

HEMLOCK BRIDGE

LEROY TOWNSHIP, OH 44077



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PLAN REPRODUCTION WARNING
THE PLANS HAVE BEEN PREPARED
FOR PRINTING ON ANSI D (22"x34")
SHEETS. PRINTING ON OTHER SIZE
SHEETS MAY DISTORT SCALES.
REFER TO GRAPHIC SCALES.



HEMLOCK BRIDGE
Leroy Township, Ohio

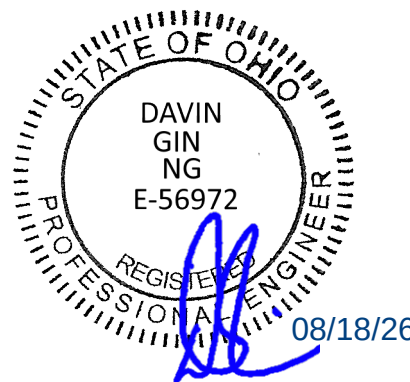
TITLE SHEET

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IV	JS

JOB NO.
2026415.01

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HEMLOCK BRIDGE
Leroy Township, Ohio

GENERAL PLAN

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RECORD	-

PROJECT MANAGER	DESIGNER
IV	MOJ

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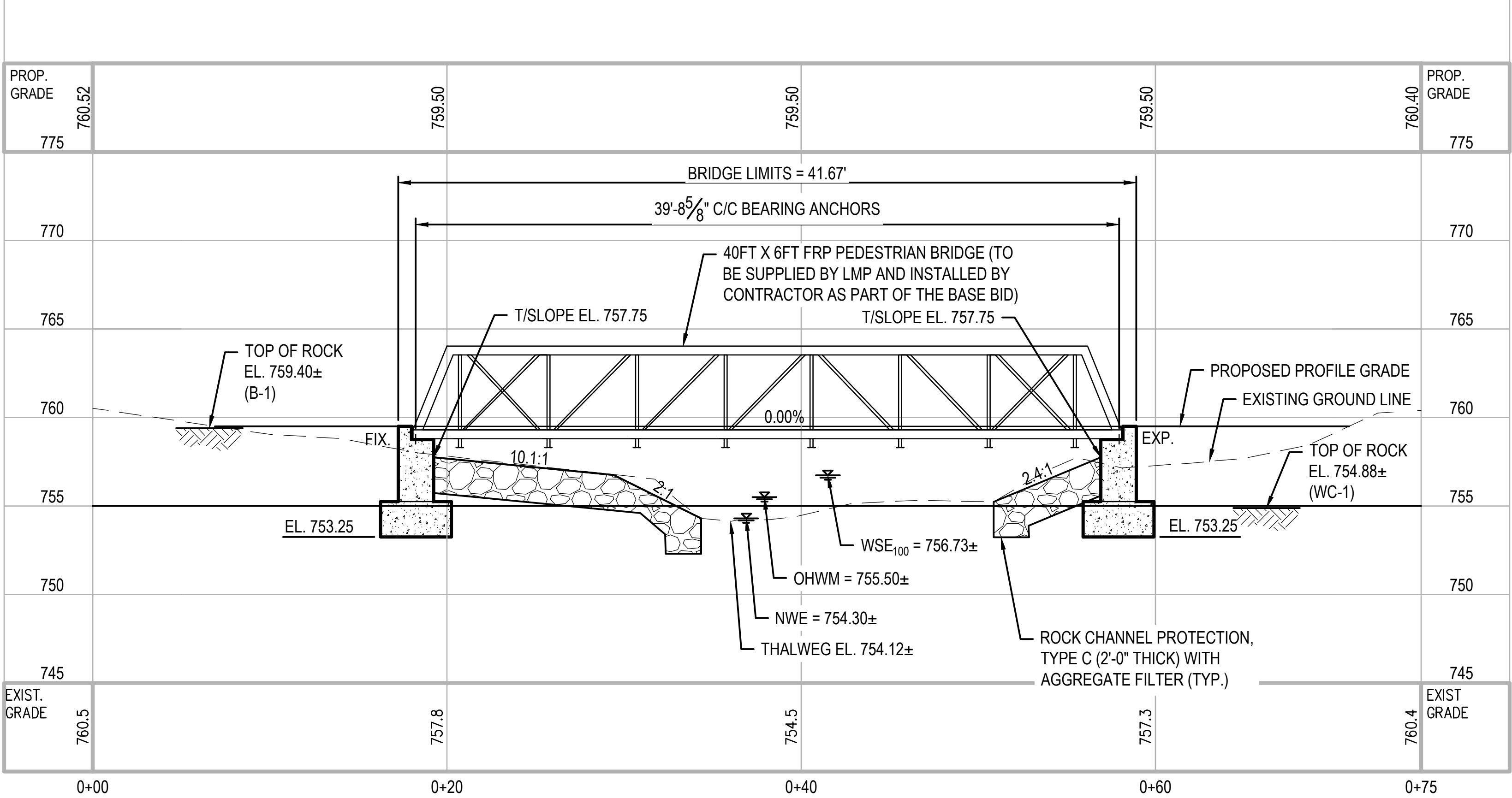
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SHEET:

S-101

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PROFILE ALONG C/L BRIDGE

1. PEDESTRIAN BRIDGE TO BE SUPPLIED AND INSTALLED BY OTHERS.
2. ALL DISTURBED AREAS TO BE SEEDED BY OTHERS.

 PROJECT BORING LOCATION

DRAINAGE AREA = 0.15 SQ. MILES
Q(100) = 153 CFS V(100) = 7.10 FT/S
STRUCTURE CLEARS THE 100 YEAR DESIGN HW BY 1.56 FEET.

PROPOSED STRUCTURE	
TYPE:	SINGLE SPAN PREFABRICATED FIBER REINFORCED POLYMER (FRP) TRUSS BRIDGE WITH TIMBER DECK ON REINFORCED CONCRETE ABUTMENTS SUPPORTED BY SPREAD FOOTINGS EMBEDDED INTO BEDROCK
SPAN:	39'-0 ⁵ / ₈ " C/C BEARING ANCHORS
ROADWAY:	6'-0" O/O DECK
LOADING:	85 PSF PEDESTRIAN LOADING
WEARING SURFACE:	TIMBER
SKEW:	NONE
APPROACH SLABS:	NONE
ALIGNMENT:	TANGENT
CROWN:	NONE
COORDINATES:	LATITUDE N 41°42'24.95" LONGITUDE W 81°10'59.01"
DECK AREA:	180 SF

0:\PUBLIC\HILAKEMETROPARKS\2026\15.01 HEMLOCK BRIDGE\400-ENGINEERING\STRUCTURES\STRUCTURAL GENERAL NOTES & DETAILS.DWG - GENERAL PLAN - ---- PLOTTED XXXXXX BY HERTEL, AJ

STRUCTURAL GENERAL NOTES

GENERAL

THE ITEM NUMBERS LISTED BELOW ARE REFERENCES TO SECTION NUMBERS IN THE OHIO DEPARTMENT OF TRANSPORTATION (ODOT) 2023 CONSTRUCTION AND MATERIALS SPECIFICATION (CMS) MANUAL. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CORRESPONDING SECTION IN THE CMS UNLESS NOTED OTHERWISE.

DESIGN SPECIFICATIONS

THESE STRUCTURES CONFORM TO THE 10TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO), AND THE ODOT BRIDGE DESIGN MANUAL (BDM), 2020.

DESIGN DATA

CONCRETE CLASS QC1 – COMPRESSIVE STRENGTH 4.0 KSI (FOOTINGS, WALLS)

CONCRETE REINFORCEMENT: EPOXY COATED STEEL REINFORCEMENT – MINIMUM YIELD STRENGTH 60–KSI

FOUNDATION BEARING RESISTANCE

THE ABUTMENT FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM SERVICE LIMIT STATE BEARING PRESSURE OF 3.70 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LIMIT STATE BEARING PRESSURE OF 5.40 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 6.75 KIPS PER SQUARE FOOT.

EPOXY COATED REINFORCING STEEL [ODOT ITEM 509]

ALL REQUIREMENTS OF CMS 509.SHALL APPLY.

CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING
[ODOT ITEM 511]

CLASS QC1 CONCRETE, FOOTING [ODOT ITEM 511]

ALL REQUIREMENTS OF CMS 511 SHALL APPLY.

SEALING OF CONCRETE SURFACES (EPOXY–URETHANE) [ODOT
ITEM 512]

ALL EXPOSED PORTIONS OF THE ABUTMENTS AND WINGWALLS SHALL RECEIVE AN EPOXY–URETHANE COATING. ALL REQUIREMENTS OF CMS 512 SHALL APPLY.

POROUS BACKFILL WITH GEOTEXTILE FABRIC [ODOT ITEM 518]
6” PERFORATED CORRUGATED PLASTIC PIPE [ODOT ITEM 518]
6” NON–PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING
SPECIALS [ODOT ITEM 518]

ALL REQUIREMENTS OF CMS 518 SHALL APPLY.

ROCK CHANNEL PROTECTION, TYPE C WITH AGGREGATE
FILTER, AS PER PLAN [ODOT ITEM 601]

ALL REQUIREMENTS OF CMS 601 SHALL APPLY EXCEPT THAT THE VOIDS SHALL BE FILLED WITH COMPACTED BANK RUN.

CONSTRUCTION LAYOUT STAKES AND SURVEYING
[ODOT ITEM 623]

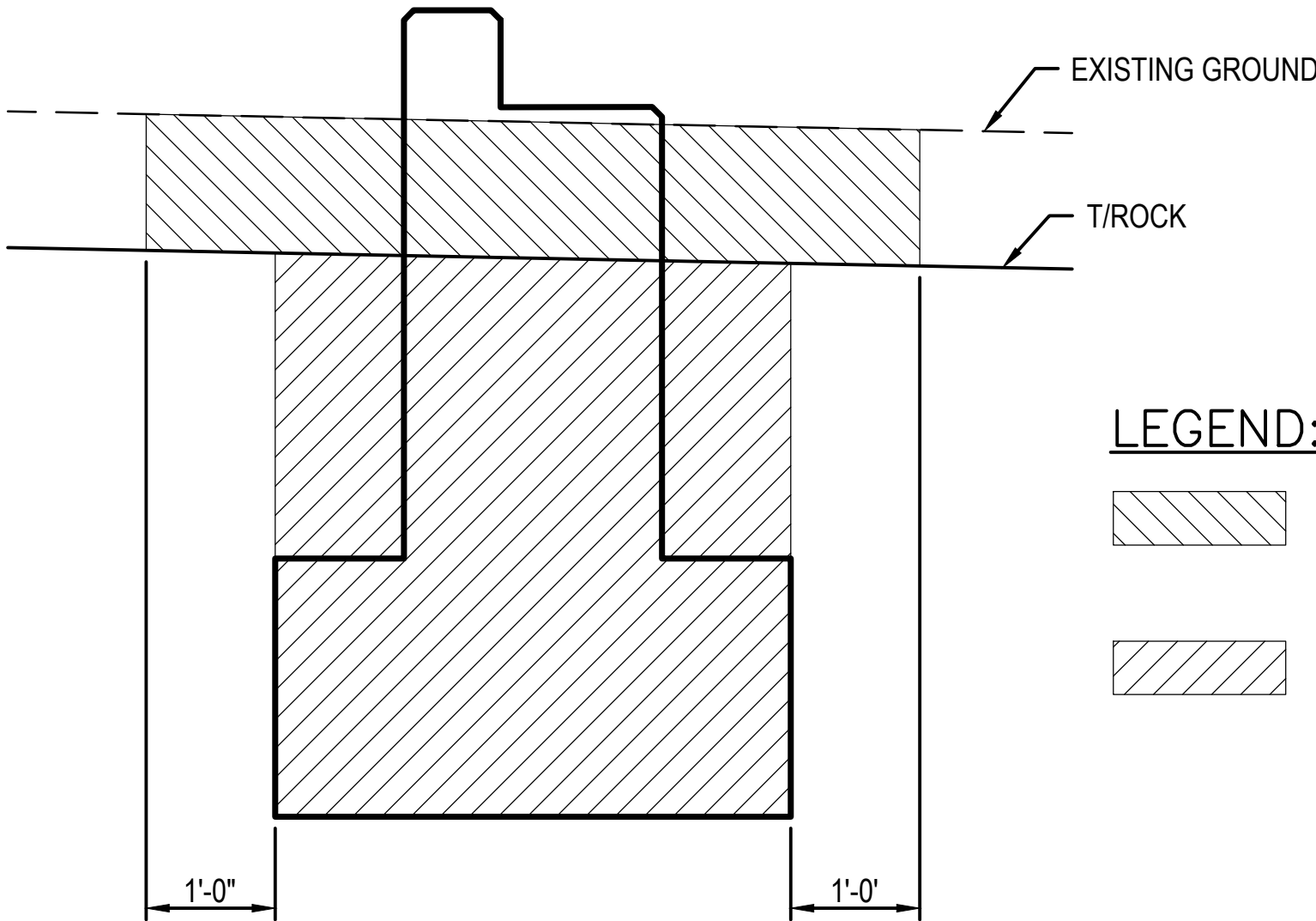
ALL REQUIREMENTS OF CMS 623 SHALL APPLY.

MOBILIZATION [ODOT ITEM 624]

ALL REQUIREMENTS OF CMS 624 SHALL APPLY.

ABBREVIATIONS

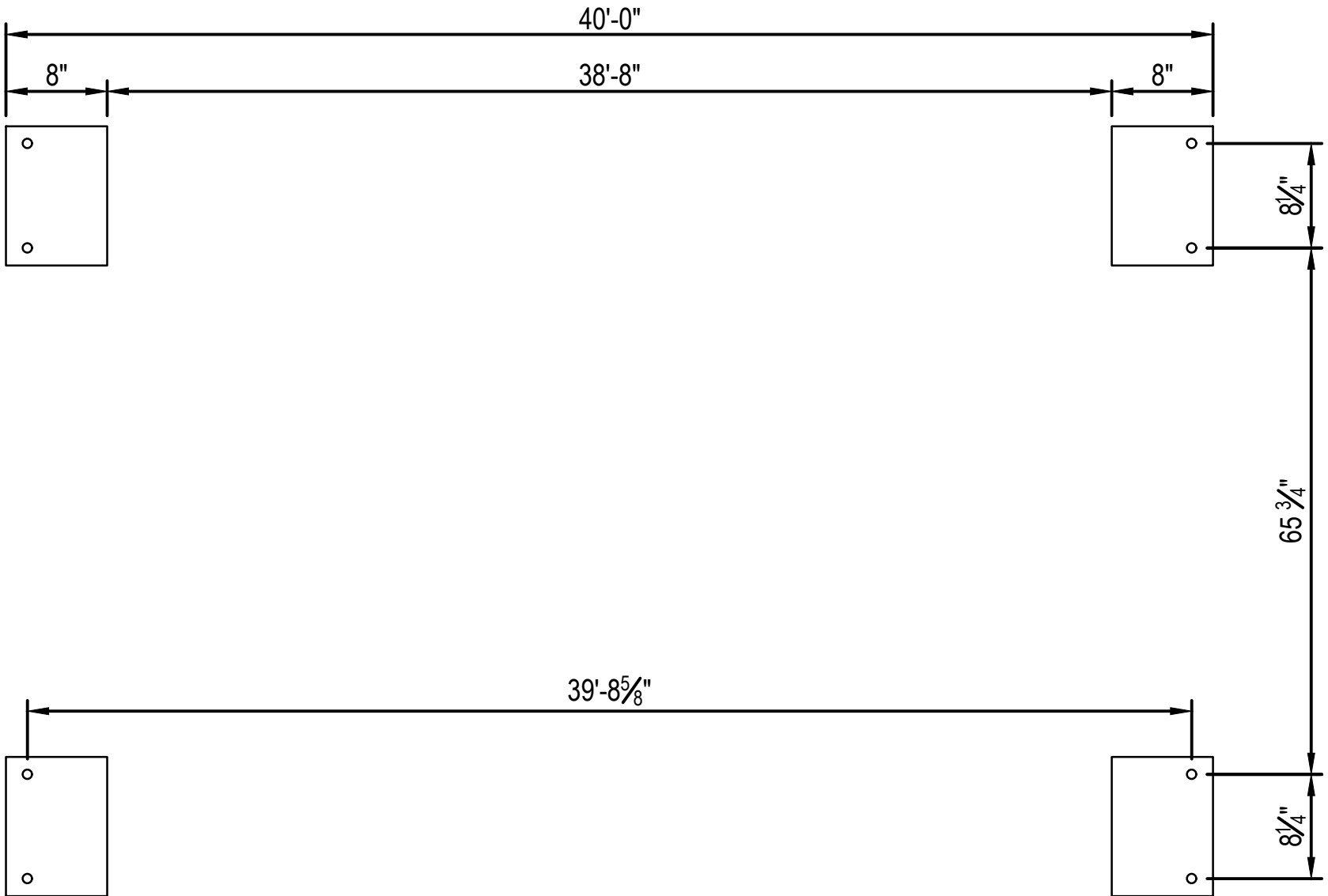
B.S.	BOTH SIDES
CLR.	CLEARANCE
CONST.	CONSTRUCTION
DIA.	DIAMETER
EL.	ELEVATION
EQ.	EQUAL
EX.	EXISTING
EXIST.	EXISTING
FRWD.	FORWARD
F.S.	FAR SIDE
I.D.	INSIDE DIAMETER
INV.	INVERT
JT.	JOINT
MAX.	MAXIMUM
MIN.	MINIMUM
N.S.	NEAR SIDE
O.D.	OUTSIDE DIAMETER
PROP.	PROPOSED
SAN.	SANITARY LINE
SER.	SERIES
SPA.	SPACED OR SPACING
STA.	STATION
STM.	STORM SEWER
TYP.	TYPICAL



LEGEND:

	ITEM 503 - UNCLASSIFIED EXCAVATION
	ITEM 503 - SHALE EXCAVATION

TYPICAL EXCAVATION LIMITS



BEARING ANCHOR PLAN VIEW

NOTES

- ANCHOR BOLT LOCATIONS ARE APPROXIMATE AND ARE TO BE COORDINATED WITH PREFABRICATED BRIDGE DETAILS.
- ANCHOR BOLTS SHALL BE 3/4" DIAMETER WITH 1'–0" MINIMUM EMBEDMENT AND SHALL CONFORM TO ASTM F1554, GRADE 55, & SHALL BE GALVANIZED IN ACCORDANCE WITH CMS 711.02. A SET OF TWO NUTS AND A WASHER SHALL ACCOMPANY EACH ANCHOR BOLT. THE BOTTOM NUT SHALL BE THREADED UNTIL INTIMATE CONTACT WITH THE WASHER AND TRUSS MEMBER IS ACHIEVED. THE TOP NUT SHALL BE FULLY TORQUED TO THE BOTTOM NUT. THE CONTRACTOR SHALL PROVIDE ALL ANCHOR HARDWARE AND INSTALL IT WITH THE BRIDGE AS PART OF THE BASE BID.

ESTIMATED QUANTITIES

ITEM NUMBER	ITEM	EXT.	TOTAL	UNIT	DESCRIPTION	AS PER PLAN REFERENCE SHEET
503E11100	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
503E21100	503	21100	14	CY	UNCLASSIFIED EXCAVATION	
503E31120	503	31120	11	CY	SHALE EXCAVATION	
509E10000	509	10000	1,726	LB	EPOXY COATED STEEL REINFORCEMENT	
511E44110	511	44110	8	CY	CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING	
511E46510	511	46510	9	CY	CLASS QC1 CONCRETE, FOOTING	
512E10100	512	10100	11	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
518E21200	518	21200	7	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
518E40000	518	40000	27	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
518E40010	518	40010	27	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	
601E32211	601	32211	22	CY	ROCK CHANNEL PROTECTION, TYPE C WITH AGGREGATE FILTER, AS PER PLAN	
623E10000	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
624E10000	624	10000	LS		MOBILIZATION	

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PROJECT MANAGER	DESIGNER
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JOB NO.
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S-102

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REAR ABUTMENT PLAN & ELEVATION

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PERMIT	-
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CONSTRUCTION	-
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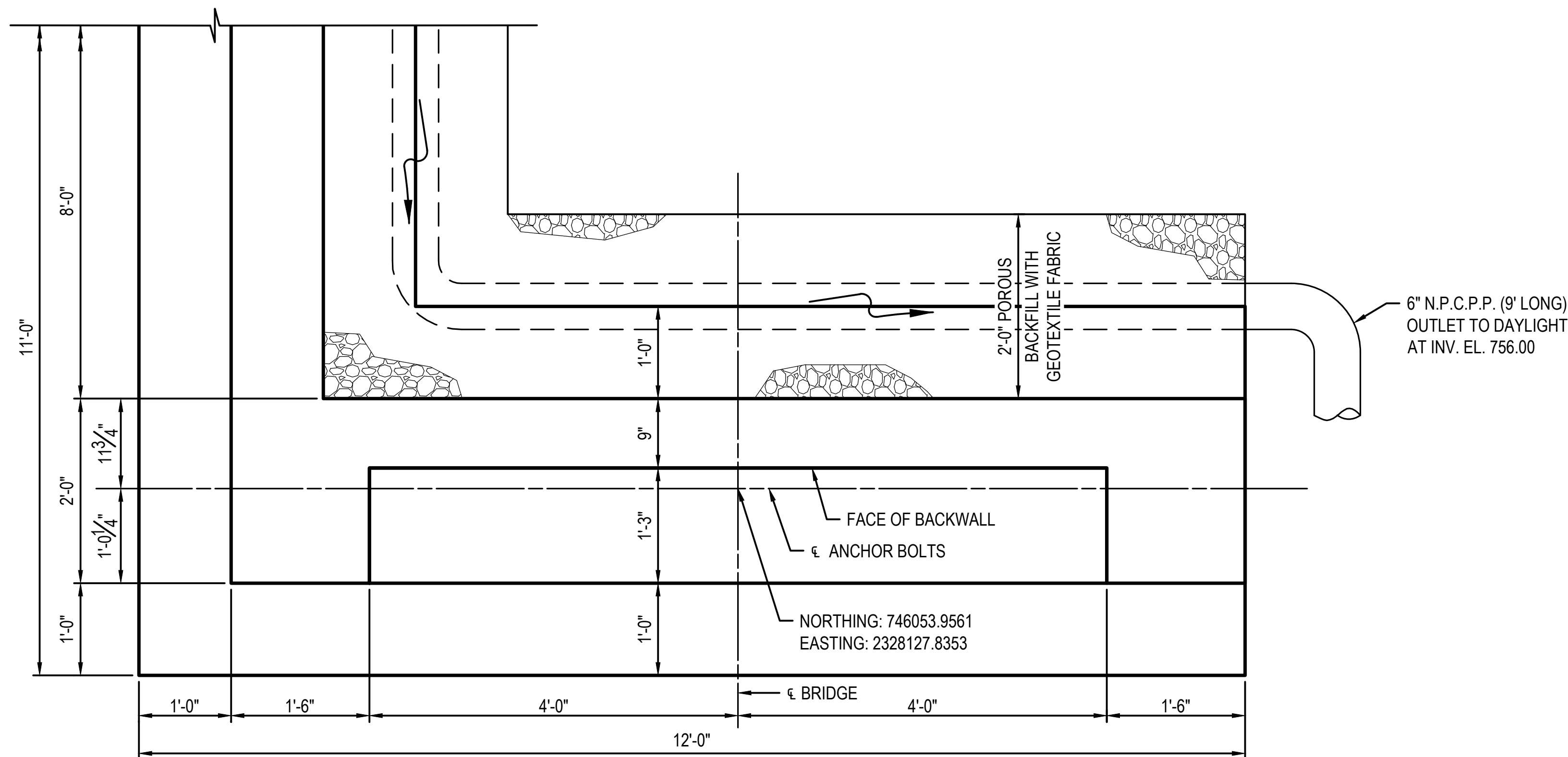
PROJECT MANAGER	DESIGNER
IV	MOJ

SHEET: S-201

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1. CENTERLINE OF ANCHOR BOLT LOCATION AND BEAM SEAT ELEVATION ARE APPROXIMATE AND ARE TO BE COORDINATED WITH PREFABRICATED BRIDGE DETAILS.



Structural drawing of a bridge deck cross-section showing reinforcement details, dimensions, and elevations.

Dimensions:

- Overall width: 12'-0"
- Overall height: 6'-3"
- Top slab thickness: 9"
- Bottom slab thickness: 2'-0"
- Top slab width (excluding abutments): 8'-0"
- Bottom slab width (excluding abutments): 9'-0"
- Top slab width (including abutments): 1'-0" + 1'-6" + 8'-0" + 1'-6" = 12'-0"
- Bottom slab width (including abutments): 3'-0" + 9'-0" = 12'-0"
- Top slab width (excluding abutments): 8'-0"
- Bottom slab width (excluding abutments): 9'-0"
- Top slab width (including abutments): 1'-0" + 1'-6" + 8'-0" + 1'-6" = 12'-0"
- Bottom slab width (including abutments): 3'-0" + 9'-0" = 12'-0"

Elevations:

- T/WALL EL. 759.50
- BEAMSEAT EL. 758.75
- T/ SLOPE EL. 757.75
- INV. EL. 756.09
- B/ FOOTING EL. 753.25

Reinforcement Details:

- Top slab: 9-A506 & 9-A503 SPA. @ 12" (-) = 7'-8"
- Bottom slab: 10-A502 SPA. @ 12" (-) = 8'-8"
- Top slab: 2-A508 (N.S. & CENTER)
- Bottom slab: 4-A501 (T&B) SPA. @ 11" (-) = 2'-8"
- Top slab: 3-A501
- Bottom slab: 5-A507
- Top slab: 4 SPA. @ 9" (+) = 3'-2"
- Bottom slab: 4-A501 B.S.
- Top slab: A515
- Bottom slab: A515
- Top slab: A501 (CENTERED IN ABUT. BACKWALL)
- Top slab: 6" P.C.P.P.
- Bottom slab: 6" N.P.C.P.P.

Other Notes:

- 2-A508 (N.S. & CENTER)
- T/ SLOPE EL. 757.75
- 6" N.P.C.P.P.
- INV. EL. 756.09
- 3" CLR.

1. FOR WINGWALL PLAN & ELEVATION. SEE SHEET 6 / 8.
2. CENTERLINE OF ANCHOR BOLT LOCATION AND BEAM SEAT ELEVATION ARE APPROXIMATE AND ARE TO BE COORDINATED WITH PREFABRICATED BRIDGE DETAILS.

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HEMLOCK BRIDGE
Leroy Township, Ohio

FORWARD ABUTMENT PLAN & ELEVATION

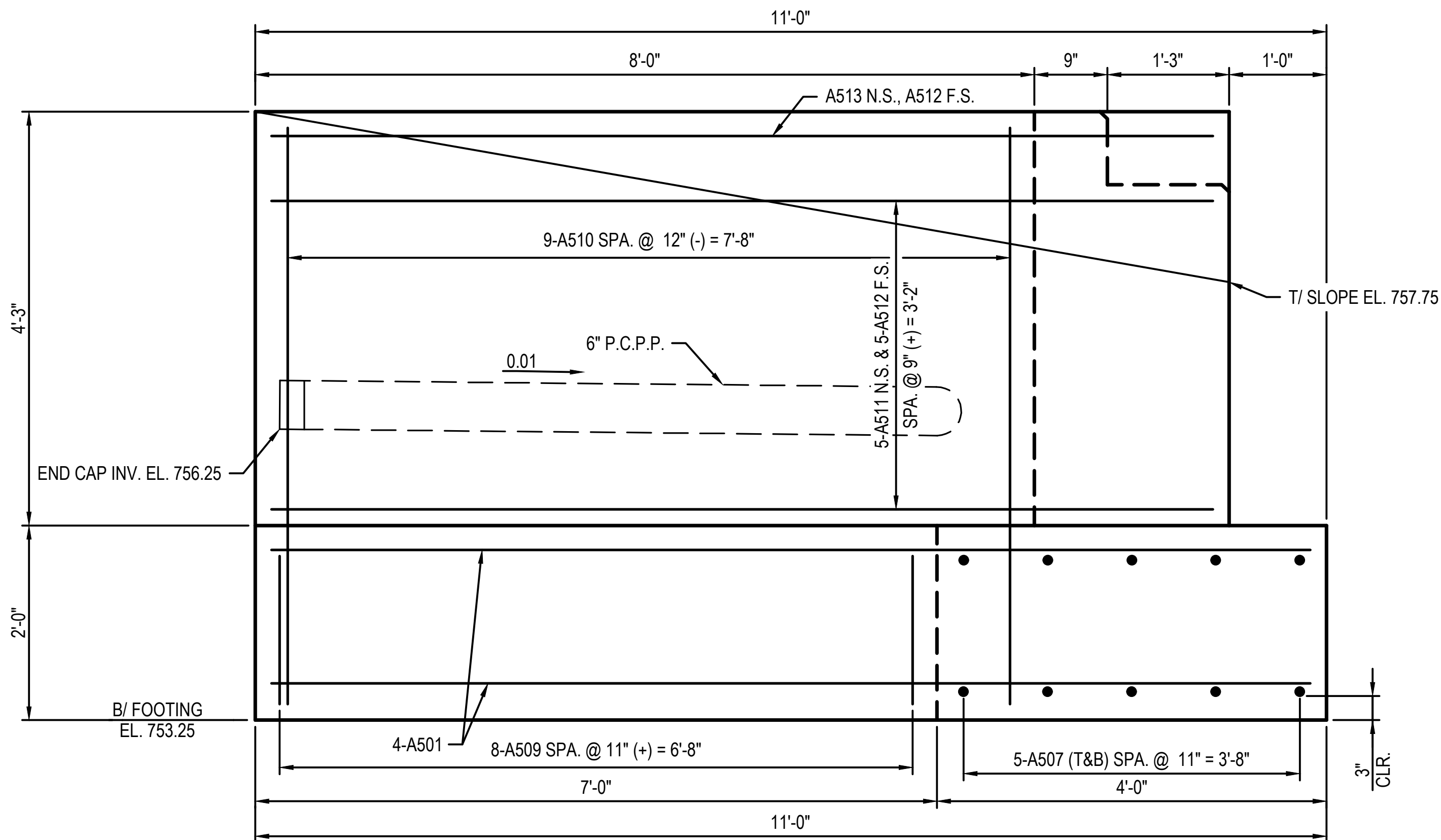
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SHEET: S-202

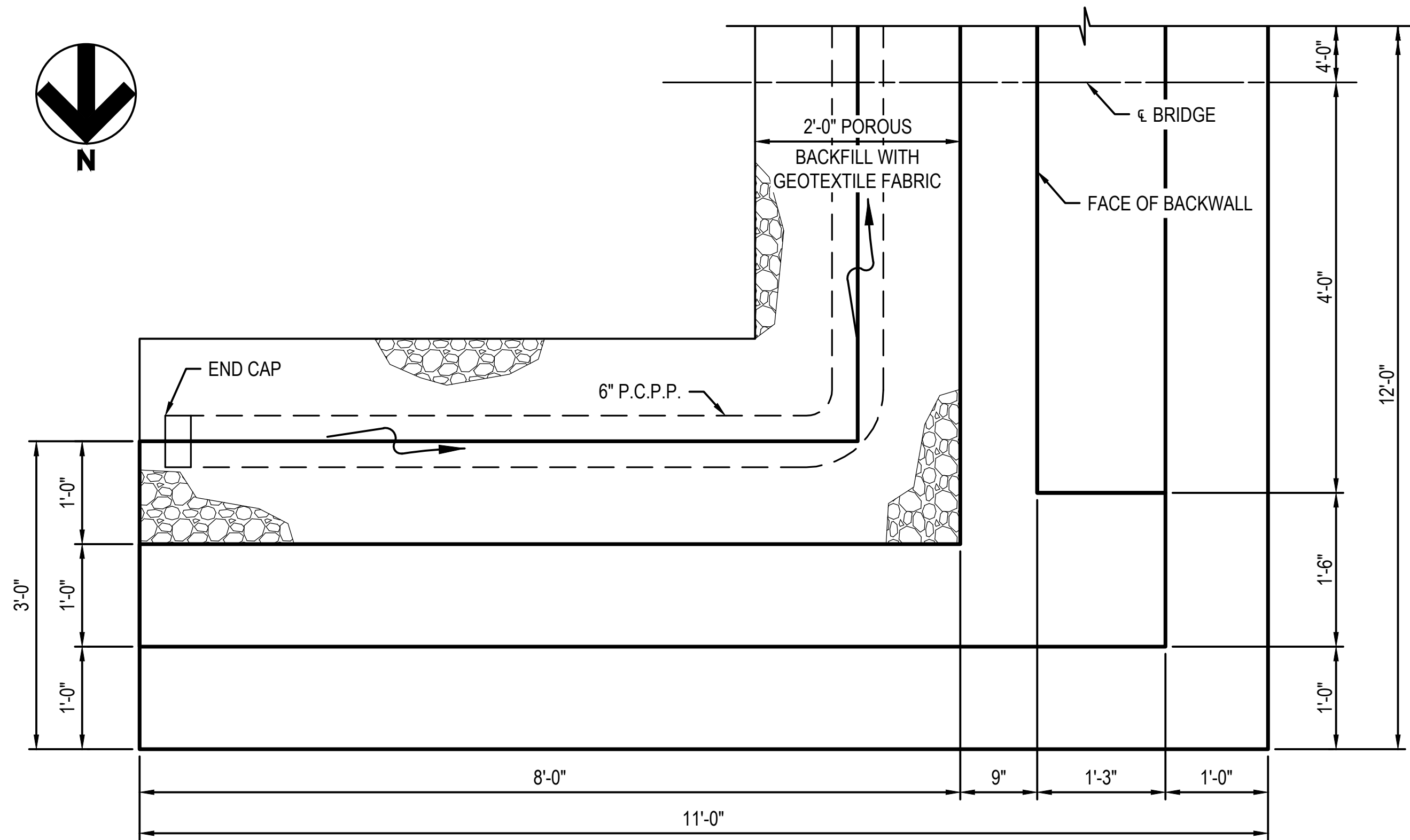
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WINGWALL ELEVATION

ABUTMENT REINFORCING NOT SHOWN FOR CLARITY



WINGWALL PLAN

NOTES:

1. FOR FRWD. ABUTMENT PLAN & ELEVATION. SEE SHEET 5 / 8.



DESCRIPTION

DATE

REV.

HEMLOCK BRIDGE
Leroy Township, Ohio

WINGWALL PLAN & ELEVATION

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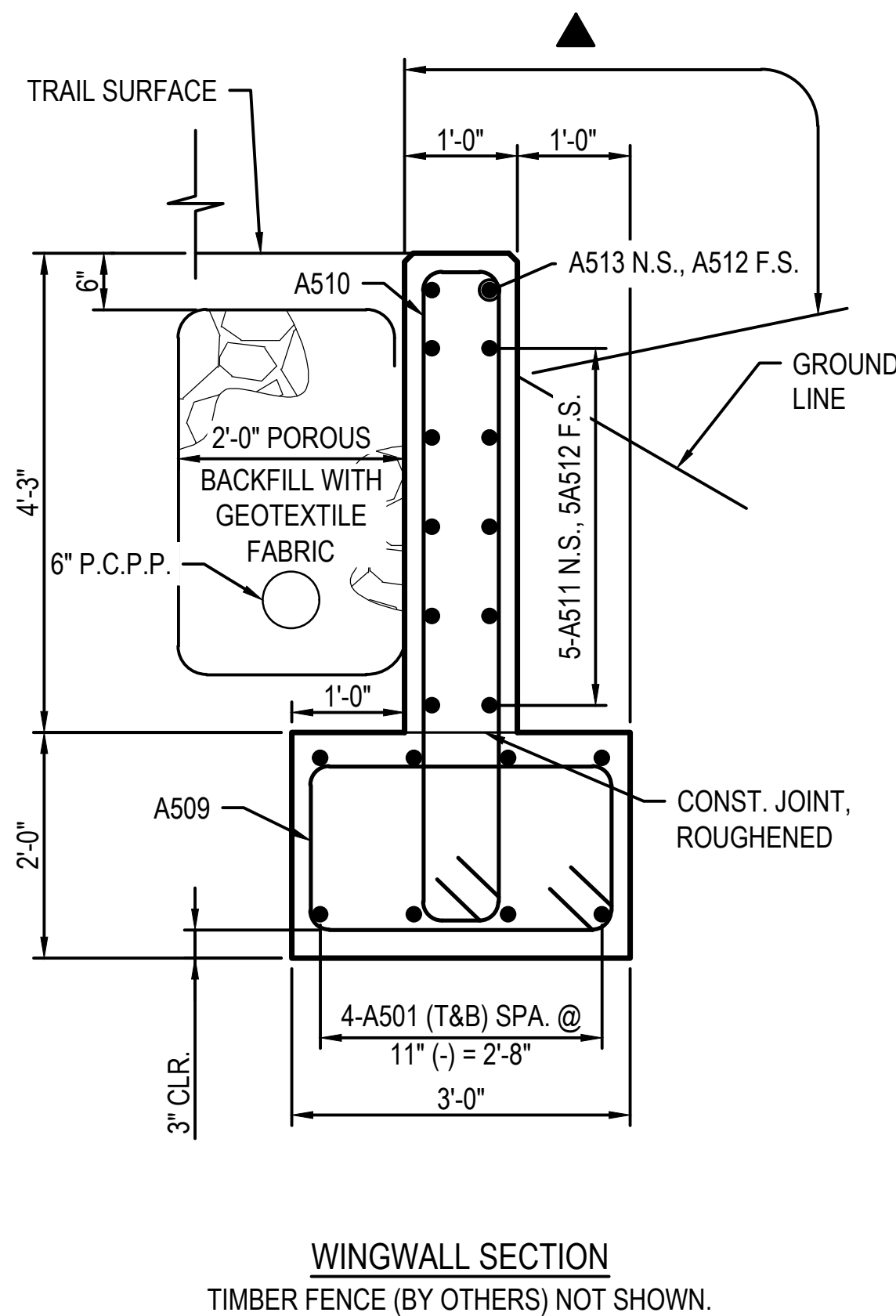
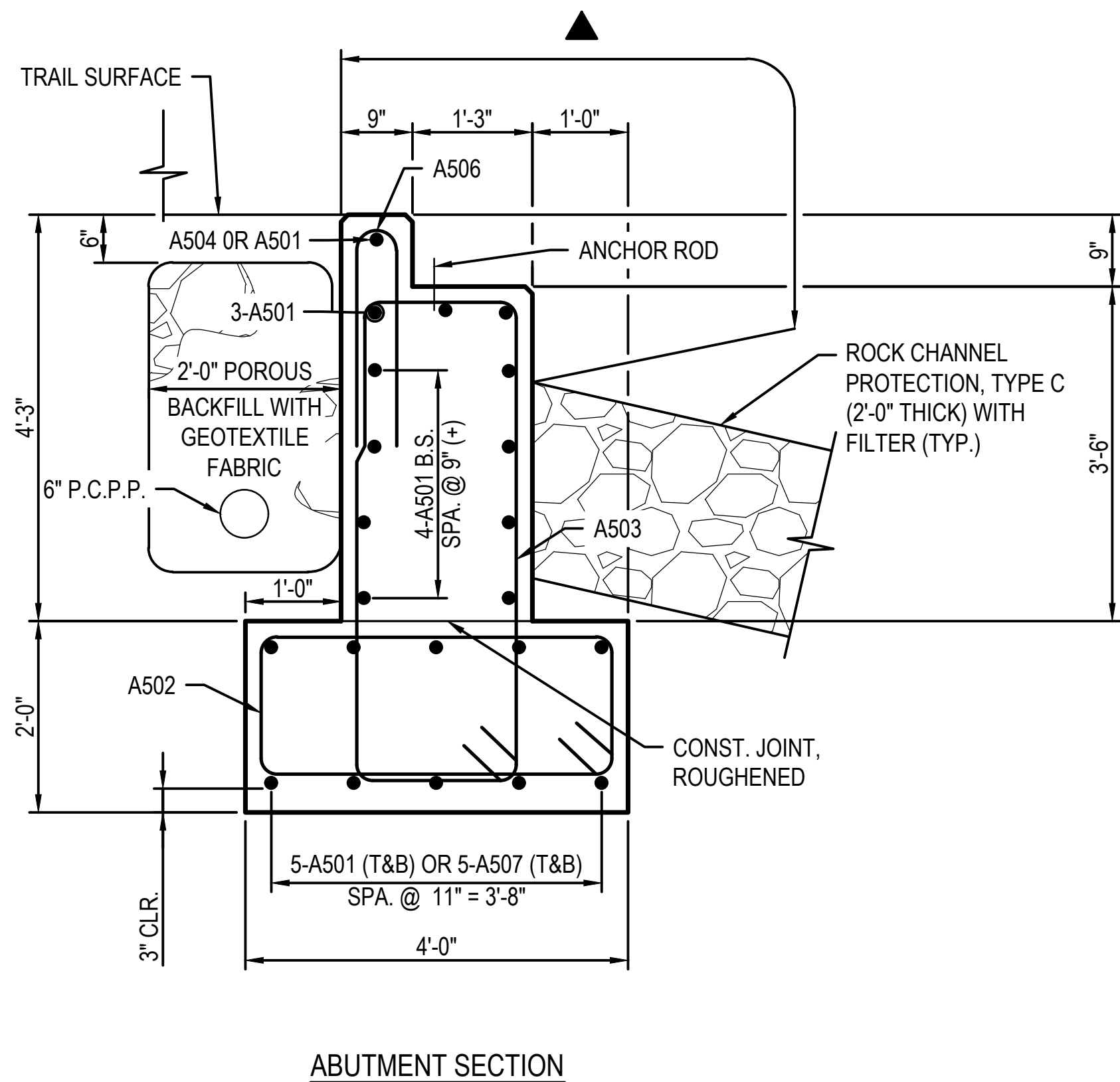
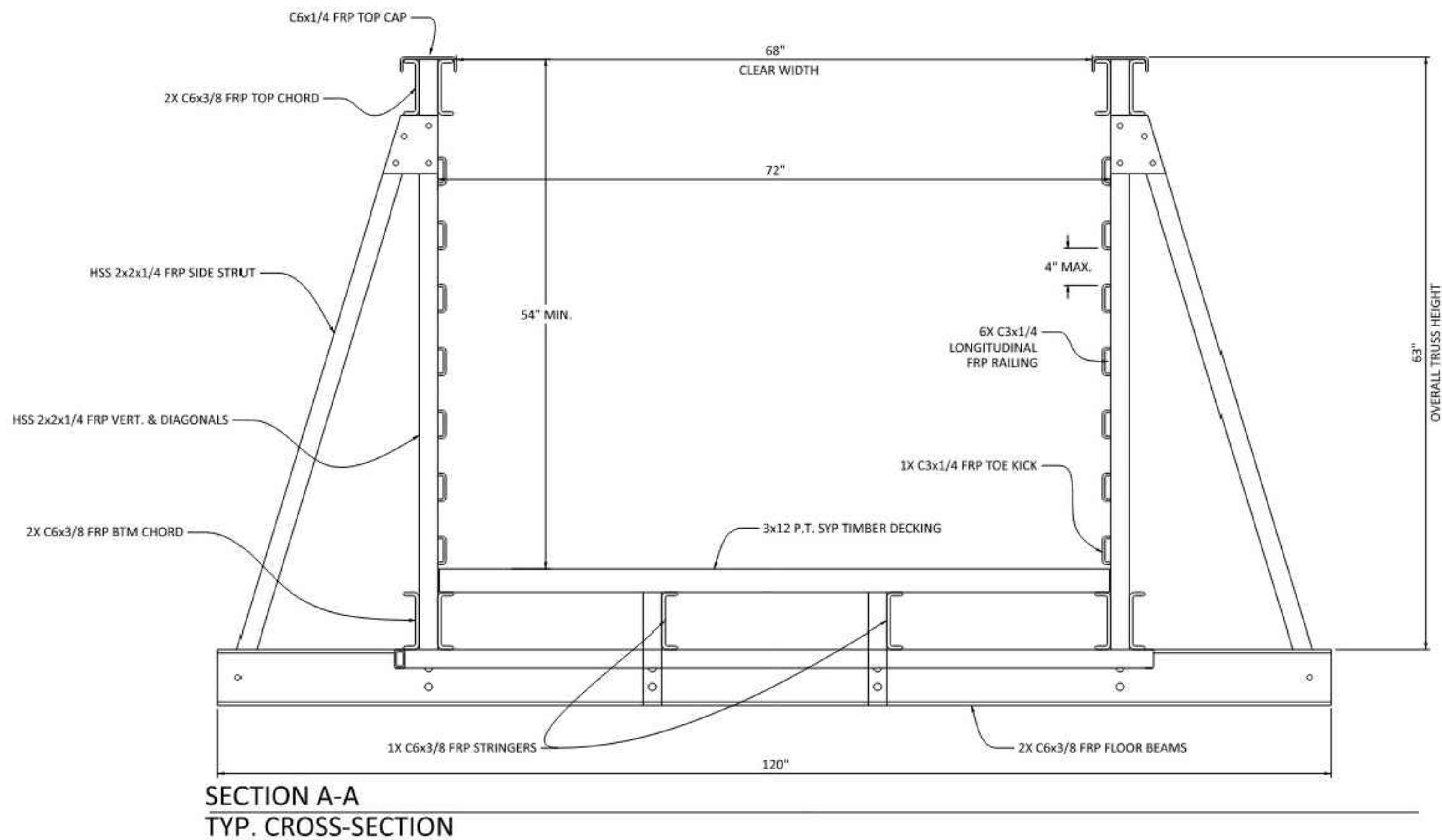
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LEGEND:

- ▲ ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)



DESCRIPTION

DATE

REV.

HEMLOCK BRIDGE
Leroy Township, Ohio

SECTION DETAILS

ISSUED FOR:	
PERMIT	-
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CONSTRUCTION	-
RECORD	-
PROJECT MANAGER	DESIGNER
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S-301

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