

GRE MARCH 2019

PROJECT ID: 4197-04-71
WMT: N/A

COUNTY: SHEBOYGAN

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details (includes erosion control plans)
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
Section No.	8	Structure Plans
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 56



DESIGN DESIGNATION 4197-04-71

A.A.D.T	2019	55
A.A.D.T	2039	65
D.H.V.		7 VPH
D.D.		60/40
T		3.0%
DESIGN SPEED		60 MPH
ESALS		985,500

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	
EXISTING CULVERT	
PROPOSED CULVERT (Box or Pipe)	
COMBUSTIBLE FLUIDS	
MARSH AREA	
WOODED OR SHRUB AREA	

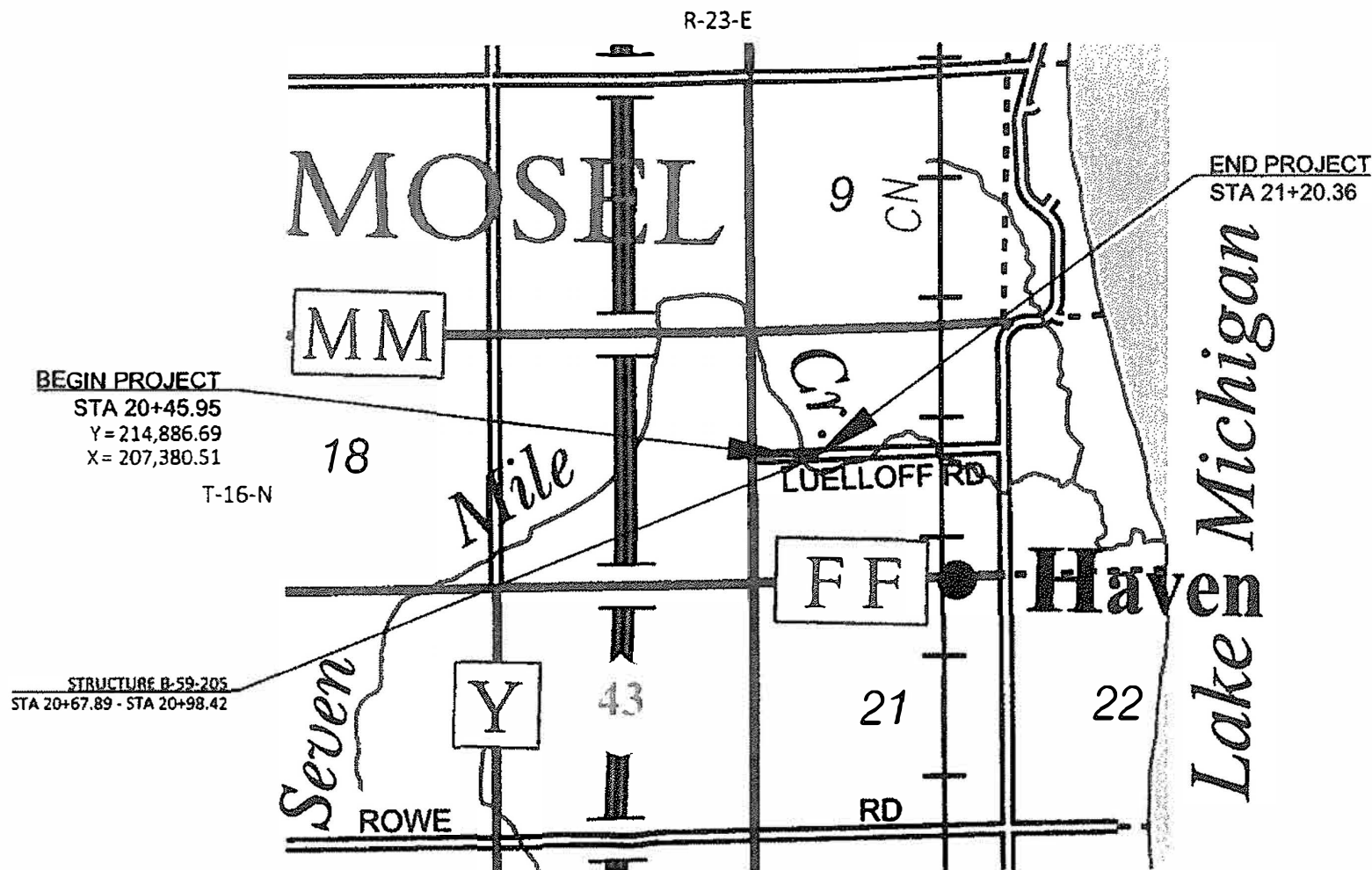
PROFILE

GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
CULVERT (Profile View)	
UTILITIES	
ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PLAN OF PROPOSED IMPROVEMENT

T MOSEL, LUELLOFF ROAD
SEVEN MILE CREEK BRIDGE B-59-0205
LOCAL STREET
SHEBOYGAN COUNTY

STATE PROJECT NUMBER
4197-04-71



LAYOUT
SCALE 0 1 MI
TOTAL NET LENGTH OF CENTERLINE = 0.014 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, SHEBOYGAN COUNTY, NAD83 (1991). IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929, NGVD 29

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
4197-04-71		

ACCEPTED FOR
Sheboygan County
Date 10/10/18
Signature and Title of Official
[Signature]

ORIGINAL PLANS PREPARED BY
K Singh Engineers
Scientists
Consultants

WISCONSIN
AJAY P SINGH
E-44388
BROOKFIELD WIS.
PROFESSIONAL ENGINEER

DATE 10/30/18
[Signature]
(Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor K SINGH & ASSOCIATES, INC.
Designer K SINGH & ASSOCIATES, INC.
Project Manager K SINGH & ASSOCIATES, INC.
Management Consultant JT ENGINEERING INC.
Regional Supervisor

APPROVED FOR THE DEPARTMENT
DATE 10/10/18
[Signature]
(Management Consultant Signature)

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GENERAL NOTES

- 1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
- 2. THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.
- 3. NO TREES OR SHRUBS SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.
- 4. WETLANDS, WATERWAYS, AND OTHER ENVIRONMENTALLY SENSITIVE AREAS SHALL BE PROTECTED AT ALL TIMES. DO NOT STORE EQUIPMENT OR MATERIALS NEAR THESE SITES UNLESS APPROVED BY THE ENGINEER.
- 5. TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
- 6. ALL SIGNS, TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE COVERED AS NEEDED AND/OR DIRECTED BY THE ENGINEER.
- 7. NO WORKING LIGHTS SHALL BE VISIBLE ON A LAID DOWN SIGN.
- 8. THE EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
- 9. EXCAVATION BELOW SUBGRADE (EBS) IS NOT INCLUDED IN THE PLAN YARDAGE, BUT IS MEASURED AND PAID FOR AS EXCAVATION COMMON. THE LOCATION, DEPTH AND BACKFILL MATERIAL FOR EBS WILL BE DETERMINED BY THE ENGINEER.
- 10. RADII, ELEVATIONS, AND DIMENSIONS ARE GIVEN AT THE PAVEMENT EDGES, UNLESS OTHERWISE NOTED.
- 11. A SAWED JOINT IS REQUIRED WHERE NEW ASPHALTIC CONCRETE SURFACE MEETS EXISTING ASPHALTIC CONCRETE SURFACE.
- 12. THE LOCATIONS OF LONGITUDINAL JOINTS IN HMA PAVEMENT SHALL BE APPROVED BY THE ENGINEER.
- 13. SMOOTH AND EVEN JOINTS SHALL BE PROVIDED WHERE MATCHING EXISTING SAW CUTTING, ADJACENT PAVEMENT, OR HARD SURFACES.
- 14. STATIONING, DISTANCES AND OFFSETS FOR SIGNS SHOWN ON THE PLANS ARE APPROXIMATE AND THE LOCATIONS OF SIGNS ARE TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
- 15. DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE TOPSOILED, FERTILIZED AND SEEDED AS DIRECTED BY THE ENGINEER IN THE FIELD. RESTORE EXPOSED SLOPES AND DITCHES WITHIN 7 CALENDAR DAYS AFTER GRADING IS COMPLETE.

ORDER OF SECTION 2 DETAIL SHEETS

- GENERAL NOTES
- TYPICAL SECTIONS
- PLAN DETAILS
- EROSION CONTROL PLANS
- SIGNING REMOVAL PLANS
- PERMANENT SIGNING & PAVEMENT MARKING PLANS
- TRAFFIC CONTROL
- ALIGNMENT PLAN

STANDARD ABBREVIATIONS

AC	ACRE
AECPRC	APRON ENDWALL CULVERT PIPE REINFORCED CONCRETE
AEW	APRON END WALL
AGG	AGGREGATE
AH	AHEAD
ASPH	ASPHALTIC
BK	BACK
BM	BENCH MARK
CE	COMMERCIAL ENTRANCE
CONC	CONCRETE
CL OR C/L	CENTER OR CONSTRUCTION LINE
CP	CULVERT PIPE
CPCM	CULVERT PIPE CORRUGATED METAL
CPRC	CULVERT PIPE REINFORCED CONCRETE
CPT	CULVERT PIPE TEMPORARY
CY	CUBIC-YARD
D	DEGREE OF CURVE
Δ	DELTA
DIA	DIAMETER
DISCH	DISCHARGE
DWY	DRIVEWAY
EL OR ELEV	ELEVATION
EW	END WALL
EBS	EXCAVATION BELOW SUBGRADE
EX	EXISTING
FF	FACE TO FACE
FE	FIELD ENTRANCE
FT	FOOT
INV	INVERT
LT	LEFT
LHF	LEFT HAND FORWARD
L	LENGTH OF CURVE
LF	LINEAR FOOT
MIN	MINIMUM
ML OR M/L	MATCHLINE
NC	NORMAL CROWN
PAVT	PAVEMENT
PCC	POINT OF COMPOUND CURVE
PC	POINT-OF CURVE
PE	PRIVATE ENTRANCE
PGL	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PLE	PERMANENT LIMITED EASMENT
PRC	POINT OF REVERSE CURVATURE
PROP	PROPOSED
PT	POINT OF TANGENT
R	RADIUS OF CURVE
RL OR R/L	REFERENCE LINE
REINF	REINFORCED
REQ'D OR REQD	REQUIRED
RC	REVERSE CROWN
RT	RIGHT
RHF	RIGHT HAND FORWARD
R/W	RIGHT OF WAY
SALV	SALVAGED
SF	SQUARE FOOT

SDD	STANDARD DETAIL DRAWING
STA	STATION
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
SSPRCHE	STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
SE	SUPER ELEVATION
T	TANGENT
TEMP	TEMPORARY
TLE	TEMPORARY LIMITED EASEMENT
TYP	TYPICAL
VPCC	VERTICAL POINT OF COMPOUND CURVATURE
VPC	VERTICAL POINT OF CURVE
VPI	VERTICAL POINT OF INTERSECTION
VPRC	VERTICAL OPINT OF REVERSE CURVATURE
VPT	VERTICAL POINT OF TANGENCY

DNR CONTACT

DEPT. OF NATURAL RESOURCES
MR. JAY SCHIEFELBEIN
2984 SHAWANO AVENUE
GREEN BAY, WI 54313
PHONE: (920) 662-5130
jeremiah.schiefelbein@wisconsin.gov

UTILITY CONTACTS

TDS TELECOM
MR. STEVE JAKUBIEC
10 COLLEGE AVE., SUITE 218A
APPLETON, WI 54911
PHONE: (920) 882-4166
CELL: (920) 562-7221
steve.jakubiec@tdstelecom.com

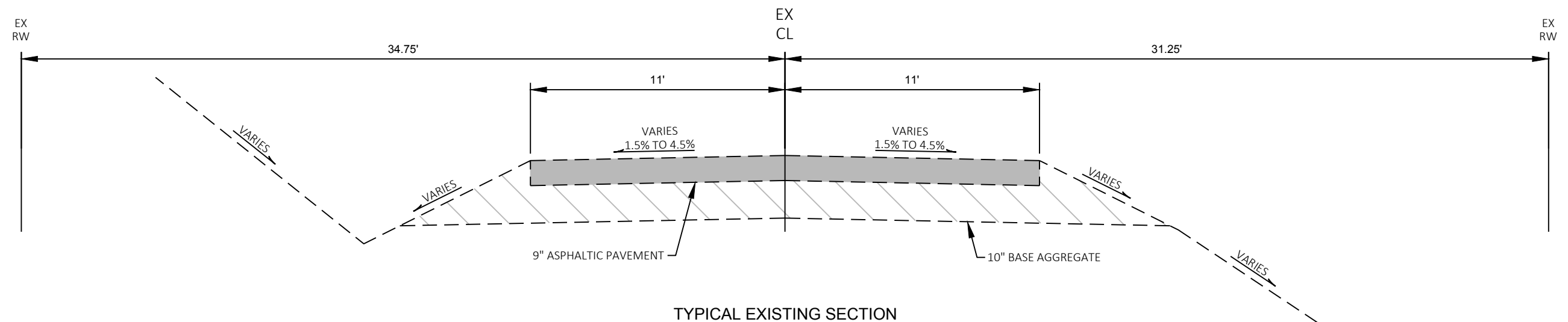
ALLIANT ENERGY (ELECTRIC)
MR. MICHAEL BROLIN
4902 N. BILTMORE LANE
MADISON, WI 53713
PHONE: (608) 458-4871
MichaelBrolin@alliantenergy.com



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

TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

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



TYPICAL EXISTING SECTION
LUELLOFF ROAD
STA 20+25.95 TO STA 20+77.84
STA 21+02.28 TO STA 21+40.36

PROJECT NO: 4197-04-71

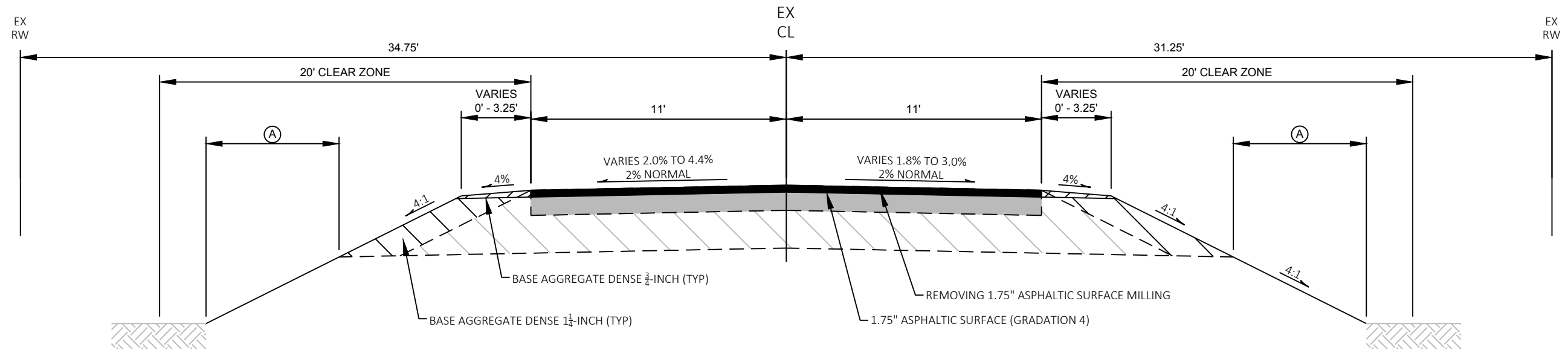
HWY: LOCAL ROAD

COUNTY: SHEBOYGAN

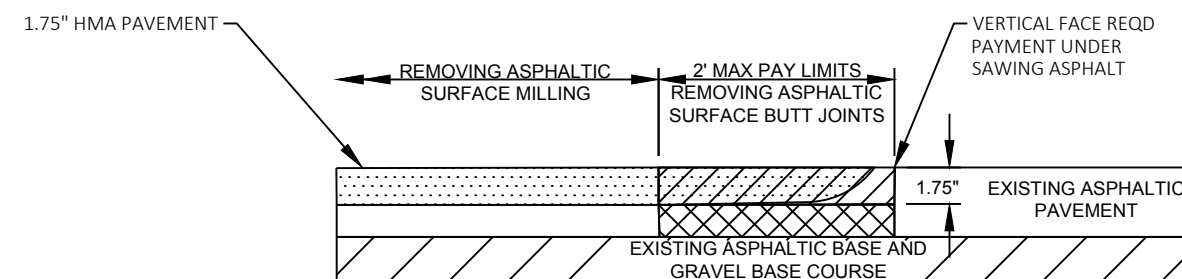
PLAN: TYPICAL EXISTING SECTIONS

SHEET

E



TYPICAL PROPOSED SECTION
LUELLOFF ROAD
STA 20+25.95 TO STA 20+45.95
STA 21+20.36 TO STA 21+40.36

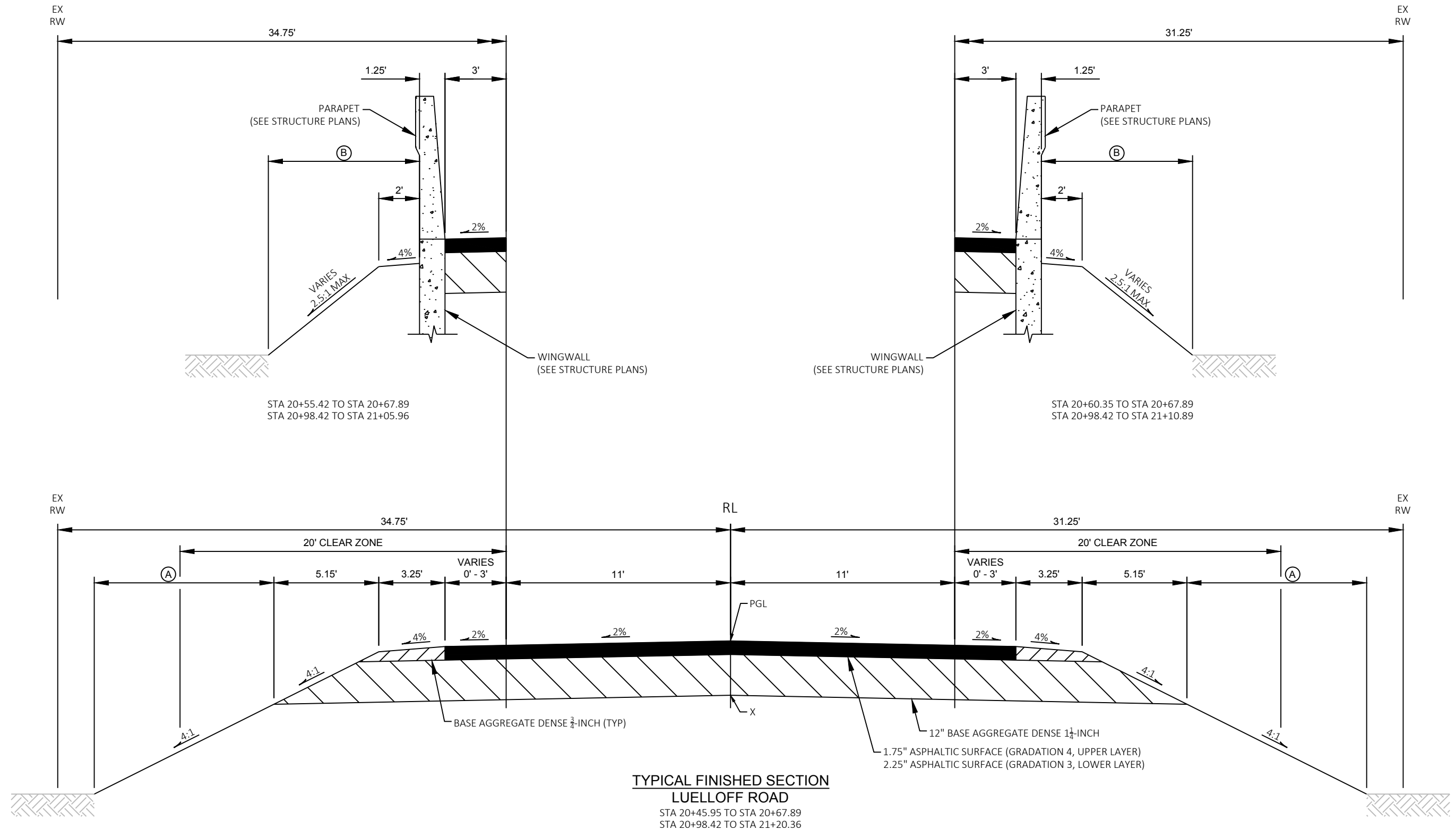


- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALTIC SURFACE, BUTT JOINTS (FULL DEPTH REMOVAL OPTIONAL)
- ASPHALTIC WEDGING (FULL DEPTH REMOVAL OPTION)

MAINLINE BUTT JOINT DETAIL

NOTES

- (A) SALVAGED TOPSOIL, SEEDING MIXTURE NO. 30, AND EROSION MAT CLASS I TYPE A

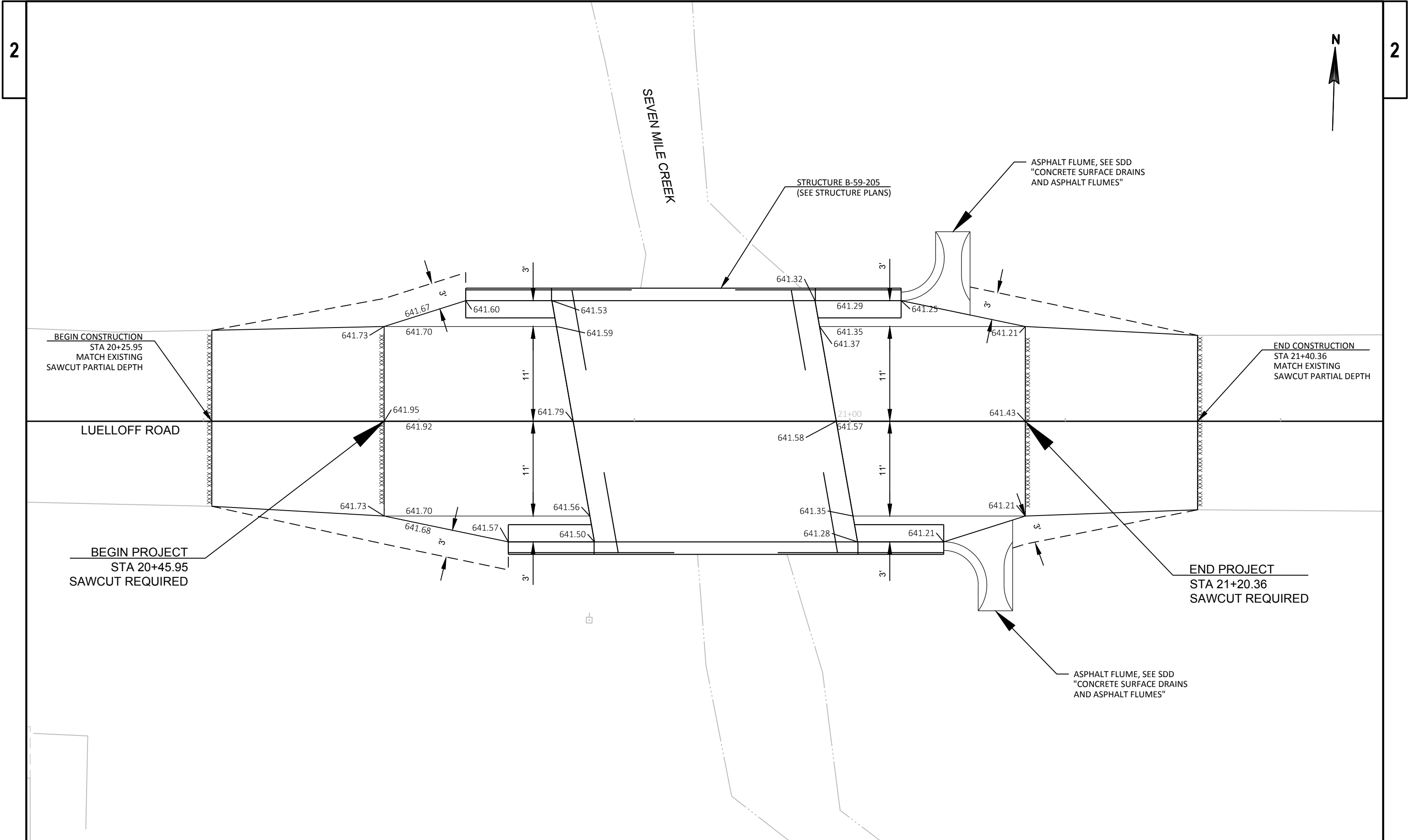
**NOTES**

(A) SALVAGED TOPSOIL, SEEDING MIXTURE NO. 30, AND EROSION MAT CLASS I TYPE A

(B) RIPRAP HEAVY, GEOTEXTILE TYPE HR (SEE STRUCTURE PLANS)

PGL = POINT REFERRED TO ON PROFILE

X = POINT REFERRED TO ON CROSS SECTIONS



PROJECT NO: 4197-04-71

HWY: LOCAL ROAD

COUNTY: SHEBOYGAN

PLAN DETAILS

SHEET

E

FILE NAME : P:\8531 LUELLOFF RD SHEBOYGAN\TRANSPORTATION\CADD\41970471\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021201-pd

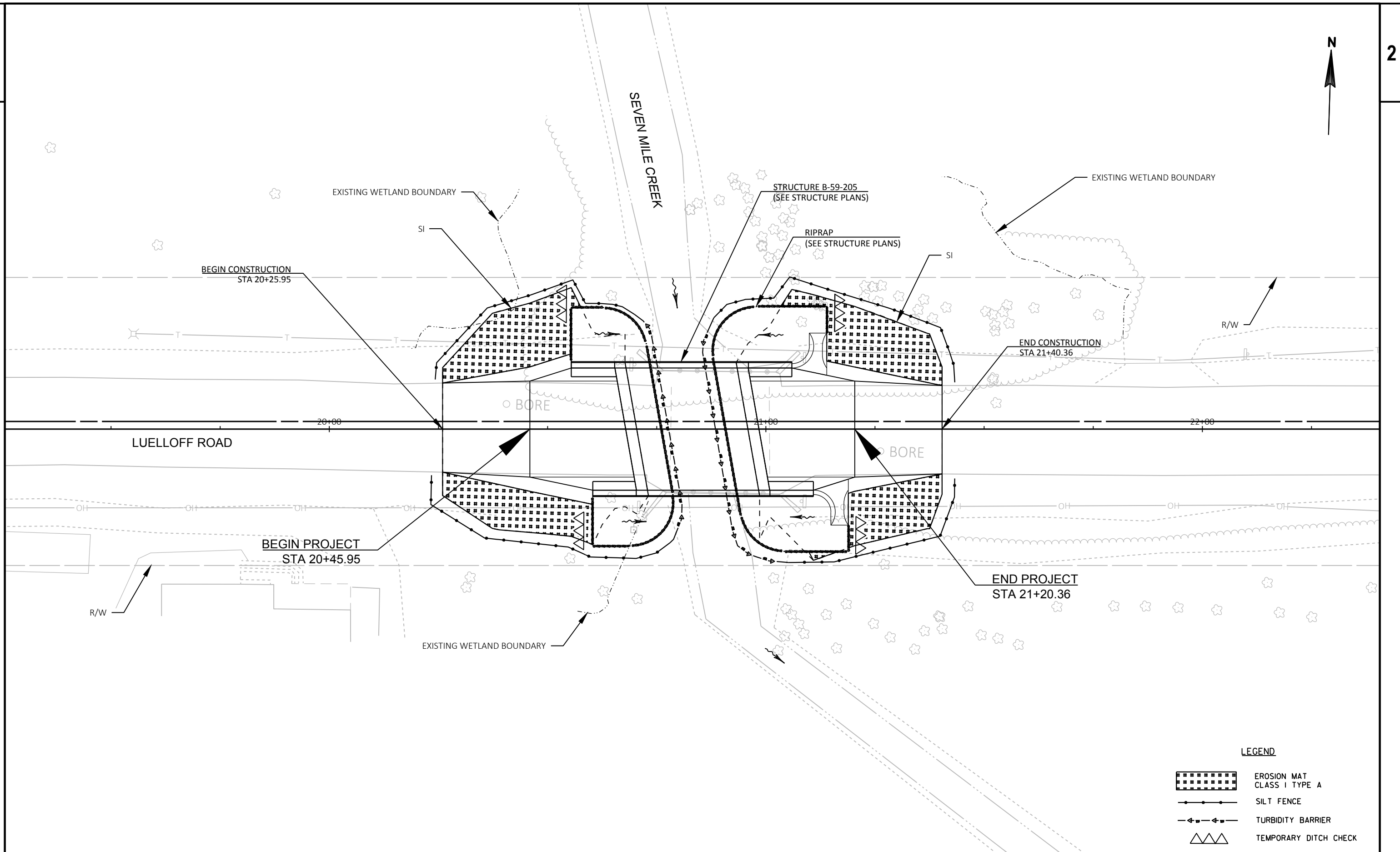
PLOT DATE : 7/24/2018 11:34 AM

PLOT BY : MICHAEL GASPER

PLOT NAME :

PLOT SCALE : 1 IN:10 FT

WISDOT/CADD5 SHEET 42



PROJECT NO: 4197-04-71

HWY: LOCAL ROAD

COUNTY: SHEBOYGAN

EROSION CONTROL

SHEET

E

FILE NAME : P:\8531 LUELLOFF RD SHEBOYGAN\TRANSPORTATION\CADD\41970471\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022001-ec

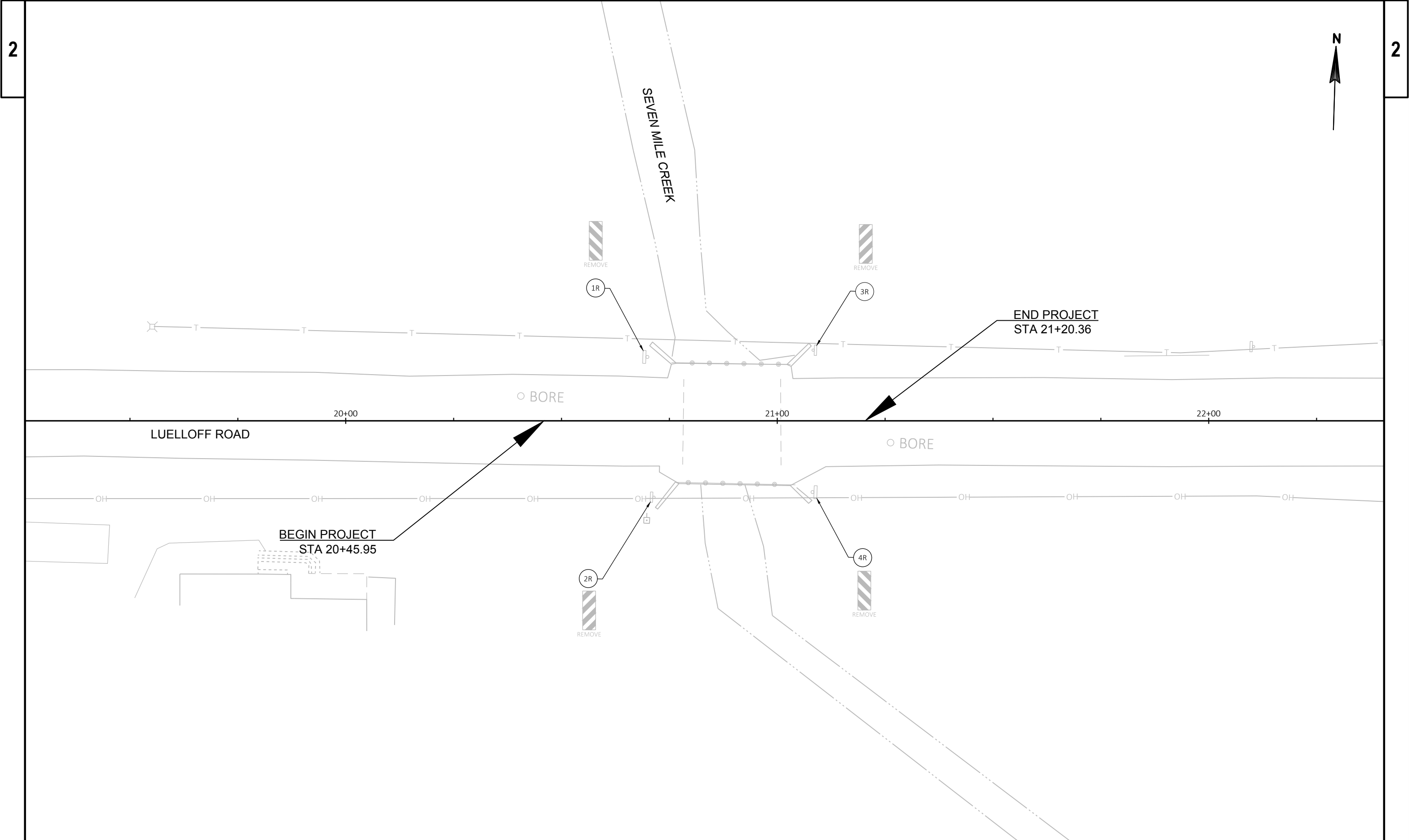
PLOT DATE : 7/24/2018 11:35 AM

PLOT BY : MICHAEL GASPER

PLOT NAME :

PLOT SCALE : 1 IN:20 FT

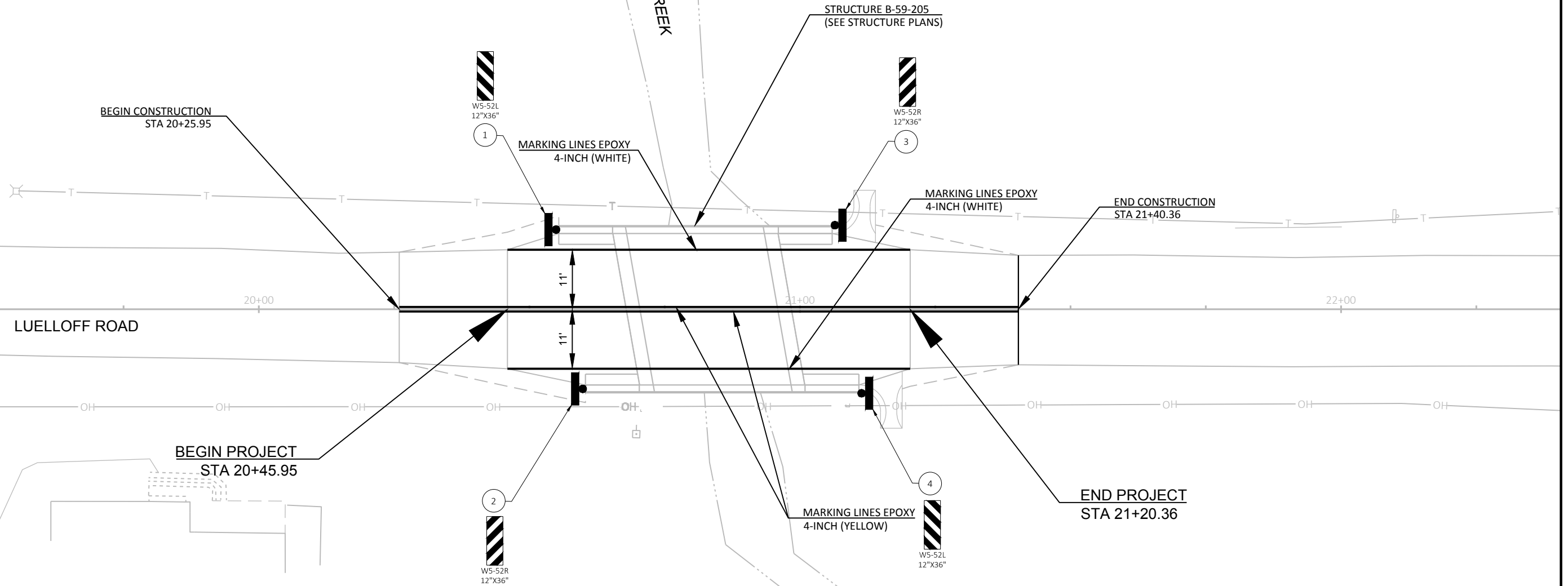
WISDOT/CADD5 SHEET 42

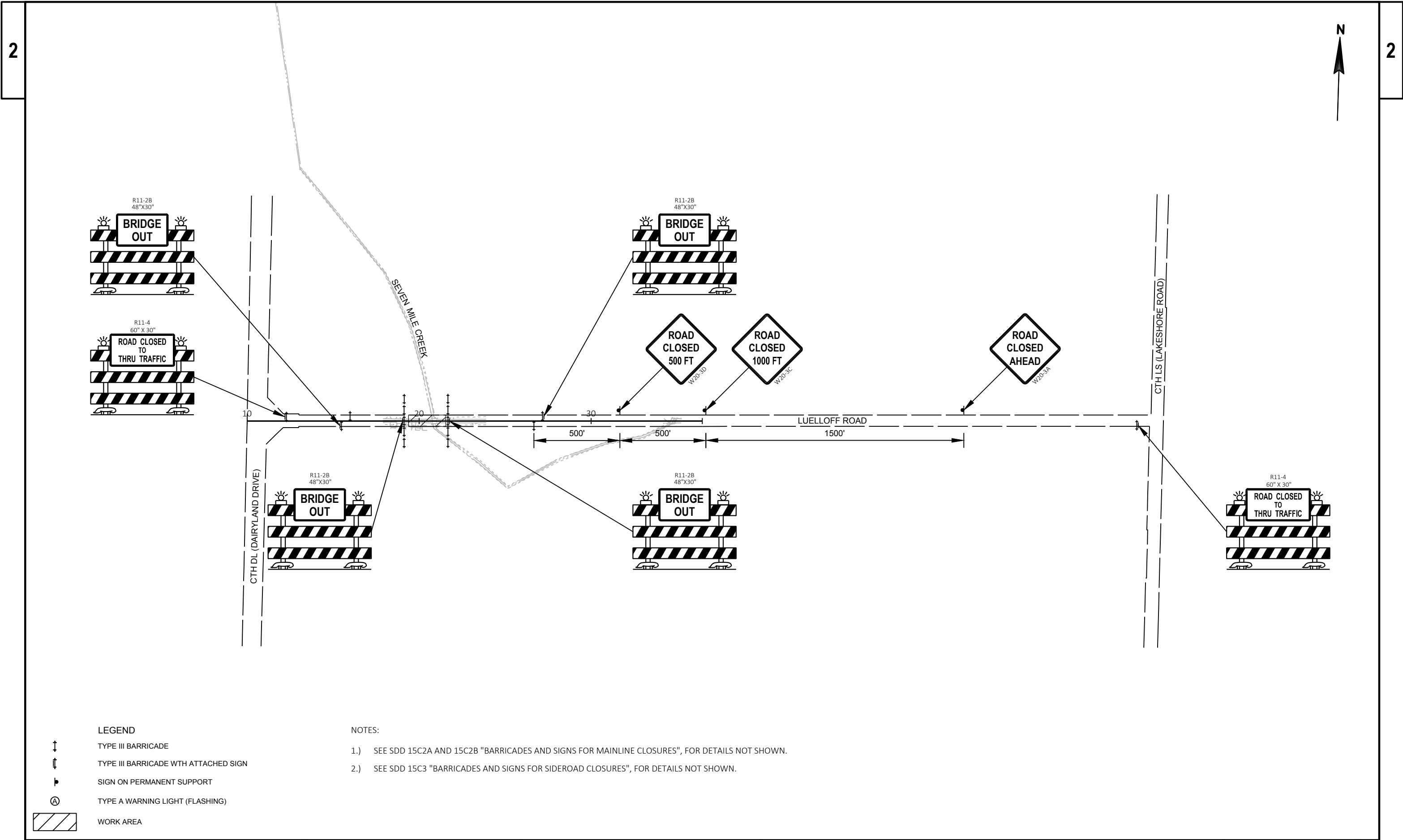


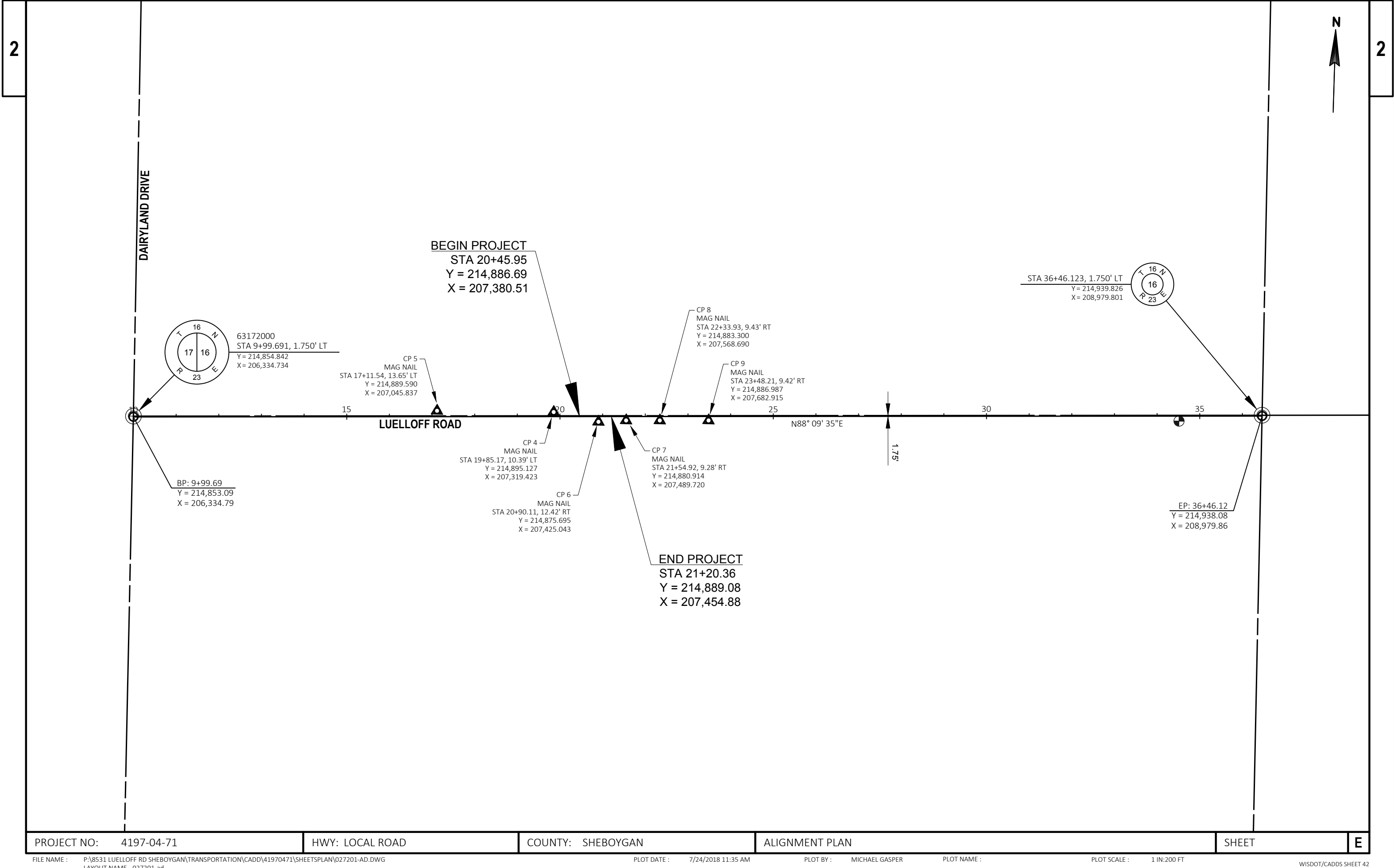
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PROJECT NO: 4197-04-71	HWY: LOCAL ROAD	COUNTY: SHEBOYGAN	SIGNING REMOVAL PLANS	SHEET	E
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Estimate Of Quantities

4197-04-71

Line	Item	Item Description	Unit	Total	Qty
0002	201.0205	Grubbing	STA	2.000	2.000
0004	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 20+81.89	LS	1.000	1.000
0006	204.0115	Removing Asphaltic Surface Butt Joints	SY	10.000	10.000
0008	204.0120	Removing Asphaltic Surface Milling	SY	98.000	98.000
0010	205.0100	Excavation Common	CY	58.000	58.000
0012	206.1000	Excavation for Structures Bridges (structure) 01. B-59-205	LS	1.000	1.000
0014	208.0100	Borrow	CY	44.000	44.000
0016	210.1500	Backfill Structure Type A	TON	252.000	252.000
0018	213.0100	Finishing Roadway (project) 01. 4197-04-71	EACH	1.000	1.000
0020	305.0110	Base Aggregate Dense 3/4-Inch	TON	7.000	7.000
0022	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	131.000	131.000
0024	455.0605	Tack Coat	GAL	14.000	14.000
0026	465.0105	Asphaltic Surface	TON	37.000	37.000
0028	465.0315	Asphaltic Flumes	SY	11.000	11.000
0030	502.0100	Concrete Masonry Bridges	CY	128.000	128.000
0032	502.3200	Protective Surface Treatment	SY	96.000	96.000
0034	502.3210	Pigmented Surface Sealer	SY	58.000	58.000
0036	505.0400	Bar Steel Reinforcement HS Structures	LB	3,920.000	3,920.000
0038	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	15,640.000	15,640.000
0040	516.0500	Rubberized Membrane Waterproofing	SY	18.000	18.000
0042	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	595.000	595.000
0044	606.0300	Riprap Heavy	CY	120.000	120.000
0046	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	192.000	192.000
0048	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0050	619.1000	Mobilization	EACH	1.000	1.000
0052	624.0100	Water	MGAL	2.000	2.000
0054	625.0500	Salvaged Topsoil	SY	180.000	180.000
0056	628.1504	Silt Fence	LF	305.000	305.000
0058	628.1520	Silt Fence Maintenance	LF	305.000	305.000
0060	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0062	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0064	628.2002	Erosion Mat Class I Type A	SY	180.000	180.000
0066	628.6005	Turbidity Barriers	SY	100.000	100.000
0068	628.7504	Temporary Ditch Checks	LF	60.000	60.000
0070	630.0130	Seeding Mixture No. 30	LB	5.000	5.000
0072	630.0300	Seeding Borrow Pit	LB	5.000	5.000
0074	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0076	637.2230	Signs Type II Reflective F	SF	12.000	12.000

Estimate Of Quantities

4197-04-71

Line	Item	Item Description	Unit	Total	Qty
0078	638.2602	Removing Signs Type II	EACH	4.000	4.000
0080	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0082	642.5001	Field Office Type B	EACH	1.000	1.000
0084	643.0420	Traffic Control Barricades Type III	DAY	910.000	910.000
0086	643.0705	Traffic Control Warning Lights Type A	DAY	1,365.000	1,365.000
0088	643.0900	Traffic Control Signs	DAY	1,040.000	1,040.000
0090	643.5000	Traffic Control	EACH	1.000	1.000
0092	645.0111	Geotextile Type DF Schedule A	SY	48.000	48.000
0094	645.0120	Geotextile Type HR	SY	160.000	160.000
0096	646.1020	Marking Line Epoxy 4-Inch	LF	378.000	378.000
0098	650.4500	Construction Staking Subgrade	LF	44.000	44.000
0100	650.5000	Construction Staking Base	LF	44.000	44.000
0102	650.6500	Construction Staking Structure Layout (structure) 01. B-59-205	LS	1.000	1.000
0104	650.9910	Construction Staking Supplemental Control (project) 01. 4197-04-71	LS	1.000	1.000
0106	650.9920	Construction Staking Slope Stakes	LF	84.000	84.000
0108	690.0150	Sawing Asphalt	LF	81.000	81.000
0110	715.0502	Incentive Strength Concrete Structures	DOL	770.000	770.000

3

<u>CLEARING AND GRUBBING</u>					<u>REMOVING ASPHALTIC SURFACE MILLING</u>					
				201.0205 GRUBBING					204.0115 Removing Asphaltic Surface Butt Joints	204.0120 Removing Asphaltic Surface
CATEGORY	STA	TO	STA	STA	CATEGORY	STA	TO	STA	SY	SY
0010	20+00	TO	22+00	2	0010	20+25.95	TO	20+45.95	5	49
				TOTALS					5	49
									21+20.36	TO 21+40.36

EARTHWORK SUMMARY

CATEGORY	DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON		SALVAGED/ UNUSABLE PAVEMENT (4) CY	AVAILABLE MATERIAL (5) CY	UNEXPANDED FILL CY	EXPANDED	MASS ORDINATE +/- (14) CY	WASTE CY	208.0100
				EXCAVATION (1)	BORROW CY							
				CUT (2) CY					EBS (3) CY			FILL (13) FACTOR 1.20 CY
0010	1	20+26 TO 20+70	WEST APPROACH	34	0	15	19	20	24	-5	0	5
	2	20+98 TO 21+20	EAST APPROACH	18	0	16	3	35	41	-39	0	39
	UNDISTRIBUTED			0	5	0	0	0	0	0	5	0
	GRAND TOTAL			53	5	31	22	55	66	-44	5	44
TOTAL COMMON EXCAVATION				58								

1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100

2) Salvaged/Unsuable Pavement Material is included in Cut.

3) EBS Excavation to be backfilled with Cut material.

4) Salvaged/Unusable Pavement Material

5) Available Material = Cut - Salvaged/Unusuable Pavement Material

13) Expanded Fill. Factor = 1.20

14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

FINISHING ROADWAY 4197-04-71				
			213.0100	
CATEGORY	PROJECT ID		EACH	
0010	4197-04-71		1	
		TOTALS	1	

PAVING ITEMS									
			305.0110	305.0120	455.0605	465.0105	465.0315	624.0100	
			BASE AGGREGATE		TACK COAT GAL	ASPHALTIC		WATER MGAL	
CATEGORY	STA	TO	STA	TON		SURFACE	FLUMES		
0010	20+25.95	TO	20+45.95	2	13	3	5	--	0.2
	20+45.95	TO	20+67.89	2	53	4	14	--	0.8
	20+98.42	TO	21+20.36	1	51	4	14	11	0.8
	21+20.36	TO	21+40.36	2	14	3	4	--	0.2
	TOTALS			7	131	14	37	11	2.0

MOBILIZATION			
			619.1000
CATEGORY	PROJECT ID		EACH
0010	4197-04-71		1
TOTALS			1

LANDSCAPING ITEMS							
					625.0500	630.0100	630.0300
					SALVAGED TOPSOIL	SEEDING	
CATEGORY	STA	TO	STA	OFFSET		MIXTURE NO. 30	BORROW PIT
					SY	LB	LB
0010	20+25.95	TO	20+67.89	LT	41	1	--
	20+25.95	TO	20+67.89	RT	34	1	--
	20+98.42	TO	21+40.36	LT	40	1	--
	20+98.42	TO	21+40.36	RT	29	1	--
BORROW PIT					--	--	4
SUB-TOTAL					144	4	4
25% UNDISTRIBUTED QUANTITIES					36	1	1
TOTALS					180	5	5

<u>EROSION CONTROL</u>										
				628.1504	628.1520	628.1905	628.1910	628.2002	628.6005	628.7504
				SILT FENCE		EROSION CONTROL MOBILIZATIONS		EROSION MAT CLASS I	TURBIDITY	TEMPORARY
				MAINTENANCE		EMERGENCY		TYPE A	BARRIERS	CHECKS
CATEGORY	STA	TO	STA	LF	LF	EACH	EACH	SY	SY	LF
0010	20+25.95	TO	20+67.89	125	125	--	--	75	31	20
	20+98.42	TO	21+40.36	120	120	--	--	68	37	20
	UNDISTRIBUTED			60	60	5	3	37	32	20
TOTALS				305	305	5	3	180	100	60

PERMANENT SIGNING									
			634.0612				637.2230		
			POSTS WOOD				SIGNS		
			4x6-INCH	SIGN	SIGN SIZE		TYPE II		
CATEGORY	SIGN NO.	STA	OFFSET	x 12-FT EACH	CODE & SIZE	SIGN MESSAGE	W X H IN X IN	REFLECTIVE F SF	REMARKS
0010	1	20+55	15' LT	1	W5-52L	--	12 X 36	3.00	PLACE AT END OF WING WALL
	2	20+60	15' RT	1	W5-52R	--	12 X 36	3.00	PLACE AT END OF WING WALL
	3	21+06	16' LT	1	W5-52R	--	12 X 36	3.00	PLACE AT END OF WING WALL
	4	21+11	16' RT	1	W5-52L	--	12 X 36	3.00	PLACE AT END OF WING WALL
TOTALS				4				12.00	

REMOVING SIGNS					
			638.2602	638.3000	
			REMOVING SIGNS		
	SIGN	SIGN		SMALL	
CATEGORY	NO.	CODE & SIZE	MESSAGE	TYPE II EACH	SUPPORTS EACH
0010	1R	W5-52L	--	1	1
	2R	W5-52R	--	1	1
	3R	W5-52R	--	1	1
	4R	W5-52L	--	1	1
	TOTALS			4	4

FIELD OFFICE TYPE B			642.5001
CATEGORY	PROJECT ID		EACH
0010	4197-04-71		1
TOTALS			1

PROJECT NO:	4197-04-71	HWY: LOCAL ROAD	COUNTY: SHEBOYGAN	MISCELLANEOUS QUANTITIES	SHEET	E
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3

TRAFFIC CONTROL

		643.0420	643.0705	643.0900	643.5000			
		BARRICADES		WARNING LIGHTS		SIGNS		TRAFFIC
		TYPE III		TYPE A				CONTROL
CATEGORY	LOCATION	EACH	DAY	EACH	DAY	EACH	DAY	EA
0010	MAINLINE CLOSURE	14	910	21	1,365	16	1,040	--
	UNDISTRIBUTED	--	--	--	--	--	--	1
	TOTALS	910		1,365		4,859		1

MARKING LINE EPOXY 4-INCH

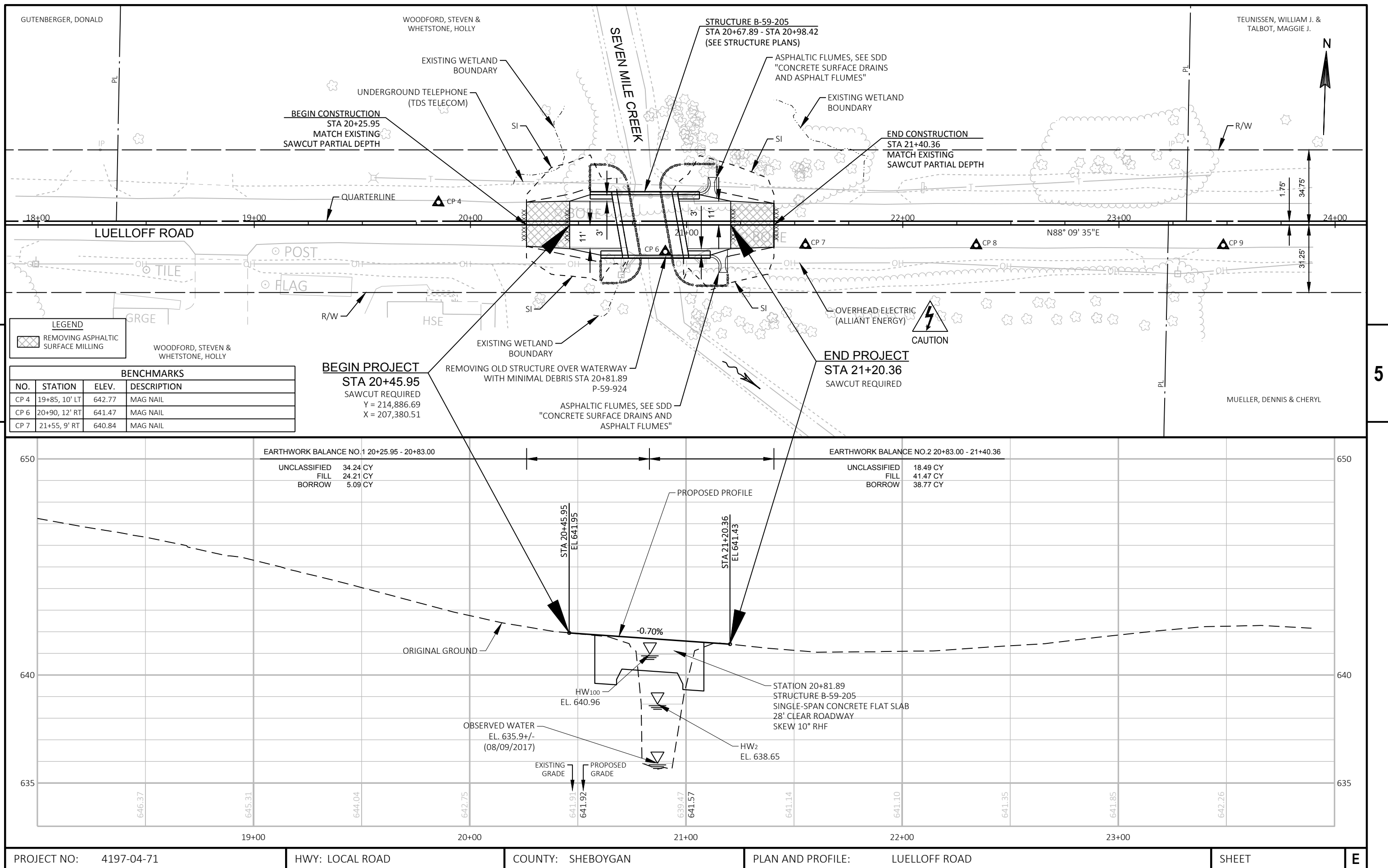
				646.1020	
				(WHITE)	(YELLOW)
CATEGORY	STA	TO	STA	LF	LF
0010	20+25.95	21+40.36		149	229
			SUBTOTALS	149	229
			TOTAL	378	

CONSTRUCTION STAKING

			650.4500	650.5000	650.6500	650.9910	650.9920
					STRUCTURE	SUPPLEMENTAL	
					LAYOUT	CONTROL	SLOPE
					B-59-205	4197-04-71	STAKES
CATEGORY	LOCATION		SUBGRADE	BASE			
			LF	LF	LS	LS	LF
0010	STA 20+25.95 TO STA 20+45.95		--	--	--	--	20
	STA 20+45.95 TO STA 20+67.89		22	22	--	--	22
	STA 20+67.89 TO STA 20+98.42		--	--	--	--	--
	STA 20+98.42 TO STA 21+20.36		22	22	--	--	22
	STA 21+20.36 TO STA 21+40.36		--	--	--	--	20
	UNDISTRIBUTED		--	--	--	1	--
	TOTALS		44	44	--	1	84
0020	STA 20+67.89 TO STA 20+98.42		--	--	1	--	--
	TOTALS		--	--	1	--	--

SAWING ASPHALT

		690.0150
CATEGORY	STA	LF
0010	20+25.95	20
	20+45.95	21
	21+20.36	20
	21+40.36	20
	TOTALS	81

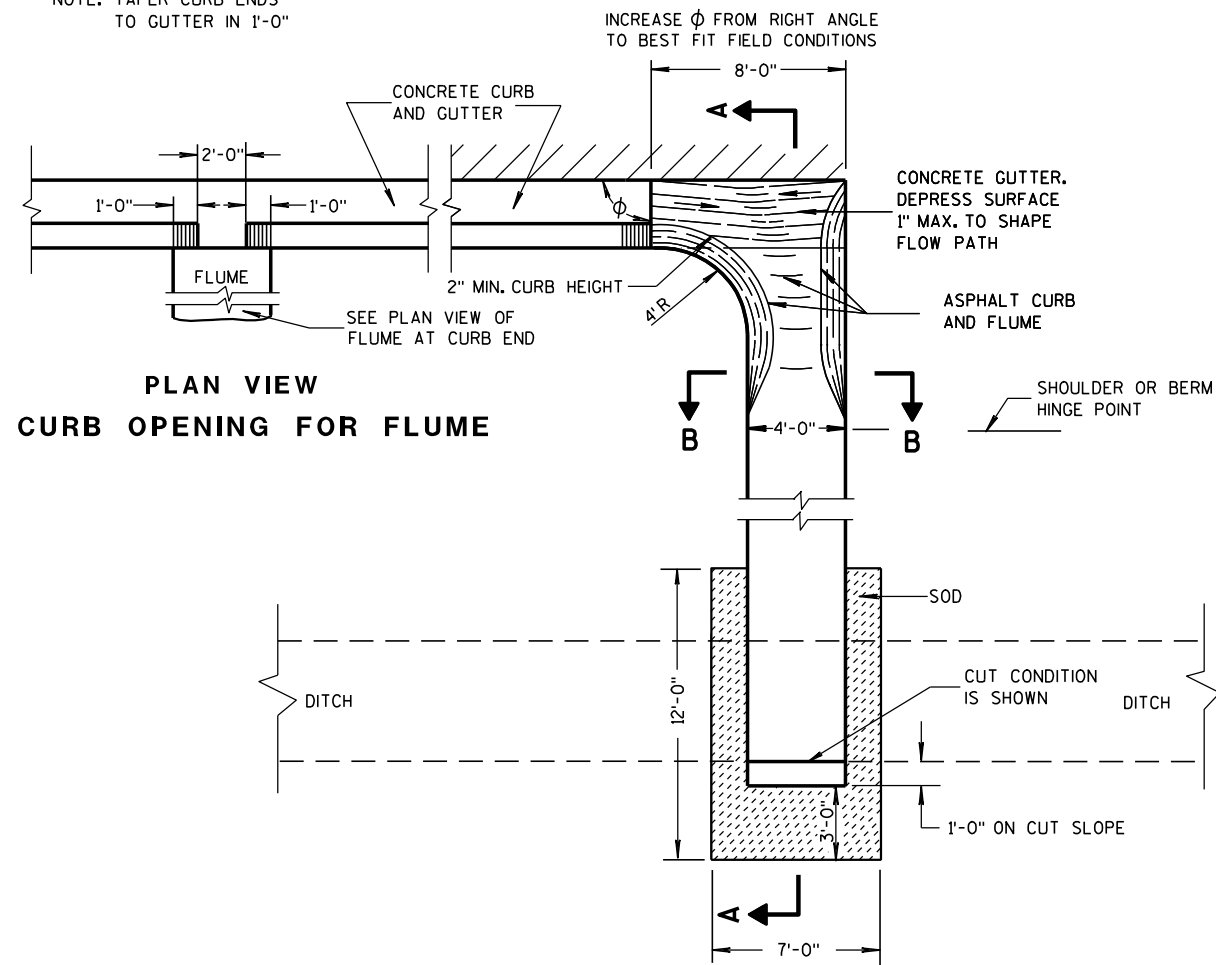


Standard Detail Drawing List

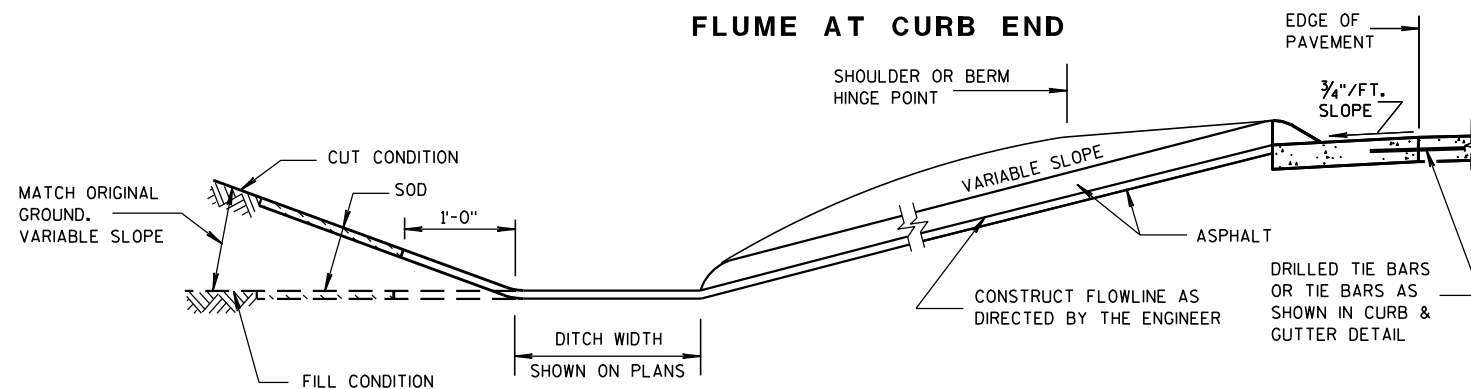
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

ASPHALTIC FLUME

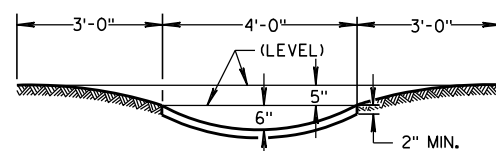
NOTE: TAPER CURB ENDS
TO GUTTER IN 1'-0"



PLAN VIEW FLUME AT CURB END



SECTION A-A



SECTION B-B

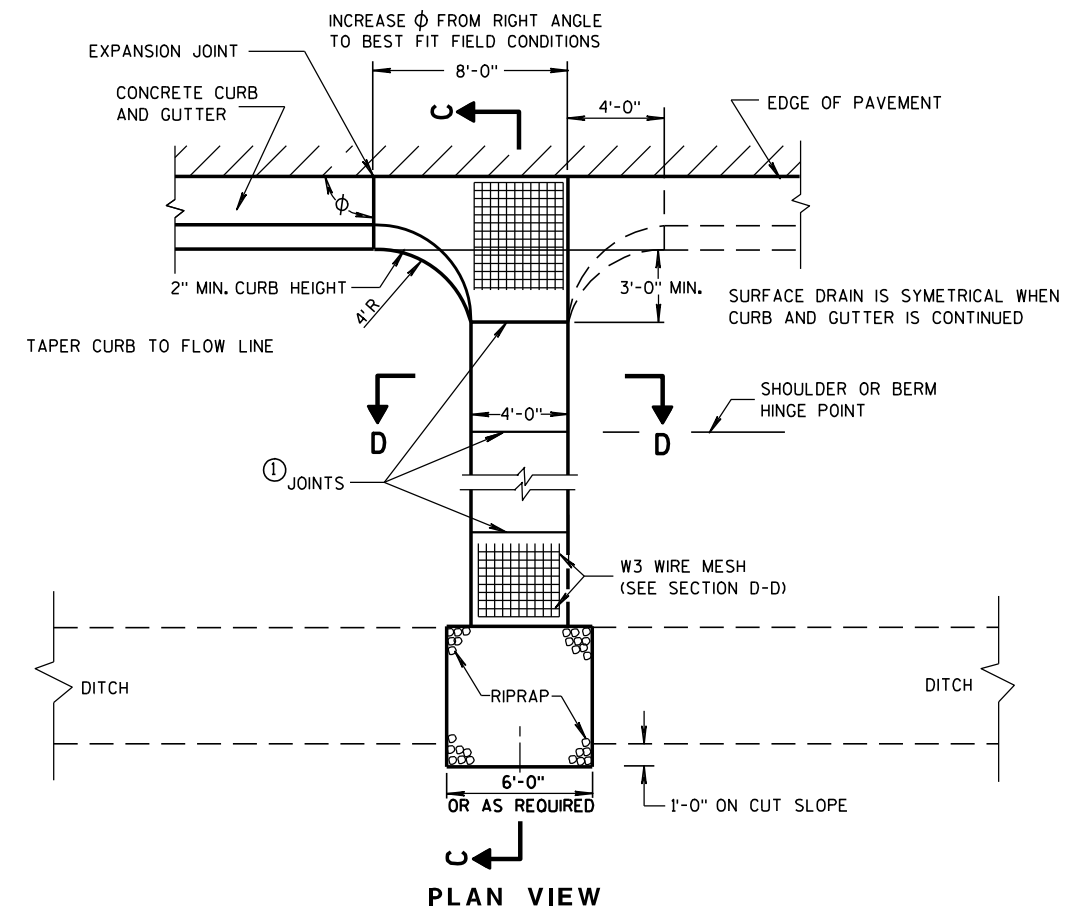
GENERAL NOTES

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

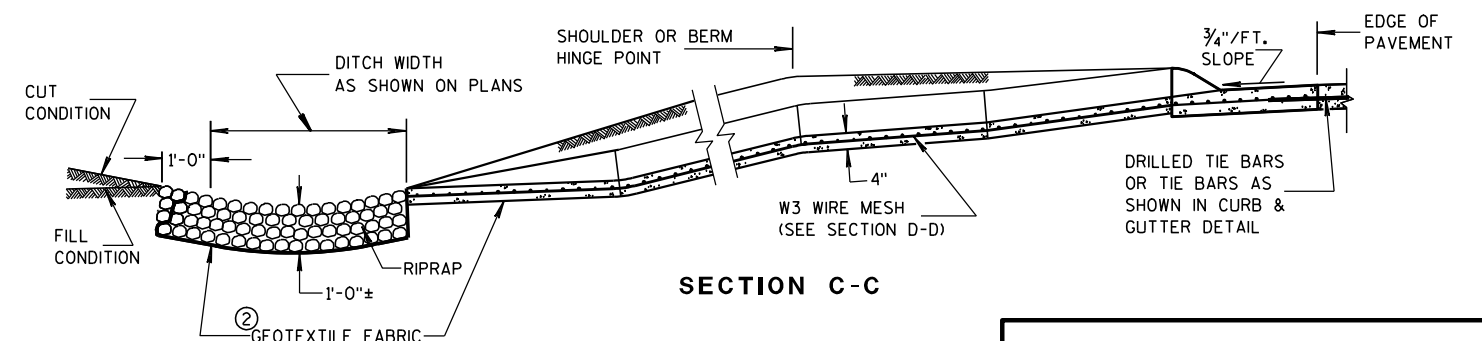
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

- ① JOINTS SHALL BE 1/8" TO 1/4" INCH WIDE BY 1 1/2" INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

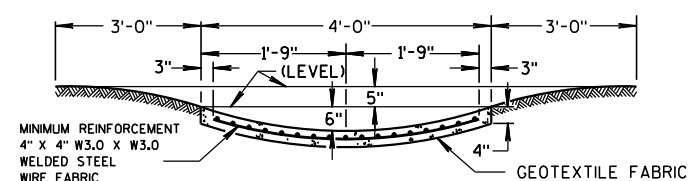
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

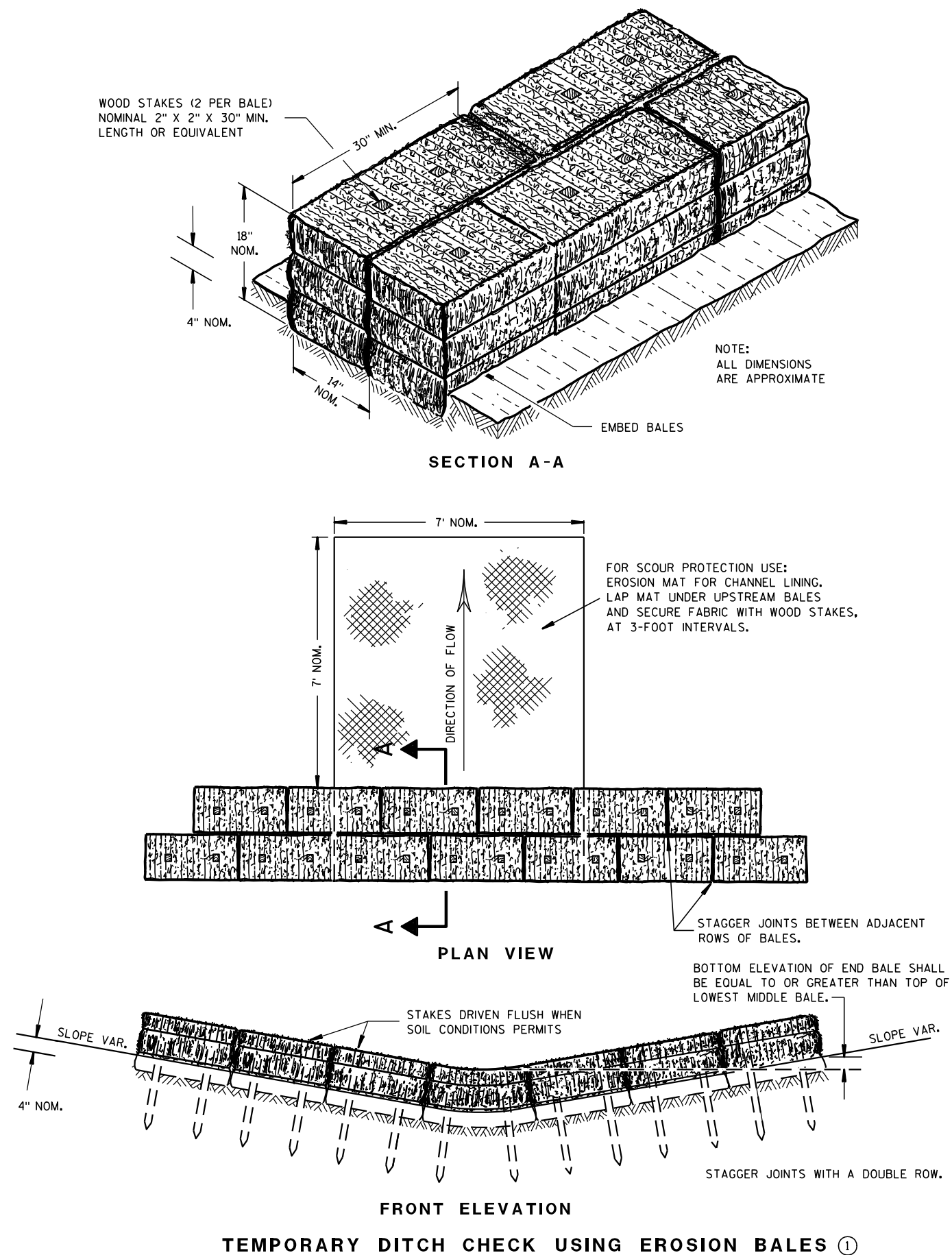
APPROVED

9-4-08

DATE

FHWA

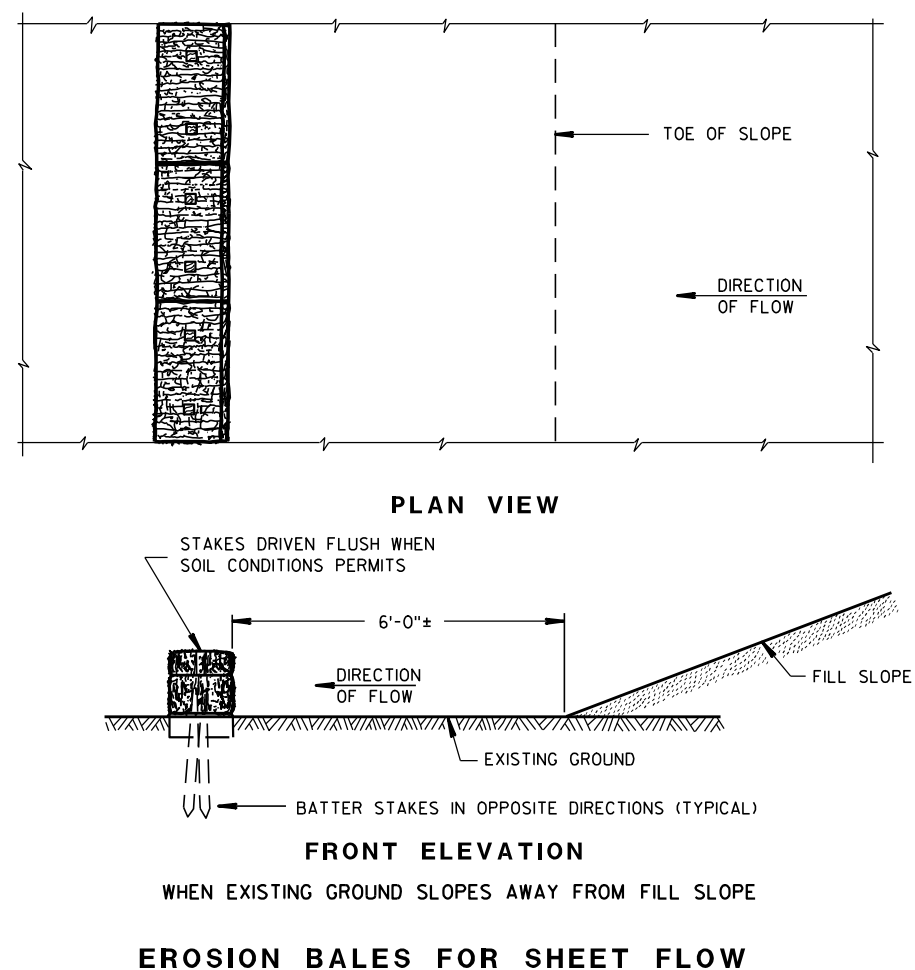
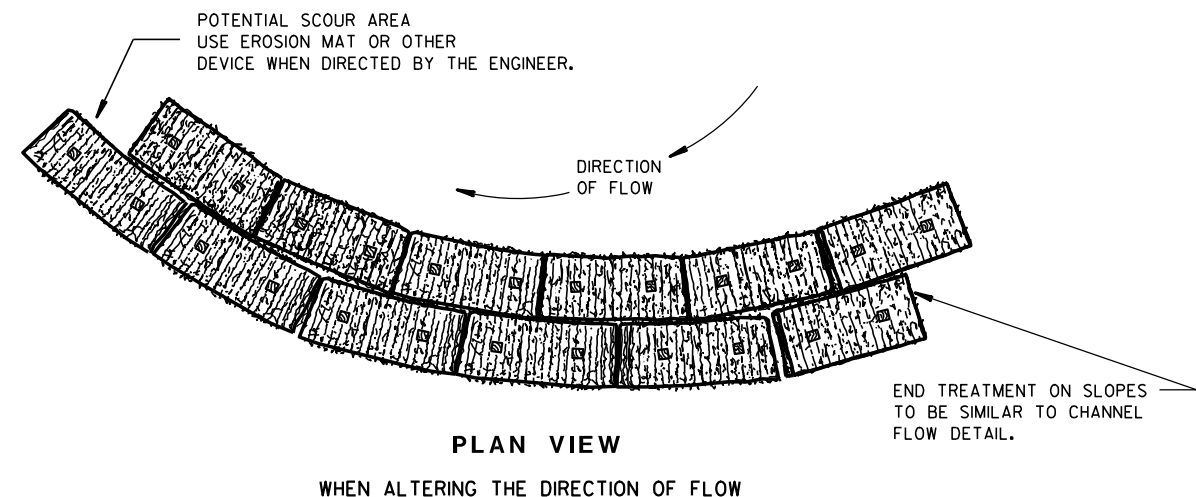
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



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.

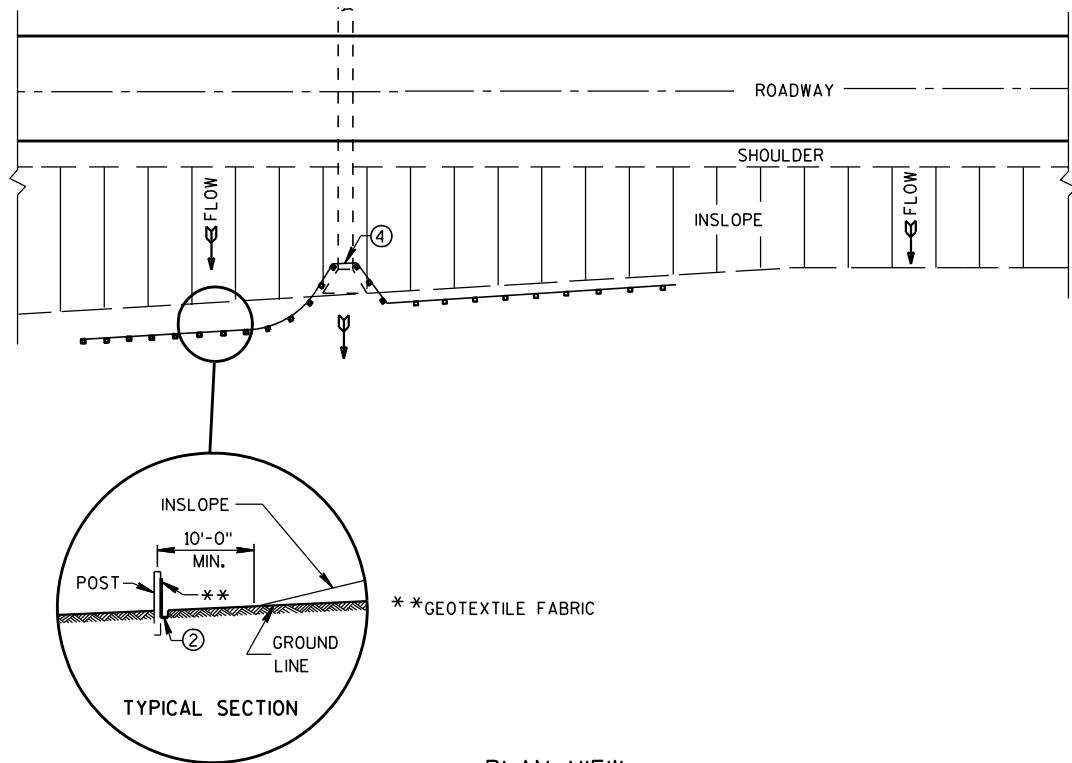
TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

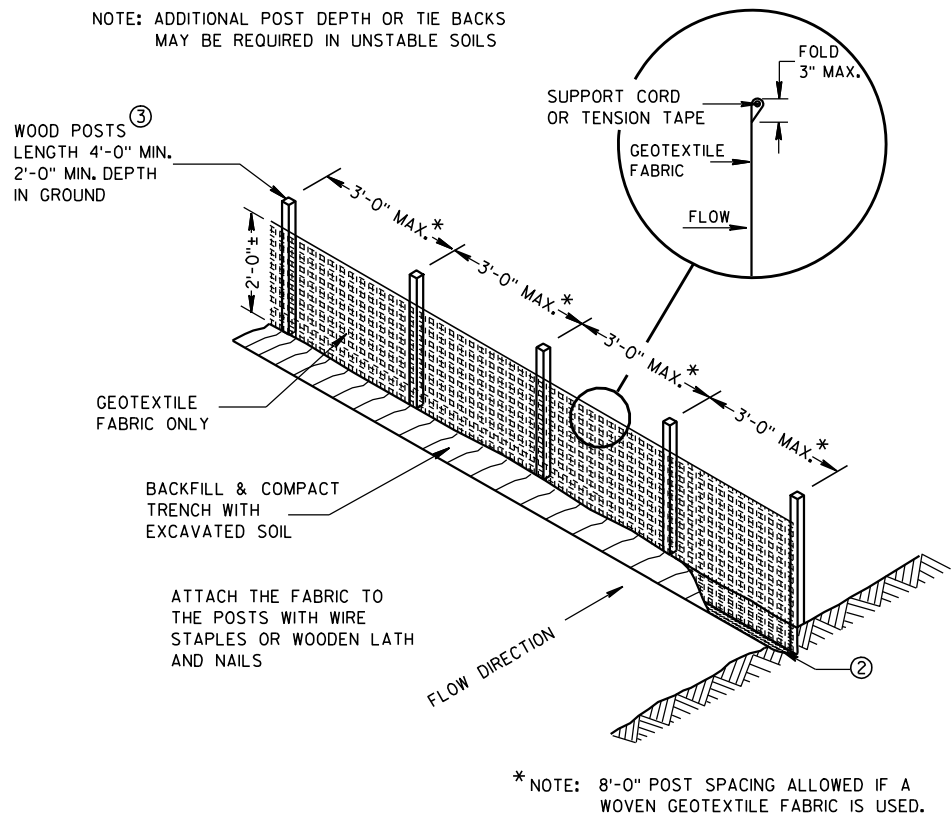
APPROVED

6/04/02
DATE/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

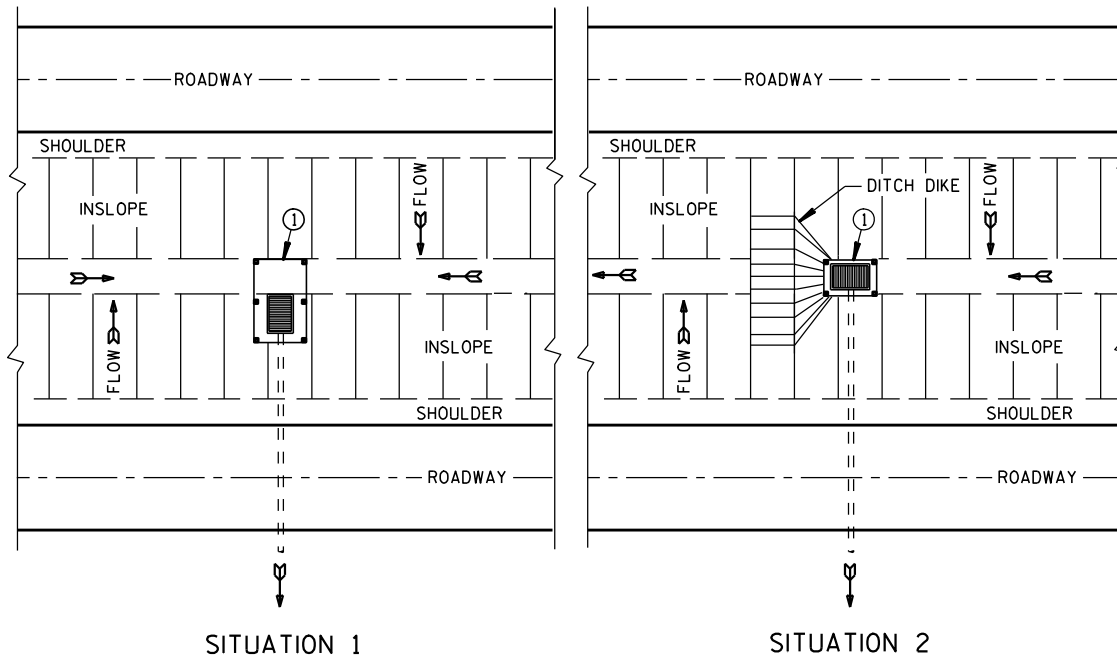
FHWA



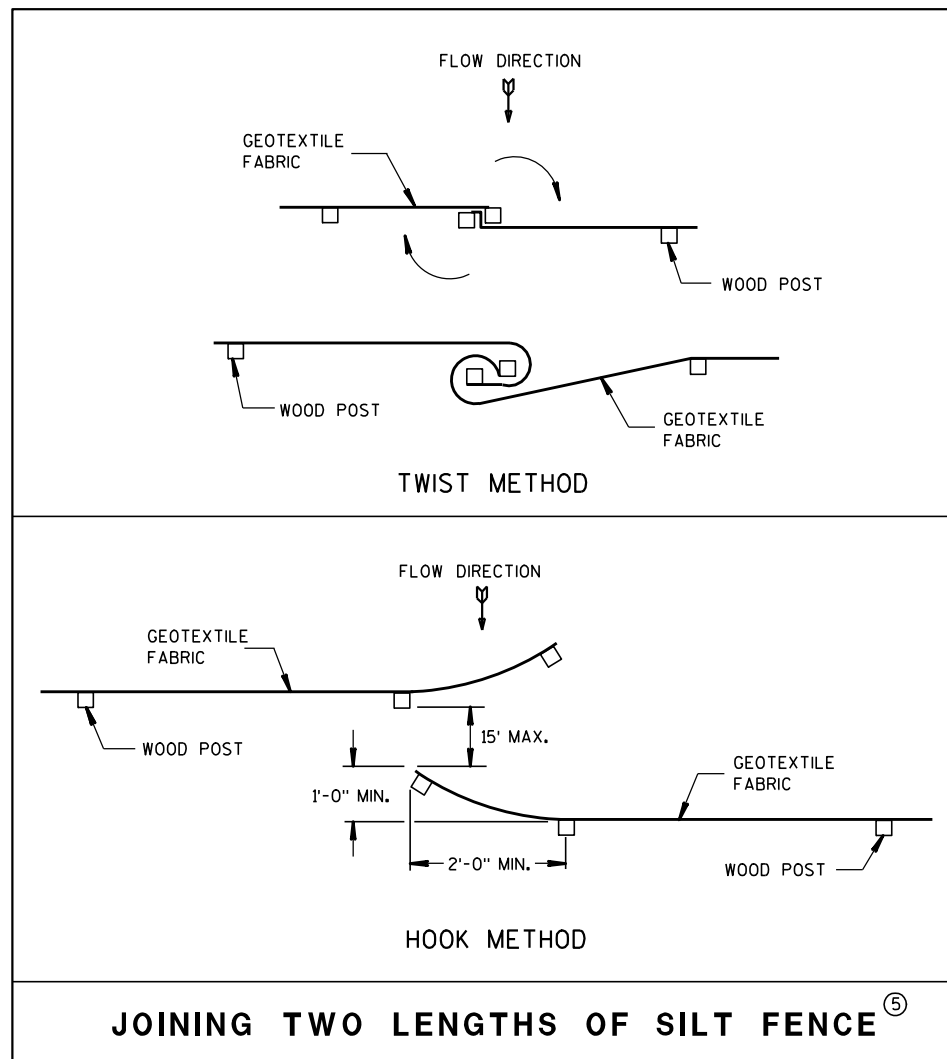
PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE



SILT FENCE



PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

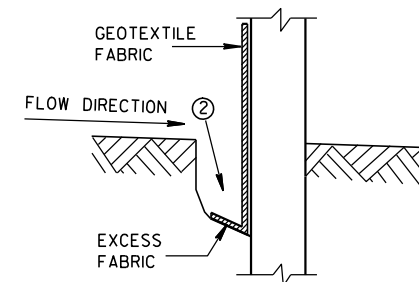


JOINING TWO LENGTHS OF SILT FENCE^⑤

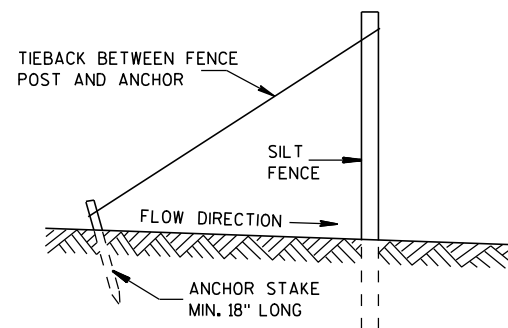
GENERAL NOTES

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

- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

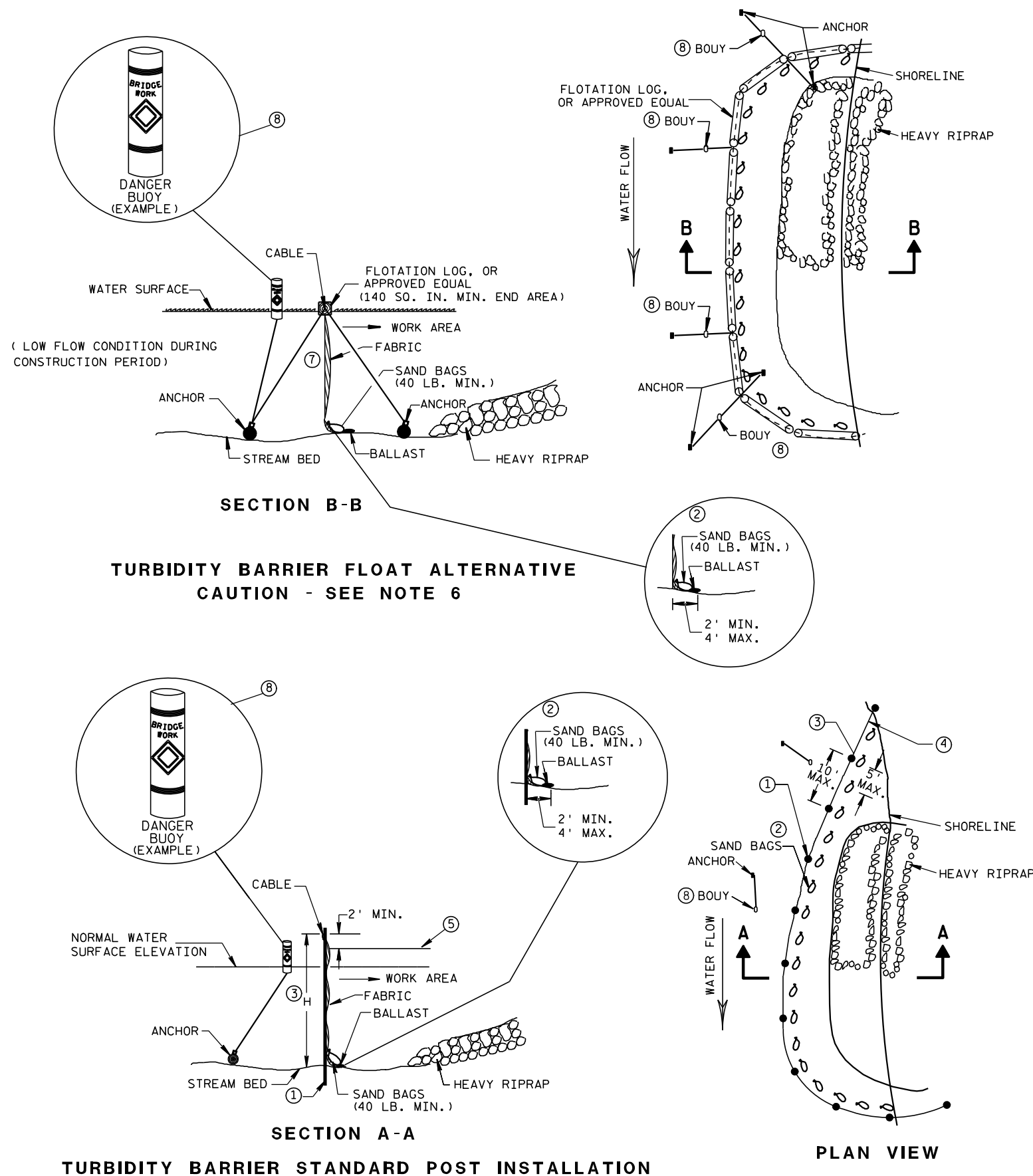


TRENCH DETAIL



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-29-05 DATE	/S/ Beth Canestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

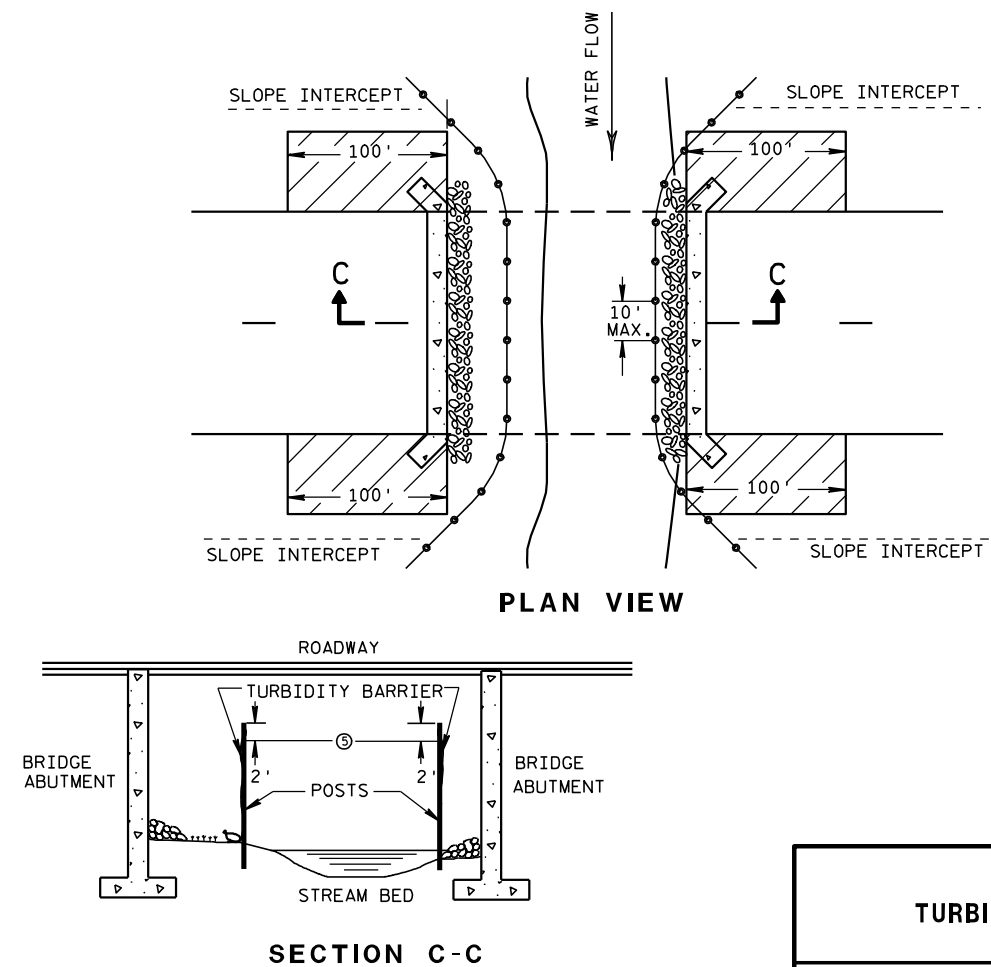


GENERAL NOTES

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

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

- ① DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.
- ② SANDBAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.
- ③ WHEN BARRIER HEIGHT, H, EXCEEDS 8 FT., POST SPACING MAY NEED TO BE DECREASED.
- ④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.
- ⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE 02 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.
- ⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.
- ⑦ ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.
- ⑧ USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

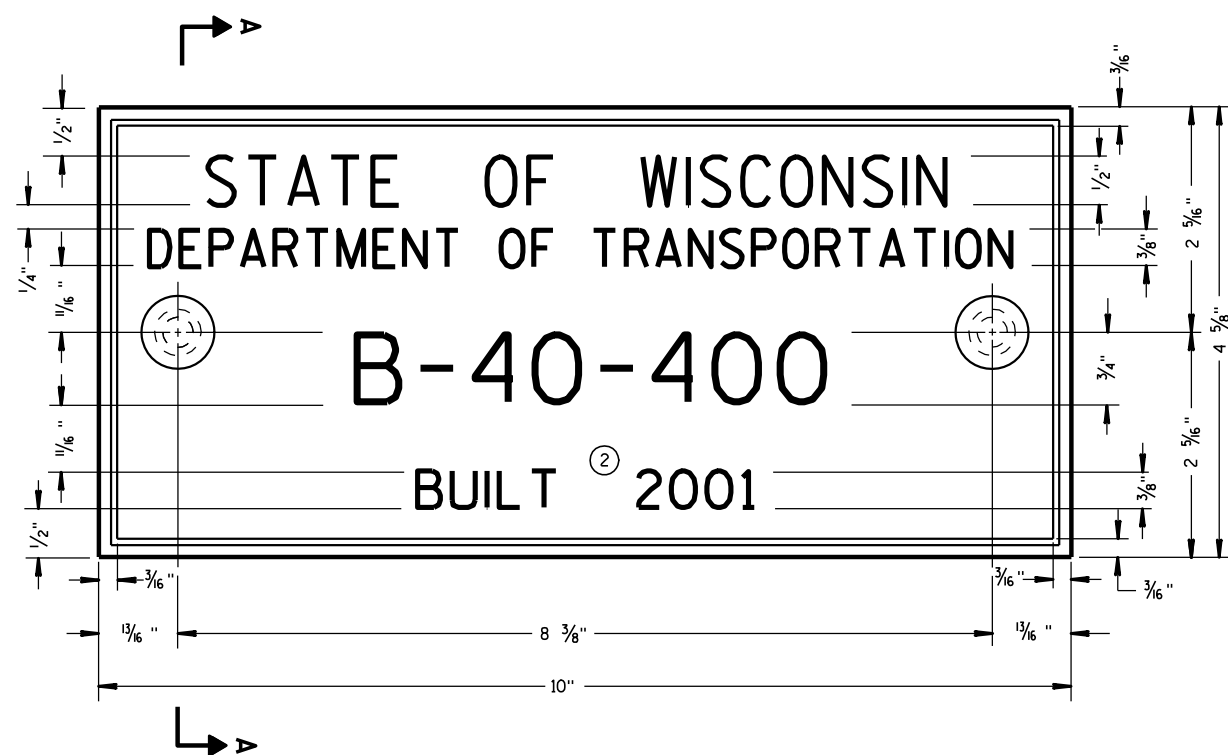
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02
DATE

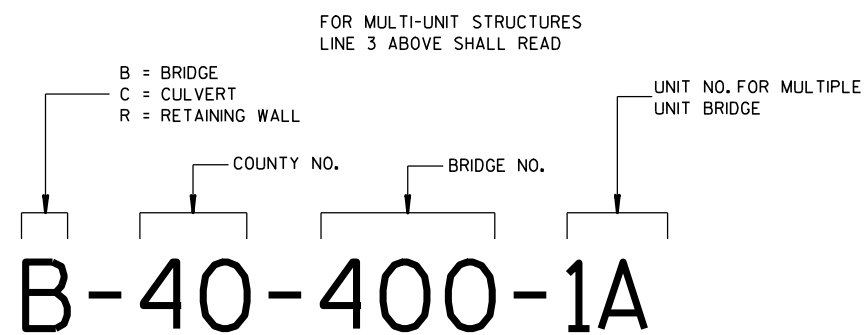
FHWA

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



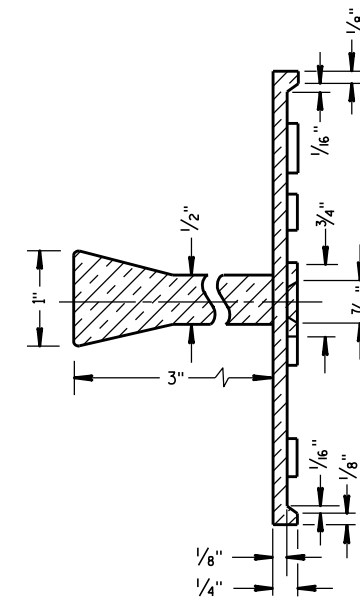
NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

GENERAL NOTES

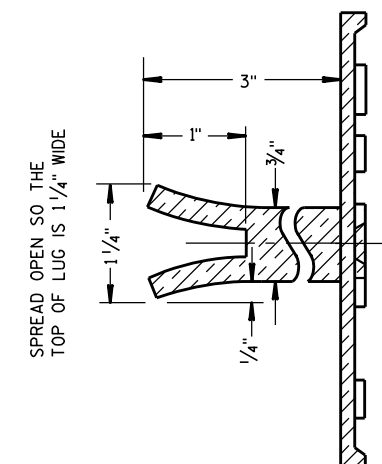
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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

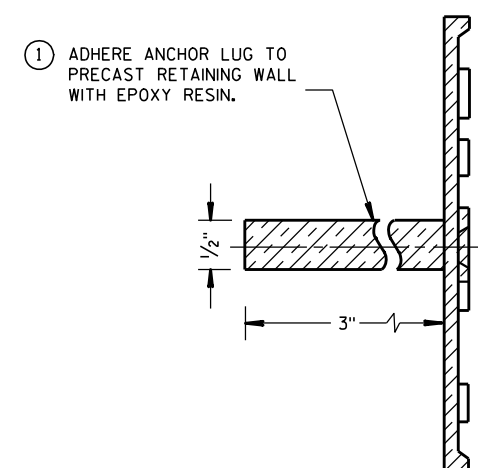
- ① EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ② REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE
(STRUCTURES)

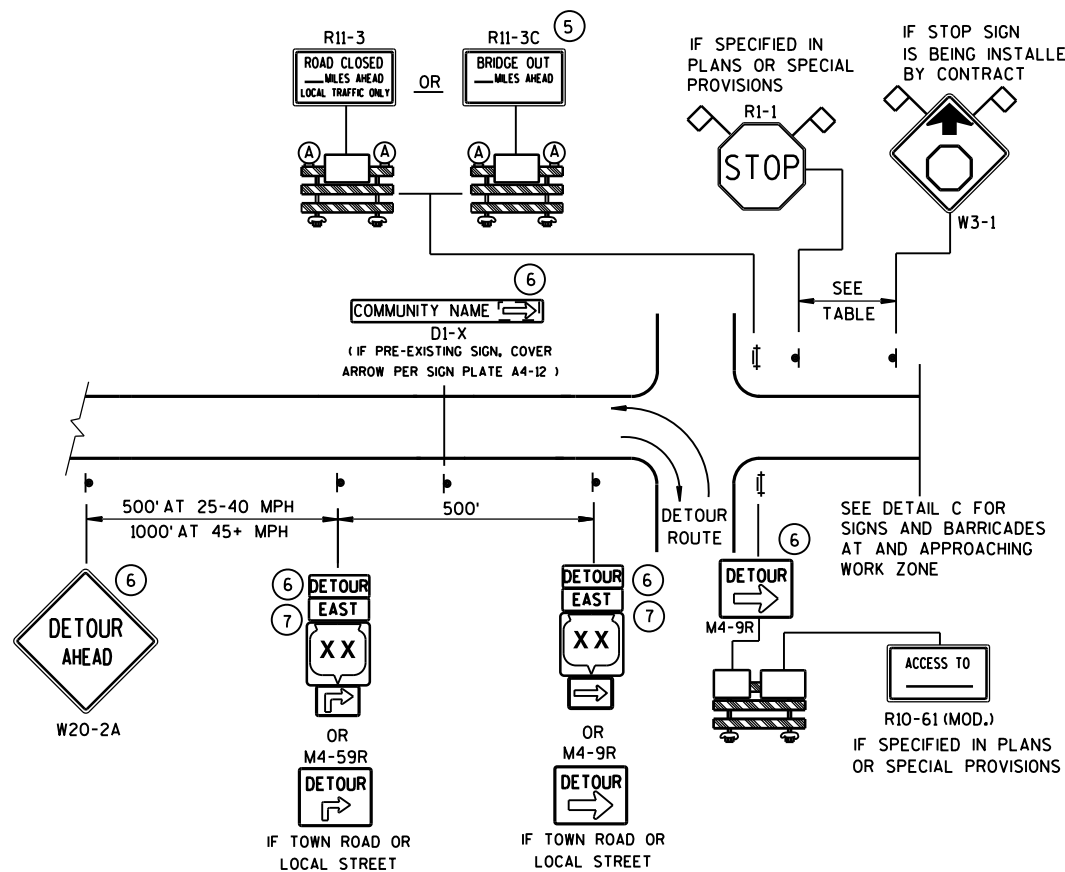
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

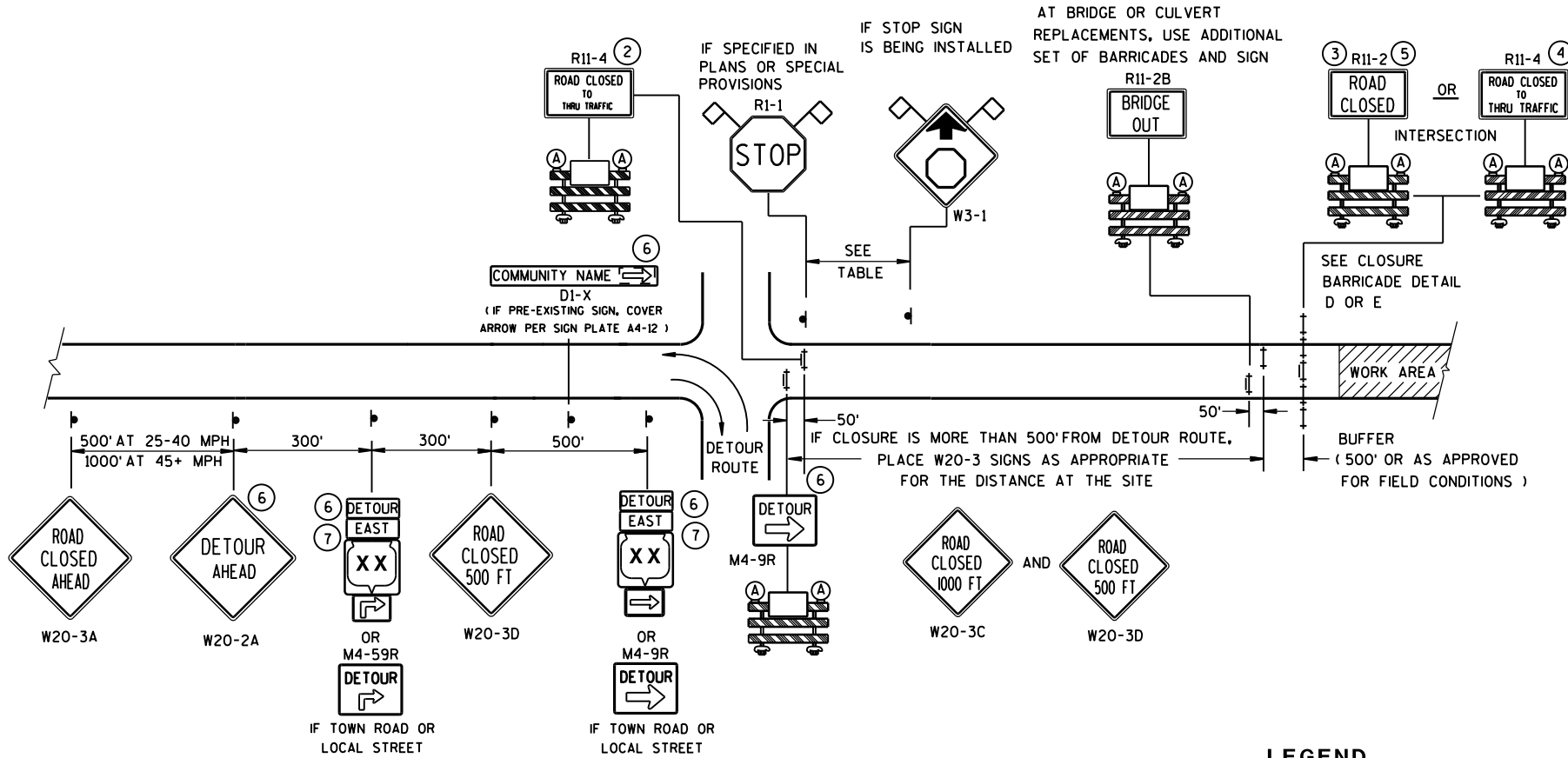
3/26/10
DATE

FHWA

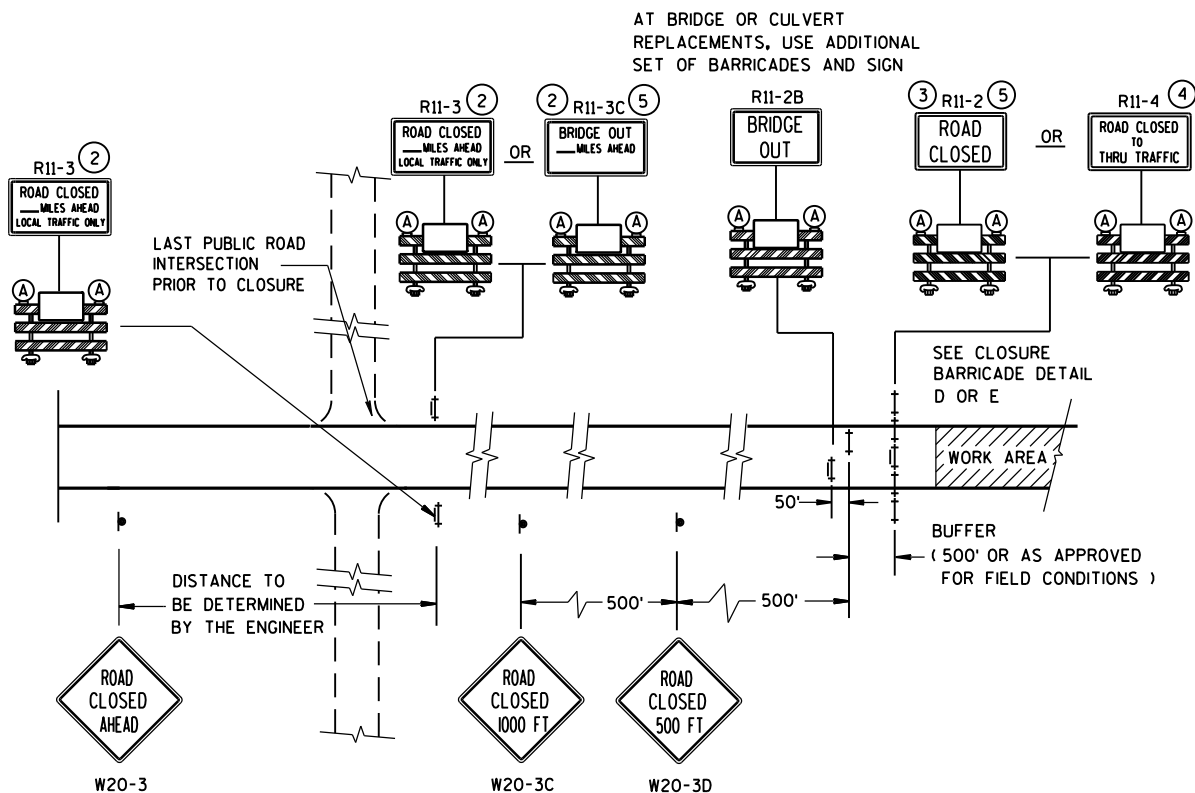
/S/ Scot Becker
CHIEF STRUCTURAL DEVELOPMENT ENGINEER



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE LESS THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

LEGEND

- SIGN ON PERMANENT SUPPORT
- ⊥ TYPE III BARRICADE
- ⊥ TYPE III BARRICADE WITH ATTACHED SIGN
- Ⓐ TYPE "A" WARNING LIGHT (FLASHING)

WORK AREA

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

M05-1 OR M06-1

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

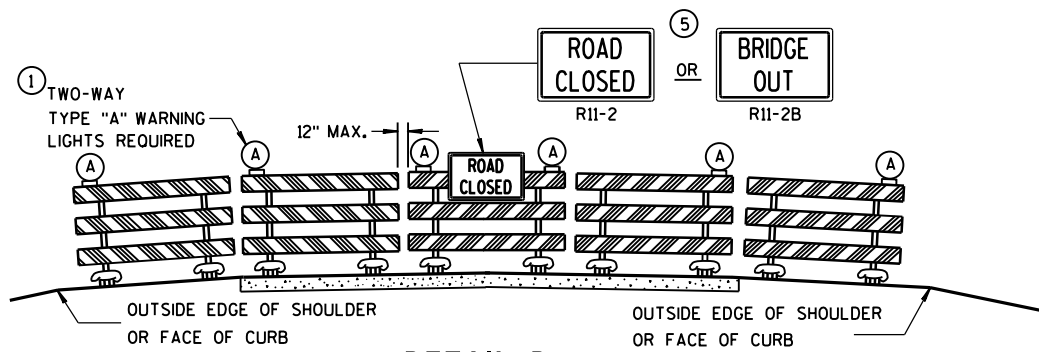
SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

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

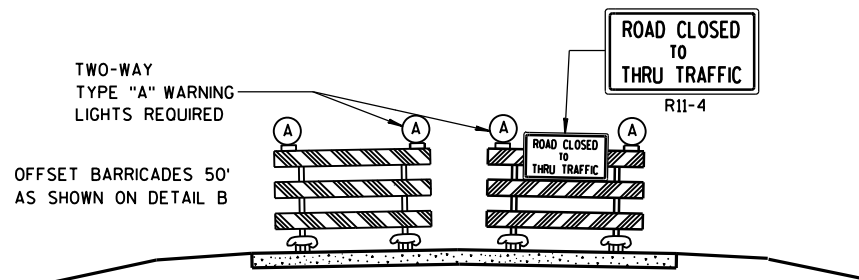
BARRICADES AND SIGNS
FOR
MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2-SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

R11-2 SHALL BE 48" X 30".

R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".

M4-9 SHALL BE 30" X 24".

M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)

M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)

M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)

M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)

D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

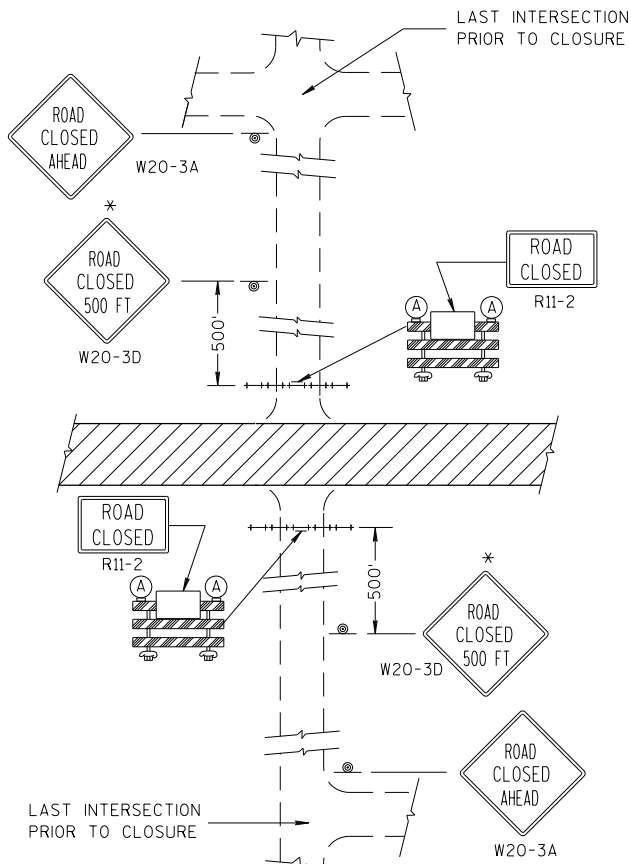
R1-1 SHALL BE 36" X 36".

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

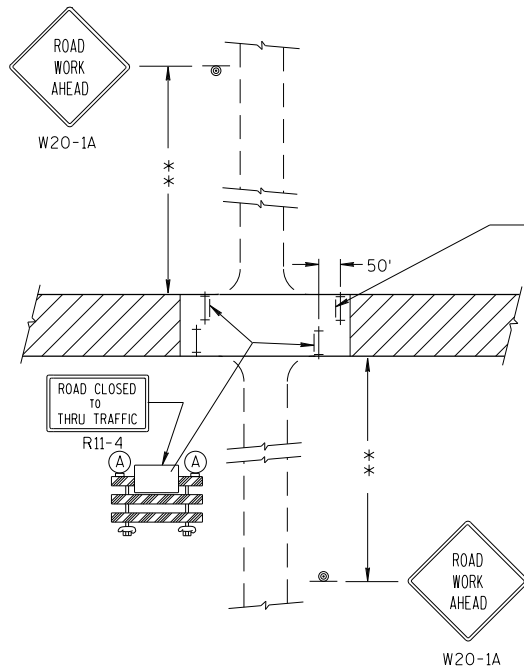
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

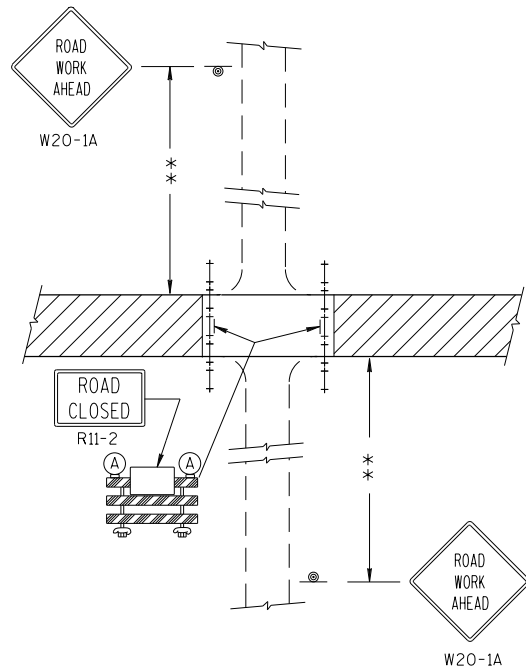
Sept. 2015 /S/ Peter Amokobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER



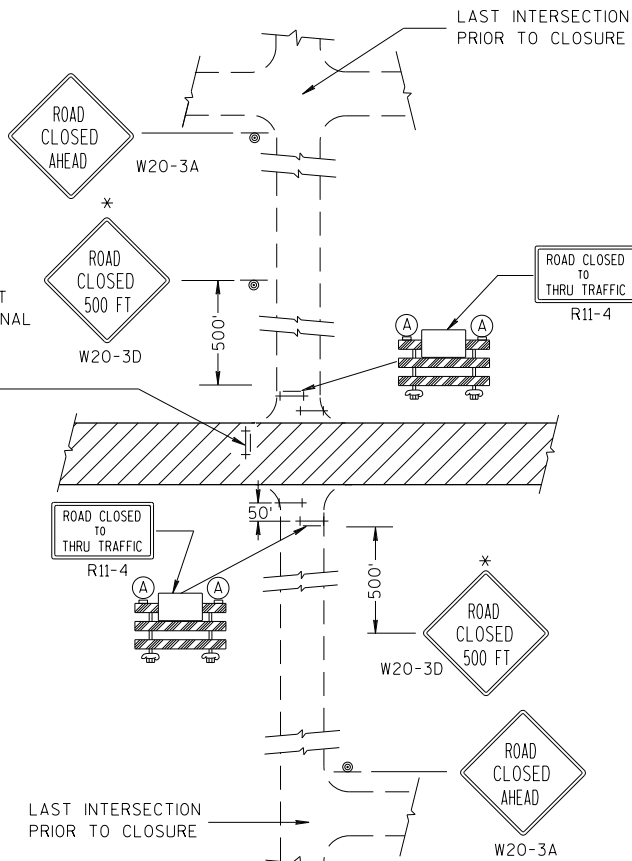
DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS).



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED. NO ACCESS TO PROJECT).



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS TO PROJECT)

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.

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

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 AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

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

R11-2 SHALL BE 48" X 30".

R11-4 AND R11-3 SHALL BE 60" X 30".

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

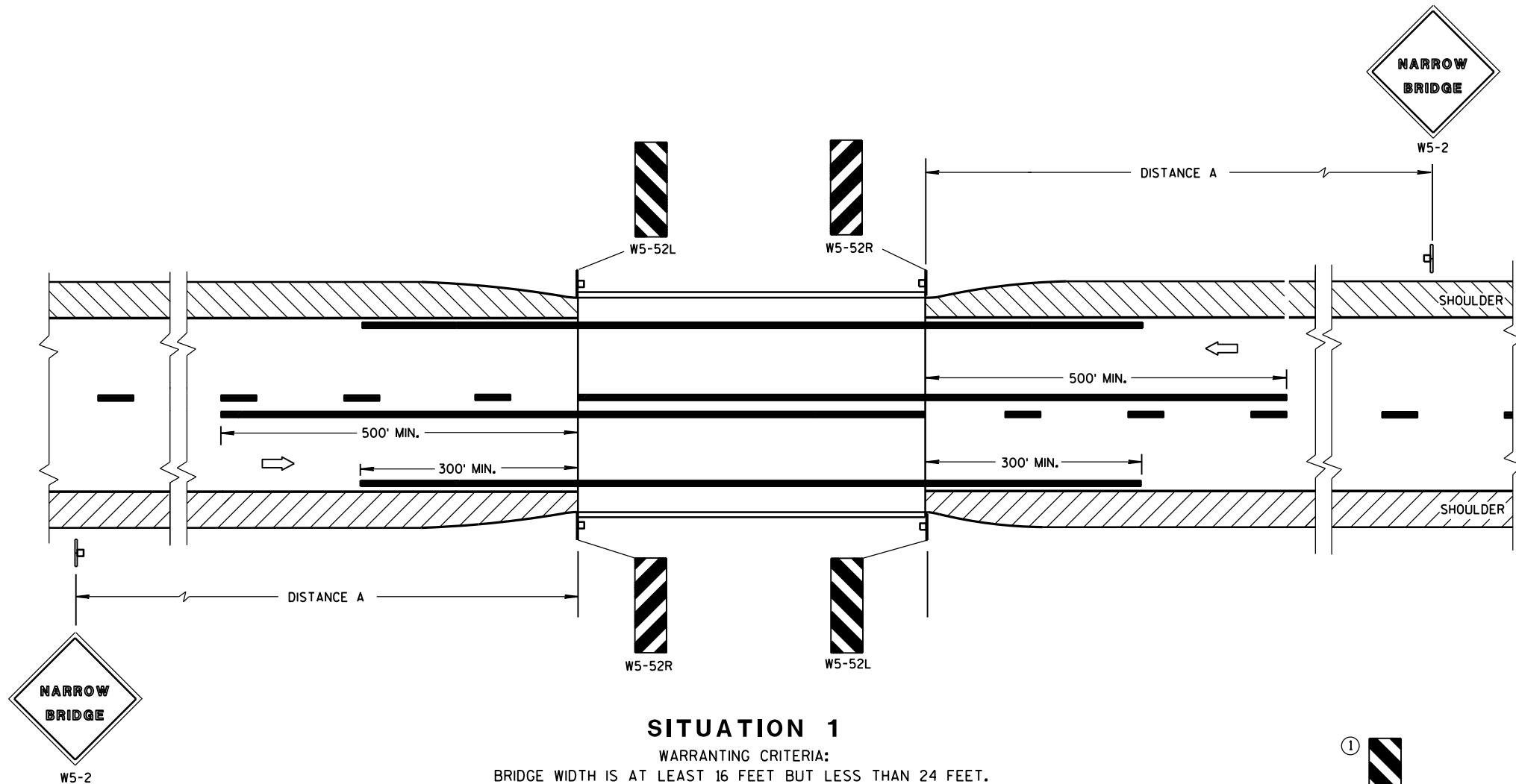
LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

**BARRICADES AND SIGNS
FOR
SIDEROAD CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA



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

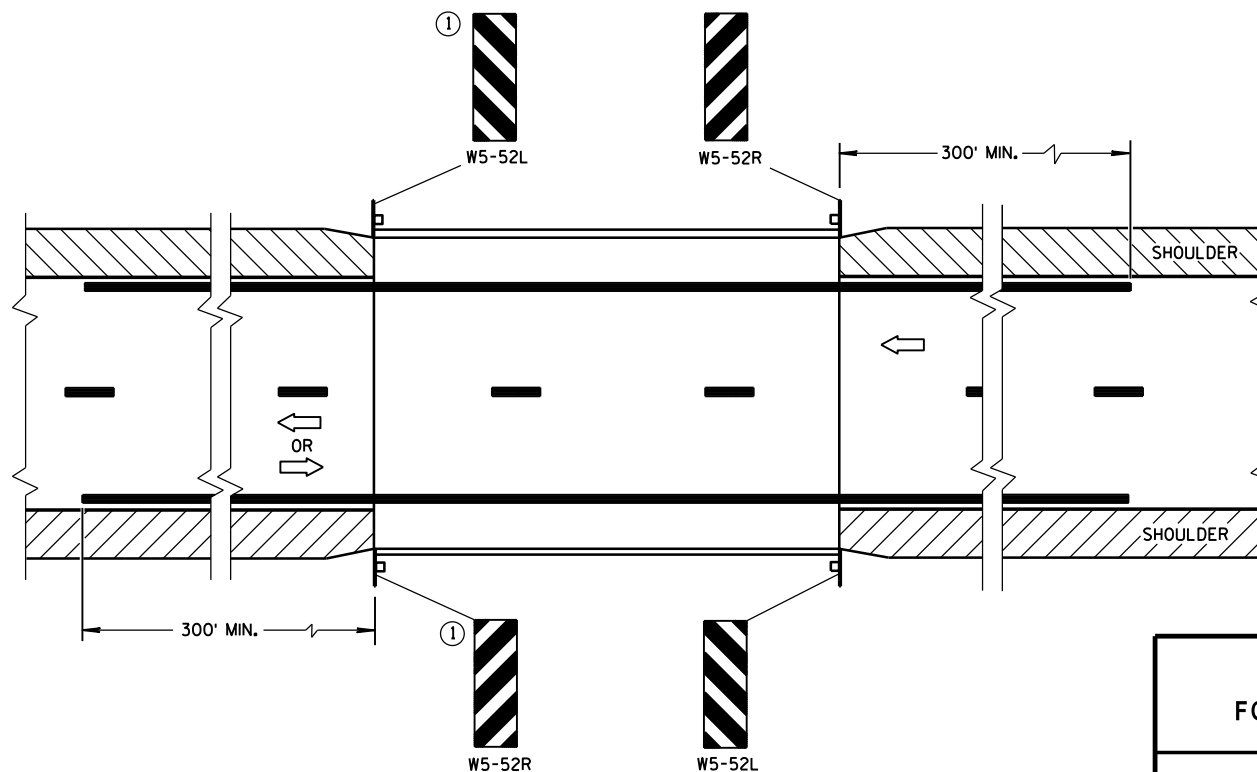
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

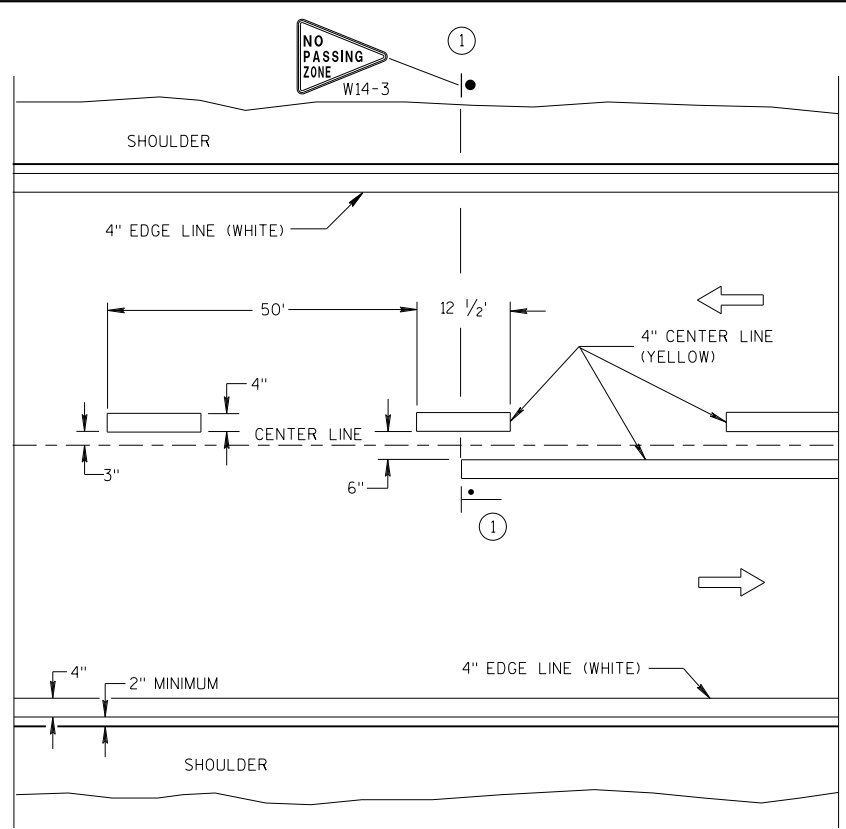
June 2017

DATE

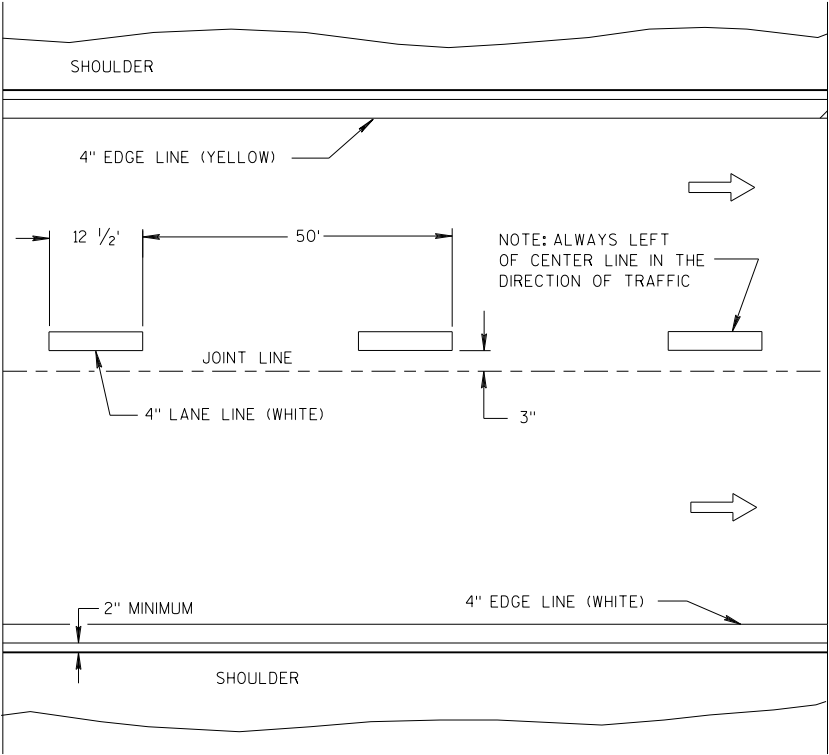
FHWA

/S/ Matthew R. Rauch

STATE SIGNING AND MARKING ENGINEER

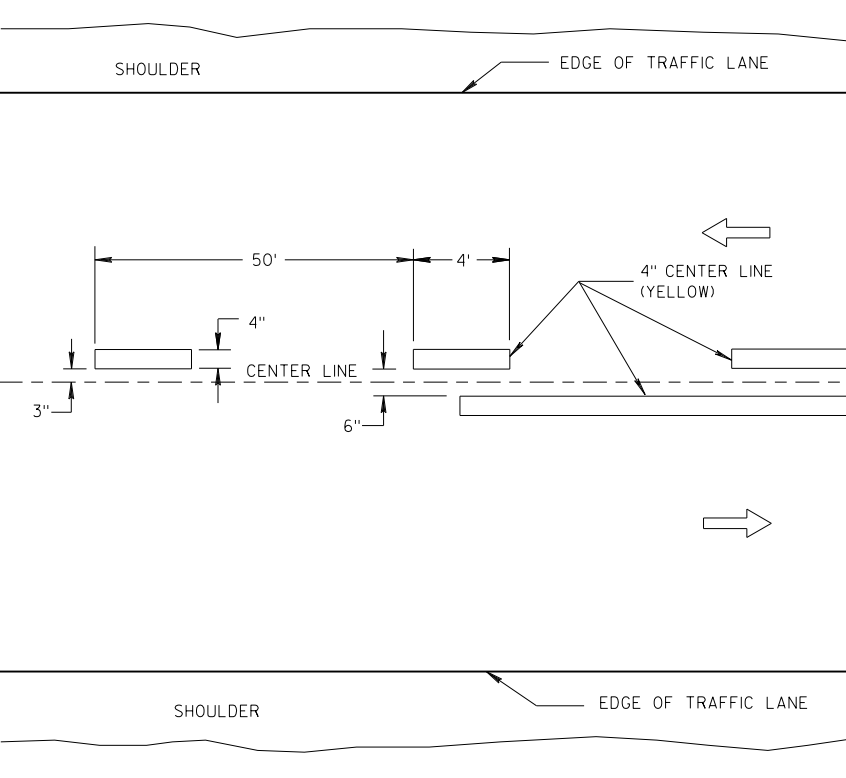


TWO WAY TRAFFIC

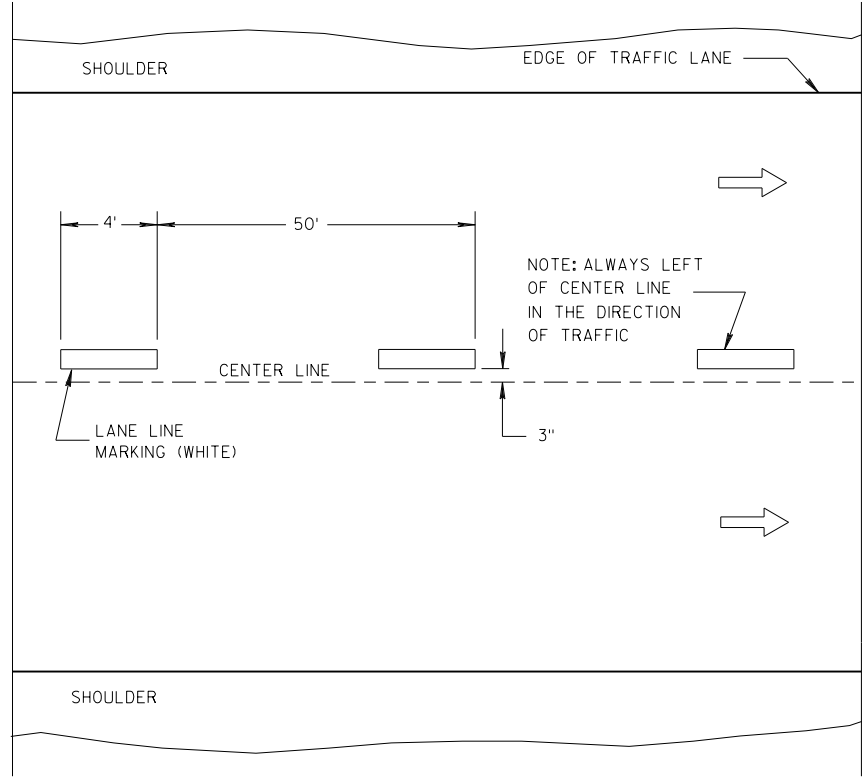


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

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

NOTE

ARROW SYMBOL (➡) SHOWS DIRECTION OF TRAVEL

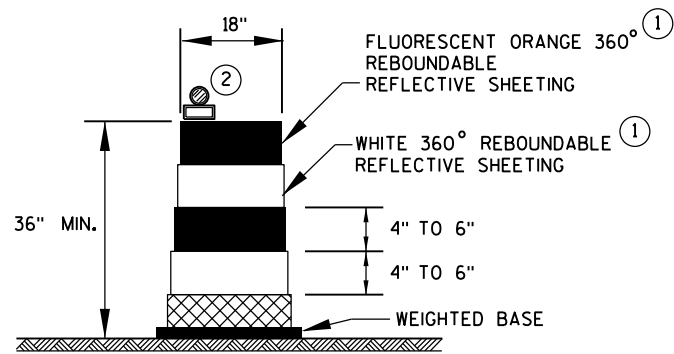
LEGEND

- "T" MARKING
- POST MOUNTED SIGN

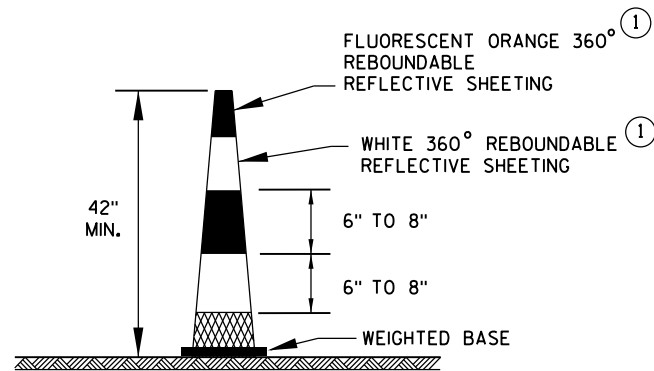
LONGITUDINAL MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA



DRUM

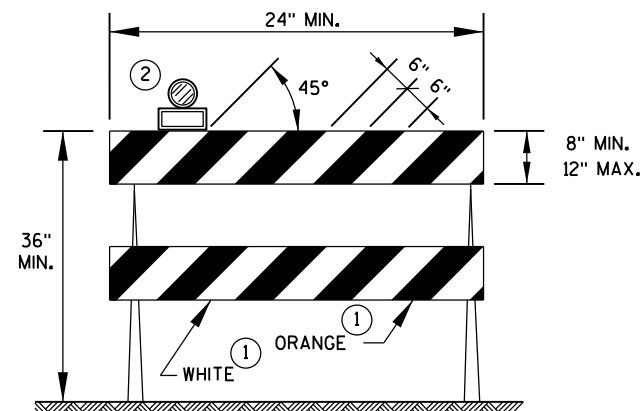


42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS

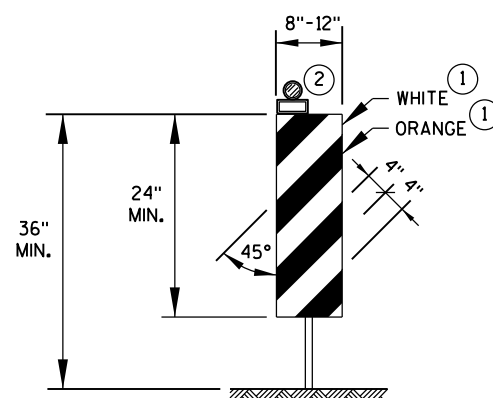
GENERAL NOTES

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



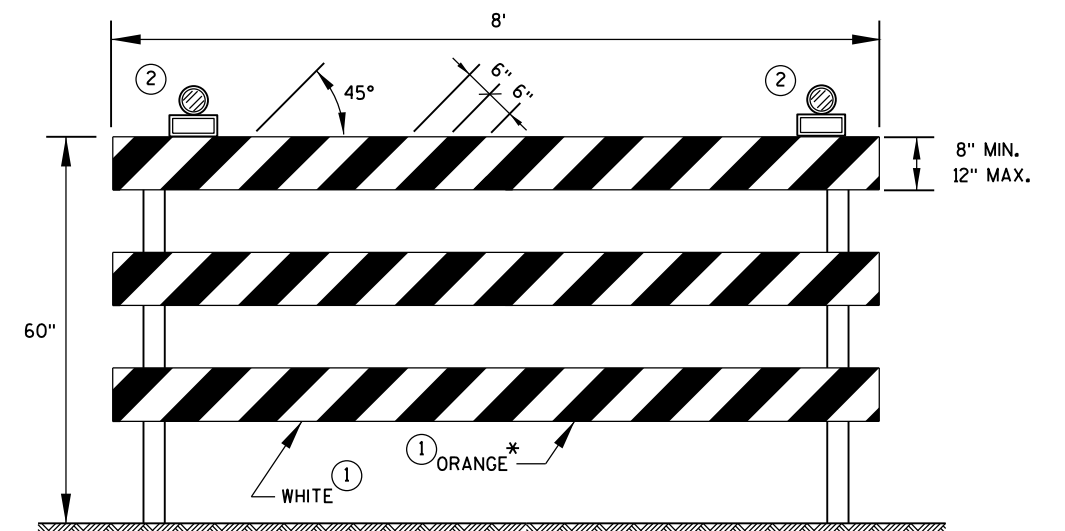
TYPE 2 BARRICADE

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



VERTICAL PANEL

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



TYPE 3 BARRICADE

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

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

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

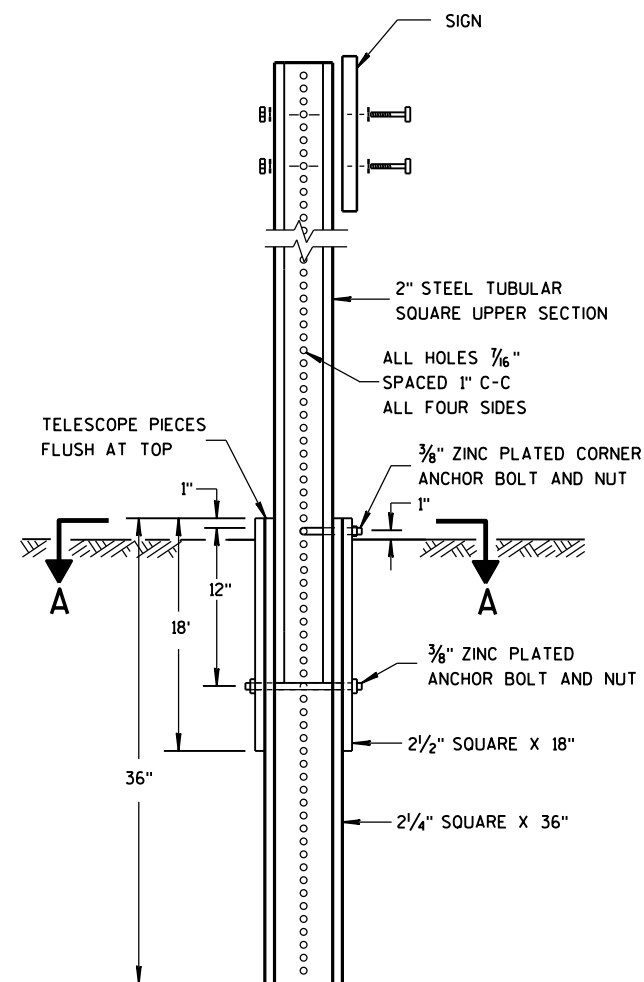
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017
DATE

FHWA

/S/ Andrew Heidtke
WORK ZONE ENGINEER

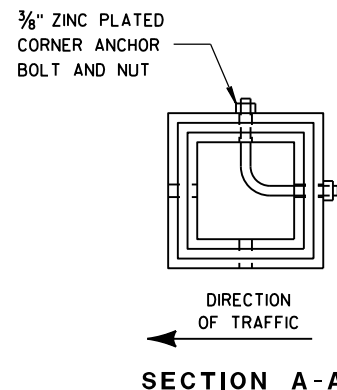


DETAIL OF TUBULAR
STEEL SIGN POST

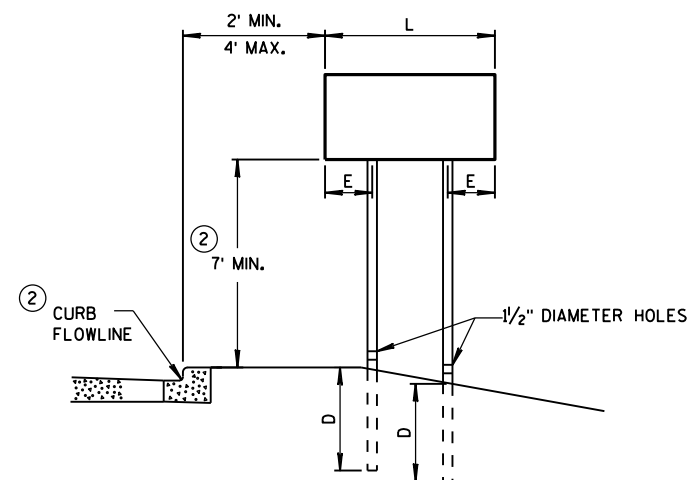
TUBULAR STEEL POSTS

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

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL
BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).
SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED
ON TUBULAR STEEL POSTS.



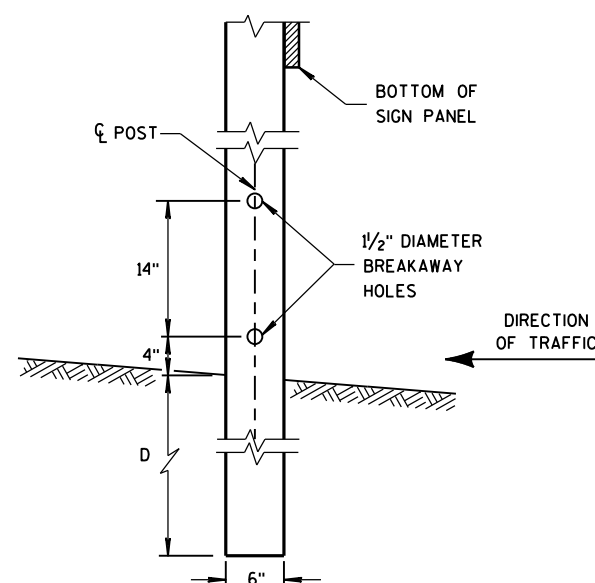
SECTION A-A



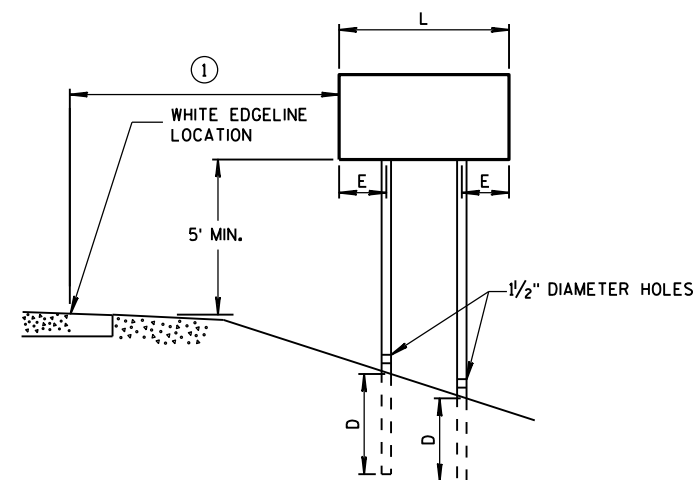
URBAN AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

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



4 "x6 " WOOD POST
MODIFICATION



RURAL AREA

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

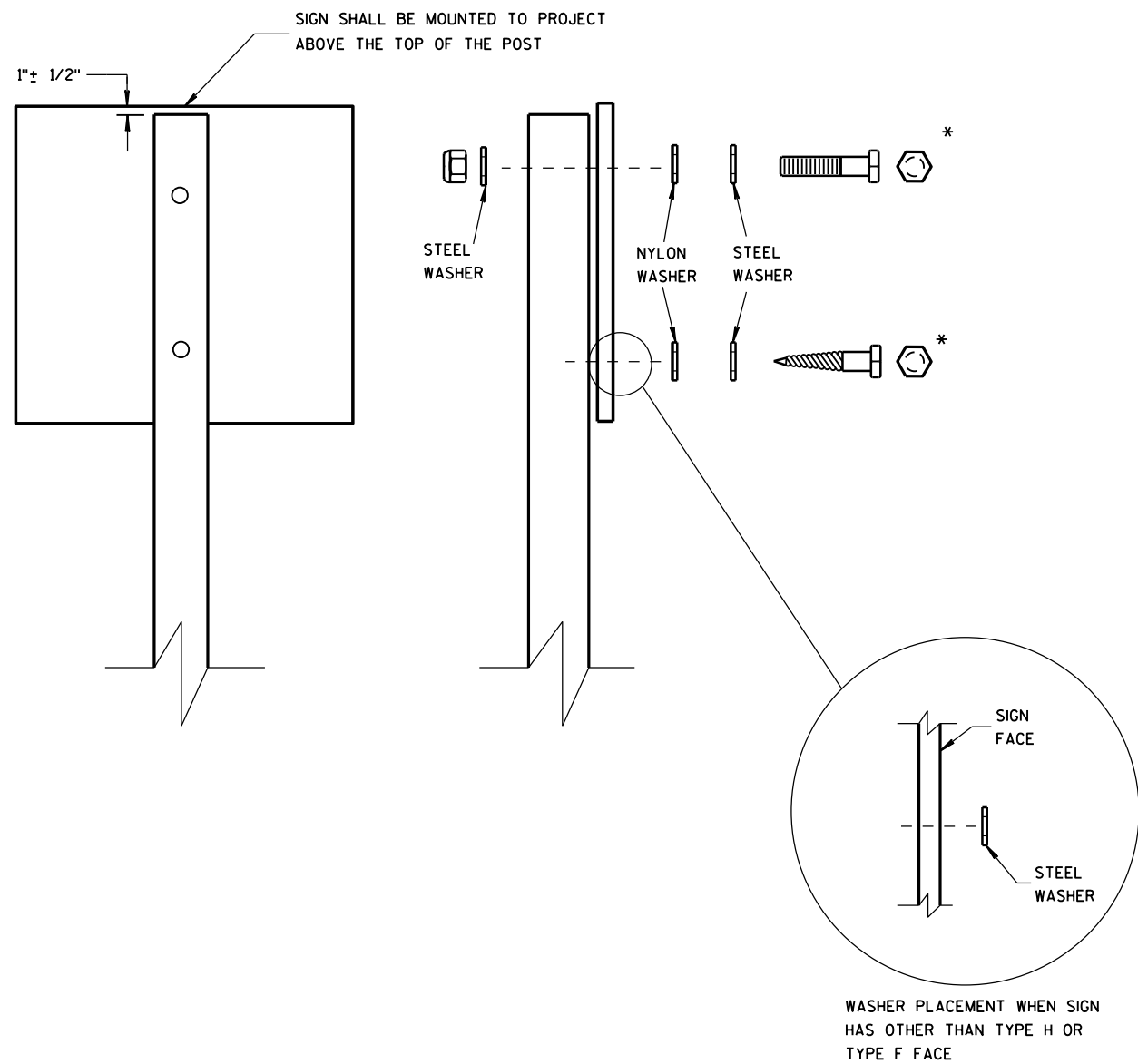
SEE NOTE ③

GENERAL NOTES

- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- ② THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

TEMPORARY TRAFFIC CONTROL
SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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

- A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3
- B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

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

- WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - 3/8" X 3"
 - MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS
 - RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

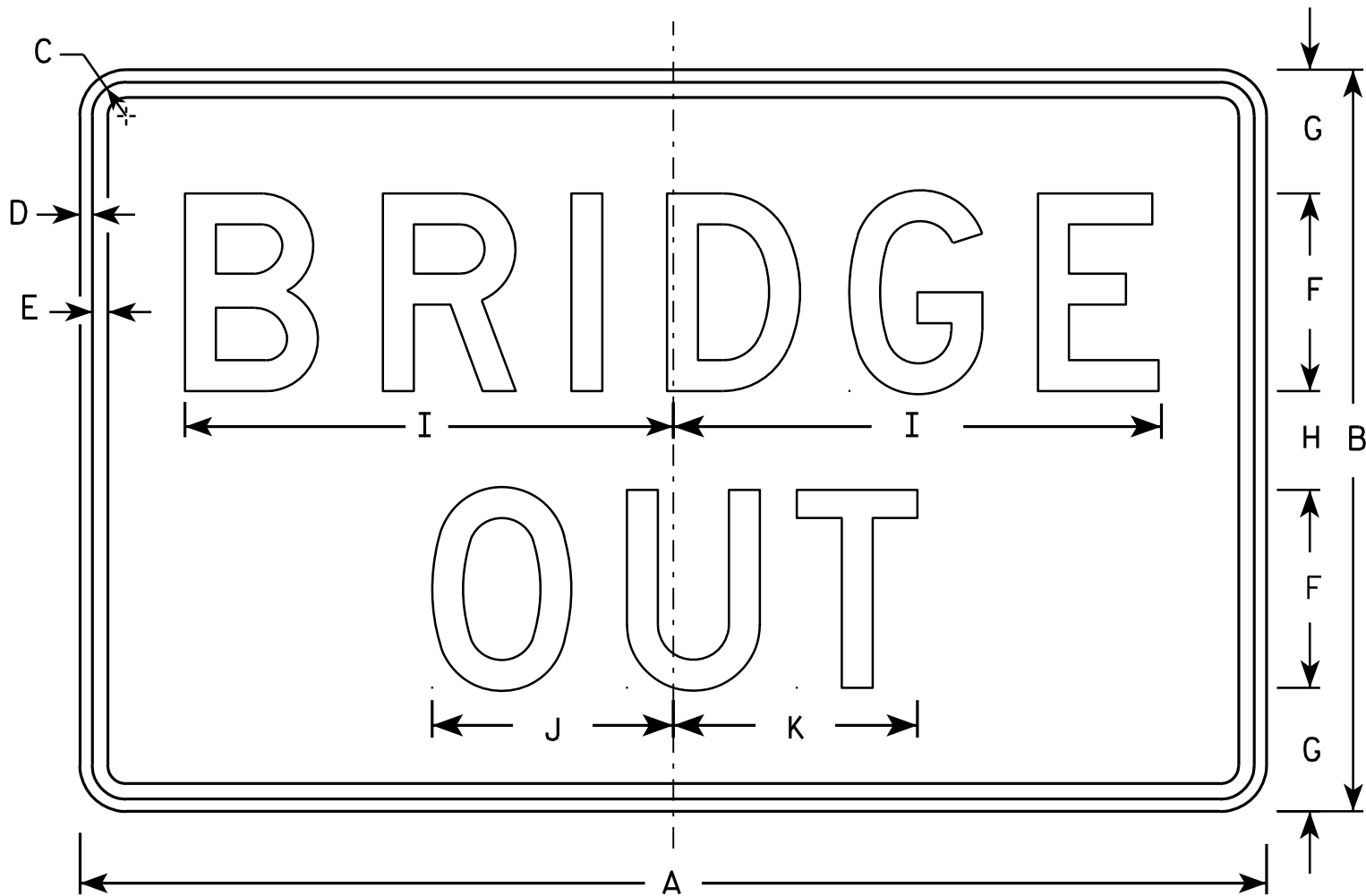
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
 - 1-1/4" O.D. X 3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

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

ATTACHMENT OF SIGNS TO POSTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heldtke WORK ZONE ENGINEER
FHWA	

NOTES

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



R11-2B

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

STANDARD SIGN

R11-2B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

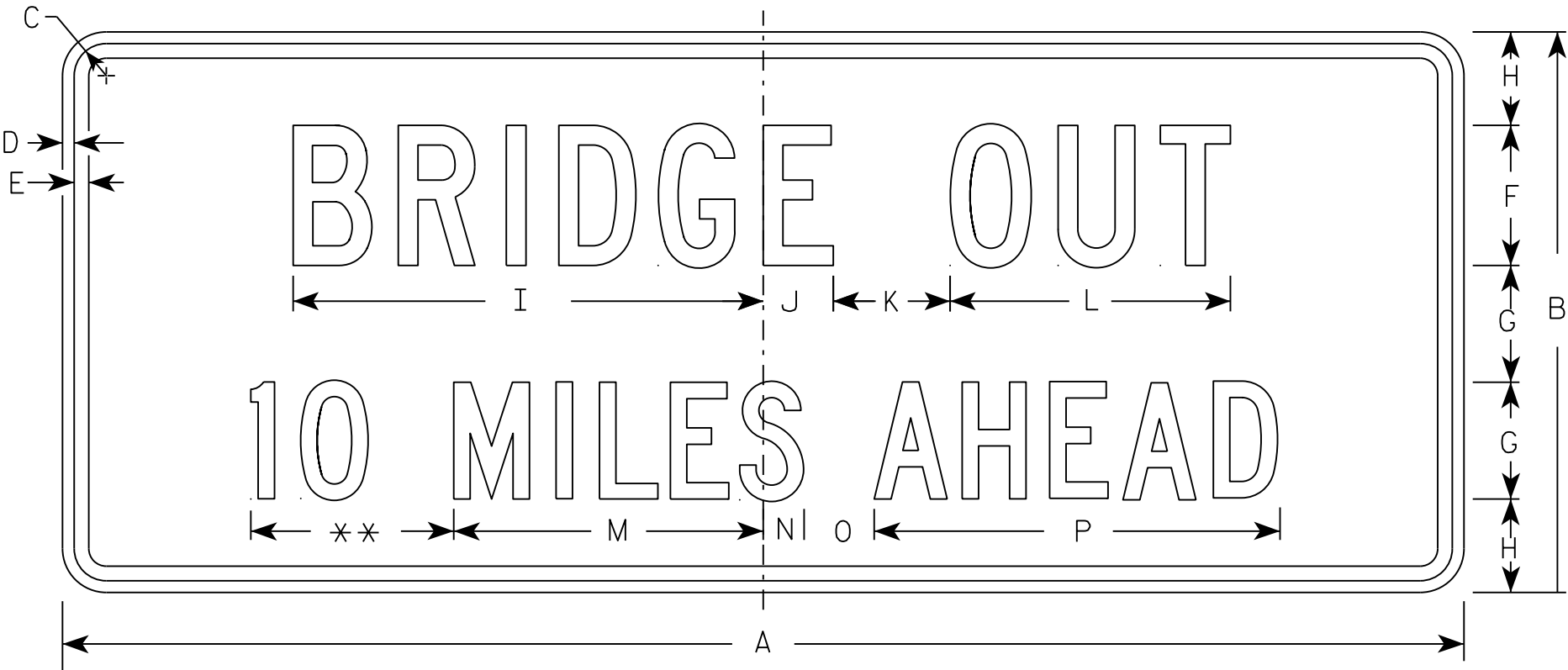
DATE 4/1/11 PLATE NO. R11-2B.2

NOTES

1. Sign is Type II - Type H Reflective
2. Color:

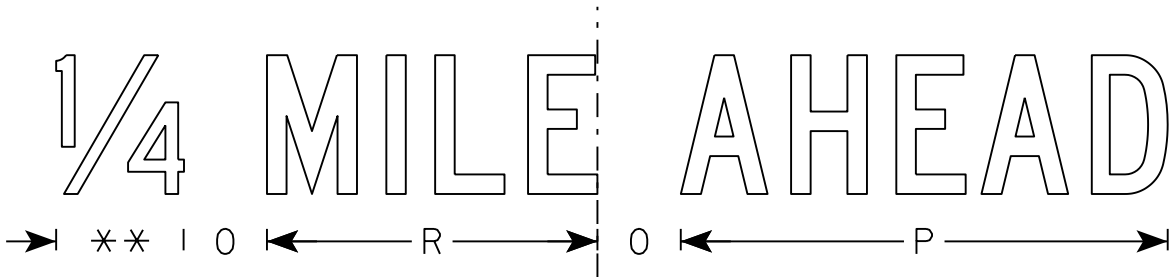
Background - White

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.



R11-3C

** See Note 5



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	15	1 3⁄8	1⁄2	5⁄8	4	3	2 1⁄2	13 1⁄4	2 1⁄4	3	8	8	1 1⁄2	2	10 3⁄4		7 1⁄8									3.75
2S	60	24	1 3⁄8	1⁄2	5⁄8	6	5	4	20 1⁄8	3	5	12	13 1⁄4	1 3⁄4	3	17 3⁄8		11 7⁄8									10.0
2M	60	24	1 3⁄8	1⁄2	5⁄8	6	5	4	20 1⁄8	3	5	12	13 1⁄4	1 3⁄4	3	17 3⁄8		11 7⁄8									10.0
3																											
4																											
5																											

STANDARD SIGN
R11-3C

WISCONSIN DEPT OF TRANSPORTATION

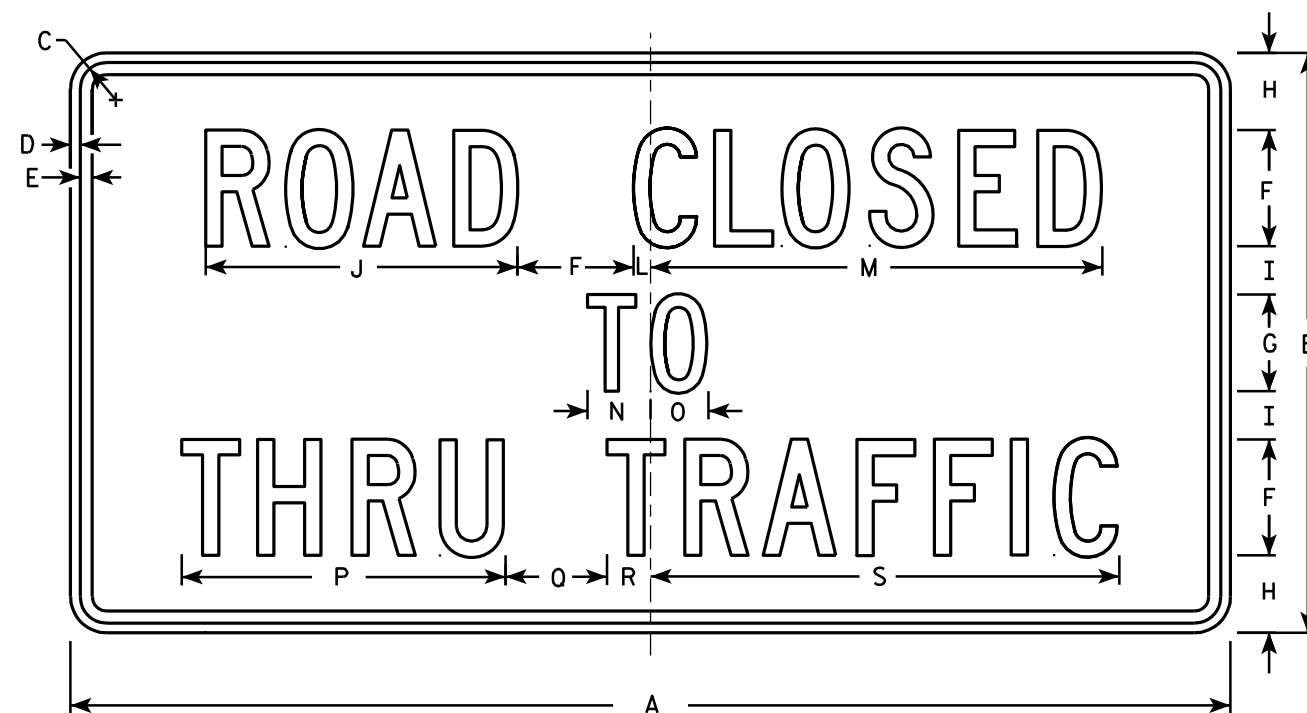
APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 7/28/16 PLATE NO. R11-3C.3

PROJECT NO:

SHEET NO:

E



R11-4

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	60	30	1 3⁄8	½	5⁄8	6	5	4	2 ½	16 ⅛		7⁄8	23 3⁄8	3 ¼	3	16 ¾	5 ¼	2 ¼	24 ¼								12.5
2M	60	30	1 3⁄8	½	5⁄8	6	5	4	2 ½	16 ⅛		7⁄8	23 3⁄8	3 ¼	3	16 ¾	5 ¼	2 ¼	24 ¼								12.5
3																											
4																											
5																											

STANDARD SIGN
R11 - 4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

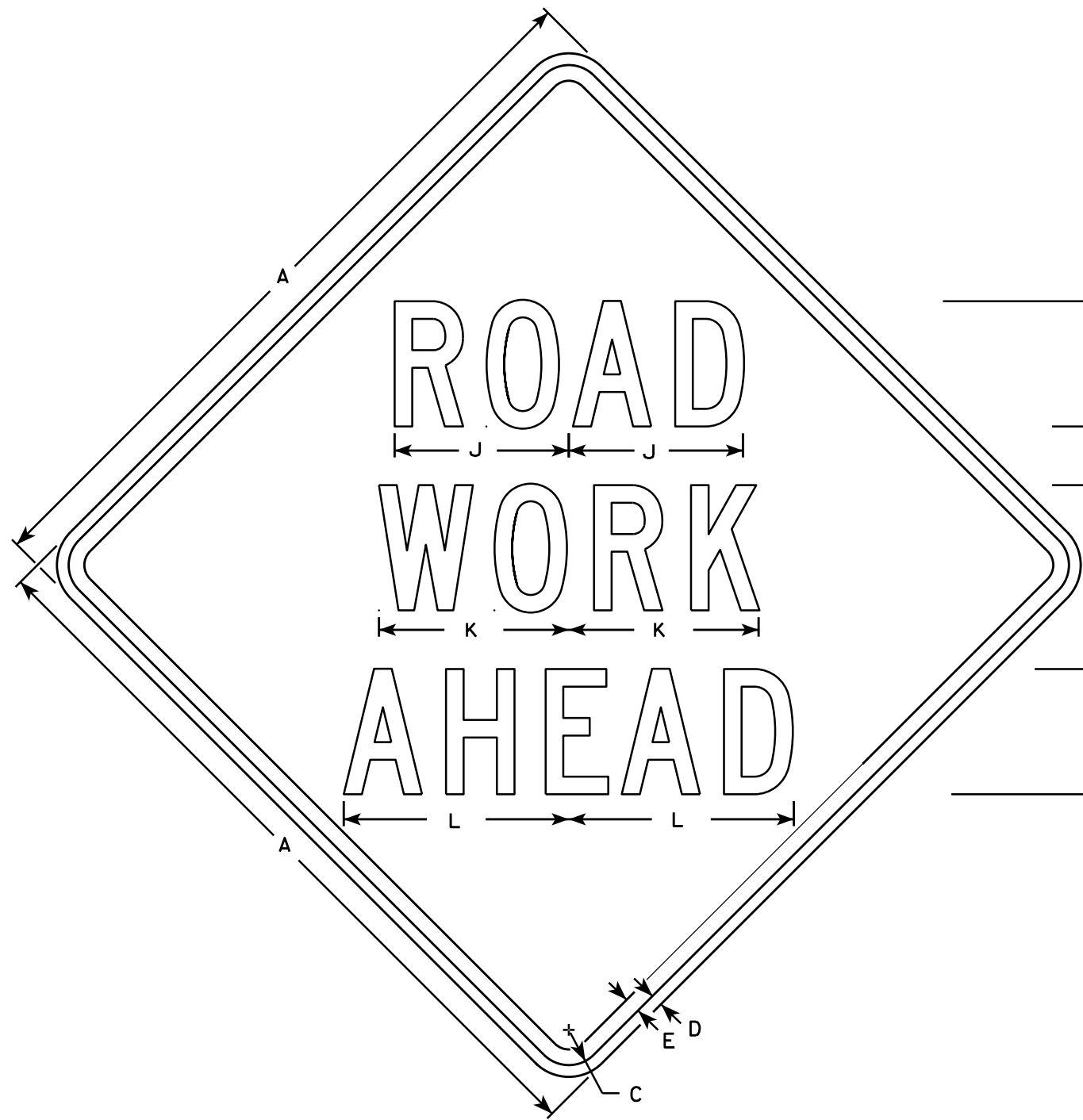
PROJECT NO:

HWY:

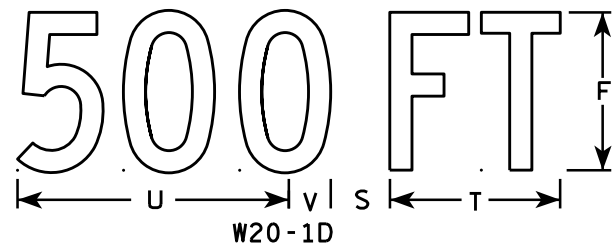
COUNTY:

SHEET NO:

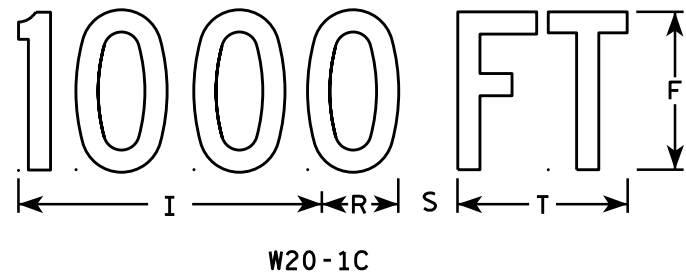
E



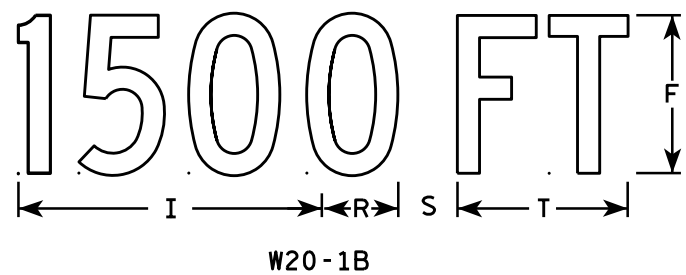
W20-1A



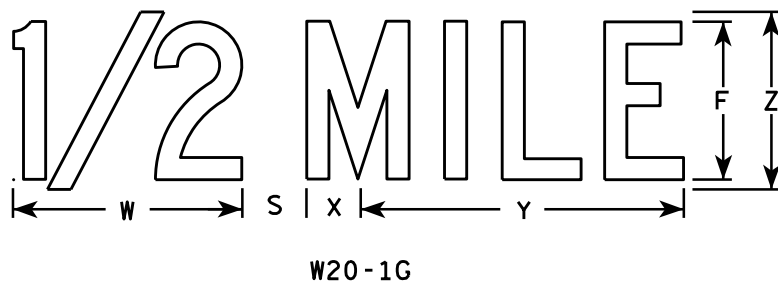
W20-1D



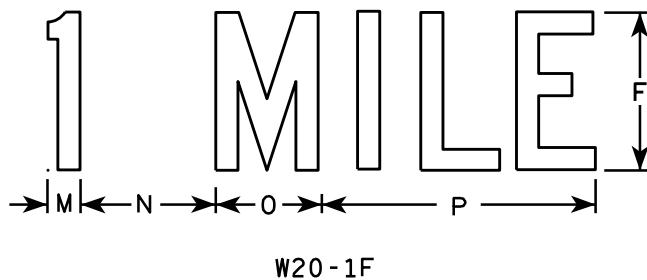
W20-1C



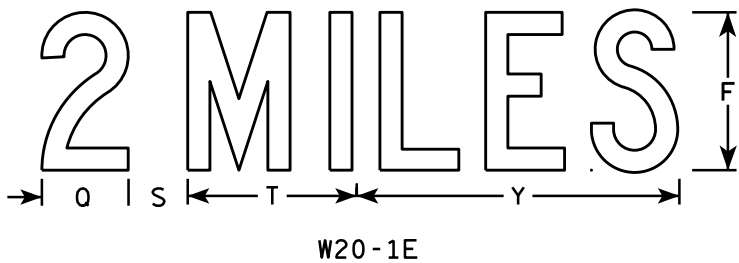
W20-1B



W20-1G



W20-1F



W20-1E

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.

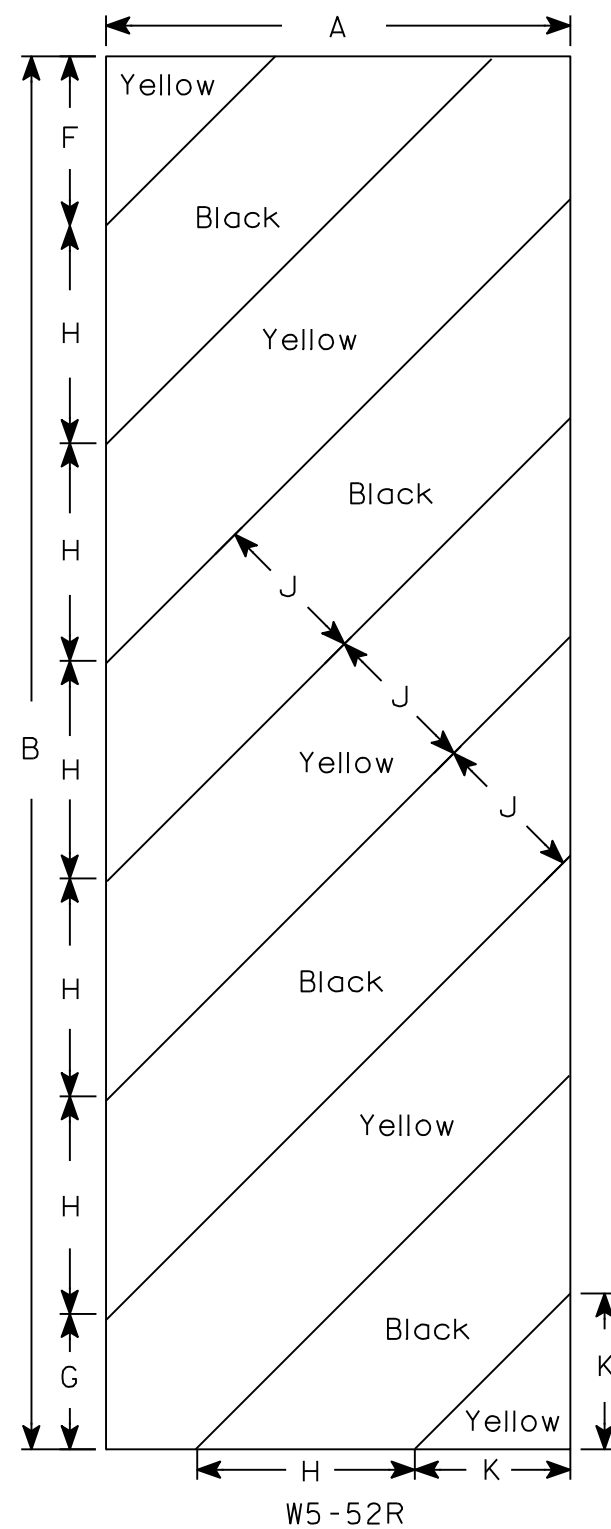
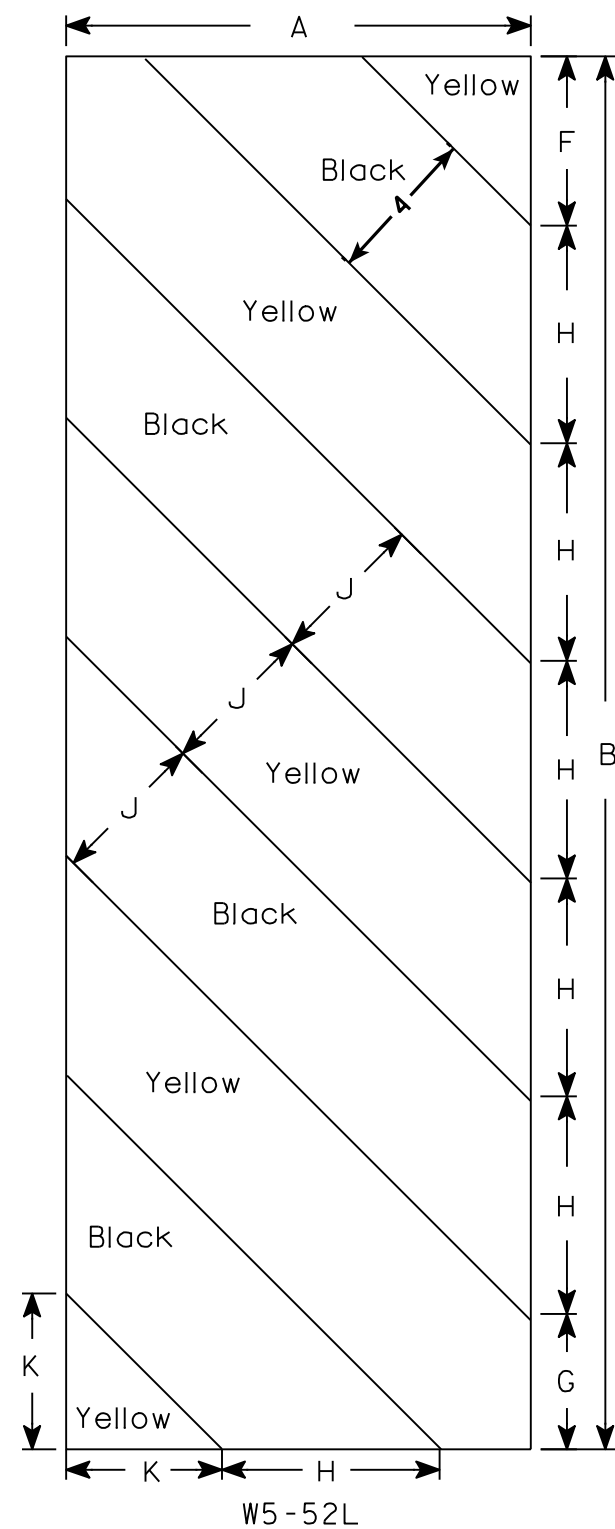
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13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

WISCONSIN DEPT OF TRANSPORTATION

APPROVED _____
State Traffic Engineer

DATE 5/07/15 PLATE NO. W20-1.10



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.

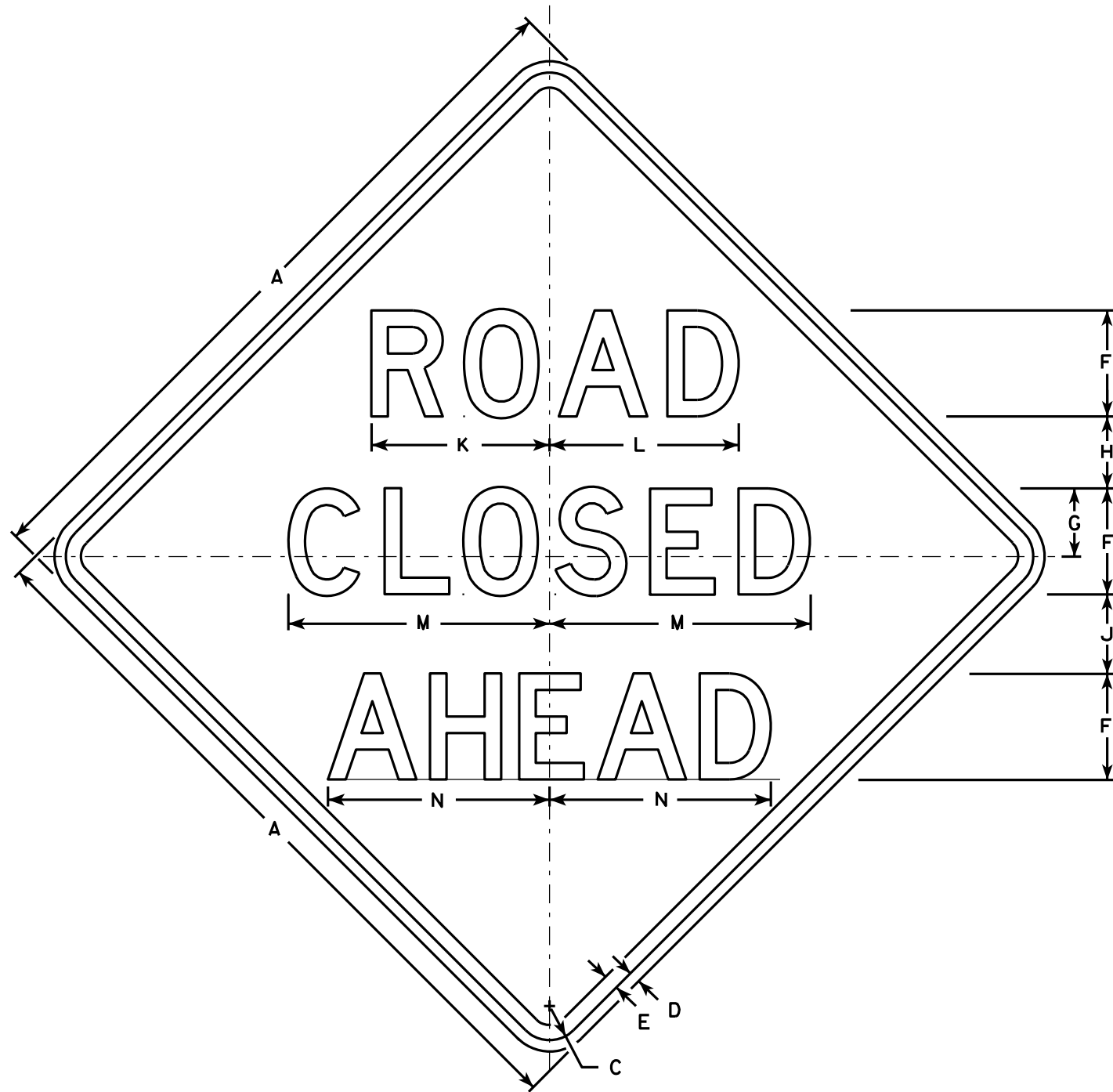
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3⁄8	3 1⁄2	5 5⁄8	45°	4	4																3.0
2M	12	36				4 3⁄8	3 1⁄2	5 5⁄8	45°	4	4																3.0
3	18	54				6	5 1⁄2	8 1⁄2	45°	6	6 9⁄16																6.75
4																											
5																											

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



W20-3A

500 FT

W20-3D

1000 FT

W20-3C

1500 FT

W20-3B

1/2 MILE

W20-3G

1 MILE

W20-3F

NOTES

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

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

STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-3.7

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.18
OPERATING RATING FACTOR: RF = 1.53
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.
CONCRETE MASONRY, 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 HP 10 X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.

WEST ABUTMENT ESTIMATED LENGTH 55'-0".
EAST ABUTMENT ESTIMATED LENGTH 45'-0".

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

HYDRAULIC DATA

100 YEAR FREQUENCY

Q100 = 740 C.F.S.
VEL. = 6.76 F.P.S.
HW100 = EL. 640.96
WATERWAY AREA = 109.45 SQ. FT.
DRAINAGE AREA = 5.05 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 5

2 YEAR FREQUENCY

Q2 = 200 C.F.S.
HW2 = EL. 638.65
VEL.2= 2.59 F.P.S.

TRAFFIC VOLUME

LUELLOFF ROAD

A.D.T = 55 (2019)
A.D.T = 65 (2039)
R.D.S = 60 MPH

LIST OF DRAWINGS

1. GENERAL PLAN AND ELEVATION
2. TYPICAL SECTION AND QUANTITIES
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. WEST ABUTMENT DETAILS
6. EAST ABUTMENT
7. EAST ABUTMENT DETAILS
8. ABUTMENT BILL OF BARS
9. SUPERSTRUCTURE
10. SUPERSTRUCTURE DETAILS
11. SINGLE SLOPE PARAPET 42SS

BENCHMARK

NO.	STATION/OFFSET	DESCRIPTION	ELEV.
BM-1	STA. 20+90.11 OFFSET = 12.42' RT.	MAG. NAIL ON P-59-924	641.47
BM-4	STA. 19+85.17 OFFSET = 10.39' LT.	MAG. NAIL IN PAVEMENT	642.77

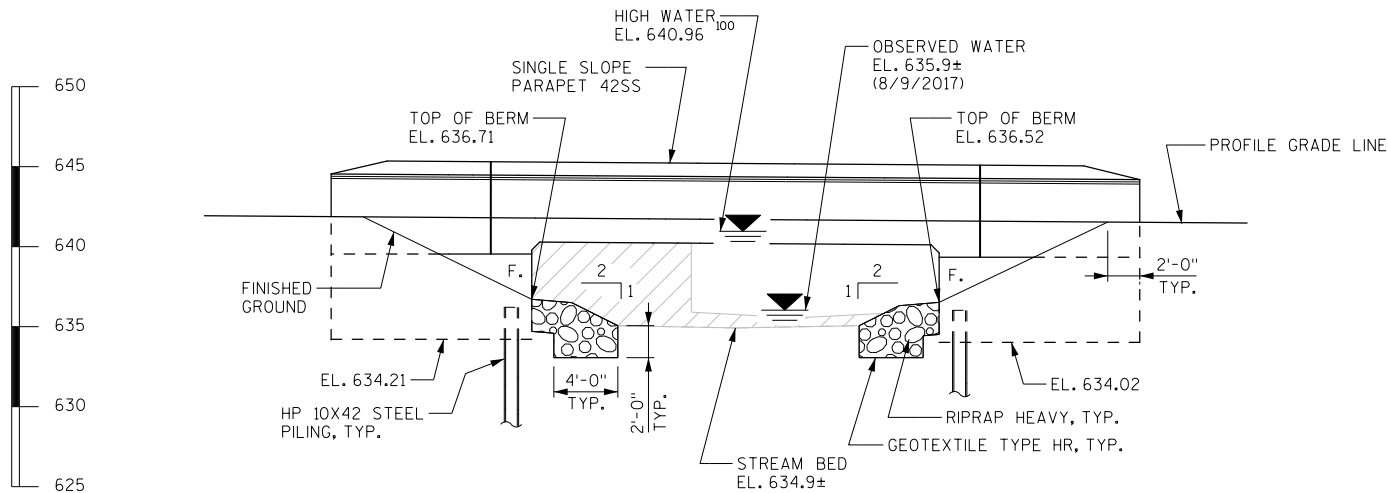
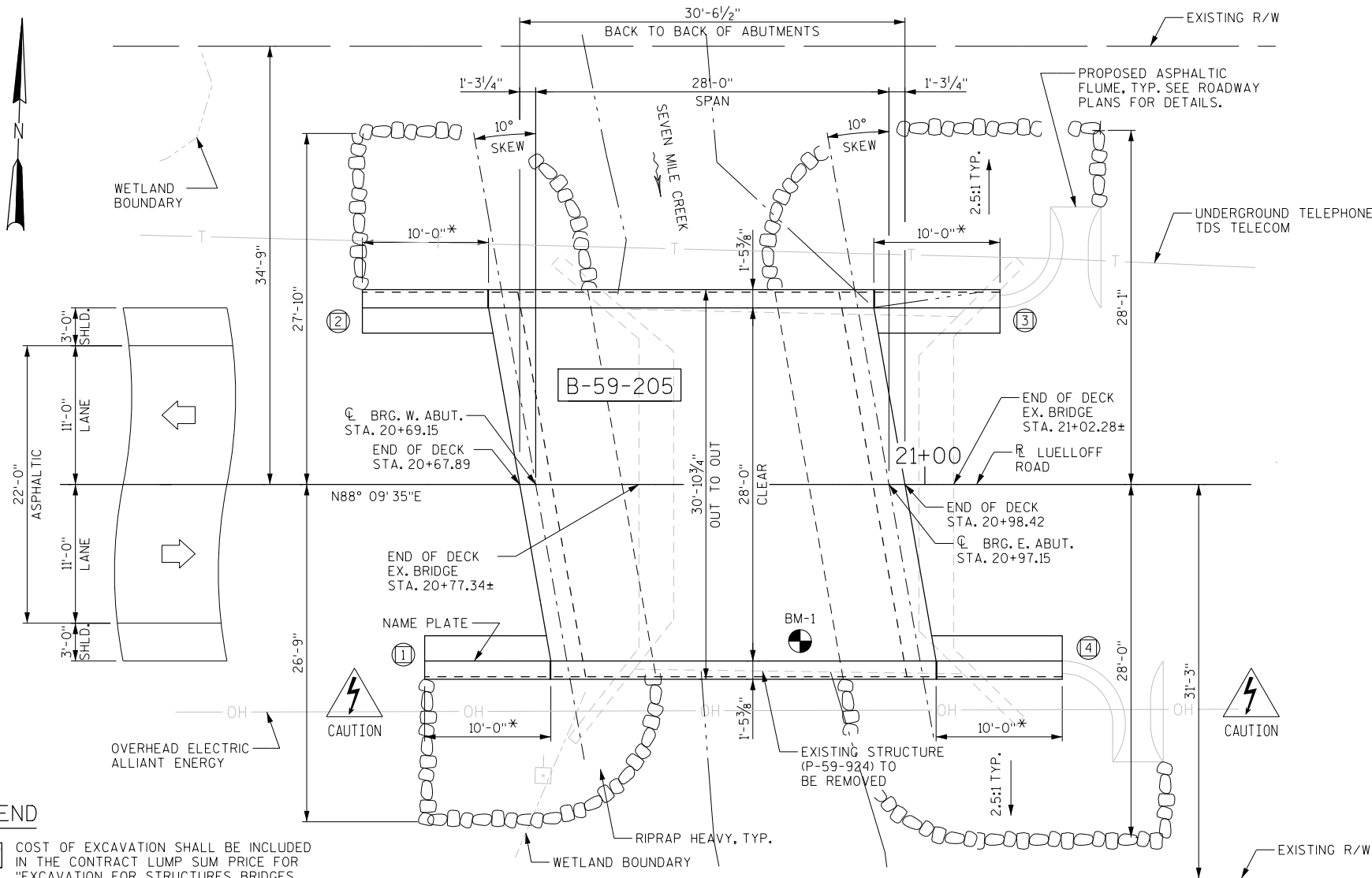
LEGEND

 COST OF EXCAVATION SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "EXCAVATION FOR STRUCTURES BRIDGES B-59-205".

* ANCHOR ASSEMBLY FOR STRUCTURAL APPROACH THRIE BEAM REQUIRED.

(X) INDICATES WINGWALL NUMBER

F. FIXED BEARING



STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER, P.E. (608) 266-8489

CONSULTANT:
STEVEN SCHMITT, P.E. (262) 821-1171

NO.	DATE	REVISION	BY
KSingh Engineers Scientists Consultants			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	<i>William C. Dreher</i> SDR		11/01/18
CHIEF STRUCTURES DESIGN ENGINEER			DATE
STRUCTURE B-59-205			
LUELLOFF ROAD OVER SEVEN MILE CREEK			
COUNTY	SHEBOYGAN		TOWN MOSEL
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	VJD	DESIGN CK'D. SWS	DRAWN BY VJD
			PLANS CK'D. SWS
GENERAL PLAN AND ELEVATION			SHEET 1 OF 11

DRAWINGS SHALL NOT BE SCALED.

BEVEL ALL EXPOSED EDGES $\frac{3}{4}$ " UNLESS NOTED OTHERWISE.

ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929, NGVD 29.

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

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

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURE BRIDGES B-59-205"
SHALL BE THE EXISTING GROUNDLINE.

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

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

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE TYPE HR TO THE EXTENTS SHOWN ON SHEET 1.

RIPRAP HEAVY SHALL BE PLACED PRIOR TO THE ERECTION OF THE FALSEWORK.

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

CONTRACTOR SHALL PLACE RIPRAP HEAVY TO AN ELEVATION BELOW THE SUPERSTRUCTURE FALSEWORK TO ENSURE EVEN DISTRIBUTION IN SEVEN MILE CREEK PRIOR TO SUPERSTRUCTURE CONSTRUCTION.

AT ABUTMENTS, CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP OF THE CONCRETE DECK SLAB.

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

EXISTING STRUCTURE P-59-924 TO BE REMOVED. IT IS A SINGLE SPAN
FLAT SLAB REINFORCED CONCRETE BRIDGE, 28'-0" WIDE, 24'-0" LONG, AS SHOWN
ON SHEET 1.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OVERHEAD UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND AND OVERHEAD UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

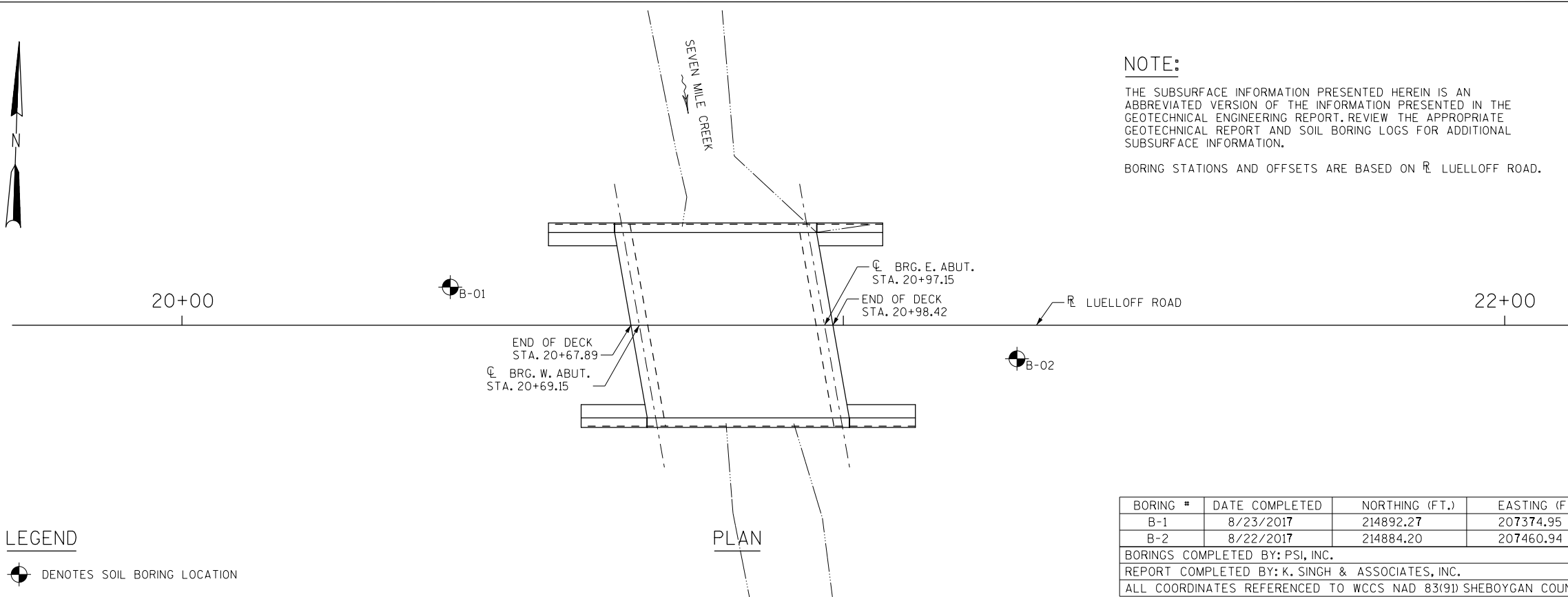


BID ITEM NO.	BID ITEM	UNIT	W. ABUT	E. ABUT	SUPER	TOTAL
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA. 20+81.89	LS	-	-	-	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-59-205	LS	-	-	-	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	126	126	-	252
502.0100	CONCRETE MASONRY BRIDGES	CY	32	32	64	128
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-	-	96	96
502.3210	PIGMENTED SURFACE SEALER	SY	12	12	34	58
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	1,960	1,960	-	3,920
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,930	1,930	11,780	15,640
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	9	9	-	18
550.1100	PIILING STEEL HP 10-INCH X 42 LB	LF	330	265	-	595
606.0300	RIPRAP HEAVY	CY	55	65	-	120
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	96	96	-	192
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2	2	-	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	24	24	-	48
645.0120	GEOTEXTILE TYPE HR	SY	80	80	-	160
	NON-BID ITEMS					
	PREFORMED JOINT FILLER	SIZE				1/2" & 3/4"
	NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER	SIZE				1"
	NAME PLATE	EACH				1

ALL B-59-205 BID ITEMS ARE CATEGORY 0020.

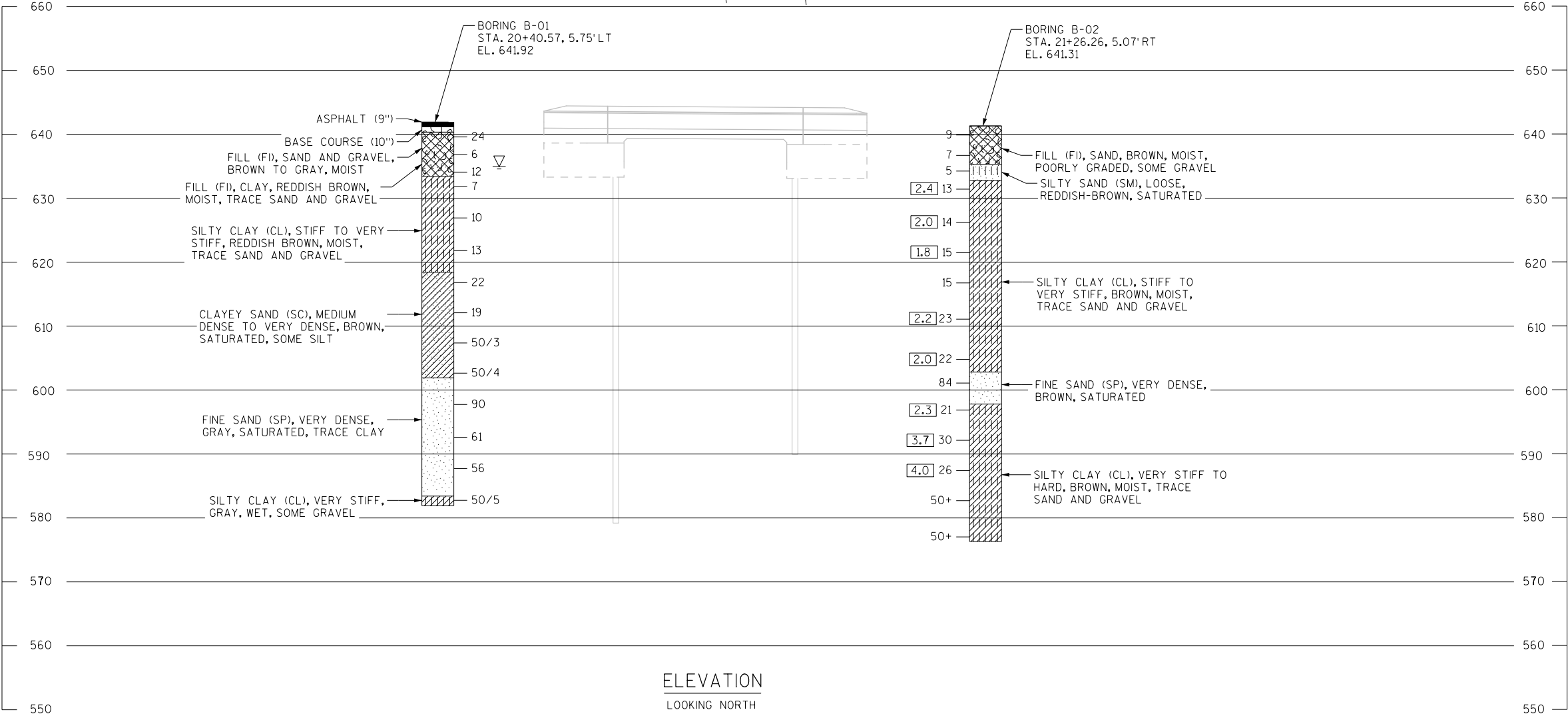


NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-59-205			
DRAWN BY VJD		PLANS CK'D. SWS	
TYPICAL SECTION AND QUANTITIES		SHEET 2 OF 11	



LEGEND

⊙ DENOTES SOIL BORING LOCATION



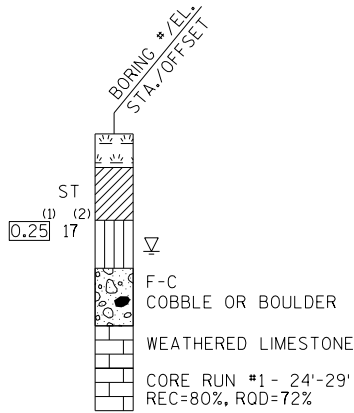
STATE PROJECT NUMBER

4197-04-71

MATERIAL SYMBOLS

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

LEGEND OF BORING



- (1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)
- (2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

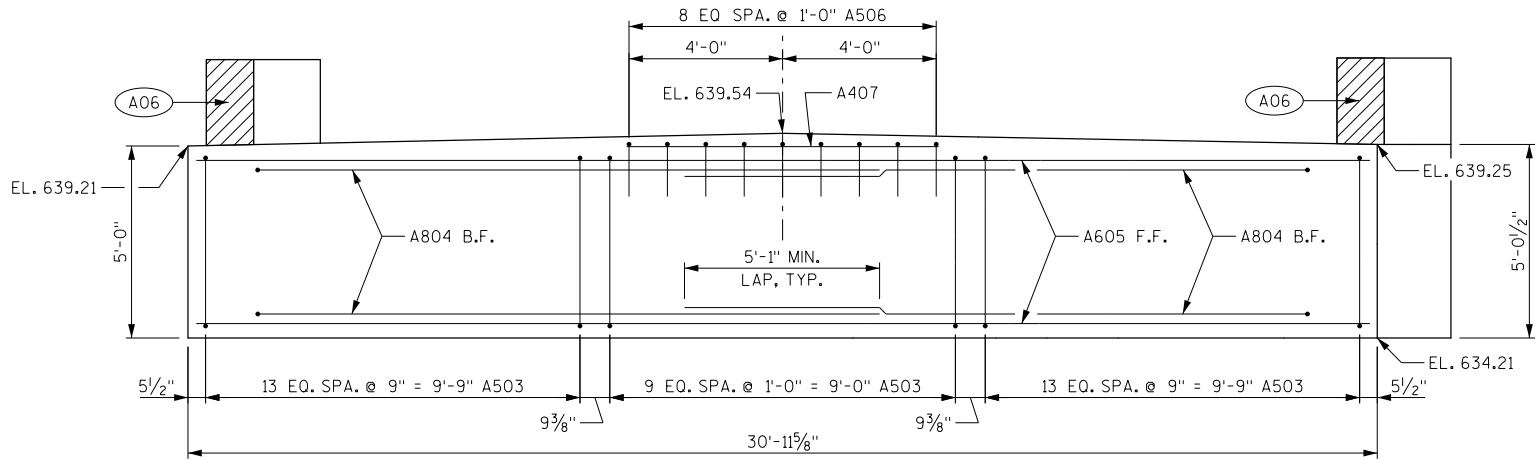
- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▼ AFTER DRILLING

ABBREVIATIONS

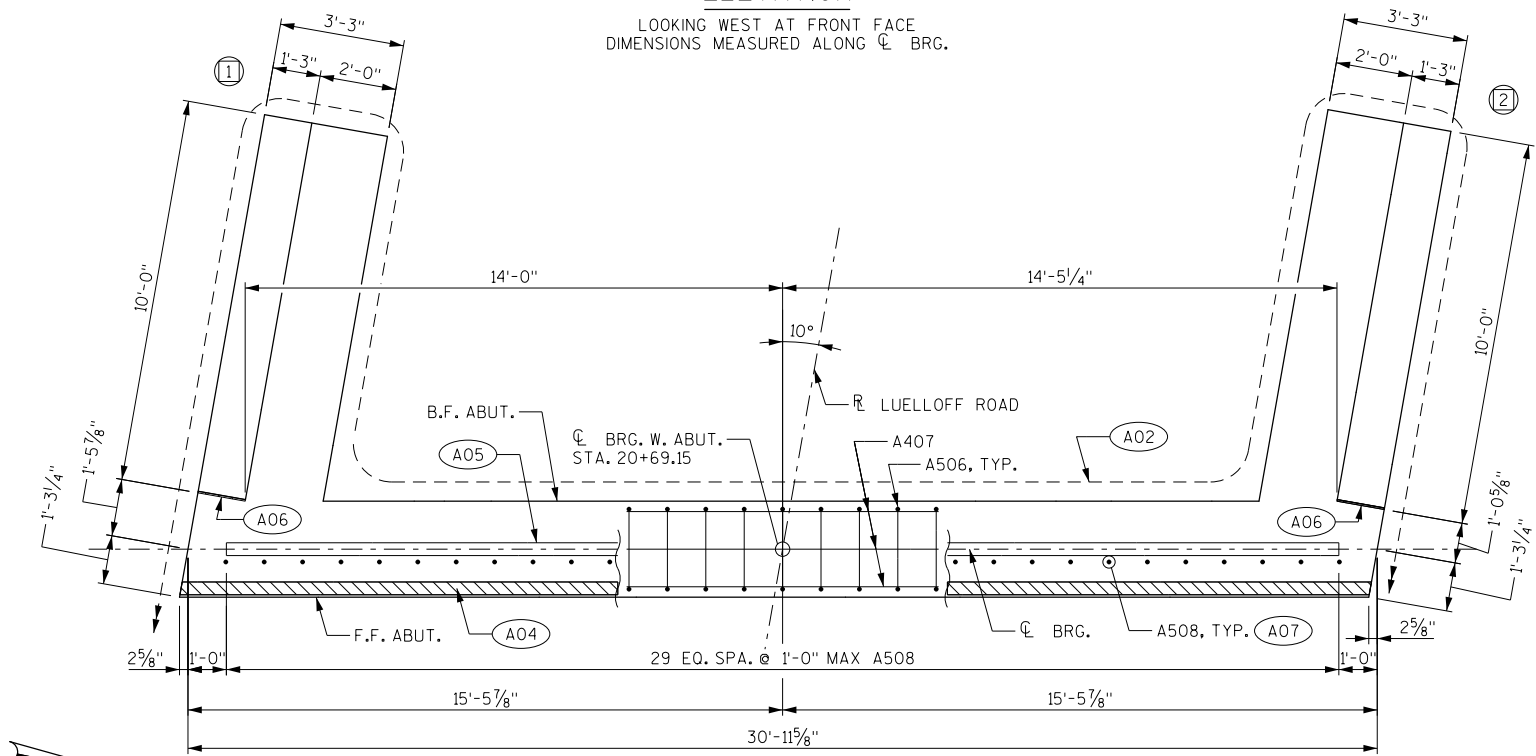
F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

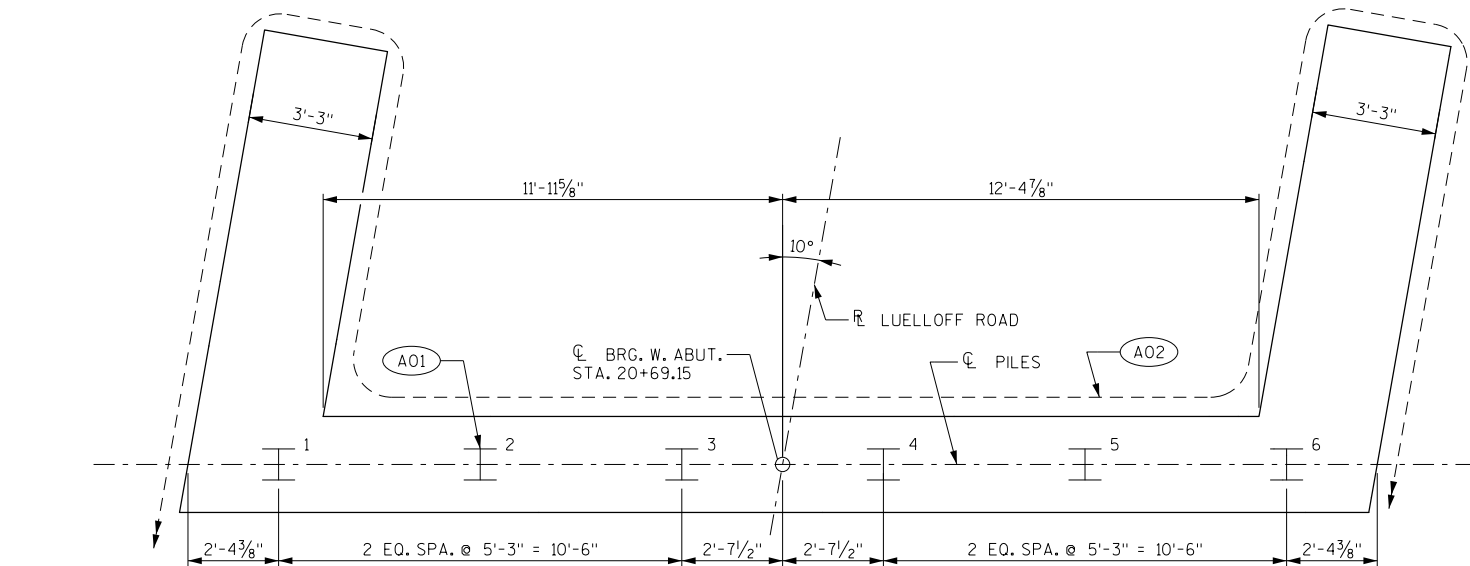
BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT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



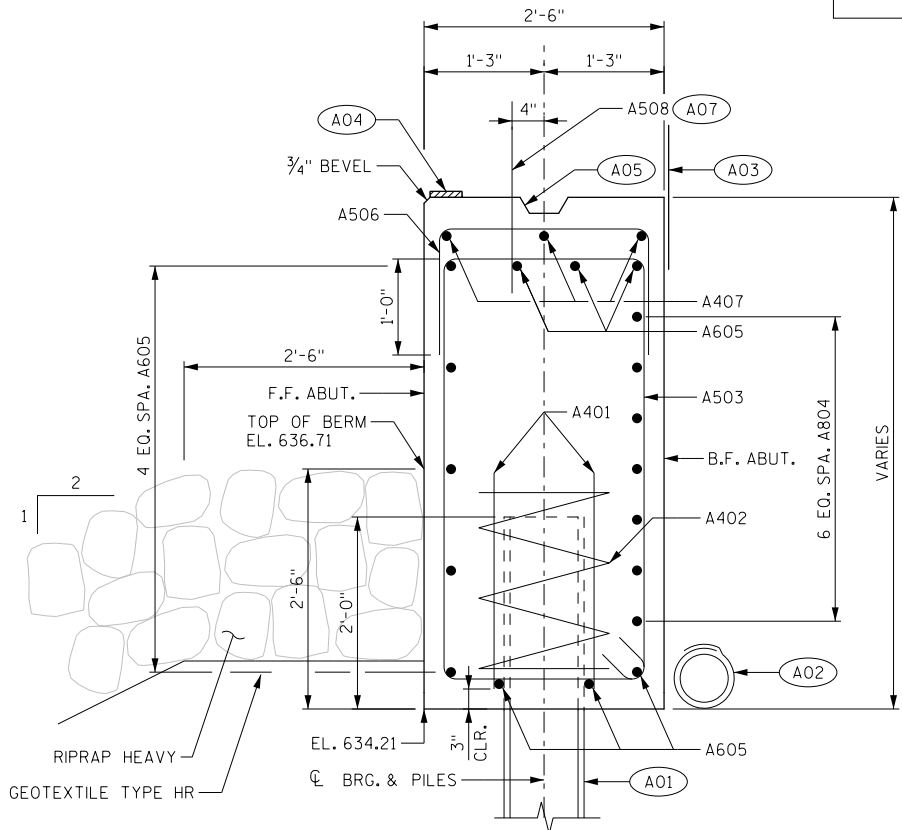
ELEVATION
LOOKING WEST AT FRONT FACE
DIMENSIONS MEASURED ALONG C L BRG.



PLAN



PILE PLAN



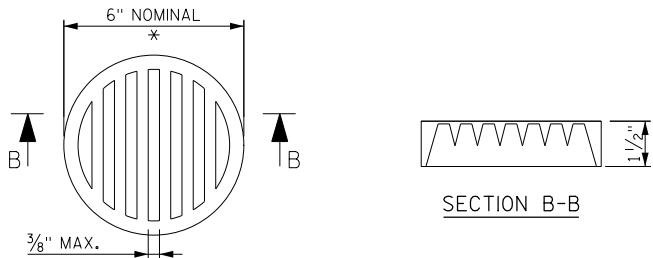
SECTION THRU BODY

NOTES

- FOR PILE SPLICE DETAILS, SEE SHEET 5.
- FOR ABUTMENT BILL OF BARS, SEE SHEET 8.
- SPACE A503 BARS TO MISS PILE LOCATIONS.
- CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

LEGEND

- (A01) SUPPORT ABUTMENT ON HP 10 X 42 STEEL PILING, ESTIMATED 55'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.
- (A02) PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MINIMUM TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE DETAIL ON THIS SHEET. PLACE INVERT ABOVE THE OBSERVED WATER ELEVATION ON SHEET 1.
- (A03) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.
- (A04) 3/4" X 4" PREFORMED FILLER, OUT TO OUT OF ABUTMENT.
- (A05) KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6".
- (A06) 1/2" FILLER, EXTEND FROM SEAT TO TOP OF CONCRETE PARAPET, FILLER INCLUDED IN WING LENGTH.
- (A07) BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. EMBED BARS 1'-0".
- (X) INDICATES WINGWALL NUMBER
- F.F. FRONT FACE
- B.F. BACK FACE



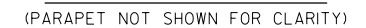
RODENT SHIELD DETAIL

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

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

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

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-59-205			
		DRAWN BY VJD	PLANS CK'D. SWS
WEST ABUTMENT			SHEET 4 OF 11

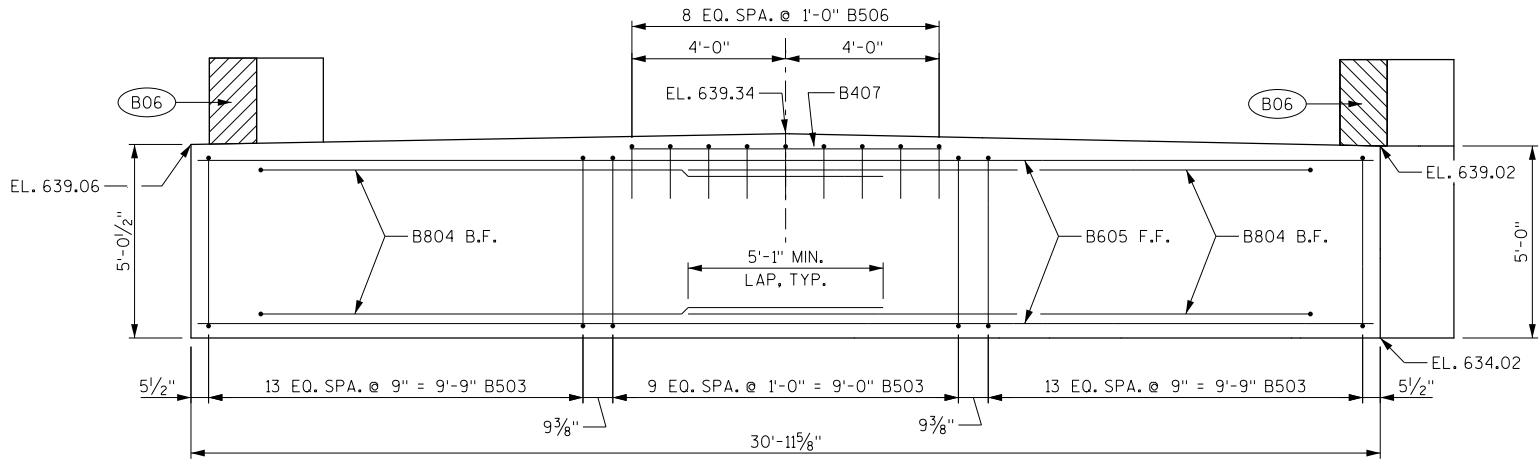


B.F. BACK FACE

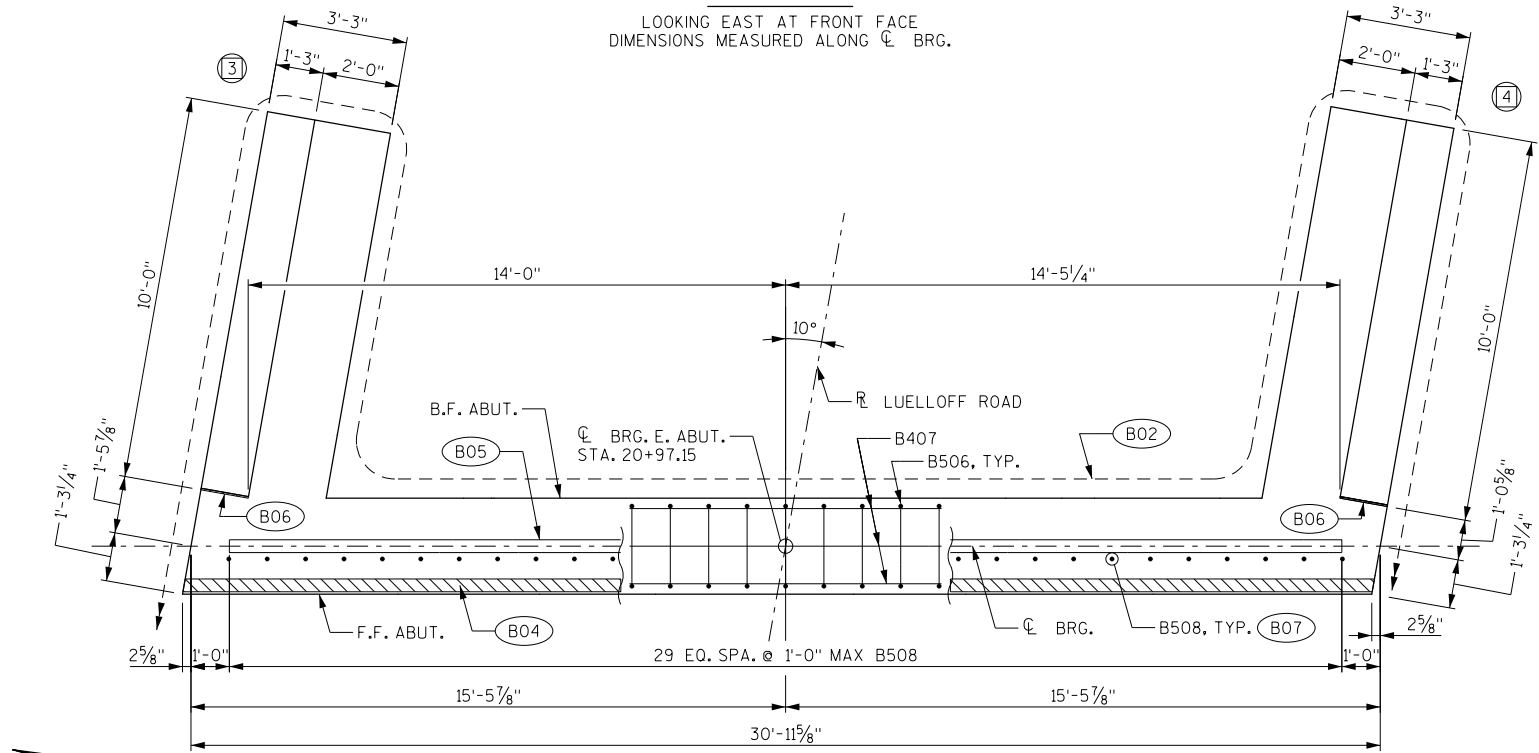


1. FOR ABUTMENT BILL OF BARS, SEE SHEET 8.
2. FOR TYPICAL FILL SECTIONS AT WING TIPS, SEE SHEET 8.
3. FOR SINGLE SLOPE PARAPET 42SS REINFORCEMENT DETAILS, SEE SHEET 11.
4. CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

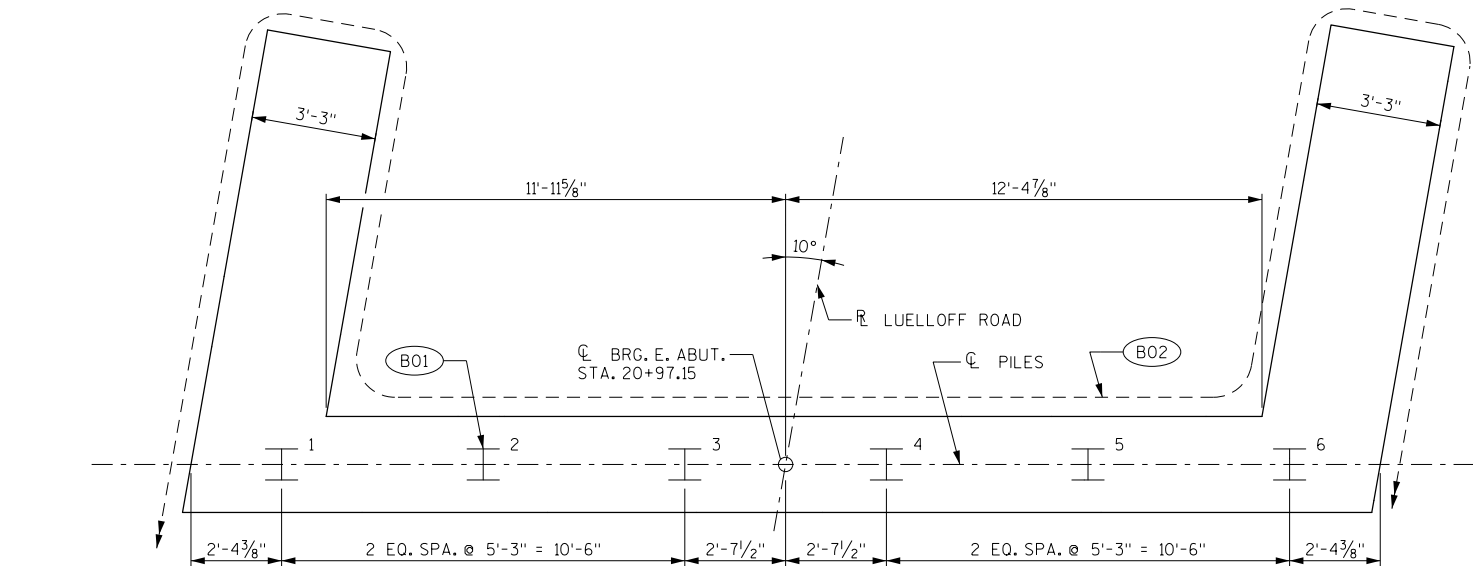
WEST ABUTMENT DETAILS	SHEET 5 OF 11



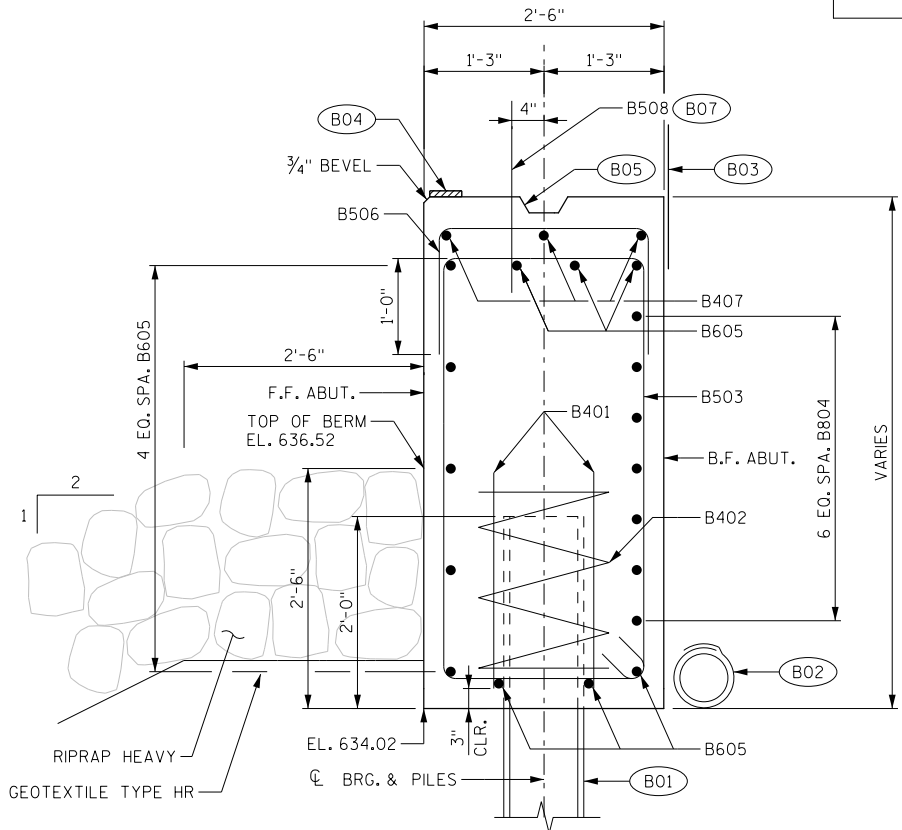
ELEVATION
LOOKING EAST AT FRONT FACE
DIMENSIONS MEASURED ALONG C L BRG.



PLAN



PILE PLAN



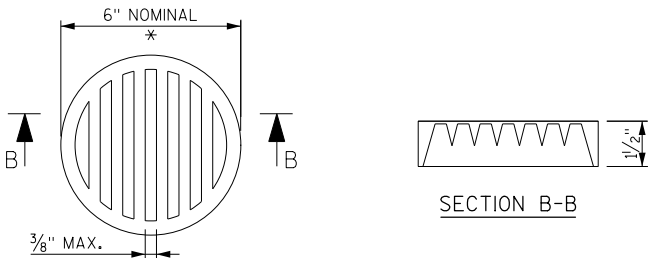
SECTION THRU BODY

NOTES

- FOR PILE SPLICE DETAILS, SEE SHEET 7.
- FOR ABUTMENT BILL OF BARS, SEE SHEET 8.
- SPACE B503 BARS TO MISS PILE LOCATIONS.
- CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

LEGEND

- (B01) SUPPORT ABUTMENT ON HP 10 X 42 STEEL PILING, ESTIMATED 44'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.
- (B02) PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MINIMUM TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE DETAIL ON THIS SHEET. PLACE INVERT ABOVE THE OBSERVED WATER ELEVATION ON SHEET 1.
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- (B07) BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. EMBED BARS 1'-0".
- (X) INDICATES WINGWALL NUMBER
- F.F. FRONT FACE
- B.F. BACK FACE



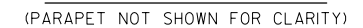
RODENT SHIELD DETAIL

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NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-59-205			
DRAWN BY VJD		PLANS CK'D. SWS	
EAST ABUTMENT			SHEET 6 OF 11



B.F. BACK FACE



1. FOR ABUTMENT BILL OF BARS, SEE SHEET 8.
2. FOR TYPICAL FILL SECTIONS AT WING TIPS, SEE SHEET 8.
3. FOR SINGLE SLOPE PARAPET 42SS REINFORCEMENT DETAILS, SEE SHEET 11.
4. CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

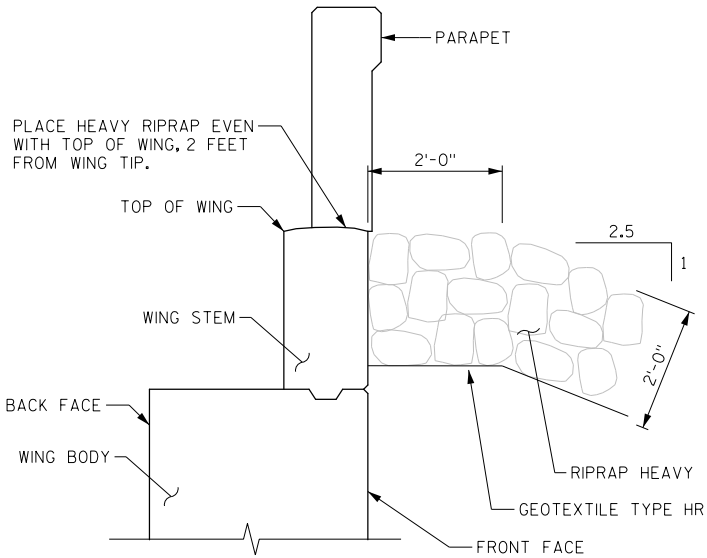
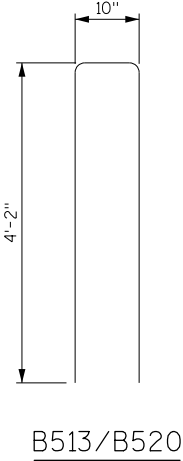
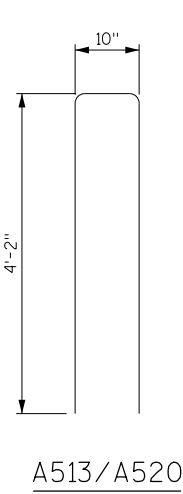
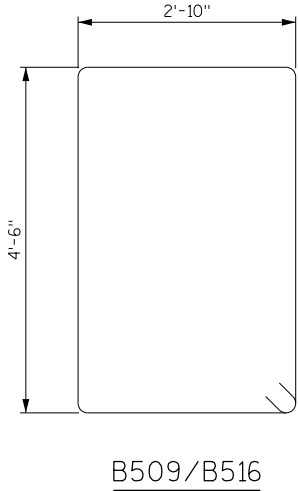
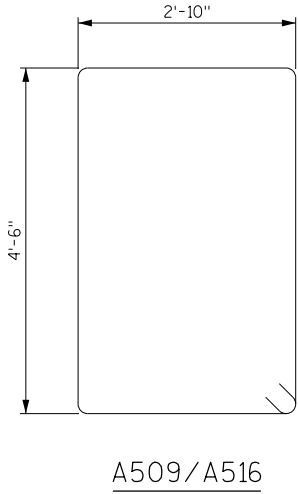
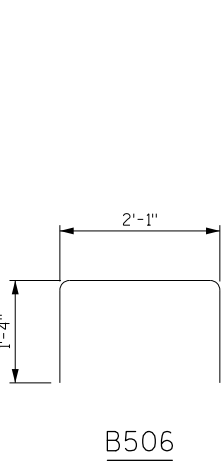
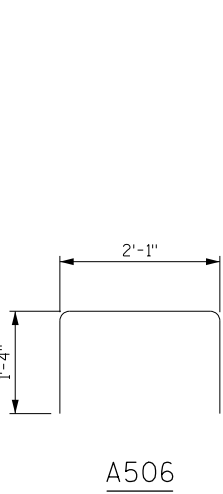
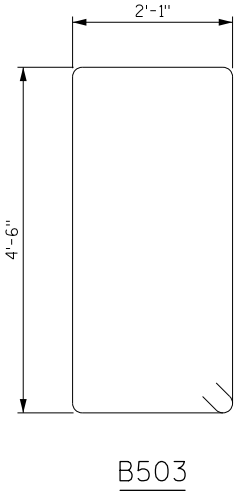
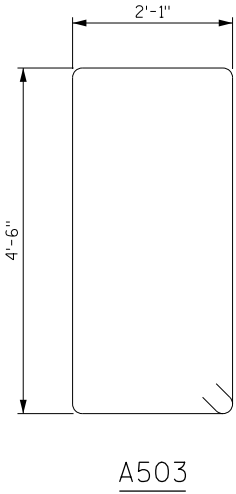
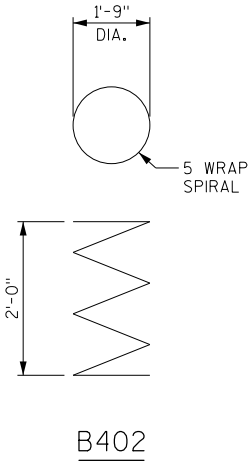
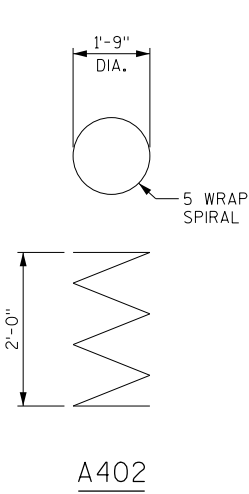
EAST ABUTMENT DETAILS

BILL OF BARS - WEST ABUTMENT						COATED: 1,190 LBS	UNCOATED: 1,960 LBS
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION	
A401		12	2'-3"			PILES - 2 PER PILE	
A402		6	28'-0"	X		PILES - 1 PER PILE	
A503		38	13'-10"	X		BODY - STIRRUPS	
A804		14	17'-4"	X		BODY - HORIZ - B.F.	
A605		11	30'-7"			BODY - HORIZ - F.F. & B.F.	
A506		9	4'-6"	X		BODY - VERT - HIGH SEAT	
A407		3	8'-3"			BODY - HORIZ - HIGH SEAT	
A508		30	2'-0"			BODY - VERT - DOWELS	
A509	X	11	15'-4"	X		WING 1 - BODY - STIRRUP	
A610	X	6	11'-7"			WING 1 - BODY - HORIZ - B.F.	
A511	X	6	12'-4"			WING 1 - BODY - HORIZ - F.F.	
A612	X	2	11'-10"		X	WING 1 - BODY - HORIZ	
A513	X	14	8'-11"	X		WING 1 - STEM - VERT	
A414	X	5	9'-7"			WING 1 - STEM - HORIZ	
A615	X	2	9'-7"			WING 1 - STEM - HORIZ	
A516	X	11	15'-4"	X		WING 2 - BODY - STIRRUP	
A617	X	6	12'-3"			WING 2 - BODY - HORIZ - B.F.	
A518	X	6	12'-0"			WING 2 - BODY - HORIZ - F.F.	
A619	X	2	12'-1"		X	WING 2 - BODY - HORIZ	
A520	X	14	8'-11"	X		WING 2 - STEM - VERT	
A421	X	5	9'-7"			WING 2 - STEM - HORIZ	
A622	X	2	9'-7"			WING 2 - STEM - HORIZ	

BAR SERIES TABLE		
BAR MARK	NO. REQ'D	LENGTH
A612	1 SERIES OF 2	11'-9" - 11'-11"
A619	1 SERIES OF 2	11'-11" - 12'-2"

BILL OF BARS - EAST ABUTMENT						COATED: 1,190 LBS	UNCOATED: 1,960 LBS
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION	
B401		12	2'-3"			PILES - 2 PER PILE	
B402		6	28'-0"	X		PILES - 1 PER PILE	
B503		38	13'-10"	X		BODY - STIRRUPS	
B804		14	17'-4"	X		BODY - HORIZ - B.F.	
B605		11	30'-7"			BODY - HORIZ - F.F. & B.F.	
B506		9	4'-6"	X		BODY - VERT - HIGH SEAT	
B407		3	8'-3"			BODY - HORIZ - HIGH SEAT	
B508		30	2'-0"			BODY - VERT - DOWELS	
B509	X	11	15'-4"	X		WING 1 - BODY - STIRRUP	
B610	X	6	11'-7"			WING 3 - BODY - HORIZ - B.F.	
B511	X	6	12'-4"			WING 3 - BODY - HORIZ - F.F.	
B612	X	2	11'-10"		X	WING 3 - BODY - HORIZ	
B513	X	14	8'-11"	X		WING 3 - STEM - VERT	
B414	X	5	9'-7"			WING 3 - STEM - HORIZ	
B615	X	2	9'-7"			WING 3 - STEM - HORIZ	
B516	X	11	15'-4"	X		WING 4 - BODY - STIRRUP	
B617	X	6	12'-3"			WING 4 - BODY - HORIZ - B.F.	
B518	X	6	12'-0"			WING 4 - BODY - HORIZ - F.F.	
B619	X	2	12'-1"		X	WING 4 - BODY - HORIZ	
B520	X	14	8'-11"	X		WING 4 - STEM - VERT	
B421	X	5	9'-7"			WING 4 - STEM - HORIZ	
B622	X	2	9'-7"			WING 4 - STEM - HORIZ	

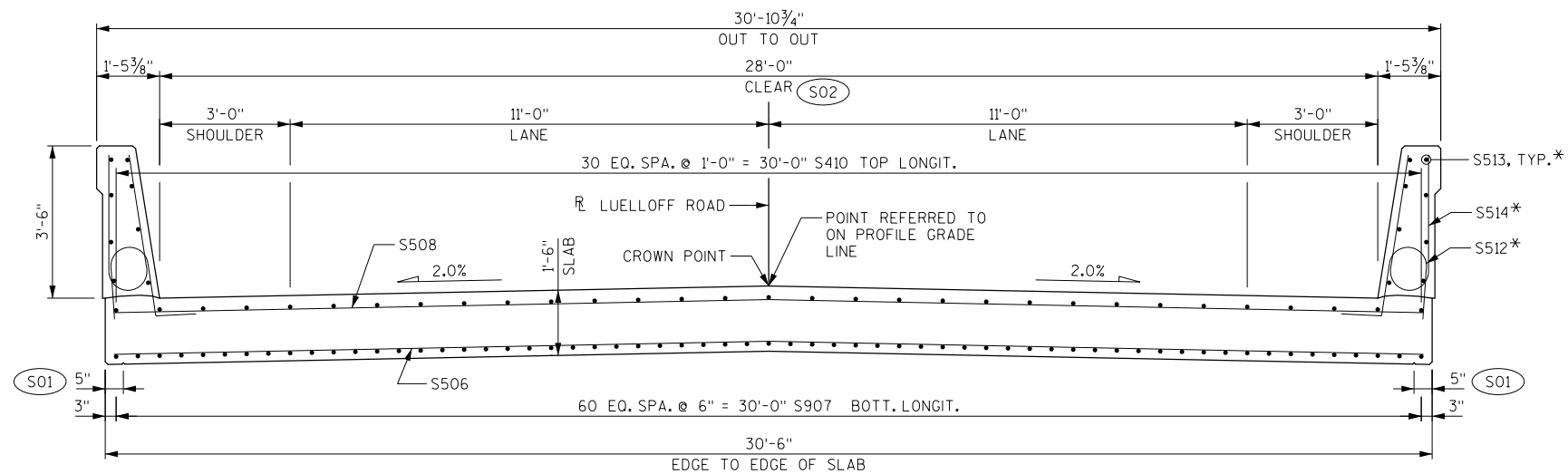
BAR SERIES TABLE		
BAR MARK	NO. REQ'D	LENGTH
B612	1 SERIES OF 2	11'-9" - 11'-11"
B619	1 SERIES OF 2	11'-11" - 12'-2"



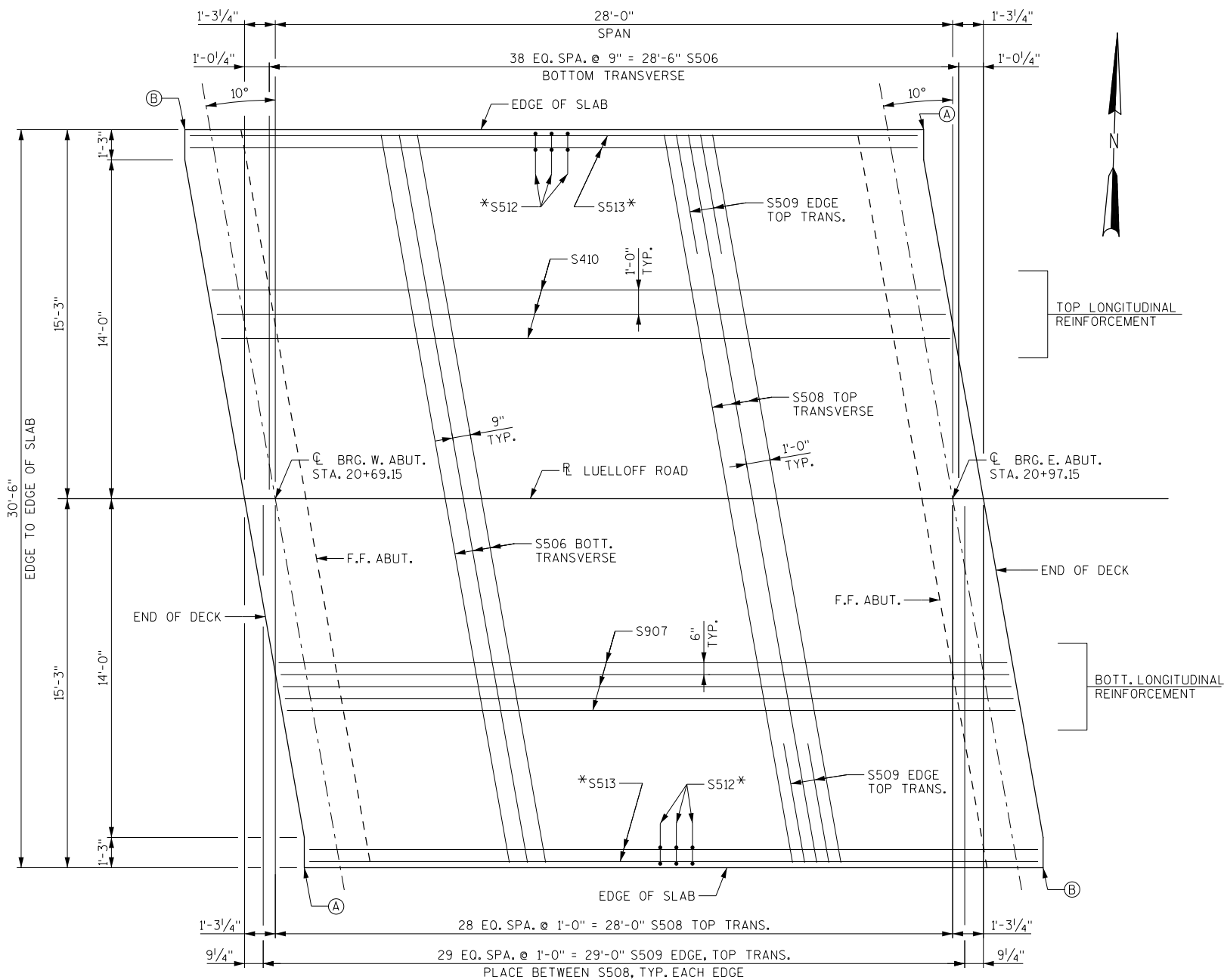
TYPICAL FILL SECTION AT WING TIPS

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

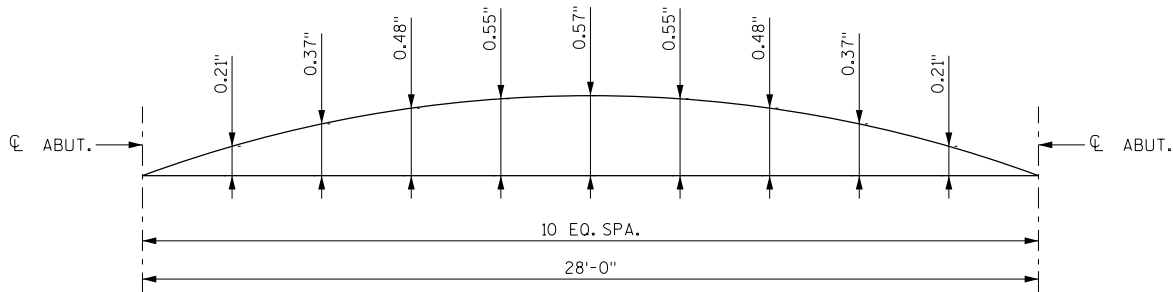
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-59-205			
		DRAWN BY VJD	PLANS CK'D. SWS
ABUTMENT BILL OF BARS		SHEET 8 OF 11	



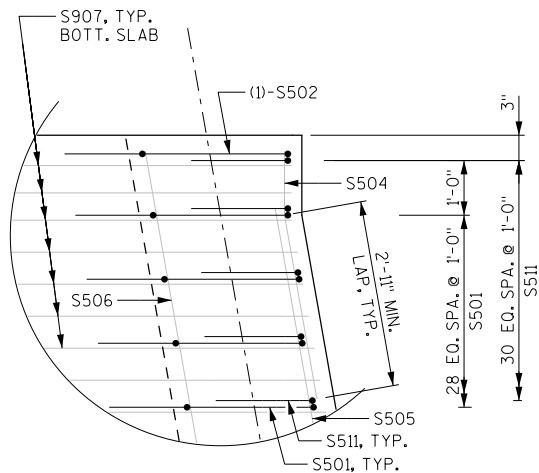
REINFORCING CROSS SECTION
DIMENSIONS SHOWN ARE NORMAL TO R LUELLOFF ROAD



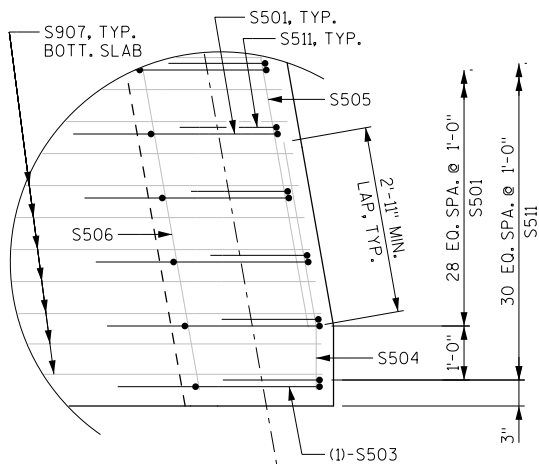
REINFORCEMENT PLAN



CAMBER DIAGRAM
SEE NOTES 4 AND 5



CORNER DETAIL A
SHOWING CORNER AT WING 3
(WING 1 CORNER SIMILAR)



CORNER DETAIL B
SHOWING CORNER AT WING 4
(WING 2 CORNER SIMILAR)

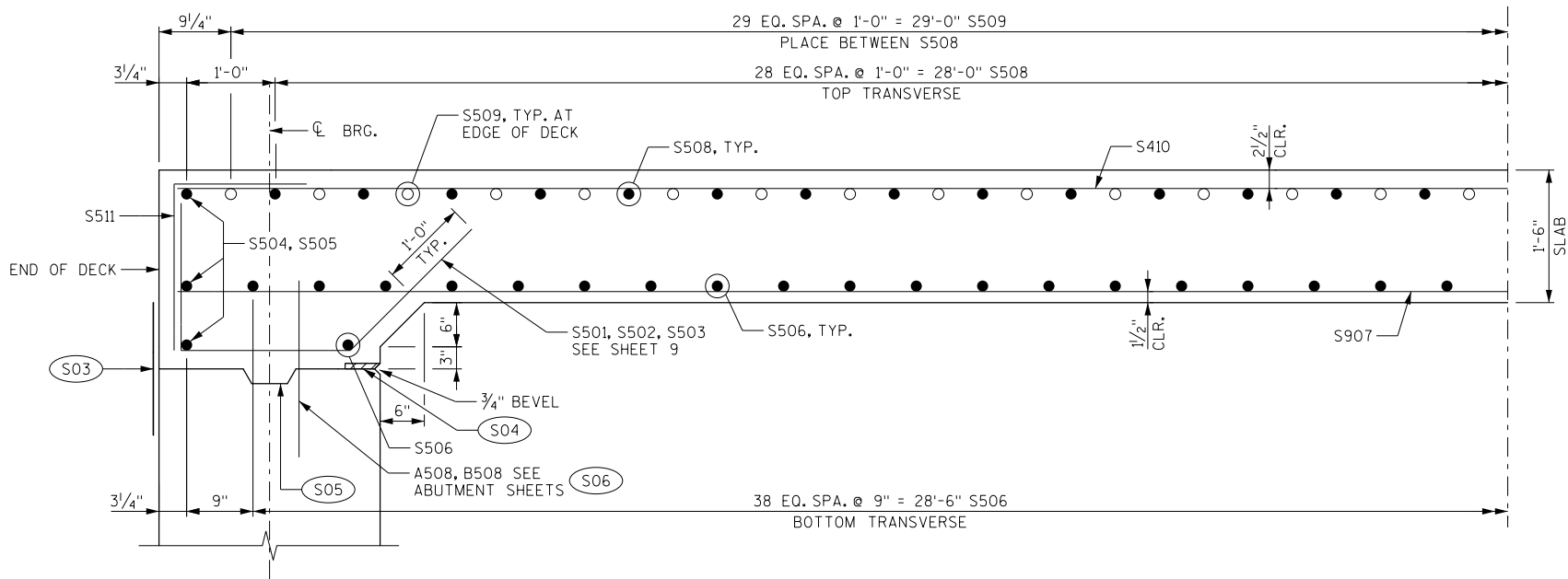
LEGEND

- (S01) 3/4" V-GROOVE. TERMINATE 6" FROM FRONT FACE OF ABUTMENT, TYP.
- (S02) COAT WITH "PROTECTIVE SURFACE TREATMENT" AS PER THE STANDARD SPECIFICATIONS.
- * PARAPET REINFORCEMENT. SEE SHEET 10 FOR SECTION THROUGH PARAPET.

NOTES

- TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.
- ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).
- PARAPETS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.
- CAMBER SPAN AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.
- PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE C. OF ABUTMENTS AND AT 5/10 POINTS TO VERIFY CAMBER. TAKE ELVATIONS ALONG GUTTER LINES AND CROWN OR C.
- FOR SUPERSTRUCTURE BILL OF BARS, SEE SHEET 10.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-59-205			
DRAWN BY VJD		PLANS CK'D. SWS	
SUPERSTRUCTURE		SHEET 9 OF 11	

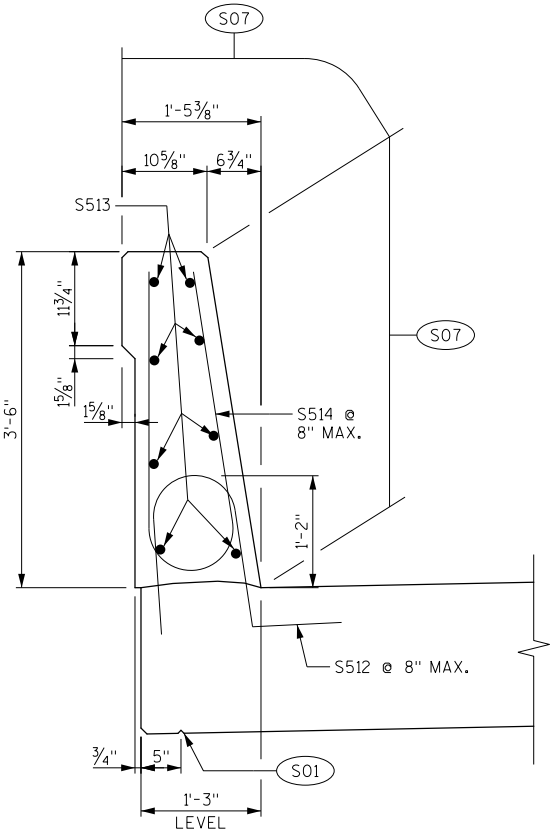


HALF LONGITUDINAL SECTION
SYMMETRICAL ABOUT MID-SPAN

BILL OF BARS - SUPERSTRUCTURE							COATED: 11,780 LBS
							UNCOATED: 0 LBS
BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION	
S501	X	58	5'-8"	X		HAUNCH - VERT	
S502	X	2	5'-10"	X		HAUNCH - VERT - CORNER "A"	
S503	X	2	5'-6"	X		HAUNCH - VERT - CORNER "B"	
S504	X	12	4'-2"	X		HAUNCH - HORIZ - CORNER	
S505	X	6	28'-6"			SLAB - TRANS - END OF DECK	
S506	X	41	30'-7"			SLAB - BOTTOM TRANS	
S907	X	61	30'-1"			SLAB - BOTTOM LONGIT	
S508	X	29	30'-7"			SLAB - TOP TRANS	
S509	X	60	5'-0"			SLAB - TOP TRANS - EDGE	
S410	X	31	30'-1"			SLAB - TOP LONGIT	
S511	X	62	3'-1"	X		HAUNCH - VERT - END OF DECK	
S512	X	92	4'-5"	X		SLAB - PARAPET DOWELS	
S513	X	16	30'-1"			PARAPET - LONGIT	
S514	X	92	6'-8"	X		PARAPET - VERT	

LOCATION	CL. W. ABUT.	0.1L	0.2L	0.3L	0.4L	0.5L	0.6L	0.7L	0.8L	0.9L	CL. E. ABUT
N. EDGE SLAB	641.53	641.51	641.49	641.47	641.45	641.43	641.41	641.39	641.37	641.35	641.33
CROWN	641.79	641.77	641.75	641.73	641.71	641.69	641.67	641.65	641.63	641.61	641.59
S. EDGE SLAB	641.49	641.47	641.45	641.43	641.41	641.39	641.37	641.35	641.33	641.31	641.29

TOP OF DECK ELEVATIONS
ELEVATIONS SHOWN ARE FINISHED DECK AND DO NOT INCLUDE ALLOWANCES OF DEAD LOAD DEFLECTION AND FUTURE CREEP

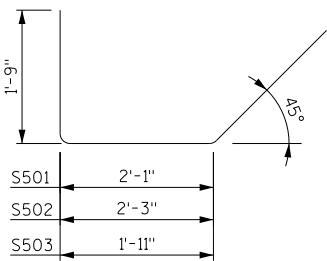


SECTION THRU PARAPET

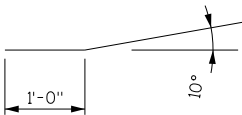
LEGEND

- S01 3/4" V-GROOVE. TERMINATE 6" FROM FRONT FACE OF ABUTMENT, TYP.
- S03 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS AT BACK FACE.
- S04 3/4" X 4" PREFORMED FILLER, OUT TO OUT OF ABUTMENT.
- S05 KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6".
- S06 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. EMBED BARS 1'-0"
- S07 COAT WITH "PIGMENTED SURFACE SEALER" AS PER THE STANDARD SPECIFICATIONS. PARAPET ON WING WALLS SIMILAR.

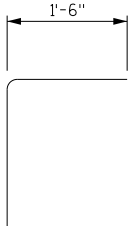
F.F. FRONT FACE
B.F. BACK FACE



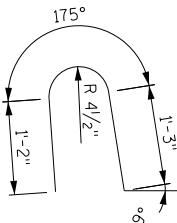
S501, S502, S503



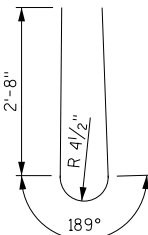
S504



S511



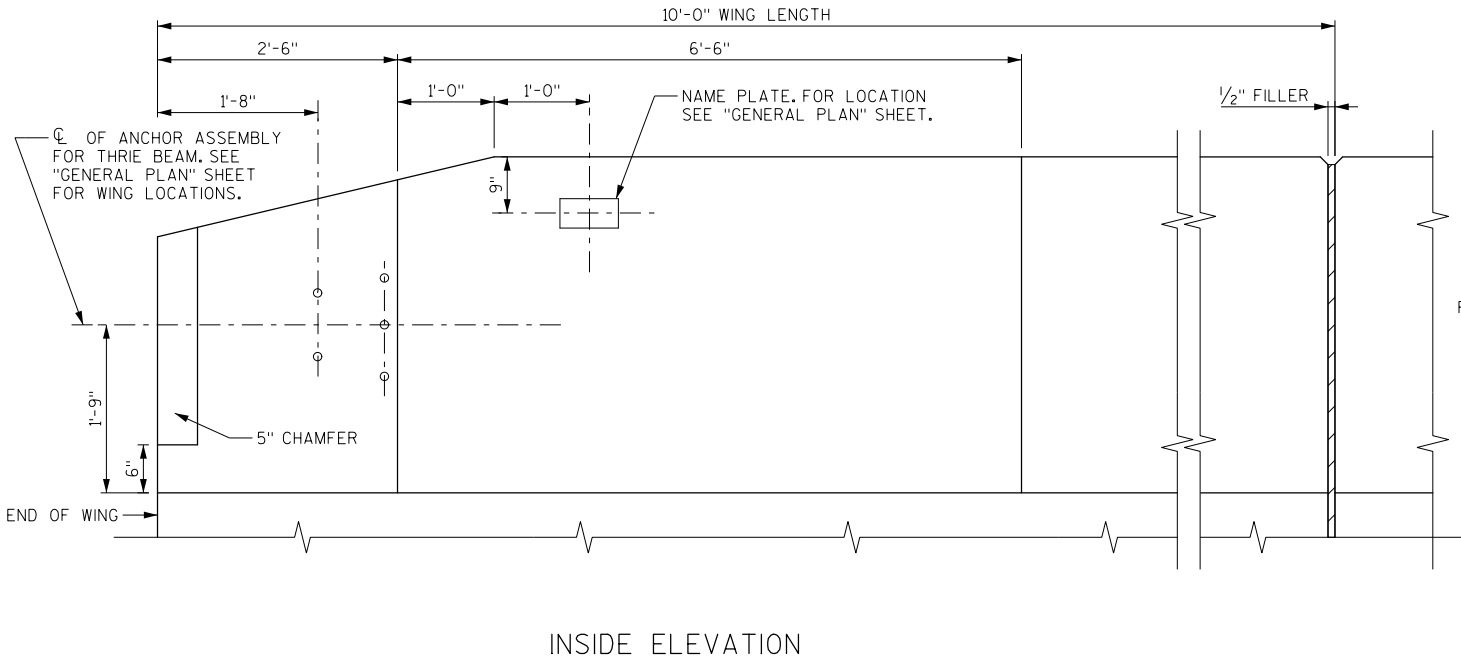
S512



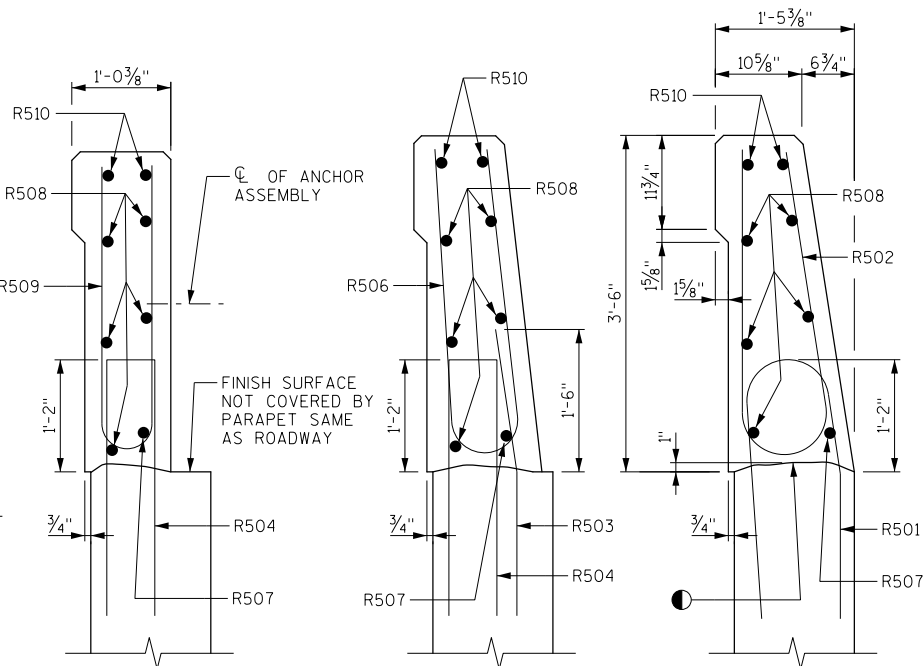
S514

LEGEND

- CONST. JOINT - STRIKE OFF AS SHOWN.
- R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R503 OR S503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.
- ▽ R501 AND R504 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.



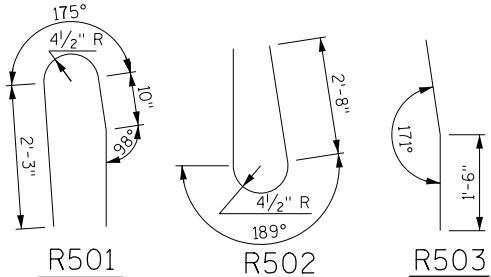
INSIDE ELEVATION



SECTION A

SECTION B

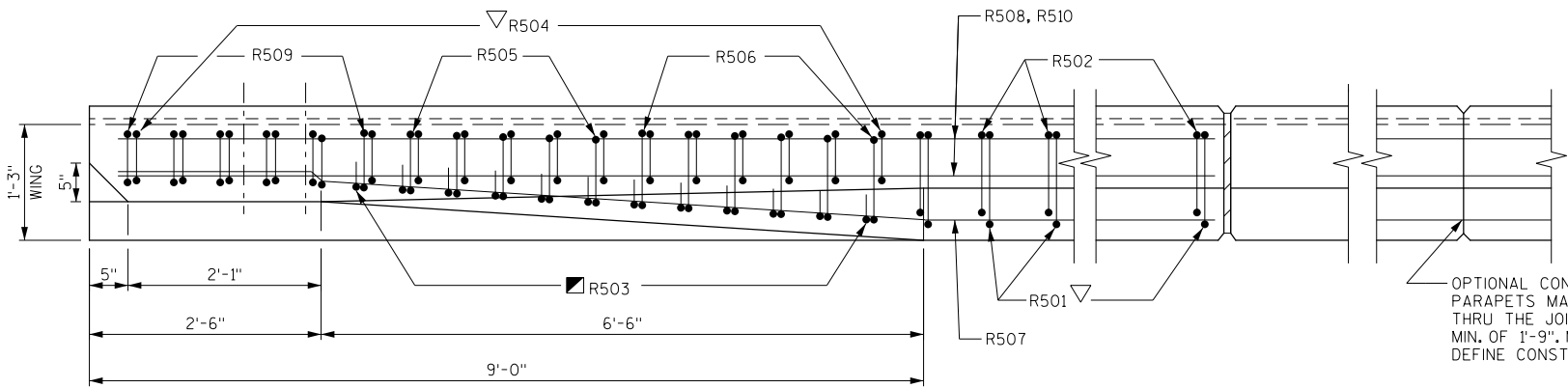
SECTION C



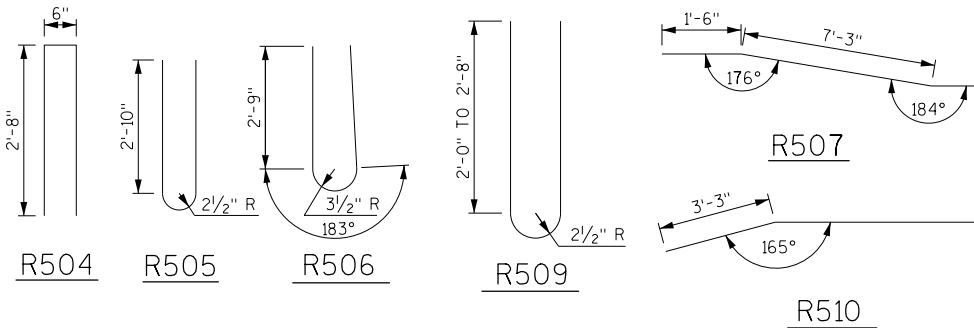
R501

R502

R503



PLAN



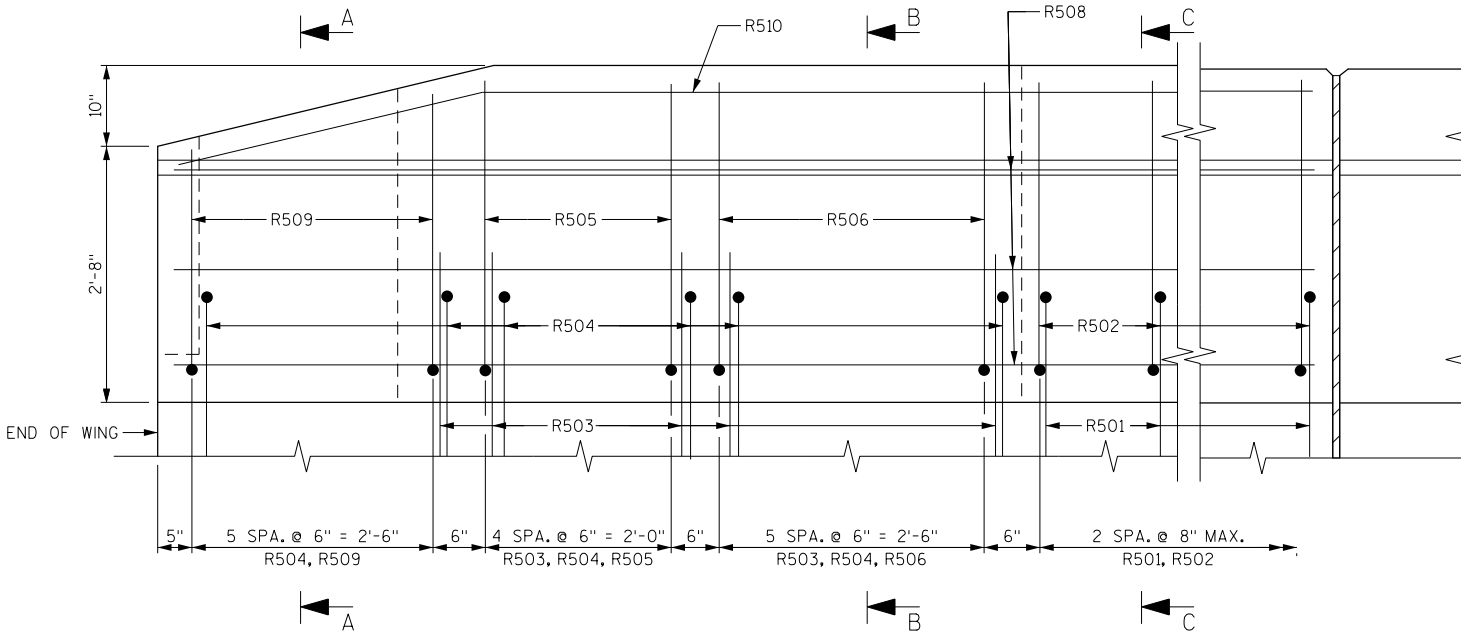
R504

R505

R506

R509

R510

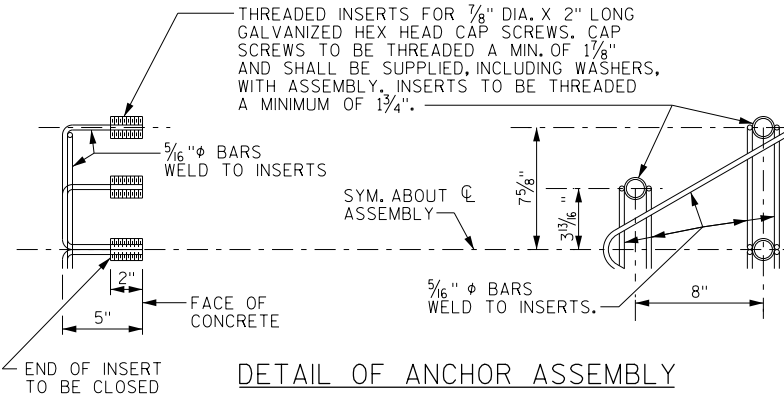


OUTSIDE ELEVATION

BAR SERIES TABLE		
BAR MARK	NO. REQ'D	LENGTH
R509	4 SERIES OF 6	4'-9" - 6'-1"

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

BILL OF BARS - ABUTMENT PARAPETS							W. ABUT: 740 LBS E. ABUT: 740 LBS
BAR MARK	COAT	NO. REQ'D W. ABUT.	NO. REQ'D E. ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	6	6	5'-10"	X		PARAPET VERT
R502	X	6	6	6'-8"	X		PARAPET - VERT
R503	X	24	24	3'-0"	X		PARAPET - VERT
R504	X	34	34	5'-7"	X		PARAPET - VERT
R505	X	10	10	6'-5"	X		PARAPET - VERT
R506	X	12	12	6'-6"	X		PARAPET - VERT
R507	X	2	2	9'-6"	X		PARAPET - HORIZ.
R508	X	10	10	9'-5"			PARAPET - HORIZ.
R509	X	12	12	5'-5"	X	X	PARAPET - VERT
R510	X	4	4	10'-9"	X		PARAPET - HORIZ.



DETAIL OF ANCHOR ASSEMBLY

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

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

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-59-205			
DRAWN BY VJD		PLANS CK'D. SWS	
SINGLE SLOPE PARAPET 42SS			SHEET 11 OF 11

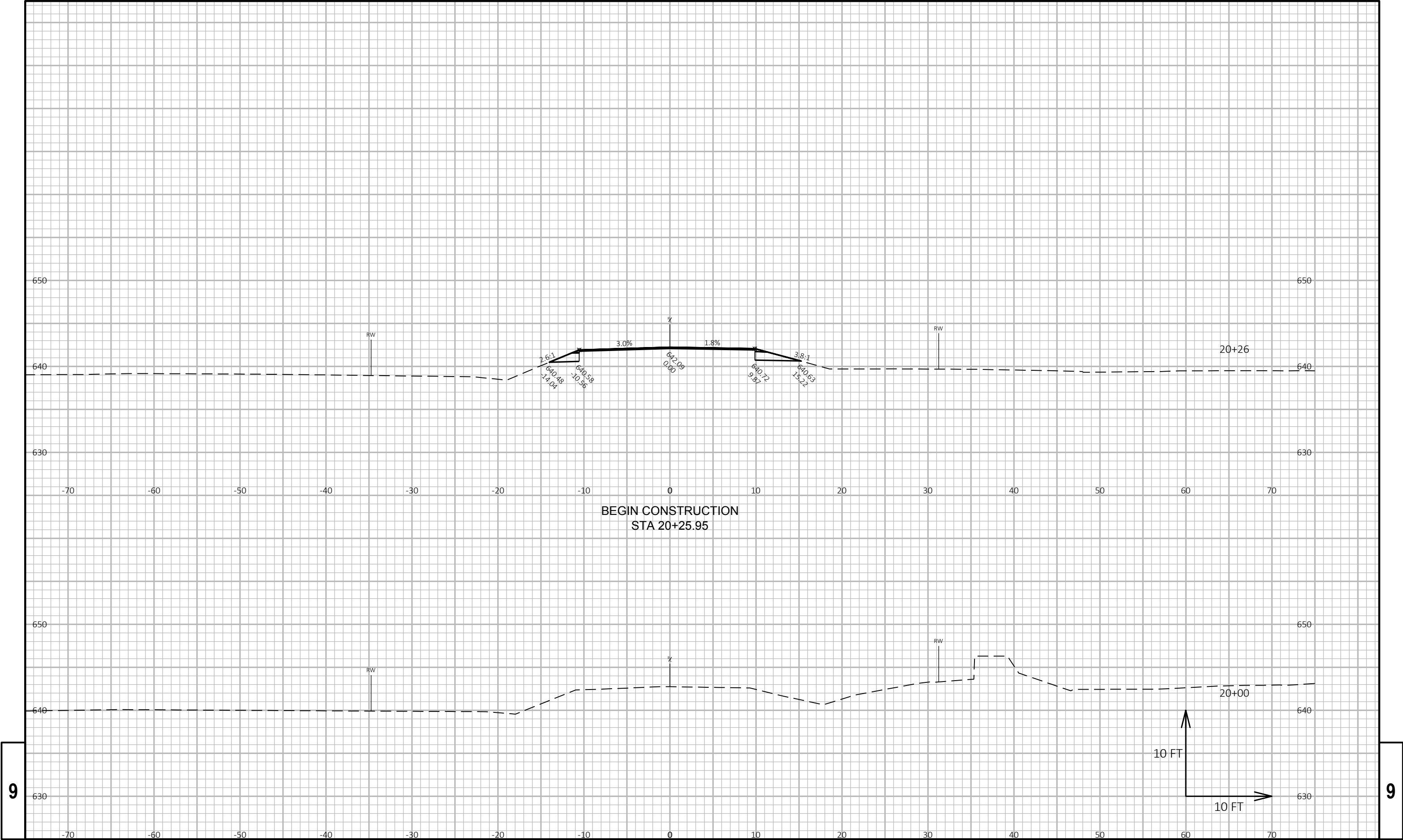
WEST APPROACH

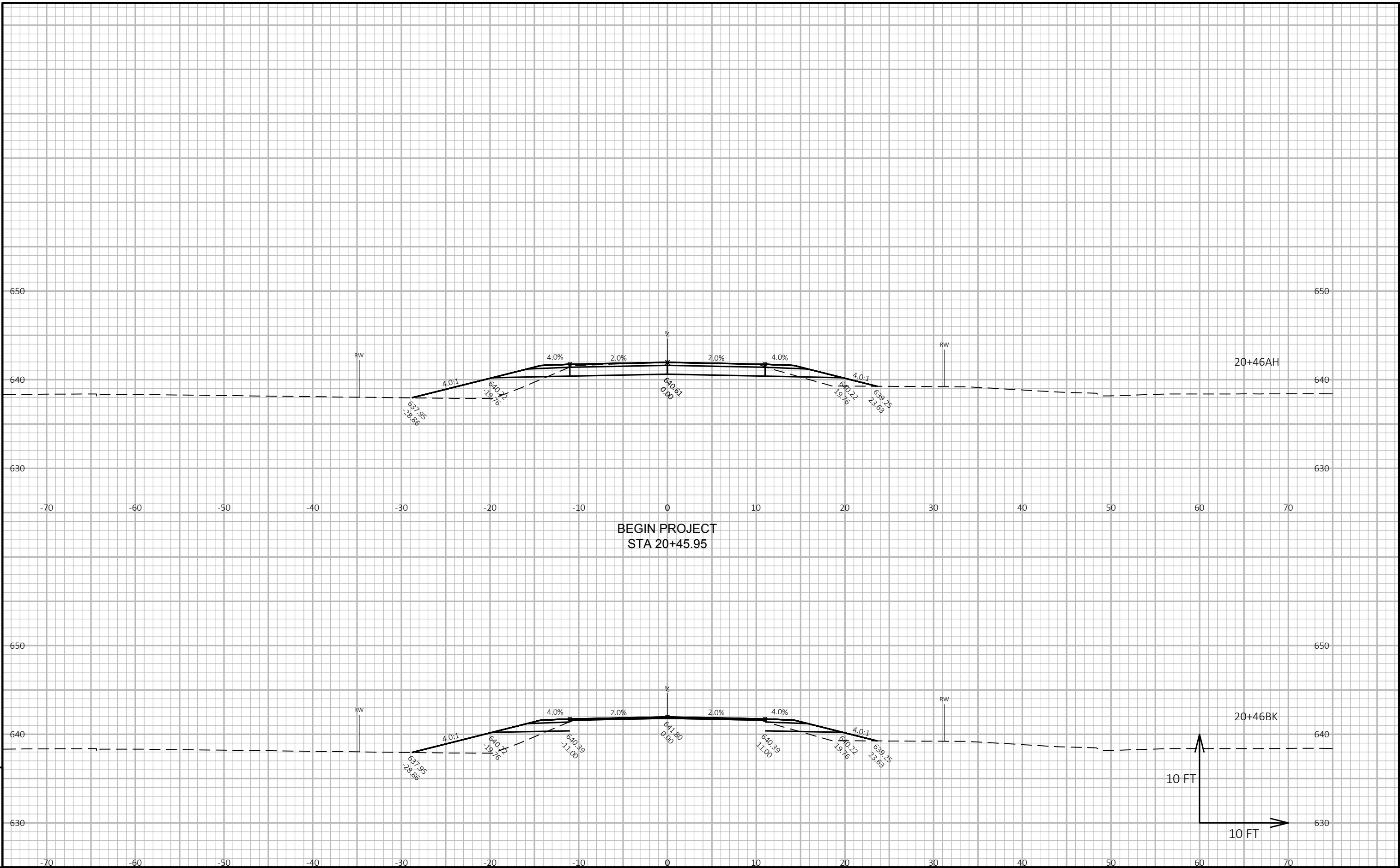
STATION	DISTANCE	AREA (SF)			INCREMENTAL VOLUME (CY) (Unadjusted)			CUMULATIVE VOLUME (CY)		MASS ORDINATE
		CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.20	
Note 1	Note 2	Note 3	Note 1	Note 8						
20+25.95		9.04	3.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20+45.95	20	5.80	3.21	23.21	5.50	2.38	8.60	5.50	10.32	-7.20
20+45.95	0	31.88	16.50	23.14	0.00	0.00	0.00	5.50	10.32	-7.20
20+50.00	4	31.40	16.50	26.98	4.75	1.81	3.76	10.24	14.83	-8.77
20+65.42	15	39.88	16.50	0.31	20.35	9.42	7.79	30.60	24.18	-7.19
20+70.35	5	0.00	0.00	0.00	3.64	1.51	0.03	34.24	24.21	-5.09
					34.24	15.12	20.18			

EAST APPROACH

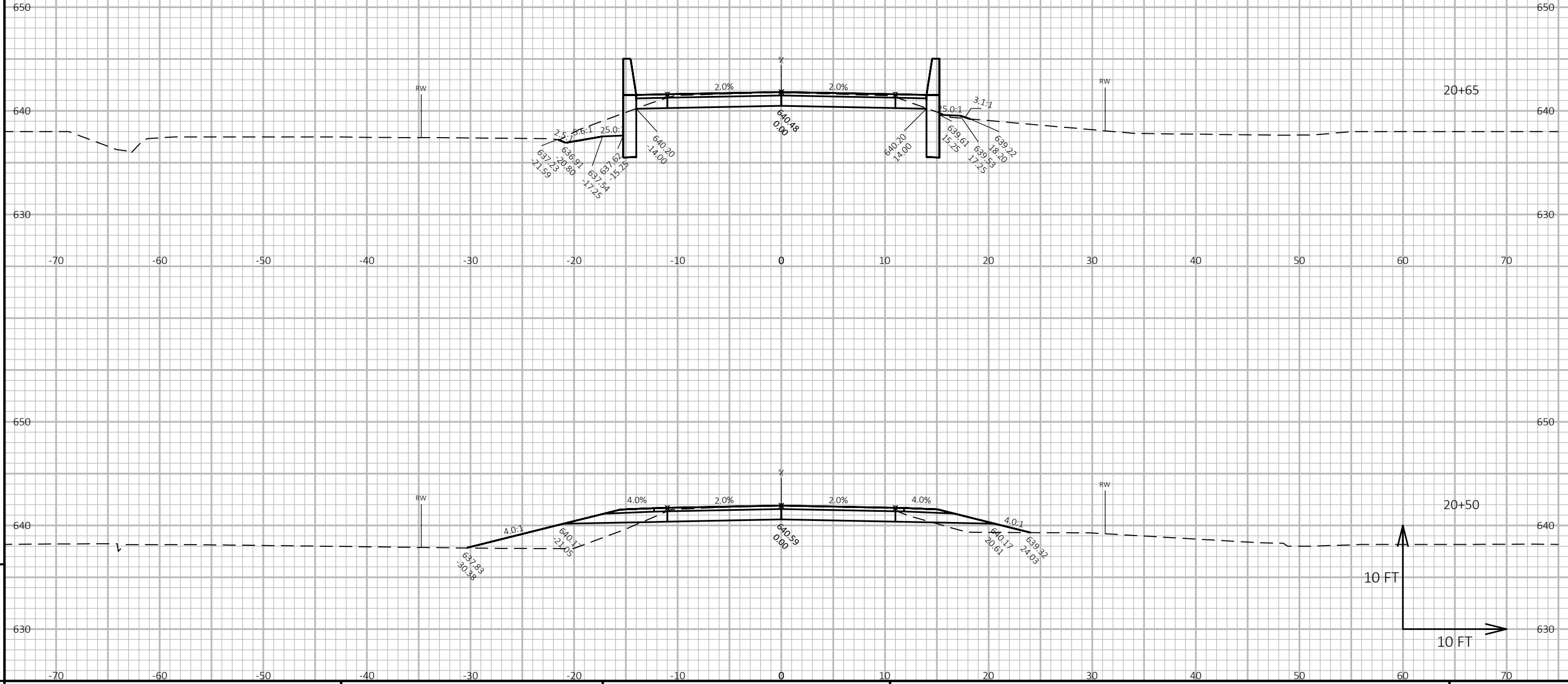
STATION	DISTANCE	AREA (SF)			INCREMENTAL VOLUME (CY) (Unadjusted)			CUMULATIVE VOLUME (CY)		MASS ORDINATE
		CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.20	
Note 1	Note 2	Note 3	Note 1	Note 8						
20+95.96		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21+00.89	5	6.20	16.50	31.06	0.57	1.51	2.84	0.57	3.40	-4.34
21+20.36	19	30.13	16.50	27.94	13.10	11.90	21.27	13.67	28.93	-28.67
21+20.36	0	4.28	3.21	28.22	0.00	0.00	0.00	13.67	28.93	-28.67
21+40.36	20	8.74	3.21	0.00	4.82	2.38	10.45	18.49	41.47	-38.77
					18.49	15.78	34.56			

Notes:		
1 - Cut	Cut includes Salvaged/Unusable Pavement material	
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections	
3 - Fill	Does not include Unusable Pavement Exc volume	
4 - Expanded Marsh Backfill	Will be backfilled with Granular Backfill (or Cut, or Borrow)	Note 4 - Select one based on input dialog selection
5 - Expanded EBS	Will be backfilled with Granular Backfill (or Cut, or Borrow)	Note 5 - Select one based on input dialog selection
6 - Reduced Marsh in Fill	Reduced Marsh Excavation that can be used in Fill	Note 6 - If excavated Marsh can be used in Fill
7 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill	Note 7 - If excavated EBS can be used in Fill
8 - Mass Ordinate	If Marsh or EBS to be backfilled with Cut or Borrow: [(Cut + Marsh Exc + EBS) - ((Fill - Reduced Marsh in Fill) - (Reduced EBS in Fill) - Expanded Rock) * Fill Factor)]	Note 8 - Select one based on mass haul input dialog selection.
		EBS and Marsh Exc used outside 1:1 in fill slopes



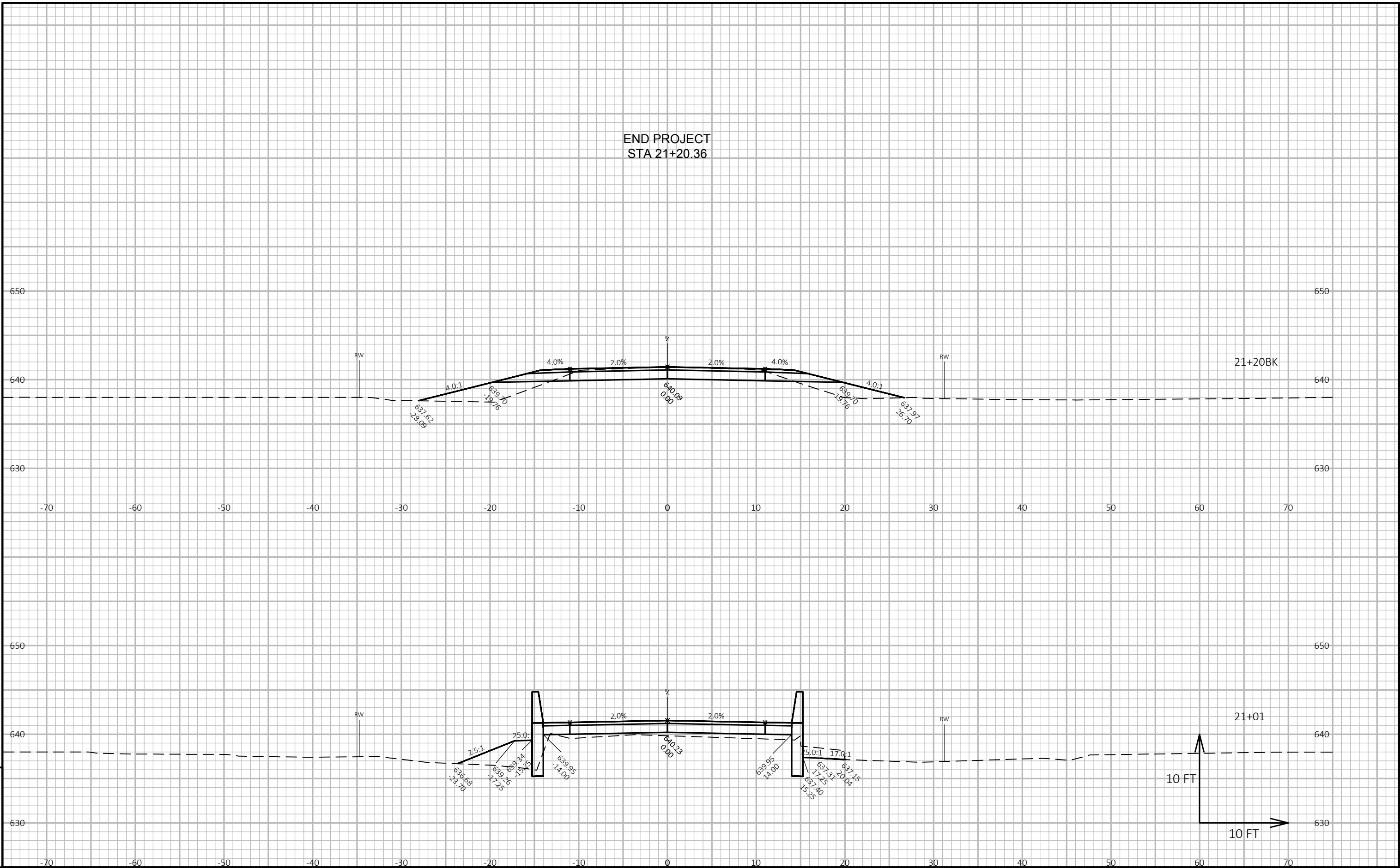


STRUCTURE B-59-205
STA 20+68 - 20+98

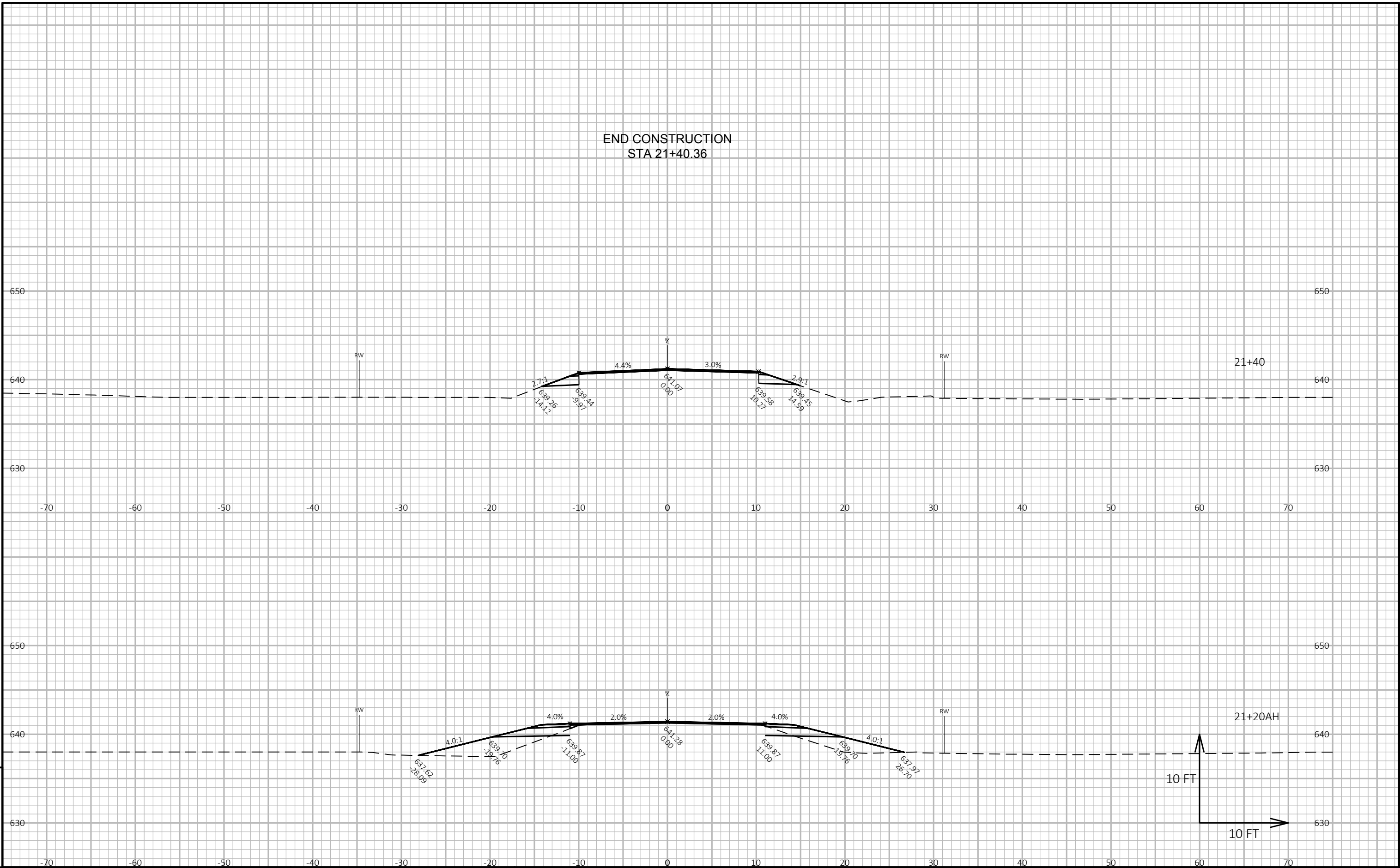


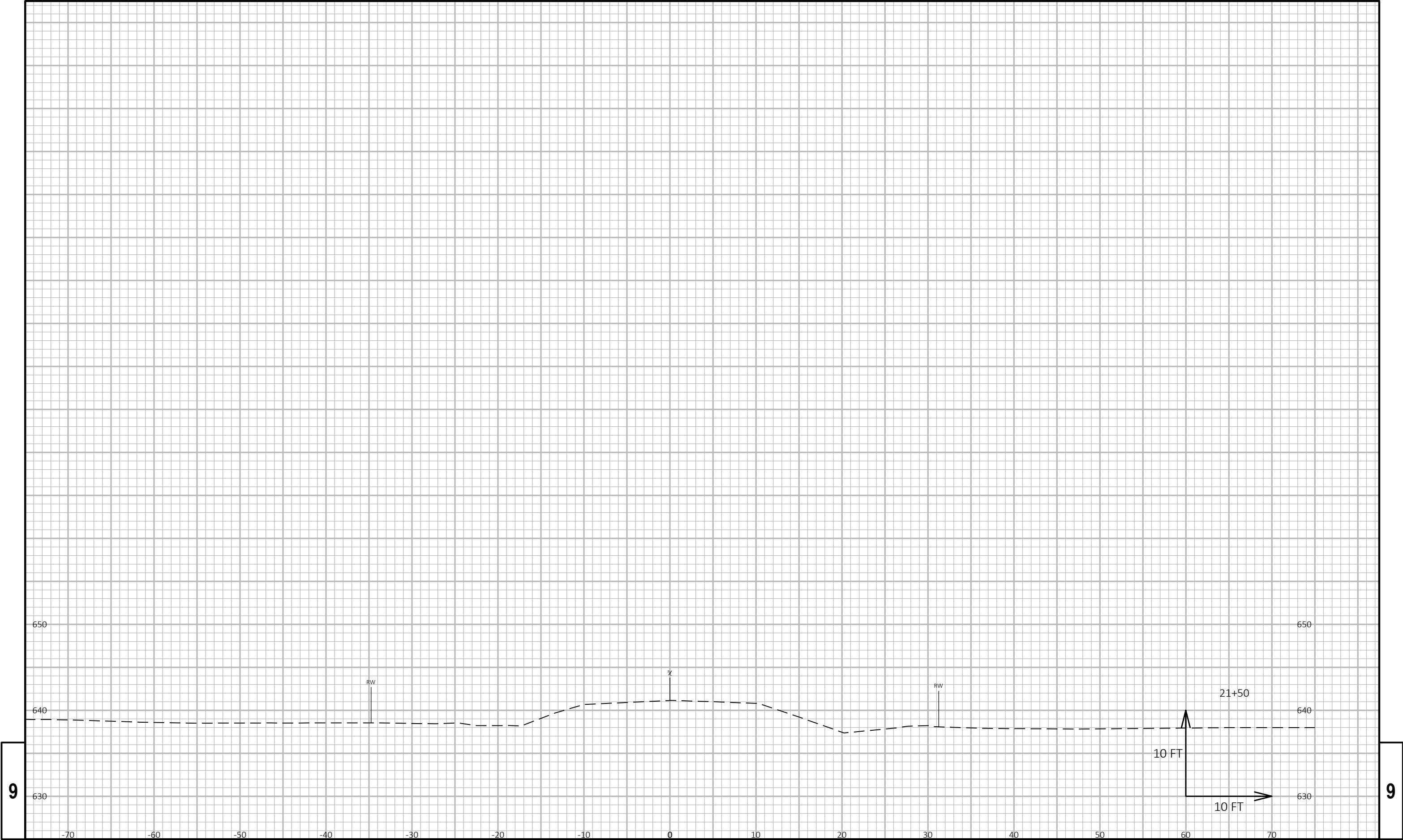
9

9



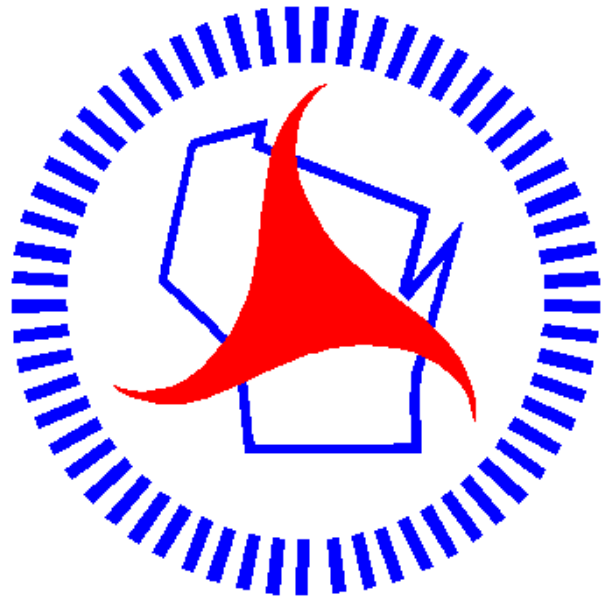
PROJECT NO: 4197-04-71	HWY: LOCAL ROAD	COUNTY: SHEBOYGAN	CROSS SECTIONS: LUELLOFF ROAD	SHEET E
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PROJECT NO:	4197-04-71	HWY: LOCAL ROAD	COUNTY: SHEBOYGAN	CROSS SECTIONS:	LUELLOFF ROAD	SHEET	E
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Notes



Wisconsin Department of Transportation

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