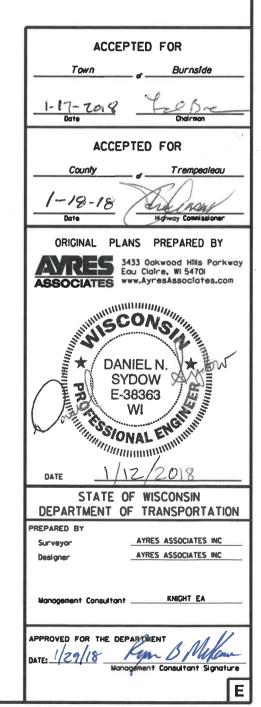
#### MAY 2018 ORDER OF SHEETS STATE OF WISCONSIN Section No. 1 DEPARTMENT OF TRANSPORTATION Typical Sections and Details (Includes Erosion Control Plans) Section No. Estimate of Quantities PLAN OF PROPOSED IMPROVEMENT Miscellaneous Quantities Right of Way Plat Plan and Profile BURNSIDE, LYGA VALLEY ROAD Standard Detail Drawings TRAVERSE VALLEY CR BRIDGE B610225 Computer Earthwork Data Cross Sections LOC STR REMPEALEAU TOTAL SHEETS = 48 TREMPEALEAU COUNTY COUNTY STATE PROJECT NUMBER 7277-00-70 STRUCTURE B-61-225 BUFFALO CO. TREMPEALEAU CO. T-23-N T-22-N LOCATION **DESIGN DESIGNATION** A.D.T. (2018) 180 A.D.T. (2038) 240 D.H.V. 20 50/50 5% DESIGN SPEED = 40 MPH **BEGIN PROJECT ESALS** = 36,500 STA. 18+50 CONVENTIONAL SYMBOLS Y = 444536.11 X = 805430.63 END PROJECT CORPORATE LIMITS 1////// PROFILE STA. 21+25 GRADE LINE PROPERTY LINE PL + 58-1 Y - 444777.15 ORIGINAL GROUND X - 805558.70 LOT LINE \_\_ROCK\_ MARSH OR ROCK PROFILE LIMITED HIGHWAY EASEMENT (To be noted as such) EXISTING RIGHT OF WAY \_ LABEL\_ \_ \_ SPECIAL DITCH PROPOSED OR NEW R/W LINE GRADE ELEVATION SLOPE INTERCEPT T-22-N T-21-N CULVERT (Profile View) REFERENCE LINE EXISTING CULVERT LITILITIES PROPOSED CULVERT OVERHEAD (Box or Pipe) R-10-W R-9-W ELECTRIC COMBUSTIBLE FLUIDS FIBER OPTIC LAYOUT SANITARY SEWER STORM SEWER HIGH VOLTAGE TELEPHONE WATER TOTAL NET LENGTH OF CENTERLINE = 0.052 MI. COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MARSH AREA UTILITY PEDESTAL



WOODED OR SHRUB AREA

POWER POLE

TELEPHONE POLE

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

THE DEPARTMENT OF TRANSPORTATION WILL FURNISH THE CONTRACTOR WITH A MONUMENT TO BE INSTALLED BY THE CONTRACTOR AS DIRECTED

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCLUSIVE OF THE ROADBED, SHALL BE FERTILIZED, SEEDED, AND MULCHED AS DIRECTED BY THE ENGINEER.

SEED MIXTURE NO. 20 AND SEEDING TEMPORARY SHALL BE USED IN THE PROJECT AND SHALL BE PLACED AS SHOWN IN THE PLANS AND/OR AS DIRECTED BY THE ENGINEER.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM (NAVD) 1988.

P.O. BOX 578

ASPHALTIC SURFACE SHALL BE CONSTRUCTED WITH A 13/4" UPPER LAYER AND A 21/4" LOWER LAYER. ASPHALTIC SURFACE SHALL USE 12.5 mm NOMINAL AGGREGATE SIZE.

#### UTILITIES

RIVERLAND ENERGY COOPERATIVE P.O. BOX 277 ARCADIA, WI 54612 ATTN: DOUG GERRITTS 608-323-3381 dgerritts@riverlandenergy.com

BY THE ENGINEER.

LT

21+13

DAIRYLAND POWER COOPERATIVE 3200 EAST AVENUE SOUTH P.O. BOX 817 LA CROSSE, WI 54602

STRUM. WI 54770 ATTN: BUCK WEBB 715-695-2691 bwebb@tccpro.net

TRI-COUNTY COMMUNICATIONS COOPERATIVE

ATTN: ROB MALY 608-518-2633 rob.maly@dairylandpower.com

\* \* DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS

# (800)242-8511 or

www.DiggersHotline.com

DESIGNER AYRES ASSOCIATES

3433 OAKWOOD HILLS PARKWAY EAU CLAIRE, WI 54701 ATTN: DANIEL N. SYDOW 715-834-3161 sydowd@AyresAssociates.com

TOWN OF BURNSIDE 715-985-2177

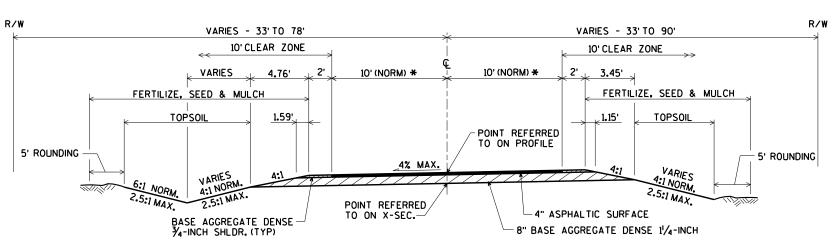
WISCONSIN DEPARTMENT OF NATURAL RESOURCES CONTACT:

KAREN KALVELAGE 3550 MORMON COULEE RD. LACROSSE, WI. 54601 608-785-9115 karen.kalvelage@wisconsin.gov

10' CLEAR ZONE 10' CLEAR ZONE 2'± 10'± 10'± OF LYGA VALLEY ROAD —VARIES VARIES-8"± EXISTING 6"± EXISTING AGGREGATE BASE ASPHALTIC SURFACE

TYPICAL EXISTING SECTION

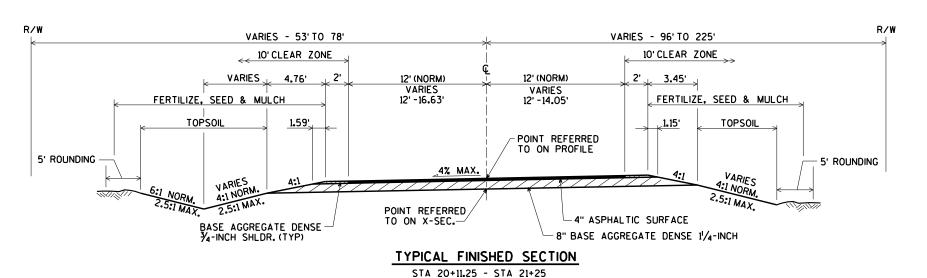
# LYGA VALLEY ROAD



#### TYPICAL FINISHED SECTION STA 16+00 - STA 19+66.75

\* THE ASPHALT SURFACE SHALL TAPER FROM 24 FT WIDE AT THE END OF THE BRIDGE TO 20 FT WIDE AT 50 FT FROM THE END OF THE BRIDGE.

SUPERELEVATION DIAGRAM



FRED BOE, CHAIRMAN W24152 STARWOOD LANE INDEPENDENCE, WI 54747

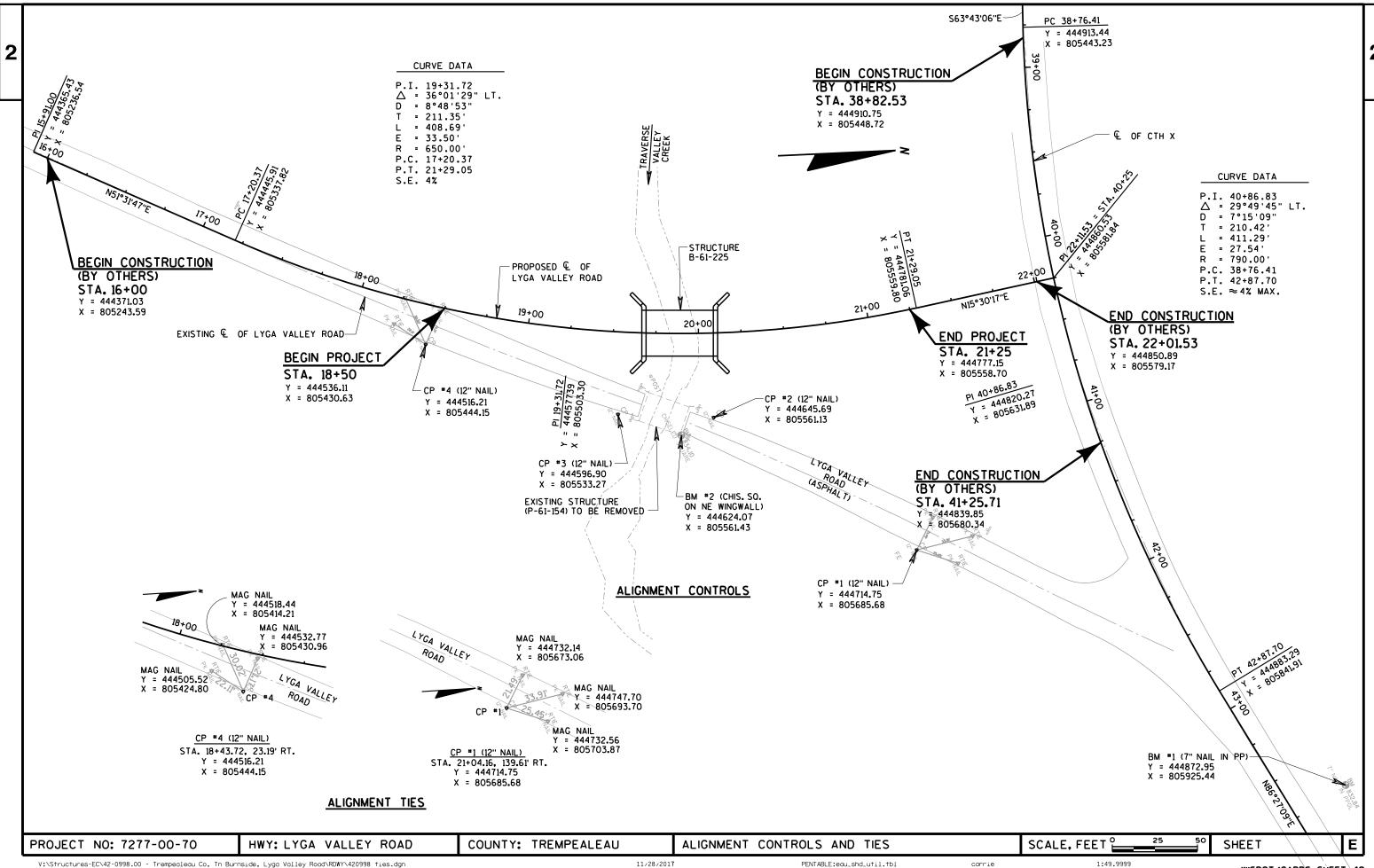
PROJECT NO: 7277-00-70

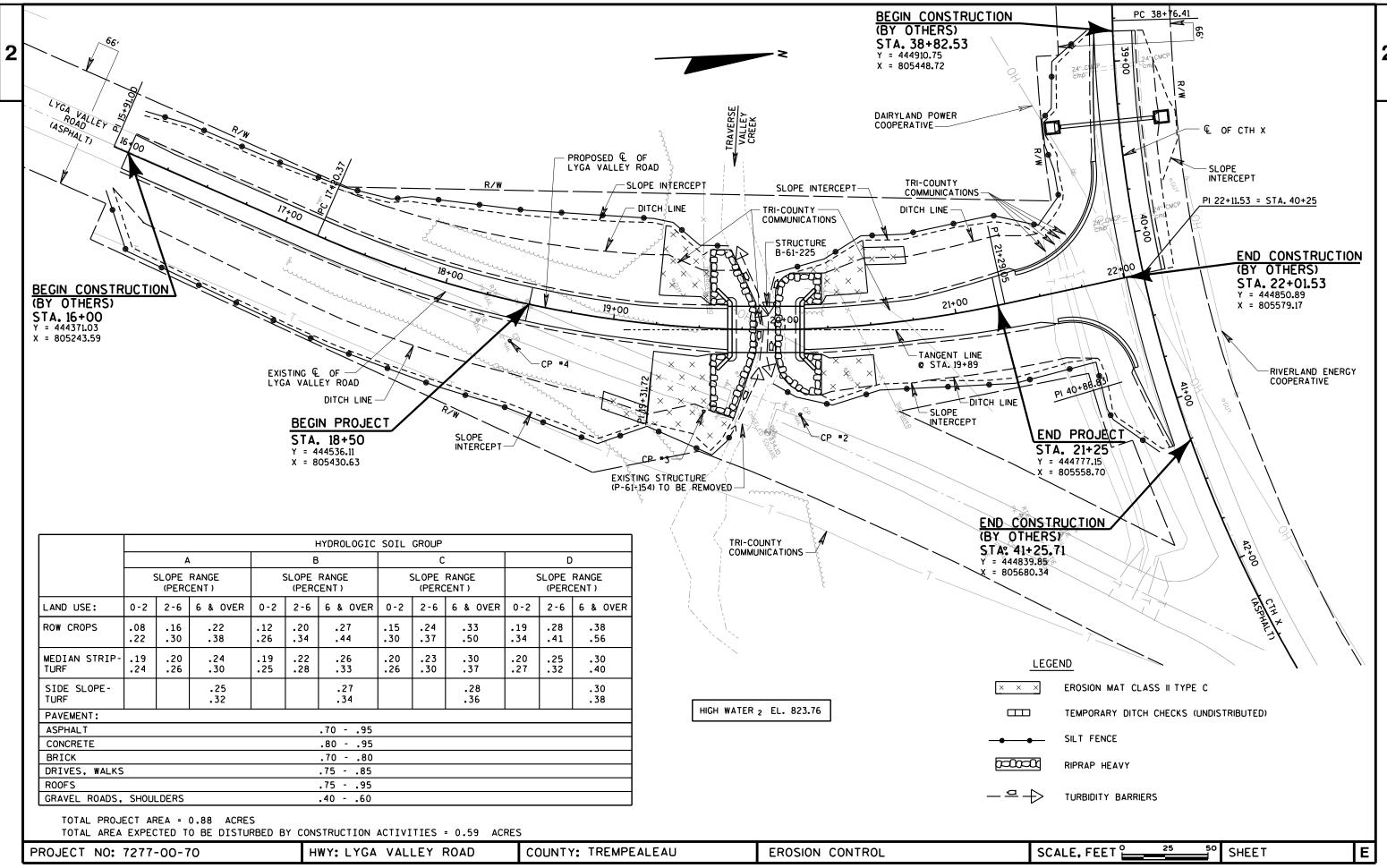
HWY: LYGA VALLEY ROAD

COUNTY: TREMPEALEAU

GENERAL NOTES

SHEET





					7277-00-70
Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	3.000	3.000
0004	201.0205	Grubbing	STA	3.000	3.000
0006	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 19+80	LS	1.000	1.000
8000	205.0100	Excavation Common	CY	864.000	864.000
0008	206.1000	Excavation for Structures Bridges (structure) 01. B-61-	LS	1.000	1.000
		0225			
0012	208.0100	Borrow	CY	1,130.000	1,130.000
0014	210.1500	Backfill Structure Type A	TON	310.000	310.000
0016	213.0100	Finishing Roadway (project) 01. 7277-00-70	EACH	1.000	1.000
0018	214.0100	Obliterating Old Road	STA	2.000	2.000
0020	305.0110	Base Aggregate Dense 3/4-Inch	TON	34.000	34.000
0022	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	371.000	371.000
0024	455.0605	Tack Coat	GAL	37.000	37.000
0026	465.0105	Asphaltic Surface	TON	139.000	139.000
0028	502.0100	Concrete Masonry Bridges	CY	147.000	147.000
0030	502.3200	Protective Surface Treatment	SY	160.000	160.000
0032	505.0400	Bar Steel Reinforcement HS Structures	LB	4,460.000	4,460.000
0034	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	17,440.000	17,440.000
0036	513.4061	Railing Tubular Type M (structure) 01. B-61-0225	LF	93.000	93.000
0038	516.0500	Rubberized Membrane Waterproofing	SY	18.000	18.000
0040	550.0500	Pile Points	EACH	10.000	10.000
0042	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	425.000	425.000
0044	606.0300	Riprap Heavy	CY	275.000	275.000
0046	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	150.000	150.000
0048	618.0100	Maintenance And Repair of Haul Roads (project) 01. 7277-00-70	EACH	1.000	1.000
0050	610 1000		EACH	1 000	1.000
0050	619.1000	Mobilization	EACH	1.000	1.000
0052	624.0100	Water	MGAL	12.000	12.000
0054	625.0100	Topsoil	SY	3,420.000	3,420.000
0056	627.0200	Mulching	SY	2,795.000	2,795.000
0058	628.1504	Silt Fence	LF	1,670.000	1,670.000
0060	628.1520	Silt Fence Maintenance	LF	3,340.000	3,340.000
0062	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0064	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0066	628.2027	Erosion Mat Class II Type C	SY	1,110.000	1,110.000
0068	628.6005	Turbidity Barriers	SY	200.000	200.000
0070	628.7504	Temporary Ditch Checks	LF	50.000	50.000
0072	629.0210	Fertilizer Type B	CWT	2.500	2.500
0074	630.0120	Seeding Mixture No. 20	LB	110.000	110.000
		3			

7277-00-70				
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Line	Item	Item Description	Unit	Total	Qty
0076	630.0200	Seeding Temporary	LB	80.000	80.000
0078	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0800	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0082	638.2602	Removing Signs Type II	EACH	4.000	4.000
0084	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0086	642.5001	Field Office Type B	EACH	1.000	1.000
8800	643.0420	Traffic Control Barricades Type III	DAY	1,260.000	1,260.000
0090	643.0705	Traffic Control Warning Lights Type A	DAY	1,800.000	1,800.000
0092	643.0900	Traffic Control Signs	DAY	360.000	360.000
0094	643.5000	Traffic Control	EACH	1.000	1.000
0096	645.0111	Geotextile Type DF Schedule A	SY	90.000	90.000
0098	645.0120	Geotextile Type HR	SY	515.000	515.000
0100	650.4500	Construction Staking Subgrade	LF	235.000	235.000
0102	650.5000	Construction Staking Base	LF	235.000	235.000
0104	650.6500	Construction Staking Structure Layout (structure) 01. B-61-0225	LS	1.000	1.000
0106	650.9910	Construction Staking Supplemental Control (project) 01. 7277-00-70	. LS	1.000	1.000
0108	650.9920	Construction Staking Slope Stakes	LF	235.000	235.000
0110	715.0502	Incentive Strength Concrete Structures	DOL	882.000	882.000

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#### EARTHWORK SUMMARY (CATEGORY 0010)

SALVAGED/

			**P** 205.0100	UNUSABLE PAVEMENT	AVAILABLE			MASS		**P**	
			EXCAVATION COMMON	MATERIAL	MATERIAL	UNEXPANDED	EXPANDED	ORDINATE		208.0100	
			CUT (1)	(2)	(4)	FILL (3)	FILL (5)	<u>+</u> (6)	WASTE	BORROW	
DIVISION	STATION TO STATION	LOCATION	CY	CY	CY	CY	CY	CY	CY	CY	COMMENTS:
1	16+00 TO 19+67	LYGA VALLEY ROAD	782	0	782	675	878	-96	0	96	
	20+11 TO 22+00	LYGA VALLEY ROAD	82	0	82	859	1,117	-1,035	0	1035	
	GRANDTOTAL		864	0	864	1,534	1,994	-1,130	0	1,130	

NOTES:

- 1) EXCAVATION COMMON IS THE SUM OF THE CUT COLUMN. ITEM NUMBER 205.0100
- 2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.

TOTAL EXCAVATION COMMON

- 3) DOES NOT INCLUDE UNUSABLE PAVEMENT EXCAVATION VOLUME.
- 4) AVAILABLE MATERIAL = CUT SALVAGED/UNUSABLE PAVEMENT MATERIAL
- 5) EXPANDED FILL FACTOR = 1.30

EXPANDED FILL = UNEXPANDED FILL \* FILL FACTOR

864 CY

- 6) THE MASS ORDINATE ± QTY CALCUTATED FOR THE DIVISION.
  PLUS (+) QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION.
  MINUS (-) QUANTITY INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.
  - \*\*P\*\* PAY PLAN QUANTITY

#### CLEARING AND GRUBBING (CATEGORY 0010)

		201.0105 CLEARING	GRUBBING
STATION TO STATION	LOCATION	STA	STA
Sta. 18+50 to Sta. 21+25	LYGA VALLEY ROAD	3	3

LOCATION	EACH
PROJECT 7277-00-70	1

213.0100 FINISHING ROADWAY (CATEGORY 0010)

#### 214.0100 OBLITERATING OLD ROAD (CATEGORY 0010)

TOTAL BORROW 1,130 CY

STATION TO	STATION	LOCATION	STA
Sta. 19+90	to Sta. 22+00	LYGA VALLEY ROAD	2

#### BASE AGGREGATE DENSE (CATEGORY 0010)

					305.0110 3/4-INCH
STAT	ION TO	STATION		LOCATION	TON
Sta.	18+05	to Sta.	19+67	LYGA VALLEY ROAI	) 17
Sta.	20+11	to Sta.	21+25	LYGA VALLEY ROAI	17
TOTA	LS				34

## 3

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#### BASE AGGREGATE DENSE (CATEGORY 0010)

STATION TO STATION	LOCATION	305.0120 1 1/4-INCH TON
Sta. 18+05 to Sta. 19+67 Sta. 20+11 to Sta. 21+25	LYGA VALLEY ROAD LYGA VALLEY ROAD	175 196
TOTALS		371

#### PAVING QUANTITIES (CATEGORY 0010)

		455.0605	
STATION TO STATION	LOCATION	GAL	ASPHALTIC SURFACE TON
Sta. 18+05 to Sta. 19+67 Sta. 20+11 to Sta. 21+25		17 20	64 75
TOTALS		37	139

## 618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS 7277-00-70 (CATEGORY 0030)

LOCATION	EACH
PROJECT 7277-00-70	1

#### 619.1000 MOBILIZATION

LOCATION	EACH			
	7277-00-70 7277-00-70	•	,	0.4
TOTAL				1

#### WATER (CATEGORY 0010)

		624.0100 WATER
TYPE	LOCATION	MGAL
COMPACTION DUST CONTROL	PROJECT PROJECT	6 6
TOTALS		12

#### SALVAGED TOPSOIL, MULCHING, FERTILIZER, SEED & TEMPORARY SEED (CATEGORY 0010)

		625.0100	627.0200	629.0210 FERTILIZER	630.0120 SEEDING	630.0200 SEEDING
		TOPSOIL	MULCHING	TYPE B	NO. 20	TEMPORARY
STATION TO STATION	LOCATION	SY	SY	CWT	LB	LB
Sta. 18+50 to Sta. 19+67 Sta. 20+11 to Sta. 21+25	LYGA VALLEY ROAD LYGA VALLEY ROAD	1,510 840	1,020 675	1.8	76	46
Undistributed				0.1	10	10
OBLITERATE OLD ROADWAY (Pro	ject)	1,070	1,100	0.6	24	24
TOTALS		3,420	2,795	2.5	110	80

#### SILT FENCE & SILT FENCE MAINTENANCE (CATEGORY 0010)

STATION TO STATION	LOCATION	628.1504 LF	628.1520 MAINTENANCE LF
Sta. 16+00 to Sta. 19+66 Sta. 16+00 to Sta. 19+72 Sta. 19+86 to Sta. 22+03 Sta. 20+00 to Sta. 22+10 Undistributed	LYGA VALLEY ROAD, LT. LYGA VALLEY ROAD, RT. LYGA VALLEY ROAD, RT. LYGA VALLEY ROAD, LT.	355 425 265 290 335	710 850 530 580 670
TOTALS		1,670	3,340

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#### 628.2027 EROSION MAT CLASS II TYPE C (CATEGORY 0010)

STATION TO S	STATION	LOCATION	SY
Sta. 19+25 t Sta. 20+20 t	co Sta. 19+56 co Sta. 19+58 co Sta. 20+50 co Sta. 20+50	LYGA VALLEY ROAD, LT. LYGA VALLEY ROAD, RT. LYGA VALLEY ROAD, RT. LYGA VALLEY ROAD, LT.	180 395 135 175 225
TOTALS			1,110

#### MOBILIZATIONS EROSION CONTROL & EMERGENCY EROSION CONTROL (CATEGORY 0010)

	628.1905	628.1910
	MOBILIZATIONS	MOBILIZATIONS EMERGENCY
	EROSION CONTROL	EROSION CONTROL
LOCATION	EACH	EACH
PROJECT 7277-00-70	4	2

#### 628.6005 TURBIDITY BARRIER (CATEGORY 0010)

LOCATION	SY
SOUTH ABUTMENT NORTH ABUTMENT UNDISTRIBUTED	100 60 40
TOTALS	200

#### 628.7504 TEMPORARY DITCH CHECKS (CATEGORY 0010)

LOCATION	LF
	_
UNDISTRIBUTED	50

#### 634.0612 WOOD POSTS 4X6 INCH X 12 FT (CATEGORY 0010)

STAT	ION		L	OCATIO	N		EACH
							_
Sta.	19+66	LYGA	VALLEY	ROAD,	LT	(W5-52L)	1
Sta.	19+67	LYGA	VALLEY	ROAD,	RT	(W5-52R)	1
Sta.	20+12	LYGA	VALLEY	ROAD,	LT	(W5-52R)	1
Sta.	20+11	LYGA	VALLEY	ROAD,	RT	(W5-52L)	1

#### 637.2230 SIGNS TYPE II REFLECTIVE F (CATEGORY 0010)

STATION	LOCATION	DESCRIPTION	SF
Sta. 19+66	LYGA VALLEY ROAD, LT.	W5-52L (OBJECT MARKER)	3
Sta. 19+67	LYGA VALLEY ROAD, RT.	W5-52R (OBJECT MARKER)	3
Sta. 20+12	LYGA VALLEY ROAD, LT.	W5-52R (OBJECT MARKER)	3
Sta. 20+11	LYGA VALLEY ROAD, RT.	W5-52L (OBJECT MARKER)	3
TOTA T			1.0

#### REMOVING (CATEGORY 0010)

				638.3000 REMOVING SMALL SIGN SUPPORTS
STATION	LOCATION	DESCRIPTION	EACH	EACH
Sta. 19+63	LYGA VALLEY ROAD, RT.	OBJECT MARKER	1	1
Sta. 19+66	LYGA VALLEY ROAD, RT.	OBJECT MARKER	1	1
Sta. 19+94	LYGA VALLEY ROAD, RT.	OBJECT MARKER	1	1
Sta. 20+00	LYGA VALLEY ROAD, RT.	OBJECT MARKER	1	1
TOTAL			4	4

#### 642.5001 FIELD OFFICE TYPE B (CATEGORY 0010)

LOCATION	EAC
PROJECT 7277-00-70	1
TOTAL	1

#### 643.0900 TRAFFIC CONTROL SIGNS (CATEGORY 0010)

LOCATION	DAYS
PROJECT 7277-00-70	360
TOTAL	360

#### 643.0420 TRAFFIC CONTROL BARRICADES TYPE III (CATEGORY 0010)

LOCATION	DAYS
PROJECT 7277-00-70	1260
TOTAL	1260

#### 643.5000 TRAFFIC CONTROL (CATEGORY 0010)

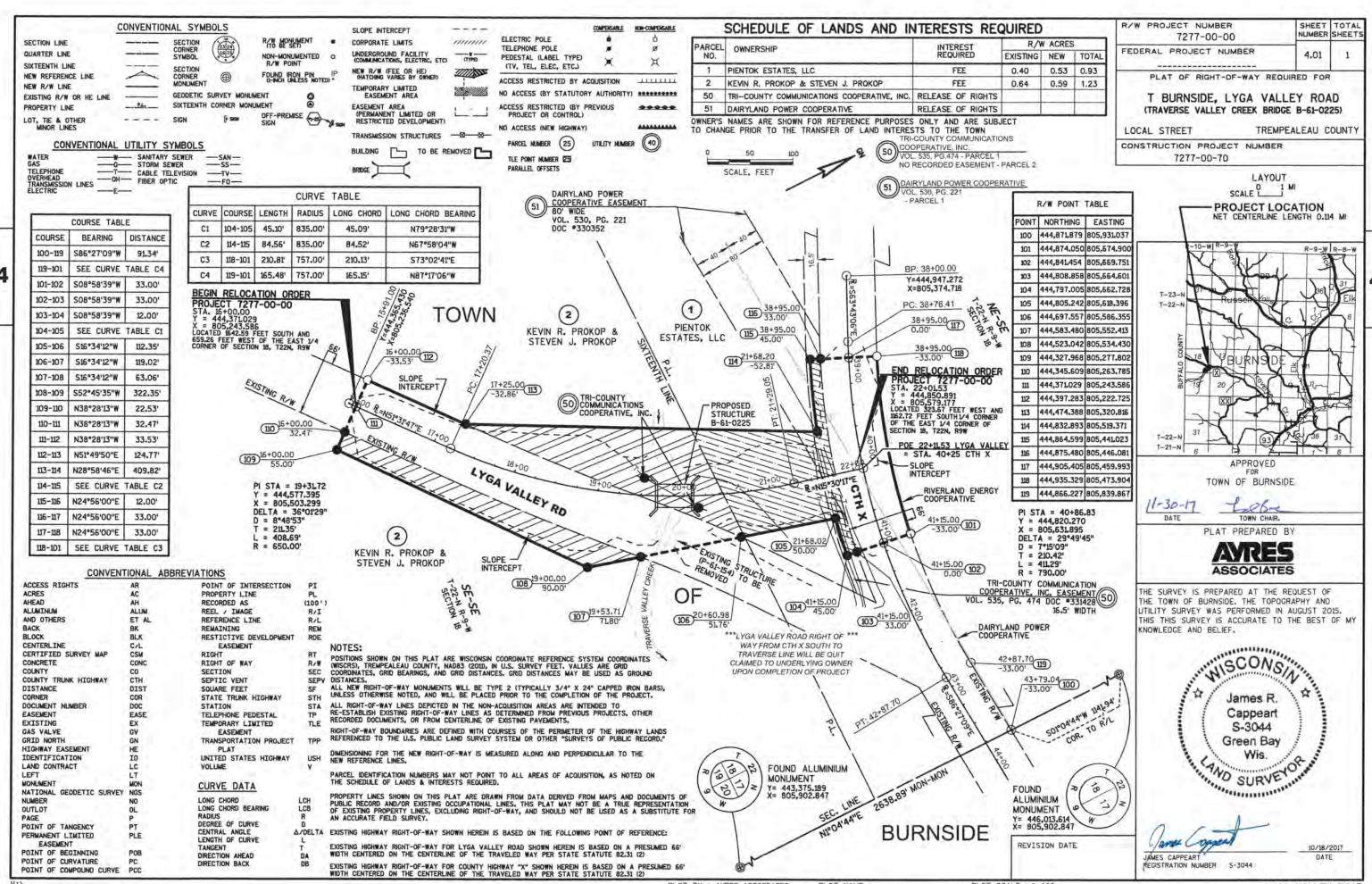
LOCATION	EACH
PROJECT 7277-00-70	1
TOTAL	1

#### 643.0705 TRAFFIC CONTROL LIGHTS TYPE A (CATEGORY 0010)

LOCATION	DAYS
PROJECT 7277-00-70	1800
TOTAL	1800

#### CONSTRUCTION STAKING

			650.4500	650.5000	STRUCTURE	SUPPLEMENTARY	SLOPE
			SUBGRADE	BASE	LAYOUT	CONTROL	STAKES
CATEGOR	RY LOCATION		LF	LF	LS	LS	LF
0010	Sta. 18+50 to Sta. 21+25	LYGA VALLEY ROAD	235	235		1	235
0020	B-61-225	LYGA VALLEY ROAD			1		
TOTALS			235	235	1	1	235

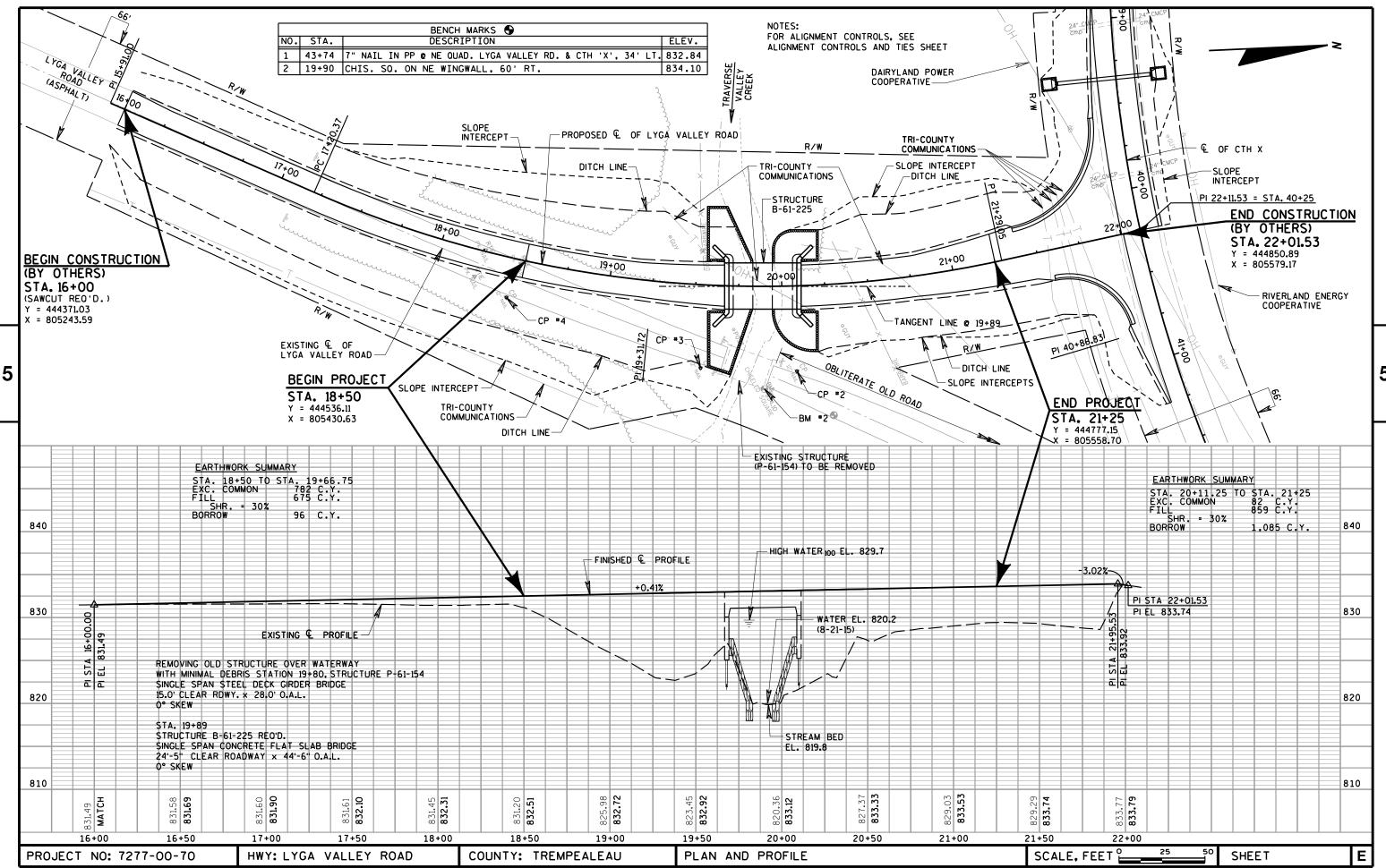


APPRAISAL PLAT DATE : 03/01/2017

PLOT BY : AYRES ASSOCIATES

PLOT NAME : PLOT SCALE : 1:100

LYGA VALLEY ROAD 7277-00-00



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## Standard Detail Drawing List

08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	0.2
08E11-02	TURBI DI TY BARRI ER
12A03-10	NAME PLATE (STRUCTURES)
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

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#### **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.

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



WHEN ALTERING THE DIRECTION OF FLOW



#### **PLAN VIEW**



#### FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

**EROSION BALES FOR SHEET FLOW** 

#### TYPICAL INSTALLATIONS OF **EROSION BALES / TEMPORARY** DITCH CHECKS

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 /S/ Beth Connestro
CHIEF ROADWAY DEVELOPMENT ENGINEER

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## TYPICAL APPLICATION OF SILT FENCE

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## 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.

- $\bigcirc$  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 11/8" X 11/8" OF OAK OR HICKORY.
- 4) SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- (5) CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



TRENCH DETAIL



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05 /S/ Beth Cannestra

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

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#### **GENERAL NOTES**

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

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

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





SECTION C-C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

#### TURBIDITY BARRIER

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 /S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER  $\infty$ 

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#### TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION MULTI-UNIT STRUCTURES

#### **GENERAL NOTES**

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

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

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



SPREAD OPEN SO THE TOP OF LUG IS 11/4" WIDE

SECTION A-A

ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

#### NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

|--|

3/26/IO /S/ SCOT BECKET

CHIEF STRUCTURAL DEVELOPMENT ENGINEER

D.D. 12 A

3-10



### 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

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

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

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

R11-2 SHALL BE 48" X 30". R11-3, R11-4 AND R10-61 SHALL BE 60" X 30". M4-9 SHALL BE 30" X 24". M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.) M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.) M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.) 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
- THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.
- FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.
- FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.
- FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.
- 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.
- "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

#### BARRICADES AND SIGNS FOR MAINLINE CLOSURES

2

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STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

/S/ Peter Amakobe Atepe

STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER



TUBULAR STEEL POSTS

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

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

#### URBAN AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST **EMBEDMENT DEPTH** 

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

4" X 6" WOOD POST

POST SPACING REQUIREM	POST SPACING REQUIREMENTS		
L	E	WOOD POSTS REQUIRED	
48" OR LESS AND LESS THAN 20 SO.FT.	-	1	
LESS THAN 60"	12"	2	٤
60" TO 120"	L/5	2	
GREATER THAN 120" LESS THAN 168"	12"	3	
168" AND GREATER	12"	4	

SEE NOTE (3)

RURAL AREA

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

-11

D D 15 D  $\infty$ 

6

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- 11/2" DIAMETER HOLES

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

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

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

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 1/6" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

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

WASHERS (ALL POSTS) -

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

1-1/4" O.D. X 3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

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

> ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017 /S/ Andrew Heidtke DATE WORK ZONE ENGINEER FHWA

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38-2b

## urban area

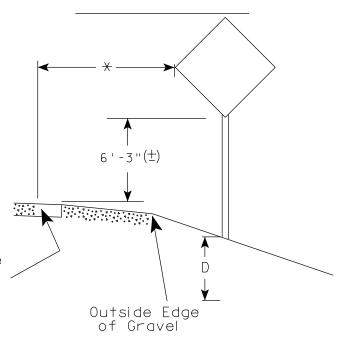
2' Min - 4' Max (See Note 6)

\*\* Curb Flowline

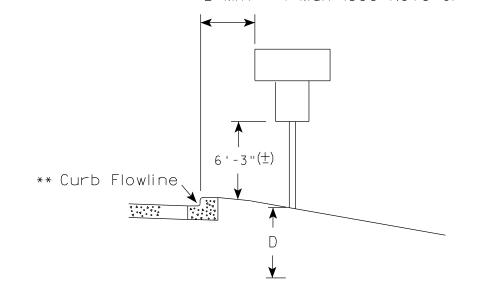
D

White Edgeline Location

RURAL AREA (See Note 2)



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



White Edgeline
Location

Outside Edge
of Gravel

\*\* 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

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.

PLOT BY : msc i9h

#### GENERAL NOTES

- 1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
- 2. If signs are mounted on barrier wall, see A4-10 sign plate.
- 3. For expressways and freeways, mounting height is 7'- 3"  $(\pm)$  or 6'-3"  $(\pm)$  depending upon existence of a sub-sign.
- 4. Minimum mounting height for J assemblies (A2-1S) is 7'-3'' ( $\pm$ ) or 6'-3'' ( $\pm$ ) per urban or rural detail respectively.
- 5. Minimum mounting height for signs mounted on traffic signal poles is  $5'-3''(\pm)$ .
- 6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
- 7. The  $(\pm)$  tolerance for mounting height is 3 inches.
- 8. Folding signs shall be mounted at a height of 5'-3'' ( $\pm$ ) or as directd by the Engineer.
- 9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

#### POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

ED Matther R Rauch

For State Traffic Engineer

DATE <u>7/23/15</u>

SHEET NO:

PROJECT NO: 7277-00-70 HWY: LYGA VALLEY ROAD

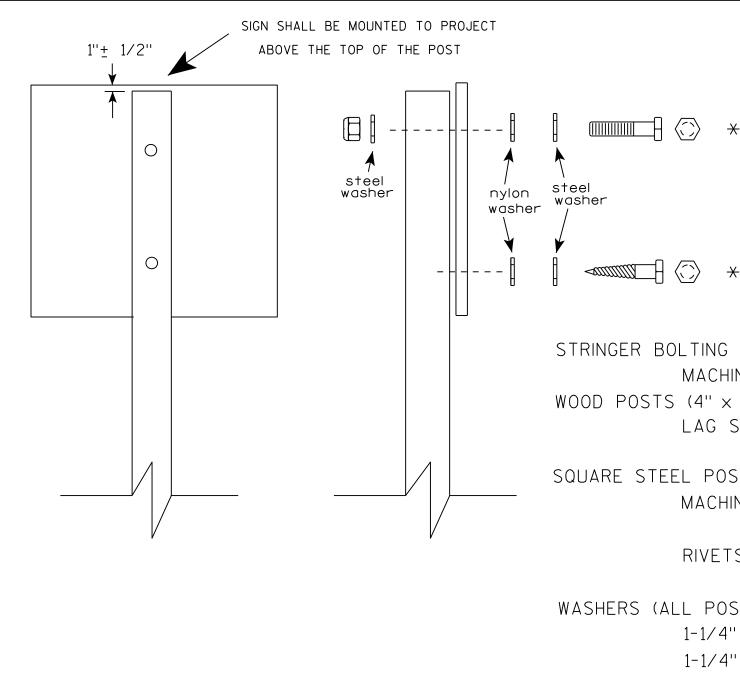
COUNTY: TREMPEALEAU

PLOT DATE: 23-JUL-2015 15:21

PLOT NAME :

PLOT SCALE: 99.237937:1.000000

PLATE NO. <u>A4-3.20</u>



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 -  $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts

WOOD POSTS  $(4" \times 4" \text{ or } 4" \times 6")$ 

LAG SCREWS -  $\frac{3}{8}$ " 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 - 3/2 " (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  $\frac{3}{8}$ " 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.

PLOT DATE . 11-416-2016 11.35

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew K For State Traffic Engineer

SHEET NO:

DATE 8/11/16

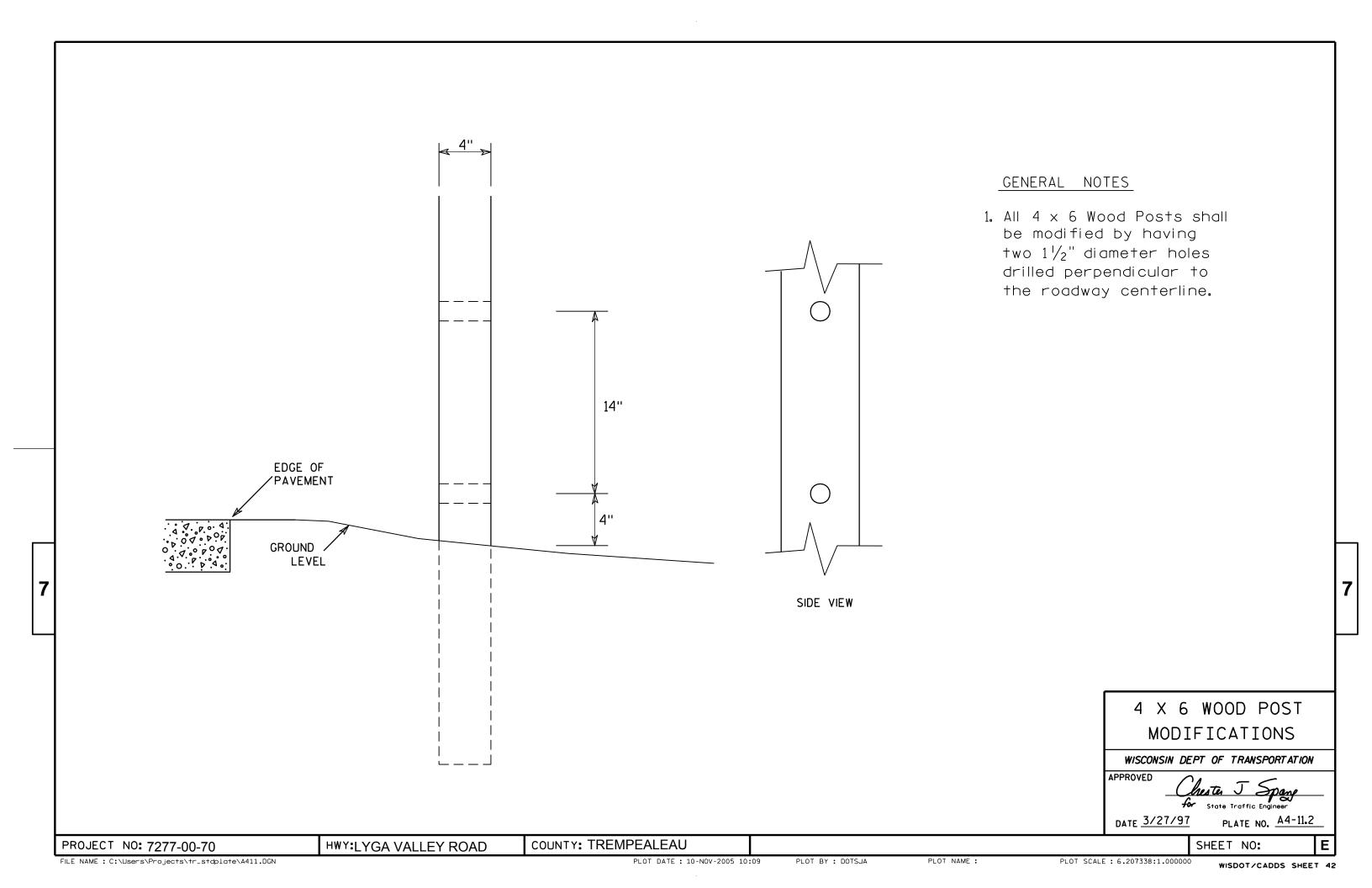
PLATE NO. \_\_A4-8.8

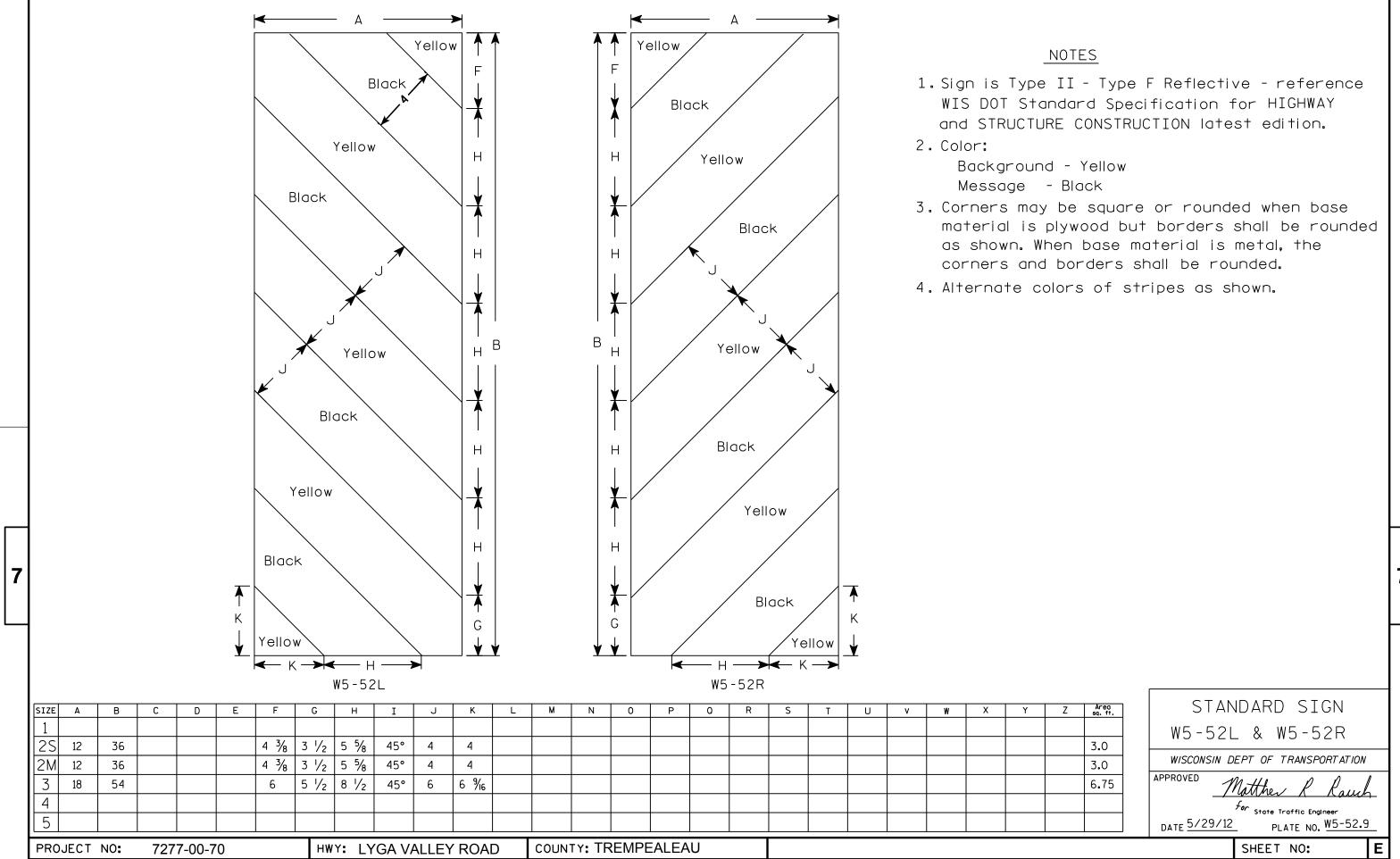
PROJECT NO: 7277-00-70

HWY: LYGA VALLEY ROAD

COUNTY: TREMPEALEAU

FILE NAME · C·\CAFfiles\Projects\tr stdolate\A48 DGN





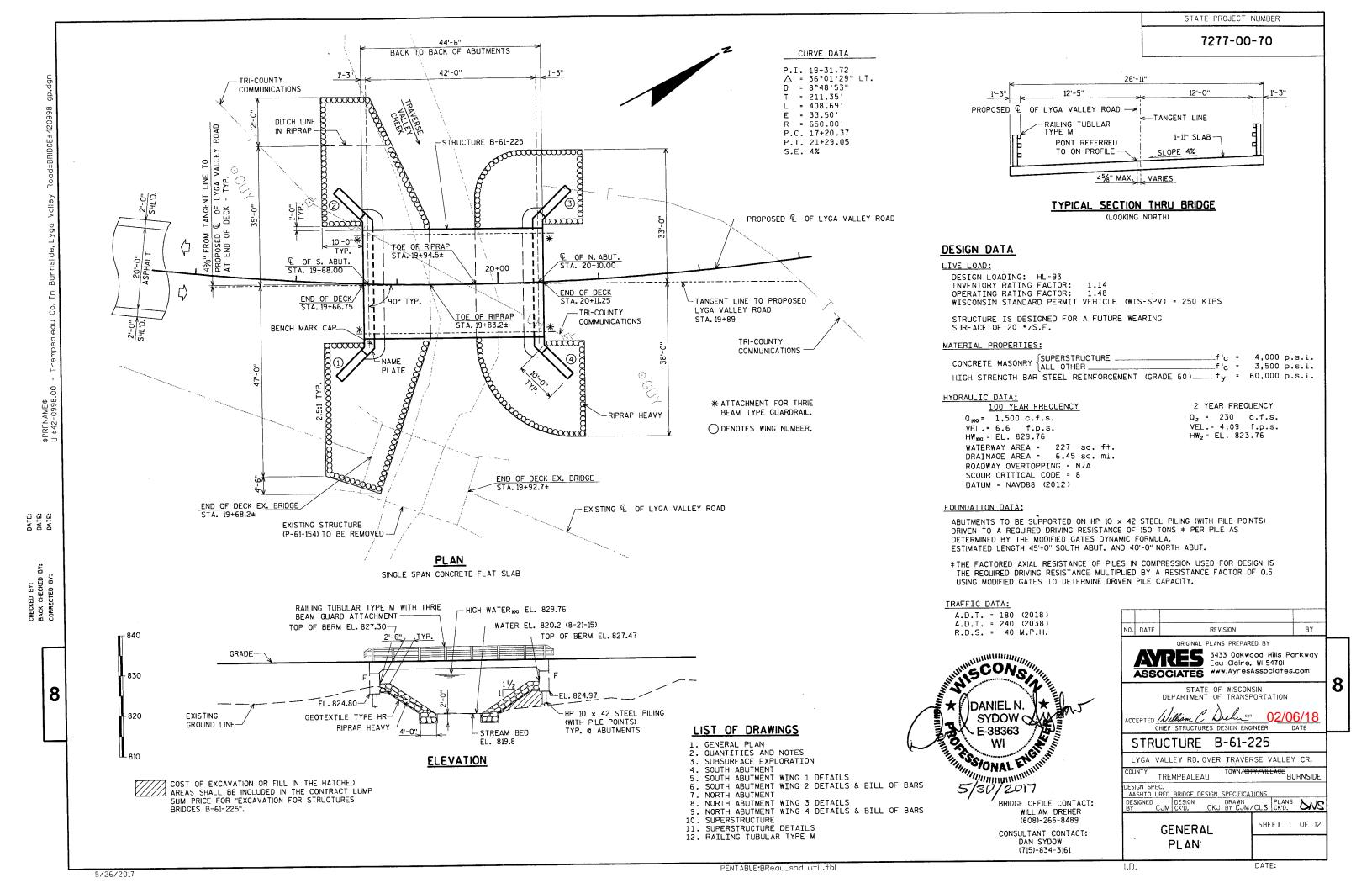
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PLOT DATE: 29-MAY-2012 13:03

PLOT NAME :

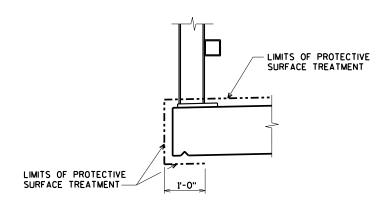
PLOT BY: mscsja

PLOT SCALE: 4.961899:1.000000



#### TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	S. ABUT.	N. ABUT.	SUPER.	TOTAL
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 19+80	LS				1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-61-225	LS				1
210.1500	BACKFILL STRUCTURE TYPE A	TON	155	155		310
502.0100	CONCRETE MASONRY BRIDGES	CY	29	29	89	147
502.3200	PROTECTIVE SURFACE TREATMENT	SY			160	160
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2,230	2,230		4,460
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	890	890	15,660	17,440
513.4061	RAILING TUBULAR TYPE M B-61-225	LF			93	93
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	9	9		18
550.0500	PILE POINTS	EACH	5	5	-	10
550.1100	PILING STEEL HP 10-INCH × 42 LB	LF	225	200		425
606.0300	RIPRAP HEAVY	CY	140	135	-	275
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	75	75	-	150
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	45	45	-	90
645.0120	GEOTEXTILE TYPE HR	SY	265	250		515
	NON-BID ITEMS					
	FILLER	SIZE				1/2" & 3/4'



#### PROTECTIVE SURFACE TREATMENT DETAIL

#### 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.

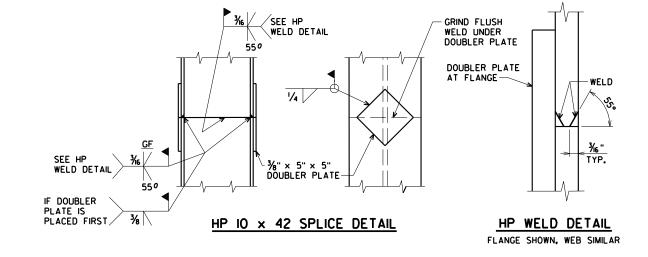
SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS OTHERWISE APPROVED BY THE ENGINEER. THE EXISTING GROUND LINE SHALL BE THE UPPER LIMIT FOR EXCAVATION FOR STRUCTURES.

THE EXISTING STRUCTURE, P-61-154, TO BE REMOVED, IS
A SINGLE SPAN STEEL DECK GIRDER BRIDGE, 28 FT. LONG
WITH AN APPROX. 15 FT. CLEAR ROADWAY WIDTH.
AT BACKFACE OF ABUTMENTS ALL VOLUME WHICH CANNOT BE
PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED

BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A.

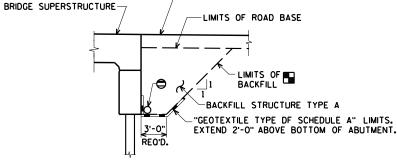
PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED AS SHOWN IN DETAIL ON THIS SHEET.

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



ARES 3433 Oakwood Hills Parkway Eau Claire, WI 54701

ASSOCIATES www.AyresAssociates.com



GRADE

## - & OF PROPOSED LYGA VALLEY ROAD

#### PROFILE GRADE LINE (PROPOSED LYGA VALLEY ROAD)

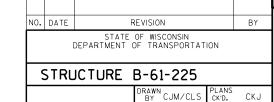
P.I. STA, 21+95.53 EL. 833.92

+0.41%

BENCH MARK: CHIS. SO. ON NE WING WALL STA. 19+90, 60'RT. EL. 834.10

#### BACKFILL STRUCTURE LIMITS

- 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 5.



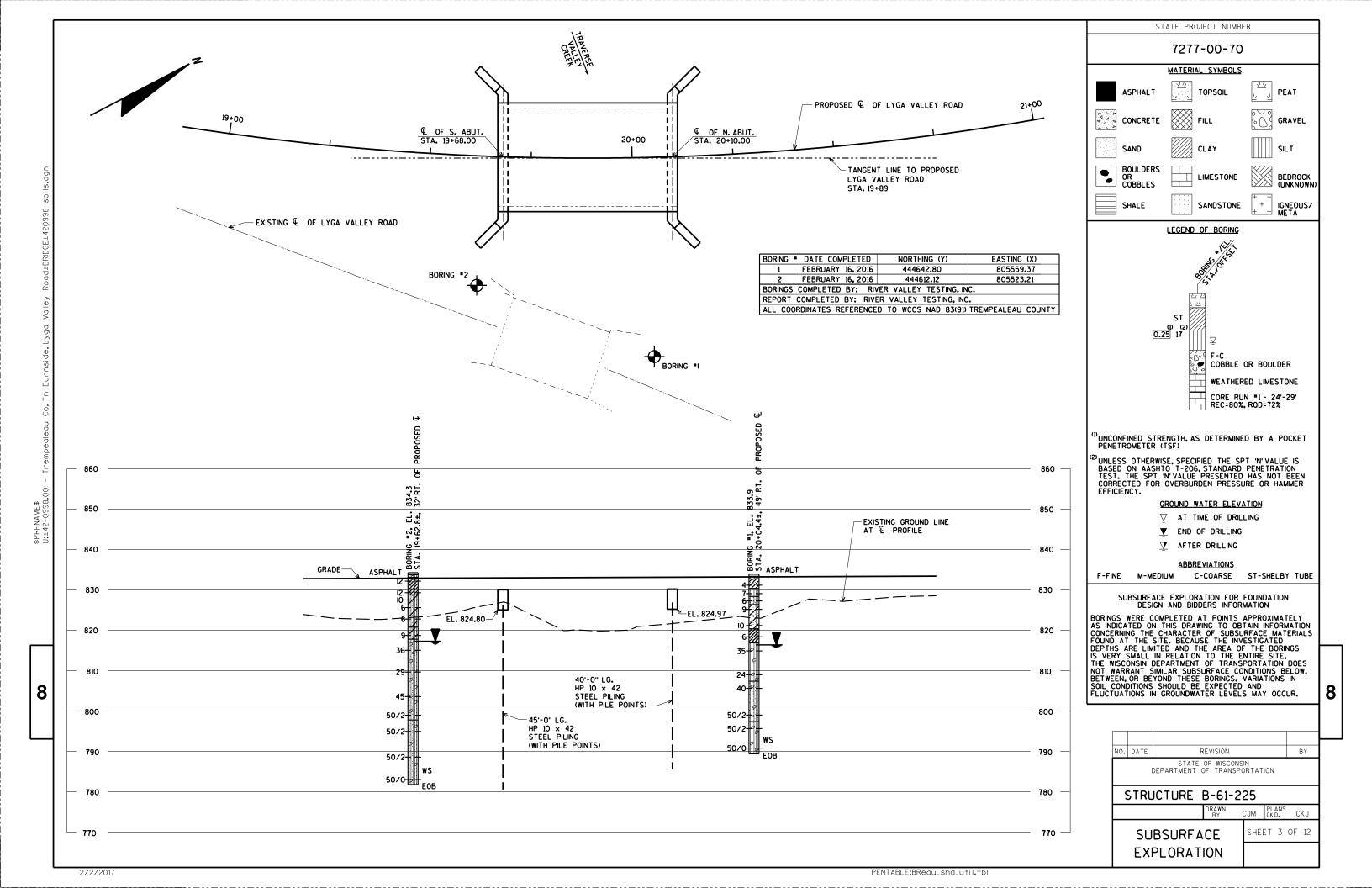
QUANTITIES

SHEET 2 OF 12 AND NOTES

8

P.I. STA. 16+00.00 EL. 831.49

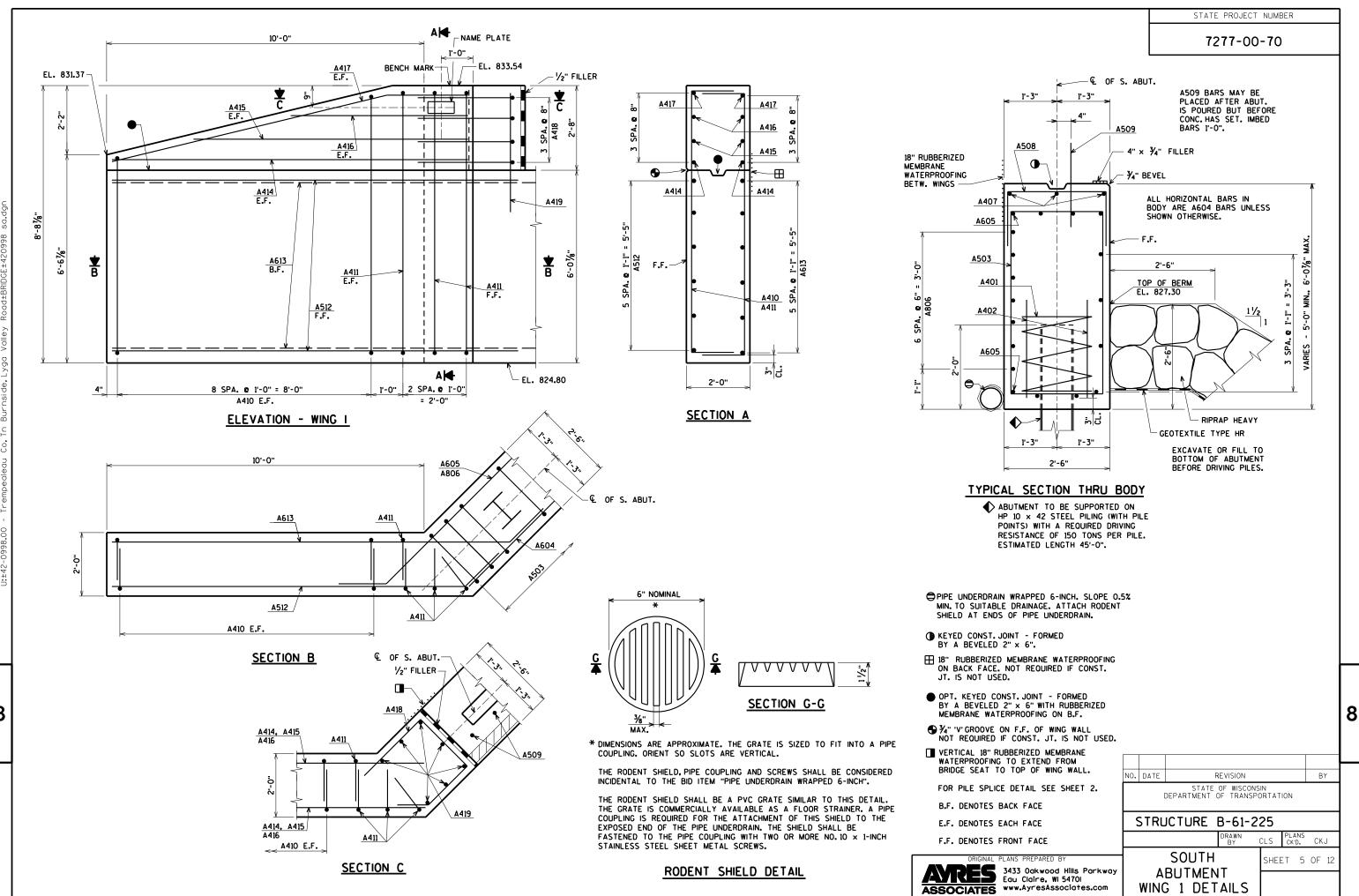
DF S. ABUT 19+68.00 832.99



2/2/2017

PENTABLE:BReau\_shd\_util.tbl

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2/2/2017

- EL. 830.30 A427 A426 A425 A424 A424 A421 2'-0" SECTION D DIM. "A" BAR NO. DIM. "A" DIM. "B" A605 I'-0¾" I'-0¾" A806 1'-0¾" 1'-03/4" A512 1'-0¾" 1'-0¾" A613 1'-0¾" 1'-0¾'' A417 8'-9" 2'-1" 1'-0¾" 1'-0¾'' 1'-0¾'' A522 1'-0¾" A623 A427 8'-9" 2'-1"

> 18" RUBBERIZED MEMBRANE WATERPROOFING ON BACK FACE. NOT REQUIRED IF CONST.

● OPT. KEYED CONST. JOINT - FORMED BY A BEVELED 2" × 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F.

NOT REQUIRED IF CONST. JT. IS NOT USED.

⊕ ¾" 'V' GROOVE ON F.F. OF WING WALL

■ VERTICAL 18" RUBBERIZED MEMBRANE

B.F. DENOTES BACK FACE

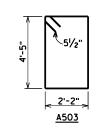
E.F. DENOTES EACH FACE

F.F. DENOTES FRONT FACE

WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WING WALL.

FOR PILE SPLICE DETAIL SEE SHEET 2.

JT. IS NOT USED.



2'-2" 5

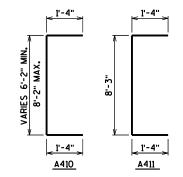
<u>4508</u>

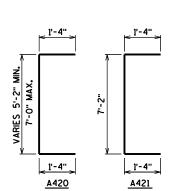
#### 2.230" UNCOATED 890" COATED LOCATION 5 28-0 X BODY @ PILES 10 2-3 BODY @ PILES 39 13-10 X BODY VERT. 9 31-5 BODY HORIZ. F.F. 4 20-8 X BODY HORIZ. B.F. A503 A604 A605 14 21-10 X | BODY HORIZ. B.F. A806 3 25-6 BODY HORIZ. 26 5-3 X BODY VERT. A407 A508 26 2-0 BODY DOWELS A509 X A410 X A411 X 6 12-8 X | WING 1 HORIZ. F.F. A613 X 6 14-3 X | WING 1 HORIZ. B.F. A414 X 2 11-3 | WING 1 HORIZ. E.F. 2 8-8 WING 1 HORIZ. E.F. A415 X 2 5-7 WING 1 HORIZ. E.F. A416 X 2 11-4 X WING 1 DIAG. E.F. 8 8-5 X WINGS 1 & 2 HORIZ. A418 X 14 4-6 | WINGS 1 & 2 VERT. 18 8-7 X ⊗ WING 2 VERT. E.F. 4 9-8 X WING 2 VERT. E.F. A420 X 5 12-8 X WING 2 HORIZ. F.F. 5 14-3 X | WING 2 HORIZ. B.F. IA623 IXI 2 | 11-3 | | WING 2 HORIZ. E.F. A425 X 2 8-8 WING 2 HORIZ. E.F. 2 5-7 WING 2 HORIZ. E.F. 2 11-4 X | WING 2 DIAG. E.F.

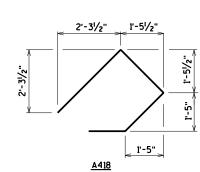
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

BILL OF BARS

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







8

#### BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
A410	2 SERIES OF 9	8'-8" TO 10'-8"
A420	2 SERIES OF 9	7'-8" TO 9'-6"
BUNDLE AND TAG EACH SERIES SEPARATELY.		

BY STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION STRUCTURE B-61-225 CLS PLANS CK'D. CKJ SOUTH ABUTMENT | SHEET 6 OF 12

WING 2 DETAILS

& BILL OF BARS

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

2/2/2017

D∣◀

2 SPA. @ 1'-0" 1'-0"

= 2'-0"

€ OF S. ABUT.

<u>/A421</u>

SECTION F

-€ OF S. ABUT.

- 1⁄2" FILLER

A419

A421

A605

A424 E.F.

8 SPA. @ 1'-0" = 8'-0"

A420 E.F.

**ELEVATION - WING 2** 

A623

A522

SECTION E

A424, A425

A424, A425

A420 E.F.

A420 E.F.

10'-0"

A522 F.F.

EL. 832.47-

1/2" FILLER -

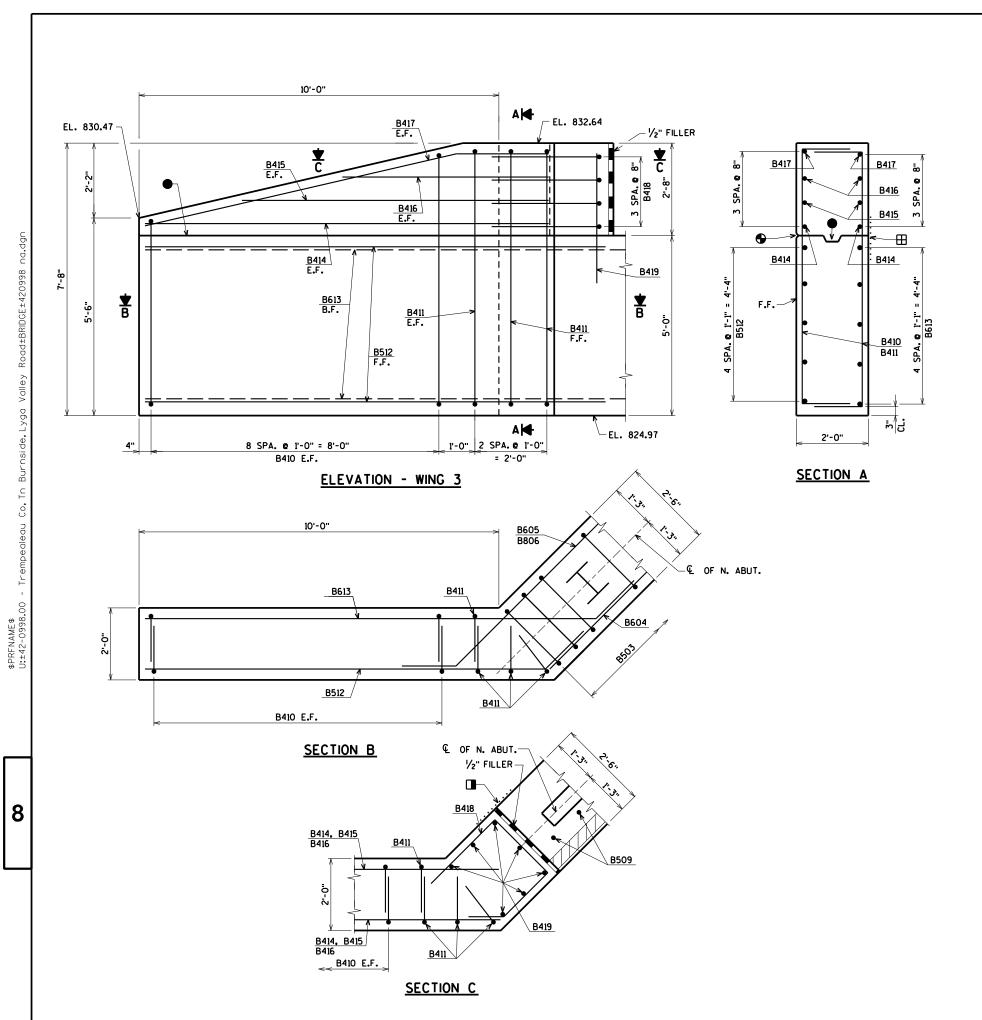
A419

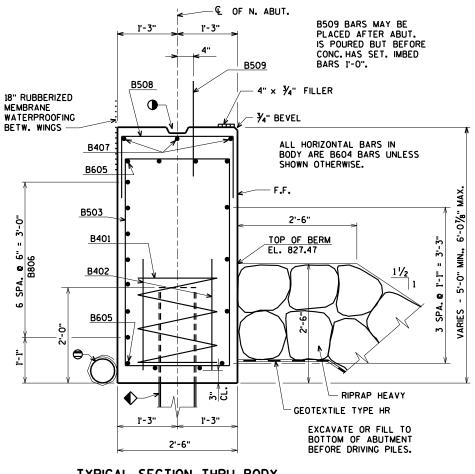
EL. 824.80 -

A604

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7277-00-70





#### TYPICAL SECTION THRU BODY

- ◆ ABUTMENT TO BE SUPPORTED ON HP 10 x 42 STEEL PILING (WITH PILE POINTS) WITH A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE. ESTIMATED LENGTH 40'-0".
- ₱PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. FOR DETAIL SEE SHEET 5.
- KEYED CONST. JOINT FORMED BY A BEVELED 2" x 6".
- 18" RUBBERIZED MEMBRANE WATERPROOFING ON BACK FACE. NOT REQUIRED IF CONST. JT. IS NOT USED.
- OPT. KEYED CONST. JOINT FORMED BY A BEVELED 2" × 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F.
- → ¾" 'V' GROOVE ON F.F. OF WING WALL NOT REQUIRED IF CONST. JT. IS NOT USED.
- VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WING WALL.

FOR PILE SPLICE DETAIL SEE SHEET 2.

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

F.F. DENOTES FRONT FACE

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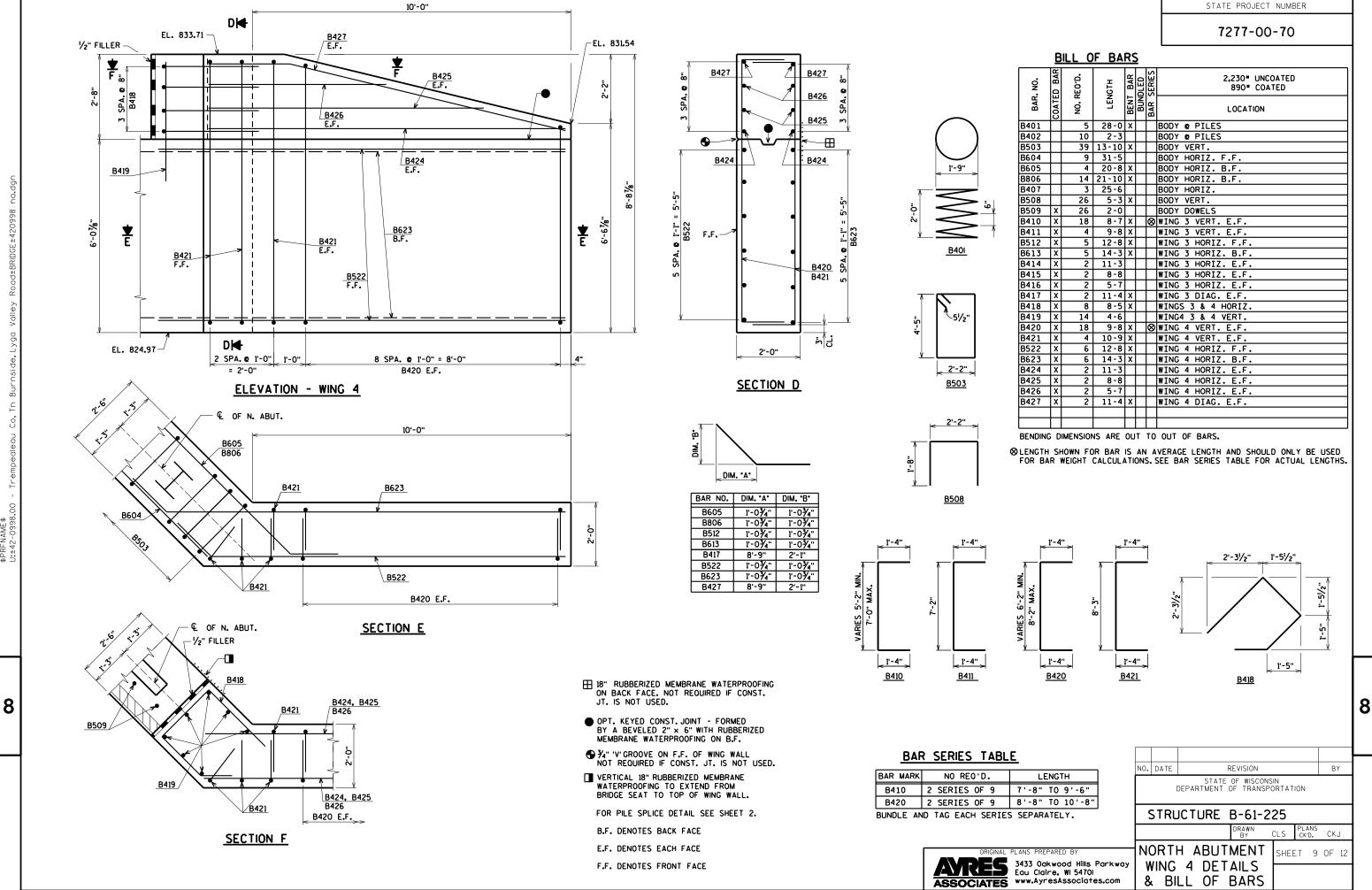
BY STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

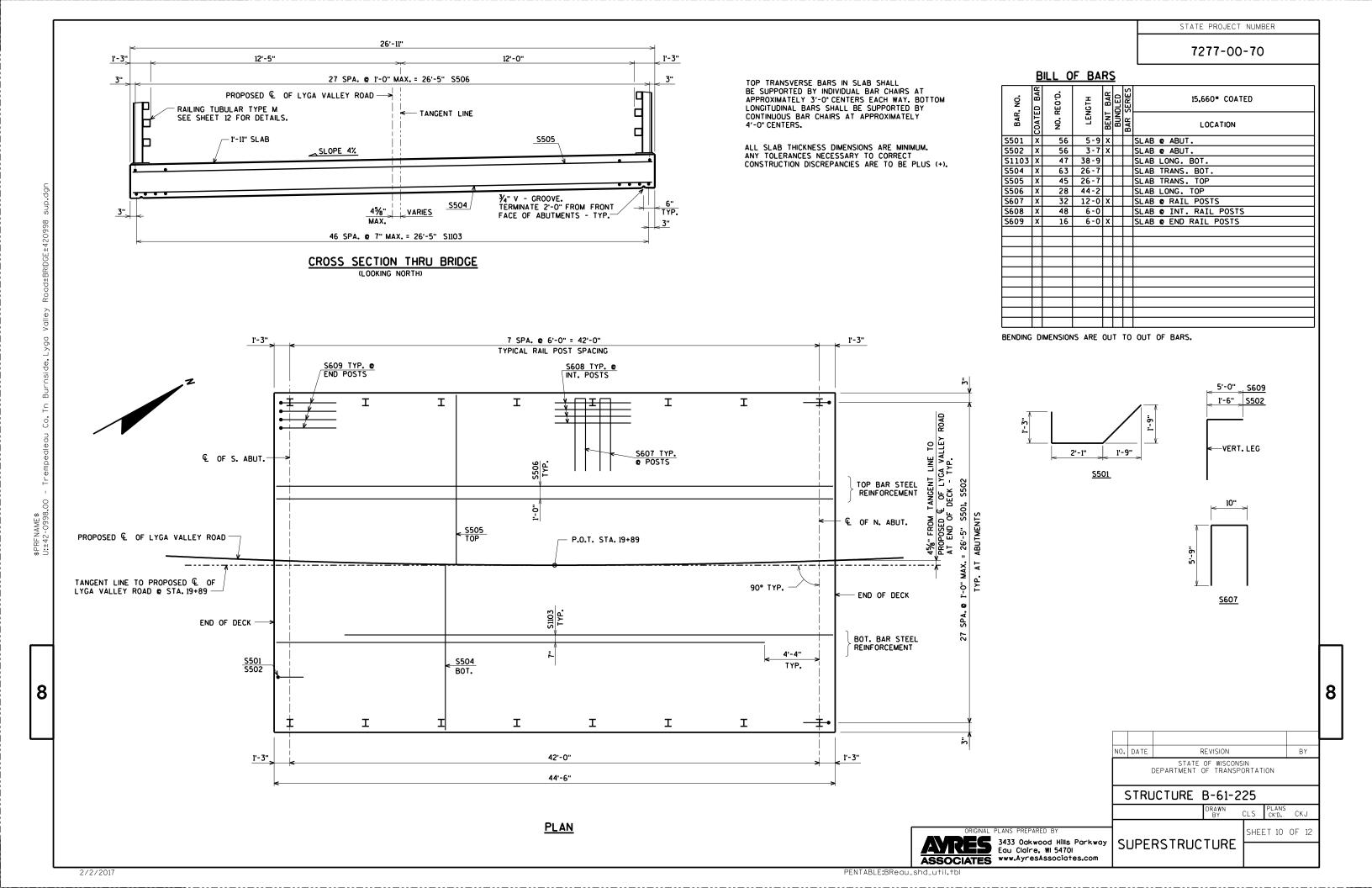
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STRUCTURE B-61-225

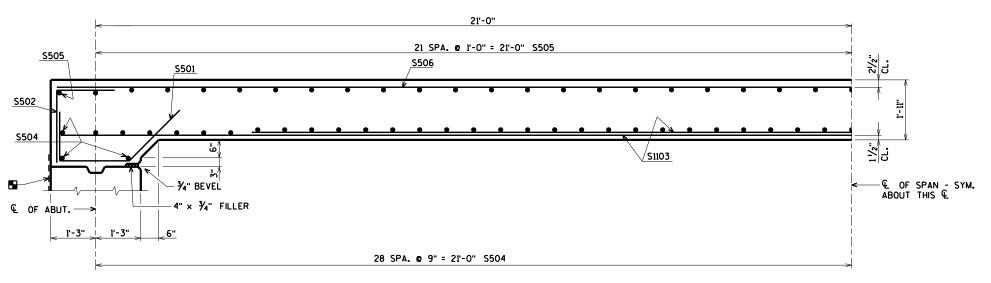
CLS PLANS CK'D. CKJ NORTH SHEET 8 OF 12

**ABUTMENT** WING 3 DETAILS



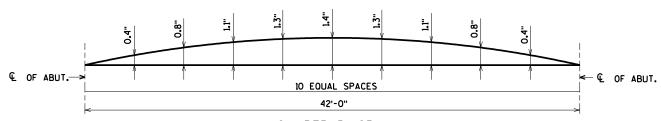


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■ 18" RUBBERIZED MEMBRANE WATERPROOFING

#### PART LONGITUDINAL SECTION



#### CAMBER DIAGRAM

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

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE  ${\mathfrak L}$  OF ABUTMENTS AND 5/10 POINTS TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF SLAB AND CROWN OR  ${\mathfrak L}$ .

#### TOP OF DECK ELEVATIONS

LOCATION	€ OF S. ABUT.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	€ OF N. ABUT.
W. EDGE OF SLAB	832.47	832.48	832.49	832.51	832.52	832.54	832.56	832.58	832.60	832.62	832.64
€ OF STRUCTURE	833.00	833.02	833.03	833.05	833.07	833.08	833.10	833.12	833.14	833.15	833.17
E. EDGE OF SLAB	833.54	833.55	833.57	833.58	833.60	833.61	833.63	833.65	833.67	833.69	833.71

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

NO. DATE BY STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURE B-61-225 CLS PLANS CK'D. CKJ SHEET 11 OF 12 SUPERSTRUCTURE DETAILS

ASSOCIATES

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Edu Claire, WI 5470I
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2/2/2017

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### **LEGEND**

- W6 x 25 WITH 11/8" X 11/2" 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 1½" × 11¾" × 1'-8" WITH 1½" X 1½" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.
- (3) ASTM A449 11/8" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REO'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1" 9" LONG THE NO. 2. CHAMFER TOP OF BULL'S BEFORE THREADING. USE 19 COMMINA BRUTMENT WINGS. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1-3" LONG. USE 10¾" LONG AT ALL OTHER LOCATIONS. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REO'D. FOR CONSTRUCTIBILITY.)
- (5) TS 5 × 4 × 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 1/8" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 1/6" X 11/6" X 11/6" WASHER, AND LOCK WASHER (2 REO'D. AT EACH RAIL TO POST LOCATION.)
- 7 1/2" THK. BACK-UP PLATE WITH 2 1/8" X 11/2" THREADED SHOP WELDED STUDS (NO. 12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.
- 8 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR %" 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 35/8" X 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
- (0A) %" X 25%" X 2'-4" PLATE USED IN NO. 5, %" X 35%" X 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
- 1/4" ♦ A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER, USE 1/4" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND 1/4" × 21/4" → MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A.
- (12) 1/8" DIA. X 11/2" LONG THREADED SHOP WELDED STUDS (2 REO'D).
- (3) 3/8" X 8" X 1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REO'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.
- (14) 1/8" DIA. X 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REO'D.).
- $^{(5)}$  1"  $\phi$  holes in Tubes no.5a for  $^{\prime\prime}_{\rm W}$ " Dia. A325 round head bolt with nut, washer and lock washer (4 reod.). 4 holes in Tubes.

## **GENERAL NOTES**

1"# HOLES TYP.

BACK-UP PLATE DETAIL

(AT BEAM GUARD ATTACHMENT)

- 1" Ø HOLE

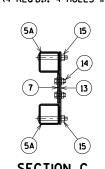
- BID ITEM SHALL BE "RAILING TUBULAR TYPE M B-61-225" WHICH INCLUDES ALL ITEMS SHOWN.
- 2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.

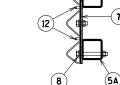
(12)

- 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
- 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 REO'D. FOR ALIGNMENT.
- 8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
- 9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY S.S.P.C. SPECIFICATIONS.
- 12. PLACE FIRST BOTTOM LONGITUDINAL BAR CLEAR OF DRIP GROOVE.

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURE B-61-225 CK'D. CKJ SHEET 12 OF 12

RAILING TUBULAR TYPE M





SECTION C



8

DETAIL AT END POST

(THRIE BEAM RAIL ATTACHMENT)

€ RAIL POST

11/8" X 11/2" HORIZ. SLOTS IN POST —

15/8"

SECTION THRU POST WEB

SECTION THRU RAIL

TYPICAL RAIL TO POST CONNECTIONS

2" | >

4"

- 1" # HOLES FOR 1/8" # HEX BOLTS

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

4'-2"

(12)

€ TS

10. WHEN PAINTING IS REQUIRED, ALL MATERIAL EXCEPT ANCHORAGE DETAIL(NO. 3 & 4) SHALL BE PAINTED OVER GALVANIZING WITH APPROVED THE COATAND TOP COAT. 11. THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST

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PENTABLE:BReau\_shd\_util.tb

**ANCHOR PLATE** 

(AT RAIL TO DECK CONNECTION)

1'-3"

4"

THIS FACE TO BE VERTICAL

87°42'34" (WEST SIDE)

92°17'26" (EAST SIDE)

S607

<u> ∆ <sub>S607</sub></u>

13/4"\_

POST SHIM

DETAIL

- S608 S609

RAIL

POST

PLACE BELOW TOP MAT SLAB REINFORCEMENT.

TIE TO TOP MAT OF STEEL.

/ 1" ♥ HOLES

TYP.

lo o

**-**0 0

\_\_ 4"

ANCHOR PLATE

TYP.

BACK FACE

OF ABUT.

(AT BEAM GUARD ATTACHMENT)

(13)

<u>/4 - S608, S609 PLACE</u> SYM. ABOUT € OF RAIL POST

6%"

(6)

(1)

(2)

23/4"

SECTION THRU RAILING ON DECK

Ф

Ф

SECTION A

FIELD CLIP AS REO'D.

1/16" THK.

13/6" Ø HOLES FOR 11/8" Ø ANCHOR BOLTS

-51/2" ♦ HOLES

7"

113/4"

-11

(2)

ΨФ

₩

∠ф-

21/4"

Ф-

→ 1/2" AT FIELD JTS.

1'-2"

PROVIDE 1/2" DRAIN HOLES IN LOW END OF ALL RAILS CLEAR OF SPLICE TUBE

FIELD ERECTION JOINT DETAIL

J 1/4"

SHOP RAIL SPLICE DETAIL

(5A

(LOCATION MUST BE SHOWN

ON THE SHOP DRAWINGS)

5"

(OA)-

SECTION B

HARDENED

**(4)**-

**ANCHOR BOLTS** 

**\*** 

TOP VIEW AT END POST

(THRIE BEAM RAIL ATTACHMENT)

•

**⊕**ı

13/4"

(12) D 🖊

D₩

13/4"

**(6**)

EDGE OF PLATE 7
AND FLANGE OF 1

WASHER-

\* TACK WELD

MINIMUM OFFSET (TYP.)

POST - & PLATE (13)

(7)

CH

0 0

0 0

(15)

· € OF END POST

CH

(13)

PART ELEVATION OF RAILING

(14)

(5A)

1/4

-3" TOP PROJECTION

CONCRETE

FOR ANCHOR BOLTS IN WINGS, TACK WELD MAY BE USED IN FIELD AFTED ANCHOR PLATE IS IN POSTTON IF REQ'D. FOR CONSTRUCTIBILITY.

B₩

(10)10A

#### EARTHWORK SUMMARY (CATEGORY 0010)

		AREA			INCREMENTAL VOLUME			CUMULATIVE VOLUME		
			SALVAGED/ UNUSABLE PAVEMENT			SALVAGED/ UNUSABLE PAVEMENT		CUT (1)	EXPANDED	
		CUT	MATERIAL	FILL	CUT (1)	MATERIAL (2)	FILL (3)	1.00	1.30	MASS ORDINATE ±(5)
DIVISION	STATION	SF	SF	SF	CY	CY	CY	CY	CY	CY
1	18+50	63	0	87	76	0	88	76	114	-38
LYGA VALLEY ROAD	18+75	102	0	103	115	0	109	191	256	-65
	19+00	146	0	131	159	0	142	350	441	-91
	19+25	198	0	176	237	0	190	587	688	-101
	19+50	315	0	235	195	0	146	782	878	-96
	19+67	315	0	235	0	0	0	782	878	-96
	STRUCTURE (B-61-225)									
	20+11	34	0	221	17	0	112	17	146	-129
	20+25	34	0	221	22	0	208	39	416	-377
	20+50	13	0	230	13	0	200	52	676	-624
	20+75	14	0	202	15	0	176	67	905	-838
	21+00	18	0	179	15	0	163	82	1,117	-1,035
	21+25	15	0	174	0	0	0	82	1,117	-1,035
TOTALS					864	0	1,534			-1,130

205.0100 EXCAVATION COMMON = SAY 864

208.0100 BORROW = SAY 1,130

#### NOTES:

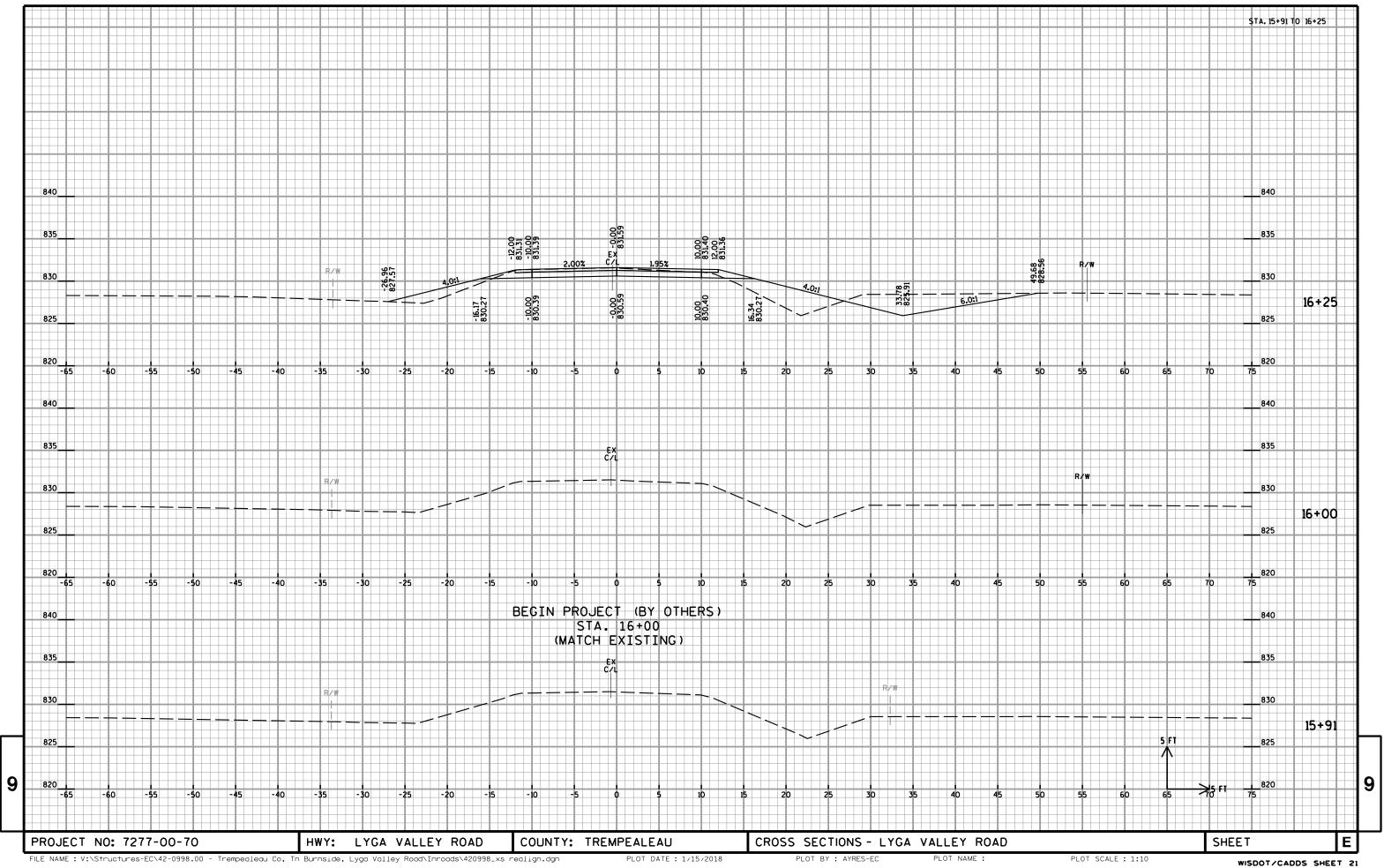
- 1) EXCAVATION COMMON IS THE SUM OF THE CUT COLUMN. ITEM NUMBER 205.0100
- 2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
- 3) DOES NOT INCLUDE UNUSABLE PAVEMENT EXCAVATION VOLUME.
- 4) EXPANDED FILL FACTOR = 1.30 EXPANDED FILL = UNEXPANDED FILL \* FILL FACTOR
- 5) THE MASS ORDINATE  $\pm$  QTY CALCULATED FOR THE DIVISION.

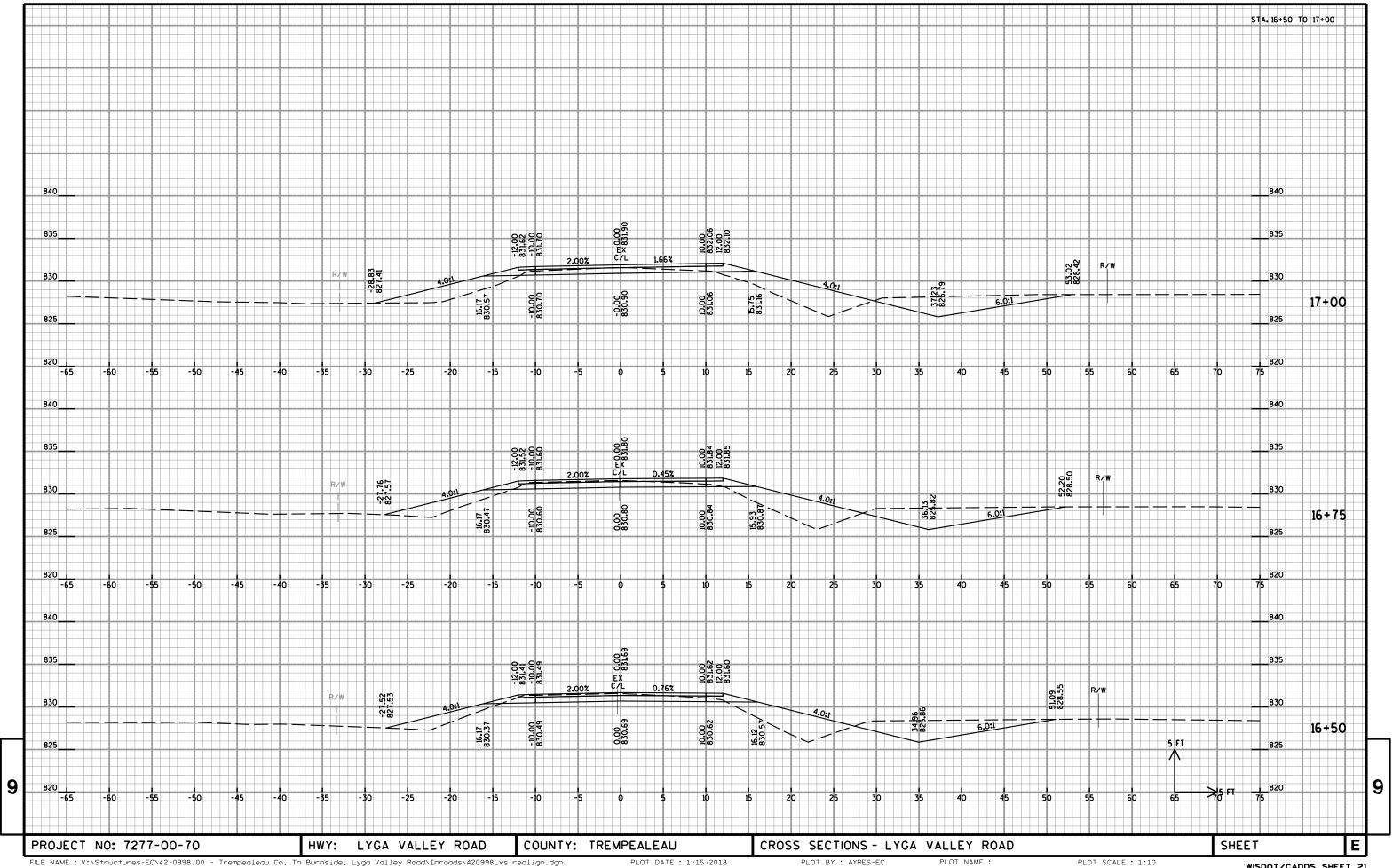
PLUS (+) QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS (-) QUANTITY INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

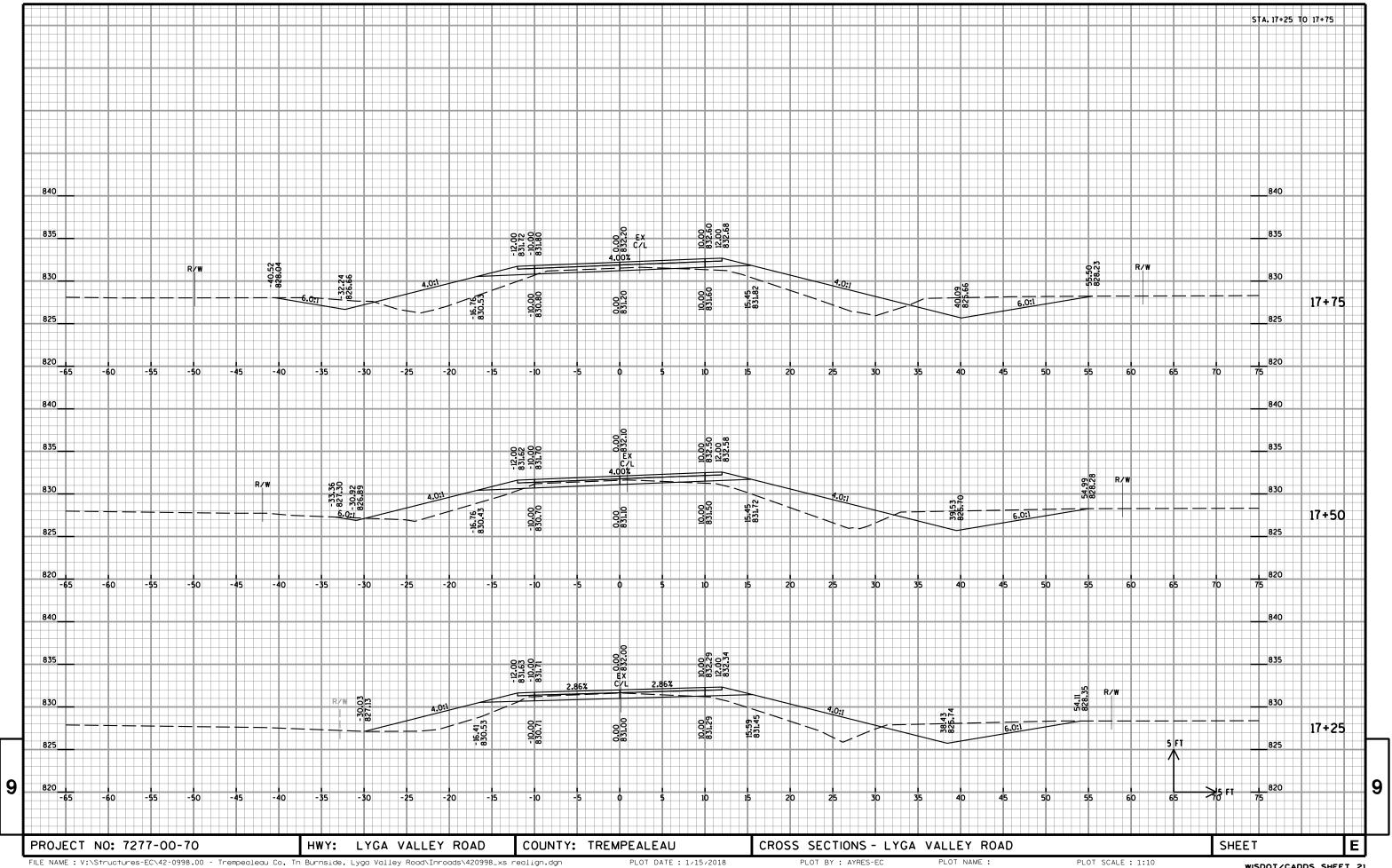
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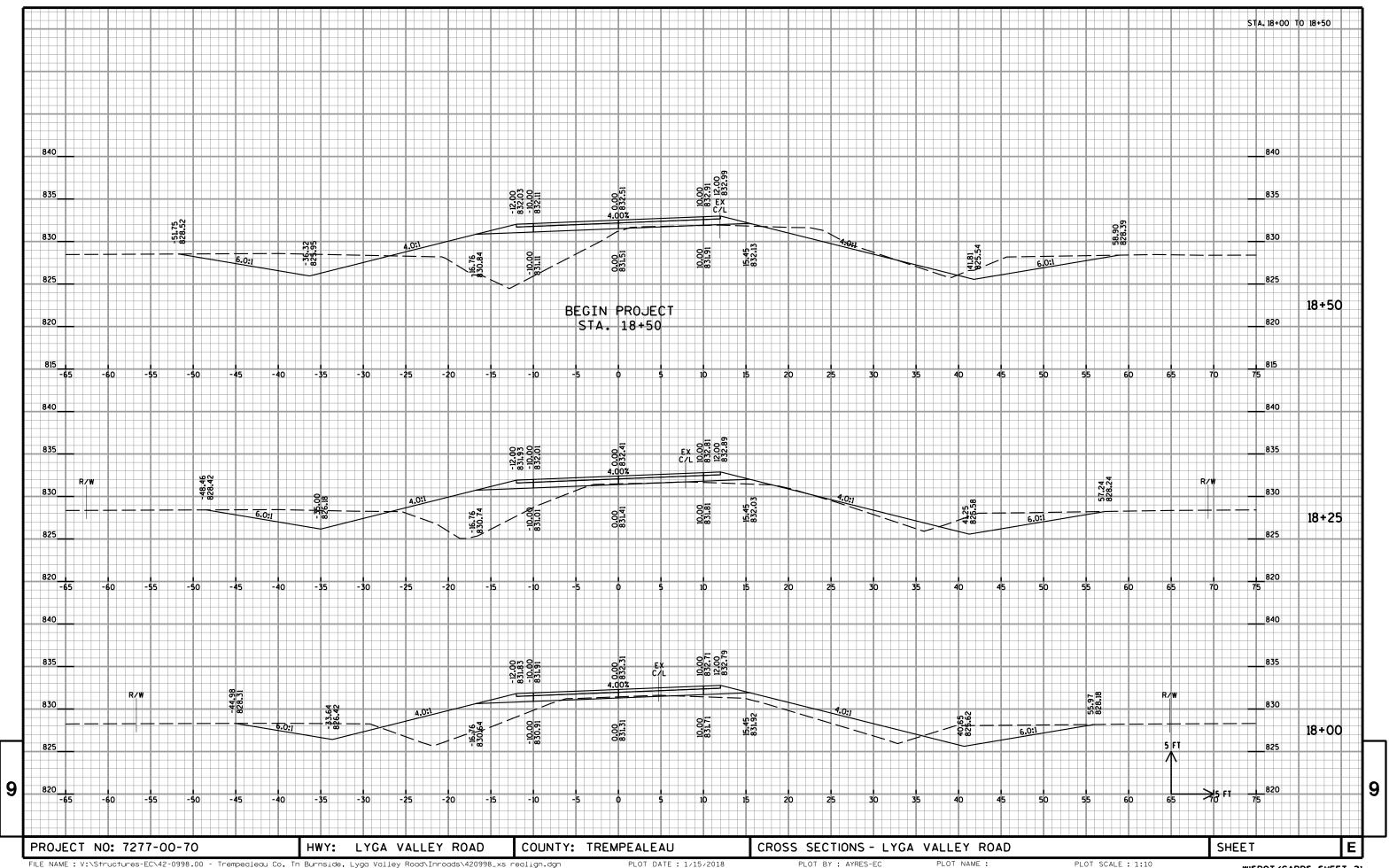
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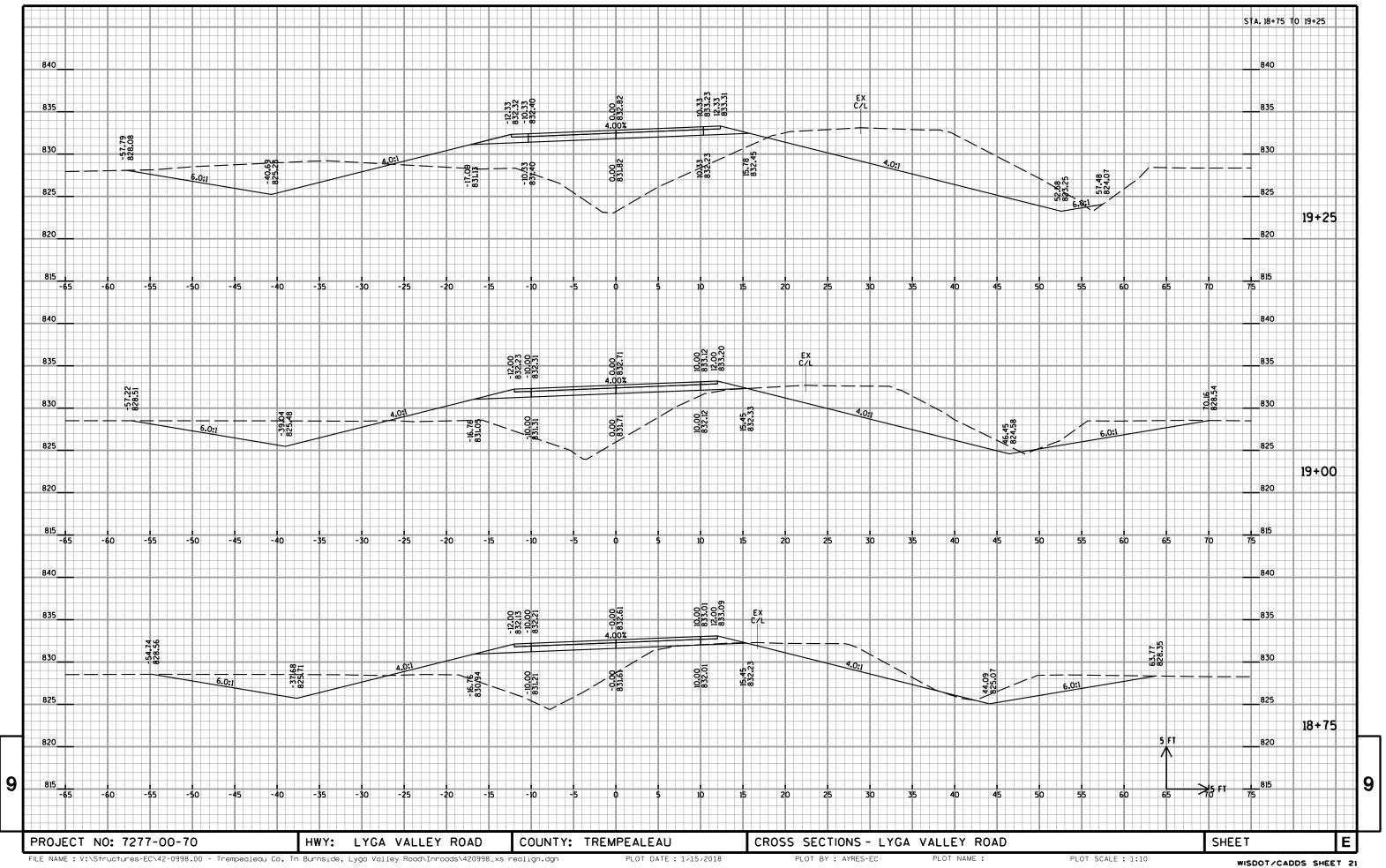
PROJECT NO: 7277-00-70 HWY: LYGA VALLEY ROAD COUNTY: TREMPEALEAU EARTHWORK SUMMARY SHEET E

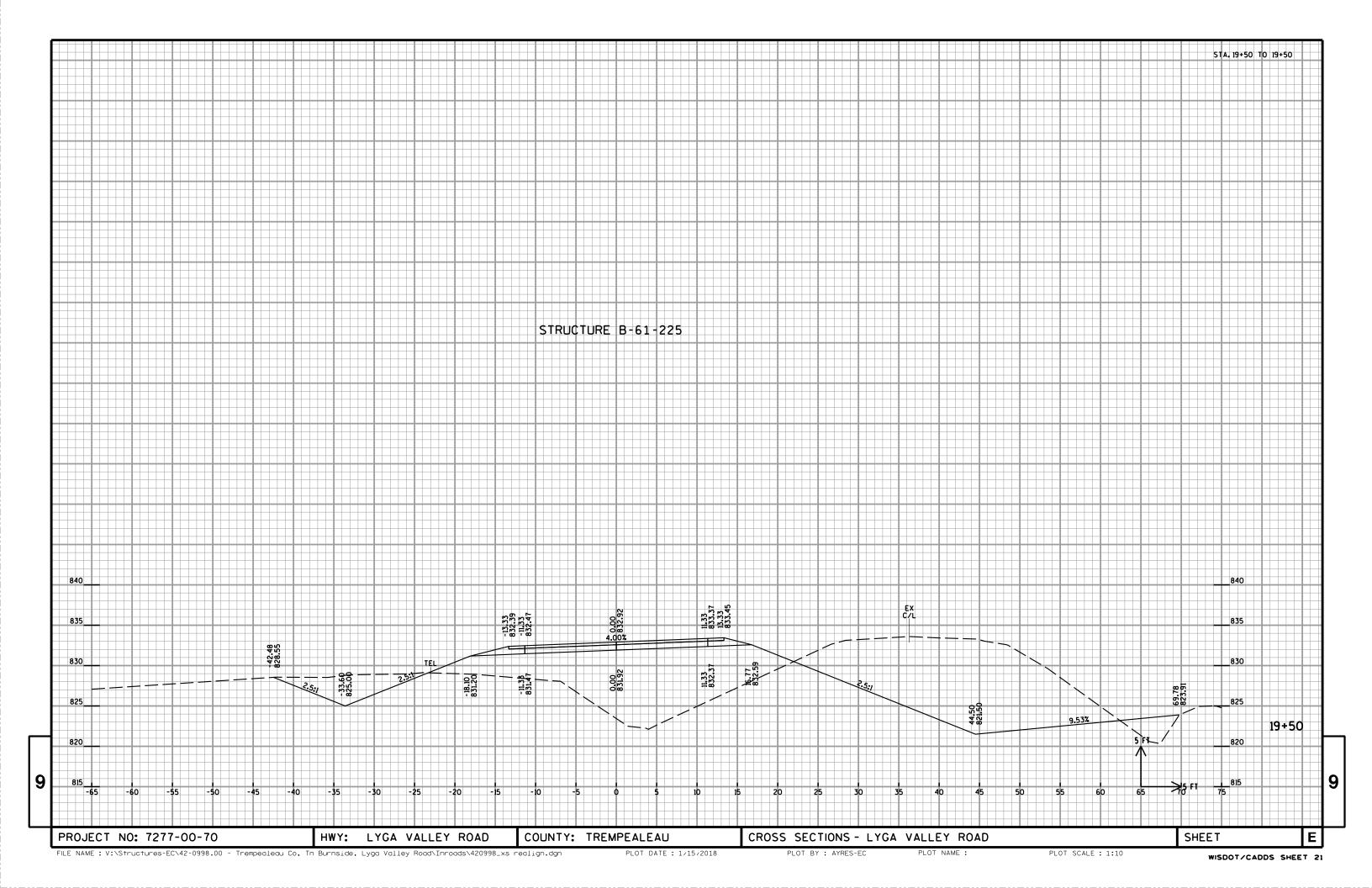


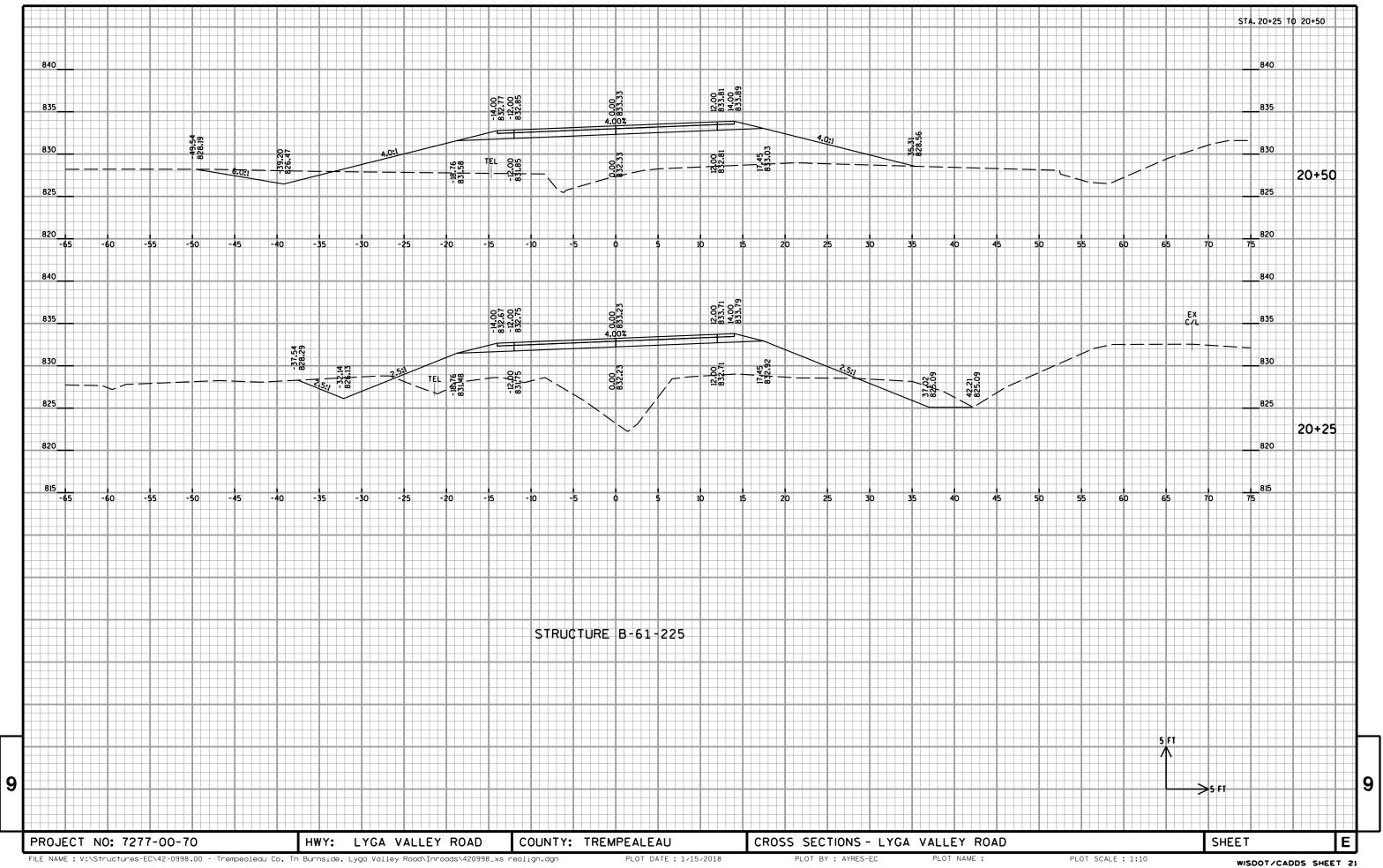


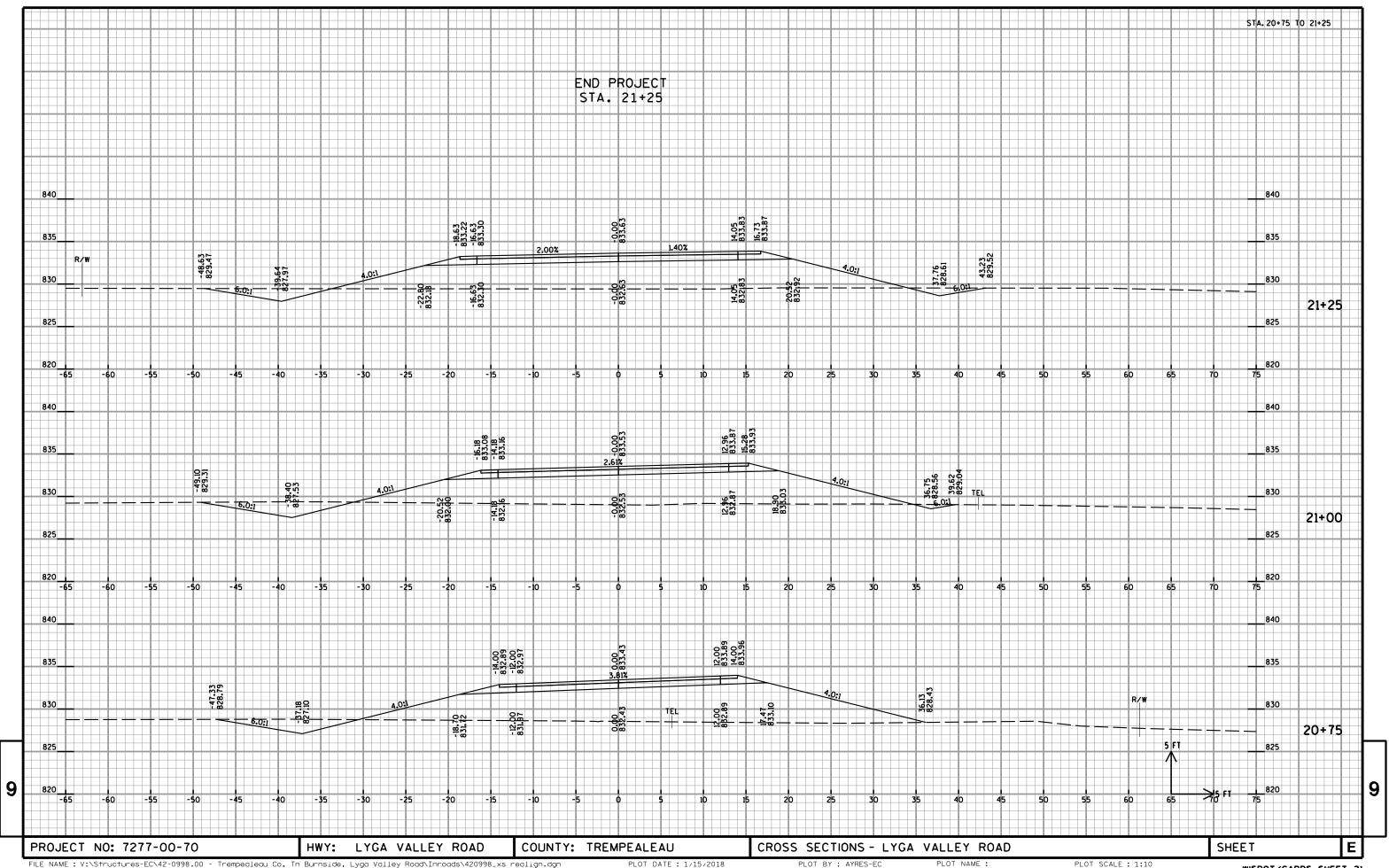


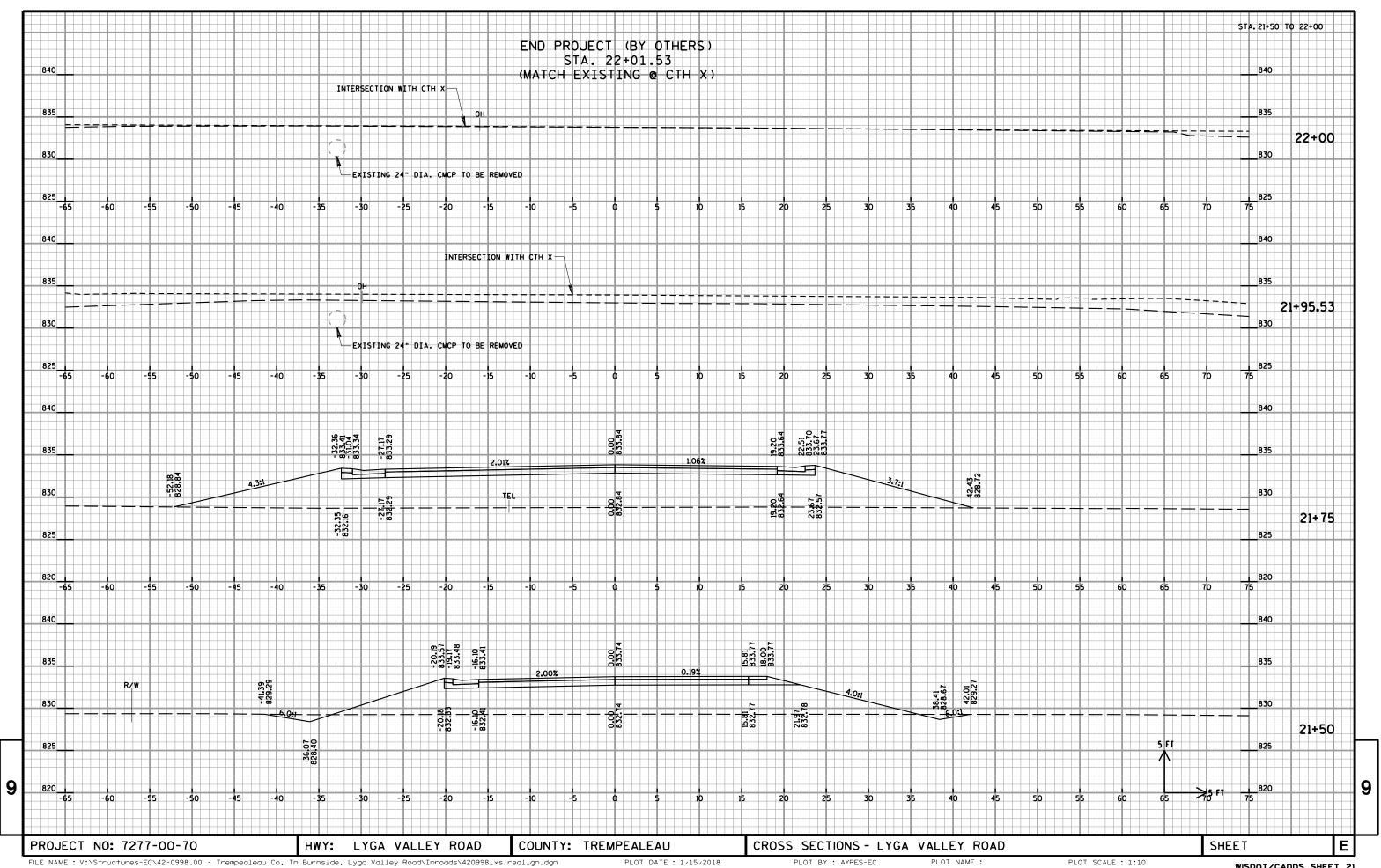














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