

STANDARD ABBREVIATIONS

ASPH.	ASPHALT	N.T.S.	NOT TO SCALE
BM(•)	BENCHMARK	O.C.	ON CENTER
C&G	CURB AND GUTTER	PE	PRIVATE ENTRANCE
CABC	CRUSHED AGGREGATE BASE COURSE	P.L.	PERMANENT LIMITED EASEMENT
CE	COMMERCIAL ENTRANCE	P.L.E.	PROPERTY LINE
CL	CENTERLINE	PROP.	PROPOSED
CL	CLASS	R	RADIUS
CONC.	CONCRETE	R	REFERENCE LINE
CMCP	CORRUGATED METAL CULVERT PIPE	RCCP	REINFORCED CONCRETE CULVERT PIPE
CP(•)	CONTROL POINT	REQ'D	REQUIRED
CP	CULVERT PIPE	RHF	RIGHT HAND FORWARD
C.Y.	CUBIC YARDS	RT	RIGHT
D/W	DRIVEWAY	R/W	RIGHT OF WAY
E.O.R.	END OF RADIUS	SB	SOUTHBOUND
EB	EASTBOUND	SBRL	SOUTHBOUND REFERENCE LINE
EL.	ELEVATION	SE	SUPERELEVATION
EX.	EXISTING	SF	SQUARE FOOT
EXC.	EXCAVATION	SO. FT.	SQUARE FOOT
FE	FIELD ENTRANCE	SY	SQUARE YARD
F.L.	FLOWLINE	(TYP.)	TYPICAL
HERCP	HORIZONTAL ELLIPTICAL REINFORCED CONCRETE PIPE	T.L.E.	TEMPORARY LIMITED EASEMENT
LF	LINEAL FOOT	VAR.	VARIES
LT	LEFT	WB	WESTBOUND
MH	MANHOLE	W/L	WETLAND
MIN.	MINIMUM		
NB	NORTHBOUND		
NBRL	NORTHBOUND REFERENCE LINE		
NOR.	NORMAL		

UTILITY CONTACTS

CENTURY LINK-COMMUNTICATION &
CENTURY TEL TELEVIDEO, INC.
ATTN: ROSS HARTWIG
144 N. PEARL STREET
BERLIN, WI. 54923
PHONE: 920-361-8425
EMAIL: ross.hartwig@centurylink.com

WISCONSIN PUBLIC SERVICE-
ELECTRIC-GAS/PETROLEUM
ATTN: LORIBUTRY
700 N. ADAMS STREET
P.O. BOX 19001
GREEN BAY, WI. 54307-9001
PHONE: 920-433-1703
EMAIL: LAButry@integrysgroup.com

VILLAGE OF FORESTVILLE
WASTEWATER TREATMENT FACILITY-
SEWER
ATTN: TERRY McNULTY
234 E. MAIN STREET
FORESTVILLE, WI. 54213-9609
PHONE: 920-746-2261
EMAIL: tml651@doorpi.net

OTHER CONTACTS

DNR LIAISON
ATTN: MATTHEW SCHAEVE
NORTHEAST REGION
2984 SHAWANO AVE.
GREEN BAY, WI. 54304
PHONE: 920-662-5472
EMAIL: matthew.schaeve@wisconsin.gov

DOOR COUNTY
HIGHWAY DEPARTMENT
ATTN: JOHN KOLODZIEJ
1001 S. DULUTH
STURGEON BAY, WI. 54235-3812
PHONE: 920-746-2500
FAX: 920-743-7060
EMAIL: kolodzie@co.door.wi.us

WISDOT PROJECT MANAGER
ATTN: JEREMY ASHAUER
944 VANDERPERREN WAY
GREEN BAY, WI. 54304
PHONE: 920-492-4165
EMAIL: Jeremy.Ashauer@dot.wi.gov

GRAEF PROJECT MANAGER
ATTN: DAN HERZBERG
1150 SPRINGHURST DRIVE
SUITE 201
GREEN BAY, WI. 54304-5947
PHONE: 920-592-9440
FAX: 920-592-9445
EMAIL: dan.herzberg@graef-usa.com

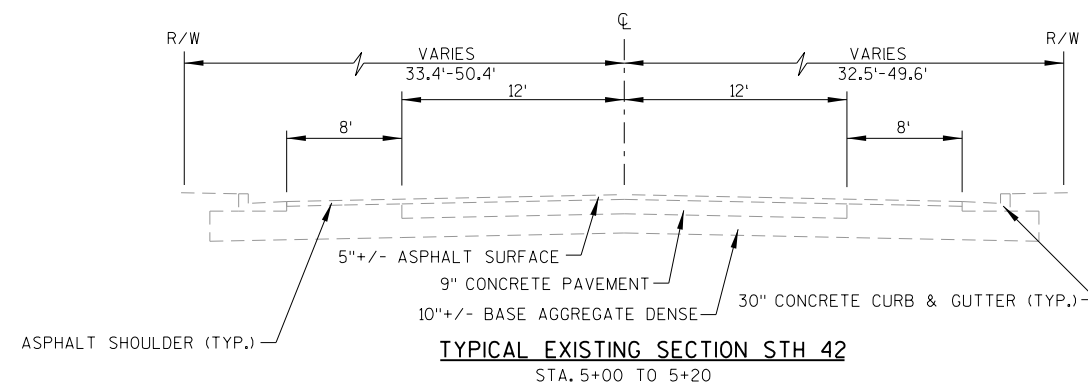
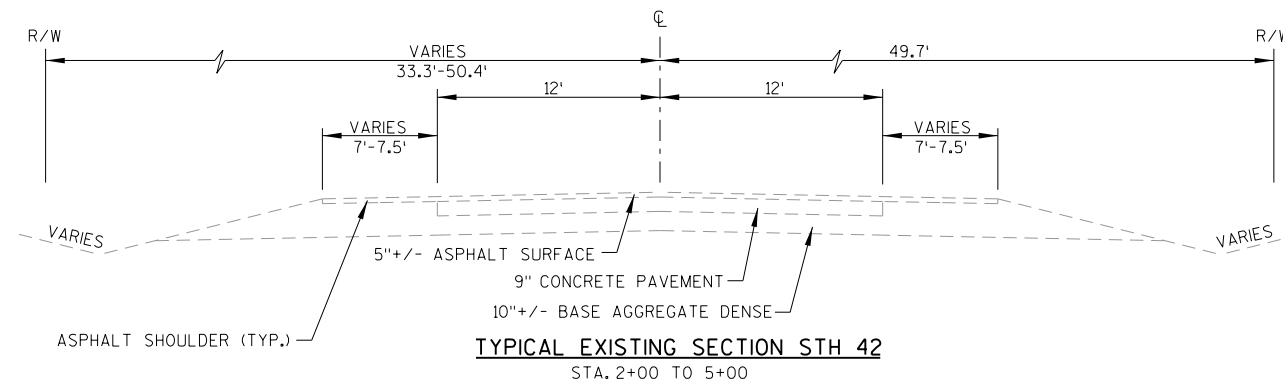
GENERAL NOTES

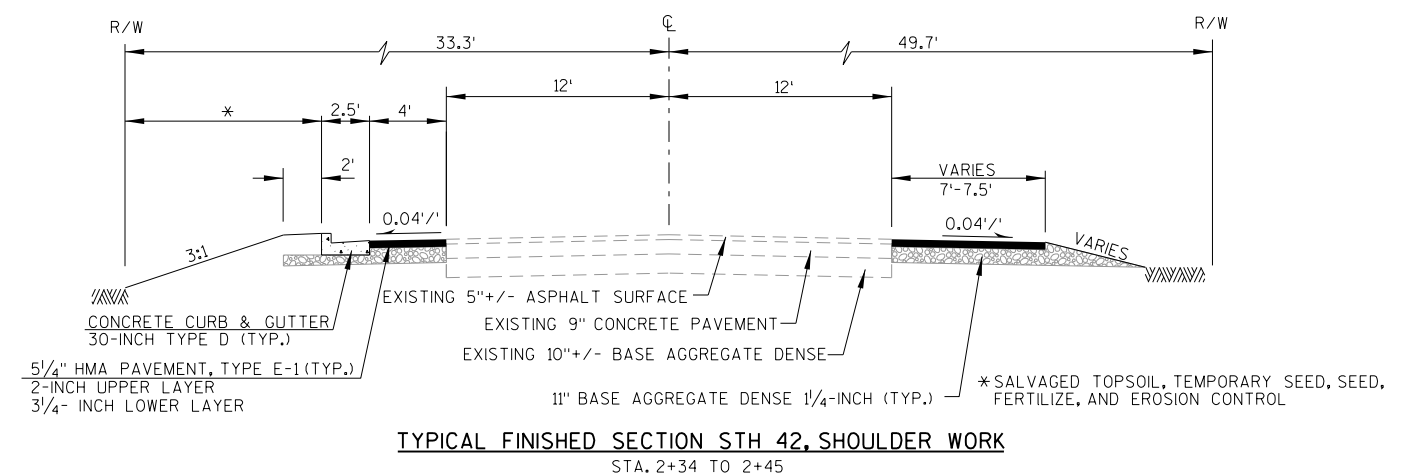
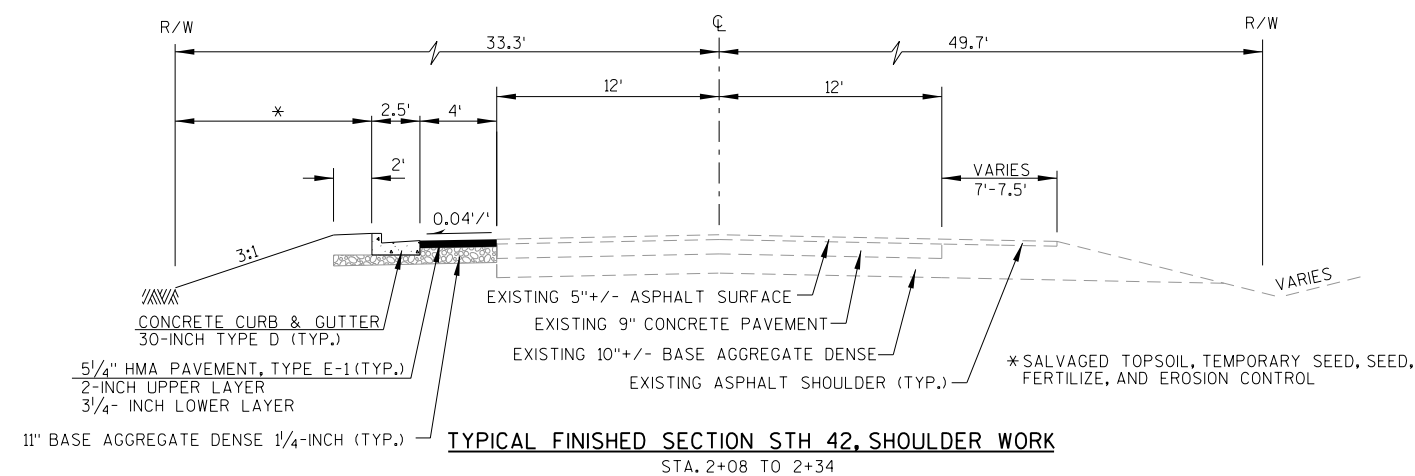
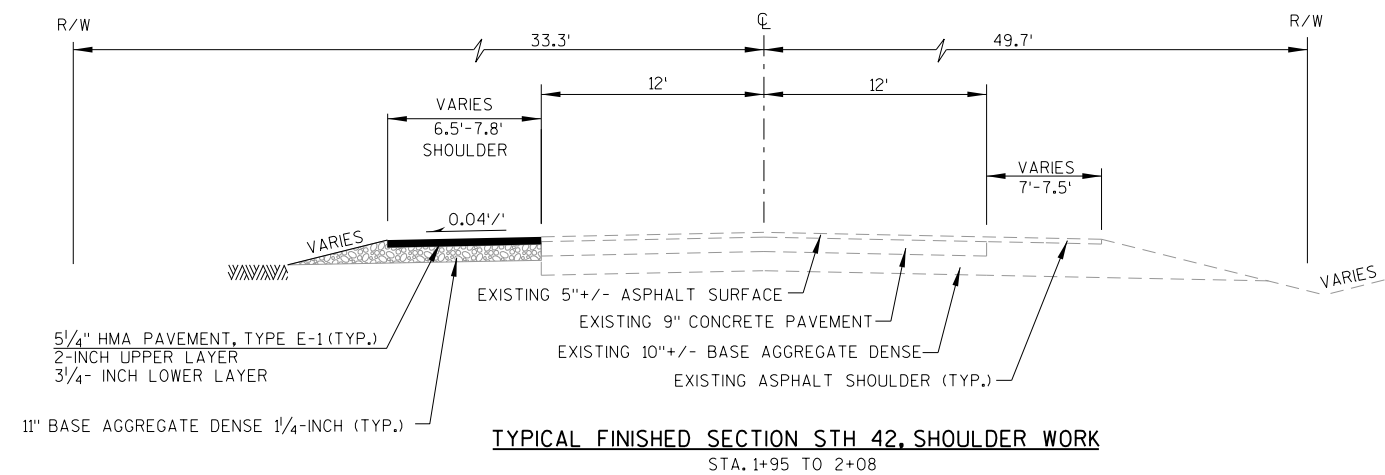
- THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATION, AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
- THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND ALL UTILITIES IN THE VICINITY OF THE PROJECT TO LOCATE THEIR FACILITIES AT LEAST THREE WORKING DAYS PRIOR TO BEGINNING WORK.
- THE ENGINEER SHALL FURNISH HORIZONTAL ALIGNMENT CONTROL POINTS.
- "ARC DEFINITION" CURVE DATA IS SHOWN ON THE PLAN
- FILL AS SHOWN ON THE PLAN SHEETS PERTAINS TO EMBANKMENT CONSTRUCTED FROM COMMON EXCAVATION. THE FACTOR USED FOR EXPANDING THE FILLS TO COMPUTE THE VOLUME OF MATERIAL REQUIRED IS 1.25.
- NO TREES OR SHRUBS ARE TO REMOVED WITHOUT PRIOR APPROVAL OF THE ENGINEER.
- THE EXACT LOCATION AND WIDTH OF PRIVATE DRIVEWAYS, AND COMMERCIAL DRIVEWAYS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
- THE EXACT LOCATION AND WIDTH OF TEMPORARY ACCESS FOR DRIVEWAYS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
- THE EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
- DRIVEWAYS SHALL BE REPLACED IN KIND. BASE AGGREGATE DENSE WILL BE USED UNDER ALL DRIVEWAYS.
- ACCESS TO DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES.

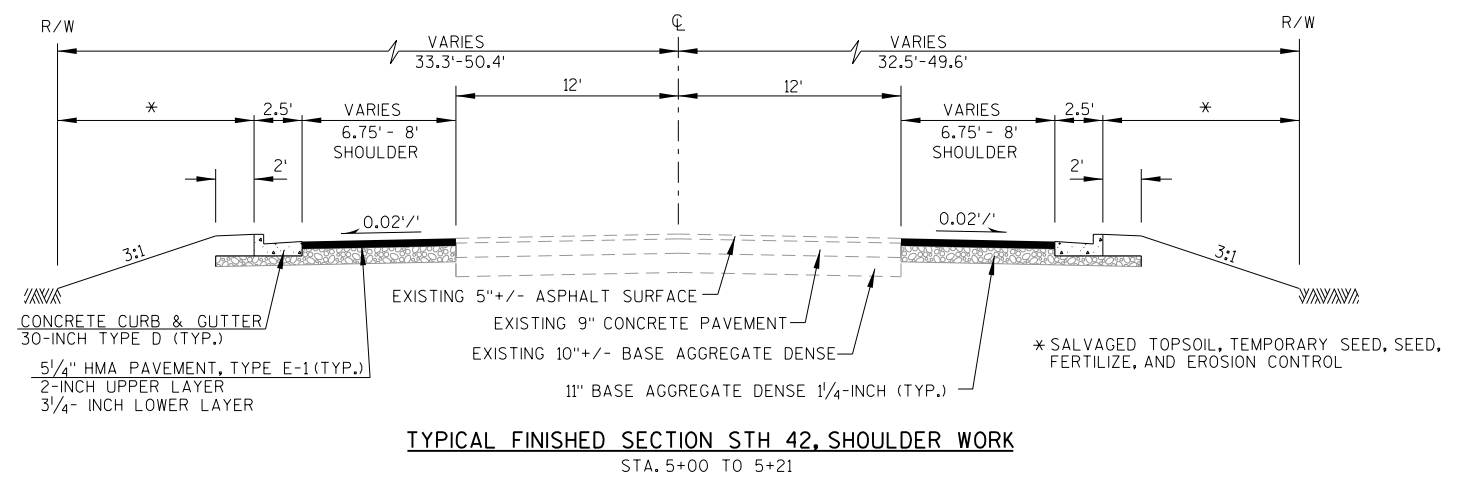
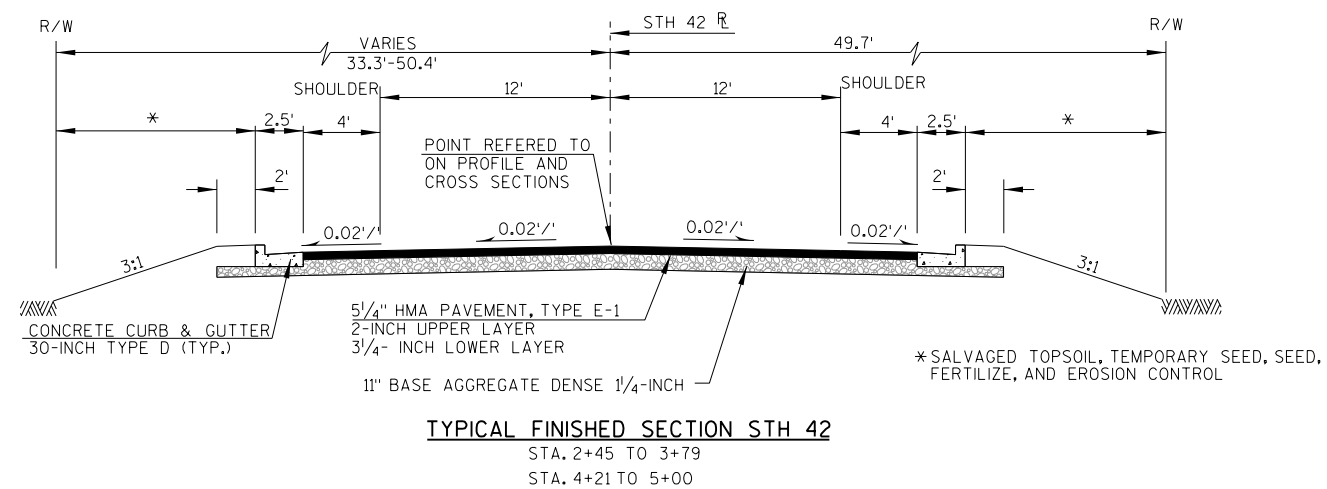
DIGGERSHOTLINE

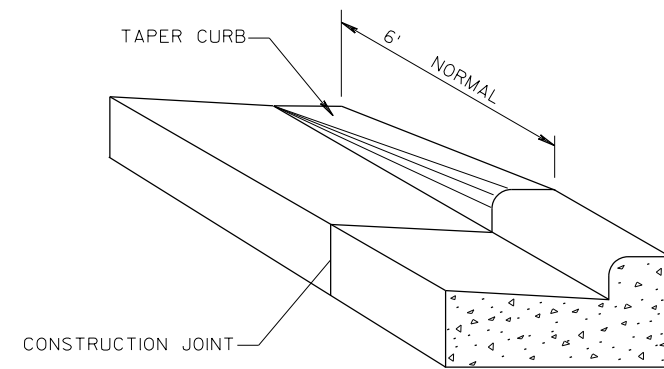
Dial 811 or (800) 242-8511

www.DiggersHotline.com

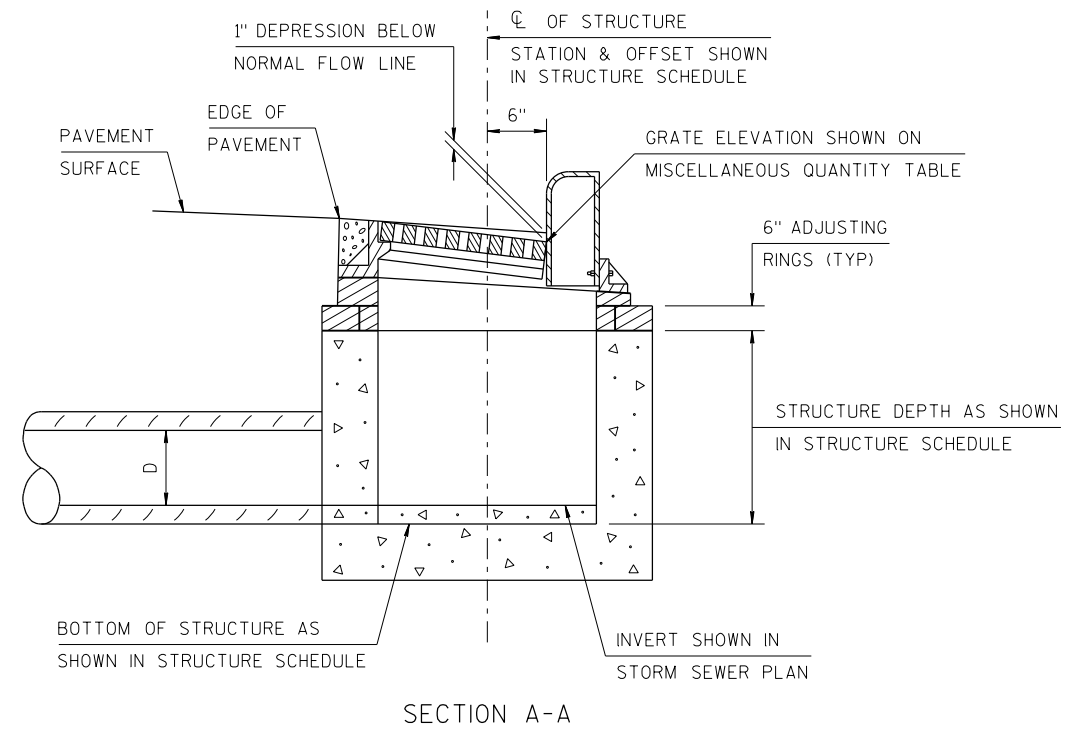
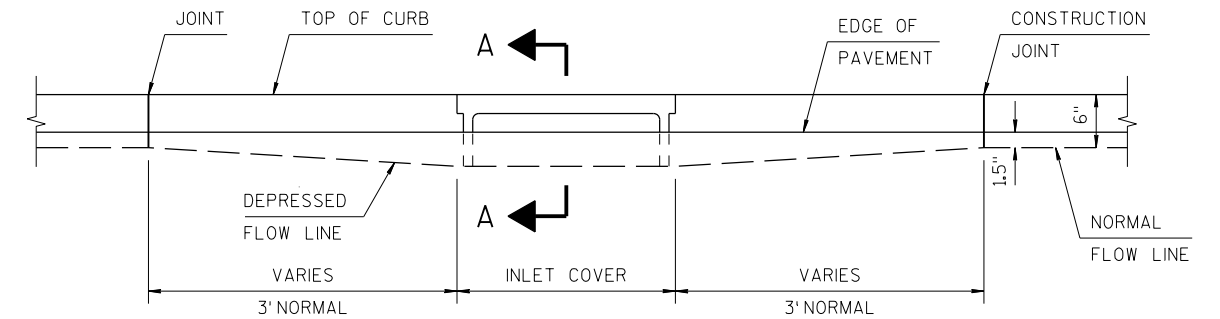
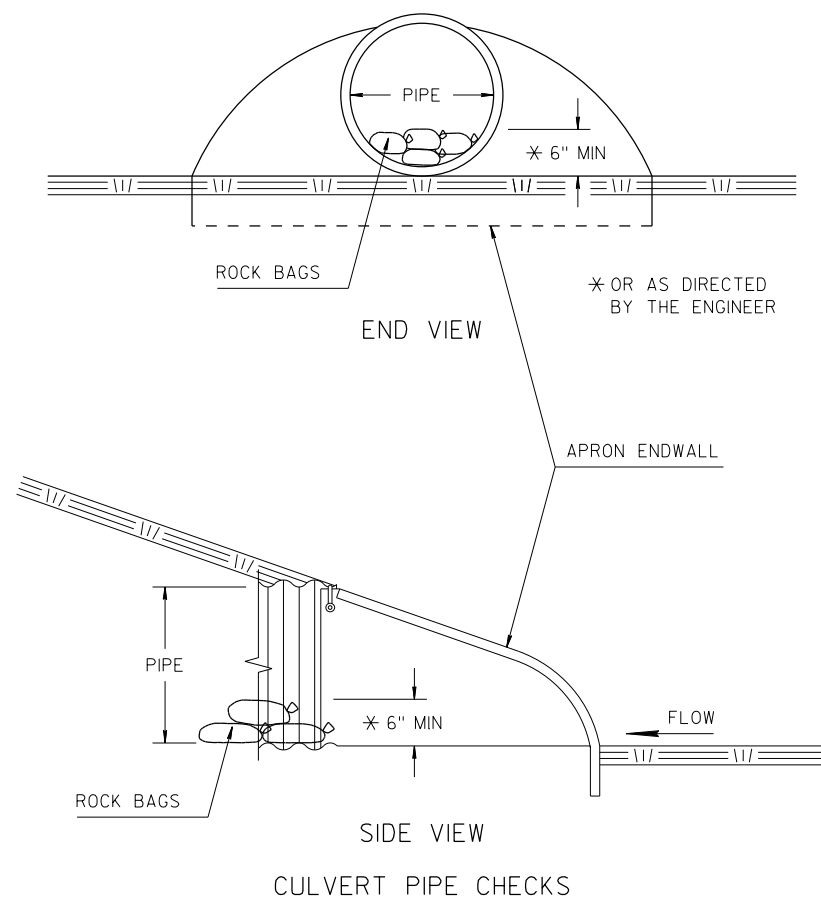




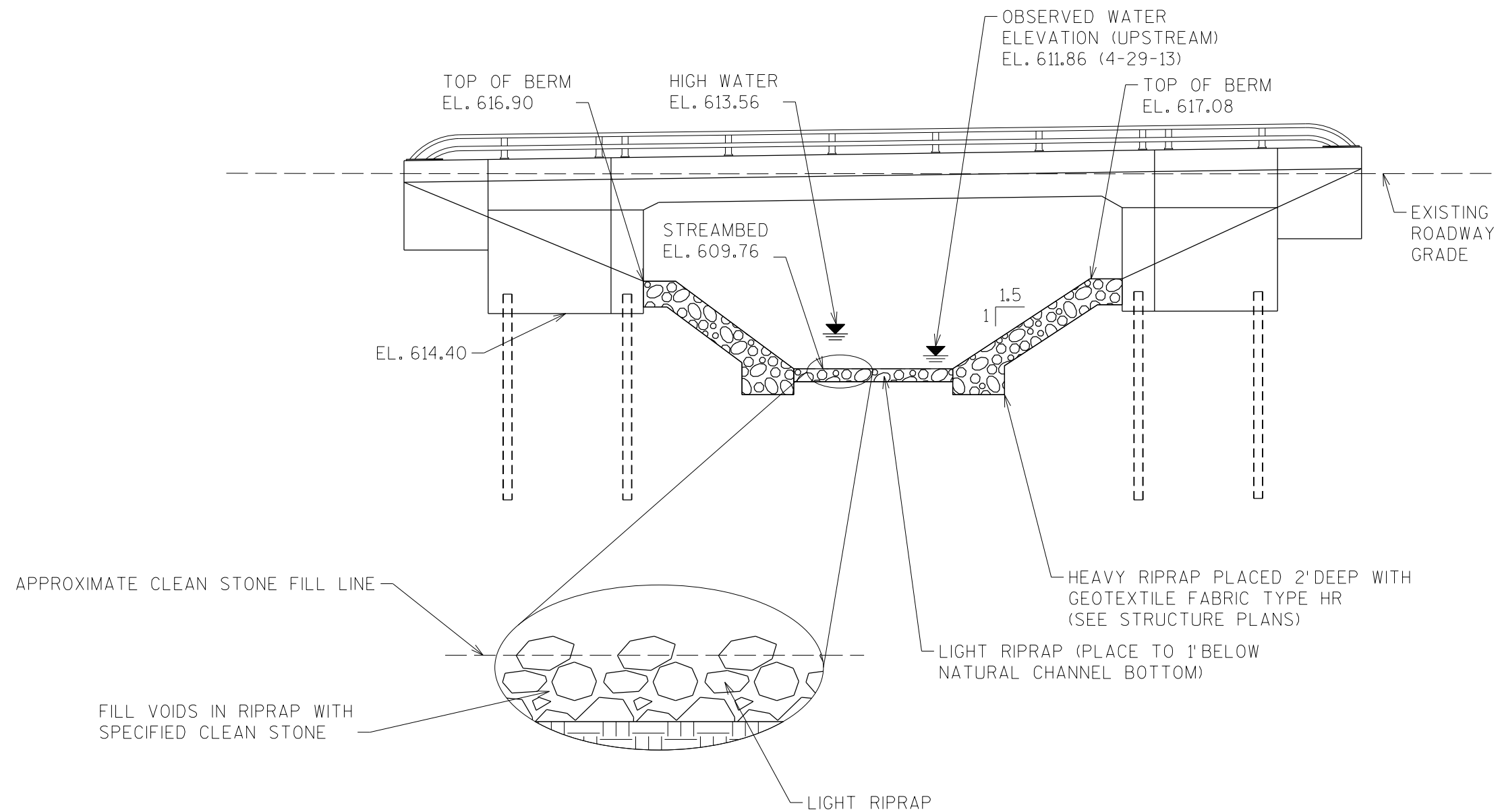


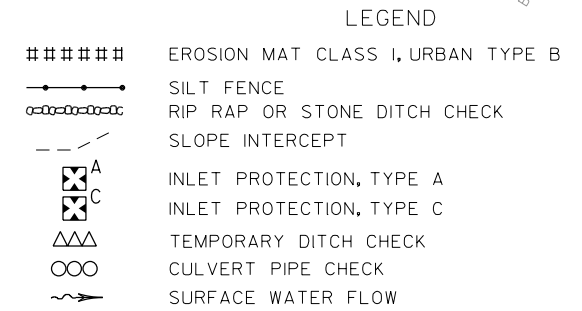
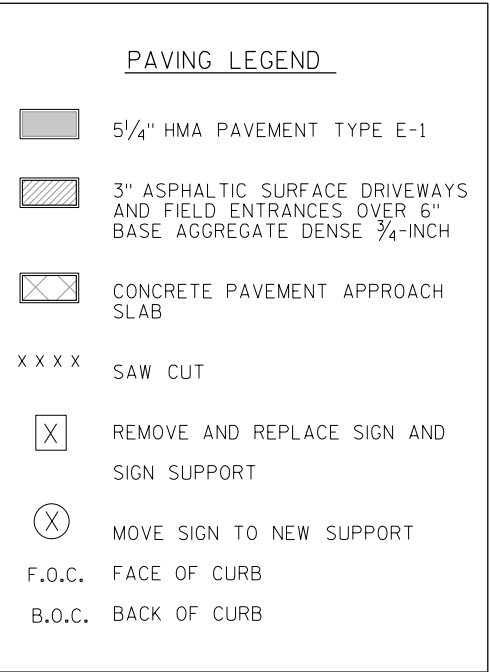


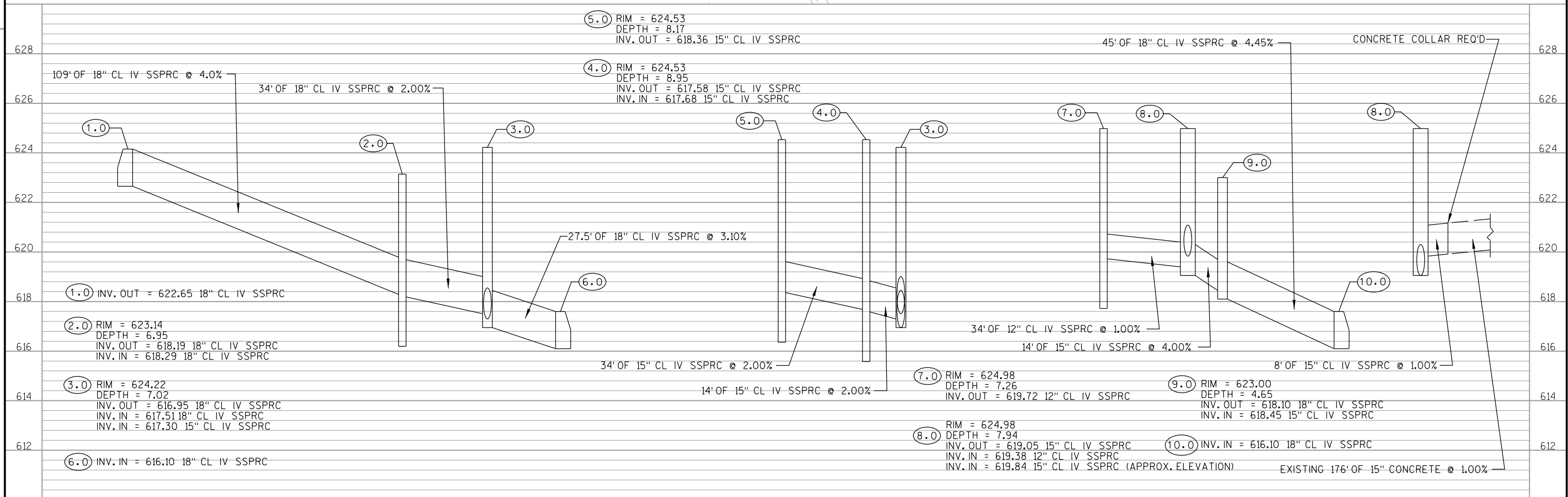
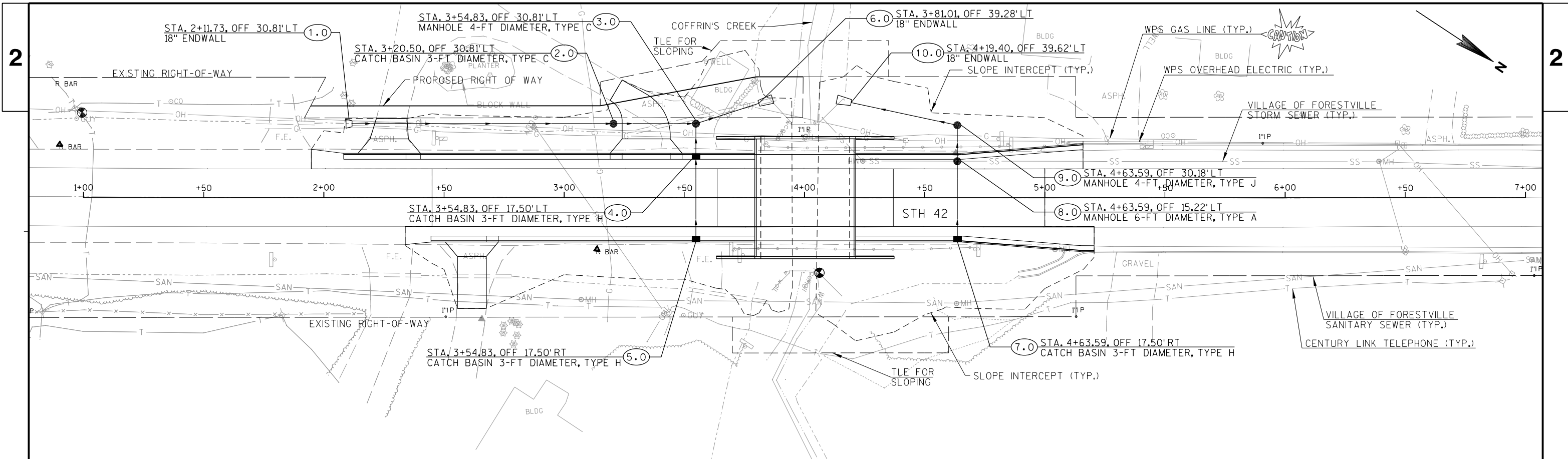
DETAIL OF CURB & GUTTER TERMINI

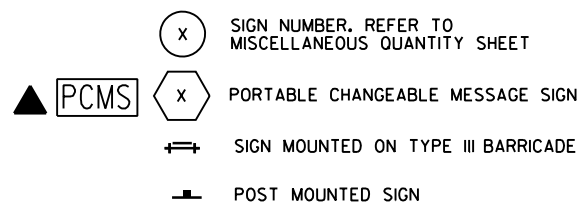


DETAIL OF CURB AND GUTTER AT INLETS









SHEET 1 OF 1
PLAN SHEET PRODUCED
BY WisDOT-NE REGION

DATE 24MAR15		E S T I M A T E O F Q U A N T I T I E S			
LINE		4430-13-71			
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0010	201.0105	Clearing	STA	1.000	1.000
0020	201.0205	Grubbing	STA	1.000	1.000
0030	203.0100	Removing Small Pipe Culverts	EACH	3.000	3.000
0040	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 4+00. 32	LS	1.000	1.000
0050	204.0100	Removing Pavement	SY	680.000	680.000
0060	204.0150	Removing Curb & Gutter	LF	16.000	16.000
0070	204.0165	Removing Guardrail	LF	210.000	210.000
0080	204.0185	Removing Masonry	CY	2.000	2.000
0090	204.0210	Removing Manholes	EACH	2.000	2.000
0100	204.0245	Removing Storm Sewer (size) 01. 15-Inch	LF	64.000	64.000
0110	205.0100	Excavation Common	CY	579.000	579.000
0120	206.1000	Excavation for Structures Bridges (structure) 01. B-15-0024	LS	1.000	1.000
0130	210.0100	Backfill Structure	CY	476.000	476.000
0140	213.0100	Finishing Roadway (project) 01. 4430-13-71	EACH	1.000	1.000
0150	305.0110	Base Aggregate Dense 3/4-Inch	TON	60.000	60.000
0160	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	630.000	630.000
0170	415.0410	Concrete Pavement Approach Slab	SY	84.000	84.000
0180	455.0105	Asphaltic Material PG58-28	TON	13.000	13.000
0190	455.0605	Tack Coat	GAL	45.000	45.000
0200	460.1101	HMA Pavement Type E-1	TON	226.000	226.000
0210	460.2000	Incentive Density HMA Pavement	DOL	160.000	160.000
0220	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	22.000	22.000
0230	502.0100	Concrete Masonry Bridges	CY	288.000	288.000
0240	502.3200	Protective Surface Treatment	SY	278.000	278.000
0250	505.0405	Bar Steel Reinforcement HS Bridges	LB	7,120.000	7,120.000
0260	505.0605	Bar Steel Reinforcement HS Coated Bridges	LB	35,480.000	35,480.000
0270	513.4055	Railing Tubular Type H (structure) 01. B-15-0024	LS	1.000	1.000
0280	516.0500	Rubberized Membrane Waterproofing	SY	26.000	26.000
0290	522.1018	Apron Endwalls for Culvert Pipe	EACH	3.000	3.000
0300	550.1100	Reinforced Concrete 18-Inch Piling Steel HP 10-Inch X 42 Lb	LF	298.000	298.000
0310	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	499.000	499.000
0320	606.0100	Riprap Light	CY	37.000	37.000
0330	606.0300	Riprap Heavy	CY	202.000	202.000
0340	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	34.000	34.000
0350	608.0415	Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	LF	70.000	70.000
0360	608.0418	Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	LF	220.000	220.000
0370	611.0530	Manhole Covers Type J	EACH	1.000	1.000
0380	611.0600	Inlet Covers Type A	EACH	1.000	1.000
0390	611.0612	Inlet Covers Type C	EACH	2.000	2.000
0400	611.0624	Inlet Covers Type H	EACH	3.000	3.000
0410	611.1003	Catch Basins 3-FT Diameter	EACH	4.000	4.000
0420	611.2004	Manholes 4-FT Diameter	EACH	2.000	2.000
0430	611.2006	Manholes 6-FT Diameter	EACH	1.000	1.000
0440	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	160.000	160.000
0450	619.1000	Mobilization	EACH	1.000	1.000

DATE 24MAR15		E S T I M A T E O F Q U A N T I T I E S			
LINE				4430-13-71	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0460	624.0100	Water	MGAL	7.000	7.000
0470	625.0500	Salvaged Topsoil	SY	1,397.000	1,397.000
0480	628.1504	Silt Fence	LF	933.000	933.000
0490	628.1520	Silt Fence Maintenance	LF	933.000	933.000
0500	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000
0510	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0520	628.2008	Erosion Mat Urban Class I Type B	SY	255.000	255.000
0530	628.7005	Inlet Protection Type A	EACH	3.000	3.000
0540	628.7015	Inlet Protection Type C	EACH	6.000	6.000
0550	628.7504	Temporary Ditch Checks	LF	35.000	35.000
0560	628.7555	Culvert Pipe Checks	EACH	5.000	5.000
0570	629.0210	Fertilizer Type B	CWT	0.900	0.900
0580	630.0140	Seeding Mixture No. 40	LB	25.000	25.000
0590	630.0200	Seeding Temporary	LB	38.000	38.000
0600	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	3.000	3.000
0610	637.2210	Signs Type II Reflective H	SF	9.000	9.000
0620	637.2230	Signs Type II Reflective F	SF	11.000	11.000
0630	638.2102	Moving Signs Type II	EACH	1.000	1.000
0640	638.2602	Removing Signs Type II	EACH	3.000	3.000
0650	638.3000	Removing Small Sign Supports	EACH	3.000	3.000
0660	642.5401	Field Office Type D	EACH	1.000	1.000
0670	643.0100	Traffic Control (project) 01. 4430-13-71	EACH	1.000	1.000
0680	643.0420	Traffic Control Barricades Type III	DAY	1,062.000	1,062.000
0690	643.0705	Traffic Control Warning Lights Type A	DAY	2,124.000	2,124.000
0700	643.0900	Traffic Control Signs	DAY	708.000	708.000
0710	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0720	643.2000	Traffic Control Detour (project) 01. 4430-13-71	EACH	1.000	1.000
0730	643.3000	Traffic Control Detour Signs	DAY	5,841.000	5,841.000
0740	645.0120	Geotextile Fabric Type HR	SY	342.000	342.000
0750	646.0106	Pavement Marking Epoxy 4-Inch	LF	843.000	843.000
0760	650.4000	Construction Staking Storm Sewer	EACH	10.000	10.000
0770	650.4500	Construction Staking Subgrade	LF	215.000	215.000
0780	650.5000	Construction Staking Base	LF	215.000	215.000
0790	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	500.000	500.000
0800	650.6500	Construction Staking Structure Layout (structure) 01. B-15-0024	LS	1.000	1.000
0810	650.9910	Construction Staking Supplemental Control (project) 01. 4430-13-71	LS	1.000	1.000
0820	650.9920	Construction Staking Slope Stakes	LF	215.000	215.000
0830	690.0150	Sawing Asphalt	LF	40.000	40.000
0840	690.0250	Sawing Concrete	LF	182.000	182.000
0850	715.0415	Incentive Strength Concrete Pavement	DOL	500.000	500.000
0860	715.0502	Incentive Strength Concrete Structures	DOL	1,728.000	1,728.000
0870	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0880	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	600.000	600.000
0890	SPV.0120	Special 01. Water for Seeding Areas	MGAL	31.400	31.400

NOTE: ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED.

CLEARING AND GRUBBING

			201.0105	201.0205
			CLEARING	GRUBBING
STATION	TO	STATION	STA	STA
3+50	-	4+50	1	1
PROJECT TOTALS			1	1

REMOVING PAVEMENT

		204.0100
STATION	LOCATION	SY
2+40 - 5+00	STH 42	680
PROJECT TOTAL		680

REMOVING MASONRY

		204.0185
STATION	LOCATION	CY
5+10	RT	2
PROJECT TOTAL		2

REMOVING SMALL PIPE CULVERTS
203.0100

STATION	LOCATION	EACH	NOTES
2+27	LT	1	18" CMCP
3+59	LT	1	18" CMCP
3+68	RT	1	18" CMCP
PROJECT TOTALS		3	

REMOVING CURB AND GUTTER

		204.0150
STATION TO STATION	LOCATION	LF
5+00 - 5+16	LT	16
PROJECT TOTAL		16

REMOVING MANHOLES

204.0210

STATION	LOCATION	EACH
4+24	LT	1
5+04	RT	1
PROJECT TOTALS		2

REMOVING GUARDRAIL

		204.0165
STATION	LOCATION	LF
3+83 - 4+86	LT	105
3+70 - 4+73	RT	105
PROJECT TOTAL		210

REMOVING STORM SEWER

		204.0245
		.01
		15-INCH
STATION - STATION	LOCATION	LF
4+07 - 4+24	LT	24
4+24 - 4+64	LT	40
PROJECT TOTALS		64

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EARTHWORK

Division	From/To Station	Location	Common Excavation (1)	(item # 205.0100)	Salvaged/ Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate +/- (14) (15)	Waste	Borrow (item #208.0100)	Comment:
			Cut (2)	EBS Excavation (3)				Factor 1.25				
1	1+95 to 3+79	STH 42	402	0	90	312	58	73	239	0	0	
	4+21 to 5+21	STH 42	178	0	53	125	218	273	-148	0	0	
Division 1 Subtotal			579	0	143	436	276	345	91	91	0	
Grand Total			579	0	143	436	276	345	91	91	0	
Total Common Exc			579									

- 1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
- 2) Salvaged/Unsuable Pavement Material is included in Cut.
- 3) EBS Excavation to be backfilled with Select Borrow material. Note: this is designers choice, can be backfilled with Borrow, or Cut as well.
- 4) Salvaged/Unusable Pavement Material
- 5) Available Material = Cut - Salvaged/Unusuable Pavement Material
- 13) Expanded Fill. Factor = 1.25
- 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.
- 15) Excavation for Structures is not included on this table.

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BASE AGGREGATE DENSE AND WATER

	305.0110 BASE AGGREGATE DENSE 3/4-INCH	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH	624.0100 WATER
STATION TO STATION	TON	TON	MGAL
1+95 - 3+79	60	425	5
4+21 - 5+21	---	205	2
PROJECT TOTALS	60	630	7

ASPHALT SUMMARY

		455.0105 ASPHALTIC MATERIAL PG58-28	455.0605 TACK COAT	460.1101 HMA PAVEMENT TYPE E-1
STATION TO STATION	LOCATION	TON	GAL	TON
1+95 - 3+79	STH 42	8	28	142
4+21 - 5+21	STH 42	5	17	84
PROJECT TOTALS		13	45	226

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CONCRETE PAVEMENT APPROACH SLAB

		415.0410
STATION TO STATION	LOCATION	SY
3+64 - 3+79	STH 42	42
4+21 - 4+37	STH 42	42
PROJECT TOTALS		84

ASPHALTIC SURFACE DRIVEWAYS AND FIELD
ENTRANCES

		465.0120
STATION	LOCATION	TON
2+14 - 2+40	LT	5
2+51 - 2+73	RT	7
3+19 - 3+49	LT	10
PROJECT TOTAL		22

CONCRETE CURB & GUTTER 30-INCH TYPE D
601.0411

STATION TO STATION	LOCATION	LF
2+08 - 3+79	LT	171
2+45 - 3+79	RT	134
4+21 - 5+16	LT	95
4+21 - 5+21	RT	99
PROJECT TOTALS		499

PROJECT NO: 4430-13-71

HWY: USH 42

COUNTY: DOOR

MISCELLANEOUS QUANTITIES

SHEET

E

3

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RIPRAP		
		606.0100
		LIGHT
STATION TO STATION	LOCATION	CY
3+95 - 4+05	LT & RT	37
PROJECT TOTALS		37

STORM SEWER								
					STORM SEWER PIPE REINFORCED CONCRETE CLASS IV			
FROM STRUCTURE NO.	TO STRUCTURE NO.	INLET ELEV	OUTLET ELEV	SLOPE %	608.0412 12-INCH (LF)	608.0415 15-INCH (LF)	608.0418 18-INCH (LF)	
1.0	2.0	622.65	618.29	4.00%	---	---	109	
2.0	3.0	618.19	617.51	2.00%	---	---	34	
3.0	6.0	616.95	616.10	3.10%	---	---	30	
5.0	4.0	616.36	617.68	2.00%	---	34	---	
4.0	3.0	617.58	617.30	2.00%	---	14	---	
7.0	8.0	619.72	619.38	1.00%	34	---	---	
EX.	8.0	619.92	619.84	1.00%	---	8	---	
8.0	9.0	619.05	618.45	4.00%	---	14	---	
9.0	10.0	615.10	616.10	4.45%	---	---	47	
PROJECT TOTALS					34	70	220	

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STORM SEWER STRUCTURE SCHEDULE

FINISHED							CATCH BASINS	MANHOLES		INLET AND MANHOLE COVERS				APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE
			TOP		BOTTOM		611.1003 3-FT	611.2004 4-FT	611.2006 6-FT	611.0530	611.0600	611.0612	611.0624	522.1018
STRUCT. NO.	STATION	OFFSET	CASTING ELEV	STRUCTURE ELEV	STRUCTURE ELEV	DEPTH	DIAMETER (EACH)	DIAMETER (EACH)	DIAMETER (EACH)	TYPE J (EACH)	TYPE A (EACH)	TYPE C (EACH)	TYPE H (EACH)	18-INCH (EACH)
1.0	2+11.7	30.81' LT			622.65		---	---	---	---	---	---	---	1
2.0	3+20.5	30.81' LT	623.14	621.89	616.19	5.70	1	---	---	---	---	1	---	---
3.0	3+54.8	30.81' LT	624.22	622.97	616.95	6.02	---	1	---	---	---	1	---	---
4.0	3+54.8	17.50' LT	624.53	623.78	615.58	8.20	1	---	---	---	---	---	1	---
5.0	3+54.8	17.50' RT	624.53	623.78	616.36	7.42	1	---	---	---	---	---	1	---
6.0	3+81.0	39.28' LT			616.10		---	---	---	---	---	---		1
7.0	4+63.6	17.50' RT	624.98	624.23	617.72	6.51	1	---	---	---	---	---	1	---
8.0	4+63.6	15.22' LT	624.98	623.98	619.05	4.93	---	---	1	---	1	---	---	---
9.0	4+63.6	30.18' LT	623.00	621.75	618.10	3.65	---	1	---	1	---	---	---	---
10.0	4+19.4	39.62' LT			616.10		---	---	---	---	---	---	---	1
PROJECT TOTALS							4	2	1	1	1	2	3	3

NOTE: ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED.

LANDSCAPING SUMMARY

		625.0500	629.0210	630.0140	630.0200	SPV.0120.01
		SALVAGED	FERTILIZER	SEEDING	SEEDING	WATER FOR
		TOPSOIL	TYPE B	MIXTURE	TEMPORARY	SEEDED
				NO. 40		AREAS
STATION	LOCATION	SY	CWT	LB	LB	MGAL
1+94 - 2+22	LT	27	0.02	0.5	1	0.6
2+35 - 3+24	LT	155	0.10	2.8	4	3.5
2+34 - 2+53	RT	22	0.01	0.4	1	0.5
2+68 - 3+85	RT	231	0.15	4.2	6	5.2
3+24 - 3+85	LT	152	0.10	2.7	4	3.4
4+05 - 5+21	RT	311	0.20	5.6	8	7.0
4+06 - 5+16	LT	219	0.14	3.9	6	4.9
SUBTOTALS		1118	0.7	20	30	25.1
UNDISTRIBUTED AMOUNT		279	0.2	5	8	6.3
PROJECT TOTAL		1,397	0.9	25	38	31.4

EROSION MAT URBAN CLASS I TYPE B

		628.2008
STATION	LOCATION	SY
1+94 - 2+22	LT	27
2+35 - 3+24	LT	155
2+34 - 2+53	RT	22
2+68 - 3+85	RT	231
3+24 - 3+85	LT	152
4+05 - 5+21	RT	311
4+06 - 5+16	LT	219
SUBTOTALS		204
UNDISTRIBUTED AMOUNT		51
PROJECT TOTALS		255

SILT FENCE

		628.1504	628.1520
		MAINTENANCE	
STATION TO STATION	LOCATION	LF	LF
1+95 - 2+22	LT	36	36
2+34 - 2+55	RT	35	35
2+68 - 3+96	RT	184	184
3+24 - 3+96	LT	132	132
4+04 - 5+21	RT	183	183
4+82 - 5+19	LT	176	176
SUBTOTALS		746	746
UNDISTRIBUTED AMOUNT		187	187
PROJECT TOTALS		933	933

INLET PROTECTION

		628.7005	628.7015
		TYPE A	TYPE C
STATION	LOCATION	EACH	EACH
3+20.50	30.81' LT	1	---
3+54.83	30.81' LT	1	---
3+54.83	17.5' LT	---	1
3+54.83	17.5' RT	---	1
4+63.59	30.18' LT	---	1
4+63.59	15.22' LT	---	1
4+63.59	17.50' RT	---	1
6+50	19.3' LT	---	1
6+50	20' RT	---	1
SUBTOTALS		2	5
UNDISTRIBUTED AMOUNT		1	1
PROJECT TOTALS		3	6

MOBILIZATIONS EROSION CONTROL

		628.1905	628.1910
		EMERGENCY	
STATION	LOCATION	EACH	EACH
1+95 - 5+21	STH 42	5	2
SUBTOTALS		5	2
UNDISTRIBUTED AMOUNT		1	1
PROJECT TOTALS		6	3

TEMPORARY DITCH CHECKS

		628.7504
STATION	LOCATION	LF
2+74	LT	17.5
3+21	RT	17.5
PROJECT TOTAL		35

NOTE: ALL ITEMS ON THIS
SHEET ARE CATEGORY 0010
UNLESS OTHERWISE NOTED.

CULVERT PIPE CHECKS

		628.7555
STATION	LOCATION	EACH
2+11.73	LT	5
PROJECT TOTAL		5

ERECTION AND REMOVAL OF TYPE II SIGNS AND SUPPORTS

SIGN NO.	LOCATION	DIRECTION OF TRAVEL	SIGN CODE	637.2210 SIGNS TYPE II REFLECTIVE H		637.2230 SIGNS TYPE II REFLECTIVE F		634.0614 POSTS WOOD 4x6x14 EACH	638.2102 MOVING SIGNS TYPE II EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
				W X H	S.F.	W X H	S.F.					
1	STH 42	NB	EX SIGN	3 X 3	9	---	---	1	---	1	1	W11-8, REMOVE AND REPLACE ON NEW SUPPORT
2	STH 42	SB	EX SIGN	---	---	2 X 2.5	5.00	1	---	1	1	R2-1, 35 MPH, REMOVE AND REPLACE ON NEW SUPPORT
3	STH 42	SB	EX SIGN	---	---	---	---	---	1	---	---	MOVE SIGN TO SIGN NO. 2 SUPPORT
4	STH 42	SB	EX SIGN	---	---	4 X 3	6.00	1	---	1	1	W14-3, REMOVE AND REPLACE ON NEW SUPPORT
PROJECT TOTALS					9.00		11.00	3	1	3	3	

TRAFFIC CONTROL SUMMARY

LOCATION	643.0420 BARRICADES TYPE III		643.0705 WARNING LIGHTS TYPE A		643.0900 TRAFFIC CONTROL SIGNS	
	SERVICE DAYS	NO.	DAYS	NO.	DAYS	NO.
NORTH OF BRIDGE	59	8	472	16	944	6
SOUTH OF BRIDGE	59	8	472	16	944	6
PROJECT TOTALS		16	944	32	1,888	12

NOTE: ALL ITEMS ON THIS
SHEET ARE CATEGORY 0010
UNLESS OTHERWISE NOTED.

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 59 DAYS	643.3000 DETOUR SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	REMARKS
1	500' S OF J1-1 (JCT X) ON HWY 42 (NB)	W 20-2-A	48"x48"	1	59	59				
2	LT OF J1-1 (JCT X) ON HWY 42 (NB)	MO 4-8	24"x12"	1	59	59				
	"	MO 3-1	24"x12"	1	59	59				
	"	M1-6	24"x24"	1	59	59				42
	"	MO 5-1-L	21"x21"	1	59	59				
3	RT OF J13-1 (X-LT) ON HWY 42 (NB) (NEAR RT)	MO 4-8	24"x12"	1	59	59				
	"	MO 3-1	24"x12"	1	59	59				
	"	M1-6	24"x24"	1	59	59				42
	"	MO 6-1	21"x21"	1	59	59				LEFT
4	NE QUAD OF HWY 42 & CTY X INTERSECTION	R 11-3	60"x30"	1	59	59	59	118		1/2 MILE
5	BELOW SIGN # 4	MO 4-9-L	30"x24"	1	59	59				
6	BACKSIDE OF J13-1 (X-RT) ON HWY 42 (SB) (FAR LT)	MO 4-8	24"x12"	1	59	59				
	"	MO 3-1	24"x12"	1	59	59				
	"	M1-6	24"x24"	1	59	59				42
	"	MO 6-1	21"x21"	1	59	59				LEFT
7	MODIFY J2-1 (HWY 42-LT & RT)	M1-6	EXISTING							42
	"	MO 6-1	21"x21"	1	59	59				RIGHT
8	200' W OF HWY 42 INTERSECTION ON CTY X (WB)	MO 4-8	24"x12"	1	59	59				
	"	MO 3-1	24"x12"	1	59	59				
	"	M1-6	24"x24"	1	59	59				42
	"	MO 6-1	21"x21"	1	59	59				AHEAD
9	MODIFY J1-2 (JCT 42; END X)	MO 4-8-A	24"x18"	1	59	59				
	"	M1-6	EXISTING							42
10	LT OF J1-1 (JCT D) ON CTY X (WB)	MO 4-8	24"x12"	1	59	59				
	"	MO 3-1	24"x12"	1	59	59				
	"	M1-6	24"x24"	1	59	59				42
	"	MO 5-1-R	21"x21"	1	59	59				
11	LT OF J13-2 (X-AH; D-LT & RT) (NEAR RT)	MO 4-8	24"x12"	1	59	59				
	"	MO 3-1	24"x12"	1	59	59				
	"	M1-6	24"x24"	1	59	59				42
	"	MO 6-1	21"x21"	1	59	59				RIGHT
12	200' E OF CTY D INTERSECTION ON CTY X (EB)	MO 4-8	24"x12"	1	59	59				
	"	MO 3-3	24"x12"	1	59	59				
	"	M1-6	24"x24"	1	59	59				42
	"	MO 6-1	21"x21"	1	59	59				AHEAD

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NOTE: ALL ITEMS ON THIS
SHEET ARE CATEGORY 0010
UNLESS OTHERWISE NOTED.

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 59 DAYS	643.3000 DETOUR SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	REMARKS
13	BACKSIDE OF J13-2 (X-AH, D-LT & RT) ON CTY X (WB) (FAR LT)	MO 4-8	24"x12"	1	59	59				
	"	MO 3-1	24"x12"	1	59	59				
	"	M1-6	24"x24"	1	59	59				42
	"	MO 6-1	21"x21"	1	59	59				RIGHT
14	BACKSIDE OF J13-2 (D-AH, X-LT & RT) ON CTY D (SB) (FAR LT)	MO 4-8	24"x12"	1	59	59				
	"	MO3-3	24"x12"	1	59	59				
	"	M1-6	24"x24"	1	59	59				42
	"	MO 6-1	21"x21"	1	59	59				LEFT
15	LT OF J13-2 (D-AH; X-LT & RT) ON CTY D (SB) (NEAR RT)	MO 4-8	24"x12"	1	59	59				
	"	MO 3-3	24"x12"	1	59	59				
	"	M1-6	24"x24"	1	59	59				42
	"	MO 6-1	21"x21"	1	59	59				LEFT
16	200' N OF CTY X INTERSECTION ON CTY D (NB)	MO 4-8	24"x12"	1	59	59				
	"	MO 3-1	24"x12"	1	59	59				
	"	M1-6	24"x24"	1	59	59				42
	"	MO 6-1	21"x21"	1	59	59				AHEAD
17	LT OF J1-1 (JCT X) ON CTY D (SB)	MO 4-8	24"x12"	1	59	59				
	"	MO 3-3	24"x12"	1	59	59				
	"	M1-6	24"x24"	1	59	59				42
	"	MO 5-1-L	21"x21"	1	59	59				
18	RT OF J1-1 (JCT J) ON CTY D (NB)	MO 4-8	24"x12"	1	59	59				
	"	MO 3-1	24"x12"	1	59	59				
	"	M1-6	24"x24"	1	59	59				42
	"	MO 5-1-R	21"x21"	1	59	59				
19	200' OF CTY J INTERSECTION ON CTY D (SB)	MO 4-8	24"x12"	1	59	59				
	"	MO 3-3	24"x12"	1	59	59				
	"	M1-6	24"x24"	1	59	59				42
	"	MO 6-1	21"x21"	1	59	59				AHEAD
20	RT OF J13-2 (D-LT; J LT & RT) ON CTY D (NB)	MO 4-8	24"x12"	1	59	59				
	"	MO 3-1	24"x12"	1	59	59				
	"	M1-6	24"x24"	1	59	59				42
	"	MO 6-1	21"x21"	1	59	59				RIGHT
21	BACKSIDE OF J13-2 (D-RT) ON CTY J (WB) (FAR LT)	MO 4-8	24"x12"	1	59	59				
	"	MO 3-3	24"x12"	1	59	59				
	"	M1-6	24"x24"	1	59	59				42
	"	MO 6-1	21"x21"	1	59	59				LEFT

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PROJECT NO: 4430-13-71

HWY: USH 42

COUNTY: DOOR

MISCELLANEOUS QUANTITIES

SHEET

E

NOTE: ALL ITEMS ON THIS
SHEET ARE CATEGORY 0010
UNLESS OTHERWISE NOTED.

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 59 DAYS	643.3000 DETOUR SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	REMARKS
22	LT OF J13-2 (D-LT & AH; J-AH) ON CTY J (EB)	MO 4-8	24"x12"	1	59	59				
	"	MO 3-3	24"x12"	1	59	59				
	"	M1-6	24"x24"	1	59	59				42
	"	MO 6-1	21"x21"	1	59	59				LEFT
23	200' E OF CTY D INTERSECTION ON CTY J (EB)	MO 4-8	24"x12"	1	59	59				
	"	MO 3-1	24"x12"	1	59	59				
	"	M1-6	24"x24"	1	59	59				42
	"	MO 6-1	21"x21"	1	59	59				AHEAD
24	500' E OF CTY D INTERSECTION ON CTY J (WB)	MO 4-8	24"x12"	1	59	59				
	"	MO 3-3	24"x12"	1	59	59				
	"	M1-6	24"x24"	1	59	59				42
	"	MO 5-1-L	21"x21"	1	59	59				
25	200' W OF STH 42 INTERSECTION ON CTY J (EB)	MO 4-8-A	24"x18"	1	59	59				
	"	M1-6	24"x24"	1	59	59				42
26	200' W OF STH 42 INTERSECTION ON CTY J (WB)	MO 4-8	24"x12"	1	59	59				
	"	MO 3-3	24"x12"	1	59	59				
	"	M1-6	24"x24"	1	59	59				42
	"	MO 6-1	21"x21"	1	59	59				AHEAD
27	MODIFY J13-2 (42-LT & RT; J-AH) ON CTY J (WB) (FAR LT)	M1-6	EXISTING							42
	"	MO 6-1	21"x21"	1	59	59				LEFT
28	SW QUAD OF HWY 42 & CTY J INTERSECTION	R 11-3	60"x30"	1	59	59	59	118		1/2 MILE
29	BELOW SIGN # 28	MO 4-9-R	30"x24"	1	59	59				
30	NW QUAD OF HWY 42 (SB) & CTY J INTERSECTION	MO 4-8	24"x12"	1	59	59				
	"	MO 3-3	24"x12"	1	59	59				
	"	M1-6	24"x24"	1	59	59				42
	"	MO 6-1	21"x21"	1	59	59				RIGHT
31	RT OF J1-1 (JCT J) ON HWY 42 (SB)	MO 4-8	24"x12"	1	59	59				
	"	MO 3-3	24"x12"	1	59	59				
	"	M1-6	24"x24"	1	59	59				42
	"	MO 5-1-R	21"x21"	1	59	59				
32	500' N OF SIGN # 31 ON HWY 42 (NB)	W 20-2-A	48"x48"	1	59	59				
33	FIELD LOCTION - ON HWY 42 (SB)	PCMS		1					7	PRIOR TO CONSTRUCTION
34	FIELD LOCTION - ON HWY 42 (NB)	PCMS		1					7	PRIOR TO CONSTRUCTION
	TOTAL			101		5,841	118	236	14	

PROJECT NO: 4430-13-71

HWY: USH 42

COUNTY: DOOR

MISCELLANEOUS QUANTITIES

SHEET

E

NOTE: ALL ITEMS ON THIS
SHEET ARE CATEGORY 0010
UNLESS OTHERWISE NOTED.

PAVEMENT MARKING 4-INCH

		646.0106	
		EPOXY	
		YELLOW	WHITE
		SOLID	SOLID
STATION TO STATION	LOCATION	LF	LF
2+45 - 5+00	CENTER LINE	319	---
1+94 - 5+16	LT	---	279
2+34 - 5+21	RT	---	245
SUBTOTALS		319	524
PROJECT TOTALS		843	

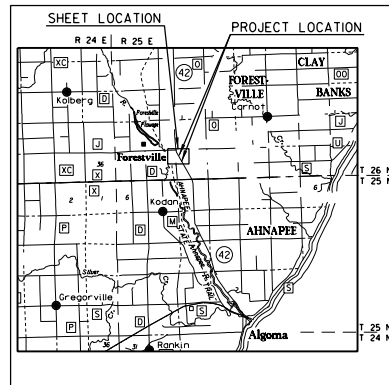
CONSTRUCTION STAKING SUMMARY

		650.4000	650.4500	650.5000	650.5500	650.6500.01	650.9910	650.9920
		STORM SEWER	SUBGRADE	BASE	CURB GUTTER &	STRUCTURE	SUPPLEMENTAL	SLOPE
		SYSTEM *			CURB & GUTTER	LAYOUT	CONTROL	STAKES
						(B-15-0024)		
STATION TO STATION	LOCATION	EACH	LF	LF	LF	LS	LS	LF
1+95 - 5+21	STH 42	10	215	215	500	1	1	215
PROJECT TOTALS		10	215	215	500	1	1	215

* SEE STORM SEWER QUANTITIES FOR STATION AND OFFSETS

SAWING PAVEMENT SUMMARY

		690.0150	690.0250
		SAWING	SAWING
		ASPHALT	CONCRETE
STATION TO STATION	LOCATION	LF	LF
1+95 - 2+45	LT & RT SOUTH PROJECT LIMITS	---	101
2+22 - 2+35	LT DRIVEWAY	15	---
2+56 - 2+68	RT DRIVEWAY	15	---
3+19 - 3+24	LT DRIVEWAY	10	---
5+00 - 5+21	LT & RT NORTH PROJECT LIMITS	---	81
PROJECT TOTALS		40	182



DOOR COUNTY MONUMENT
7" SPIKE IN CONCRETE
Y= 105,778.01
X= 467,074.92

DOOR COUNTY MONUMENT
ALUMINUM WITH CAP
Y= 103,129.68
X= 467,156.97

POINT	STATION	OFFSET
7010	5+12.95	49.56' RT
7011	5+12.93	32.56' RT
7025	5+12.88	33.44' LT
7026	5+12.87	50.44' LT
7028	3+99.45	50.35' LT
7031	3+99.27	33.35' LT
7036	3+92.15	49.66' RT
7100	4+35.00	50.38' LT
7101	4+35.00	65.38' LT
7102	3+65.00	65.32' LT
7103	3+57.00	56.24' LT
7104	3+15.00	38.28' LT
7074	4+60.00	49.60' RT
7078	3+98.94	00.00' LT
7105	3+15.00	48.45' LT
7051	1+91.87	33.19' LT
7107	1+94.48	38.19' LT
7108	3+99.60	65.35' LT
7087	4+60.00	64.60' RT
7109	3+80.00	50.33' LT
7111	3+70.00	49.67' RT
7112	3+70.00	64.67' RT
7094	3+83.40	64.66' RT
7096	3+92.15	0.00' RT
7113	1+91.87	0.00' LT

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, DOOR 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.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICALLY 1"x24" IRON PIPE) 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 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. EXCLUDING RIGHT-OF-WAY LINES, THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

A **TEMPORARY LIMITED EASEMENT (TLE)** IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. ALL TLES EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE WISCONSIN DEPARTMENT OF TRANSPORTATION REGION OFFICE IN GREEN BAY.

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	REFERENCE LINE	R/L	FOUND IRON PIPE/PIPE	IF (UNLESS NOTED)
ACCESS RIGHTS	AR	RELEASE OF RIGHTS	ROR	R/W MONUMENT	R/W MONUMENT
ACRES	AC.	REMAINING	REM.	R/W STANDARD	R/W STANDARD
AND OTHERS	ET. AL.	RIGHT-OF-WAY	R/W	SIGN	SIGN
CENTERLINE	C/L	SECTION	SEC.	SECTION CORNER MONUMENT	SECTION CORNER MONUMENT
CERTIFIED SURVEY MAP	CSM	STATION	STA.	SECTION CORNER SYMBOL	SECTION CORNER SYMBOL
CORNER	COR.	TEMPORARY LIMITED EASEMENT	TLE		
DOCUMENT	DOC.	VOLUME	V.		
EASEMENT	EASE.				
EXISTING	EX.				
HIGHWAY EASEMENT	H.E.	LONG CHORD	LCH	FEE (HATCH VARIES)	FEE (HATCH VARIES)
LAND CONTRACT	LC	LONG CHORD BEARING	LCB	TEMPORARY LIMITED EASEMENT	TEMPORARY LIMITED EASEMENT
MONUMENT	MON.	RADIUS	R	PERMANENT LIMITED EASEMENT	PERMANENT LIMITED EASEMENT
PAGE	P.	DEGREE OF CURVE	D	R/W BOUNDARY POINT	R/W BOUNDARY POINT
PERMANENT LIMITED EASEMENT	PLE	CENTRAL ANGLE OR DELTA	DELTA	PARCEL NUMBER	PARCEL NUMBER
PROPERTY LINE	PL	LENGTH OF CURVE	L	SIGN NUMBER (OFF PREMISE)	SIGN NUMBER (OFF PREMISE)
RECORDED AS	(100')	TANGENT	TAN	BUILDING	BUILDING

CONVENTIONAL SYMBOLS

PROPOSED R/W LINE	---
EXISTING H.E. LINE	---
PROPERTY LINE	---
LOT & TIE LINES	---
SLOPE INTERCEPTS	---
CORPORATE LIMITS	---
ACCESS RESTRICTED (BY PREVIOUS ACQUISITION/CONTROL)	---
ACCESS RESTRICTED (BY ACQUISITION)	---
NO ACCESS (BY STATUTORY AUTHORITY)	---
SECTION LINE	---
QUARTER LINE	---
SIXTEENTH LINE	---
EXISTING CENTERLINE	---
PROPOSED REFERENCE LINE	---
PARALLEL OFFSET	---

CONVENTIONAL UTILITY SYMBOLS

WATER	W
GAS	G
TELEPHONE	T
OVERHEAD	OH
TRANSMISSION LINES	---
ELECTRIC	E
CABLE TELEVISION	TV
FIBER OPTIC	FO
SANITARY SEWER	SAN
STORM SEWER	SS
NON COMPENSABLE	---
COMPENSABLE	---
POWER POLE	---
TELEPHONE POLE	---
TELEPHONE PEDESTAL	---
ELECTRIC TOWER	---

TRANSPORTATION PROJECT PLAT NO: 4430-13-21 - 4.01

THAT PART OF THE NW¹/₄-NW¹/₄ SECTION 33, T.26N., R.25E., IN THE VILLAGE OF FORESTVILLE, DOOR COUNTY WISCONSIN.

RELOCATION ORDER STH 42 DOOR COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION 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 SUBSECTIONS 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAY 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 DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (3) OR (2), WISCONSIN STATUTES.

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W SO. FT. REQUIRED	T.L.E. SO. FT.
1	RAYMOND LITTERAL JR. & JULIE LITTERAL	TLE	---	1,083
2	GRANT A. DESHOTELS & KIM M. DENTON	TLE	---	267
3	KEVIN MATZKE & JO ANN MATZKE	FEE & TLE	1,653	8,547
4	JOSHUA LARDINOIS	TLE	---	532

NOTE:
OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT.

ROAD NAME	BASIS OF EXISTING R-O-W	WIDTH	YEAR
STH 42 (FORESTVILLE AVENUE)	PROJECT 391-B REOP.	VARIES	1935

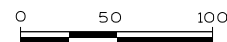
UTILITY INTERESTS REQUIRED

UTILITY NUMBER	OWNER(S)	INTEREST REQUIRED
200	CENTURY LINK (COMMUNICATION LINE)	RELEASE OF RIGHTS

PARCEL 3 FEE

COURSE	BEARING	DISTANCE
7077-7078	S 33°31'19" E	577.30'
7078-7113	S 33°31'19" E	207.07'
7113-7051	S 56°28'41" W	33.19'
7051-7107	S 84°02'14" W	5.64'
7107-7104	N 33°34'02" W	120.52'
7104-7109	N 44°01'32" W	66.11'
7109-7028	N 33°34'02" W	19.45'
7028-7078	N 57°03'24" E	50.35'

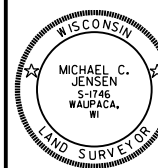
SCALE, FEET



GRAEF

1150 Springhurst Drive,
Suite 201
Green Bay, WI 54304-5950
920 / 592 9440
920 / 592 9445 fax
www.graef-usa.com

I, MICHAEL C. JENSEN, REGISTERED LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF WISCONSIN DEPT. OF TRANSPORTATION, I HAVE SURVEYED AND MAPPED TRANSPORTATION PROJECT PLAT 4430-13-21 - 4.01 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.



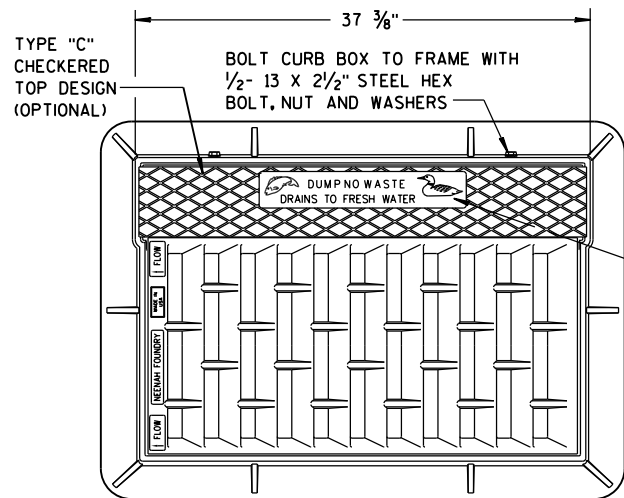
MICHAEL C. JENSEN RLS S-1746, FOR GRAEF

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

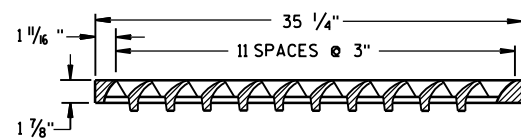
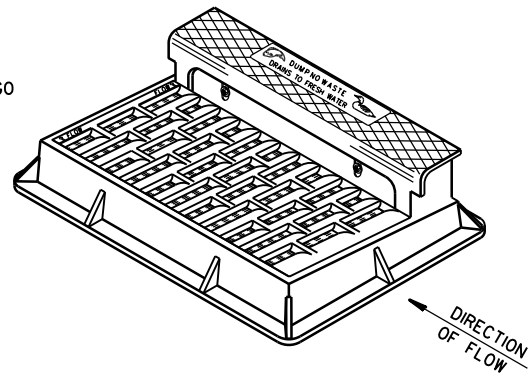
DATE 09/22/2014

Standard Detail Drawing List

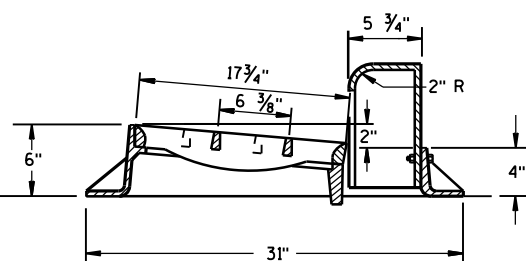
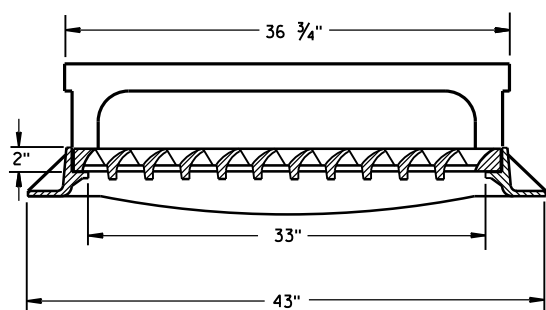
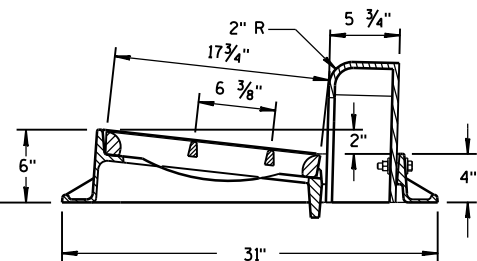
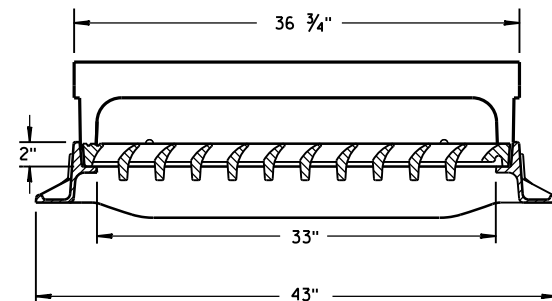
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08A08-01	CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
12A03-10	NAME PLATE (STRUCTURES)
13B02-07A	CONCRETE BRIDGE APPROACH
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C08-16A	PAVEMENT MARKING (MAINLINE)



**NOTE:
GRATE IS REVERSIBLE.**

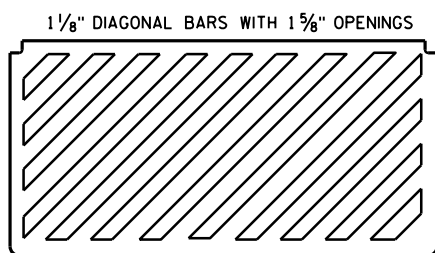


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

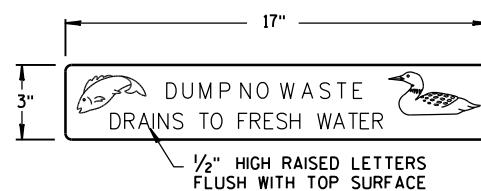


TYPE "H"

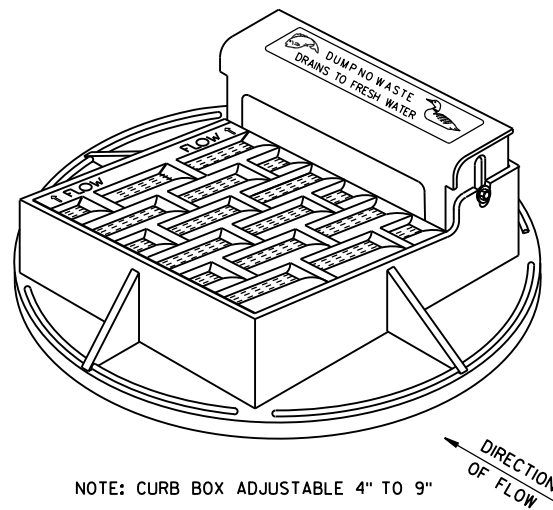
NOTE: EITHER CASTING IS ACCEPTABLE



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

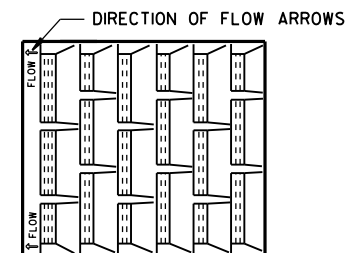


LOGO DETAIL

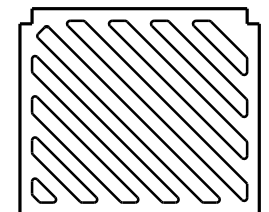


NOTE: CURB BOX ADJUSTABLE 4" TO 9"

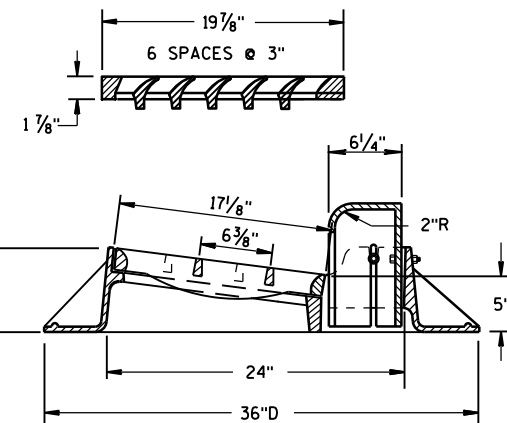
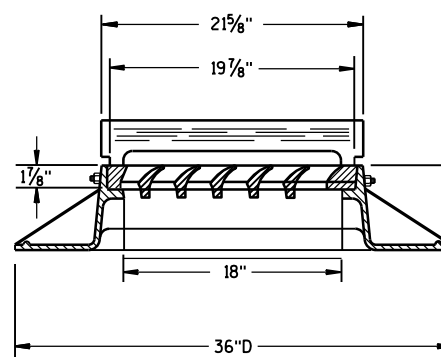
**NOTE:
GRATE IS REVERSIBLE.**



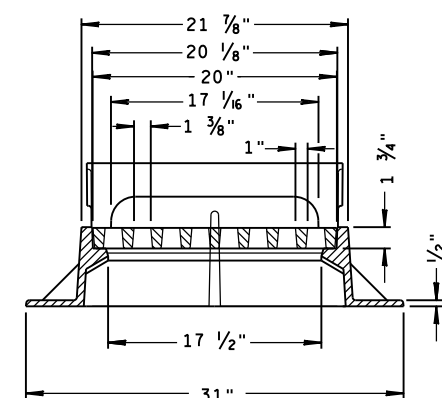
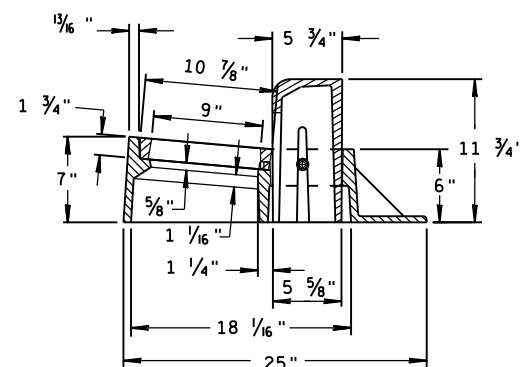
1" DIAGONAL BARS
WITH 1 1/2" OPENINGS



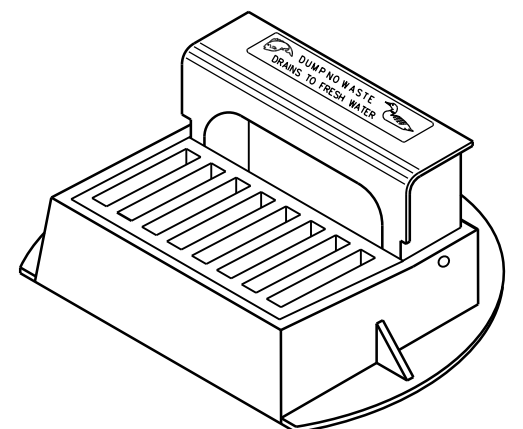
**SPECIAL GRATE FOR
TYPE "A" COVER**
(MEASURES 19 3/4" X 17" X 1 1/8")
(NOTED AS TYPE A-S ON DRAINAGE TABLE)



TYPE "A"



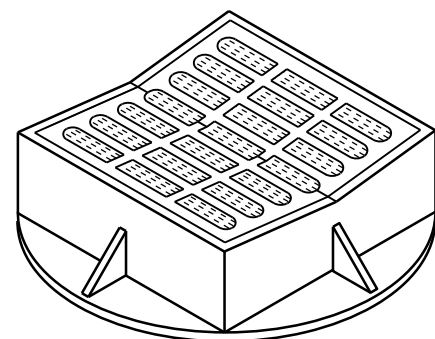
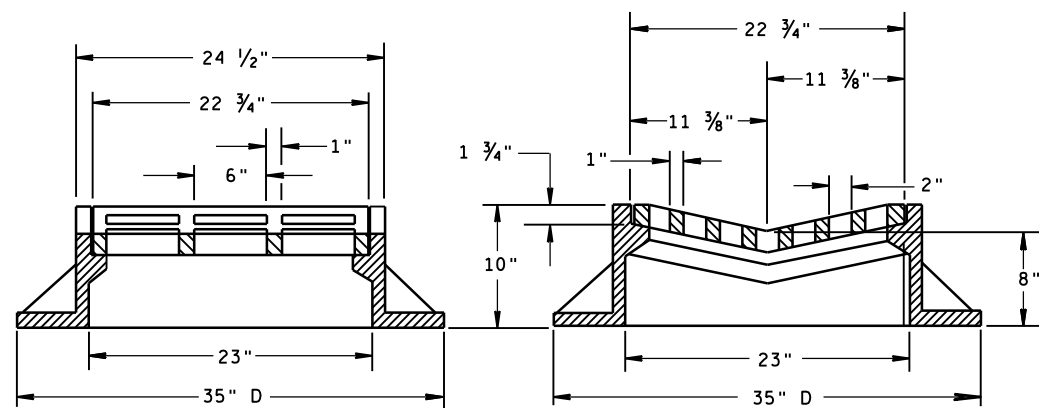
TYPE "Z"



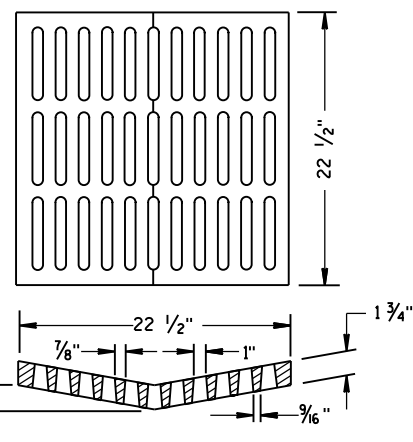
**INLET COVERS
TYPE A, H, A-S, H-S & Z**

**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION**

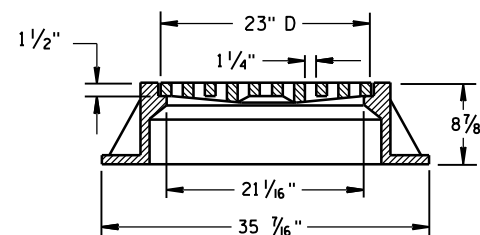
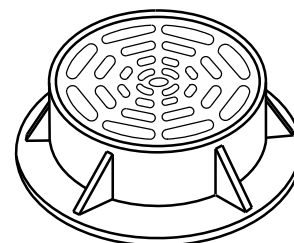
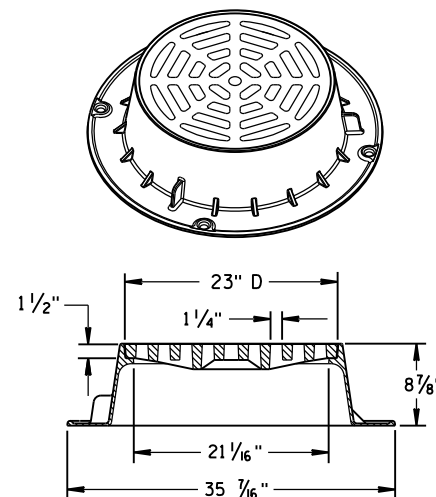
APPROVED
II-27-13
DATE /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



TYPE "B"

ALTERNATIVE GRATE FOR
TYPE "B" COVER

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
 NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

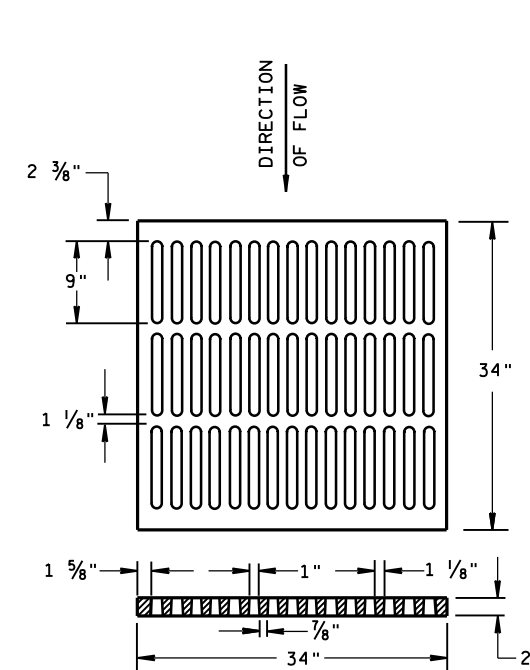
NOTE: EITHER CASTING IS ACCEPTABLE

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.

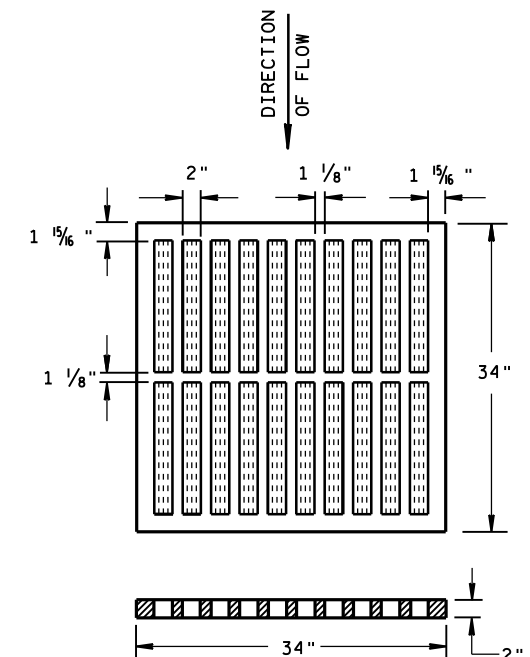
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



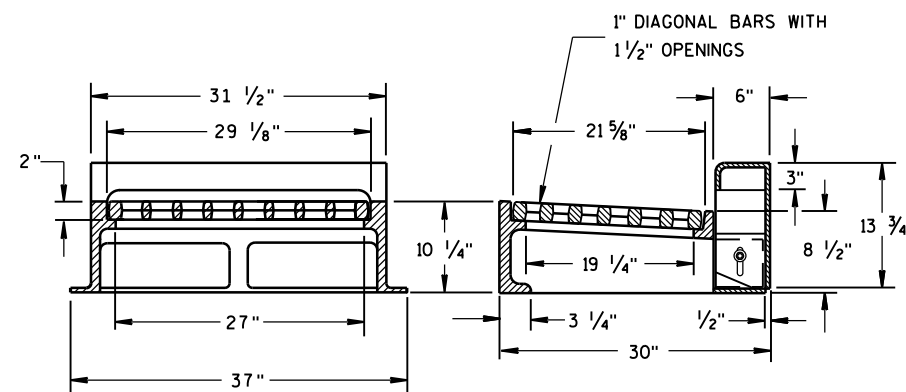
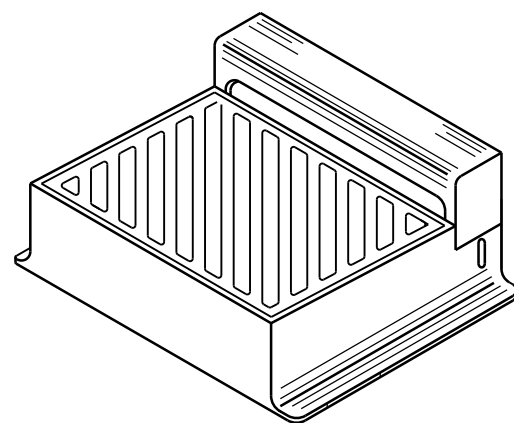
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
 NOTED AS TYPE MS-A ON THE DRAINAGE TABLE



TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
 NOTED AS TYPE MS ON DRAINAGE TABLE



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

DIAGONAL SLOTS, SHALL BE ORIENTED
 TO THE DIRECTION OF FLOW AS ILLUSTRATED.
 GRATES ARE MANUFACTURED TO BE REVERSIBLE.

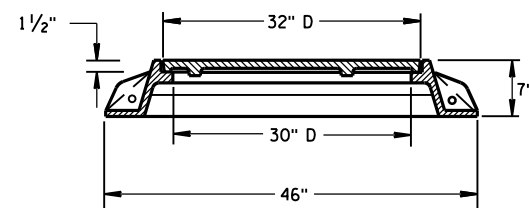
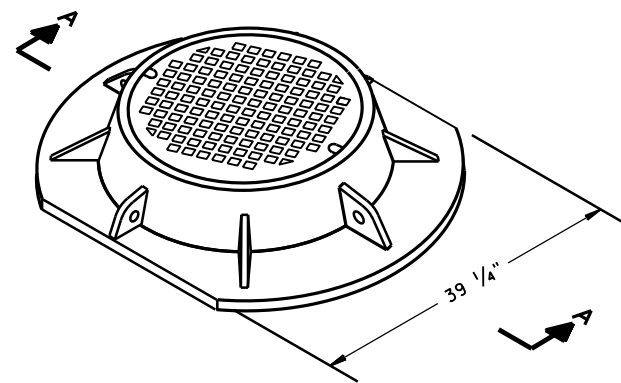
DIRECTION
OF FLOW

INLET COVERS
 TYPE B, B-A, C,
 MS, MS-A, & WM

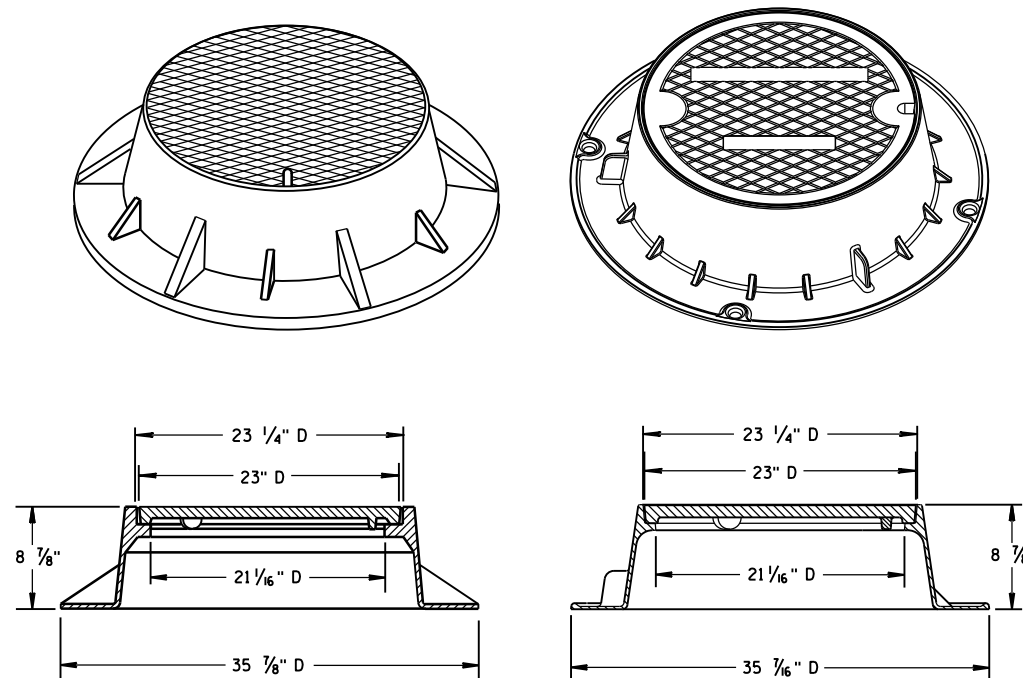
STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

APPROVED
 11/27/2013
 DATE
 FHWA

/S/ Jerry H. Zogg
 ROADWAY STANDARDS DEVELOPMENT
 ENGINEER

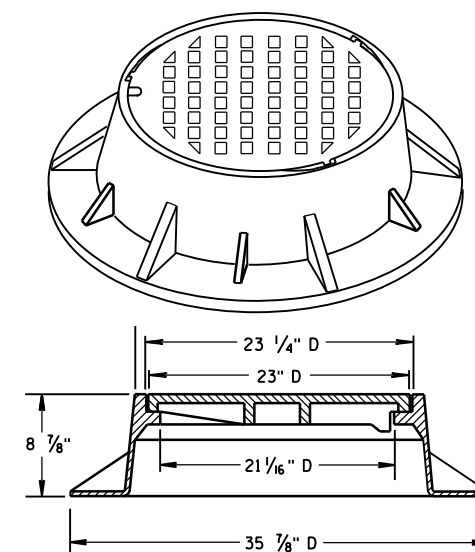
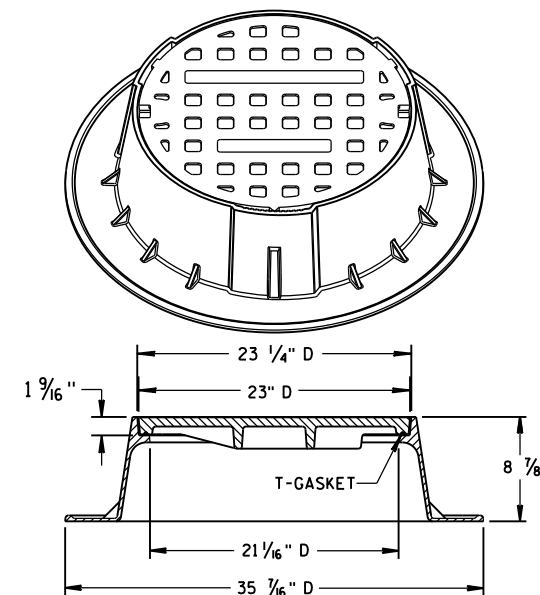


SECTION A-A
TYPE "K"



TYPE "J"

NOTE: EITHER CASTING IS ACCEPTABLE

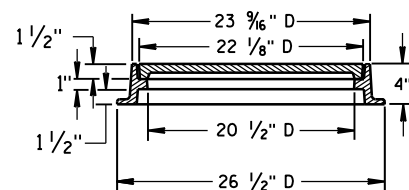
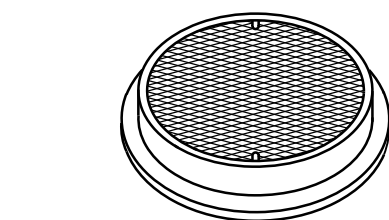


TYPE "J" SPECIAL

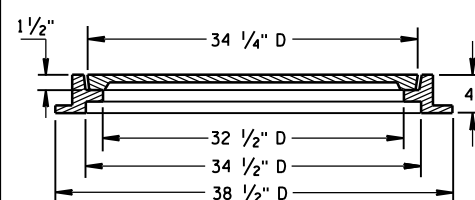
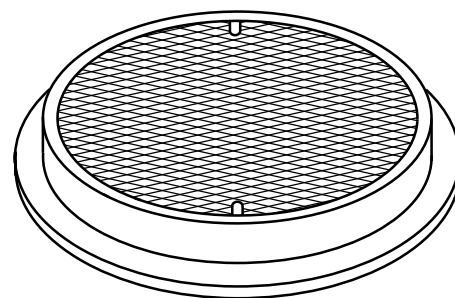
TYPE "B" NON-ROCKING SELF-SEAL LID

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

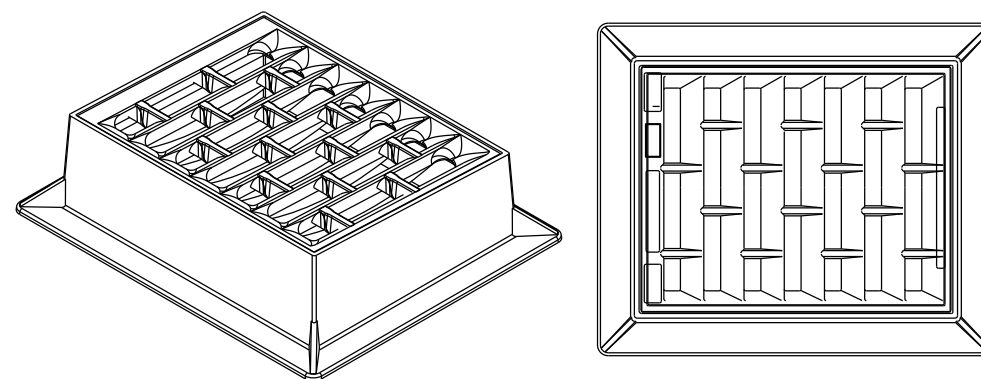
NOTE: EITHER CASTING IS ACCEPTABLE



TYPE "L"



TYPE "M"



INLET COVER TYPE "BW"

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.

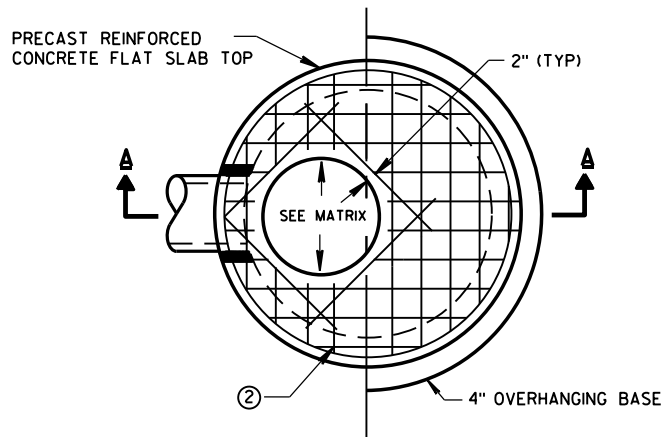
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

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

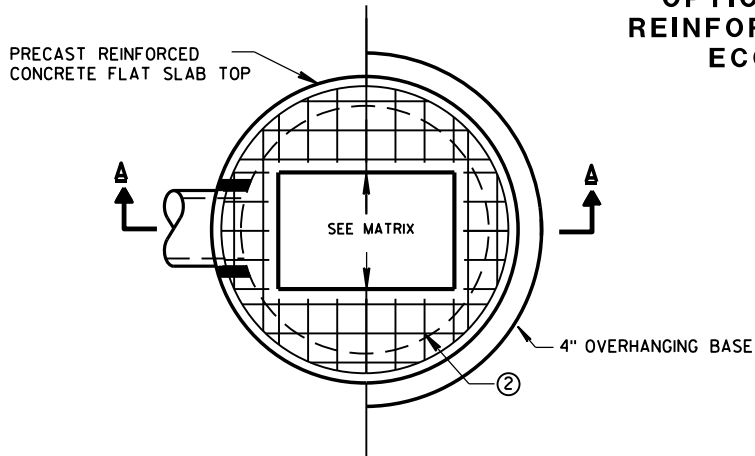
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

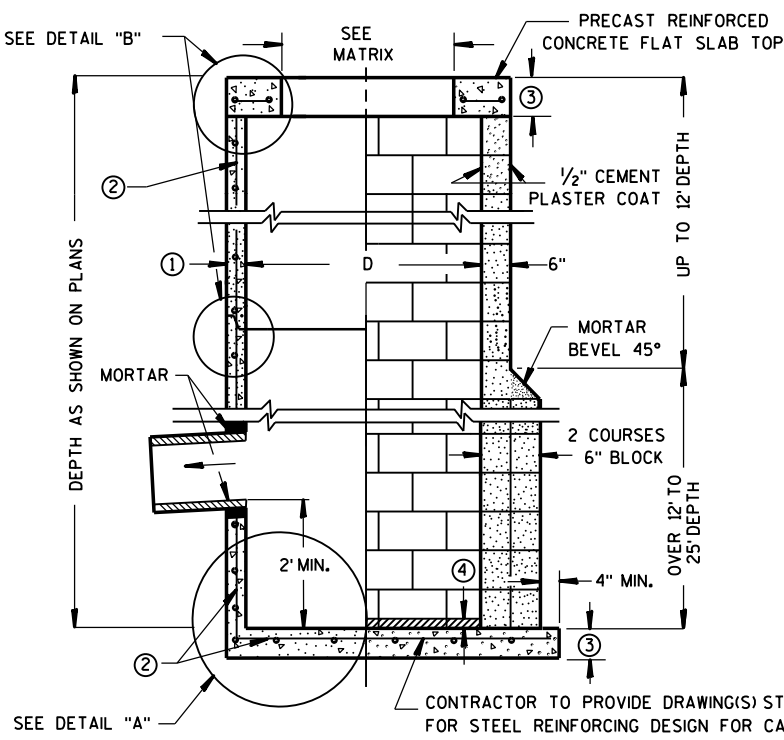
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



PLAN VIEW CIRCULAR OPENING

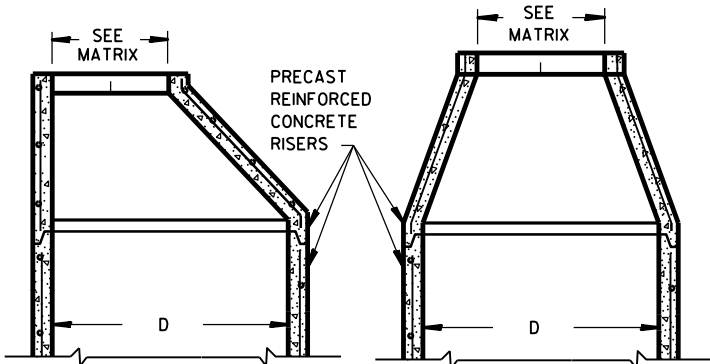


PLAN VIEW RECTANGULAR OPENING



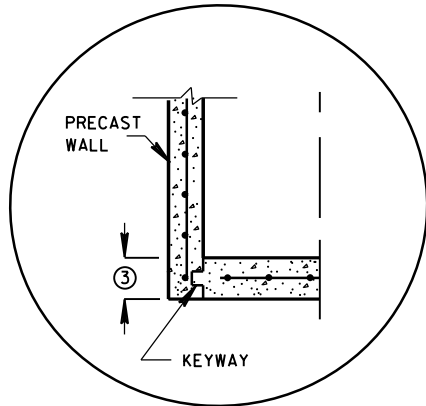
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

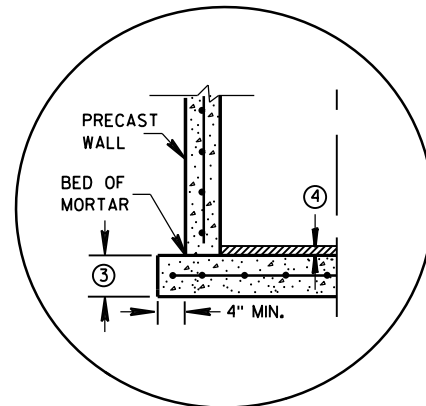


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



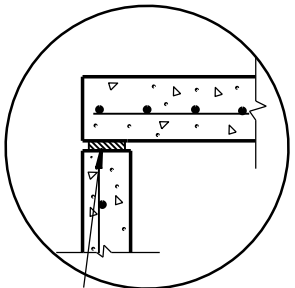
PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



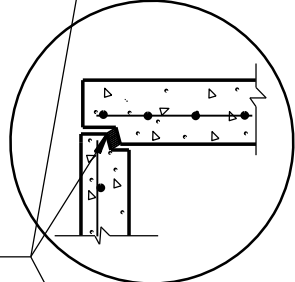
SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"

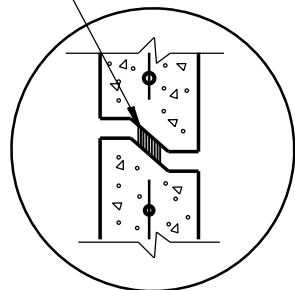
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



TOP WITH PLAIN END JOINT

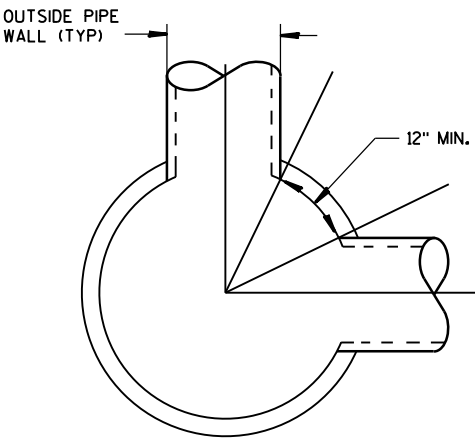


TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"



DETAIL "C"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS. 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 GRANULAR 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. THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

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		
	2X2.5			X				X	X	X	X	
	2 DIA.				X							X
	2X3						X					
	2.5X3					X						

PIPE MATRIX

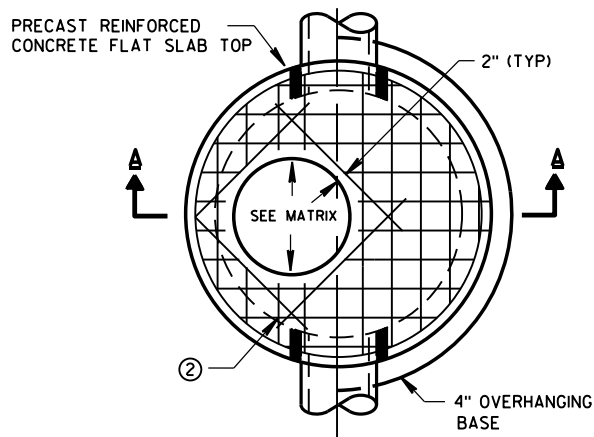
CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	30

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

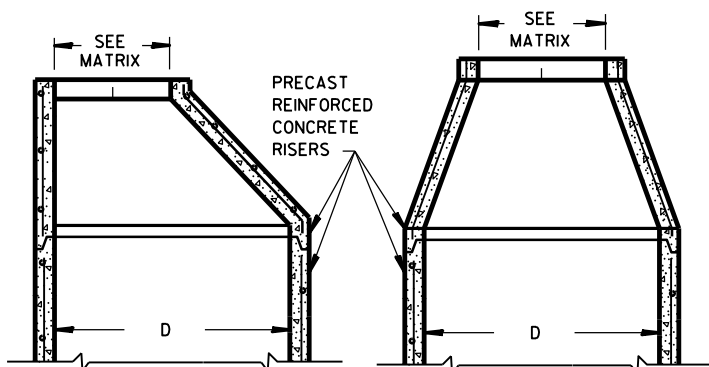
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

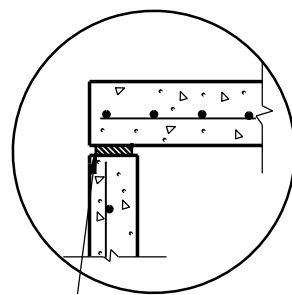


PLAN VIEW CIRCULAR OPENING

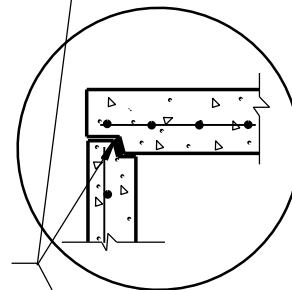


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

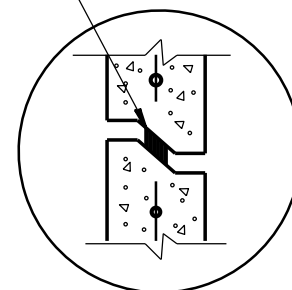
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



TOP WITH PLAIN END JOINT



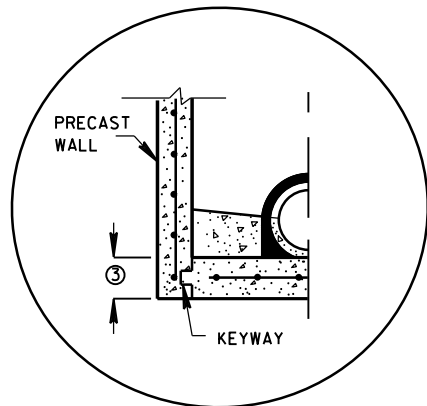
TOP WITH TONGUE AND GROOVE JOINT



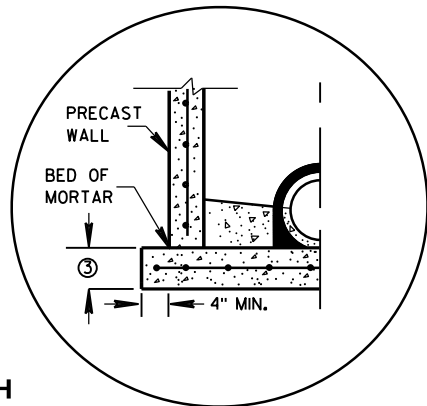
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

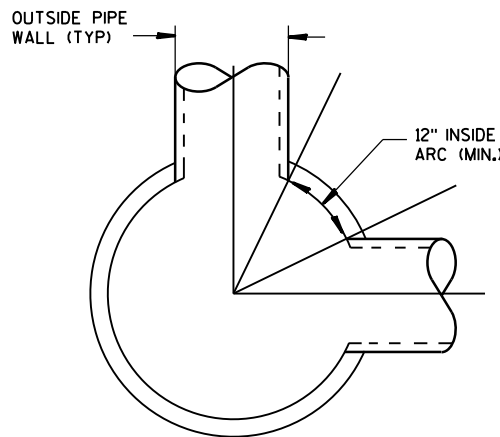


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

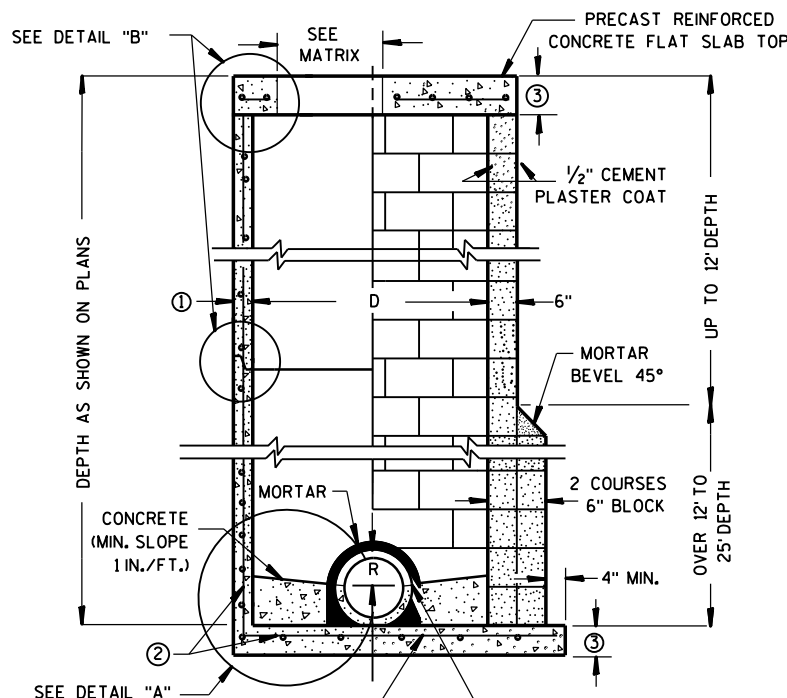


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"



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

SPLIT PIPE OR FORM CONCRETE TO FIT

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

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-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 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 GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE CONE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

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" 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 DIAMETER.

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 AASHTO DESIGNATION M 199.

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, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.
- ② FOR PRECAST MANHOLES 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".

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

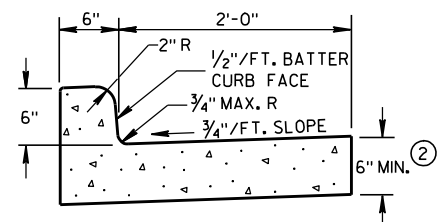
PIPE MATRIX

MANHOLE 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	36
7-FT	48	36
8-FT	60	42

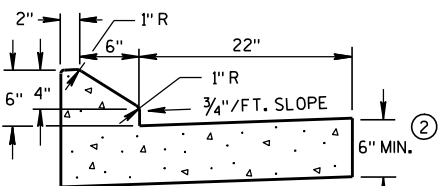
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

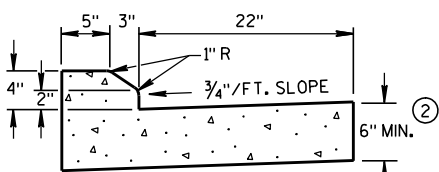
APPROVED
6/5/2012 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA ENGINEER



TYPES A & D ①

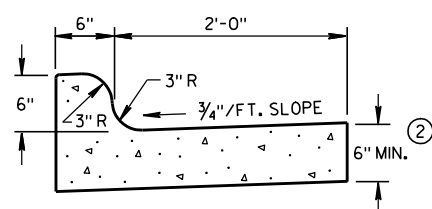


6" SLOPED CURB TYPES G & J ①

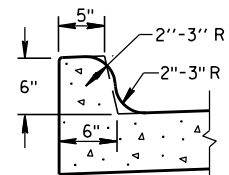
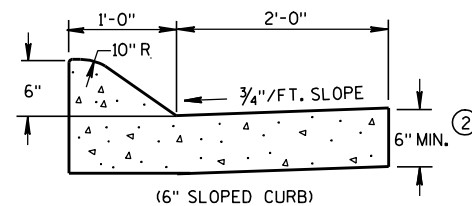


4" SLOPED CURB TYPES G & J ①

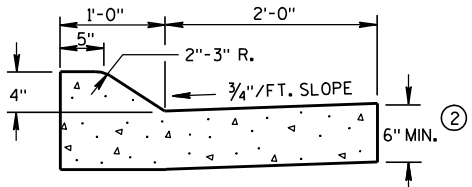
CONCRETE CURB & GUTTER 30"



TYPES K & L ①

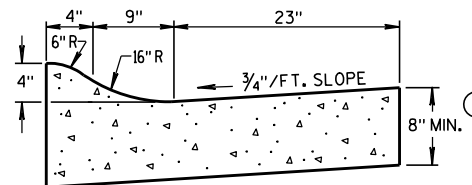
OPTIONAL CURB SHAPE
FOR TYPES K & L ①

(6" SLOPED CURB)

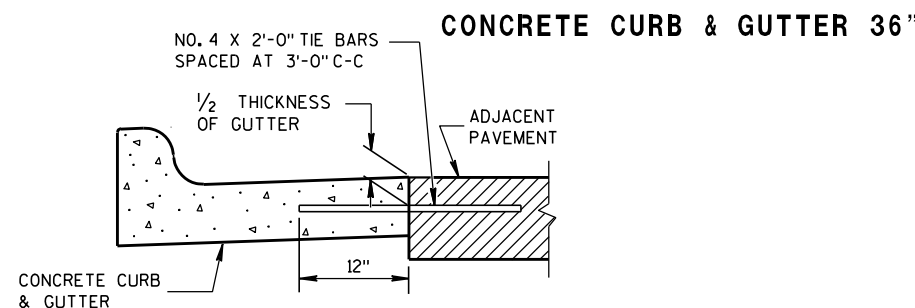


(4" SLOPED CURB)

TYPES A & D ①

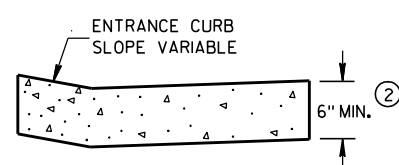


4" SLOPED CURB TYPES R & T ① ④



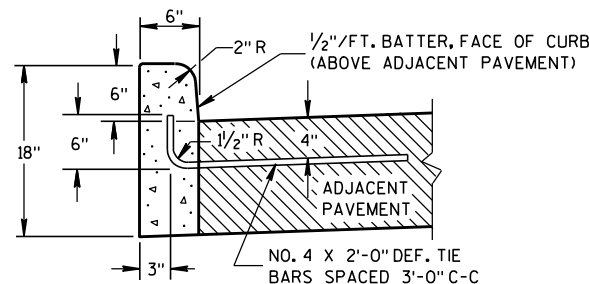
CONCRETE CURB & GUTTER 36"

TYPICAL TIE BAR LOCATION ①



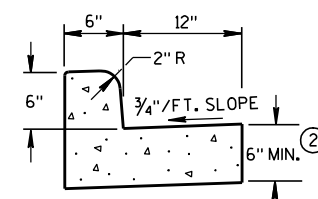
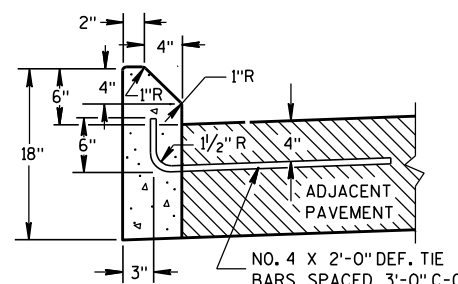
DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)



TYPES A & D ①

CONCRETE CURB

TYPES A & D
CONCRETE CURB & GUTTER 18"

TYPES G & J ①

GENERAL NOTES

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

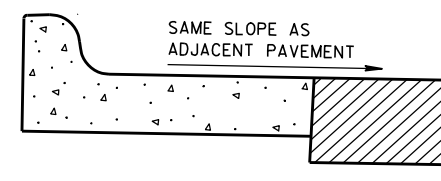
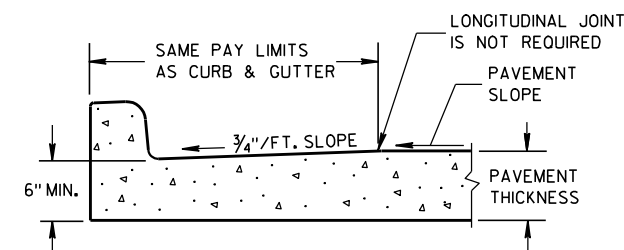
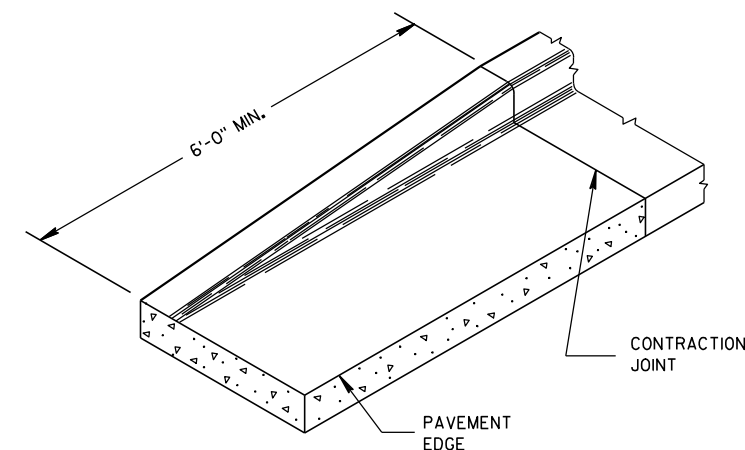
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

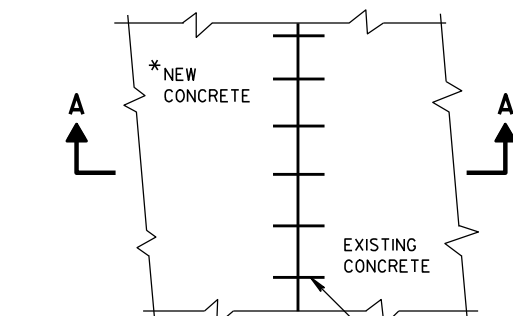
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ④ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑤ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

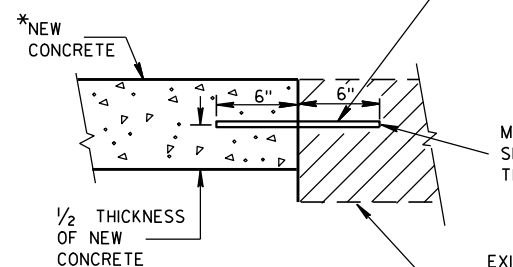
REVERSE SLOPE GUTTER ⑤
(TYPICAL FOR ALL CURB & GUTTER TYPES)PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER

END SECTION CURB & GUTTER



PLAN VIEW

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

SECTION A-A
TIE BARS DRILLED
INTO EXISTING PAVEMENT

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

MAXIMUM DRILL HOLE
SIZE IS 1/8" GREATER
THAN TIE BAR DIAMETER

EXISTING
CONCRETE

CONCRETE CURB, CONCRETE
CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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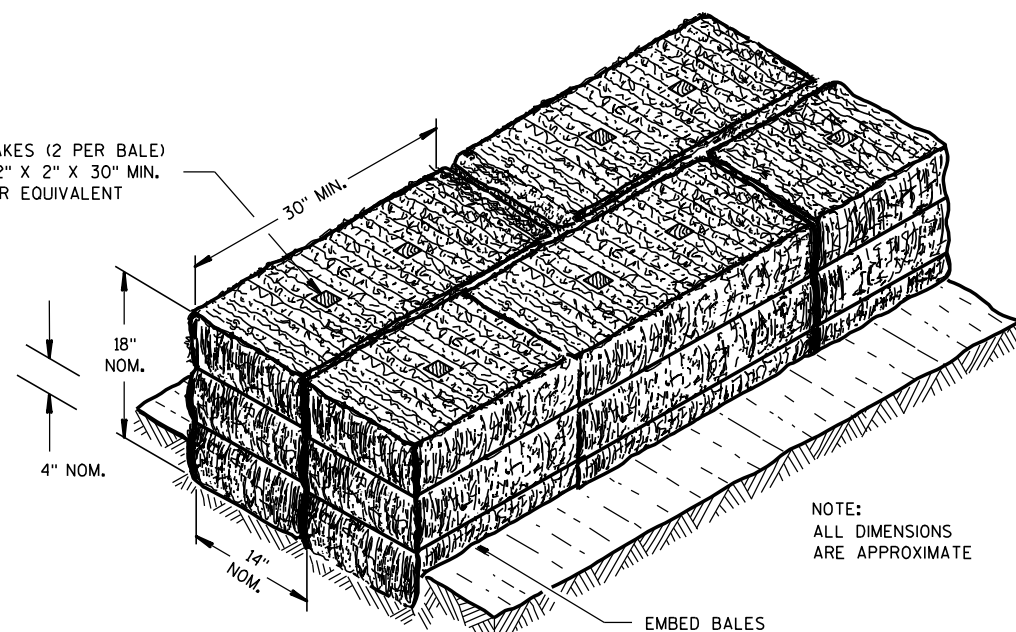
9/4/08

DATE

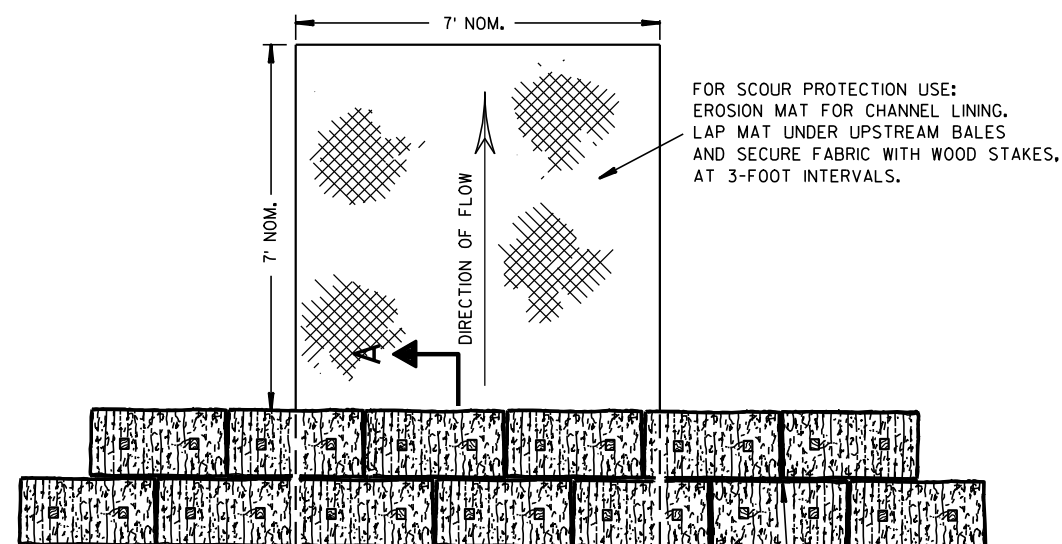
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

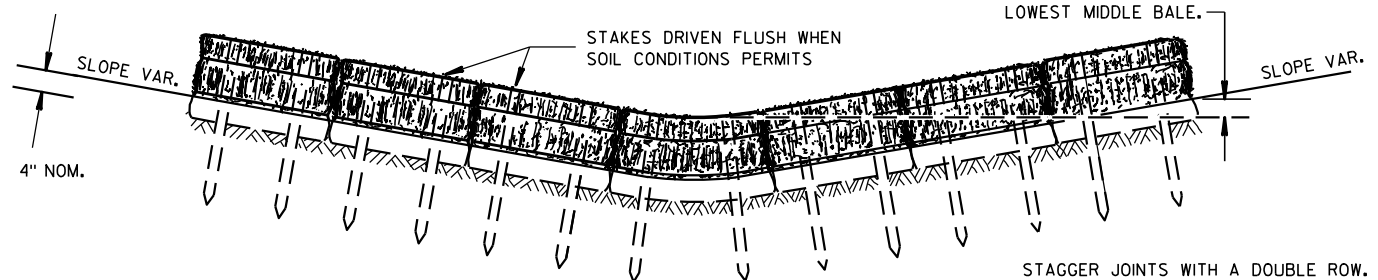
WOOD STAKES (2 PER BALE)
NOMINAL 2" X 2" X 30" MIN.
LENGTH OR EQUIVALENT



SECTION A-A



PLAN VIEW



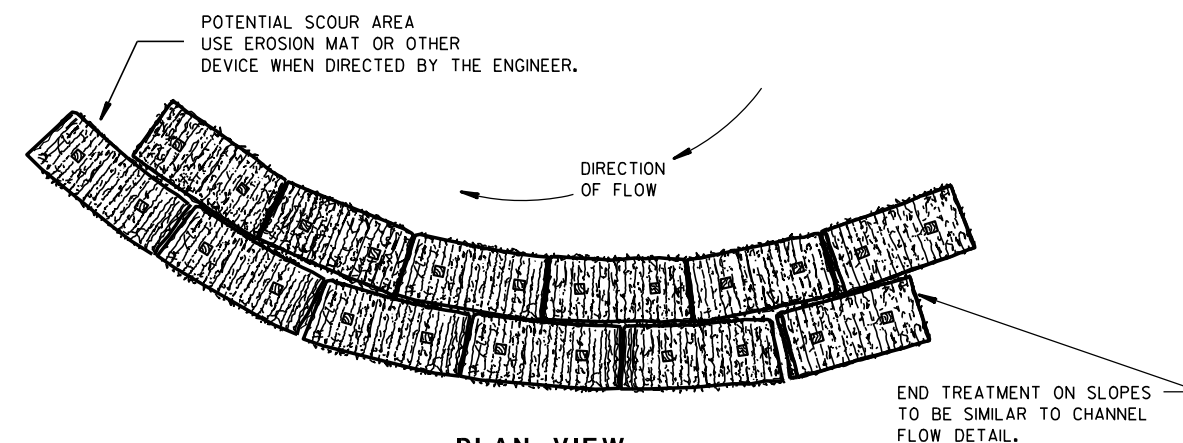
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

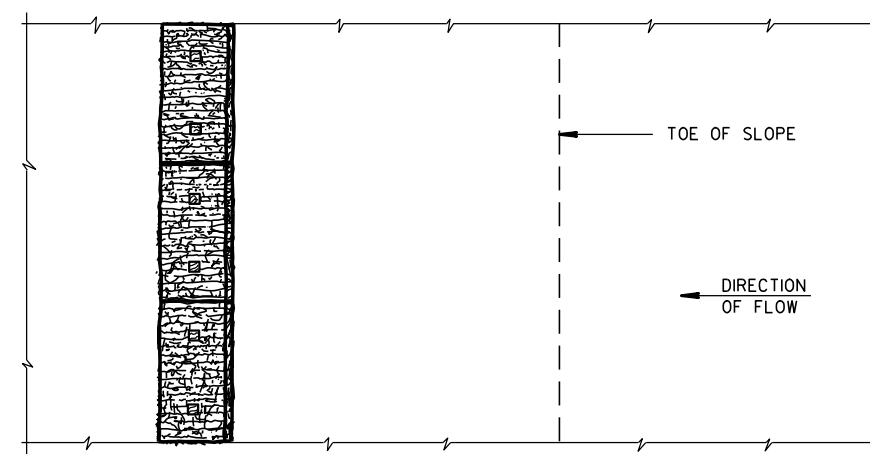
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

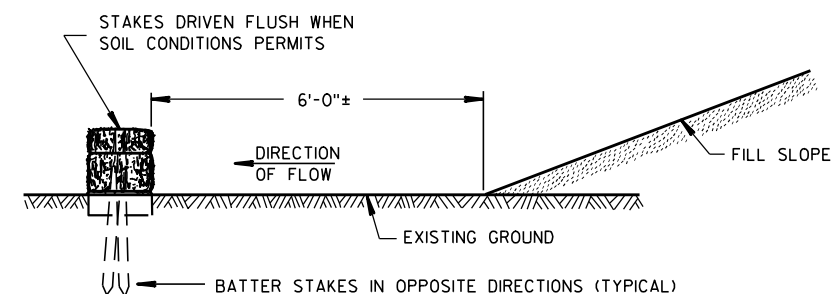


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

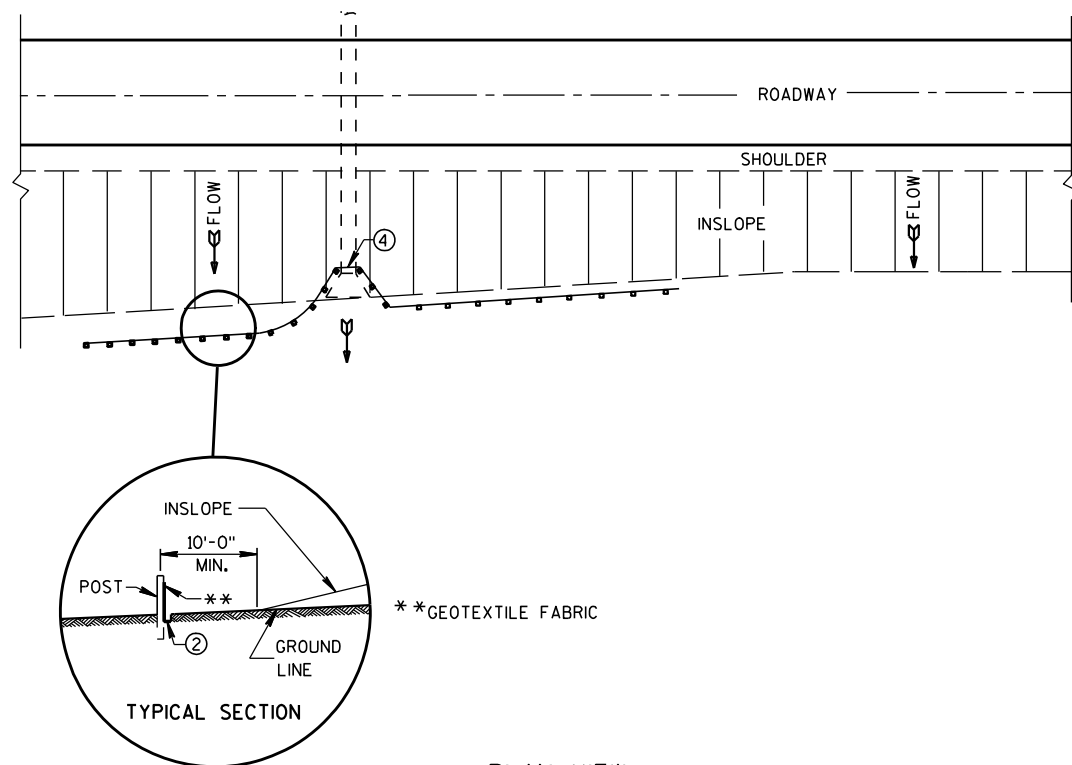
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02
DATE

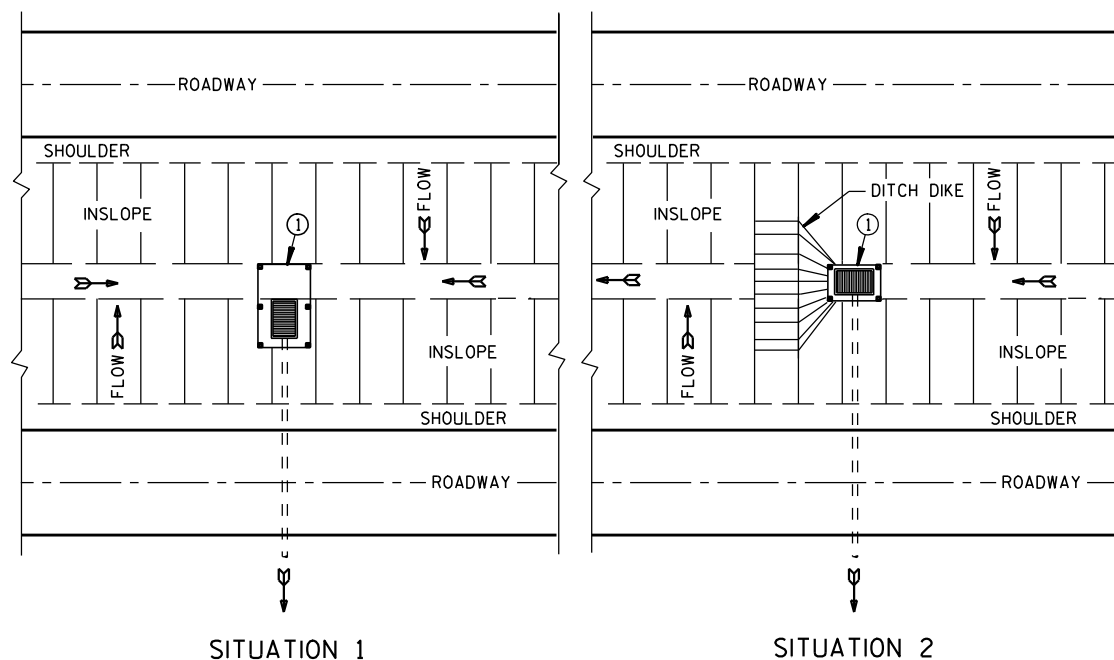
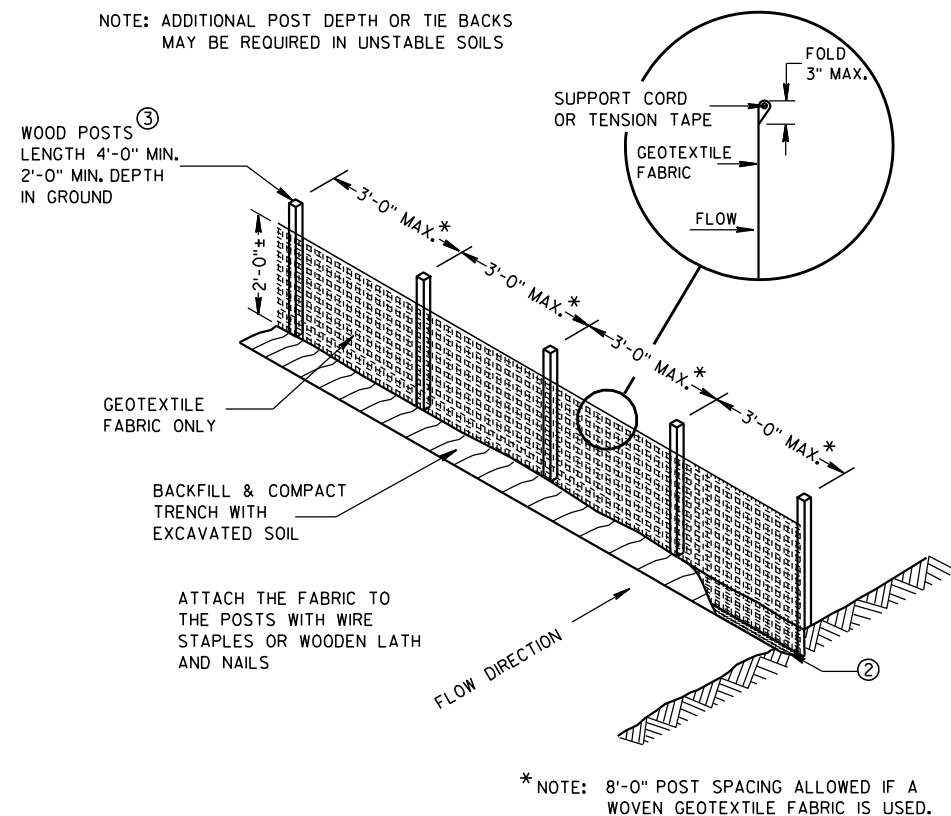
FHWA

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

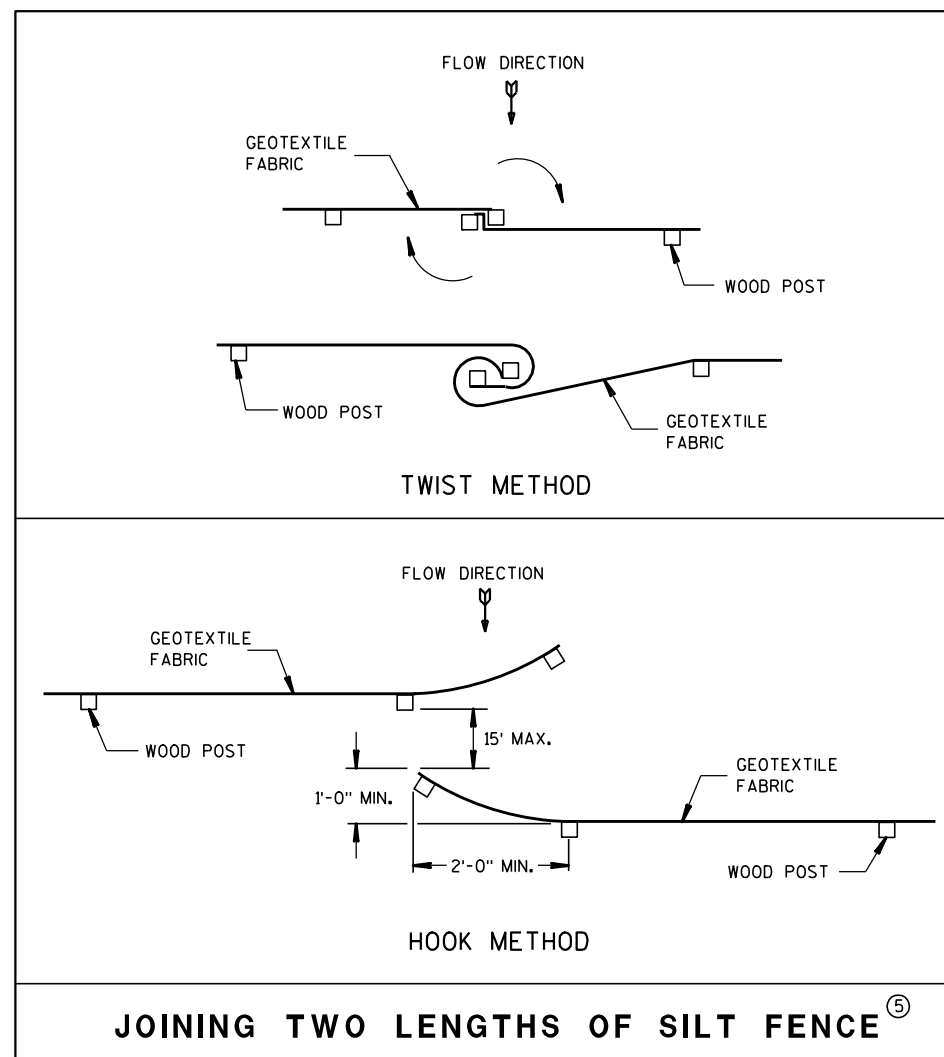


TYPICAL APPLICATION OF SILT FENCE

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS



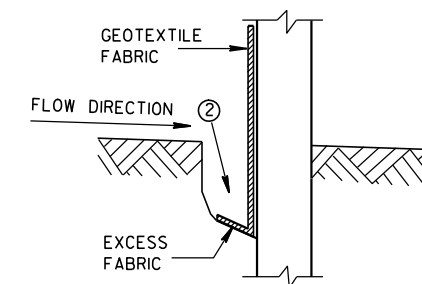
SILT FENCE AT MEDIAN SURFACE DRAINS



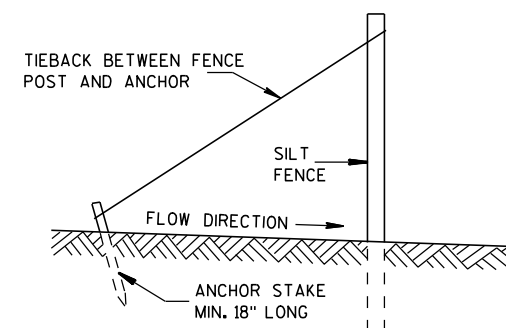
GENERAL NOTES

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 TIE BACK (WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

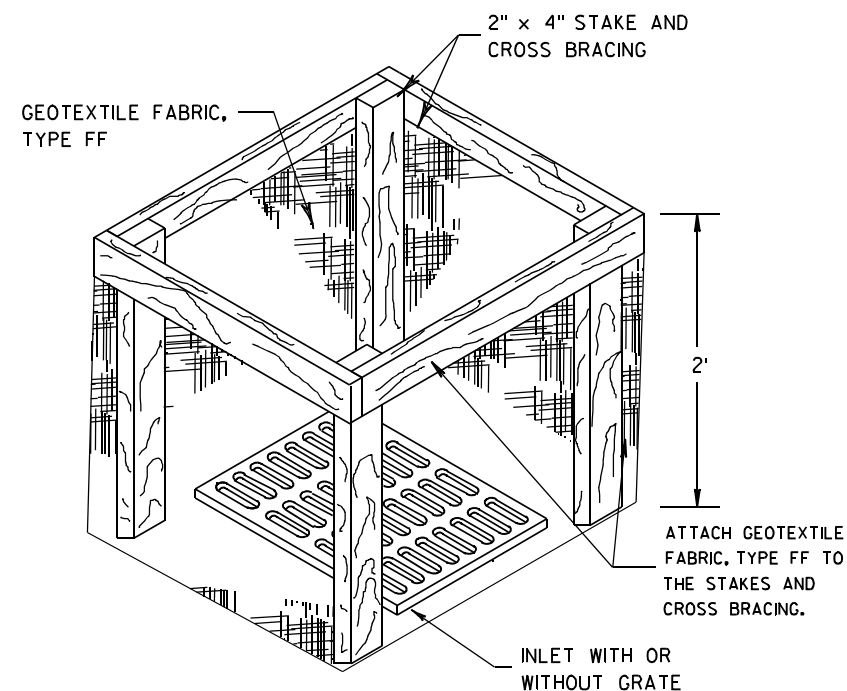
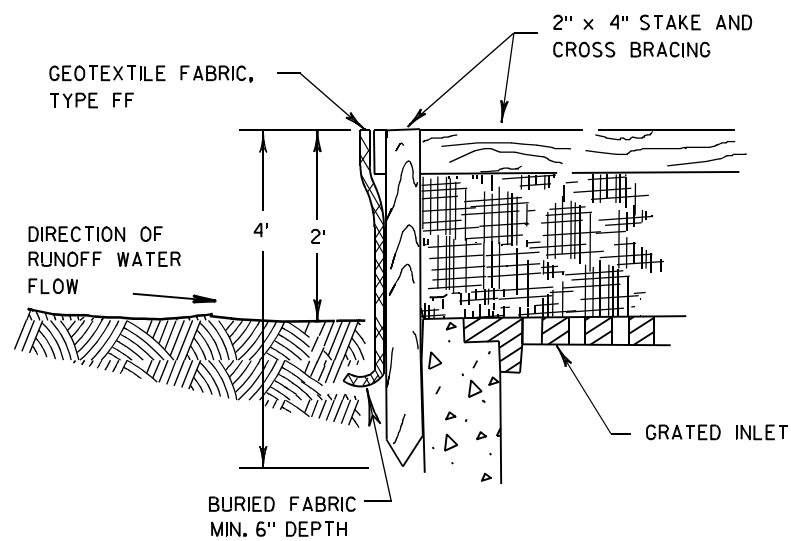
APPROVED

4-29-05

DATE

FHWA

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



INLET PROTECTION, TYPE A

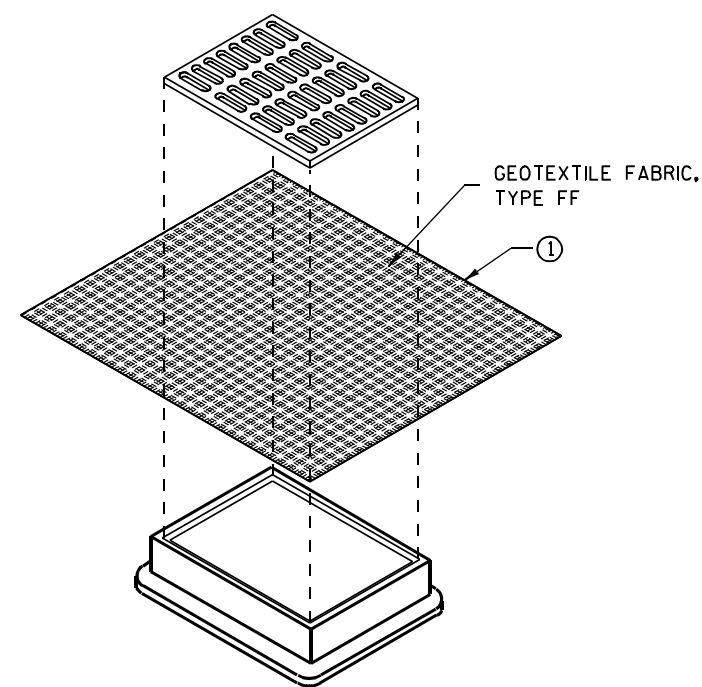
GENERAL NOTES

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

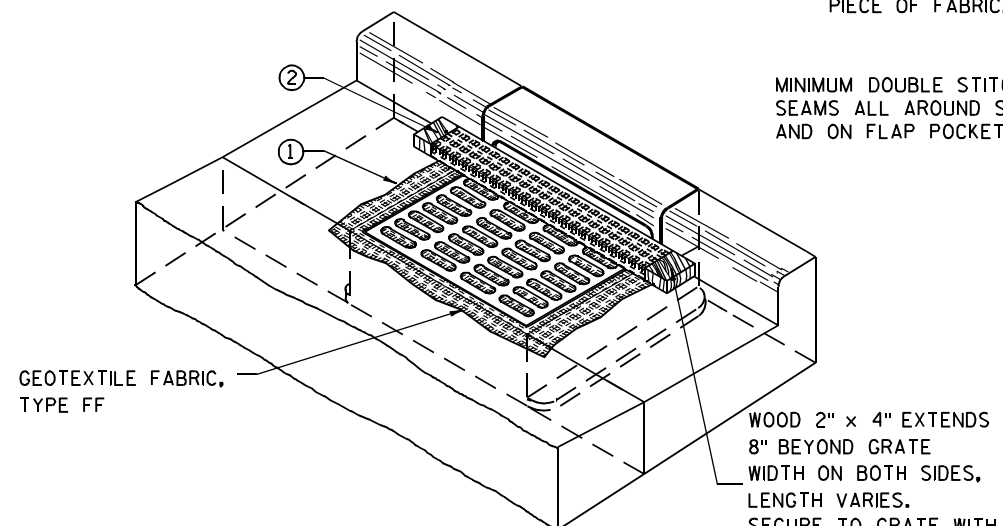
MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

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

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



**INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)**
(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

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

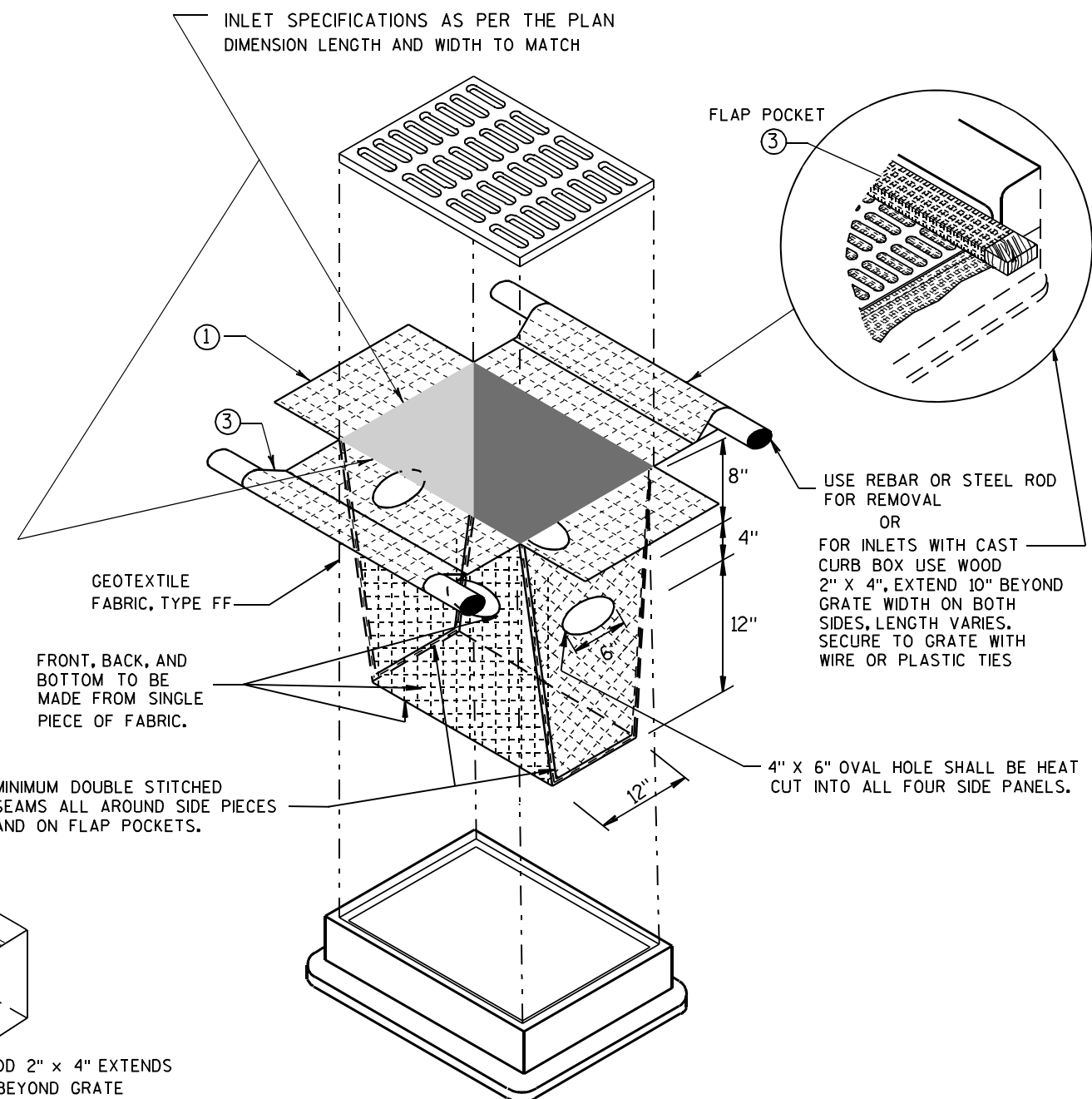
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

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

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

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



INLET PROTECTION, TYPE D

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

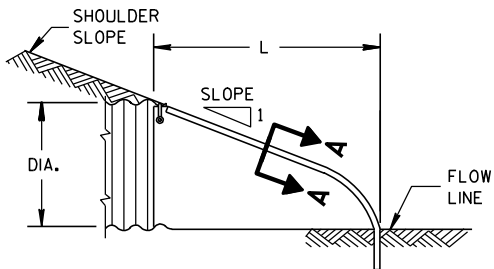
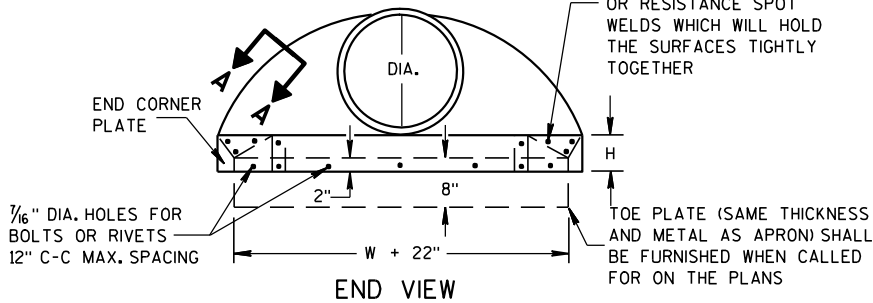
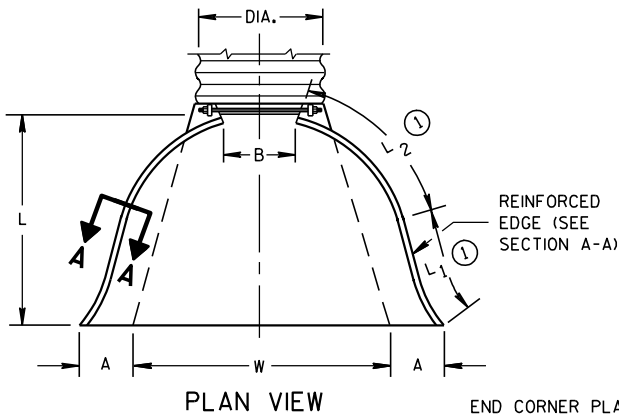
**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

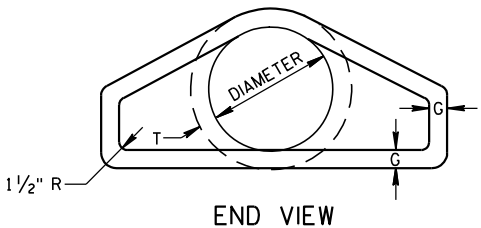
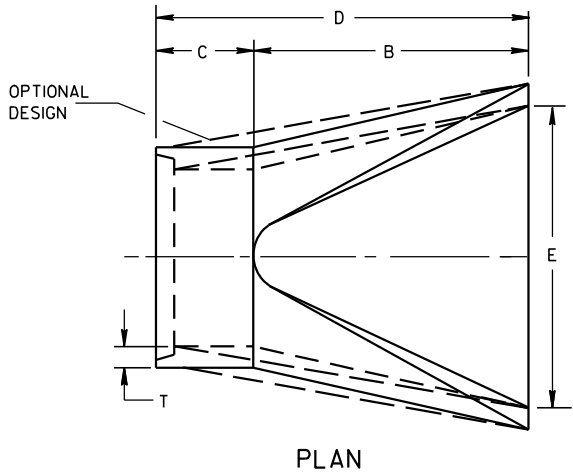
* EXCEPT CENTER PANEL
SEE GENERAL NOTES



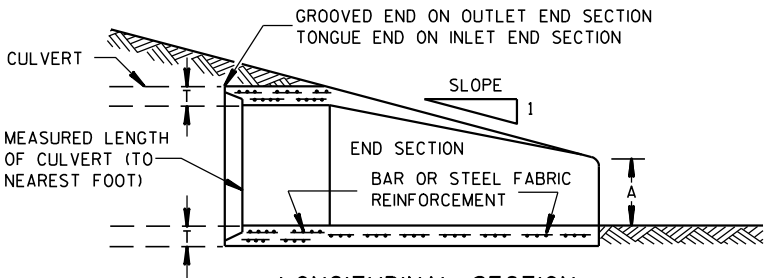
SIDE ELEVATION
METAL ENDWALLS

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

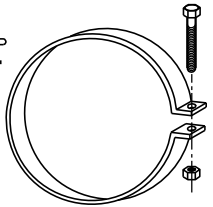
* MINIMUM
** MAXIMUM



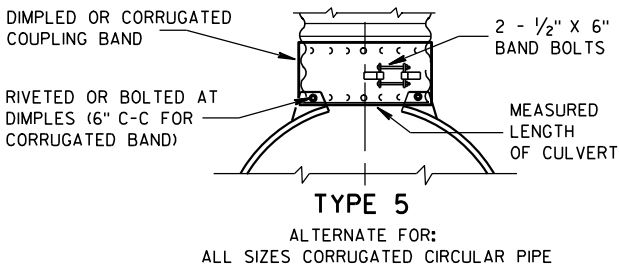
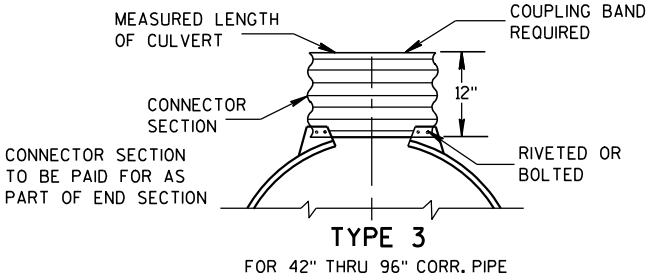
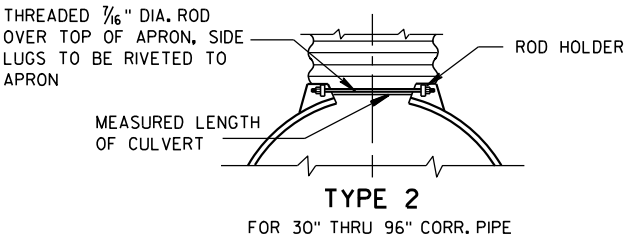
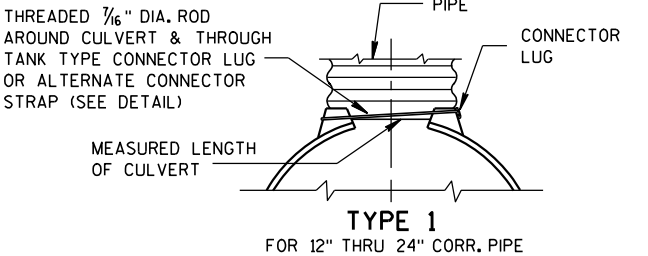
LONGITUDINAL SECTION
CONCRETE ENDWALLS



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



ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



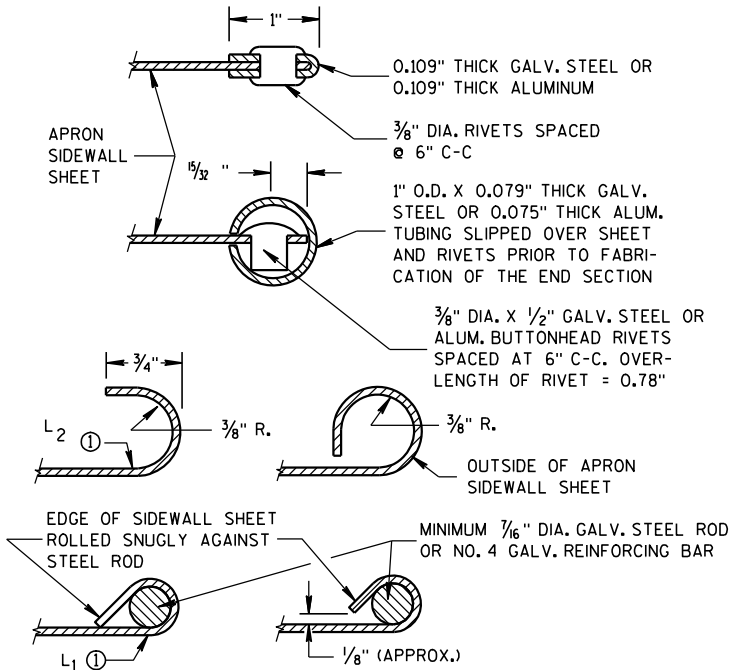
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

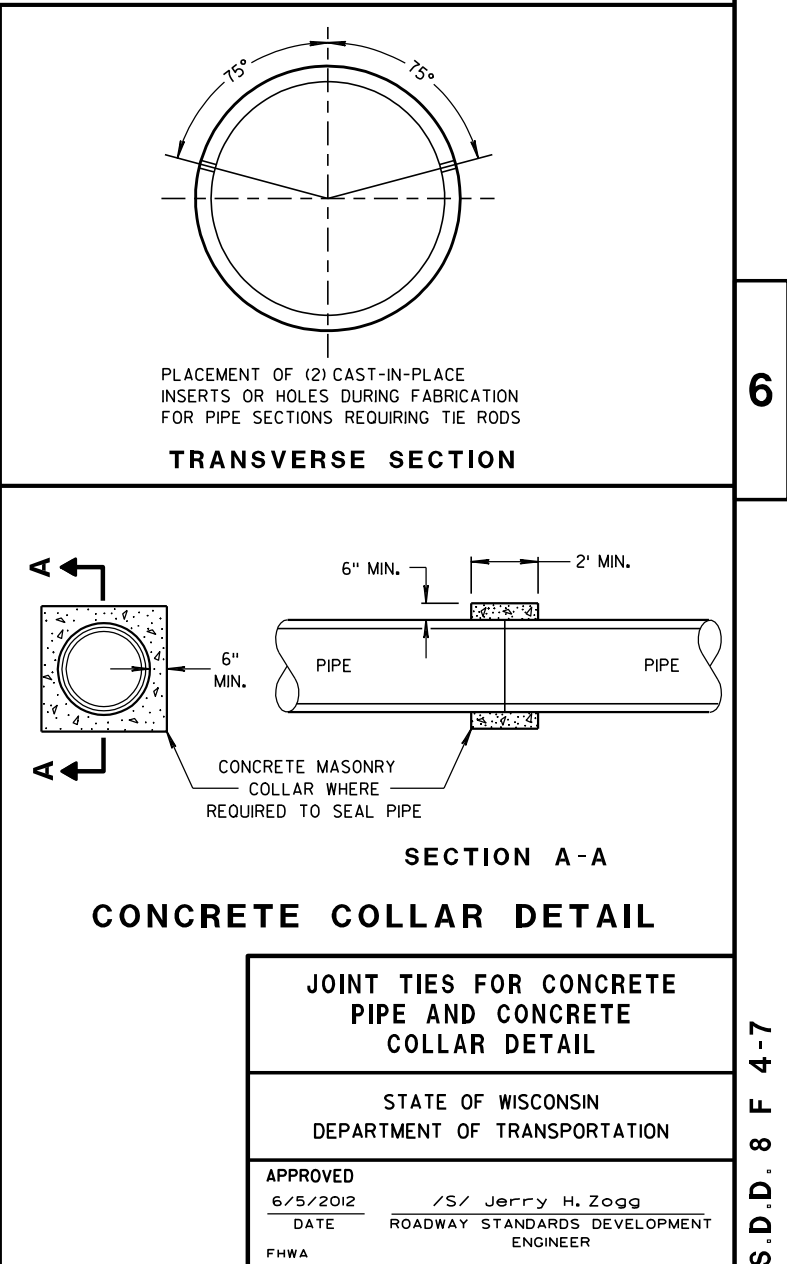
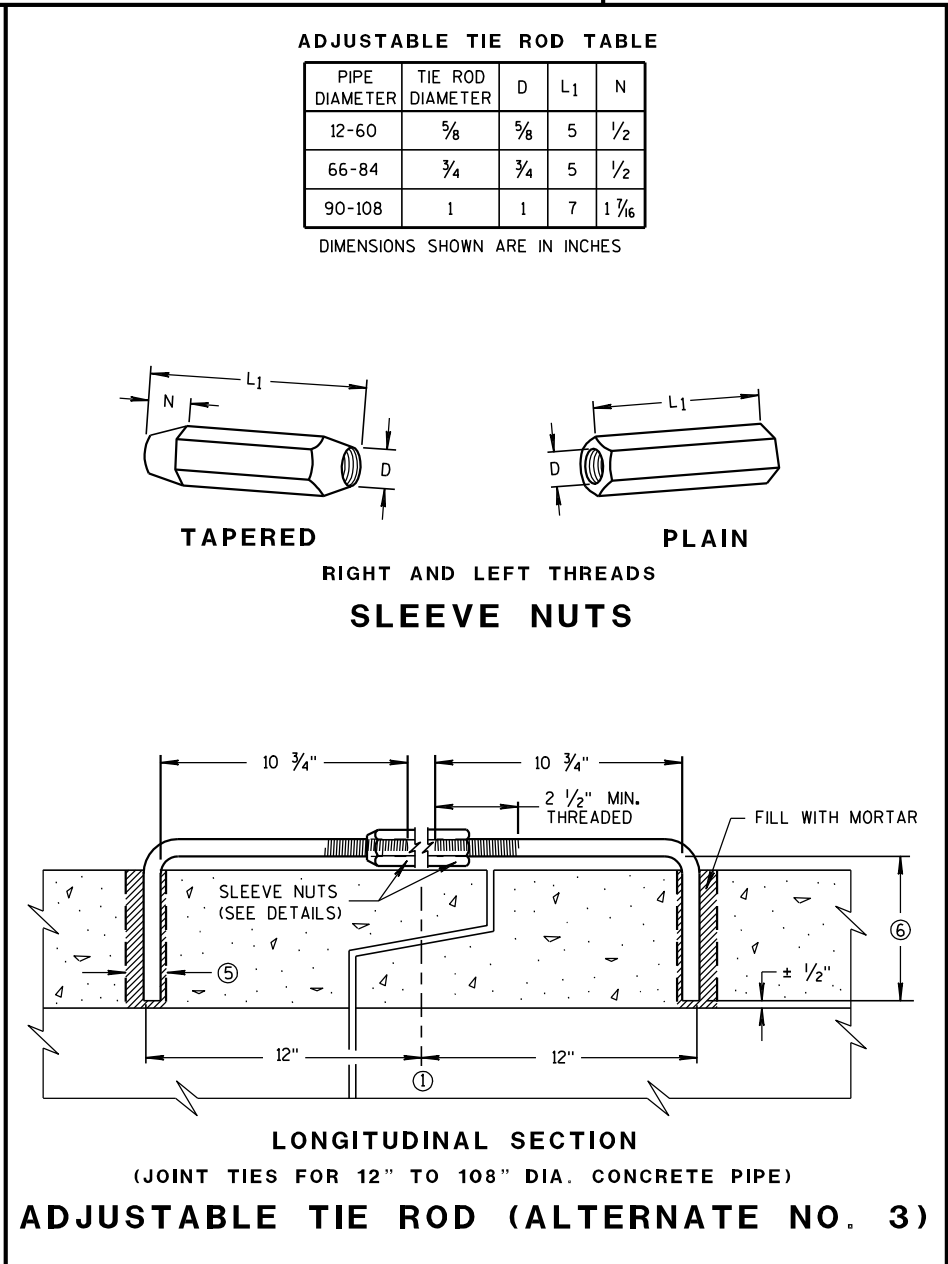
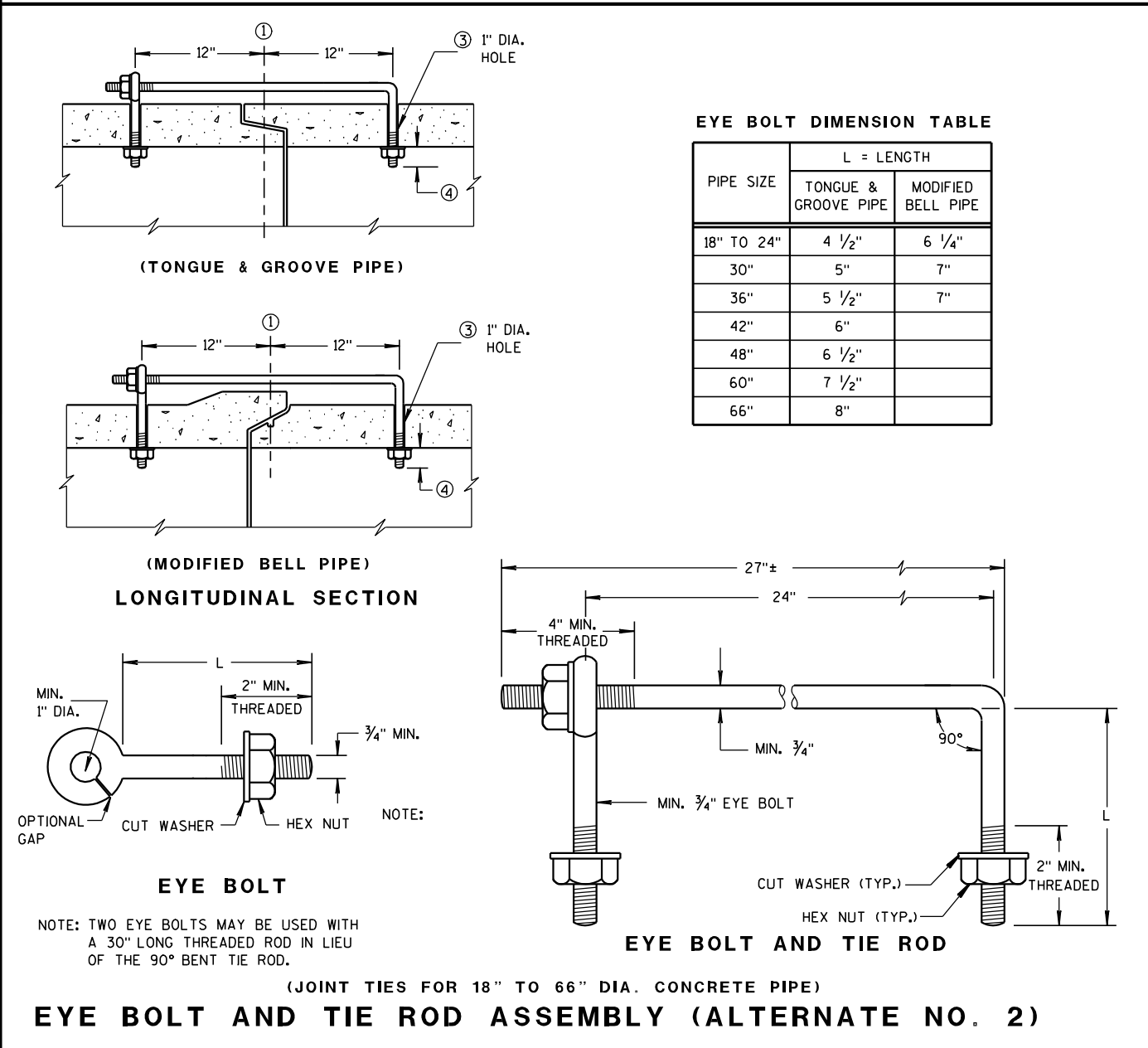
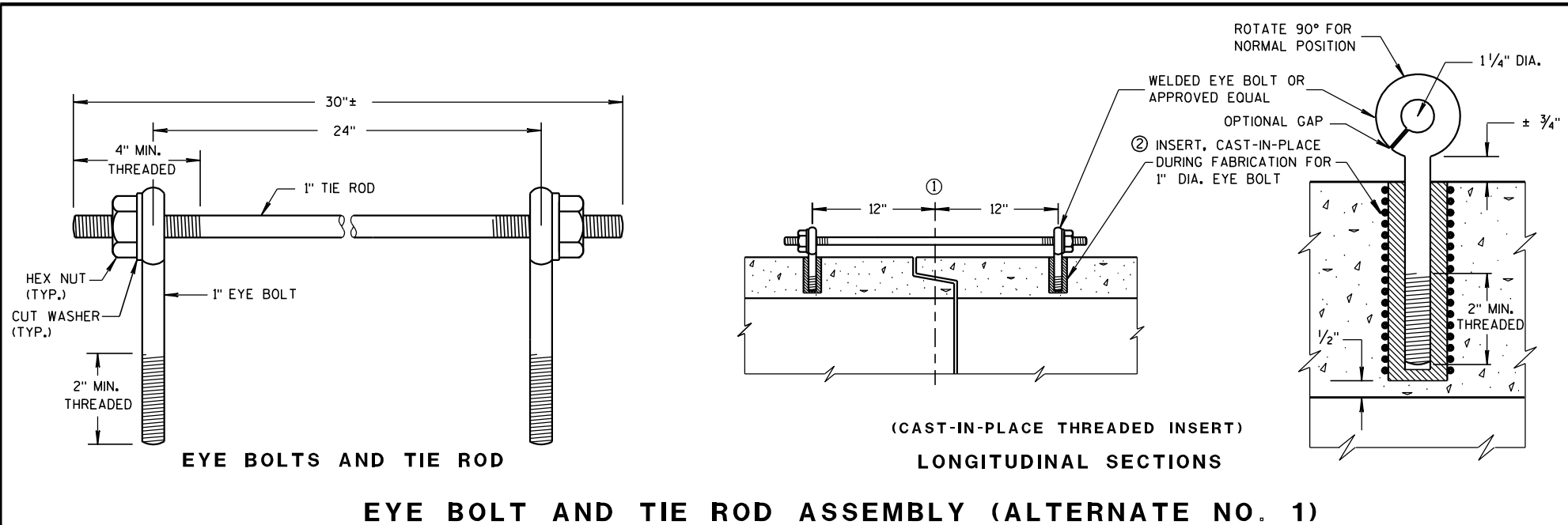
GENERAL NOTES

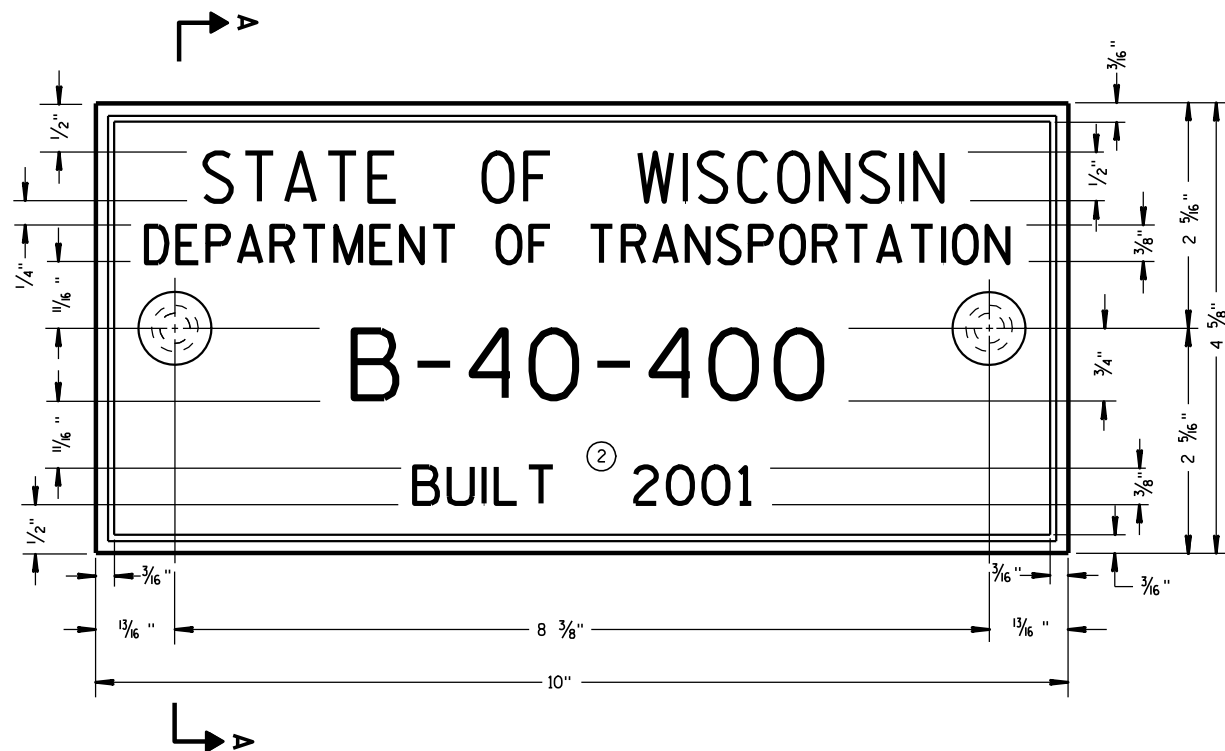
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.
- ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.
- LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.
- WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.
- ① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR
CULVERT PIPE

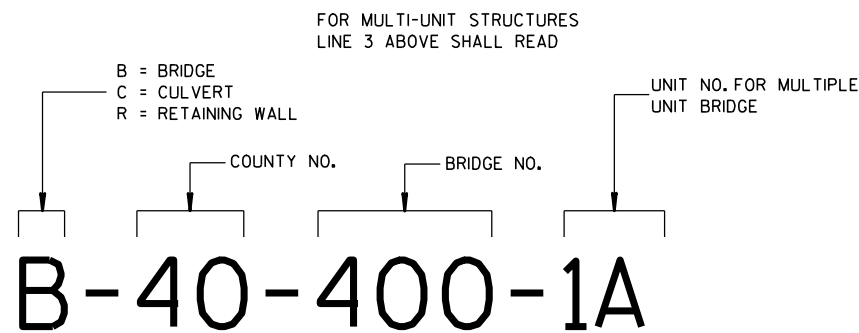
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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





TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)



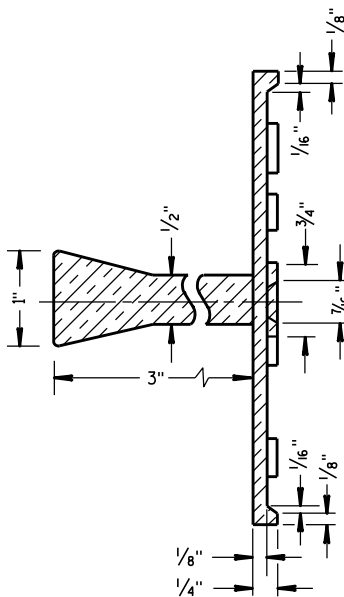
**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

GENERAL NOTES

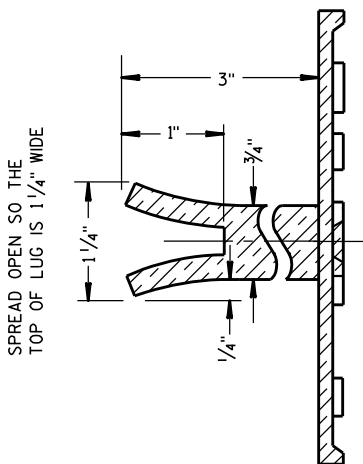
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

- ① EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ② REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.

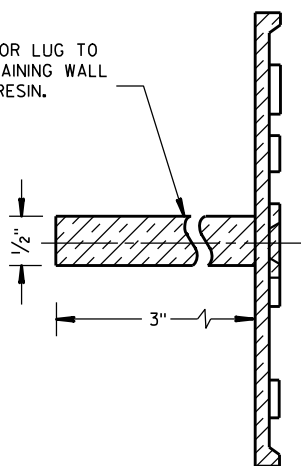


SECTION A-A



ALTERNATE LUG

- ① ADHERE ANCHOR LUG TO PRECAST RETAINING WALL WITH EPOXY RESIN.

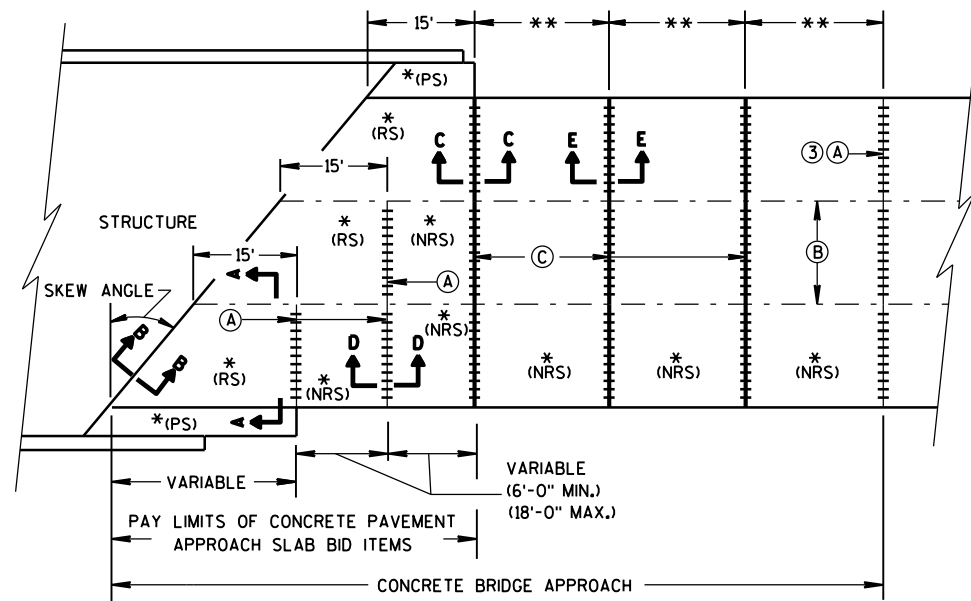


ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

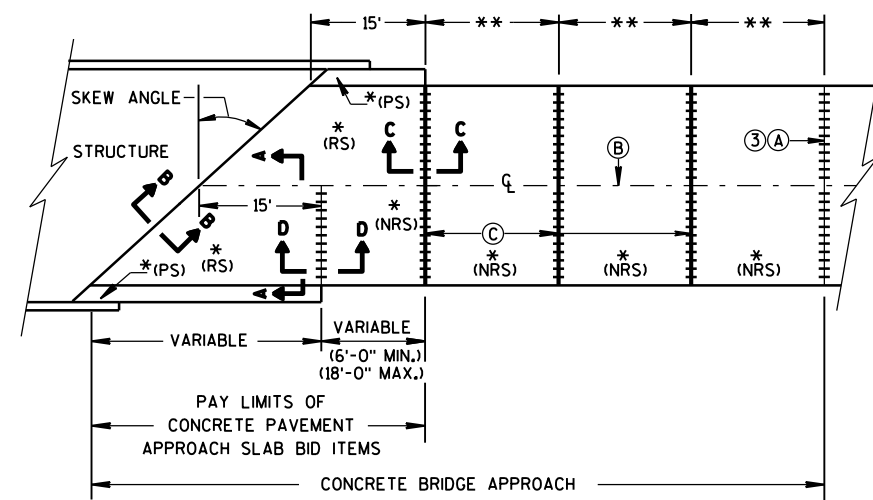
**NAME PLATE
(STRUCTURES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

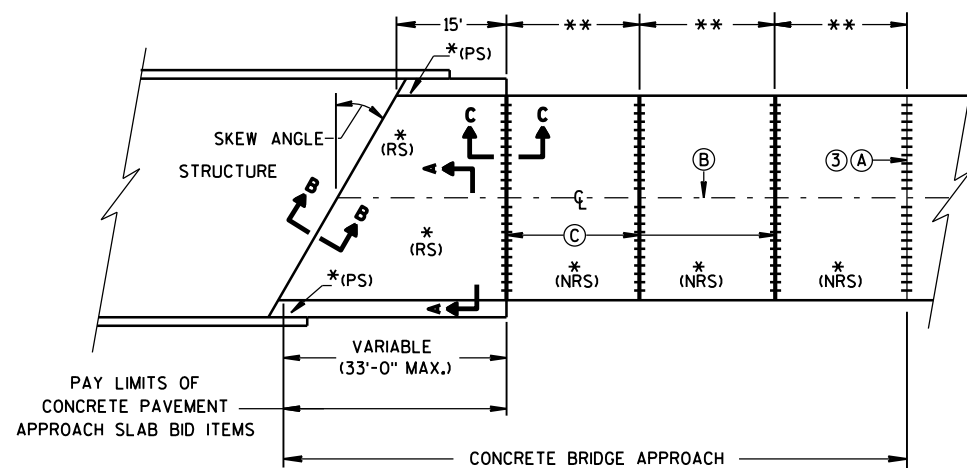
APPROVED
3/26/10
DATE
/S/ Scot Becker
CHIEF STRUCTURAL DEVELOPMENT ENGINEER
FHWA



SKewed APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS > 30°
(PAVEMENT WIDTH ≤ 30')

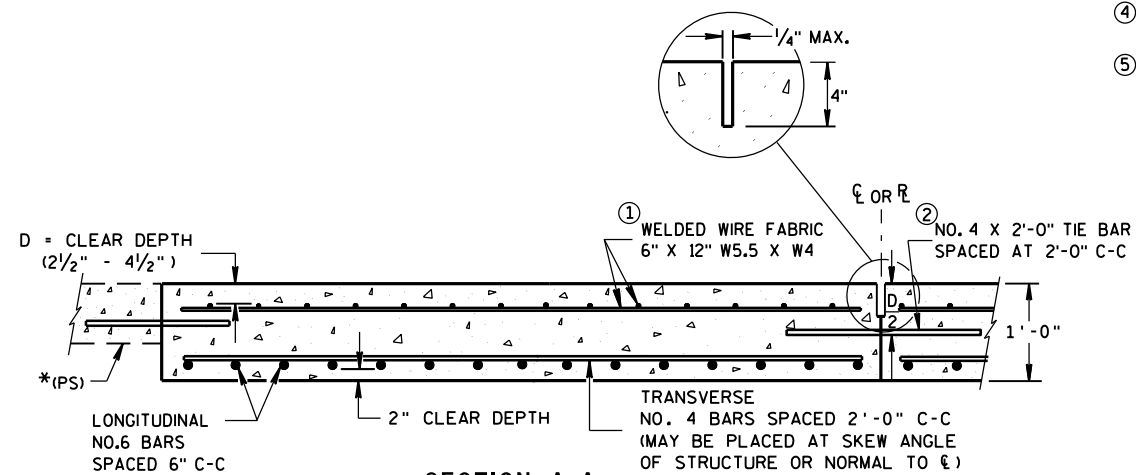


SKEWS ≤ 30°
(PAVEMENT WIDTH ≤ 30')
APPROACH SLAB AND ADJACENT PAVEMENT

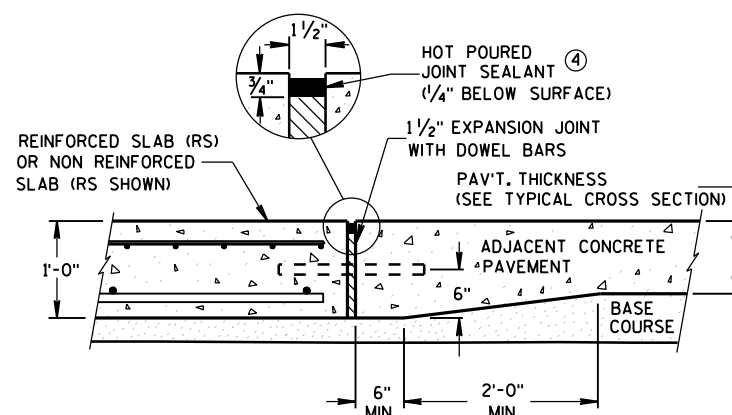
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER: CONCRETE PAVEMENT, OR CONCRETE SURFACE DRAIN
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

**STANDARD TRANSVERSE JOINT SPACING
(SEE SDD 13C4, SDD 13C11, & SDD 13C13)
***STANDARD DOWEL BAR DIAMETER
(SEE SDD 13C11, & SDD 13C13)

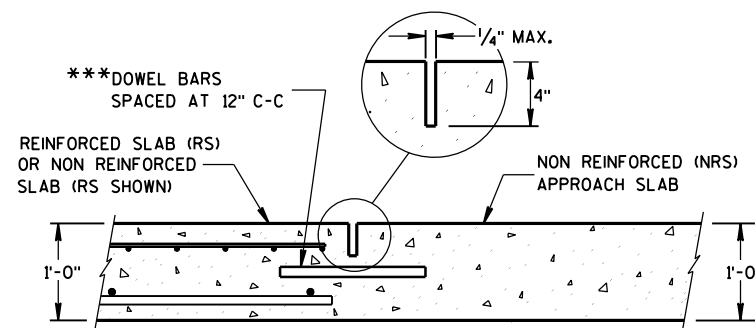
- (A) STANDARD CONTRACTION JOINT NORMAL TO R_L OR R_C
(B) STANDARD LONGITUDINAL JOINT AND TIE BARS.
(C) 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO R_L OR R_C



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



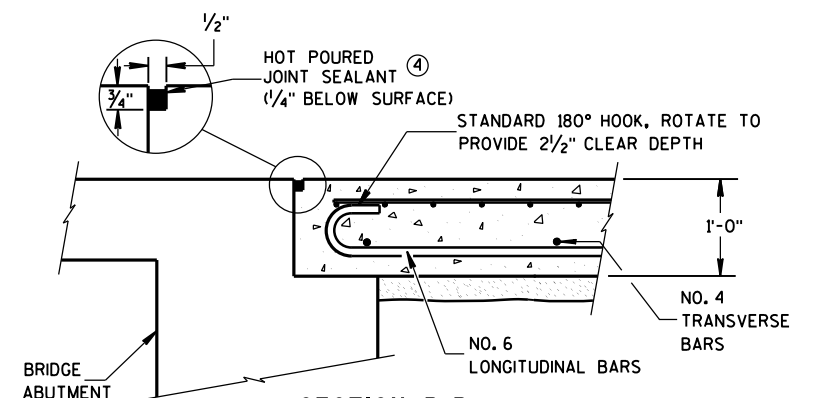
SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

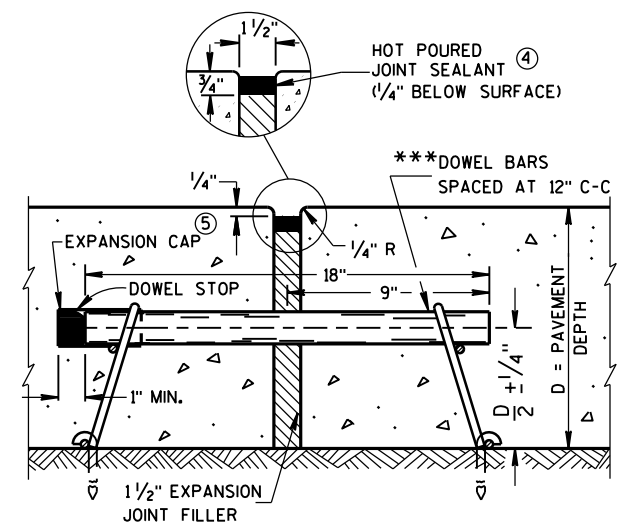
THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

- THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.
- THE CONTRACTOR MAY OMIT TIE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.
- DO NOT DOWEL A CONTRACTION JOINT THAT ABUTS AN HMA PAVEMENT.
- USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.
- PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



SECTION E-E
EXPANSION JOINT

CONCRETE BRIDGE
APPROACH

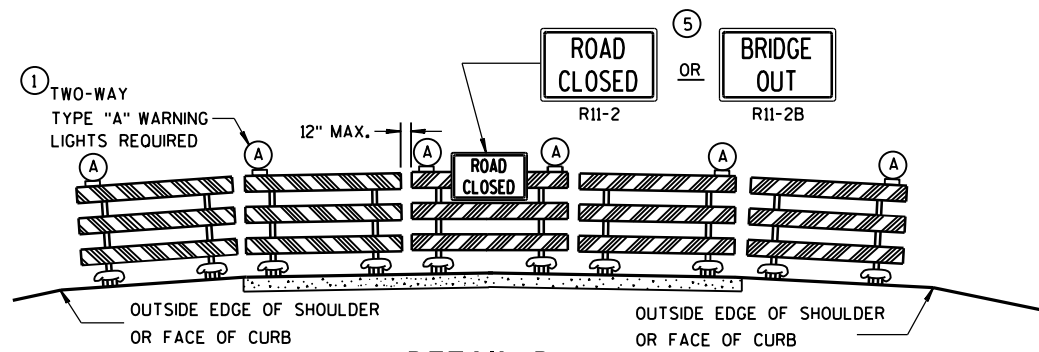
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

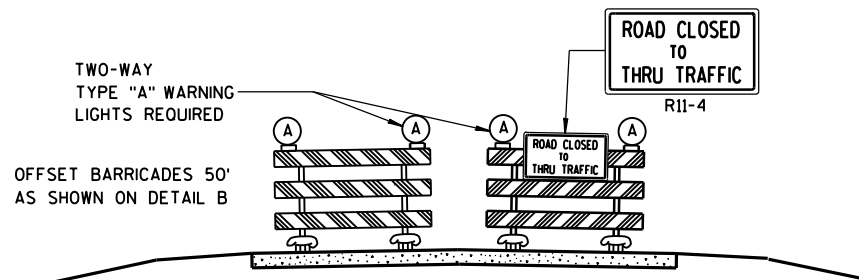
June, 2014
DATE

FHWA

/S/ Deb Bischoff
PAVEMENT POLICY & DESIGN ENGINEER



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2-SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

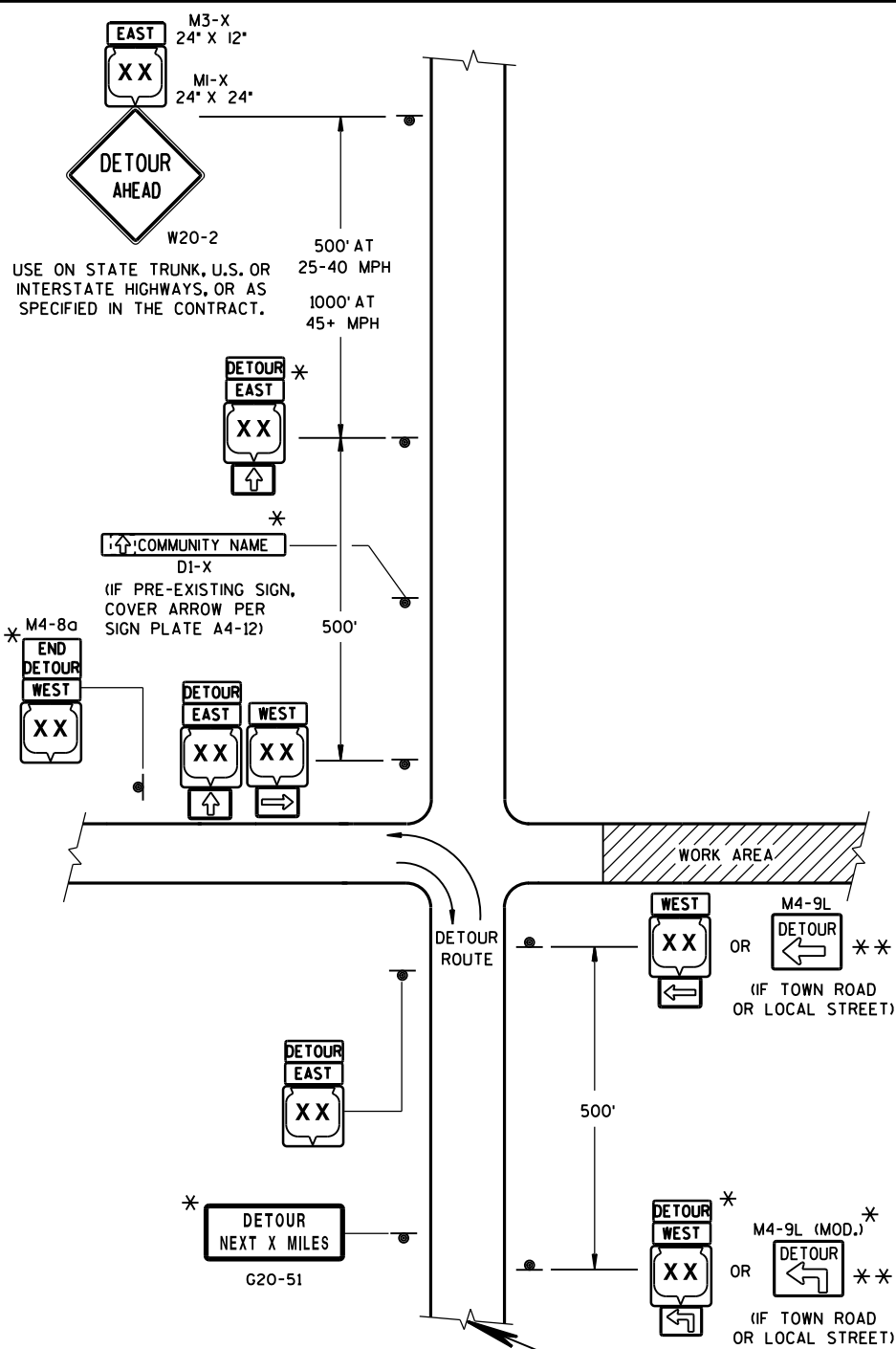
"WO AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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

- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
8/2013 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN
FHWA	



LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- M4-8
M3-X
- MI-4
MI-5A
MI-6
- M05-1
M06-1
M06-1

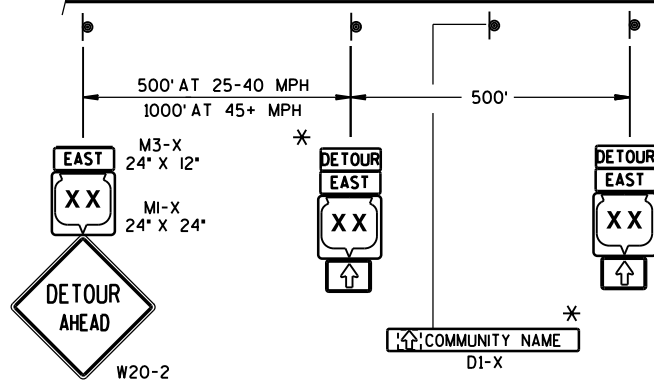
SEE SPECIFIC PROJECT DETOUR
SIGNING DETAIL SHEETS AND
DETAIL A OR B ON SDD 15C2-SHEET "a"

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

MATCH POINT

DETAIL F
DETOUR SIGNING

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



GENERAL NOTES

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

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

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

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

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

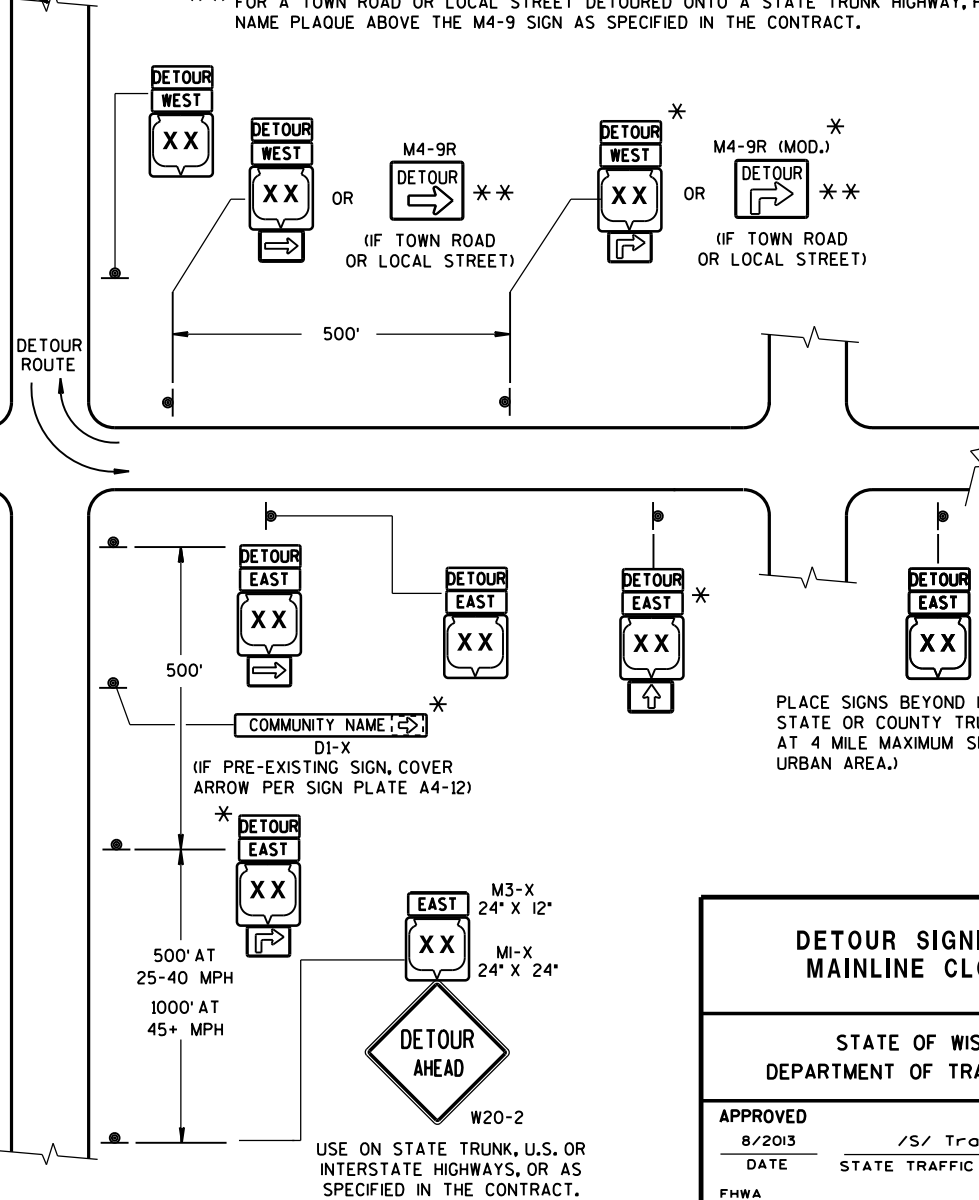
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

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

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

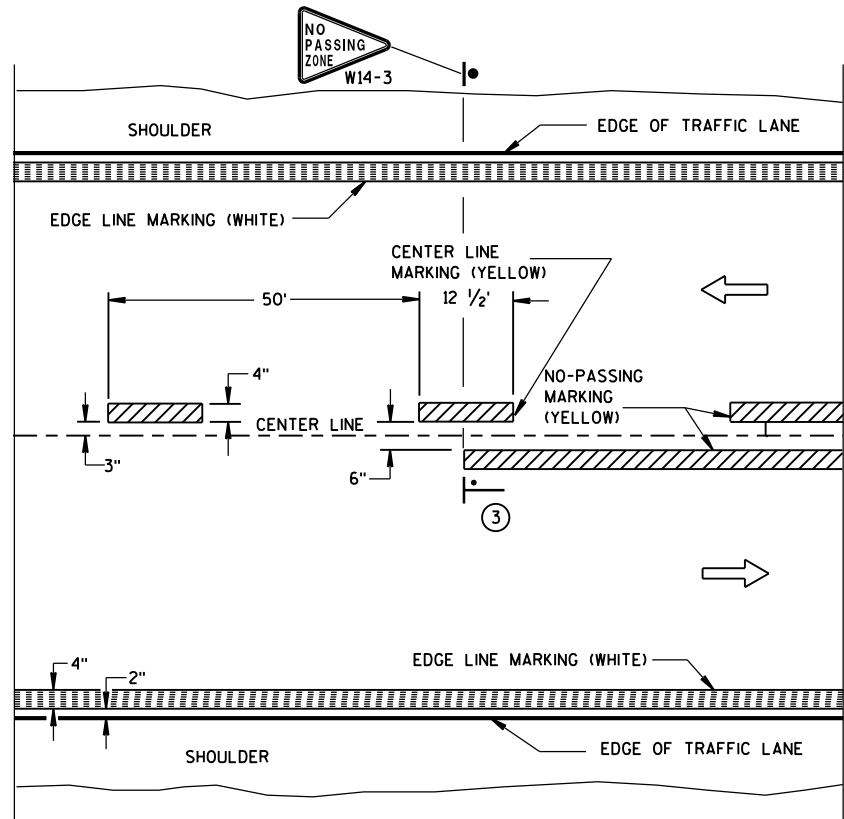
** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



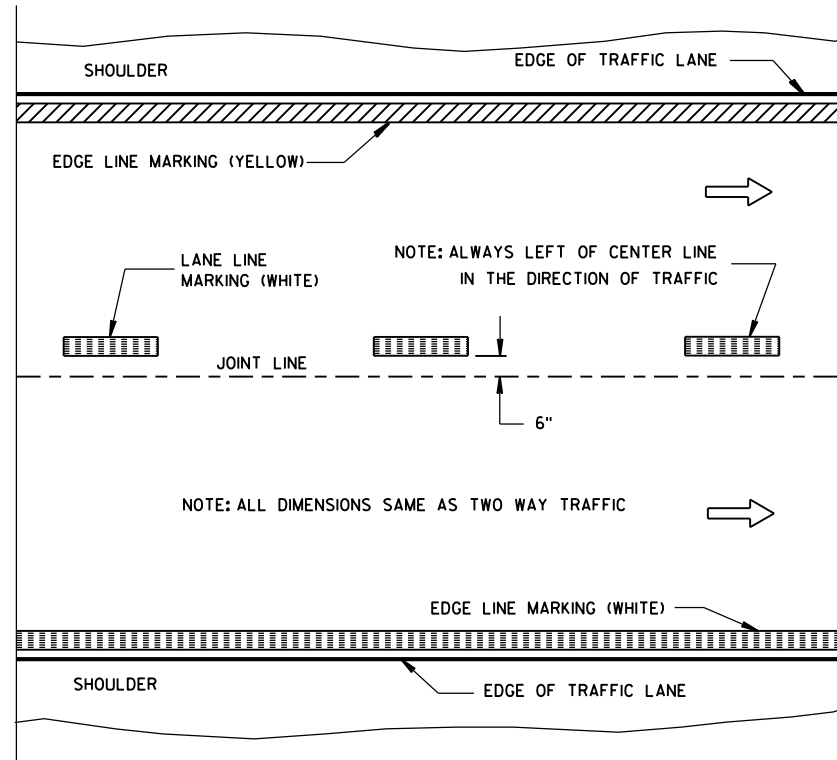
DETOUR SIGNING FOR
MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA

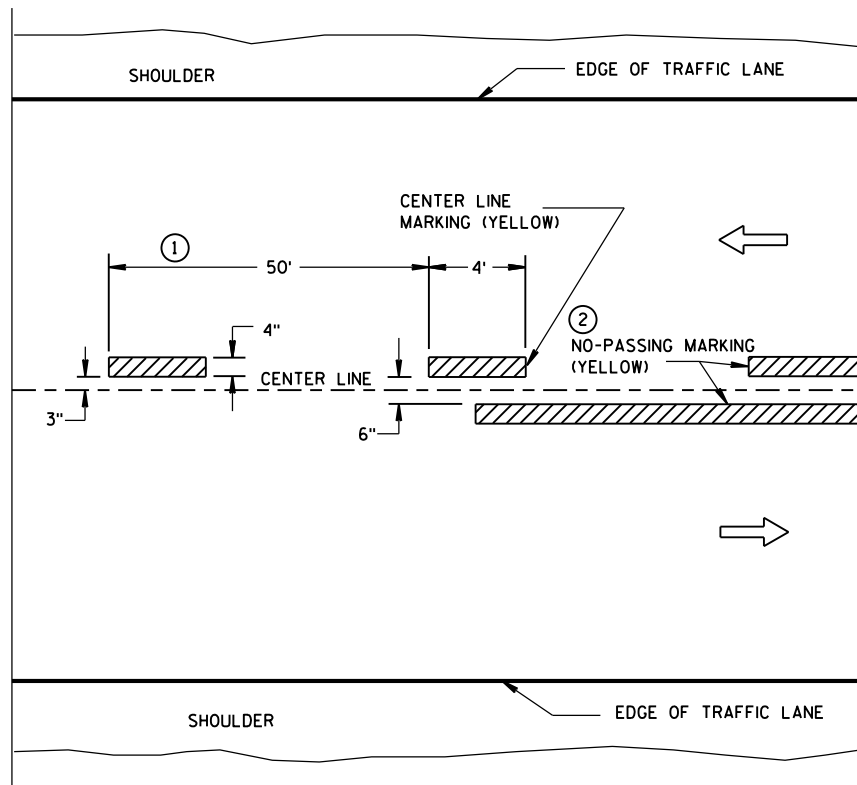


TWO WAY TRAFFIC

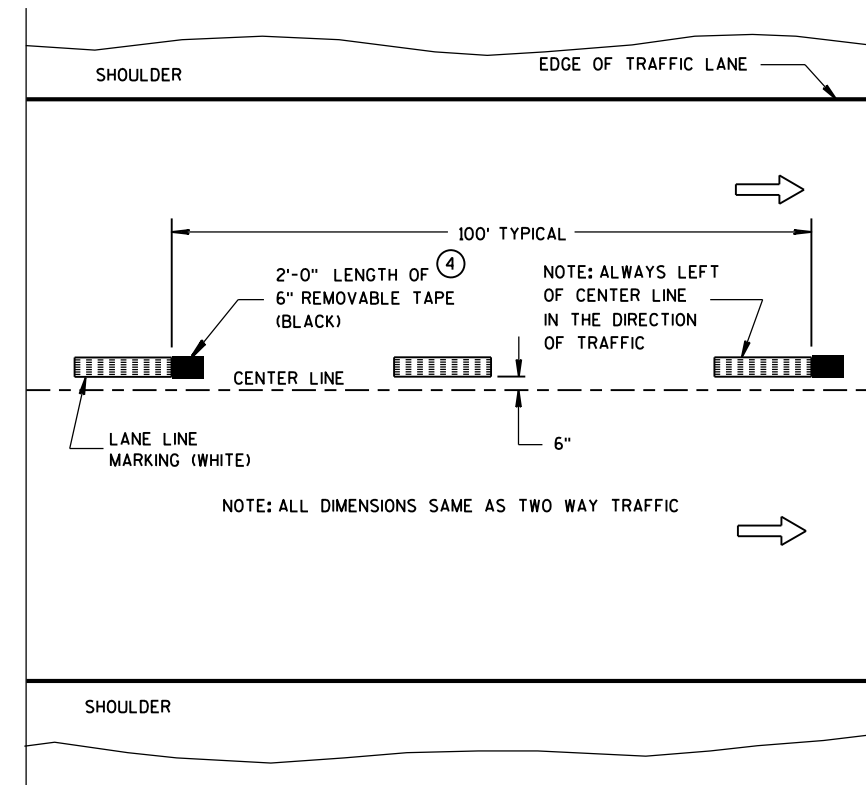


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

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

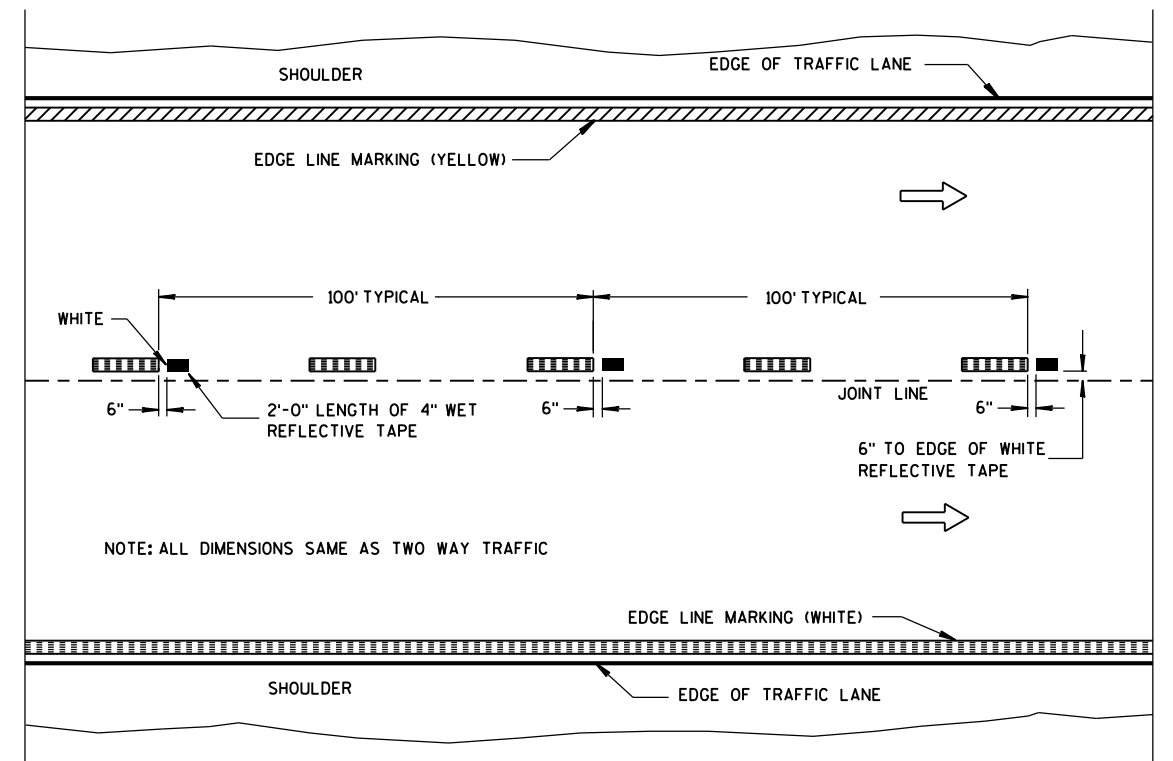
GENERAL NOTES

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

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

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



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

LEGEND

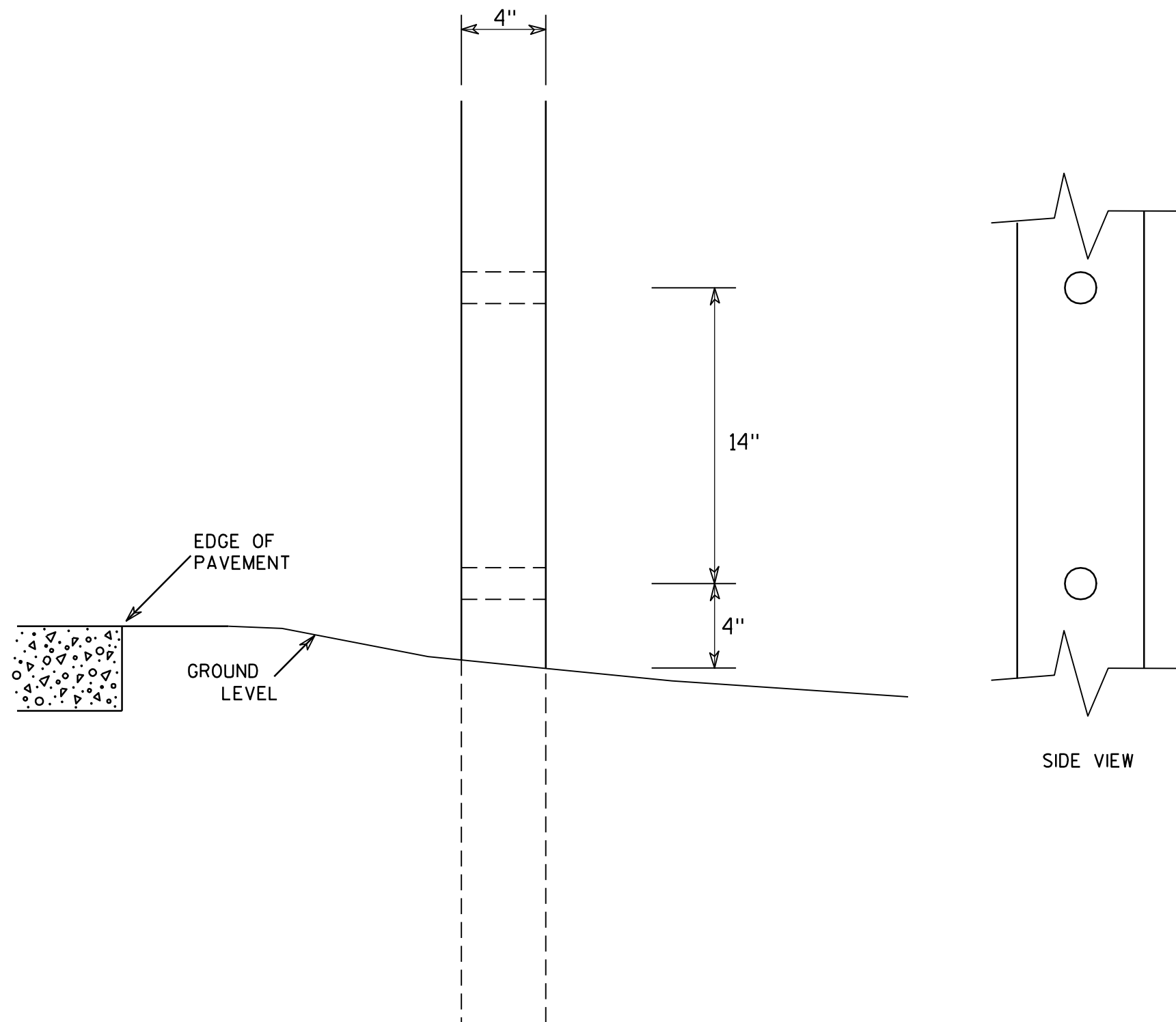
- "T" MARKING
- POST MOUNTED SIGN

PAVEMENT MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5-13-2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER
FHWA

7

GENERAL NOTES

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

7

**4 X 6 WOOD POST
MODIFICATIONS**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

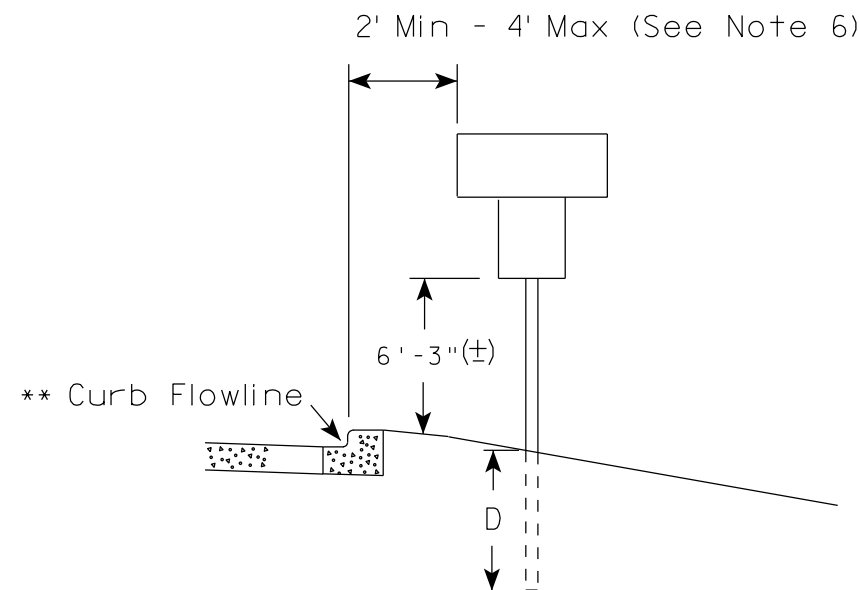
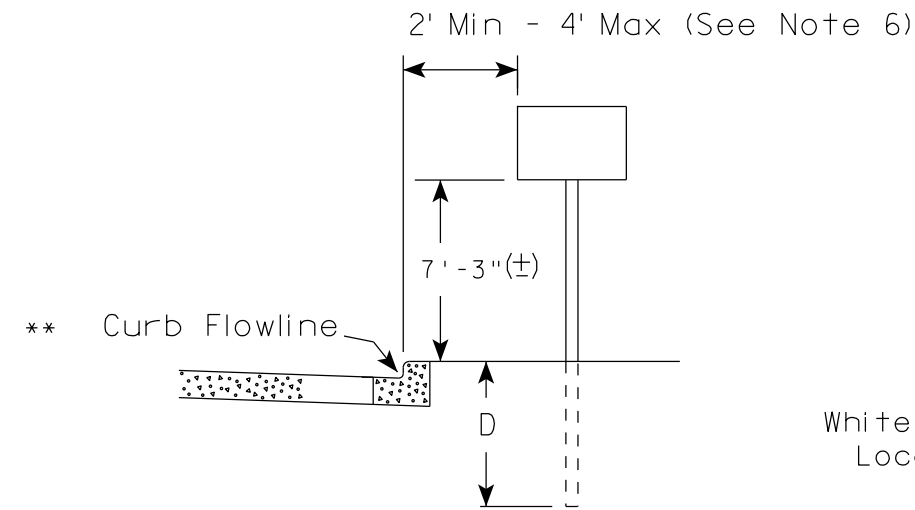
HWY:

COUNTY:

SHEET NO:

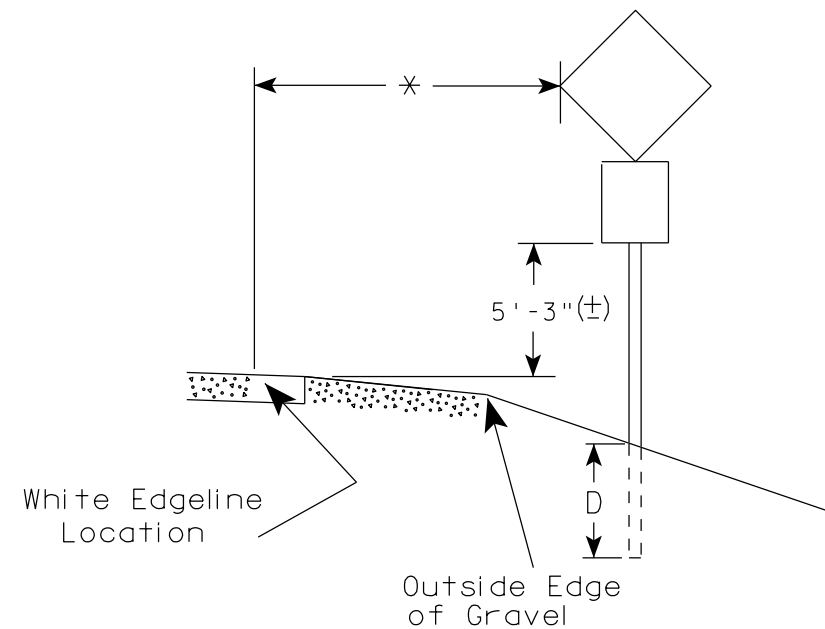
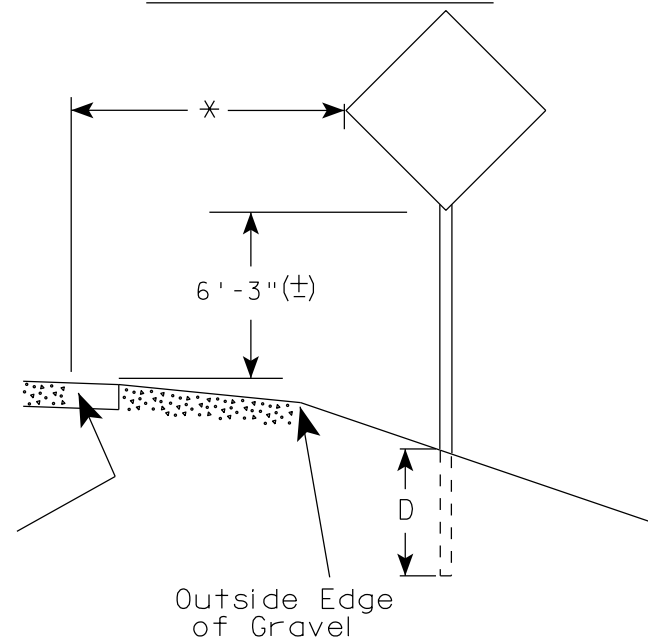
E

URBAN AREA



White Edgeline Location

RURAL AREA (See Note 2)



POST EMBEDMENT DEPTH

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

×× 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.

GENERAL NOTES

1. Signs wider than 4 feet, 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. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding 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" (±).

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 11/12/14

PLATE NO. A4-3.19

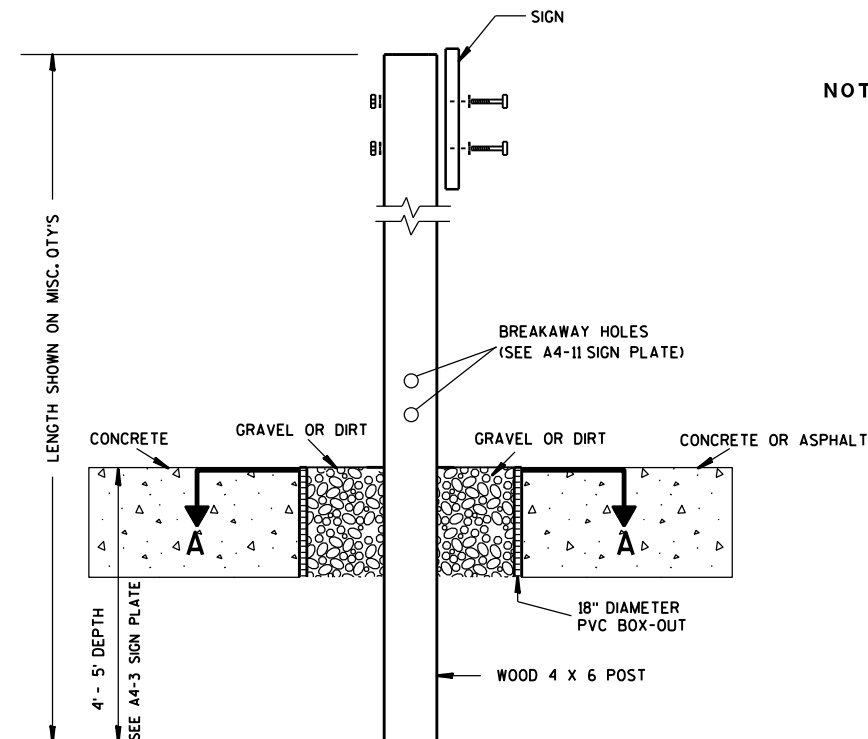
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

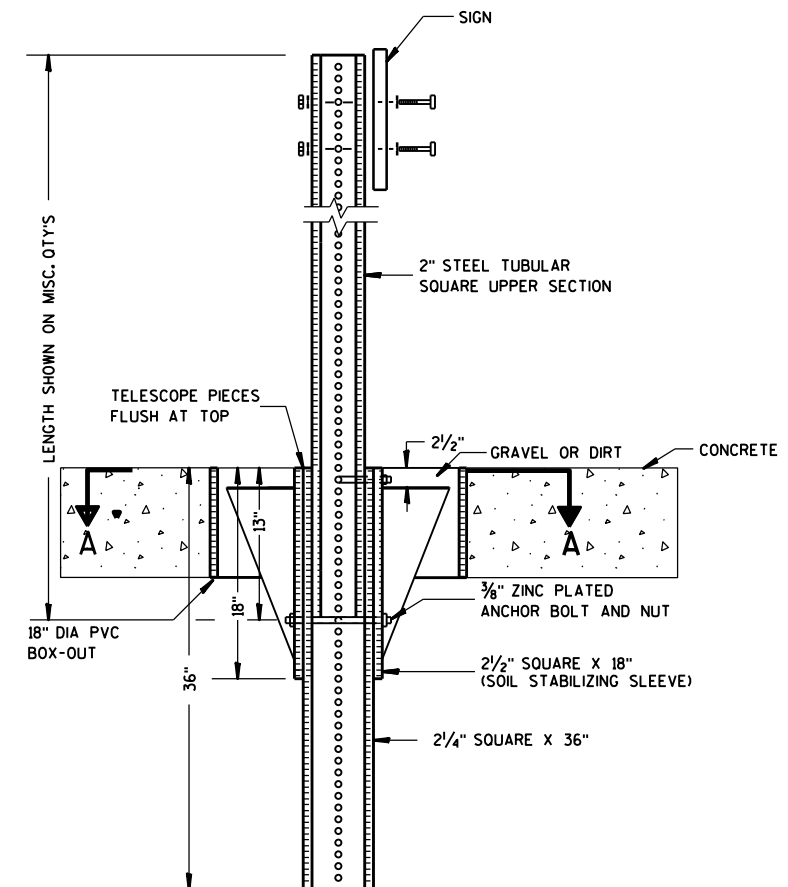
E



ELEVATION VIEW

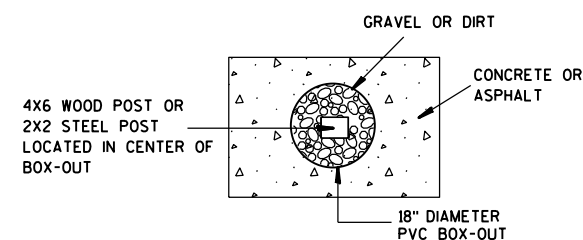
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

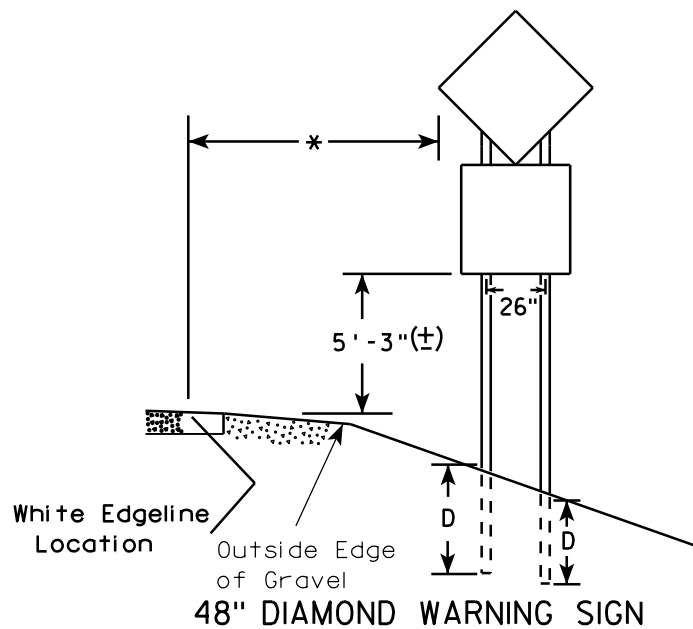
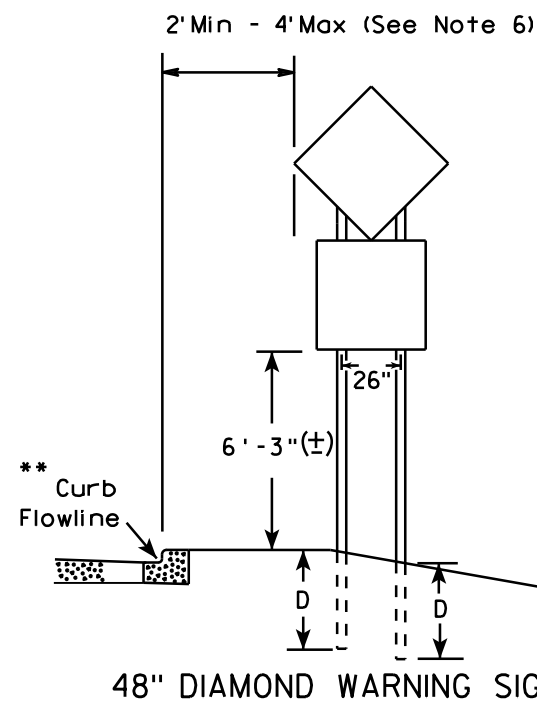
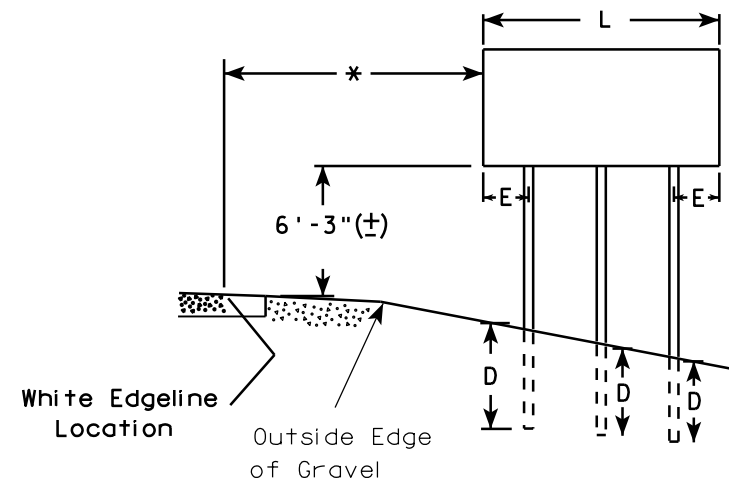
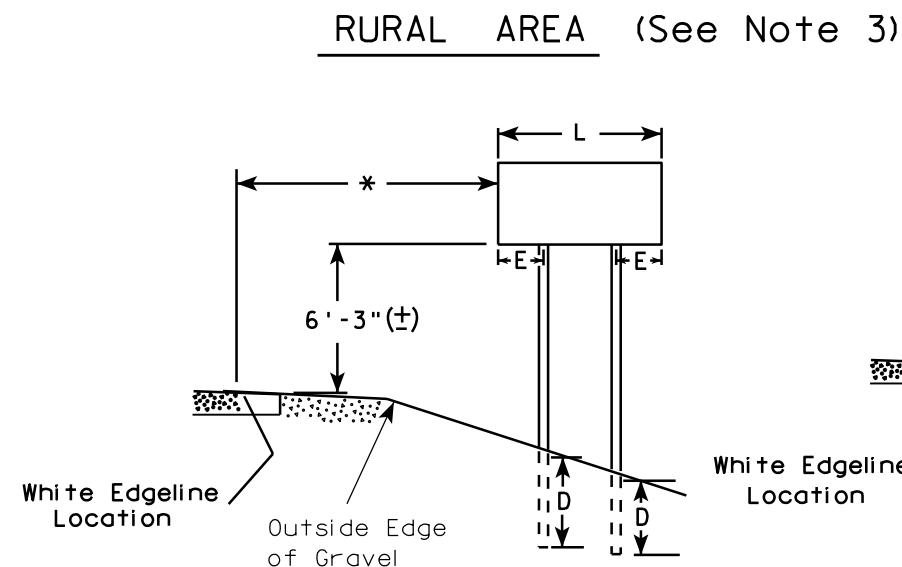
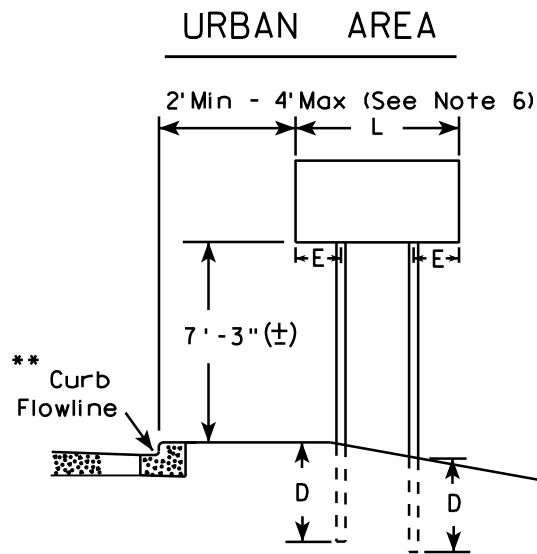
FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST
BOX-OUTS
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



- GENERAL NOTES**
1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
 2. See tables below for required number of posts.
 3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
 4. The (±) tolerance for mounting height is 3 inches.
 5. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
 6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
 7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
 8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

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

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

*** See A4-3 sign plate for signs 4' or less in width or 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 120"	L/5

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

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

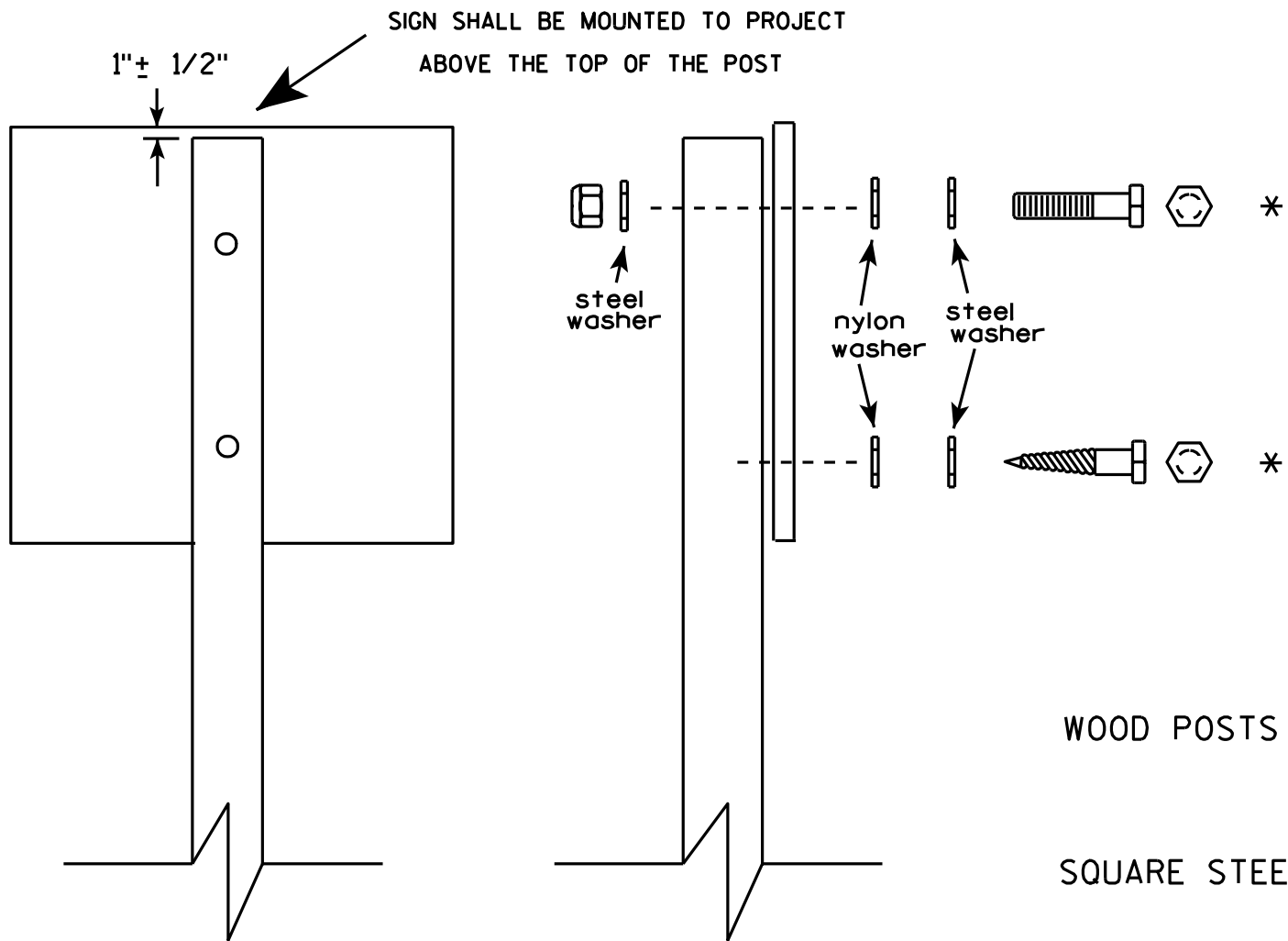
Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/12/14 PLATE NO. A4-4.13

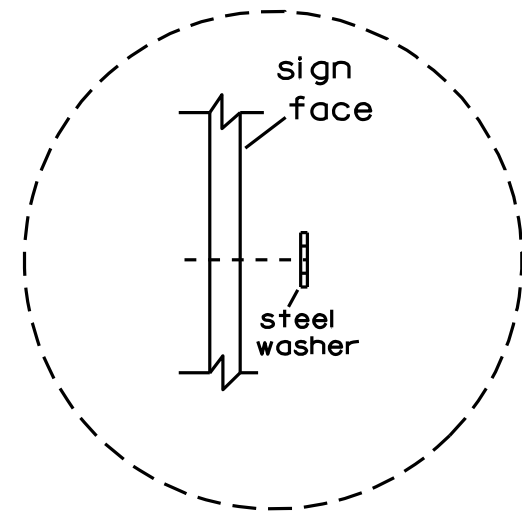


Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

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

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

- WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts
- SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts
RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.

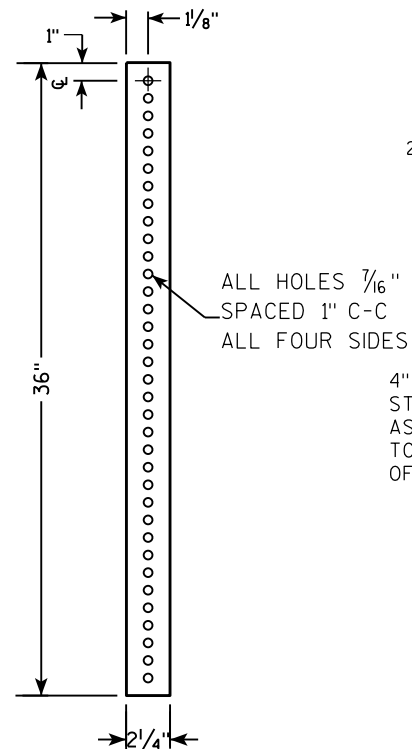


Washer Placement when Sign Has Other Than Type H or Type F Face

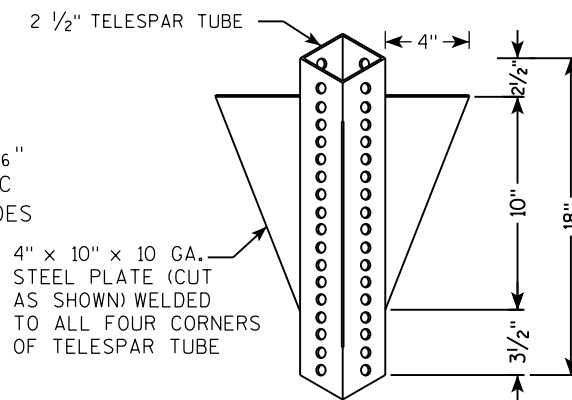
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

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

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



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



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

LENGTH SHOWN ON MISC. QTY'S

TELESCOPE PIECES FLUSH AT TOP

2" STEEL TUBULAR SQUARE UPPER SECTION

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

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

1"

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

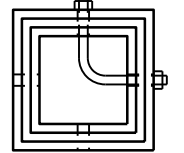
2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)

2 1/4" SQUARE X 36"

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

SIGN

3/8" ZINC PLATED CORNER
ANCHOR BOLT AND NUT



DIRECTION
OF TRAFFIC

SECTION A-A

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

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

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

PROJECT NO:

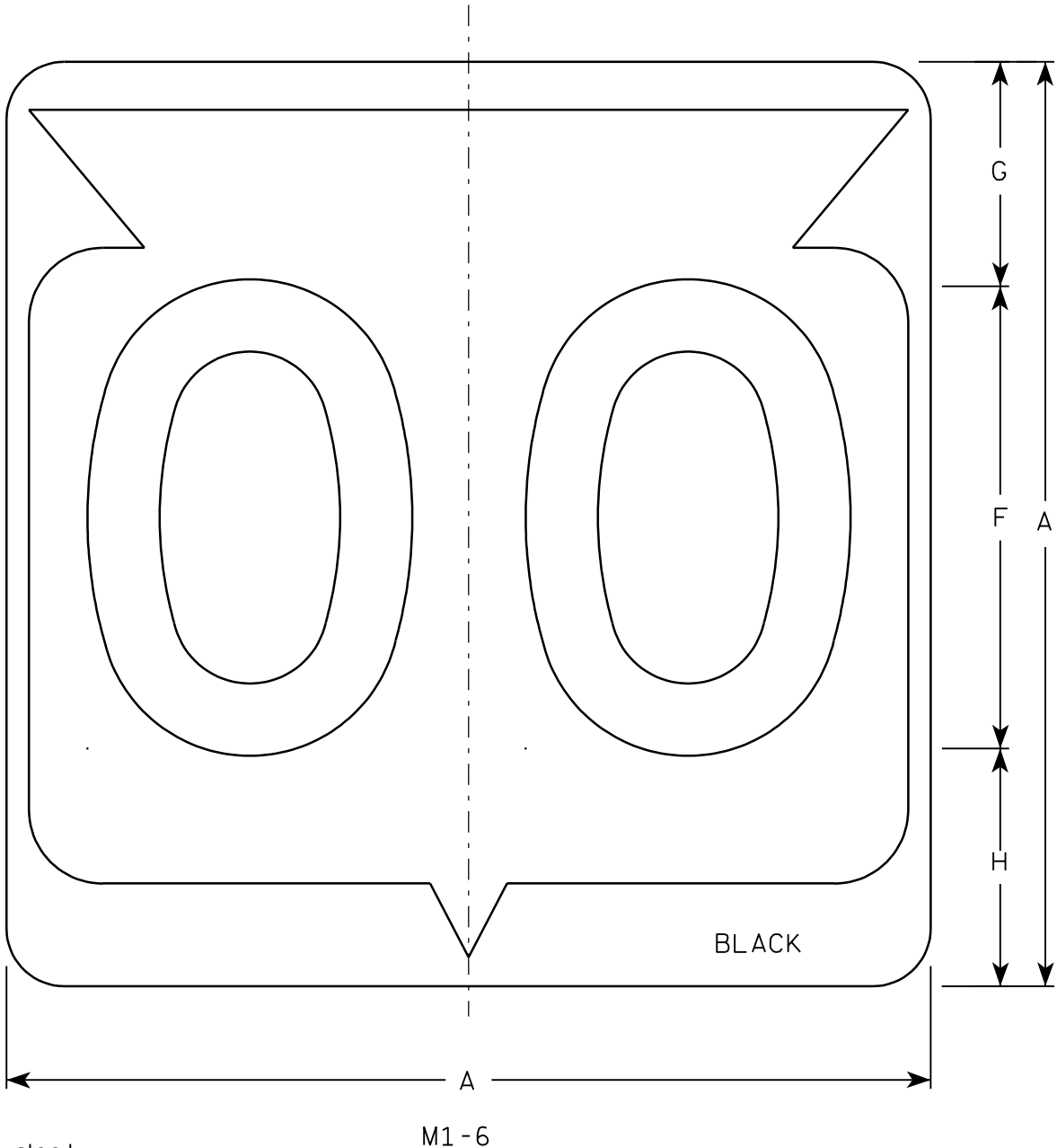
HWY:

COUNTY:

SHEET NO:

11

7



Metric equivalent
for this sign is:

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

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

PROJECT NO:

HWY:

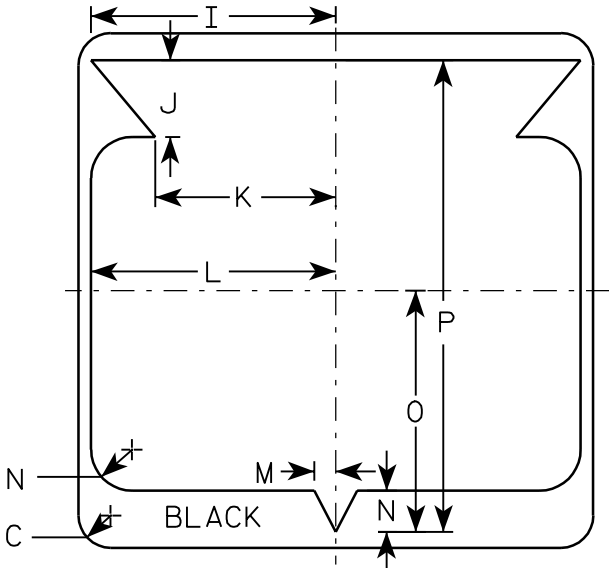
COUNTY:

SHEET NO:

E

NOTES

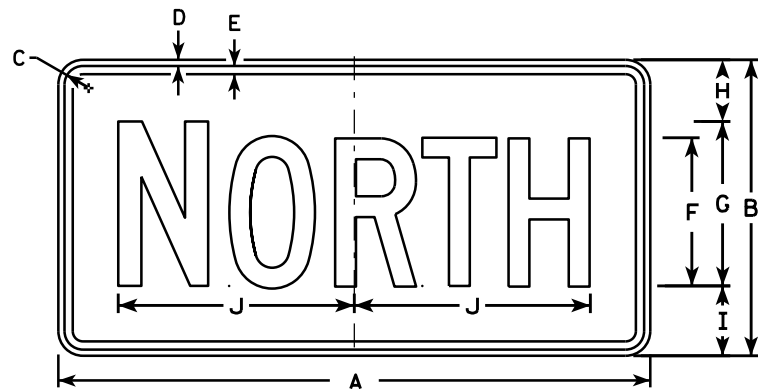
- Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - White & Black - See Note 6
Message - Black
- Message Series - See note 5
- Corners may be square or rounded when base material is plywood but borders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



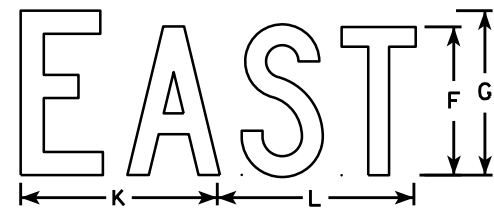
STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

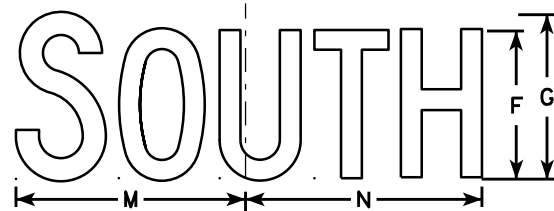
APPROVED
Chester J. Spang
for State Traffic Engineer
DATE 3/20/02 PLATE NO. M1-6.9



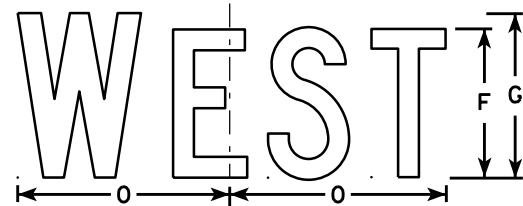
M3-1
MK3-1
MM3-1
MN3-1



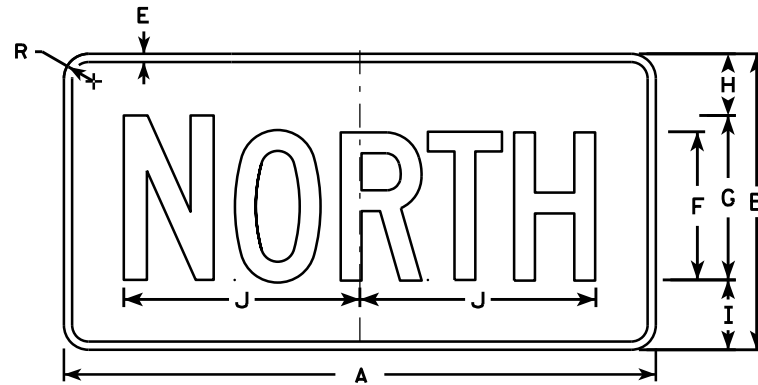
M3-2
MK3-2
MM3-2
MN3-2



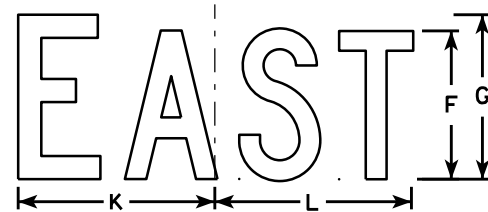
M3-3
MK3-3
MM3-3
MN3-3



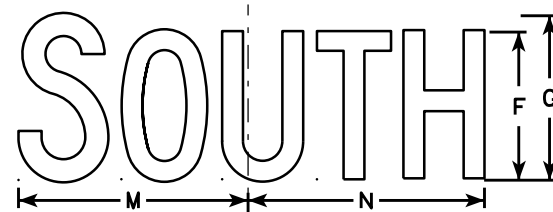
M3-4
MK3-4
MM3-4
MN3-4



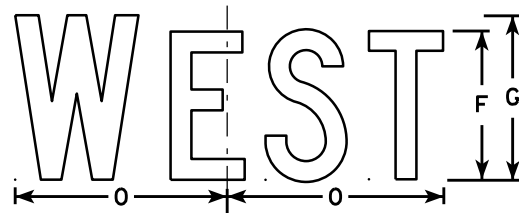
MB3-1



MB3-2



MB3-3



MB3-4

NOTES

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

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

STANDARD SIGNS
M3-1 thru M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 6/30/14 PLATE NO. M3-1.13

PROJECT NO:

HWY:

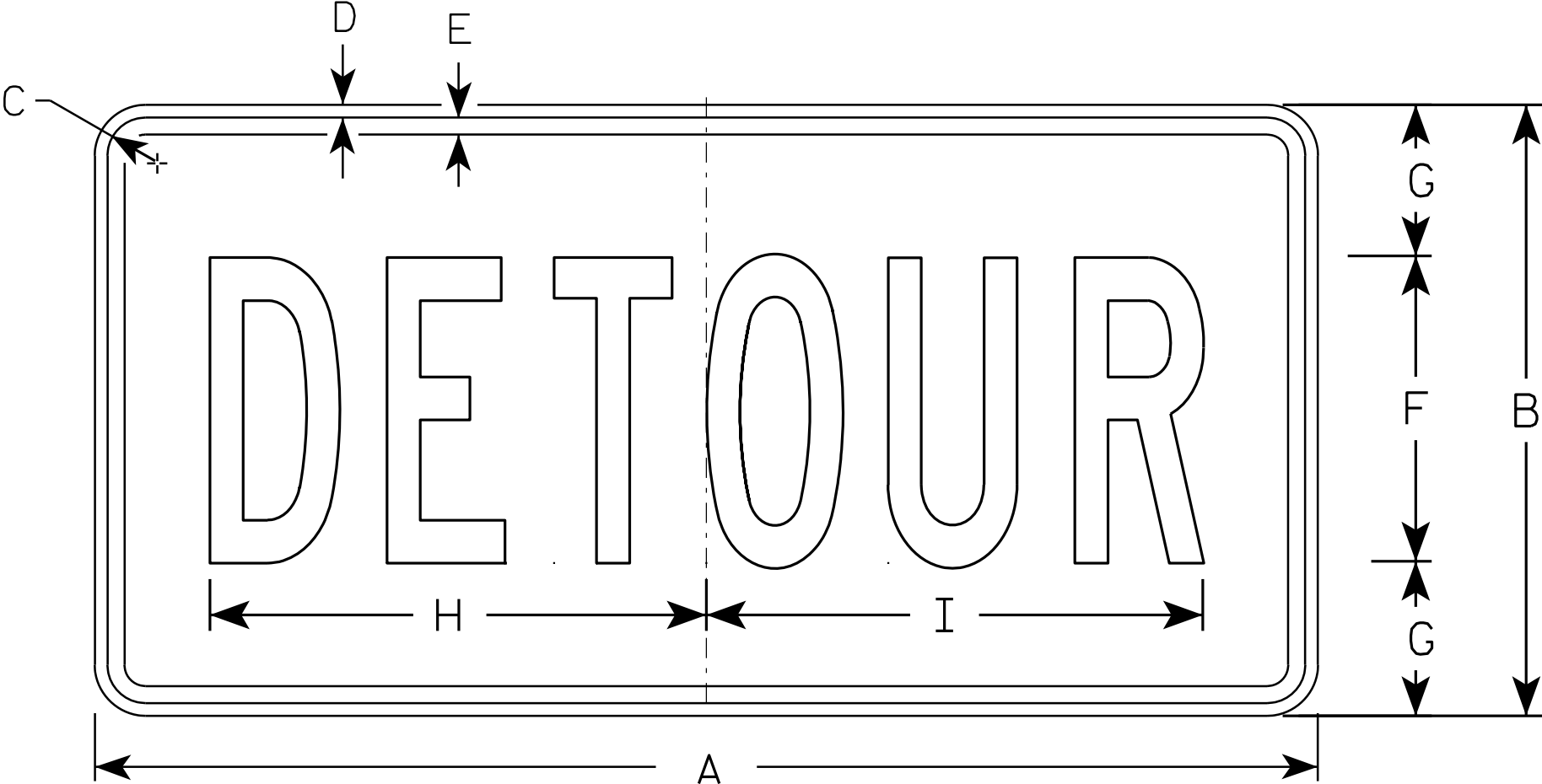
COUNTY:

SHEET NO:

E

NOTES

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



M4 - 8

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

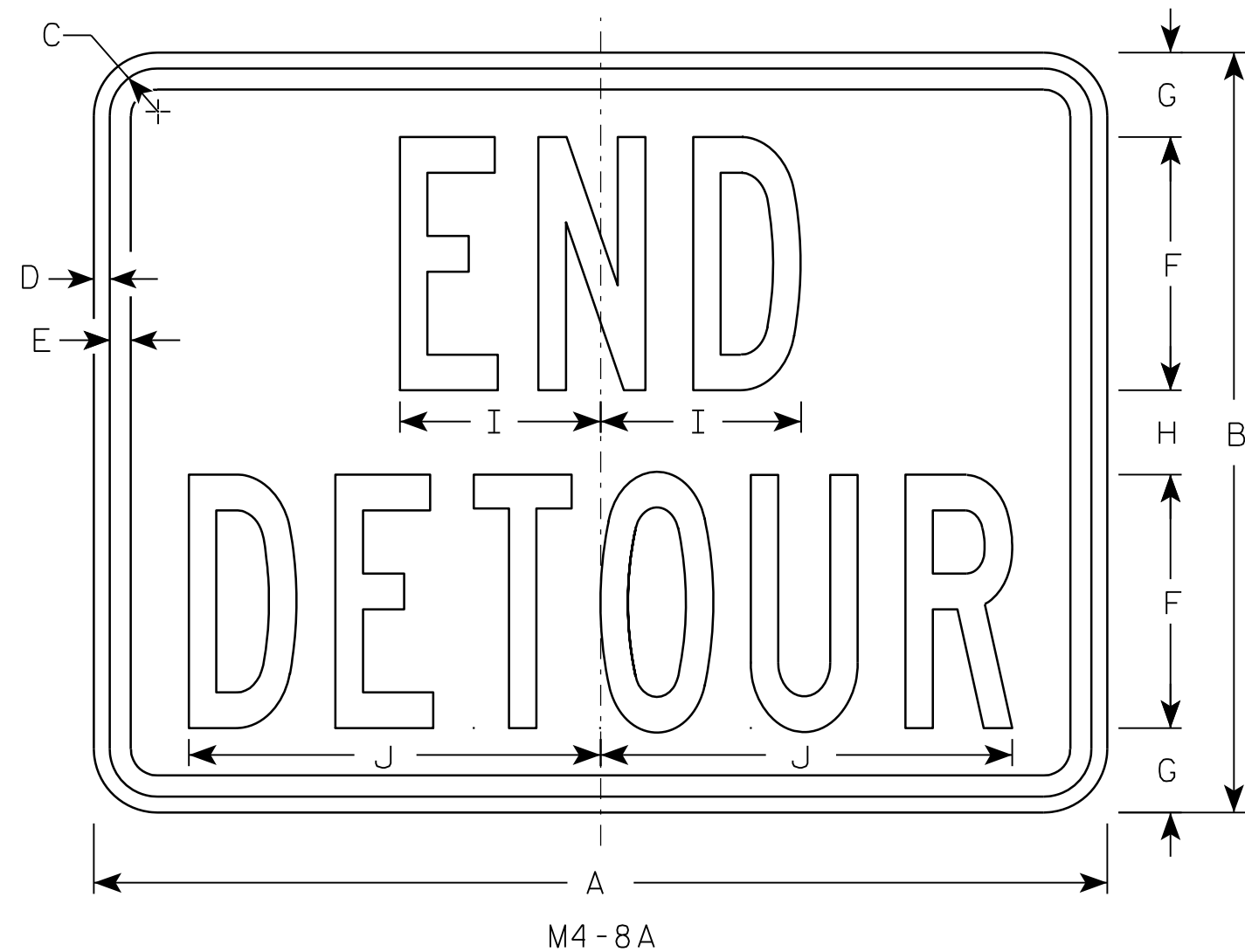
STANDARD SIGN
M4 - 8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

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

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

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

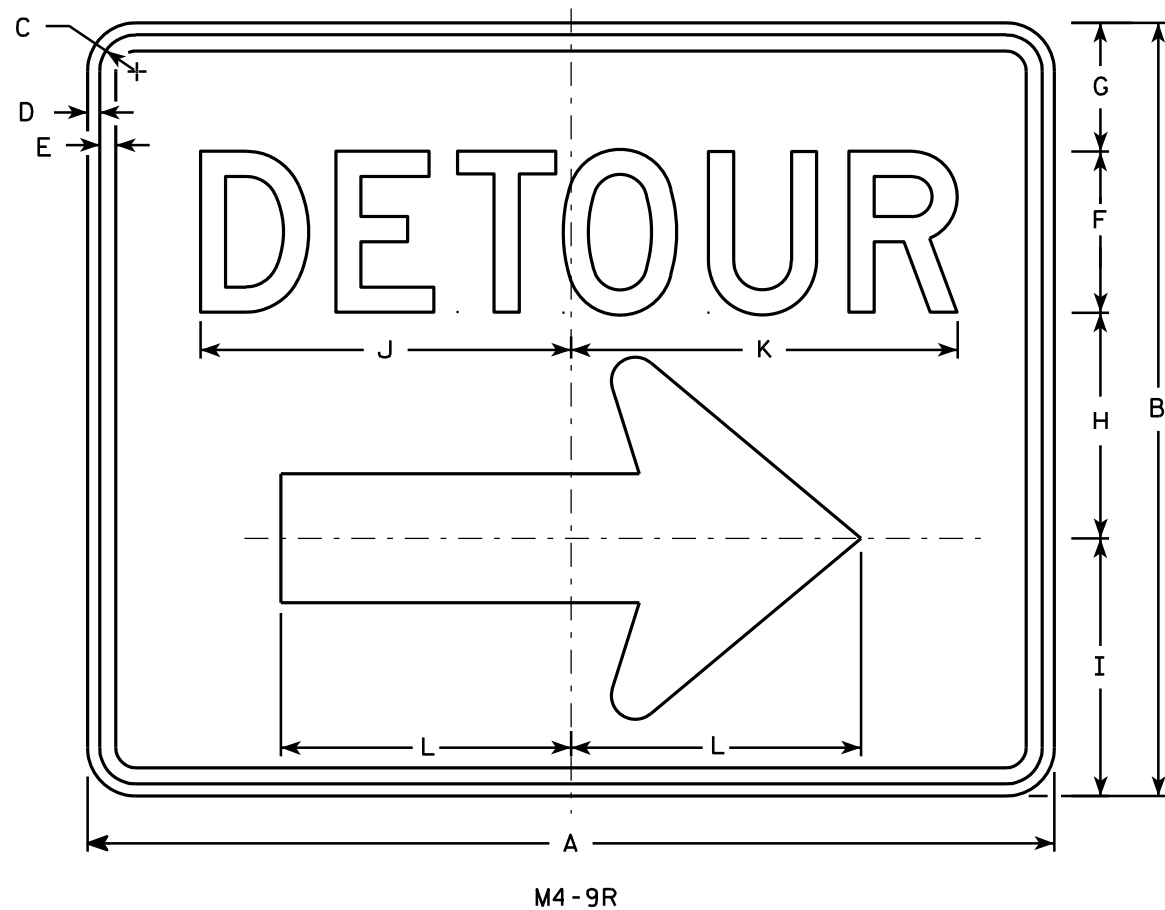
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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STANDARD SIGN
M4-8A

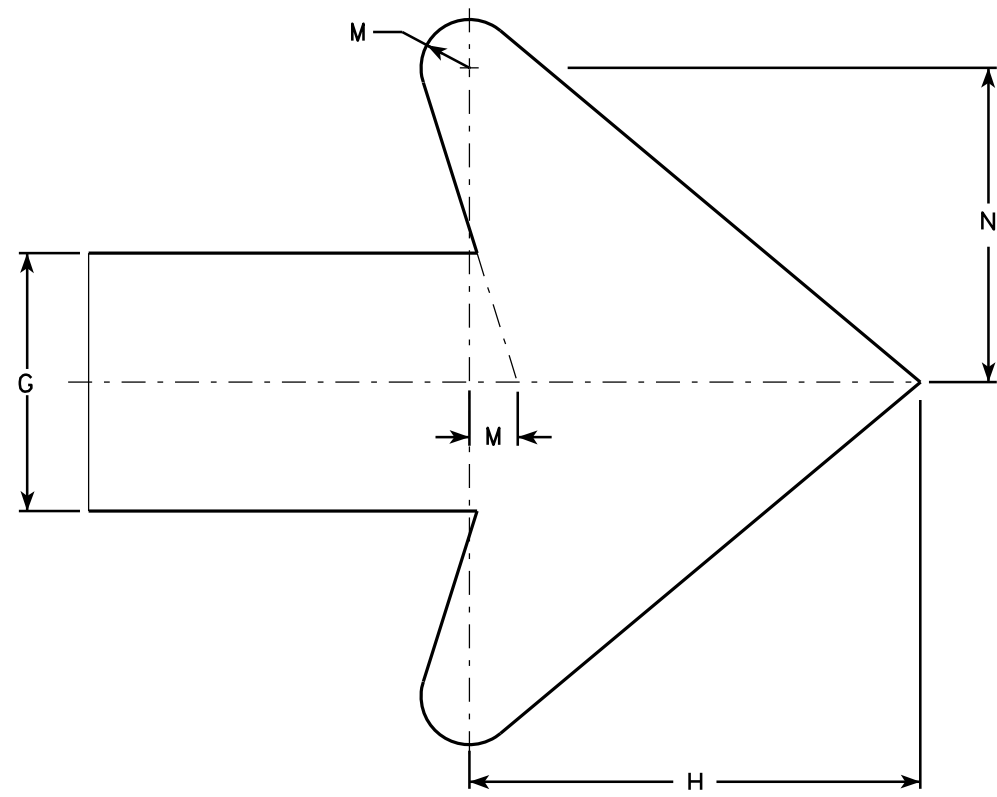
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



- 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 - 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. M4-9L is the same as M4-9R except the arrow is reversed.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0
5	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0

STANDARD SIGN
M4-9 R & L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-9R.4

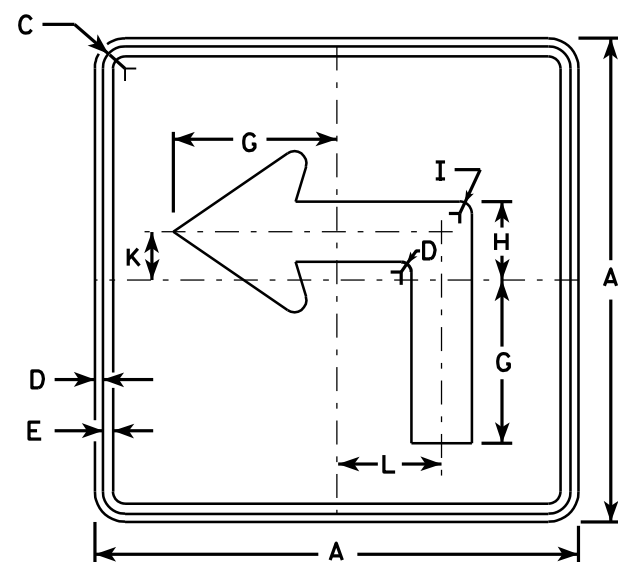
PROJECT NO:

HWY:

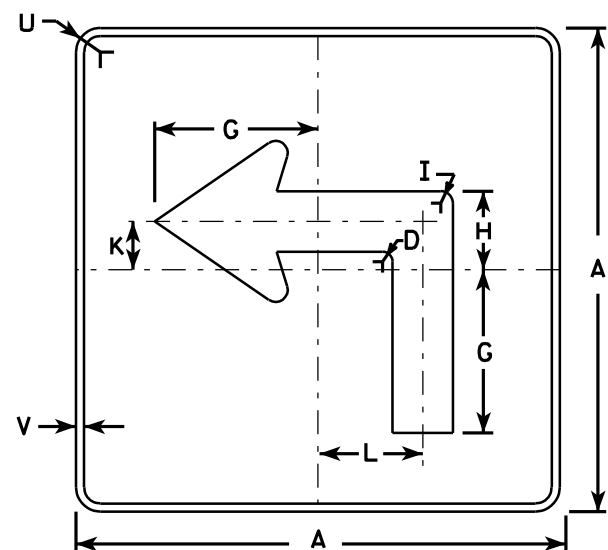
COUNTY:

SHEET NO:

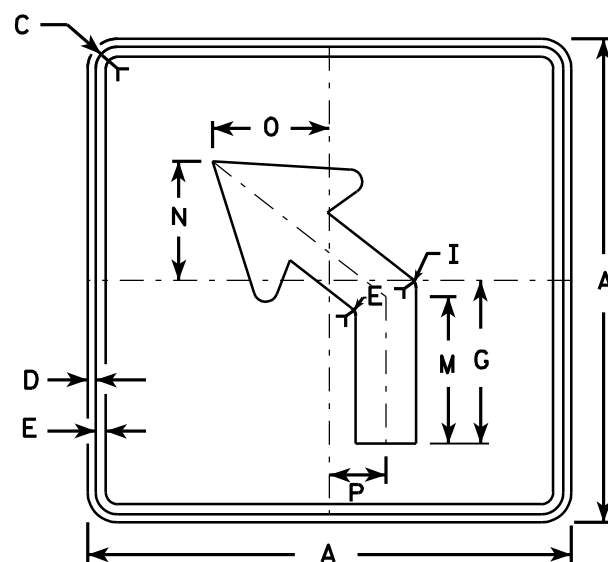
E



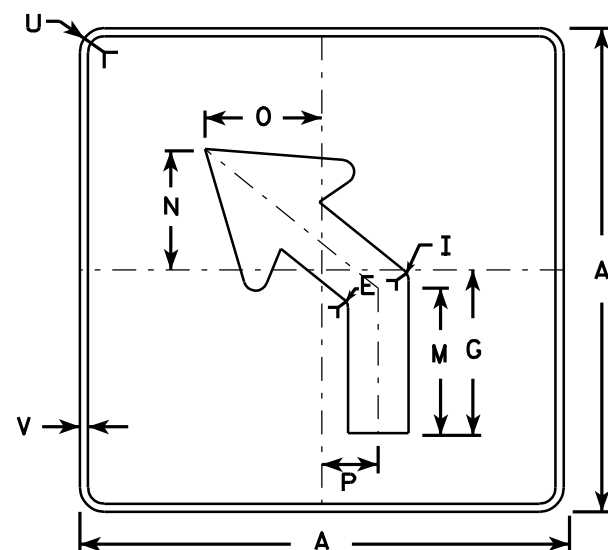
M5-1L
MK5-1L
MM5-1L
M05-1L
MP5-1L
MR5-1L



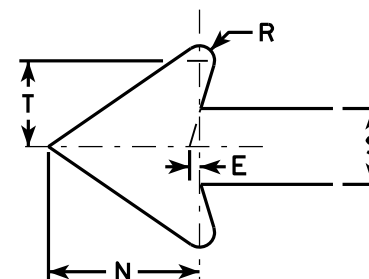
MB5-1L
MG5-1L
MN5-1L



M5-2L
MK5-2L
MM5-2L
M05-2L
MP5-2L
MR5-2L



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



NOTES

- Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M5-1 and M5-2 Background - White - Type H Reflective
Message - Black
MB5-1 and MB5-2 Background - Blue
Message - White - Type H Reflective
MG5-1 and MG5-2 Background - Green
Message - White - Type H Reflective
MK5-1 and MK5-2 Background - Green
Message - White Type H Reflective
MM5-1 and MM5-2 Background - White - Type H Reflective
Message - Green
MN5-1 and MN5-2 Background - Brown
Message - White - Type H Reflective
M05-1 and M05-2 Background - Orange - Type F Reflective
Message - Black
MP5-1 and MP5-2 Background - White - Type H Reflective
Message - Blue
MR5-1 and MR5-2 Background - Brown
Message - Yellow - Type H Reflective
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts right.

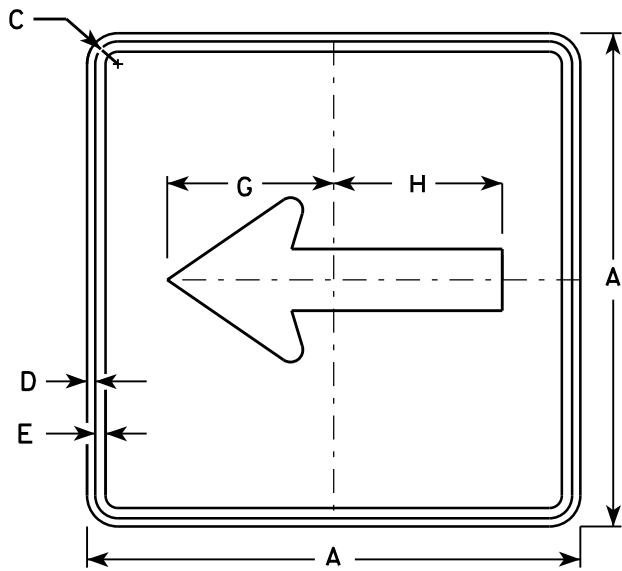
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25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

STANDARD SIGN
M5-1 & M5-2

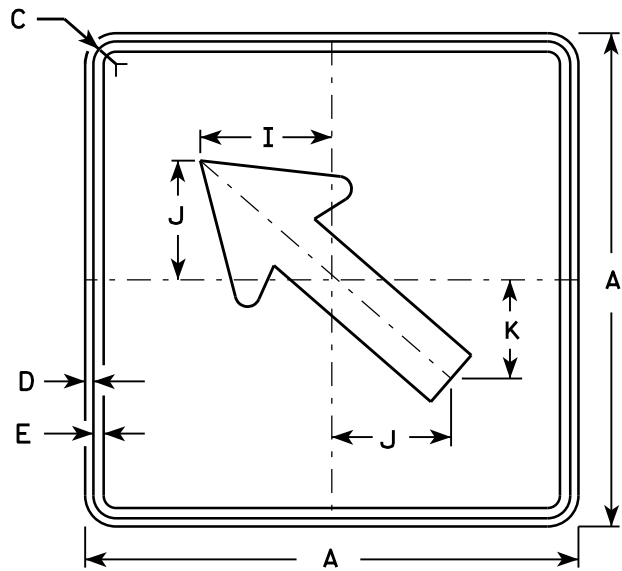
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

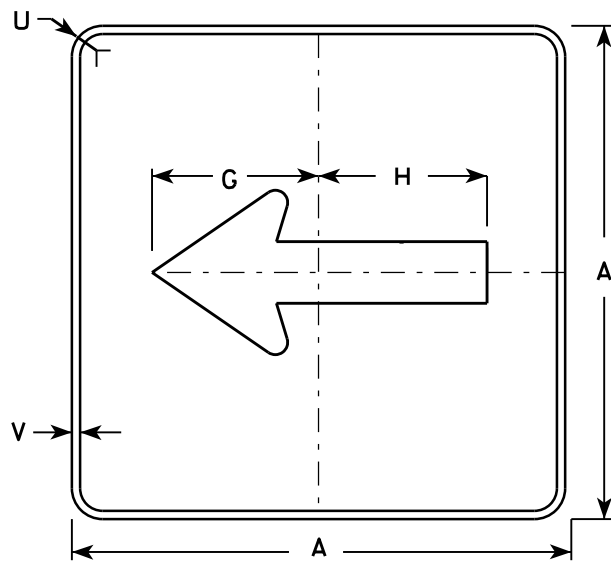
DATE 7/29/13 PLATE NO. M5-1.12



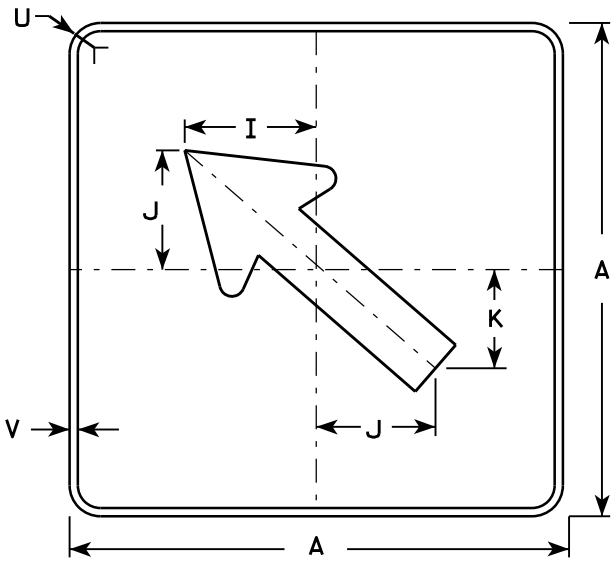
M6 - 1
MK6 - 1
MM6 - 1
MN6 - 1
M06 - 1
MP6 - 1
MR6 - 1



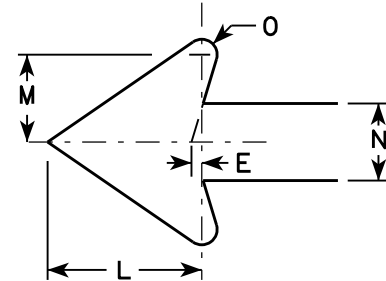
M6 - 2
MK6 - 2
MM6 - 2
MN6 - 2
M06 - 2
MP6 - 2
MR6 - 2



MB6 - 1



MB6 - 2



NOTES

- Signs are Type II - Type H except as Shown
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M6-1 and M6-2 Background - White
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White
MG6-1 and MG6-2 Background - Green
Message - White
MK6-1 and MK6-2 Background - Green
Message - White
MM6-1 and MM6-2 Background - White
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White
M06-1 and M06-2 Background - Orange - Type F Reflective
Message - Black
MP6-1 and MP6-2 Background - White
Message - Blue
MR6-1 and MR6-2 Background - Brown
Message - Yellow

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

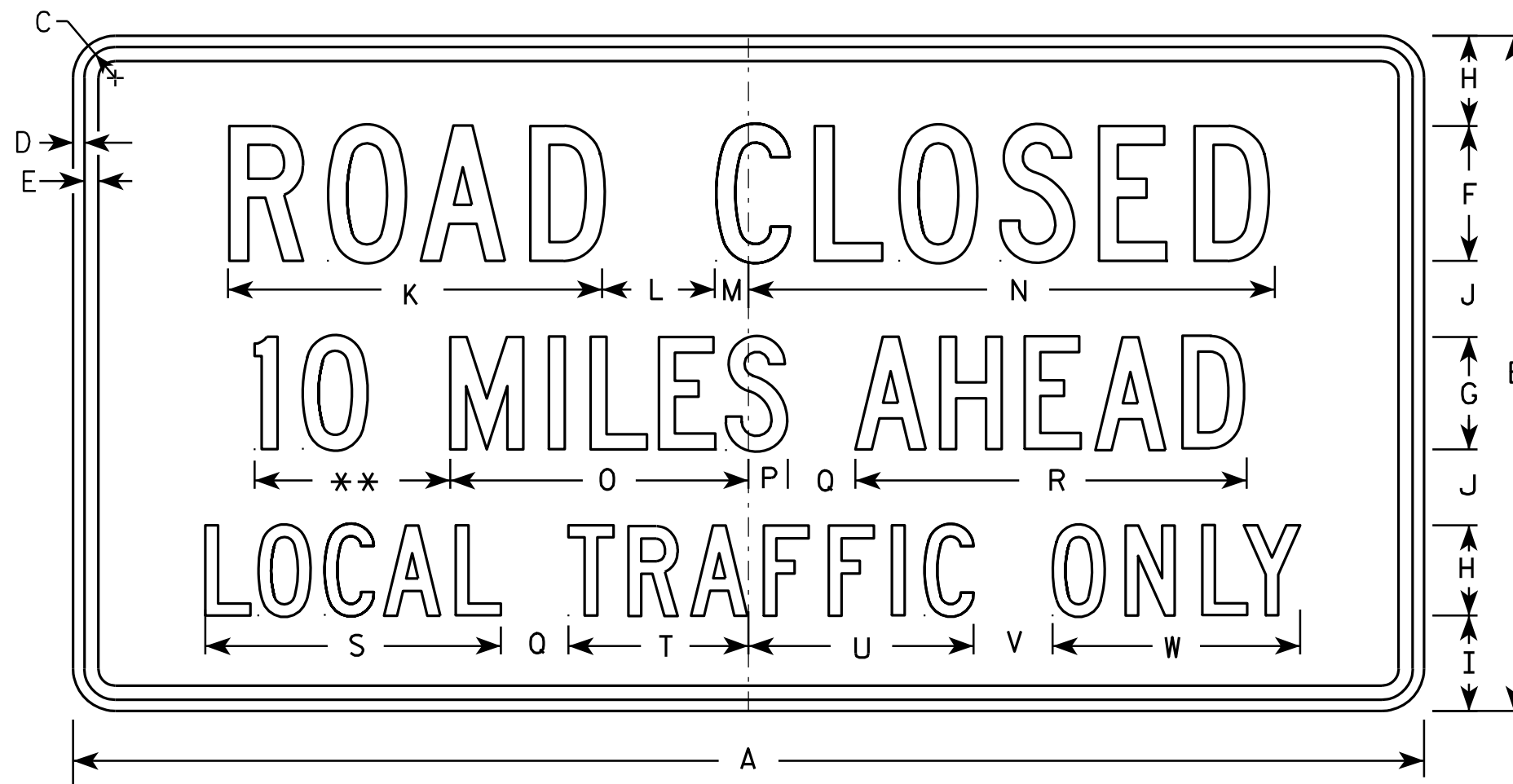
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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STANDARD SIGN
M6 - 1 & M6 - 2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 7/03/14 PLATE NO. M6-1.14



R11-3

NOTES

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

** See Note 5

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

STANDARD SIGN
R11-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-3.6

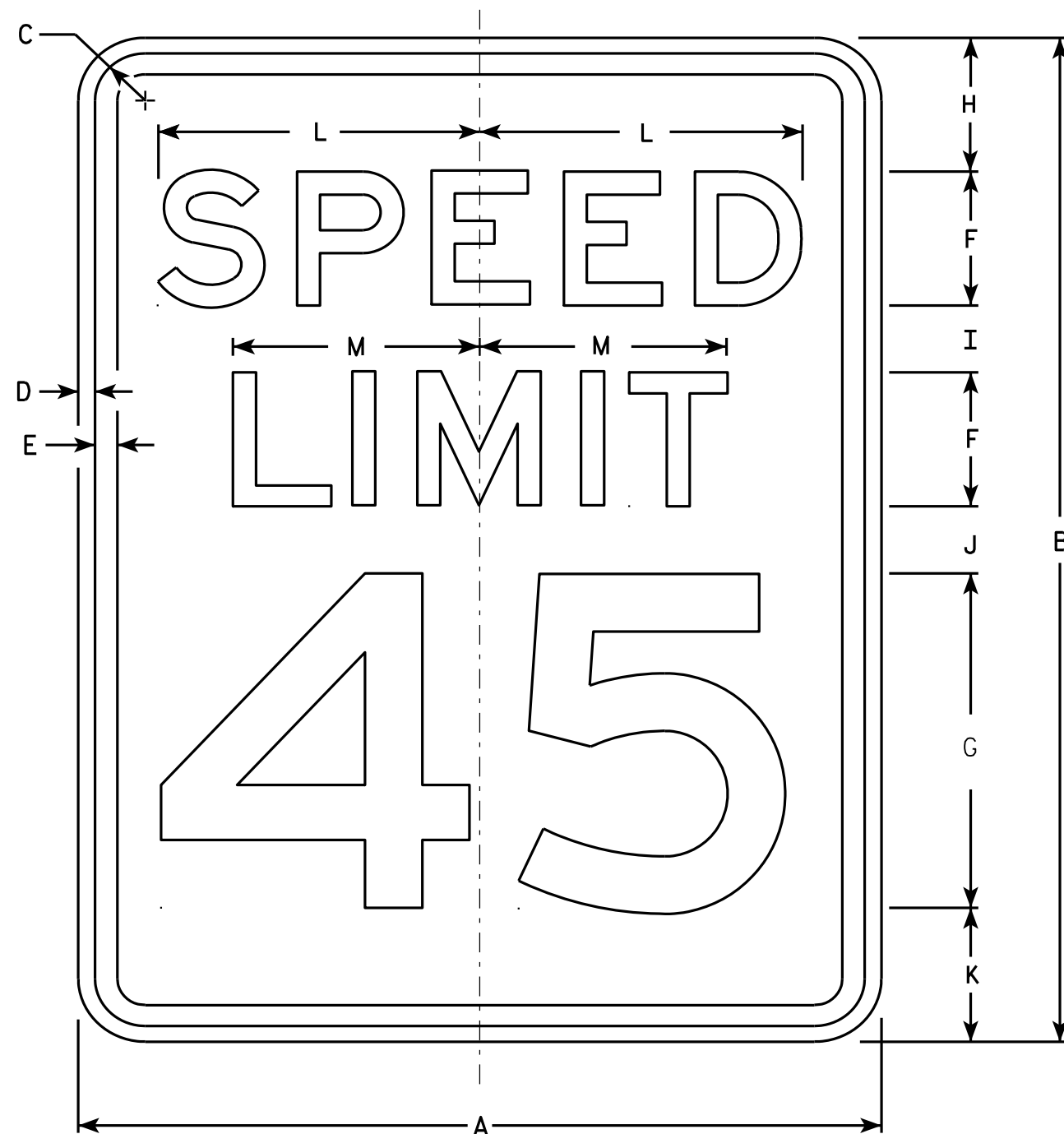
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



R2-1

NOTES

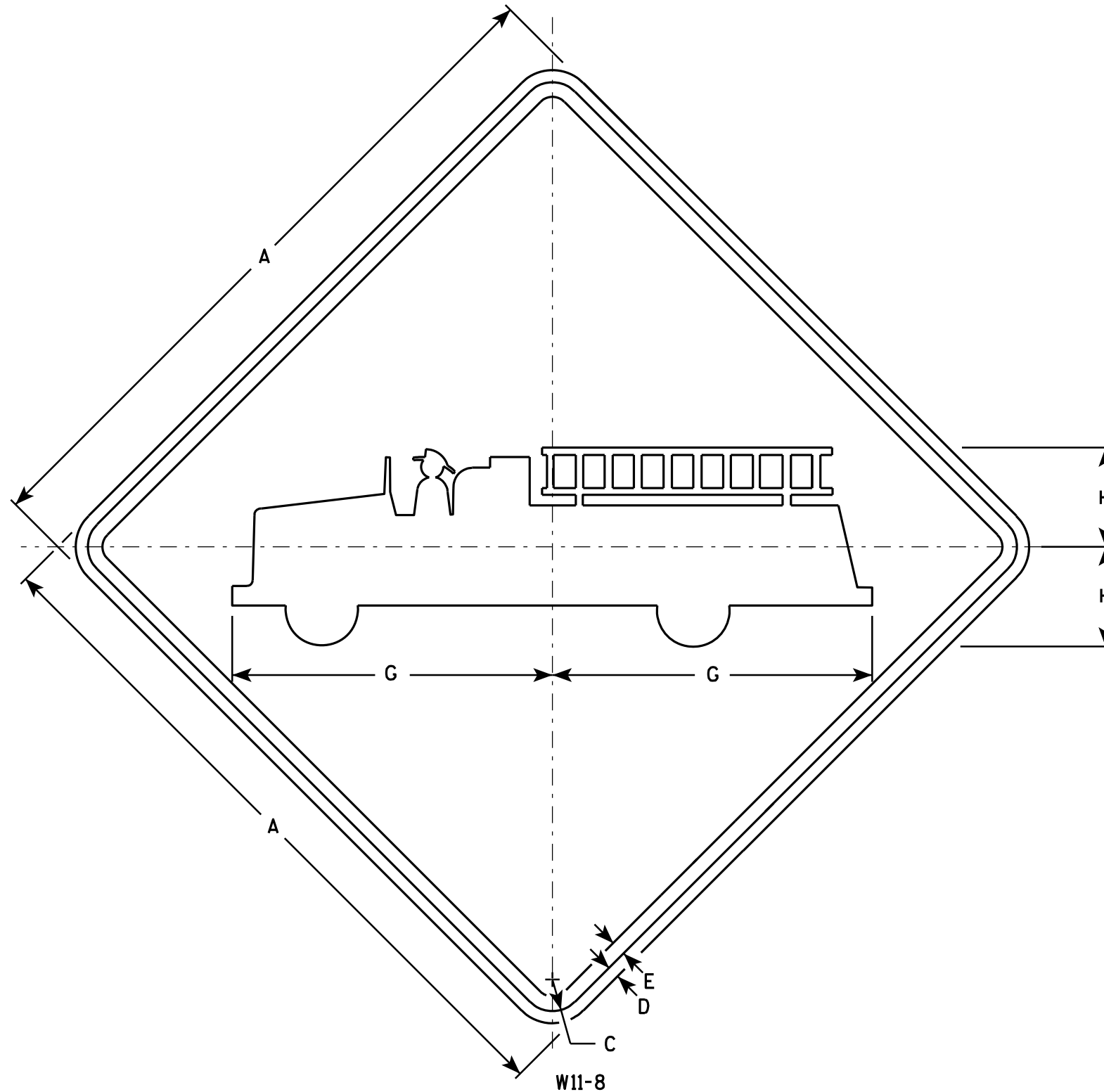
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as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

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

STANDARD SIGN R2-1

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: HWY: COUNTY: SHEET NO: E



NOTES

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

W11-8

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2		11	3 3/8																			4.0
2S	30		1 3/8	1/2	5/8		13 3/4	4 3/8																			6.25
2M	30		1 3/8	1/2	5/8		13 3/4	4 3/8																			6.25
3	36		1 5/8	5/8	3/4		16 1/2	5 1/4																			9.0
4	48		2 1/4	3/4	1		22	7																			16.0
5																											

STANDARD SIGN W11-8

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 3/13/13 PLATE NO. W11-8.7

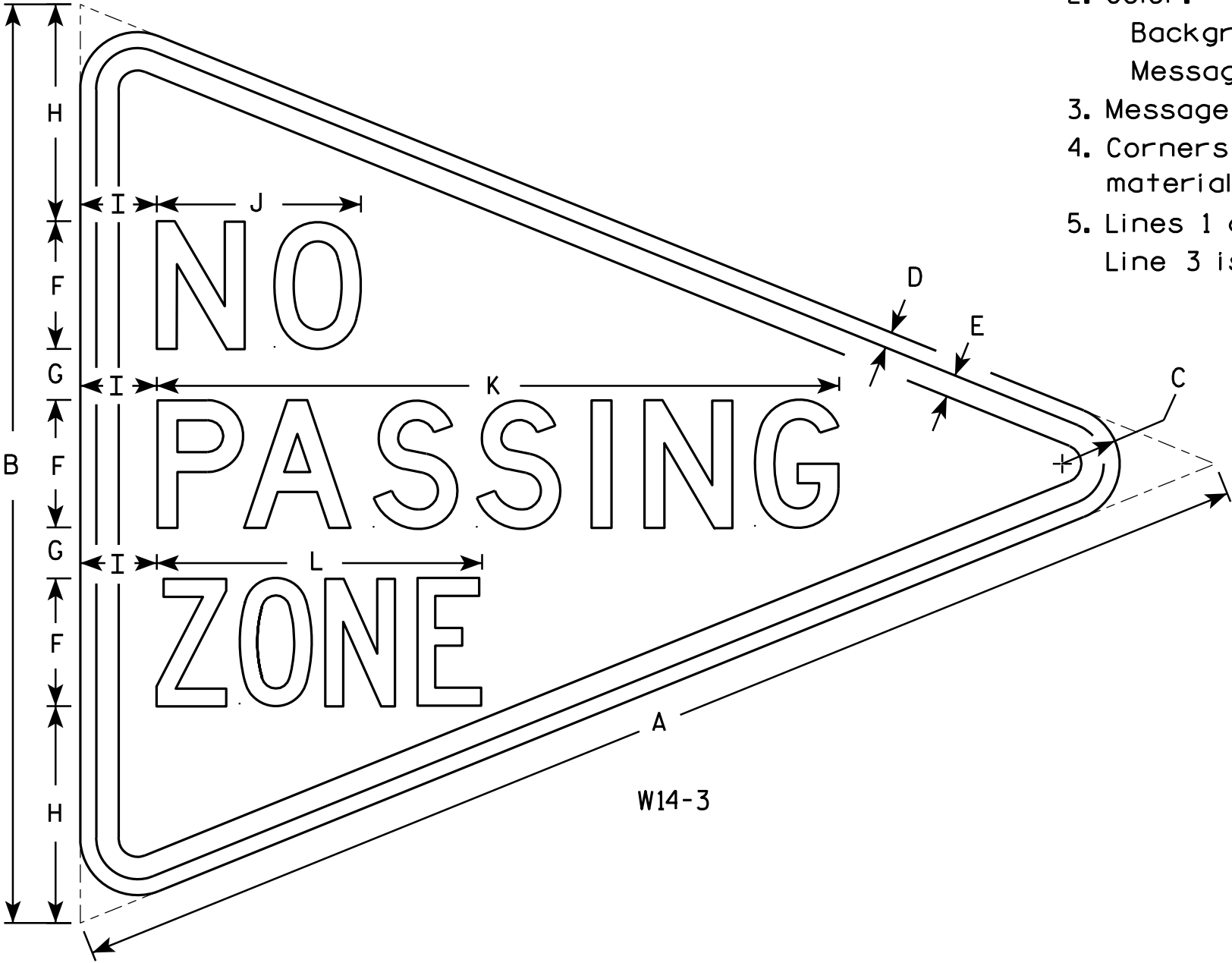
PROJECT NO:

SHEET NO:

E

NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Yellow
Message - Black
- 3. Message Series - See note 5
- 4. Corners and borders shall be rounded on all base materials for this sign.
- 5. Lines 1 and 2 are Series D.
Line 3 is series C.



W14-3

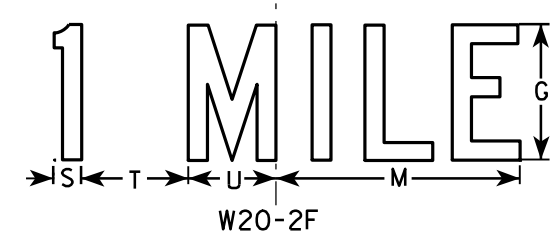
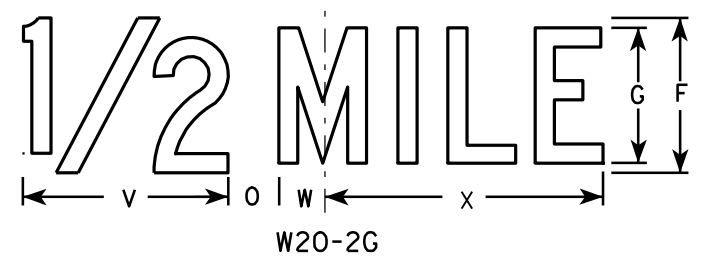
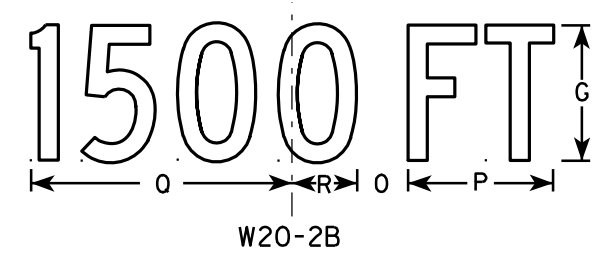
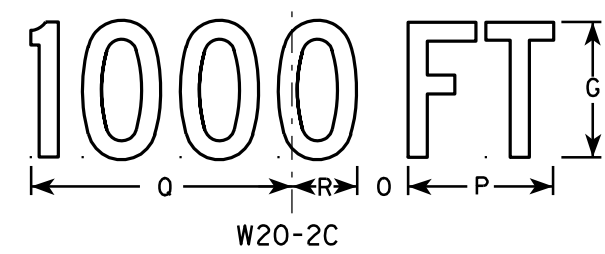
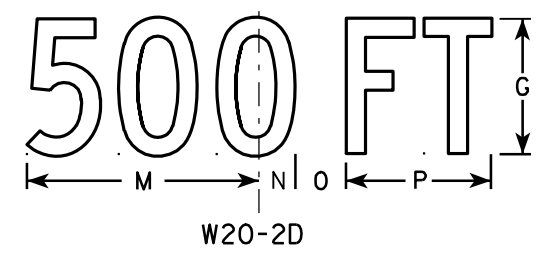
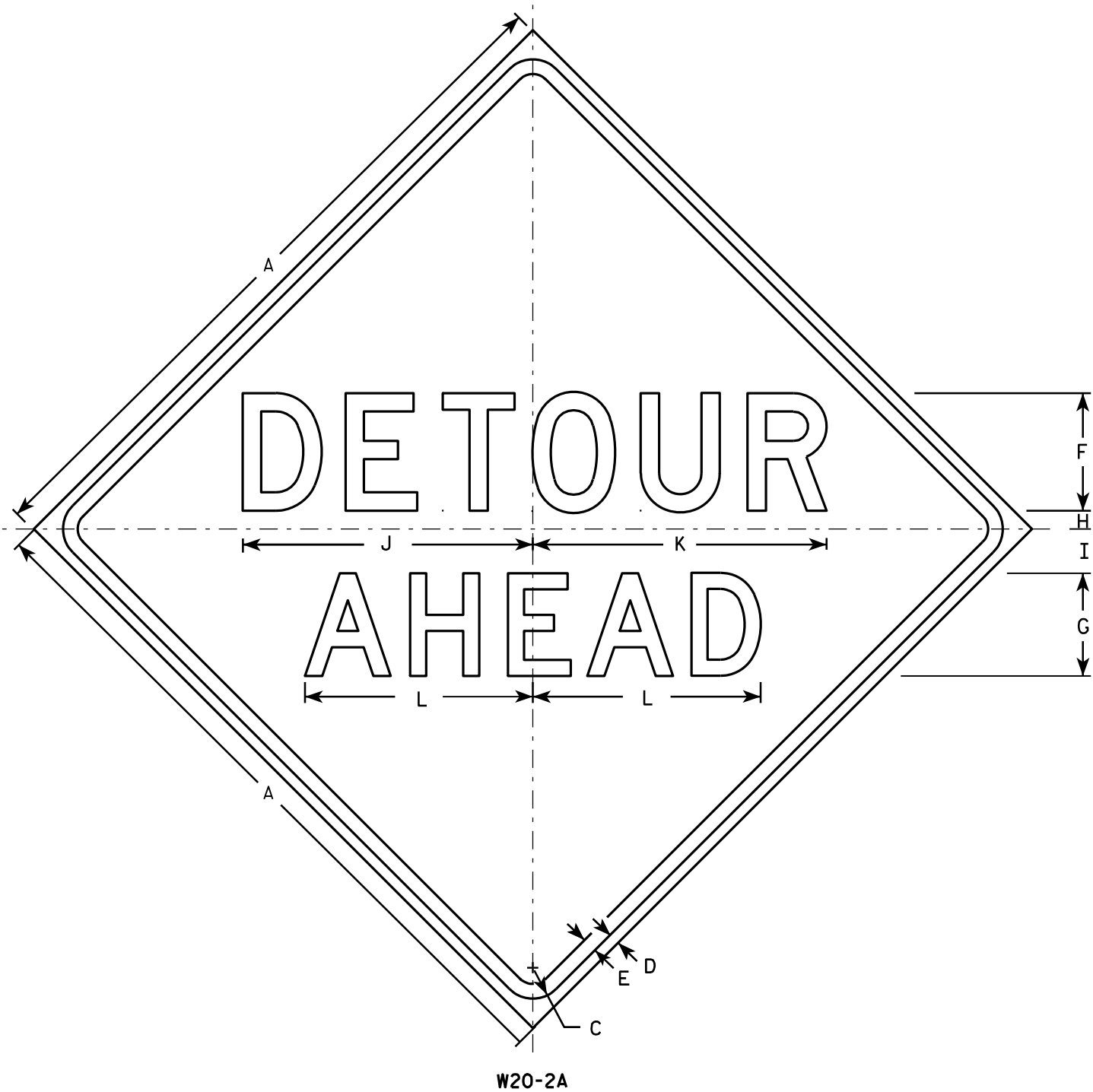
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
2M	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
3	64	48	3	3/4	1 1/4	6	3	12	4	10 3/4	33 5/8	16 1/2														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

STANDARD SIGN
W14-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

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



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. Line 1 is Series D.
Line 2 is Series D for AHEAD and Series C for all other distances.

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	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

PROJECT NO:

HWY:

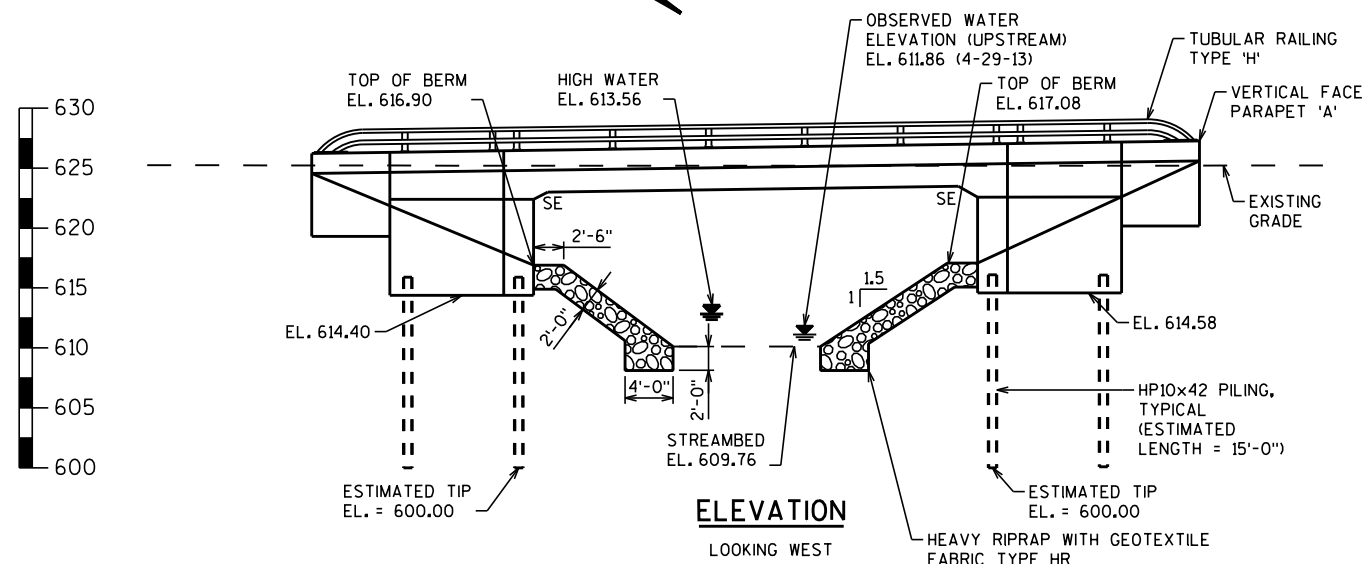
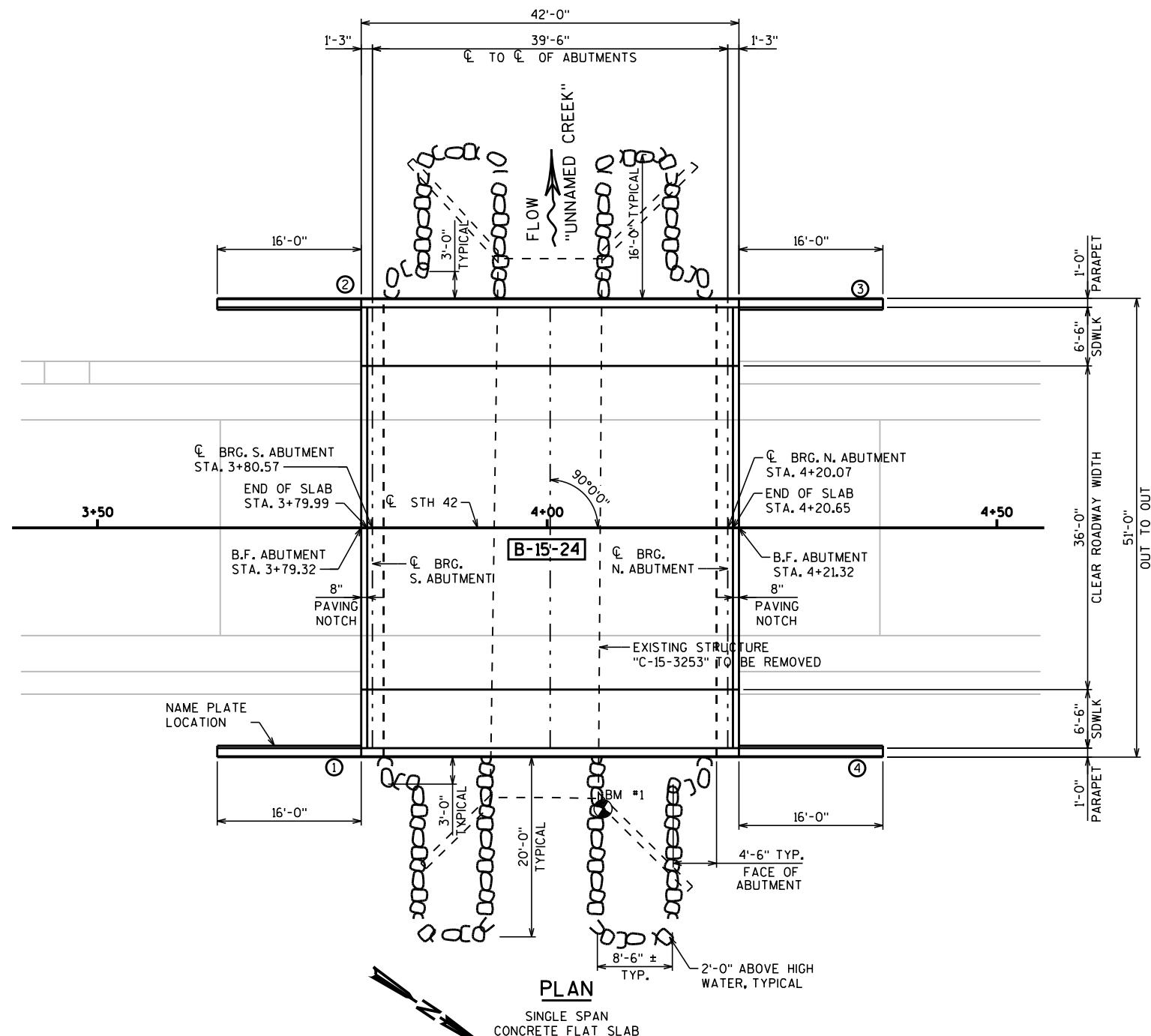
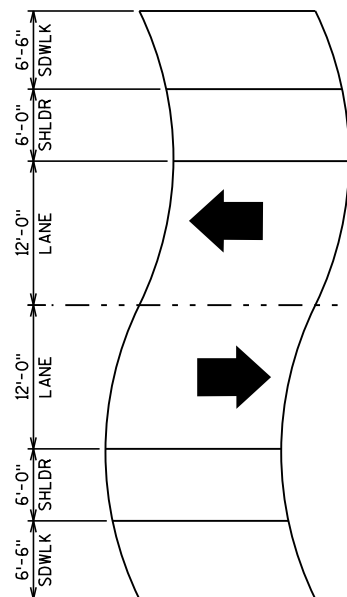
COUNTY:

SHEET NO:

E

LEGEND

⊗ INDICATES WING NUMBER



LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. WINGWALLS 1 & 2 DETAILS
6. NORTH ABUTMENT
7. WINGWALLS 3 & 4 DETAILS
8. SUPERSTRUCTURE PLAN
9. SUPERSTRUCTURE DETAILS
10. VERTICAL FACE PARAPET 'A'
11. TUBULAR RAILING TYPE "H" (STEEL)
12. TUBULAR RAILING TYPE "H" (ALUM.)

BUREAU OF STRUCTURES CONTACT:
WILLIAM DREHER, P.E. 608-266-8489

CONSULTANT CONTACT:
JEFFREY S. ROSNER, P.E. 920-592-9440

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

THE STREAM BED IN FRONT OF THE ABUTMENT SHALL BE COVERED WITH RIPRAP AS SHOWN ON THIS SHEET AND IN THE ABUTMENT DETAILS.

AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

THE EXISTING STRUCTURE, C-15-3253, IS A SINGLE CELL (12'-0" W x 8'-6" H) 3-SIDED CAST-IN-PLACE CULVERT STRUCTURE WITH AN OVERALL LENGTH OF 61 FEET. EXISTING STRUCTURE TO BE REMOVED.

DESIGN DATA

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF=1.19
OPERATING RATING FACTOR: RF=1.55
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 220 (KIPS)

STRUCTURE IS DESIGNED FOR A 1/2" SACRIFICIAL WEARING SURFACE. PLACED AT INITIAL CONSTRUCTION INTEGRAL WITH THE DECK. THE DESIGN PROVIDES FOR ADDITIONAL LOADS DUE TO A FUTURE WEARING SURFACE = 20 PSF.

ULTIMATE DESIGN STRESSES:
CONCRETE SUPERSTRUCTURE..... f'c = 4,000 P.S.I.
CONCRETE SUBSTRUCTURE..... f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT, GRADE 60..... fy = 60,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP10x42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS* PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 16'-6" LONG.

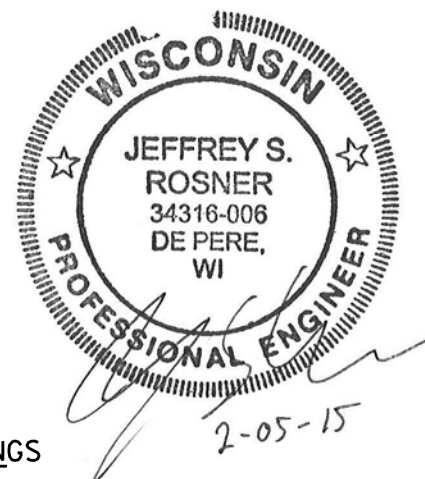
* THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

TRAFFIC VOLUME

S.T.H. 42
A.D.T. = 1500 (2008)
A.D.T. = 1700 (2034)
R.D.S. 40 M.P.H.

HYDRAULIC DATA

Q₁₀₀ 170 CFS
V₁₀₀ 7.02 FPS
HW₁₀₀ EL 613.56
WATERWAY AREA 24.22 SF
DRAINAGE AREA 1.7 SQ MILES
SCOUR CODE 8
OVERTOPPING FREQUENCY N/A
OVERTOPPING ELEVATION N/A
OVERTOPPING DISCHARGE N/A
Q_s 40 CFS
HW_s 612.51



NO.	DATE	REVISION	BY
1150 Springhurst Drive, Suite 201 Green Bay, WI 54304 920-592-9440 920-592-9445 fax www.graef-usa.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION ACCEPTED <i>William C. Dreher</i> KAR 02/05/15 CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-15-24			
STH 42 OVER UNNAMED CREEK			
COUNTY	DOOR	VILLAGE	FORESTVILLE
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPEC.			
DESIGNED BY	SAC	DESIGN CK'D.	JSR
DRAWN BY	AMZ	PLANS CK'D.	JSR
GENERAL PLAN			SHEET 1 OF 12

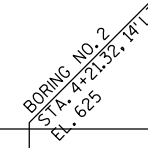


NO.	STATION	OFFSET	DESCRIPTION	ELEV.
1	4+6.02	31.24' RT.	CHISELED "SQ" IN NE CORNER OF BOX CULVERT, TOP OF EXISTING NORTHEAST WING WALL	619.65
2	0+99.40	35.42' LT.	LEFT MAGNAIL, EAST SIDE OF POWER POLE	624.39
3	7+54.28	39.26' RT.	RIGHT TOP OF SW CORNER BOTTOM STEP HS#208	630.36

ITEM NO.	BID ITEMS	UNIT	S ABUT	N ABUT	SUPER	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA. 4+00.32	LS	--	--	--	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-15-24	LS	--	--	--	1
210.0100	BACKFILL STRUCTURE	CY	238	238	--	476
502.0100	CONCRETE MASONRY BRIDGES	CY	64	64	160	288
502.3200	PROTECTIVE SURFACE TREATMENT	SY	--	--	278	278
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	3560	3560	--	7120
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	2080	2080	31,320	35,480
513.4055	RAILING TUBULAR TYPE H B-15-24	LS	--	--	--	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	13	13	--	26
550.1100	PILING STEEL HP 10-INCH X 42 LB.	LF	149	149	--	298
606.0300	RIPRAP HEAVY	CY	101	101	--	202
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	80	80	--	160
645.0120	GEOTEXTILE FABRIC TYPE HR	SY	171	171	--	342
	NON-BID ITEMS					
	PREFORMED JOINT FILLER					¾"



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-15-24			
		DRAWN BY AMZ	PLANS CK'D. JSR
CROSS SECTION & QUANTITIES		SHEET 2 OF 1	

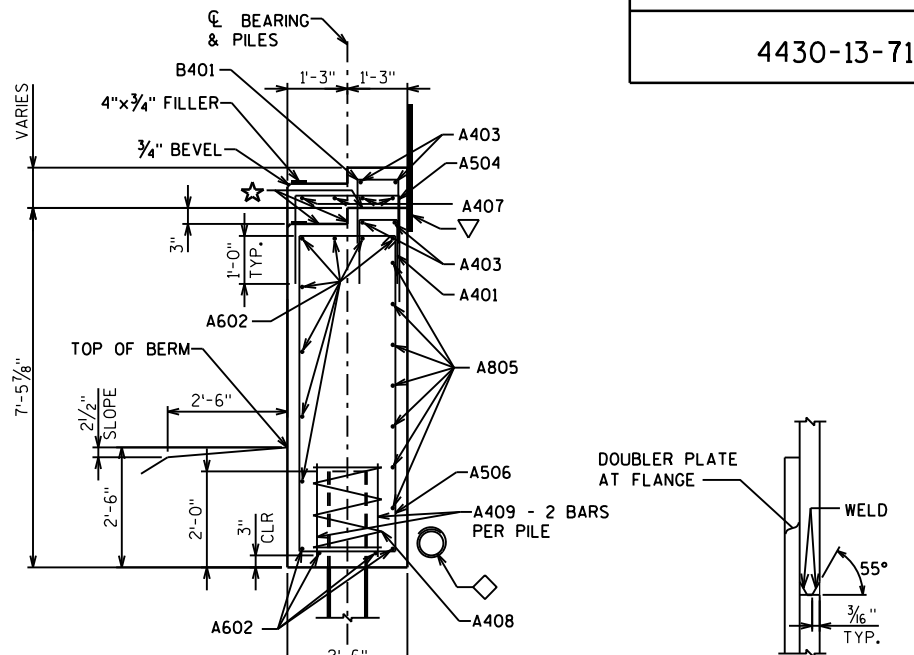
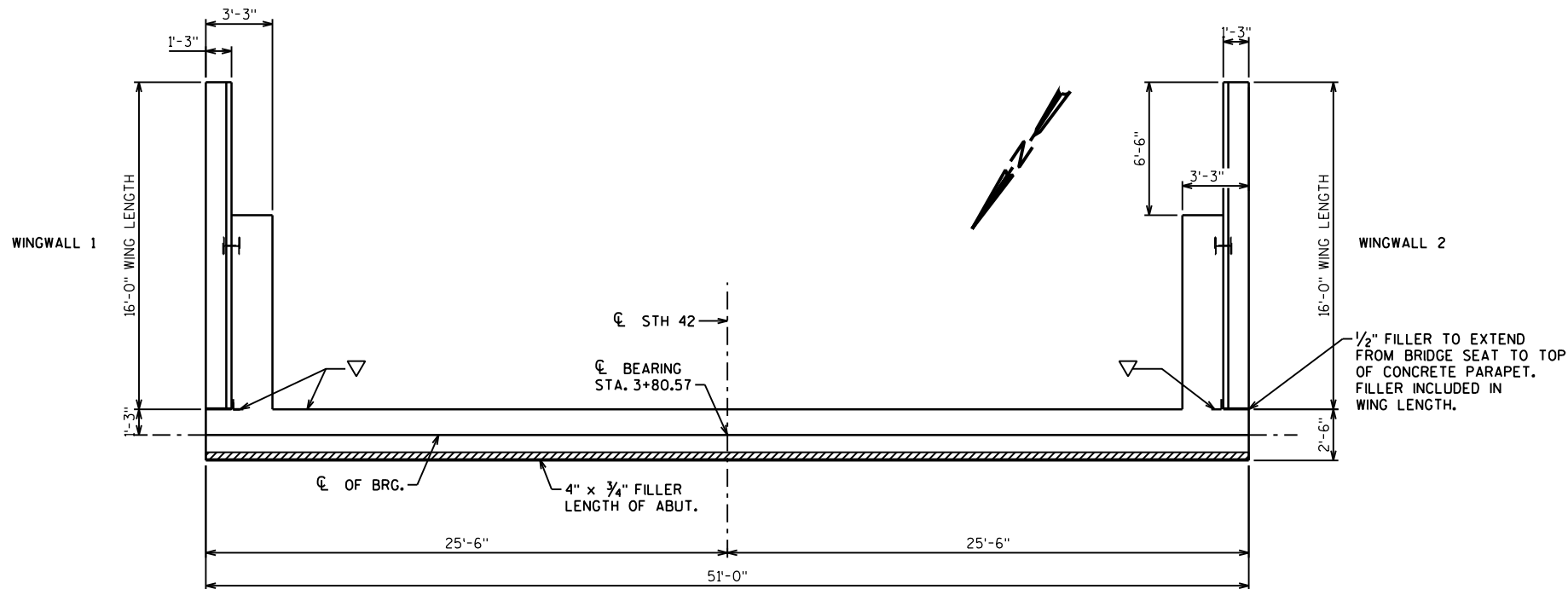


BORINGS #2 AND #3 TAKEN ON
JUNE 3, 2014



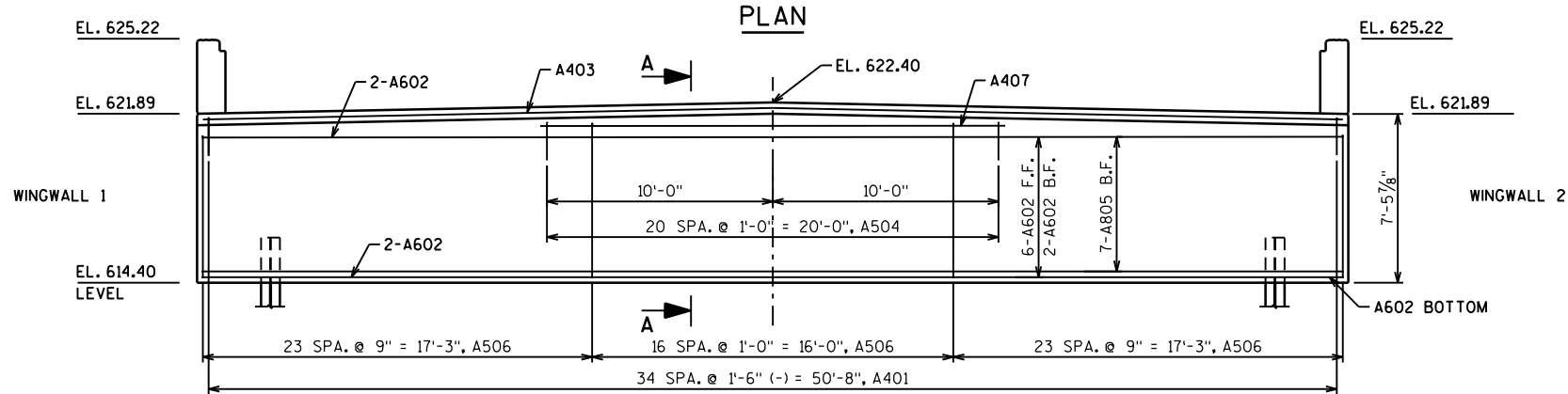
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SCALE =



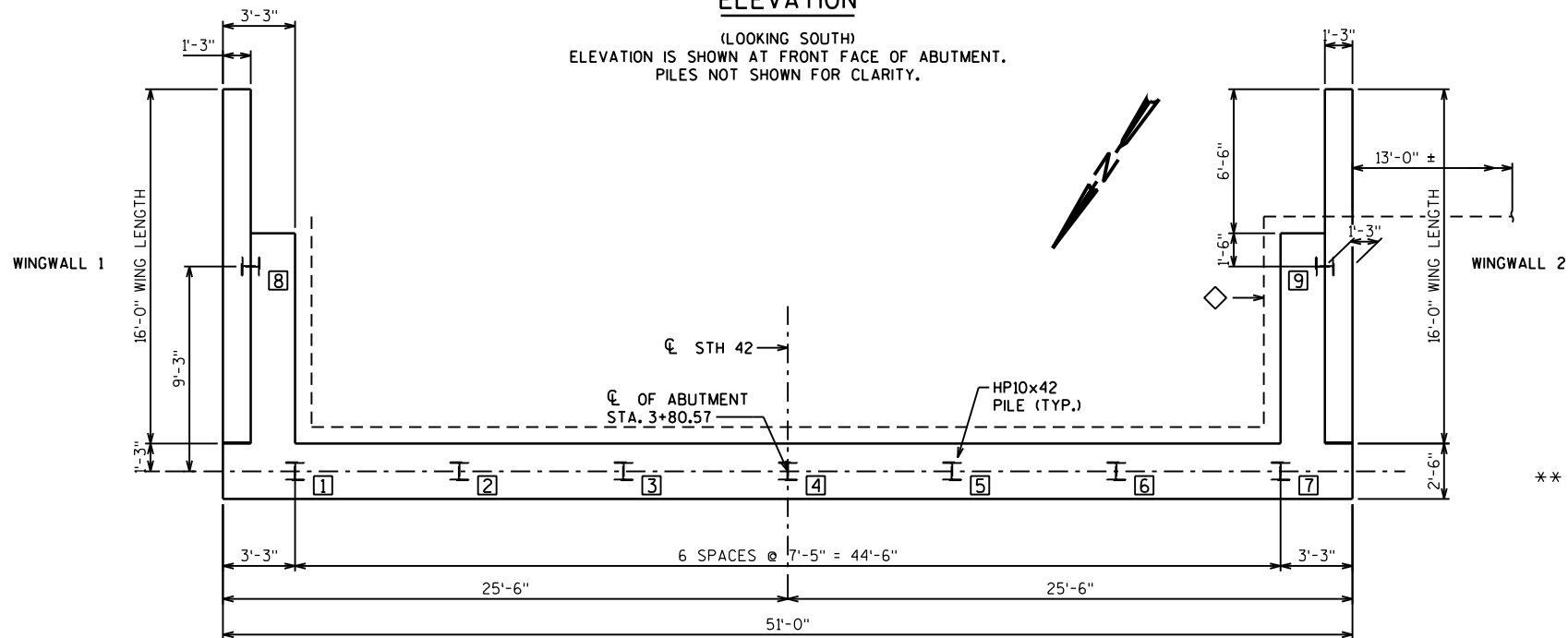
SECTION A-A
THROUGH SOUTH ABUTMENT

HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

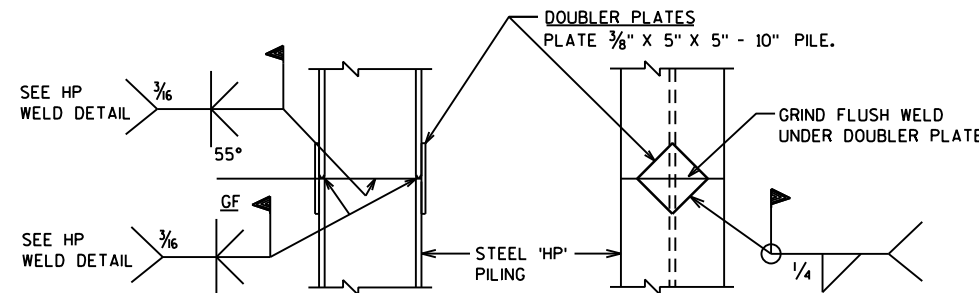


ELEVATION

(LOOKING SOUTH)
ELEVATION IS SHOWN AT FRONT FACE OF ABUTMENT.
PILES NOT SHOWN FOR CLARITY.



PILE PLAN



STEEL 'HP' SHAPES

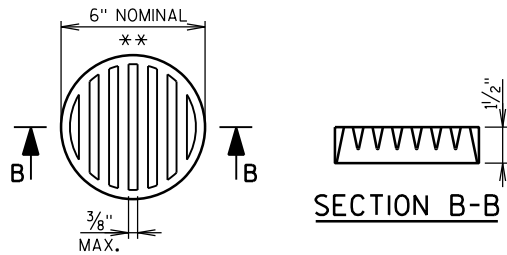
LEGEND

- ▽ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- ▲ KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2"x6".
- ◇ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.
- ☒ = PILE NUMBER
- ☆ STEEL TROWEL TOP SURFACE OF ABUTMENT, PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03"

ABUTMENT NOTES

ABUTMENT TO BE SUPPORTED ON HP10x42 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED 16'-6" LONG.

SEE THIS SHEET FOR PILE SPLICE DETAILS.



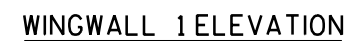
RODENT SCREEN DETAIL

** DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

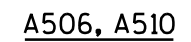
THE RODENT SCREEN, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SCREEN SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SCREEN TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SCREEN SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH SHEET METAL SCREWS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-15-24			
DRAWN BY AMZ		PLANS CK'D. JSR	
SOUTH ABUTMENT		SHEET 4 OF 12	

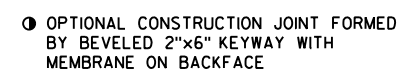


THE FIRST DIGIT OF A THREE DIGIT BAR MARK INDICATES BAR SIZE.
ALL DIMENSIONS IN THE BAR BENDS ARE OUT TO OUT.



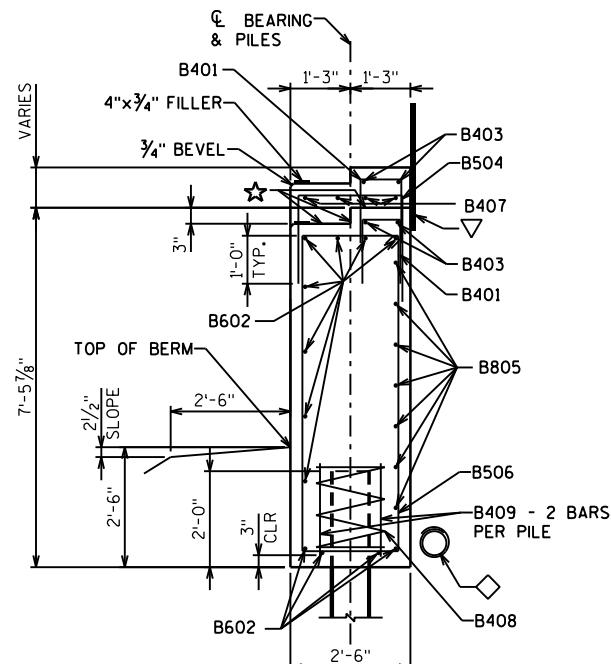
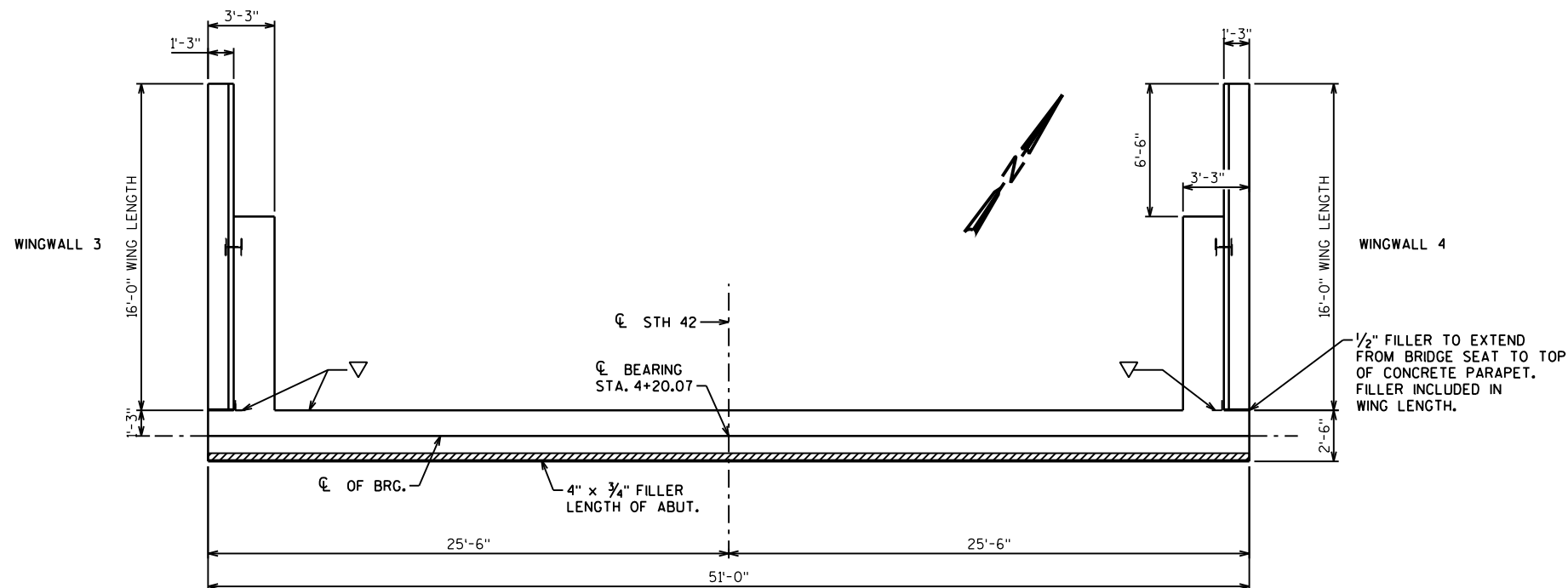
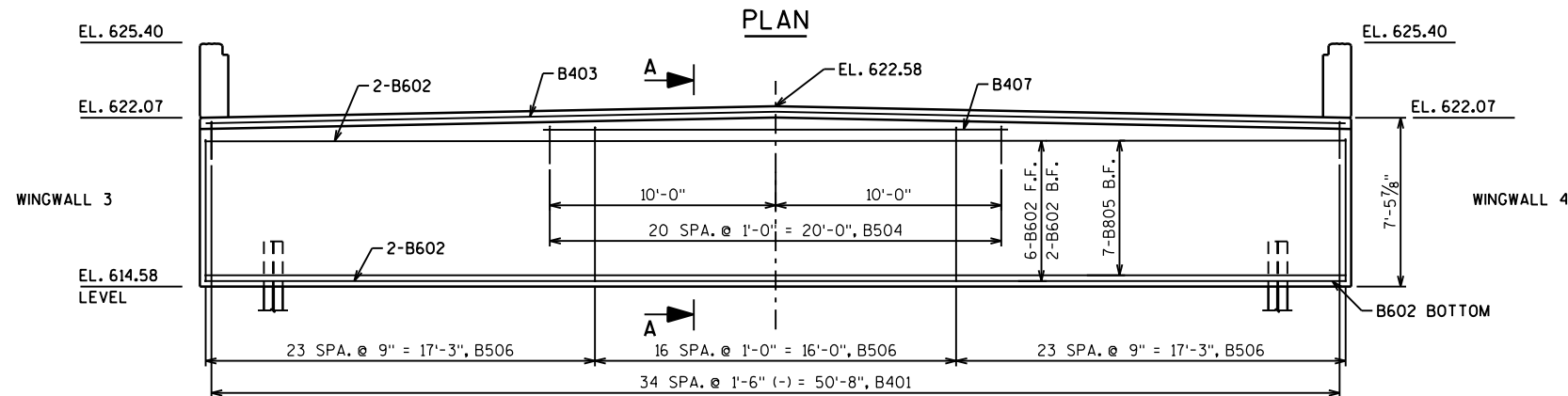
A408

A713



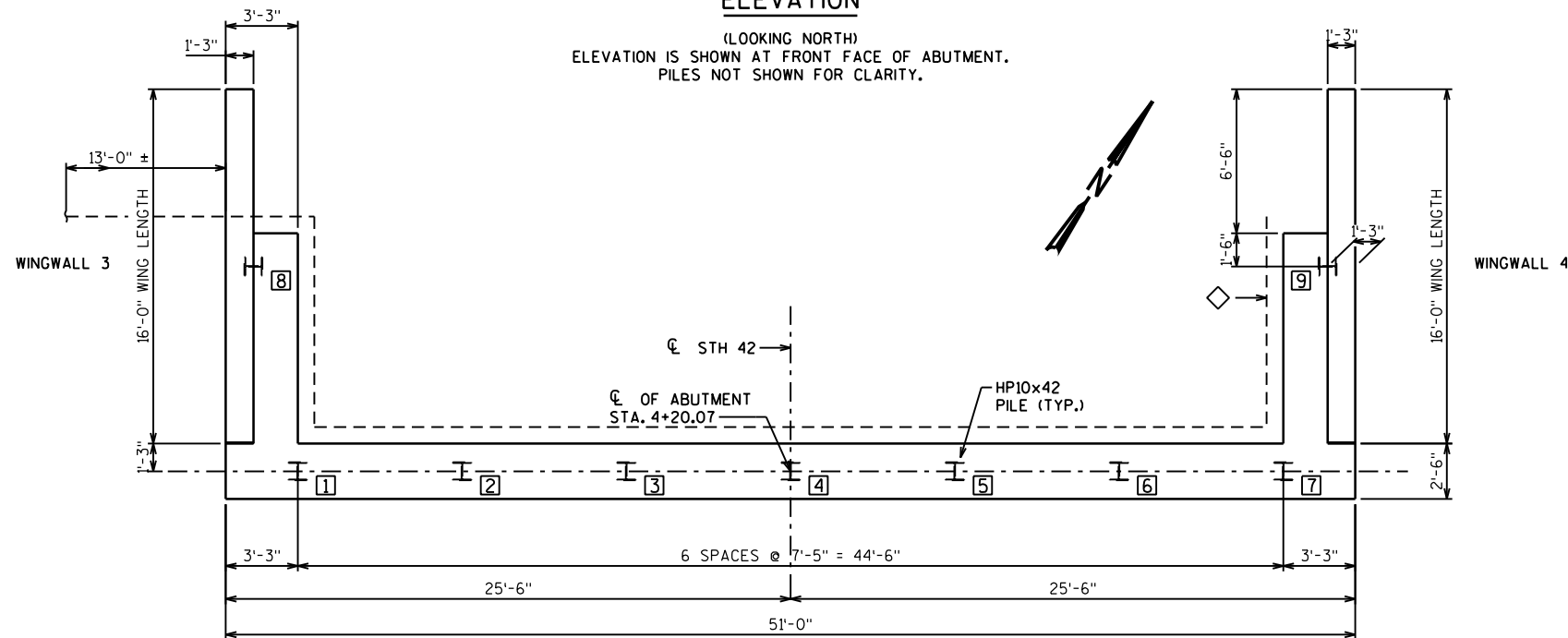
WINGS 1 & 2 SECTION

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-15-24			
DRAWN BY AMZ		PLANS CK'D. JSR	
WINGWALLS 1 & 2 DETAILS		SHEET 5 OF 12	

SECTION A-A
THROUGH NORTH ABUTMENT

ELEVATION

(LOOKING NORTH)
ELEVATION IS SHOWN AT FRONT FACE OF ABUTMENT.
PILES NOT SHOWN FOR CLARITY.



PILE PLAN

LEGEND

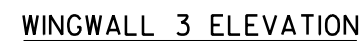
- ▽ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- ▲ KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2"x6".
- ◇ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.
- ☒ = PILE NUMBER
- ☆ STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03"

ABUTMENT NOTES

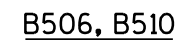
ABUTMENT TO BE SUPPORTED ON HP10x42 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED 16'-6" LONG.

SEE THIS SHEET 4 FOR PILE SPLICE AND RODENT SCREEN DETAILS.

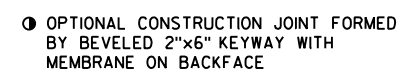
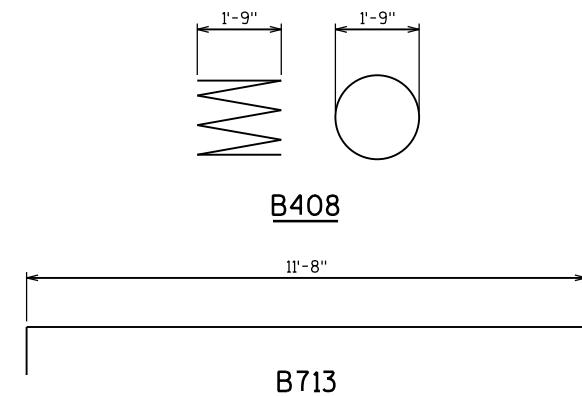
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-15-24			
DRAWN BY AMZ		PLANS CK'D. JSR	
NORTH ABUTMENT		SHEET 6 OF 12	



THE FIRST DIGIT OF A THREE DIGIT BAR MARK INDICATES BAR SIZE.
ALL DIMENSIONS IN THE BAR BENDS ARE OUT TO OUT.

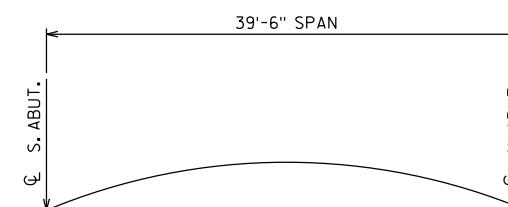


B408



WINGS 3 & 4 SECTION

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-15-24			
DRAWN BY AMZ		PLANS CK'D. JSR	
WINGWALLS 3 & 4 DETAILS			SHEET 7 OF 12



CAMBER DIAGRAM

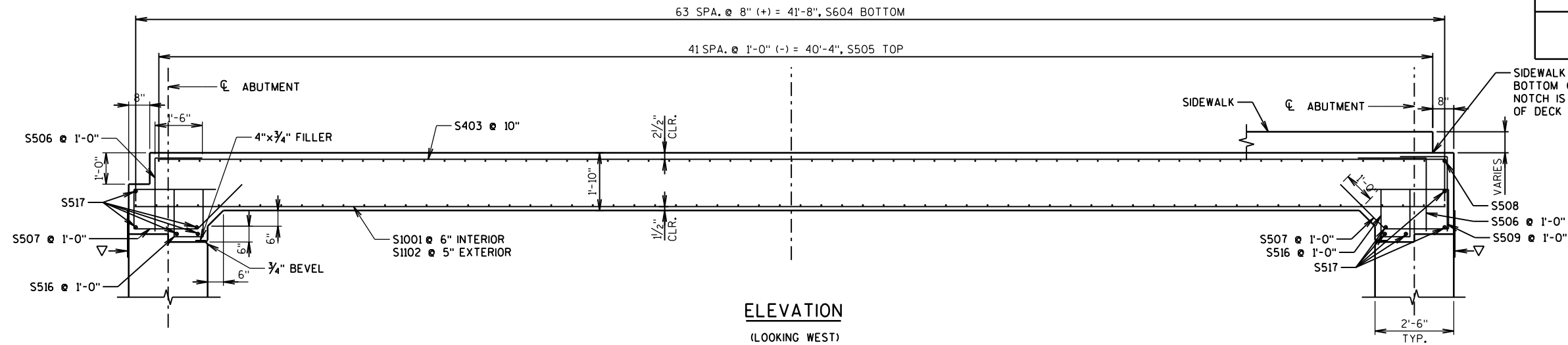
TOP OF SLAB ELEVATIONS											
LOCATION	CL S. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CL N. ABUT.
WEST GUTTER LINE	624.62	624.63	624.65	624.66	624.68	624.70	624.72	624.74	624.76	624.78	624.80
CROWN	624.98	624.99	625.01	625.02	625.04	625.06	625.08	625.10	625.12	625.14	625.16
EAST GUTTER LINE	624.62	624.63	624.65	624.66	624.68	624.70	624.72	624.74	624.76	624.78	624.80
CAMBER (in.)	0	0.4	0.7	0.9	1.1	1.2	1.1	0.9	0.7	0.4	0

SUPERSTRUCTURE PLAN

SUPERSTRUCTURE NOTES

SEE SHEET 9 FOR SECTIONS A-A, B-B, AND C-C.

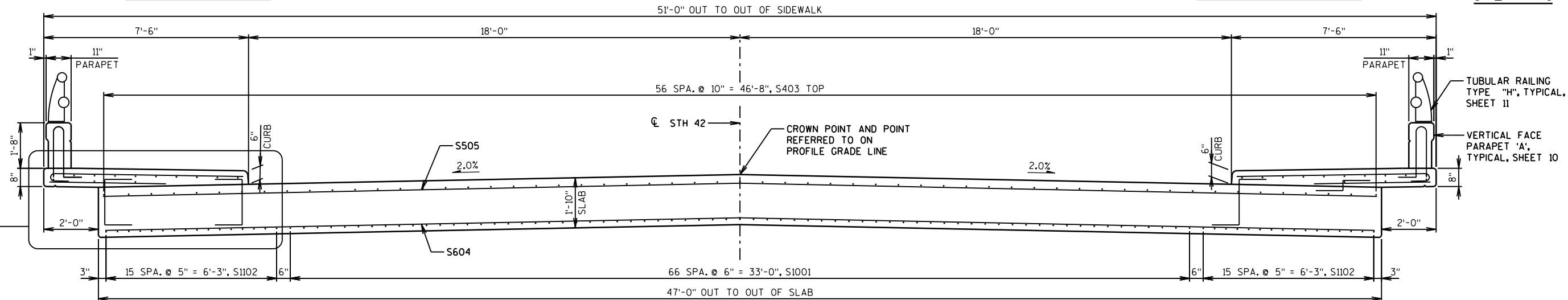
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-15-24			
DRAWN BY AMZ		PLANS CK'D. JSR	
SUPERSTRUCTURE PLAN		SHEET 8 OF 12	



SECTION A-A
AT PAVING NOTCH

SECTION B-B
AT SIDEWALK NOTCH

SECTION C-C
AT SIDEWALK
OVERHANG



CROSS SECTION

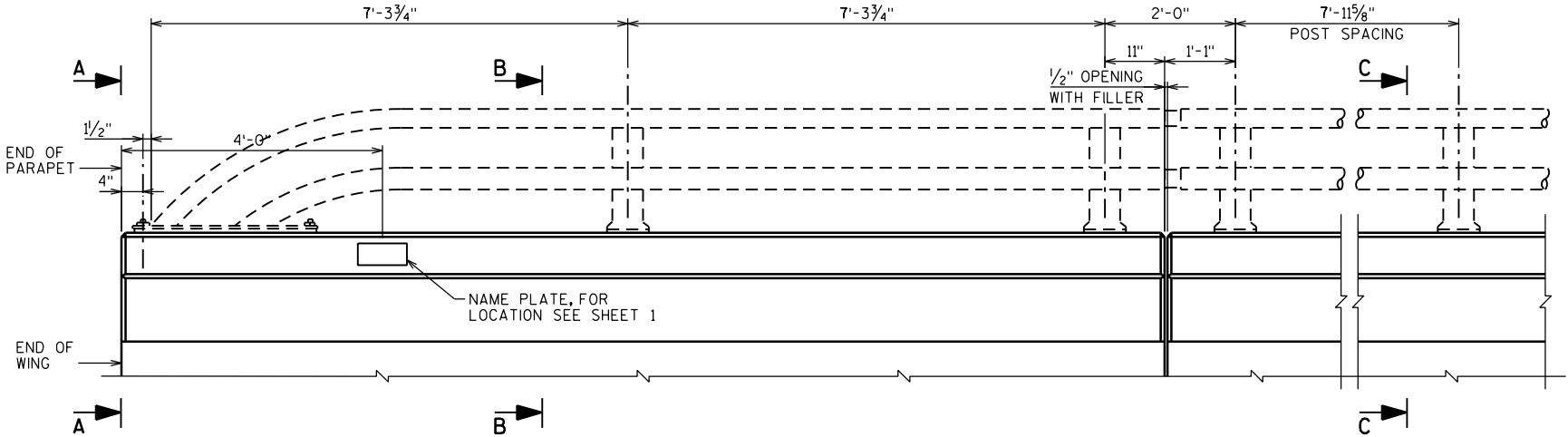
(LOOKING NORTH)
ABUTMENT NOT SHOWN FOR CLARITY

SUPERSTRUCTURE - BILL OF BARS						COATED TOTAL WEIGHT = 30280 LBS
MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
S1001	X	67	36'-3"			SLAB BOTTOM LONG., INTERIOR STRIP
S1102	X	32	36'-3"			SLAB BOTTOM LONG., EXTERIOR STRIP
S403	X	57	40'-4"			SLAB TOP LONG.
S604	X	64	46'-8"			SLAB BOTTOM TRANS.
S505	X	42	46'-8"			SLAB TOP TRANS.
S506	X	96	3'-6"		X	SLAB TOP AT END OF SLAB
S507	X	96	6'-11"		X	SLAB BOTTOM AT END OF SLAB
S508	X	12	6'-2"			SLAB AT SIDEWALK NOTCH
S509	X	20	4'-2"		X	SLAB TOP AT END OF SLAB, SIDEWALK NOTCH
S510	X	12	9'-6"		X	SLAB TRANS. AT SIDEWALK OVERHANG
S411	X	324	3'-8"		X	SIDEWALK DOWEL
S512	X	162	7'-7"		X	SIDEWALK TOP TRANS.
S413	X	56	3'-0"			SIDEWALK BOTTOM TRANS.
S414	X	28	40'-4"			SIDEWALK LONG.
S515	X	84	4'-8"		X	SIDEWALK PARAPET DOWEL
S516	X	104	3'-8"		X	SLAB BOTTOM AT END OF SLAB
S517	X	10	50'-8"			SLAB TRANS. END OF SLAB

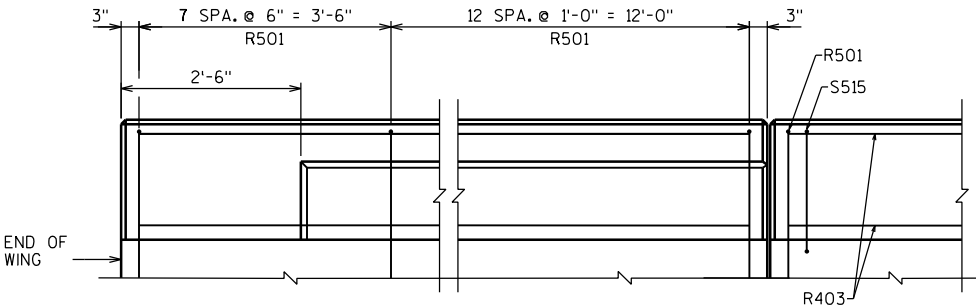
LEGEND

- ▲ CONSTRUCTION JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH. FOR DECK POUR, MATCH BRIDGE X-SLOPE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- 3/4" V-GROOVE, EXTEND V-GROOVE TO 3" FROM FRONT FACE OF ABUTMENT DIAPHRAGM. V-GROOVES ARE REQUIRED.
- ⊗ COAT WITH "PROTECTIVE SURFACE TREATMENT" AS PER THE STANDARD SPECIFICATIONS.
- ▽ 18" RUBBERIZED MEMBRANE WATERPROOFING

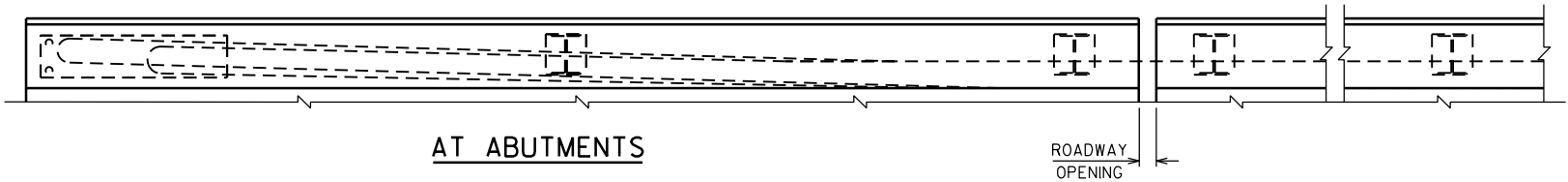
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-15-24			
DRAWN BY AMZ		PLANS CK'D. JSR	
SUPERSTRUCTURE DETAILS		SHEET 9 OF 12	



PARTIAL INTERIOR ELEVATION OF RAIL PARAPET

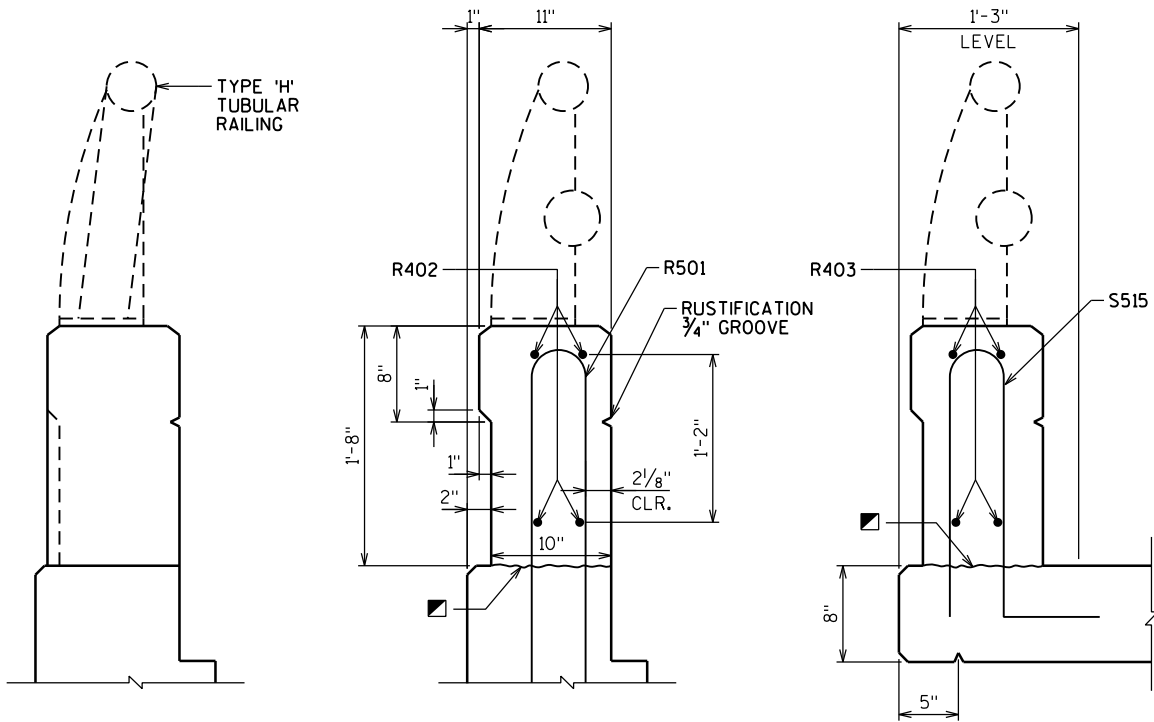


VIEW SHOWING OUTSIDE FACE OF
PARAPET AND REINFORCING



PARTIAL PLAN OF RAIL PARAPET

PARAPET - BILL OF BARS					COATED TOTAL WEIGHT = 1040 LBS	
MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
R501	X	84	7'-5"		X	PARAPET VERT. AT WINGS
R402	X	16	15'-8"			PARAPET HORIZ. AT WINGS
R403	X	8	41'-6"			PARAPET HORIZ.



VIEW A

SECTION B

SECTION C
AT SIDEWALK



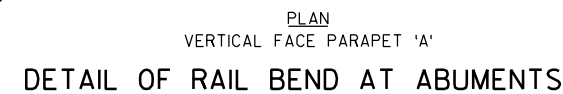
R501

LEGEND

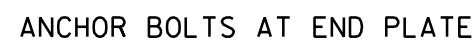
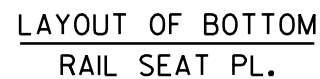
- HORIZONTAL CONSTRUCTION JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-15-24			
DRAWN BY AMZ		PLANS CK'D. JSR	
VERTICAL FACE PARAPET 'A'		SHEET 10 OF 12	

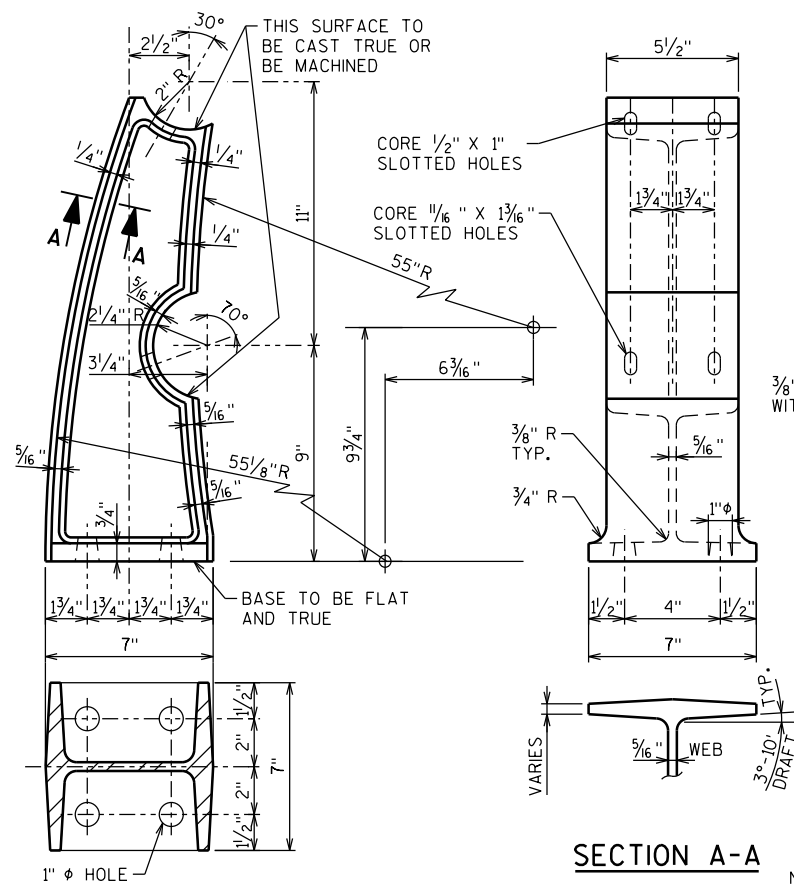
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-15-24			
		DRAWN BY AMZ	PLANS CK'D. JSR
TUBULAR RAILING TYPE "H" (STEEL)		SHEET 11 OF 1	



STEEL POST DETAILS

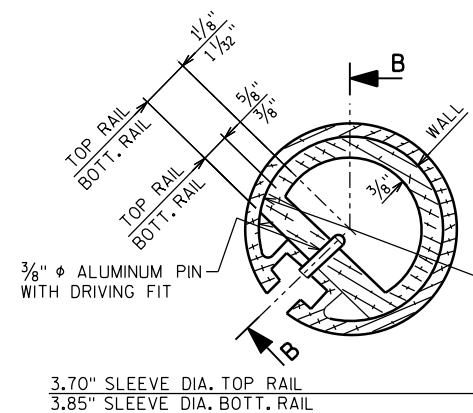


END SECTION ONLY

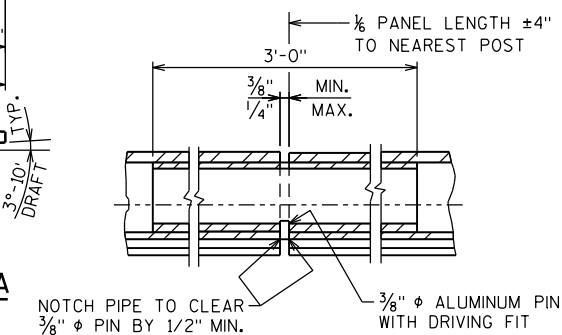


SECTION A-A

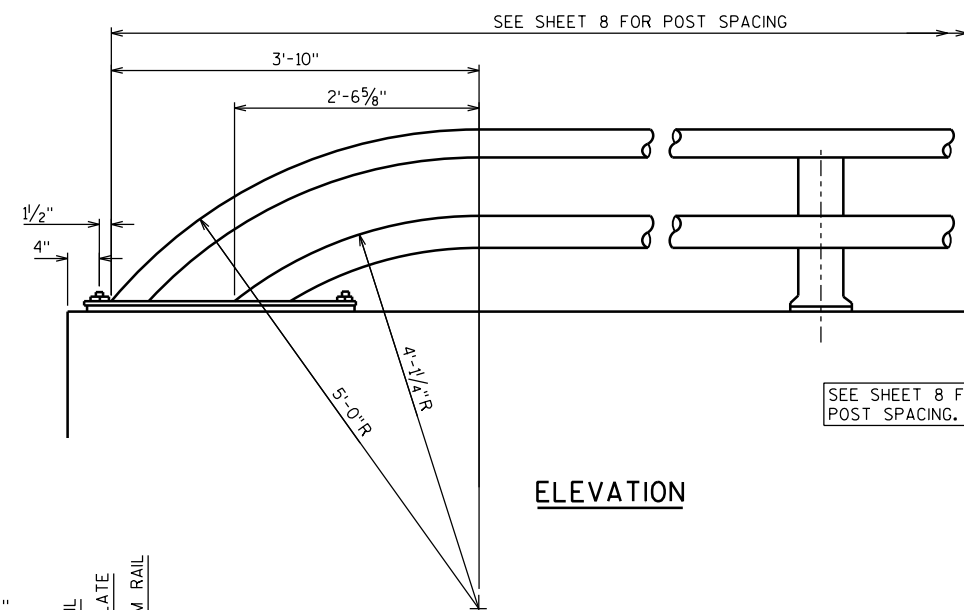
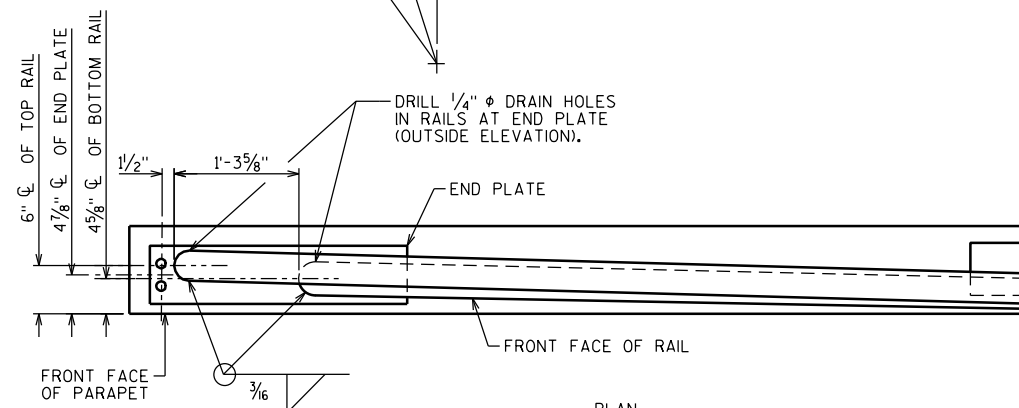
ALUMINUM POST CASTING



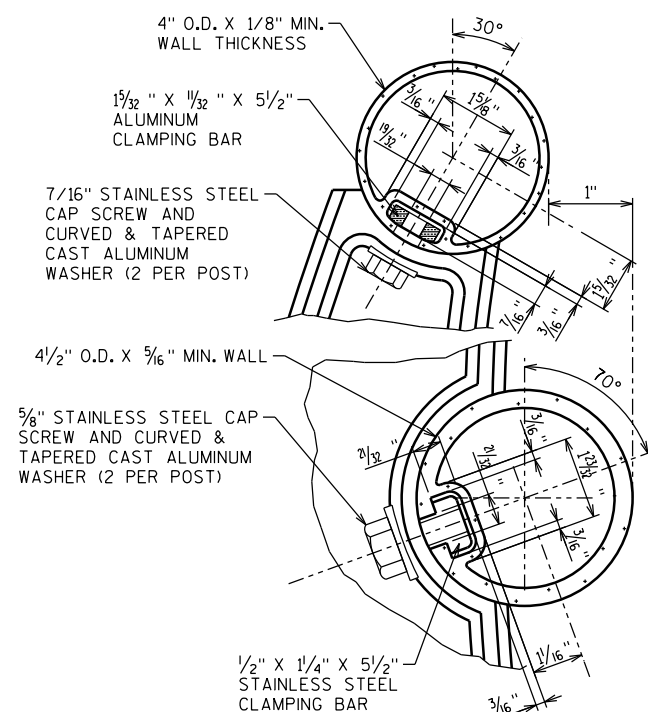
RAIL SPLICE DETAIL



SECTION B-B

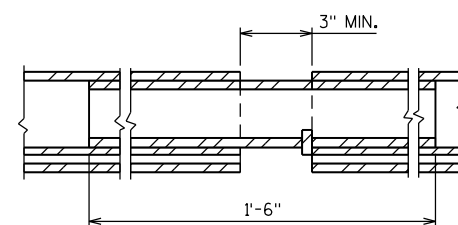
ELEVATION

DETAIL OF RAIL BEND AT ABUMENTS

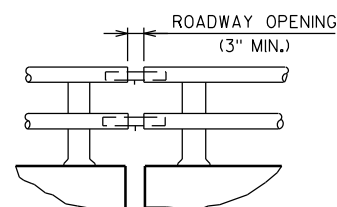


DETAIL OF RAIL ATTACHMENT TO POST

NOTES: MAX. REDUCTION IN DIAMETER OF BENT SECTION SHALL BE 3%
WALL THICKNESS OF TUBING ABOVE SHALL BE
MIN. NOMINAL AVERAGE WALL THICKNESS.
MAX. REDUCTION IN SLOT WIDTH IN BENT TUBING SHALL BE $\frac{3}{16}$ ".

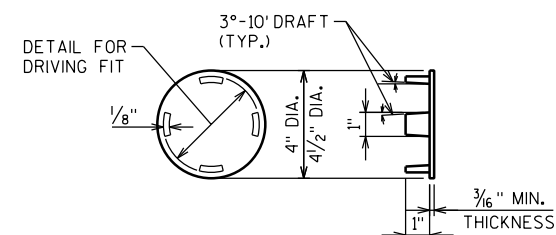


SLEEVE DETAIL AT ABUTMENT

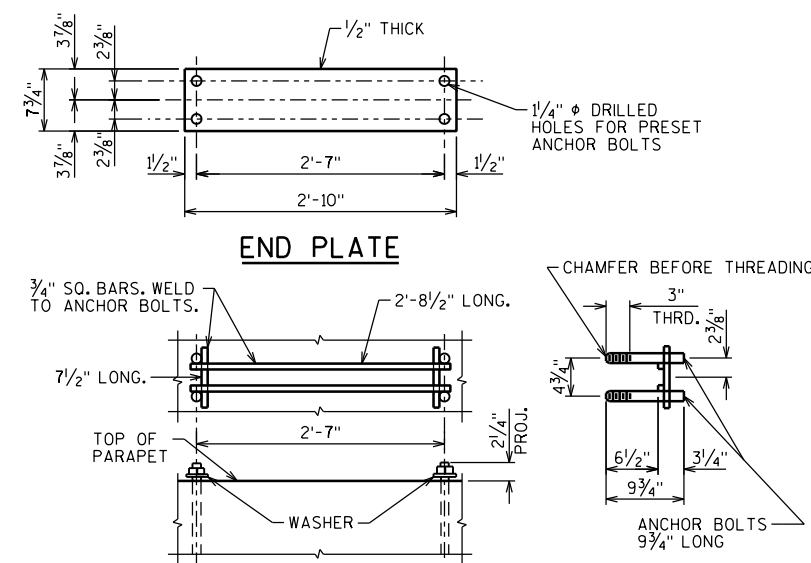


DETAIL AT RAIL OPENINGS

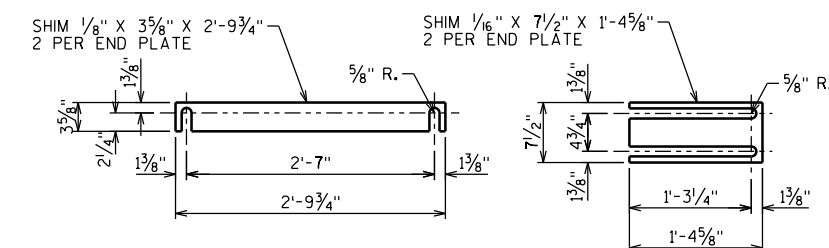
ALL SLEEVE DETAILS SAME AS "RAIL SPLICE DETAIL"
UNLESS SHOWN OTHERWISE.



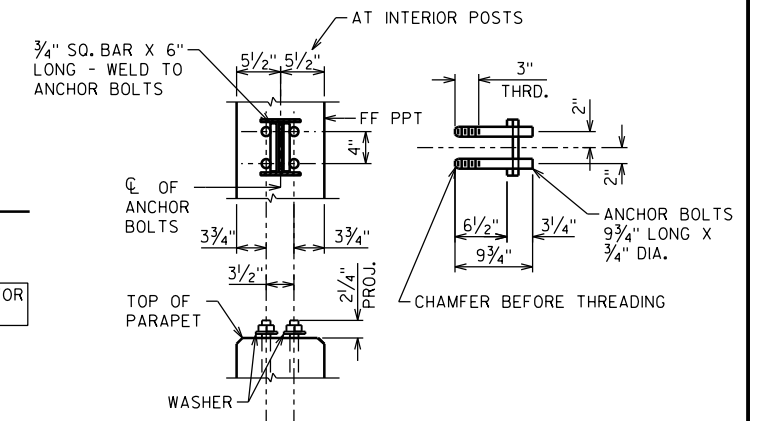
RAIL CLOSURE CAP DETAIL



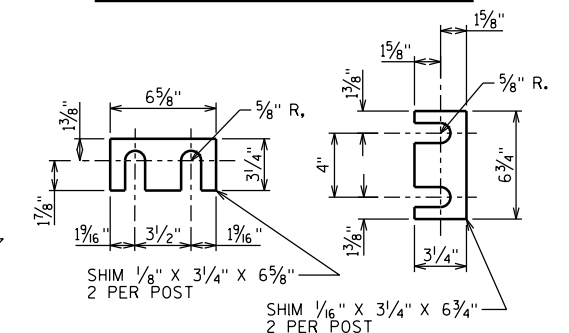
ANCHOR BOLTS AT END PLATE



END PLATE SHIM DETAILS



ANCHOR BOLTS AT POSTS



POST SHIM DETAILS

GENERAL NOTES

BID ITEM SHALL BE "RAILING TUBULAR TYPE H
B-15-24 WHICH INCLUDES ALL ITEMS SHOWN.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE STAINLESS STEEL.

SHIMS SHALL CONFORM TO SAME MATERIAL AS POSTS.

RAILINGS SHALL BE FABRICATED IN 2 AND 3 PANEL LENGTHS.

RAILING POSTS SHALL BE SET NORMAL TO GRADE
LINE.

ALL POST SPACINGS ARE MEASURED HORIZONTALLY
ALONG CENTERLINE OF THE POST BASE.

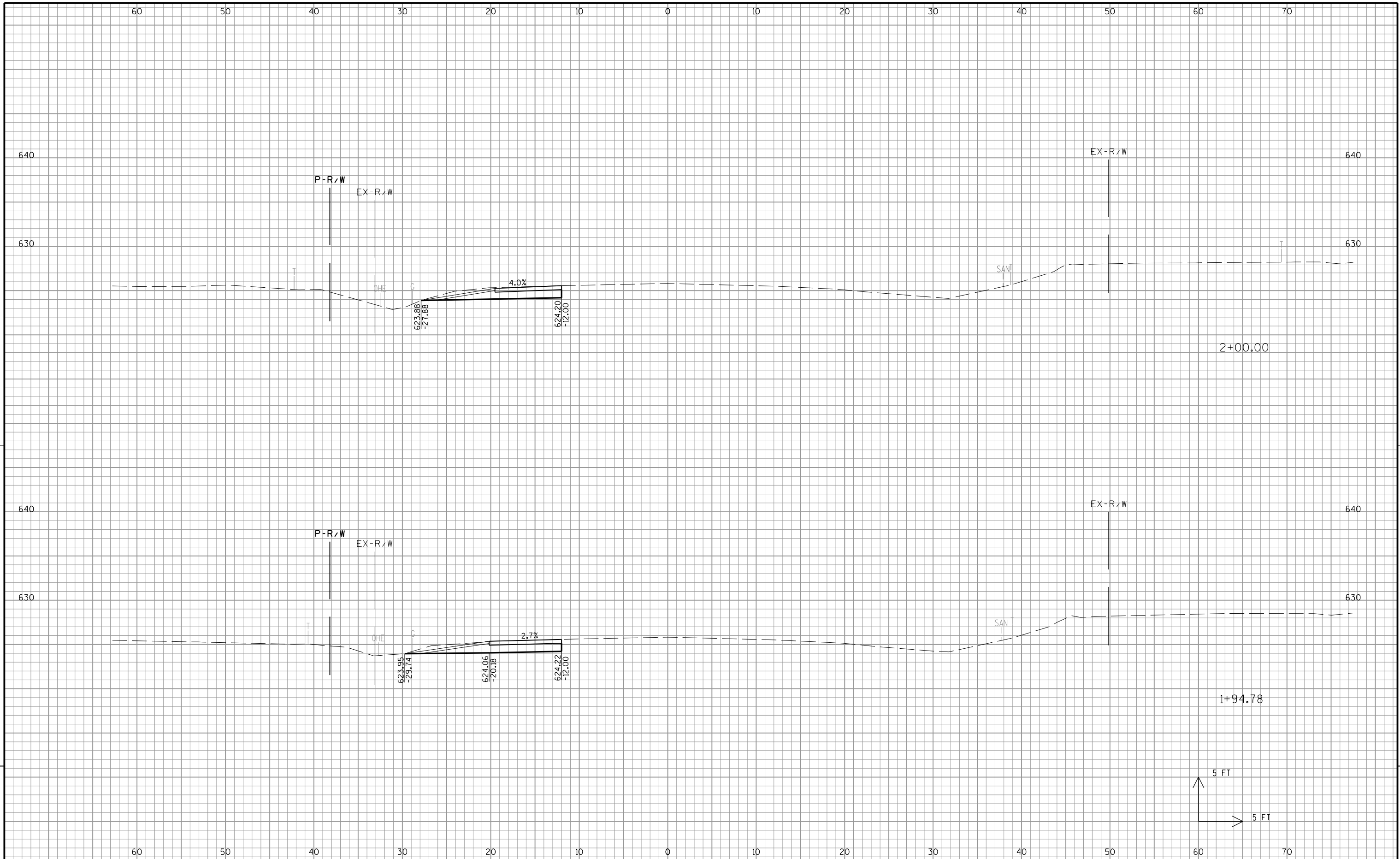
SHIMS SHALL BE USED UNDER POSTS AND END
PLATES WHERE REQ'D. FOR ALIGNMENT.

FILL ALL EXPOSED OPENINGS BETWEEN SHIMS AND POST ANCHOR BOLT HOLES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

RAILS SHALL BE BUILT STRAIGHT AND SPRUNG INTO PLACE FOR STRUCTURES CURVED UP TO 3°. FOR STRUCTURES CURVED GREATER THAN 3°, RAILS SHALL BE CURVED TO FIT.

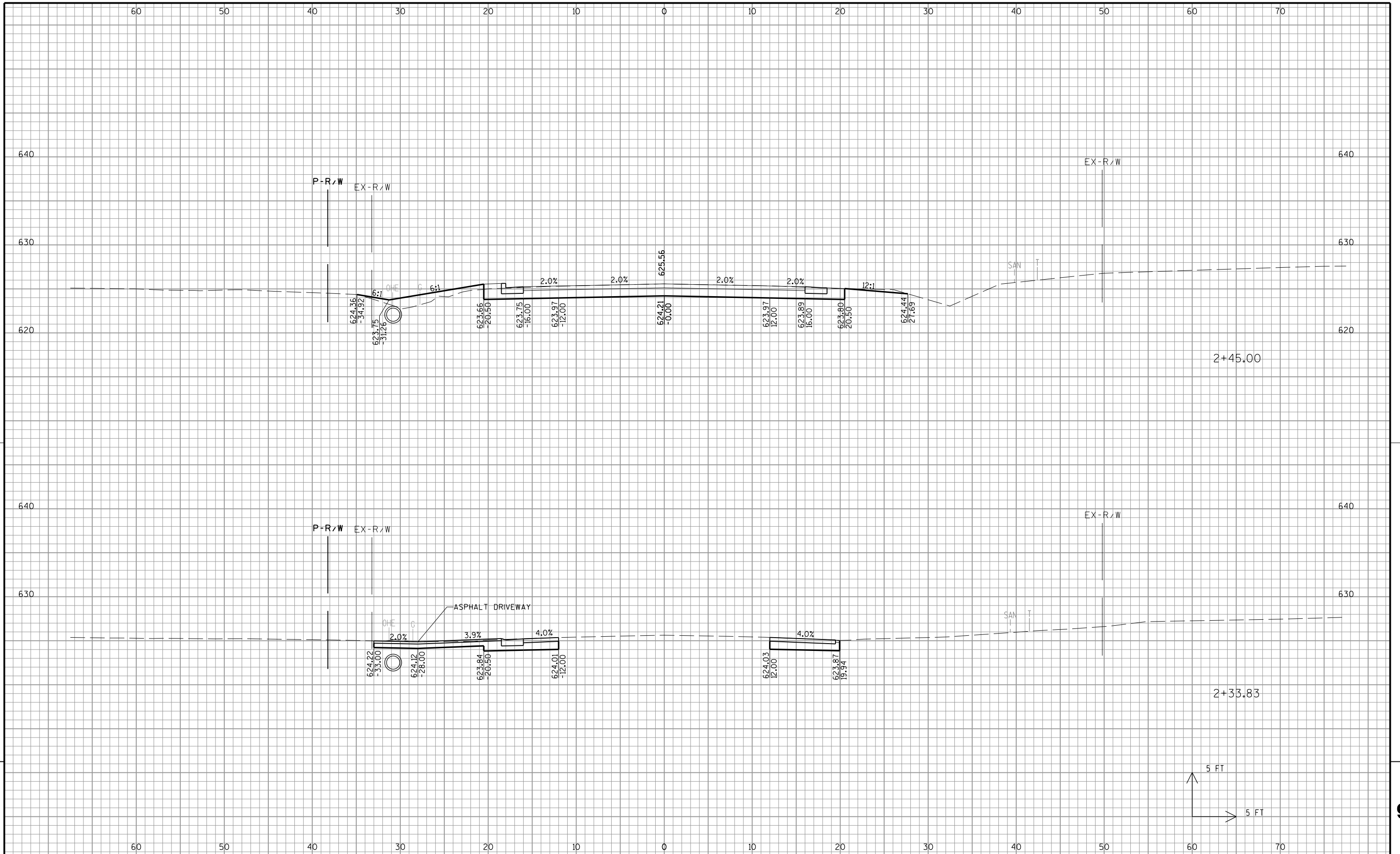
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-15-24			
DRAWN BY AMZ		PLANS CK'D. JSR	
TUBULAR RAILING TYPE "H" (ALUM.)		SHEET 12 OF 12	

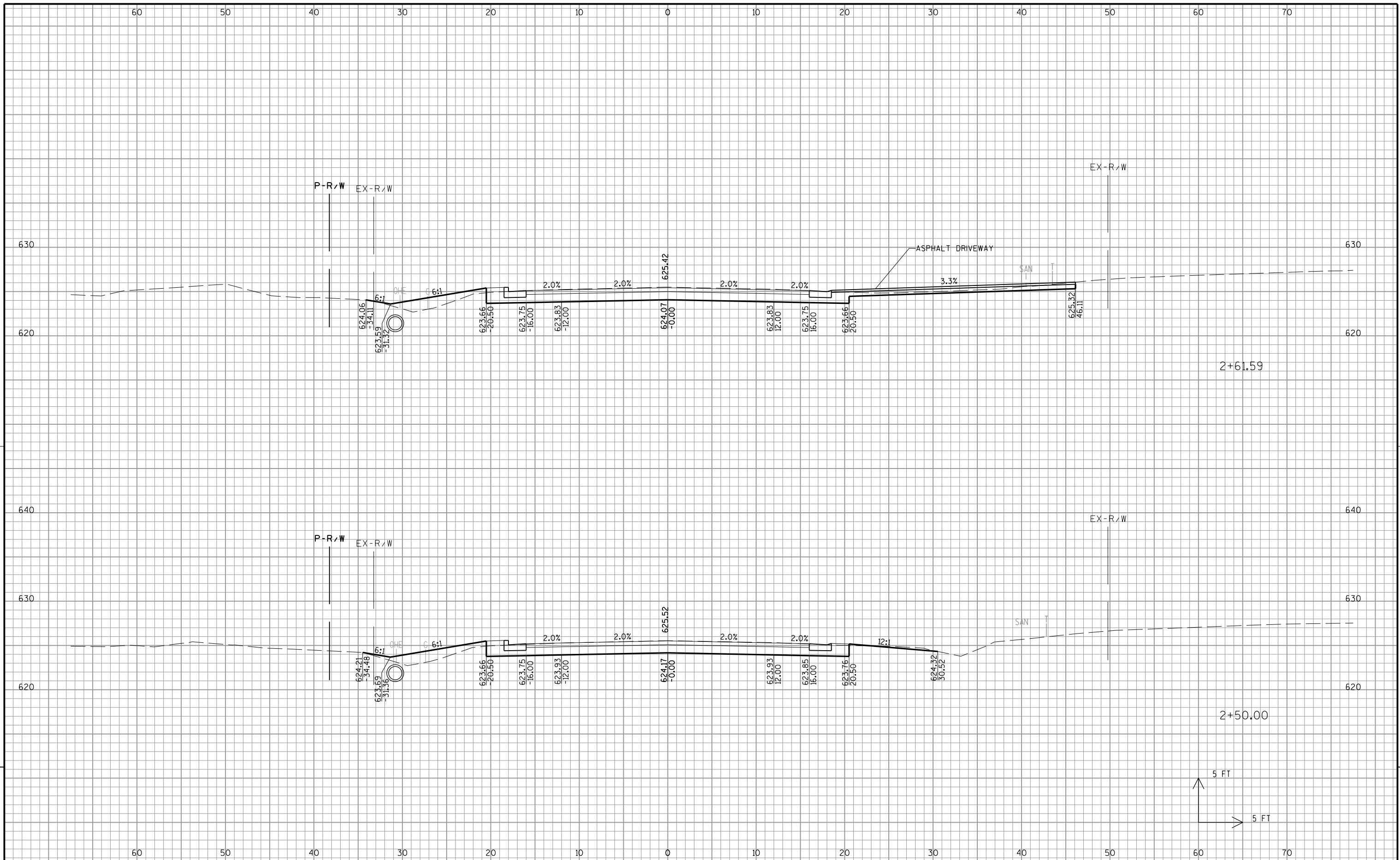
STH 42										
STATION LENGTH		END-AREA		VOLUME INCREMENTAL		VOLUME CUMULATIVE				MASS HAUL
		CUT	FILL	CUT	FILL	CUT	FAC	FILL	FAC	
		SQ FT		CU YD		CU YD		CU YD		CU YD
01+94.78		18.9	0.0							
	5.22			3.5	0.0	3.5	1.0	0.0	1.25	3.5
02+00.00		17.1	0.0							
	8.21			5	0.0	8.5	1.0	0.0	1.25	8.5
02+08.21		16.0	0.0							
	19.00			12.6	0.0	21.1	1.0	0.0	1.25	21.1
02+27.21		19.8	0.0							
	6.62			6.1	0.0	27.2	1.0	0.0	1.25	27.2
02+33.83		30.1	0.0							
	11.17			17.7	2.0	44.9	1.0	2.5	1.25	42.4
02+45.00		55.4	9.6							
	5.00			10.3	1.9	55.2	1.0	4.9	1.25	50.3
02+50.00		55.8	10.8							
	11.59			26	4.4	81.2	1.0	10.4	1.25	70.8
02+61.59		65.3	9.7							
	38.41			91.1	15.8	172.3	1.0	30.1	1.25	142.2
03+00.00		62.7	12.6							
	34.11			84	12.2	256.3	1.0	45.4	1.25	210.9
03+34.11		70.3	6.7							
	15.89			39.3	5.4	295.6	1.0	52.1	1.25	243.5
03+50.00		63.2	11.7							
	13.32			32	7.5	327.6	1.0	61.5	1.25	266.1
03+63.32		66.3	18.7							
	16.00			74.1	8.8	401.7	1.0	72.5	1.25	329.2
03+79.32		183.9	11.0							
Bridge										
04+21.32		82.2	65.1							
	16.00			38.4	60.2	440.1	1.0	147.8	1.25	292.4
04+37.32		47.4	137.9							
	12.68			22	50.6	462.1	1.0	211.0	1.25	251.1
04+50.00		46.3	77.7							
	50.00			88.2	98.6	550.3	1.0	334.3	1.25	216.1
05+00.00		49.0	28.8							
	15.90			24.6	8.8	574.9	1.0	345.3	1.25	229.7
05+15.90		34.6	0.9							
	4.65			4.5	0.1	579.4	1.0	345.4	1.25	234.0
05+20.55		18.0	0.0							

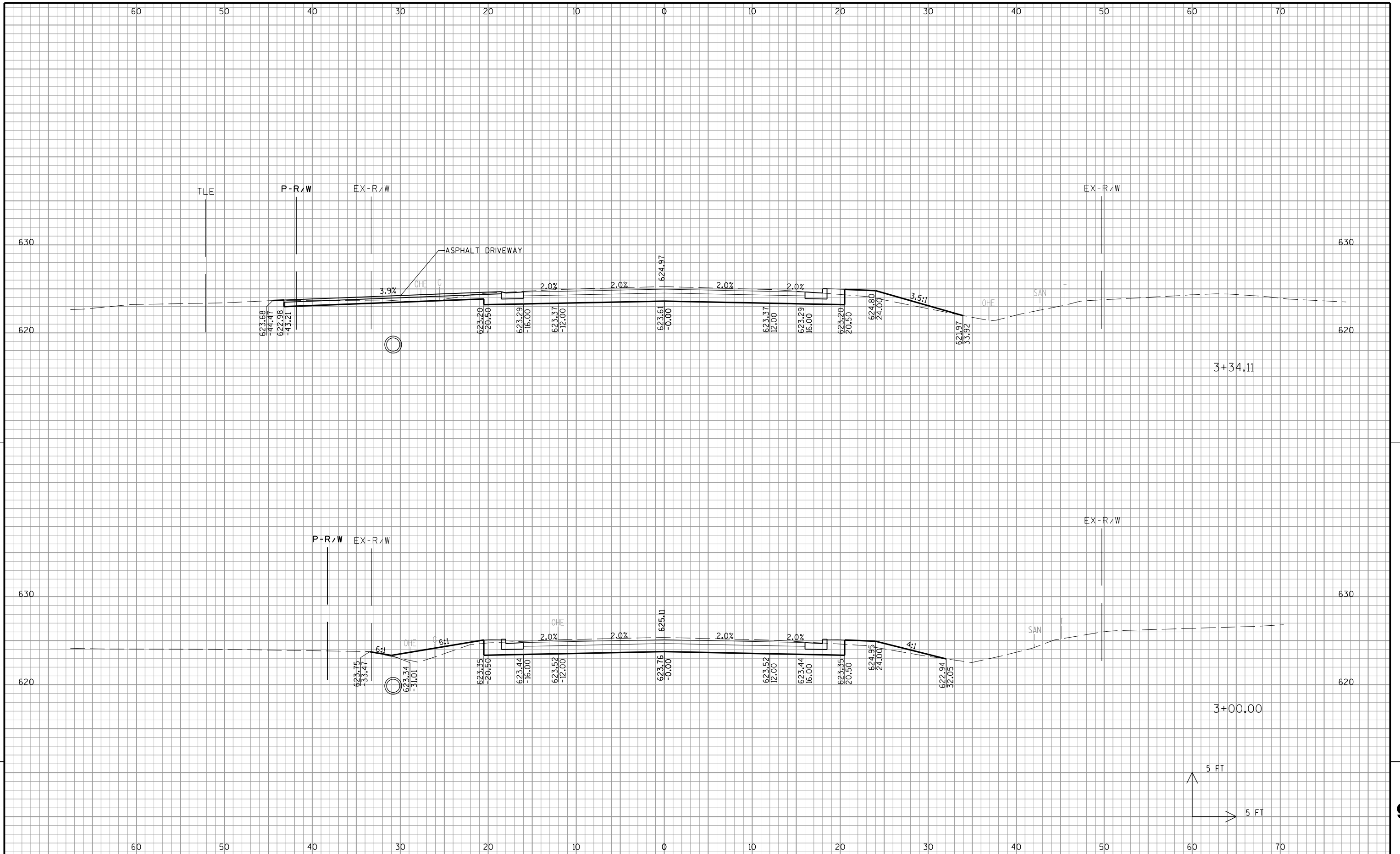


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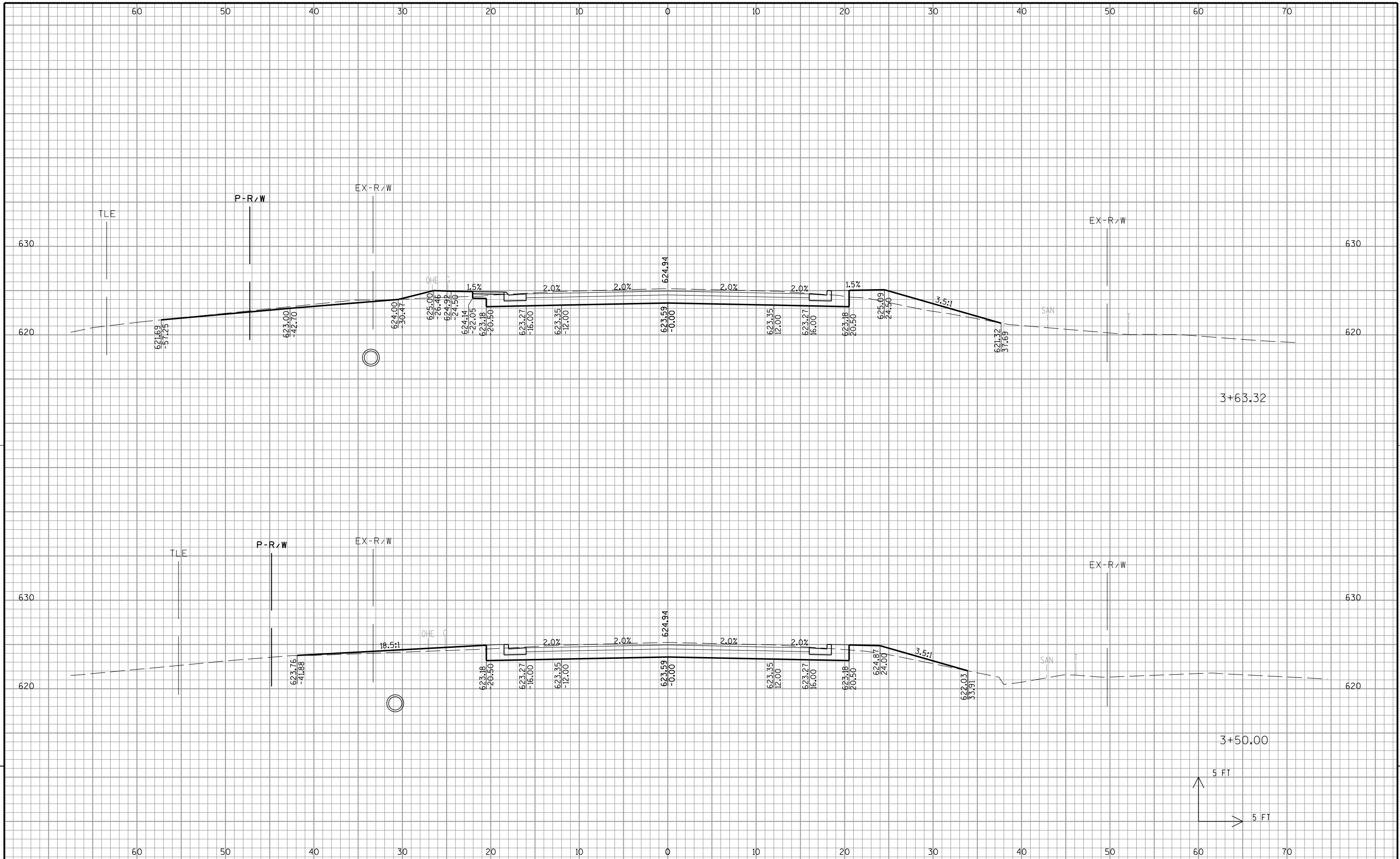






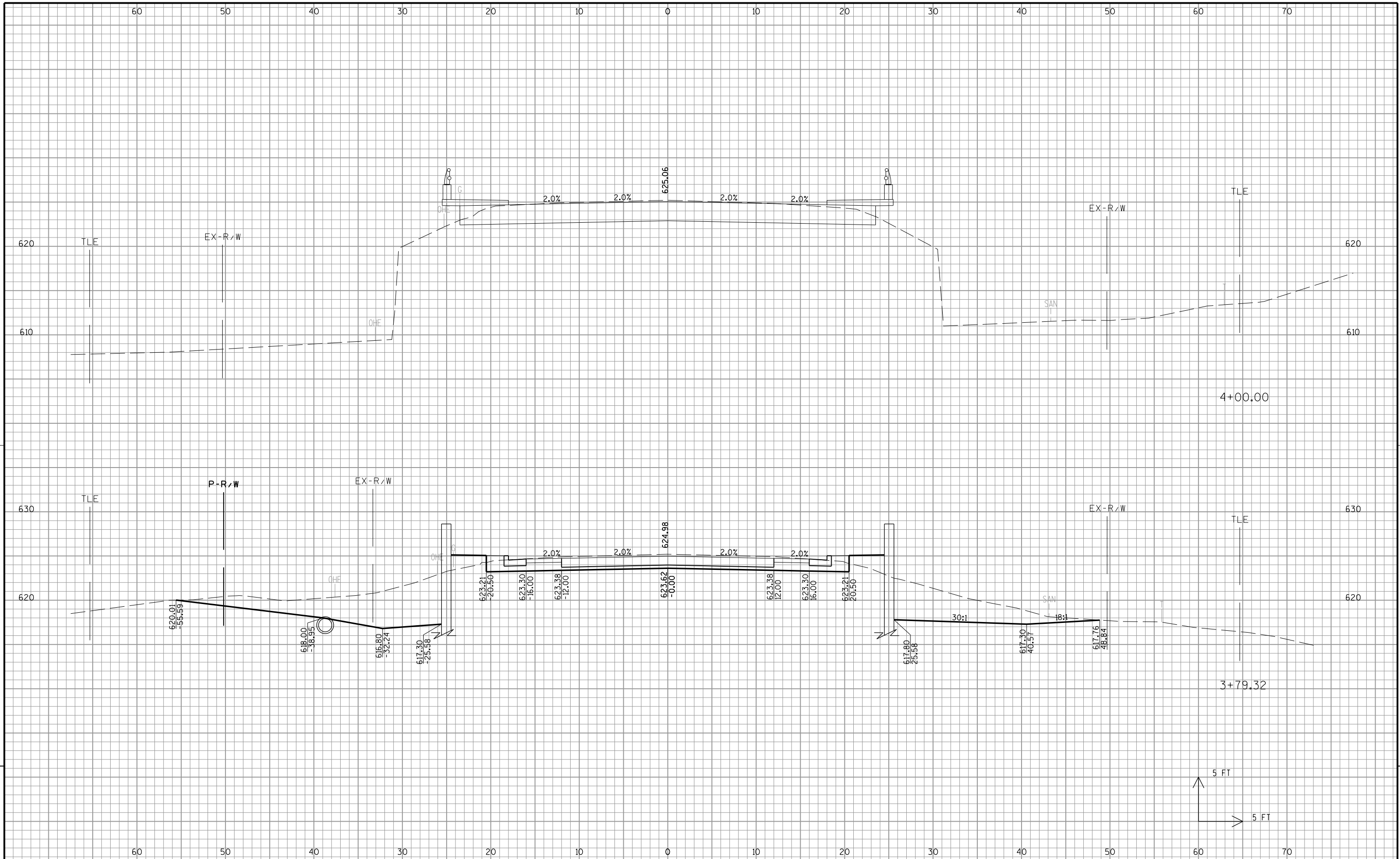
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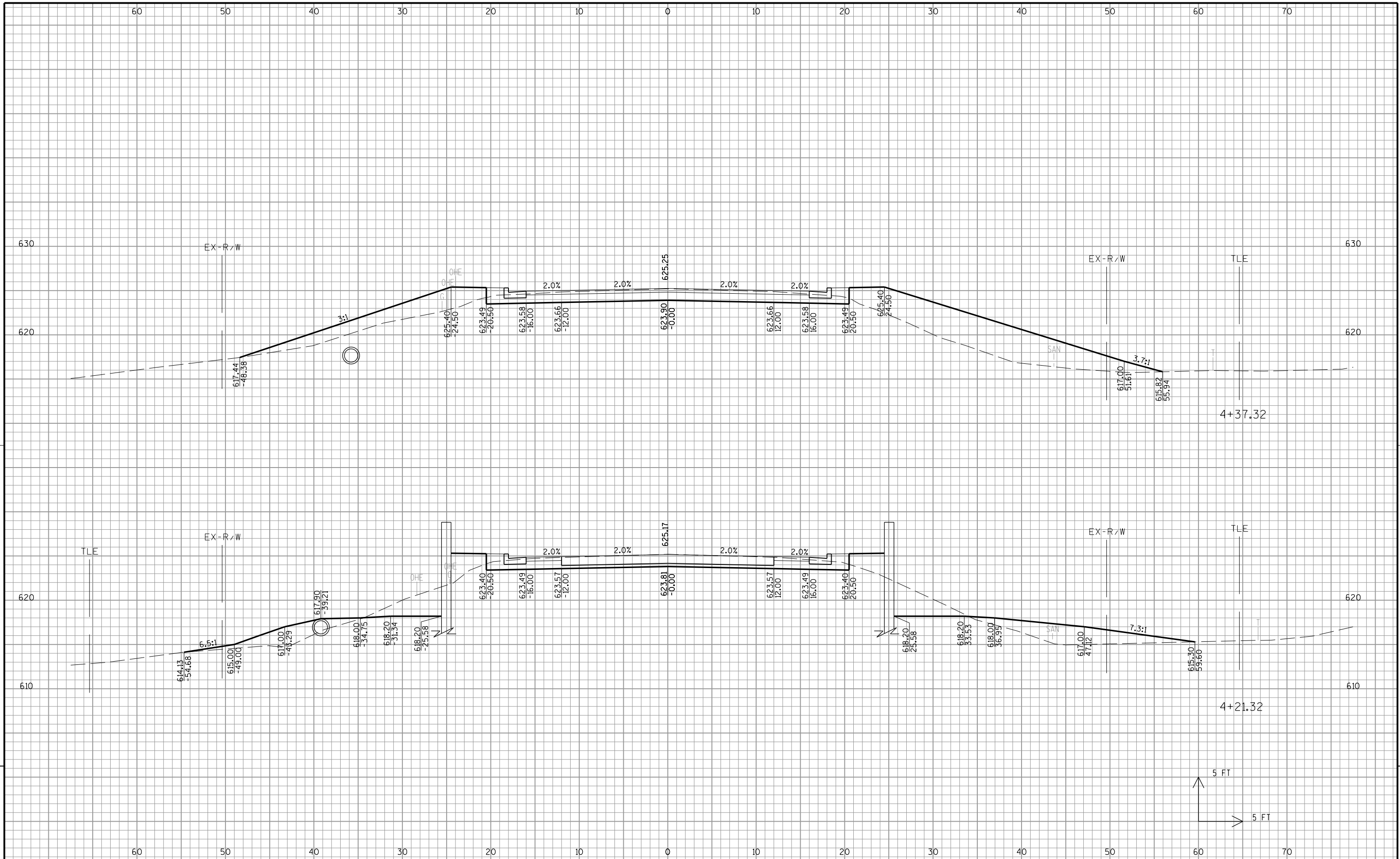
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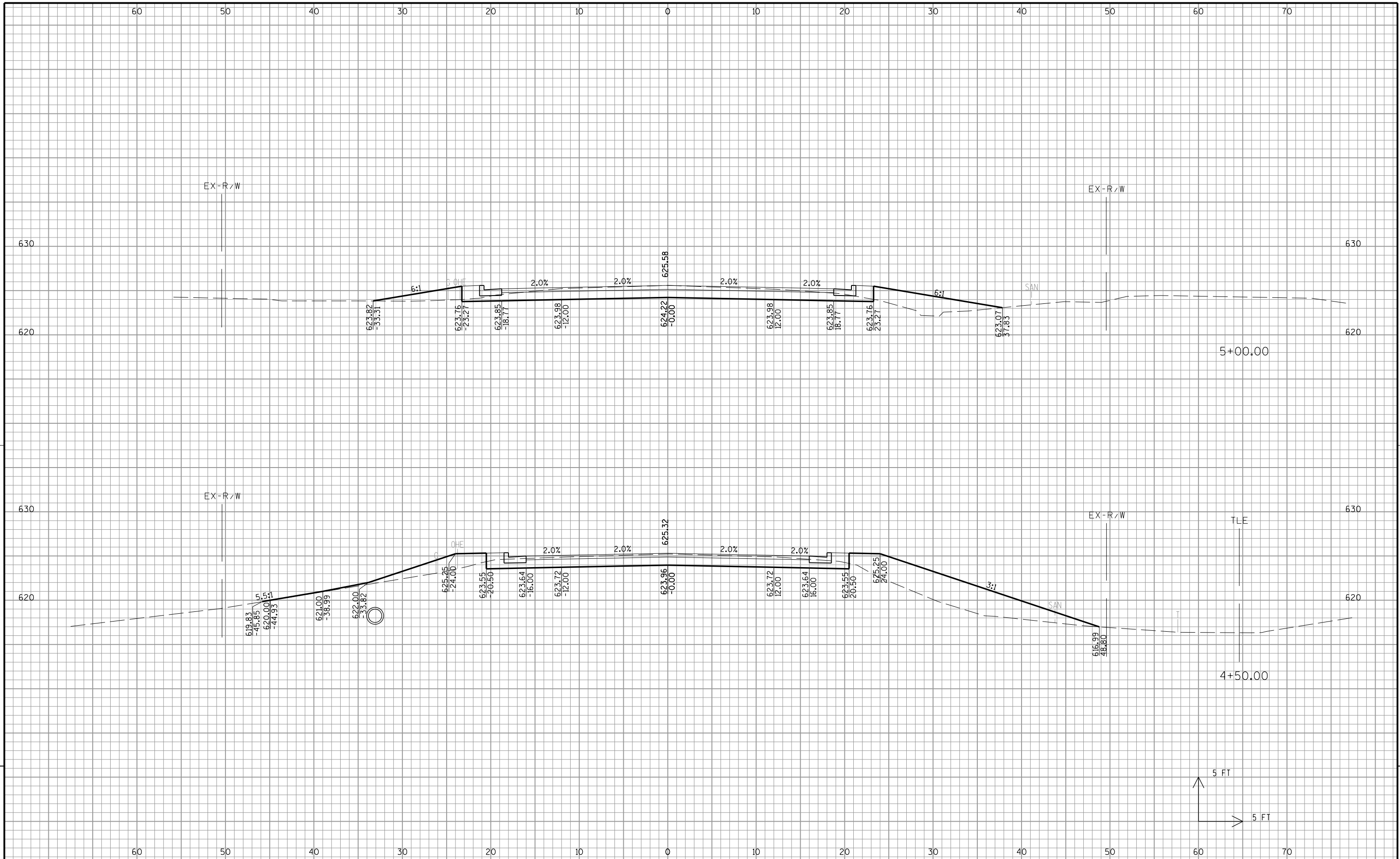
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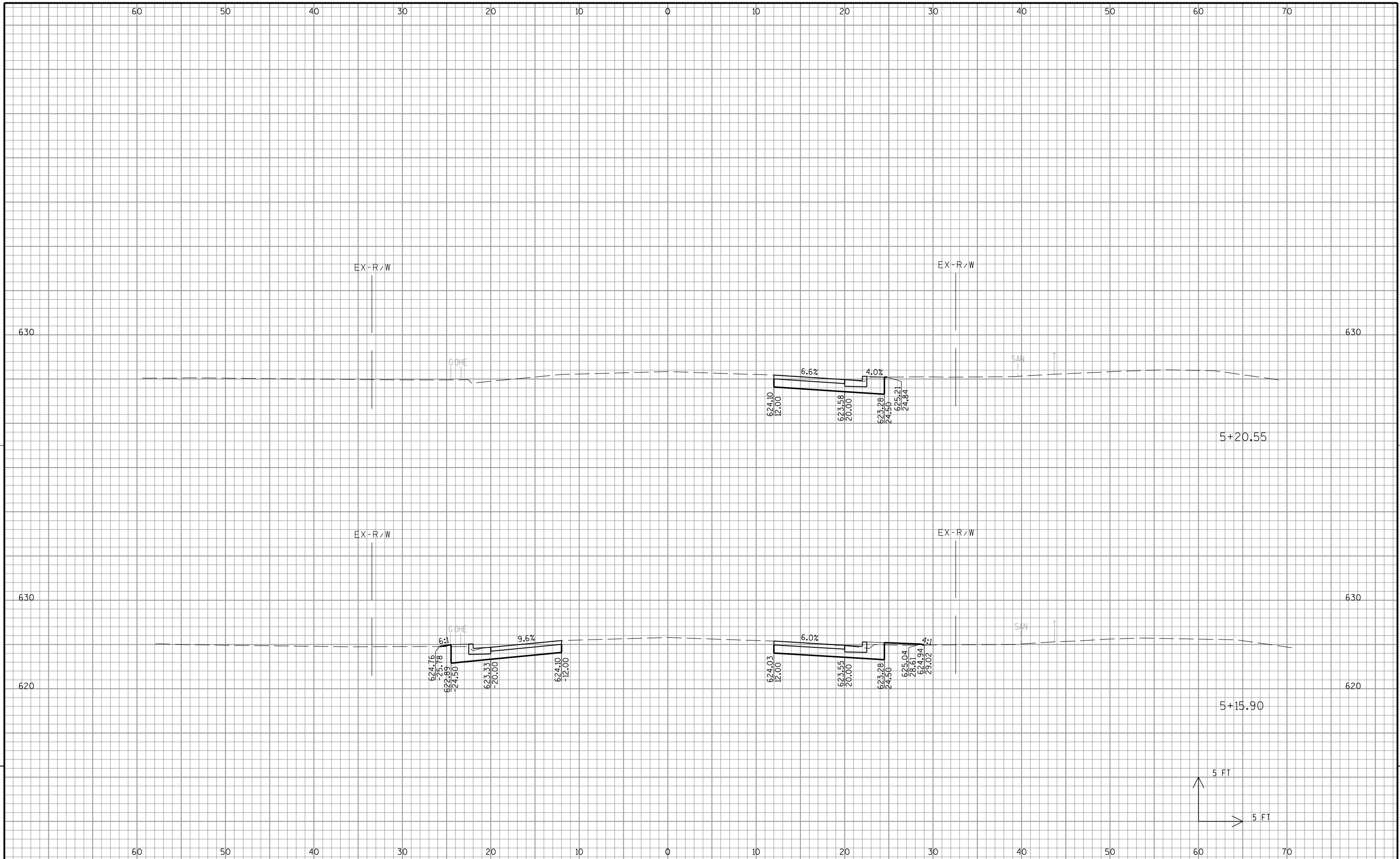
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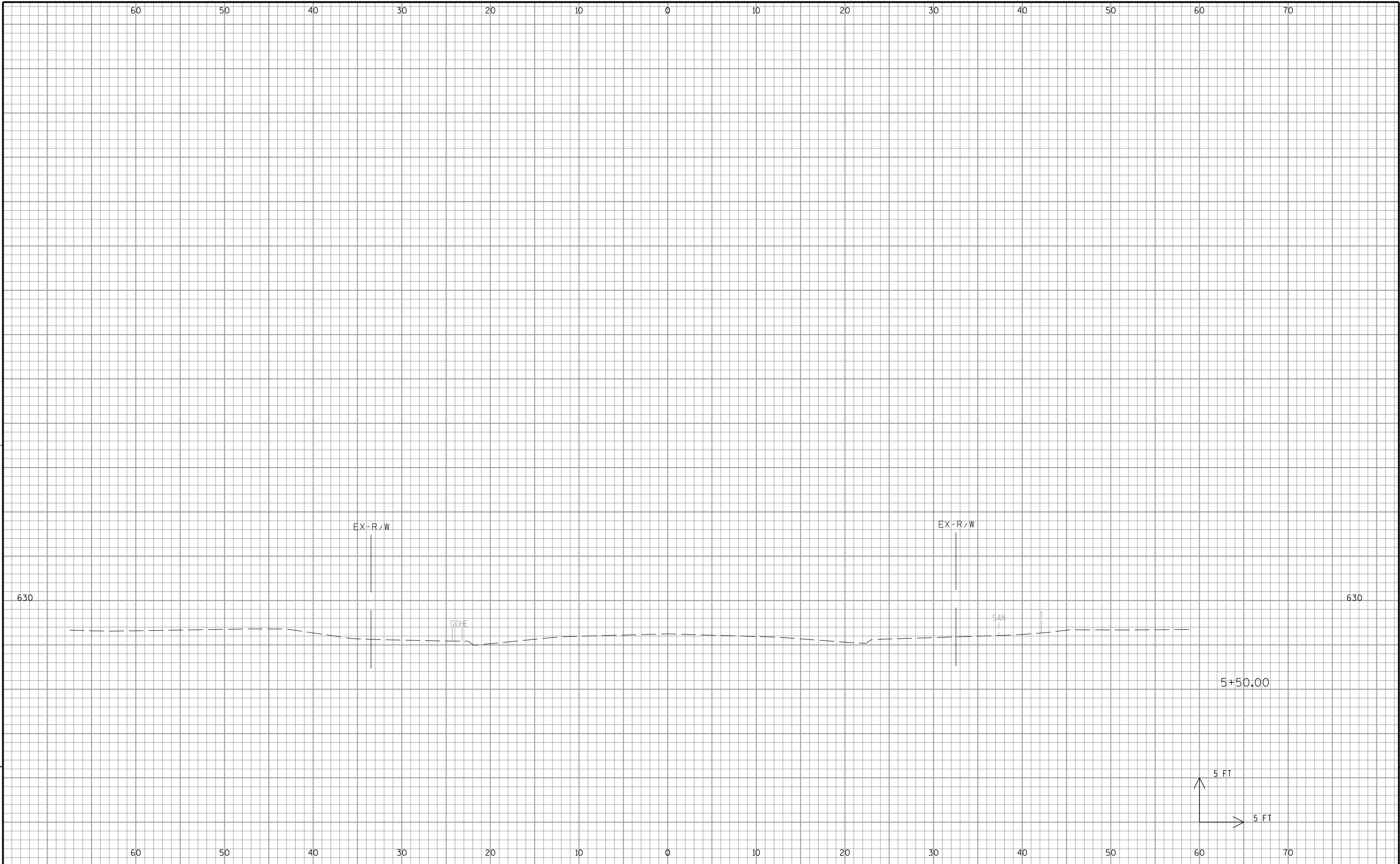
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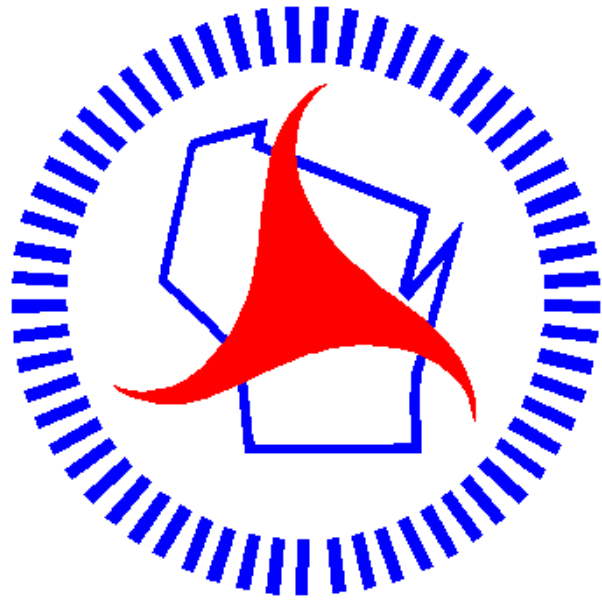
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Notes



Wisconsin Department of Transportation

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through innovation and exceptional service.

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