STA 256+50 (LT)

R11-2  
48" X 30"  
ROAD  
CLOSED



- NOTE: FOR MORE INFORMATION SEE SDD TRAFFIC CONTROL,
- ADVANCE WARNING SIGNS 40 MPH OR LESS, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
  - WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
  - BARRICADES AND SIGNS FOR SIDEROAD CLOSURES



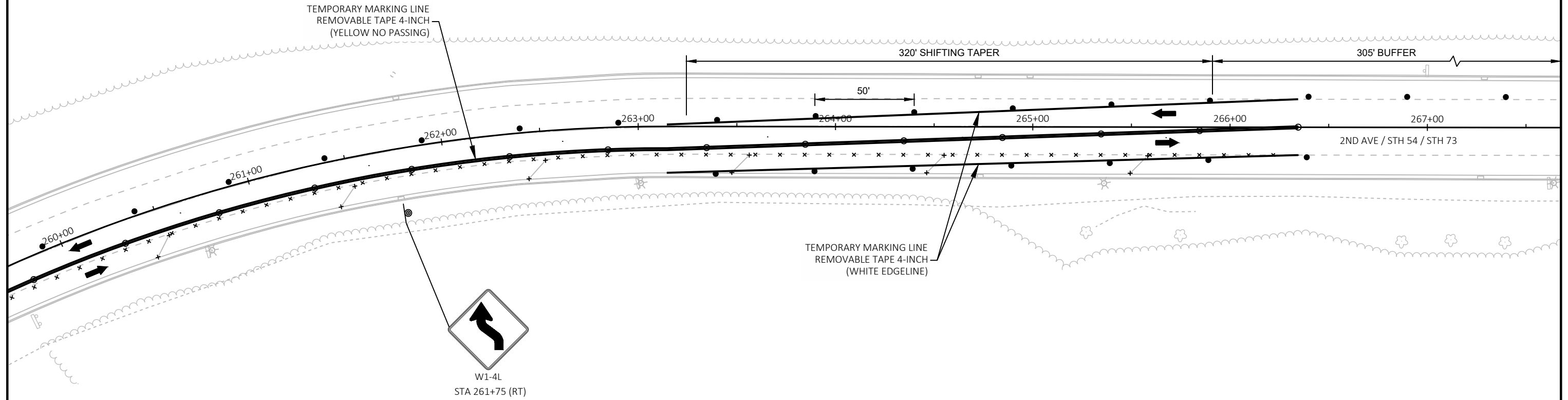
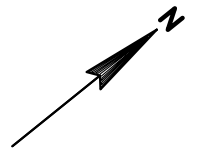
STA 255+85 - STA 258+68

LEGEND

- ↑ TYPE III BARRICADE
- ↑ TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- ▬ SIGN ON PERMANENT SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- ⓐ TYPE A WARNING LIGHT (FLASHING)
- ▨ WORK AREA
- DIRECTION OF TRAFFIC

SENECA RD  
CLOSED  
BEGINS XXX-XX

72"x36"  
INSTALL FIXED MESSAGE SIGN  
7 DAYS PRIOR TO CONSTRUCTION  
STA 265+00 (LT)



NOTE: FOR MORE INFORMATION SEE SDD TRAFFIC CONTROL,

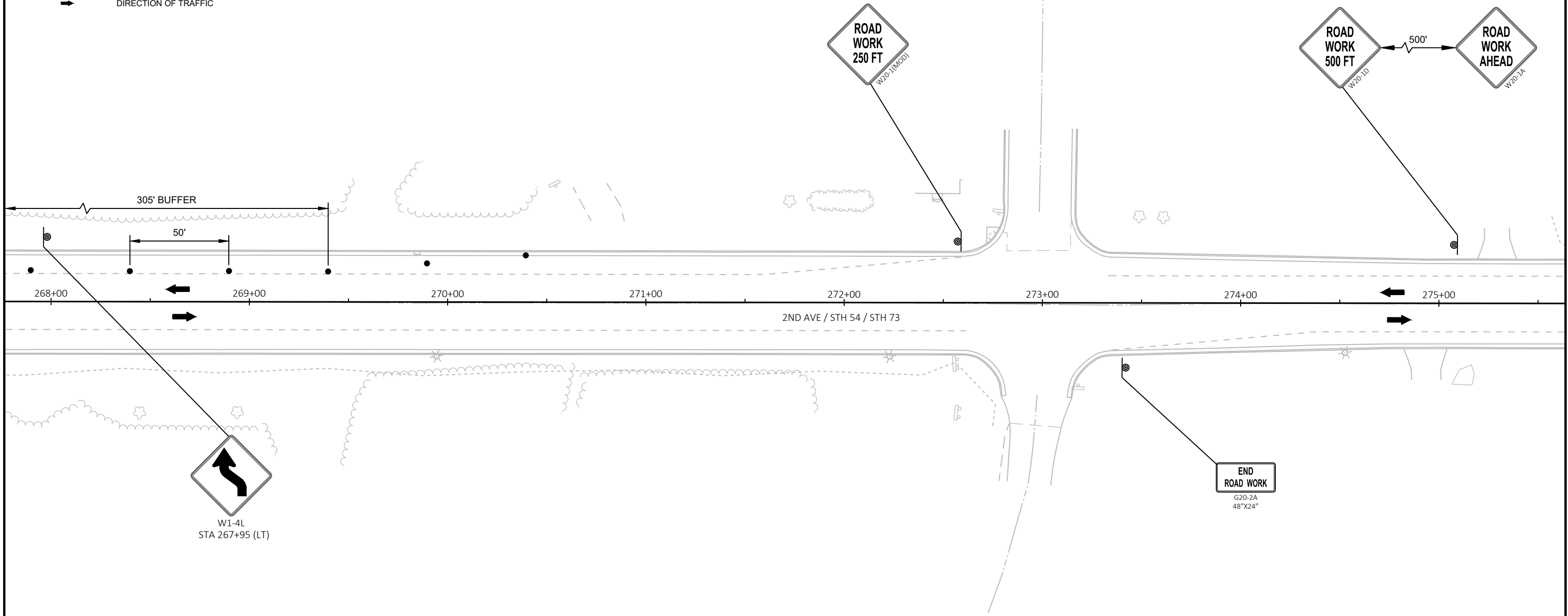
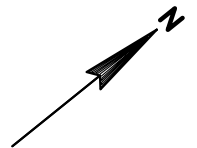
- ADVANCE WARNING SIGNS 40 MPH OR LESS, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
- WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
- BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.



LEGEND

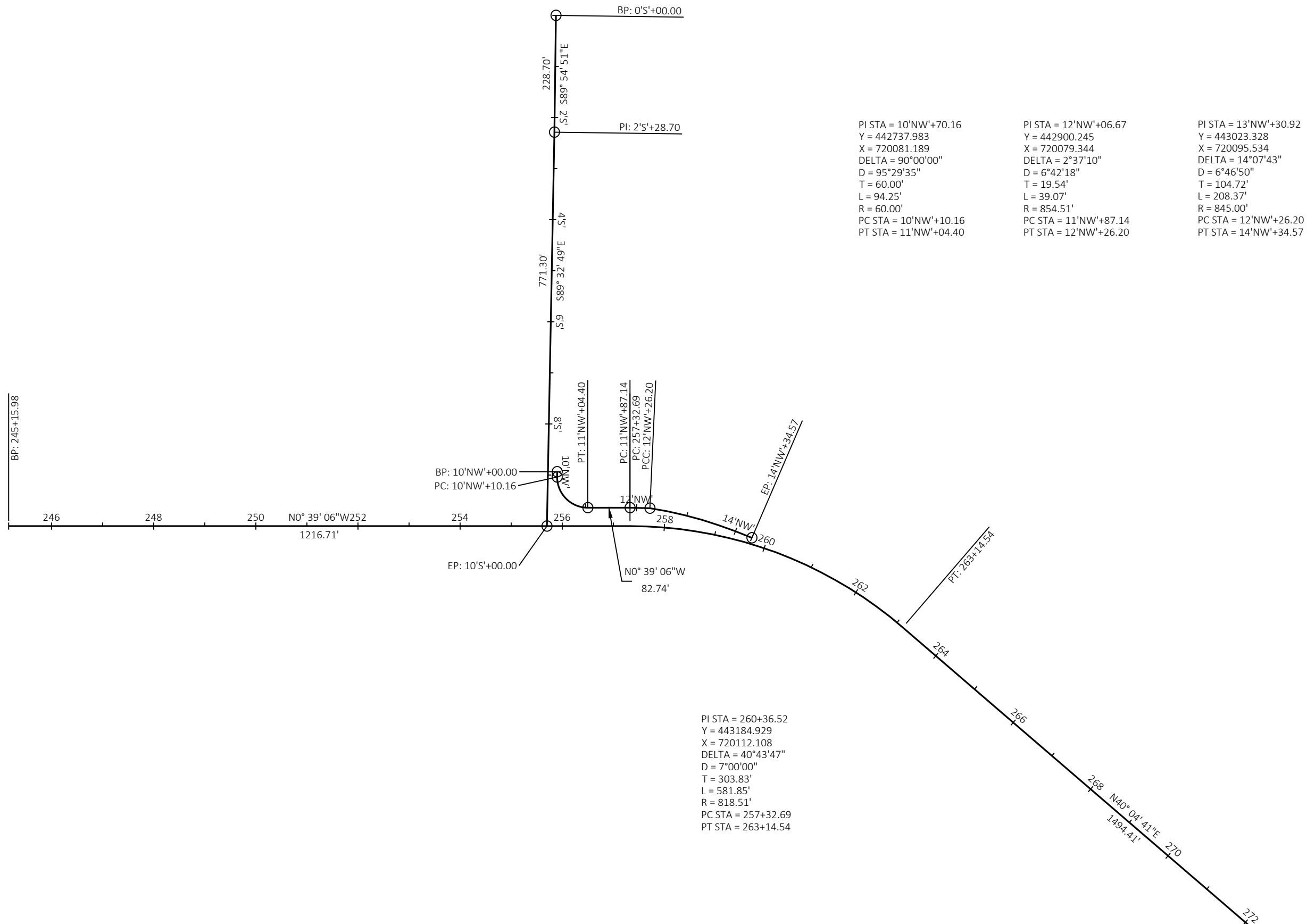
- ↑ TYPE III BARRICADE
- ↑ TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- ⚡ TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- ⌋ SIGN ON PERMANENT SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- ⓐ TYPE A WARNING LIGHT (FLASHING)
- ▨ WORK AREA
- DIRECTION OF TRAFFIC



NOTE: FOR MORE INFORMATION SEE SDD TRAFFIC CONTROL,

- ADVANCE WARNING SIGNS 40 MPH OR LESS, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
- WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
- BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.



## Estimate Of Quantities

6999-03-72

Line	Item	Item Description	Unit	Total	Qty
0002	204.0110	Removing Asphaltic Surface	SY	21.000	21.000
0004	204.0150	Removing Curb & Gutter	LF	420.000	420.000
0006	204.0155	Removing Concrete Sidewalk	SY	17.000	17.000
0008	204.0210	Removing Manholes	EACH	1.000	1.000
0010	204.0220	Removing Inlets	EACH	3.000	3.000
0012	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	36.000	36.000
0014	204.0245	Removing Storm Sewer (size) 02. 15-Inch	LF	218.000	218.000
0016	204.0245	Removing Storm Sewer (size) 03. 24-Inch	LF	10.000	10.000
0018	204.0245	Removing Storm Sewer (size) 04. 30-Inch	LF	12.000	12.000
0020	205.0100	Excavation Common	CY	984.000	984.000
0022	205.0501.S	Excavation, Hauling, and Disposal of Petroleum Contaminated Soil	TON	200.000	200.000
0024	209.1500	Backfill Granular Grade 1	TON	1,025.000	1,025.000
0026	213.0100	Finishing Roadway (project) 01. 6999-03-72	EACH	1.000	1.000
0028	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	415.000	415.000
0030	455.0605	Tack Coat	GAL	29.000	29.000
0032	460.2000	Incentive Density HMA Pavement	DOL	130.000	130.000
0034	460.5224	HMA Pavement 4 LT 58-28 S	TON	191.000	191.000
0036	520.8000	Concrete Collars for Pipe	EACH	4.000	4.000
0038	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	346.000	346.000
0040	602.0415	Concrete Sidewalk 6-Inch	SF	40.000	40.000
0042	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	60.000	60.000
0044	608.0315	Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	LF	205.000	205.000
0046	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	24.000	24.000
0048	608.0330	Storm Sewer Pipe Reinforced Concrete Class III 30-Inch	LF	12.000	12.000
0050	608.0430	Storm Sewer Pipe Reinforced Concrete Class IV 30-Inch	LF	12.000	12.000
0052	611.0530	Manhole Covers Type J	EACH	1.000	1.000
0054	611.0624	Inlet Covers Type H	EACH	1.000	1.000
0056	611.0639	Inlet Covers Type H-S	EACH	2.000	2.000
0058	611.1005	Catch Basins 5-FT Diameter	EACH	1.000	1.000
0060	611.2044	Manholes 4x4-FT	EACH	1.000	1.000
0062	611.3230	Inlets 2x3-FT	EACH	2.000	2.000
0064	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	190.000	190.000
0066	618.0100	Maintenance And Repair of Haul Roads (project) 01. 6999-03-72	EACH	1.000	1.000
0068	619.1000	Mobilization	EACH	1.000	1.000

## Estimate Of Quantities

6999-03-72

Line	Item	Item Description	Unit	Total	Qty
0070	624.0100	Water	MGAL	5.000	5.000
0072	625.0100	Topsoil	SY	210.000	210.000
0074	628.1504	Silt Fence	LF	400.000	400.000
0076	628.1520	Silt Fence Maintenance	LF	400.000	400.000
0078	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0080	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0082	628.2006	Erosion Mat Urban Class I Type A	SY	200.000	200.000
0084	628.7005	Inlet Protection Type A	EACH	3.000	3.000
0086	628.7015	Inlet Protection Type C	EACH	6.000	6.000
0088	629.0210	Fertilizer Type B	CWT	0.130	0.130
0090	630.0140	Seeding Mixture No. 40	LB	4.000	4.000
0092	630.0500	Seed Water	MGAL	5.000	5.000
0094	638.2602	Removing Signs Type II	EACH	2.000	2.000
0096	638.3000	Removing Small Sign Supports	EACH	2.000	2.000
0098	642.5001	Field Office Type B	EACH	1.000	1.000
0100	643.0300	Traffic Control Drums	DAY	1,320.000	1,320.000
0102	643.0420	Traffic Control Barricades Type III	DAY	336.000	336.000
0104	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	49.000	49.000
0106	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	49.000	49.000
0108	643.0705	Traffic Control Warning Lights Type A	DAY	672.000	672.000
0110	643.0715	Traffic Control Warning Lights Type C	DAY	72.000	72.000
0112	643.0900	Traffic Control Signs	DAY	408.000	408.000
0114	643.1000	Traffic Control Signs Fixed Message	SF	84.000	84.000
0116	643.5000	Traffic Control	EACH	1.000	1.000
0118	646.1020	Marking Line Epoxy 4-Inch	LF	1,297.000	1,297.000
0120	646.3020	Marking Line Epoxy 8-Inch	LF	448.000	448.000
0122	646.5020	Marking Arrow Epoxy	EACH	2.000	2.000
0124	646.5120	Marking Word Epoxy	EACH	1.000	1.000
0126	646.6120	Marking Stop Line Epoxy 18-Inch	LF	31.000	31.000
0128	646.7020	Marking Diagonal Epoxy 6-Inch	LF	82.000	82.000
0130	646.7220	Marking Chevron Epoxy 24-Inch	LF	95.000	95.000
0132	646.8120	Marking Curb Epoxy	LF	20.000	20.000
0134	646.9000	Marking Removal Line 4-Inch	LF	1,002.000	1,002.000
0136	646.9100	Marking Removal Line 8-Inch	LF	274.000	274.000
0138	646.9300	Marking Removal Special Marking	EACH	4.000	4.000
0140	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	4,640.000	4,640.000
0142	650.4000	Construction Staking Storm Sewer	EACH	4.000	4.000
0144	650.4500	Construction Staking Subgrade	LF	251.000	251.000
0146	650.5000	Construction Staking Base	LF	491.000	491.000
0148	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	346.000	346.000

Estimate Of Quantities

6999-03-72

Line	Item	Item Description	Unit	Total	Qty
0150	650.9910	Construction Staking Supplemental Control (project) 01. 6999-03-72	LS	1.000	1.000
0152	650.9920	Construction Staking Slope Stakes	LF	407.000	407.000
0154	690.0150	Sawing Asphalt	LF	529.000	529.000
0156	690.0250	Sawing Concrete	LF	40.000	40.000
0158	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	150.000	150.000
0160	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	300.000	300.000

**REMOVING ASPHALTIC SURFACE**

STATION - STATION	LOCATION	204.0110 SY	REMARKS
9'S'+49 - 9'S'+81	SENECA ROAD	13	CENTER ISLAND
9'S'+67 - 9'S'+84	SENECA ROAD	8	TURN LANE ISLAND
<b>TOTAL</b>			<b>21</b>

**REMOVING MANHOLES**

STATION	LOCATION	204.0210 EACH	REMARKS
258+35	STH 54 (LT)	1	
<b>TOTAL</b>			<b>1</b>

**REMOVING CURB & GUTTER**

STATION - STATION	LOCATION	204.0150 LF	REMARKS
9'S'+14 - 258+68	STH 54 (LT)	324	
9'S'+50 - 9'S'+80	SENECA ROAD	67	CENTER ISLAND
9'S'+67 - 9'S'+84	SENECA ROAD	29	TURN LANE ISLAND
<b>TOTAL</b>			<b>420</b>

**REMOVING STORM SEWER**

STATION - STATION	LOCATION	204.0245.01	204.0245.02	204.0245.03	204.0245.04	REMARKS
		12-INCH LF	15-INCH LF	24-INCH LF	30-INCH LF	
255+96 - 256+26	STH 54 (LT)	36	---	---	---	
256+26 - 258+34	STH 54 (LT)	---	212	---	---	
258+34 - 258+44	STH 54 (LT)	---	6	10	12	
<b>TOTALS</b>		<b>36</b>	<b>218</b>	<b>10</b>	<b>12</b>	

**REMOVING CONCRETE SIDEWALK**

STATION - STATION	LOCATION	204.0155 SY	REMARKS
9'S'+52 - 9'S'+77	SENECA ROAD	12	CENTER ISLAND
9'S'+67 - 9'S'+84	SENECA ROAD	5	TURN LANE ISLAND
<b>TOTAL</b>			<b>17</b>

**REMOVING INLETS**

STATION	LOCATION	204.0220 EACH	REMARKS
255+95	STH 54 (LT)	1	
256+25	STH 54 (LT)	1	
258+35	STH 54 (LT)	1	
<b>TOTAL</b>			<b>3</b>

**EXCAVATION COMMON**

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION CY (1)	AVAILABLE MATERIAL CY (5)	MASS ORDINATE +/- CY (14)	WASTE CY	REMARKS
DIVISION 1	8'S'+51 - 258+67.45	STH 54	876	876	876	876	
	256+15.49 - 9'S'+77	SENECA ROAD	107	107	107	107	
<b>TOTALS</b>			<b>984</b>	<b>984</b>	<b>984</b>	<b>984</b>	

**NOTES:**

- (1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
- (5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL
- (14) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

**EXCAVATION, HAULING, AND DISPOSAL  
OF PETROLEUM CONTAMINATED SOIL**

STATION - STATION	LOCATION	205.0501.S TON	REMARKS
<u>CATEGORY 0020</u>			
256+16 - 256+50	STH 54; 22' LT	84	
256+80 - 257+30	STH 54; 22' LT	116	
<b>TOTAL</b>			<b>200</b>

**TACK COAT**

STATION - STATION	LOCATION	455.0605 GAL	REMARKS
8'S'+50 - 258+67	STH 54 (LT)	26	
9'S'+49 - 9'S'+81	SENECA ROAD	2	CENTER ISLAND REMOVAL
9'S'+67 - 9'S'+84	SENECA ROAD	1	TURN LAND ISLAND
<b>TOTAL</b>			<b>29</b>

**BACKFILL GRANULAR GRADE 1**

STATION - STATION	LOCATION	209.1500 TON	REMARKS
256+16 - 256+50	STH 54 (LT)	84	
256+50 - 258+67	STH 54 (LT)	941	
<b>TOTAL</b>			<b>1025</b>

**HMA PAVEMENT 4 LT 58-28 S**

STATION - STATION	LOCATION	460.5224 TON	REMARKS
8'S'+50 - 258+67	STH 54 (LT)	174	
9'S'+49 - 9'S'+81	SENECA ROAD	12	CENTER ISLAND REMOVAL
9'S'+67 - 9'S'+84	SENECA ROAD	5	TURN LANE ISLAND
<b>TOTAL</b>			<b>191</b>

**BASE AGGREGATE DENSE 1 1/4-INCH**

STATION - STATION	LOCATION	305.0120 TON	REMARKS
8'S'+93 - 258+67	STH 54 (LT)	408	
9'S'+49 - 9'S'+81	SENECA ROAD	4	CENTER ISLAND
9'S'+67 - 9'S'+84	SENECA ROAD	3	TURN LAND ISLAND
<b>TOTAL</b>			<b>415</b>

**CONCRETE CURB & GUTTER 30-INCH TYPE D**

STATION - STATION	LOCATION	601.0411 LF	REMARKS
8'S'+93 - 258+67	STH 54 (LT)	325	
9'S'+67 - 9'S'+84	SENECA ROAD	21	TURN LANE ISLAND
<b>TOTAL</b>			<b>346</b>

**STORM SEWER PIPE REINFORCED CONCRETE**

STATION - STATION	LOCATION	STRUCTURE		FOR PIPE EACH	520.8000 CONCRETE				REMARKS
		TO	FROM		CLASS III	CLASS IV			
					608.0312	608.0315	608.0324	608.0330	608.0430
					12-INCH LF	15-INCH LF	24-INCH LF	30-INCH LF	30-INCH LF
255+92 - 256+16	STH 54 (LT)	EP1	I2	1	24	---	---	---	---
256+16 - 256+50	STH 54 (LT)	I2	I1	---	36	---	---	---	---
256+50 - 258+34	STH 54 (LT)	I1	MH1	---	---	189	---	---	---
258+36 - 258+37	STH 54 (LT)	CB1	EP4	1	---	---	---	---	12
258+33 - 258+34	STH 54 (LT)	EP2	MH1	1	---	16	---	---	---
258+36 - 258+58	STH 54 (LT)	EP3	CB1	1	---	---	24	---	---
258+34 - 258+36	STH 54 (LT)	MH1	CB1	---	---	---	---	12	---
<b>TOTALS</b>				<b>4</b>	<b>60</b>	<b>205</b>	<b>24</b>	<b>12</b>	<b>12</b>

**CONCRETE SIDEWALK 6-INCH**

STATION - STATION	LOCATION	602.0415 SF	REMARKS
9'S'+67 - 9'S'+84	SENECA ROAD	40	TURN LANE ISLAND
<b>TOTAL</b>		<b>40</b>	

**WATER**

STATION - STATION	LOCATION	624.0100 MGAL	630.0500 SEED MGAL	REMARKS
UNDISTRIBUTED	PROJECT LIMITS	5.0	5.0	
<b>TOTALS</b>		<b>5.0</b>	<b>5.0</b>	

**STORM SEWER STRUCTURES**

STATION	LOCATION	STRUCTURE	COVERS			611.1005			REMARKS
			611.0530 MANHOLE TYPE J EACH	611.0624 INLET TYPE H EACH	611.0639 INLET TYPE H-S EACH	611.2044 CATCH BASIN 5-FT EACH	611.3230 MANHOLE INLET 4X4-FT EACH	611.3230 INLET 2X3-FT EACH	
256+50	STH 54 (LT); 37' LT	I1	---	1	---	---	---	1	
256+16	STH 54 (LT); 48' LT	I2	---	---	1	---	---	1	
258+36	STH 54 (LT); 29' LT	CB1	---	---	1	1	---	---	
258+34	STH 54 (LT); 41' LT	MH1	1	---	---	---	1	---	
<b>TOTALS</b>			<b>1</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>2</b>	

**INLET PROTECTION**

STATION	LOCATION	628.7005 TYPE A EACH	628.7015 TYPE C EACH	REMARKS
9'S'+50	SENECA ROAD (RT)	---	1	
256+16	STH 54 (LT)	1	1	
256+50	STH 54 (LT)	1	1	
258+37	STH 54 (LT)	1	1	
258+39	STH 54 (LT & RT)	---	2	
<b>TOTALS</b>		<b>3</b>	<b>6</b>	

**PIPE UNDERDRAIN WRAPPED 6-INCH**

STATION - STATION	LOCATION	612.0406 LF	REMARKS
256+50 - 258+37	STH 54 (LT)	190	
<b>TOTAL</b>		<b>190</b>	

**EROSION CONTROL**

STATION - STATION	LOCATION	625.0100 TOPSOIL SY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2006 EROSION MAT URBAN CLASS I TYPE A SY	629.0210 FERTILIZER TYPE B CWT	630.0140 SEEDING NO. 40 LB	REMARKS
8'S'+50 - 258+67	STH 54 (LT)	188	---	---	---	0.12	3.5	
8'S'+70 - 258+87	STH 54 (LT)	---	355	355	---	---	---	
8'S'+93 - 258+67	STH 54 (LT)	---	---	---	180	---	---	
UNDISTRIBUTED	PROJECT LIMITS	22	45	45	20	0.01	0.5	
<b>TOTALS</b>		<b>210</b>	<b>400</b>	<b>400</b>	<b>200</b>	<b>0.13</b>	<b>4.0</b>	



**REMOVING SIGNS**

STATION	LOCATION	638.2602 638.3000 SIGNS SMALL SIGN TYPE II SUPPORTS		REMARKS
		EACH	EACH	
9'S'+52	SENECA ROAD (RT)	1	1	CENTER ISLAND
9'S'+75	SENECA ROAD (RT)	1	1	TURN LANE ISLAND
<b>TOTALS</b>		<b>2</b>	<b>2</b>	

**TRAFFIC CONTROL DRUMS & WARNING LIGHTS**

STATION - STATION	LOCATION	643.0300 DRUMS			643.0715 LIGHTS TYPE C			REMARKS
		NO	DAYS	DAY	NO	DAYS	DAY	
253+00 - 262+50	STH 54 (LT)	55	24	1320	3	24	72	SEE TRAFFIC CONTROL SHEETS
<b>TOTALS</b>				<b>1320</b>			<b>72</b>	

**TRAFFIC CONTROL BARRICADE & WARNING LIGHTS TYPE A**

STATION	LOCATION	643.0420 BARRICADE TYPE III			643.0705 LIGHTS TYPE A			REMARKS
		NO	DAYS	DAY	NO	DAYS	DAY	
8'S'+10	SENECA ROAD	4	24	96	8	24	192	SEE TRAFFIC CONTROL SHEETS
9'S'+85	SENECA ROAD	8	24	192	16	24	384	SEE TRAFFIC CONTROL SHEETS
259+00	STH 54 (LT)	2	24	48	4	24	96	SEE TRAFFIC CONTROL SHEETS
<b>TOTALS</b>		<b>336</b>			<b>672</b>			

**TRAFFIC CONTROL FLEXIBLE TUBULAR MARKERS**

STATION - STATION	LOCATION	643.0500 643.0600 POSTS BASES		REMARKS
		EACH	EACH	
248+50 - 259+75	STH 54	49	49	SEE TRAFFIC CONTROL SHEETS
<b>TOTALS</b>		<b>49</b>	<b>49</b>	

**TRAFFIC CONTROL SIGNS**

LOCATION	MESSAGE	SIGN CODE	643.0900			REMARKS
			NO	DAYS	DAY	
STH 54	ROAD WORK AHEAD	W20-1A	2	24	48	SEE TRAFFIC CONTROL SHEETS
STH 54	ROAD WORK 500 FT	W20-1D	2	24	48	SEE TRAFFIC CONTROL SHEETS
STH 54	ROAD WORK 250 FT	W20-1(MOD)	2	24	48	SEE TRAFFIC CONTROL SHEETS
STH 54	ROAD CURVES AHEAD (RT)	W1-4R	2	24	48	SEE TRAFFIC CONTROL SHEETS
STH 54	ROAD CURVES AHEAD (LT)	W1-4L	2	24	48	SEE TRAFFIC CONTROL SHEETS
STH 54	LANE CLOSED	R11-2L	1	24	24	SEE TRAFFIC CONTROL SHEETS
STH 54	END ROAD WORK	G20-2A	2	24	48	SEE TRAFFIC CONTROL SHEETS
SENECA ROAD	ROAD CLOSED AHEAD	W20-3A	1	24	24	SEE TRAFFIC CONTROL SHEETS
SENECA ROAD	ROAD CLOSED	R11-2	2	24	48	SEE TRAFFIC CONTROL SHEETS
SENECA ROAD	END ROAD WORK	G20-2A	1	24	24	SEE TRAFFIC CONTROL SHEETS
<b>TOTAL</b>			<b>408</b>			

**TRAFFIC CONTROL SIGNS FIXED MESSAGE**

STATION	LOCATION	MESSAGE	643.1000		REMARKS
			SF		
246+00 (RT), 7'S'+50 (RT), 265+00 (LT)	STH 54 (RT)	SENECA RD CLOSED BEGINS XXX-XX	54		SEE TRAFFIC CONTROL SHEETS
STH 54/73/PORT RD INTERSECTION	STH 54 (EB)	SENECA RD CLOSED AT HWY 54	15		SEE TRAFFIC CONTROL SHEETS
STH 54/73/PORT RD INTERSECTION	STH 73 (NB)	SENECA RD CLOSED AT HWY 54	15		SEE TRAFFIC CONTROL SHEETS
<b>TOTAL</b>			<b>84</b>		

**MARKING LINE**

STATION - STATION	LOCATION	646.1020 4-INCH EPOXY		646.3020	646.5020	646.5120	646.6120	646.7020	646.7220	646.8120	649.0150	REMARKS
		C/L DOUBLE YELLOW LF	EDGE LINE WHITE LF	8-INCH EPOXY LF	ARROW EACH	WORD EACH	STOP LINE EPOXY 18-INCH LF	DIAGONAL EPOXY 6-INCH LF	CHEVRON EPOXY 24-INCH LF	CURB EPOXY LF	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH LF	
248+45 - 266+35	STH 54	---	---	--	---	---	---	---	---	---	3580	C/L NO PASSING
250+80 - 254+90	STH 54 (LT)	---	---	--	---	---	---	---	---	---	410	EDGE LINE
256+00 - 258+25	STH 54	---	---	448	2	1	---	---	95	---	---	
258+67 - 259+65	STH 54 (LT)	---	100	---	---	---	---	---	---	---	---	
257+35 - 266+35	STH 54 (RT)	---	902	---	---	---	---	82	---	---	---	
263+10 - 266+35	STH 54	---	---	--	---	---	---	---	---	---	650	EDGE LINE
8'S'+50 - 9'S'+75	SENECA ROAD	250	45	---	---	---	15	---	---	---	---	
9'S'+67 - 9'S'+84	SENECA ROAD	---	---	---	---	---	16	---	---	20	---	TURN LANE ISLAND
SUB-TOTALS		250	1047	448	2	1	31	82	95	20	4640	
<b>TOTALS</b>		<b>1297</b>	<b>448</b>	<b>2</b>	<b>1</b>	<b>31</b>	<b>82</b>	<b>95</b>	<b>20</b>	<b>4640</b>		

**MARKING REMOVAL**

STATION - STATION	LOCATION	646.9300 * SPECIAL MARKING			REMARKS
		646.9000 4-INCH LF	646.9100 8-INCH LF	EACH	
256+48 - 258+40	STH 54 (LT)	---	192	4	
258+67 - 259+65	STH 54 (LT)	100	---	---	
257+35 - 266+35	STH 54 (RT)	902	82	---	
<b>TOTALS</b>		<b>1002</b>	<b>274</b>	<b>4</b>	

\* SPECIAL MARKING REMOVAL CONSISTS OF TWO ARROWS AND TWO WORDS.

**SAWING**

STATION - STATION	LOCATION	690.0150 ASPHALT		690.0250 CONCRETE		REMARKS
		LF	LF	LF	LF	
258+68	STH 54 (LT)	---	---	---	3	
8'S'+50 - 258+68	SENECA ROAD	407	---	---	---	
9'S'+49 - 9'S'+81	SENECA ROAD	84	---	---	---	CENTER ISLAND
9'S'+67 - 9'S'+84	SENECA ROAD	38	37	---	---	TURN LANE ISLAND
<b>TOTALS</b>		<b>529</b>	<b>40</b>			

**CONSTRUCTION STAKING**

STATION - STATION	LOCATION	650.4000 STORM AND SEWER			650.5500 CURB GUTTER AND CURB & GUTTER		650.9910 SUPPLEMENTAL CONTROL (6999-03-72)		650.9920 SLOPE STAKES	REMARKS
		SEWER EACH	SUBGRADE LF	BASE LF	LF	LF	LS	LF		
8'S'+93 - 258+67	STH 54 (LT)	4	---	---	---	325	1	---		
256+16 - 258+67	STH 54 (LT)	---	251	---	---	---	---	---		
8'S'+50 - 258+67	STH 54 (LT)	---	---	407	---	---	---	407		
9'S'+49 - 9'S'+81	STH 54 (LT)	---	---	84	---	---	---	---		
9'S'+67 - 9'S'+84	STH 54 (LT)	---	---	---	21	---	---	---		
<b>TOTALS</b>		<b>4</b>	<b>251</b>	<b>491</b>	<b>346</b>	<b>1</b>	<b>407</b>			

# TRANSPORTATION PROJECT PLAT NO: 6999-03-22 - 4.01

PART OF LOT 1 CSM 3259, LOCATED IN GOVERNMENT LOT 4, SECTION 24, T 22 N, R 5 E  
CITY OF WISCONSIN RAPIDS, WOOD COUNTY, WISCONSIN

RELOCATION ORDER STH 54, WOOD COUNTY, CITY OF WISCONSIN RAPIDS (SECOND AVENUE SOUTH / SENECA ROAD INTERSECTION)

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE CITY OF WISCONSIN RAPIDS DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 62.22, WISCONSIN STATUTES, THE CITY OF WISCONSIN RAPIDS HEREBY ORDERS THAT:  
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.  
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE CITY FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE CITY OF WISCONSIN RAPIDS, PURSUANT TO THE PROVISIONS OF SECTION 62.22, WISCONSIN STATUTES.

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER	INTEREST REQUIRED	FEE ACRES SO. FT.	T.L.E. SO. FT.	P.L.E. ACRES	EXISTING ACRES
1	DOMTAR A.W. CORP	FEE	1222	-	-	-

OWNERS NAMES ARE FOR INFORMATIONAL PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LANDS TO THE DEPARTMENT OF TRANSPORTATION

EXISTING HIGHWAY R/W SHOWN HEREIN IS BASED ON CSM 3259

SCALE, FEET

SCHEDULE OF UTILITIES & INTERESTS REQUIRED

PARCEL NUMBER	OWNER	INTEREST REQUIRED
101	SOLARUS	RELEASE OF RIGHTS
102	CHARTER COMMUNICATIONS	RELEASE OF RIGHTS

- (101) SOLARUS  
NO EASEMENT OF RECORD  
PARCEL 1
- (102) CHARTER COMMUNICATIONS  
NO EASEMENT OF RECORD  
PARCEL 1

CURVE 1  
PI STA. 260+36.52  
Y = 443184.929  
X = 720112.108  
DELTA = 40°43'47"  
D = 7°00'00"  
T = 303.83'  
L = 581.85'  
R = 818.51'  
PC STA. = 257+32.69  
PT STA. = 263+14.54

### NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), WOOD COUNTY, NAD83 2011 IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4"x24" IRON REBARS) UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

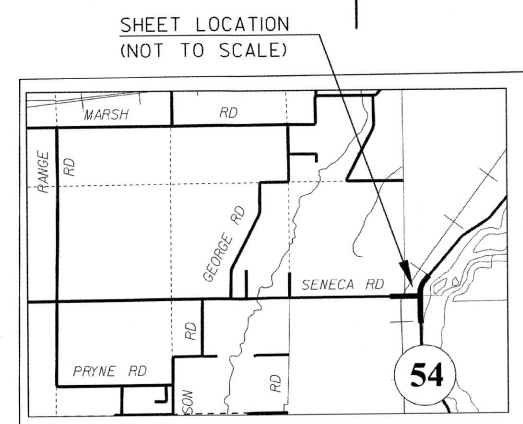
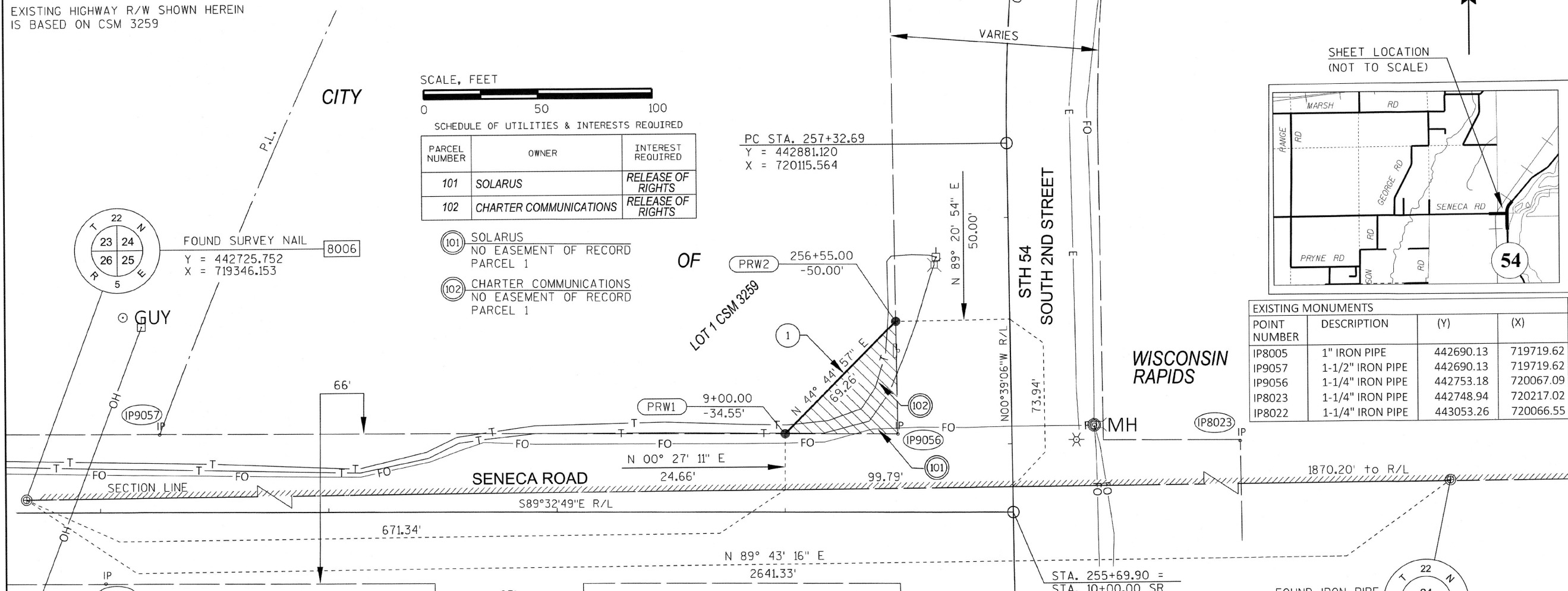
RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS" OF PUBLIC RECORD.

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

FOR THE LATEST ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN WISCONSIN RAPIDS.

RESERVED FOR REGISTER OF DEEDS  
PROJECT NUMBER 6999-03-22-4.01  
AMENDMENT NO. \_\_\_\_\_



EXISTING MONUMENTS

POINT NUMBER	DESCRIPTION	(Y)	(X)
IP8005	1" IRON PIPE	442690.13	719719.62
IP9057	1-1/2" IRON PIPE	442690.13	719719.62
IP9056	1-1/4" IRON PIPE	442753.18	720067.09
IP8023	1-1/4" IRON PIPE	442748.94	720217.02
IP8022	1-1/4" IRON PIPE	443053.26	720066.55

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	RELEASE OF RIGHTS	ROR
ACCESS RIGHTS	AR	REMAINING	REM.
ACRES	AC.	RIGHT-OF-WAY	R/W
AND OTHERS	ET.AL.	SECTION	SEC.
CENTERLINE	C/L	STATION	STA.
CERTIFIED SURVEY MAP CORNER	CSM	TEMPORARY LIMITED EASEMENT	TLE
DOCUMENT	DOC.	VOLUME	V.
EASEMENT	EASE.		
HIGHWAY EASEMENT	H.E.		
LAND CONTRACT	LC		
MONUMENT	MON.		
PAGE	P.		
PERMANENT LIMITED EASEMENT	PLE		
PROPERTY LINE	PL		
RECORDED AS (100')	PL (100')		
REFERENCE LINE	R/L		

CONVENTIONAL SYMBOLS

(IP)	FOUND IRON PIPE/PIN
(R/W)	R/W MONUMENT
(S)	R/W STANDARD
(S)	SIGN
(S)	SECTION CORNER MONUMENT
(S)	SECTION CORNER SYMBOL
(H)	FEE (HATCH VARIES)
(TLE)	TEMPORARY LIMITED EASEMENT
(PLE)	PERMANENT LIMITED EASEMENT
(R/W)	R/W BOUNDARY POINT
(U)	UTILITY PARCEL NUMBER
(S)	SIGN NUMBER (OFF PREMISE)
(B)	BUILDING

CONVENTIONAL UTILITY SYMBOLS

(W)	WATER
(G)	GAS
(T)	TELEPHONE
(OH)	OVERHEAD TRANSMISSION LINES
(E)	ELECTRIC
(TV)	CABLE TELEVISION
(FO)	FIBER OPTIC
(SAN)	SANITARY SEWER
(SS)	STORM SEWER
(P)	POWER POLE
(TP)	TELEPHONE POLE
(TP)	TELEPHONE PEDESTAL
(ET)	ELECTRIC TOWER

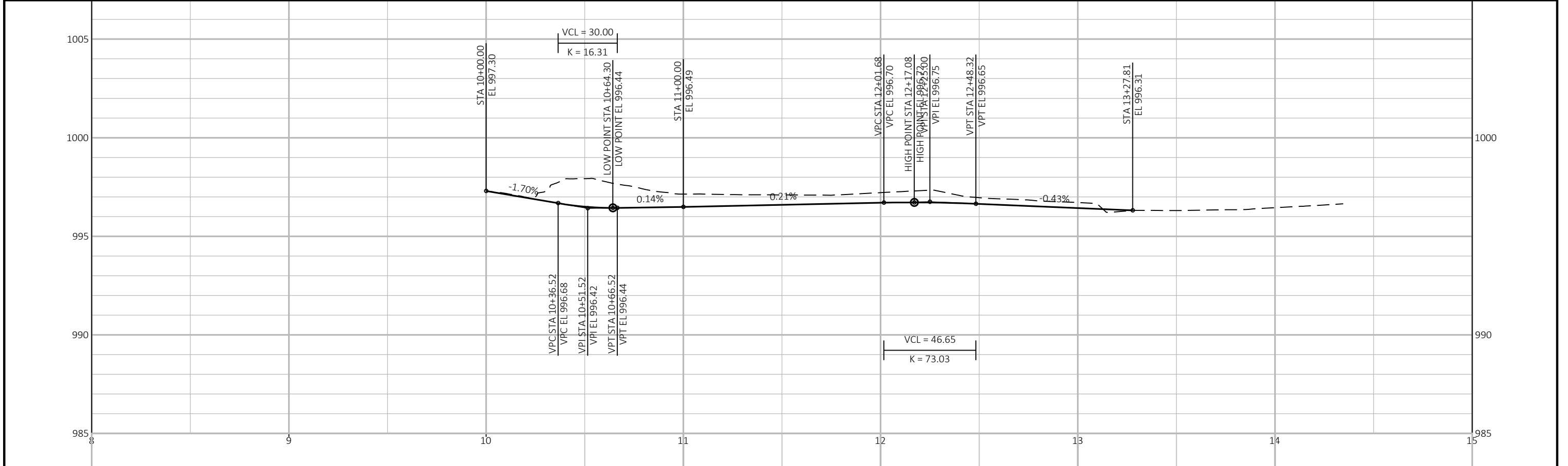
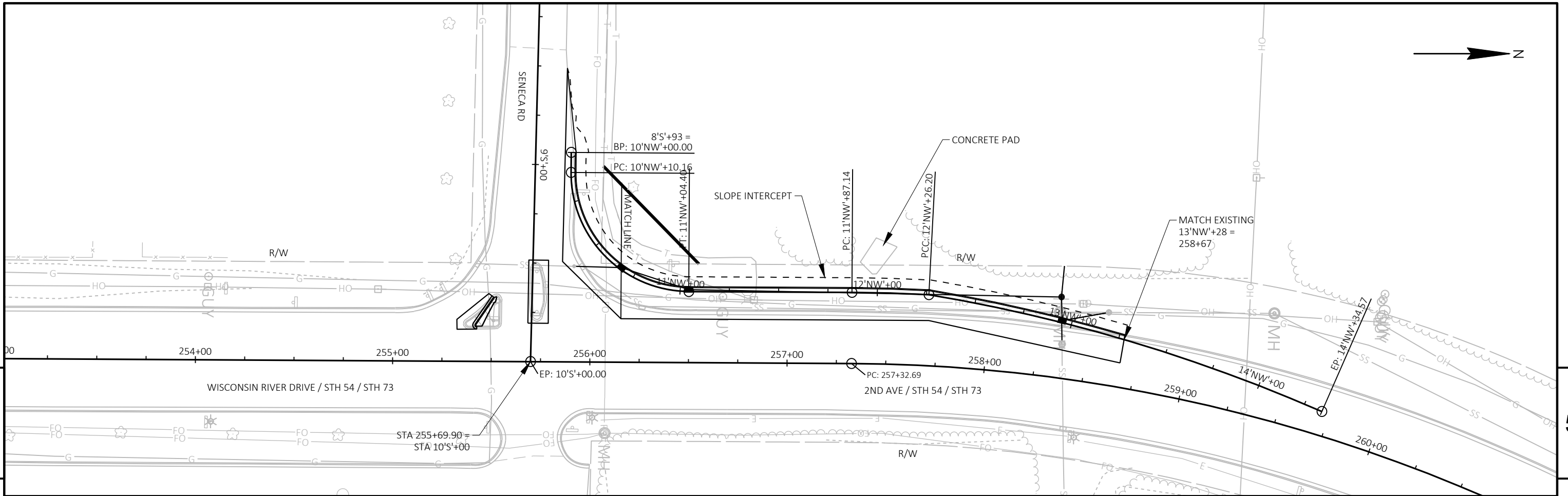
### STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

I, JEFFREY T. BROCK, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE CITY OF WISCONSIN RAPIDS, I HAVE MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: *Jeffrey T. Brock* DATE: 2/5/2019  
PRINT NAME: JEFFREY T. BROCK  
REGISTRATION NUMBER: S-2642

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE CITY OF WISCONSIN RAPIDS

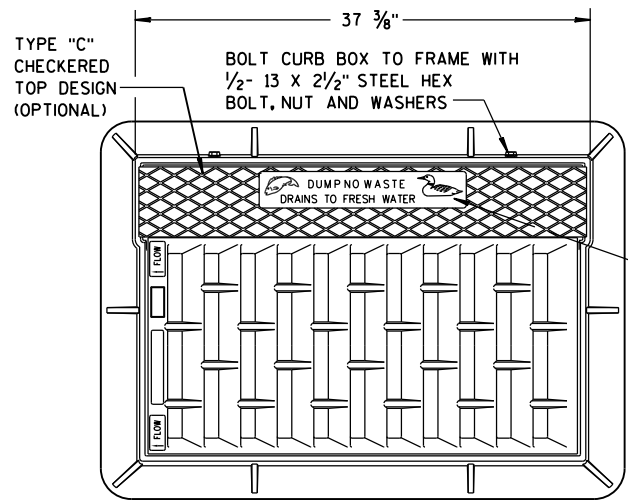
SIGNATURE: *Joe Eichsteadt* DATE: 2/7/19  
PRINT NAME: Joe Eichsteadt, City Engineer



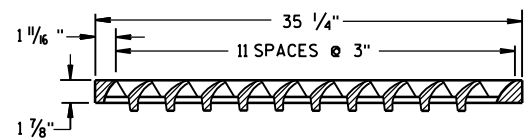
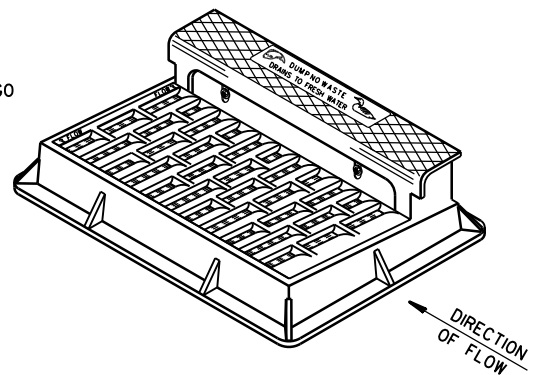
PROJECT NO: 6999-03-72      HWY: STH 54      COUNTY: WOOD      PLAN AND PROFILE: NW QUADRANT      SHEET: E

## Standard Detail Drawing List

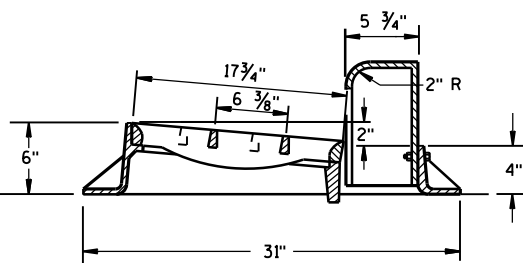
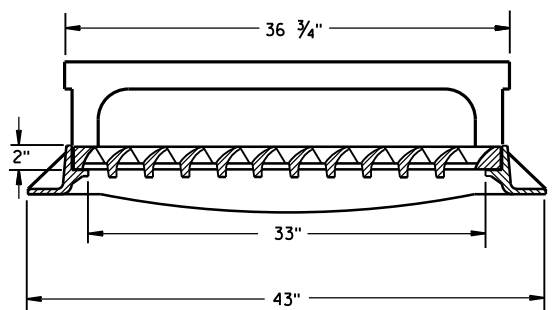
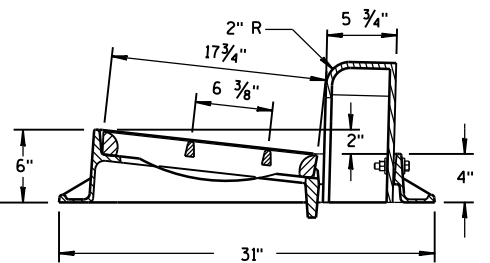
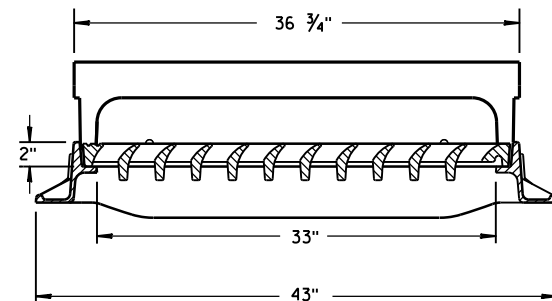
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08A08-02	CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER
08B10-02	MANHOLES 3X3-FT, 4X4-FT, 5X5-FT AND 6X6-FT
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-14B	PAVEMENT MARKING WORDS
15C07-14C	PAVEMENT MARKING ARROWS
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C08-19C	PAVEMENT MARKING (TURN LANES)
15C11-07A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C33-03	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



**NOTE:  
GRATE IS REVERSIBLE.**

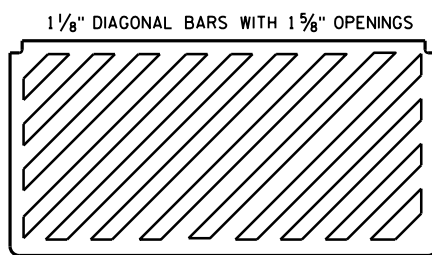


**NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"**



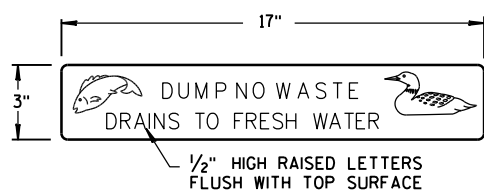
**TYPE "H"**

**NOTE: EITHER CASTING IS ACCEPTABLE**

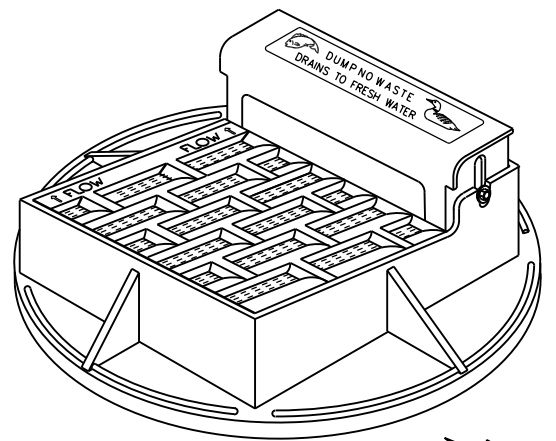


**SPECIAL GRATE FOR  
TYPE "H" COVER**

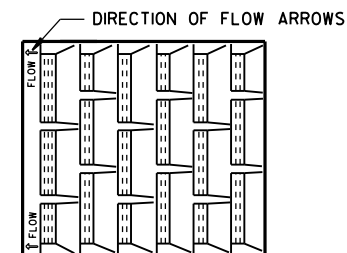
(MEASURES 35 1/4" X 17 3/4" X 2")  
(NOTED AS TYPE H-S ON DRAINAGE TABLE)



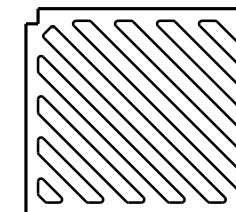
**LOGO DETAIL**



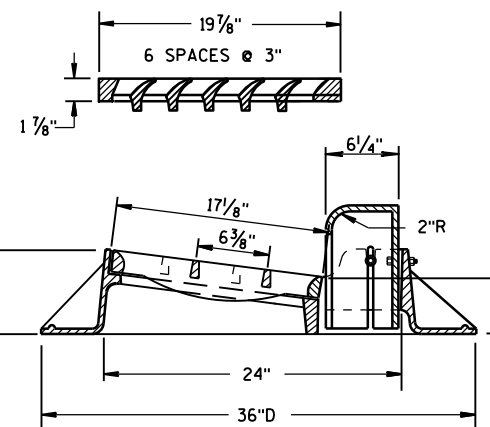
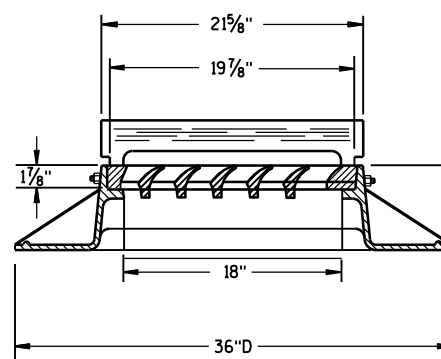
**NOTE:  
GRATE IS REVERSIBLE.**



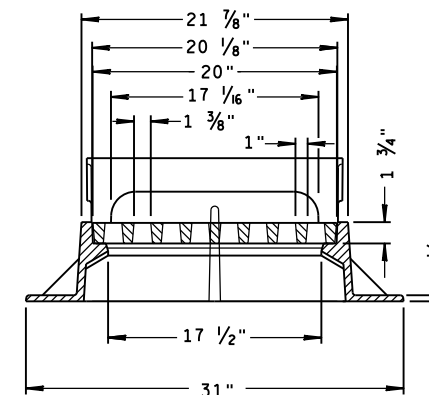
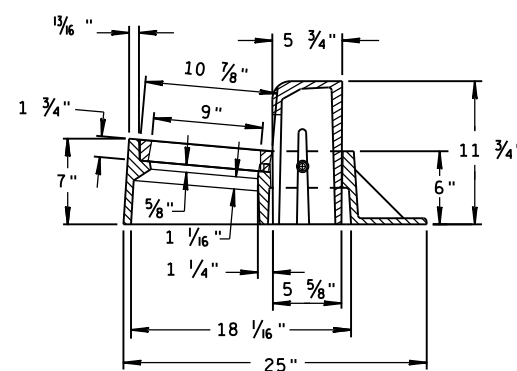
1" DIAGONAL BARS  
WITH 1 1/2" OPENINGS



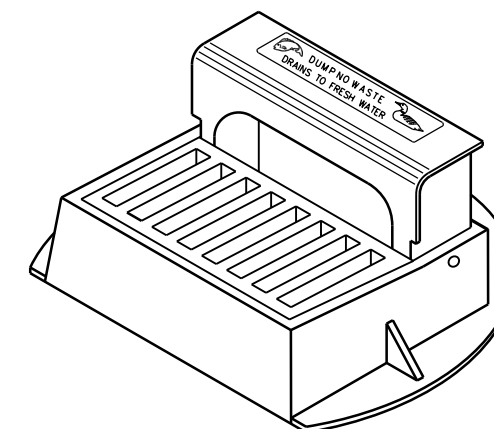
**SPECIAL GRATE FOR  
TYPE "A" COVER**  
(MEASURES 19 3/4" X 17" X 1 1/8")  
(NOTED AS TYPE A-S ON DRAINAGE TABLE)



**TYPE "A"**



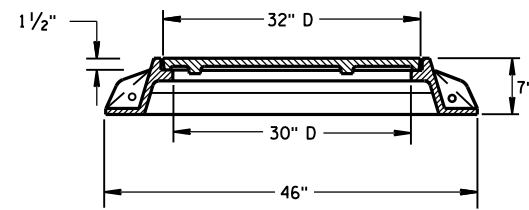
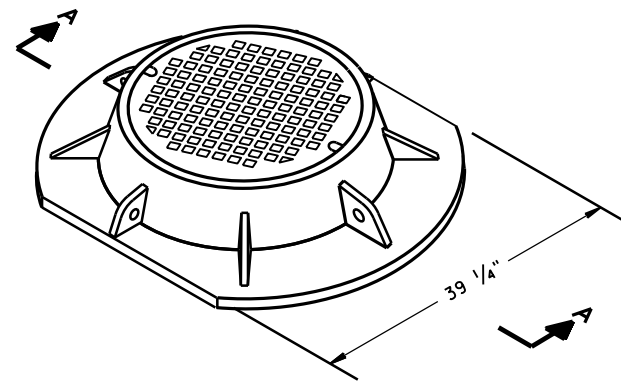
**TYPE "Z"**



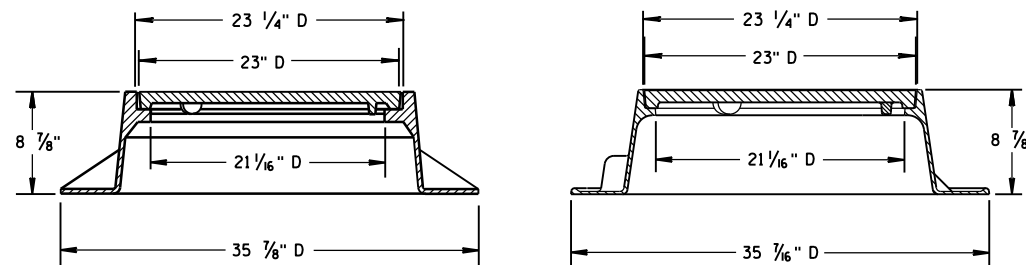
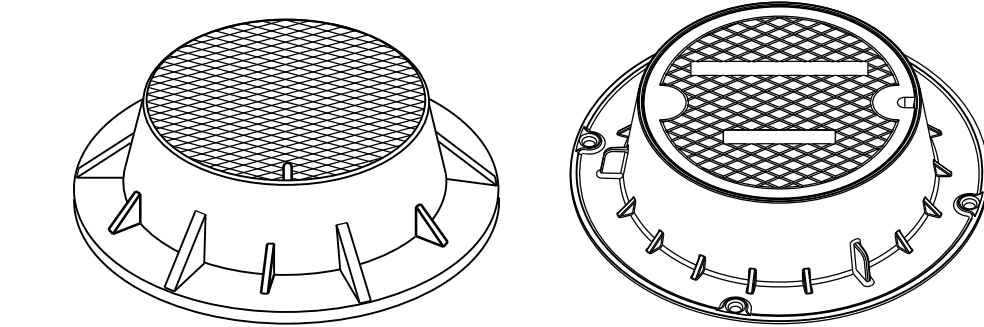
**INLET COVERS  
TYPE A, H, A-S, H-S & Z**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE 11-27-13  
DATE 1/5/ Jerry H. Zogg  
ROADWAY STANDARDS DEVELOPMENT  
ENGINEER  
FHWA



SECTION A-A  
TYPE "K"



TYPE "J"

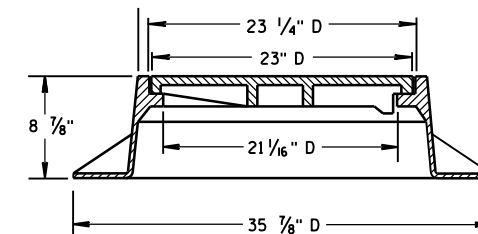
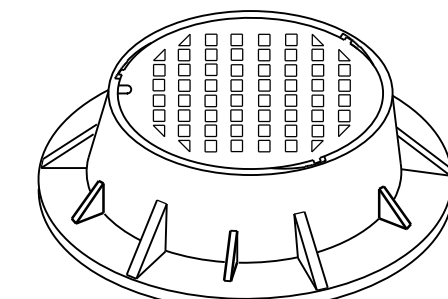
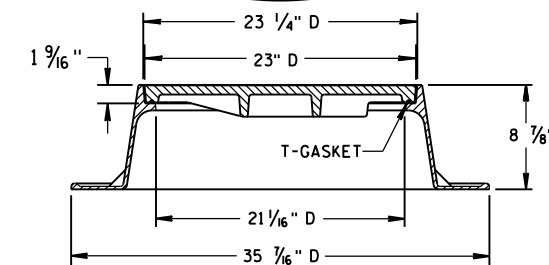
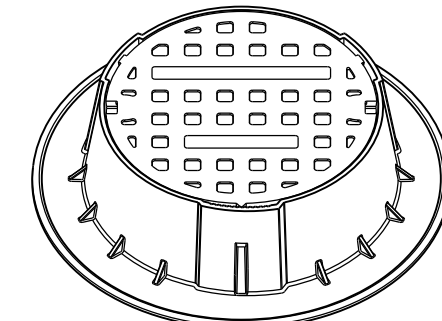
NOTE: EITHER CASTING IS ACCEPTABLE

**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.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



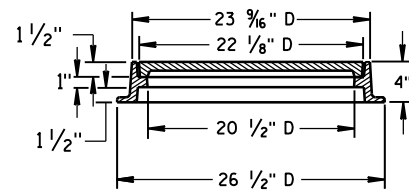
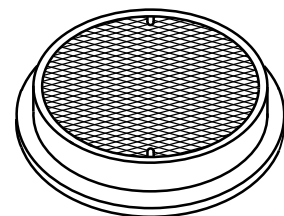
TYPE "J" SPECIAL

TYPE "B" NON-ROCKING SELF-SEAL LID

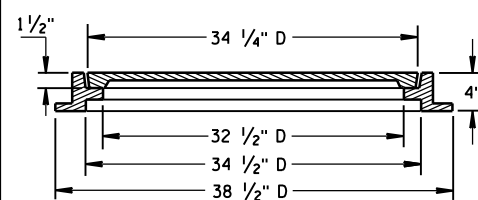
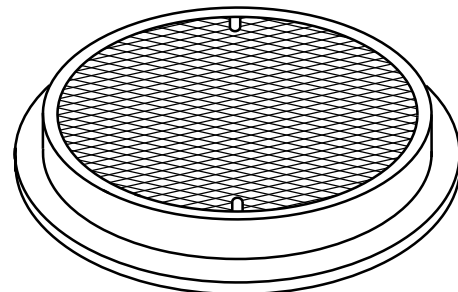
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

NOTE: EITHER CASTING IS ACCEPTABLE

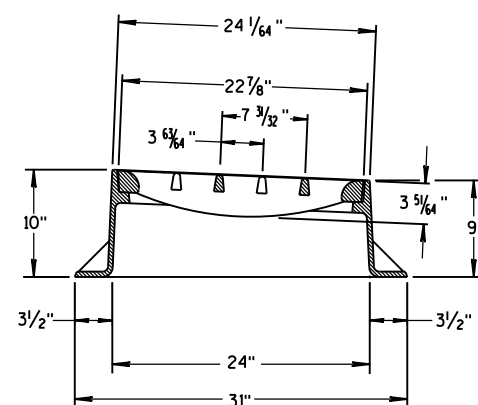
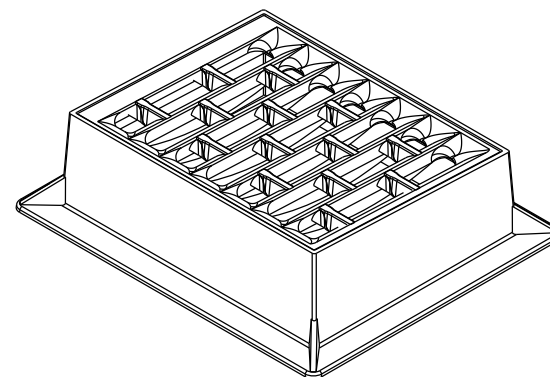
6



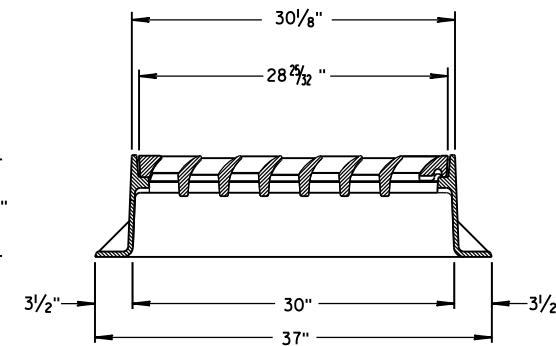
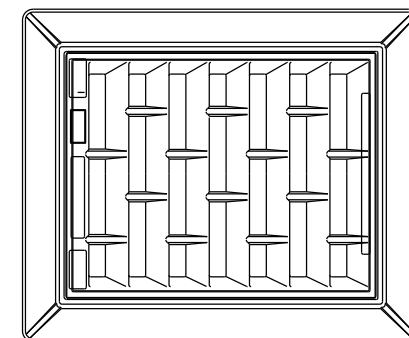
TYPE "L"



TYPE "M"



INLET COVER TYPE "BW"



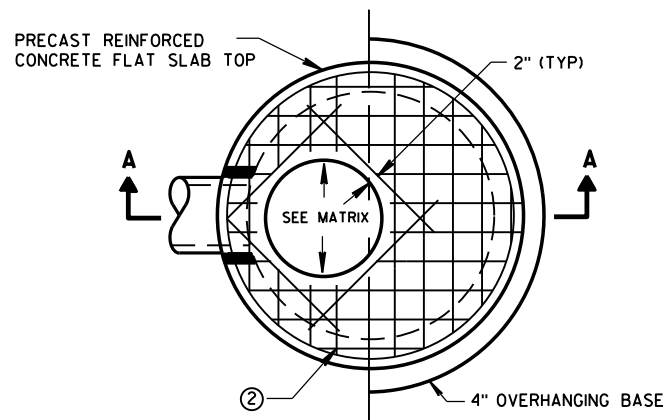
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INLET COVER TYPE BW  
MANHOLE COVERS, TYPE K,  
J, J-S, L & M

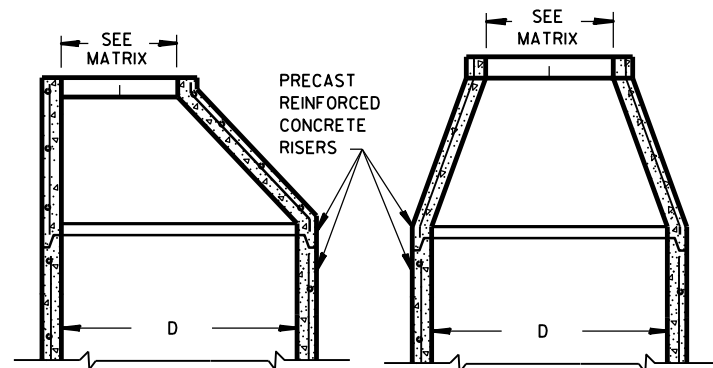
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
11/27/2013  
DATE  
FHWA

/s/ Jerry H. Zogg  
ROADWAY STANDARDS DEVELOPMENT  
ENGINEER

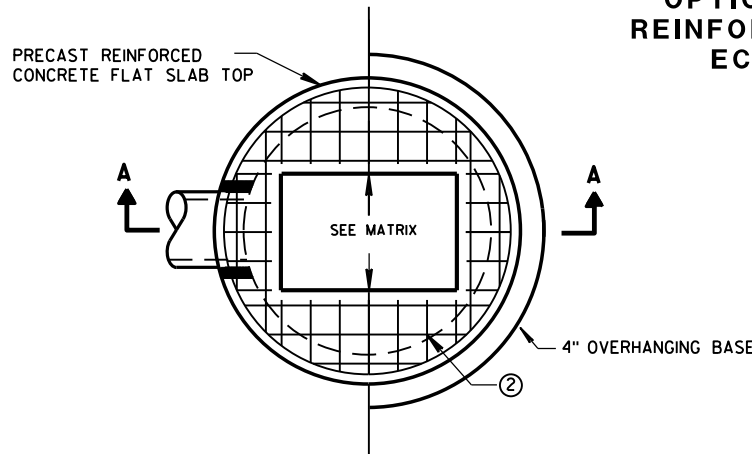


PLAN VIEW CIRCULAR OPENING

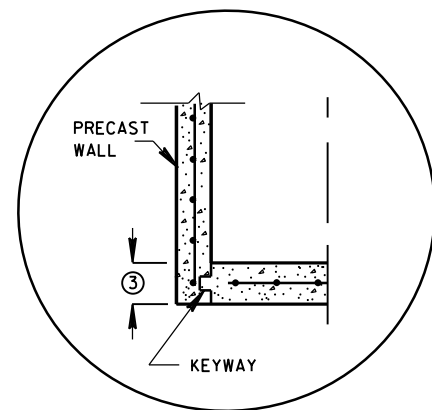


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

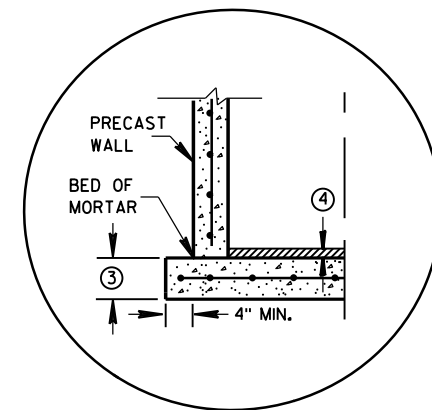
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PLAN VIEW RECTANGULAR OPENING

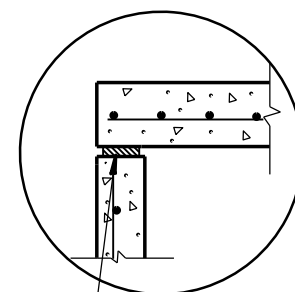


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

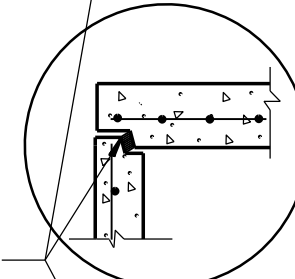


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

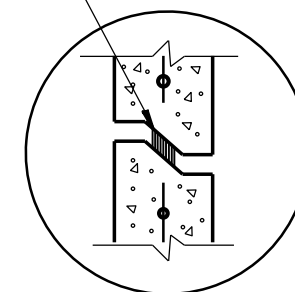
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



TOP WITH PLAIN END JOINT

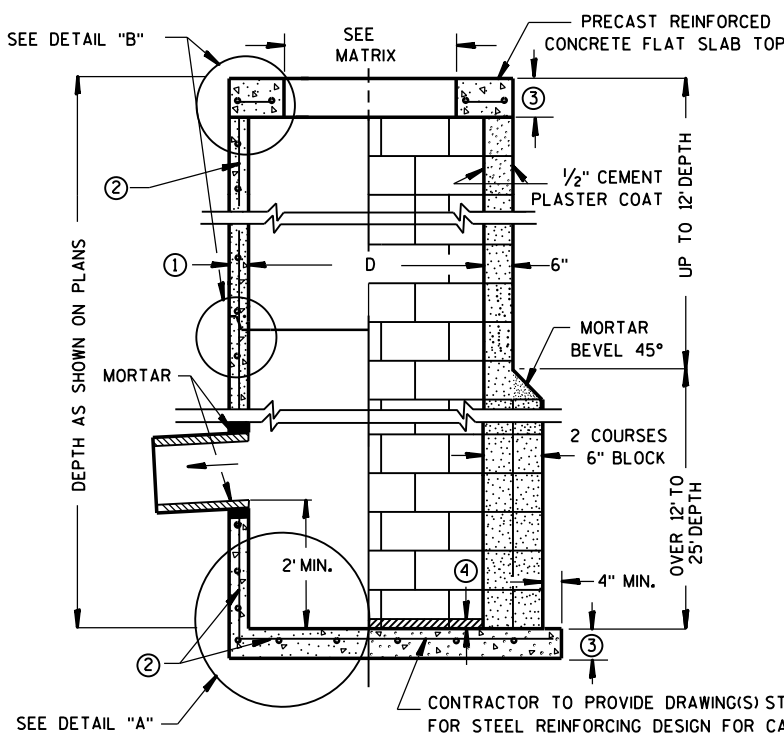


TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

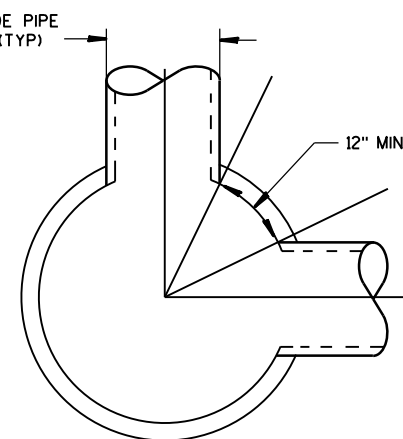
DETAIL "B"



SECTION A-A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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



DETAIL "C"

CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-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 CATCH BASIN 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.

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH; 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2 INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

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.

CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

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 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT AND 7 INCHES FOR 6-FT DIAMETER PRECAST CATCH BASINS.
- ② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- ③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".
- ④ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2" SUMP MEASURED FROM TOP OF KEY.

**CATCH BASIN COVER OPENING MATRIX**

CATCH BASIN SIZE	INLET COVER TYPE OPENING SIZE (FT)	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
3-FT	2X2	X	X					X		X		
	2 DIA.				X							X
4-FT- 6-FT	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2 DIA.				X							X
	2X3						X					
	2.5X3											

**PIPE MATRIX**

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	30

CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
Sep 1, 2016 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
FHWA UNIT SUPERVISOR

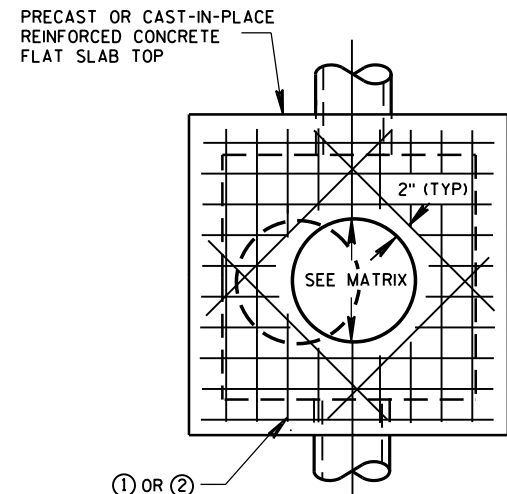
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6

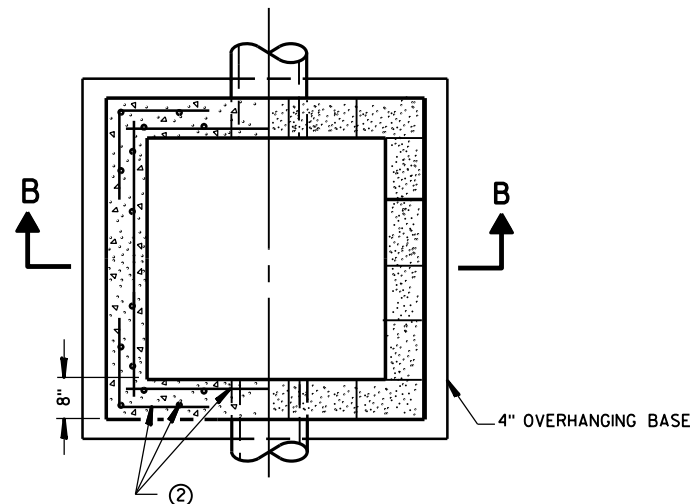
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S.D.D. 8 A 8-2

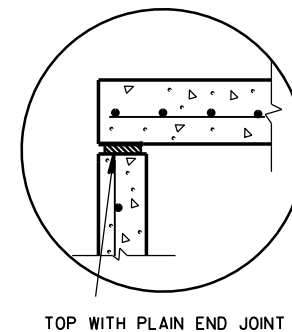




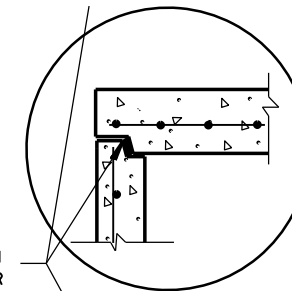
**PLAN VIEW  
CIRCULAR OPENING**



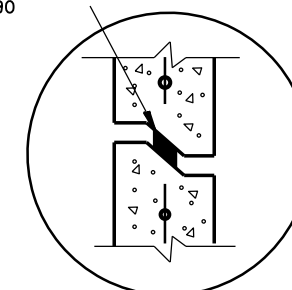
**SECTION A-A  
PLAN VIEW**



TOP WITH PLAIN END JOINT

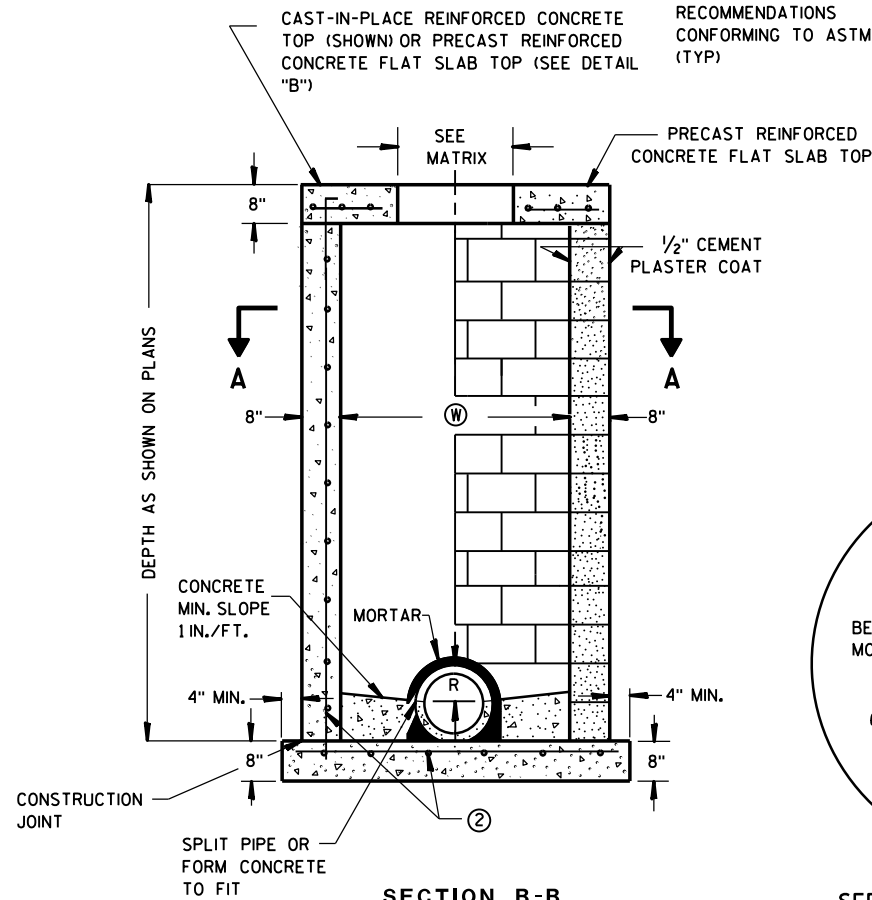
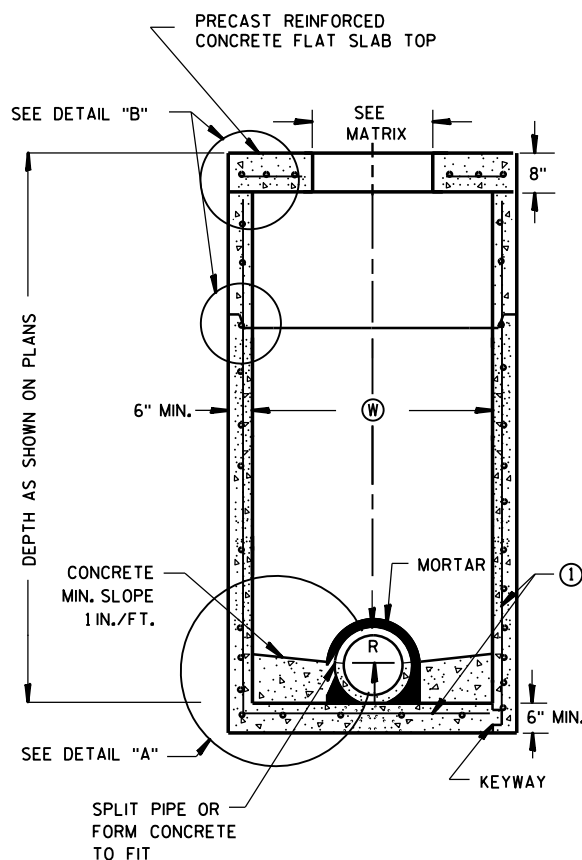


TOP WITH TONGUE AND GROOVE JOINT

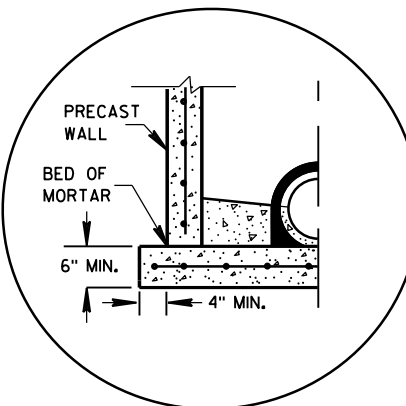


RISER WITH TONGUE AND GROOVE JOINT

**DETAIL "B"**



**SECTION B-B**



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

**DETAIL "A"**

**GENERAL NOTES**

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

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE 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.

PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2 INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED. CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN WIDTH.

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

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

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.

MAXIMUM PIPE DIAMETER DETERMINED BY 3 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "C". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

- ① FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

**MANHOLE COVER OPENING MATRIX**

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
2 DIA.	X	X		X	
3 DIA.			X		X

**PIPE MATRIX**

MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (W) (IN)	LENGTH (L) (IN)
3X3-FT	24	24
4X4-FT	30	30
5X5-FT	42	42
6X6-FT	54	54

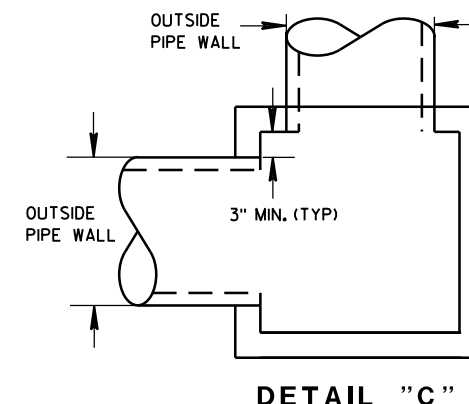
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE

CAST-IN-PLACE REINFORCED CONCRETE

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

**SQUARE MANHOLES W/ FLAT TOP  
MANHOLES 3X3-FT, 4X4-FT, 5X5-FT AND 6X6-FT**

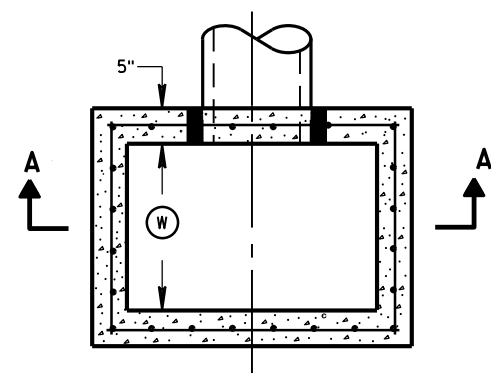


**DETAIL "C"**

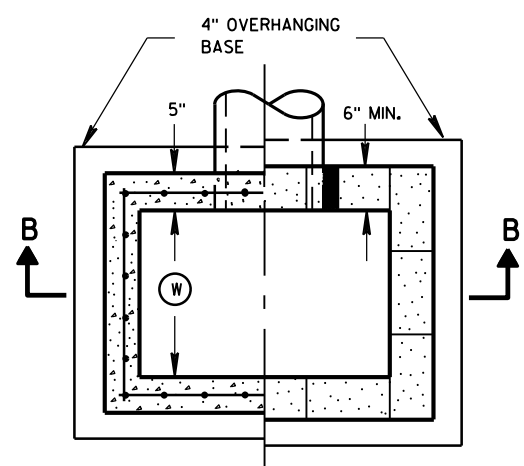
**MANHOLES 3X3-FT, 4X4-FT  
5X5-FT AND 6X6-FT**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

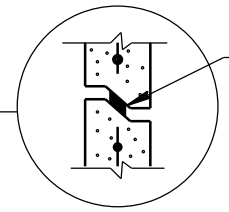
APPROVED  
DATE: Sep 1, 2016  
DATE: /S/ Rodney Taylor  
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR  
FHWA



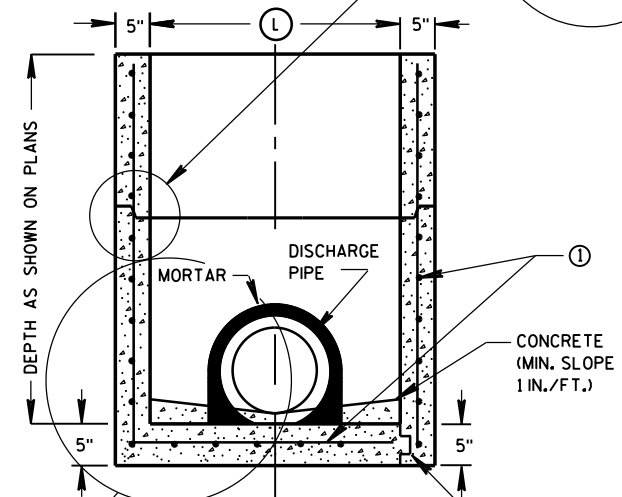
PLAN VIEW



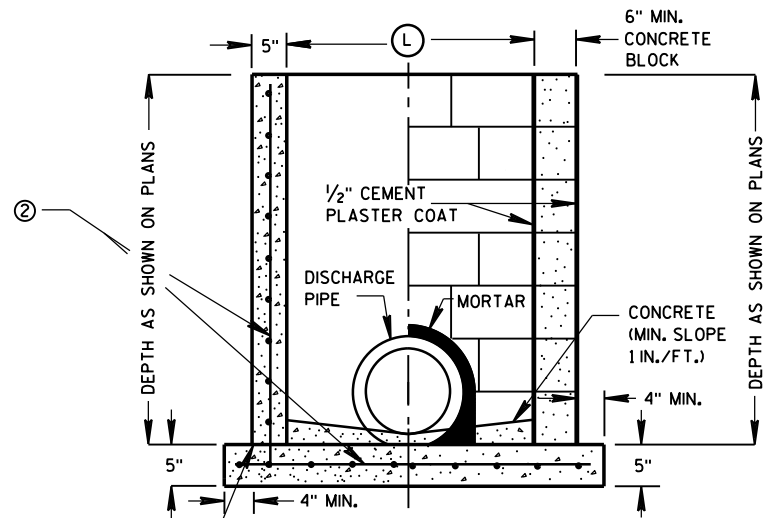
PLAN VIEW



RISER JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



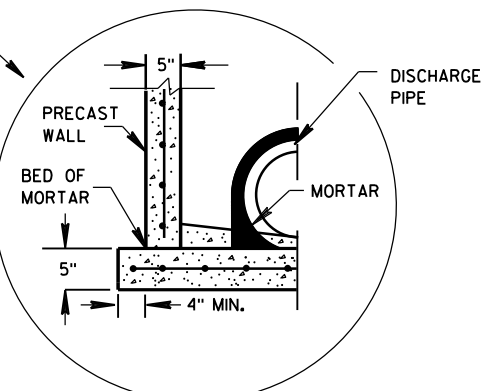
SECTION A-A



SECTION B-B

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE  
 PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE  
 KEYWAY

CONSTRUCTION JOINT  
 CAST-IN-PLACE REINFORCED CONCRETE  
 CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ①



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

**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.

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ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES 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.

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

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND 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.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

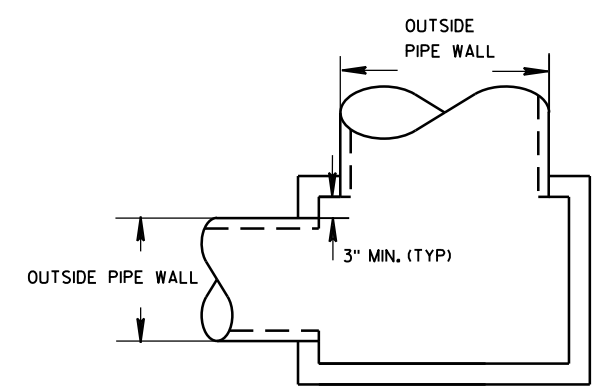
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

**INLET COVER MATRIX**

INLET SIZE	INLET COVER TYPE		ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH (W) (FT)	LENGTH (L) (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

**PIPE MATRIX**

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



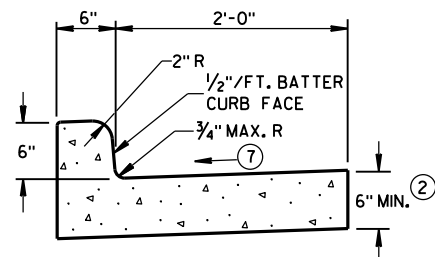
DETAIL "A"

**INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT**

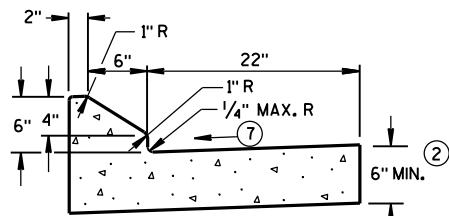
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

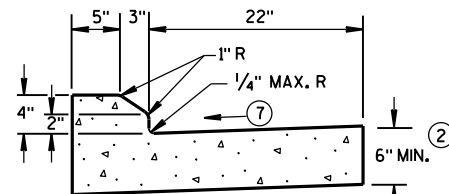
APPROVED  
 Sept., 2016 /S/ Rodney Taylor  
 DATE ROADWAY STANDARDS DEVELOPMENT  
 FHWA UNIT SUPERVISOR



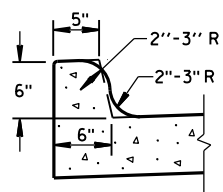
TYPES A<sup>①</sup> & D



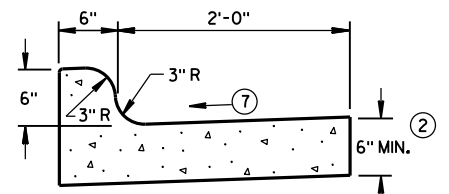
6" SLOPED CURB TYPES G<sup>①</sup> & J



4" SLOPED CURB TYPES G<sup>①</sup> & J

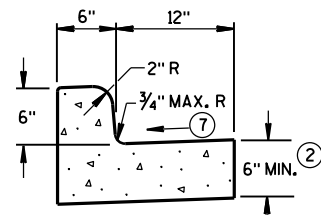


TYPES K<sup>①</sup> & L  
(OPTIONAL CURB SHAPE)



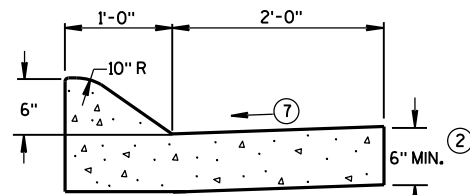
TYPES K<sup>①</sup> & L

CONCRETE CURB & GUTTER 30"

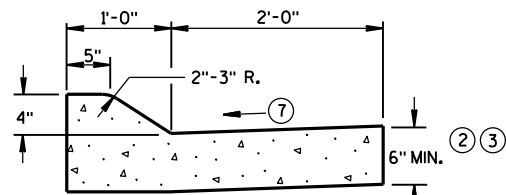


TYPES A<sup>①</sup> & D

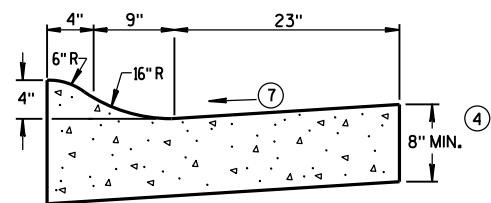
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A<sup>①</sup> & D

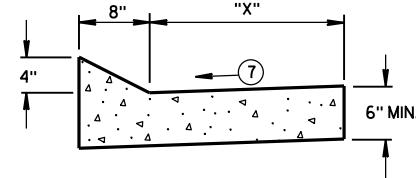


4" SLOPED CURB TYPES A<sup>①</sup> & D



4" SLOPED CURB TYPES R<sup>①</sup> & T<sup>⑤</sup>

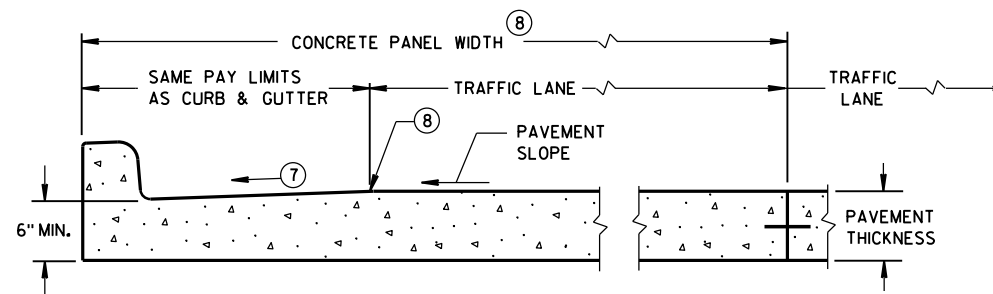
CONCRETE CURB & GUTTER 36"



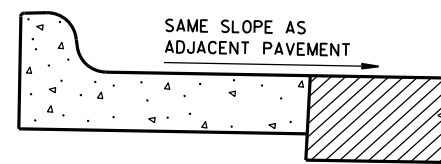
TYPES TBT & TBTT<sup>①</sup>

CONCRETE CURB & GUTTER

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



PARTIAL SECTION OF PAVEMENT  
WITH INTEGRAL CURB & GUTTER



REVERSE SLOPE GUTTER<sup>⑥</sup>  
(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.

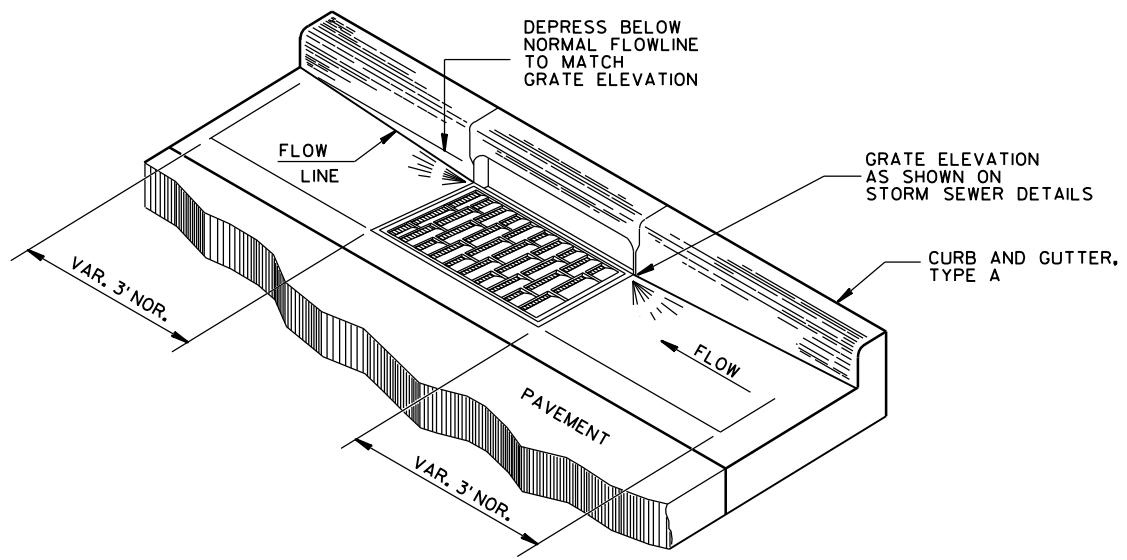
PAVEMENT THICKNESS  
AND MAXIMUM CONCRETE  
PANEL WIDTH TABLE

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

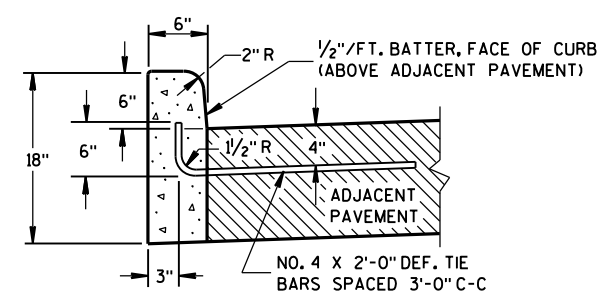
\* BIKE LANE IS NOT SHOWN.

CONCRETE CURB & GUTTER

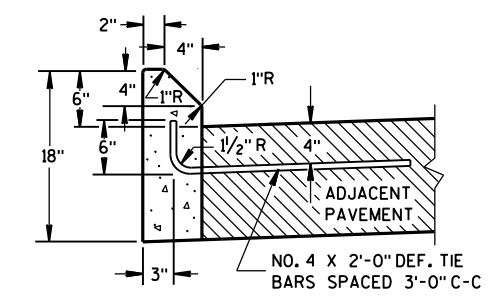
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



**DETAIL OF CURB AND GUTTER AT INLETS**  
(TYPE H INLET COVER SHOWN)



TYPES A<sup>①</sup> & D

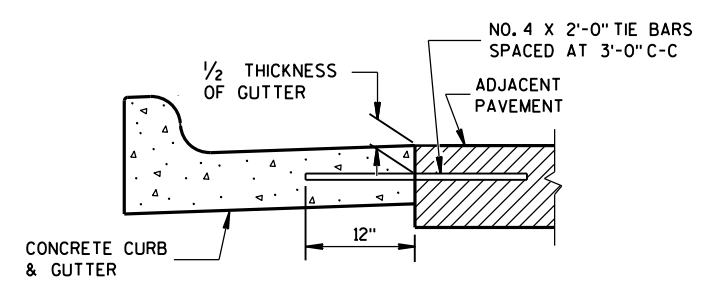


TYPES G<sup>①</sup> & J

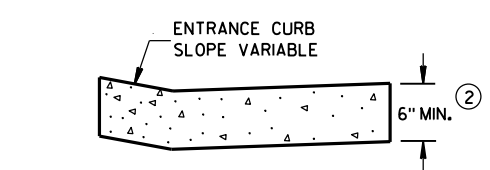
**GENERAL NOTES**

- 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.
  - ③ REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

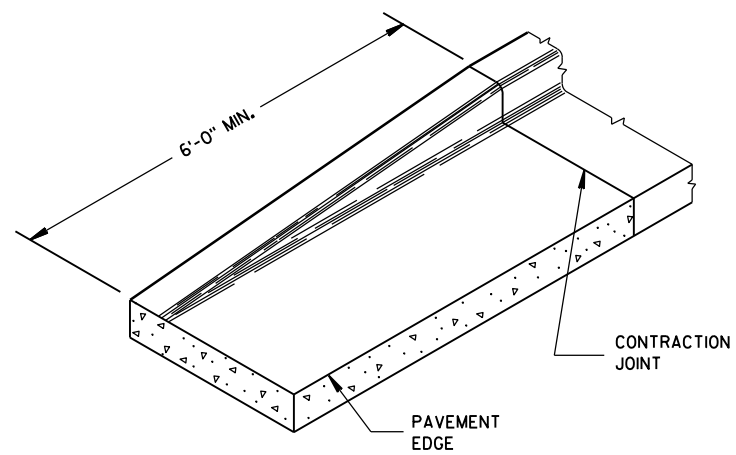
**CONCRETE CURB**



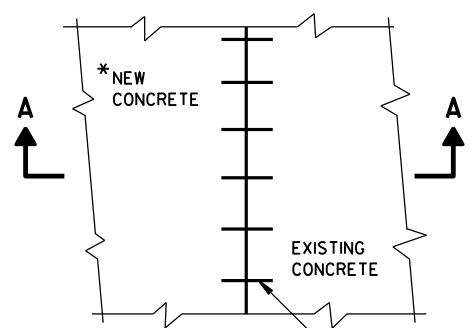
TYPICAL TIE BAR LOCATION<sup>①</sup>



DRIVEWAY ENTRANCE CURB<sup>⑨</sup>  
(WHEN DIRECTED BY THE ENGINEER)



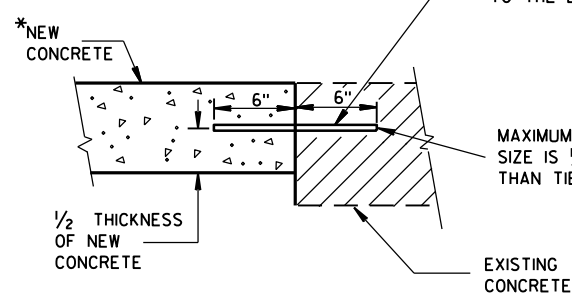
**END SECTION CURB & GUTTER**



PLAN VIEW

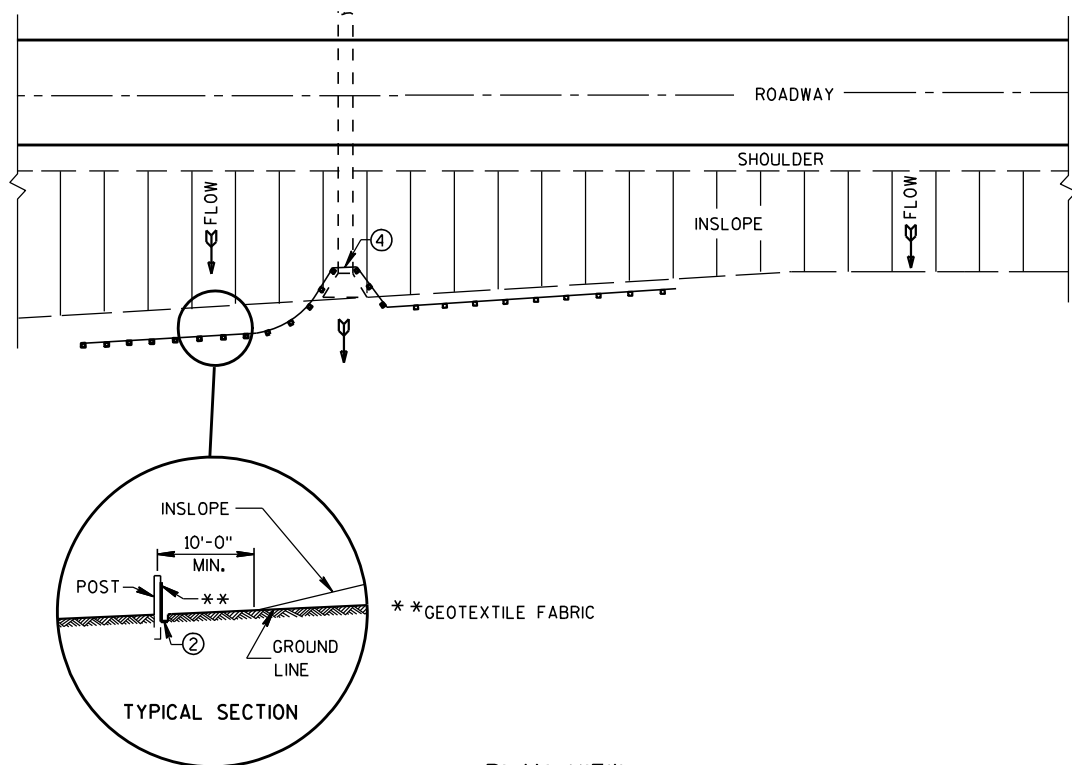
\* NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

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

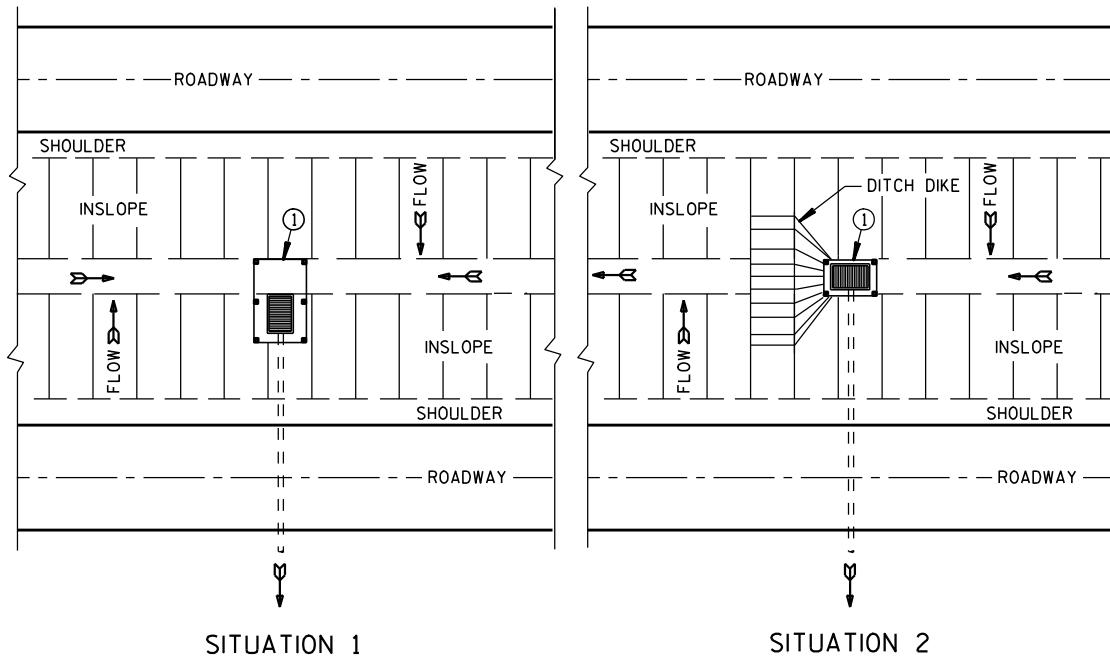


SECTION A-A  
TIE BARS DRILLED INTO EXISTING PAVEMENT

<b>CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June, 2017 DATE	/s/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	



PLAN VIEW  
TYPICAL APPLICATION OF SILT FENCE

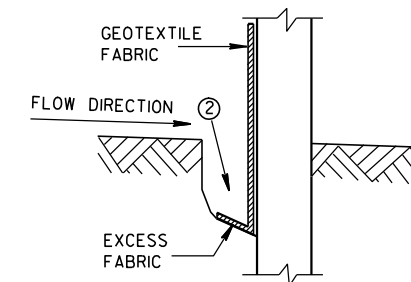


SITUATION 1 SITUATION 2  
PLAN VIEW  
SILT FENCE AT MEDIAN SURFACE DRAINS

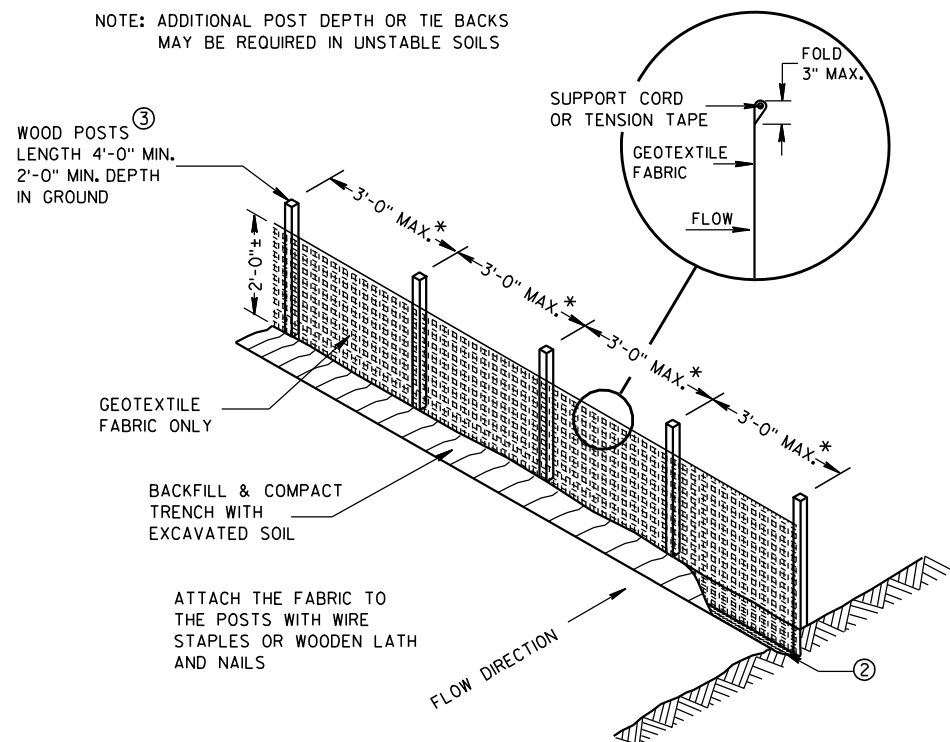
**GENERAL NOTES**

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

- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 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.

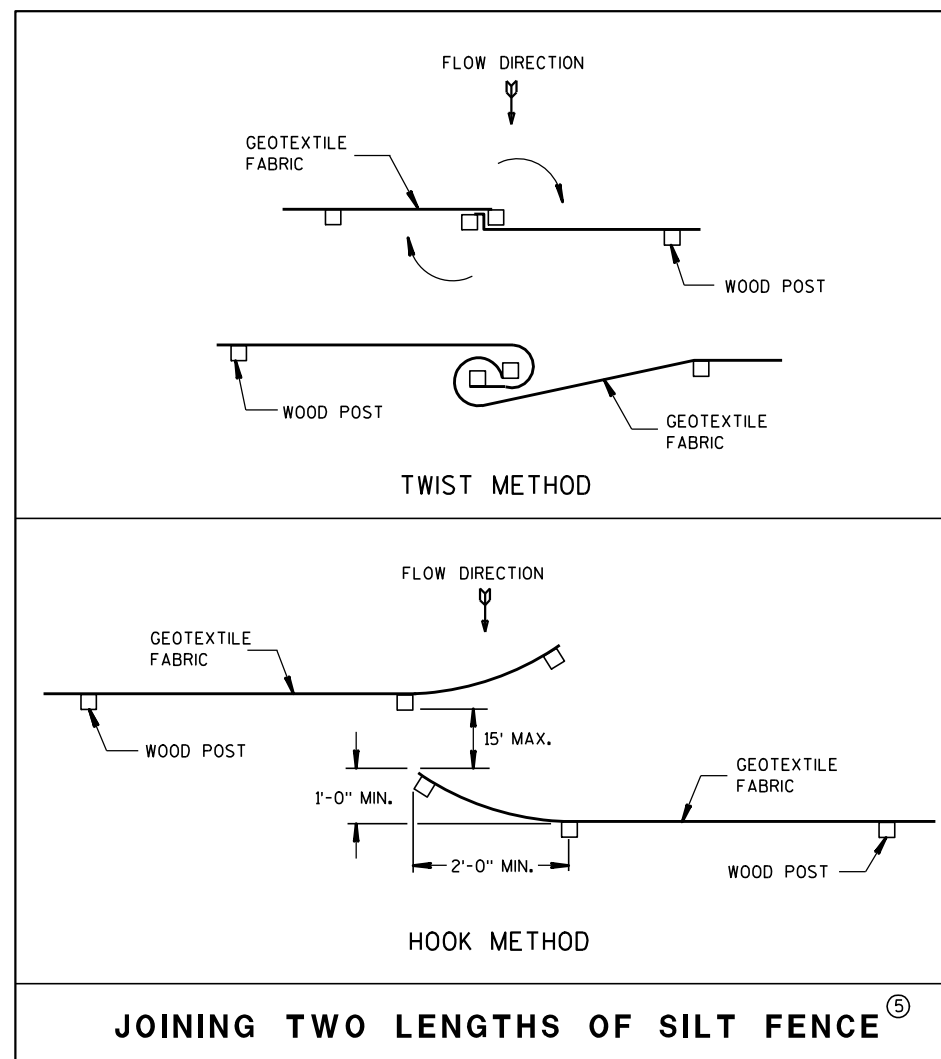


TRENCH DETAIL

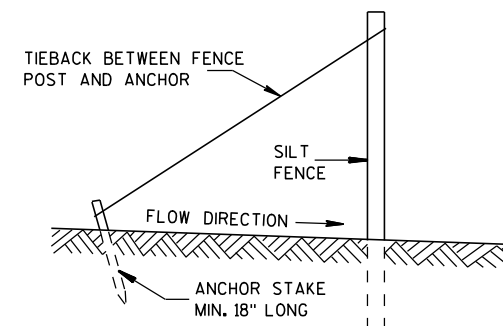


SILT FENCE

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



JOINING TWO LENGTHS OF SILT FENCE ⑤

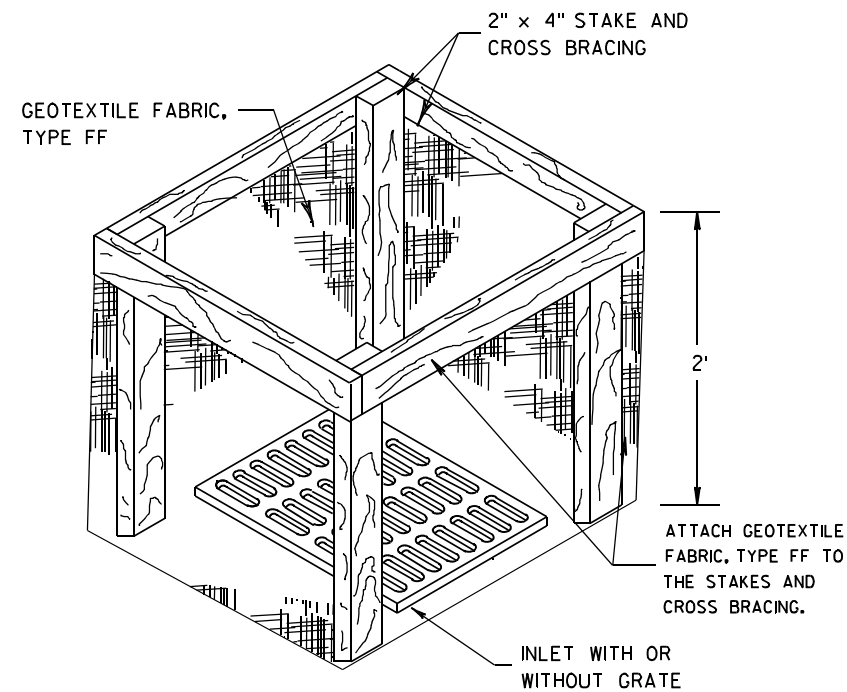
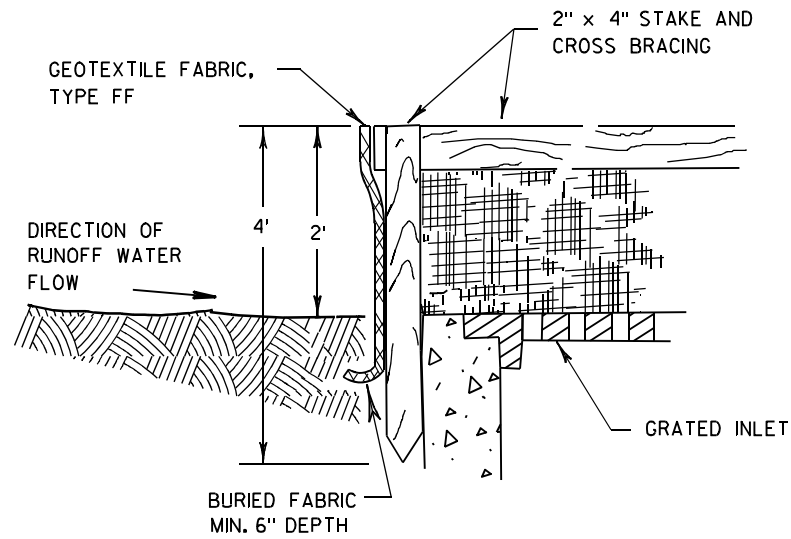


SILT FENCE TIE BACK  
(WHEN REQUIRED BY THE ENGINEER)

**SILT FENCE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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



**INLET PROTECTION, TYPE A**

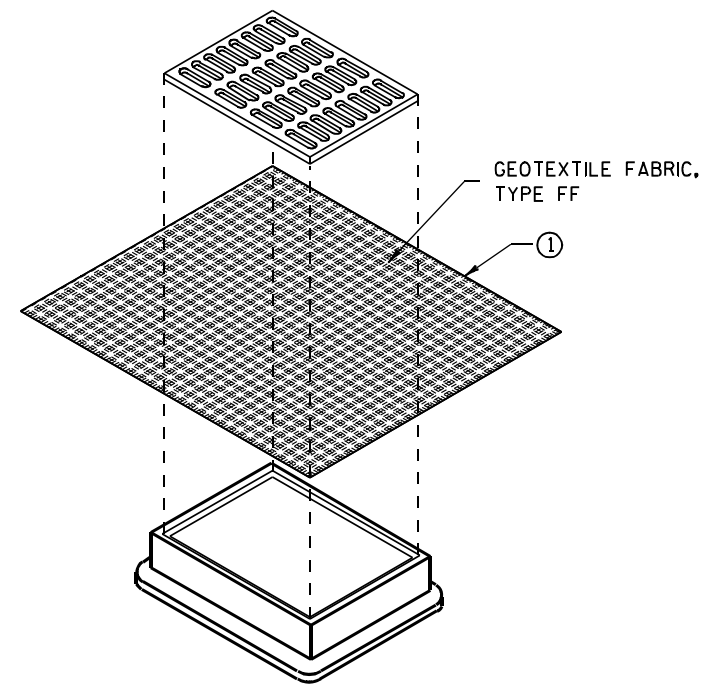
**GENERAL NOTES**

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.

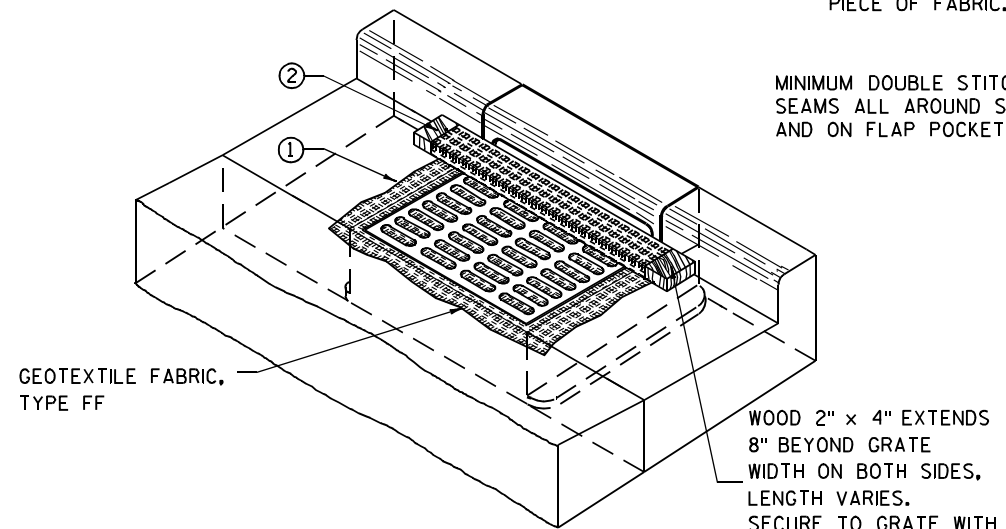
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- 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.

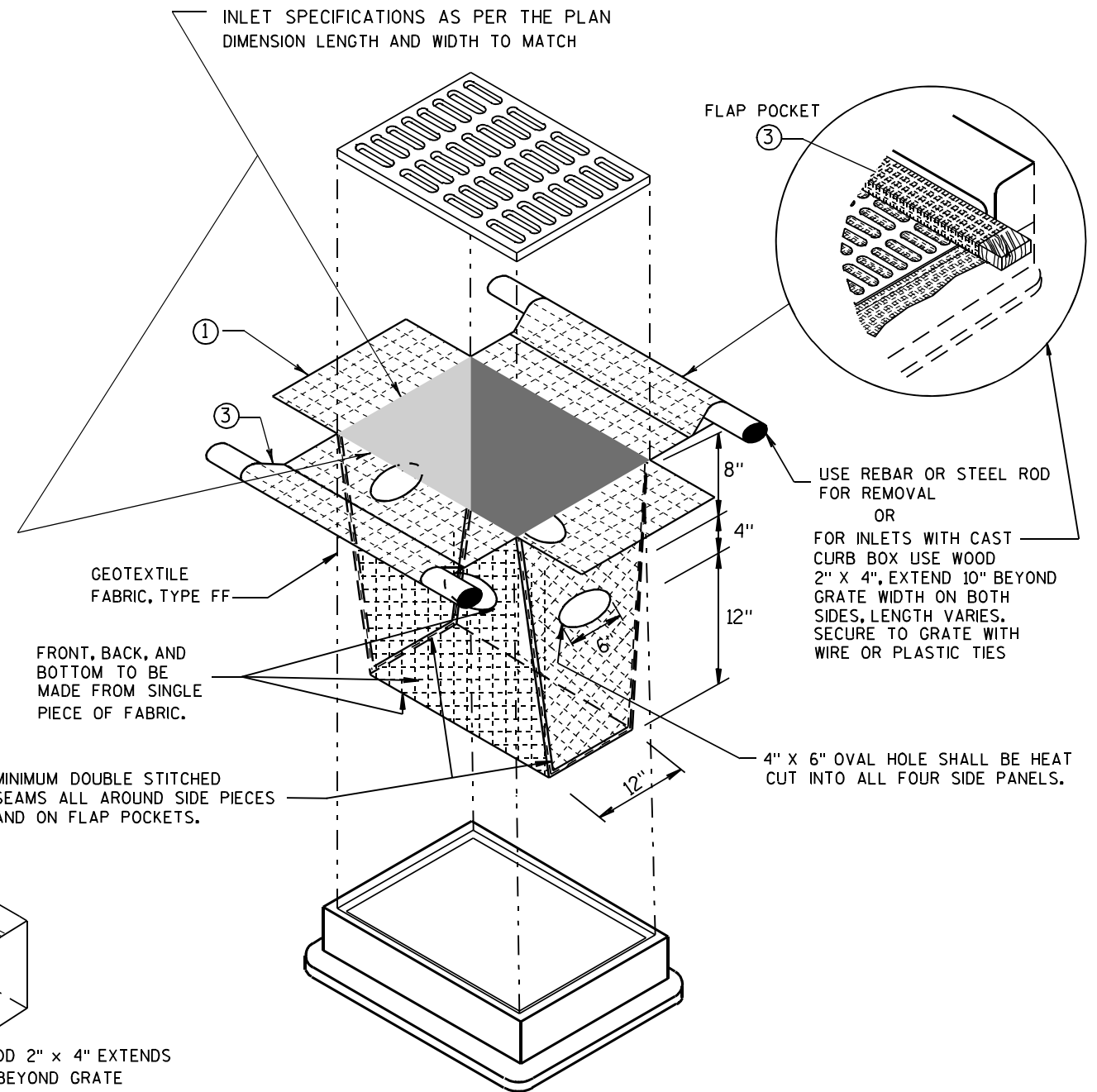
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

**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.



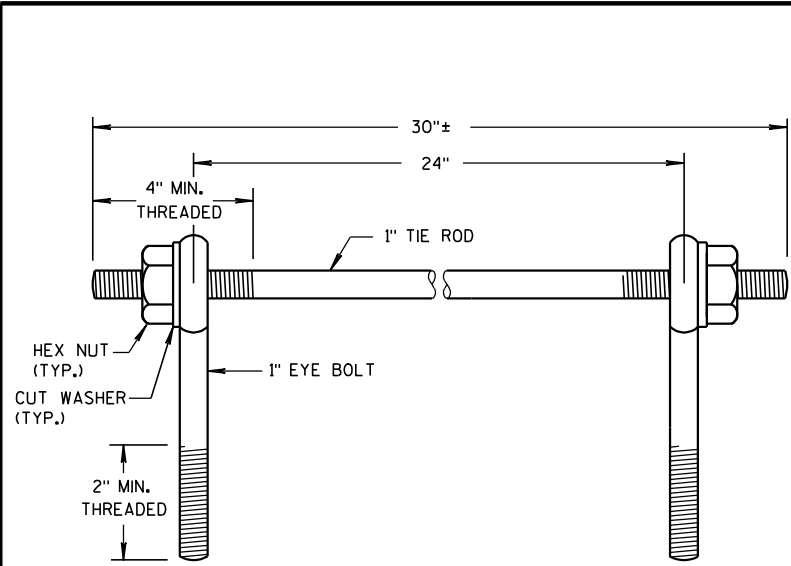
**INLET PROTECTION, TYPE D**

(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**

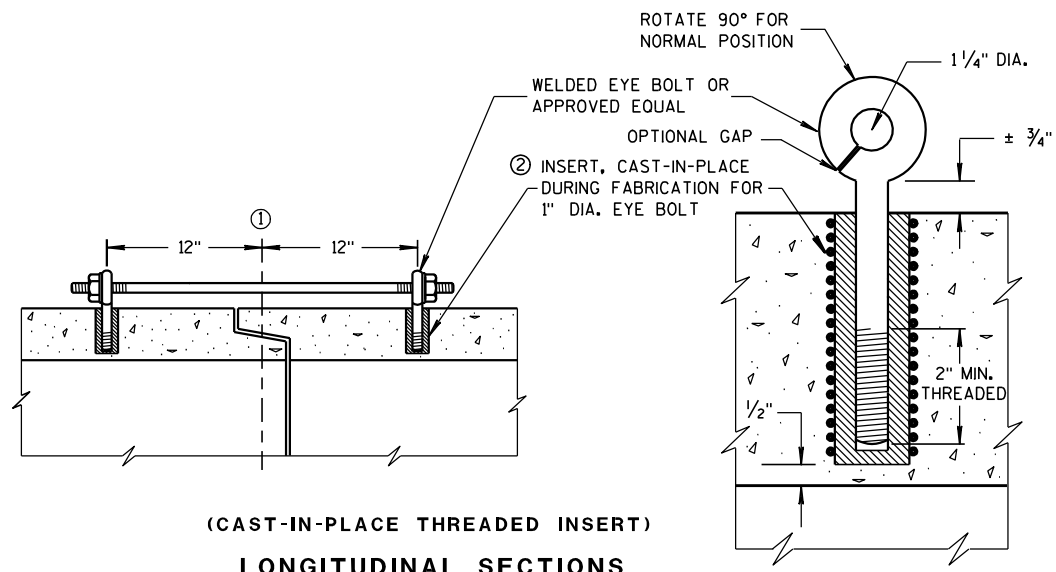
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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



EYE BOLTS AND TIE ROD

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



(CAST-IN-PLACE THREADED INSERT)  
LONGITUDINAL SECTIONS

GENERAL NOTES

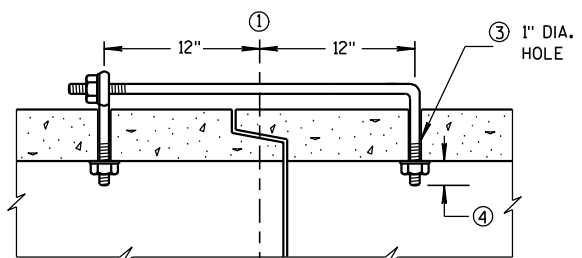
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

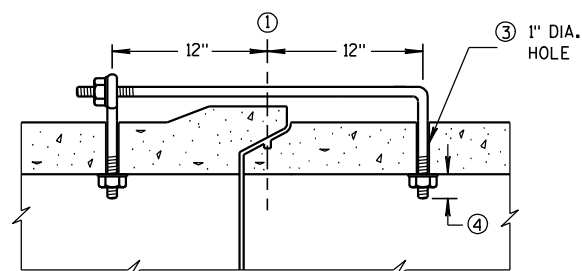
DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

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



(TONGUE & GROOVE PIPE)



(MODIFIED BELL PIPE)  
LONGITUDINAL SECTION

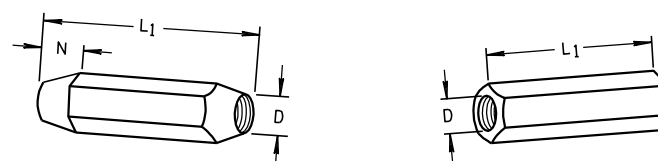
EYE BOLT DIMENSION TABLE

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

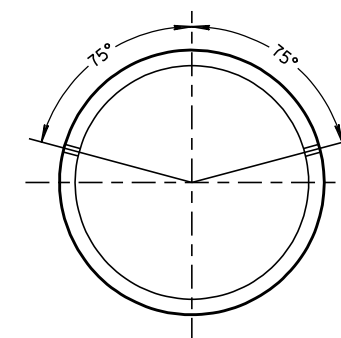
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L <sub>1</sub>	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/6

DIMENSIONS SHOWN ARE IN INCHES

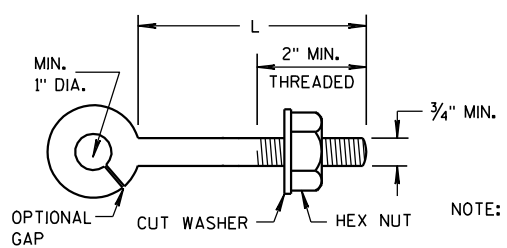


TAPERED PLAIN  
RIGHT AND LEFT THREADS  
SLEEVE NUTS



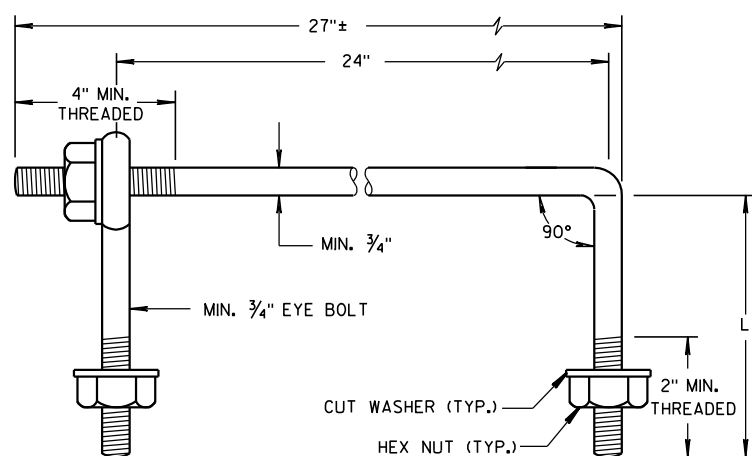
PLACEMENT OF (2) CAST-IN-PLACE  
INSERTS OR HOLES DURING FABRICATION  
FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



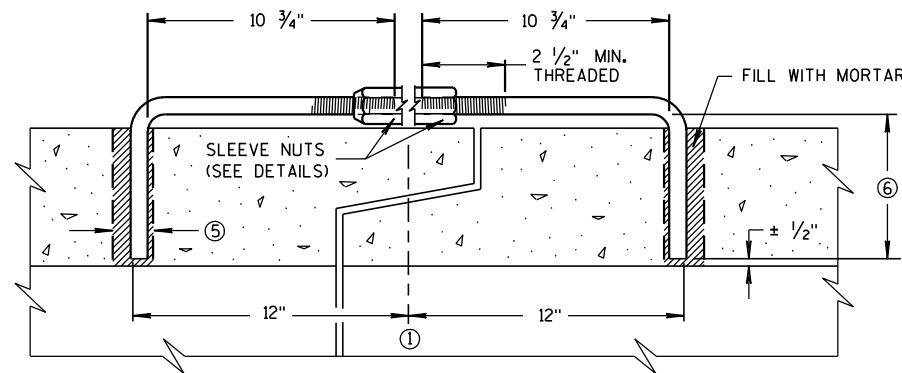
EYE BOLT

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

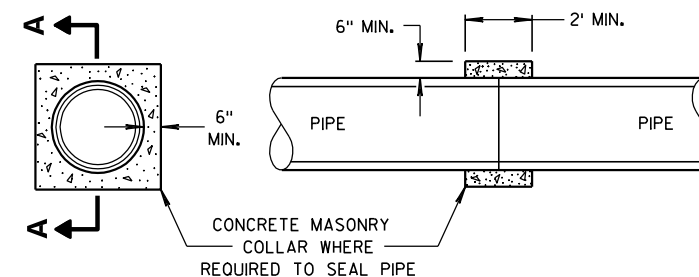


EYE BOLT AND TIE ROD

(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)  
EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)



LONGITUDINAL SECTION  
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)  
ADJUSTABLE TIE ROD (ALTERNATE NO. 3)

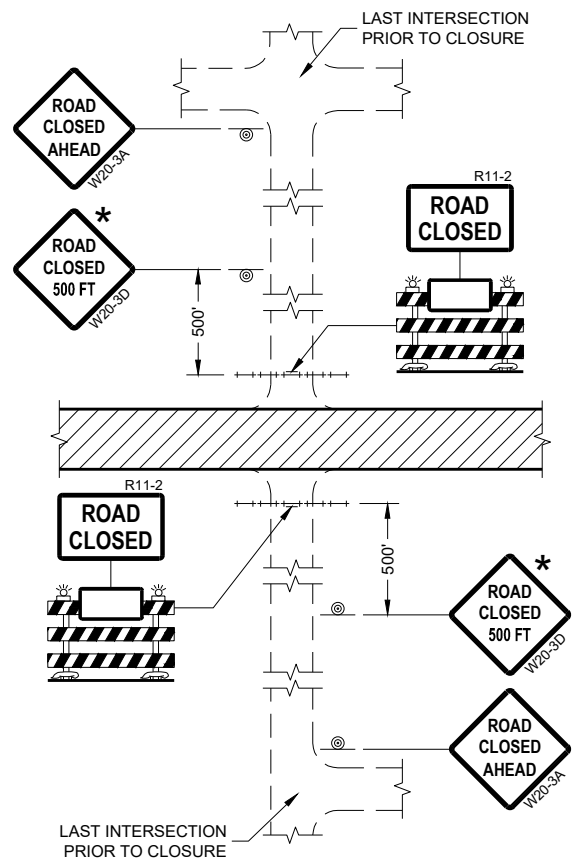


SECTION A-A  
CONCRETE COLLAR DETAIL

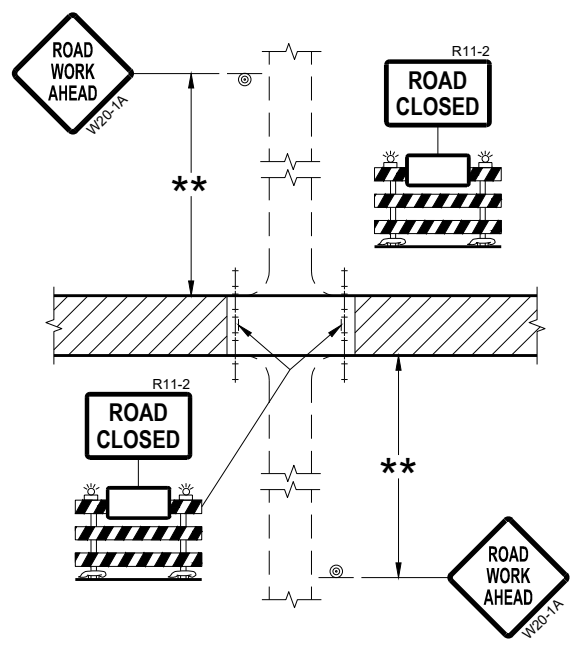
JOINT TIES FOR CONCRETE  
PIPE AND CONCRETE  
COLLAR DETAIL

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

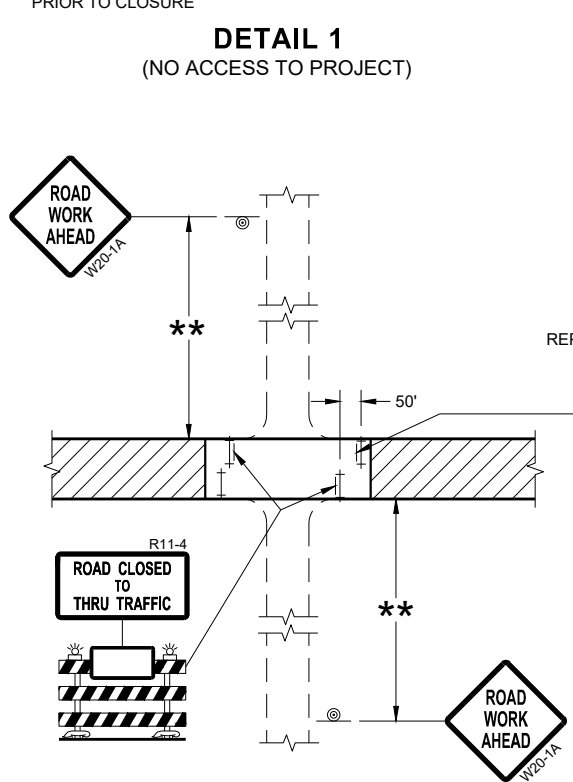
APPROVED  
6/5/2012 /S/ Jerry H. Zogg  
DATE ROADWAY STANDARDS DEVELOPMENT  
ENGINEER  
FHWA



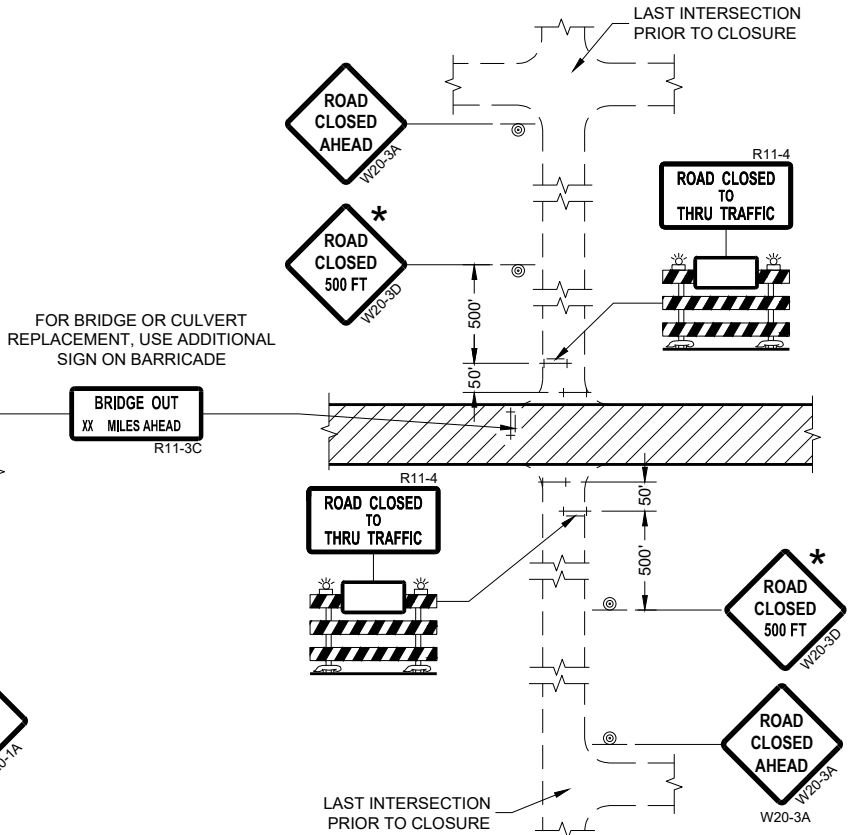
**DETAIL 1**  
(NO ACCESS TO PROJECT)



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



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



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

**GENERAL NOTES**

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

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

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

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:  
R11-2 SHALL BE 48" X 30".  
R11-4 AND R11-3 SHALL BE 60" X 30".

- \* OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.
- \*\* 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

**LEGEND**

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

**BARRICADES AND SIGNS  
FOR  
SIDEROAD CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
July 2018 /S/ Andrew Heidtke  
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.

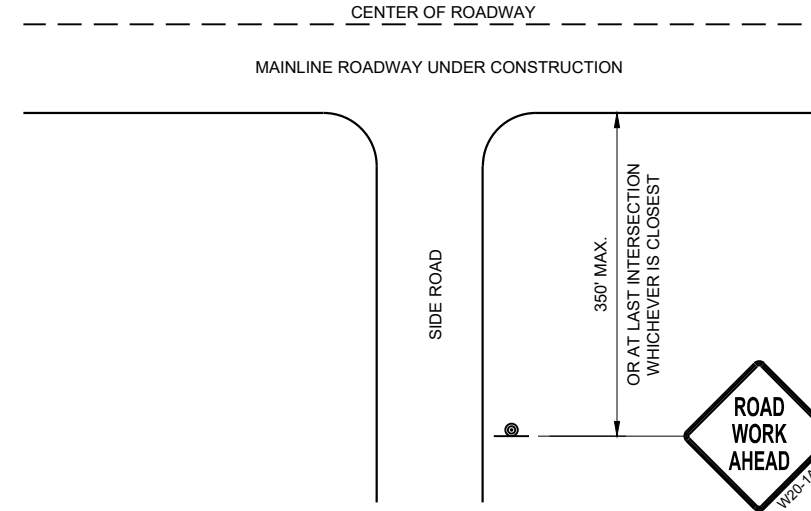
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

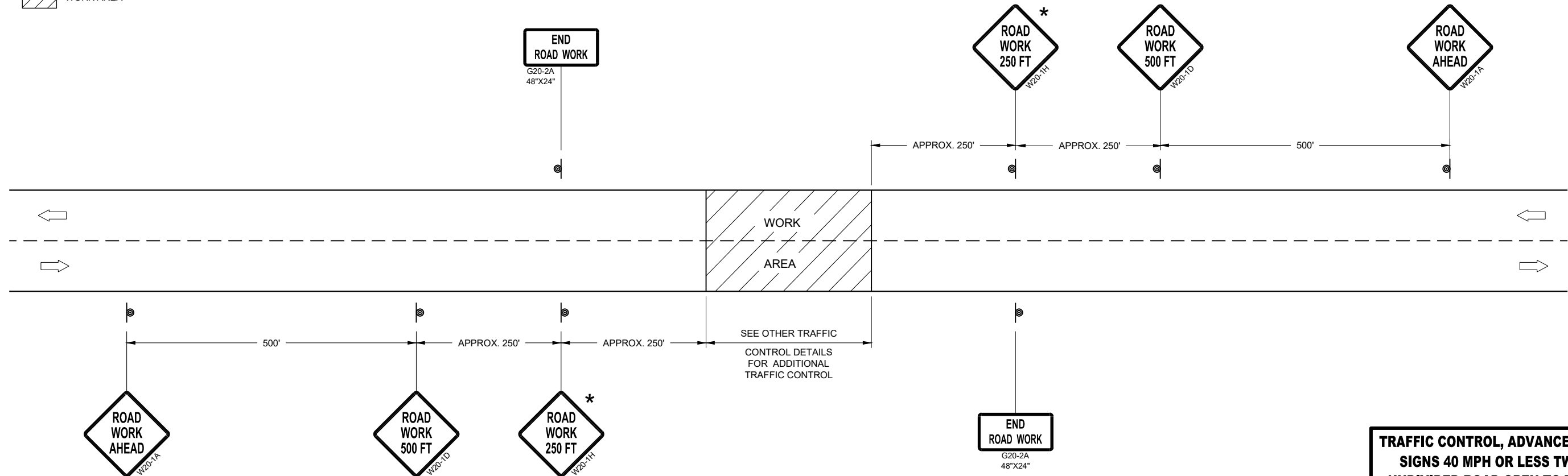
\* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

**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 TRAFFICE**

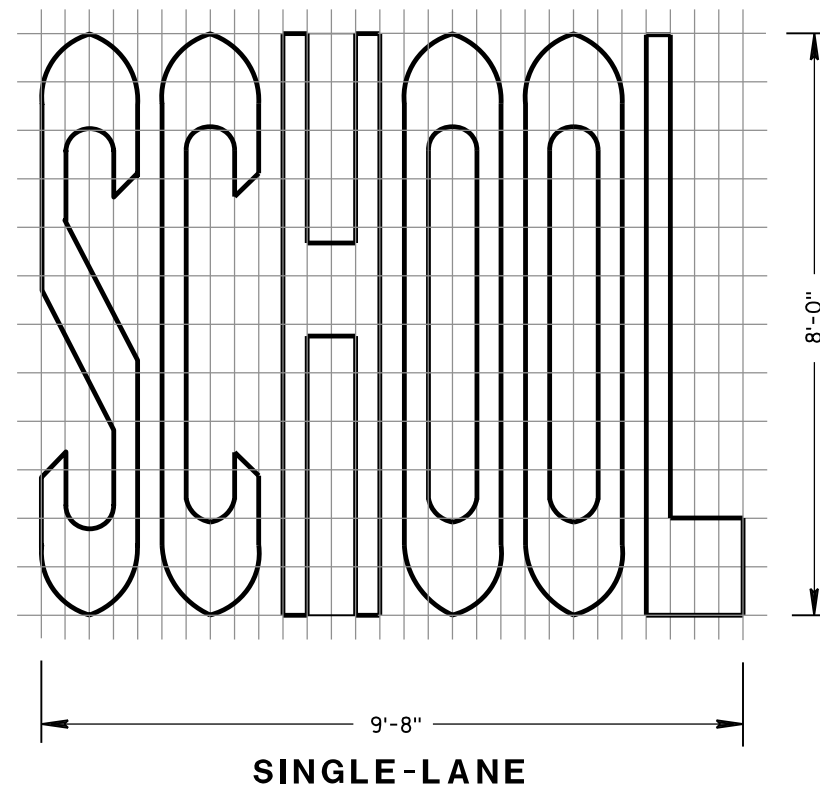
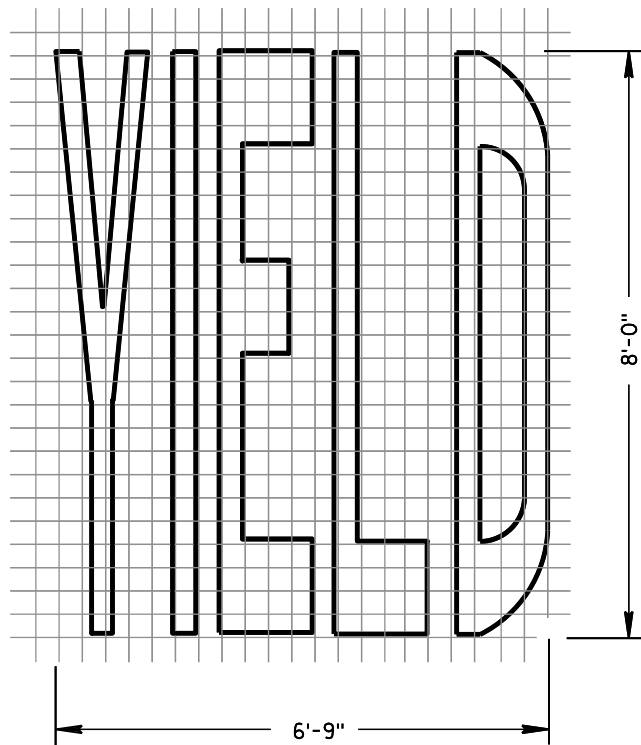
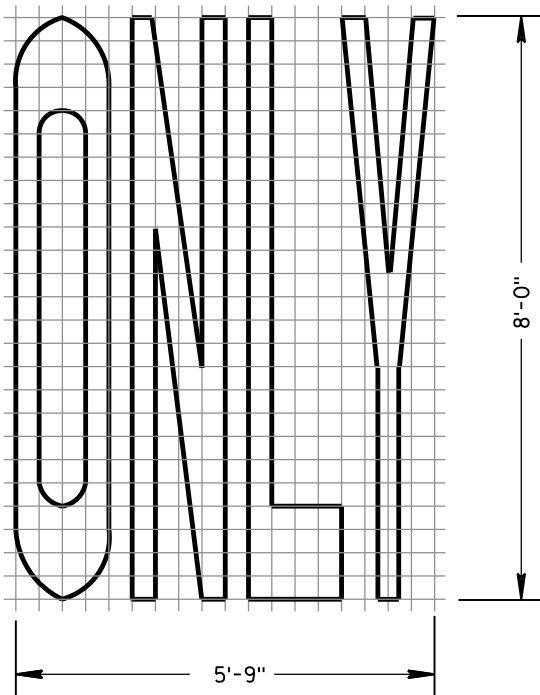
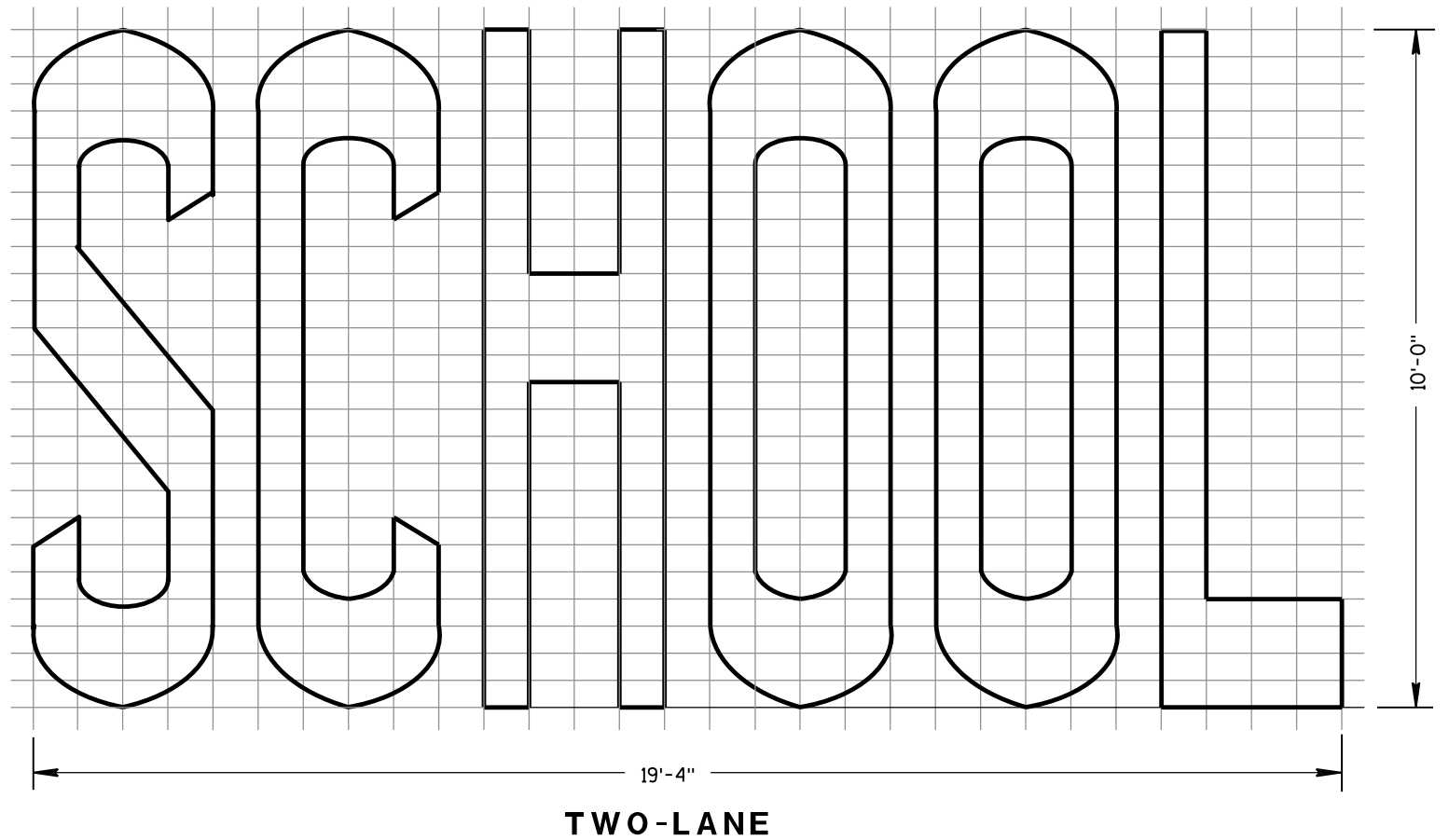
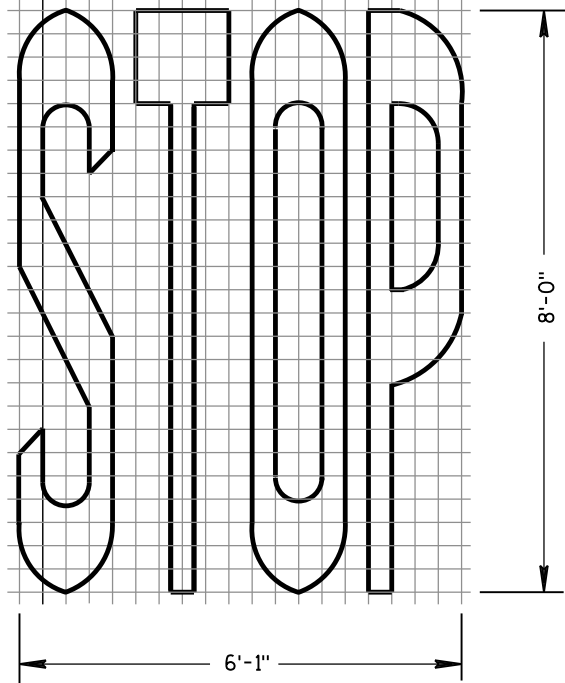
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

FHWA

**GENERAL NOTES**

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



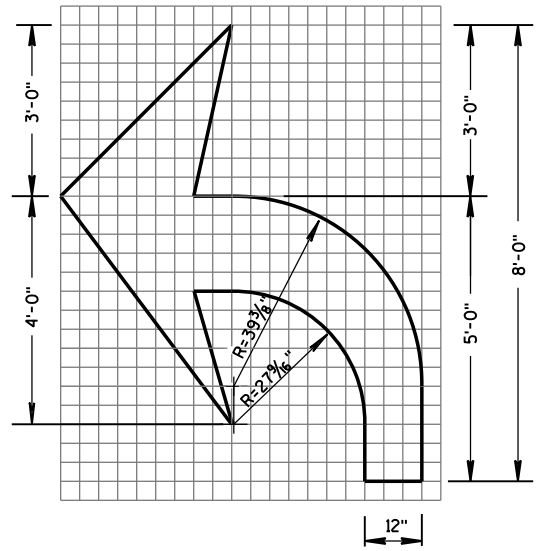
**PAVEMENT MARKING WORDS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

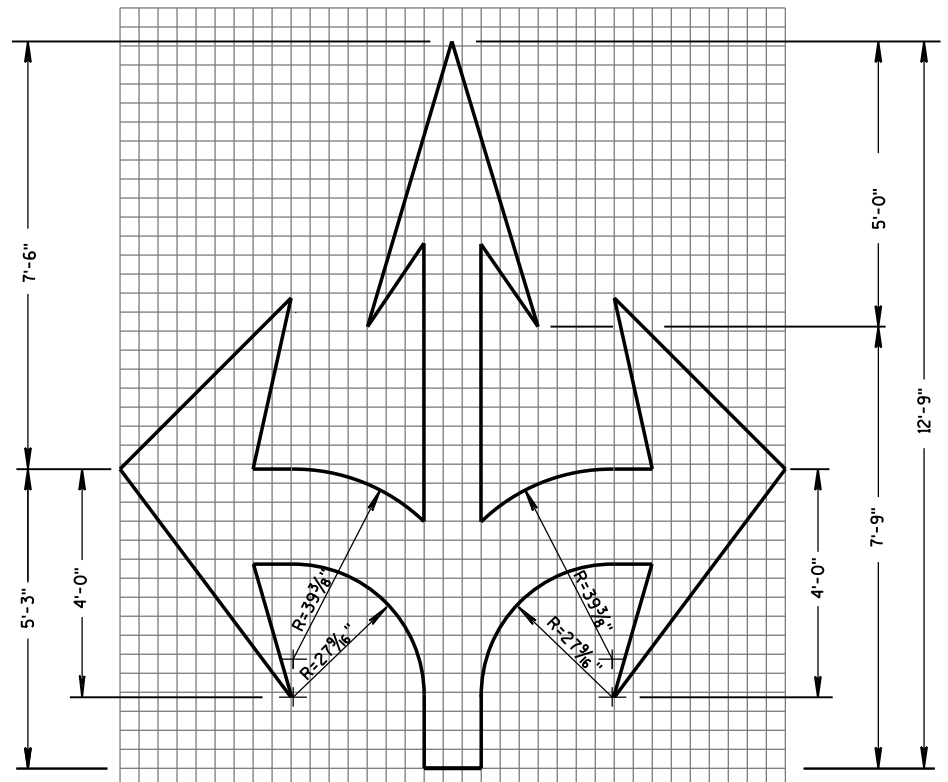
APPROVED

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

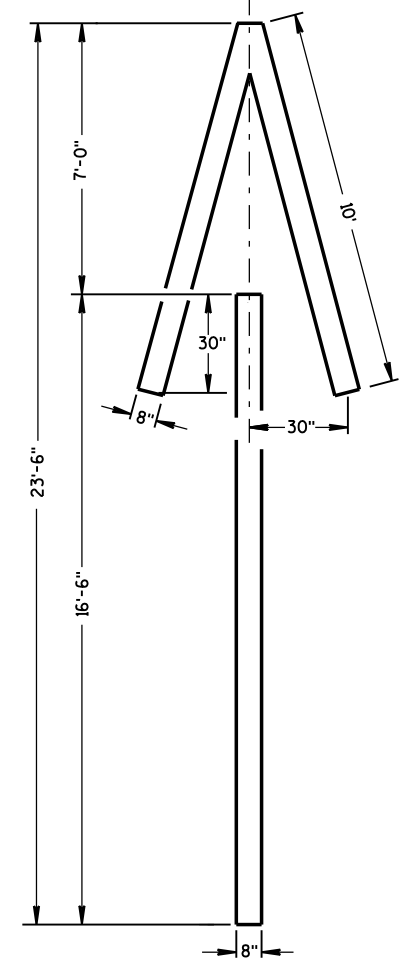
FHWA



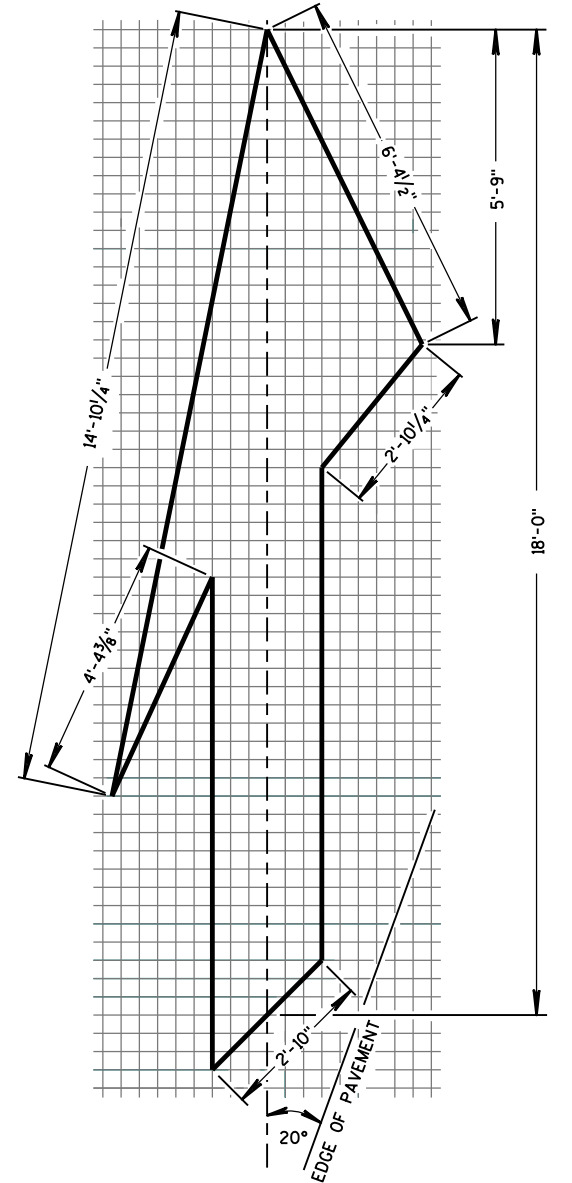
TYPE 2



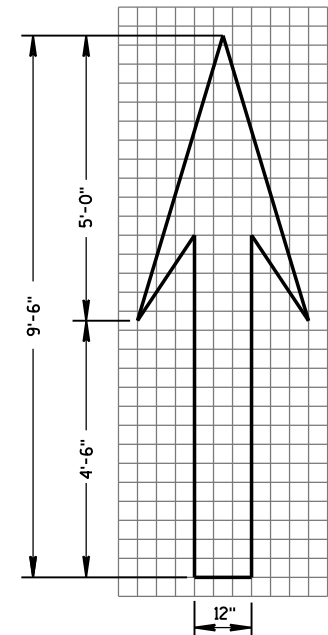
TYPE 6



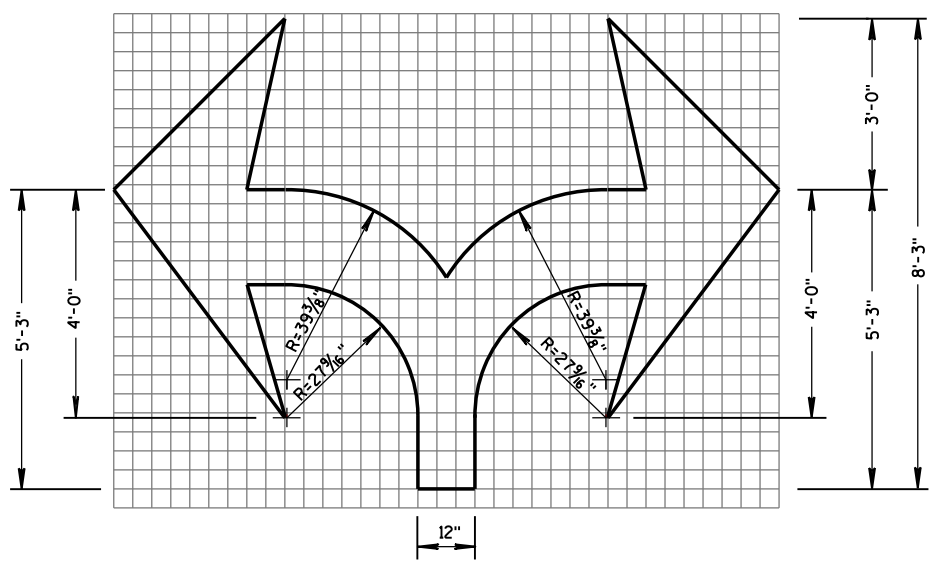
TYPE 4



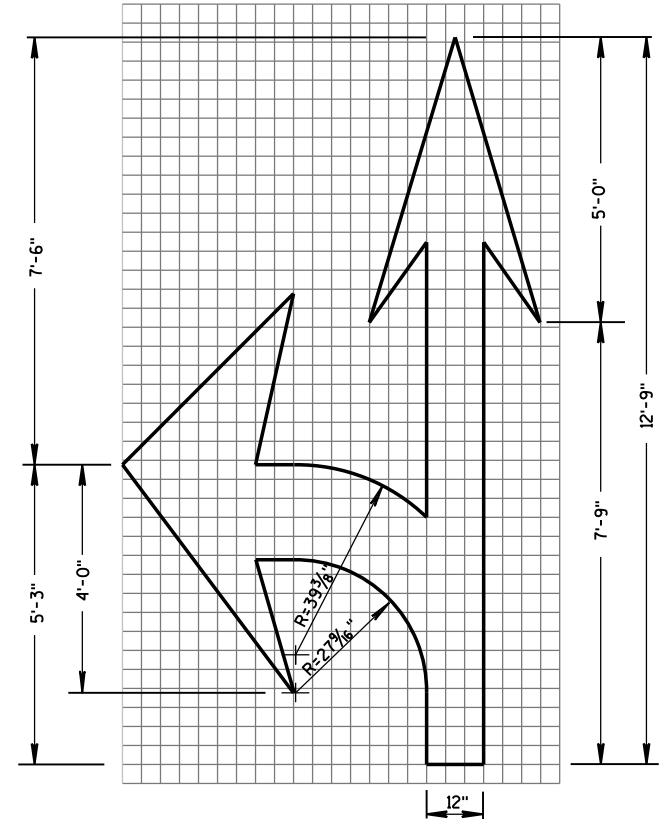
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7

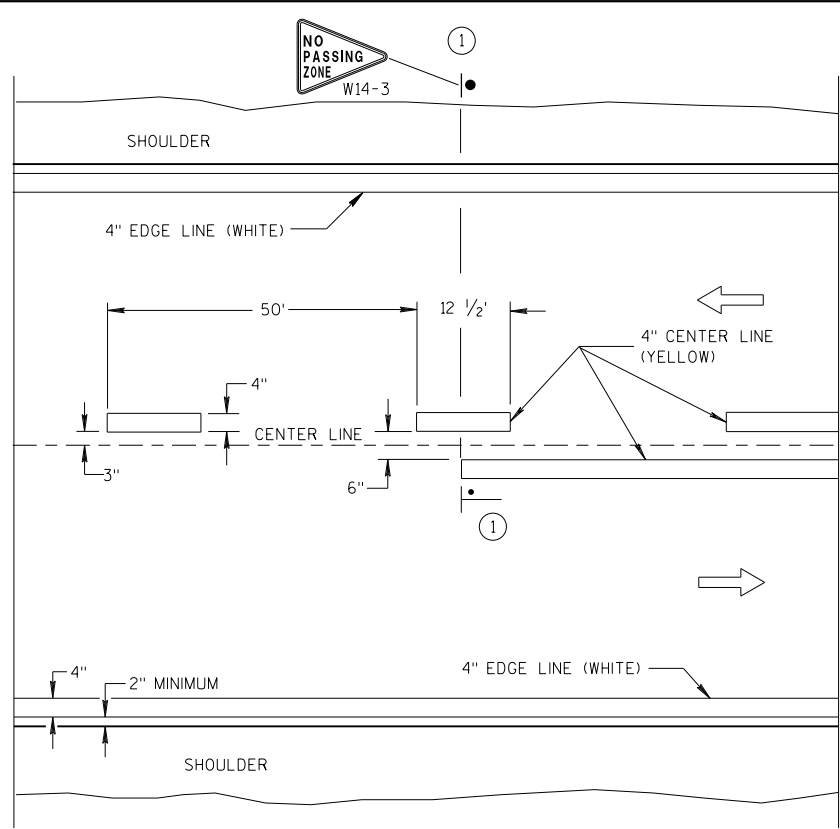


TYPE 3

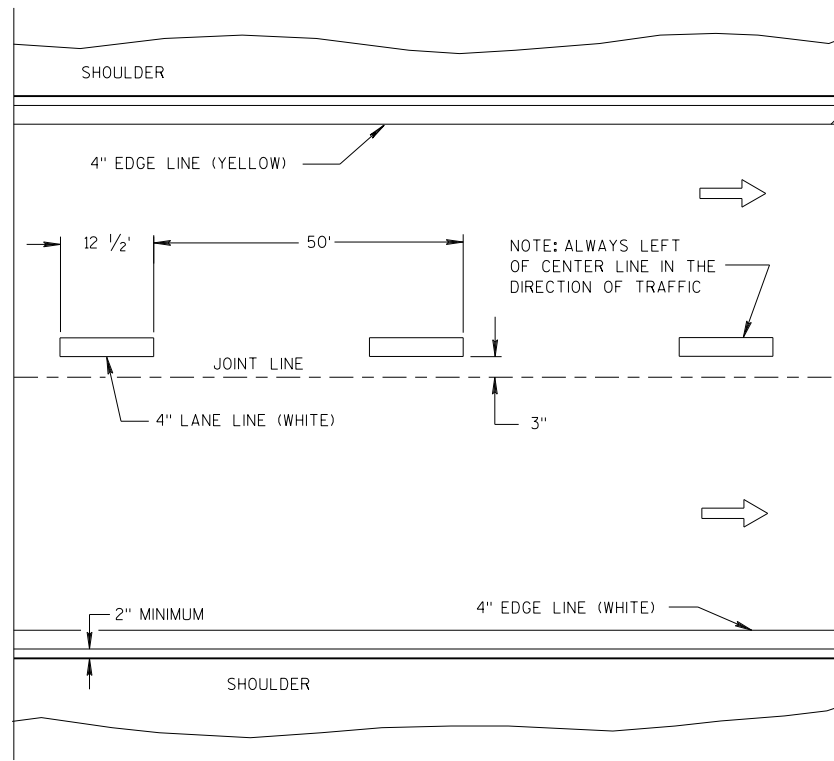
GENERAL NOTES

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.

<b>PAVEMENT MARKING ARROWS</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/s/ Matthew R. Rauch STATE SIGNING AND MARKING ENGINEER
FHWA	

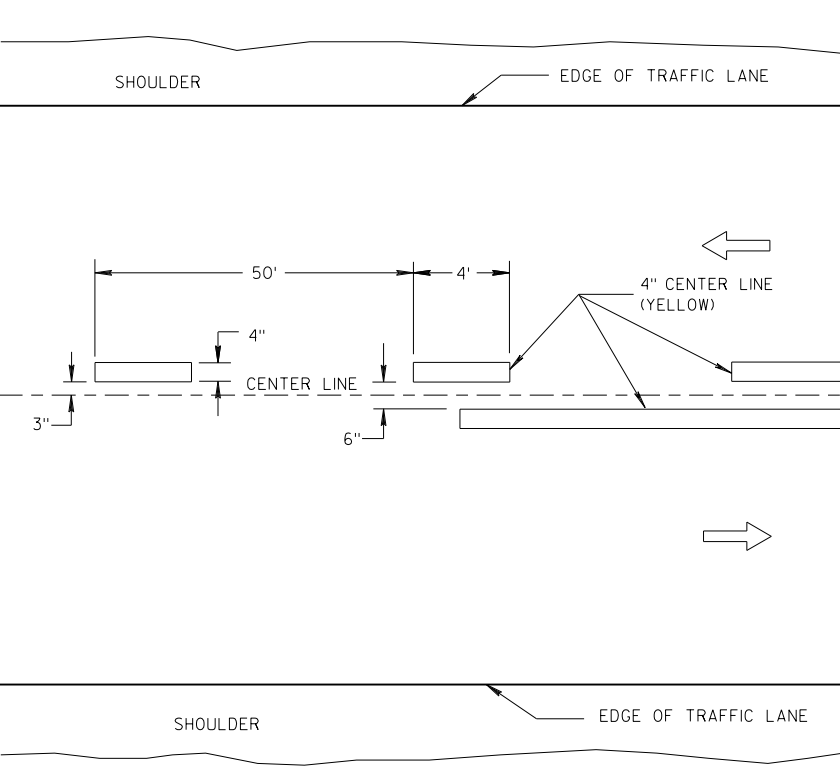


**TWO WAY TRAFFIC**

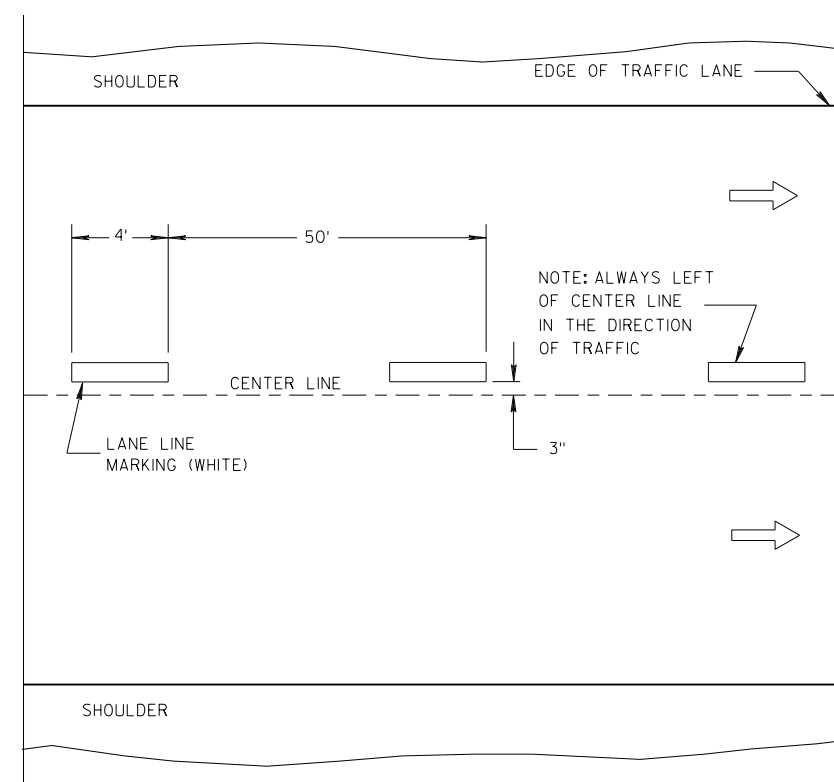


**ONE WAY TRAFFIC**

**PERMANENT PAVEMENT MARKING**



**TWO WAY TRAFFIC**



**ONE WAY TRAFFIC**

**TEMPORARY PAVEMENT MARKING**

**GENERAL NOTES**

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

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

**NOTE**

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

**LEGEND**

- "T" MARKING
- POST MOUNTED SIGN

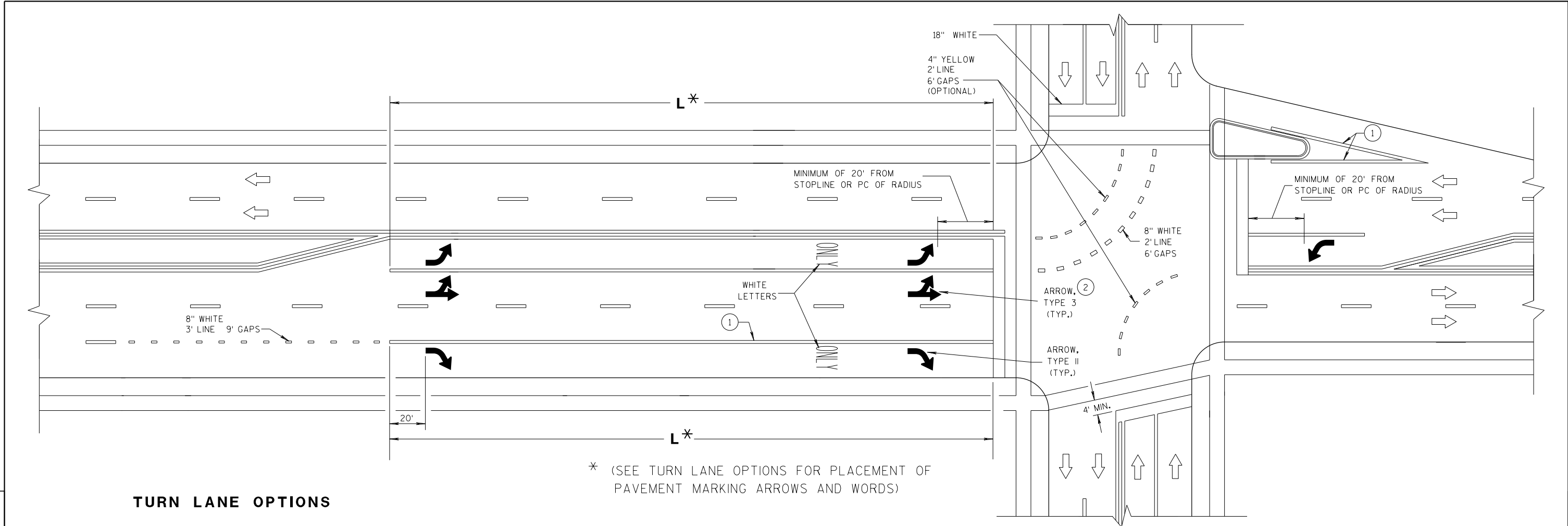
6

6

S.D.D. 15 C 8-19a

S.D.D. 15 C 8-19a

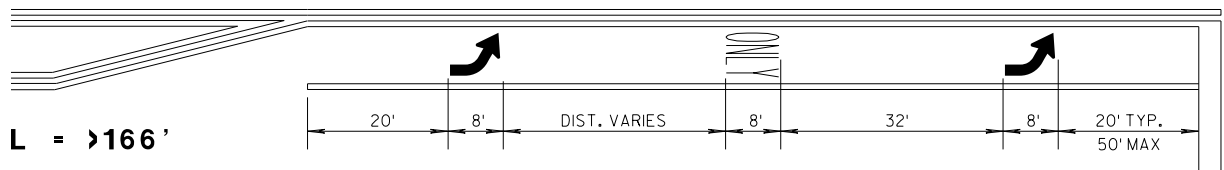
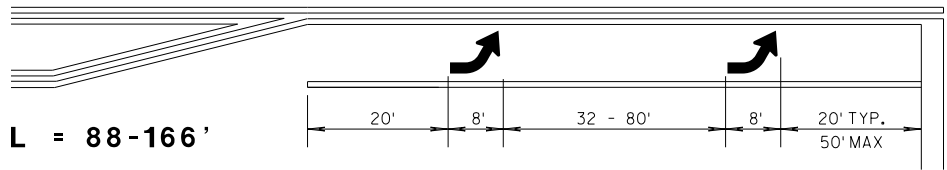
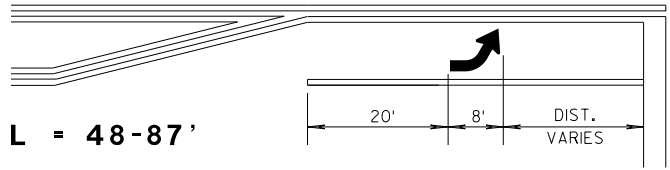
<b>LONGITUDINAL MARKING (MAINLINE)</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 7/2018	/S/ Matthew R. Rauch DATE STATE SIGNING AND MARKING ENGINEER
FHWA	



\* (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

**TURN LANE OPTIONS**

LENGTH OF TURN BAY (L) OF 0-47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS

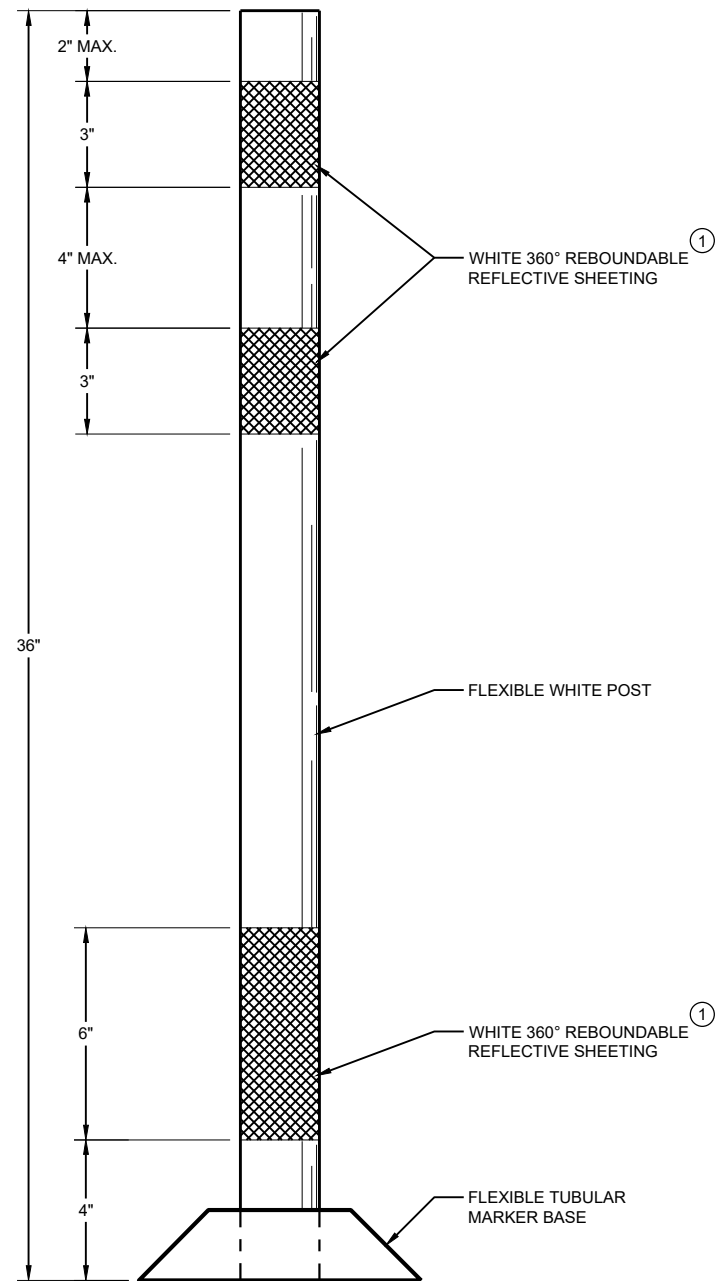


**GENERAL NOTES**

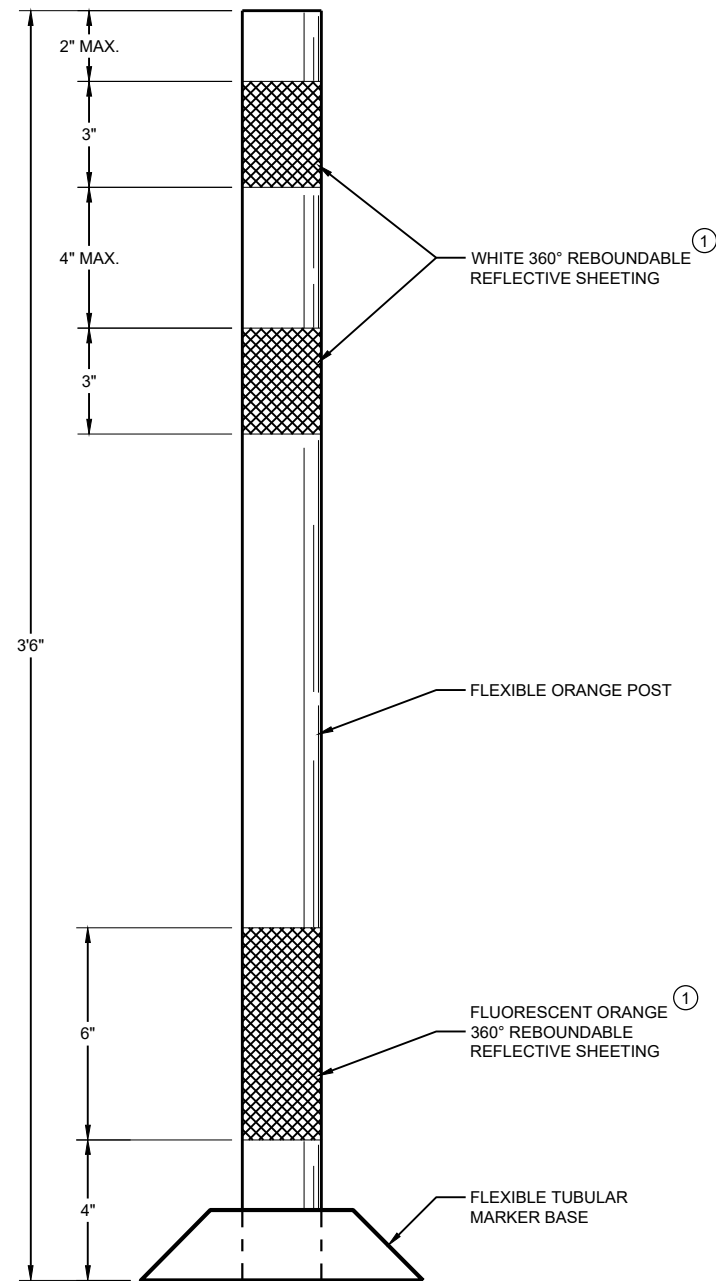
- ① 8" WHITE
- ② QUANTITY AND LOCATION OF TYPE 3 ARROW ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION, THE ARROWS AND ONLY MARKING ARE ELIMINATED.

➔ DIRECTION OF TRAFFIC  
**L** = LENGTH OF TURN BAY

<b>PAVEMENT MARKING (TURN LANES)</b>
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION



**FLEXIBLE TUBULAR  
MARKER POST  
PERMANENT CROSSOVER**



**FLEXIBLE TUBULAR  
MARKER POST  
WORK ZONE**

**GENERAL NOTES**

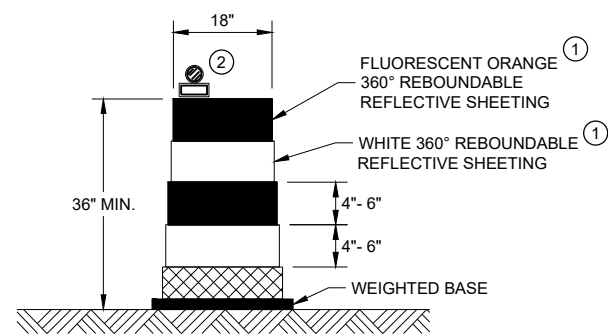
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

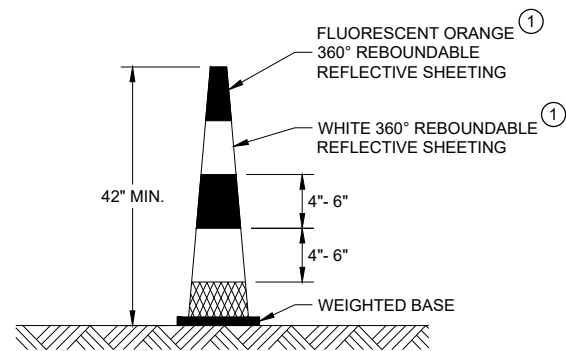
THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

<b>CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
<small>FHWA</small>	

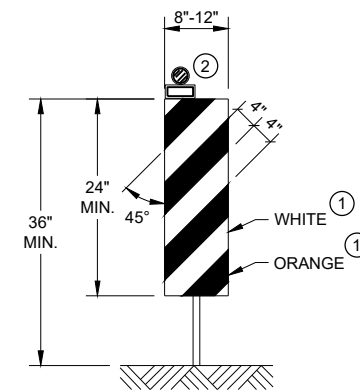


**DRUM**



**42" CONE**

DO NOT USE IN TAPERS  
 1/2 SPACING OF DRUMS

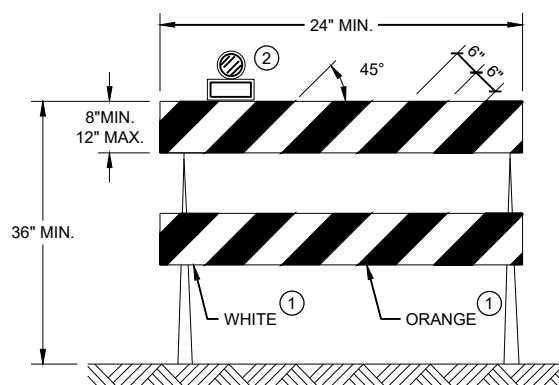


**VERTICAL PANEL**

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

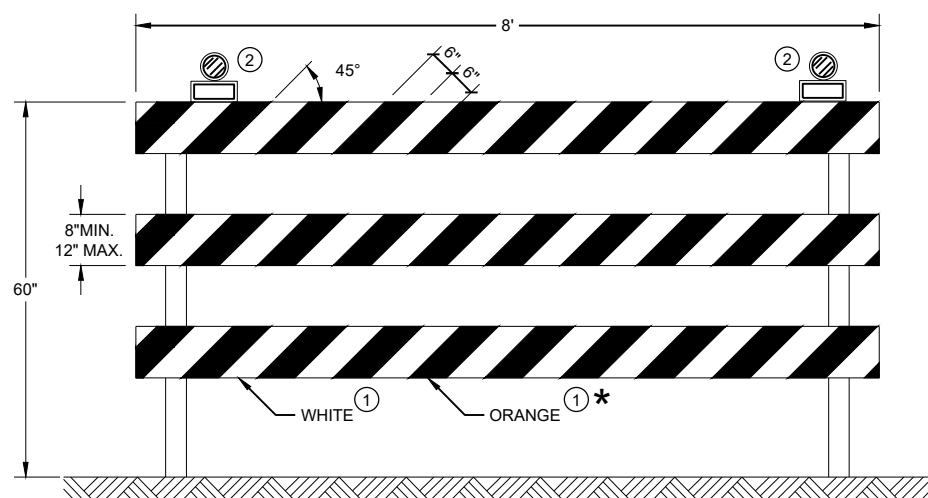
**GENERAL NOTES**

- 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.

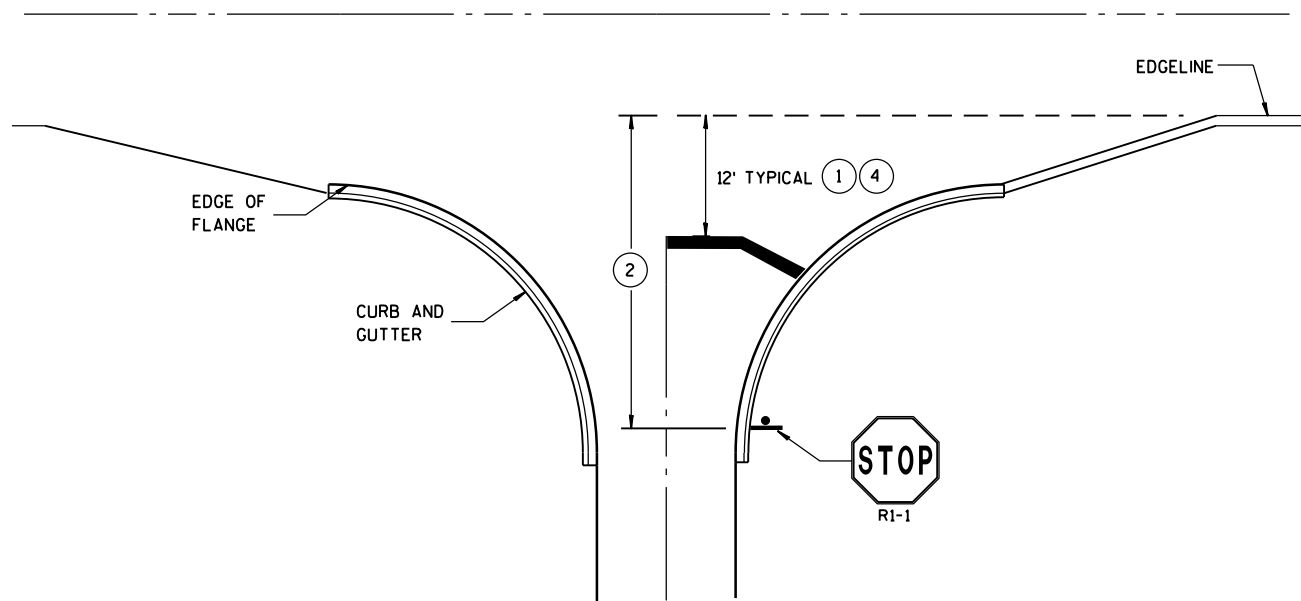


**TYPE III BARRICADE**

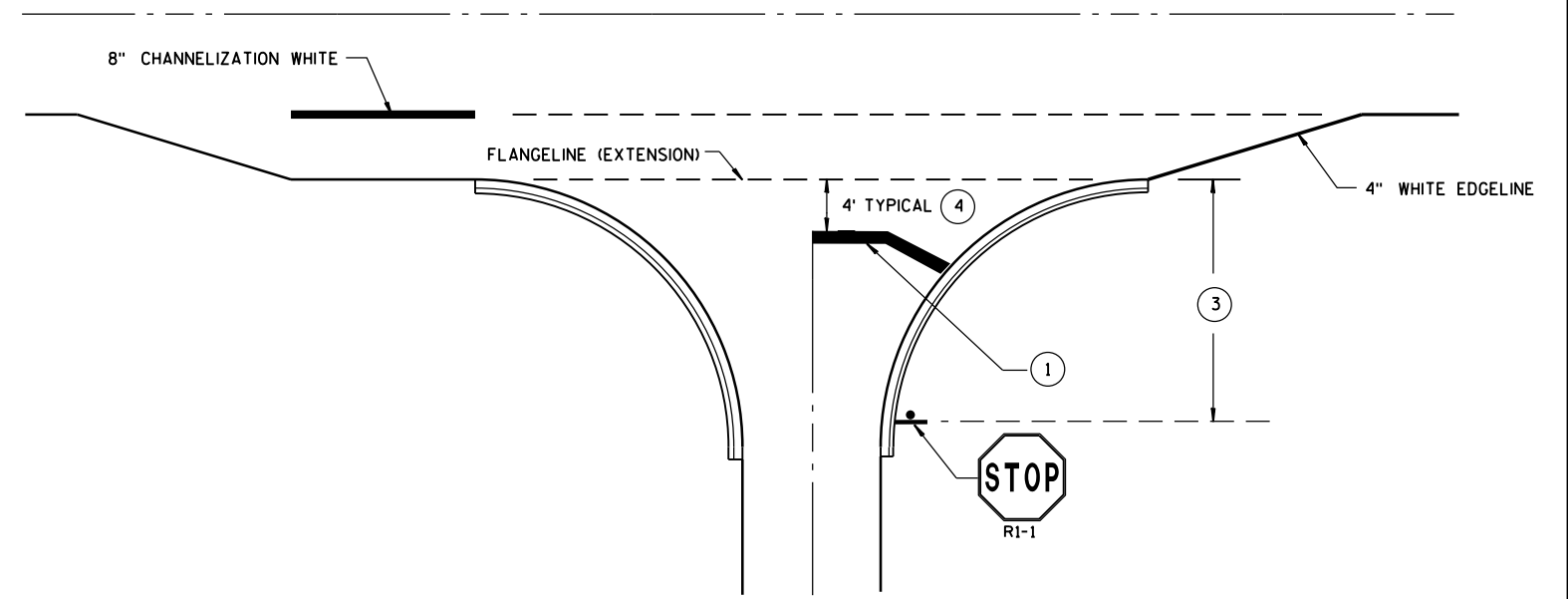
IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP  
 TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

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

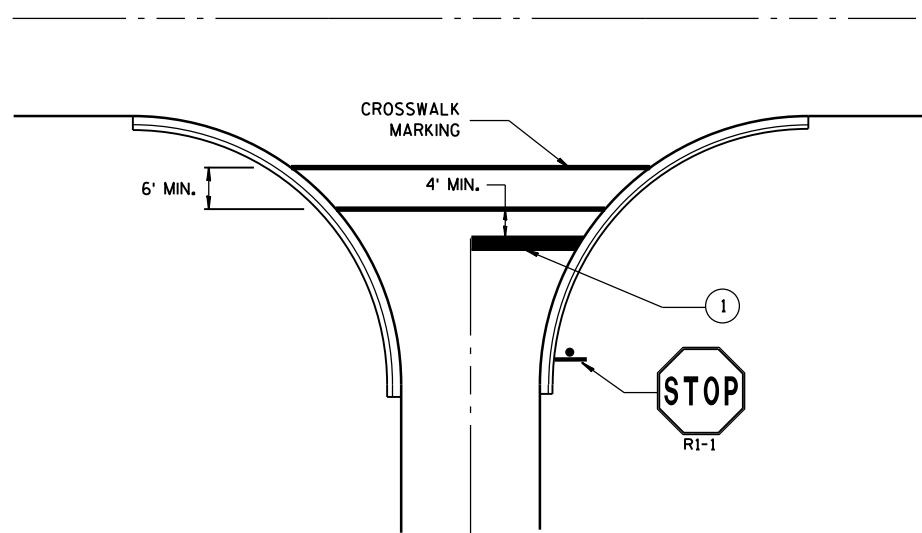
<b>CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
<small>FHWA</small>	



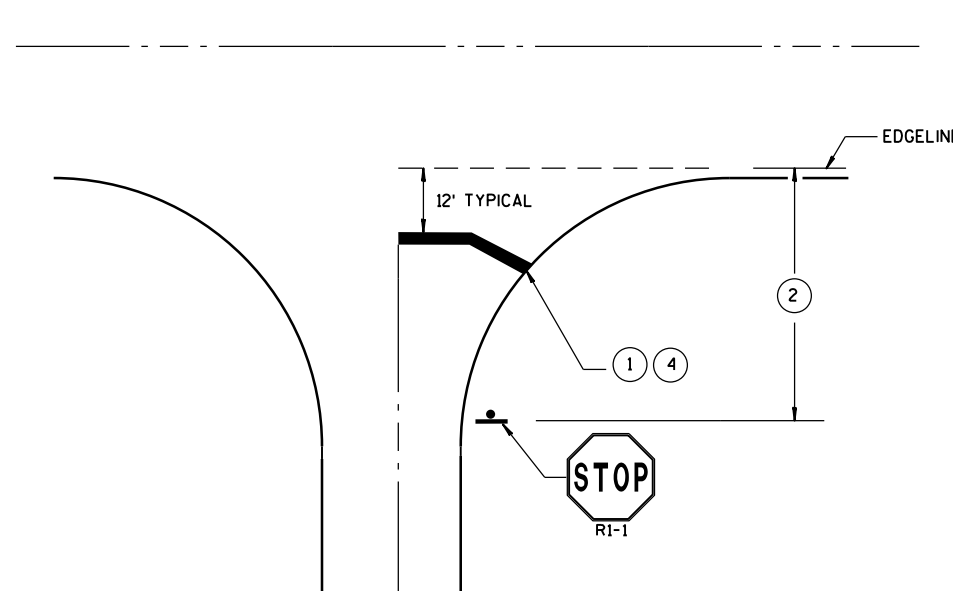
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

**GENERAL NOTES**

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

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





**STOP LINE AND CROSSWALK PAVEMENT MARKING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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



**LEGEND**

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

**TABLE A**

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

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

TAPER LENGTH

L = WS AT 45 MPH OR GREATER  
L = WS<sup>2</sup> / 60 AT 40 MPH OR LESS

SHOULDER TAPER LENGTH = 1/3L

**GENERAL NOTES**

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

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

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

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

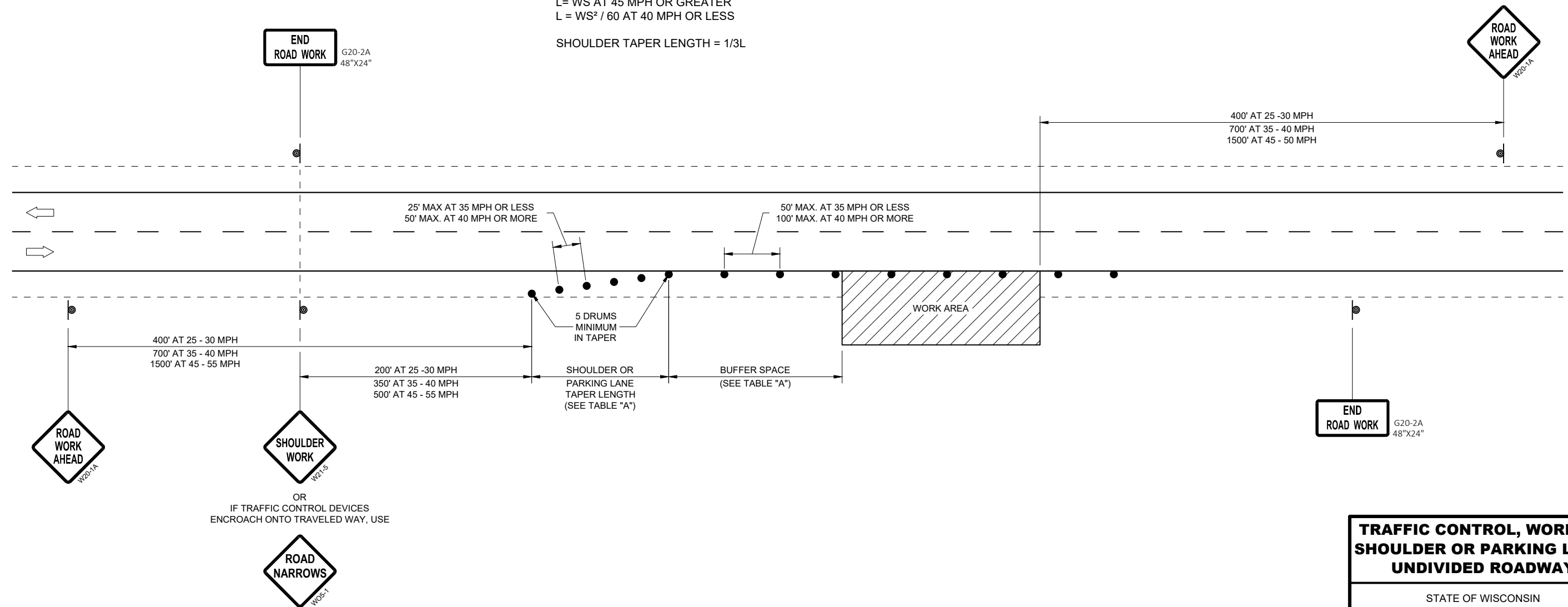
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

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

6

6



SDD 15D28 - 03

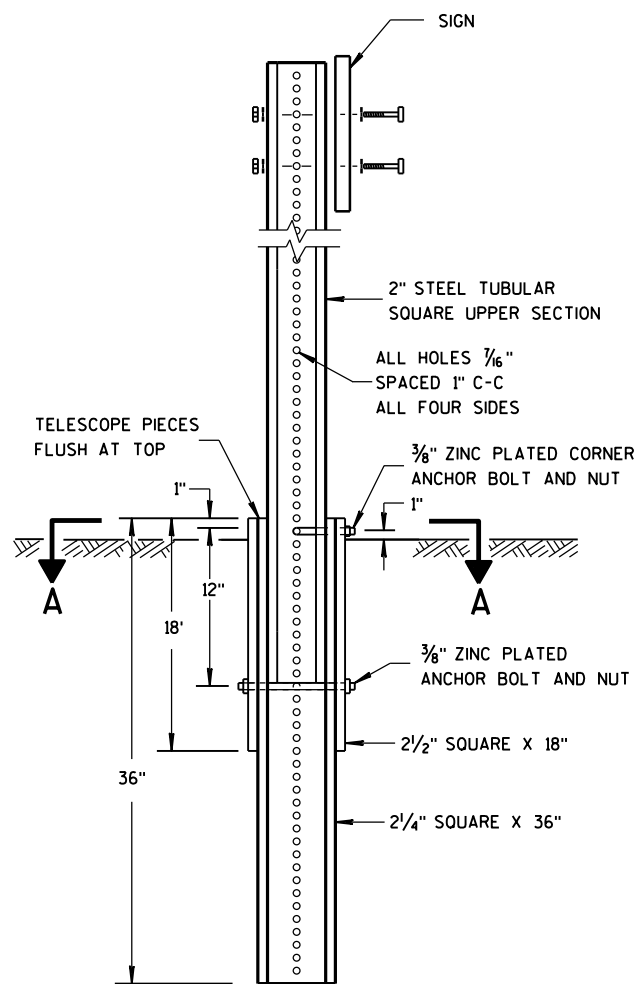
SDD 15D28 - 03

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

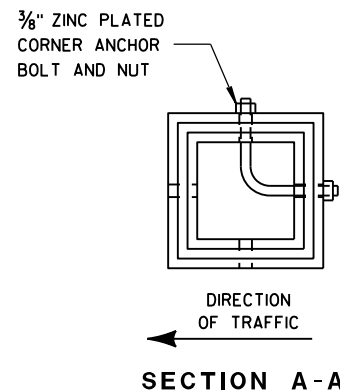
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
August 2019 /S/ Andrew Heidtke  
DATE STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

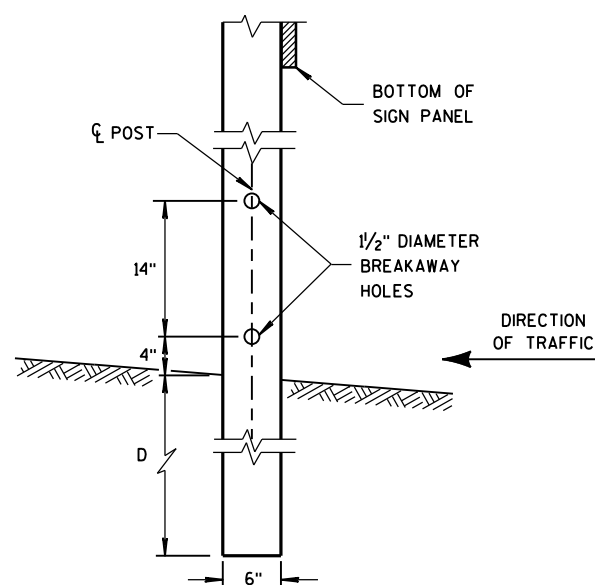
FHWA



**DETAIL OF TUBULAR STEEL SIGN POST**



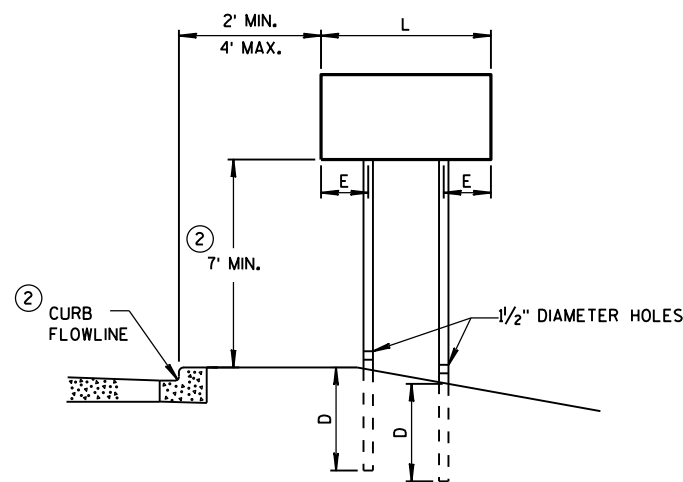
**SECTION A-A**



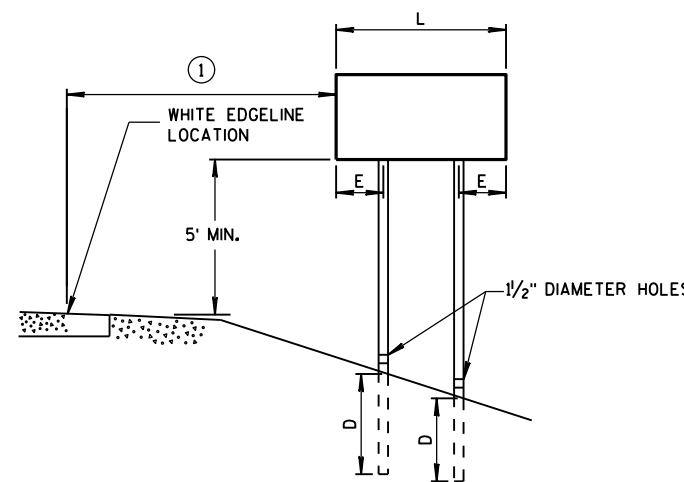
**4" X 6" WOOD POST MODIFICATION**

**GENERAL NOTES**

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



**URBAN AREA**



**RURAL AREA**

**POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS**

**TUBULAR STEEL POSTS**

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

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

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

**WOOD POST EMBEDMENT DEPTH**

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

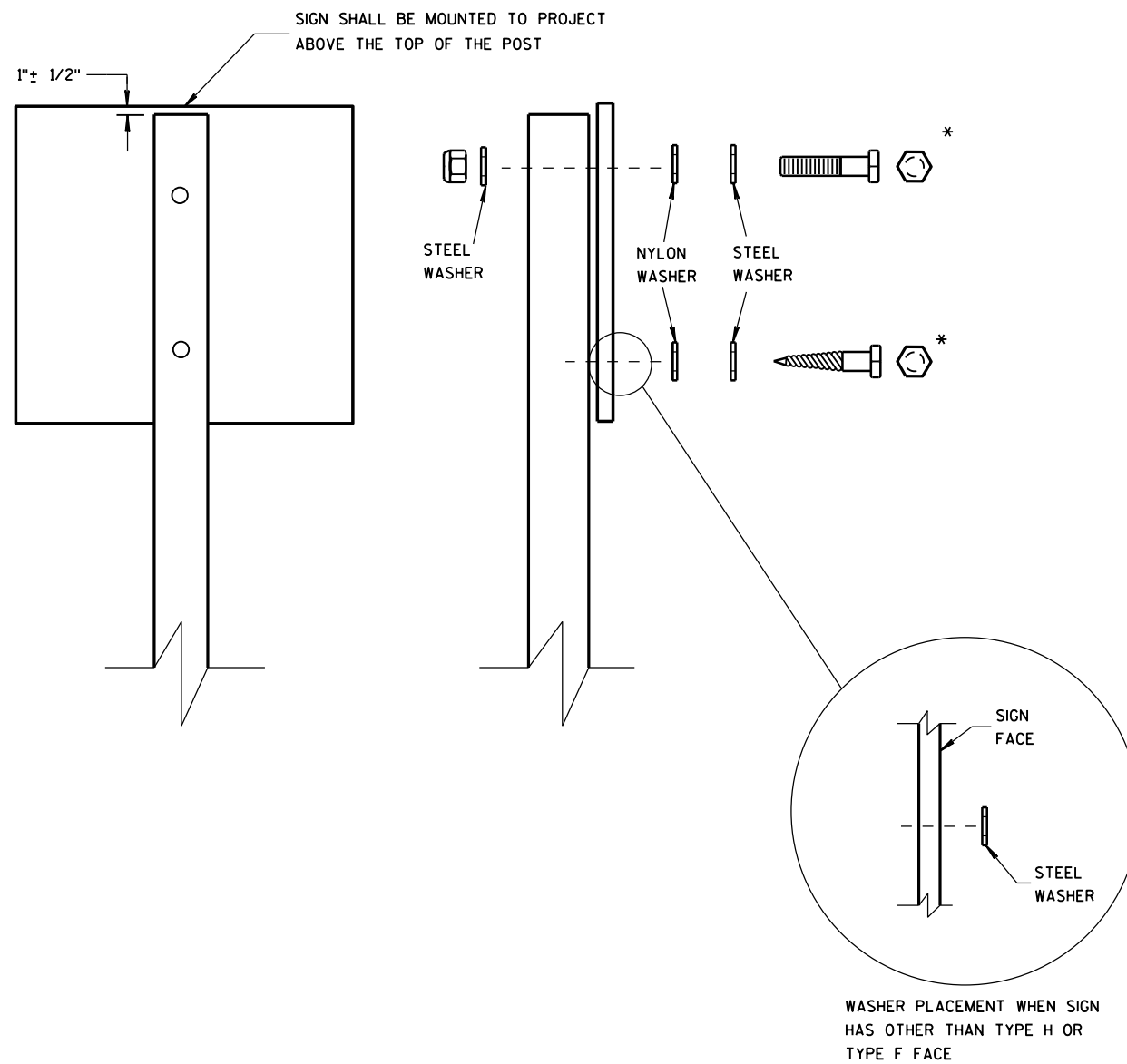
**4" X 6" WOOD POST**

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

SEE NOTE ③

**TEMPORARY TRAFFIC CONTROL SIGN MOUNTING**

STATE OF WISCONSIN DEPARTMENT OF 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 - 5/32" (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

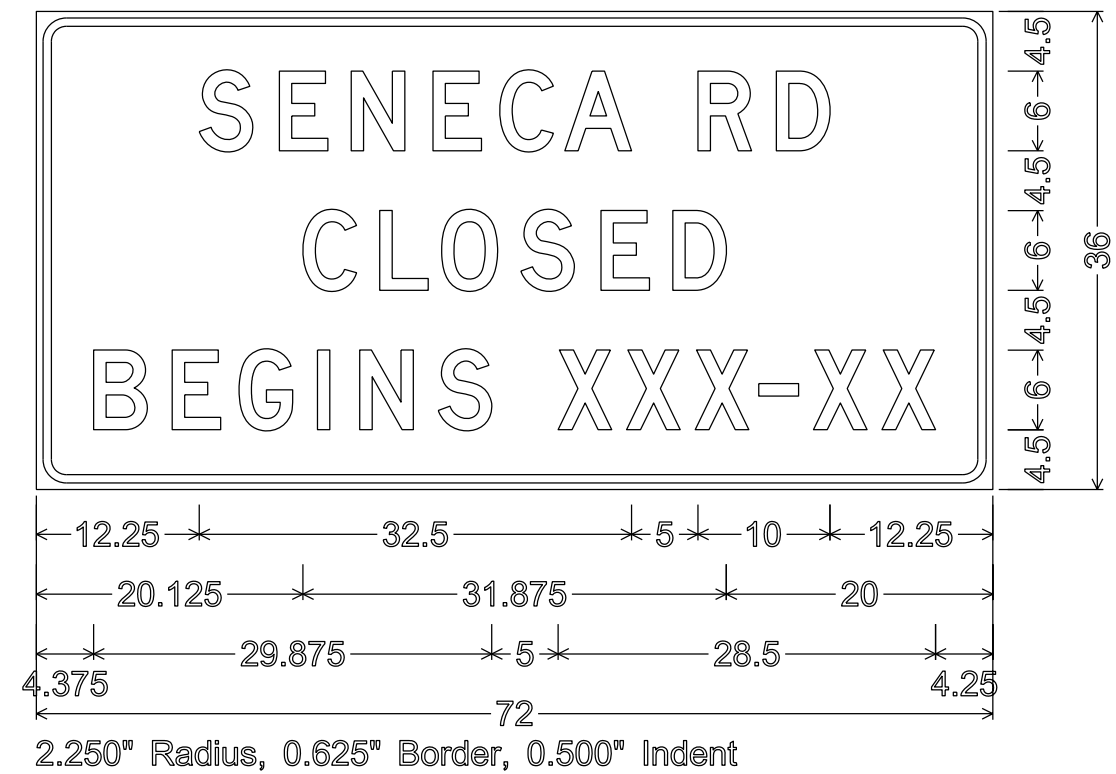
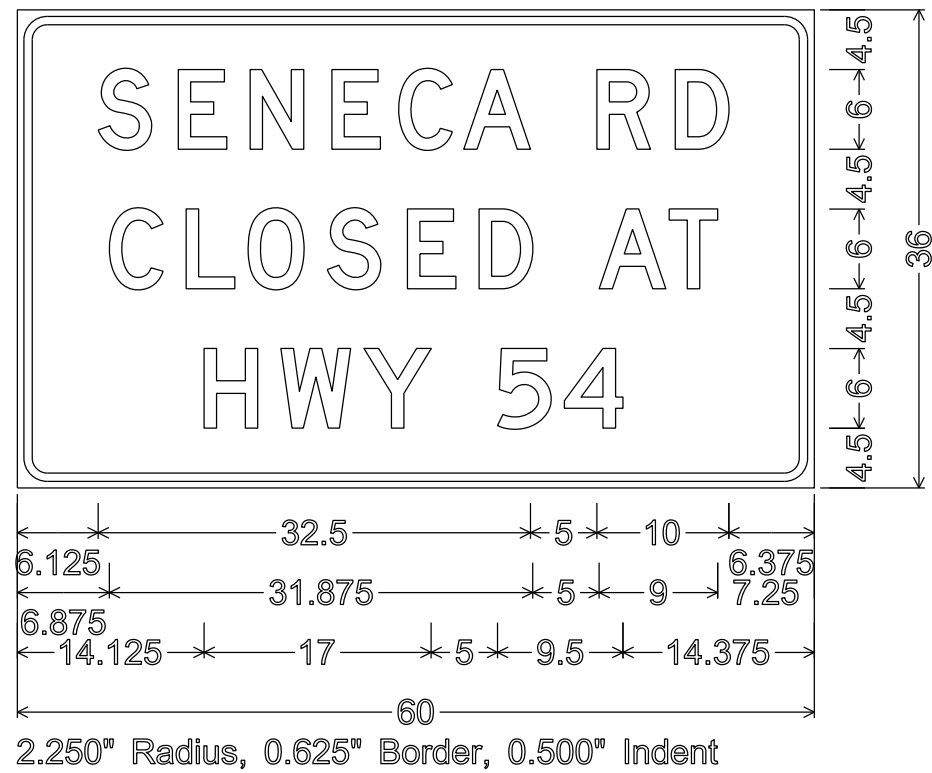
1-1/4" O.D. X 3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

\* 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

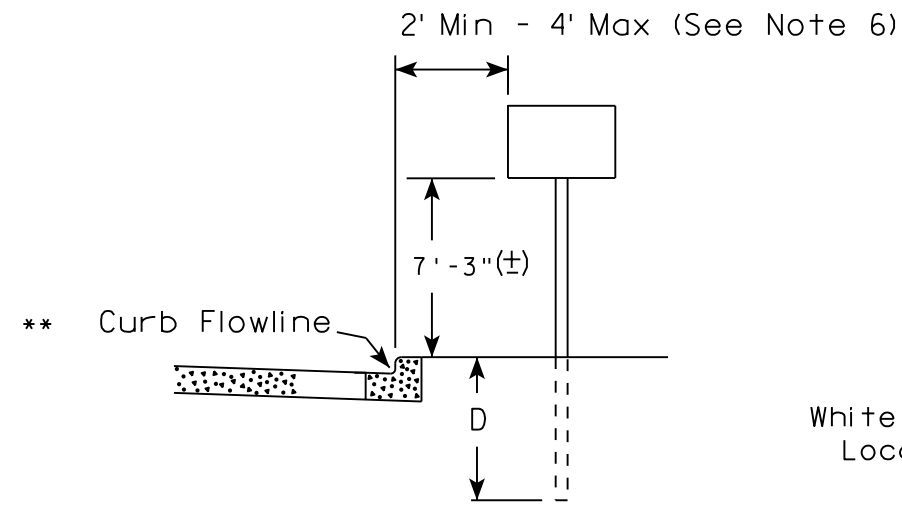
1. Fixed Message Type II Signs - Type F Reflective
2. Color:  
     Background - Orange  
     Message - Black
3. Message Series - D



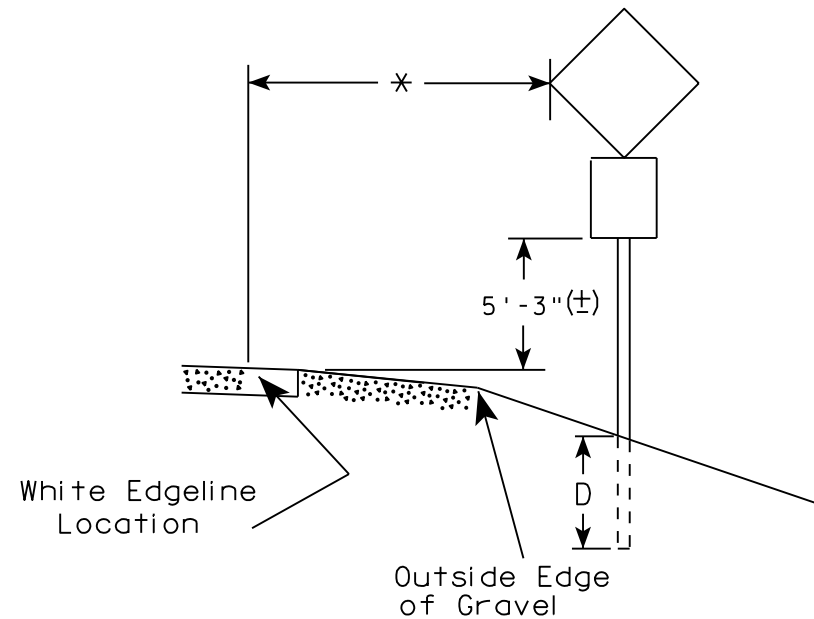
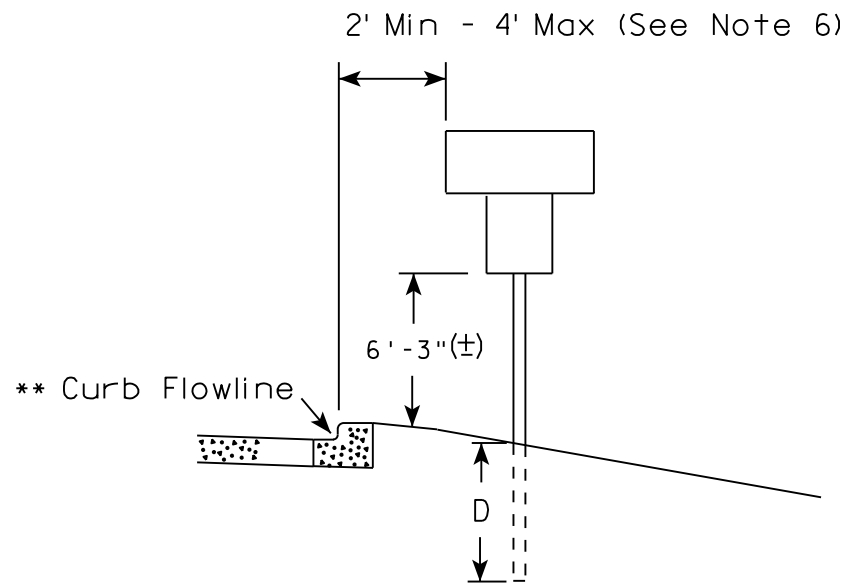
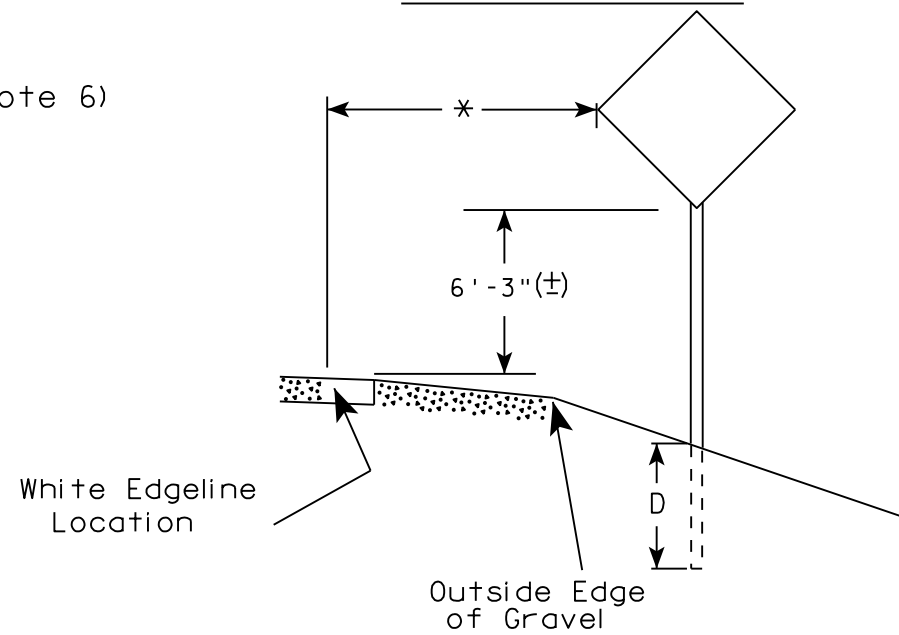
7

7

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

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

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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

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



**ELEVATION VIEW**

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

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



**ELEVATION VIEW**

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



**PLAN VIEW**

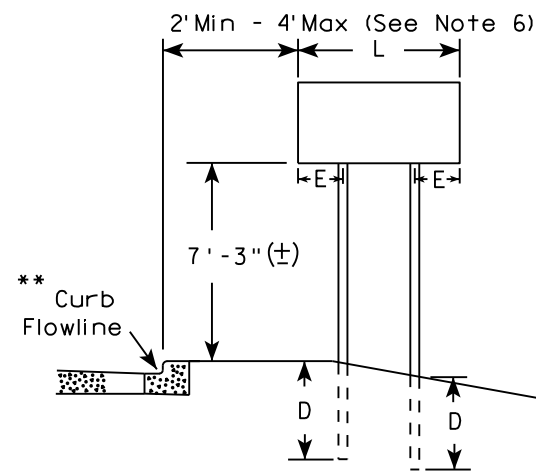
**FOR NEW CONCRETE/ASPHALT INSTALLATIONS**

<b>SIGN POST BOX-OUTS A4-3B</b>	
<small>WISCONSIN DEPT OF TRANSPORTATION</small>	
APPROVED <i>Matthew R. Rauch</i> <small>for State Traffic Engineer</small>	
<small>DATE 1/27/14</small>	<small>PLATE NO. A4-3B.1</small>

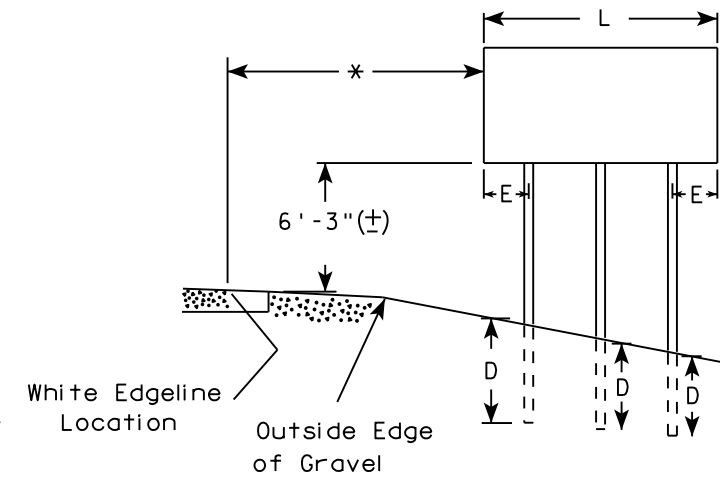
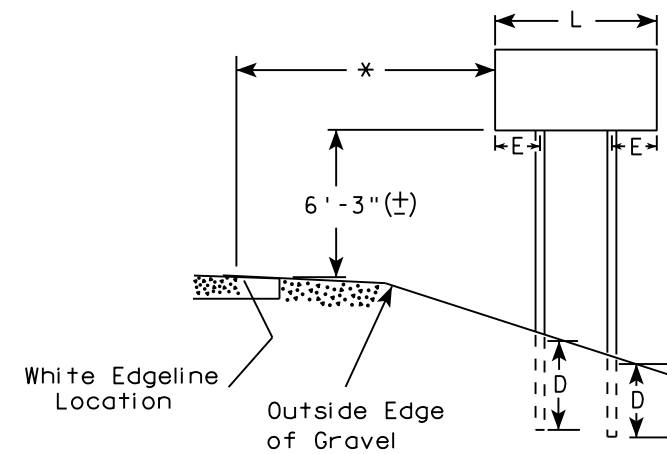
GENERAL NOTES

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" (±).

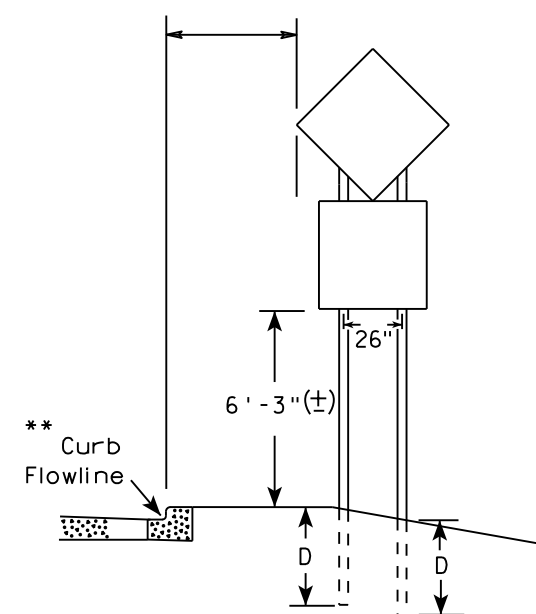
URBAN AREA



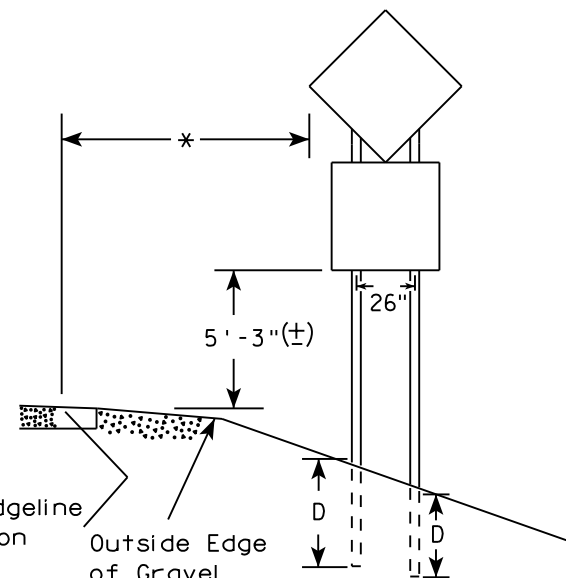
RURAL AREA (See Note 3)



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

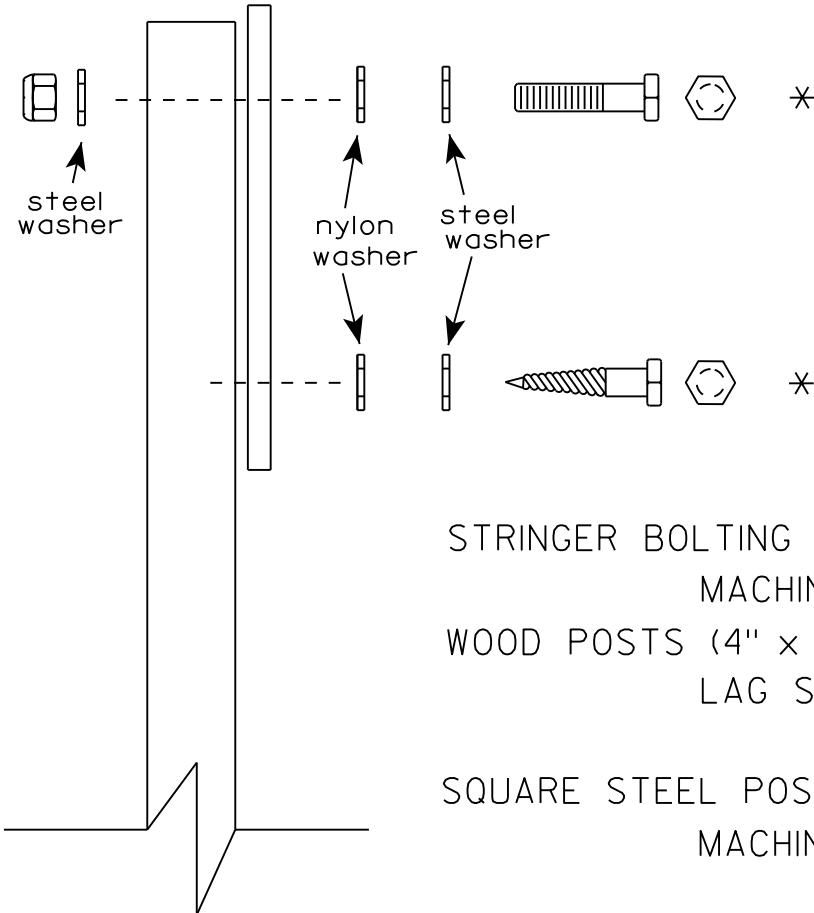
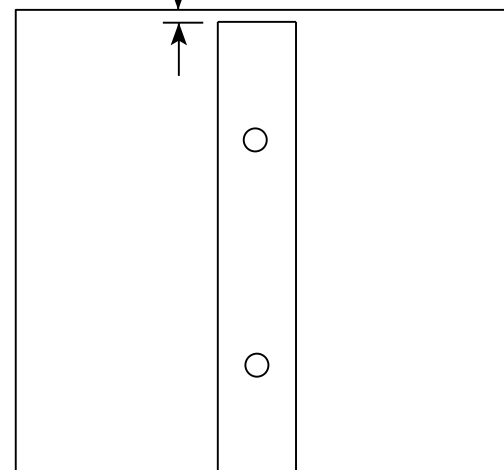
Area of Sign Installation ( Sq. Ft. )	D ( Min )
20 or Less	4'
Greater than 20	5'

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

1"± 1/2"

SIGN SHALL BE MOUNTED TO PROJECT ABOVE THE TOP OF THE POST



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.

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ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

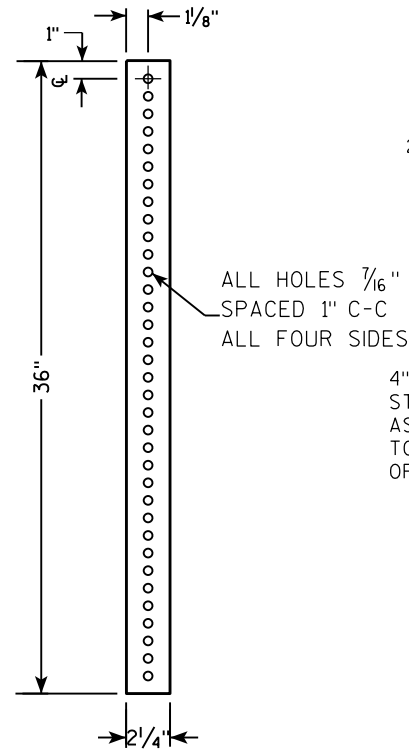
APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 8/11/16 PLATE NO. A4-8.8



**TELESCOPIC TUBING ANCHORS  
TWO PIECE SYSTEM**

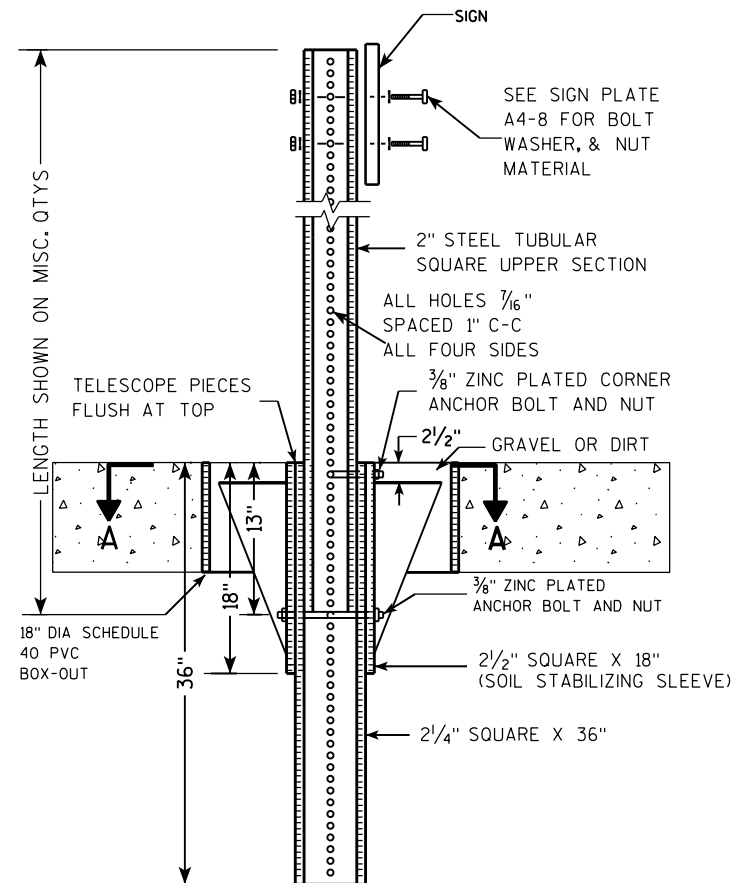
**2 1/4" SQUARE  
12 GAUGE  
PERFORATED  
GALVANIZED FINISH**



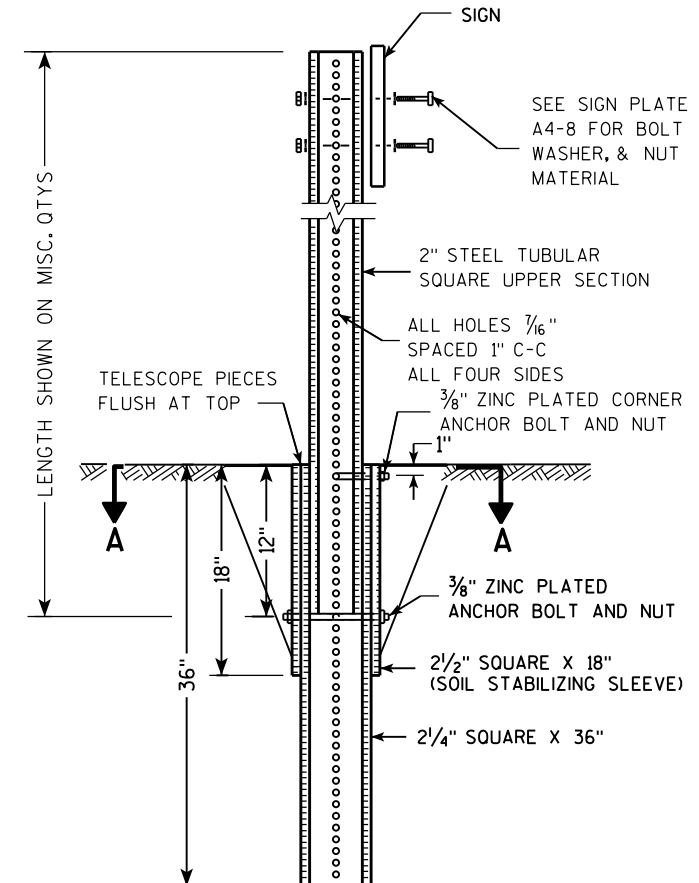
**2 1/2" SQUARE  
12 GAUGE  
OMNI-DIRECTIONAL  
PERFORATED  
SOIL STABILIZING SLEEVE  
GALVANIZED FINISH**



**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

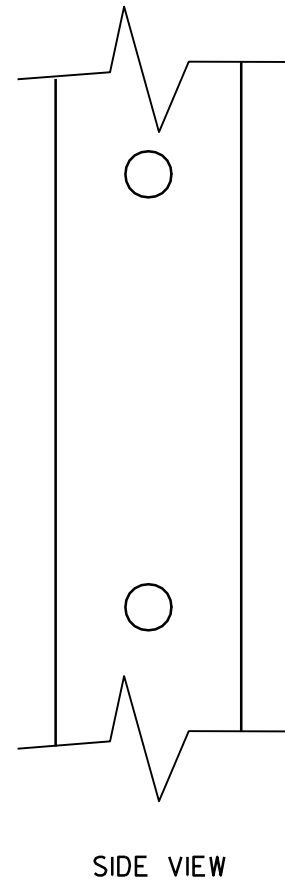
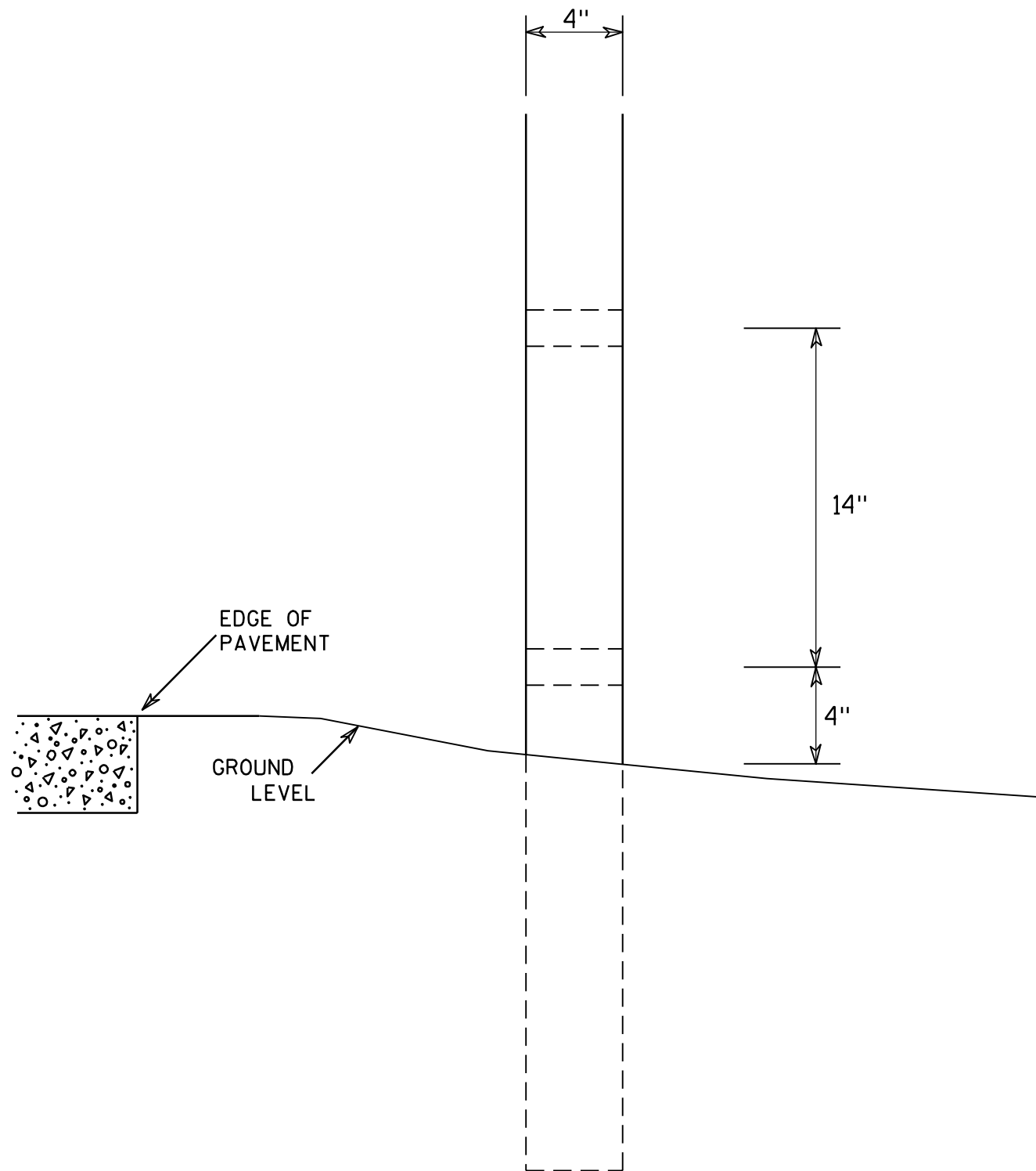
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**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




GENERAL NOTES

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

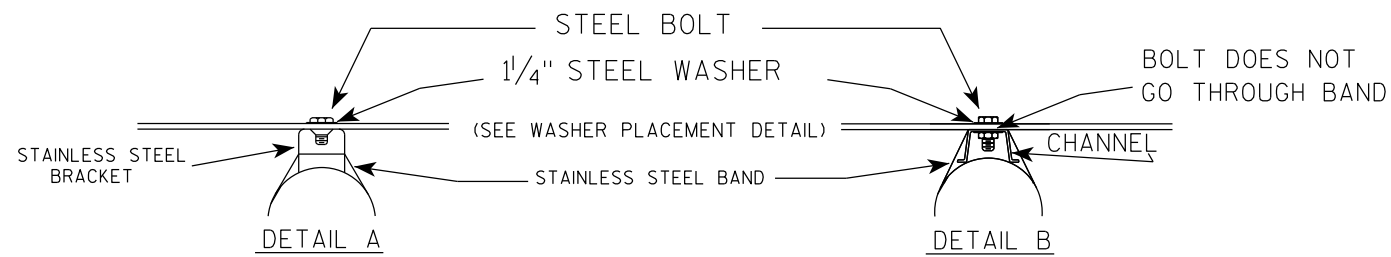
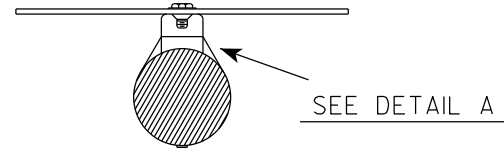
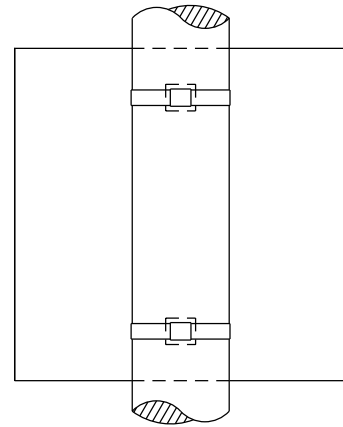
7

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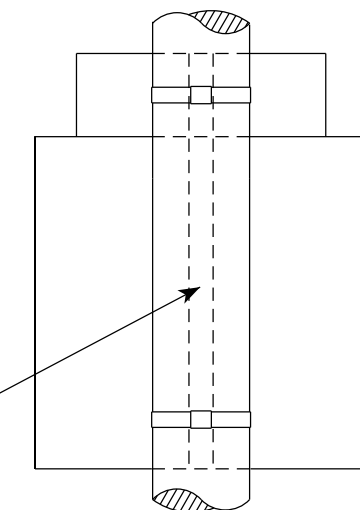
<b>4 X 6 WOOD POST MODIFICATIONS</b>	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	 <small>for State Traffic Engineer</small>
DATE <u>3/27/97</u>	PLATE NO. <u>A4-11.2</u>

# BANDING

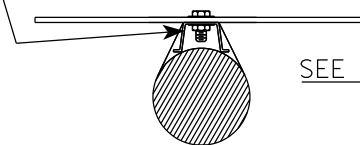
SINGLE SIGN



"J" ASSEMBLY

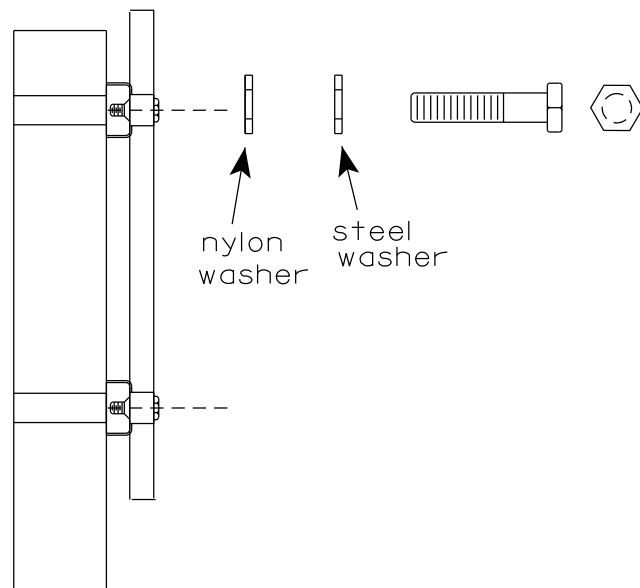


CHANNEL  
SEE TYPICAL PANEL  
INSTALLATION SHEET



- 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.
  4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
    - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
    - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

WASHER PLACEMENT



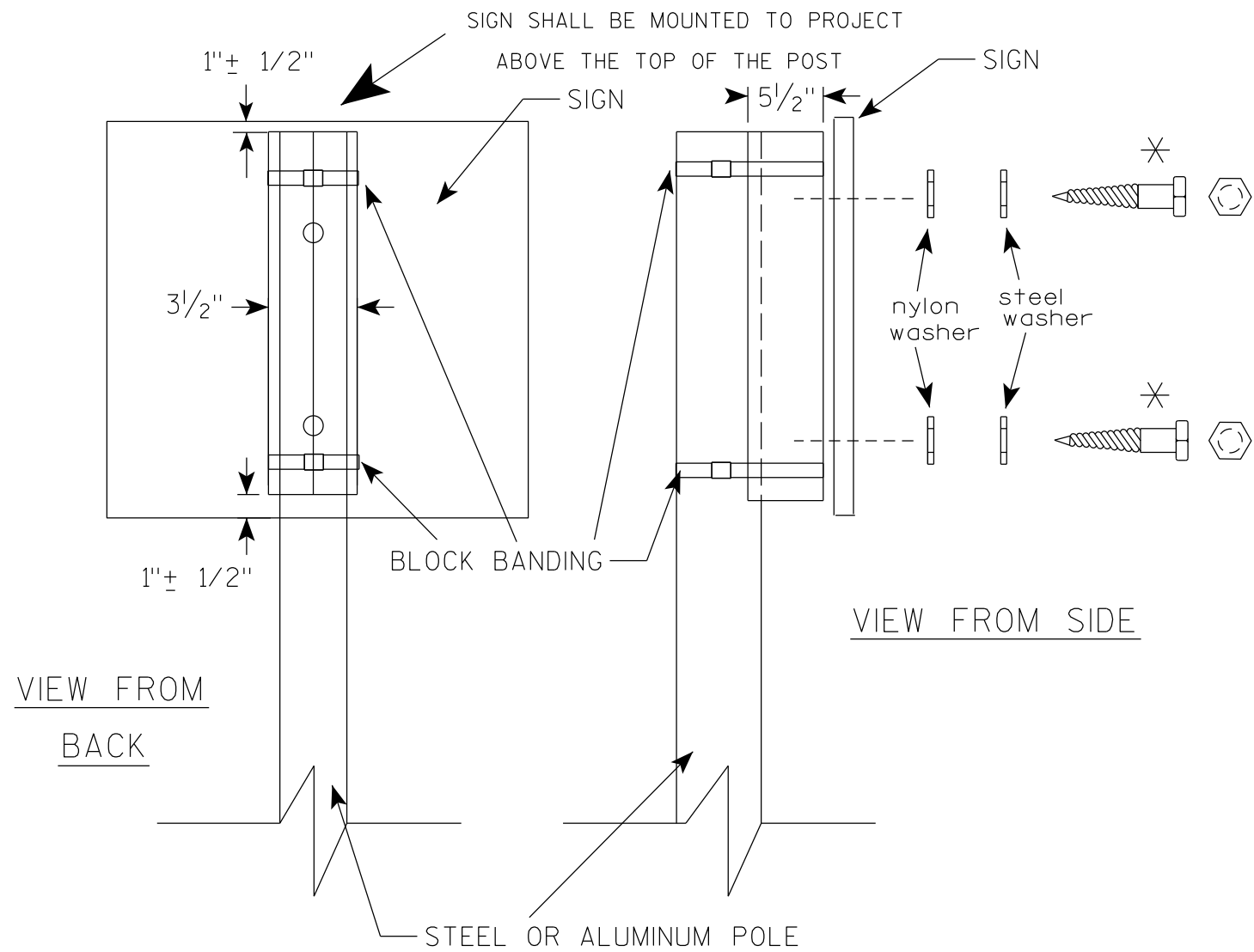
WASHERS (ALL POSTS) -  
 1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL  
 1-1/4" O.D. X 3/8" I.D. X .080 NYLON  
 FOR ALL TYPE H SIGNS

STANDARD SIGN  
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

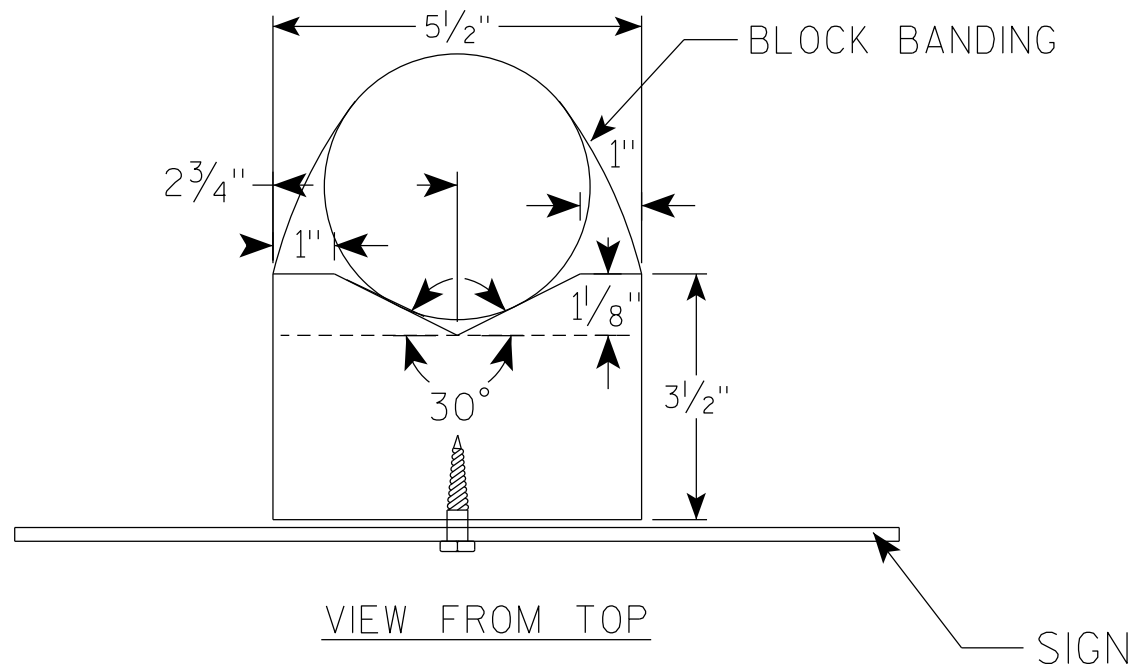
DATE 6/10/19 PLATE NO. A5-9.4



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
  - b. 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 1/4" O.D. X 3/8" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1/4" O.D. X 3/8" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

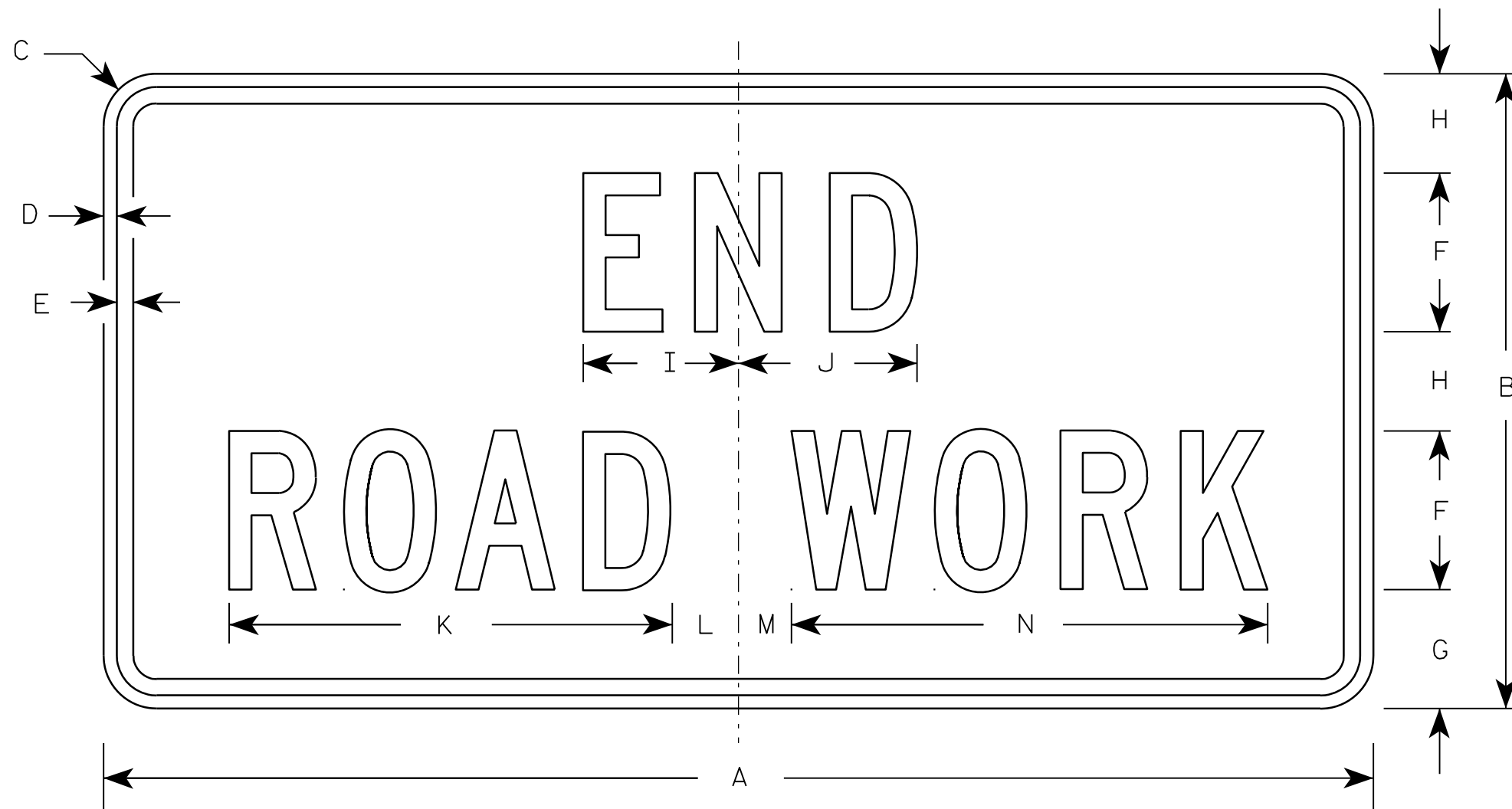
✱ LAG BOLTS SHALL BE 3/8" X 2 1/2"



BLOCK BANDING DETAIL ( V-BLOCK OPTION )	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> for State Traffic Engineer
DATE 6/10/19	PLATE NO. A5-10.2

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

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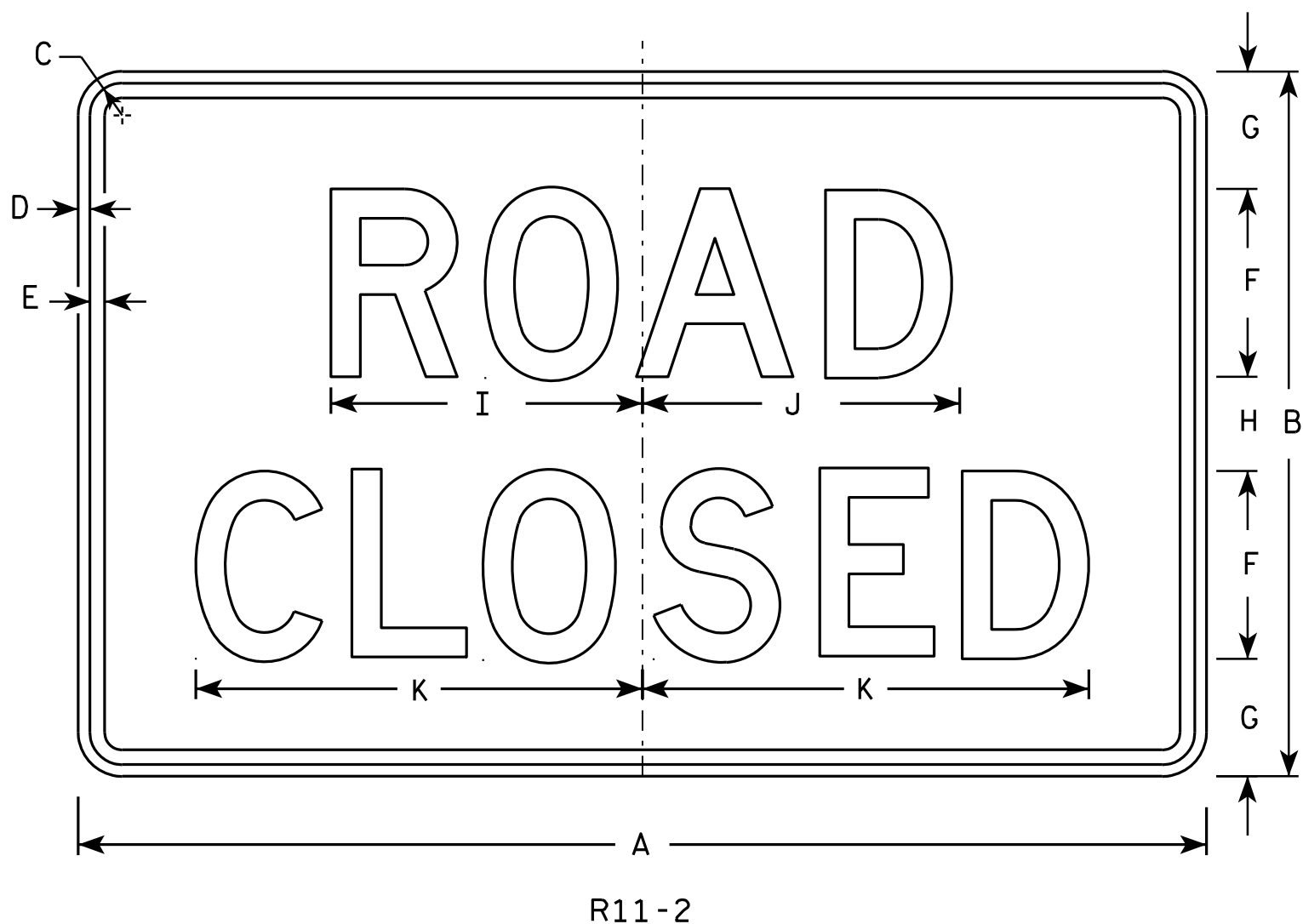
Metric equivalent for this sign is:

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.
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

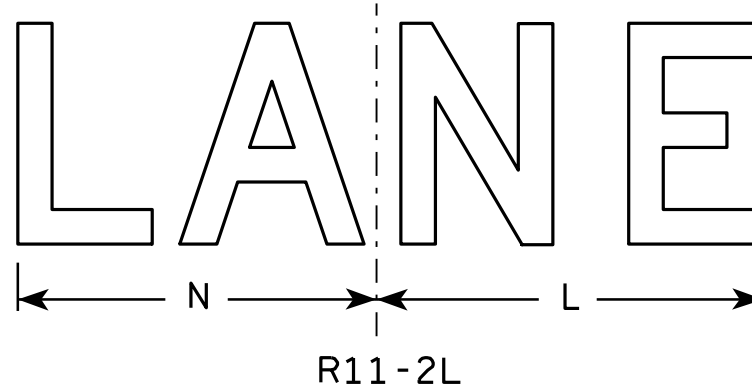
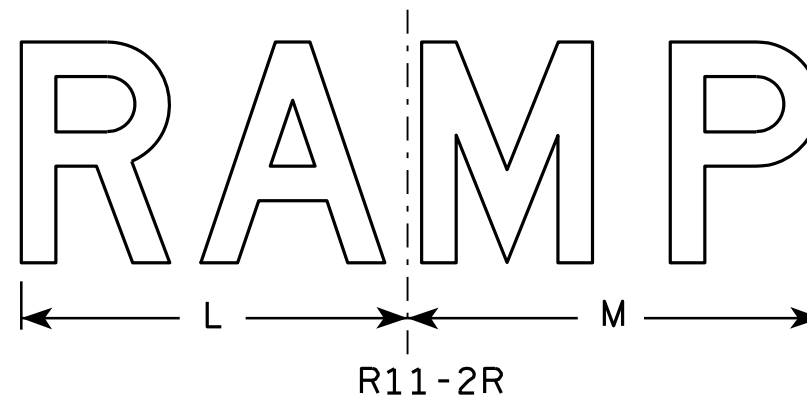
STANDARD SIGN	
G20-2A	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 9/30/09	PLATE NO. G20-2A.8

PROJECT NO:	HWY:	COUNTY:	SHEET NO: <b>E</b>
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**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. Modify the message as required.



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SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13												10.0	
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13												10.0	
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13												10.0	
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13												10.0	
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13												10.0	

**STANDARD SIGN**  
R11-2

*WISCONSIN DEPT OF TRANSPORTATION*

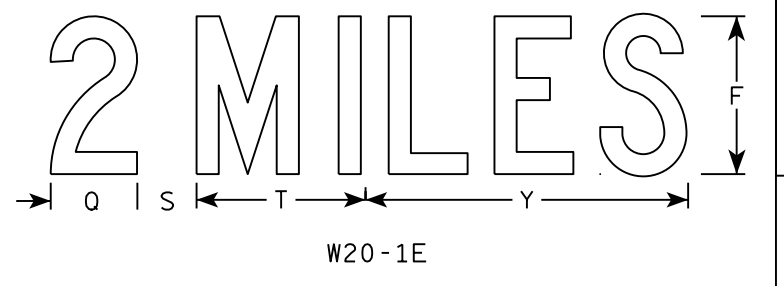
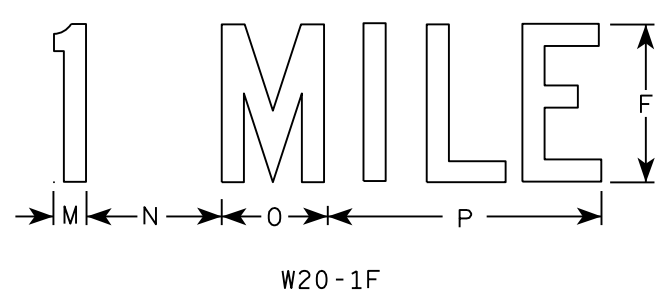
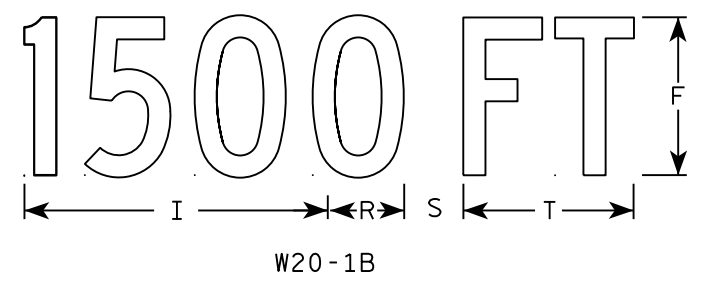
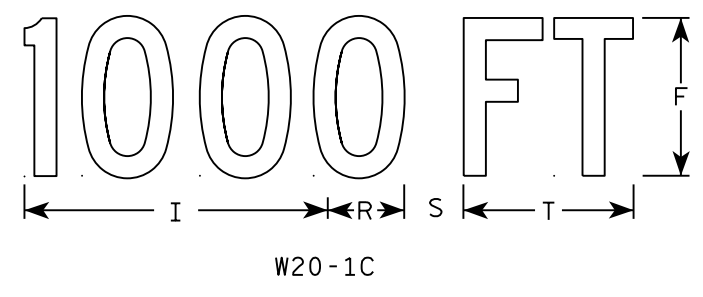
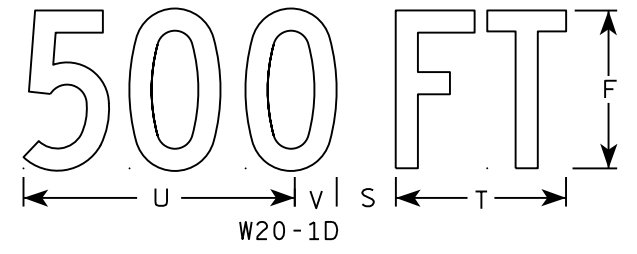
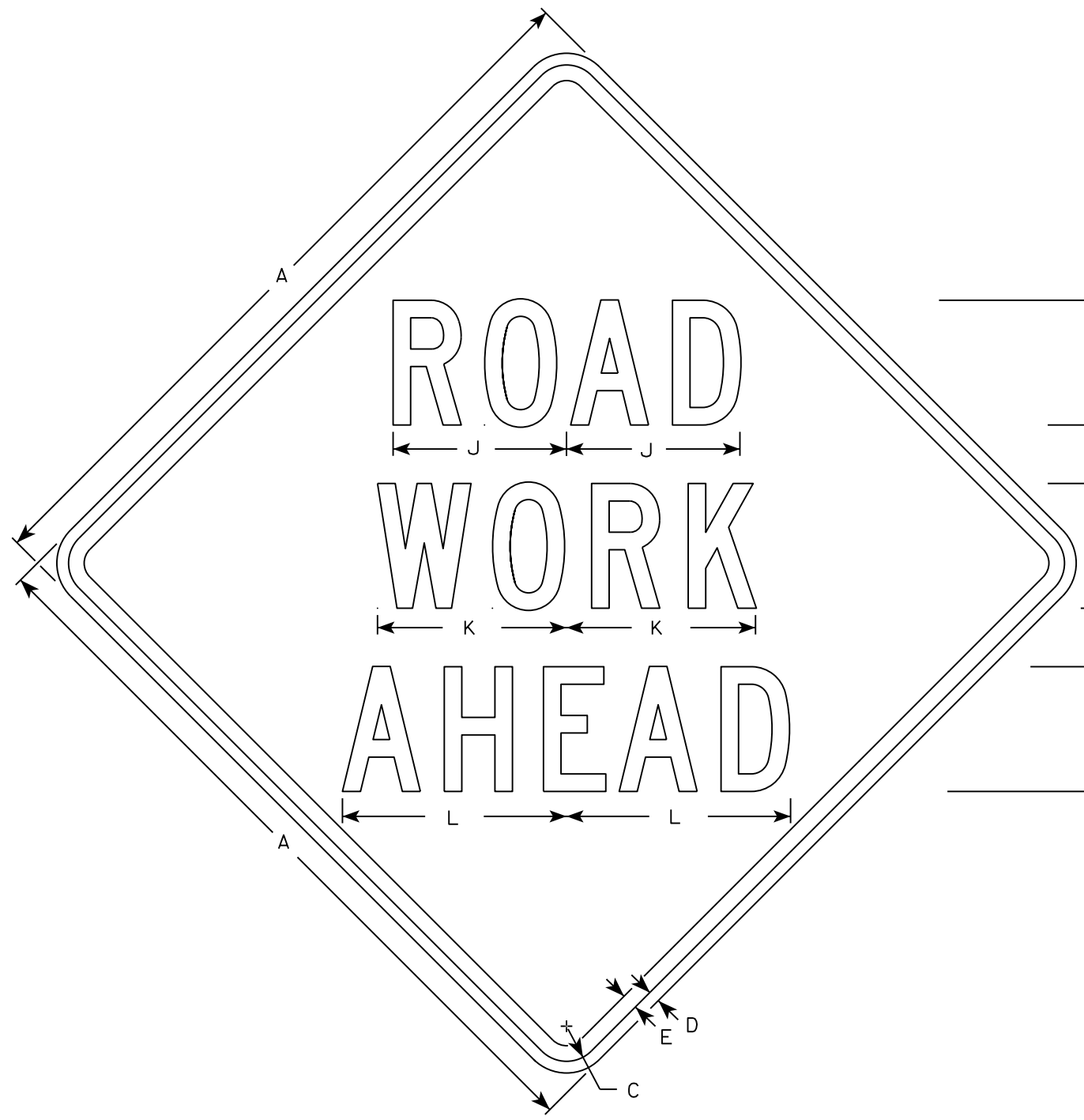
APPROVED *Matthaeus R. Rauch*  
For State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

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

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.



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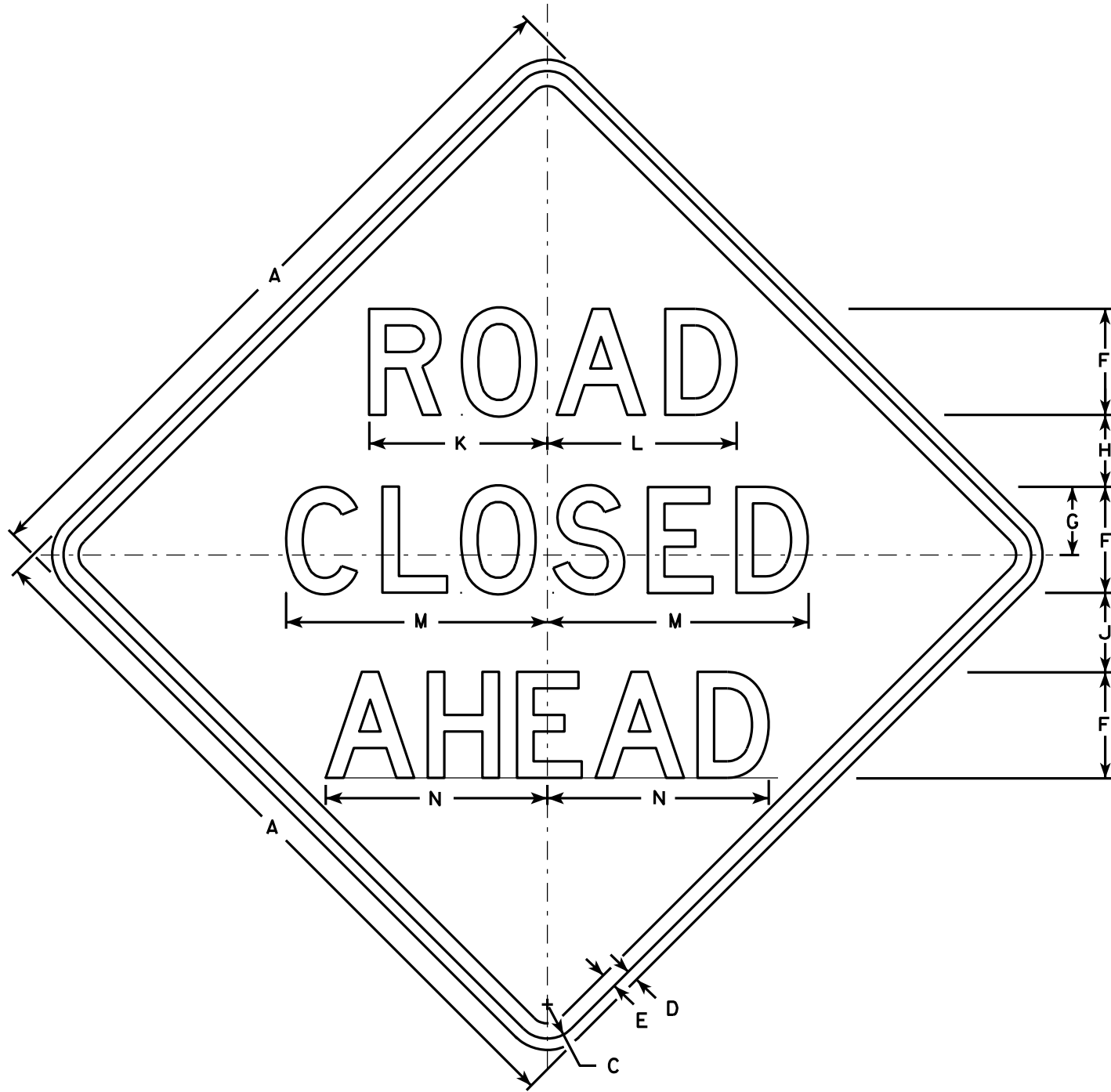
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 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, F & G

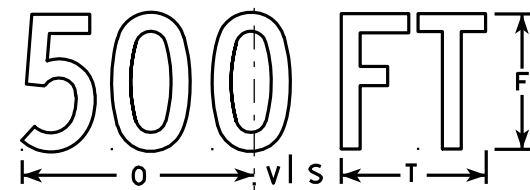
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

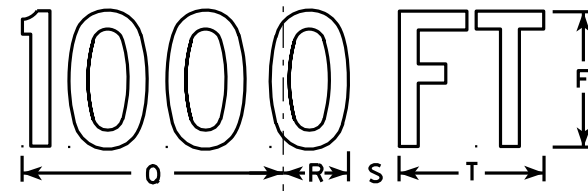
DATE 5/07/15 PLATE NO. W20-1.10



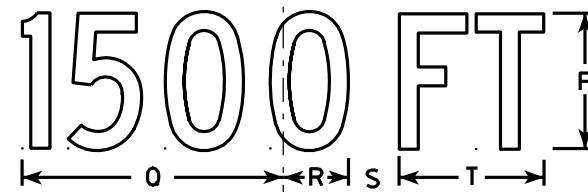
W20-3A



W20-3D



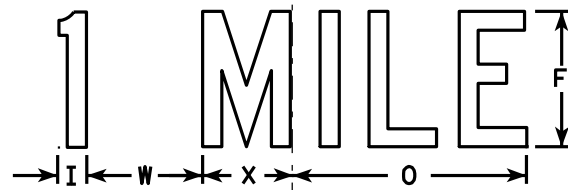
W20-3C



W20-3B



W20-3G



W20-3F

**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 - 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. Lines 1 and 2 are Series D.  
Line 3 is Series D for AHEAD and Series C for all other distances.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

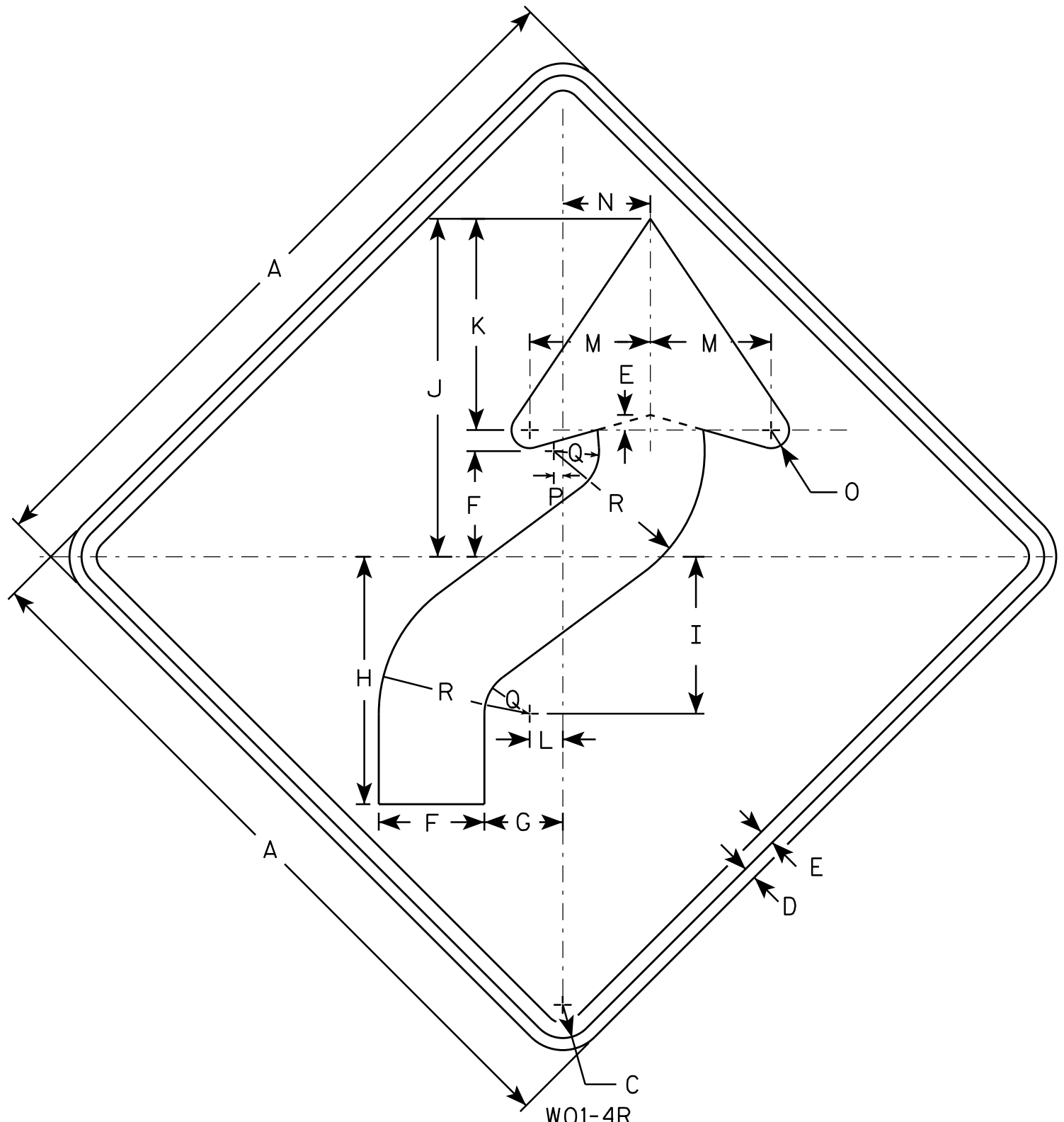
**STANDARD SIGN**  
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-3.7





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. 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. W01-4L is the same as W01-4R except the arrow is reversed along the vertical centerline.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
2S	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
2M	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
3	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
4	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

W01-4R

**STANDARD SIGN**  
**W01-4**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-4.1

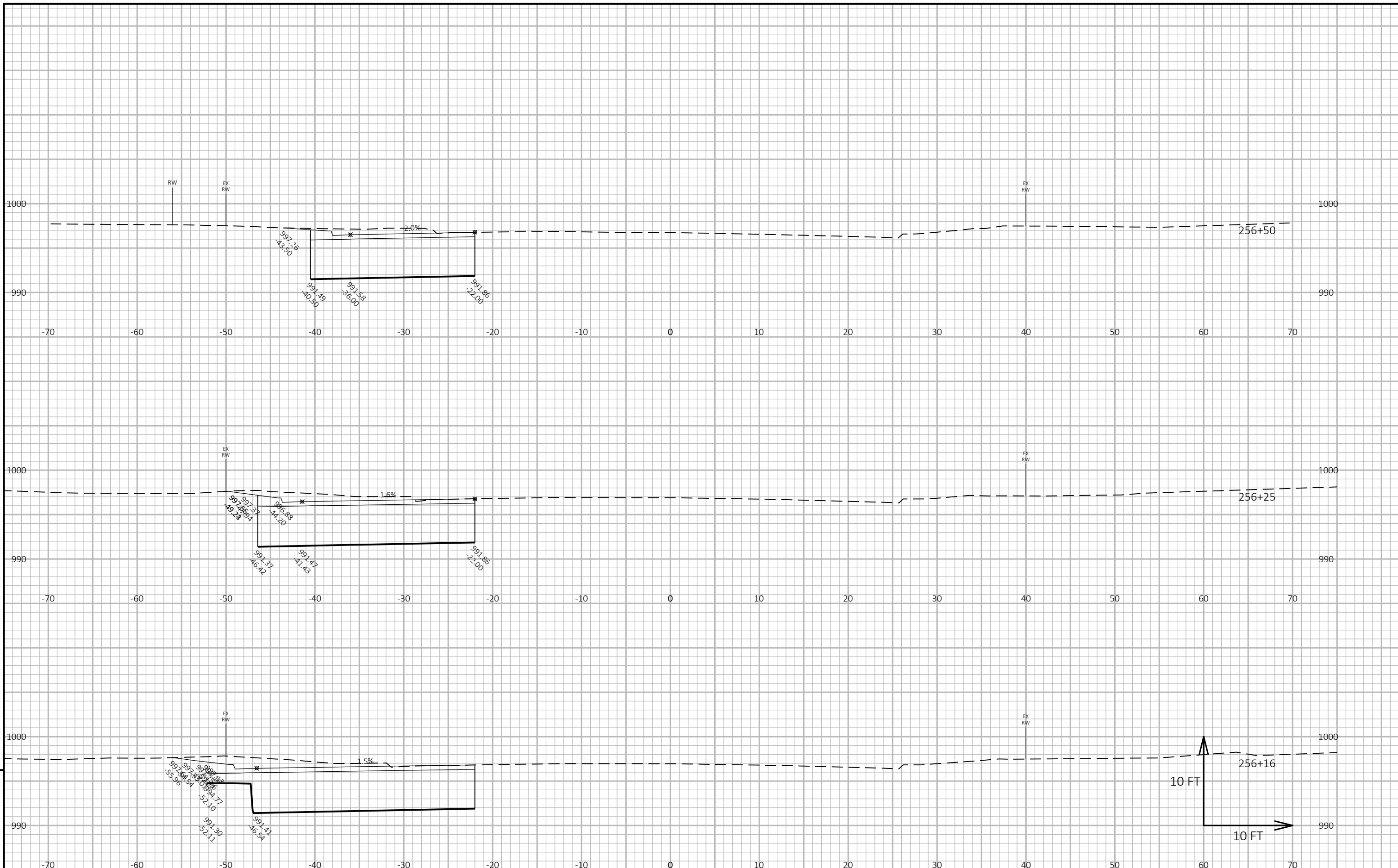
PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

## STH 54 EARTHWORK

STATION	AREA (SF) CUT	INCREMENTAL VOL (CY) (UNADJUSTED) CUT	CUMULATIVE VOL (CY) 1.00 CUT	MASS ORDINATE
256+15.49	65.39	0	0	0
256+50.00	99.78	106	106	106
257+00.00	100.06	185	291	291
257+50.00	100.97	186	477	477
258+00.00	101.65	188	664	664
258+50.00	94.41	182	846	846
258+67.45	0.00	31	876	876

## SENECA ROAD EARTHWORK

STATION	AREA (SF) CUT	INCREMENTAL VOL (CY) (UNADJUSTED) CUT	CUMULATIVE VOL (CY) 1.00 CUT	MASS ORDINATE
8'S'+50.82	0.00	0	0	0
9'S'+00.00	11.93	11	11	11
9'S'+50.00	59.90	67	77	77
9'S'+77.12	0.00	30	107	107



PROJECT NO: 6999-03-72

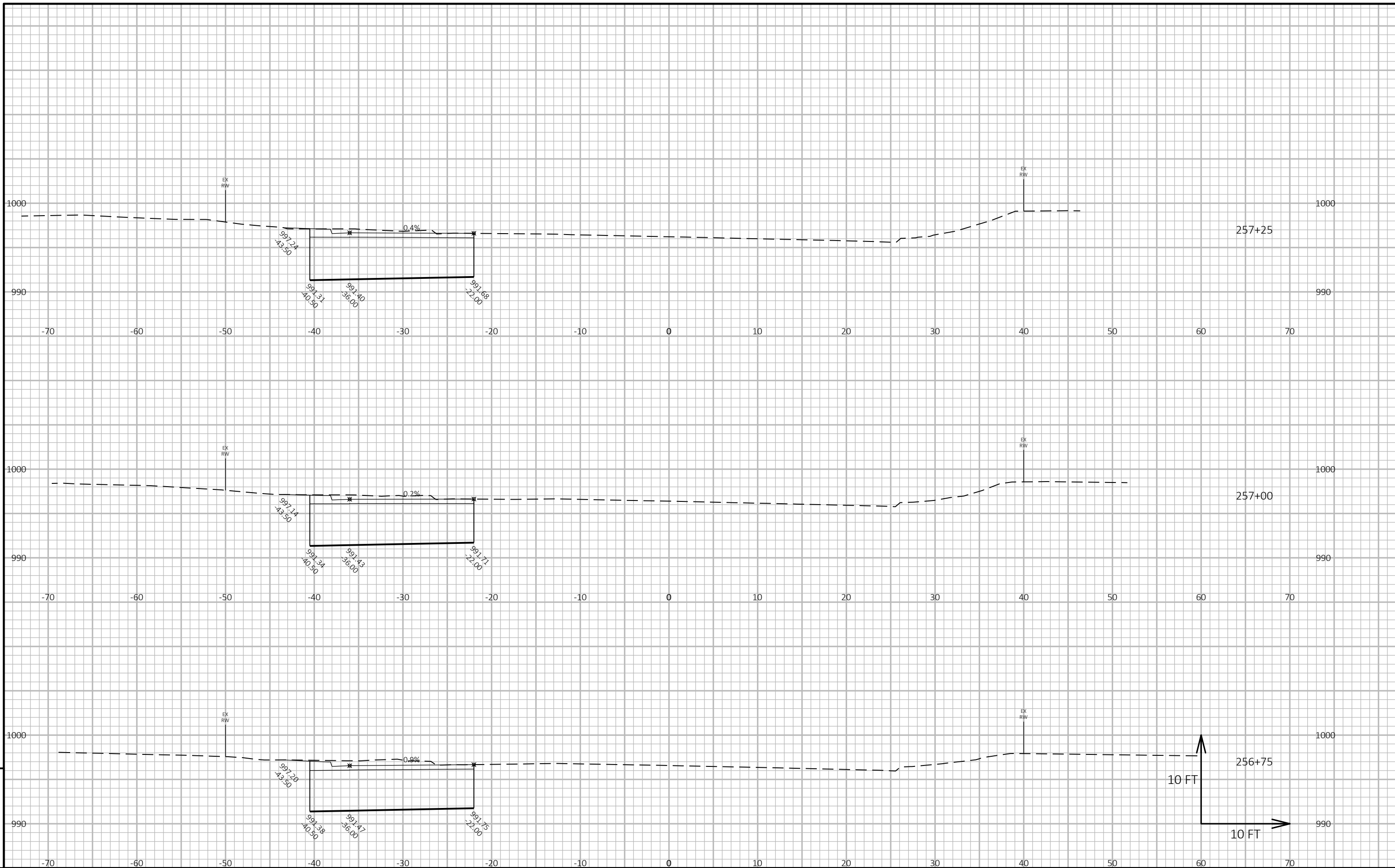
HWY: STH 54

COUNTY: WOOD

CROSS SECTIONS: STH 54

SHEET

E



PROJECT NO: 6999-03-72

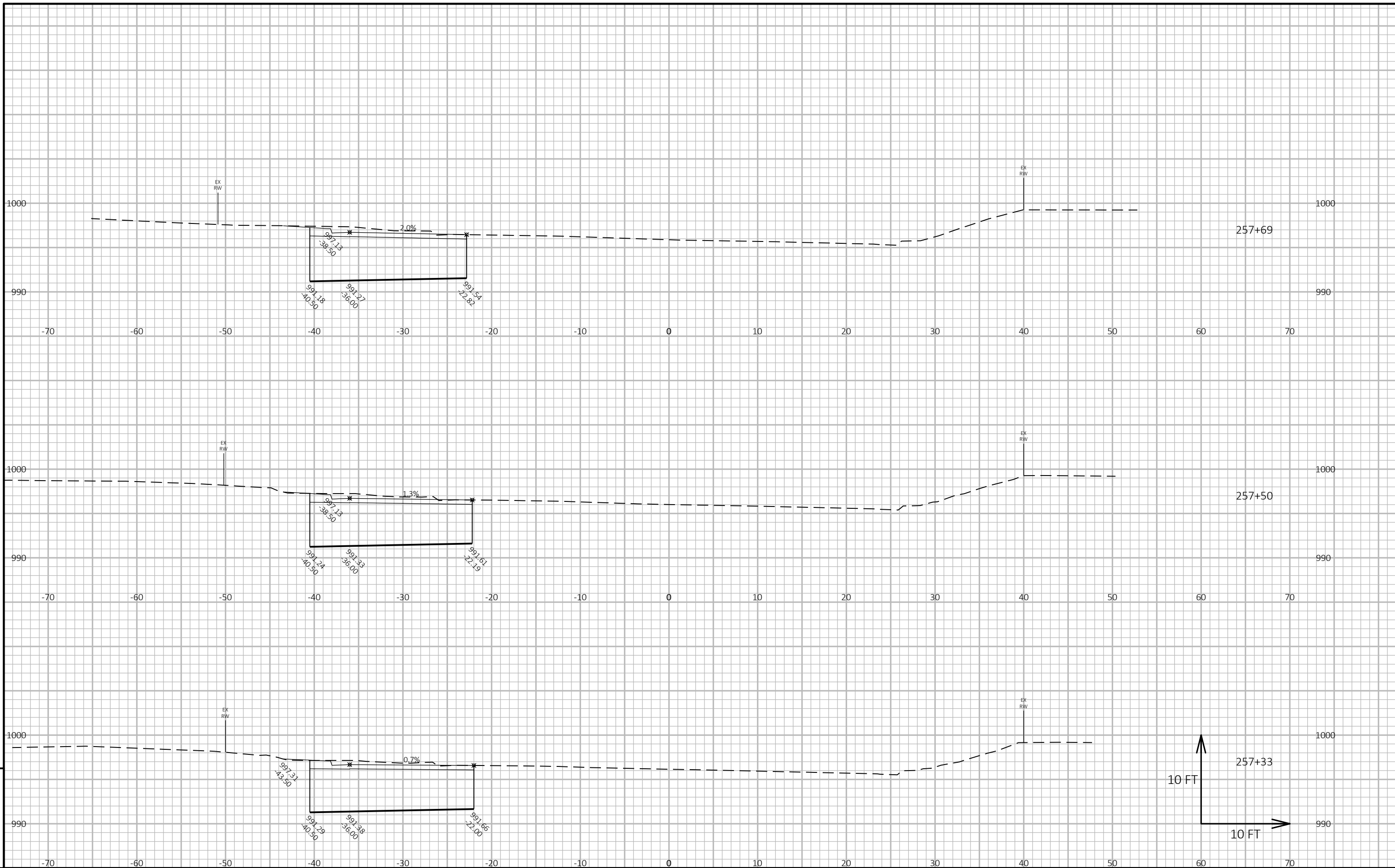
HWY: STH 54

COUNTY: WOOD

CROSS SECTIONS: STH 54

SHEET

E



PROJECT NO: 6999-03-72

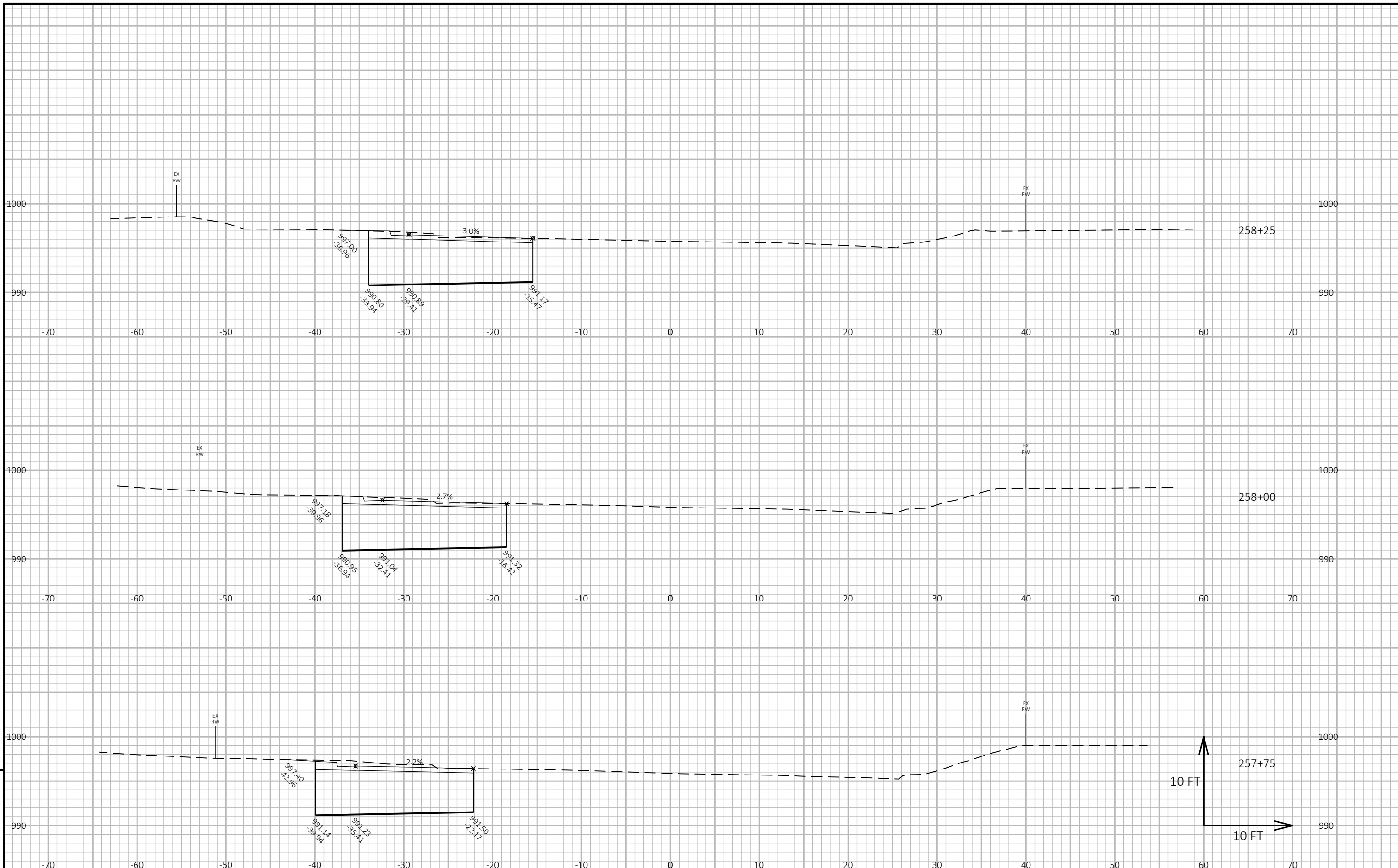
HWY: STH 54

COUNTY: WOOD

CROSS SECTIONS: STH 54

SHEET

E



PROJECT NO: 6999-03-72

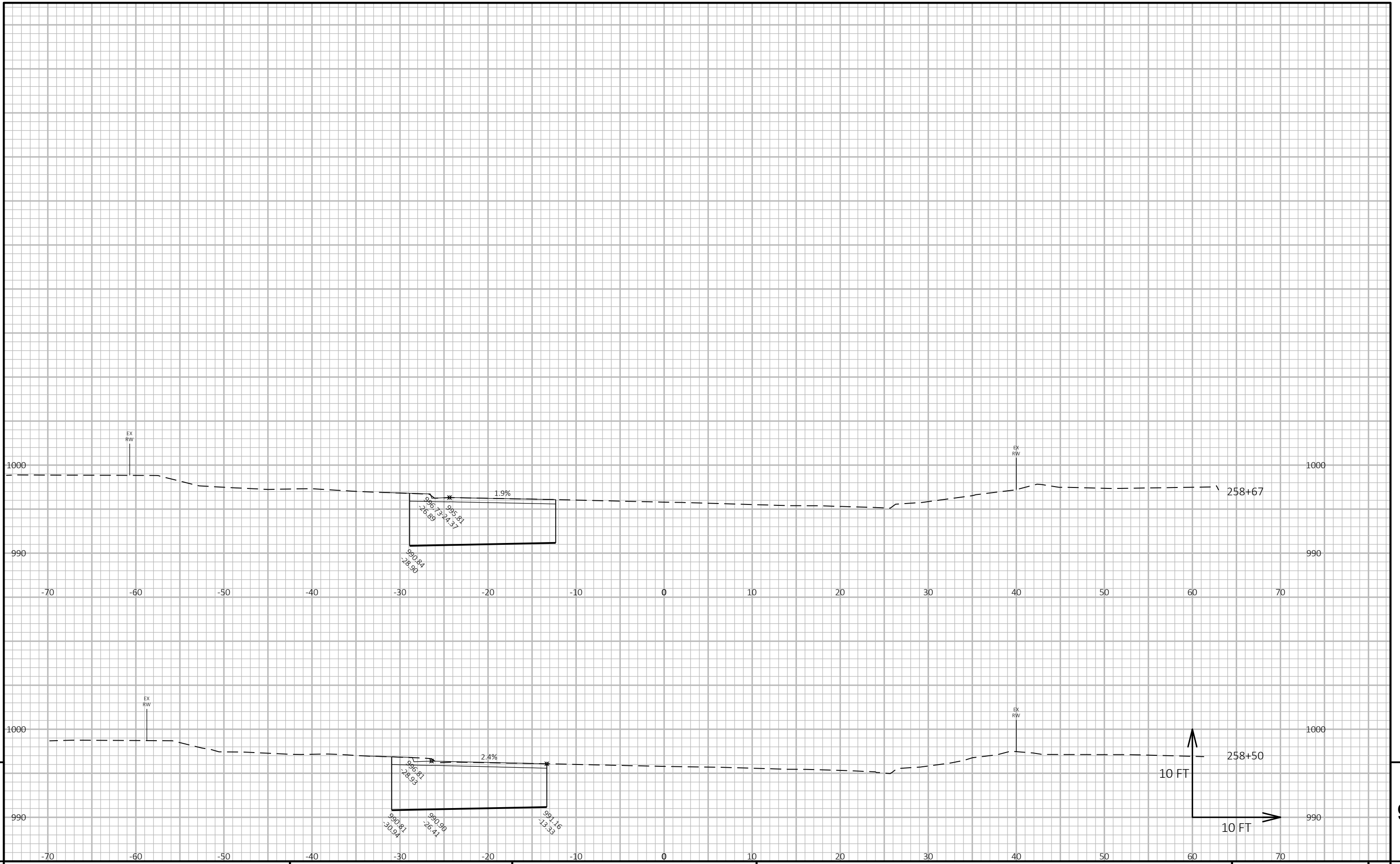
HWY: STH 54

COUNTY: WOOD

CROSS SECTIONS: STH 54

SHEET

E



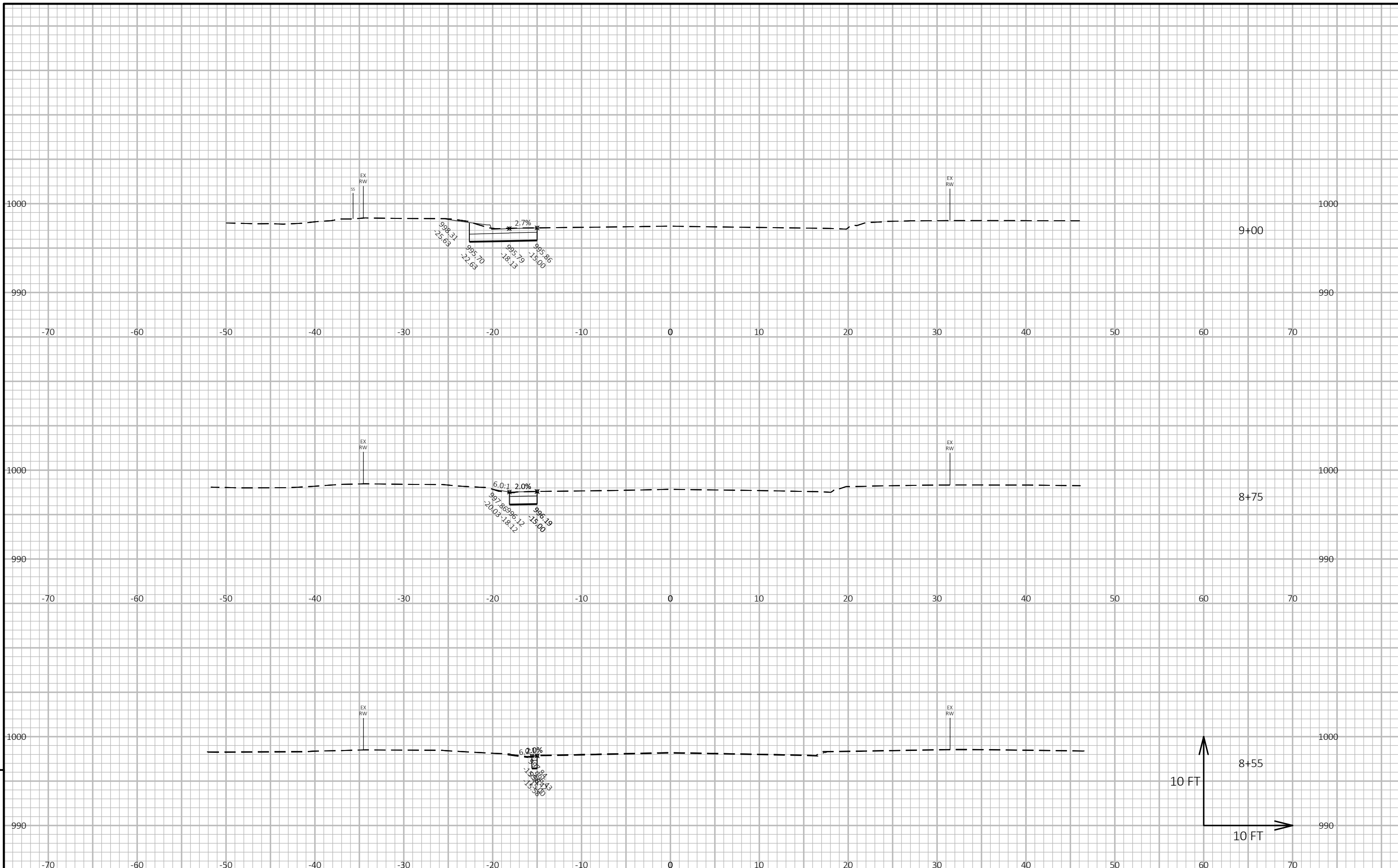
9

9

PROJECT NO: 6999-03-72	HWY: STH 54	COUNTY: WOOD	CROSS SECTIONS: STH 54	SHEET	E
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FILE NAME : N:\PDS\C3D\69990312\SHEETSPLAN\090201-XS.DWG PLOT DATE : 10/29/2019 7:41 AM PLOT BY : CHRISTIANSON, ERIN M PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 54 - (5)



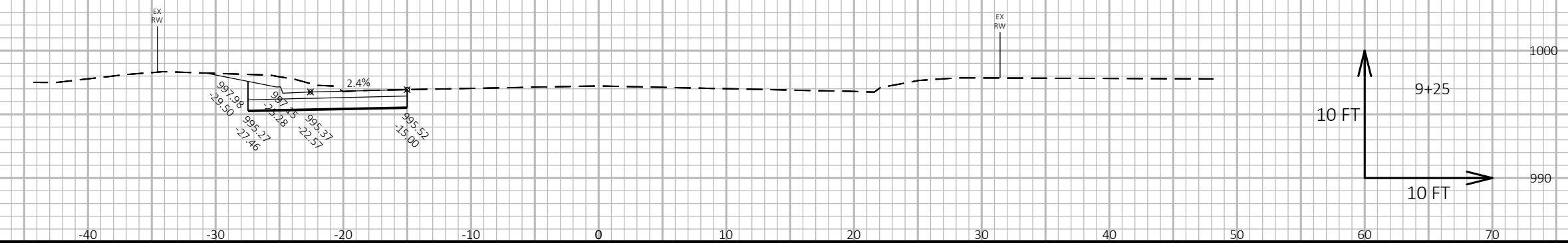
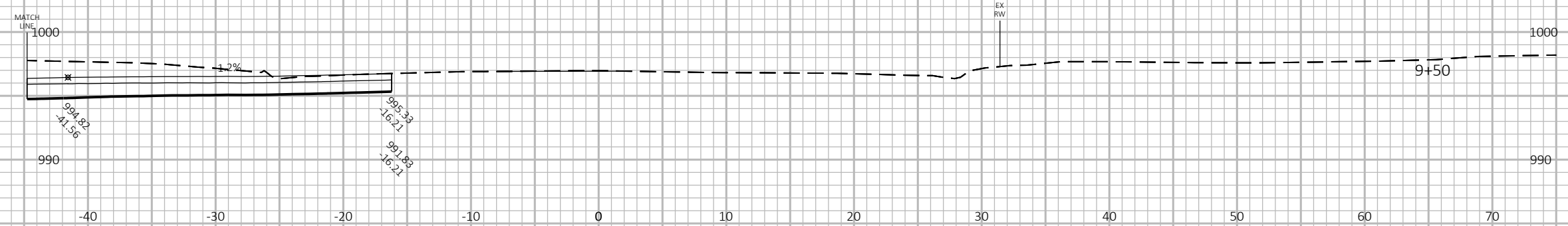
PROJECT NO: 6999-03-72	HWY: STH 54	COUNTY: WOOD	CROSS SECTIONS: SENECA ROAD	SHEET
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9

9

E





PROJECT NO: 6999-03-72

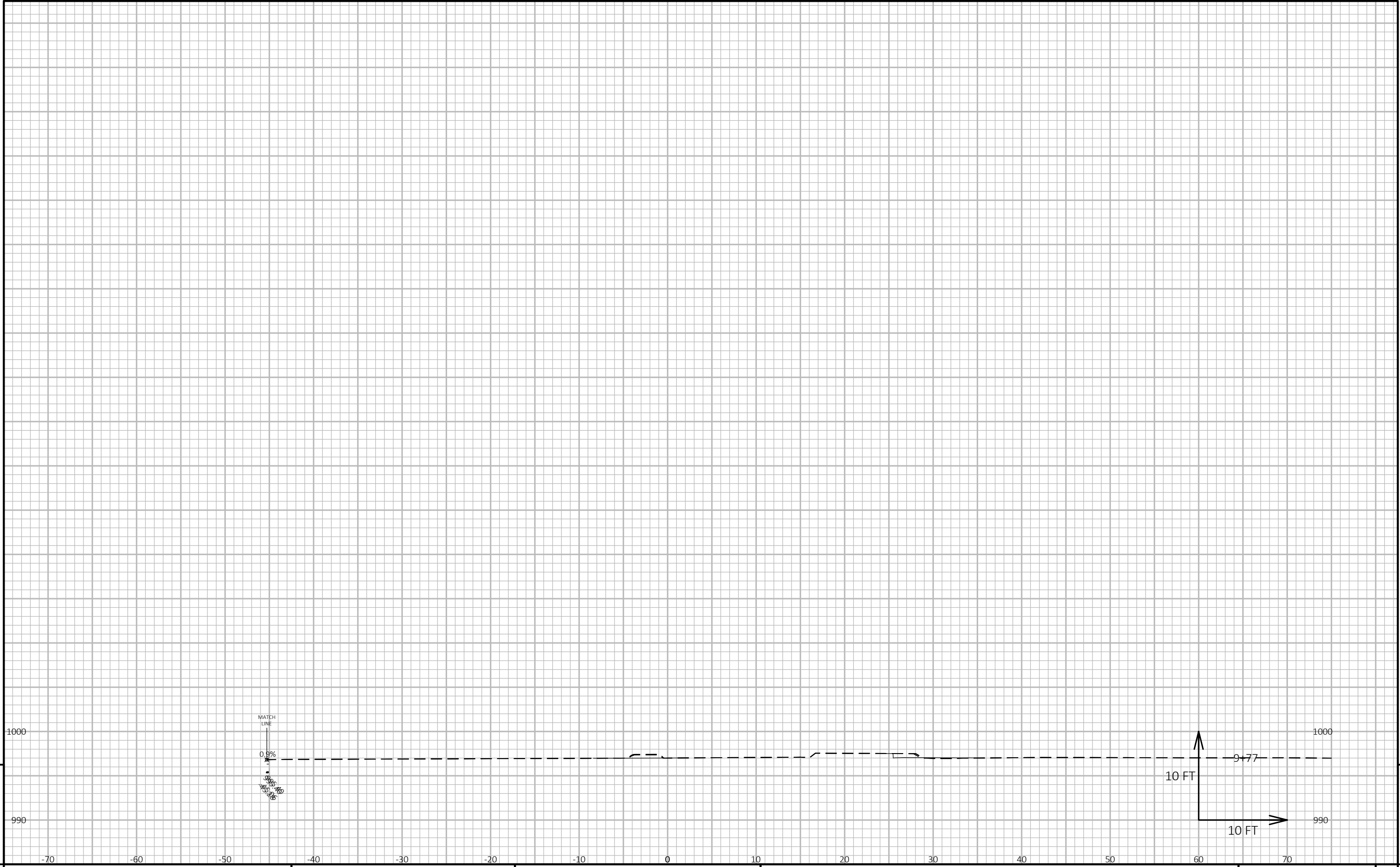
HWY: STH 54

COUNTY: WOOD

CROSS SECTIONS: SENECA ROAD

SHEET

E



9

9

PROJECT NO: 6999-03-72	HWY: STH 54	COUNTY: WOOD	CROSS SECTIONS: SENECA ROAD	SHEET	E
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FILE NAME : N:\PDS\C3D\69990312\SHEETSPLAN\090201-XS.DWG  
LAYOUT NAME - Seneca-(3)

PLOT DATE : 10/29/2019 7:41 AM

PLOT BY : CHRISTIANSON, ERIN M

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADD SHEET 49

# Notes



## ***Wisconsin Department of Transportation***

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