

90 Burnett North Fork Bridge Cost Increase

State of Wisconsin
Department of Natural Resources
dnr.wi.gov

Motorized Recreation Grant Application

For: (choose all that apply)

Form 8700-159 (R 02/2024)

Page 1 of 5

Due Date: April 15

☒ ATV/UTV Trail Aid

☒ Snowmobile Trail Aid

Notice: Completion of this form is required under Wisconsin Statutes 23.09(26) and 23.33. Failure to complete this form will result in denial of financial assistance. Personally identifiable information found on this form is not intended to be used for any other purpose. The Department of Natural Resources (DNR) may provide this information to requesters as required by Wisconsin's Public Records law (ss. 19.31 – 19.39, Wis. Stats.).

Instructions: Applications may combine more than one source of funds. They may be submitted for consideration of traditional ATV, UTV, Snowmobile and Motorized Stewardship funding. Submit one copy of all forms and attachments. See Page 2 for necessary attachments. Send applications to your Community Services Specialist.

DNR Use Only	
Category	Number

Section 1: Applicant Information

Applicant / Organization Name			Check Recipient: Individual other than authorized individual to act on behalf of the applicant. <input checked="" type="checkbox"/> Select if the same as applicant.		
Burnett County Forest & Parks					
Individual Authorized to Act on Behalf of Applicant per Resolution			Check Recipient Name (Name to Appear on Check)		
Susan Tollander			Susan Tollander		
Title			Title		
Recreation Coordinator			Recreation Coordinator		
Address			Address		
8150 State Rd 70			8150 State Rd 70		
City	State	ZIP Code	City	State	ZIP Code
Siren	WI	54872	Siren	WI	54872
Telephone Number		Email Address			
(715) 349-2157		susan.tollander@burnettcountywi.gov			

Section 2: Project Information Required for all Projects

Project Title					Current Funded Miles	New Miles (if applicable)
Trail 45 North Fork Bridge					264	
County	Township	Range	Section	1/4 1/4	1/4	GPS Coordinates:
Burnett	39 N	18	28	SE	NE	Lat. 45.840273
						Long. -92.592046

Project Description Summary

Burnett County is requesting funding for a bridge replacement project on Snowmobile/Winter ATV Corridor Trail 45 in western Burnett County. The North Fork Flowage bridge was installed in 2004, is 40' x 12', and rated for 12,000 pounds. The bridge was placed on existing abutments in 2004, and the age of them is unknown. The abutments are now starting to fail, and erosion is occurring around them. We propose replacing this bridge with a new, 60' bridge on new abutments. The longer length is a better option for this site, and combined with new abutments will resolve the erosion issues that are currently occurring. This segment of Trail 45 runs through Crex Meadows State Wildlife Area and is an important corridor connecting Grantsburg to Danbury. This project was granted \$82,000 in snowmobile and ATV funding in 2023, however, costs have increased due to additional engineering being required and higher bridge costs. RTP funding is also being applied for.

COST ESTIMATE: \$344,219 GRANTS RECEIVED: \$82,000 ADDITIONAL FUNDING NEEDED: \$262,219
Snowmobile Request: ~~\$9,509.50~~ 81,109 ATV Request: ~~\$9,509.50~~ 81,109 RTP Request: \$243,200
RTP Max is \$100,000

☒ I certify that all maintenance land use agreements are on file.

Estimated Cost

Maintenance	Acquisition	Insurance	Development	Bridge Rehab.	Trail Rehab.	Total Estimated Cost
				\$262,219.00		\$262,219.00
Leave Blank – DNR Use Only						

Applicant Certification

Printed Name of Authorized Official	Official's Title
Susan Tollander	Recreation Coordinator

As the applicant's authorized official, I certify that, to the best of my knowledge, the information in this application is true and correct.

Susan Tollander
Signature of Authorized Official

4/14/25
Date Prepared

Appendix A – Required for Bridge Rehab/Replace, New, or Reroute with New Bridge
☒ Bridge Rehab/Replace ☐ New Bridge ☐ Reroute with new bridge

County Burnett	Township 39 N	Range 18	Section 28	1/4 1/4 SE	1/4 NE	GPS Coordinates: Lat. 45.840273 Long. -92.592046
Water Body Name North Fork Flowage			Bridge Name North Fork Flowage Bridge		County Inventory Number BURNETT-13	
Funded Trail Name or Number (SNARS if applicable) Corridor Trail 45			Has this bridge site ever received development or rehabilitation funds in the past? <input checked="" type="radio"/> Yes <input type="radio"/> No Year: 2004 \$ 14,200.00			
Bridge is located on: <input type="radio"/> Private property <input checked="" type="radio"/> Public property			Old Bridge/Culvert Size 40'x12' New Bridge/Culvert Size 60'x12'			
Landowner Where Bridge is Located Wisconsin DNR			Telephone Number (715) 463-2739		Length of Trail Use Agreement (5 year minimum)	
Current maximum load 12,000 lbs.		Age of Bridge 21 years		Bridge Material Steel frame, wood decking		
Proposed maximum load 25,000 lbs.						
Sponsoring Club Name Burnett County Snow Trails Association			Club Contact Danny Carlson		Telephone Number (715) 566-0177	
Do you have your trail bridges posted as to maximum load? <input checked="" type="radio"/> Yes <input type="radio"/> No			What is the maximum load of the other bridges on the system if groomed with this bridge?			
What is the weight of your puller & drag/grading equipment? 14,000 lbs						
What other recreational trail uses are planned for this bridge? No other recreational trail uses						
If there are other Recreational uses planned, how much of the bridge cost will be paid for by non-snowmobile or non-ATV users?						

- ☒ Yes ☐ No Have you contacted your local DNR Water Management Specialist (WMS) regarding a permit?
- ☐ Yes ☒ No Is a permit needed? (Please provide any written correspondence from WMS.)
- ☐ Yes ☒ No Have you contacted your County Zoning Dept. regarding a floodplain determination?
- ☐ Yes ☒ No Will an H & H (hydrologic and hydraulic) study be required?

Bridge Project Detailed Description

Burnett County is requesting funding for a bridge replacement project on Snowmobile/Winter ATV Corridor Trail 45 in western Burnett County. The North Fork Flowage bridge was installed in 2004, is 40' x 12', and rated for 12,000 pounds. The bridge was placed on existing abutments in 2004, and the age of them is unknown. The abutments are now starting to fail, and erosion is occurring around them. We propose replacing this bridge with a new, 60' bridge on new abutments. The longer length is a better option for this site, and combined with new abutments will resolve the erosion issues that are currently occurring. This segment of Trail 45 runs through Crex Meadows State Wildlife Area and is an important corridor connecting Grantsburg to Danbury. This project was granted \$82,000 in snowmobile and ATV funding in 2023, however, costs have increased due to additional engineering being required by DNR and higher bridge costs than originally estimated. The revised cost estimate for the bridge is from SEH Engineering. RTP funding is also being applied for.

Guidelines for Applicant

Complete this form for each bridge structure you are submitting a grant application for. Provide any additional documents not requested on application checklist to substantiate your points, including actual deeded easements.

Category		Possible Points	Actual Points
1	Condition of the Structure (max of 10 points)		
	Has a certified bridge inspection report that supports the project & demonstrates need (see example, must provide copy of report by August 1 for 2024 only)	10	0
2	Permits (maximum points 4)		
	Consultation with DNR Water Mgmt Specialist has occurred & permit is likely, if needed	1	
	Permit in hand / Bridge already permitted	3	3
3	Funding (maximum points 2) Are other funds already committed?		
	50% or greater from other funding source(s)?	2	
	11% - 49% from other funding source(s)?	1	
4	Length of Written Easements or Land Use Agreement (max points 5)(ch. 23.09(26)(am)1 WI Stats)		
	On public land (County, State, Federal)	5	5
	10 or more year deeded easement on private land or other public land, for <u>all portions of that trail to the nearest road on each side of the bridge</u>	5	
	3-9 year deeded easement on private land or other public land, for <u>all portions of that trail to the nearest road on each side of the bridge</u>	4	
	10 or more year deeded easement on private land or other public land, for <u>just the bridge site</u>	3	
	3-9 deeded easement on private land or other public land, for <u>just the bridge site</u>	2	
	10 or more year land use agreement (LUA, not deeded) on private land or other public land	1	
	3-9 year land use agreement (LUA, not deeded) on private land or other public land	0	
5	Miles Impacted – How many miles will need to rerouted if the structure is not replaced? Measured from nearest intersection on both sides of the bridge. (max 4 points)		
	Less than 20 miles	1	
	20 miles or more	3	3
	No other snowmobile trails connect. Explain:	4	
DEDUCTIONS			
6	County Active Project Deduction (maximum deduction 1 point) A snowmobile active project is one that has exceeded it's initial grant period.		
	Two or more active projects - deduct 1 point	-1	
GRAND TOTAL			11

Comments/Notes:

Appendix A (continued)**Summarize Costs in Appropriate Categories:****Bridge Structure****Quote 1**☒ Steel ☐ Wooden**Quote 2**☐ Steel ☐ Wooden

Bridge Dimensions:

60'x12'

Bridge Manufacturer:

Unknown - SEH Engineering Estimate

Design Weight Load

25,000 lbs.

Cost of Structure:

1. Engineering

\$ 40,219

\$

2. Structure

\$ 304,000

\$

Subtotal

\$ 344,219

\$

Quote 1☐ Contractor or ☐ Sponsor
Estimate**Quote 2**☐ Contractor or ☐ Sponsor
Estimate**Installation Costs:**

1. Engineering

\$

\$

2. Site Preparation

\$

\$

3. Abutments

\$

\$

4. Pilings/Piers

\$

\$

5. Approaches

\$

\$

6. Riprap

\$

\$

7. Labor

\$

\$

8. Equipment Rental

\$

\$

9. Culverts

\$

\$

10. H & H Study

\$

\$

11. Wetland Delineation

\$

\$

12. Other

\$

\$

Subtotal

\$

\$

Total Cost

\$ 344,219

\$

For the application grant, you must take the lowest of the two quotes.**Entire Deck and Railing Projects**☐ Contractor ☐ Sponsor ☐ Club

Bridge Dimensions:

Design Weight Load

lbs.

1. Materials

\$

2. Labor

\$

Total

\$

For use with Recreation Grant Application Forms

Project Name:		Prepared By:	Date
Trail 45 North Fork Flowage Bridge Rehabilitation		Susan Tollander	04/07/2025
County	Project Applicant:	Landowner Name	<input checked="checked" type="radio"/> Public
Burnett	Burnett County Forest & Parks	Wisconsin DNR	<input type="radio"/> Private

	Indicate - (C) Contract , (F) Force Acct., (D) Donated				
	DEVELOPMENT PROJECT ITEMS <i>List by individual item or break down by Use Areas (See Item List On Back Of This Form)</i>	Quantity	Unit of Measure	Component Costs	Estimated Total Item Cost
C	Replace existing bridge with new, 60'x12' bridge	1		\$304,000.00	304,000.00
C	Engineering contract	1		\$40,219.00	40,219.00
	Snowmobile/ATV Grants Received	2		(\$82,000.00)	
	ADDITIONAL FUNDING NEEDED			\$262,219.00	
				TOTAL \$	\$344,219.00

NOTE:

- For development projects, contingency and indirect costs are not eligible expenses.
- For acquisition projects, complete the Acquisition Project Cost Estimate Section of this form.













Client Project No. -

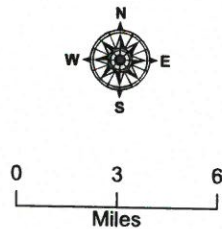
Engineer's Estimate

TOTAL ESTIMATED COST OF CONSTRUCTION

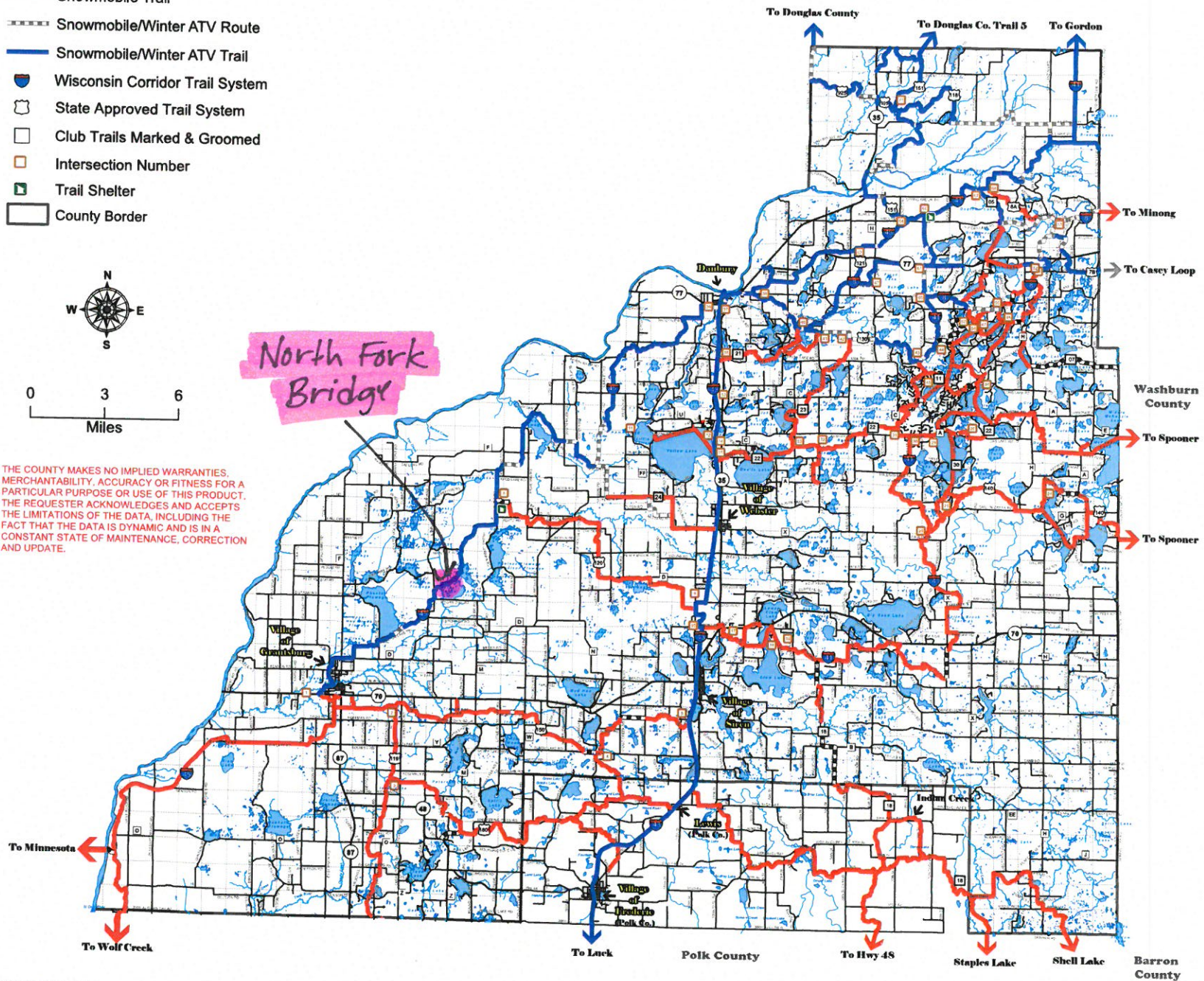
\$ 349,600.00

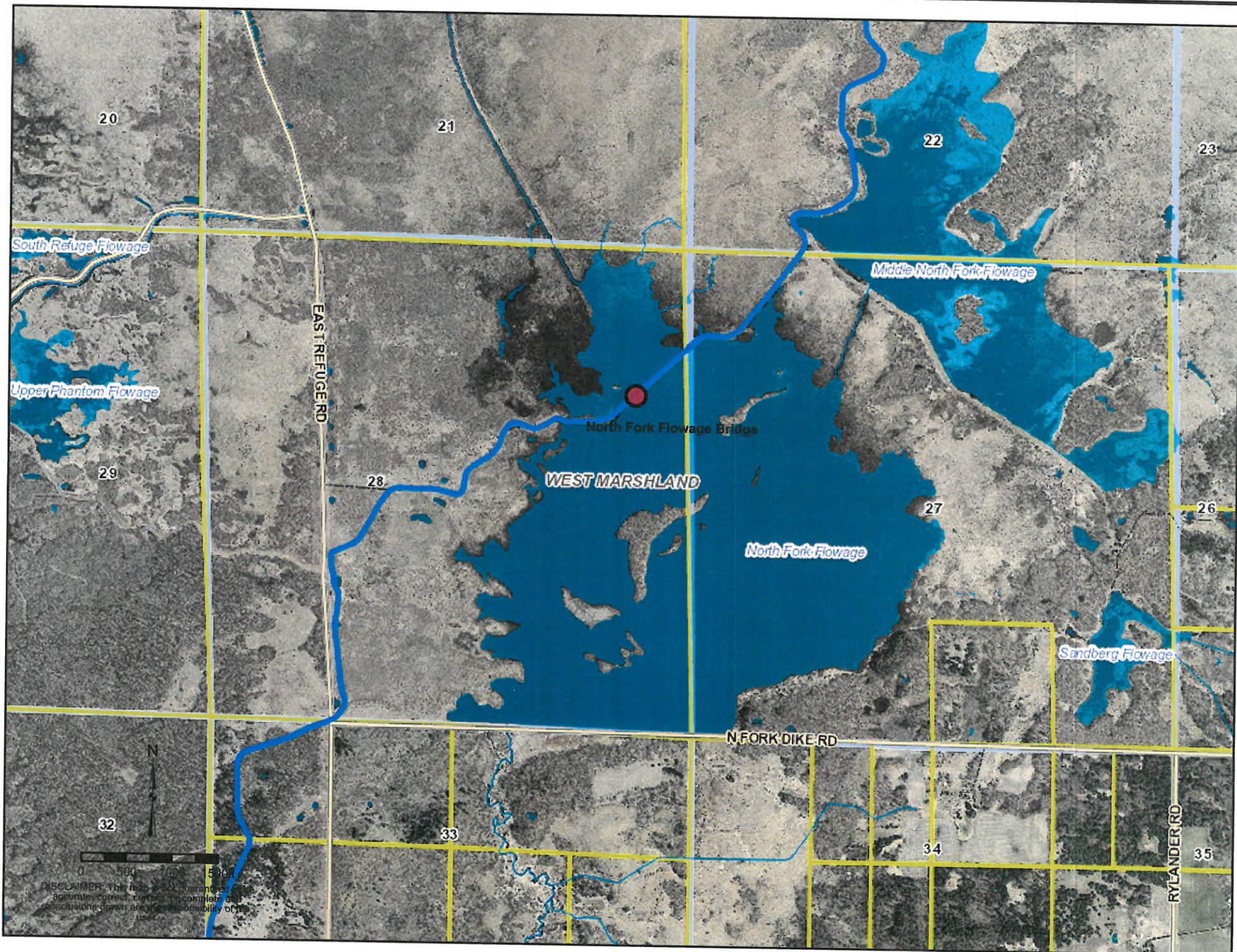
Legend

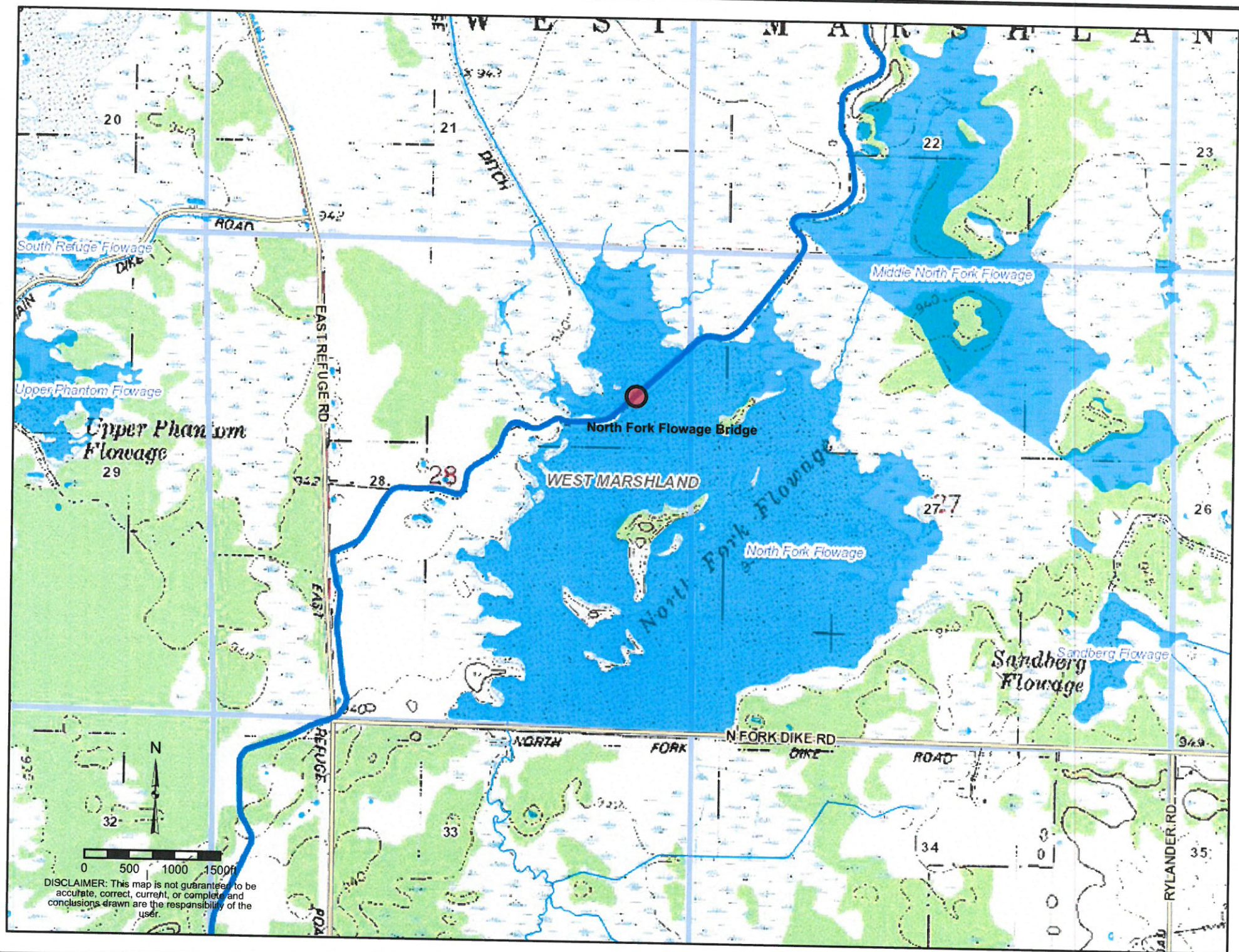
-  Snowmobile Route
-  Snowmobile Trail
-  Snowmobile/Winter ATV Route
-  Snowmobile/Winter ATV Trail
-  Wisconsin Corridor Trail System
-  State Approved Trail System
-  Club Trails Marked & Groomed
-  Intersection Number
-  Trail Shelter
-  County Border

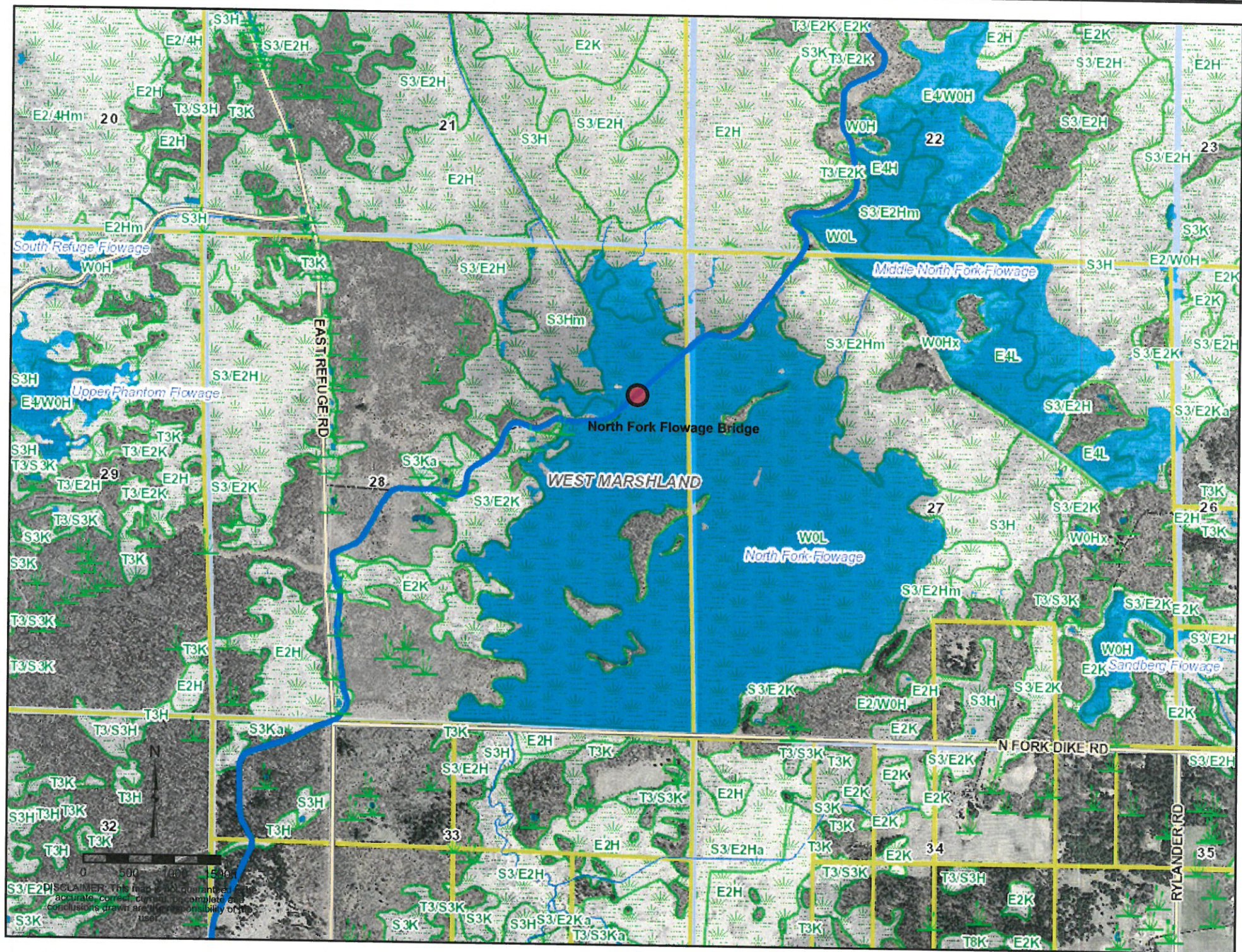


THE COUNTY MAKES NO IMPLIED WARRANTIES, MERCHANTABILITY, ACCURACY OR FITNESS FOR A PARTICULAR PURPOSE OR USE OF THIS PRODUCT. THE REQUESTER ACKNOWLEDGES AND ACCEPTS THE LIMITATIONS OF THE DATA, INCLUDING THE FACT THAT THE DATA IS DYNAMIC AND IS IN A CONSTANT STATE OF MAINTENANCE, CORRECTION AND UPDATE.









Tollander, Susan

From: Harrington, Dan - DNR <Dan.Harrington@wisconsin.gov>
Sent: Friday, February 7, 2025 9:00 AM
To: Dave Kafura
Cc: Tollander, Susan; Nichols, Jason
Subject: RE: Crex-North Fork Bridge Design
Attachments: Bridge Elevation Exhibit-EX1 COMPARISON EXHIBIT.pdf

Good Morning Everyone; I agree with David's statement that "the proposed bridge would meet the "In-Kind Replacement/Maintenance of a Previously Permitted Structure" exemption. Be sure to send me photos of the completed project.

Regards, DAn

Dan Harrington

Phone: (715) 733-0019

Dan.Harrington@Wisconsin.gov

From: Dave Kafura <dave@wisconsincountyforests.com>
Sent: Tuesday, February 4, 2025 8:33 AM
To: Harrington, Dan - DNR <Dan.Harrington@wisconsin.gov>
Cc: Tollander, Susan <susan.tollander@burnettcountywi.gov>; Nichols, Jason <Jason.Nichols@burnettcountywi.gov>
Subject: Crex-North Fork Bridge Design

**CAUTION: This email originated from outside the organization.
Do not click links or open attachments unless you recognize the sender and know the content is safe.**

Good morning Dan;

On behalf of Burnett County Forestry and Parks, please see the attached blueprint comparison document prepared by SEH Inc. As you recall, we visited the site on Nov. 12, 2024 to go over conceptual design issues for replacing the bridge over the pumphouse ditch that discharges into North Fork Flowage at Crex.

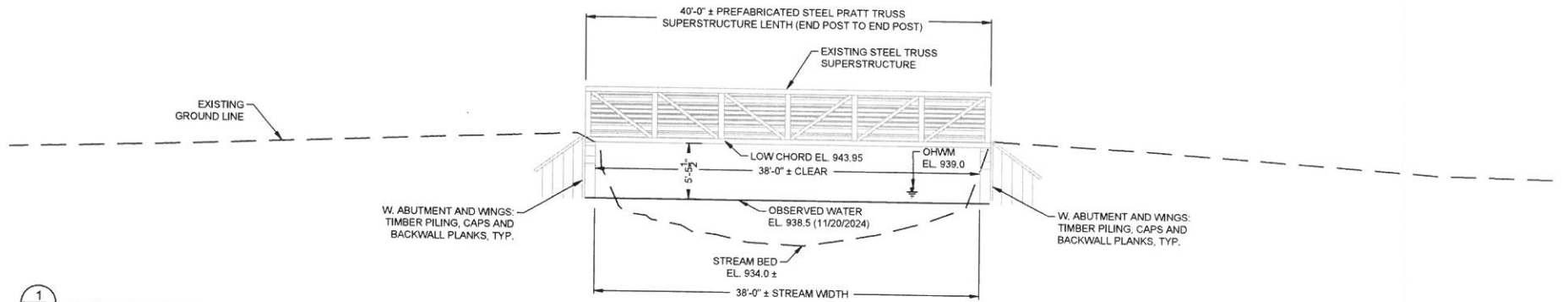
The multiple plan sheets provided to Burnett Co. were very detailed. I requested SEH to provide a simple addendum that would show the existing structure profile compared to the proposed bridge structure. Obviously the main purpose of my request was to provide you with a side-by-side comparison that would make a relatively easy regulatory decision on whether the proposed bridge would meet the "In-Kind Replacement/Maintenance of a Previously Permitted Structure" exemption. The proposed NR 320 WI Admin. Code includes codification of the "In-Kind" exemption and allows for modification (ie; doesn't need to be exact replication). The current bridge was permitted by Ed Slaminski under a short form application.

We are seeking a determination that the proposed bridge replacement would be exempt from additional Ch. 30 permitting process under the In-Kind Replacement exemption.

Thanks again Dan for coming out to the site and we look forward to a regulatory decision on the exemption assertion. Let me know if you need anything else or need any clarification.

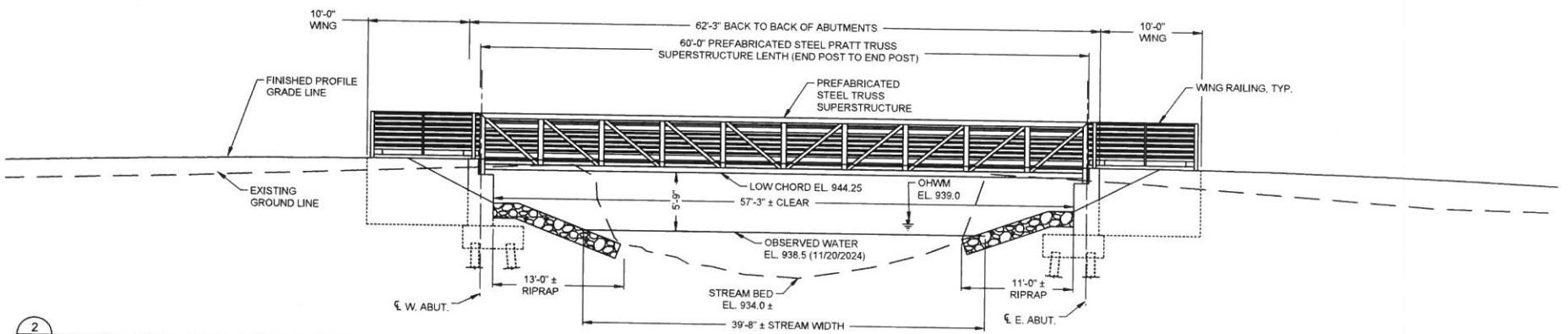
SEH PROJECT NUMBER

181898



1
EX1
ORIGINAL SCALE: 1" = 10'-0"

ELEVATION VIEW - EXISTING



2
EX1
ORIGINAL SCALE: 1" = 10'-0"

ELEVATION VIEW - PROPOSED

IMPROVEMENT COMPARISON

	EXISTING	PROPOSED
BRIDGE LENGTH (END POST TO END POST)	40'-0" ±	60'-0"
CLEAR OPENING WIDTH BETWEEN ABUTMENTS	38'-0" ±	57'-3"
VERTICAL CLEARANCE ABOVE OBS. WSE (11/20/2024)	5'-5 1/2"	5'-9"
WATERWAY WIDTH	38'-0" ±	39'-8" ±

NO.	DATE	REVISION	BY
STRUCTURE TR45 @ N. FK. FLWG			
DRAWN BY		PLANS	BY
		ZM	CK'D
BRIDGE ELEVATION EXHIBIT			SHEETEX1















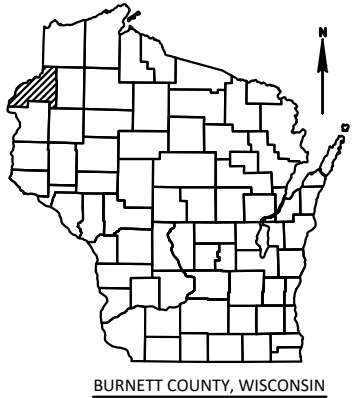




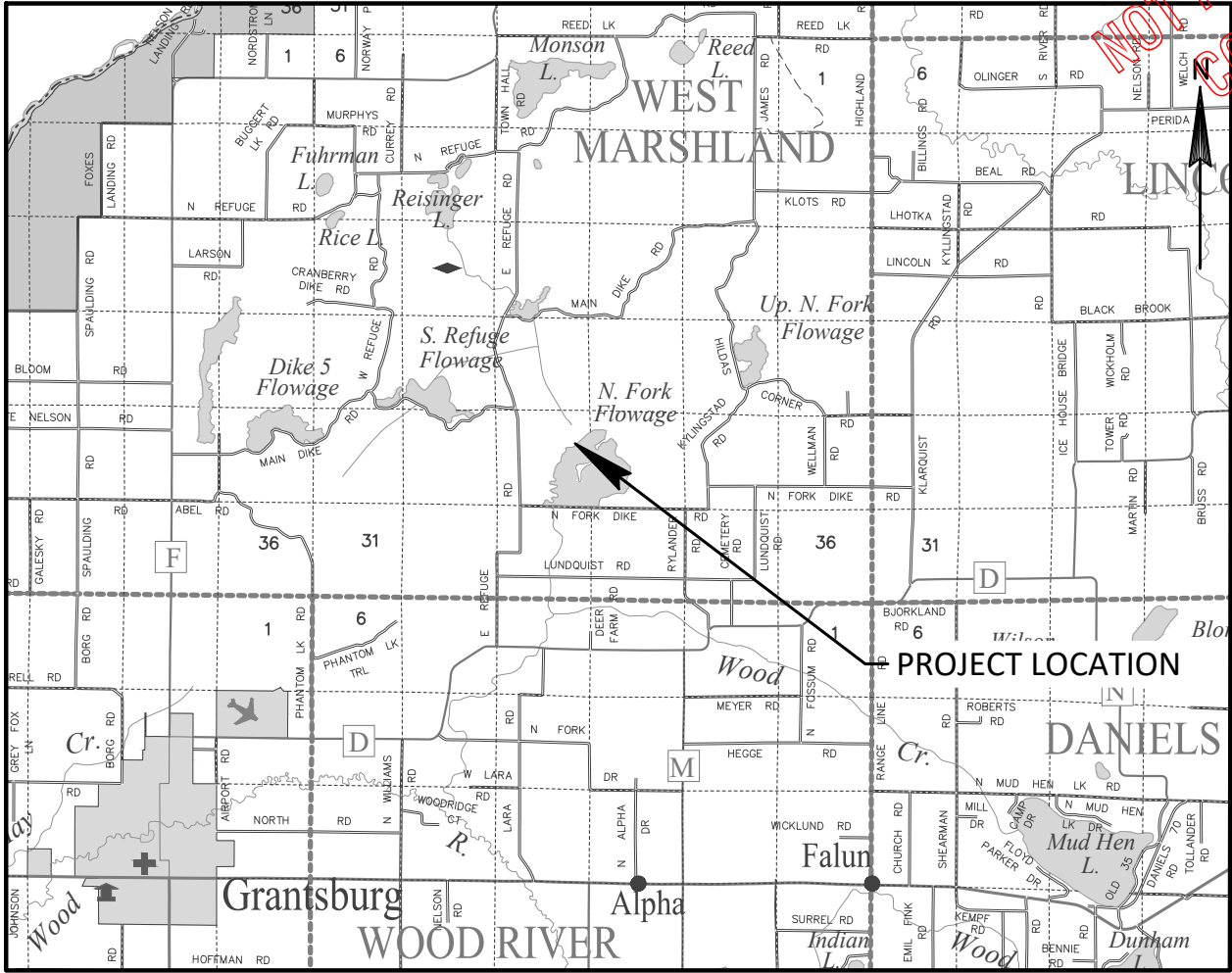


PLAN OF PROPOSED IMPROVEMENT
FOR
Trail 45 Bridge Over North Fork Flowage Replacement
IN THE
Town of West Marshland
Burnett County, Wisconsin

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	GENERAL NOTES
3	PROJECT OVERVIEW
4	TYPICAL SECTIONS
6	CONSTRUCTION DETAILS
7	EROSION CONTROL
9	ALIGNMENT DETAILS
10 - 11	MISCELLANEOUS QUANTITIES
12	PLAN & PROFILE
13 - 15	WISDOT SDD
16 - 19	WISDOT SIGN PLATES
20 - 25	CROSS SECTIONS



VICINITY MAP
(West Burnett Co.)



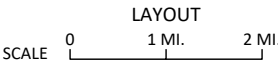
T-39-N

T-38-N

R-19-W

R-18-W

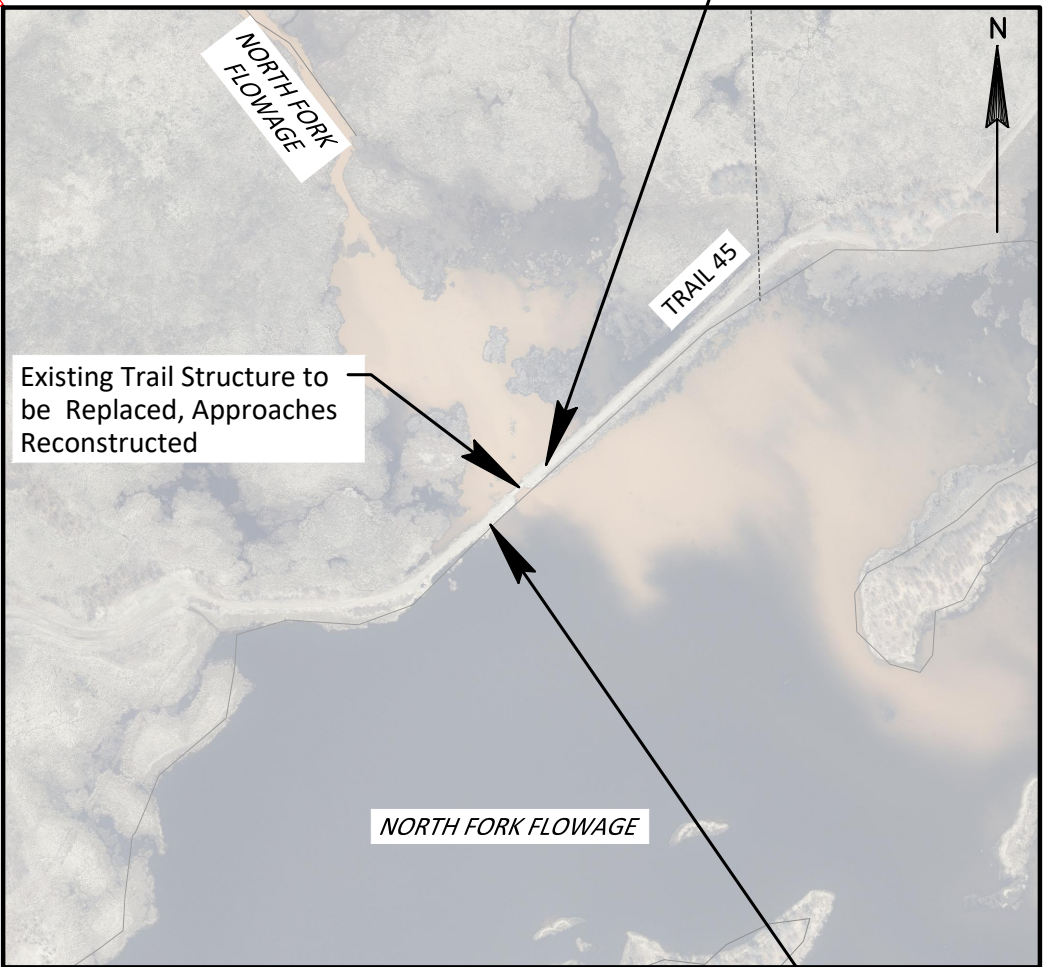
R-17-W



HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), BURNETT 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.

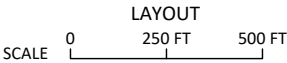
SITE MAP



END PROJECT
STA 12+00

BEGIN PROJECT

STA 7+50
Y = 173,583.037
X = 175,596.064



Original Plans Prepared by



Short Elliott Hendrickson Inc.
326 S Main Street, Suite 100
Rice Lake, WI 54868

Building a Better World
for All of Us™ 715.236.4000 main | 888.908.8166 fax
800.903.6970 toll free | www.sehinc.com

(Signature) (Date)

Accepted For
Burnett County, Wisconsin
by:

(Signature) (Date)

(Title of Official)

FILE NO.
181898

1

21

Save: 3/18/2025 10:32 AM mgundry Plot- 3/18/2025 2:26 PM X:\AE\B\BUREP\181898\5-final.dgn\C3D Bunett Cnty Trail\Sheets\SEC 02 Typ Sec & Details\020101_gn (General Notes).dgn

STANDARD ABBREVIATIONS

ABUT	ABUTMENT	HYD	HYDRANT
AC	ACRE	ID	INSIDE DIAMETER
AGG	AGGREGATE	INV	INVERT
AECPRC	APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE	IP	IRON PIPE ON PIN
AECPCS	APRON ENDWALL FOR CULVERT PIPE CORRUGATED STEEL	LHF	LEFT-HAND FORWARD
ASPH	ASPHALTIC	L	LENGTH OF CURVE
AVG	AVERAGE	LF	LINEAR FOOT
ADT	AVERAGE DAILY TRAFFIC	LC	LONG CHORD OF CURVE
BF	BACK FACE	LS	LUMP SUM
BM	BENCH MARK	MH	MANHOLE
BR	BRIDGE	MOR	MID POINT OF RADIUS
CE	COMMERCIAL ENTRANCE	NC	NORMAL CROWN
C/L	CENTER LINE	NO	NUMBER
Δ	CENTRAL ANGLE OR DELTA	OBLIT	OBLITERATE
COB	CENTER OF BARRIER	PAVT	PAVEMENT
CONC	CONCRETE	PE	PRIVATE ENTRANCE
CPRC	CULVERT PIPE REINFORCED CONCRETE	PVRC	POINT OF VERTICAL REVERSE CURVE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL	QOR	QUARTER POINT OF RADIUS
CR	CREEK	R	RADIUS
CY	CUBIC YARD	REQ'D	REQUIRED
C&G	CURB AND GUTTER	RES	RESIDENCE OR RESIDENTIAL
D	DEGREE OF CURVE	RHF	RIGHT-HAND FORWARD
DHV	DESIGN HOUR VOLUME	R/W	RIGHT-OF-WAY
DISCH	DISCHARGE	R	RIVER
DG	DITCH GRADE	RDWY	ROADWAY
DWY	DRIVEWAY	R/L	REFERENCE LINE
X	EAST GRID COORDINATE	SALV	SALVAGED
EAT	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL	SAN	SANITARY SEWER
EOR	END POINT OF RADIUS	SF	SQUARE FEET
EL	ELEVATION	SY	SQUARE YARD
ENT	ENTRANCE	SDD	STANDARD DETAIL DRAWINGS
ESALS	EQUIVALENT SINGLE AXLE LOADS	STA	STATION
EXC	EXCAVATION	SS	STORM SEWER
EBS	EXCAVATION BELOW SUBGRADE	SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
EXIST	EXISTING	SE	SUPERELEVATION RATE
FC	FACE OF CURB	TC	TOP OF CURB
FF	FACE TO FACE	T OR TN	TOWN
FERT	FERTILIZE	T	TRUCKS (PERCENT OF)
FE	FIELD ENTRANCE	TYP	TYPICAL
FL	FLOW LINE	VAR	VARIABLE
FO	FIBER OPTIC	VC	VERTICAL CURVE
CWT	HUNDREDWEIGHT	Y	NORTH GRID COORDINATE
		YD	YARD

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	
MARSH AREA		STORM SEWER	
WOODED OR SHRUB AREA		TELEPHONE	
		WATER	
		UTILITY PEDESTAL	
		POWER POLE	
		TELEPHONE POLE	

DNR AREA LIAISON:

DNR NORTHERN REGION HEADQUARTERS
810 W MAPLE STREET
SPOONER, WI 54801
TELEPHONE: 715.733.0019
ATTENTION: DAN HARRINGTON
EMAIL: DAN.HARRINGTON@WISCONSIN.GOV

DESIGN CONTACT:

SHORT ELLIOTT HENDRICKSON INC.
10 N BRIDGE STREET
CHIPPEWA FALLS, WI 54729
TELEPHONE: 715.720.6246
ATTENTION: MATT GUNDRY
EMAIL: MGUNDRY@SEHINC.COM

UTILITY CONTACT LIST:

THERE ARE NO KNOWN UTILITY FACILITIES IN THE PROJECT AREA.

MUNICIPAL CONTACT:

BURNETT COUNTY FOREST & PARKS
8150 State Road 70
SIREN, WISCONSIN, 54872
TELEPHONE: 715.349.2157
ATTENTION: SUSAN TOLLANDER
EMAIL: SUSAN.TOLLANDER@BURNETTCOUNTYWI.GOV

GENERAL NOTES:

- NO TREES OR SHRUBS SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.
- THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.
- WETLANDS, WATERWAYS, AND OTHER ENVIRONMENTALLY SENSITIVE AREAS SHALL BE PROTECTED AT ALL TIMES. DO NOT STORE EQUIPMENT OR MATERIALS NEAR THESE SITES UNLESS APPROVED BY THE ENGINEER.
- TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
- THE EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
- ASPHALTIC AND CONCRETE SURFACES SHALL BE SAWCUT AT THE MATCH LINE AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER.
- DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE SALVAGED TOPSOILED, FERTILIZED AND SEEDED.
- FERTILIZER SHALL NOT BE USED WITHIN 20 FEET OF NAVIGABLE WATERWAYS OR WETLANDS.

DIGGERSHOTLINE

Dial 811 or (800)242-8511

www.DiggersHotline.com

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 1.1 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.7 ACRES

SEH Project	181898	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	GE						
Designed By	MJG						
Checked By	MJG						



Trail 45 Bridge Replacement
TOWN OF WEST MARSHLAND

GENERAL NOTES

PLOT SCALE: 1.0 IN = 1.0 FT

Save: 3/17/2025 2:47 PM mgundry Plot: 3/18/2025 2:27 PM X:\AE\B\B\URFP\181898\5-final-dsgn\C3D Bunett Cnty Trail\Sheets\SEC 02 Typ Sec & Details\020201-po (Project Overview).dwg

NOTES:

WATER LEVELS OF NORTH FORK FLOWAGE IS SEASONALLY CONTROLLED. WATER LEVELS ARE DRAWN DOWN IN SPRING AND SUMMER TO PROMOTE VEGETATION GROWTH AND FLOODED IN AUTUMN TO FACILITATE WATERFOWN FEEDING. WATER SURFACE ELEVATIONS SHOWN IN THE PLAN REPRESENT OBSERVED FLOODED CONDITIONS IN LATE AUTUMN 2024.

NORTH FORK FLOWAGE

S28-T39N-R18W
WISCONSIN CONSERV. COMM.

BEGIN PROJECT
STA 7+50

0.75 MI. TO EAST REFUGE ROAD

TRAIL 45

1.7 MI. TO MAIN DIKE ROAD

END PROJECT
STA 12+00

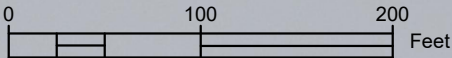
EXISTING GROUND SURFACE
CONTOURS (TYP)

REPLACE EXISTING 40' LONG STEEL TRUSS
PEDESTRAIN BRIDGE ON TIMBER ABUTMENTS
WITH 60' LONG STEEL TRUSS PEDESTRIAN BRIDGE
ON CONCRETE ABUTMENTS AND STEEL PILING

NORTH FORK FLOWAGE

N

WISCONSIN CONSERV. COMM.



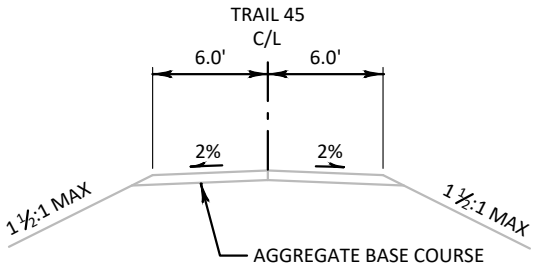
SEH Project	181898	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	GE						
Designed By	MJG						
Checked By	MJG						



Trail 45 Bridge Replacement
TOWN OF WEST MARSHLAND

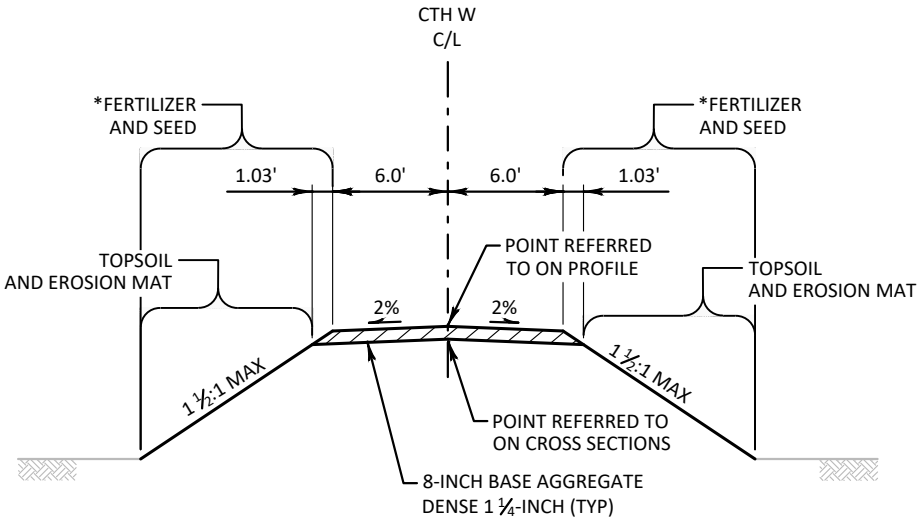
PROJECT OVERVIEW

Save: 3/16/2025 2:07 PM ngundry Plot: 3/18/2025 2:27 PM X:\AE\B\B\URFP\181898\5-final-dsgn\C3D Bunett Cnty Trail\ Sheets\SEC 02 Typ Sec & Details\020300_ts (Typical Sections).dwg



TYPICAL EXISTING SECTION

TRAIL 45
STA 7+50 - STA 9+79
STA 10+21 - STA 12+00



* = OMIT FERTILIZER WITHIN 20.0' OF THE EDGE OF WATER

TYPICAL FINISHED SECTION

TRAIL 45
STA 7+50 - STA 9+69
STA 10+31 - STA 12+00

SEH Project	181898	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	GE						
Designed By	MJG						
Checked By	MJG						

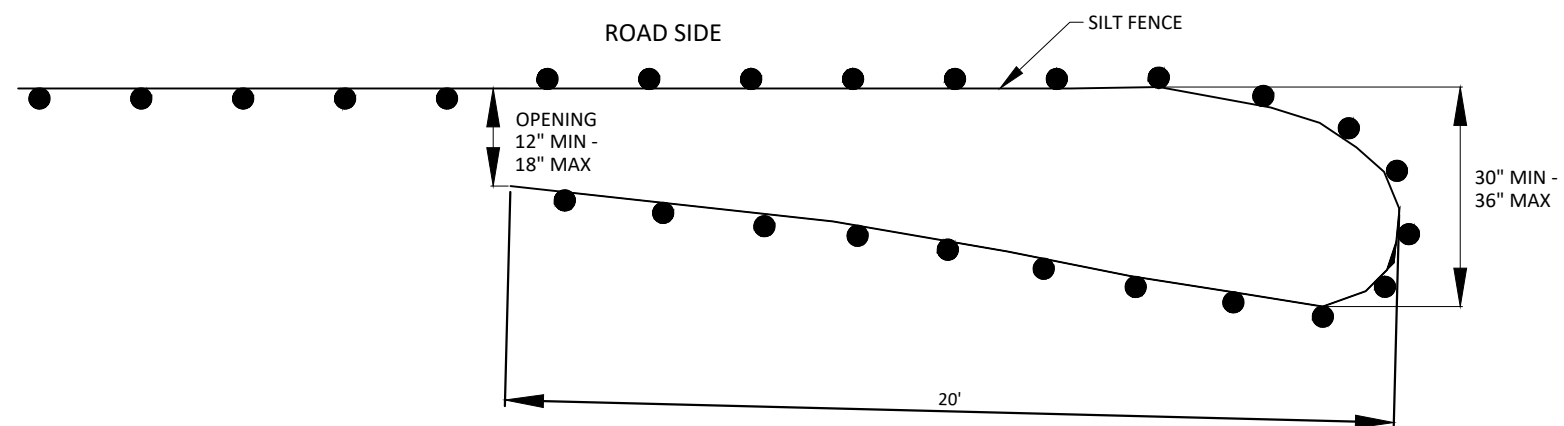


Trail 45 Bridge Replacement
TOWN OF WEST MARSHLAND

TYPICAL SECTIONS

4
of 21

PLOT SCALE: 1.0 IN = 10.0 FT



PLAN VIEW

TEMPORARY SMALL ANIMAL TURN-AROUND

GENERAL NOTES:
SILT FENCE POSTS FOR THE TURN-AROUND SHOULD BE ON THE OUTSIDE OF THE TURN-AROUND AND TRENCHED IN ACCORDING TO SILT FENCE REQUIREMENTS. THE PURPOSE OF THE TURN-AROUNDS ARE TO REDIRECT SMALL REPTILES AWAY FROM THE CONSTRUCTION ZONE.

EROSION CONTROL NOTES:

PLACE SALVAGED TOPSOIL, SEED, FERTILIZER AND MULCH WITHIN ANY SURFACE SLOPE INTERCEPT AREAS THAT DO NOT USE EROSION MAT. NOTE, OMIT FERTILIZER APPLICATION WITHIN 20' OF THE WATER'S EDGE.

DO NOT DRIVE EQUIPMENT OR STORE EQUIPMENT OR MATERIALS IN WETLANDS OR WATERWAYS.

PLACE SILT FENCE TWO FEET FROM THE SLOPE INTERCEPT WHERE APPROPRIATE.

NORTH FORK FLOWAGE

EP: 12+00.00

TRAIL 45
(GRAVEL)

END PROJECT
STA 12+00

SLOPE INTERCEPT (TYP)

PI: 10+30.00

RIPRAP MEDIUM 500 SF

RIPRAP MEDIUM, 500 SF

PI: 8+46.18

NORTH FORK FLOWAGE

BP: 7+50.00

BEGIN PROJECT
STA 7+50

TRAIL 45
(GRAVEL)

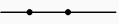
EROSION CONTROL LEGEND



EROSION MAT CLASS II TYPE B



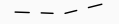
TEMPORARY DITCH CHECK



SILT FENCE



SURFACE WATER FLOW



SLOPE INTERCEPT



TURBIDITY BARRIER

SEH Project
Drawn By
Designed By
Checked By

181898
GE
MJG
MJG

Rev.#

Revision Issue
Description

Date

Rev.#

Revision Issue
Description

Date



Trail 45 Bridge Replacement
TOWN OF WEST MARSHLAND

EROSION CONTROL

6

of 21

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PLOT SCALE: 1.0 IN = 50.3 FT

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SEH Project	181898
Drawn By	GE
Designed By	MJG
Checked By	MJG

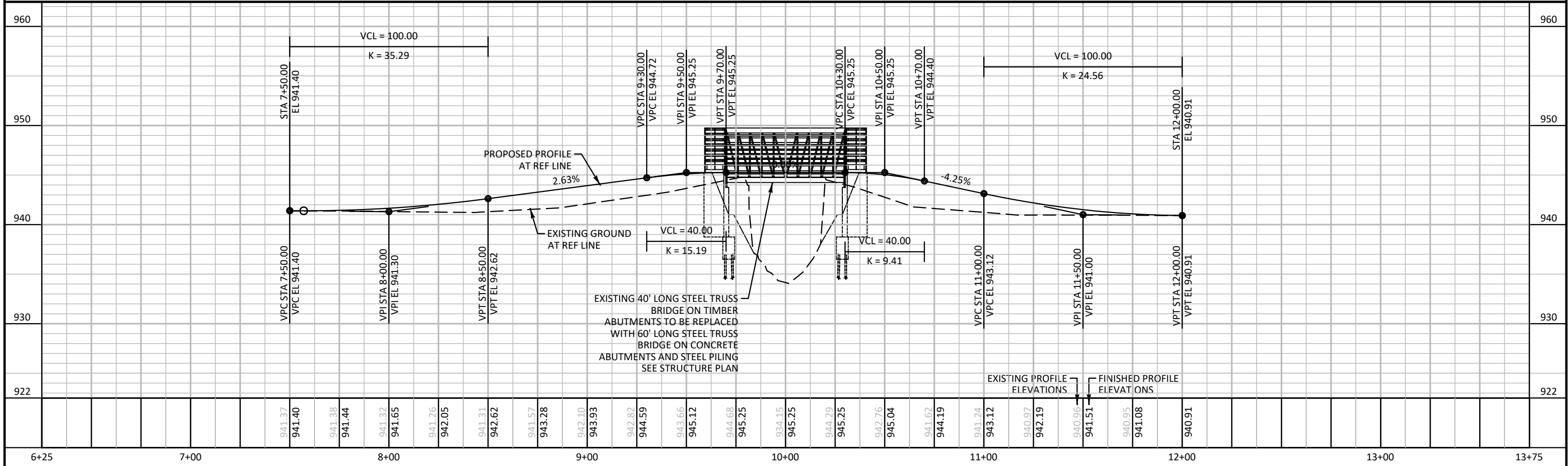
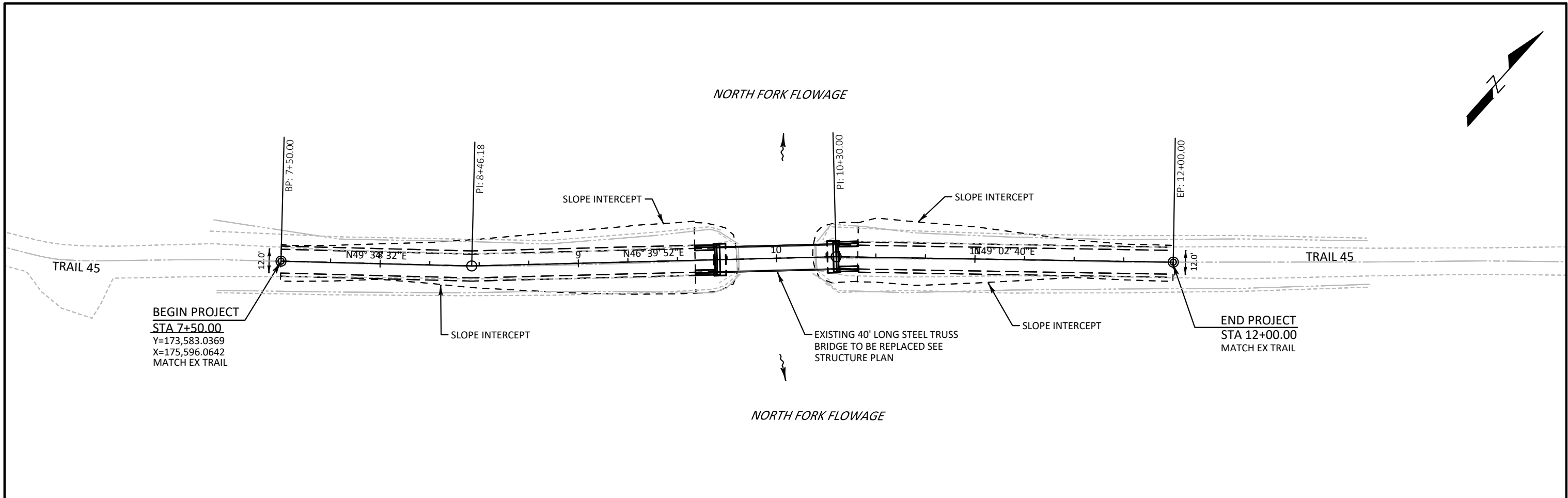
Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date



Trail 45 Bridge Replacement
TOWN OF WEST MARSHLAND

ALIGNMENT DETAILS
TRAIL 45

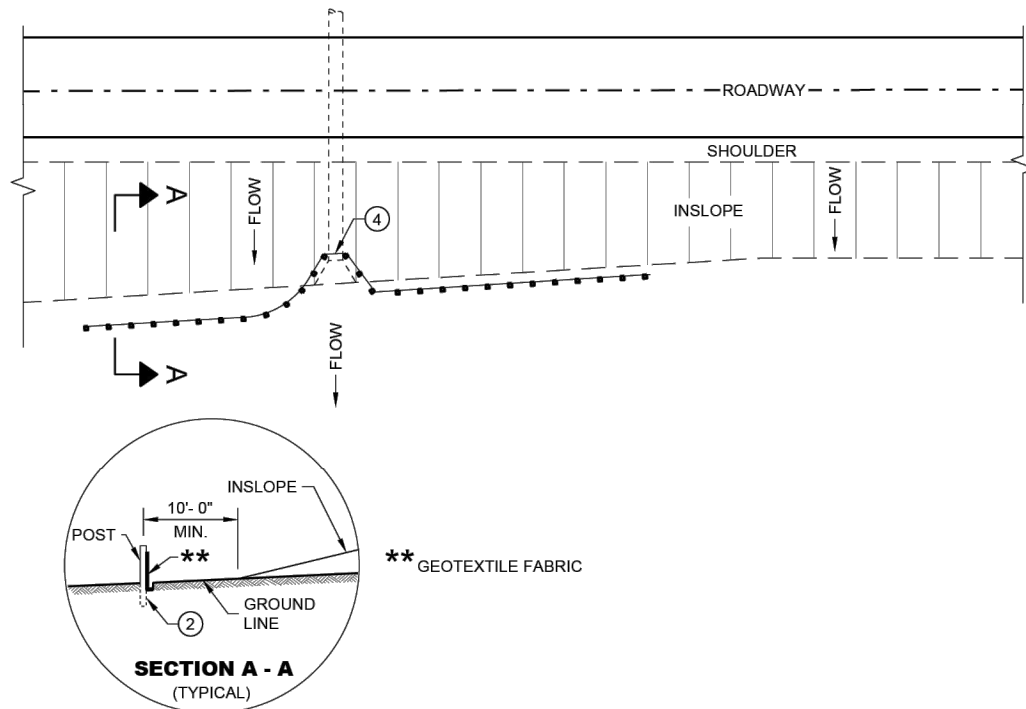
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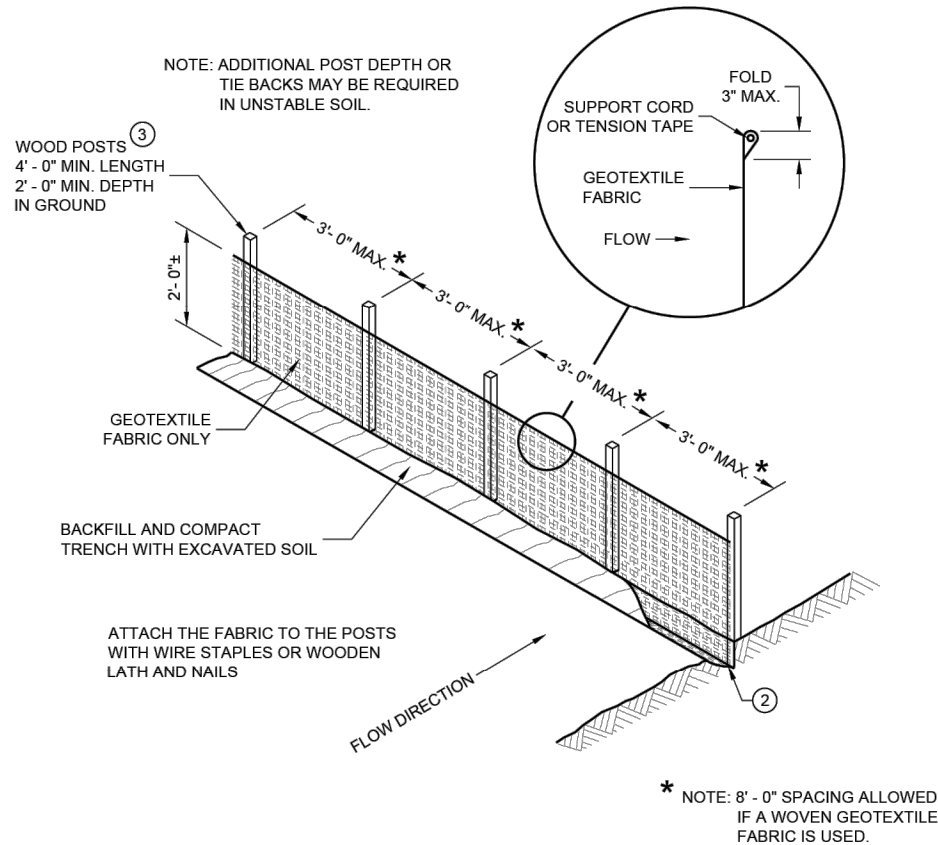
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6

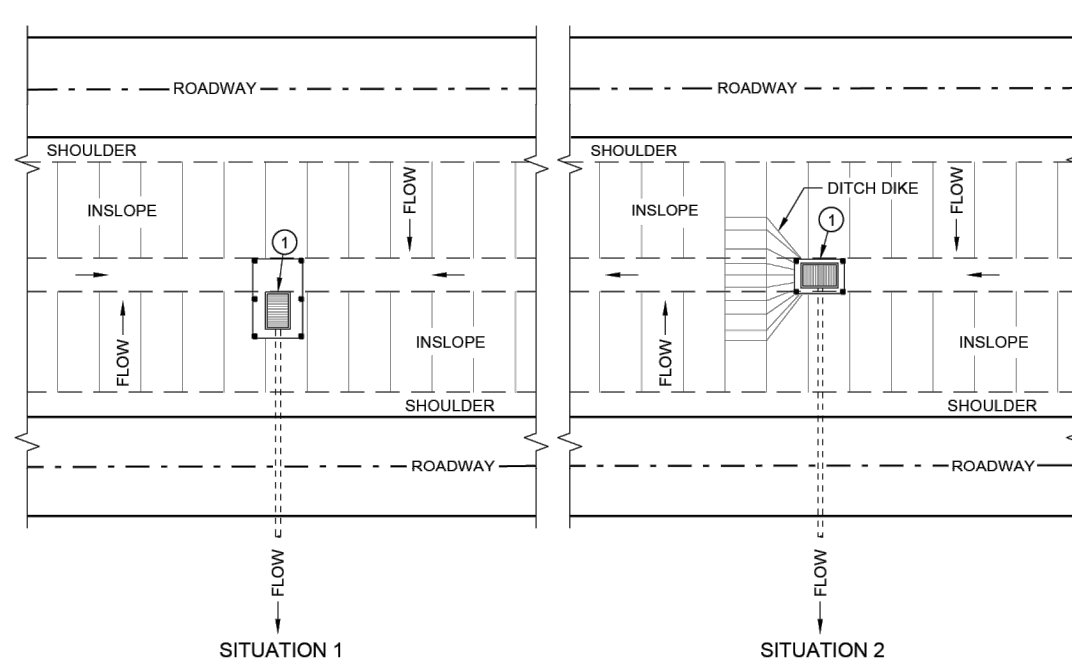
SDD 08E09 - 06



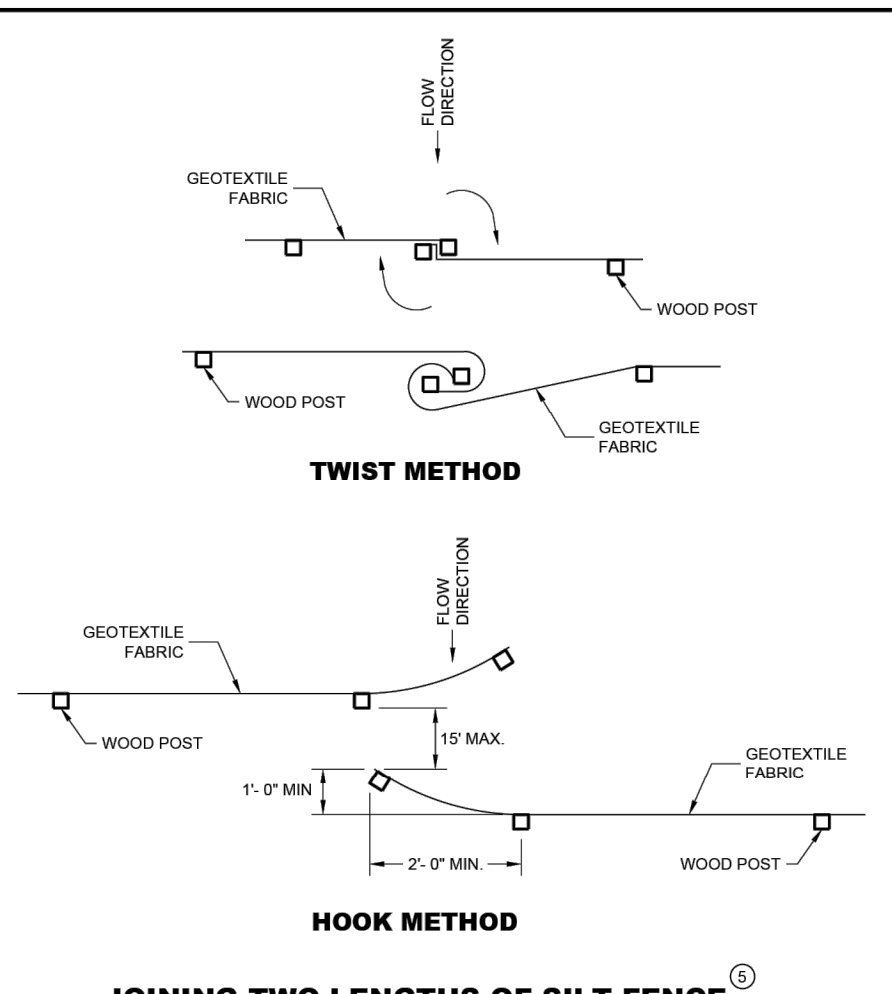
PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE



SILT FENCE



PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

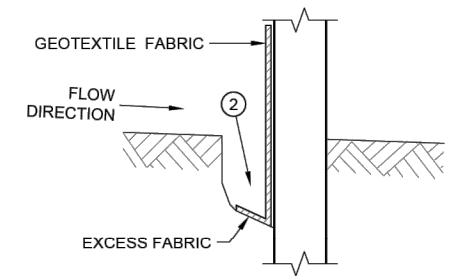


JOINING TWO LENGTHS OF SILT FENCE

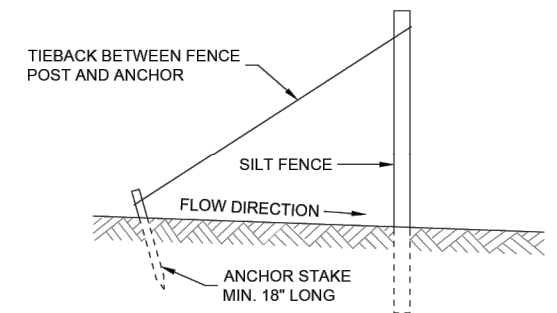
GENERAL NOTES

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



TRENCH DETAIL



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

SEH Project	181898	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	GE						
Designed By	MJG						
Checked By	MJG						



Trail 45 Bridge Replacement
TOWN OF WEST MARSHLAND

WISDOT STANDARD DETAIL DRAWINGS

9
of 21

PLOT SCALE: 1.0 IN = 200.0 FT

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS AND REINFORCING BARS ARE IN ENGLISH UNITS. ALL STATIONS AND ELEVATIONS ARE IN FEET.

IF DEWATERING IS REQUIRED TO PLACE AND CONSTRUCT ABUTMENTS, SUBMIT A DEWATERING PLAN CONFORMING TO THE REQUIREMENTS OF SECTION 31 23 19 FOR APPROVAL PRIOR TO COMMENCING DEWATERING OPERATIONS.

THE SLOPE IN FRONT OF THE ABUMENTS SHALL BE COVERED WITH MEDIUM RIPRAP AND GEOTEXTILE FABRIC TYPE HR TO THE EXTENT SHOWN ON THIS SHEET AND IN THE ABUTMENT DETAILS.

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

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

CHAMFER ALL EXPOSED 90° CONCRETE EDGES WITH A 3/4" CHAMFER STRIP.

ALL PREFABRICATED TRUSS BEARING ANCHOR BOLTS SHALL BE SUPPLIED BY THE PREFABRICATED BRIDGE MANUFACTURER. FINAL ANCHOR BOLT LOCATIONS AT THE ABUTMENTS WILL BE DETERMINED BY THE PREFABRICATED BRIDGE MANUFACTURER.

BRIDGE SEAT REINFORCEMENT SHALL BE CAREFULLY PLACED / ADJUSTED AS NECESSARY TO AVOID INTERFERENCE WITH DRILLING HOLES FOR ANCHOR BOLTS. THE PREFABRICATED TRUSS SHALL BE ERECTED IN ITS FINAL POSITION PRIOR TO DRILLING HOLES FOR AND PLACING THE ANCHOR BOLTS.

THE MINIMUM CENTERLINE DECKING PROFILE-TO-LOW CHORD ELEVATION FOR THE PREFABRICATED TRUSS IS 3'-0". THE VERTICAL DISTANCE FROM THE TOP OF THE DECK TO THE CONCRETE BEARING SEAT IS 3'-6". ANY ADJUSTMENT TO THE BRIDGE SEAT ELEVATION REQUIRES PRIOR APPROVAL BY THE ENGINEER.

AT THE BACKFACE OF THE ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TYPE A.

THE EXISTING STRUCTURE IS A SINGLE-SPAN STEEL TRUSS FOOT BRIDGE ON TIMBER ABUTMENTS. THE BRIDGE HAS AN OVERALL LENGTH OF APPROXIMATELY 40 FEET AND TOTAL WIDTH OF APPROXIMATELY 11 FEET. THE EXISTING BRIDGE IS TO BE SALVAGED AND DELIVERED TO BURNETT COUNTY PRIOR TO CONSTRUCTION OF THE NEW BRIDGE.

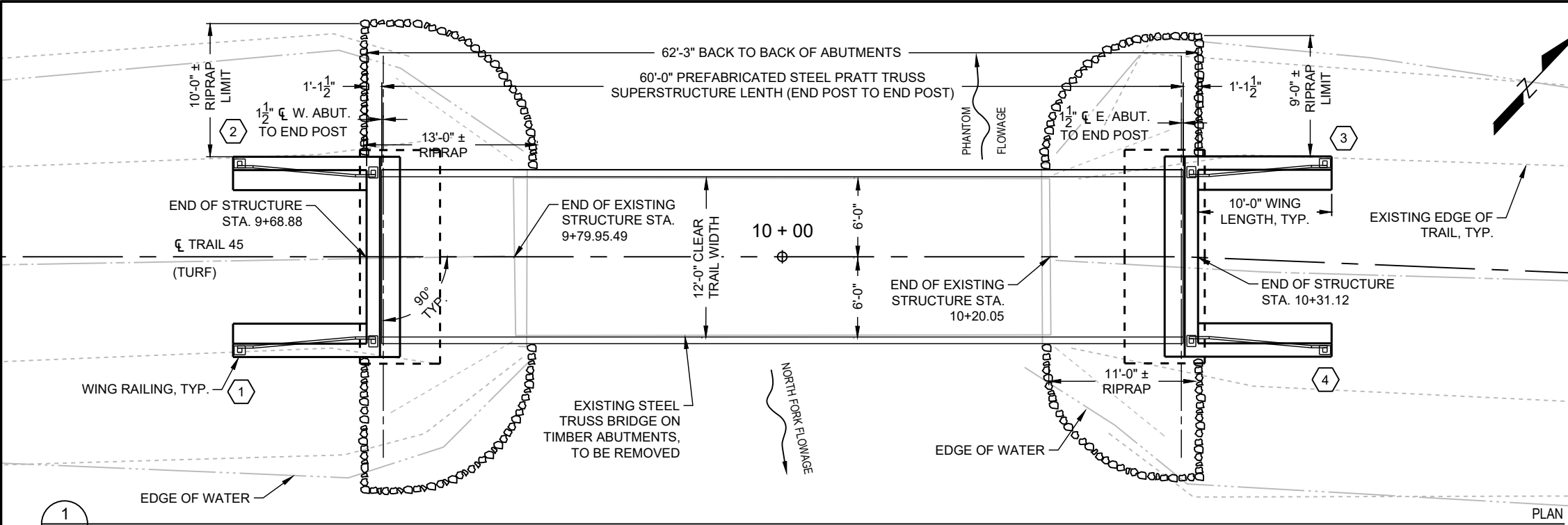
REMOVE EXISTING TIMBER PILES LOCATED WITHIN THE ORDINARY HIGH WATER MARKS FLUSH WITH THE STREAMBED. REMOVE OTHER EXISTING TIMBER PILES FLUSH TO THE FINISHED GROUND SLOPE OR 1-FOOT BELOW NEW STRUCTURAL ELEMENTS, AS APPROPRIATE.

PREFABRICATED BRIDGE MANUFACTURER SHALL INCLUDE BRIDGE NAME PLATE / LOAD LIMIT PLATE AT ABUTMENT END ONLY. PLATE SHALL STATE "12.5 TON VEHICLE LOAD LIMIT." IF LOAD LIMIT PLATE IS OBSTRUCTED, ADDITIONAL PLATES WILL BE PROVIDED UPON REQUEST TO THE BRIDGE MANUFACTURER.

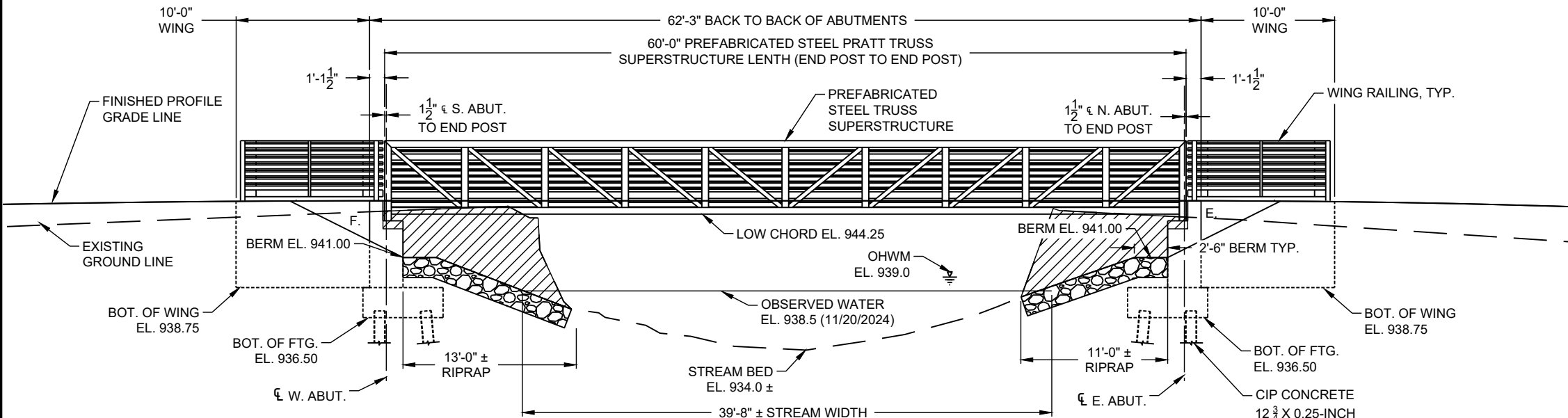
THE REQUIRED DRIVING RESISTANCE (RDR) GIVEN FOR THE PILING REPRESENTS <50% OF THE MAXIMUM PILE CAPACITY. CLOSELY MONITOR DRIVING OPERATIONS TO ENSURE PILING ARE NOT OVERDRIVEN. THE DEPARTMENT WILL NOT PAY FOR DRIVEN PILE LENGTHS GREATER THAN THAT NECESSARY TO ACHIEVE THE RDR.

LIST OF DRAWINGS

- 10 S800 GENERAL PLAN
- 11 S801 CROSS SECTION, PROFILE, AND DETAILS
- 12 S802 ABUTMENT
- 13 S803 ABUTMENT DETAILS
- 14 S804 RAILING DETAILS
- 15 S805 SUBSURFACE EXPLORATION



1 S800 ORIGINAL SCALE: 1" = 10'-0"



2 S800 ORIGINAL SCALE: 1" = 10'-0"

DESIGN DATA

LIVE LOAD:
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS - 9TH EDITION
AASHTO LRFD GUIDE SPECIFICATIONS FOR THE DESIGN OF PEDESTRIAN BRIDGES - 2ND EDITION

LIVE LOAD:
DESIGN LIVE PEDESTRIAN LOAD: 90 PSF
DESIGN VEHICLE LOAD: AASHTO H12.5 TRUCK
RAILING LOAD: 50 PLF TRANS. AND VERT. SIMULTANEOUSLY ON EACH LONG. MEMBER

MATERIAL PROPERTIES:
CONCRETE MASONRY: F'c = 3,500 PSI
HIGH STRENGTH BAR STEEL REINFORCEMENT: Fy = 60,000 PSI
STRUCTURAL CARBON STEEL: Fy = 36,000 PSI (ASTM A709 GRADE 36)

HYDRAULIC DATA

STRUCTURE IS LOCATED AT THE DIVIDE BETWEEN TWO SEASONALLY FLOODED BASINS, EACH WITH MANAGED DISCHARGE CONTROL. THE STRUCTURE ACTS AS A LEVELER BETWEEN THE TWO BASINS. CONTRIBUTING DRAINAGE AREA TO THE STRUCTURE IS NEGLIGIBLE. ANY FLOW BELOW THE STRUCTURE IS A FUNCTION OF DIFFERENTIAL RATES OF IMPOUNDMENT OR DRAWDOWN BETWEEN THE TWO BASINS.

OBSERVED WATER SURFACE ELEVATIONS REPRESENT THE SEASONAL HIGH. WATER SURFACE ELEVATIONS ARE INCREASED IN AUTUMN TO FACILITATE WATERFOWL FEEDING OF FLOODED VEGETATION.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON CIP CONCRETE 12 3/4 X 0.25-INCH PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 60 TONS **PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.

ESTIMATED XX'-0" PILE LENGTH AT W. ABUTMENT.
ESTIMATED XX'-0" PILE LENGTH AT E. ABUTMENT.

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

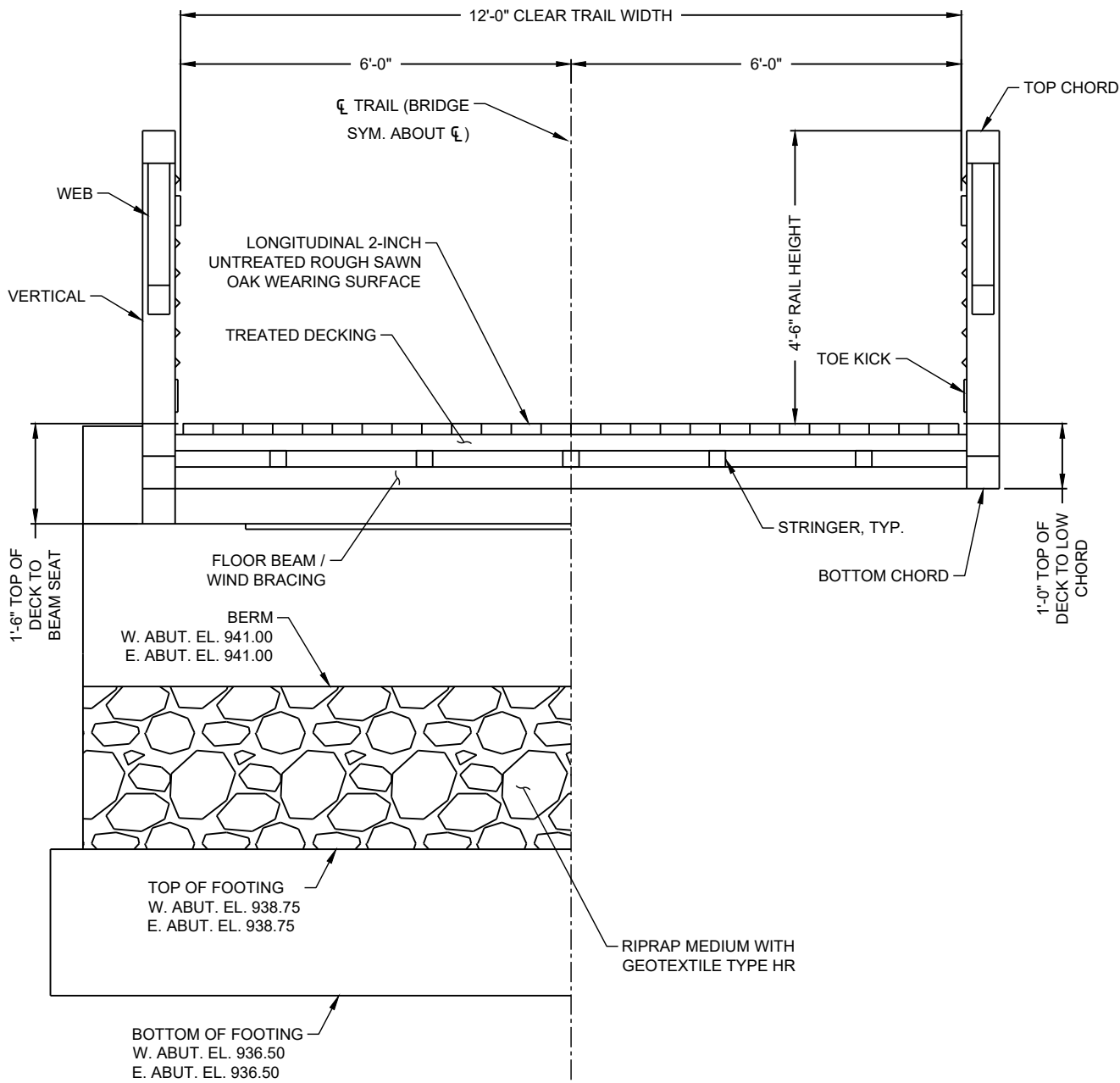
LEGEND

- EXCAVATION AS INDICATED IN THE HATCH AREAS
- INDICATES WING NUMBER

CONSULTANT CONTACT

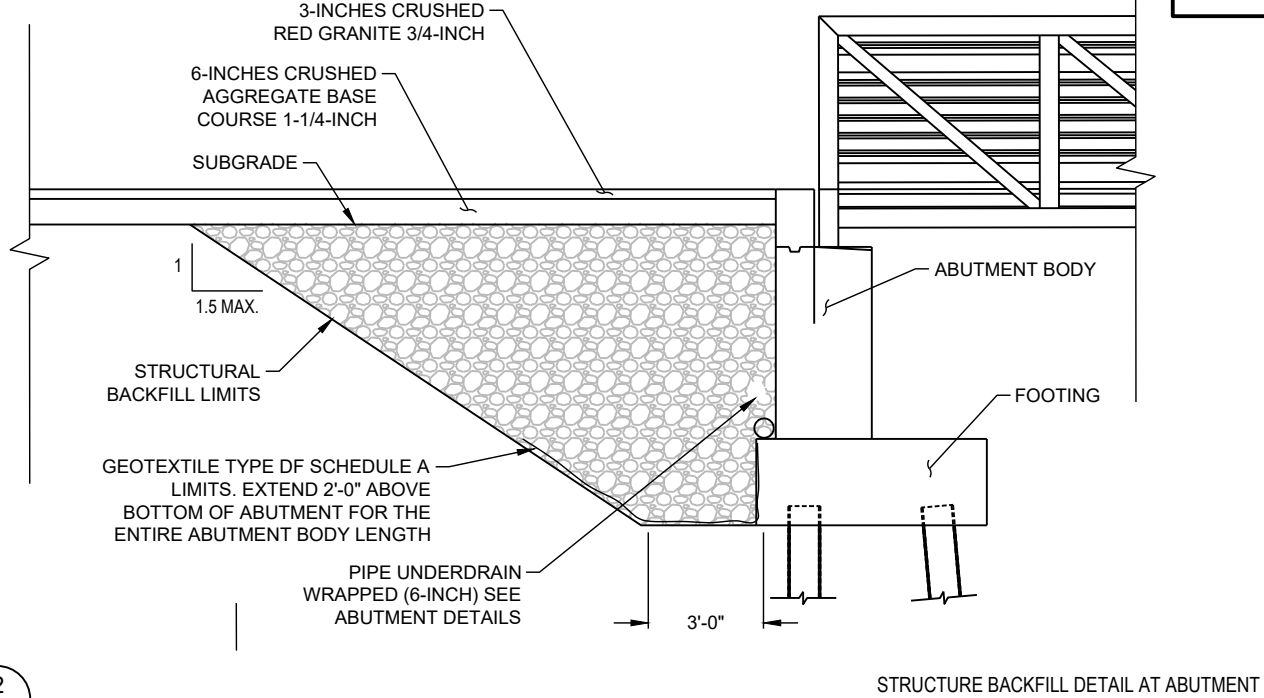
MATT GUNDRY, P.E.
(715) 720-6246

NO.	DATE	REVISION	BY
STRUCTURE TR45 @ N. FK. FLWG			
DRAWN BY		PLANS CK'D	MJG
GENERAL PLAN		SHEET 10	

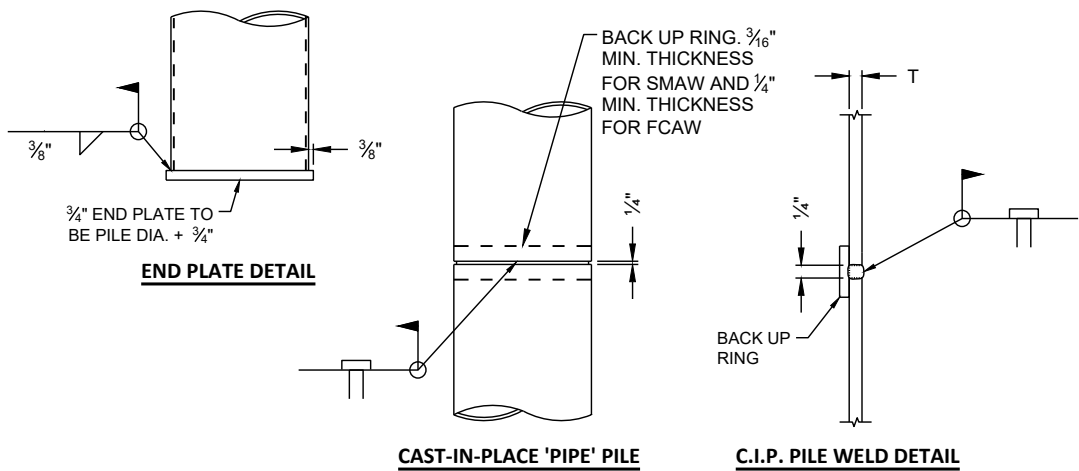


2
S801

ORIGINAL SCALE: 1" = 5'-0"



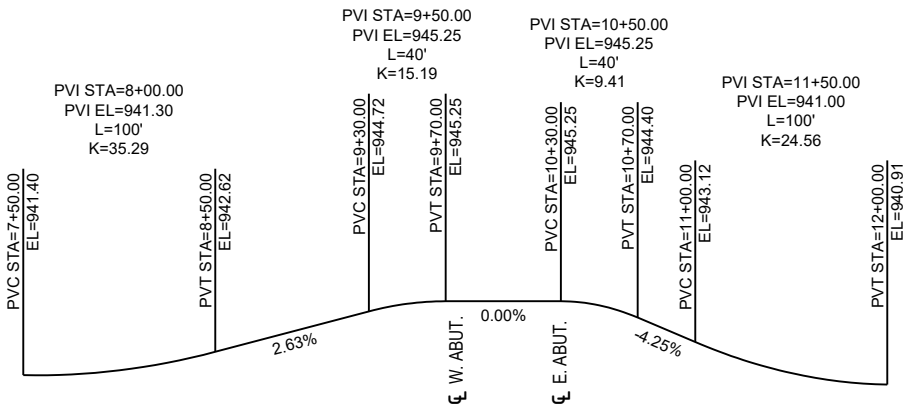
STRUCTURE BACKFILL DETAIL AT ABUTMENT



3
S803

ORIGINAL SCALE: N.T.S.

CIP PILING DETAILS

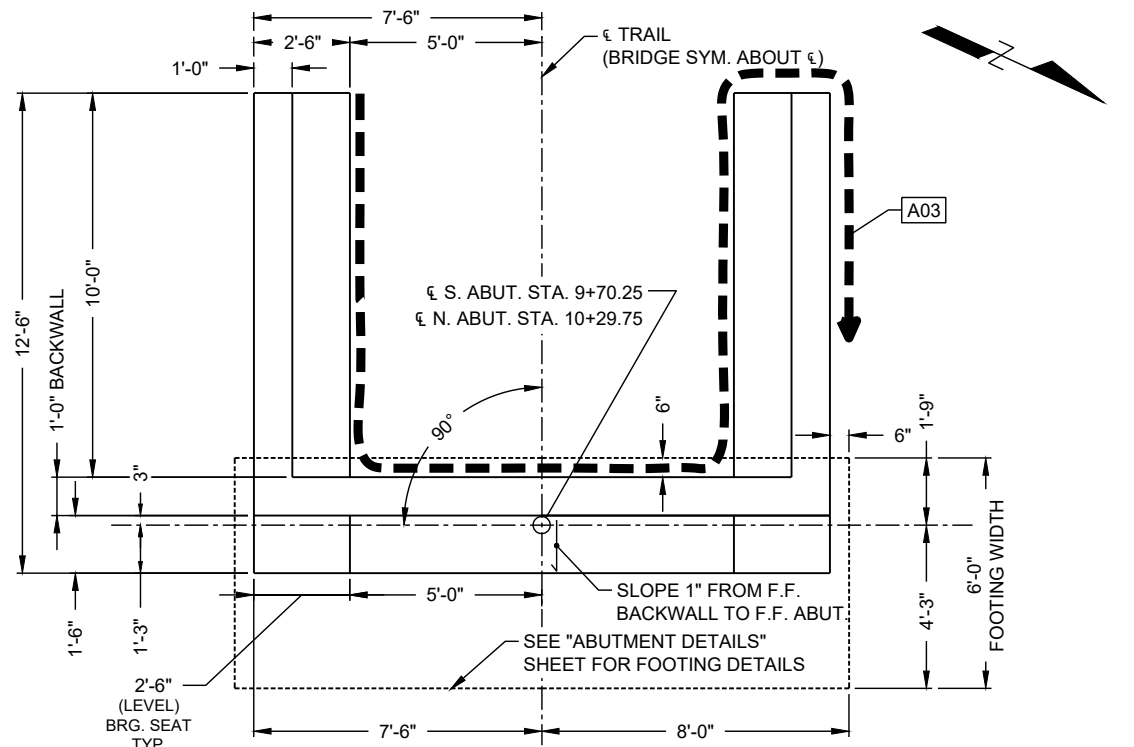


PROFILE GRADE LINE, TRAIL 45

4
S801

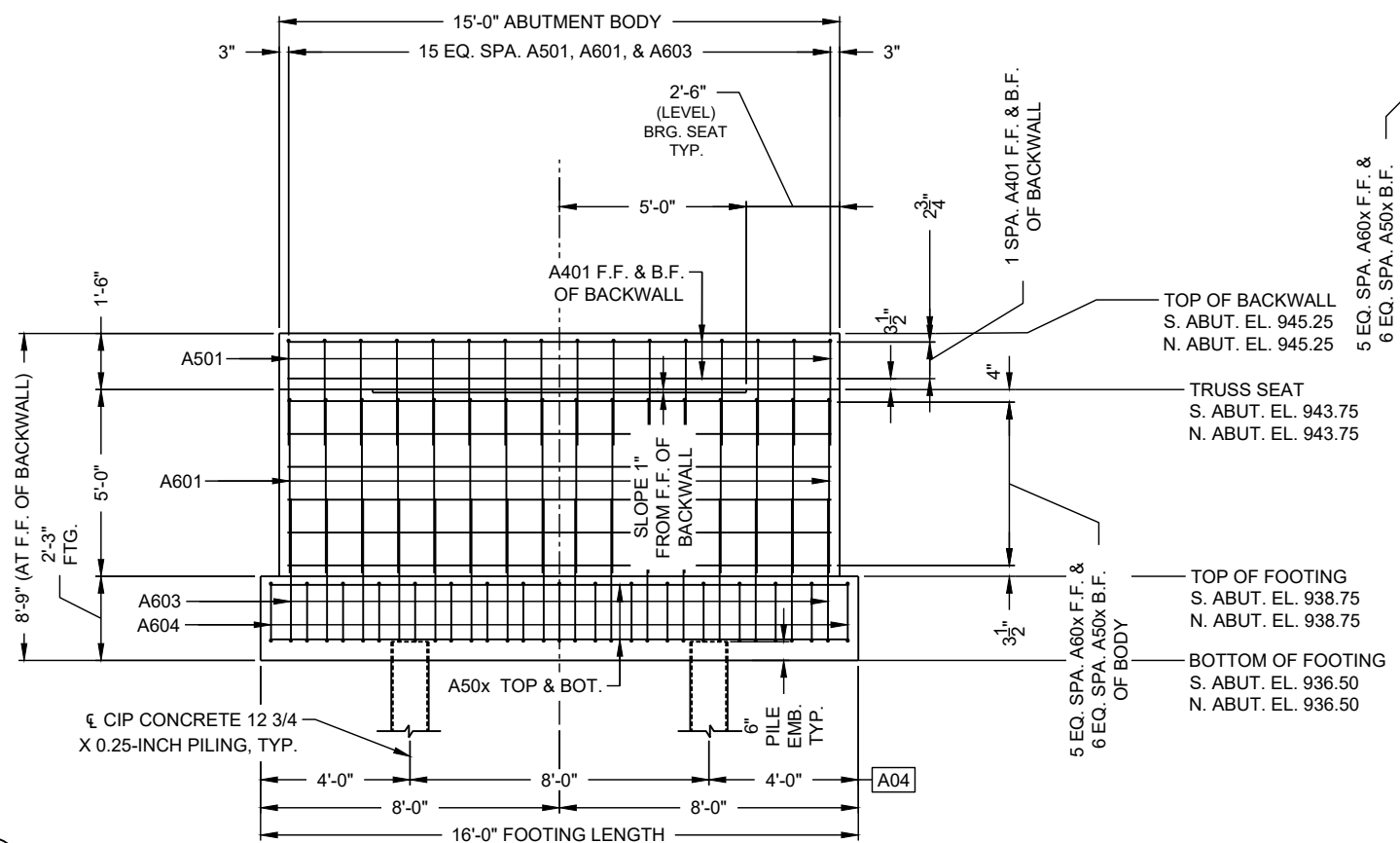
ORIGINAL SCALE: N.T.S.

NO.	DATE	REVISION	BY
STRUCTURE TR45 @ N. Fk. FLWG			
DRAWN BY		PLANS CKD	MJG
CROSS SECTION, PROFILE, & DETAILS		SHEET 11	



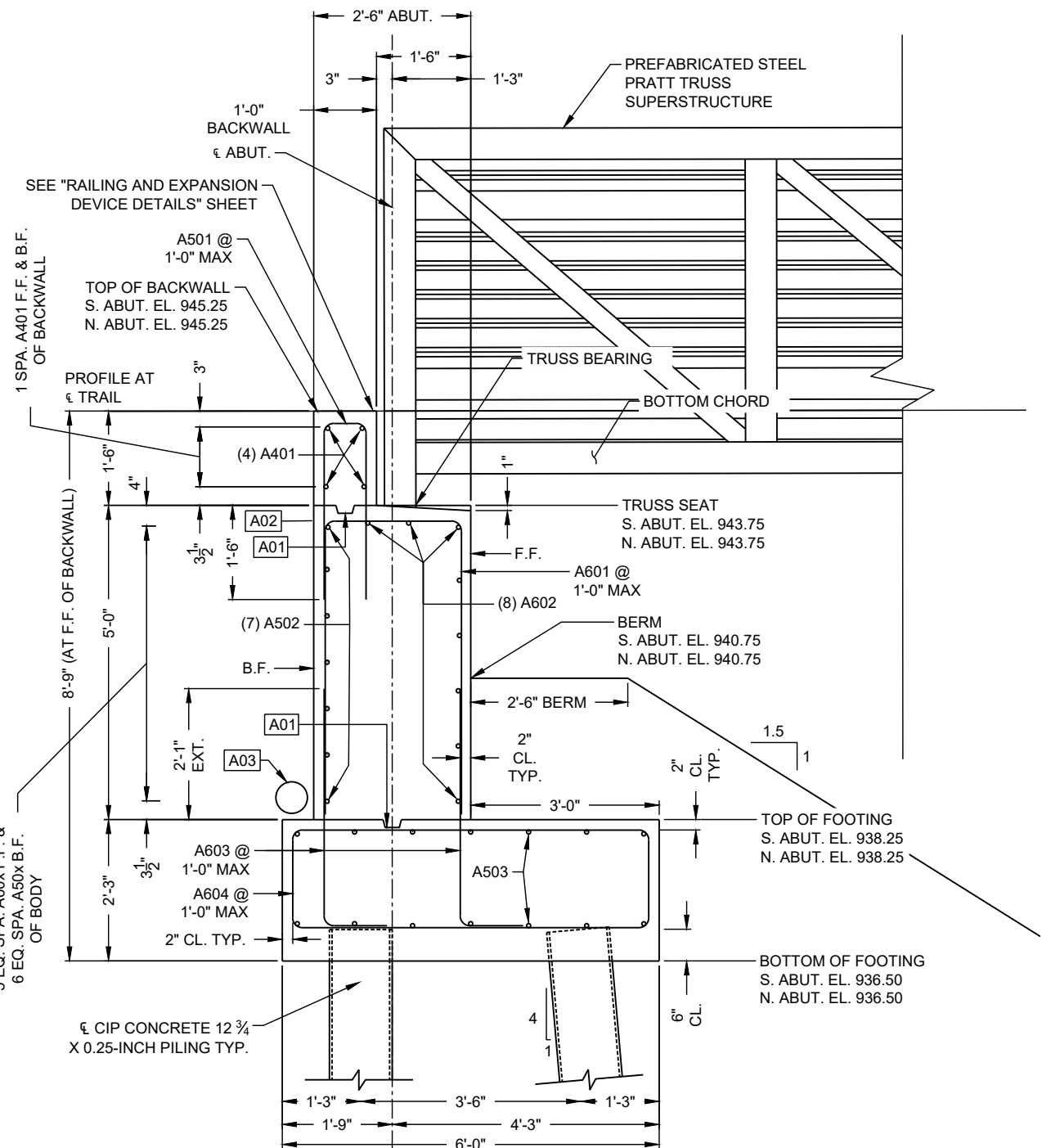
1 S802 ORIGINAL SCALE: 1" = 5'-0"

S. ABUT. SHOWN. N. ABUT. SIMILAR)



2 S802 ORIGINAL SCALE: 1" = 5'-0"

S. ABUT. LOOKING SOUTH, N. ABUT. SIMILAR

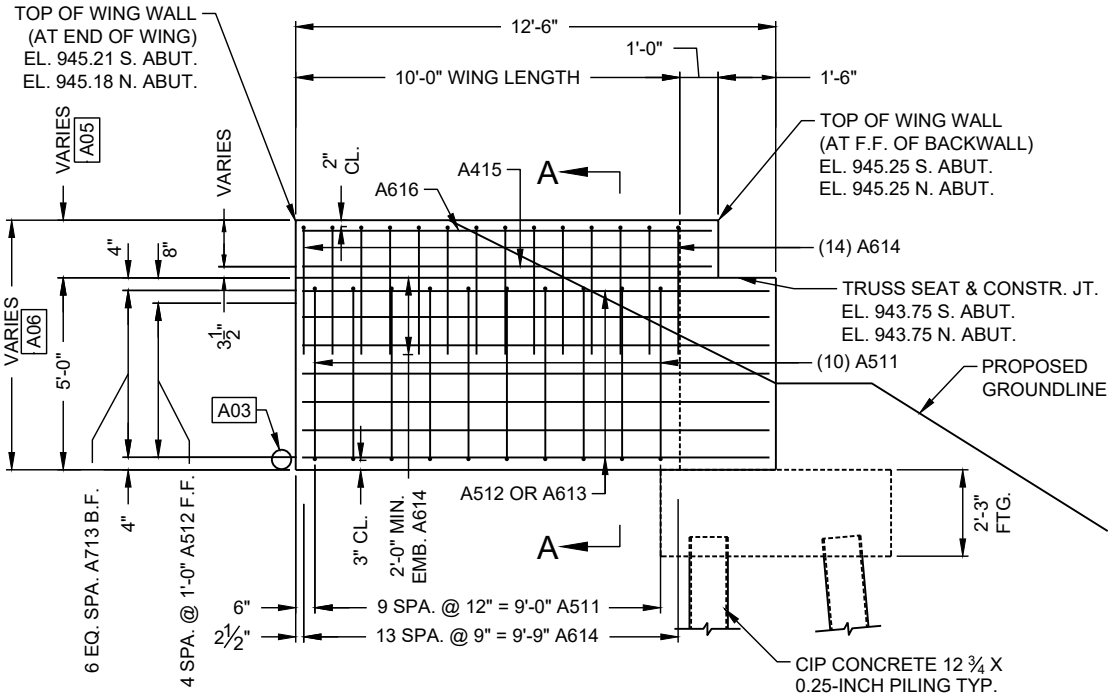


3 S802 ORIGINAL SCALE: 1" = 2'-6"

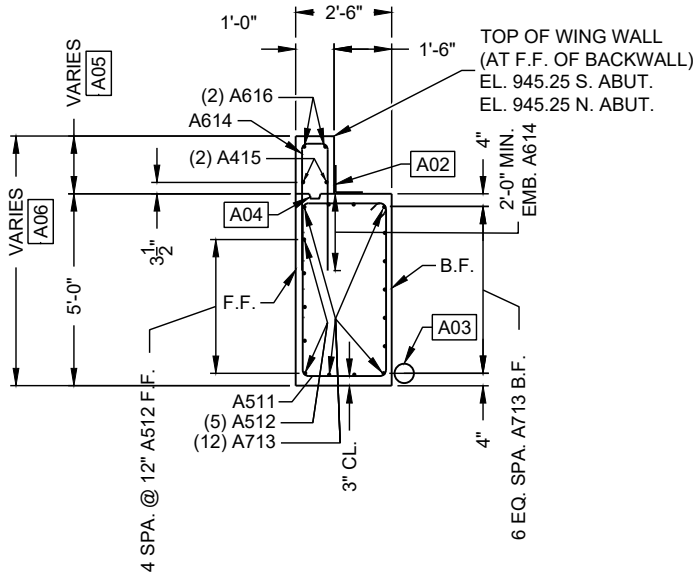
NOTES

- F.F. DENOTES FRONT FACE
- B.F. DENOTES BACK FACE
- A01 OPTIONAL CONSTRUCTION JOINT WITH 2"x6" BEVELED KEYWAY
- A02 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. AND VERT. JOINTS ON BACKFACE ABOVE FOOTING
- A03 PIPE UNDERDRAIN WRAPPED (6-INCH) SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED IN "ABUTMENT DETAILS" SHEET
- A04 CONTACT ENGINEER IF PILE SPACING CANNOT BE MAINTAINED DUE TO CONFLICT WITH EXISTING SUBSTRUCTURE

NO.	DATE	REVISION	BY
STRUCTURE TR45 @ N. Fk. FLWG			
DRAWN BY		PLANS CKD	MJG
ABUTMENT		SHEET 12	



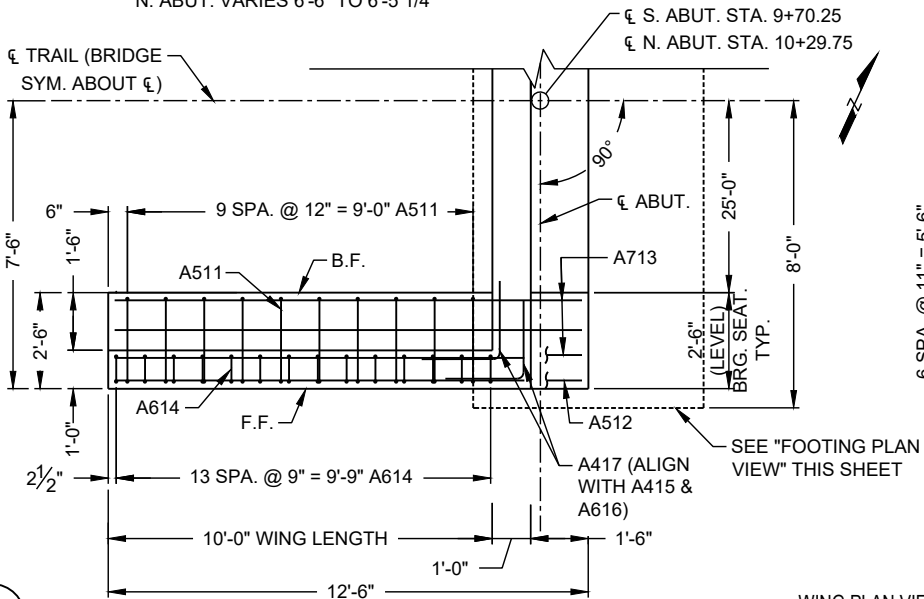
1
S803 ORIGINAL SCALE: 1" = 5'-0"
WING ELEVATION VIEW
WING 1 SHOWN. WINGS 2, 3, & 4 SIMILAR



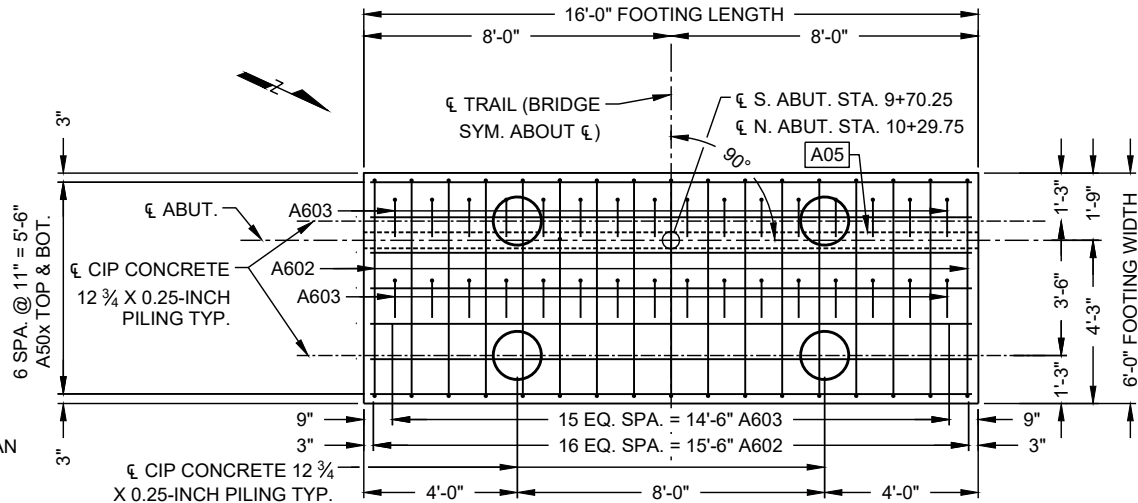
2
S803 ORIGINAL SCALE: 1" = 5'-0"
SECTION A-A

NOTES

- A05** S. ABUT. VARIES 1'-5 1/2" AT END OF WING TO 1'-6" AT F.F. OF BACKWALL
N. ABUT. VARIES 1'-6" AT F.F. OF BACKWALL TO 1'-5 1/4" AT END OF WING
- A06** S. ABUT. VARIES 6'-5 1/2" TO 6'-6"
N. ABUT. VARIES 6'-6" TO 6'-5 1/4"



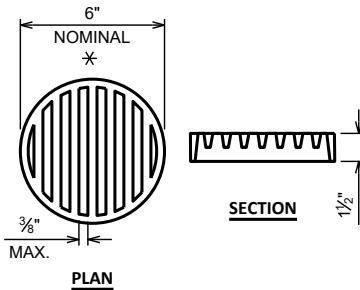
3
S803 ORIGINAL SCALE: 1" = 5'-0"
WING PLAN VIEW
WING 1 SHOWN. WINGS 2, 3, & 4 SIMILAR



4
S803 ORIGINAL SCALE: 1" = 5'-0"
FOOTING PLAN VIEW
S. ABUT. SHOWN. N. ABUT. SIMILAR

NOTES

- F.F. DENOTES FRONT FACE
- B.F. DENOTES BACK FACE
- A01** OPTIONAL CONSTRUCTION JOINT WITH 2"x6" BEVELED KEYWAY
- A02** 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. AND VERT. JOINTS ON BACKFACE ABOVE FOOTING
- A03** PIPE UNDERDRAIN WRAPPED (6-INCH) SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED IN "ABUTMENT DETAILS" SHEET
- A04** CONTACT ENGINEER IF PILE SPACING CANNOT BE MAINTAINED DUE TO CONFLICT WITH EXISTING SUBSTRUCTURE
- A05** CONSTRUCTION JOINT WITH 2"x6" BEVELED KEYWAY

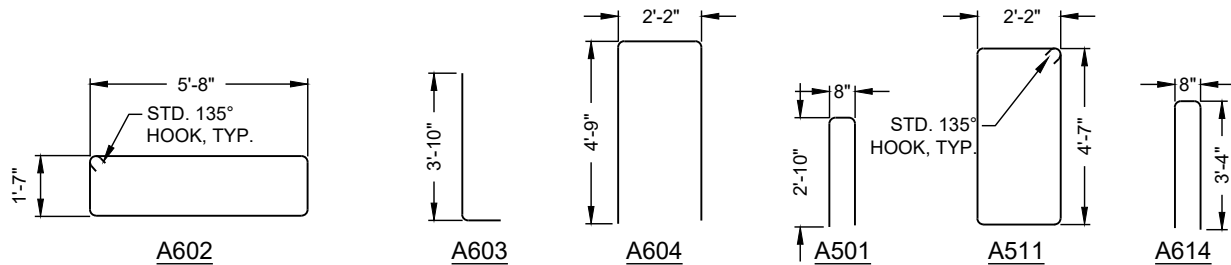


RODENT SHIELD DETAIL

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

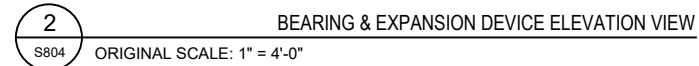
THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

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

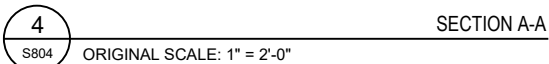
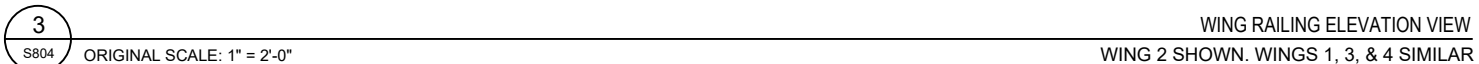


5
S803 ORIGINAL SCALE: NTS
BAR BEND DIAGRAMS

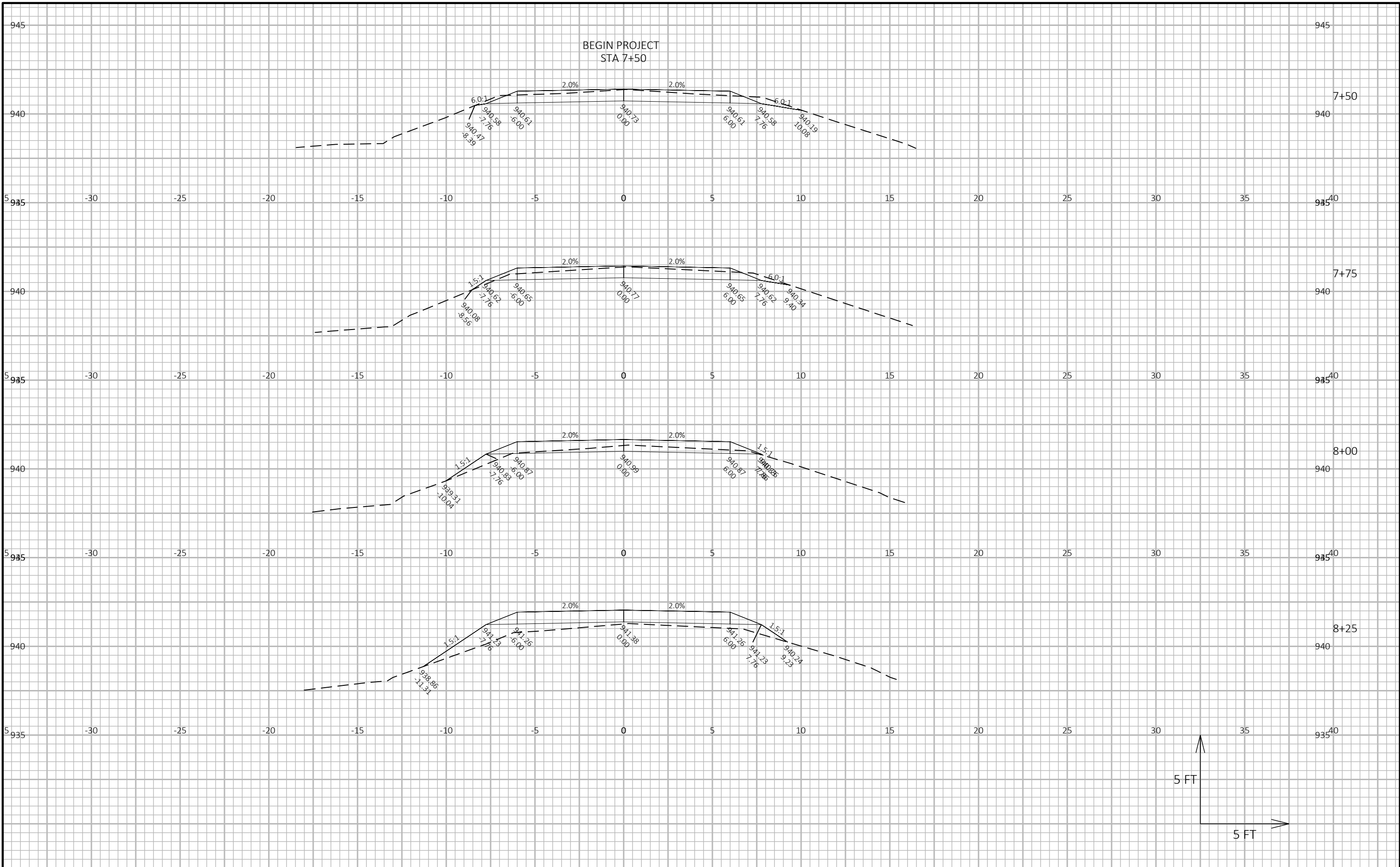
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STRUCTURE TR45 @ N. Fk. FLWG			
DRAWN BY		PLANS CK'D	MJG
ABUTMENT DETAILS		SHEET 13	



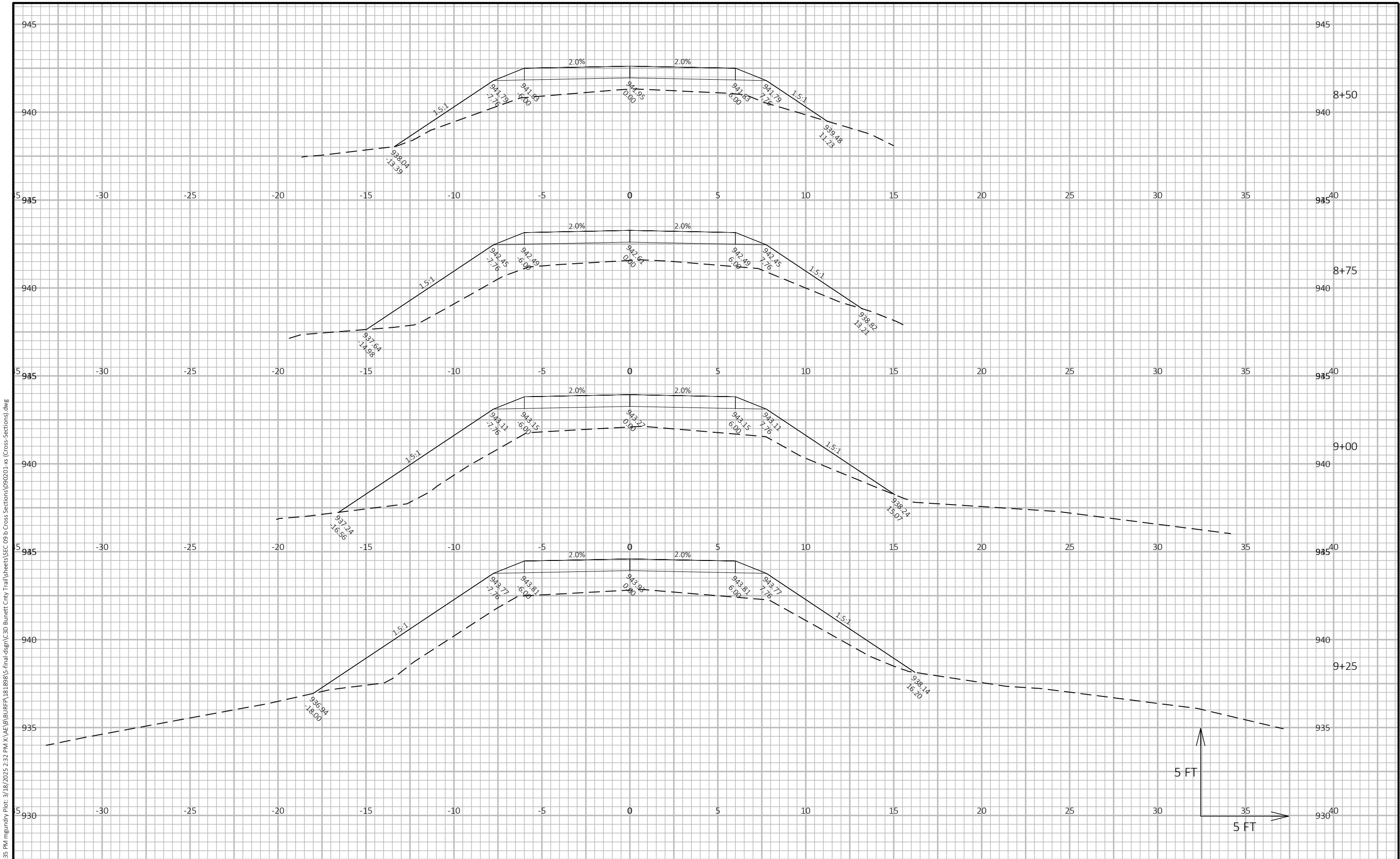
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BY		
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	ZM	MJG
RAILING DETAILS		SHEET 14



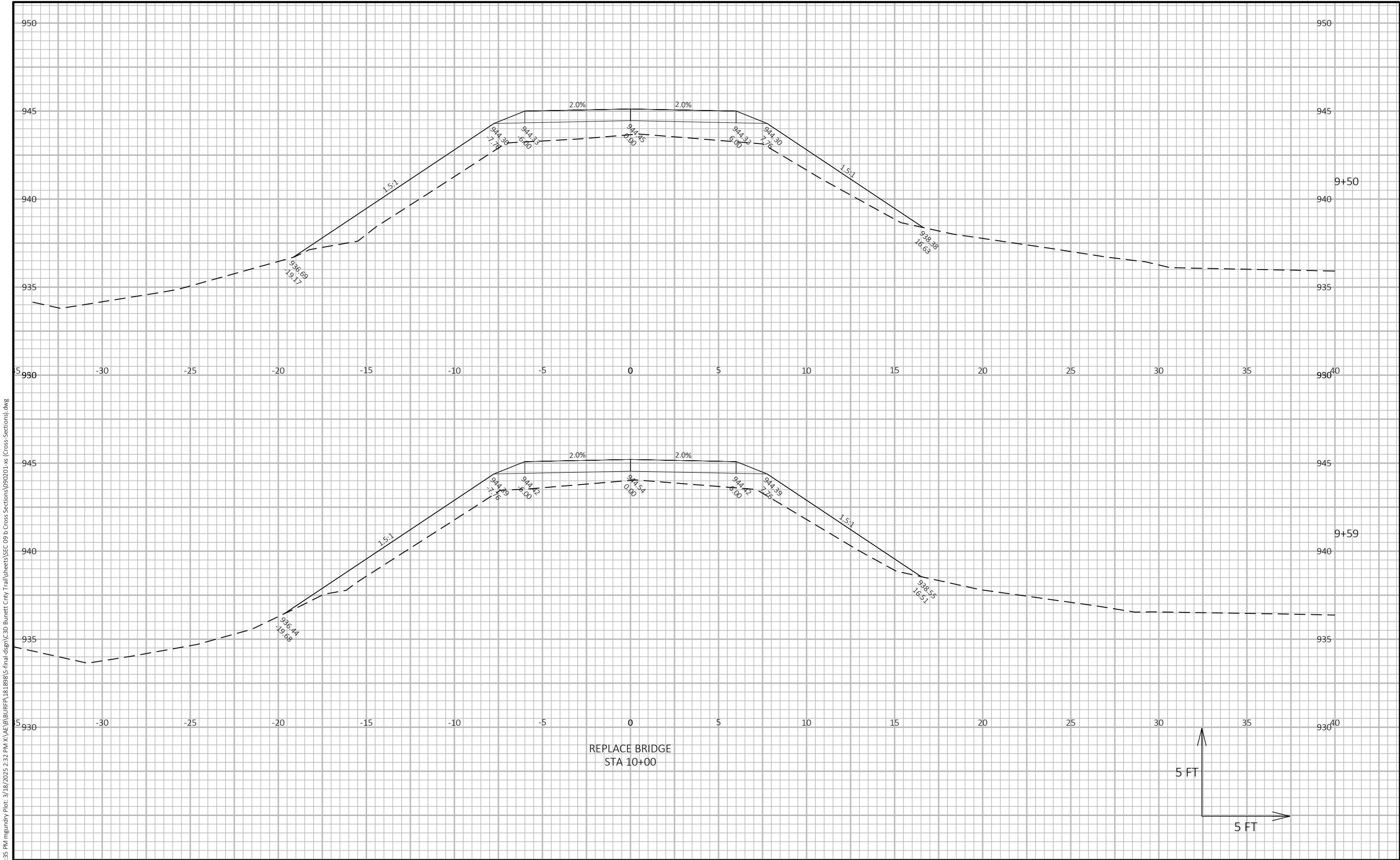
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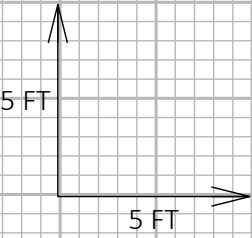
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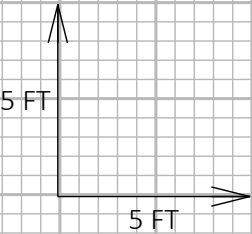
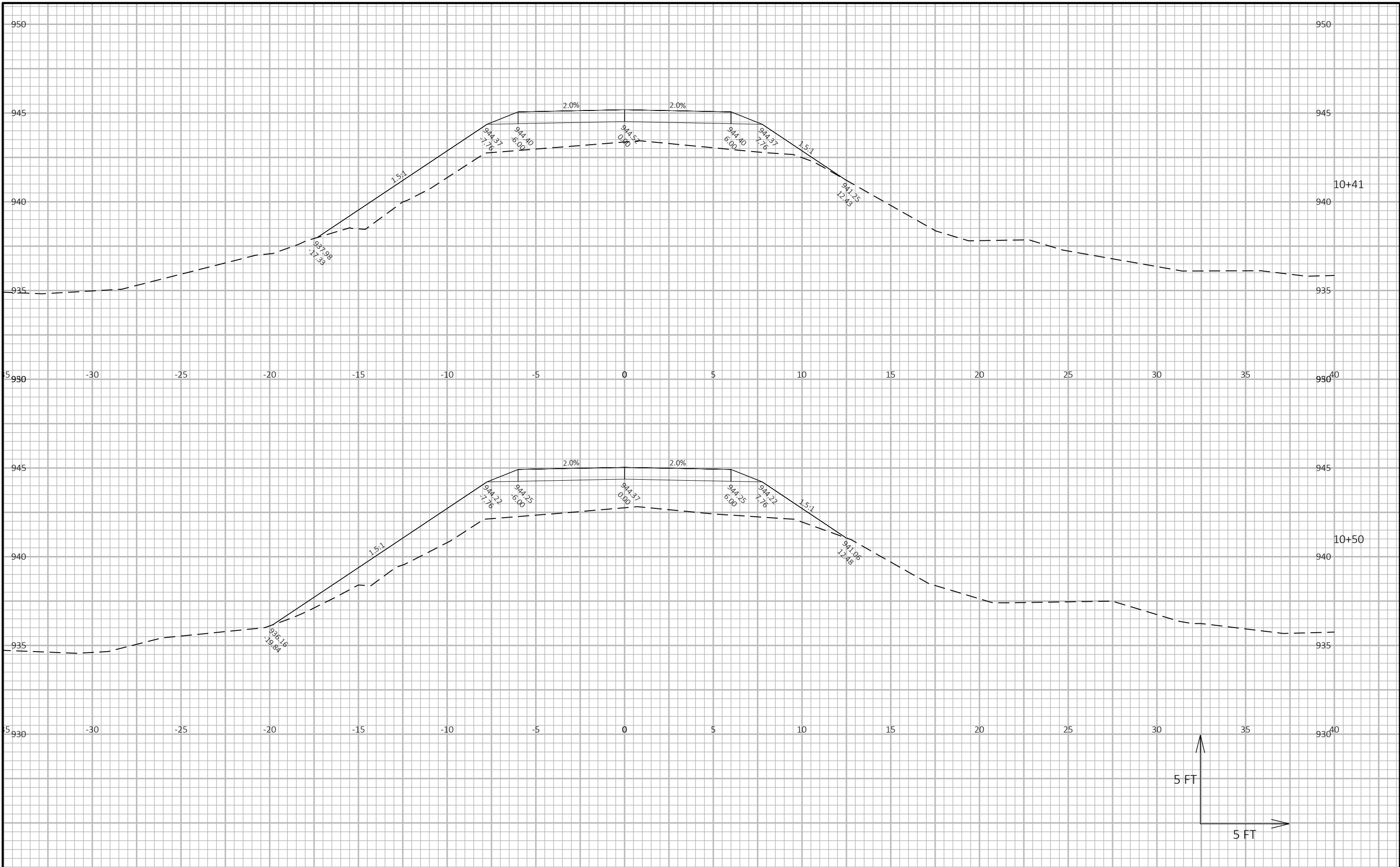


REPLACE BRIDGE
STA 10+00



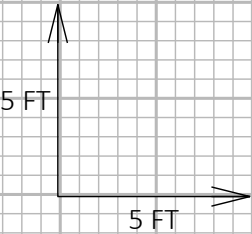
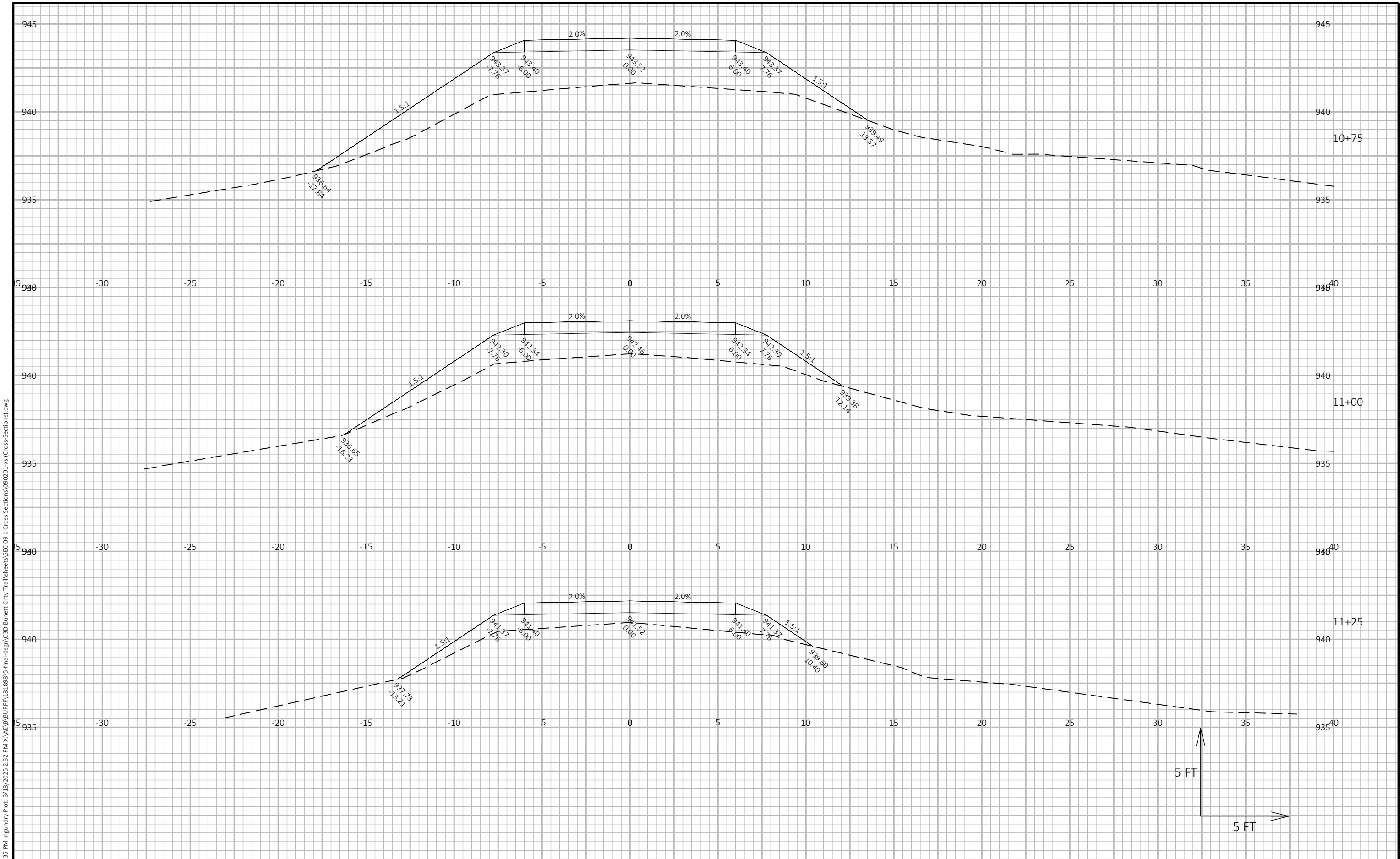
PLOT SCALE: 1.0 IN = 5.0 FT

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PLOT SCALE: 1.0 IN = 5.0 FT

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PLOT SCALE: 1.0 IN = 5.0 FT

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