SUP

PROJECT ID: 1560-04-70

WITH: N/A

COUNTY: SAWYER/ BAYFIELD

MARCH 2019

ORDER OF SHEETS

TOTAL SHEETS = 142

51

N

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

HAYWARD – DRUMMOND

LARSEN ROAD TO CTH M

USH 63

SAWYER/ BAYFIELD COUNTIES

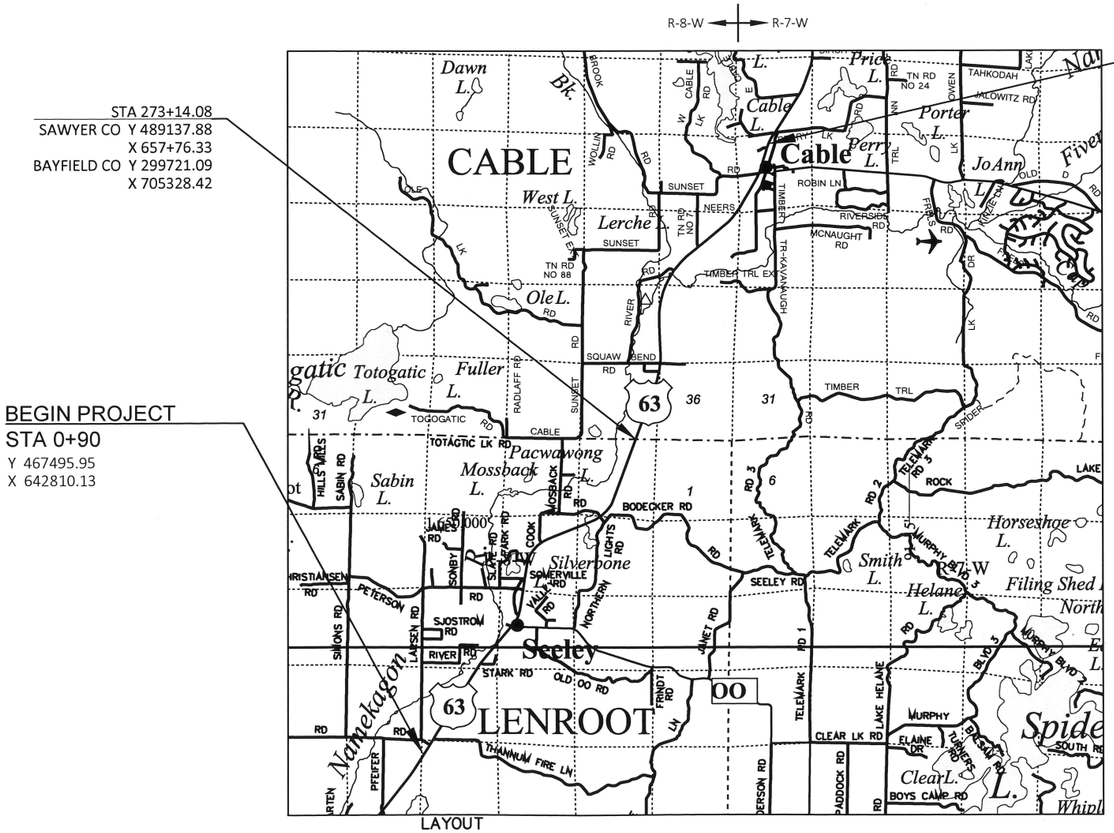
STATE PROJECT NUMBER
1560-04-70

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1560-04-70	WISC 2019183	1

STA 273+14.08
SAWYER CO Y 489137.88
X 657+76.33
BAYFIELD CO Y 299721.09
X 705328.42

BEGIN PROJECT
STA 0+90
Y 467495.95
X 642810.13

END PROJECT
STA 496+85.00
Y 319288.90
X 714039.77



TOTAL NET LENGTH OF CENTERLINE = 9.392 MI

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

DESIGN DESIGNATION

A.A.D.T.	(2019)	= 4100
A.A.D.T.	(2039)	= 4900
D.H.V.		= ---
D.D.		= 61/39
T.		= 10.5%
DESIGN SPEED		= 60 MPH
ESALS		= 1,300,000

CONVENTIONAL SYMBOLS

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

PROFILE
- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES
- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

ORIGINAL PLANS PREPARED BY

AYRES ASSOCIATES

WISCONSIN PROFESSIONAL ENGINEER
MARK R. PETERSEN
E - 36785
EAU CLAIRE
WI

DATE: 6/20/18 (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	C.O. SURVEYING & MAPPING
Designer	AYRES ASSOCIATES INC
Project Manager	MATT DICKENSON
Regional Examiner	
Regional Supervisor	JEFFREY OLSON

APPROVED FOR THE DEPARTMENT

DATE: 06/21/2018 Matthew J Dickenson (Signature)

E

GENERAL NOTES

THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA.

ALL RADII ARE MEASURED TO EDGE OF PAVEMENT UNLESS OTHERWISE SHOWN OR NOTED ON THE PLAN.

PRIOR TO THE PLACEMENT OF MGS GUARDRAIL, THE SHOULDERS SHALL BE IN PLACE, SHAPED AND COMPACTED UNLESS SHOWN OTHERWISE.

EXISTING RIGHT-OF-WAY LOCATION IS APPROXIMATE; BASED ON GIS DATA.

UTILITY CONTACTS

XCEL ENERGY - DISTRIBUTION
2400 FARM ROAD
ASHLAND, WI 54806
ATTN: SCOTT FROEMMING
715-682-6927
scott.c.froemming@xcelenergy.com
CC ALL CORRESPONDENCE TO:
CORISSA SEELY
corissa.e.seely@xcelenergy.com

XCEL ENERGY - TRANSMISSION
414 NICOLET MALL, 5TH FLOOR
MINNEAPOLIS, MN 55401
ATTN: BRUCE ZEMKE
612-330-7815
bruce.m.zemke@xcelenergy.com

CENTURYLINK
PO BOX 78
HAWKINS, WI 54530
ATTN: BRIAN HUHN
715-532-0023
brian.huhn@centurylink.com

CABLE SANITARY DISTRICT #1
PO BOX 541
CABLE, WI 54821
ATTN: DAVID POPELKA
715-580-0251
drp6100@gmail.com

NORVADO
43750 USH 63
PO BOX 67
CABLE, WI 54821
ATTN: GUY FULSOM
715-798-7123
gfulsom@norvado.com

* DENOTES NOT A DIGGERS HOTLINE MEMBER

DIGGERS HOTLINE
Dial 811 or (800)242-8511
www.DiggersHotline.com

DNR CONTACT

DNR NORTHWEST DISTRICT HQ
810 WEST MAPLE STREET
SPOONER, WI 54801
ATTN: SHAWN HASELEU
715-636-4228
shawn.haseleu@wisconsin.gov

DESIGN CONTACT

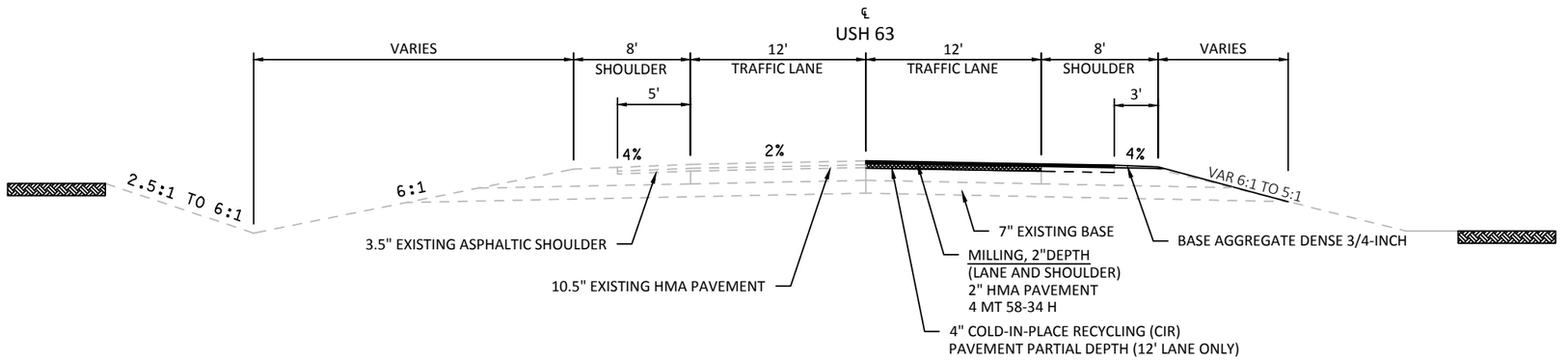
AYRES ASSOCIATES INC
3433 OAKWOOD HILLS PARKWAY
EAU CLAIRE, WI 54701
ATTN: MARK PETERSEN, PE
715-834-3161
petersenm@ayresassociates.com

WISCONSIN DOT RWIS PROGRAM

PO BOX 7986, 5TH FLOOR
MADISON, WI 53707-7986
ATTN: MICHAEL ADAMS
608-266-5004
michael.adams@dot.wi.gov

2

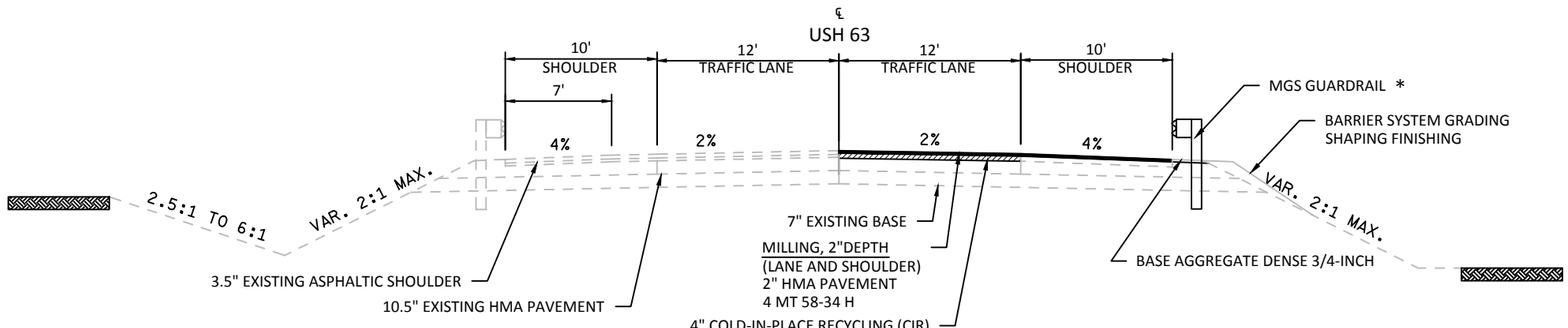
PAVEMENT CORE LOG		
STATION	OFFSET	PAVEMENT DEPTH
8+00	9' LT	11.0"
34+00	5' RT	10.5"
60+00	3.5' LT	10.0"
87+00	10' RT	10.75"
112+00	13' LT	7.5"
140+00	9.5' RT	10.0"
166+00	5' LT	10.25"
192+00	4' RT	9.75"
219+00	9.5' LT	11.0"
245+00	9' RT	10.0"
272+00	4' LT	11.0"
298+00	4' RT	10.5"
324+00	8.5' LT	11.0"
357+00	7.5' RT	10.5"
377+00	3.5' LT	10.75"
404+00	3.5' RT	12.0"
430+00	7.5' LT	10.0"
456+00	8.5' RT	10.0"
483+00	4' LT	10.75"



EXISTING HALF SECTION

FINISHED HALF SECTION

STA 00+90.00 - STA 101+85.00
STA 116+39.00 - STA 207+81.00
STA 210+61.00 - STA 394+40.00
STA 402+09.00 - STA 488+90.00



EXISTING HALF SECTION

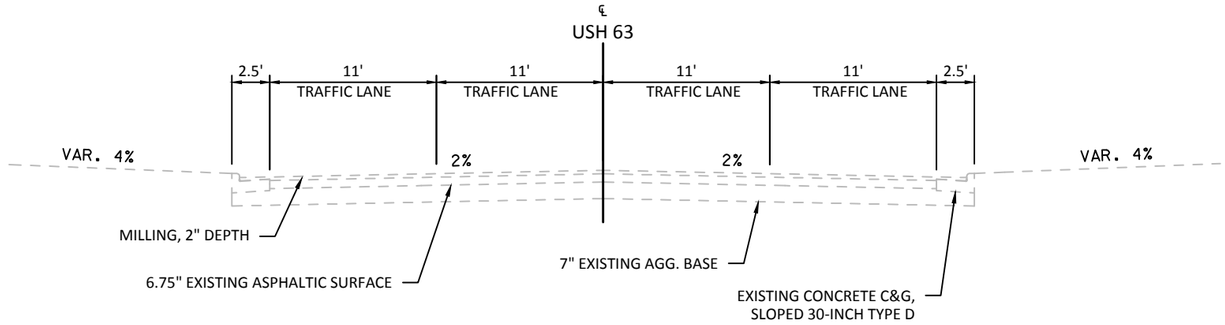
FINISHED HALF SECTION

STA 207+81.00 - STA 210+61.00
STA 394+40.00 - STA 402+09.00
STA 408+97.00 - STA 415+03.00, LT
STA 480+49.00 - STA 487+72.00, RT

* STA 482+50.00 - STA 484+25.00, RT
STA 484+75.00 - STA 486+50.00, RT
MGS GUARDRAIL 3K REQ'D

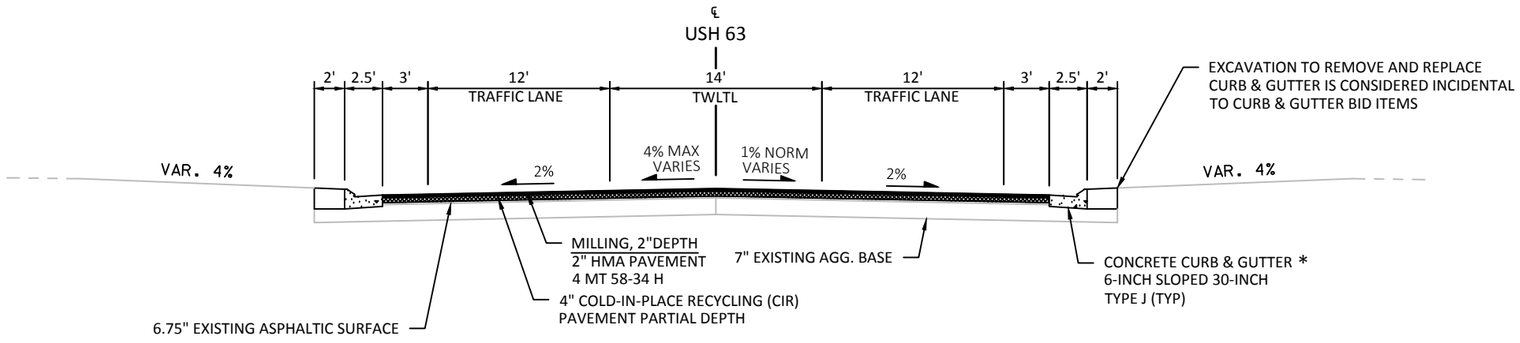
STA 207+81.00 - STA 210+61.00
STA 395+88.00 - STA 399+15.00, LT
STA 400+16.00 - STA 401+78.00, RT
EXISTING GUARDRAIL TO REMAIN

PROJECT NO: 1560-04-01	HWY: USH 63	COUNTY: SAWYER & BAYFIELD	TYPICAL SECTIONS	SHEET 3	E



EXISTING CURB & GUTTER SECTION

STA 101+85.00 - STA 116+39.00
STA 488+90.00 - STA 496+85.00

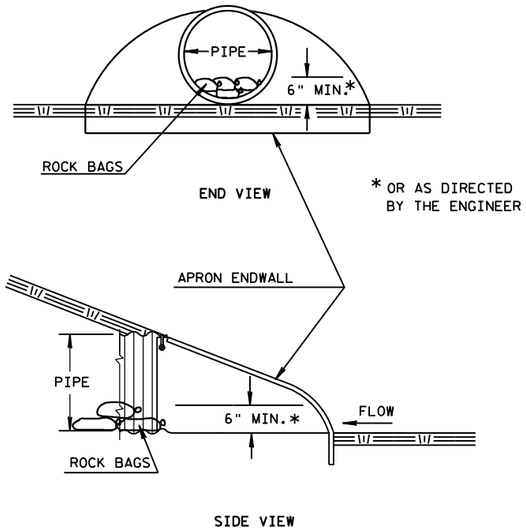


PROPOSED CURB & GUTTER SECTION

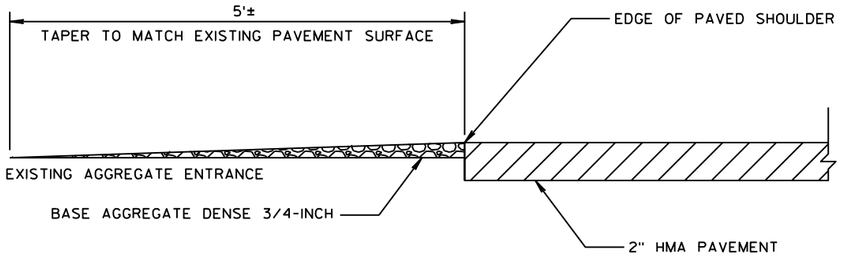
STA 101+85.00 - STA 116+39.00
STA 488+90.00 - STA 496+85.00

* STA 488+90.00 - STA 496+85.00, LT
STA 489+39.00 - STA 491+50.00, RT
STA 492+05.00 - STA 476+75.00, RT
EXISTING CONCRETE CURB & GUTTER
TO REMAIN

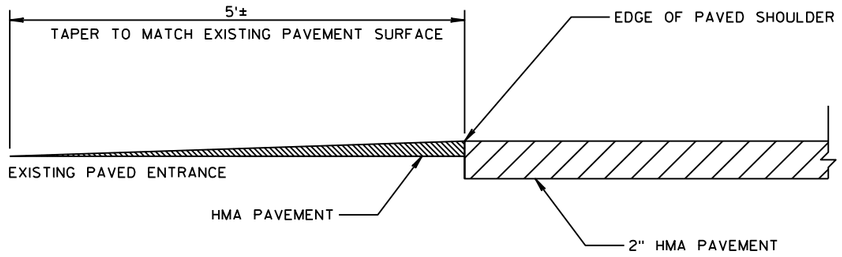
PROJECT NO:1560-04-70	HWY: USH 63	COUNTY: SAWYER & BAYFIELD	TYPICAL SECTIONS	SHEET 4	E



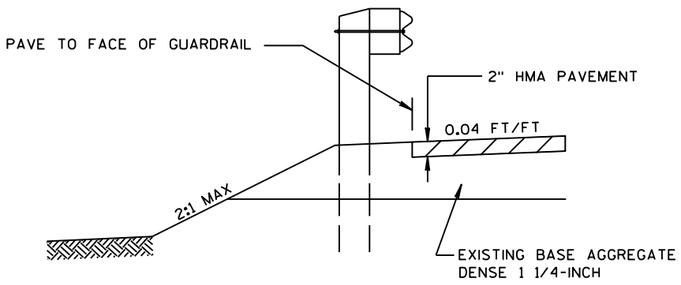
CULVERT PIPE CHECK

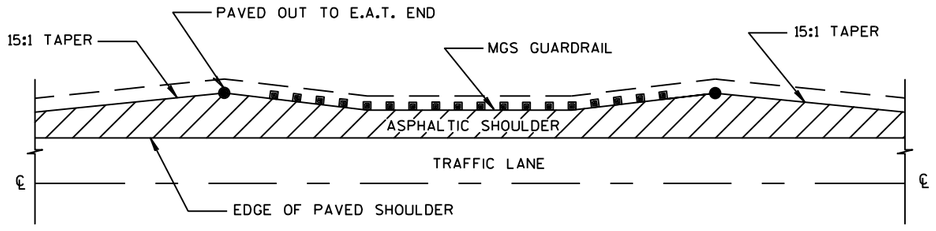


BASE AGGREGATE PRIVATE ENTRANCE DETAIL PROFILE VIEW

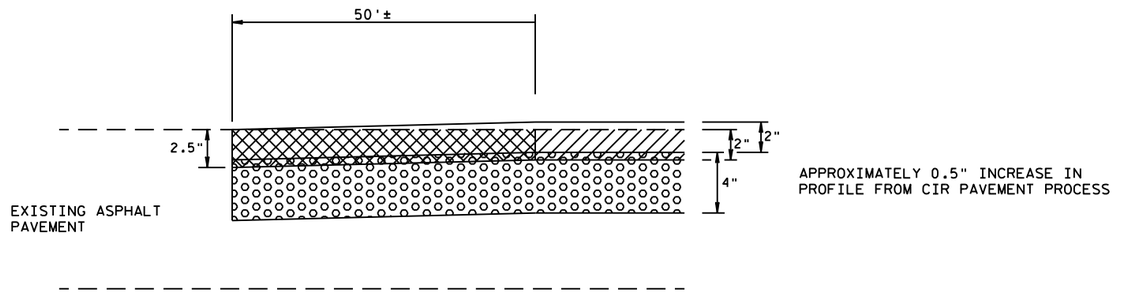


PAVED PRIVATE ENTRANCE DETAIL PROFILE VIEW





ASPHALTIC PAVING ALONG BEAMGUARD



BUTT JOINT DETAIL

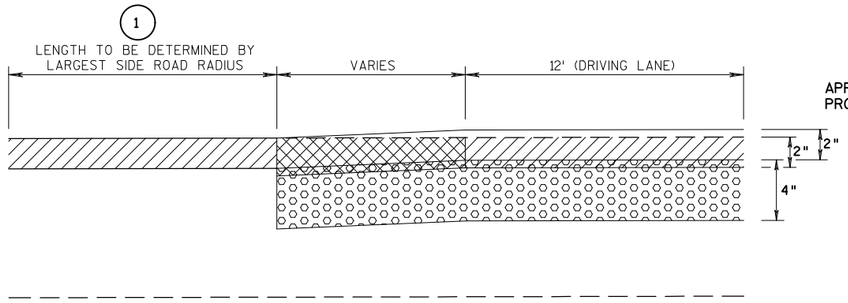
STA 0+90 - STA 1+40
STA 496+35 - STA 496+85

MILLING ASPHALTIC SURFACE BUTT JOINT (DEPTH VARIES FROM 2" TO 2.5")

MILLING ASPHALTIC SURFACE (DEPTH 2")

4" COLD-IN-PLACE RECYCLE

PROJECT NO:1560-04-70	HWY: USH 63	COUNTY: SAWYER & BAYFIELD	CONSTRUCTION DETAILS	SHEET 5	E



APPROXIMATELY 0.5" INCREASE IN PROFILE FROM CIR PAVEMENT PROCESS

MILLING ASPHALTIC SURFACE (DEPTH VARIES FROM 2" TO 2.5")

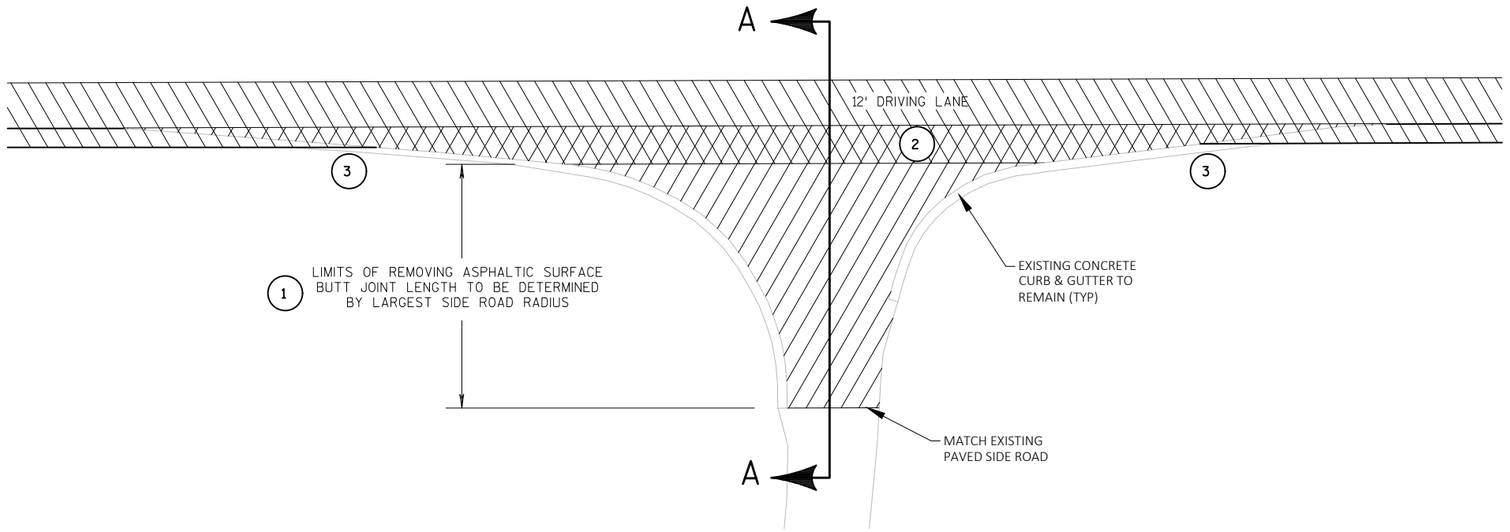
MILLING ASPHALTIC SURFACE (DEPTH 2")

4" COLD-IN-PLACE RECYCLE

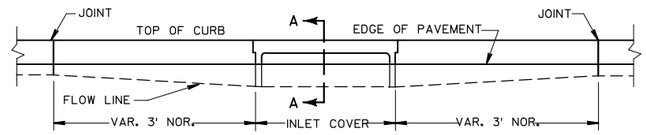
(1) LIMITS AS DIRECTED BY THE ENGINEER.

(2) TRANSITION SHOULDER SLOPE AND SIDE ROAD CROSS-SLOPE TO MATCH THE EXISTING CONCRETE CURB AND GUTTER FLANGE LINE.

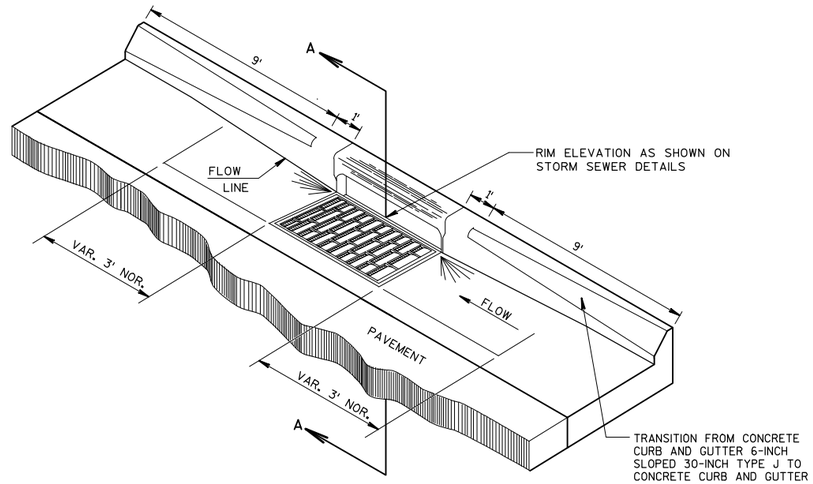
(3) MATCH EXISTING TAPER RATES.

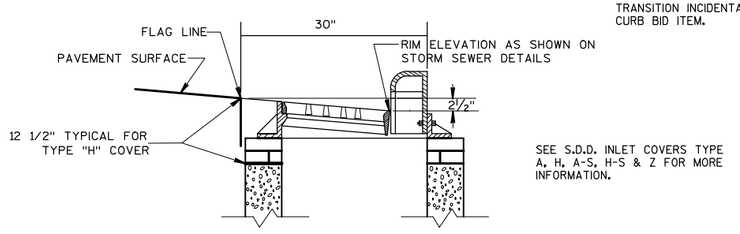


DETAIL FOR RURAL PAVED SIDE ROAD



ELEVATION

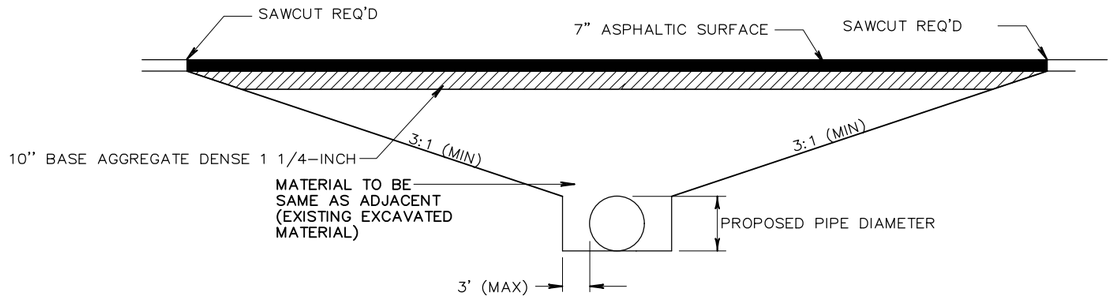




SECTION A-A

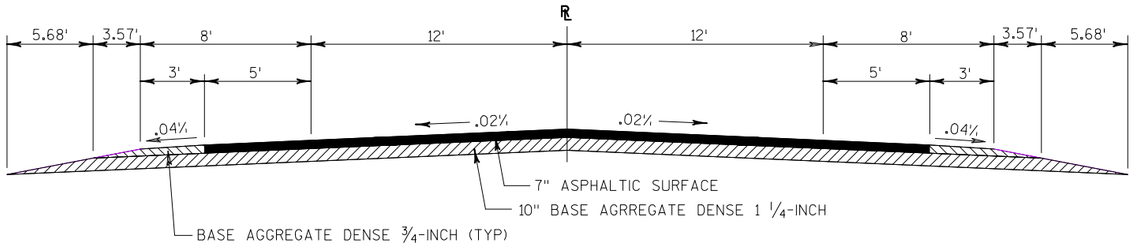
DETAIL OF CURB AND GUTTER AT INLETS

(INLET COVERS TYPE H SHOWN)



DETAIL FOR USH 63 CULVERT PIPE REMOVAL, REPLACEMENT AND BASE PATCHING INSTALLATION

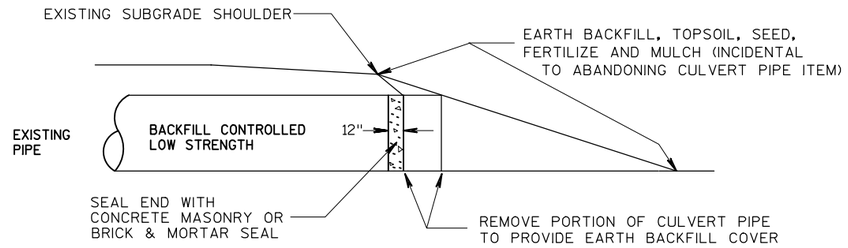
NOTE: REMOVAL OF PAVEMENT AND EXCAVATION ARE INCIDENTAL TO REMOVING CULVERT PIPE



FINISHED TYPICAL SECTION FOR USH 63 PIPE INSTALLATION AREAS

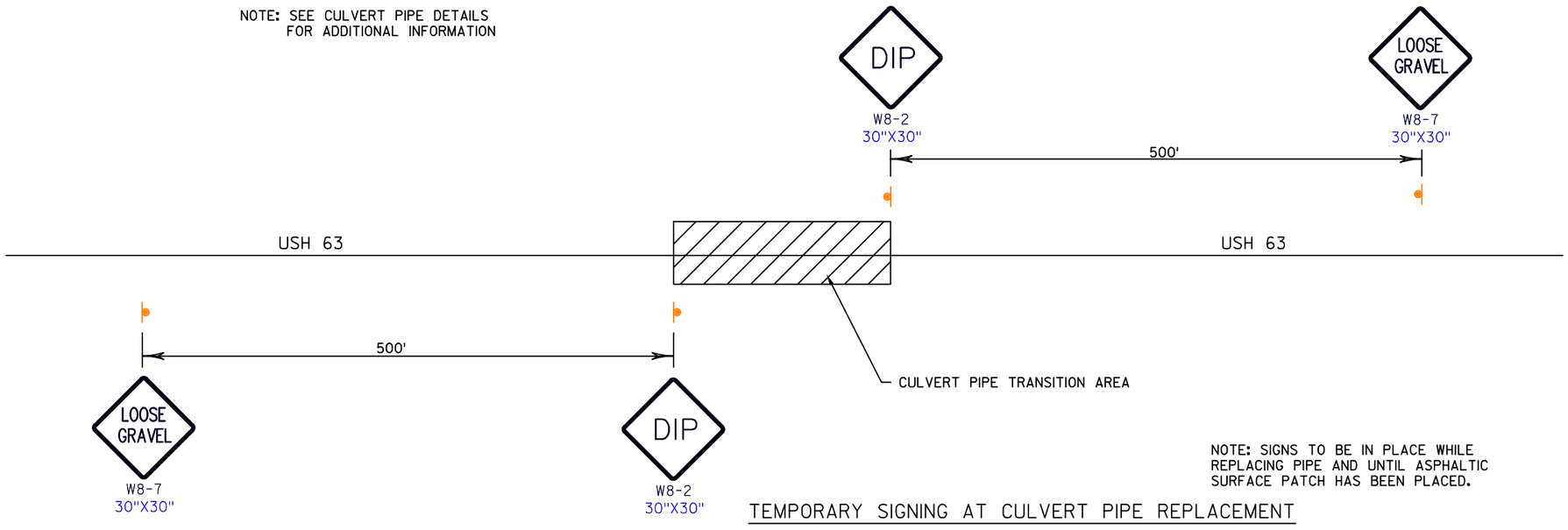
STA 57+04
STA 272+92
STA 347+20

NOTE: SEE CULVERT PIPE DETAILS FOR ADDITIONAL INFORMATION



ABANDONING CULVERT PIPE DETAIL

STA 412+64
STA 111+55, LT



NOTE: SIGNS TO BE IN PLACE WHILE REPLACING PIPE AND UNTIL ASPHALTIC SURFACE PATCH HAS BEEN PLACED.

TEMPORARY SIGNING AT CULVERT PIPE REPLACEMENT

2

2

TEMPORARY DITCH CHECK

CENTURYLINK

STA 57+04
1-30"x116' CPRC CL. III
2-APRON ENDWALLS REQ'D

STA 57+04
REMOVING SMALL PIPE CULVERTS
(30"x121' EXISTING CMCP)

57+00

XCEL ENERGY

SILT FENCE (TYP)

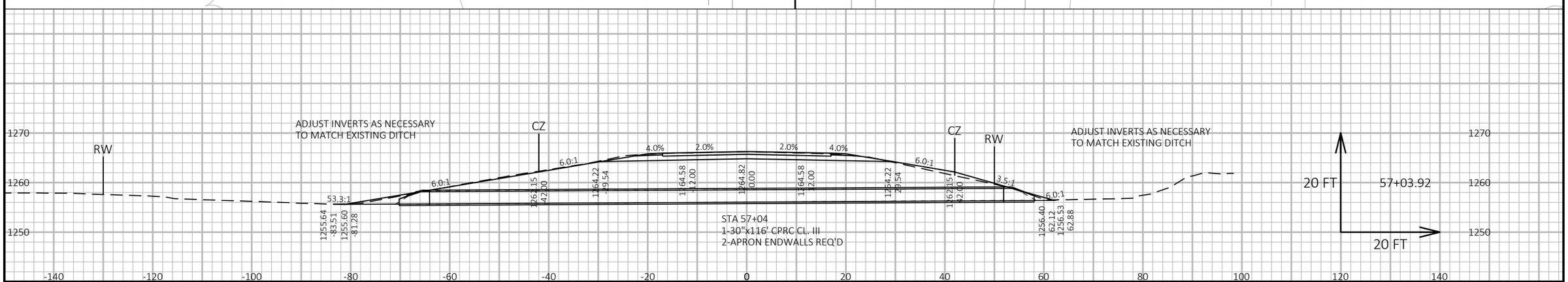
EROSION MAT CL.I TYPE B

SEE DETAIL FOR USH 63 CULVERT
PIPE REMOVAL, REPACEMENT AND
BASE PATCHING INSTALLATION

CULVERT PIPE CHECK

NORVADO

CENTURYLINK



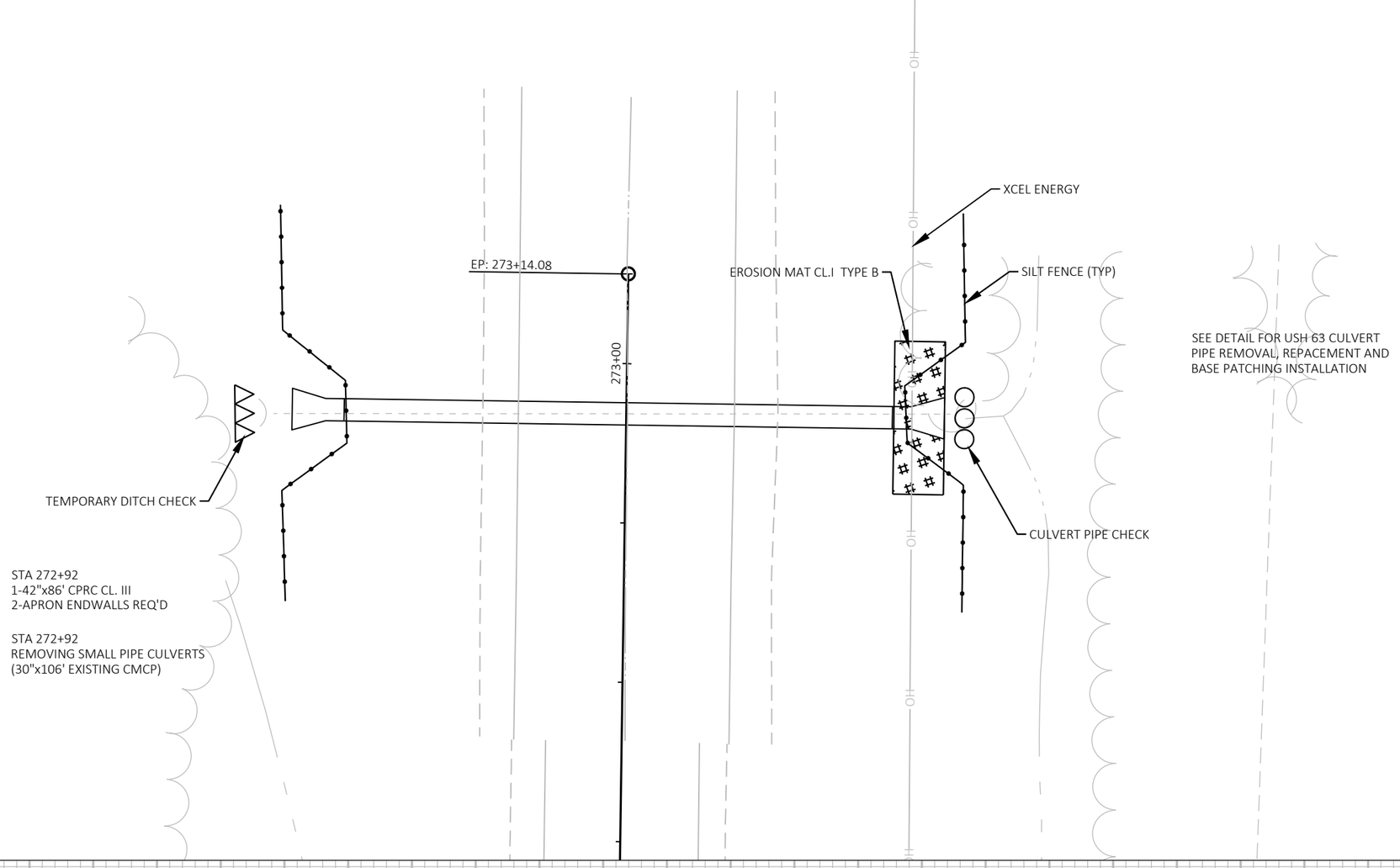
PROJECT NO: 1560-04-70	HWY: USH 63	COUNTY: SAWYER	CULVERT PIPE DETAIL STA 57+04	SHEET 8	E

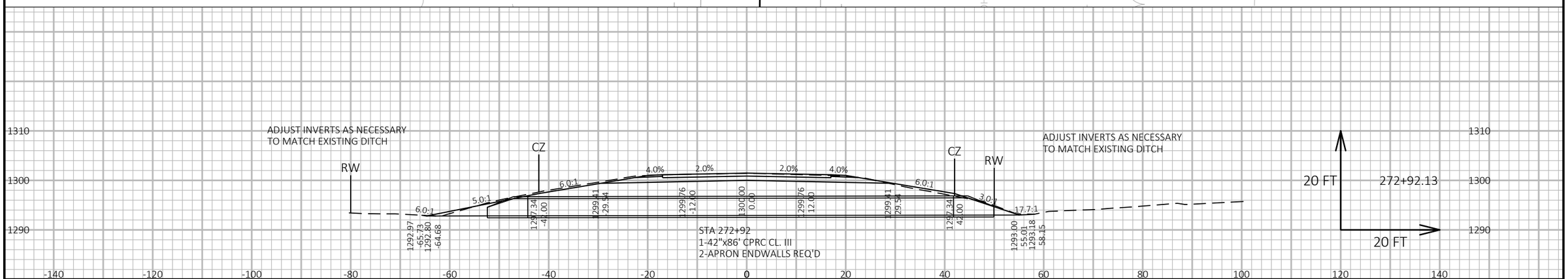
FILE NAME : V:\TRANS-EC\410757 USH 63\C3D\SHEETSPLAN\021002_CD.DWG
LAYOUT NAME - 021004_cd SAWYER-57+04

PLOT DATE : 6/22/2018 10:32 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

2





PROJECT NO: 1560-04-70	HWY: USH 63	COUNTY: SAWYER	CULVERT PIPE DETAIL STA 272+92	SHEET 9	E

FILE NAME : V:\TRANS-EC\410757 USH 63\C3D\SHEETSPLAN\021002_CD.DWG
LAYOUT NAME - 021005_cd SAWYER-272+92
PLOT DATE : 6/27/2018 4:13 PM
PLOT BY : RESHESKE, CARRIE
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
WISDOT/CADDS SHEET 49

2

N

348+00

TEMPORARY DITCH CHECK

EROSION MAT CL.I TYPE B (TYP)

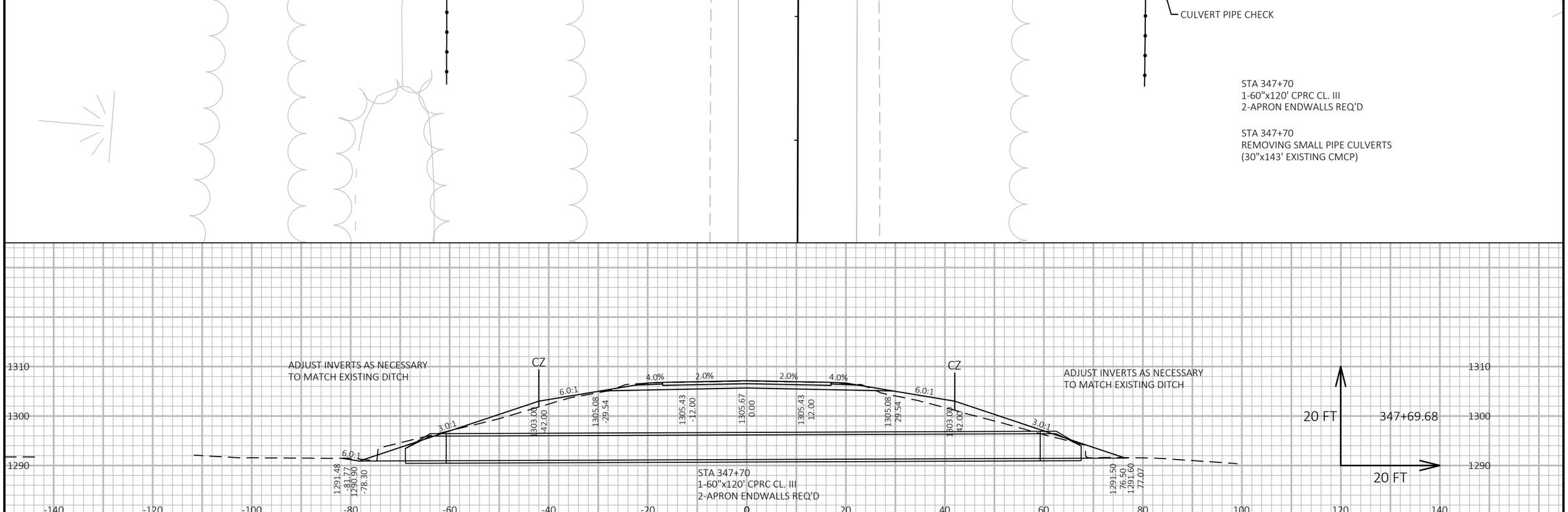
SILT FENCE (TYP)

SEE DETAIL FOR USH 63 CULVERT PIPE REMOVAL, REPACEMENT AND BASE PATCHING INSTALLATION

CULVERT PIPE CHECK

STA 347+70
1-60"x120' CPRC CL. III
2-APRON ENDWALLS REQ'D

STA 347+70
REMOVING SMALL PIPE CULVERTS
(30"x143' EXISTING CMCP)



PROJECT NO: 1560-04-70	HWY: USH 63	COUNTY: BAYFIELD	CULVERT PIPE DETAIL STA 347+70	SHEET 10	E

FILE NAME : V:\TRANS-EC\410757 USH 63\C3D\SHEETSPLAN\021003_CD.DWG
LAYOUT NAME - 021006_cd BAYFIELD-347+70
PLOT DATE : 6/27/2018 4:14 PM
PLOT BY : RESHESKE, CARRIE
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
WISDOT/CADDS SHEET 49

2

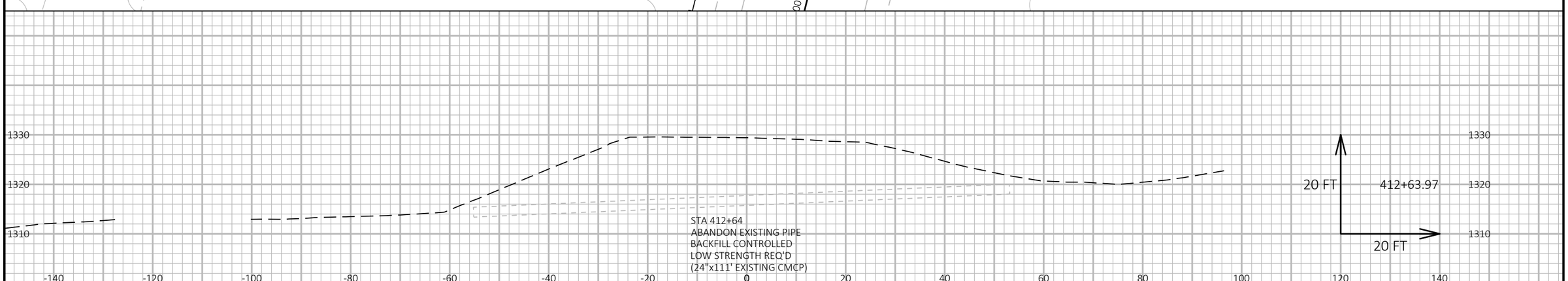
2

N

413+00

STA 412+64
ABANDON EXISTING PIPE
BACKFILL CONTROLLED
LOW STRENGTH REQ'D
(24"x111' EXISTING CMCP)

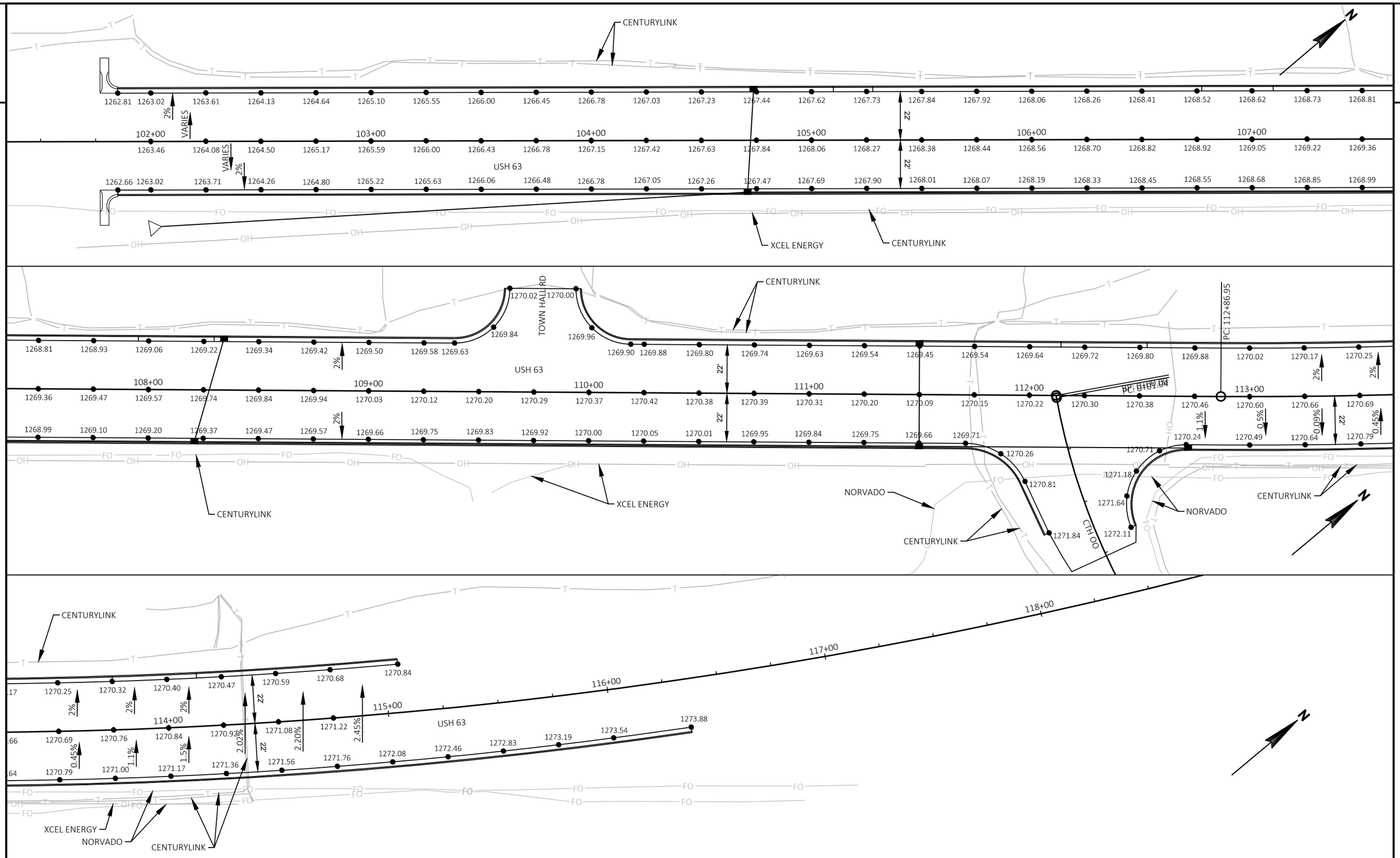
SEE ABANDONING CULVERT PIPE DETAIL
FOR ADDITIONAL INFORMATION



PROJECT NO: 1560-04-70	HWY: USH 63	COUNTY: BAYFIELD	CULVERT PIPE DETAIL STA 412+64	SHEET 11	E

FILE NAME : V:\TRANS-EC\410757 USH 63\C3D\SHEETSPLAN\021003_CD.DWG
LAYOUT NAME - 021007_cd BAYFIELD-412+64

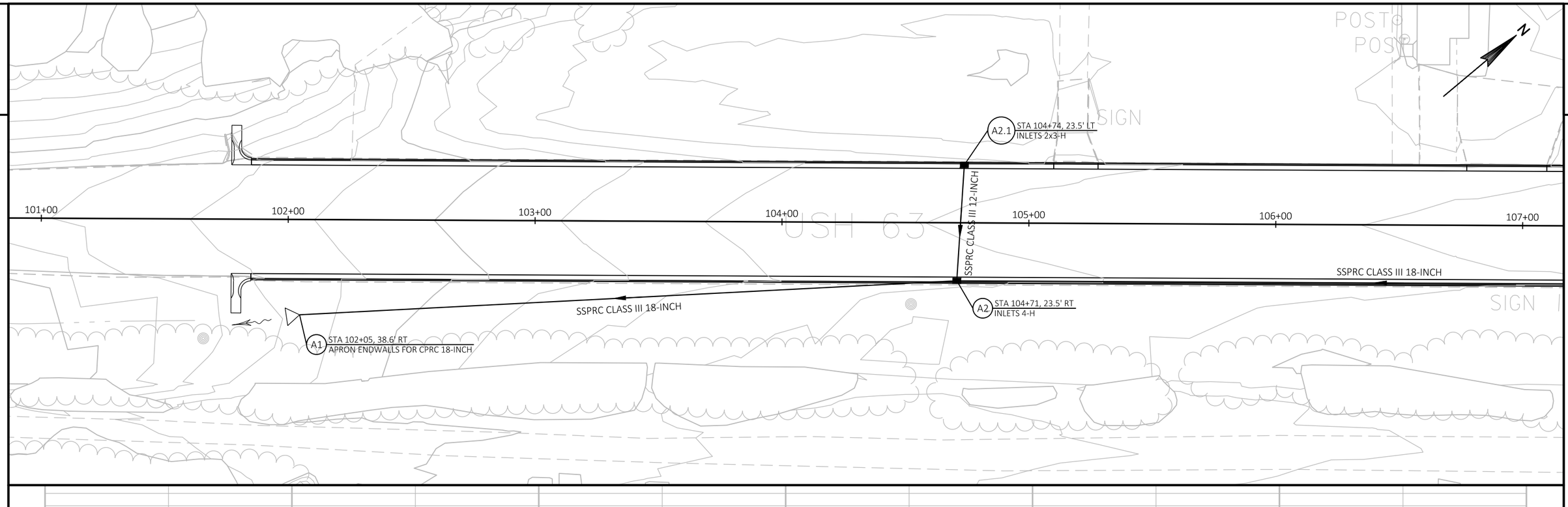
PLOT DATE : 5/18/2018 10:52 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

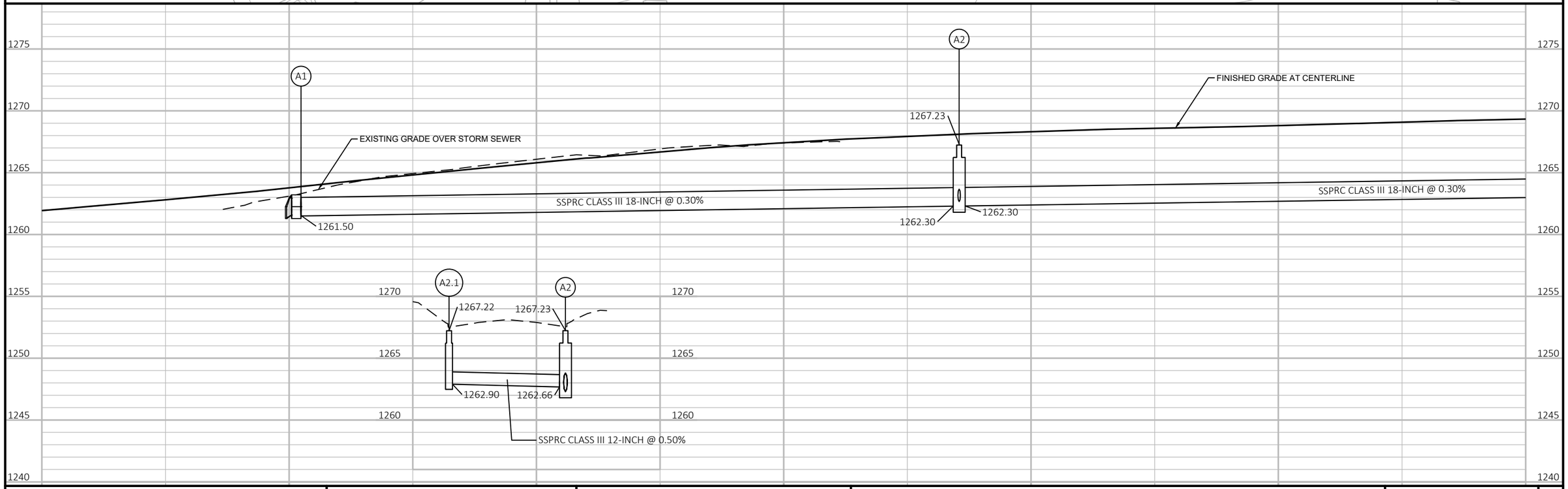


PROJECT NO: 1560-04-70	HWY: USH 63	COUNTY: SAWYER & BAYFIELD	PAVING DETAIL	SHEET 12	E

FILE NAME : V:\TRANS-EC\410757 USH 63\C3D\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021202-pd

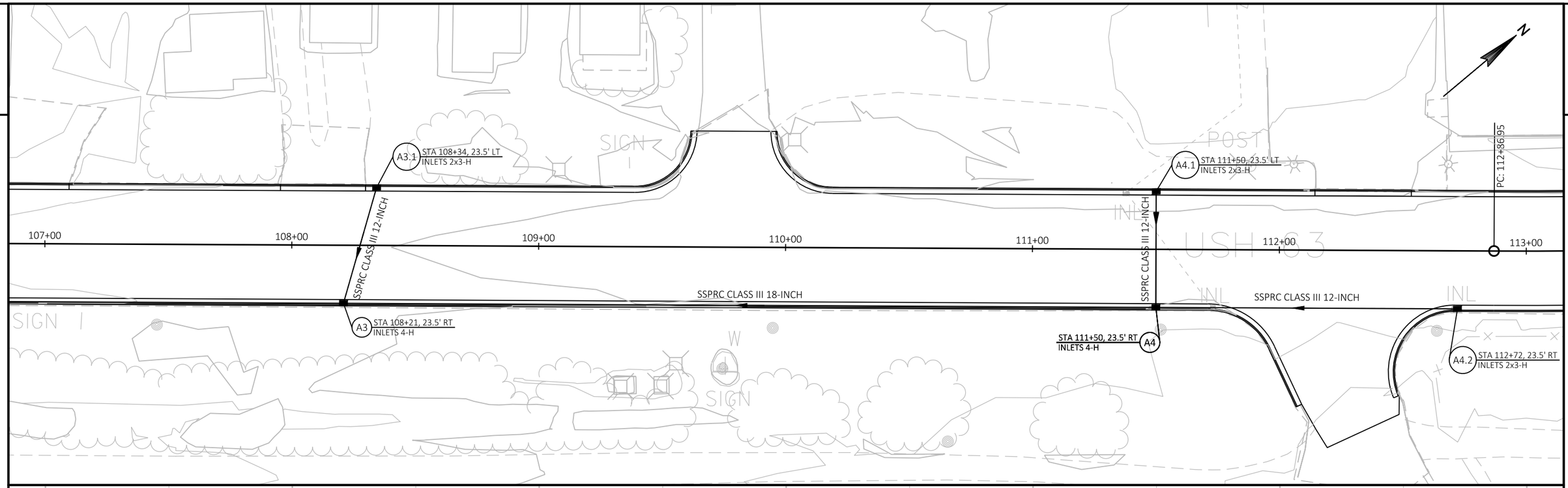
PLOT DATE : 6/22/2018 10:40 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:40 FT

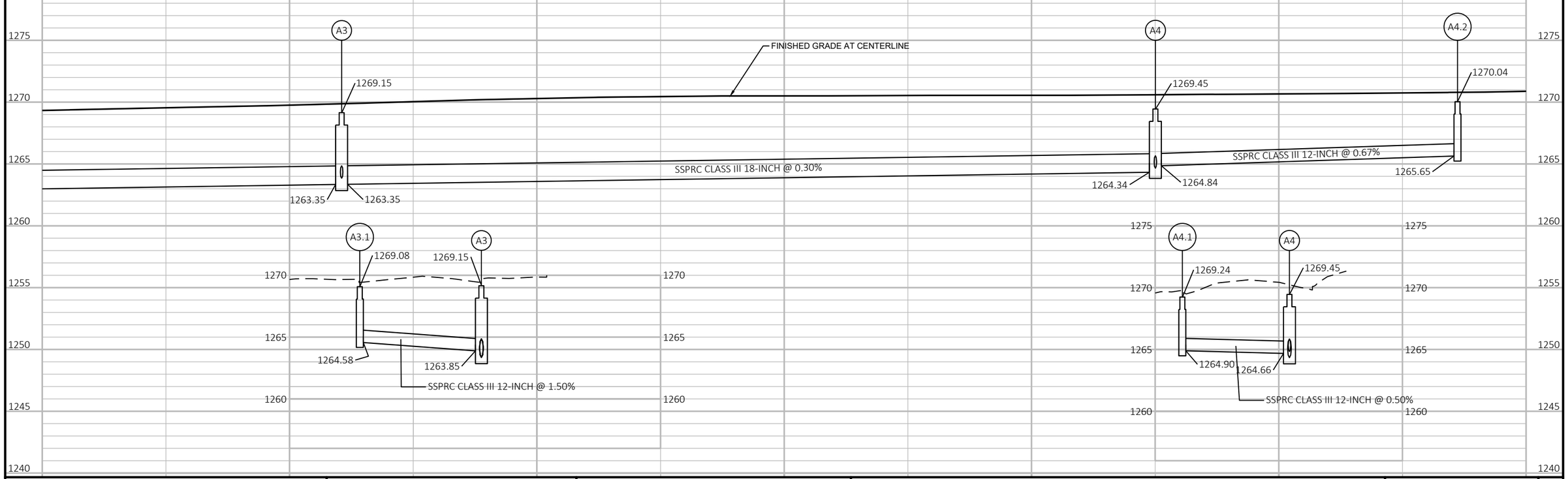




PROJECT NO: 1560-04-70	HWY: USH 63	COUNTY: SAWYER AND BAYFIELD	STORM SEWER	SHEET 13	E

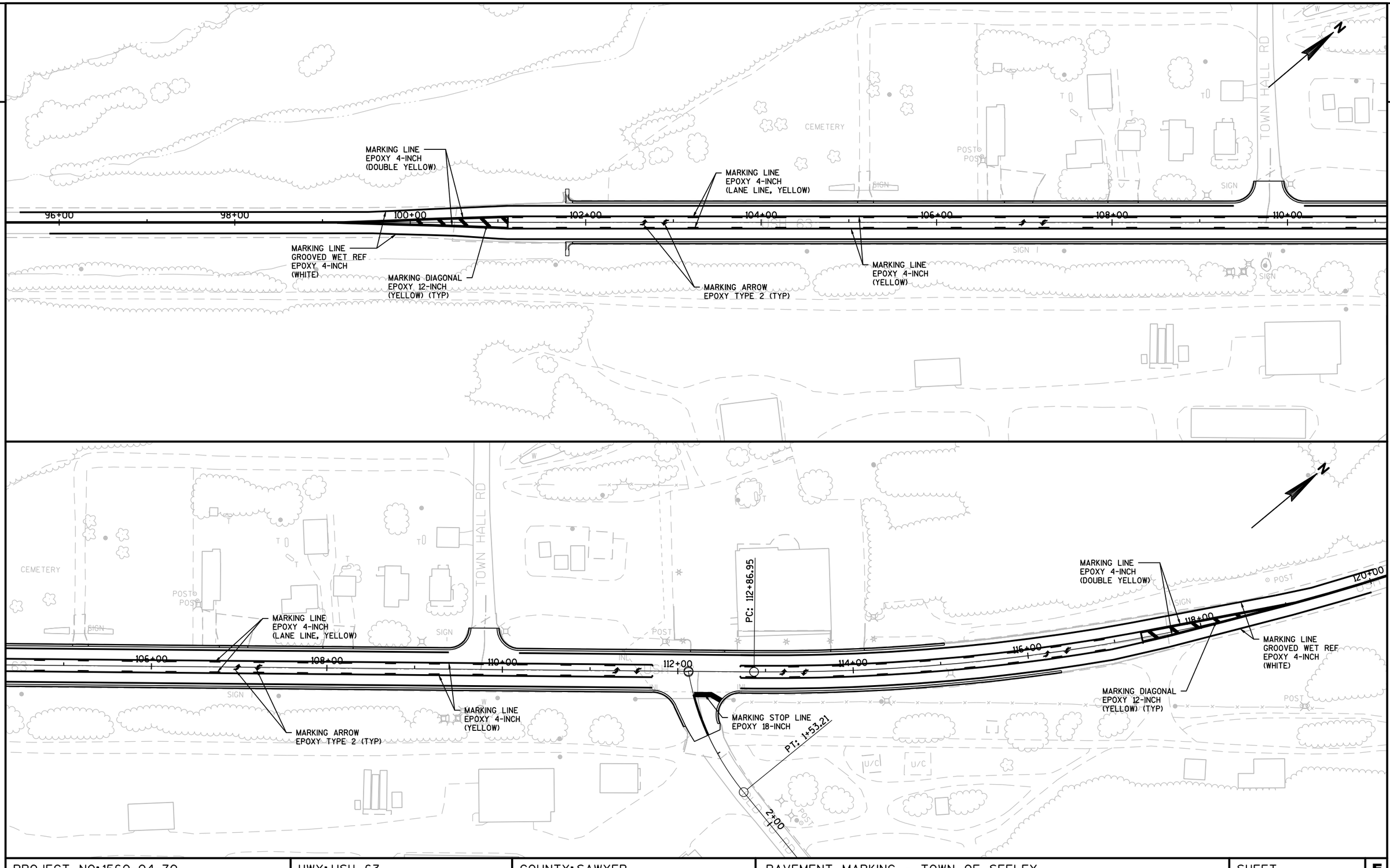
2



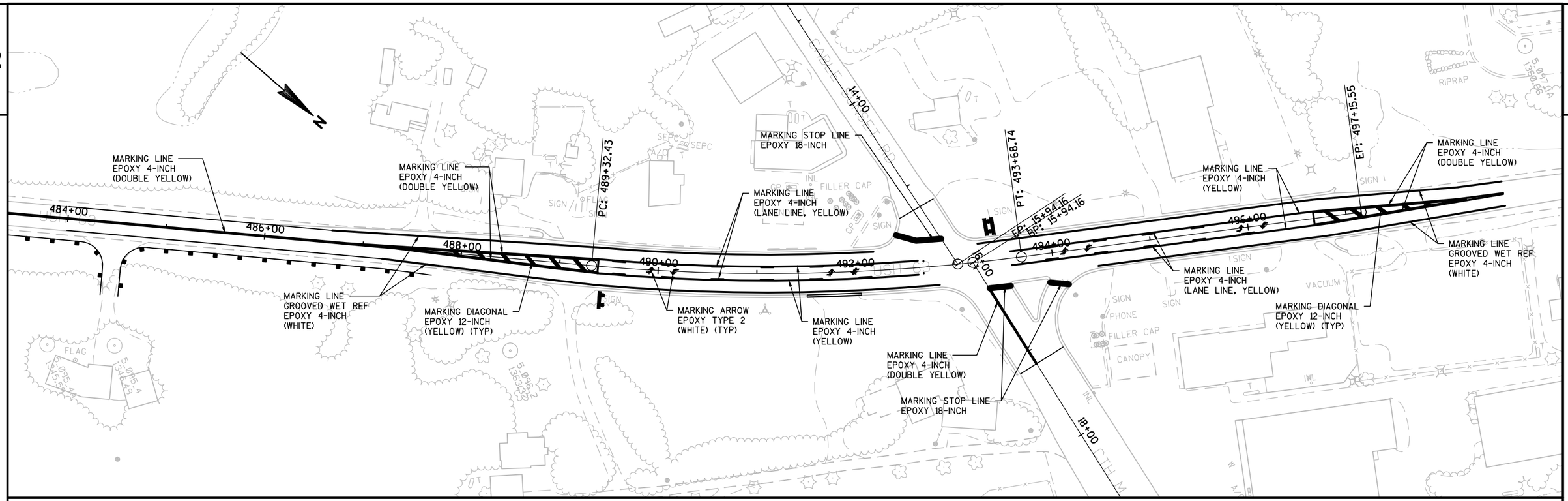


PROJECT NO: 1560-04-70	HWY: USH 63	COUNTY: SAWYER AND BAYFIELD	STORM SEWER	SHEET 14	E

2



PROJECT NO:1560-04-70	HWY: USH 63	COUNTY: SAWYER	PAVEMENT MARKING - TOWN OF SEELEY	SHEET 15	E



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PROJECT NO: 1560-04-70	HWY: USH 63	COUNTY: BAYFIELD	PAVEMENT MARKING	SHEET 16	E

FILE NAME : V:\TRANS-EC\410757 USH 63\C3D\SHEETSPLAN\024502_PM.DWG
LAYOUT NAME - 024502-PM
PLOT DATE : 5/18/2018 10:54 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

NOTE:
"ROAD WORK AHEAD" AND
"END ROAD WORK" SIGNS
SHALL BE PLACED AT THE
FOLLOWING SIDE ROADS:
LARSEN RD
THANNUM FIRE LN
STARK RD
TOWN HALL RD
OLD 00 RD
UHRENHOLDT RD
PETERSON RD
SOMMERVILLE RD
PARK RD
COOK RD
MOODY'S RD
NORTHERN LIGHTS RD
OLD MILL RD
LEONARD SCHOOL RD
E LEONARD SCHOOL RD
NAMAKAGON RIVER RD
SHORT RD
CABLE SUNSET RD
CTH M

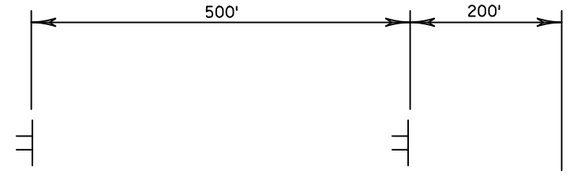
W8-11
48"X48"

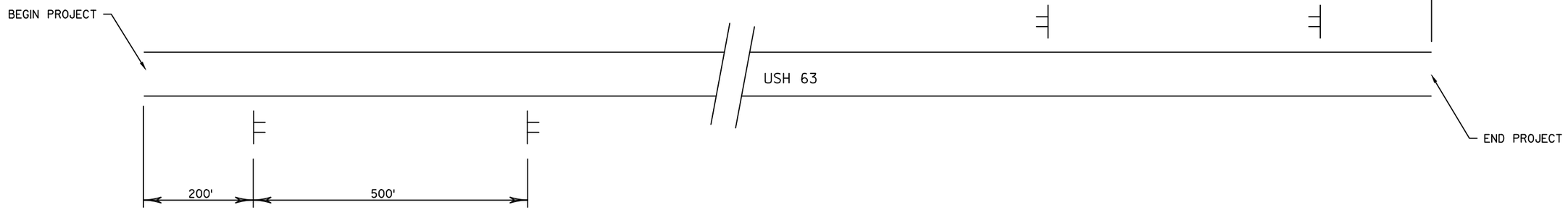
PLACE EVERY 1 MILE
IN MILL AND OVERLAY
ZONES

W8-12
48"X48"

R4-1
24"X30"

PLACE SIGNS AT 1 MILE
INTERVALS OR AS DIRECTED
BY THE ENGINEER





W8-12
48"X48"

R4-1
24"X30"

PLACE SIGNS AT 1 MILE
INTERVALS OR AS DIRECTED
BY THE ENGINEER

DETAIL FOR SIGNING ON HMA PAVEMENT SURFACES

NOTES:

USE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC" FOR ADVANCE WARNING SIGNS.

DRAWING NOT TO SCALE. ALL SIGNS & POSTS ON THIS SHEET SHALL BE PAID FOR WITH "TRAFFIC CONTROL SIGNS" BID ITEM.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THAT THE BACKGROUND IS ORANGE. ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

REMOVE OR COVER "NO CENTER LINE" AND "DO NOT PASS" SIGNS IMMEDIATELY FOLLOWING PLACEMENT OF TEMPORARY OR SAME-DAY PAVEMENT MARKINGS.

NOTE:
"ROAD WORK AHEAD" AND "END ROAD WORK" SIGNS SHALL BE PLACED AT THE FOLLOWING SIDE ROADS:
LARSEN RD
THANNUM FIRE LN
STARK RD
TOWN HALL RD
OLD OO RD
UHRENHOLDT RD
PETERSON RD
SOMMERVILLE RD
PARK RD
COOK RD
MOODY'S RD
NORTHERN LIGHTS RD
OLD MILL RD
LEONARD SCHOOL RD
E LEONARD SCHOOL RD
NAMAKAGON RIVER RD
SHORT RD
CABLE SUNSET RD
CTH M

W8-11
48"X48"

PLACE EVERY 1 MILE IN MILL AND OVERLAY ZONES

W8-52
48"X48"

PLACE PRIOR TO EVERY MILLED SURFACE SECTIONS AND ON SIDE ROAD APPROACH.

W8-11
48"X48"

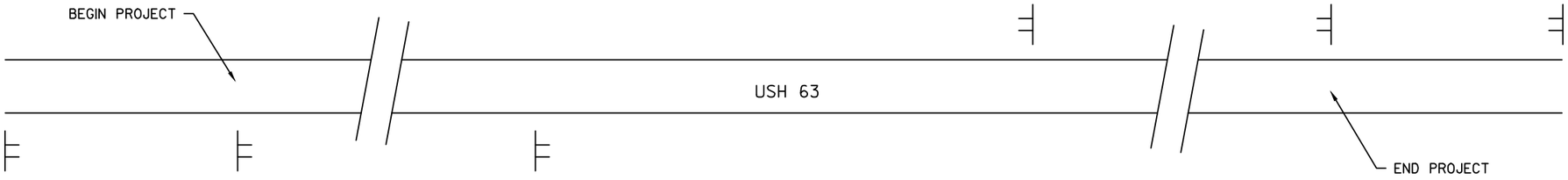
WO13-1
36"X36"

PLACE SIGNS 350' IN ADVANCE OF PAVING OPERATIONS. ADD BUMP SIGN AT PROFILE CHANGE EXCEEDING ONE INCH.

WO16-7L
48"X24"

W8-11
48"X48"

WO13-1
36"X36"



W8-11
48"X48"

WO13-1
36"X36"

WO16-7L
48"X24"

W8-11
48"X48"

WO13-1
36"X36"

PLACE SIGNS 350' IN ADVANCE OF PAVING OPERATIONS. ADD BUMP SIGN AT PROFILE CHANGE EXCEEDING ONE INCH.

NOTES:

USE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC" FOR ADVANCE WARNING SIGNS.

DRAWING NOT TO SCALE. ALL SIGNS & POSTS ON THIS SHEET SHALL BE PAID FOR WITH "TRAFFIC CONTROL SIGNS" BID ITEM.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THAT THE BACKGROUND IS ORANGE. ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

DETAIL FOR SIGNING ON CIR PAVEMENT AND MILLED SURFACES

1560-04-70

Line	Item	Item Description	Unit	Total	Qty
0002	203.0100	Removing Small Pipe Culverts	EACH	3.000	3.000
0004	204.0115	Removing Asphaltic Surface Butt Joints	SY	4,547.000	4,547.000
0006	204.0120	Removing Asphaltic Surface Milling	SY	194,825.000	194,825.000
0008	204.0150	Removing Curb & Gutter	LF	2,970.000	2,970.000
0010	204.0220	Removing Inlets	EACH	3.000	3.000
0012	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	155.000	155.000
0014	204.0270	Abandoning Culvert Pipes	EACH	2.000	2.000
0016	209.0200.S	Backfill Controlled Low Strength	CY	23.500	23.500
0018	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	23.000	23.000
0020	213.0100	Finishing Roadway (project) 01. 1560-04-70	EACH	1.000	1.000
0022	305.0110	Base Aggregate Dense 3/4-Inch	TON	3,370.000	3,370.000
0024	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	180.000	180.000
0026	305.0500	Shaping Shoulders	STA	476.000	476.000
0028	455.0605	Tack Coat	GAL	13,810.000	13,810.000
0030	460.2000	Incentive Density HMA Pavement	DOL	13,830.000	13,830.000
0032	460.4110.S	Reheating HMA Pavement Longitudinal Joints	LF	49,505.000	49,505.000
0034	460.6444	HMA Pavement 4 MT 58-34 H	TON	21,733.000	21,733.000
0036	465.0105	Asphaltic Surface	TON	292.000	292.000
0038	465.0110	Asphaltic Surface Patching	TON	100.000	100.000
0040	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	30.000	30.000
0042	465.0315	Asphaltic Flumes	SY	10.000	10.000
0044	465.0425	Asphaltic Shoulder Rumble Strips 2-Lane Rural	LF	93,180.000	93,180.000
0046	465.0475	Asphalt Centerline Rumble Strips 2-Lane Rural	LF	29,600.000	29,600.000
0048	512.1000	Piling Steel Sheet Temporary	SF	1,900.000	1,900.000
0050	522.0130	Culvert Pipe Reinforced Concrete Class III 30-Inch	LF	116.000	116.000
0052	522.0142	Culvert Pipe Reinforced Concrete Class III 42-Inch	LF	86.000	86.000
0054	522.0160	Culvert Pipe Reinforced Concrete Class III 60-Inch	LF	120.000	120.000
0056	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	1.000	1.000
0058	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	2.000	2.000
0060	522.1042	Apron Endwalls for Culvert Pipe Reinforced Concrete 42-Inch	EACH	2.000	2.000
0062	522.1060	Apron Endwalls for Culvert Pipe Reinforced Concrete 60-Inch	EACH	2.000	2.000
0064	601.0415	Concrete Curb & Gutter 6-Inch Sloped 30-Inch Type J	LF	2,841.000	2,841.000
0066	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	265.000	265.000
0068	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	946.000	946.000
0070	611.0624	Inlet Covers Type H	EACH	7.000	7.000

1560-04-70

Line	Item	Item Description	Unit	Total	Qty
0072	611.3004	Inlets 4-FT Diameter	EACH	3.000	3.000
0074	611.3230	Inlets 2x3-FT	EACH	4.000	4.000
0076	614.0010	Barrier System Grading Shaping Finishing	EACH	5.000	5.000
0078	614.2300	MGS Guardrail 3	LF	1,189.000	1,189.000
0080	614.2330	MGS Guardrail 3 K	LF	350.000	350.000
0082	614.2350	MGS Guardrail Short Radius	LF	76.000	76.000
0084	614.2500	MGS Thrie Beam Transition	LF	78.000	78.000
0086	614.2610	MGS Guardrail Terminal EAT	EACH	6.000	6.000
0088	614.2630	MGS Guardrail Short Radius Terminal	EACH	2.000	2.000
0090	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1560-04-70	EACH	1.000	1.000
0092	619.1000	Mobilization	EACH	1.000	1.000
0094	624.0100	Water	MGAL	72.000	72.000
0096	625.0500	Salvaged Topsoil	SY	1,500.000	1,500.000
0098	627.0200	Mulching	SY	190.000	190.000
0100	628.1504	Silt Fence	LF	700.000	700.000
0102	628.1520	Silt Fence Maintenance	LF	700.000	700.000
0104	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0106	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0108	628.2004	Erosion Mat Class I Type B	SY	850.000	850.000
0110	628.2027	Erosion Mat Class II Type C	SY	100.000	100.000
0112	628.7005	Inlet Protection Type A	EACH	7.000	7.000
0114	628.7015	Inlet Protection Type C	EACH	7.000	7.000
0116	628.7504	Temporary Ditch Checks	LF	60.000	60.000
0118	628.7555	Culvert Pipe Checks	EACH	32.000	32.000
0120	629.0205	Fertilizer Type A	CWT	1.000	1.000
0122	630.0120	Seeding Mixture No. 20	LB	32.000	32.000
0124	630.0140	Seeding Mixture No. 40	LB	24.000	24.000
0126	630.0200	Seeding Temporary	LB	24.000	24.000
0128	633.5200	Markers Culvert End	EACH	6.000	6.000
0130	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	91.000	91.000
0132	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	53.000	53.000
0134	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	11.000	11.000
0136	634.0620	Posts Wood 4x6-Inch X 20-FT	EACH	2.000	2.000
0138	637.2210	Signs Type II Reflective H	SF	731.410	731.410
0140	637.2230	Signs Type II Reflective F	SF	150.720	150.720
0142	638.2102	Moving Signs Type II	EACH	3.000	3.000
0144	638.2602	Removing Signs Type II	EACH	108.000	108.000
0146	638.3000	Removing Small Sign Supports	EACH	136.000	136.000
0148	642.5001	Field Office Type B	EACH	1.000	1.000

1560-04-70

Line	Item	Item Description	Unit	Total	Qty
0150	643.0310.S	Temporary Portable Rumble Strips	LS	1.000	1.000
0152	643.0900	Traffic Control Signs	DAY	13,050.000	13,050.000
0154	643.5000	Traffic Control	EACH	1.000	1.000
0156	646.1020	Marking Line Epoxy 4-Inch	LF	51,420.000	51,420.000
0158	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	99,540.000	99,540.000
0160	646.5020	Marking Arrow Epoxy	EACH	18.000	18.000
0162	646.6120	Marking Stop Line Epoxy 18-Inch	LF	121.000	121.000
0164	646.7120	Marking Diagonal Epoxy 12-Inch	LF	220.000	220.000
0166	648.0100	Locating No-Passing Zones	MI	8.830	8.830
0168	649.0105	Temporary Marking Line Paint 4-Inch	LF	189,448.000	189,448.000
0170	650.4000	Construction Staking Storm Sewer	EACH	8.000	8.000
0172	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	2,841.000	2,841.000
0174	650.6000	Construction Staking Pipe Culverts	EACH	3.000	3.000
0176	650.8000	Construction Staking Resurfacing Reference	LF	49,595.000	49,595.000
0178	650.9910	Construction Staking Supplemental Control (project) 01. 1560-04-70	LS	1.000	1.000
0180	690.0150	Sawing Asphalt	LF	204.000	204.000
0182	690.0250	Sawing Concrete	LF	5.000	5.000
0184	740.0440	Incentive IRI Ride	DOL	37,600.000	37,600.000
0186	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	630.000	630.000
0188	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	2,000.000	2,000.000
0190	SPV.0035	Special 01. Base Repair for CIR Pavement	CY	300.000	300.000
0192	SPV.0060	Special 01. Ditch Cleaning	EACH	3.000	3.000
0194	SPV.0105	Special 01. Prepare Foundation for HMA Layer 1560-04-70	LS	1.000	1.000
0196	SPV.0105	Special 02. Prepare Foundation for CIR Asphalt Pavement	LS	1.000	1.000
0198	SPV.0165	Special 01. Remove and Salvage Brick Pavers	SF	315.000	315.000
0200	SPV.0180	Special 01. Cold In Place Recycling (CIR) Asphalt Pavement	SY	143,489.000	143,489.000
0202	SPV.0195	Special 01. Asphalt Stabilizing Agent	TON	504.000	504.000

REMOVING SMALL PIPE CULVERTS

STATION	LOCATION	SIZE	MATERIAL	203.0100 EACH
57+04	USH 63	30"x121'	CMCP	1
272+92	USH 63	30"x106'	CMCP	1
347+70	USH 63	30"x143'	CMCP	1
PROJECT TOTAL				**3**

REMOVING ASPHALTIC SURFACE BUTT JOINTS

STATION TO STATION	LOCATION	204.0115 SY
0+90 - 1+40	USH 63	189
476+35 - 496+85	USH 63	244
12+00	LARSEN RD	278
16+80	THANNUM FIRE LN	221
78+80	STARK RD	165
109+80	TOWN HALL RD	113
112+10	OLD OO RD	272
120+60	UHRENHOLDT RD	241
139+30	PETERSON RD	240
146+80	SOMMERVILLE RD	126
158+90	PARK RD	116
175+30	COOK RD	208
220+20	MOODY'S RD	36
220+20	NORTHERN LIGHTS RD	208
329+90	OLD MILL RD	221
335+70	LEONARD SCHOOL RD	256
335+70	E LEONARD SCHOOL RD	170
402+40	NAMAKAGON RIVER RD	196
425+90	SHORT RD	206
492+70	CABLE SUNSET RD	234
493+20	CTH M	607
PROJECT TOTAL		**4547**

REMOVING ASPHLATIC SURFACE MILLING

STATION TO STATION	204.0120 SY
1+40 - 101+85	37947
101+85 - 116+39	7108
116+39 - 207+81	34536
207+81 - 210+61	1369
210+61 - 395+88	69991
395+88 - 402+09	2596
402+09 - 409+00	2610
409+00 - 415+00	2267
415+00 - 478+50	23989
478+50 - 487+25	3305
487+25 - 488+90	715
488+90 - 496+35	3642
INTERSECTIONS	4750
PROJECT TOTAL	**194825**

REMOVING CURB & GUTTER

STATION TO STATION	LOCATION	204.0150 LF
101+85 - 108+64	LT	795
101+85 - 112+08	RT	1045
109+95 - 116+36	LT	650
112+45 - 116+36	RT	425
491+50 - 492+05	RT	55
PROJECT TOTAL		**2970**

REMOVING INLETS

STATION	LOCATION	204.0220 EACH
111+38	LT	1
111+73	RT	1
112+71	RT	1
PROJECT TOTAL		**3**

REMOVING STORM SEWER 12-INCH

STATION TO STATION	LOCATION	204.0245.01 LF
111+38 - 111+73	USH 63	58
111+73 - 112+71	USH 63	97
PROJECT TOTAL		**155**

ABANDONING CULVERT PIPES

STATION	LOCATION	204.0270 EACH
111+55	USH 63, LT	1
412+64	USH 63	1
PROJECT TOTAL		**2**

BACKFILL CONTROLLED LOW STRENGTH

STATION	LOCATION	209.0200.S CY
111+55	USH 63, LT	9.1
412+64	USH 63	14.4
PROJECT TOTAL		**23.5**

PREPARING FOUNDATION FOR ASPHALT SHOULDER

STATION TO STATION	LOCATION	211.0400 STA
394+35 - 398+00	RT	4
401+50 - 402+09	LT	2
408+97 - 415+03	LT	9
480+49 - 487+72	RT	8
PROJECT TOTAL		**23**

FINISHING ROADWAY

PROJECT	213.0100 EACH
1560-04-70	1
PROJECT TOTAL	**1**

BASE AGGREGATE DENSE

STATION TO STATION	LOCATION	305.0110 3/4-INCH TON	305.0120 1 1/4-INCH TON
000+90 - 496+75	USH 63	3000	---
PIPE REPLACEMENT	USH 63	70	180
MGS GUARDRAIL AREAS	USH 63	200	---
DRIVEWAYS	USH 63	100	---
PROJECT TOTALS		**3370**	**180**

SHAPING SHOULDERS

STATION TO STATION	LOCATION	305.0500 STA
0+90 - 101+85	USH 63	101
115+07 - 489+40	USH 63	375
PROJECT TOTAL		**476**

3

HMA PAVEMENT ITEMS

STATION TO STATION	LOCATION	460.6444 HMA PAVEMENT 4 MT 58-34 H TON	465.0105 ASPHALTIC SURFACE TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	455.0605 TACK COAT GAL
000+90 - 101+85	USH 63	4215	---	---	2670
101+85 - 116+39	USH 63	802	---	---	500
116+39 - 207+81	USH 63	3839	---	---	2420
207+81 - 210+61	USH 63	151	---	---	100
210+61 - 394+40	USH 63	7657	---	---	4860
394+40 - 402+09	USH 63	365	---	---	230
402+09 - 408+97	USH 63	286	---	---	180
408+97 - 415+03	USH 63	289	---	---	180
415+03 - 480+49	USH 63	2720	---	---	1730
480+49 - 487+72	USH 63	389	---	---	250
487+72 - 488+90	USH 63	69	---	---	30
488+90 - 496+85	USH 63	428	---	---	270
	PIPE REPLACEMENT AREAS	---	92	---	20
	DRIVEWAYS	---	---	30	---
	INTERSECTIONS	523	---	---	330
UNDISTRIBUTED	SOFT/YIELDING AREAS	---	200	---	40
PROJECT TOTALS		**21733**	**292**	**30**	**13810**

REHEATING HMA PAVEMENT LONGITUDINAL JOINTS

STATION TO STATION	460.4110.S LF
0+90 - 496+85	49505
PROJECT TOTAL	**49505**

ASPHALTIC SURFACE PATCHING

STATION TO STATION	LOCATION	465.0110 TON
UNDISTRIBUTED	SOFT/YIELDING AREAS	100
PROJECT TOTAL		**100**

ASPHALTIC FLUMES

STATION	LOCATION	465.0315 SY
101+87	LT	5
101+87	RT	5
PROJECT TOTAL		**10**

ASPHALTIC RUMBLE STRIPS 2-LANE RURAL

STATION TO STATION	LOCATION	465.0425 SHOULDER LF	465.0475 CENTERLINE LF
0+90 - 99+00	CENTERLINE	---	6600
0+90 - 99+00	EDGELINES	19620	---
119+20 - 487+00	CENTERLINE	---	23000
119+20 - 487+00	EDGELINES	73560	---
PROJECT TOTALS		**93180**	**29600**

PILING STEEL SHEET TEMPORARY

STATION	LOCATION	512.1000 SF
57+04	USH 63	500
272+92	USH 63	330
347+70	USH 63	1070
PROJECT TOTAL		**1900**

CONCRETE CURB AND GUTTER 6-INCH SLOPED 30-INCH TYPE J

STATION TO STATION	LOCATION	601.0415 LF
101+85 - 109+64	LT	795
101+85 - 112+08	RT	1045
109+95 - 115+07	LT	521
112+45 - 116+36	RT	425
491+50 - 492+05	RT	55
PROJECT TOTAL		**2841**

CULVERT PIPE REINFORCED CONCRETE CLASS III

STATION	LOCATION	522.0130 30-INCH LF	522.0142 42-INCH LF	522.0160 60-INCH LF	522.1030 APRON ENDWALL FOR CULVERT PIPE 30-INCH LF	522.1042 42-INCH EACH	522.1060 60-INCH EACH
57+04	USH 63	116	---	---	2	---	---
272+92	USH 63	---	86	---	---	2	---
347+70	USH 63	---	---	120	---	---	2
PROJECT TOTALS		**116**	**86**	**120**	**2**	**2**	**2**

BARRIER SYSTEM GRADING SHAPING FINISHING

STATION TO STATION	LOCATION	* EXCAVATION COMMON CY	* BORROW CY	* SALVAGED TOPSOIL SY	* FERTILIZER TYPE A CWT	* SEEDING LB	* MULCHING SY	614.0010 EACH
313+00 - 399+15	RT	---	120	400	0.3	11	400	1
400+16 - 402+09	LT	---	25	100	0.1	3	100	1
407+62 - 416+38	LT	---	120	400	0.3	11	400	1
479+14 - 484+40	RT	---	120	600	0.4	16	600	1
484+37 - 489+07	RT	---	900	200	0.1	5	200	1
PROJECT TOTAL								**5**

* FOR INFORMATION ONLY

MGS GUARDRAIL

STATION TO STATION	LOCATION	614.2300 GUARDRAIL 3 LF	614.2330 GUARDRAIL 3K LF	614.2350 SHORT RADIUS LF	614.2500 THRIE BEAM TRANSITION LF	614.2610 TERMINAL EAT EACH	614.2630 SHORT RADIUS TERMINAL EACH
394+35 - 399+15	RT	388	---	---	39	1	---
400+16 - 402+09	LT	100	---	---	39	1	---
408+97 - 415+03	LT	500	---	---	---	2	---
480+49 - 484+40	RT	138	175	38	---	1	1
484+57 - 487+72	RT	63	175	38	---	1	1
PROJECT TOTALS		**1189**	**350**	**76**	**78**	**6**	**2**

STORM SEWER STRUCTURES

STRUCTURE	STATION	OFFSET*	LOCATION	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH EACH	611.0624 INLET COVERS TYPE H EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3230 INLETS 2x3-FT EACH	650.4000 CONSTRUCTION STAKING STORM SEWER EACH	RIM ELEVATION	INVERT** ELEVATION	DEPTH*** FT
A1	120+05	38.6' RT	USH 63	1	---	---	---	1	---	1261.50	---
A2	104+71	23.5' RT	USH 63	---	1	1	---	1	1267.23	1262.30	4.10
A3	108+21	23.5' RT	USH 63	---	1	1	---	1	1269.15	1263.35	4.97
A4	111+50	23.5' RT	USH 63	---	1	1	---	1	1269.45	1264.34	4.28
A2.1	104+74	23.5' RT	USH 63	---	1	---	1	1	1267.22	1262.90	3.49
A3.1	108+34	23.5' RT	USH 63	---	1	---	1	1	1269.08	1264.58	3.67
A4.1	111+50	23.5' RT	USH 63	---	1	---	1	1	1269.24	1264.90	3.51
A4.2	112+72	23.5' RT	USH 63	---	1	---	1	1	1270.04	1265.65	3.56
PROJECT TOTALS				1	7	3	4	8			

REMARKS
* STATIONS AND OFFSETS ARE TO CENTER OF STRUCTURE
** THE INVERT ELEVATION IS THE ELEVATION OF THE LOWEST PIPE FLOW LINE
*** DEPTH = RIM ELEV - INVERT ELEV - INLET COVER HEIGHT - 6-INCH ADJUSTMENT RING HEIGHT

STORM SEWER PIPE REINFORCED CONCRETE CLASS III

FROM	-	TO	LOCATION	608.0312 12-INCH LF	608.0318 18-INCH LF	START INVERT	END INVERT	SLOPE (FT/FT)
A2	-	A1	USH 63	---	267	1262.30	1261.50	0.0030
A2.1	-	A2	USH 63	47	---	1262.90	1262.66	0.0051
A3	-	A2	USH 63	---	350	1263.35	1262.30	0.0030
A3.1	-	A3	USH 63	49	---	1264.58	1263.85	0.0150
A4	-	A3	USH 63	---	329	1264.34	1263.35	0.0030
A4.1	-	A4	USH 63	47	---	1264.90	1264.66	0.0051
A4.2	-	A4	USH 63	122	---	1265.65	1264.84	0.0066
PROJECT TOTALS				265	946			

3

MAINTENANCE AND REPAIR OF HAUL ROADS

PROJECT	618.0100 EACH
1560-04-70	1
PROJECT TOTAL	**1**

MOBILIZATION

PROJECT	619.1000 EACH
1560-04-70	1
PROJECT TOTAL	**1**

WATER

LOCATION	624.0100 MGAL
BASE COMPACTION	62
DUST CONTROL	10
PROJECT TOTAL	**72**

SALVAGED TOPSOIL, MULCHING, FERTILIZER, & SEEDING

STATION TO STATION	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0205 FERTILIZER TYPE A CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0140 SEEDING MIXTURE NO. 40 LB	630.0200 SEEDING TEMPORARY LB
PIPE LOCATIONS	500	150	0.3	14	---	7
STORM SEWER/CURB & GUTTER LOCATIONS	1000	---	0.6	14	14	14
UNDISTRIBUTED	---	40	0.1	4	10	3
PROJECT TOTALS	**1500**	**190**	**1.0**	**32**	**24**	**24**

SILT FENCE

STATION TO STATION	LOCATION	628.1504 LF	628.1520 MAINTENANCE LF
56+70 - 57+40	LT & RT	160	160
272+62 - 273+25	LT & RT	144	144
347+36 - 348+03	LT & RT	158	158
UNDISTRIBUTED	PROJECT	238	238
PROJECT TOTALS		**700**	**700**

EROSION MAT

STATION TO STATION	LOCATION	628.2004 CL.I TYPE B SY	628.2027 CL.II TYPE C SY
56+93 - 57+15	RT	50	---
272+80 - 273+05	RT	34	---
347+57 - 347+82	LT	100	---
347+57 - 347+82	RT	95	---
BEHIND CURB & GUTTER	LT & RT	400	---
UNDISTRIBUTED	NEAR STREAM BANKS	---	100
UNDISTRIBUTED		171	---
PROJECT TOTALS		**850**	**100**

MOBILIZATIONS EROSION CONTROL AND EMERGENCY EROSION CONTROL

PROJECT	628.1905 EACH	628.1910 EMERGENCY EACH
1560-04-70	4	4
PROJECT TOTALS	**4**	**4**

INLET PROTECTION

STATION	LOCATION	628.7005 TYPE A EACH	628.7015 TYPE C EACH
104+71	INLET, RT	1	1
104+74	INLET, LT	1	1
108+21	INLET, RT	1	1
108+34	INLET, LT	1	1
111+51	INLET, LT	1	1
111+51	INLET, RT	1	1
112+72	INLET, RT	1	1
PROJECT TOTALS		**7**	**7**

TEMPORARY DITCH CHECKS

STATION	LOCATION	628.7504 LF
57+04	LT	24
272+92	LT	12
347+70	LT	12
UNDISTRIBUTED		12
PROJECT TOTAL		**60**

CULVERT PIPE CHECKS

STATION	LOCATION	628.7555 EACH
57+04	RT	5
272+92	RT	8
347+70	RT	13
UNDISTRIBUTED		6
PROJECT TOTAL		**32**

MARKER CULVERT END

STATION	LOCATION	633.5200 EACH
57+04	USH 63	2
272+92	USH 63	2
347+70	USH 63	2
PROJECT TOTAL		**6**

FIELD OFFICE TYPE B

PROJECT	642.5001 EACH
1560-04-70	1
PROJECT TOTAL	**1**

TEMPORARY PORTABLE RUMBLE STRIP

PROJECT	643.0310.S LS
1560-04-70	1
PROJECT TOTAL	**1**

PERMANENT SIGNING

SIGN NO	APPROX STATION LOCATION	SIGN CODE	SIGN SIZE WxH (INCHES)	634.0614 14-FT EACH	634.0616 POSTS WOOD 16-FT EACH	634.0618 4X6-INCH 18-FT EACH	634.0620 20-FT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 REFLECTIVE F SF	638.2102 MOVING SIGNS TYPE II EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	COMMENT
100	5+00, RT	D1-1	72x15	2	---	---	---	7.50	---	---	1	2	LARSEN RD
101	7+50, RT	D7-56L	48x36	---	2	---	---	12.00	---	---	1	2	
102	LARSEN RD	R1-1	30x30	1	---	---	---	5.18	---	---	1	1	
103	12+75, RT	D1-1	108x15	2	---	---	---	11.25	---	---	1	2	THANNUM FIRE LN
104	16+25, LT	D1-1	72x15	2	---	---	---	7.50	---	---	1	2	LARSEN RD
105	THANNUM FIRE LN	R1-1	30x30	1	---	---	---	5.18	---	---	1	1	
106	19+25, LT	D7-56R	48x36	---	2	---	---	12.00	---	---	1	2	
107	23+65, LT	D1-1	108x15	2	---	---	---	11.25	---	---	1	2	THANNUM FIRE LN
200	67+50, LT	---	---	---	---	---	---	---	---	---	1	---	(ADOPT A HIGHWAY) POST TO REMAIN
300	67+50, RT	R55-56	30x36	---	1	---	---	7.50	---	---	---	---	SEELEY LIONS CLUB
108	STARK RD	R1-1	30x30	1	---	---	---	5.18	---	---	1	1	
109	94+30, RT	W3-5	36x36	---	1	---	---	---	9.00	---	1	1	
110	94+75, LT	W14-3	48x36	---	1	---	---	---	5.56	---	1	1	
111	97+25, RT	I2-3	54x24	2	---	---	---	9.00	---	---	1	2	SEELEY UNINCORPORATED
112	100+00, RT	J1-1	24x39	---	1	---	---	6.50	---	---	1	1	JCT, "OO"
301	101+00, LT	R3-9D	24x6	---	---	1	---	1.00	---	---	---	---	
		R3-9B	24x36	---	---	---	---	6.00	---	---	---	---	SHARES POST
302	101+00, RT	R3-9C	24x6	---	---	1	---	1.00	---	---	---	---	
		R3-9B	24x36	---	---	---	---	6.00	---	---	---	---	SHARES POST
113	101+85, LT	R2-1	24x30	1	---	---	---	5.00	---	---	1	1	"55"
114	101+85, RT	R2-1	24x30	1	---	---	---	5.00	---	---	1	1	"45"
115	104+25, LT	J4-1	24x36	---	1	---	---	6.00	---	---	1	1	SOUTH, USH 63
201	104+25, LT	---	---	---	---	---	---	---	---	---	---	---	(HAYWARD 10) REMOVE
202	106+50, LT	---	---	---	---	---	---	---	---	---	1	1	(LANE REDUCTION RT)
203	107+00, RT	---	---	---	---	---	---	---	---	---	1	1	UHRENHOLDT FOREST
116	TOWN HALL RD	R1-1	30x30	1	---	---	---	5.18	---	---	1	1	
204	109+75, RT	---	---	---	---	---	---	---	---	---	1	1	(LANE REDUCTION RT)
303	110+00, RT	R2-1	24x30	1	---	---	---	5.00	---	---	---	---	"45"
117	111+40, LT	R2-1	24x30	1	---	---	---	5.00	---	---	1	1	"45"
118	111+75, RT	J13-1	24x45	---	1	---	---	7.50	---	---	1	1	"OO", RT ARROW
119	CTH OO	R1-1	30x30	---	1	---	---	5.18	---	---	1	1	
120	113+15, RT	J4-1	24x36	---	1	---	---	6.00	---	---	1	1	NORTH, USH 63
205	114+20, RT	---	---	---	---	---	---	---	---	---	1	1	(SPEED LIMIT 45)
323	114+20, LT	J13-1	24x45	---	1	---	---	7.50	---	---	---	---	"OO", LT ARROW
304	114+50, RT	D1-1	96x15	2	---	---	---	10.00	---	---	---	---	UHRENHOLDT RD
305	116+40, LT	R3-9C	24x6	---	---	1	---	1.00	---	---	---	---	
		R3-9B	24x36	---	---	---	---	6.00	---	---	---	---	SHARES POST
306	116+40, RT	R3-9D	24x6	---	---	1	---	1.00	---	---	---	---	
		R3-9B	24x36	---	---	---	---	6.00	---	---	---	---	SHARES POST
121	116+80, LT	R7-1L	18x24	1	---	---	---	3.00	---	---	1	1	
122	116+80, RT	R7-1R	18x24	1	---	---	---	3.00	---	---	1	1	
206	117+75, LT	---	---	---	---	---	---	---	---	---	1	1	UHRENHOLDT FOREST
307	119+00, LT	R2-1	24x30	1	---	---	---	5.00	---	---	---	---	"45"
308	119+00, RT	R2-1	24x30	1	---	---	---	5.00	---	---	---	---	"55"
123	UHRENHOLDT RD	R1-1	30x30	1	---	---	---	5.18	---	---	1	1	
207	123+00, LT	---	---	---	---	---	---	---	---	---	1	1	(SPEED LIMIT 45) REMOVE
208	123+50, RT	---	---	---	---	---	---	---	---	---	1	1	(SPEED LIMIT 55) REMOVE
124	124+00, LT	J1-1	24x39	---	1	---	---	6.50	---	---	1	1	JCT, "OO"
309	125+95, LT	D1-1	96x15	2	---	---	---	10.00	---	---	---	---	UHRENHOLDT RD
125	128+10, LT	S3-1	36x36	---	1	---	---	---	9.00	---	1	1	
126	130+50, LT	W3-5	36x36	---	1	---	---	---	9.00	---	1	1	
127	130+50, RT	W14-3	48x36	---	1	---	---	---	5.56	---	1	1	
128	131+80, RT	D1-1	84x15	2	---	---	---	8.75	---	---	1	2	PETERSON RD
129	134+00, LT	I2-3	54x24	2	---	---	---	9.00	---	---	1	2	SEELEY UNINCORPORATED

- SIGNS CONTINUED -

PERMANENT SIGNING

SIGN NO	APPROX STATION LOCATION	SIGN CODE	SIGN SIZE WxH (INCHES)	634.0614 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH 16-FT EACH	634.0618 18-FT EACH	634.0620 20-FT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 REFLECTIVE F SF	638.2102 MOVING SIGNS TYPE II EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	COMMENT
130	PETERSON RD	R1-1	30x30	1	---	---	---	5.18	---	---	1	1	
131	140+80, RT	D1-1	90x15	2	---	---	---	9.38	---	---	1	2	SOMERVILLE RD
132	145+75, LT	D1-1	84x15	2	---	---	---	8.75	---	---	1	2	PETERSON RD
133	SOMERVILLE RD	R1-1	30x30	1	---	---	---	5.18	---	---	1	1	
134	150+25, LT	W14-3	48x36	---	1	---	---	---	5.56	---	1	1	
135	152+00, RT	D1-1	66x15	2	---	---	---	6.88	---	---	1	2	PARK RD
136	154+75, LT	D1-1	90x15	2	---	---	---	9.38	---	---	1	2	SOMERVILLE RD
137	PARK RD	R1-1	30x30	1	---	---	---	5.18	---	---	1	1	
138	166+80, LT	D1-1	66x15	---	2	---	---	6.88	---	---	1	2	PARK RD
139	168+10, RT	D1-1	66x15	2	---	---	---	6.88	---	---	1	2	COOK RD
140	COOK RD	R1-1	30x30	1	---	---	---	5.18	---	---	1	1	
141	182+40, LT	D1-1	66x15	2	---	---	---	6.88	---	---	1	2	COOK RD
142	187+20, RT	W14-3	48x36	---	1	---	---	---	5.56	---	1	1	
143	206+00, LT	W14-3	48x36	---	1	---	---	---	5.56	---	1	1	
144	210+50, RT	J13-1	24x45	---	1	---	---	7.50	---	---	1	1	RUSTIC ROAD, RT ARROW
209	210+50, RT	---	---	---	---	---	---	---	---	---	---	---	(JCT) REMOVE
145	213+25, RT	D1-2	120x30	---	2	---	---	25.00	---	---	1	2	MOODY'S RD, NORTHERN LIGHTS RD
146	MOODY'S RD	R1-1	30x30	---	1	---	---	5.18	---	---	1	1	
147	NORTHERN LIGHTS RD	R1-1	30x30	1	---	---	---	5.18	---	---	1	1	
148	227+30, LT	D1-2	120x30	---	2	---	---	25.00	---	---	1	2	NORTHERN LIGHTS RD, MOODY'S RD
149	230+50, LT	J13-1	24x45	---	1	---	---	7.50	---	---	1	1	RUSTIC ROAD, LT ARROW
210	230+50, LT	---	---	---	---	---	---	---	---	---	---	---	(JCT) REMOVE
150	241+50, RT	W14-3	48x36	---	1	---	---	---	5.56	---	1	1	
400		I55-56	---	1	---	---	---	---	---	1	---	---	MOVED FROM STA 280+00, LT
151	280+00, LT	I2-2	60x15	2	---	---	---	6.25	---	---	1	2	SAWYER CO
211	280+00, LT	---	---	---	---	---	---	---	---	---	---	---	(SOUTH, USH 63) REMOVE
152	280+00, RT	I2-2	66x15	2	---	---	---	6.88	---	---	1	2	BAYFIELD CO
212	280+00, RT	---	---	---	---	---	---	---	---	---	---	---	(NORTH USH 63) REMOVE
213	280+00, RT	---	---	---	---	---	---	---	---	---	---	---	(ADOPT A HIGHWAY) REMOVE
214	281+85, LT	---	---	---	---	---	---	---	---	---	1	1	(DEER CROSSING)
153	320+40, LT	W14-3	48x36	---	1	---	---	---	5.56	---	1	1	
312	325+00, RT	D1-1	78x15	2	---	---	---	8.13	---	---	---	---	OLD MILL RD
154	OLD MILL RD	R1-1	30x30	1	---	---	---	5.18	---	---	1	1	
313	331+00, RT	D1-2	126x30	---	2	---	---	26.25	---	---	---	---	LEONARD SCHOOL RD, E LEONARD SCHOOL RD
215	333+80, RT	---	---	---	---	---	---	---	---	---	1	1	(DEER CROSSING)
314	334+00, LT	D1-1	78x15	2	---	---	---	8.13	---	---	---	---	OLD MILL RD
155	LEONARD SCHOOL RD	R1-1	30x30	1	---	---	---	5.18	---	---	1	1	
156	E LEONARD SCHOOL RD	R1-1	30x30	1	---	---	---	5.18	---	---	1	1	
315	341+00, LT	D1-2	126x30	---	2	---	---	26.25	---	---	---	---	E LEONARD SCHOOL RD, LEONARD SCHOOL RD
157	349+00, RT	W14-3	48x36	---	1	---	---	---	5.56	---	1	1	
158	360+30, LT	W14-3	48x36	---	1	---	---	---	5.56	---	1	1	
159	377+85, RT	D5-61	48x24	1	---	---	---	---	8.00	---	1	1	
216	394+10, LT	---	---	---	---	---	---	---	---	---	1	---	(ADOPT A HIGHWAY) POST TO REMAIN
222	394+90, LT	---	---	---	---	---	---	---	---	---	1	1	
161	SIDEROAD, LT	R1-1	30x30	1	---	---	---	5.18	---	---	1	1	
162	395+00, RT	D5-62L	48x24	1	---	---	---	---	8.00	---	1	1	
163	395+75, LT	D5-62R	48x24	1	---	---	---	---	8.00	---	1	1	
164	397+80, RT	D1-1	126x15	2	---	---	---	13.13	---	---	1	2	NAMAKAGON RIVER RD
325	398+85, RT	I3-1	66x24	2	---	---	---	11.00	---	---	---	---	NAMEKAGON RIVER
165	399+20, LT	W5-52L	12x36	---	1	---	---	---	3.00	---	1	1	
166	399+20, RT	W5-52R	12x36	---	1	---	---	---	3.00	---	1	1	
167	400+05, LT	W5-52R	12x36	---	1	---	---	---	3.00	---	1	1	
168	400+05, RT	W5-52L	12x36	---	1	---	---	---	3.00	---	1	1	
326	400+55, LT	I3-1	66x24	2	---	---	---	11.00	---	---	---	---	NAMEKAGON RIVER
169	NAMAKAGON RIVER RD	R1-1	30x30	1	---	---	---	5.18	---	---	1	1	

- SIGNS CONTINUED -

PERMANENT SIGNING

SIGN NO	APPROX STATION LOCATION	SIGN CODE	SIGN SIZE WxH (INCHES)	634.0614 14-FT EACH	634.0616 POSTS WOOD 16-FT EACH	634.0618 4X6-INCH 18-FT EACH	634.0620 20-FT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2102 MOVING SIGNS TYPE II EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	COMMENT
170	409+25, LT	D1-1	126x15	2	---	---	---	13.13	---	---	1	2	NAMAKAGON RIVER RD
171	418+80, RT	D1-1	66x15	2	---	---	---	6.88	---	---	1	2	SHORT RD
172	422+95, RT	W14-3	48x36	---	1	---	---	---	5.56	---	1	1	
173	425+00, LT	D5-61	48x24	1	---	---	---	---	8.00	---	1	1	
174	SHORT RD	R1-1	30x30	1	---	---	---	5.18	---	---	1	1	
175	432+75, LT	D1-1	66x15	2	---	---	---	6.88	---	---	1	2	SHORT RD
176	447+30, LT	W14-3	48x36	---	1	---	---	---	5.56	---	1	1	
177	448+30, LT	R1-1	30x30	1	---	---	---	5.18	---	---	1	1	
178	466+15, RT	D7-57	54x36	---	2	---	---	13.50	---	---	1	2	
179	476+00, LT	R59-51	36x36	---	1	---	---	9.00	---	---	1	1	
180	476+50, RT	I2-3	54x24	2	---	---	---	9.00	---	---	1	2	CABLE UNINCORPORATED
181	479+15, LT	W14-3	48x36	---	1	---	---	---	5.56	---	1	1	
182	479+60, RT	W3-5	36x36	---	1	---	---	---	9.00	---	1	1	"35"
183	481+50, RT	R7-1D	18x24	1	---	---	---	3.00	---	---	1	1	
401	483+00, LT	I55-56	---	1	---	---	---	---	---	1	---	1	MOVED FROM STA 486+25, LT
317	483+50, RT	J1-1	24x39	---	1	---	---	6.50	---	---	---	---	JCT, "M"
217	485+20, RT	---	---	---	---	---	---	---	---	---	1	1	(JCT, "M")
218	485+75, LT	---	---	---	---	---	---	---	---	---	1	1	(SPEED LIMIT 55)
219	485+75, RT	---	---	---	---	---	---	---	---	---	1	1	(SPEED LIMIT 35)
318	488+00, LT	R2-1	24x30	1	---	---	---	5.00	---	---	---	---	"55"
185	488+00, RT	R2-1	24x30	1	---	---	---	5.00	---	---	1	1	"35"
184	490+00, LT	J4-1	24x36	---	1	---	---	6.00	---	---	1	1	SOUTH, USH 63 (REMOVAL STA 484+00)
319	490+00, LT	R3-9D	24x6	---	---	1	---	1.00	---	---	---	---	
		R3-9B	24x36	---	---	---	---	6.00	---	---	---	---	SHARES POST
320	490+00, RT	R3-9C	24x6	---	---	1	---	1.00	---	---	---	---	
		R3-9B	24x36	---	---	---	---	6.00	---	---	---	---	SHARES POST
327	491+25, RT	D7-59R	54x36	---	---	1	1	13.50	---	---	---	---	
186	492+25, LT	R7-1D	18x24	1	---	---	---	3.00	---	---	1	1	
187	492+80, RT	J13-1	24x45	1	---	---	---	7.50	---	---	1	1	"M", RT ARROW
221	493+40, LT	---	---	---	---	---	---	---	---	---	1	2	REMOVE D7-59R, D7-59L, & J13-1
189	493+40, LT	J13-1	24x45	---	---	1	---	7.50	---	---	---	---	"M", LT ARROW
324	494+80, LT	D7-59L	54x36	---	---	1	1	13.50	---	---	---	---	
190	CTH M ISLAND	R1-1	30x30	---	1	---	---	5.18	---	---	1	1	
191	CTH M ISLAND	W12-1D	24x24	1	---	---	---	---	4.00	---	1	1	
192	494+00, LT	R7-1R	18x24	1	---	---	---	3.00	---	---	1	1	
193	494+25, RT	R1-1	30x30	---	1	---	---	5.18	---	---	1	1	
194	495+75, RT	J4-1	24x36	---	1	---	---	6.00	---	---	1	2	NORTH, USH 63
220	495+75, RT	---	---	---	---	---	---		---	---	---	---	ASHLAND 40 (SHARES POST)
321	497+00, LT	R3-9C	24x6	---	---	1	---	1.00	---	---	---	---	
		R3-9B	24x36	---	---	---	---	6.00	---	---	---	---	SHARES POST
322	497+00, RT	R3-9D	24x6	---	---	1	---	1.00	---	---	---	---	
		R3-9B	24x36	---	---	---	---	6.00	---	---	---	---	SHARES POST
402	498+00, RT	I55-56	---	1	---	---	---	---	---	1	---	1	MOVED FROM STA 497+05, RT
PROJECT TOTALS				**91**	**53**	**11**	**2**	**731.41**	**150.72**	**3**	**108**	**136**	

TRAFFIC CONTROL ITEMS

PROJECT	643.0900 SIGNS EACH	643.0900 SIGNS DAY	643.5000 TRAFFIC CONTROL EACH
1560-04-70	136	8160	1
19 SIDE ROADS	38	2280	---
UNDISTRIBUTED		2610	---
PROJECT TOTALS		**13050**	**1**

MARKING LINE EPOXY 4-INCH

STATION TO STATION	DESCRIPTION	646.1020 YELLOW LF
0+30 - 0+80	CTH OO	100
0+90 - 99+00	CENTERLINE	3153
99+00 - 119+00	TWLTL	5550
119+00 - 487+00	CENTERLINE	38875
487+00 - 498+60	TWLTL	3560
16+25 - 17+15	CTH M	182
PROJECT TOTAL		**51420**

MARKING LINE GROOVED WET REF EPOXY 4-INCH

STATION TO STATION	DESCRIPTION	646.1040 WHITE LF
0+90 - 99+00	EDGELINE	19620
99+00 - 119+00	EDGELINE	4000
119+00 - 487+00	EDGELINE	73600
487+00 - 498+60	EDGELINE	2320
PROJECT TOTAL		**99540**

MARKING ARROW EPOXY

STATION	TYPE	COLOR	646.5020 EACH	COMMENT
102+79	2	WHITE	2	TWLTL
107+11	2	WHITE	2	TWLTL
111+43	2	WHITE	2	TWLTL
113+33	2	WHITE	2	TWLTL
116+34	2	WHITE	2	TWLTL
490+05	2	WHITE	2	TWLTL
491+87	2	WHITE	2	TWLTL
494+24	2	WHITE	2	TWLTL
495+05	2	WHITE	2	TWLTL
PROJECT TOTAL			**18**	

MARKING STOP LINE EPOXY 18-INCH

LOCATION	646.6120 LF
OLD OO RD	33
CABLE SUNSET RD	47
CTH M	41
PROJECT TOTAL	**121**

MARKING DIAGONAL EPOXY 12-INCH

STATION TO STATION	LOCATION	646.7120 YELLOW LF
99+35 - 101+11	TWLTL	53
117+31 - 119+00	TWLTL	48
487+31 - 489+39	TWLTL	66
496+67 - 497+22	TWLTL	53
PROJECT TOTAL		**220**

LOCATING NO-PASSING ZONE

STATION TO STATION	648.0100 MI
0+90 - 99+00	1.86
119+00 - 489+00	6.97
PROJECT TOTAL	**8.83**

TEMPORARY MARKING LINE PAINT 4-INCH

STATION TO STATION	LOCATION	649.0105 YELLOW LF
ENTIRE PROJECT	MILLED SURFACE C/L	48000
ENTIRE PROJECT	CIR SURFACE C/L	48000
ENTIRE PROJECT	UPPER LIFT HMA	51420
ENTIRE PROJECT	C/L RUMBLE STRIPS	42028
PROJECT TOTAL		**189448**

CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER

STATION TO STATION	LOCATION	650.5500 LF
101+85 - 109+64	LT	795
101+85 - 112+08	RT	1045
109+95 - 115+07	LT	521
112+45 - 116+36	RT	425
491+50 - 492+05	RT	55
PROJECT TOTAL		**2841**

CONSTRUCTION STAKING PIPE CULVERTS

STATION	LOCATION	650.6000 EACH
57+04	USH 63	1
272+92	USH 63	1
347+70	USH 63	1
PROJECT TOTAL		**3**

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL

PROJECT	650.9910 LS
1560-04-70	1

BASE REPAIR FOR CIR PAVEMENT

LOCATION	SPV.0035.01 CY
UNDISTRIBUTED	300
PROJECT TOTAL	**300**

REMOVE AND SALVAGE BRICK PAVERS

STATION TO STATION	SPV.0165.01 SF
112+70 - 113+75	315
PROJECT TOTAL	**315**

DITCH CLEANING

STATION TO STATION	LOCATION	SPV.0060.01 EACH
412+50 - 412+74	RT	1
487+64	RT/LT	2
PROJECT TOTAL		**3**

CONSTRUCTION STAKING RESURFACING REFERENCE

STATION TO STATION	650.8000 LF
0+90 - 496+85	49595
PROJECT TOTAL	**49595**

SAWING

STATION	LOCATION	690.0150 ASPHALT LF	690.0250 CONCRETE LF
57+04	PIPE INSTALLATION	68	---
272+92	PIPE INSTALLATION	68	---
347+20	PIPE INSTALLATION	68	---
491+50	CURB, RT	---	2.5
492+05	CURB, RT	---	2.5
PROJECT TOTALS		**204**	**5**

PREPARE FOUNDATION FOR HMA LAYER

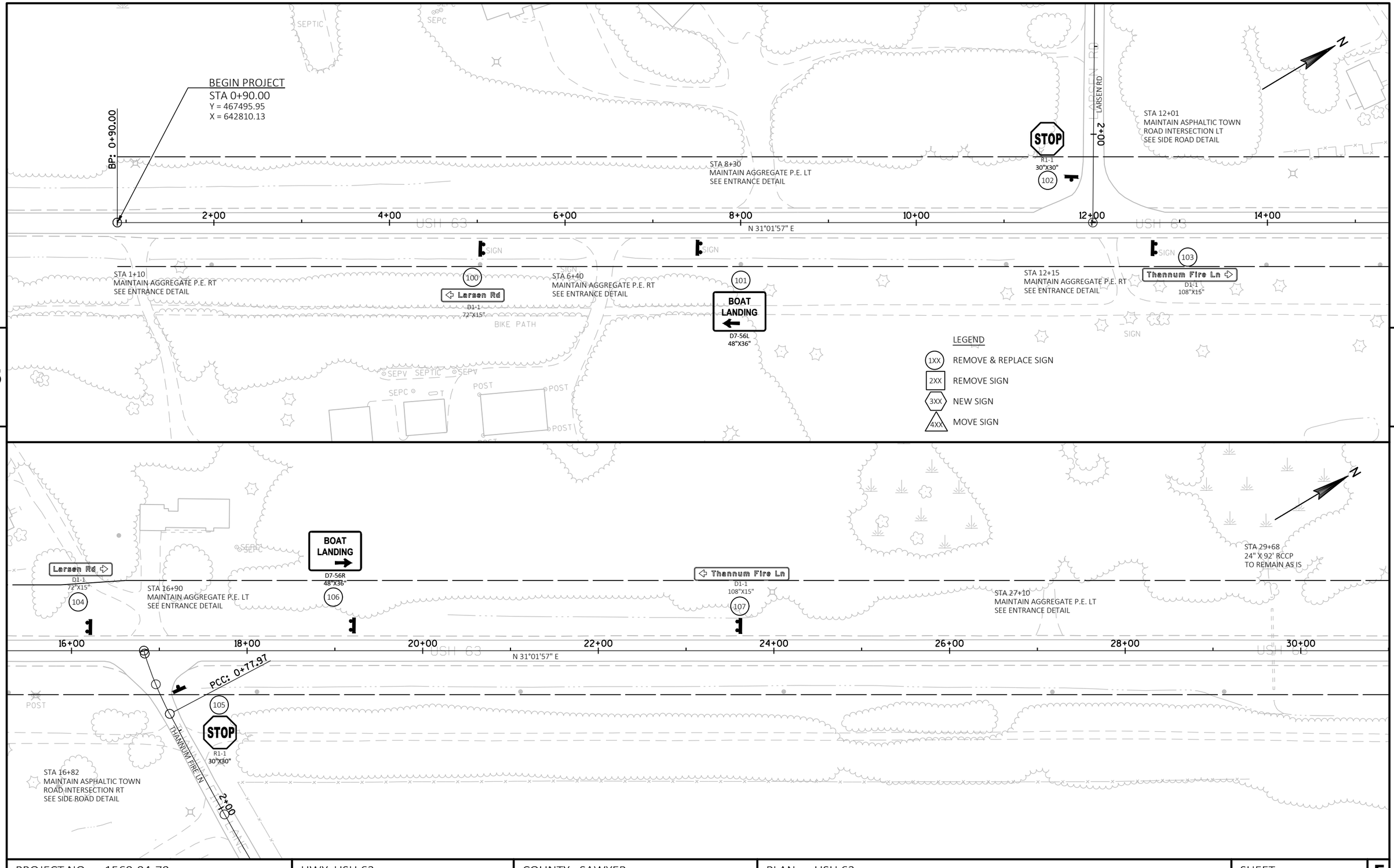
PROJECT	SPV.0105.01 LS
1560-04-70	1

PREPARE FOUNDATION FOR CIR ASPHALTIC PAVEMENT

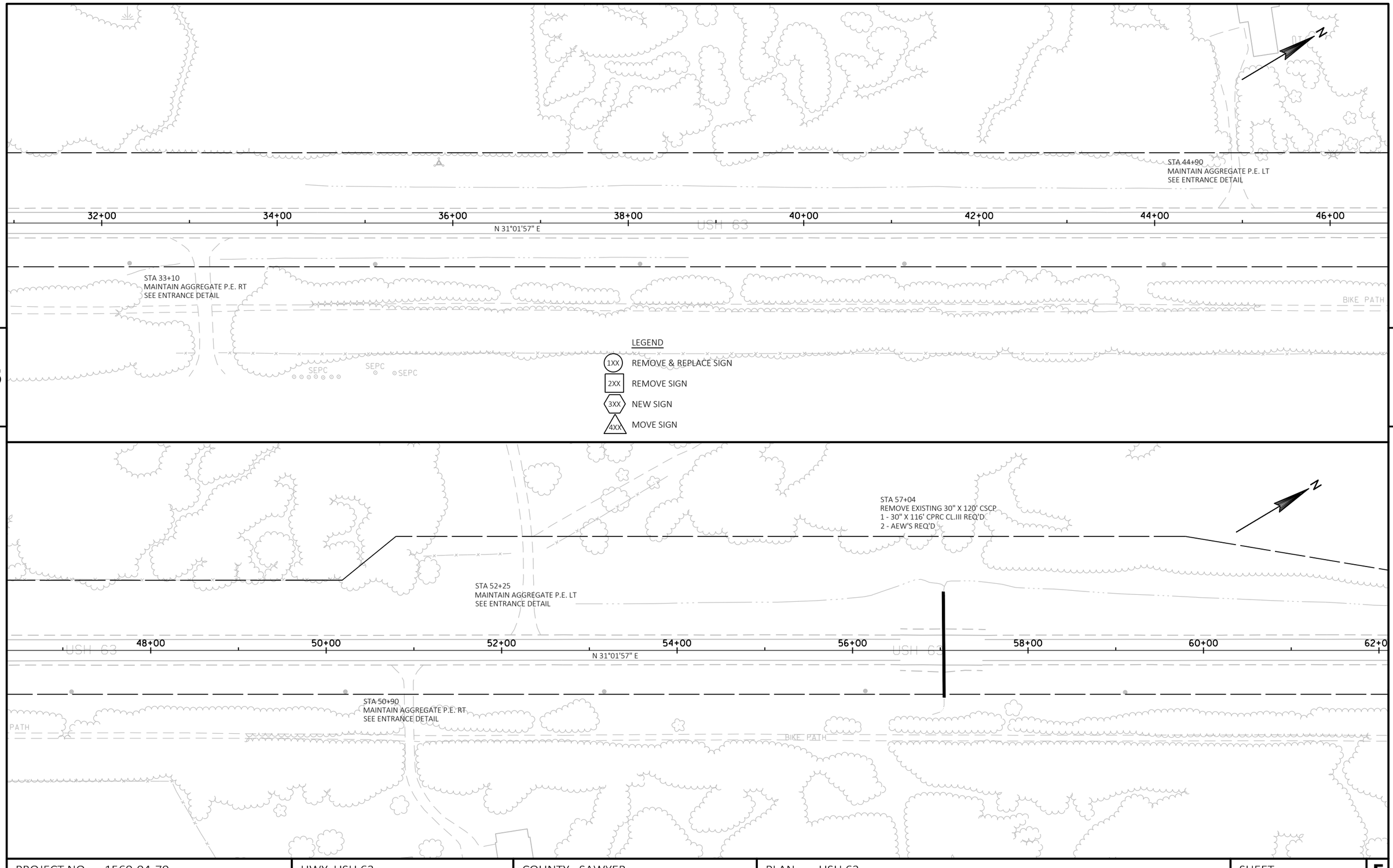
PROJECT	SPV.0105.02 LS
1560-04-70	1

COLD-IN-PLACE RECYCLING (CIR) PARTIAL DPETH ITEMS

STATION TO STATION	SPV.0180.01 COLD-IN-PLACE RECYCLING (CIR) ASPHALT PAVEMENT SY	SPV.0195.01 ASPHALT STABILIZING AGENT TON
000+90 - 101+85	27364	96
101+85 - 116+39	7108	25
116+39 - 207+81	24823	87
207+81 - 210+61	747	3
210+61 - 395+88	49405	173
395+88 - 402+09	1416	5
402+09 - 409+00	1843	6
409+00 - 415+00	1600	6
415+00 - 478+50	16933	59
478+50 - 487+25	2333	8
487+25 - 488+90	440	2
488+90 - 496+75	4727	17
INTERSECTIONS	4750	17
PROJECT TOTALS	**143489**	**504**



PROJECT NO: 1560-04-70	HWY: USH 63	COUNTY: SAWYER	PLAN: USH 63	SHEET 30	E



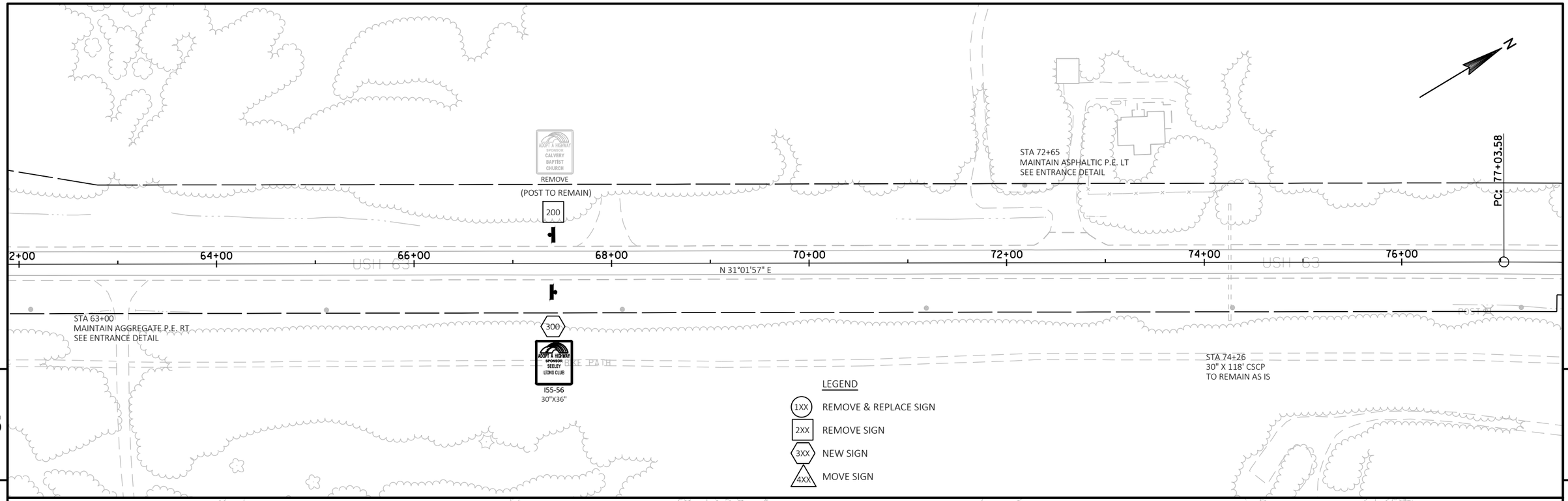
5

5

PROJECT NO: 1560-04-70	HWY: USH 63	COUNTY: SAWYER	PLAN: USH 63	SHEET 31	E

FILE NAME : V:\TRANS-EC\410757 USH 63\C3D\SHEETSPLAN\SAWYER_PN.DWG
LAYOUT NAME - 050202-PN

PLOT DATE : 10/25/2018 9:08 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:100 FT

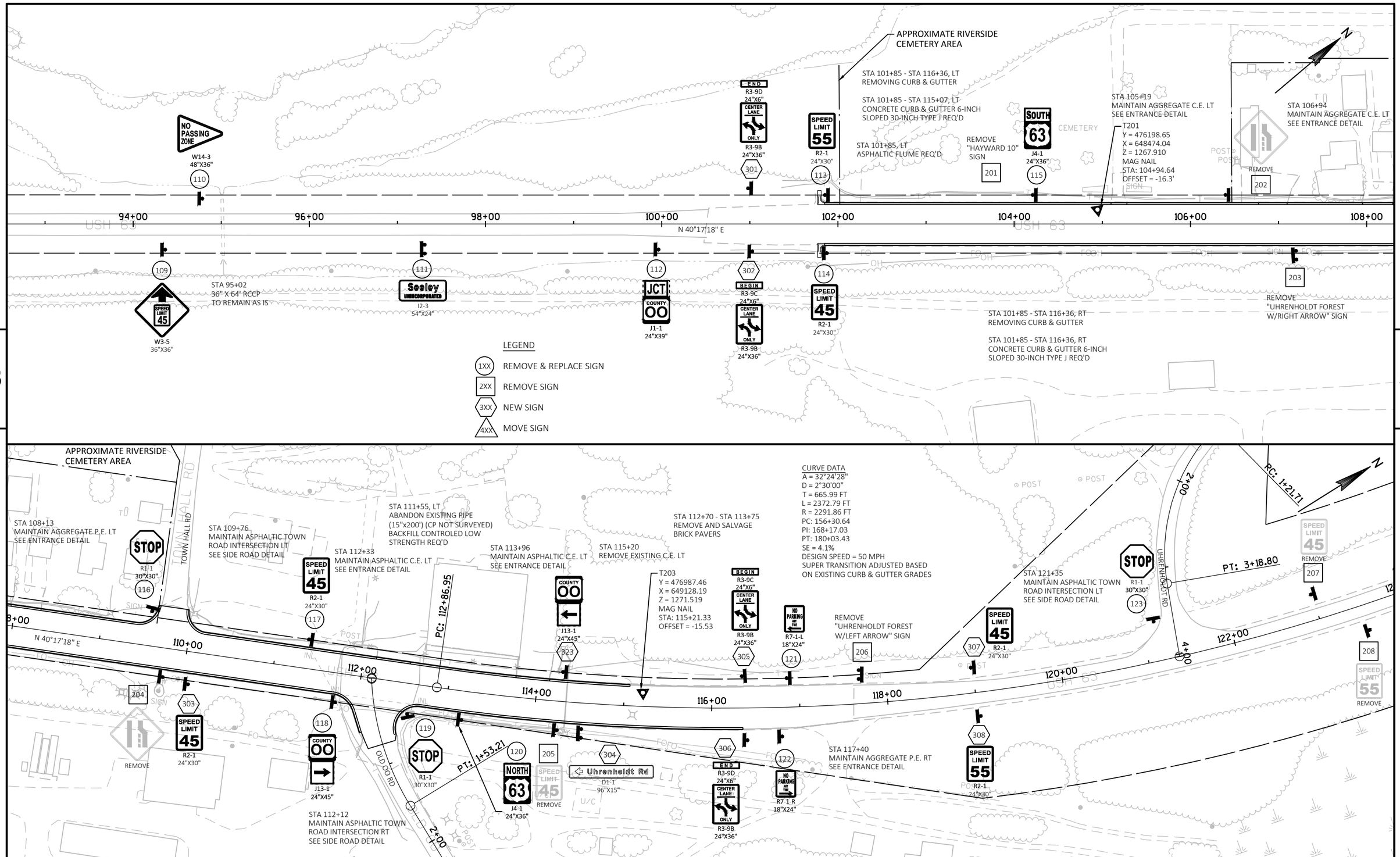


5 5

PROJECT NO: 1560-04-70	HWY: USH 63	COUNTY: SAWYER	PLAN: USH 63	SHEET 32	E

FILE NAME : V:\TRANS-EC\410757 USH 63\C3D\SHEETSPLAN\SAWYER_PN.DWG
LAYOUT NAME - 050203-PN

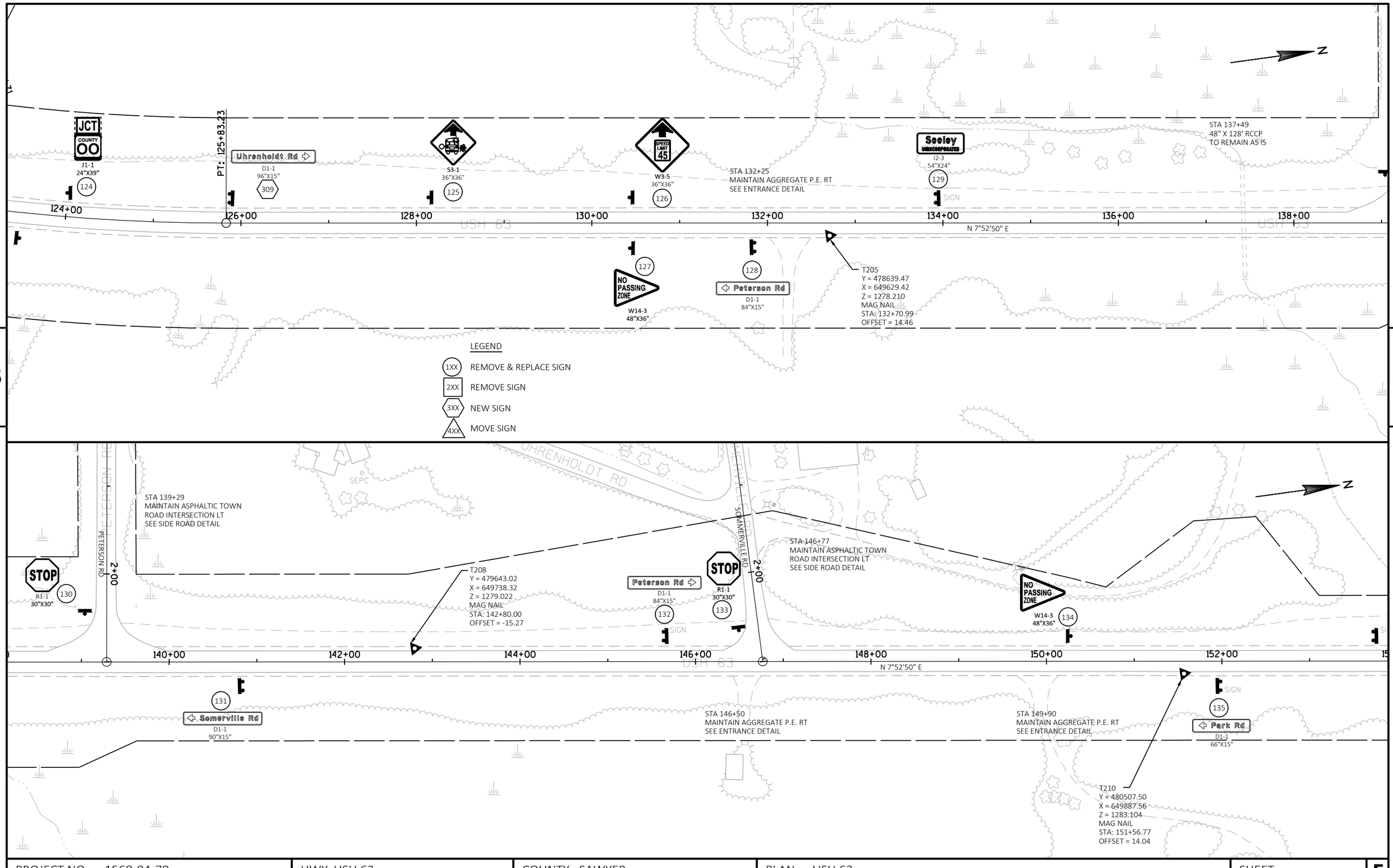
PLOT DATE : 10/25/2018 9:08 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 1560-04-70	HWY: USH 63	COUNTY: SAWYER	PLAN: USH 63	SHEET 33	E

FILE NAME : V:\TRANS-EC\410757 USH 63\C3D\SHEETSPLAN\SAWYER_PN.DWG
LAYOUT NAME - 050204-PN

PLOT DATE : 10/25/2018 9:09 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 1560-04-70	HWY: USH 63	COUNTY: SAWYER	PLAN: USH 63	SHEET 34	E

5

STA 158+91
MAINTAIN ASPHALTIC TOWN
ROAD INTERSECTION LT
SEE SIDE ROAD DETAIL

ATHLETIC FIELD

PARK RD

2+00

PC: 156+30.64

STOP 137
R1-1
30"X30"

Somerville Rd
136
D1-1
90"X15"

154+00 156+00 158+00 160+00 162+00 164+00 166+00 168+00

USH 63

STA 167+44
30" X 142' RCCP
TO REMAIN AS IS

Park Rd
D1-1
66"X15"
138

T282
Y = 481966.23
X = 650340.12
Z = 1282.013
MAG NAIL
STA: 167+09.79
OFFSET = 14.50

139
Cook Rd
D1-1
66"X15"

CURVE DATA
A = 59°19'09"
D = 2°30'00"
T = 1305.11 FT
L = 2372.79 FT
R = 2291.86 FT
PC: 156+30.64
PI: 168+17.03
PT: 180+03.43
SE = 5.1%
DESIGN SPEED = 60 MPH

LEGEND
1XX REMOVE & REPLACE SIGN
2XX REMOVE SIGN
3XX NEW SIGN
4XX MOVE SIGN

CRANBERRY BOGS

5

DN5219
Y = 482495.18
X = 650660.47
Z = 1282.382
STA: 173+06.28
OFFSET = -105.68

WDOT POST

COOK RD

2+00

STOP
R1-1
30"X30"
140

STA 175+37
MAINTAIN ASPHALTIC TOWN
ROAD INTERSECTION LT
SEE SIDE ROAD DETAIL

168+00 170+00 172+00 174+00 176+00 178+00 180+00 182+00

USH 63

PT: 180+03.43

N 67°11'59" E

T213
Y =482218.85
X = 650544.18
Z = 1282.547
MAG NAIL
STA: 170+36.54
OFFSET = 14.40

T218
Y =482620.85
X = 651043.24
Z = 1285.367
MAG NAIL
STA: 176+83.94
OFFSET = 14.67

Cook Rd
D1-1
66"X15"
141

SIGN

PROJECT NO: 1560-04-70	HWY: USH 63	COUNTY: SAWYER	PLAN: USH 63	SHEET 35	E

FILE NAME : V:\TRANS-EC\410757 USH 63\C3D\SHEETSPLAN\SAWYER_PN.DWG
LAYOUT NAME - 050206-PN

PLOT DATE : 10/25/2018 9:09 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:100 FT

N

STA 195+90
24" X 94' CSCP
TO REMAIN AS IS

STA 191+10
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

184+00 186+00 188+00 190+00 192+00 194+00 196+00 198+00

USH 63

N 67°11'59" E

142
NO PASSING ZONE
W14-3
48"X36"

STA 189+80
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

5

5

LEGEND

- 1XX REMOVE & REPLACE SIGN
- 2XX REMOVE SIGN
- 3XX NEW SIGN
- 4XX MOVE SIGN

CRANBERRY BOG

N

STA 209+30
EXISTING BOX CULVERT C-57-8
TO REMAIN AS IS

NO PASSING ZONE
W14-3
48"X36"
143

198+00 200+00 202+00 204+00 206+00 208+00 210+00 212+00

USH 63

N 67°11'59" E

T221
Y =483697.12
X = 653546.45
Z = 1283.522
MAG NAIL
STA: 204+11.70
OFFSET = 14.64

STA 204+20
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

EXISTING BEAMGUARD
TO REMAIN AS IS

209 JCT
REMOVE
RUSTIC ROAD
144
J13-1
24"X45"

PROJECT NO: 1560-04-70	HWY: USH 63	COUNTY: SAWYER	PLAN: USH 63	SHEET 36	E

FILE NAME : V:\TRANS-EC\410757 USH 63\C3D\SHEETSPLAN\SAWYER_PN.DWG
LAYOUT NAME - 050207-PN

PLOT DATE : 10/25/2018 9:09 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:100 FT

5

5

PC: 213+49.70

214+00

216+00

218+00

220+00

222+00

224+00

226+00

228+00

PT: 1+22.37

PC: 2+17.74

2+00

4+00

MOODY'S RD

NORTHERN LIGHTS RD

USH 63

SIGN

145

Moody's Rd
Northern Lights Rd
D1-2
120"X30"

146

STOP
R1-1
30"X30"

147

STOP
R1-1
30"X30"

148

Northern Lights Rd
Moody's Rd
D1-2
120"X30"

CURVE DATA
A = 47°56'33"
D = 2°00'00"
T = 1273.77 FT
L = 2397.13 FT
R = 2864.80 FT
PC: 213+49.70
PI: 225+48
PT: 237+46.83
SE = 4.5%
DESIGN SPEED = 60 MPH

STA 220+26
MAINTAIN ASPHALTIC TOWN
ROAD INTERSECTION LT
SEE SIDE ROAD DETAIL

STA 220+21
MAINTAIN ASPHALTIC TOWN
ROAD INTERSECTION RT
SEE SIDE ROAD DETAIL

T223
Y = 484545.90
X = 655143.45
Z = 1279.385
MAG NAIL
STA: 222+30.72
OFFSET = -14.48

T225
Y = 484197.41
X = 654691.62
Z = 1281.187
MAG NAIL
STA: 216+60.34
OFFSET = 14.13

T228
Y = 484889.55
X = 655483.96
Z = 1280.780
MAG NAIL
STA: 227+18.14
OFFSET = 14.77

STA 227+65
24" X 146' RCCP
TO REMAIN AS IS

LEGEND
1XX REMOVE & REPLACE SIGN
2XX REMOVE SIGN
3XX NEW SIGN
4XX MOVE SIGN

N

JCT
210
REMOVE
RUSTIC ROAD

149
J13-1
24"X45"

228+00

230+00

232+00

234+00

236+00

238+00

240+00

242+00

PT: 237+46.83

N 19°15'25.92" E

STA 233+75
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

STA 233+80
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

T232
Y = 485677.12
X = 655948.84
Z = 1285.886
MAG NAIL
STA: 236+41.53
OFFSET = -15.50

T224
Y = 485294.18
X = 655799.89
Z = 1285.321
MAG NAIL
STA: 232+31.35
OFFSET = 14.75

STA 236+89
36" X 122' CSCP
TO REMAIN AS IS

150
NO PASSING ZONE
W14-3
48"X36"

N

PROJECT NO: 1560-04-70	HWY: USH 63	COUNTY: SAWYER	PLAN: USH 63	SHEET 37	E

T231
Y = 486523.20
X = 656247.23
Z = 1294.517
MAG NAIL
STA: 245+39.28
OFFSET = -14.77

STA 237+61
36" X 122' CSCP
TO REMAIN AS IS

STA 255+50
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

244+00 246+00 248+00 250+00 252+00 254+00 256+00 258+00

USH 63

N 19°15'26" E

STA 244+70
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

STA 251+80
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

STA 255+50
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

T234
Y = 487371.71
X = 656574.90
Z = 1300.032
MAG NAIL
STA: 254+48.38
OFFSET = 14.73

5

LEGEND

1XX REMOVE & REPLACE SIGN
2XX REMOVE SIGN
3XX NEW SIGN
4XX MOVE SIGN

FEE BOX

RUINS

5

T235
Y = 489156.40
X = 657131.46
Z = 1296.997
MAG NAIL
STA: 273+16.77
OFFSET = -48.46

EP: 273+14.08

STA 265+50
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

STA 268+50
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

260+00 262+00 264+00 266+00 268+00 270+00 272+00

USH 63

N 19°15'26" E

USH 63

STA 236+00
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

T233
Y = 488237.11
X = 656877.55
Z = 1301.028
MAG NAIL
STA: 263+65.17
OFFSET = 15.02

STA 268+50
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

STA 272+92
REMOVE EXISTING 24" X 105' CSCP
1 - 42" X 86' CPRC CL.III REQ'D
2 - AEW'S REQ'D

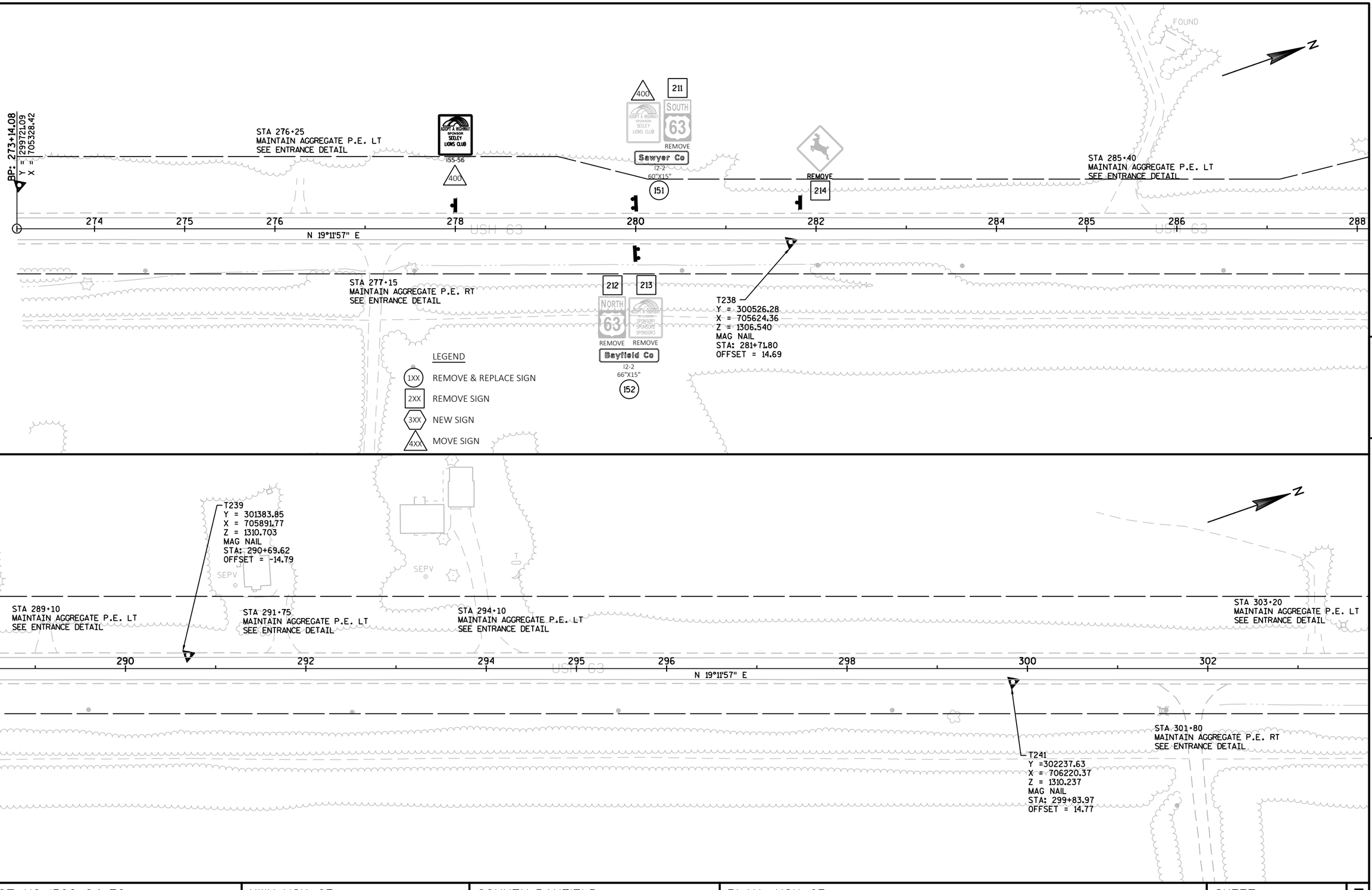
BERM

FLAG
FLAG

PROJECT NO: 1560-04-70	HWY: USH 63	COUNTY: SAWYER	PLAN: USH 63	SHEET 38	E

FILE NAME : V:\TRANS-EC\410757 USH 63\C3D\SHEETSPLAN\SAWYER_PN.DWG
LAYOUT NAME - 050209-PN

PLOT DATE : 10/25/2018 9:09 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 1560-04-70	HWY: USH 63	COUNTY: BAYFIELD	PLAN: USH 63	SHEET 39	E

FILE NAME : V:\TRANS-EC\410757 USH 63\C3D\SHEETSPLAN\BAYFIELD_PN.DWG
LAYOUT NAME - 050210-PN

PLOT DATE : 10/25/2018 9:09 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

STA 308+10
MAINTAIN ASPHALTIC P.E. LT
SEE ENTRANCE DETAIL

T242
Y = 303089.76
X = 706485.72
Z = 1309.490
MAG NAIL
STA: 308+75.97
OFFSET = -14.86

STA 318+00
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

304 305 306 308 310 312 314 315 316 318

USH 63

N 19°11'57" E

STA 318+95
30" X 92' CSCP
TO REMAIN AS IS

LEGEND

1XX REMOVE & REPLACE SIGN
2XX REMOVE SIGN
3XX NEW SIGN
4XX MOVE SIGN

CURVE DATA
A = 22°26'09"
D = 0°59'59"
T = 1136.62 FT
L = 2244.12 FT
R = 5730.95 FT
PC: 320+70.31
PI: 331+92.37
PT: 343+14.43
SE = 2.7%
DESIGN SPEED = 60 MPH

STA 329+87
MAINTAIN ASPHALTIC TOWN
ROAD INTERSECTION LT
SEE SIDE ROAD DETAIL

OLD MILL RD

NO PASSING ZONE
W14-3
48"X36"
153

PC: 320+70.31

STOP
R1-1
30"X30"
154

Old Mill Rd
D1-1
78"X15"
314

320 322 324 325 326 328 330 332 334 335

312
Old Mill Rd
D1-1
78"X15"

T245
Y = 304791.97
X = 707075.37
Z = 1308.279
MAG NAIL
STA: 326+77.02
OFFSET = 14.38

313
Leonard School Rd
E Leonard School Rd
D1-2
126"X30"

215
REMOVE

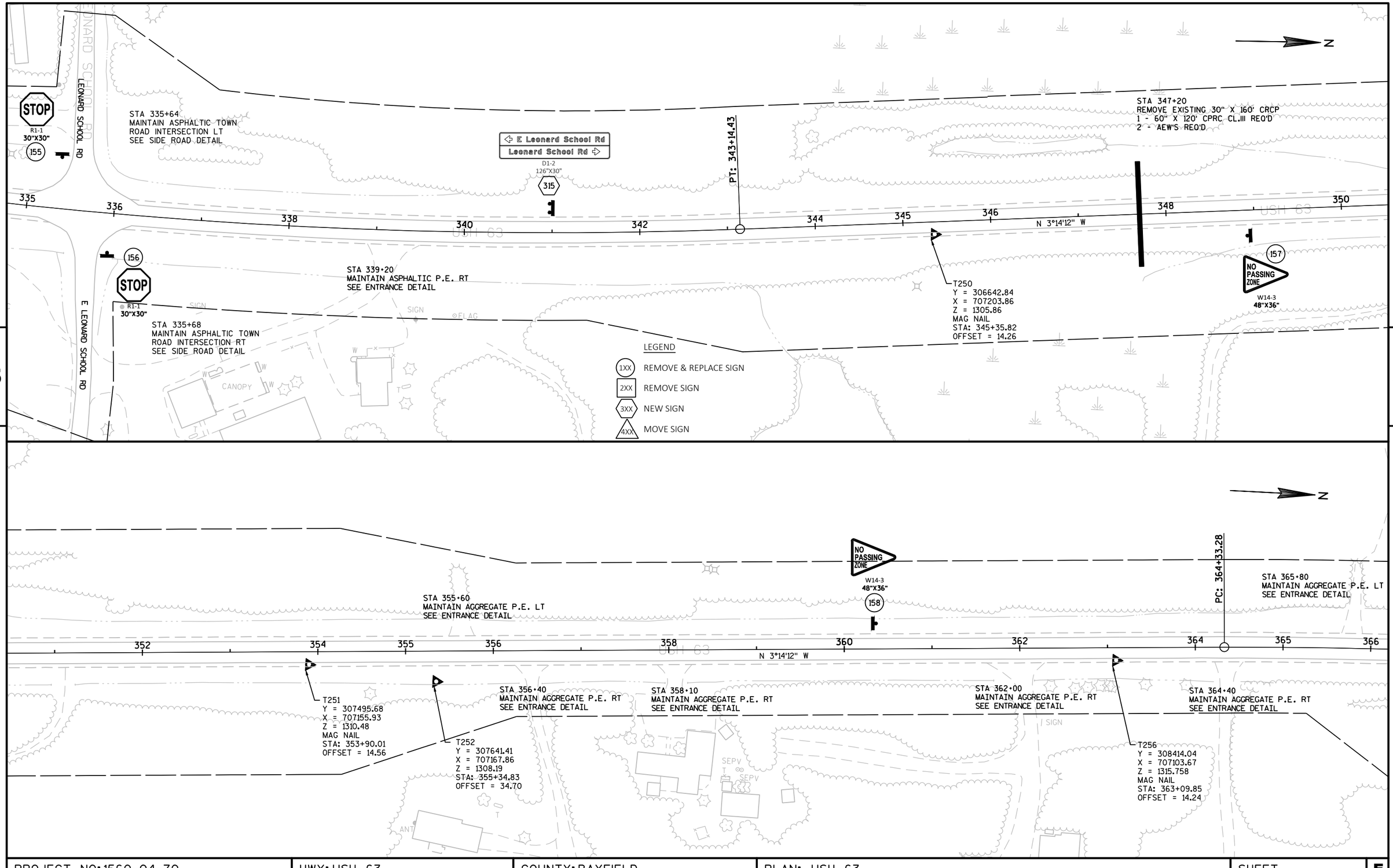
U/C

PROJECT NO: 1560-04-70	HWY: USH 63	COUNTY: BAYFIELD	PLAN: USH 63	SHEET 40	E

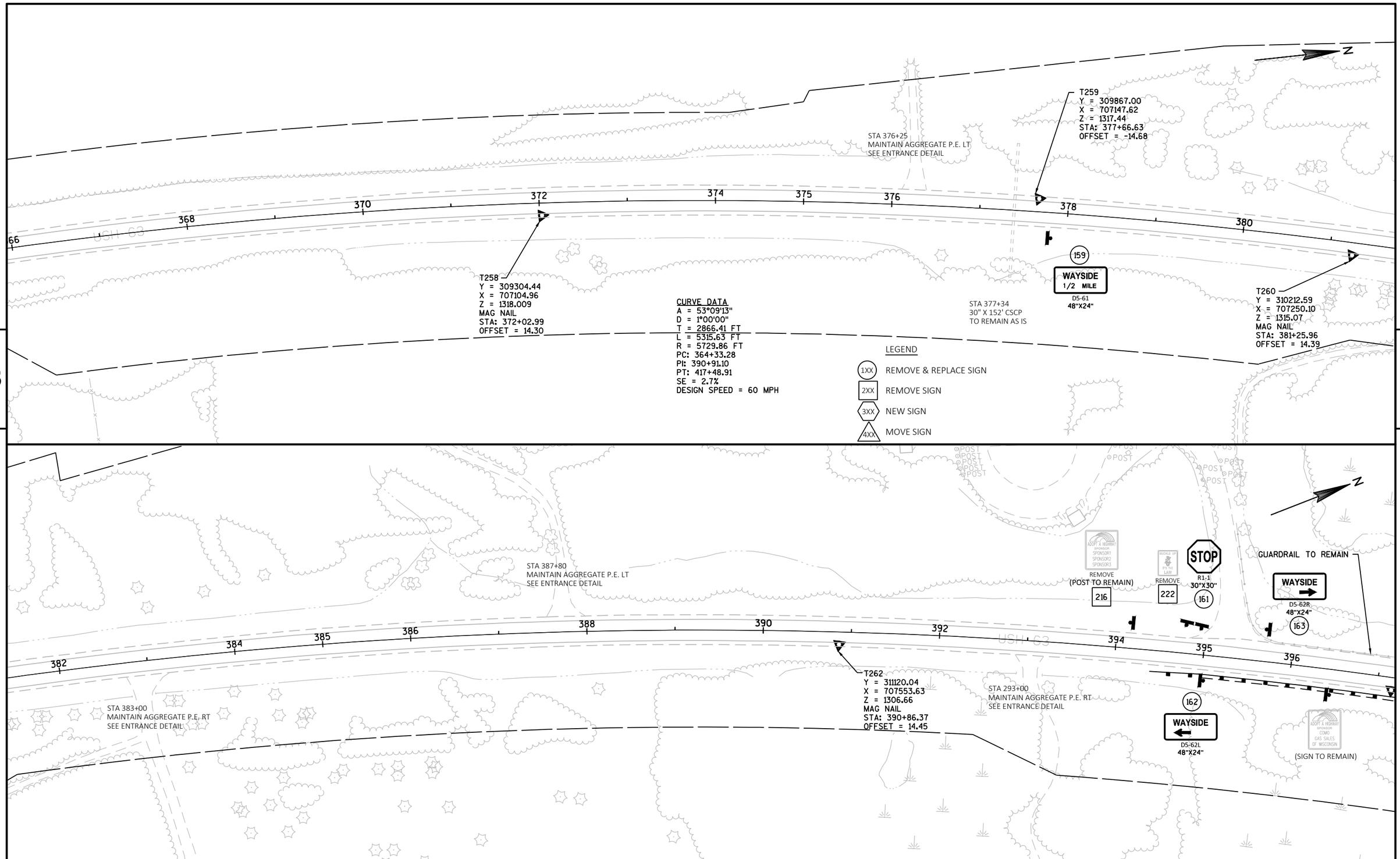
FILE NAME : V:\TRANS-EC\410757 USH 63\C3D\SHEETSPLAN\BAYFIELD_PN.DWG
LAYOUT NAME - 050211-PN

PLOT DATE : 10/25/2018 9:09 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 1560-04-70	HWY: USH 63	COUNTY: BAYFIELD	PLAN: USH 63	SHEET 41	E



PROJECT NO: 1560-04-70	HWY: USH 63	COUNTY: BAYFIELD	PLAN: USH 63	SHEET 42	E

FILE NAME : V:\TRANS-EC\410757 USH 63\C3D\SHEETSPLAN\BAYFIELD_PN.DWG
LAYOUT NAME - 050213-PN

PLOT DATE : 10/25/2018 9:09 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

STA 400+16 - STA 402+09, LT
MGS GUARDRAIL REQ'D

T267
Y = 312019.44
X = 708004.40
Z = 1309.070
MAG NAIL
STA: 400+93.16
OFFSET = -15.63

Namekagon River
I3-1
66"X24"
326

W5-52R
12"X36"
167

NAMEKAGON RIVER

W5-52L
12"X36"
165

STOP
R1-1
30"X30"
169

NAMEKAGON RIVER RD

STA 402+44
MAINTAIN ASPHALTIC TOWN
ROAD INTERSECTION LT
SEE SIDE ROAD DETAIL

STA 407+50
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

Namekagon River Rd
D1-1
126"X15"
170

STA 408+97 - STA 415+03, LT
MGS GUARDRAIL REQ'D

GUARDRAIL TO REMAIN

398 400 402 404 405 406 408 410 412

USH 63

168

W5-52L
12"X36"

GUARDRAIL TO REMAIN

STA 407+00
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

164

Namekagon River Rd
D1-1
126"X15"

166

W5-52R
12"X36"

T266
Y = 311682.61
X = 707833.34
Z = 1303.08
MAG NAIL
STA: 397+16.55
OFFSET = 14.37

325

Namekagon River
I3-1
66"X24"

STA 394+35 - STA 399+15, RT
MGS GUARDRAIL REQ'D

RUINS

LEGEND

1XX REMOVE & REPLACE SIGN
2XX REMOVE SIGN
3XX NEW SIGN
4XX MOVE SIGN

STA 412+74
ABANDON EXISTING PIPE
(24" X 124' CSCP)
BACKFILL CONTROLLED
LOW STRENGTH REQ'D

PT: 417+48.91

T270
Y = 313706.45
X = 709639.10
Z = 1348.646
MAG NAIL
STA: 424+48.63
OFFSET = -15.59

WAYSIDE
1/2 MILE
D5-61
48"X24"
173

STOP
R1-1
30"X30"
174

SHORT RD

STA 425+86
MAINTAIN ASPHALTIC TOWN
ROAD INTERSECTION LT
SEE SIDE ROAD DETAIL

414 415 416 418 420 422 424 425 426

N 49°55'01" E

USH 63

171

Short Rd
D1-1
66"X15"

172

NO PASSING ZONE
W14-3
48"X36"

STA 423+30
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

STA 412+50 - STA 412+74
DITCH CLEANING RT
(DRAIN DITCH TO SW)

PROJECT NO: 1560-04-70	HWY: USH 63	COUNTY: BAYFIELD	PLAN: USH 63	SHEET 43	E

FILE NAME : V:\TRANS-EC\410757 USH 63\C3D\SHEETSPLAN\BAYFIELD_PN.DWG
LAYOUT NAME - 050214-PN

PLOT DATE : 10/25/2018 9:09 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:100 FT

Short Rd
D1-1
66"X15"
175

STA 439+90
MAINTAIN ASPHALTIC P.E. LT
SEE ENTRANCE DETAIL

STA 443+10
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

428 430 432 434 435 436 438 440 442

USH 63

N 49°55'01" E

STA 432+20
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

STA 435+22
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

STA 439+15
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

T273
Y = 314869.19
X = 711066.816
Z = 1355.40
MAG NAIL
STA: 442+89.69
OFFSET = 14.09

SIGN

5

LEGEND

- 1XX — REMOVE & REPLACE SIGN
- 2XX — REMOVE SIGN
- 3XX — NEW SIGN
- 4XX — MOVE SIGN

5

SEPC

NO PASSING ZONE
W14-3
48"X36"
176

STOP
R1-1
30"X30"
177

PC: 449+96.50

CURVE DATA
A = 20°16'26"
D = 1°15'12"
T = 817.38 FT
L = 1617.67 FT
R = 4571.65 FT
PC: 449+96.50
PI: 458+05.33
PT: 466+14.17
SE = 3.3%
DESIGN SPEED = 60 MPH

STA 453+50
30" X 66' CSCP
TO REMAIN AS IS

STA 458+10
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

444 445 446 448 450 452 454 455 456 458

N 49°55'01" E

USH 63

STA 451+20
MAINTAIN ASPHALTIC P.E. RT
SEE ENTRANCE DETAIL

T275
Y = 315452.47
X = 711754.88
Z = 1347.727
MAG NAIL
STA: 451+91.12
OFFSET = 15.01

STA 456+50
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

SIGN

PROJECT NO:1560-04-70	HWY: USH 63	COUNTY: BAYFIELD	PLAN: USH 63	SHEET 44	E

T276
Y = 316143.10
X = 712332.73
Z = 1336.415
MAG NAIL
STA: 460+92.58
OFFSET = -15.14

STA 462+39
24" X 66' CSCP
TO REMAIN AS IS

STA 463+50
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

PT: 466+14.17

STA 468+40
MAINTAIN ASPHALTIC P.E. LT
SEE ENTRANCE DETAIL

460 462 464 465 466 468 470 472 474

N 29°38'35" E

STA 462+80
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

TOURIST INFORMATION 1/2 MILE
D7-57
54"X36"
178

STA 467+10
MAINTAIN ASPHALTIC P.E. RT
SEE ENTRANCE DETAIL

T278
Y = 316916.94
X = 712841.26
Z = 1347.776
MAG NAIL
STA: 470+19.52
OFFSET = 14.47

STA 473+40
MAINTAIN ASPHALTIC P.E. RT
SEE ENTRANCE DETAIL

LEGEND
1XX REMOVE & REPLACE SIGN
2XX REMOVE SIGN
3XX NEW SIGN
4XX MOVE SIGN

STA 482+50 - STA 484+25, RT
STA 484+75 - STA 486+50, RT
MGS GUARDRAIL 3K REQ'D

STA 487+64
30" X 190' CSCP
TO REMAIN AS IS
DITCH CLEANING LT/RT
CLEANING CULVERT PIPE

STA 487+60
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

STA 489+18
MAINTAIN ASPHALTIC C.E. LT
SEE ENTRANCE DETAIL

CURB & GUTTER TO REMAIN

PC: 489+32.43

STOP SCHOOL BUS FLASHING RED LIGHTS
R59-51
36"X36"
179

STA 478+40
MAINTAIN AGGREGATE P.E. LT
SEE ENTRANCE DETAIL

NO PASSING ZONE
W14-3
48"X36"
181

ADOPT A HIGHWAY SPONSOR COMO GAS SALES OF WISCONSIN
I55-56
401

SOUTH 63
REMOVE
184

SPEED LIMIT 55
REMOVE
218

401

SPEED LIMIT 55
R2-1
24"X30"
318

SOUTH 63
J4-1
24"X36"
184

END
R3-9D
24"X6"

CENTER LANE ONLY
R3-9B
24"X36"
319

475 476 478 480 482 484 485 486 488 490

N 29°38'35" E

STA 476+10
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

180

Cable UNINCORPORATED
I2-3
54"X24"

T279
Y = 317710.90
X = 713293.28
Z = 1351.063
MAG NAIL
STA: 479+33
OFFSET = 14.64

182

SPEED LIMIT 35
W3-5
36"X36"

STA 480+20
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

183

NO PARKING ANY TIME
R7-1D
18"X24"

MGS GUARDRAIL REQ'D

317

JCT COUNTY M
J1-1
24"X39"

MGS GUARDRAIL
SHORT RADIUS

STA 484+50
MAINTAIN ASPHALTIC P.E. RT
SEE ENTRANCE DETAIL

217

JCT COUNTY M
REMOVE

219

SPEED LIMIT 35
REMOVE

MGS GUARDRAIL REQ'D

185

SPEED LIMIT 35
R2-1
24"X30"

SIGNS TO REMAIN
LAKE NAMEKAGON,
AMERICAN BIRKEBEINER
TRAIL AND CABLE
AIRPORT

320

BEGIN
R3-9C
24"X6"

CENTER LANE ONLY
R3-9B
24"X36"

STA 489+15
MAINTAIN AGGREGATE P.E. RT
SEE ENTRANCE DETAIL

PROJECT NO: 1560-04-70	HWY: USH 63	COUNTY: BAYFIELD	PLAN: USH 63	SHEET 45	E

FILE NAME : V:\TRANS-EC\410757 USH 63\C3D\SHEETSPLAN\BAYFIELD_PN.DWG
LAYOUT NAME - 050216-PN

PLOT DATE : 10/25/2018 9:09 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:100 FT

CURVE DATA
A = 12°37'44"
D = 2°53'40"
T = 219.04 FT
L = 436.30 FT
R = 1979.44 FT
PC: 489+32.43
PI: 491+50.58
PT: 493+68.74
SE = 3.4%
DESIGN SPEED = 40 MPH

STA 490+87
MAINTAIN ASPHALTIC C.E. LT
SEE ENTRANCE DETAIL

STA 491+80
MAINTAIN ASPHALTIC C.E. LT
SEE ENTRANCE DETAIL

STA 493+04
MAINTAIN ASPHALTIC TOWN
ROAD INTERSECTION LT
SEE SIDE ROAD DETAIL

CABLE SUNSET RD

TOURIST INFORMATION

NO PARKING ANY TIME
R7-1D
18"X24"

NO PARKING ANY TIME
R7-1R
18"X24"

TOURIST INFORMATION
D7-59L
54"X36"

COUNTY M
J13-1
24"X45"

PT: 493+68.74

SIGNS TO REMAIN
LAKE NAMEKAGON,
AMERICAN BIRKEBEINER
TRAIL AND CABLE
AIRPORT

BEGIN
R3-9C
24"X6"
CENTER LANE
R3-9B
24"X36"
ONLY

EP: 497+15.55

CURB & GUTTER
TO REMAIN

END PROJECT
STA 496+85.00
Y = 319288.90
X = 714039.77

490 492 494 495 496

USH 63

N 17°00'50" E

CURB & GUTTER
TO REMAIN

TOURIST INFORMATION
D7-59R
54"X36"

STA 491+78
REMOVE EXISTING
C.E. RT

COUNTY M
J13-1
24"X45"

STA 491+50 - STA 492+05, RT
REMOVING CURB & GUTTER

STA 491+50 - STA 492+05, RT
CONCRETE CURB & GUTTER 6-INCH
SLOPED 30-INCH TYPE J REQ'D

CURB & GUTTER
TO REMAIN

STA 493+19
MAINTAIN ASPHALTIC TOWN
ROAD INTERSECTION RT
SEE SIDE ROAD DETAIL

CTH M

STOP
R1-1
30"X30"

W12-1D
24"X24"

NORTH
63
J4-1
24"X36"

REMOVE
"ASHLAND 40"
SIGN

STA 494+78
MAINTAIN ASPHALTIC C.E. RT
SEE ENTRANCE DETAIL

END
R3-9D
24"X6"
CENTER LANE
R3-9B
24"X36"
ONLY

STA 496+50
MAINTAIN ASPHALTIC C.E. RT
SEE ENTRANCE DETAIL

ADOPT A HIGHWAY SPONSORED BY RONDEAU FAMILY
I55-56

STA 497+44
24" X 62' RCCP
TO REMAIN AS IS

SPRUCE ST

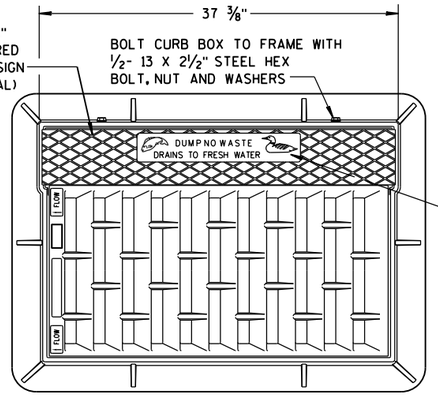
LEGEND
1XX REMOVE & REPLACE SIGN
2XX REMOVE SIGN
3XX NEW SIGN
4XX MOVE SIGN

PROJECT NO: 1560-04-70	HWY: USH 63	COUNTY: BAYFIELD	PLAN: USH 63	SHEET 46	E

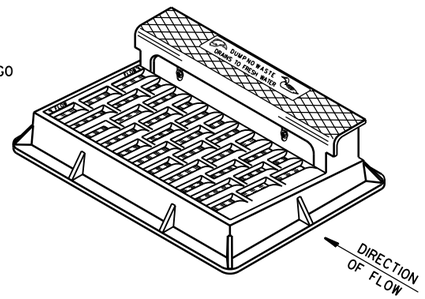
FILE NAME : V:\TRANS-EC\410757 USH 63\C3D\SHEETSPLAN\BAYFIELD_PN.DWG
LAYOUT NAME - 050217-PN
PLOT DATE : 10/25/2018 9:09 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:100 FT

Standard Detail Drawing ListStandard Detail Drawing List

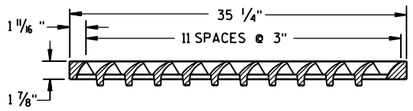
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08C06-02	INLETS 3-FT AND 4-FT DIAMETER
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E08-03	TYPICAL 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
13A10-02A	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-02B	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-02C	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-02D	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A11-03A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-03B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
14B42-06A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B53-01A	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01B	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01C	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01D	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01E	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01F	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01G	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01H	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
14B53-01I	SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C07-14C	PAVEMENT MARKING ARROWS
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C08-19B	PAVEMENT MARKING (TURN LANES)
15C12-06	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-05A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C35-02A	PAVEMENT MARKING (INTERSECTIONS)
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING

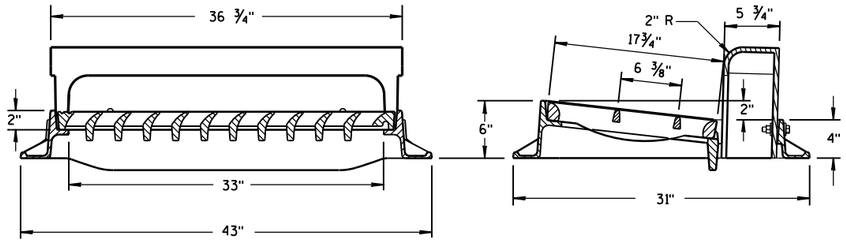


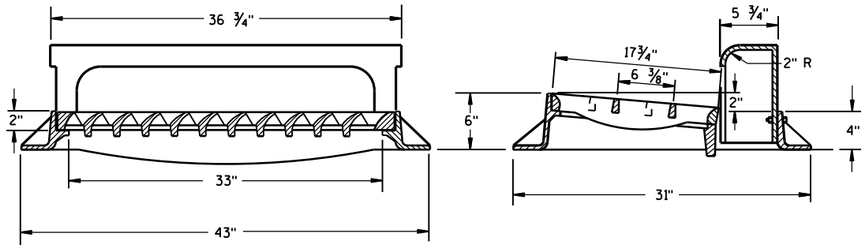
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

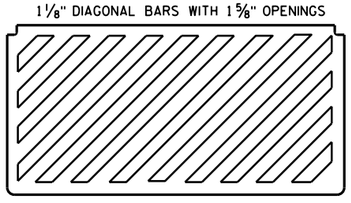






TYPE "H"

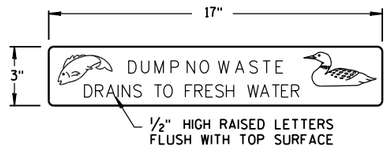
NOTE: EITHER CASTING IS ACCEPTABLE



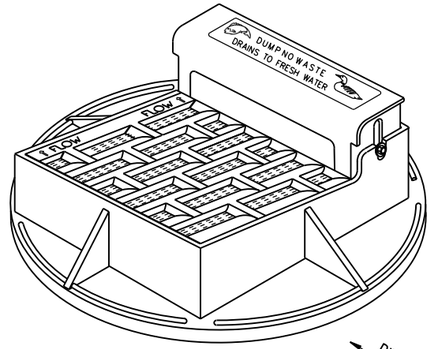
SPECIAL GRATE FOR TYPE "H" COVER

(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"

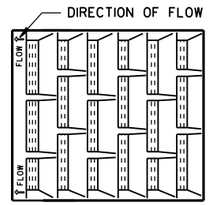
NOTE:
GRATE IS REVERSIBLE.

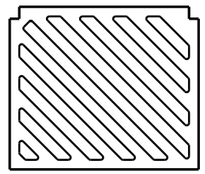
GENERAL NOTES

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.

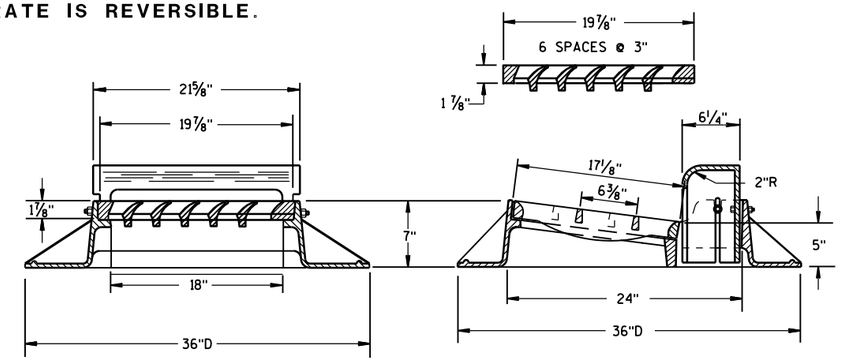




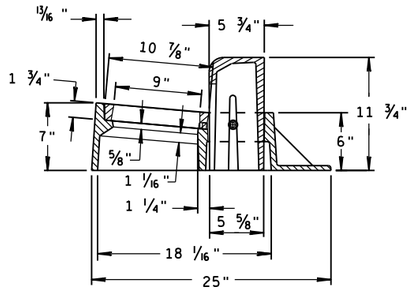
SPECIAL GRATE FOR TYPE "A" COVER

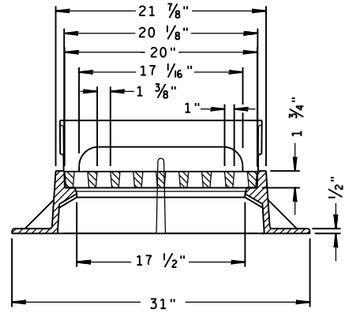
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)

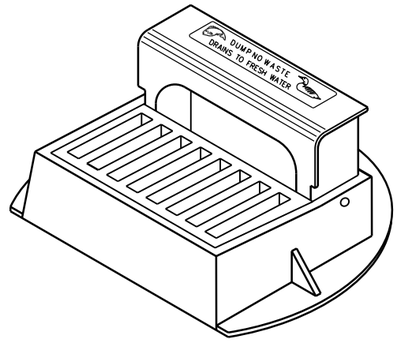


TYPE "A"





TYPE "Z"

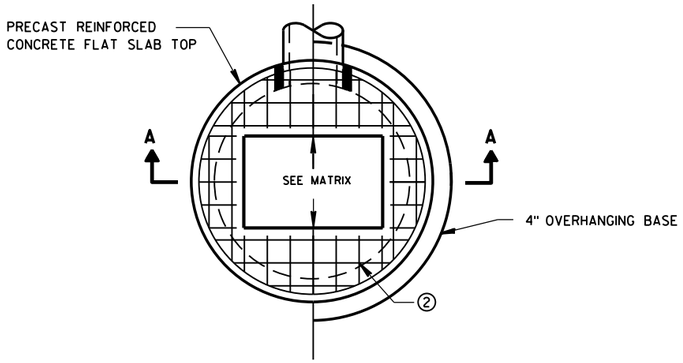


INLET COVERS
TYPE A, H, A-S, H-S & Z

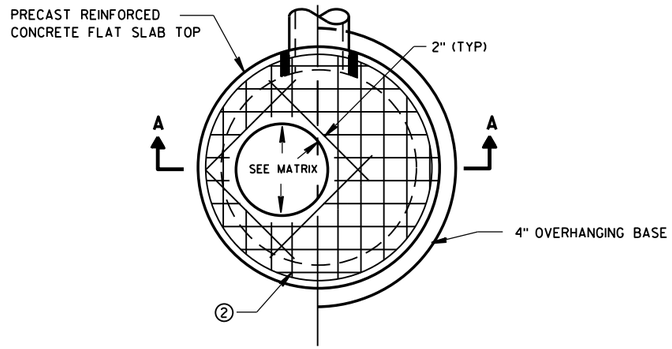
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-27-13 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

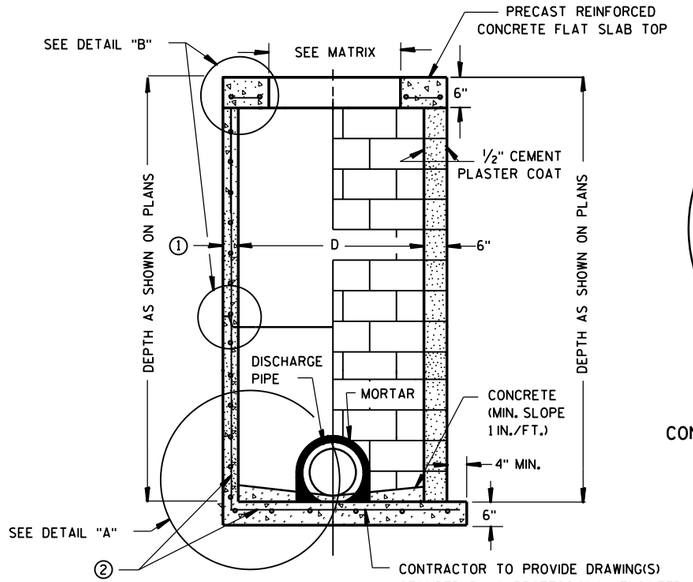
S.D.D. 8 A 5-19a



PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

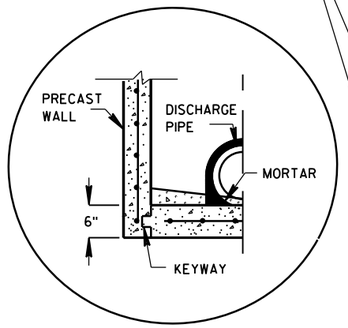


SECTION A-A

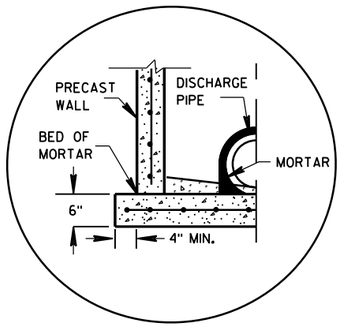
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

CIRCULAR INLETS W/ FLAT TOP

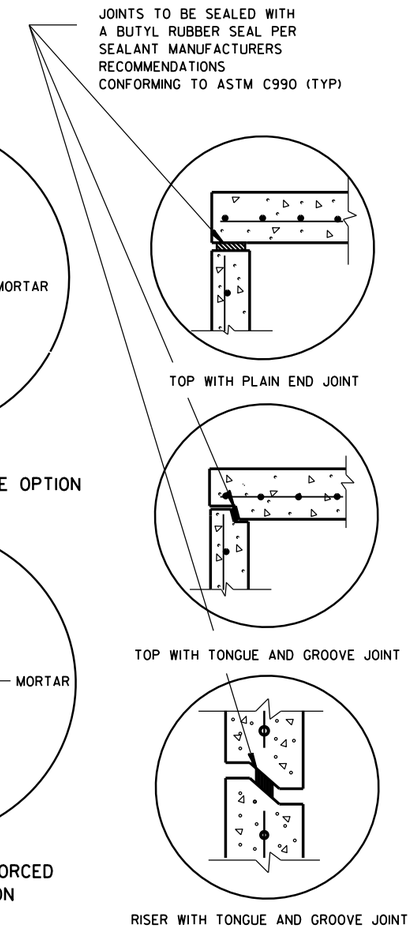


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "B"

GENERAL NOTES

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

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

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

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

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

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

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

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

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

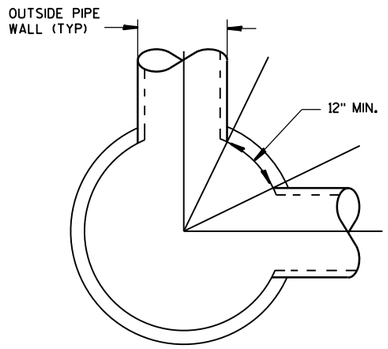
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.

② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

INLET COVER OPENING MATRIX

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



DETAIL "C"

PIPE MATRIX

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

INLETS 3-FT AND 4-FT DIAMETER

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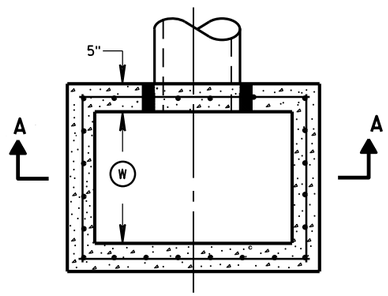
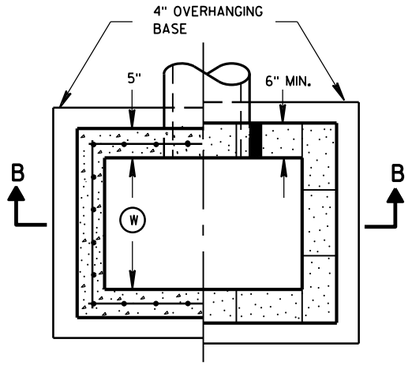
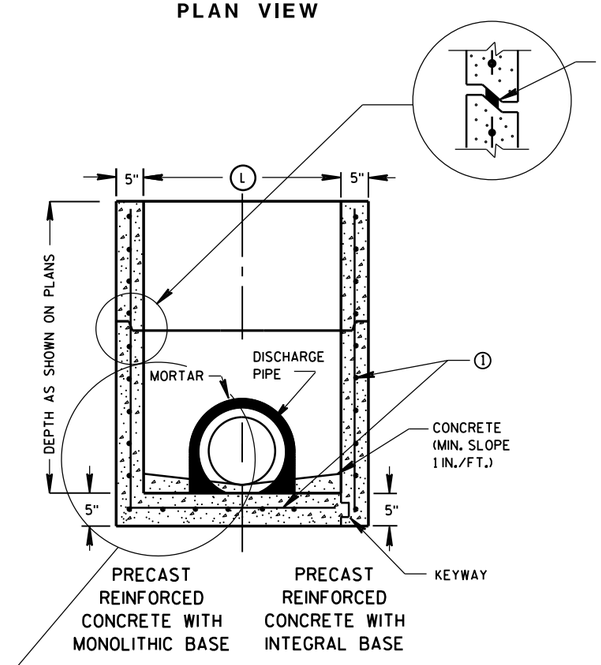
INLETS 3-FT AND 4-FT DIAMETER



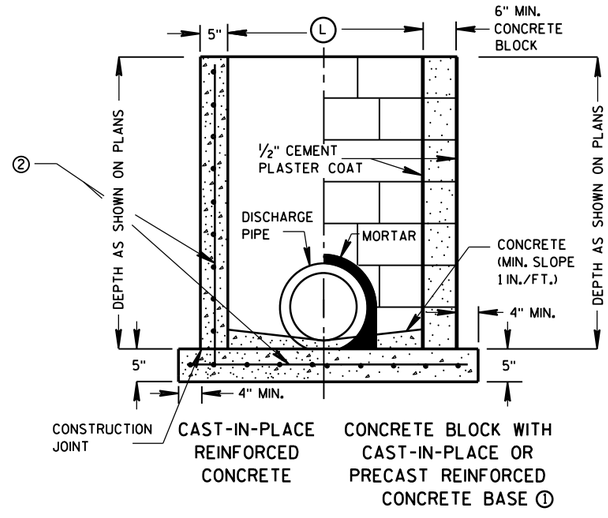
PLAN VIEW



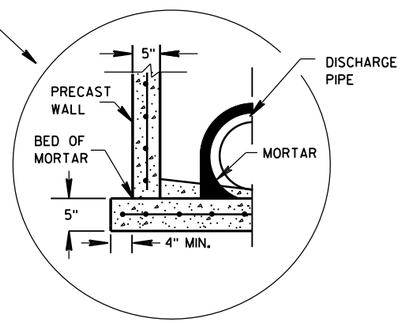
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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

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

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

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

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

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

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

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS.
4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED.
OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

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

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

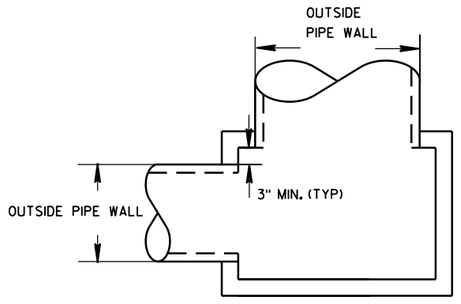
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

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

PIPE MATRIX

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



DETAIL "A"

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

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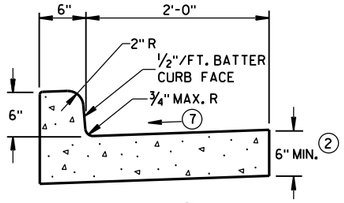
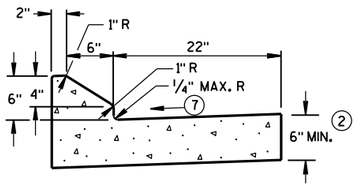
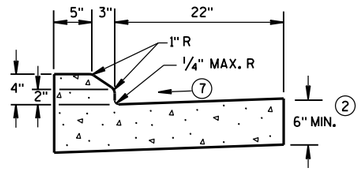
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT



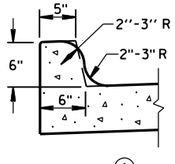
TYPES A (1) & D



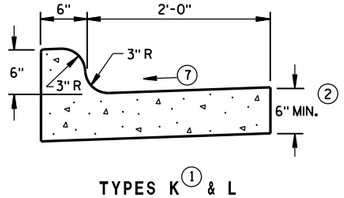
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

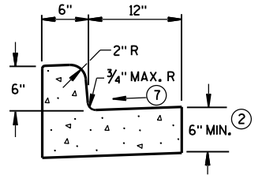


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



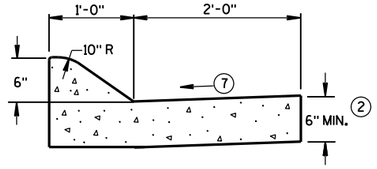
TYPES K (1) & L

CONCRETE CURB & GUTTER 30"

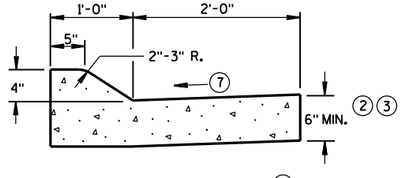


TYPES A (1) & D

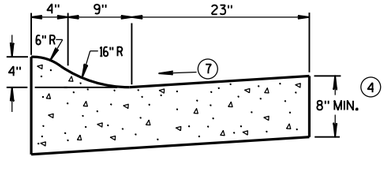
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A (1) & D

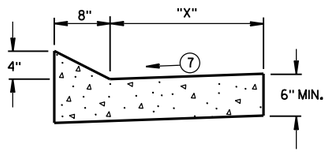


4" SLOPED CURB TYPES A (1) & D



4" SLOPED CURB TYPES R (1) & T (5)

CONCRETE CURB & GUTTER 36"



TYPES TBT & TBTT (1)

CONCRETE CURB & GUTTER

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

GENERAL NOTES

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

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

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

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

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

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

(4) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(5) THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

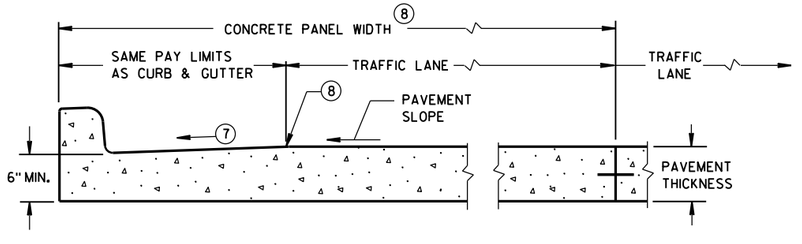
(6) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

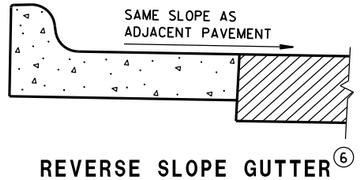
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB & GUTTER

* BIKE LANE IS NOT SHOWN.



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

CONCRETE CURB & GUTTER

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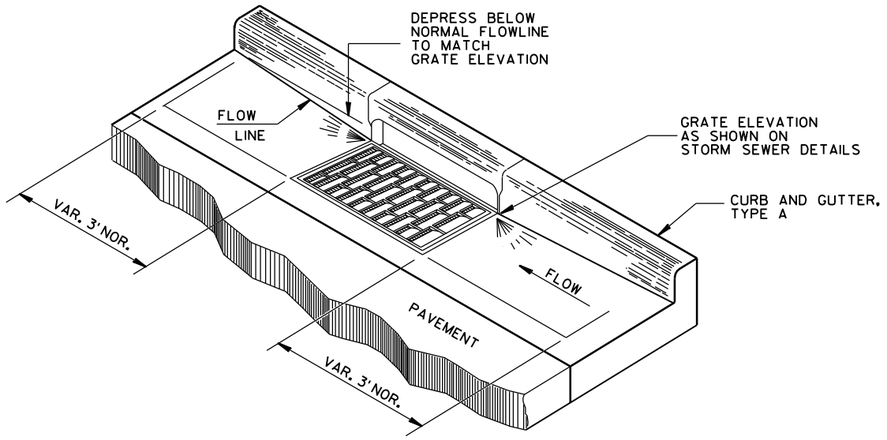


DETAIL OF CURB AND GUTTER AT INLETS

(TYPE H INLET COVER SHOWN)

GENERAL NOTES

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

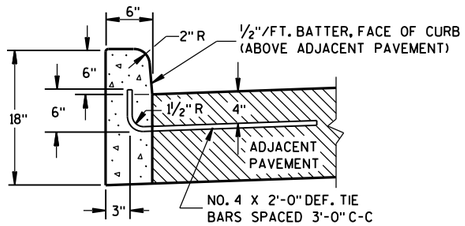
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

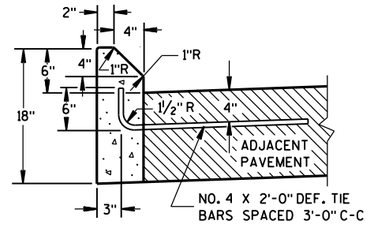
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(9) REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

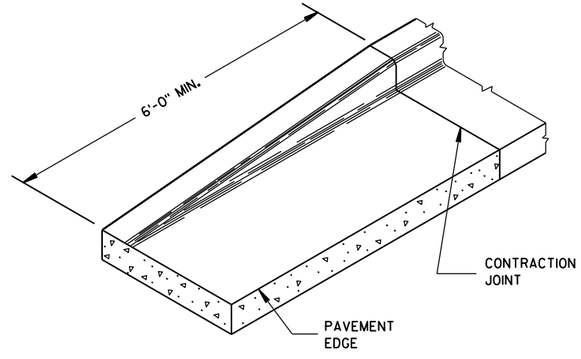


TYPES A(1) & D

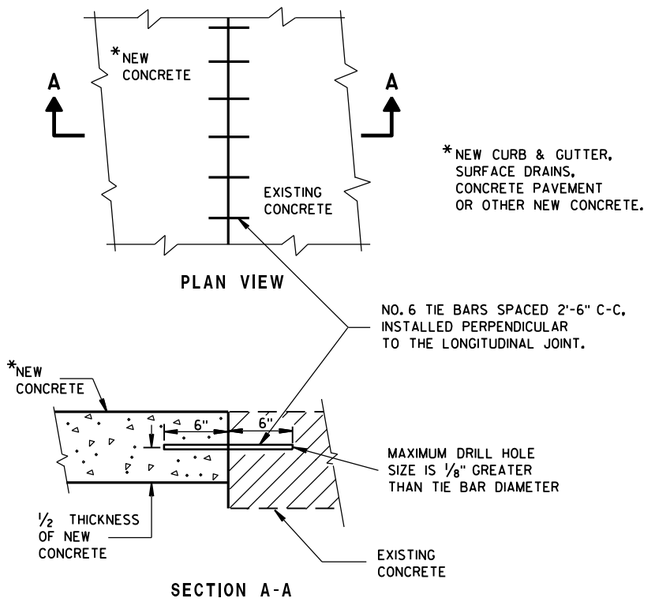


TYPES G(1) & J

CONCRETE CURB



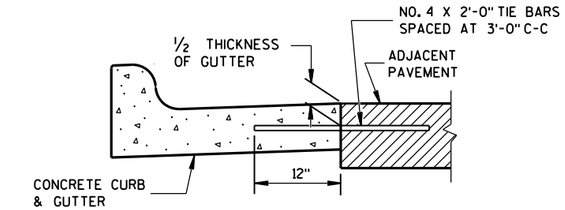
END SECTION CURB & GUTTER



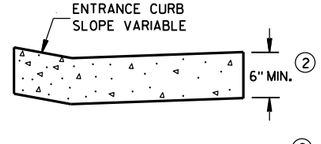
PLAN VIEW

SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (9)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2017 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS 52 ENT
UNIT SUPERVISOR
FHWA

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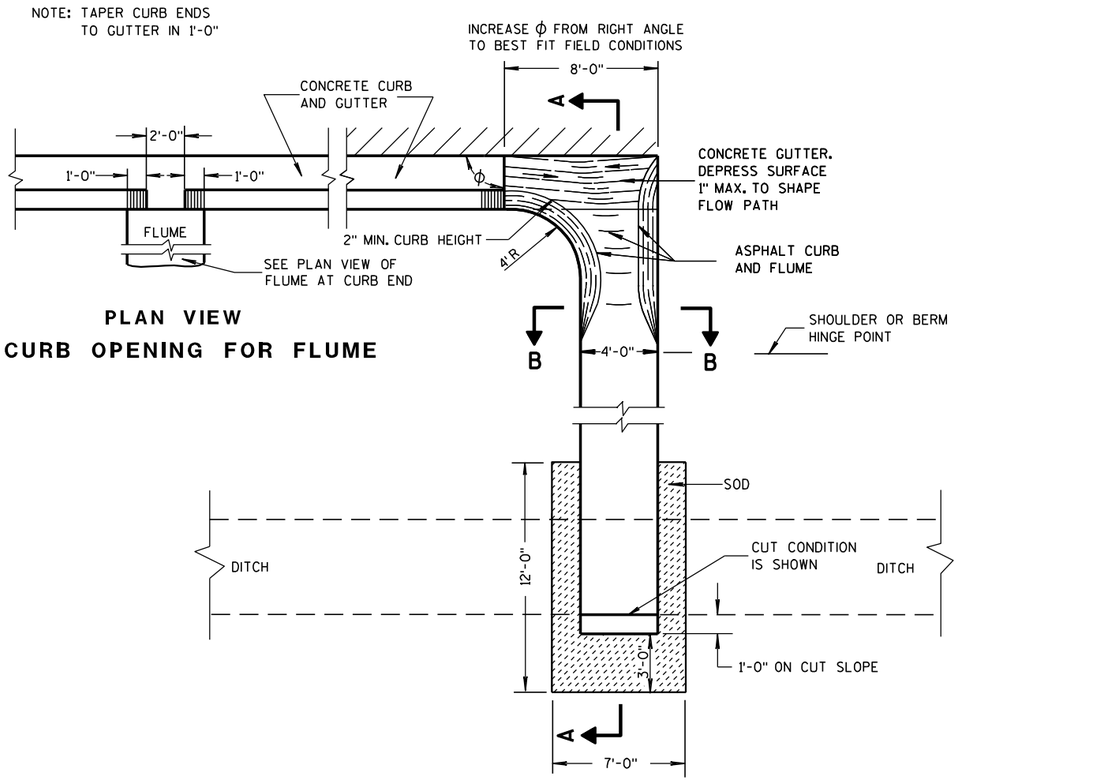
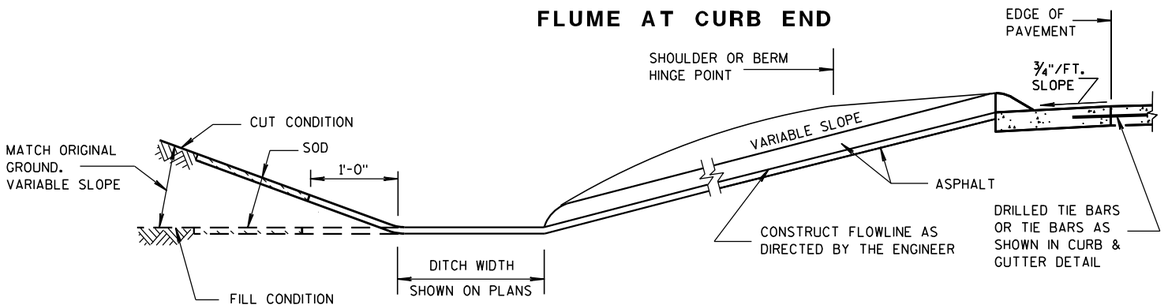
S.D.D. 8 D 1-20b

ASPHALTIC FLUME

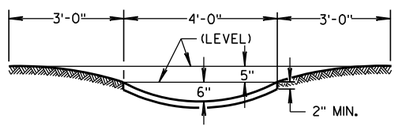


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

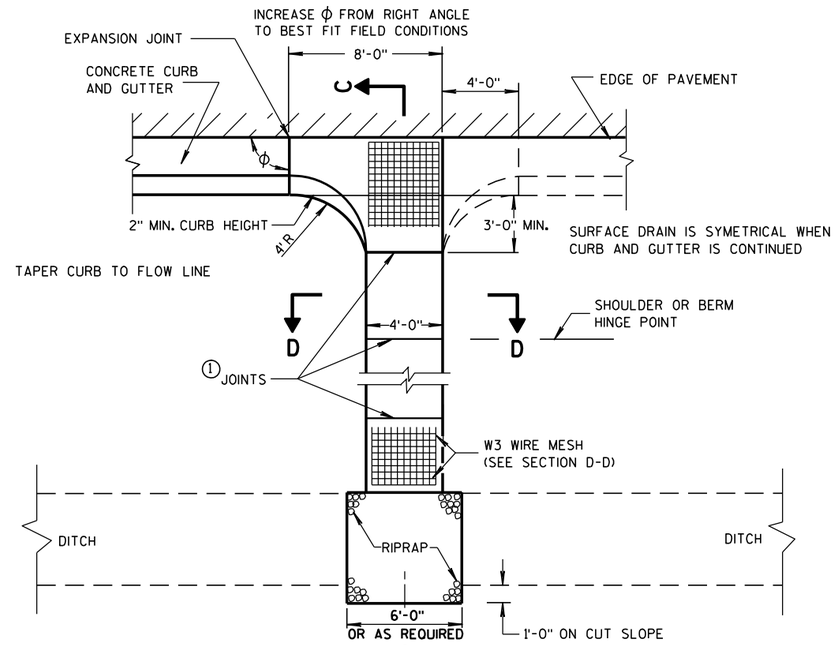
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE ⅛ TO ¼ INCH WIDE BY 1½ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

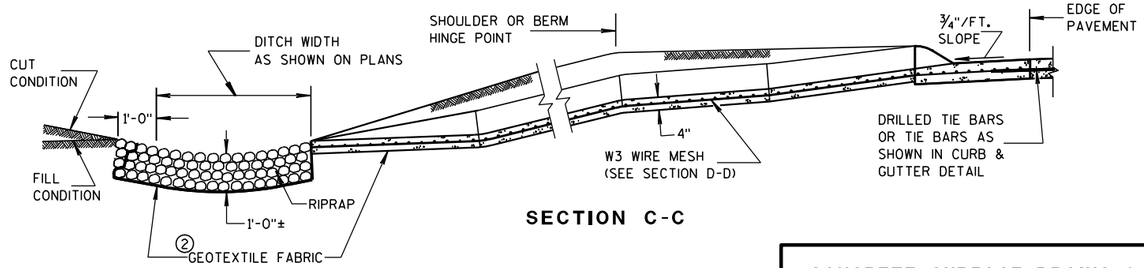
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

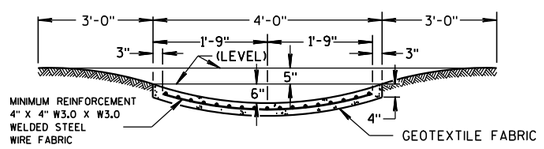
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

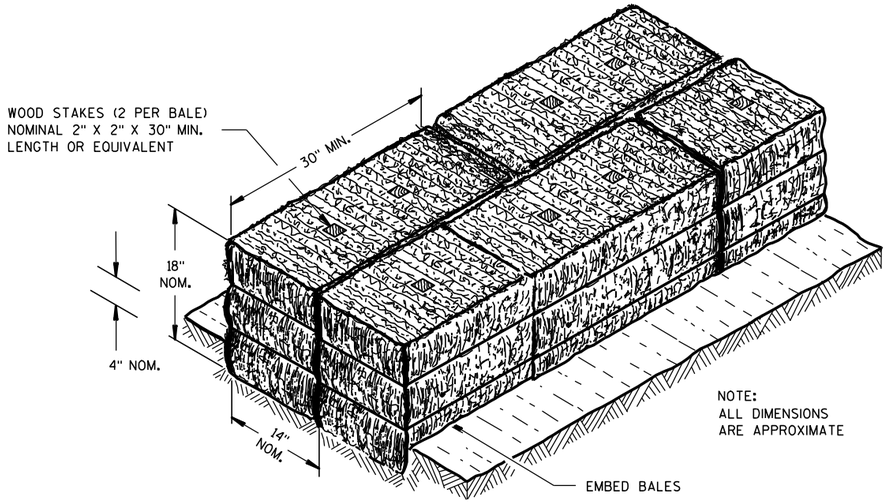
APPROVED
9-4-08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
53
FHWA

6

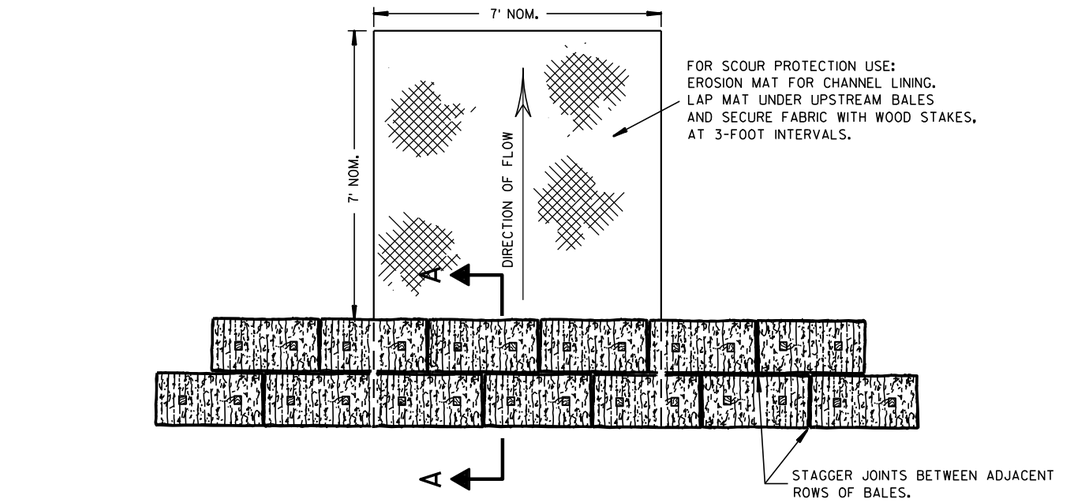
S.D.D. 8 D 4-5

6

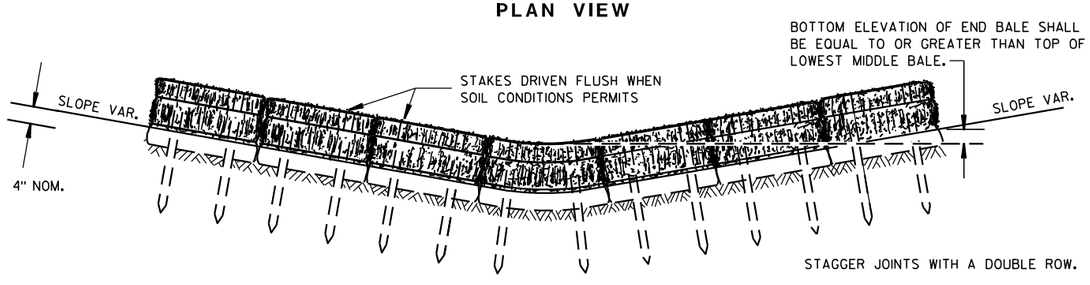
S.D.D. 8 D 4-5



SECTION A-A



PLAN VIEW



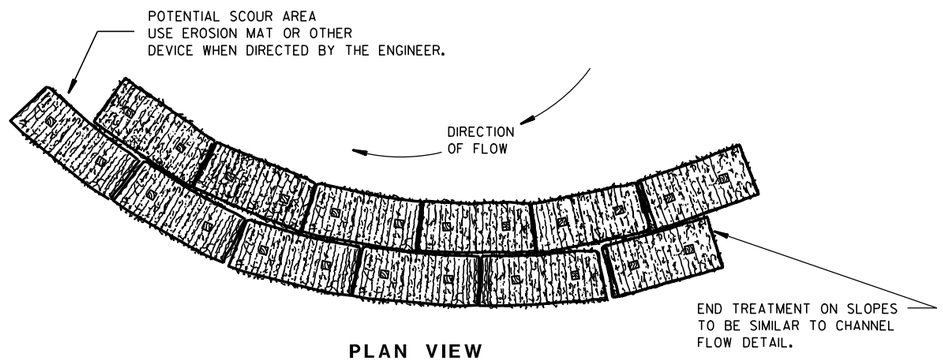
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

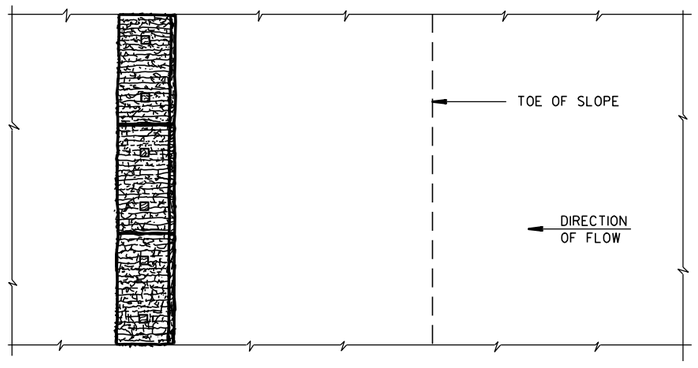
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

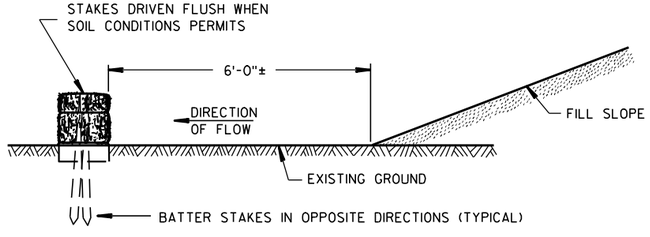


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 DATE — /S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

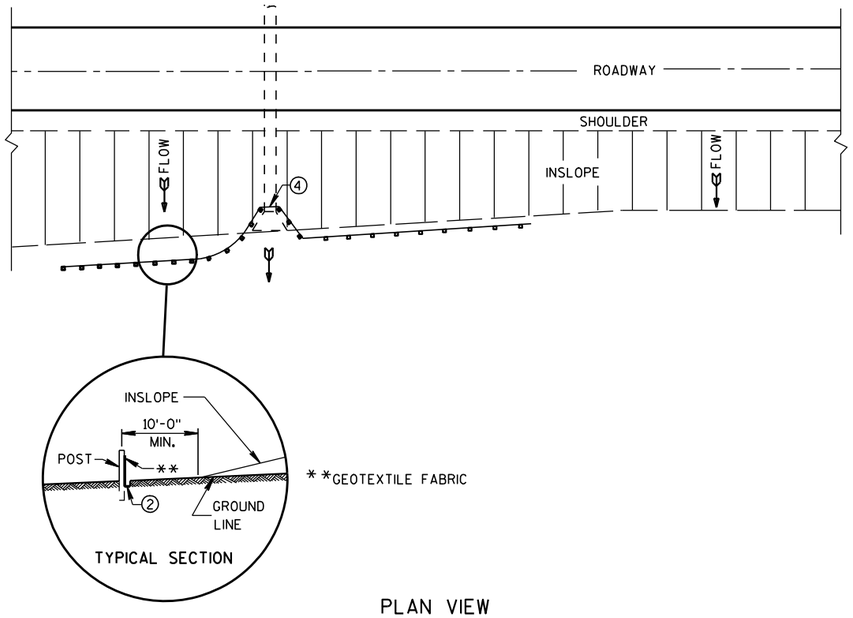
FHWA

6

S.D.D. 8 E 8-3

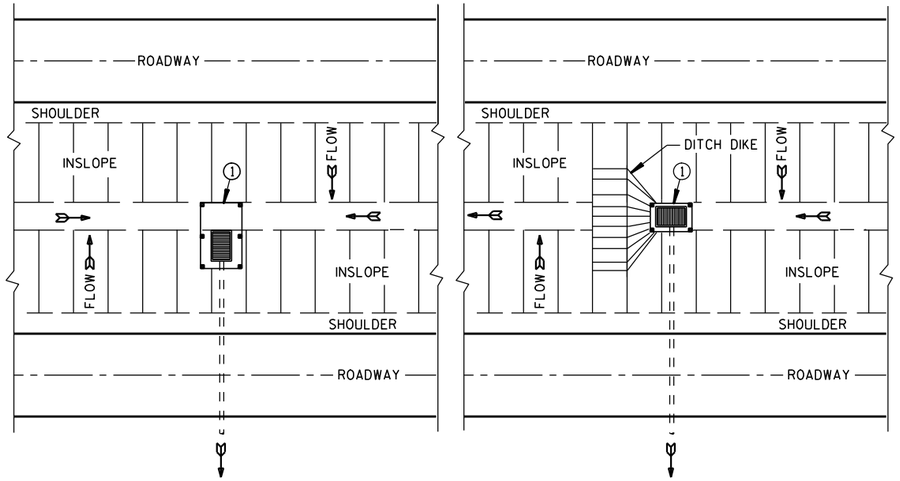
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

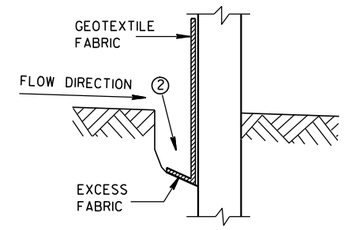
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

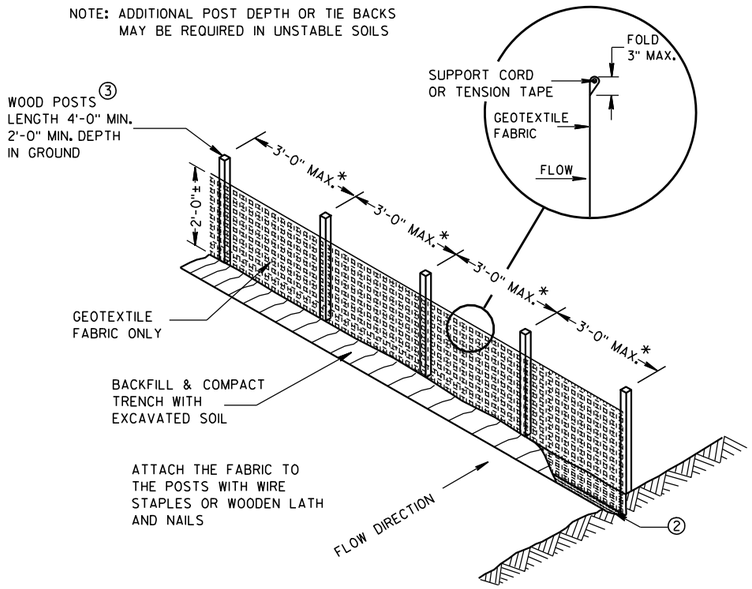
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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.

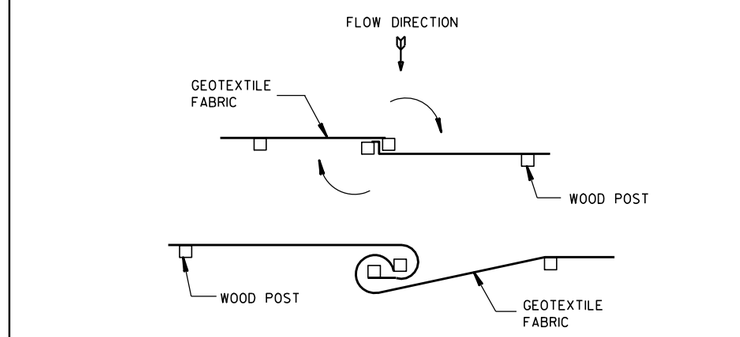


TRENCH DETAIL

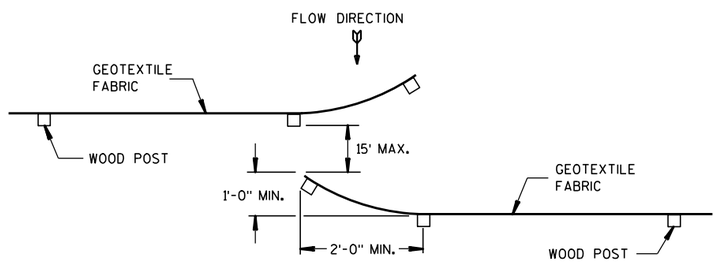


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

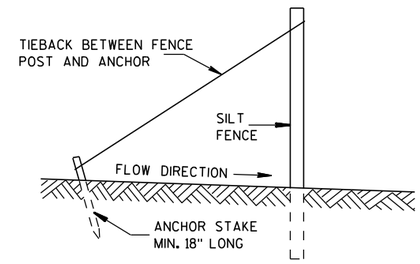


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

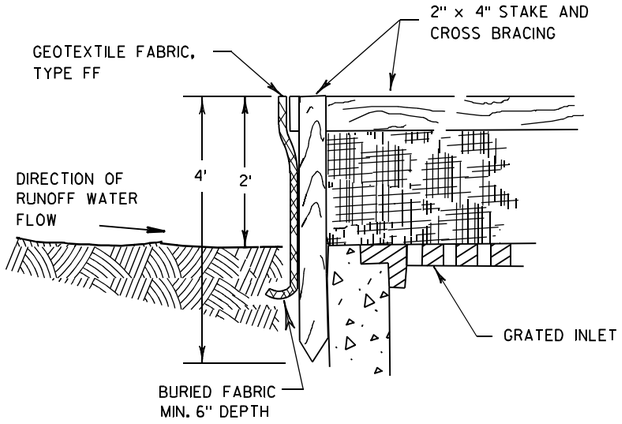
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

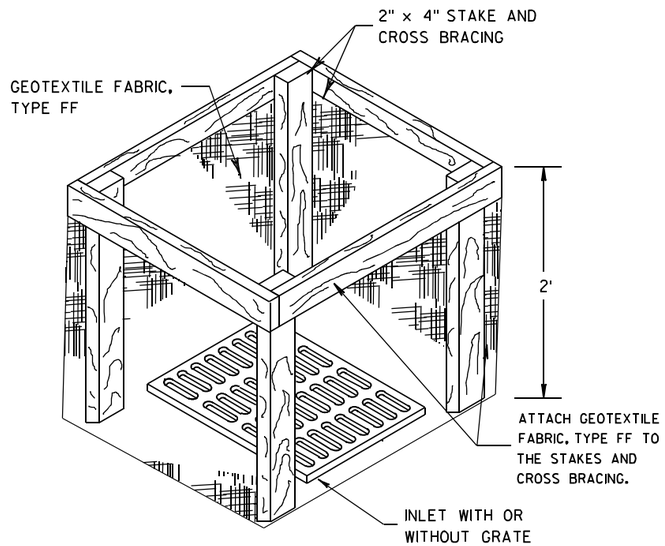
6

S.D.D. 8 E 9-6

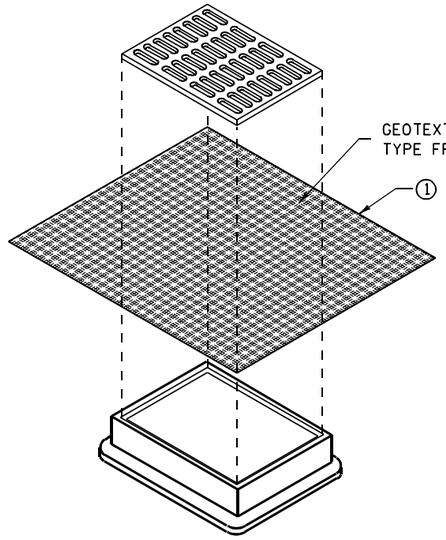
6

S.D.D. 8 E 9-6



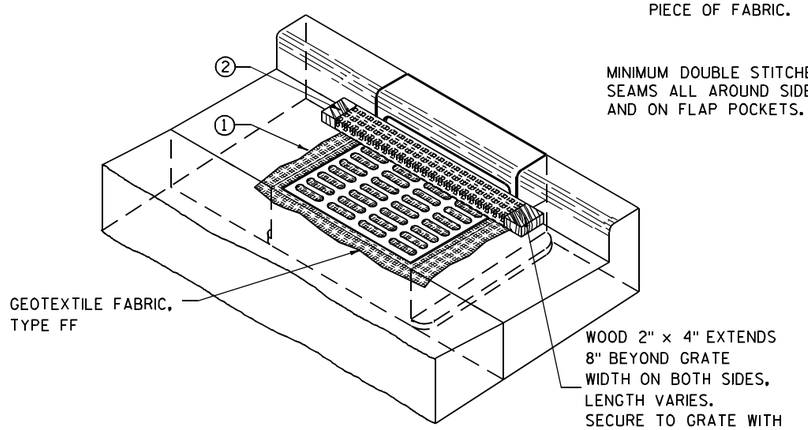


INLET PROTECTION, TYPE A

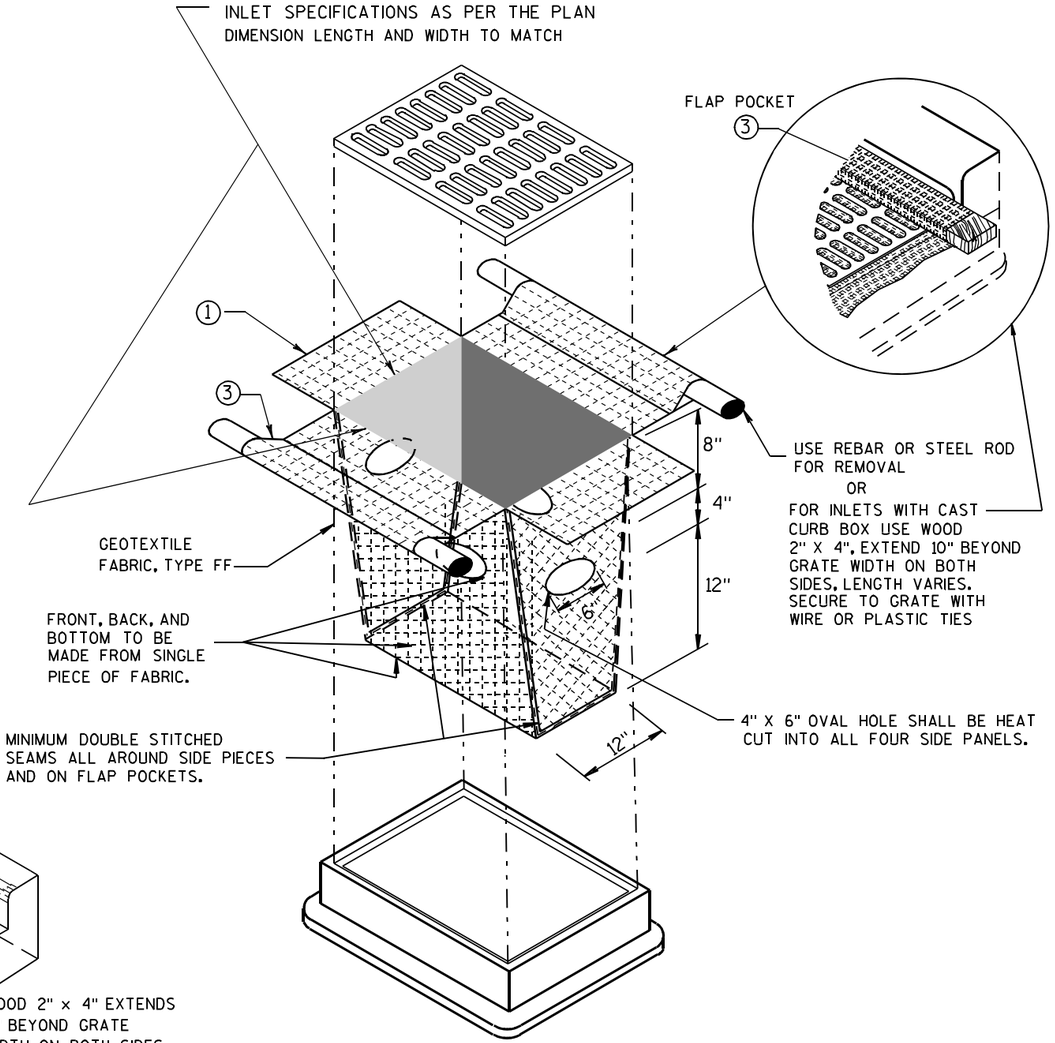


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

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.

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 A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
S.D.D. 8 E 10-2

METAL APRON ENDWALLS

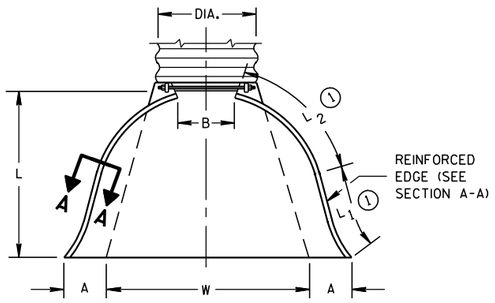
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	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	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

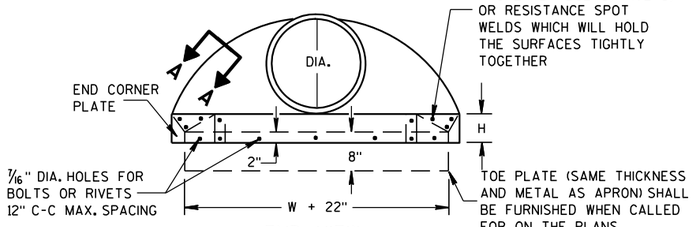
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
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

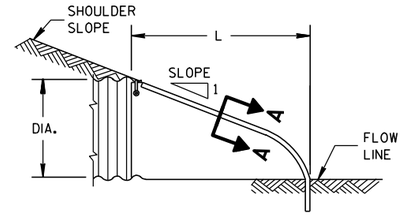
*MINIMUM
**MAXIMUM



PLAN VIEW

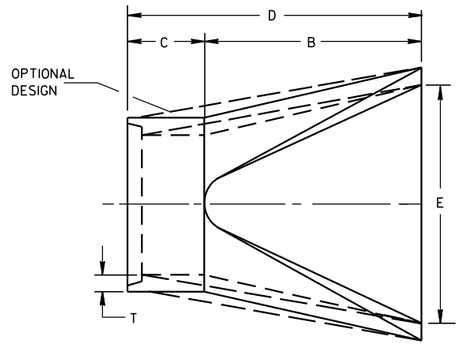


END VIEW

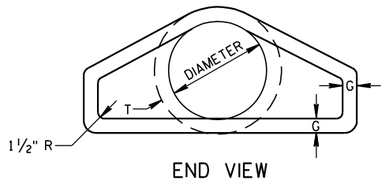


SIDE ELEVATION

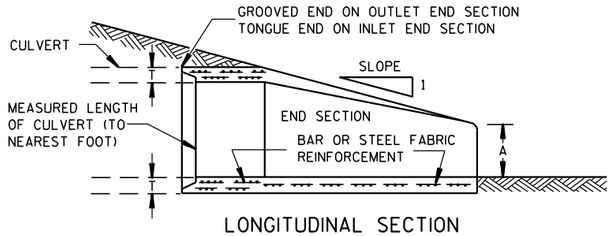
METAL ENDWALLS



PLAN

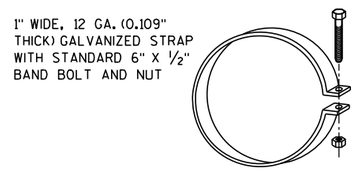


END VIEW



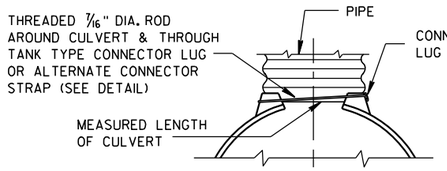
LONGITUDINAL SECTION

CONCRETE ENDWALLS

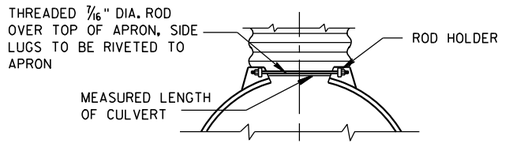


ALTERNATE FOR TYPE 1 CONNECTION

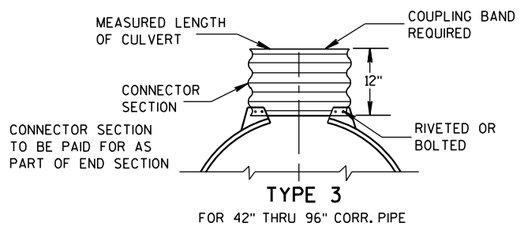
END SECTION CONNECTOR STRAP



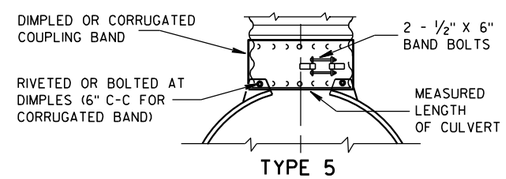
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

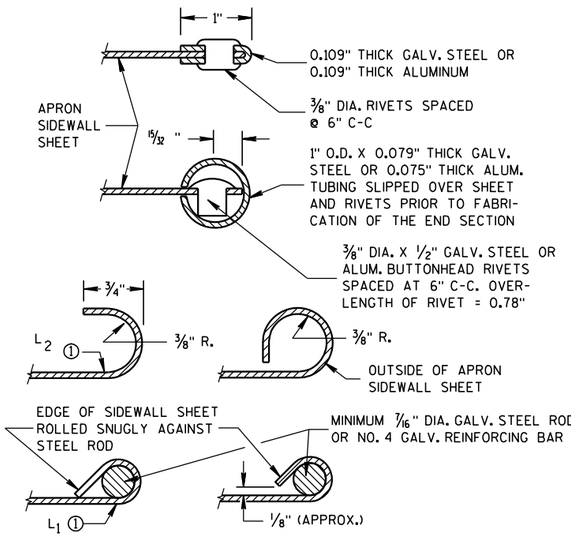
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

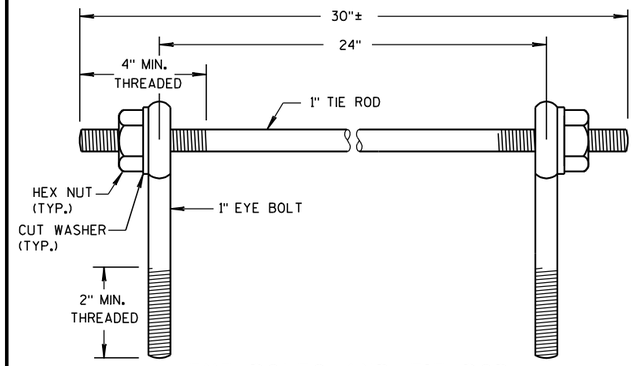
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

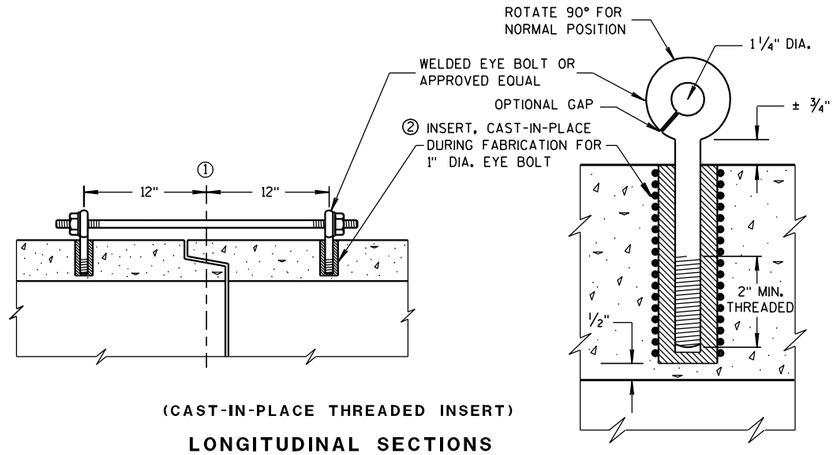
APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 F 1-11



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 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 APPLICABLE SPECIAL PROVISIONS.

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

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

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

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

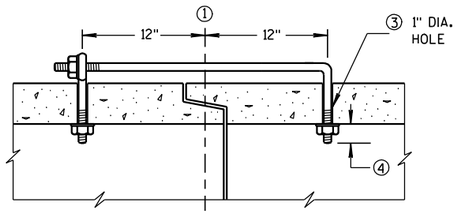
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

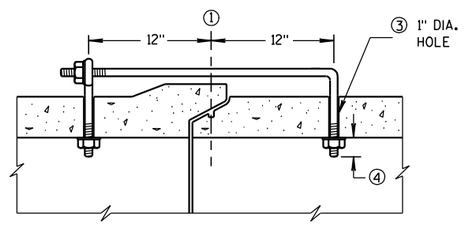
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

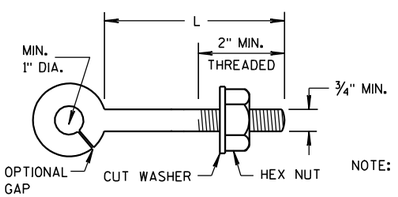


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

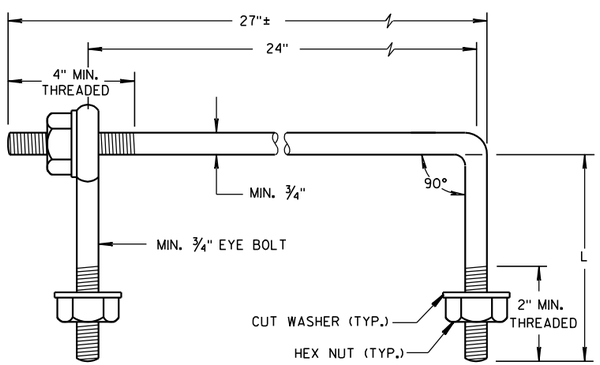
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

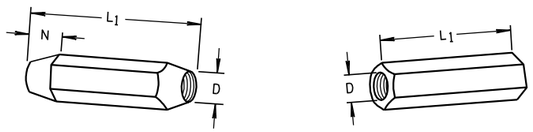
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

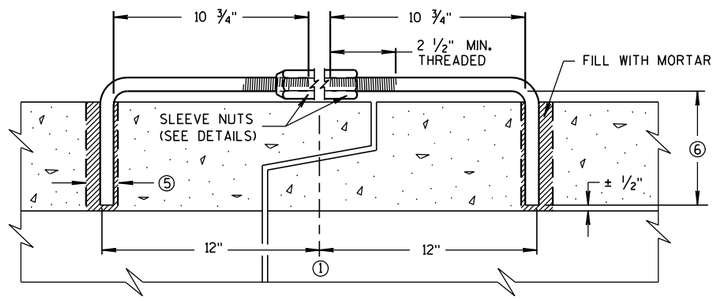
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

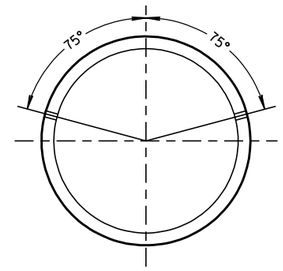
SLEEVE NUTS



LONGITUDINAL SECTION

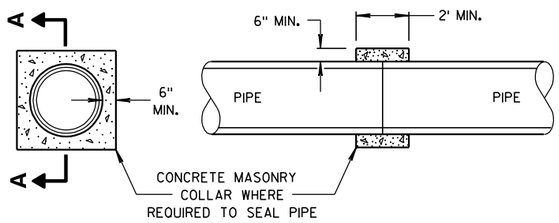
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

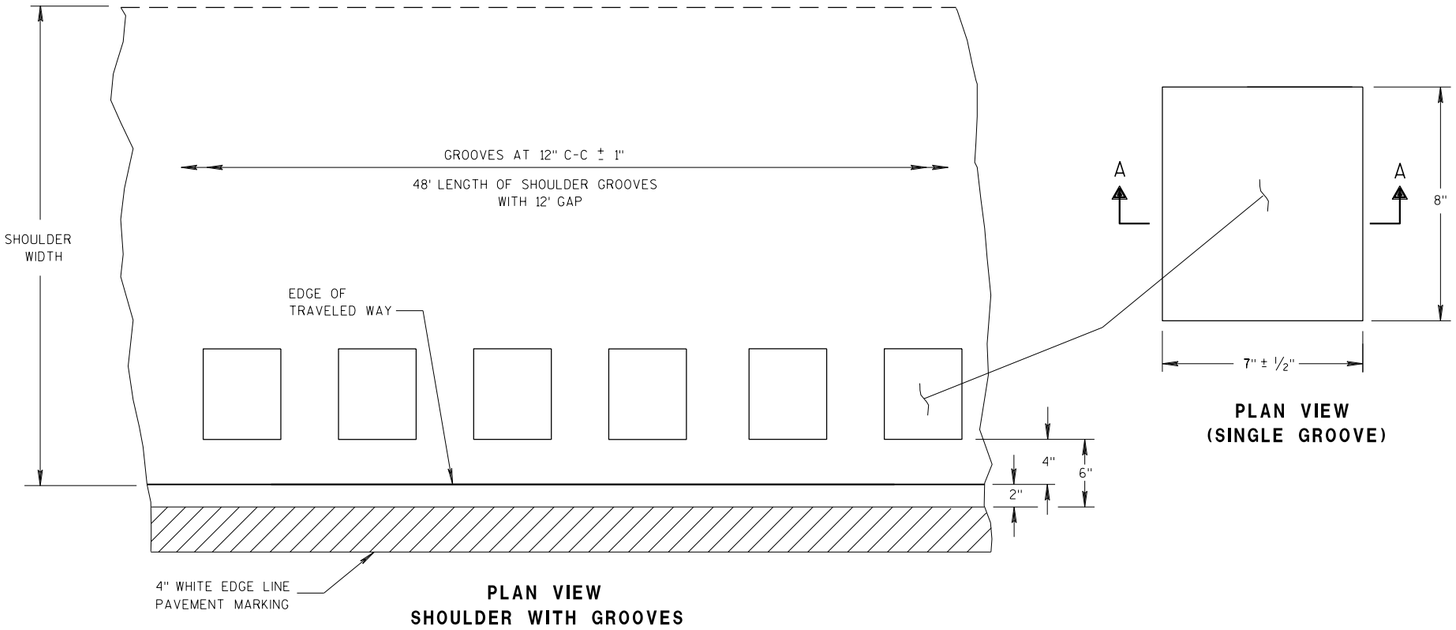
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 8 F 4-7

6

S.D.D. 8 F 4-7



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

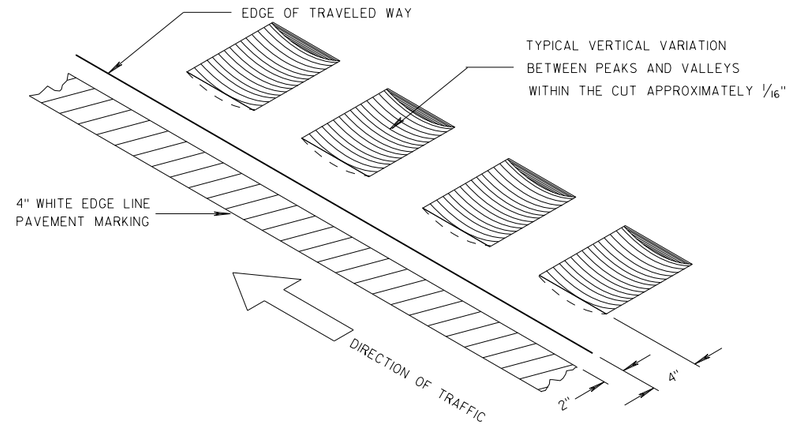
GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL SHOULDER GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

(1) SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.

PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP



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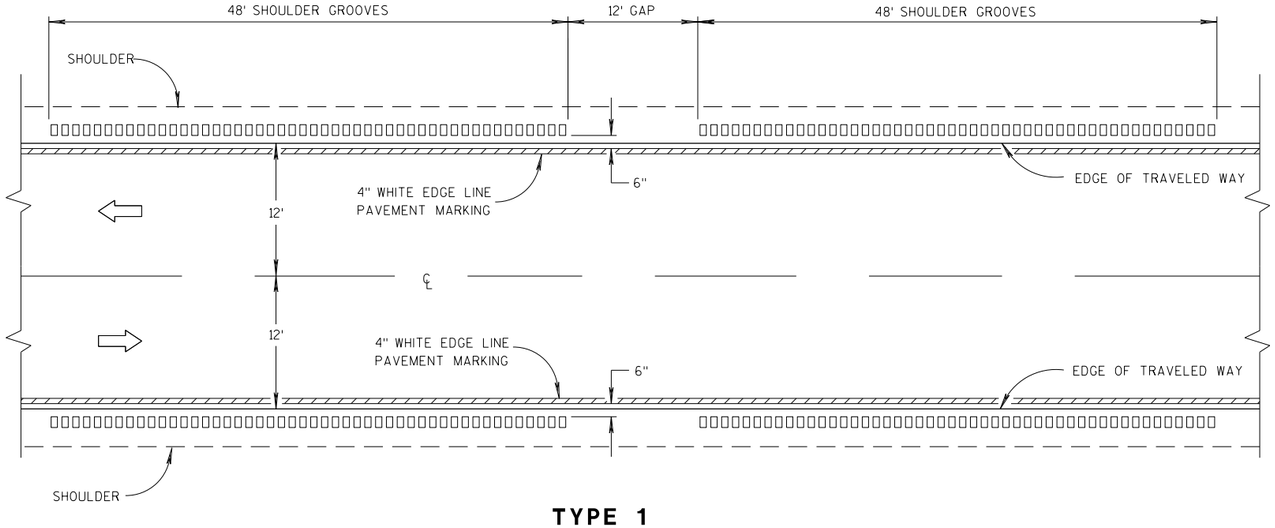
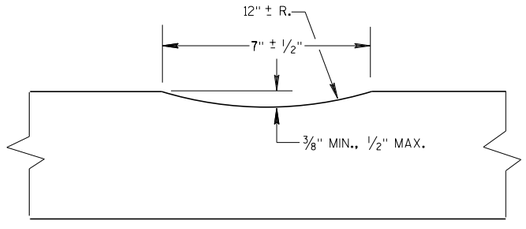


TYPE 1
2-LANE SHOULDER RUMBLE STRIP

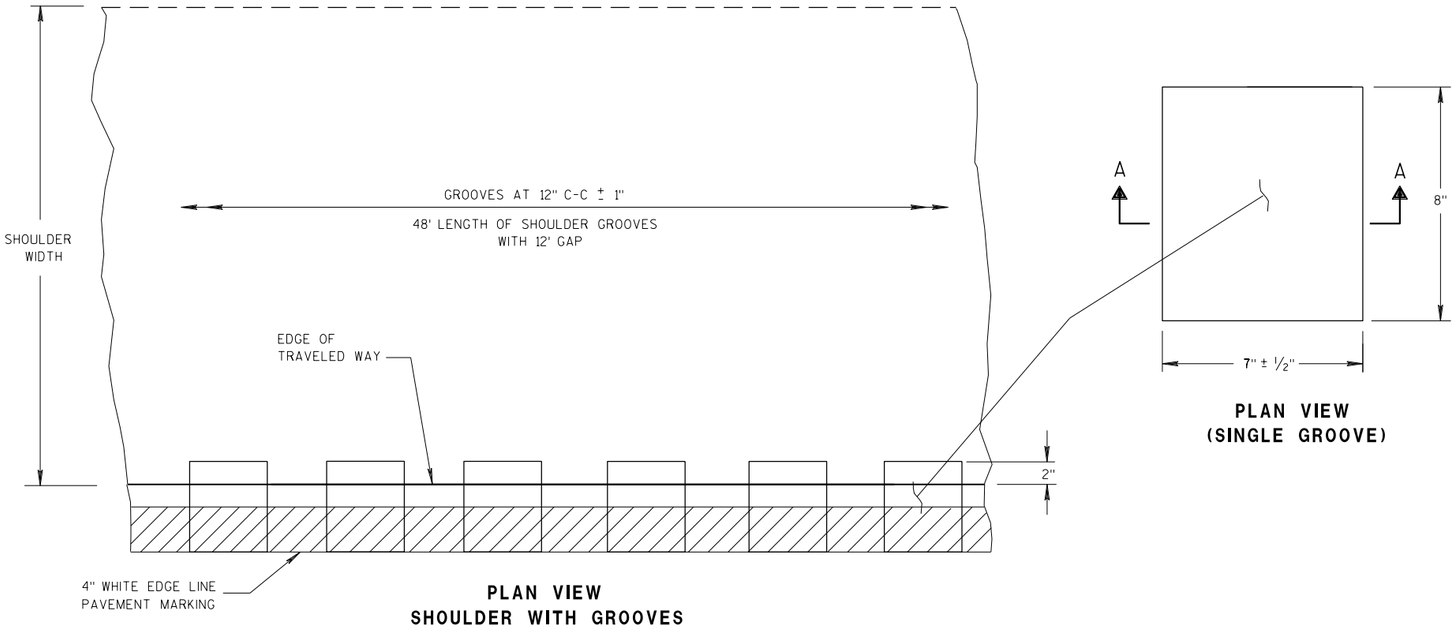


SECTION A-A

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORT.

6
S.D.D. 13 A 10-2a



PLAN VIEW
SHOULDER WITH GROOVES

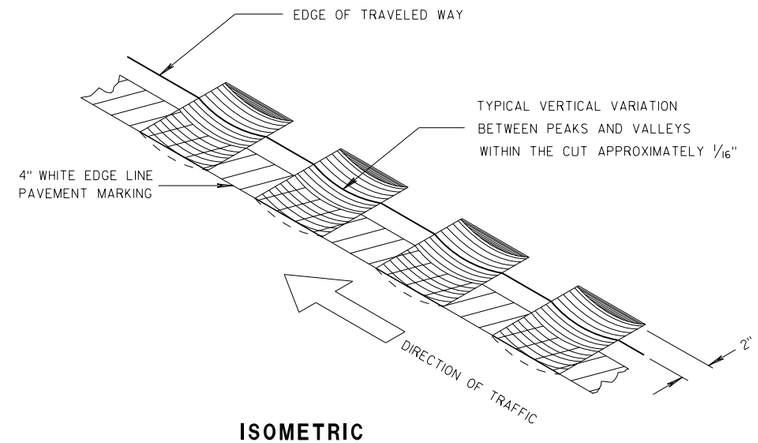
PLAN VIEW
(SINGLE GROOVE)

GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

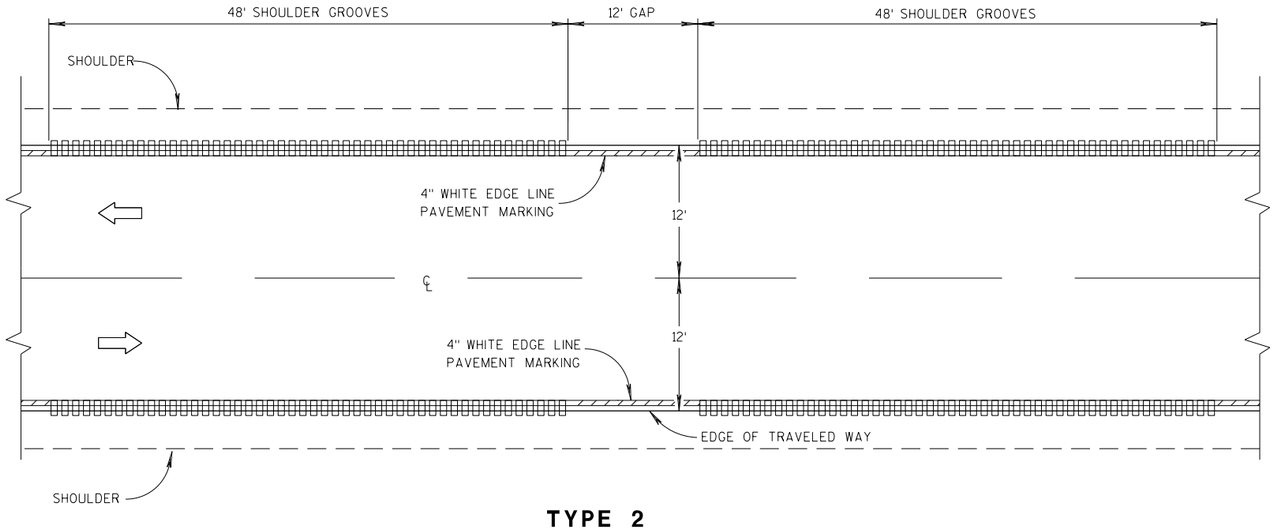
DO NOT MILL SHOULDER GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

(1) SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.

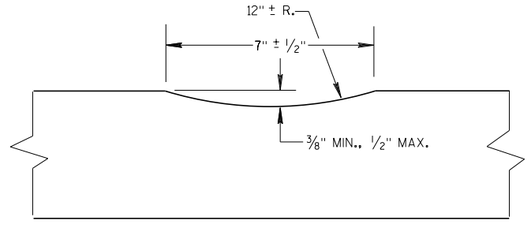


ISOMETRIC

PLACEMENT DETAIL FOR TYPE 2 MILLED RUMBLE STRIP



TYPE 2
2-LANE SHOULDER RUMBLE STRIP



SECTION A-A

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

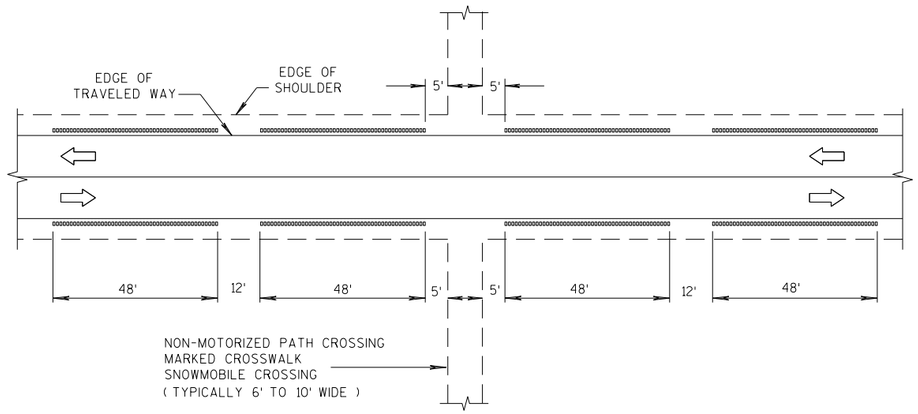
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORT, 60

6

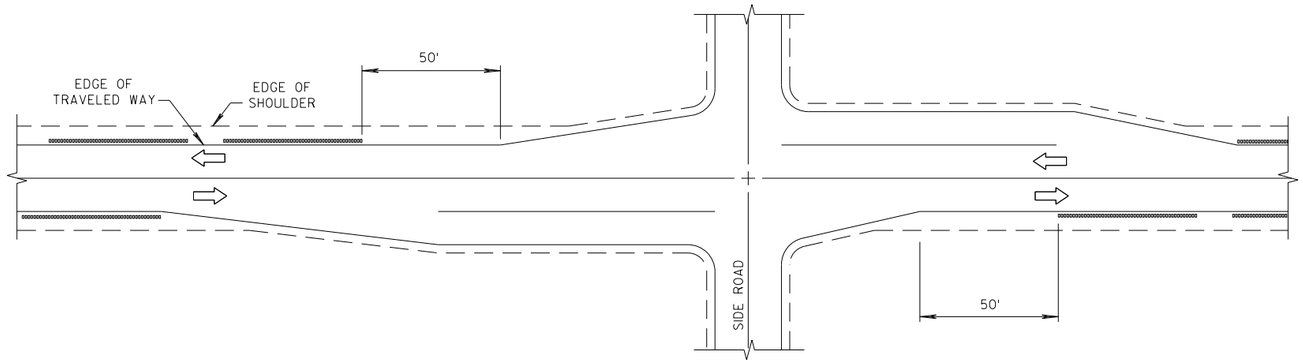
S.D.D. 13 A 10-2b

6

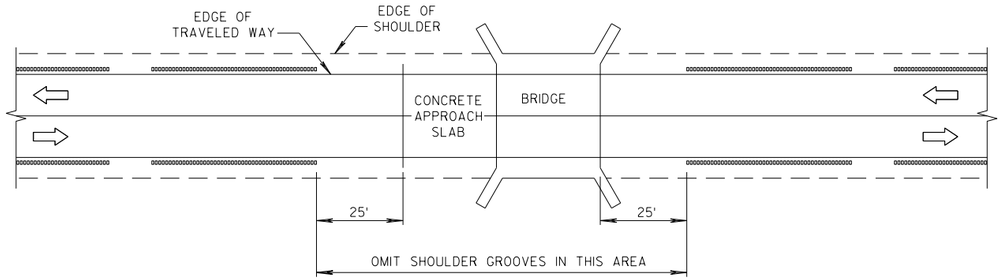
S.D.D. 13 A 10-2b



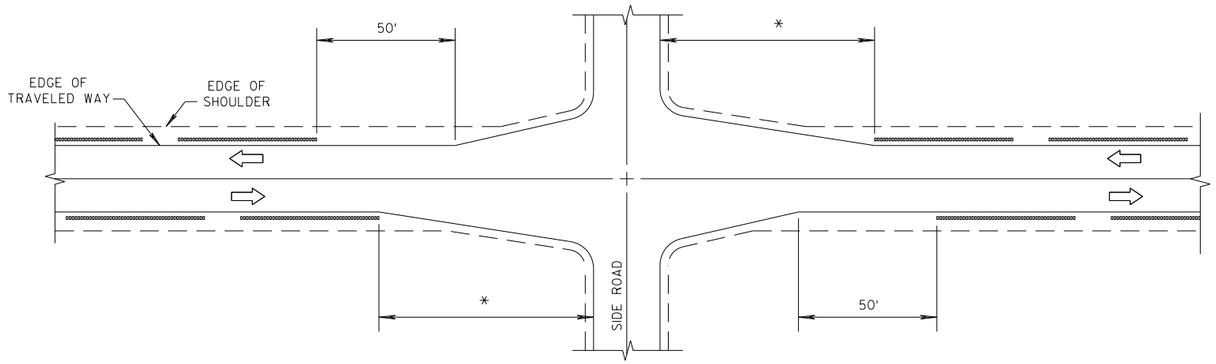
SHOULDER GROOVES AT MISCELLANEOUS CROSSINGS



SHOULDER GROOVES AT WITH RIGHT TURN LANE

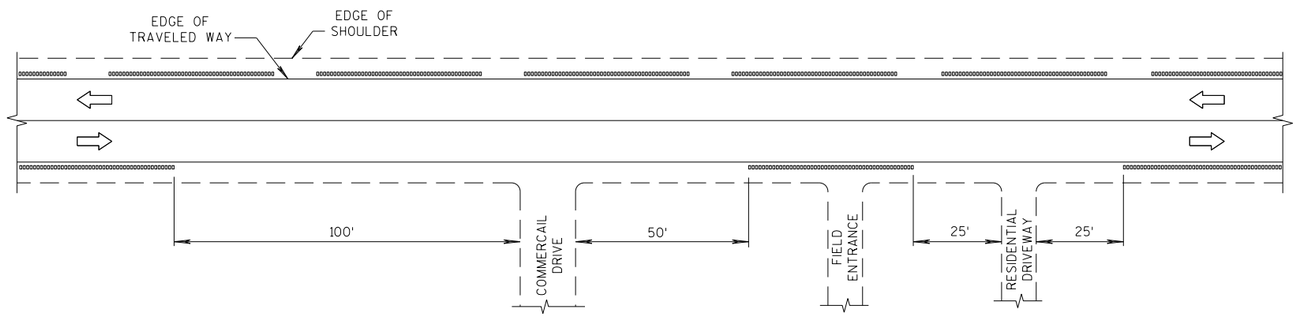


SHOULDER GROOVES AT BRIDGES



* GREATER OF 100' OR APPROACH TAPER LENGTH

SHOULDER GROOVES AT INTERSECTIONS WITH APPROACH TAPER

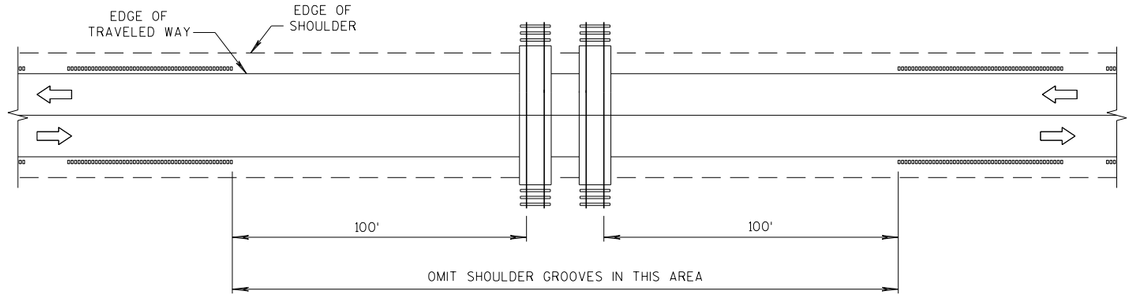


SHOULDER GROOVES AT DRIVEWAYS (1)

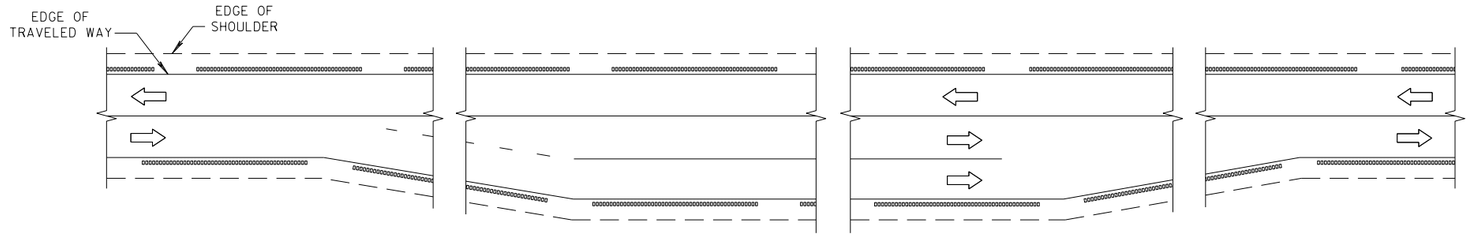
2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORT.

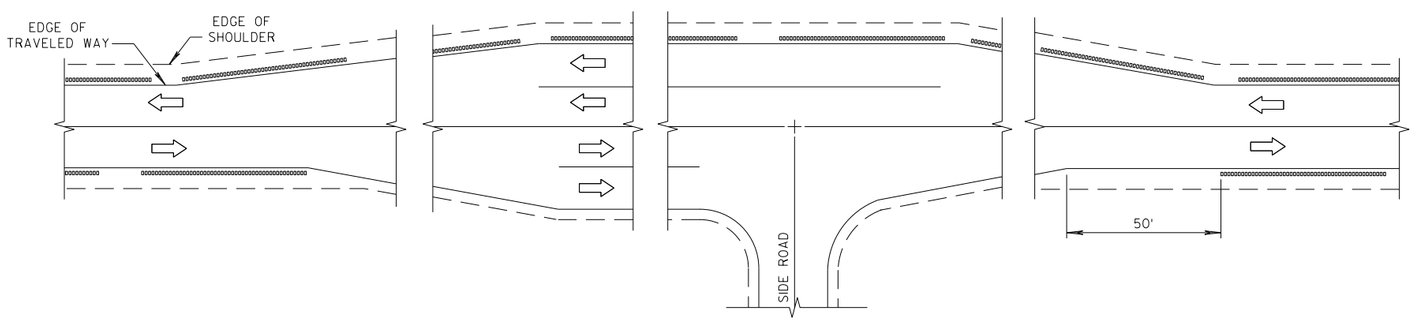
6
S.D.D. 13 A 10-2c



SHOULDER GROOVES AT RAILROADS



SHOULDER GROOVES AT PASSING AND CLIMBING LANES



SHOULDER GROOVES AT BYPASS LANES

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
FHWA

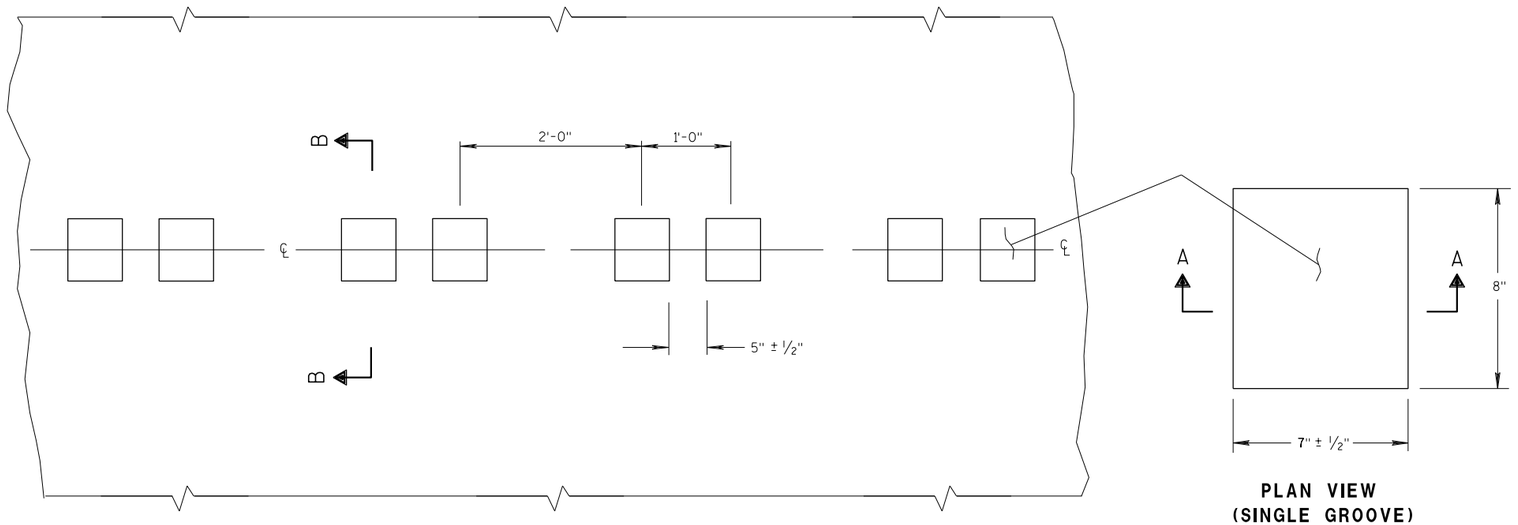
/S/ Rodney Taylor
ROADWAY STANDARDS DEV
UNIT SUPERVISOR

6

S.D.D. 13 A 10-2d

6

S.D.D. 13 A 10-2d



PLAN VIEW
CENTER LINE WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

GENERAL NOTES

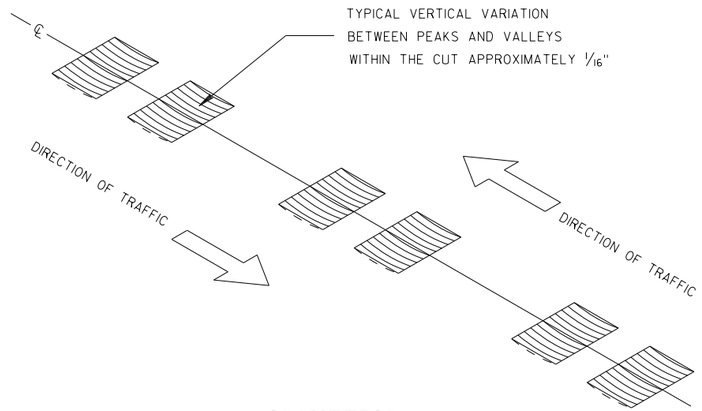
DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL CENTER LINE GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

INSTALL PERMANENT MARKING EPOXY 4-INCH AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



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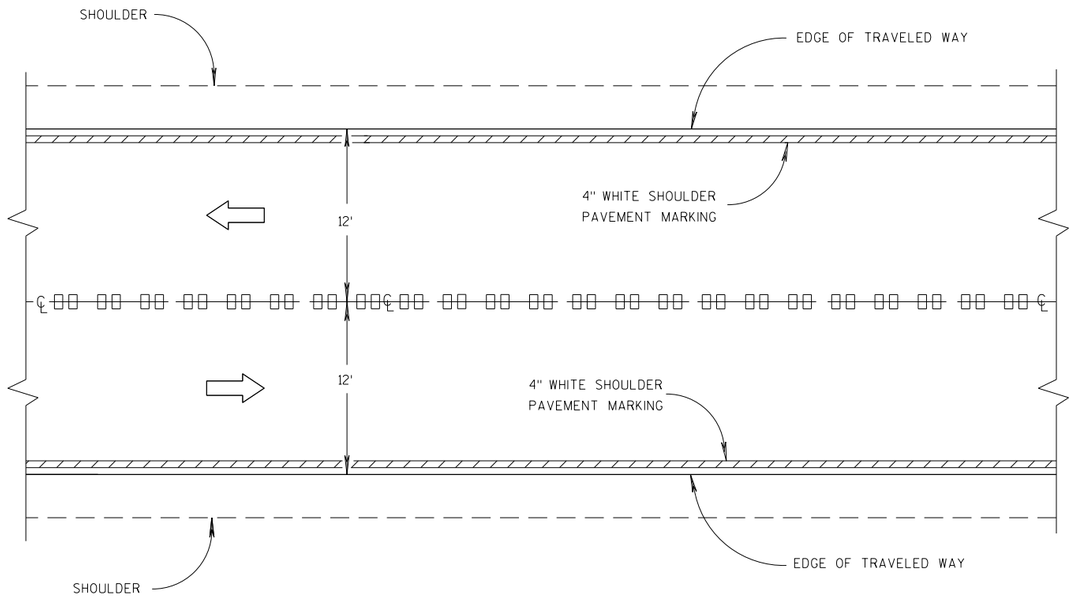
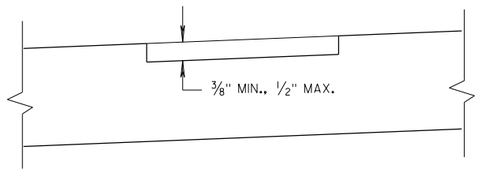
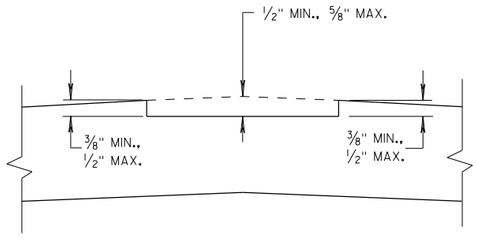


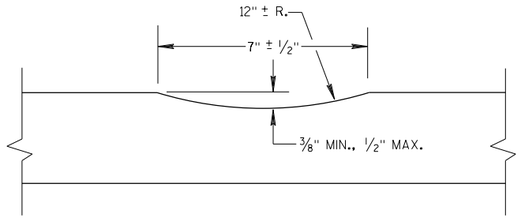
CENTER LINE GROOVES ON TWO-WAY ROADWAYS



SECTION B-B
SUPERELEVATED ROADWAY



SECTION B-B
CROWNED ROADWAY

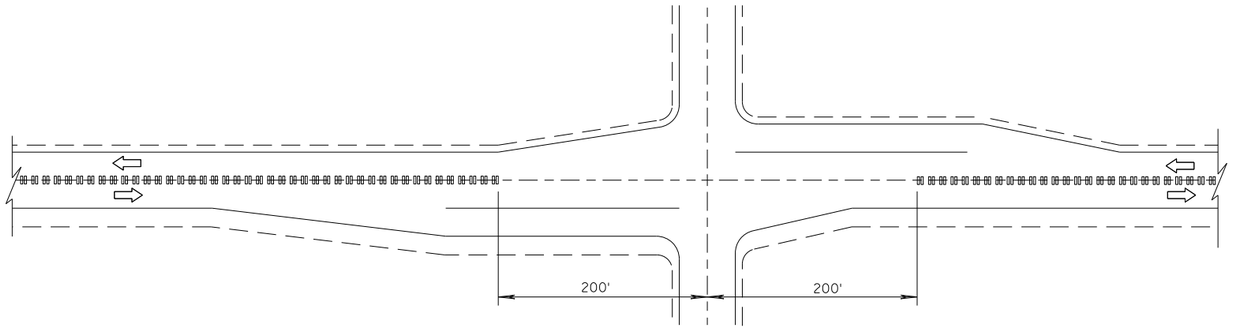


SECTION A-A

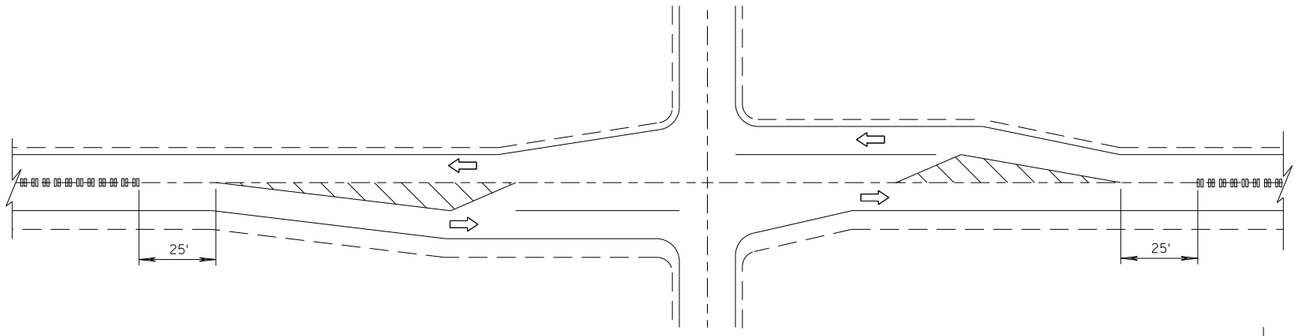
2-LANE RURAL
CENTER LINE RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

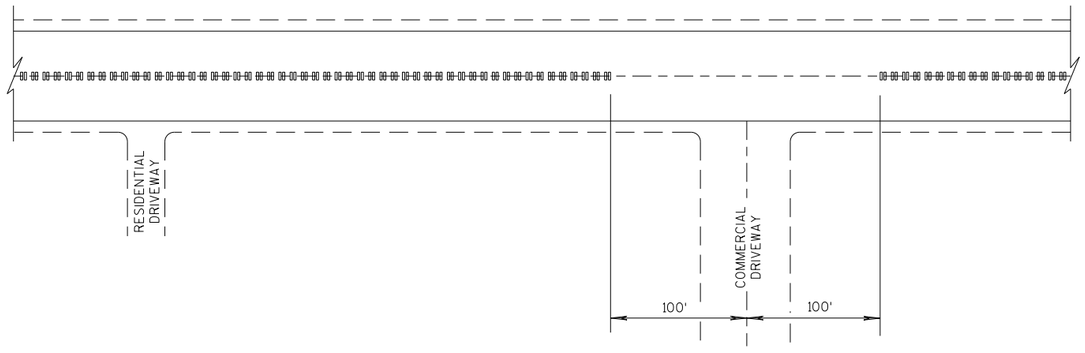
6
S.D.D. 13 A 11-3a



CENTER LINE GROOVES AT INTERSECTIONS

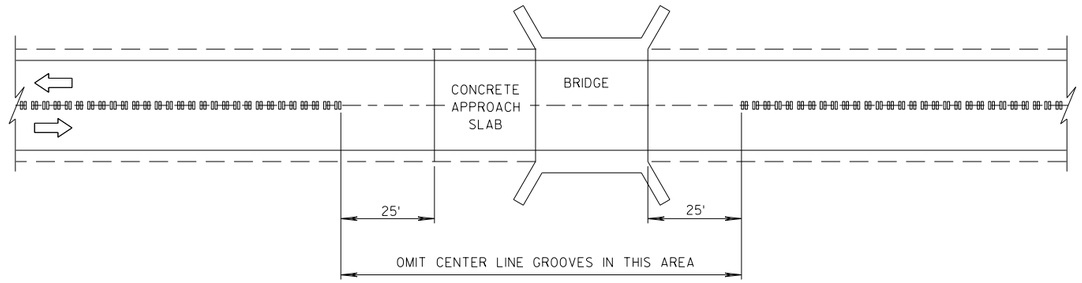


CENTER LINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)

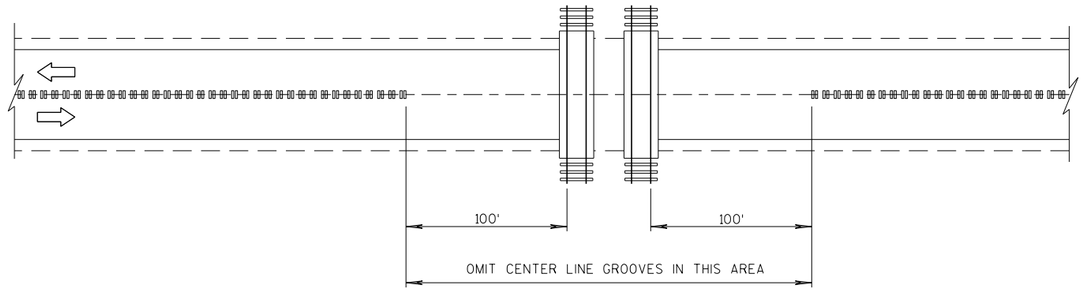


CENTER LINE GROOVES AT DRIVEWAYS (1)

(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



CENTER LINE GROOVES AT BRIDGES



CENTER LINE GROOVES AT RAILROADS

2-LANE RURAL
CENTER LINE RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018 — DATE

/S/ Rodney T. — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

6

S.D.D. 13 A 11-3b

6

S.D.D. 13 A 11-3b

1. WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

2. USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

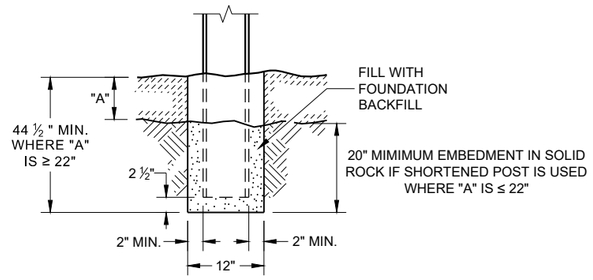
3. IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

4. WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

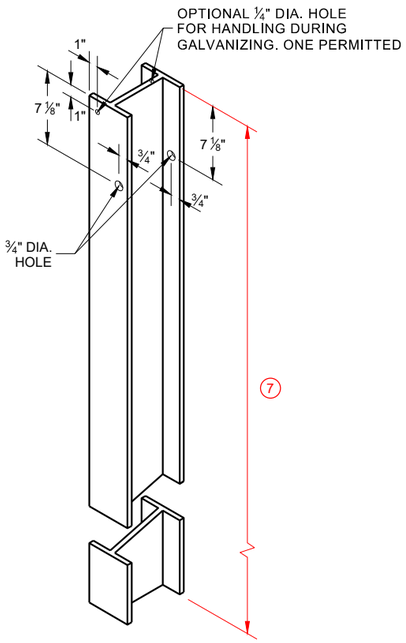
5. FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

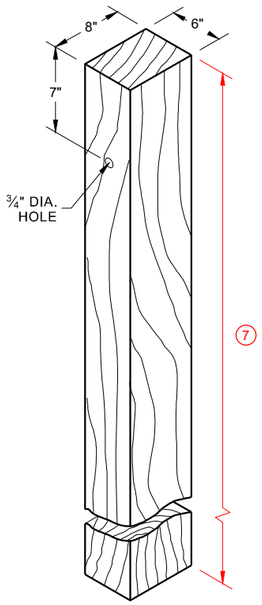
7. TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



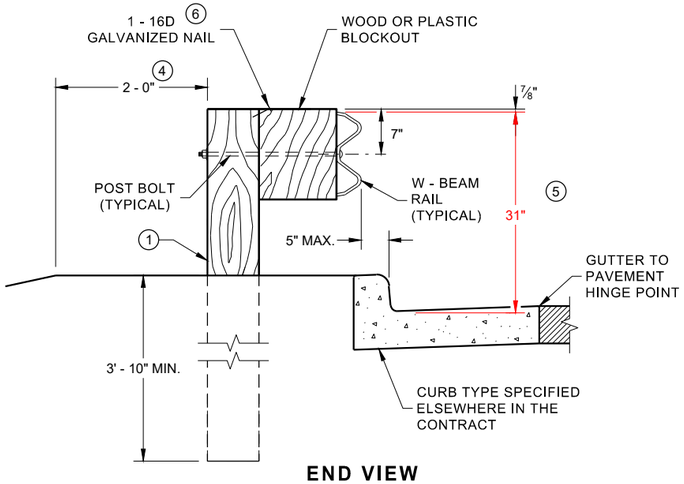
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



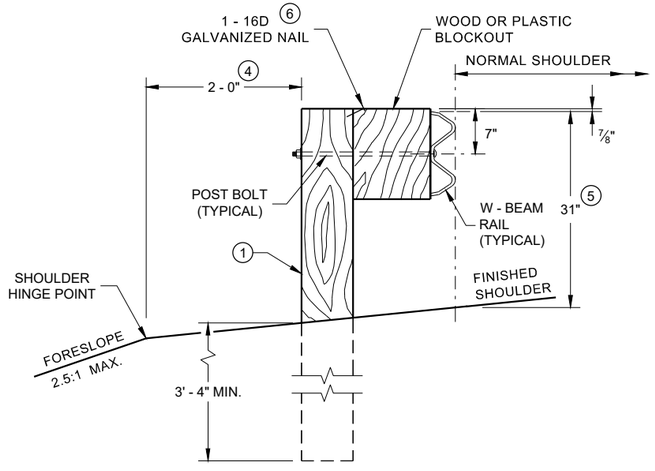
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



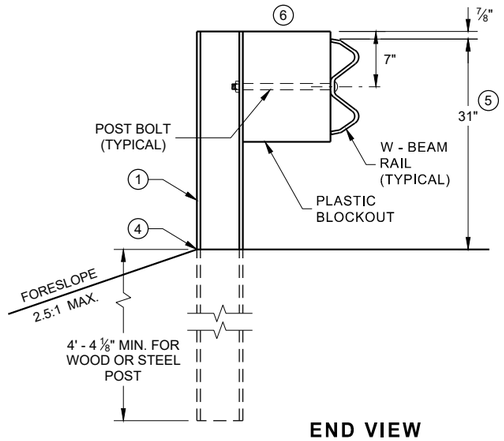
WOOD POST (6" X 8") NOMINAL (1)



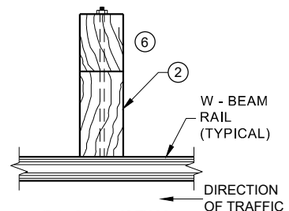
END VIEW
LOCATED ALONG A CURBED ROADWAY



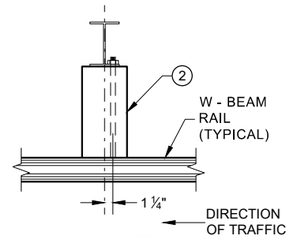
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



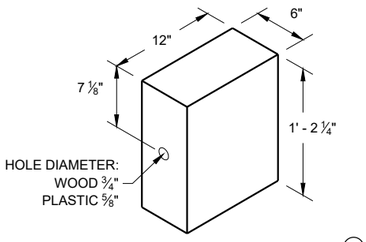
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B42 - 06a

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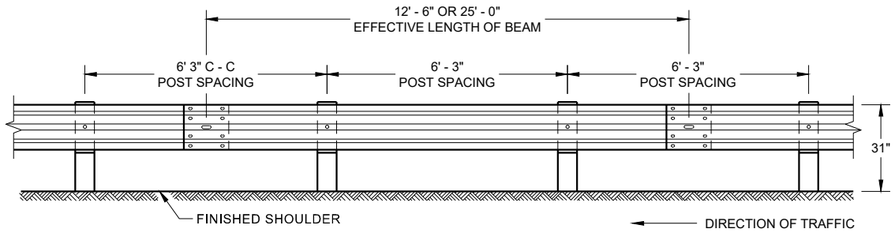
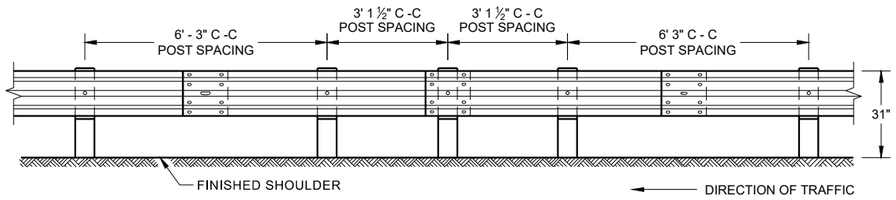
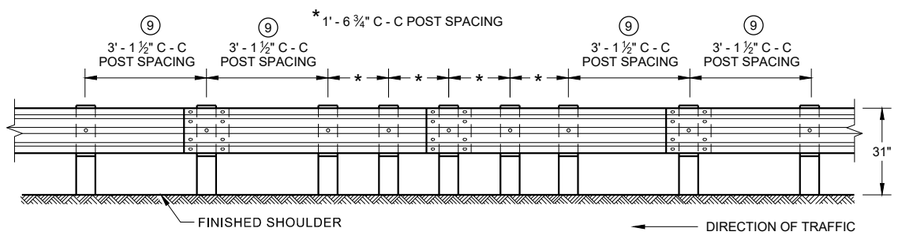
SDD 14B42 - 06a



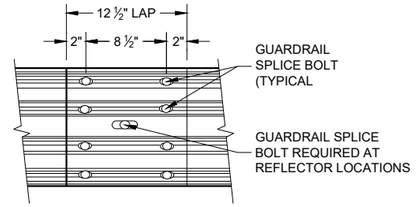
FRONT VIEW
POST SPACING STANDARD INSTALLATION



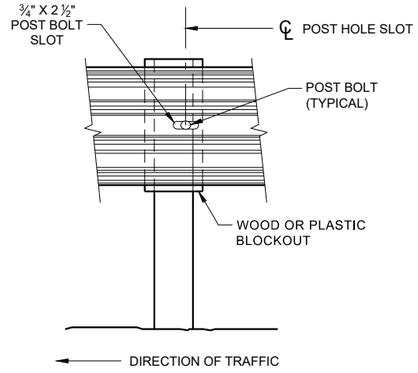
FRONT VIEW
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



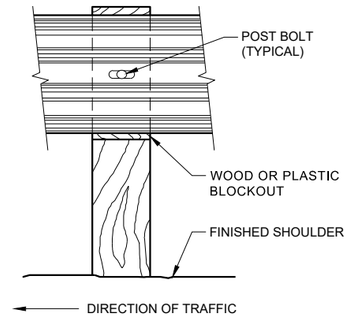
FRONT VIEW
QUARTER POST SPACING (QS)



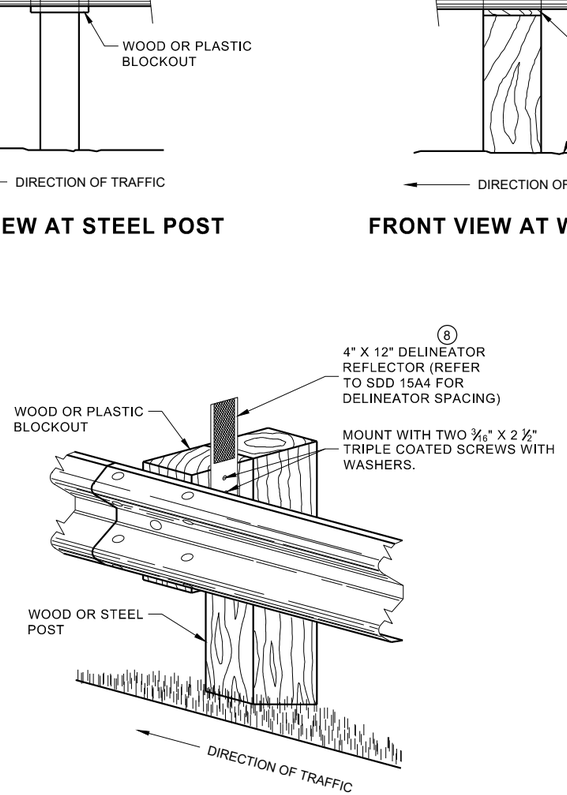
FRONT VIEW
MID-SPAN BEAM SPLICE



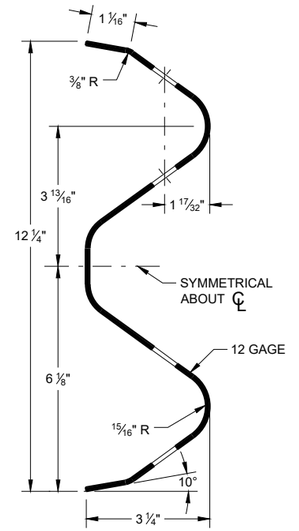
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION



SECTION THRU W-BEAM RAIL

GENERAL NOTES

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.

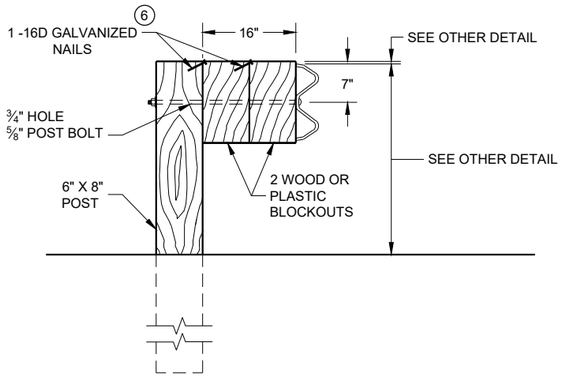
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

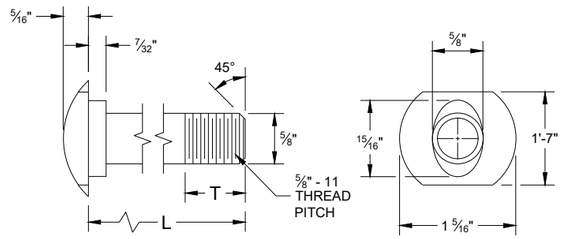


DETAIL FOR 16" BLOCKOUT DEPTH

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

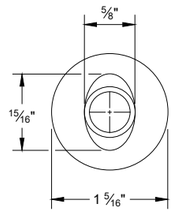
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3⁄16".
2. IF THE BOLT EXTENDS MORE THAN ¼" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

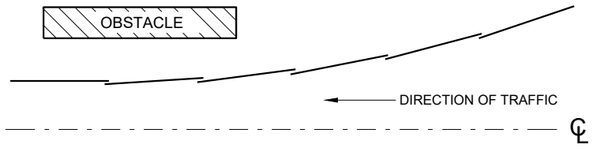


POST BOLT TABLE

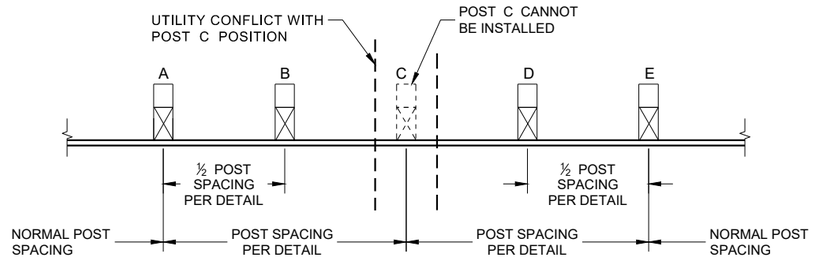
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



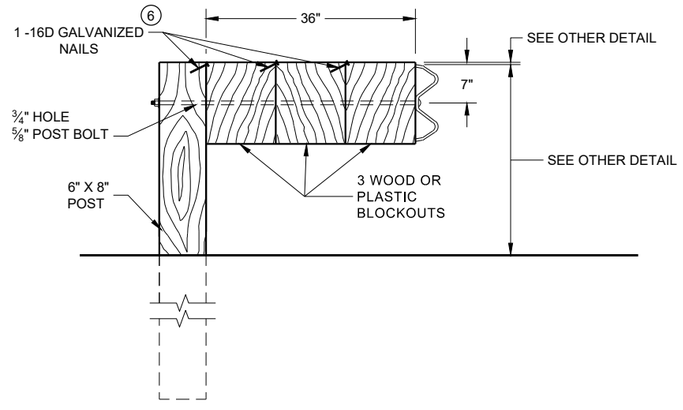
ALTERNATE BOLT HEAD



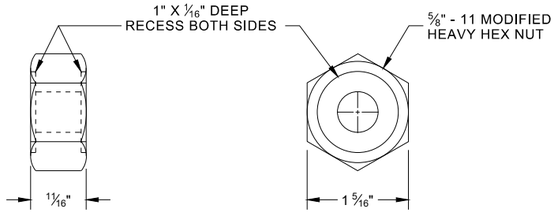
PLAN VIEW
BEAM LAPPING DETAIL



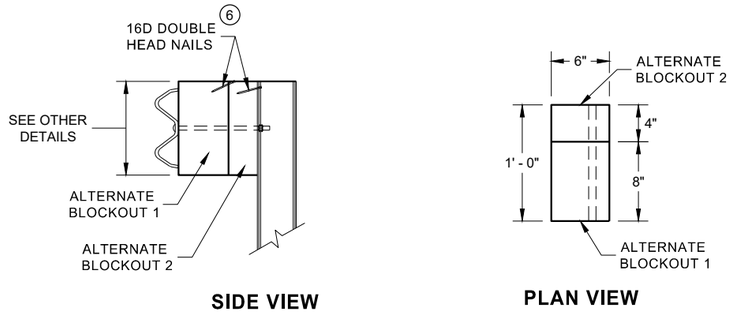
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW

PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

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

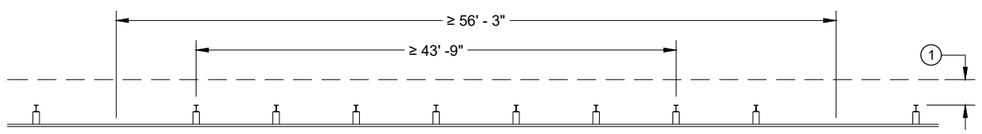
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

(6) WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

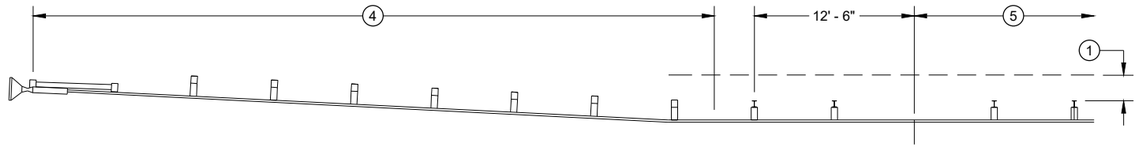
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

6

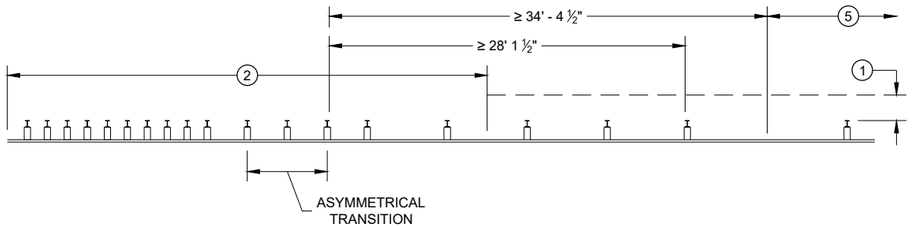
SDD 14B42 - 06c



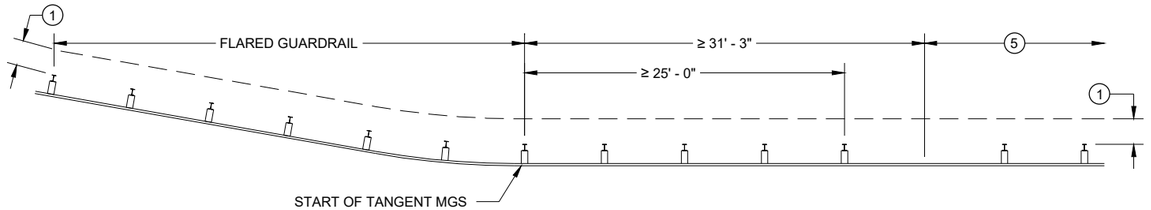
MISSING POST IN NORMAL BEAM GUARD RUN



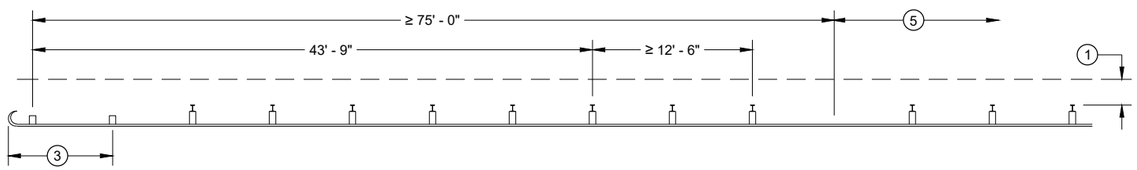
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



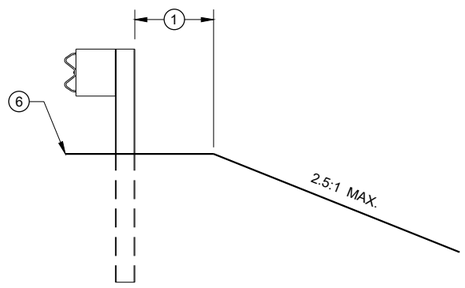
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



MISSING POST IN NORMAL BEAM GUARD RUN NEAR FLARED BEAM GUARD



MISSING POST IN NORMAL BEAM GUARD RUN NEAR TYPE 2 TERMINAL



CROSS SECTION VIEW

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

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

FHWA

6

SDD 14B42 - 06d

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED

(C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.

(D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.

(E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

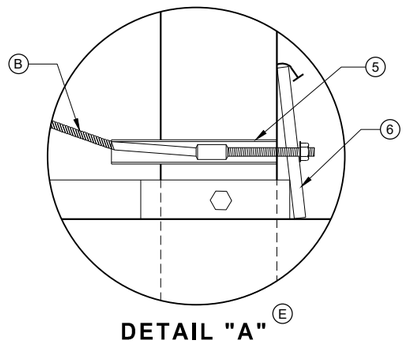
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

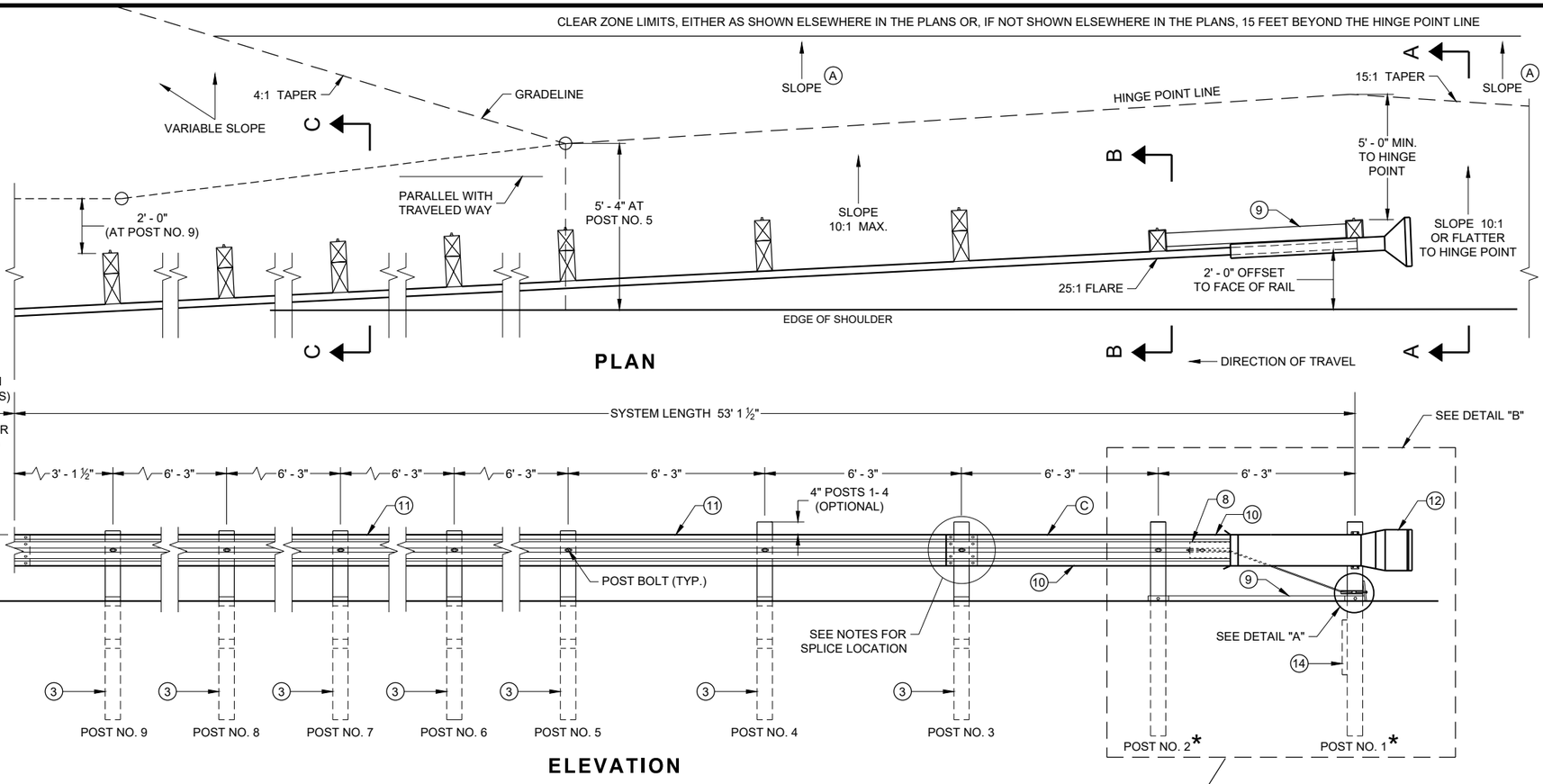
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

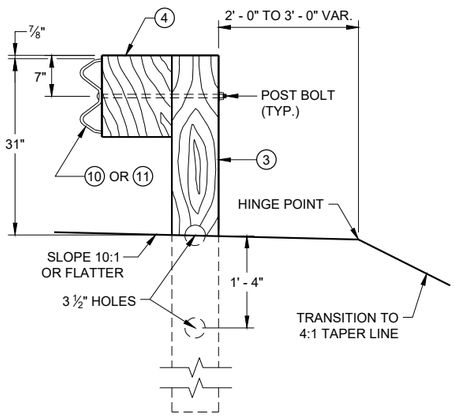
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.

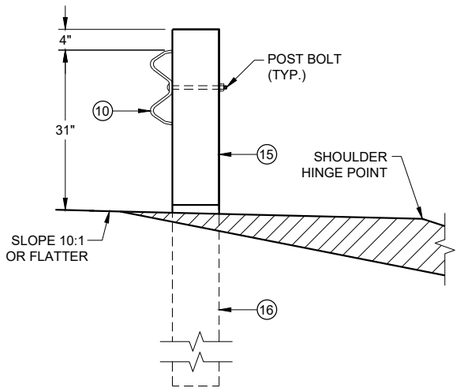


DETAIL "A" (E)

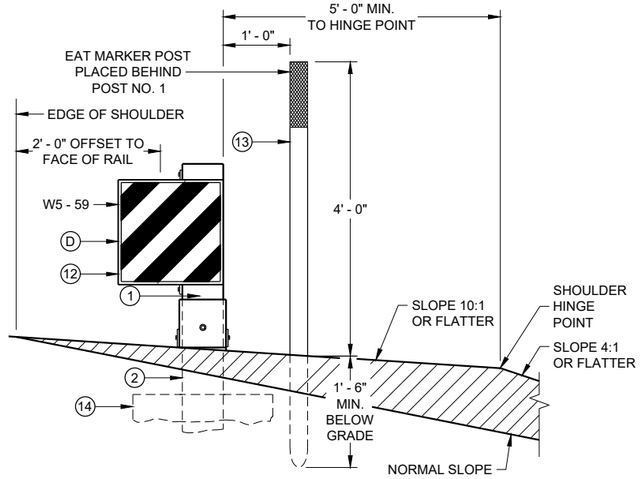




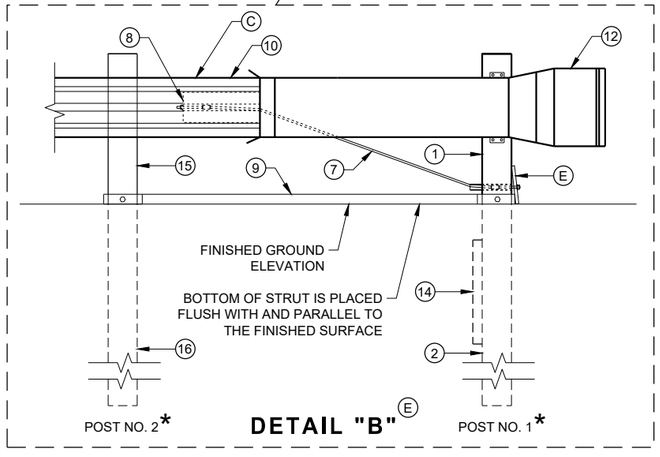
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



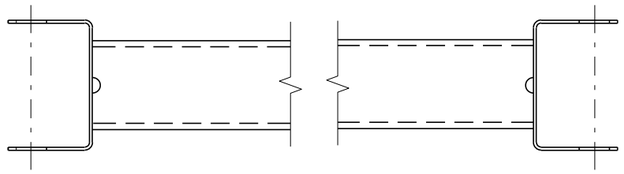
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

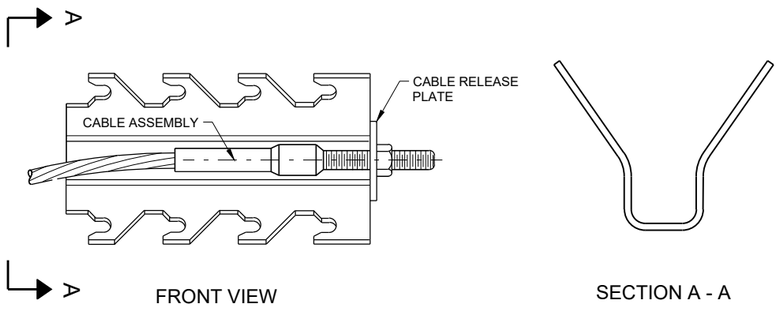
SDD 14B44 - 04a



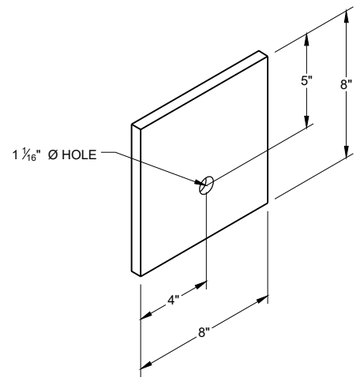
GENERIC GROUND STRUT (9) (E)

BILL OF MATERIALS

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



GENERIC ANCHOR CABLE BOX (9) (E)



BEARING PLATE (6) (E)

6

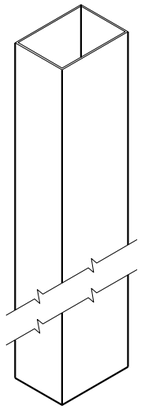
6

SDD 14B45 - 04b

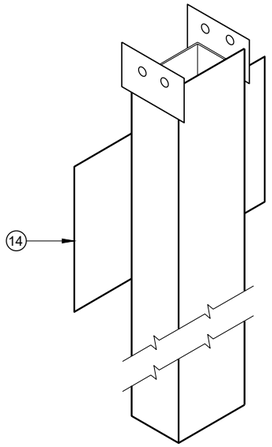
SDD 14B45 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

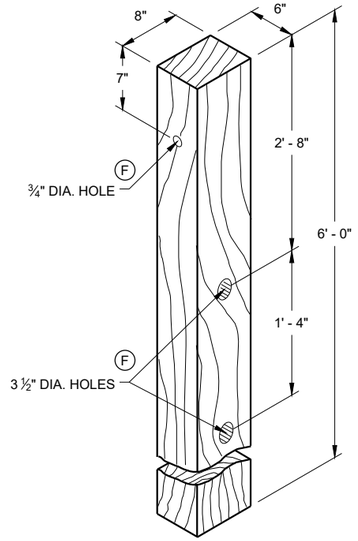
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



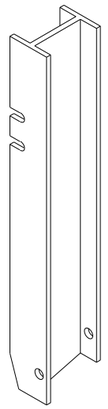
UPPER POST NO. 1 (1) (E)



LOWER POST NO. 1 (2) (E)



WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



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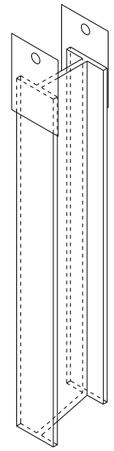
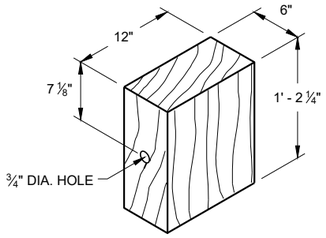
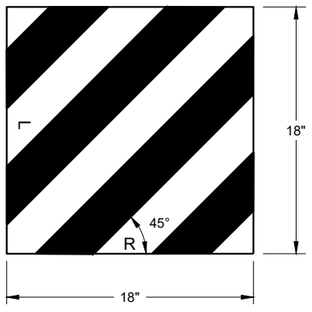


LOWER POST NO. 2 (16) (E)

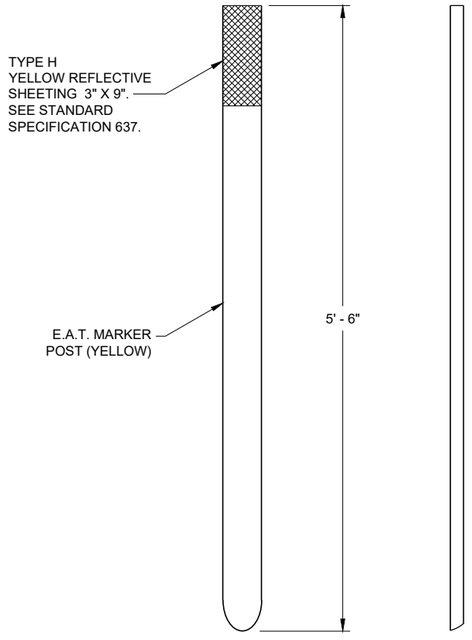


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



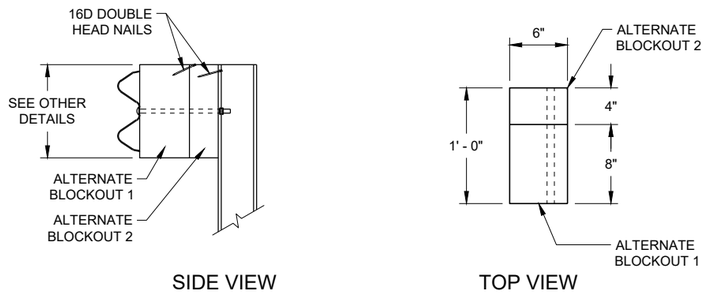
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

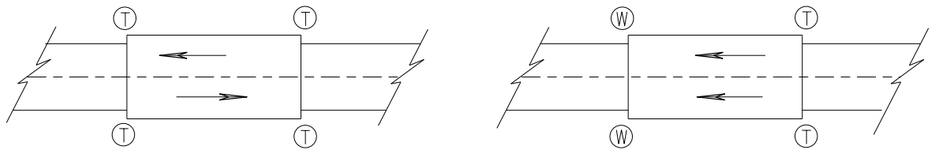
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

FHWA

6

SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

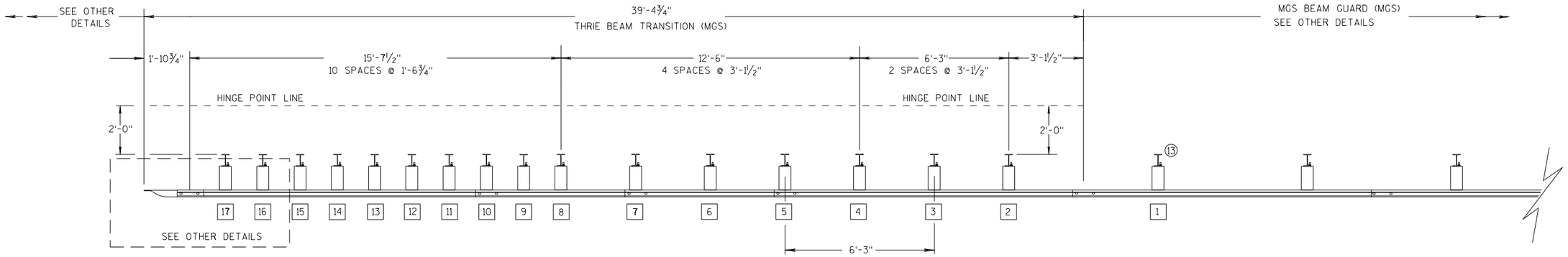
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

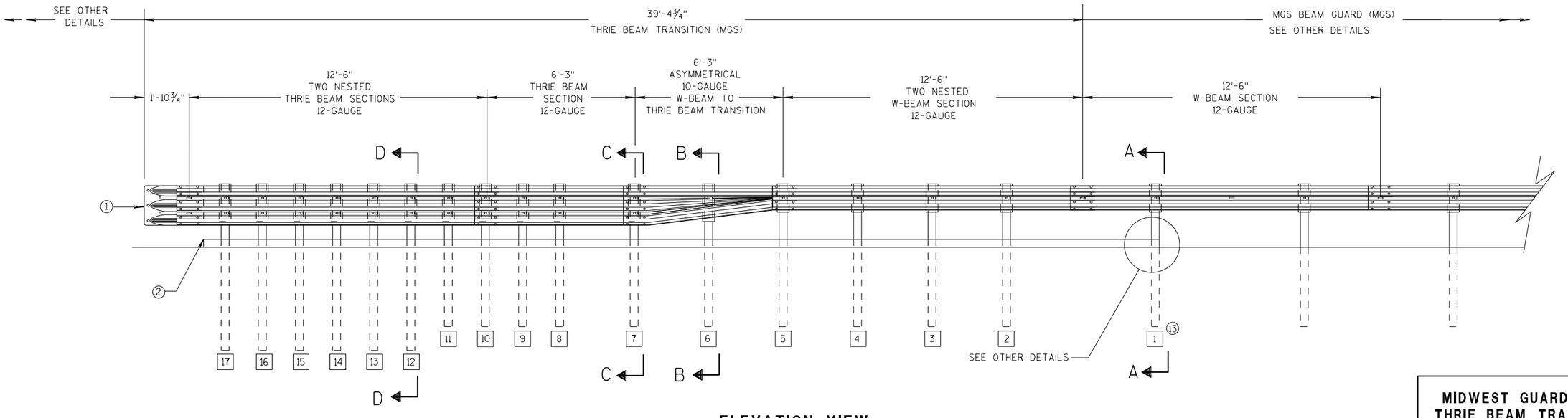
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 45-5a

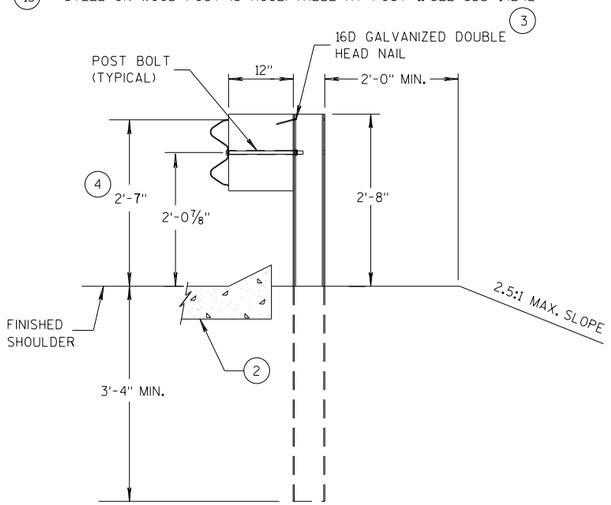
GENERAL NOTES

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

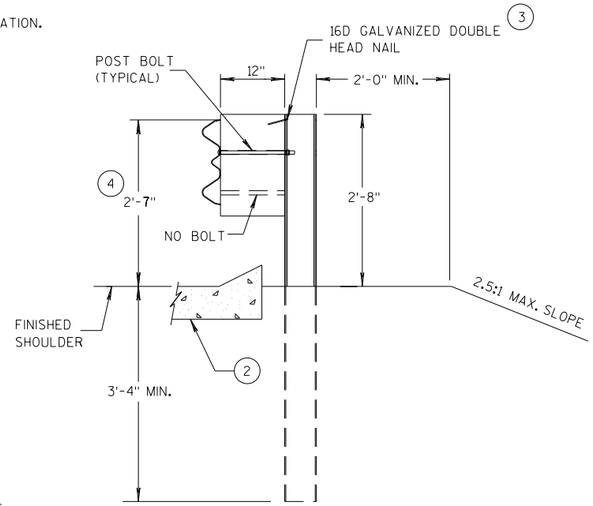
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42



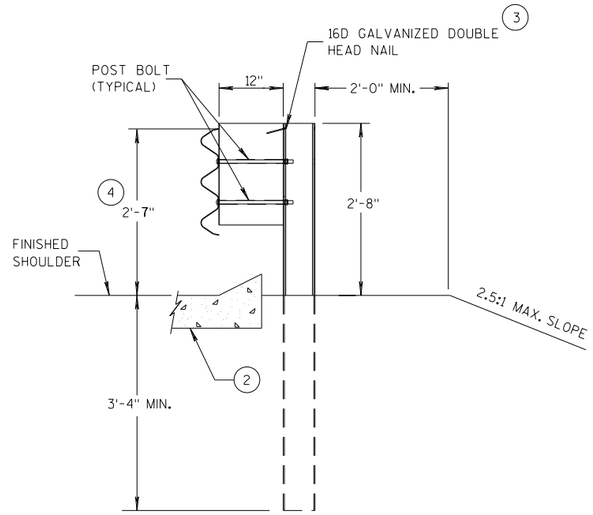
SECTION A-A (13)

POSTS 1-5



SECTION B-B

POST 6



SECTION C-C

POSTS 7-11

SECTION D-D

POSTS 12-17

SPLICE DETAIL

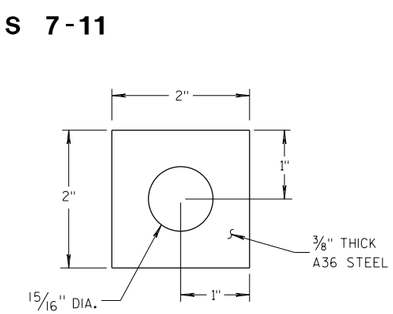
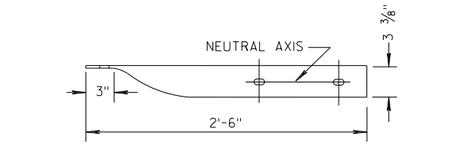
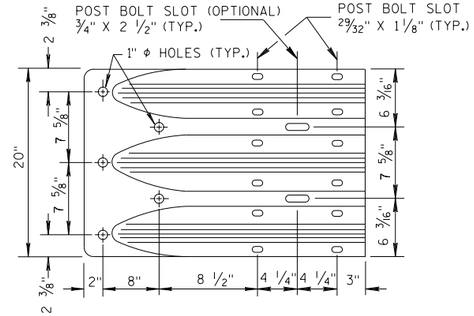
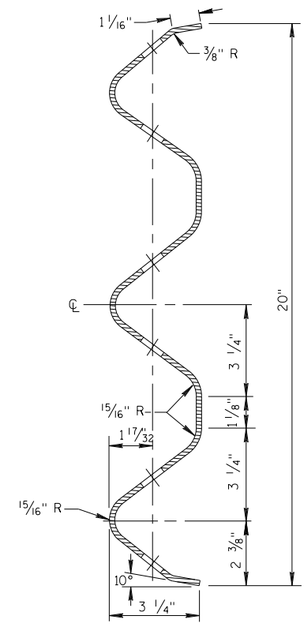


PLATE WASHER DETAIL





THRIE BEAM TERMINAL CONNECTOR



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

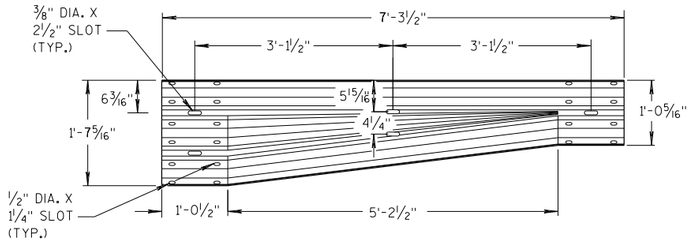
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 73

6

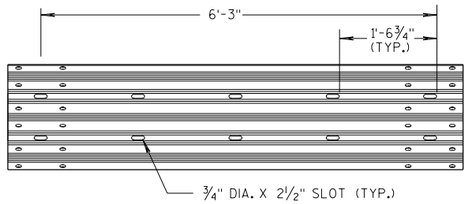
S.D.D. 14 B 45-5b

6

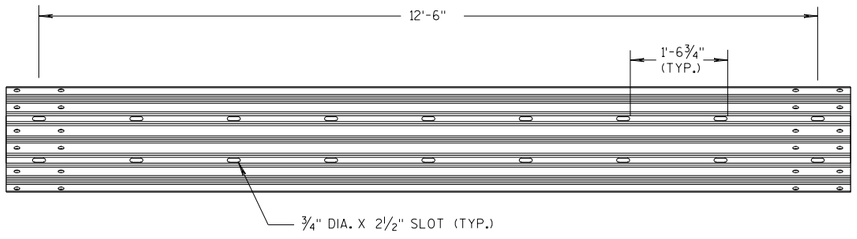
S.D.D. 14 B 45-5b



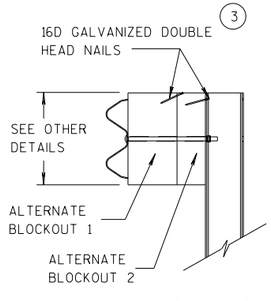
W-BEAM TO THRIE BEAM TRANSITION SECTION



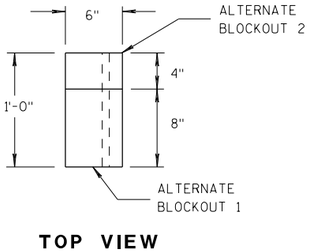
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

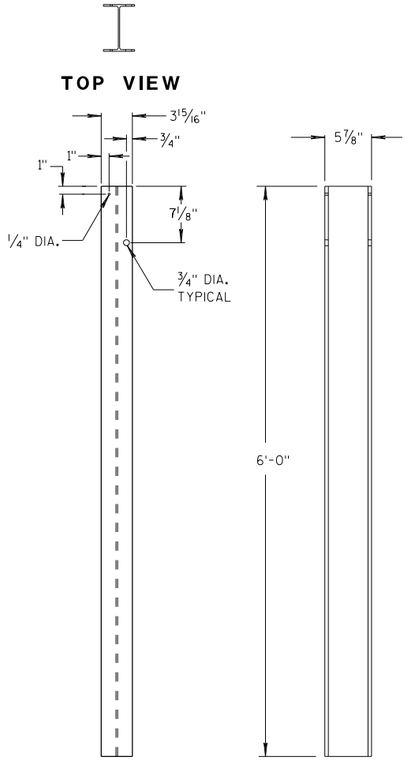


SIDE VIEW



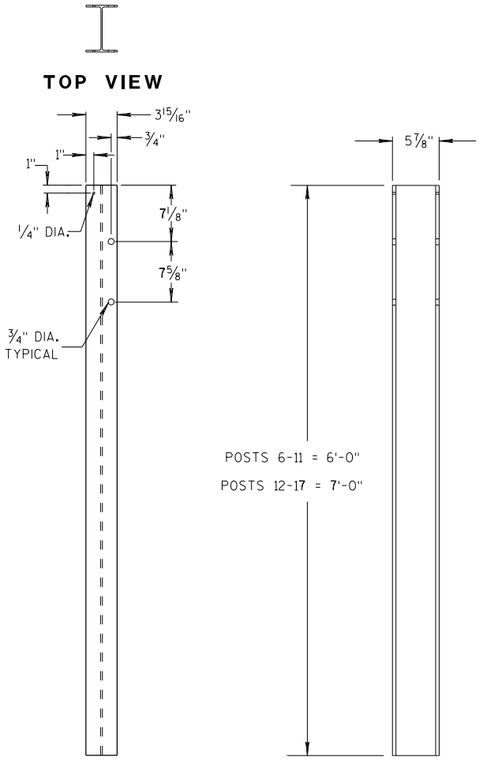
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



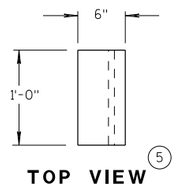
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

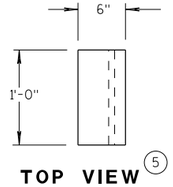


FRONT VIEW SIDE VIEW

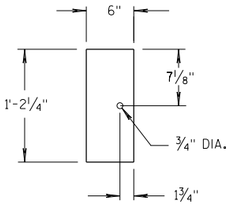
STEEL POSTS 6-17



TOP VIEW (5)

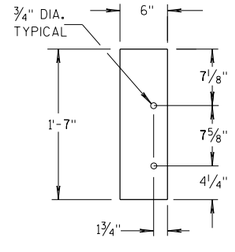


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

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

(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

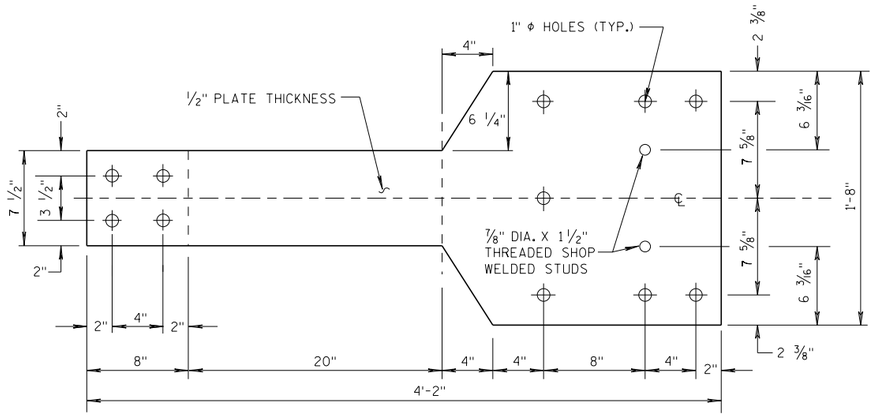
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 74

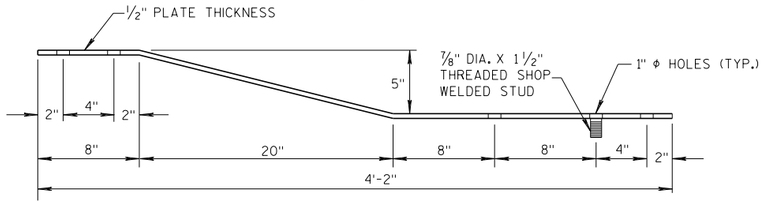
6
S.D.D. 14 B 45-5c

GENERAL NOTES

(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

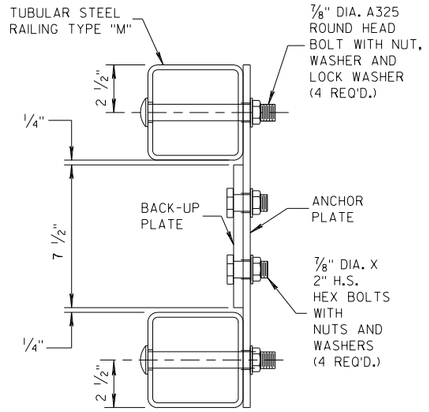


FRONT VIEW

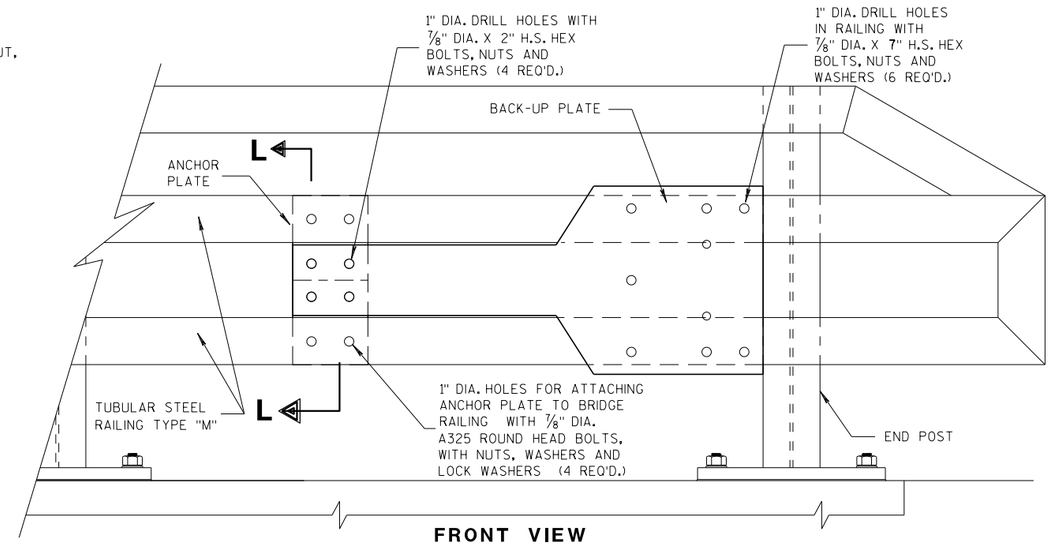


PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"



SECTION L-L

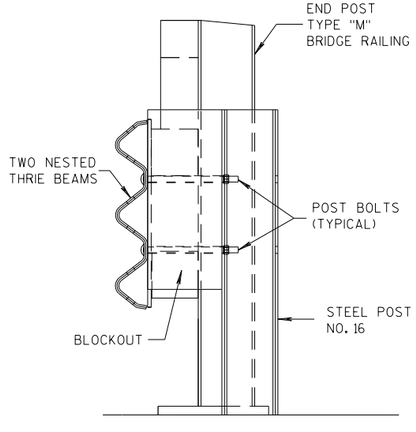


FRONT VIEW

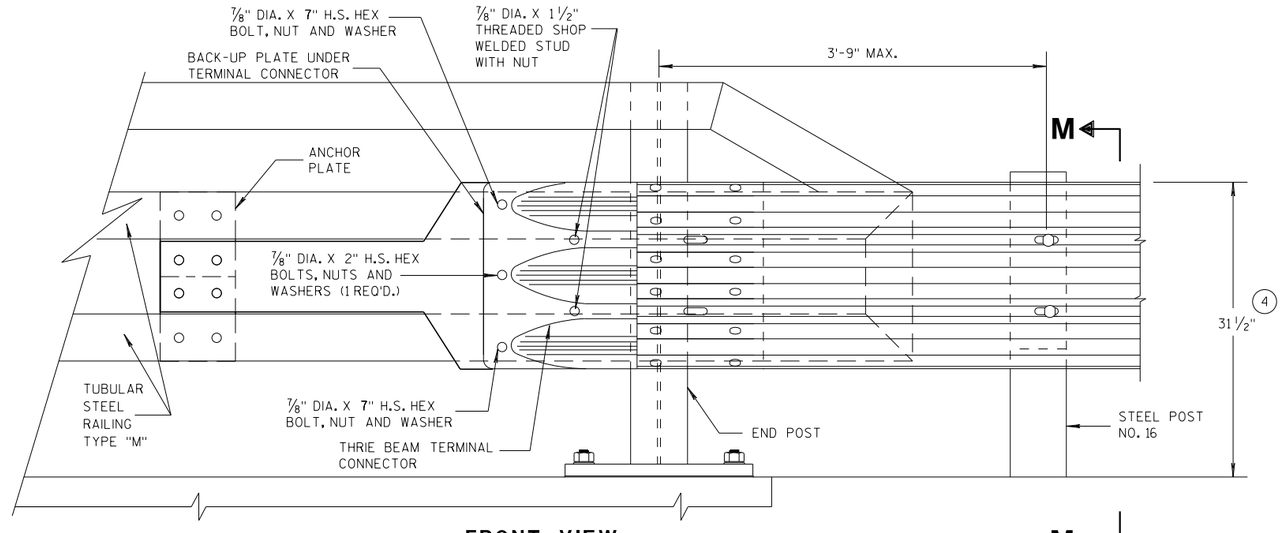
ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"

FRONT VIEW

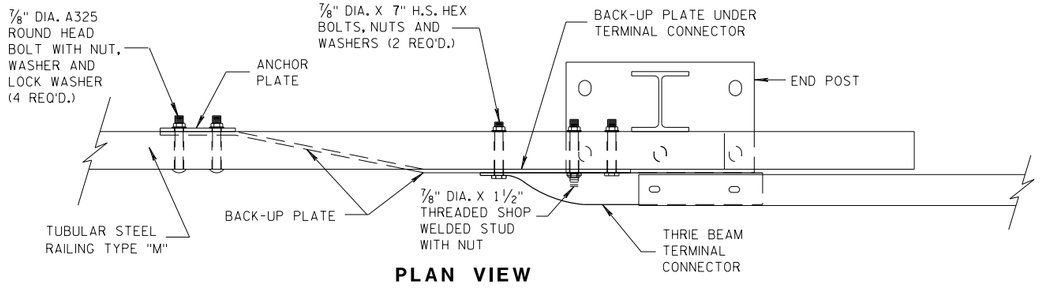
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

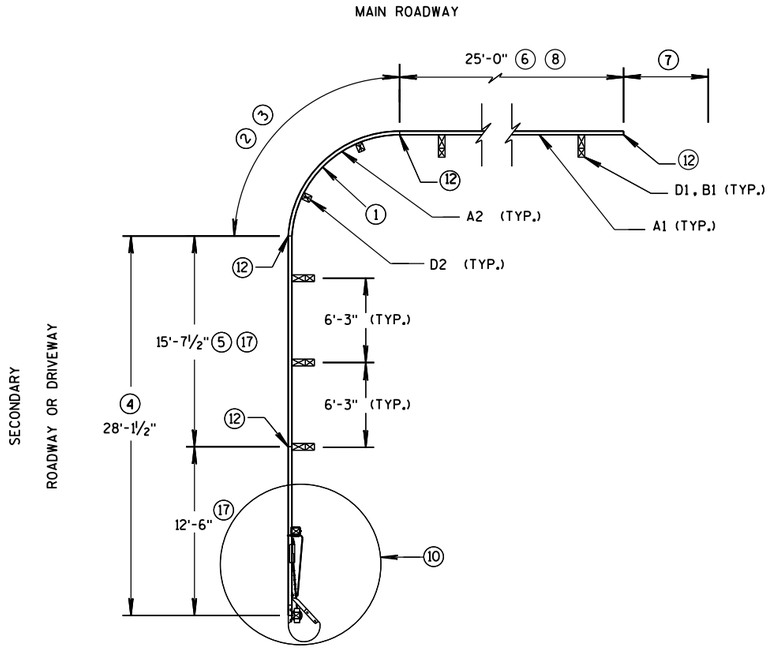
APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVISOR
FHWA

6

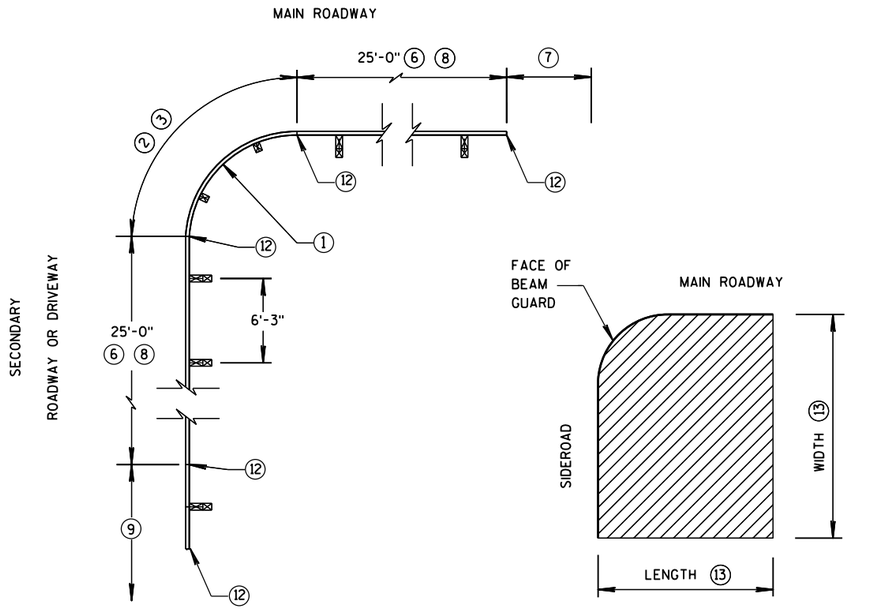
S.D.D. 14 B 45-5h

6

S.D.D. 14 B 45-5h



SHORT RADIUS BEAM GUARD WITH SHORT RADIUS TERMINAL ON SECONDARY ROAD OR DRIVEWAY PLAN VIEW



SHORT RADIUS BEAM GUARD WITH EAT, ADDITIONAL BEAM GUARD OR TRANSITION TO RIGID BARRIER ON SECONDARY ROAD OR DRIVEWAY PLAN VIEW

AREA FREE OF FIXED OBJECTS FOR RADIUS 32' AND LESS 16

TABLE FOR RADIUS OF 32' AND LESS

RADIUS FT	LENGTH FT	WIDTH FT
8	25	15
16	30	15
24	40	20
32	50	30

GENERAL NOTES

SEE PLANS FOR OTHER BARRIER SYSTEM AND LOCATION SPECIFICS.

SEE 14B42 FOR MORE INFORMATION ON BEAM GUARD INSTALLATION, PARTS, MATERIALS, AND INSTALLATION INFORMATION.

GALVANIZE PARTS AFTER FABRICATION.

WELDING IS TO FOLLOW CURRENT REQUIREMENTS OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE ANSI/AWS D1.1

UNLESS NOTED OTHERWISE, ALL PLATES ARE FLAT AND FREE OF WARP.

UNLESS NOTED OTHERWISE, ALL EDGES ARE SMOOTH, STRAIGHT AND VERITCAL.

ALL CUTS AND HOLES, EXCEPT IN BEAM GUARD RAIL ARE TO BE MACHINED OR MACHINE FLAME CUTS.

UNLESS NOTED OTHERWISE CUT OR PROVIDE BOLTS THAT ARE ¼" TO ½" BEYOND THE NUT

DRAWINGS ARE NOT TO SCALE.

(1) RADIUS MEASURE FROM INSIDE OF RAIL. LENGTH OF BEAM GUARD SHORT RADIUS GUARD MEASURED ALONG TRAFFIC SIDE OF RAIL. RADIUS BETWEEN 8 FEET TO 150 FEET. SEE PLAN FOR REQUIRED RADIUS. BEAM GUARD RAIL IN RADIUS IS SHOP BENT. ODD RAIL LENGTH OR FIELD CUTS MAY BE REQUIRED.

(2) CONTROLLED RELEASE TERMINAL (CRT) POSTS ARE USED IN THE RADIUS. CONTROLLED RELEASE TERMINAL (CRT) POSTS ARE SPACED 6'-3". SEE PLAN FOR NUMBER OF CONTROLLED RELEASE TERMINAL (CRT) POSTS.

(3) WITHIN RADIUS BEAM GUARD RAILS ARE NOT BOLTED TO POSTS. BEAM GUARD RAILS RESTED ON TOP OF LAG SCREW.

(4) MINIMUM LENGTH OF BEAM GUARD ALONG SIDE ROAD OR DRIVEWAY TO INSTALL SHORT RADIUS TERMINAL. BEAM GUARD IS PAID FOR WITH BEAM GUARD ITEM.

(5) ODD LENGTH OF BEAM GUARD REQUIRED TO INSTALL SHORT RADIUS TERMINAL.

(6) MINIMUM AMOUNT OF BEAM GUARD TO BE INSTALLED PRIOR TRANSITION TO RIGID BARRIER, ADDITIONAL BEAM GUARD, OR EAT. BEAM GUARD PAID FOR WITH BEAM GUARD ITEM. SEE PLANS FOR MORE DETAIL.

(7) BEAM GUARD, EAT OR TRANSITION TO RIGID BARRIER. SEE PLAN.

(8) TOP OF BEAM GUARD BY THE RADIUS IS 27". HEIGHT OF BEAM GUARD IS 31" BY TRANSITION TO RIGID BARRIER, ADDITIONAL BEAM GUARD OR EAT.

(9) ADDITIONAL BEAM GUARD, EAT OR TRANSITION TO RIGID BARRIER. BEAM GUARD SHOWN. SEE PLAN FOR DETAILS.

(10) SHORT RADIUS TERMINAL (SEE OTHER DETAILS)

(11) HEIGHT VARIES. SEE NOTE (8) AND (17).

(12) BEAM GUARD RAIL SPLICE LOCATION. SPLICE LOCATION REQUIRE PART F1 AND F2. SEE SDD 14B42 FOR DETAILS.

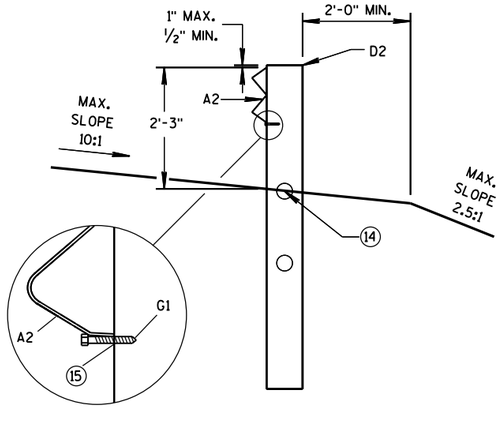
(13) SEE TABLE FOR VALUES.

(14) MAXIMUM HEIGHT FOR CENTER OF HOLE IS ¾" ABOVE FINISHED GROUND ±1".

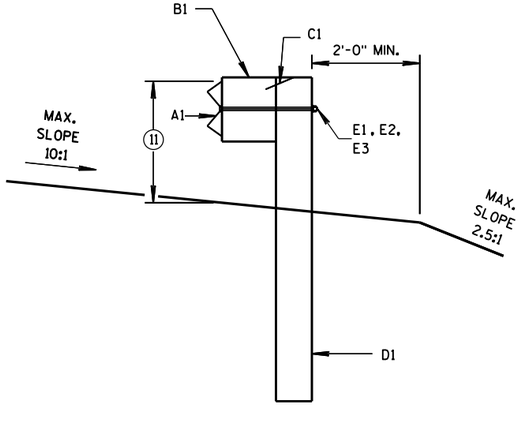
(15) DRILL 15/64" DIA. PILOT HOLE. DO NOT HAMMER LAG SCREW INTO POST.

(16) SMALL SIGNS ON BREAKAWAY HARDWARE ARE ACCEPTABLE.

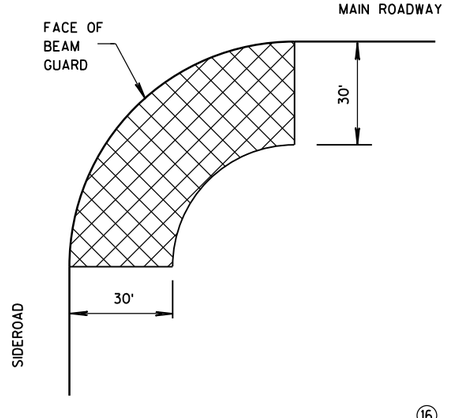
(17) TOP OF RAIL HEIGHT IS 27" WHEN USING A SHORT RADIUS TERMINAL.



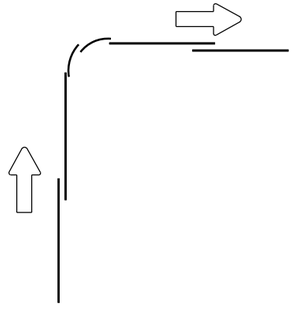
CONTROLLED RELEASE TERMINAL POST (CRT) IN RADIUS



BEAM GUARD POSTS IN HEIGHT TRANSITION



AREA FREE OF FIXED OBJECTS 16 RADIUS GREATER THAN 32'



LAP SPLICE DETAIL

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

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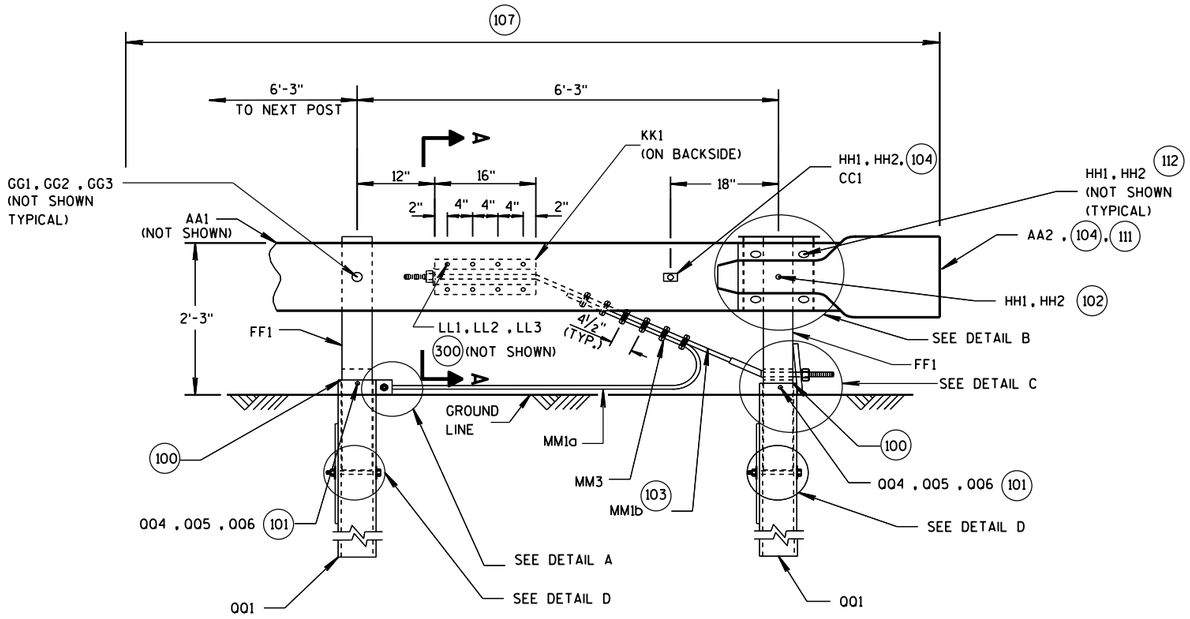
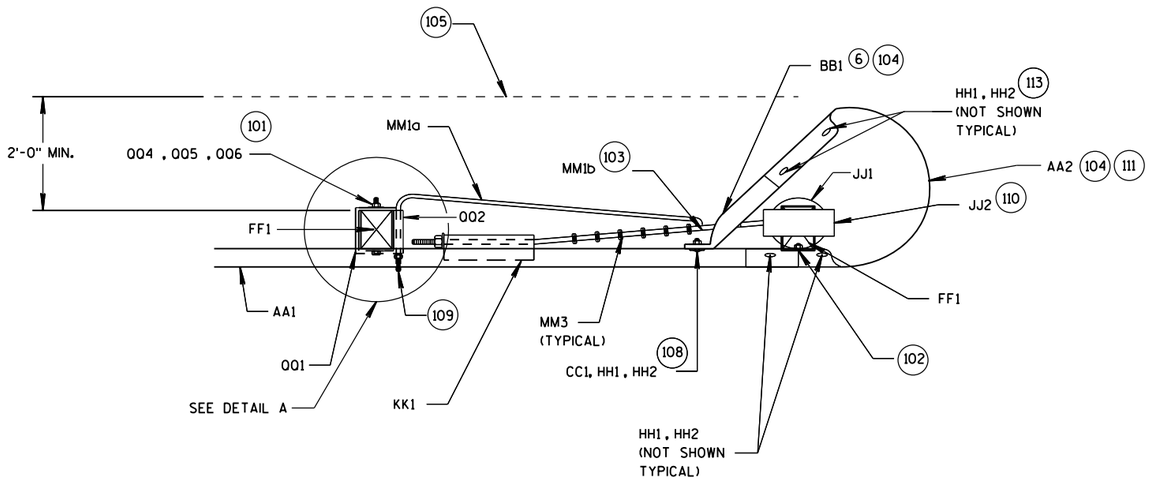


SHORT RADIUS TERMINAL
PROFILE VIEW



SHORT RADIUS TERMINAL
TOP VIEW

(100) TOP OF FOUNDATION TUBE 2 INCHES MAXIMUM ABOVE FINISHED GROUND.

(101) WASHERS REQUIRED BETWEEN BOLT HEAD AND FOUNDATION TUBE AND BETWEEN NUT AND FOUNDATION TUBE.

(102) SPLICE BOLT AND NUT CONNECTS BEAM GUARD RAIL, W-BEAM END SECTION BUFFER, AND STEEL PIPE ASSEMBLY. NO WASHER REQUIRED. SEE DETAIL B.

(103) CABLE IS TAUT.

(104) ADJUST AA2 AND BB1 TO FIT.

(105) BREAK POINT OF SHOULDER.

(106) TACK WELD CABLE CONNECTOR TUBE PLATE TO CABLE CONNECTION TUBE. SEE DETAIL A PROFILE VIEW.

(107) PAY LIMIT FOR BEAM GUARD.

(108) SQUARE WASHER BETWEEN HEAD OF BOLT AND TRAFFIC FACE OF BEAM GUARD. ROUND WASHER REQUIRED BETWEEN NUT AND BB1.

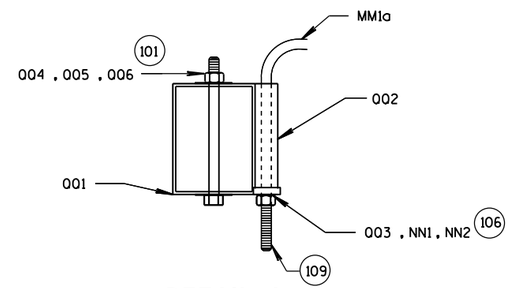
(109) CUT OR PROVIDE THREADED STUD THAT IS FLUSH WITH FACE OF BEAM GUARD RAIL KK1 (PLUS OR MINUS ½" TOLERANCE). DEBURR AFTER CUTTING.

(110) SEE STEEL PIPE ASSEMBLY DETAILS.

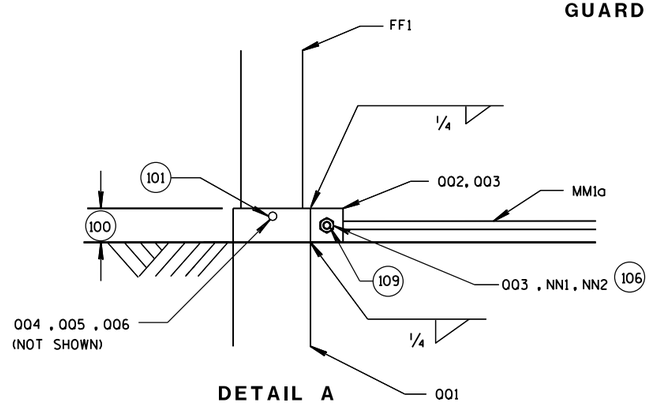
(111) ATTACH UU2 WITH UU3. SHOP APPLY UU1 TO UU2.

(112) FOUR HH1 AND HH2 REQUIRED TO ATTACH AA1 TO AA2.

(113) FOUR HH1 AND HH2 REQUIRED TO ATTACH AA2 TO BB1.



DETAIL A
TOP VIEW
(WOOD BREAKAWAY AND BEAM GUARD RAIL POSTS NOT SHOWN)



DETAIL A
PROFILE VIEW

STEEL PLATE BEAM GUARD
SHORT RADIUS TERMINAL
MGS

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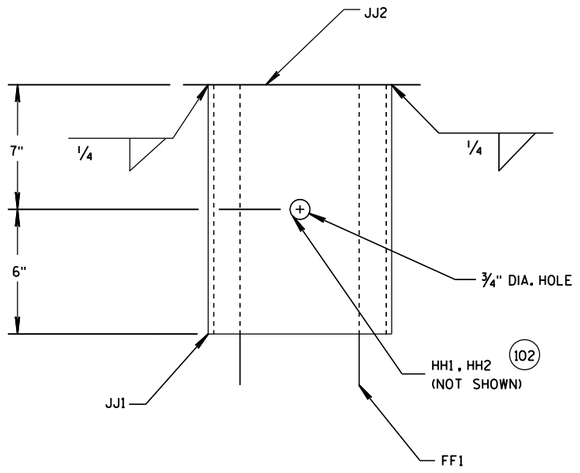
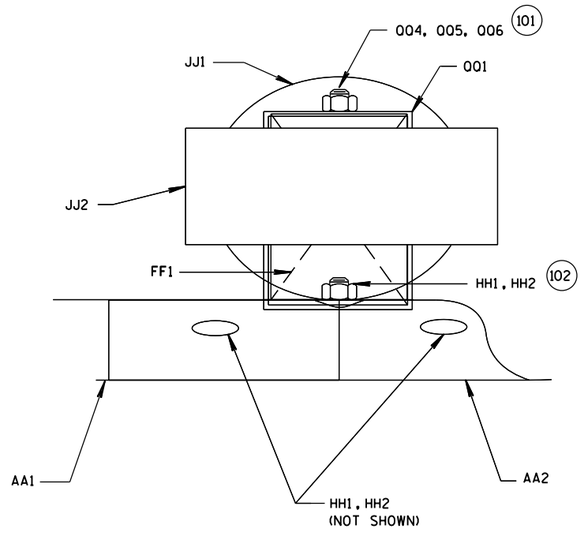
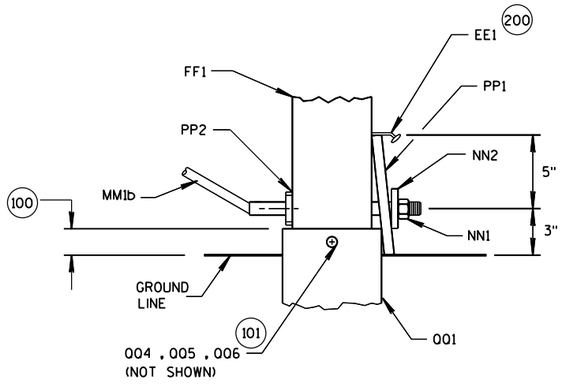


DETAIL B
PROFILE VIEW OF STEEL PIPE ASSEMBLY
(BEAM GUARD AND W-BEAM
END SECTION NOT SHOWN)

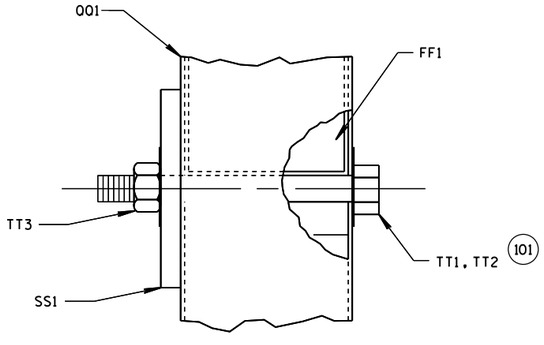


DETAIL B
PLAN VIEW OF STEEL PIPE ASSEMBLY

200 2 NAILS SPACED 4 INCHES CENTER TO CENTER.



DETAIL C
PROFILE VIEW



DETAIL D
PROFILE VIEW

SHORT RADIUS BEAM GUARD
(MGS) SHORT RADIUS
TERMINAL (MGS)

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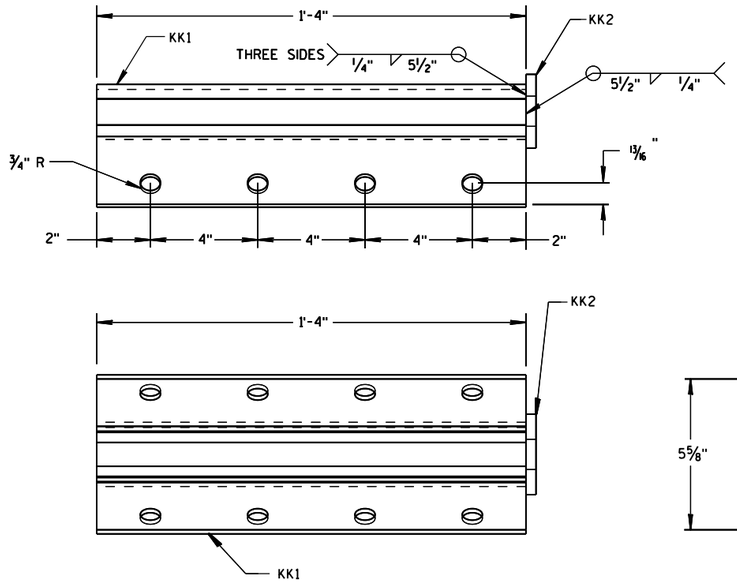
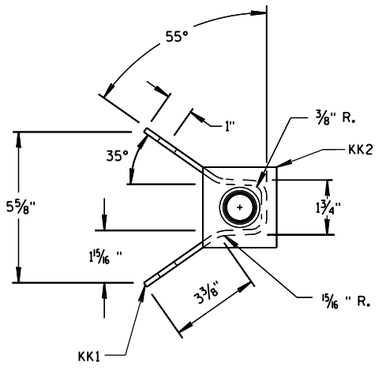
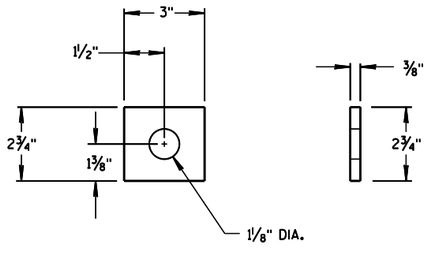
(300) WASHERS REQUIRED BETWEEN BOLT HEAD AND BEAM GUARD RAIL AND BETWEEN NUT AND ANCHOR BRACKET. EIGHT LL1 AND LL3 REQUIRED. SIXTEEN LL2 REQUIRED.

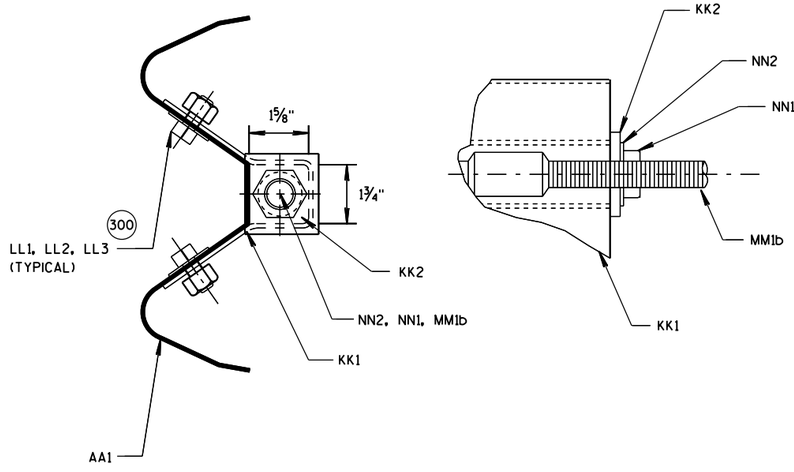




ANCHOR BRACKET (KK1, KK2)



ANCHOR BRACKET BEARING PLATE (KK2)



SECTION A-A

SHORT RADIUS BEAM GUARD
(MGS) SHORT RADIUS
TERMINAL (MGS)

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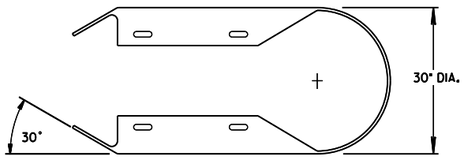
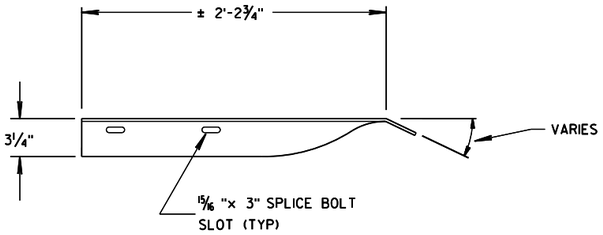


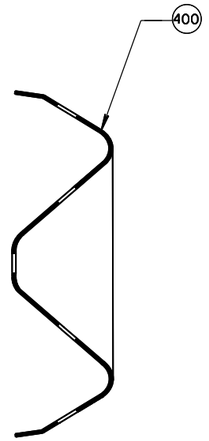
TOP VIEW



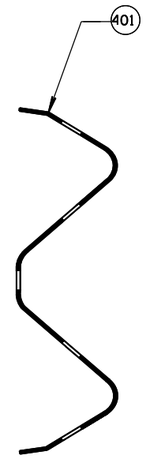
TOP VIEW

(400) CROSS SECTON OF PART IS TO FIT OVER AA1.

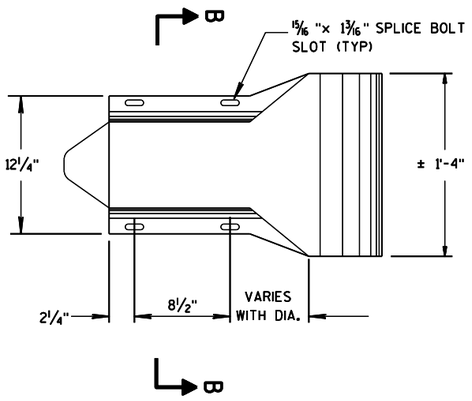
(401) CROSS SECTON OF PART IS TO FIT OVER OR UNDER AA1.



SECTION B-B

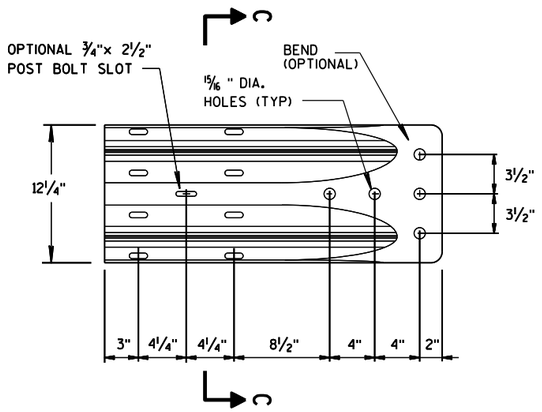


SECTION C-C



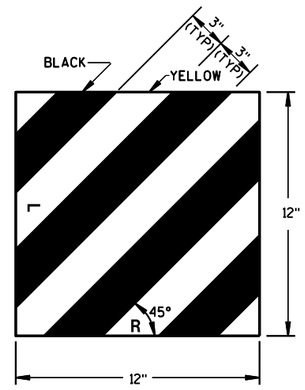
W-BEAM
END SECTION BUFFER (AA2)

PROFILE VIEW



W-BEAM
TERMINAL CONNECTOR (BB1)

PROFILE VIEW



REFLECTIVE SHEETING
(UU1, UU2)

SHORT RADIUS BEAM GUARD
(MGS) SHORT RADIUS
TERMINAL (MGS)

STATE OF WISCONSIN
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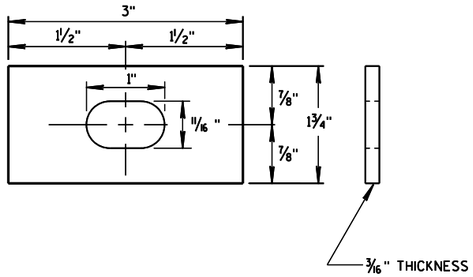
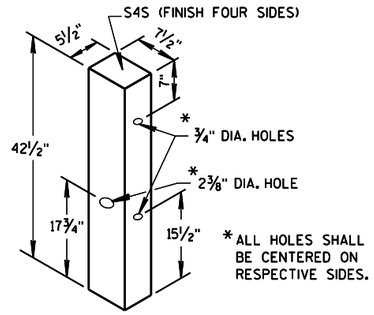
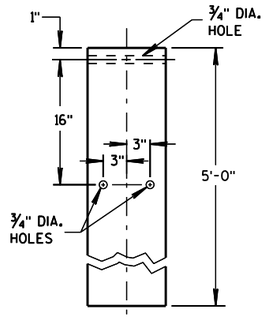


RECTANGULAR PLATE WASHER (CC1)



WOOD BREAKAWAY POST (FF1)



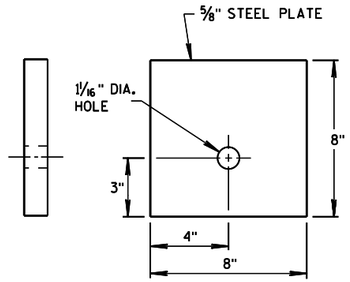
FOUNDATION TUBE (QQ1) (500)

(500) SEE DETAIL "D" FOR LOCATION AND ATTACHING SS1.

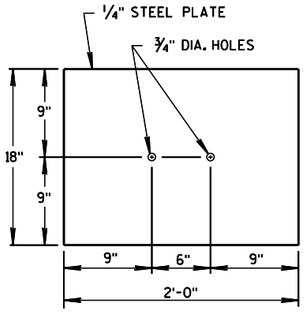
(501) FOR MM1a THREADED STUD ONLY REQUIRED ON ONE END. SWAGED FITTING REQUIRED.

(502) LOCATE HOLES ON THE CENTERLINE OF THE SIDE OF THE POST.

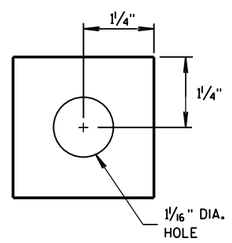
(503) MM1a MAY HAVE ONE THREADED STUD 4 INCHES LONG. SEE NOTE (109).



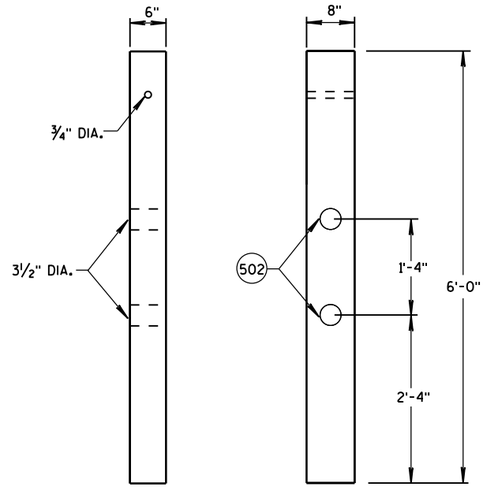
BEARING PLATE (PP1)



SOIL PLATE (SS1)

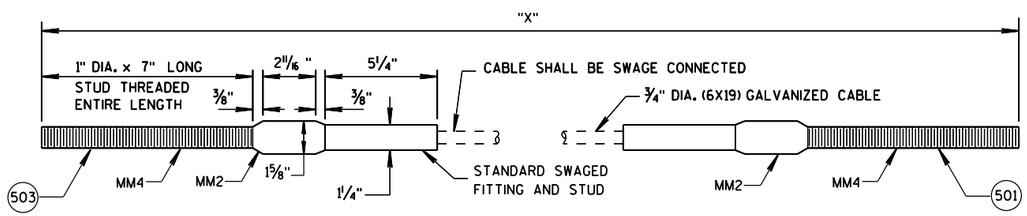


TUBE END PLATE (QQ3)



FRONT VIEW SIDE VIEW

CONTROLLED RELEASE TERMINAL POST (CRT) (D2)



"X" LENGTH

MM1a	9'-0"
MM1b	6'-8"

CABLE ASSEMBLY (MM1a , MM1b)

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

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S.D.D. 14 B 53-1f

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	BEAM GUARD RAIL	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
A2	BEAM GUARD RAIL - SHOP BENT	INDICATE ON BACK OF RAIL RADIUS THAT RAIL WAS BENT TO. SHOP BEND RADIUS IS TO THE NEAREST FOOT. FOLLOW AASHTO M180 ON HOW TO MARK RADIUS INFORMATION.	
		AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
B1	BLOCK - WOOD	WISDOT SPEC. 614	SEE SDD 14B42
C1	NAIL	ASTM A153 HOT DIP CLASS D	
		ASTM F1667 TYPE 1 STYLE 12 (16 DOUBLE HEAD)	
D1	POST-STRONG POST-WOOD	WISDOT SPEC. 614	SEE SDD 14B42
D2	POST-CRT-WOOD	WISDOT SPEC. 614	
E1	POST BOLT	ASTM A307 GRADE A OR SAE J429 GRADE 2	5/8" DIA. SEE SDD 14B42 FOR BOLT GEOMETRY
		AASHTO M180	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		UNC	
E2	POST BOLT-WASHER	ASTM F436 TYPE 1 (HARDEN TYPICALLY USED WITH STEEL) OR ASTM F844 (UNHARDENED TYPICALLY WITH WOOD)	5/8" DIA.
		GALV. AASHTO M111/ASTM A 123 OR GALV. HOT DIP. TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329	
E3	POST BOLT - NUT		5/8" DIA. SEE SDD 14B42 FOR GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		UNC	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291/ ASTM A 563	
		ASTM A563 GRADE A HEAVY HEX HEAD	
F1	SPLICE BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		ASTM A307 GRADE A OR SAE J429 GRADE 2	5/8" DIA. SEE SDD 14B42 FOR GEOMETRY AND OTHER INFORMATION
		UNC	
		AASHTO M180	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
F2	SPLICE BOLT - NUT	ASTM A563 GRADE A	5/8" DIA. SEE SDD 14B42 FOR GEOMETRY
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C/ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291/ ASTM A 563	
		UNC	
G1	LAG SCREW	ASTM A308 GRADE A ASTM A153 CLASS D	3/8" DIA. 3" LONG
H1	DELINEATOR - BEAM GUARD		SEE SDD 14B42 FOR MORE INFORMATION
H2	DELINEATION - SHEETING	YELLOW OR WHITE	
		WISDOT SPEC 637 TYPE SH	
		APPROVED PRODUCT LIST	
J1	FOUNDATION BACKFILL	STANDARD SPEC. 614	
AA1	BEAM GUARD RAIL - PUNCHED	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
AA2	BEAM GUARD RAIL - END SECTION BUFFER	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
BB1	BEAM GUARD RAIL - TERMINAL CONNECTOR MODIFIED	AASHTO M180, CLASS A, TYPE 2	
		APPROVED PRODUCER	
CC1	SHORT RADIUS - SQUARE WASHER	AASHTO M180	
		GALV. AASHTO M111 / ASTM A123	
EE1	NAIL	ASTM A153 HOT DIP CLASS D	
		ASTM F1667 TYPE 1 STYLE 12 (16 DOUBLE HEADED)	
FF1	POST - BCT - WOOD	S4S FINISH ON 4 SIDES	
		WISDOT SPEC. 614	
GG1	POST BOLT	ASTM A307 GRADE A OR SAE J429 GRADE 2	3/8" DIA. SEE SDD 14B42 FOR GEOMETRY
		AASHTO M180	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		UNC	
GG2	POST BOLT - WASHER	ASTM F436 TYPE 1 (HARDEN TYPICALLY USED WITH STEEL) OR ASTM F844 (UNHARDENED TYPICALLY WITH WOOD)	3/8" DIA.
		GALV. AASHTO M111 / ASTM A123 OR5 GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

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BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
GG3	POST BOLT - NUT	ASTM A563 GRADE A	3/8" DIA.
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	SEE 14B42 FOR GEOMETRY
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		UNC	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		ASTM A563 GRADE A HEAVY HEX HEAD	
HH1	SPLICE BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	3/8" DIA. SEE 14B42 FOR GEOMETRY
		ASTM A307 GRADE A OR SAE J429 GRADE 2	
		UNC	
		AASHTO M180 HEAD GEOMETRY	
HH2	SPLICE BOLT - NUT	ASTM A563 GRADE A	3/8" DIA.
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	SEE 14B42 FOR GEOMETRY
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		UNC	
JJ1	PIPE - STEEL	ASTM A53 GALVANIZED GRADE B SCHEDULE 40	10" O.D.
JJ2	TOP PLATE	ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	DIMENSIONS 3/8" X 4" X 1'-0"
		GALV. AASHTO M111 / ASTM A123	
KK1	ANCHOR BRACKET	ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	
		GALV. AASHTO M111 / ASTM A123	
KK2	ANCHOR BRACKET - BEARING PLATE	ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	
		GALV. AASHTO M111 / ASTM A123	
LL1	ANCHOR BRACKET - BOLT	ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	5/8" DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		UNC	
LL2	ANCHOR BRACKET - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	5/8" DIA.
		GALV. AASHTO M111 / ASTM A123 OR5 GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
LL3	ANCHOR BRACKET - NUT	ASTM A563 GRADE A	5/8" DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A563	
		UNC	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
MM1a	ANCHOR CABLE	AASHTO M30 / ASTM A741 INDEPENDENT WIRE CORE (IWRC) OR WIRE STRAND CORE (WCS), IMPROVED PLOW STEEL (IPS), 6X19, TYPE II OR IIc CLASS C ZINC COATED	
MM1b	ANCHOR CABLE	AASHTO M30 / ASTM A741 INDEPENDENT WIRE CORE (IWRC) OR WIRE STRAND CORE (WCS), IMPROVED PLOW STEEL (IPS), 6X19, TYPE II OR IIc CLASS C ZINC COATED	
MM2	ANCHOR CABLE - SWAGE FITTING	ASTM A576 GRADE 1035	
		SWAGE FITTINGS ARE TO BE FACTORY SWEDGED. WITH A BREAKING STRENGTH 40,000 LBS.	
		GALV. AASHTO M111 / ASTM A123	
		ASME B30.26 FORGED, CAST, OR DIE STAMPED WITH THE FOLLOWING INTO CONNECTION: NAME OF MANUFACTURER OR TRADEMARK OF CONNECTION'S MANUFACTURER, SIZE OR RATED LOAD, GRADE.	
MM3	WIRE ROPE CABLE CLAMPS	FF-C-450D TYPE 1 CLASS 1	3/4"
		ASTM A153 HOT DIP CLASS D	
MM4	ANCHOR CABLE - SWAGE FITTING - STUD	ASTM F3125 GRADE A325 TYPE 1 OR SAE GRADE 5 OR ASTM A449 TYPE 1 HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		UNC	
NN1	ANCHOR CABLE - NUT	ASTM A563 GRADE A	1" DIA.
		AASHTO M180 DOUBLE RECESSED HEAVY HEX HEAD	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		OVER TAPPED NUTS OVER-SIZE AS SPECIFIED IN AASHTO 291 / ASTM A563	
		UNC	
NN2	ANCHOR CABLE - NUT - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	1" DIA.
		GALV. AASHTO M111 / ASTM A123 OR5 GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
PP1	BEARING PLATE AT POST	ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	
		GALV. AASHTO M111 / ASTM A123	
PP2	PIPE - STEEL	ASTM A53 GALVANIZED GRADE B SCHEDULE 40	2" DIA. x 6" LONG
QQ1	FOUNDATION TUBE	ASTM A500 GRADE B	8" X 6" X 3/16"
		GALV. AASHTO M111 / ASTM A123	
QQ2	SHORT RADIUS - FOUNDATION TUBE - ANCHOR CABLE - TUBE	ASTM A500 GRADE B	DIMENSIONS 2 1/2" X 2 1/4" X 1/4" X 8"
		GALV. AASHTO M111 / ASTM A123	

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 14 B 53-1h

BILL OF MATERIALS - SHORT RADIUS BEAM GUARD (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
003	SHORT RADIUS - SOIL TUBE - ANCHOR CABLE - TUBE - END PLATE	ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	DIMENSIONS 2½" X 2½" X ¼"
		GALV. AASHTO M111 / ASTM A123	
004	GROUND STRUT AND YOKE - BOLT	GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	⅝" DIA.
		ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	
		UNC	
005	GROUND PLATE AND YOKE - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	⅝" DIA.
		GALV. AASHTO M111 / ASTM A123 OR5 GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
006	GROUND STRUT AND YOKE - NUT	HEAVY HEX	⅝" DIA.
		UNC	
		ASTM A563 GRADE A	
		OVER TAPPED NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563	
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	
SS1	SOIL PLATE	ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI OR ASTM A709 MAX STRENGTH 50 KSI OR ASTM A992 MAX STRENGTH 50 KSI	
		GALV. AASHTO M111 / ASTM A123	
TT1	SOIL PLATE - BOLT	ASTM A307 GRADE B HEAVY HEX HEAD OR SAE J429 GRADE 2 HEAVY HEX HEAD	⅝" DIA.
		GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1/ASTM B695 CLASS 50, TYPE 1	
		UNC	
TT2	SOIL PLATE - WASHER	ASTM F436 TYPE 1 (HARDEN WASHER ONLY)	⅝" DIA.
		GALV. AASHTO M111 / ASTM A123 OR5 GALV. HOT DIP TO AASHTO M232 CLASS C / ASTM A153 CLASS C / ASTM F2329	
TT3	SOIL PLATE - NUT	GALV. HOT DIP TO AASHTO M232 CLASS C/ASTM A153 CLASS C / ASTM F2329 OR GALV. MECHANICALLY TO AASHTO M298 CLASS 50, TYPE 1 / ASTM B695 CLASS 50, TYPE 1	⅝" DIA.
UU1	OBJECT MARKER - SHEETING	MUTCD / WISDOT OBJECT MARKER TYPE 3	PATTERN AND COLOR FOR SHEETING SHEETING TYPE FOR MARKER
		WISDOT SPEC 637 TYPE F	
		APPROVED PRODUCT LIST	
UU2	OBJECT MARKER - ALUMINUM PLATE	WISDOT SPEC 637 ALUMINUM PLATE	MATERIAL AND THICKNESS OF MATERIALS
UU3	OBJECT MARKER - SCREWS	STAINLESS SELF-TAPPING SCREWS	
VV1	FOUNDATION BACKFILL	WISDOT SPEC 614	

SHORT RADIUS BEAM GUARD (MGS) SHORT RADIUS TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS D UNIT SUPERVI
NT
FHWA

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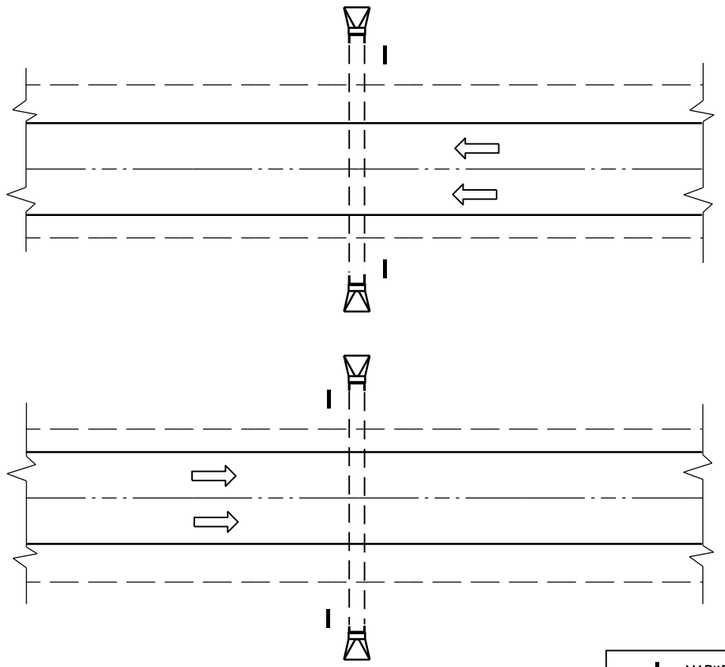
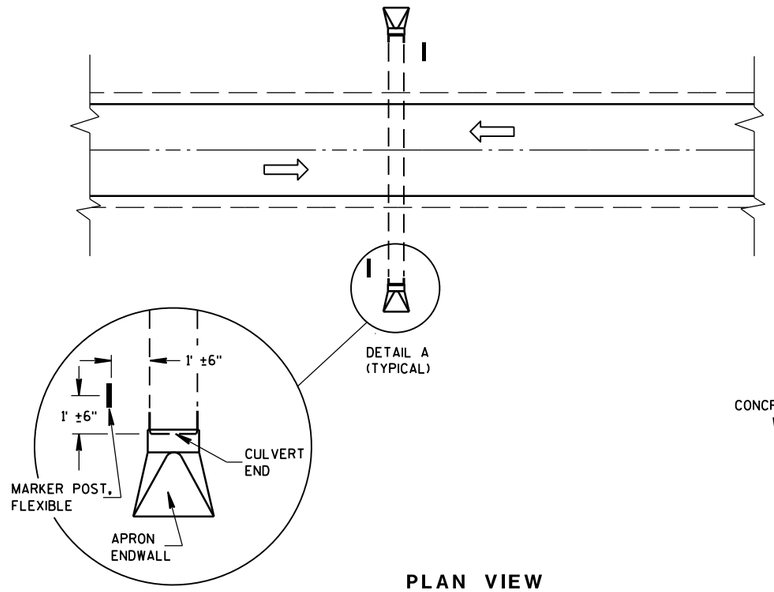
S.D.D. 14 B 53-1i



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

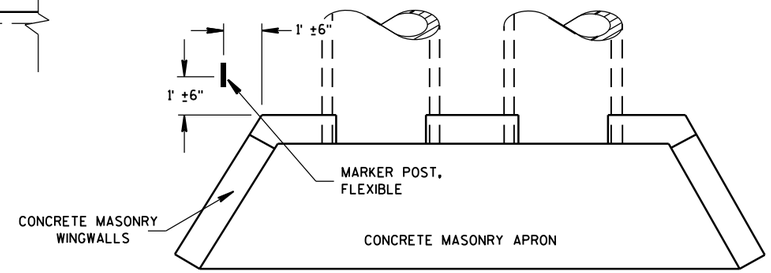
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

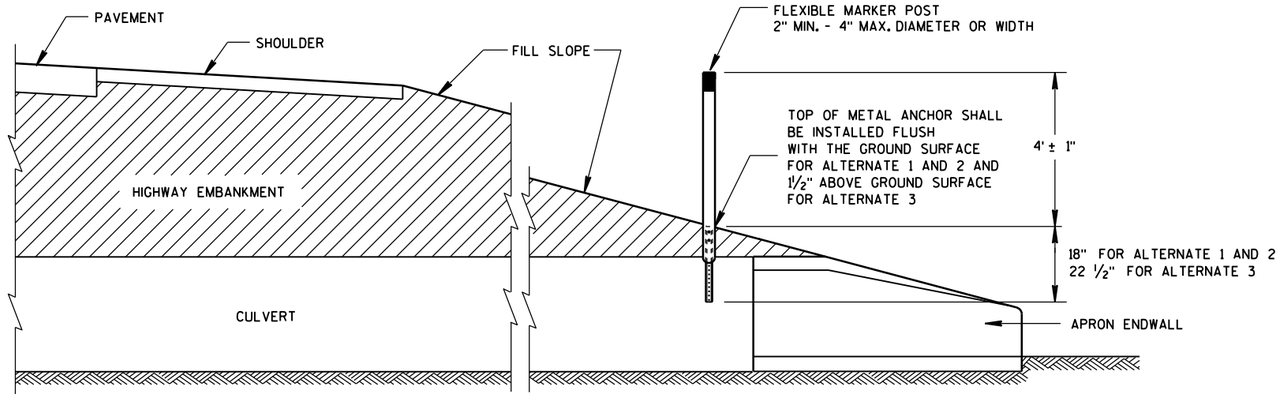
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

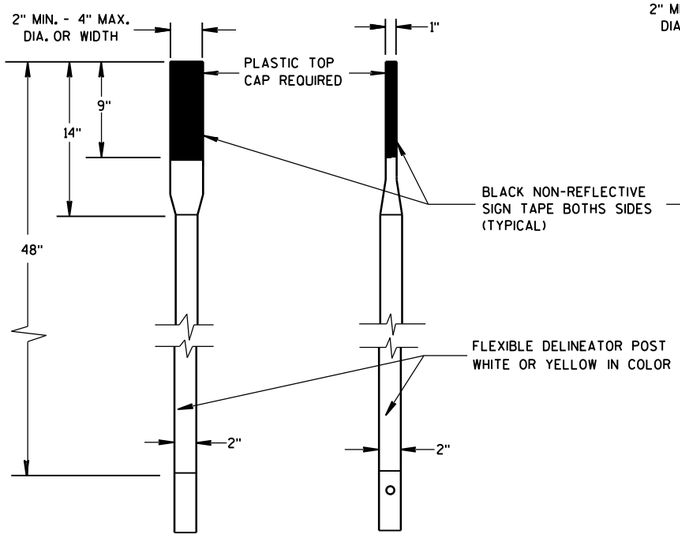
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

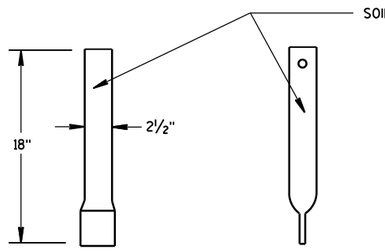
6

S.D.D. 15 A 3-2a

6

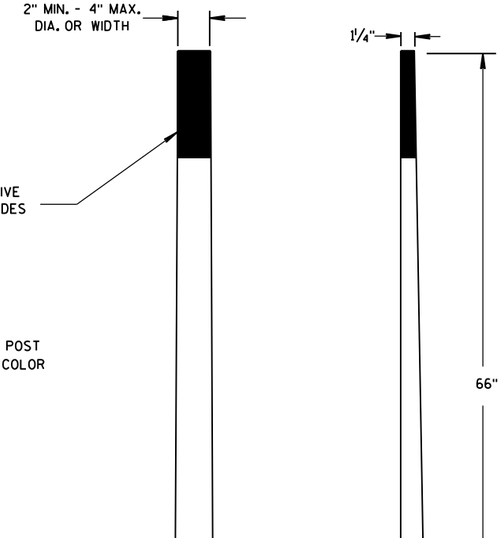
S.D.D. 15 A 3-2a





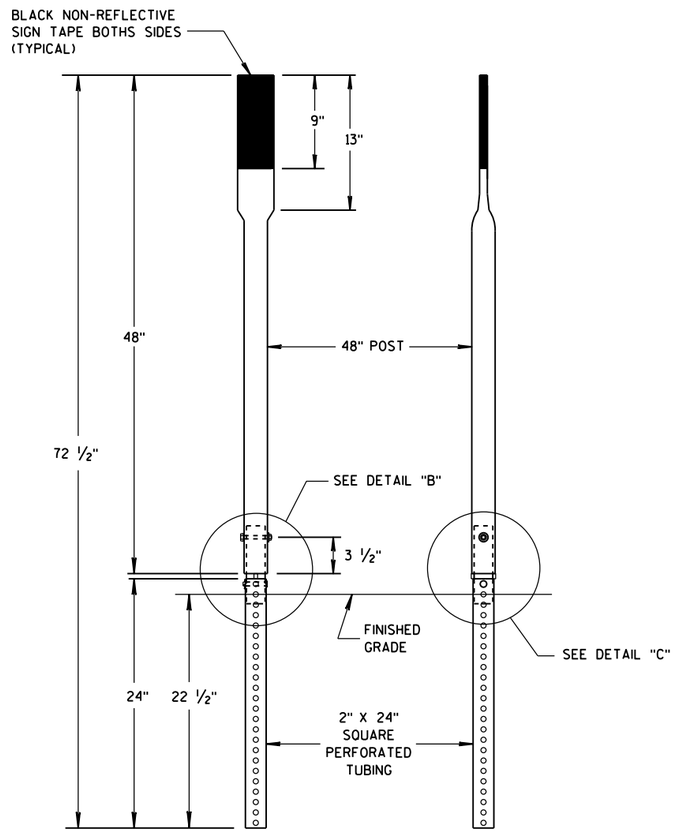
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

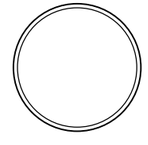
ALTERNATE 2



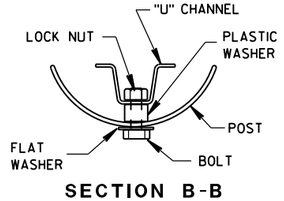
FRONT VIEW SIDE VIEW

ALTERNATE 3

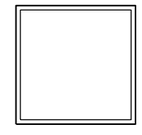
FLEXIBLE MARKER POSTS



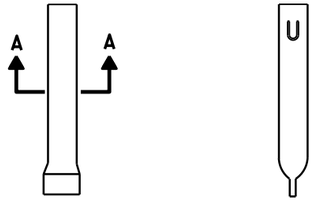
SECTION A-A



SECTION B-B

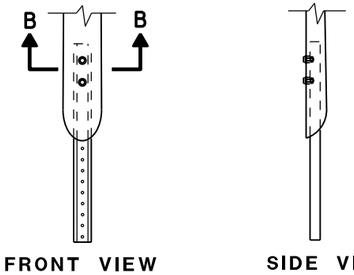


SECTION C-C



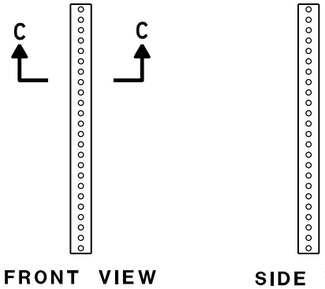
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

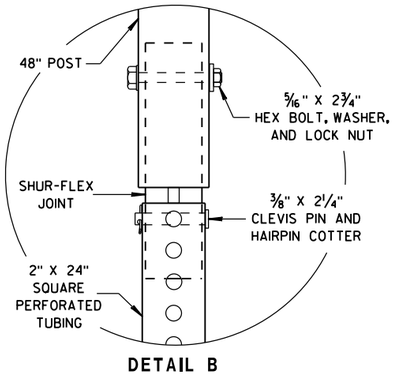
ALTERNATE 2



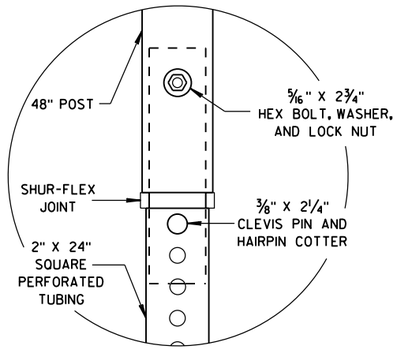
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/1/2012
DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER
IGN
FHWA

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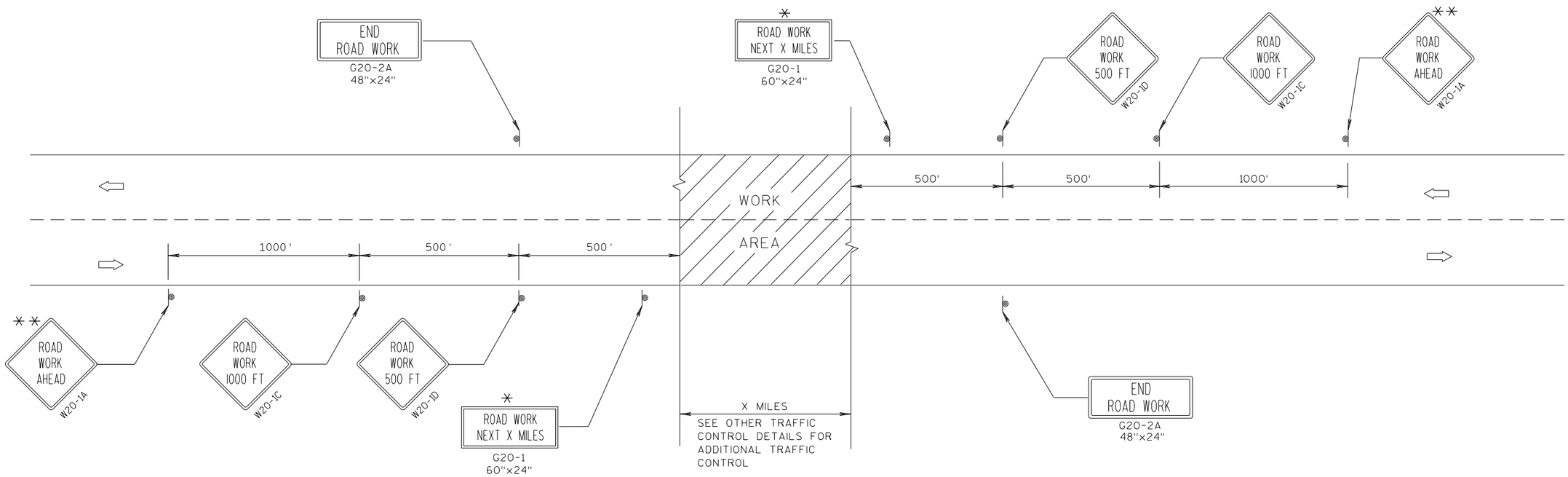
S.D.D. 15 A 3-2b

TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



GENERAL NOTES

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

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

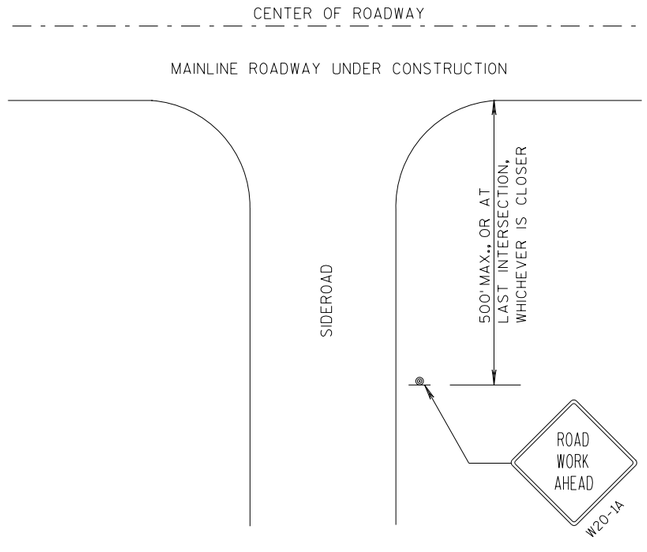
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

** PLACE ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



LEGEND

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

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018
DATE

/S/ Andrew Heldtke
WORK ZONE ENGI

FHWA

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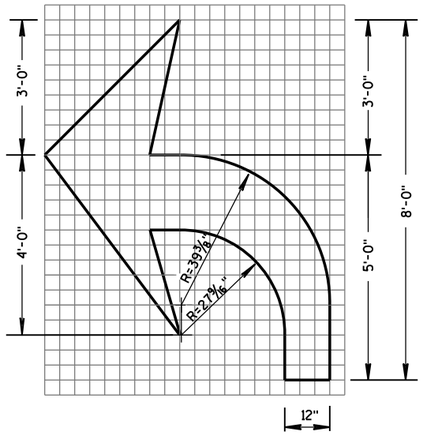
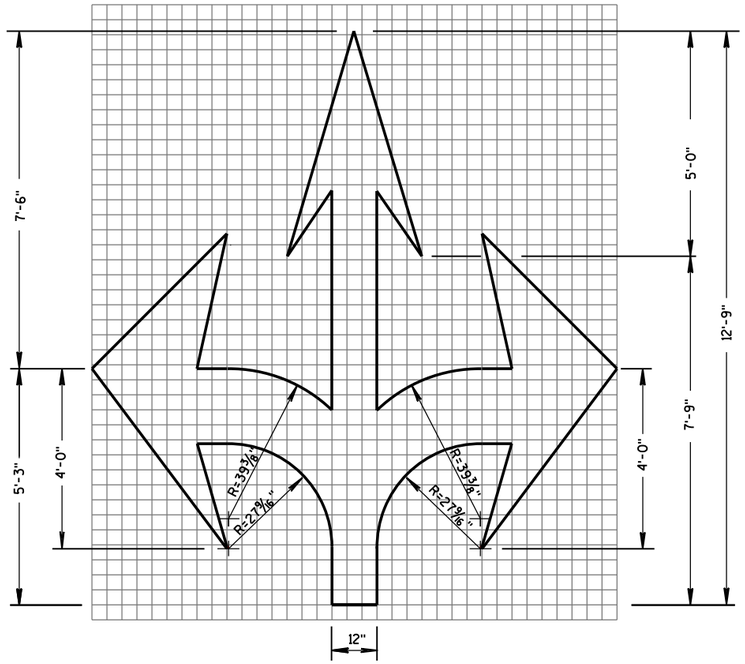
S.D.D. 15 C 4-5

GENERAL NOTES

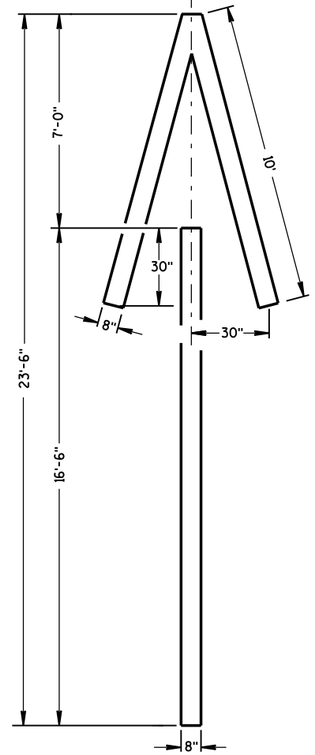
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



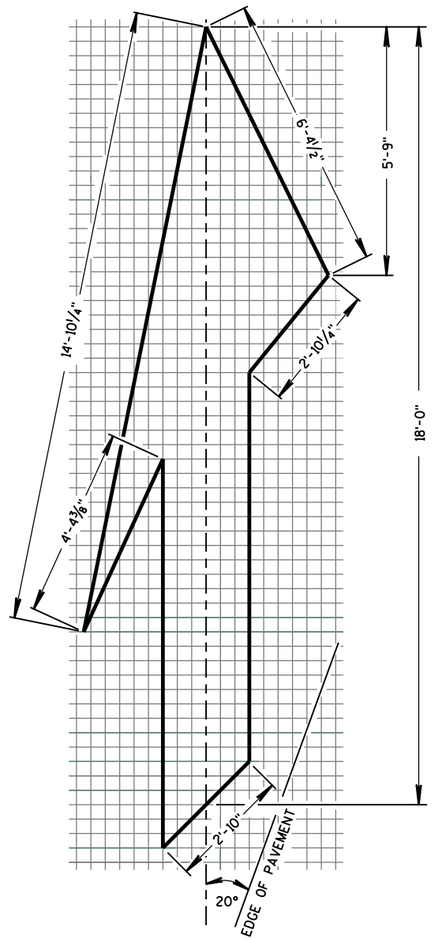
TYPE 2



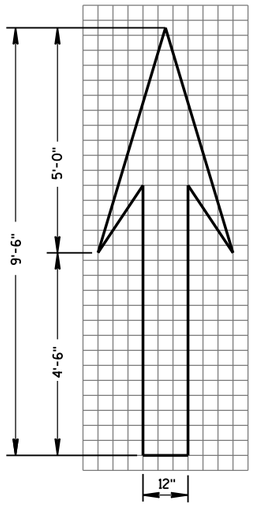
TYPE 6



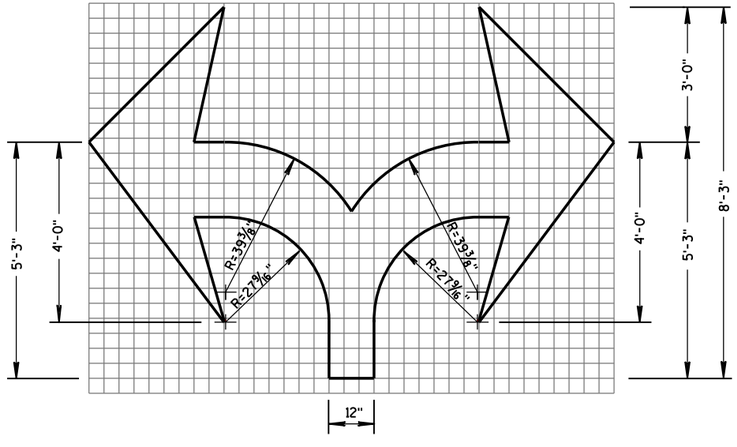
TYPE 4



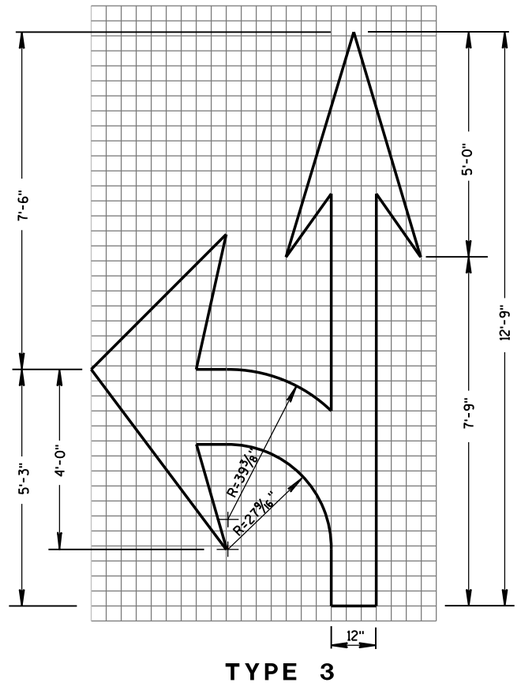
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

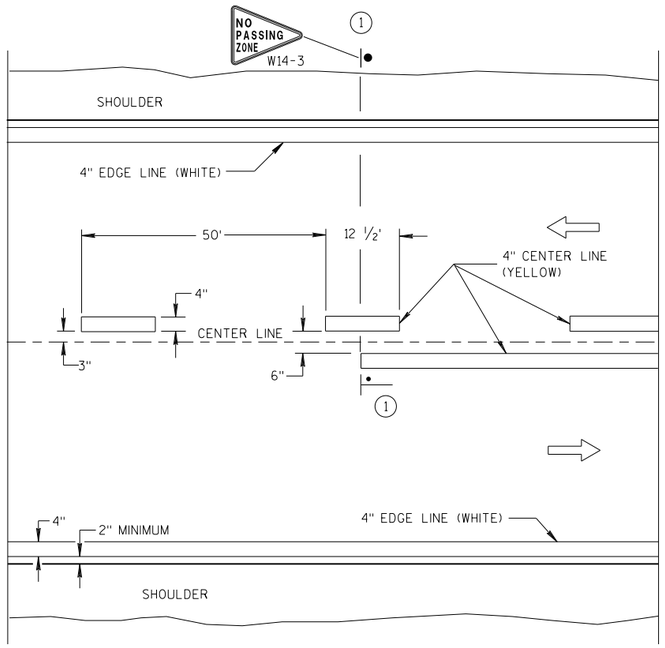
APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR
ENGINEER
FHWA

6

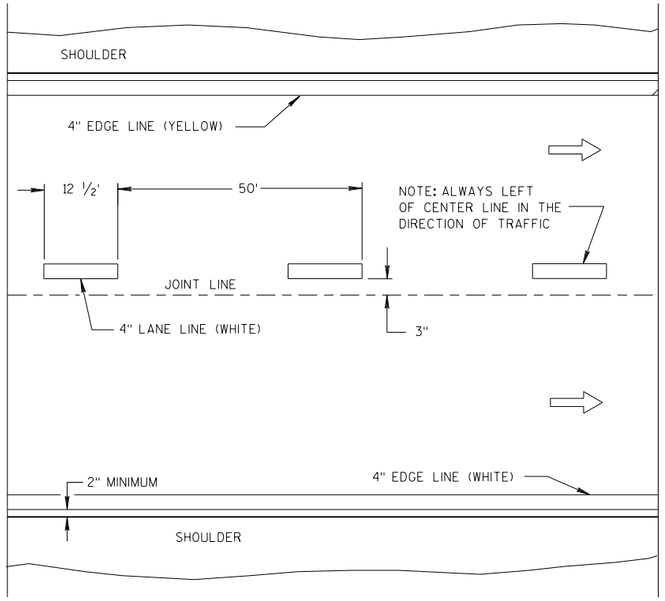
S.D.D. 15 C 7-14c

6

S.D.D. 15 C 7-14c



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

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

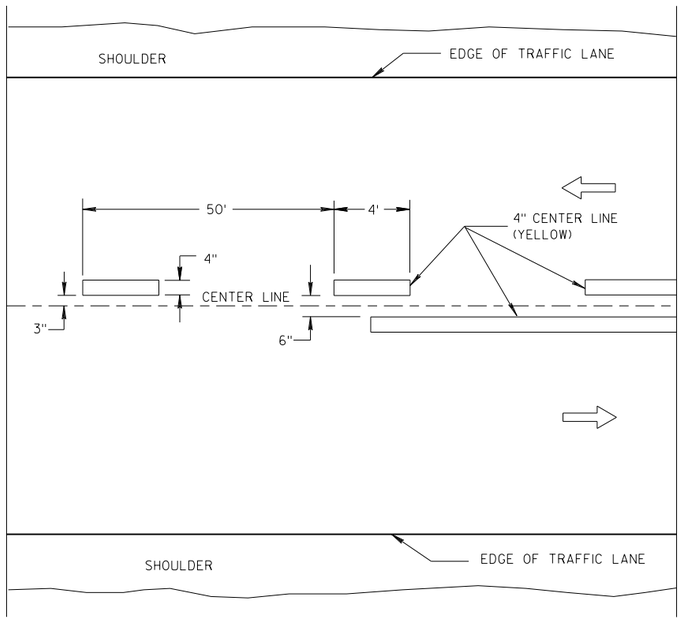
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

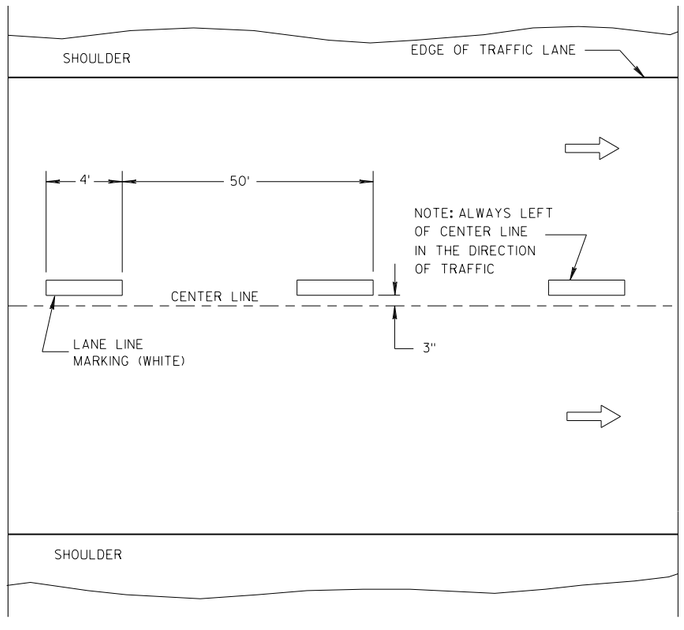
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018 DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER

FHWA

6

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

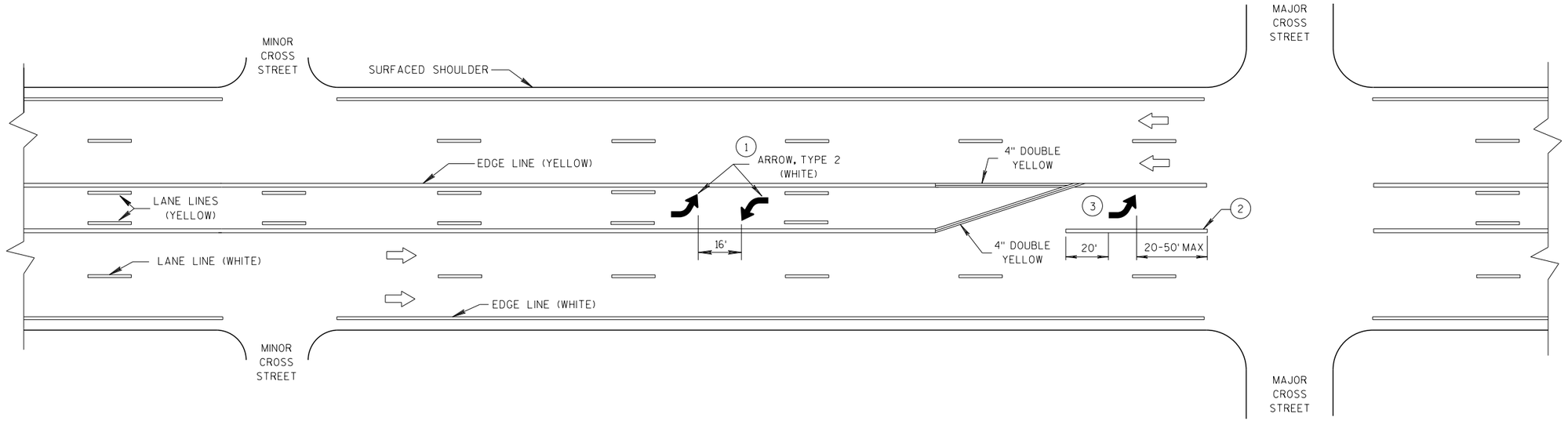
6

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

GENERAL NOTES

1. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
2. 8" WHITE
3. TURN BAY LENGTH OF LESS THAN 48'DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT

DIRECTION OF TRAFFIC



TWO WAY LEFT TURN LANE

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

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

6

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

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

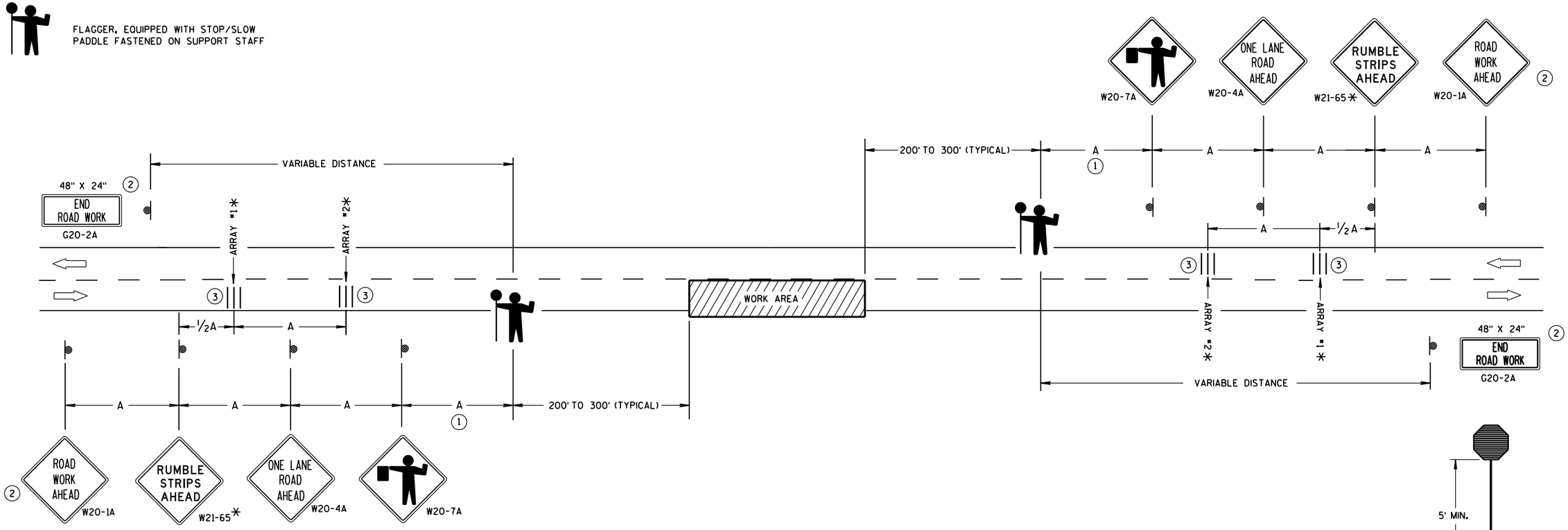
WORK AREA

FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

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



STOP/SLOW PADDLE ON SUPPORT STAFF

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

GENERAL NOTES

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

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

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

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

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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

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

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

(1) FOR A MOVING WORK OPERATION, SIGNING AND TEMPORARY RUMBLE STRIPS (IF USED) SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3,500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

(3) EACH TEMPORARY RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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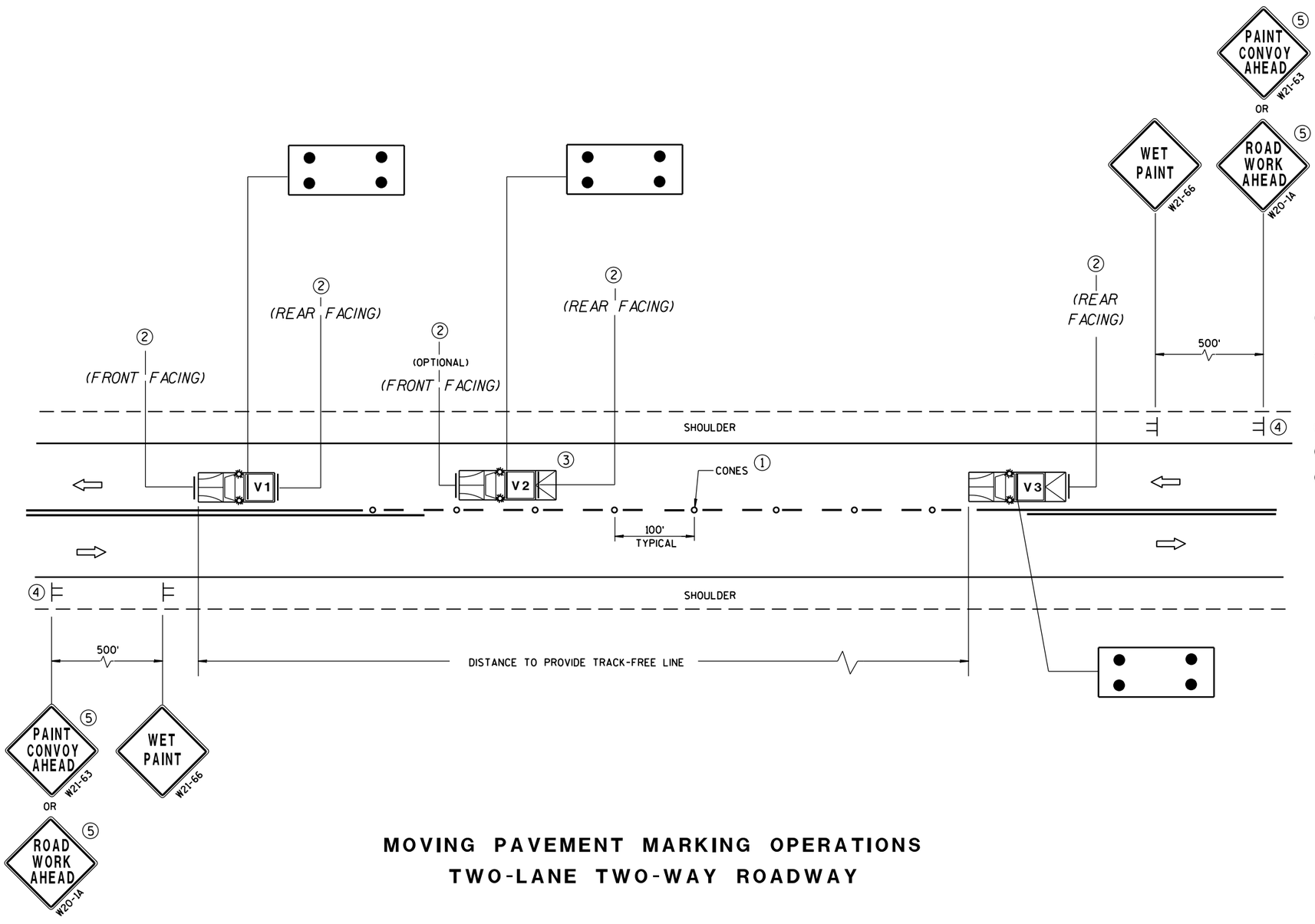
/S/ Andrew Heldtke — WORK ZONE ENG
FHWA

6
S.D.D. 15 C 12-6



MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY

GENERAL NOTES

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

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

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

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

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

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

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

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

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

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

(2) USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

(3) OPTIONAL TRUCK-MOUNTED ATTENUATOR.

(4) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

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

LEGEND

- **V1** LEAD VEHICLE
- **V2** SHADOW VEHICLE
- **V3** TRAIL VEHICLE WITH TMA
- **TMA** TRUCK-MOUNTED ATTENUATOR
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- CONES
- FLASHING ARROW PANEL (CAUTION)

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
Sept., 2017 DATE	/S/ Andrew Heldtke WORK ZONE ENGR
FHWA	

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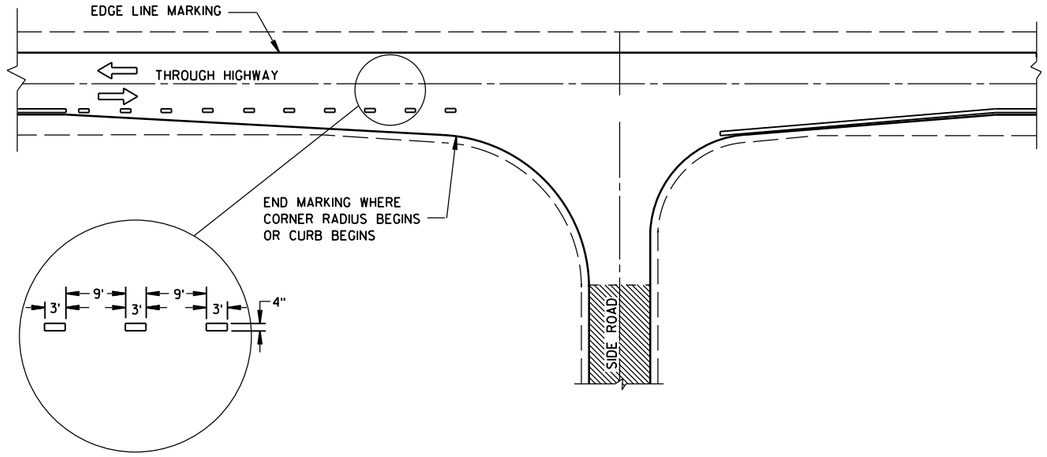
S.D.D. 15 C 19-5a



MINOR INTERSECTION

GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

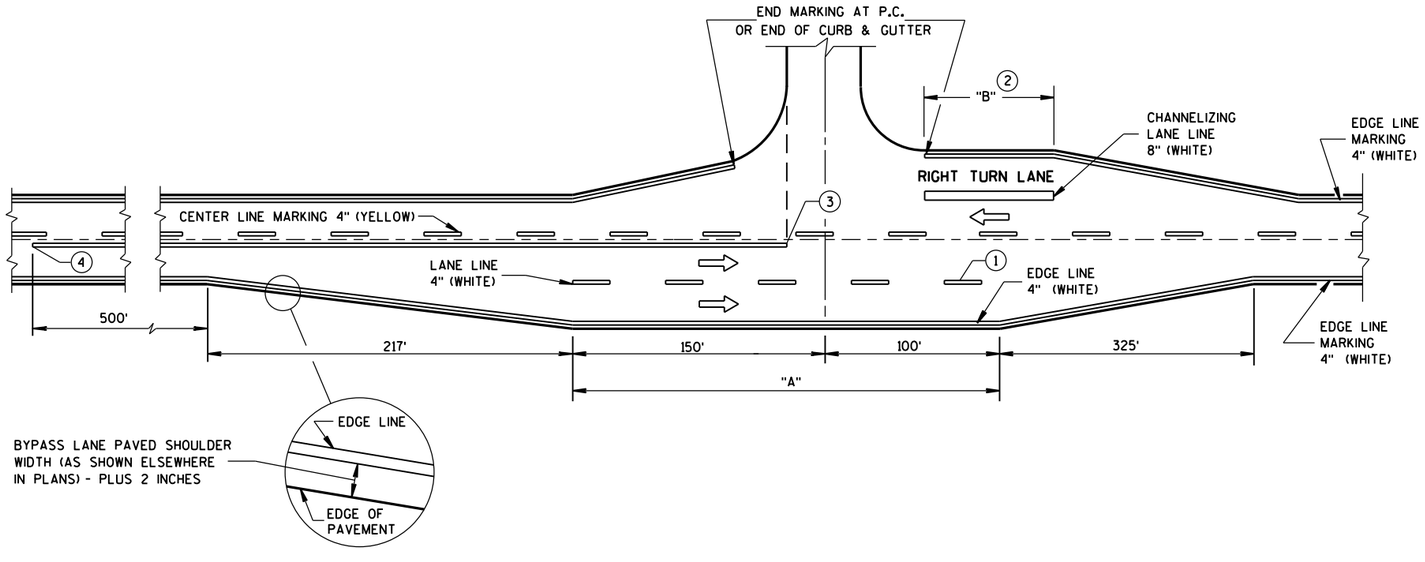
(1) WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.

(2) WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.

(3) BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.

(4) BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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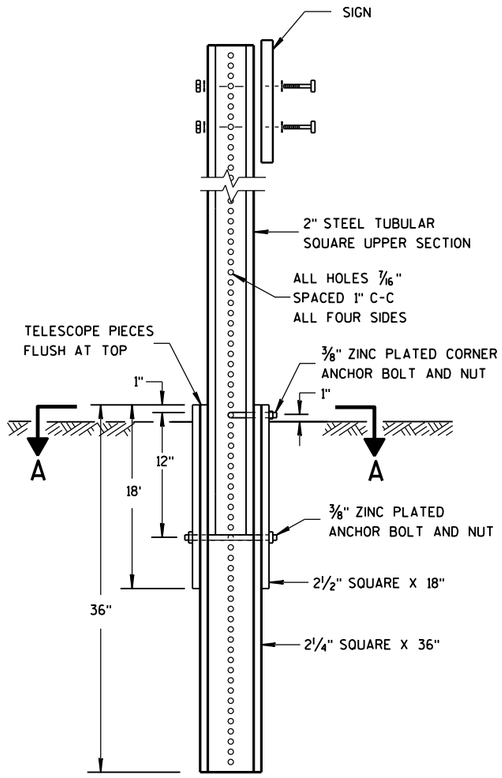
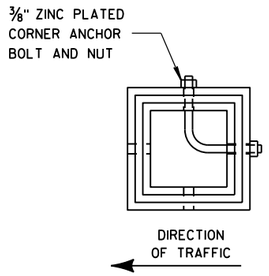
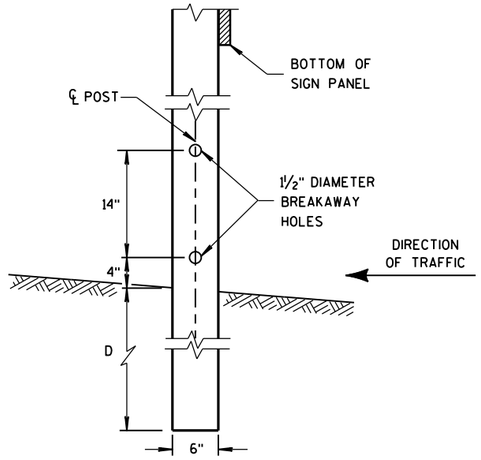
S.D.D. 15 C 35-2a



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



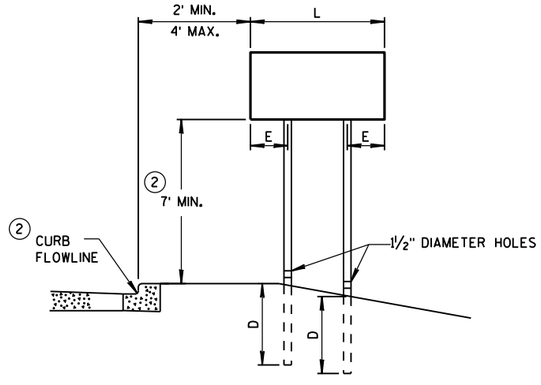
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

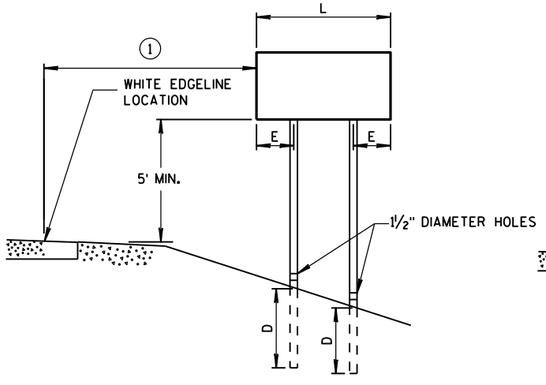
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

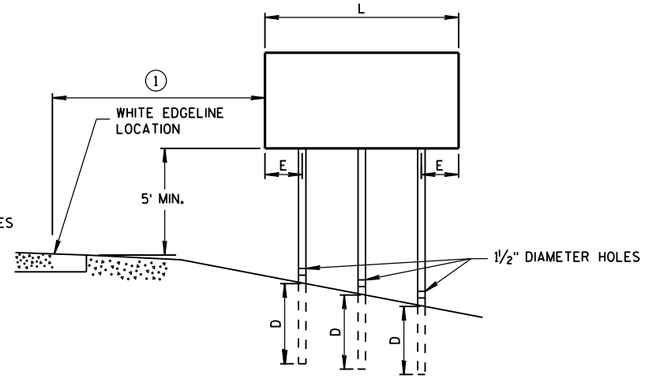
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK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

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

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

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

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

WOOD POST EMBEDMENT DEPTH

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

4" X 6" WOOD POST

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

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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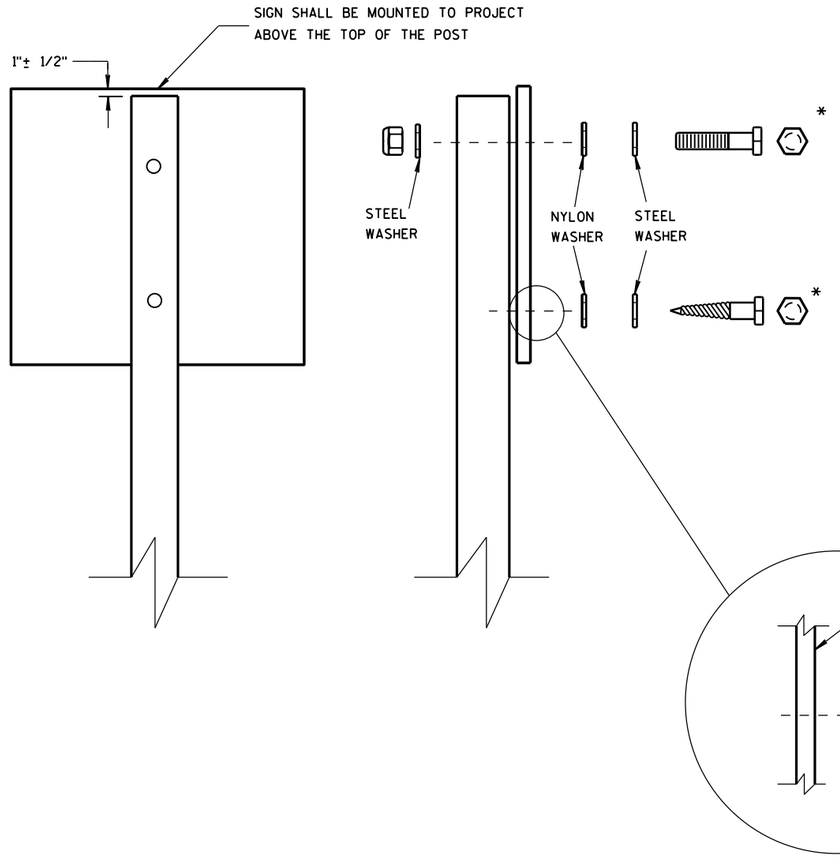
S.D.D. 15 D 38-2a
S.D.D. 15 D 38-2a



WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

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

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3

B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

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

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

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

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

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

6

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S.D.D. 15 D 38-2b

S.D.D. 15 D 38-2b

ATTACHMENT OF SIGNS TO POSTS

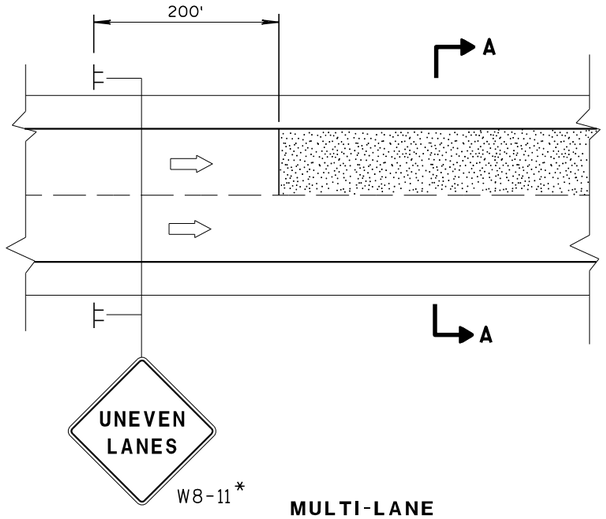
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

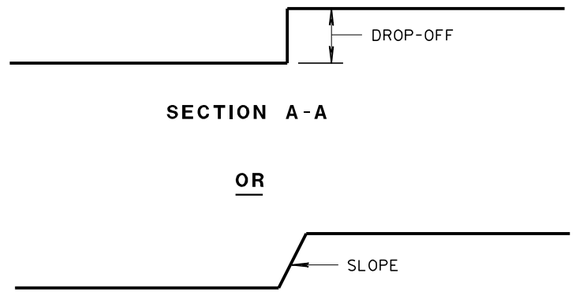
June 2017
DATE

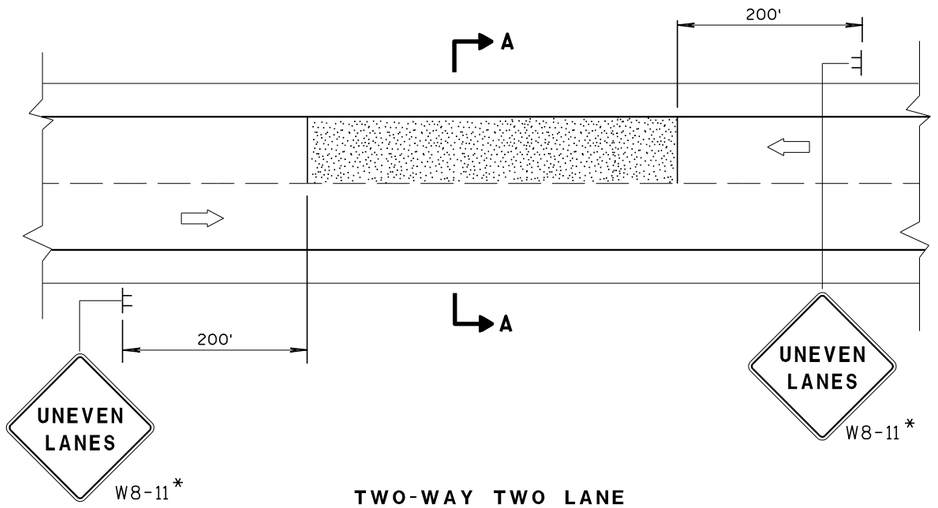
/S/ Andrew Heldtke
WORK ZONE ENG

FHWA

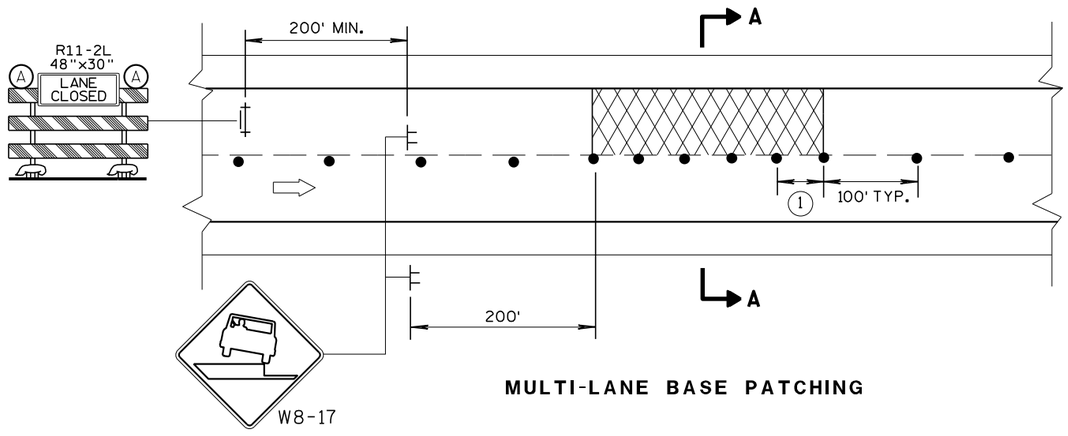


MULTI-LANE



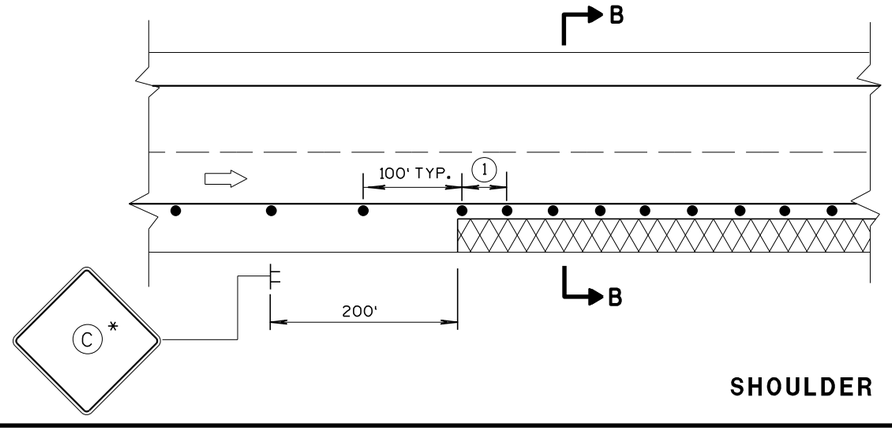


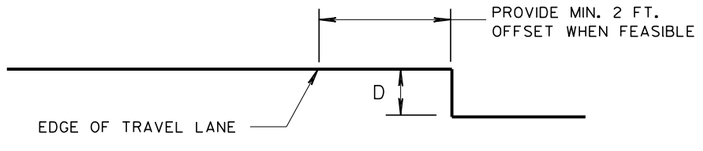
TWO-WAY TWO LANE



MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS





SECTION B-B

SHOULDER DROP-OFFS

GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

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

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

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

* IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EACH ENTRANCE RAMP.

(1) USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	LOW SHOULDER WO8-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	SHOULDER DROP-OFF W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

TRAFFIC CONTROL, DROP-OFF SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Andrew H — WORK ZONE EN
FHWA

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S.D.D. 15 D 39-2

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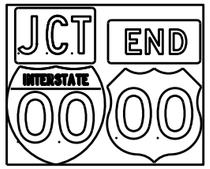
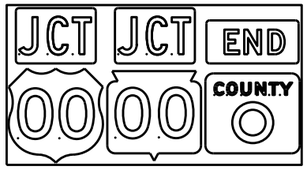
S.D.D. 15 D 39-2

TYPICAL ASSEMBLIES

J1-1

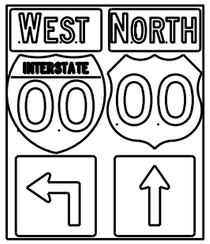


J1-2

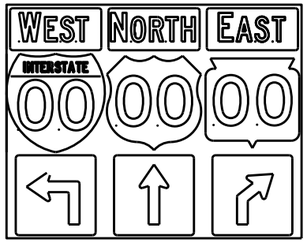


J1-3

J2-1



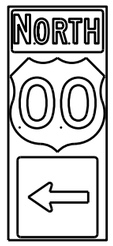
J2-2



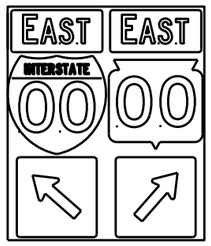
J2-3

JV

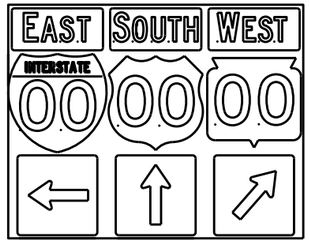
(Typical Vertical J-Assembly
See Note 10 and 11)



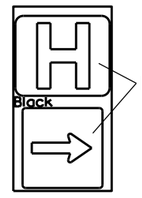
J3-1



J3-2

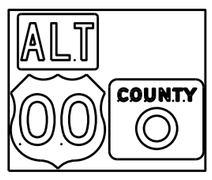


J3-3

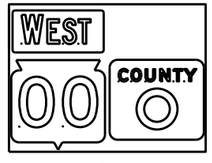


JH-1

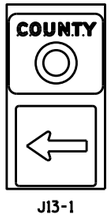
J4-1



J4-2



J4-2



J13-1

J12-1

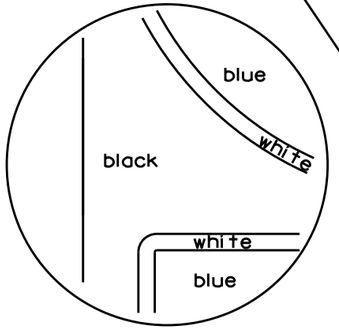
J32-1

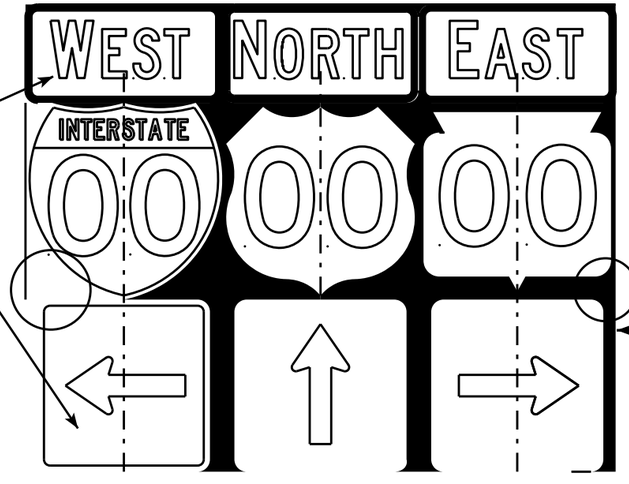
J33-1

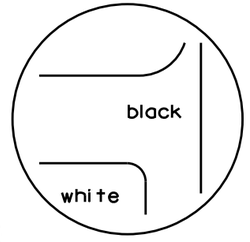
J23-1

J22-1

[blue background with interstate]







[black background]

NOTES

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

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

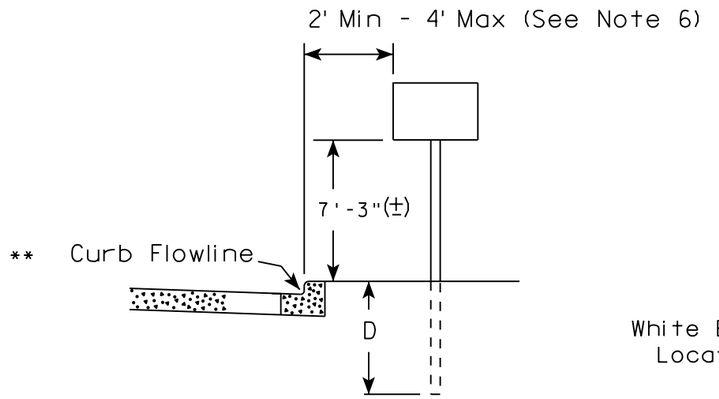
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/06/14 PL... A2-1S.8

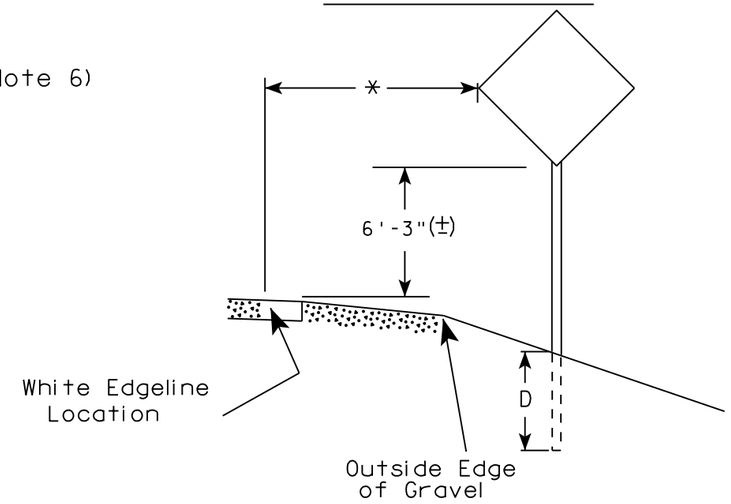
PROJECT NO: | SHEET NO: E

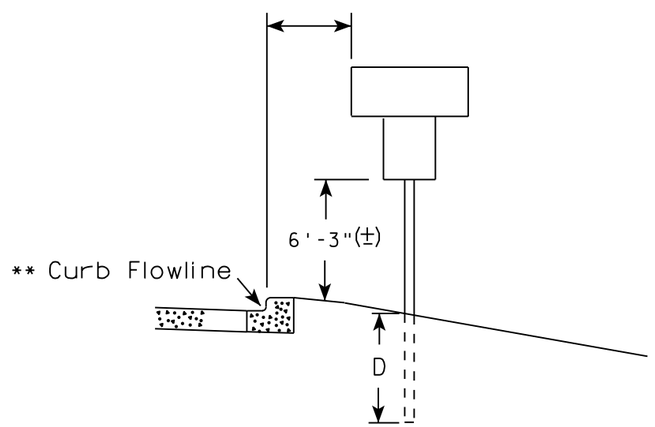
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :
WISDOT/CADDS SHEET 42

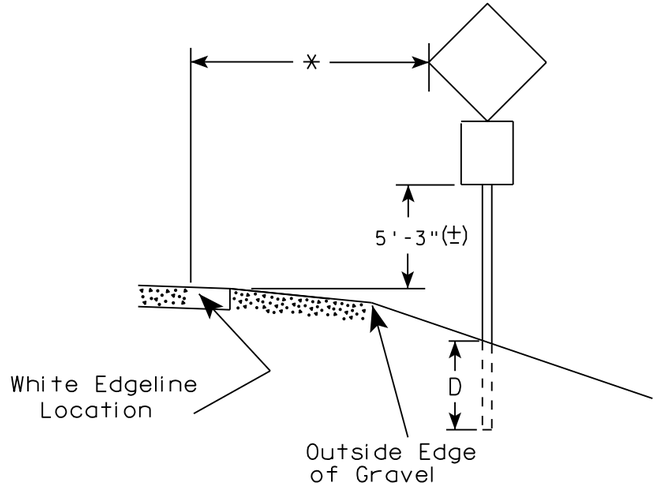
URBAN AREA



RURAL AREA (See Note 2)







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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies are considered to be one sign for mounting height.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd 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

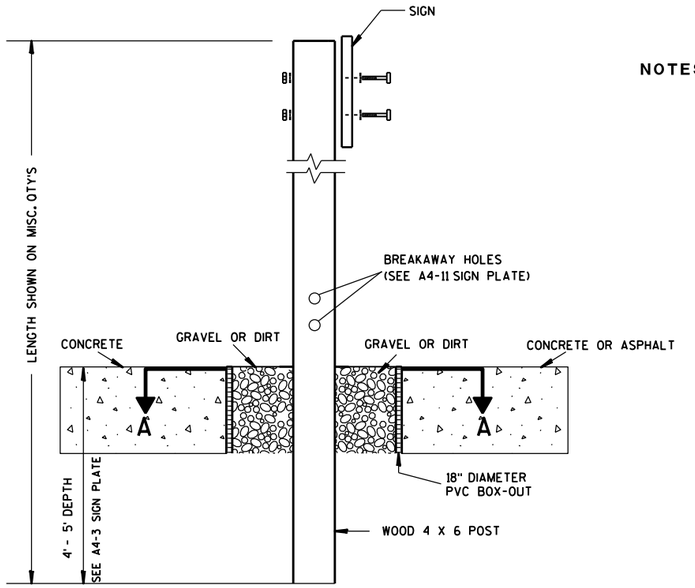
APPROVED Matthew R Rauch
for State Traffic Engineer

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

7

7

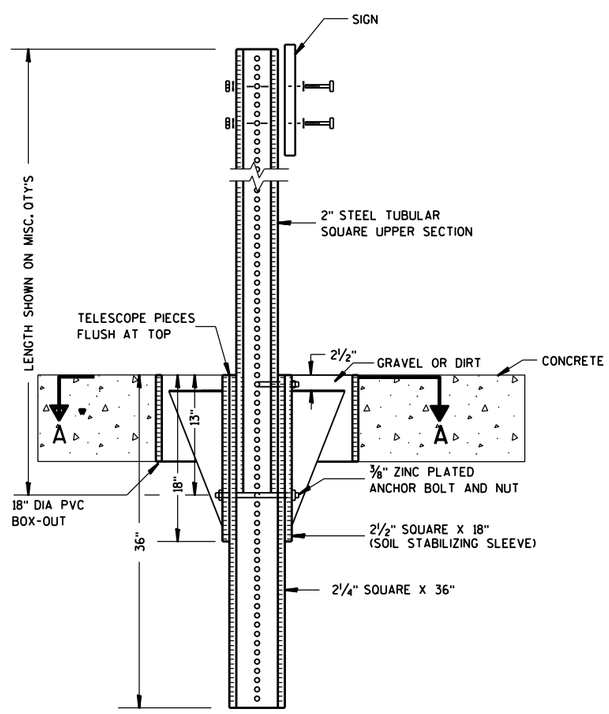
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 98	E



ELEVATION VIEW

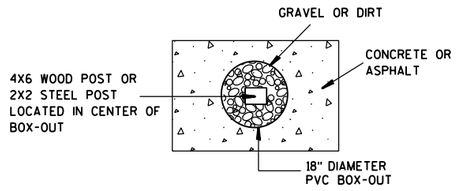
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

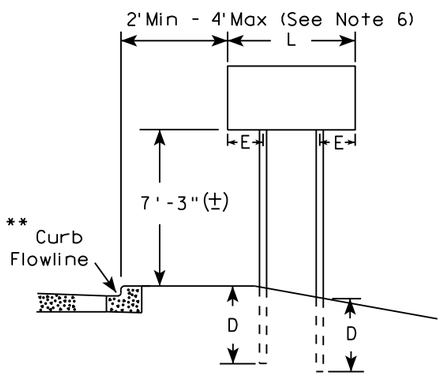
APPROVED Matthew R Rauch
for State Traffic Engineer

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

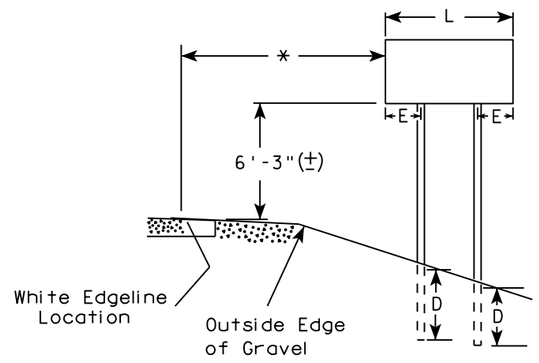
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

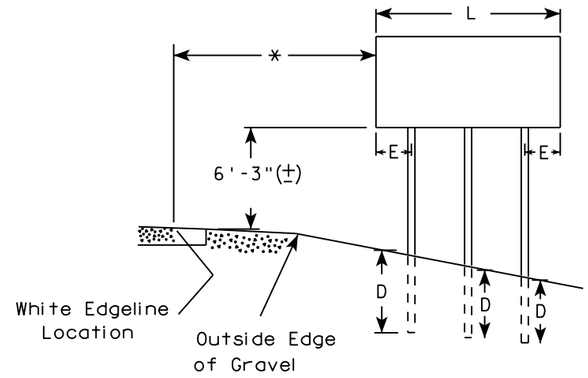
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

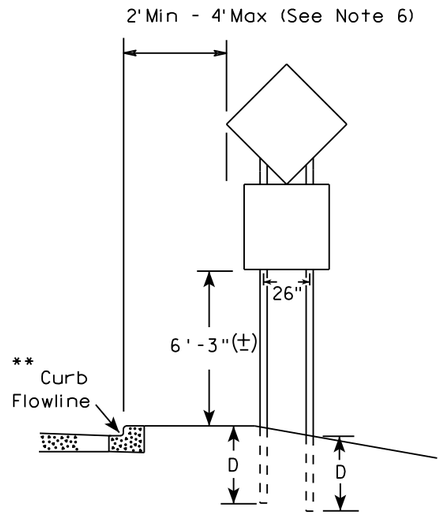
URBAN AREA



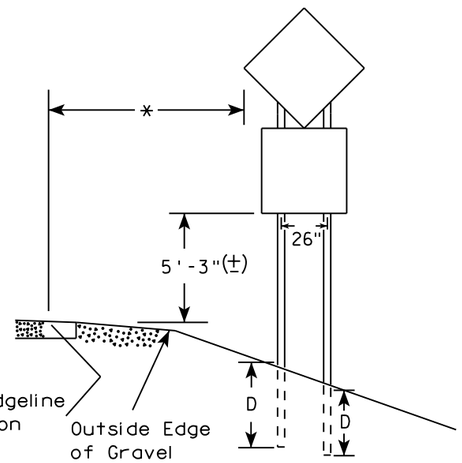
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

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

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

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

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

POST EMBEDMENT DEPTH

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

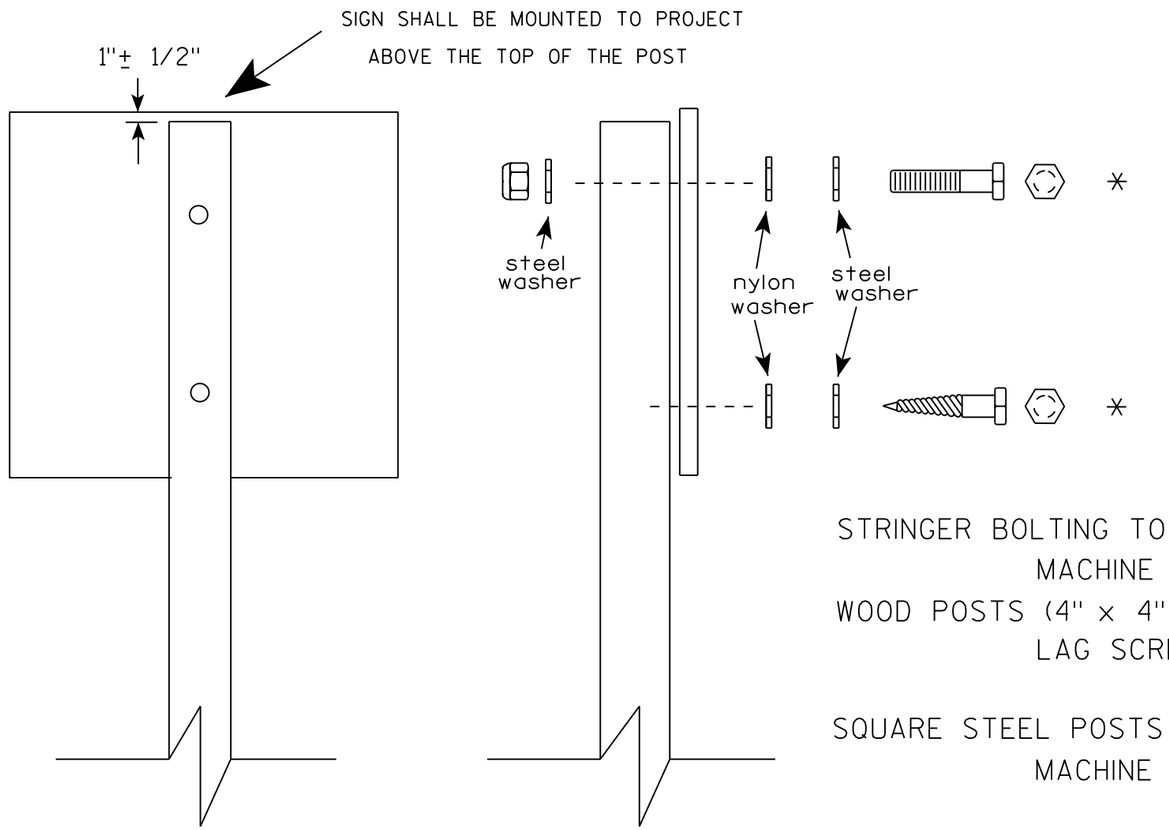
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 100	E



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

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)

3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)

3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

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

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

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

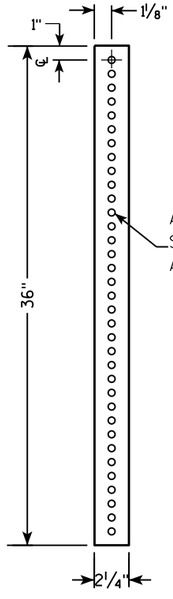
DATE 8/11/16 PLATE NO. A4-8.8

PROJECT NO: SHEET NO: E

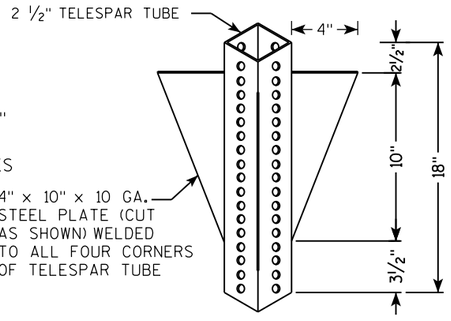
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 11-AUG-2016 11:35 PLOT BY : $$ plotuser $$

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

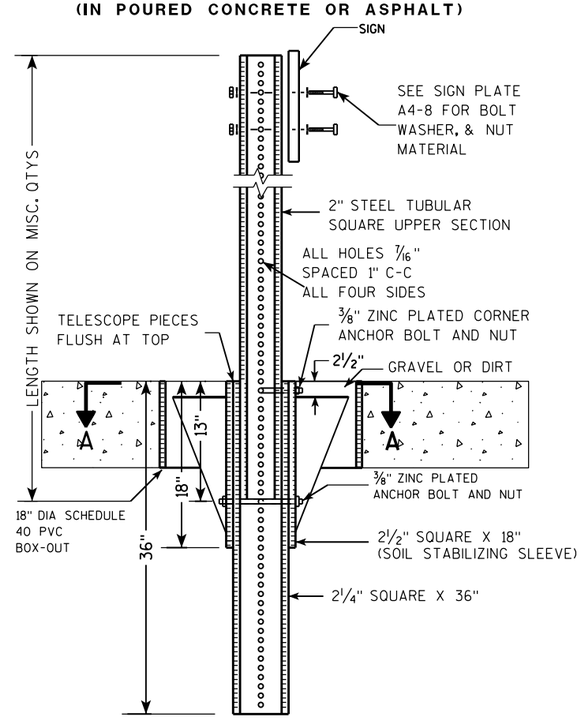
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



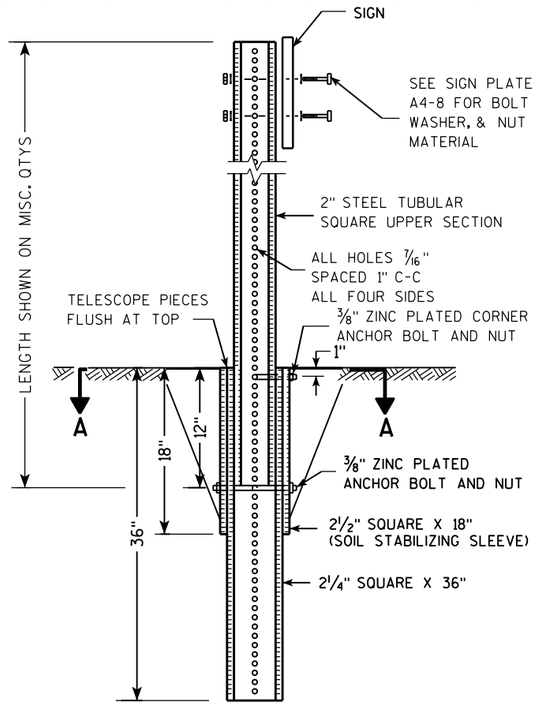
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

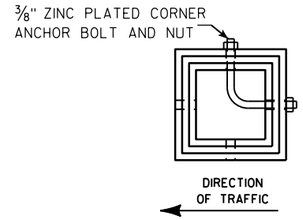


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





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

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

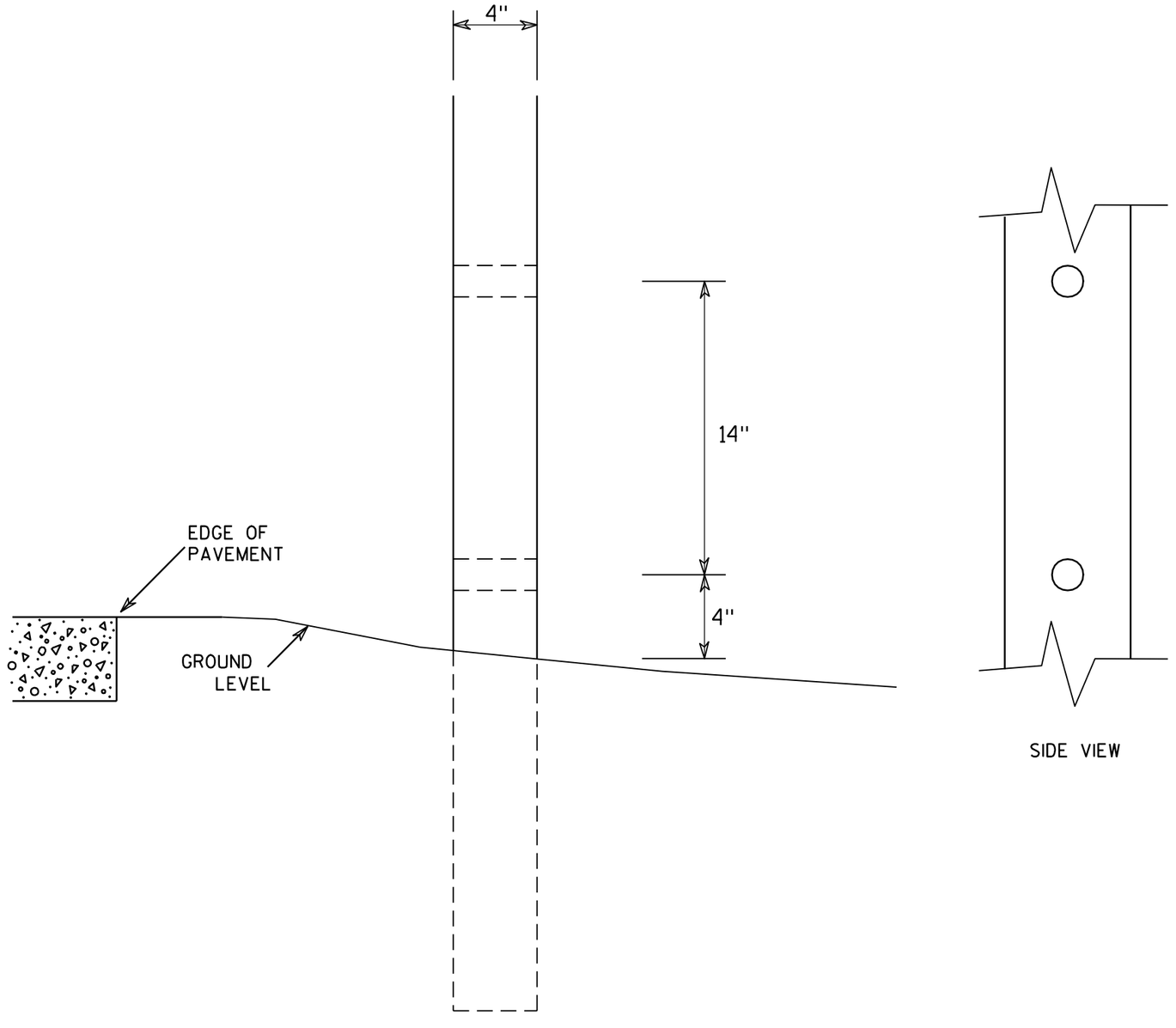
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 102 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

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

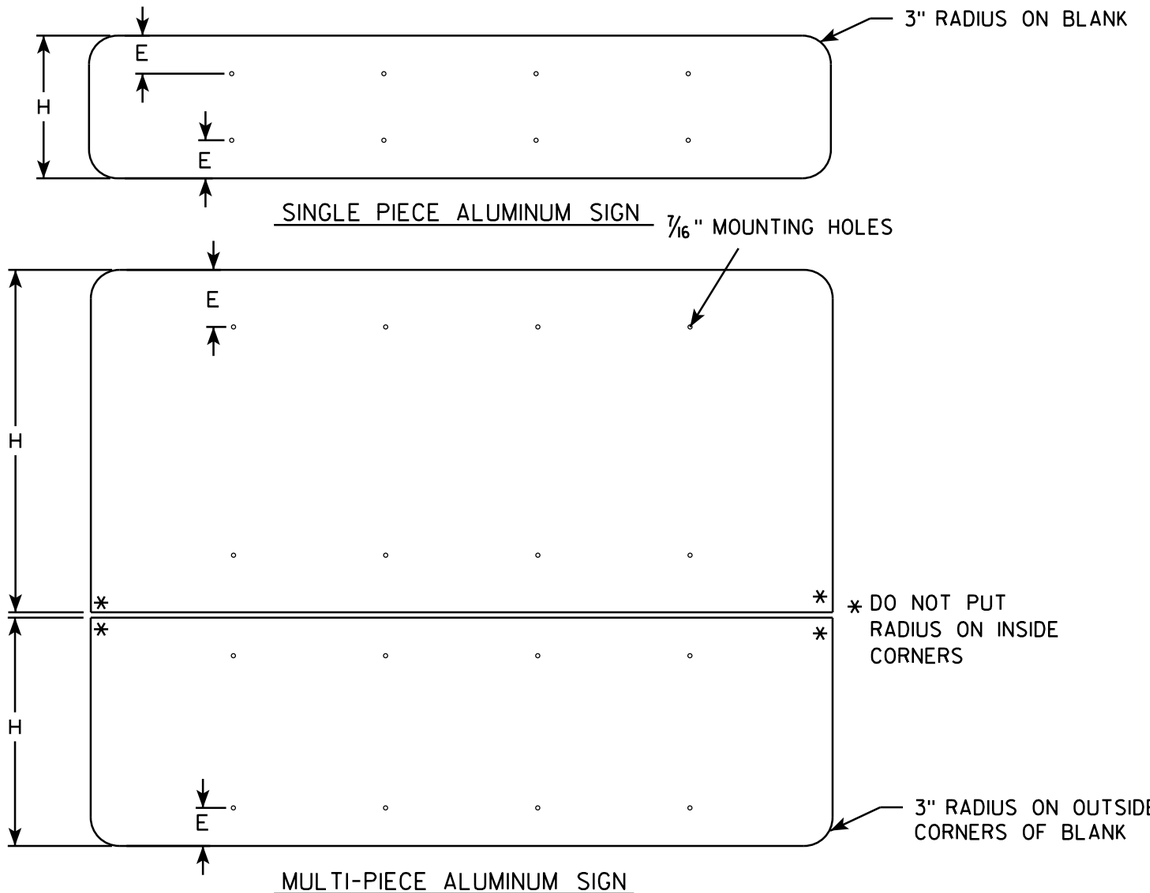
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

DATE 3/27/97 PLATE NO. A4-11.2

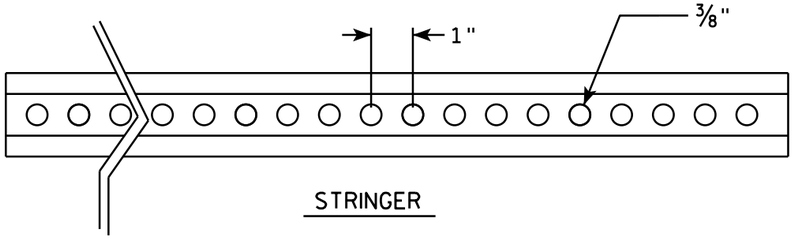
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 103	E



GENERAL NOTES

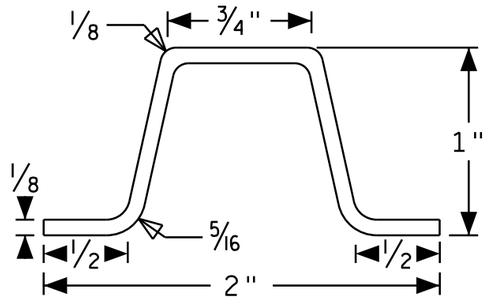
- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER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

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES
78"	72"	2	16"	15" 31" 47" 63"
84"	72"	2	17"	16½" 33½" 50½" 67½"
90"	72"	2	18"	18" 36" 54" 72"
96"	90"	2	19"	19½" 38½" 57½" 76½"
102"	90"	2	20"	21" 41" 61" 81"
108"	90"	2	21"	22½" 43½" 64½" 85½"
114"	108"	3	15"	12" 27" 42" 57" 72" 87" 102"
120"	108"	3	16"	12" 28" 44" 60" 76" 92" 108"
126"	108"	3	17"	12" 29" 46" 63" 80" 97" 114"
132"	126"	3	18"	12" 30" 48" 66" 84" 102" 120"
138"	126"	3	19"	12" 31" 50" 69" 88" 107" 126"
144"	126"	3	20"	12" 32" 52" 72" 92" 112" 132"

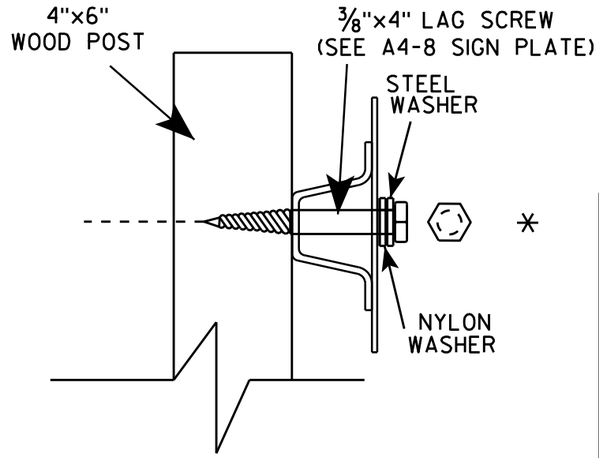


STRINGER

CROSS SECTION VIEW OF CHANNEL



POST MOUNTING



SIGN STRINGER MOUNTING REQUIREMENTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

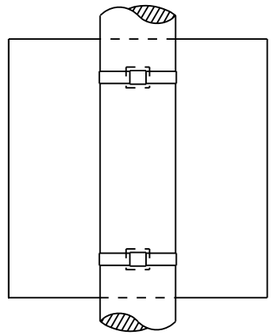
DATE 4/26/16 PLATE NO A4-18.1

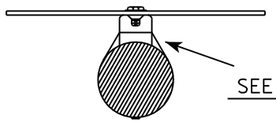
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A418.dgn PLOT DATE : 27-APR-2016 13:56 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 41.805205:1.000000

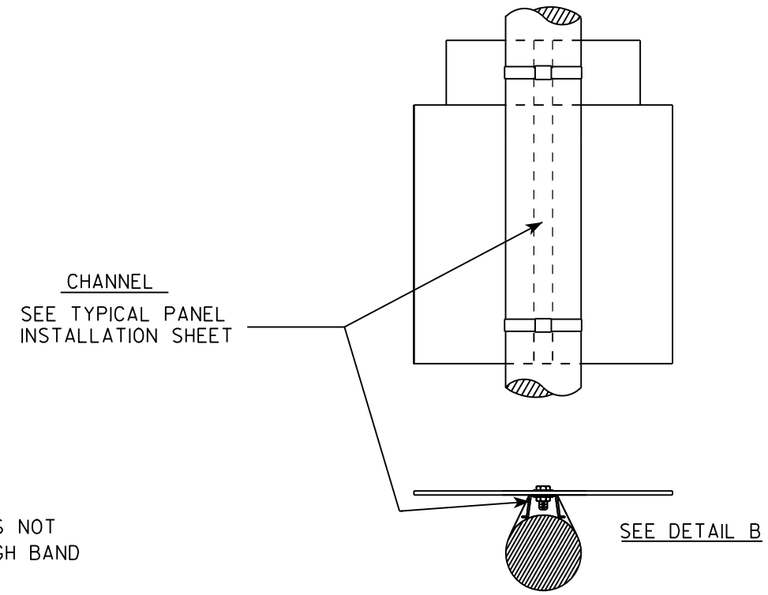
BANDING

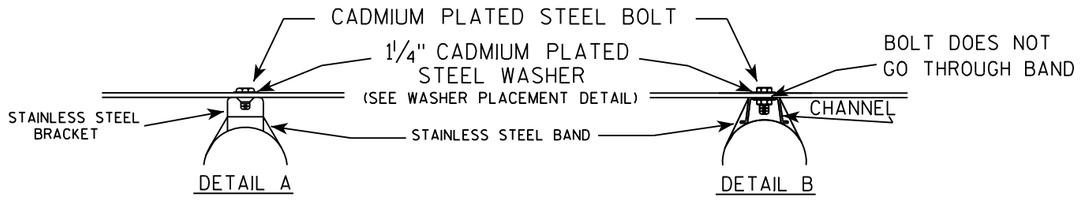
SINGLE SIGN



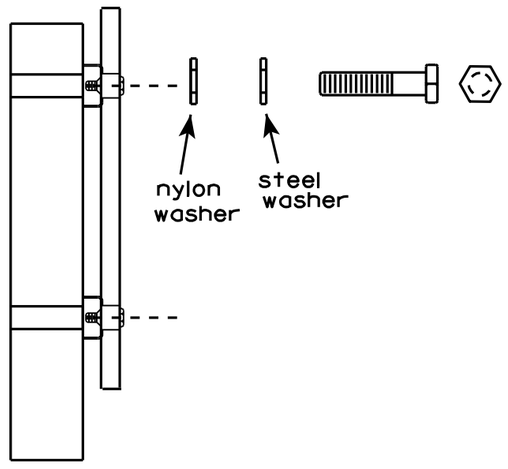


"J" ASSEMBLY





WASHER PLACEMENT



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

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.

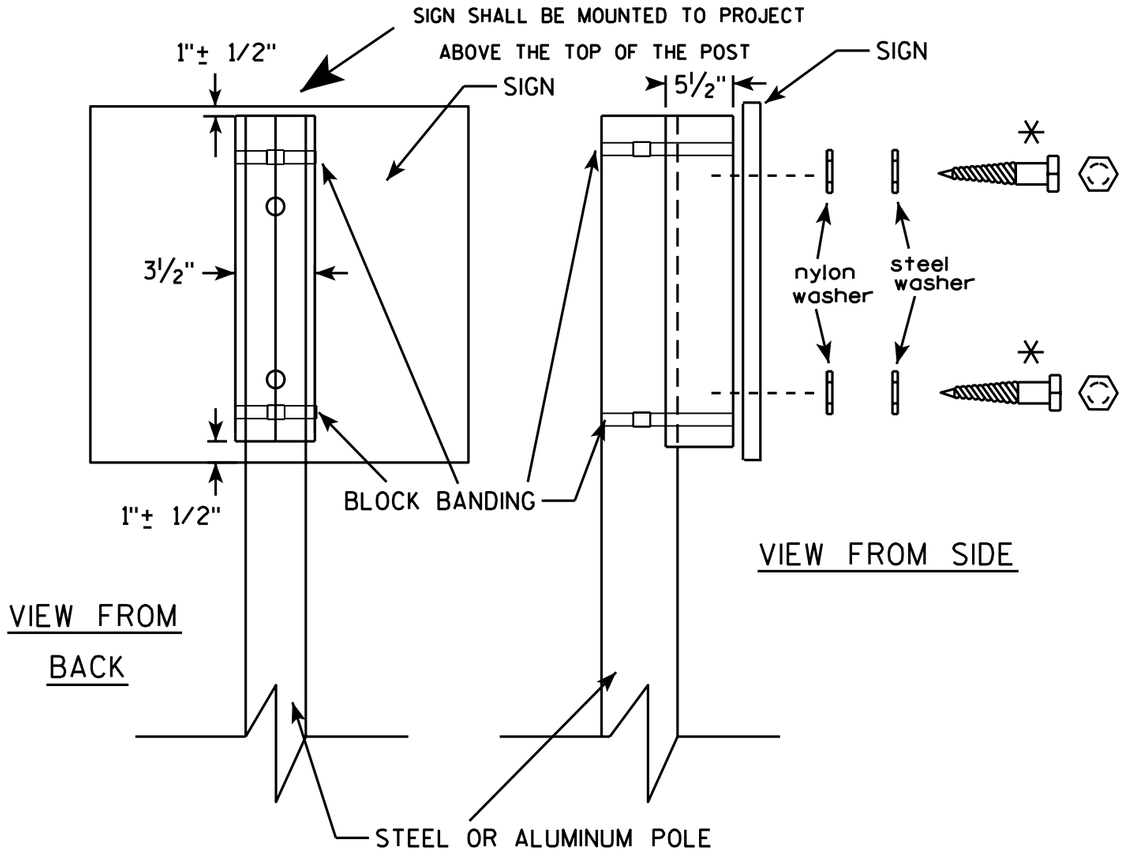
STANDARD SIGN
SIGN BANDING DETAILS

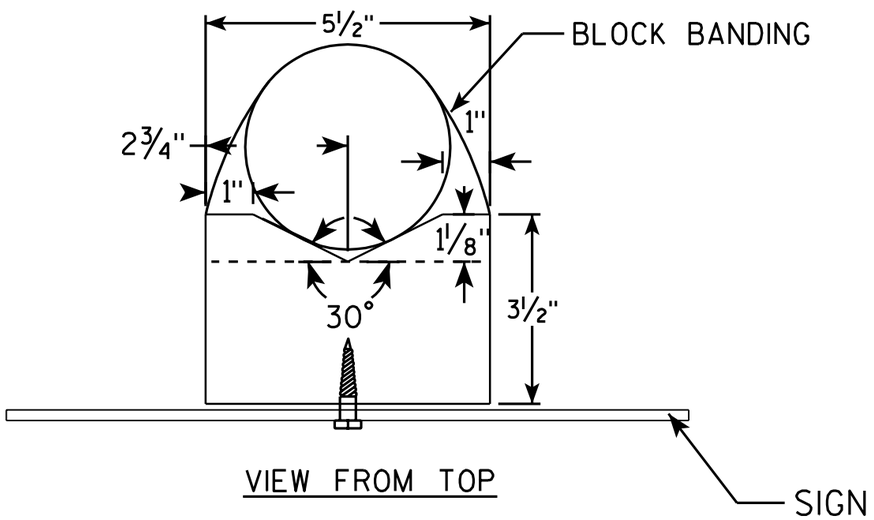
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 105	E





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
   b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
   c. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

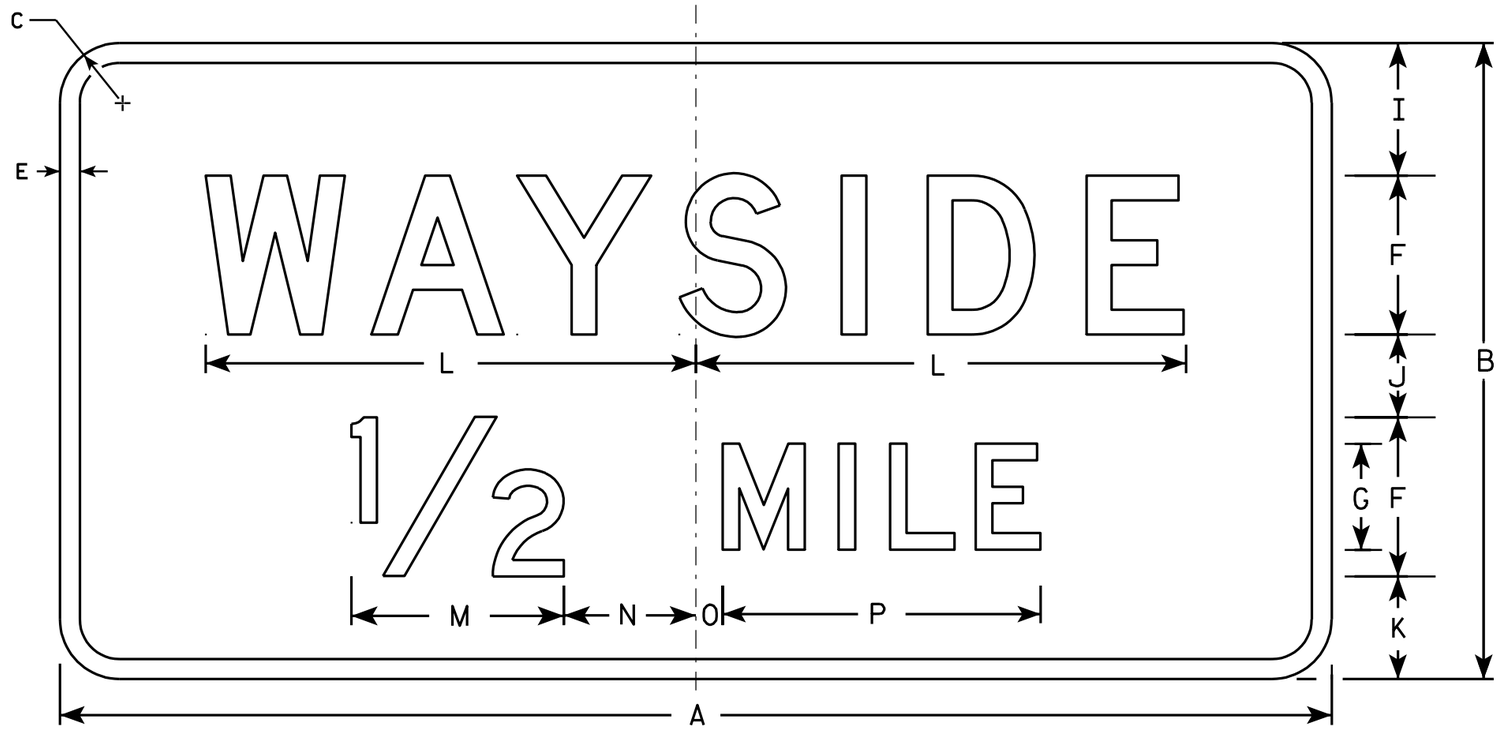
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

SHEET NO: 106 E



D5-61

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Blue
   Message - White
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.

Metric equivalent for this sign is:

SIZE	
1	
2	1200 mm X 600 mm
3	
4	1950 mm X 1050 mm
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		
1																												
2	48	24	2 1/4		3/4	6	4	6	5	3 1/8	3 7/8	18 1/2	8	5	1	12											8.0	0.72
3																												
4	78	42	3		1	10	7	10 1/2	8 3/4	5 3/4	7	30 1/8	14	8 3/4	1 3/4	21											22.8	2.05
5																												

STANDARD SIGN
D5-61

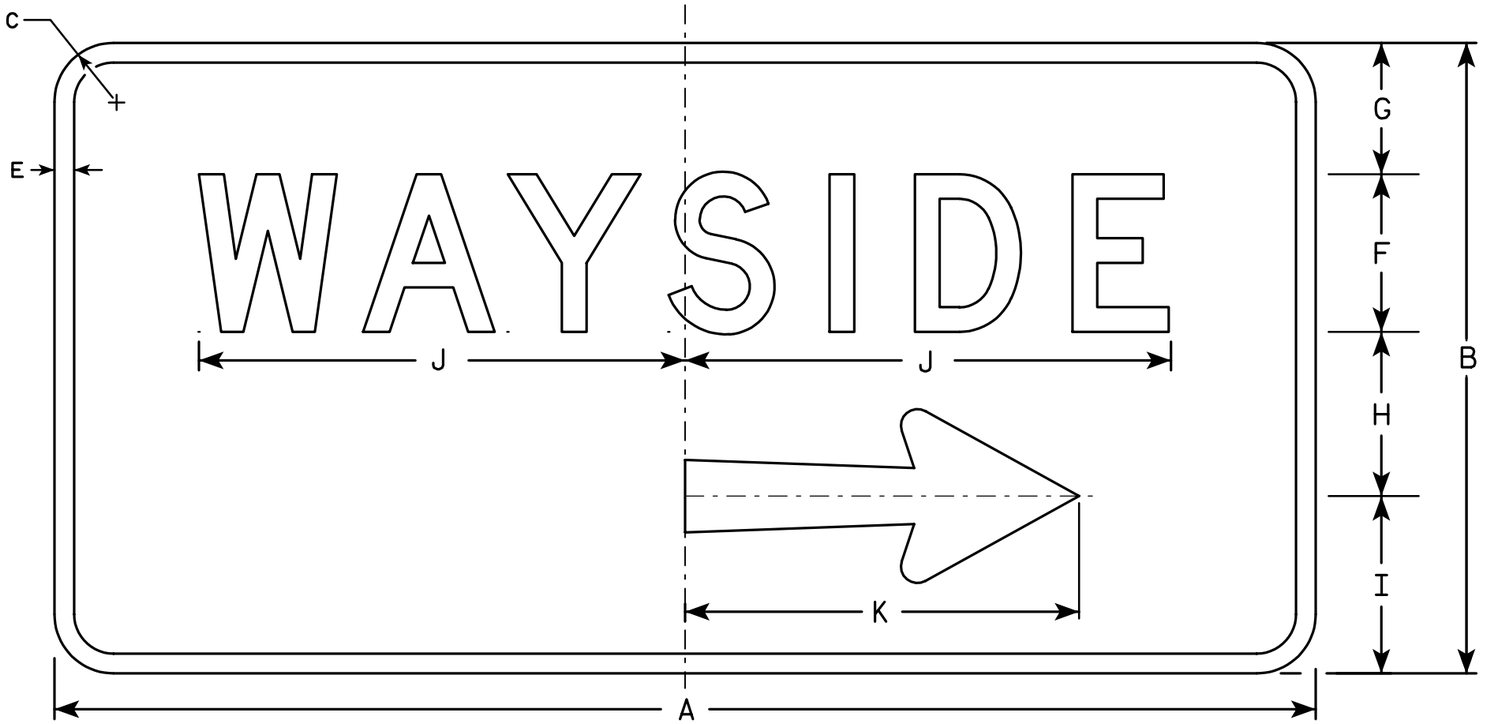
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spagg for State Traffic Engineer

DATE 1/09/02 PLATE NO. D5-61.9

STATE PROJECT NUMBER:

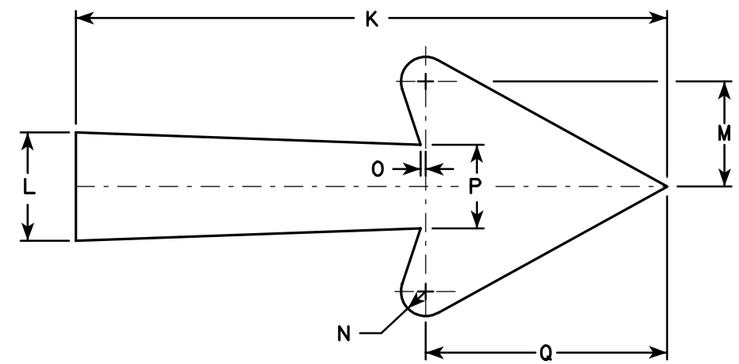
SHEET NO: 107 E



D5-62R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Blue
   Message - White
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. D5-62L is the same as D5-62R except that the arrow is rotated 180° about the vertical center line.



Arrow Detail

Metric equivalent for this sign is:

SIZE	
1	
2	1200 mm X 600 mm
3	
4	1950 mm X 1050 mm
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.	Area m2
1																												
2	48	24	2 1/4		3/4	6	4	6 1/4	6 3/4	18 1/2	15	2 3/4	3 1/8	5/8	1/8	2 1/8	6 1/8										8.0	0.72
3																												
4	78	42	3		1	10	8 3/4	11	12 1/4	30 1/8	26 1/4	4 3/4	4 5/8	1 1/8	1/4	3 3/4	10 3/4										22.8	2.05
5																												

STANDARD SIGN
D5-62

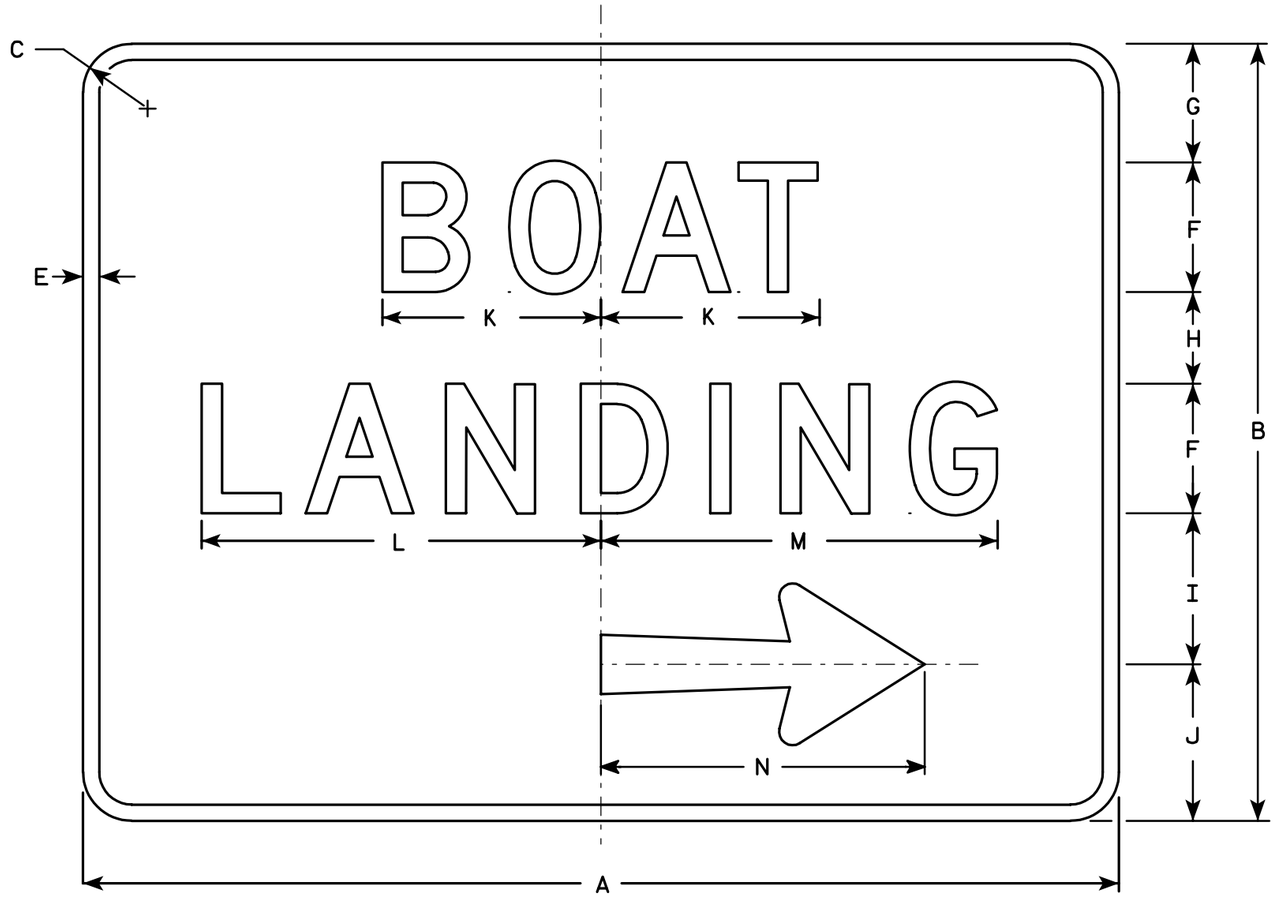
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spagg for State Traffic Engineer

DATE 1/09/02 PLATE NO. D5-62.10

STATE PROJECT NUMBER:

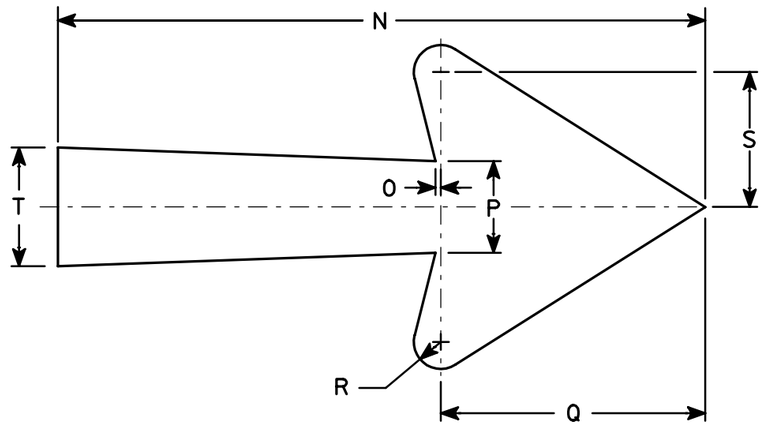
SHEET NO: 108 E



D7-56R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Brown
   Message - White - Type H Reflective
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. D7-56L is the same as D7-56R except the arrow is reversed.



Arrow Detail

Metric equivalent for this sign is:

SIZE	
1	
2	1200 mm X 900 mm
3	
4	
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.	Area m2
1																												
2	48	36	2 1/4		3/4	6	5 1/2	4 1/4	7	7 1/4	10 1/8	18 1/2	18 3/8	15	1/8	2 1/8	6 1/8	5/8	3 1/8	2 3/4							12.0	1.08
3																												
4																												
5																												

STANDARD SIGN
D7-56

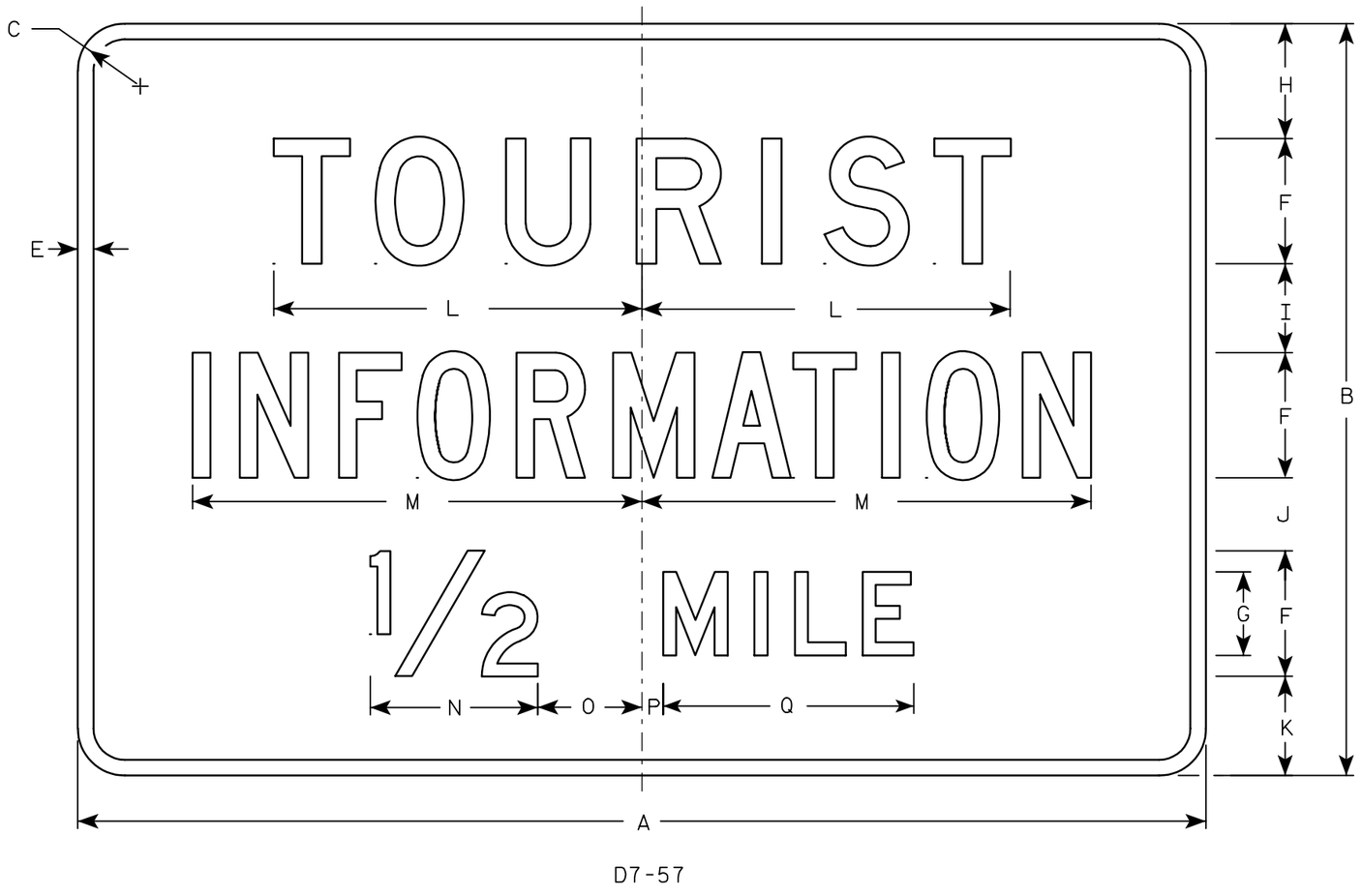
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Sprenger for State Traffic Engineer

DATE 1/10/02 PLATE NO. D7-56.8

STATE PROJECT NUMBER:

SHEET NO: 109 E



D7-57

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Blue
   Message - White - Type H Reflective
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 & 3 are series D
   Line 2 is series C.

Metric equivalent for this sign is:

SIZE	
1	
2	1350 mm X 900 mm
3	
4	
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.	Area m2
1																												
2	54	36	2 1/4		3/4	6	4	5 1/2	4 1/4	3 1/2	4 3/4	17 5/8	21 1/2	8	5	1	12										13.5	1.22
3																												
4																												
5																												

STANDARD SIGN
D7-57

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spacy for State Traffic Engineer

DATE 1/10/02 PLATE NO. D7-57.5

STATE PROJECT NUMBER:

SHEET NO: 110 E

7

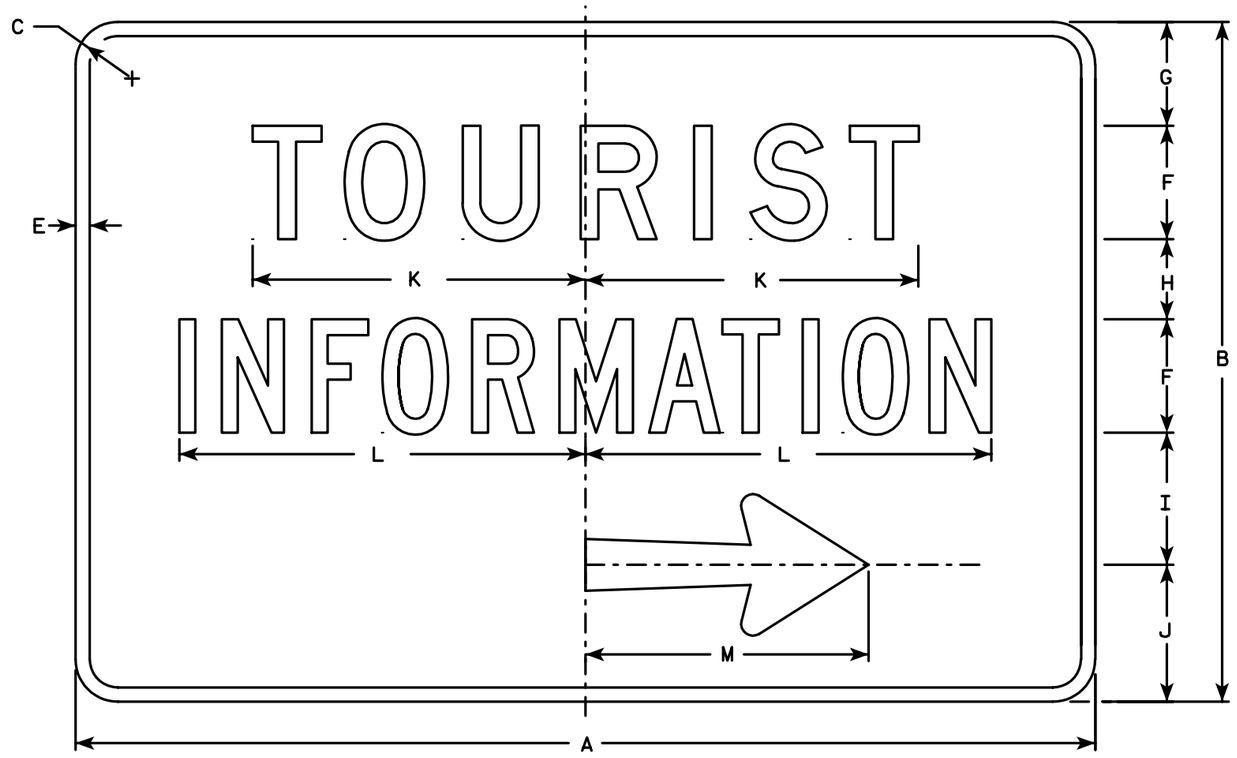
7

58,59,60,61,62,63

LEVELS ON - 2.3. 5.6. 10.

FILE NAME : C:\Users\Projects\tr_stdplate\D757.DGN PLOT DATE : 22-JAN-2002 08:10 ORG DATE : 5/22/97 Originator : Don Kluever

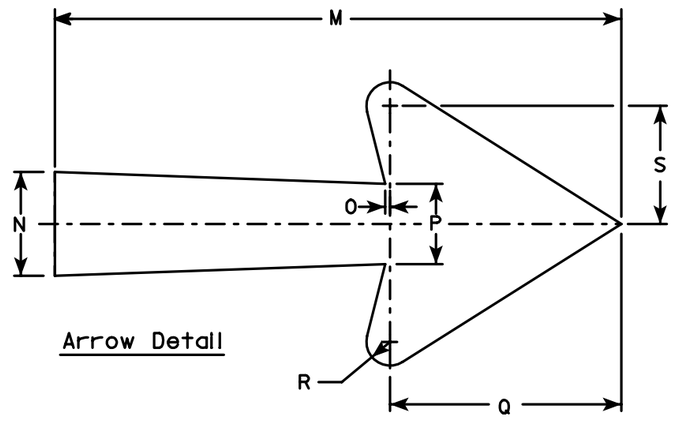
WISDOT/CADDS SHEET 42



D7-59R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Blue
   Message - White - Type H Reflective
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 are series D
   Line 2 is series C
6. D7-59L is same as D7-59R except the arrow is reversed.



Arrow Detail

Metric equivalent for this sign is:

SIZE	
1	
2	1350 mm X 900 mm
3	
4	
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.	Area m2
1																												
2	54	36	2 1/4		3/4	6	5 1/2	4 1/4	7	7 1/4	17 5/8	21 1/2	15	2 3/4	1/8	2 1/8	6 1/8	5/8	3 1/8								13.5	1.22
3																												
4																												
5																												

STANDARD SIGN
D7-59

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spear
for State Traffic Engineer

DATE 1/11/02 PLATE NO. D7-59.6

STATE PROJECT NUMBER:

SHEET NO: 111 E

7

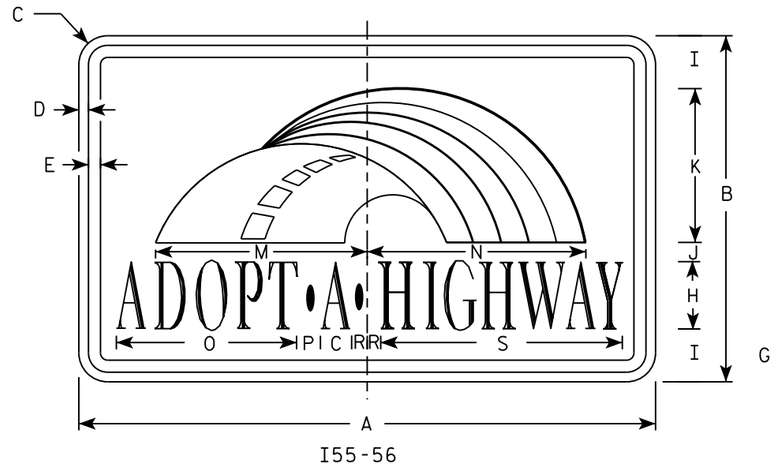
7

58,59,60,61,62,63

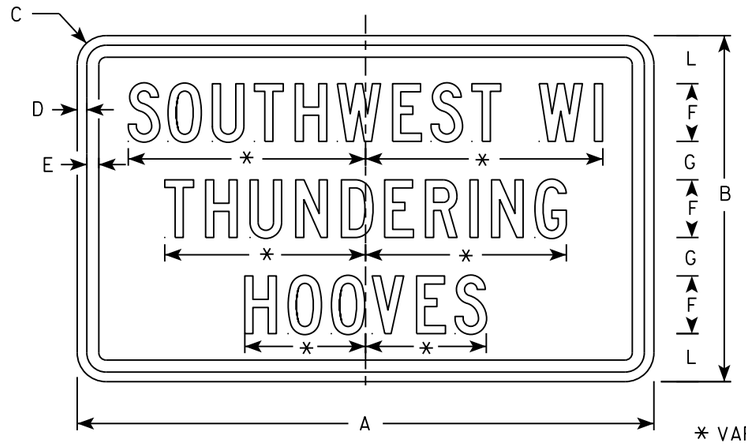
LEVELS ON - 2.3. 5.6. 10.

FILE NAME : C:\Users\Projects\tr_stdplate\D759.DGN PLOT DATE : 22-JAN-2002 08:12 ORG DATE : 5/21/97 Originator : Don Kluever

WISDOT/CADDS SHEET 42



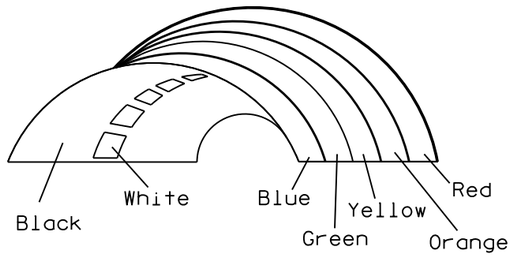
I55-56



I55-56P

* VARIES

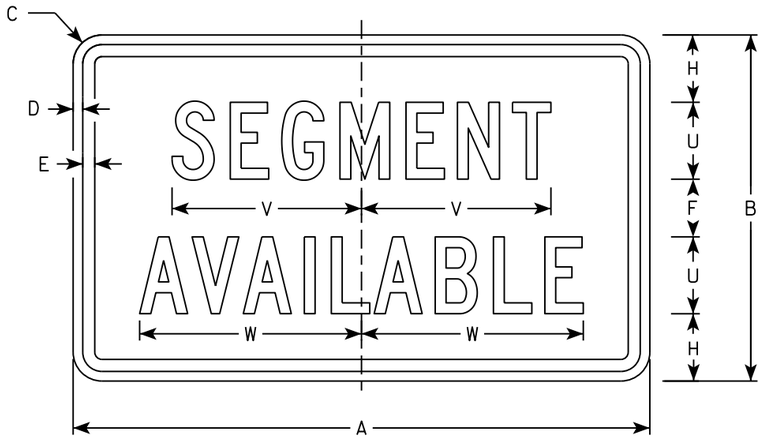
Background Colors of Symbol*



*1/4" Black Border between each color of rainbow and border of rainbow

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - (See Note 4)
3. Message Series - (See Note 5)
4. Border - Blue
   Adopt a Highway - Red
   All other Text - Blue
5. Adopt a Highway - Dutch 8011L
   All other Text - Series C
6. Contractor shall provide and install a new post bracket in accordance with the I55-56B sign detail.



I55-56S

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	18	1 1/2	1/2	5/8	3	2	3 1/2	2 3/4	1	8	2 1/2	11 1/4	11 1/8	9 3/8	1 1/4		3/4	12 5/8	7 1/2	4	9 7/8	11 1/2				3.75
3																											
4																											
5																											

STANDARD SIGN
I55-56

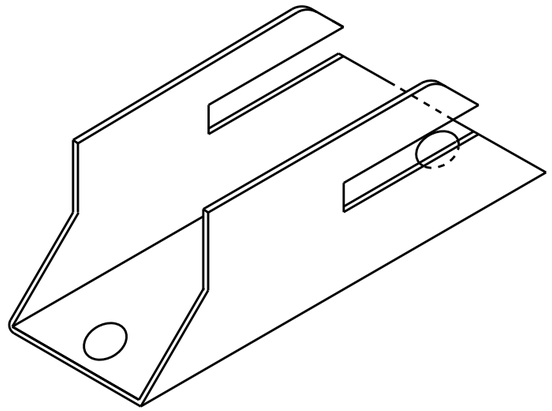
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

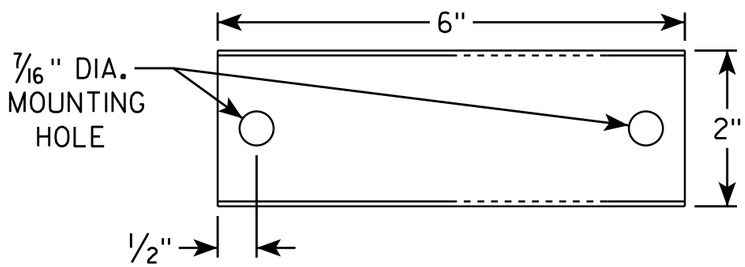
DATE 2/20/18 PLATE NO. I55-56.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 112 | E

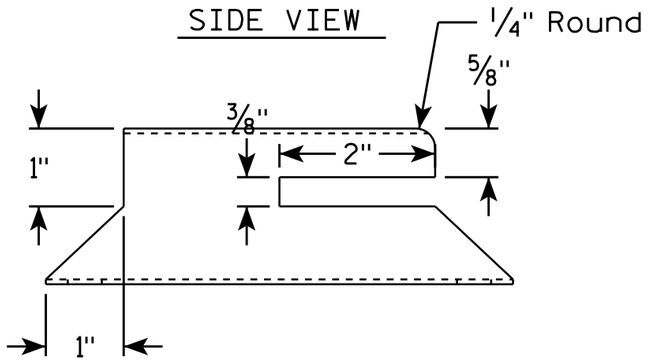
ISOMETRIC VIEW



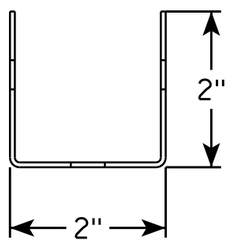
TOP VIEW



SIDE VIEW



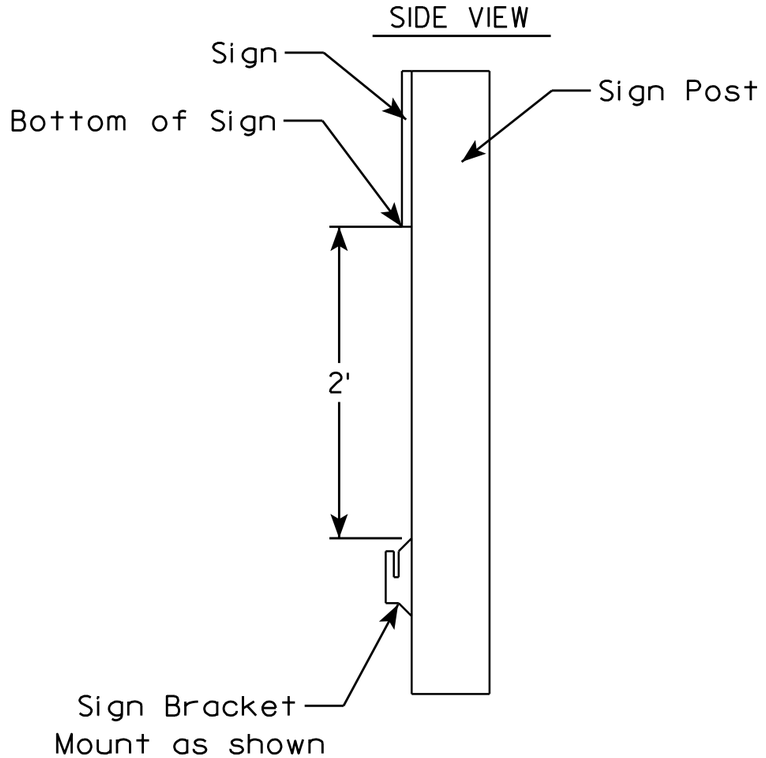
END VIEW



NOTES

1. Must be capable of permanent attachment to a wood or steel channel sign post utilizing the fastening hardware specified on the A4-8 sign plate.
2. Shall be entirely primed and painted with two coats of a black powder coated enamel paint.
3. Shall be made with 12 gauge steel, and incorporate no welds, no hinged components, no threaded lock-type components, and no parts which are loose or can be separated from the main body.
4. Shall have rounded edges with at least 1/8" radii.
5. Shall not have unrounded and uncoated metal edges which can contact the back surface of the roll-up sign.
6. Top of bracket shall be mounted 2' below the bottom of the I55-56 sign.
7. Cost of bracket and fastening hardware shall be incidental to the I55-56 sign.

SIDE VIEW



7

7

ROLLUP SIGN BRACKET
I55-56B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

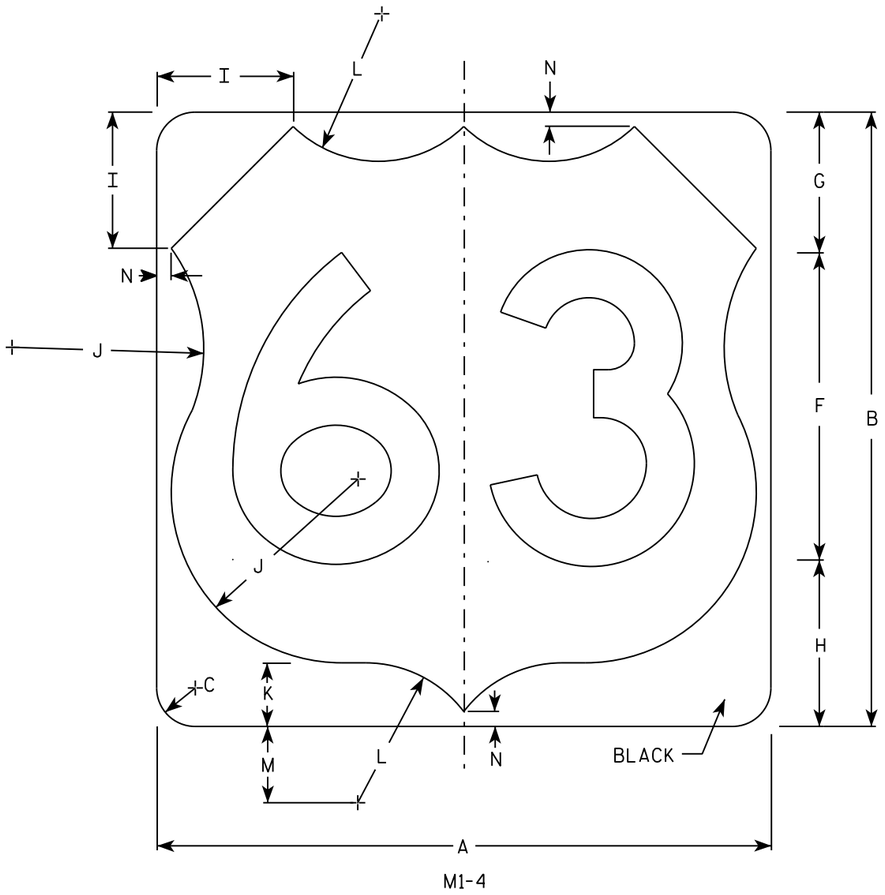
DATE 4/26/16 PLATE I55-56B.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

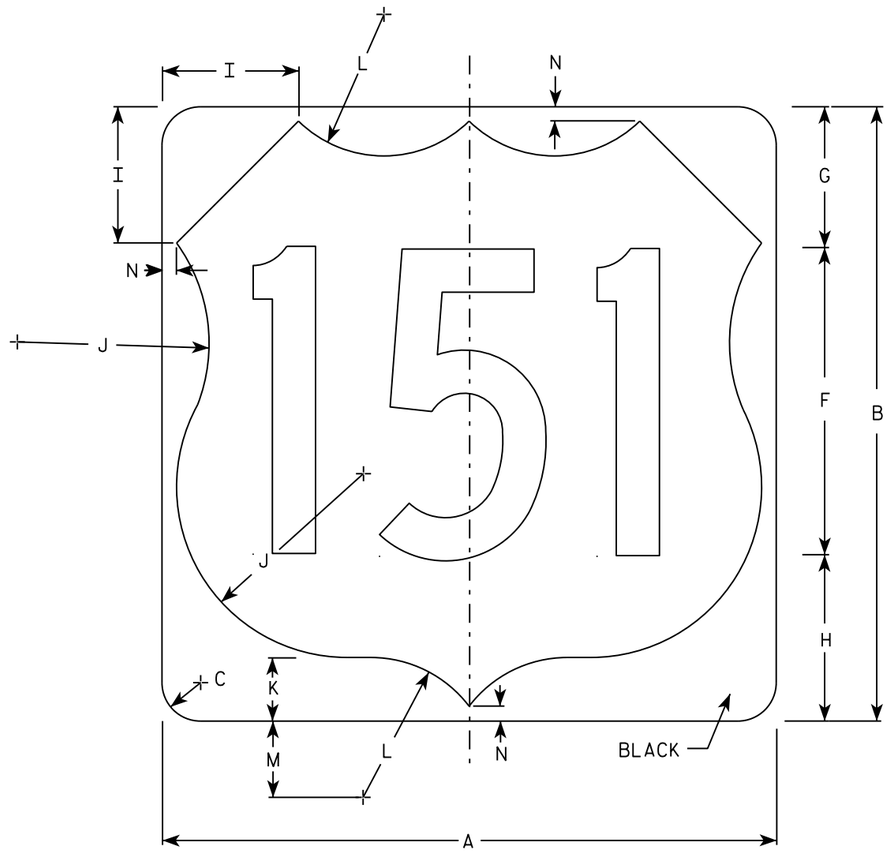
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\I5556B.DGN PLOT DATE : 26-APR-2016 17:29 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 1.945842:1.000000 WISDOT/CADDS SHEET 42

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D except 3 number signs 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.



M1-4



M1-4

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	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0

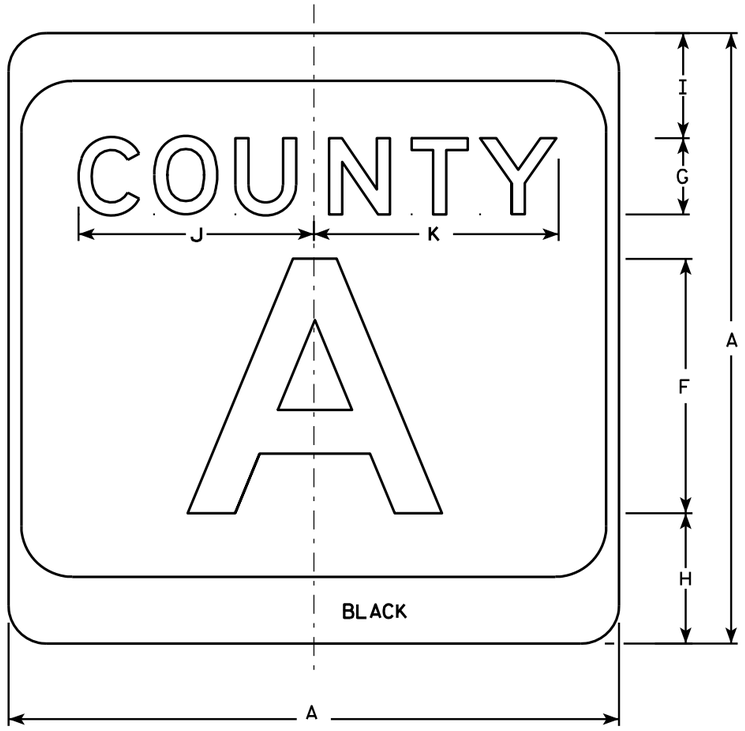
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

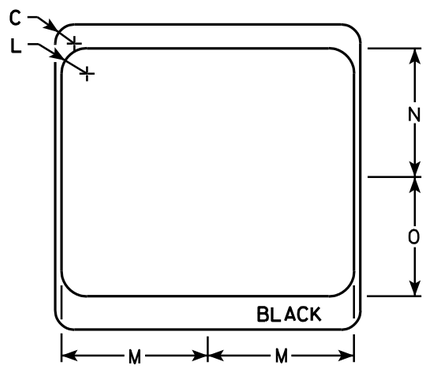
APPROVED Matthew R Rauch
for State Traffic Engineer

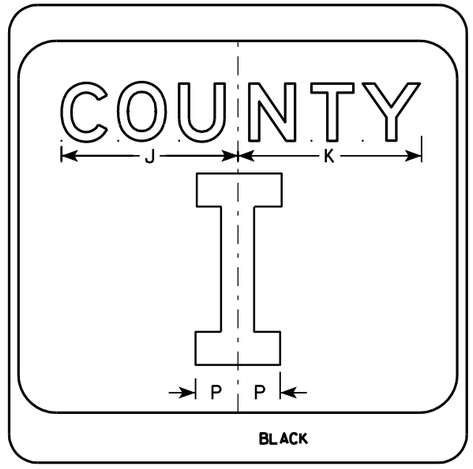
DATE 3/16/18 PLATE NO. M1-4.10

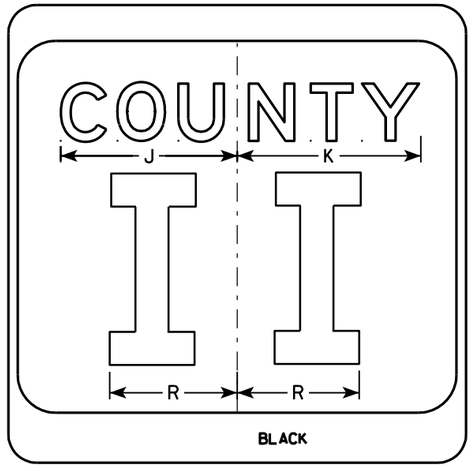
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 114	E



M1-5A







NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 7
   Message - Black
3. Message Series - see Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

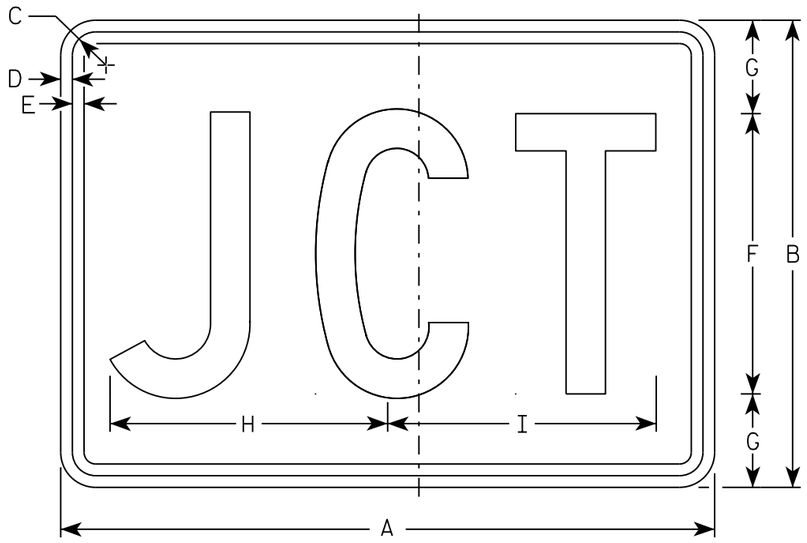
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

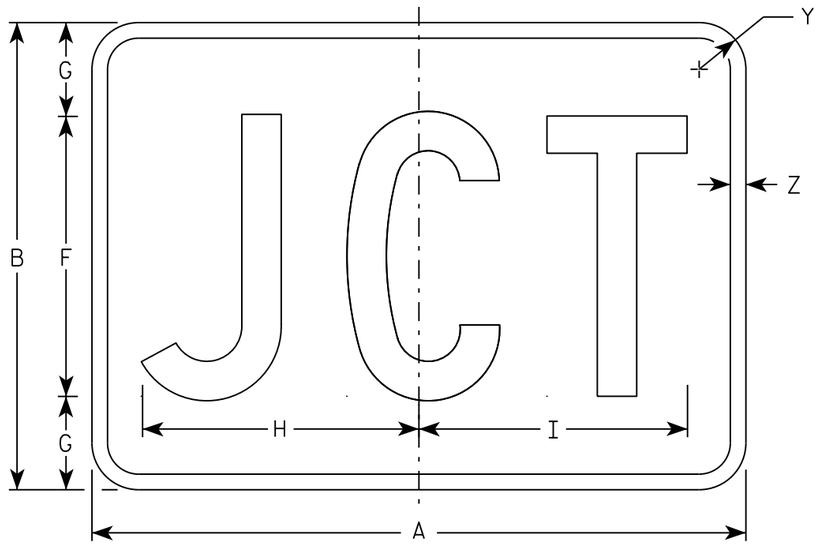
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 115	E



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

NOTES

1. Sign is 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. M2-1 Background - White
   Message - Black
   MB2-1 Background - Blue
   Message - White
   MK2-1 Background - Green
   Message - White
   MM2-1 Background - White
   Message - Green
   MN2-1 Background - Brown
   Message - White
   MP2-1 Background - White
   Message - Blue
   MR2-1 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	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

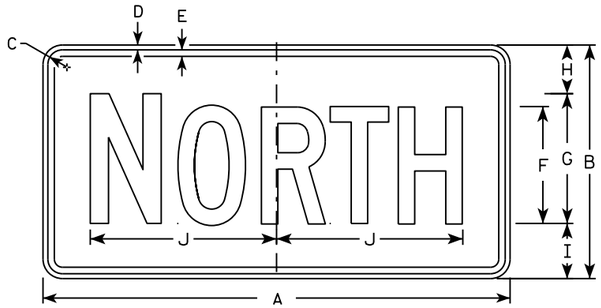
STANDARD SIGN
M2-1

WISCONSIN DEPT OF TRANSPORTATION

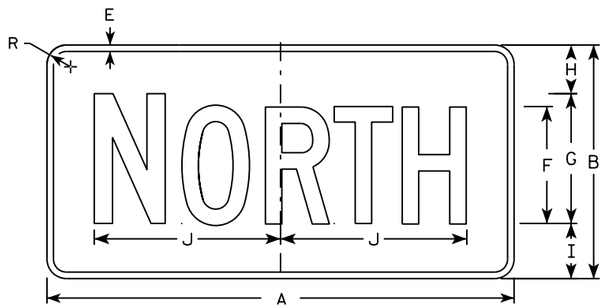
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 116 12-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



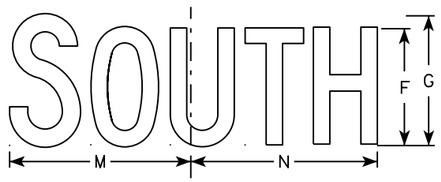
M3-1
MM3-1
MP3-1



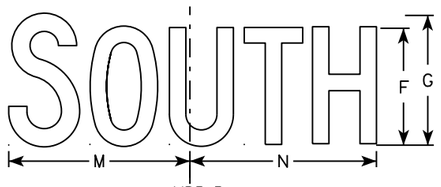
MB3-1
MK3-1
MN3-1

M3-2
MM3-2
MP3-2

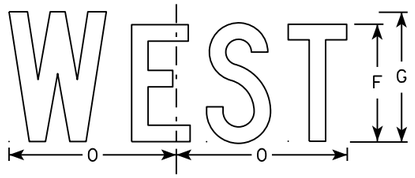
MB3-2
MK3-2
MN3-2



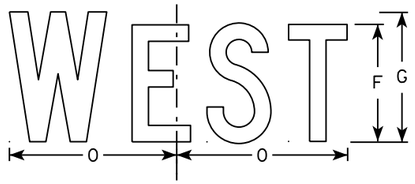
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

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

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

STANDARD SIGNS
M3-1 thur M3-4
SERIES

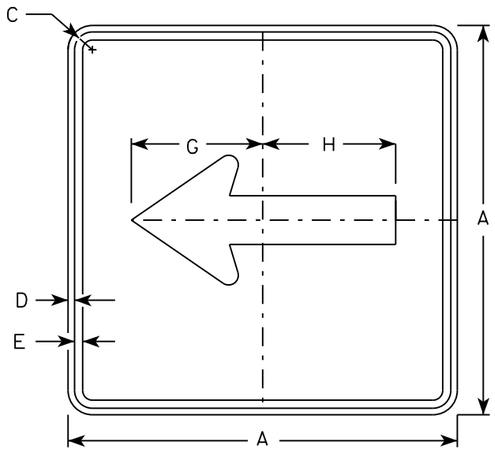
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

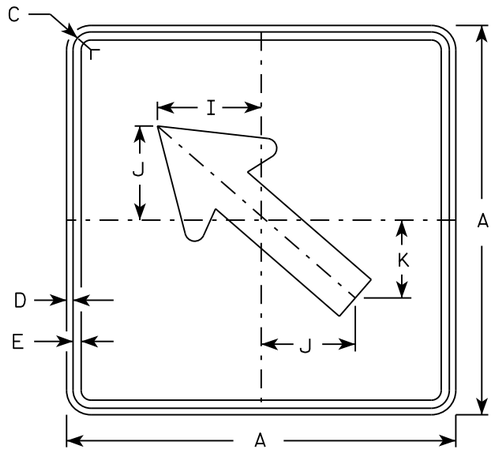
DATE 10/15/15 PLATE NO M3-1.14

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



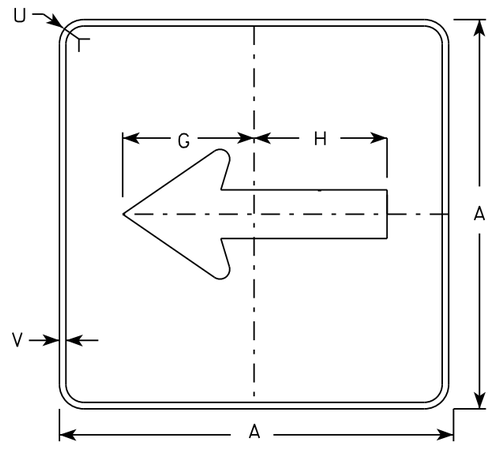
M6-1
MM6-1
MO6-1
MP6-1



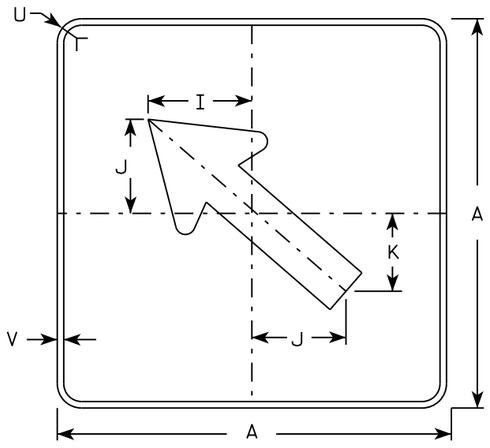
M6-2
MM6-2
MO6-2
MP6-2

NOTES

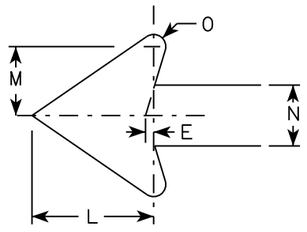
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 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



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



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



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

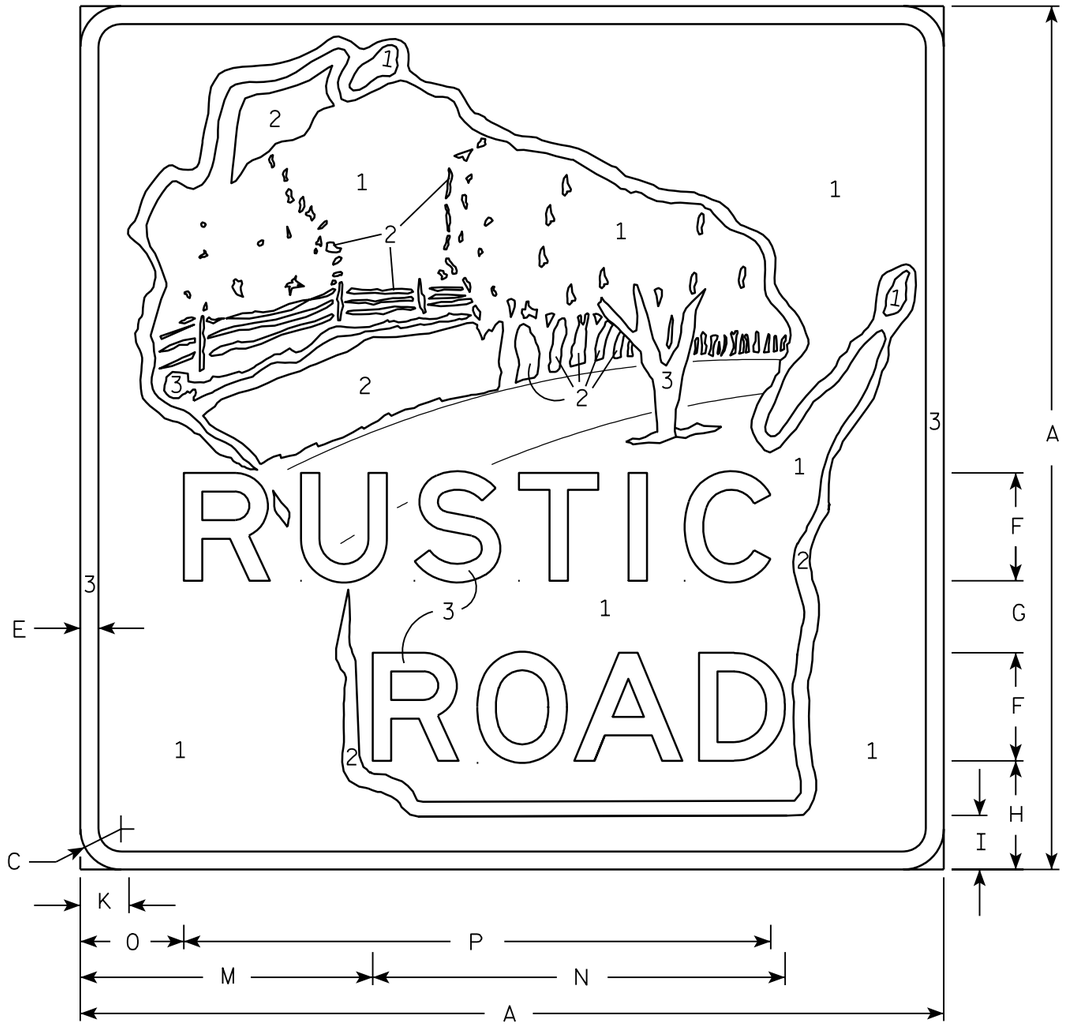
STANDARD SIGN M6-1 & M6-2 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 118 M6-1.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 5
   Message - See note 5.
3. Message Series - Modified 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. The sign will be color coded by numerical designation Numeral *1 Brown
   2 Type H Reflective White
   3 Reflective Yellow

   Exact color descriptions will be furnished upon request.

Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	
4	
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.	Area m2
1																												
2	24		1 1/8		1/2	3	2	3	1 1/2		1 3/8		8 1/8	11 1/4	2 7/8	16 1/4											4.0	0.36
3																												
4																												
5																												

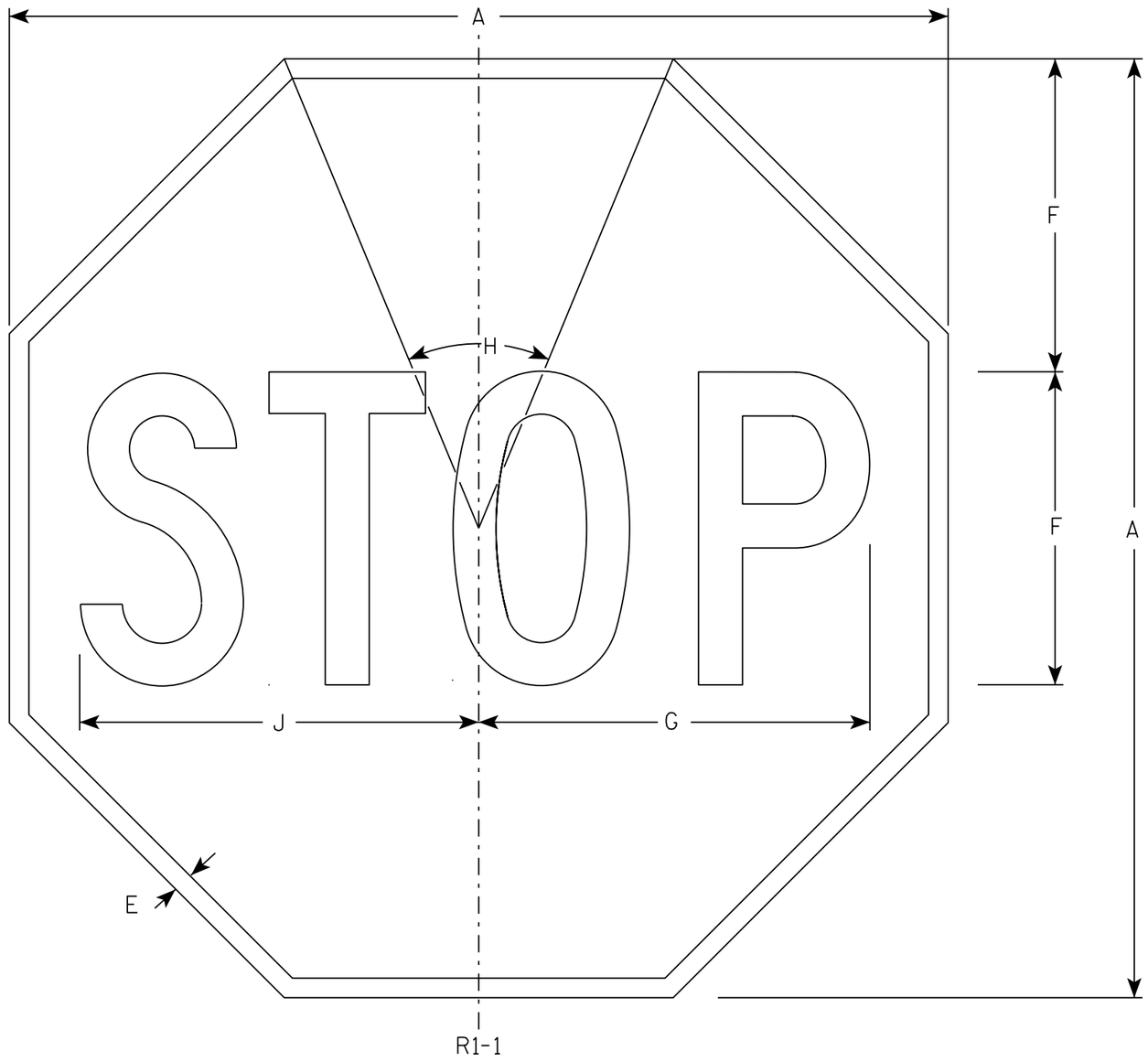
STANDARD SIGN
MR1-99

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/05 PLATE NO. MR1-99.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 119	E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

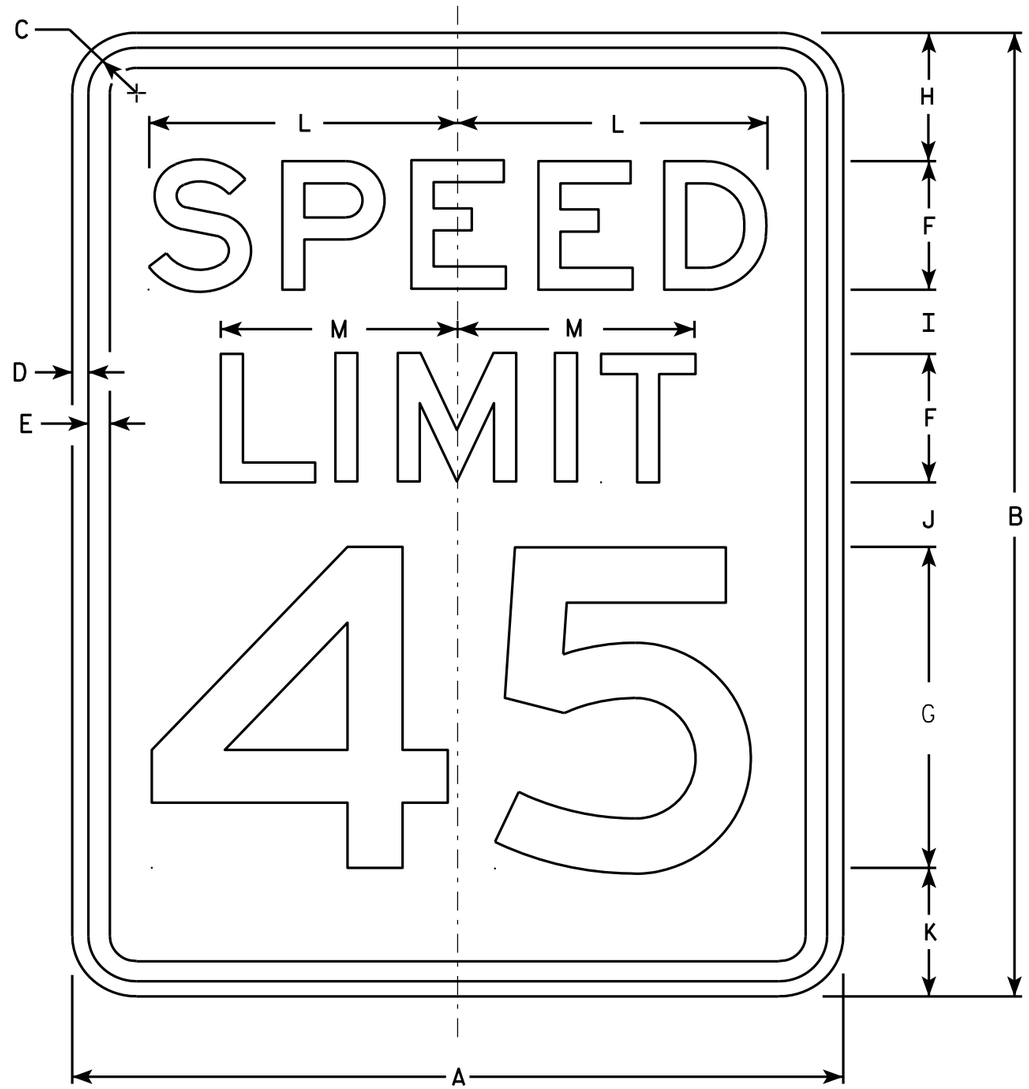
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 120	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

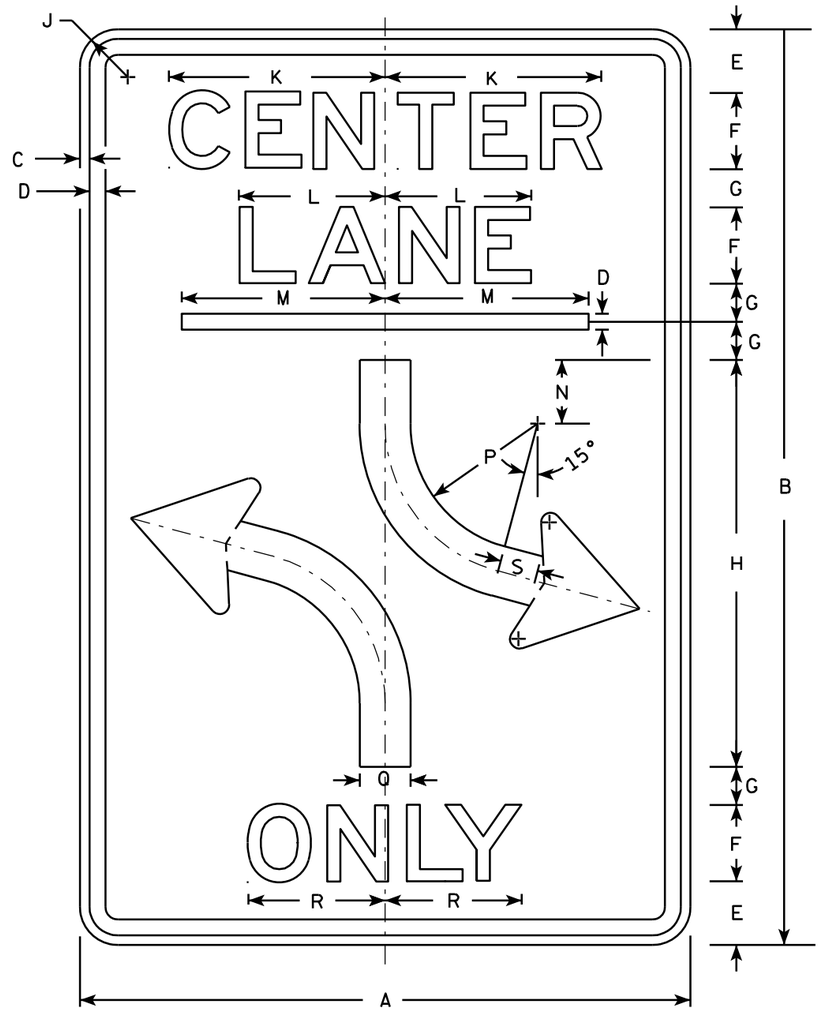
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

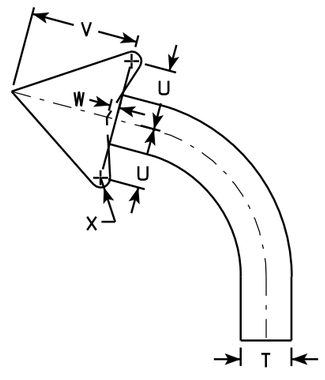
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 121 | E



R3-9B

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.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	3/8	1/2	2 1/2	3	1 1/2	16		1 1/2	8 1/2	5 3/4	8	2 1/2		6	2	5 1/8	1 1/2		2 3/8	4 3/8	3/8				6.0
2M	24	36	3/8	1/2	2 1/2	3	1 1/2	16		1 1/2	8 1/2	5 3/4	8	2 1/2		6	2	5 1/8	1 1/2		2 3/8	4 3/8	3/8				6.0
3	36	48	5/8	7/8	3 1/2	5	1 1/2	20		2 1/4	14 1/8	9 1/2	12	3		4	3	9 7/8	2		3 1/2	6 1/8	1/2				12.0
4																											
5																											

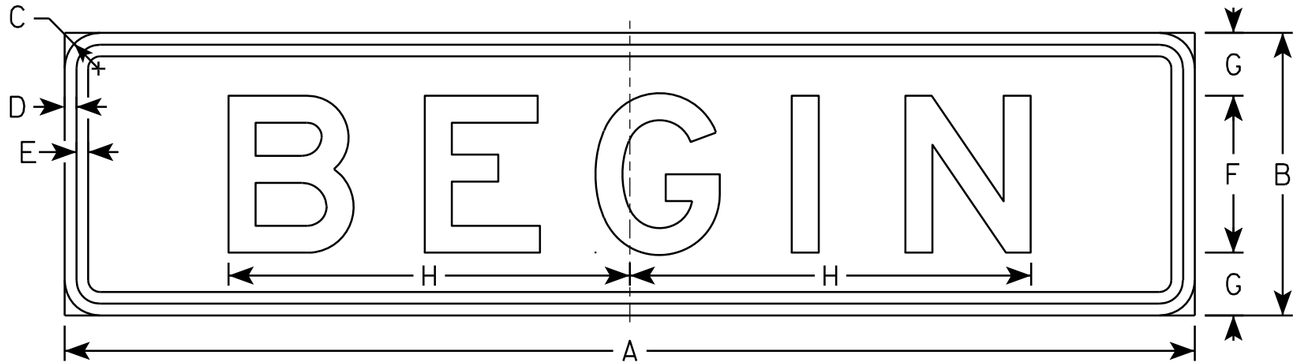
STANDARD SIGN
R3-9B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-9B.5

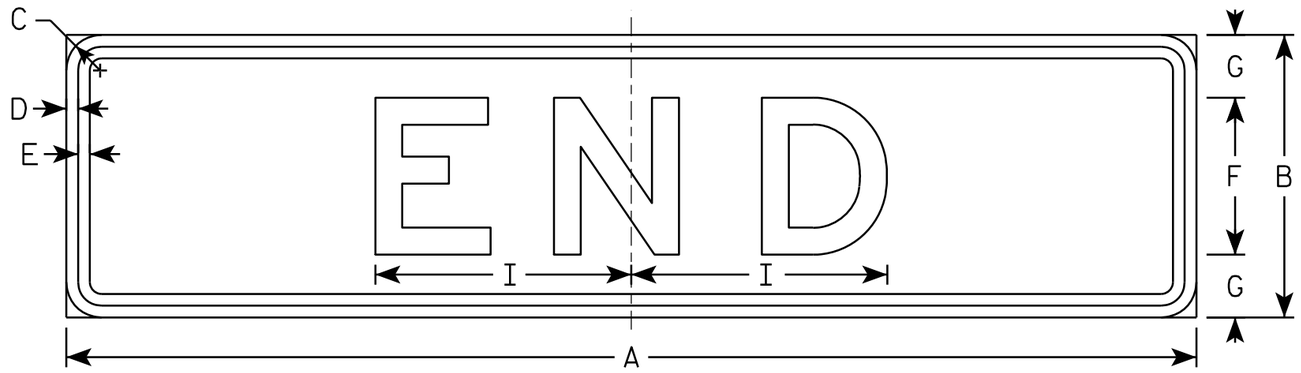
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 122 | E



R3-9C

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.



R3-9D

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	6	1 1/8	3/8	3/8	3	1 1/2	7 3/4	4 7/8																		1.0
2M	24	6	1 1/8	3/8	3/8	3	1 1/2	7 3/4	4 7/8																		1.0
3	36	9	1 1/8	3/8	3/8	5	2	12 3/4	8 1/8																		1.86
4																											
5																											

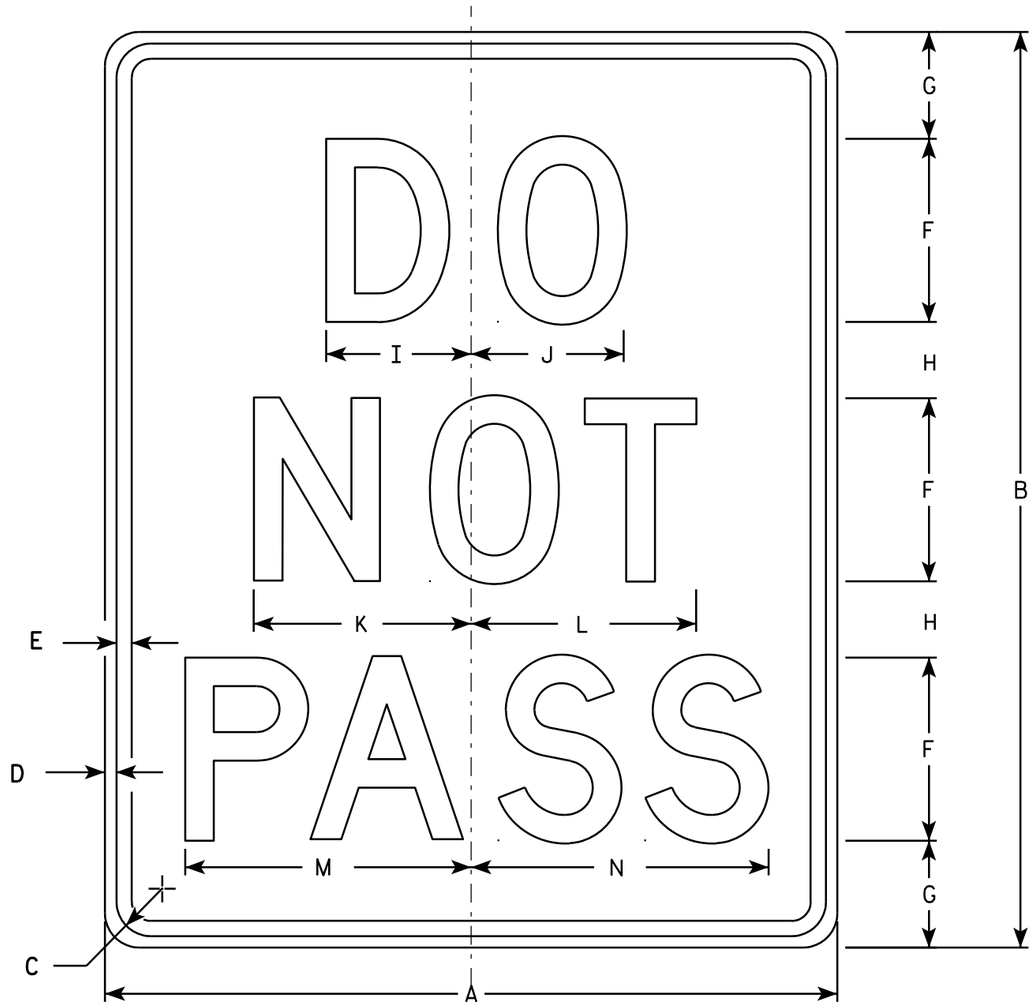
STANDARD SIGN
R3-9C & R3-9D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-9C.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 123	E



R4-1

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	4	3 1/2	2 1/2	3 1/8	3 1/4	4 3/4	4 7/8	6 1/4	6 1/2													3.0
2S	24	30	1 1/8	3/8	1/2	6	3 1/2	2 1/2	4 3/4	5	7 1/8	7 3/8	9 3/8	9 3/4													5.0
2M	24	30	1 1/8	3/8	1/2	6	3 1/2	2 1/2	4 3/4	5	7 1/8	7 3/8	9 3/8	9 3/4													5.0
3																											
4	36	48	1 5/8	5/8	3/4	8	7	5	6 1/4	6 5/8	9 1/2	9 3/4	12 1/2	13													12.0
5	48	60	2 1/4	3/4	1	10	8	7	7 3/4	8 3/8	11 7/8	12 1/4	15 5/8	16 1/4													20.0

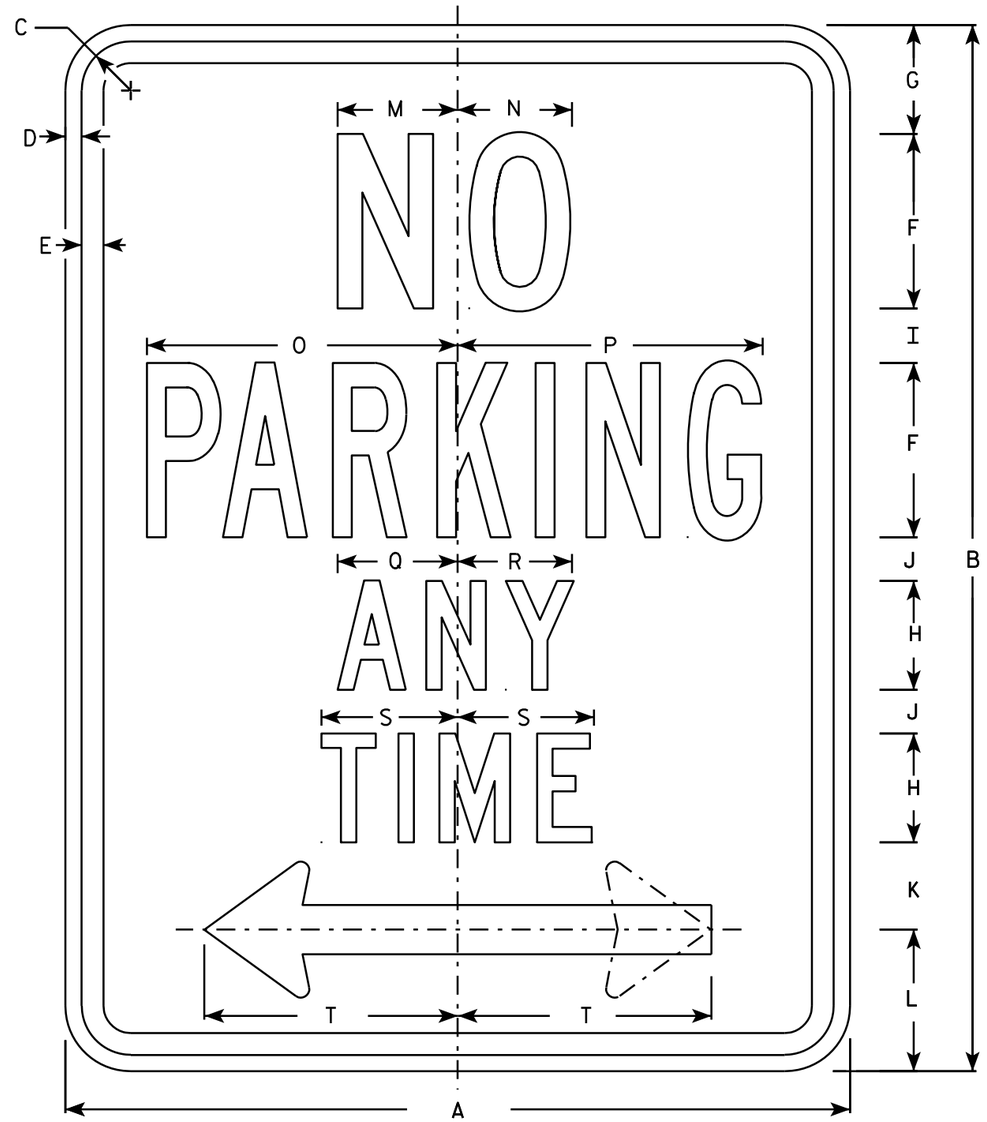
STANDARD SIGN
R4-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-1.7

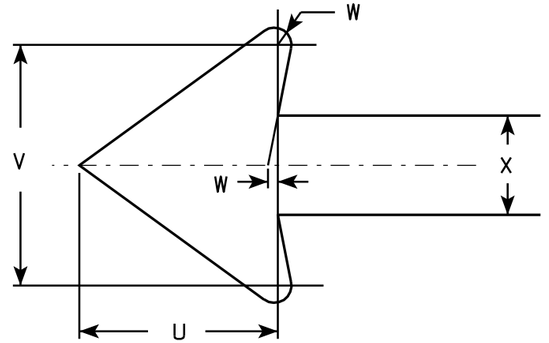
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 124 | E



R7-1

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 - Red
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
   R7-1L (left arrow)
   R7-1R (right arrow)



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

STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

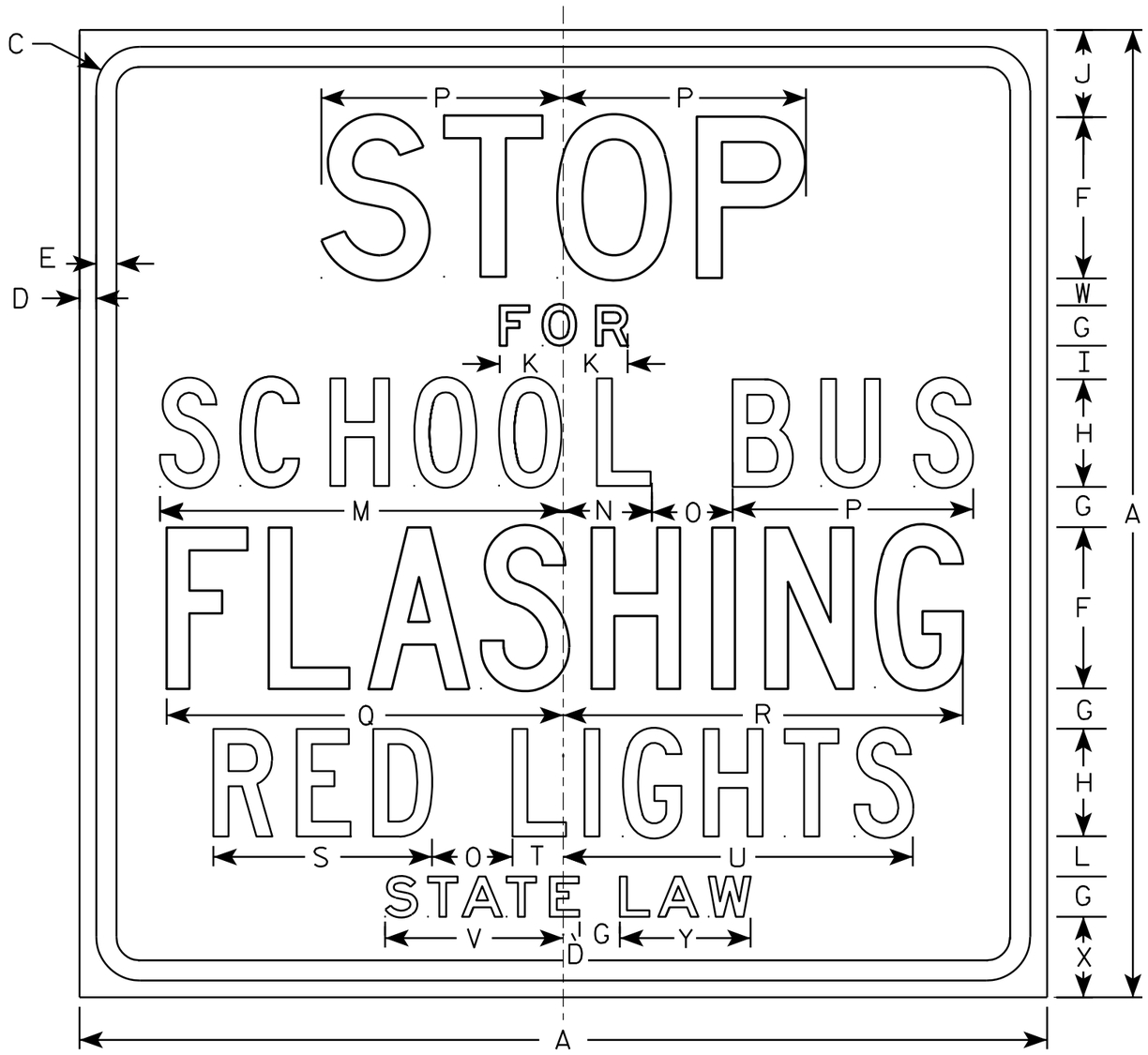
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-1.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 125 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R71.DGN PLOT DATE : 31-MAR-2011 09:20 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 3.476110:1.000000

WISDOT/CADDS SHEET 42



R59-51

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D
   Lines 2 & 6 are Series E
   Line 3, 4 & 5 are Series C

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36		1 5/8	5/8	3/4	6	1 1/2	4	1 1/4	3 1/4	2 3/8	1 1/2	15	3 1/4	3	9	14 3/4	14 7/8	8 1/8	1 7/8	13	6 5/8	1	3	4 7/8		9.0
2M	36		1 5/8	5/8	3/4	6	1 1/2	4	1 1/4	3 1/4	2 3/8	1 1/2	15	3 1/4	3	9	14 3/4	14 7/8	8 1/8	1 7/8	13	6 5/8	1	3	4 7/8		9.0
3	48		2 1/4	3/4	1	8	2	6	1 1/4	4 3/4	3 1/4	1 1/2	20 1/4	5	3 5/8	12	19 1/2	20	11 5/8	3 3/4	19	9 1/2	1	3 1/2	6 3/4		16.0
4	48		2 1/4	3/4	1	8	2	6	1 1/4	4 3/4	3 1/4	1 1/2	20 1/4	5	3 5/8	12	19 1/2	20	11 5/8	3 3/4	19	9 1/2	1	3 1/2	6 3/4		16.0
5																											

STANDARD SIGN
R59-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

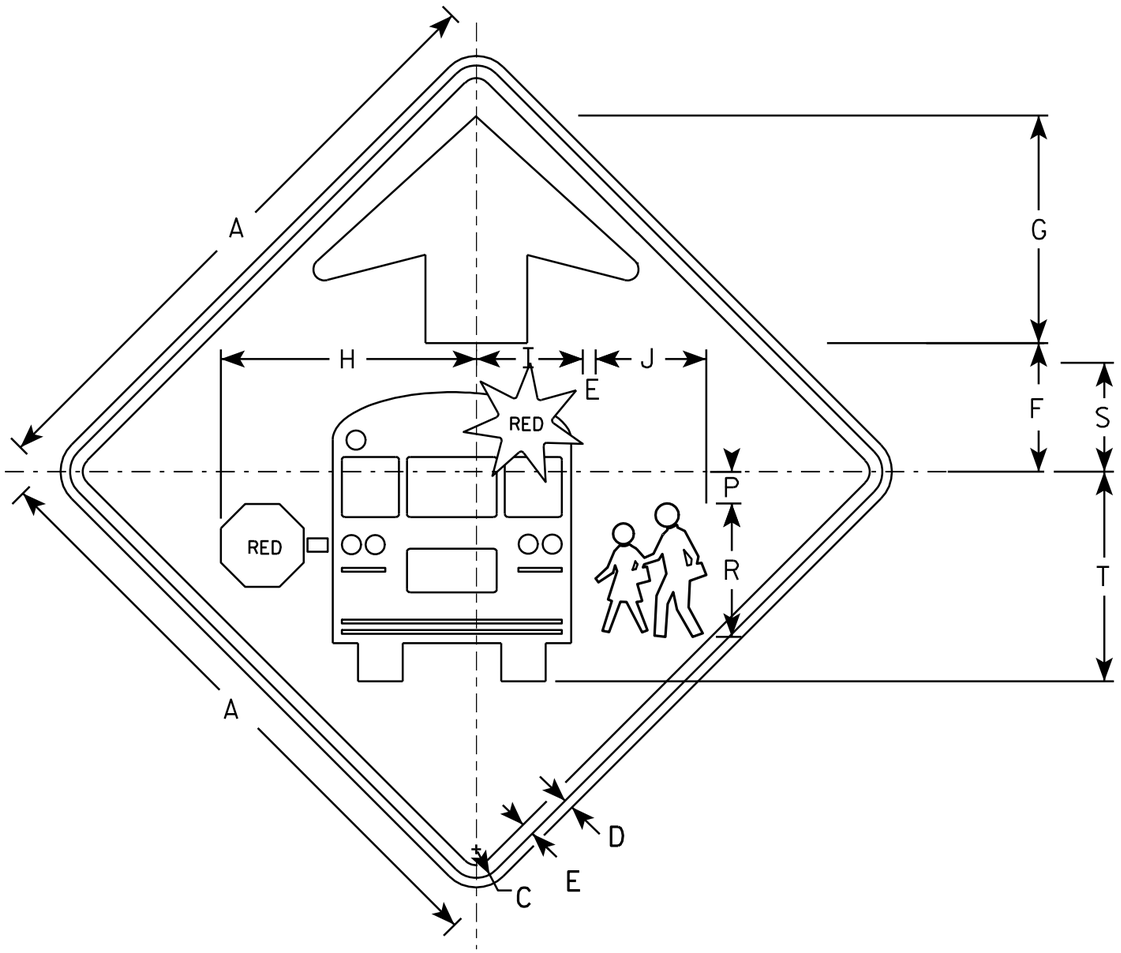
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 126 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R5951.DGN 30-MAR-2011 09:59 PLOT DATE : 30-MAR-2011 09:59 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.287650:1.000000

WISDOT/CADDS SHEET 42

7

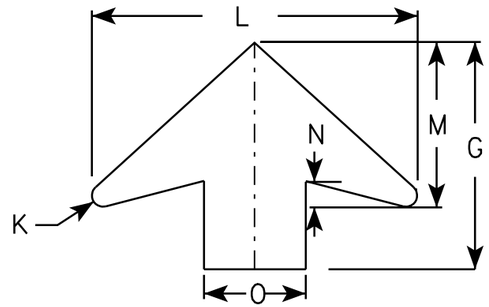
7



S3-1

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW-GREEN
   Message - BLACK except as noted
   Circles except PEDS- RED BACKGROUND
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.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	6 1/4	11 1/4	12 1/2	5 1/4	5 1/2	1/2	16	8	1 1/4	5	1 1/2		6 5/8	5 3/8	10 3/8							6.25
2	36		1 5/8	5/8	3/4	7 1/2	13 1/2	15 1/8	6 1/4	6 1/2	5/8	19 1/4	9 3/4	1 5/8	6	1 7/8		7 7/8	6 3/8	12 3/8							9.0
3	48		2 1/4	3/4	1	10	17 7/8	20 1/8	8 3/8	8 3/4	7/8	25 5/8	13	2	8	2 1/2		10 1/2	8 1/2	16 1/2							16.0
4	48		2 1/4	3/4	1	10	17 7/8	20 1/8	8 3/8	8 3/4	7/8	25 5/8	13	2	8	2 1/2		10 1/2	8 1/2	16 1/2							16.0
5																											

STANDARD SIGN
S3-1

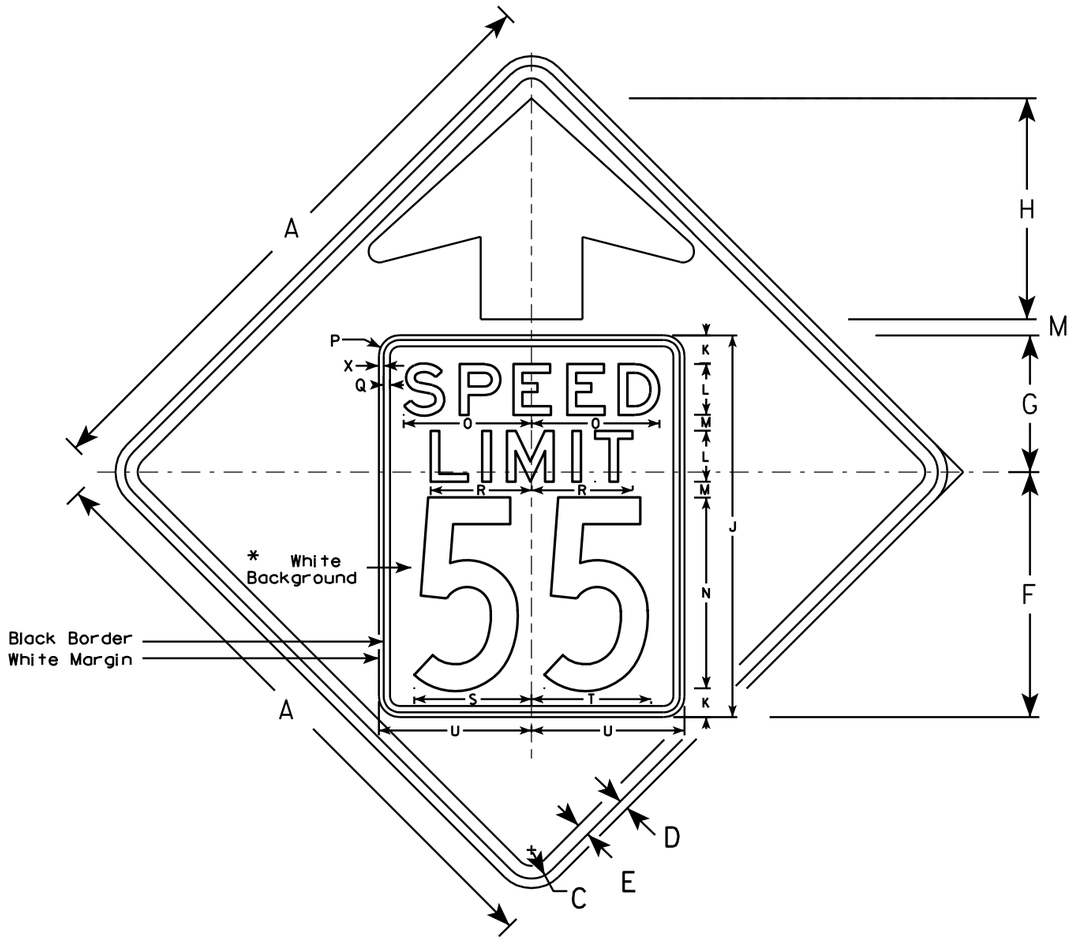
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/8/10 PLATE NO. S3-1.6

PROJECT NO:

SHEET NO: 127 E

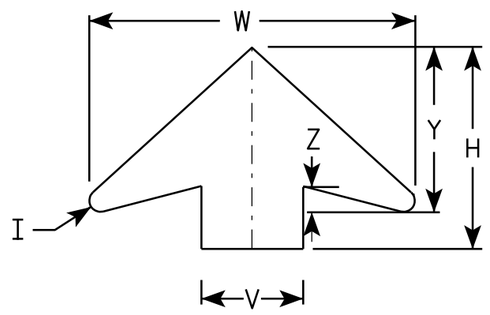


W3-5

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color: *
   Background - YELLOW*
   Message - BLACK
3. Message Series - C for numbers Series E for wording
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

*Speed Limit Sign shall have a White Background



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
2M	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
3	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
4	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
5	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0

STANDARD SIGN
W3-5

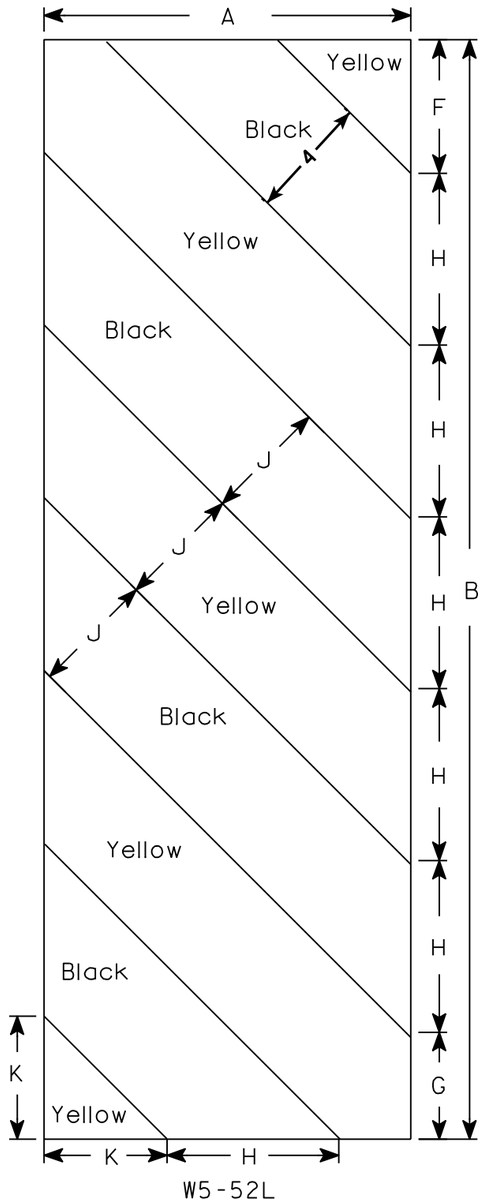
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

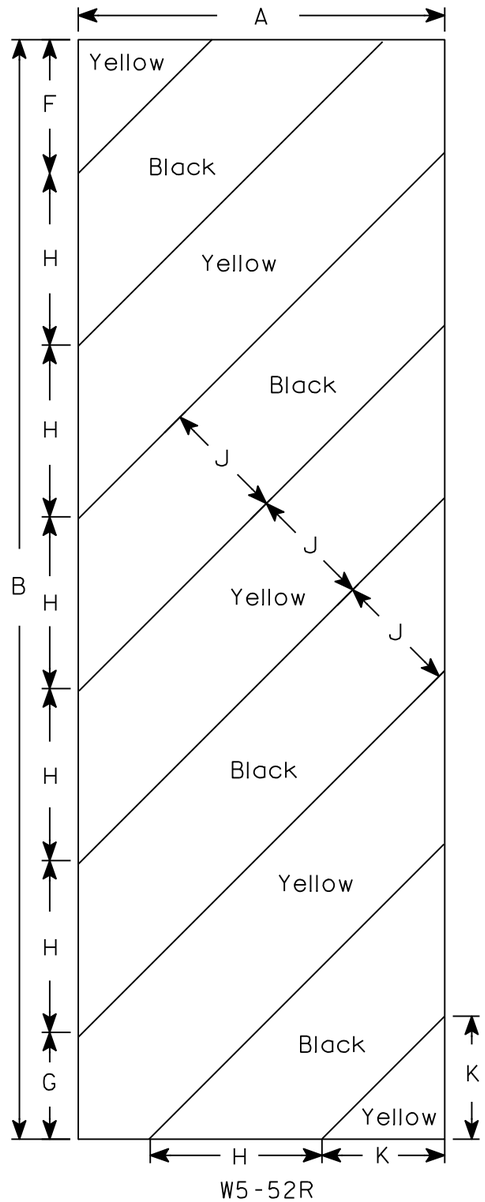
DATE 5/29/12 PLATE NO. W3-5.5

PROJECT NO:

SHEET NO: 128 E



W5-52L



W5-52R

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.
4. Alternate colors of stripes as shown.

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	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

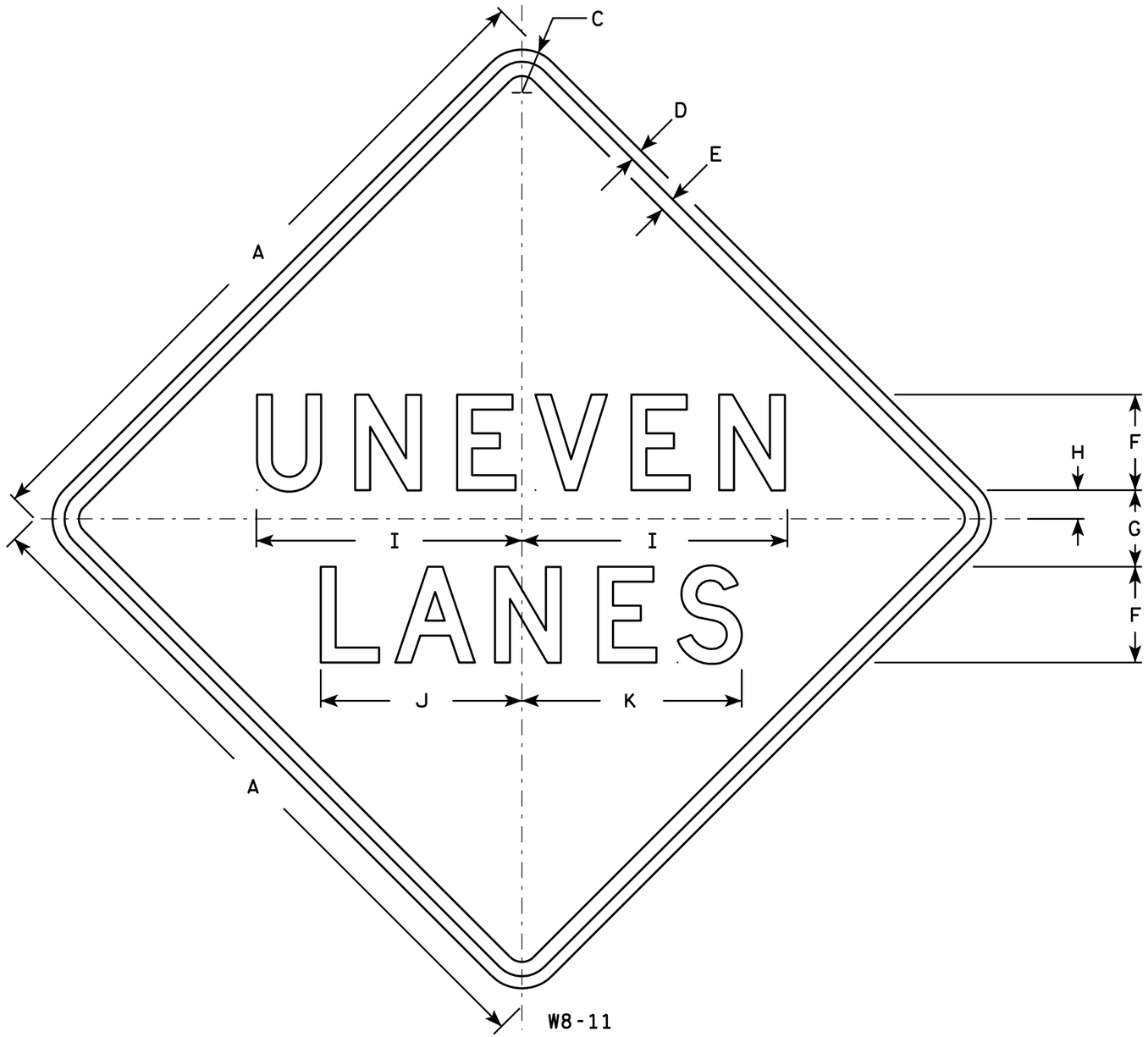
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 129 | 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 - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36		1 5/8	5/8	3/4	5	4	1 1/2	13 7/8	10 1/2	11 1/2																9.0
2M	36		1 5/8	5/8	3/4	5	4	1 1/2	13 7/8	10 1/2	11 1/2																9.0
3																											
4	36		1 5/8	5/8	3/4	5	4	1 1/2	13 7/8	10 1/2	11 1/2																9.0
5	48		2 1/4	3/4	1	7	5	2	18 1/2	14	15 3/8																16.0

STANDARD SIGN
W8-11

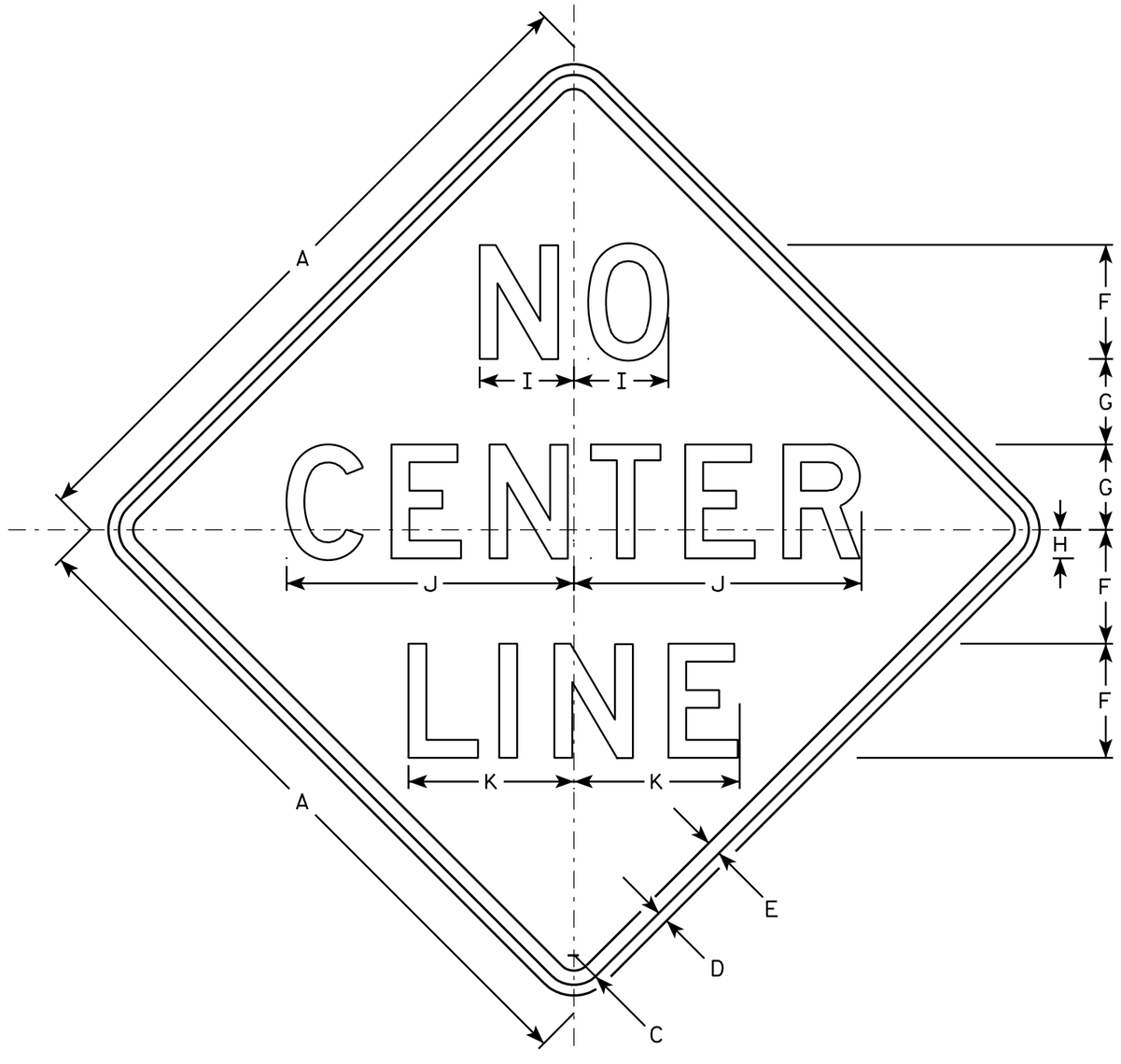
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 3/22/11 PLATE NO. W8-11.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 130 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W811.DGN PLOT DATE : 22-MAR-2011 14:12 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.703924:1.000000
WISDOT/CADDS SHEET 42



W8-12

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.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36		1 5/8	5/8	3/4	6	4 1/2	1 1/2	5 1/8	16	9																9.0
2M	36		1 5/8	5/8	3/4	6	4 1/2	1 1/2	5 1/8	16	9																9.0
3	48		2 1/4	3/4	1	8	6	2	6 5/8	20 1/4	11 5/8																16.0
4	48		2 1/4	3/4	1	8	6	2	6 5/8	20 1/4	11 5/8																16.0
5	48		2 1/4	3/4	1	8	6	2	6 5/8	20 1/4	11 5/8																16.0

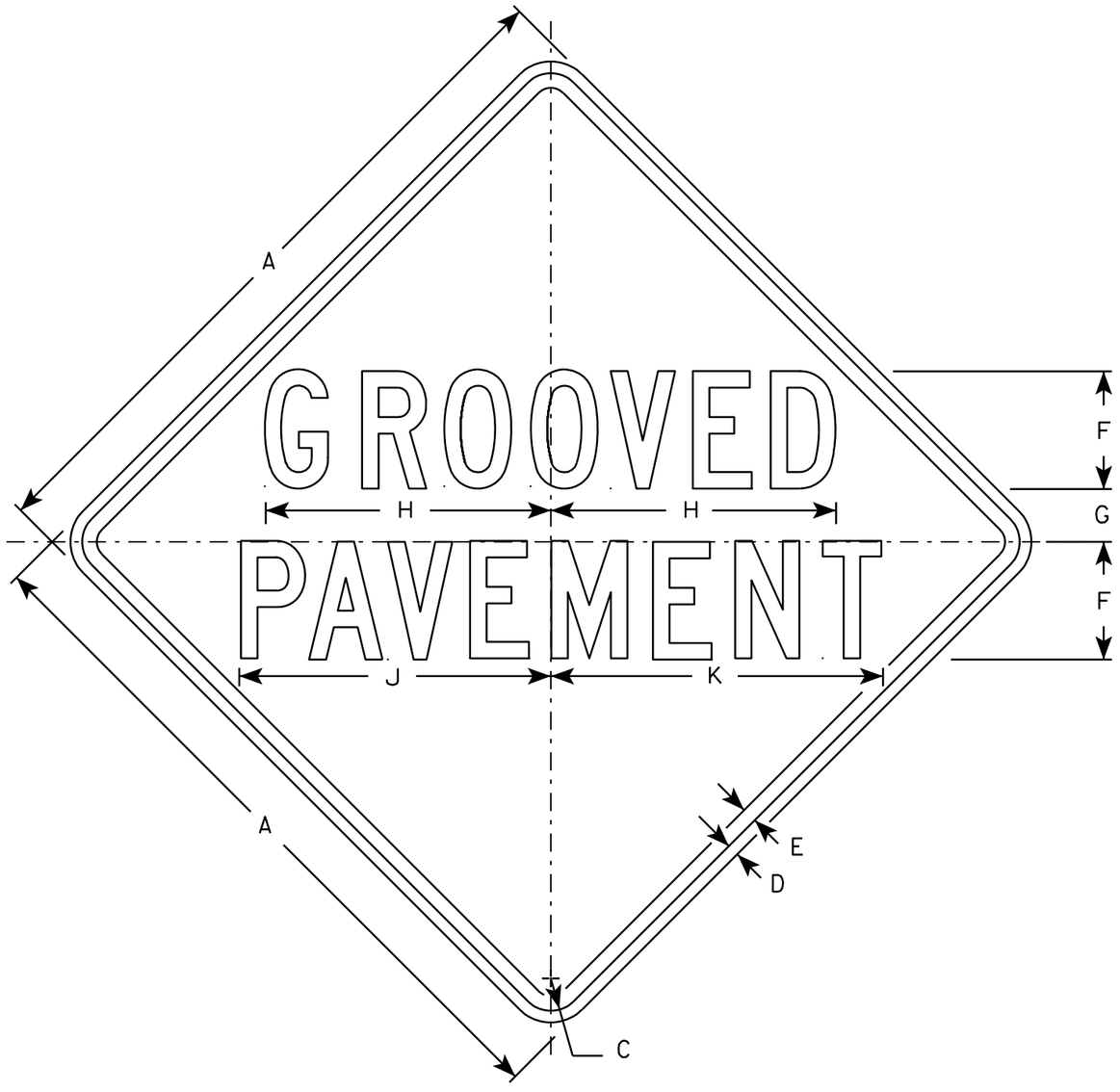
STANDARD SIGN
W8-12

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rausch
for State Traffic Engineer

DATE 8/24/10 PLATE NO. W8-12.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 131	E



W8-52

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 3/8	1/2	5/8	5	2 1/4	12 1/8		13 1/4	14 1/8																6.25
2M	36		1 5/8	5/8	3/4	6	2 5/8	14 1/2		15 7/8	17																9.0
3	36		1 5/8	5/8	3/4	6	2 5/8	14 1/2		15 7/8	17																9.0
4	36		1 5/8	5/8	3/4	6	2 5/8	14 1/2		15 7/8	17																9.0
5	48		2 1/4	3/4	1	8	3 1/2	19 3/8		21 1/4	22 5/8																16.0

STANDARD SIGN
W8-52

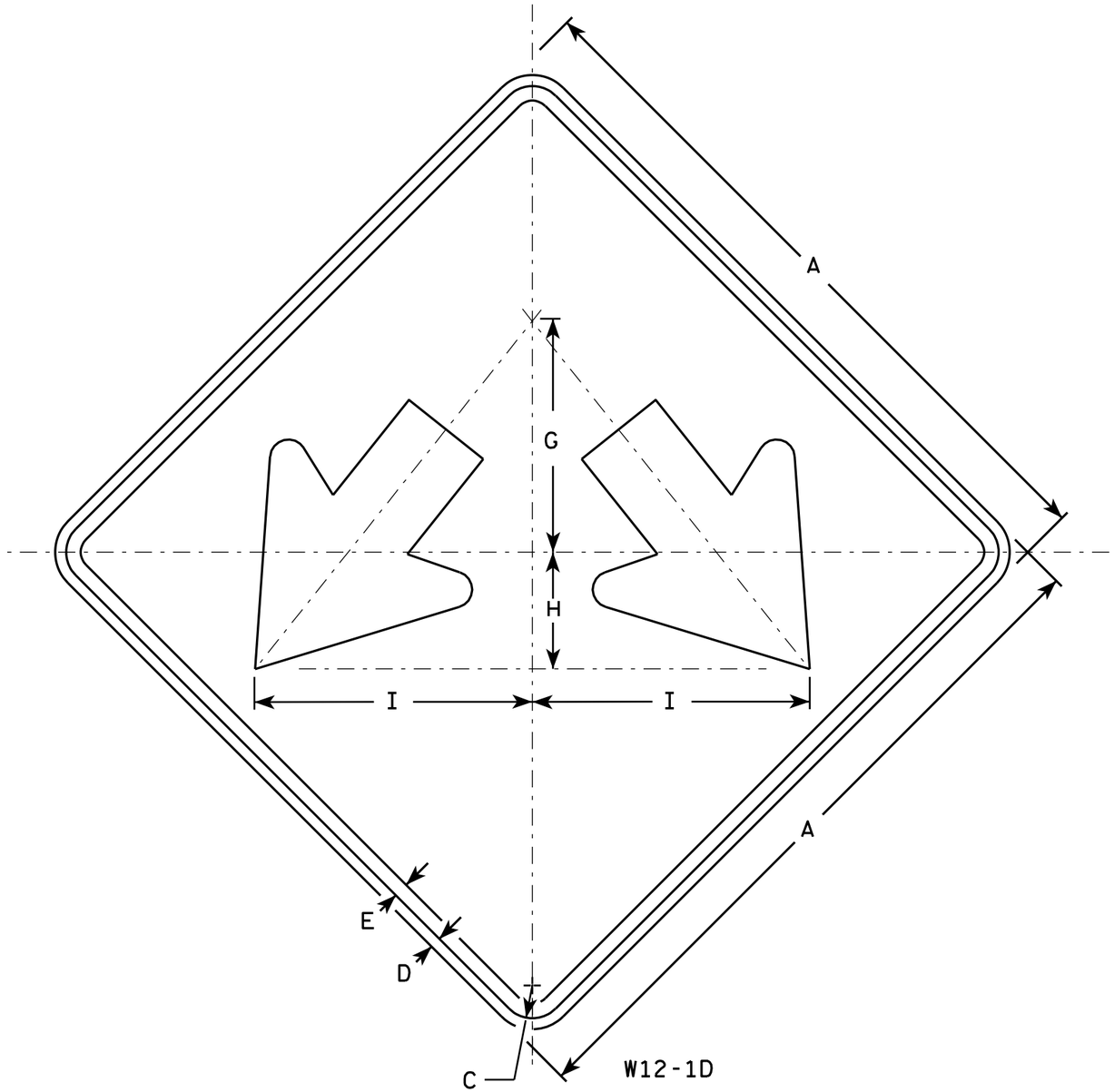
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 03/14/13 PLATE NO. W8-52.8

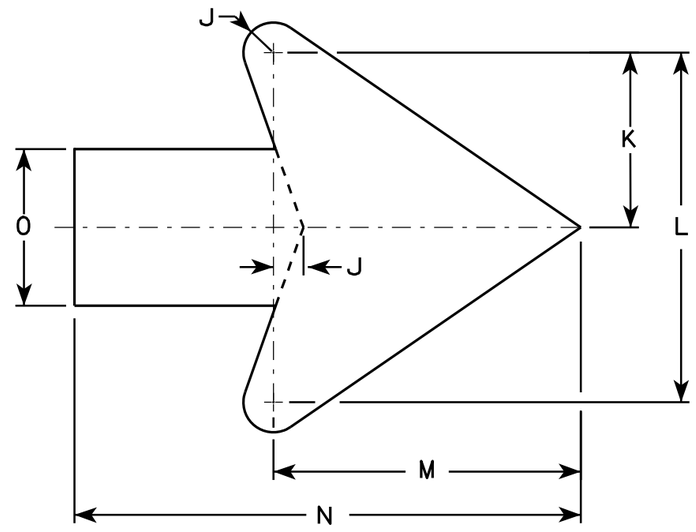
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 132 | E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W852.DGN PLOT DATE : 14-MAR-2013 11:00 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.206250:1.000000
WISDOT/CADDS SHEET 42



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.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	48		2 1/4	3/4	1		16	8	19	1 1/4	7 1/4	14 1/2	12 3/4	21	6 1/4												16.0

STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

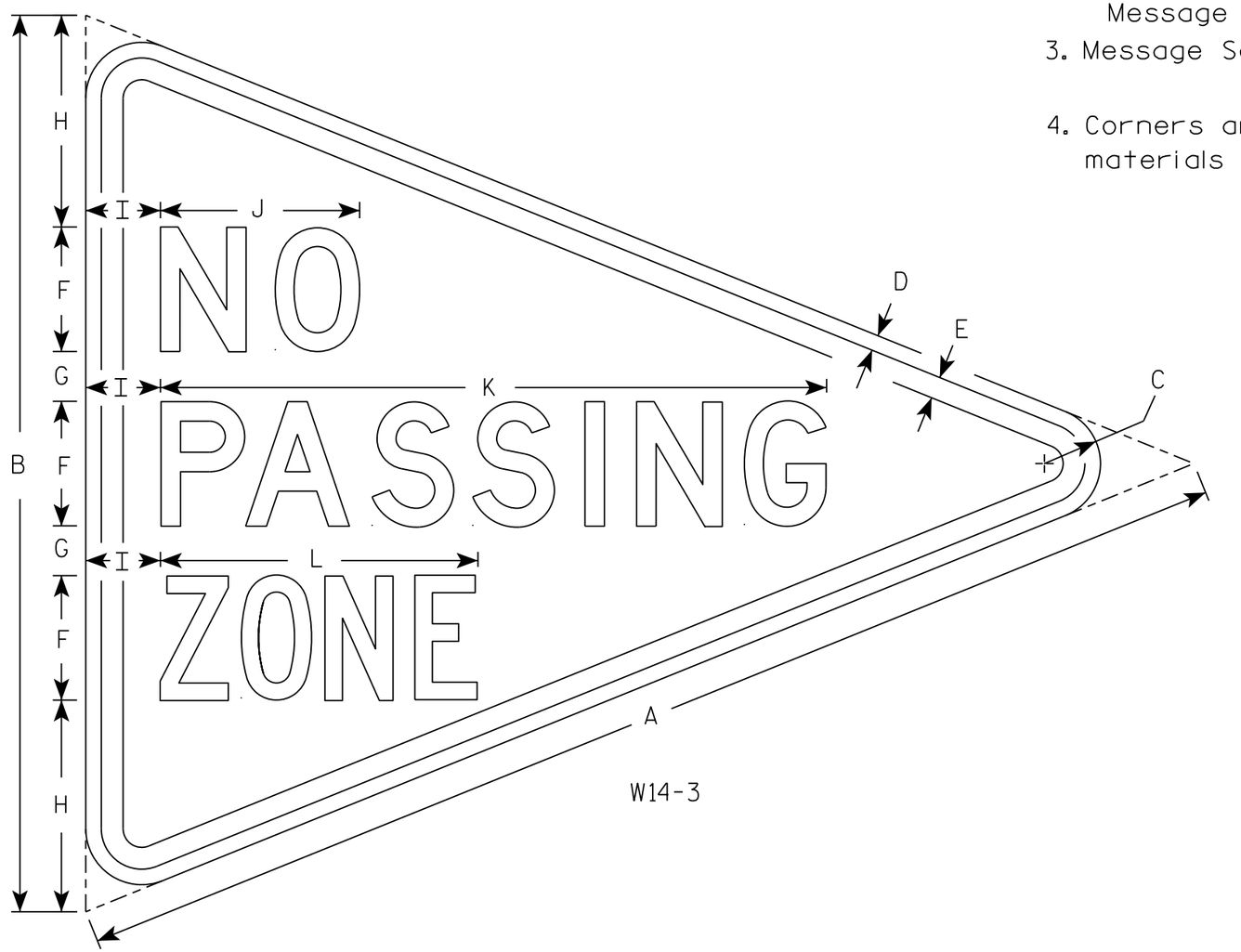
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-1D.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 133	E

NOTES

1. Sign is Type II- Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - Lines 1 and 2 are Series D.
   Line 3 is series C.
4. Corners and borders shall be rounded on all base materials for this sign.



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															5.56
2M																											
3																											
4																											
5																											

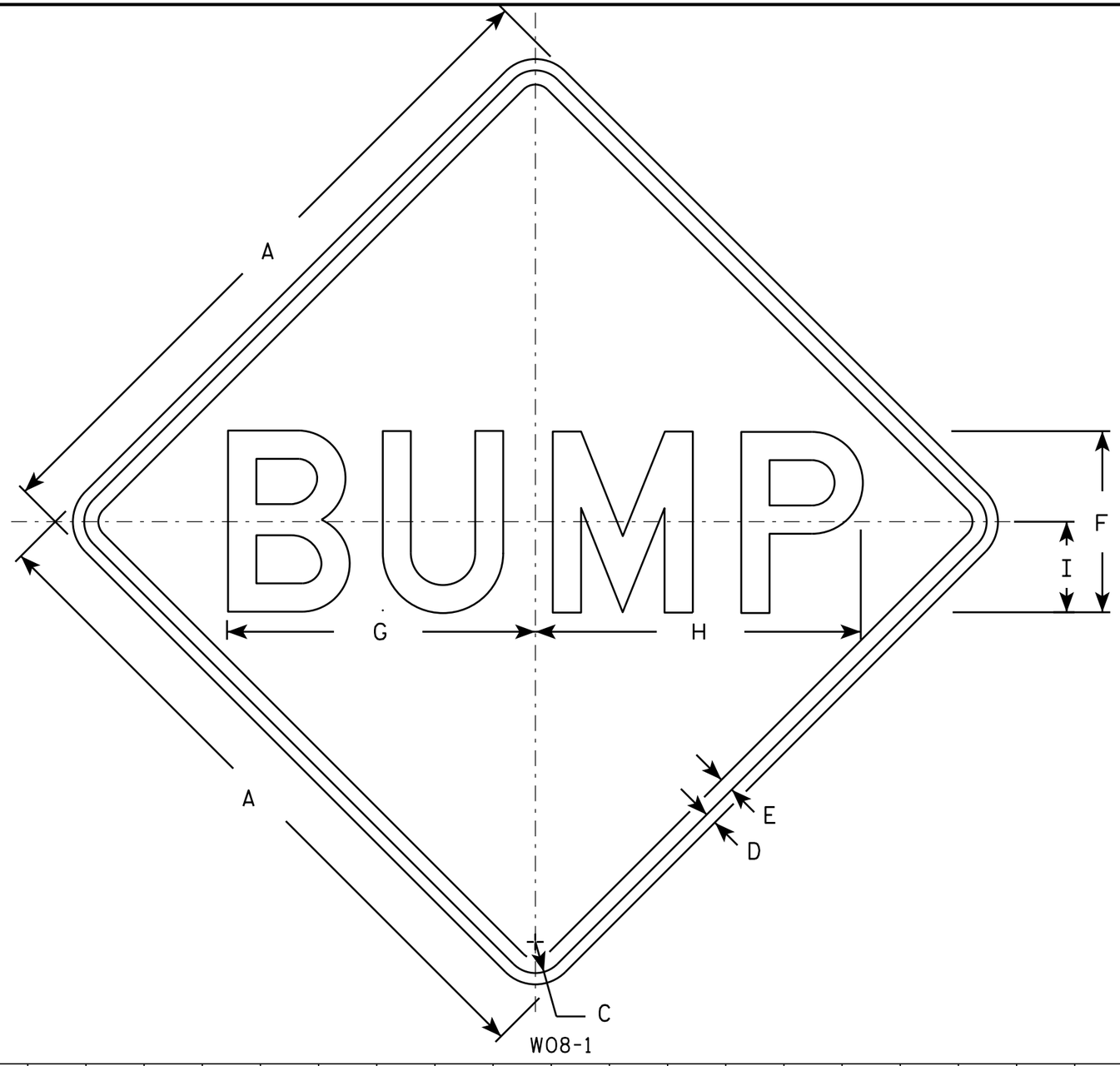
STANDARD SIGN
W14-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/17 PLATE NO. W14-3.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 134 | 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 - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	10	16 7/8	17 7/8	5																		9.0
2S	48		2 1/4	3/4	1	12	20 3/8	21 5/8	6																		16.0
2M	48		2 1/4	3/4	1	12	20 3/8	21 5/8	6																		16.0
3	48		2 1/4	3/4	1	12	20 3/8	21 5/8	6																		16.0
4	48		2 1/4	3/4	1	12	20 3/8	21 5/8	6																		16.0
5	48		2 1/4	3/4	1	12	20 3/8	21 5/8	6																		16.0

STANDARD SIGN
W08-1

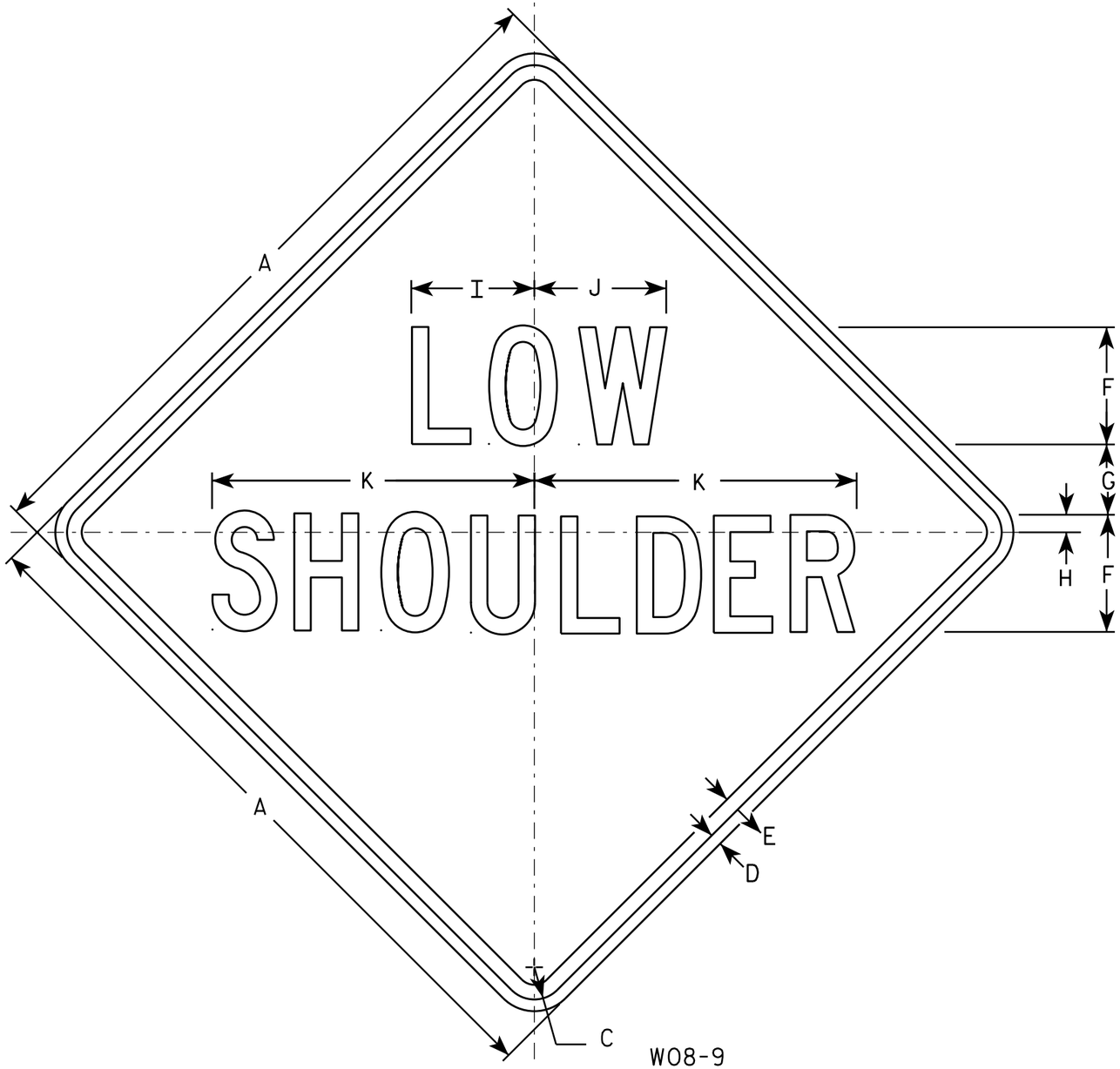
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE NO. W08-1.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W081.DGN PLOT DATE : 20-NOV-2013 12:24 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.688833:1.000000 WISDOT/CADDS SHEET 42



W08-9

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	3 1/2	1	6 1/4	6 3/4	16 1/2																9.0
2S	48		2 1/4	3/4	1	8	5	1 1/4	8 1/4	9	21 7/8																16.0
2M	48		2 1/4	3/4	1	8	5	1 1/4	8 1/4	9	21 7/8																16.0
3	48		2 1/4	3/4	1	8	5	1 1/4	8 1/4	9	21 7/8																16.0
4	48		2 1/4	3/4	1	8	5	1 1/4	8 1/4	9	21 7/8																16.0
5	48		2 1/4	3/4	1	8	5	1 1/4	8 1/4	9	21 7/8																16.0

STANDARD SIGN
W08-9

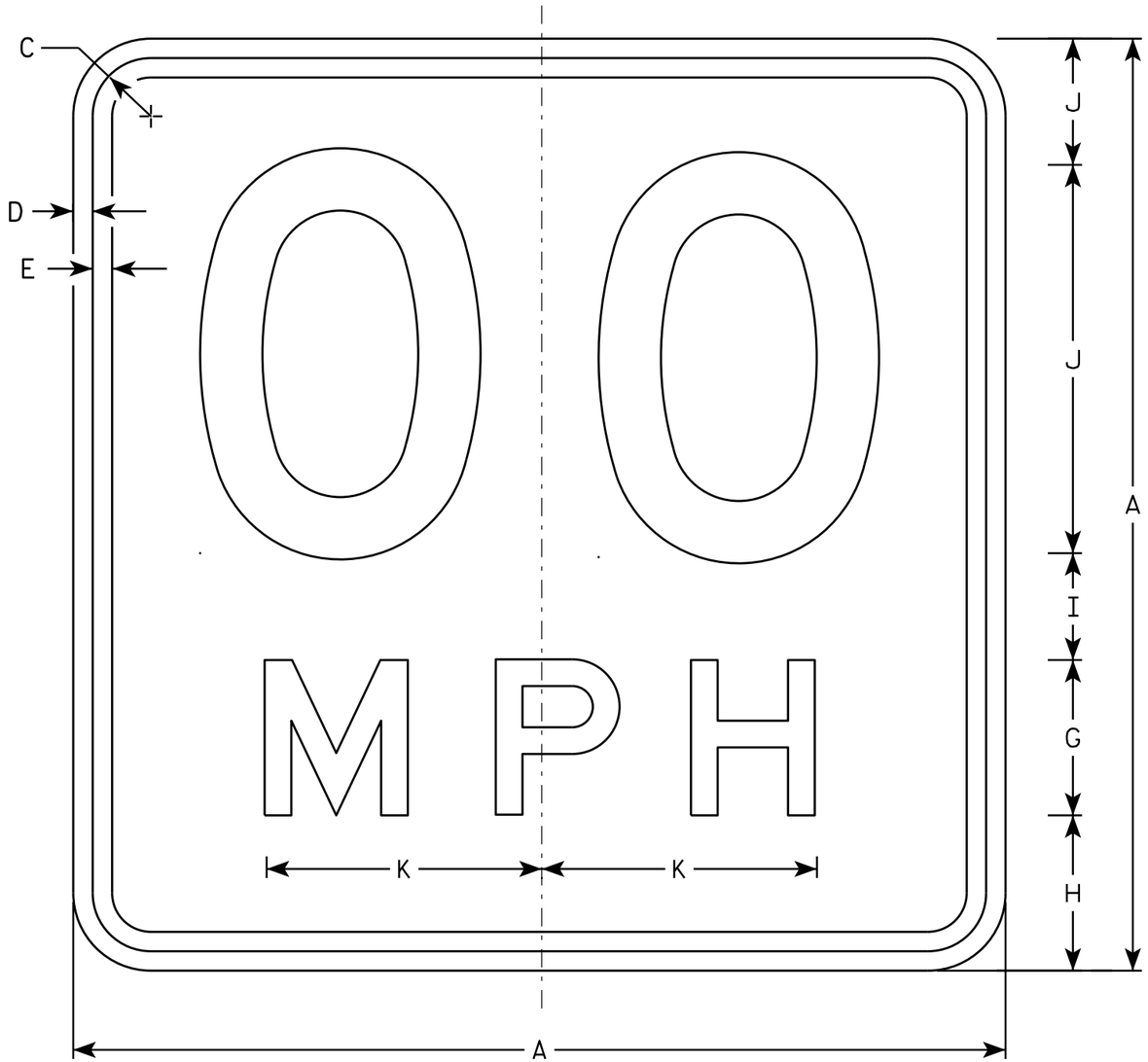
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE W08-9.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W089.DGN PLOT DATE : 20-NOV-2013 14:06 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.755110:1.000000
WISDOT/CADDS SHEET 42



W013-1

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

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	10	4	4	2 3/4	3 1/4	7 1/8																4.00
2S	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
2M	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
3	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

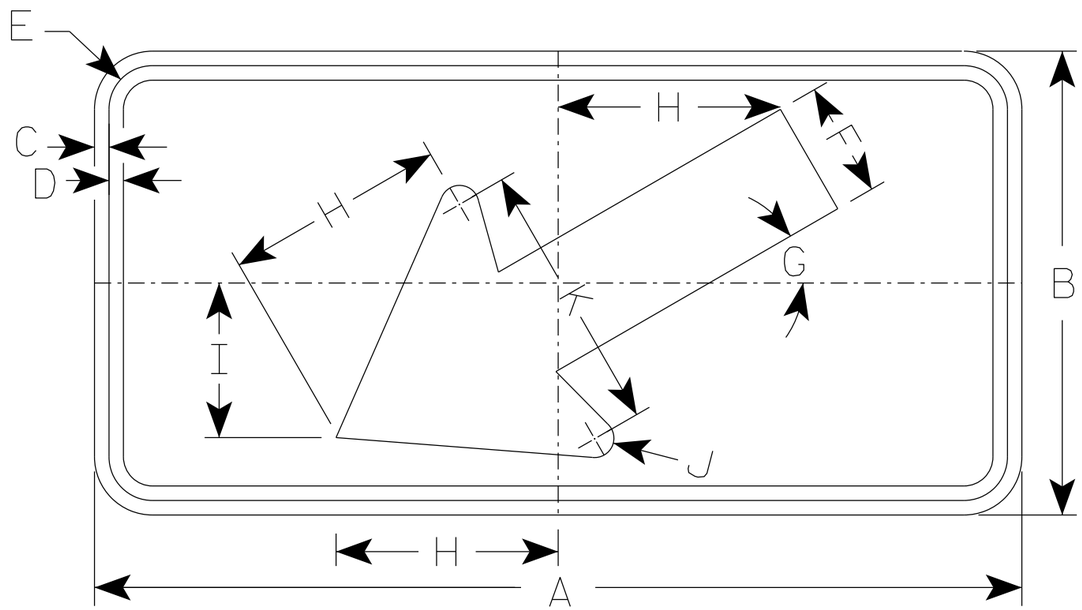
STANDARD SIGN
W013-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/21/13 PLATE 137 W013-1.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W016-7L

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded but corners shall be rounded when base material is metal.
4. W016-7R is the same as W016-L except the arrow is reversed along the vertical centerline.

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

STANDARD SIGN
W016-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

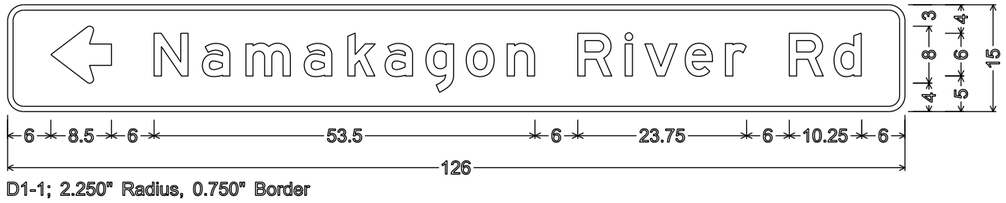
DATE 7/11/18 PLATE NO. W016-7.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 138 | E

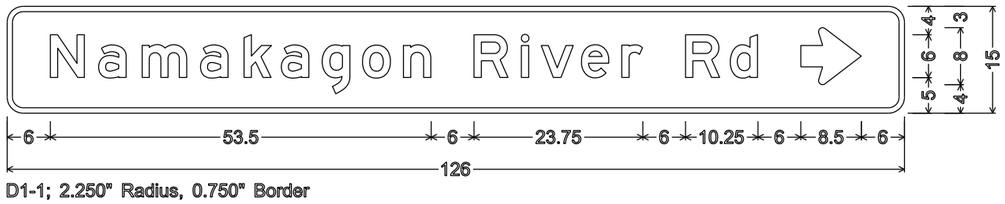
7

NOTES

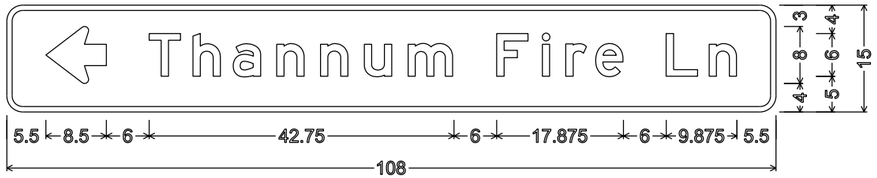
1. Sign is Type II - Type H Reflective
2. Color:
   Background - Green except as noted
   Message - White
3. Message Series - E except as noted



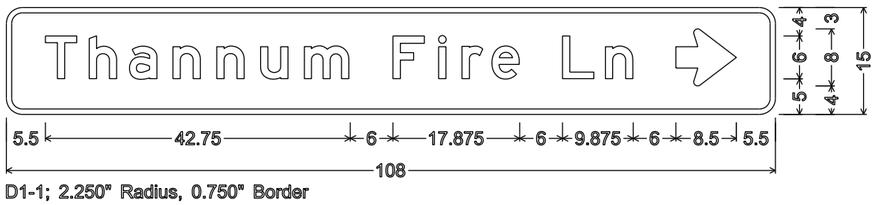
D1-1; 2.250" Radius, 0.750" Border



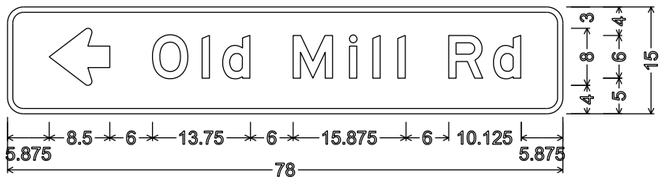
D1-1; 2.250" Radius, 0.750" Border



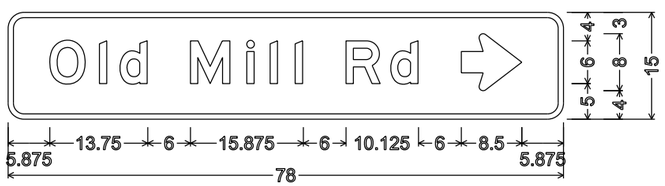
D1-1; 2.250" Radius, 0.750" Border



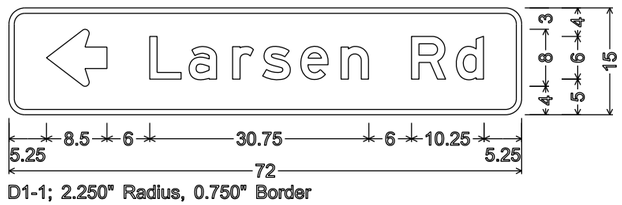
D1-1; 2.250" Radius, 0.750" Border



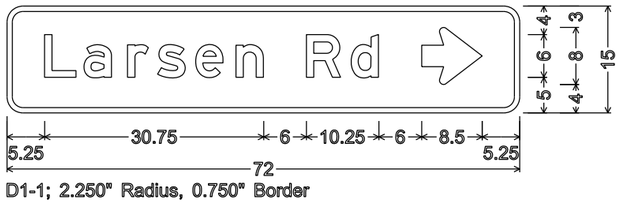
D1-1; 2.250" Radius, 0.750" Border



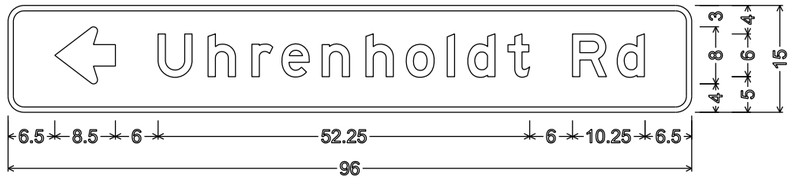
D1-1; 2.250" Radius, 0.750" Border



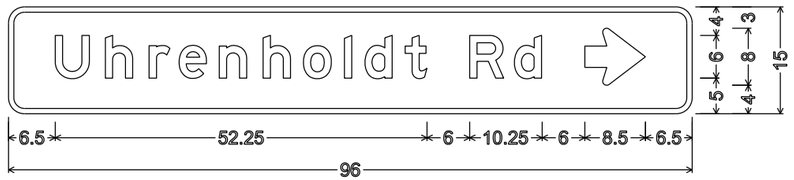
D1-1; 2.250" Radius, 0.750" Border



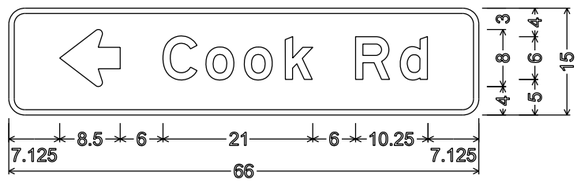
D1-1; 2.250" Radius, 0.750" Border



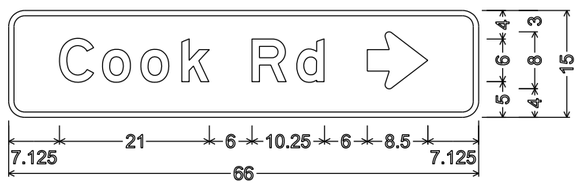
D1-1; 2.250" Radius, 0.750" Border



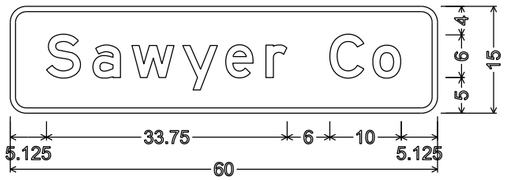
D1-1; 2.250" Radius, 0.750" Border



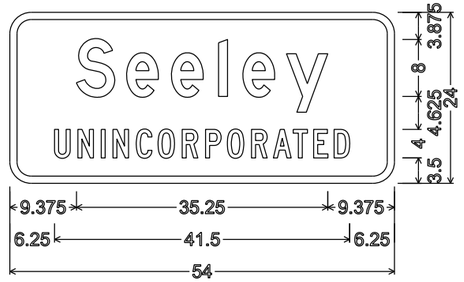
D1-1; 2.250" Radius, 0.750" Border



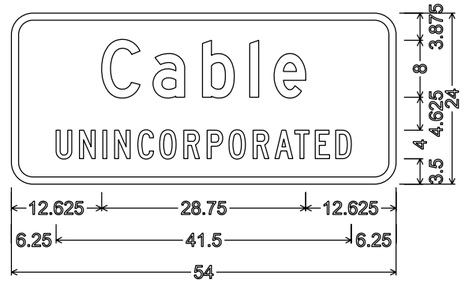
D1-1; 2.250" Radius, 0.750" Border



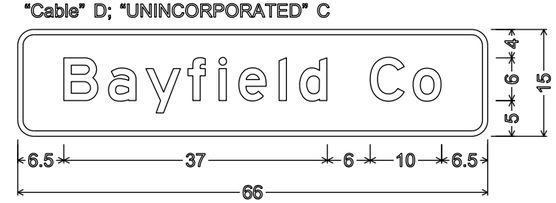
I2-2;
2.250" Radius, 0.750" Border



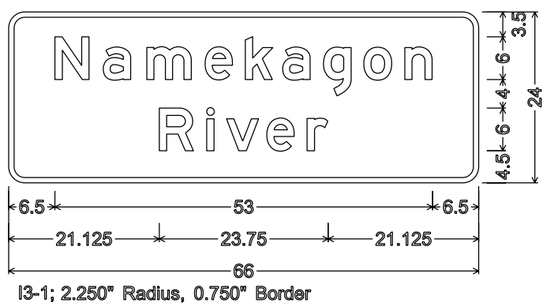
I2-3;
3.000" Radius, 1.000" Border,
"Seeley" D; "UNINCORPORATED"



I2-3;
3.000" Radius, 1.000" Border,
"Cable" D; "UNINCORPORATED" C



I2-2; 2.250" Radius, 0.750" Border



I3-1; 2.250" Radius, 0.750" Border

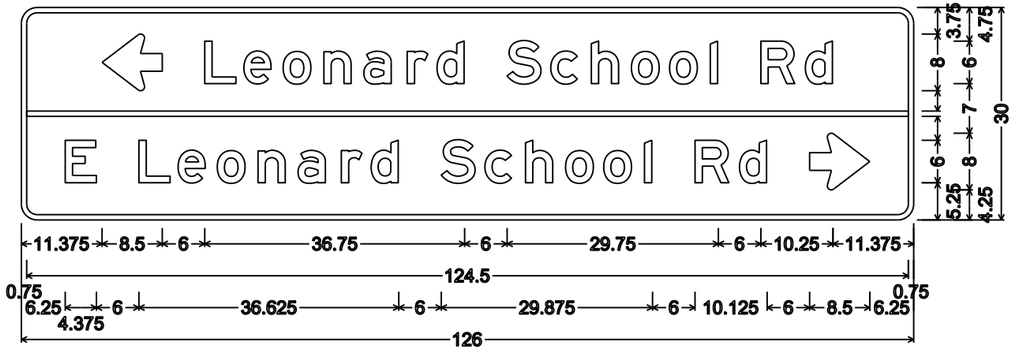
7

7

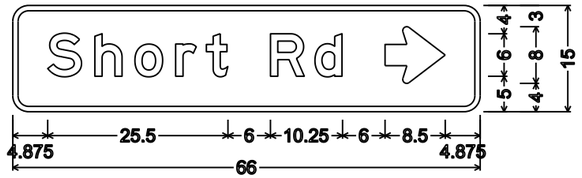
PROJECT NO: 1560-04-70	HWY: USH 63	COUNTY: SAWYER	PERMANENT SIGNING	SHEET NO: 139	E

NOTES

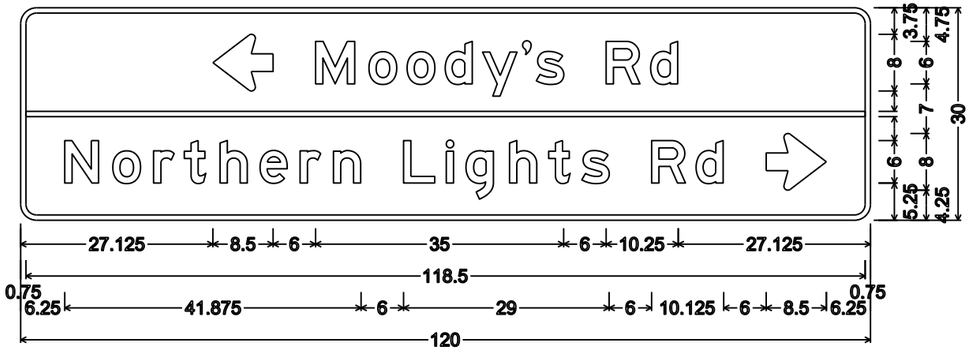
1. Sign is Type II - Type H Reflective
2. Color:
   Background - Green except as noted
   Message - White
3. Message Series - E except as noted



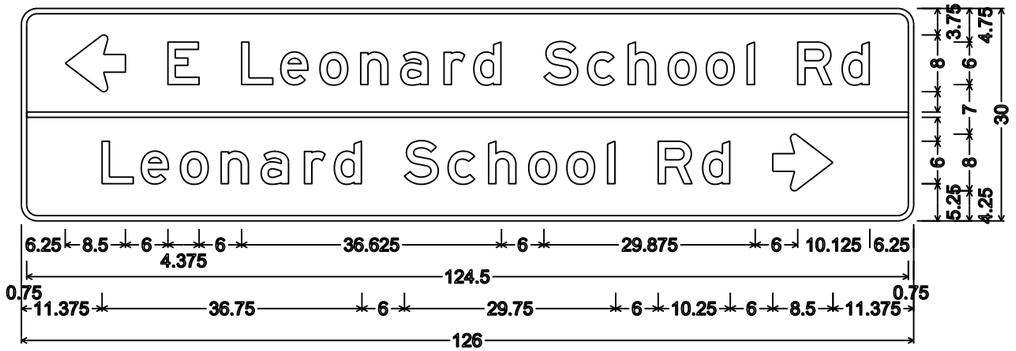
D1-2; 2.250" Radius, 0.750" Border



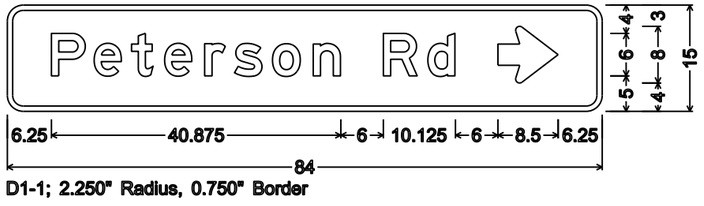
D1-1; 2.250" Radius, 0.750" Border



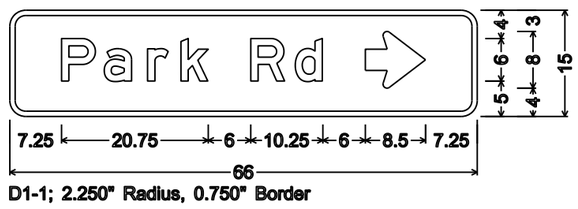
D1-2; 2.250" Radius, 0.750" Border, White on Green;



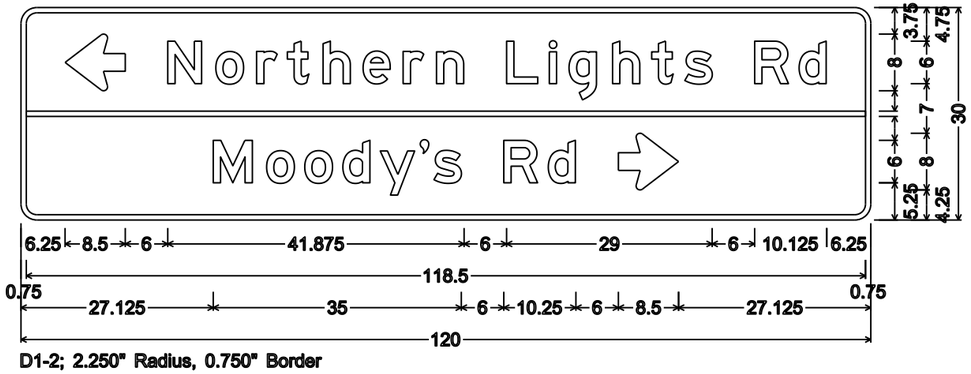
D1-2; 2.250" Radius, 0.750" Border



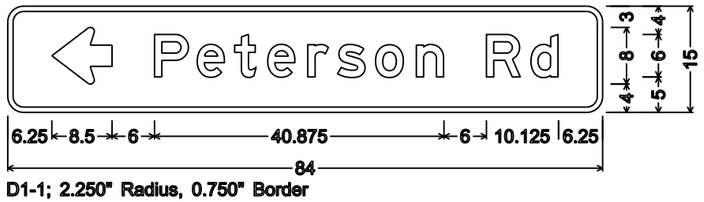
D1-1; 2.250" Radius, 0.750" Border



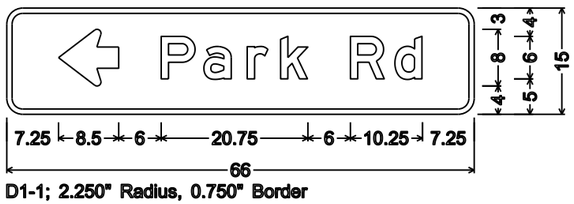
D1-1; 2.250" Radius, 0.750" Border



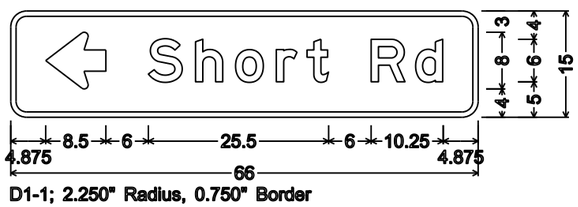
D1-2; 2.250" Radius, 0.750" Border



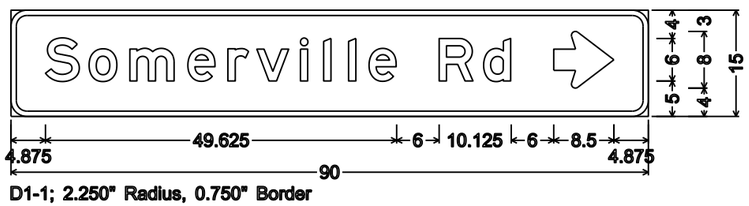
D1-1; 2.250" Radius, 0.750" Border



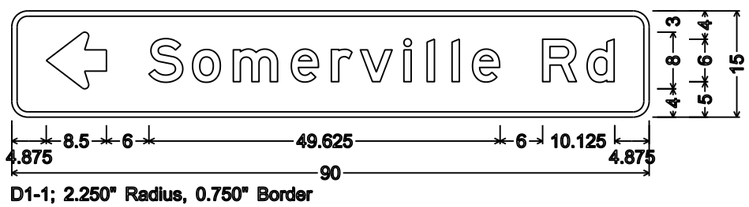
D1-1; 2.250" Radius, 0.750" Border



D1-1; 2.250" Radius, 0.750" Border



D1-1; 2.250" Radius, 0.750" Border



D1-1; 2.250" Radius, 0.750" Border

7

7

PROJECT NO: 1560-04-70	HWY: USH 63	COUNTY: SAWYER	PERMANENT SIGNING	SHEET NO: 140	E

Notes

Wisconsin Department of Transportation

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through innovation and exceptional service.

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