EAU

NOVEMBER 2021

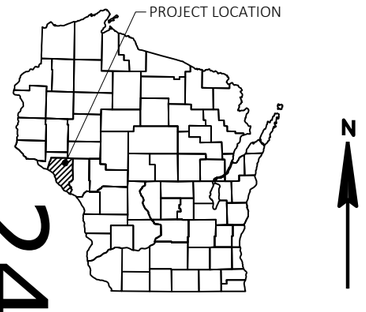
PROJECT ID: 1533-00-70

WITH: N/A

COUNTY: BUFFALO

ORDER OF SHEETS

TOTAL SHEETS = 84



24

DESIGN DESIGNATION

A.A.D.T.	2022	=	1800
A.A.D.T.	2042	=	1800
D.H.V.		=	110
D.D.		=	60/40
T.		=	22.5%
DESIGN SPEED		=	60 MPH
ESALS		=	820,000

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

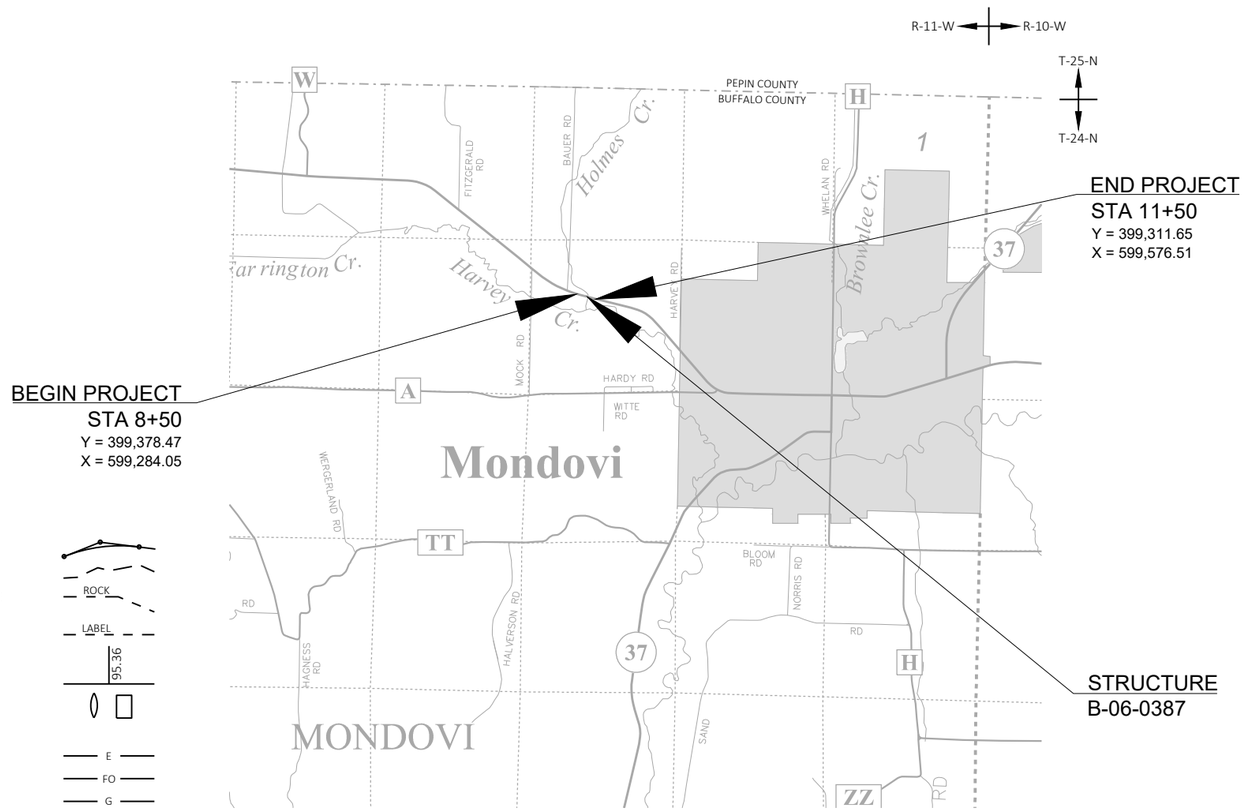
DURAND - MONDOVI

HOLMES CREEK BRIDGE B-06-0387

USH 10
BUFFALO COUNTY

STATE PROJECT NUMBER
1533-00-70

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1533-00-70	WISC 2022020	1



LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.057 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), BUFFALO COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12B.

ORIGINAL PLANS PREPARED BY

MSA

1230 SOUTH BOULEVARD, BARABOO, WI 53913
(608) 356-2771 www.msa-ps.com

WISCONSIN JOSHUA R. SWENO E-44384 WAUNAKEE WI PROFESSIONAL ENGINEER

DATE: 7/22/2021 (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	MSA PROFESSIONAL SERVICES
Designer	MSA PROFESSIONAL SERVICES
Project Manager	BRETT HOLLISTER, PE
Regional Examiner	TOU YANG, PE
Regional Supervisor	JAMES KOENIG, PE

APPROVED FOR THE DEPARTMENT

DATE: 7/23/2021 (Signature)

E

STANDARD ABBREVIATIONS

AC	ACRE
AGG	AGGREGATE
<	ANGLE
ASPH	ASPHALTIC
AC	ASPHALT CEMENT
ADT	AVERAGE DAILY TRAFFIC
B & B	BALLED AND BURLAPPED
BM	BENCH MARK
CB	CATCH BASIN
` OR C/L	CENTER LINE
C-C	CENTER TO CENTER
CONC	CONCRETE
CO	COUNTY
CTH	COUNTY TRUNK HIGHWAY
CY	CUBIC YARD
CULV	CULVERT
CP	CULVERT PIPE
CPRC	CULVERT PIPE REINFORCED CONCRETE
C & G	CURB AND GUTTER
D	DEGREE OF CURVE
DHV	DESIGN HOUR VOLUME
DIA OR |	DIAMETER
DIST	DISTRICT
DWY	DRIVEWAY
E	EAST
X	EAST GRID COORDINATE
EB	EASTBOUND
ELEC	ELECTRIC
EL OR ELEV	ELEVATION
EMB	EMBANKMENT
EW	ENDWALL
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXC	EXCAVATION
EBS	EXCAVATION BELOW SUBGRADE
EXIST	EXISTING
EXP	EXPANSION
F-F	FACE TO FACE
FERT	FERTILIZER
FE	FIELD ENTRANCE
F/L	FLOW LINE
FT	FOOT
GN	GRID NORTH
HR	HANDICAP RAMP
HT	HEIGHT
CWT	HUNDREDWEIGHT
HYD	HYDRANT
IN DIA	INCH DIAMETER
INL	INLET
ID	INSIDE DIAMETER
I	INTERSECTION ANGLE
IE	INVERT ELEVATION
IP	IRON PIPE OR PIN
JCT	JUNCTION
L	LENGTH OF CURVE
LF	LINEAR FOOT
LC	LONG CHORD OF CURVE
LCB	LONG CHORD BEARING
LS	LUMP SUM
MH	MANHOLE
N	NORTH
Y	NORTH GRID COORDINATE
OE	OUTLET ELEVATION
OL	OUT LOT
OD	OUTSIDE DIAMETER
OH	OVERHEAD LINES
PAVT	PAVEMENT
PLE	PERMANENT LIMITED EASEMENT
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
PCC	PORTLAND CEMENT CONCRETE
LB	POUND
PE	PRIVATE ENTRANCE
R OR RAD	RADIUS
RR	RAILROAD
R	RANGE
~ OR R/L	REFERENCE LINE
REQD	REQUIRED
RT	RIGHT
R / W	RIGHT-OF-WAY
RD	ROAD
SALV	SALVAGED
SAN	SANITARY SEWER
SECT	SECTION
SHLDR	SHOULDER
SW	SIDEWALK
S	SOUTH
SB	SOUTHBOUND
SPECS	SPECIFICATIONS
SQ	SQUARE
SF OR SQ FT	SQUARE FEET
SY	SQUARE YARD
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
STD	STANDARD
SDD	STANDARD DETAIL DRAWINGS
STH	STATE TRUNK HIGHWAYS
STA	STATION
SS	STORM SEWER
T	TANGENT
TEL	TELEPHONE
TEMP	TEMPORARY
TLE	TEMPORARY LIMITED EASEMENT
T	TON
TC	TOP OF CURB
TN	TOWN
TRANS	TRANSITION
T	TRUCKS (percent of)
TYP	TYPICAL
UNCL	UNCLASSIFIED
USH	UNITED STATES HIGHWAY
VAR	VARIABLE
VERT	VERTICAL
VC	VERTICAL CURVE
VOL	VOLUME
WM	WATER MAIN
WV	WATER VALVE
W	WEST
WB	WESTBOUND
YD	YARD

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 1.04 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 1.07 ACRES

ORDER OF TYPICAL SECTION & DETAIL SHEETS

1. GENERAL NOTES
2. TYPICAL SECTIONS

DNR LIASON

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
ATTN: AMY LESIK
DNR WEST CENTRAL REGION HEADQUARTERS
1300 WEST CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
PHONE: 715-836-6571
EMAIL: AMYL.LESIK@WISCONSIN.GOV

MSA DESIGN CONTACT

MSA PROFESSIONAL SERVICES, INC
ATTN: JOSH SWENO, P.E.
1702 PANKRATZ STREET
MADISON, WI 53704
PHONE: 608-355-8852
EMAIL: JSWENO@MSA-PS.COM

WISDOT CONTACT

WISCONSIN DEPARTMENT OF TRANSPORTATION
ATTN: BRETT HOLLISTER, PROJECT MANAGER
718 W CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
PHONE: 715-563-8402
EMAIL: HOLLISTERB@AYRESASSOCIATES.COM

UTILITIES

BURIED TELEPHONE:
FRONTIER COMMUNICATIONS
ATTN: CALVIN KLADE
1851 N. 14TH AVENUE
WAUSAU, WI 54401
PHONE: 715-573-2110
EMAIL: CALVIN.KLADE@FTR.COM

OVERHEAD ELECTRIC:
RIVERLAND ENERGY COOPERATIVE
ATTN: TIM HOLTAN
N28988 STATE ROAD 93
P.O. BOX 277
ARCADIA, WI 54612-0277
PHONE: 608-323-3381
EMAIL: THOLTAN@RIVERLANDENERGY.COM

* NOT A DIGGERS HOTLINE MEMBER

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

GENERAL NOTES

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE FERTILIZED, SEEDED AND STABILIZED WITH EROSION MAT AS DIRECTED BY THE ENGINEER.

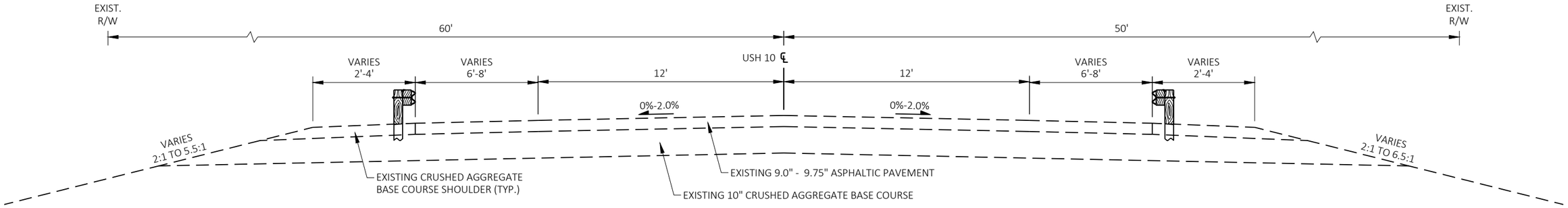
THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE AREA THAT ARE NOT SHOWN.

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

THE 6.25" ASPHALTIC SURFACE SHALL CONSIST OF A 2" UPPER AND MIDDLE LAYER, AND A 2¼" LOWER LAYER. A 4-MT 58-34 S MIX SHALL BE USED.

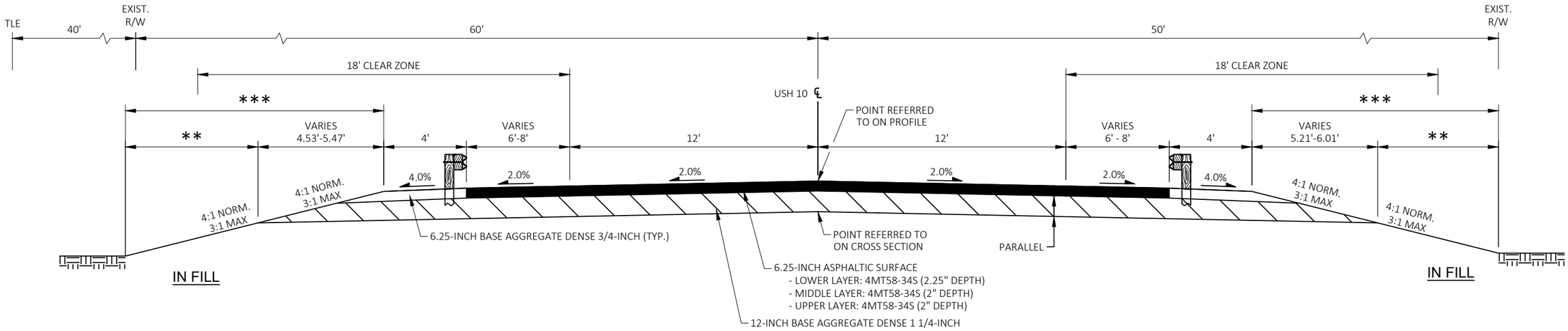
PLACE SILT FENCE AND TURBIDITY BARRIER AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER AND IN PLACE PRIOR TO CONSTRUCTION OR BRIDGE REMOVAL.

WETLANDS ARE NOT PRESENT.



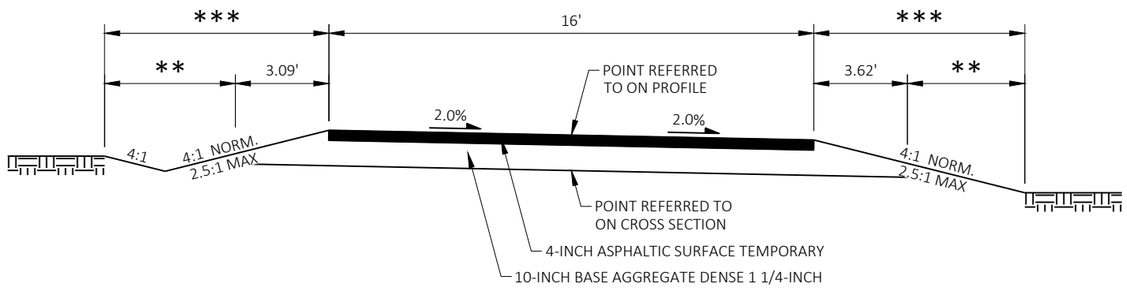
EXISTING TYPICAL SECTION

STA 8+50 - STA 9+83.6
STA 10+16.4 - STA 11+50



FINISHED TYPICAL SECTION

STA 8+50 - STA 9+45.75
STA 10+54.25 - STA 11+50



BYPASS TYPICAL SECTION

NOTES:

** SALVAGED TOPSOIL AND EROSION MAT URBAN CLASS I, TYPE B LIMITS

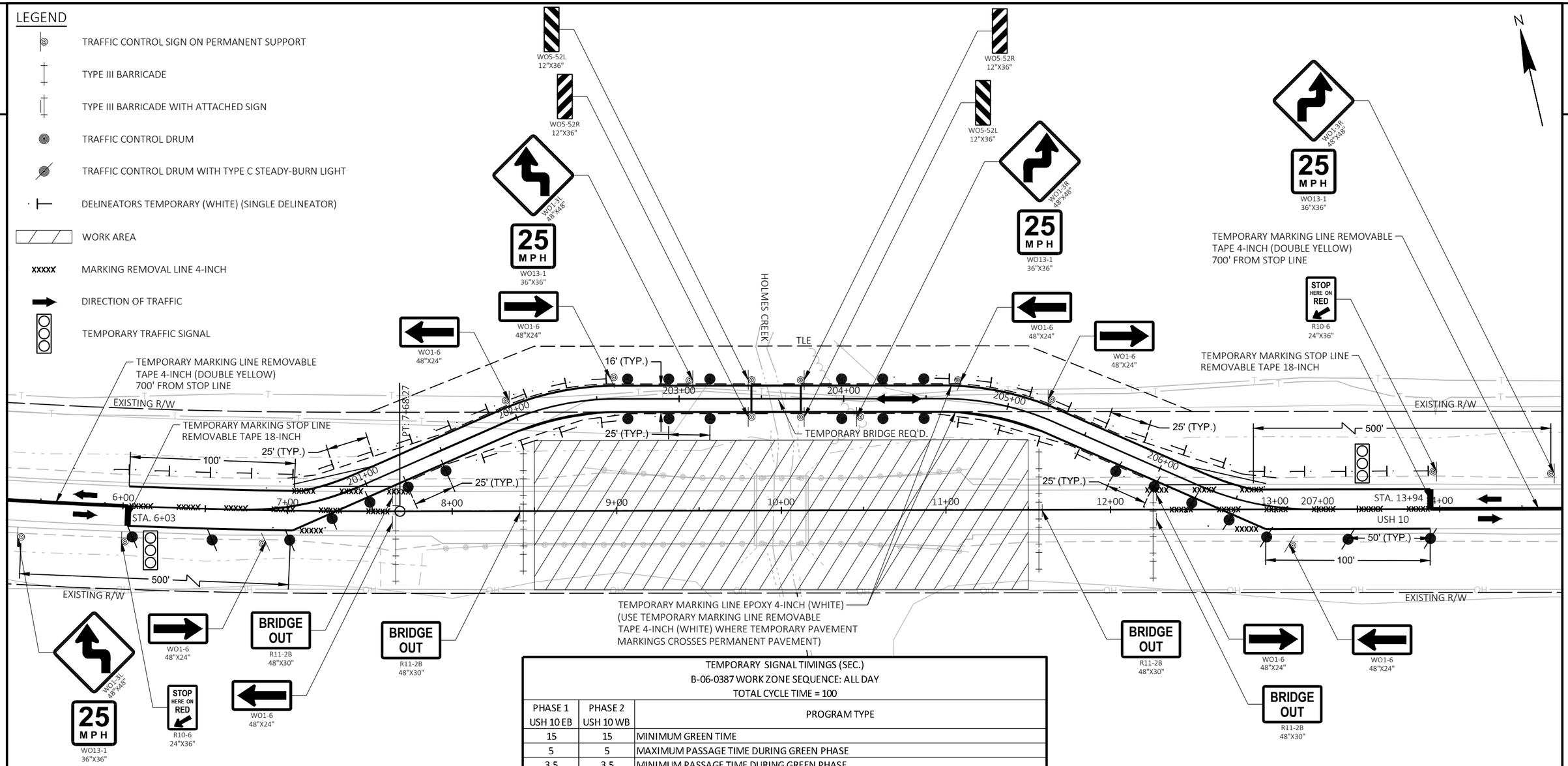
*** SEEDING MIXTURE #20, SEEDING TEMPORARY, & FERTILIZER TYPE B LIMITS

PROJECT NO: 1533-00-70	HWY: USH 10	COUNTY: BUFFALO	TYPICAL SECTIONS	SHEET 3	E

2

LEGEND

- TRAFFIC CONTROL SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY-BURN LIGHT
- DELINEATORS TEMPORARY (WHITE) (SINGLE DELINEATOR)
- WORK AREA
- XXXXX MARKING REMOVAL LINE 4-INCH
- DIRECTION OF TRAFFIC
- TEMPORARY TRAFFIC SIGNAL



TEMPORARY SIGNAL TIMINGS (SEC.)
B-06-0387 WORK ZONE SEQUENCE: ALL DAY
TOTAL CYCLE TIME = 100

PHASE 1 USH 10 EB	PHASE 2 USH 10 WB	PROGRAM TYPE
15	15	MINIMUM GREEN TIME
5	5	MAXIMUM PASSAGE TIME DURING GREEN PHASE
3.5	3.5	MINIMUM PASSAGE TIME DURING GREEN PHASE
15	15	START OF REDUCTION OF PASSAGE FROM MAX. TO MIN. DURING GREEN PHASE
6	6	TIME TO REDUCE PASSAGE FROM MAX. TO MIN. DURING GREEN PHASE
20	20	MAXIMUM GREEN TIME
5	5	YELLOW
25	25	ALL-RED
NONE	NONE	RECALL MODE

NOTES:
REVIEW SIGNALS AFTER PROGRAMMING TO ASSURE THAT THERE ARE NOT CONFLICTING MOVEMENTS.

THE TIMINGS ARE BASED ON A 25 MPH POSTED WORK ZONE ADVISORY SPEED. NOTIFY THE DEPARTMENT WITH TIMING ADJUSTMENTS IF SLOWER THAN AVERAGE SPEEDS ARE OBSERVED WITHIN THE SINGLE LANE WORK ZONE.

SEE S.D.D. "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS" AND S.D.D. "TRAFFIC CONTROL, TEMPORARY BYPASS ROADWAY" FOR ADDITIONAL INFORMATION AND ADVANCED SIGNING REQUIREMENTS.

SEE S.D.D." BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION" FOR EXACT PLACEMENT OF TEMPORARY TRAFFIC SIGNALS.

PROJECT NO: 1533-00-70	HWY: USH 10	COUNTY: BUFFALO	TRAFFIC CONTROL	SHEET 4	E

Estimate Of Quantities

1533-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	2.000	2.000
0004	201.0205	Grubbing	STA	2.000	2.000
0006	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. B-6-112	EACH	1.000	1.000
0008	204.0165	Removing Guardrail	LF	566.000	566.000
0010	204.0180	Removing Delineators and Markers	EACH	4.000	4.000
0012	205.0100	Excavation Common	CY	1,826.000	1,826.000
0014	206.1000	Excavation for Structures Bridges (structure) 01. B-6-387	LS	1.000	1.000
0016	208.0100	Borrow	CY	712.000	712.000
0018	210.1500	Backfill Structure Type A	TON	220.000	220.000
0020	213.0100	Finishing Roadway (project) 01. 1533-00-70	EACH	1.000	1.000
0022	305.0110	Base Aggregate Dense 3/4-Inch	TON	92.000	92.000
0024	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	2,020.000	2,020.000
0026	305.0500	Shaping Shoulders	STA	4.000	4.000
0028	415.0080	Concrete Pavement 8-Inch	SY	28.000	28.000
0030	415.0410	Concrete Pavement Approach Slab	SY	80.000	80.000
0032	416.1010	Concrete Surface Drains	CY	5.000	5.000
0034	455.0605	Tack Coat	GAL	125.000	125.000
0036	465.0105	Asphaltic Surface	TON	260.000	260.000
0038	465.0110	Asphaltic Surface Patching	TON	10.000	10.000
0040	465.0125	Asphaltic Surface Temporary	TON	216.000	216.000
0042	502.0100	Concrete Masonry Bridges	CY	325.000	325.000
0044	502.3200	Protective Surface Treatment	SY	340.000	340.000
0046	502.3210	Pigmented Surface Sealer	SY	80.000	80.000
0048	505.0400	Bar Steel Reinforcement HS Structures	LB	5,080.000	5,080.000
0050	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	41,390.000	41,390.000
0052	505.0800.S	Bar Steel Reinforcement HS Stainless Structures	LB	350.000	350.000
0054	516.0500	Rubberized Membrane Waterproofing	SY	24.000	24.000
0056	526.0100	Temporary Structure (station) 01. 203+60	LS	1.000	1.000
0058	550.2106	Piling CIP Concrete 10 3/4 X 0.365-Inch	LF	1,240.000	1,240.000
0060	601.0588	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBT	LF	148.000	148.000
0062	601.0590	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBTT	LF	60.000	60.000
0064	606.0200	Riprap Medium	CY	16.000	16.000
0066	606.0300	Riprap Heavy	CY	130.000	130.000
0068	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	210.000	210.000
0070	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0072	614.2300	MGS Guardrail 3	LF	50.000	50.000
0074	614.2500	MGS Thrie Beam Transition	LF	158.000	158.000
0076	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0078	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1533-00-70	EACH	1.000	1.000
0080	619.1000	Mobilization	EACH	1.000	1.000
0082	624.0100	Water	MGAL	38.000	38.000
0084	625.0500	Salvaged Topsoil	SY	1,277.000	1,277.000
0086	628.1504	Silt Fence	LF	862.000	862.000
0088	628.1520	Silt Fence Maintenance	LF	862.000	862.000
0090	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0092	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0094	628.2008	Erosion Mat Urban Class I Type B	SY	1,277.000	1,277.000
0096	628.6005	Turbidity Barriers	SY	273.000	273.000
0098	628.7504	Temporary Ditch Checks	LF	150.000	150.000

1533-00-70

Line	Item	Item Description	Unit	Total	Qty
0100	629.0210	Fertilizer Type B	CWT	1.150	1.150
0102	630.0120	Seeding Mixture No. 20	LB	52.000	52.000
0104	630.0200	Seeding Temporary	LB	52.000	52.000
0106	630.0500	Seed Water	MGAL	43.000	43.000
0108	633.1100	Delineators Temporary	EACH	34.000	34.000
0110	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0112	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0114	642.5001	Field Office Type B	EACH	1.000	1.000
0116	643.0300	Traffic Control Drums	DAY	2,990.000	2,990.000
0118	643.0420	Traffic Control Barricades Type III	DAY	2,300.000	2,300.000
0120	643.0705	Traffic Control Warning Lights Type A	DAY	2,760.000	2,760.000
0122	643.0715	Traffic Control Warning Lights Type C	DAY	1,610.000	1,610.000
0124	643.0900	Traffic Control Signs	DAY	4,370.000	4,370.000
0126	643.5000	Traffic Control	EACH	1.000	1.000
0128	645.0111	Geotextile Type DF Schedule A	SY	80.000	80.000
0130	645.0120	Geotextile Type HR	SY	323.000	323.000
0132	646.1020	Marking Line Epoxy 4-Inch	LF	3,200.000	3,200.000
0134	646.9000	Marking Removal Line 4-Inch	LF	1,000.000	1,000.000
0136	649.0120	Temporary Marking Line Epoxy 4-Inch	LF	1,065.000	1,065.000
0138	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	3,370.000	3,370.000
0140	649.0850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	24.000	24.000
0142	650.4500	Construction Staking Subgrade	LF	830.000	830.000
0144	650.5000	Construction Staking Base	LF	830.000	830.000
0146	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	208.000	208.000
0148	650.6500	Construction Staking Structure Layout (structure) 01. B-6-387	LS	1.000	1.000
0150	650.7000	Construction Staking Concrete Pavement	LF	30.000	30.000
0152	650.9910	Construction Staking Supplemental Control (project) 01. 1533-00-70	LS	1.000	1.000
0154	650.9920	Construction Staking Slope Stakes	LF	830.000	830.000
0156	661.0100	Temporary Traffic Signals for Bridges (structure) 01. B-06-0387	LS	1.000	1.000
0158	690.0150	Sawing Asphalt	LF	65.000	65.000
0160	715.0502	Incentive Strength Concrete Structures	DOL	1,950.000	1,950.000
0162	999.2000.S	Installing and Maintaining Bird Deterrent System (Station) yup	EACH	1.000	1.000
0164	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	300.000	300.000
0166	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	300.000	300.000

3

STATION	TO	STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
9+00	-	11+00	RT & LT	2	2
			TOTAL 0010	2	2

STATION	TO	STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF
8+79	-	11+15	LT	236
7+84	-	11+14	RT	330
			TOTAL 0010	566

STATION	LOCATION	204.0180 REMOVING DELINEATORS AND MARKERS EACH
7+84	RT	1
8+79	LT	1
11+14	RT	1
11+15	LT	1
	TOTAL 0010	4

STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	305.0500 SHAPING SHOULDERS STA	624.0100 WATER MGAL
8+50	-	11+50	USH 10	92	1,020	--	22
6+50	-	8+50	USH 10	--	--	2	--
11+50	-	13+50	USH 10	--	--	2	--
200+95	-	206+25	TEMPORARY BYPASS	--	780	--	16
			TOTAL 0010	92	1,800	4	38

STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON	465.0110 ASPHALTIC SURFACE PATCHING TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON
8+50	-	11+50	USH 10	76	260	10	--
200+95	-	206+25	TEMPORARY BYPASS	49	--	--	216
			TOTAL 0010	125	260	10	216

STATION	TO	STATION	LOCATION	*** 205.0100 EXCAVATION COMMON CY	* FILL CY	** EXPANDED FILL CY	* WASTE CY	208.0100 BORROW CY	REMARKS
8+00	-	11+50	USH 10	717	14	14	701	0	
200+95	-	206+25	TEMPORARY BYPASS	368	365	365	0	108	CONSTRUCTION
200+95	-	206+25	TEMPORARY BYPASS	741	354	354	0	604	REMOVAL
			TOTAL 0010	1,826	733	733	701	712	

* NOT A BID ITEM - FOR INFORMATIONAL PURPOSES ONLY
** FILL EXPANSION 30%
*** EXISTING ASPHALTIC PAVEMENT IS INCLUDED IN COMMON EXCAVATION TOTALS. SEE EARTHWORK TABLE

STATION	TO	STATION	LOCATION	415.0080 CONCRETE PAVEMENT 8-INCH SY	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY
9+45.75	-	9+60.75	LT & RT	14	40
10+39.25	-	10+54.25	LT & RT	14	40
			TOTAL 0010	28	80

STATION	TO	STATION	LOCATION	416.1010 CONCRETE SURFACE DRAINS CY
9+15.3	-	9+19.3	LT	2
9+15.3	-	9+19.3	RT	1
10+80.7	-	10+84.7	LT	1
10+80.7	-	10+84.7	RT	1
			TOTAL 0010	5

STATION	TO	STATION	LOCATION	601.0588 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT LF	601.0590 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT LF
9+08.42	-	9+45.42	LT	37	--
9+08.42	-	9+45.42	RT	37	--
10+54.58	-	10+91.58	LT	37	--
10+54.58	-	10+91.58	RT	37	--
9+45.42	-	9+60.42	LT	--	15
9+45.42	-	9+60.42	RT	--	15
10+39.58	-	10+54.58	LT	--	15
10+39.58	-	10+54.58	RT	--	15
			TOTAL 0010	148	60

3

STATION	TO	STATION	LOCATION	606.0200 RIPRAP MEDIUM CY
9+15.6	-	9+19.6	LT	4
9+15.6	-	9+19.6	RT	4
10+80.4	-	10+84.4	LT	4
10+80.4	-	10+84.4	RT	4
			TOTAL 0010	16

STATION	TO	STATION	LOCATION	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
8+57.90	-	9+62.92	LT	12.5	39	1
8+57.90	-	9+62.92	RT	12.5	39	1
10+37.08	-	11+42.10	LT	12.5	39	1
10+37.08	-	11+42.10	RT	12.5	39	1
			TOTAL 0010	50	158	4

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
PROJECT	3	3
TOTAL 0010	3	3

3

STATION	TO	STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL
8+50	-	9+85	RT	55	0.05	3	3	2
8+50	-	9+85	LT	125	0.10	5	5	4
10+12	-	11+50	RT	79	0.10	4	4	3
10+12	-	11+50	LT	104	0.10	4	4	4
201+20		203+60	TEMP BYPASS RT	102	0.10	5	5	4
200+50	-	203+60	TEMP BYPASS LT	187	0.20	8	8	7
203+60	-	206+00	TEMP BYPASS RT	316	0.25	11	11	9
203+60	-	206+50	TEMP BYPASS LT	309	0.25	12	12	10
			TOTAL 0010	1,277	1.15	52	52	43

STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.6005 TURBIDITY BARRIERS SY	628.7504 TEMPORARY DITCH CHECKS LF
8+50	-	9+85	RT	147	147	55	--	--
8+50	-	9+85	LT	--	--	125	--	30
10+12	-	11+50	RT	137	137	79	--	--
10+12	-	11+50	LT	--	--	104	--	30
9+86	-	10+14	LT & RT	--	--	--	273	--
201+20		203+60	TEMP BYPASS RT	--	--	102	--	30
200+50	-	203+60	TEMP BYPASS LT	280	280	187	--	--
203+60	-	206+00	TEMP BYPASS RT	--	--	316	--	15
203+60	-	206+50	TEMP BYPASS LT	298	298	309	--	45
			TOTAL 0010	862	862	1,277	273	150

STATION	TO	STATION	LOCATION	633.1100 DELINEATORS TEMPORARY EACH
5+72	-	14+24	TEMPORARY BYPASS	34
			TOTAL 0010	34

LOCATION	DAYS	TRAFFIC CONTROL DRUMS EACH	643.0300 TRAFFIC CONTROL DRUMS DAY	TRAFFIC CONTROL BARRICADES TYPE III EACH	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE C EACH	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	TRAFFIC CONTROL SIGNS EACH	643.0900 TRAFFIC CONTROL SIGNS DAY	643.5000 TRAFFIC CONTROL EACH	661.0100.01 TEMPORARY TRAFFIC SIGNALS FOR BRIDGES B-06-0387 LS
PROJECT	115	26	2,990	20	2,300	24	2,760	14	1,610	38	4,370	1	1
TOTAL 0010			2,990		2,300		2,760		1,610		4,370	1	1

3

STATION	LOCATION	634.0612 POSTS WOOD 4x6-INCH X 12-FT EACH	637.2230 SIGNS TYPE II REFLECTIVE F SF	REMARKS
9+60	LT	1	3	W5-52L, 12"x36"
9+60	RT	1	3	W5-52R, 12"x36"
10+40	LT	1	3	W5-52R, 12"x36"
10+40	RT	1	3	W5-52L, 12"x36"
	TOTAL 0010	4	12	

STATION	TO	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH LF	646.9000 MARKING REMOVAL LINE 4-INCH LF	REMARKS
6+00	-	8+50	USH 10 LT & RT	500	150	WHITE EDGELINE SOLID
6+00	-	8+50	USH 10 CL	500	350	YELLOW DOUBLE SOLID
8+50	-	11+50	USH 10 RT & LT	600	--	WHITE EDGELINE SOLID
8+50	-	11+50	USH 10 CL	600	--	YELLOW DOUBLE SOLID
11+50	-	14+00	USH 10 LT & RT	500	150	WHITE EDGELINE SOLID
11+50	-	14+00	USH 10 CL	500	350	YELLOW DOUBLE SOLID
			TOTAL 0010	3,200	1,000	

3

STATION	TO	STATION	LOCATION	645.0120 GEOTEXTILE TYPE HR SY
9+15.6	-	9+19.6	LT	12
9+15.6	-	9+19.6	RT	12
10+80.4	-	10+84.4	LT	12
10+80.4	-	10+84.4	RT	12
			TOTAL 0010	48

STATION	TO	STATION	LOCATION	649.0120 TEMPORARY MARKING LINE EPOXY 4-INCH LF	649.0150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH LF	649.0850 TEMPORARY MARKING STOP LINE REMOVABLE LF	REMARKS
-0+97	-	6+03	USH 10 CL	--	1,400	--	YELLOW DOUBLE SOLID
6+03		--	USH 10 RT	--	--	12	--
6+03	-	13+94	TEMPORARY BYPASS	1,065	570	--	WHITE EDGELINE SOLID
13+94		--	USH 10 RT	--	--	12	--
13+94	-	20+94	USH 10 CL	--	1,400	--	YELLOW DOUBLE SOLID
			TOTAL 0010	1,065	3,370	24	

CATEGORY	STATION	TO	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT LF	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF	650.6500.01 CONSTRUCTION STAKING STRUCTURE LAYOUT (B-6-387) LS	650.9910.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (1533-00-70) LS
0010	8+50	-	11+50	USH 10	300	300	208	30	300	--	--
0010	200+95	-	206+25	TEMPORARY BYPASS	530	530	--	--	530	--	--
0010	PROJECT				--	--	--	--	--	--	1
0020	B-6-387				--	--	--	--	--	1	--
				TOTAL 0010	830	830	208	30	830	--	1
				TOTAL 0020	--	--	--	--	--	1	--

STATION	TO	STATION	690.0150 SAWING ASPHALT LF
8+50	-	8+50	35
11+50	-	11+50	30
		TOTAL 0010	65

PROJECT NO: 1533-00-70	HWY: USH 10	COUNTY: BUFFALO	MISCELLANEOUS QUANTITIES	SHEET: 9	E

TRANSPORTATION PROJECT PLAT NO: 1533-00-20-4.01

THAT PART OF THE SE1/4 - NW1/4, SECTION 10, TOWNSHIP 24 NORTH, RANGE 11 WEST,
TOWN OF MONDOVI, BUFFALO COUNTY, WISCONSIN

RELOCATION ORDER - USH 10, DURAND - MONDOVI, HOLMES CREEK BRIDGE B-06-0112, BUFFALO COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT. TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 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 PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

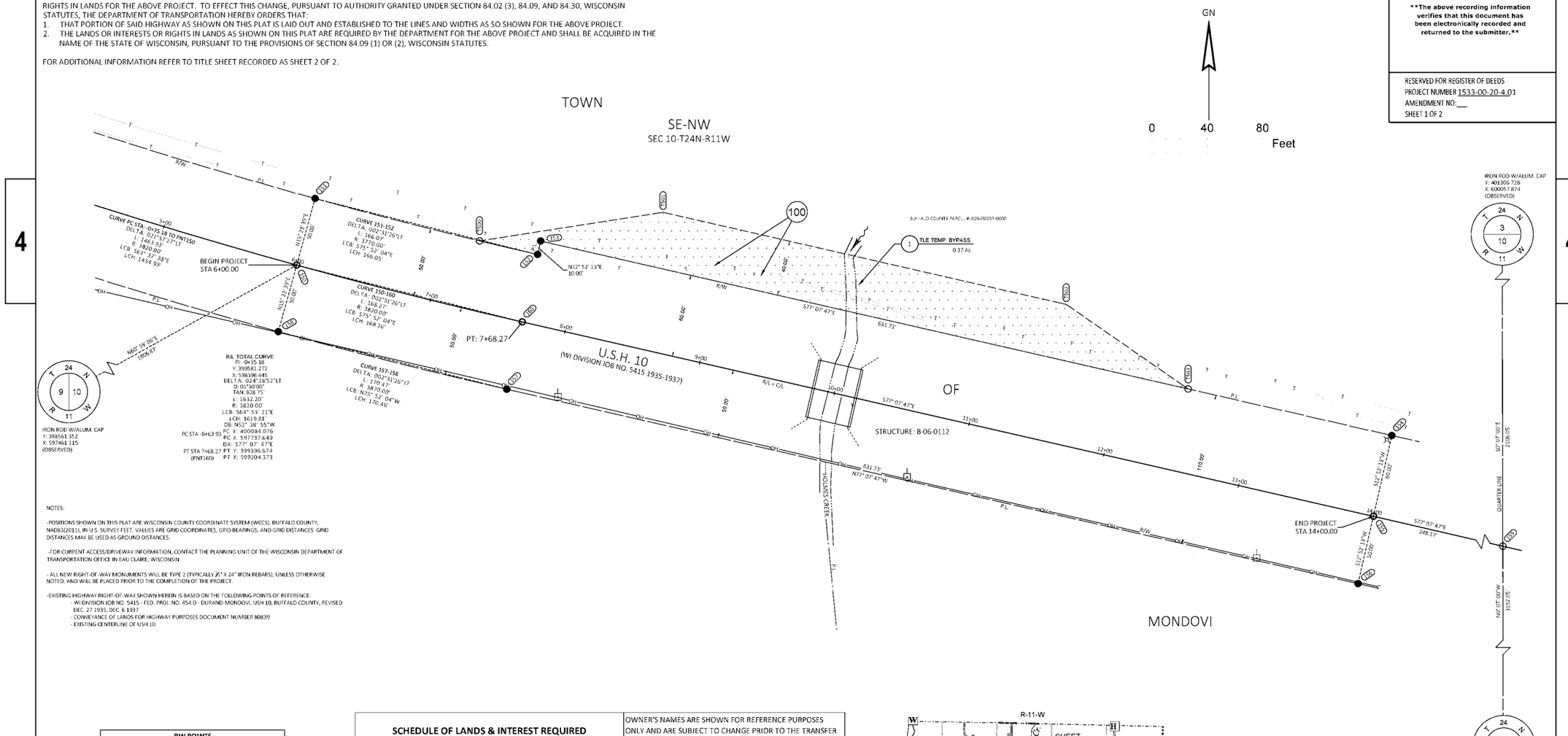
FOR ADDITIONAL INFORMATION REFER TO TITLE SHEET RECORDED AS SHEET 2 OF 2.

273105
CAROL J BURMEISTER
REGISTER OF DEEDS
BUFFALO COUNTY, WI
RECORDED ON
08/14/2020 03:24 PM

REC FEE: 25.00
PAGES: 2

****The above recording information verifies that this document has been electronically recorded and returned to the submitter.****

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 1533-00-20-4.01
AMENDMENT NO:___
SHEET 1 OF 2



NOTES:

-POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), BUFFALO COUNTY, NAD83(2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

-FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN EAU CLAIRE, WISCONSIN

- ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY ¾" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

-EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE.
- WI DIVISION FOR NO. 5415 - FED. PROJ. NO. 454 D - DURAND-MONDOVI, USH 10, BUFFALO COUNTY, REVISED DEC. 27 1935, DEC. 6 1937
- CONVEYANCE OF LANDS FOR HIGHWAY PURPOSES DOCUMENT NUMBER 80839
- EXISTING CENTERLINE OF USH 10

RW POINTS

PNT	STA	OFFSET	Y	X
150	6+00.00	0.00'	399437.755	599041.209
151	6+00.00	50.00' LT	399485.962	599054.481
152	7+68.27	50.00' LT	399445.418	599215.510
153	7+68.27	60.00' LT	399455.167	599217.737
154	14+00.00	60.00' LT	399314.453	599833.597
155	14+00.00	0.00'	399255.960	599820.232
156	14+00.00	50.00' RT	399207.216	599809.095
157	7+68.27	50.00' RT	399347.930	599193.236
158	6+00.00	50.00' RT	399389.549	599027.936
159	16+48.17	0.00'	399200.682	600062.167
160	7+68.27	0.00'	399396.674	599204.373

TLE POINTS

PNT	STA	OFFSET	Y	X
T500	7+24.54	50.00' LT	399455.272	599173.491
T501	8+49.95	100.00' LT	399475.967	599306.280
T502	11+49.19	100.00' LT	399409.314	599597.999
T503	12+48.82	60.00' LT	399348.126	599686.219

SCHEDULE OF LANDS & INTEREST REQUIRED

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

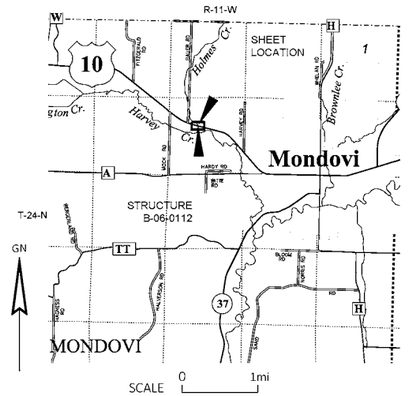
PARCEL NUMBER	OWNERS	INTEREST REQUIRE	R/W ACRES REQUIRED NEW	EXISTING	TOTAL	PLE AC.	TLE AC.
1	RANDY J. JOHNSTON AND DORA C. JOHNSTON, TRUSTEES OF THE JOHNSTON FAMILY TRUST DATED APRIL 16, 2018	TLE					0.37

UTILITY INTERESTS REQUIRED

UTILITY NUMBER	OWNER(S)	INTEREST REQUIRED
100	FRONTIER COMMUNICATIONS OF WISCONSIN	RELEASE OF RIGHTS
101	RIVERLAND ENERGY COOPERATIVE	RELEASE OF RIGHTS

UTILITY EASEMENT TABLE

UTILITY NUMBER	OWNER(S)	DOC. INFO.	NOTES	PARCEL LOCATED IN
100	MONDOVI TELEPHONE COMPANY	DOC. NO. 123084	BLANKET EASEMENT - NO WIDTH	1
101	BUFFALO ELECTRIC COOPERATIVE	DOC. NO. 92878	BLANKET EASEMENT - NO WIDTH	1



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1835 North Stevens Street, Rhinelander WI 54501
(715) 362-3244 www.msa-ps.com
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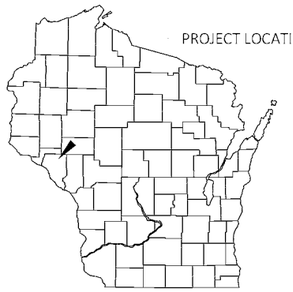
I, CHAD A. BESAW, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT OF TRANSPORTATION, I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: _____ DATE: 7/15/2020
PRINT NAME: CHAD A. BESAW
REGISTRATION NUMBER: S-3029

WISCONSIN CHAD A. BESAW S-3029 MERRILL WI LAND SURVEYOR 7/15/2020

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION
NORTHWEST REGION - EAU CLAIRE OFFICE
SIGNATURE: _____ DATE: 8/14/2020
PRINT NAME: DEBRA B. STENSLAND

FILE NAME : G:\00\00093\00093525\CADD\RW\PRW.DWG
APPRAISAL PLAT DATE : 7/15/2020
PLOT DATE : 8/10/2020 11:36 AM
PLOT BY : CHAD BESAW
PLOT SCALE : 1"=40'



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PROJECT PLAT TITLE SHEET
1533-00-20
DURAND - MONDOVI
HOLMES CREEK BRIDGE B-06-0112
USH 10
BUFFALO COUNTY

4

4

CONVENTIONAL SYMBOLS

SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW R/W LINE
EXISTING R/W OR HE LINE
PROPERTY LINE
LOT, TIE & OTHER MINOR LINES
SLOPE INTERCEPT
CORPORATE LIMITS
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)
TEMPORARY LIMITED EASEMENT AREA
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)
TRANSMISSION STRUCTURES
BUILDING — TO BE REMOVED
BRIDGE

SECTION CORNER SYMBOL
SECTION CORNER MONUMENT
R/W MONUMENT (TO BE SET)
NON-MONUMENTED R/W POINT
FOUND IRON PIN (1-INCH UNLESS NOTED) — IP
GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
SIGN — OFF-PREMISE 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)
NO ACCESS (NEW HIGHWAY)

PARCEL NUMBER (25) — UTILITY NUMBER (40)
PARALLEL OFFSETS

CONVENTIONAL ABBREVIATIONS

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

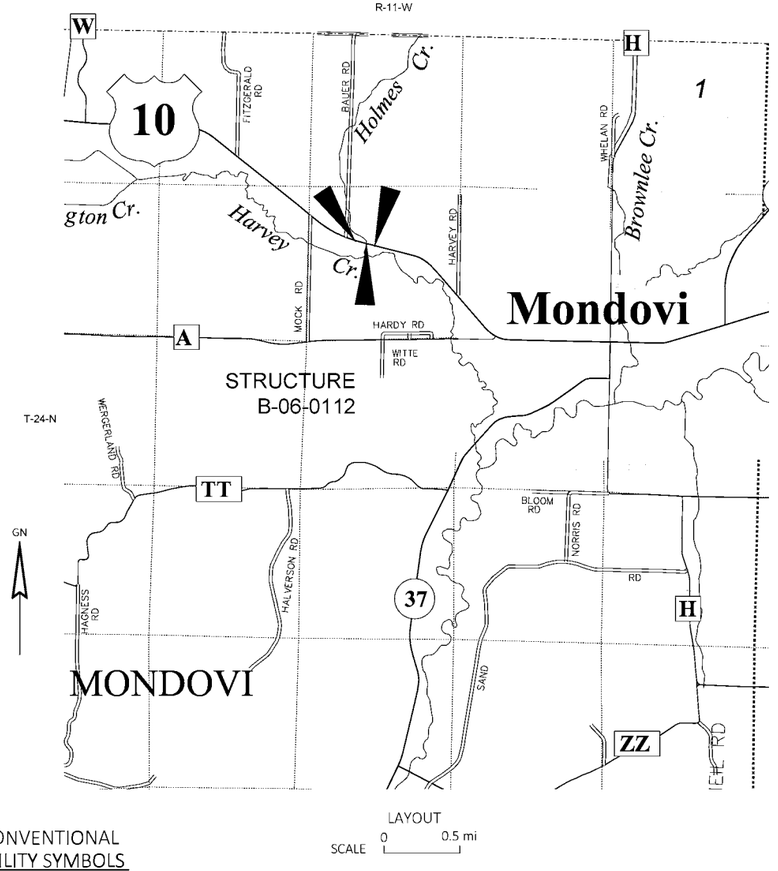
CURVE DATA

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

CONVENTIONAL UTILITY SYMBOLS

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

PROJECT LOCATION
R-11-W



THE NOTES,CONVENTIONAL SIGNS, AND ABBREVIATIONS ARE ASSOCIATED WITH EACH TRANSPORTATION PROJECT PLAT FOR PROJECT 1533-00-20

NOTES:

-POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), BUFFALO COUNTY, NAD83(2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

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

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

- PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. 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.

- 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

- PARCEL AND UTILITY IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE TPP DETAIL PAGES.

- INFORMATION FOR THE BASIS OF EXISTING HIGHWAY RIGHT-OF-WAY POINTS OF REFERENCE AND ACCESS CONTROL ARE LISTED ON THE TPP DETAIL PAGES.

-FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN EAU CLAIRE, WISCONSIN

- 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 RIGHT 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.

- 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.

- ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY ¾" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

PROJECT NUMBER 1533-00-20 -4.01
SHEET 2 of 2
AMENDMENT NO: _____

FILE NAME : G:\00\00093\00093525\CADD\RW\PRW.DWG
LAYOUT NAME: TPP Title 30x22

PLOT DATE : 7/20/2020 12:48 PM PLOT BY : CHAD BESAW

APPRAISAL PLAT DATE : 7/15/2020

1533-00-20-4.01

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
BM-1	10+15, 22' LT	807.36	CHISELED '+' IN NE WING
BM-2	9+92, 94' RT	802.45	POLE NAILS IN 18" ELM
BM-3	9+34, 141' LT	806.56	10" SPIKE IN 8' DIA. COTTON WOOD

CONTROL POINTS					
NO.	STATION	ELEV.	DESCRIPTION	Y	X
CP-2	10+60, 18' RT	806.56	PK NAIL	399,313.99	599,484.94
CP-3	8+90, 22' LT	807.43	PK NAIL	399,390.73	599,328.12

BM-3

N

LEGEND
- RIPRAP HEAVY
- SILT FENCE
- TURBIDITY BARRIER
- FLOW ARROW
- DITCH CHECK
- CONCRETE PAVEMENT APPROACH SLAB
- CONCRETE PAVEMENT 8-INCH

JOHNSTON FAMILY TRUST

BURIED TELEPHONE (FRONTIER COMMUNICATIONS)

FIELD EDGE

JOHNSTON FAMILY TRUST

TEMPORARY BRIDGE REQ'D

℄ TEMPORARY BYPASS

TLE

PT: 7+68.27

BEGIN CONSTRUCTION STA 7+22

201+00 202+00 203+00 204+00 205+00 206+00

16'

40'

EXISTING R/W

RIPRAP MEDIUM (TYP.)

REMOVING GUARDRAIL (TYP.)

MGS EAT TERMINAL

CP-3

BM-1

MGS EAT TERMINAL

END CONSTRUCTION STA 12+75

SAWING ASPHALT

+57.90 +07.90 +92.10 +42.10

6+00 7+00 USH 10 8+00 9+00 10+00 11+00 S77° 07' 47"E 12+00 13+00 207+00

60'

50'

PI STA = -0+35.18
Y = 399581.27
X = 598396.45
DELTA = 24°28'52"
D = 1°30'00"
T = 828.75'
L = 1632.20'
R = 3820.00'
PC STA = -8+63.93
Y = 400084.1
X = 597737.65
PT STA = 7+68.27
Y = 399396.67
X = 599204.37

FE GRAVEL STA 7+70, RT

MGS EAT TERMINAL

MGS THRIE BEAM (TYP.)

CP-2

MGS EAT TERMINAL

CONCRETE SURFACE DRAIN (TYP.)

SLOPE INTERCEPT (TYP.)

OVERHEAD ELECTRIC (RIVERLAND ENERGY COOPERATIVE)

CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT (TYP.)

CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT (TYP.)

EXISTING R/W

BEGIN PROJECT
STA 8+50
Y = 399,378.47
X = 599,284.05

DOUGLAS D OLSON

BM-2

HOLMES CREEK

℄

EXISTING STRUCTURE B-06-0112 (TO BE REMOVED)

STRUCTURE B-06-0387

JOHNSTON FAMILY TRUST

END PROJECT
STA 11+50
Y = 399,311.65
X = 599,576.51

5

5

STA 8+50.00
EL 808.48

VCL = 100.00
K = 170.79

VPC STA 10+21.77
VPC EL 807.22

VPT STA 11+21.77
VPT EL 806.78

STA 11+50.00
EL 806.74

FINISHED ℄ PROFILE

-0.73%

-0.15%

EXISTING ℄ PROFILE

VPI STA 10+71.77
VPI EL 806.86

STA 10+00 STRUCTURE B-06-0387
SINGLE SPAN FLAT CONCRETE SLAB
36.0 FT CLEAR ROADWAY WIDTH
40.5 FT OVERALL LENGTH
NO SKEW

REMOVE EXISTING BRIDGE B-06-0112
STA 10+00
SINGLE SPAN STEEL DECK GIRDER
40.0 FT CLEAR ROADWAY WIDTH
32.8 FT OVERALL LENGTH
NO SKEW

EARTHWORK SUMMARY
STA 8+50 - STA 11+50

EXC. COMMON	717 CY
FILL	14 CY
FILL EXPANSION	30%
WASTE	701 CY

	EXISTING	810.27	809.94	809.62	809.17	808.85	808.48	807.90	807.30	794.88	806.79	806.70	806.74	806.65	806.46	806.21	805.73
	PROPOSED						808.48	808.12	807.75	807.38	807.04	806.83	806.74				

810 805 800 795

6+00 7+00 8+00 9+00 10+00 11+00 12+00 13+00

PROJECT NO: 1533-00-70	HWY: USH 10	COUNTY: BUFFALO	PLAN AND PROFILE: USH 10	SHEET 12	E

PI STA = 200+10.80
Y = 399422.06
X = 599099.94
DELTA = 0°28'38"
D = 2°12'37"
T = 10.80'
L = 21.60'
R = 2592.38'
PC STA = 200+00.00
Y = 399424.8
X = 599089.50
PT STA = 200+21.60
Y = 399419.41
X = 599110.41
SE = N/A

PI STA = 200+59.64
Y = 399409.91
X = 599147.25
DELTA = 25°13'48"
D = 33°42'12"
T = 38.05'
L = 74.86'
R = 170.00'
PC STA = 200+21.60
Y = 399419.4
X = 599110.41
PT STA = 200+96.45
Y = 399417.03
X = 599184.63
SE = N/A

JOHNSTON FAMILY TRUST

PI STA = 202+27.54
Y = 399441.54
X = 599313.41
DELTA = 23°43'34"
D = 33°42'12"
T = 35.71'
L = 70.40'
R = 170.00'
PC STA = 201+91.83
Y = 399434.9
X = 599278.33
PT STA = 202+62.23
Y = 399433.54
X = 599348.21
SE = 2%

PI STA = 204+94.97
Y = 399381.40
X = 599575.03
DELTA = 23°39'34"
D = 33°42'12"
T = 35.61'
L = 70.20'
R = 170.00'
PC STA = 204+59.36
Y = 399389.4
X = 599540.33
PT STA = 205+29.56
Y = 399360.16
X = 599603.62
SE = 2%

JOHNSTON FAMILY TRUST

PI STA = 206+62.06
Y = 399281.15
X = 599709.97
DELTA = 23°44'13"
D = 33°42'12"
T = 35.73'
L = 70.43'
R = 170.00'
PC STA = 206+26.33
Y = 399302.5
X = 599681.29
PT STA = 206+96.76
Y = 399273.19
X = 599744.80
SE = N/A

N

BM-3

SLOPE INTERCEPT (TYP.)

PC: 201+91.83

PT: 202+62.23

℄ TEMPORARY BYPASS

TEMPORARY BRIDGE REQ'D

PC: 204+59.36

PT: 205+29.56

BURIED TELEPHONE (FRONTIER COMMUNICATIONS)

TLE

FIELD EDGE

PT: 200+96.45

BP: 200+00.00

PCC: 200+21.60

201+54.31, -9.00' LT

202+00

202+69.83, 9.00' RT

202+54.80, 8.00' RT

203+00

S77° 03' 08"E

204+00

204+66.80, 8.00' RT

204+84.72, 9.00' RT

205+00

204+54.41, 9.00' RT

204+85.21, 11.07' RT

205+67.58, -9.00' LT

EXISTING R/W

PC: 206+26.33

S53° 23' 34"E

206+00

N79° 13' 18"E

201+00

201+49.97, 9.00' RT

202+40.30, 11.29' RT

CP-3

202+36.86, 9.00' RT

205+16.22, 9.00' RT

205+26.24, 8.00' RT

205+44.34, 9.00' RT

206+13.97, -8.00' LT

PT: 206+96.76

EP: 207+24.13

5+00

7+00

8+00

USH 10

9+00

10+00

11+00

12+00

13+00

207+00 S77° 07' 47"E

201+08.00, -8.00' LT

200+72.47, -15.45' LT

200+55.51, -13.02' LT

201+95.36, 8.00' RT

206+49.11, -15.48' LT

206+66.19, -13.09' LT

STA 6+50.00 R/L USH 10 =
STA 200+00.00 R/L BRIDGE BYPASS
Y = 399,424.798
X = 599,089.500

STA 13+50.00 R/L USH 10 =
STA 207+24.13 R/L BRIDGE BYPASS
Y = 399,267.097
X = 599,771.488

PT: 7+68.27

OVERHEAD ELECTRIC
(RIVERLAND ENERGY COOPERATIVE)

DOUGLAS D OLSON

HOLMES CREEK

CP-2

JOHNSTON FAMILY TRUST

EXISTING R/W

16'

40'

60'

50'

5

5

VCL = 230.00

K = 138.37

STA 200+95.49
EL 808.74

STA 201+14.78
EL 808.55

STA 201+33.60
EL 808.16

-0.99%

-2.08%

-1.52%

FINISHED ℄ PROFILE

0.14%

STA 206+25.45
EL 806.20

VPC STA 201+77.25
VPC EL 807.49

EXISTING GROUND

VPI STA 202+92.25
VPI EL 805.74

VPT STA 204+07.25
VPT EL 805.90

BYPASS EARTHWORK CONST.
STA 200+00 - STA 207+24.13

EXC. COMMON	368 CY
FILL	365 CY
FILL EXPANSION	30 %
BORROW	108 CY

BYPASS EARTHWORK REMOVAL
STA 200+00 - STA 207+24.13

EXC. COMMON	741 CY
FILL	354 CY
FILL EXPANSION	30 %
BORROW	604 CY

STA 203+60 = STA 9+97, 68' LT
TEMPORARY BRIDGE REQ'D
HIGHWATER 5 = 801.13
Qs = 330 CFS
MINIMUM CLEAR OPENING OF
TEMP STRUCTURE = 63 SF
MINIMUM 14.5' CLEAR SPAN
MINIMUM LOW CHORD ELEV. = 802.0
16' CLEAR WIDTH BETWEEN RAILS

EXISTING
PROPOSED

809.94		809.53		808.69	808.70	805.90	807.91	805.32	807.17	804.61	806.58	804.11	806.17	797.54	805.94	805.34	805.89	806.23	805.96	807.21	806.03	802.50	806.10	805.23	806.17	806.23		805.96	

810
805
800
795

200+00 201+00 202+00 203+00 204+00 205+00 206+00 207+00

PROJECT NO: 1533-00-70	HWY: USH 10	COUNTY: BUFFALO	PLAN AND PROFILE: TEMPORARY BYPASS	SHEET 13 E

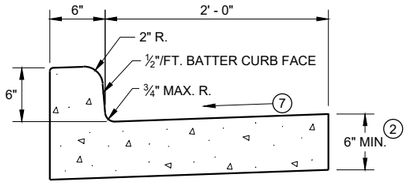
FILE NAME : G:\00\00093\00093525\CADD\DESIGN\ALIPROFS\BYPASS P&P.DWG
LAYOUT NAME - 050102-pp BYPASS

PLOT DATE : 7/27/2021 2:10 PM PLOT BY : JASON DOLENS PLOT NAME : PLOT SCALE : 1 IN:50 FT

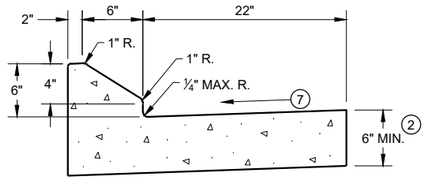
WISDOT/CADDS SHEET 44

Standard Detail Drawing List

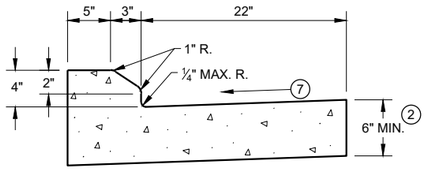
08D01-22A	CONCRETE CURB & GUTTER
08D01-22B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D02-07A	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-07B	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-07C	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
09G02-05A	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05B	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05C	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
12A03-10	NAME PLATE (STRUCTURES)
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13B02-09B	STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-07	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D31-03	TRAFFIC CONTROL, TEMPORARY BYPASS ROADWAY
15D33-06	TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



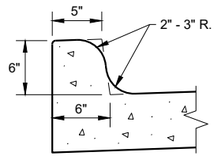
TYPES A (1) & D



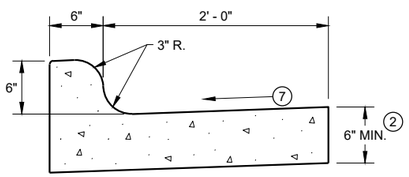
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

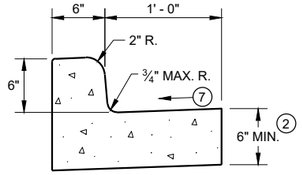


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



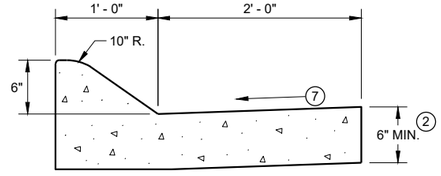
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

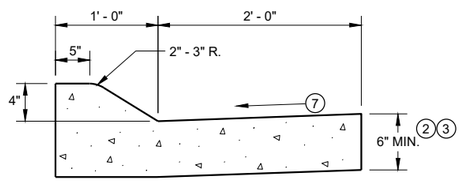


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

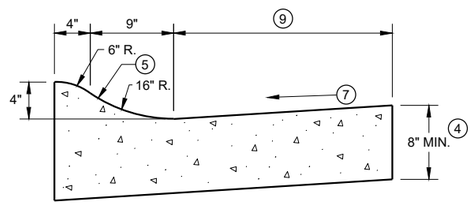


6" SLOPED CURB TYPES A (1) & D



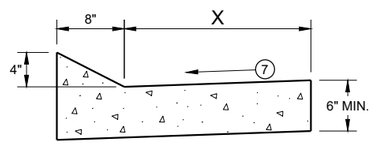
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T

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

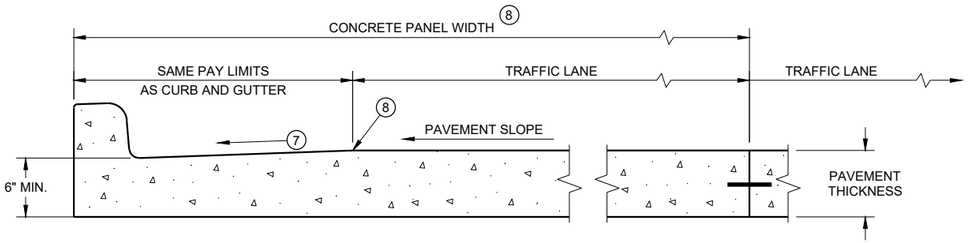


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

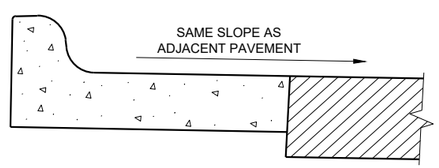
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

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

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

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

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

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

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

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

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

(5) UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

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

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

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

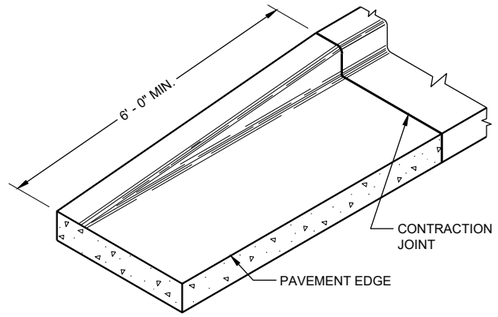
(9) CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

CONCRETE CURB AND GUTTER

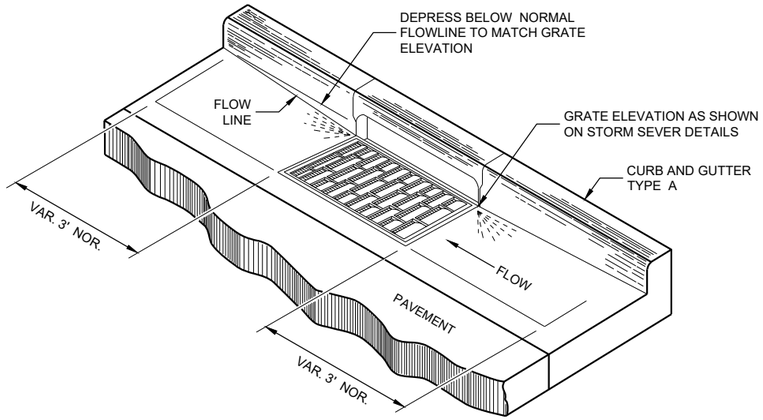
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D01 - 22a
SDD 08D01 - 22a



END SECTIONCURB AND GUTTER



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

GENERAL NOTES

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

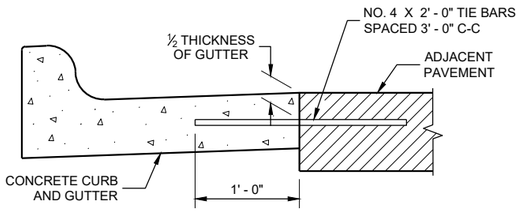
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

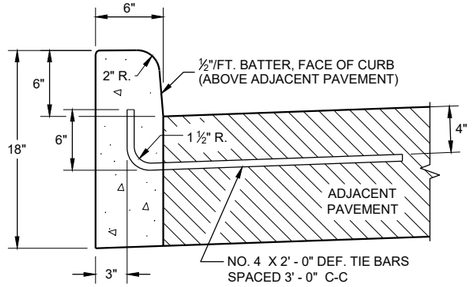
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

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

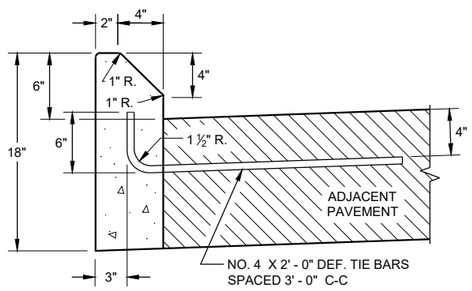
(9) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



TYPICAL TIE BAR LOCATION (1)

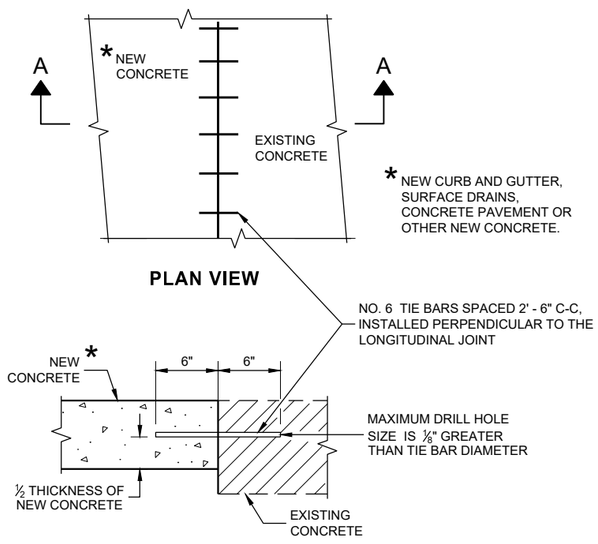


TYPES A (1) & D



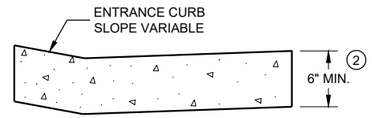
TYPES G (1) & J

CONCRETE CURB



SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB (9)
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA

6

SDD08D01 - 22b

GENERAL NOTES

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

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

(1) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

(2) NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.

(3) PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.

(4) CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02.

(5) PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

(6) CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

(7) PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)

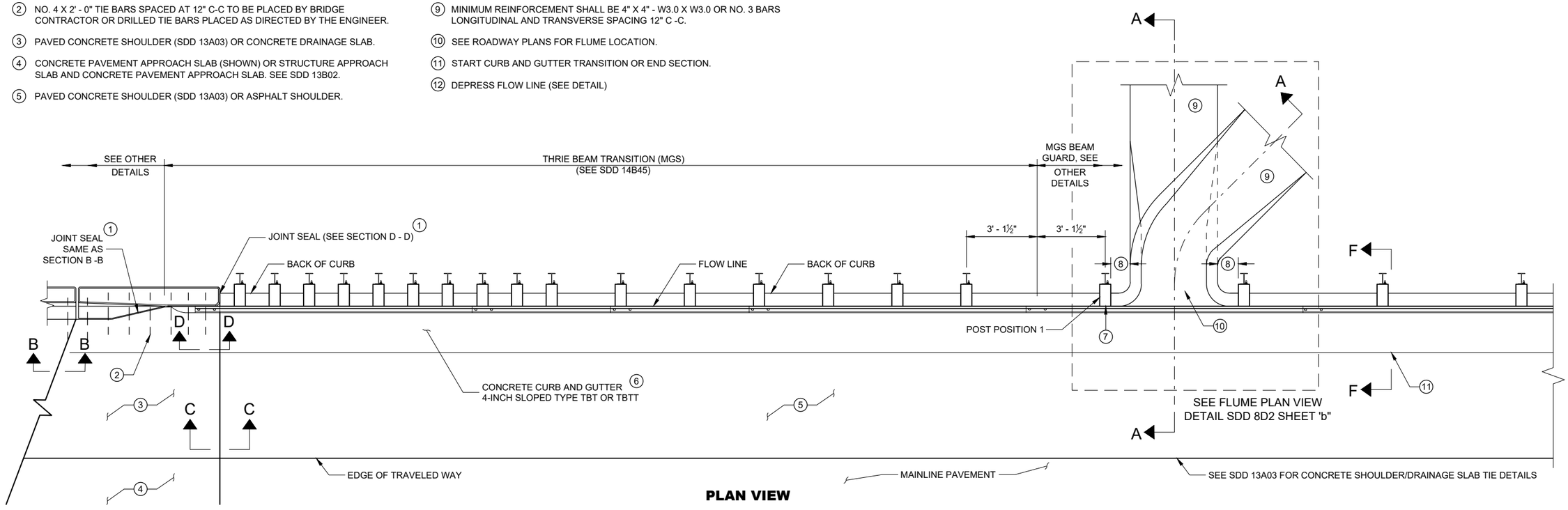
(8) CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.

(9) MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.

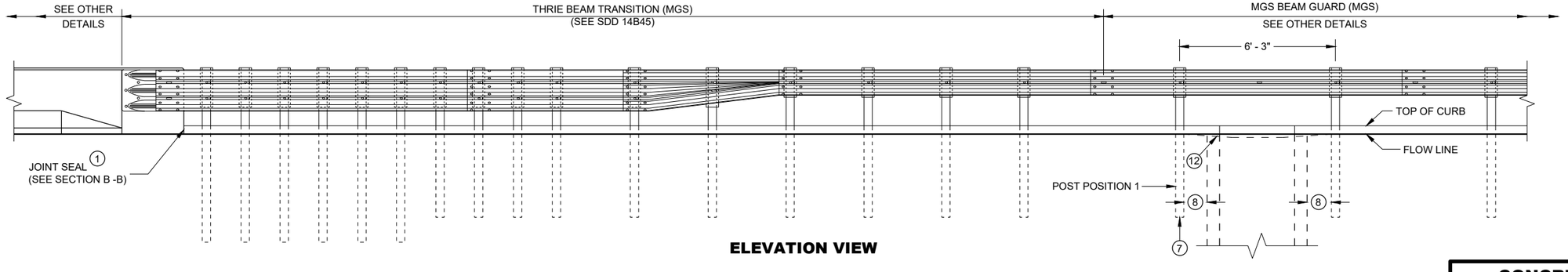
(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

(11) START CURB AND GUTTER TRANSITION OR END SECTION.

(12) DEPRESS FLOW LINE (SEE DETAIL)



PLAN VIEW



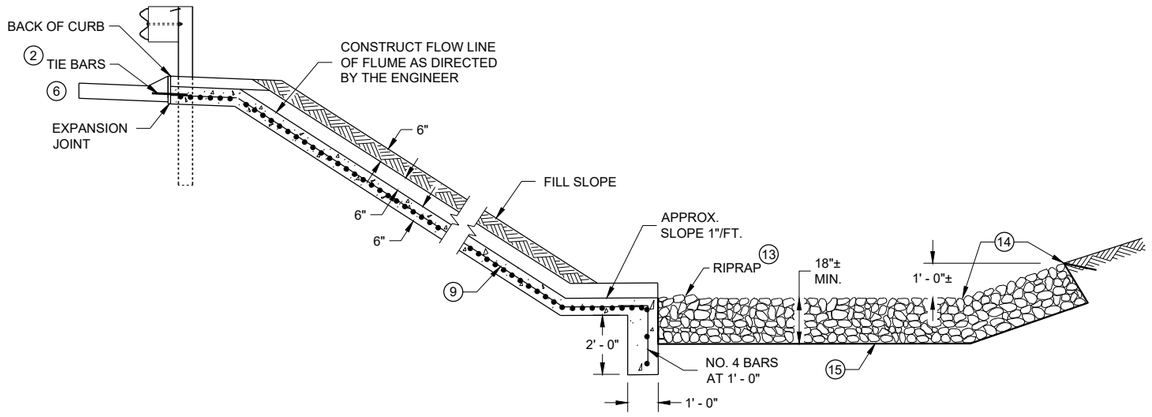
ELEVATION VIEW

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

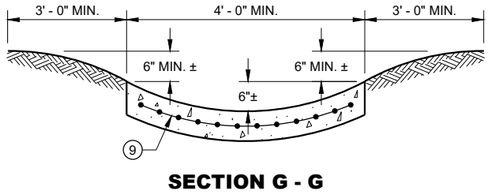
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D02 - 07a

SDD 08D02 - 07a



SECTION A - A



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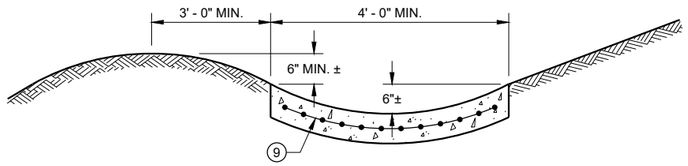

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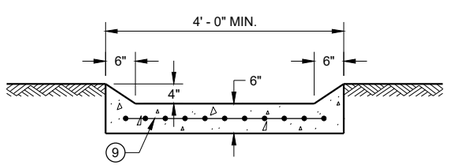
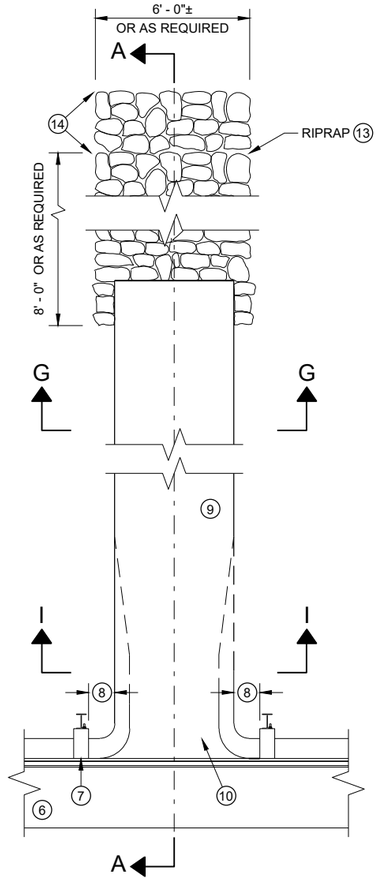
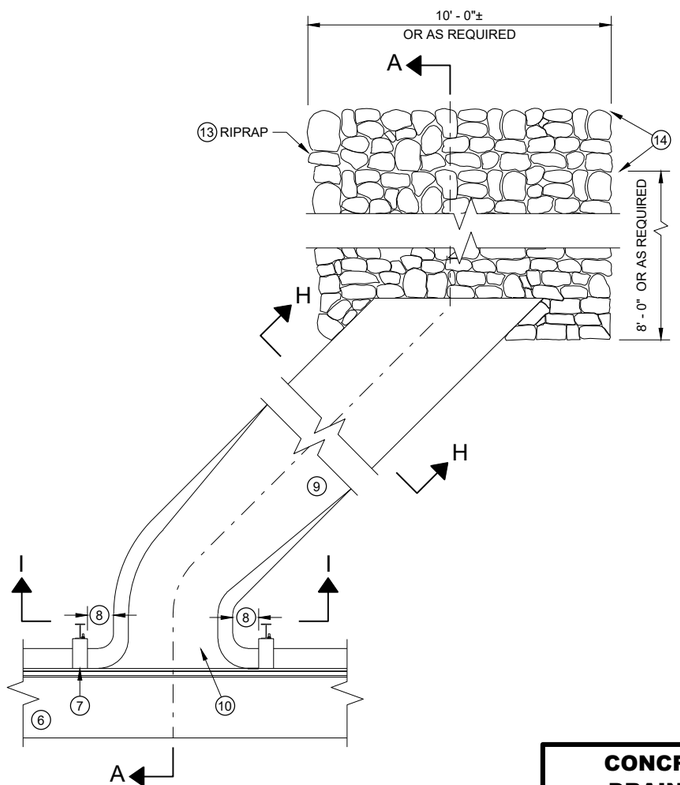


SECTION I - I



PLAN VIEW PERPENDICULAR FLUME



PLAN VIEW SKEWED FLUME

GENERAL NOTES

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

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

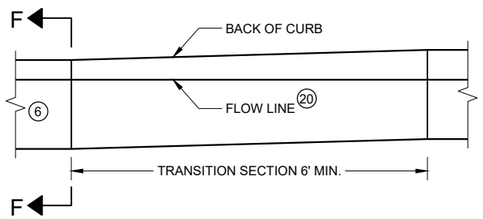
1. USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
2. NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
3. PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
4. CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.
5. PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
6. CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
7. PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
8. CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
9. MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.
10. SEE ROADWAY PLANS FOR FLUME LOCATION.
11. START CURB AND GUTTER TRANSITION OR END SECTION.
12. DEPRESS FLOW LINE (SEE DETAIL)
13. MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
14. LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH AS REQUIRED.
15. GEOTEXTILE FABRIC TYPE HR.

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

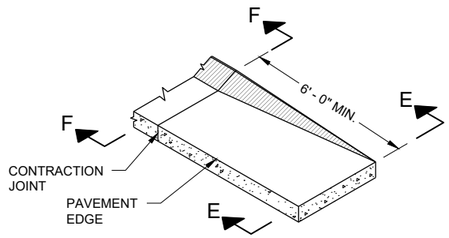
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

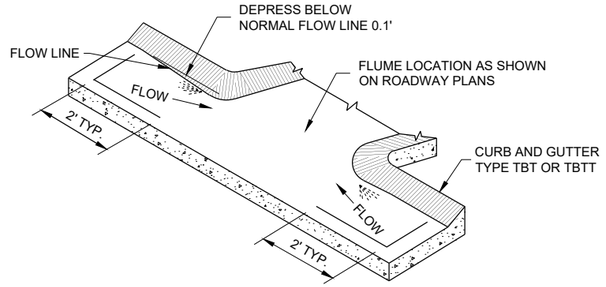
SDD 08D02 - 07b



CURB AND GUTTER TRANSITION SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT



CURB AND GUTTER END SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT



CURB AND GUTTER FLOW LINE DEPRESSION
AT FLUMES CONCRETE CURB AND GUTTER
4-INCH SLOPED 36 INCH TYPE TBT OR TBTT

GENERAL NOTES

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

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

(1) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

(2) NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.

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(9) MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.

(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

(11) START CURB AND GUTTER TRANSITION OR END SECTION.

(12) DEPRESS FLOW LINE (SEE DETAIL)

(13) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

(14) LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.

(15) GEOTEXTILE FABRIC TYPE HR.

(16) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.

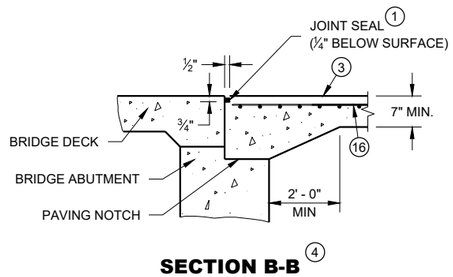
(17) MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.

(18) MAINTAIN WIDTH, THICKNESS AND CROSS SLOPE OF ADJACENT TYPE TBT OR TBTT CURB. SEE NOTE 6 FOR TIE BAR SPACING.

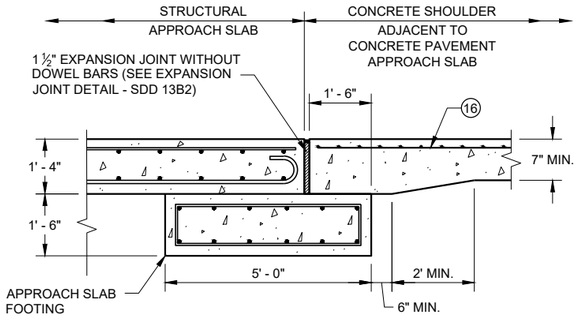
(19) ALIGN FACE OF POST BLOCK WITH FLOW LINE.

(20) MAINTAIN FLOW LINE AT EDGE OF PAVEMENT/FACE OF BEAM GUARD AS APPLICABLE.

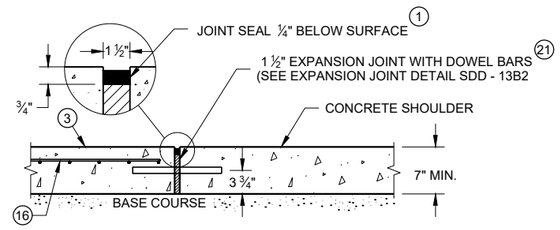
(21) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.



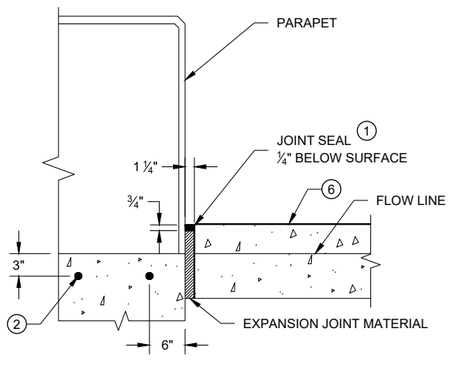
SECTION B-B (4)



SECTION C - C
JOINT DETAIL FOR BRIDGE WITH STRUCTURAL APPROACH SLAB AND CONCRETE APPROACH SLAB



SECTION C - C
JOINT DETAIL FOR BRIDGE APPROACH WITH CONCRETE SHOULDERS



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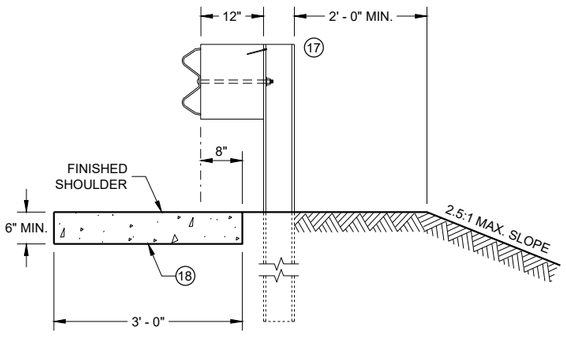
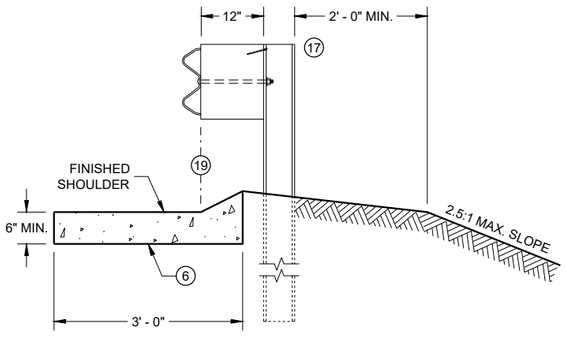


SECTION E - E



SECTION F - F

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

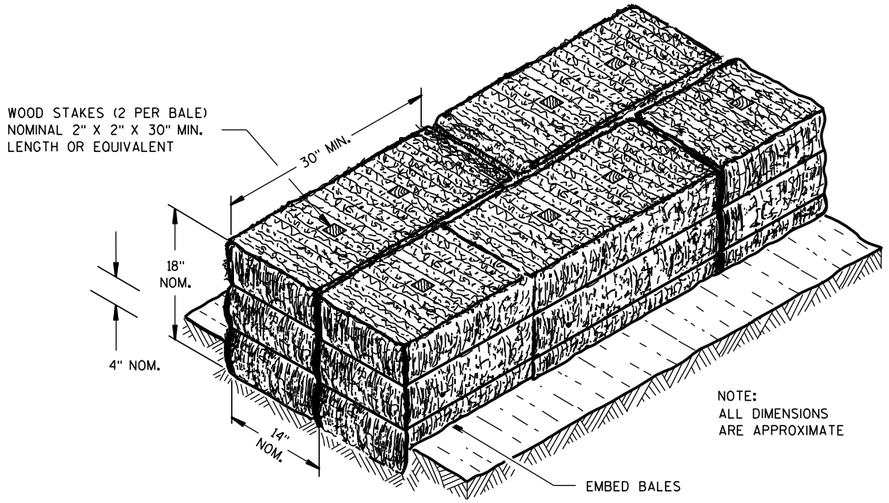
APPROVED
February 2020
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
ENGINEER

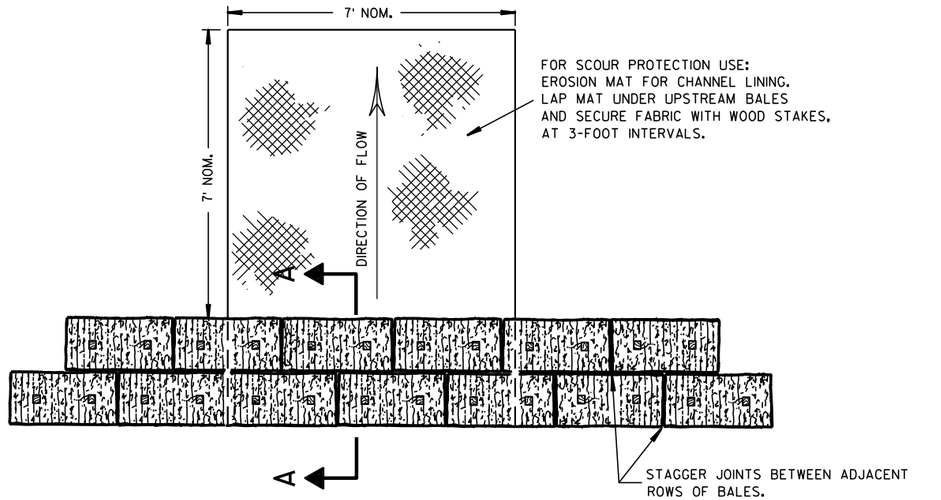
FHWA

6

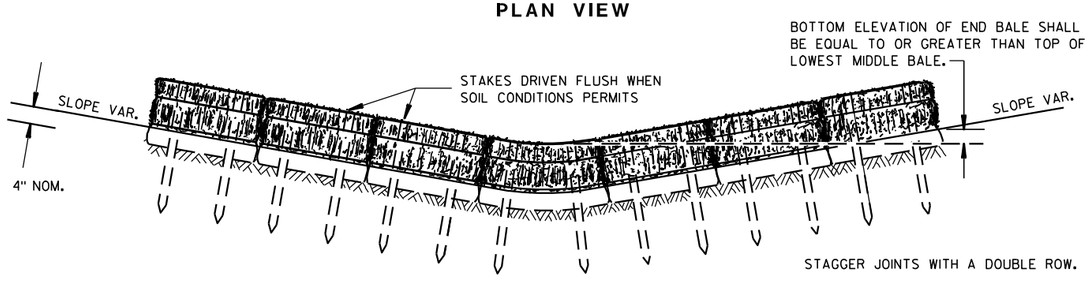
SDD 08D02 - 07c



SECTION A-A



PLAN VIEW



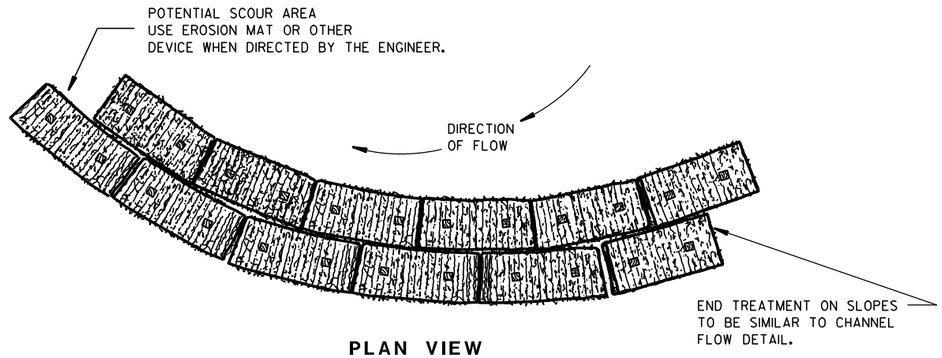
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

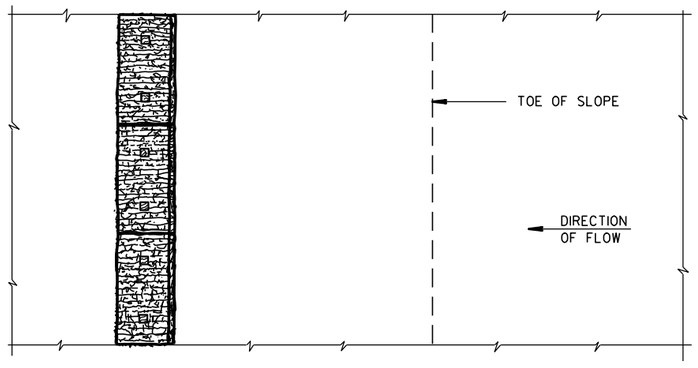
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

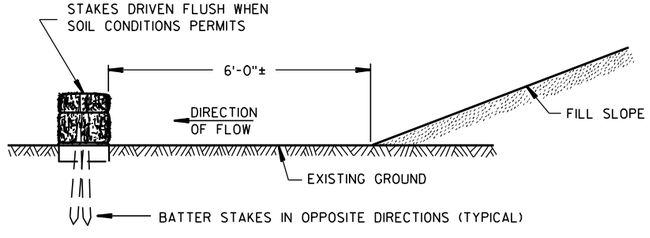


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

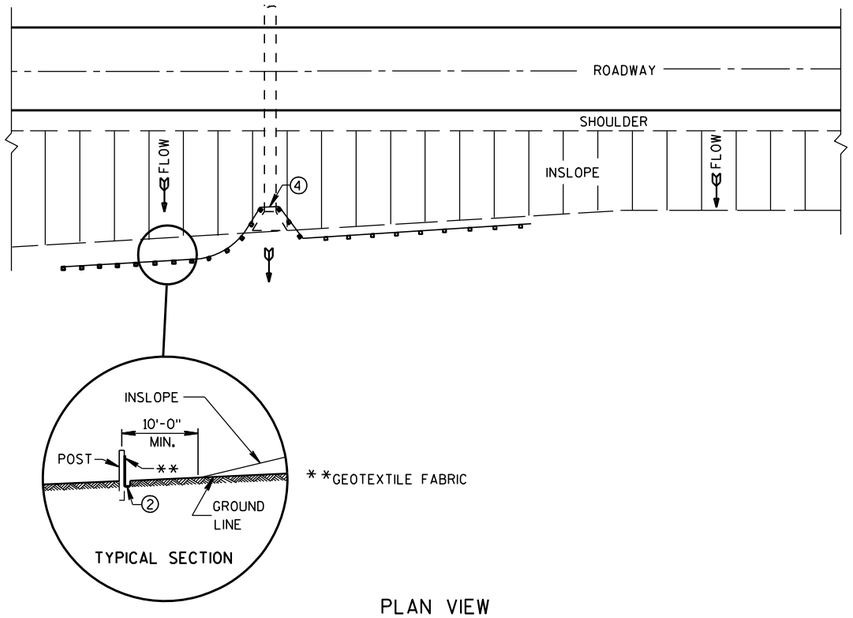
6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

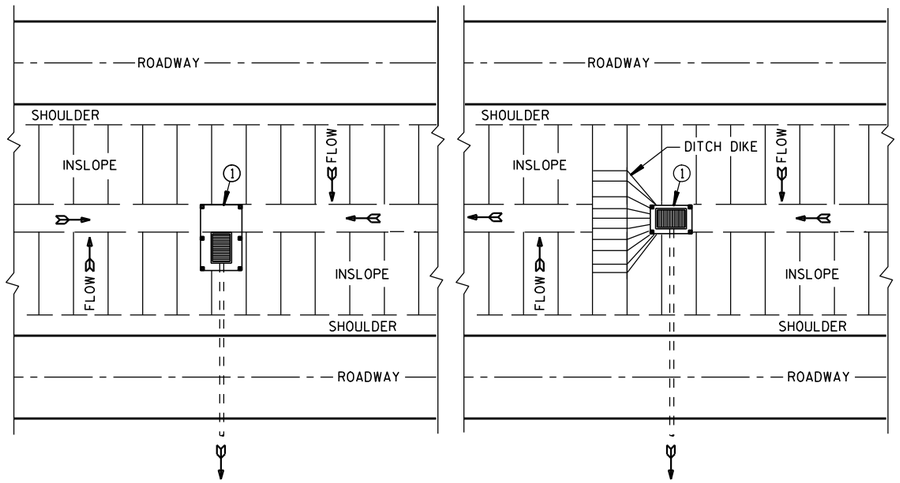
6

S.D.D. 8 E 8-3



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.

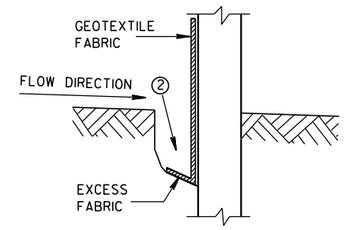
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

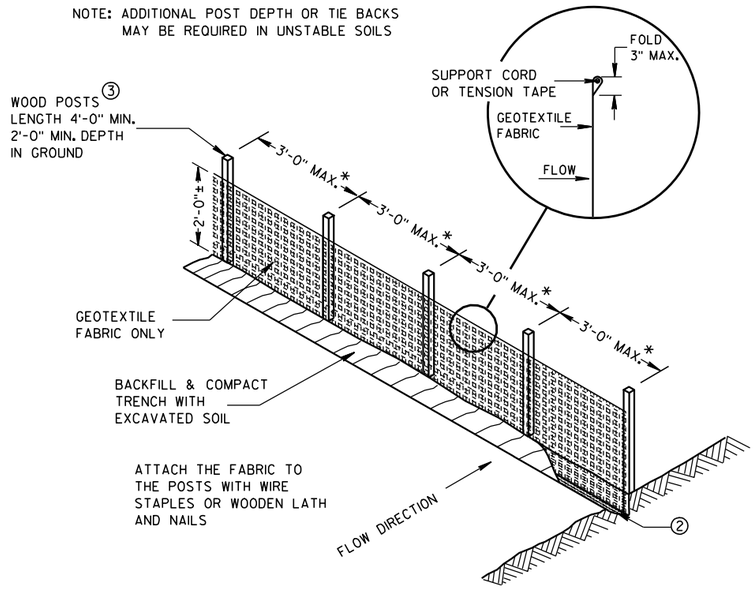
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

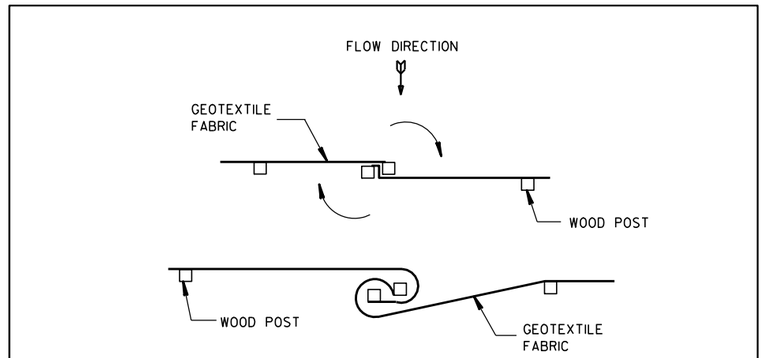
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



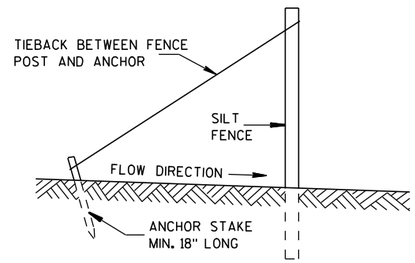
TRENCH DETAIL



SILT FENCE



JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

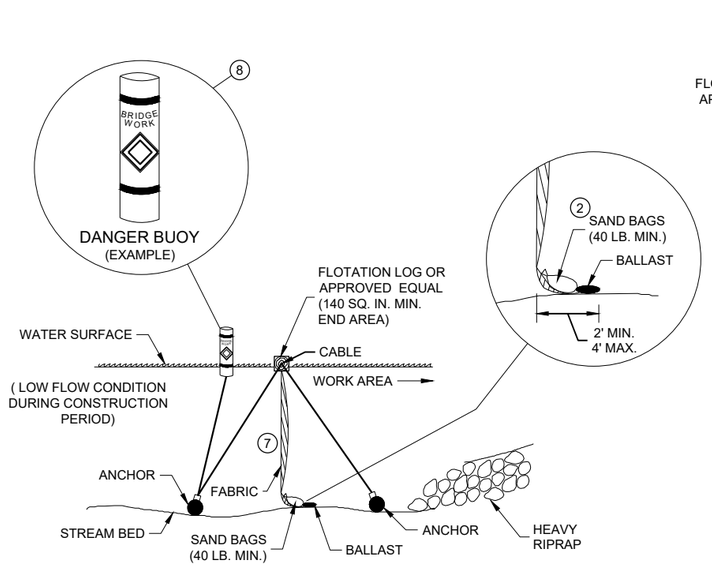
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

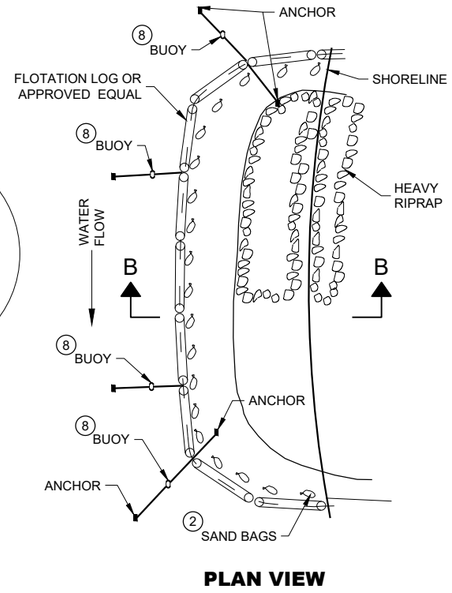
S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6

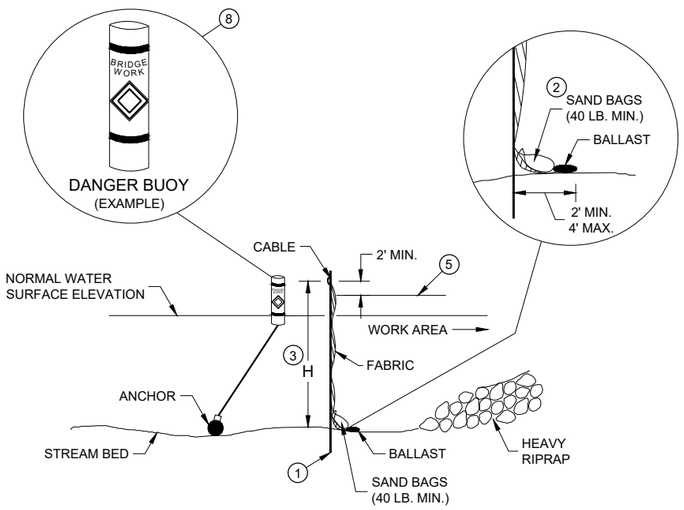


SECTION B - B

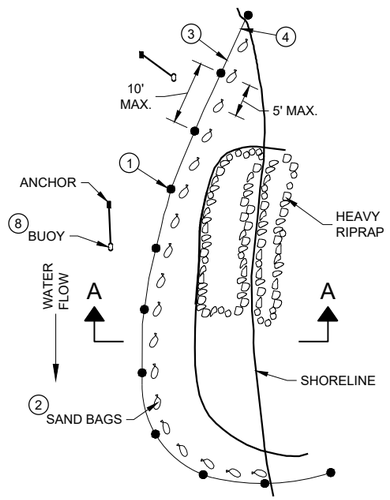


PLAN VIEW

TURBIDITY BARRIER - FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A - A



PLAN VIEW

TURBIDITY BARRIER - STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

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

TURBIDITY BARRIER MAY BE REMOVED AT THE ENGINEERS DISCRETION, WHEN PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED.

(1) DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.

(2) SAND BAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.

(3) WHEN BARRIER HEIGHT "H" EXCEEDS 8 FEET, POST SPACING MAY NEED TO BE DECREASED.

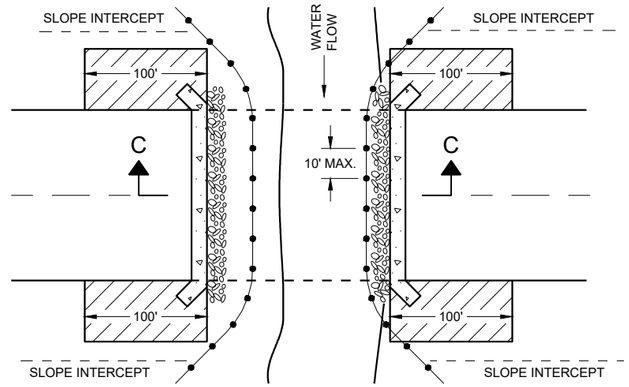
(4) IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

(5) ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE Q2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.

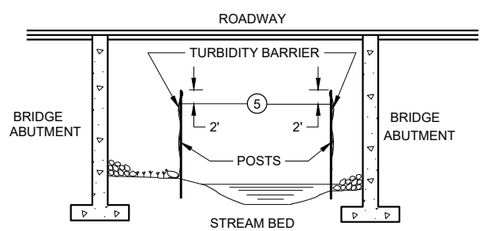
(6) FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.

(7) ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.

(8) USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



PLAN VIEW



SECTION C - C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/4/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOI
ENGINEER

FHWA

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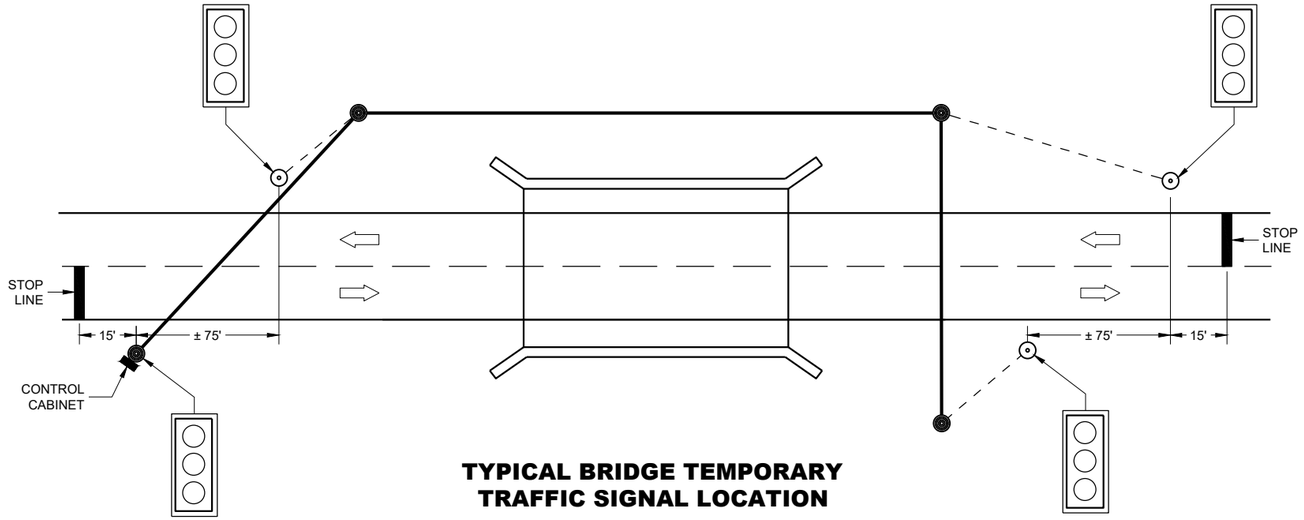
SDD 08E11 - 02



TYPICAL BRIDGE TEMPORARY TRAFFIC SIGNAL LOCATION

LEGEND

- WOOD POLE (NON-BREAKAWAY)
- WOOD POST (BREADAWAY)
- SIGNAL CABLE
- SIGNAL CABLE W/MESSENGER
- DIRECTION OF TRAFFIC
- LED TRAFFIC SIGNAL WITH BACKPLATE (3-12")

GENERAL NOTES

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

POLE MOUNTED TRAFFIC SIGNAL CONTROL CABINET MAY BE MOUNTED ON THE SERVICE POLE IF THE ELECTRICAL UTILITY ALLOWS THE INSTALLATION.

WHEN UTILITY POLES ARE USED TO SPAN THE TEMPORARY OVERHEAD CABLE, WRITTEN PERMISSION MUST BE OBTAINED FROM THE OWNER OF THE POLES AND GIVEN TO THE PROJECT MANAGER. ALL PERTINENT UTILITY AND CODE CLEARANCES SHALL BE MAINTAINED.

WOOD POLES (NON-BREAKAWAY) SHALL BE NO CLOSER TO EDGE OF PAVEMENT THAN OFFSET DISTANCE CHART ALLOWS OR 4 FEET BEHIND PROTECTIVE BARRIER (BEAM GUARD, ETC.).

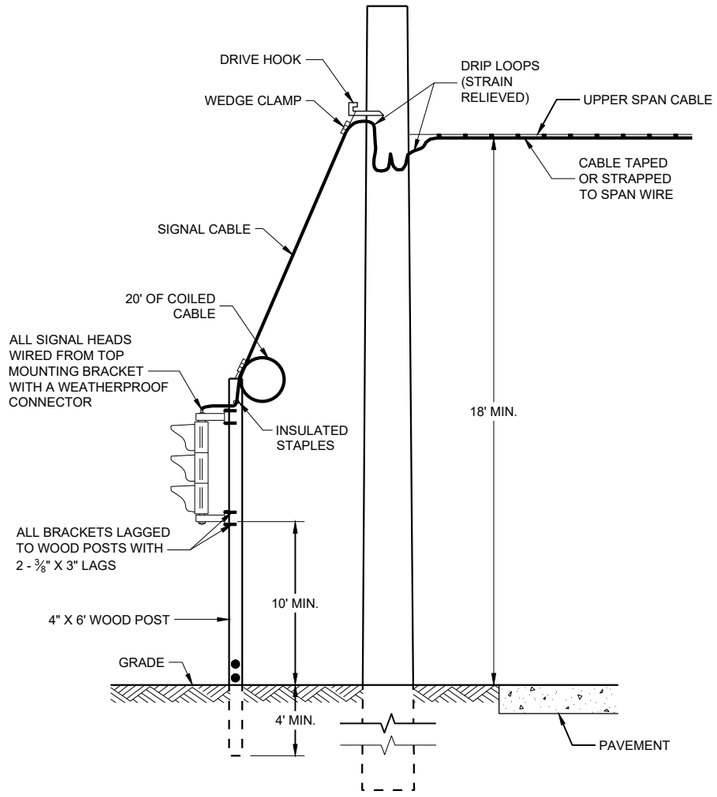
WOOD POSTS (BREAKAWAY) SHALL BE NO CLOSER THAN 2 FEET OUTSIDE OF SHOULDER.

VERTICAL CLEARANCE ETC. PER NEC.

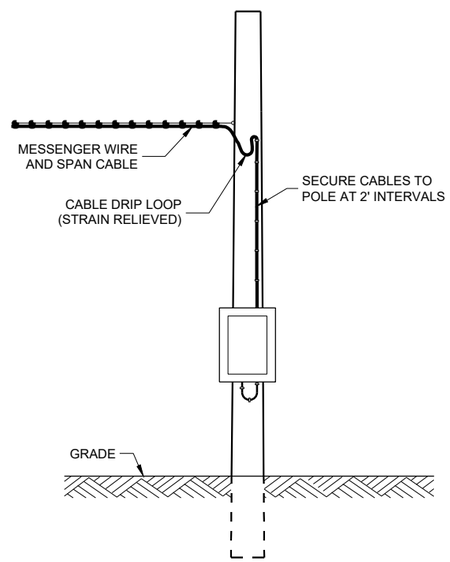
TRAFFIC SIGNAL FACES SHALL BE TYPICALLY PLACED 12 FEET FROM EDGE OF PAVEMENT.

EACH TRAFFIC SIGNAL SHALL HAVE A BACKPLATE.

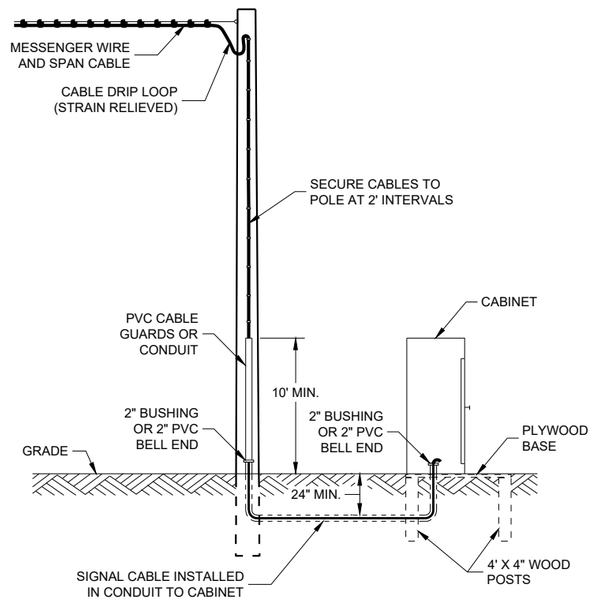
SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15D33.



TYPICAL DROP TO TRAFFIC SIGNAL FACE



POLE MOUNT CABINET INSTALLATION



GROUND MOUNT CABINET INSTALLATION

MINIMUM POLE LENGTHS	CLASS	POLE BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

OFFSET DISTANCES FOR TEMPORARY NON-BREAKAWAY POLES	
SPEED LIMIT	OFFSET DISTANCE*
GREATER THAN 45 MPH	18 FT
45 MPH OR LESS	12 FT
45 MPH OR LESS W/CURBS	2 FT

* NOTE: OFFSET MEASURED FROM OUTER EDGE OF OUTSIDE THRU LANE.

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Ahmet Demirbilek — ROADWAY STANDARDS DEVE ENGINEER

FHWA

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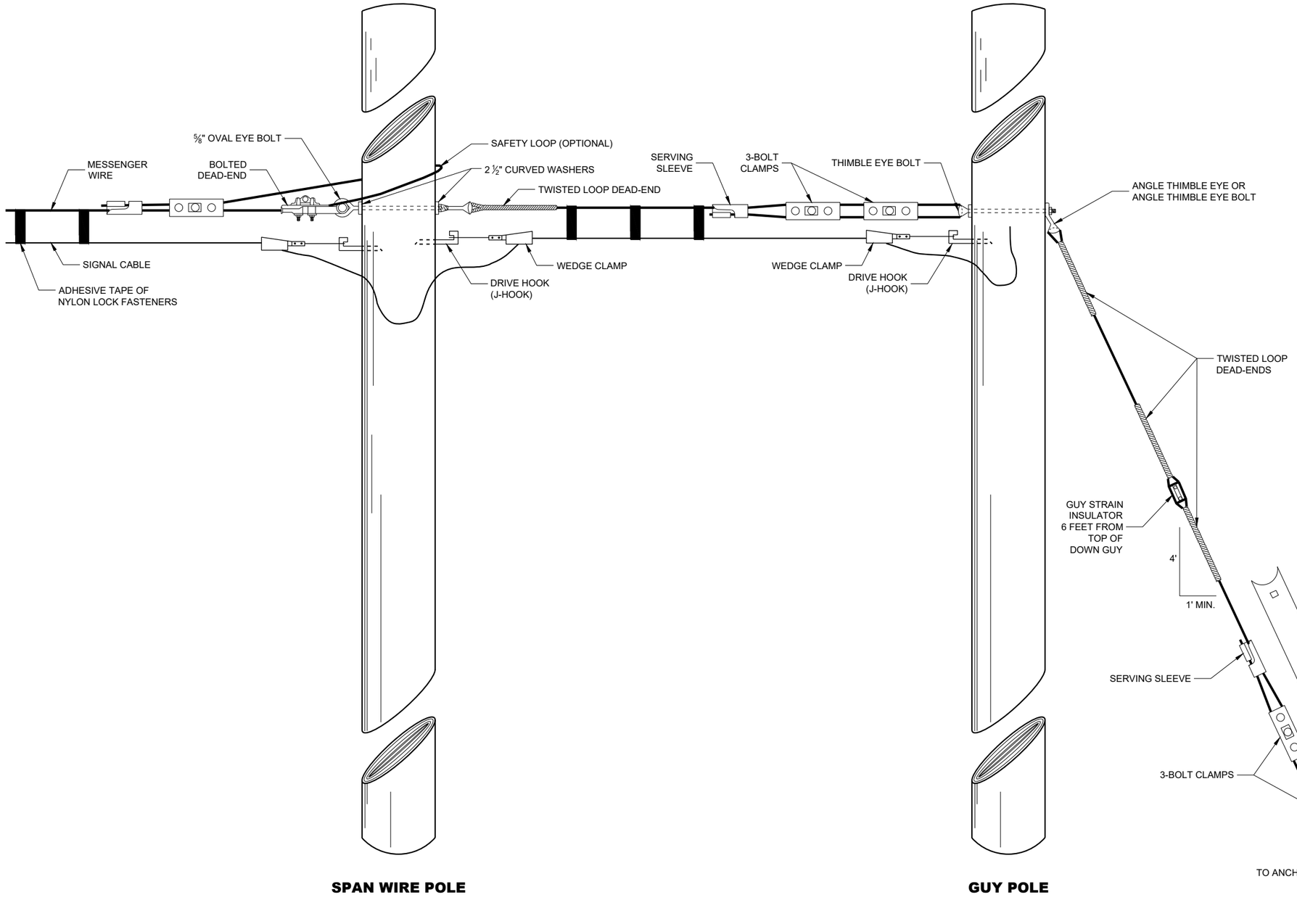
SDD09G02 - 05a

SDD09G02 - 05a

GENERAL NOTES

USE ¾" DRILL IN WOOD POLE TO PROVIDE FOR ⅝" BOLTS.



SPAN WIRE POLE

GUY POLE

TYPICAL DEAD-ENDINGS OR GUYING

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2015 — DATE
/S/ Ahmet Demerbilek — ROADWAY STANDARDS DEVE ENGINEER

FHWA

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SDD09G02 - 05b

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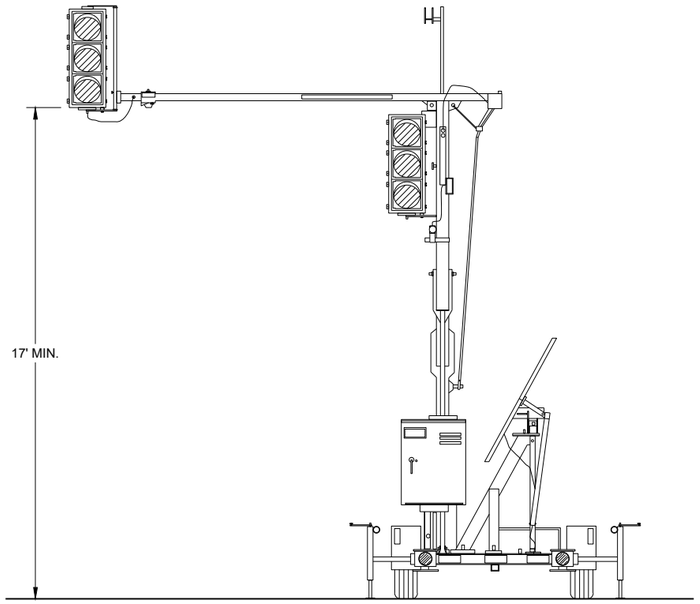
SDD09G02 - 05b

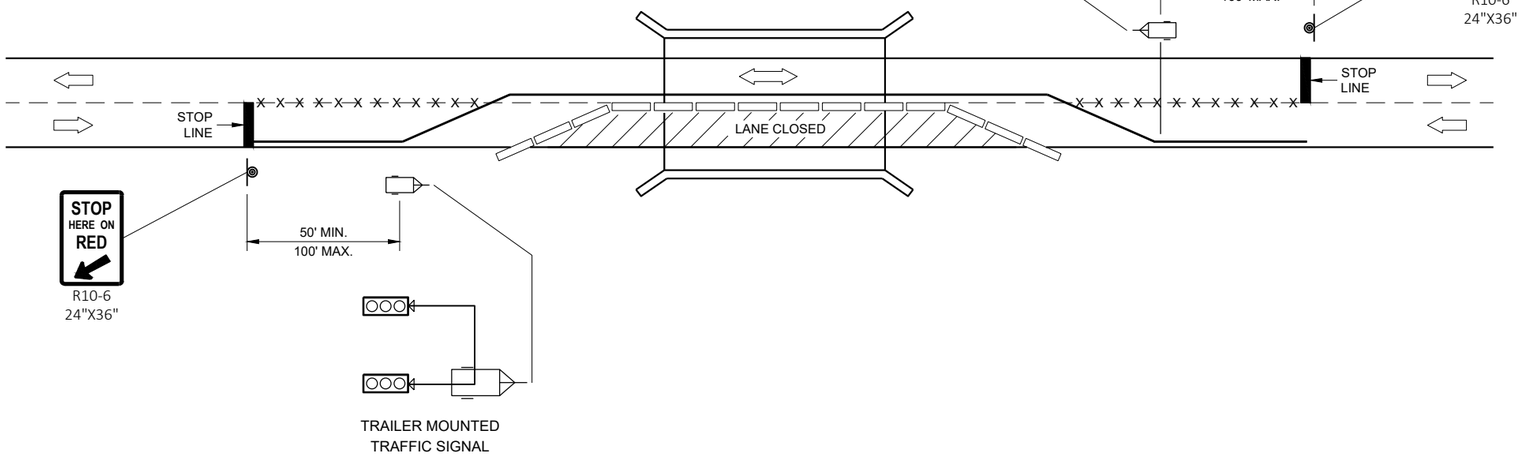


TRAILER MOUNTED TRAFFIC SIGNAL

GENERAL NOTES

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

SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15D33.



TYPICAL TRAILER MOUNTED TRAFFIC SIGNAL LOCATION

LEGEND

- POST MOUNTED SIGN
- TEMPORARY PRECAST CONCRETE BARRIER
- TRAILER MOUNTED TRAFFIC SIGNAL
- REMOVE PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

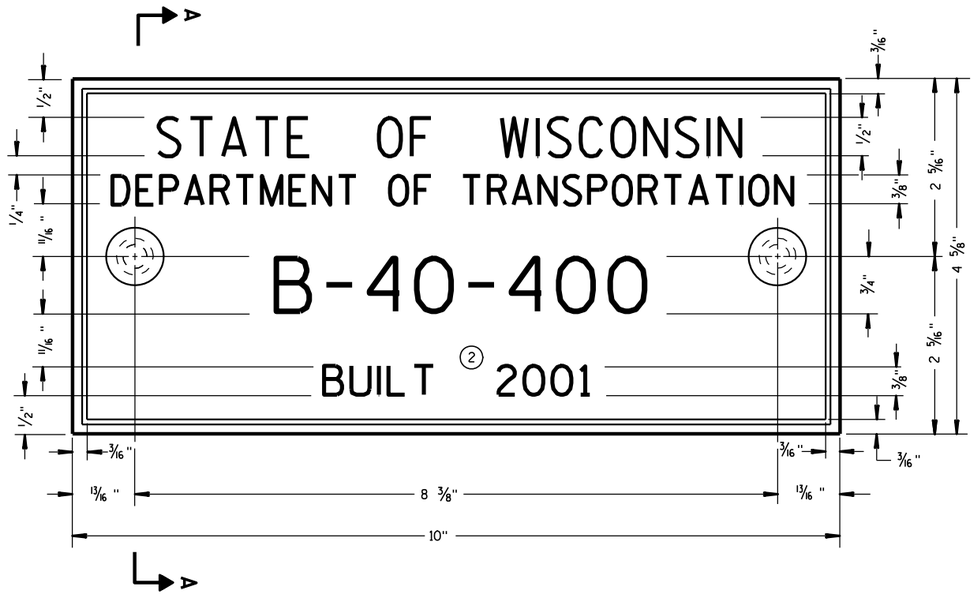
APPROVED
June 2015
DATE

/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

FHWA

SDD09G02 - 05c

SDD09G02 - 05c



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

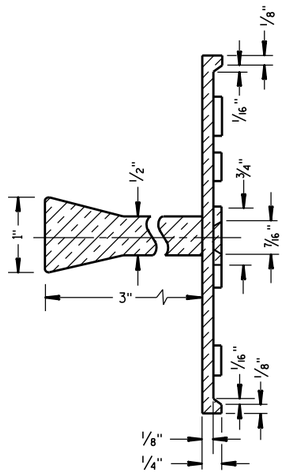
GENERAL NOTES

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.

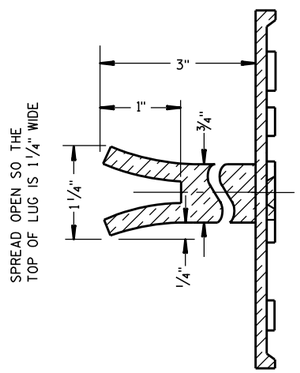
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

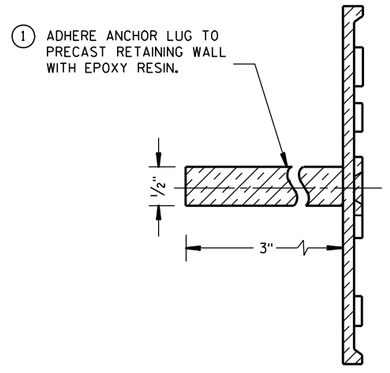
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



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 DEVELOP ENGINEER

FHWA

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S.D.D. 12 A 3-10

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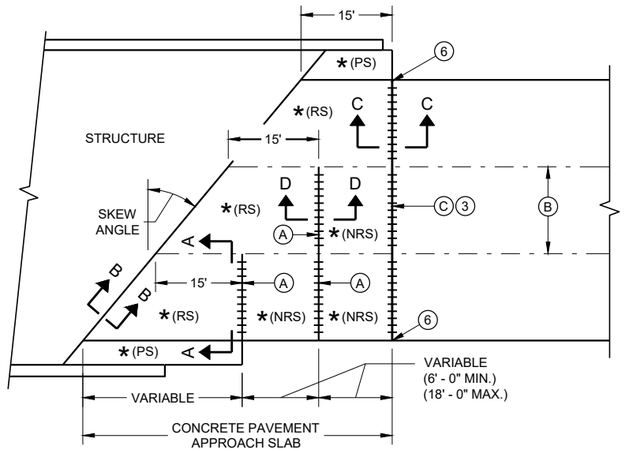
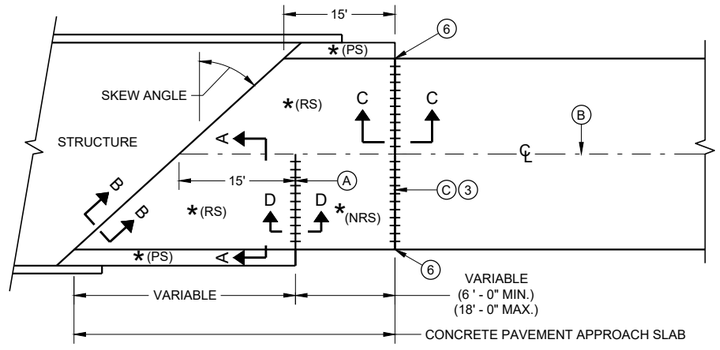
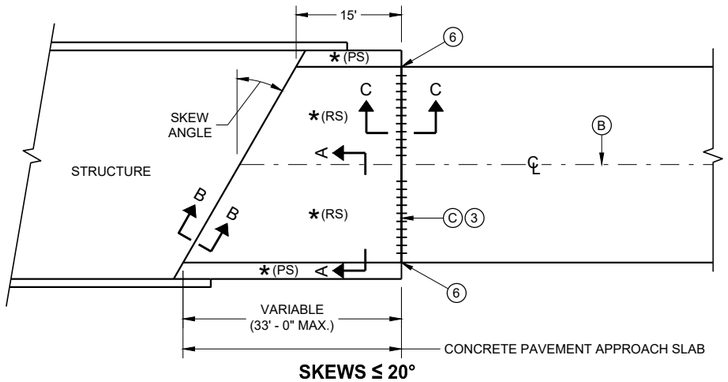
S.D.D. 12 A 3-10



SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)



SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')



SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

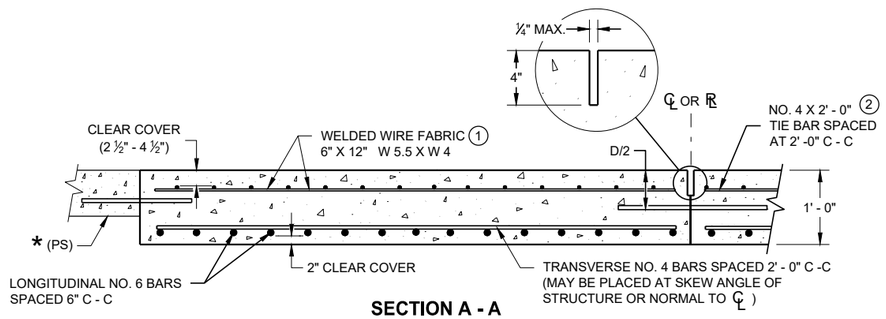
APPROACH SLAB AND ADJACENT PAVEMENT

* (RS) = REINFORCED CONCRETE SLAB

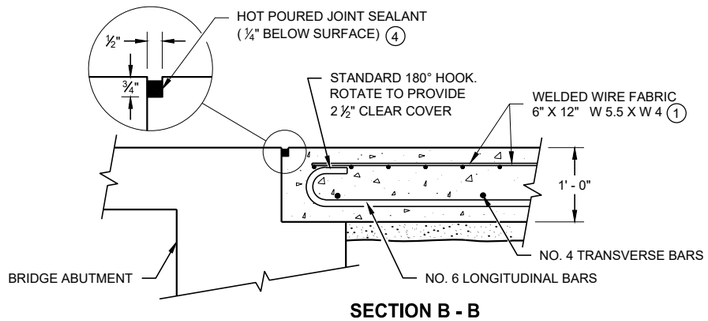
* (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB

* (NRS) - NON - REINFORCED CONCRETE SLAB

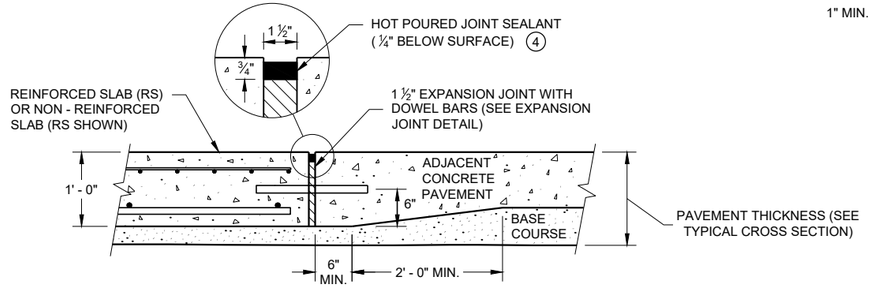
*** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



SECTION A - A
REINFORCEMENT POSITIONING DETAIL



SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

GENERAL NOTES

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

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

(1) THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0 " C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

(2) THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

(3) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

(4) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

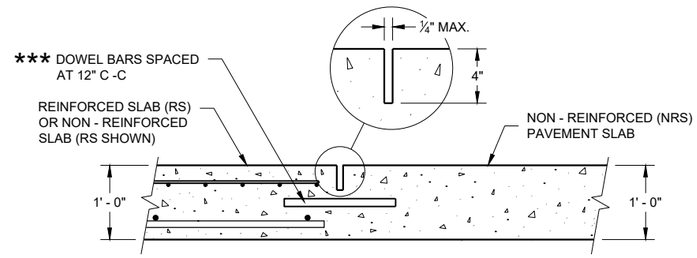
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

(6) EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.

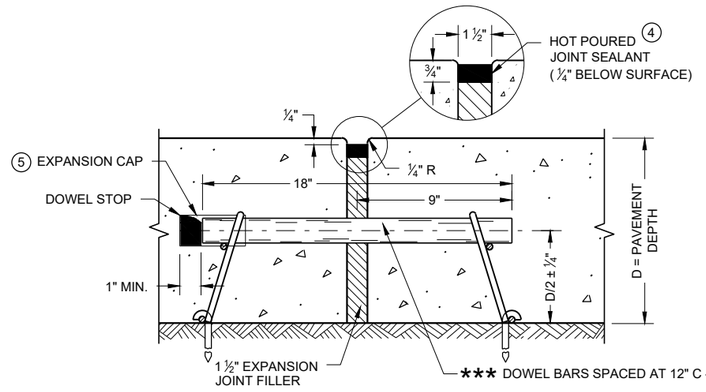
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

(C) 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞ .



SECTION D - D
CONTRACTION JOINT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Peter Kemp, P.E.
PAVEMENT SUPERVISO

FHWA

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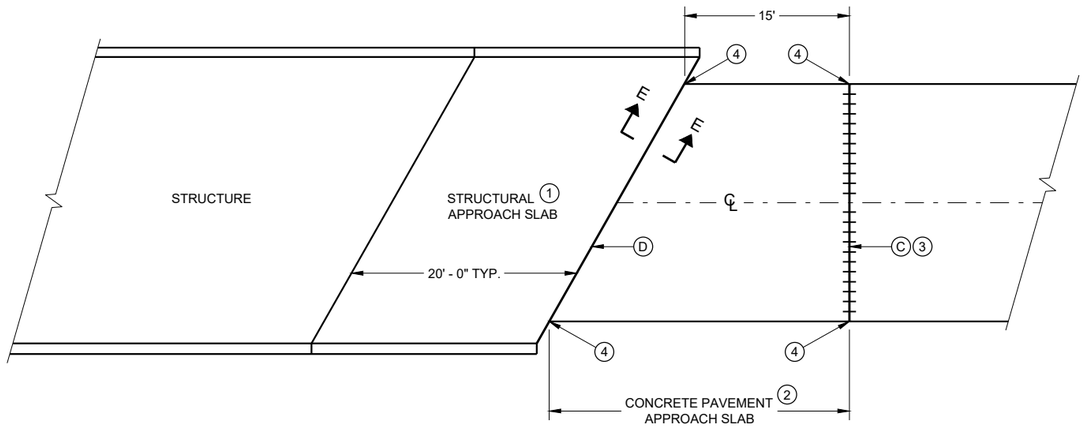
SDD 13B02 - 09a



BRIDGE APPROACHES

GENERAL NOTES

ALL PROJECTS THAT INVOLVE A STRUCTURAL APPROACH SLAB WILL ALSO HAVE A CONCRETE PAVEMENT APPROACH SLAB.

(1) SEE BRIDGE PLAN.

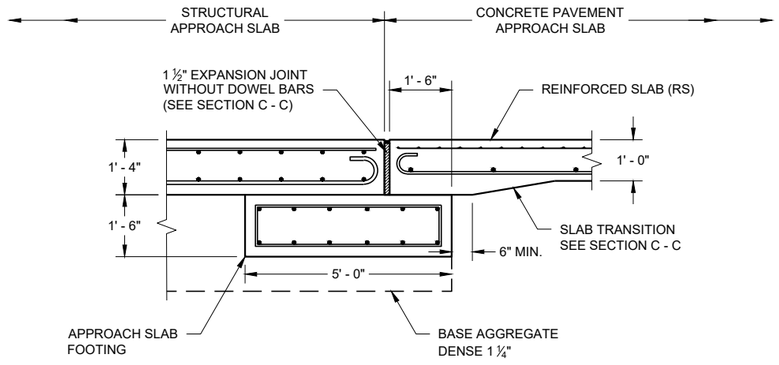
(2) CONFORM TO SDD 13B02 SHEET A FOR CONCRETE PAVEMENT APPROACH SLAB DETAILS

(3) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

(4) EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.

(C) 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞.

(D) 1 ½" EXPANSION JOINT (NO DOWELS)



SECTION E - E
FOOTING DETAIL
STRUCTURAL APPROACH SLAB TO CONCRETE BRIDGE APPROACH

STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

FHWA

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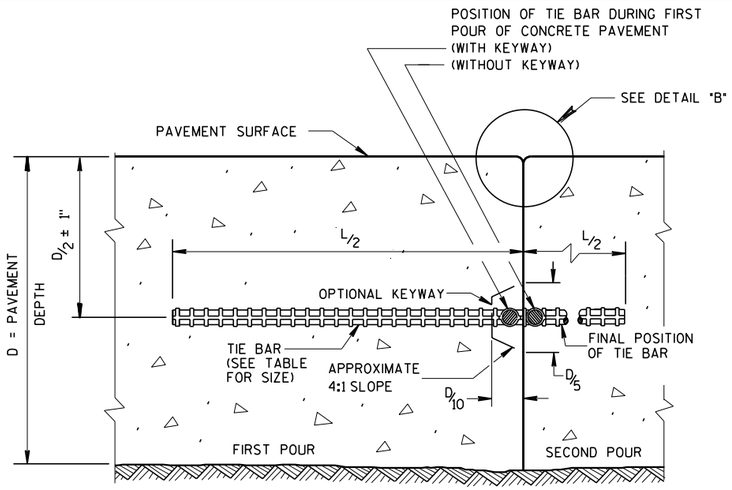
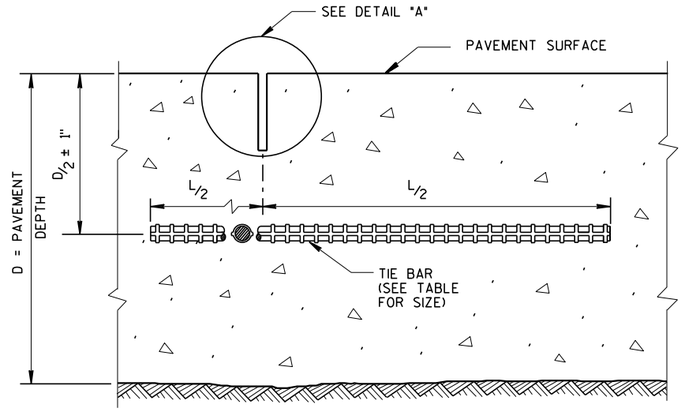
SDD 13B02 - 09b



CONSTRUCTION JOINT



SAWED JOINT

GENERAL NOTES

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

PLAN VIEW

SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

DETAIL "A"

DETAIL "B"

DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPE
FHWA

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S.D.D. 13 C 1-19

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

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

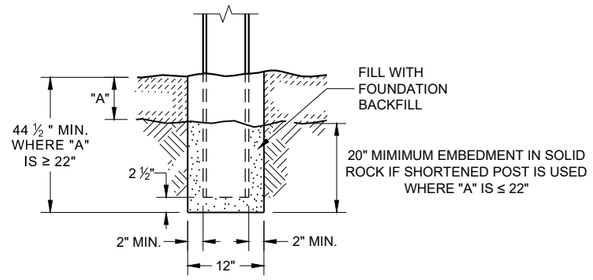
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

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

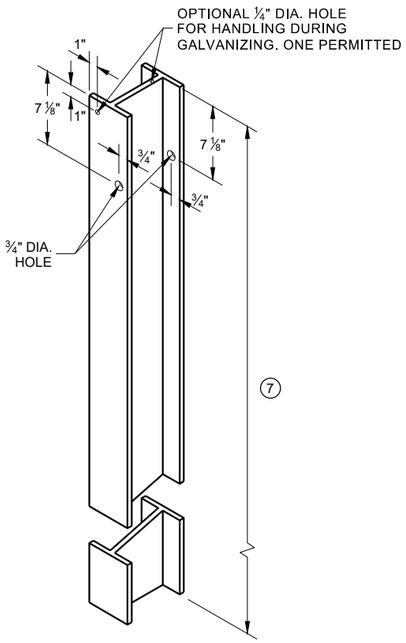
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

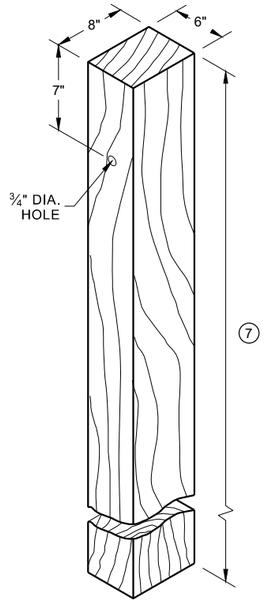
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



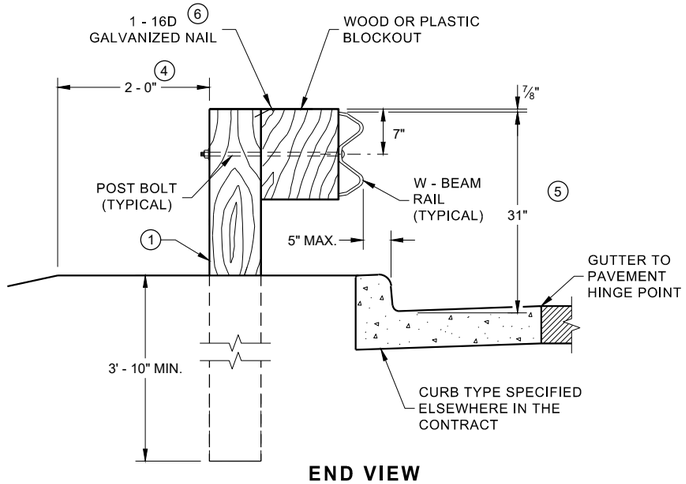
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



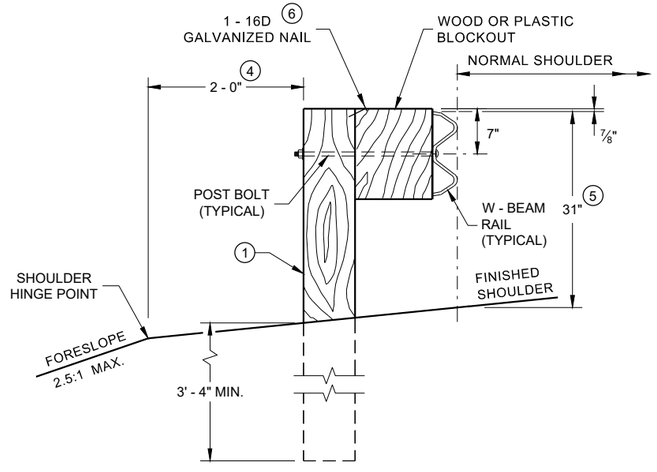
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



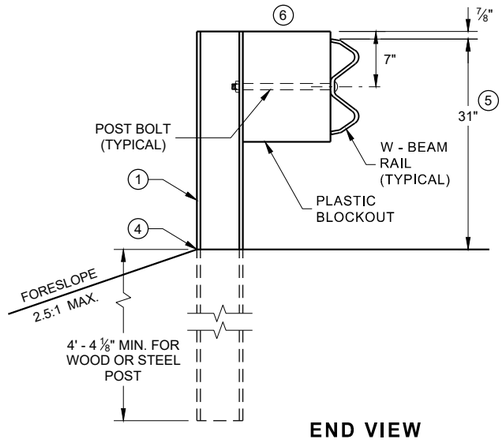
WOOD POST (6" X 8") NOMINAL (1)



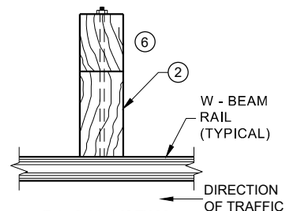
END VIEW
LOCATED ALONG A CURBED ROADWAY



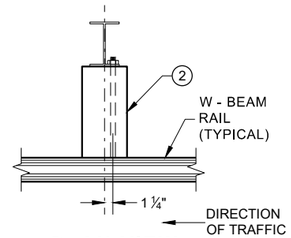
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



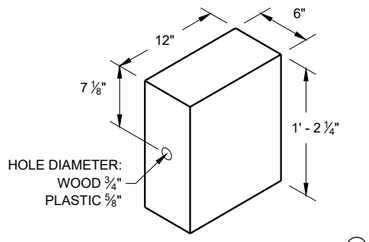
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

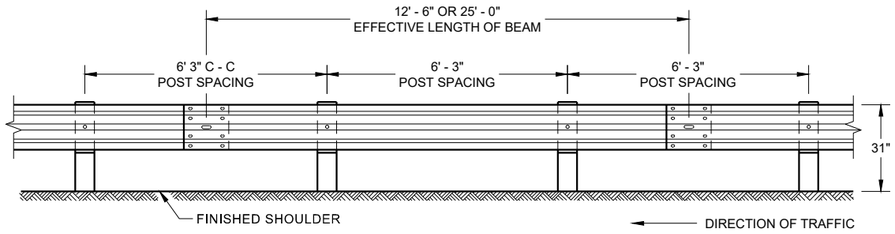
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

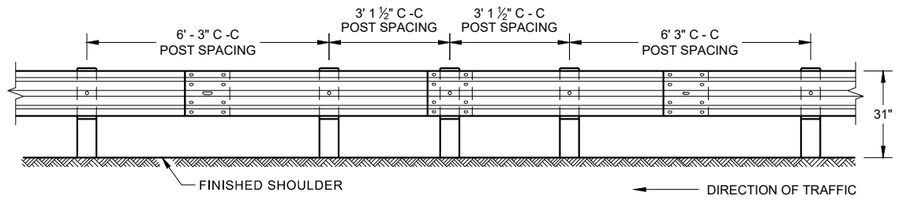
SDD 14B42 - 07a

6

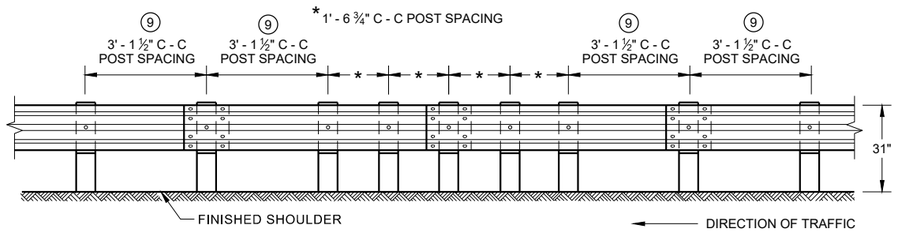
SDD 14B42 - 07a



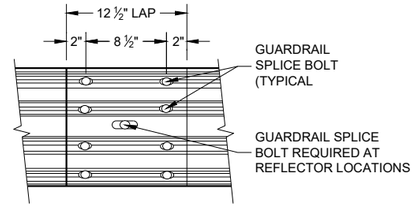
FRONT VIEW
POST SPACING STANDARD INSTALLATION



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



FRONT VIEW
QUARTER POST SPACING (QS)



FRONT VIEW
MID-SPAN BEAM SPLICE

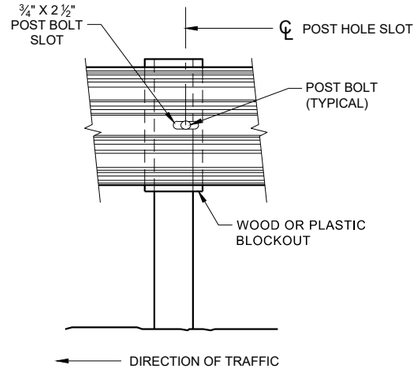
GENERAL NOTES

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

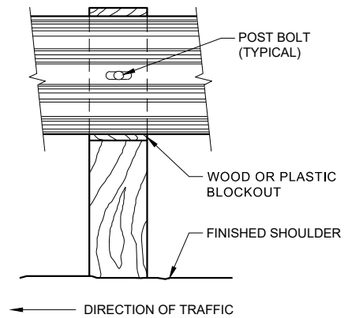
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

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

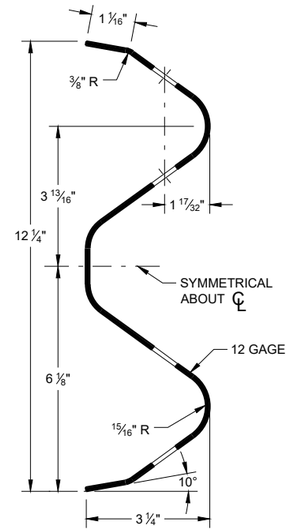
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



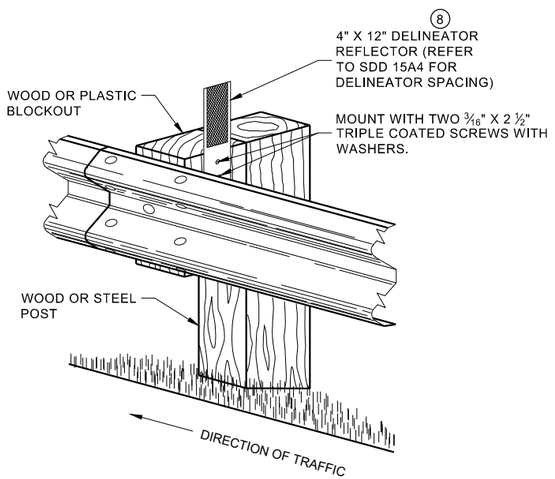
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



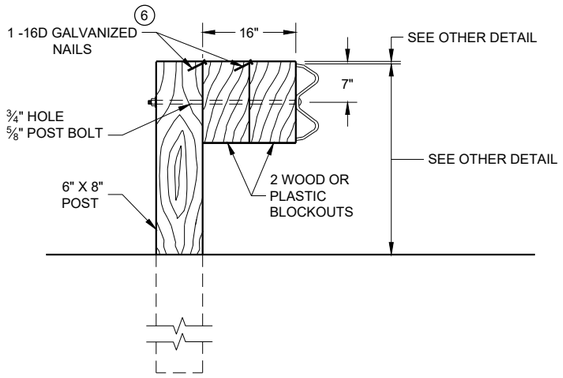
ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B42 - 07b

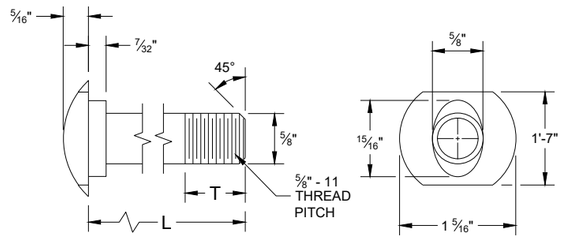


DETAIL FOR 16" BLOCKOUT DEPTH

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

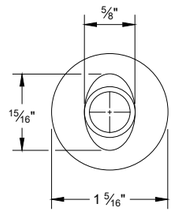
NOTE:

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

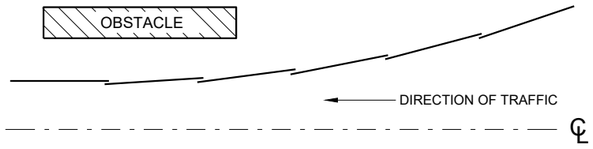


POST BOLT TABLE

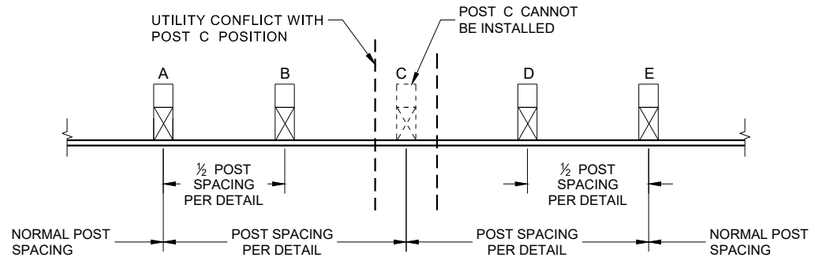
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



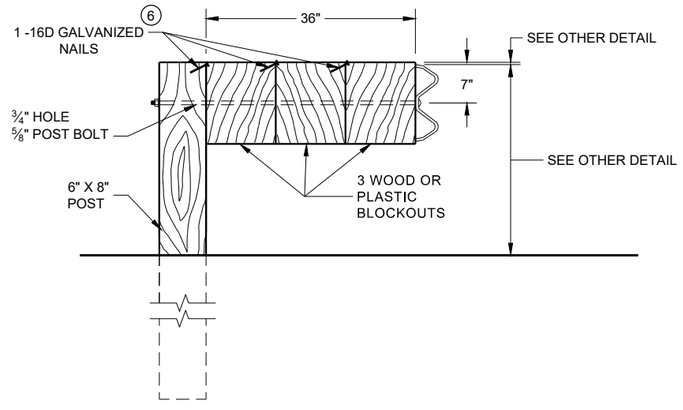
ALTERNATE BOLT HEAD



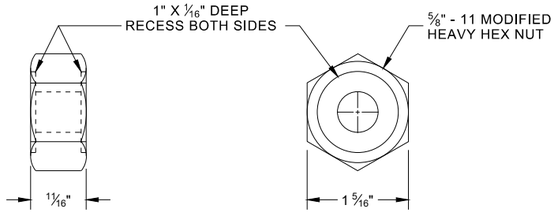
PLAN VIEW
BEAM LAPPING DETAIL



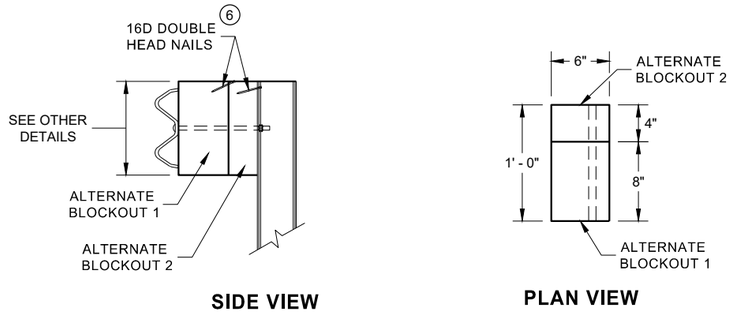
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW

PLAN VIEW

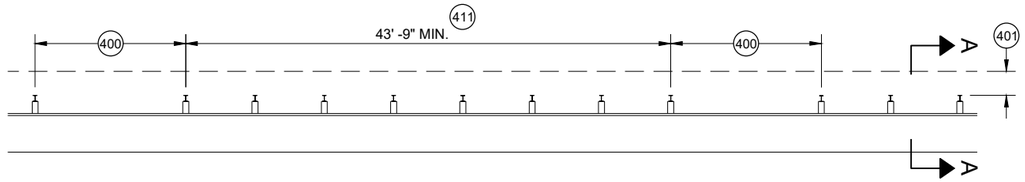
ALTERNATE WOOD BLOCKOUT DETAIL

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

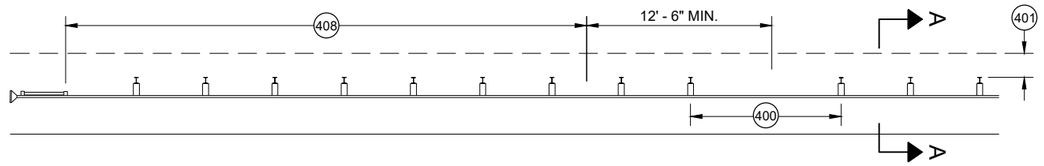
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

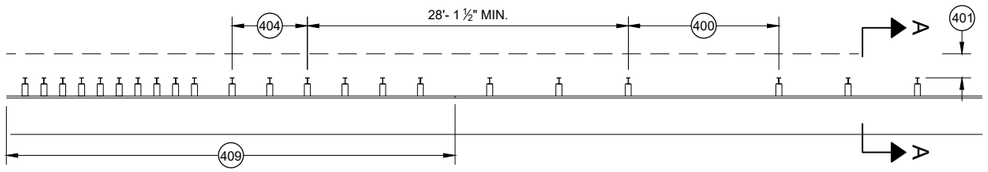
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL



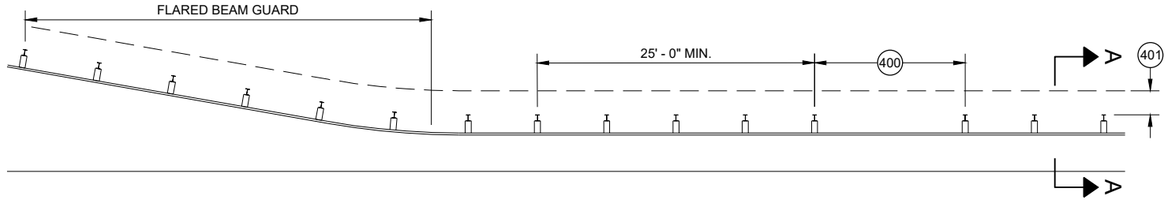
MISSING POST IN MGS GUARDRAIL



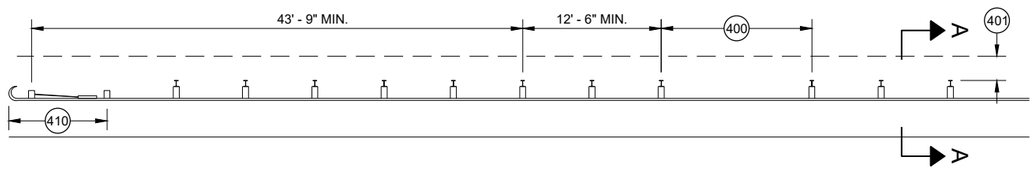
MISSING POST IN MGS GUARDRAIL NEAR EAT



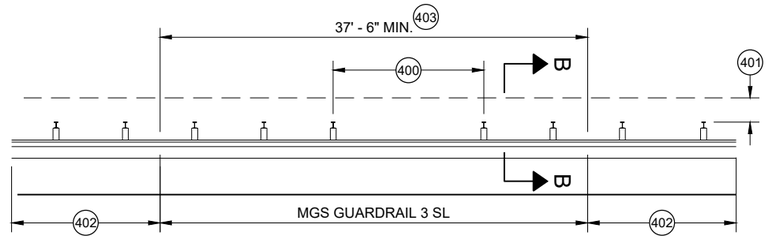
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

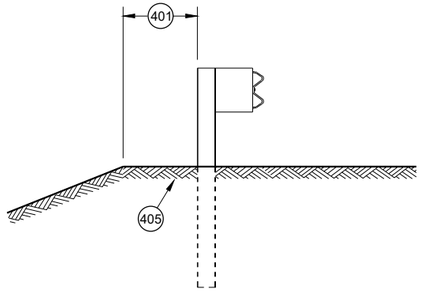


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

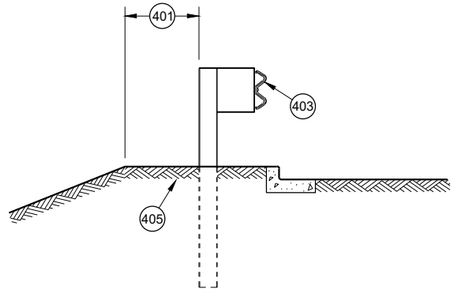


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

(400) MAX SPAN 12' - 6"
(401) 2' MIN.
(402) MGS GUARDRAIL 3
(403) NESTING BEAM GUARD
(404) ASYMMETRIC TRANSITION
(405) SOIL WELL DRAINED AND COMPACTED
(406) SEE OTHER DRAWINGS IN THIS SDD
(407) SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
(408) SEE SDD 14B44
(409) SEE SDD 14B45
(410) SEE SDD 14B47
(411) MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A 406



SECTION B - B 406

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

FHWA

SDD 14B42 - 07d

GENERAL NOTES

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

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

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

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

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

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

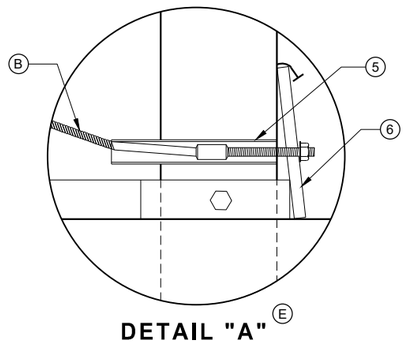
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

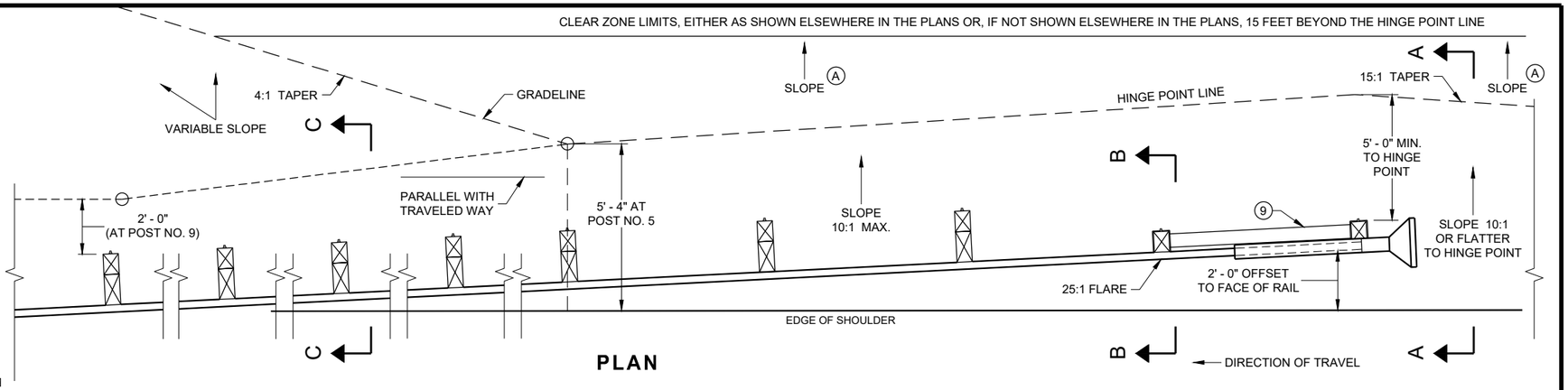
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

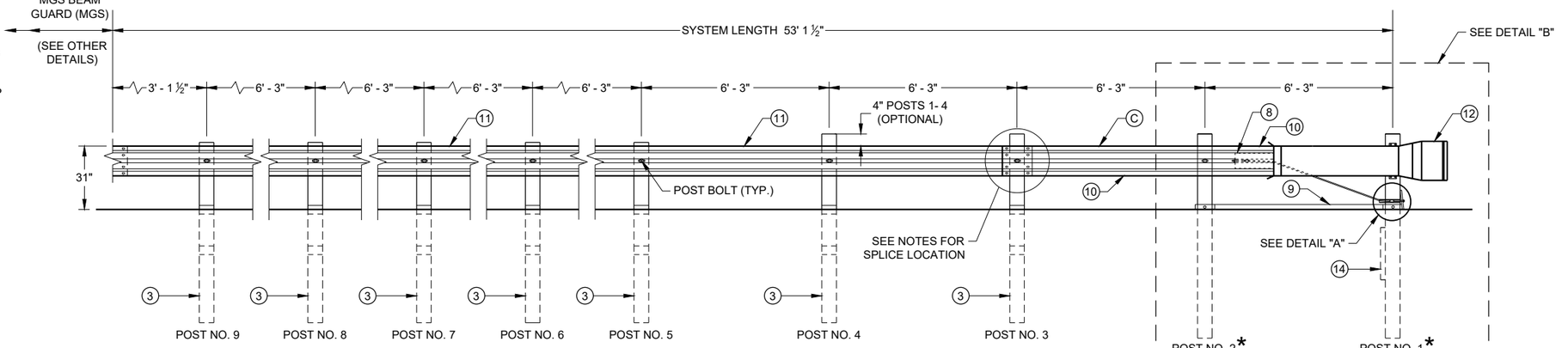
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



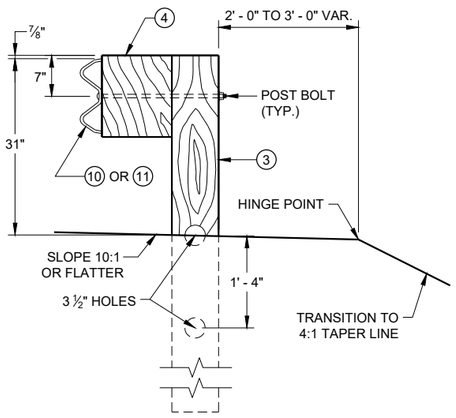
DETAIL "A" (E)



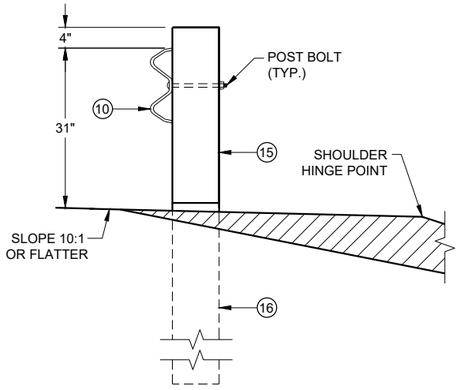
PLAN



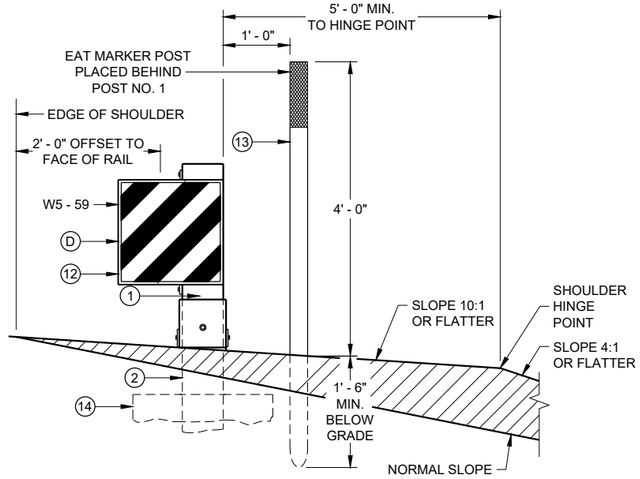
ELEVATION



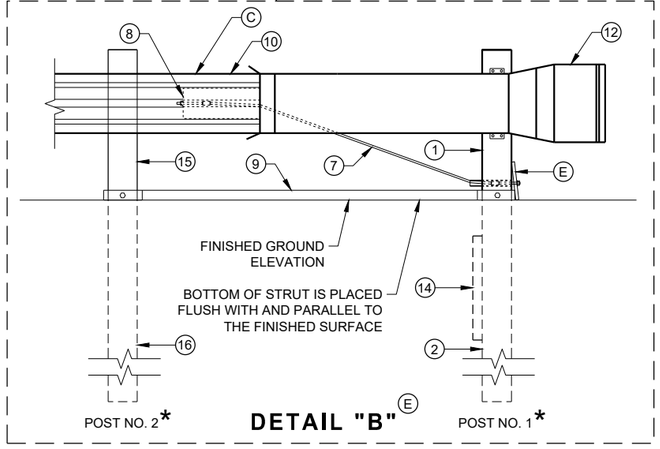
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



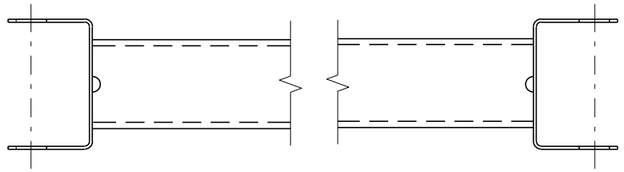
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

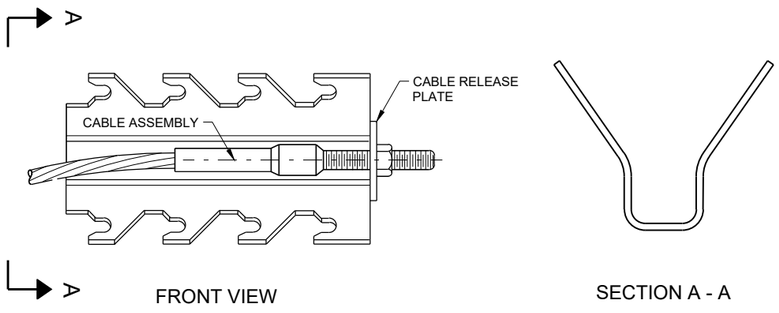
SDD 14B44 - 04a



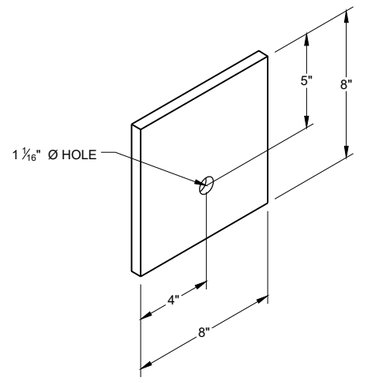
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

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



GENERIC ANCHOR CABLE BOX ⑧ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

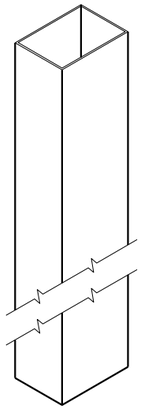
6

SDD 14B44 - 04b

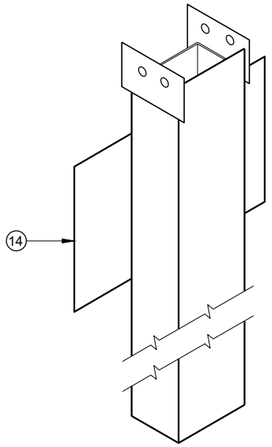
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

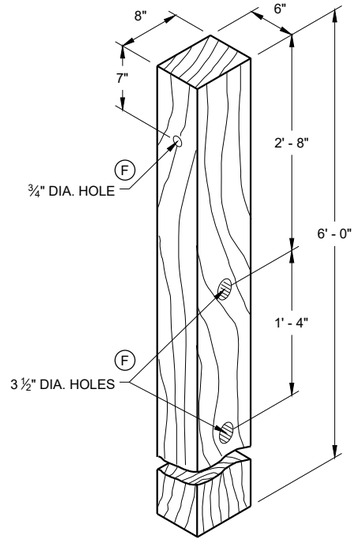
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



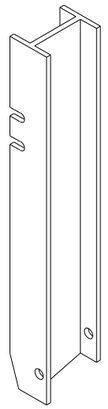
UPPER POST NO. 1 (1) (E)



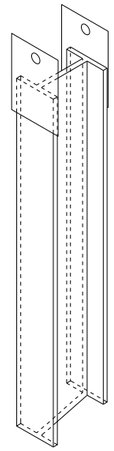
LOWER POST NO. 1 (2) (E)



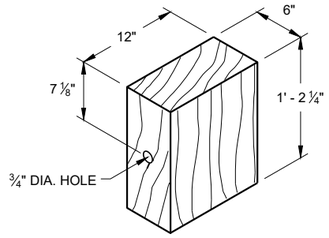
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



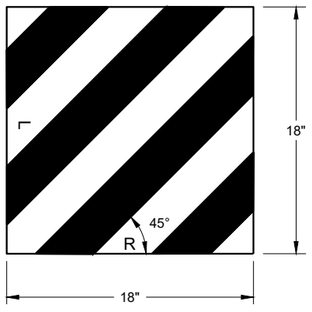
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

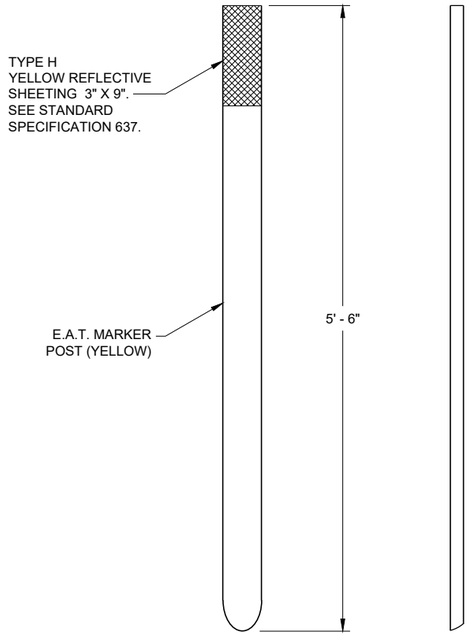


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



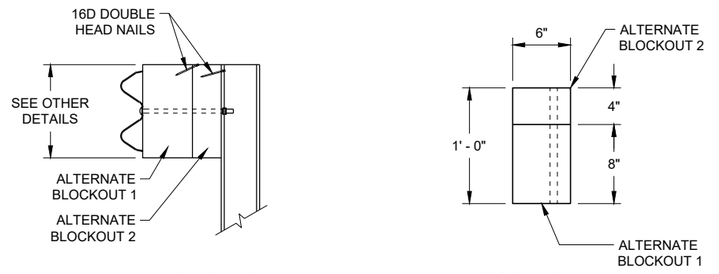
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

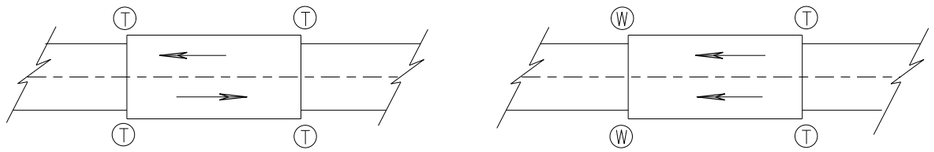
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

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

TRANSITION USES STEEL POSTS ONLY.

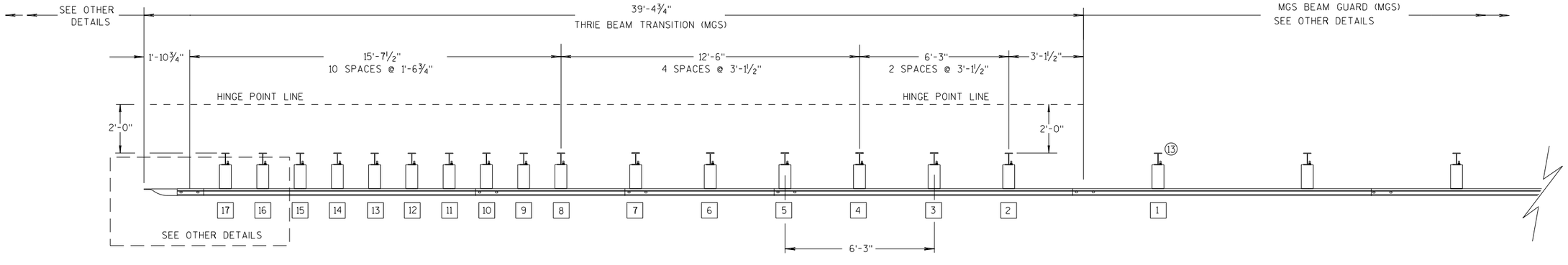
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

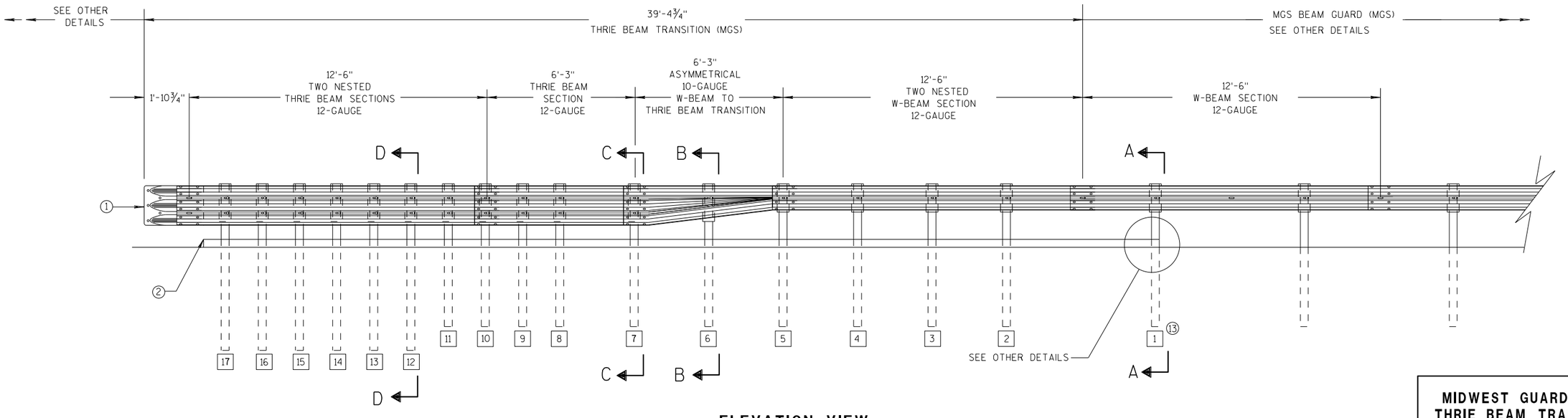
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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

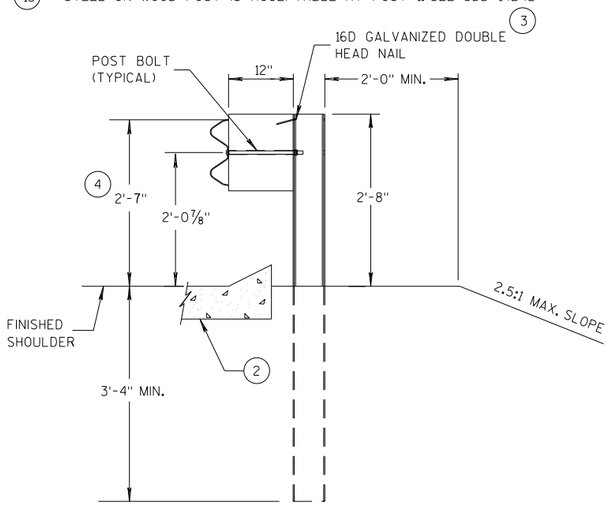
GENERAL NOTES

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

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

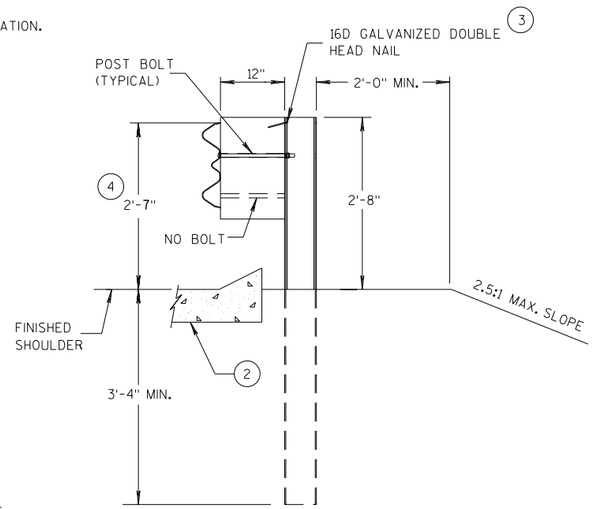
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



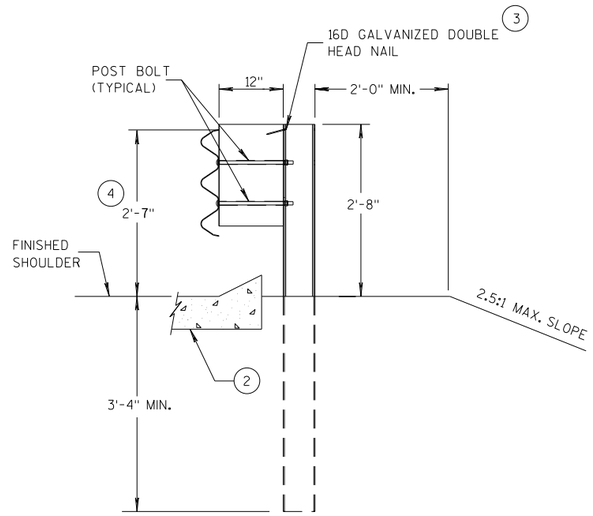
SECTION A-A (13)

POSTS 1-5



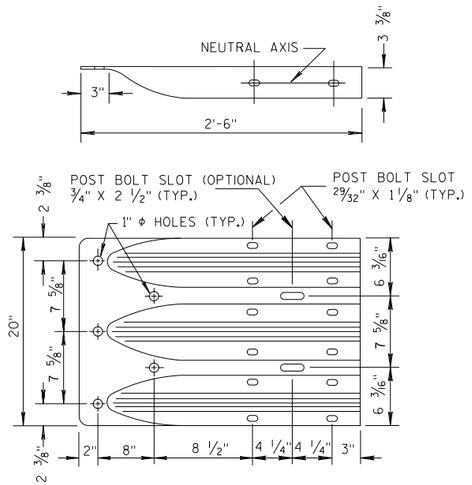
SECTION B-B

POST 6

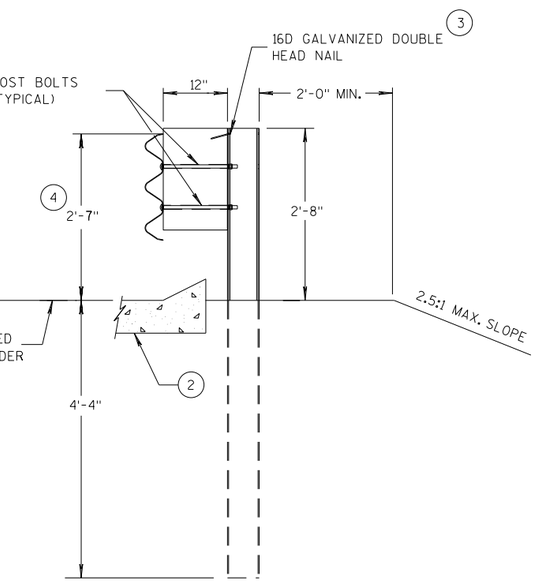


SECTION C-C

POSTS 7-11

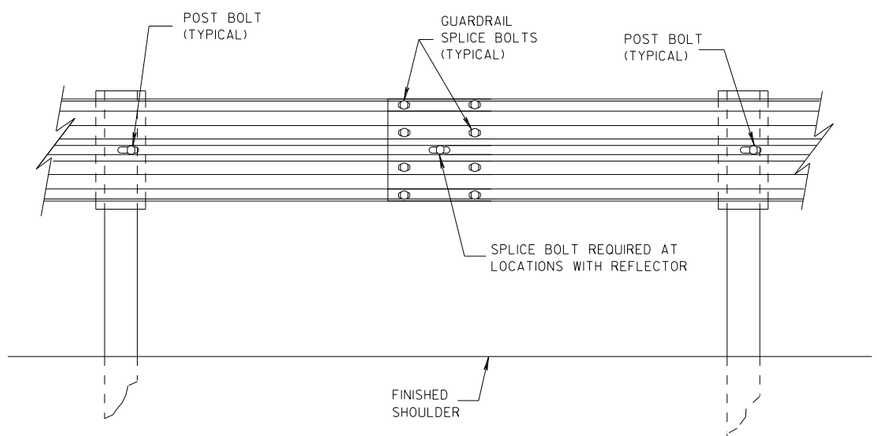


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

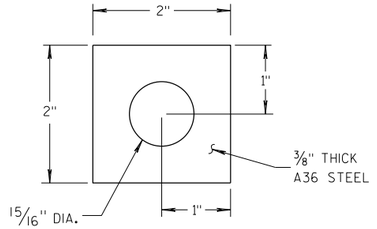
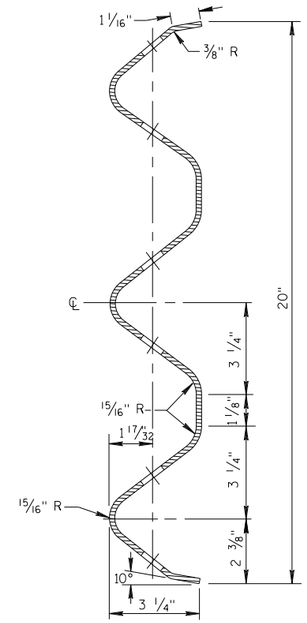


PLATE WASHER DETAIL



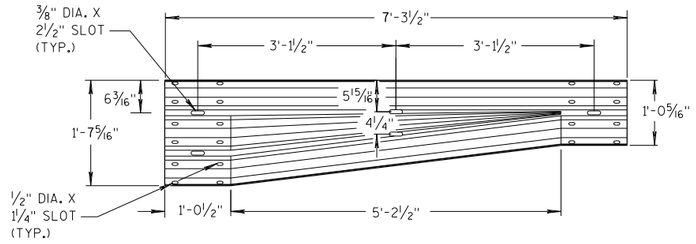
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

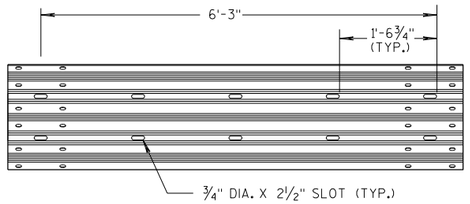
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

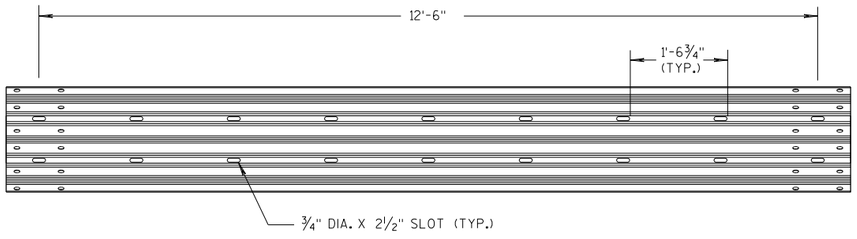
S.D.D. 14 B 45-5b



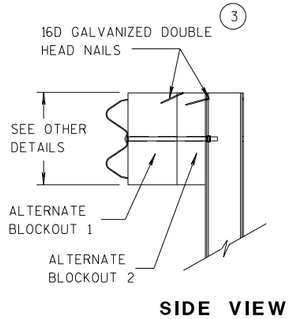
W-BEAM TO THRIE BEAM TRANSITION SECTION



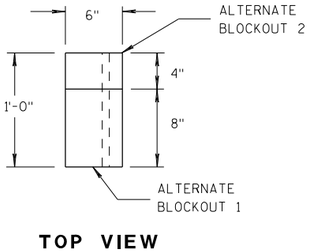
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

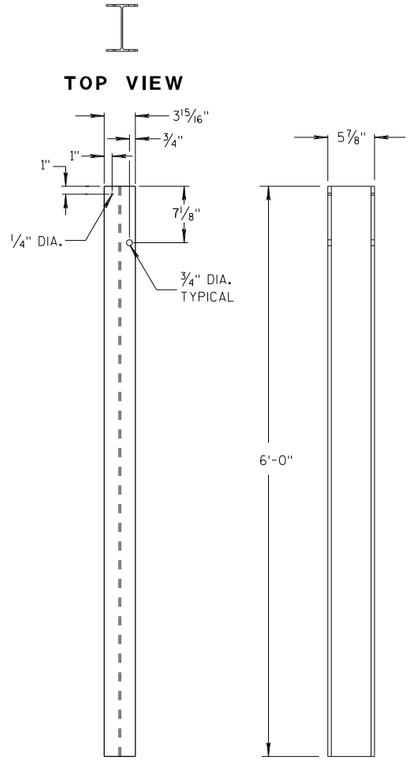


SIDE VIEW



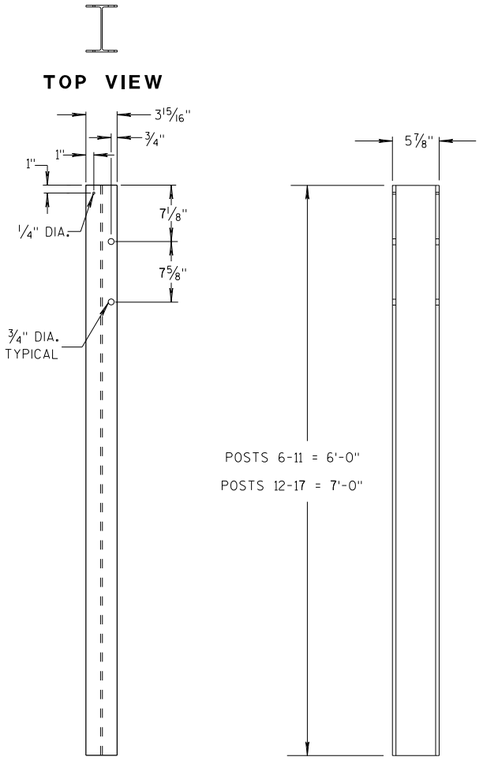
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



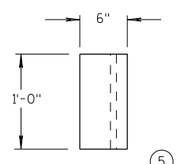
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

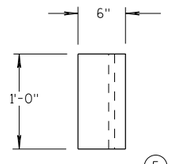


FRONT VIEW SIDE VIEW

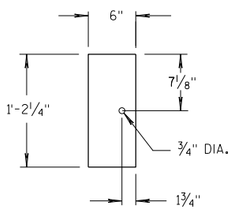
STEEL POSTS 6-17



TOP VIEW (5)

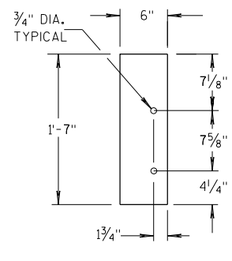


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

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

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

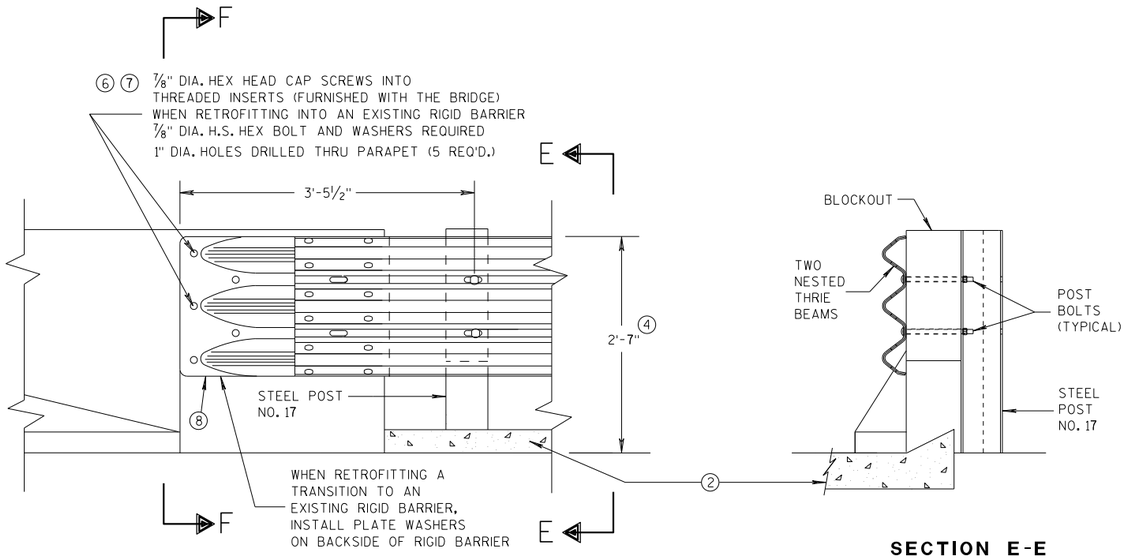
(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

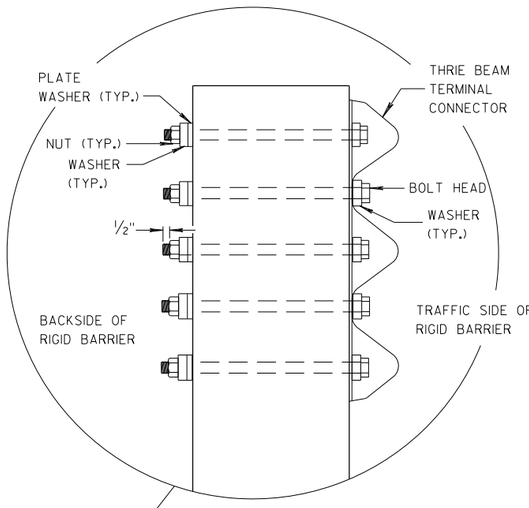
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

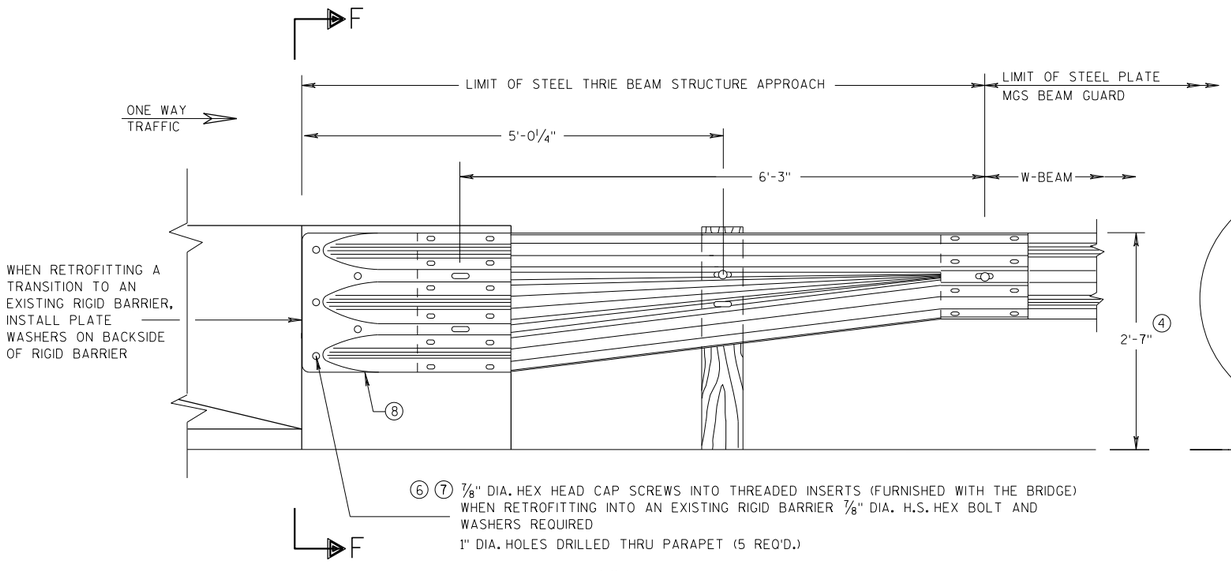
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

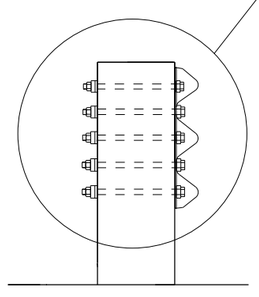
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

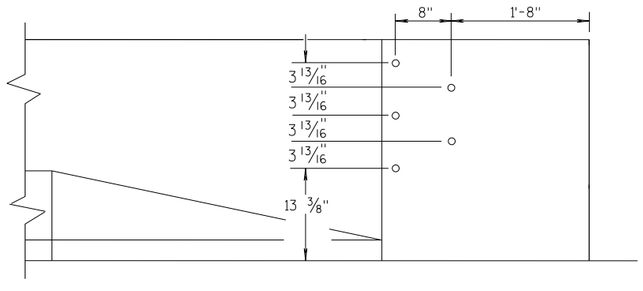




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D UNIT SUPERVI
NT
FHWA

6

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

GENERAL NOTES

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

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

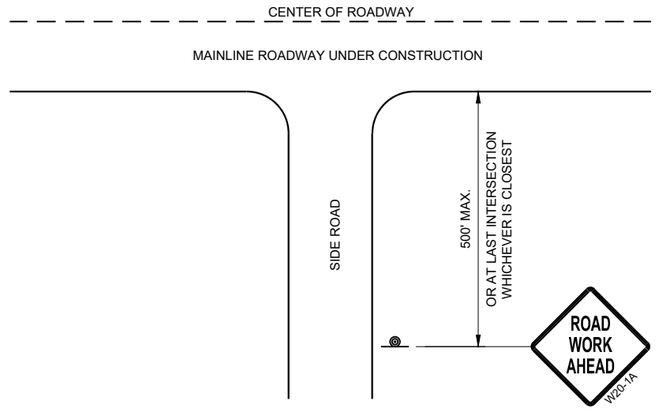
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

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

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

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



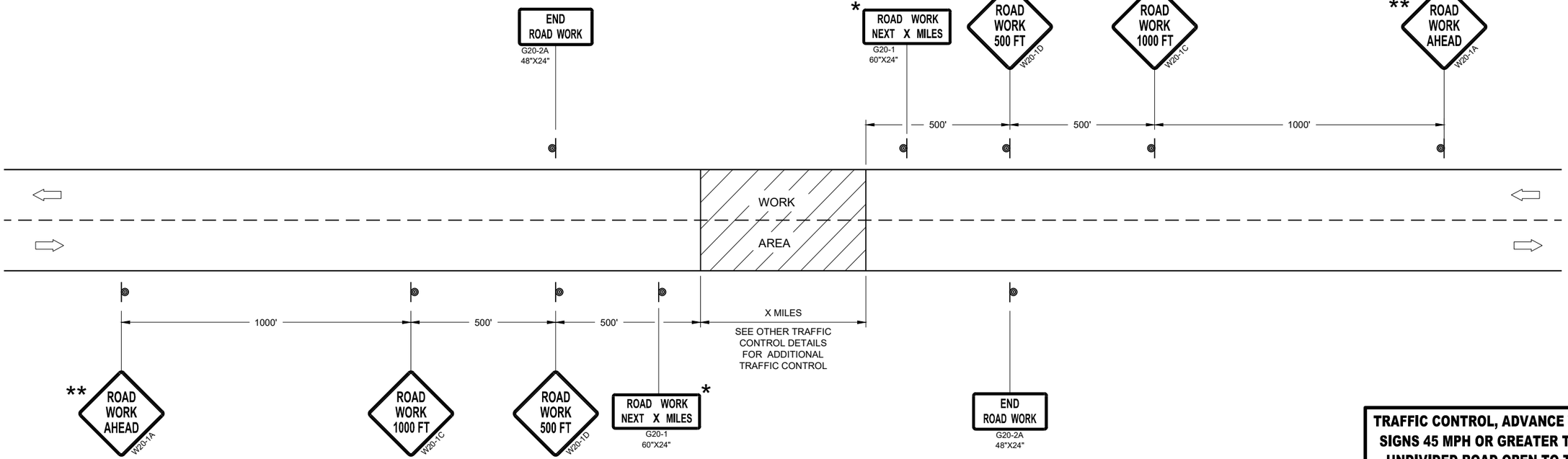
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 MPH OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

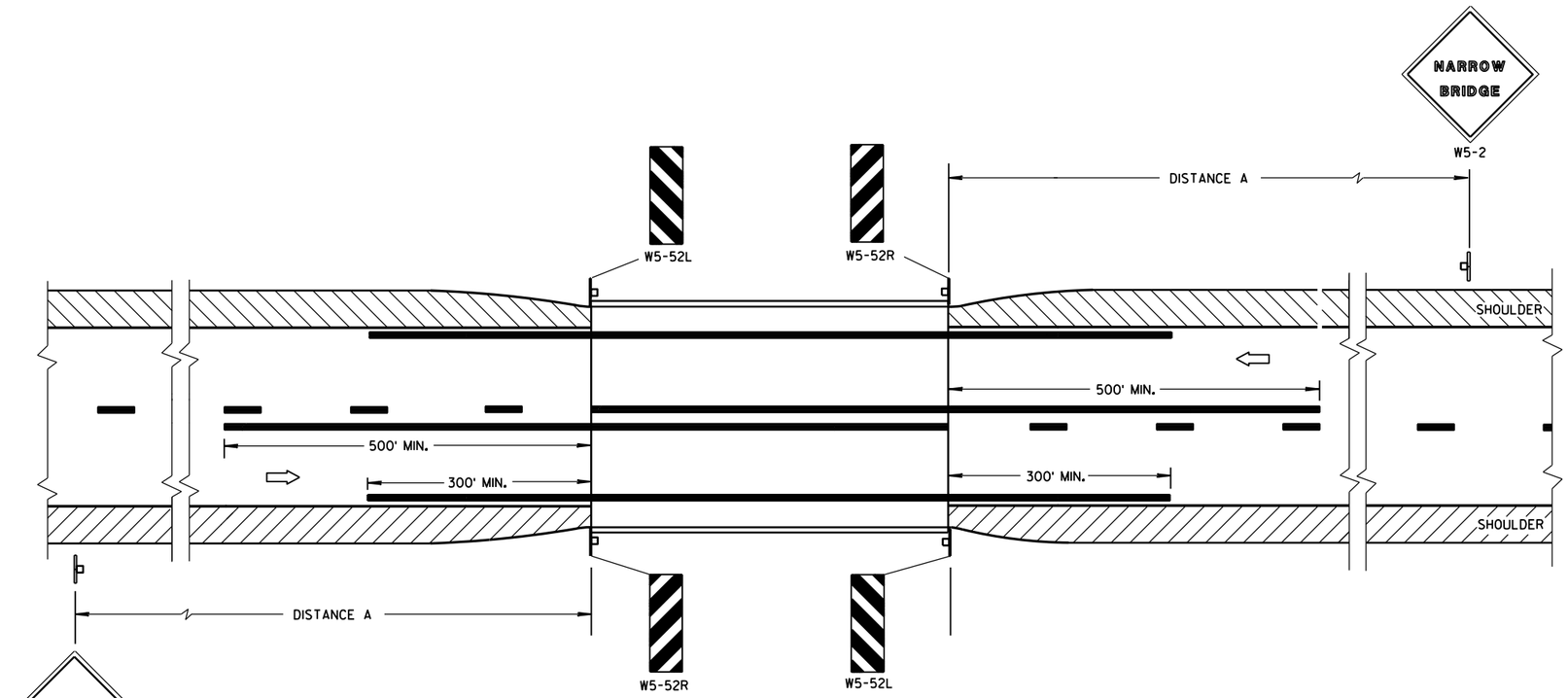
APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C04 - 05



SITUATION 1

WARRANTING CRITERIA:
BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET.

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	750'

GENERAL NOTES

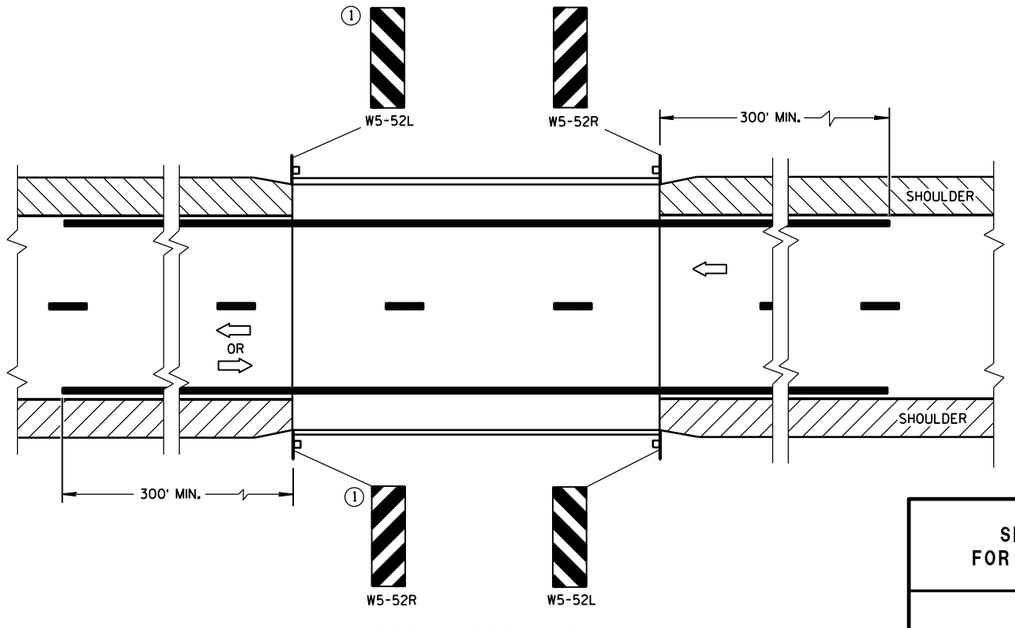
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

LOCATE W5-52 SIGN POST(S) BEHIND GUARDRAIL WHEN PRESENT.

PLACE THE EDGE OF THE W5-52 SIGN IN LINE WITH FACE OF CURB OR PARAPET.

(1) OMIT ON ONE-WAY TRAVELLED WAYS.

⇨ DIRECTION OF TRAFFIC



SITUATION 2

WARRANTING CRITERIA:

1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
2. BRIDGE SHOULDER WIDTH IS LESS THAN 6 FEET.

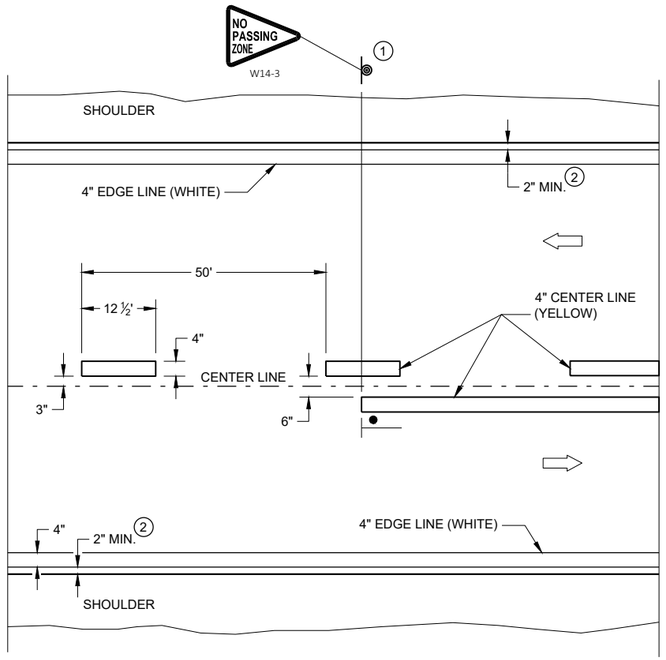
SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

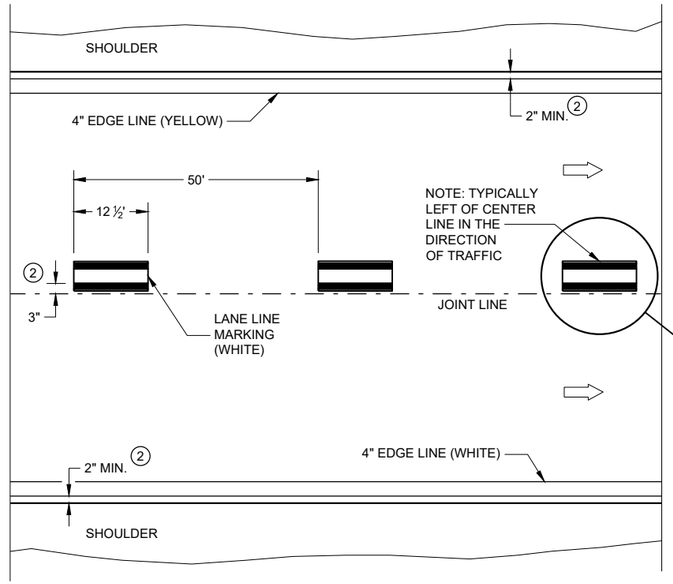
APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER
FHWA

6

S.D.D. 15 C 6-9

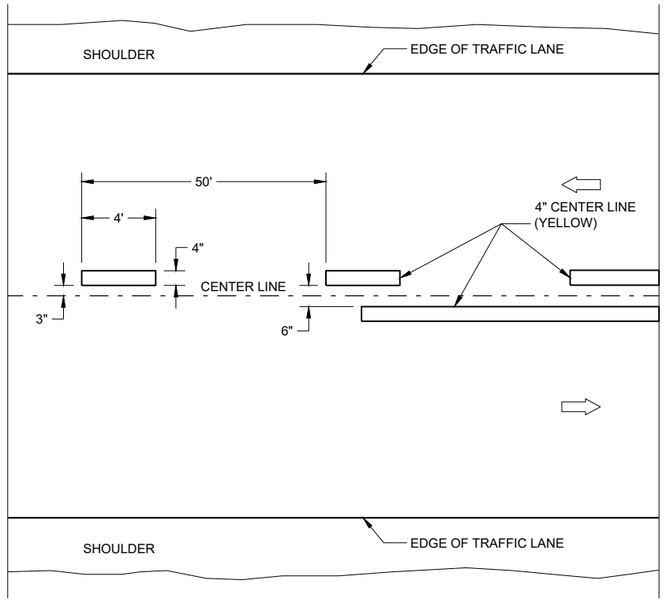


TWO WAY TRAFFIC

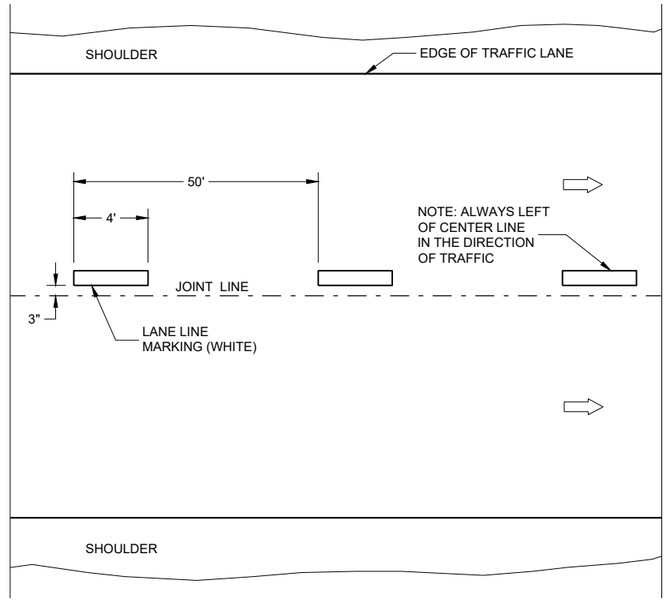


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

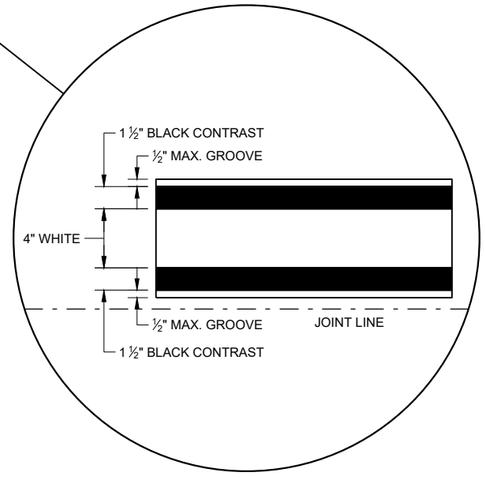
1. LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
2. MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 — DATE
/S/ Matthew Rauch — STATEWIDE SIGNING AND M ENGINEER

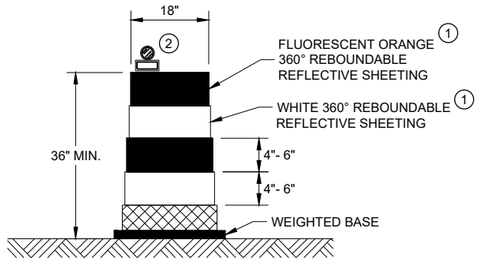
FHWA

SDD 15C08 - 20a

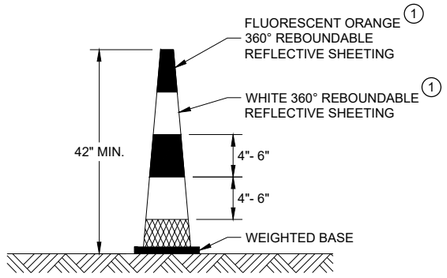
SDD 15C08 - 20a

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.

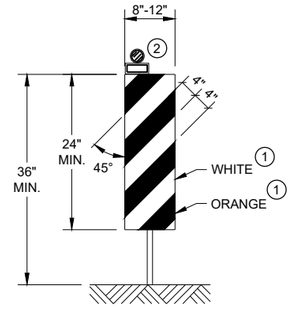


DRUM



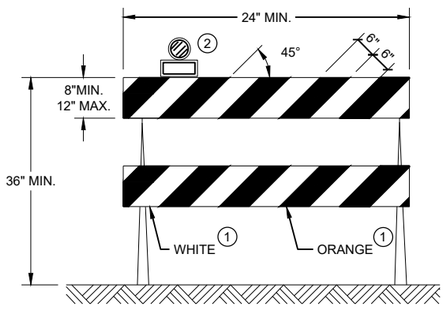
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



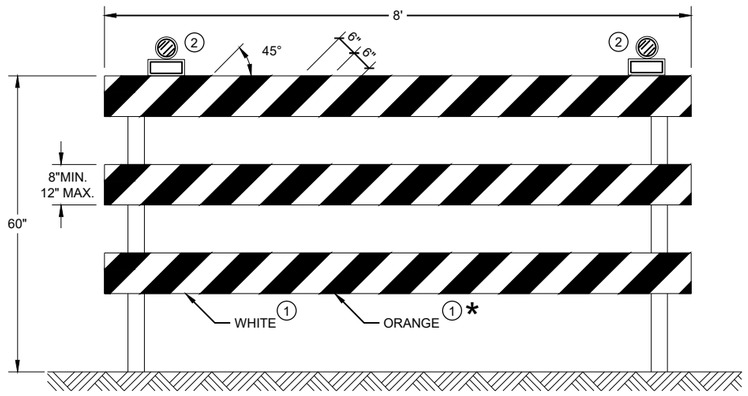
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD15C11 - 09b

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SDD15C11 - 09b

LEGEND

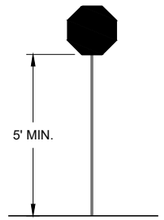
SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

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



STOP/SLOW PADDLE ON SUPPORT STAFF

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

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

(1) FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

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

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

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

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FOR THE APPROVED PRODUCTS LIST.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

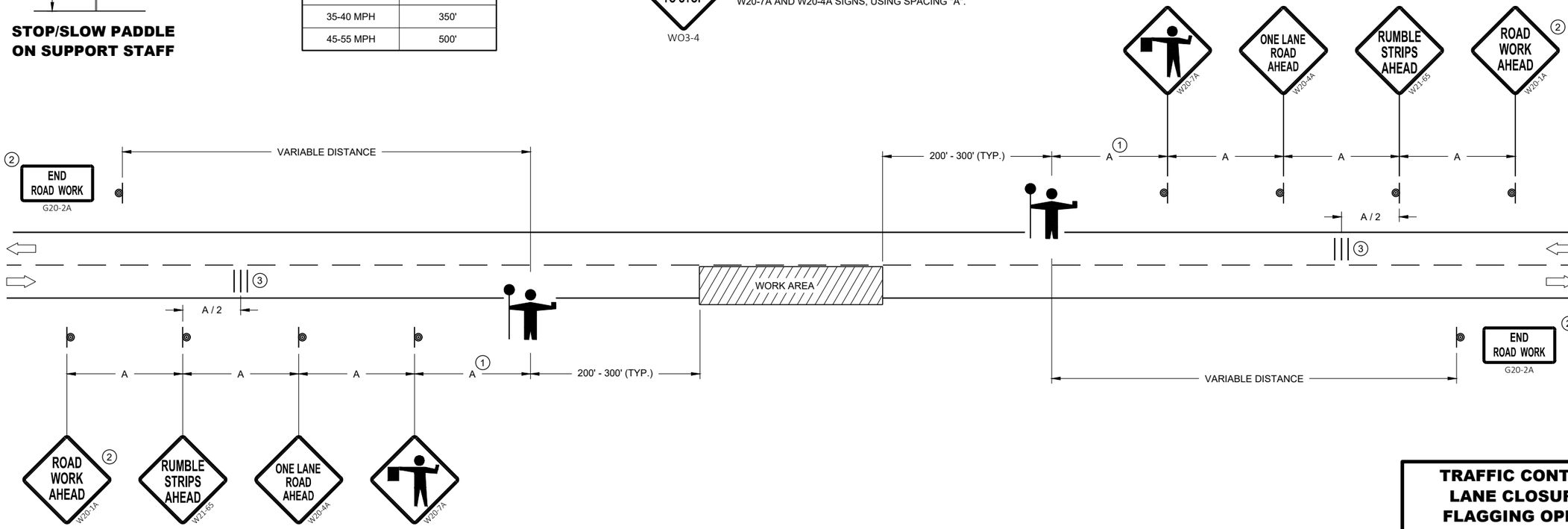
DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'

WO3-4

USE OF WO3-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15C12 - 07

LEGEND

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL DRUM

DIRECTION OF TRAFFIC

WORK ZONE

GENERAL NOTES

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

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

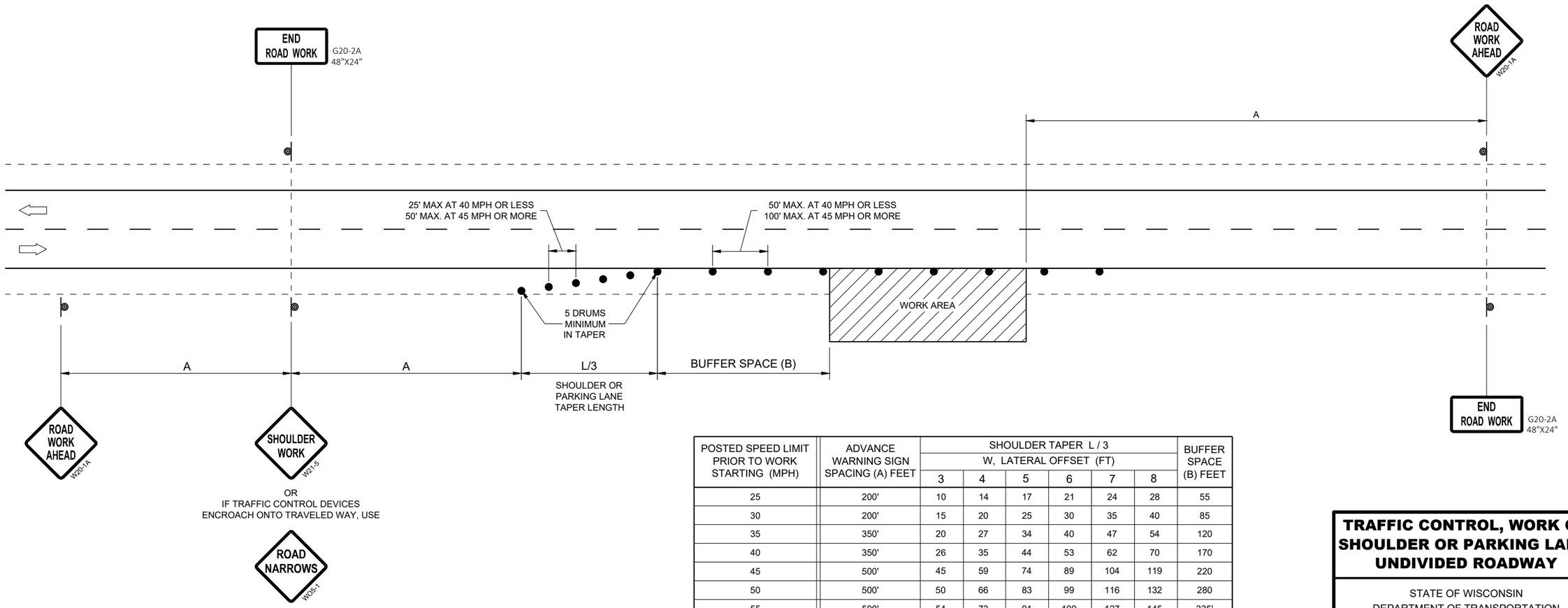
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

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

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

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



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3 W, LATERAL OFFSET (FT)						BUFFER SPACE (B) FEET
		3	4	5	6	7	8	
25	200'	10	14	17	21	24	28	55
30	200'	15	20	25	30	35	40	85
35	350'	20	27	34	40	47	54	120
40	350'	26	35	44	53	62	70	170
45	500'	45	59	74	89	104	119	220
50	500'	50	66	83	99	116	132	280
55	500'	54	73	91	109	127	145	335'

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020
DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE T SAFETY ENGINEER

FHWA

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SDD 15D28 - 04

S	BUFFER SPACE (DESIRABLE)
25	55'
30	85'
35	120'
40	170'
45	220'
50	280'
55	335'

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

END ROAD WORK
G20-2A
48"x24"

NO PASSING ZONE
W14-3
48"x36"

BEGIN TEMPORARY PAVEMENT MARKING, 4-INCH SOLID YELLOW CENTERLINE ✳✳

1000'
500'
400'
500'
200'
50'
50'
25' TYP.

W01-6
48"x24"
✳✳✳

R11-2
48"x30"
ROAD CLOSED
TYPE III BARRICADE

FOR BRIDGE OR CULVERT REPLACEMENTS SUBSTITUTE
BRIDGE OUT
R11-2B
48"x30"

W01-6
48"x24"
TYPE III BARRICADE

W01-3L OR W01-4L
W013-1
XX M.P.H.
24"x24"

ROAD WORK 1000 FT
W20-1C

ROAD WORK AHEAD
W20-1A

END TEMPORARY PAVEMENT MARKING, 4-INCH SOLID YELLOW CENTERLINE ✳✳

ROAD CLOSURE OR BRIDGE/CULVERT REPLACEMENT

BUFFER SPACE (SEE TABLE)

WORK AREA

BUFFER SPACE (SEE TABLE)

BEGIN TEMPORARY PAVEMENT MARKING, 4-INCH WHITE EDGELINE

TEMPORARY STEEL PLATE BEAM GUARD AND END TREATMENT WHEN INCLUDED IN THE CONTRACT. FOR LAYOUT, SEE DETAILS ELSEWHERE IN THE PLAN.

W05-52L
12"x36"

W05-52R
12"x36"

25' TYP.

ROAD WORK AHEAD
W20-1A

ROAD WORK 1000 FT
W20-1C

W01-4R OR W01-3R
W013-1
XX M.P.H.
24"x24"

W01-6
48"x24"
✳✳✳

W01-4L OR W01-3L
W013-1
XX M.P.H.
24"x24"

END TEMPORARY PAVEMENT MARKING, 4-INCH WHITE EDGELINE

TEMPORARY PAVEMENT MARKING, 4-INCH WHITE EDGELINES. (USE REMOVABLE TAPE WHERE TEMPORARY MARKING CROSSES PERMANENT PAVEMENT)

TEMPORARY PAVEMENT MARKING, 4-INCH DOUBLE YELLOW CENTERLINE AND 2-WAY YELLOW RAISED PAVEMENT MARKERS AT 25' SPACING. USE REMOVABLE TAPE WHERE TEMPORARY MARKING CROSSES PERMANENT PAVEMENT.

NO PASSING ZONE
W14-3
48"x36"

END ROAD WORK
G20-2A
48"x24"

GENERAL NOTES

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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

EQUIPMENT, VEHICLES, OR MATERIAL SHOULD NOT BE STORED IN BUFFER SPACE.

✳ IF ADVISORY SPEED IS GREATER THAN 30 MPH, USE THE W01-4 SIGN. IF ADVISORY SPEED IS 30 MPH OR LESS, USE THE W01-3 SIGN.

✳✳ WHEN THE DISTANCE TO/FROM THE NEXT CLOSEST NO-PASSING ZONE IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES AS INDICATED IN THE SPECIFICATIONS, THE TWO ZONES SHALL BE CONNECTED.

✳✳✳ OMIT THESE W01-6 SIGNS IF THE ADVISORY SPEED OF THE CURVE IS GREATER THAN 30 MPH.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY-BURN LIGHT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- Ⓐ TYPE "A" WARNING LIGHT (FLASHING)
- TEMPORARY DELINEATOR, (WHITE) (SINGLE DELINEATOR)
- TEMPORARY RAISED PAVEMENT MARKERS (TWO-WAY YELLOW)
- XXX REMOVE PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY STEEL PLATE BEAM GUARD AND END TREATMENT
- WORK AREA

TRAFFIC CONTROL, TEMPORARY BYPASS ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

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

FHWA

6

S.D.D. 15 D 31-3

LEGEND

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT

TRAFFIC CONTROL DRUM

FLAGS, 16" X 16" MIN. (ORANGE)

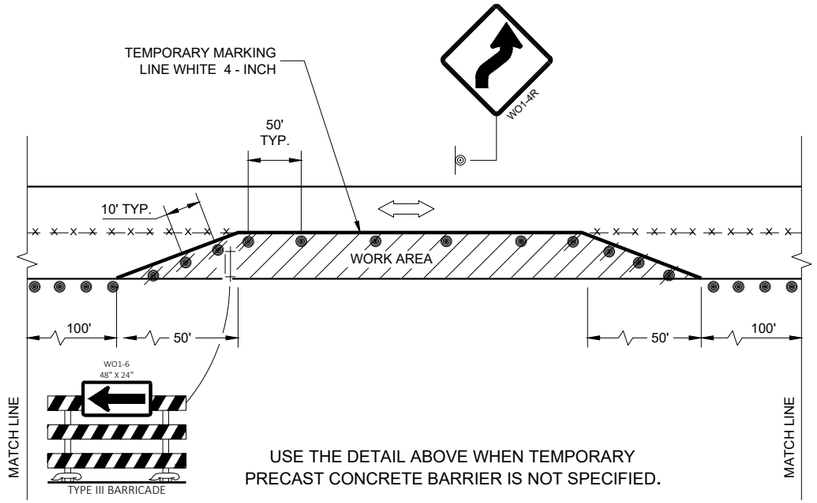
REMOVING PAVEMENT MARKING

DIRECTION OF TRAFFIC

ASPHALTIC PAVEMENT WIDENING

CONCRETE BARRIER TEMPORARY PRECAST

TEMPORARY SIGNAL. SEE SDD 09G02 FOR EXACT PLACEMENT



USE THE DETAIL ABOVE WHEN TEMPORARY PRECAST CONCRETE BARRIER IS NOT SPECIFIED.

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.

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

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

PLACE TEMPORARY PAVEMENT MARKING EDGELINE AND CENTERLINE AND REMOVE EXISTING PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS OR AS NOTED ON DETAIL.

(1) 500 FOOT SPACING SHOWN IS FOR ROADWAYS WITH A PRE-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35 - 40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25 - 30 MPH, USE 200 FOOT TYPICAL SPACING.

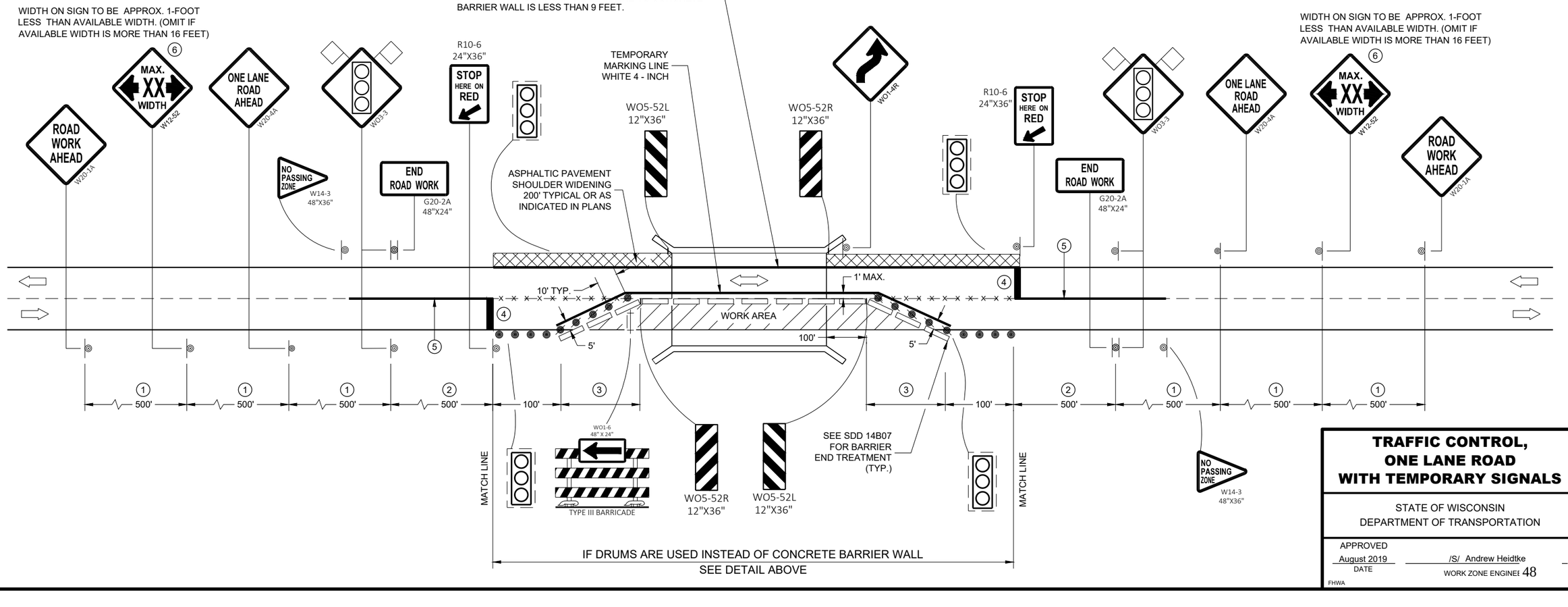
(2) USE 300 FOOT SPACING IF THE PRE - CONSTRUCTION REGULATORY SPEED IS 35 MPH OR LESS.

(3) DIMENSION DETERMINED BY CBTP TAPER FROM EDGE LINE TO TANGENT SECTION OF THE ROAD.

(4) TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18 - INCH.

(5) 700 FOOT TEMPORARY MARKING LINE, DOUBLE YELLOW 4 - INCH . WHEN THE DISTANCE FOR THE PRECEDING NO - PASSING ZONE IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES AS INDICATED IN THE SPECIFICATIONS, THE TWO ZONES SHALL BE CONNECTED.

(6) SEE SDD 15C02 - SHEET "F" FOR ADVANCED WIDTH RESTRICTION SIGNING.



TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

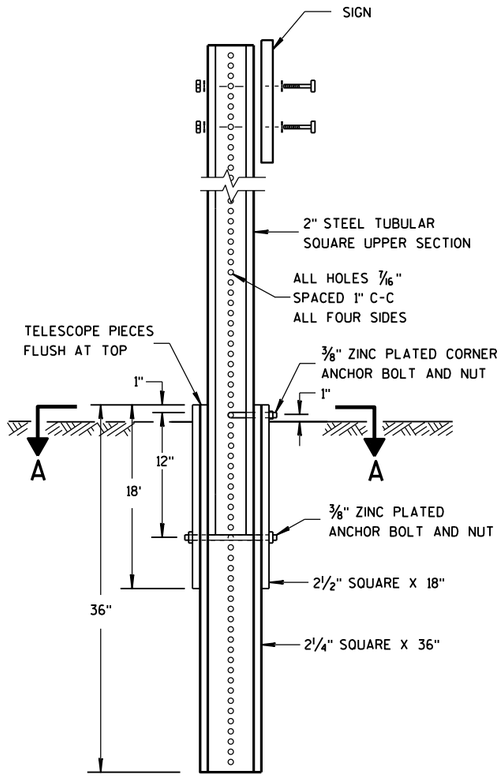
APPROVED
August 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

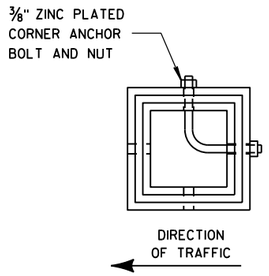
FHWA

SDD 15D33 - 06

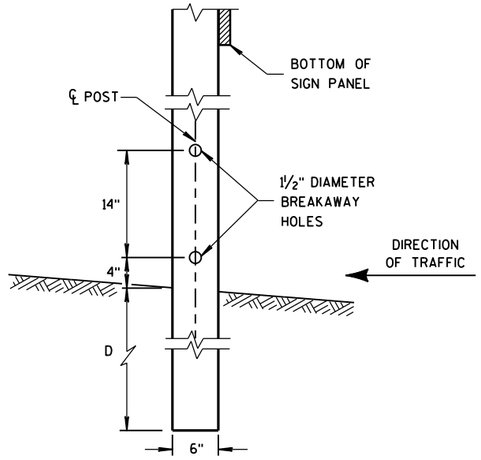
SDD 15D33 - 06



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



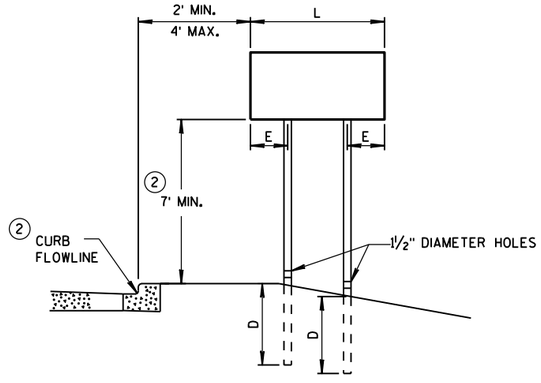
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

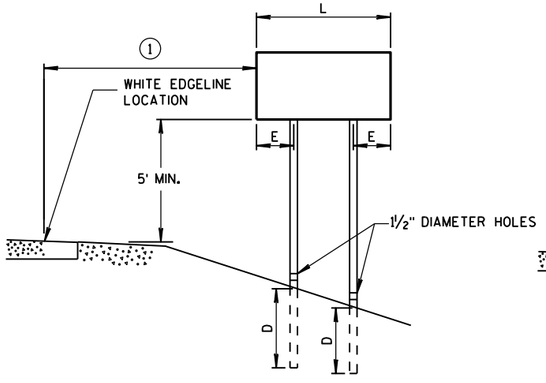
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

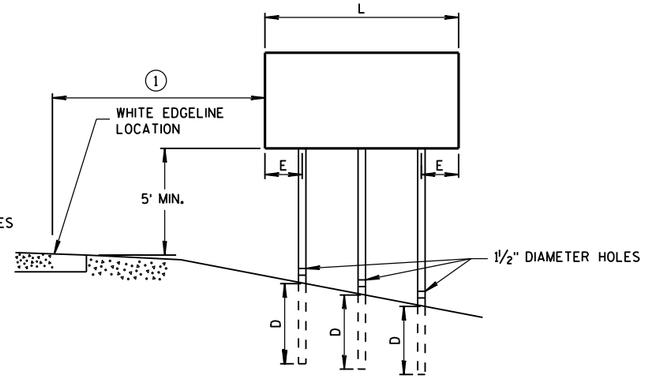
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK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

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



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

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

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

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

WOOD POST EMBEDMENT DEPTH

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

4" X 6" WOOD POST

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

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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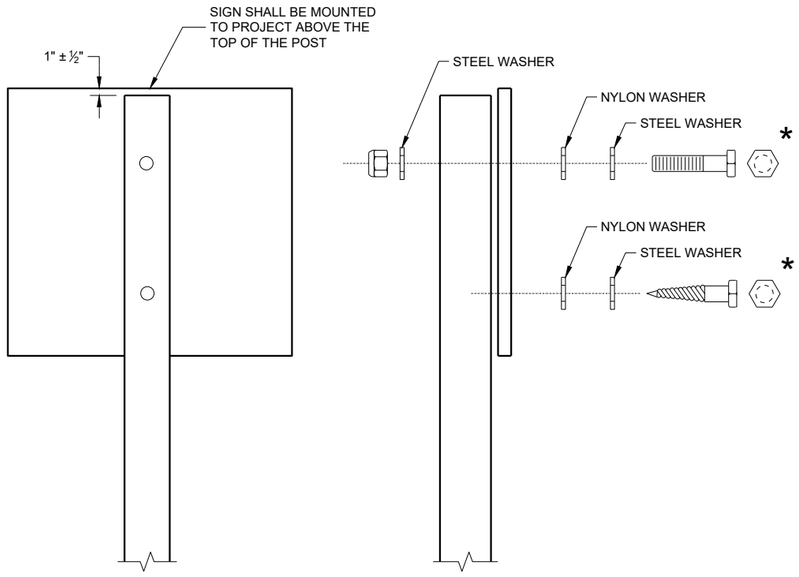
S.D.D. 15 D 38-2a
S.D.D. 15 D 38-2a



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 POST (4" x 6")
LAG SCREWS - ⅜" x 3"
MACHINE BOLTS - 5/16" x 6 ½" OR 7" LENGTH W/NUTS

SQUARE STEEL POST (2" x 2")
MACHINE BOLTS - ⅜" x 3 ¼" LENGTH W/NUTS
RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM
BODY/MANDREL O.D. FLANGE 0.720 - 0.765 INCH,
GRIP RANGE 0.042 - 0.375 INCH

WASHERS (ALL POSTS) -
1 ¼" O.D. x ⅜" I.D. x 1/16" STEEL
1 ¼" O.D. x ⅜" I.D. x 0.080 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

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SDD 15D38 - 02b

SDD15D38 - 02b

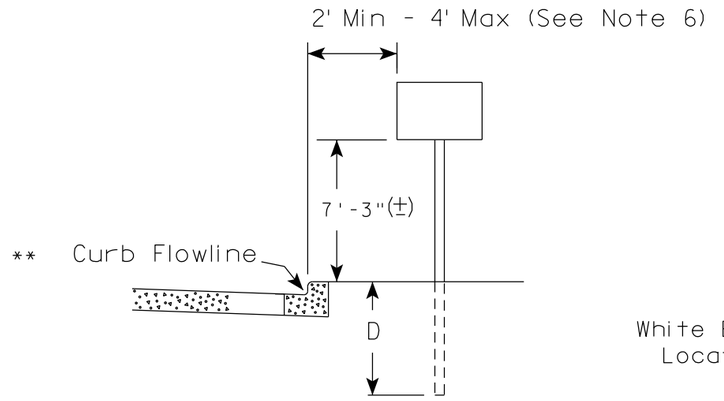
ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

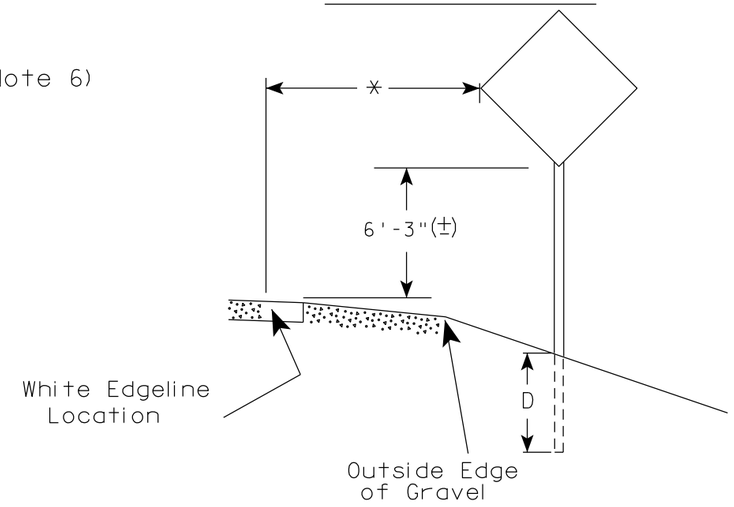
APPROVED
June 2017
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

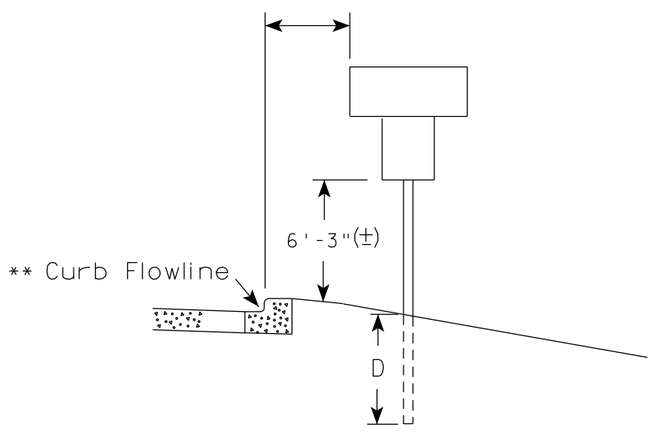
FHWA

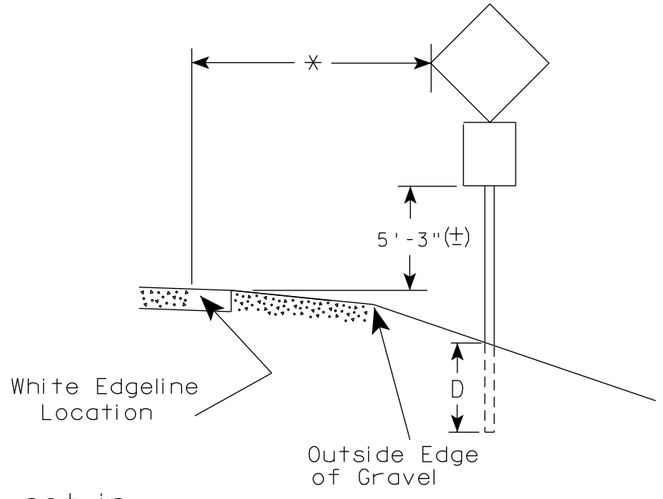
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
   The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.

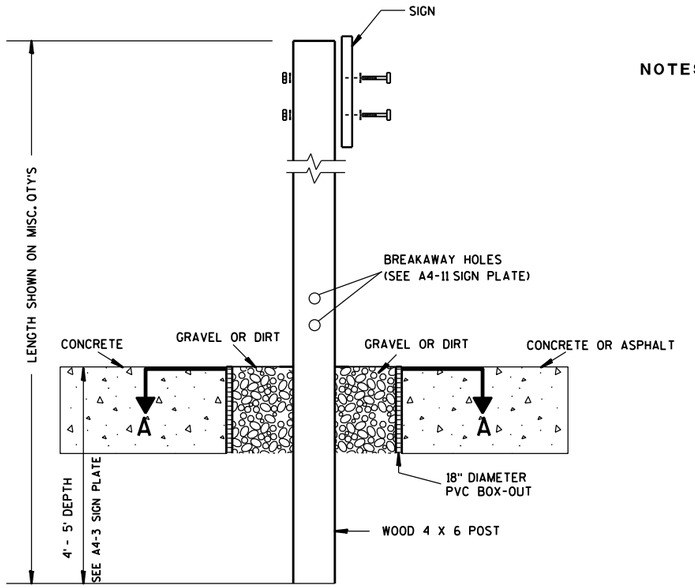
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

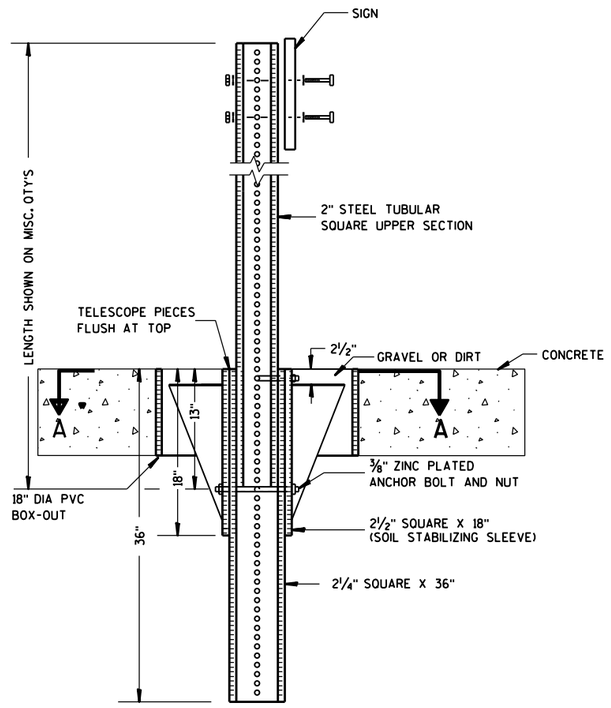
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 51	E



ELEVATION VIEW

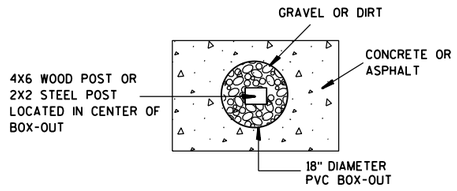
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

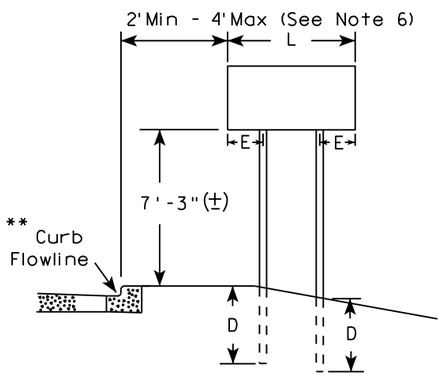
APPROVED Matthew R Rauch
for State Traffic Engineer

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

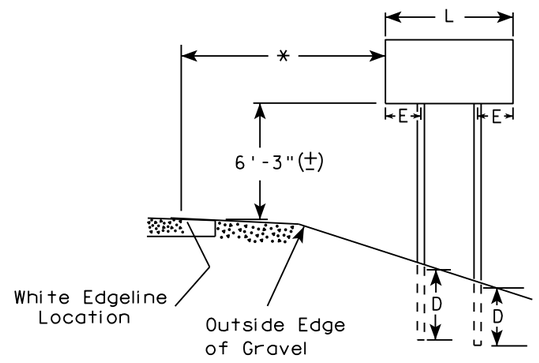
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

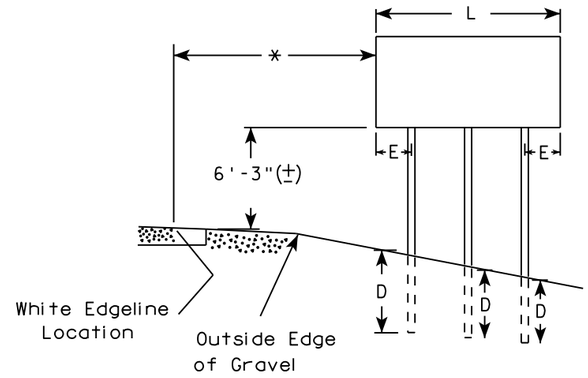
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

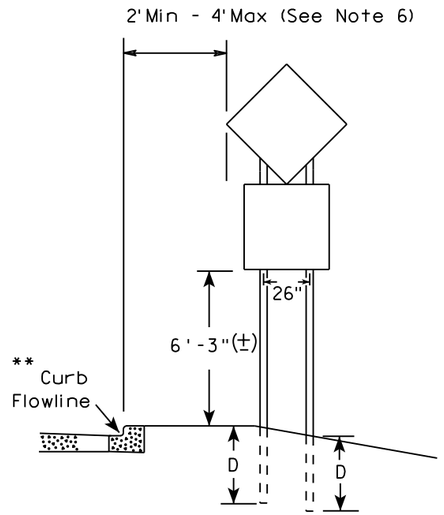
URBAN AREA



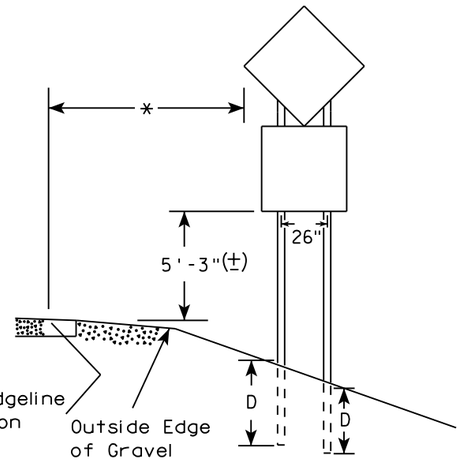
RURAL AREA (See Note 3)







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'

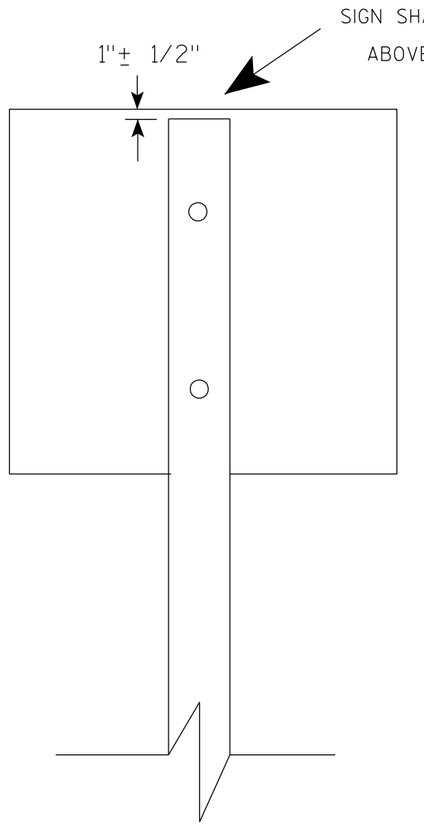
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

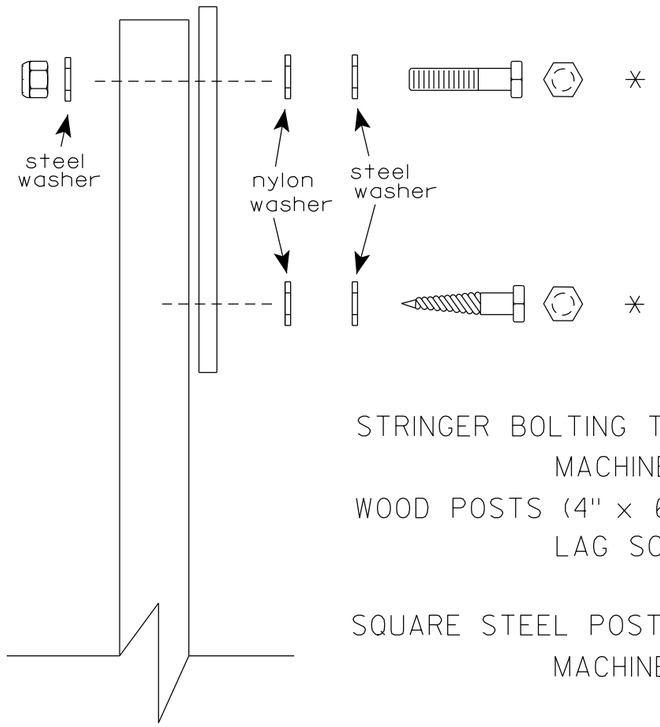
WISCONSIN DEPT OF TRANSPORTATION

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 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

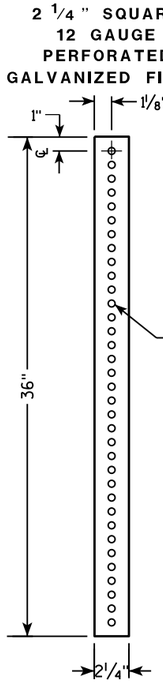
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

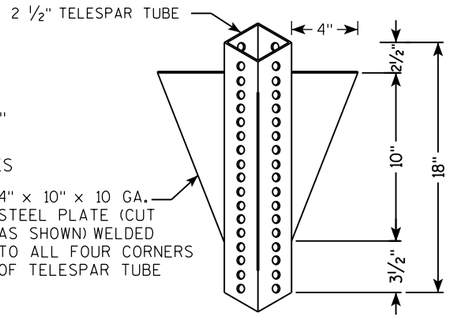
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

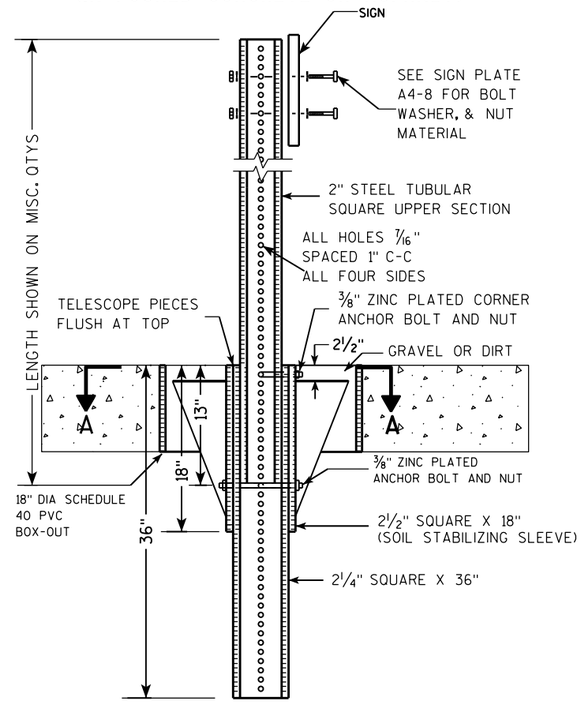
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



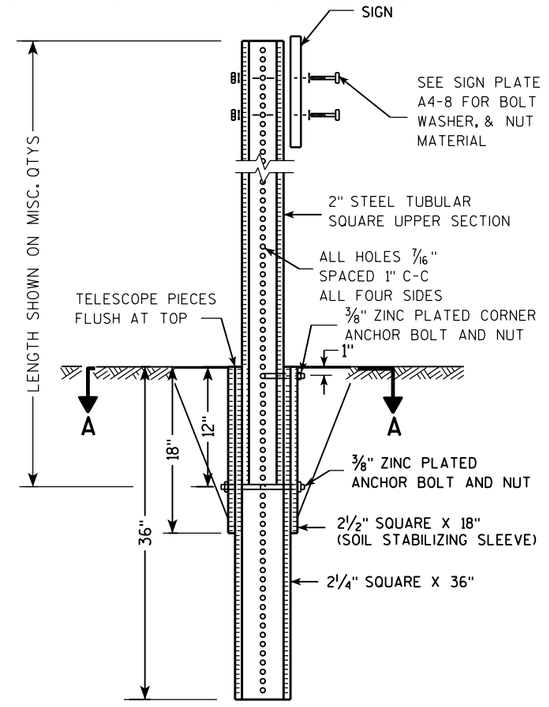
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

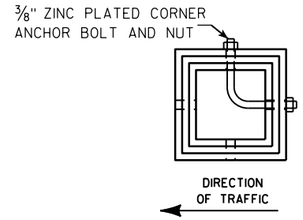


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





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).

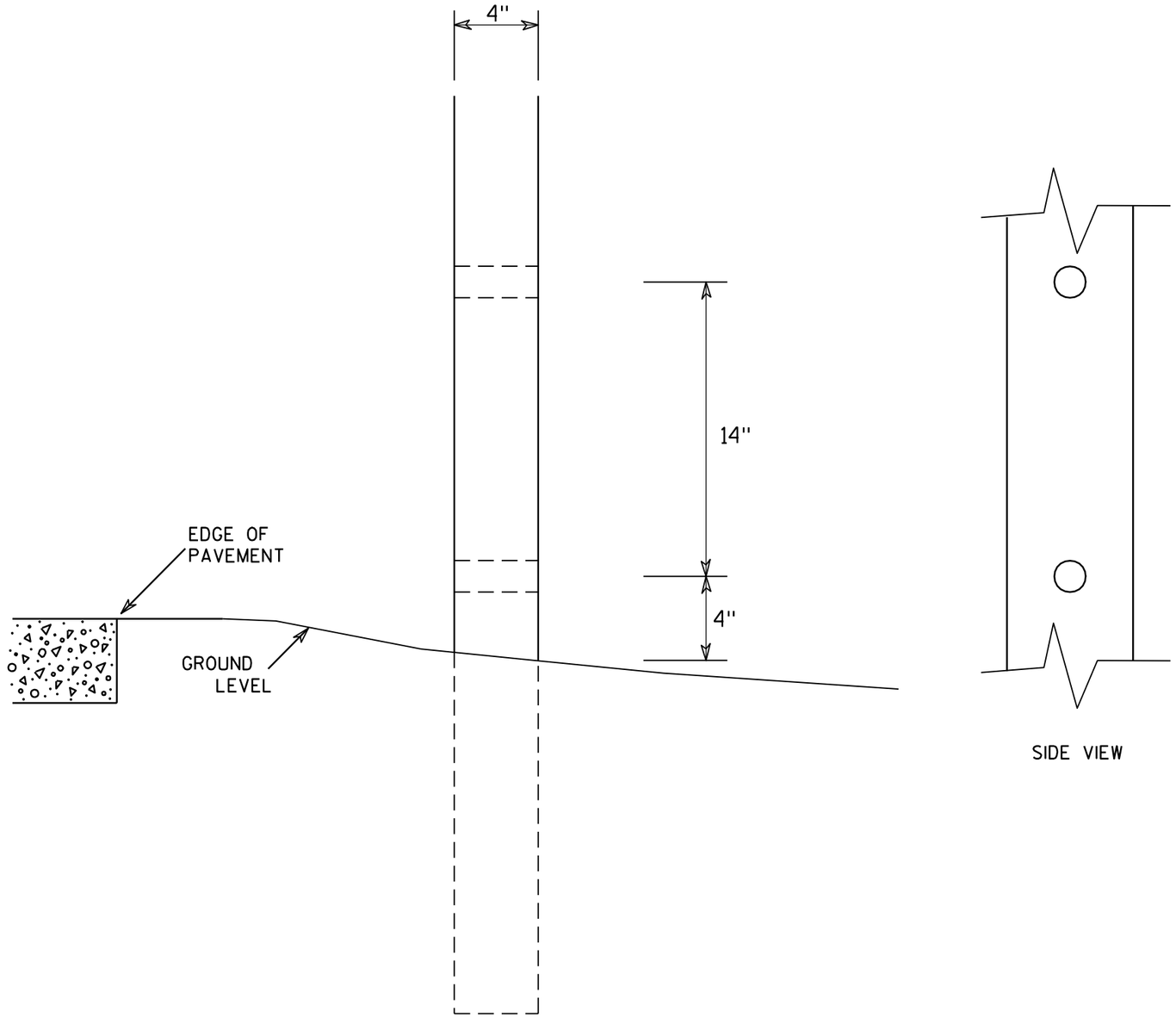
TUBULAR STEEL
SIGN POST
A4-9

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.

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

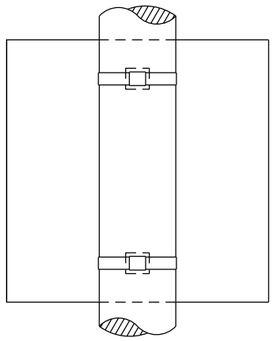
APPROVED Chester J Spang for State Traffic Engineer

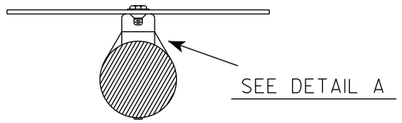
DATE 3/27/97 PLATE NO. A4-11.2

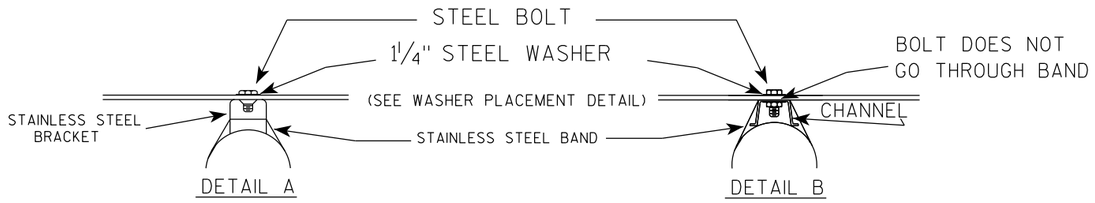
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 56	E

BANDING

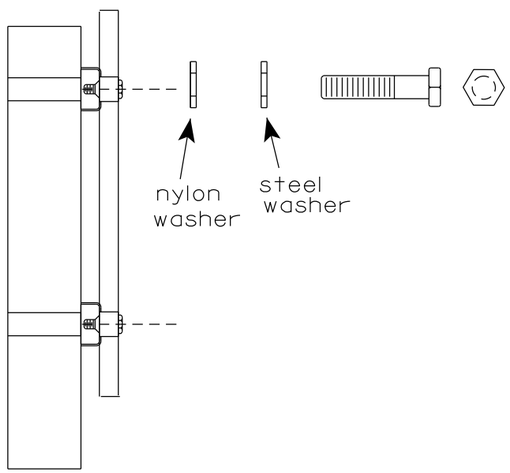
SINGLE SIGN







WASHER PLACEMENT

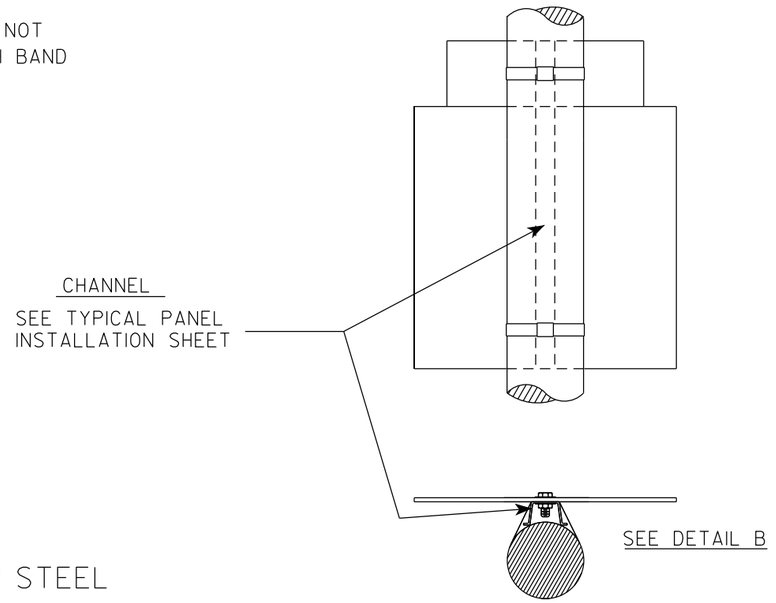


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

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

"J" ASSEMBLY



STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

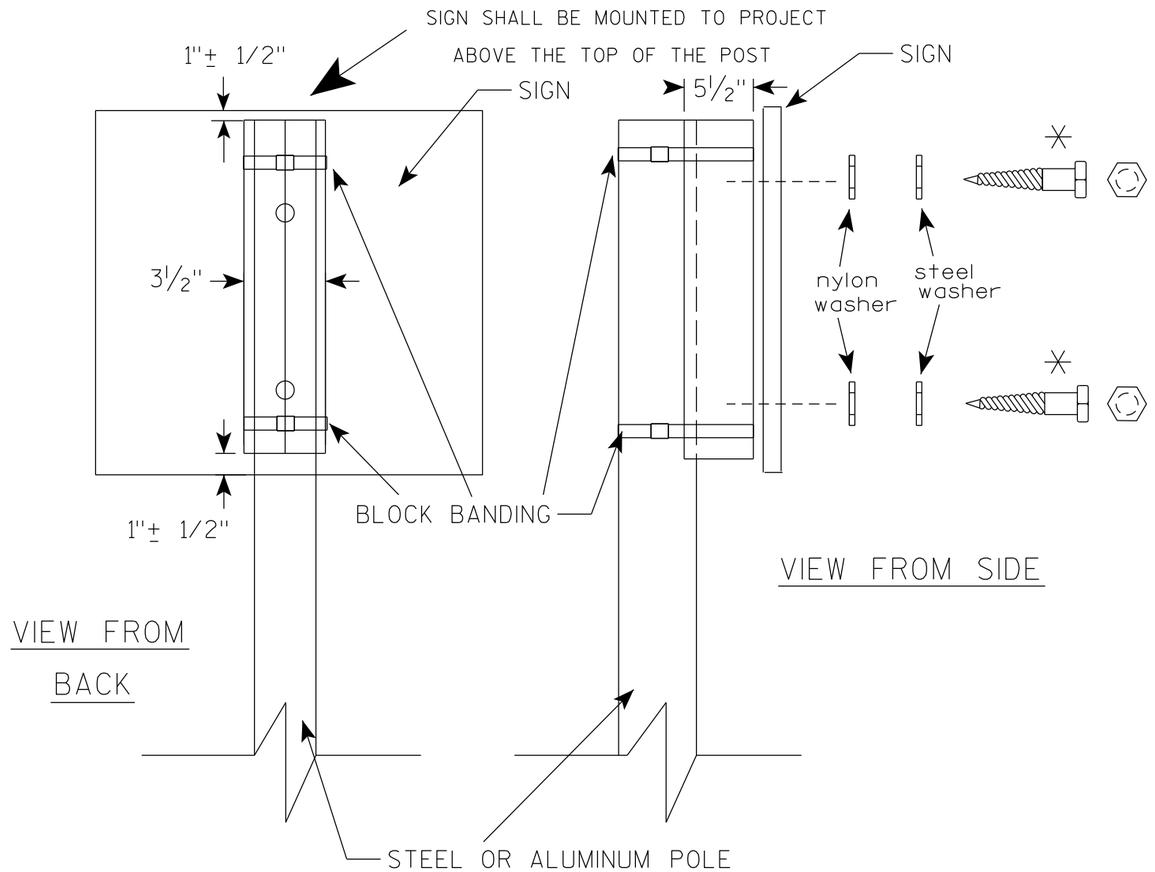
DATE 6/10/19 PLATE NO. A5-9.4

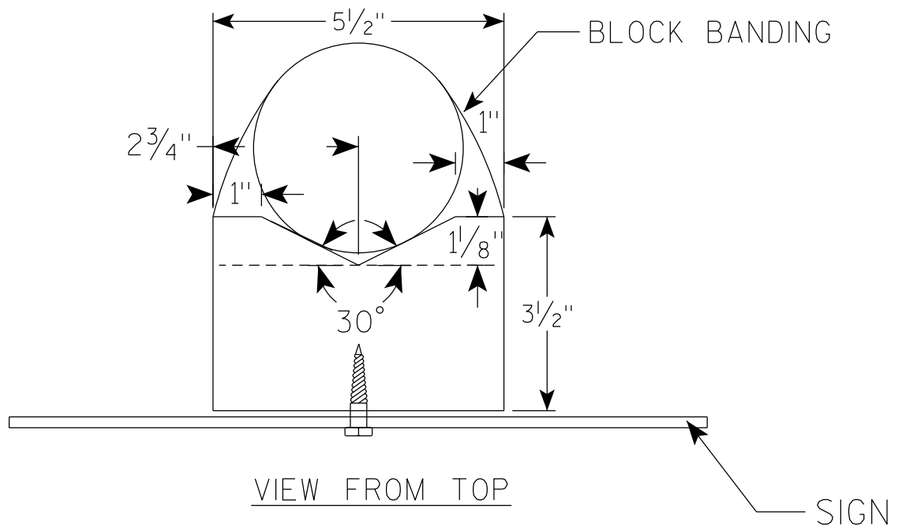
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 57	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

7





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
   b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 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"

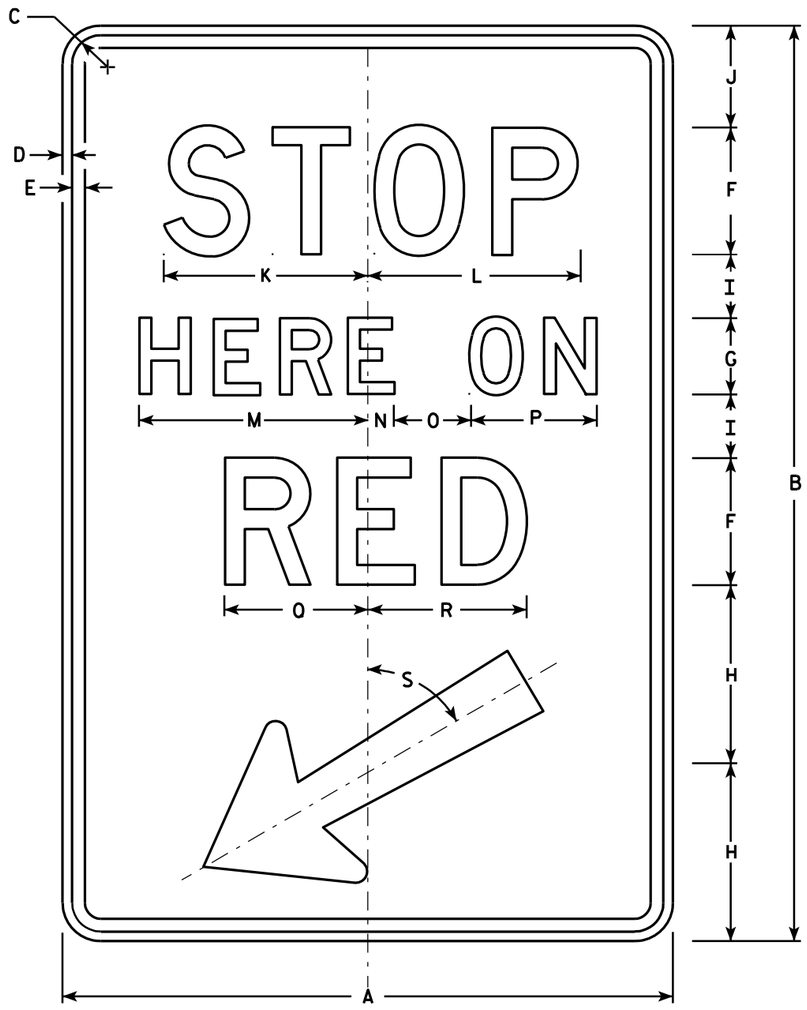
BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-10.2

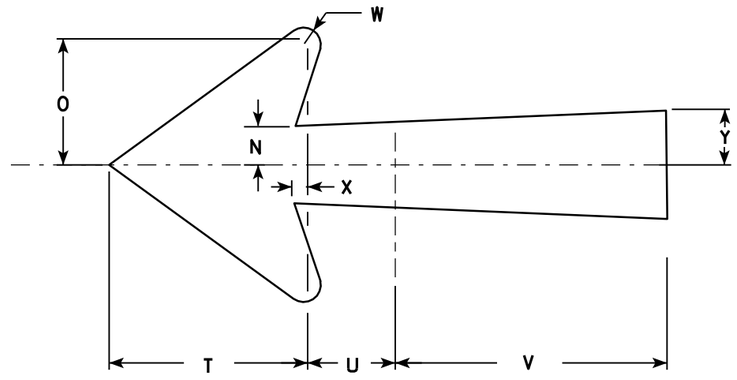
PROJECT NO:				SHEET NO: 58	E



R10-6

NOTES

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



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 5/8	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8		6.0
2M	24	36	1 1/8	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 5/8	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8		6.0
3																											
4																											
5																											

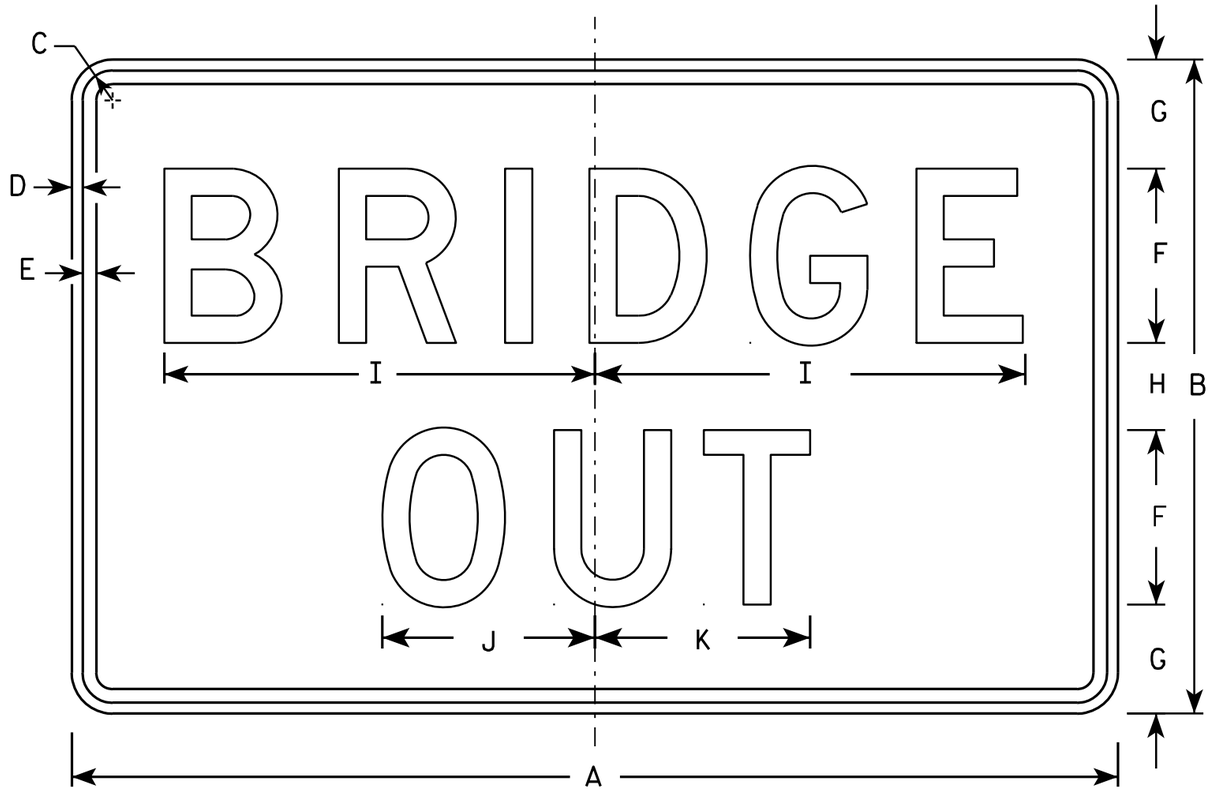
STANDARD SIGN
R10-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/5/11 PLATE NO. R10-6.6

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



R11-2B

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0

STANDARD SIGN
R11-2B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2B.2

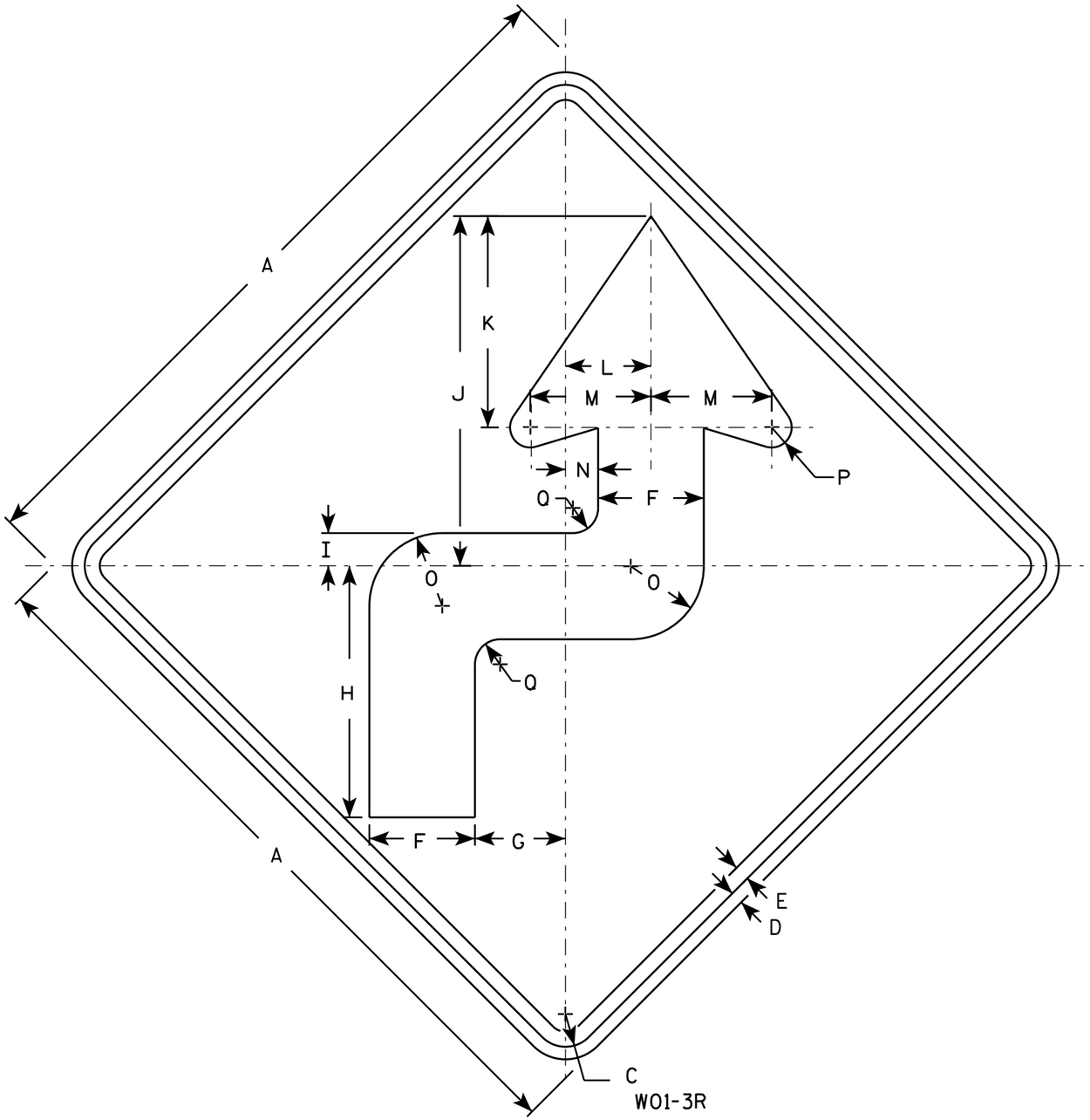
PROJECT NO:

SHEET NO: 60 E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R112B.DGN PLOT DATE : 01-APR-2011 14:23 PLOT BY : mscj9h

WISDOT/CADDS SHEET 42



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-3L is the same as W01-3R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5 1/4	4 1/2	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
2S	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0
2M	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0
3	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0
4	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0
5	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0

STANDARD SIGN
W01-3

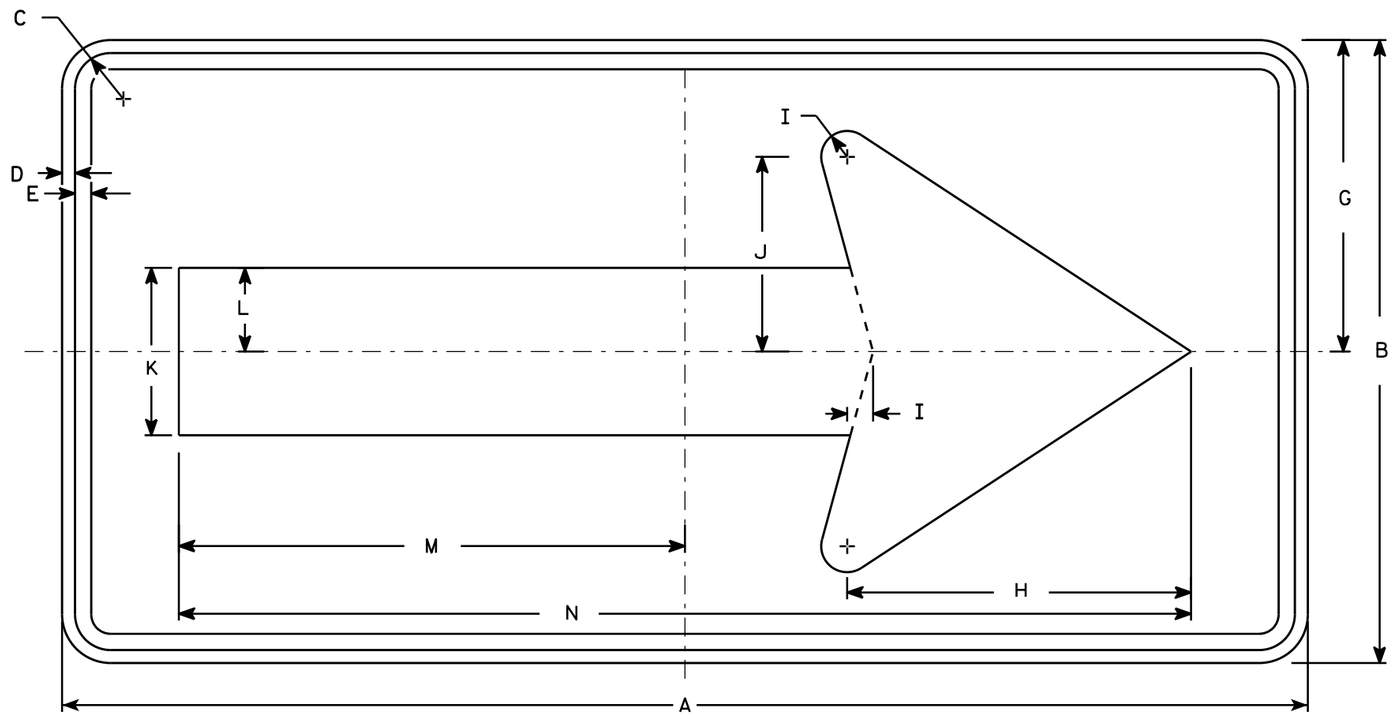
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE W01-3.1

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W013.DGN PLOT DATE : 28-FEB-2014 11:35 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.567217:1.000000



W01-6

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

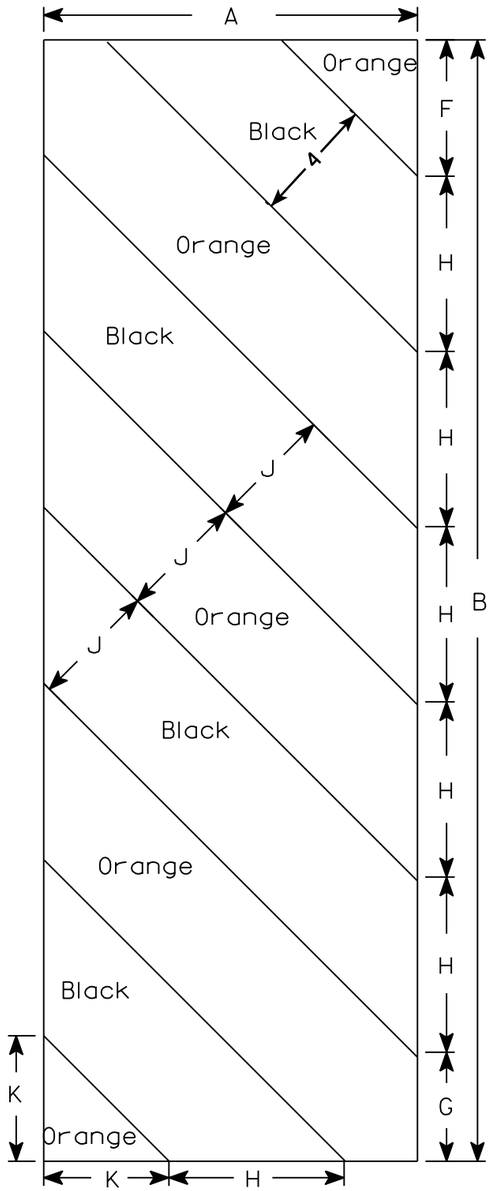
STANDARD SIGN
W01-6

WISCONSIN DEPT OF TRANSPORTATION

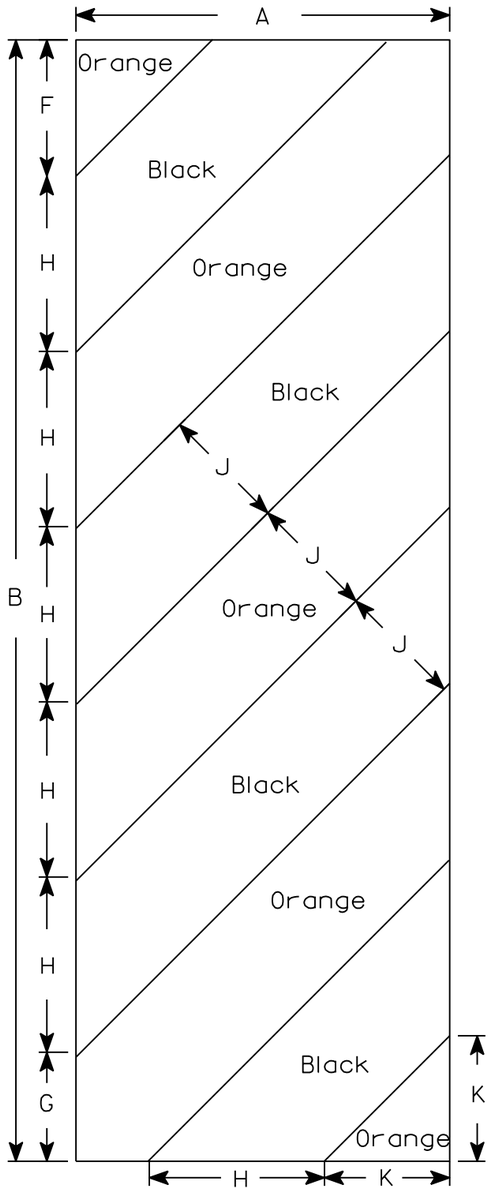
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO W01-6.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W05-52L



W05-52R

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

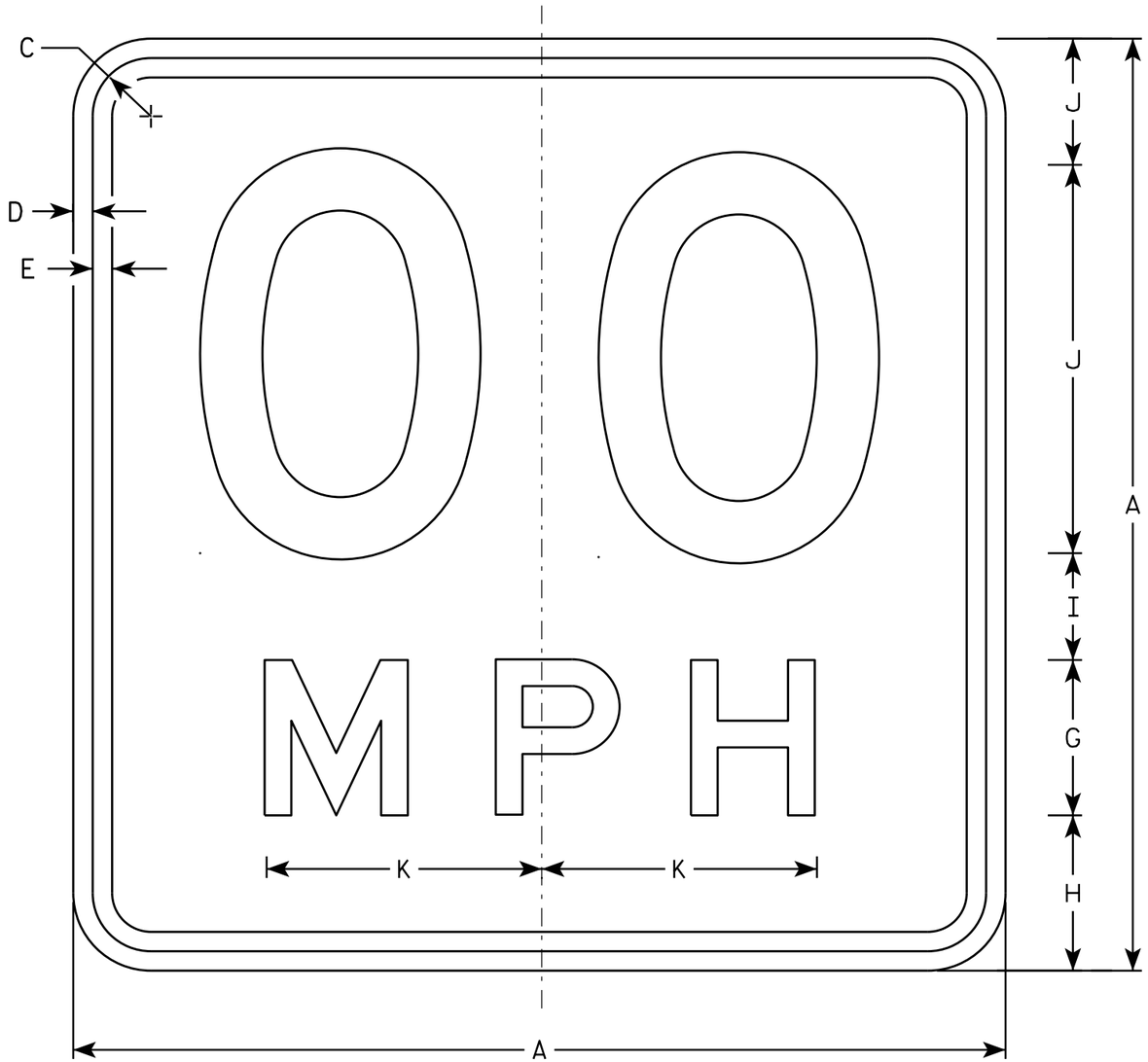
W05-52L & W05-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE W05-52.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W013-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	7 1/8																4.00
2S	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
2M	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
3	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

STANDARD SIGN
W013-1

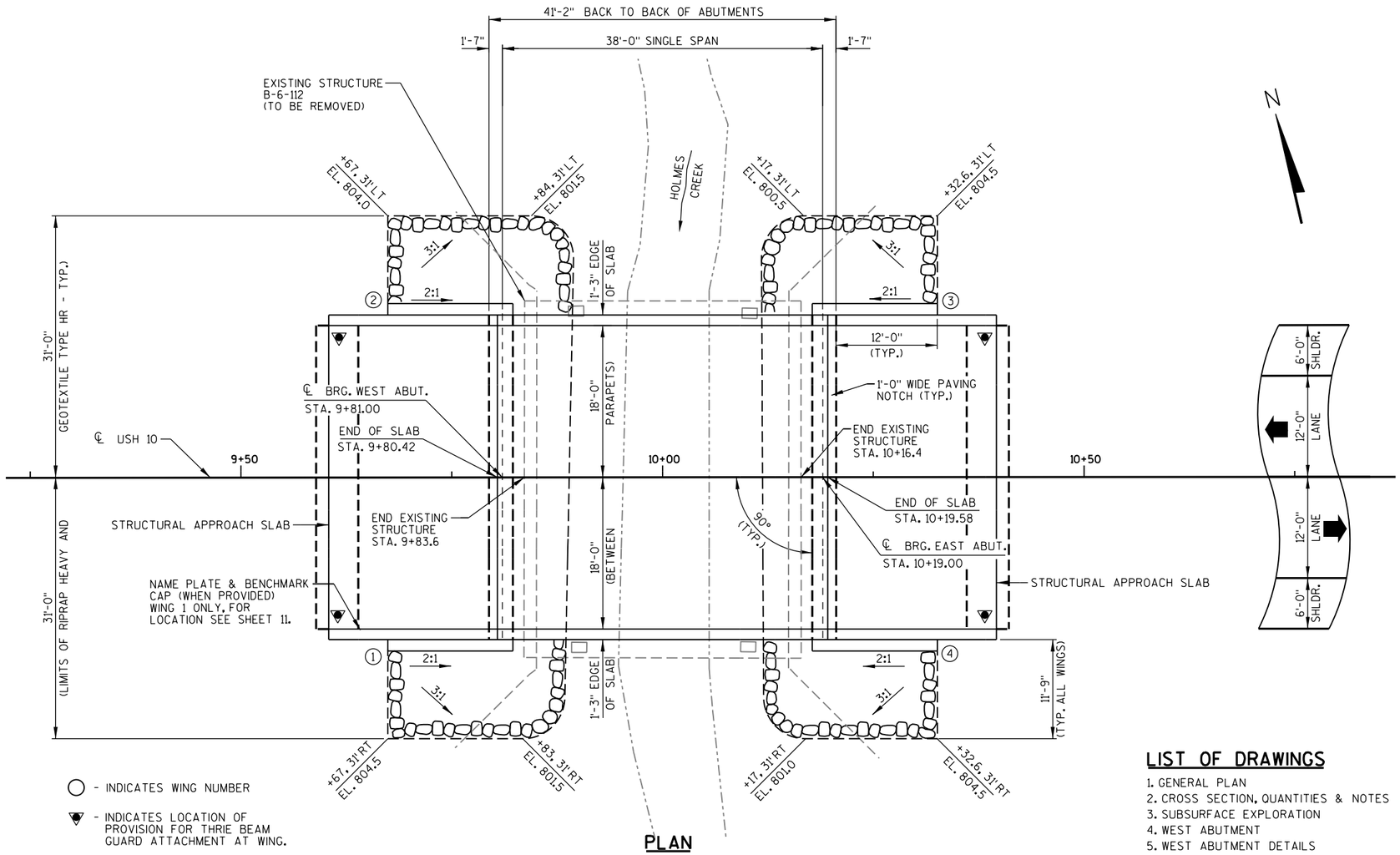
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/21/13 PLATE 64 W013-1.1

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

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W0131.DGN PLOT DATE : 02-DEC-2013 13:55 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 3.794391:1.000000
WISDOT/CADDS SHEET 42



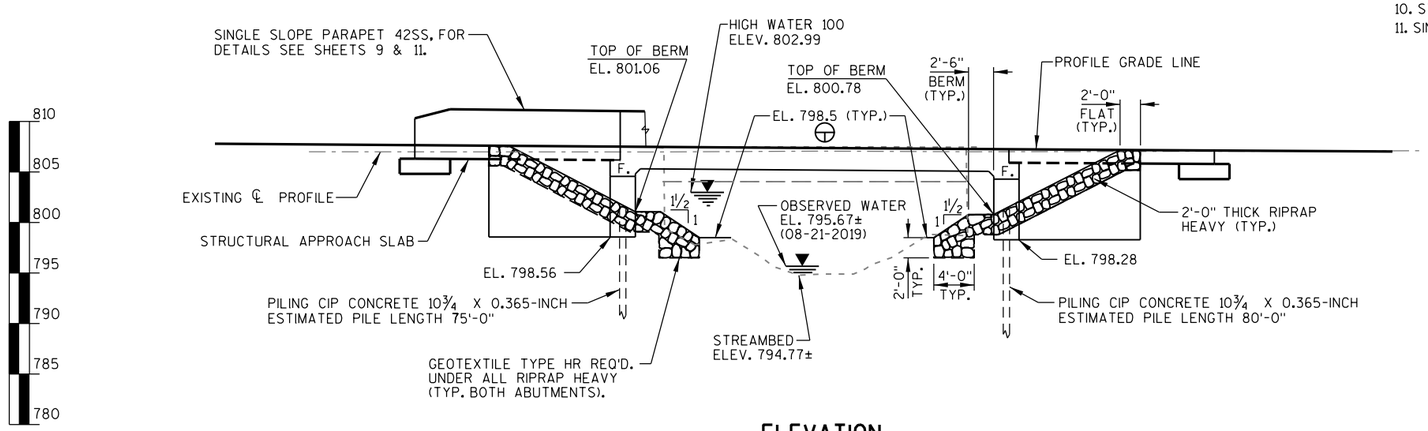
◯ - INDICATES WING NUMBER

▼ - INDICATES LOCATION OF PROVISION FOR THRIE BEAM GUARD ATTACHMENT AT WING.

⊕ - EXCAVATE TO ELEVATION 798.5. REMOVAL OF THIS MATERIAL IS INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-6-387".

PLAN

(SINGLE SPAN FLAT CONCRETE SLAB)



ELEVATION

(LOOKING NORTH)

STATE PROJECT NUMBER

1533-00-70

DESIGN DATA

LIVE LOAD:

DESIGN LOADING : HL-93
INVENTORY RATING FACTOR : 1.09
OPERATIONAL RATING FACTOR : 1.41

TRAFFIC DATA:

A.A.D.T. (2022) = 1800
A.A.D.T. (2042) = 1800
R.D.S. = 60 MPH

WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS.

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY, SLAB AND STRUCTURAL APPROACH SLAB — $f'c$ = 4,000 P.S.I.

ALL OTHER — $f'c$ = 3,500 P.S.I.

HIGH-STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 — fy = 60,000 P.S.I.

PILING CIP CONCRETE 10¾ × 0.365-INCH — fy = 45,000 P.S.I.

FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON PILING CIP CONCRETE 10¾ X 0.365-INCH DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 140 TONS ✳ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. DRIVE PILES TO 140 TON RESISTANCE OR PILE TIP ELEVATION 726.9 AT THE WEST ABUTMENT AND PILE TIP ELEVATION 721.7 AT THE EAST ABUTMENT, WHICHEVER IS DEEPER. ESTIMATED PILE LENGTHS ARE 75'-0" AT THE WEST ABUTMENT AND 80'-0" AT THE EAST ABUTMENT.

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

HYDRAULIC DATA:

100 YEAR FREQUENCY

DRAINAGE AREA	3.45 SQ. MI.
Q_{100}	770 C.F.S.
VELOCITY	4.35 FT./SEC.
WATERWAY AREA	177 SQ. FT.
SCOUR CRITICAL CODE	5
HIGH WATER $_{100}$ ELEVATION	802.99
Q_2	170 C.F.S.
Q_2 VELOCITY	3.12 FT./SEC.
Q_2 ELEVATION	799.04

ROADWAY OVERFLOW DESIGN FREQUENCY

OVERTOPPING FREQUENCY	> 100 YEARS

TEMPORARY BRIDGE

Q_5	330 C.F.S.
Q_5 ELEVATION	801.13
MINIMUM BRIDGE AREA	63 SQ. FT.

LIST OF DRAWINGS

DESIGN CONTACT:
JOSHUA SWENO
(608) 355-8852

BRIDGE OFFICE CONTACT:
AARON BONK
(608) 261-0261

NO.	DATE	REVISION	BY

MSA
ENGINEERING | ARCHITECTURE | SURVEYING
FUNDING | PLANNING | ENVIRONMENTAL
1230 SOUTH BLVD., BARABOO WI 53913
(608) 242-7771 www.msa-ps.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED _____ SDR 08/03/21
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-6-387

USH 10 OVER HOLMES CREEK

COUNTY	TOWN ~~CITY/VILLAGE~~
BUFFALO	MONDOVI

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	JFM	DESIGN CK'D.	JRS	DRAWN BY	RLR	PLANS CK'D.	JRS

GENERAL PLAN

SHEET 1 OF 11
65

WISCONSIN
JOSHUA R. SWENO
E-44384
WAUNAKEE
WI
PROFESSIONAL ENGINEER

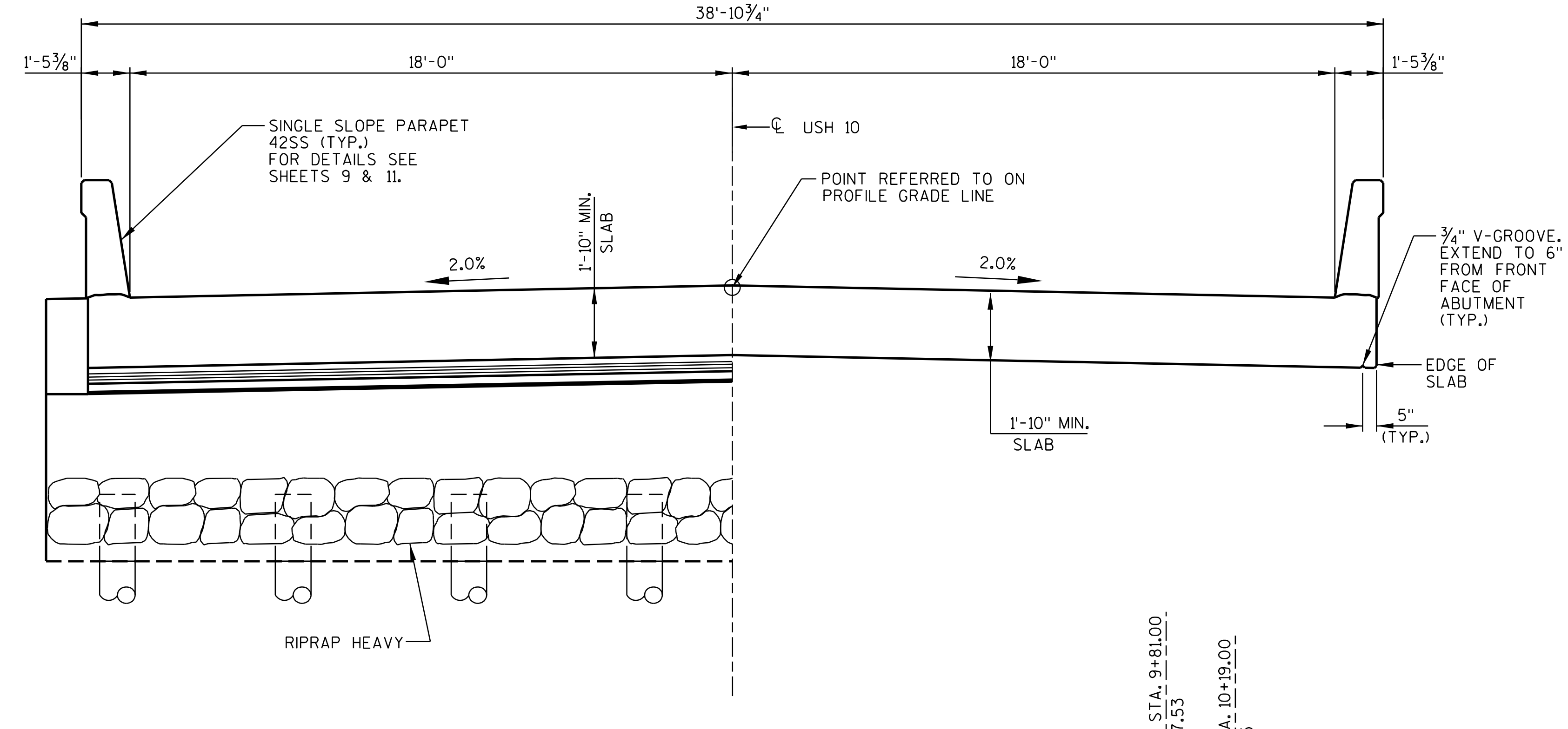
5/26/2021

FILE= 93525_01.DGN
DATE= $DATE$

93525_01.dgn 5/20/2021 12:13:13 PM rrabska

STATE PROJECT NUMBER

1533-00-70



AT ABUTMENTS   IN SPAN

CROSS SECTION THRU BRIDGE

(LOOKING EAST)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR MARK AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE TYPE HR TO THE LIMITS SHOWN ON SHEET 1 AND ON THE ABUTMENT SHEETS OR AS DIRECTED BY THE ENGINEER.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-6-387" FOR THE ABUTMENTS.

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

THIS STRUCTURE WILL REPLACE EXISTING STRUCTURE B-6-112, A 32.8 FT. LONG STEEL DECK GIRDER BRIDGE SUPPORTED ON FULL RETAINING CONCRETE ABUTMENTS WITH A 40.0 FT. CLEAR ROAD WIDTH.

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

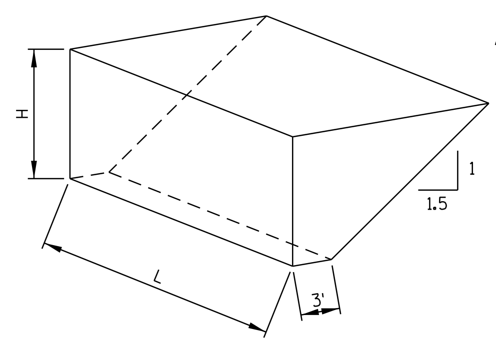
THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES.

EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP OF SLAB, PAVING NOTCH, AND STRUCTURAL APPROACH SLABS.

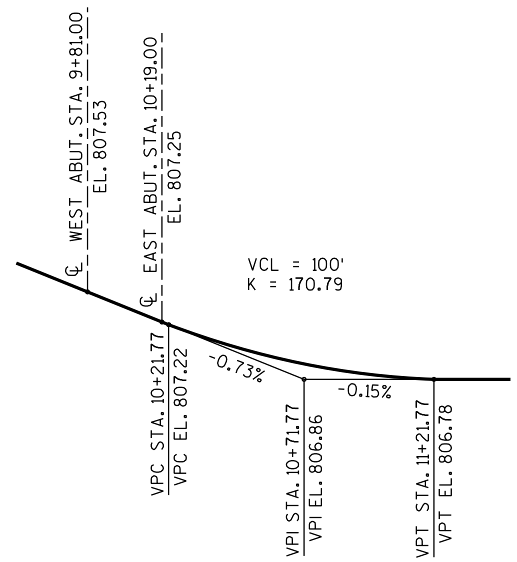
PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE INSIDE FACES, THE TOP FACES, AND THE VERTICAL ENDS OF THE PARAPETS.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO USGS NAVD 88 (2012 ADJUSTED). BENCHMARK REFERENCES AT THE PROJECT SITE WERE SET BY THE CONSULTANT USING GPS TECHNOLOGY.

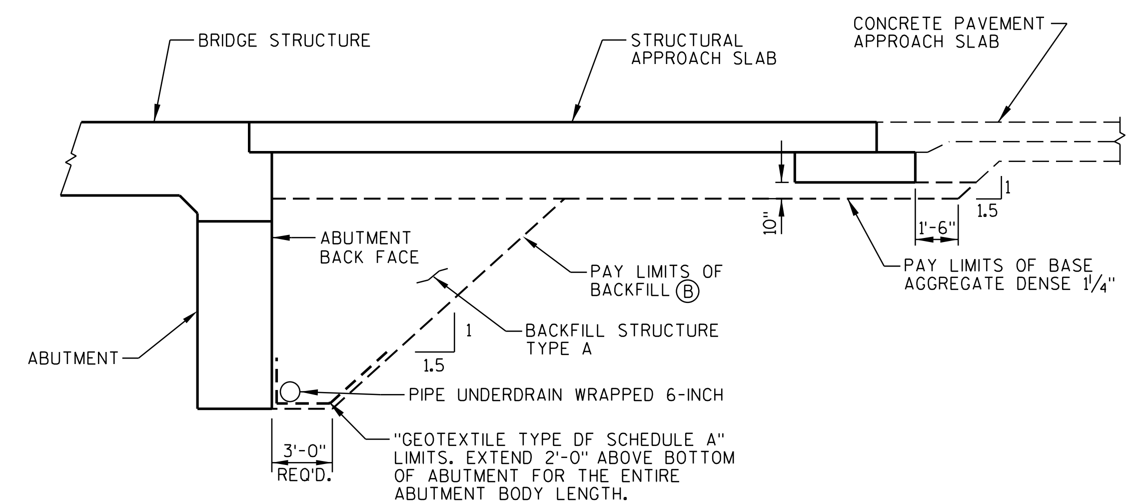


ABUTMENT BACKFILL DIAGRAM

L = OUT-TO-OUT OF ABUTMENT, INCLUDING WINGS
H = AVERAGE ABUTMENT FILL HEIGHT
$V_{CF} = (L)(3.0')(H)+(L)(0.5)(1.5H)(H)$
$V_{TON} = V_{CF}(2.0)/27$



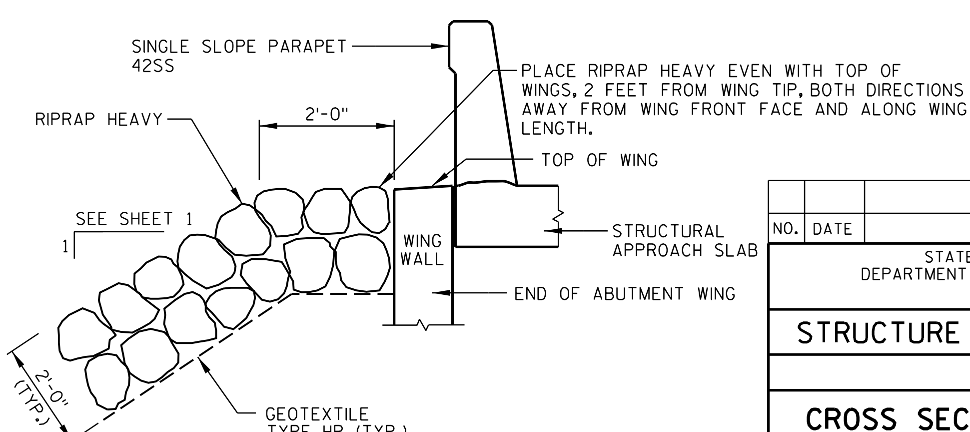
PROFILE GRADE LINE - USH 10



STRUCTURE BACKFILL DETAIL

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	WEST APPROACH	WEST ABUT.	EAST ABUT.	EAST APPROACH	SUPER	TOTAL
203.0260.01	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS B-6-112	EACH	-	-	-	-	-	1
206.1000.01	EXCAVATION FOR STRUCTURES BRIDGES B-6-387	LS	-	-	-	-	-	1
Ⓑ 210.1500	BACKFILL STRUCTURE TYPE A	TON	-	110	110	-	-	220
305.0120	BASE AGGREGATE DENSE 1 1/4 INCH	TON	110	-	-	110	-	220
502.0100	CONCRETE MASONRY BRIDGES	CY	54	48	48	54	121	325
502.3200	PROTECTIVE SURFACE TREATMENT	SY	80	-	-	80	180	340
502.3210	PIGMENTED SURFACE SEALER	SY	20	-	-	20	40	80
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	-	2,540	2,540	-	-	5,080
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	9,230	1,700	1,700	9,230	19,530	41,390
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	-	-	-	-	350	350
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-	12	12	-	-	24
526.0100	TEMPORARY STRUCTURE STA 203+60	LS	-	-	-	-	-	1
550.2106	PILING CIP CONCRETE 10 3/4 X 0.365-INCH	LF	-	600	640	-	-	1,240
606.0300	RIPRAP HEAVY	CY	-	67	63	-	-	130
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	-	105	105	-	-	210
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	-	-	-	-	4	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	-	40	40	-	-	80
645.0120	GEOTEXTILE TYPE HR	SY	-	140	135	-	-	275
	NON-BID ITEMS							
	PREFORMED FILLER	SIZE						½" & ¾"



TYPICAL FILL SECTION AT WING TIPS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-6-387

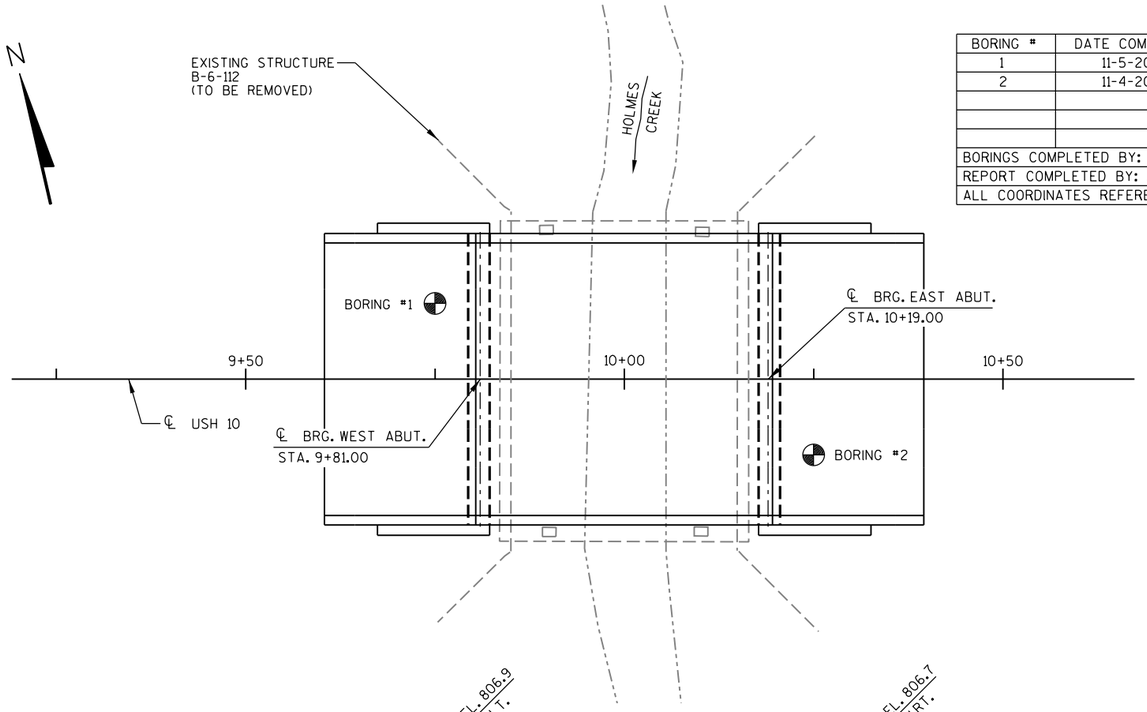
DRAWN BY RLR | PLANS CK'D. JRS

CROSS SECTION, QUANTITIES & NOTES

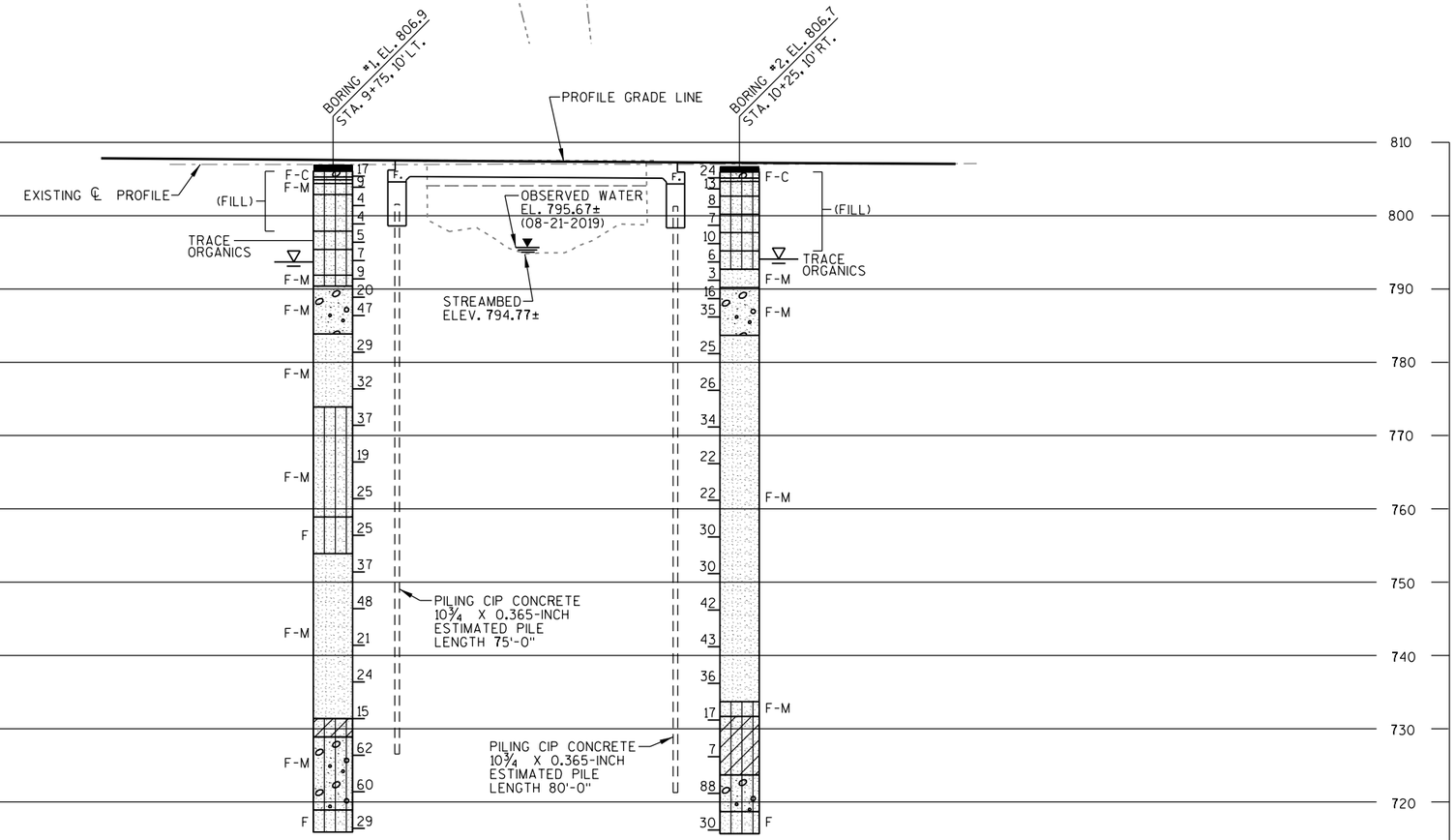
SHEET 2 OF 11

FILE= 93525_02.DGN
DATE= 5/24/2021

93525_02.dgn 5/24/2021 7:47:58 AM rrabska



BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	11-5-2019	399,360.4	599,408.2
2	11-4-2019	399,329.7	599,452.4
BORINGS COMPLETED BY: AMERICAN ENGINEERING TESTING, INC.			
REPORT COMPLETED BY: AMERICAN ENGINEERING TESTING, INC.			
ALL COORDINATES REFERENCED TO WCCS NAD 83(11) BUFFALO COUNTY			



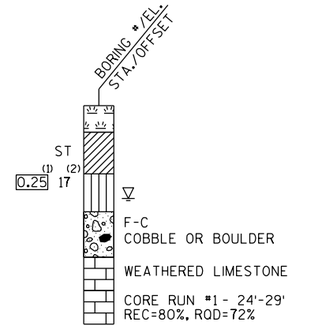
STATE PROJECT NUMBER

1533-00-70

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-6-387

DRAWN BY RLR | PLANS CK'D. JRS

SUBSURFACE EXPLORATION

SHEET 3 OF 11
67

8

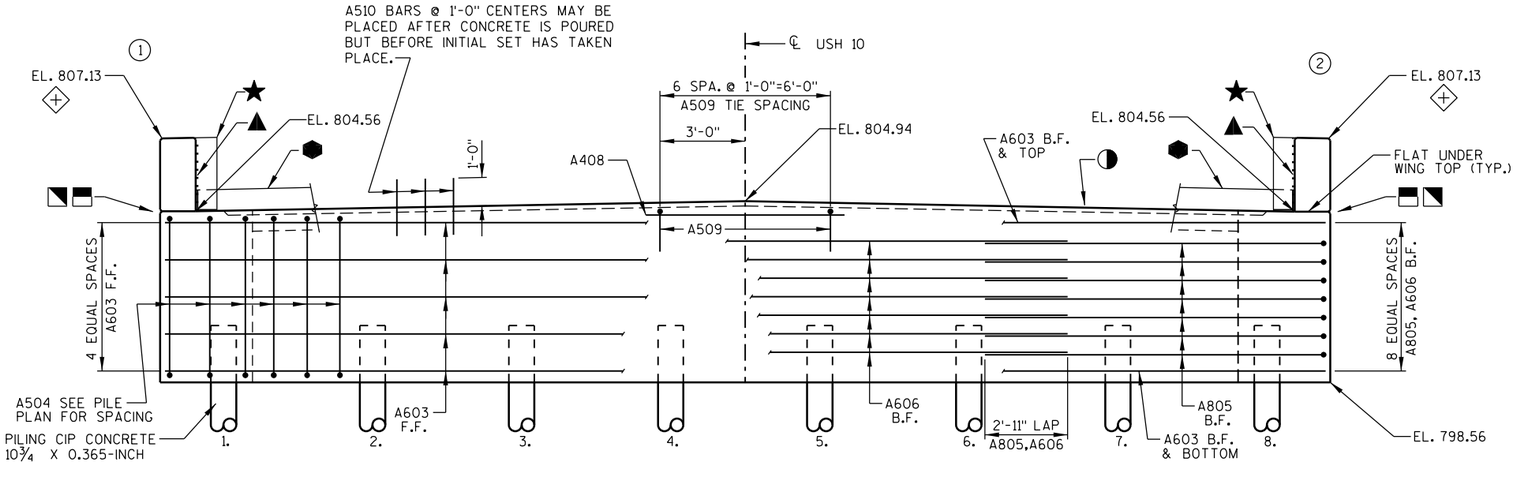
8

93525_03.dgn 5/19/2021 7:37:29 AM rrabska

FILE= 93525_03.DGN

STATE PROJECT NUMBER

1533-00-70

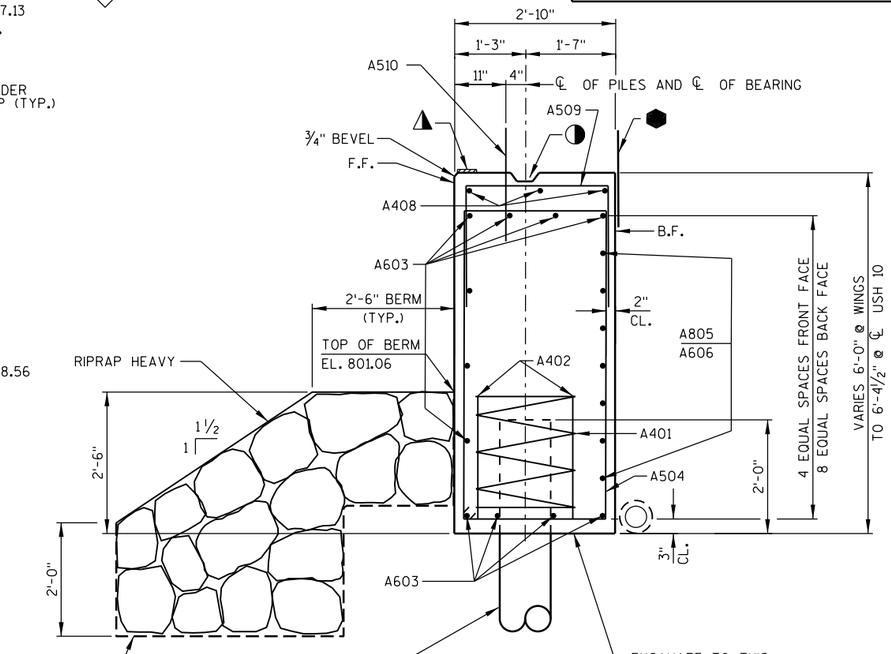


FRONT FACE BAR STEEL REINF.

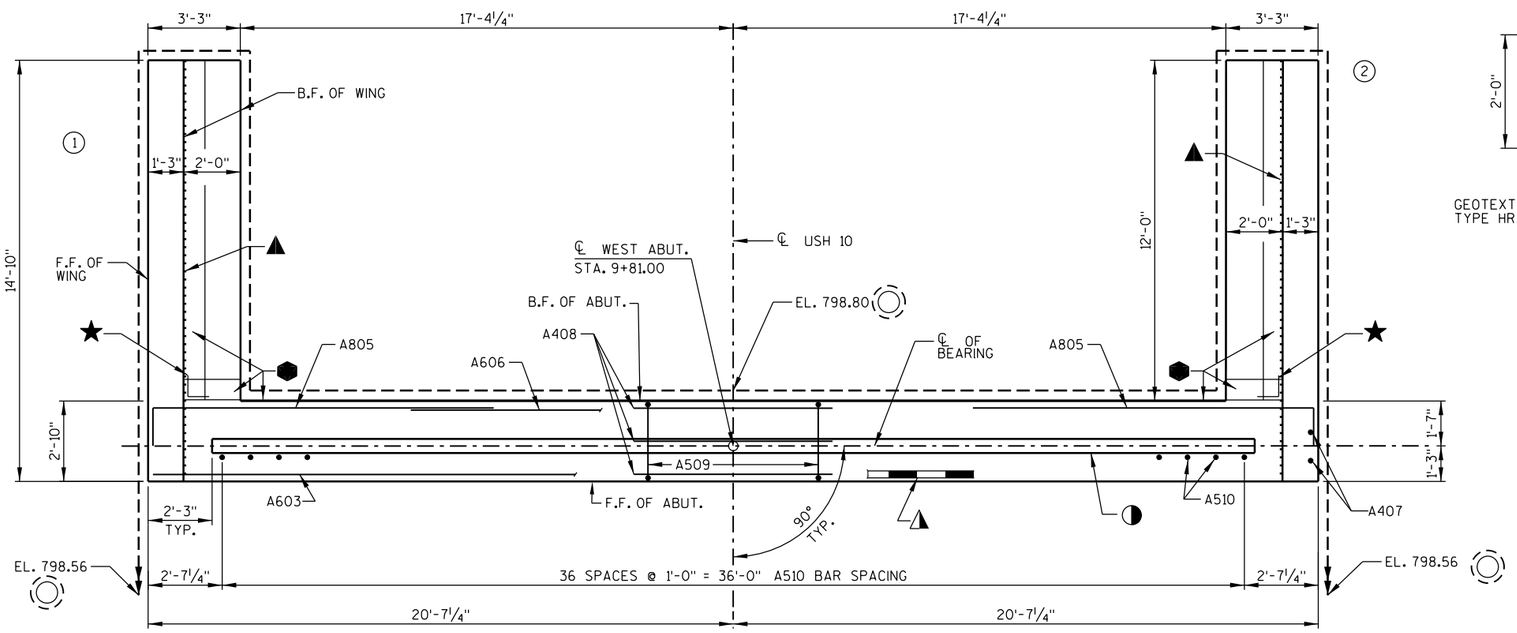
ELEVATION
(LOOKING WEST)

BACK FACE BAR STEEL REINF.

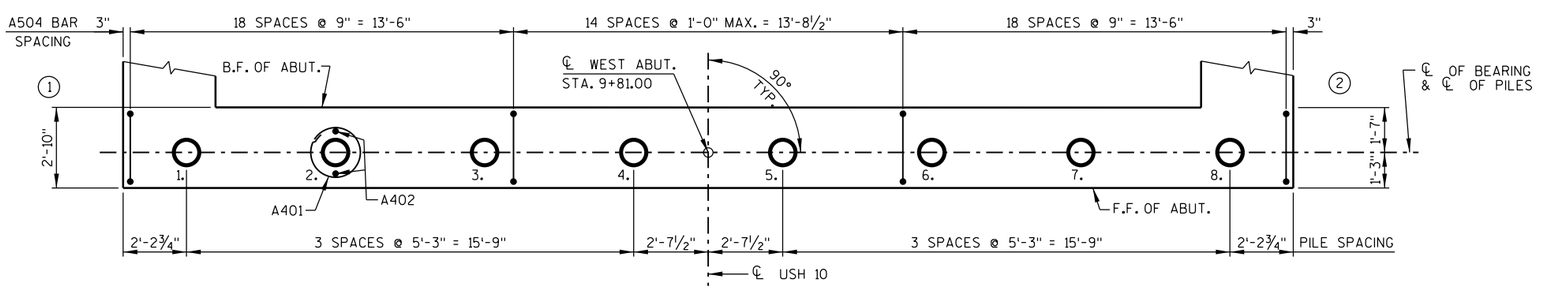
NOTES:
FOR WING DETAILS SEE SHEET 5.
⊕ ELEVATIONS GIVEN AT THE F.F. ABUTMENT



TYPICAL SECTION THRU ABUTMENT



PLAN



PILE PLAN

LEGEND

- ▬ – OPTIONAL KEYED CONSTRUCTION JOINT ON WING FORMED BY BEVELED 2x6. IF JOINT IS USED PLACE ⬢ ON B.F. OF WING.
- ◥ – ¾" "V" GROOVE ON FRONT FACE OF WING WALL, REQ'D. ONLY WHERE CONST. JOINT IS USED.
- ◑ – KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2x6.
- ▲ – ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE).
- △ – 4"× ¾" FILLER, EXTEND FULL LENGTH OF ABUTMENT BETWEEN EDGES OF SLAB.
- ★ – VERTICAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM BRIDGE SEAT TO TOP OF WINGS.
- ⬢ – HORIZONTAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND BETWEEN WINGS. PLACE BOTTOM HALF HORIZONTAL AT HAUNCHED AREA OF WINGS AT CONSTRUCTION JOINT.
- ◎ – PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND THRU GEOTEXTILE TYPE HR AT FACE OF RIPRAP HEAVY. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT PROTECTION AT ENDS OF PIPE. FOR RODENT SHIELD DETAILS SEE SHEET 7.
- ◯ – INDICATES WING NUMBER

F.F. - FRONT FACE

B.F. - BACK FACE

CL. - CLEAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-6-387

DRAWN BY RLR | PLANS CK'D. JRS

WEST ABUTMENT

SHEET 4 OF 11
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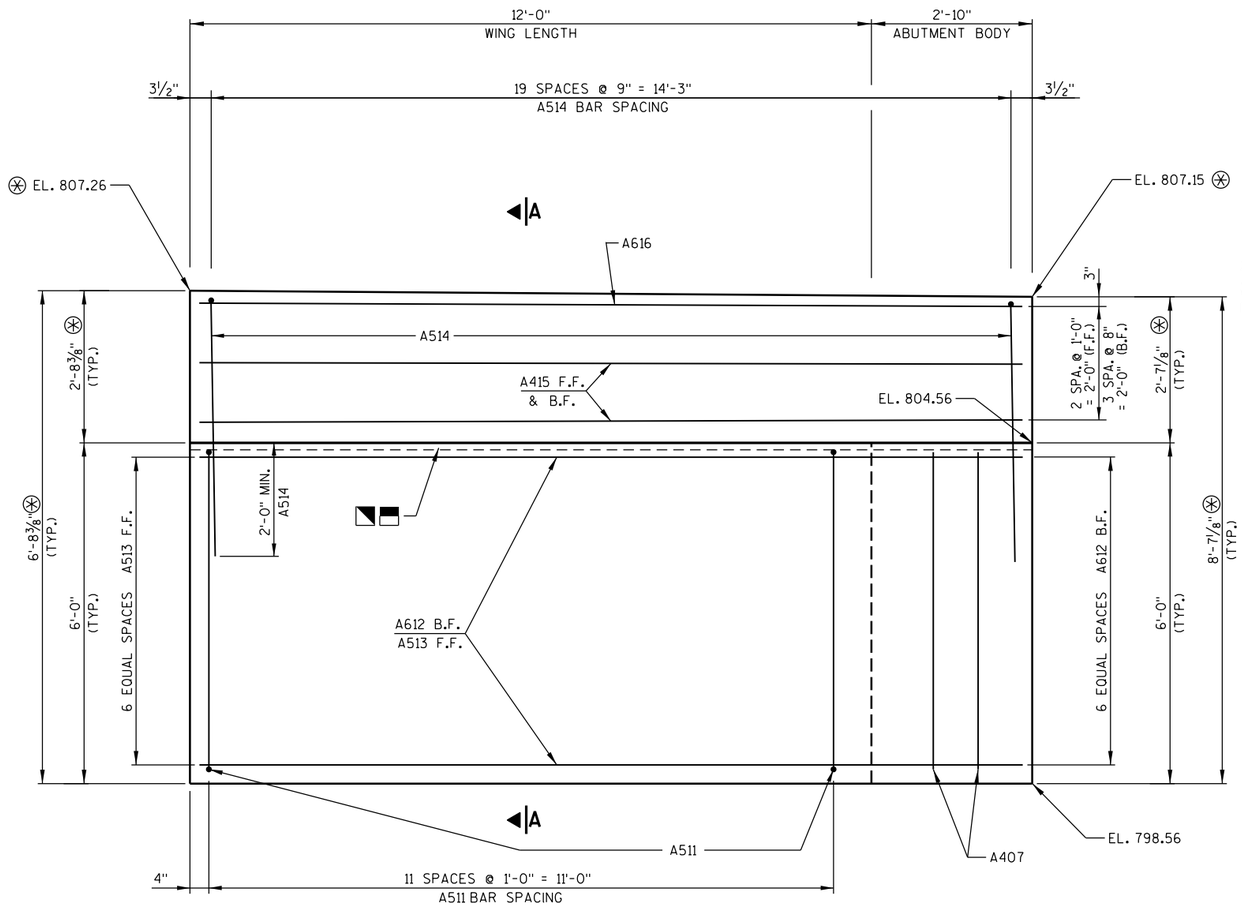
STATE PROJECT NUMBER
1533-00-70



ELEVATION - WING

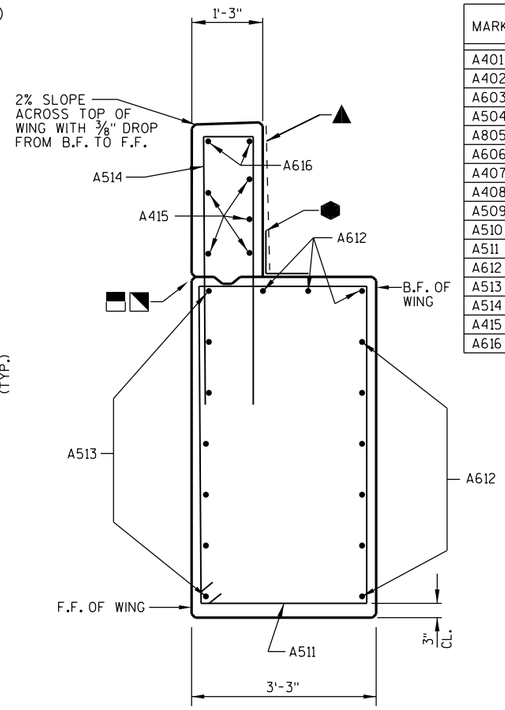
⊛ - ELEVATIONS AND DIMENSIONS ARE GIVEN AT THE B.F. OF WING.

COATED 1,700 LBS.
UNCOATED 2,540 LBS.

BILL OF BARS (WEST ABUT.)

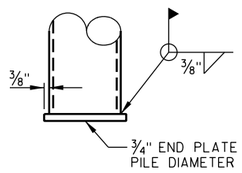
MARK	NUMBER REQUIRED COATED	NUMBER REQUIRED UNCOATED	LENGTH	BENT	LOCATION
A401	-	8	28'-0"	X	ABUTMENT BODY - 1 SPIRAL WRAP @ EACH PILING
A402	-	16	2'-3"		ABUTMENT BODY - 2 @ EACH PILING - VERT.
A603	-	11	40'-10"		ABUTMENT BODY - F.F., TOP & BOTTOM - HORIZ.
A504	-	51	16'-10"	X	ABUTMENT BODY - STIRRUP - VERT.
A805	-	14	13'-2"	X	ABUTMENT BODY - B.F. @ WINGS - HORIZ.
A606	-	7	22'-9"		ABUTMENT BODY - B.F. - CENTER - HORIZ.
A407	-	4	5'-7"		ABUTMENT BODY - ENDS - VERT.
A408	-	3	7'-0"		ABUTMENT BODY - TOP - HORIZ.
A509	-	7	5'-1"	X	ABUTMENT BODY - TOP - VERT.
A510	37	-	2'-0"		ABUTMENT BODY - TOP - DOWELS - VERT.
A511	24	-	17'-8"	X	WINGS 1 & 2 - BASE - STIRRUP - VERT.
A612	18	-	14'-0"		WINGS 1 & 2 - BASE - B.F. & CENTER - HORIZ.
A513	14	-	14'-6"		WINGS 1 & 2 - BASE - F.F. - HORIZ.
A514	40	-	9'-8"	X	WINGS 1 & 2 - TOP - STIRRUP - VERT.
A415	10	-	14'-6"		WINGS 1 & 2 - TOP - F.F. & B.F. - HORIZ.
A616	4	-	14'-6"		WINGS 1 & 2 - TOP - F.F. & B.F. - HORIZ.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

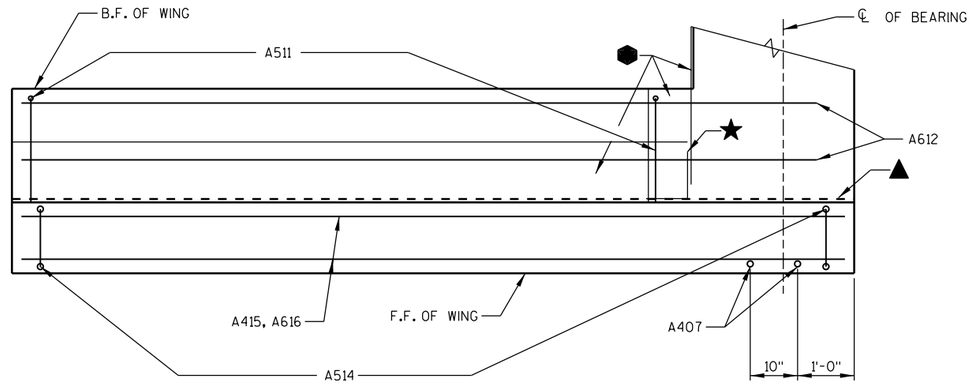


SECTION A-A THRU WING

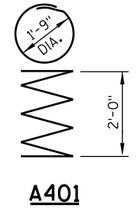
WING 1 SHOWN
WING 2 SIMILAR



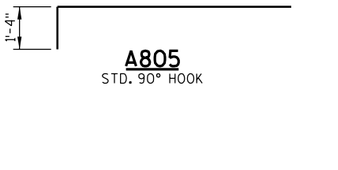
END PLATE DETAIL FOR CIP PILING



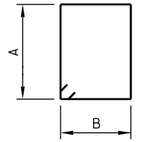
PLAN - WING



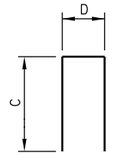
A401



A805
STD. 90° HOOK

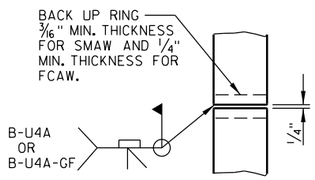


MARK	A	B
A504	5'-7"	2'-6"
A511	5'-7"	2'-11"

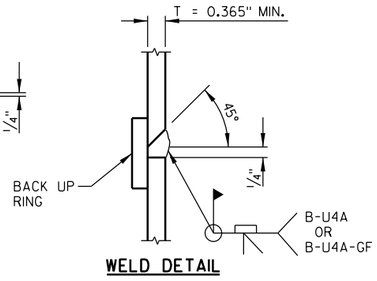


MARK	C	D
A509	1'-5"	2'-6"
A514	4'-6"	11"

SEE SHEET 4 LEGEND FOR DESCRIPTION OF ⬢ ⬓ ◥ ★ ▲



PILE SPLICE DETAILS



WELD DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-6-387

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WEST ABUTMENT DETAILS

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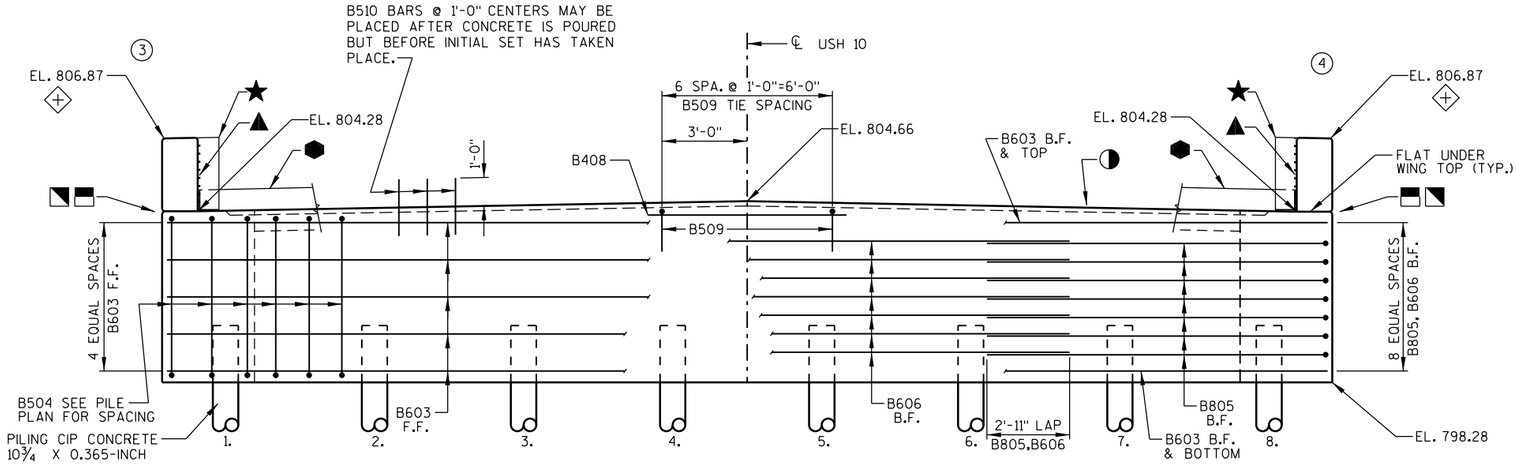
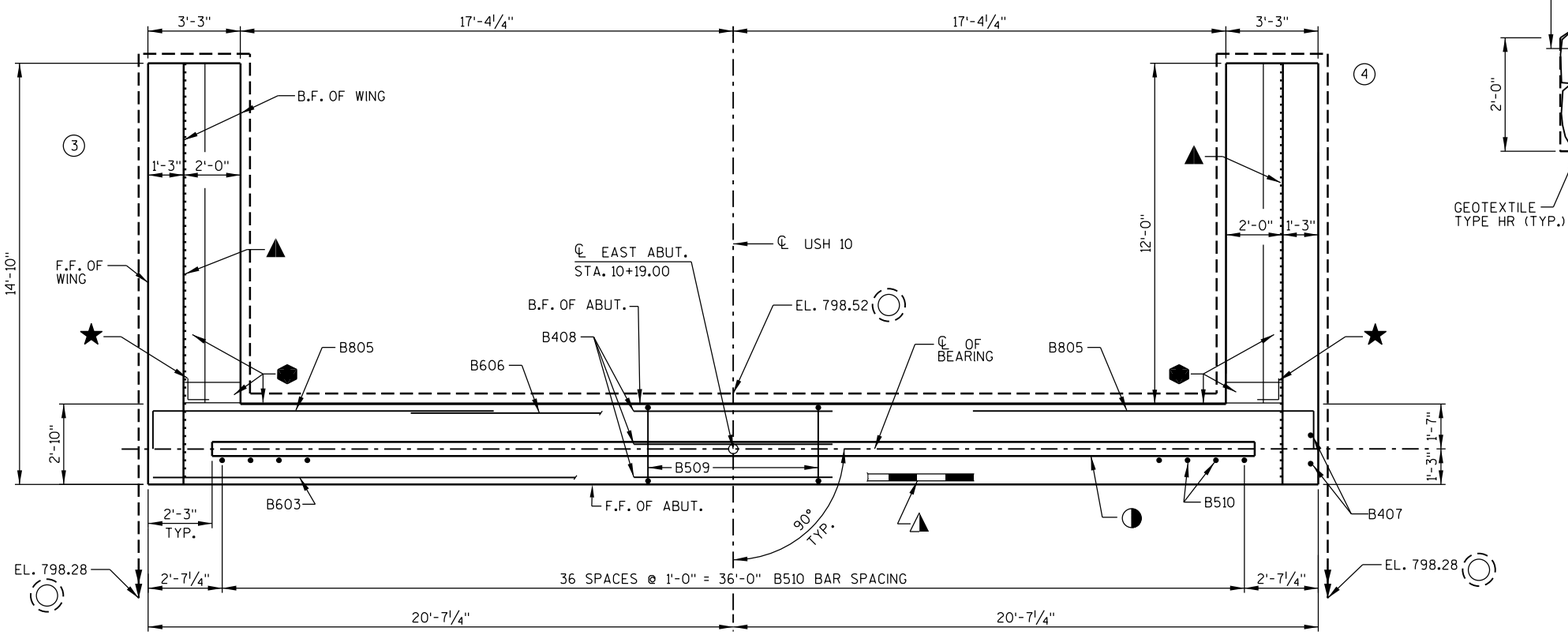


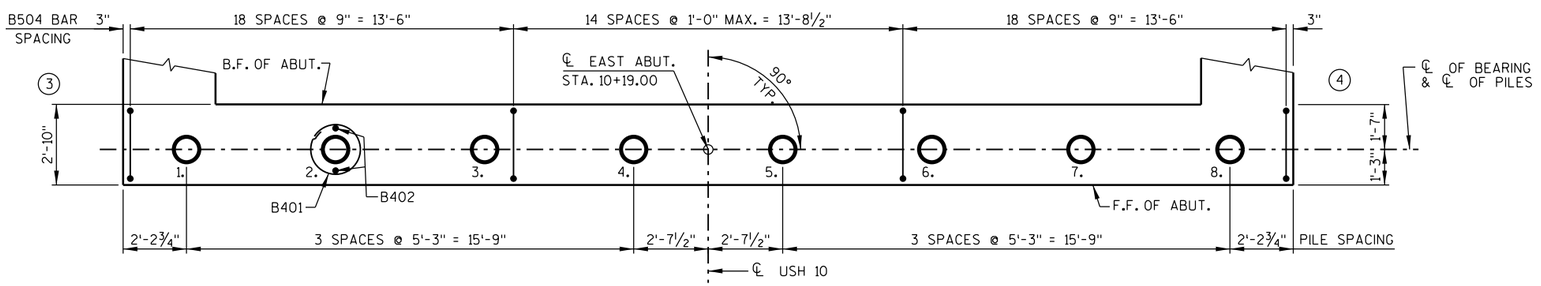
FRONT FACE BAR STEEL REINF.

ELEVATION
(LOOKING EAST)

BACK FACE BAR STEEL REINF.

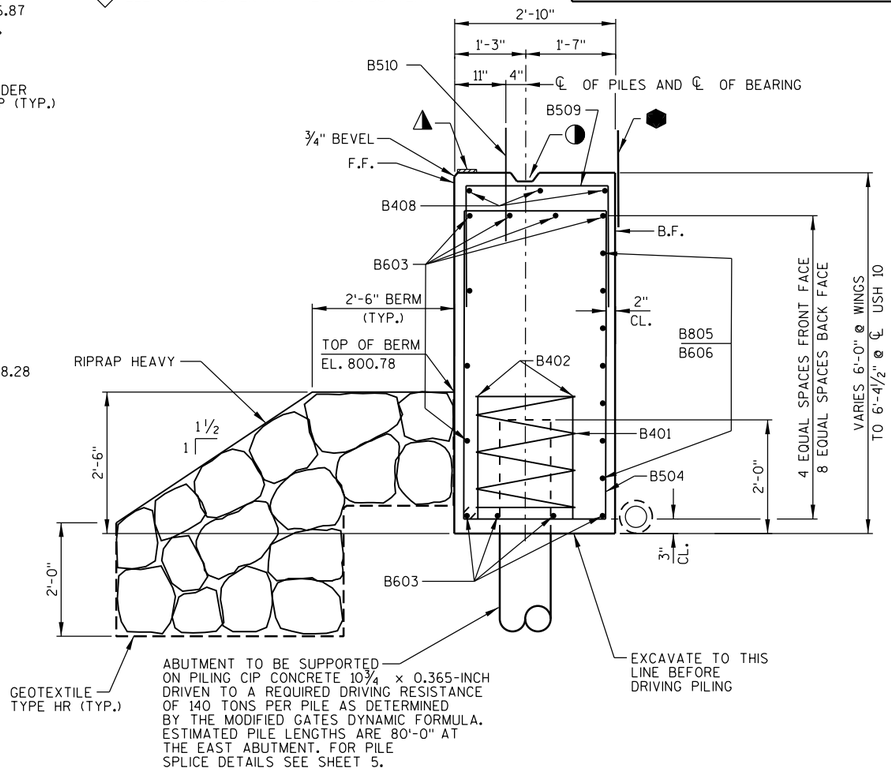


PLAN



PILE PLAN

NOTES:
FOR WING DETAILS SEE SHEET 7.
⊕ ELEVATIONS GIVEN AT THE F.F. ABUTMENT



TYPICAL SECTION THRU ABUTMENT

LEGEND

- ▬ – OPTIONAL KEYED CONSTRUCTION JOINT ON WING FORMED BY BEVELED 2x6. IF JOINT IS USED PLACE ⬢ ON B.F. OF WING.
- ◥ – ¾" "V" GROOVE ON FRONT FACE OF WING WALL, REQ'D. ONLY WHERE CONST. JOINT IS USED.
- ◑ – KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2x6.
- ▲ – ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE).
- ◭ – 4"× ¾" FILLER, EXTEND FULL LENGTH OF ABUTMENT BETWEEN EDGES OF SLAB.
- ★ – VERTICAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM BRIDGE SEAT TO TOP OF WINGS.
- ⬢ – HORIZONTAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND BETWEEN WINGS. PLACE BOTTOM HALF HORIZONTAL AT HAUNCHED AREA OF WINGS AT CONSTRUCTION JOINT.
- ◎ – PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND THRU GEOTEXTILE TYPE HR AT FACE OF RIPRAP HEAVY. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT PROTECTION AT ENDS OF PIPE. FOR RODENT SHIELD DETAILS SEE SHEET 7.
- ◯ – INDICATES WING NUMBER

F.F. - FRONT FACE

B.F. - BACK FACE

CL. - CLEAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-6-387

DRAWN BY RLR | PLANS CK'D. JRS

EAST ABUTMENT

SHEET 6 OF 11
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STATE PROJECT NUMBER

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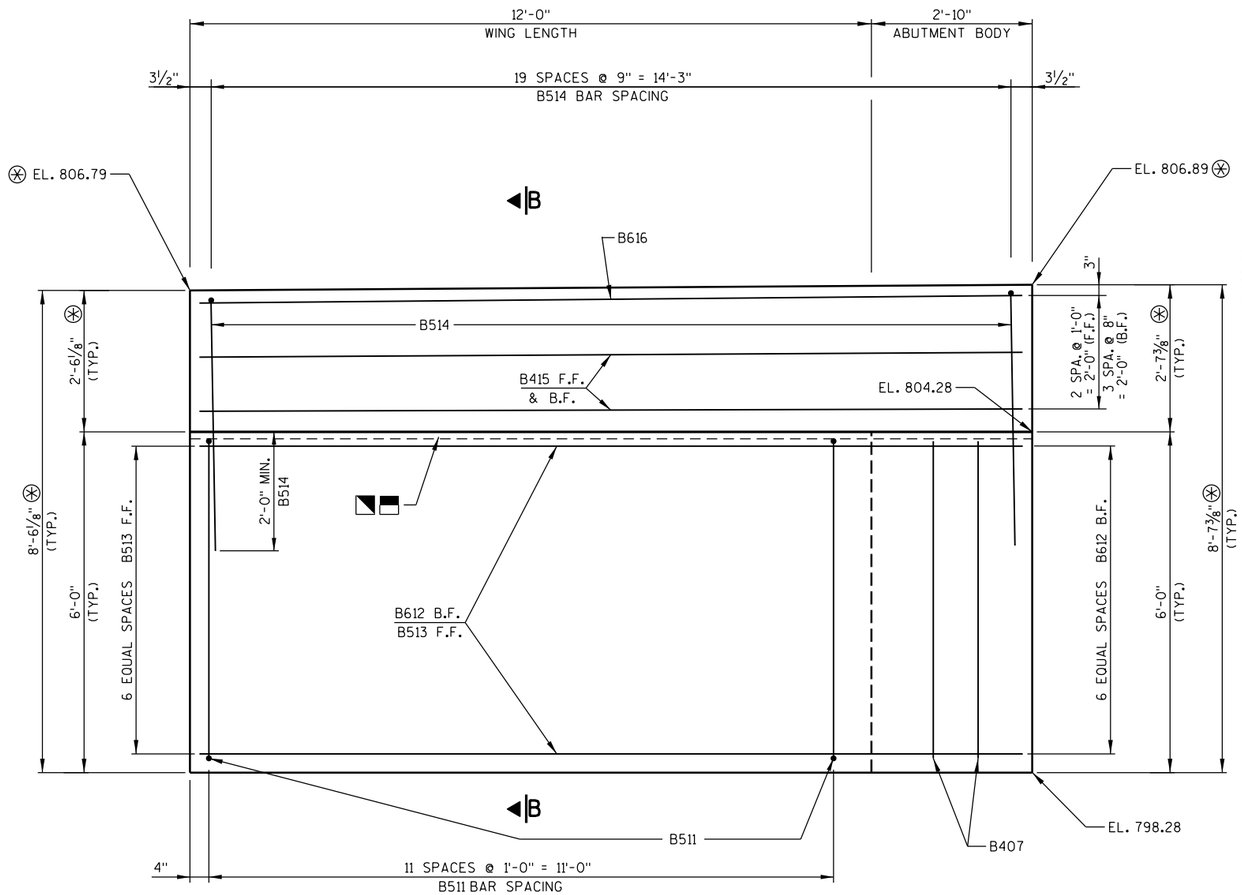
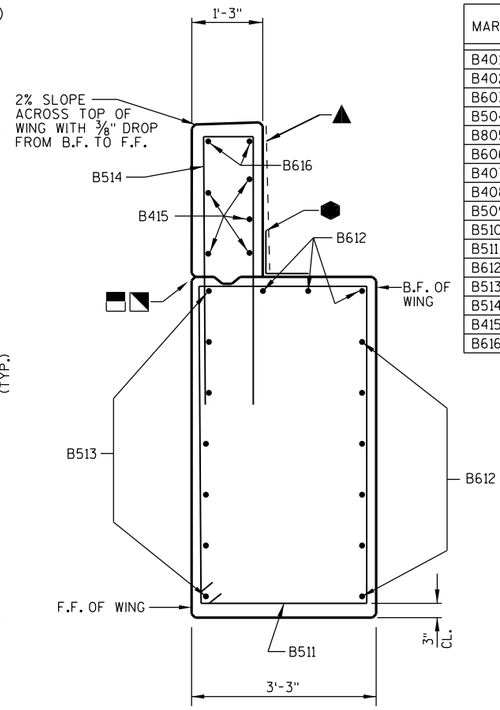
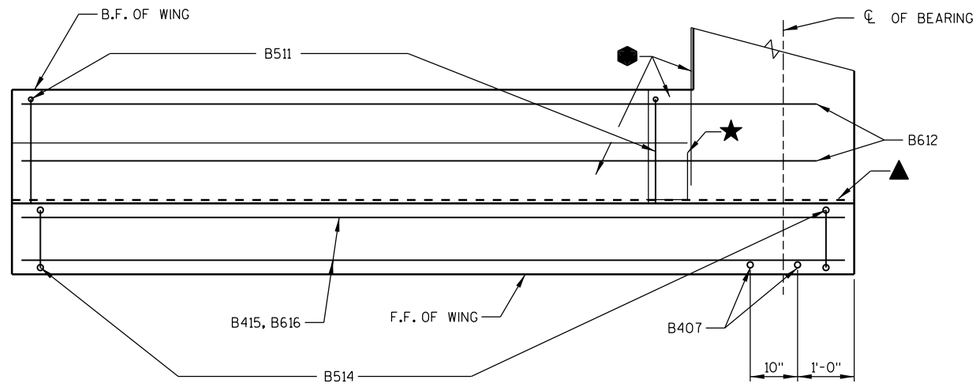


ELEVATION - WING



SECTION B-B THRU WING

WING 3 SHOWN
WING 4 SIMILAR



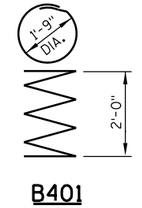
PLAN - WING

BILL OF BARS (EAST ABUT.)

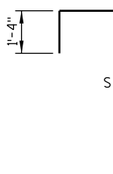
COATED 1,700 LBS.
UNCOATED 2,540 LBS.

MARK	NUMBER REQUIRED COATED	NUMBER REQUIRED UNCOATED	LENGTH	BENT	LOCATION
B401	-	8	28'-0"	X	ABUTMENT BODY - 1 SPIRAL WRAP @ EACH PILING
B402	-	16	2'-3"		ABUTMENT BODY - 2 @ EACH PILING - VERT.
B603	-	11	40'-10"		ABUTMENT BODY - F.F., TOP & BOTTOM - HORIZ.
B504	-	51	16'-10"	X	ABUTMENT BODY - STIRRUP - VERT.
B805	-	14	13'-2"	X	ABUTMENT BODY - B.F. @ WINGS - HORIZ.
B606	-	7	22'-9"		ABUTMENT BODY - B.F. - CENTER - HORIZ.
B407	-	4	5'-7"		ABUTMENT BODY - ENDS - VERT.
B408	-	3	7'-0"		ABUTMENT BODY - TOP - HORIZ.
B509	-	7	5'-1"	X	ABUTMENT BODY - TOP - VERT.
B510	37	-	2'-0"		ABUTMENT BODY - TOP - DOWELS - VERT.
B511	24	-	17'-8"	X	WINGS 3 & 4 - BASE - STIRRUP - VERT.
B612	18	-	14'-0"		WINGS 3 & 4 - BASE - B.F. & CENTER - HORIZ.
B513	14	-	14'-6"		WINGS 3 & 4 - BASE - F.F. - HORIZ.
B514	40	-	9'-8"	X	WINGS 3 & 4 - TOP - STIRRUP - VERT.
B415	10	-	14'-6"		WINGS 3 & 4 - TOP - F.F. & B.F. - HORIZ.
B616	4	-	14'-6"		WINGS 3 & 4 - TOP - F.F. & B.F. - HORIZ.

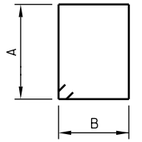
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.



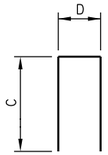
B401



B805
STD. 90° HOOK



MARK	A	B
B504	5'-7"	2'-6"
B511	5'-7"	2'-11"

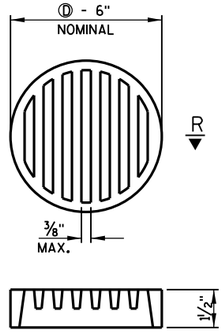


MARK	C	D
B509	1'-5"	2'-6"
B514	4'-6"	11"

RODENT SHIELD NOTES:

ORIENT SHIELD SO SLOTS ARE VERTICAL.

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 x 1-INCH STAINLESS STEEL SHEET METAL SCREWS. THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".



SECTION R-R

RODENT SHIELD

Ⓓ - DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

Ⓐ - ELEVATIONS AND DIMENSIONS ARE GIVEN AT THE B.F. OF WING.

SEE SHEET 6 LEGEND FOR DESCRIPTION OF

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-6-387

DRAWN BY RLR | PLANS CK'D. JRS

EAST ABUTMENT DETAILS

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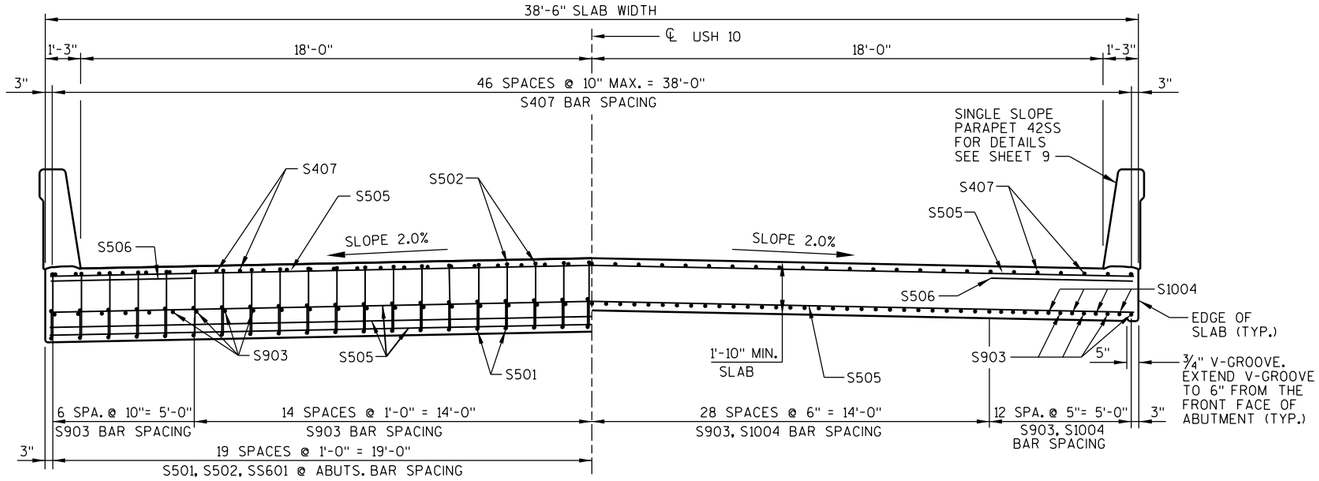
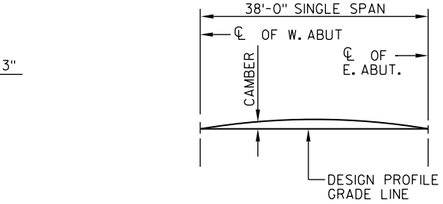


AT ABUTMENTS IN SPAN

CROSS SECTION THRU BRIDGE

(LOOKING EAST)



CAMBER DIAGRAM

CAMBER SPANS AS SHOWN ABOVE AND IN THE TABLE OF VALUES TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT. DEAD LOAD DEFLECTION APPROXIMATES 1/3 OF CAMBER VALUES SHOWN.

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB, CROWN OR REFERENCE LINE, FOLLOW THIS PROCEDURE:

TOP OF SLAB ELEVATION AT FINAL GRADE

- SLAB THICKNESS

+ CAMBER

+ FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)

= TOP OF SLAB FALSEWORK ELEVATION

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GENERAL NOTES

ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

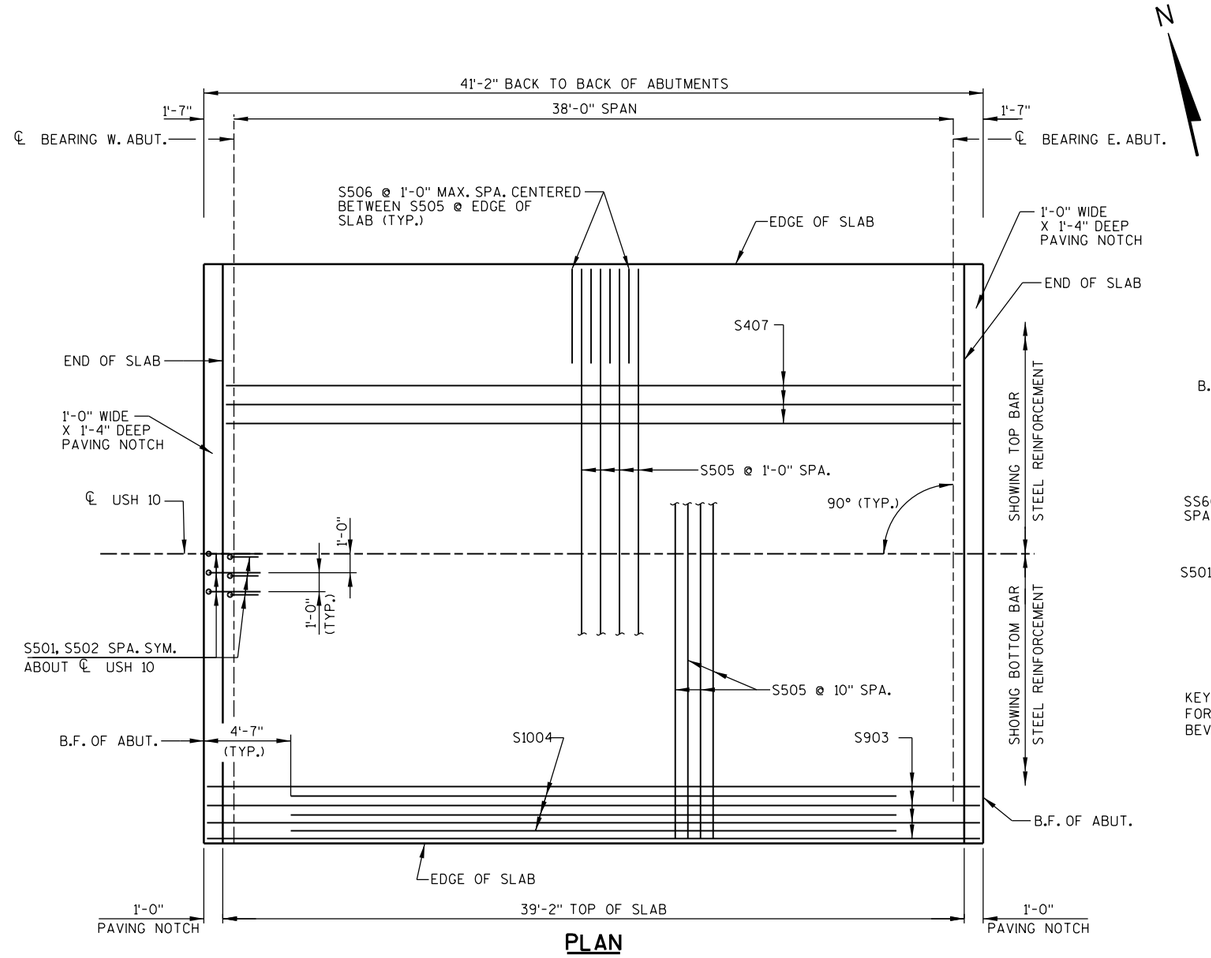
SURVEY TOP OF SLAB ELEVATIONS

LOCATION	SPAN POINT	SOUTH SLAB EDGE	C/L USH 10	NORTH SLAB EDGE
WEST ABUT.	1.0			
	1.5			
EAST ABUT.	2.0			

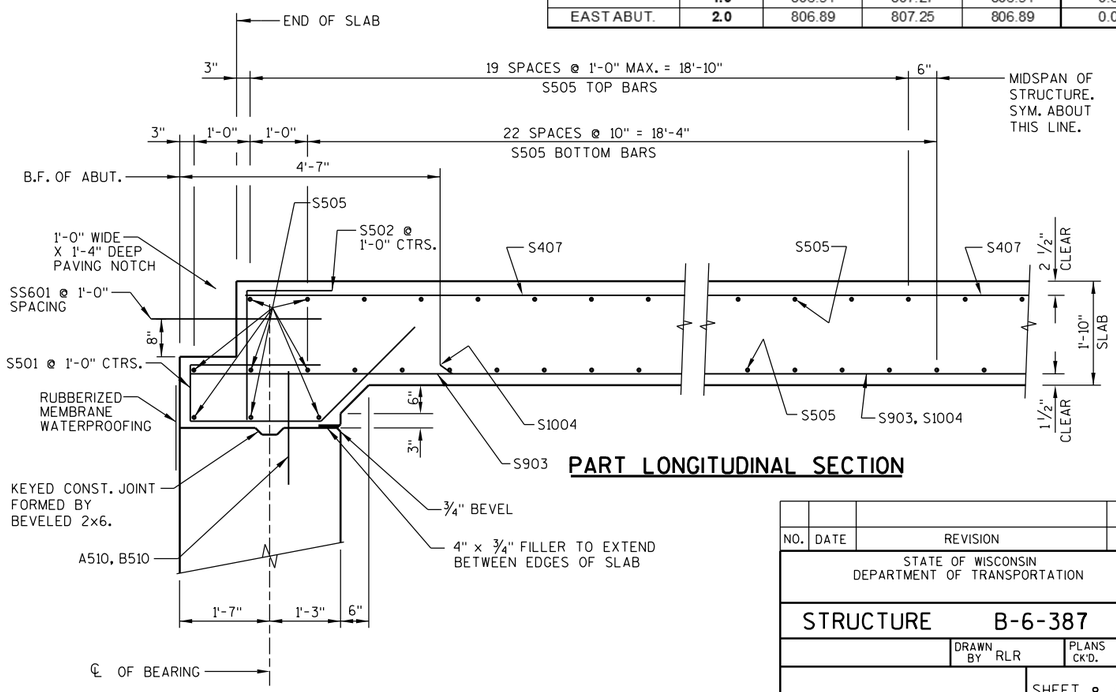
PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE ℄ OF ABUTMENTS AND AT THE 0.5 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF SLAB AND CROWN OR ℄. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

TOP OF SLAB ELEVATIONS AND CAMBER VALUES

LOCATION	SPAN POINT	SOUTH SLAB EDGE	C/L USH 10	NORTH SLAB EDGE	CAMBER VALUE (INCHES)
WEST ABUT.	1.0	807.17	807.53	807.17	0.00
	1.1	807.14	807.50	807.14	0.35
	1.2	807.11	807.47	807.11	0.67
	1.3	807.08	807.44	807.08	0.92
	1.4	807.05	807.41	807.05	1.07
	1.5	807.03	807.39	807.03	1.13
	1.6	807.00	807.36	807.00	1.07
	1.7	806.97	807.33	806.97	0.92
	1.8	806.94	807.30	806.94	0.67
	1.9	806.91	807.27	806.91	0.35
EAST ABUT.	2.0	806.89	807.25	806.89	0.00



PLAN



PART LONGITUDINAL SECTION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-6-387

DRAWN BY RLR | PLANS CK'D. JRS

SUPERSTRUCTURE

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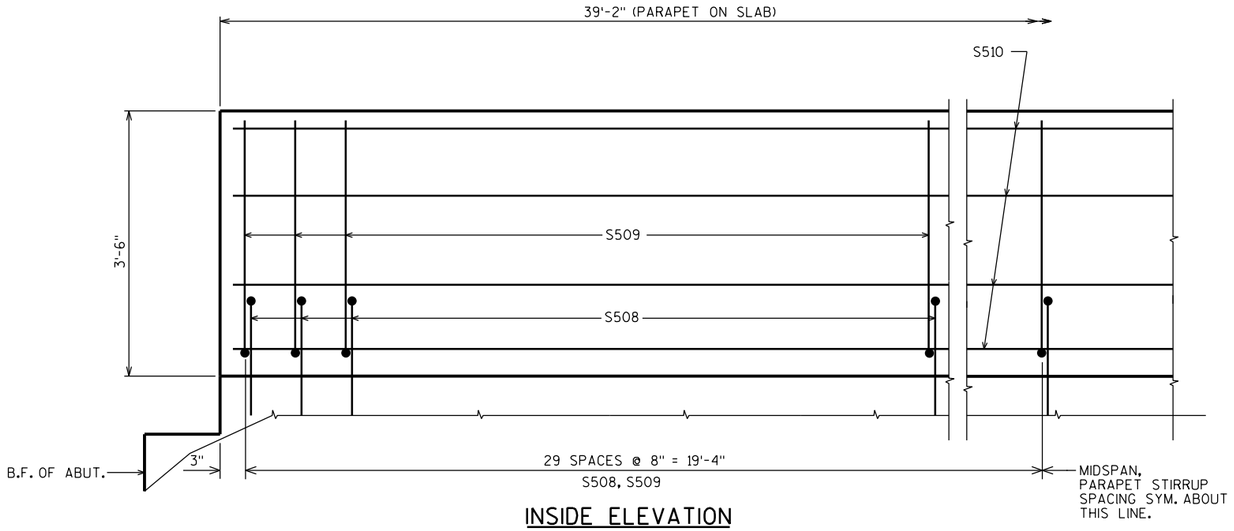
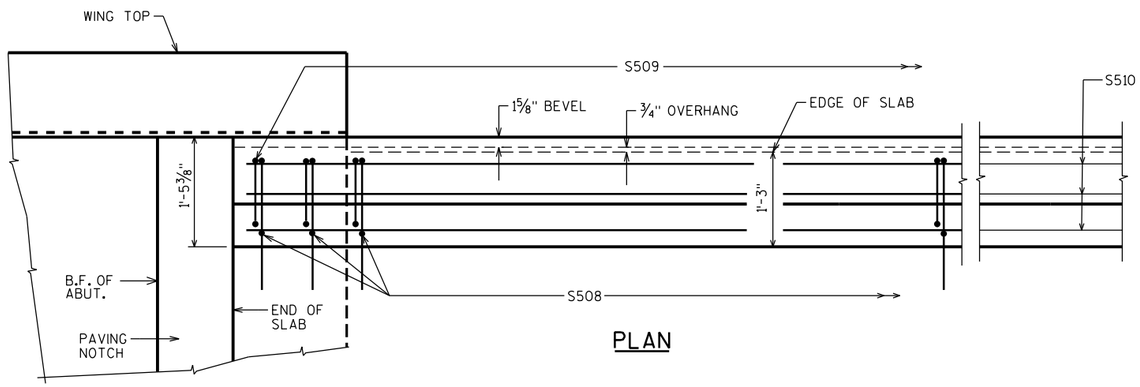


INSIDE ELEVATION



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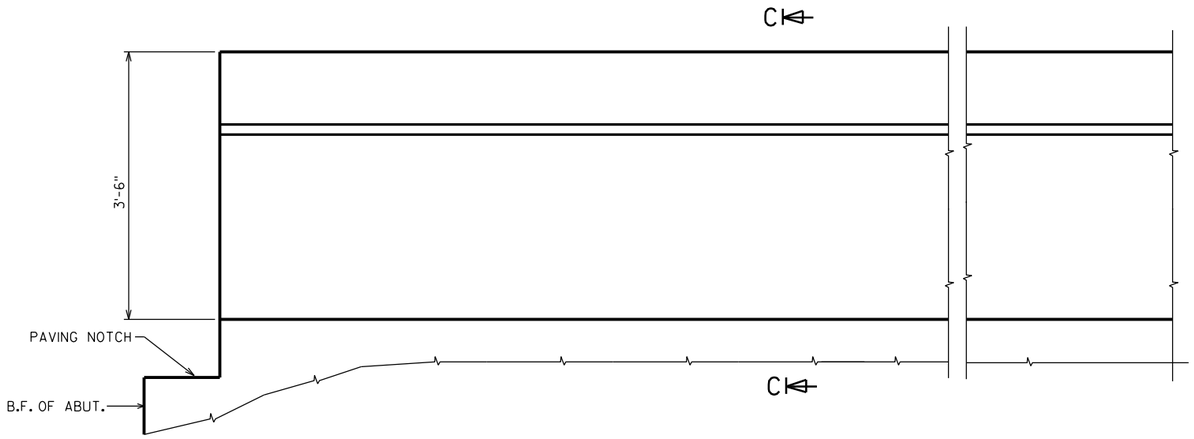


OUTSIDE ELEVATION

BILL OF BARS

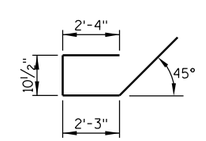
COATED 19,530 LBS.
STAINLESS 350 LBS.

MARK	NO. REQ'D.	LENGTH	BENT	LOCATION
S501	78	7'-7"	X	DIAPHRAGM @ ABUTS. - LONGIT.
S502	78	3'-7"	X	DIAPHRAGM @ ABUTS. - VERT.
S903	41	40'-10"		SLAB BOTTOM - LONGIT.
S1004	40	32'-0"		SLAB BOTTOM - LONGIT.
S505	95	38'-2"		SLAB TOP & BOTTOM - TRANS.
S506	78	5'-0"		SLAB TOP @ EDGES
S407	47	38'-10"		SLAB TOP - LONGIT.
S508	118	4'-5"	X	PARAPET STIRRUP - INTO SLAB - VERT.
S509	118	6'-8"	X	PARAPET STIRRUP - VERT.
S510	16	38'-10"		PARAPET ON BRIDGE - LONGIT.
SS601	78	3'-0"		BRIDGE SLAB TO APPROACH SLAB - LONGIT.

STAINLESS STEEL BAR. DO NOT EPOXY COAT.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

EPOXY COAT ALL SUPERSTRUCTURE BAR STEEL REINFORCEMENT.



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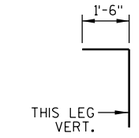
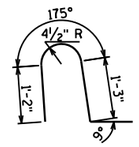


S502



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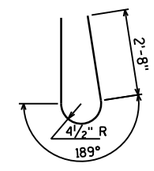

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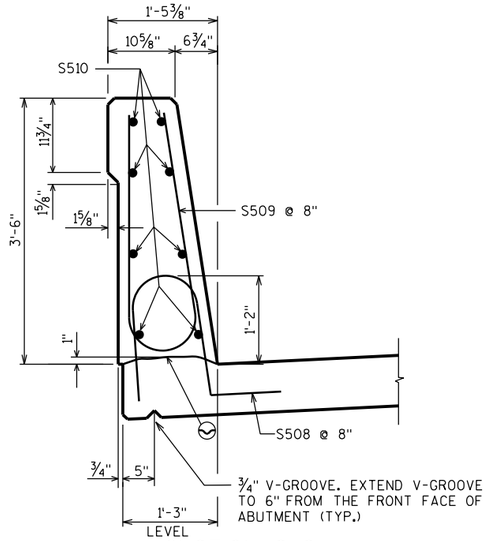

SECTION C-C

CONST. JOINT - STRIKE OFF AS SHOWN.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-6-387

DRAWN BY RLR | PLANS CK'D. JRS

SINGLE SLOPE PARAPET 42SS ON SUPERSTRUCTURE

SHEET 9 OF 11
73

8

8

93525_09.dgn 5/18/2021 8:55:56 PM rrabska

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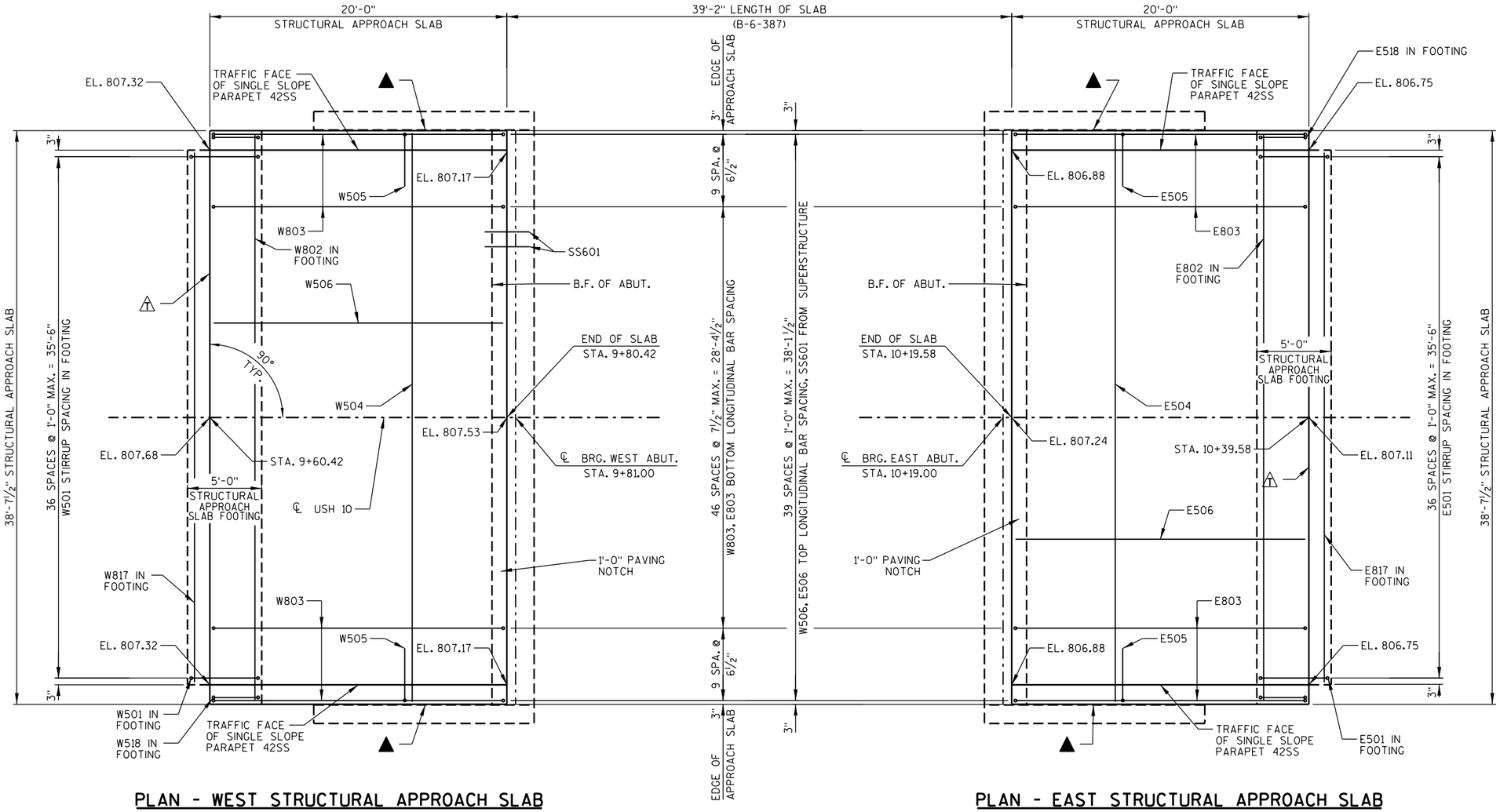
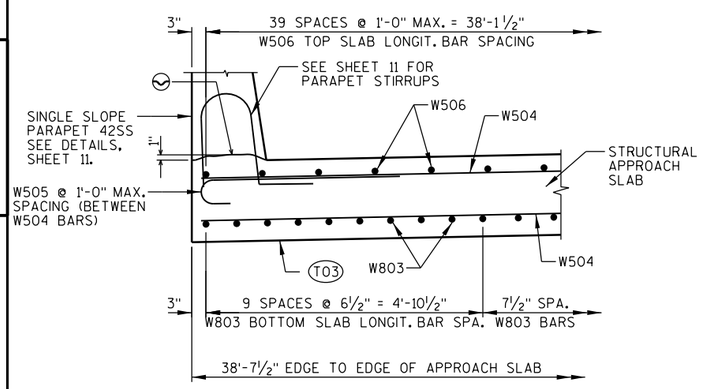
DATE= 5/18/2021

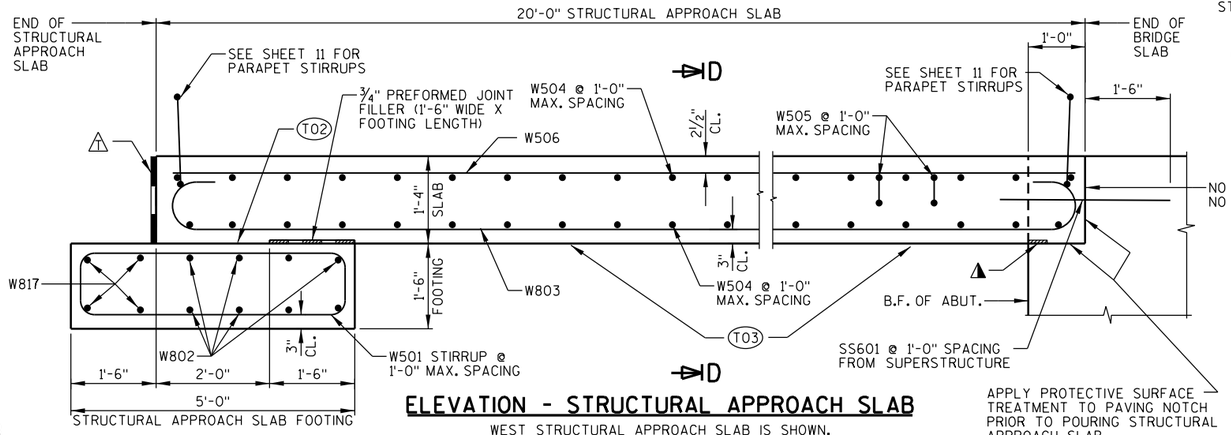


PLAN - WEST STRUCTURAL APPROACH SLAB

PLAN - EAST STRUCTURAL APPROACH SLAB

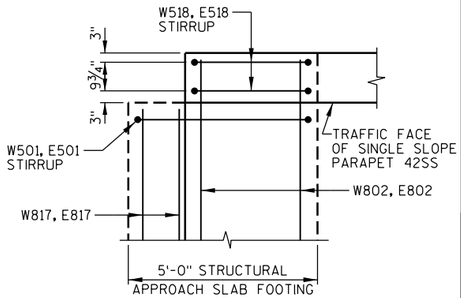


SECTION D-D THRU EDGE OF STRUCTURAL APPROACH SLAB



ELEVATION - STRUCTURAL APPROACH SLAB

WEST STRUCTURAL APPROACH SLAB IS SHOWN.
EAST STRUCTURAL APPROACH SLAB IS SIMILAR.
SEE SHEET 11 FOR PARAPET AND BAR DETAILS.



FOOTING - CORNER DETAIL AT WINGS

STATE PROJECT NUMBER

1533-00-70

NOTES:

BAR MARKS FOR WEST STRUCTURAL APPROACH SLAB AND PARAPET ARE SHOWN WITH A W MARK. BUNDLE EAST STRUCTURAL APPROACH SLAB AND PARAPET BARS AND LABEL WITH E MARK (E501 - E518).

ELEVATIONS GIVEN ARE AT TOP OF STRUCTURAL APPROACH SLAB.

ELEVATIONS AT EDGE OF STRUCTURAL APPROACH SLAB ARE SAME AS ELEVATIONS GIVEN AT CORRESPONDING TRAFFIC FACE OF PARAPET.

FOR DETAILS OF SINGLE SLOPE PARAPET 42SS ON THE STRUCTURAL APPROACH SLAB, SEE SHEET 11.

LEGEND

(T02) STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THICKNESS) OF POLYETHYLENE SHEETS OVER ENTIRE TOP OF FOOTING.

(T03) PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THICKNESS) OF POLYETHYLENE SHEETS OVER ENTIRE TOP OF SUBGRADE BENEATH SLAB. POLYETHYLENE SHEETS SHALL BE INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY BRIDGES".

△1 1½" EXPANSION FILLER.

▲ ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZONTAL & VERTICAL SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE).

◭ 4" X ¾" PREFORMED JOINT FILLER, EXTEND FULL LENGTH OF PAVING NOTCH.

CONSTRUCTION JOINT - STRIKE OFF AS SHOWN.

SLOPE TOP OF WING WITH ⅜" DROP FROM B.F. TO F.F.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-6-387

DRAWN BY RLR | PLANS CK'D. JRS

STRUCTURAL APPROACH SLAB

SHEET 10 OF 11
74

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DATE= 5/24/2021

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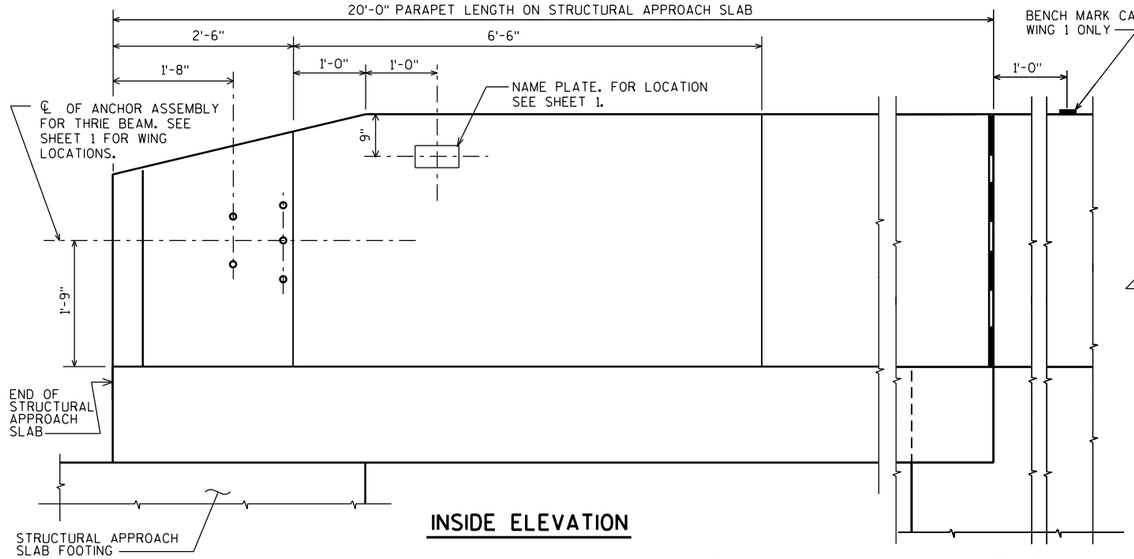
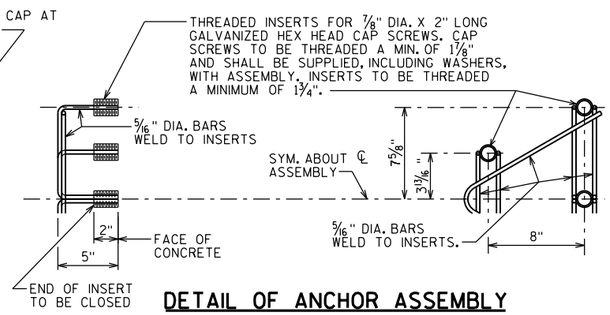
STATE PROJECT NUMBER

1533-00-70



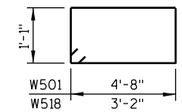
INSIDE ELEVATION



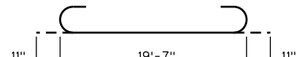
DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

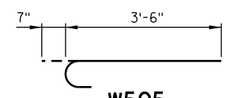
ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.



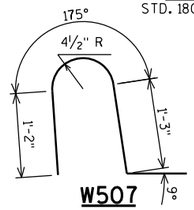
W501, W518



W803
STD. 180° HOOKS



W505
STD. 180° HOOK



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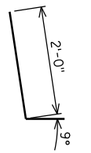

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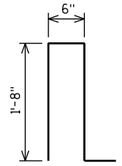

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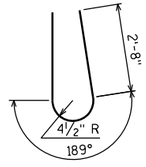

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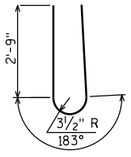

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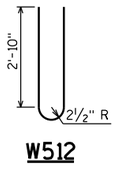

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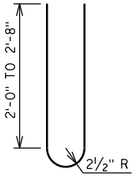
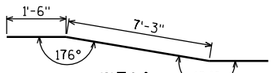


W513

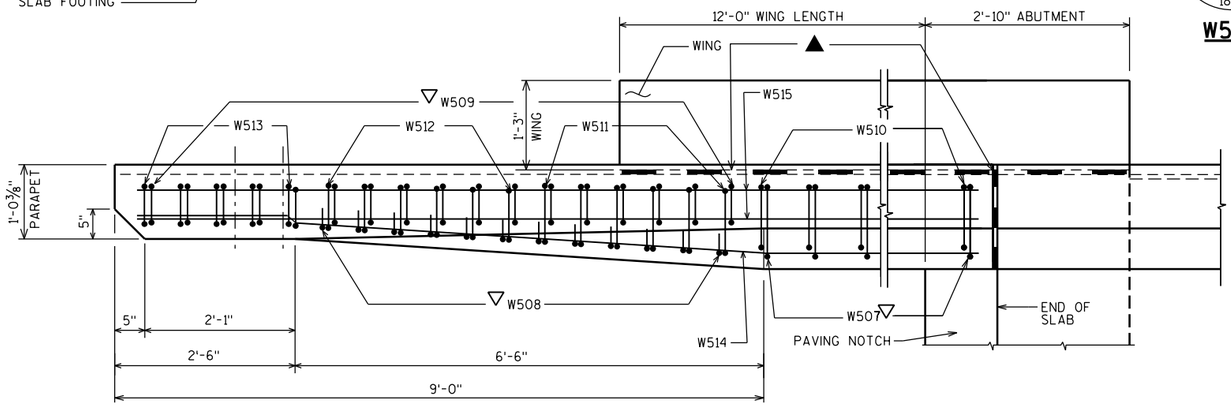


W514

W516

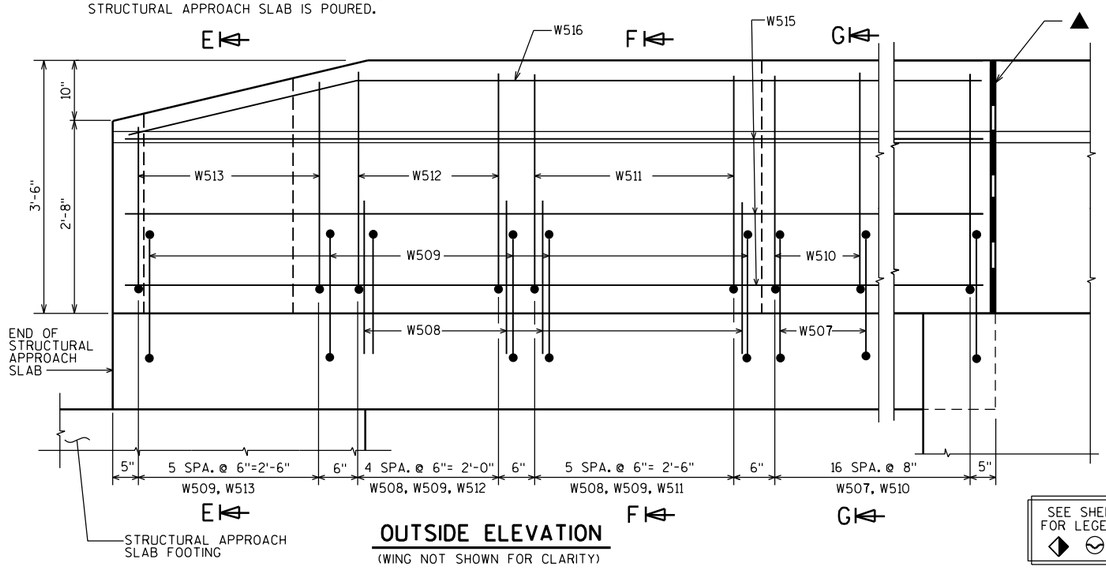
BILL OF BARS (WEST STRUCTURAL APPROACH SLAB) COATED 9,230 LBS.

MARK	NUMBER REQUIRED	LENGTH	BENT	BAR SERIES	LOCATION
W501	37	12'-2"	X		STRUCT. APPROACH SLAB - FOOTING - STIRRUP - VERT.
W802	8	38'-1"			STRUCT. APPROACH SLAB - FOOTING - TRANS.
W803	65	21'-5"	X		STRUCT. APPROACH SLAB - BOTTOM - LONGIT.
W504	42	38'-1"			STRUCT. APPROACH SLAB - TOP & BOTTOM - TRANS.
W505	40	4'-1"	X		STRUCT. APPROACH SLAB - TOP @ EDGES - TRANS.
W506	40	19'-7"			STRUCT. APPROACH SLAB - TOP - LONGIT.
W507	34	4'-5"	X		PARAPET STIRRUP - INTO SLAB - VERT.
W508	22	2'-9"	X		PARAPET STIRRUP - @ TRANSITION - VERT.
W509	34	4'-4"	X		PARAPET STIRRUP - END - VERT.
W510	34	6'-8"	X		PARAPET STIRRUP - VERT.
W511	12	6'-6"	X		PARAPET STIRRUP - @ TRANSITION - VERT.
W512	10	6'-5"	X		PARAPET STIRRUP - @ TRANSITION - VERT.
W513	12	5'-5"	X	S	PARAPET STIRRUP - END - VERT.
W514	2	19'-8"	X		PARAPET - TRAFFIC FACE - BOTTOM - LONGIT.
W515	10	19'-8"			PARAPET - LONGIT.
W516	4	19'-8"	X		PARAPET - TOP - LONGIT.
W817	4	35'-5"			STRUCT. APPROACH SLAB - FOOTING - TRANS.
W518	4	9'-2"	X		STRUCT. APPROACH SLAB - FOOTING - STIRRUP - VERT.



PLAN

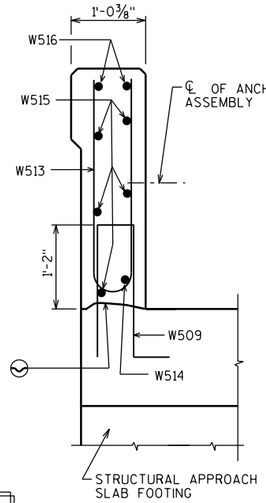
▽ — W507, W508 AND W509 BARS TO BE TIED TO STRUCTURAL APPROACH SLAB STEEL BEFORE STRUCTURAL APPROACH SLAB IS POURED.



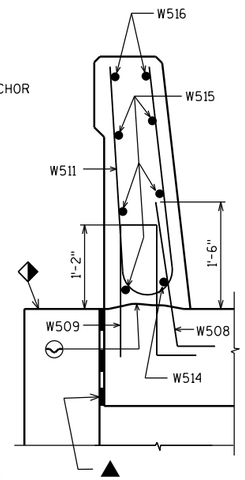
OUTSIDE ELEVATION

(WING NOT SHOWN FOR CLARITY)

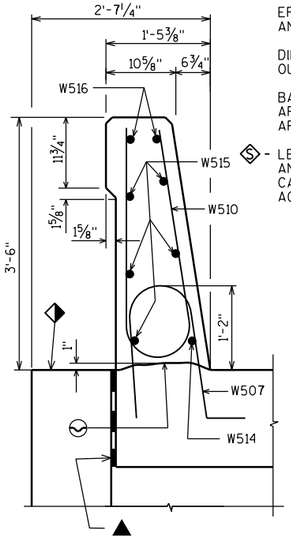
SEE SHEET 10 FOR LEGEND OF ◆ ⊖ ▲



SECTION E



SECTION F



SECTION G

EPOXY COAT ALL STRUCTURAL APPROACH SLAB AND PARAPET BAR STEEL.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

BAR MARKS FOR WEST STRUCTURAL APPROACH SLAB ARE SHOWN. LABEL AND BUNDLE EAST STRUCTURAL APPROACH SLAB BARS WITH E MARK (E501 THRU E518).

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

BAR SERIES TABLE

MARK	NO. REQUIRED	LENGTH
W513	2 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-6-387

DRAWN BY RLR | PLANS CK'D. JRS

SINGLE SLOPE PARAPET 42SS ON STRUCTURAL APPROACH SLAB

SHEET 11 OF 11
75

FILE= 93525_11.DGN
DATE= 5/20/2021

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PROJECT I.D. 1533-00-70 EARTHWORK SUMMARY

STA	EXCAVATION COMMON CY	EXCAVATION ROCK CY	FILL (1) CY	EXPANDED FILL (2) CY	WASTE CY
8+50.00					
	23	0	1	1	22
8+57.90					
	73	0	4	5	68
8+82.90					
	68	0	1	1	67
9+07.90					
	91	0	1	1	90
9+45.00					
	79	0	1	1	78
9+79.75					
STRUCTURE B-06-0387					
10+20.25					
	97	0	1	1	96
10+55.00					
	109	0	0	0	109
10+92.10					
	77	0	0	0	77
11+17.10					
	76	0	4	5	71
11+42.10					
	24	0	1	1	23
11+50.00					
SUBTOTALS	717	0	14	16	701
(3)					
TOTALS	**717**	**0**	**14**	**16**	**701**

(1) - NOT A BID ITEM - FOR INFORMATIONAL PURPOSES ONLY.
(2) - FILL EXPANSION 30%

PROJECT I.D. 1533-00-70 BYPASS EARTHWORK CONSTRUCTION

STA	EXCAVATION COMMON CY	EXCAVATION ROCK CY	FILL (1) CY	EXPANDED FILL (2) CY	WASTE CY	BORROW CY
200+95.49						
	10	0	19	25	-15	15
201+50.00						
	0	0	28	36	-36	36
202+00.00						
	0	0	43	56	-56	56
202+50.00						
	0	0	49	64	-64	64
203+00.00						
	0	0	45	59	-59	59
203+44.20						
TEMPORARY BRIDGE						
203+74.20						
	38	0	0	0	38	-38
204+00.00						
	84	0	0	0	84	-84
204+50.00						
	116	0	12	16	100	-100
205+00.00						
	88	0	53	69	19	-19
205+50.00						
	25	0	83	108	-83	83
206+00.00						
	7	0	33	43	-36	36
206+25.45						
SUBTOTALS	368	0	365	476	-108	108
TOTALS	**368**	**0**	**365**	**476**	**-108**	**108**

(1) - NOT A BID ITEM - FOR INFORMATIONAL PURPOSES ONLY.
(2) - FILL EXPANSION 30%

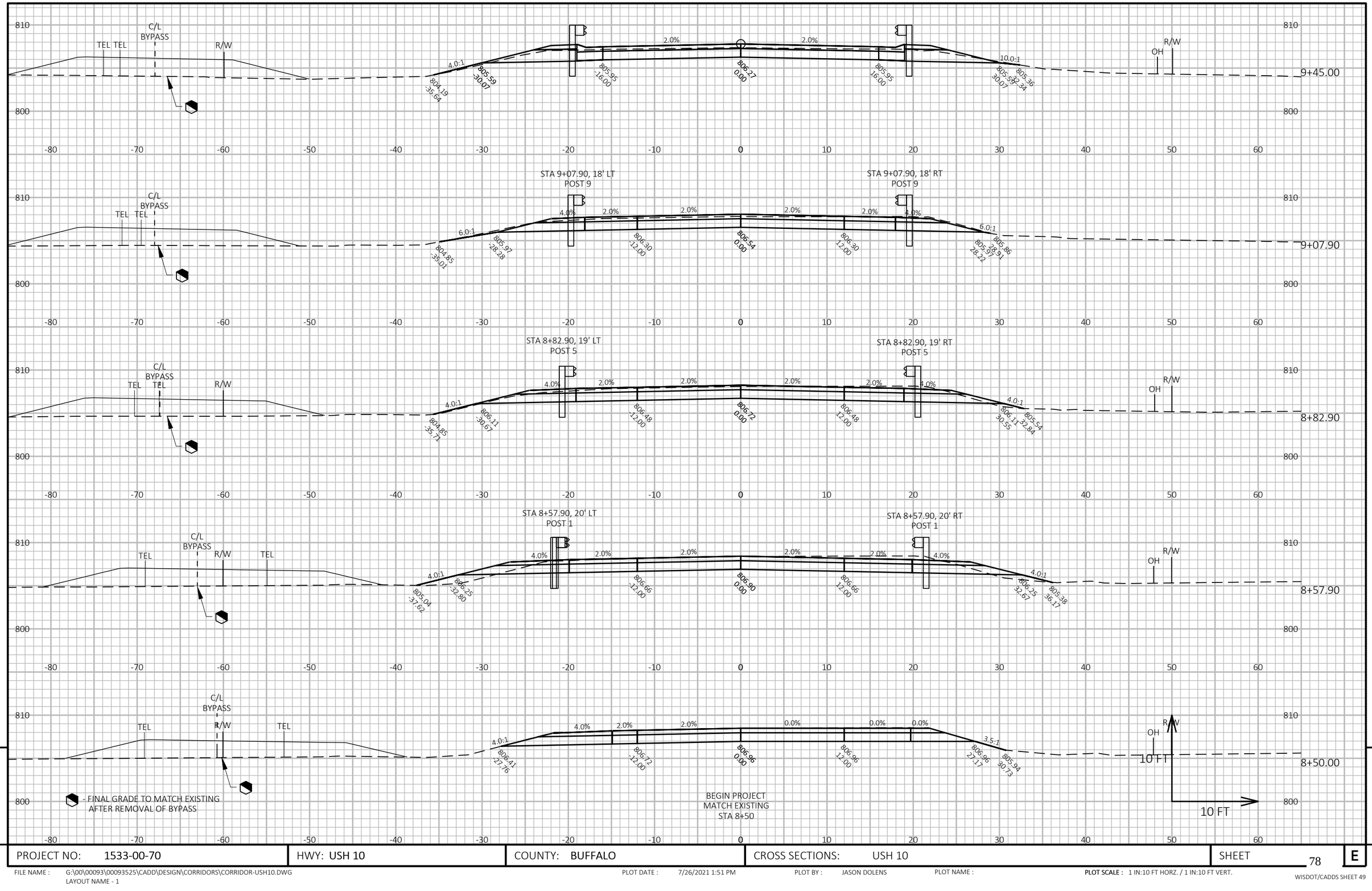
PROJECT I.D. 1533-00-70 BYPASS EARTHWORK REMOVAL

STA	EXCAVATION COMMON CY	EXCAVATION ROCK CY	FILL (1) CY	EXPANDED FILL (2) CY	WASTE CY	BORROW CY
200+95.49						
	43	0	0	0	43	-43
201+50.00						
	70	0	0	0	70	-70
202+00.00						
	89	0	0	0	89	-89
202+50.00						
	90	0	0	0	90	-90
203+00.00						
	79	0	0	0	79	-79
203+44.20						
TEMPORARY BRIDGE						
203+74.20						
	19	0	38	49	-30	30
204+00.00						
	38	0	84	109	-71	71
204+50.00						
	54	0	116	151	-97	97
205+00.00						
	95	0	88	114	-19	19
205+50.00						
	120	0	25	33	87	-87
206+00.00						
	44	0	3	4	40	-40
206+25.45						
SUBTOTALS	741	0	354	460	281	-281
UNUSABLE BASE (3)						780
UNUSABLE PAVEMENT (4)						105
TOTALS	**741**	**0**	**354**	**460**	**281**	**604**

(1) - NOT A BID ITEM - FOR INFORMATIONAL PURPOSES ONLY.
(2) - FILL EXPANSION 30%
(3) - BASE AGGREGATE VOLUME FROM BASE COMPUTATIONS
(4) - EXISTING PAVEMENT BASED ON AVE THK OF 4" OF ASPHALT

9

9



PROJECT NO: 1533-00-70	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10	SHEET 78	E

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LAYOUT NAME - 1

PLOT DATE : 7/26/2021 1:51 PM PLOT BY : JASON DOLENS PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

END PROJECT
MATCH EXISTING
STA 11+50

TEL TEL R/W C/L BYPASS

4.0% 2.0% 2.0% 2.0% 2.0% 4.0%

803.10 -35.52 | 804.63 -29.37 | 804.98 -12.00 | 805.22 0.00 | 804.98 12.00 | 804.63 30.25 | 804.03 32.92

R/W OH

11+50.00

STA 11+42.10, 20' LT
POST 1

STA 11+42.10, 20' RT
POST 1

C/L BYPASS TEL TEL R/W

4.0% 2.0% 2.0% 2.0% 2.0% 4.0%

4.0:1

803.25 -42.00 | 804.58 -32.70 | 804.99 -12.00 | 805.23 0.00 | 804.99 12.00 | 804.58 32.89 | 803.61 35.71

R/W OH

11+42.10

STA 11+17.10, 19' LT
POST 5

STA 11+17.10, 19' RT
POST 5

C/L BYPASS TEL TEL R/W

4.0% 2.0% 2.0% 2.0% 2.0% 4.0%

4.0:1

803.87 -33.65 | 804.66 -30.98 | 805.03 -12.00 | 805.27 0.00 | 805.03 12.00 | 804.82 30.64 | 804.46 31.44

R/W OH

11+17.10

STA 10+92.10, 18' LT
POST 9

STA 10+92.10, 18' RT
POST 9

C/L BYPASS TEL TEL R/W

4.0% 2.0% 2.0% 2.0% 2.0% 4.0%

7.0:1

803.95 -35.89 | 804.77 -28.13 | 805.09 -12.00 | 805.33 0.00 | 805.09 12.00 | 804.77 28.27 | 803.59 35.31

6.0:1

R/W OH

10+92.10

C/L BYPASS TEL TEL R/W

2.0% 2.0%

4.0:1

803.60 -34.94 | 804.81 -30.07 | 805.17 -16.00 | 805.49 0.00 | 805.17 16.00 | 804.81 30.07 | 804.49 33.29

10.0:1

R/W OH

10 FT

10 FT

10+55.00

STRUCTURE B-06-0387

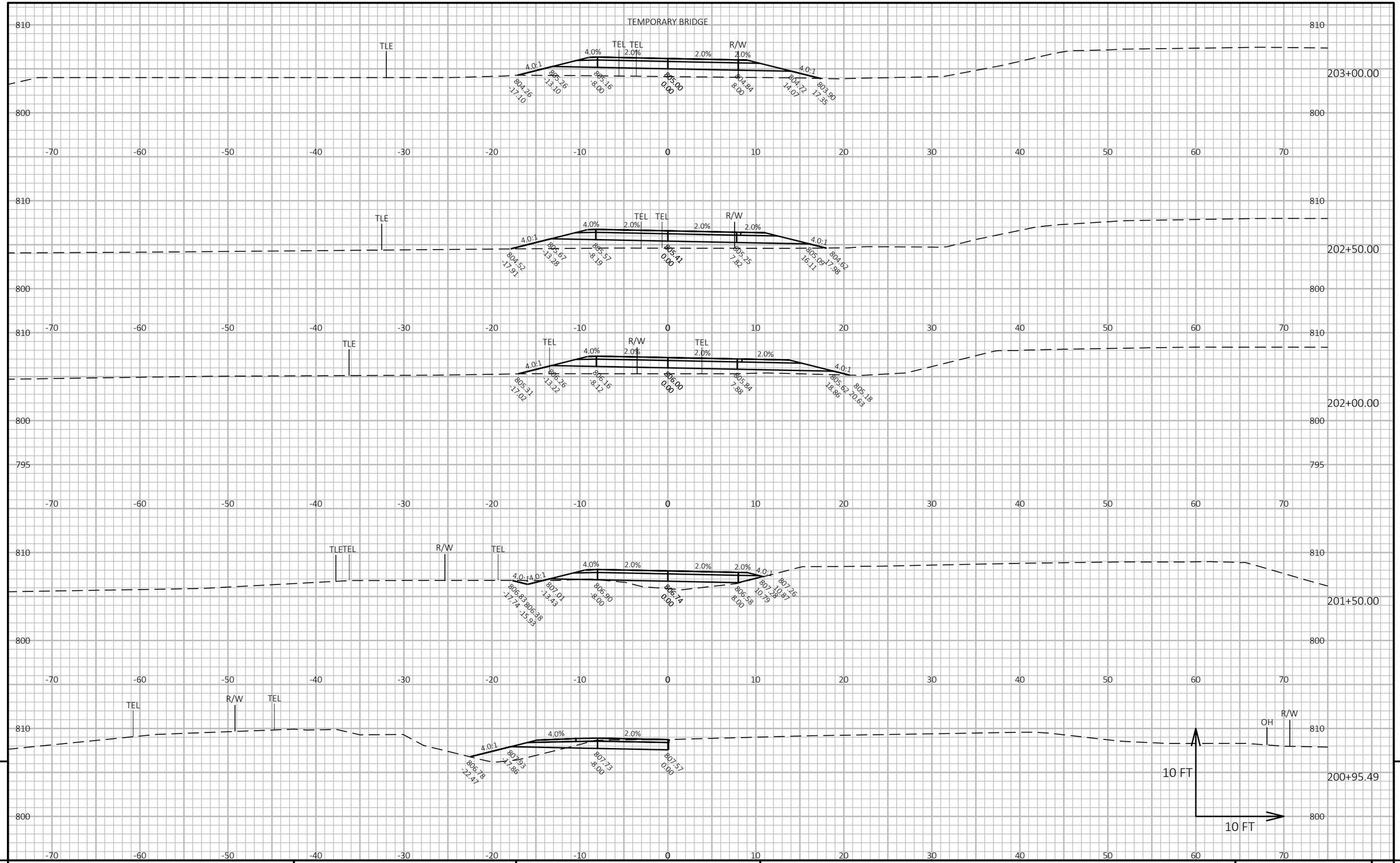
FINAL GRADE TO MATCH EXISTING AFTER REMOVAL OF BYPASS

9 9

PROJECT NO: 1533-00-70	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: USH 10	SHEET 79	E

FILE NAME : G:\00\00093\00093525\CADD\DESIGN\CORRIDORS\CORRIDOR-USH10.DWG
LAYOUT NAME - 2

PLOT DATE : 7/26/2021 1:51 PM PLOT BY : JASON DOLENS PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



9

9

PROJECT NO: 1533-00-70	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: TEMPORARY BYPASS	SHEET 80	E

FILE NAME : G:\00\00093\00093525\CADD\DESIGN\CORRIDORS\CORRIDOR-USH10.DWG
LAYOUT NAME - BYPASS1

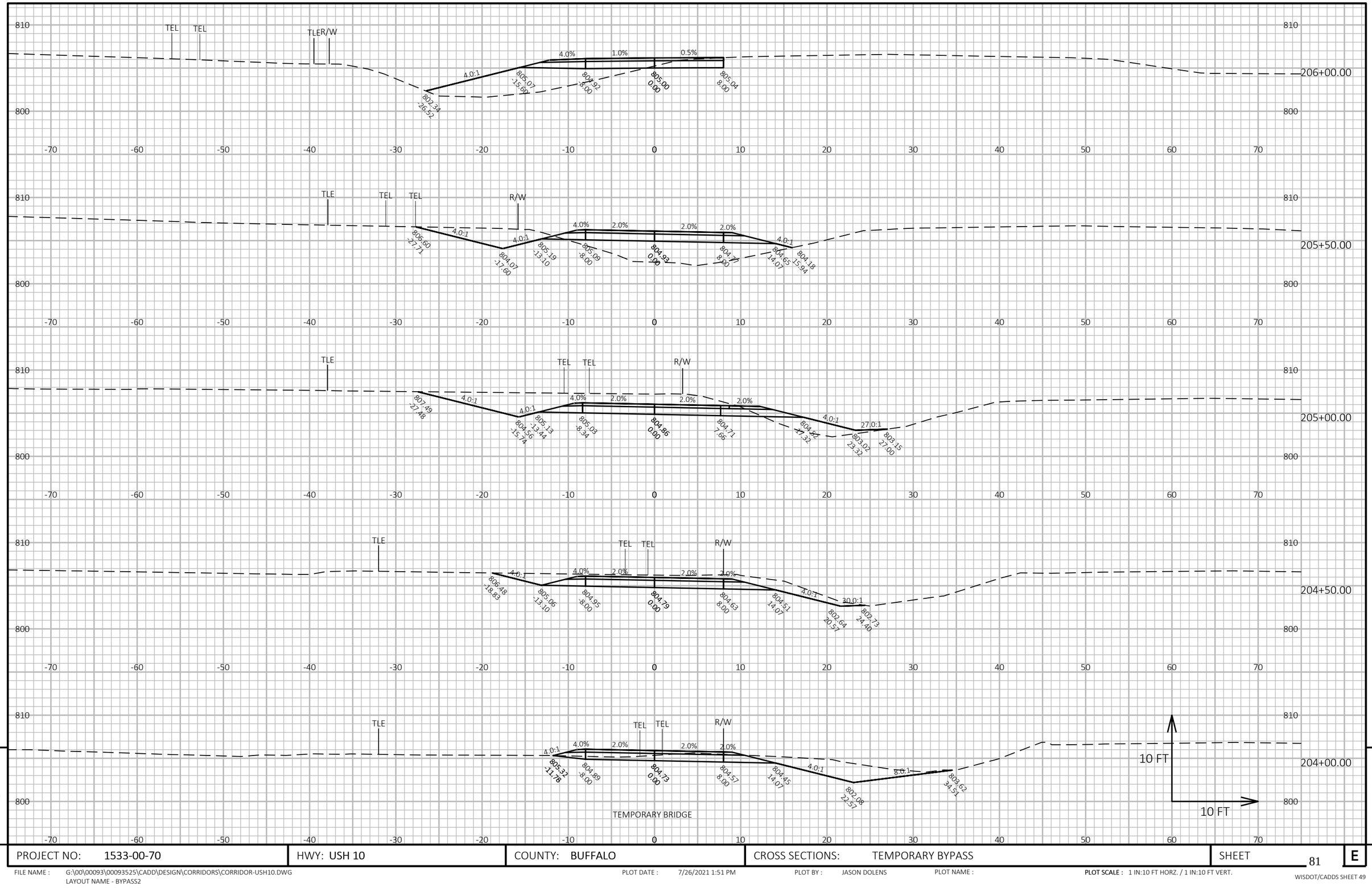
PLOT DATE : 7/26/2021 1:51 PM

PLOT BY : JASON DOLENS

PLOT NAME :

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

WISDOT/CADDS SHEET 49



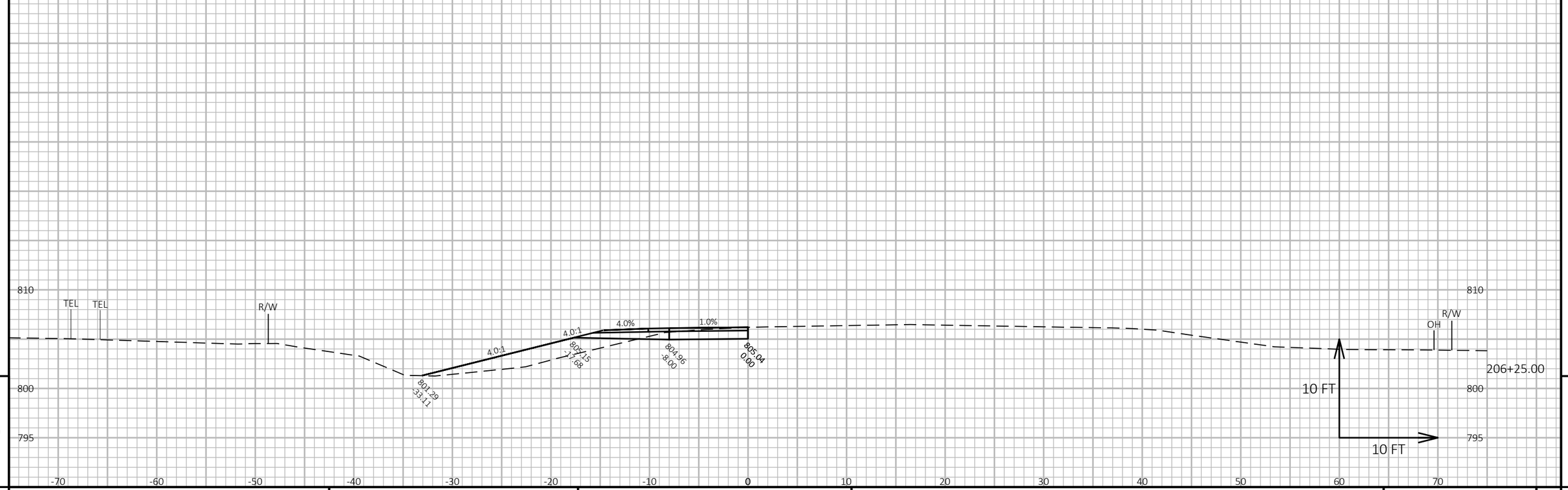
9

PROJECT NO: 1533-00-70	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: TEMPORARY BYPASS	SHEET 81	E

FILE NAME : G:\00\00093\00093525\CADD\DESIGN\CORRIDORS\CORRIDOR-USH10.DWG
LAYOUT NAME - BYPASS2

PLOT DATE : 7/26/2021 1:51 PM PLOT BY : JASON DOLENS PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9 9

PROJECT NO: 1533-00-70	HWY: USH 10	COUNTY: BUFFALO	CROSS SECTIONS: TEMPORARY BYPASS	SHEET 82	E

FILE NAME : G:\00\00093\00093525\CADD\DESIGN\CORRIDORS\CORRIDOR-USH10.DWG
LAYOUT NAME - BYPASS3

PLOT DATE : 7/26/2021 1:51 PM PLOT BY : JASON DOLENS PLOT NAME :

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

Notes

Wisconsin Department of Transportation

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