

MAD

Dec 14, 2021

PROJECT ID: 3810-00-71

COUNTY: DODGE

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

TOWN OF EMMET, APPLE RD

SILVER CREEK BRIDGE, B-14-0223

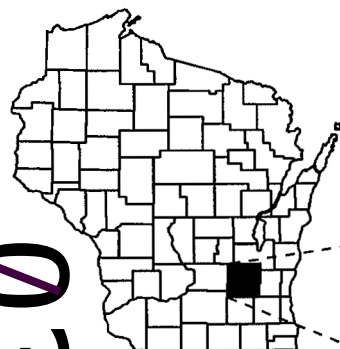
LOCAL STREET DODGE COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
3810-00-71	WISC 2022063	1

ORDER OF SHEETS

Section No.	Title
1	Title
2	Typical Sections and Details
3	Estimate of Quantities
3	Miscellaneous Quantities
4	Right of Way Plat
5	Plan and Profile (Incl. Erosion Control Plans)
6	Standard Detail Drawings
7	Sign Plates
8	Structure Plans
9	Computer Earthwork Data
9	Cross Sections

TOTAL SHEETS = 48



03

BEGIN PROJECT 3810-00-71
 STA. 7'A'+65.00
 Y = 656,318.230
 X = 885,315.017

STATE PROJECT NUMBER
3810-00-71

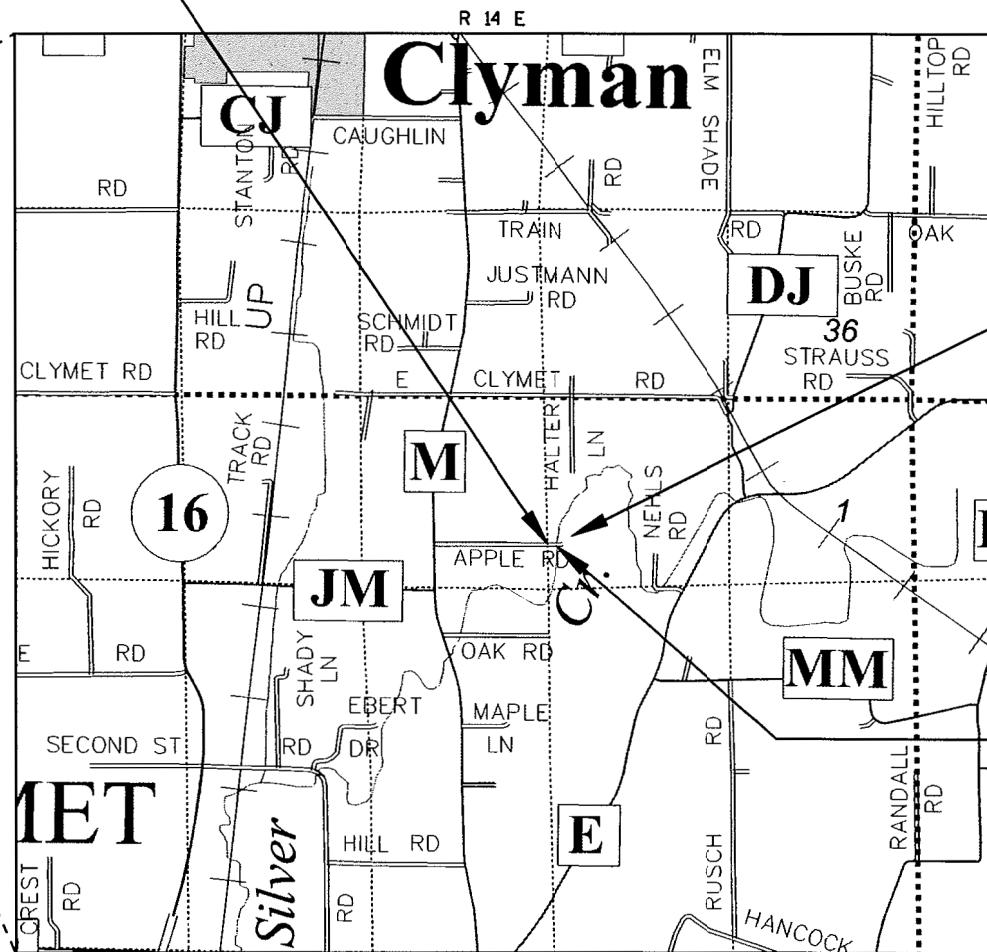
DESIGN DESIGNATION 3810-00-71

A.A.D.T.	2022	=	< 100
A.A.D.T.	2042	=	< 100
D.H.V.		=	3.5
D.D.		=	60/40
T.		=	4.2%
DESIGN SPEED		=	20 MPH
ESALS		=	36,500

CONVENTIONAL SYMBOLS

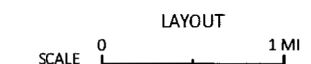
PLAN	PROFILE
CORPORATE LIMITS	GRADE LINE
PROPERTY LINE	ORIGINAL GROUND
LOT LINE	MARSH OR ROCK PROFILE (To be noted as such)
LIMITED HIGHWAY EASEMENT	SPECIAL DITCH
EXISTING RIGHT OF WAY	GRADE ELEVATION
PROPOSED OR NEW R/W LINE	CULVERT (Profile View)
SLOPE INTERCEPT	UTILITIES
REFERENCE LINE	ELECTRIC
EXISTING CULVERT	FIBER OPTIC
PROPOSED CULVERT (Box or Pipe)	GAS
COMBUSTIBLE FLUIDS	SANITARY SEWER
	STORM SEWER
	TELEPHONE
	WATER
MARSH AREA	UTILITY PEDESTAL
	POWER POLE
WOODED OR SHRUB AREA	TELEPHONE POLE

ROCK
LABEL
91.36
91.56
E
FO
G
SAN
SS
T
W
☐
☐



END PROJECT 3810-00-71
 STA. 12'A'+10.00
 Y = 656,410.015
 X = 885,744.692

BRIDGE STRUCTURE (B-14-0223)



TOTAL NET LENGTH OF CENTERLINE = 0.084 MILES

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

ACCEPTED FOR
 TOWN OF EMMET
 Date: 7-26-21
 (TOWN CHAIRMAN)

ORIGINAL PLANS PREPARED BY

AYRES

AMANDA M. INMAN
 44690
 OREGON
 WI
 PROFESSIONAL ENGINEER
 7/28/2021

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

PREPARED BY
 Surveyor: AYRES ASSOCIATES
 Designer: AYRES ASSOCIATES
 Regional Examiner: _____
 Regional Supervisor: _____

APPROVED FOR THE DEPARTMENT
 DATE: 07/28/2021
 (Signature)

E

GENERAL NOTES

NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY UTILITY WHICH IS NOT A MEMBER OF DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT LOCATION THAT ARE NOT SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR FIELD LOCATING ALL UTILITIES.

A SAWED JOINT WILL BE REQUIRED WHERE NEW PAVEMENT IS TO MEET AN EXISTING PAVED SURFACE.

EXACT TRAFFIC CONTROL LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

ALL SIGN LOCATIONS SHALL BE REVIEWED BY THE ENGINEER PRIOR TO INSTALLATION.

NO TREES OR SHRUBS SHALL BE REMOVED UNLESS DESIGNATED FOR REMOVAL BY THE ENGINEER.

PROTECT FROM DAMAGE AND COMPLETE SHOULDER WORK AROUND ANY EXISTING SIGNS OR MAILBOXES THAT ARE TO REMAIN IN PLACE.

RESTORATION OF EXPOSED SLOPES AND DITCHES SHALL TAKE PLACE WITHIN 7 CALENDAR DAYS AFTER FINISHED GRADING IS COMPLETE.

WETLANDS ARE PRESENT IN THE PROJECT AREA. DO NOT DISTURB WETLANDS OUTSIDE THE PROPOSED SLOPE INTERCEPTS.

IF AN EXISTING SIGN IS TO BE REMOVED AND REPLACED WITH A NEW SIGN, DO NOT REMOVE THE EXISTING SIGN PRIOR TO INSTALLATION OF THE NEW SIGN.

THE LOCATIONS OF EROSION CONTROL ITEMS SHALL BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

HMA UNIT WEIGHT: 112 LB/SY/IN
TACK COAT APPLICATION RATE: 0.07 GAL/SY

SUGGESTED ASPHALTIC SURFACE LAYERS:
-UPPER: 1.75-INCH
-LOWER: 2.25-INCH

ABBREVIATIONS

A.D.T.	AVERAGE DAILY TRAFFIC
ATMS	ARTERIAL TRAFFIC MANAGEMENT SYSTEM
BM	BENCHMARK
BOC	BACK OF CURB
BTWN	BETWEEN
C&G	CURB AND GUTTER
C.E.	COMMERCIAL ENTRANCE
CONST	CONSTRUCTION
CP	CONTROL POINT
CTR.	CENTER
D.D.	DIRECTIONAL DISTRIBUTION
D.H.V.	DESIGN HOURLY VOLUME
DMS	DYNAMIC MESSAGE SIGN
EB	EASTBOUND
EXIST	EXISTING
GALV.	GALVANIZED
HMA	HOT MIX ASPHALT
H.S.	HIGH STRENGTH
ITS	INTELLIGENT TRAFFIC SYSTEM
MAX	MAXIMUM
MIN	MINIMUM
NB	NORTHBOUND
NOR	NORMAL
PC	POINT OF CURVATURE
PCC	POINT OF COMMON CURVATURE
PGL	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PVT	PAVEMENT
R/L	REFERENCE LINE
REQ'D	REQUIRED
SB	SOUTHBOUND
SYM	SYMMETRICAL
T.	PERCENT TRUCKS
TCC	TRAFFIC CONDITION CAMERA
TYP	TYPICAL
VAR	VARIABLE
WB	WESTBOUND
Wt.	WEIGHT
X-WALK	CROSS WALK

PROJECT CONTACTS

DODGE COUNTY PUBLIC WORKS
BRIAN FIELD
ASST. COMMISSIONER
HIGHWAY DEPT.
211 E. CENTER STREET
JUNEAU, WI 53039-1309
P: (920) 386-3650
F: (920) 386-3525
E: BFIELD@CO.DODGE.WI.US

UTILITIES

AT&T
TOM CROWLEY
2005 PEWAUKEE ROAD
WAUKESHA, WI 53188
P: (262) 896-7427
C: (262) 501-3499

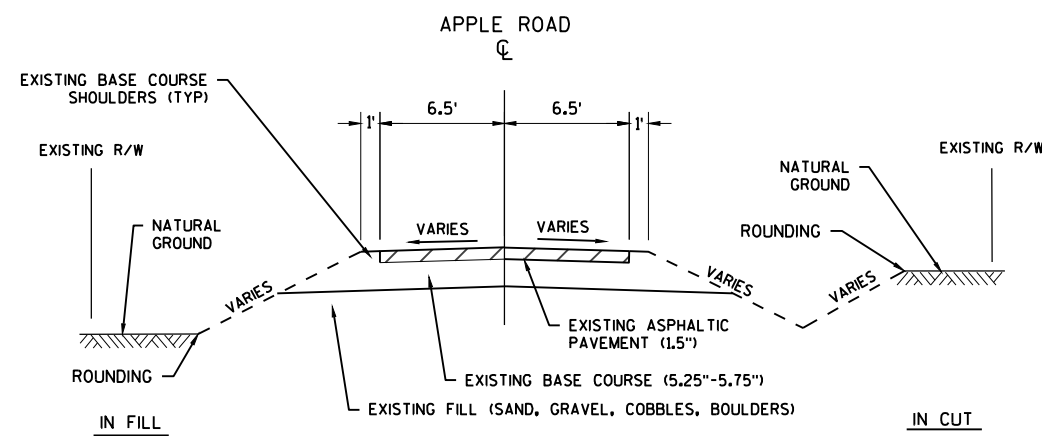
WE ENERGIES
ERIC KICKHAVER
500 SOUTH 116TH STREET
WEST ALLIS, WI 53214
P: (414) 944-5917
C: (414) 588-7472
F: (414) 944-5552
E: ERIC.KICKHAVER@WE-ENERGIES.COM

TOWN OF EMMET
BILL NASS
TOWN CHAIRMAN
W6777 SECOND ST. ROAD
WATERTOWN, WI 53098
P: (920) 285-3457

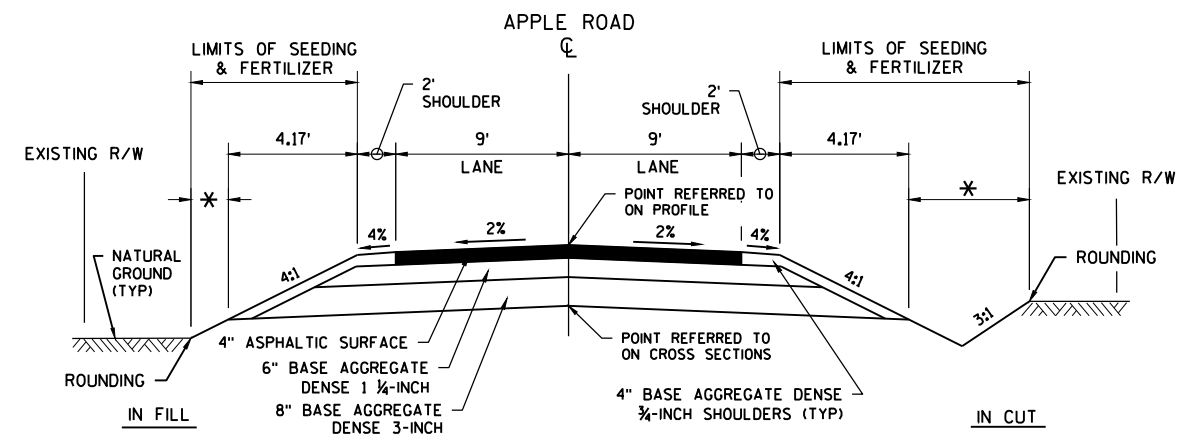
WISCONSIN DEPARTMENT OF NATURAL RESOURCES
ERIC HEGGELUND
DNR SOUTH CENTRAL REGION HEADQUARTERS
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
P: (608) 275-3301
E: ERIC.HEGGELUND@WISCONSIN.GOV

DESIGNER
AMANDA INMAN, PE
AYRES ASSOCIATES
5201 EAST TERRACE DRIVE, SUITE 200
MADISON, WI 53718
P: (608) 443-1239
E: INMANA@AYRESASSOCIATES.COM

** DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS



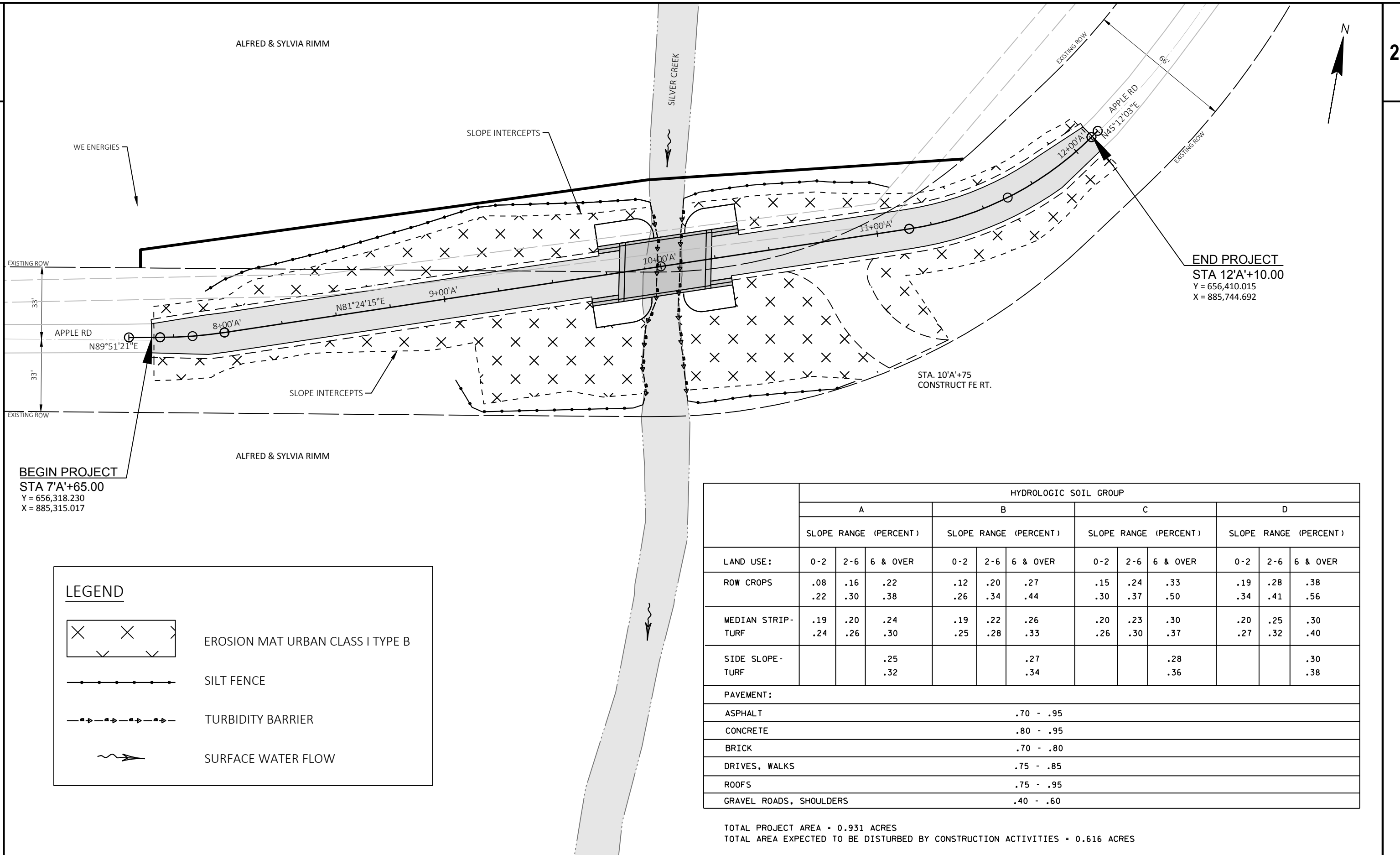
TYPICAL EXISTING SECTION



FINISHED TYPICAL SECTION

STA. 7+65 - STA. 9+79
STA. 10+21 - STA. 12+10

* LIMITS OF SALVAGED TOPSOIL AND EROSION MAT



END PROJECT
 STA 12'A+10.00
 Y = 656,410.015
 X = 885,744.692

BEGIN PROJECT
 STA 7'A+65.00
 Y = 656,318.230
 X = 885,315.017

LEGEND

- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- TURBIDITY BARRIER
- SURFACE WATER FLOW

	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	.16	.22	.12	.20	.27	.15	.24	.33	.19	.28	.38
	.22	.30	.38	.26	.34	.44	.30	.37	.50	.34	.41	.56
MEDIAN STRIP-TURF	.19	.20	.24	.19	.22	.26	.20	.23	.30	.20	.25	.30
	.24	.26	.30	.25	.28	.33	.26	.30	.37	.27	.32	.40
SIDE SLOPE-TURF			.25			.27			.28			.30
			.32			.34			.36			.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 = 0.931 ACRES
 TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.616 ACRES

Estimate Of Quantities

3810-00-71

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	1.000	1.000
0004	201.0205	Grubbing	STA	1.000	1.000
0006	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. P-14-0924	EACH	1.000	1.000
0008	205.0100	Excavation Common	CY	456.000	456.000
0010	206.1000	Excavation for Structures Bridges (structure) 01. B-14-0223	LS	1.000	1.000
0012	208.0100	Borrow	CY	913.000	913.000
0014	210.1500	Backfill Structure Type A	TON	190.000	190.000
0016	213.0100	Finishing Roadway (project) 01. 3810-00-71	EACH	1.000	1.000
0018	305.0110	Base Aggregate Dense 3/4-Inch	TON	126.000	126.000
0020	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	408.000	408.000
0022	305.0130	Base Aggregate Dense 3-Inch	TON	623.000	623.000
0024	455.0605	Tack Coat	GAL	56.000	56.000
0026	465.0105	Asphaltic Surface	TON	179.000	179.000
0028	502.0100	Concrete Masonry Bridges	CY	137.000	137.000
0030	502.3200	Protective Surface Treatment	SY	155.000	155.000
0032	505.0400	Bar Steel Reinforcement HS Structures	LB	3,150.000	3,150.000
0034	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	17,790.000	17,790.000
0036	511.1100	Temporary Shoring	SF	148.000	148.000
0038	513.4061	Railing Tubular Type M	LF	132.100	132.100
0040	516.0500	Rubberized Membrane Waterproofing	SY	18.000	18.000
0042	550.0500	Pile Points	EACH	8.000	8.000
0044	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	120.000	120.000
0046	606.0300	Riprap Heavy	CY	160.000	160.000
0048	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	140.000	140.000
0050	618.0100	Maintenance And Repair of Haul Roads (project) 01. 3810-00-71	EACH	1.000	1.000
0052	619.1000	Mobilization	EACH	1.000	1.000
0054	623.0200	Dust Control Surface Treatment	SY	970.000	970.000
0056	624.0100	Water	MGAL	7.000	7.000
0058	625.0500	Salvaged Topsoil	SY	1,270.000	1,270.000
0060	628.1504	Silt Fence	LF	720.000	720.000
0062	628.1520	Silt Fence Maintenance	LF	1,440.000	1,440.000
0064	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0066	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0068	628.2008	Erosion Mat Urban Class I Type B	SY	1,800.000	1,800.000
0070	628.6005	Turbidity Barriers	SY	180.000	180.000
0072	629.0210	Fertilizer Type B	CWT	1.300	1.300
0074	630.0120	Seeding Mixture No. 20	LB	60.000	60.000
0076	630.0200	Seeding Temporary	LB	60.000	60.000
0078	630.0300	Seeding Borrow Pit	LB	5.000	5.000
0080	630.0500	Seed Water	MGAL	37.000	37.000
0082	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	4.000	4.000
0084	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0086	638.2602	Removing Signs Type II	EACH	5.000	5.000
0088	638.3000	Removing Small Sign Supports	EACH	5.000	5.000
0090	642.5001	Field Office Type B	EACH	1.000	1.000
0092	643.0300	Traffic Control Drums	DAY	70.000	70.000
0094	643.0420	Traffic Control Barricades Type III	DAY	710.000	710.000
0096	643.0705	Traffic Control Warning Lights Type A	DAY	852.000	852.000
0098	643.0900	Traffic Control Signs	DAY	355.000	355.000

Estimate Of Quantities

3810-00-71

Line	Item	Item Description	Unit	Total	Qty
0100	643.5000	Traffic Control	EACH	1.000	1.000
0102	645.0111	Geotextile Type DF Schedule A	SY	85.000	85.000
0104	645.0120	Geotextile Type HR	SY	305.000	305.000
0106	650.4500	Construction Staking Subgrade	LF	405.000	405.000
0108	650.5000	Construction Staking Base	LF	405.000	405.000
0110	650.6500	Construction Staking Structure Layout (structure) 01. B-14-0223	LS	1.000	1.000
0112	650.9910	Construction Staking Supplemental Control (project) 01. 3810-00-71	LS	1.000	1.000
0114	650.9920	Construction Staking Slope Stakes	LF	405.000	405.000
0116	690.0150	Sawing Asphalt	LF	26.000	26.000
0118	715.0502	Incentive Strength Concrete Structures	DOL	822.000	822.000
0120	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. Station 9+96	EACH	1.000	1.000
0122	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	1,200.000	1,200.000
0124	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	600.000	600.000
0126	SPV.0035	Special 01. Excavation, Hauling, and Disposal of Creosote Contaminated Soil	CY	28.000	28.000
0128	SPV.0090	Special 01. Flashing Stainless Steel	LF	85.000	85.000

APPLE ROAD EARTHWORK SUMMARY

From/To Station	Location	Common Excavation (1) (Item 205.0100)	Unexpanded Fill	Expanded Fill (2)	Mass Ordinate +/- (3)	Waste	Borrow (Item 208.0100)	Comment:
		Cut		Factor 1.30				
7+65 - 9+78	NEW ALI & MATCH-IN	236	856	1113	-877		877	
9+83 - 10+08	CREOSOTE BACKFILL	0	28	36	-36		36	
9+10 - 11+22	EX ROADWAY CUT	220	0	0	220	220		
PROJECT TOTAL		<u>456</u>		<u>1149</u>			<u>913</u>	

- 1) Common Excavation is the Cut. Item number 205.0100.
- 2) Expanded Fill. Factor = 1.30; Expanded Fill = Unexpanded Fill * Fill Factor
- 3) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material on the project.
- 4) All quantities shown in CY.

BASE AGGREGATE

CATEGORY	STATION	TO	STATION	LOCATION	305.0110	305.0120	305.0130	624.0100	REMARKS
					BASE AGGREGATE DENSE 3/4-INCH TON	BASE AGGREGATE DENSE 1 1/4-INCH TON	BASE AGGREGATE DENSE 3-INCH TON	WATER MGAL	
0010	7+65	-	9+78	MAINLINE	70	192	338	3	WEST APPROACH
0010	10+21	-	12+10	MAINLINE	56	164	285	3	EAST APPROACH
0010		-	10+75	FERT	-	52	-	1	FIELD ENTRANCE
TOTAL 0010					<u>126</u>	<u>408</u>	<u>623</u>	<u>7</u>	

CLEARING AND GRUBBING

CATEGORY	STATION	TO	STATION	LOCATION	201.0105	201.0205
					CLEARING STA	GRUBBING STA
0010	9+50	-	10+50	LT/RT	1	1
TOTAL 0010					<u>1</u>	<u>1</u>

ASPHALT

CATEGORY	STATION	TO	STATION	LOCATION	* 455.0605	** 465.0105	REMARKS
					TACK COAT GAL	ASPHALTIC SURFACE TON	
0010	7+65	-	9+79.63	MAINLINE	30	96	WEST APPROACH
0010	10+21.27	-	12+10	MAINLINE	26	83	EAST APPROACH
TOTAL 0010					<u>56</u>	<u>179</u>	

- NOTES:
 * TACK COAT APPLICATION RATE = 0.07 GAL/SY
 ** ASSUMED ASPHALT AT 112 LBS/SY/IN

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

EROSION CONTROL

CATEGORY	STATION	TO	STATION	LOCATION	625.0500	628.1504	628.1520	628.2008	628.6005	629.0210	630.0120	630.0200	630.0300	630.0500
					SALVAGED TOPSOIL	SILT FENCE	SILT FENCE MAINTENANCE	EROSION MAT URBAN CLASS I TYPE B	TURBIDITY BARRIERS	FERTILIZER TYPE B	SEEDING MIXTURE NO. 20	SEEDING TEMPORARY	SEEDING BORROW PIT	SEED WATER
					SY	LF	LF	SY	SY	CWT	LB	LB	LB	MGAL
0010	7+65	-	10+00	LT	280	210	420	382	-	0.2	11	11	-	8.6
0010	7+65	-	10+00	RT	380	95	190	477	80	0.3	13	13	-	10.7
0010	10+00	-	12+10	LT	80	95	190	161	-	0.1	5	5	-	3.7
0010	10+00	-	12+10	RT	530	175	350	610	80	0.4	17	17	-	13.7
0010			UNDISTRIBUTED		-	145	290	170	20	0.3	14	14	5	0.3
TOTAL 0010					1,270	720	1,440	1,800	180	1.3	60	60	5	37.0

SIGNS

DUST CONTROL SURFACE TREATMENT

CATEGORY	LOCATION	623.0200	REMARKS
		DUST CONTROL SURFACE TREATMENT SY	
0010	UNDISTRIBUTED	970	
TOTAL 0010		970	

CATEGORY	STATION	LOCATION	634.0614	637.2230	638.2602	638.3000	REMARKS
			POSTS WOOD 4X6-INCH X 14-FT EACH	SIGNS TYPE II REFLECTIVE F SF	REMOVING SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH	
0010	9+07	RT	-	-	1	1	R12-1: WEIGHT LIMIT 30 TONS
0010	9+83	RT	1	3	1	1	W5-52L: CLEARANCE STRIPER DOWN RIGHT
0010	9+79	RT	1	3	1	1	W5-52R: CLEARANCE STRIPER DOWN LEFT
0010	10+08	RT	1	3	1	1	W5-52L: CLEARANCE STRIPER DOWN RIGHT
0010	10+11	RT	1	3	1	1	W5-52R: CLEARANCE STRIPER DOWN LEFT
TOTAL 0010			4	12	5	5	

TRAFFIC CONTROL

CATEGORY	LOCATION	DURATION DAYS	643.0300		643.0420		643.0705		643.0900	643.5000	
			TRAFFIC CONTROL DRUMS	TRAFFIC CONTROL BARRICADES TYPE III	TRAFFIC CONTROL WARNING LIGHTS TYPE A	TRAFFIC CONTROL SIGNS	TRAFFIC CONTROL EACH				
			NO.	DAY	NO.	DAY	NO.	DAY	NO.	DAY	
0010	PER SDD 15C2-8B DETAIL D	71	-	-	10	710	12	852	2	142	-
0010	PER SDD 15C5*	71	-	-	-	-	-	-	3	213	-
0010	UNDISTRIBUTED	7	10	70	-	-	-	-	-	-	1
TOTAL 0010				70	710	852	355	1			

*ASSUMING ADVANCE WARNING SIGNS ONLY NEEDED PRIOR TO PROJECT START AREA.

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

STAKING

CATEGORY	STATION	TO	STATION	LOCATION	650.4500	650.5000	650.6500.01	650.9910.01	650.9920
					CONSTRUCTION STAKING SUBGRADE LF	CONSTRUCTION STAKING BASE LF	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) (01. B-14-0223) LS	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 3810-00-71) LS	CONSTRUCTION STAKING SLOPE STAKES LF
0010	7+65	-	12+10	MAINLINE	405	405	-	1	405
TOTAL 0010					405	405	0	1	405
0020	9+80	-	10+20	B-14-0223	-	-	1	-	-
TOTAL 0020					0	0	1	0	0
PROJECT TOTAL					405	405	1	1	405

SAWING ASPHALT

CATEGORY	STATION	LOCATION	690.0150	REMARKS
			SAWING ASPHALT LF	
0010	7+65	MAINLINE	13	WEST APPROACH
0010	12+10	MAINLINE	13	EAST APPROACH
TOTAL 0010			26	

EXCAVATION, HAULING, AND DISPOSAL OF CREOSOTE CONTAMINATED SOIL

SPV.0035.01

CATEGORY	STATION	OFFSET	TO	STATION	OFFSET	LOCATION	CY	REMARKS
0020	9+85	26' RT	-	9+88	15' RT	NW	7	TIMBER BACKING
0020	9+83	42' RT	-	9+83	53' RT	SW	7	TIMBER BACKING
0020	10+08	18' RT	-	10+08	29' RT	NE	7	TIMBER BACKING
0020	10+03	56' RT	-	10+06	45' RT	SE	7	TIMBER BACKING
TOTAL 0020							28	

EXCAVATE A 2' OFFSET AROUND EACH EXISTING BRIDGE TIMBER BACKING PLATE ANCHOR AND 3' DEEP

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

CONVENTIONAL SYMBOLS

SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW RW LINE
EXISTING RW LINE
PROPERTY LINE
LOT, TIE, AND OTHER MINOR LINES
SLOPE INTERCEPT
CORPORATE LIMITS
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC.)
FEE ACQUISITION AREA (HATCHING VARIES BY OWNER)
TEMP. LIMITED EASEMENT AREA
EASEMENT AREA (HIGHWAY, PERMANENT LIMITED, OR RESTRICTED DEVELOPMENT)
TRANSMISSION STRUCTURES
BUILDING
BUILDING (TO BE REMOVED)
BRIDGE

CONVENTIONAL ABBREVIATIONS

ACCESS RIGHTS
ACRES
AHEAD
ALUMINUM AND OTHERS
BACK
BLOCK
CENTERLINE
CERTIFIED SURVEY MAP
CONCRETE
COUNTY
COUNTRY TRUNK HIGHWAY
DISTANCE
CORNER
DOCUMENT NUMBER
EASEMENT
EXISTING
GAS VALVE
GRID NORTH
HIGHWAY EASEMENT
IDENTIFICATION
LAND CONTRACT
LEFT
MONUMENT
NATIONAL GEODETIC SURVEY NUMBER

CURVE DATA ABBREVIATIONS

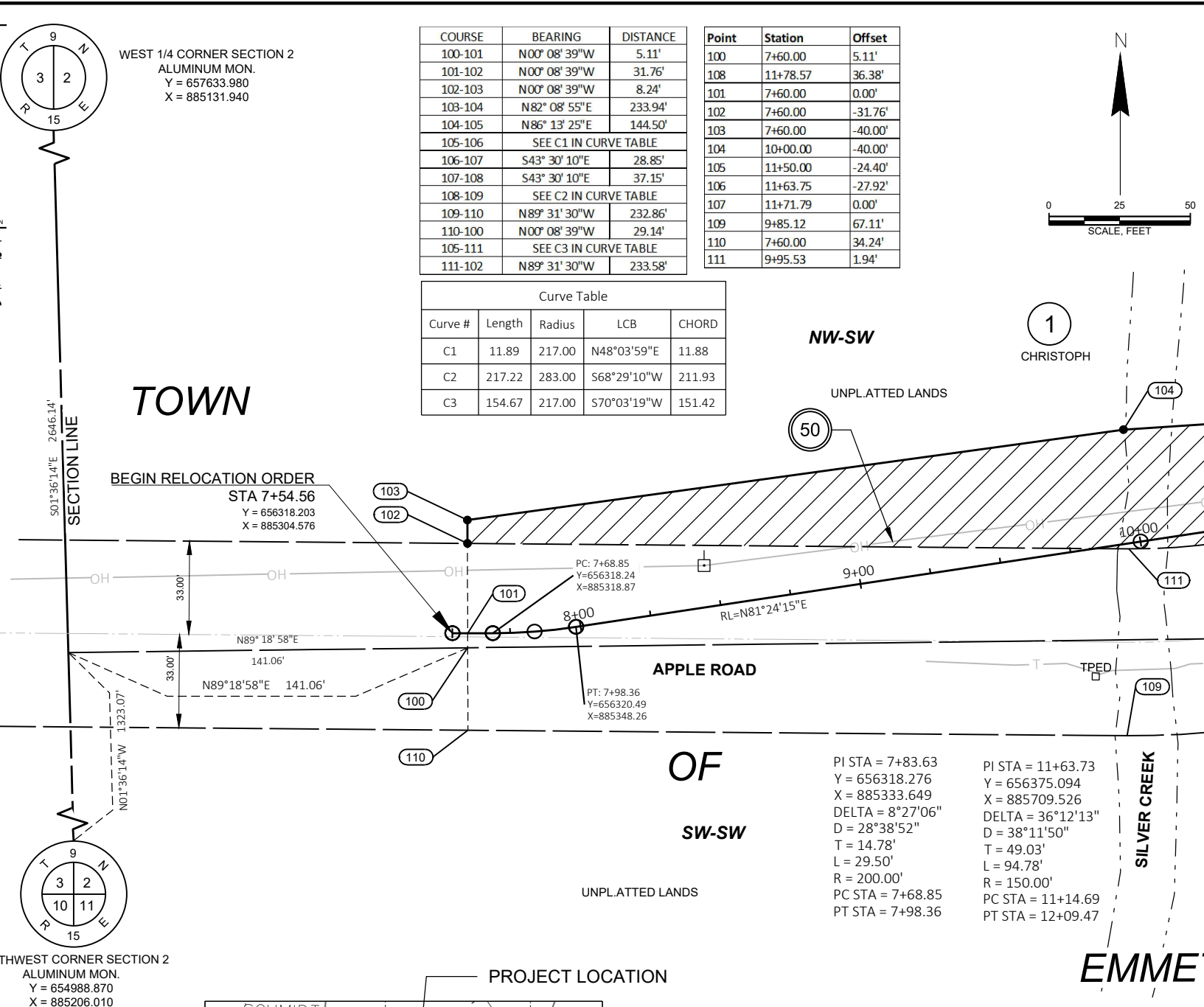
LONG CHORD
RADIUS
DEGREE OF CURVE
CENTRAL ANGLE
LENGTH OF CURVE
TANGENT
DIRECTION AHEAD
DIRECTION BACK

CONVENTIONAL UTILITY SYMBOLS

WATER
GAS
TELEPHONE
OVERHEAD TRANSMISSION LINES
ELECTRIC
CABLE TELEVISION
FIBER OPTIC
SANITARY SEWER
STORM SEWER
ELECTRIC TOWER

NON-COMPENSABLE
COMPENSABLE

POWER POLE
TELEPHONE POLE
TELEPHONE PEDESTAL



R/W PROJECT NUMBER 3810-00-71	SHEET NUMBER 4.01	TOTAL SHEETS 1
CONSTRUCTION PROJECT NUMBER 3810-00-71		
PLAT OF RIGHT OF WAY REQUIRED FOR APPLE ROAD		
APPLE ROAD	DODGE COUNTY	

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), DANE COUNTY, NAD83 (2011) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

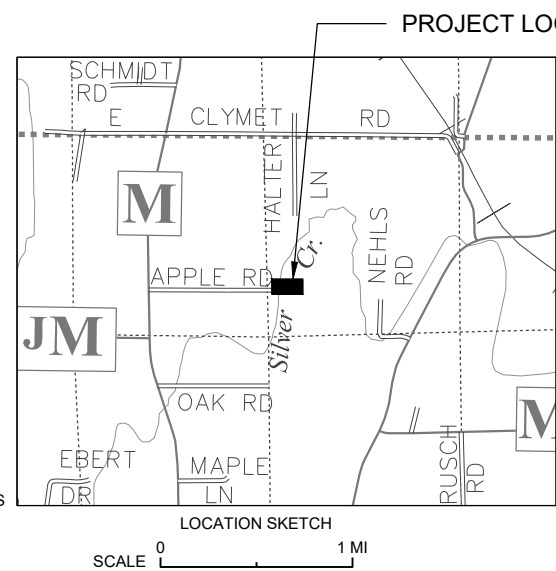
RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (3/4"x24" CAPPED IRON REBAR WEIGHING 1.50 LBS./LIN. FT.) AND ARE PLACED PRIOR TO OR AT THE TIME OF LAND TITLE TRANSFER.

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

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

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

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINT OF REFERENCE: EXISTING HIGHWAY RIGHT-OF-WAY FOR ROAD NAME SHOWN HEREIN IS BASED ON EXISTING CENTERLINE AND IS PRESUMED TO BE 66 FEET IN WIDTH.



SCHEDULE OF LANDS AND INTERESTS REQUIRED

PARCEL NO.	OWNER(S)	INTEREST REQUIRED	R/W (SQ FT)		
			FEE	EXISTING	TOTAL
1	ALFRED AND SYLVIA RIMM	FEE	10,306	27,153	37,459

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

UTILITY INTERESTS REQUIRED

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED
50	WE ENERGIES	RELEASE OF RIGHTS
51	AT&T DISTRIBUTION	RELEASE OF RIGHTS

- 50 WE ENERGIES
PARCEL 1 - V200. P544. DOC. 343795
- 51 AT&T DISTRIBUTION
PARCEL 1 - NO EASEMENT OF RECORD

REVISION DATE

APPROVED FOR TOWN OF EMMET

DATE _____ TOWN CHAIRMAN _____

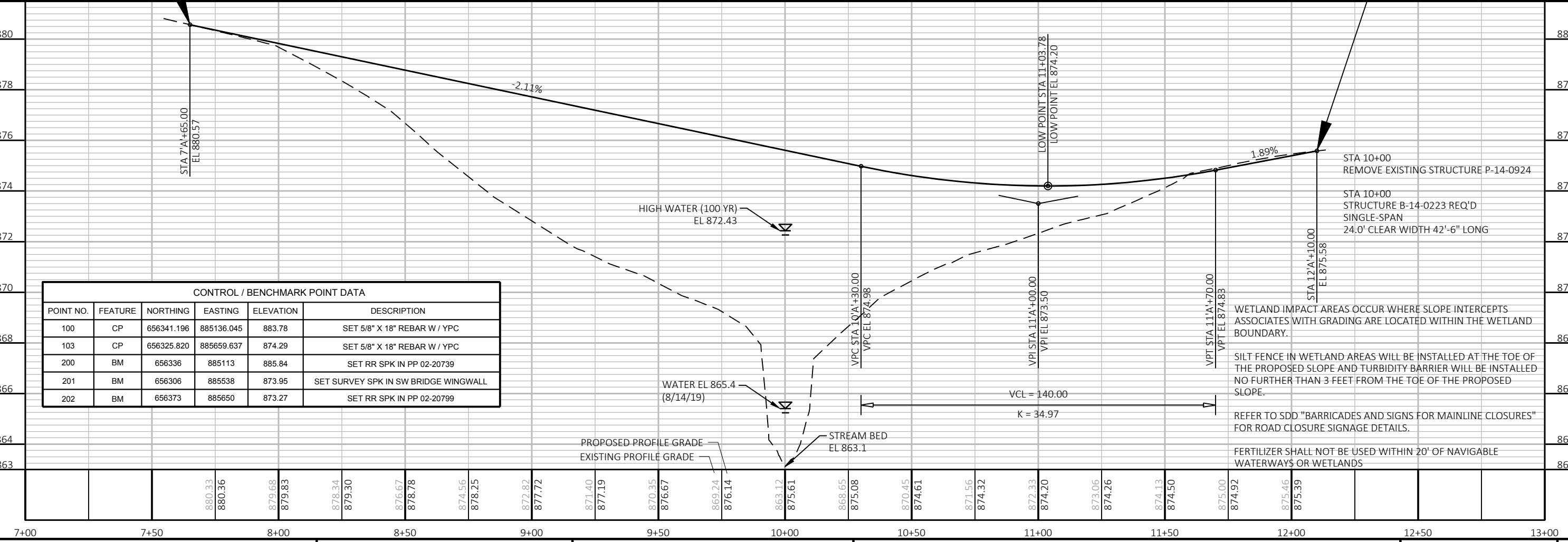
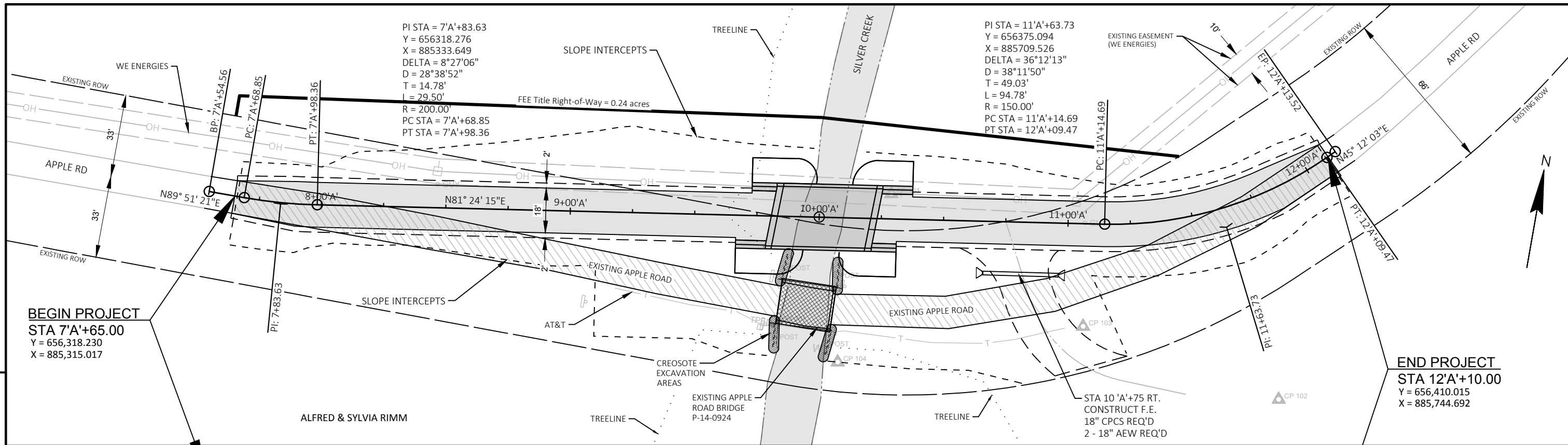
PLAT PREPARED BY
AVRES

THE SURVEY IS PREPARED AT THE REQUEST OF THE TOWN OF EMMET
THE FIELD SURVEY WAS PERFORMED IN SEPTEMBER 2020.

THIS SURVEY IS ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

WISCONSIN LAND SURVEYOR
BENJAMIN J LARSON
S-3006
EAST TROY WISCONSIN

June 10, 2021
BENJAMIN J LARSON, P.L.S. S-3006
DATE

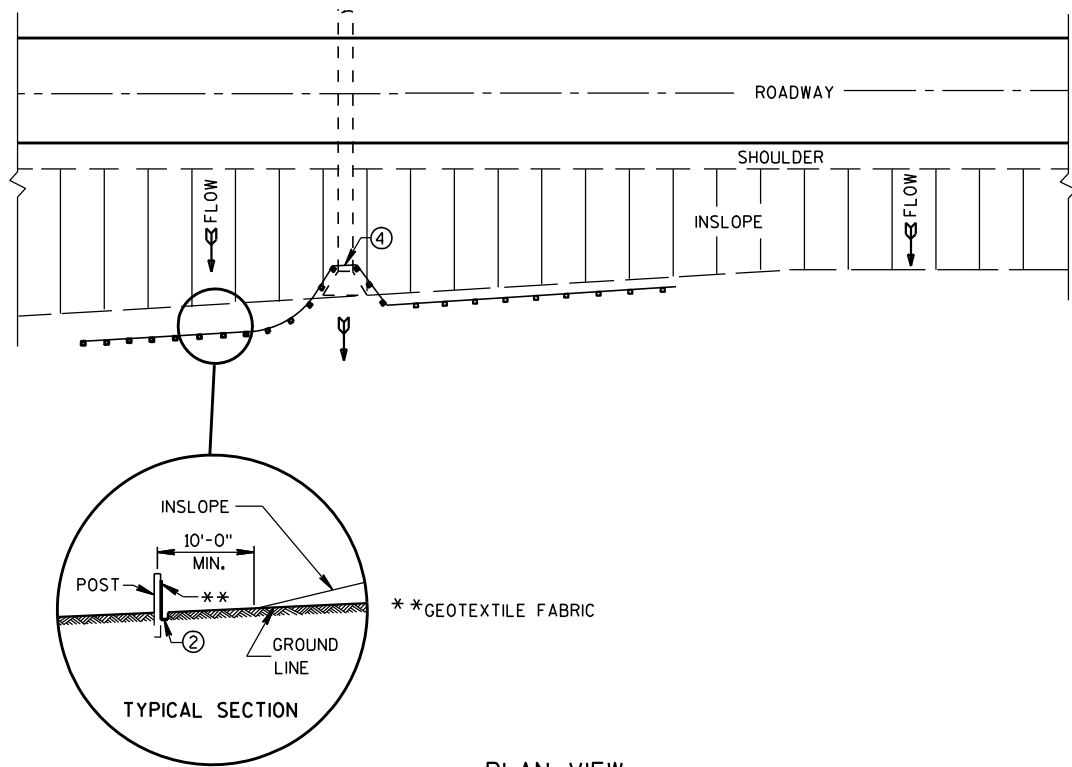


CONTROL / BENCHMARK POINT DATA					
POINT NO.	FEATURE	NORTHING	EASTING	ELEVATION	DESCRIPTION
100	CP	656341.196	885136.045	883.78	SET 5/8" X 18" REBAR W / YPC
103	CP	656325.820	885659.637	874.29	SET 5/8" X 18" REBAR W / YPC
200	BM	656336	885113	885.84	SET RR SPK IN PP 02-20739
201	BM	656306	885538	873.95	SET SURVEY SPK IN SW BRIDGE WINGWALL
202	BM	656373	885650	873.27	SET RR SPK IN PP 02-20799

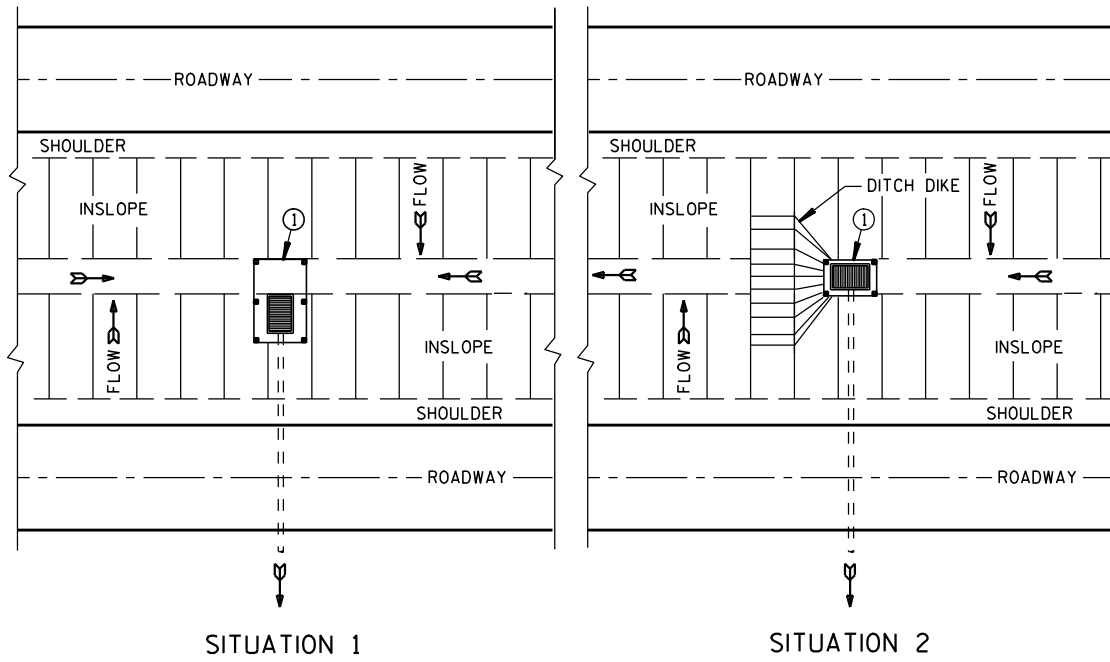
PROJECT NO: 3810-00-71 HWY: APPLE ROAD COUNTY: DODGE PLAN AND PROFILE: APPLE ROAD SHEET: 5

Standard Detail Drawing List

08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

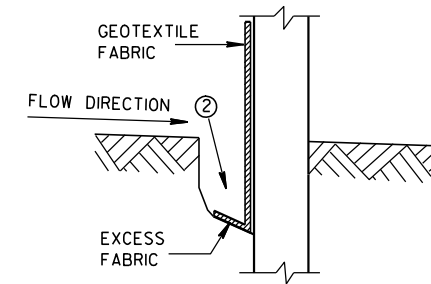


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

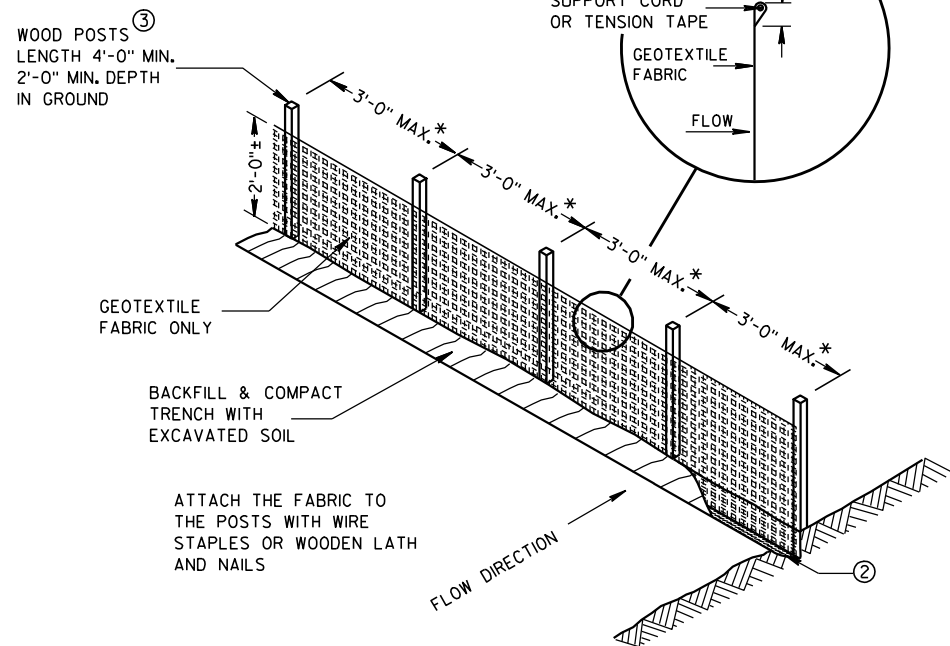
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- 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 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.

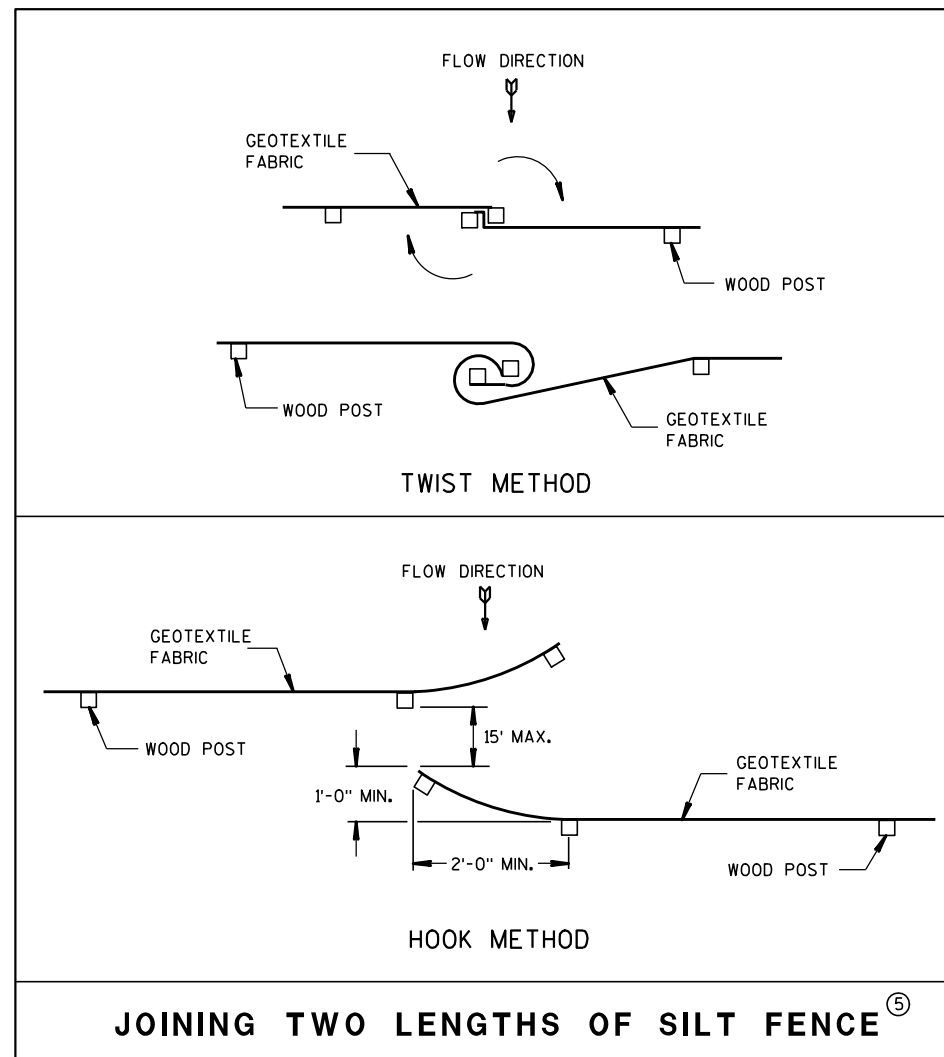


TRENCH DETAIL

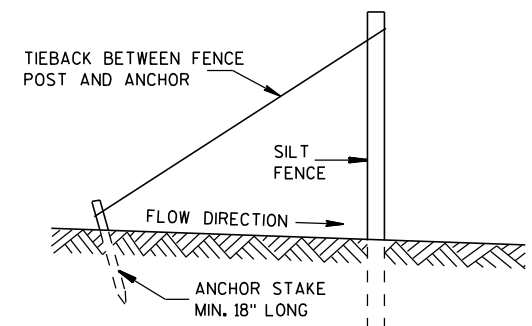
NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS



SILT FENCE



JOINING TWO LENGTHS OF SILT FENCE ⑤

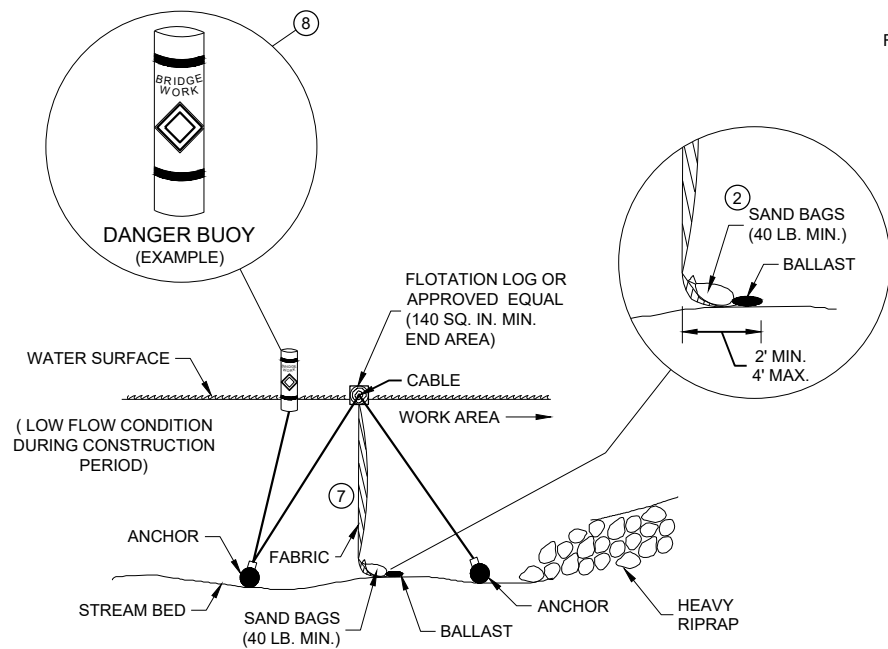


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

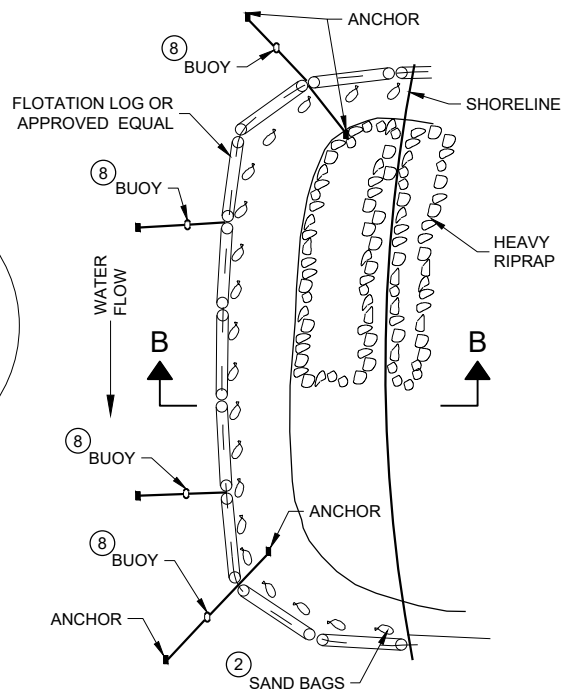
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

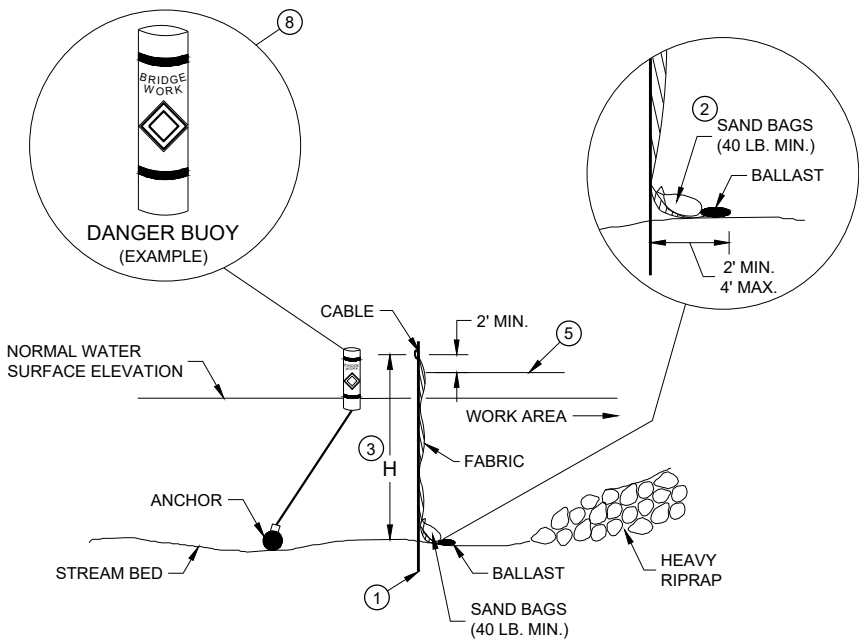


SECTION B - B

**TURBIDITY BARRIER - FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6**

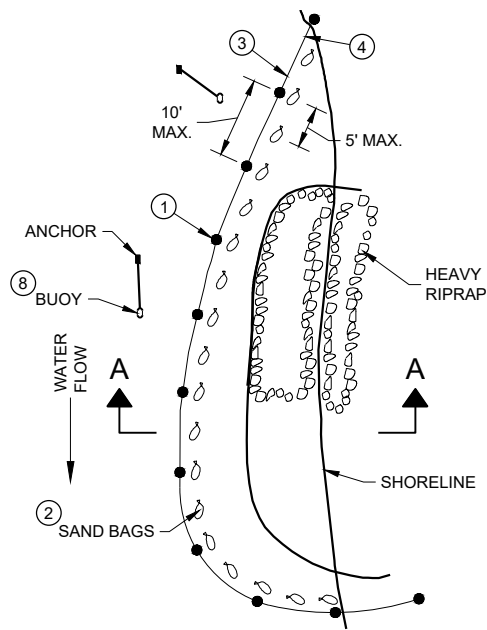


PLAN VIEW



SECTION A - A

TURBIDITY BARRIER - STANDARD POST INSTALLATION



PLAN VIEW

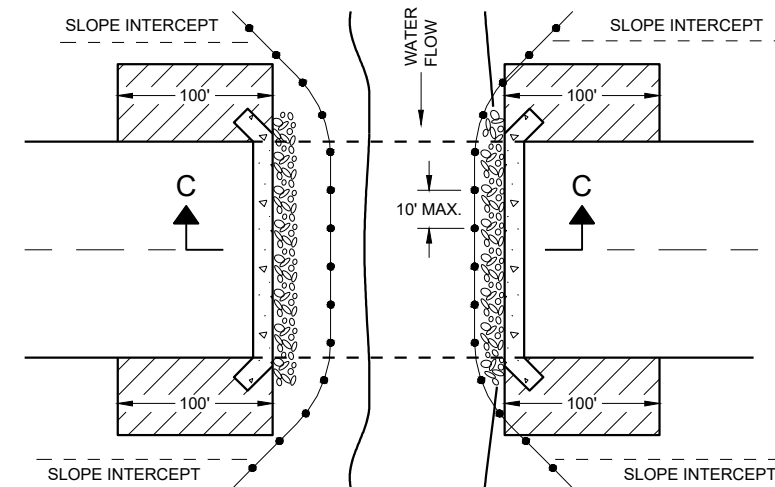
TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

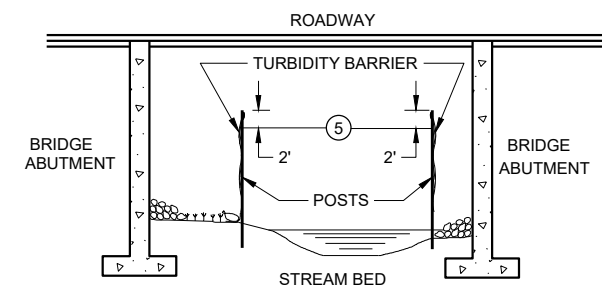
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

- ① DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.
- ② SAND BAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.
- ③ WHEN BARRIER HEIGHT "H" EXCEEDS 8 FEET, POST SPACING MAY NEED TO BE DECREASED.
- ④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.
- ⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE Q2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.
- ⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.
- ⑦ ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.
- ⑧ USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



PLAN VIEW



SECTION C - C

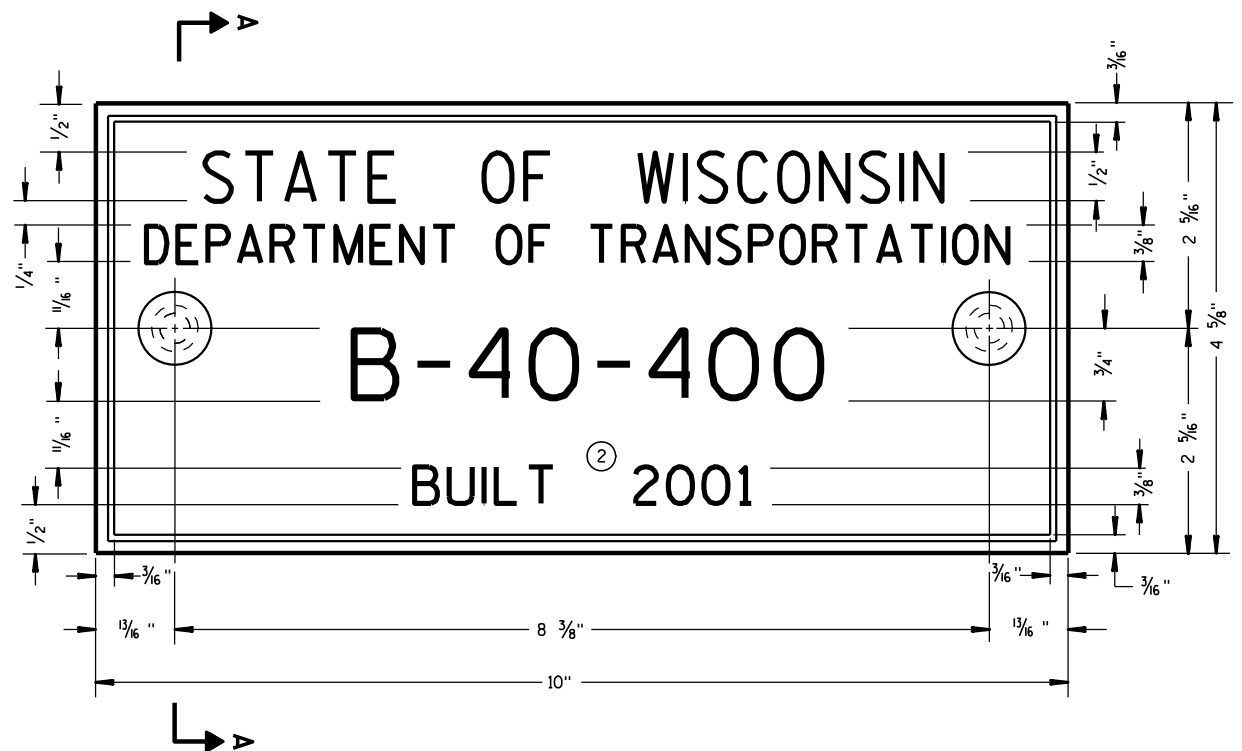
**TURBIDITY BARRIER DETAIL SHOWING
TYPICAL PLACEMENT AT STRUCTURES**

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



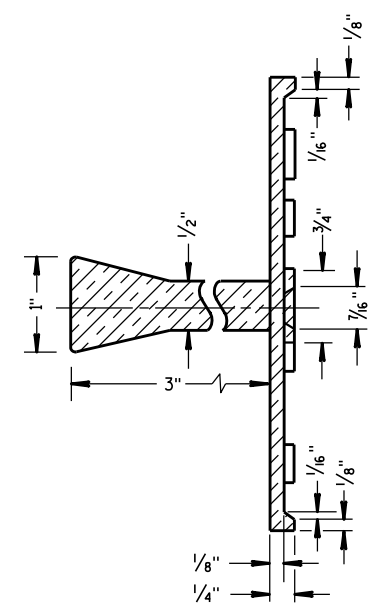
TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

GENERAL NOTES

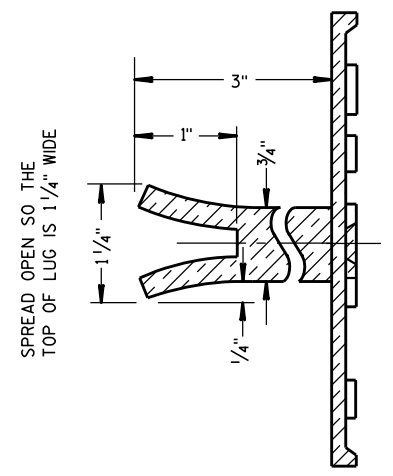
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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

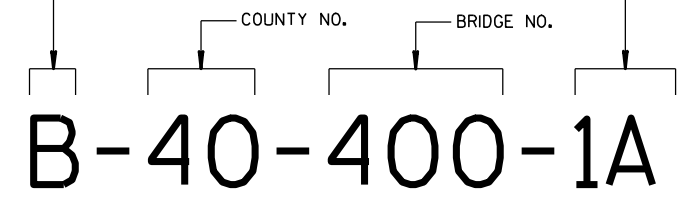
6

6

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

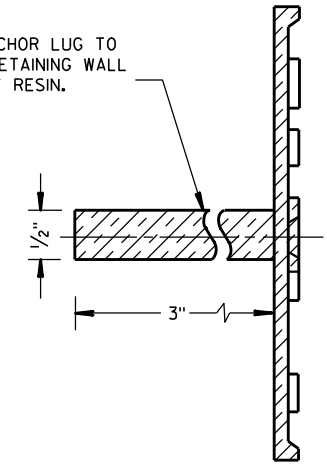
B = BRIDGE
C = CULVERT
R = RETAINING WALL

UNIT NO. FOR MULTIPLE
UNIT BRIDGE



**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

- ① ADHERE ANCHOR LUG TO PRECAST RETAINING WALL WITH EPOXY RESIN.

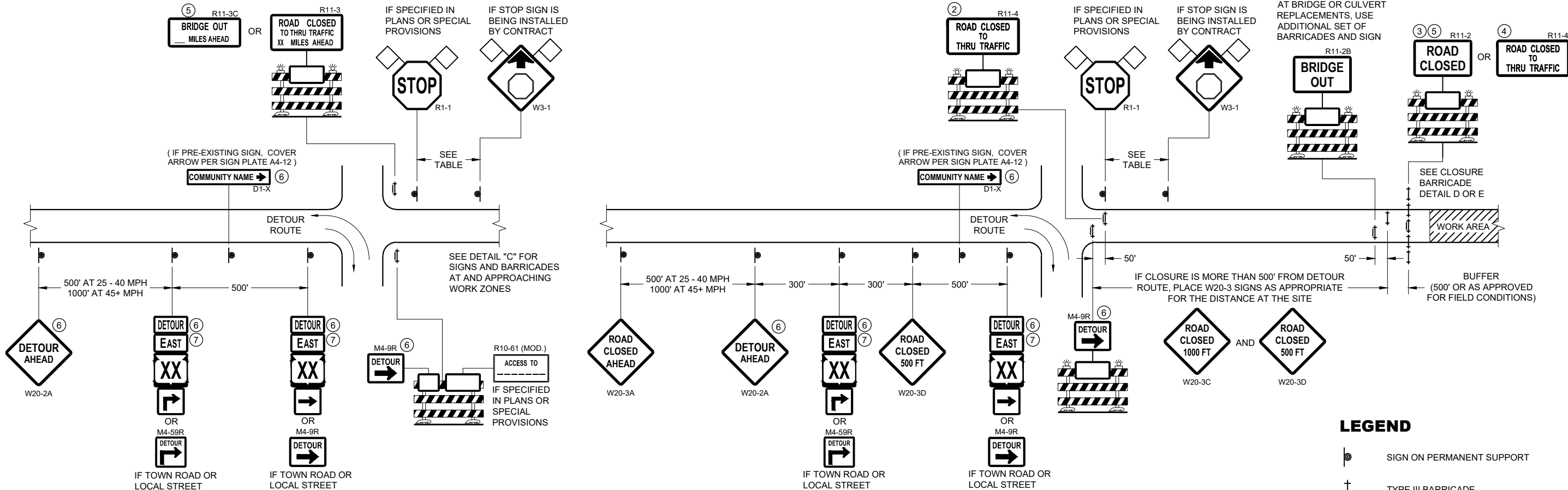


ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

S.D.D. 12 A 3-10

S.D.D. 12 A 3-10

NAME PLATE (STRUCTURES)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE 3/26/10	/S/ Scot Becker CHIEF STRUCTURAL DEVELOPMENT ENGINEER
FHWA	



**DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR**

WORK ZONE GREATER THAN OR EQUAL TO 1/2 MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

**DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR**

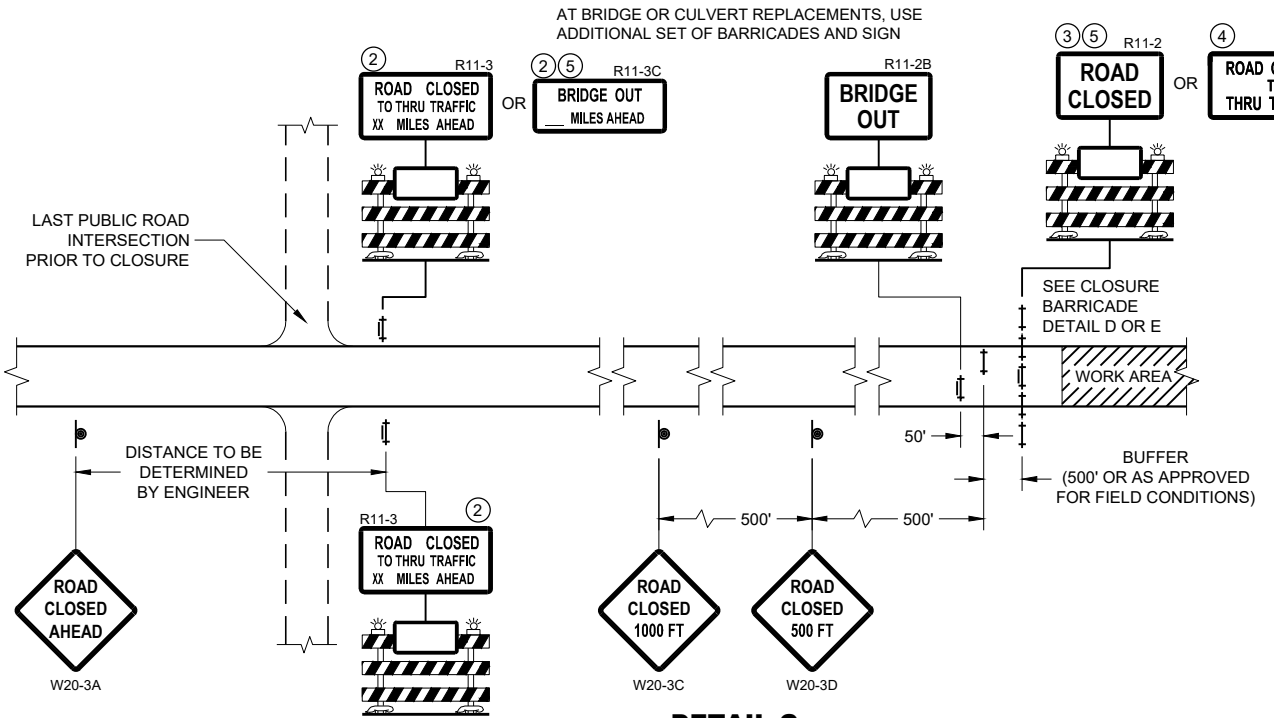
WORK ZONE LESS THAN 1/2 MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

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)

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

- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1



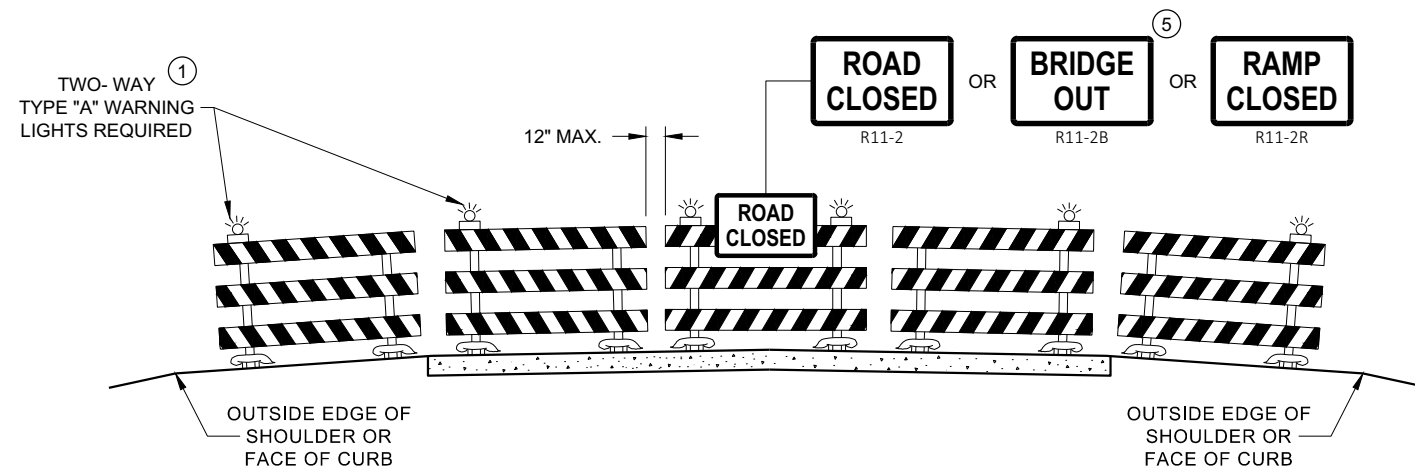
**DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR**

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

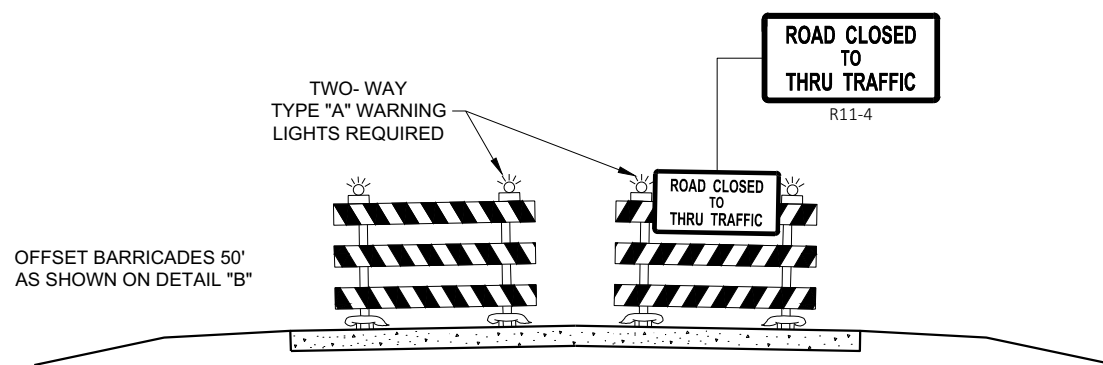
**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



**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 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

GENERAL NOTES

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

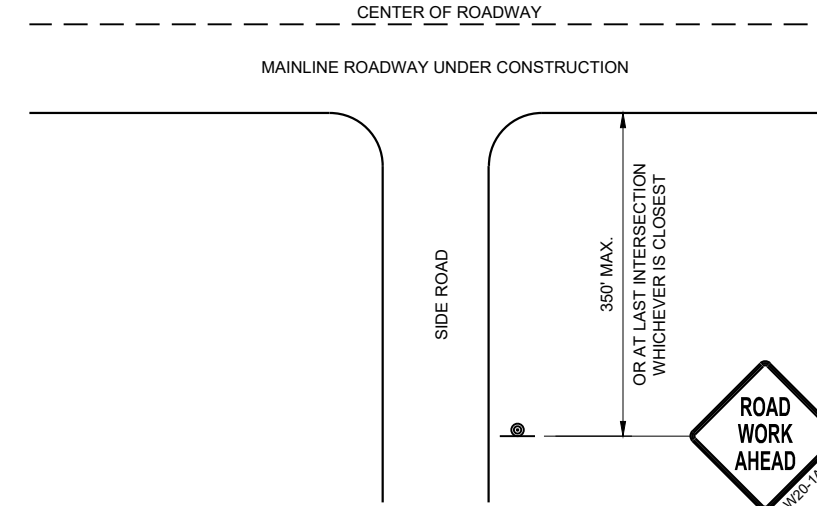
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

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

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

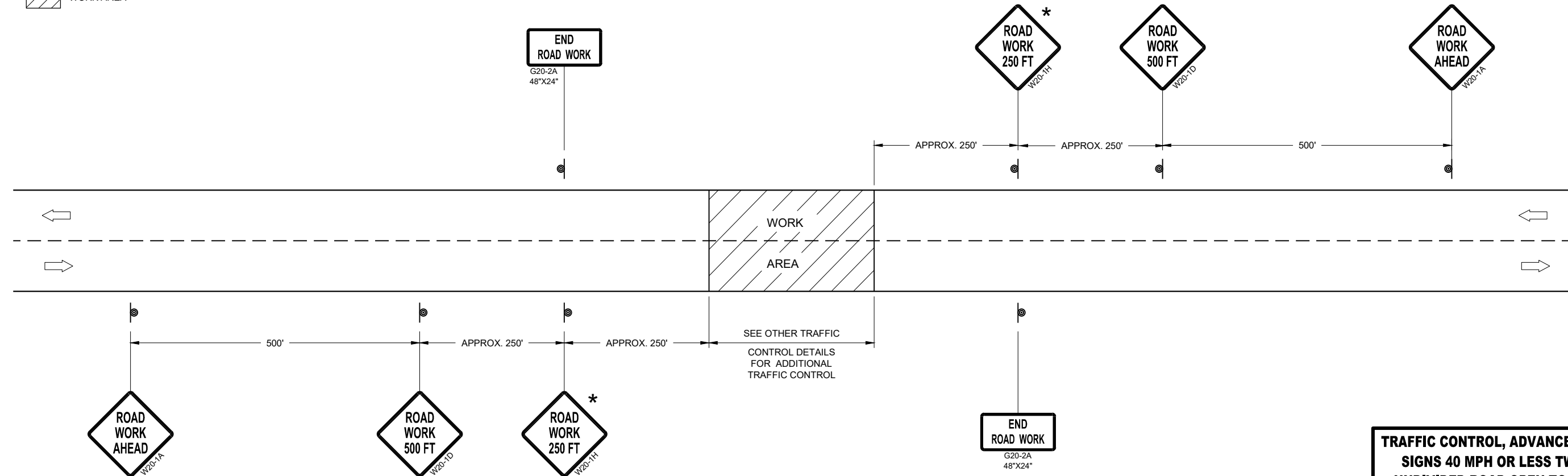
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



**TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL**

LEGEND

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



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

**TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 40 MPH OR LESS TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

GENERAL NOTES

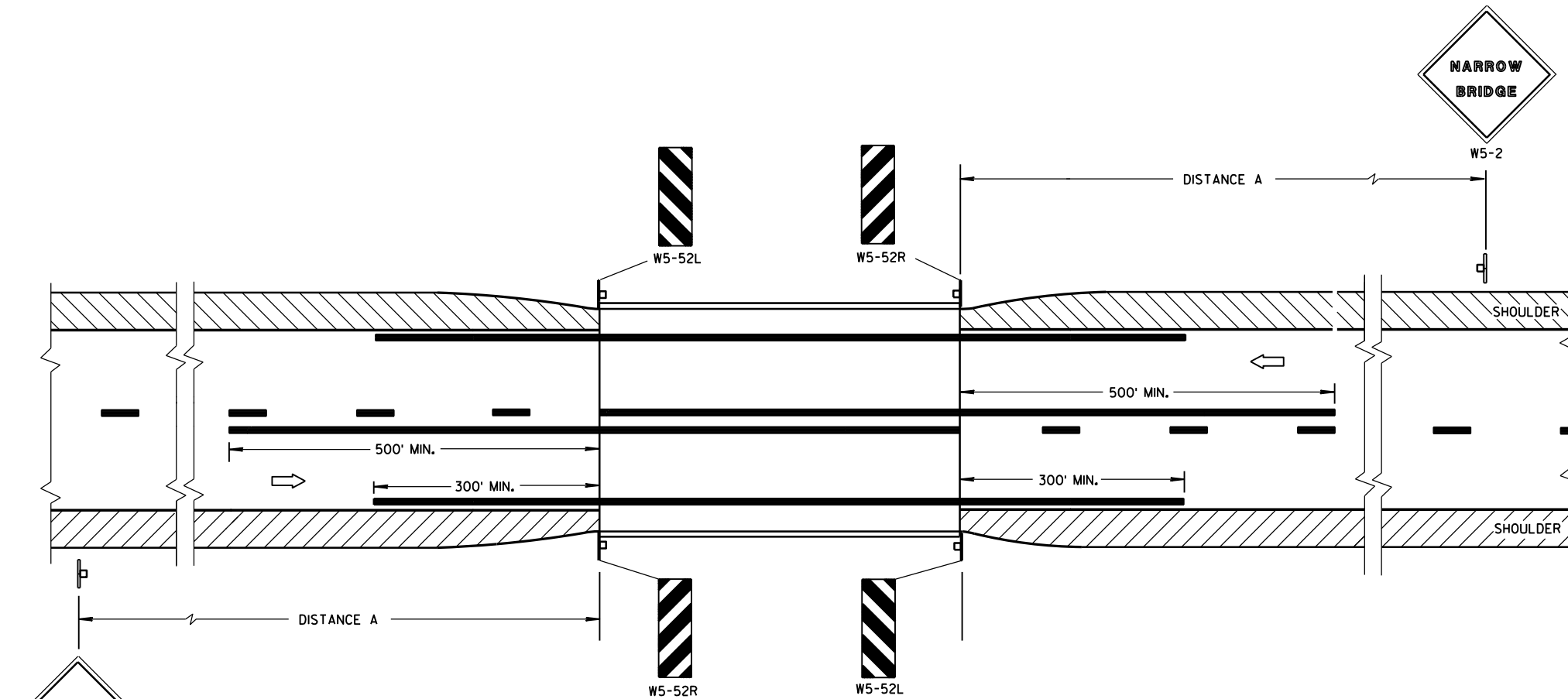
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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.

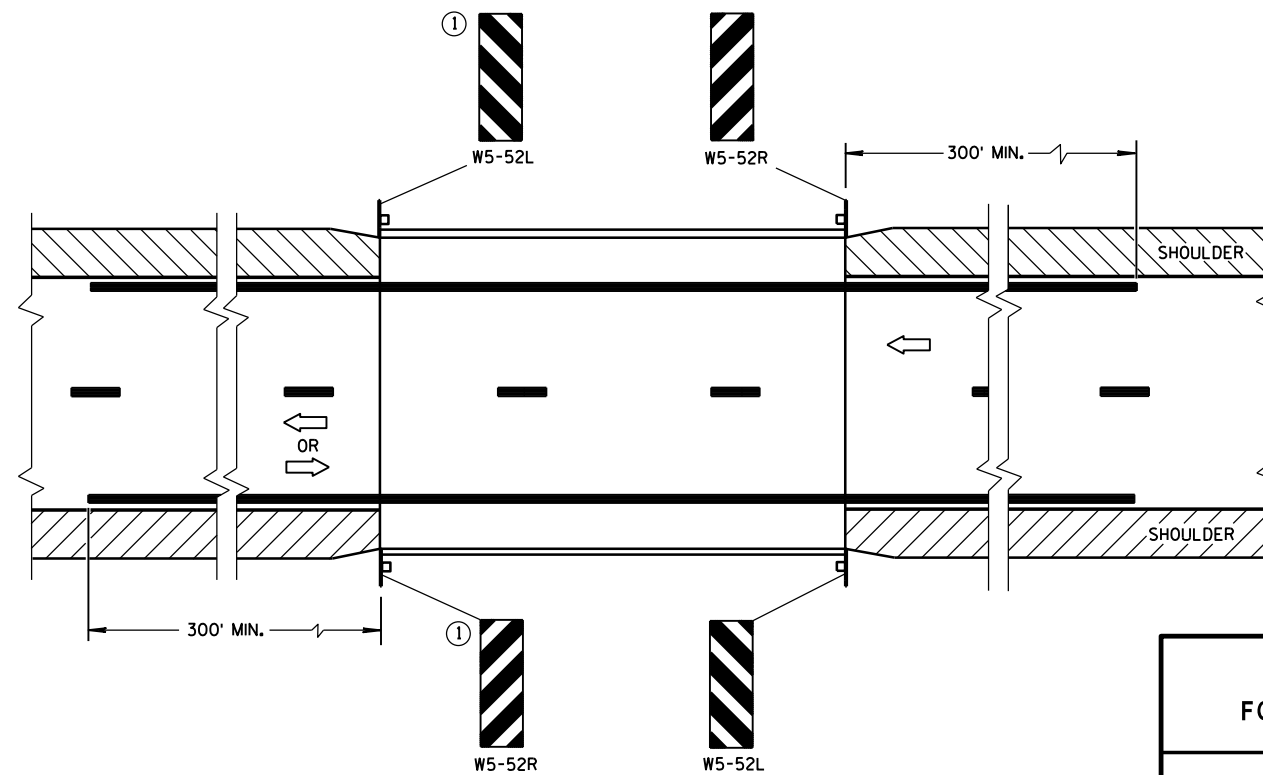
① OMIT ON ONE-WAY TRAVELLED WAYS.

➡ DIRECTION OF TRAFFIC



SITUATION 1

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



SITUATION 2

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

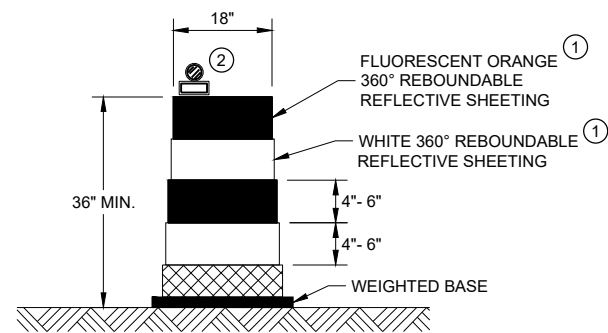
DISTANCE TABLE

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

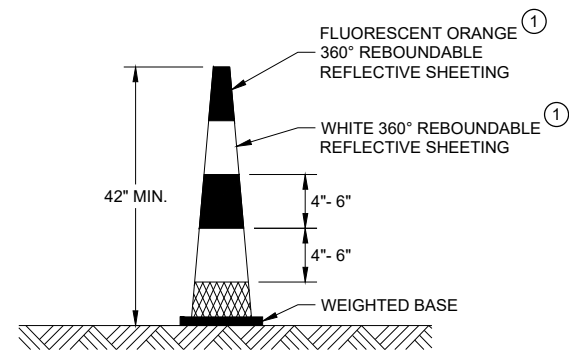
SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

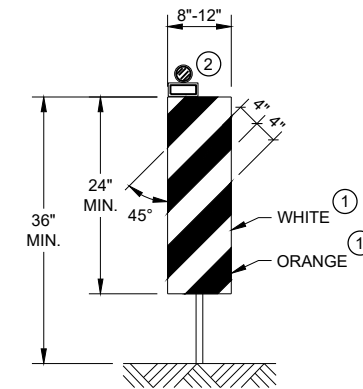


DRUM



42" CONE

DO NOT USE IN TAPERS
 1/2 SPACING OF DRUMS

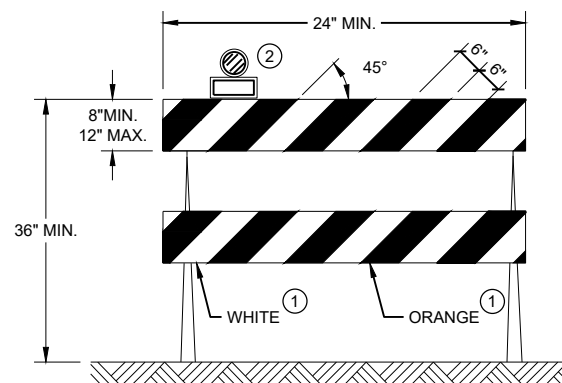


VERTICAL PANEL

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

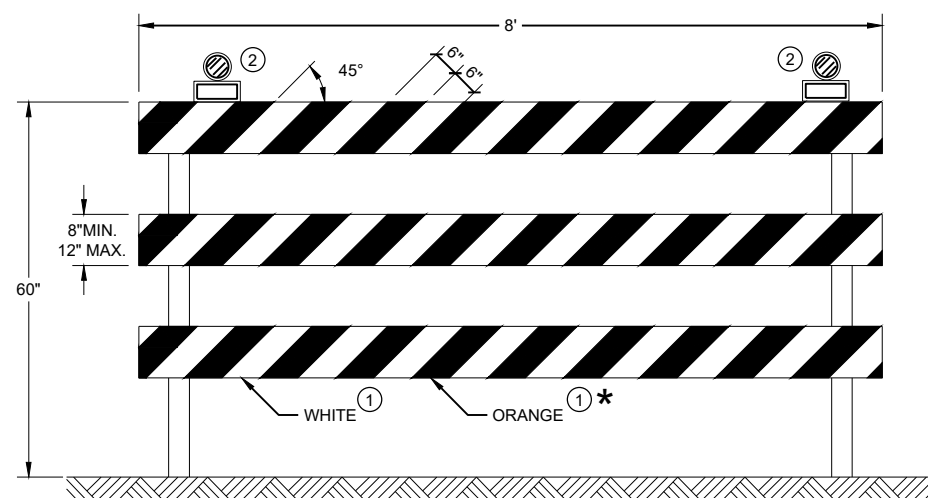
GENERAL NOTES

- 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 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

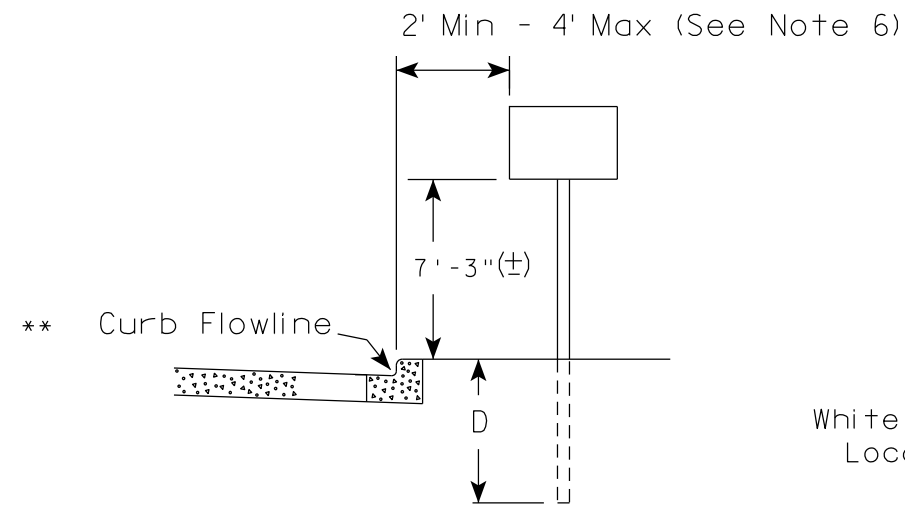
IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

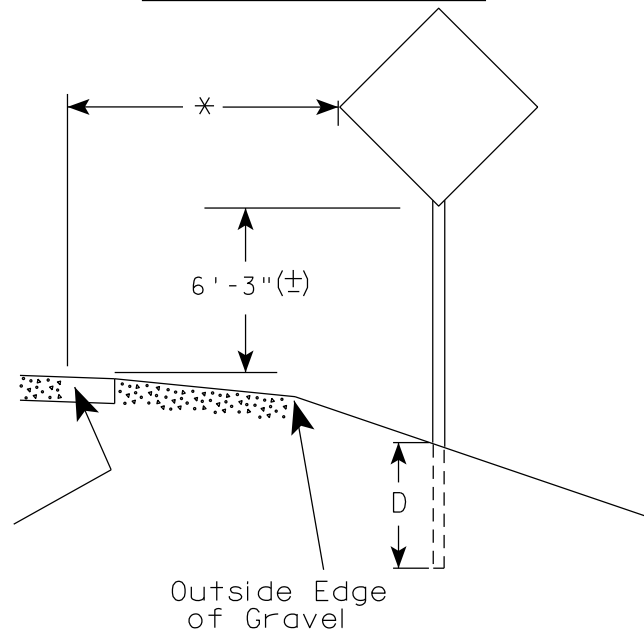
CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2021 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
<small>FHWA</small>	

URBAN AREA

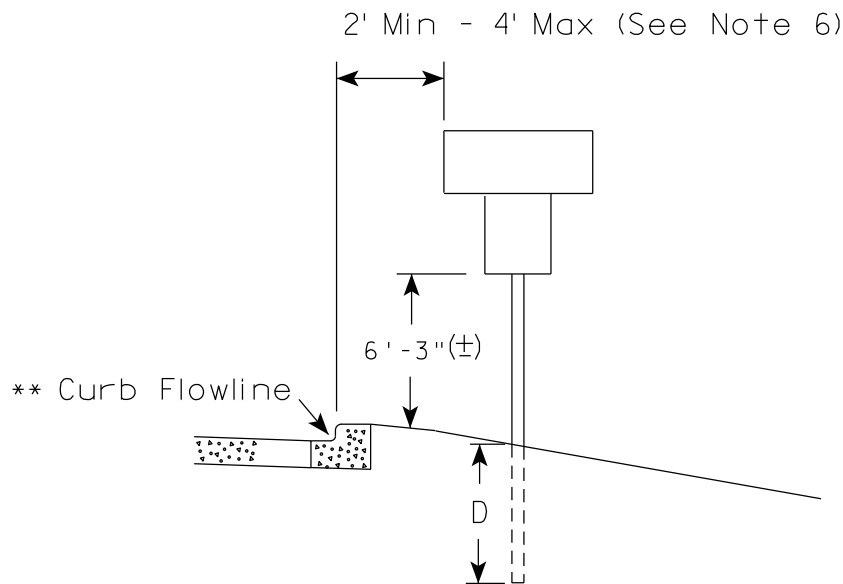
RURAL AREA (See Note 2)



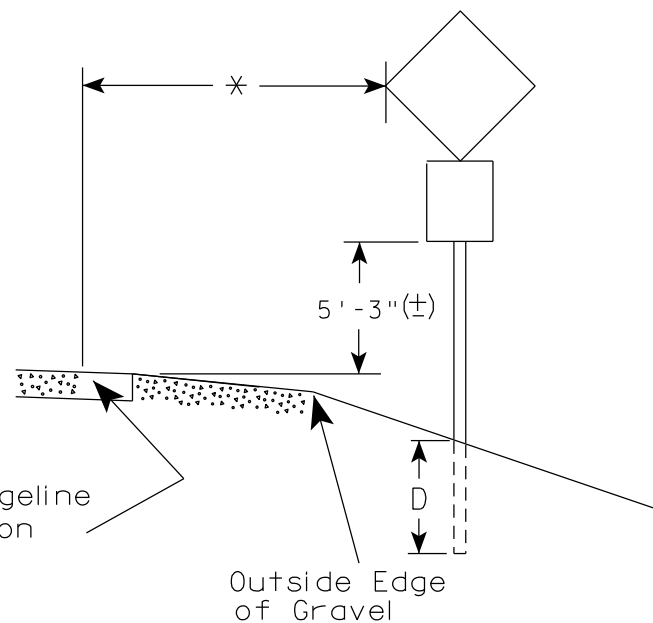
White Edgeline Location



Outside Edge of Gravel



White Edgeline Location



Outside Edge of Gravel

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 directed by the 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.

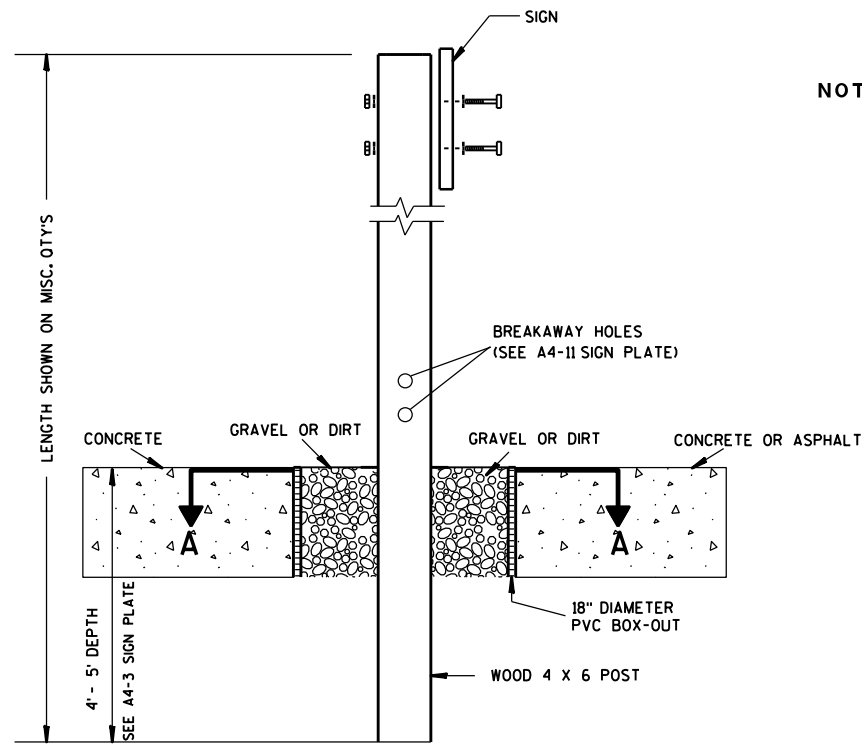
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

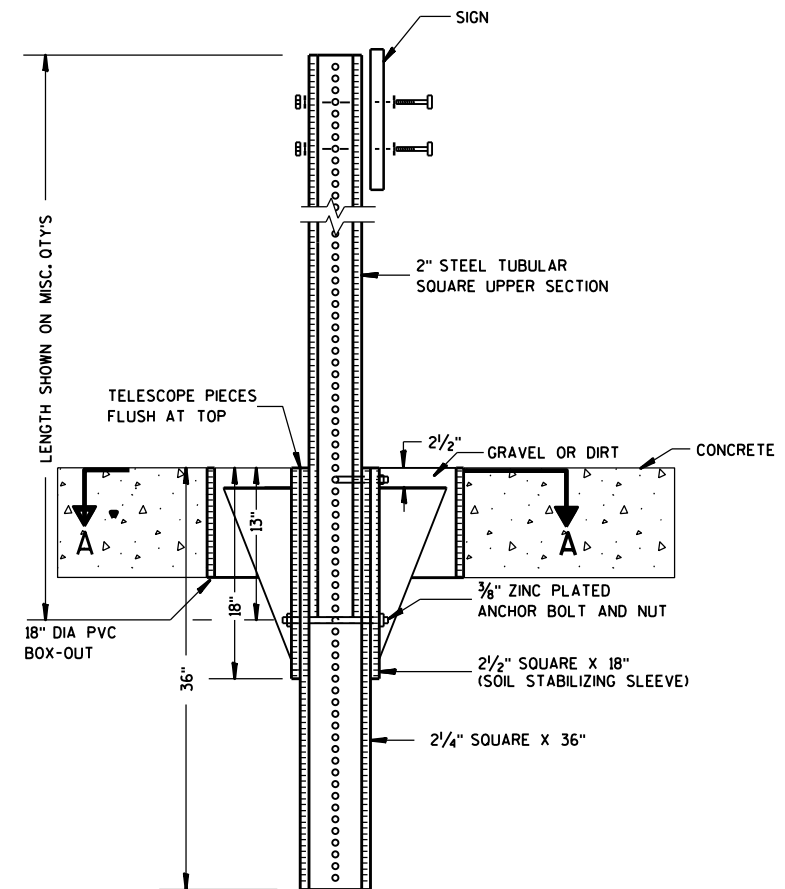
DATE 5/13/2020 PLATE NO. A4-3.22



ELEVATION VIEW

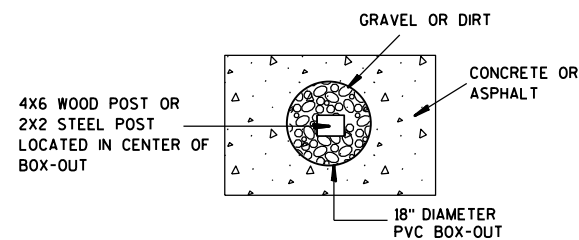
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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

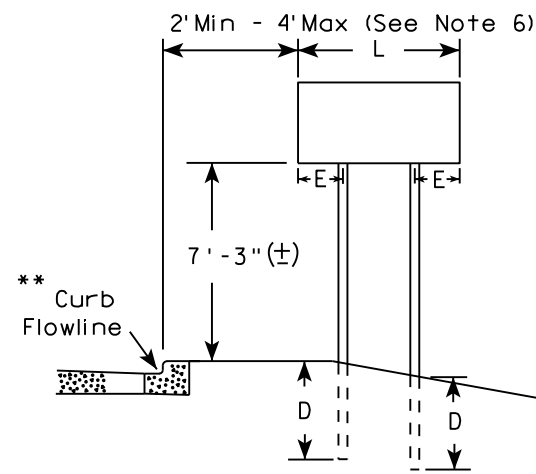
FOR NEW CONCRETE/ ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B	
<small>WISCONSIN DEPT OF TRANSPORTATION</small>	
APPROVED <i>Matthew R Rauch</i> <small>for State Traffic Engineer</small>	
<small>DATE 1/27/14</small>	<small>PLATE NO. A4-3B.1</small>

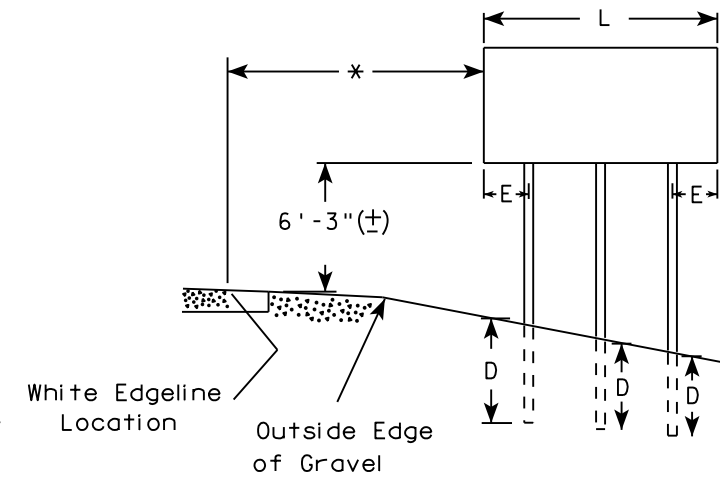
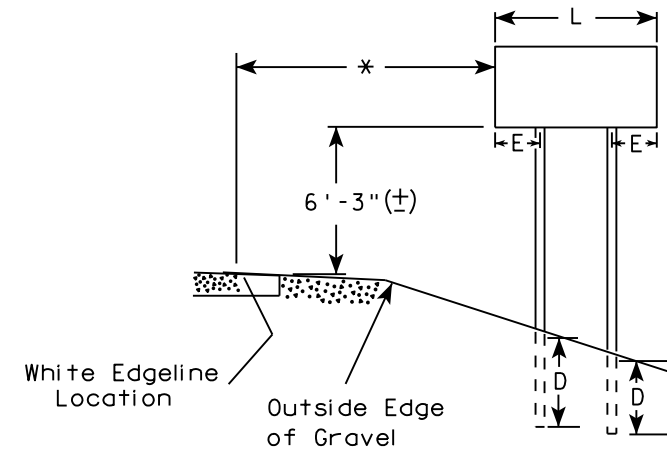
GENERAL NOTES

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" (±).

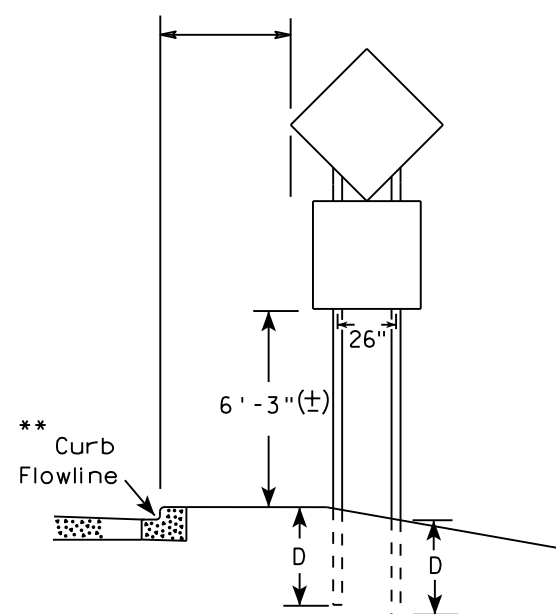
URBAN AREA



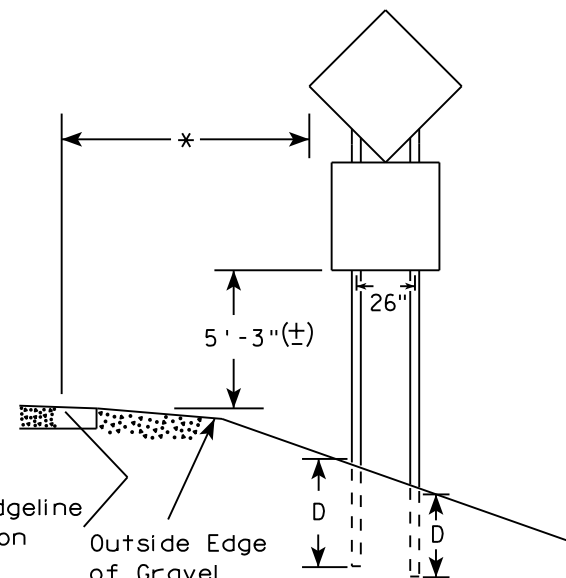
RURAL AREA (See Note 3)



2' Min - 4' Max (See Note 6)



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

* 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.

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

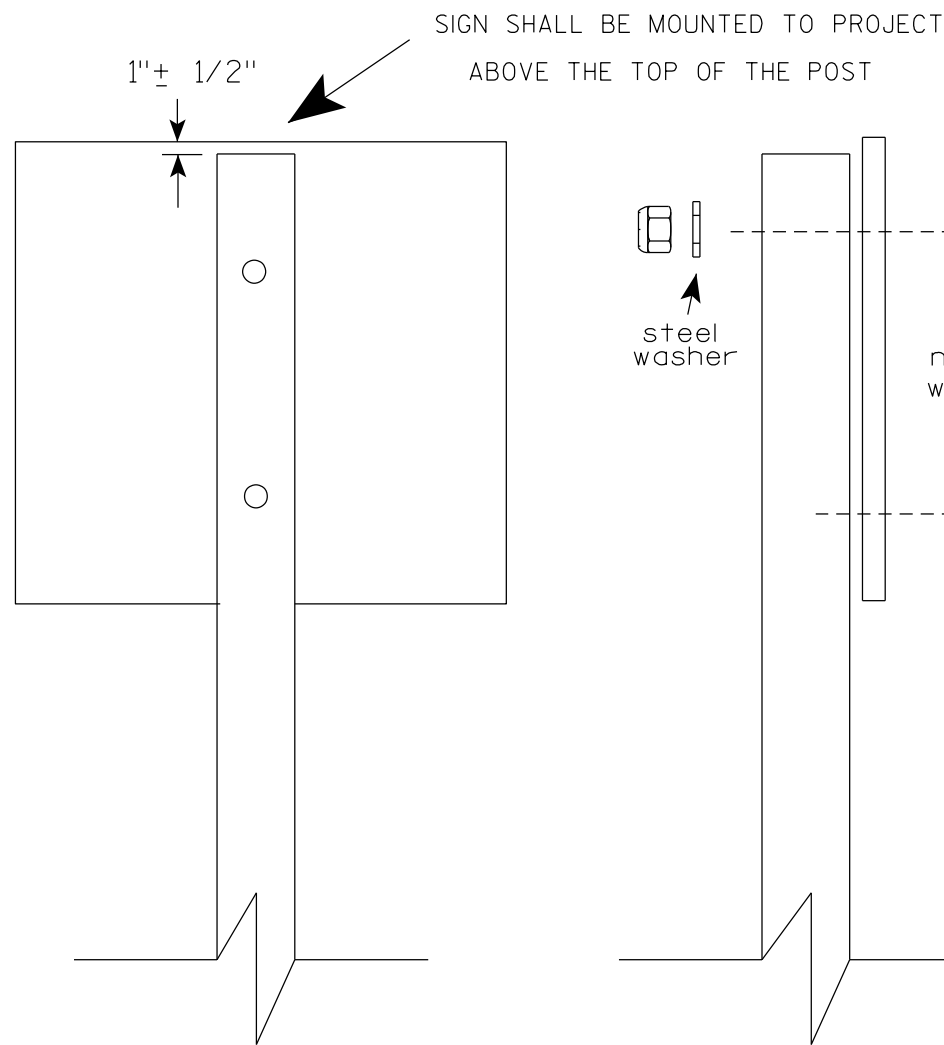
SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

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



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

- a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

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

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

WOOD POSTS (4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

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

WASHERS (ALL POSTS) -

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

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

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

ATTACHMENT OF SIGNS
TO POSTS

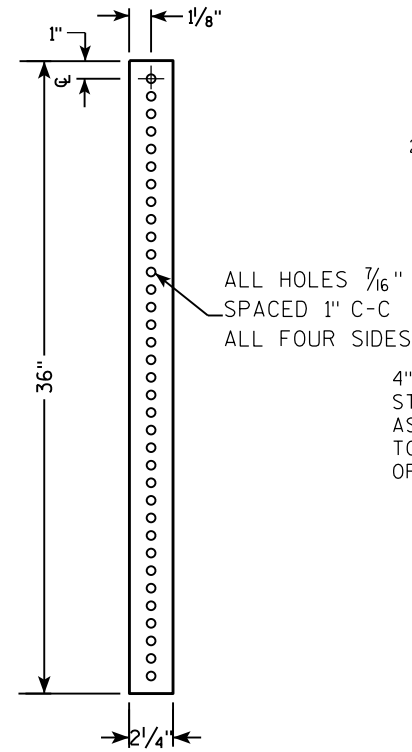
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
For State Traffic Engineer

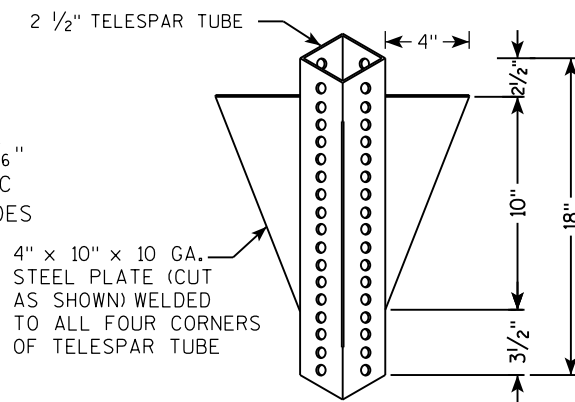
DATE 4/1/2020 PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM**

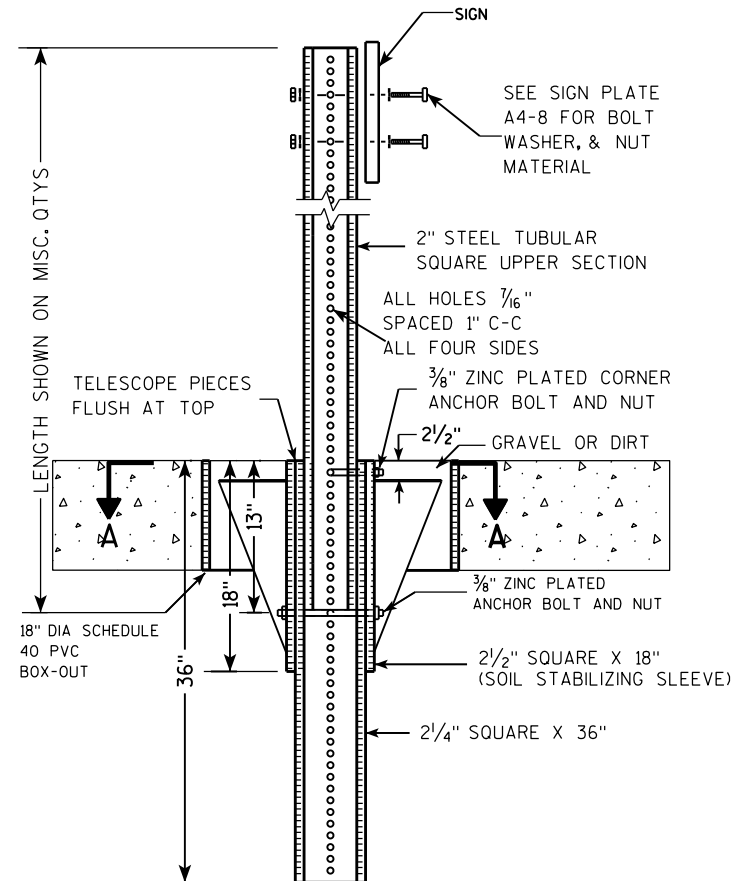
2 1/4" SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



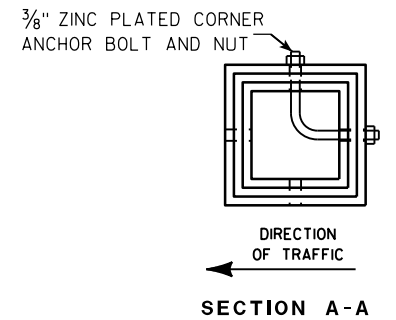
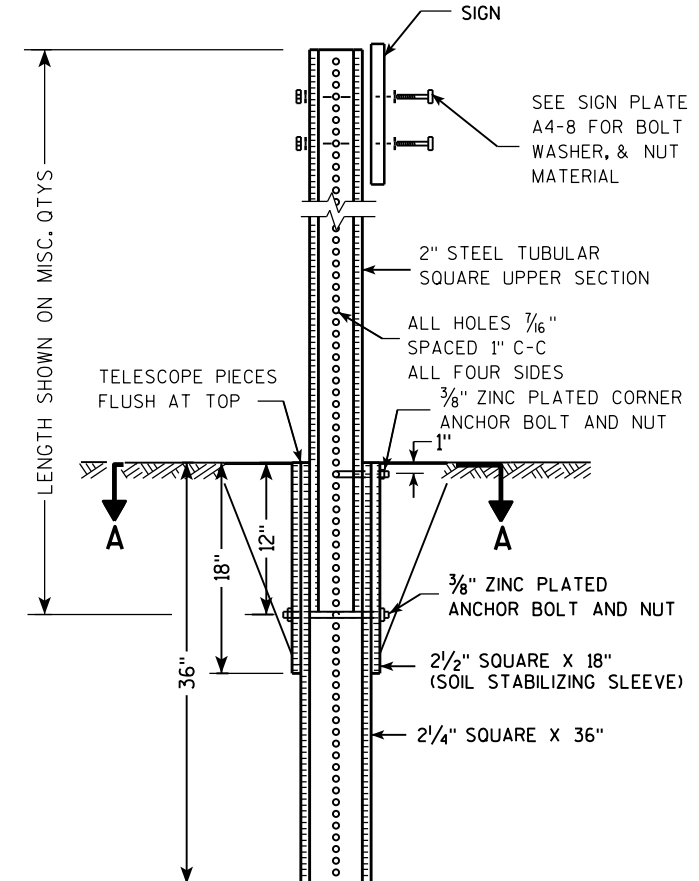
2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH



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



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



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

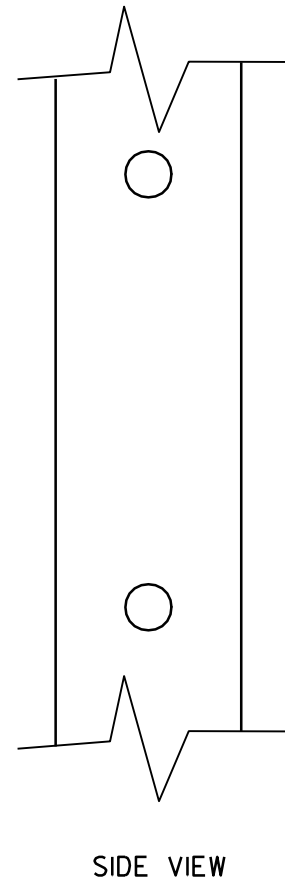
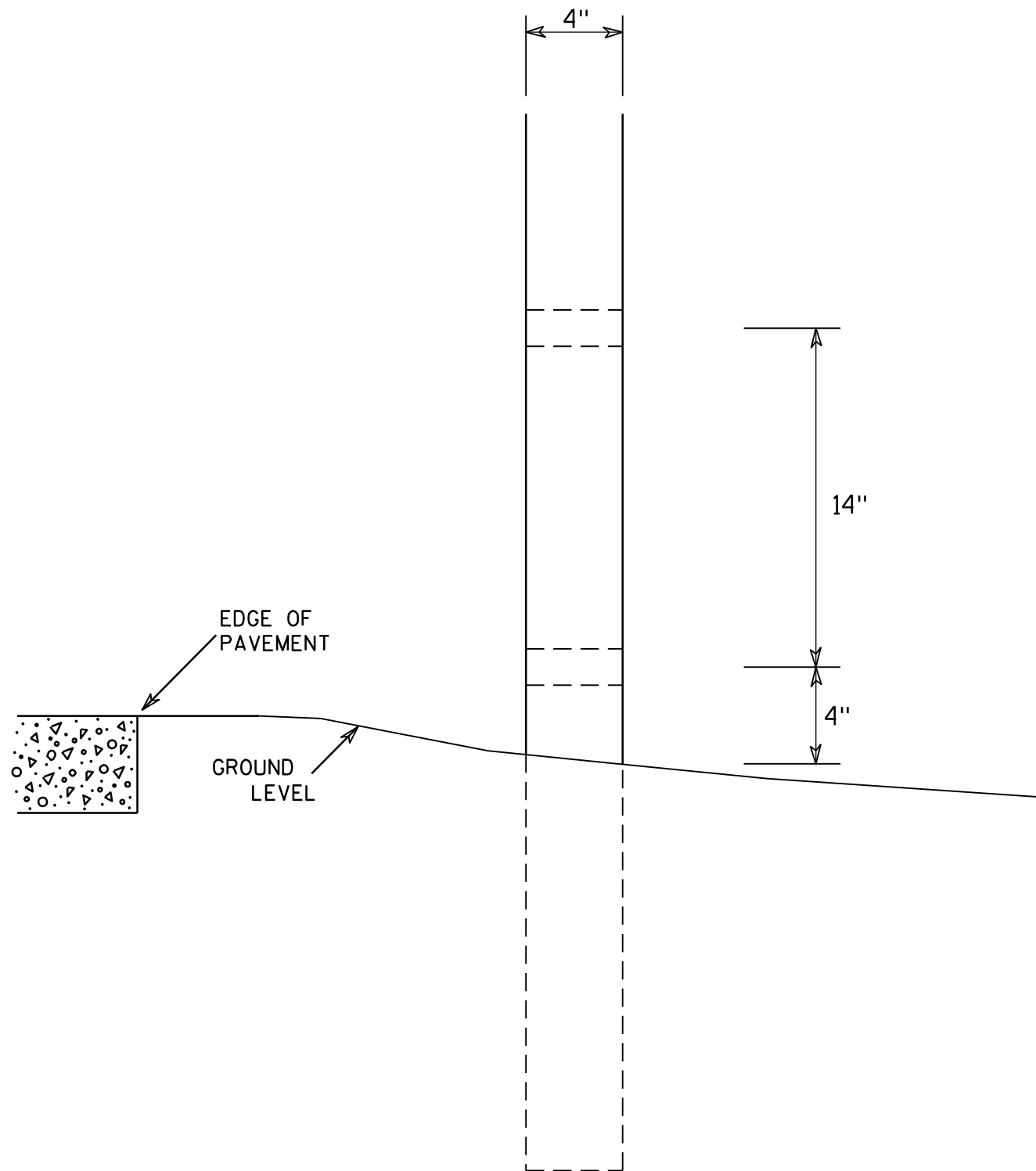
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**TUBULAR STEEL
SIGN POST
A4-9**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/05/15 PLATE NO. A4-9.9



GENERAL NOTES

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

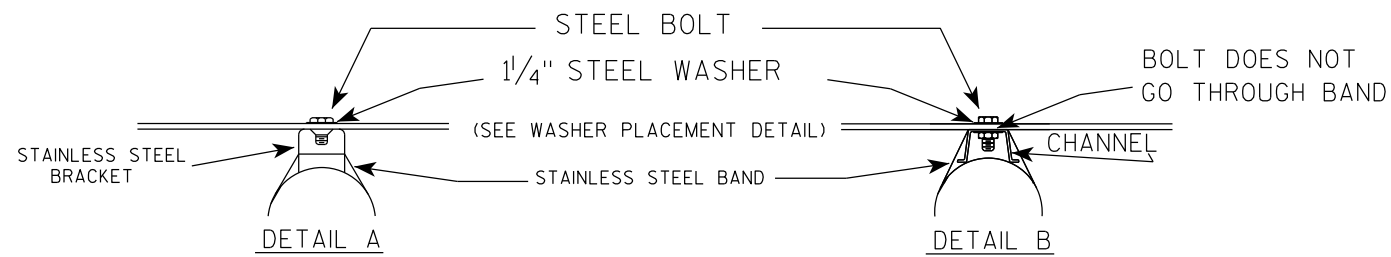
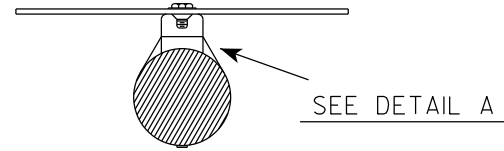
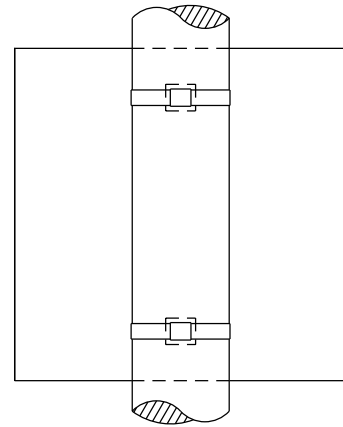
7

7

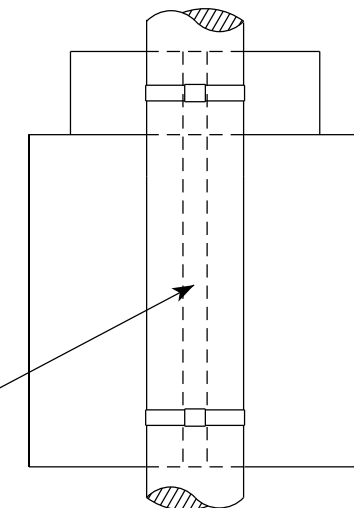
4 X 6 WOOD POST MODIFICATIONS	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	<i>Chester J Spang</i> for State Traffic Engineer
DATE <u>3/27/97</u>	PLATE NO. <u>A4-11.2</u>

BANDING

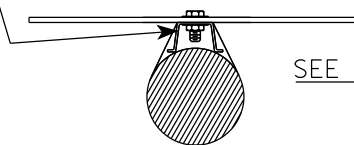
SINGLE SIGN



"J" ASSEMBLY

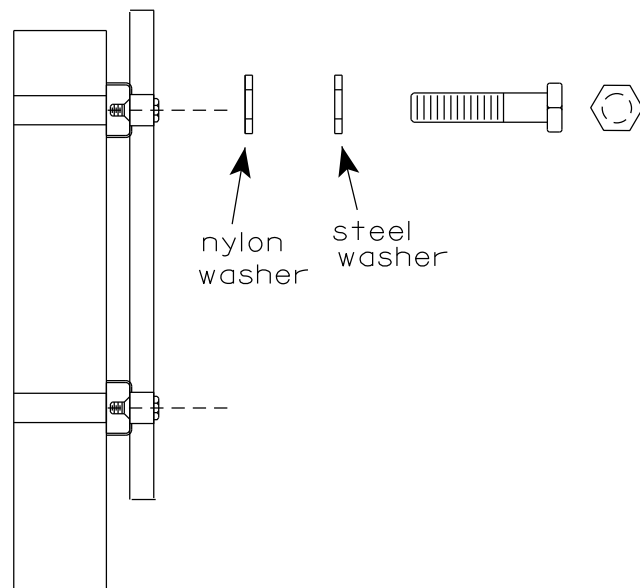


CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



- GENERAL NOTES**
1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
 2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
 3. Banding and assembly bracket shall be stainless steel. All bands shall be $\frac{3}{4}$ " in width and 0.025" thickness.
 4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

WASHER PLACEMENT



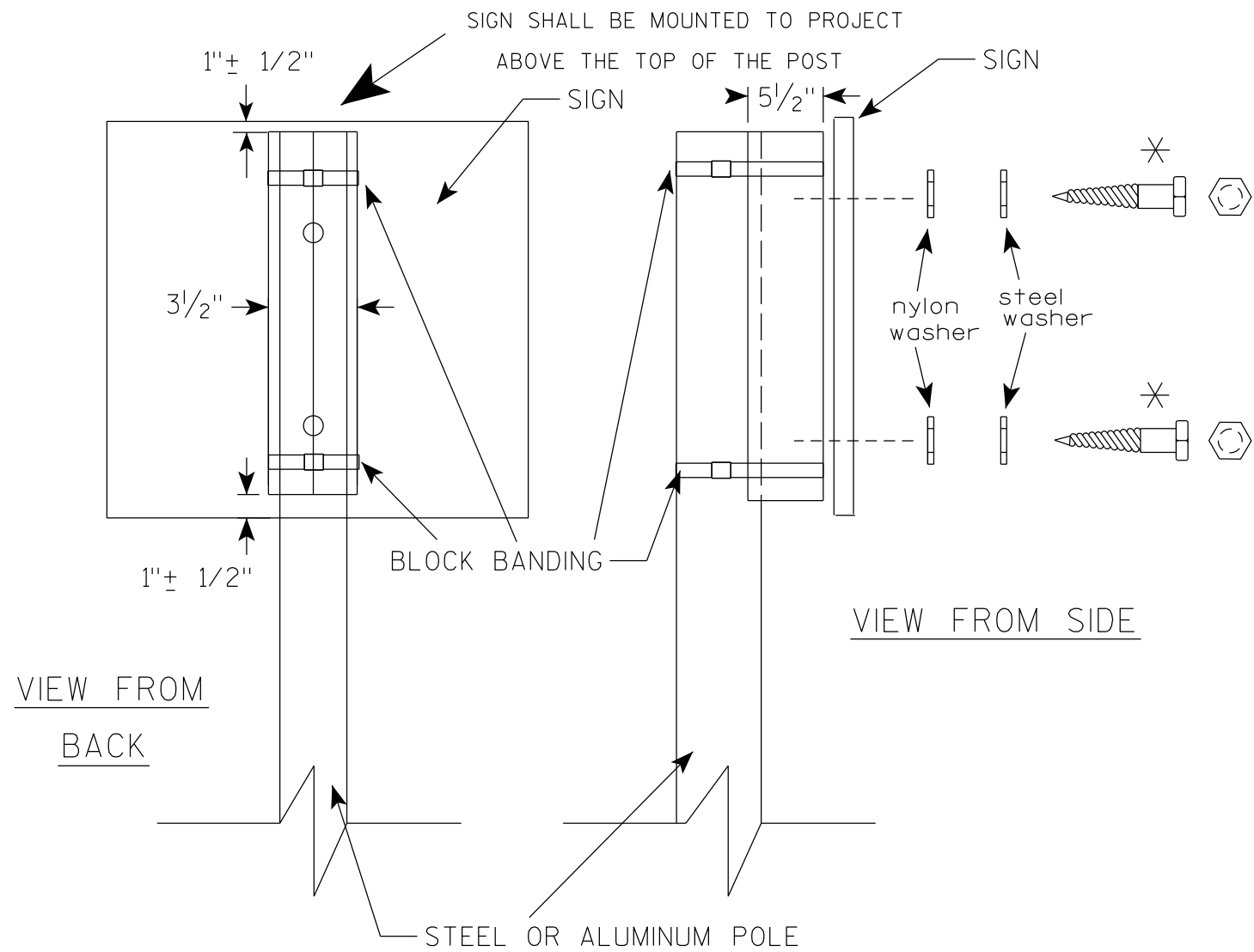
WASHERS (ALL POSTS) -
 1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
 1-1/4" O.D. X 3/8" I.D. X .080 NYLON
 FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

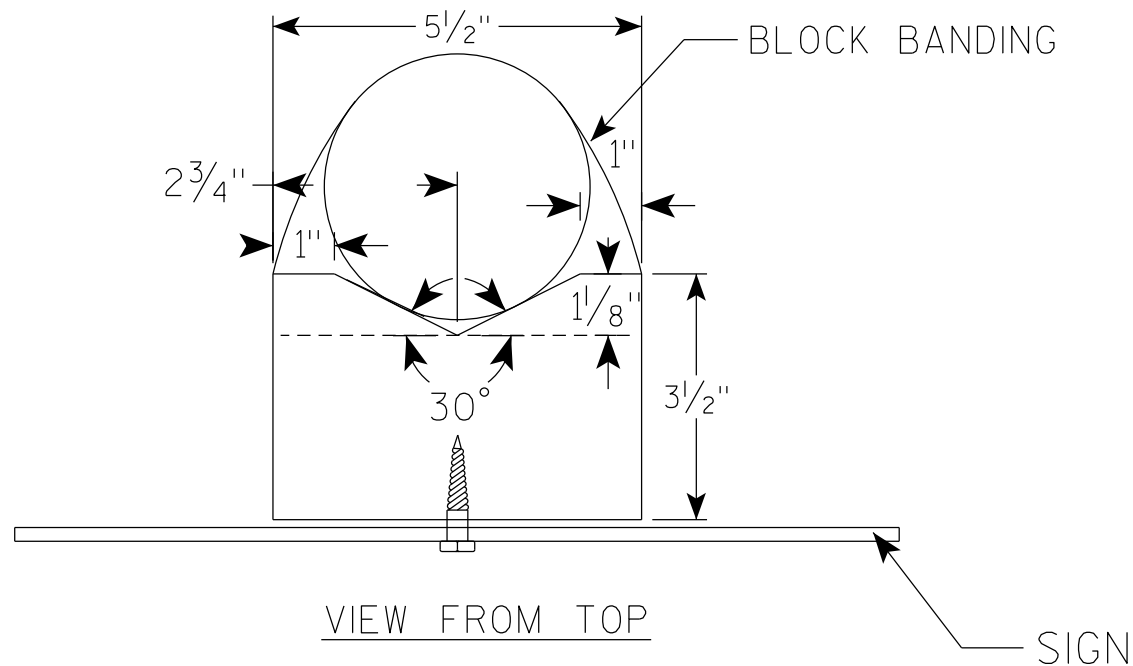
DATE 6/10/19 PLATE NO. A5-9.4



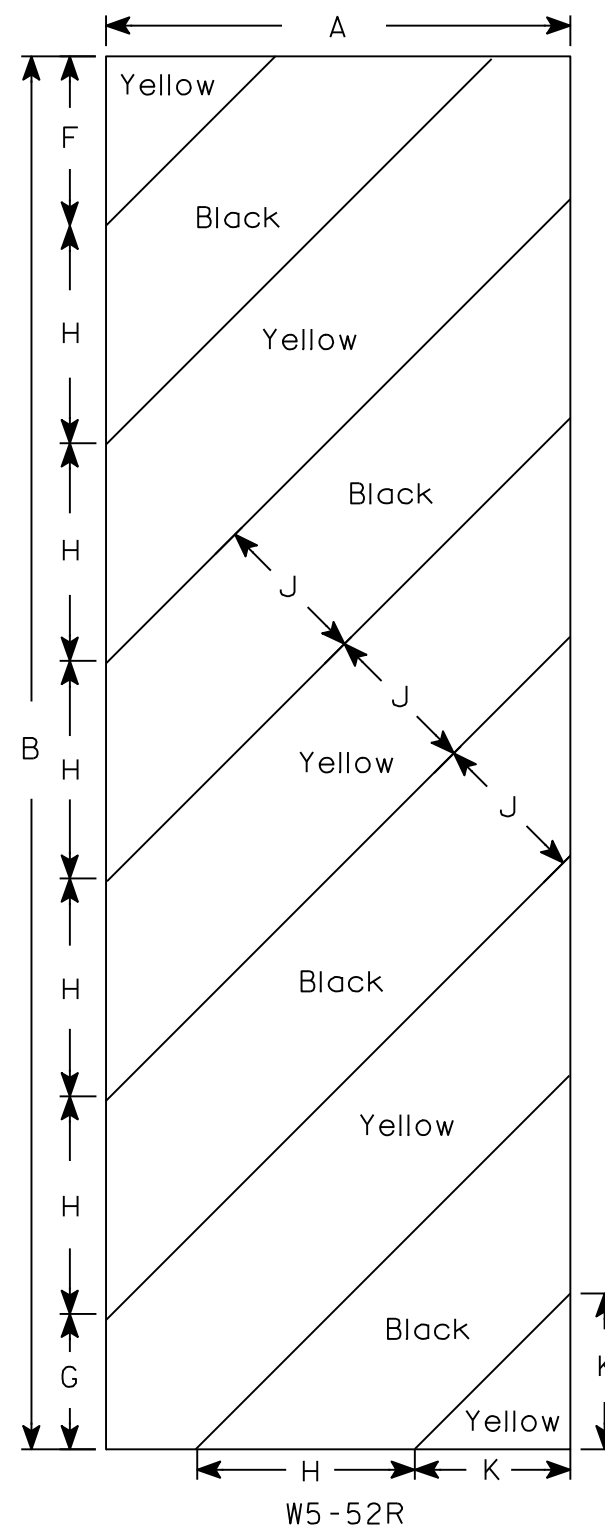
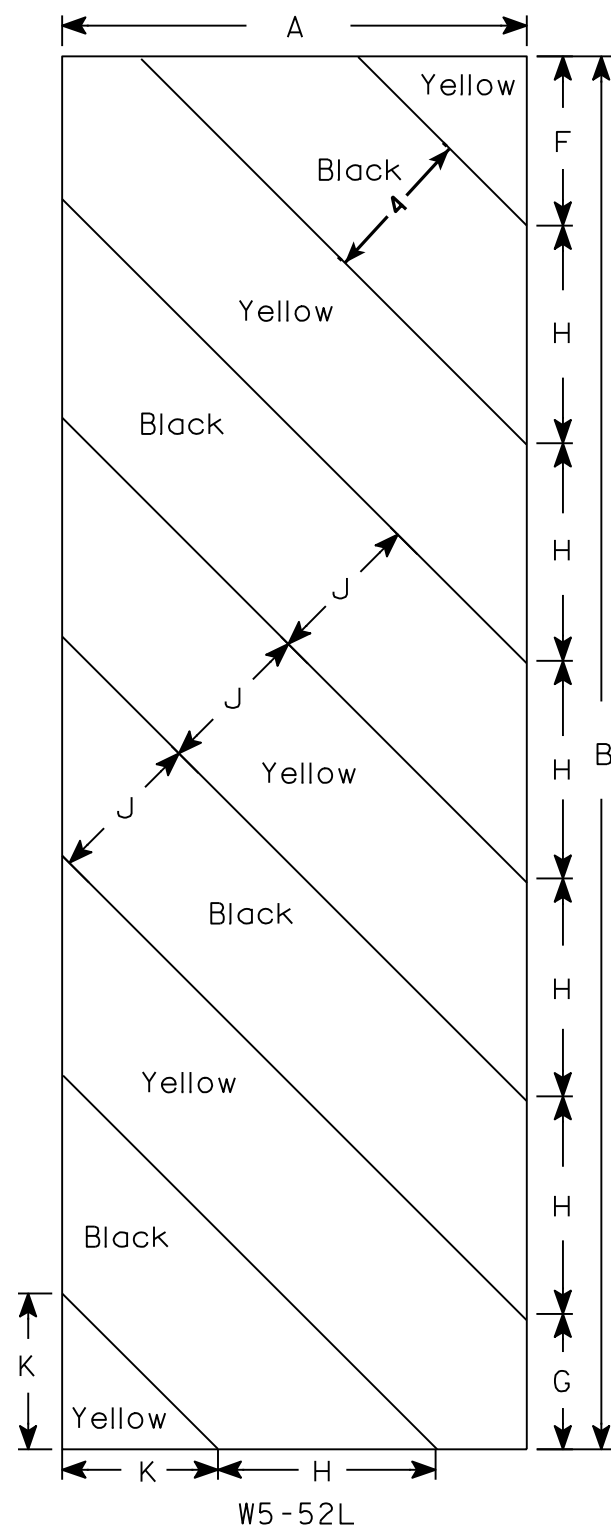
GENERAL NOTES

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

* LAG BOLTS SHALL BE 3/8" X 2 1/2"



BLOCK BANDING DETAIL (V-BLOCK OPTION)	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> For State Traffic Engineer
DATE 6/10/19	PLATE NO. A5-10.2



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.

7

7

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																											

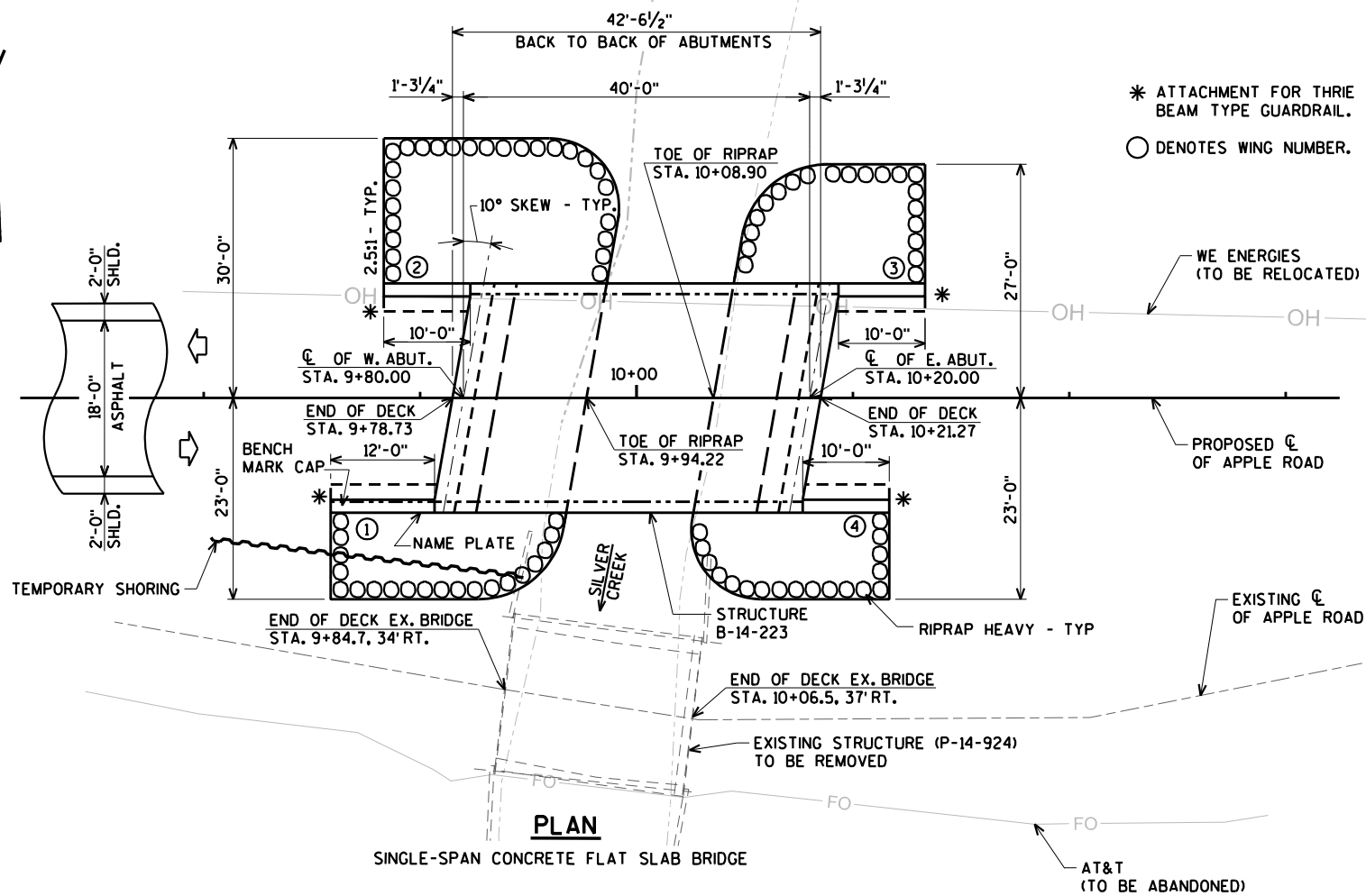
STANDARD SIGN
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

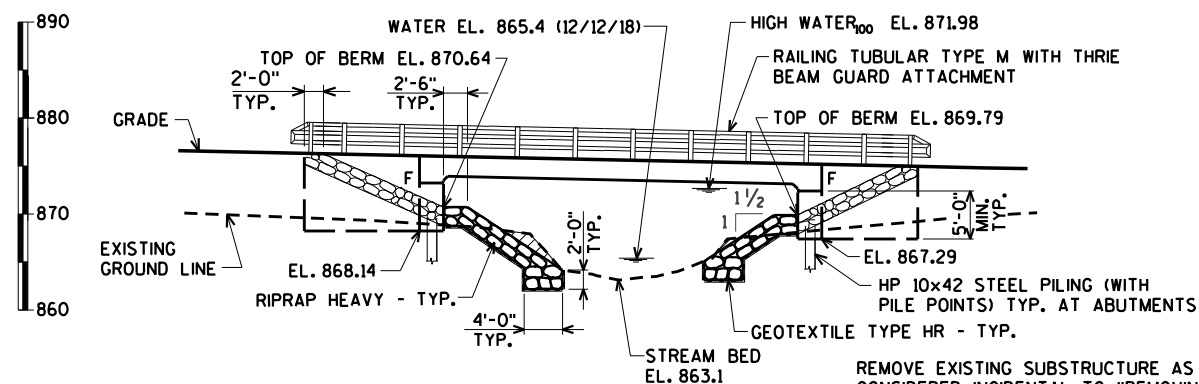
DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E



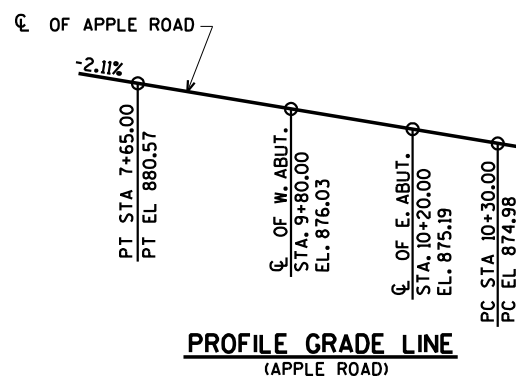
PLAN
SINGLE-SPAN CONCRETE FLAT SLAB BRIDGE

COST OF EXCAVATION OR FILL IN THE HATCHED AREAS SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "EXCAVATION FOR STRUCTURES BRIDGES B-14-223".



ELEVATION
(NORMAL TO CENTERLINE OF SILVER CREEK)

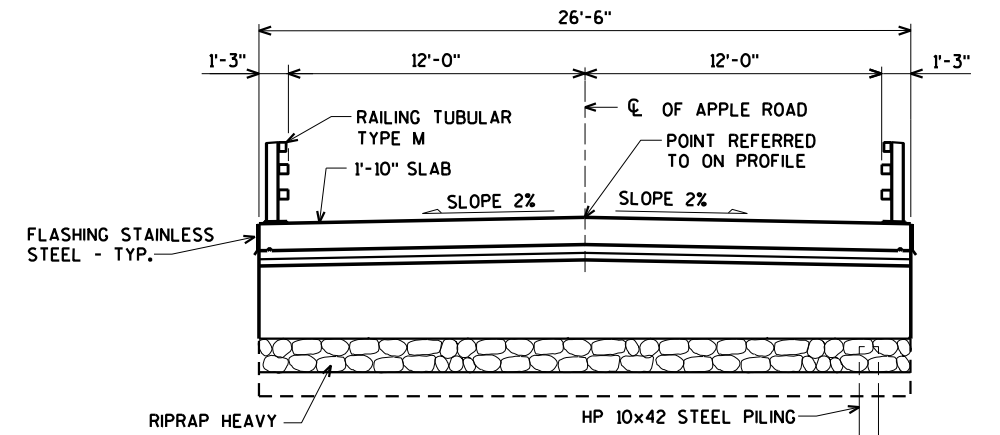
REMOVE EXISTING SUBSTRUCTURE AS NEEDED. COST CONSIDERED INCIDENTAL TO "REMOVING STRUCTURE" ITEM. TYPICAL AT ALL SUBSTRUCTURES.



PROFILE GRADE LINE
(APPLE ROAD)

LIST OF DRAWINGS

1. GENERAL PLAN
2. QUANTITIES AND NOTES
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. WEST ABUTMENT WINGS 1 & 2 DETAILS
6. WEST ABUTMENT DETAILS & BILL OF BARS
7. EAST ABUTMENT
8. EAST ABUTMENT WINGS 3 & 4 DETAILS
9. EAST ABUTMENT DETAILS & BILL OF BARS
10. SUPERSTRUCTURE
11. SUPERSTRUCTURE DETAILS
12. TUBULAR STEEL RAILING TYPE 'M'



TYPICAL SECTION THRU BRIDGE

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: 1.19
OPERATING RATING FACTOR: 1.54
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 "/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.

HYDRAULIC DATA:

100 YEAR FREQUENCY

O₁₀₀ = 760 c.f.s.
VEL. = 4.1 f.p.s.
HW₁₀₀ = EL. 871.98
WATERWAY AREA = 185 sq. ft.
DRAINAGE AREA = 8.6 sq. mi.
SCOUR CRITICAL CODE = 8
DATUM = NAVD88 (2012)

2 YEAR FREQUENCY

O₂ = 50 c.f.s.
VEL. = 1.2 f.p.s.
HW₂ = EL. 866.82

FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON HP 10x42 STEEL PILING (WITH PILE POINTS) DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS * PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 15'-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.

TRAFFIC DATA:

A.A.D.T. = <100 (2022)
A.A.D.T. = <100 (2042)
R.D.S. = 20 M.P.H.

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY

AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED *[Signature]* SDR **08/24/21**
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-14-223

APPLE ROAD OVER SILVER CREEK

COUNTY DODGE TOWN/CITY/VILLAGE EMMET

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY JLB DESIGN CKD. ZSS DRAWN BY JLB/CLP PLANS CKD. DNS

GENERAL
PLAN

SHEET 1 OF 12

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

CONSULTANT CONTACT:
DAN SYDOW
(715)834-3161



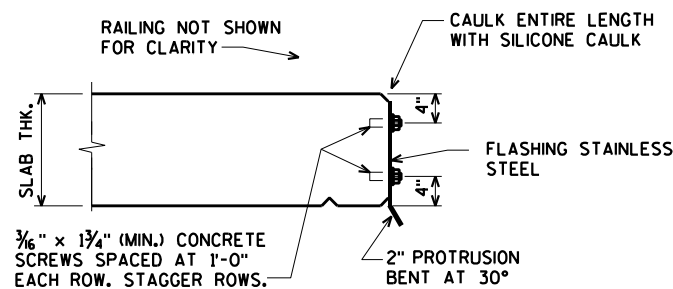
08/23/2021

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	W. ABUT.	E. ABUT.	SUPER.	TOTAL
203.0260	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS P-14-924	EACH	-----	-----	-----	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-14-223	LS	-----	-----	-----	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	95	95	-----	190
502.0100	CONCRETE MASONRY BRIDGES	CY	29	28	80	137
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-----	-----	155	155
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	1,580	1,570	-----	3,150
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,510	1,380	14,900	17,790
511.1100	TEMPORARY SHORING	SF	148	-----	-----	148
513.4061	RAILING TUBULAR TYPE M	LF	24.5	22.5	85.1	132.1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	9	9	-----	18
550.0500	PILE POINTS	EACH	4	4	-----	8
550.1100	PILING STEEL HP 10-INCH x 42 LB	LF	60	60	-----	120
606.0300	RIPRAP HEAVY	CY	90	70	-----	160
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	70	70	-----	140
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	45	40	-----	85
645.0120	GEOTEXTILE TYPE HR	SY	170	135	-----	305
SPV.0090.01	FLASHING STAINLESS STEEL	SY	-----	-----	85	85
NON-BID ITEMS						
	FILLER	SIZE	-----	-----	-----	1/2" & 3/4"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
 BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS SHOWN OR NOTED OTHERWISE.
 THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.
 JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.
 THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE TYPE HR TO THE EXTENT SHOWN ON THE GENERAL PLAN SHEET AND IN THE ABUTMENT DETAILS.
 SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.
 THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-14-223" SHALL BE THE EXISTING GROUNDLINE.
 THE EXISTING STRUCTURE, P-14-924, TO BE REMOVED, IS A 22.7-FT. LONG SINGLE-SPAN PRESTRESSED CONCRETE CHANNEL BRIDGE ON TIMBER ABUTMENTS WITH A 17.7-FT. CLEAR ROADWAY WIDTH.
 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 ABUTMENTS WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES.
 PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED AS SHOWN IN DETAIL ON THIS SHEET.
 BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS NOTED OTHERWISE.
 EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.
 EXTENT OF BELOW GRADE SUBSTRUCTURES ARE NOT KNOWN. REMOVE EXISTING SUBSTRUCTURES AS NEEDED TO BUILD NEW SUBSTRUCTURES. COST OF SUBSTRUCTURE REMOVAL IS CONSIDERED INCIDENTAL TO "REMOVING STRUCTURE" BID ITEM.



FLASHING DETAIL FOR NEW BRIDGES WITH OPEN RAILING

THE BID ITEM "FLASHING STAINLESS STEEL" SHALL INCLUDE PROVIDING AND INSTALLING THE STAINLESS STEEL FLASHING, SILICONE CAULK, 3/8" CONCRETE SCREWS AND CLEANING THE EDGE OF THE DECK PRIOR TO ATTACHMENT OF THE FLASHING.

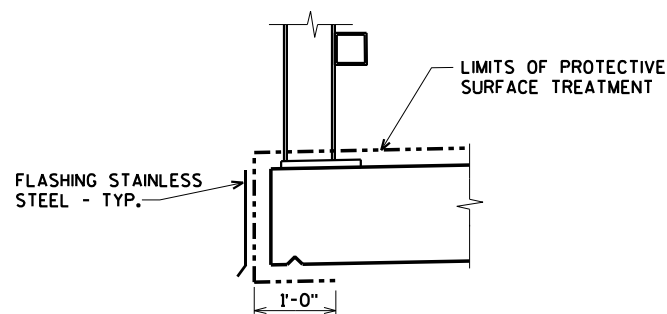
FLASHING TO BE INSTALLED AFTER PROTECTIVE SURFACE TREATMENT APPLICATION.

CONCRETE SCREWS SHALL BE 410 STAINLESS STEEL.

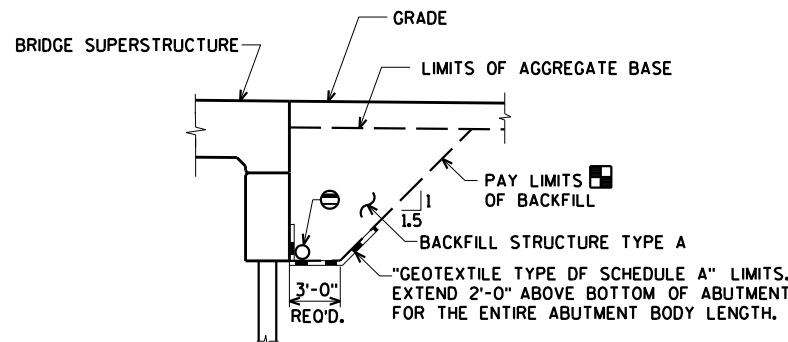
EXTEND FLASHING TO BACK FACE OF ABUTMENT.

TOP OF FLASHING TO BEGIN APPROX. 1-INCH BELOW TOP OF SLAB SURFACE.

THE FLASHING IS TO BE A CONSTANT HEIGHT BASED ON THE THINNEST SLAB DEPTH OVER THE BRIDGE LENGTH.



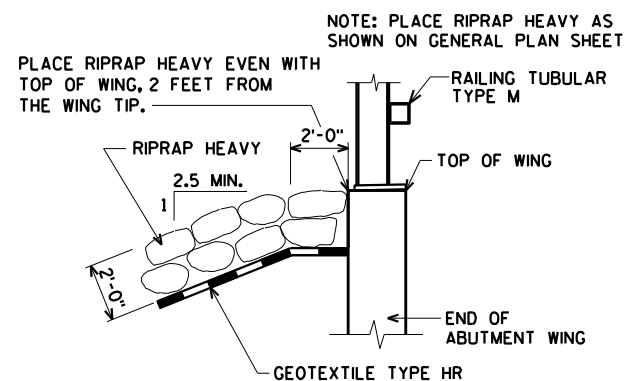
PROTECTIVE SURFACE TREATMENT DETAIL



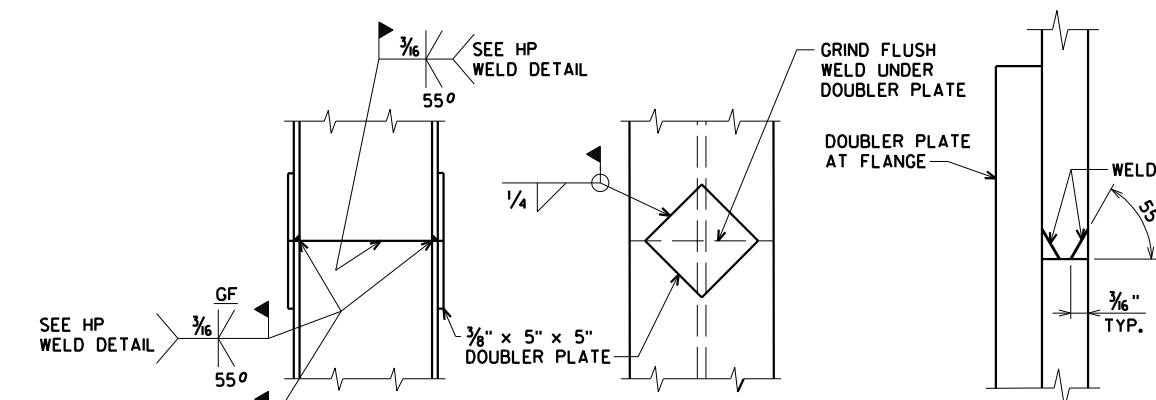
BACKFILL STRUCTURE LIMITS THRU ABUTMENT

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

PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 6.



TYPICAL FILL SECTION AT WING TIPS



HP 10 x 42 SPLICE DETAIL

HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

8/23/2021 PENTABLE:BRouu_shd_uHil.tbi

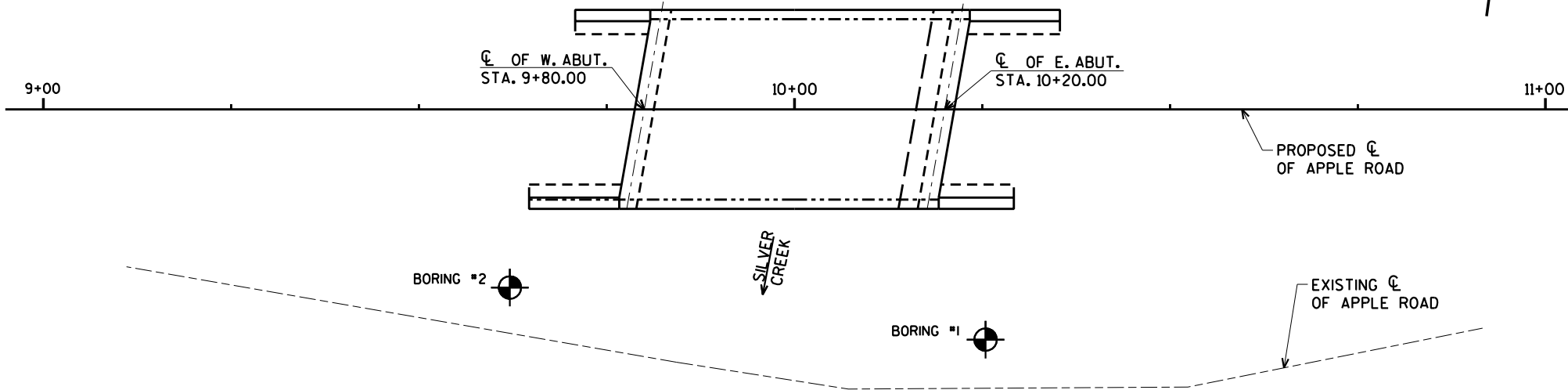
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NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-14-223			
DRAWN BY JLB		PLANS CK'D. ZSS	
QUANTITIES AND NOTES			SHEET 2 OF 12

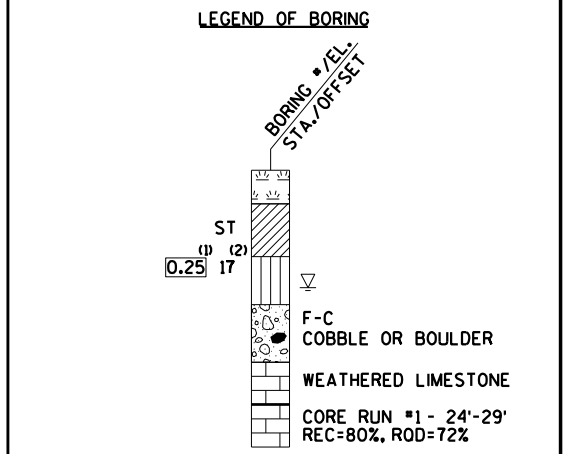
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	3/10/20 AND 3/12/20	656321.52	885513.72
2	3/11/20	656324.14	885577.83

BORINGS COMPLETED BY: NUMMELIN TESTING SERVICES, INC.
 REPORT COMPLETED BY: NUMMELIN TESTING SERVICES, INC.
 ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DODGE COUNTY



MATERIAL SYMBOLS

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



⁽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

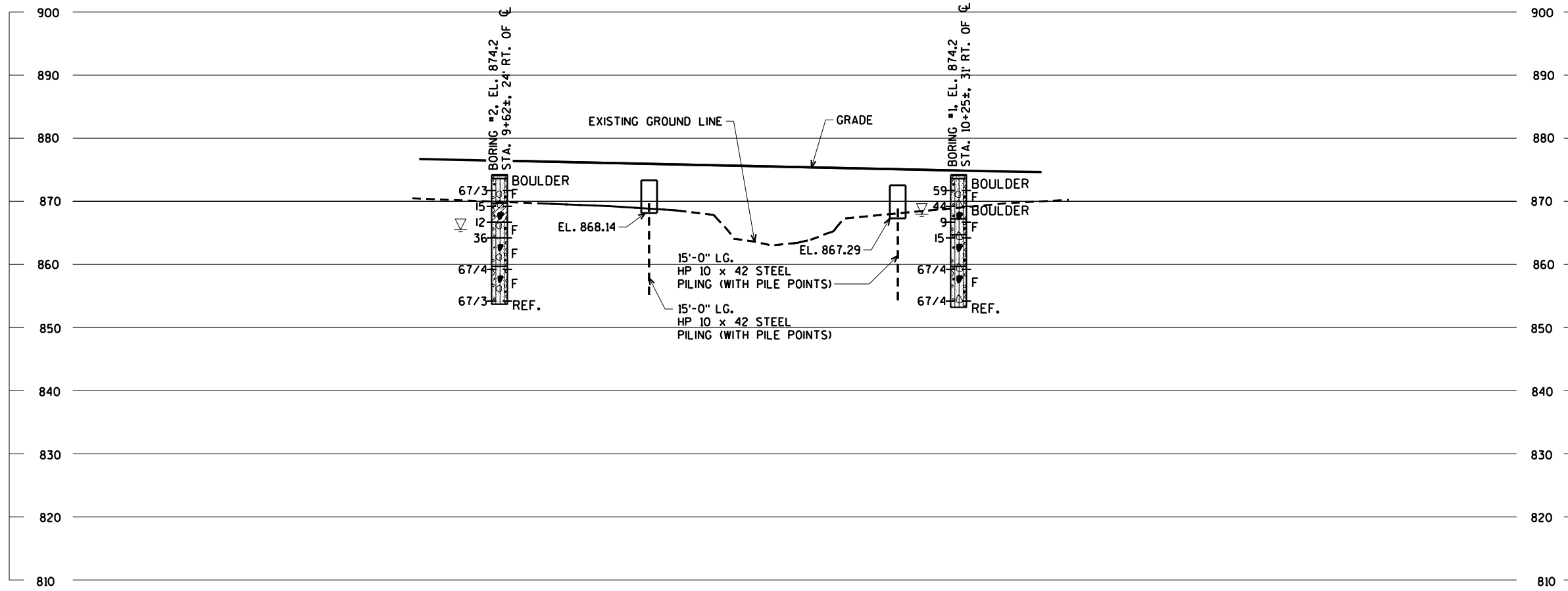
- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

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.



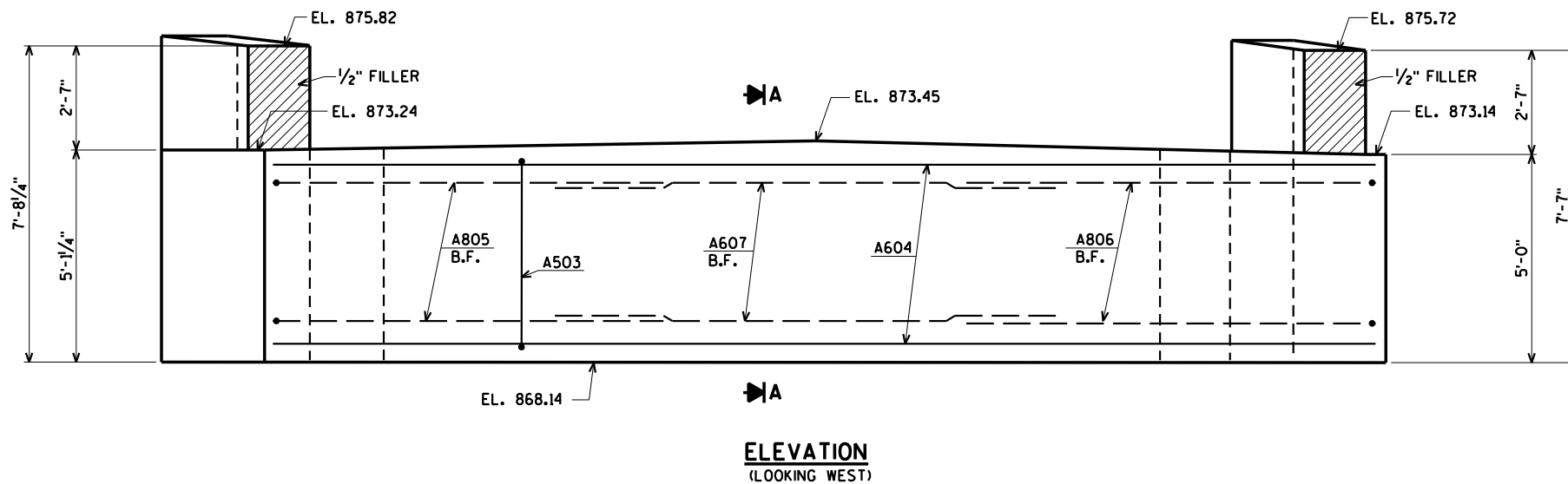
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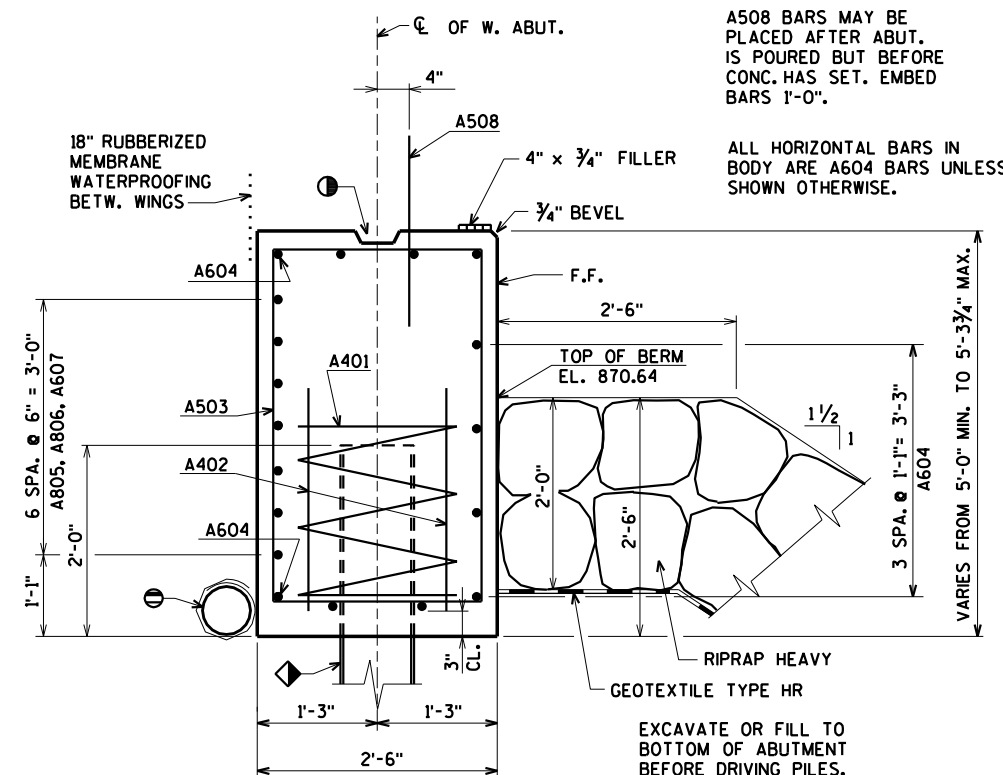
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NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-14-223			
DRAWN BY JLB		PLANS CKD. ZSS	
SUBSURFACE EXPLORATION			SHEET 3 OF 12

NOTE:
SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF
1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT
SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

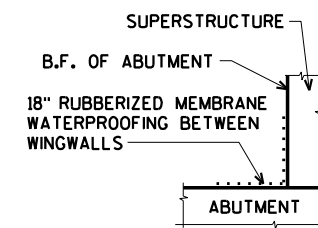


ELEVATION
(LOOKING WEST)



SECTION A

◆ ABUTMENT TO BE SUPPORTED ON HP 10 x 42 STEEL PILING (WITH PILE POINTS) DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. ESTIMATED LENGTH 15'-0".



SECTION F

⊖ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. FOR RODENT SHIELD DETAIL SEE SHEET 6.

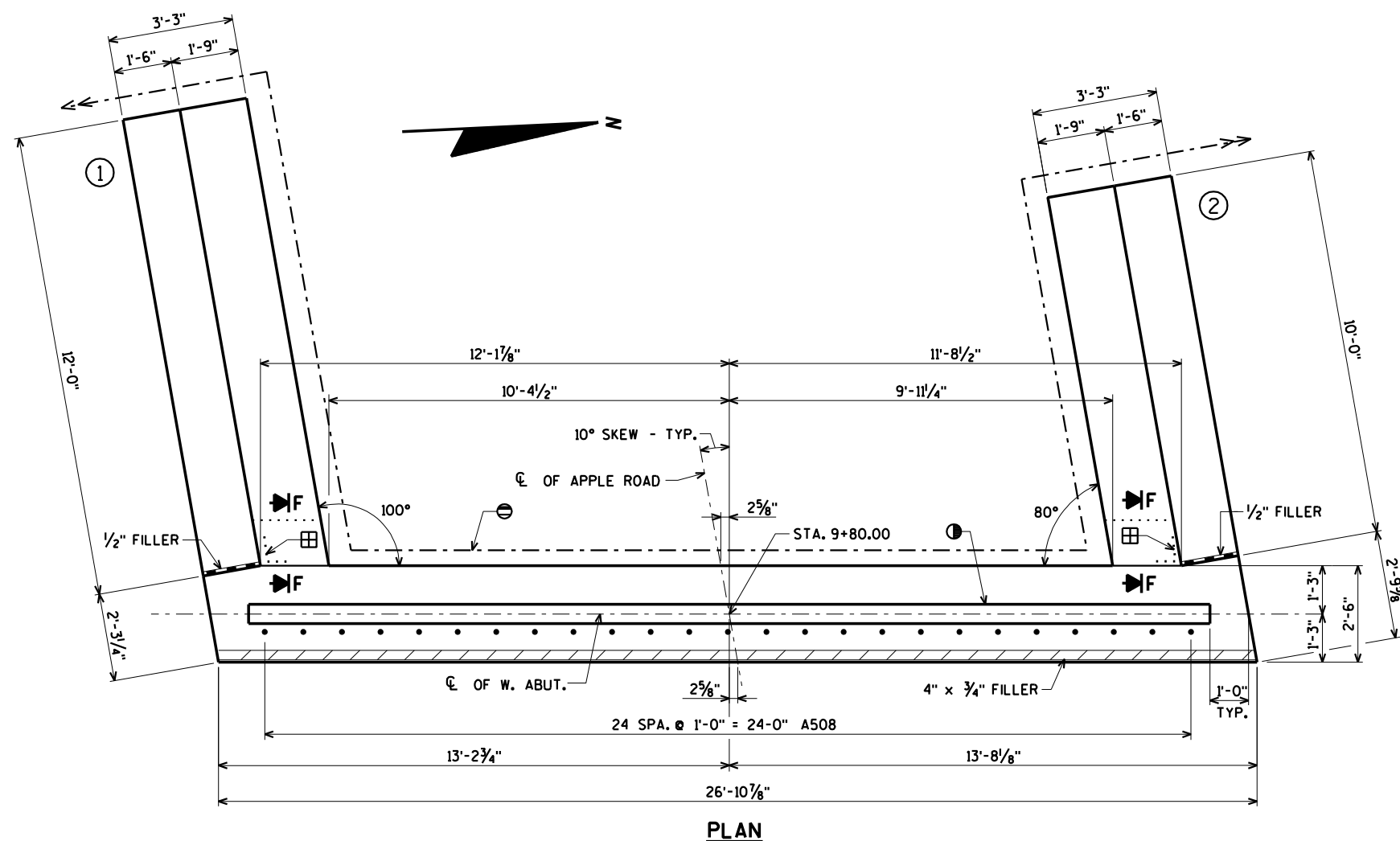
Ⓚ KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6".

⊞ VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WINGWALL.

FOR PILE SPLICE DETAIL SEE SHEET 2.

B.F. DENOTES BACK FACE

F.F. DENOTES FRONT FACE



PLAN

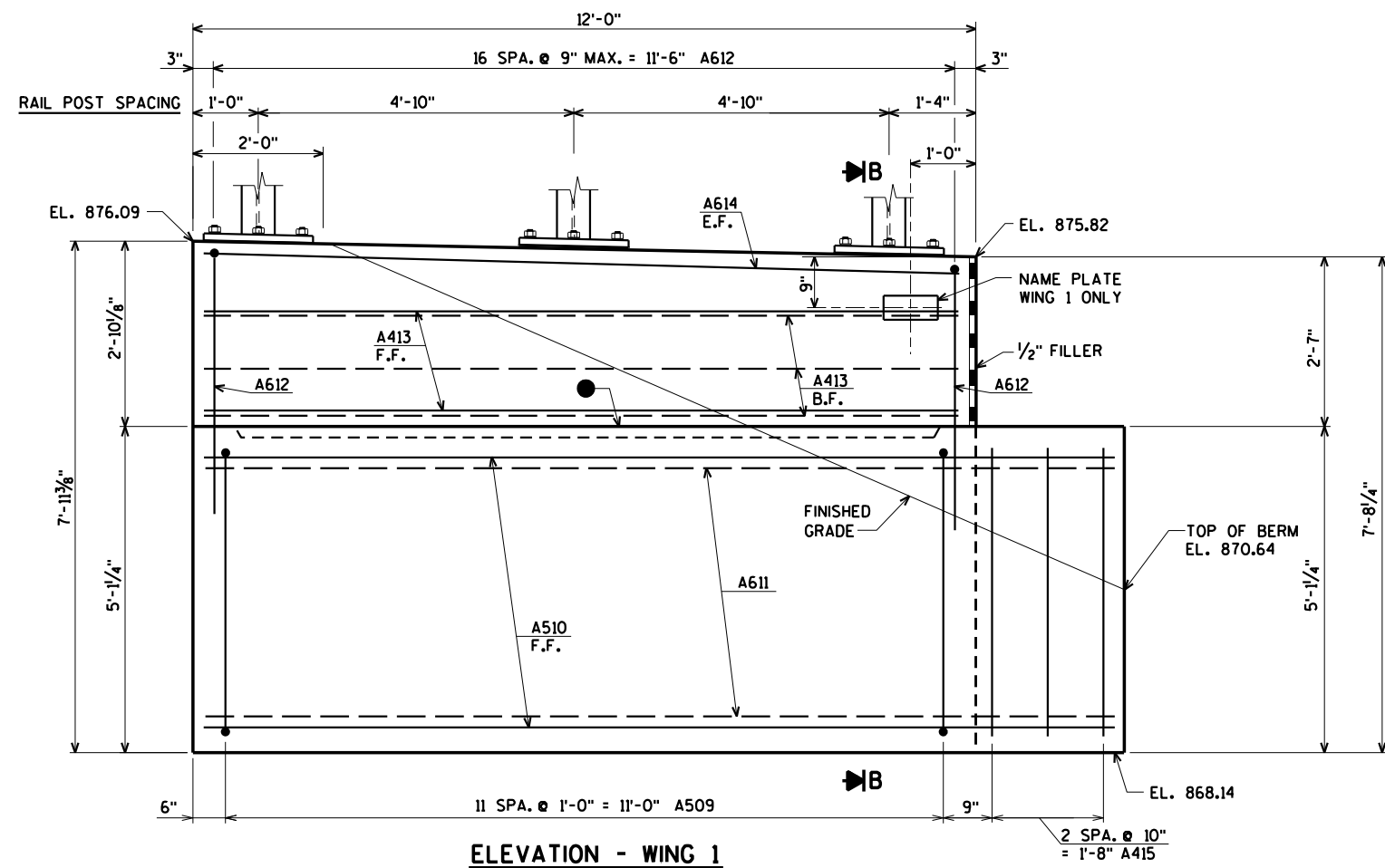
5/10/2021
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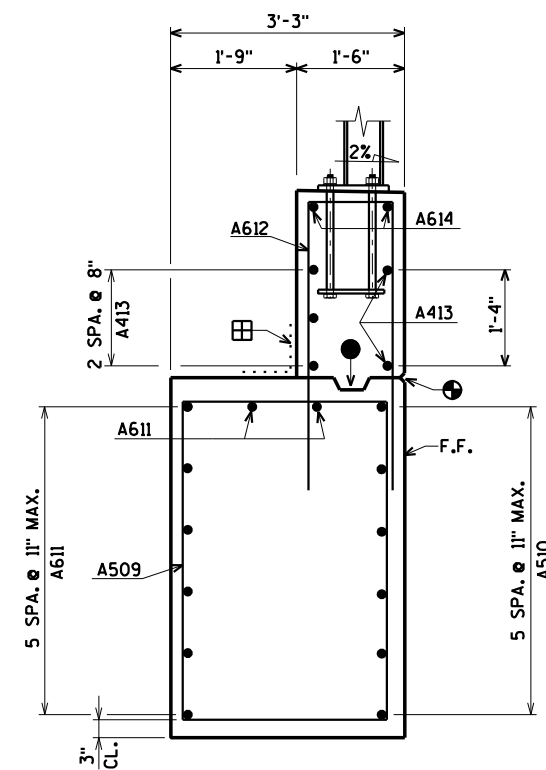
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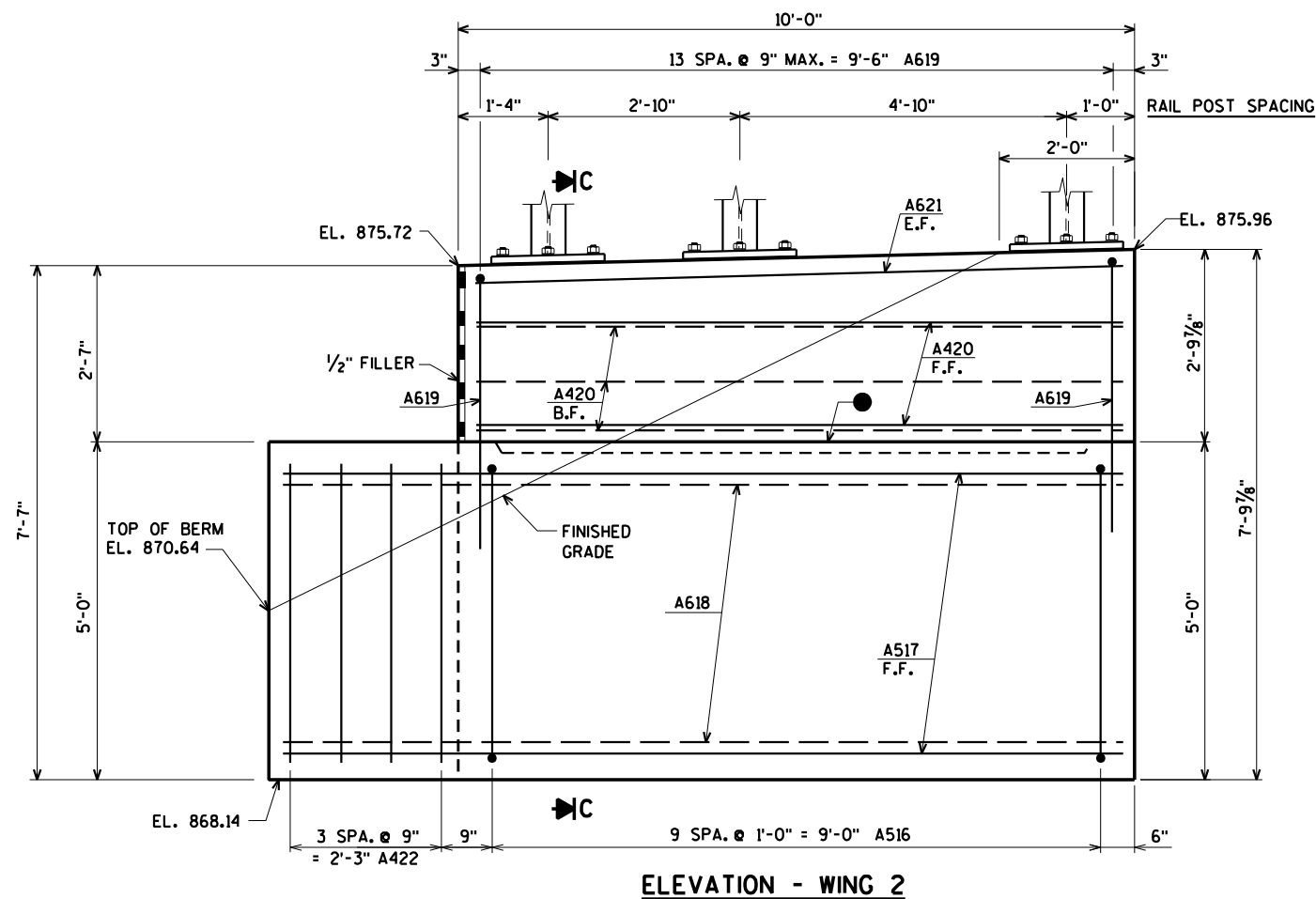
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-14-223			
DRAWN BY		CLP	PLANS CK'D. ZSS
WEST ABUTMENT			SHEET 4 OF 12



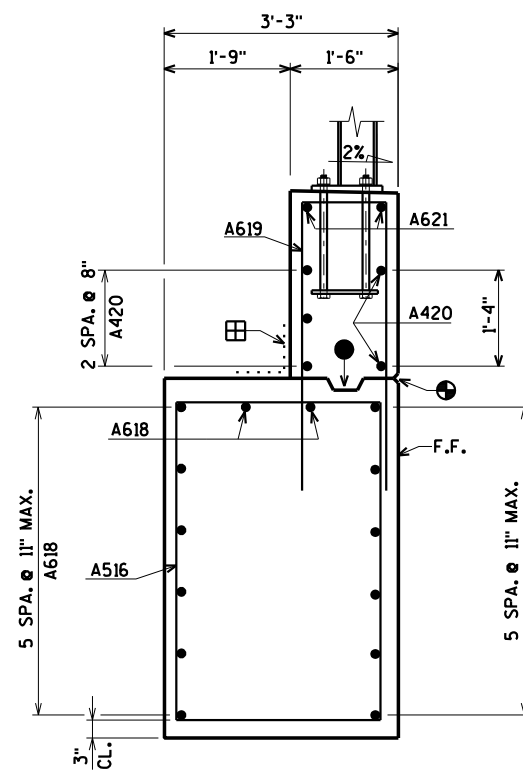
ELEVATION - WING 1



SECTION B



ELEVATION - WING 2



SECTION C

⊕ 3/4" "V" GROOVE ON FRONT FACE OF WINGWALL. ONLY REQUIRED IF OPTIONAL CONSTRUCTION JOINT IS USED.

● OPT. CONST. JOINT FORMED BY A BEVELED 2" x 6" KEYWAY WITH MEMBRANE ON BACKFACE.

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HOIRZONTAL AND VERTICAL JOINTS ON BACKFACE.

B.F. DENOTES BACK FACE.

F.F. DENOTES FRONT FACE.

E.F. DENOTES EACH FACE.

5/4/2021
PENTABLE:BRRedu_shd_util.tb1

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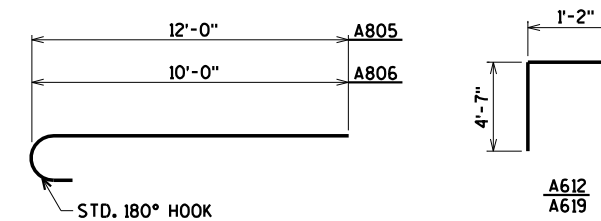
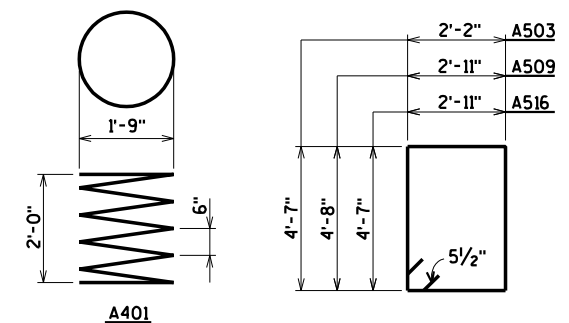
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-14-223			
DRAWN BY		CLP	PLANS CK'D. ZSS
WEST ABUTMENT WING DETAILS			SHEET 5 OF 12

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BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	1,510° COATED	1,580° UNCOATED	LOCATION
A401		4	28-0	X					BODY @ PILES
A402		8	2-3						BODY @ PILES
A503		34	14-2	X					BODY VERT.
A604		11	26-6						BODY HORIZ.
A805		7	12-11	X					BODY HORIZ. @ WING B.F.
A806		7	10-11	X					BODY HORIZ. @ WING B.F.
A607		7	10-5						BODY HORIZ. BETW. WINGS B.F.
A508	X	25	2-0						BODY DOWELS
A509	X	12	15-10	X					WING 1 VERT.
A510	X	6	13-11						WING 1 HORIZ. F.F.
A611	X	8	14-2						WING 1 HORIZ. B.F. & TOP
A612	X	17	10-0	X					WING 1 VERT.
A413	X	5	11-8						WING 1 HORIZ. E.F.
A614	X	2	11-8						WING 1 HORIZ. E.F.
A415	X	3	4-8						BODY VERT. END @ WING 1
A516	X	10	15-8	X					WING 2 VERT.
A517	X	6	12-4						WING 2 HORIZ. F.F.
A618	X	8	11-6						WING 2 HORIZ. B.F. & TOP
A619	X	14	10-0	X					WING 2 VERT.
A420	X	5	9-8						WING 2 HORIZ. E.F.
A621	X	2	9-8						WING 2 HORIZ. E.F.
A422	X	4	4-7						BODY VERT. END @ WING 2

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

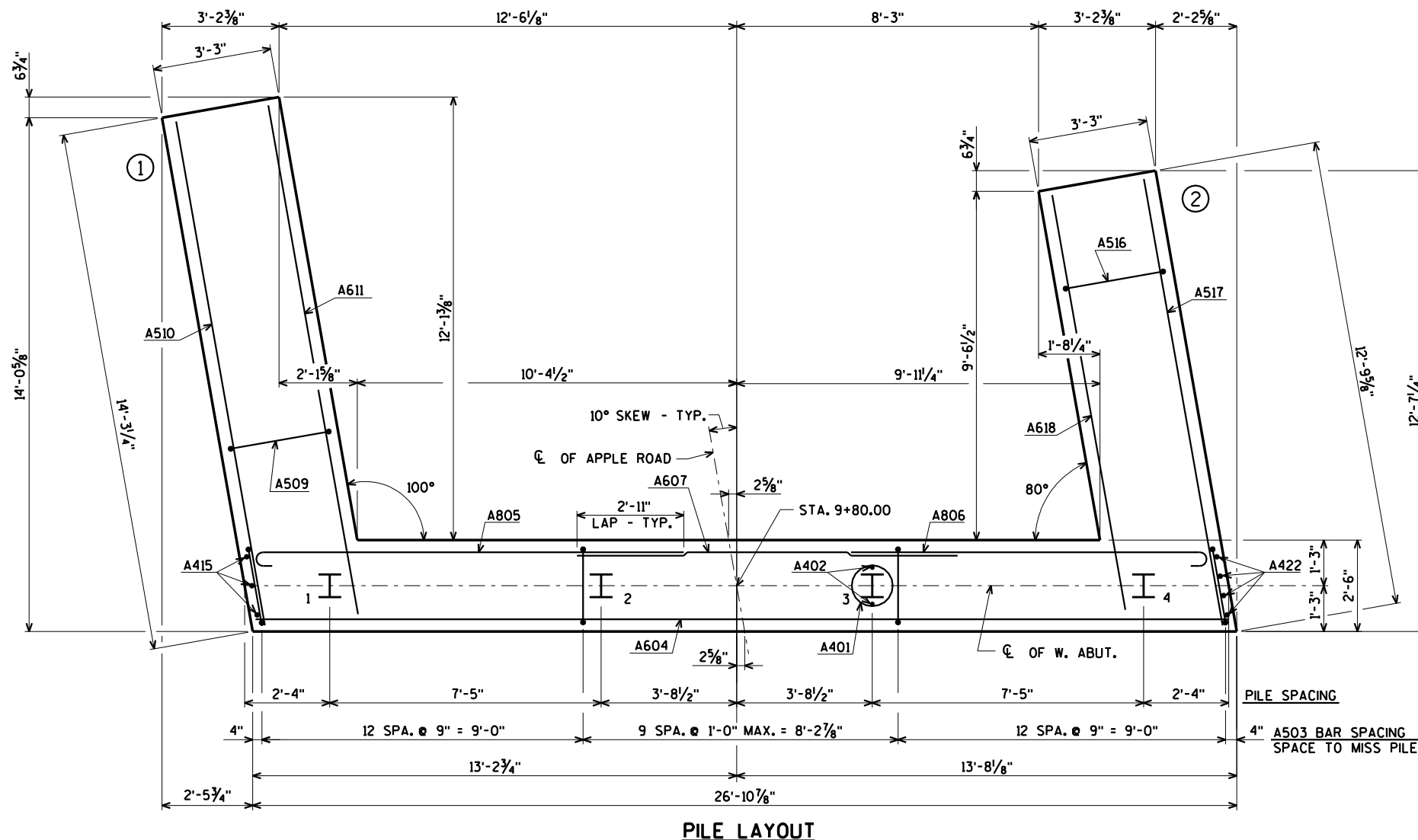


FOR PILE SPLICE DETAIL SEE SHEET 2.

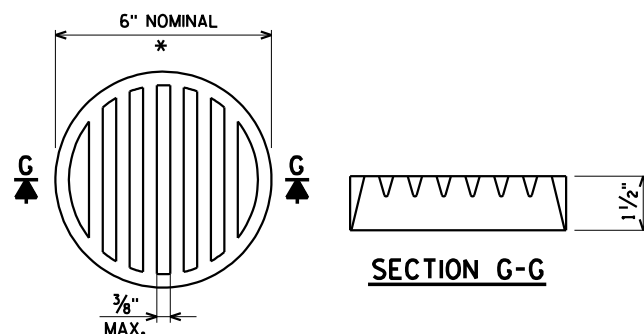
B.F. DENOTES BACK FACE
E.F. DENOTES EACH FACE
F.F. DENOTES FRONT FACE

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-14-223			
DRAWN BY		CLP	PLANS CK'D. ZSS
WEST ABUTMENT DETAILS & BILL OF BARS			SHEET 6 OF 12

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PILE LAYOUT



SECTION G-G

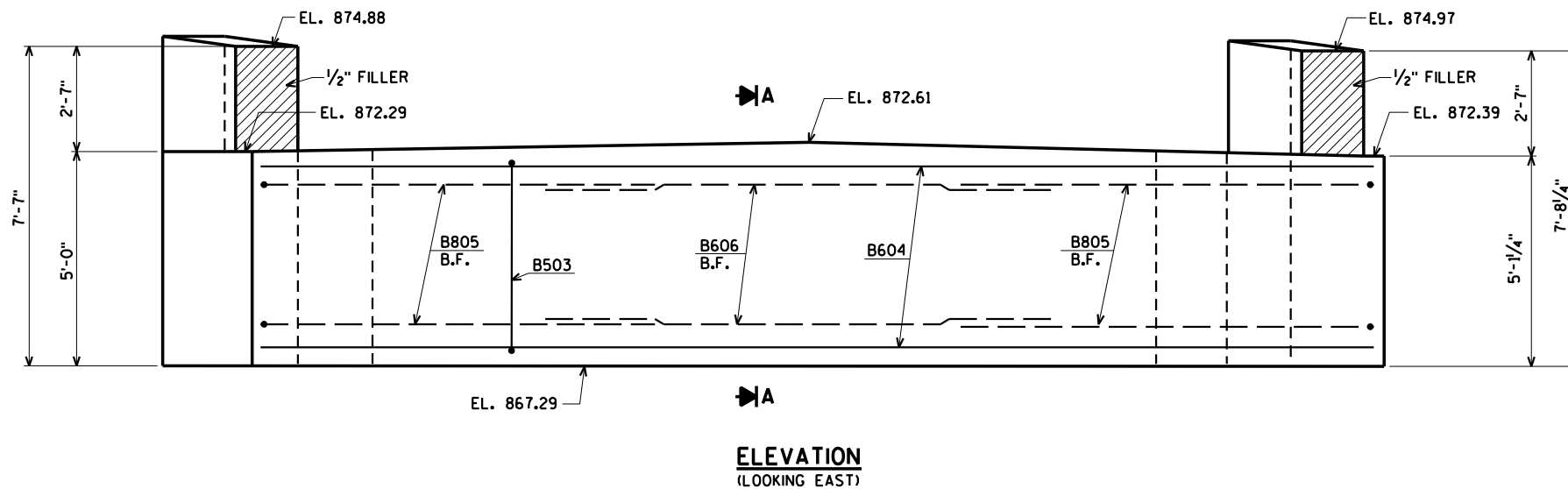
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

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

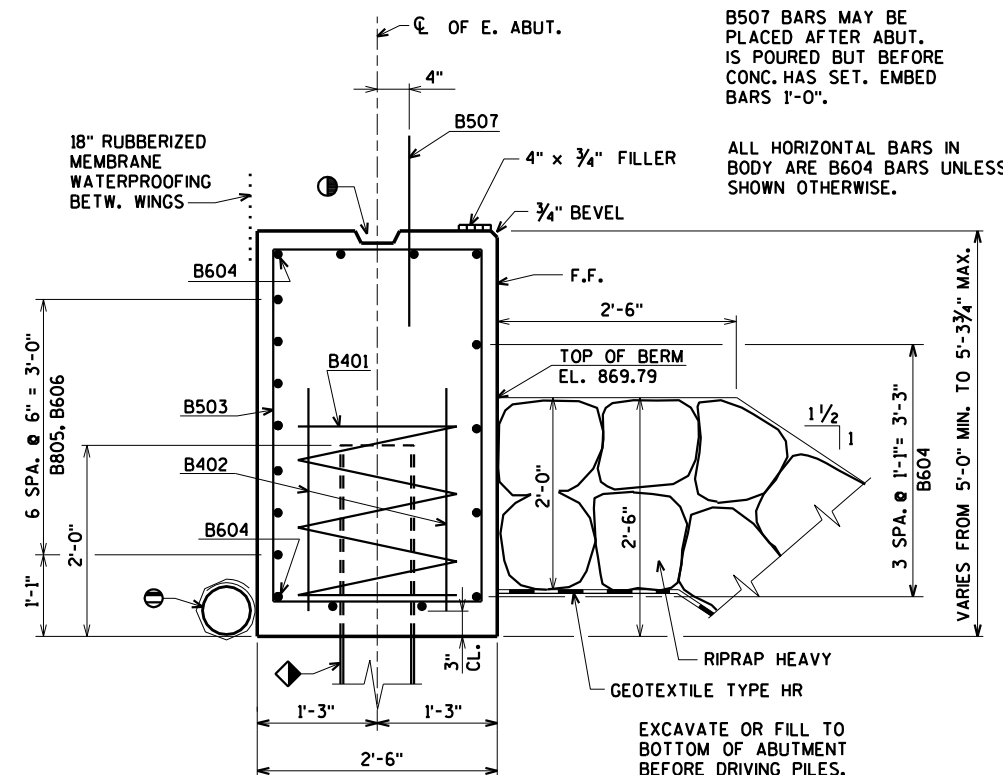
THE RODENT SHIELD SHALL BE PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 x 1-INCH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

RODENT SHIELD DETAIL

NOTE:
SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF
1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT
SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

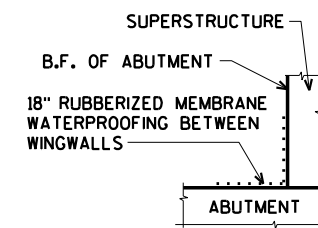


ELEVATION
(LOOKING EAST)



SECTION A

ABUTMENT TO BE SUPPORTED ON HP 10 x 42 STEEL PILING (WITH PILE POINTS) DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE. ESTIMATED LENGTH 15'-0".



SECTION F

PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. FOR RODENT SHIELD DETAIL SEE SHEET 6.

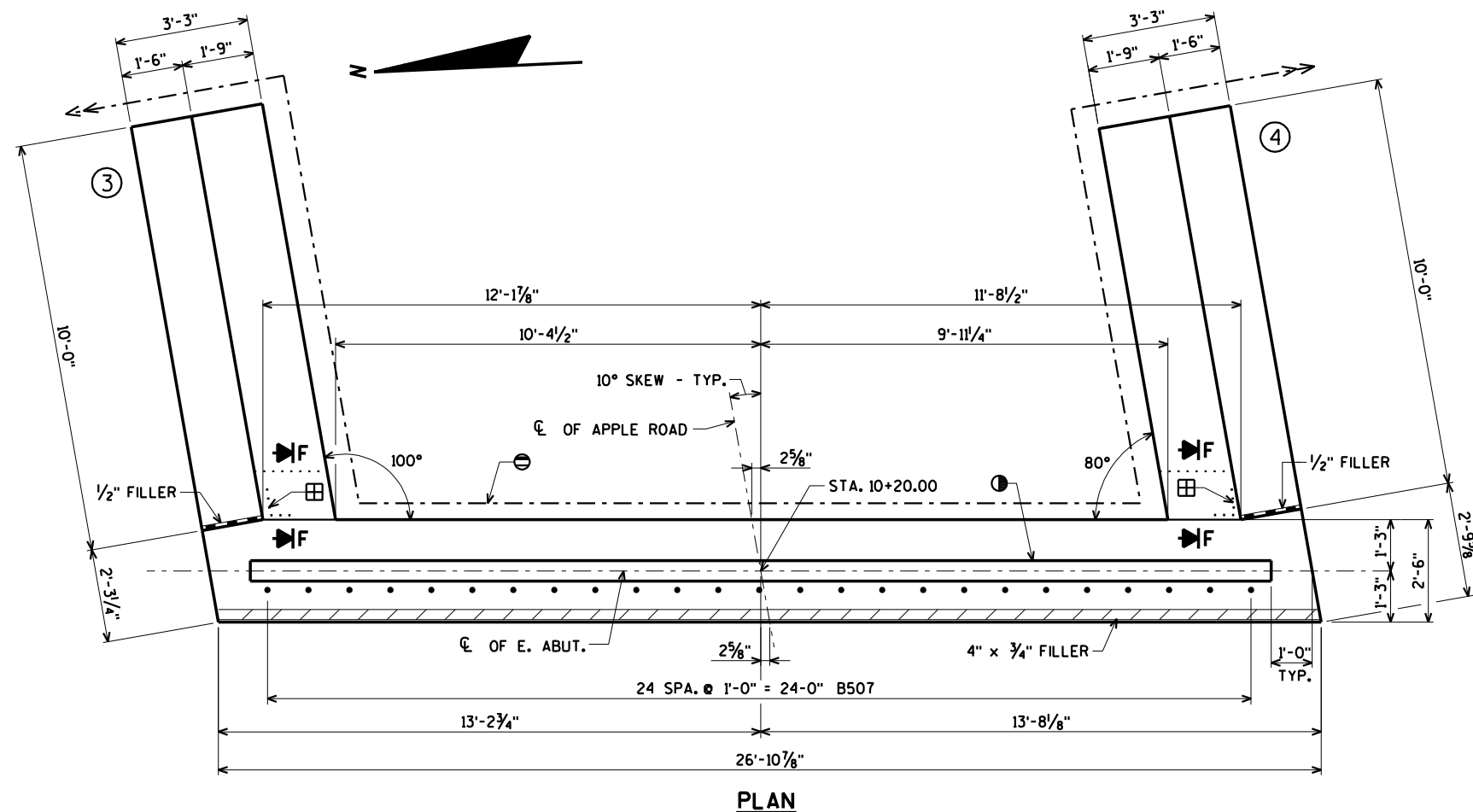
KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6".

VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WINGWALL.

FOR PILE SPLICE DETAIL SEE SHEET 2.

B.F. DENOTES BACK FACE

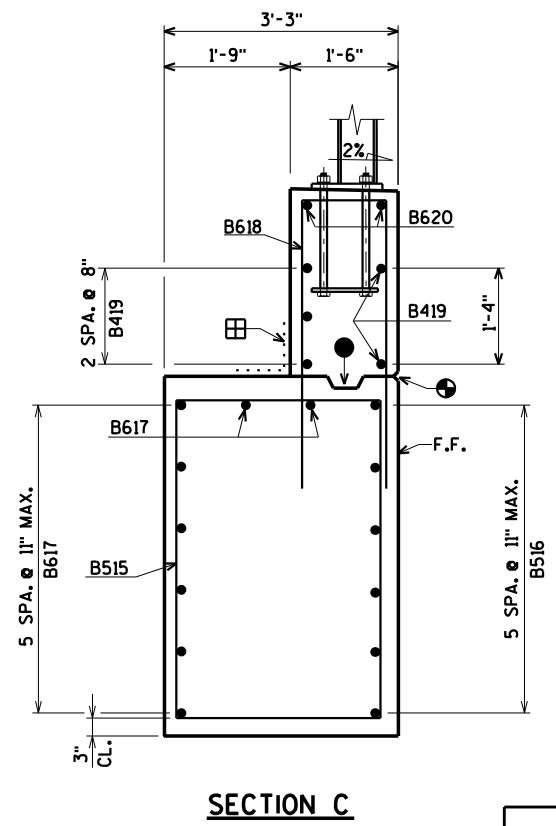
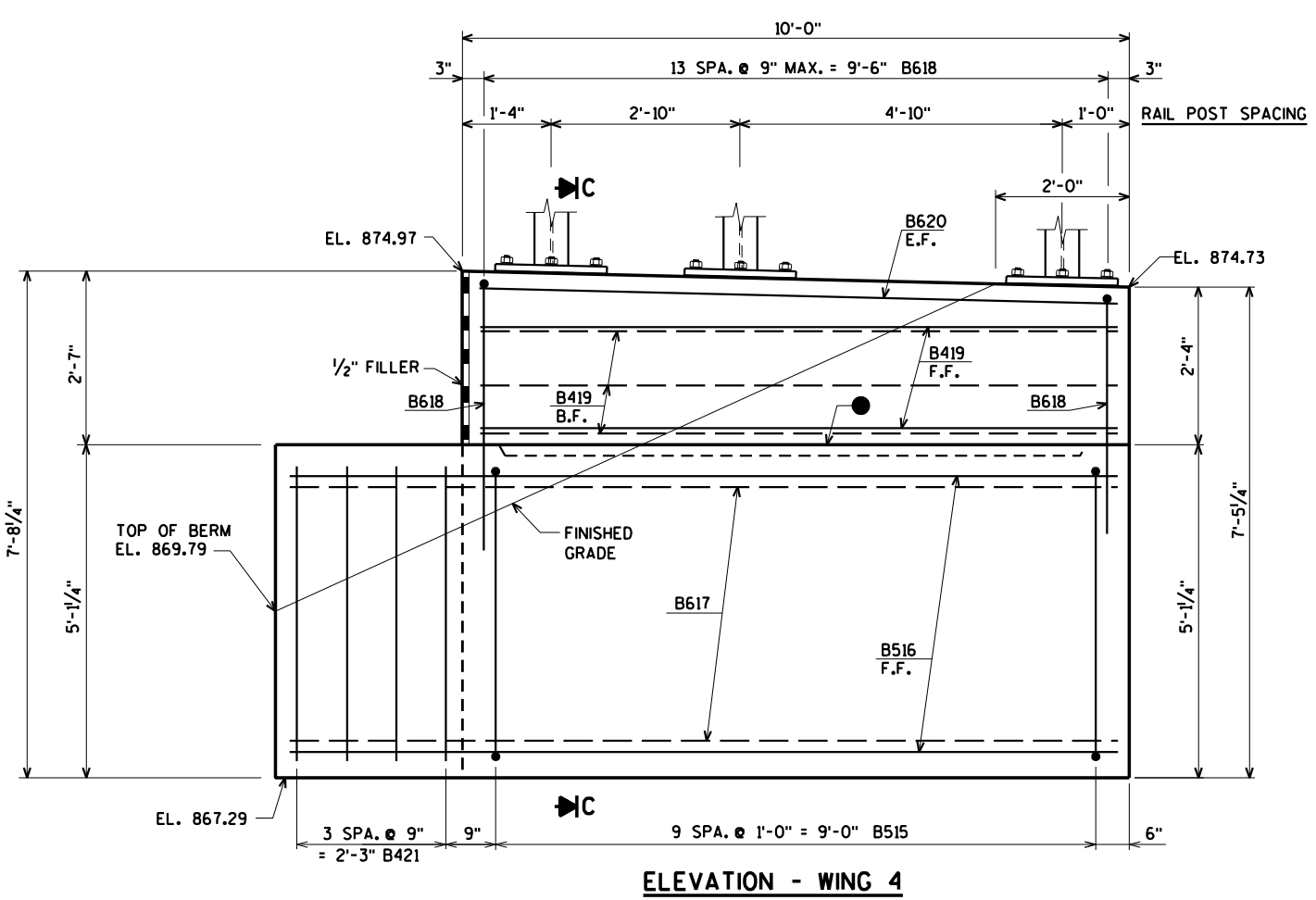
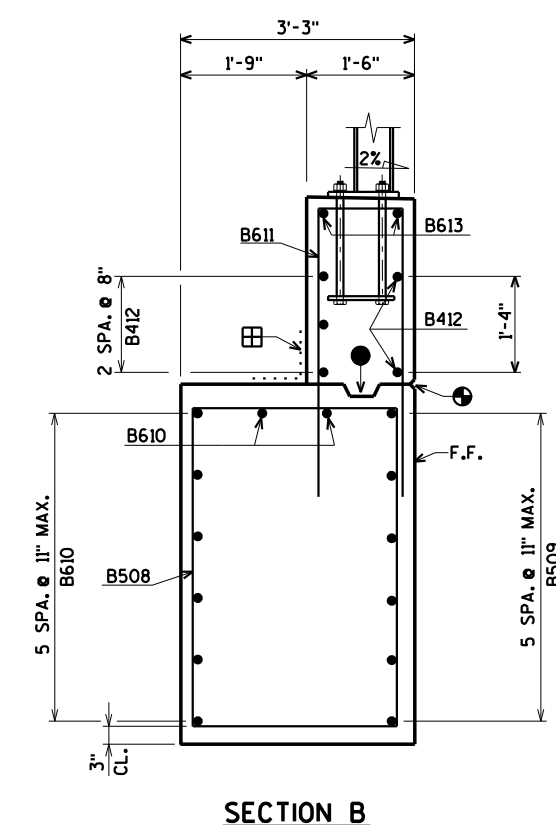
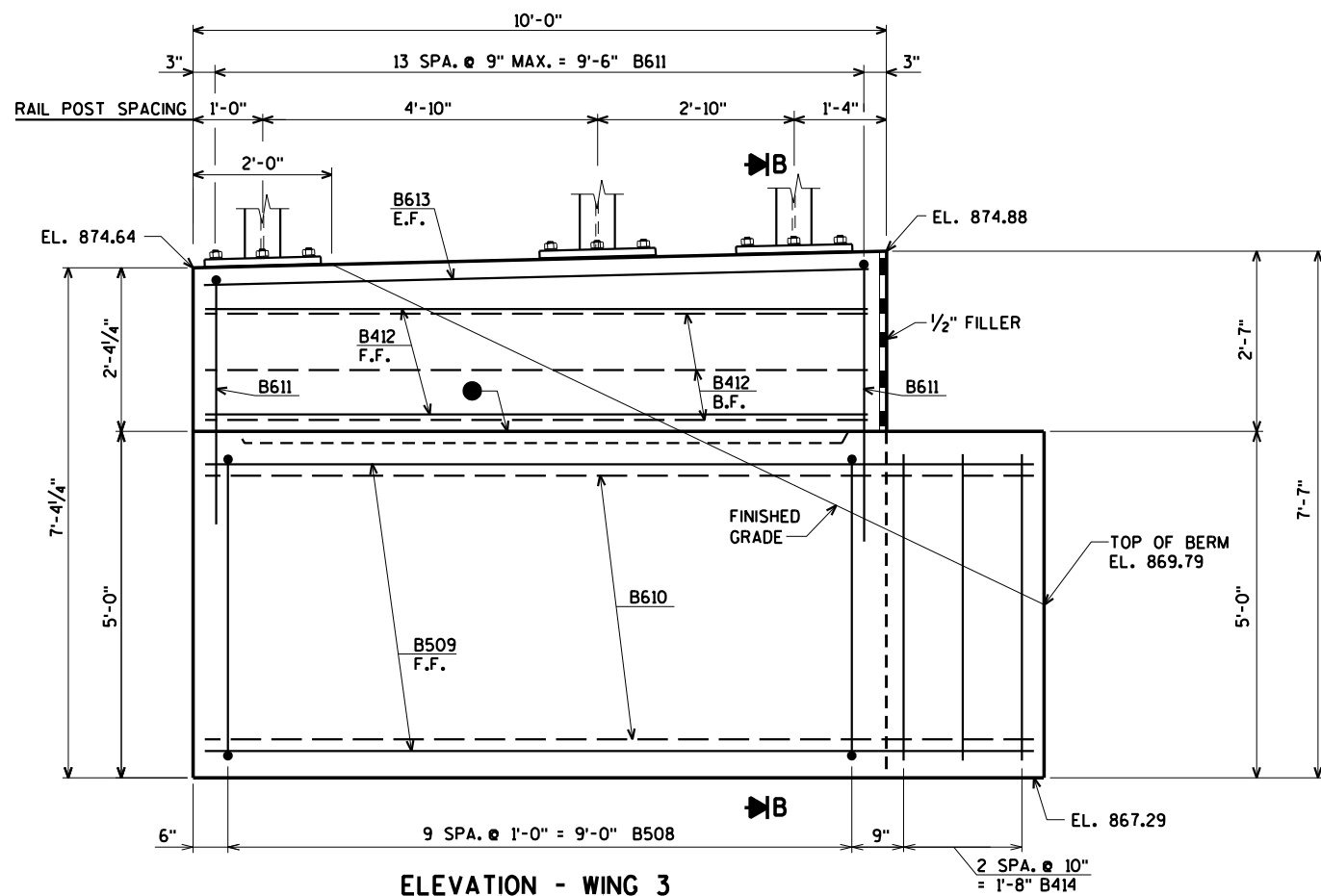
F.F. DENOTES FRONT FACE



PLAN

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-14-223			
DRAWN BY		CLP	PLANS CK'D. ZSS
EAST ABUTMENT			SHEET 7 OF 12

ORIGINAL PLANS PREPARED BY
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- ⊕ 3/4" "V" GROOVE ON FRONT FACE OF WINGWALL. ONLY REQUIRED IF OPTIONAL CONSTRUCTION JOINT IS USED.
 - OPT. CONST. JOINT FORMED BY A BEVELED 2" x 6" KEYWAY WITH MEMBRANE ON BACKFACE.
 - ⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HOIRZONTAL AND VERTICAL JOINTS ON BACKFACE.
- B.F. DENOTES BACK FACE.
 F.F. DENOTES FRONT FACE.
 E.F. DENOTES EACH FACE.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-14-223			
DRAWN BY CLP		PLANS CK'D. ZSS	
EAST ABUTMENT WING DETAILS			SHEET 8 OF 12

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5/4/2021 PENTABLE:BRRedu_shd_util.tbl

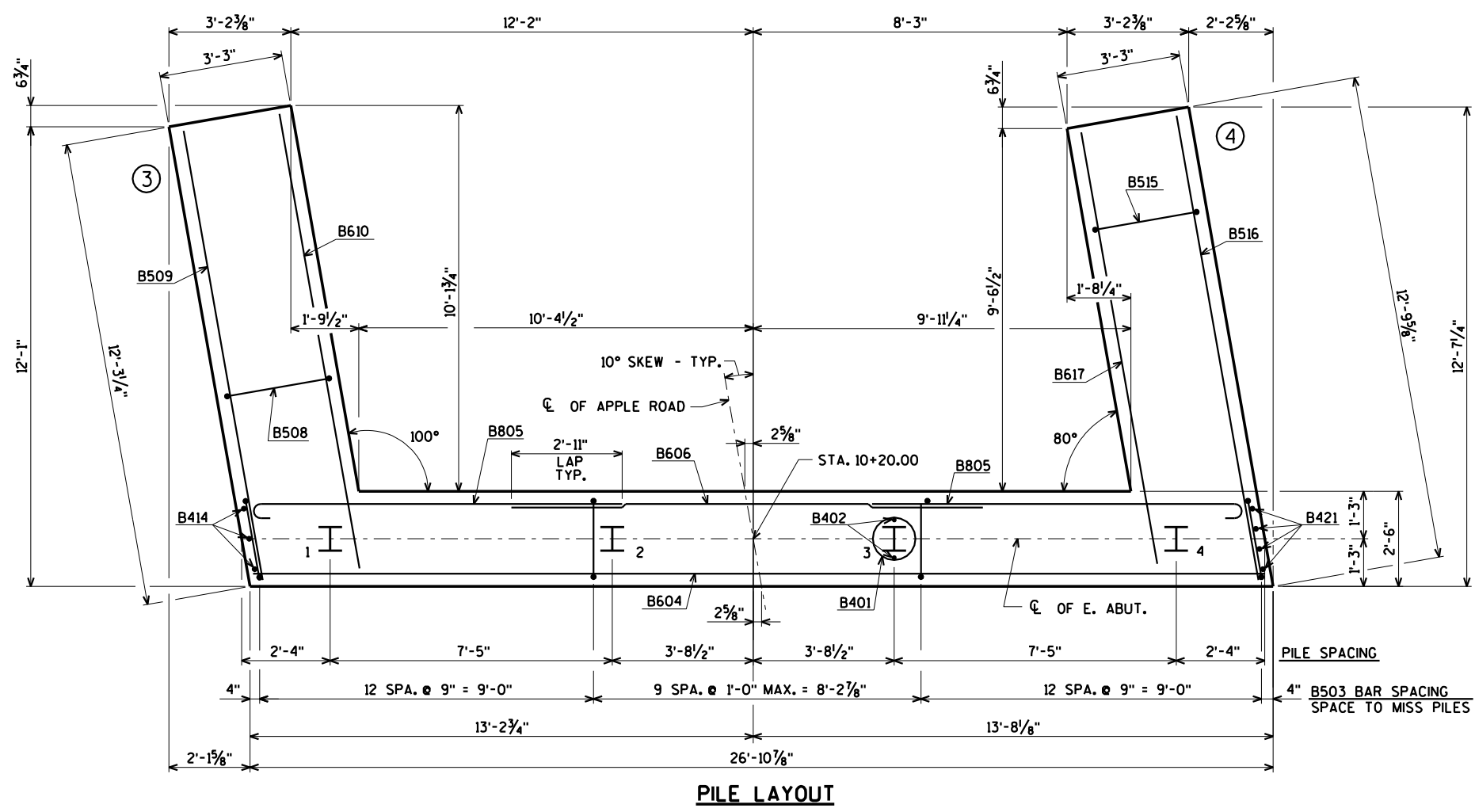
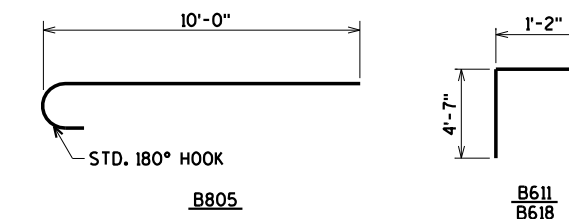
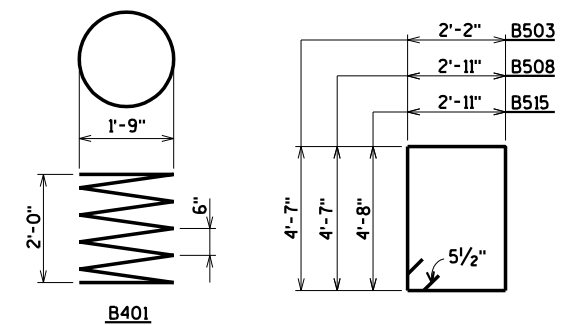
8

8

BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	1,380" COATED 1,570" UNCOATED
						LOCATION
B401		4	28-0	X		BODY @ PILES
B402		8	2-3			BODY @ PILES
B503		34	14-2	X		BODY VERT.
B604		11	26-6			BODY HORIZ.
B805		14	10-11	X		BODY HORIZ. @ WING B.F.
B606		7	12-5			BODY HORIZ. BETW. WINGS B.F.
B507	X	25	2-0			BODY DOWELS
B508	X	10	15-8	X		WING 3 VERT.
B509	X	6	11-11			WING 3 HORIZ. F.F.
B610	X	8	12-2			WING 3 HORIZ. B.F. & TOP
B611	X	14	10-0	X		WING 3 VERT.
B412	X	5	9-8			WING 3 HORIZ. E.F.
B613	X	2	9-8			WING 3 HORIZ. E.F.
B414	X	3	4-7			BODY VERT. END @ WING 3
B515	X	10	15-10	X		WING 4 VERT.
B516	X	6	12-4			WING 4 HORIZ. F.F.
B617	X	8	11-6			WING 4 HORIZ. B.F. & TOP
B618	X	14	10-0	X		WING 4 VERT.
B419	X	5	9-8			WING 4 HORIZ. E.F.
B620	X	2	9-8			WING 4 HORIZ. E.F.
B421	X	4	4-8			BODY VERT. END @ WING 4

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



PILE LAYOUT

FOR PILE SPLICE DETAIL SEE SHEET 2.

B.F. DENOTES BACK FACE
E.F. DENOTES EACH FACE
F.F. DENOTES FRONT FACE

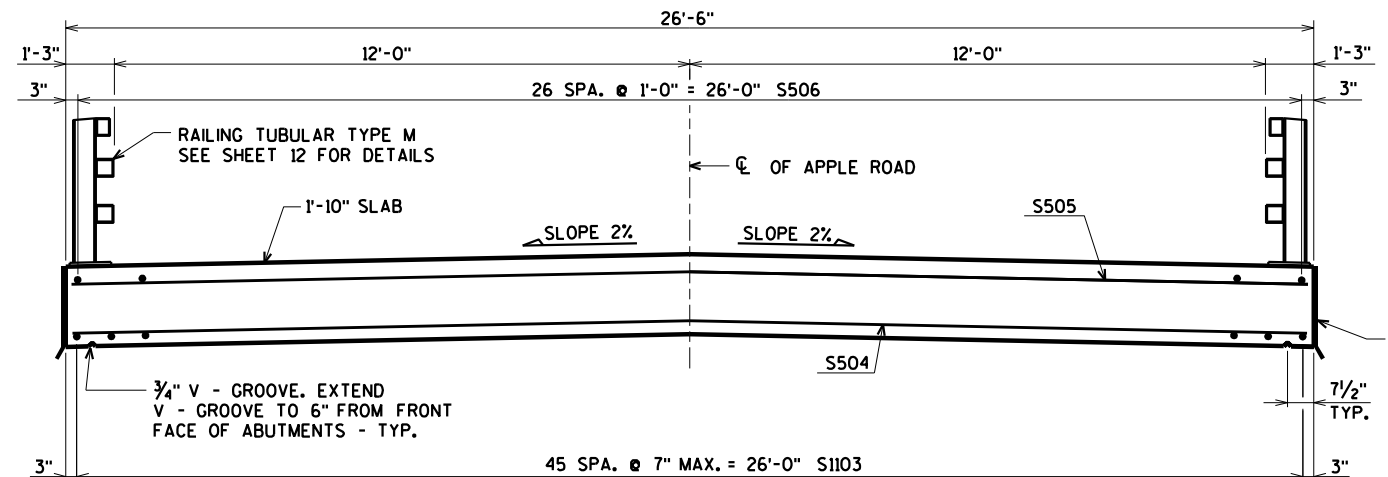
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-14-223			
DRAWN BY CLP		PLANS CK'D. ZSS	
EAST ABUTMENT DETAILS & BILL OF BARS			SHEET 9 OF 12

ORIGINAL PLANS PREPARED BY
AYRES 3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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8



TYPICAL SECTION THRU BRIDGE

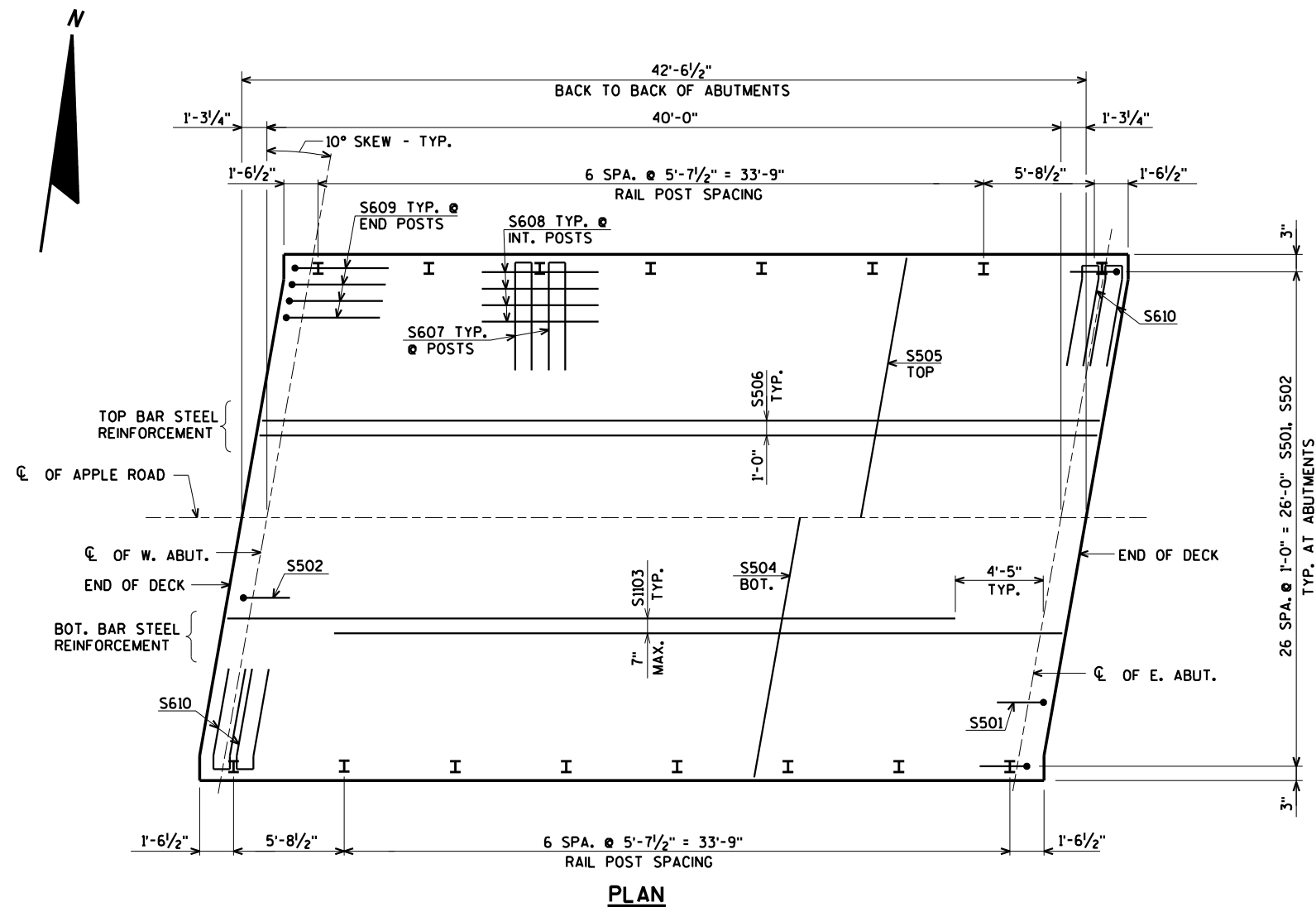
TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

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

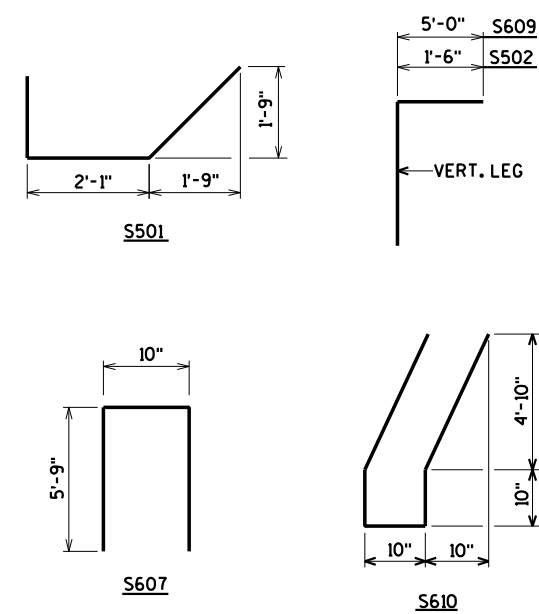
BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	14,900# COATED
							LOCATION
S501	X	54	6-3	X			SLAB @ ABUT.
S502	X	54	3-6	X			SLAB @ ABUT.
S1103	X	46	36-8				SLAB LONG. BOT.
S504	X	67	26-7				SLAB TRANS. BOT.
S505	X	43	26-7				SLAB TRANS. TOP
S506	X	27	42-2				SLAB LONG. TOP
S607	X	28	12-0	X			SLAB @ RAIL POSTS
S608	X	48	6-0				SLAB @ INT. RAIL POSTS
S609	X	16	6-0	X			SLAB @ END RAIL POSTS
S610	X	4	12-0	X			SLAB @ END RAIL POSTS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



PLAN



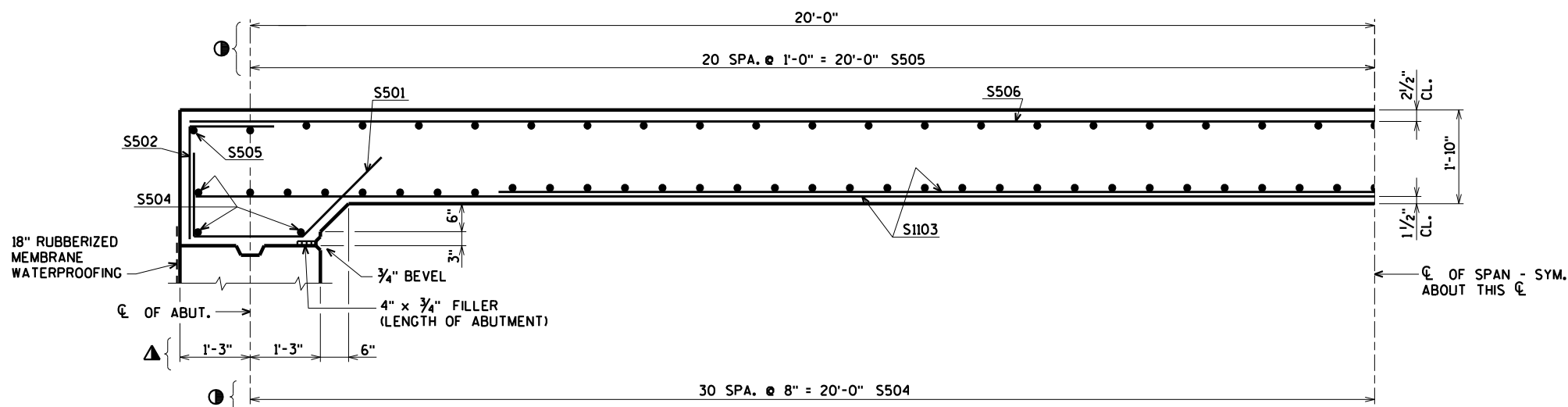
5/26/2021 PENTABLE:BRReou_shd_util.tbl

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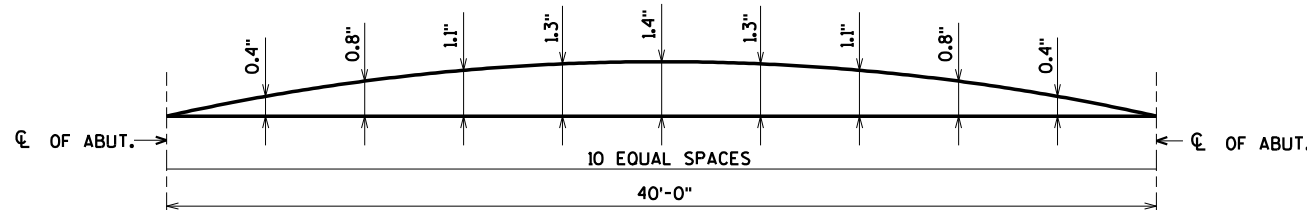
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-14-223			
DRAWN BY CLP		PLANS CK'D. ZSS	
SUPERSTRUCTURE			SHEET 10 OF 12

ORIGINAL PLANS PREPARED BY
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PART LONGITUDINAL SECTION

- ▲ DIMENSIONS MEASURED NORMAL TO CL OF SUBSTRUCTURE.
- DIMENSIONS MEASURED ALONG CL OF APPLE ROAD.



CAMBER DIAGRAM

CAMBER SPAN AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION & FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

SURVEY TOP OF SLAB ELEVATIONS

LOCATION	CL OF W. ABUT.	5/10 PTS.	CL OF E. ABUT.
N. EDGE OF SLAB			
CL OF STRUCTURE			
S. EDGE OF SLAB			

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF DECK ELEVATIONS AT THE CL OF ABUTMENTS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF SLAB AND CROWN OR CL. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

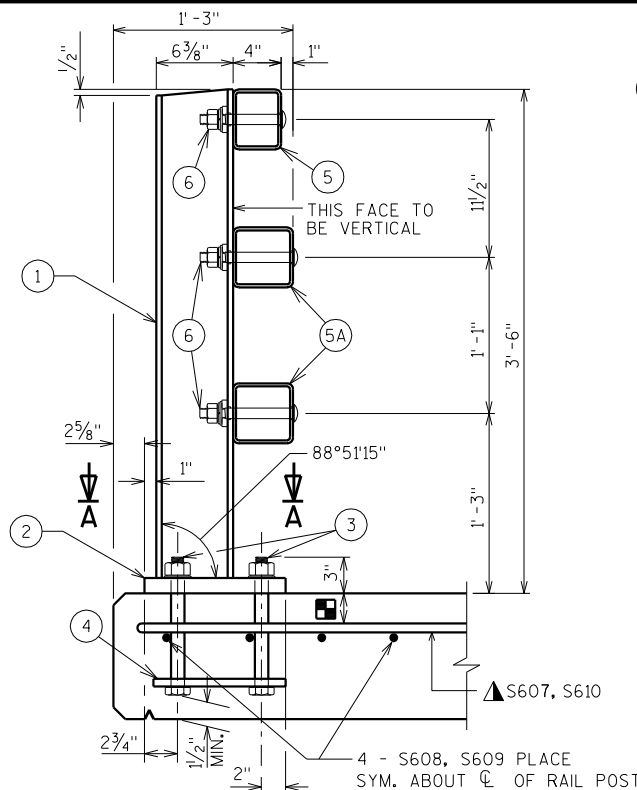
TOP OF DECK ELEVATIONS

LOCATION	CL OF W. ABUT.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	CL OF E. ABUT.
N. EDGE OF SLAB	875.72	875.63	875.55	875.47	875.38	875.30	875.21	875.13	875.04	874.96	874.88
CL OF STRUCTURE	876.03	875.95	875.86	875.78	875.70	875.61	875.53	875.44	875.36	875.27	875.19
S. EDGE OF SLAB	875.82	875.73	875.65	875.56	875.48	875.40	875.31	875.23	875.14	875.06	874.97

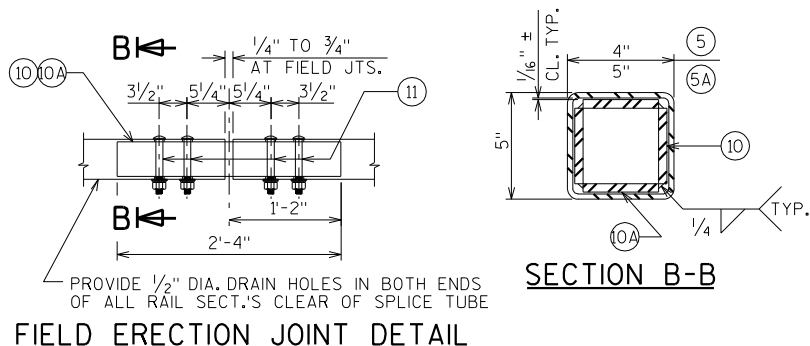
ELEVATIONS SHOWN ARE FINISHED DECK AND DO NOT INCLUDE ALLOWANCES OF DEAD LOAD DEFLECTION AND FUTURE CREEP.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-14-223			
DRAWN BY		CLP	PLANS CK'D. ZSS
SUPERSTRUCTURE DETAILS			SHEET 11 OF 12

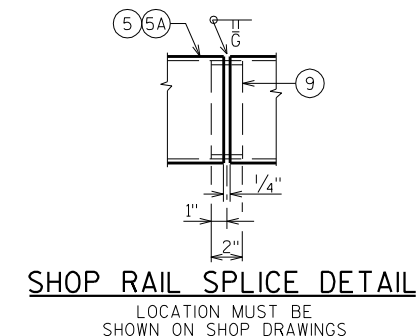
ORIGINAL PLANS PREPARED BY
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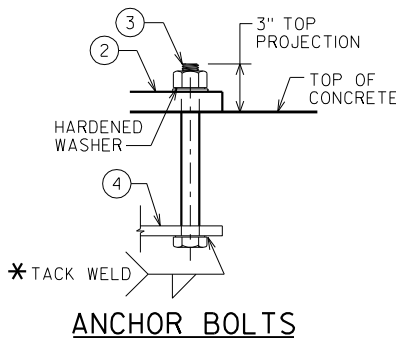
SECTION THRU RAILING ON DECK



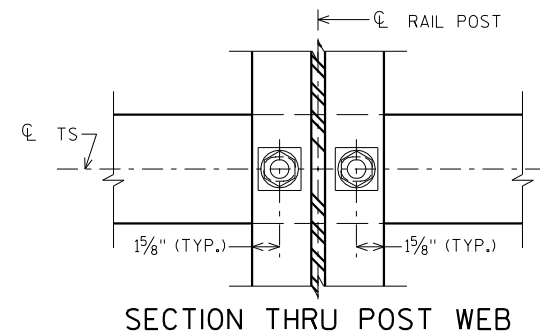
FIELD ERECTION JOINT DETAIL



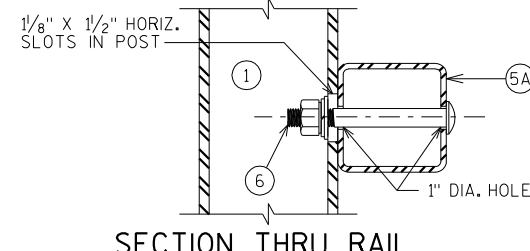
SHOP RAIL SPLICE DETAIL



ANCHOR BOLTS

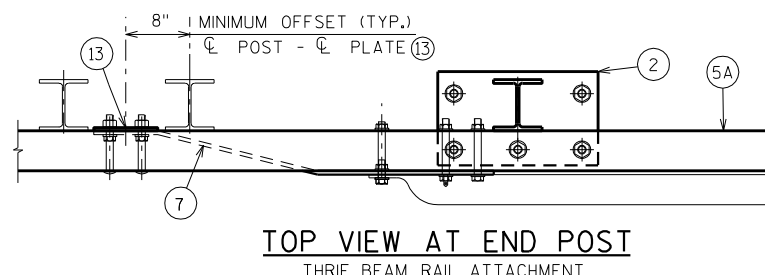


SECTION THRU POST WEB



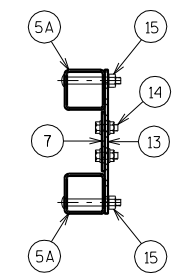
SECTION THRU RAIL

TYPICAL RAIL TO POST CONNECTIONS

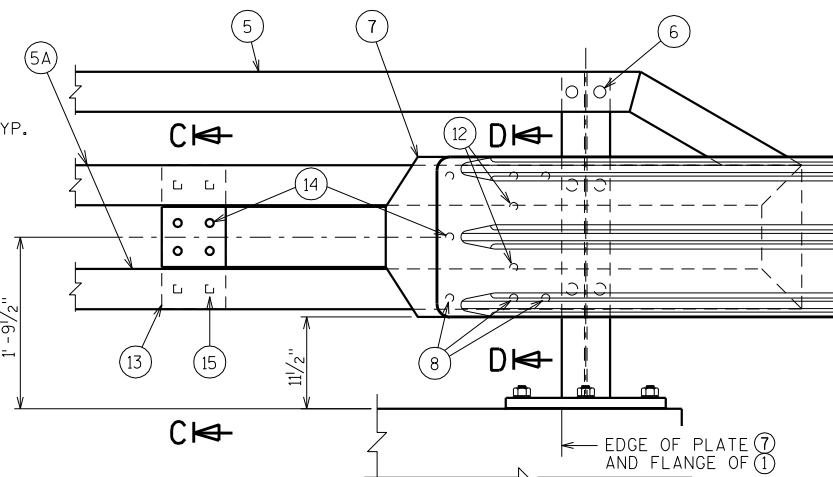


TOP VIEW AT END POST

THREE BEAM RAIL ATTACHMENT

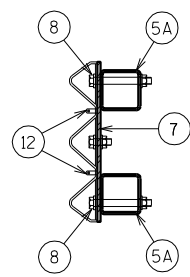


SECTION C-C

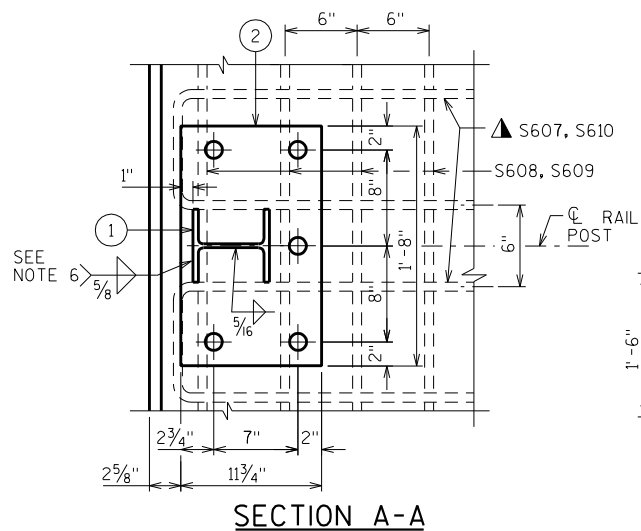


DETAIL AT END POST

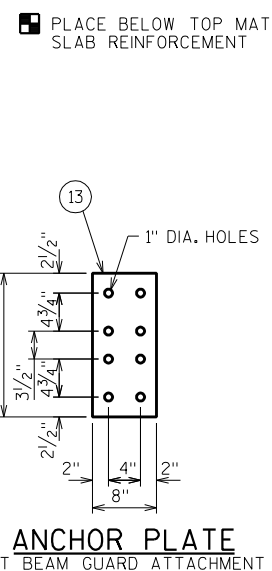
THREE BEAM RAIL ATTACHMENT



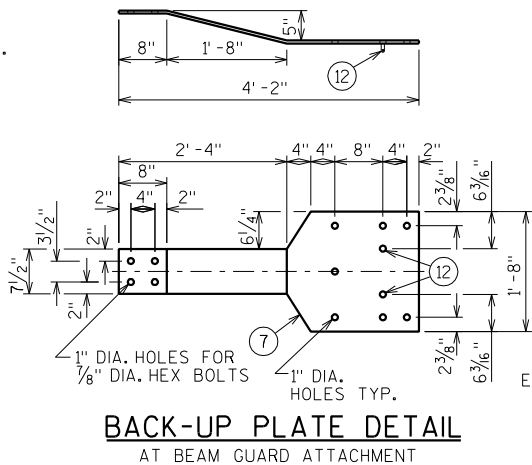
SECTION D-D



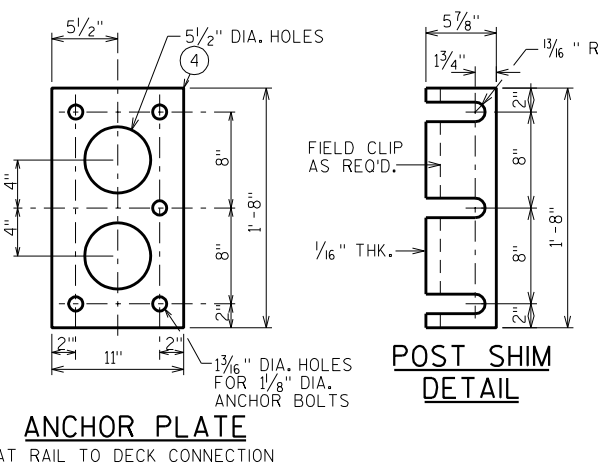
SECTION A-A



ANCHOR PLATE AT BEAM GUARD ATTACHMENT



BACK-UP PLATE DETAIL



ANCHOR PLATE AT RAIL TO DECK CONNECTION

LEGEND

- ① W6 x 25 WITH 1/8" X 1/2" HORIZ. 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 1/4" x 11 3/4" x 1'-8" WITH 1 7/16" DIA. OVERSIZED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN.
- ③ ASTM A449 - 1/8" 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. USE 1'-9" LONG IN ABUTMENT WINGS. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. USE 10 7/8" LONG AT ALL OTHER LOCATIONS. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTABILITY.)
- ④ 5/8" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1 3/16" DIA. HOLES FOR ANCHOR BOLTS NO. 3
- ⑤ TS 5 x 4 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
- ⑤A TS 5 x 5 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
- ⑥ 7/8" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/16" x 1 5/8" x 1 5/8" MIN. WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)
- ⑦ 1/2" THK. BACK-UP PLATE WITH 2 - 7/8" x 1/2" THREADED SHOP WELDED STUDS (NO. 12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THREE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.
- ⑧ 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR 7/8" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.
- ⑨ SPLICE SLEEVE FABRICATED FROM 1/4" PLATE. PROVIDE "SLIDING FIT".
- ⑩ 3/8" x 3 5/8" x 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
- ⑩A 3/8" x 2 5/8" x 2'-4" PLATE USED IN NO. 5, 3/8" x 3 5/8" x 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
- ⑪ 7/8" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 1 5/8" x 1 1/4" LONGIT. SLOTTED HOLES IN PLATE NO. 10A. AT FIELD JOINTS AND 1 1/8" x 2 1/4" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A. PROVIDE 1/8" DIA. ROUND HOLES IN TUBES NO. 5 AND NO. 5A.
- ⑫ 7/8" DIA. x 1/2" LONG THREADED SHOP WELDED STUDS (2 REQ'D).
- ⑬ 3/8" x 8" x 1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THREE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.
- ⑭ 7/8" DIA. x 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.).
- ⑮ 1" DIA. HOLES IN TUBES NO. 5A FOR 7/8" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.

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 1/8 TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE. RAILS SHALL BE SPLICED IN A PANEL OVER EXPANSION JOINTS.
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 SSPC SPECIFICATIONS.

■ 1/4" TO 3/4" AT ABUTMENTS.

▲ TIE TO TOP MAT OF STEEL.

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-14-223

DRAWN BY CLP PLANS CK'D. ZSS

TUBULAR STEEL RAILING TYPE 'M' SHEET 12 OF 12

ORIGINAL PLANS PREPARED BY
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8

APPLE ROAD COMPUTER EARTHWORK - NEW ALIGNMENT & MATCH-IN

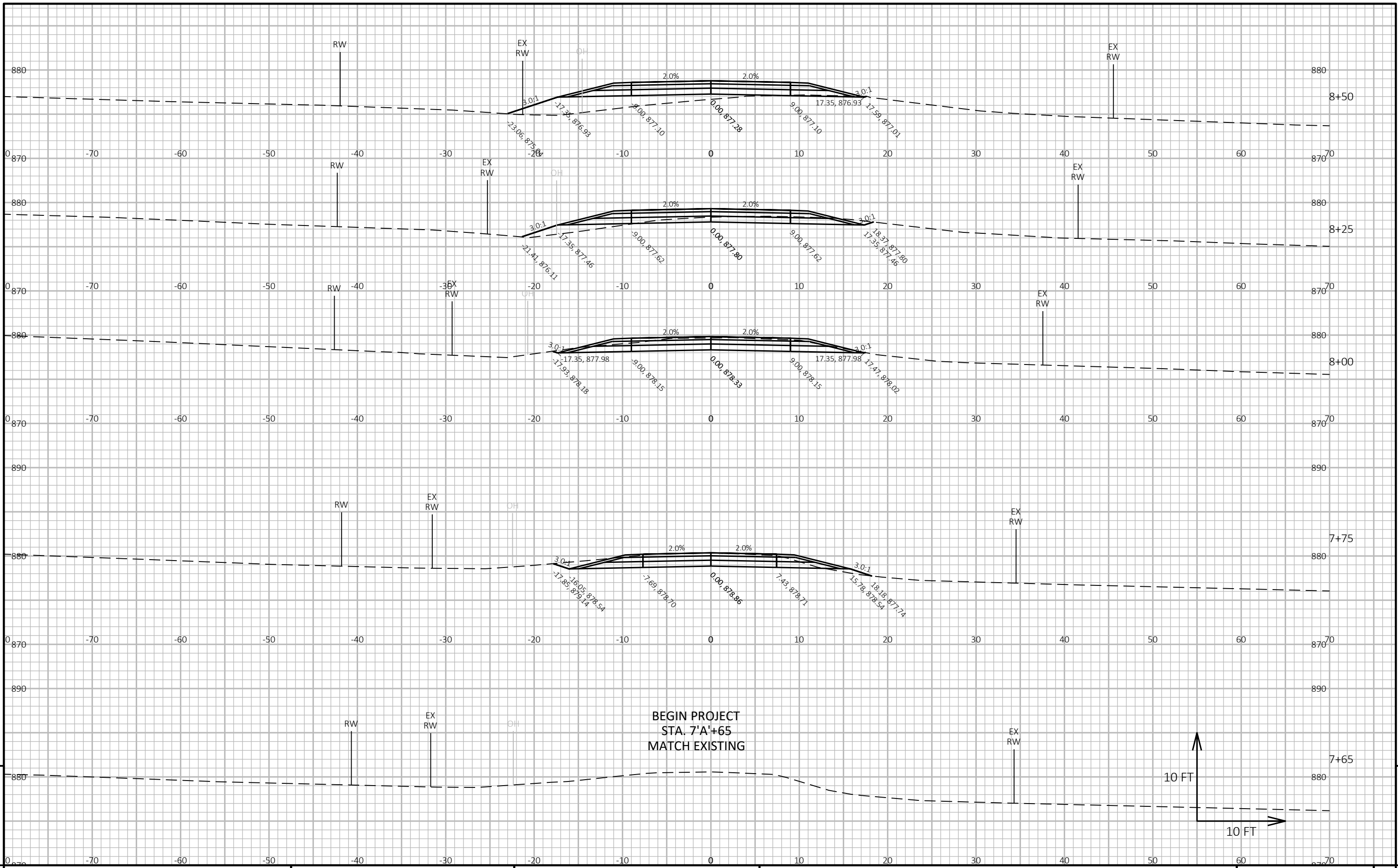
Station	Distance	Area (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.30	
7+65	--	0.0	0.0					
7+75	10	35.1	1.3	7	0	7	0	6
8+00	25	35.6	0.0	33	1	39	1	38
8+25	25	15.3	7.1	24	3	63	5	57
8+50	25	0.9	30.1	7	17	70	28	42
8+75	25	0.0	78.5	0	50	71	93	-22
9+00	25	0.0	123.6	0	94	71	215	-144
9+25	25	0.0	154.6	0	129	71	382	-312
9+50	25	0.0	168.4	0	150	71	577	-506
9+65	15	0.0	182.6	0	97	71	703	-633
9+78	13	0.0	182.6	0	88	71	818	-747
NEW BRIDGE	--	--	--	--	--	--	--	--
10+21	--	0.0	135.9	--	--	--	--	--
10+38	17	0.0	136.5	0	86	71	929	-858
10+50	12	0.0	99.5	0	52	71	997	-927
10+75	25	0.0	38.6	0	64	71	1080	-1010
11+00	25	0.0	7.8	0	21	71	1108	-1038
11+25	25	35.5	0.0	16	4	87	1113	-1026
11+50	25	54.0	0.0	41	0	129	1113	-984
11+75	25	57.1	0.0	51	0	180	1113	-933
12+00	25	45.3	0.0	47	0	227	1113	-886
12+10	10	0.0	0.0	8	0	236	1113	-877
				236	856			

APPLE ROAD COMPUTER EARTHWORK - EXISTING ROADWAY CUT

Station	Distance	Area (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.30	
9+10	--	20.6	0.0					
9+25	15	20.6	0.0	11	0	11	0	11
9+50	25	42.0	0.0	29	0	40	0	40
9+65	15	57.5	0.0	28	0	68	0	68
9+78	13	57.5	0.0	28	0	96	0	96
NEW BRIDGE	--	--	--	--	--	--	--	--
10+21	--	53.1	0.0	--	--	--	--	--
10+38	17	82.4	0.0	43	0	138	0	138
10+50	12	77.8	0.0	36	0	174	0	174
10+75	25	0.3	0.0	36	0	210	0	210
11+00	25	8.0	0.0	4	0	214	0	214
11+22	22	8.0	0.0	6	0	220	0	220
				220	0			

ASSUMED THIS CUT CANNOT HAPPEN UNTIL THE NEW ROADWAY IS OPEN TO TRAFFIC.

Note 1 - Cut	Cut includes existing asphalt pavement. Assumed to be reused as fill outside the 1:1 road core.
Note 2 - Fill	Volume needed to be filled.
Note 3 - Mass Ordinate	(Cut) - (Fill * 1.30)



PROJECT NO: 3810-00-71

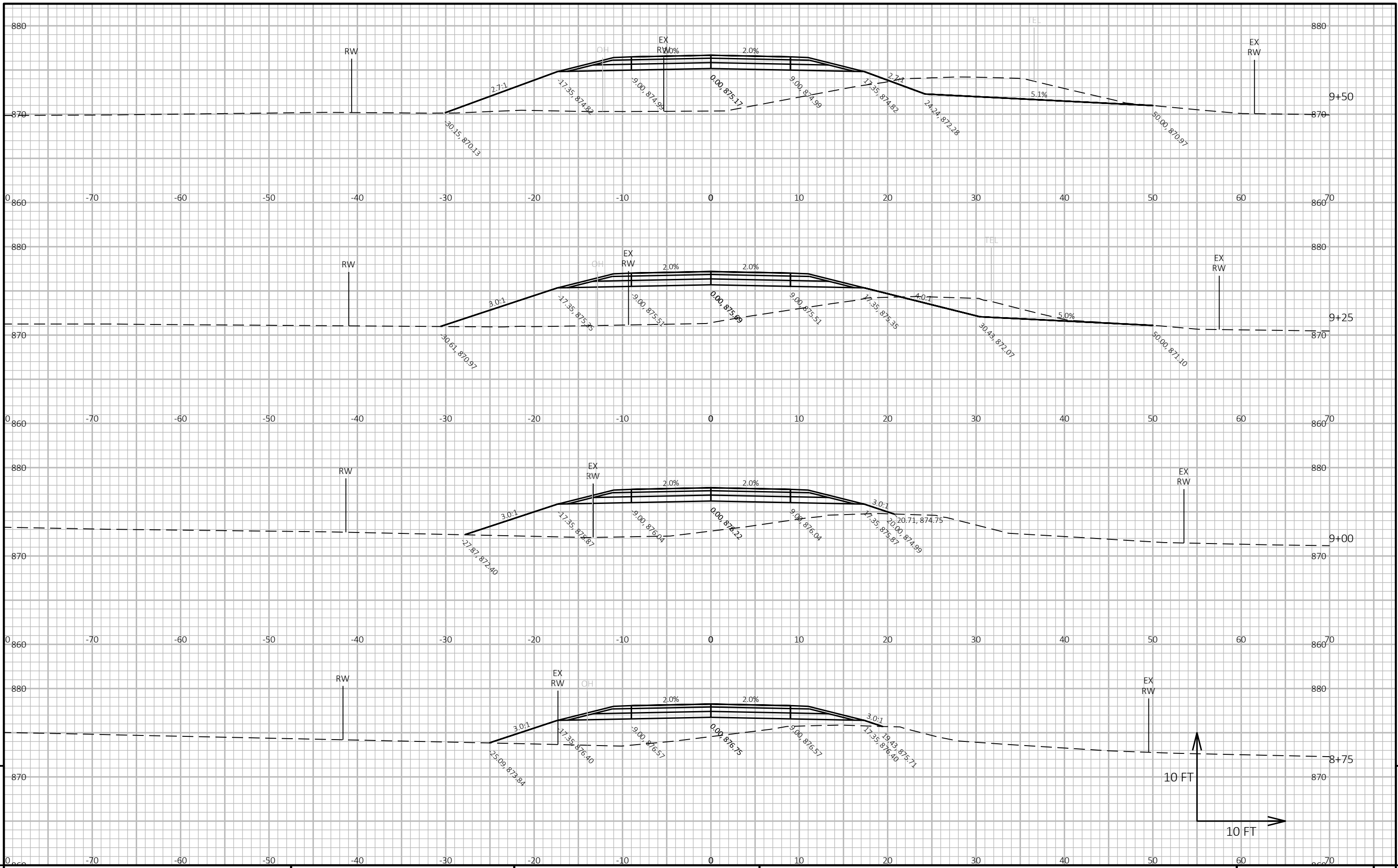
HWY: APPLE ROAD

COUNTY: DODGE

CROSS SECTIONS: MAINLINE

SHEET

E



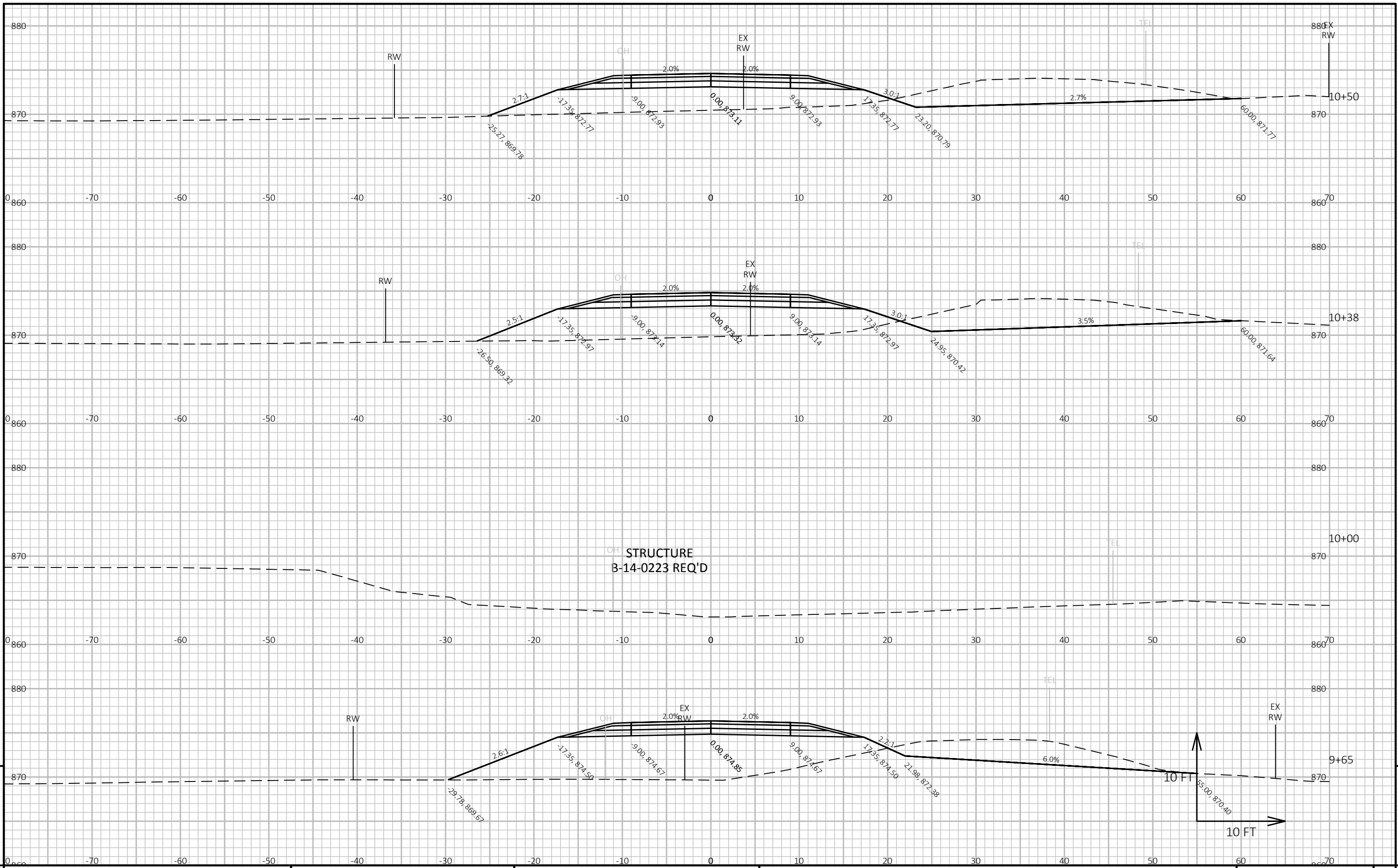
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PROJECT NO: 3810-00-71 HWY: APPLE ROAD COUNTY: DODGE CROSS SECTIONS: MAINLINE SHEET E

FILE NAME : I:\47\410809 DODGE, TWN EMMET, APPLE RD\C3D\DESIGN\CORRIDORS\CRDR-APPLE RD.DWG PLOT DATE : 5/27/2021 5:03 PM PLOT BY : ROSA, AUSTIN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - x_02



PROJECT NO: 3810-00-71

HWY: APPLE ROAD

COUNTY: DODGE

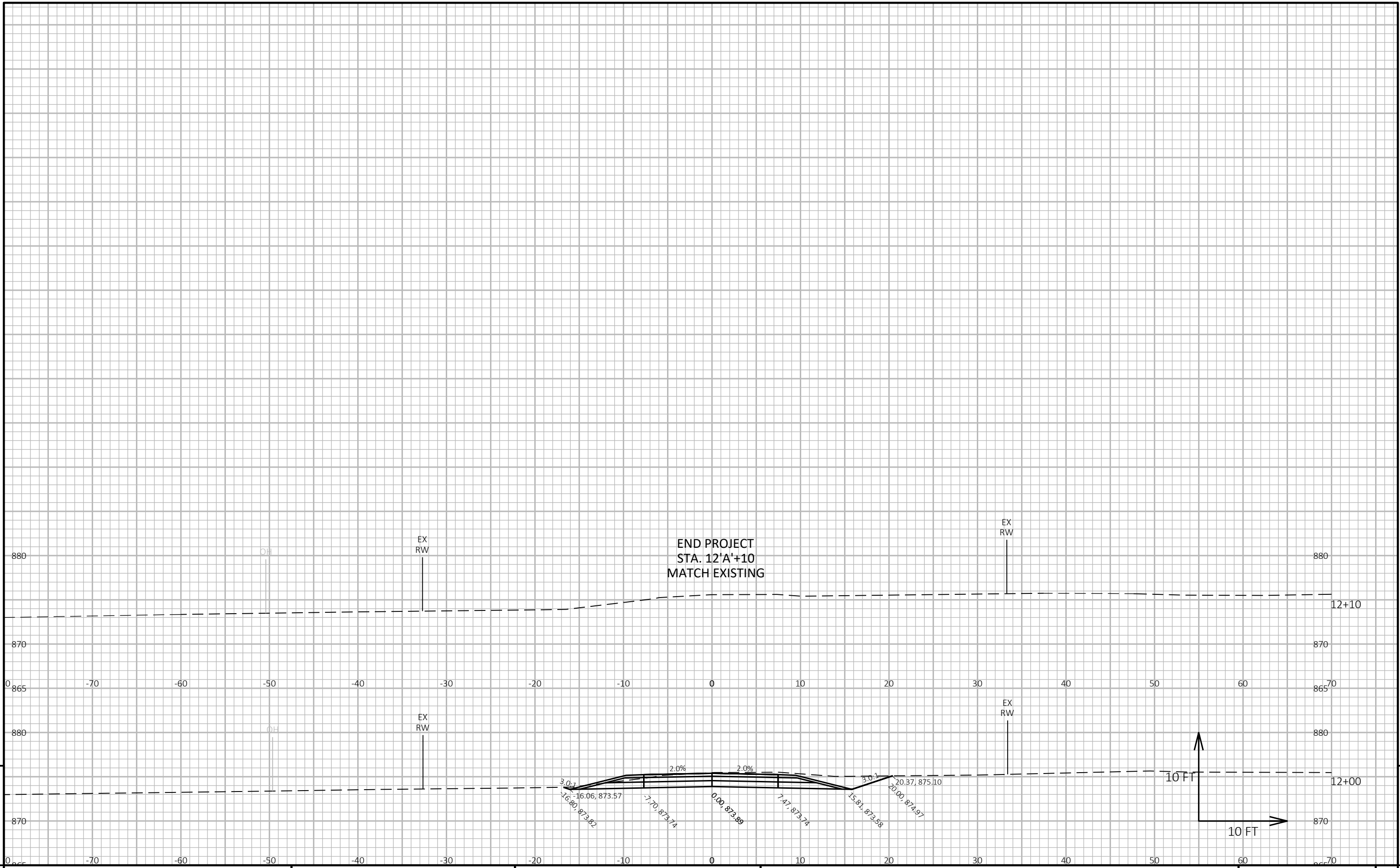
CROSS SECTIONS: MAINLINE

SHEET

E



PROJECT NO: 3810-00-71	HWY: APPLE ROAD	COUNTY: DODGE	CROSS SECTIONS: MAINLINE	SHEET E
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END PROJECT
STA. 12'A'+10
MATCH EXISTING

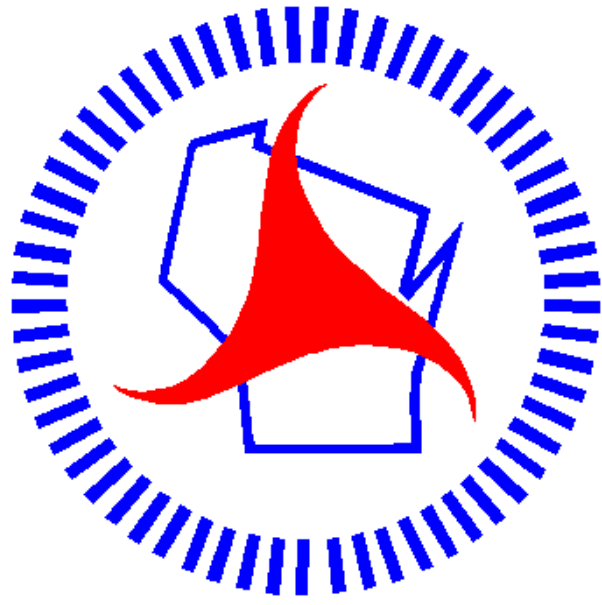
PROJECT NO: 3810-00-71	HWY: APPLE ROAD	COUNTY: DODGE	CROSS SECTIONS: MAINLINE	SHEET	E
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FILE NAME : I:\47\410809 DODGE, TWN EMMET, APPLE RD\C3D\DESIGN\CORRIDORS\CRDR-APPLE RD.DWG PLOT DATE : 5/27/2021 5:03 PM PLOT BY : ROSA, AUSTIN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

9

9

Notes



Wisconsin Department of Transportation

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