EAU

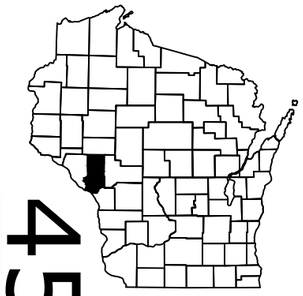
PROJECT ID: 7283-00-70

WITH: N/A

COUNTY: TREMPEALEAU

FEBRUARY 2022
ORDER OF SHEETS

TOTAL SHEETS = 56



45

N

DESIGN DESIGNATION

A.A.D.T.	(2022)	=	11
A.A.D.T.	(2042)	=	17
D.H.V.		=	1.5
D.D.		=	60/40
T.		=	10% (ASSUMED)
DESIGN SPEED		=	40 M.P.H.
ESALS		=	36,500

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

T HALE, KOWAHL ROAD

N BR ELK CREEK BRIDGE B-61-0243

LOCAL STREET
TREMPEALEAU COUNTY

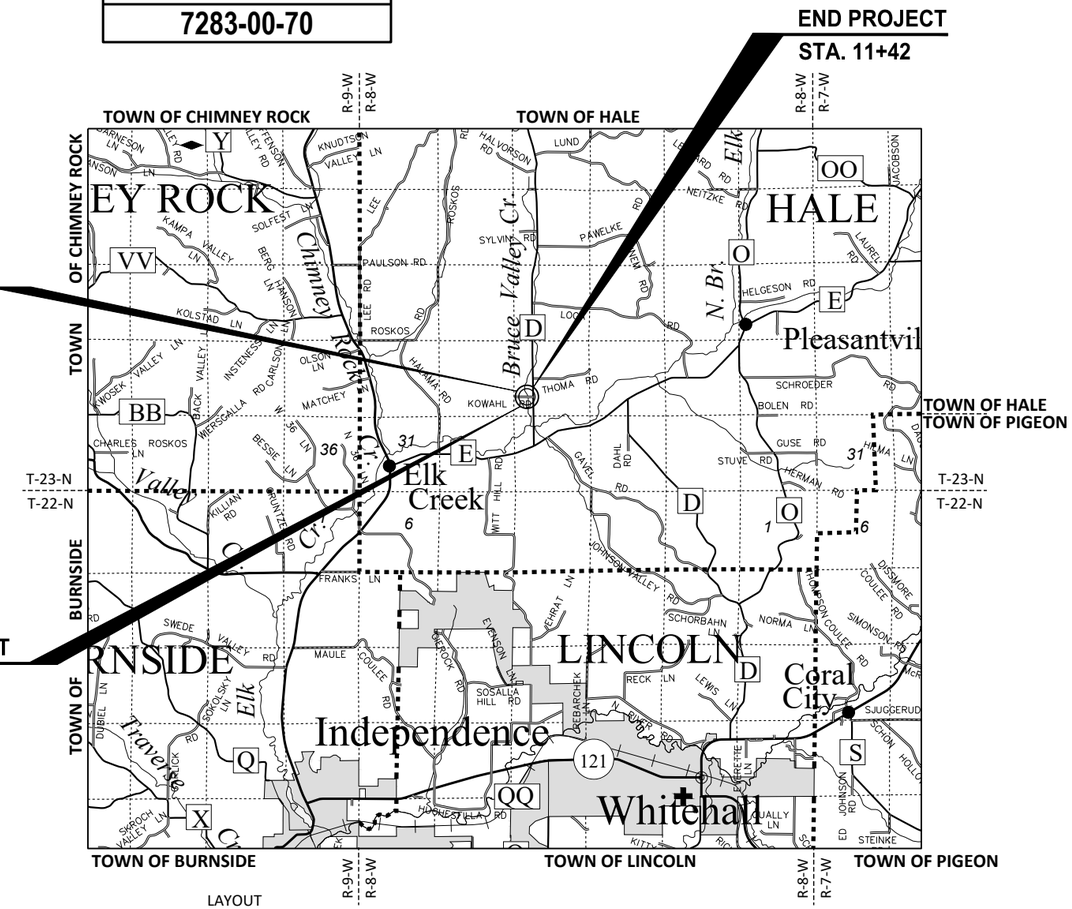
STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7283-00-70	WISC 2022186	1

STATE PROJECT NUMBER
7283-00-70

END PROJECT
STA. 11+42

STRUCTURE B-61-243

BEGIN PROJECT
STA. 10+00
Y=466,251.43
X=843,880.25



LAYOUT
SCALE 0 2 MI

TOTAL NET LENGTH OF CENTERLINE = 0.027 MI

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

ELEVATION SHOWN ON THIS PLAN ARE REFERENCE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD (2012).

ACCEPTED FOR

COUNTY of TREMPEALEAU

Al Rinka Highway Commissioner (Date)

Digitally signed by Al Rinka Highway Commissioner Date: 2021.10.27 07:42:22 -05'00' (Highway Commissioner)

ACCEPTED FOR

TOWN of HALE

10-18-2021 (Date) Eric Franson (Town Chairman)

ORIGINAL PLANS PREPARED BY

JEWELL associates engineers, inc
Engineers - Architects - Surveyors

WISCONSIN
ROBERT B. HANOLD
E-45655
PRAIRIE DU SAC
WI
PROFESSIONAL ENGINEER
10/14/2021

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	JEWELL ASSOCIATES ENGINEERS, INC.
Designer	JEWELL ASSOCIATES ENGINEERS, INC.
Project Manager	MATTHEW THORNSEN, P.E.
Regional Examiner	TOU YANG, P.E.
Regional Supervisor	TYLER RONGSTAND, P.E.

APPROVED FOR THE DEPARTMENT

DATE: 10/28/2021 (Signature)

E

2

GENERAL NOTES

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

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS SUCH TREES OR SHRUBS HAVE FIRST BEEN INDICATED FOR REMOVAL BY THE ENGINEER IN THE FIELD.

UNLESS SHOWN OTHERWISE, DISTURBED AREAS SHOWN WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS ARE TO BE FERTILIZED (TYPE B), SEEDED (USE SEED MIX NO. 20), AND MULCHED AS DIRECTED BY THE ENGINEER. ALL POST CONSTRUCTION WET AREAS SHALL BE SEEDED WITH SEEDING MIXTURE NO. 60.

WHEN THE QUANTITY OF THE ITEM OF BASE AGGREGATE DENSE OR ASPHALTIC SURFACE IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE COURSE SHOWN ON THE PLANS IS APPROXIMATE, AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF MATERIAL AS DIRECTED BY THE ENGINEER IN THE FIELD.

SILT FENCE SHALL BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER IN THE FIELD. SILT FENCE SHALL BE PLACED PRIOR TO CONSTRUCTION AND SHALL BE IN PLACE PRIOR TO STRUCTURE REMOVAL.

MULCH ALL SLOPES AS DIRECTED BY THE ENGINEER IN THE FIELD.

FILL EXPANSION IS VARIABLE AND IS ESTIMATED AT 25%.

REMOVAL OF ASPHALTIC SURFACES WHERE AN ABUTTING ASPHALTIC SURFACE IS TO REMAIN IN PLACE SHALL REQUIRE A SAWCUT MEETING THE APPROVAL OF THE ENGINEER IN THE FIELD.

THE LOCATION OF ALL PERMANENT SIGNING SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD PRIOR TO PLACEMENT.

3½-INCHES OF ASPHALTIC SURFACE SHALL BE CONSTRUCTED WITH A 1¾-INCH LOWER LAYER AND A 1¾-INCH UPPER LAYER. THE NOMINAL SIZE AGGREGATE USED FOR THE LOWER LAYER SHALL BE 12.5 MM.

WETLANDS ARE PRESENT IN THE PROJECT LIMITS. THE CONTRACTOR SHALL NOT OPERATE OR STOCKPILE EQUIPMENT BEYOND THE EXISTING TOE OF SLOPE.

UPON REMOVAL OF TEMPORARY BYPASS RESTORE ORIGINAL GROUNDLINE BY REMOVING EARTHWORK AND GEOTEXTILE. DO NOT DISTURB EXISTING GROUND. DO NOT CULTIVATE OR LOOSEN WETLANDS DUE TO COMPACTION OF BYPASS FILL. EXISTING VEGETATION TO REMAIN.

CONTACTS

TREMPEALEAU COUNTY HIGHWAY DEPARTMENT:
AL RINKA, COMMISSIONER
20699 STATE ROAD 121
P.O. BOX 97
WHITEHALL, WI 54773
PH: (715) 538-9402
CELL: (715) 299-2657
EMAIL: al.rinka@co.trempealeau.wi.us

DESIGN CONSULTANT:
JEWELL ASSOCIATES ENGINEERS, INC.
560 SUNRISE DRIVE
SPRING GREEN, WI 53588
ATTN: ROBERT HANOLD, P.E.
PHONE: (608) 588-7484
CELL: (608) 606-3568
EMAIL: robert.hanold@jewellassoc.com

TOWN OF HALE:
ERIC FRANSON, CHAIRMAN
W20096 LUND ROAD
STRUM, WI 54770
PHONE: (715) 695-3553
EMAIL: townofhale@triwest.net

DNR LIAISON:
STATE OF WISCONSIN DNR SERVICE CENTER
1300 W. CLAIREMONT
EAU CLAIRE, WI 54701
ATTN: AMY LESIK
PHONE: (715) 495-1903
EMAIL: amy.lesik@wisconsin.gov

UTILITIES

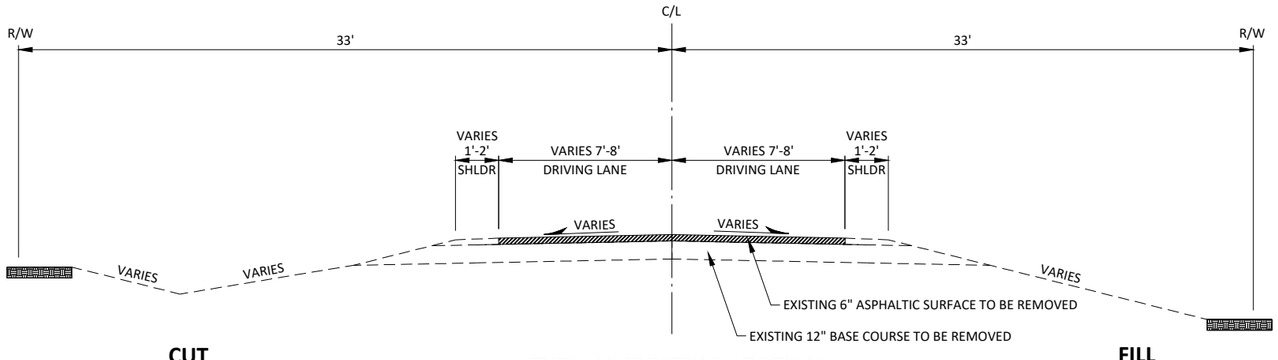
ELECTRIC
RIVERLAND ENERGY COOPERATIVE
ATTN: ROB SOSALLA
P.O. BOX 277
ARCADIA, WI 54612
PH: (608) 863-0135
EMAIL: rsosalla@riverlandenergy.com

FIBER OPTIC/TELEPHONE
TRI COUNTY COMMUNICATIONS COOP
ATTN: BUCK WEBB
P.O BOX 578
STRUM, WI 54770
OFFICE: (715) 695-2691
EMAIL: bwebb@tccpro.net

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

LIST OF STANDARD ABBREVIATIONS

ABUT	Abutment	INV	Invert	SALV	Salvaged
AC	Acre	IP	Iron Pipe or Pin	SAN S	Sanitary Sewer
AGG	Aggregate	IRS	Iron Rod Set	SEC	Section
AH	Ahead	JT	Joint	SHLDR	Shoulder
<	Angle	JCT	Junction	SHR	Shrinkage
ASPH	Asphaltic	LHF	Left-Hand Forward	SW	Sidewalk
AVG	Average	L	Length of Curve	S	South
ADT	Average Daily Traffic	LIN FT or LF	Linear Foot	SQ	Square
BAD	Base Aggregate Dense	LC	Long Chord of Curve	SF or SQ FT	Square Feet
BK	Back	MH	Manhole	SY or SQ YD	Square Yard
BF	Back Face	MB	Mailbox	STD	Standard
BM	Bench Mark	ML or M/L	Match Line	SDD	Standard Detail Drawings
BR	Bridge	N	North	STH	State Trunk Highways
C or C/L	Center Line	Y	North Grid Coordinate	STA	Station
CC	Center to Center	O.A.L.	Overall Length	SS	Storm Sewer
CTH	County Trunk Highway	OD	Outside Diameter	SG	Subgrade
CR	Creek	PLE	Permanent Limited Easement	SE	Superelevation
CR	Crushed	PT	Point	SL or S/L	Survey Line
CY or CU YD	Cubic Yard	PC	Point of Curvature	SV	Septic Vent
CP	Culvert Pipe	PI	Point of Intersection	T	Tangent
C & G	Curb and Gutter	PRC	Point of Reverse Curvature	TEL	Telephone
D	Degree of Curve	PT	Point of Tangency	TEMP	Temporary
DHV	Design Hour Volume	POC	Point On Curve	TI	Temporary Interest
DIA	Diameter	POT	Point on Tangent	TLE	Temporary Limited Easement
E	East	PVC	Polyvinyl Chloride	t	Ton
X	East Grid Coordinate	PCC	Portland Cement Concrete	T or TN	Town
ELEC	Electric (al)	LB	Pound	TRANS	Transition
EL or ELEV	Elevation	PSI	Pounds Per Square Inch	TL or T/L	Transit Line
ESALS	Equivalent Single Axle Loads	PE	Private Entrance	T	Trucks (percent of)
EBS	Excavation Below Subgrade	R	Radius	TYP	Typical
ESTR	Existing Sign to Remain	RR	Railroad	UNCL	Unclassified
FF	Face to Face	R	Range	UG	Underground Cable
FE	Field Entrance	RL or R/L	Reference Line	USH	United States Highway
F	Fill	RP	Reference Point	VAR	Variable
FG	Finished Grade	RCCP	Reinforced Concrete Culvert Pipe	V	Velocity or Design Speed
FL or F/L	Flow Line	REQ'D	Required	VERT	Vertical
FT	Foot	RES	Residence or Residential	VC	Vertical Curve
FTG	Footing	RW	Retaining Wall	VOL	Volume
GN	Grid North	RT	Right	WM	Water Main
HT	Height	RHF	Right-Hand Forward	WV	Water Valve
CWT	Hundredweight	R/W	Right-of-Way	W	West
HYD	Hydrant	R	River	WB	Westbound
INL	Inlet	RD	Road	YD	Yard
ID	Inside Diameter	RDWY	Roadway		



TYPICAL EXISTING SECTION
KOWAHL ROAD

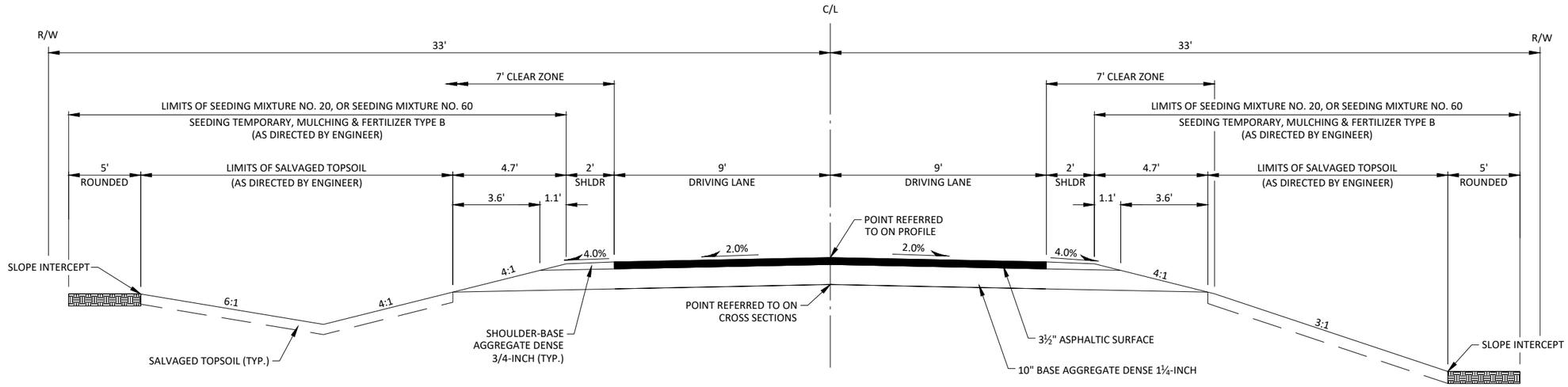
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .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= 0.59 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.37 ACRES

PROJECT NO: 7283-00-70	HWY: KOWAHL ROAD	COUNTY: TREMPEALEAU	GENERAL NOTES, UTILITIES, CONTACTS, & ABBREVIATIONS	SHEET 2	E

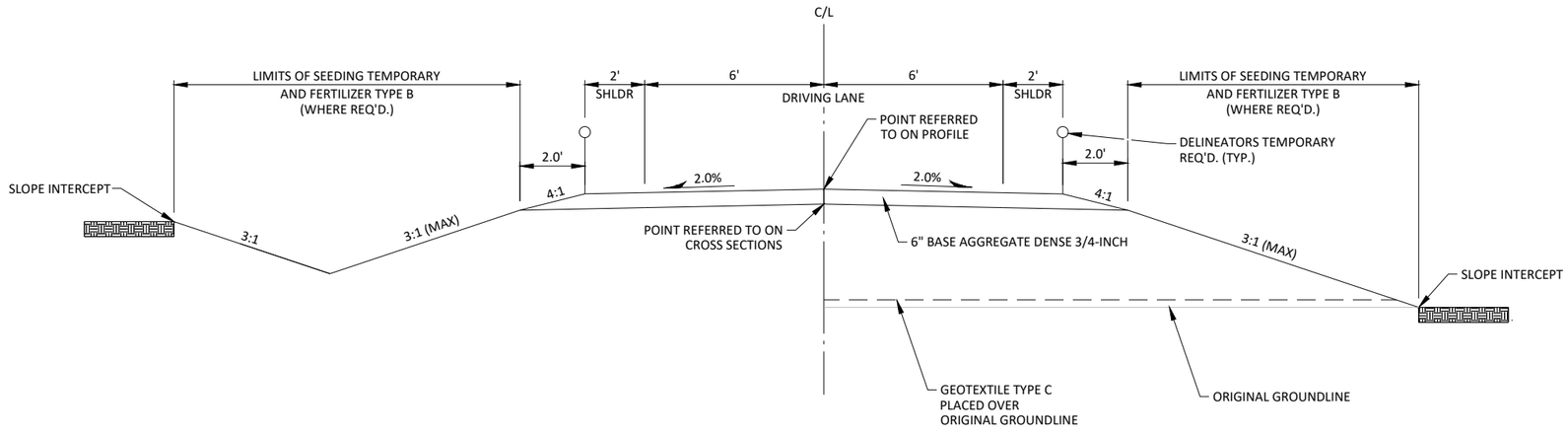
FILE NAME : S:\PROJECTS\W11610 WISDOT - KOWAHL ROAD, TREMPEALEAU COUNTY\SHEETSPLAN\DETAILS\72830000_GEN NOTES.DWG PLOT DATE : 11/18/2021 11:34:53 AM PLOT BY : HANOLD, ROBERT PLOT SCALE : 1" = 1' LAYOUT : LAYOUT1

2



TYPICAL FINISHED SECTION

KOWAHL ROAD
STA. 10+00 - STA. 11+42

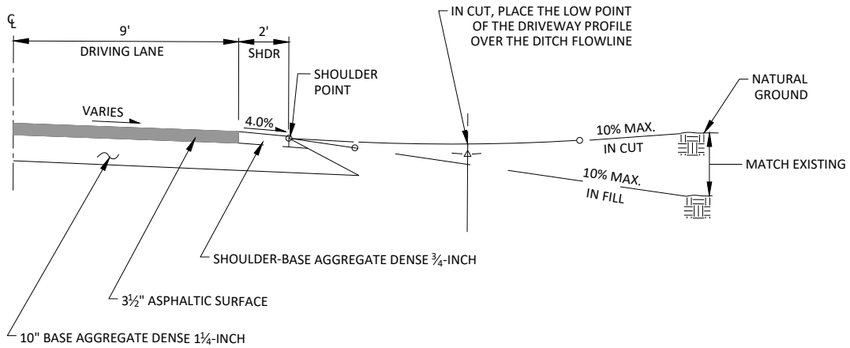


TYPICAL FINISHED SECTION

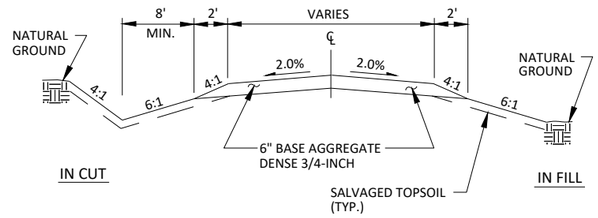
TEMPORARY BYPASS
STA. 20+00 - STA. 24+20

PROJECT NO: 7283-00-70	HWY: KOWAHL ROAD	COUNTY: TREMPEALEAU	TYPICAL FINISHED SECTIONS	SHEET 3	E

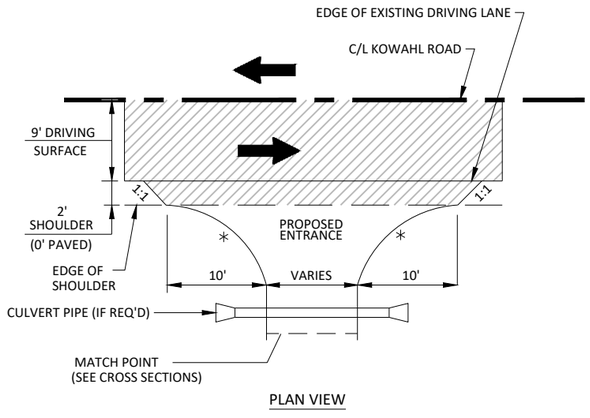
FILE NAME : S:\PROJECTS\W11610 WISDOT - KOWAHL ROAD, TREMPEALEAU COUNTY\SHEETSPLAN\TYPICALS\72830000_TYPICALS.DWG PLOT DATE : 4/21/2021 10:29:13 AM PLOT BY : RYAN SCHMITZ PLOT SCALE : 1" = 1' LAYOUT : LAYOUT1



TYPICAL F.E. PROFILE



TYPICAL CROSS-SECTION FOR F.E.



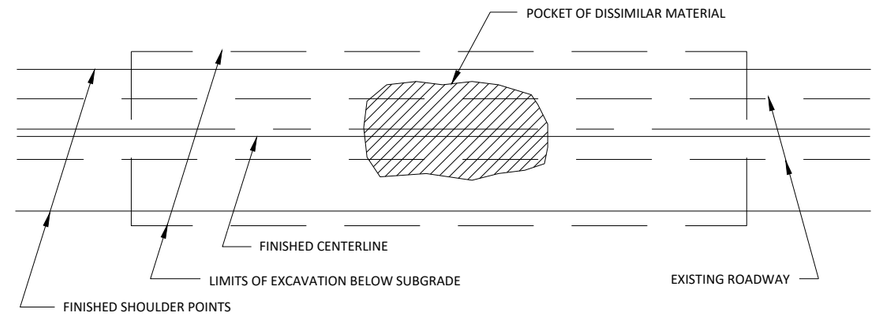
PLAN VIEW

APPROACH AT F.E.

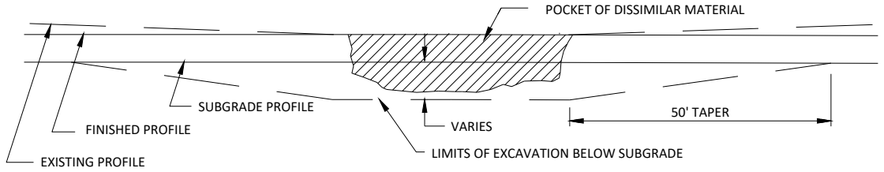
TYPICAL FIELD ENTERANCE (F.E.) DETAILS

LIMITS OF ASPHALTIC SURFACE

* RADIUS = 10'

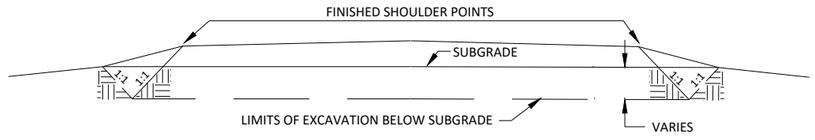


PLAN VIEW



PROFILE VIEW

RURAL EXCAVATION BELOW SUBGRADE (E.B.S.)

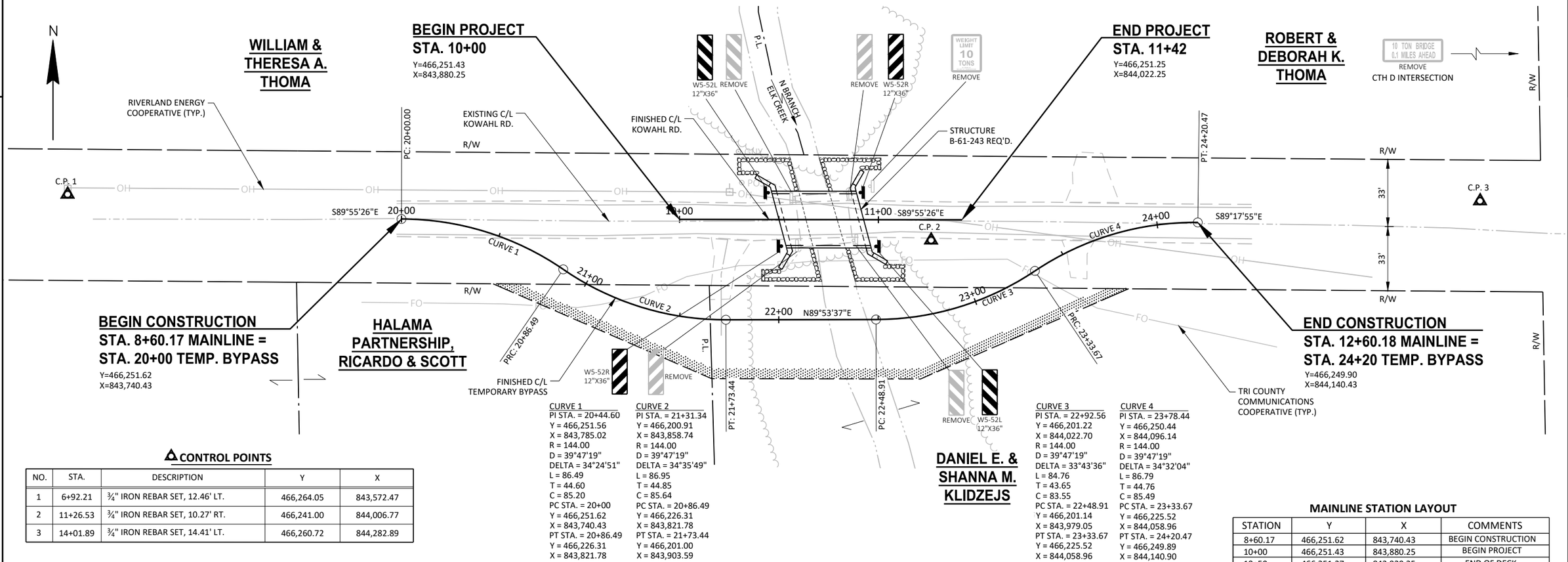


CROSS SECTION VIEW

1. EXACT LOCATION OF E.B.S. (EXCAVATION BELOW SUBGRADE) SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

2. E.B.S. AREA TO BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE ENGINEER. BACKFILL MUST BE HOMOGENEOUS WITH ADJOINING FILL MATERIAL.

3. THE FILL SECTION WITHIN 100' OF THE MOUTH OF THE CUT MUST BE KEPT 2' BELOW SUBGRADE UNTIL E.B.S. IS COMPLETED. LATERAL LIMITS OF EXCAVATION SHALL BE THE SUBGRADE SHOULDER POINTS.



CONTROL POINTS

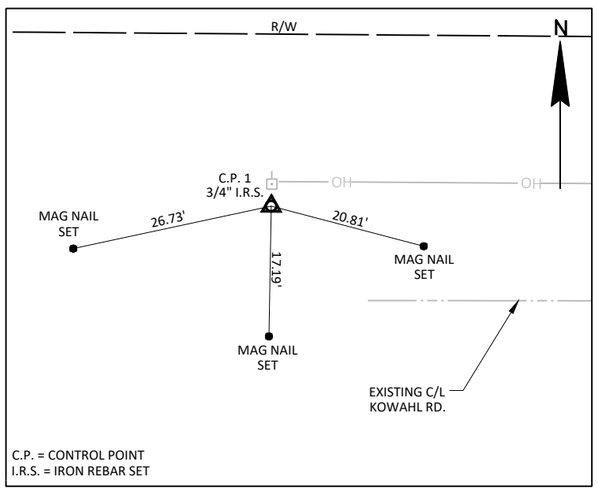
NO.	STA.	DESCRIPTION	Y	X
1	6+92.21	¾" IRON REBAR SET, 12.46' LT.	466,264.05	843,572.47
2	11+26.53	¾" IRON REBAR SET, 10.27' RT.	466,241.00	844,006.77
3	14+01.89	¾" IRON REBAR SET, 14.41' LT.	466,260.72	844,282.89

MAINLINE STATION LAYOUT

STATION	Y	X	COMMENTS
8+60.17	466,251.62	843,740.43	BEGIN CONSTRUCTION
10+00	466,251.43	843,880.25	BEGIN PROJECT
10+50	466,251.37	843,930.25	END OF DECK
10+92.59	466,251.31	843,972.84	END OF DECK
11+00	466,251.30	843,980.25	-
11+42	466,251.25	844,022.25	END PROJECT
12+60.18	466,249.90	844,140.43	END CONSTRUCTION

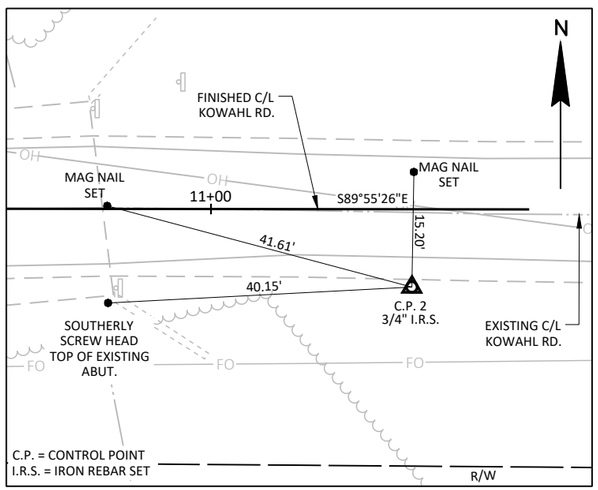
TEMPORARY BYPASS STATION LAYOUT

STATION	Y	X	COMMENTS
20+00	466,251.62	843,740.43	BEGIN TEMP. BYPASS
20+50	466,242.96	843,789.42	-
21+00	466,219.19	843,833.25	-
21+50	466,202.86	843,880.24	-
22+00	466,201.05	843,930.14	-
22+50	466,201.14	843,980.14	-
23+00	466,210.20	844,029.06	-
23+50	466,233.82	844,073.01	-
24+00	466,248.69	844,120.48	-
24+20	466,249.90	844,140.43	END TEMP. BYPASS



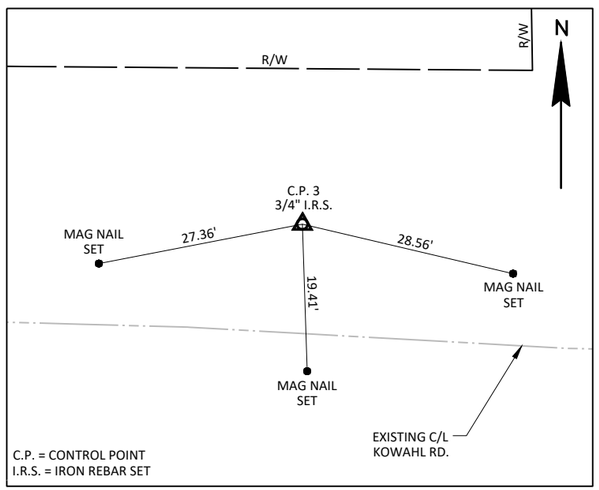
TIES TO C.P.#1

STA. 6+92.21; 12.46' LT.
Y = 466,264.05
X = 843,572.47



TIES TO C.P.#2

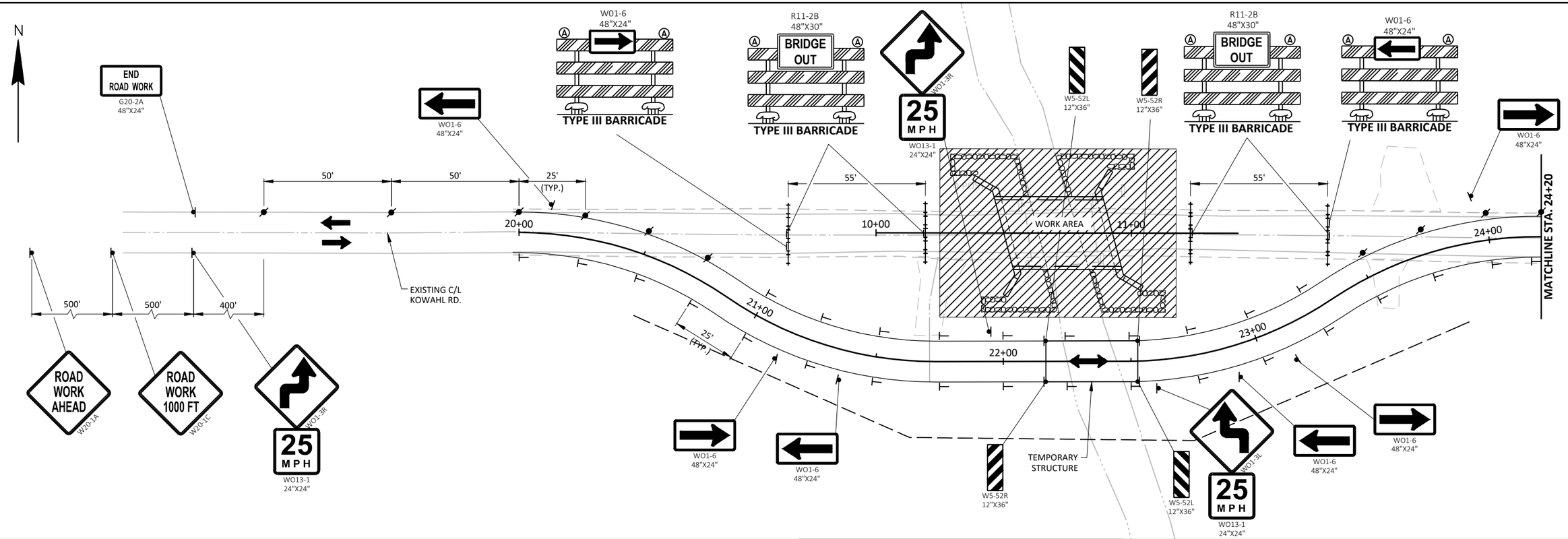
STA. 11+26.53; 10.27' RT.
Y = 466,241.00
X = 844,006.77

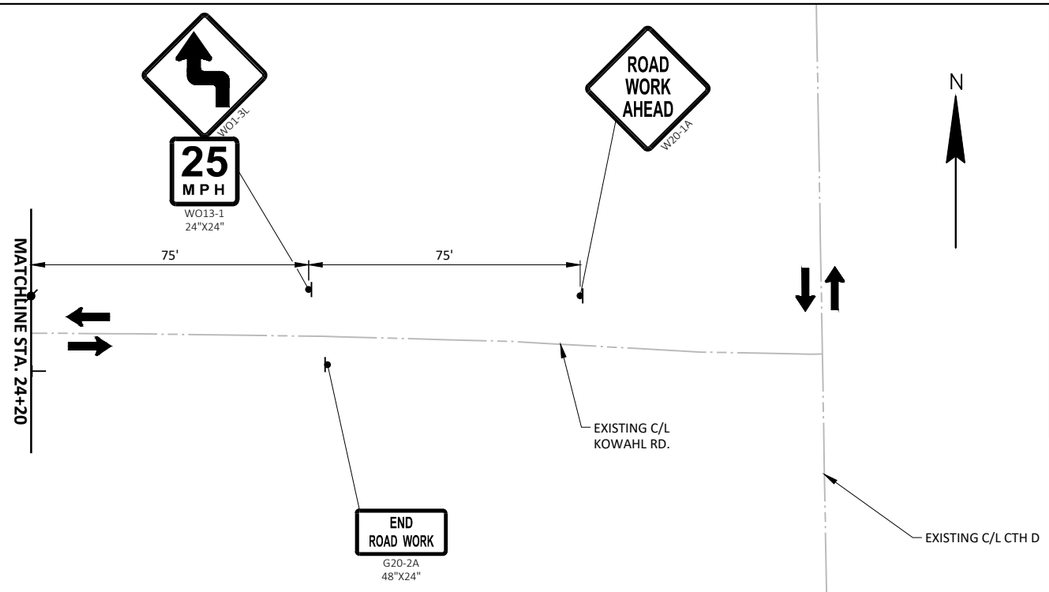


TIES TO C.P.#3

STA. 14+01.89; 14.41' LT.
Y = 466,260.72
X = 844,282.89

PROJECT NO: 7283-00-70	HWY: KOWAHL ROAD	COUNTY: TREMPEALEAU	ALIGNMENT AND TIES AND PERMANENT SIGNING	SHEET 5	E





LEGEND

- TEMPORARY DELINEATOR. (WHITE) (DOUBLE DELINEATOR)
- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC

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.

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

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

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

PROJECT NO: 7283-00-70	HWY: KOWAHL ROAD	COUNTY: TREMPEALEAU	TRAFFIC DETAIL	SHEET 6	E

7283-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	3.000	3.000
0004	201.0205	Grubbing	STA	3.000	3.000
0006	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. P-61-0134	EACH	1.000	1.000
0008	205.0100	Excavation Common	CY	680.000	680.000
0010	206.1000	Excavation for Structures Bridges (structure) 01. B-61-0243	LS	1.000	1.000
0012	208.0100	Borrow	CY	610.000	610.000
0014	210.1500	Backfill Structure Type A	TON	400.000	400.000
0016	213.0100	Finishing Roadway (project) 01. 7283-00-70	EACH	1.000	1.000
0018	305.0110	Base Aggregate Dense 3/4-Inch	TON	290.000	290.000
0020	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	210.000	210.000
0022	455.0605	Tack Coat	GAL	12.000	12.000
0024	465.0105	Asphaltic Surface	TON	50.000	50.000
0026	502.0100	Concrete Masonry Bridges	CY	151.000	151.000
0028	502.3200	Protective Surface Treatment	SY	200.000	200.000
0030	505.0400	Bar Steel Reinforcement HS Structures	LB	4,500.000	4,500.000
0032	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	17,950.000	17,950.000
0034	513.4061	Railing Tubular Type M	LF	90.000	90.000
0036	516.0500	Rubberized Membrane Waterproofing	SY	12.000	12.000
0038	526.0100	Temporary Structure (station) 01. Sta. 22+35	LS	1.000	1.000
0040	550.2104	Piling CIP Concrete 10 3/4 X 0.25-Inch	LF	770.000	770.000
0042	606.0300	Riprap Heavy	CY	190.000	190.000
0044	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	150.000	150.000
0046	619.1000	Mobilization	EACH	1.000	1.000
0048	624.0100	Water	MGAL	8.000	8.000
0050	625.0500	Salvaged Topsoil	SY	330.000	330.000
0052	627.0200	Mulching	SY	725.000	725.000
0054	628.1504	Silt Fence	LF	820.000	820.000
0056	628.1520	Silt Fence Maintenance	LF	1,640.000	1,640.000
0058	628.1905	Mobilizations Erosion Control	EACH	9.000	9.000
0060	628.1910	Mobilizations Emergency Erosion Control	EACH	5.000	5.000
0062	628.7504	Temporary Ditch Checks	LF	24.000	24.000
0064	629.0210	Fertilizer Type B	CWT	1.000	1.000
0066	630.0120	Seeding Mixture No. 20	LB	9.000	9.000
0068	630.0160	Seeding Mixture No. 60	LB	3.000	3.000
0070	630.0200	Seeding Temporary	LB	24.000	24.000
0072	630.0300	Seeding Borrow Pit	LB	13.000	13.000
0074	630.0500	Seed Water	MGAL	28.000	28.000
0076	633.1100	Delineators Temporary	EACH	28.000	28.000
0078	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0080	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0082	638.2602	Removing Signs Type II	EACH	6.000	6.000
0084	638.3000	Removing Small Sign Supports	EACH	6.000	6.000
0086	642.5001	Field Office Type B	EACH	1.000	1.000
0088	643.0300	Traffic Control Drums	DAY	780.000	780.000
0090	643.0420	Traffic Control Barricades Type III	DAY	1,560.000	1,560.000
0092	643.0705	Traffic Control Warning Lights Type A	DAY	2,040.000	2,040.000
0094	643.0715	Traffic Control Warning Lights Type C	DAY	780.000	780.000
0096	643.0900	Traffic Control Signs	DAY	2,110.000	2,110.000
0098	643.5000	Traffic Control	EACH	1.000	1.000

7283-00-70

Line	Item	Item Description	Unit	Total	Qty
0100	645.0105	Geotextile Type C	SY	1,030.000	1,030.000
0102	645.0111	Geotextile Type DF Schedule A	SY	100.000	100.000
0104	645.0120	Geotextile Type HR	SY	330.000	330.000
0106	650.4500	Construction Staking Subgrade	LF	482.000	482.000
0108	650.5000	Construction Staking Base	LF	482.000	482.000
0110	650.6500	Construction Staking Structure Layout (structure) 01. B-61-0243	LS	1.000	1.000
0112	650.9910	Construction Staking Supplemental Control (project) 01. 7283-00-70	LS	1.000	1.000
0114	650.9920	Construction Staking Slope Stakes	LF	482.000	482.000
0116	690.0150	Sawing Asphalt	LF	32.000	32.000
0118	715.0502	Incentive Strength Concrete Structures	DOL	906.000	906.000
0120	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	300.000	300.000
0122	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	300.000	300.000
0124	SPV.0060	Special 01. Research and Locate Existing Property Monuments	EACH	1.000	1.000
0126	SPV.0060	Special 02. Verify and Replace Existing Property Monuments	EACH	1.000	1.000

ALL ITEMS 010 UNLESS OTHERWISE NOTED

CLEARING & GRUBBING

STATION-STATION	LOCATION	201.0105 CLEARING (STA)	201.0205 GRUBBING (STA)
10+00 - 11+00	MAINLINE	1	1
21+00 - 23+00	TEMPORARY BYPASS	2	2
	TOTALS =	3	3

BASE AGGREGATE DENSE

STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)
20+00 - 24+20	TEMPORARY BYPASS	250	-
10+00 - 24+20	MAINLINE	25	210
10+25	MAINLINE RT, F.E.	15	-
	TOTALS =	290	210

ASPHALTIC SURFACE

STATION - STATION	LOCATION	455.0605 TACK COAT (GAL)	465.0105 ASPHALTIC SURFACE (TON)
10+00 - 11+42	MAINLINE	12	50
	TOTALS =	12	50

3

EARTHWORK SUMMARY

FROM/TO STA	LOCATION	205.0100 COMMON EXCAVATION CUT (2) (CY)	AVAILABLE MATERIAL (CY) (1)	UNEXPANDED FILL (CY)	EXPANDED FILL (CY) FACTOR 1.25 (2)	MASS ORDINATE +/- (CY) (3)	208.0100 BORROW (CY)	WASTE (CY)
20+00 - 24+20	CONSTRUCT TEMPORARY BYPASS	2	2	488	610.0	-608.0	610.0	0.0
10+00 - 11+42	MAINLINE	94	94	49	62.0	32.0	0.0	32.0
20+00 - 24+20	REMOVE TEMPORARY BYPASS	584	584	2	3.0	581.0	0.0	581.0
	TOTALS =	680	680	539	675	5	610	613

NOTES:
1.) AVAILABLE MATERIAL=CUT
2.) EXPANDED FILL FACTOR 1.25: EXPANDED FILL = (UNEXPANDED FILL)*1.25
3.) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE CATEGORY. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE CATEGORY.

WATER

PROJECT	624.0100 (MGAL)
7283-00-70	8
TOTAL =	8

FINISHING ITEMS

STATION - STATION	LOCATION	625.0500 SALVAGED TOPSOIL (SY)	627.0200 MULCHING (SY)	629.0210 FERTILIZER TYPE B (CWT)	630.0120 SEEDING MIXTURE NO. 20 (LB)	*630.0160 SEEDING MIXTURE NO. 60 (LB)	630.0200 SEEDING TEMPORARY (LB)	630.0300 SEEDING BORROW PIT (LB)	630.0500 SEED WATER (MGAL)
20+00 - 24+20	TEMPORARY BYPASS	-	320	0.2	-	-	9	-	7
10+00 - 11+42	MAINLINE	260	260	0.2	7	2	-	-	8
-	BORROW PIT	-	-	0.3	-	-	-	10	9
-	UNDISTRIBUTED	70	145	0.3	2	1	15	3	4
	TOTALS =	330	725	1.0	9	3	24	13	28

*ADJACENT TO WETLAND AREAS (STA 10+00 - 10+62, RT; STA 10+00 - 10+55, LT; STA 10+71 - 11+17, LT; 10+89 - 11+25, RT)

MOBILIZATION EROSION CONTROL

PROJECT	628.1905 MOBILIZATION EROSION CONTROL (EACH)	628.1910 MOBILIZATION EMERGENCY EROSION CONTROL (EACH)
7283-00-70	9	5
TOTALS =	9	5

SILT FENCE

STATION - STATION	LOCATION	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)
10+00 - 11+42	MAINLINE, LT.	200	400
10+00 - 11+42	MAINLINE, RT.	80	160
20+00 - 24+20	TEMPORARY BYPASS, RT.	390	780
-	UNDISTRIBUTED	150	300
	TOTALS =	820	1,640

PERMANENT SIGNING

APPROX. STATION	POSITION	LOCATION	SIGN CODE	SIGN DESCRIPTION	SIGN SIZE	634.0612 POSTS WOOD 4X6-INCH X 12-FT (EACH)	637.2230 SIGNS TYPE II REFLECTIVE F (SF)	638.2602 REMOVING SIGNS TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH)
10+46	LEFT	MAINLINE	W5-52L	BRIDGE HASH MARKS	12X36	1	3.00	---	---
10+52	RIGHT	MAINLINE	W5-52R	BRIDGE HASH MARKS	12X36	1	3.00	---	---
10+56	LEFT	MAINLINE	W5-52L	BRIDGE HASH MARKS	---	---	---	1	1
10+59	RIGHT	MAINLINE	W5-52R	BRIDGE HASH MARKS	---	---	---	1	1
10+85	LEFT	MAINLINE	W5-52R	BRIDGE HASH MARKS	---	---	---	1	1
10+88	RIGHT	MAINLINE	W5-52L	BRIDGE HASH MARKS	---	---	---	1	1
10+91	LEFT	MAINLINE	W5-52R	BRIDGE HASH MARKS	12X36	1	3.00	---	---
10+97	LEFT	MAINLINE	R12-1	WEIGHT LIMIT 10 TONS	---	---	---	1	1
10+98	RIGHT	MAINLINE	W5-52L	BRIDGE HASH MARKS	12X36	1	3.00	---	---
-	LEFT	CTH D INTERSECTION	R12-55	10 TON BRIDGE 0.1 MILES AHEAD	---	---	---	1	1
					TOTALS =	4	12.00	6	6

ALL ITEMS 010 UNLESS OTHERWISE NOTED

3

DELINEATORS

STATION - STATION	LOCATION	633.1100 DELINEATORS TEMPORARY (EACH)
20+00 - 24+20	TEMPORARY BYPASS, RT.	10
20+00 - 24+20	TEMPORARY BYPASS, LT.	18
	TOTAL =	28

TRAFFIC CONTROL

STATION - STATION	LOCATION	643.0300 TRAFFIC CONTROL DRUMS (DAY)	643.0420 TRAFFIC CONTROL BARRICADES TYPE III (DAY)	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A (DAY)	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C (DAY)	643.0900 TRAFFIC CONTROL SIGNS (DAY)	643.5000 TRAFFIC CONTROL (EACH)
5+00 - 25+70	TEMPORARY BYPASS	780	-	-	780	1,795	-
9+66 - 11+77	MAINLINE	-	1,560	2,040	-	315	-
-	PROJECT	-	-	-	-	-	1
	TOTALS =	780	1,560	2,040	780	2,110	1

3

CONSTRUCTION STAKING

STATION -STATION	LOCATION	650.4500 SUBGRADE (L.F.)	650.5000 BASE (L.F.)	*650.6500 STRUCTURE LAYOUT (L.S.)	650.9910 SUPPLEMENTAL CONTROL (7283-00-70) (L.S.)	650.9920 SLOPES STAKES (L.F.)
20+00 - 24+20	TEMPORARY BYPASS	383	383	-	-	383
10+00 - 11+42	MAINLINE	99	99	-	-	99
7283-00-70	PROJECT	-	-	1	1	-
	TOTALS =	482	482	1	1	482

*CATEGORY 020

GEOTEXTILE

STATION - STATION	LOCATION	645.0105 TYPE C (SY)
20+00 - 24+20	TEMPORARY BYPASS	1030
	TOTAL =	1030

SAWING ASPHALT

STATION	LOCATION	690.0150 (LF)
10+00	MAINLINE	16
11+42	MAINLINE	16
	TOTAL =	32

TEMPORARY DITCH CHECKS

STATION	LOCATION	628.7504 (LF)
10+72	MAINLINE, RT.	8
10+89	MAINLINE, RT.	8
-	UNDISTRIBUTED	8
TOTALS =		24

PROPERTY MONUMENTS

STATION	LOCATION	CATEGORY	SPV.0060.01 RESEARCH AND LOCATE EXISTING PROPERTY MONUMENTS (EACH)	SPV.0060.02 VERIFY AND REPLACE EXISTING PROPERTY MONUMENTS (EACH)
10+15	MAINLINE, RT.	030	1	1
	TOTAL =		1	1

NOTES:
THIS EXHIBIT IS A GRAPHIC REPRESENTATION AND IS FOR REFERENCE PURPOSES ONLY.
REFER TO THE CONVEYANCE DOCUMENT FOR PARCEL RELATED DETAILS.
THE PURPOSE OF THE TLE IS FOR TEMPORARY BYPASS CONSTRUCTION.

BEARINGS ARE REFERENCED TO THE WEST LINE OF THE SW¼ OF SECTION 28, T23N, R8W, WHICH BEARS N01°02'49"W ACCORDING TO WISCRS, TREMPEALEAU COUNTY, NAD 83(2011)

R/W PROJECT NUMBER: 7283-00-00	EXHIBIT NUMBER: 1

TLE ACQUISITION EXHIBIT
TOWN OF HALE, KOWAHL ROAD
NORTH BRANCH ELK CREEK BRIDGE B-61-243
LOCAL STREET — TREMPEALEAU COUNTY

PART OF LOT 1 AND PART OF OUTLOT 1 OF CERTIFIED SURVEY MAP VOL. 7, PG. 201-202, LOCATED IN THE SW¼-SW¼, SECTION 28, T23N, R8W, TOWN OF HALE, TREMPEALEAU COUNTY, WISCONSIN.

⅞"Ø IRON ROD FOUND
Y = 467557.819
X = 843000.583

T. 23 N. / 29 28 / R. 8 W.

TLE POINTS				
PT.#	STATION	OFFSET	Y	X
1	20+55.00	23.80' RT	466219.100	843785.184
2	21+65.00	30.00' RT	466171.276	843893.445
3	22+70.00	33.00' RT	466170.079	844004.941
4	23+85.00	30.24' RT	466216.560	844112.752

BEGIN RELOCATION ORDER
STA. 8+60.17 MAINLINE =
STA. 20+00 TEMP. BYPASS
1335.12' NORTH AND 691.57' EAST
OF THE S.W. CORNER OF SECTION 28,
T.23N., R.8W., TOWN OF HALE,
TREMPEALEAU COUNTY, WI
Y=466,251.62
X=843,740.43

N01°02'49"W, 2641.76' WEST LINE OF THE SW¼, SECTION 28

N29°28'43"E, 1496.31' S.W. CORNER SECTION 28 TO TLE PT. 1

T. 23 N. / 29 28 / 32 33 / R. 8 W.

ALUMINUM MONUMENT FOUND
Y = 464916.504
X = 843048.851

NW¼–SW¼ SEC.28, T23N, R8W

GN

0 25' 50'
SCALE, FEET

R/W
99'
PL
OH
FO
POST
GUY
KOWAHL ROAD
20+00
9+00
10+00
11+00
12+00
24+00
PRC: 20+86.49
PI: 11+51.29
PRC: 23+33.67
PT: 21+73.44
PC: 22+48.91
21+00 S89° 33' 21"E
22+00
23+00
N66° 10' 00"W
118.35'
N89° 23' 06"W
111.50'
S66° 40' 39"W
327.58'
117.40'
SOUTH LINE OF THE NW¼-SW¼, SEC. 28
NORTH LINE OF THE SW¼-SW¼, SEC. 28
IP
1
2
3
4
TLE PT. 1

TLE - TEMPORARY BYPASS (1)
0.06 ACRES

TLE - TEMPORARY BYPASS (2)
0.18 ACRES

201

SLOPE INTERCEPTS

PARCEL ID. 018-01293-0005
OUTLOT 1, CSM
VOL. 7, PG. 201-202,
DOC. 381386

PARCEL ID. 018-01293-0000
LOT 1, CSM
VOL. 7, PG. 201-202,
DOC. 381386

TOWN OF HALE

NORTH BRANCH ELK CREEK

SW¼–SW¼ SEC.28, T23N, R8W

END RELOCATION ORDER
STA. 12+60.18 MAINLINE =
STA. 24+20 TEMP. BYPASS
1333.40' NORTH AND 1091.58' EAST
OF THE S.W. CORNER OF SECTION 28,
T.23N., R.8W., TOWN OF HALE,
TREMPEALEAU COUNTY, WI
Y=466,249.90
X=844,140.43

CTH D

WISCONSIN
WESLEY L KRAEMER
S-3026
SPRING GREEN WIS.
June 30, 2020
LAND SURVEYOR

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO TOWN OF HALE

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	TLE ACRES
1	RICARDO & SCOTT HALAMA PARTNERSHIP	TLE	0.06
2	DANIEL E. & SHANNA M. KLIDZEJS	TLE	0.18

UTILITY INTERESTS REQUIRED

UTILITY NUMBER	UTILITY OWNER(S)	INTEREST REQUIRED
201	TRI COUNTY COMMUNICATIONS COOPERATIVE	TEMPORARY CONSTRUCTION EASEMENT

THIS MAP IS APPROVED FOR THE TOWN OF HALE

SIGNATURE: Eric Frahson DATE: 7-7-2020

PRINT NAME: Eric Frahson

APPRAISAL PLAT DATE:

FILENAME: S:\Projects\W11610 WisDOT – Kowahl Road, Trempealeau County\RW\W11610 Kowahl Rd TLE exhibit.dwg

PLOT DATE: June 30, 2020

PLOT BY: Kraemer, Wes

CLEARING AND GRUBBING REQ'D
STA. 21+00 - STA. 23+00

REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS (P-61-134)
SINGLE-SPAN TIMBER FLAT SLAB STRUCTURE
24.7' CLEAR ROADWAY WIDTH
26.0' OVERALL LENGTH

LEGEND
- DIRECTION OF FLOW
- XXXXXXXXX SAWING ASPHALT
- EDGE OF WATER
- WETLAND BOUNDARY
- WETLAND
- RIPRAP HEAVY OVER GEOTEXTILE TYPE HR (CATEGORY 020)

WILLIAM & THERESA A. THOMA

ROBERT & DEBORAH K. THOMA

RIVERLAND ENERGY COOPERATIVE (TYP.)

STRUCTURE B-61-243 REQ'D

SLOPE INTERCEPTS

EXISTING C/L KOWAHL RD.

FINISHED C/L KOWAHL RD.

BM 4

FINISHED C/L TEMPORARY BYPASS (SEE TEMPORARY BYPASS PLAN AND PROFILE)

R/W

33'

33'

R/W

20+00

(ASPHALT)

KOWAHL RD.

10+00

S89°55'26"E

11+00

(ASPHALT)

24+00

21+00

23+00

22+00

BM 2

WETLAND BOUNDARY (TYP.)

BEGIN CONSTRUCTION
STA. 8+60.17 MAINLINE =
STA. 20+00 TEMP. BYPASS
Y=466,251.62
X=843,740.43

RICARDO & SCOTT HALAMA PARTNERSHIP

BEGIN PROJECT
STA. 10+00
Y=466,251.43
X=843,880.25

P.I.

N BRANCH ELK CREEK

STA. 10+25, RT.
CONSTRUCT F.E. (B.A.D.)
TO BE COMPLETED AFTER
TEMPORARY BYPASS REMOVAL

TEMPORARY STRUCTURE

TLE REQ'D. (TYP.)

END PROJECT
STA. 11+42
Y=466,251.25
X=844,022.25

STA. 12+02, RT.
CONSTRUCT F.E. (B.A.D.)
TO BE COMPLETED AFTER
TEMPORARY BYPASS REMOVAL

DANIEL E. & SHANNA M. KLIDZEJS

END CONSTRUCTION
STA. 12+60.18 MAINLINE =
STA. 24+20 TEMP. BYPASS
Y=466,249.90
X=844,140.43

TRI COUNTY COMMUNICATIONS COOPERATIVE (TYP.)

L=90.00
K=102.81

FINISHED C/L PROFILE KOWAHL RD.

EXISTING C/L PROFILE KOWAHL RD.

-1.21%

-0.33%

STA. 10+71
STRUCTURE B-61-243 REQ'D
SINGLE SPAN REINFORCED CONCRETE FLAT SLAB STRUCTURE
CLEAR ROADWAY WIDTH = 26.0'
O.A.L. = 42.59'
SKEW = 15° R.H.F.

STA. 10+00
EL. 848.98
MATCH EXISTING

PC STA 10+01.29
EL 848.96

PI STA 10+46.29
EL 848.42

PT STA 10+91.29
EL 848.27

STA. 11+42
EL. 848.10
MATCH EXISTING

HIGH WATER$_2$
EL = 839.98

HIGH WATER$_{100}$
EL = 844.00

OBSERVED WATER
EL. 835.82
(10-30-19)

STREAMBED
EL. 834.84

EXISTING C/L ELEVATION

FINISHED C/L ELEVATION

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	6+92	3/4" IRON REBAR SET, 12.5' LT.	854.31
2	11+27	3/4" IRON REBAR SET, 10.3' RT.	847.67
3	14+02	3/4" IRON REBAR SET, 14.4' LT.	851.75
4	10+25	STAR SPIKE IN PPOL, 13.7' LT.	847.82

EARTHWORK SUMMARY

	MAINLINE		TEMPORARY BYPASS REMOVAL	
EXCAVATION COMMON	= 94 C.Y.		EXCAVATION COMMON	= *584 C.Y.
FILL	= 49 C.Y.		FILL	= 2 C.Y.
FILL EXPANSION (25%)	= 62 C.Y.		FILL EXPANSION (25%)	= 3 C.Y.
WASTE	= 32 C.Y.		WASTE	= 581 C.Y.
TEMPORARY BYPASS CONSTRUCTION			TOTAL EXCAVATION COMMON	= 680 C.Y.
EXCAVATION COMMON	= 2 C.Y.		TOTAL BORROW	= 610 C.Y.
FILL	= 489 C.Y.			
FILL EXPANSION (25%)	= 612 C.Y.			
BORROW	= 610 C.Y.			

* QUANTITY INCLUDES BASE AGGREGATE DENSE REMOVAL OF TEMPORARY BYPASS.

850 848 846 844 842 840 838 836 834

851.65 851.24 850.81 850.37 849.91 849.46 849.22 848.98 848.98 848.76 848.76 848.55 848.57 848.35 848.42 848.30 848.31 848.25 848.24 848.17 848.17 848.09 848.11 848.10 848.10 848.18 848.28 848.40 848.51 848.65 848.90 849.16

8+00 8+20 8+40 8+60 8+80 9+00 9+20 9+40 9+60 9+80 10+00 10+20 10+40 10+60 10+80 11+00 11+20 11+40 11+42 11+60 11+80 12+00 12+20 12+40 12+60 12+80 13+00 13+20 13+40 13+60

PROJECT NO: 7283-00-70	HWY: KOWAHL ROAD	COUNTY: TREMPEALEAU	PLAN AND PROFILE: MAINLINE	SHEET 12	E

FILE NAME : S:\PROJECTS\W11610 WISDOT - KOWAHL ROAD, TREMPEALEAU COUNTY\SHEETSPLAN\PLAN & PROFILE SHEETS\P&P'S.DWG
PLOT DATE : 8/27/2021 9:38:47 AM
PLOT BY : COLTON PEPER
PLOT SCALE : 1" = 1'
LAYOUT : MAINLINE

N

WILLIAM & THERESA A. THOMA

ROBERT & DEBORAH K. THOMA

RICARDO & SCOTT HALAMA PARTNERSHIP

DANIEL E. & SHANNA M. KLIDZEJS

CURVE 1	CURVE 2	CURVE 3	CURVE 4
PI STA. = 20+44.60	PI STA. = 21+31.34	PI STA. = 22+92.56	PI STA. = 23+78.44
Y = 466,251.56	Y = 466,200.91	Y = 466,201.22	Y = 466,250.44
X = 843,785.02	X = 843,858.74	X = 844,022.70	X = 844,096.14
R = 144.00	R = 144.00	R = 144.00	R = 144.00
D = 39°47'19"	D = 39°47'19"	D = 39°47'19"	D = 39°47'19"
DELTA = 34°24'51"	DELTA = 34°35'49"	DELTA = 33°43'36"	DELTA = 34°32'04"
L = 86.49	L = 86.95	L = 84.76	L = 86.79
T = 44.60	T = 44.85	T = 43.65	T = 44.76
C = 85.20	C = 85.64	C = 83.55	C = 85.49
PC STA. = 20+00	PC STA. = 20+86.49	PC STA. = 22+48.91	PC STA. = 23+33.67
Y = 466,251.62	Y = 466,226.31	Y = 466,201.14	Y = 466,225.52
X = 843,740.43	X = 843,821.78	X = 843,979.05	X = 844,058.96
PT STA. = 20+86.49	PT STA. = 21+73.44	PT STA. = 23+33.67	PT STA. = 24+20.47
Y = 466,226.31	Y = 466,201.00	Y = 466,225.52	Y = 466,249.89
X = 843,821.78	X = 843,903.59	X = 844,058.96	X = 844,140.90

LEGEND
- DIRECTION OF FLOW
- SILT FENCE
- EDGE OF WATER
- WETLAND BOUNDARY
- WETLAND
- RIPRAP HEAVY OVER GEOTEXTILE TYPE HR (CATEGORY 020)
- TEMPORARY DITCH CHECK

RIVERLAND ENERGY COOPERATIVE (TYP.)

EXISTING C/L KOWAHL RD.

(ASPHALT)

KOWAHL RD.

R/W

PC: 20+00.00

S89°55'26"E

20+00

CURVE 1

PRC: 20+86.49

21+00

CURVE 2

22+00

N89°53'37"E

10+00

S89°55'26"E

11+00

PT: 21+73.44

PC: 22+48.91

PRC: 23+33.67

CURVE 3 23+00

CURVE 4

24+00

S89°17'55"E

PT: 24+20.47

P.I.

N BRANCH ELK CREEK

FINISHED C/L KOWAHL RD.

BM 4

BM 2

WETLAND BOUNDARY (TYP.)

BEGIN CONSTRUCTION STA. 8+60.17 MAINLINE = STA. 20+00 TEMP. BYPASS

Y=466,251.62
X=843,740.43

END CONSTRUCTION STA. 12+60.18 MAINLINE = STA. 24+20 TEMP. BYPASS

Y=466,249.90
X=844,140.43

SLOPE INTERCEPTS

SHOULDER HINGE POINT

FINISHED C/L TEMPORARY BYPASS

TLE REQ'D.

STA. 21+70, RT.
CONSTRUCT F.E. (B.A.D.)
TO BE REMOVED UPON
TEMPORARY BYPASS REMOVAL

TEMPORARY STRUCTURE

TLE REQ'D.

TRI COUNTY COMMUNICATIONS COOPERATIVE (TYP.)

STA. 23+50, RT.
CONSTRUCT F.E. (B.A.D.)

5

5

852
850
848
846
844
842
840
838
836

STA. 20+48.10
MATCH EXISTING GRADE
AT EDGE OF KOWAHL ROAD

-4.03%

L=160.00
K=26.80

1.94%

STA. 23+73.43
MATCH EXISTING GRADE
AT EDGE OF KOWAHL ROAD

FINISHED C/L TEMPORARY BYPASS KOWAHL ROAD

PC STA 21+10.00
EL 847.96

PI STA 21+90.00
EL 844.74

PT STA 22+70.00
EL 846.29

HIGH WATER$_5$
EL = 841.90

EXISTING GROUNDLINE AT FINISHED C/L TEMPORARY BYPASS KOWAHL ROAD

EXISTING C/L ELEVATION

FINISHED C/L ELEVATION

TEMPORARY STRUCTURE	
Q_5	640 C.F.S.
HIGH WATER ELEVATION	842.03 FT.
MINIMUM REQ'D WATERWAY AREA	109 SQ. FT.

TEMPORARY STRUCTURE REQ'D.
CONTRACTOR TO PROVIDE CLEAR SPAN STRUCTURE WITH MIN. OPENING OF 109 S.F. AND CLEAR ROADWAY WIDTH OF 16 FT.

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	6+92	3/4" IRON REBAR SET, 12.5' LT.	854.31
2	11+27	3/4" IRON REBAR SET, 10.3' RT.	847.67
3	14+02	3/4" IRON REBAR SET, 14.4' LT.	851.75
4	10+25	STAR SPIKE IN PPOL, 13.7' LT.	847.82

EARTHWORK SUMMARY

MAINLINE			TEMPORARY BYPASS REMOVAL		
EXCAVATION COMMON	=	94 C.Y.	EXCAVATION COMMON	=	*584 C.Y.
FILL	=	49 C.Y.	FILL	=	2 C.Y.
FILL EXPANSION (25%)	=	62 C.Y.	FILL EXPANSION (25%)	=	3 C.Y.
WASTE	=	32 C.Y.	WASTE	=	581 C.Y.
TEMPORARY BYPASS CONSTRUCTION			TOTAL EXCAVATION COMMON	=	680 C.Y.
EXCAVATION COMMON	=	2 C.Y.	TOTAL BORROW	=	610 C.Y.
FILL	=	489 C.Y.			
FILL EXPANSION (25%)	=	612 C.Y.	* QUANTITY INCLUDES BASE AGGREGATE DENSE REMOVAL OF TEMPORARY BYPASS.		
BORROW	=	610 C.Y.			

851.65 851.20 850.69 849.26 849.98 847.93 849.17 847.25 848.37 846.51 847.58 846.08 846.92 845.44 846.42 844.94 846.06 841.19 845.85 838.28 845.79 835.26 845.88 838.48 846.12 840.93 846.49 842.67 846.87 844.42 847.26 845.42 847.65 847.68 848.04 848.41 848.64 848.90 849.16

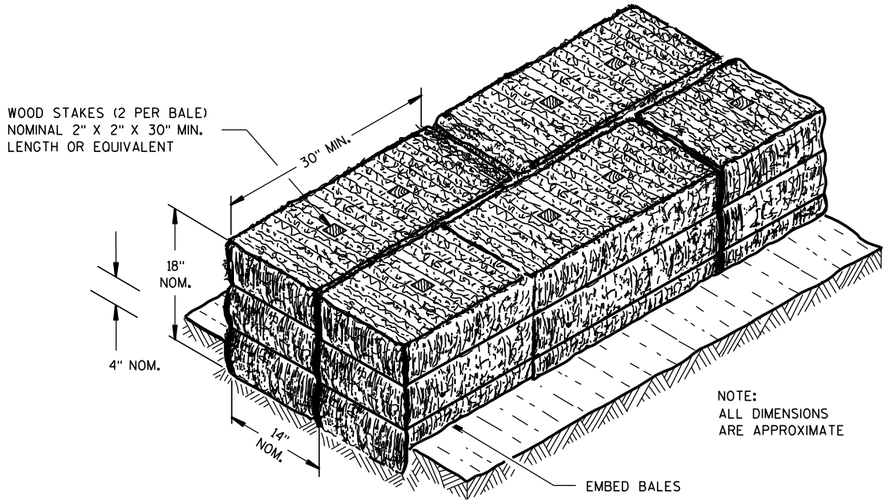
19+20 19+40 19+60 19+80 20+00 20+20 20+40 20+60 20+80 21+00 21+20 21+40 21+60 21+80 22+00 22+20 22+40 22+60 22+80 23+00 23+20 23+40 23+60 23+80 24+00 24+20 24+40 24+60 24+80

PROJECT NO: 7283-00-70	HWY: KOWAHL ROAD	COUNTY: TREMPEALEAU	PLAN AND PROFILE: TEMPORARY BYPASS AND EROSION CONTROL	SHEET 13	E

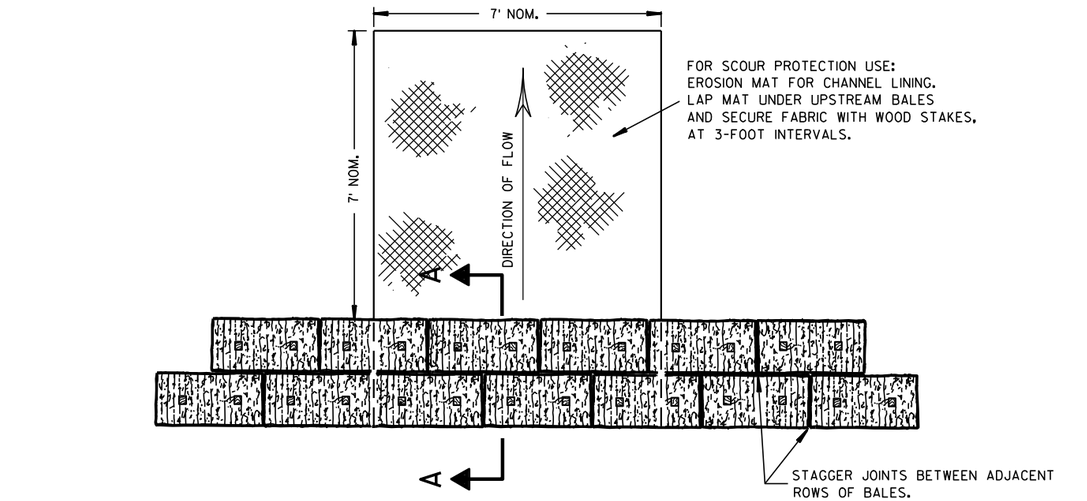
FILE NAME : S:\PROJECTS\W11610 WISDOT - KOWAHL ROAD, TREMPEALEAU COUNTY\SHEETSPLAN\PLAN & PROFILE SHEETS\P&P'S.DWG
PLOT DATE : 8/27/2021 9:38:49 AM
PLOT BY : COLTON PEPER
PLOT SCALE : 1" = 1'
LAYOUT : TEMP BYPASS

Standard Detail Drawing List

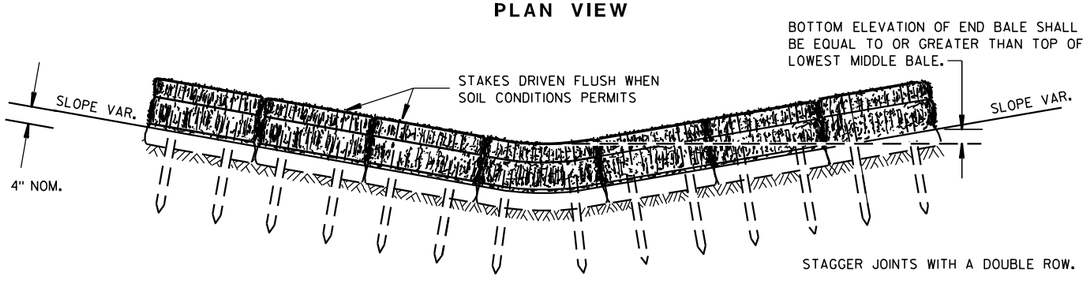
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
12A03-10	NAME PLATE (STRUCTURES)
15A04-06A	PERMANENT FLEXIBLE DELINEATOR POST
15A04-06C	DELINEATOR POST WITH REFLECTIVE SHEETING
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D31-03	TRAFFIC CONTROL, TEMPORARY BYPASS ROADWAY



SECTION A-A



PLAN VIEW



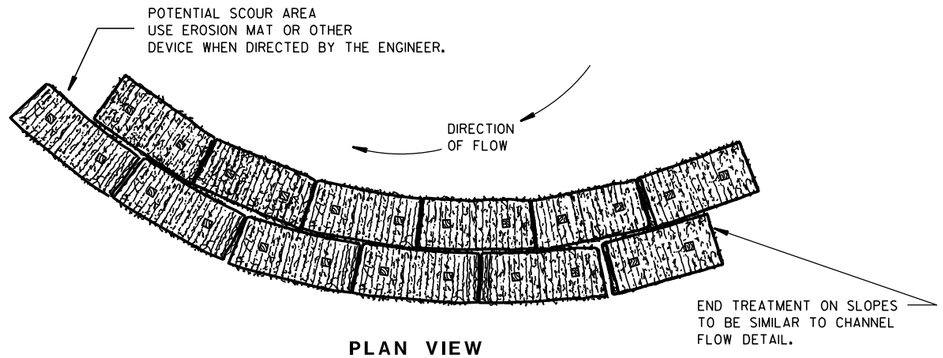
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

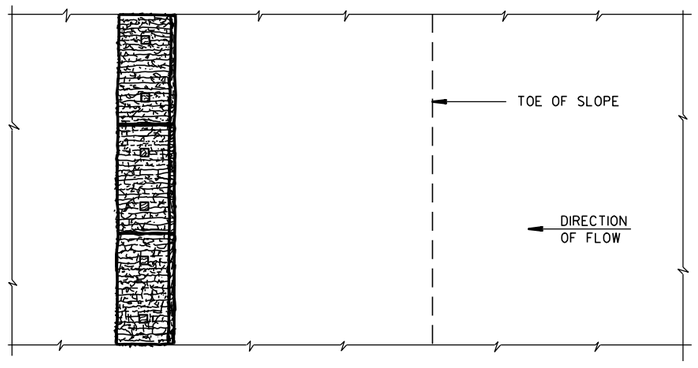
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

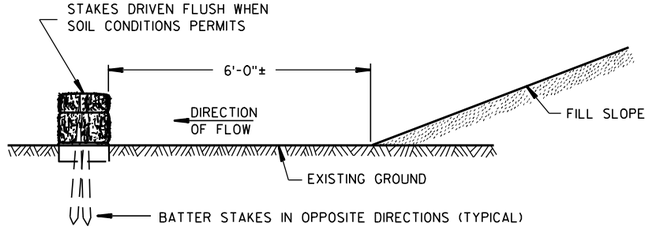


PLAN VIEW

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

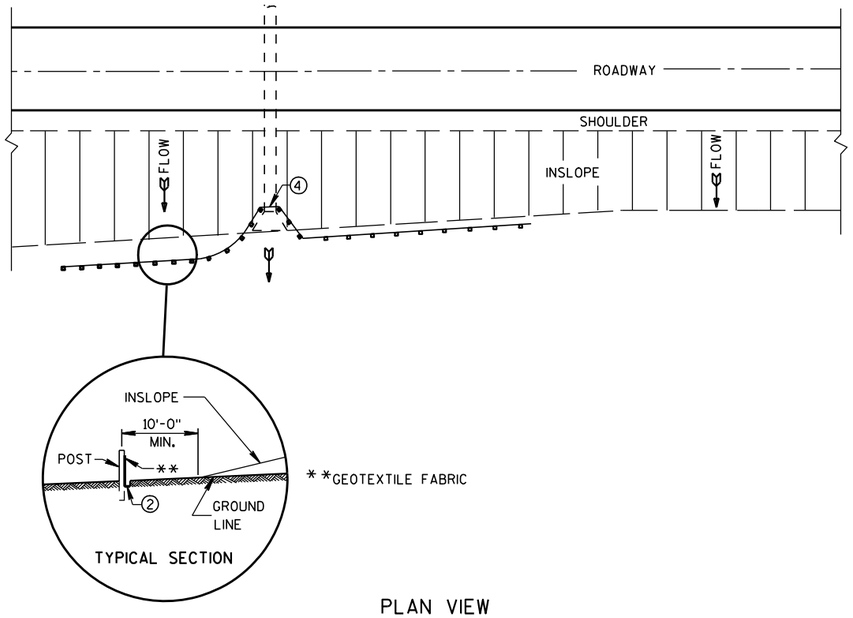
APPROVED

6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

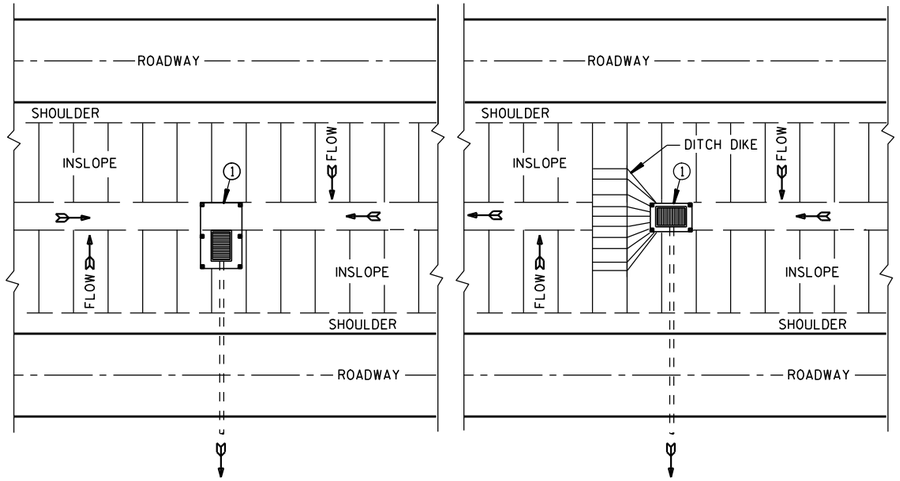
FHWA

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.

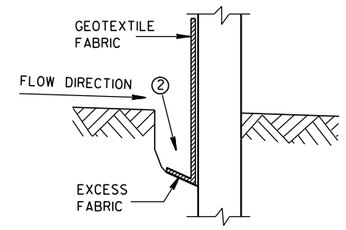
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

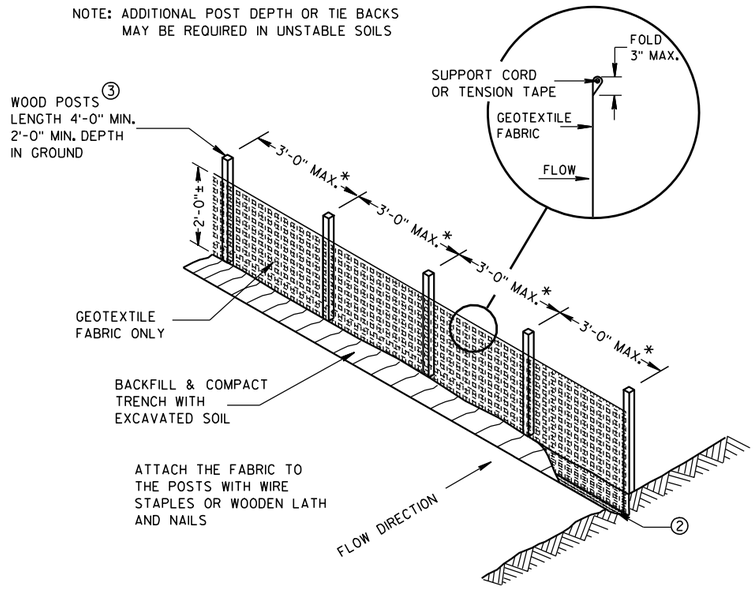
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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.

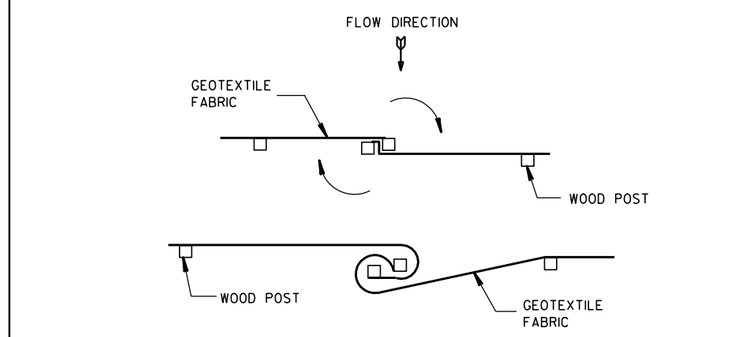


TRENCH DETAIL

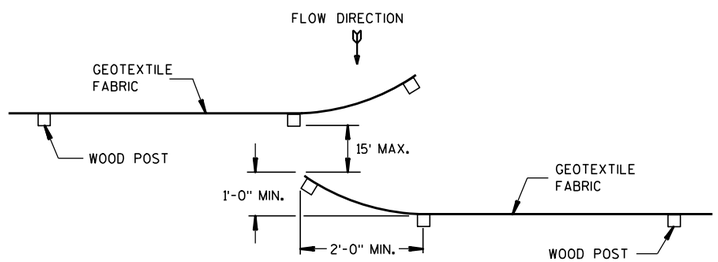


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

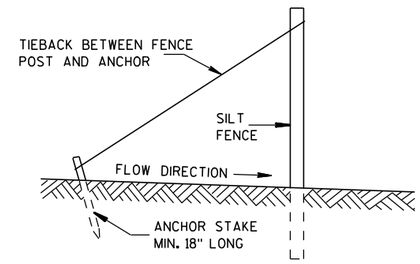


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

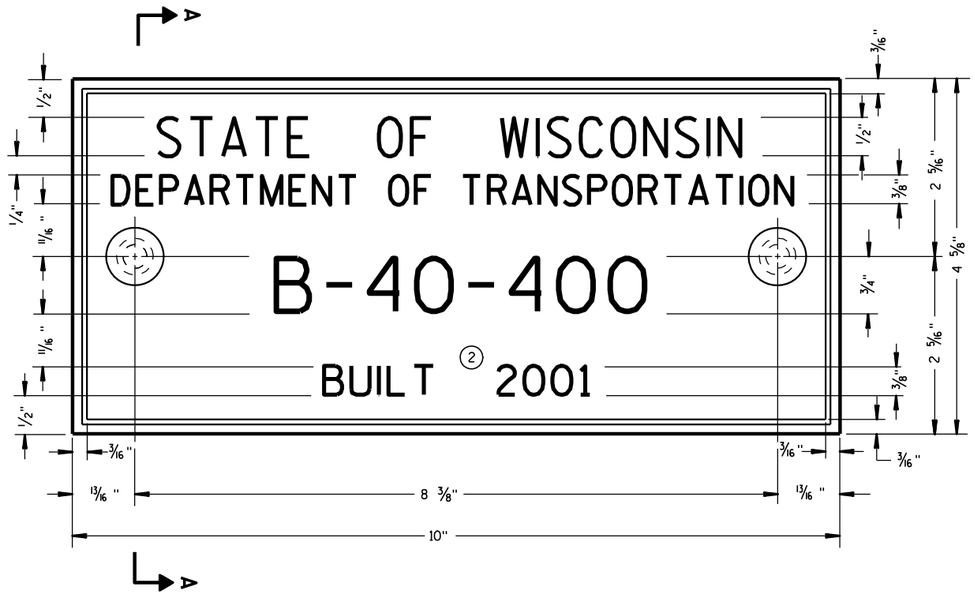
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

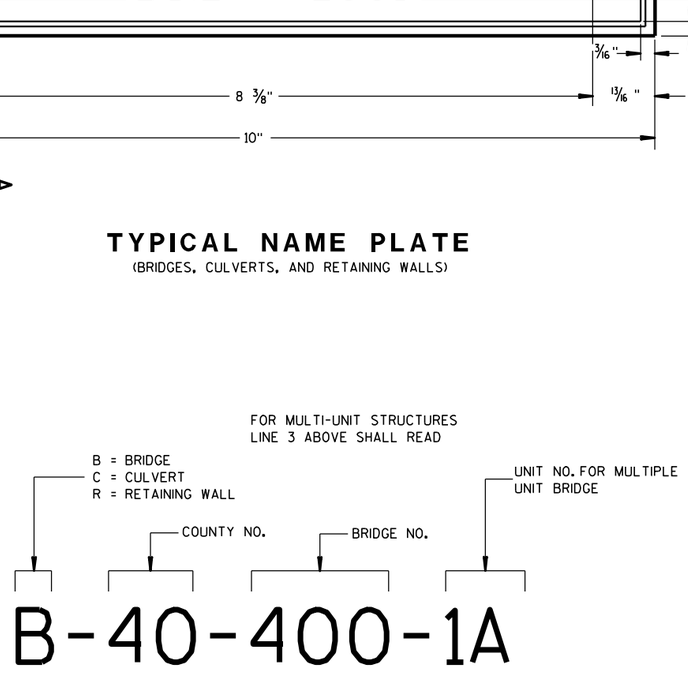
S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6



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



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

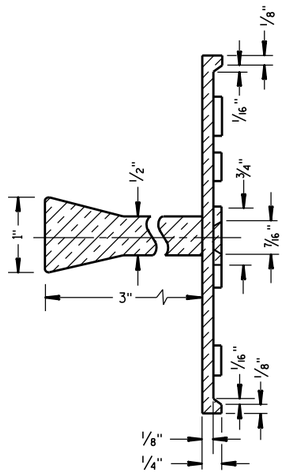
GENERAL NOTES

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

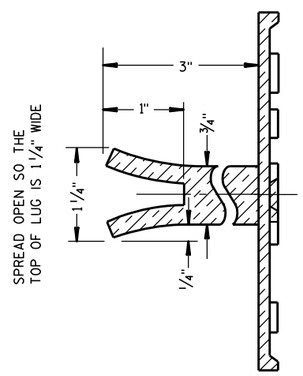
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

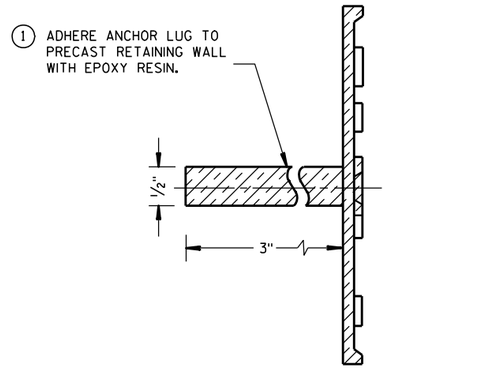
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



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

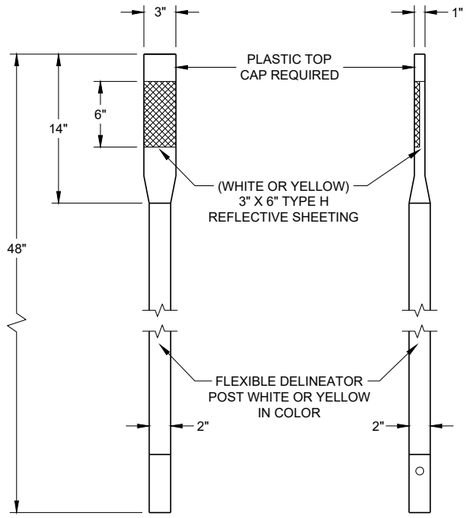
FHWA

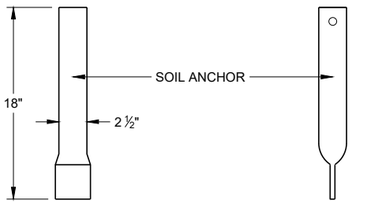
6

S.D.D. 12 A 3-10

6

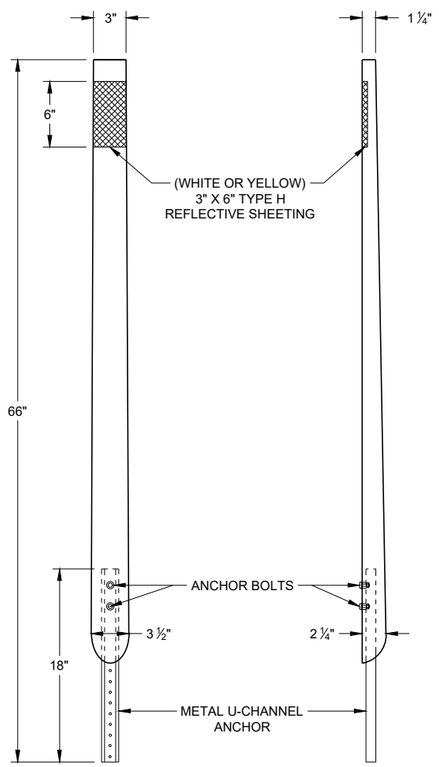
S.D.D. 12 A 3-10





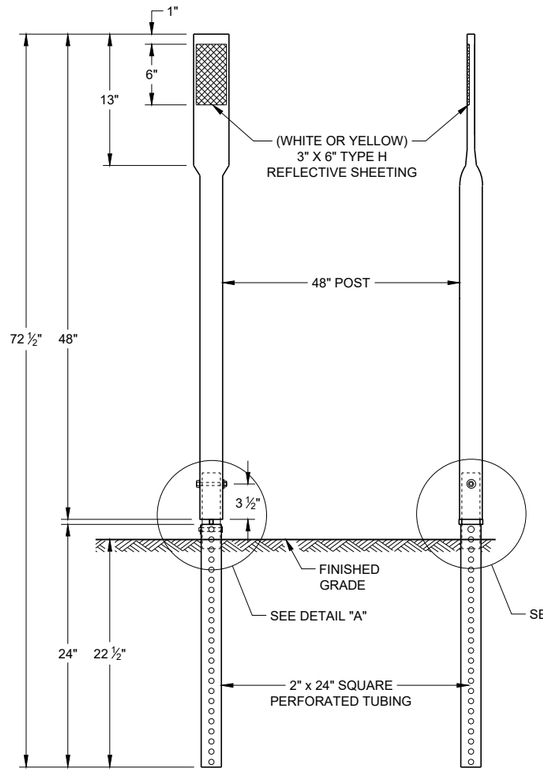
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

ALTERNATE 2



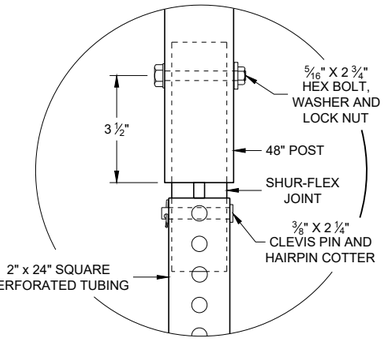
FRONT VIEW SIDE VIEW

ALTERNATE 3

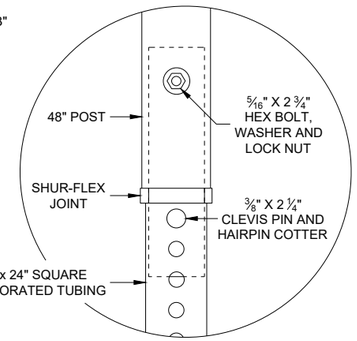
FLEXIBLE DELINEATOR POSTS

GENERAL NOTES

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



DETAIL A

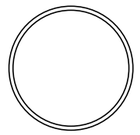


DETAIL B

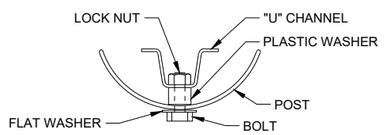
REFLECTOR SPACING TABLE

REFLECTOR SPACING	LOCATION
* 100' C-C	RAMPS
400' C-C	MAINLINE

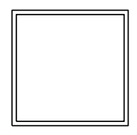
* START AT BEGINNING OF RAMP TAPER AND END AT END OF RAMP TAPER



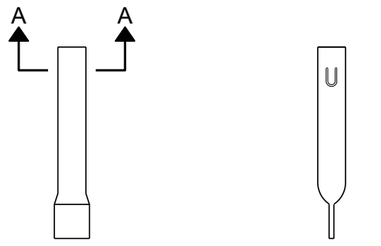
SECTION A - A



SECTION B - B

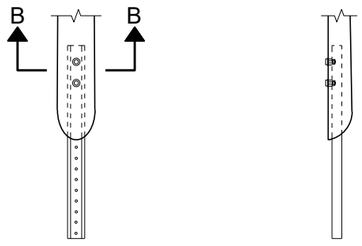


SECTION C - C



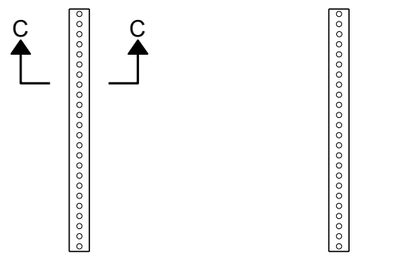
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

ALTERNATE 2



FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS

FLEXIBLE DELINEATOR POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

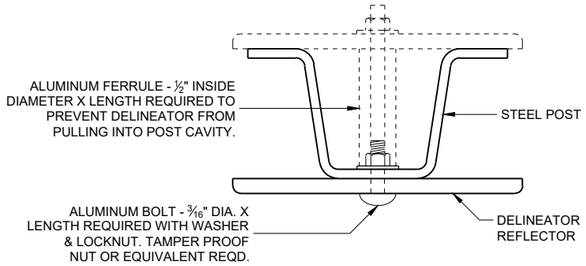
APPROVED
May 2021 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MAF ENGINEER

FHWA

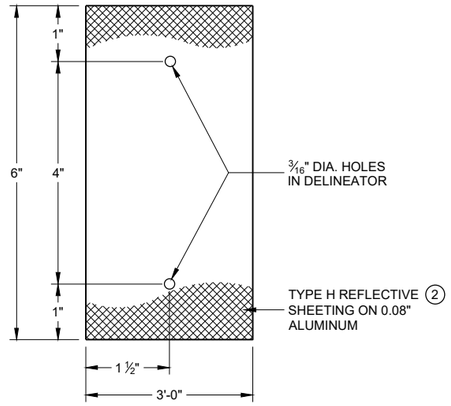
6

SDD 15A04 - 06a

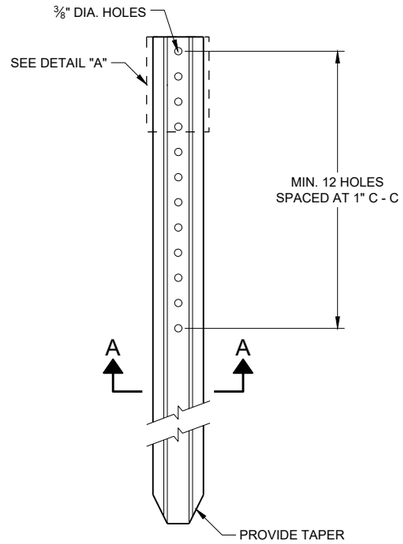
SDD 15A04 - 06a



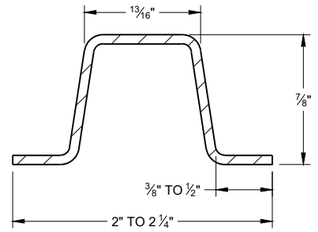
MOUNTING DETAIL FOR DELINEATOR REFLECTOR



DETAIL "A" 3" X 6" DELINEATOR REFLECTOR



DELINEATOR POST



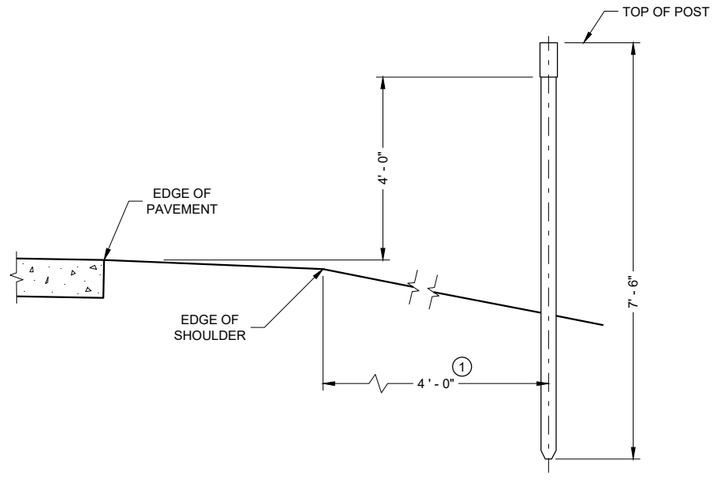
SECTION A - A

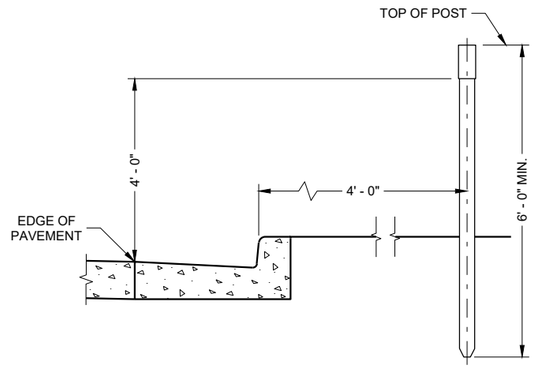
WEIGHT 1.12 LBS PER FT. \ 0.1 LB.

REFLECTOR SPACING TABLE

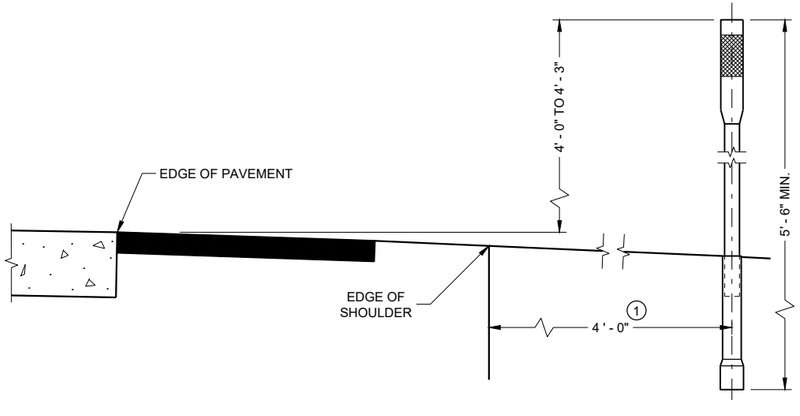
REFLECTOR SPACING	LOCATION
* 100' C-C	RAMPS
400' C-C	MAINLINE

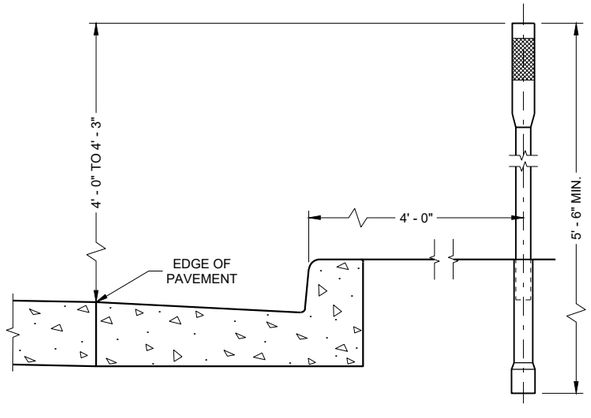
* START AT BEGINNING OF RAMP TAPER AND END AT END OF RAMP TAPER





TYPICAL INSTALLATIONS OF DELINEATOR POSTS





TYPICAL INSTALLATIONS OF FLEXIBLE DELINEATOR POSTS

GENERAL NOTES

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

1. DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.
2. FURNISH TYPE H SHEETING FROM THE APPROVED PRODUCTS LIST.

DELINEATOR POST WITH REFLECTIVE SHEETING

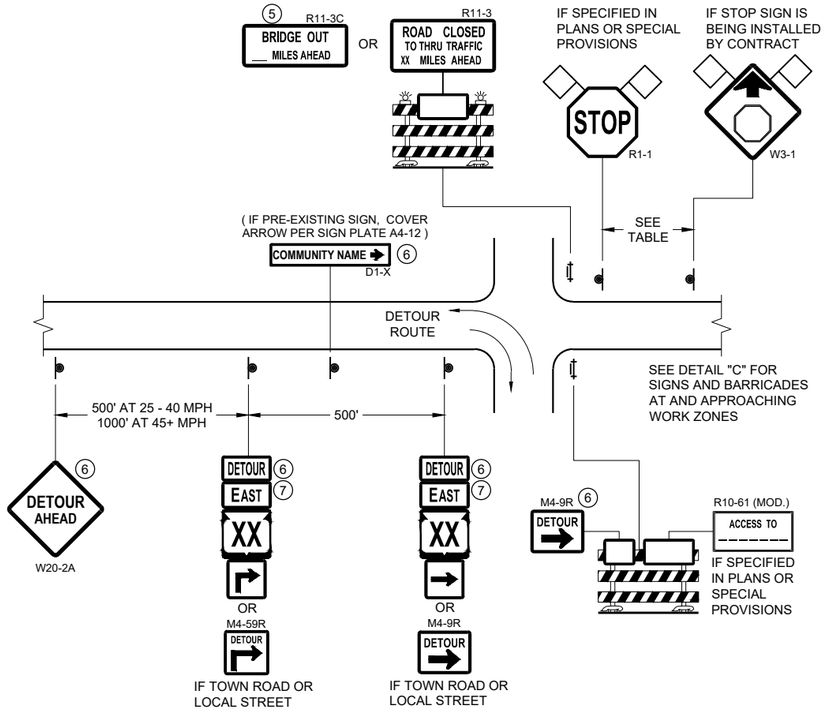
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MAF ENGINEER

FHWA

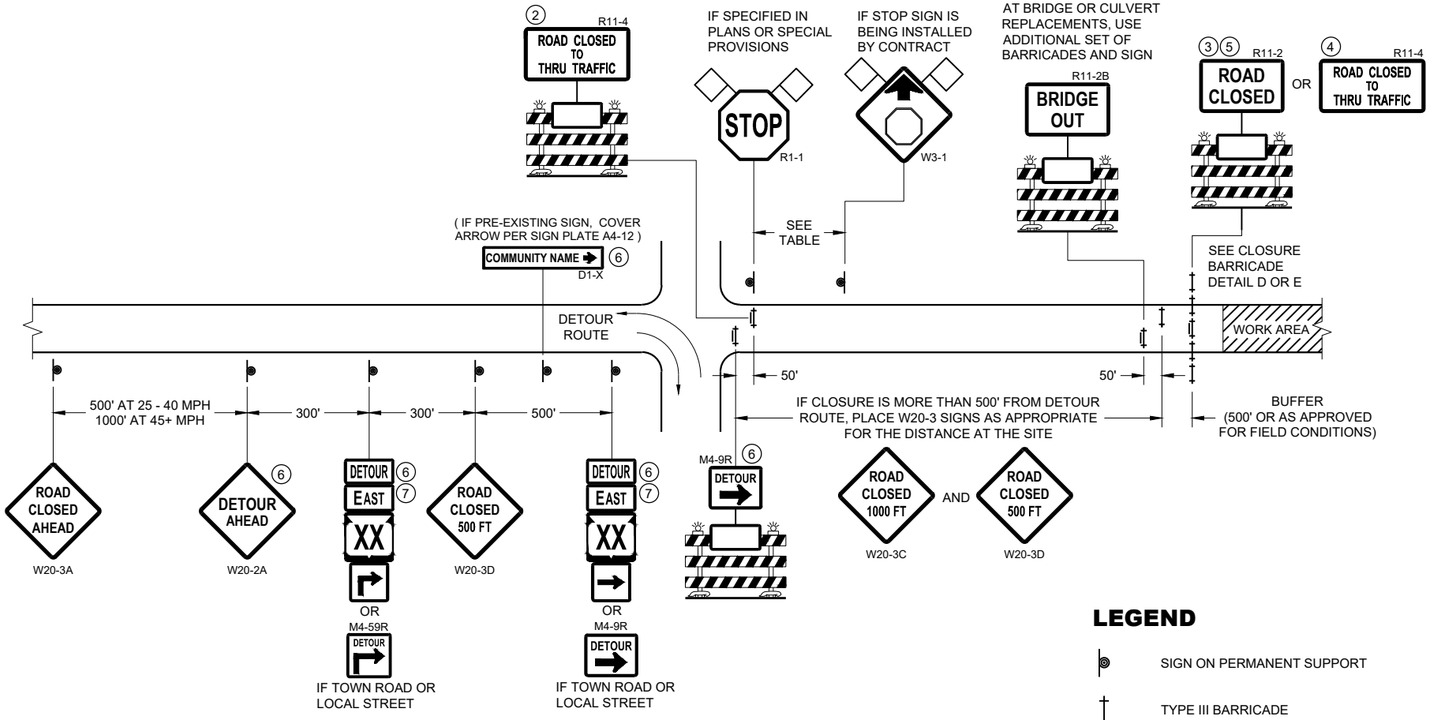
SDD 15A04 - 06c

SDD 15A04 - 06c



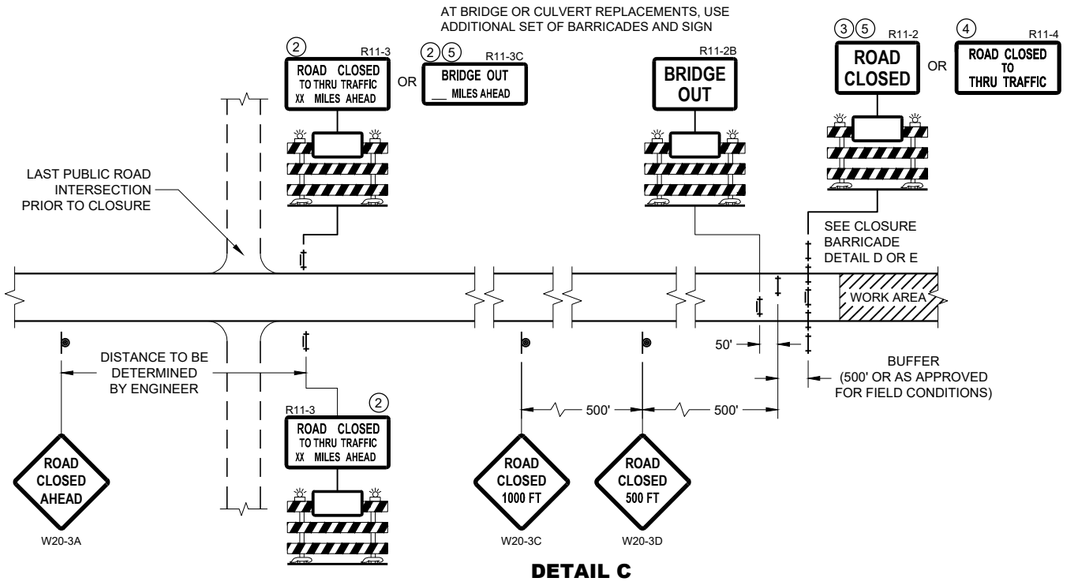
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)

DETOUR M4 - 8
EAST M3 - X
XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A
M05 - 1 OR M06 - 1

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

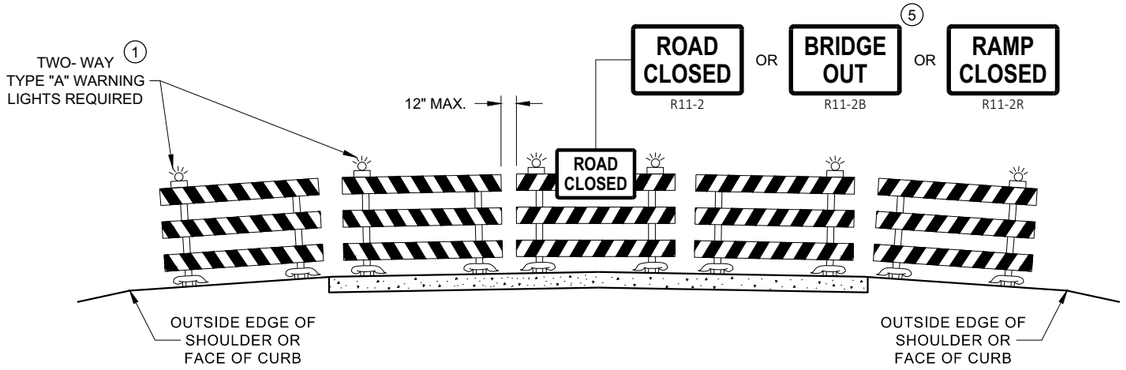
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

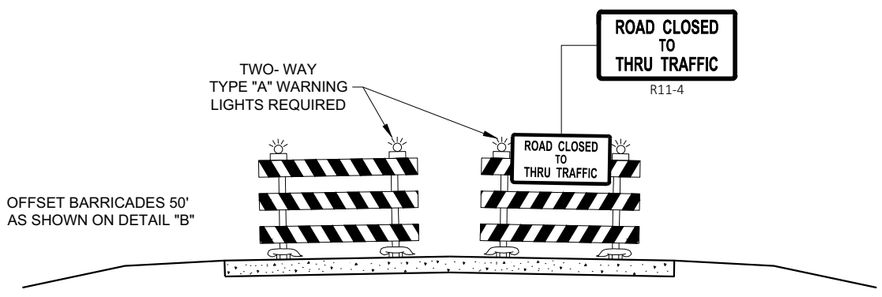
FHWA

6

SDD 15C02 - 08a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

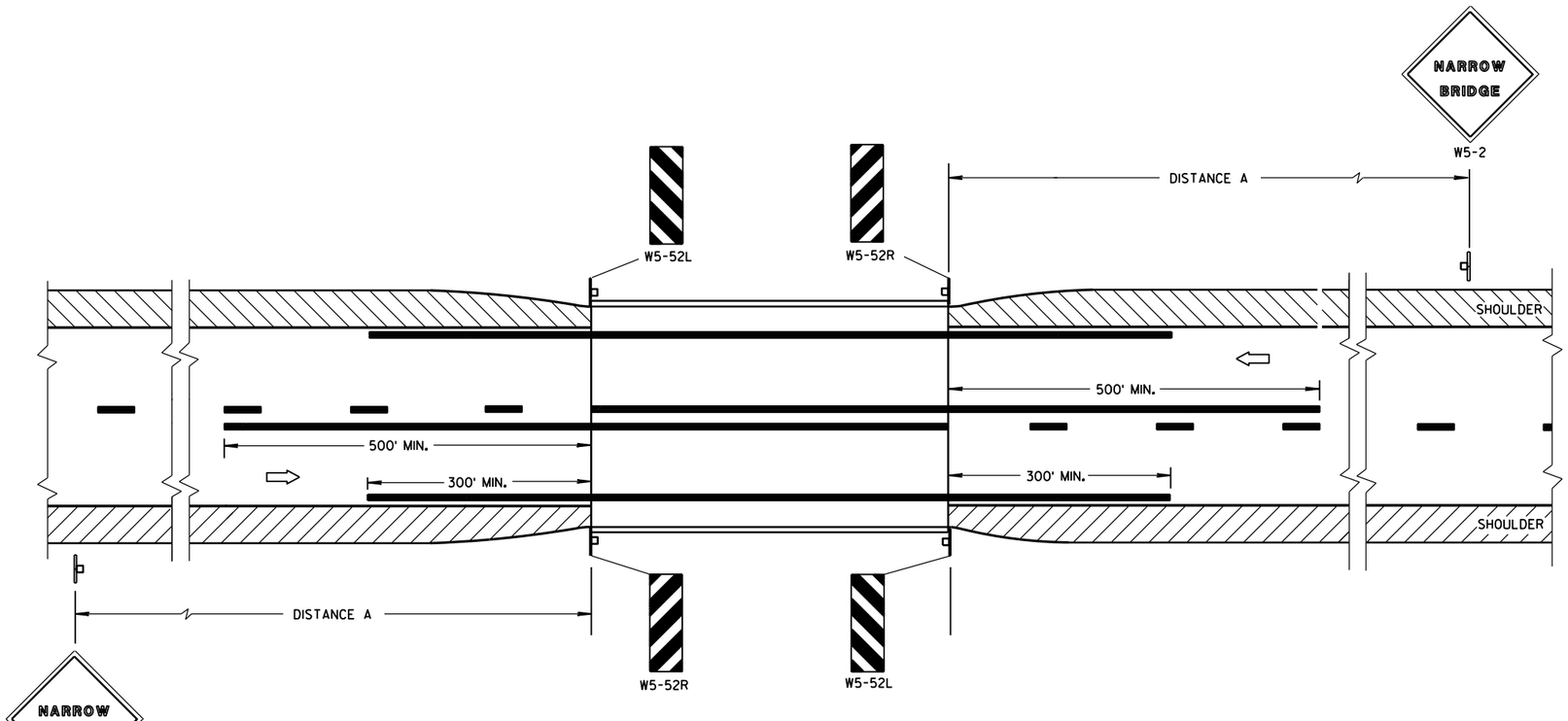
APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

6

SDD 15C02 - 08b

6

SDD 15C02 - 08b



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

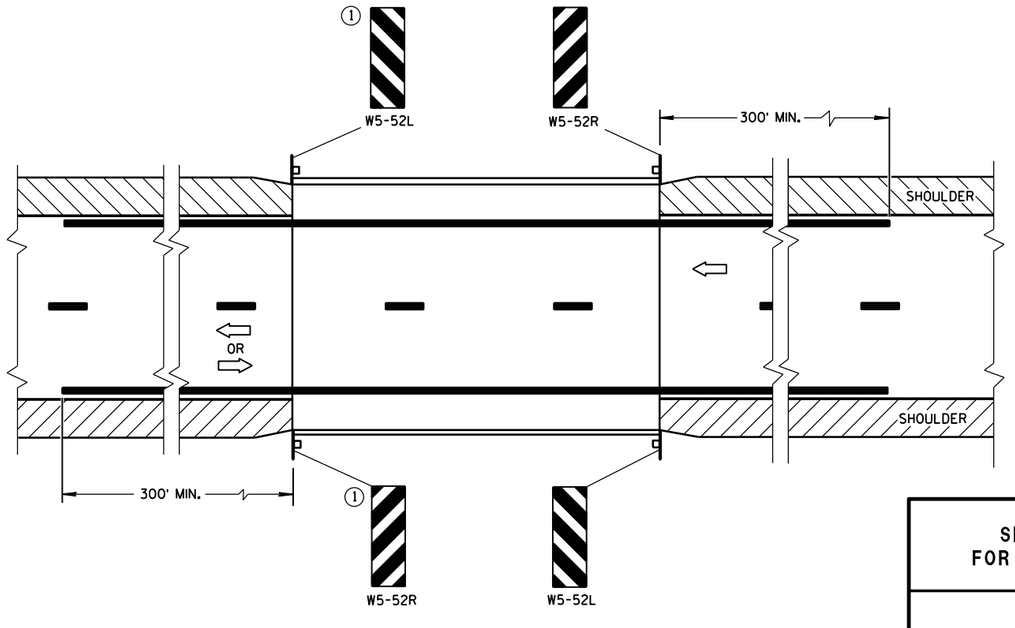
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

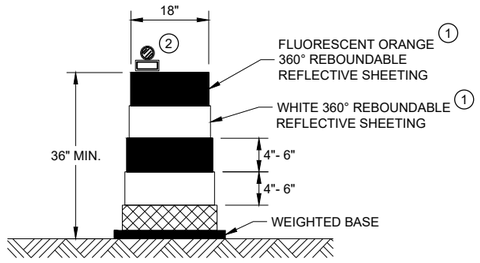
APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR[illegible]ENGINEER
FHWA

6

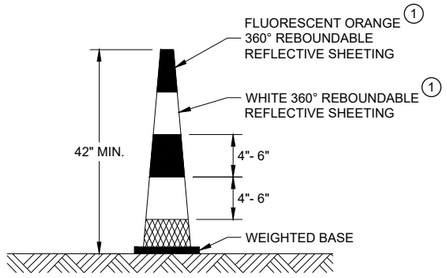
S.D.D. 15 C 6-9

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.

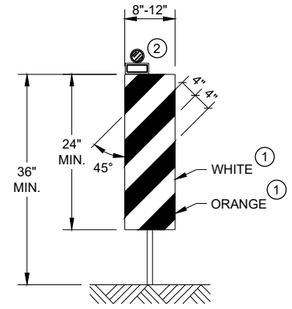


DRUM



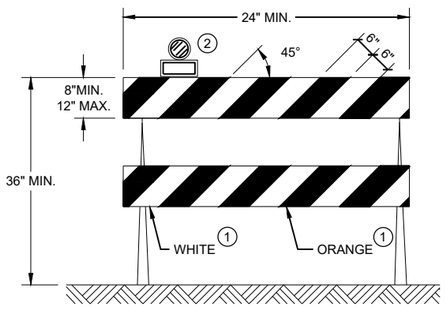
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



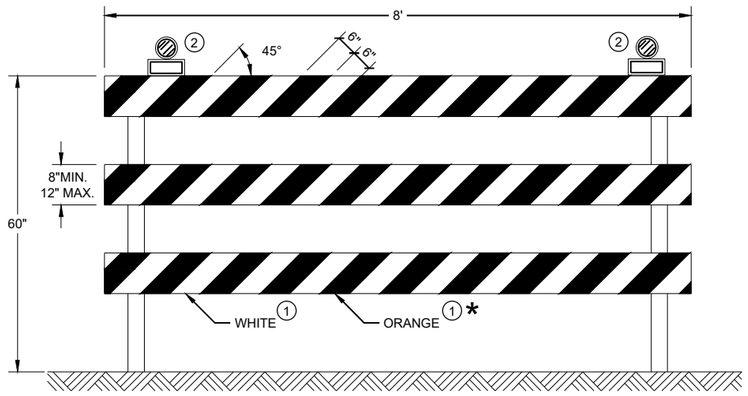
VERTICAL PANEL

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

6

SDD15C11 - 09b

6

SDD15C11 - 09b

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

ROAD CLOSURE OR BRIDGE/CULVERT REPLACEMENT

BUFFER SPACE (SEE TABLE)

WORK AREA

BUFFER SPACE (SEE TABLE)

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"

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

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.

BEGIN TEMPORARY PAVEMENT MARKING, 4-INCH WHITE EDGELINE

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

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

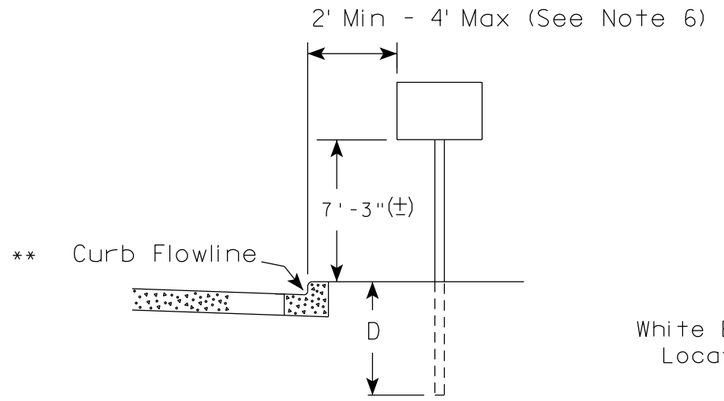
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZONE SAFETY ENGINEER

FHWA

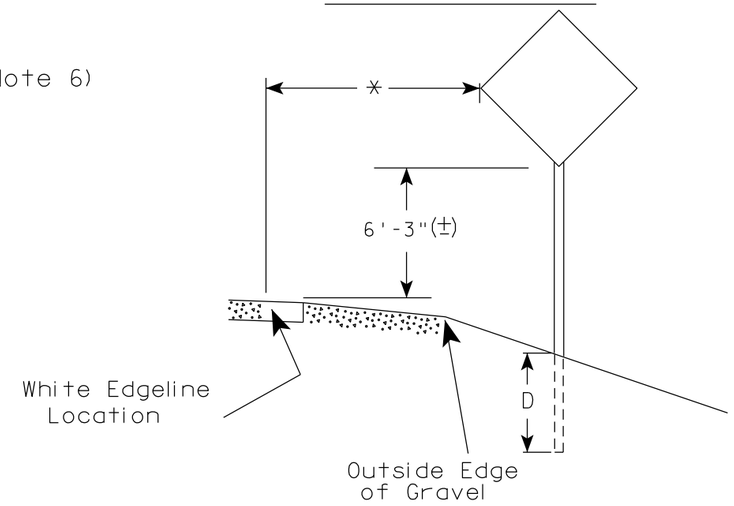
6

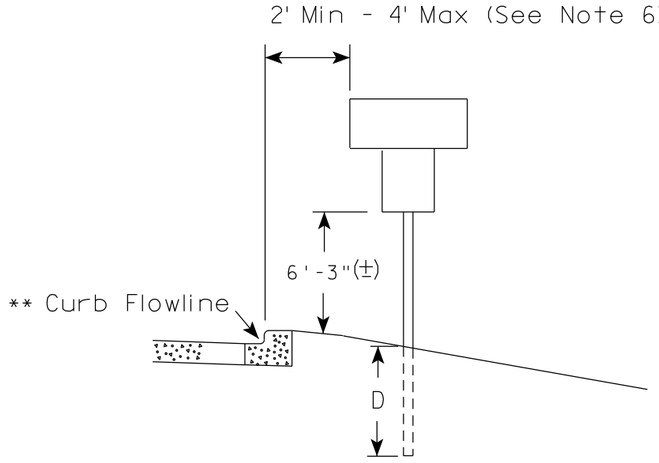
S.D.D. 15 D 31-3

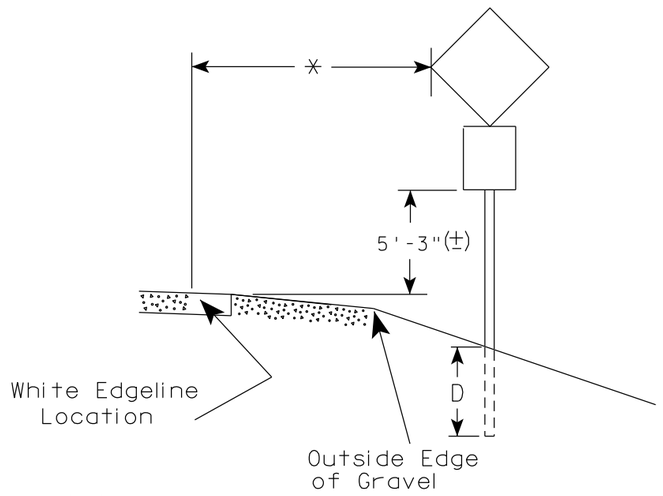
URBAN AREA



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.

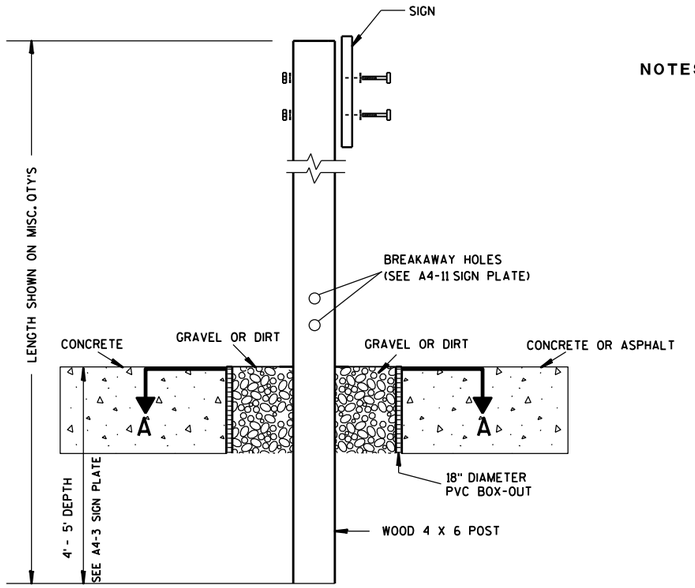
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

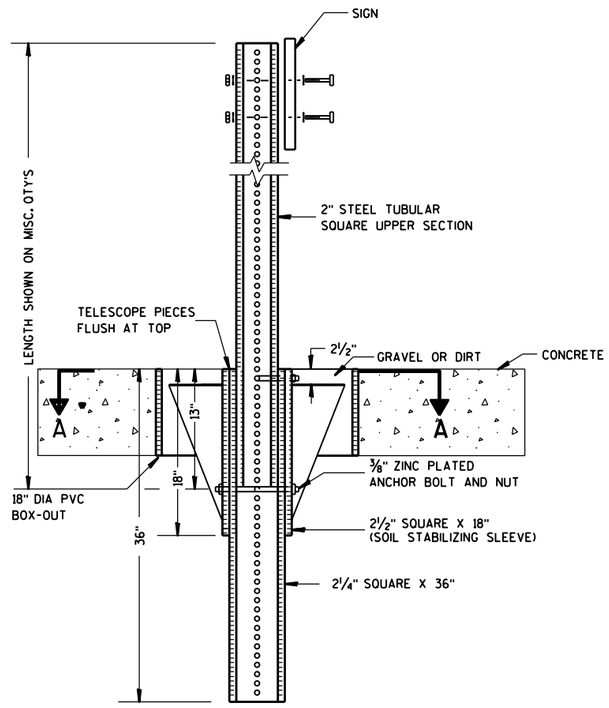
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 25	E



ELEVATION VIEW

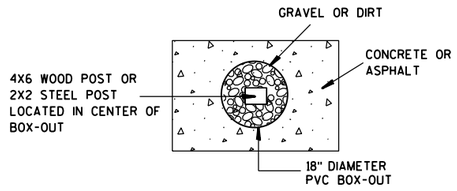
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

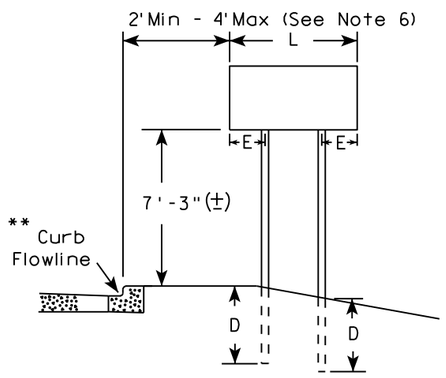
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

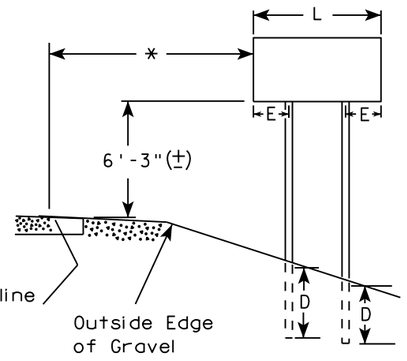
DATE 1/27/14 PLATE NO. A4-3B.1

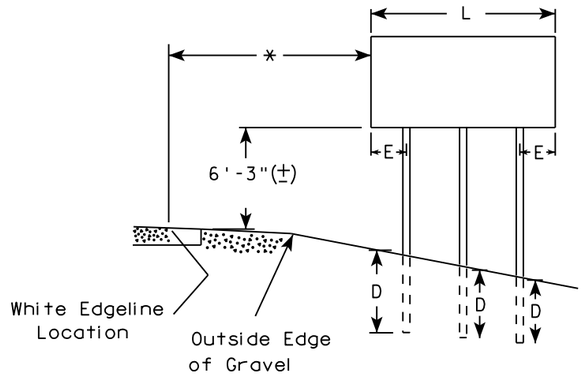
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

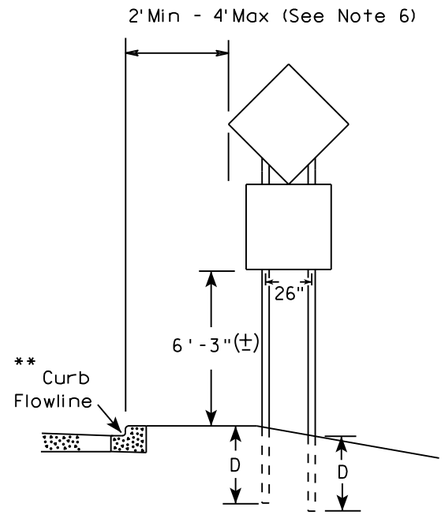
URBAN AREA



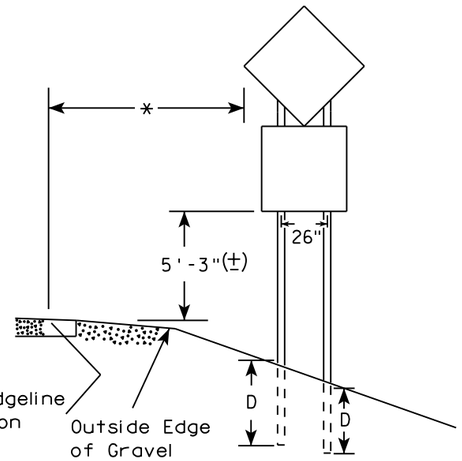
RURAL AREA (See Note 3)







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'

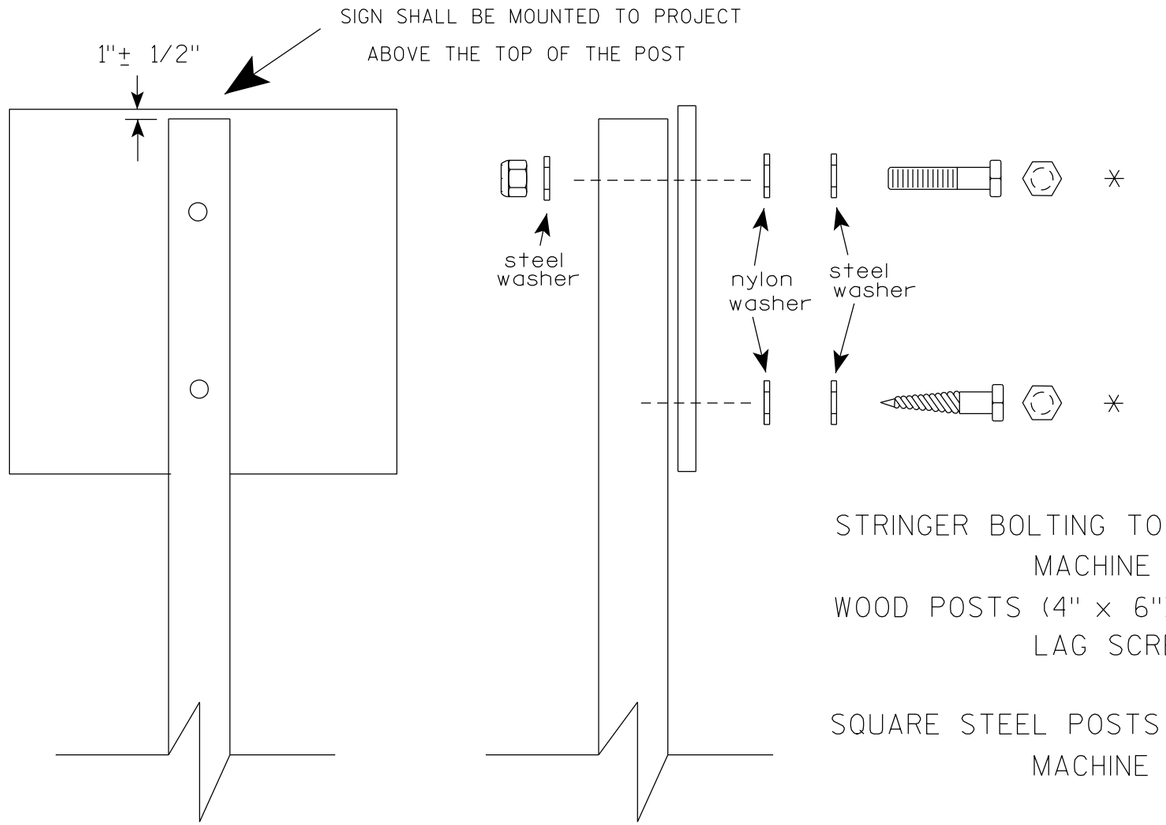
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

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: 27	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

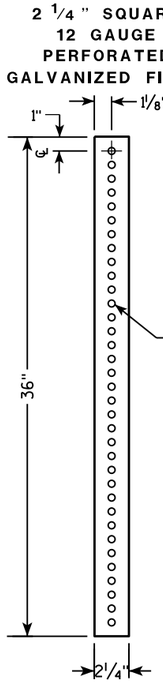
DATE 4/1/2020 PLATE NO. A4-8.9

PROJECT NO:

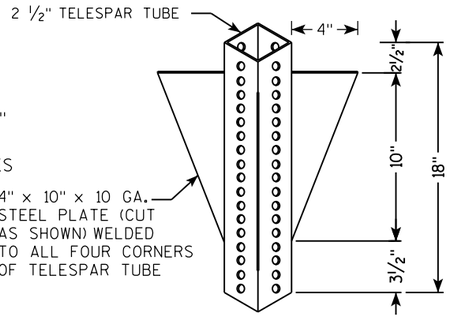
SHEET NO: 28 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

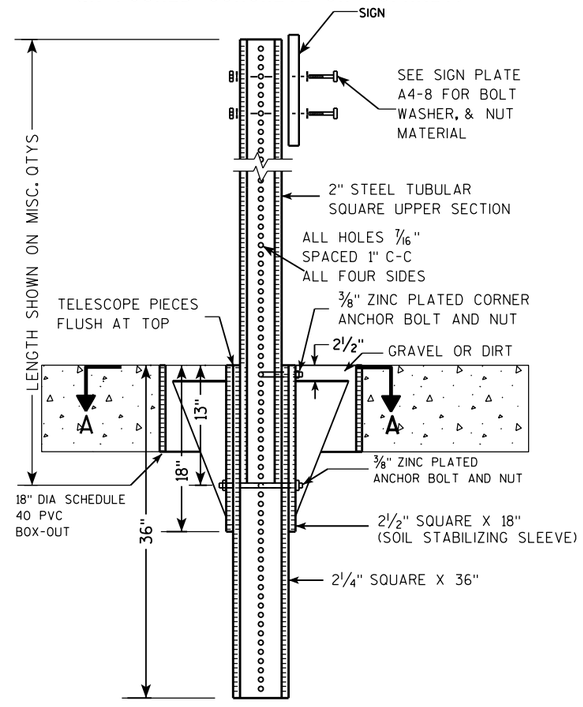
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



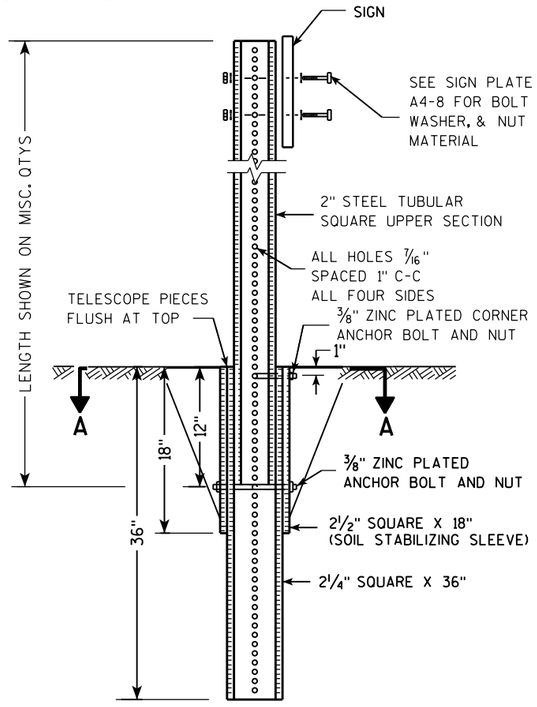
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

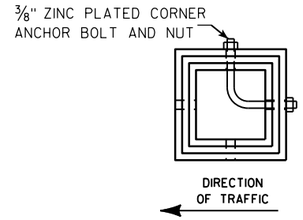


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

TUBULAR STEEL
SIGN POST
A4-9

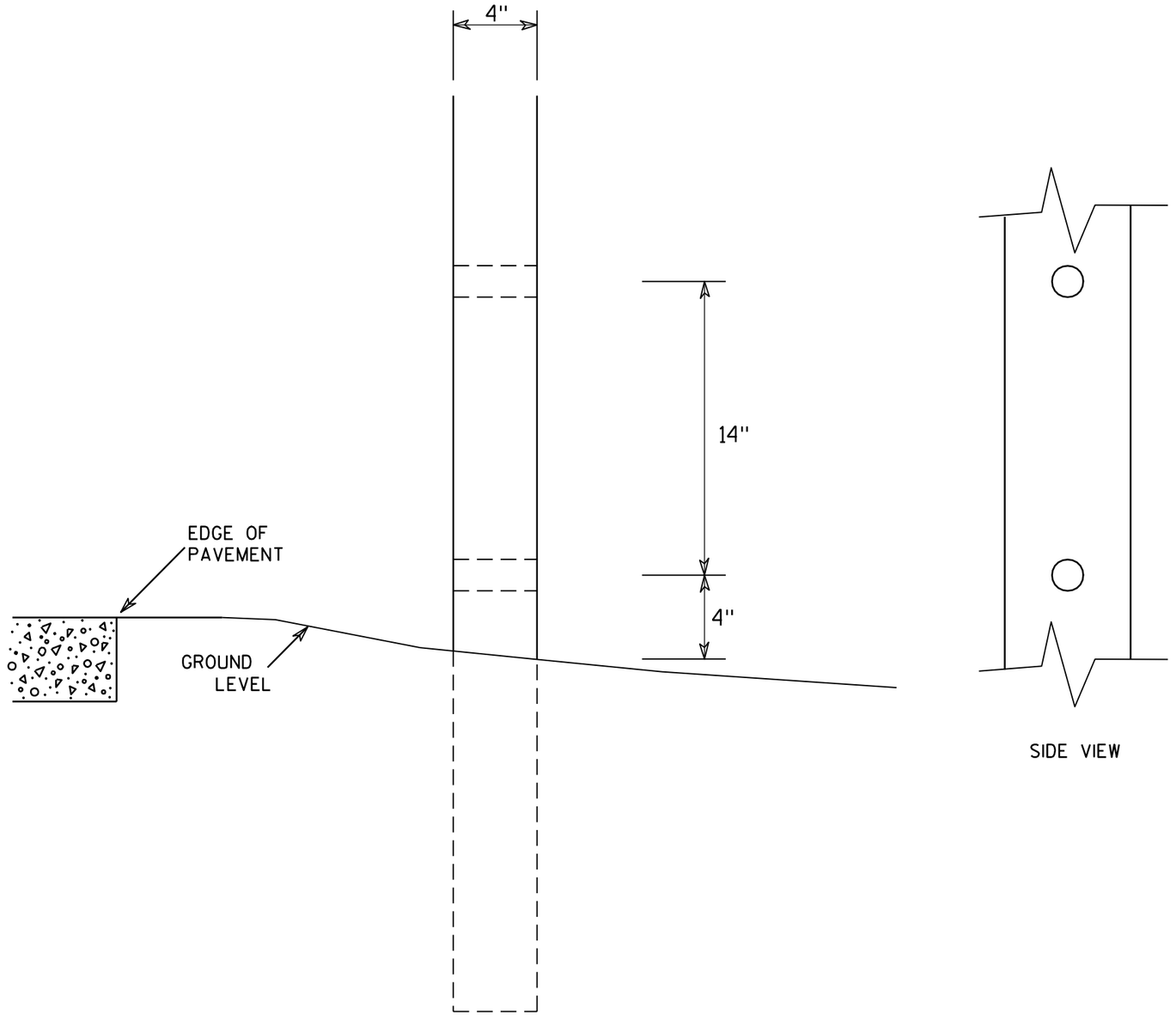
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000
WISDOT/CADDS SHEET 42



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.

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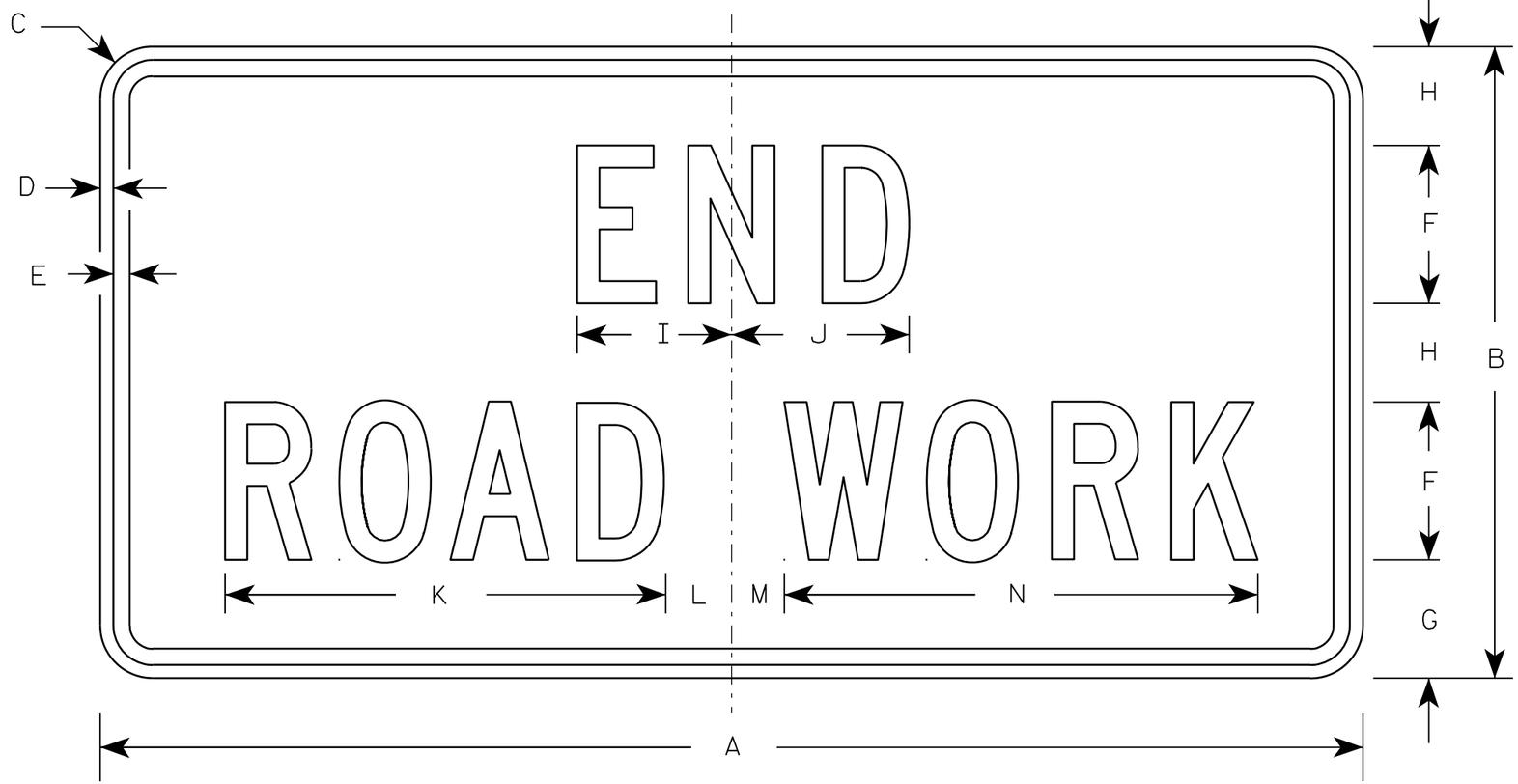
4 X 6 WOOD POST MODIFICATIONS

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: 30	E



G20-2A

NOTES

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

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

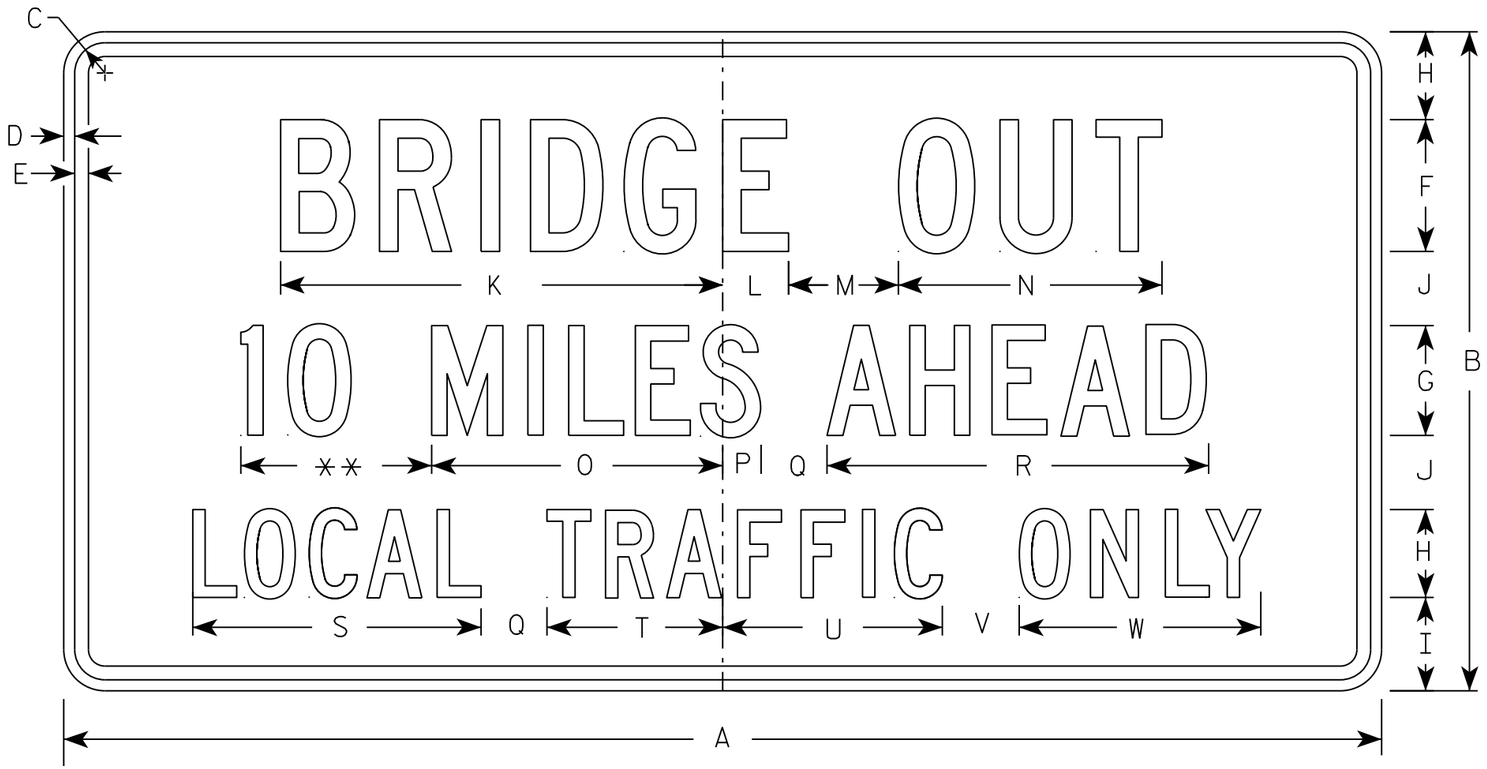
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

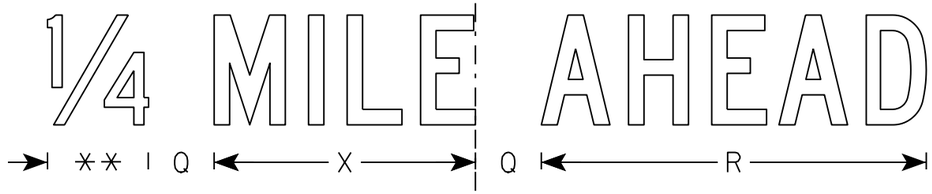
DATE 9/30/09 PLATE NO. G20-2A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 31	E



R11-3B

** See Note 5



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 3/8	1/2	5/8	4	3	2 1/2	2	2	13 1/4	2 1/4	3	8	8	1 1/2	2	10 3/4	8 3/8	4 3/4	6 1/2	2	6 3/4	7 1/8			4.5
2S	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
3																											
4																											
5																											

STANDARD SIGN
R11-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/17 PLATE NO. R11-3B.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 32 | E

7

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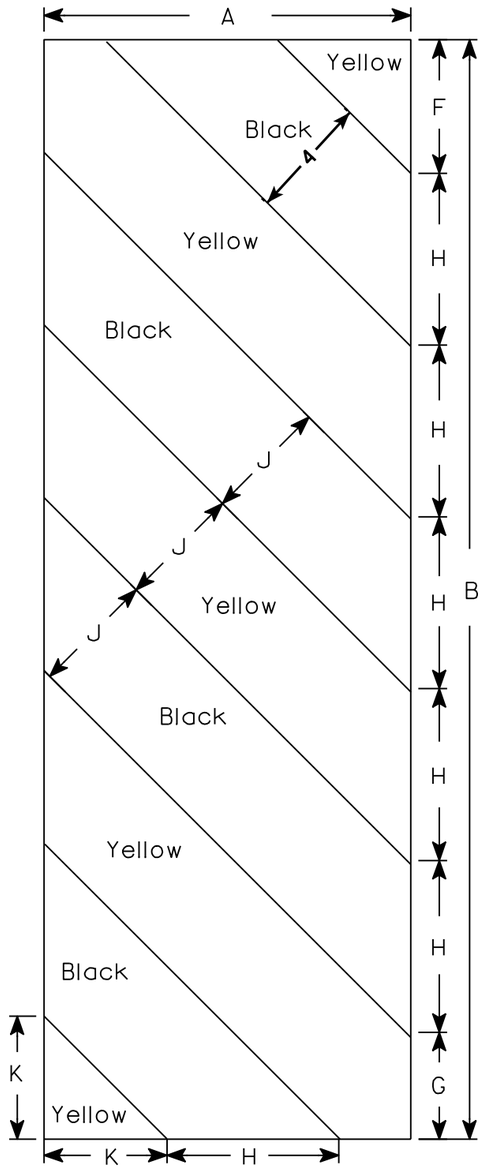
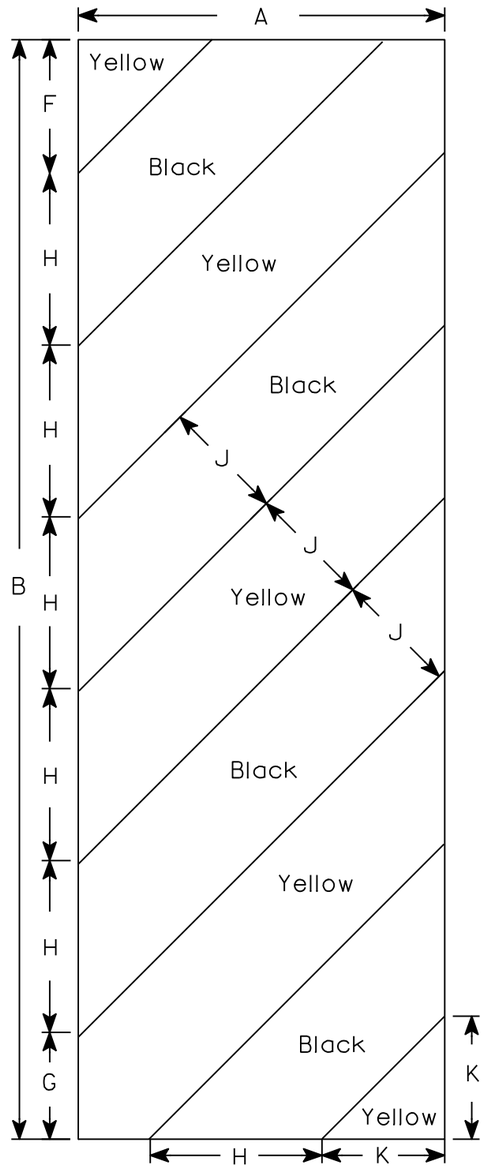


W5-52L



W5-52R

NOTES

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

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

STANDARD SIGN

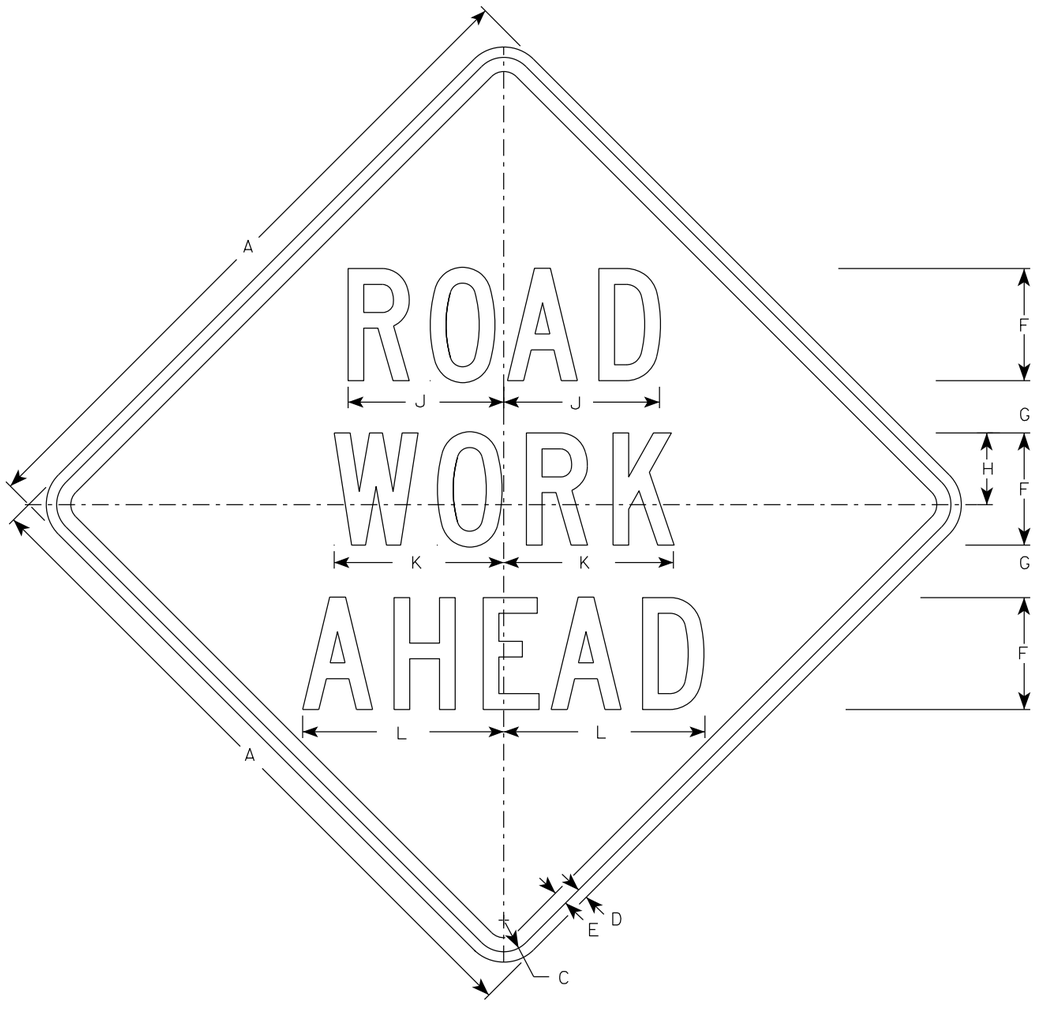
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

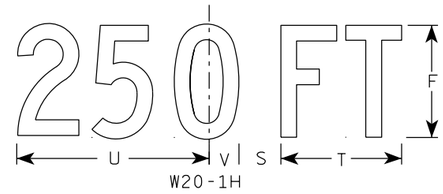
APPROVED Matthew R Rauch
for State Traffic Engineer

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

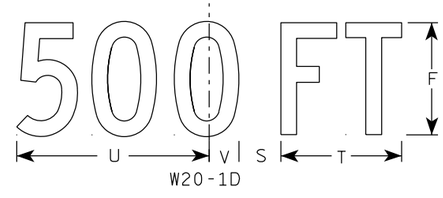
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 33	E



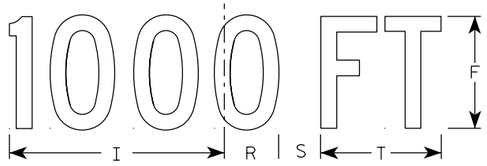
W20-1A



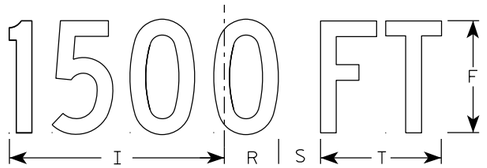
W20-1H



W20-1D



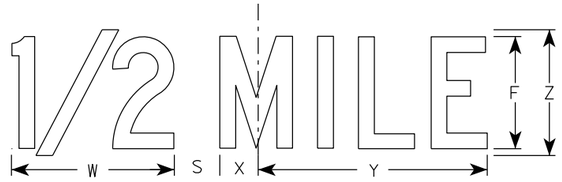
W20-1C



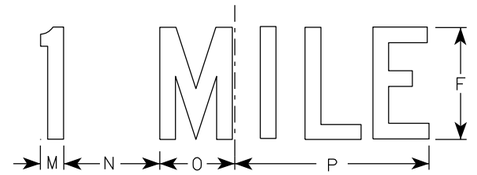
W20-1B

NOTES

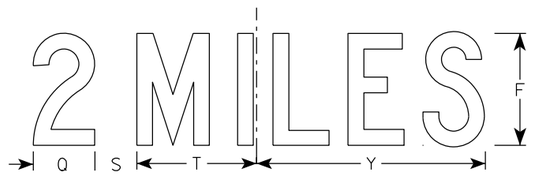
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1G



W20-1F



W20-1E

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	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, E, F, G & H

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 3/25/2020 PLATE NO. W20-1.11

PROJECT NO:

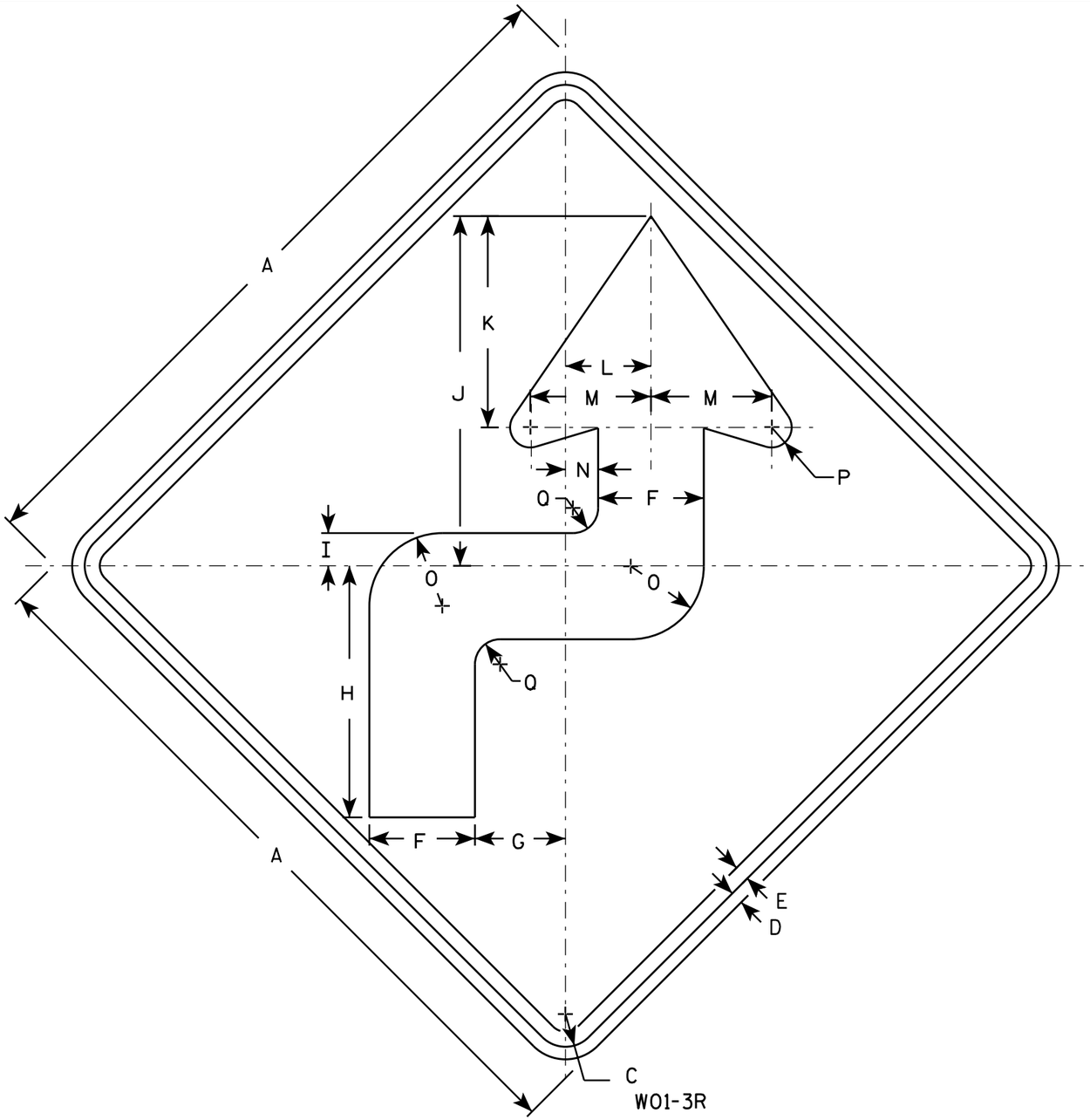
SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 25-MARCH-2020 PLOT BY : dotc4c

WISDOT/CADDS SHEET 42

7

7



NOTES

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

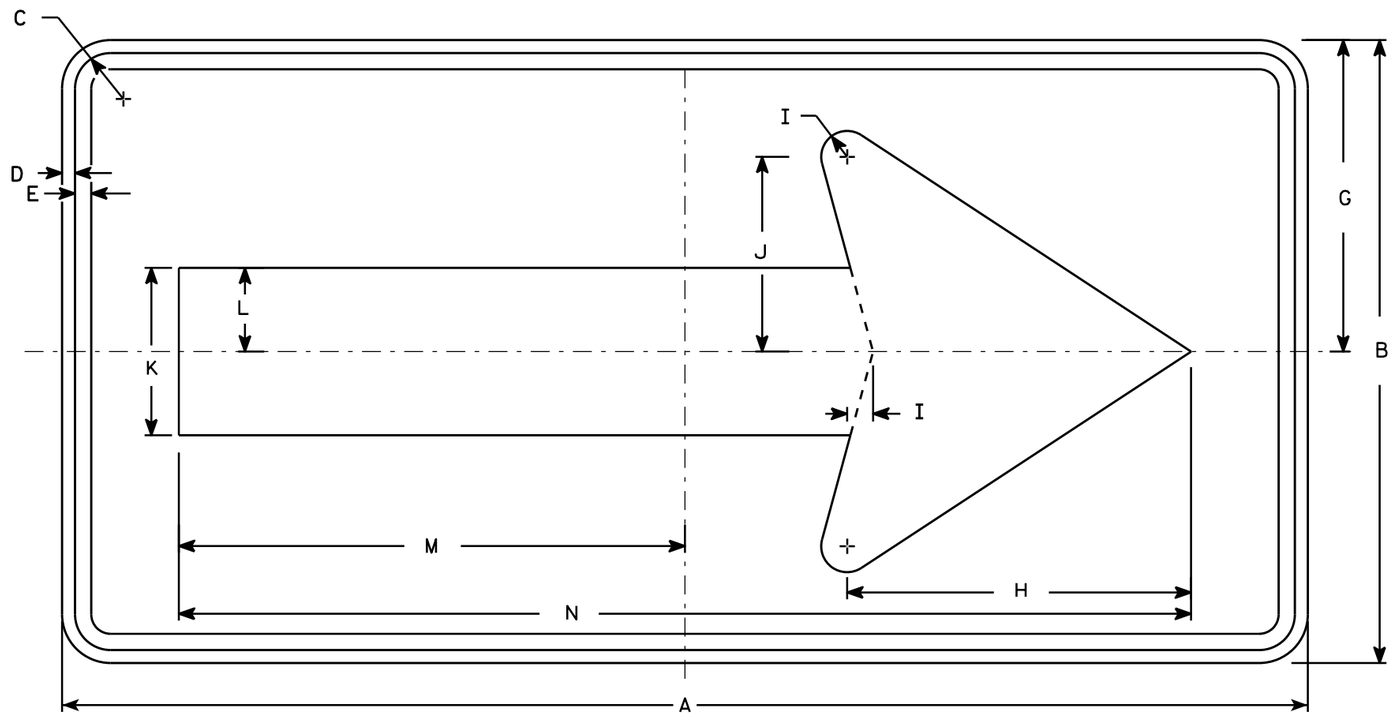
WISCONSIN DEPT OF TRANSPORTATION

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
WISDOT/CADDS SHEET 42



WO1-6

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
WO1-6

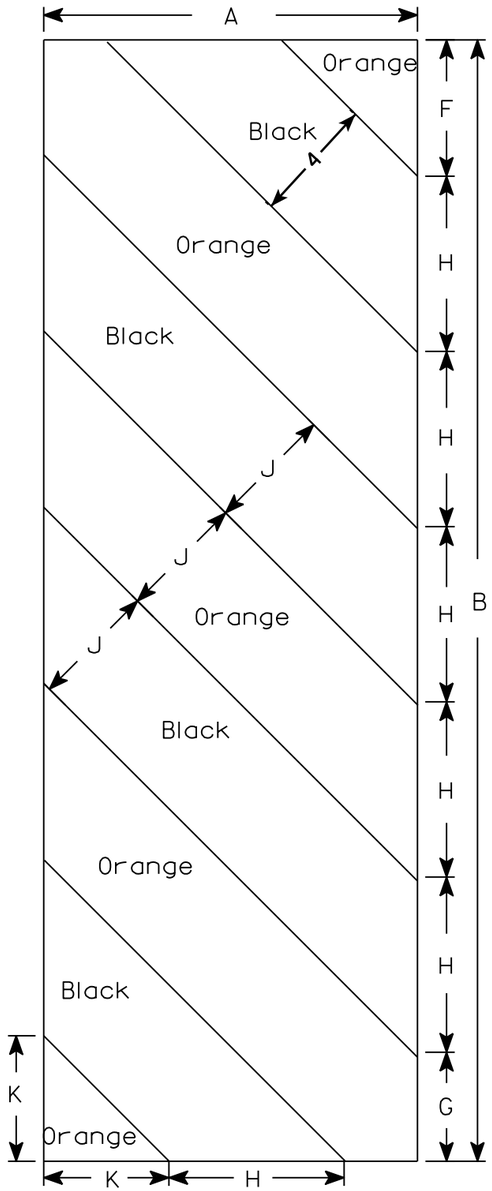
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

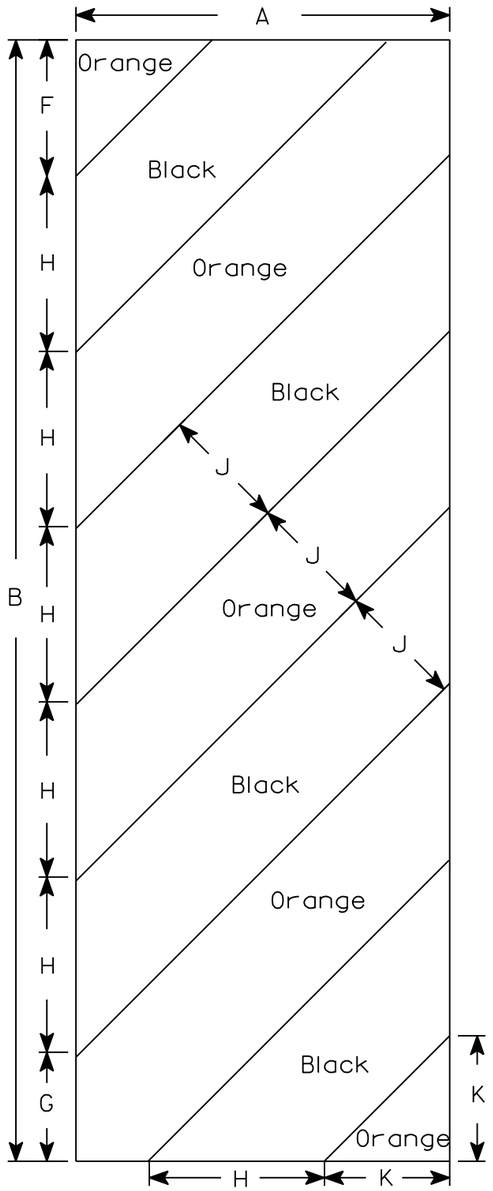
DATE 11/18/13 PLATE NO WO1-6.1

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\WO16.DGN PLOT DATE : 28-FEB-2014 11:37 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.837526:1.000000 WISDOT/CADDS SHEET 42



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

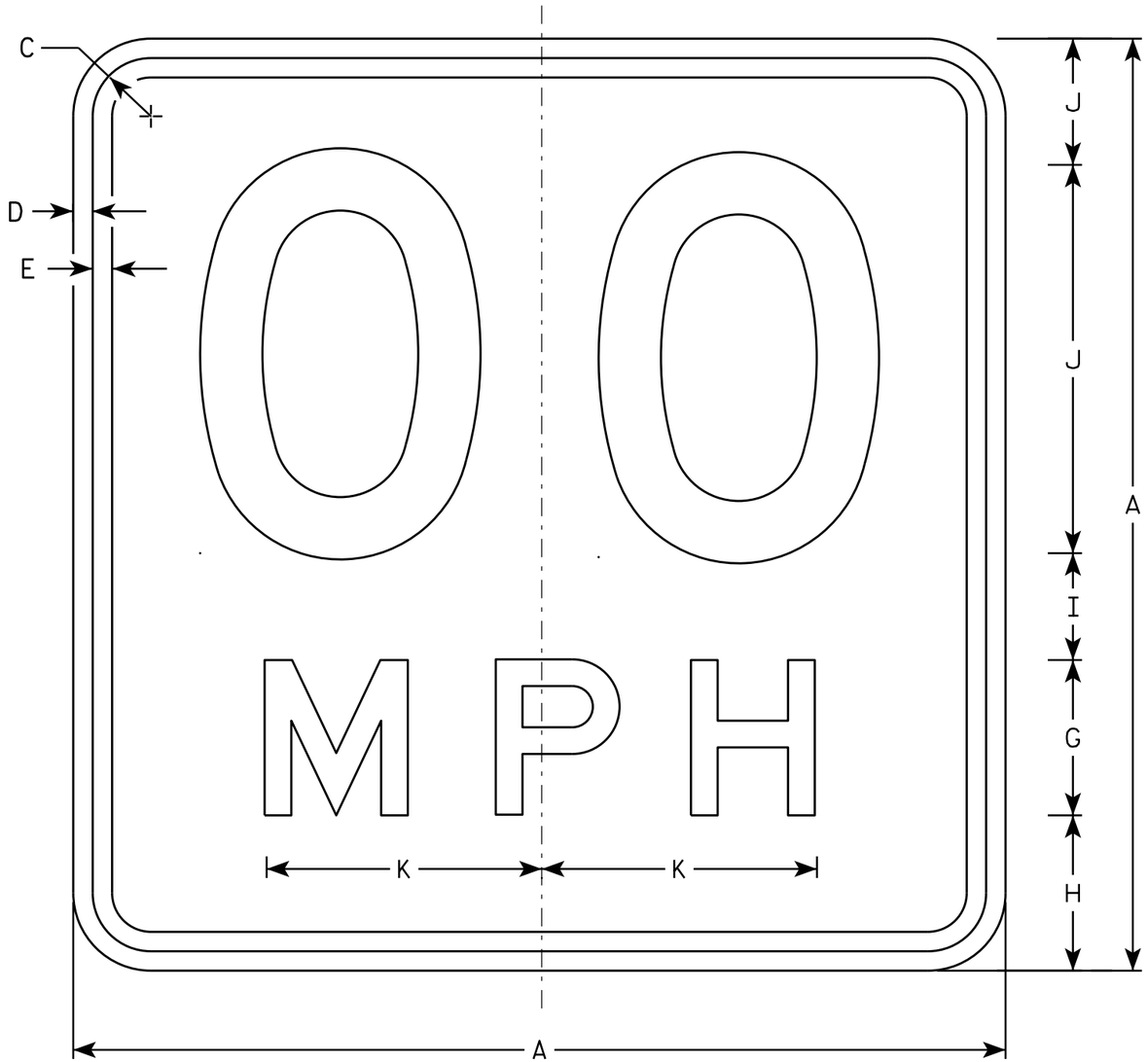
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE W05-52.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W0552.DGN PLOT DATE : 28-FEB-2014 11:39 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 4.864607:1.000000 WISDOT/CADDS SHEET 42



W013-1

NOTES

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

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

STANDARD SIGN
W013-1

WISCONSIN DEPT OF TRANSPORTATION

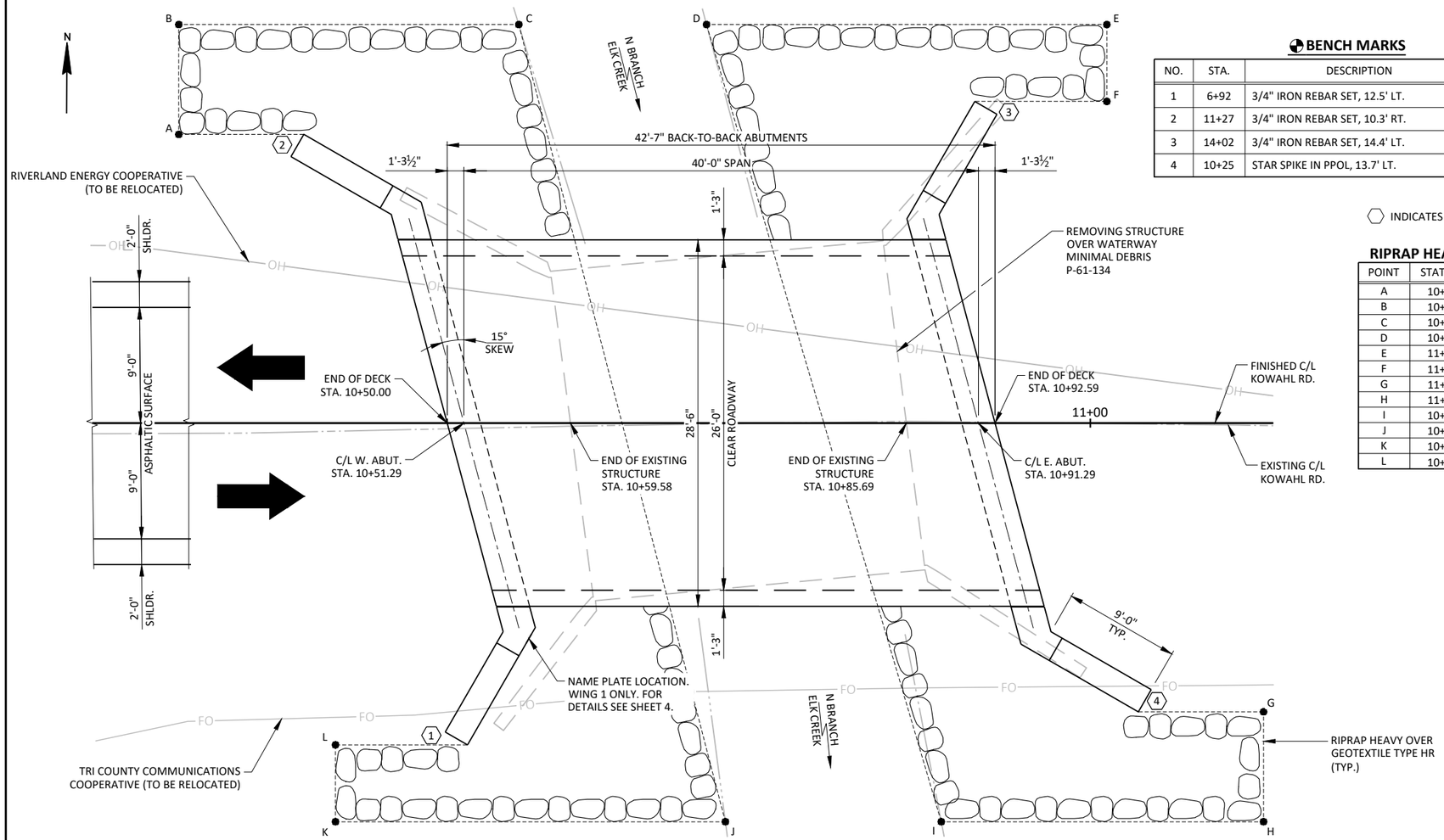
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/21/13 PLATE 38 W013-1.1

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

STATE PROJECT NUMBER

7283-00-70



PLAN B-61-243

(SINGLE-SPAN REINFORCED CONCRETE FLAT SLAB)

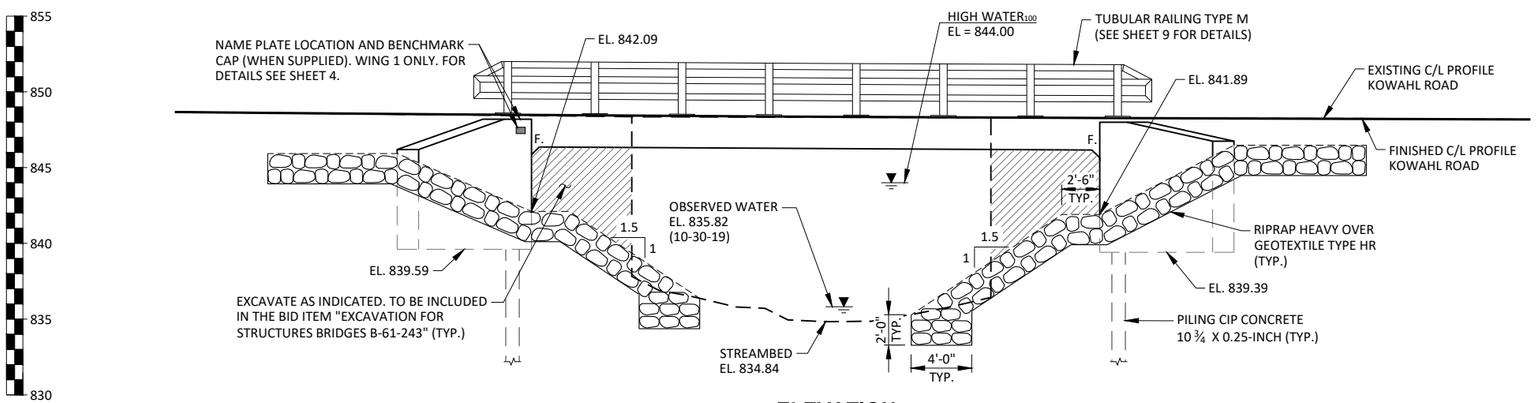
BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	6+92	3/4" IRON REBAR SET, 12.5' LT.	854.31
2	11+27	3/4" IRON REBAR SET, 10.3' RT.	847.67
3	14+02	3/4" IRON REBAR SET, 14.4' LT.	851.75
4	10+25	STAR SPIKE IN PPOL, 13.7' LT.	847.82

⬡ INDICATES WING NUMBER

RIPRAP HEAVY LAYOUT

POINT	STATION	OFFSET
A	10+29	23' LT.
B	10+29	31' LT.
C	10+56	31' LT.
D	10+70	31' LT.
E	11+01	31' LT.
F	11+01	25' LT.
G	11+13	23' RT
H	11+13	31' RT.
I	10+88	31' RT.
J	10+72	31' RT.
K	10+41	31' RT.
L	10+41	25' RT.



ELEVATION

(NORMAL TO NORTH BRANCH ELK CREEK)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING — HL-93
INVENTORY RATING FACTOR — RF=1.12
OPERATING RATING FACTOR — RF=1.46
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) — 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 P.S.F.

MATERIAL PROPERTIES:

CONCRETE MASONRY, SUPERSTRUCTURE — 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.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON PILING CIP CONCRETE 10 ¾ X 0.25-INCH DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 130 TONS** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 55 FT PILE LENGTHS AT BOTH ABUTMENTS.

**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.

TRAFFIC DATA

A.D.T. (2022) — 11
A.D.T. (2042) — 17
DESIGN SPEED — 40 M.P.H.

HYDRAULIC DATA

100 YEAR FREQUENCY
DRAINAGE AREA — 11.0 SQ. MI.
Q_{100} TOTAL — 1,130 C.F.S.
THROUGH STRUCTURE — 1,130 C.F.S.
OVERTOPPING ROADWAY — N.A.
VELOCITY - THROUGH STRUCTURE — 5.9 F.P.S.
WATERWAY AREA - THROUGH STRUCTURE — 191 SQ. FT.
HIGH WATER$_{100}$ ELEVATION — 844.00
SCOUR CRITICAL CODE — 5

EROSION CONTROL
Q_2 — 335 C.F.S.
VELOCITY$_2$ — 4.3 F.P.S.
HIGH WATER$_2$ ELEVATION — 839.98

TEMPORARY STRUCTURE
Q_S — 640 C.F.S.
HIGH WATER$_S$ — 842.03
MIN. WATERWAY AREA — 109 SQ. FT.

LIST OF DRAWINGS

WISCONSIN PROFESSIONAL ENGINEER
DANIEL J. TRACY
E-47578-6
MUSCODA, WI
9/1/2021

DESIGN CONSULTANT
DAN TRACY, PE
(608) 588-7484

BRIDGE OFFICE CONTACT
AARON BONK, PE
(608) 266-8489

NO.	DATE	REVISION	BY

JEWELL associates engineers, inc.
Engineers - Architects - Surveyors
560 SUNRISE DRIVE
SPRING GREEN, WI 53588
OFFICE: (608) 588-7484
www.jewellassoc.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED — SDR — 11/15/21
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-61-243

KOWAHL ROAD OVER N BRANCH ELK CREEK

COUNTY: TREMPEALEAU
TOWN/~~CITY/VILLAGE~~: HALE
DESIGN SPEC.: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DJT	DESIGN CK'D.	PTB	DRAWN BY	DJT	PLANS CK'D.	PTB

GENERAL PLAN

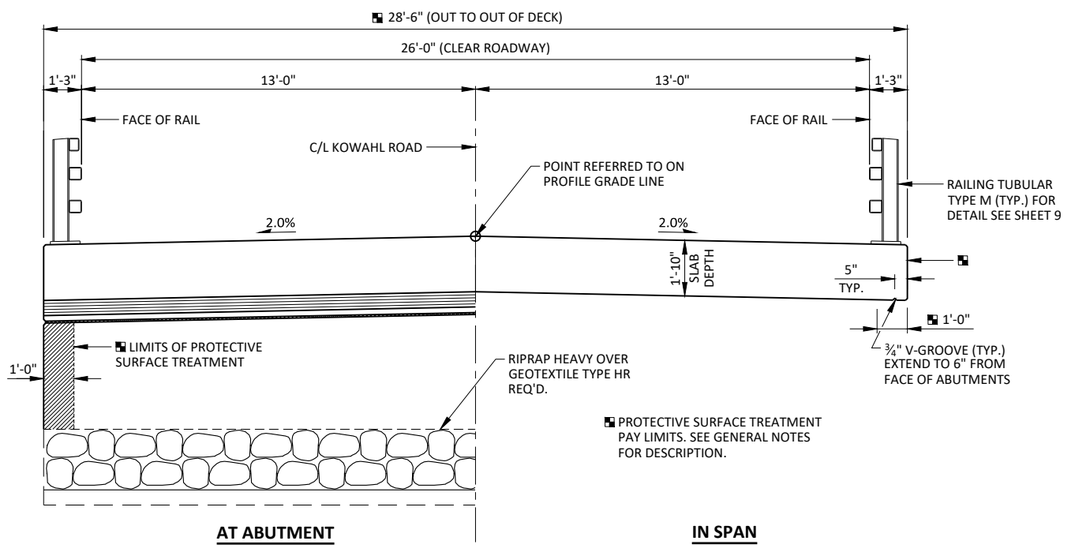
SHEET 1 OF 9
39

8

8

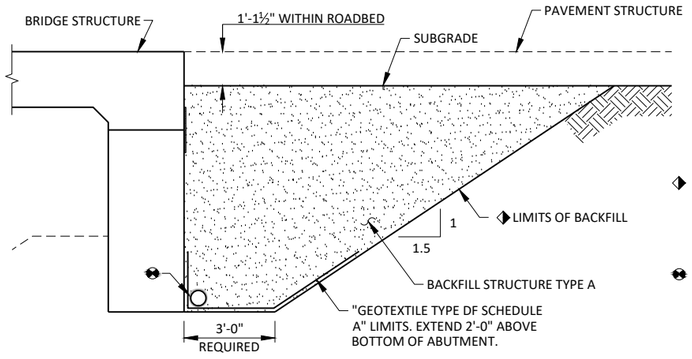
STATE PROJECT NUMBER

7283-00-70



PROPOSED CROSS-SECTION THROUGH ROADWAY

LOOKING EAST

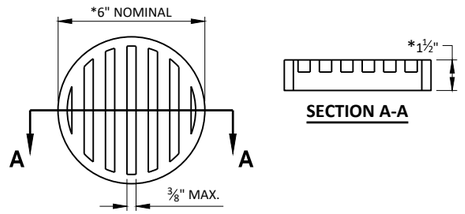


BACKFILL STRUCTURE DETAIL

(TYPICAL AT ABUTMENTS. ABUTMENT BODY SHOWN - WING WALLS SIMILAR)

◆ BACKFILL STRUCTURE TYPE A PAY LIMITS. BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO THE BID ITEM "EXCAVATION FOR STRUCTURES B-61-243". LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

◆ PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPED 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON THIS SHEET. RODENT SCREEN TO BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH."



RODENT SCREEN

SECTION A-A

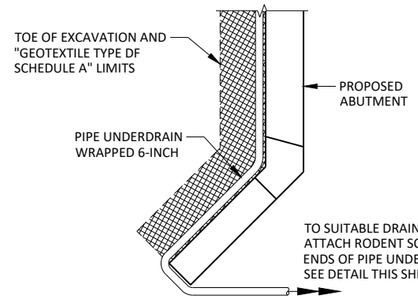
NOTES:

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

ORIENT SHIELD SO SLOTS ARE VERTICAL.

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

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



PIPE UNDERDRAIN DETAIL

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE NORTH AMERICA VERTICAL DATUM OF 1988 (NAVD 88).

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

JOINT FILLER SHALL CONFORM TO A.A.S.H.T.O. DESIGNATION MI53, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M213.

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

AT THE BACK FACE OF ABUTMENTS, ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A. SEE THIS SHEET FOR DETAIL.

ANY EXCAVATION BELOW THE ABUTMENT AND ASSOCIATED ABUTMENT BEDDING MATERIALS REQUIRE THE APPROVAL OF THE ENGINEER IN THE FIELD.

AT THE DECK, APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP OF THE DECK (CONCRETE MATERIAL ONLY), THE SIDES OF THE DECK, AND THE EXTERIOR 12" OF THE UNDERSIDE OF THE DECK. AT THE ABUTMENTS, APPLY TO THE TOP AND EXTERIOR EXPOSED FACES OF WINGS AND THE FRONT FACE OF ABUTMENTS TO 12" PAST THE EDGE OF SLAB. SEE THIS SHEET FOR DETAIL.

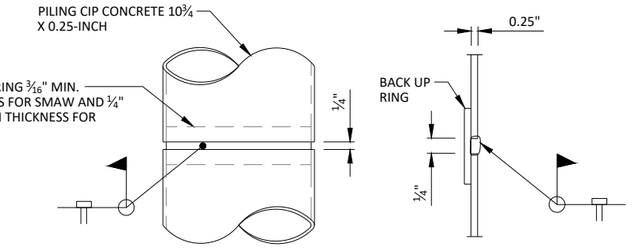
THE EXISTING STRUCTURE (P-61-134) IS A TIMBER FLAT SLAB STRUCTURE SUPPORTED ON TIMBER ABUTMENTS AND PILING. THE STRUCTURE HAS A ROADWAY WIDTH BETWEEN RAILINGS OF 24.7 FEET AND AN OVERALL LENGTH OF 26.0 FEET AND SHALL BE REMOVED.

ALL STATIONS AND ELEVATIONS SHOWN ARE IN FEET.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.

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

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



CAST-IN-PLACE 'PIPE PILE'

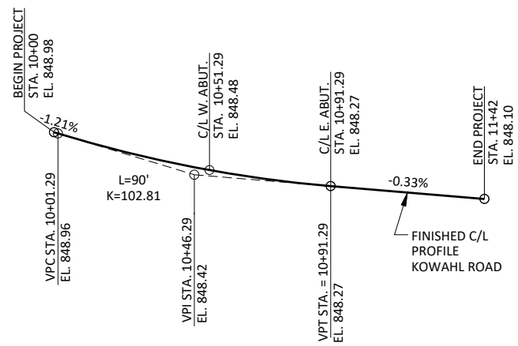
C.I.P. PILE WELD DETAIL

NOTES:

CAST-IN-PLACE PILE SHELL MATERIAL SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	W. ABUT.	SUPER	E. ABUT.	TOTALS
203.0260	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS P-61-134	EACH	--	--	--	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-61-243	LS	--	--	--	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	200	--	200	400
502.0100	CONCRETE MASONRY BRIDGES	CY	32.1	86.9	32.0	151
502.3200	PROTECTIVE SURFACE TREATMENT	SY	20	160	20	200
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2,250	--	2,250	4500
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,450	15,050	1,450	17,950
513.4061	RAILING TUBULAR TYPE M	LF	--	90	--	90
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	6	--	6	12
526.0100	TEMPORARY STRUCTURE STA. 22+35	LS	--	--	--	1
550.2104	PILING CIP CONCRETE 10 ¾ X 0.25-INCH	LF	385	--	385	770
606.0300	RIPRAP HEAVY	CY	95	--	95	190
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	75	--	75	150
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	50	--	50	100
645.0120	GEOTEXTILE TYPE HR	SY	165	--	165	330
	NON-BID ITEMS					
	FILLER	SIZE				½" & ¾"
	NAME PLATE					



PROFILE GRADE LINE

KOWAHL ROAD

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-61-243

DRAWN BY DJT | PLANS CK'D. PTB

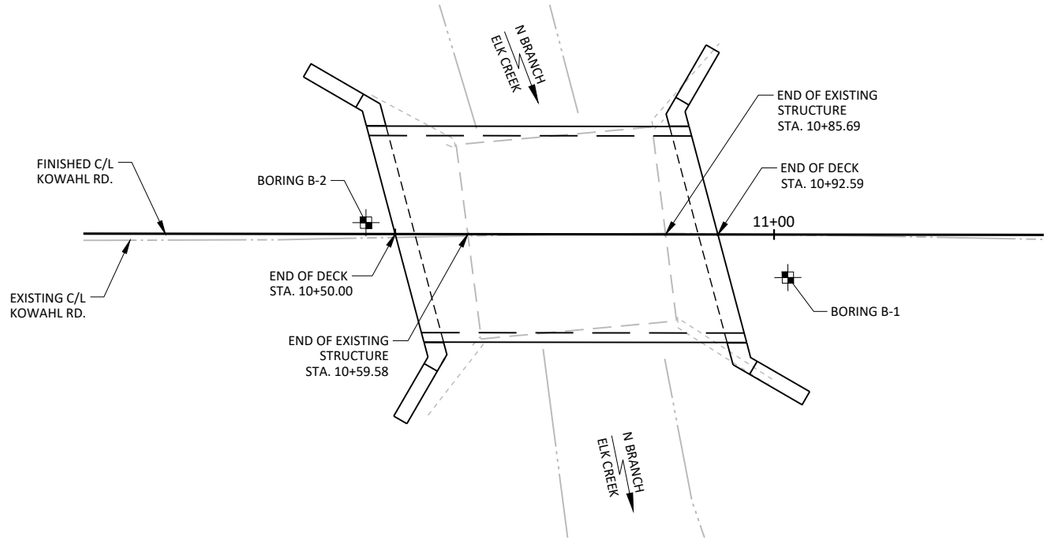
CROSS SECTION AND QUANTITIES

SHEET 2 OF 9

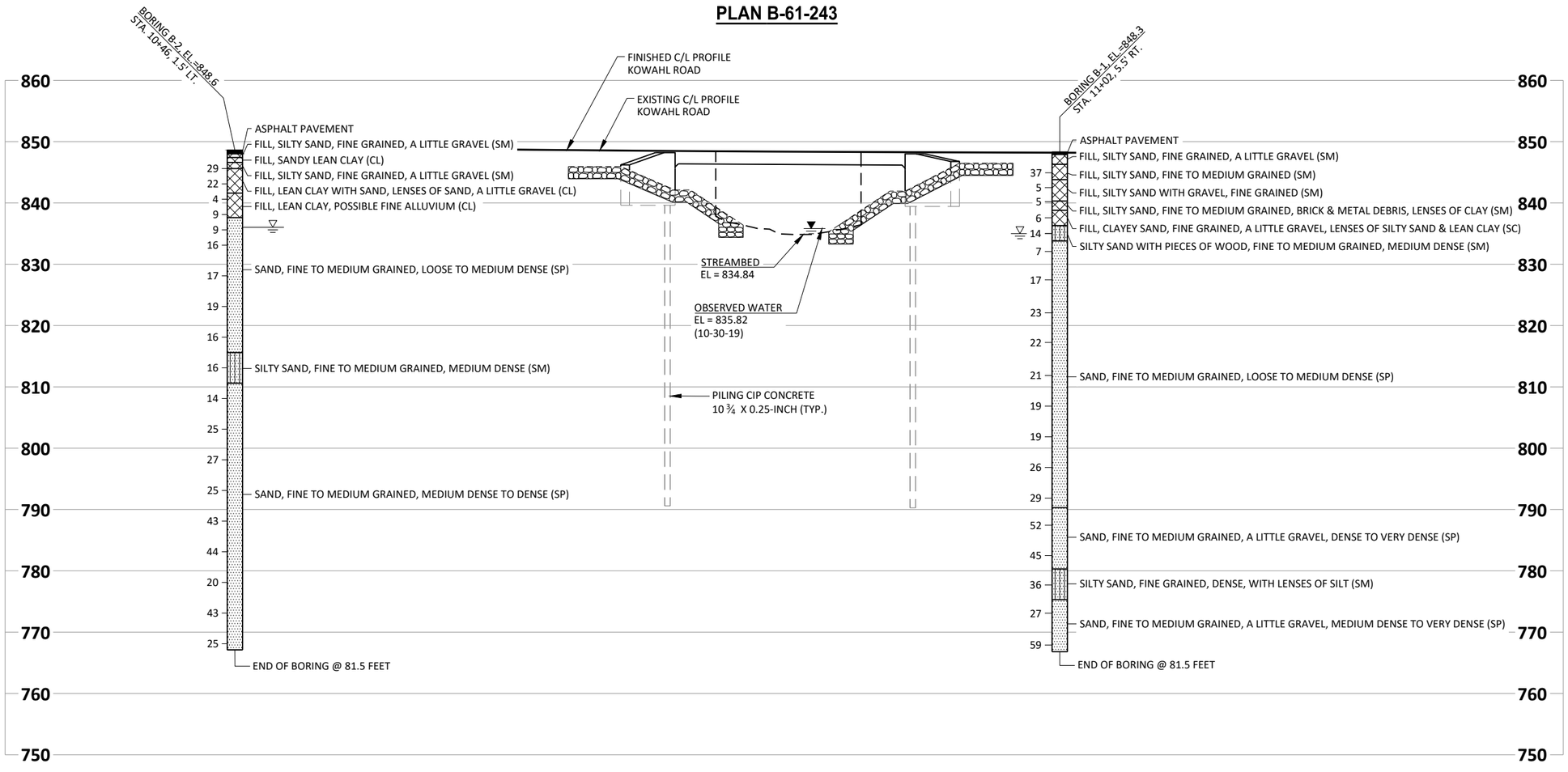
40

8

8



PLAN B-61-243



SOIL BORINGS

BORING NUMBER	DATE COMPLETED	NORTHING (Y)	EASTING (X)
B-1	01/15/20	466,245.6	843,982.1
B-2	01/28/20	466,252.9	843,926.4

BORINGS & REPORT COMPLETED BY: AMERICAN ENGINEERING TESTING, INC.
4203 SCHOFIELD AVENUE, SUITE 1
SCHOFIELD, WI 54476

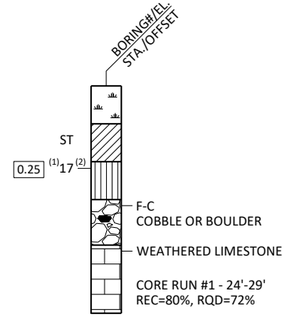
STATE PROJECT NUMBER

7283-00-70

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 ELEVATIONS

AT TIME OF DRILLING
END OF DRILLING
AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COURSE 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-61-243

DRAWN BY DJT | PLANS CK'D. PTB

SUBSURFACE EXPLORATION

SHEET 3 OF 9

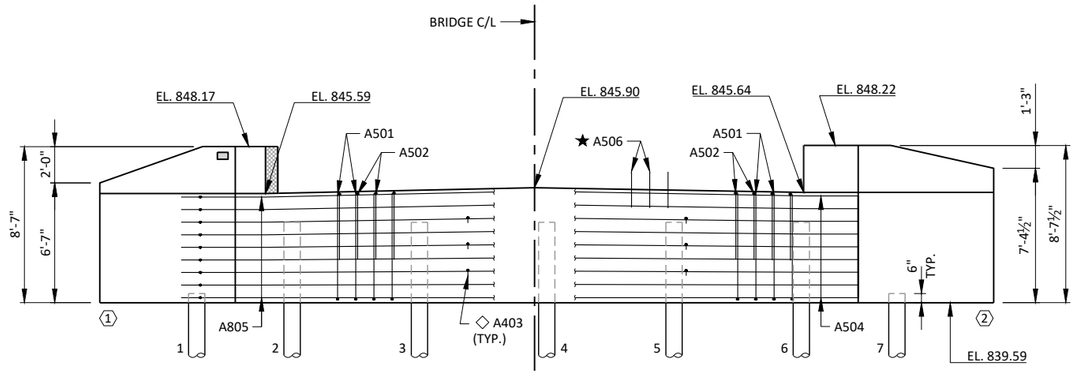
41

8

8

STATE PROJECT NUMBER

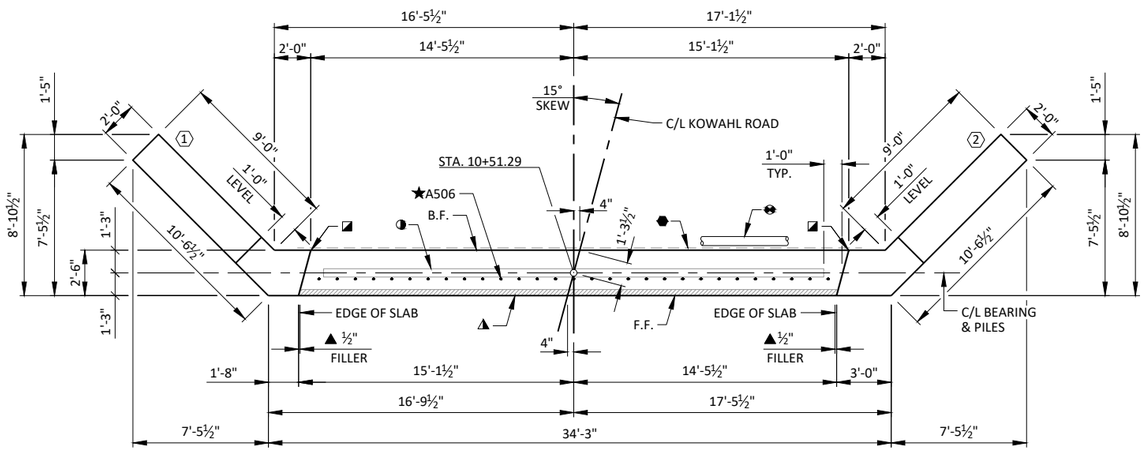
7283-00-70



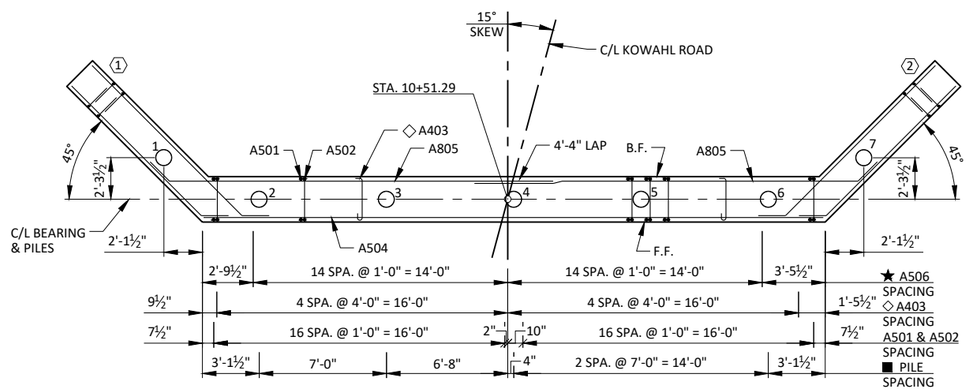
BACK FACE BAR STEEL REINF. **FRONT FACE BAR STEEL REINF.**

ELEVATION

(WEST ABUTMENT LOOKING WEST)

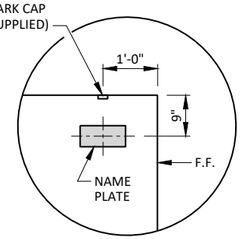


PLAN



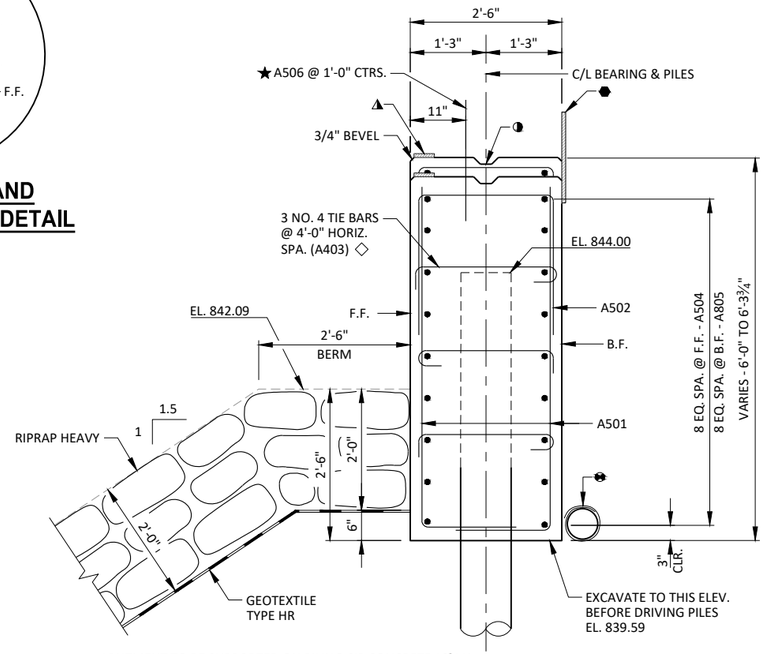
LAYOUT

BENCHMARK CAP (WHEN SUPPLIED)



NAME PLATE AND BENCHMARK CAP DETAIL

(WING 1 ONLY)



ABUTMENT TO BE SUPPORTED ON PILING CIP CONCRETE 10¾ X 0.25-INCH DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 130 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 55 FT. PILE LENGTHS AT WEST ABUTMENT.

TYPICAL SECTION THROUGH ABUTMENT BODY

LEGEND

- KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6.
- VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING EXTEND FROM 9" BELOW BRIDGE SEAT TO 1" BELOW TOP OF WINGS.
- 18" RUBBERIZED MEMBRANE WATERPROOFING. (HORIZONTAL)
- ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINUOS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE)
- ¾" x 4" PREFORMED FILLER, EXTEND FULL LENGTH OF ABUTMENTS BETWEEN EDGES OF SLAB.
- ★ A506 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE IT HAS TAKEN ITS INITIAL SET. EMBED BAR 1'-0".
- ■ PILE SPACING MEASURED AT BASE OF ABUTMENT BODY.
- PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPED 0.5% MIN. TO SUITABLE DRAINAGN. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 2. RODENT SCREEN TO BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH."
- ◇ ALTERNATE THE POSITION OF THE 90° AND THE 180° BENDS AT EACH VERTICAL LAYER OF TIES.

NOTES

SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE SHEET 5 FOR BILL OF BARS.

SEAT ELEVATIONS SHOWN IN THE ELEVATION VIEW ARE TAKEN AT THE C/L OF BEARING NEGLECTING THE KEYED CONSTRUCTION JOINT.

DO NOT PLACE FILL HIGHER THAN 3 FEET FROM BOTTOM OF ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

SPACE REINFORCEMENT TO MISS PILING

F.F. - FRONT FACE

B.F. - BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-61-243

DRAWN BY	DJT	PLANS CK'D.	PTB

WEST ABUTMENT

SHEET 4 OF 9

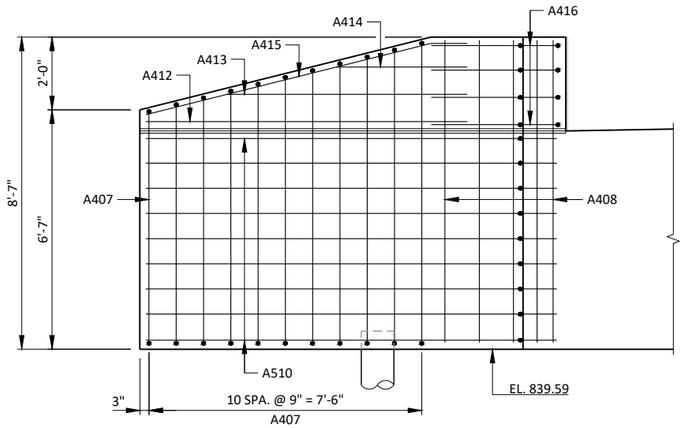
42

8

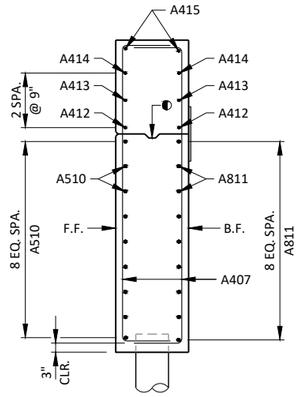
8

STATE PROJECT NUMBER

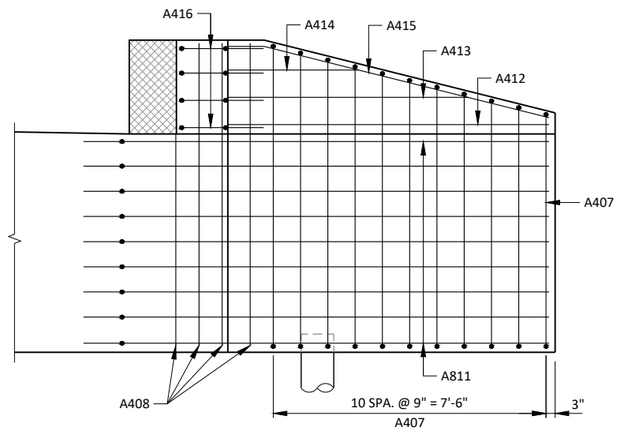
7283-00-70



F.F. ELEVATION - WING 1



SECTION A-A



B.F. ELEVATION - WING 1

BILL OF BARS
WEST ABUTMENT

1,450 LB (COATED)
2,250 LB (UNCOATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	BAR SERIES	LOCATION
A501	68	7-1	X			BODY - VERT. - F.F & B.F.
A502	34	7-7	X			BODY - VERT. - TOP
A403	27	3-0	X			TIE BARS
A504	9	34-1				BODY - HORIZ. - F.F.
A805	18	22-11	X			BODY - HORIZ. - B.F.
A506	29	2-0		X		BODY - VERT. - DOWELS
A407	22	9-8	X	X	*	WING 1 - VERT. - F.F. & B.F.
A408	9	8-2		X		WING 1 - VERT.
A409	2	3-5		X		WING 1 & 2 - VERT. - TOP
A510	18	11-9	X	X		WING 1 & 2 - HORIZ. - F.F.
A811	18	13-5	X	X		WING 1 & 2 - HORIZ. - B.F.
A412	2	8-10		X		WING 1 - HORIZ. - F.F. & B.F. - TOP
A413	2	6-8		X		WING 1 - HORIZ. - F.F. & B.F. - TOP
A414	2	3-8		X		WING 1 - HORIZ. - F.F. & B.F. - TOP
A415	2	9-1	X	X		WING 1 - HORIZ. - F.F. & B.F. - TOP
A416	4	8-9	X	X		WING 1 - HORIZ. - TOP
A417	22	10-1	X	X	*	WING 2 - VERT. - F.F. & B.F.
A418	9	8-3		X		WING 2 - VERT.
A419	2	8-10		X		WING 2 - HORIZ. - F.F. & B.F. - TOP
A420	2	8-10		X		WING 2 - HORIZ. - F.F. & B.F. - TOP
A421	2	5-3		X		WING 2 - HORIZ. - F.F. & B.F. - TOP
A422	2	8-11	X	X		WING 2 - HORIZ. - F.F. & B.F. - TOP
A423	4	10-0	X	X		WING 2 - HORIZ.- TOP

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

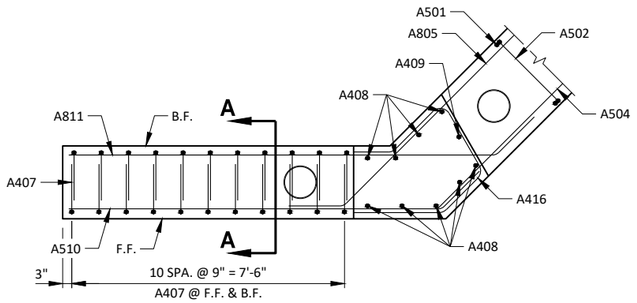
* DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

LENGTH SHOWN IS AN AVERAGE LENGTH ONLY. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
A407	2 SERIES OF 11	10-7 TO 8-9
A417	2 SERIES OF 11	10-8 TO 9-6

BUNDLE AND TAG EACH SERIES SEPARATELY.



PLAN VIEW - WING 1

LEGEND

◐ OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6. ¾" "V" GROOVE AT FRONT FACE OF WING WALL AND HORIZONTAL 18" RUBBERIZED MEMBRANE WATERPROOFING AT BACK FACE IF CONSTRUCTION JOINT IS USED. COST IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY BRIDGES".

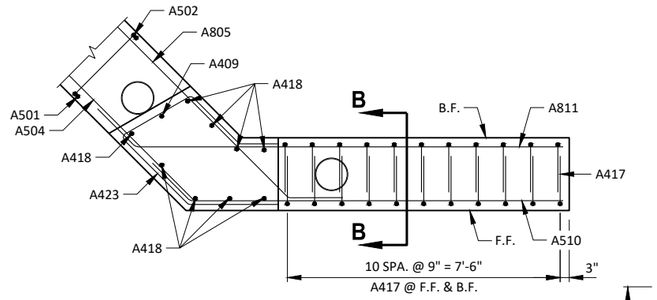
NOTES

SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE THIS SHEET FOR BILL OF BARS.

SPACE REINFORCEMENT TO MISS PILING

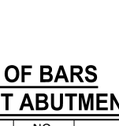
F.F. - FRONT FACE

B.F. - BACK FACE

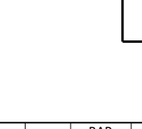


PLAN VIEW - WING 2

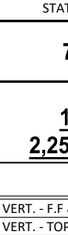
A501



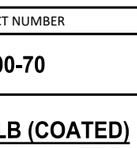
A502



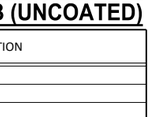
A403



A407 & A417

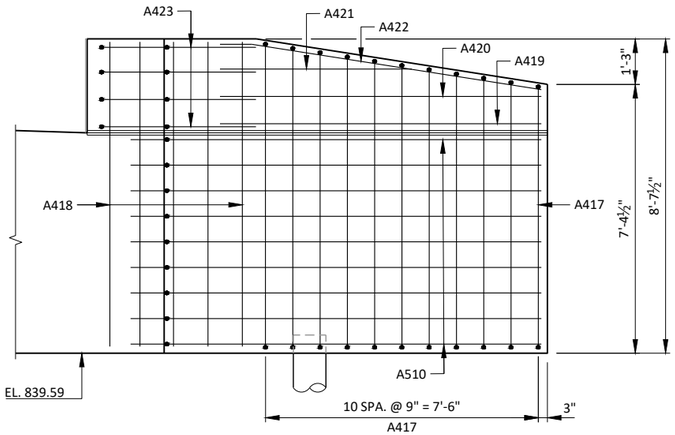


A416

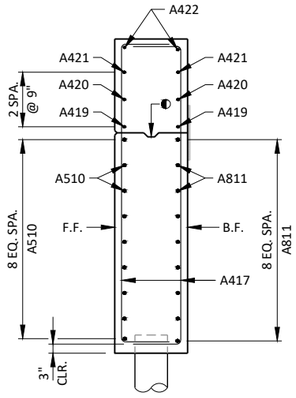


A423

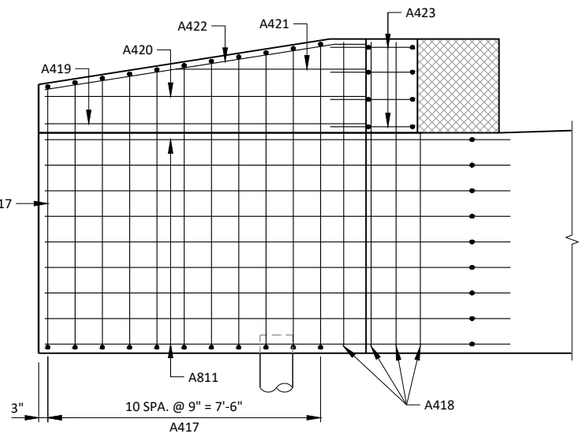
A805, A510 & A811



F.F. ELEVATION - WING 2



SECTION B-B



B.F. ELEVATION - WING 2

A415 & A422

MARK	'A'
A415	165°58'
A422	171°07'

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-61-243

DRAWN BY DJT | PLANS CK'D. PTB

WEST ABUTMENT DETAILS

SHEET 5 OF 9

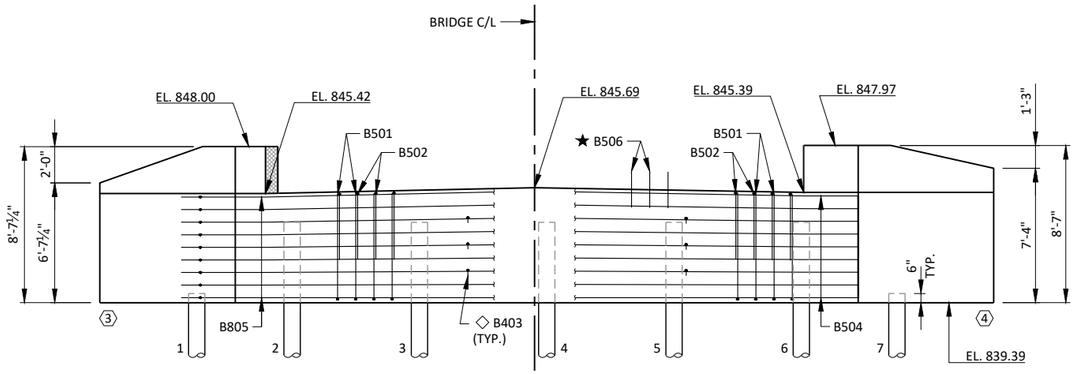
43

8

8

STATE PROJECT NUMBER

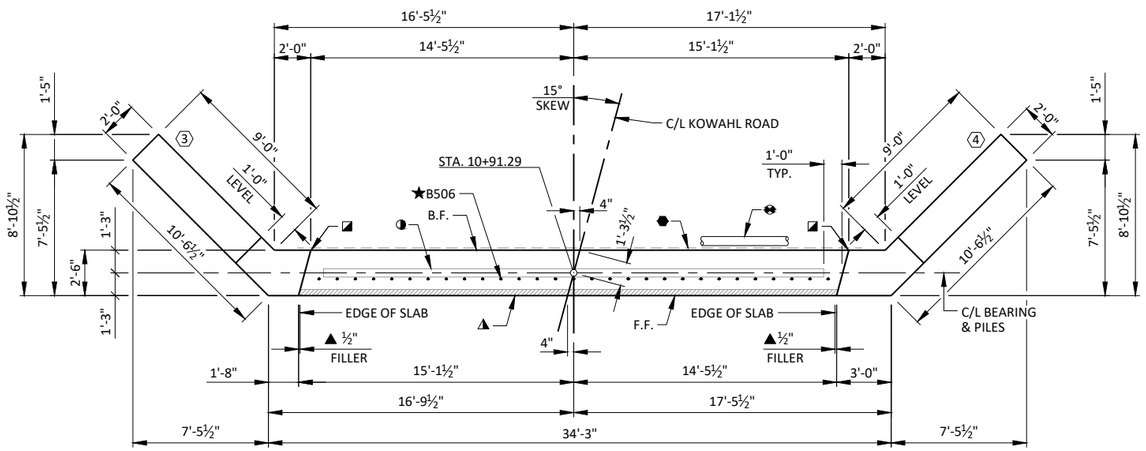
7283-00-70



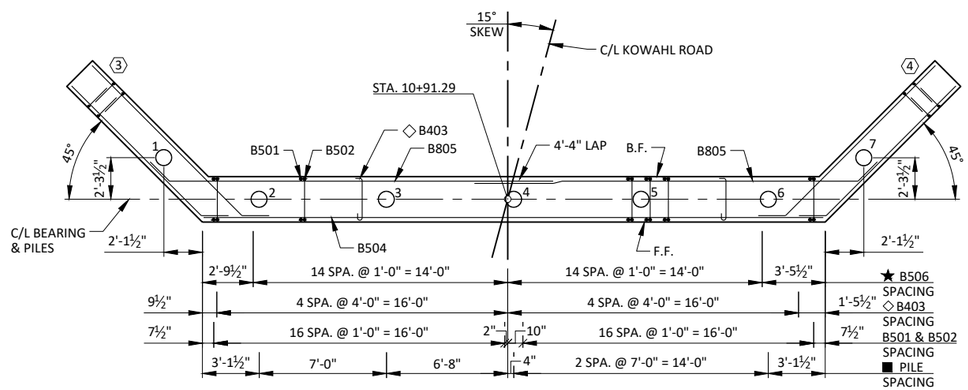
BACK FACE BAR STEEL REINF. **FRONT FACE BAR STEEL REINF.**

ELEVATION

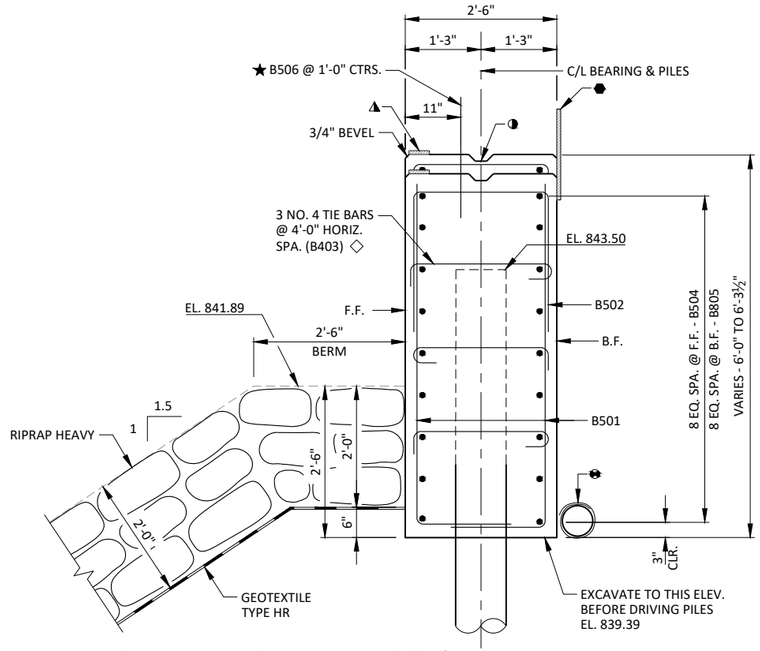
(EAST ABUTMENT LOOKING EAST)



PLAN



LAYOUT



ABUTMENT TO BE SUPPORTED ON PILING CIP CONCRETE 10¾ X 0.25-INCH DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 130 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 55 FT. PILE LENGTHS AT EAST ABUTMENT.

TYPICAL SECTION THROUGH ABUTMENT BODY

LEGEND

- KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6.
- VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING EXTEND FROM 9" BELOW BRIDGE SEAT TO 1" BELOW TOP OF WINGS.
- 18" RUBBERIZED MEMBRANE WATERPROOFING. (HORIZONTAL)
- ▲ ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINUOS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE)
- ◭ ¾" x 4" PREFORMED FILLER, EXTEND FULL LENGTH OF ABUTMENTS BETWEEN EDGES OF SLAB.
- ★ B506 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE IT HAS TAKEN ITS INITIAL SET. EMBED BAR 1'-0".
- ■ PILE SPACING MEASURED AT BASE OF ABUTMENT BODY.
- PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPED 0.5% MIN. TO SUITABLE DRAINAGN. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 2. RODENT SCREEN TO BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH."
- ◇ ALTERNATE THE POSITION OF THE 90° AND THE 180° BENDS AT EACH VERTICAL LAYER OF TIES.

NOTES

SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE SHEET 7 FOR BILL OF BARS.

SEAT ELEVATIONS SHOWN IN THE ELEVATION VIEW ARE TAKEN AT THE C/L OF BEARING NEGLECTING THE KEYED CONSTRUCTION JOINT.

DO NOT PLACE FILL HIGHER THAN 3 FEET FROM BOTTOM OF ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

SPACE REINFORCEMENT TO MISS PILING

F.F. - FRONT FACE

B.F. - BACK FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-61-243

DRAWN BY	DJT	PLANS CK'D.	PTB

EAST ABUTMENT

SHEET 6 OF 9

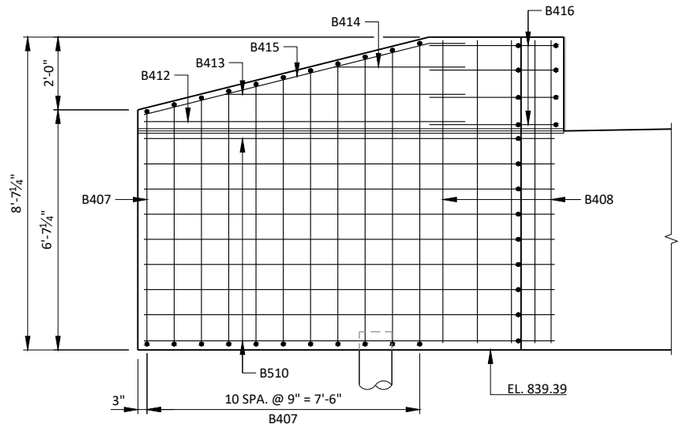
44

8

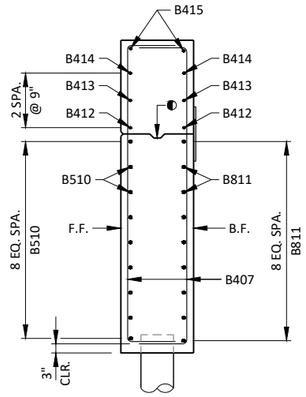
8

STATE PROJECT NUMBER

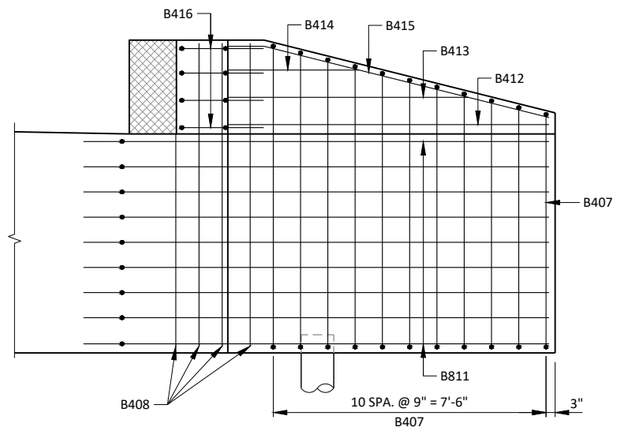
7283-00-70



F.F. ELEVATION - WING 3



SECTION A-A



B.F. ELEVATION - WING 3

BILL OF BARS
EAST ABUTMENT

1,450 LB (COATED)
2,250 LB (UNCOATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	BAR SERIES	LOCATION
B501	68	7-1	X			BODY - VERT. - F.F & B.F.
B502	34	7-7	X			BODY - VERT. - TOP
B403	27	3-0	X			TIE BARS
B504	9	34-1				BODY - HORIZ. - F.F.
B805	18	22-11	X			BODY - HORIZ. - B.F.
B506	29	2-0		X		BODY - VERT. - DOWELS
B407	22	9-8	X	X	*	WING 3 - VERT. - F.F. & B.F.
B408	9	8-2		X		WING 3 - VERT.
B409	2	3-5		X		WING 3 & 4 - VERT. - TOP
B510	18	11-9	X	X		WING 3 & 4 - HORIZ. - F.F.
B811	18	13-5	X	X		WING 3 & 4 - HORIZ. - B.F.
B412	2	8-10		X		WING 3 - HORIZ. - F.F. & B.F. - TOP
B413	2	6-8		X		WING 3 - HORIZ. - F.F. & B.F. - TOP
B414	2	3-8		X		WING 3 - HORIZ. - F.F. & B.F. - TOP
B415	2	9-1	X	X		WING 3 - HORIZ. - F.F. & B.F. - TOP
B416	4	8-9	X	X		WING 3 - HORIZ. - TOP
B417	22	10-1	X	X	*	WING 4 - VERT. - F.F. & B.F.
B418	9	8-2		X		WING 4 - VERT.
B419	2	8-10		X		WING 4 - HORIZ. - F.F. & B.F. - TOP
B420	2	8-10		X		WING 4 - HORIZ. - F.F. & B.F. - TOP
B421	2	5-3		X		WING 4 - HORIZ. - F.F. & B.F. - TOP
B422	2	8-11	X	X		WING 4 - HORIZ. - F.F. & B.F. - TOP
B423	4	10-0	X	X		WING 4 - HORIZ.- TOP

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

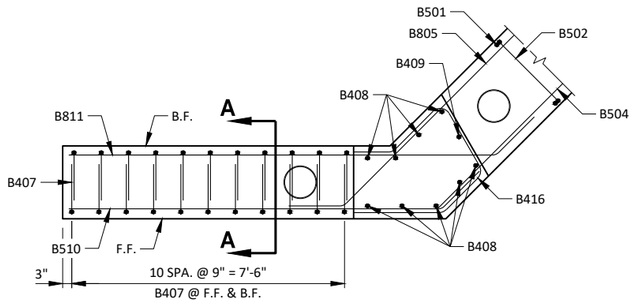
* DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

LENGTH SHOWN IS AN AVERAGE LENGTH ONLY. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
B407	2 SERIES OF 11	10-7 TO 8-9
B417	2 SERIES OF 11	10-7 TO 9-6

BUNDLE AND TAG EACH SERIES SEPARATELY.



PLAN VIEW - WING 3

LEGEND

◐ OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6. ¾" "V" GROOVE AT FRONT FACE OF WING WALL AND HORIZONTAL 18" RUBBERIZED MEMBRANE WATERPROOFING AT BACK FACE IF CONSTRUCTION JOINT IS USED. COST IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY BRIDGES".

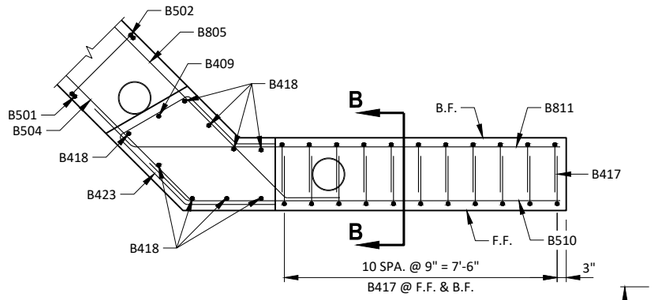
NOTES

SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE THIS SHEET FOR BILL OF BARS.

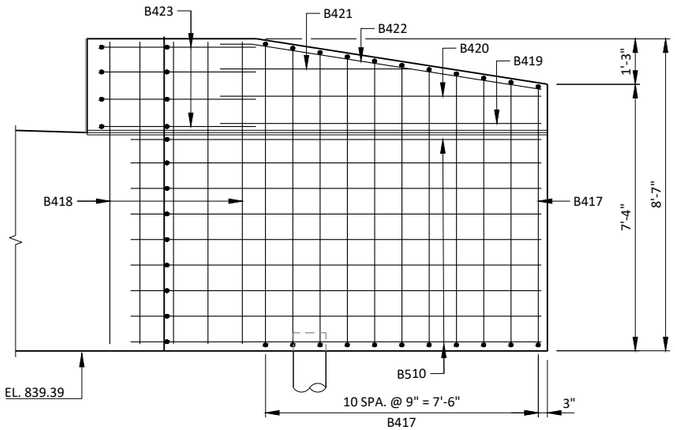
SPACE REINFORCEMENT TO MISS PILING

F.F. - FRONT FACE

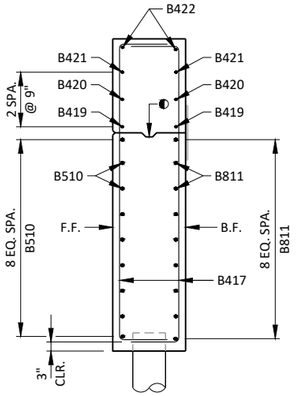
B.F. - BACK FACE



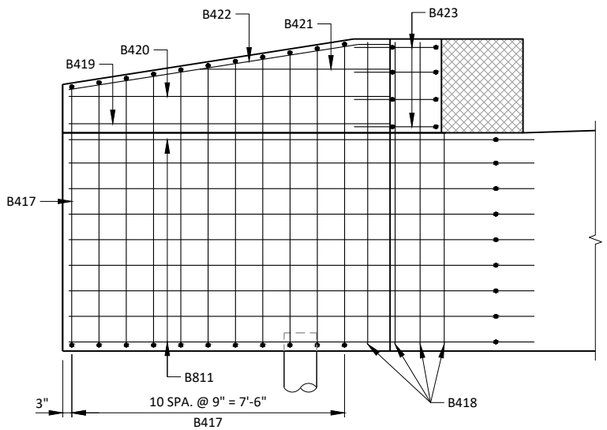
PLAN VIEW - WING 4



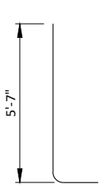
F.F. ELEVATION - WING 4



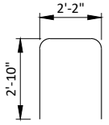
SECTION B-B



B.F. ELEVATION - WING 4



B501



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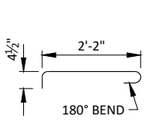
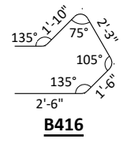


B403

B407 & B417



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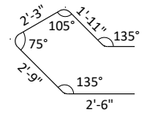
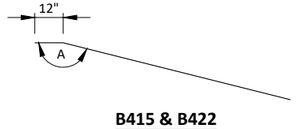


B423

B805, B510 & B811



B415 & B422

MARK	'A'
B415	165°58'
B422	171°07'

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-61-243

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EAST ABUTMENT DETAILS

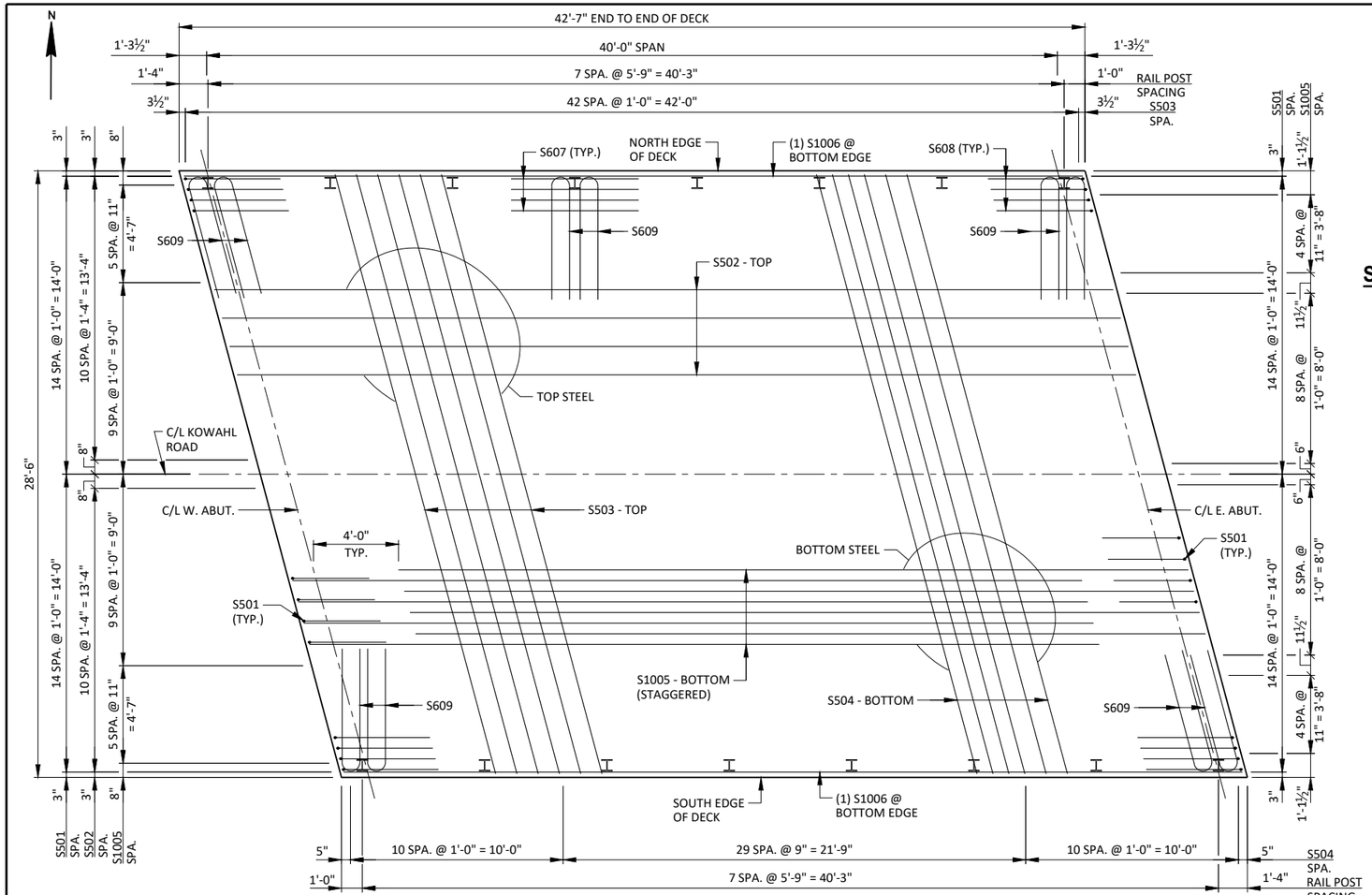
SHEET 7 OF 9

45

8

8

STATE PROJECT NUMBER
7283-00-70



PLAN

NOTES

SUPPORT ALTERNATE TOP TRANSVERSE BARS IN SLAB BY INDIVIDUAL BAR CHAIRS AT APPROX. 3'-0" CENTERS. SUPPORT BOTTOM LONGITUDINAL BARS BY CONTINUOUS BAR CHAIRS AT APPROX. 4'-0" CENTERS.

PLACE TRANSVERSE BARS PARALLEL TO THE CENTERLINE OF SUBSTRUCTURE UNITS.

THE SLAB THICKNESS DIMENSION IS MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

SURVEY TOP OF DECK ELEVATIONS

	W. ABUT.	0.50 PT.	E. ABUT.
NORTH EDGE OF DECK			
CENTER LINE			
SOUTH EDGE OF DECK			

PRIOR TO RELEASING SLAB FASLEWORK, TAKE TOP OF DECK ELEVATIONS AT THE C/L OF THE ABUTMENTS AND AT 0.50 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG THE EDGE OF DECK AND CENTER LINE. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

BILL OF BARS SUPERSTRUCTURE — 15,080 LB (COATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	LOCATION
S501	58	7-8	X	X	ENDS OF DECK
S502	22	42-3		X	SLAB - TOP - LONGIT.
S503	49	29-2		X	SLAB - TOP - TRANS. & ABUTS.
S504	50	29-2		X	SLAB - BOTTOM - TRANS.
S1005	57	37-2		X	SLAB - BOTTOM - LONGIT.
S1006	2	42-3		X	SLAB - BOTTOM - LONGIT. - EDGES
S607	48	6-0		X	RAIL POSTS - INTERIOR
S608	16	4-8	X	X	RAIL POSTS - CORNERS
S609	32	12-0	X	X	RAIL POSTS

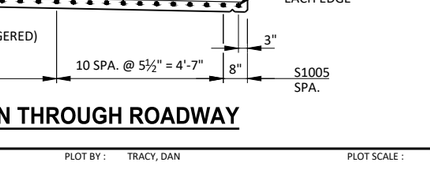
NOTES: THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

SOME BARS HAVE BEEN OMITTED FOR CLARITY.

TOP OF DECK ELEVATIONS

	C/L W. ABUT.	0.10 PNT.	0.20 PNT.	0.30 PNT.	0.40 PNT.	0.50 PNT.	0.60 PNT.	0.70 PNT.	0.80 PNT.	0.90 PNT.	C/L E. ABUT.
N. EDGE	848.22	848.20	848.17	848.14	848.12	848.09	848.07	848.05	848.03	848.01	848.00
C/L	848.48	848.45	848.43	848.40	848.38	848.36	848.34	848.32	848.30	848.28	848.27
S. EDGE	848.17	848.14	848.12	848.09	848.07	848.05	848.03	848.02	848.00	847.99	847.97

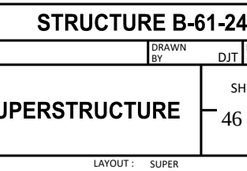


CAMBER DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPAN AS SHOWN TO PROVIDE FOR THEORETICAL DEADLOAD DEFLECTION AND FUTURE PLASTIC FLOW. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB OR CENTER LINE FOLLOW THIS PROCEDURE:

TOP OF SLAB ELEVATION AT FINAL GRADE
-SLAB THICKNESS
+CAMBER
+FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (COMPUTED BY CONTRACTOR)
=TOP OF SLAB FALSEWORK ELEVATION.



S501

S608

S609

PARTIAL LONGITUDINAL SECTION THROUGH ROADWAY

PARTIAL CROSS SECTION THROUGH ROADWAY

LEGEND

- ⬣ 18" RUBBERIZED MEMBRANE WATERPROOFING. (HORIZONTAL)
- ▲ ¾" x 4" PREFORMED FILLER, EXTEND FULL LENGTH OF ABUTMENTS BETWEEN EDGES OF SLAB.
- ✳ DIMENSION IS NORMAL TO THE C/L OF SUBSTRUCTURE UNITS.
- ✳✳ SEE SHEET 4 FOR PLACEMENT OF A506 BARS AND SHEET 6 FOR PLACEMENT OF B506 BARS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-61-243

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SUPERSTRUCTURE

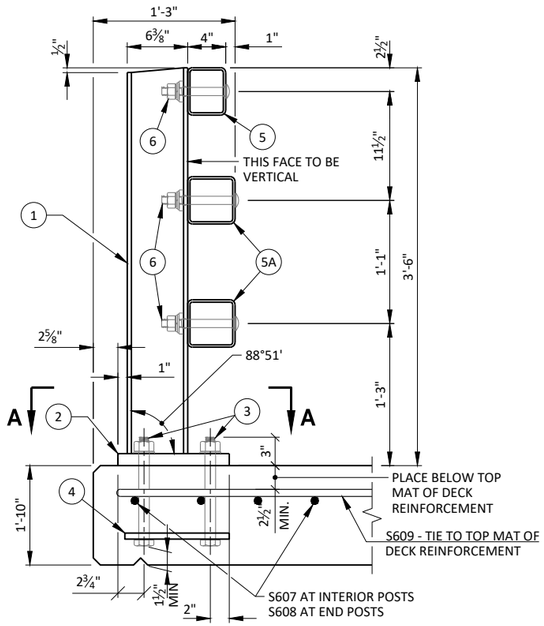
SHEET 8 OF 9

46

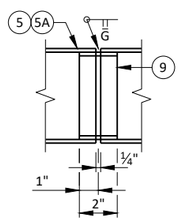
8

STATE PROJECT NUMBER

7283-00-70

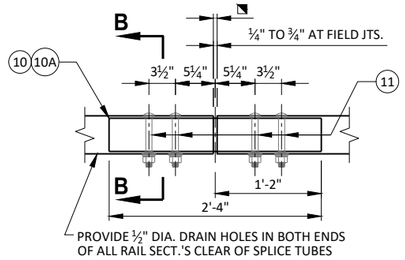


SECTION THROUGH RAILING ON DECK



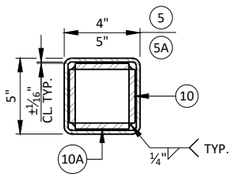
SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



FIELD ERECTION JOINT DETAIL

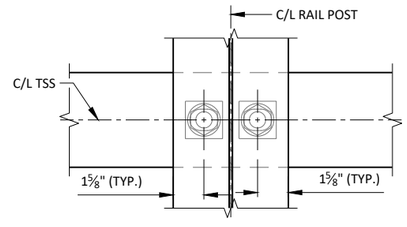
◥ RDWY. OPENING OR 2½" MIN. FOR STRIP SEAL EXP. JOINT & (¾" TO ¾") OPENING FOR A1 ABUTMENT.



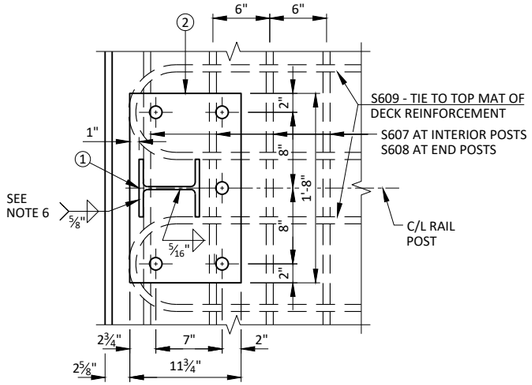
SECTION B-B

LEGEND

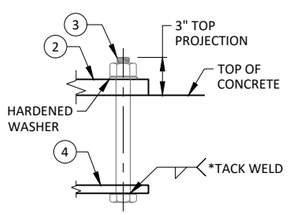
1. W6x25 WITH 1⅛" x 1½" HORIZONTAL SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
2. PLATE 1½"x11¾"x1'-8" WITH 1 1/16" DIA. OVERSIZED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN.
3. ASTM A449 - 1⅛" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS ≥ 16" USE 1'-3" LONG.
4. ⅝"x11"x1'-8" ANCHOR PLATE (GALVANIZED) WITH 1 3/16" DIA. HOLES FOR ANCHOR BOLTS NO. 3.
5. TSS 5x4x0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
5A. TSS 5x5x0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
6. ⅞" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/16"x1⅝"x1⅝" MIN. WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION).
9. SPLICE SLEEVE FABRICATED FROM ¼" PLATE. PROVIDE "SLIDING FIT".
10. ⅜"x3⅜"x2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
10A. ⅜"x2⅝"x2'-4" PLATE USED IN NO. 5, ⅜"x3⅜"x2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
11. ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 15/16"x1¼" LONGIT. SLOTTED HOLES IN PLATE NO. 10A. AT FIELD JOINTS AND 15/16"x2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A. PROVIDE 15/16" DIA. ROUND HOLES IN TUBES NO. 5 AND NO. 5A.



SECTION THROUGH POST WEB

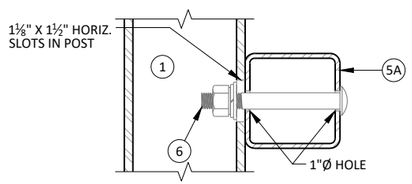


SECTION A-A



ANCHOR BOLTS

* ANCHOR BOLT ASSEMBLY MAY BE TACK WELDED, EITHER IN THE SHOP, OR IN THE FIELD AFTER THE ANCHOR PLATE IS PLACED.



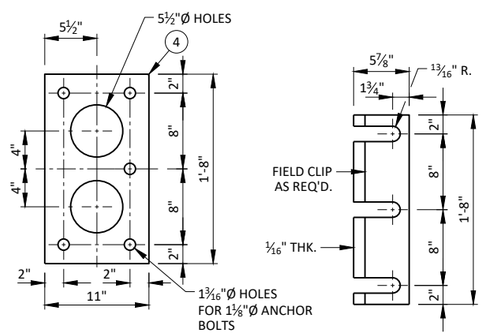
SECTION THROUGH RAIL

NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS

GENERAL NOTES

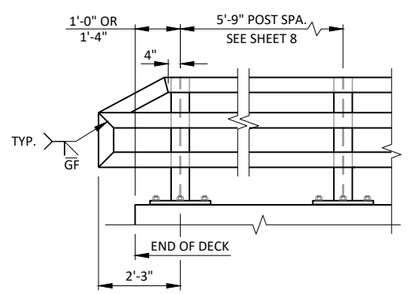
1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY=50 KSI. ANCHOR PLATES AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ⅛ TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY S.S.P.C. SPECIFICATIONS.
10. THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST LEVEL 4 (TL-4).



ANCHOR PLATE

AT RAIL TO DECK CONNECTION

POST SHIM DETAIL



PART ELEVATION OF RAILING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-61-243

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TUBULAR STEEL RAILING TYPE M

SHEET 9 OF 9

47

8

8

EARTHWORK - KOWAHL ROAD, BYPASS CONSTRUCTION - STAGE 1

	AREA (SF)		INCREMENTAL VOL (CY)			CUMMULATIVE VOLUME (CY)			
STATION	CUT	FILL	CUT NOTE 1	FILL NOTE 2	FILL (25%) NOTE 3	CUT 1.00 NOTE 1	FILL	FILL (25%) NOTE 3	MASS ORDINATE NOTE 4
20+00	0	0	0	0	0	0	0	0	0
20+50	0	9	0	8	10	0	8	10	-10
21+00	0	11	0	18	23	1	26	33	-32
21+50	0	5	0	15	18	1	41	51	-50
22+00	0	122	0	117	146	1	158	197	-196
22+50	0	0	0	113	141	1	270	338	-337
23+00	0	104	0	97	121	1	367	459	-458
23+50	1	14	1	110	137	2	476	596	-594
24+00	0	0	1	13	16	2	489	612	-610
24+20	0	0	0	0	0	2	489	612	-610
COLUMN TOTALS =			2	489	612				-610

EARTHWORK - KOWAHL ROAD, MAINLINE - STAGE 2

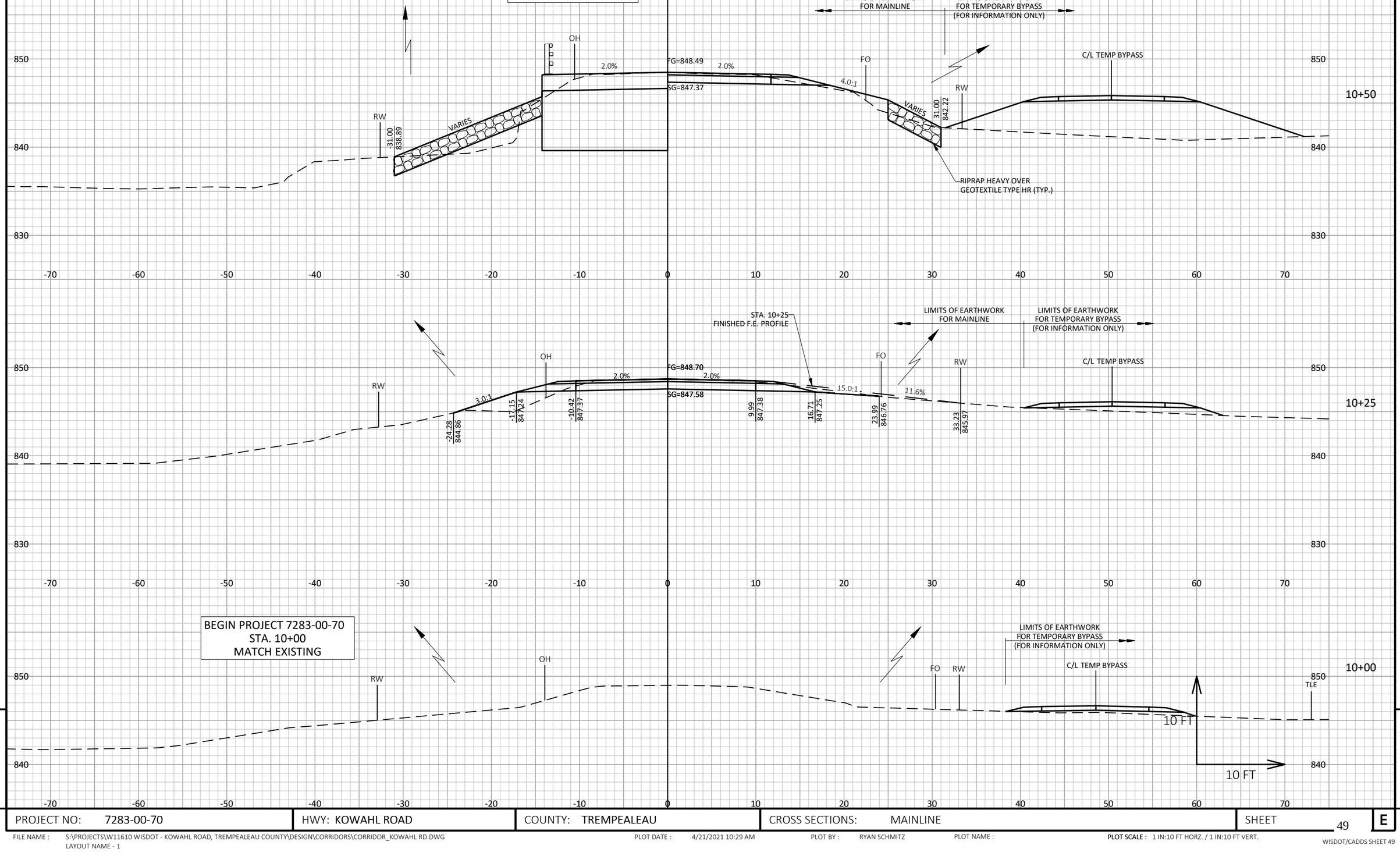
	AREA (SF)		INCREMENTAL VOL (CY)			CUMMULATIVE VOLUME (CY)			
STATION	CUT	FILL	CUT NOTE 1	FILL NOTE 2	FILL (25%) NOTE 3	CUT 1.00 NOTE 1	FILL	FILL (25%) NOTE 3	MASS ORDINATE NOTE 4
10+00	0	0	0	0	0	0	0	0	0
10+25	29	12	14	6	7	14	6	7	6
10+50	14	5	20	8	10	33	14	17	17
10+93	15	15	23	16	20	56	29	37	19
11+00	25	28	5	6	7	61	35	44	18
11+25	27	1	24	13	17	85	48	60	25
11+42	0	0	9	0	1	94	49	61	33
COLUMN TOTALS =			94	49	61				33

EARTHWORK - KOWAHL ROAD, BYPASS REMOVAL - STAGE 3

	AREA (SF)		INCREMENTAL VOL (CY)			CUMMULATIVE VOLUME (CY)			
STATION	CUT	FILL	CUT NOTE 1	FILL NOTE 2	FILL (25%) NOTE 3	CUT 1.00 NOTE 1	FILL	FILL (25%) NOTE 3	MASS ORDINATE NOTE 4
20+00	0	0	0	0	0	0	0	0	0
20+50	12	0	12	0	1	12	0	1	11
21+00	20	0	30	0	1	42	1	1	41
21+50	14	0	31	0	0	73	1	1	71
22+00	130	0	133	0	0	206	1	1	204
22+50	0	0	121	0	0	327	1	1	325
23+00	113	0	105	0	0	432	1	1	430
23+50	26	1	128	1	1	560	2	2	558
24+00	0	0	24	1	1	584	2	3	581
24+20	0	0	0	0	0	584	2	3	581
COLUMN TOTALS =			584	2	3				581

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
3 - FILL 25%	(UNEXPANDED FILL)*1.25
4 - MASS ORDINATE	CUT + ROCK (10%) + REDUCED MARSH (60%) - FILL (25%)

STRUCTURE B-61-243
REQ'D

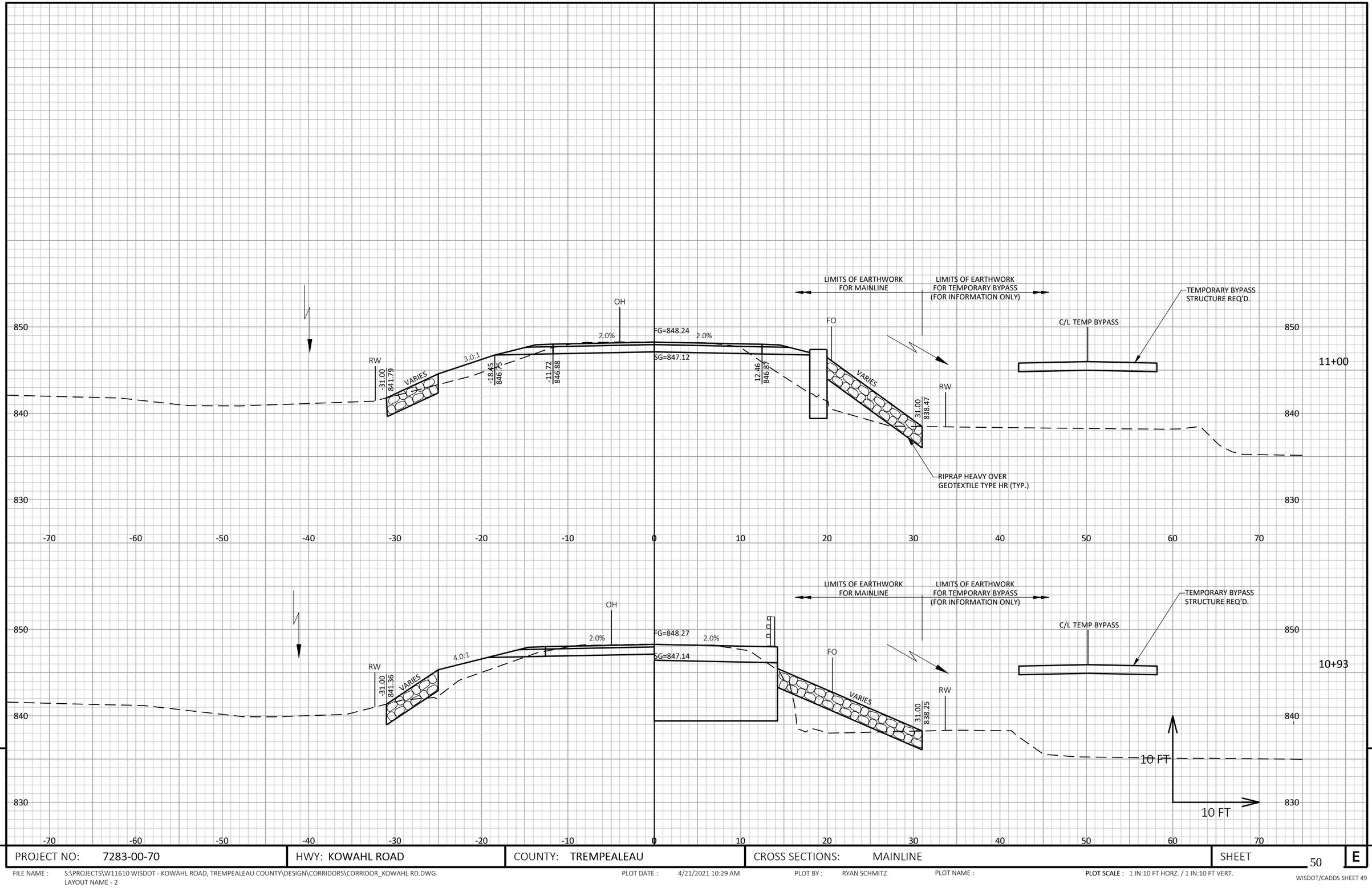


PROJECT NO: 7283-00-70	HWY: KOWAHL ROAD	COUNTY: TREMPEALEAU	CROSS SECTIONS: MAINLINE	SHEET 49	E

FILE NAME : S:\PROJECTS\W11610 WISDOT - KOWAHL ROAD, TREMPEALEAU COUNTY\DESIGN\CORRIDORS\CORRIDOR_KOWAHL RD.DWG
LAYOUT NAME - 1

PLOT DATE : 4/21/2021 10:29 AM PLOT BY : RYAN SCHMITZ PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 7283-00-70	HWY: KOWAHL ROAD	COUNTY: TREMPEALEAU	CROSS SECTIONS: MAINLINE	SHEET 50	E

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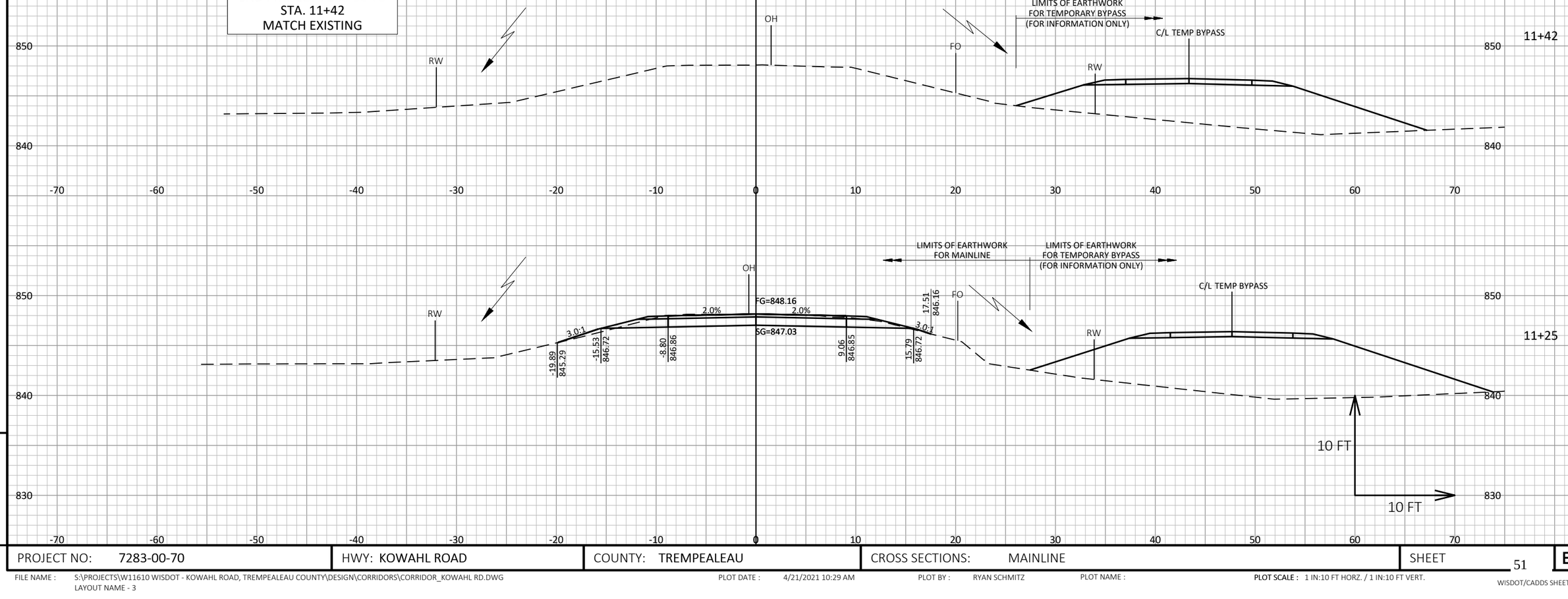
LAYOUT NAME - 2

PLOT DATE : 4/21/2021 10:29 AM PLOT BY : RYAN SCHMITZ PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

END PROJECT 7283-00-70
STA. 11+42
MATCH EXISTING



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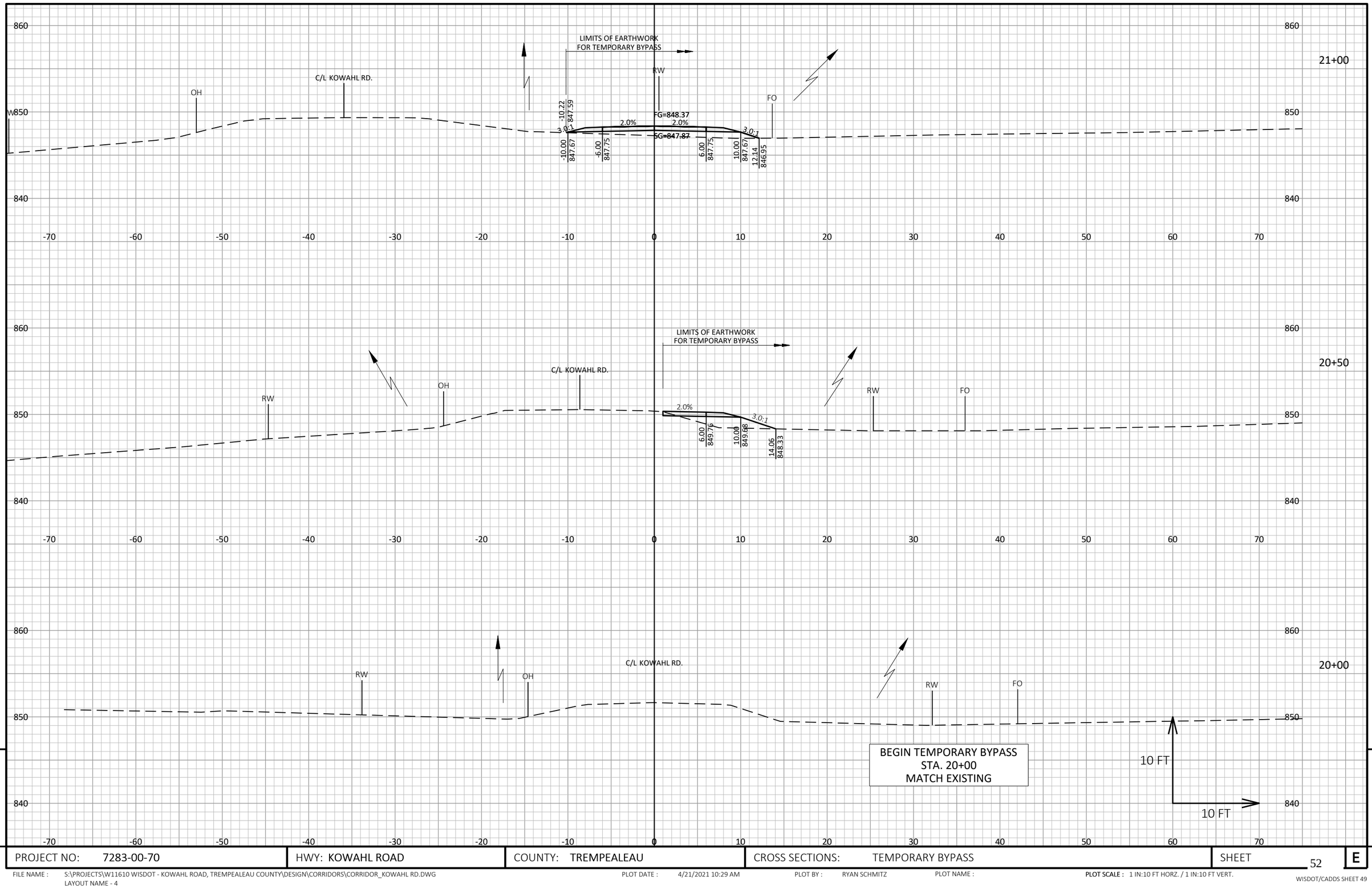
PROJECT NO: 7283-00-70	HWY: KOWAHL ROAD	COUNTY: TREMPEALEAU	CROSS SECTIONS: MAINLINE	SHEET 51	E

FILE NAME : S:\PROJECTS\W11610 WISDOT - KOWAHL ROAD, TREMPEALEAU COUNTY\DESIGN\CORRIDORS\CORRIDOR_KOWAHL RD.DWG
LAYOUT NAME - 3

PLOT DATE : 4/21/2021 10:29 AM PLOT BY : RYAN SCHMITZ PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

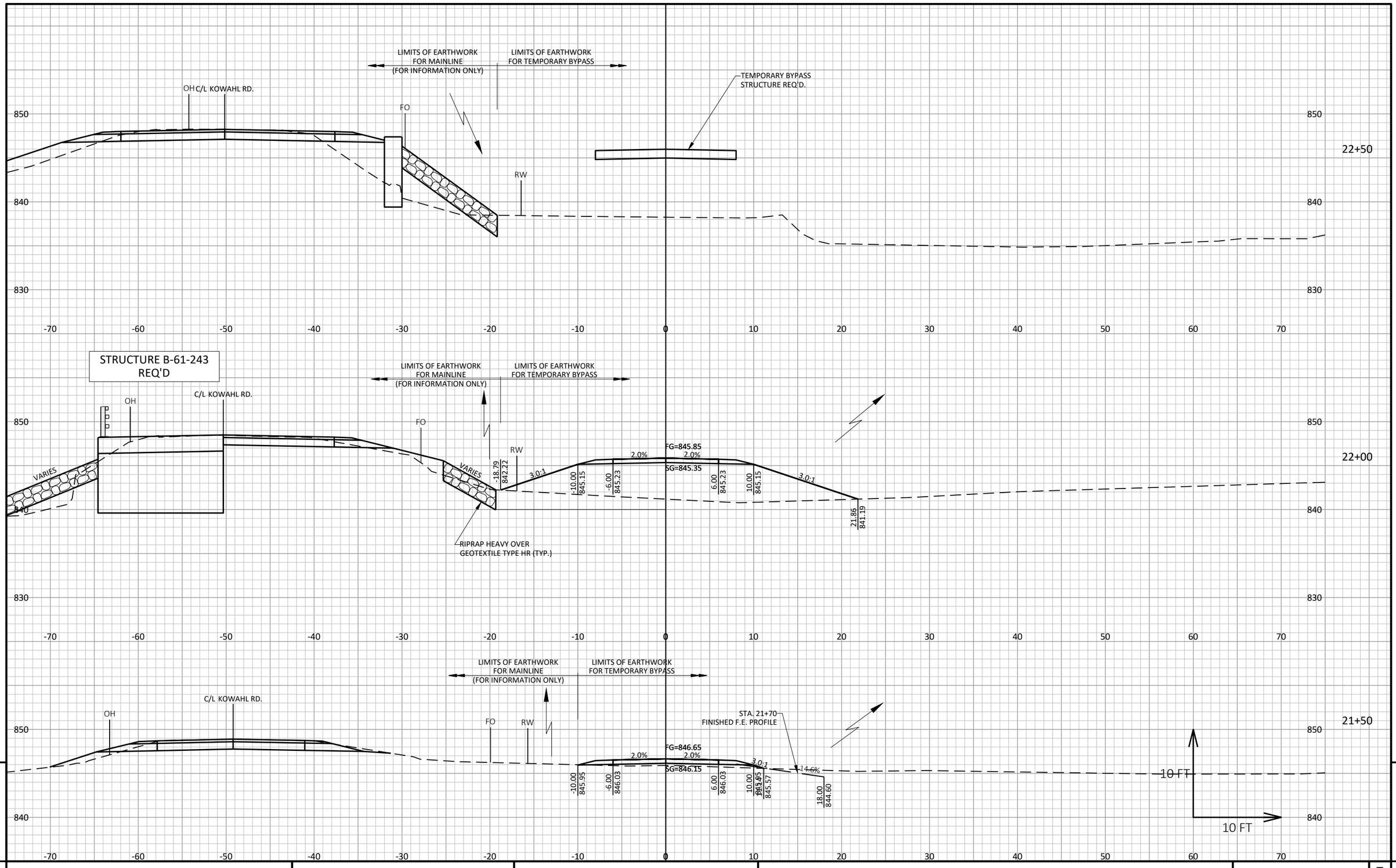


PROJECT NO: 7283-00-70	HWY: KOWAHL ROAD	COUNTY: TREMPEALEAU	CROSS SECTIONS: TEMPORARY BYPASS	SHEET 52	E

FILE NAME : S:\PROJECTS\W11610 WISDOT - KOWAHL ROAD, TREMPEALEAU COUNTY\DESIGN\CORRIDORS\CORRIDOR_KOWAHL RD.DWG
LAYOUT NAME - 4

PLOT DATE : 4/21/2021 10:29 AM PLOT BY : RYAN SCHMITZ PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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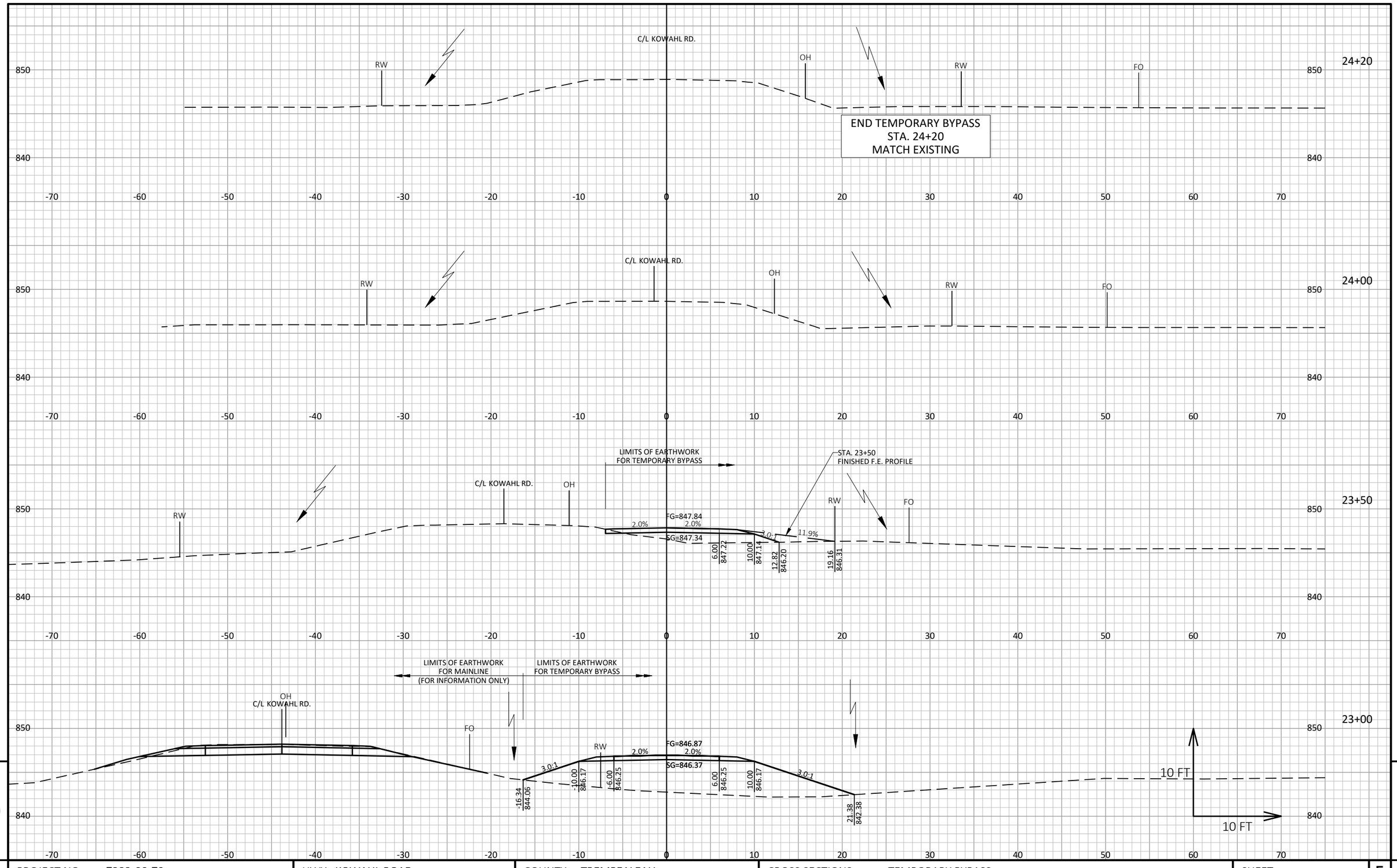
PROJECT NO: 7283-00-70	HWY: KOWAHL ROAD	COUNTY: TREMPEALEAU	CROSS SECTIONS: TEMPORARY BYPASS	SHEET 53	E

FILE NAME : S:\PROJECTS\W11610 WISDOT - KOWAHL ROAD, TREMPEALEAU COUNTY\DESIGN\CORRIDORS\CORRIDOR_KOWAHL RD.DWG
LAYOUT NAME - 5

PLOT DATE : 4/21/2021 10:29 AM PLOT BY : RYAN SCHMITZ PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



PROJECT NO: 7283-00-70	HWY: KOWAHL ROAD	COUNTY: TREMPEALEAU	CROSS SECTIONS: TEMPORARY BYPASS	SHEET 54	E

FILE NAME : S:\PROJECTS\W11610 WISDOT - KOWAHL ROAD, TREMPEALEAU COUNTY\DESIGN\CORRIDORS\CORRIDOR_KOWAHL RD.DWG
LAYOUT NAME - 6

PLOT DATE : 4/21/2021 10:29 AM PLOT BY : RYAN SCHMITZ PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Notes

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