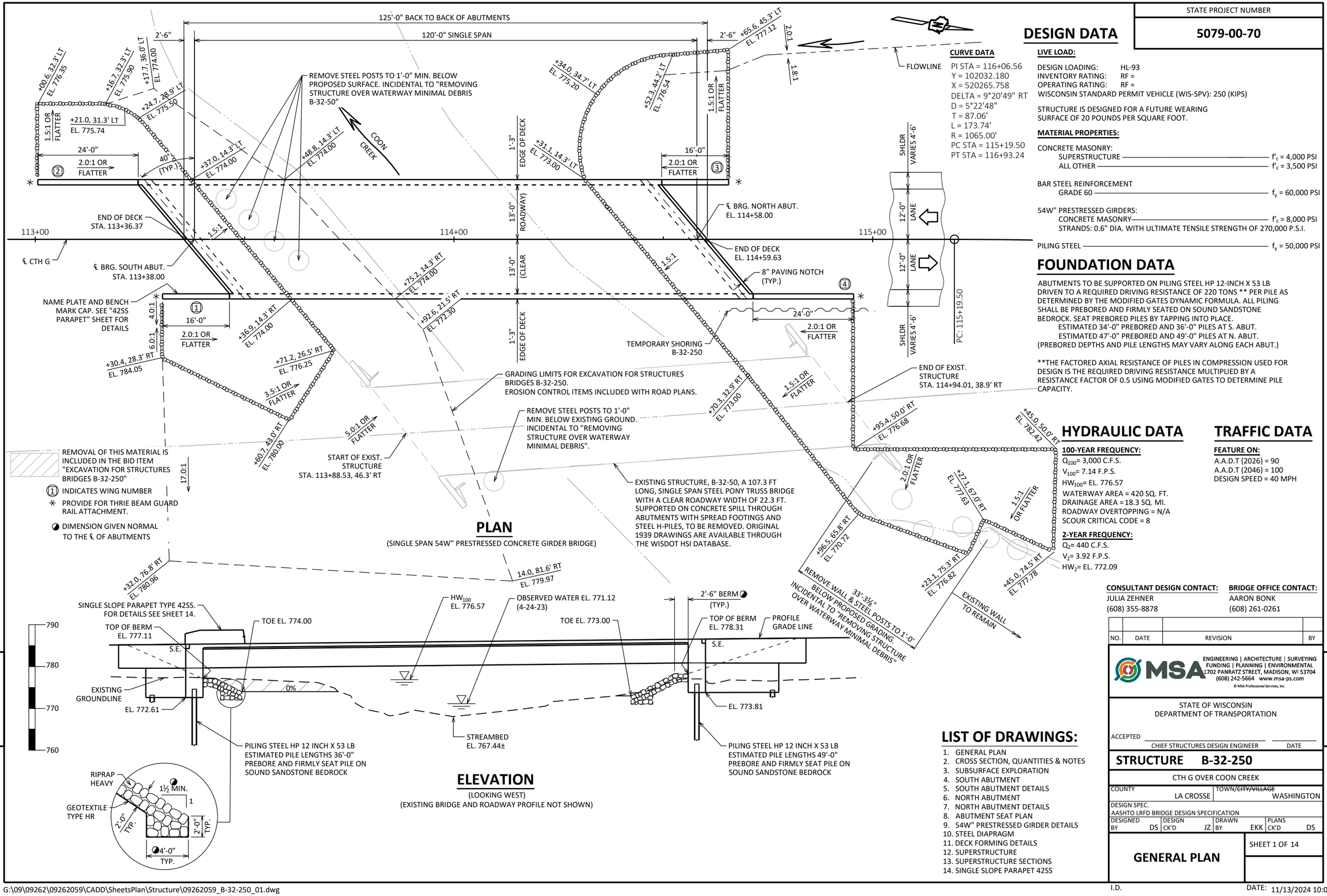
STATE PROJECT NUMBER

5079-00-70



PLAN

(SINGLE SPAN 54W" PRESTRESSED CONCRETE GIRDER BRIDGE)

ELEVATION

(LOOKING WEST)

(EXISTING BRIDGE AND ROADWAY PROFILE NOT SHOWN)

DESIGN DATA

CURVE DATA

PI STA = 116+06.56
Y = 102032.180
X = 520265.758
DELTA = 9°20'49" RT
D = 5°22'48"
T = 87.06'
L = 173.74'
R = 1065.00'
PC STA = 115+19.50
PT STA = 116+93.24

LIVE LOAD:

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

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE — f'_c = 4,000 PSI
ALL OTHER — f'_c = 3,500 PSI

BAR STEEL REINFORCEMENT
GRADE 60 — f_y = 60,000 PSI

54W" PRESTRESSED GIRDERS:
CONCRETE MASONRY — f'_c = 8,000 PSI
STRANDS: 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

PILING STEEL — f_y = 50,000 PSI

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 12-INCH X 53 LB DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 220 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ALL PILING SHALL BE PREBORED AND FIRMLY SEATED ON SOUND SANDSTONE BEDROCK. SEAT PREBORED PILES BY TAPPING INTO PLACE.
ESTIMATED 34'-0" PREBORED AND 36'-0" PILES AT S. ABUT.
ESTIMATED 47'-0" PREBORED AND 49'-0" PILES AT N. ABUT.
(PREBORED DEPTHS AND PILE LENGTHS MAY VARY ALONG EACH ABUT.)

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

HYDRAULIC DATA

100-YEAR FREQUENCY:

Q_{100}= 3,000 C.F.S.
V_{100}= 7.14 F.P.S.
HW_{100}= EL. 776.57
WATERWAY AREA = 420 SQ. FT.
DRAINAGE AREA = 18.3 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 8

2-YEAR FREQUENCY:

Q_2= 440 C.F.S.
V_2= 3.92 F.P.S.
HW_2= EL. 772.09

TRAFFIC DATA

FEATURE ON:

A.A.D.T (2026) = 90
A.A.D.T (2046) = 100
DESIGN SPEED = 40 MPH

LIST OF DRAWINGS:

CONSULTANT DESIGN CONTACT:
JULIA ZEHNER
(608) 355-8878

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

NO.	DATE	REVISION	BY

MSA
ENGINEERING | ARCHITECTURE | SURVEYING
FUNDING | PLANNING | ENVIRONMENTAL
1702 PANRATZ STREET, MADISON, WI 53704
(608) 242-5664 www.msa-ps.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED _____ _____
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-32-250

CTH G OVER COON CREEK

COUNTY	TOWN/~~CITY/VILLAGE~~
LA CROSSE	WASHINGTON

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATION

DESIGNED BY	DS	DESIGN CK'D	JZ	DRAWN BY	EKK	PLANS CK'D	DS

GENERAL PLAN

SHEET 1 OF 14

I.D.

DATE: 11/13/2024 10:09 AM

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STATE PROJECT NUMBER

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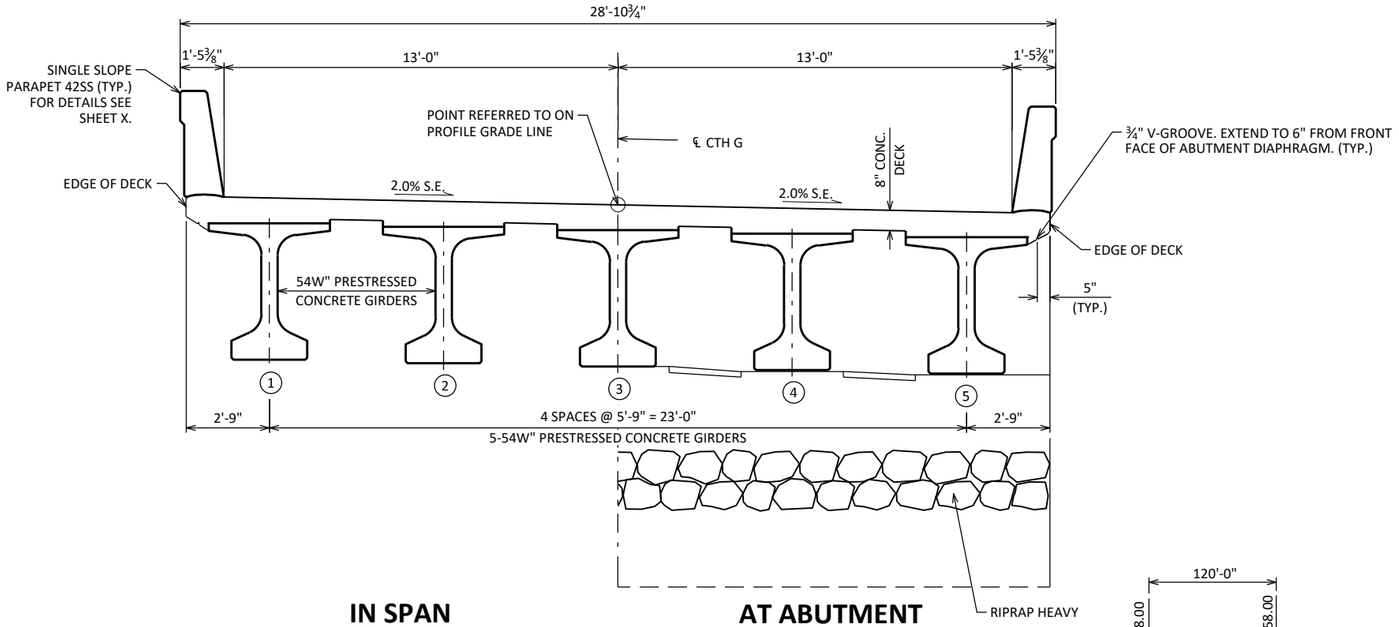


IN SPAN

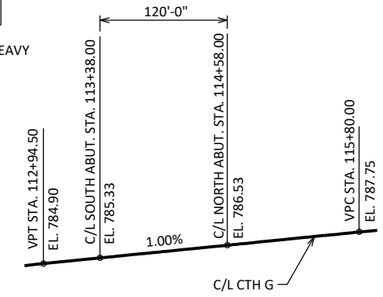
(INTERMEDIATE STEEL DIAPHRAGMS NOT SHOWN)

AT ABUTMENT

(PILING NOT SHOWN)

CROSS SECTION THRU BRIDGE

(LOOKING NORTH)



PROFILE GRADE LINE - CTH G

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES B-32-250" SHALL BE THE EXISTING GROUNDLINE.

AT THE BACK FACE OF 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. ALSO EXCLUDED IS THE "BASE AGGREGATE DENSE 1 1/4-INCH".

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

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

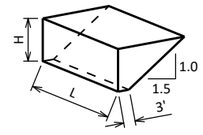
PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.

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

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 SHEET 1 AND THE ABUTMENT DETAILS.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE 54W" PRESTRESSED GIRDER DETAILS" SHEET.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO USGS NAVD 88 (2012 ADJUSTED). BENCHMACK REFERENCES AT THE PROJECT SITE WERE SET BY THE CONSULTANT USING GPS TECHNOLOGY.

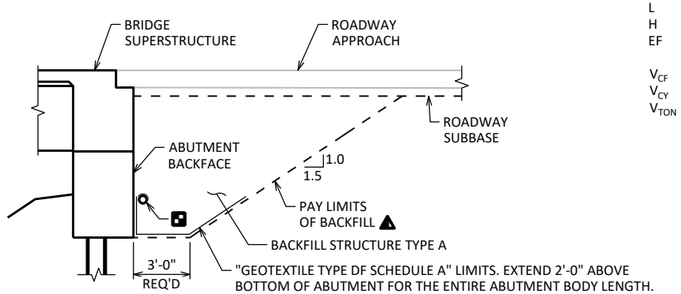


ABUTMENT BACKFILL DIAGRAM

L = OUT TO OUT OF ABUTMENT BODY INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)
V_{CY} = V_{CF}(EF)/27
V_{TON} = V_{CY}(2.0)

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	WEST ABUT.	EAST ABUT.	SUPER	TOTAL
203.0260.01	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS B-32-50	EACH	-	-	-	1
206.1001.01	EXCAVATION FOR STRUCTURES BRIDGES B-32-250	EACH	-	-	-	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	-	-	-	0
502.0100	CONCRETE MASONRY BRIDGES	CY	-	-	-	0
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-	-	-	0
502.3210	PIGMENTED SURFACE SEALER	SY	-	-	-	0
503.0155	PRESTRESSED GIRDER TYPE I 54W-INCH	LF	-	-	-	0
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	-	-	-	0
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	-	-	-	0
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	-	-	-	0
506.4000.01	STEEL DIAPHRAGMS B-32-250	EACH	-	-	-	0
511.1200.01	TEMPORARY SHORING B-32-250	SF				
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-	-	-	0
550.0010	PRE-BORING UNCONSOLIDATED MATERIALS	LF	-	-	-	0
550.1120	PILING STEEL HP 12-INCH X 53 LB	LF	-	-	-	0
606.0300	RIPRAP HEAVY	CY	-	-	-	0
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	-	-	-	0
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	-	-	-	0
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	-	-	-	0
645.0120	GEOTEXTILE TYPE HR	SY	-	-	-	0
	NON-BID ITEMS					
	PREFORMED FILLER	SIZE				½" & ¾"



TYPICAL SECTION THRU ABUTMENT

▲ BACKFILL PAY LIMITS. BACKFILL BEYOND 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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-250

DRAWN BY EKK | PLANS CK'D DS

CROSS SECTION, QUANTITIES, & NOTES

SHEET 2

SCALE = 5

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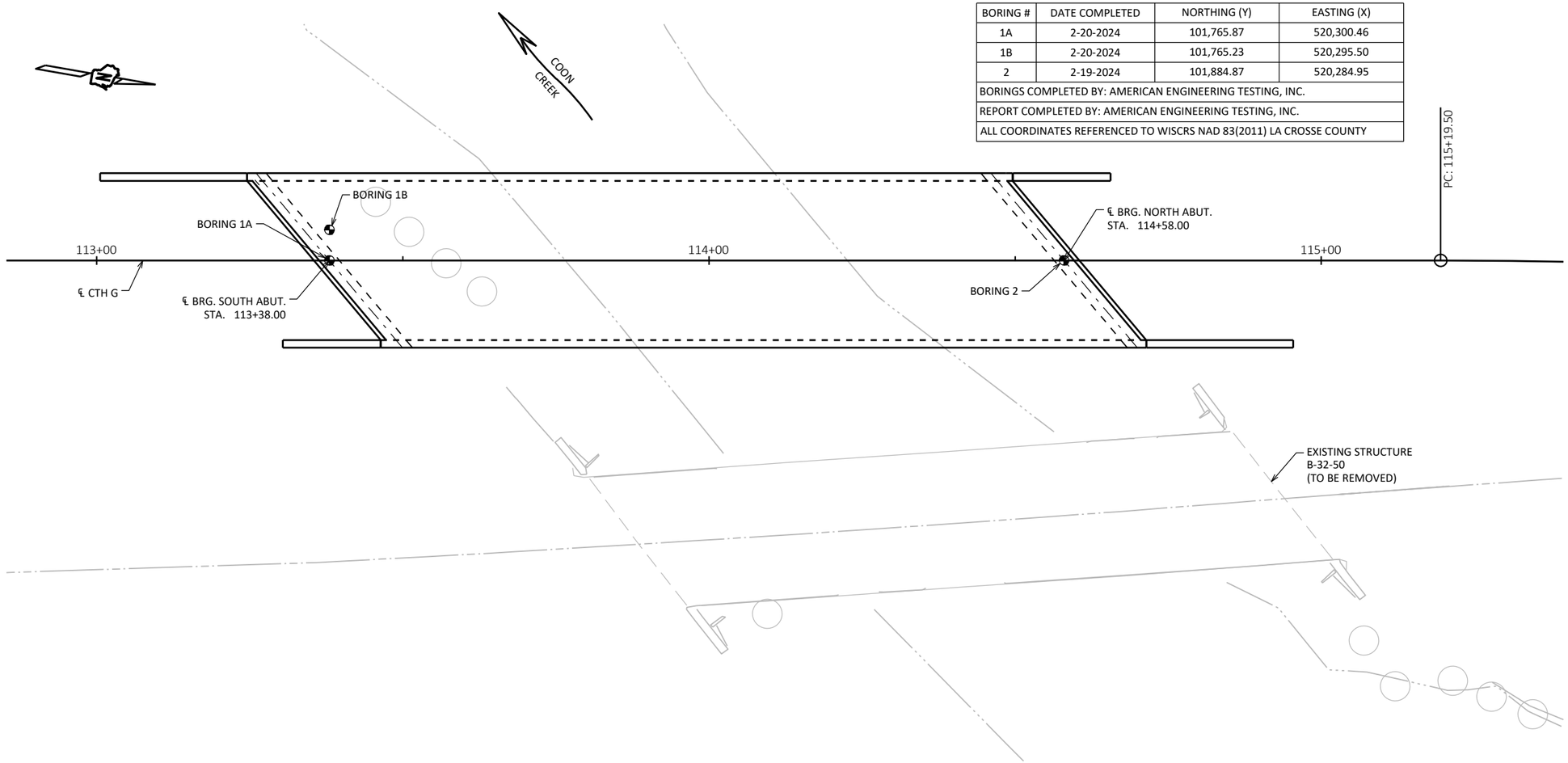
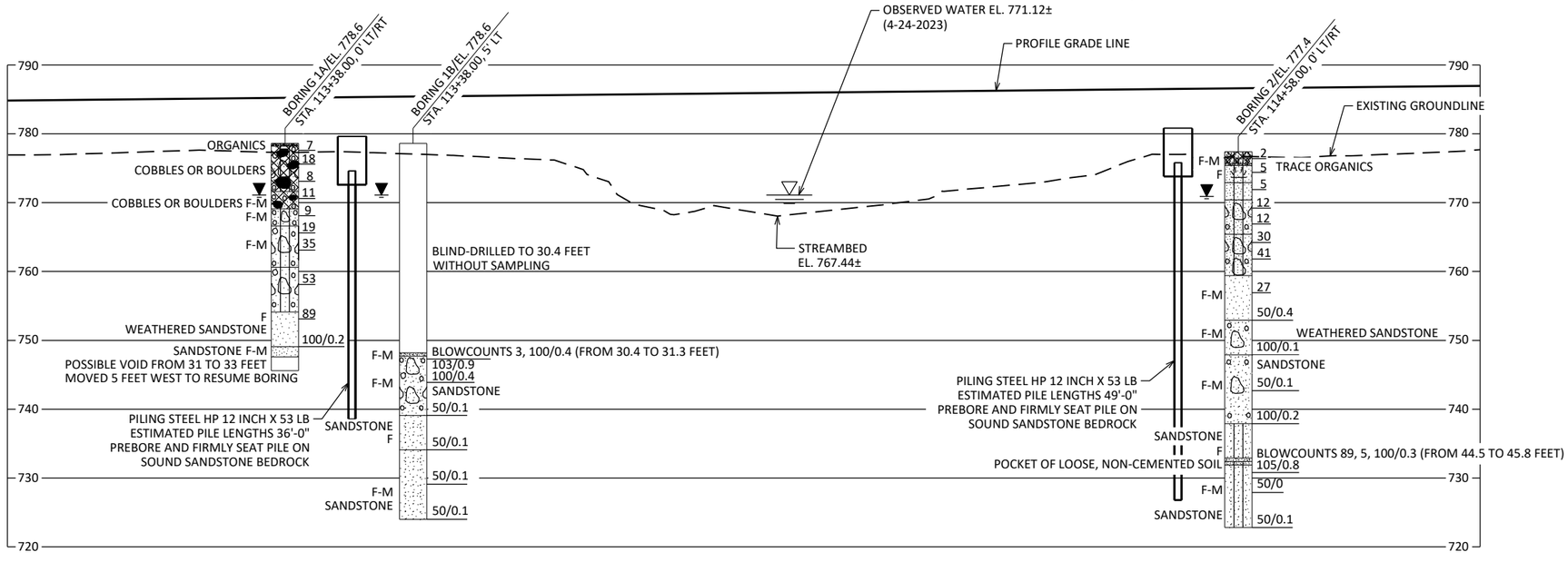
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1A	2-20-2024	101,765.87	520,300.46
1B	2-20-2024	101,765.23	520,295.50
2	2-19-2024	101,884.87	520,284.95
BORINGS COMPLETED BY: AMERICAN ENGINEERING TESTING, INC.			
REPORT COMPLETED BY: AMERICAN ENGINEERING TESTING, INC.			
ALL COORDINATES REFERENCED TO WISCRS NAD 83(2011) LA CROSSE COUNTY			





STATE PROJECT NUMBER

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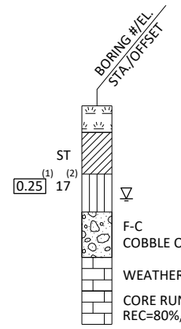
MATERIAL SYMBOLS

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

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

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

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-32-250

DRAWN BY EKK | PLANS CK'D DS

SUBSURFACE EXPLORATION

SHEET 3

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