GRE

APRIL 2018

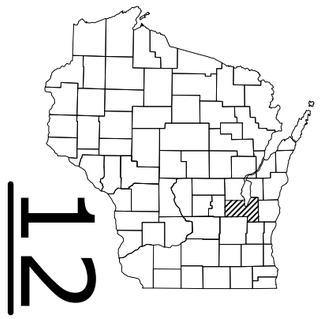
PROJECT ID: 4530-06-73

WITH:

COUNTY: FOND DU LAC

ORDER OF SHEETS

TOTAL SHEETS = 84



DESIGN DESIGNATION

A.A.D.T.	2016	=	1,600
A.A.D.T.	2036	=	2,100
D.H.V.		=	8
D.D.		=	63/37
T.		=	12.50%
DESIGN SPEED		=	60
ESALS		=	492,900

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

- COMMUNICATION OVERHEAD — OH
- COMMUNICATION UNDERGROUND — C
- ELECTRIC OVERHEAD — OH
- ELECTRIC UNDERGROUND — E
- FIBER OPTIC — FO
- GAS — G
- SANITARY SEWER — SAN
- STORM SEWER — SS
- WATER — W
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
4530-06-73		

USH 45 - ECL

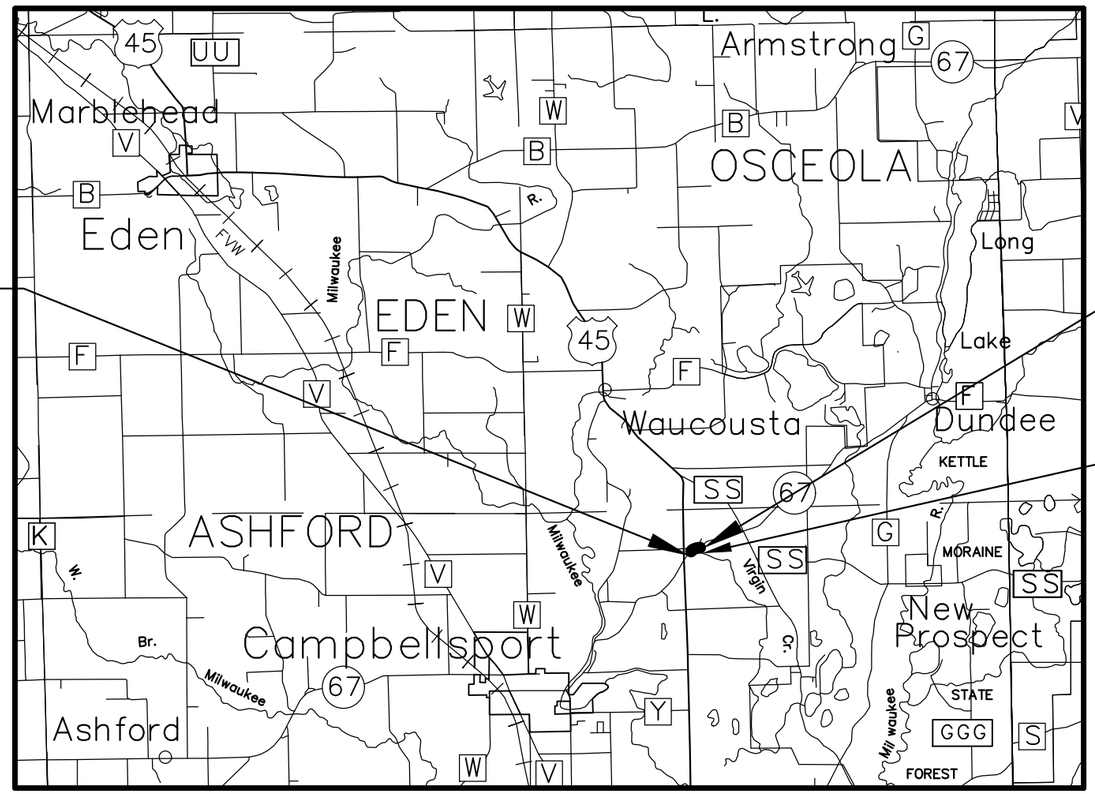
VIRGIN CREEK BOX CULVERT

STH 67

FOND DU LAC COUNTY

CONST REPLACE BOX

STATE PROJECT NUMBER
4530-06-73



LAYOUT

SCALE 0 2 MI

TOTAL NET LENGTH OF CENTERLINE = 0.114

BEGIN PROJECT 4530-06-73
STA 1502+60.00
Y=329209.6378
X=871907.5434

END PROJECT 4530-06-73
STA 1508+60.00
Y=329520.0998
X=872394.4557

STRUCTURE
C-20-159

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS). FOND DU LAC COUNTY NAD83 (2007).

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1988, NAVD88 (2007) ADJUSTMENT.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT
Designer	J. MATERNOSKI
Project Manager	B. LEARST
Regional Examiner	
Regional Supervisor	R. WAGNER

APPROVED FOR THE DEPARTMENT

DATE: 2/8/18 (Signature)

E

FILE NAME : N:\PDS\C3D\45300600\SHEETSPLAN\010101-TI.DWG
LAYOUT NAME - 010101-TI

PLOT DATE : 1/18/2018 9:22 AM

PLOT BY : MATERNOSKI, JORDAN DPLOT NAME :

WISDOT/CADDS SHEET 10

LIST OF STANDARD ABBREVIATIONS

AEW	APRON END WALL
AGG	AGGREGATE
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
C&G	CURB AND GUTTER
C/L	CENTER OR CONSTRUCTION LINE
CMCP	CORRUGATED METAL CULVERT PIPE
CONC	CONCRETE
CP	CULVERT PIPE
CPRC	CULVERT PIPE REINFORCED CONCRETE
CSD	CONCRETE SURFACE DRAIN
CY	CUBIC YARD
D	DEGREE OF CURVE
Δ	DELTA
DISCH	DISCHARGE
EB	EAST BOUND
EL OR ELEV	ELEVATION
EAT	ENERGY ABSORBING TERMINAL
EXIST	EXISTING
FE	FIELD ENTRANCE
FT	FOOT
HMA	HOT MIX ASPHALT
INL	INLET
INV	INVERT
L	LENGTH OF CURVE
LHF	LEFT HAND FORWARD
LT	LEFT
LF	LINEAR FOOT
MIN	MINIMUM
MH	MANHOLE
M/L	MATCHLINE
NB	NORTHBOUND
NC	NORMAL CROWN
PAVT	PAVEMENT
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PLE	PERMANENT LIMITED EASEMENT
PT	POINT OF TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RC	REVERSE CROWN
RCAEW	REINFORCED CONCRETE APRON ENDWALL FOR CULVERT PIPE
REQ'D	REQUIRED
RHF	RIGHT HAND FORWARD
RO	RUN OFF LENGTH
RRSP	RAIL ROAD SPIKE
RT	RIGHT
RW OR R/W	RIGHT OF WAY
SALV	SALVAGED
SAPBC	SALVAGED ASPHALTIC PAVEMENT BASE COURSE
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SF	SQUARE FOOT
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
STA	STATION
SY	SQUARE YARD
T	TANGENT LENGTH
TEMP	TEMPORARY
TLE	TEMPORARY LIMITED EASEMENT
TYP	TYPICAL
VCL	VERTICAL CURVE LENGTH
VPC	POINT OF VERTICAL CURVE
VPI	POINT OF VERTICAL INTERSECTION
VPT	POINT OF VERTICAL TANGENT
WB	WESTBOUND
YD	YARD

WISDOT CONTACTS

BRYAN LEARST
PROJECT MANAGER
NORTHEAST REGION
944 VAN DER PERREN WAY
GREEN BAY, WI 54304
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BRYAN.LEARST@DOT.WI.GOV

JORDAN MATERNOSKI
DESIGN PROJECT LEADER
NORTHEAST REGION
944 VAN DER PERREN WAY
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JORDAN.MATERNOSKI@DOT.WI.GOV

DNR AREA LIASON

JAY SCHIEFELBEIN
DEPARTMENT OF NATURAL RESOURCES
2984 SHAWANO AVENUE
GREEN BAY, WI 54313
920-360-3784
jeremiah.schiefelbein@wisconsin.gov

SURVEYS CONTACT PERSON

CORMAC MCINNIS
NORTHEAST REGIONAL SURVEY COORDINATOR
944 VANDERPERREN WAY
GREEN BAY, WI 54304
920-492-5638
CORMAC.MCINNIS@DOT.WI.GOV

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

TO OBTAIN LOCATIONS OF
PARTICIPANTS UNDERGROUND
FACILITIES BEFORE YOU
DIG IN WISCONSIN

WIS. STATUTE 182.0175 (1974)
REQUIRES MIN. OF 3 WORK DAYS
NOTICE BEFORE YOU EXCAVATE

GENERAL NOTES

THE CONTRACTOR SHALL CONTACT THE UTILITIES AND DIGGERS HOTLINE TO LOCATE AND FIELD VERIFY UTILITIES. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

THE LOCATIONS OF EROSION CONTROL ITEMS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

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

DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE SALVAGE TOPSOILED, FERTILIZED, AND SEEDED AS DIRECTED BY THE ENGINEER.

A VERTICAL SAWCUT SHALL BE MADE THROUGH EXISTING PAVEMENTS AT REMOVAL LIMITS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY ANY OPERATION OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS AT THE CONTRACTORS EXPENSE.

EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO ANY GRUBBING OR TOPSOIL STRIPPING OPERATIONS

TEMPORARY STORAGE OF ANY EXCAVATED MATERIAL WILL NOT BE PERMITTED IN WETLANDS, FLOODWAY OR FLOODPLAIN OF ANY WATERWAY.

THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, PASSING OR PARKING LANE.

EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE YARDAGE AND IS NOT SHOWN ON THE CROSS-SECTIONS BUT IS MEASURED AND PAID FOR AS COMMON EXCAVATION.

UTILITY CONTACTS

MICHAEL BROLIN
ALLIANT ENERGY - ELECTRICITY
4902 NORTH BILTMORE LN
MADISON, WI 53713
(608) 458-4871
MICHAELBROLIN@ALLIANTENERGY.COM

RUSS RYAN
FRONTIER COMMUNICATIONS OF WI LLC - COMMUNICATION LINE
107 PLEASANTVIEW DR
PLYMOUTH, WI 53073
(920) 893-7212
RUSSELL.W.RYAN@FTR.COM

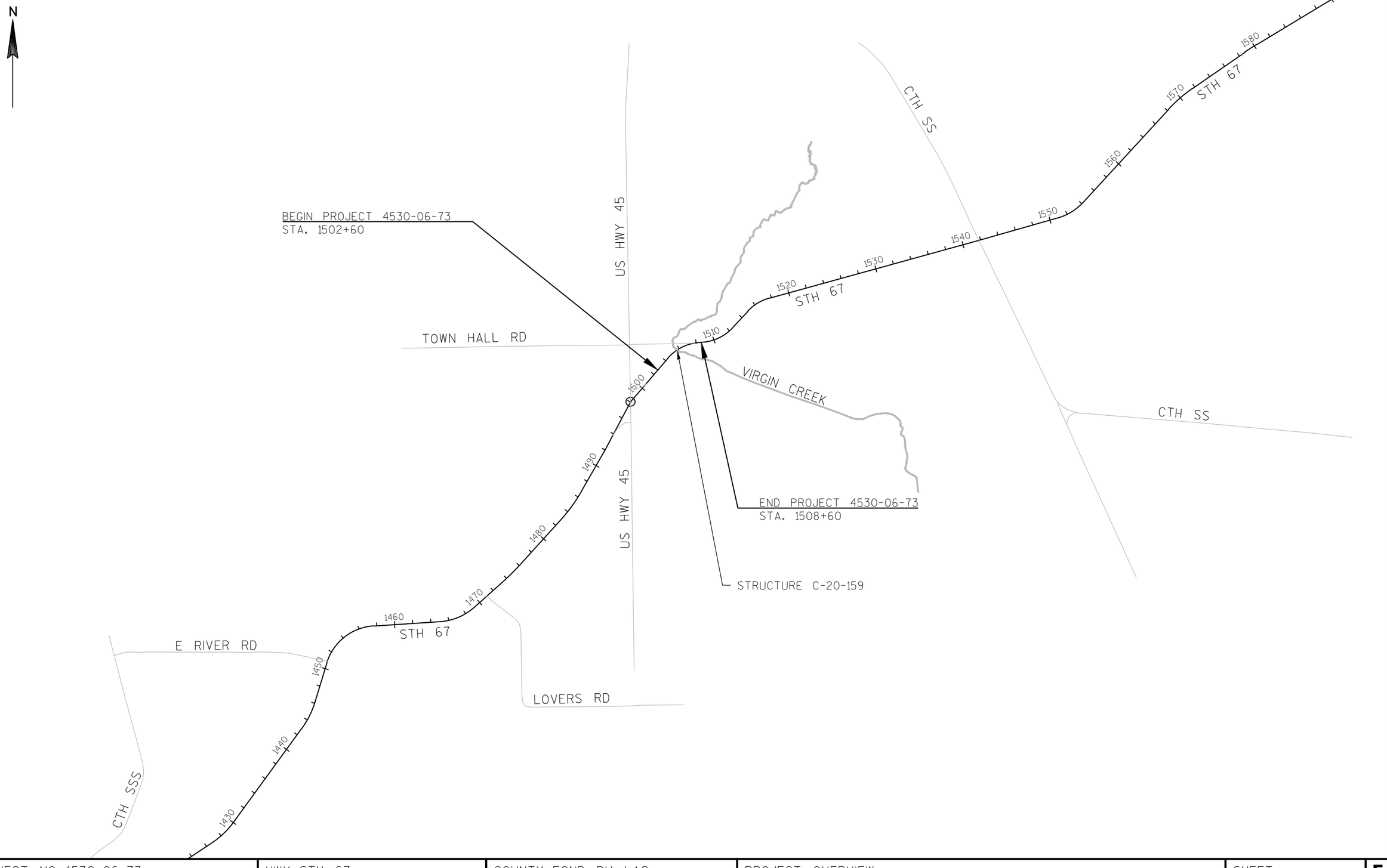
DAN SANDE
WE ENERGIES - ELECTRICITY
A299
333 W EVERETT ST
MILWAUKEE, WI 53203
(414) 221-4578
DAN.SANDE@WE-ENERGIES.COM

TODD HILDEBRANDT
CHARTER COMMUNICATIONS - COMMUNICATION LINE
165 KNIGHTS WAY
FOND DU LAC, WI 54935
(920) 263-0428
TODD.HILDEBRANDT@CHARTER.COM

LORI BUTRY
WISCONSIN PUBLIC SERVICE CORPORATION - GAS/PETROLEUM
700 N ADAMS ST
P.O. BOX 19001
GREEN BAY, WI 54307-9001
(920) 433-1703
LABUTRY@INTEGRYSGROUP.COM

RUNOFF COEFFICIENT TABLE

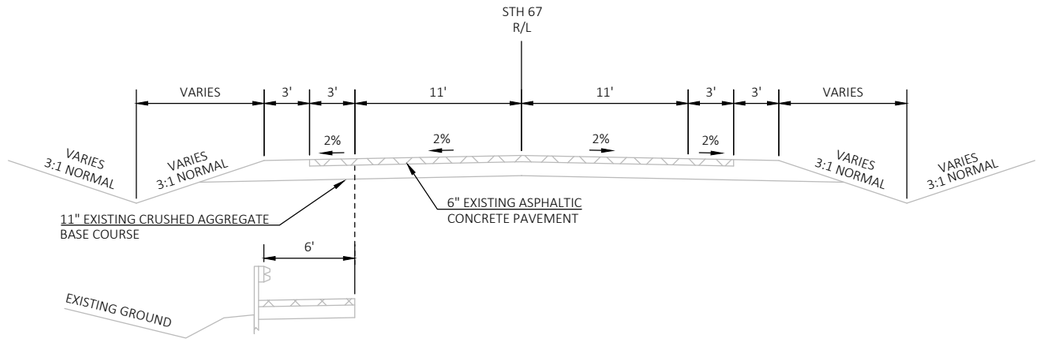
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	0.08	0.16	0.22	0.12	0.20	0.27	0.15	0.24	0.33	0.19	0.28	0.38
	0.22	0.30	0.38	0.26	0.34	0.44	0.30	0.37	0.50	0.34	0.41	0.56
MEDIAN STRIP TURF	0.19	0.20	0.24	0.19	0.22	0.26	0.20	0.23	0.30	0.20	0.25	0.30
	0.24	0.26	0.30	0.25	0.28	0.33	0.26	0.30	0.37	0.27	0.32	0.40
SIDE STRIP TURF			0.25			0.27			0.28			0.30
			0.32			0.34			0.36			0.38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											



2

PROJECT NO: 4530-06-73	HWY: STH 67	COUNTY: FOND DU LAC	PROJECT OVERVIEW	SHEET 4	E

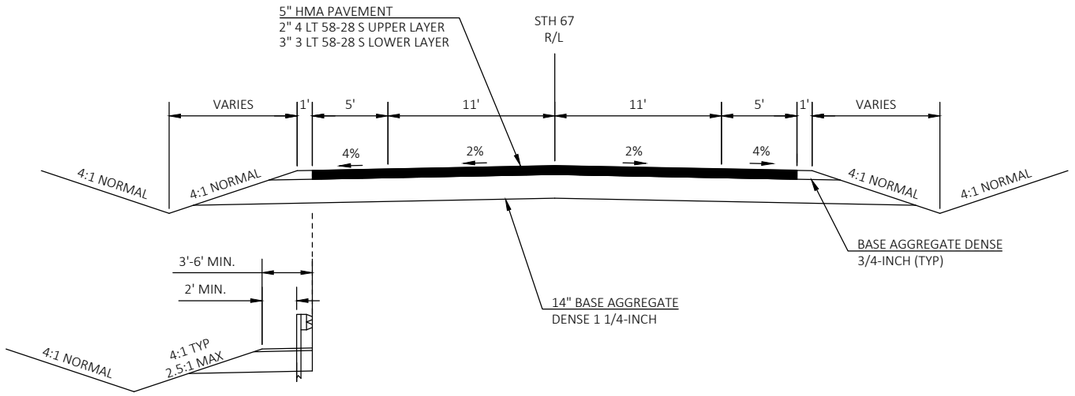
2



BEAM GUARD
STA. 1505+10 TO STA. 1506+45 RT
STA. 1505+20 TO 1506+49 LT

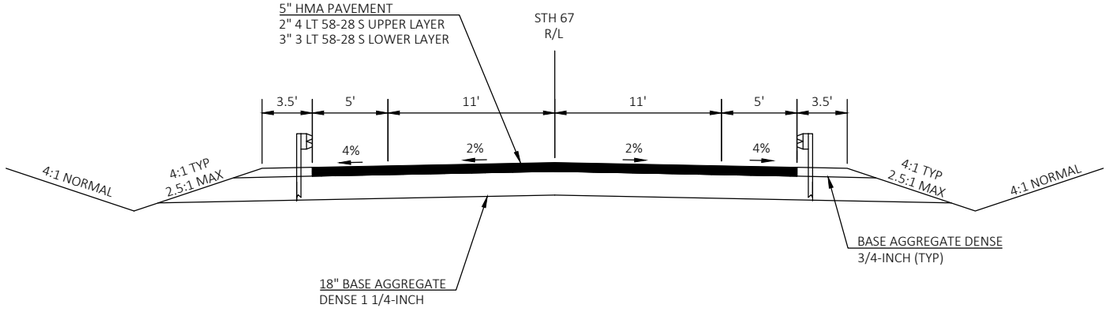
EXISTING TYPICAL SECTION FOR STH 67
1502+60 TO STA. 1508+60

2



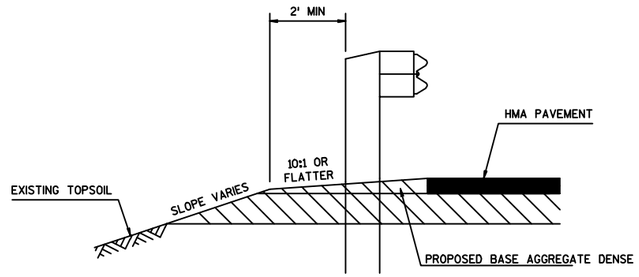
PROPOSED FINISHED TYPICAL SECTION FOR STH 67
STA. 1502+60 TO STA. 1505+65
STA. 1505+98 TO STA. 1508+60

BEAM GUARD
STA. 1504+77 TO STA. 1507+03 RT
STA. 1504+71 TO 1506+83 LT

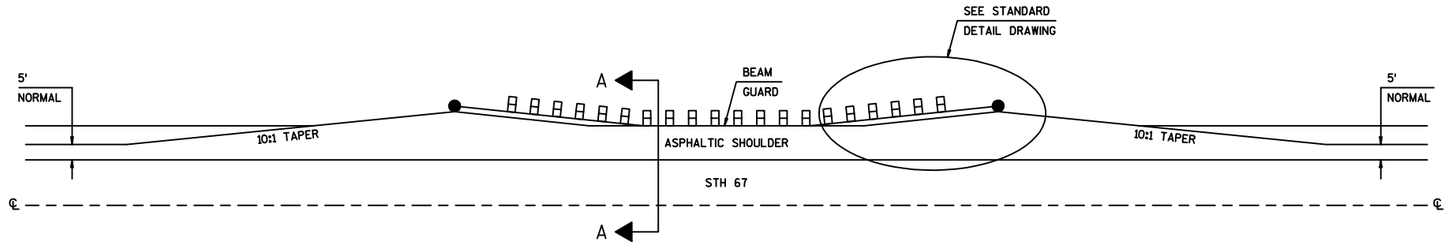


PROPOSED FINISHED TYPICAL SECTION FOR STH 67
STA. 1505+65 TO STA. 1505+98

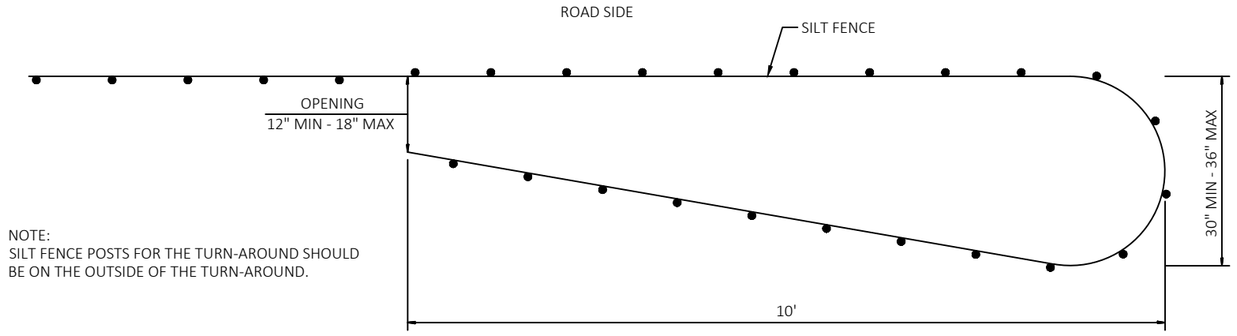
PROJECT NO: 4530-06-73	HWY: STH 67	COUNTY: FOND DU LAC	TYPICAL SECTIONS	SHEET 6	E



SECTION A-A

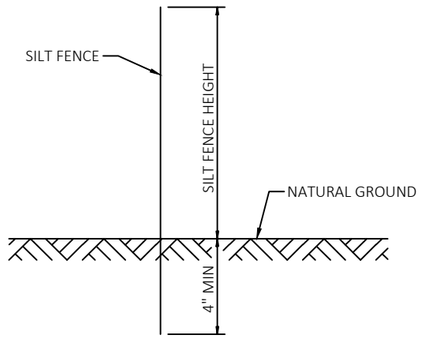


DETAIL FOR ASPHALTIC SHOULDER AT GUARDRAIL



NOTE:
SILT FENCE POSTS FOR THE TURN-AROUND SHOULD BE ON THE OUTSIDE OF THE TURN-AROUND.

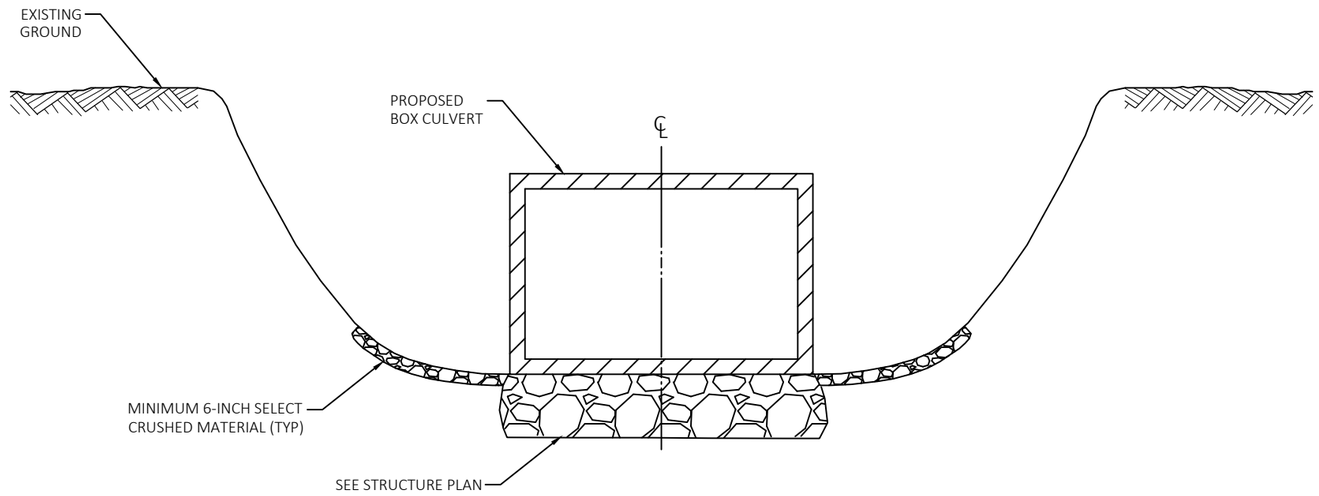
PLAN VIEW



SIDE VIEW

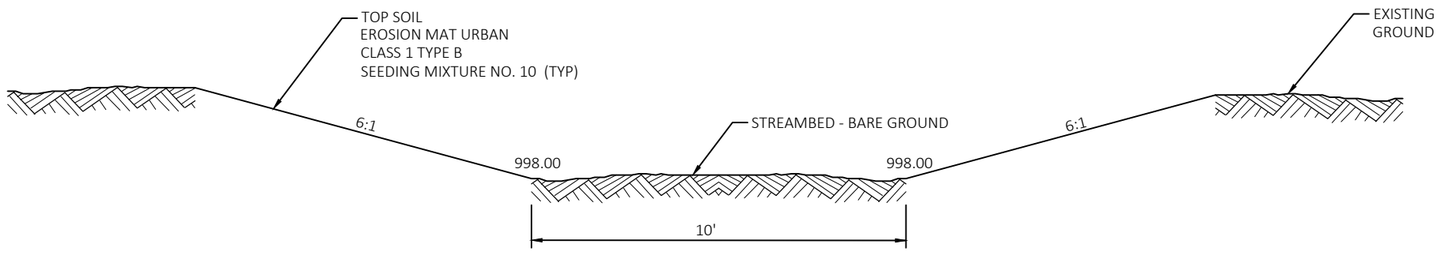
SILT FENCE TURN-AROUND DETAIL

PROJECT NO:4530-06-73	HWY:STH 67	COUNTY:FOND DU LAC	CONSTRUCTION DETAILS	SHEET 7	E



EXCAVATION PROTECTION AT BOX CULVERTS

(NOT TO SCALE)
INFORMATION ONLY



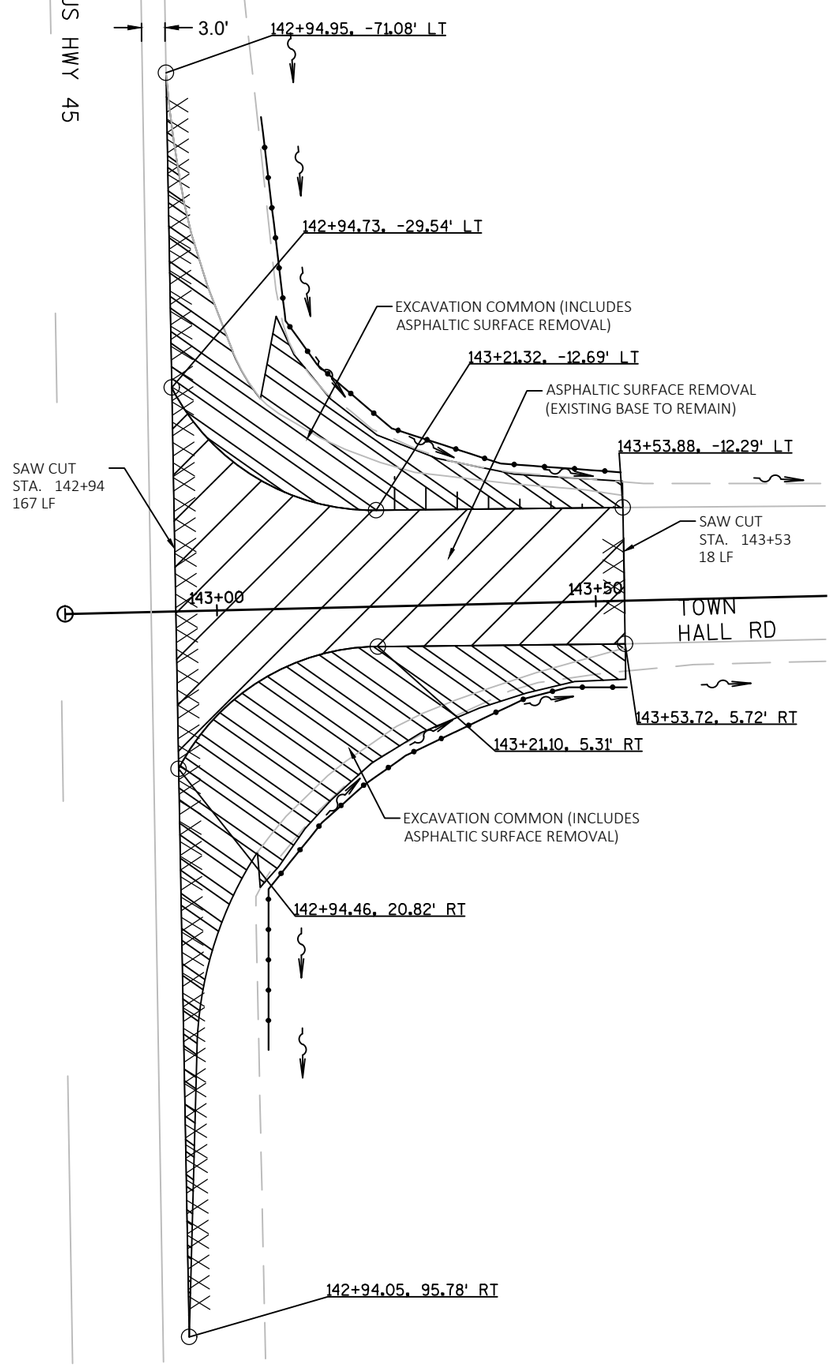
TYPICAL SECTION OF VIRGIN CREEK AT TOWN HALL ROAD (147+60)

PROJECT NO:4530-06-73	HWY:STH 67	COUNTY:FOND DU LAC	CONSTRUCTION DETAILS	SHEET 8	E

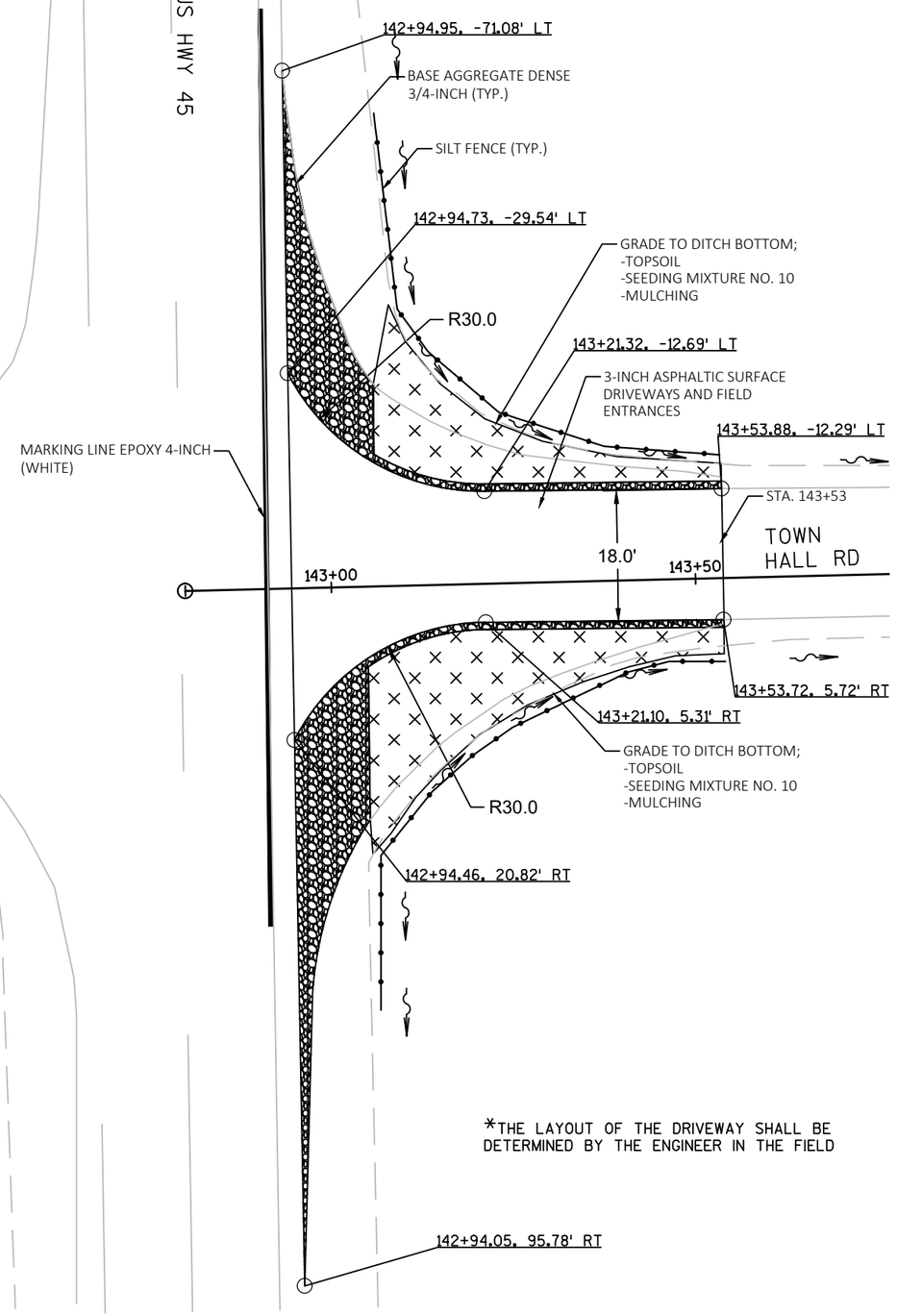
FILE NAME : N:\PDS\C3D\45300600\SHEETSPLAN\021001-CD.DWG
VIRGIN CREEK BOX CULVERT - 021002-CD

PLOT DATE : 2/12/2018 9:21 AM PLOT BY : MATERNOSKI, JORDAN DPLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 42



REMOVALS



PROPOSED

*THE LAYOUT OF THE DRIVEWAY SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD

CONVERSION OF TOWN HALL ROAD INTO RURAL DRIVEWAY

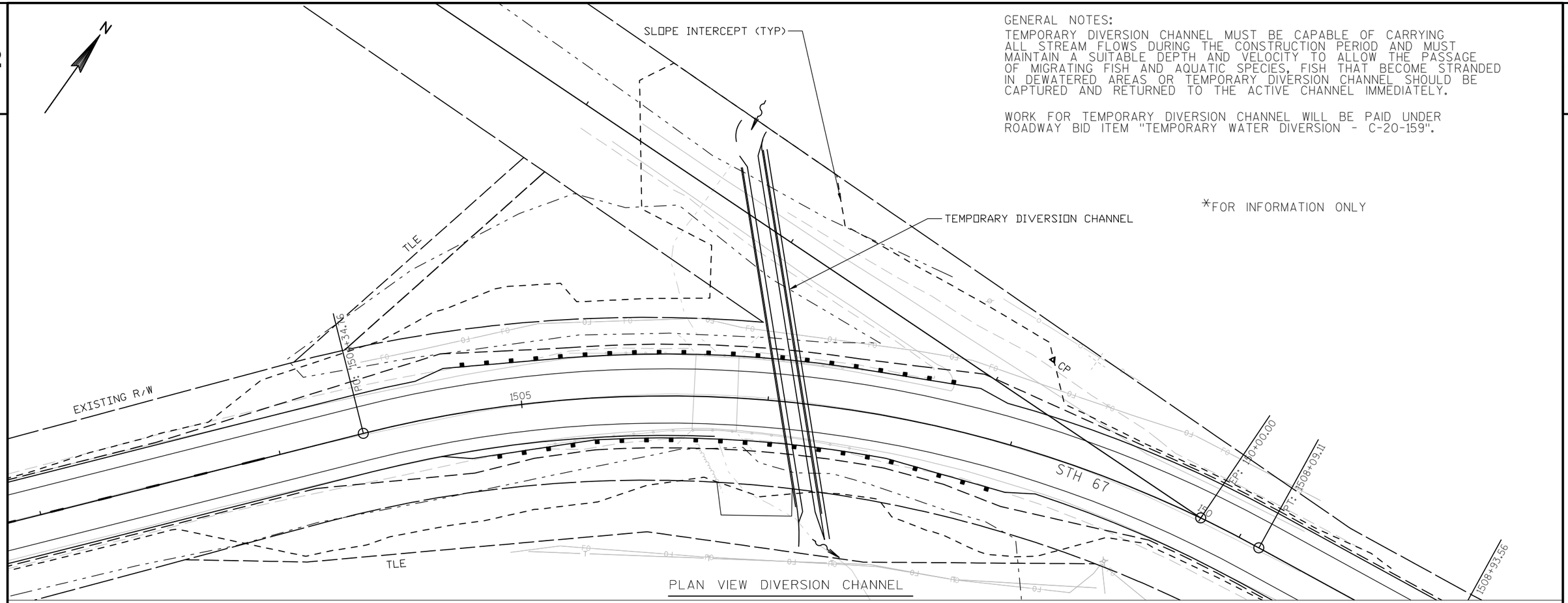
PROJECT NO: 4530-06-73	HWY: STH 67	COUNTY: FOND DU LAC	CONSTRUCTION DETAILS	SHEET 9	E

GENERAL NOTES:

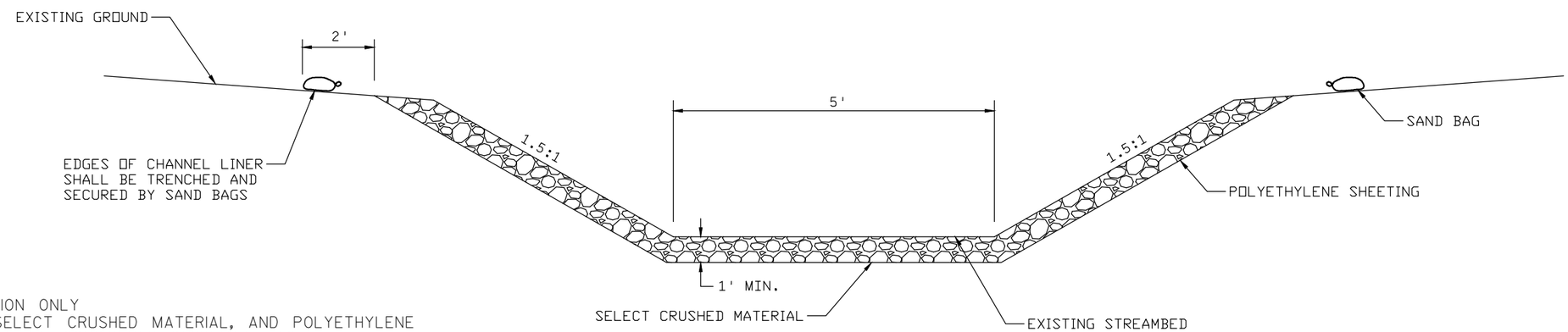
TEMPORARY DIVERSION CHANNEL MUST BE CAPABLE OF CARRYING ALL STREAM FLOWS DURING THE CONSTRUCTION PERIOD AND MUST MAINTAIN A SUITABLE DEPTH AND VELOCITY TO ALLOW THE PASSAGE OF MIGRATING FISH AND AQUATIC SPECIES, FISH THAT BECOME STRANDED IN DEWATERED AREAS OR TEMPORARY DIVERSION CHANNEL SHOULD BE CAPTURED AND RETURNED TO THE ACTIVE CHANNEL IMMEDIATELY.

WORK FOR TEMPORARY DIVERSION CHANNEL WILL BE PAID UNDER ROADWAY BID ITEM "TEMPORARY WATER DIVERSION - C-20-159".

*FOR INFORMATION ONLY



PLAN VIEW DIVERSION CHANNEL



*FOR INFORMATION ONLY
SAND BAGS, SELECT CRUSHED MATERIAL, AND POLYETHYLENE SHEETING SHALL BE CONSIDERED INCIDENTAL TO ROADWAY ITEM "TEMPORARY WATER DIVERSION - C-20-159".

TYPICAL SECTION DIVERSION CHANNEL

PROJECT NO: 4530-06-73	HWY: STH 67	COUNTY: FOND DU LAC	TEMPORARY DIVERSION CHANNEL DETAILS	SHEET 10	E

2

2

N

TOWN HALL RD

145

OBLITERATING OLD ROAD

REMOVING SMALL CULVERT PIPE
(24LF OF 60" X 42" CONCRETE ELLIPTICAL)

WETLAND BOUNDARY

FIBER OPTIC

REMOVING GUARDRAIL
STA 1505+21 - 1506+46 LT, 130 LF

ELECTRIC/TELEPHONE POLE

REMOVING ASPHALTIC SURFACE PAID FOR UNDER EXCAVATION COMMON

PROPOSED R/W

PLE (TYP.)

TLE (TYP.)

BEGIN PROJECT 4053-06-73
STA. 1502+60

EXISTING R/W

PC: 1504+74.76

FO

CP

1505

2009

EPT 150+00.00

PT: 1508+09.11

END PROJECT 4053-06-73
STA. 1508+60

PC: 1508+93.56

STH 67

1510

SAW CUT (TYP.)

REMOVING GUARDRAIL
STA 1505+09 - 1506+43 RT, 131 LF

WETLAND BOUNDARY

FIBER OPTIC

TELEPHONE

TLE (TYP.)

CLEARING AND GRUBBING (TYP.)

PROPOSED R/W

STA 1507+82.70 STH 67 =
STA. 150+00 TOWN HALL ROAD
INTERSECTION

PROJECT NO: 4530-06-73	HWY: STH 67	COUNTY: FOND DU LAC	REMOVAL PLAN	SHEET 11	E

2

2

N

TOWN HALL RD

145

STH 67

1505

2009

1504+34.76

PLACE SEEDING TEMPORARY IN WETLAND LOCATIONS

BEGIN PROJECT 4053-06-73
STA. 1502+60

EXISTING R/W (TYP.)

EP: 150+00.00

PT: 1508+09.11

END PROJECT 4053-06-73
STA. 1508+60

PT: 1508+93.56

TLE (TYP.)

WETLAND BOUNDARY

SLOPE INTERCEPT (TYP.)

PLACE SEEDING TEMPORARY IN WETLAND LOCATIONS

LEGEND

- SILT FENCE
- EROSION MAT URBAN CLASS 1 TYPE B
- MULCHING
- SLOPE INTERCEPT

PROJECT NO: 4530-06-73	HWY: STH 67	COUNTY: FOND DU LAC	EROSION CONTROL	SHEET 12	E

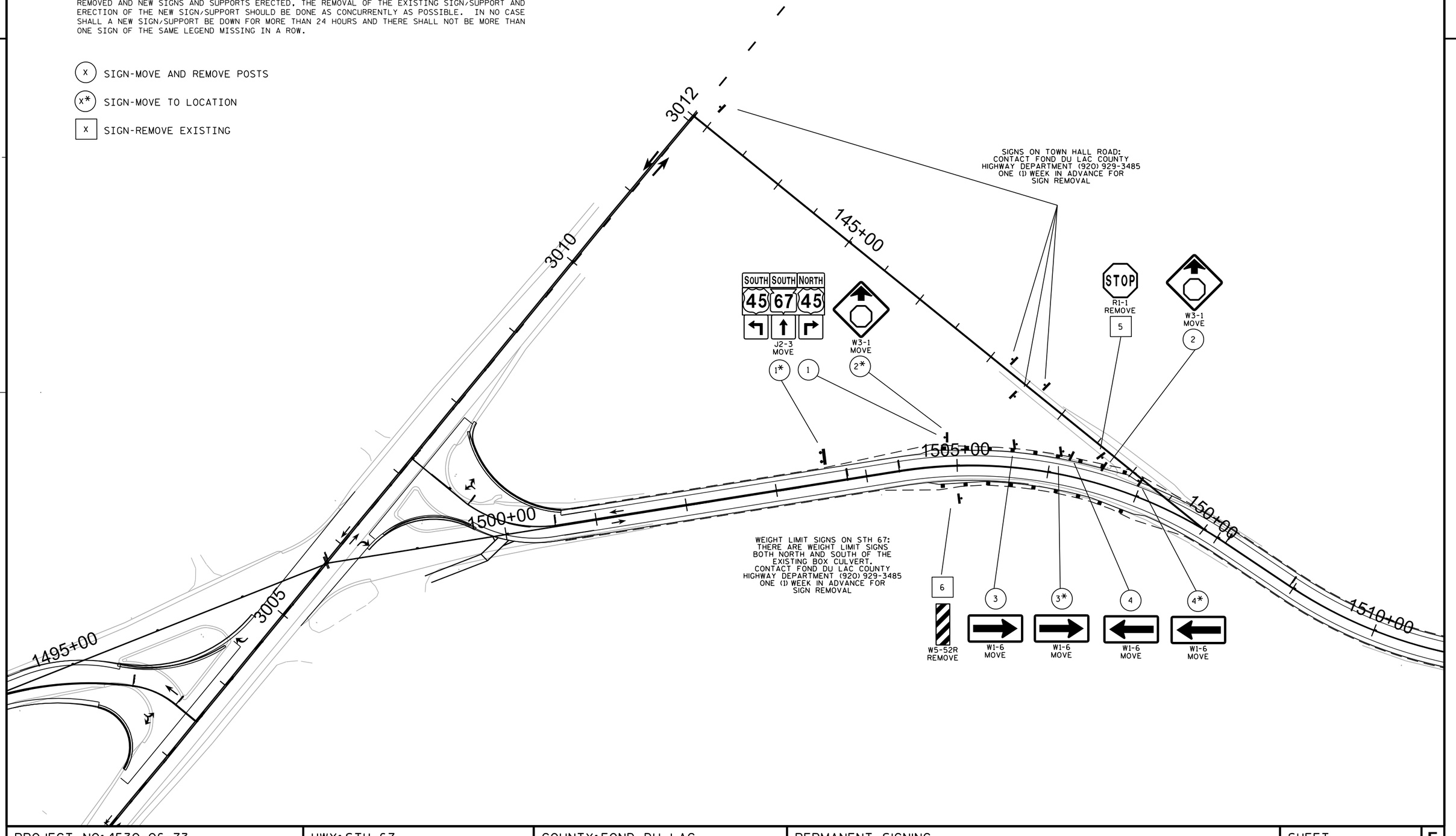
SIGNING NOTES

WHEN AN EXISTING STOP OR YIELD SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP OR YIELD SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

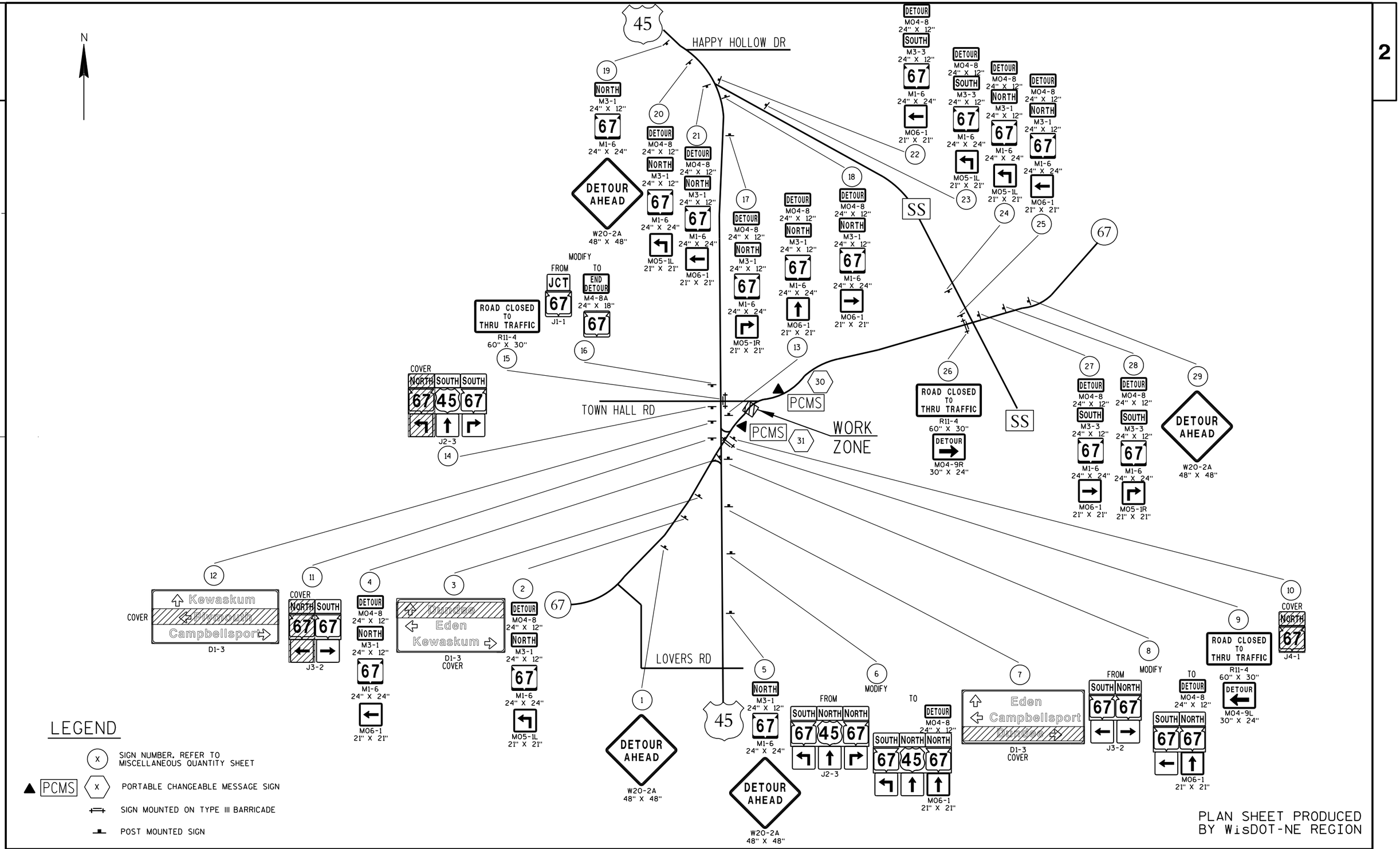
(X) SIGN-MOVE AND REMOVE POSTS

(X*) SIGN-MOVE TO LOCATION

[X] SIGN-REMOVE EXISTING



PROJECT NO: 4530-06-73	HWY: STH 67	COUNTY: FOND DU LAC	PERMANENT SIGNING	SHEET	E



PROJECT NO: 4530-06-73	HWY: STH 67	COUNTY: FOND DU LAC	DETOUR SIGNING DETAIL	SHEET 14	E

4530-06-73

Line	Item	Item Description	Unit	Total	Qty
0002	201.0110	Clearing	SY	67.000	67.000
0004	201.0210	Grubbing	SY	67.000	67.000
0006	203.0100	Removing Small Pipe Culverts	EACH	1.000	1.000
0008	203.0500.S	Removing Old Structure Over Waterway (station) 01. 1505+77	LS	1.000	1.000
0010	204.0110	Removing Asphaltic Surface	SY	146.000	146.000
0012	204.0165	Removing Guardrail	LF	261.000	261.000
0014	205.0100	Excavation Common	CY	1,713.000	1,713.000
0016	206.2000	Excavation for Structures Culverts (structure) 01. C-20-159	LS	1.000	1.000
0018	208.0100	Borrow	CY	64.000	64.000
0020	210.2500	Backfill Structure Type B	TON	370.000	370.000
0022	213.0100	Finishing Roadway (project) 01. 4530-06-73	EACH	1.000	1.000
0024	214.0100	Obliterating Old Road	STA	2.000	2.000
0026	305.0110	Base Aggregate Dense 3/4-Inch	TON	185.000	185.000
0028	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	2,520.000	2,520.000
0030	311.0110	Breaker Run	TON	110.000	110.000
0032	312.0110	Select Crushed Material	TON	50.000	50.000
0034	455.0605	Tack Coat	GAL	111.000	111.000
0036	460.2000	Incentive Density HMA Pavement	DOL	400.000	400.000
0038	460.5223	HMA Pavement 3 LT 58-28 S	TON	390.000	390.000
0040	460.5224	HMA Pavement 4 LT 58-28 S	TON	260.000	260.000
0042	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	25.000	25.000
0044	504.0100	Concrete Masonry Culverts	CY	95.000	95.000
0046	505.0400	Bar Steel Reinforcement HS Structures	LB	10,970.000	10,970.000
0048	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	1,080.000	1,080.000
0050	516.0500	Rubberized Membrane Waterproofing	SY	18.000	18.000
0052	614.2340	MGS Guardrail 3 L	LF	225.000	225.000
0054	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0056	618.0100	Maintenance And Repair of Haul Roads (project) 01. 4530-06-73	EACH	1.000	1.000
0058	619.1000	Mobilization	EACH	1.000	1.000
0060	624.0100	Water	MGAL	116.000	116.000
0062	625.0100	Topsoil	SY	1,190.000	1,190.000
0064	625.0500	Salvaged Topsoil	SY	2,440.000	2,440.000
0066	627.0200	Mulching	SY	1,489.000	1,489.000
0068	628.1504	Silt Fence	LF	2,301.000	2,301.000
0070	628.1520	Silt Fence Maintenance	LF	2,301.000	2,301.000
0072	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0074	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000

4530-06-73

Line	Item	Item Description	Unit	Total	Qty
0076	628.2008	Erosion Mat Urban Class I Type B	SY	2,145.000	2,145.000
0078	630.0110	Seeding Mixture No. 10	LB	43.000	43.000
0080	630.0200	Seeding Temporary	LB	16.000	16.000
0082	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	4.000	4.000
0084	638.2102	Moving Signs Type II	EACH	4.000	4.000
0086	638.2602	Removing Signs Type II	EACH	3.000	3.000
0088	638.3000	Removing Small Sign Supports	EACH	8.000	8.000
0090	642.5001	Field Office Type B	EACH	1.000	1.000
0092	643.0300	Traffic Control Drums	DAY	65.000	65.000
0094	643.0420	Traffic Control Barricades Type III	DAY	900.000	900.000
0096	643.0705	Traffic Control Warning Lights Type A	DAY	1,320.000	1,320.000
0098	643.0900	Traffic Control Signs	DAY	4,405.000	4,405.000
0100	643.0920	Traffic Control Covering Signs Type II	EACH	6.000	6.000
0102	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0104	643.5000	Traffic Control	EACH	1.000	1.000
0106	645.0105	Geotextile Type C	SY	216.000	216.000
0108	646.1020	Marking Line Epoxy 4-Inch	LF	2,526.000	2,526.000
0110	650.4500	Construction Staking Subgrade	LF	600.000	600.000
0112	650.5000	Construction Staking Base	LF	600.000	600.000
0114	650.6500	Construction Staking Structure Layout (structure) 01. C-20-159	LS	1.000	1.000
0116	650.9910	Construction Staking Supplemental Control (project) 01. 4530-06-73	LS	1.000	1.000
0118	650.9920	Construction Staking Slope Stakes	LF	600.000	600.000
0120	690.0150	Sawing Asphalt	LF	257.000	257.000
0122	715.0502	Incentive Strength Concrete Structures	DOL	570.000	570.000
0124	SPV.0105	Special 01. Temporary Water Diversion - C-20-159	LS	1.000	1.000

3

CLEARING AND GRUBBING

ROADWAY	STATION	TO	STATION	LOCATION	201.0110 CLEARING SY	201.0210 GRUBBING SY
STH 67	1505+66	-	1506+25	RT	67	67
				PROJECT TOTALS	**67**	**67**

REMOVALS

ROADWAY	STATION	TO	STATION	LOCATION	203.0100 REMOVING SMALL PIPE CULVERTS EACH	204.0110 REMOVING ASPHALTIC SURFACE SY	204.0165 REMOVING GUARDRAIL LF	REMARKS
TOWN HALL ROAD	142+94	-	143+53	L/R	-	146	-	
TOWN HALL ROAD	147+60	-	147+60	L/R	1	-	-	24LF OF 60"X42" CONCRETE ELLIPTICAL PIPE
STH 67	1505+09	-	1506+43	RT	-	-	131	
STH 67	1505+21	-	1506+46	LT	-	-	130	
				PROJECT TOTALS	**1**	**146**	**261**	

3

EARTHWORK SUMMARY

ROADWAY	STATION	TO	STATION	EXCAVATION COMMON (1) CUT (2) CY	EXCAVATION COMMON (1) EBS (3) CY	UNUSABLE PAVEMENT MATERIAL (4) CY	AVAILABLE MATERIAL (5) CY	UNEXPANDED FILL	EXPANDED FILL (6) CY	MASS ORDINATE ± (7) CY	BORROW (8) CY
TOWN HALL ROAD	142+94	-	143+53	50	0	22	28	0	0	28	0
STH 67	1502+60	-	1508+60	1,663	0	348	1,315	1,061	1,379	-64	64
				1,713	**0**	**370**	**1,343**	**1,061**	**1,379**	**-36**	**64**

(1) EXCAVATION COMMON IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
(2) UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
(3) EBS EXCAVATION TO BE BACKFILLED WITH CUT MATERIAL
(4) UNUSABLE PAVEMENT MATERIAL
(5) AVAILABLE MATERIAL = CUT - UNUSABLE PAVEMENT MATERIAL
(6) EXPANDED FILL * EXPANDED FILL FACTOR. EXPANDED FILL FACTOR = 1.3
(7) MASS ORDINATE = (AVAILABLE MATERIAL) - (EXPANDED FILL) + (EBS). PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL. MINUS INDICATES A SHORTAGE OF MATERIAL. THE MASS ORDINATE IS FOR INFORMATION PURPOSES ONLY
(8) BORROW = (EXPANDED FILL) + (EBS) - (AVAILABLE MATERIAL). ITEM NUMBER 208.0100

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FINISHING ROADWAY

LOCATION	213.0100 FINISHING ROADWAY (PROJECT) EACH
4530-06-73	1
PROJECT TOTALS	**1**

OBLITERATING OLD ROAD

ROADWAY	STATION	TO	STATION	LOCATION	214.0100 OBLITERATING OLD ROAD STA
TOWN HALL ROAD	145+58	-	147+30	L/R	2
				PROJECT TOTALS	**2**

MAINTENANCE AND REPAIR OF HAUL ROADS

LOCATION	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) EACH
4530-06-73	1
PROJECT TOTALS	**1**

3

BASE AGGREGATE

ROADWAY	STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	312.0110 SELECT CRUSHED MATERIAL TON	REMARKS
TOWN HALL ROAD	142+94	-	143+53	L/R	20	-	-	SHOULDERS
TOWN HALL ROAD	142+94	-	143+53	L/R	-	20	-	BASE FOR ASPHALTIC DRIVEWAY
STH 67	1502+60	-	1508+60	L/R	165	2,500	-	
STH 67	1505+65	-	1505+98	L/R	-	-	50	EXCAVATION PROTECTION AT BOX CULVERT
				PROJECT TOTALS	**185**	**2,520**	**50**	

MOBILIZATION

LOCATION	619.1000 MOBILIZATION EACH
4530-06-73	1
PROJECT TOTALS	**1**

ASPHALT PAVEMENT ITEMS

ROADWAY	STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	460.5223 HMA PAVEMENT 3 LT 58-28 S TON	460.5224 HMA PAVEMENT 4 LT 58-28 S TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON
TOWN HALL ROAD	142+94	-	143+53	L/R	-	-	-	25
STH 67	1502+60	-	1508+60	L/R	111	390	260	-
				PROJECT TOTALS	**111**	**390**	**260**	**25**

3

GUARDRAIL

ROADWAY	STATION	TO	STATION	LOCATION	614.2340 MGS GUARDRAIL 3 L LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
STH 67	1504+77	-	1507+03	RT	112	2
STH 67	1504+71	-	1506+83	LT	113	2
				PROJECT TOTALS	**225**	**4**

SILT FENCE

ROADWAY	STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF
STH 67	1502+60	-	1508+60	L/R	1,686	1,686
TOWN HALL ROAD	143+05	-	143+53	L/R	155	155
UNDISTRIBUTED					460	460
				PROJECT TOTALS	**2,301**	**2,301**

3

WATER

LOCATION	624.0100 WATER MGAL	REMARKS
4530-06-73	25	WATER FOR COMPACTION
4530-06-73	10	WATER FOR DUST CONTROL
4530-06-73	81	WATER FOR SEEDED AREAS
PROJECT TOTALS	**116**	

EROSTION CONTROL

ROADWAY	STATION	TO	STATION	LOCATION	625.0100 TOPSOIL SY	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	630.0110 SEEDING MIXTURE NO. 10 LB	630.0200 SEEDING TEMPORARY LB
TOWN HALL ROAD	143+04	-	143+53	L/R	102	-	102	-	2	-
TOWN HALL ROAD	145+58	-	150+00	L/R	850	170	238	730	14	-
STH 67	1502+60	-	1508+60	L/R	-	1,782	851	986	18	13
UNDISTRIBUTED					238	488	298	429	9	3
				PROJECT TOTALS	**1,190**	**2,440**	**1,489**	**2,145**	**43**	**16**

ERECTION & REMOVAL OF PERMANENT SIGNING, TYPE II

SIGN NO.	LOCATION	SIGN CODE	638.2102 SIGNS MOVING TYPE II EACH	634.0616 POSTS WOOD 4x6x16 EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
1	STH 67 S. OF TOWN HALL RD	J2-3	1	---	---	2	MOVE TO NEW LOCATION, REMOVE POST
1*	"	J2-3	---	2	---	---	NEW LOCATION OF SIGN 1
2	"	W3-1	1	---	---	1	MOVE TO NEW LOCATION, REMOVE POST
2*	"	W3-1	---	1	---	---	NEW LOCATION OF SIGN 2
3	"	W1-6	1	---	---	1	MOVE TO NEW LOCATION, REMOVE POST
3*	"	W1-6	---	1	---	---	NEW LOCATION OF SIGN 3
4	"	W1-6	1	---	---	1	MOVE TO NEW LOCATION, REMOVE POST
5	"	R1-1	---	---	1	1	NEW LOCATION OF SIGN 4
5	"	R1-1	---	---	1	1	
6	"	W5-52R	---	---	1	1	
	TOTALS		**4**	**4**	**3**	**8**	

3

MOBILIZATIONS EROSION CONTROL

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
4530-06-73	4	2
PROJECT TOTALS	**4**	**2**

TRAFFIC CONTROL

LOCATION	DURATION DAYS	643.0300 TRAFFIC CONTROL DRUMS EACH	643.0300 TRAFFIC CONTROL DRUMS DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III EACH	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0900 TRAFFIC CONTROL SIGNS EACH	643.0900 TRAFFIC CONTROL SIGNS DAYS	643.5000 TRAFFIC CONTROL EACH	REMARKS
4530-06-73	60	-	-	15	900	20	1,200	15	900	1	ROAD CLOSURE
STH 45	5	13	65	-	-	-	-	5	25	-	SHOULDER CLOSURE FOR DRIVEWAY CONSTRUCTION
PROJECT TOTALS			**65**		**900**		**1,200**		**925**	**1**	

3

FIELD OFFICE

LOCATION	642.5001 FIELD OFFICE TYPE B EACH
4530-06-73	1
PROJECT TOTALS	**1**

PAVEMENT MARKING

ROADWAY	STATION	TO	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH WHITE LF	646.1020 MARKING LINE EPOXY 4-INCH YELLOW LF	REMARKS
TOWN HALL ROAD	142+91	-	142+91	L/R	126	-	EDGELINE
STH 67	1502+60	-	1508+60	L/R	1,200	1,200	EDGELINE, CENTERLINE (DOUBLE SOLID)
				PROJECT TOTALS	**1,326**	**1,200**	

TEMPORARY WATER DIVERSION

LOCATION	SPV.0105.01 TEMPORARY WATER DIVERSION - C-20-159 LS
4530-06-73	1
	1

CONSTRUCTION STAKING

ROADWAY	STATION	TO	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) LS	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) LS	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF	REMARKS
STH 67	1502+60	-	1508+60	L/R	600	600	-	-	600	
STH 67	1502+60	-	1508+60	L/R	-	-	1	-	-	C-20-159
STH 67	1502+60	-	1508+60	L/R	-	-	-	1	-	4530-06-73
				PROJECT TOTALS	**600**	**600**	**1**	**1**	**600**	

SAWING ASPHALT

ROADWAY	STATION	LOCATION	690.0150 SAWING ASPHALT LF
STH 67	1502+60	L/R	28
STH 67	1508+60	L/R	28
TOWN HALL ROAD	142+94	L/R	167
TOWN HALL ROAD	143+53	L/R	18
TOWN HALL ROAD	145+58	L/R	16
		PROJECT TOTALS	**257**

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 60 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO. OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
1	STH 67, S. OF USH 45, 1/4 MILE S. OF US 45 INTERSECTION	W 20-2A	48"X48"	1	60	60						
2	STH 67, S. OF USH 45, PLACE 1000' S. OF US 45 INTERSECTION	MO 4-8	24"X12"	1	60	60						
	"	M 3-1	24"X12"	1	60	60						
	"	M 1-6	24"X24"	1	60	60						67
	"	MO 5-1L	21"X21"	1	60	60						
3	STH 67, S. OF USH 45, COVER EXISTING D1-3 SIGN AS SHOWN									1	1	COVER "DUNDEE"
4	STH 67, AT USH 45 INTERSECTION, PLACE RIGHT OF EXISTING J3-1 SIGN AT STOP SIGN	MO 4-8	24"X12"	1	60	60						
	"	M 3-1	24"X12"	1	60	60						
	"	M 1-6	24"X24"	1	60	60						67
	"	MO 6-1	21"X21"	1	60	60						LEFT
5	USH 45, N. OF LOVERS RD, PLACE 1/2 MILE S. OF STH 67 INTERSECTION	M 3-1	24"X12"	1	60	60						
	"	M 1-6	24"X24"	1	60	60						67
	"	W 20-2A	48"X48"	1	60	60						
6	USH 45, N. OF LOVERS RD, MODIFY EXISTING J2-3 AS SHOWN	MO 4-8	24"X12"	1	60	60						
	"	MO 6-1	21"X21"	1	60	60						AHEAD
7	USH 45, S. OF USH 45, COVER EXISTING D1-3 SIGN AS SHOWN									1	1	COVER "DUNDEE"
8	USH 45, AT STH 67, MODIFY EXISTING J3-2 SIGN AS SHOWN	MO 4-8	24"X12"	1	60	60						
	"	MO 6-1	21"X21"	1	60	60						AHEAD
9	STH 67, AT USH 45, PLACE IN SE QUADRANT OF INTERSECTION ON RIGHT SHOULDER	R 11-4	60"X30"	1	60	60	60	120				
	"	MO 4-9L	30"X24"	1	60	60						
10	STH 67, E. OF USH 45, COVER EXISTING J4-1 SIGN AS SHOWN									1	1	COVER ENTIRE SIGN
11	USH 45, N. OF STH 67, COVER EXISTING J3-2 SIGN AS SHOWN									1	1	COVER "NORTH 67 LT"
12	USH 45, N. OF STH 67, COVER EXISTING D1-3 SIGN AS SHOWN									1	1	COVER "PLYMOUTH"
13	USH 45, N. OF STH 67, PLACE 400' N. OF STH 67 INTERSECTION	MO 4-8	24"X12"	1	60	60						
	"	M 3-1	24"X12"	1	60	60						
	"	M 1-6	24"X24"	1	60	60						67
	"	MO 6-1	21"X21"	1	60	60						AHEAD
14	USH 45, N. OF STH 67, COVER EXISTING J2-3 SIGN AS SHOWN									1	1	COVER "NORTH 67 ADV LT"
15	TOWN HALL RD, AT USH 45, PLACE IN THE MIDDLE OF THE ROADWAY FACING WEST	R 11-4	60"X30"	1	60	60	60	120				
16	USH 45, N. OF TOWN HALL RD, MODIFY EXISTING J1-1 SIGN AS SHOWN	M 4-8A	24"X18"	1	60	60						
17	USH 45, S. OF CTH SS, PLACE 750' S. OF CTH SS INTERSECTION	MO 4-8	24"X12"	1	60	60						
	"	M 3-1	24"X12"	1	60	60						
	"	M 1-6	24"X24"	1	60	60						67
	"	MO 5-1R	21"X21"	1	60	60						
18	USH 45, AT CTH SS, PLACE RIGHT OF EXISTING J13-1 SIGN AT CTH SS INTERSECTION	MO 4-8	24"X12"	1	60	60						
	"	M 3-1	24"X12"	1	60	60						
	"	M 1-6	24"X24"	1	60	60						67
	"	MO 6-1	21"X21"	1	60	60						RIGHT
19	USH 45, N. OF HAPPY HOLLOW RD, PLACE 1500' N. OF CTH SS INTERSECTION	M 3-1	24"X12"	1	60	60						
	"	M 1-6	24"X24"	1	60	60						
	"	W 20-2A	48"X48"	1	60	60						
20	USH 45, S. OF HAPPY HOLLOW RD, PLACE 750' N. OF CTH SS INTERSECTION	MO 4-8	24"X12"	1	60	60						
	"	M 3-1	24"X12"	1	60	60						
	"	M 1-6	24"X24"	1	60	60						67
	"	MO 5-1L	21"X21"	1	60	60						
	PAGE SUBTOTALS			39		2,340	120	240	0		6	

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

3

TRAFFIC CONTROL DETOUR SIGN SUMMARY

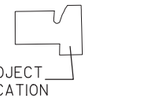
SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 60 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO. OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
21	USH 45, AT CTH SS, PLACE RIGHT OF EXISTING J3-1 SIGN AS SHOWN	MO 4-8	24"X12"	1	60	60						
	"	M 3-1	24"X12"	1	60	60						
	"	M 1-6	24"X24"	1	60	60						67
	"	MO 6-1	21"X21"	1	60	60						LEFT
22	CTH SS, AT USH 45, PLACE RIGHT OF EXISTING J13-1 SIGN AT USH 45 INTERSECTION	MO 4-8	24"X12"	1	60	60						
	"	M 3-3	24"X12"	1	60	60						
	"	M 1-6	24"X24"	1	60	60						67
	"	MO 6-1	21"X21"	1	60	60						LEFT
23	CTH SS, S. OF USH 45, PLACE 750' S. OF USH 45 INTERSECTION	MO 4-8	24"X12"	1	60	60						
	"	M 3-3	24"X12"	1	60	60						
	"	M 1-6	24"X24"	1	60	60						67
	"	MO 5-1L	21"X21"	1	60	60						
24	CTH SS, N. OF STH 67, PLACE 750' N. OF STH 67 INTERSECTION	MO 4-8	24"X12"	1	60	60						
	"	M 3-1	24"X12"	1	60	60						
	"	M 1-6	24"X24"	1	60	60						67
	"	MO 5-1L	21"X21"	1	60	60						
25	CTH SS, AT STH 67, PLACE RIGHT OF EXISTING J13-1 SIGN AT STH 67 INTERSECTION	MO 4-8	24"X12"	1	60	60						
	"	M 3-1	24"X12"	1	60	60						
	"	M 1-6	24"X24"	1	60	60						67
	"	MO 6-1	21"X21"	1	60	60						LEFT
26	STH 67, AT CTH SS, PLACE IN ROADWAY FACING EAST	R 11-4	60"X30"	1	60	60	60	120				
	"	MO 4-9R	30"X24"	1	60	60						
27	STH 67, AT CTH SS, RIGHT OF EXISTING J13-1 SIGN AT CTH SS INTERSECTION	MO 4-8	24"X12"	1	60	60						
	"	M 3-3	24"X12"	1	60	60						
	"	M 1-6	24"X24"	1	60	60						67
	"	MO 6-1	21"X21"	1	60	60						RIGHT
28	STH 67, E. OF CTH SS, PLACE 750' E. OF CTH SS INTERSECTION	MO 4-8	24"X12"	1	60	60						
	"	M 3-3	24"X12"	1	60	60						
	"	M 1-6	24"X24"	1	60	60						67
	"	MO 5-1R	21"X21"	1	60	60						
29	STH 67, E. OF CTH SS, PLACE 1500' E. OF CTH SS INTERSECTION	W 20-2A	48"X48"	1	60	60						
30	STH 67, PLACE ON RIGHT SHOULDER E. OF TOWN HALL RD, FIELD DETERMINED	PCMS		1					7			PLACE 7 DAYS IN ADVANCE OF CLOSURE
31	STH 67, PLACE ON RIGHT SHOULDER BETWEEN USH 45 & TOWN HALL RD, FIELD DETERMINED	PCMS		1					7			PLACE 7 DAYS IN ADVANCE OF CLOSURE
	PAGE SUBTOTALS			33		1,860	60	120	14		0	
	PROJECT TOTALS			**72**		**4,200**	**180**	**360**	**14**		**6**	

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PROJECT PLAT TITLE SHEET
PROJ NO. 4530-06-21
USH 45 - ECL
USH 45 - DIVISION ROAD
STH 67
FOND DU LAC COUNTY

FOND DU LAC COUNTY



PROJECT LOCATION

THE NOTES,CONVENTIONAL SIGNS, AND ABBREVIATIONS ARE ASSOCIATED WITH EACH TRANSPORTATION PROJECT PLAT FOR PROJECT 4530-06-00

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), FOND DU LAC COUNTY, NAD83(2007), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 1" X 24" IRON PIPE WITH DOT CAP), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

ALL RIGHT-OF-WAY LINES DEPICTED IN THE NON-ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, OR FROM CENTERLINE OF EXISTING PAVEMENTS.

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

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

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

A PERMANENT LIMITED EASEMENT (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE, BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHTS TO MAKE OR CONSTRUCT IMPROVEMENTS ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

A HIGHWAY EASEMENT (HE) IS AN EASEMENT FOR HIGHWAY PURPOSES (HE), AS LONG AS SO USED, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE.

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

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

PARCEL IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE SCHEDULE OF LANDS & INTERESTS REQUIRED.

CONVENTIONAL SYMBOLS

- SECTION LINE
- QUARTER LINE
- SIXTEENTH LINE
- NEW REFERENCE LINE
- NEW R/W LINE
- EXISTING R/W LINE
- PROPERTY LINE
- LOT, TIE & OTHER MINOR LINES
- CORPORATE LIMITS
- UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC) — W (TYPE)
- FEE ACQUISITION AREA (HATCHING VARIES BY OWNER)
- TEMPORARY LIMITED EASEMENT AREA
- EASEMENT AREA (HIGHWAY, PERMANENT LIMITED, OR RESTRICTED DEVELOPMENT)
- TRANSMISSION STRUCTURES
- BUILDING
- NATIONAL GEODETIC SURVEY MONUMENT
- SIXTEENTH CORNER MONUMENT
- SECTION CORNER
- NOTATION FOR COMBUSTABLE FLUIDS — CAUTION
- NOTATION FOR HIGH VOLTAGE TRANSMISSION LINES — CAUTION
- R/W MONUMENT
- NON-MONUMENTED R/W POINT
- FOUND IRON PIN — IP
- VALVE (GAS, WATER, ETC.) — (TYPE)
- SIGN
- OFF-PREMISE SIGN — I-25 — SIGN

	COMPENSABLE	NON-COMPENSABLE
ELECTRIC POLE	■	⌀
TELEPHONE POLE	⌀	⌀
PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)	⌀	⌀

- ACCESS RESTRICTED (BY ACQUISITION)
- NO ACCESS (BY STATUTORY AUTHORITY)
- ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
- BRIDGE
- PARCEL NUMBER 25
- UTILITY NUMBER 201

CONVENTIONAL ABBREVIATIONS

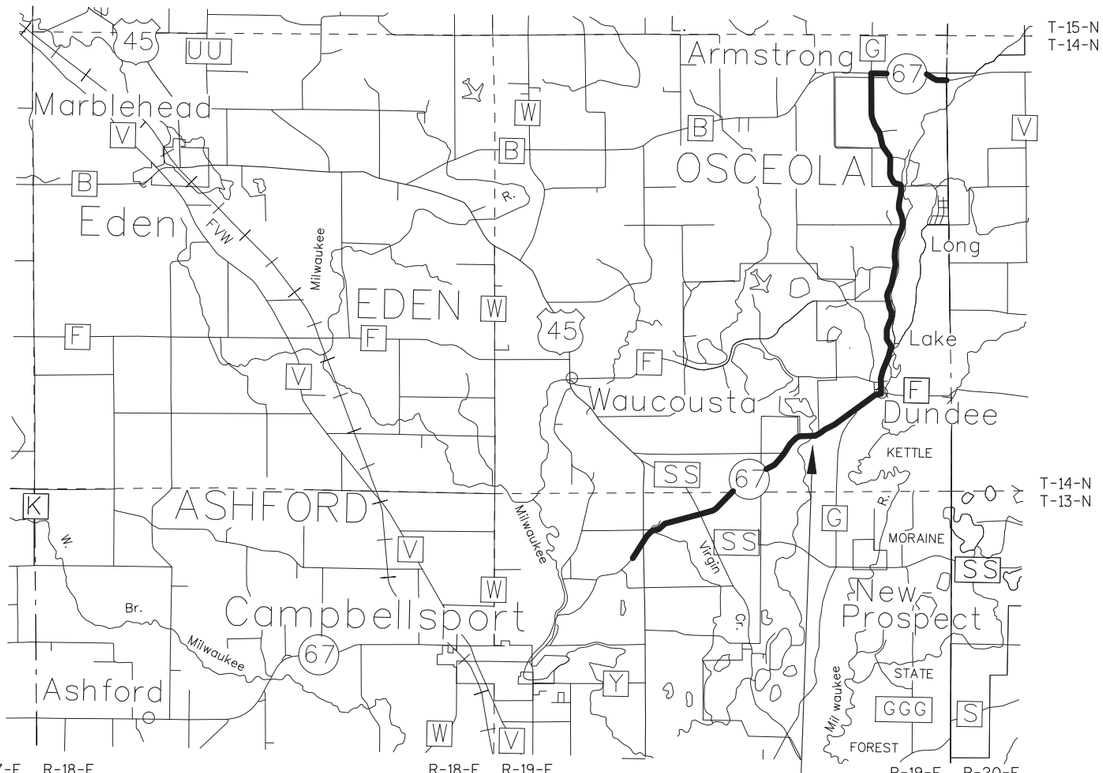
ACCESS RIGHTS	AR	POINT OF COMPOUND CURVE	PCC
ACRES	AC	POINT OF INTERSECTION	PI
AHEAD	AH	PROPERTY LINE	PL
ALUMINUM	ALUM	RECORDED AS	(100')
AND OTHERS	ET AL	REFERENCE LINE	R/L
BACK	BK	REMAINING	REM
BLOCK	BLK	RIGHT	RT
CENTERLINE	C/L	RIGHT OF WAY	R/W
CERTIFIED SURVEY MAP	CSM	SECTION	SEC
CONCRETE	CONC	SEPTIC VENT	SEPV
COUNTY	CO	SQUARE FEET	SF
COUNTY TRUNK HIGHWAY	CTH	STATE TRUNK HIGHWAY	STH
DISTANCE	DIST	STATION	STA
CORNER	COR	SUBDIVISION	SUBD
DOCUMENT NUMBER	DOC	TANGENT	TAN
EASEMENT	EASE	TELEPHONE PEDESTAL	TP
EXISTING	EX	TEMPORARY LIMITED EASEMENT	TLE
GAS VALVE	GV	TRANSPORTATION PROJECT PLAT	TPP
GRID NORTH	GN	UNITED STATES HIGHWAY	USH
HIGHWAY EASEMENT	HE	VOLUME	V
IDENTIFICATION	ID		
LAND CONTRACT	LC		
LEFT	LT		
MONUMENT	MON		
NATIONAL GEODETIC SURVEY	NGS		
NUMBER	NO		
OUTLOT	OL		
PAGE	P		
POINT OF TANGENCY	PT		
PERMANENT LIMITED EASEMENT	PLE		
POINT OF BEGINNING	POB		
POINT OF CURVATURE	PC		

CURVE DATA

LONG CHORD	LC
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE OR DELTA	Δ
LENGTH OF CURVE	L
TANGENT	T
DIRECTION AHEAD	DA
DIRECTION BACK	DB

CONVENTIONAL UTILITY SYMBOLS

- WATER — W
- GAS — G
- TELEPHONE — T
- OVERHEAD TRANSMISSION LINES — OH
- ELECTRIC — E
- CABLE TELEVISION — TV
- FIBER OPTIC — FO
- SANITARY SEWER — SAN
- STORM SEWER — SS



LAYOUT
SCALE 0 1 MI.

GN

PROJECT LOCATION

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 4530-06-21- 4, 01
SHEET 2 OF 2
AMENDMENT NO:

FILE NAME : \\CORP.MEADHUNT.COM\SHAREDFOLDERS\ENTP\3230500\113975.04\TECH\CAD\RW\040101_TI- TPP 4530-06-21.DWG
APPRAISAL PLAT DATE :
PLOT DATE : 9/13/2017 10:38 AM
PLOT BY : WILLIAM KOTTLER
PLOT NAME : ----------
---------- 4530-06-21 4.01

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

TRANSPORTATION PROJECT PLAT NO: 4530-06-21 - 4.01 AMENDMENT NUMBER 1. AMENDS TRANSPORTATION PROJECT PLAT 4530-06-21 - 4.01, RECORDED AS DOCUMENT NUMBER 1090466 TO ADD PARCEL 5 AND REVISE PARCEL 7 ACQUISITION.

PART OF LOT 4 AND 8, CSM 6009 LOCATED IN AND INCLUDING THE NE 1/4 OF THE SE 1/4, SECTION 5, AND PART OF LOT 2, CSM 358 LOCATED IN AND INCLUDING THE NW 1/4 OF THE SW 1/4 SECTION 4, TOWNSHIP 13 NORTH, RANGE 19 EAST, TOWN OF AUBURN, FOND DU LAC COUNTY, WISCONSIN.

RELOCATION ORDER STH 67 FOND DU LAC COUNTY, USH 45 - ECL

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

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SUBSECTION 84.02 (3), 84.09 AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:

1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE NAMED PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SUBSECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

DOC# 1093338
Recorded
December 18, 2017 8:51 AM
JAMES M KREBS
REGISTER OF DEEDS
FOND DU LAC COUNTY
Fee Amount: $25.00

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 4530-06-21 - 4.01
SHEET 1 OF 1
AMENDMENT NO: 1

Recorded this 18th day of December, 2017 at 8:51 AM in VOL 19 Pg. 18 Doc # 1093338
James M Krebs
Register of Deeds, Fond du Lac County, WI

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W NEW SF	R/W EXISTING SF	R/W TOTAL SF	TLE SF	PLE SF
1	THE LUNCH & TACKLE BOXES, LLC	FEE & TLE	1615	---	1615	689	---
2	JAMES J. SILBERNAGEL AND JOANNE M. SILBERNAGEL	TLE	---	---	---	1119	---
3	KENT A. ZOCHER AND STACY L. ZOCHER	TLE	---	---	---	25339	---
4	JON D. GENTZ AND SHARON M. GENTZ	TLE	---	---	---	1017	---
5	TOWN OF AUBURN	FEE	---	953	---	---	---
6	WILLIAM L. OSTRANDER AND TRACY R. OSTRANDER	TLE	---	---	---	1641	---
7	P&Q EAST OF WINNEBAGO LLC	FEE & TLE	365	---	365	6564	---
8	CARY R. RAMTHUN	FEE & TLE	1207	---	1207	345	---
9	ERIC J. KLEIN AND CHARITY A. KLEIN	FEE, TLE & PLE	882	---	882	1166	4064

NOTES:
EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE: DOT PROJECT 4090-03-20, DOT 2646, DOT PROJECT F 027-1(15), CSM 358 AND CSM 6009. ACCESS RESTRICTED BY CSM 6009.
EXISTING SIDE ROAD RIGHT-OF-WAYS SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE: DOT PROJECT F 027-1(15).

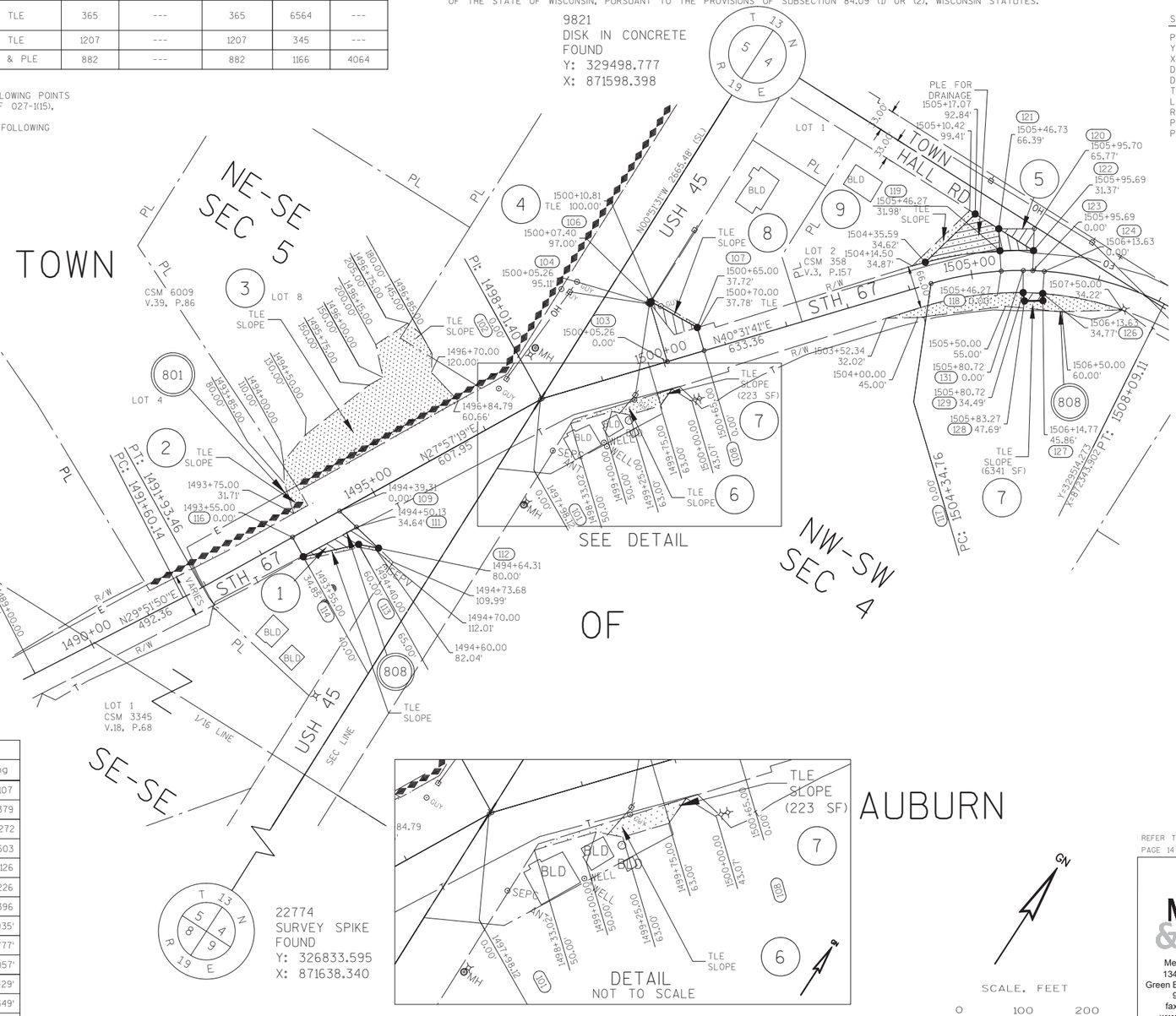
RIGHT-OF-WAY LINE TABLE		
PT*-PT*	LENGTH	DIRECTION
22774-101	2024.79	N0°51'31"W
101-102	3.28	N27°57'18"E
102-103	203.86	N40°31'41"E
103-104	95.11	N49°28'19"W
104-106	2.86	N0°51'31"W
106-107	82.66	N86°21'19"E
107-108	37.71	S49°28'19"E
108-117	369.76	N40°31'41"E
117-118	SEE CURVE TABLE	
118-119	31.98	N36°41'39"W
119-121	34.41	N35°50'2"W
121-120	55.42	N56°48'09"E
120-122	34.40	S31°00'38"E
122-123	31.37	S31°1'54"E
123-124	SEE CURVE TABLE	

RIGHT-OF-WAY LINE TABLE		
PT*-PT*	LENGTH	DIRECTION
124-126	34.77	S28°58'31"E
126-127	11.14	S34°18'25"E
127-128	28.60	S55°41'35"W
128-129	13.40	N42°39'8"W
129-131	34.49	N32°44'46"W
131-117	SEE CURVE TABLE	
117-102	633.36	S40°31'41"W
102-109	362.10	S27°57'18"W
109-111	36.30	S79°23'51"E
111-112	47.52	S79°23'51"E
112-113	31.48	S67°24'13"W
113-114	88.64	S44°26'27"W
114-116	34.85	N62°02'41"W
116-101	443.12	N27°57'18"E

STH 67 CURVE DATA
PI STA = 1491+76.80
Y = 328309.34
X = 871316.74
DELTA = 1°54'32"
D = 5°43'46"
T = 16.66
L = 33.31
R = 1000.00
PC STA = 1491+60.14
PT STA = 1491+93.46

STH 67 CURVE DATA
PI STA = 1506+31.20
Y = 329491.78
X = 872148.76
DELTA = 42°53'50"
D = 11°27'33"
T = 196.44
L = 374.35
R = 500.00
PC STA = 1504+34.76
PT STA = 1508+09.11

CURVE TABLE					
PT*-PT*	LENGTH	RADIUS	DELTA	CHORD DIST.	CHORD BEARING
117-118	111.51	500.00	12°46'40"	111.28	N46°55'1"E
123-124	17.94	500.00	2°03'23"	17.94	N59°59'48"E
131-117	145.96	500.00	16°43'33"	145.44	S48°53'28"W



WE ENERGIES (ELEC)
PARCEL 2
801
DOC. 436294
PRESCRIPTIVE

FRONTIER COMMUNICATIONS OF WI, LLC
PARCEL 1, 6, 7 & 9
808
DOC. 243260
DOC. 243269

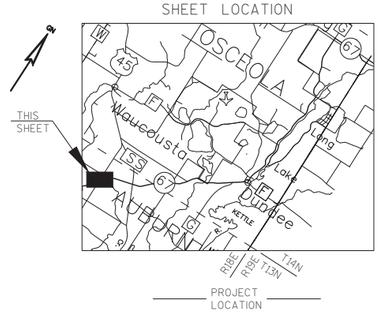
UTILITY SCHEDULE OF INTERESTS REQUIRED

UTILITY NUMBER	OWNER(S)	INTEREST REQUIRED
801	WE ENERGIES (ELEC)	RELEASE OF RIGHTS
808	FRONTIER COMMUNICATIONS OF WI, LLC	RELEASE OF RIGHTS

Point Table		
Point #	Northing	Easting
101	328858.164	871607.998
102	328861.064	871609.537
103	329016.011	871742.007
104	329077.816	871669.714
106	329080.673	871669.671
107	329085.927	871752.160
108	329061.419	871780.827
109	328541.219	871439.794
111	328534.541	871475.471
112	328525.797	871522.178
113	328513.703	871493.117
114	328450.413	871431.051
116	328466.748	871400.272

Point Table		
Point #	Northing	Easting
117	329342.471	872021.107
118	329418.480	872102.379
119	329444.120	872083.272
120	329502.364	872109.503
121	329472.019	872063.126
122	329472.880	872127.226
123	329446.003	872143.396
124	329454.976'	872158.935'
126	329424.560'	872175.777'
127	329415.356'	872182.057'
128	329399.234'	872158.429'
129	329409.090'	872149.349'
131	329438.100'	872130.693'

SHEET LOCATION



REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2, IN VOLUME 19 OF TRANSPORTATION PROJECT PLATS, PAGE 14 AS DOCUMENT NO. 1090466 FOR ADDITIONAL INFORMATION.

Mead & Hunt
Mead & Hunt, Inc.
1345B North Road
Green Bay, WI 54313-5723
920.496.0500
fax:920.496.0576
www.meadhunt.com

I, WILLIAM F. KOTTLER, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION, I HAVE SURVEYED AND MAPPED TRANSPORTATION PROJECT PLAT 4530-06-21-4.01 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN
WILLIAM F. KOTTLER
S-2348
MIDDLETON, WI
LAND SURVEYOR

William F. Kottler DATE 12-07-2017
WILLIAM F. KOTTLER,
PLS 2348

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION.
(SIGNATURE) Curt Van Erem DATE 12-08-2017
(PRINTED NAME) CURT VAN EREM

TRANSPORTATION PROJECT PLAT NO: 4530-06-21 - 4.01

PART OF LOT 4 AND 8, CSM 6009 LOCATED IN AND INCLUDING THE NE 1/4 OF THE SE 1/4, SECTION 5, AND PART OF LOT 2, CSM 358 LOCATED IN AND INCLUDING THE NW 1/4 OF THE SW 1/4 SECTION 4, TOWNSHIP 13 NORTH, RANGE 19 EAST, TOWN OF AUBURN, FOND DU LAC COUNTY, WISCONSIN.

RELOCATION ORDER STH 67 FOND DU LAC COUNTY
USH 45 - ECL

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

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DOC# 1090466
Recorded
October 04, 2017 2:42 PM
JAMES M KREBS
REGISTER OF DEEDS
FOND DU LAC COUNTY
Fee Amount: $25.00

Recorded this 4th day of October, 2017 at 2:42 PM. in VOL. 19 Pg. 14 Doc # 1090466
James M. Krebs
Register of Deeds, Fond du Lac County, WI

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 4530-06-21 - 4.01
SHEET 1 OF 2
AMENDMENT NO:-

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

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W NEW SF	R/W EXISTING SF	R/W TOTAL SF	TLE SF	PLE SF
1	THE LUNCH & TACKLE BOXES, LLC	FEE & TLE	1615	---	1615	689	---
2	JAMES J. SILBERNAGEL AND JOANNE M. SILBERNAGEL	TLE	---	---	---	1119	---
3	KENT A. ZOCHER AND STACY L. ZOCHER	TLE	---	---	---	25339	---
4	JON D. GENTZ AND SHARON M. GENTZ	TLE	---	---	---	1017	---
6	WILLIAM L. OSTRANDER AND TRACY R. OSTRANDER	TLE	---	---	---	1641	---
7	P&Q EAST OF WINNEBAGO LLC	FEE & TLE	365	---	365	536	---
8	CARY R. RAMTHUN	FEE & TLE	1207	---	1207	345	---
9	ERIC J. KLEIN AND CHARITY A. KLEIN	FEE, TLE & PLE	882	---	882	1166	4064

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106-107	82.66	N86°21'19"E
107-108	37.72	S49°28'19"E
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122-123	31.37	S31°1'54"E
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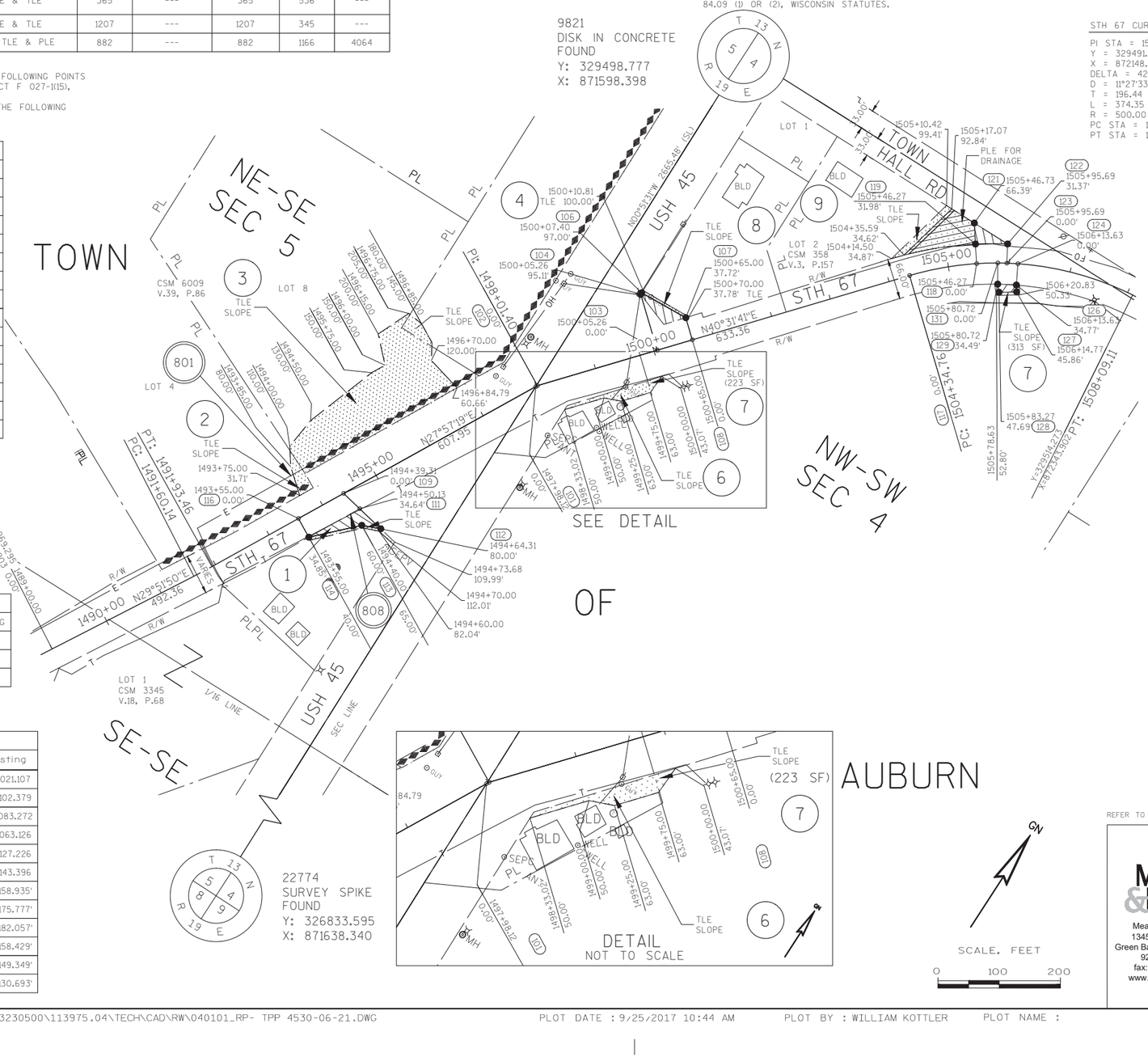
131	329438.100'	872130.693'



STH 67 CURVE DATA

PI STA = 1506+31.20
Y = 329491.78
X = 872148.76
DELTA = 42°53'50"
D = 11°27'33"
T = 196.44
L = 374.35
R = 500.00
PC STA = 1504+34.76
PT STA = 1508+09.11

801 WE ENERGIES (ELEC)
PARCEL 2
DOC. 436294
PRESCRIPTIVE

808 FRONTIER COMMUNICATIONS OF WI, LLC
PARCEL 1, 6, 7 & 9
DOC. 243260
DOC. 243269

UTILITY SCHEDULE OF INTERESTS REQUIRED

UTILITY NUMBER	OWNER(S)	INTEREST REQUIRED
801	WE ENERGIES (ELEC)	RELEASE OF RIGHTS
808	FRONTIER COMMUNICATIONS OF WI, LLC	RELEASE OF RIGHTS

REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2 IN THIS DOCUMENT, FOR ADDITIONAL INFORMATION.

Mead & Hunt
Mead & Hunt, Inc.
1345B North Road
Green Bay, WI 54313-5723
920.496.0500
fax:920.496.0576
www.meadhunt.com

I, WILLIAM F. KOTTLER, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION, I HAVE SURVEYED AND MAPPED TRANSPORTATION PROJECT PLAT 4530-06-21-4.01 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN WILLIAM F. KOTTLER S-2348 MIDDLETON, WI LAND SURVEYOR

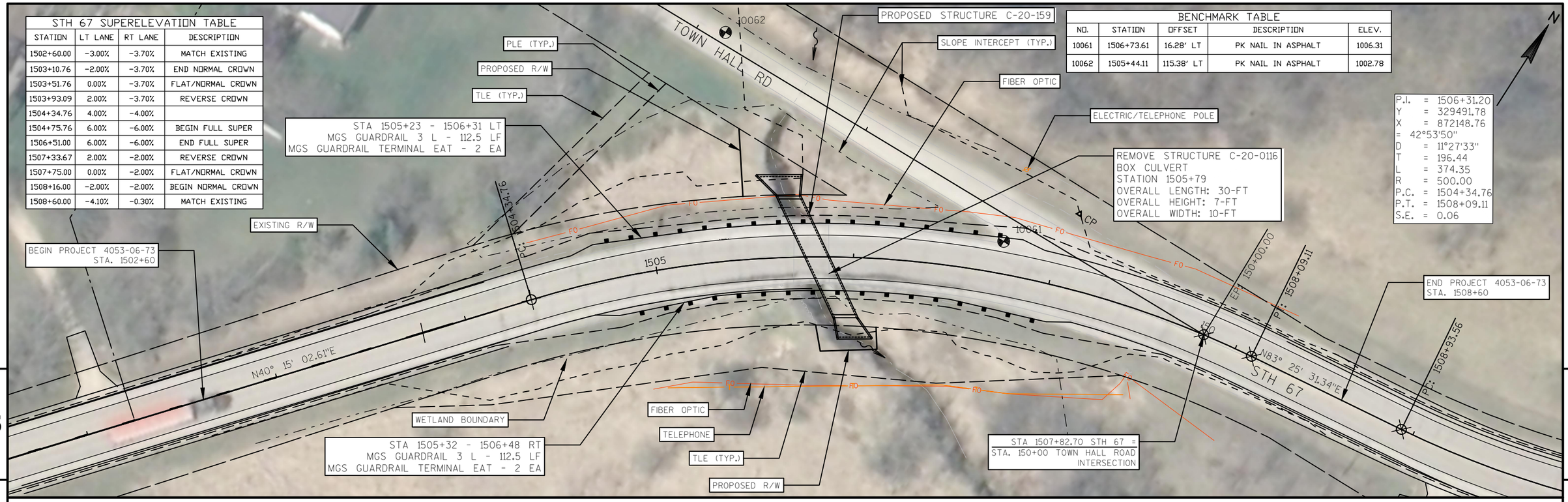
DATE 09-25-2017
WILLIAM F. KOTTLER,
PLS 2348

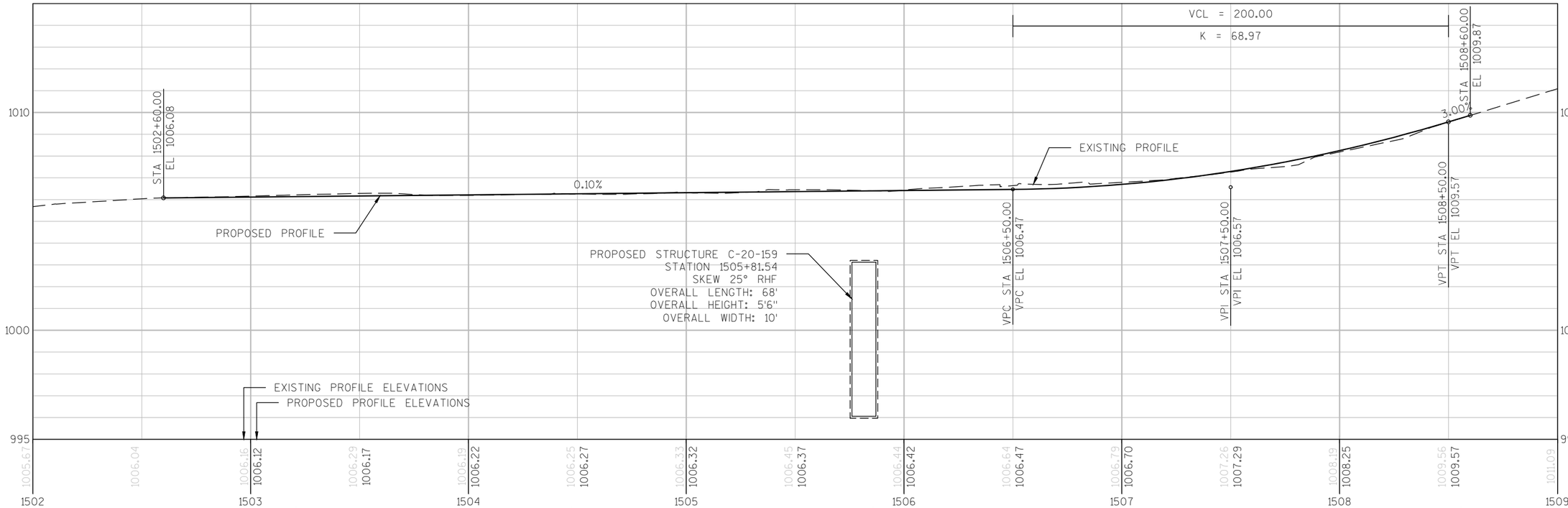
THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION.
(SIGNATURE) _____ DATE 9-25-2017
(PRINTED NAME) CURT VAN EREM

FILE NAME : \\CORP.MEADHUNT.COM\SHAREDFOLDERS\ENTP\3230500\113975.04\TECH\CAD\RW\040101_RP- TPP 4530-06-21.DWG
PLOT DATE : 9/25/2017 10:44 AM PLOT BY : WILLIAM KOTTLER PLOT NAME : PLOT SCALE : 1:200
APPRAISAL PLAT DATE : ----------

STH 67 SUPERELEVATION TABLE			
STATION	LT LANE	RT LANE	DESCRIPTION
1502+60.00	-3.00%	-3.70%	MATCH EXISTING
1503+10.76	-2.00%	-3.70%	END NORMAL CROWN
1503+51.76	0.00%	-3.70%	FLAT/NORMAL CROWN
1503+93.09	2.00%	-3.70%	REVERSE CROWN
1504+34.76	4.00%	-4.00%	
1504+75.76	6.00%	-6.00%	BEGIN FULL SUPER
1506+51.00	6.00%	-6.00%	END FULL SUPER
1507+33.67	2.00%	-2.00%	REVERSE CROWN
1507+75.00	0.00%	-2.00%	FLAT/NORMAL CROWN
1508+16.00	-2.00%	-2.00%	BEGIN NORMAL CROWN
1508+60.00	-4.10%	-0.30%	MATCH EXISTING

BENCHMARK TABLE				
NO.	STATION	OFFSET	DESCRIPTION	ELEV.
10061	1506+73.61	16.28' LT	PK NAIL IN ASPHALT	1006.31
10062	1505+44.11	115.38' LT	PK NAIL IN ASPHALT	1002.78

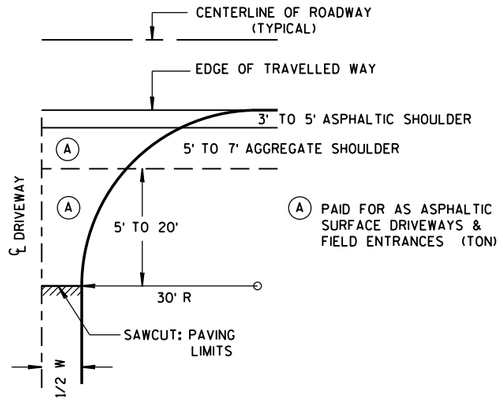




PROJECT NO: 4530-06-73	HWY: STH 67	COUNTY: FOND DU LAC	PLAN AND PROFILE: STH 67	SHEET 26 E

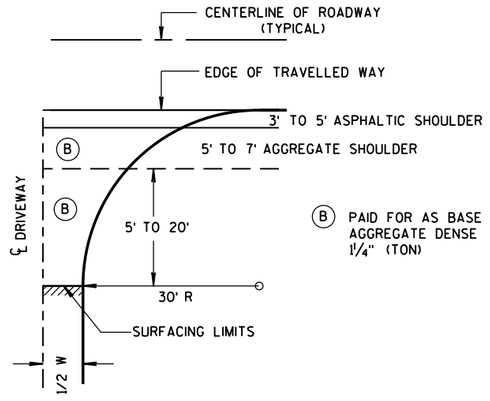
Standard Detail Drawing List

08D22-01	DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL
08E09-06	SILT FENCE
12A03-10	NAME PLATE (STRUCTURES)
14B28-03	GUARDRAIL MOW STRIP
14B42-05A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-05B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-05C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-05D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B43-03A	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-03B	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-03C	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B44-03A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-03B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-03C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C08-18A	LONGITUDINAL MARKING (MAINLINE)
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



PLAN VIEW
HALF SECTION

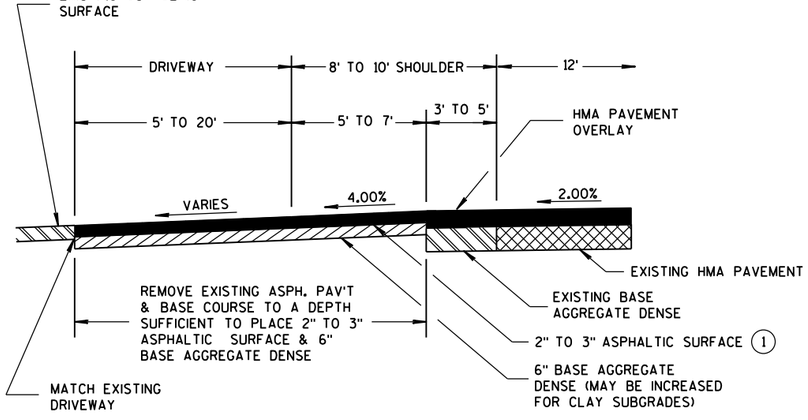
W MIN. = 16'
W MAX. = 24'



PLAN VIEW
HALF SECTION

GENERAL NOTES

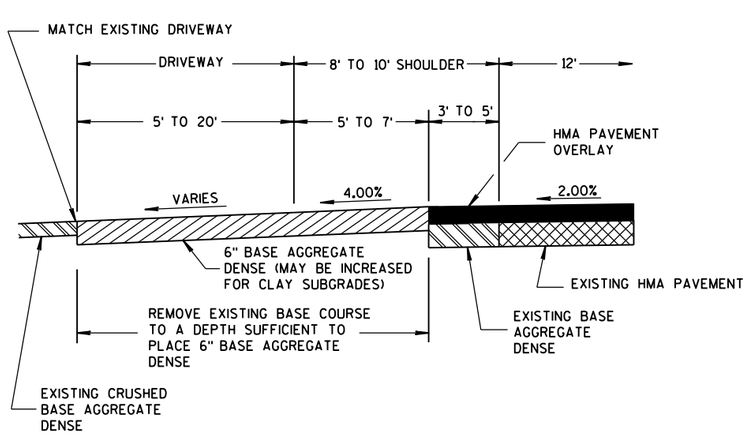
(1) DESIGN WILL DETERMINE FINAL DRIVEWAY ASPHALTIC THICKNESS BASED ON TYPE OF USAGE AND LOADINGS.



PROFILE VIEW

RURAL ENTRANCE WITH ASPHALTIC SURFACE

RESURFACING PROJECTS



PROFILE VIEW

RURAL ENTRANCE WITH AGGREGATE SURFACE

6" BASE AGGREGATE DENSE
RESURFACING PROJECTS

DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December, 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERV
ENT
FHWA

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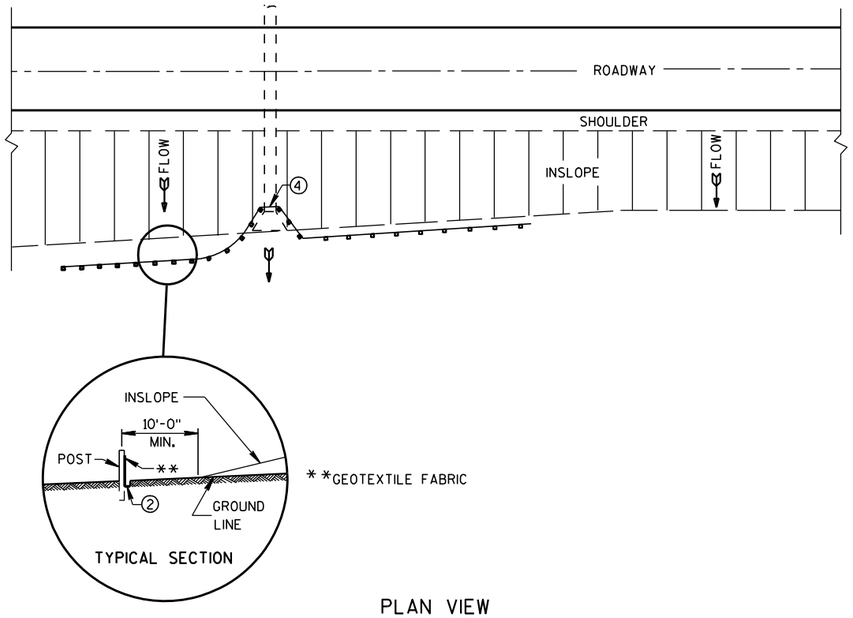
S.D.D. 8 D 22-1

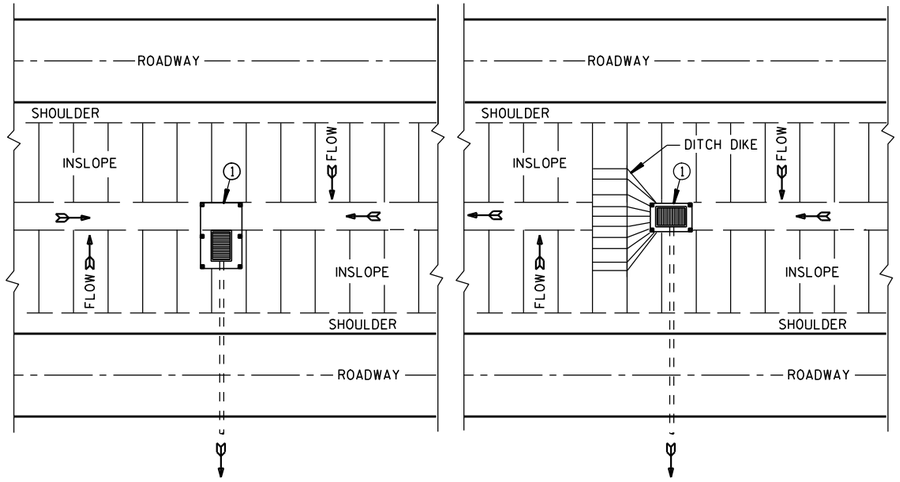
6

S.D.D. 8 D 22-1



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.

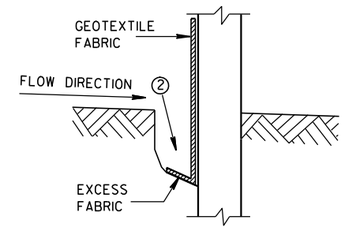
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

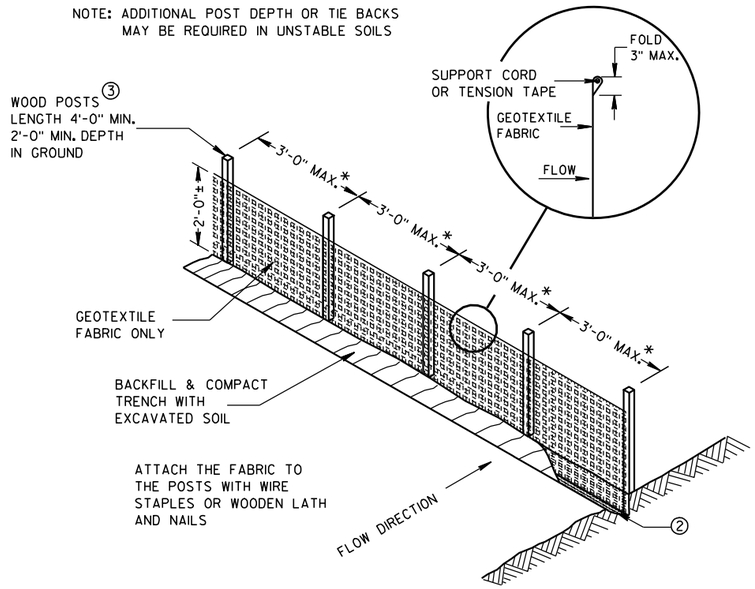
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

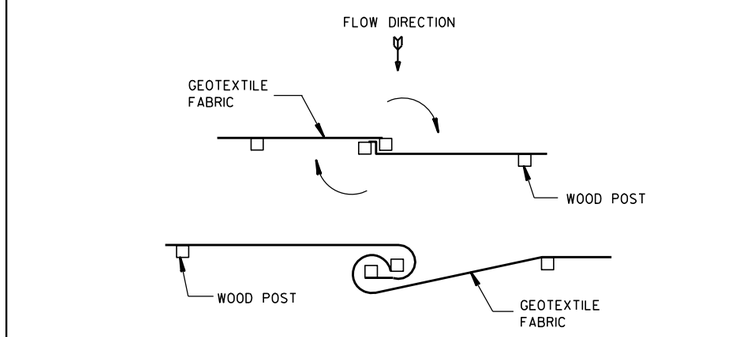
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



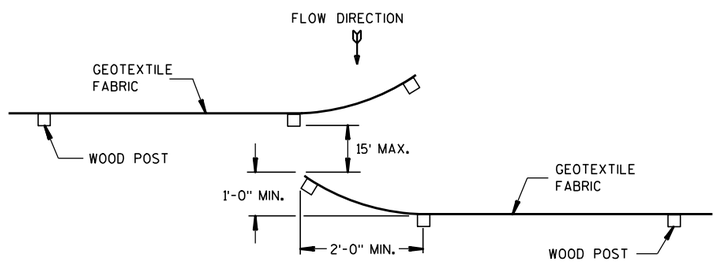
TRENCH DETAIL



SILT FENCE

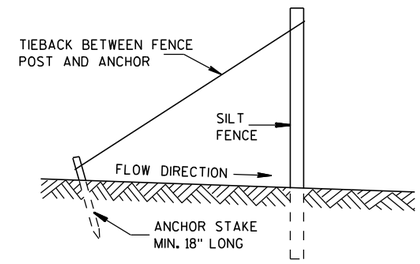


TWIST METHOD



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

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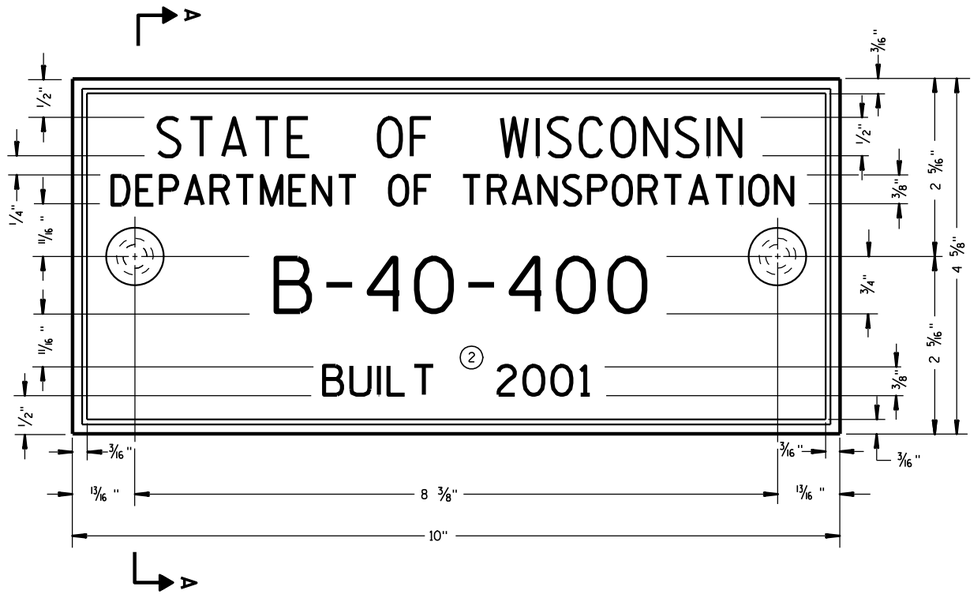
S.D.D. 8 E 9-6



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

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

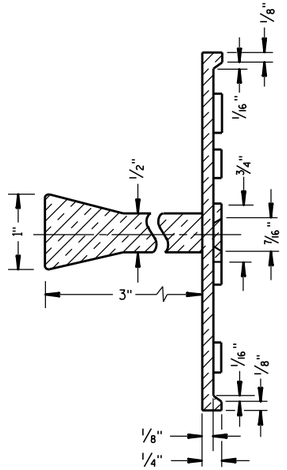
GENERAL NOTES

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

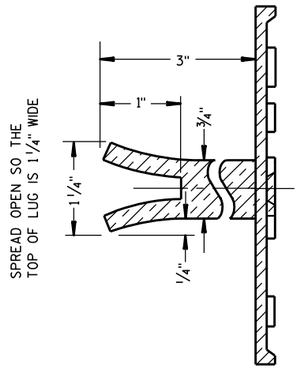
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

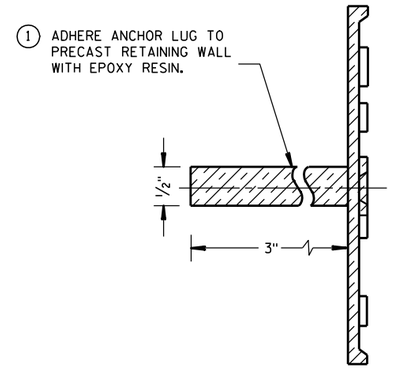
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

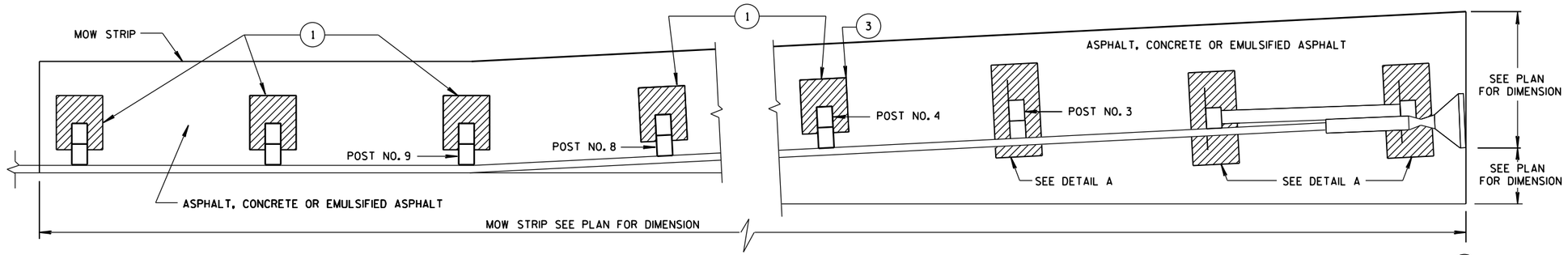
3/26/10 DATE

/S/ Scot Beck CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA

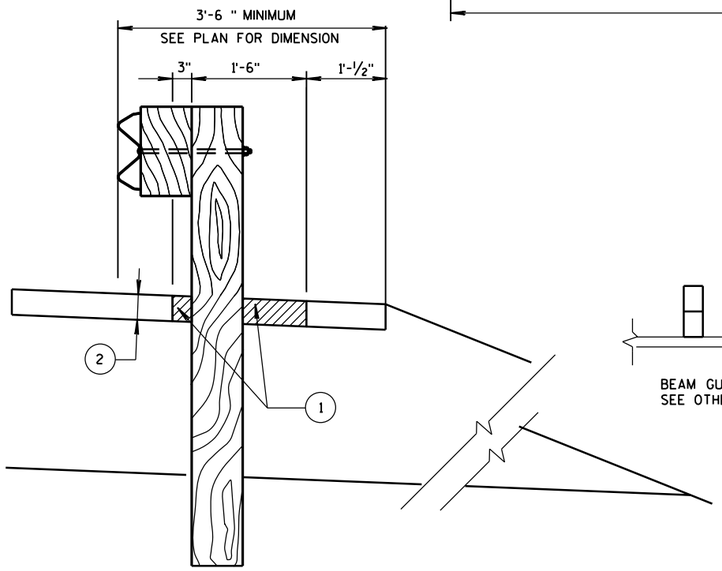
6

S.D.D. 12 A 3-10

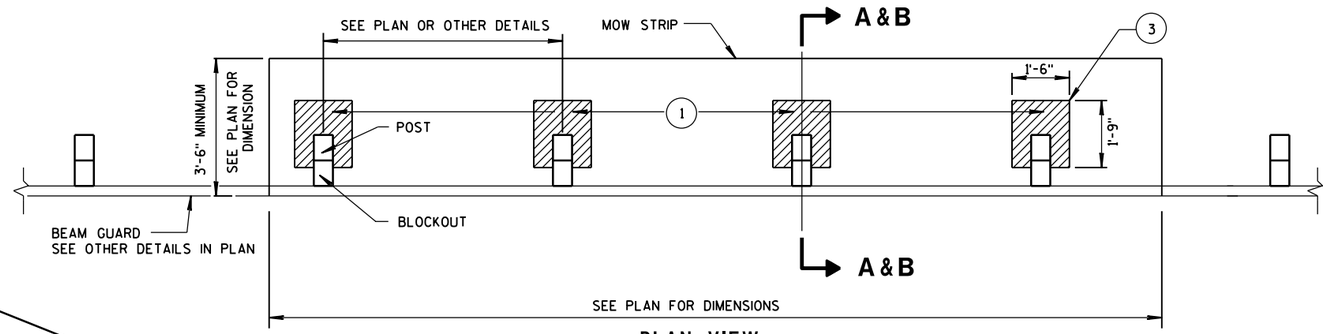


PLAN VIEW

MOW STRIP LAYOUT FOR ENERGY ABORBING TERMINAL

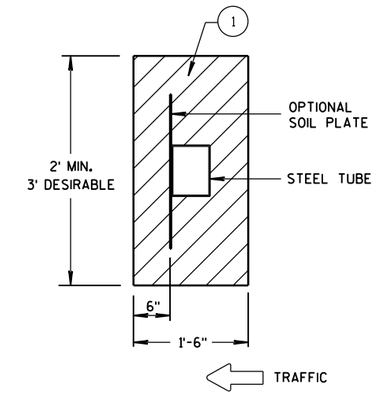


SECTION A-A

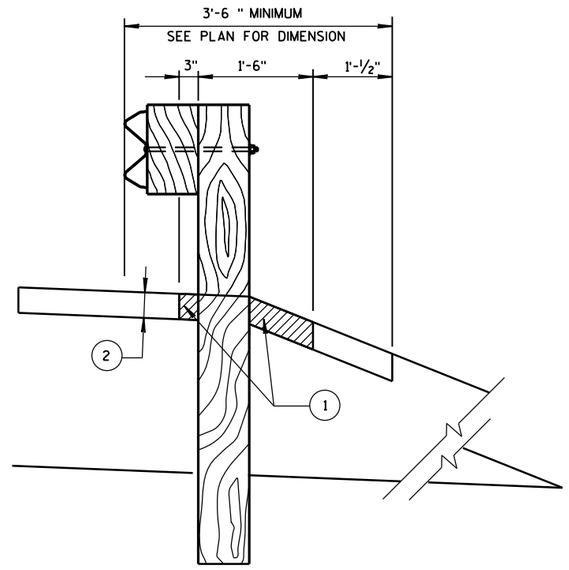


PLAN VIEW

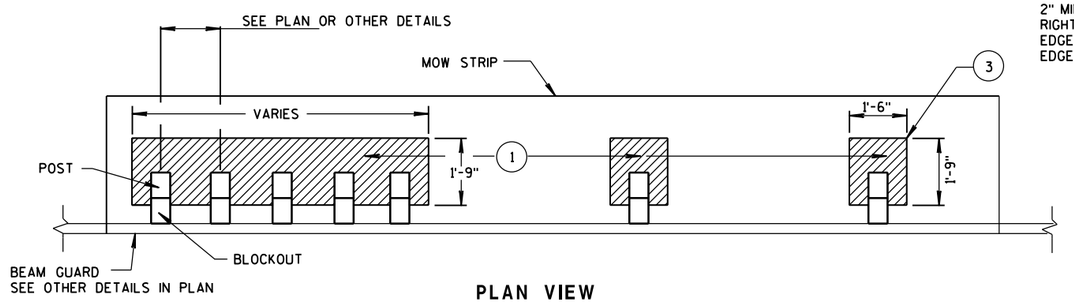
MOW STRIP FOR TYPICAL BLOCKOUT LAYOUT



DETAIL A

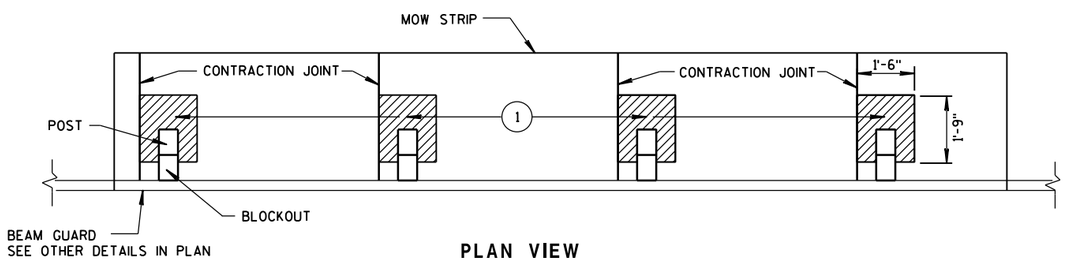


SECTION B-B



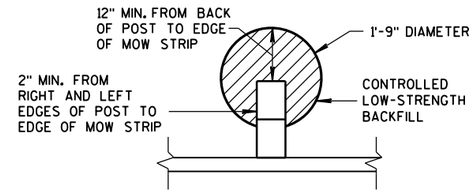
PLAN VIEW

MOW STRIP FOR TIGHT SPACING LAYOUT



PLAN VIEW

JOINT PLACEMENT FOR CONCRETE MOW STRIP



ALTERNATIVE HMA
MOW STRIP DESIGN

(1) CONTROLLED LOW-STRENGTH BACKFILL OR EMULSIFIED ASPHALT.

(2) DEPTH OF MOW STRIP:
ASPHALT - 4"
CONCRETE - 4"
EMULSIFIED ASPHALT - 1" OR LESS

(3) FOR EMULSIFIED ASPHALT MOW STRIP LEAVE OUTS NOT REQUIRED. (TYPICAL FOR ALL POSTS.)

GUARDRAIL MOW STRIP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA
NT

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S.D.D. 14 B 28-3

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S.D.D. 14 B 28-3

(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.

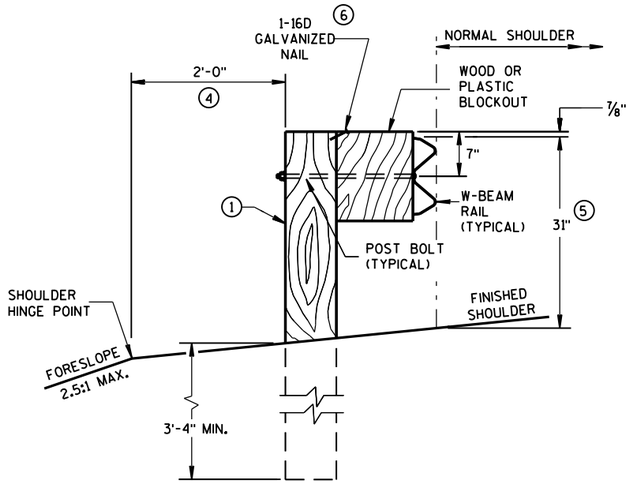
(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½ 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).

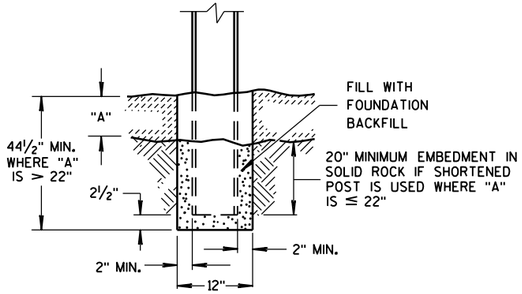
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

(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.



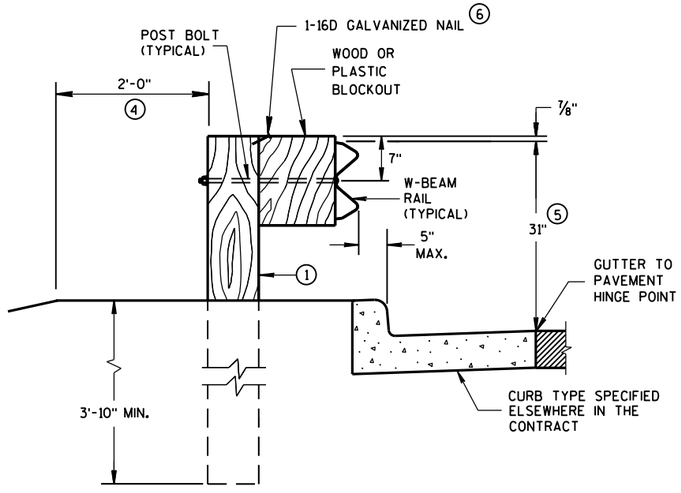
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



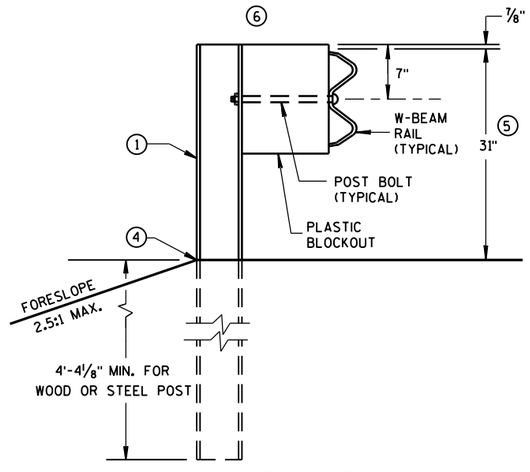
END VIEW

SETTING STEEL OR WOOD POST IN ROCK (3)



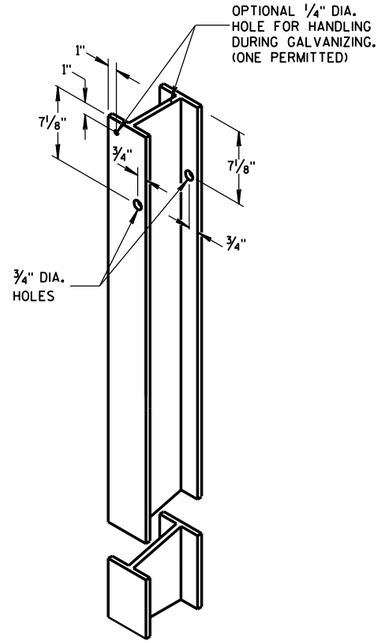
END VIEW

LOCATED ALONG A CURBED ROADWAY

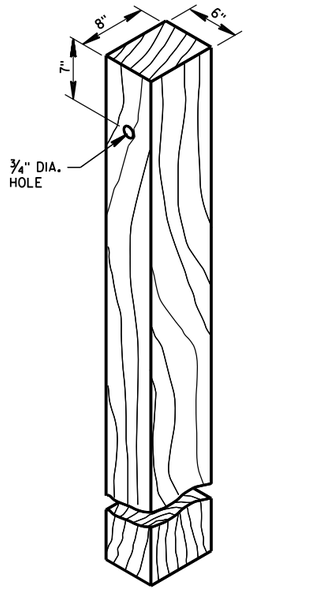


END VIEW

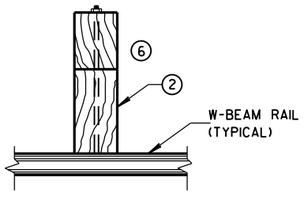
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



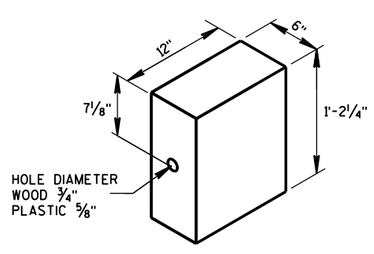
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) (1)



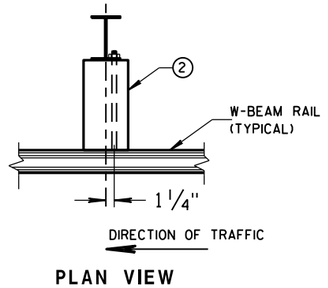
WOOD POST
(6" X 8") NOMINAL (1)



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT (2)

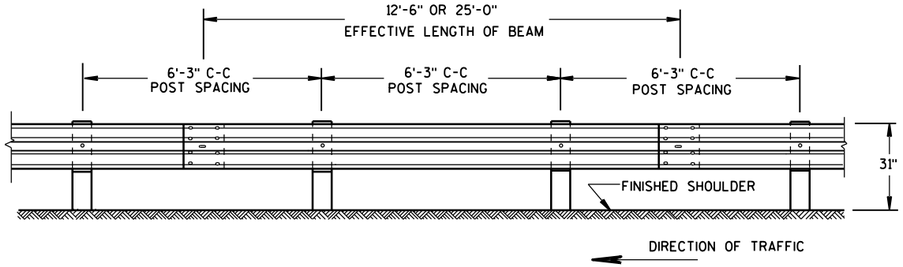


PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

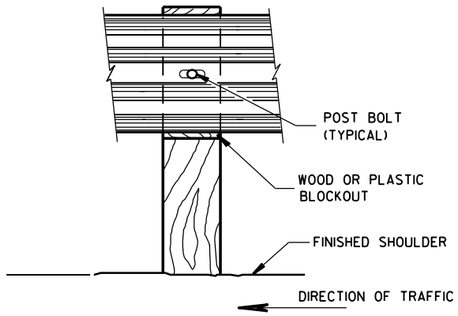
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 14 B 42-5a



FRONT VIEW

POST SPACING STANDARD INSTALLATION



FRONT VIEW AT WOOD POST

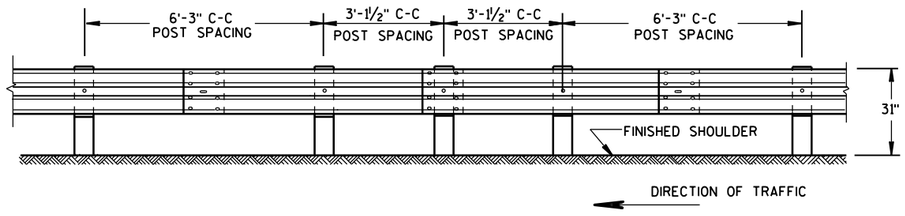
GENERAL NOTES

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

(11) 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

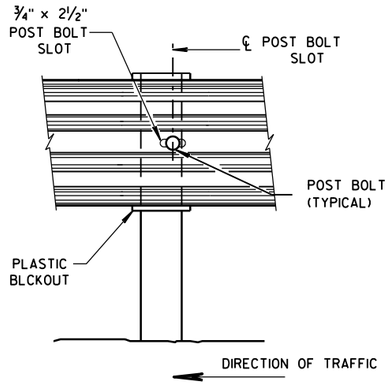
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

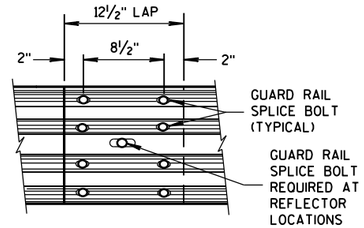


FRONT VIEW

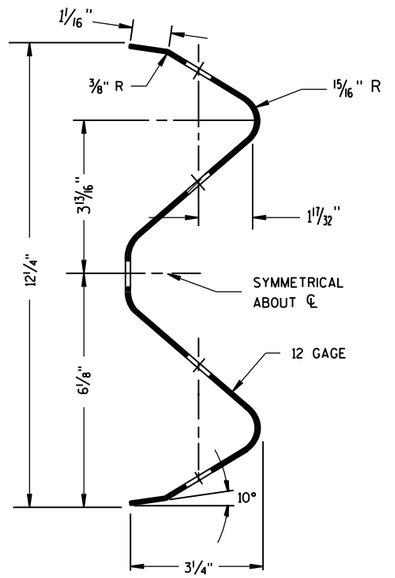
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



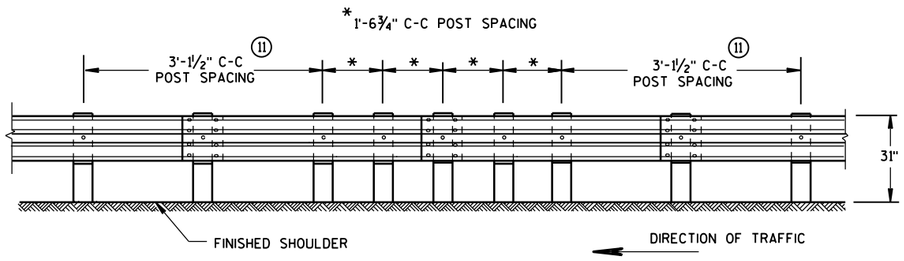
FRONT VIEW AT STEEL POST



FRONT VIEW
MID-SPAN BEAM SPLICE

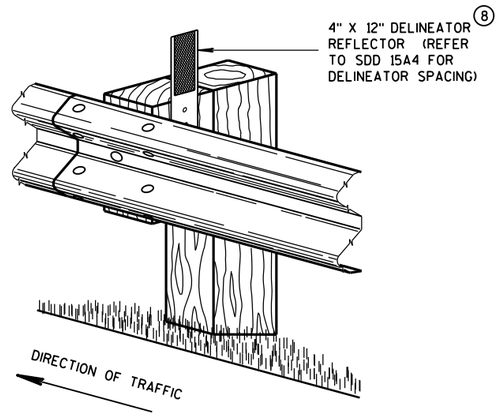


SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)

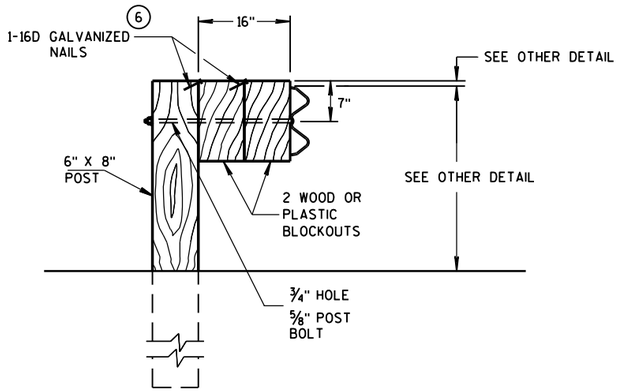


ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

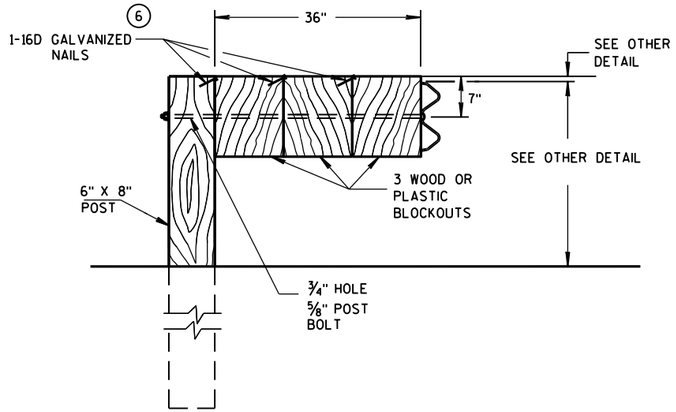
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 14 B 42-5b



DETAIL FOR 16" BLOCKOUT DEPTH

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

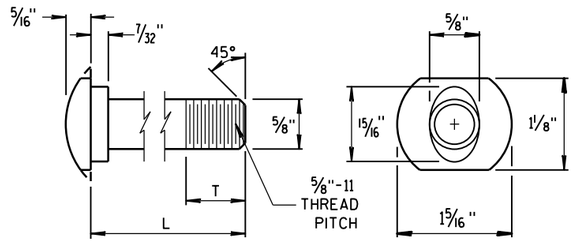


DETAIL FOR 36" BLOCKOUT DEPTH

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

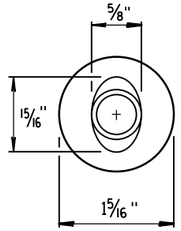
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

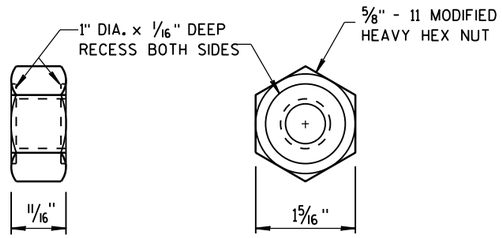


POST BOLT TABLE

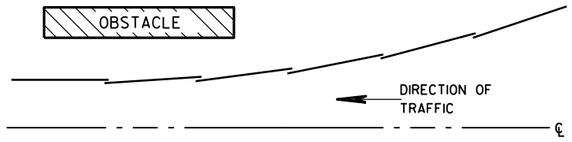
L	T (MIN.)
1¼"	1⅛"
2"	1¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

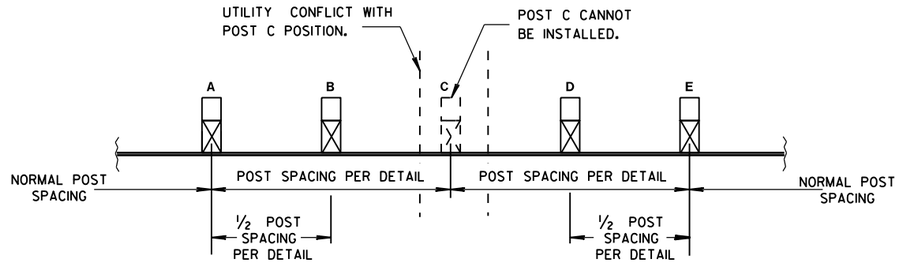


POST BOLT, SPLICE BOLT AND RECESS NUT

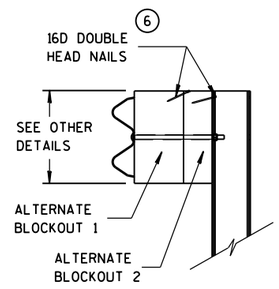


PLAN VIEW

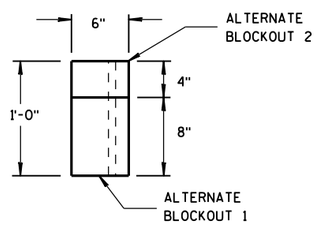
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

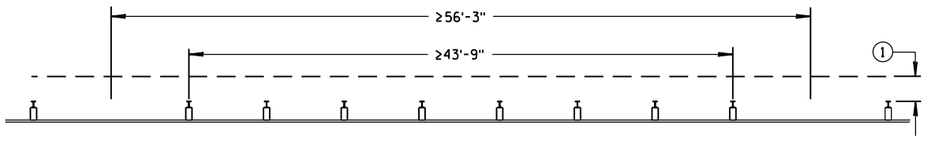
ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

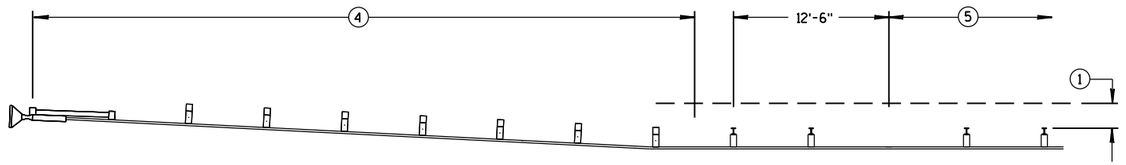
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

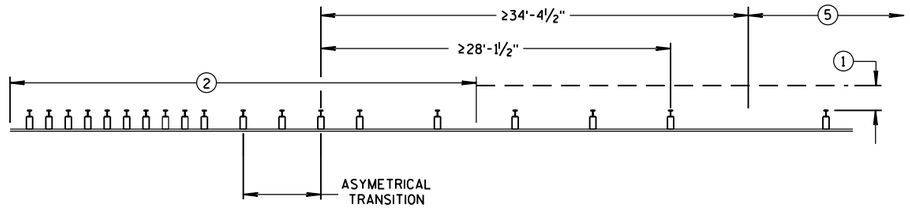
S.D.D. 14 B 42-5c



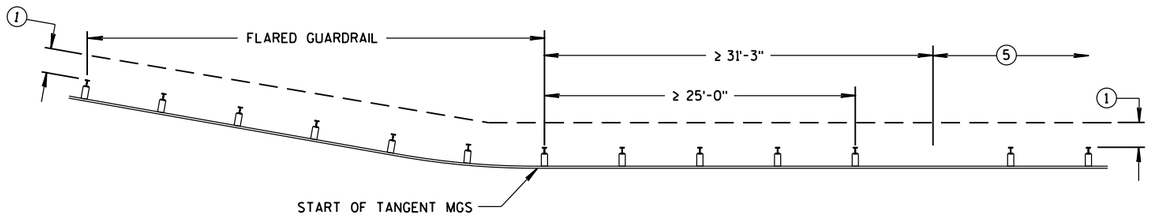
MISSING POST IN NORMAL BEAM GUARD RUN



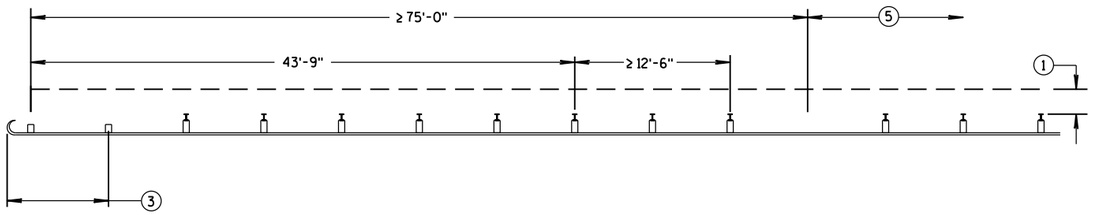
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



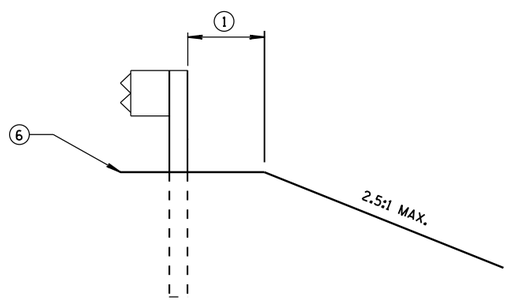
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



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

June 2017
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

FHWA

6

S.D.D. 14 B 42-5d

6

S.D.D. 14 B 42-5d

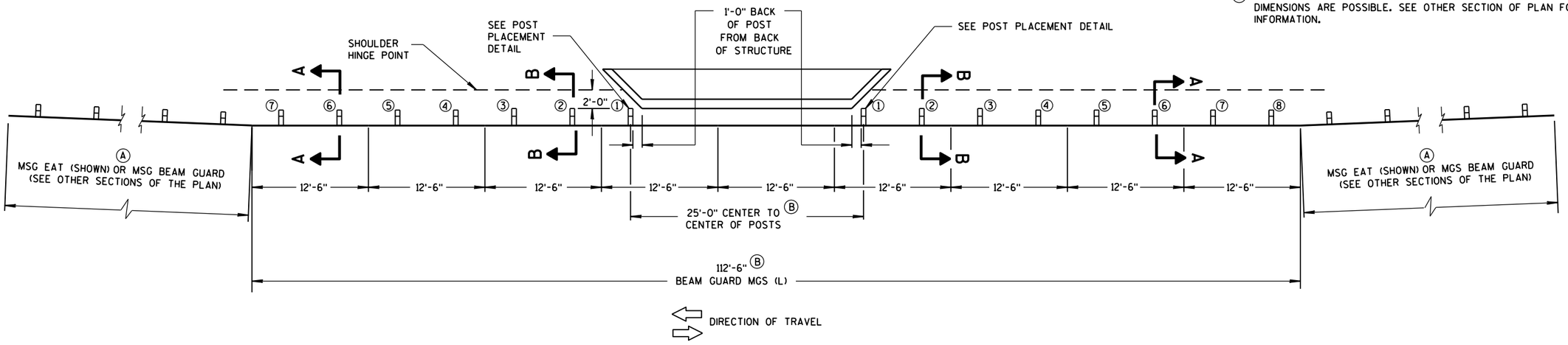
GENERAL NOTES

POSTS 1 THROUGH 3 ARE CRT POSTS.
ALL OTHER POSTS SHALL BE WOOD OR STEEL.

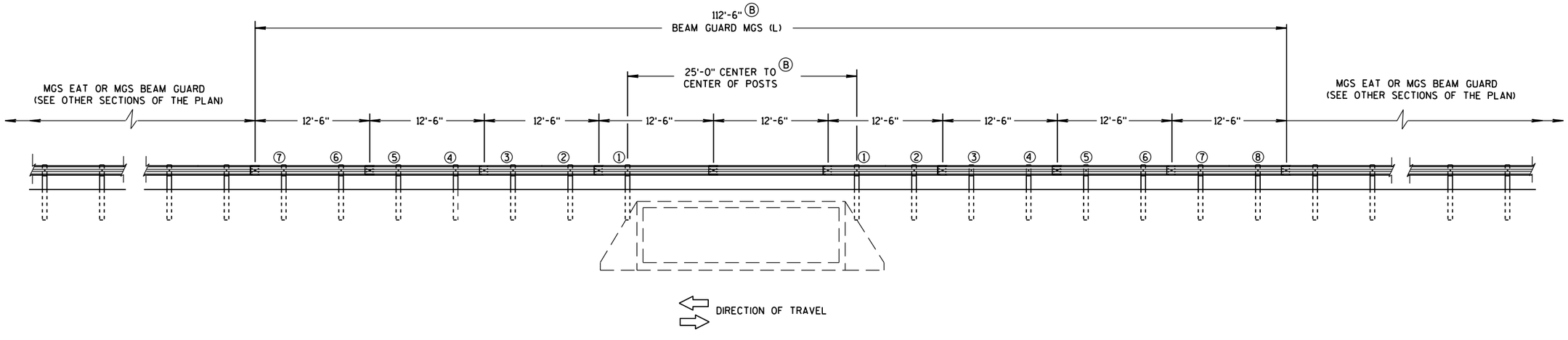
SEE SDD 14 B 42 FOR MORE DETAILS.

(A) FLARE FOR MGS EAT SHOWN. IF INSTALLING MGS NO FLARE NEEDED.

(B) VALUES SHOWN ON DRAWING REPRESENT THE MAXIMUM LENGTH. SHORTER DIMENSIONS ARE POSSIBLE. SEE OTHER SECTION OF PLAN FOR MORE INFORMATION.



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) TWO-WAY TRAFFIC

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
STATE OF WISCONSIN DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 43-3a

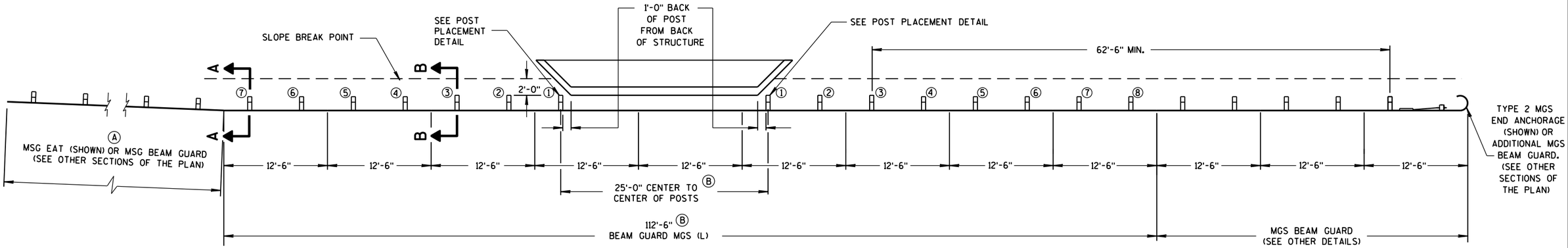
GENERAL NOTES

POSTS 1 THROUGH 3 ARE CRT POSTS.
ALL OTHER POSTS SHALL BE WOOD OR STEEL.

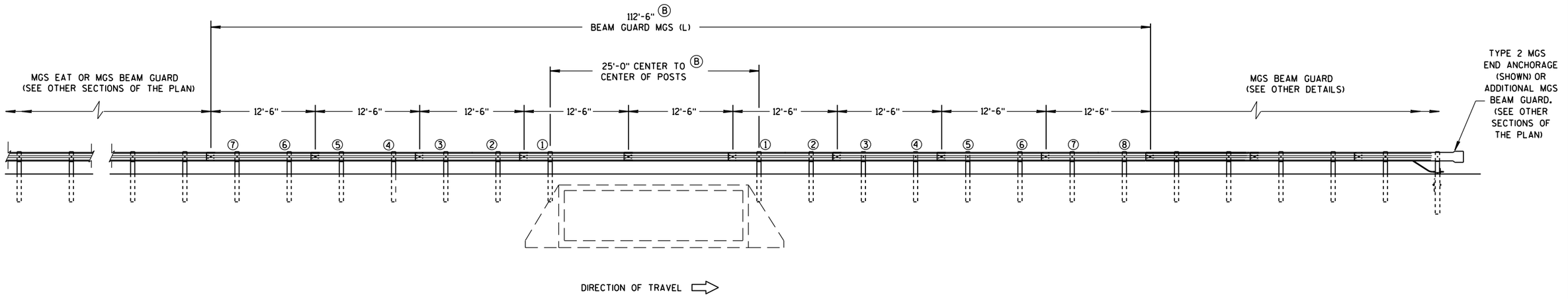
SEE SDD 14 B 42 FOR MORE DETAILS.

(A) FLARE FOR MGS EAT SHOWN. IF INSTALLING MGS NO FLARE NEEDED.

(B) VALUES SHOWN ON DRAWING REPRESENT THE MAXIMUM LENGTH. SHORTER DIMENSIONS ARE POSSIBLE. SEE OTHER SECTION OF PLAN FOR MORE INFORMATION.



PLAN VIEW



ELEVATION VIEW

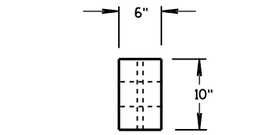
MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) ONE-WAY TRAFFIC

MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)

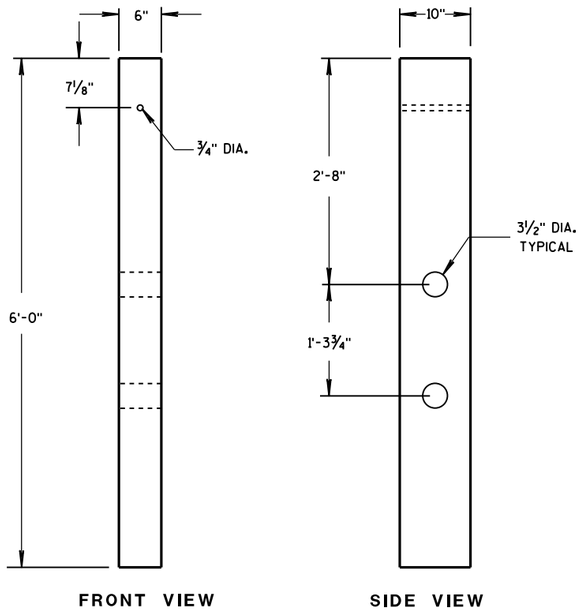
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 43-3b

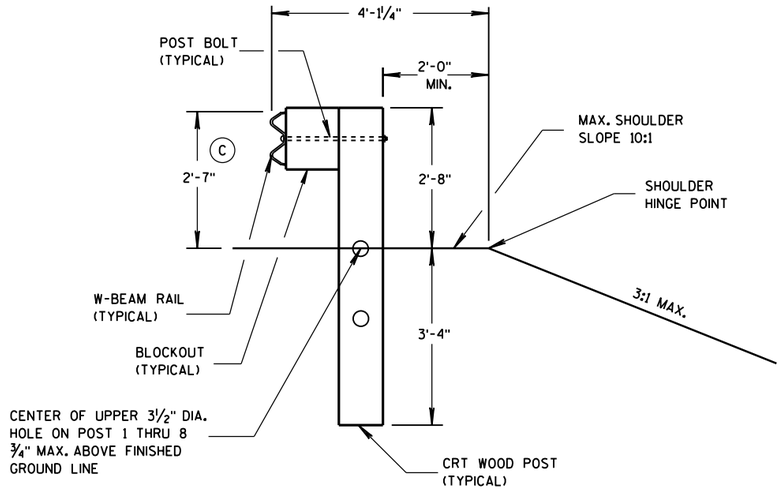


PLAN VIEW



FRONT VIEW SIDE VIEW

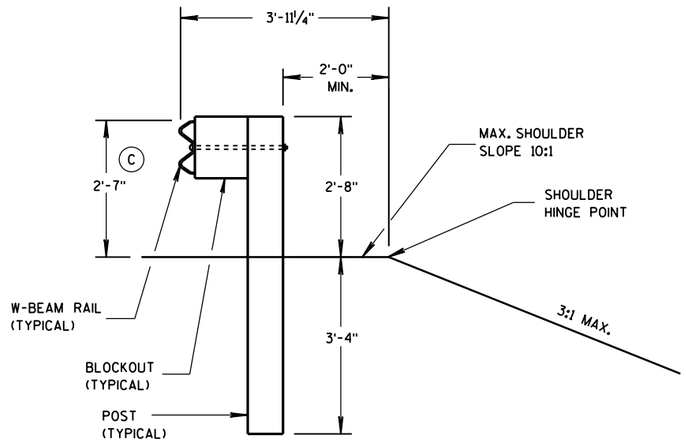
CRT WOOD POST



SECTION B-B

POSTS NO. 1-3

SEE OTHER DETAILS



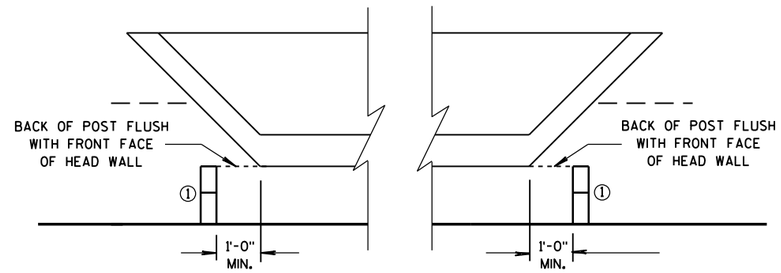
SECTION A-A

POSTS NO. 4-8

SEE OTHER DETAILS

GENERAL NOTES

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



POST PLACEMENT DETAIL

MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/10/2013
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

6

S.D.D. 14 B 43-3c

6

S.D.D. 14 B 43-3c

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 MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

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

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

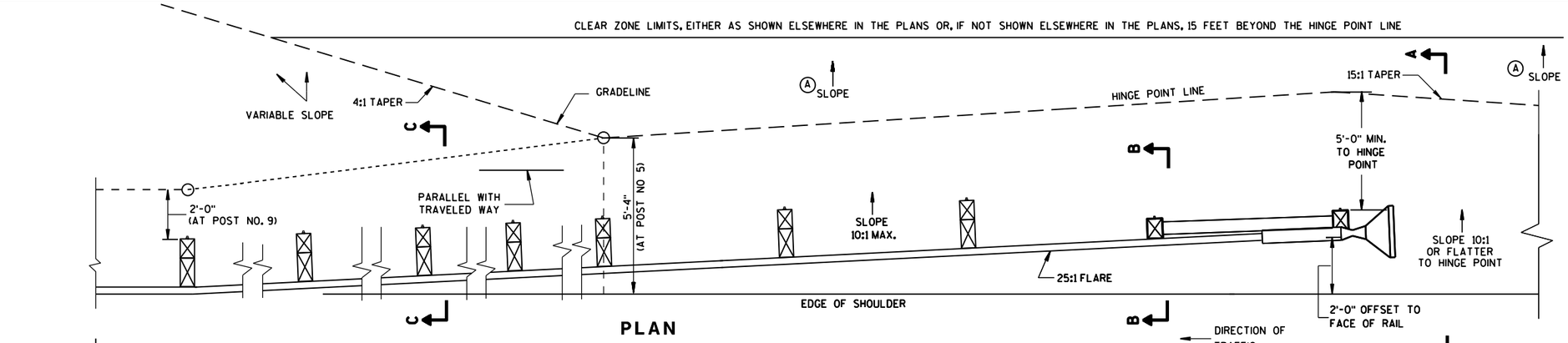
SEE SDD 14B42 FOR MORE INFORMATION.

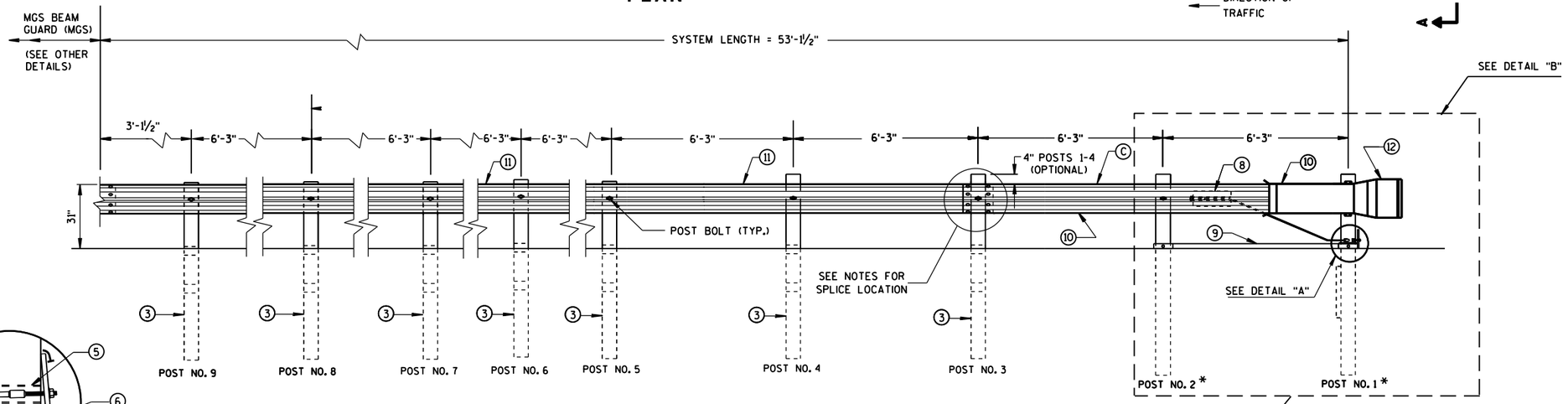
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

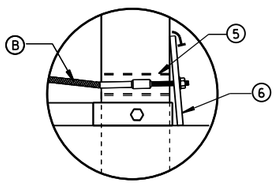
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

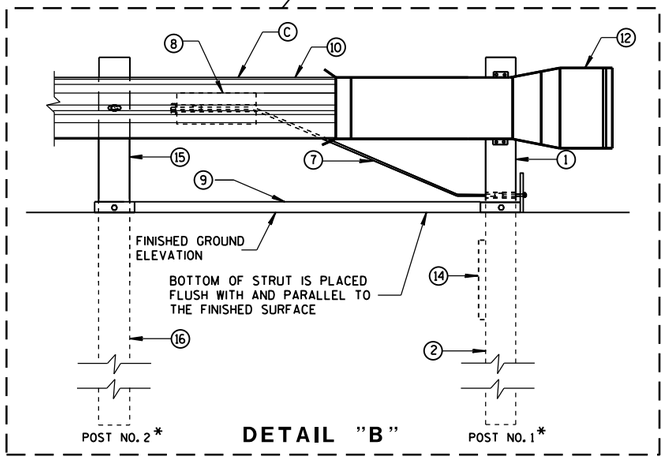
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

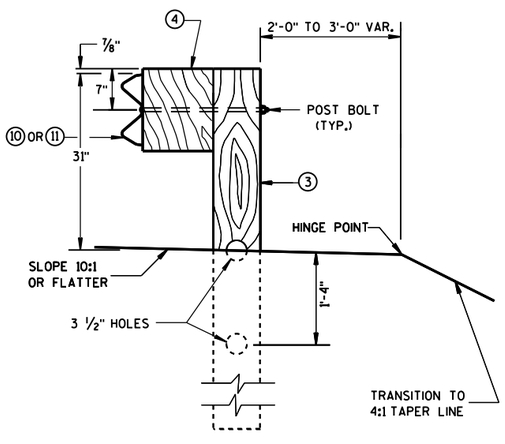
THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.

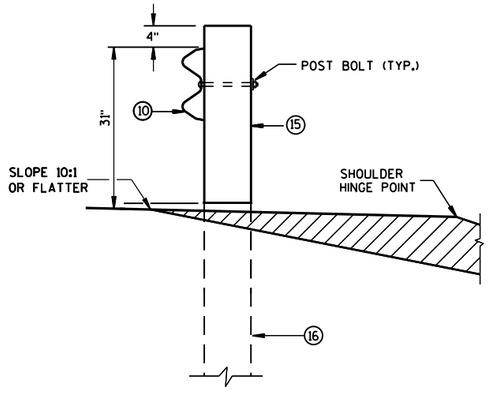


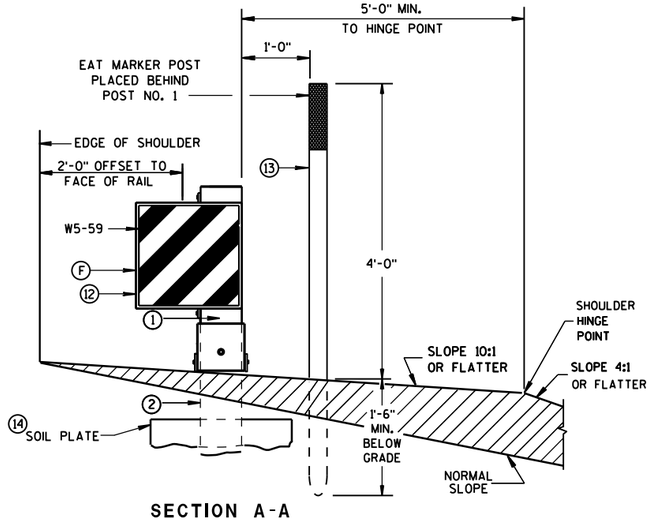












MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPO	39

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S.D.D. 14 B 44-3a

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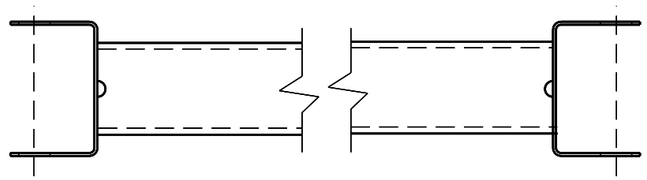
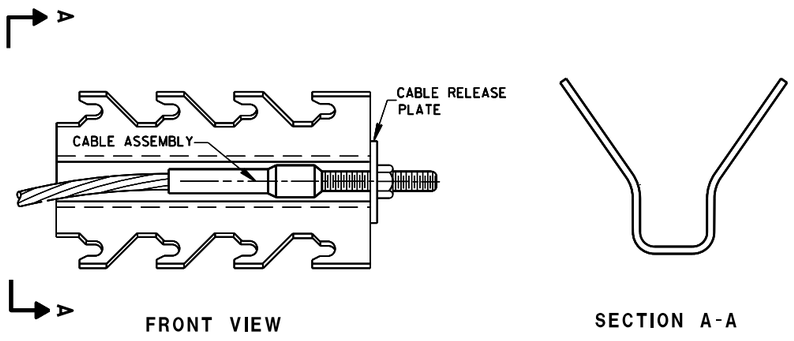
S.D.D. 14 B 44-3a



(9) (H)

GENERIC GROUND STRUT



FRONT VIEW

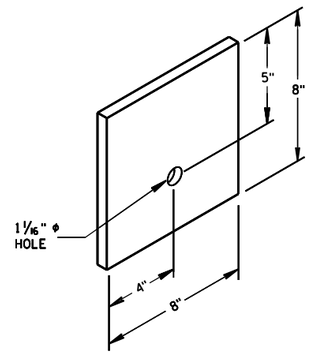
SECTION A-A

(8) (H)

GENERIC ANCHOR CABLE BOX

BILL OF MATERIALS

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



(6)

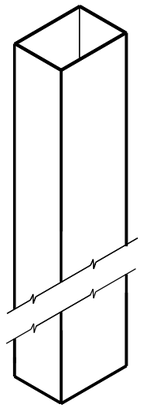
BEARING PLATE

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 44-3b



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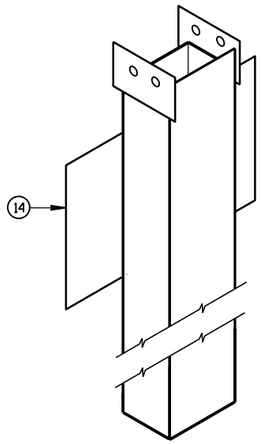
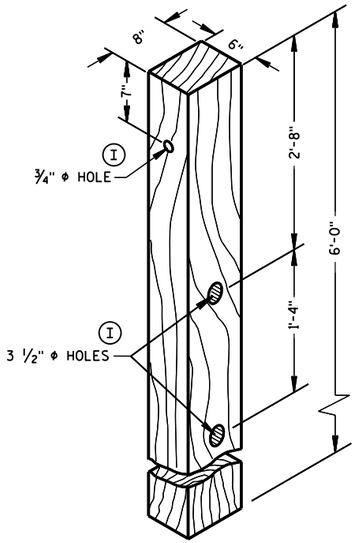
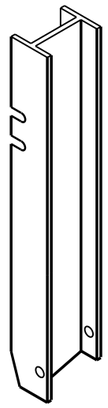


LOWER POST NO. 1 (2)

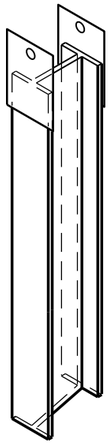


POSTS NUMBER 3-9

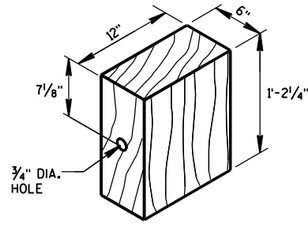
WOOD CRT POST (3)



UPPER POST NO. 2 (15)

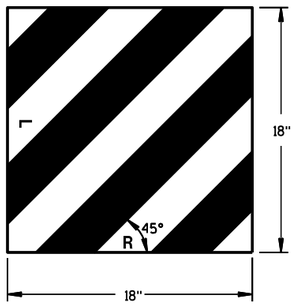


LOWER POST NO. 2 (16)



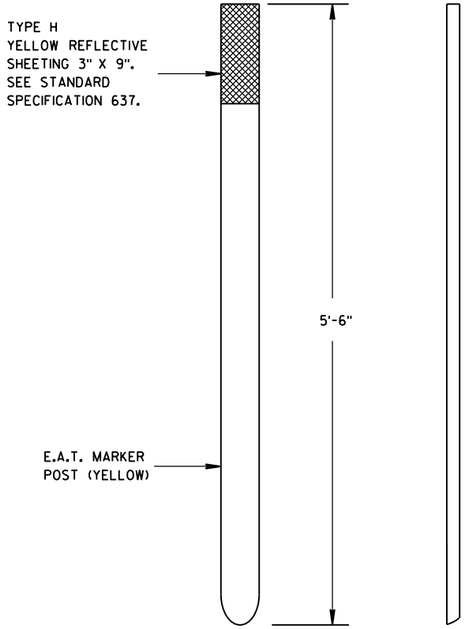
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



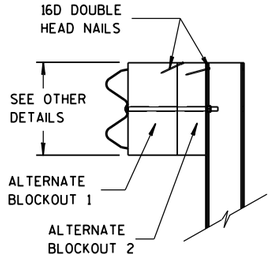
W5-59

REFLECTIVE SHEETING DETAIL (H)

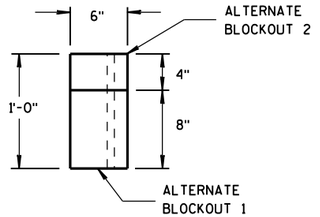


FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW



TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS
UNIT SUPERVISOR

FHWA

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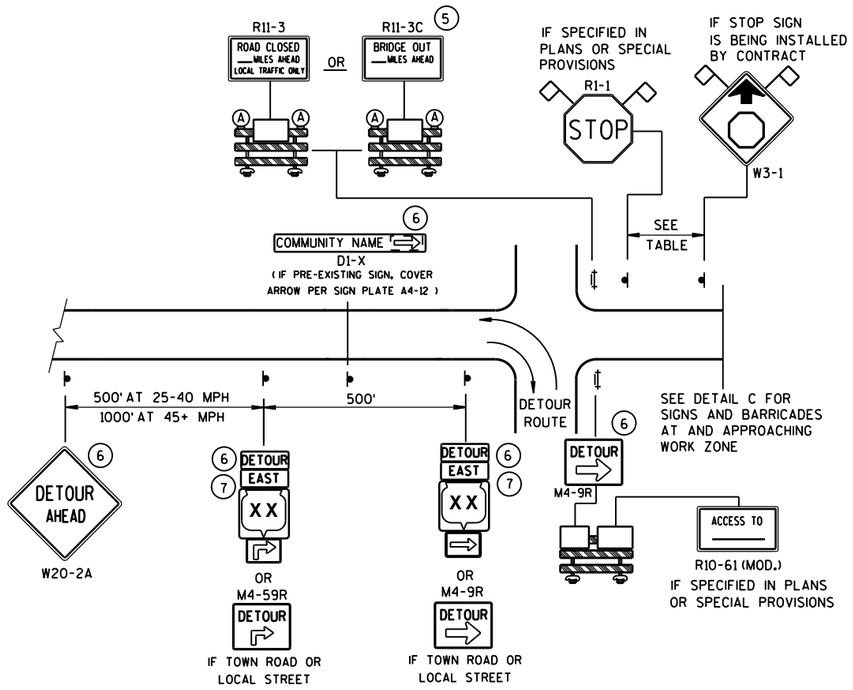
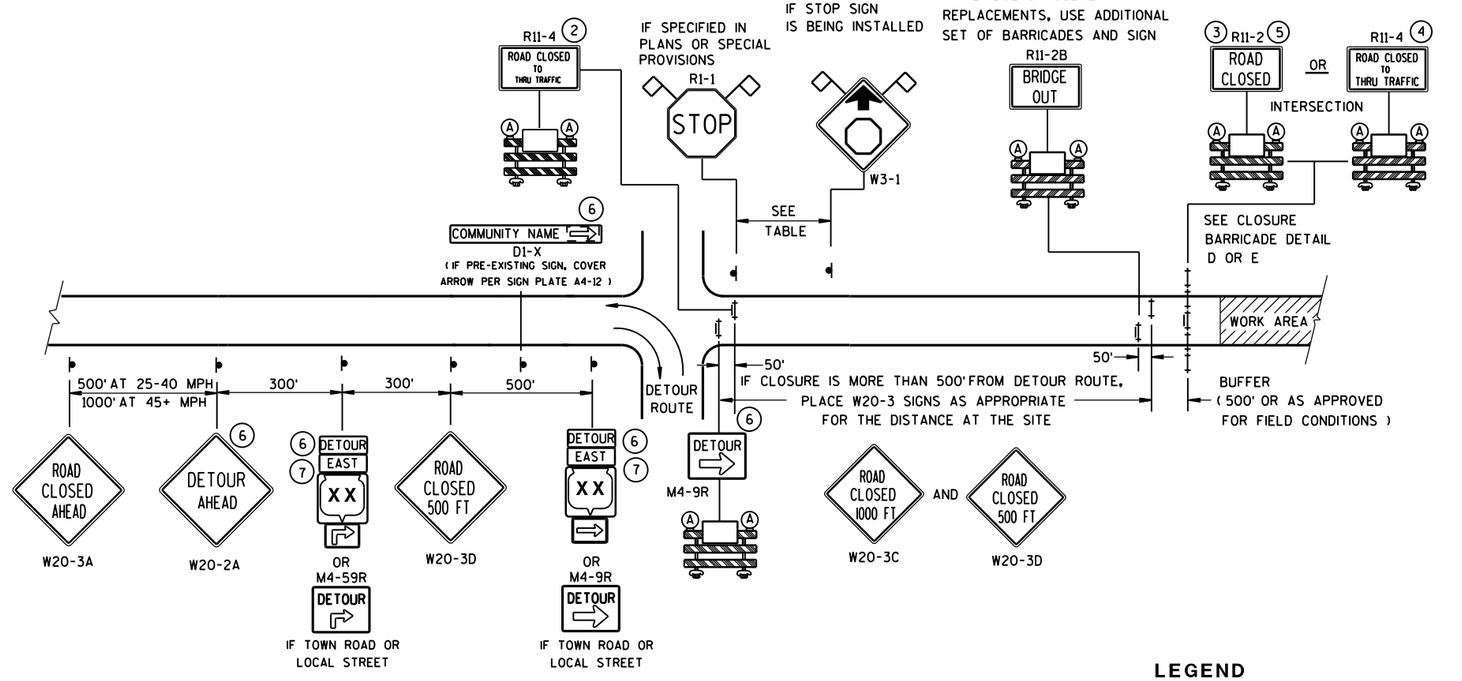
S.D.D. 14 B 44-3c



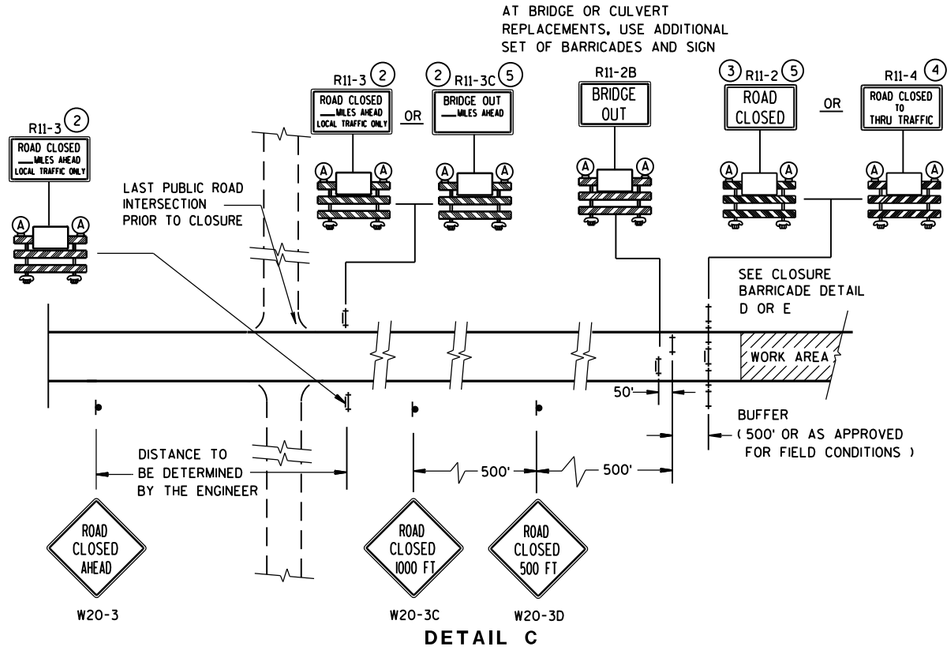
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 15 C 2-6a

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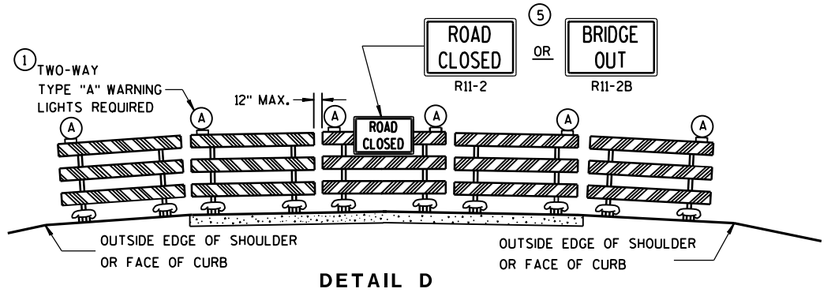
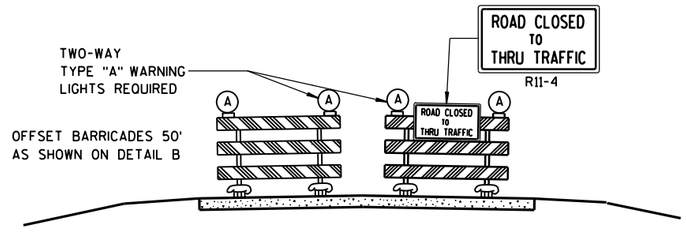
S.D.D. 15 C 2-6a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO SAFETY ENGI FIC
FHWA

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S.D.D. 15 C 2-6b

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

GENERAL NOTES

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

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

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

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

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

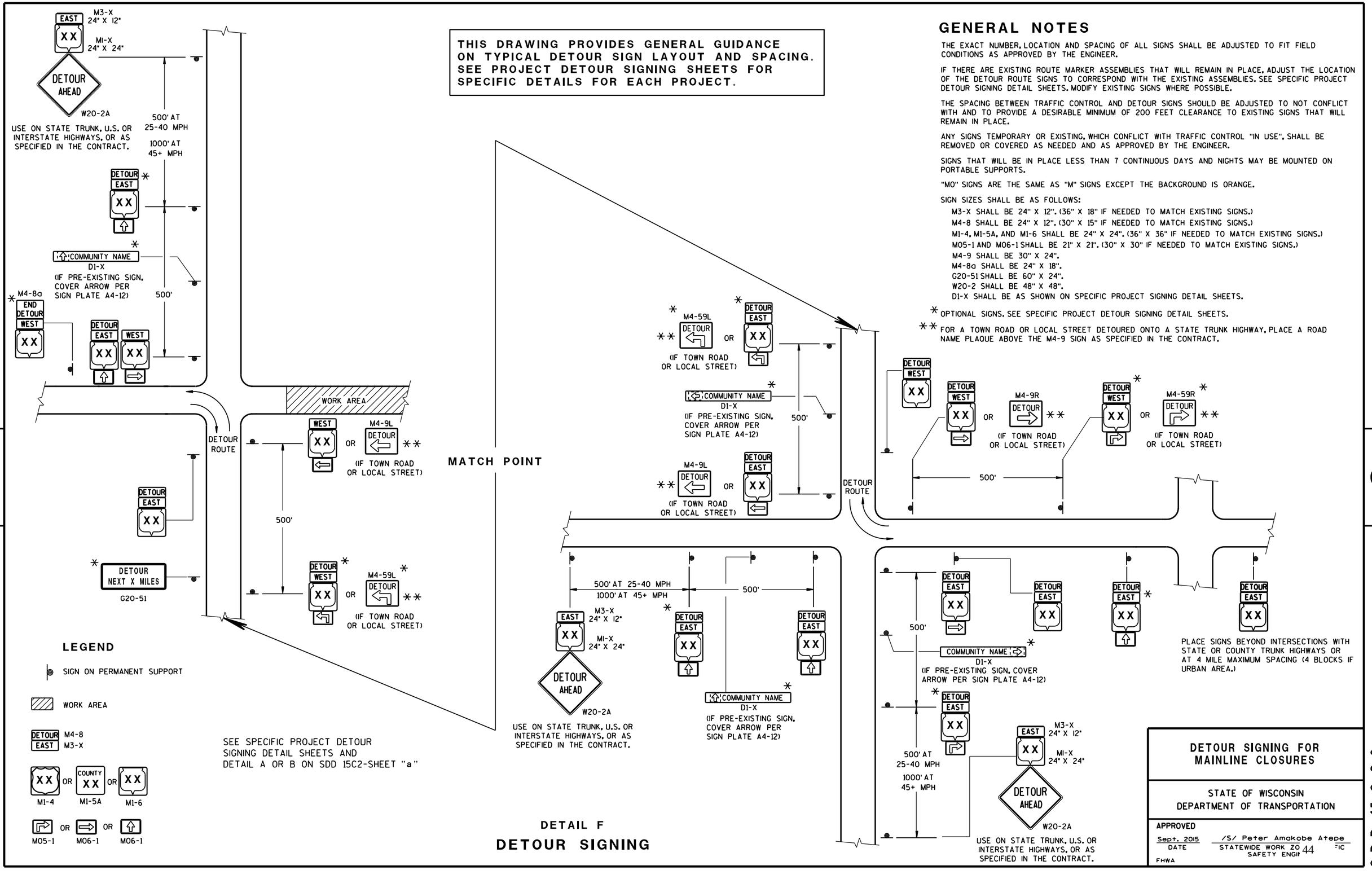
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- MO5-1 AND MO6-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

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

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



LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR EAST — M4-8 / M3-X
- XX OR COUNTY XX OR XX — M1-4 / M1-5A / M1-6
- MO5-1 OR MO6-1 OR MO6-1

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

DETAIL F

DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe — STATEWIDE WORK ZO SAFETY ENGI FIC

FHWA

S.D.D. 15 C 2-6c

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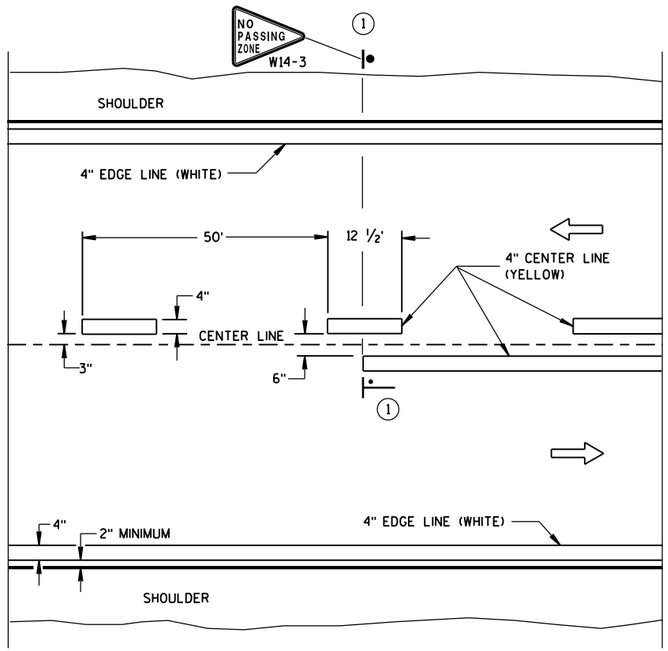
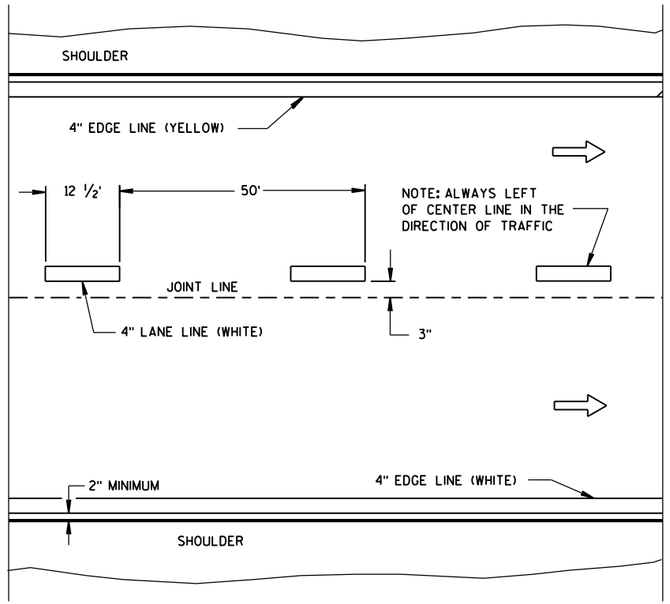


TWO WAY TRAFFIC



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.

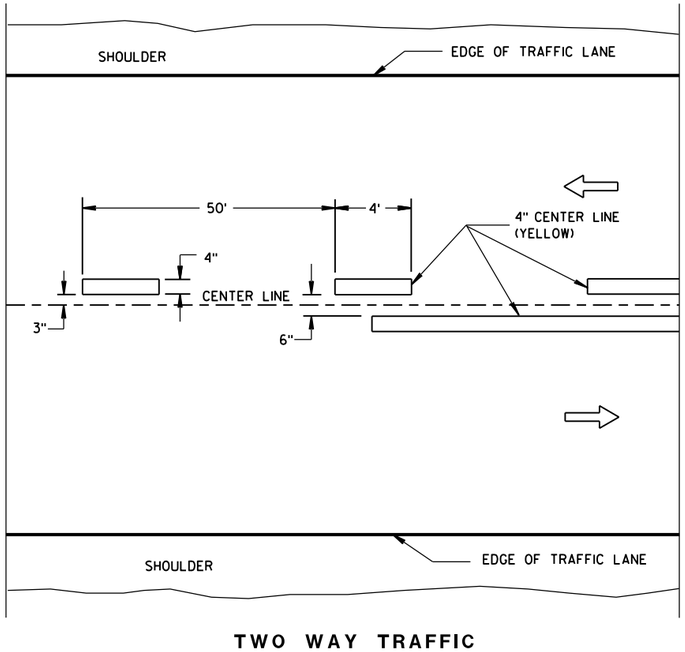
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

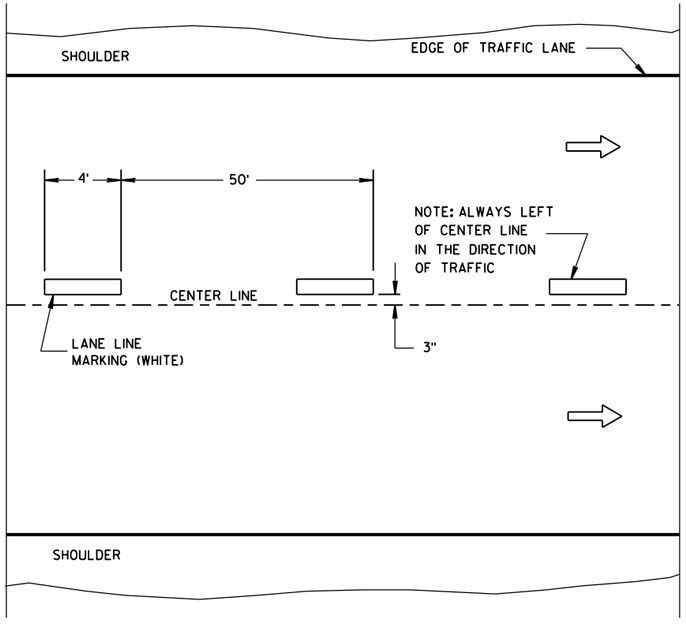
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

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

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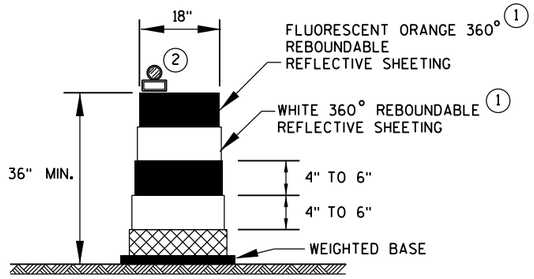
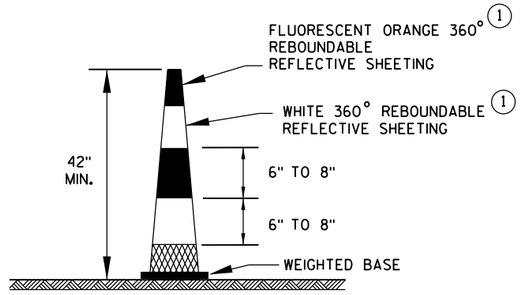
S.D.D. 15 C 8-18a



DRUM

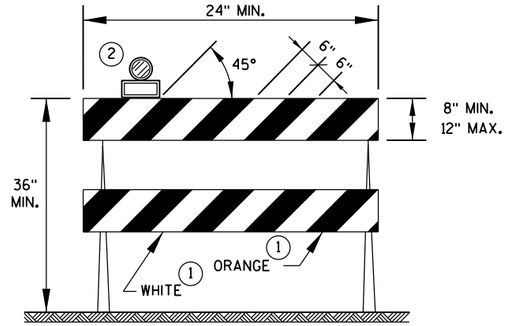


42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS

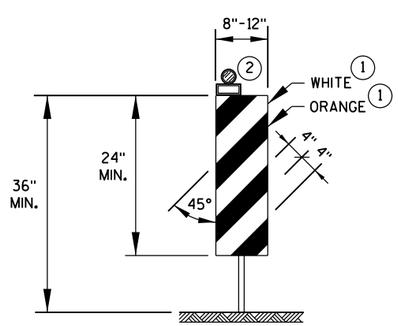
GENERAL NOTES

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



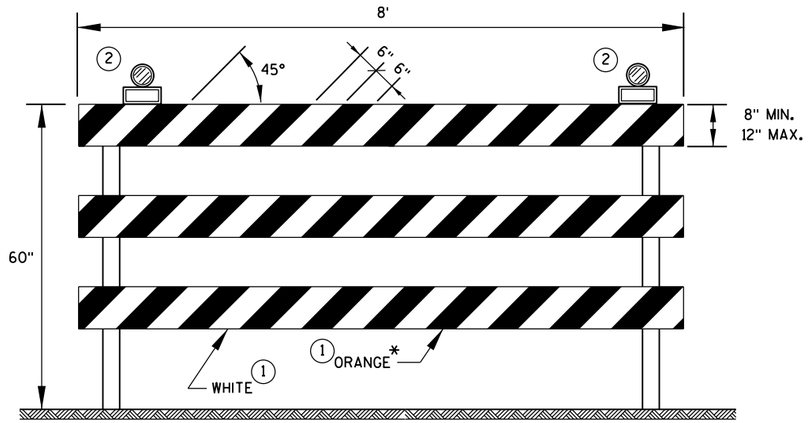
TYPE 2 BARRICADE

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



VERTICAL PANEL

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



TYPE 3 BARRICADE

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

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

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017 — DATE

/S/ Andrew Heidtke — WORK ZONE ENG

FHWA

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S.D.D. 15 C 11-7b

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S.D.D. 15 C 11-7b

GENERAL NOTES

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

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

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

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

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

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

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

TABLE A

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

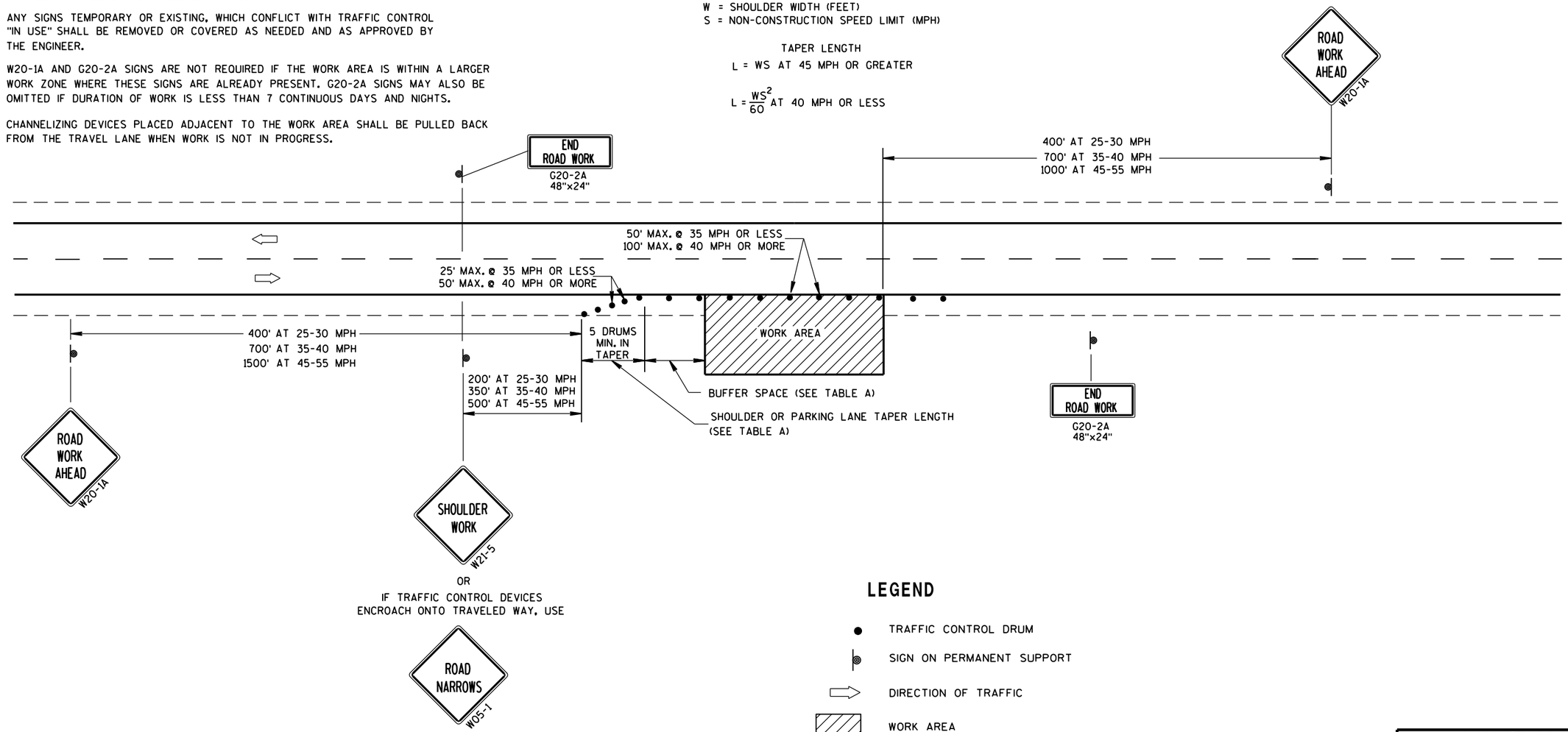
W = SHOULDER WIDTH (FEET)
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

TAPER LENGTH

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

SHOULDER TAPER LENGTH = $\frac{1}{3}L$



LEGEND

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

July 14, 2015 — DATE

/S/ Peter Amakobe Atepe — STATEWIDE WORK ZO... SAFETY ENGI... FIC

FHWA

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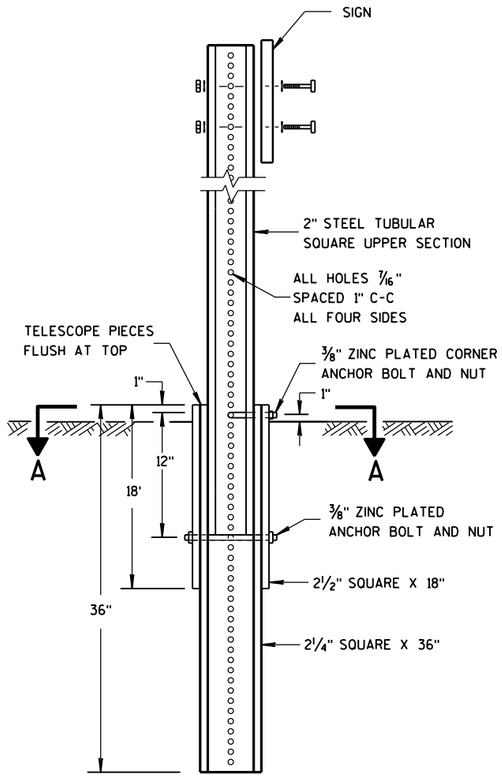
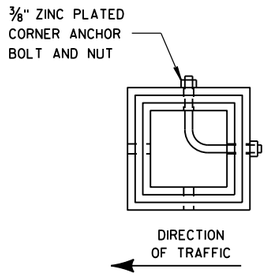
S.D.D. 15 D 28-3

6

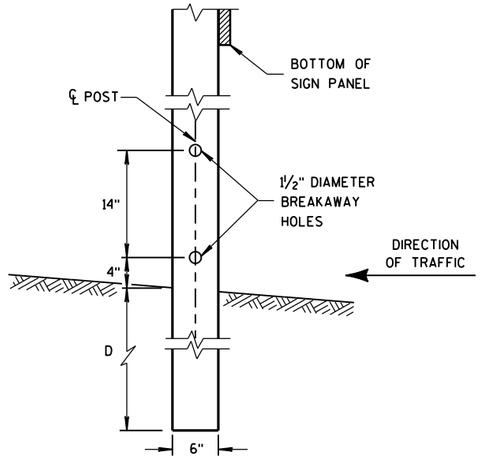
S.D.D. 15 D 28-3



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



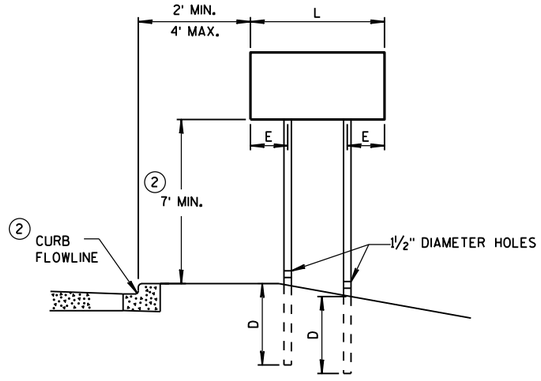
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

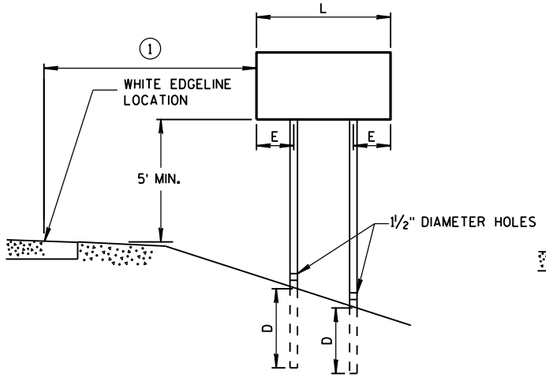
1. 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

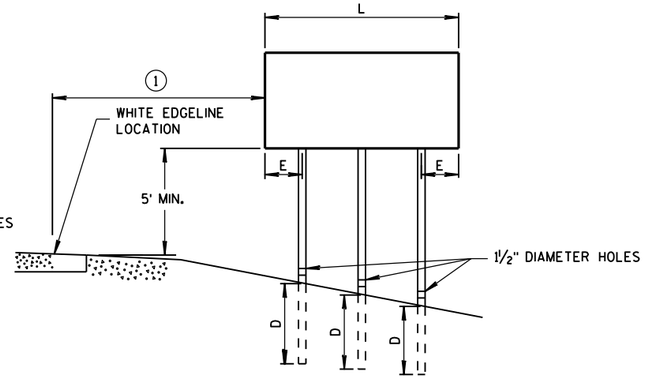
2. THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK 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

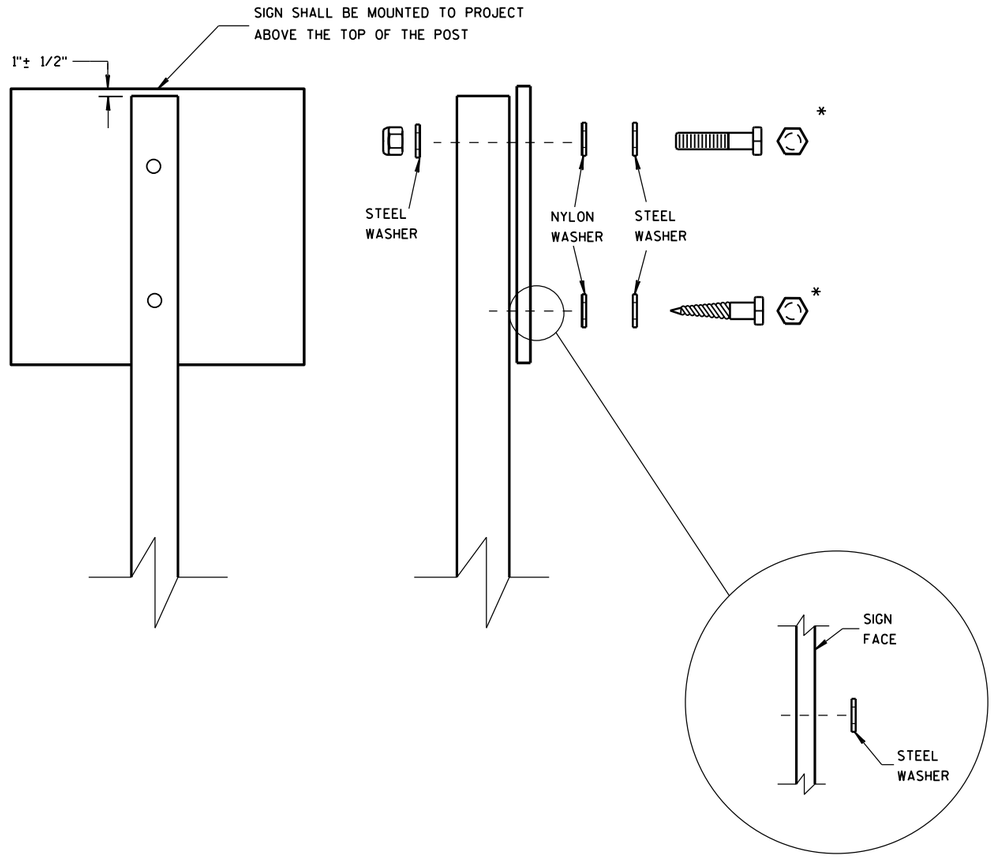
POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

SEE NOTE 3

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
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

6

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

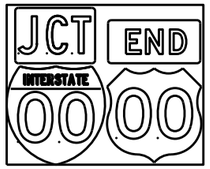
June 2017
DATE

/S/ Andrew Heldtke
WORK ZONE ENG

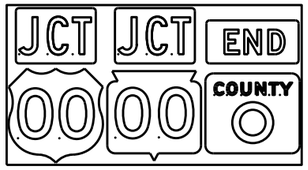
FHWA

TYPICAL ASSEMBLIES

J1-1

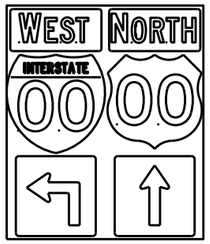


J1-2

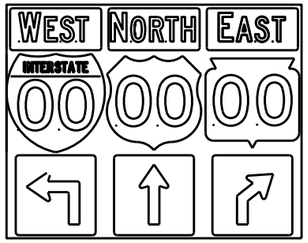


J1-3

J2-1



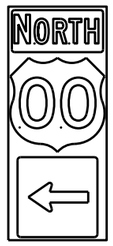
J2-2



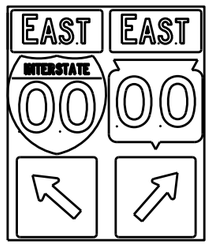
J2-3

JV

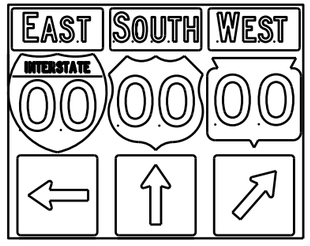
(Typical Vertical J-Assembly
See Note 10 and 11)



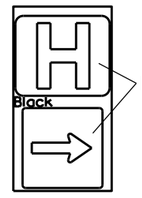
J3-1



J3-2

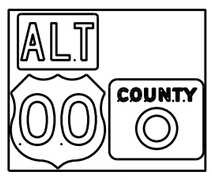


J3-3

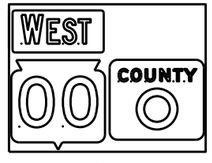


JH-1

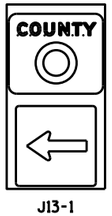
J4-1



J4-2



J4-2



J13-1

J12-1

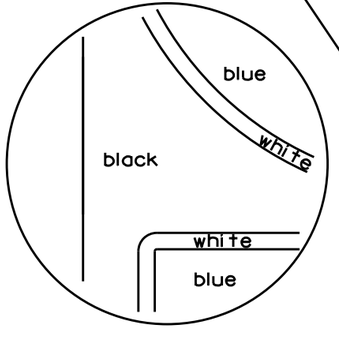
J32-1

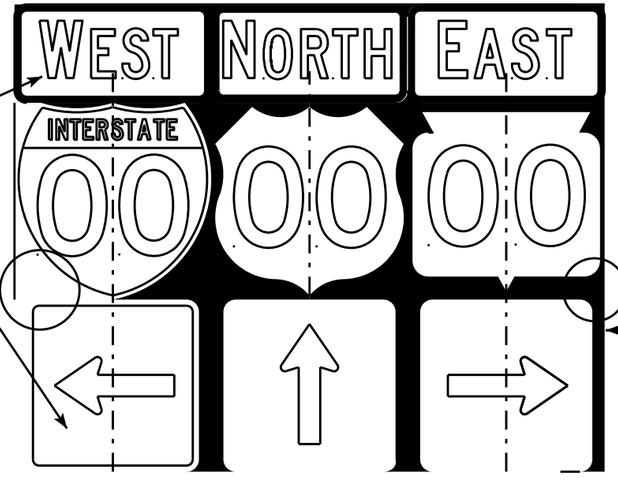
J33-1

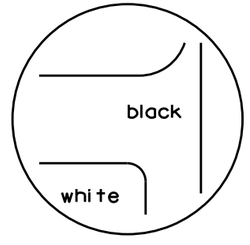
J23-1

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

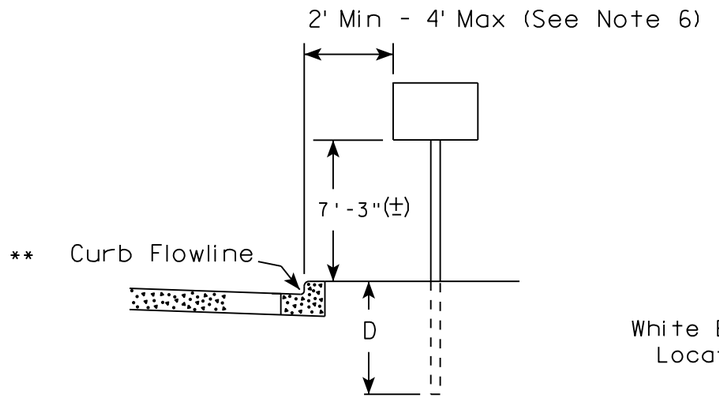
APPROVED Matthew R Rauch
for State Traffic Engineer

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

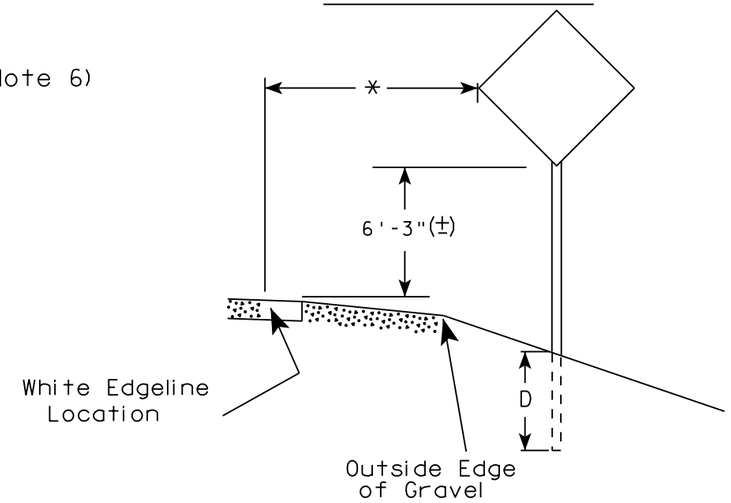
PROJECT NO: | SHEET NO: E

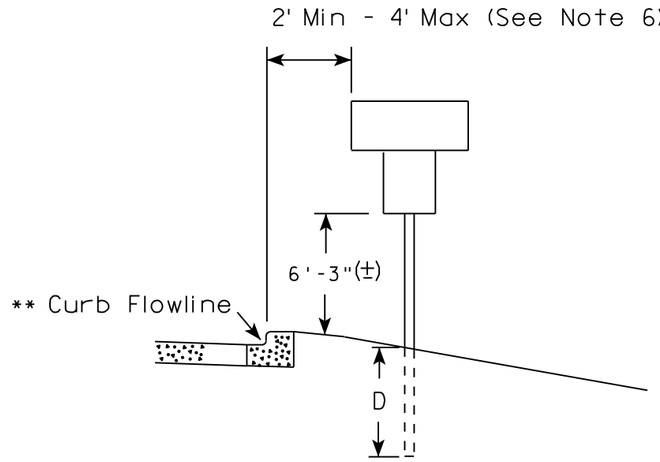
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :
WISDOT/CADDS SHEET 42

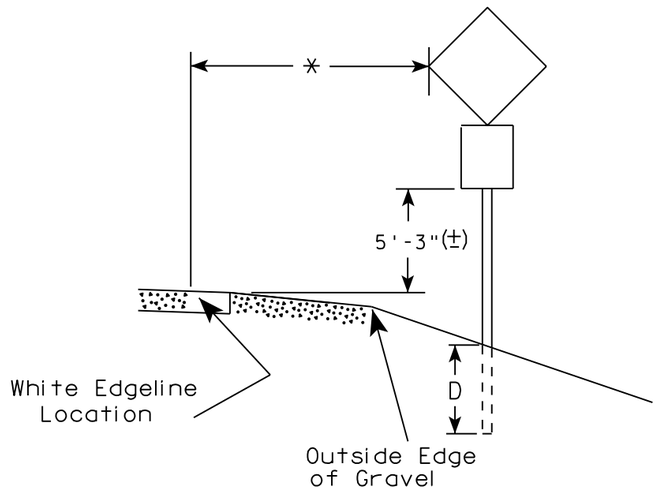
URBAN AREA



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.

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" (±).

POST EMBEDMENT DEPTH

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

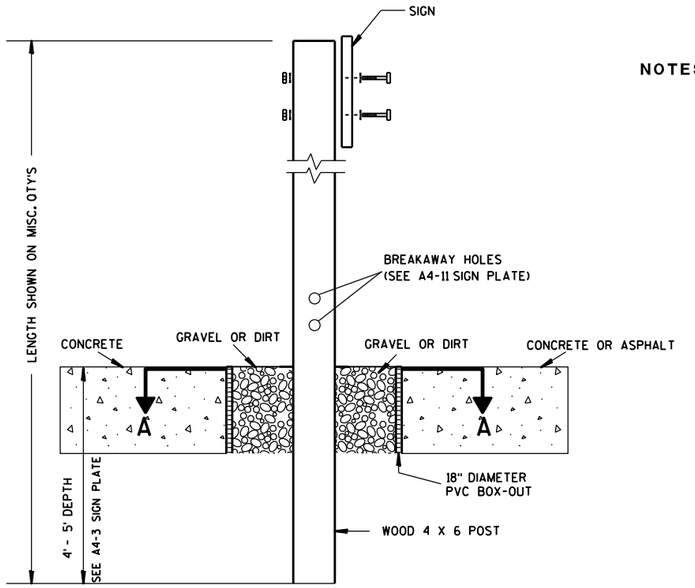
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

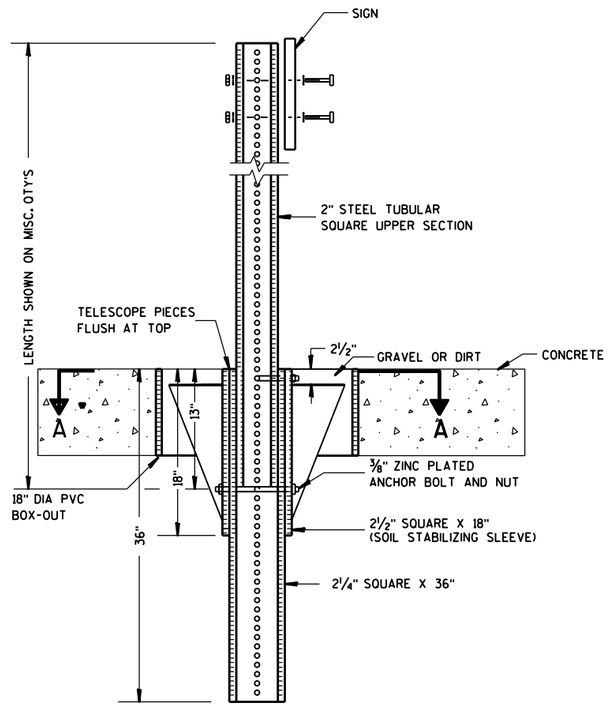
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 51	E



ELEVATION VIEW

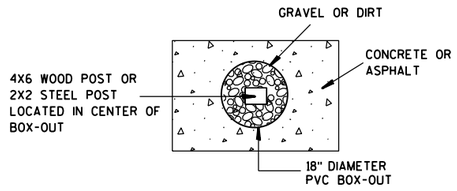
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

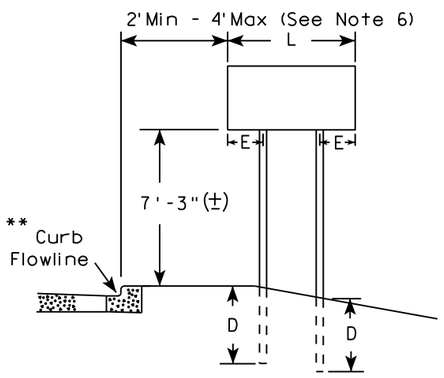
APPROVED Matthew R Rauch
for State Traffic Engineer

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

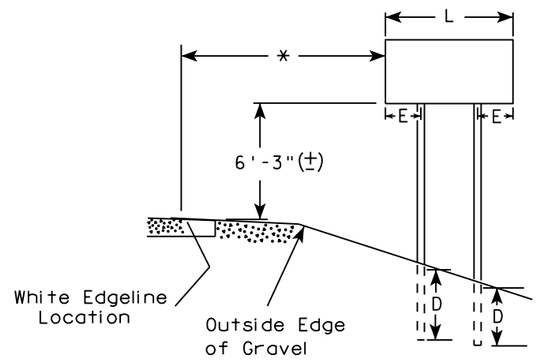
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

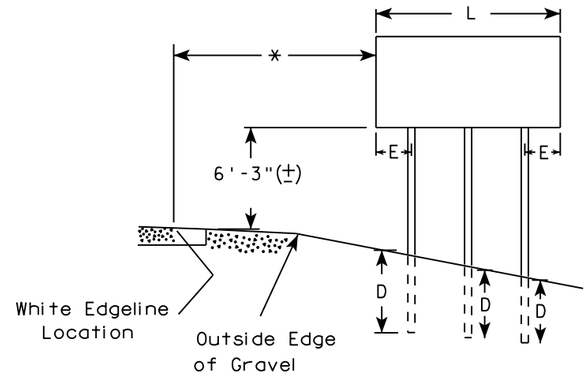
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

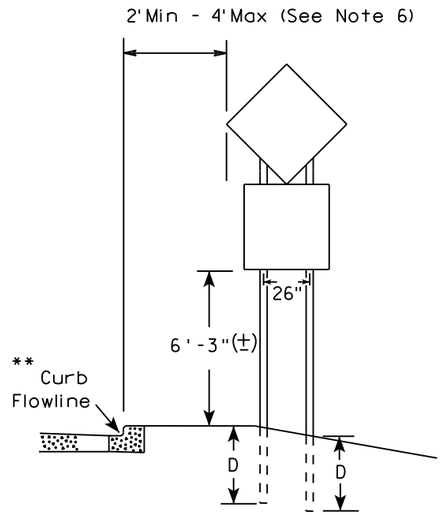
URBAN AREA



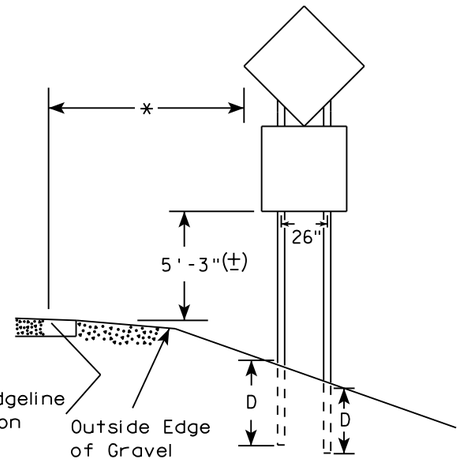
RURAL AREA (See Note 3)







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'

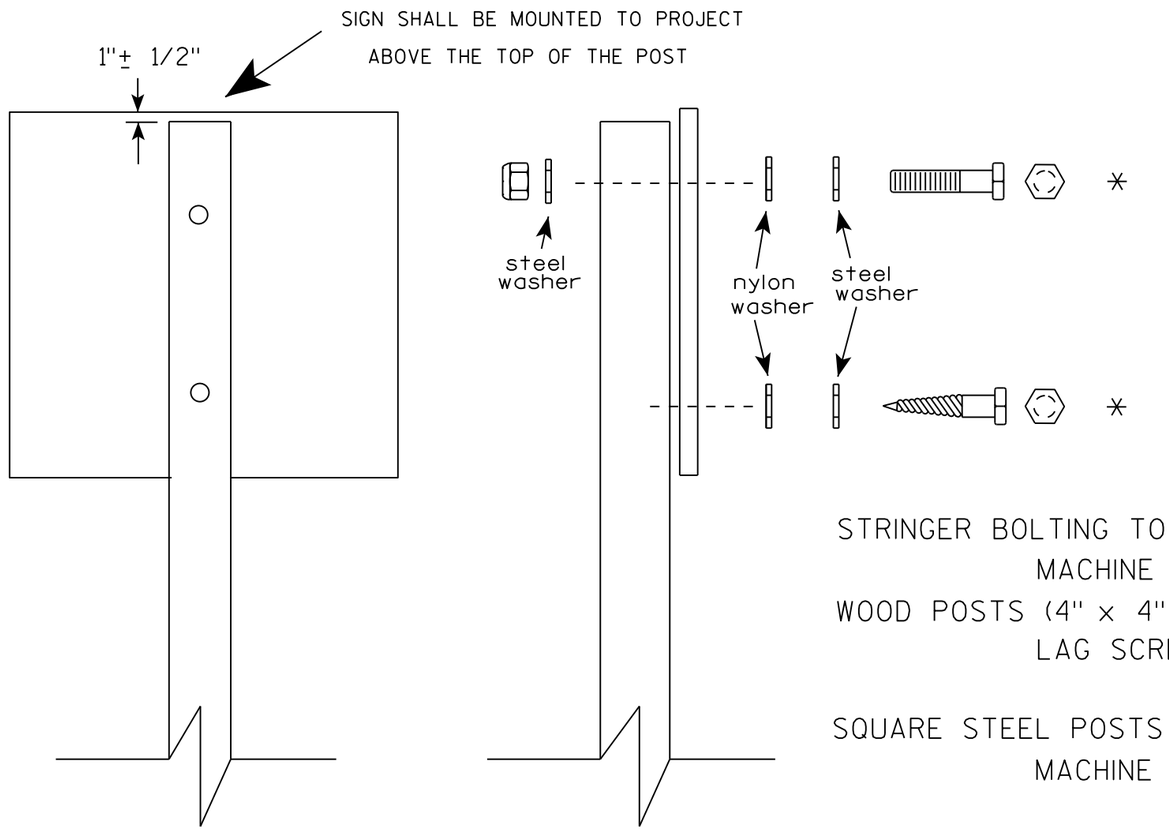
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

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: 53	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

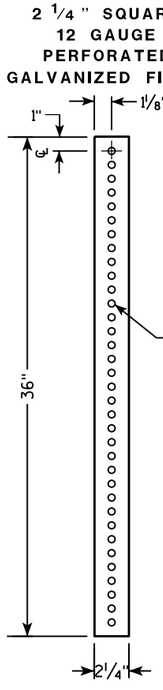
APPROVED Matthew R Rauch
For State Traffic Engineer

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

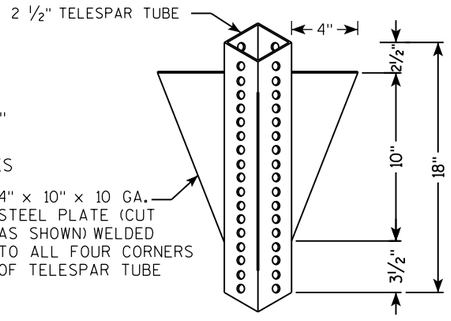
PROJECT NO: SHEET NO: E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

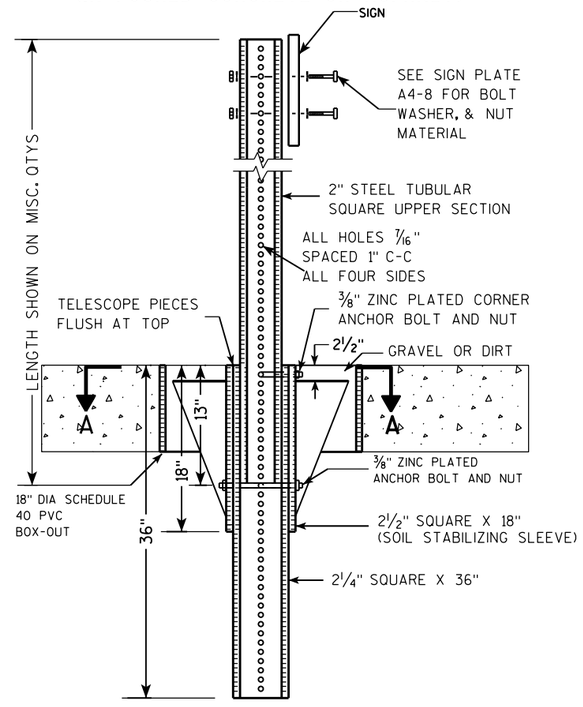
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



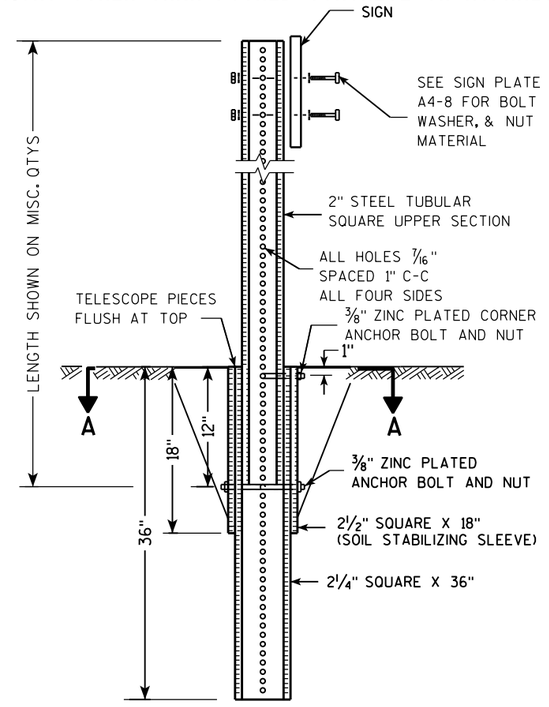
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

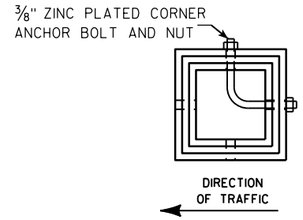


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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).

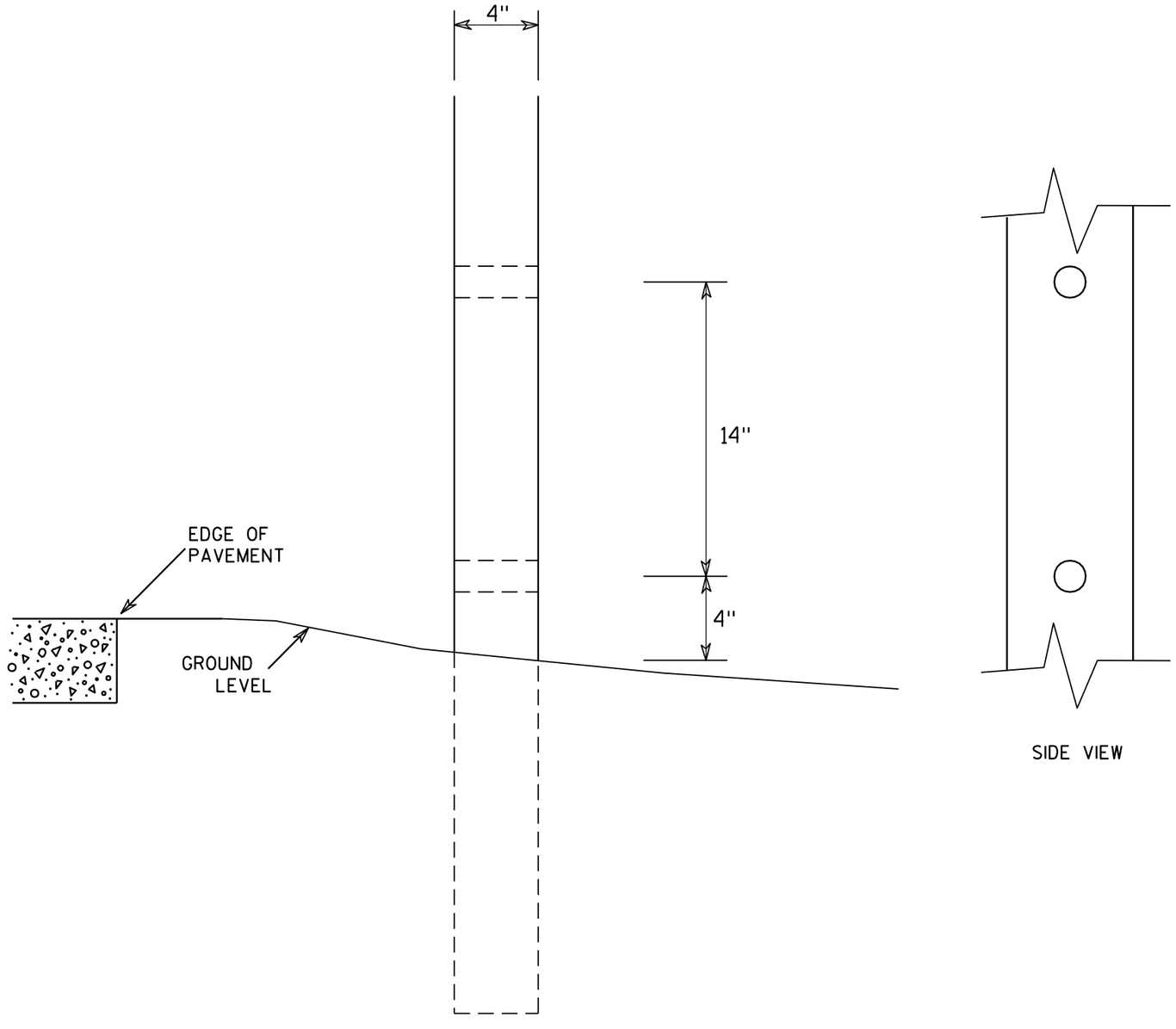
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 55 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.

7

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

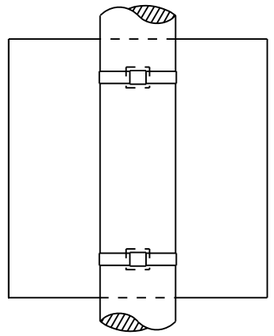
APPROVED Chester J Spang
for State Traffic Engineer

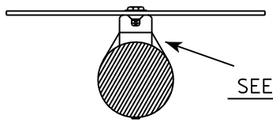
DATE 3/27/97 PLATE NO. A4-11.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 56	E

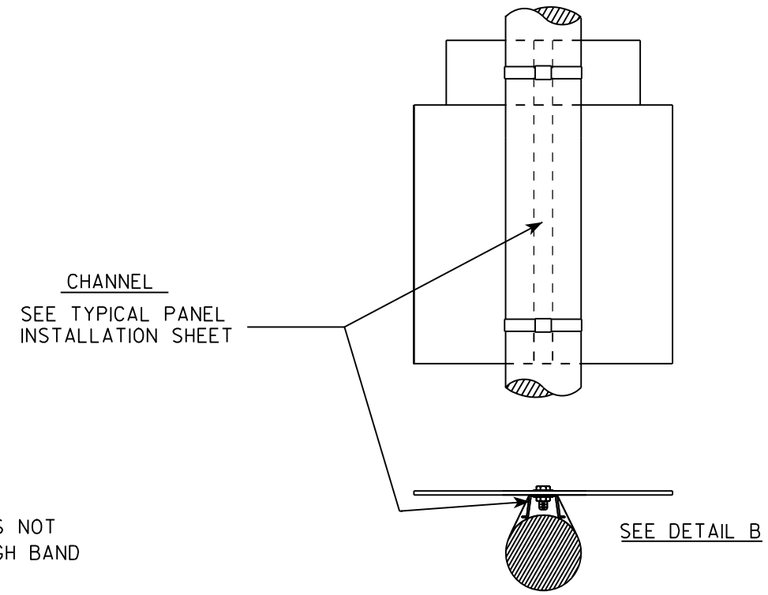
BANDING

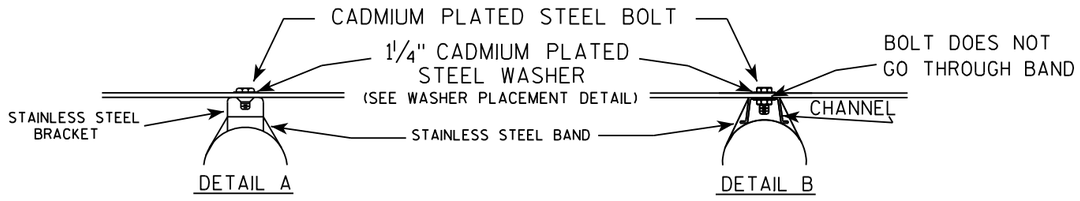
SINGLE SIGN



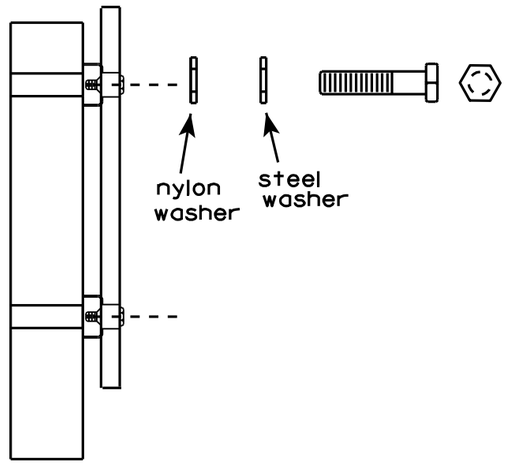


"J" ASSEMBLY





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.

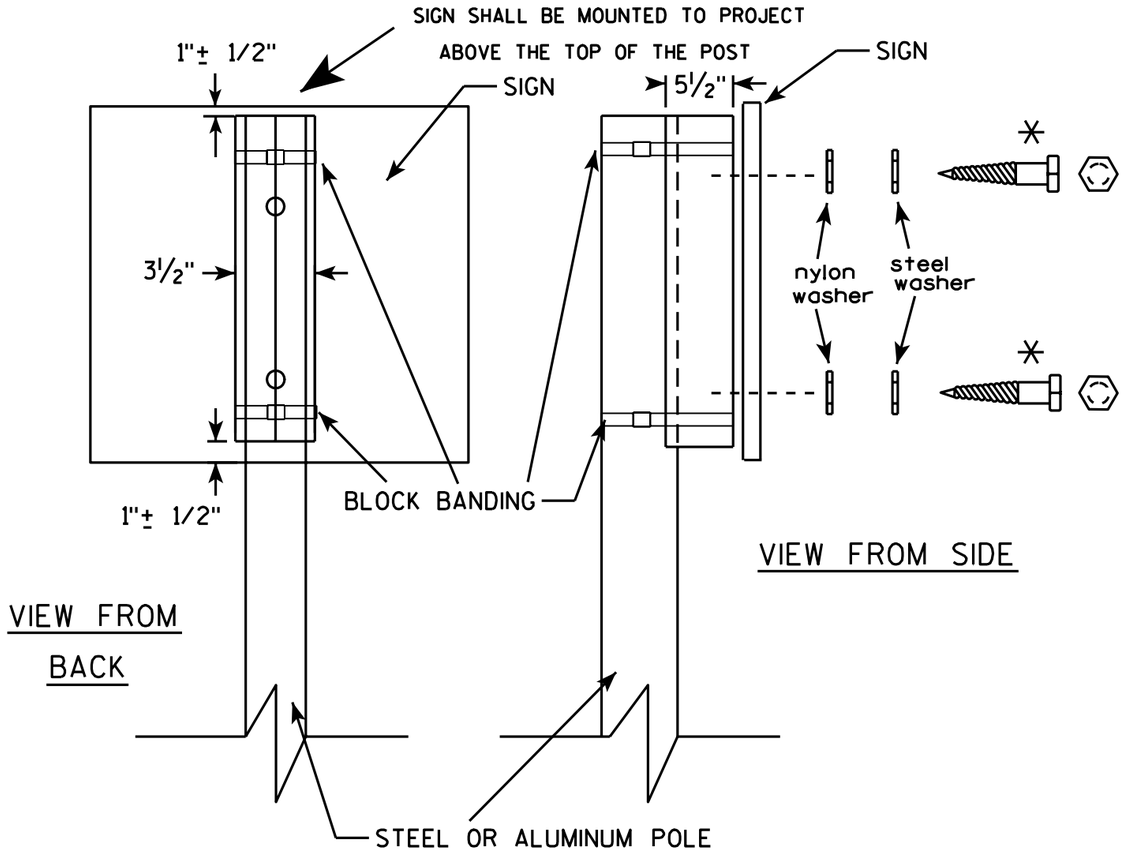
STANDARD SIGN
SIGN BANDING DETAILS

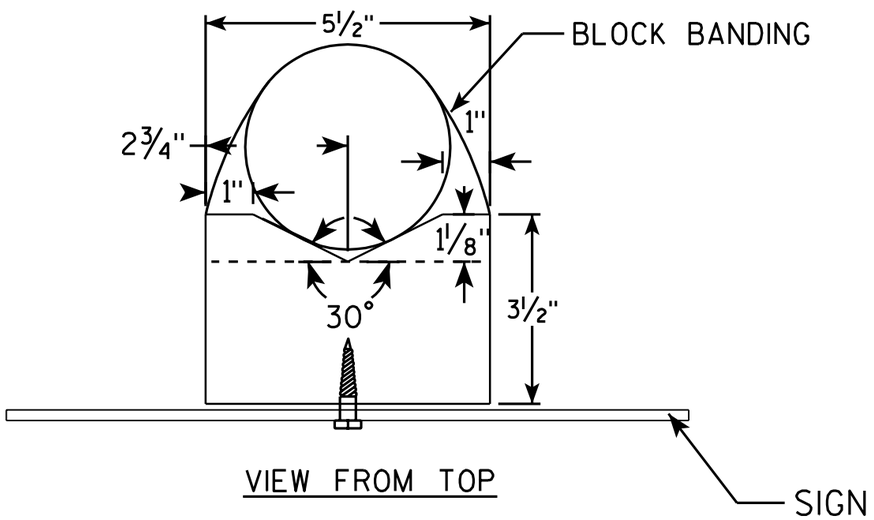
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 57	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:

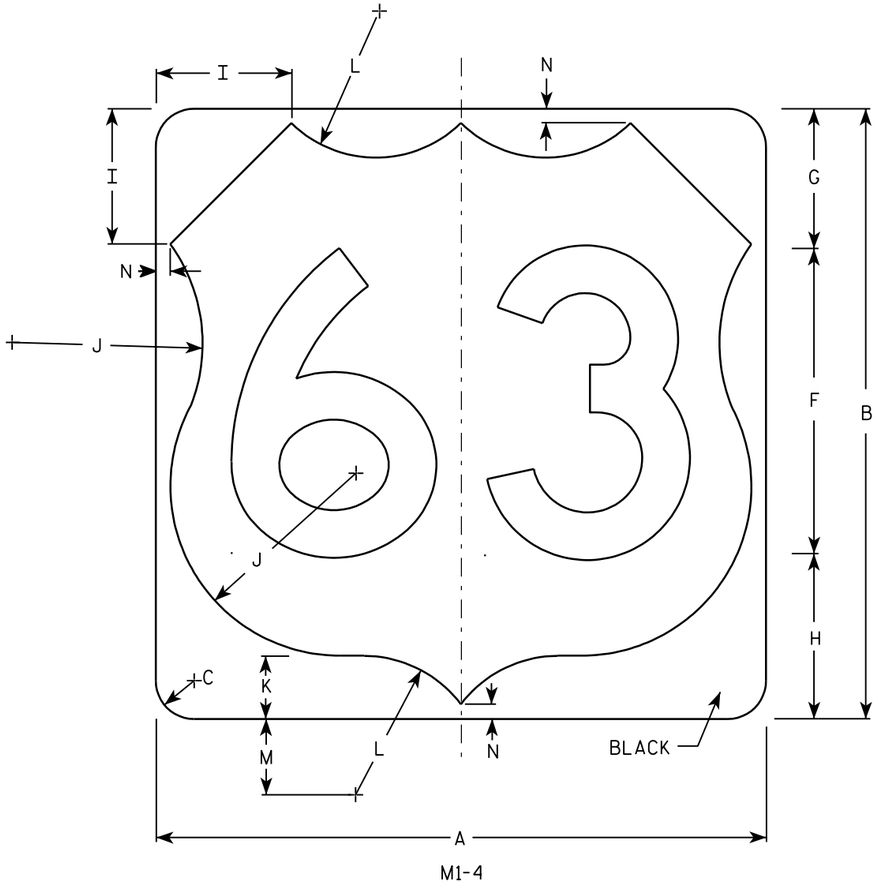
SHEET NO: 58 E

FILE NAME : C:\Users\Projects\tr_stdplate\A510.dgn PLOT DATE : 06-AUG-2007 13:37 PLOT BY : ditjph

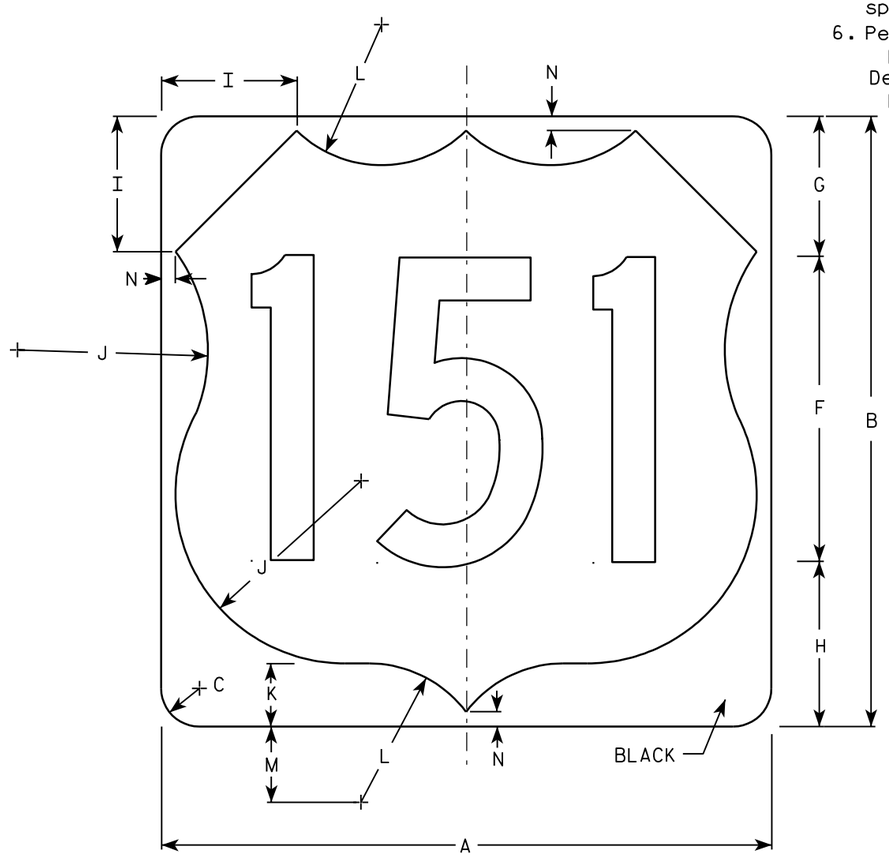
WISDOT/CADDS SHEET 42

NOTES

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



M1-4



M1-4

Metric equivalent for this sign is:

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
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	.36
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	.81
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	.81
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	.81

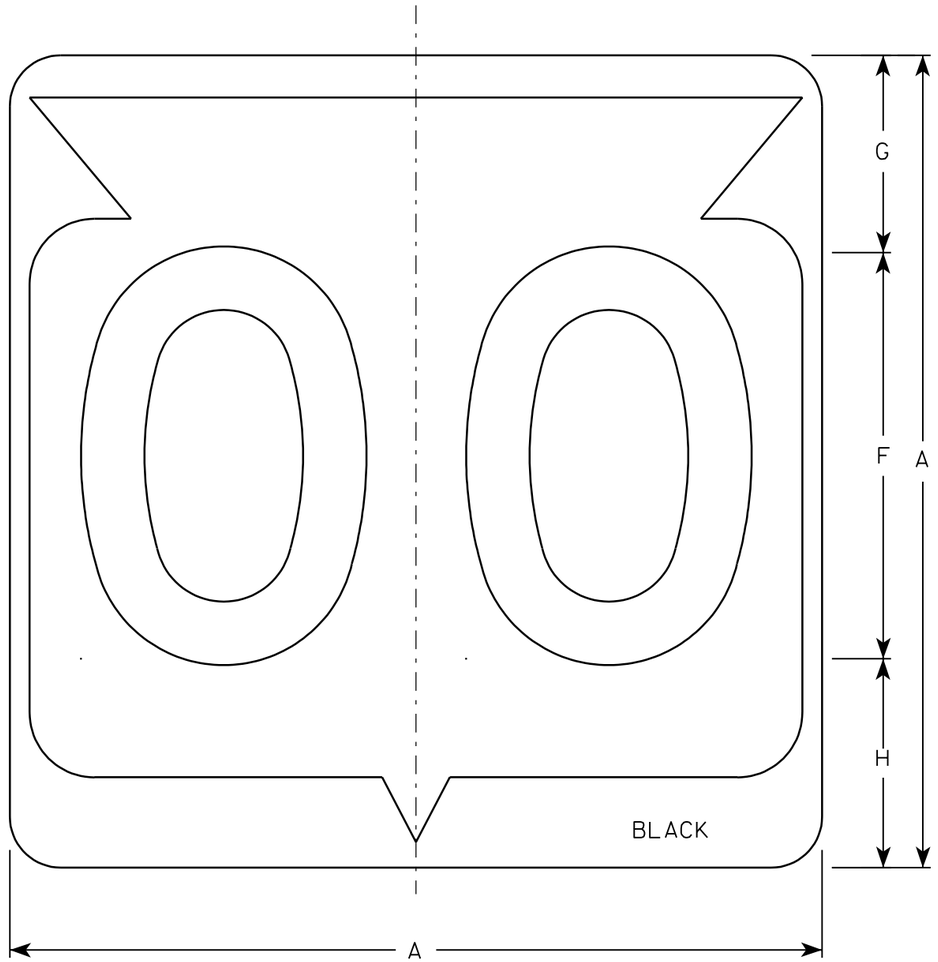
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/25/05 PLATE NO. M1-4.9

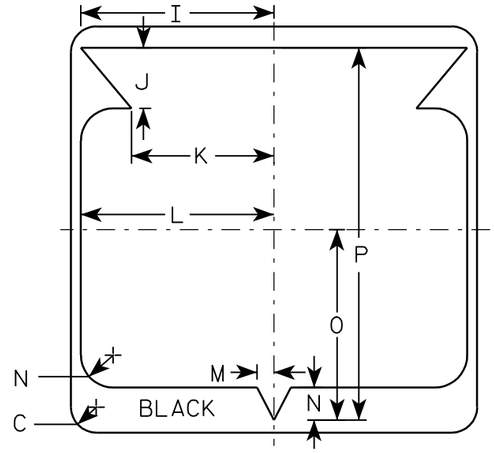
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 59 | E



M1-6

NOTES

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



Metric equivalent for this sign is:

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81

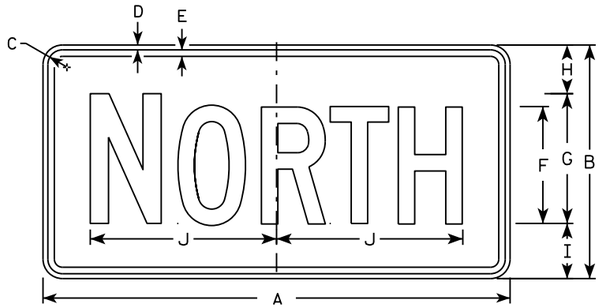
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

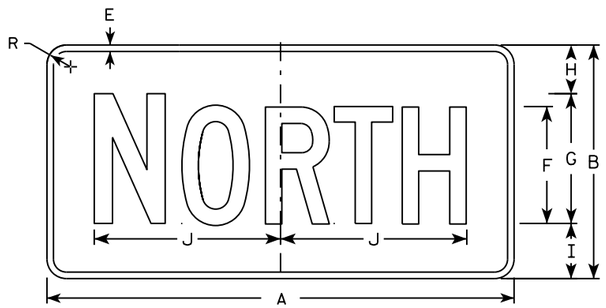
APPROVED Chester J Spang for State Traffic Engineer

DATE 3/20/02 PLATE NO. M1-6.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 60	E



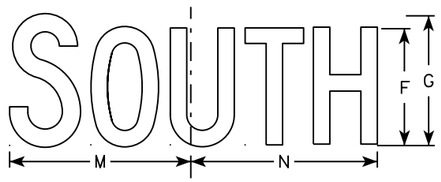
M3-1
MM3-1
MP3-1



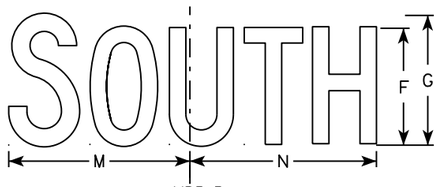
MB3-1
MK3-1
MN3-1

M3-2
MM3-2
MP3-2

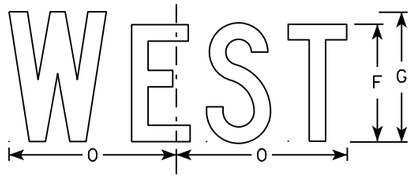
MB3-2
MK3-2
MN3-2



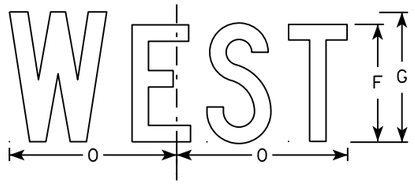
M3-3
MM3-3
MP3-3



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

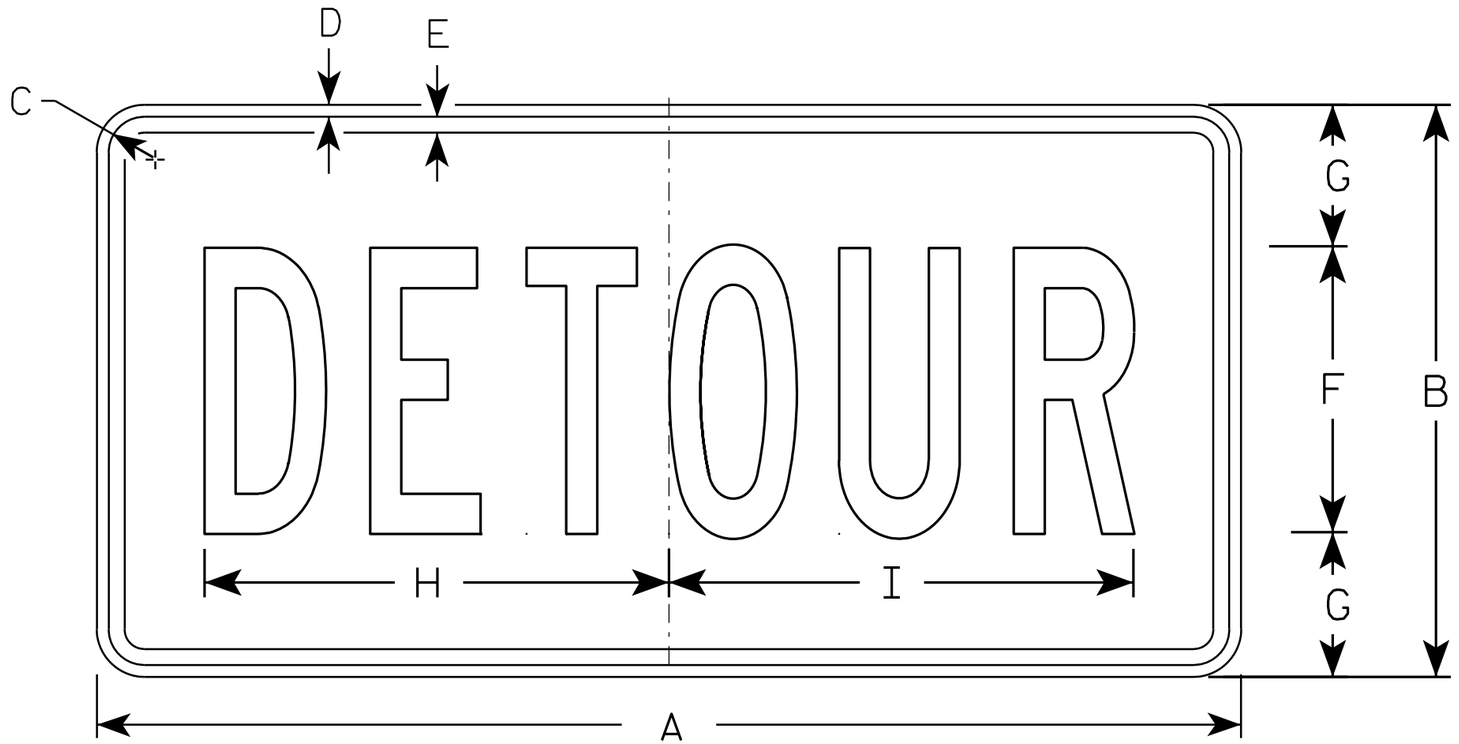
WISCONSIN DEPT OF TRANSPORTATION

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



M4-8

NOTES

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

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

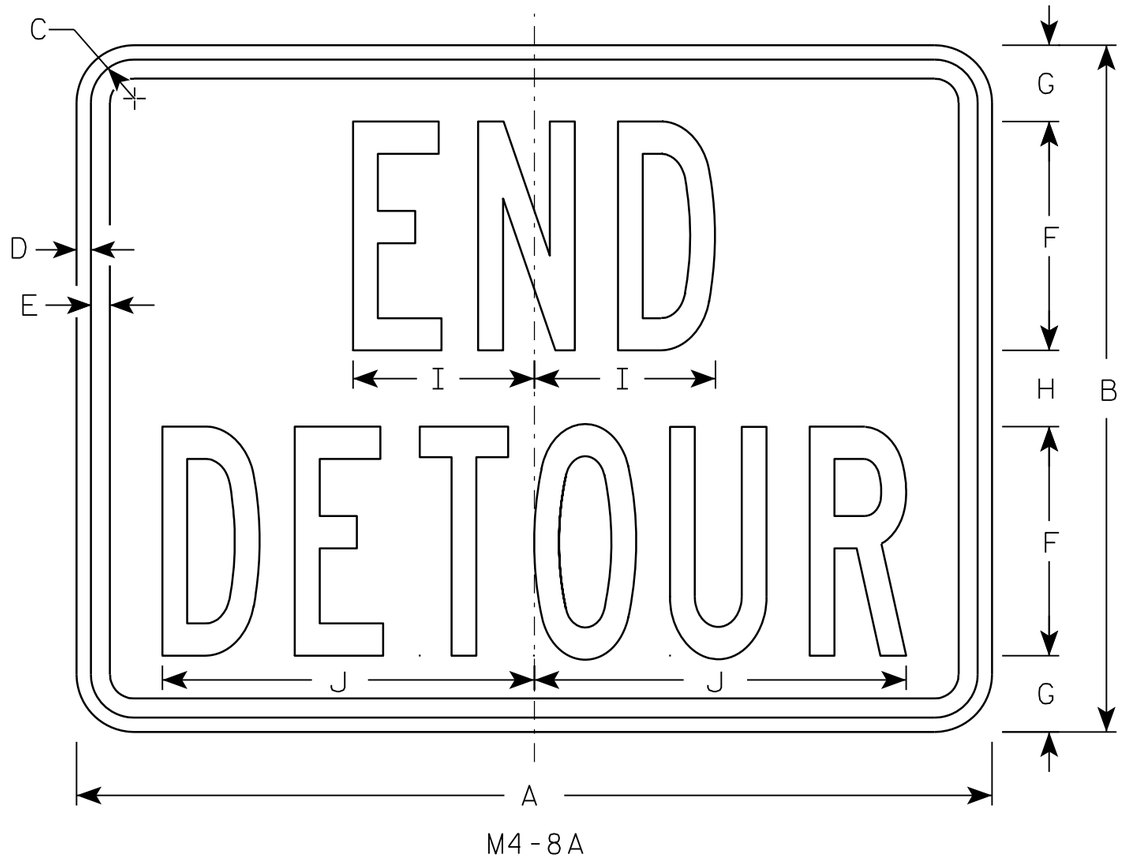
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 62	E



M4-8A

NOTES

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

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

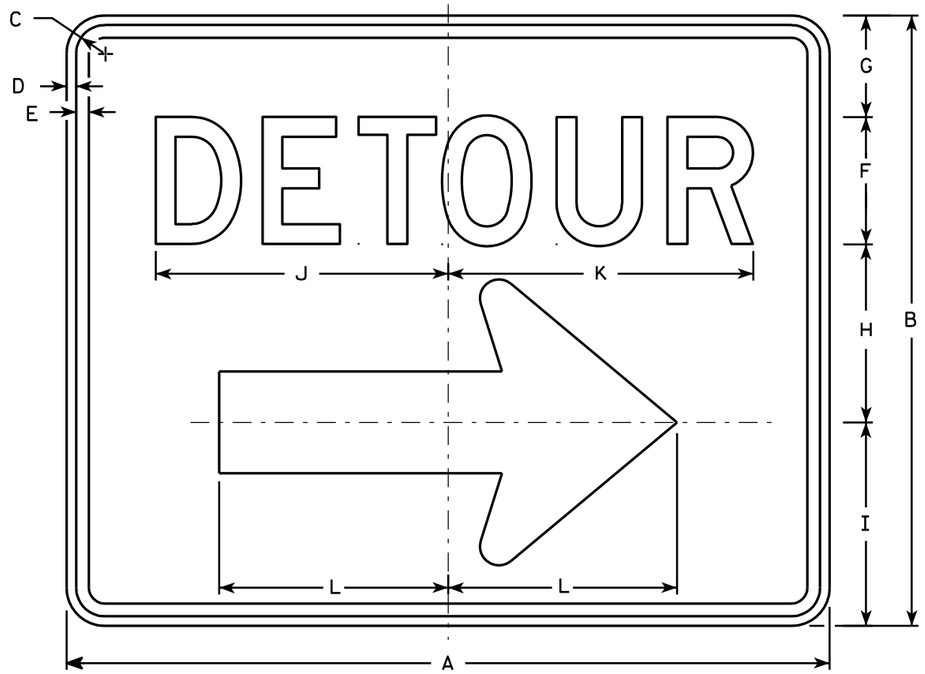
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

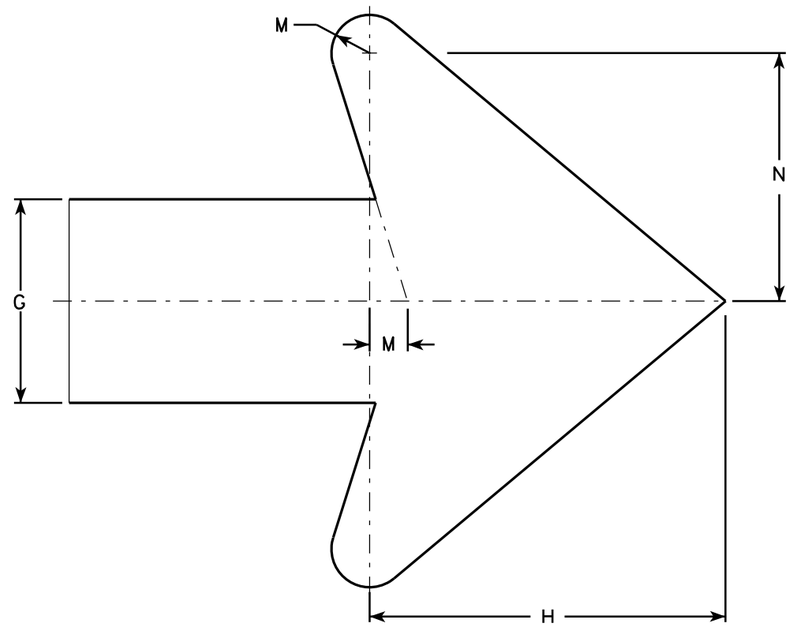
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 63	E



M4-9R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-9L is the same as M4-9R except the arrow is reversed.



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																											
2	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0
5	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0

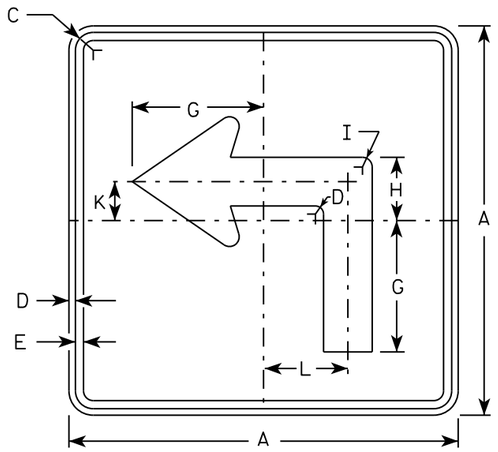
STANDARD SIGN
M4-9 R & L

WISCONSIN DEPT OF TRANSPORTATION

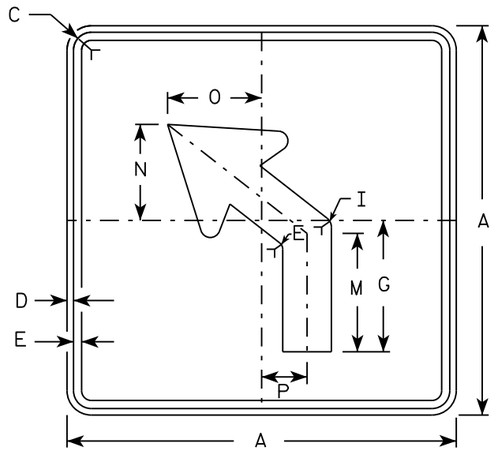
APPROVED Matthew R Rauch
for State Traffic Engineer

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

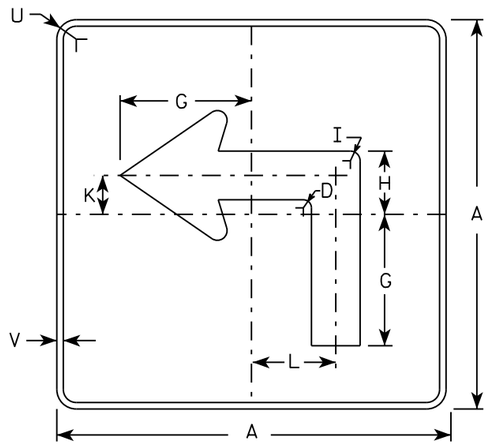
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 64	E



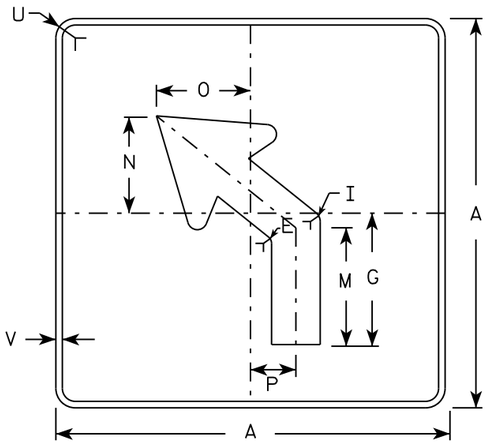
M5-1L
MM5-1L
MO5-1L
MP5-1L



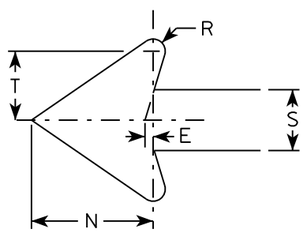
M5-2L
MM5-2L
MO5-2L
MP5-2L



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



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



NOTES

1. Signs are Type II - Type H reflective 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. M5-1 and M5-2 Background - White
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White
   MK5-1 and MK5-2 Background - Green
   Message - White
   MM5-1 and MM5-2 Background - White
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

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

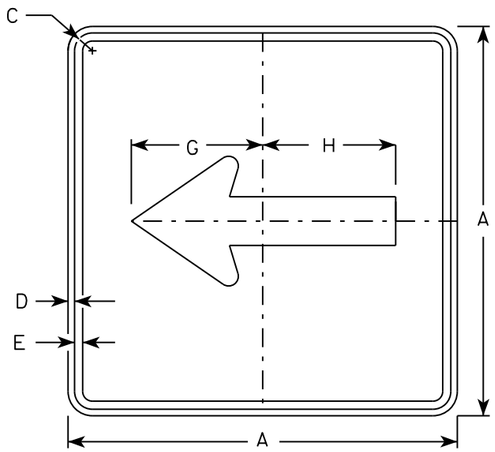
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

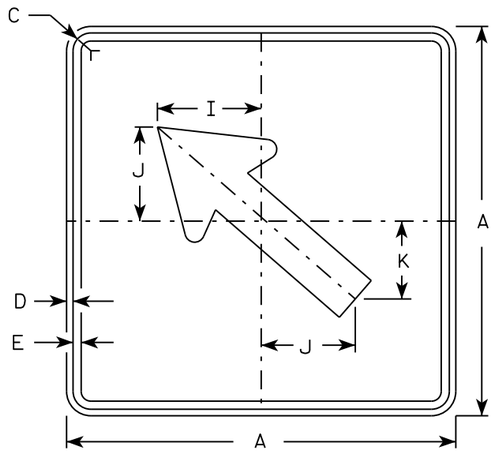
APPROVED Matthew R Rauch
for State Traffic Engineer

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

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



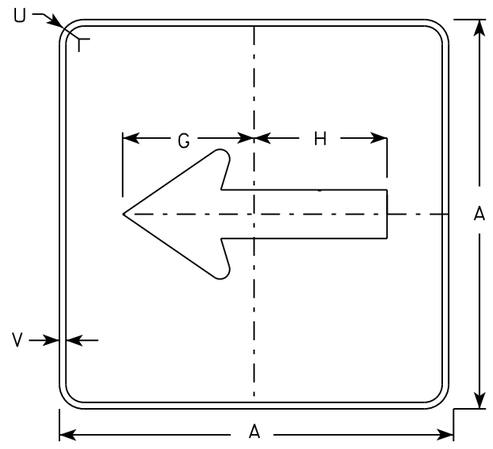
M6-1
MM6-1
MO6-1
MP6-1



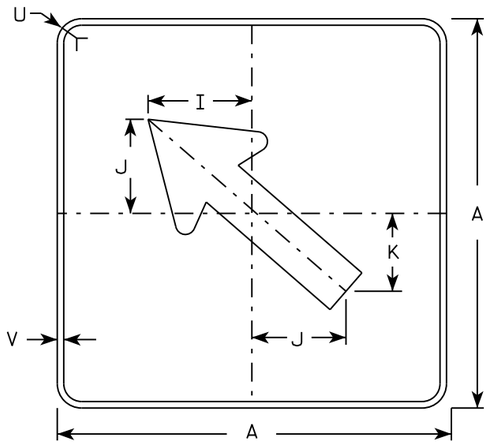
M6-2
MM6-2
MO6-2
MP6-2

NOTES

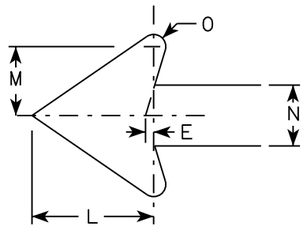
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background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

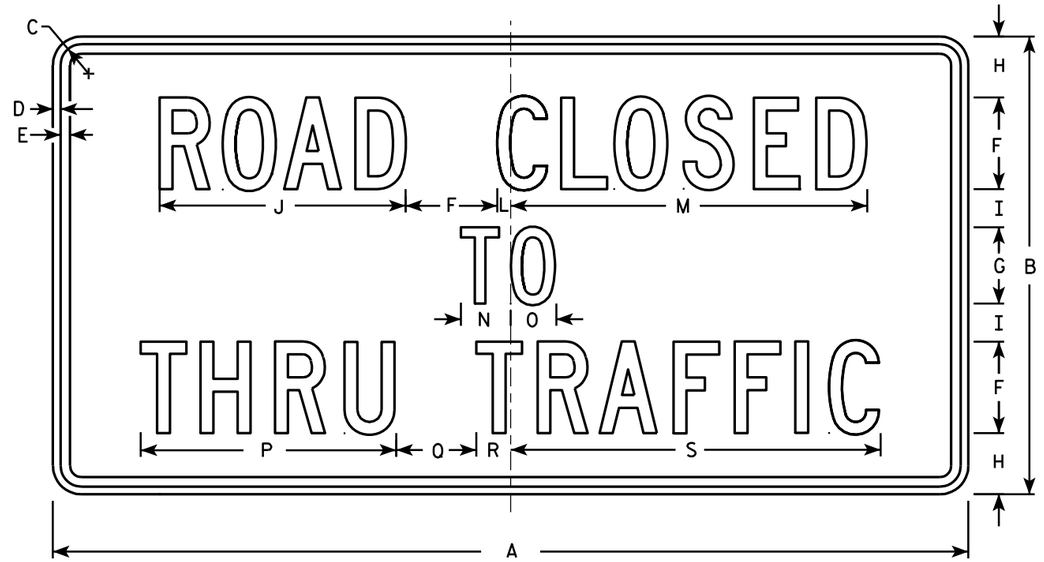
STANDARD SIGN
M6-1 & M6-2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 66 M6-1.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



R11-4

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
3																											
4																											
5																											

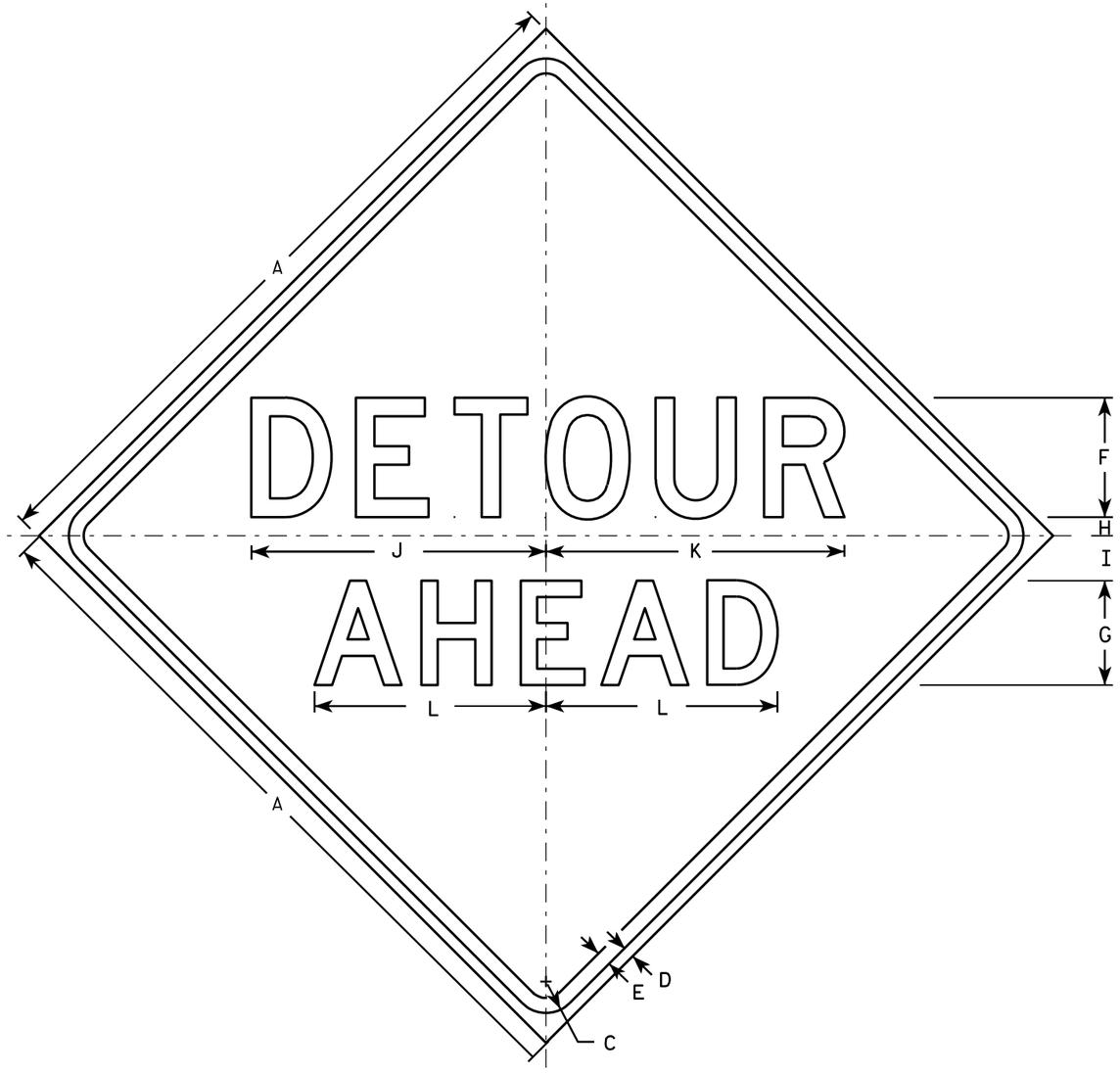
STANDARD SIGN
R11 - 4

WISCONSIN DEPT OF TRANSPORTATION

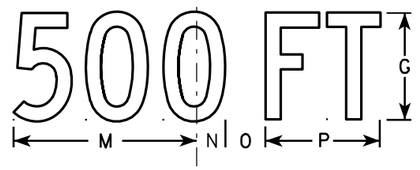
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-4.3

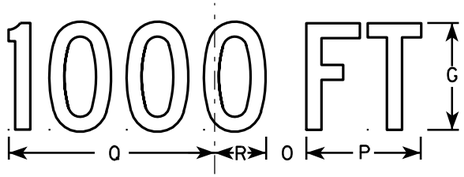
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 67 | E



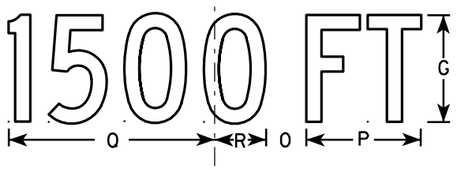
W20-2A



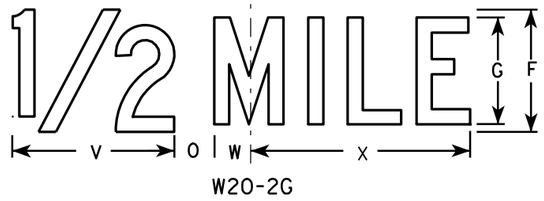
W20-2D



W20-2C



W20-2B



W20-2G

W20-2F

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

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

WISCONSIN DEPT OF TRANSPORTATION

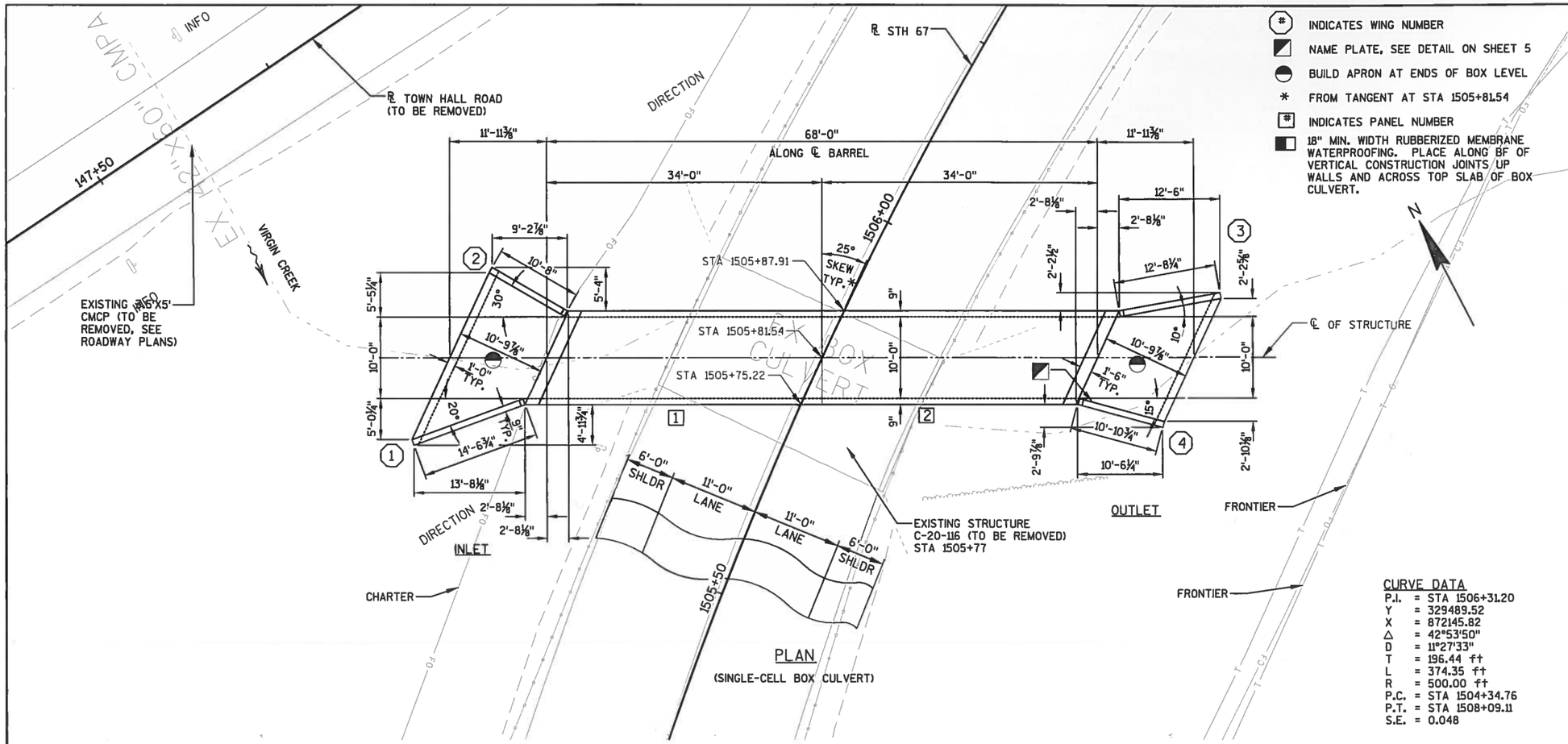
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 68	E

STATE PROJECT NUMBER

4530-06-73



PLAN

(SINGLE-CELL BOX CULVERT)

- (#) INDICATES WING NUMBER
- NAME PLATE, SEE DETAIL ON SHEET 5
- BUILD APRON AT ENDS OF BOX LEVEL
- * FROM TANGENT AT STA 1505+81.54
- [#] INDICATES PANEL NUMBER
- 18" MIN. WIDTH RUBBERIZED MEMBRANE WATERPROOFING. PLACE ALONG BF OF VERTICAL CONSTRUCTION JOINTS UP WALLS AND ACROSS TOP SLAB OF BOX CULVERT.

DESIGN DATA:

DESIGN LOADING	HL-93
INVENTORY RATING FACTOR	1.05
OPERATING RATING FACTOR	1.35
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV)	255 KIPS

THE STRUCTURE IS DESIGNED FOR AN EARTH LOAD OF 2.5 TO 3.5 FEET.

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY, CULVERT	f'c = 3500 psi
HIGH STRENGTH BAR STEEL REINFORCEMENT	fy = 60,000 psi

TRAFFIC DATA:

ADT (2016) =	1,600
ADT (2036) =	2,100
DESIGN SPEED =	60 MPH

HYDRAULIC DATA:

100 YEAR FREQUENCY

Q_{100}	115 cfs
STREAM VELOCITY	4.57 fps
HIGH WATER	EL. 1000.80
WATERWAY AREA	25 ft²
DRAINAGE AREA	2.0 mi²
OVERTOPPING FREQUENCY	N/A

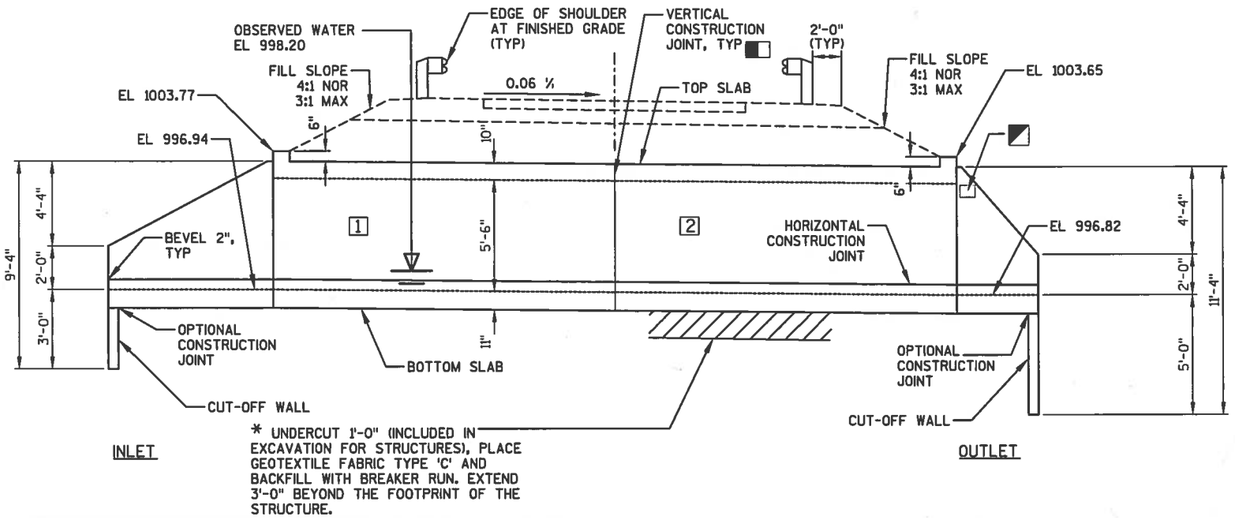
2 YEAR FREQUENCY

Q_2	29 cfs
HIGH WATER	EL. 1000.02
SCOUR CODE	8

LIST OF DRAWINGS

CURVE DATA

P.I. = STA 1506+31.20
Y = 329489.52
X = 872145.82
△ = 42°53'50"
D = 11°27'33"
T = 196.44 ft
L = 374.35 ft
R = 500.00 ft
P.C. = STA 1504+34.76
P.T. = STA 1508+09.11
S.E. = 0.048



* UNDERCUT 1'-0" (INCLUDED IN EXCAVATION FOR STRUCTURES), PLACE GEOTEXTILE FABRIC TYPE 'C' AND BACKFILL WITH BREAKER RUN. EXTEND 3'-0" BEYOND THE FOOTPRINT OF THE STRUCTURE.

ELEVATION

1010
1000
990
980

WISCONSIN
MICHELLE K. GEHRKE
E-39040
FT. ATKINSON WI
PROFESSIONAL ENGINEER
12/28/2017

NO.	DATE	REVISION	BY

Mead & Hunt
10700 West Research Drive, Suite 155
Wauwatosa, WI 53226
phone: 262-790-0232
meadhunt.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 02/07/18
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE C-20-159

STH 67 OVER VIRGIN CREEK

COUNTY	TOWN ~~CITY/VILLAGE~~
FOND DU LAC	AUBURN

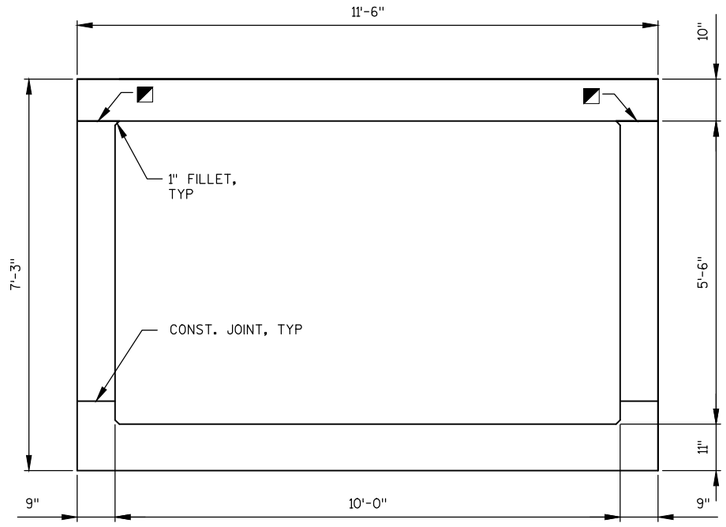
DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MKG	RCP	TAV	RCP

GENERAL PLAN

SHEET 1 OF 6
69

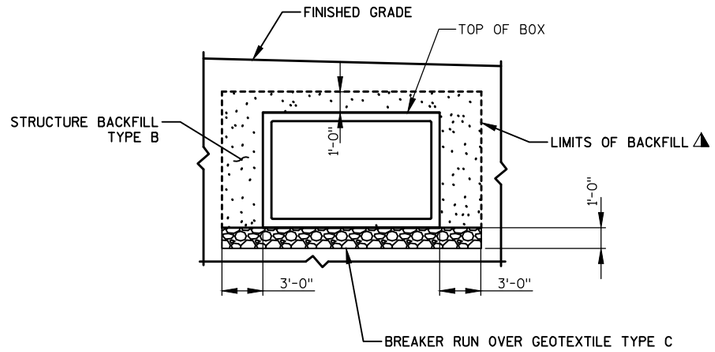
BRIDGE OFFICE CONTACT
WILLIAM DREHER, P.E.
TELEPHONE: (608) 266-8489
CONSULTANT CONTACT
MICHELLE GEHRKE, P.E.
TELEPHONE: (262)790-0232



SECTION THRU BOX

(NORMAL TO ℄ OF STRUCTURE, LOOKING DOWNSTREAM)

◪ OPTIONAL CONSTRUCTION JOINT. OMIT 1" FILLET IF OPTIONAL CONSTRUCTION JOINT IS USED.



STRUCTURE BACKFILL DETAIL

⚠ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

PROFILE GRADE LINE - ℞ STH 67

TOTAL ESTIMATED QUANTITIES

BID ITEM NO.	BID ITEMS	UNIT	TOTALS
203.0500.S	REMOVING OLD STRUCTURE OVER WATERWAY STATION 1505+77	LS	1
206.2000	EXCAVATION FOR STRUCTURES CULVERTS (C-20-159)	LS	1
210.2500	BACKFILL STRUCTURE TYPE B	TON	370
311.0110	BREAKER RUN	TON	110
504.0100	CONCRETE MASONRY CULVERTS	CY	95
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	10970
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1080
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	18
645.0105	GEOTEXTILE TYPE C	SY	216
	NON BID ITEMS		
	FILLER	SIZE	1/2" & 3/4"

BENCHMARKS

NO.	STATION	OFFSET	DESCRIPTION	ELEV.
10061	1506+73.61	16.28' LT	PK NAIL IN ASPHALT	1006.31
10062	1505+44.11	115.38' LT	PK NAIL IN ASPHALT	1002.78

STATE PROJECT NUMBER

4530-06-73

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES CULVERTS C-20-159" SHALL BE THE EXISTING GROUND LINE.

ALL VOLUME WHICH CANNOT BE PLACED BEFORE THE CULVERT CONSTRUCTION AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL WITHIN THE LENGTH OF THE CULVERT INCLUDING APRON WING WALLS.

THE CONCRETE IN CUTOFF WALLS MAY BE PLACED UNDERWATER IF THE EXCAVATION CANNOT BE DEWATERED.

THE ALTERNATIVE CUT OFF WALL MAY BE USED IN LIEU OF THE CAST-IN-PLACE CONCRETE CUT OFF WALLS. PAYMENT SHALL BE BASED ON CONCRETE CUT OFF WALLS.

ALL STATIONS AND ELEVATIONS ARE IN FEET.

ELEVATIONS ON THIS PLAN ARE REFERENCED TO THE NATIONAL AMERICAN VERTICAL DATUM OF 1988, NAVD88 (2007) ADJUSTMENT.

RUBBERIZED MEMBRANE WATERPROOFING AND FILLER TO EXTEND ALONG JOINT BETWEEN WING AND BOX FROM HORIZONTAL CONSTRUCTION JOINT TO TOP OF WING.

18" MIN. WIDTH RUBBERIZED MEMBRANE WATERPROOFING TO BE PLACED ALONG BACKFACE OF VERTICAL CONSTRUCTION JOINTS ALONG WALLS AND ACROSS TOP SLAB OF BOX CULVERT.

THE CONTRACTOR MAY FURNISH A PRECAST CONCRETE BOX CULVERT IN LIEU OF THE CAST-IN-PLACE BOX CULVERT WITH THE ACCEPTANCE OF THE SHOP DRAWINGS BY THE STRUCTURES DESIGN SECTION. THE PRECAST CONCRETE BOX CULVERT SHALL CONFORM TO PRECAST DETAILS IN CHAPTER 36 STANDARDS OF THE CURRENT WISCONSIN DOT BRIDGE MANUAL. PAYMENT FOR THE PRECAST CULVERT SHALL BE BASED ON THE QUANTITIES AND PRICES BID FOR THE ITEMS LISTED IN THE "TOTAL ESTIMATED QUANTITIES".

THE EXISTING STRUCTURE (C-20-116) TO BE REMOVED IS A SINGLE - CELL CONCRETE BOX CULVERT, 12-FT WIDE BY 7-FT HIGH, BUILT IN 1950.

UNDER CUT 1'-0", EXCAVATION FOR UNDER CUT TO BE INCLUDED IN EXCAVATION FOR STRUCTURES. PLACE "GEOTEXTILE TYPE C" AND BACKFILL WITH "BREAKER RUN".

IN LIEU OF USING BREAKER RUN FOR THE BOX CONSTRUCTION PLATFORM. THE CONTRACTOR MAY ELECT TO SUBSTITUTE #1 OR #2 CONCRETE COARSE AGGREGATE, SELECT CRUSHED MATERIAL OR OTHER GRANULAR MATERIAL AS APPROVED BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR BASE STABILITY WITH ANY SUBSTITUTED MATERIAL. THE REGION GEOTECHNICAL ENGINEER MAY BE CONTACTED TO DETERMINE IF "OTHER GRANULAR MATERIAL" IS ACCEPTABLE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-20-159

DRAWN BY TAV | PLANS CK'D. RCP/MJB

TYPICAL SECTION, GENERAL NOTES & QUANTITIES

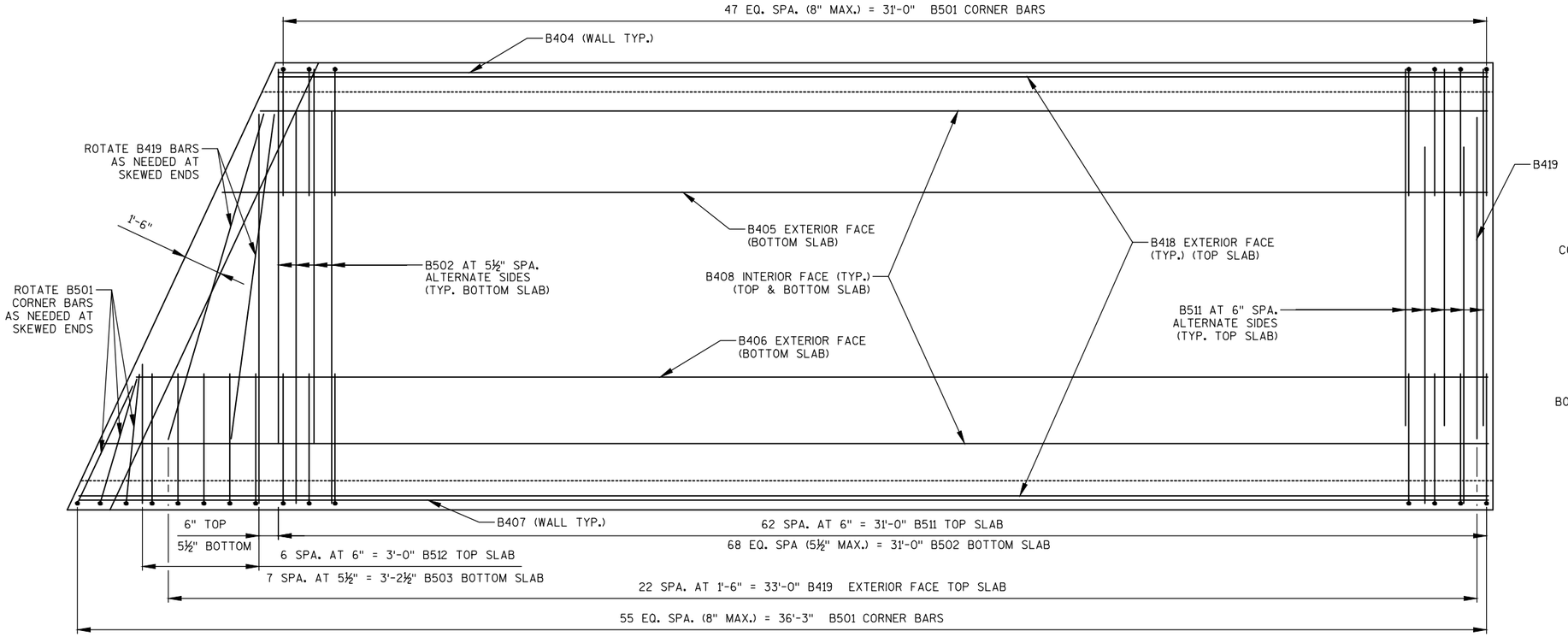
SHEET 2 OF 6
70

8

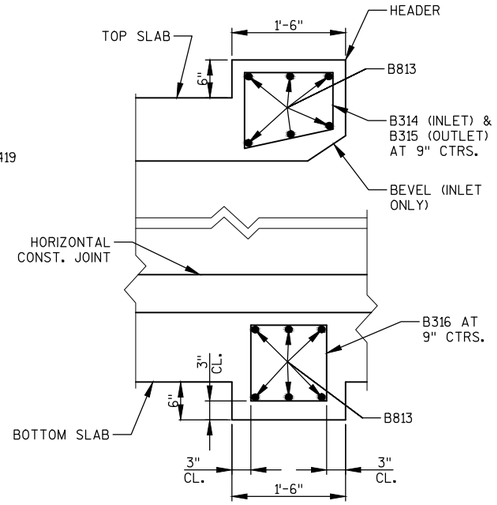
8

STATE PROJECT NUMBER

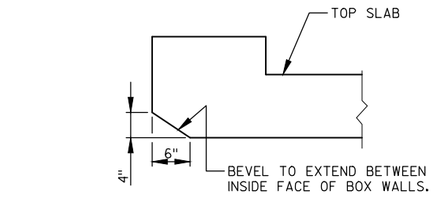
4530-06-73



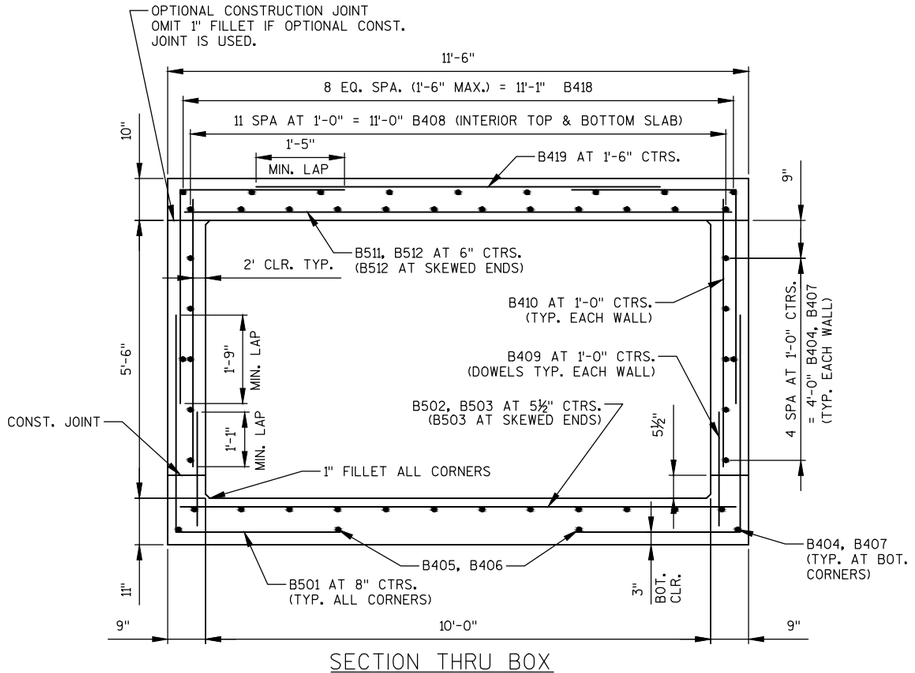
PLAN VIEW TYPICAL PANEL



TYPICAL SECTION THRU CULVERT HEADERS



SECTION THRU INLET HEADER



SECTION THRU BOX

BILL OF BARS
BARREL

COATED= 0 LBS.
UNCOATED= 10230 LBS.

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH FT - IN	BENT	BAR SERIES	LOCATION	
B501		416	7 - 4	X		CORNER BARS - TOP & BOTTOM	
B502		138	9 - 4			INT. BOTTOM SLAB	TRANS
B503		16	6 - 9		X	INT. BOTTOM SLAB AT SKEWED ENDS	TRANS
B404		15	31 - 1			WALL & CORNER	LONG
B405		2	32 - 6			EXT. TOP & BOTTOM SLAB	LONG
B406		2	34 - 10			EXT. TOP & BOTTOM SLAB	LONG
B407		15	36 - 3			WALL & CORNER	LONG
B408		48	33 - 8		X	INT. TOP & BOTTOM SLAB	LONG
B409		140	2 - 3			WALL DOWELS	VERT
B410		140	5 - 6			WALL	VERT
B511		126	9 - 4			INT. TOP SLAB	TRANS
B512		14	6 - 11		X	INT. TOP SLAB AT SKEWED ENDS	TRANS
B813		24	12 - 3			HEADER	TRANS
B314		16	4 - 8	X		HEADER STIRRUPS - INLET TOP	VERT
B315		16	4 - 11	X		HEADER STIRRUPS - OUTLET TOP	VERT
B316		32	4 - 7	X		HEADER STIRRUPS - BOTTOM	VERT
B517		36	4 - 0			CONST. JOINT DOWELS	HORIZ
B418		18	33 - 8		X	EXT. TOP SLAB	LONG
B419		46	7 - 10			EXT. TOP SLAB	TRANS

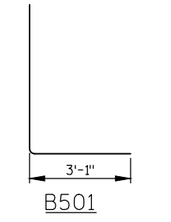
BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.

THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

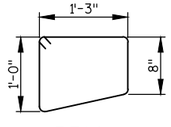
SEE BAR SERIES TABLE FOR ACTUAL LENGTHS. LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD BE USED FOR BAR WEIGHT CALCULATIONS.

BAR SERIES TABLE

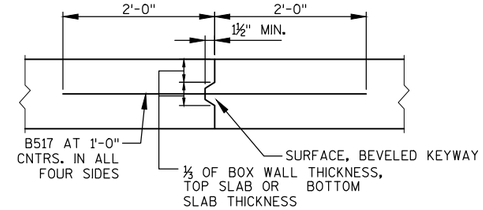
MARK	NO. REQUIRED	LENGTH
B503	2 SERIES OF 8	3'-4" TO 10'-2"
B408	4 SERIES OF 12	31'-2" TO 36'-1"
B512	2 SERIES OF 7	3'-8" TO 10'-1"
B418	2 SERIES OF 9	31'-1" TO 36'-3"



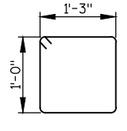
B501



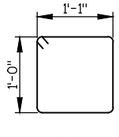
B314



VERTICAL CONSTRUCTION JOINT



B315



B316

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-20-159

DRAWN BY MKG | PLANS CK'D. RCP

BOX DETAILS

SHEET 3 OF 6
71

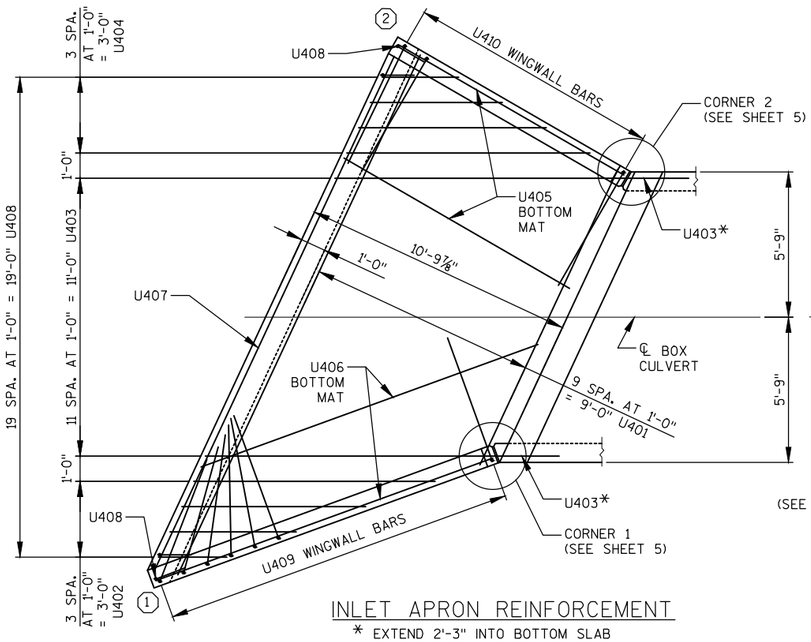
8

8

FILE NAME : X:±3230500±113975.04±TECH±CAD±45300670±SHEETSPLAN±C-20-159±080104_BOX.DWG DATE : 12/13/2017 PLOT BY : 1:1 PLOT SCALE : 1" = 1'

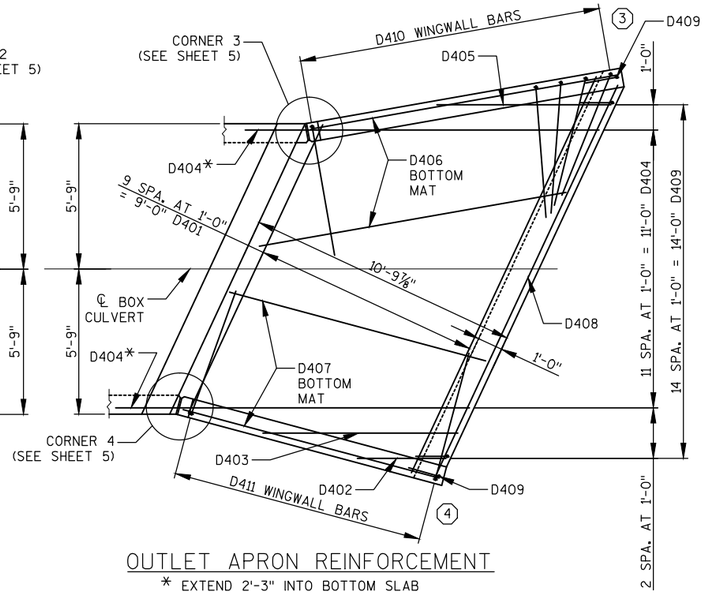
STATE PROJECT NUMBER

4530-06-73



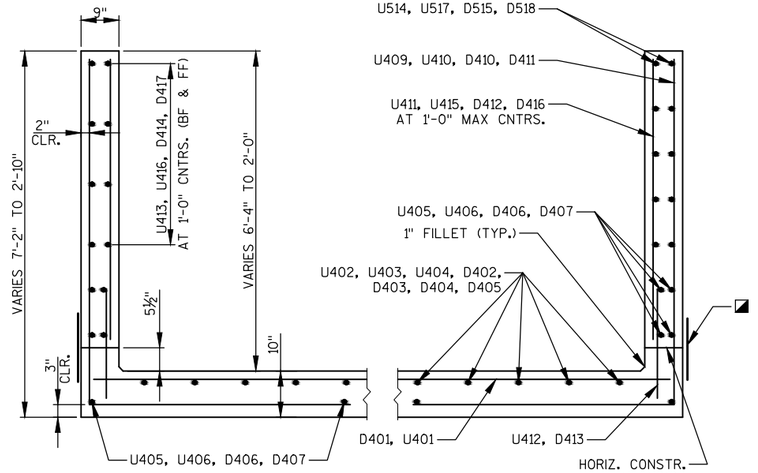
INLET APRON REINFORCEMENT

* EXTEND 2'-3" INTO BOTTOM SLAB



OUTLET APRON REINFORCEMENT

* EXTEND 2'-3" INTO BOTTOM SLAB



SECTION THRU WINGWALLS

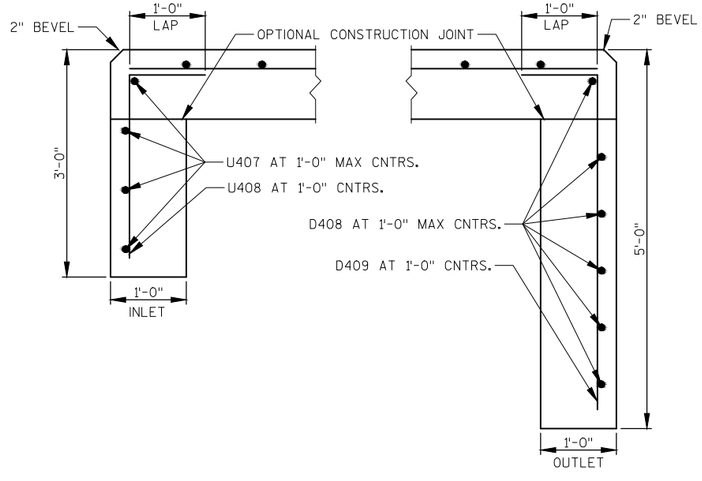
◪ 18" MIN. WIDTH RUBBERIZED MEMBRANE WATERPROOFING ALONG HORIZ. CONSTR. JT. IN WING. (TYP.)

WING 1

WING 2

WING 3

WING 4



SECTION THRU CUT-OFF WALLS

LEGEND

BF - BACK FACE

FF - FRONT FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-20-159

DRAWN BY MKG | PLANS CK'D. RCP

APRON & WINGWALL DETAILS

SHEET 4 OF 6
72

8

8

FILE NAME : X:±3230500±113975.04±TECH±CAD±45300670±SHEETSPLAN±C-20-159±080105_REBOND.DWG

PLOT DATE : 11/30/2017

PLOT BY : 1:1

PLOT SCALE : 1" = 1'

STATE PROJECT NUMBER

4530-06-73

BILL OF BARS
INLET APRON

COATED= 560 LBS.
UNCOATED= 380 LBS.

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH FT - IN	BENT	BAR SERIES	LOCATION	
U401		10	17 - 10		X	APRON	TRANS
U402		4	6 - 1		X	APRON AT WING 1	LONG
U403		12	14 - 0			APRON	LONG
U404		4	6 - 4		X	APRON AT WING 2	LONG
U405	6		14 - 2			APRON BOTTOM & WING 1	LONG
U406	6		10 - 4			APRON BOTTOM & WING 2	LONG
U407		4	22 - 6			CUT-OFF WALL	LONG
U408		22	3 - 5	X		CUT-OFF WALL	VERT
U409	18		10 - 7	X	X	WING 1 - BF	VERT
U410	14		10 - 7	X	X	WING 2 - BF	VERT
U411	15		3 - 7		X	WING 1 - FF	VERT
U412	28		2 - 7			WINGS 1 & 2 - DOWEL	VERT
U413	8		6 - 11		X	WING 1 - FF & BF	HORIZ
U514	2		14 - 10			WING 1 - TOP	HORIZ
U415	11		3 - 7		X	WING 2 - FF	VERT
U416	8		4 - 11		X	WING 2 - FF & BF	HORIZ
U517	2		11 - 1			WING 2 - TOP	HORIZ

BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.

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

SEE BAR SERIES TABLE FOR ACTUAL LENGTHS. LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD BE USED FOR BAR WEIGHT CALCULATIONS.

BAR SERIES TABLE

MARK	NO. REQUIRED	LENGTH
U401	1 SERIES OF 10	12'-11" TO 22'-8"
U402	1 SERIES OF 4	2'-8" TO 9'-6"
U404	1 SERIES OF 4	3'-0" TO 9'-7"
U409	1 SERIES OF 18	8'-5" TO 12'-9"
U410	1 SERIES OF 14	8'-5" TO 12'-9"
U411	1 SERIES OF 15	1'-7" TO 5'-6"
U413	2 SERIES OF 4	2'-1" TO 11'-9"
U415	1 SERIES OF 11	1'-8" TO 5'-6"
U416	2 SERIES OF 4	1'-6" TO 8'-4"

BILL OF BARS
OUTLET APRON

COATED= 520 LBS.
UNCOATED= 360 LBS.

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH FT - IN	BENT	BAR SERIES	LOCATION	
D401		10	14 - 11		X	APRON	TRANS
D402		1	3 - 6			APRON AT WING 4	LONG
D403		1	7 - 8			APRON AT WING 4	LONG
D404		12	14 - 0			APRONG	LONG
D405		1	6 - 10			APRON AT WING 3	LONG
D406	6		12 - 4			APRON BOTTOM & WING 3	LONG
D407	6		10 - 6			APRON BOTTOM & WING 4	LONG
D408		6	17 - 2			CUT-OFF WALL	LONG
D409		17	5 - 5	X		CUT-OFF WALL	VERT
D410	16		10 - 7	X	X	WING 3 - BF	VERT
D411	14		10 - 7	X	X	WING 4 - BF	VERT
D412	13		3 - 7			WING 3 - FF	VERT
D413	26		2 - 7			WINGS 3 & 4 - DOWEL	VERT
D414	8		6 - 1		X	WING 3 - FF & BF	HORIZ
D515	2		13 - 0			WING 3 - TOP	HORIZ
D416	11		3 - 7		X	WING 4 - FF	VERT
D417	8		5 - 2		X	WING 4 - FF & BF	HORIZ
D518	2		11 - 4			WING 4 - TOP	HORIZ

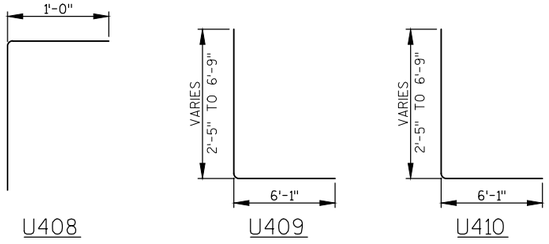
BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.

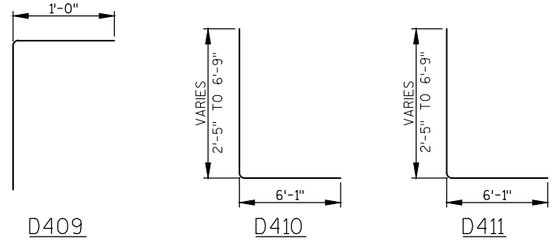
THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

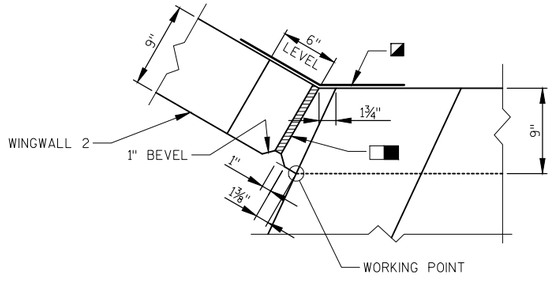
SEE BAR SERIES TABLE FOR ACTUAL LENGTHS. LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD BE USED FOR BAR WEIGHT CALCULATIONS.

BAR SERIES TABLE

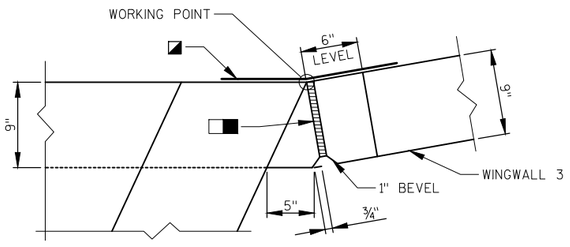
MARK	NO. REQUIRED	LENGTH
D401	1 SERIES OF 10	12'-7" TO 17'-3"
D410	1 SERIES OF 16	8'-5" TO 12'-9"
D411	1 SERIES OF 14	8'-5" TO 12'-9"
D412	1 SERIES OF 13	1'-7" TO 5'-6"
D414	2 SERIES OF 4	1'-10" TO 10'-3"
D416	1 SERIES OF 11	1'-8" TO 5'-6"
D417	2 SERIES OF 4	1'-7" TO 8'-9"



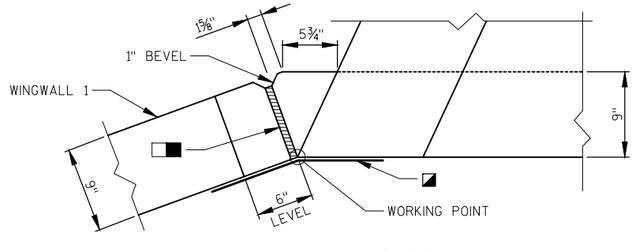




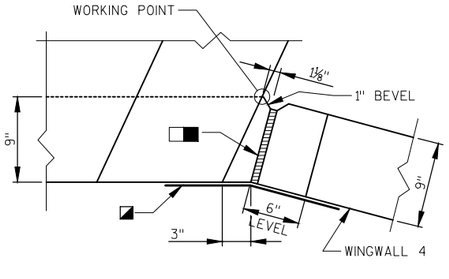
CORNER 2



CORNER 3



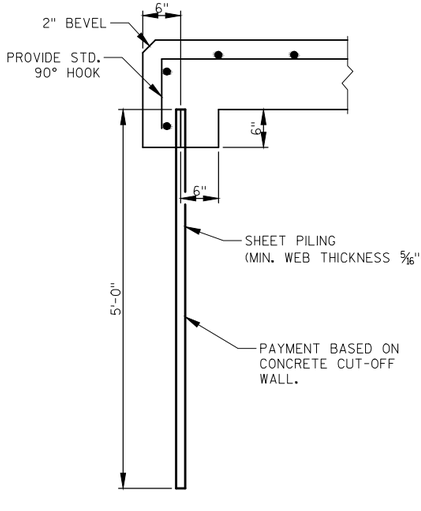
CORNER 1



CORNER 4

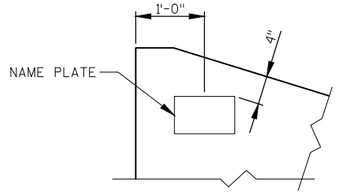
■ R.M.W. EXTEND FROM HORIZ. CONST. JT. TO TOP OF WALL. (FLUSH WITH FACE OF CONCRETE)

■ ¾" FILLER TO EXTEND FROM HORIZONTAL CONSTRUCTION JOINT TO TOP OF WING.



ALTERNATE CUT-OFF WALL

THE ABOVE ALT. MAY BE USED IN LIEU OF THE CAST-IN-PLACE CONC. CUT-OFF WALLS. PAYMENT WILL BE BASED ON THE CONC. CUT-OFF WALLS.



NAME PLATE DETAIL
WING 4

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-20-159

DRAWN BY MKG | PLANS CK'D. RCP

APRON & WINGWALL DETAILS

SHEET 5 OF 6
73

8

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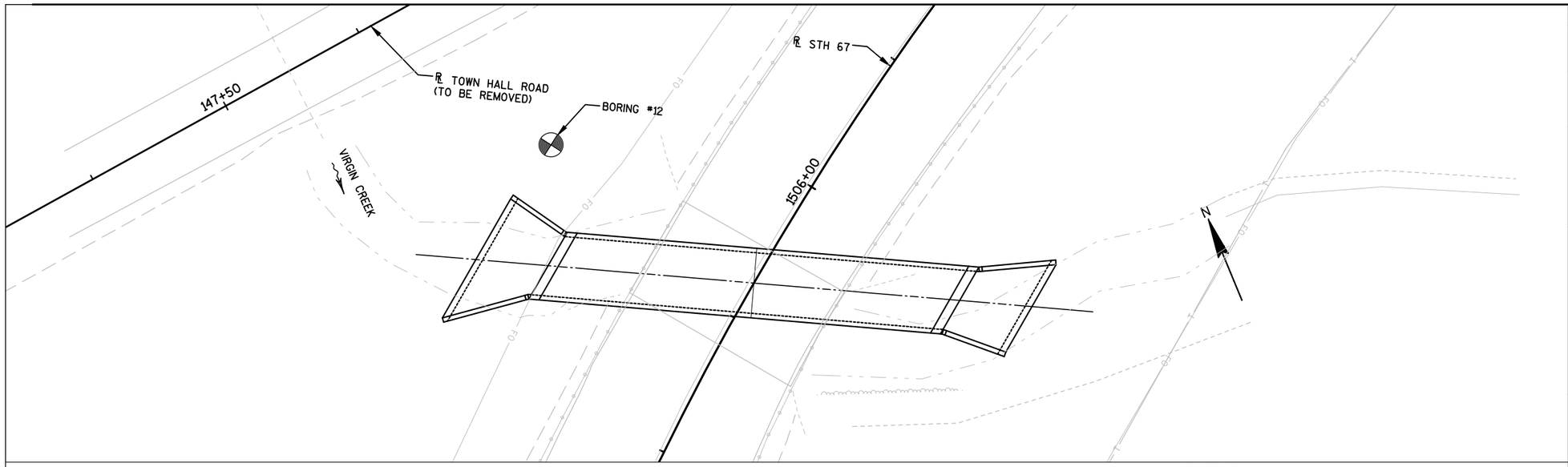
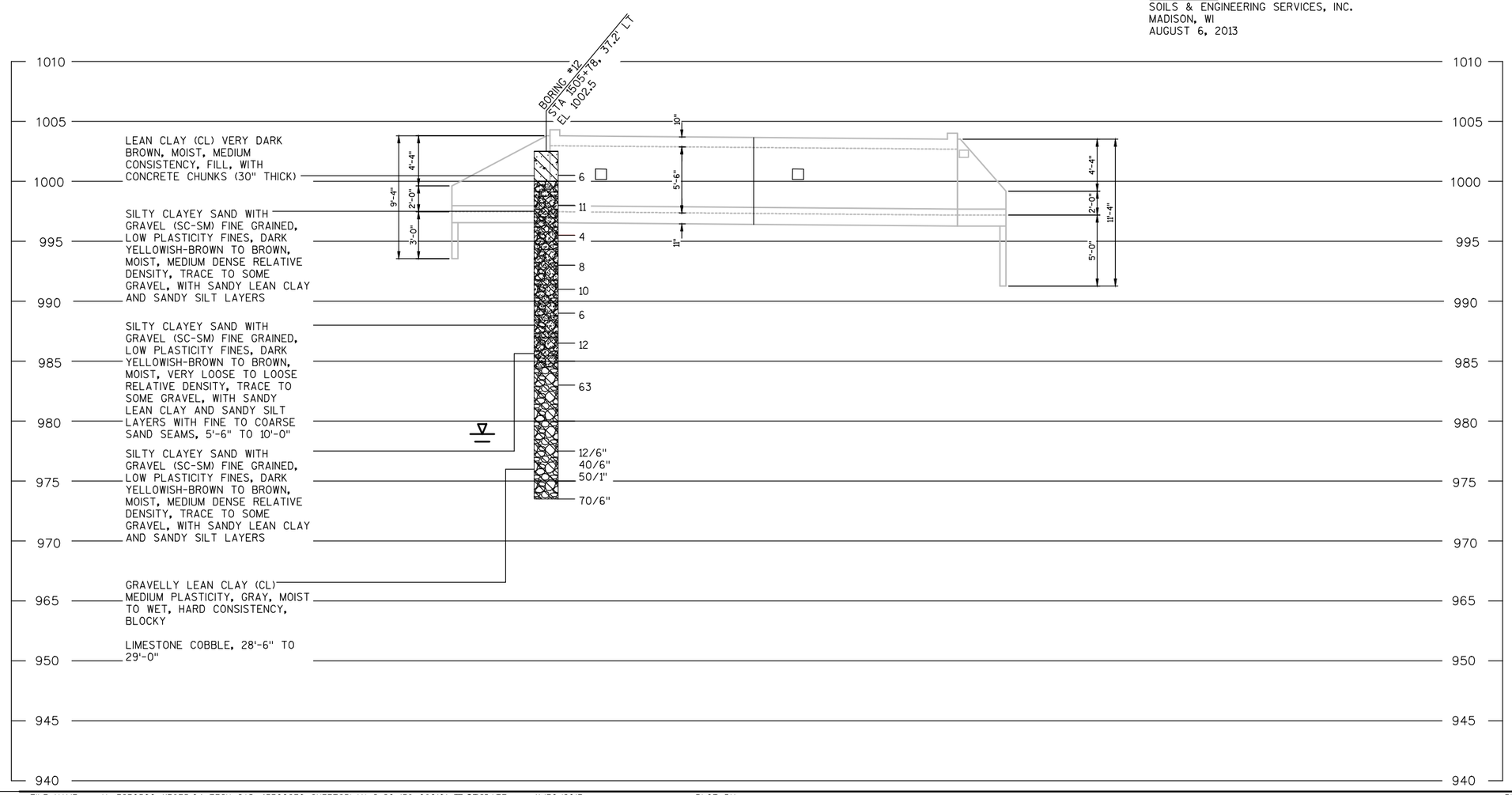


BORINGS BY:
SOILS & ENGINEERING SERVICES, INC.
MADISON, WI
AUGUST 6, 2013



STATE PROJECT NUMBER

4530-06-73

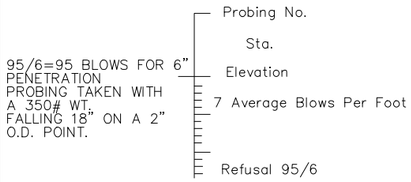
ABBREVIATIONS

F — Fine M — Medium C — Coarse
Ws — Weathered So — Sound

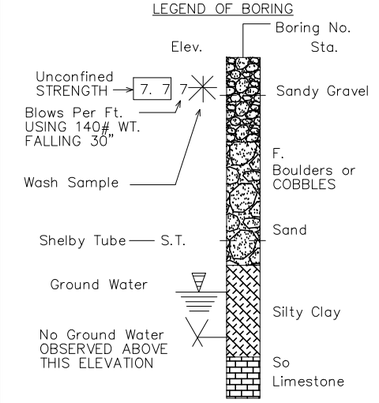
MATERIAL SYMBOLS

Asphalt, Silt, Sand, Concrete, Organic Soil, Air, Gravel, Clay, Water

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-20-159

DRAWN BY TAV | PLANS CK'D. GAR

SUBSURFACE EXPLORATION

SH 74 OF 6

8

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EARTHWORK TABULATION - STH 67 (Box Culvert) EXPANSION FACTOR = 1.3

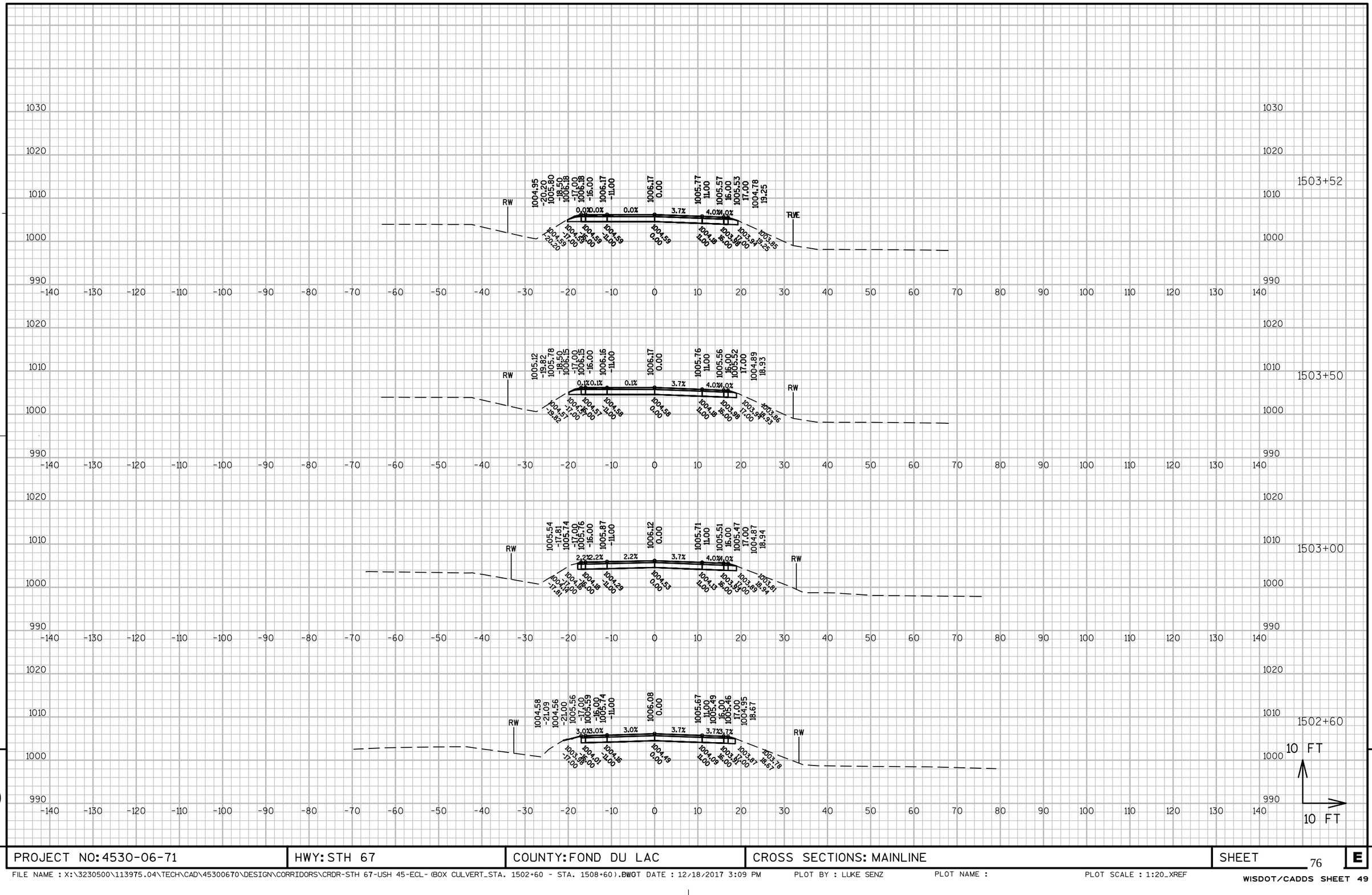
STATION	END AREA CUT (SF)	END AREA FILL (SF)	INCREMENTAL VOLUME CUT (CY)	INCREMENTAL VOLUME EXP FILL (CY)	CUMMULATIVE VOLUME CUT (CY)	CUMMULATIVE VOLUME EXP FILL (CY)	MASS ORDINATE (CY)
1502+60.00	57.26	0.00	0	0	0	0	0
1503+00.00	59.70	0.00	87	0	87	0	87
1503+50.00	58.01	0.00	109	0	196	0	196
1503+52.00	57.66	0.00	4	0	200	0	200
1504+00.00	51.35	44.06	97	51	297	51	246
1504+50.00	50.54	69.74	94	137	391	188	203
1504+71.00	52.97	124.71	40	98	431	286	145
1504+77.00	53.22	125.57	12	36	443	322	121
1504+95.00	51.59	133.91	35	112	478	435	43
1505+00.00	49.15	129.99	9	32	487	467	21
1505+03.00	46.97	127.51	5	19	493	485	8
1505+20.00	42.95	129.47	28	105	521	590	-69
1505+29.00	43.19	107.85	14	51	535	642	-106
1505+50.00	146.91	102.54	74	106	609	748	-139
1505+75.00	138.76	188.00	132	175	742	923	-181
1506+00.00	147.58	100.96	133	174	874	1,097	-223
1506+22.00	149.69	58.35	121	84	995	1,181	-186
1506+25.00	149.49	54.54	17	8	1,012	1,189	-177
1506+34.00	148.44	45.66	50	22	1,062	1,211	-150
1506+50.00	127.07	33.43	82	30	1,143	1,242	-98
1506+51.00	124.87	32.10	5	2	1,148	1,243	-95
1506+59.00	114.92	38.80	36	14	1,183	1,257	-73
1506+77.00	92.89	35.43	69	32	1,253	1,289	-36
1506+83.00	85.71	35.78	20	10	1,273	1,299	-27
1507+00.00	77.09	38.52	51	30	1,324	1,330	-6
1507+03.00	74.64	38.35	8	6	1,332	1,335	-3
1507+50.00	53.67	0.00	112	43	1,444	1,379	65
1507+67.00	49.23	0.00	32	0	1,476	1,379	98
1507+70.00	48.81	0.00	5	0	1,482	1,379	103
1508+00.00	54.51	0.00	57	0	1,539	1,379	161
1508+50.00	56.56	0.00	103	0	1,642	1,379	263
1508+60.00	59.27	0.00	21	0	1,663	1,379	285
TOTAL			1,663	1,379			

9

9

PROJECT NO: 4530-06-73 | HWY: STH 67 | COUNTY: FOND DU LAC | EARTHWORK | SHEET: 75 | E

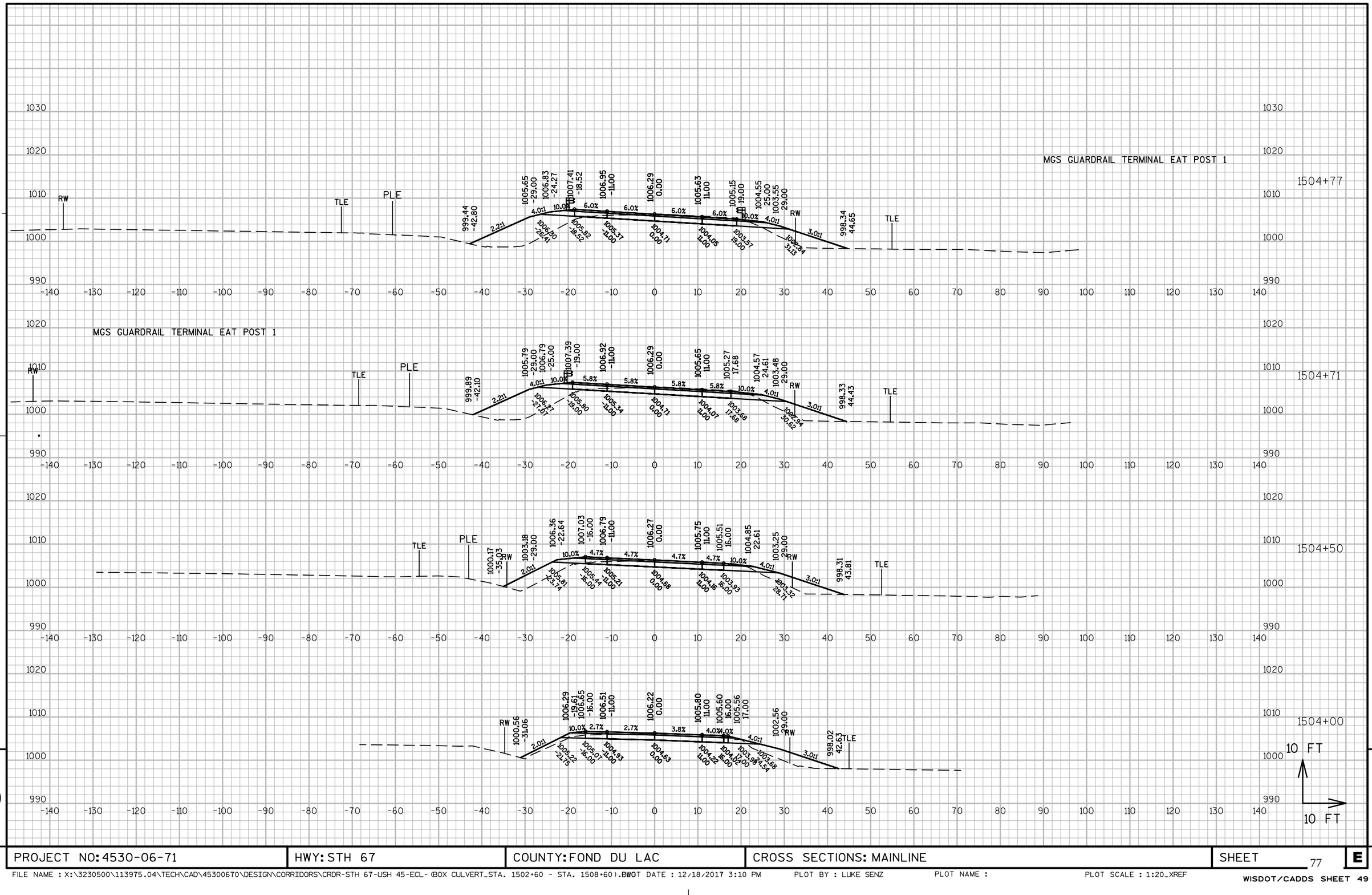
FILE NAME : N:\PDS\...\030200_mq.pptx PLOT DATE : June 14, 1911 PLOT BY : A.R.H. PLOT NAME : PLOT SCALE : 1:1



PROJECT NO: 4530-06-71	HWY: STH 67	COUNTY: FOND DU LAC	CROSS SECTIONS: MAINLINE	SHEET 76	E

FILE NAME : X:\3230500\113975.04\TECH\CAD\4530670\DESIGN\CORRIDORS\CRDR-STH 67-USH 45-ECL-(BOX CULVERT_STA. 1502+60 - STA. 1508+60).DWG DATE : 12/18/2017 3:09 PM PLOT BY : LUKE SENZ PLOT NAME : PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



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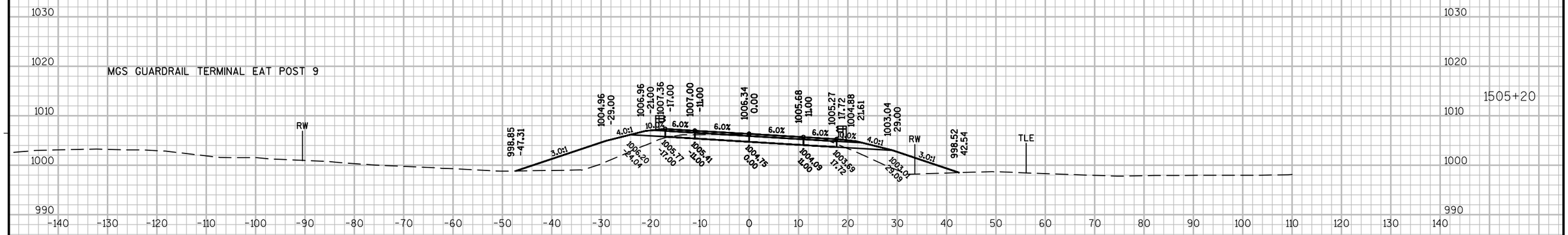
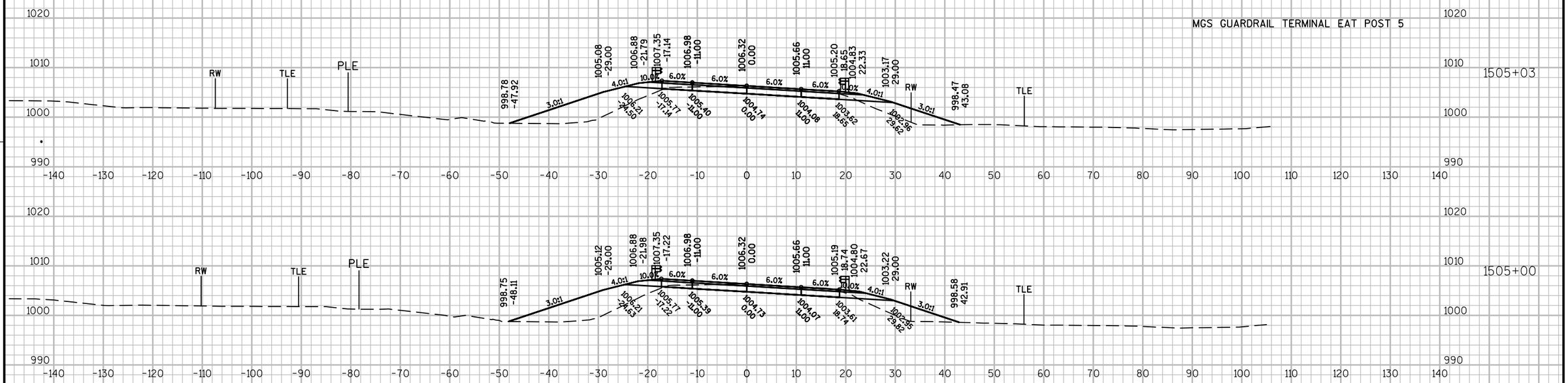
9

PROJECT NO: 4530-06-71	HWY: STH 67	COUNTY: FOND DU LAC	CROSS SECTIONS: MAINLINE	SHEET 77	E

MGS GUARDRAIL TERMINAL EAT POST 9

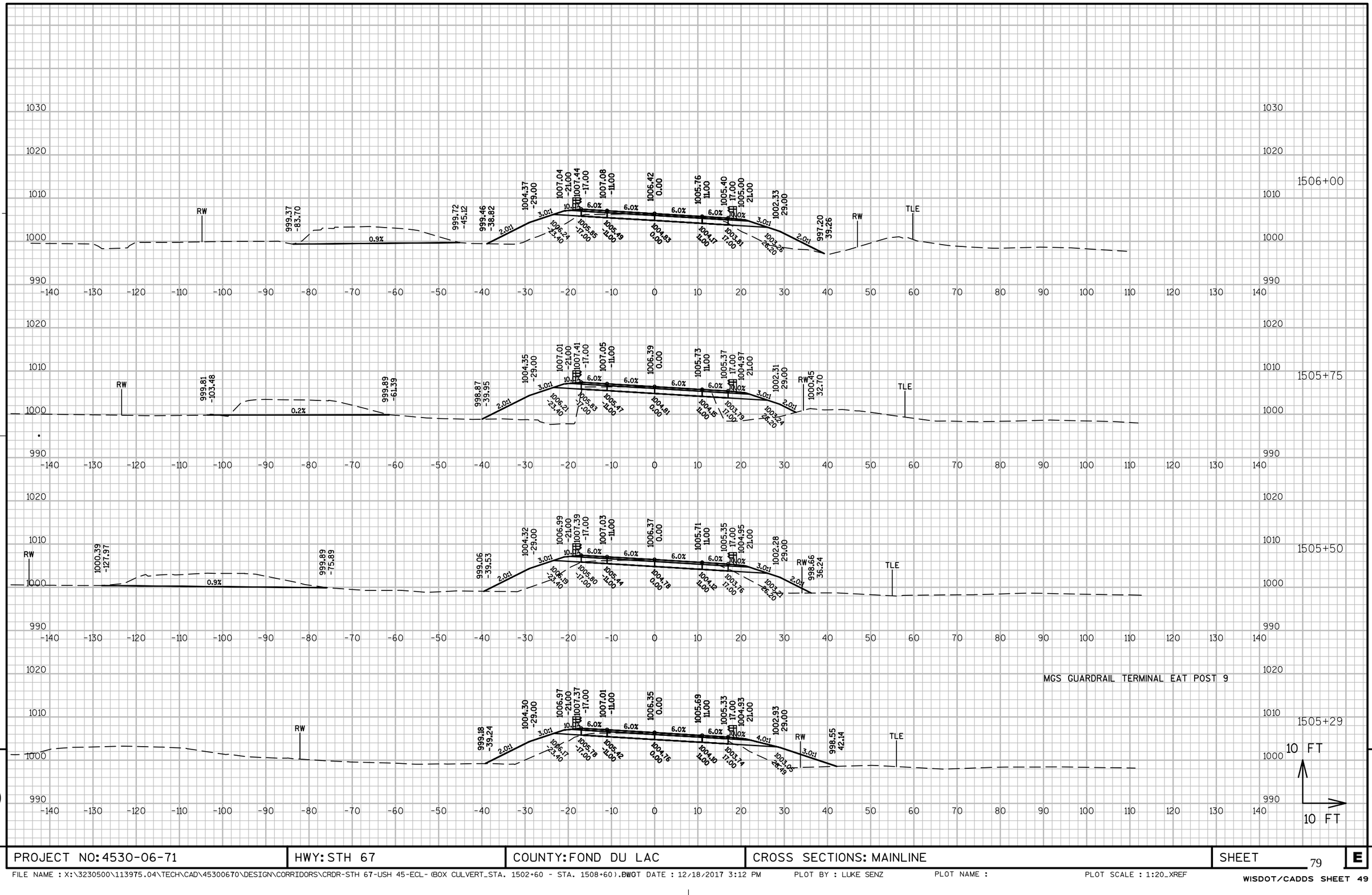


MGS GUARDRAIL TERMINAL EAT POST 5



9 9

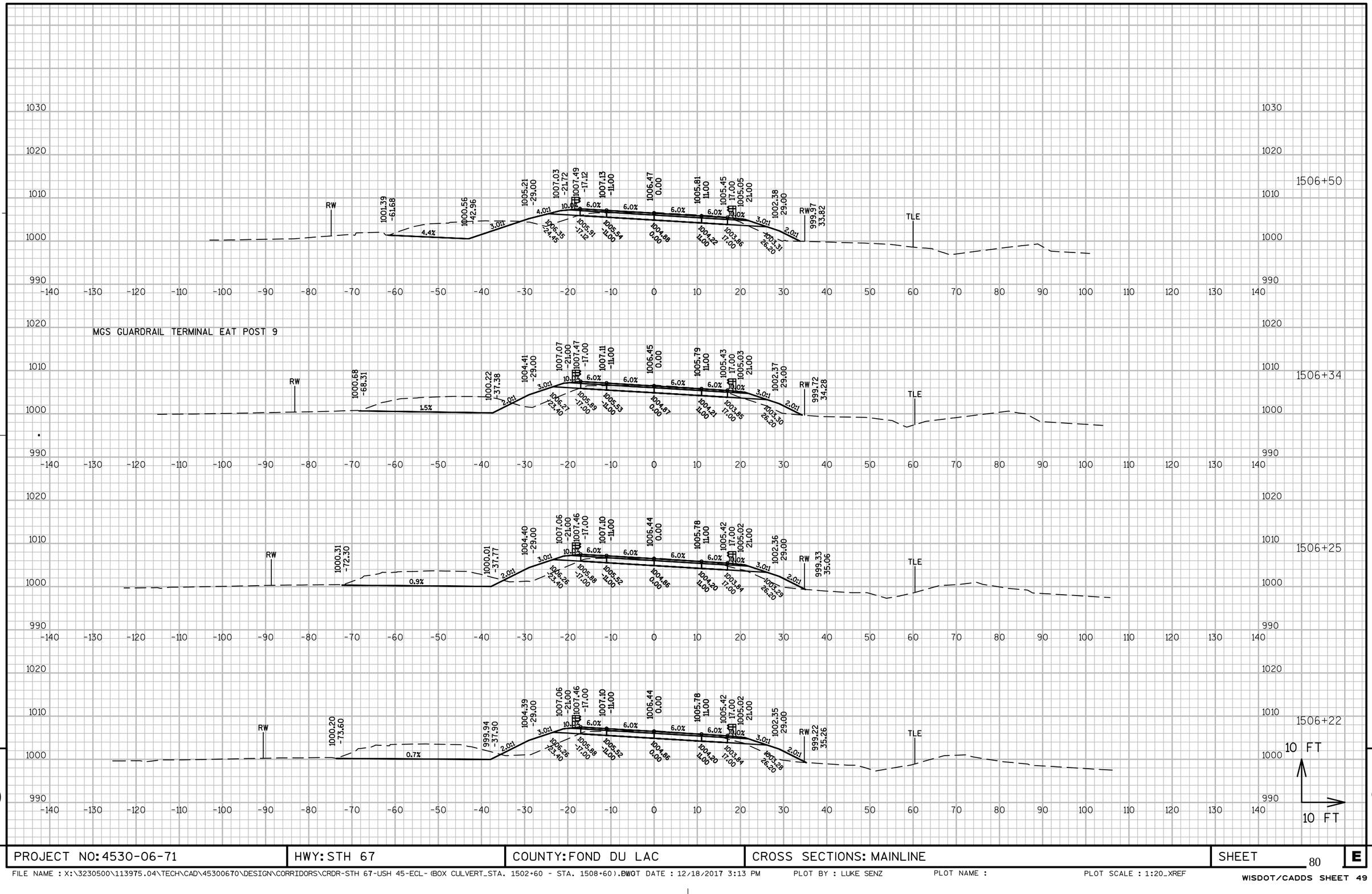
PROJECT NO: 4530-06-71	HWY: STH 67	COUNTY: FOND DU LAC	CROSS SECTIONS: MAINLINE	SHEET 78	E



PROJECT NO: 4530-06-71	HWY: STH 67	COUNTY: FOND DU LAC	CROSS SECTIONS: MAINLINE	SHEET 79	E

FILE NAME : X:\3230500\113975.04\TECH\CAD\4530670\DESIGN\CORRIDORS\CRDR-STH 67-USH 45-ECL- (BOX CULVERT_STA. 1502+60 - STA. 1508+60).DWG DATE : 12/18/2017 3:12 PM PLOT BY : LUKE SENZ PLOT NAME : PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 4530-06-71	HWY: STH 67	COUNTY: FOND DU LAC	CROSS SECTIONS: MAINLINE	SHEET 80	E

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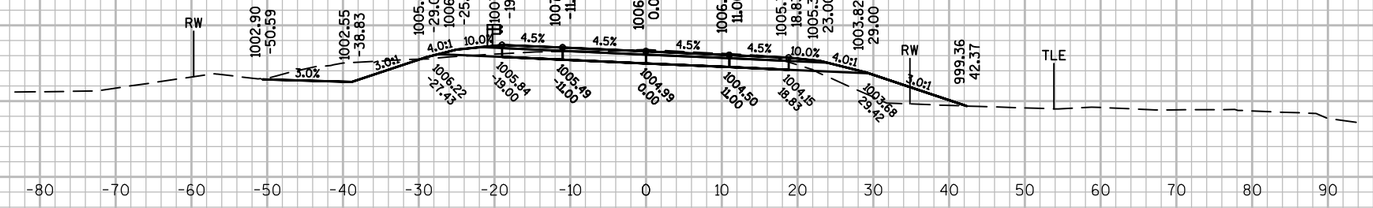
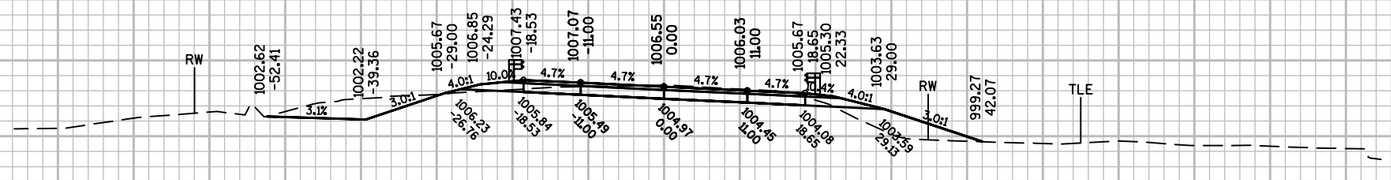
WISDOT/CADDS SHEET 49

MGS GUARDRAIL TERMINAL EAT POST 1



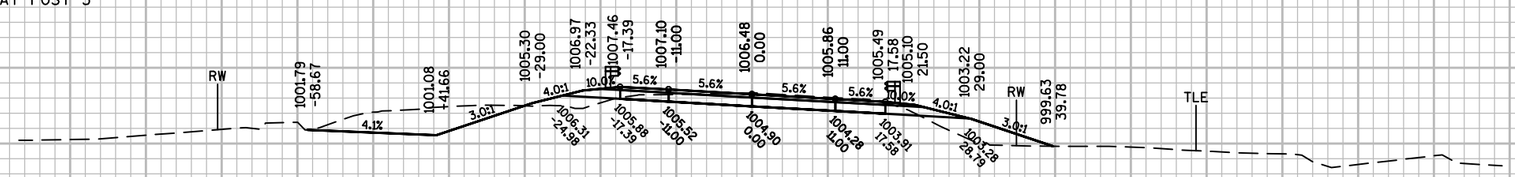
1506+83

MGS GUARDRAIL TERMINAL EAT POST 5



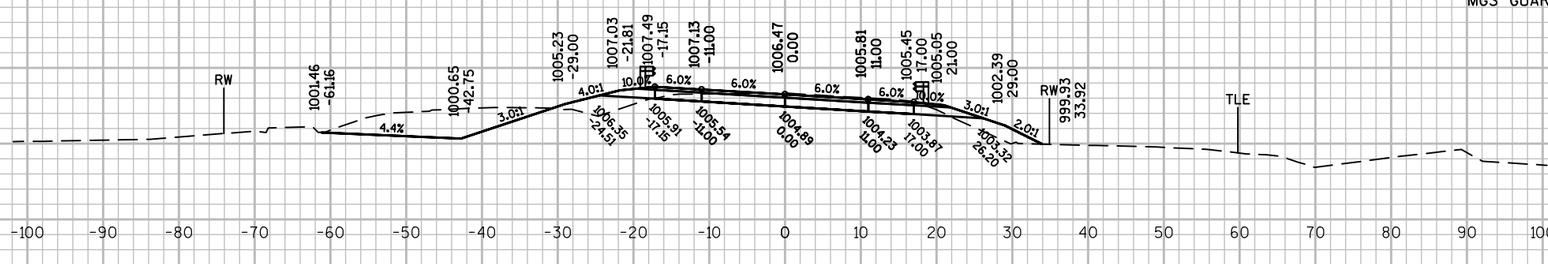
1506+77

MGS GUARDRAIL TERMINAL EAT POST 5



1506+59

MGS GUARDRAIL TERMINAL EAT POST 9



1506+51

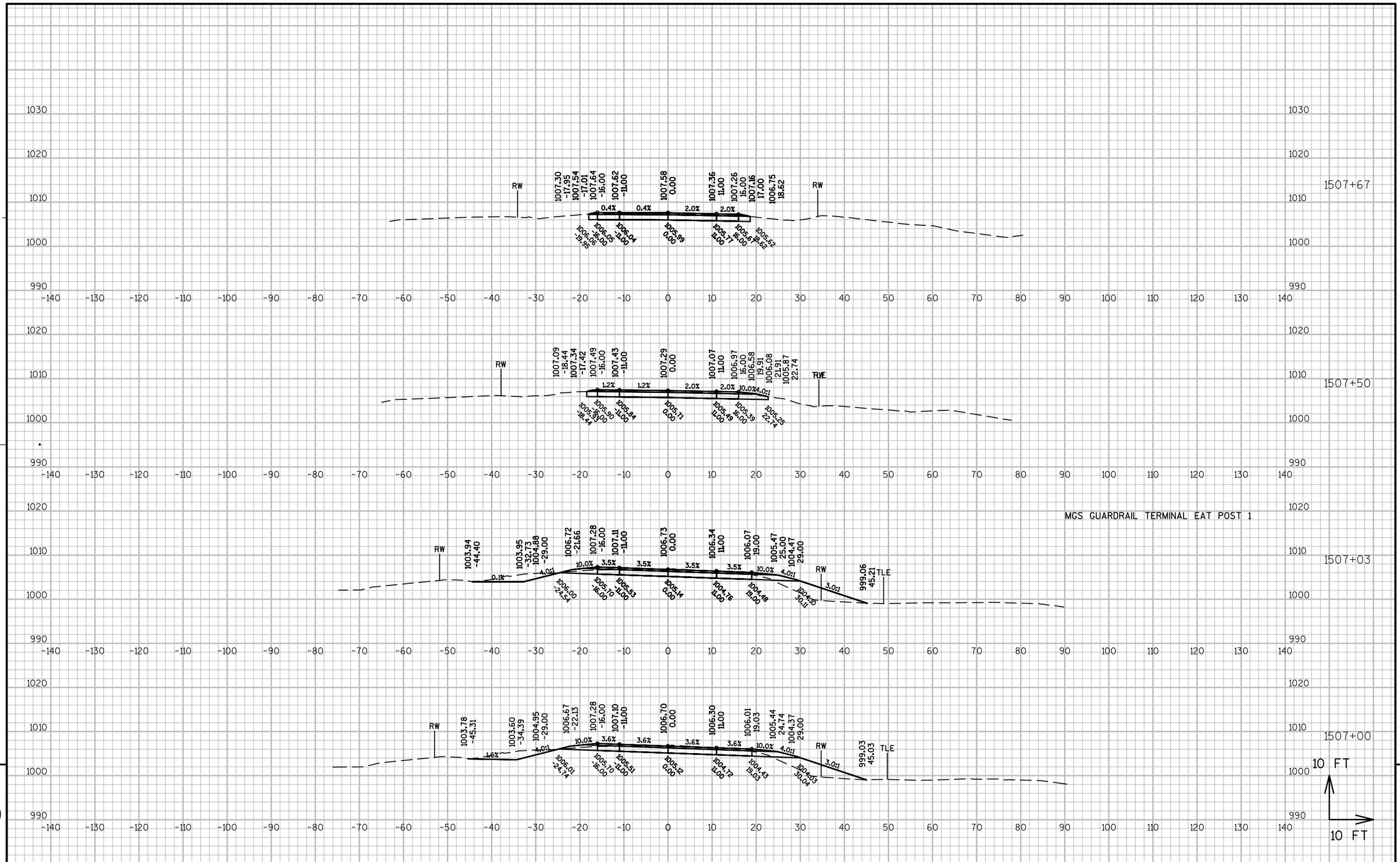
10 FT

10 FT

9

9

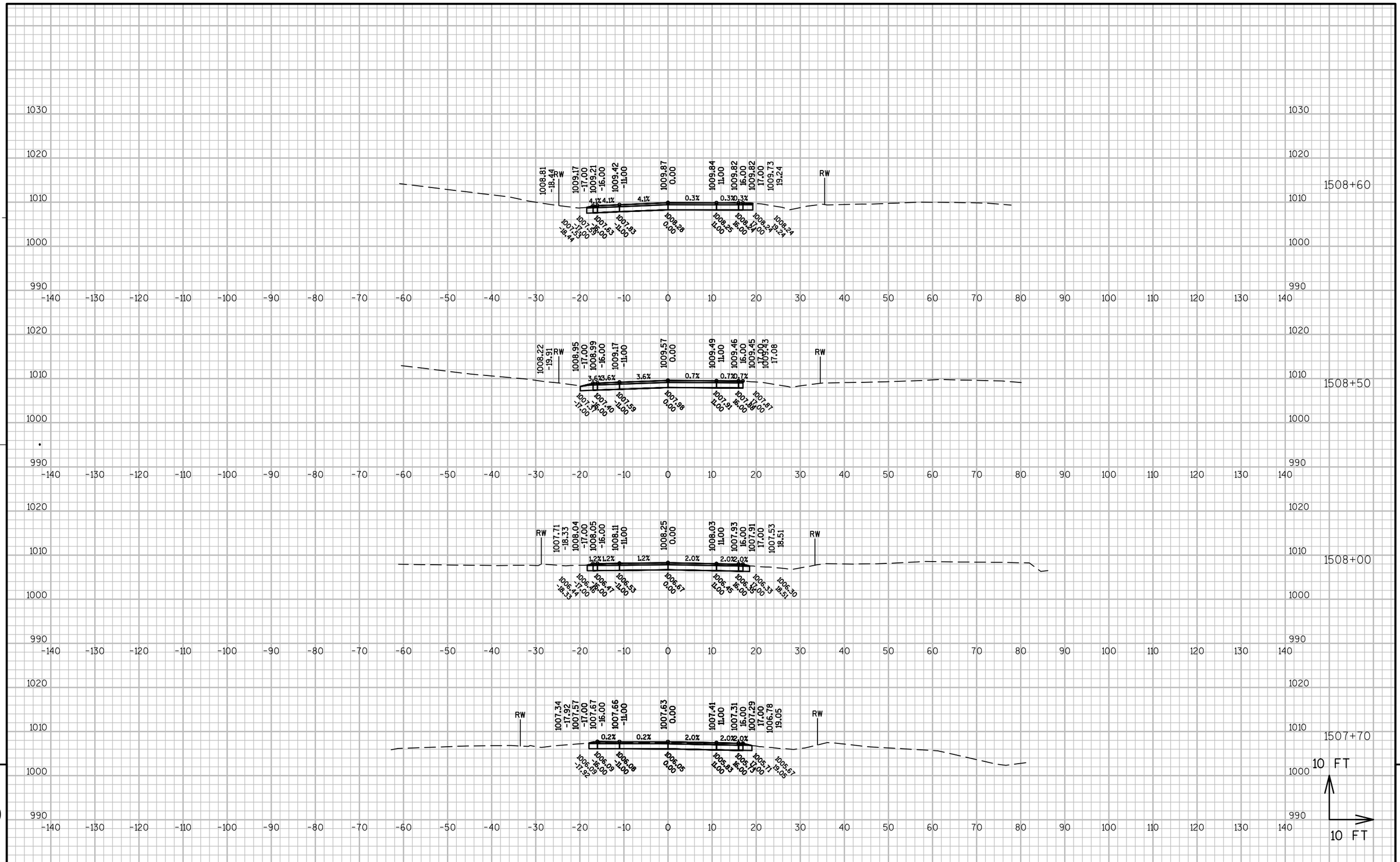
PROJECT NO: 4530-06-71	HWY: STH 67	COUNTY: FOND DU LAC	CROSS SECTIONS: MAINLINE	SHEET 81	E



PROJECT NO: 4530-06-71	HWY: STH 67	COUNTY: FOND DU LAC	CROSS SECTIONS: MAINLINE	SHEET 82	E

FILE NAME : X:\3230500\113975.04\TECH\CAD\4530670\DESIGN\CORRIDORS\CRDR-STH 67-USH 45-ECL-(BOX CULVERT_STA. 1502+60 - STA. 1508+60).DWG DATE : 12/18/2017 3:15 PM PLOT BY : LUKE SENZ PLOT NAME : PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 4530-06-71	HWY: STH 67	COUNTY: FOND DU LAC	CROSS SECTIONS: MAINLINE	SHEET 83	E

FILE NAME : X:\3230500\113975.04\TECH\CAD\4530670\DESIGN\CORRIDORS\CRDR-STH 67-USH 45-ECL-(BOX CULVERT_STA. 1502+60 - STA. 1508+60).DWG DATE : 12/18/2017 3:16 PM PLOT BY : LUKE SENZ PLOT NAME : PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

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