

SUBSET 04 - STRUCTURES INDEX OF DRAWINGS

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S-24	FRAMING PLAN		
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DESIGNED BY:
MCFARLAND JOHNSON

REV.	DATE	REVISION DESCRIPTION	

DESIGNER/DRAFTER: DRW/SLM CHECKED BY: DMK

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PLOTTED DATE: 11/21/2025

SIGNATURE
BLOCK:



McFarland Johnson
273 Corporate Drive
Suite 200
Portsmouth, NH
03801

**ROXBURY**
CONNECTICUT

PROJECT NUMBER: 0119-0121

PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 05068-WELLERS BRIDGE ROAD OVER SHEPAUG RIVER

TOWN(S): ROXBURY

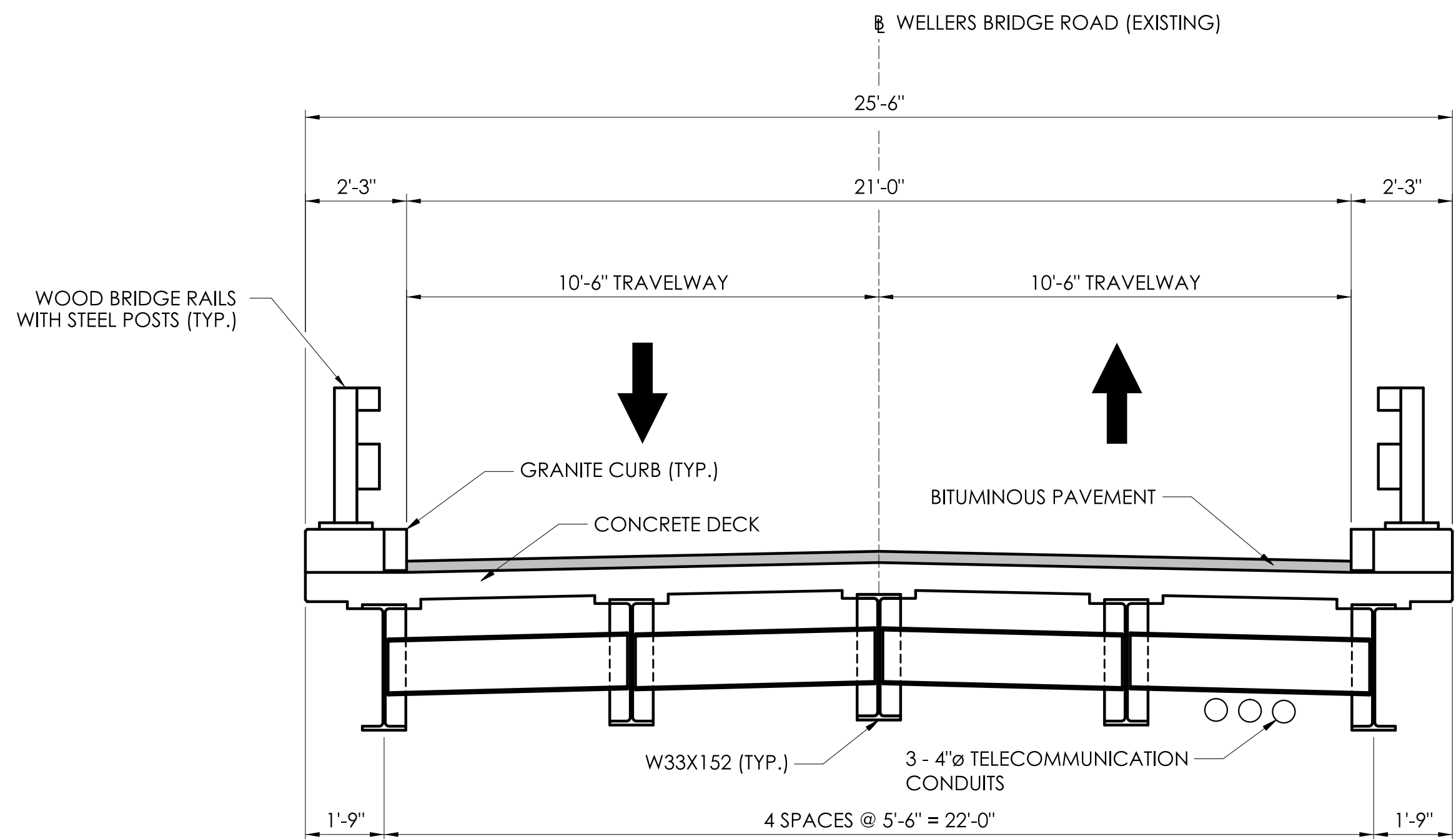
DRAWING TITLE: STRUCTURES INDEX OF DRAWINGS

DRAWING NO. 333

S-01

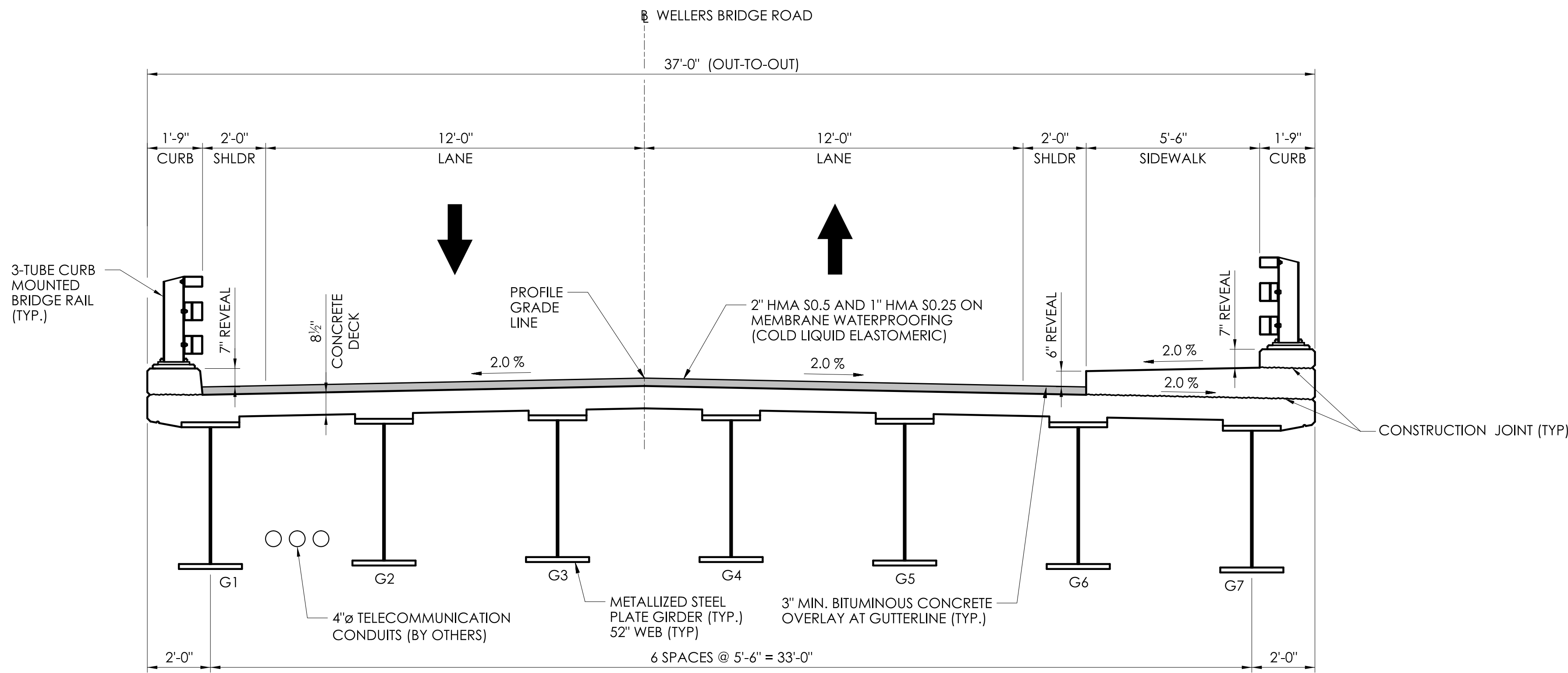
SHEET NO.

04.0



EXISTING BRIDGE CROSS SECTION

SCALE: $\frac{3}{8}$ " = 1'-0"



PROPOSED BRIDGE CROSS SECTION

SCALE: $\frac{3}{8}$ " = 1'-0"

REV.	DATE	REVISION DESCRIPTION

GENERAL NOTES

SPECIFICATIONS: CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 819 (2024), SUPPLEMENTAL SPECIFICATIONS DATED JANUARY 2025, AND SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS - 9TH EDITION, 2020 AS SUPPLEMENTED BY THE CONNECTICUT DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL (2003) WITH REVISIONS THROUGH FEBRUARY 2024.

MATERIAL STRENGTHS:

CONCRETE:
CLASS PCC03340 f'c = 3,000 PSI
CLASS PCC04460 f'c = 4,000 PSI
CLASS PCC04462 f'c = 4,000 PSI

THE CONCRETE STRENGTH, f'c, USED IN DESIGN OF THE CONCRETE COMPONENTS IS NOTED ABOVE. THE COMPRESSIVE STRENGTH OF THE CONCRETE IN THE CONSTRUCTED COMPONENTS SHALL CONFORM TO THE REQUIREMENTS OF 6.01 - CONCRETE FOR STRUCTURES, AND M.03 - PORTLAND CEMENT CONCRETE.

REINFORCEMENT:
(ASTM A615 GRADE 60) Fy = 60,000 PSI

STRUCTURAL STEEL:
(AASHTO M270, GRADE 50T2) Fy= 50,000 PSI

LIVE LOAD: HL93, LEGAL AND PERMIT VEHICLES

FUTURE PAVING ALLOWANCE: NONE

STRUCTURAL STEEL: SEE STRUCTURAL STEEL NOTES FOR DESIGNATIONS AND REQUIREMENTS.

METALLIZING: STRUCTURAL STEEL SHALL BE METALLIZED IN ACCORDANCE WITH THE SPECIAL PROVISION : METALLIZING STRUCTURAL STEEL (SITE NO. 1). THE COLOR OF THE TOP COAT MATERIAL ON THE STRUCTURAL STEEL SHALL CONFORM TO AMS-STD-595 COLOR NO. 10055 DOT HIGHWAY BROWN (GLOSS).

BITUMINOUS CONCRETE OVERLAY: THIS SHALL CONSIST OF TWO LIFTS, 2" HMA S0.5 TRAFFIC LEVEL 2 ON 1" HMA S0.25 TRAFFIC LEVEL 2 ON WATERPROOFING MEMBRANE (COLD LIQUID ELASTOMERIC).

SALVAGE: NONE

DIMENSIONS AND ELEVATIONS: ALL DIMENSIONS ARE GIVEN IN FEET UNLESS OTHERWISE NOTED. ALL ELEVATIONS GIVEN IN FEET. WHEN DECIMAL DIMENSIONS OR ELEVATIONS ARE GIVEN TO LESS THAN THREE DECIMAL PLACES, THE OMITTED DIGITS SHALL BE ASSUMED TO BE ZEROS

EXISTING DIMENSIONS: DIMENSIONS OF THE EXISTING STRUCTURE SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY. THEY HAVE BEEN TAKEN FROM THE ORIGINAL DESIGN DRAWINGS AND ARE NOT GUARANTEED. THE CONTRACTOR SHALL TAKE ALL FIELD MEASUREMENTS NECESSARY TO ASSURE PROPER FIT OF THE FINISHED WORK AND SHALL ASSUME FULL RESPONSIBILITY FOR THEIR ACCURACY. WHEN SHOP DRAWINGS BASED ON FIELD MEASUREMENTS ARE SUBMITTED FOR REVIEW, THE FIELD MEASUREMENTS SHALL ALSO BE SUBMITTED FOR REFERENCE BY THE REVIEWER.

SUBSTRUCTURE AND SUPERSTRUCTURE REMOVAL: BEFORE INITIATING BRIDGE CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A PLAN FOR APPROVAL DEFINING THE METHOD FOR CONSTRUCTION AND PROTECTING DEBRIS FROM FALLING INTO EXISTING CHANNEL. COST SHALL BE INCLUDED FOR PAYMENT UNDER THE ITEM "REMOVAL OF SUPERSTRUCTURE"

GENERAL NOTES (CONTINUED)

UTILITIES: THE FOLLOWING UTILITIES ARE LOCATED WITHIN THE PROJECT LIMITS AND SHALL BE PROTECTED DURING CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE ALL WORK RELATED TO UTILITY RELOCATION WITH THE RESPECTIVE UTILITY COMPANIES:

THE SOUTHERN NEW ENGLAND TELEPHONE COMPANY DBA FRONTIER COMMUNICATIONS OF CONNECTICUT
THE CONNECTICUT LIGHT AND POWER COMPANY DBA EVERSOURCE ENERGYELECTRIC DISTRIBUTION
CROWN CASTLE FIBER, LLC
CHARTER COMMUNICATIONS ENTERTIANMENTI, LLC DBA CHARTER COMMUNICATIONS OF WESTERN CONN.
LEVEL 3 COMMUNICATIONS, LLC AKA WILTEL COMMUNICATIONS, LLC AKA CENTURYLINK COMMUNICATIONS, LLC

MASH TEST LEVEL: THE 3-TUBE CURB MOUNTED BRIDGE RAIL MEETS THE TL-4 CRITERIA FOR MASH 2016.

TRAFFIC: ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE SPECIAL PROVISIONS "MAINTENANCE AND PROTECTION OF TRAFFIC" AND "PROSECUTION AND PROGRESS".

DEWATERING: WATER ENCOUNTERED IN THE EXCAVATION THAT REQUIRES DEWATERING SHALL BE PERFORMED IN ACCORDANCE WITH THE PROVISIONS OF SUBARTICLE 2.04.03-2 OF THE STANDARD SPECIFICATIONS. NO ADDITIONAL PAYMENT WILL BE MADE FOR DEWATERING. THE COST FOR DEWATERING WITHIN THE LIMITS OF EXCAVATION REQUIRED FOR ABUTMENT 1 AND ABUTMENT 2 SHALL BE INCLUDED FOR PAYMENT UNDER ITEM "HANDLING WATER".

BRIDGE IDENTIFICATION PLACARDS: THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW BRIDGE IDENTIFICATION SIGNS AT THE LEADING END OF EACH BRIDGE ENDWALL ON THE TRAFFIC SIDE. THE SIGNS SHALL BE FABRICATED WITH 40 GAUGE ALUMINUM SHEET METAL. THE SIGNS SHALL BE 4" X 12" WITH 3" WHITE REFLECTIVE BLOCK LETTERS ON GREEN SHEETING. EACH SIGN SHALL READ: 05068. ALL COSTS ASSOCIATED WITH PROVIDING AND INSTALLING THE BRIDGE SIGNS SHALL BE COVERED UNDER "SIGN FACE-SHEET ALUMINUM (TYPE IX RETROREFLECTIVE SHEETING)". THE FINAL LOCATION AND ATTACHMENT METHOD FOR THE SIGNS SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.

CONCRETE NOTES

REMAIN-IN-PLACE FORMS: THE USE OF REMAIN-IN-PLACE FORMS ON THIS STRUCTURE IS NOT ALLOWED.

COMPOSITE CONSTRUCTION: NO TEMPORARY INTERMEDIATE SUPPORTS SHALL BE USED DURING THE PLACING AND SETTING OF THE CONCRETE DECK SLAB. TEMPORARY SUPPORTS MAY BE USED FOR STRUCTURAL STEEL ERECTION ONLY. CONSTRUCTION LOADS AND DEAD LOADS WILL BE PERMITTED WHEN DIRECTED BY THE ENGINEER BUT ONLY WHEN THE CONCRETE HAS REACHED A STRENGTH OF f'c=3500psi. LIVE LOADS (TRAFFIC) WILL BE PERMITTED ON THE STRUCTURE AFTER THE CONCRETE HAS REACHED A STRENGTH OF f'c=4000psi.

THE FOLLOWING PAY ITEMS AND CONCRETE CLASSES ARE REQUIRED FOR CAST-IN-PLACE BRIDGE COMPONENTS:

ITEM NAME	BRIDGE COMPONENT	PCC CLASS
FOOTING CONCRETE	ABUTMENT AND WINGWALL FOOTINGS CONCRETE FOR ROCK SOCKETS	PCC03340
ABUTMENT AND WALL CONCRETE	ABUTMENT STEMS, PEDESTALS AND WINGWALLS	PCC03340
BRIDGE DECK CONCRETE	BRIDGE DECK, CURBS, HAUNCHES ABUTMENT BACKWALLS, CORBELS, PILASTERS	PCC04462
SIDEWALK CONCRETE	BRIDGE SIDEWALKS APPROACH SIDEWALKS	PCC04462
APPROACH SLAB CONCRETE	APPROACH SLABS	PCC04460
PARAPET CONCRETE	CONCRETE END BLOCKS	PCC04462

EXPOSED EDGES: EXPOSED EDGES SHALL BE BEVELED 1"x1" UNLESS DIMENSIONED OTHERWISE.

CONCRETE COVER: ALL REINFORCEMENT SHALL HAVE TWO INCHES COVER UNLESS DIMENSIONED OTHERWISE.

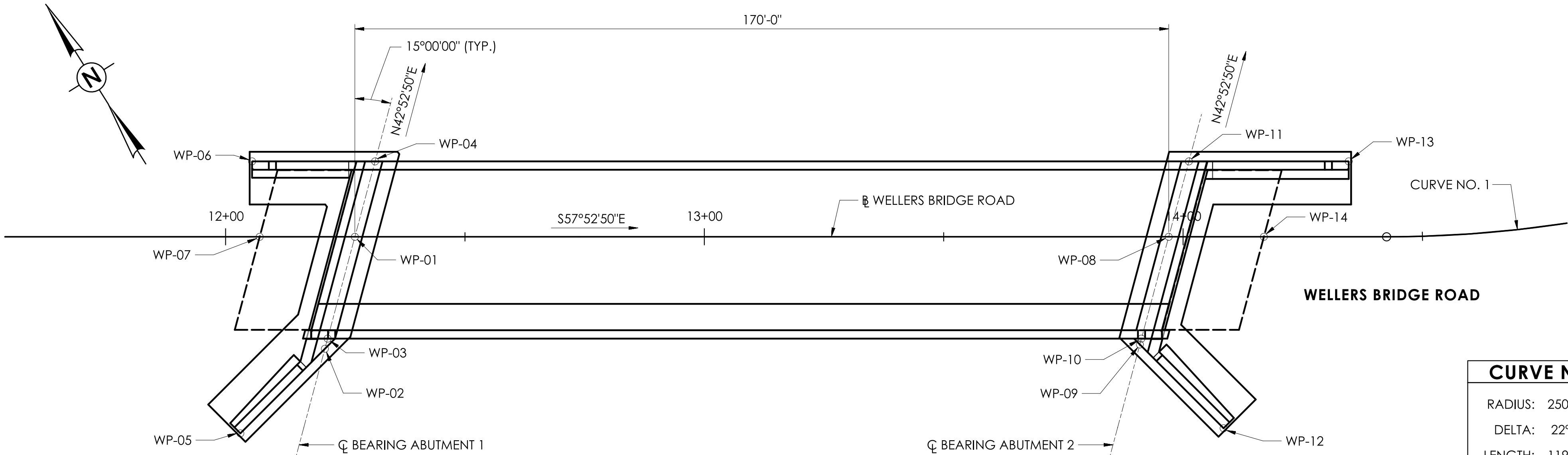
REINFORCEMENT: ALL REINFORCEMENT SHALL BE GALVANIZED AFTER FABRICATION UNLESS NOTED OTHERWISE. ALL REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS OF ASTM A767, CLASS 1, INCLUDING SUPPLEMENTAL REQUIREMENTS. THE COST OF FURNISHING AND PLACING THIS REINFORCEMENT SHALL BE INCLUDED IN THE ITEM "DEFORMED STEEL BARS - GALVANIZED"

FELT: THE COST OF FURNISHING AND PLACING #15 ROOFING FELT IS INCLUDED IN THE ITEM "1" CLOSED CELL ELASTOMER".

PREFORMED EXPANSION JOINT FILLER: THE COST OF FURNISHING AND INSTALLING PREFORMED EXPANSION JOINT FILLER SHALL BE PAID FOR AS "1/2" PREFORMED EXPANSION JOINT FILLER FOR BRIDGES" AND "1" PREFORMED EXPANSION JOINT FILLER FOR BRIDGES" AS APPROPRIATE.

CLOSED CELL ELASTOMER: FURNISHING AND INSTALLING CLOSED CELL ELASTOMER SHALL BE INCLUDED IN THE ITEM "1" CLOSED CELL ELASTOMER".

CONSTRUCTION JOINTS: CONSTRUCTION JOINTS, OTHER THAN THOSE SHOWN ON THE PLANS, WILL NOT BE PERMITTED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.



LAYOUT PLAN

SCALE: 1/8" = 1'-0"

CURVE NO. 1					
RADIUS:	250.00'				
DELTA:	22°55'06" Left				
LENGTH:	119.92'				
TANGENT:	61.13'				
PI N:	761527.56				
E:	841625.15				

WORKING POINT COORDINATES TABLE					
LOCATION	WP #	STA.	OFFSET	NORTH	EAST
ABUTMENT 1	01	12+27.00	0.00 RT	761674.65	841390.85
	02	12+20.74	23.37 RT	761658.19	841373.12
	03	12+21.13	21.25 RT	761659.68	841374.73
	04	12+31.22	15.75 LT	761685.75	841402.80
	05	12+03.08	41.03 RT	761652.62	841348.78
	06	12+05.53	15.75 LT	761699.41	841381.03
	07	12+07.12	0.00 RT	761685.23	841374.01
ABUTMENT 2	08	13+97.00	0.00 RT	761584.27	841534.83
	09	13+90.98	22.48 RT	761568.43	841517.78
	10	13+91.31	21.25 RT	761569.30	841518.71
	11	14+01.22	15.75 LT	761595.36	841546.78
	12	14+08.47	39.96 RT	761544.33	841523.29
	13	14+34.60	15.75 LT	761577.61	841575.05
	14	14+16.88	0.00 RT	761573.70	841551.67

REV.	DATE	REVISION DESCRIPTION

Driller: Mike St. John		Connecticut DOT Boring Report				Hole No.: B-1			
Inspector: Robert Jasper		Town: Roxbury		Stat./Offset:					
Engineer: CJM - Jim Otis		Project No.: C17041		Northing: 761,692.7117					
Start Date: 2-13-23		Route No.: Wellers Bridge Rd		Easting: 841,411.3434					
Finish Date: 2-13-23		Bridge No.: 05068		Surface Elevation: 299.4705					
Project Description: Wellers Bridge Road over Shepang River									
Casing Size/Type: 4" - HW		Sampler Type/Size: SS-2"			Core Barrel Type: NQ				
Hammer Wt.: 300lb Fall: 24" in.		Hammer Wt.: 140lb Fall: 30in.							
Groundwater Observations: @16.75									
Depth (ft)	SAMPLES					Generalized Strata Description	Material Description and Notes	Elevation (ft)	
	Sample Type/No.	Blows on Sampler per 6 inches							Pen. (in.)
0									
1	S-1	11	8	7	7	24	12	8" ASPHALT SAND, Gravel, Silt	Brown, fine to medium SAND, little fine to medium Gravel, little Silt.
5	S-2	12	7	9	13	24	10		Brown, fine to medium SAND, little fine to medium Gravel, little Silt.
10	S-3	5	11	12	10	24	4		Brown, fine to medium SAND, little fine to medium Gravel, little Silt.
15	S-4	12	25	24	10	24	5	SAND, Gravel, Silt	Gray / brown coarse SAND, some medium Sand, some fine to coarse Gravel, trace Silt.
20	S-5	17	18	21	26	24	5		Gray / brown coarse SAND, some medium Sand, some fine to coarse Gravel, trace Silt.
25	S-6	24	21	21	21	24	0		Gray / brown coarse SAND, some medium Sand, some fine to coarse Gravel, trace Silt.
30	S-7	31	32	20	32	24	7		Gray / brown coarse SAND, some medium Sand, some fine to coarse Gravel, trace Silt.
35	S-8	13	12	31	50	24	5		Gray / brown coarse SAND, some medium Sand, some fine to coarse Gravel, trace Silt.
40	C-1					60	57	53	GRANITE SCHIST
45	C-2					60	60	76	GRANITE SCHIST
50									
Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%									
Total Penetration in		NOTES: End of Boring 50ft						Sheet 1 of 1	
Earth: 40ft Rock: 10ft									
No. of Soil Samples: 8		No. of Core Runs: 2							
SM-001-M REV. 1/02									

BORING B-1

Driller:		Mike St.John		Connecticut DOT Boring Report				Hole No.:		B-2	
Inspector:		Robert Jasper		Town:		Roxbury		Stat./Offset:			
Engineer:		CJM - Jim Otis		Project No.:		C17041		Northing: 761,601.7457			
Start Date:		2-14-23		Route No.:		Wellers Bridge Rd		Easting: 841,553.5831			
Finish Date:		2-14-23		Bridge No.:		05068		Surface Elevation: 302.0670			
Project Description: Wellers Bridge Road over Shepang River											
Casing Size/Type: 4" - HW						Sampler Type/Size: SS-2"			Core Barrel Type: NQ		
Hammer Wt.: 300lb Fall: 24" in.						Hammer Wt.: 140lb Fall: 30in.					
Groundwater Observations: @17											
Depth (ft)	SAMPLES						Generalized Strata Description	Material Description and Notes	Elevation (ft)		
	Sample Type/No.	Blows on Sampler per 6 inches				Pen. (in.)				Rec. (in.)	RQD %
0	S								ASPHALT	6.5" ASPHALT	
	S-1	17	14	13	16	24	7		SAND, Gravel, Silt	Brown, fine to medium SAND, some fine Gravel, little Silt.	
5											
	S-2	7	9	13	20	24	13			Brown, fine to medium SAND, some fine Gravel, little Silt.	
10											
	S-3	4	14	18	10	24	7			Brown, fine to medium SAND, some fine Gravel, little Silt.	
15											
	S-4	4	6	11	10	24	14			Brown, fine to medium SAND, some fine Gravel, little Silt.	
20											
	S-5	13	17	21	32	24	9		SAND and GRAVEL, Cobbles, Silt	Brown, fine to coarse SAND and fine to coarse Gravel, some Cobbles, trace Silt.	
25											
	S-6	6	7	7	11	24	3			Brown, fine to coarse SAND and fine to coarse Gravel, some Cobbles, trace Silt.	
30											
	S-7	15	18	36	40	24	12			Brown, fine to coarse SAND and fine to coarse Gravel, some Cobbles, trace Silt.	
35											
	S-8	23	19	21	46	24	11			Brown, fine to coarse SAND and fine to coarse Gravel, some Cobbles, trace Silt.	
40											
	C-1					60	58	47	BEDROCK SCHIST	GRANITE SCHIST	
45											
	C-2					60	59	93		GRANITE SCHIST	
50											

Sample Type: S = Split Spoon C = Core UP = Undisturbed Piston V = Vane Shear Test

END OF BORING 50ft

Proportions Used: Trace = 1 - 10%, Little = 10 - 20%, Some = 20 - 35%, And = 35 - 50%

Total Penetration in		NOTES: End of Boring 50ft	Sheet 1 of 1
Earth: 40ft	Rock: 10ft		
No. of Soil Samples: 8	No. of Core Runs: 2		


SM-001-M REV. 1/02

BORING B-2

[illegible]

DESIGNER/DRAFTER: EAP/SLM	CHECKED BY: DMK
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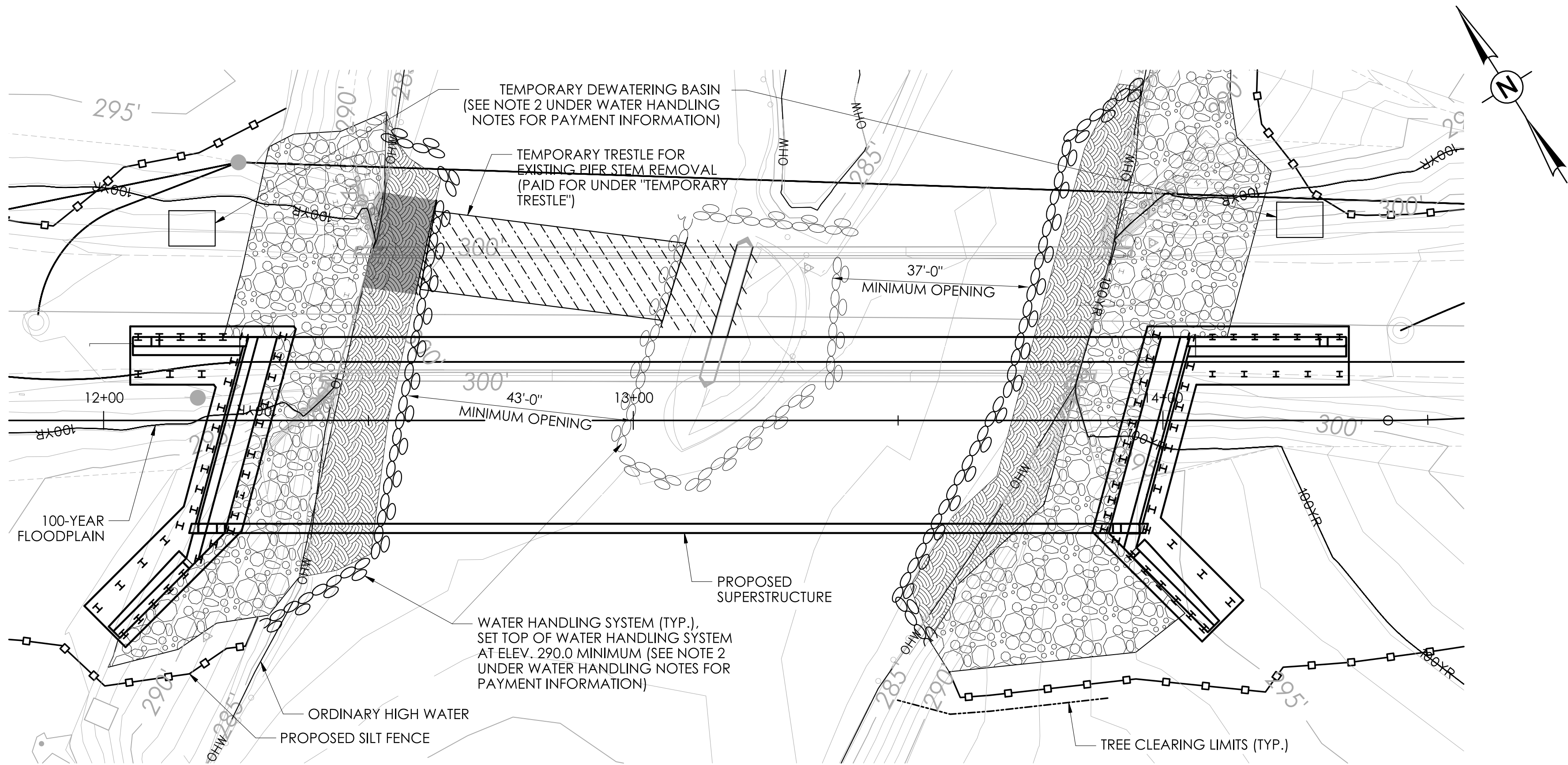
SIGNATURE,
BLOCK:

 McFarland Johnson
273 Corporate Drive
Suite 200
Portsmouth, NH
03801



PROJECT NUMBER: 0119-0121
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 05068-WELLERS BRIDGE ROAD OVER SHEPAUG RIVER
TOWN(S): ROXBURY
DRAWING TITLE: BORING LOGS (1 OF 2)

AWING NO.	S-05
EET NO.	04.05



WATER HANDLING PLAN
SCALE: 1/8" = 1'-0"

WATER HANDLING NOTES

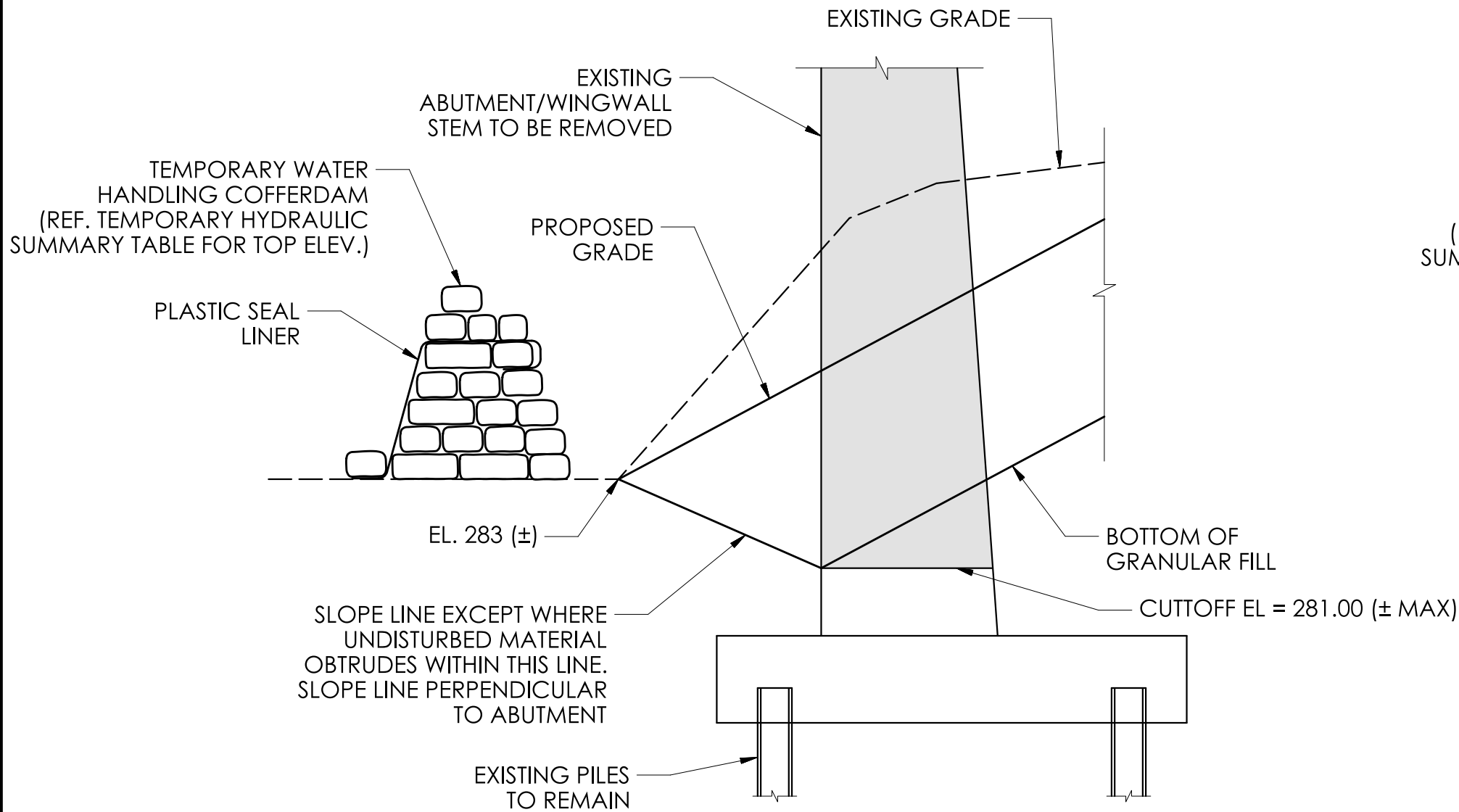
1. THE CONTRACTOR SHALL DESIGN THE TEMPORARY WATER HANDLING COFFERDAMS AND SUBMIT MEANS AND METHODS OF HANDLING WATER TO THE ENGINEER FOR APPROVAL.
2. WATER HANDLING SYSTEM, INCLUDING TEMPORARY DRAINAGE PIPES, DEWATERING BASINS, PUMPS AND ANY OTHER NECESSARY INCIDENTAL APPURTENANCES REQUIRED TO HANDLE THE WATER USED FOR THE CONSTRUCTION OF THE NEW ABUTMENTS AND WINGWALLS SHALL BE PAID FOR UNDER THE ITEM "HANDLING WATER".
3. CONSTRUCTION TO BE PERFORMED IN THE DRY BEHIND TEMPORARY WATER HANDLING COFFERDAM.
4. ALL WORK SHALL BE PERFORMED USING BEST MANAGEMENT PRACTICES.
5. EQUIPMENT SHALL NOT BE PERMITTED IN THE RIVER.
6. THE TEMPORARY ACCESS TRESTLE LOW CHORD SHALL BE A MINIMUM ELEVATION OF 292.6 FEET.

SUGGESTED BRIDGE CONSTRUCTION SEQUENCE

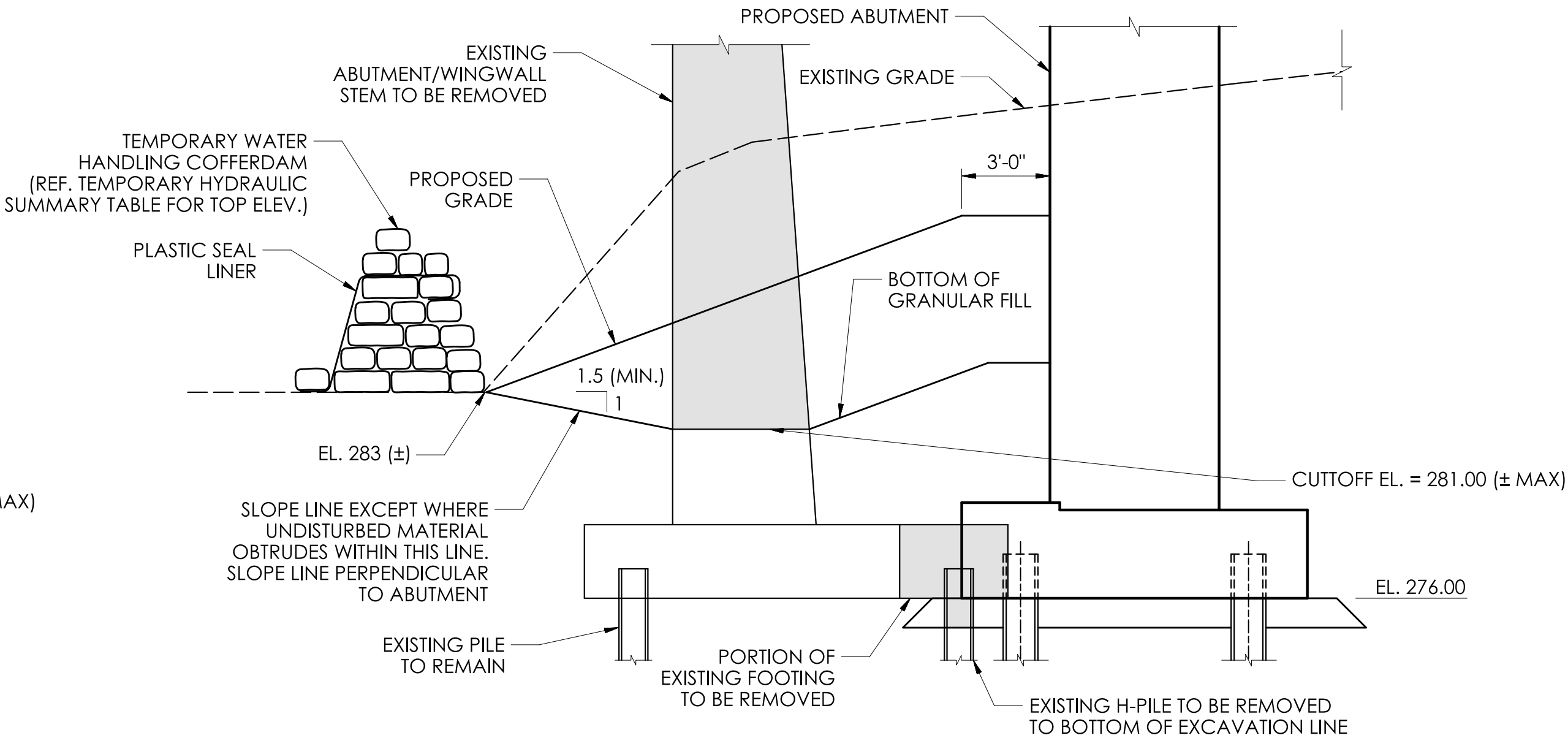
1. INSTALL SEDIMENTATION CONTROL SYSTEM.
2. CLEAR AND GRUB SITE.
3. INSTALL DEBRIS SHIELD (MIN. ELEV. 287.0) AND DEMO EXISTING SUPERSTRUCTURE.
4. INSTALL TEMPORARY DEWATERING BASINS.
5. INSTALL TEMPORARY WATER HANDLING COFFERDAM SYSTEM AS SHOWN FOR BOTH ABUTMENTS.
6. INSTALL TEMPORARY EARTH RETAINING SYSTEM FOR BOTH ABUTMENTS.
7. EXCAVATE AND REMOVE EXISTING ABUTMENTS AND WINGWALLS.
8. PERFORM EXPLORATION TEST BORINGS.
9. PRE-AUGER AND INSTALL PROPOSED PILES.
10. FORM AND POUR FOOTINGS, ABUTMENT AND WINGWALLS.
11. PLACE PORTION OF RIPRAP IN FRONT OF PROPOSED ABUTMENTS.
12. BACKFILL BEHIND ABUTMENTS.
13. REMOVE SOUTHERN PORTION OF EXISTING PIER CAP FOR SUPERSTRUCTURE ERECTION, AS REQUIRED.
14. CONSTRUCT SUPERSTRUCTURE .
15. INSTALL TEMPORARY ACCESS TRESTLE FOR FULL PIER REMOVAL.
16. REMOVE EXISTING PIER STEM.
17. REMOVE TEMPORARY ACCESS TRESTLE AND TURBIDITY CURTAIN.
18. FINAL GRADE AND INSTALL REMAINING RIPRAP.
19. REMOVE TEMPORARY SEDIMENTATION CONTROL SYSTEM FENCE.

TIME OF YEAR RESTRICTIONS

1. UNCONFINED IN-STREAM WORK WITHIN THE WATERCOURSE IS RESTRICTED TO THE PERIOD FROM JUNE 1ST TO SEPTEMBER 30TH, INCLUSIVE.
2. TREE CUTTING IS RESTRICTED TO THE PERIOD FROM APRIL 1ST TO APRIL 15TH INCLUSIVE. A HERPETOLOGIST SHALL BE ON SITE WHEN TREE CLEARING IS OCCURING WITHIN 100 FEET OF THE WATERCOURSE.
3. THE CONDITIONS AND RESTRICTIONS NOTED IN THE CTDEEP NDDb DETERMINATION LETTER NUMBER: 202412321 DATED JUNE 3, 2025, SHALL BE ADHERED TO. A COPY OF THIS DOCUMENT CAN BE FOUND IN THE CONTRACT DOCUMENTS.



WATER HANDLING SECTION AT EXISTING ABUTMENT
SCALE: 1/4" = 1'-0"



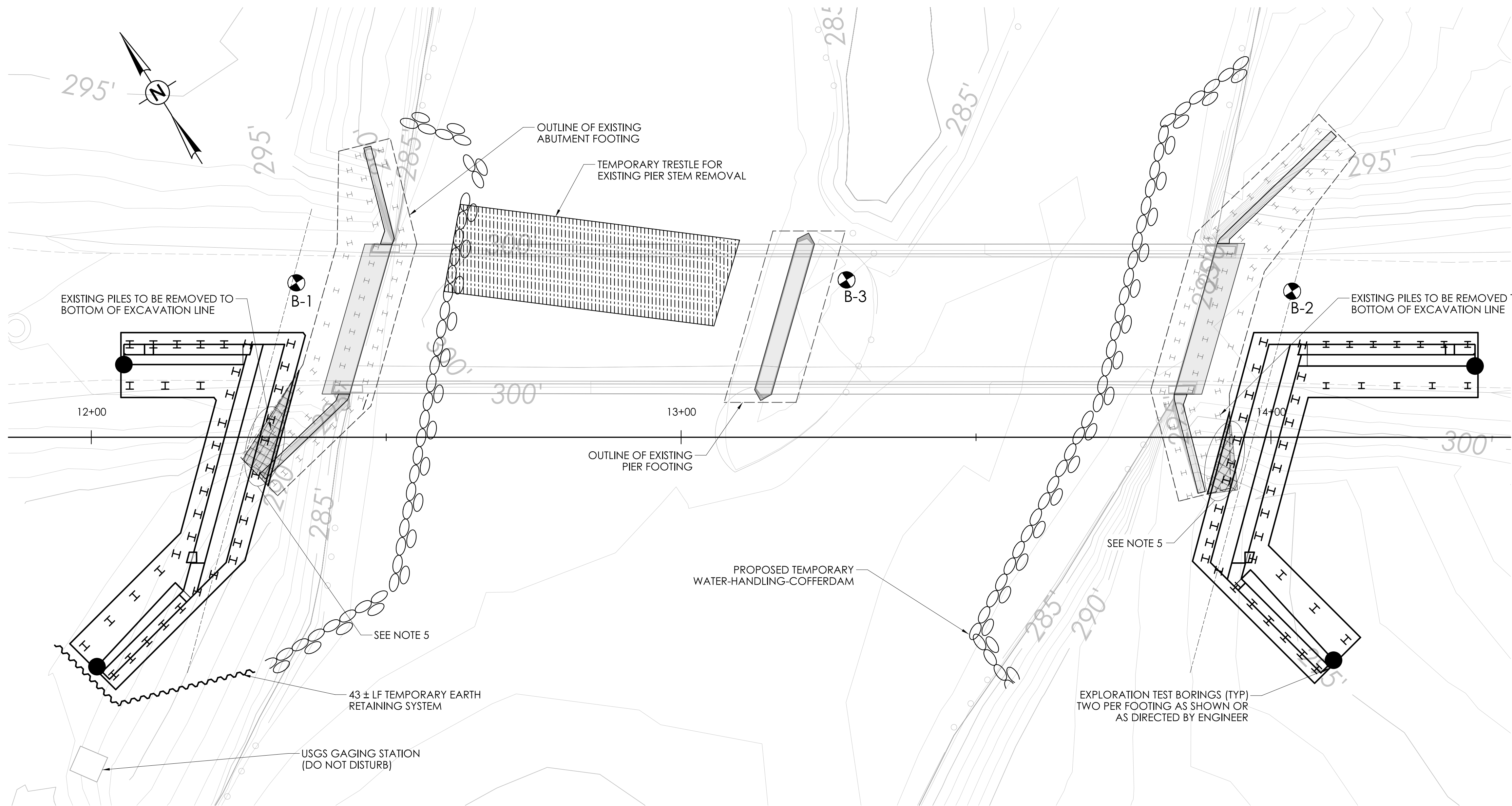
WATER HANDLING SECTION AT PROPOSED ABUTMENT
SCALE: 1/4" = 1'-0"

TEMPORARY HYDRAULIC SUMMARY DATA	
AVERAGE DAILY FLOW (ADF)	224 CFS
AVERAGE SPRING FLOW (ASF)	451 CFS
2 - YEAR DESIGN FREQUENCY DISCHARGE	3130 CFS
TEMPORARY FREQUENCY	3 YEAR
TEMPORARY DISCHARGE	4000 CFS
TEMPORARY DESIGN SURFACE ELEVATION (UPSTREAM)	289.1 FEET
TEMPORARY DESIGN SURFACE ELEVATION (DOWNSTREAM)	289.0 FEET

LEGEND

- 36" STANDARD RIPRAP (TYP)
- NATURAL STREAMBED MATERIAL

REV.	DATE	REVISION DESCRIPTION



CONSTRUCTION LAYOUT PLAN

SCALE: 3/32" = 1'-0"

NOTES:

1. TEMPORARY EARTH RETAINING SYSTEMS SHALL BE DESIGNED BY THE CONTRACTOR IN ACCORDANCE WITH THE SPECIAL PROVISION "TEMPORARY EARTH RETAINING SYSTEM".
2. REMOVAL OF THE EXISTING SUPERSTRUCTURE, INCLUDING CONCRETE DECK, BITUMINOUS OVERLAY, CURBS, END BLOCKS, RAILINGS, STEEL GIRDERS DIAPHRAGMS AND BEARINGS, SHALL BE PAID FOR UNDER THE ITEM "REMOVAL OF SUPERSTRUCTURE".
3. REMOVAL OF THE EXISTING ABUTMENTS AND PIER STEM SHALL BE PAID FOR UNDER THE ITEM "REMOVAL OF EXISTING MASONRY". ABUTMENTS SHALL BE REMOVED TO THE EL. 281.0 (MAX) AND PIER SHALL BE REMOVED 2' BELOW THE EXISTING STREAMBED, OR AS DIRECTED BY THE ENGINEER TO AVOID CONFLICT WITH THE PROPOSED ABUTMENTS AND PILES.
4. THE COST TO FURNISH, INSTALL, MAINTAIN, AND REMOVE THE TEMPORARY ACCESS TRESTLE FOR PIER REMOVAL, SHALL BE INCLUDED IN THE COST FOR ITEM #0502188A, "TEMPORARY TRESTLE".
5. PRIOR TO PRE-AUGERING FOR PILE INSTALLATION, THE PILE LAYOUT AND CLEARANCES TO EXISTING PILES SHALL BE CONFIRMED BY THE ENGINEER.

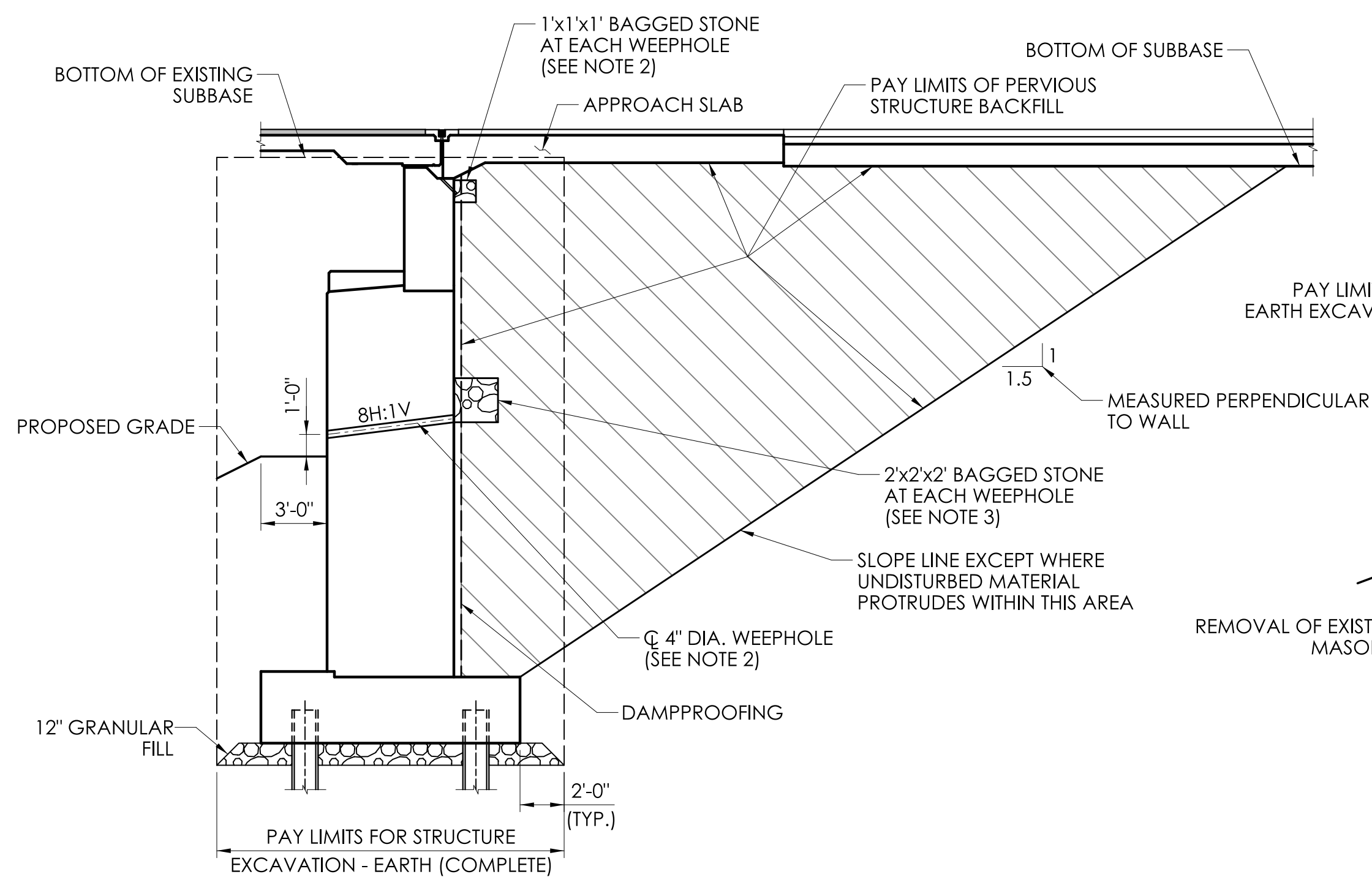
EXPLORATION TEST BORINGS NOTES:

1. BEDROCK ELEVATIONS SHOWN ARE BASED ON LIMITED BORING INFORMATION. THE CONTRACTOR SHALL PROVIDE EXPLORATION TEST BORINGS TO DETERMINE A MORE ACCURATE ROCK PROFILE.

LEGEND

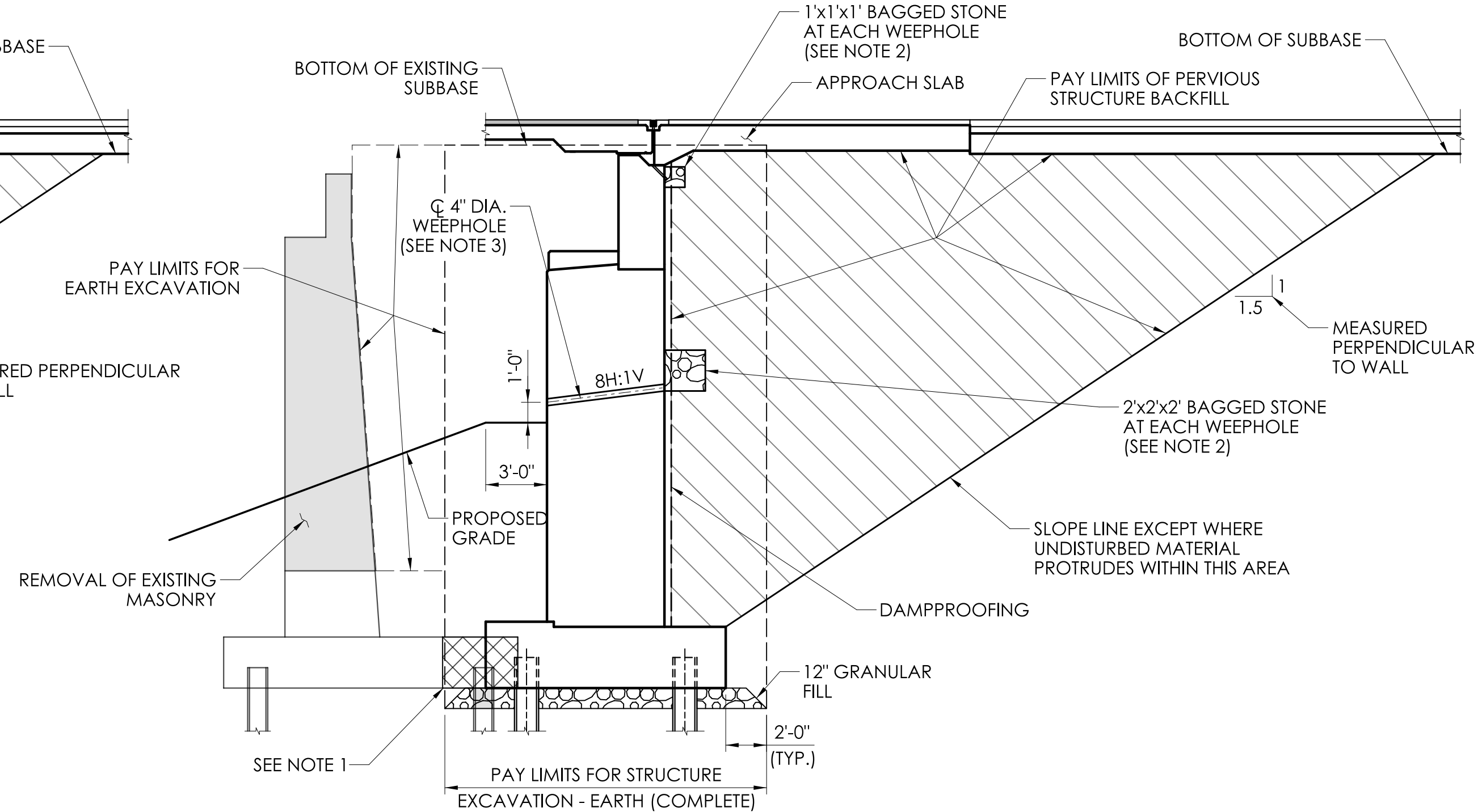
- = TEMPORARY EARTH RETAINING SYSTEM
- = REMOVAL OF EXISTING MASONRY (STEM ONLY)
- = REMOVAL OF EXISTING MASONRY (FOOTING)
- = BORING LOCATION
- = EXPLORATION TEST BORING LOCATION

REV.	DATE	REVISION DESCRIPTION



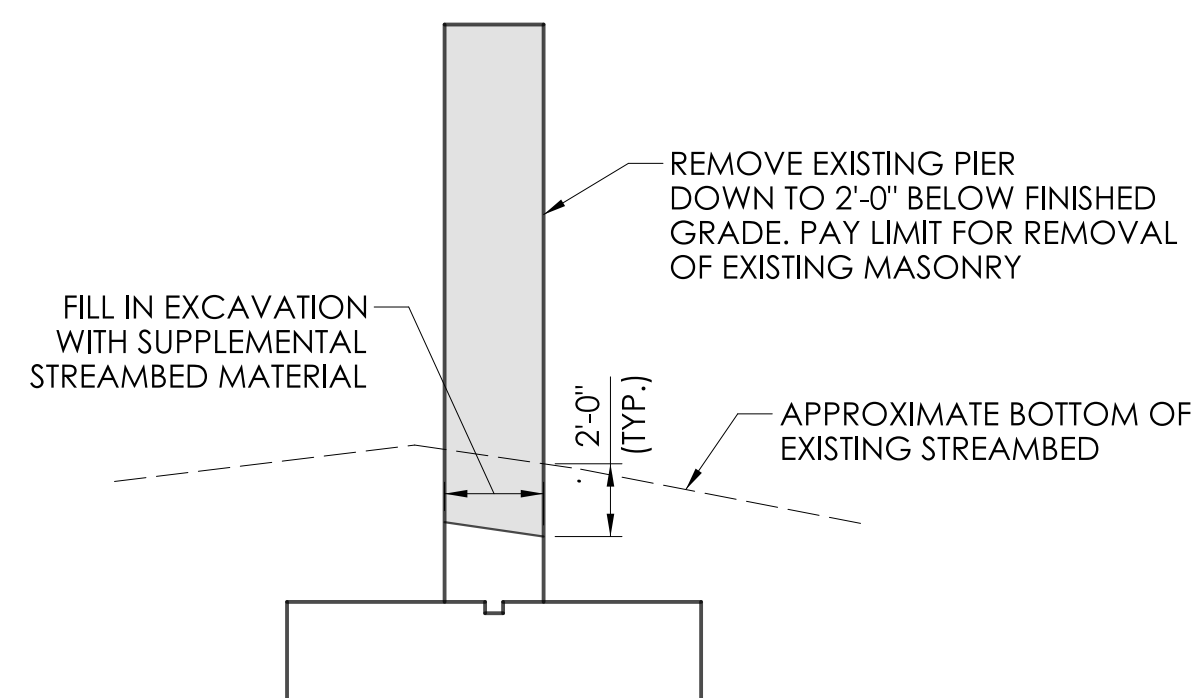
PAY LIMITS AT ABUTMENTS - BEYOND EXISTING ABUTMENT

SCALE: $\frac{3}{16}$ " = 1'-0"



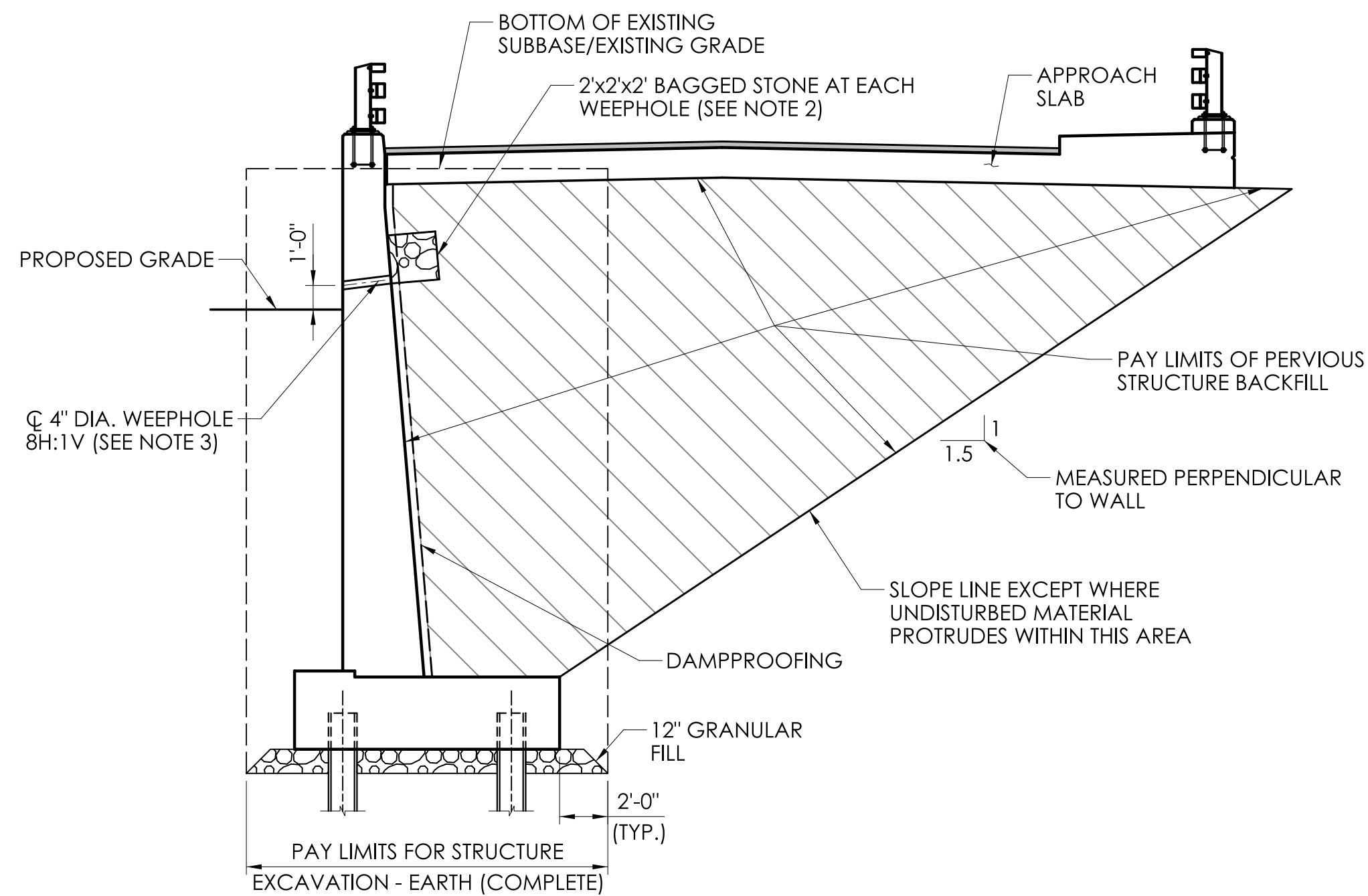
PAY LIMITS AT ABUTMENTS - BEHIND EXISTING ABUTMENT

SCALE: $\frac{3}{16}$ " = 1'-0"



PAY LIMITS AT EXISTING PIER

SCALE: $\frac{3}{16}$ " = 1'-0"



PAY LIMITS AT WINGWALLS

SCALE: $\frac{3}{16}$ " = 1'-0"

NOTES:

- EXISTING H-PILES WITHIN THE LIMITS OF STRUCTURE EXCAVATION - EARTH (COMPLETE) SHALL BE CUT OFF AT THE BOTTOM OF GRANULAR FILL AND SHALL BE APPROVED BY THE ENGINEER. THE COST TO REMOVE EXISTING FOOTING PILES SHALL BE PAID UNDER ITEM "STRUCTURE EXCAVATION - EARTH (COMPLETE)".
- THE COST OF BAGGED STONE AT EACH WEEPHOLE TO BE INCLUDED IN THE ITEM "PERVIOUS STRUCTURE BACKFILL".
- THE COST OF 4" DIA. WEEPHOLES TO BE INCLUDED IN THE ITEM "ABUTMENT AND WALL CONCRETE".
- NATURAL STREAMBED MATERIAL SHALL BE PAID FOR UNDER THE ITEM "EXCAVATION AND REUSE OF EXISTING CHANNEL BOTTOM MATERIAL". THE ITEM "SUPPLEMENTAL STREAMBED CHANNEL MATERIAL" SHALL BE USED WHEN A SUFFICIENT QUANTITY OF THE EXISTING CHANNEL BOTTOM MATERIAL IS NOT AVAILABLE.

LEGEND:

	PERVIOUS STRUCTURE BACKFILL
	LIMITS OF EXISTING MASONRY REMOVAL
	LIMITS OF EXISTING FOOTING/PILE REMOVAL

REV.	DATE	REVISION DESCRIPTION

DESIGNER/DRAFTER: EAP/SLM	CHECKED BY: DMK
---------------------------	-----------------

SIGNATURE:
BLOCK:

McFarland Johnson
273 Corporate Drive
Suite 200
Portsmouth, NH
03801



PROJECT NUMBER: 0119-0121
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 05068-WELLERS BRIDGE ROAD OVER SHEPAUG RIVER
TOWN(S): ROXBURY
DRAWING TITLE: PAY LIMITS

DRAWING NO.
S-09
SHEET NO.
04.09

PILE NOTES

1.

PRIOR TO DRIVING THE PILES, THE CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL THE METHOD AND SEQUENCE OF PILE DRIVING.
2.

ALL PILES SHALL BE PRE-AUGERED FROM THE BOTTOM OF PROPOSED ABUTMENT THROUGH THE EXISTING FOOTING (IF ENCOUNTERED) AND SHALL BE EMBEDDED A MINIMUM OF DISTANCE IN BEDROCK AS SPECIFIED IN THE "PILE DATA TABLE".
3.

FOR ESTIMATING PURPOSES, THE PILE LENGTHS NOTED IN THE "PILE DATA TABLE" ARE BASED ON THE BORING LOGS SHOWN. THE ACTUAL DEPTH TO BEDROCK MAY VARY.
4.

ALL PILES SHALL BE HP 14x117 CONFORMING TO THE REQUIREMENTS OF ASTM A709, GRADE 50.
5.

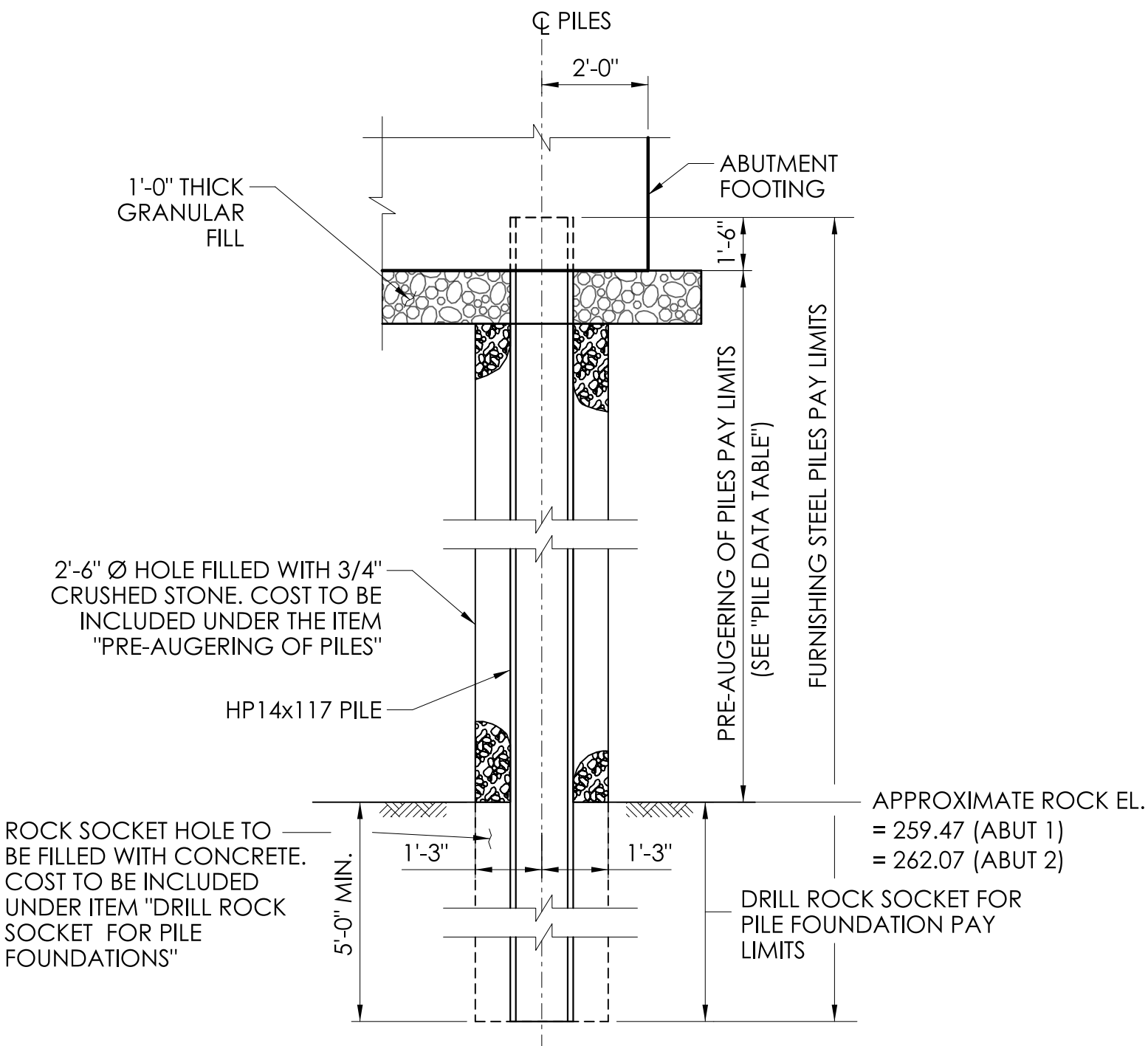
DYNAMIC TESTING SHALL BE PERFORMED IN ACCORDANCE WITH SUBSECTION 7.02.03-3(d). A MINIMUM OF ONE DYNAMIC PILE TEST SHALL BE CONDUCTED ON THE FIRST PILE DRIVEN. MORE TESTS MAY BE ORDERED BY THE ENGINEER. ADDITIONAL TEST(S) ORDERED BY THE ENGINEER SHALL BE PAID FOR AT THE UNIT BID PRICE FOR "DYNAMIC PILE DRIVING ANALYSIS (P.D.A.) TEST".
6.

THE ESTIMATED PILE LENGTHS ARE TO BE USED AS THE PILE ORDER LENGTH. THERE WILL BE NO SEPARATE PAYMENT FOR THE SPLICING OF PILES TO ATTAIN THE PILE ORDER LENGTH AS SHOWN ON THE PLANS.
7.

ALL PILES SHALL BE PRE-AUGERED FROM THE BOTTOM OF FOOTING TO THE DEPTH SPECIFIED IN THE "PILE DATA TABLE".
8.

THE EXISTING ABUTMENT FOOTING SHOWN IS BASED OFF OF EXISTING PLANS.
9.

THE COST FOR FURNISHING AND PLACING CONCRETE FOR ROCK SOCKETS SHALL BE INCLUDED IN THE ITEM "DRILL ROCK SOCKET FOR PILE FOUNDATIONS".



TYPICAL PILE DETAIL
(ABUTMENT 1 AND ABUTMENT 2)

SCALE: 3/8" = 1'-0"

ABUTMENT 1 PILE LAYOUT PLAN

SCALE: 1/4" = 1'-0"

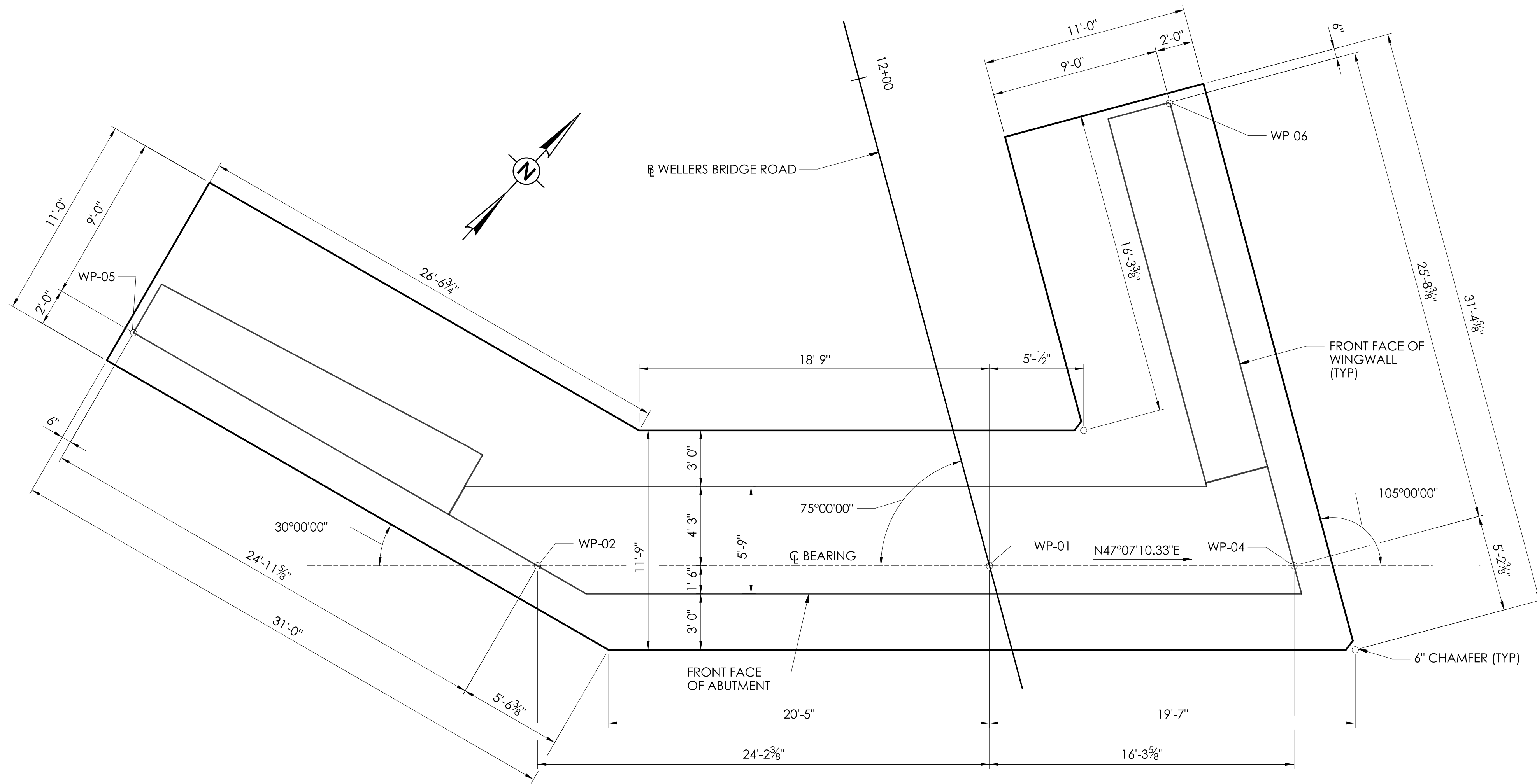
ABUTMENT 1 PILE DATA TABLE

LOCATION	BOTTOM OF FOOTING ELEVATION	PILE CUT-OFF ELEVATION	APPROXIMATE BEDROCK ELEVATION	DEPTH OF PRE-AUGERING (FT)	DEPTH OF ROCK SOCKET (FT)	ESTIMATED PILE LENGTH (FT)	PDA TEST PILE LENGTH (FT)	TOTAL NUMBER OF PILES	ULTIMATE PILE CAPACITY (TONS)	ULTIMATE DESIGN PILE LOAD (TONS)	
										SERVICE I	STRENGTH I
ABUTMENT 1	276.00	277.50	259.50	16.5	5.0	23	23	39	200	101.60	81.14

LEGEND

- HP 14x117 VERTICAL STEEL PILE
- HP 14x117 PDA TEST PILE

REVISION DESCRIPTION			
REV.	DATE	BY	DESCRIPTION



ABUTMENT 1 FOUNDATION PLAN

SCALE: 1/4" = 1'-0"

REV.	DATE	REVISION DESCRIPTION

DESIGNER/DRAFTER: CLG/DRW CHECKED BY: DMK

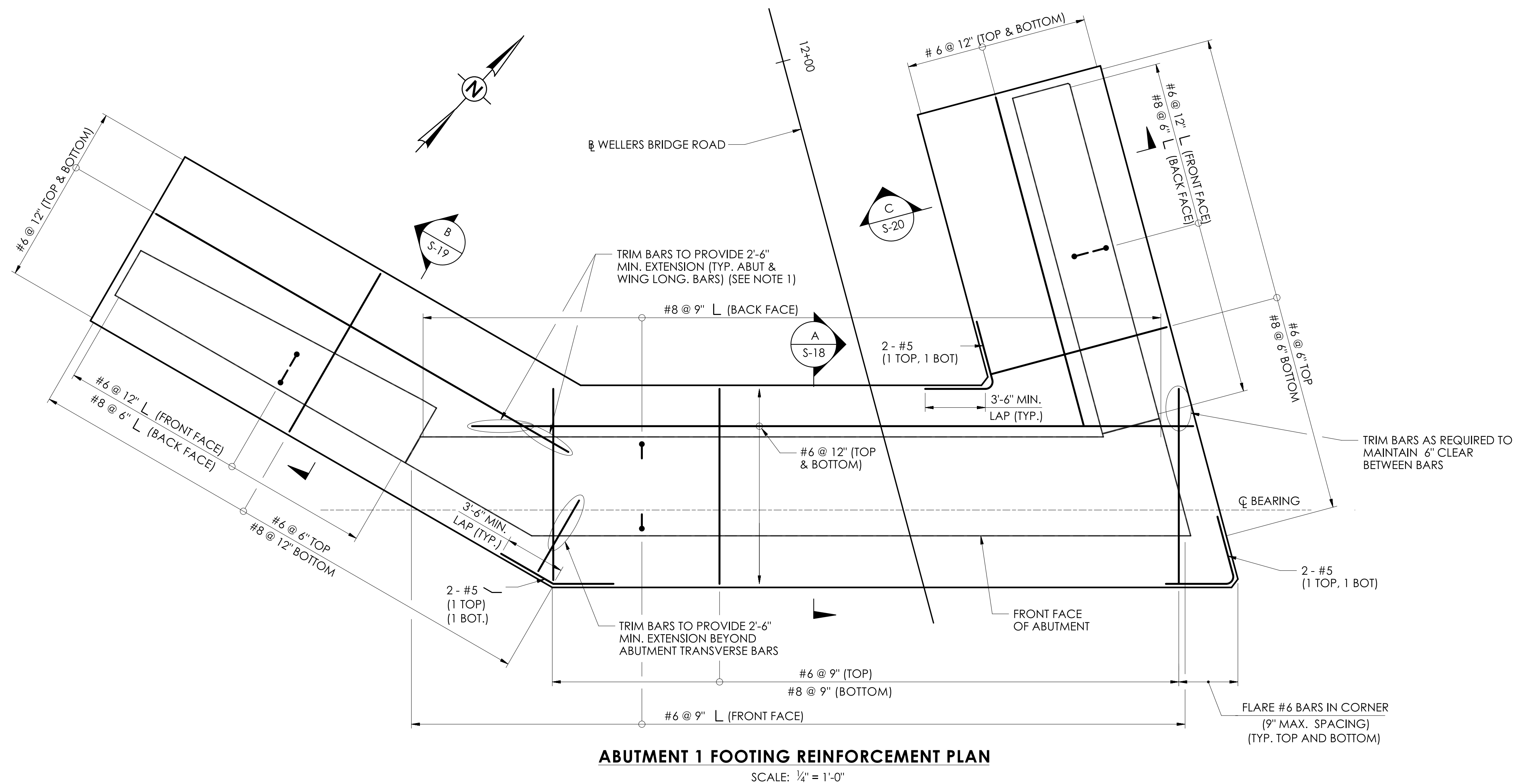
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BLOCK:



ROXBURY
CONNECTICUT

PROJECT NUMBER: 0119-0121
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 05068-WELLERS BRIDGE ROAD OVER SHEPAUG RIVER
TOWN(S): ROXBURY
DRAWING TITLE: ABUTMENT 1 FOUNDATION PLAN

DRAWING NO.
S-11
SHEET NO.
04.11

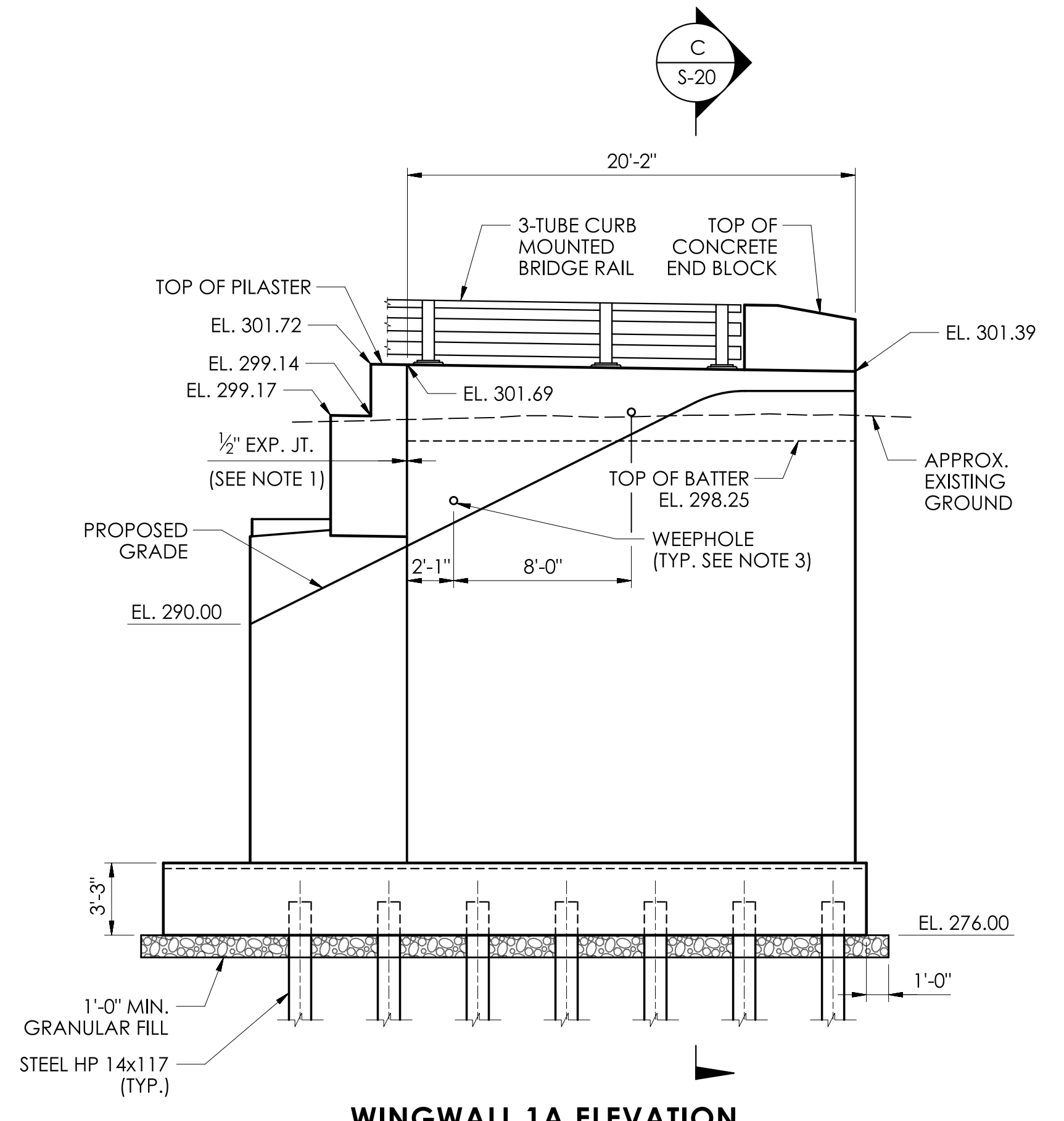
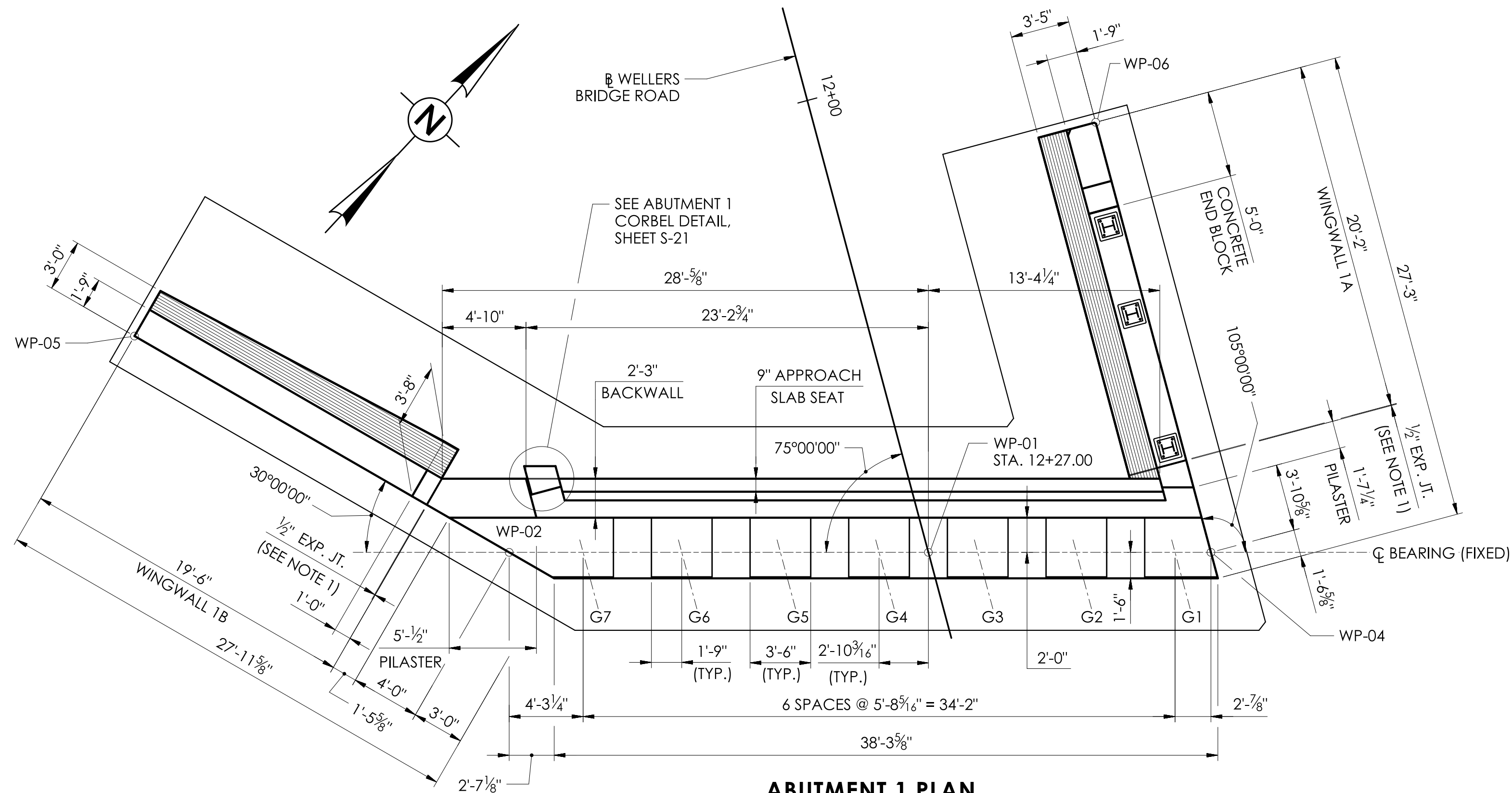


NOTES

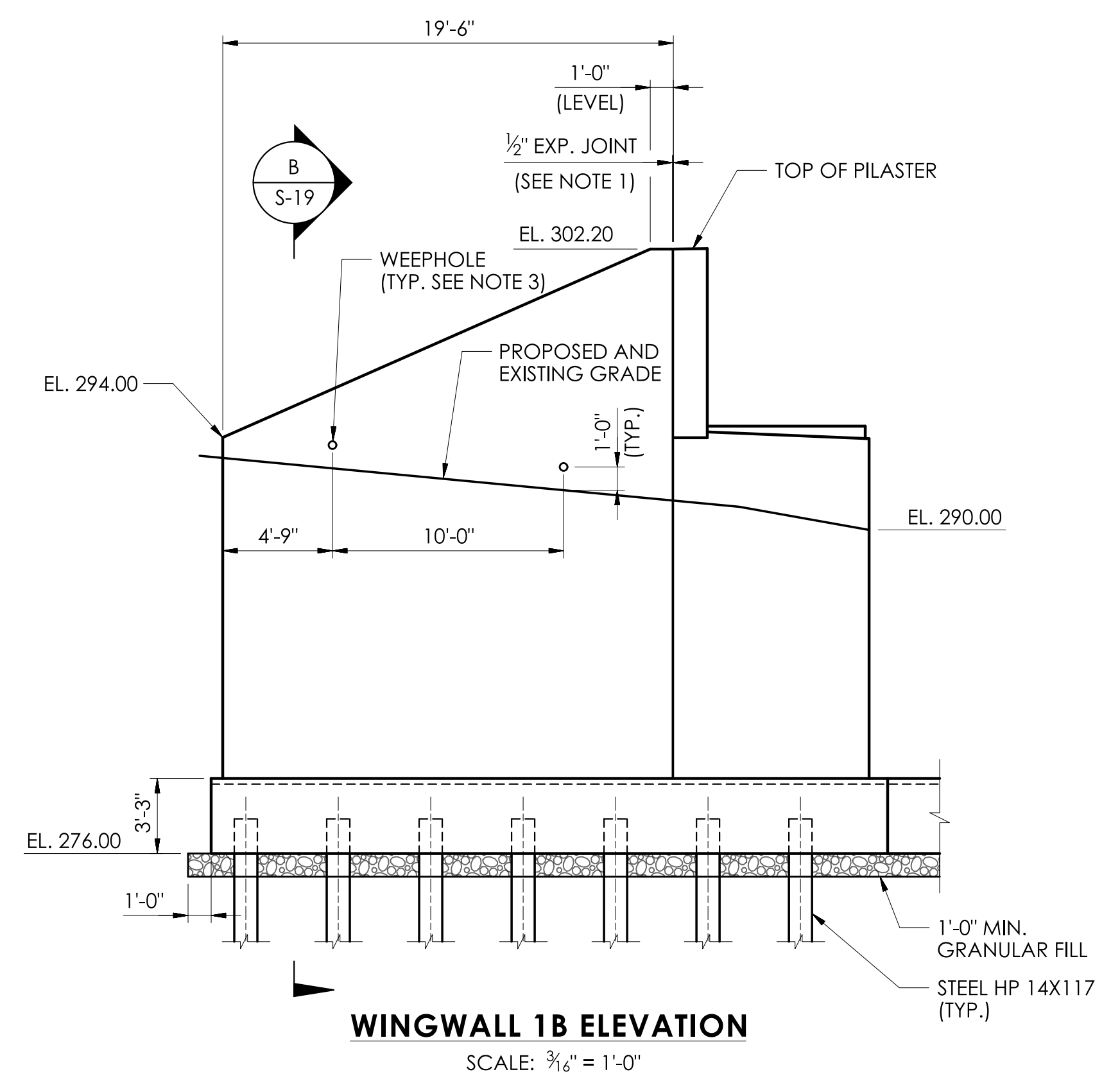
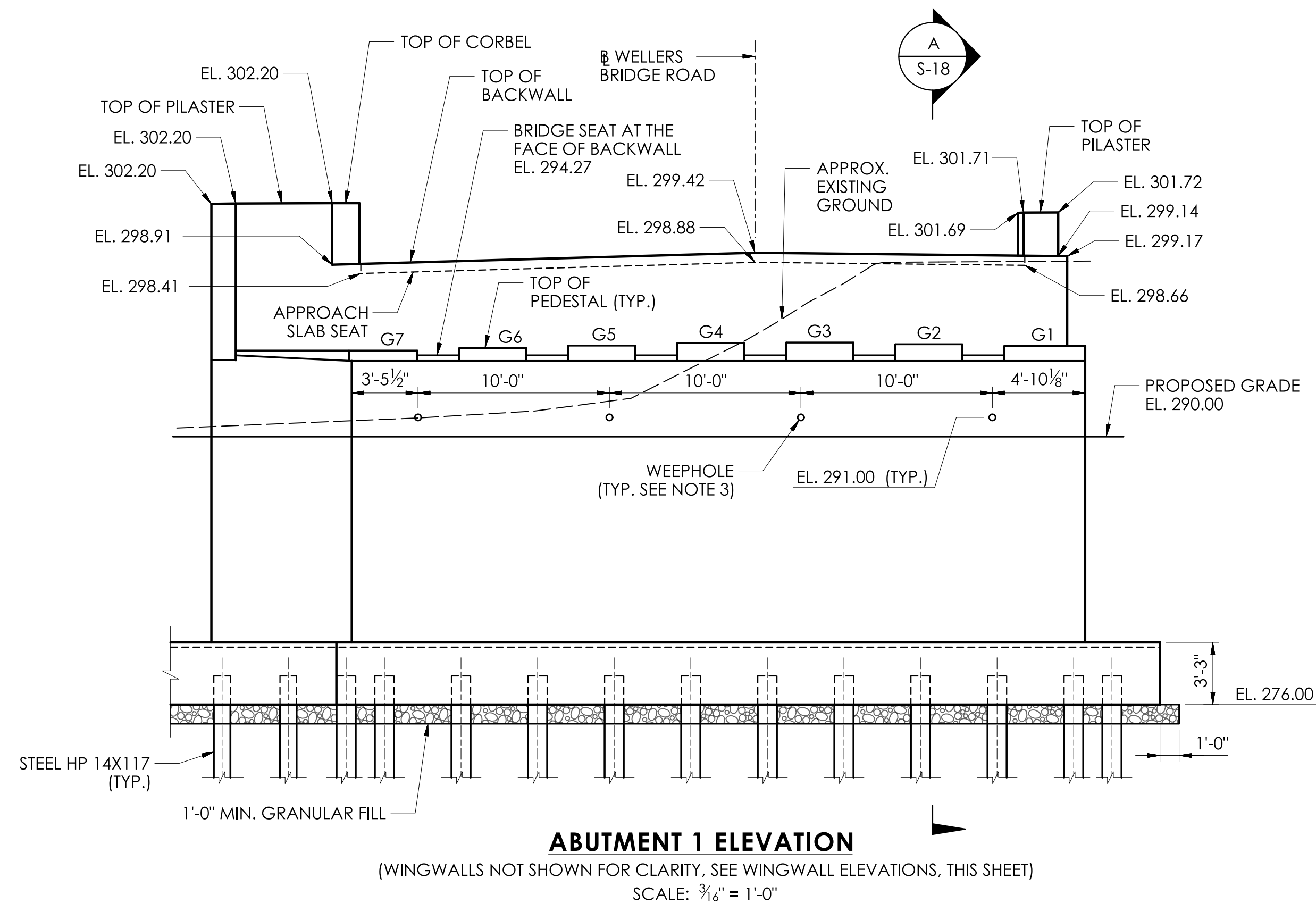
1. FIELD COAT BARS IN FIELD WITH APPROVED ZINC SPRAY. THE COST FOR PAYMENT SHALL BE INCLUDED UNDER ITEM "DEFORMED STEEL BARS - GALVANIZED".

REV.	DATE	REVISION DESCRIPTION

DESIGNER/DRAFTER: CLG/DRW	CHECKED BY: DMK	SIGNATURE: BLOCK:  McFarland Johnson 273 Corporate Drive Suite 200 Portsmouth, NH 03801	 ROXBURY CONNECTICUT	PROJECT NUMBER: 0119-0121 PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 05068-WELLERS BRIDGE ROAD OVER SHEPAUG RIVER TOWN(S): ROXBURY DRAWING TITLE: ABUTMENT 1 REINFORCEMENT PLAN	DRAWING NO. S-12 SHEET NO. 04.12
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PEDESTAL ELEVATIONS	
LOCATION	ELEVATION
G1	294.76
G2	294.85
G3	294.94
G4	294.91
G5	294.78
G6	294.65
G7	294.52



NOTES

- FILL $\frac{1}{2}"$ EXPANSION JOINTS WITH "1/2" PREFORMED EXPANSION JOINT FILLER FOR BRIDGES".
- THE COST OF BAGGED STONE AT EACH WEPPHOLE TO BE INCLUDED IN THE ITEM "PERVIOUS STRUCTURE BACKFILL".
- THE COST OF 4" DIA. WEPPHOLES TO BE INCLUDED IN THE ITEM "ABUTMENT AND WALL CONCRETE".

DESIGNER/DRAFTER: CLG/DRW
CHECKED BY: DMK

SIGNATURE:
BLOCK:

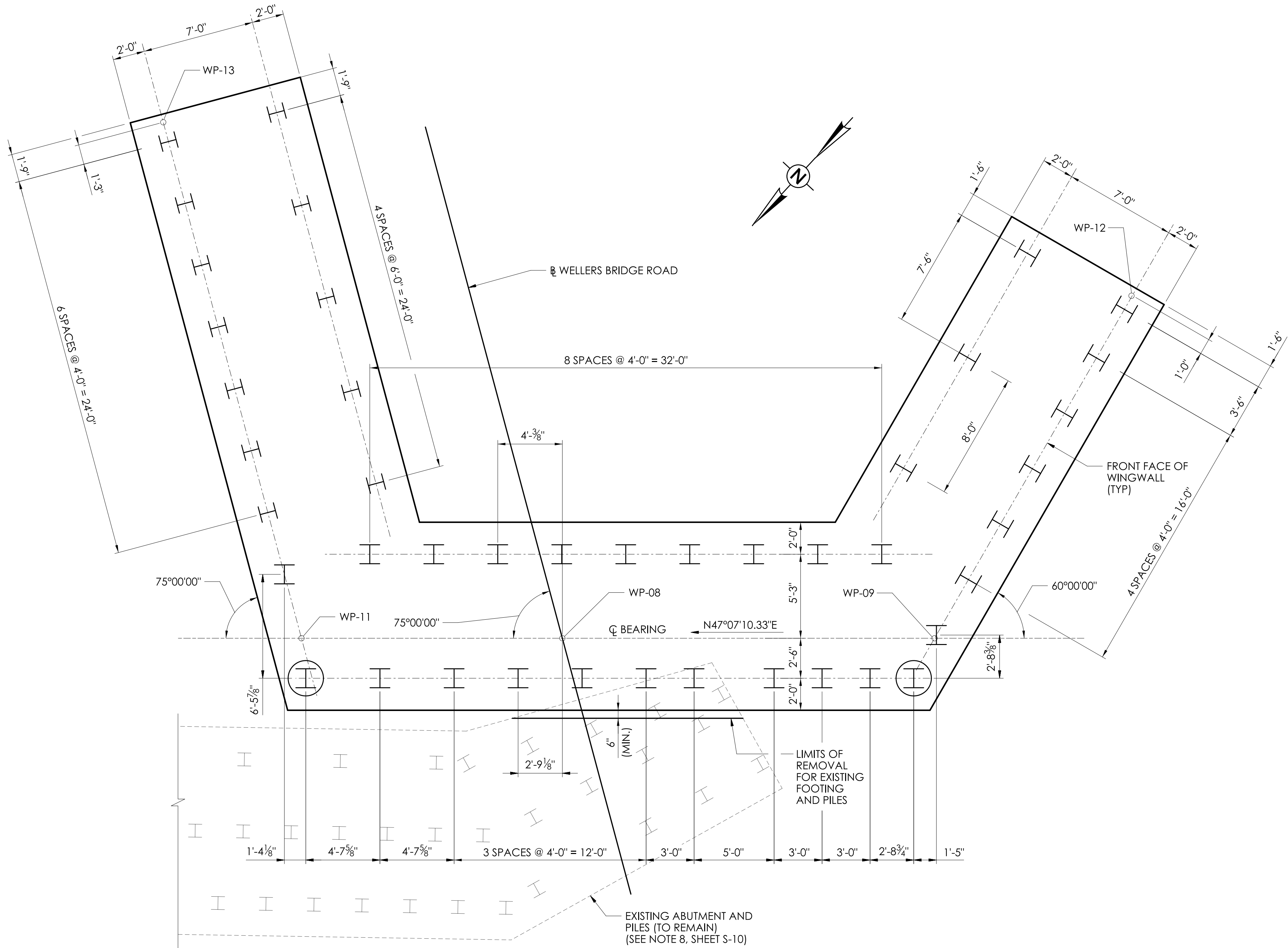


PROJECT NUMBER: 0119-0121
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 05068-WELLERS BRIDGE ROAD OVER SHEPAUG RIVER
TOWN(S): ROXBURY
DRAWING TITLE: ABUTMENT 1 PLAN AND ELEVATION AND WINGWALL ELEVATIONS

DRAWING NO.
S-13
SHEET NO.
04.13

PILE NOTES

- FOR TYPICAL PILE DETAIL, SEE SHEET S-10.
- PRIOR TO DRIVING THE PILES, THE CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL THE METHOD AND SEQUENCE OF PILE DRIVING.
- ALL PILES SHALL BE PRE-AUGERED FROM THE BOTTOM OF PROPOSED ABUTMENT THROUGH THE EXISTING FOOTING (IF ENCOUNTERED) AND SHALL BE EMBEDDED A MINIMUM OF DISTANCE IN BEDROCK AS SPECIFIED IN THE "PILE DATA TABLE".
- FOR ESTIMATING PURPOSES, THE PILE LENGTHS NOTED IN THE "PILE DATA TABLE" ARE BASED ON THE BORING LOGS SHOWN. THE ACTUAL DEPTH TO BEDROCK MAY VARY.
- ALL PILES SHALL BE HP 14x117 CONFORMING TO THE REQUIREMENTS OF ASTM A709, GRADE 50.
- DYNAMIC TESTING SHALL BE PERFORMED IN ACCORDANCE WITH SUBSECTION 7.02.03-3(d). A MINIMUM OF ONE DYNAMIC PILE TEST SHALL BE CONDUCTED ON THE FIRST PILE DRIVEN. MORE TESTS MAY BE ORDERED BY THE ENGINEER. ADDITIONAL TEST(S) ORDERED BY THE ENGINEER SHALL BE PAID FOR AT THE UNIT BID PRICE FOR "DYNAMIC PILE DRIVING ANALYSIS (P.D.A.) TEST".
- THE ESTIMATED PILE LENGTHS ARE TO BE USED AS THE PILE ORDER LENGTH. THERE WILL BE NO SEPARATE PAYMENT FOR THE SPLICING OF PILES TO ATTAIN THE PILE ORDER LENGTH AS SHOWN ON THE PLANS.
- ALL PILES SHALL BE PRE-AUGERED FROM THE BOTTOM OF FOOTING TO THE DEPTH SPECIFIED IN THE "PILE DATA TABLE".
- THE EXISTING ABUTMENT FOOTING SHOWN IS BASED OFF OF EXISTING PLANS.
- THE COST FOR FURNISHING AND PLACING CONCRETE FOR ROCK SOCKETS SHALL BE INCLUDED IN THE ITEM "DRILL ROCK SOCKET FOR PILE FOUNDATIONS".





ABUTMENT 2 PILE LAYOUT PLAN
SCALE: 1/4" = 1'-0"

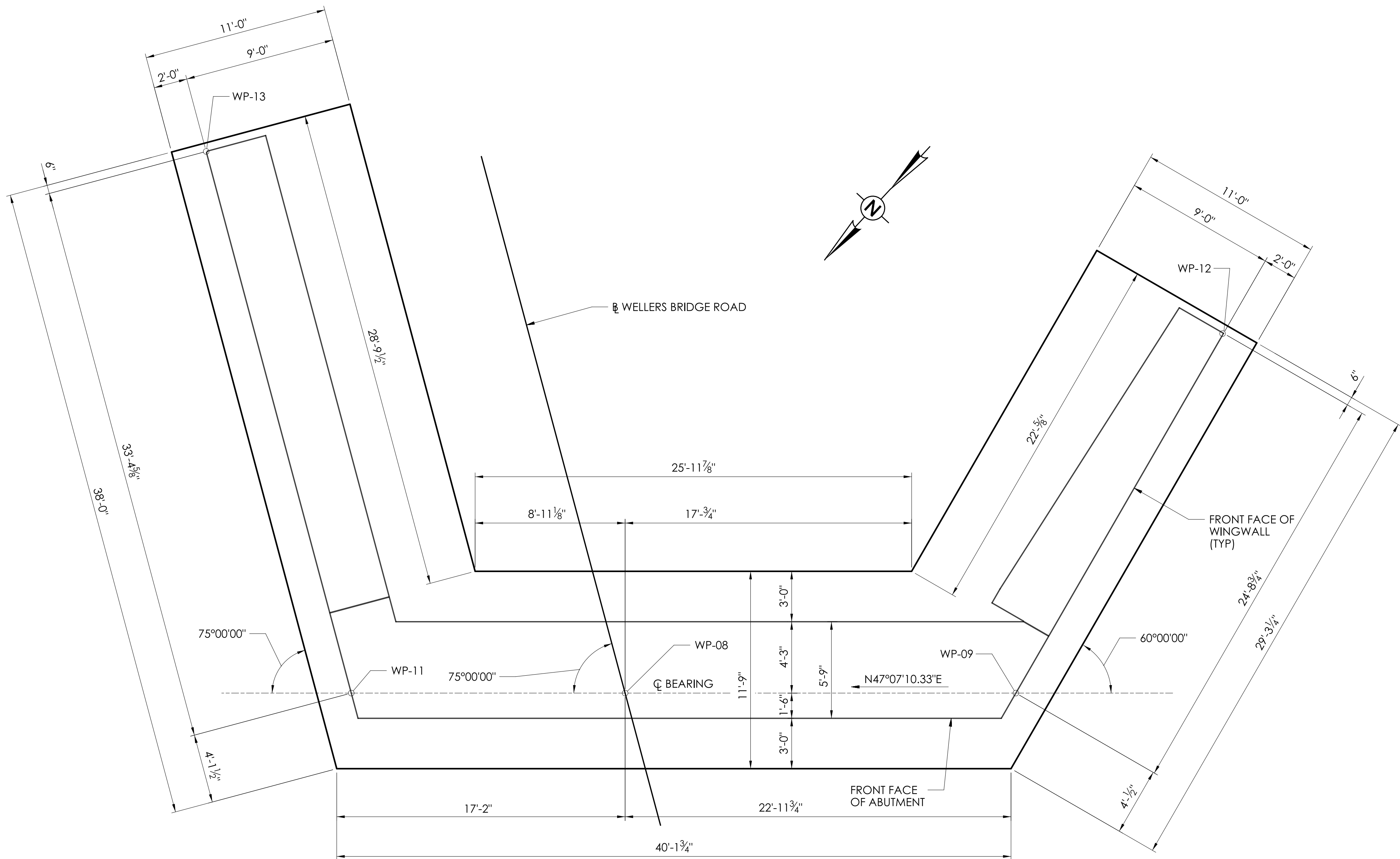
ABUTMENT 2 PILE DATA TABLE

LOCATION	BOTTOM OF FOOTING ELEVATION	PILE CUT-OFF ELEVATION	APPROXIMATE BEDROCK ELEVATION	DEPTH OF PRE-AUGERING (FT)	DEPTH OF ROCK SOCKET (FT)	ESTIMATED PILE LENGTH (FT)	PDA TEST PILE LENGTH (FT)	TOTAL NUMBER OF PILES	ULTIMATE PILE CAPACITY (TONS)	ULTIMATE DESIGN PILE LOAD (TONS)	
										SERVICE I	STRENGTH I
ABUTMENT 2	276.00	277.50	262.00	14.0	5.0	20.5	20.5	43	200	101.60	81.14

LEGEND

-  HP 14x117 VERTICAL STEEL PILE
-  HP 14x117 PDA TEST PILE

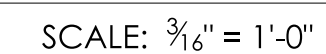
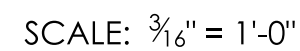
REVISION DESCRIPTION		
REV.	DATE	



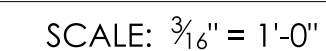
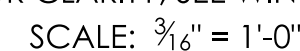
ABUTMENT 2 FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

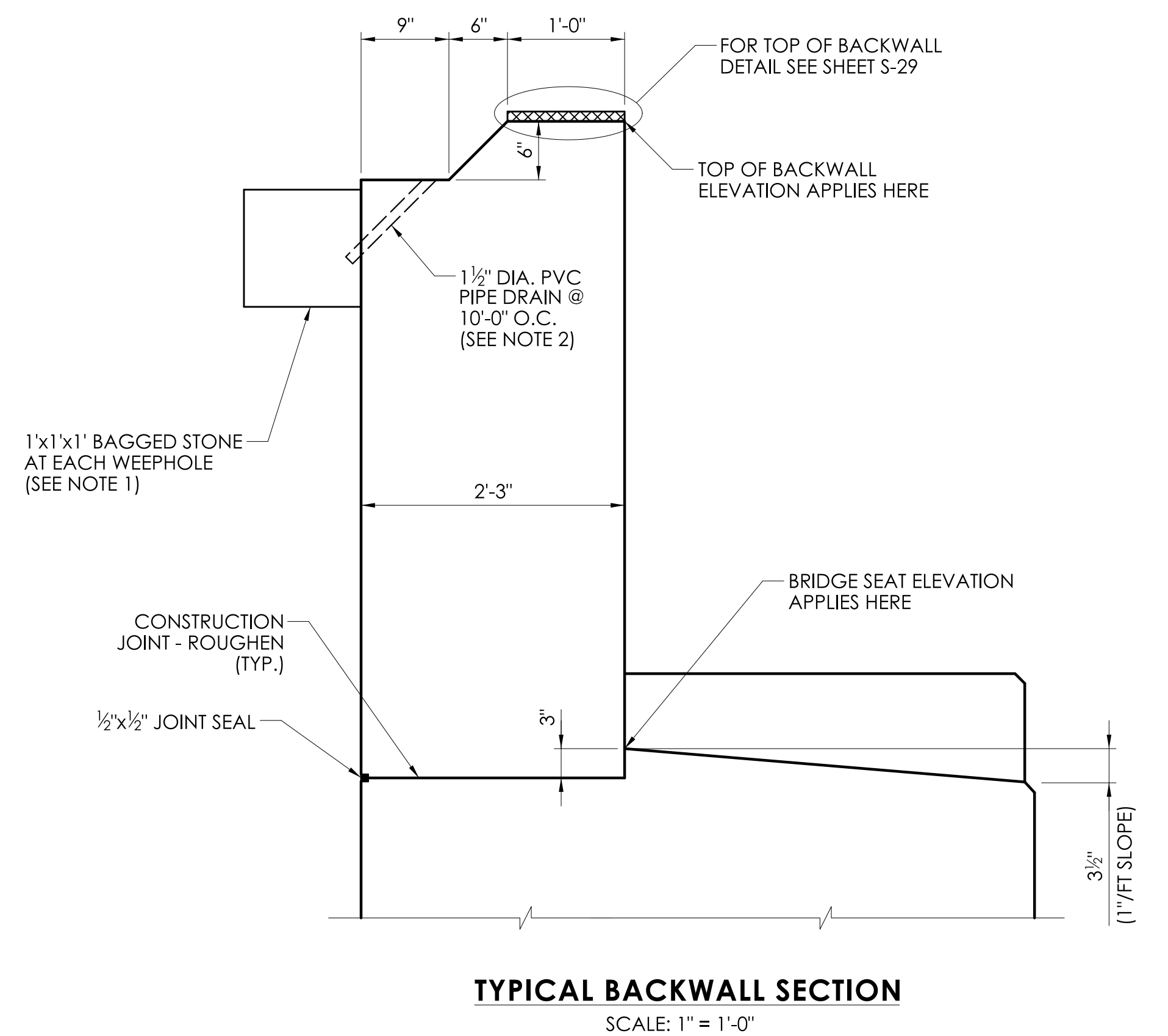
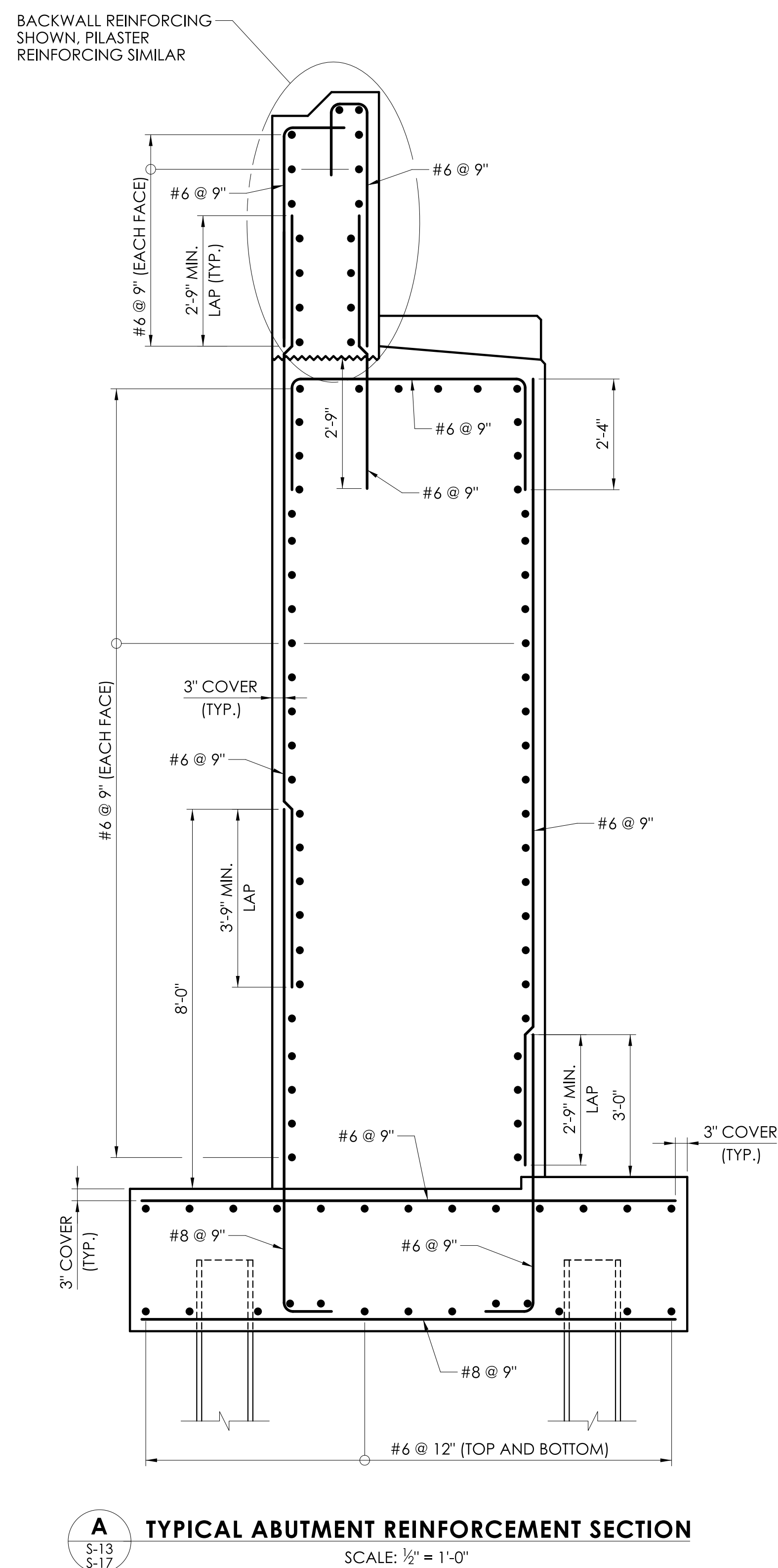
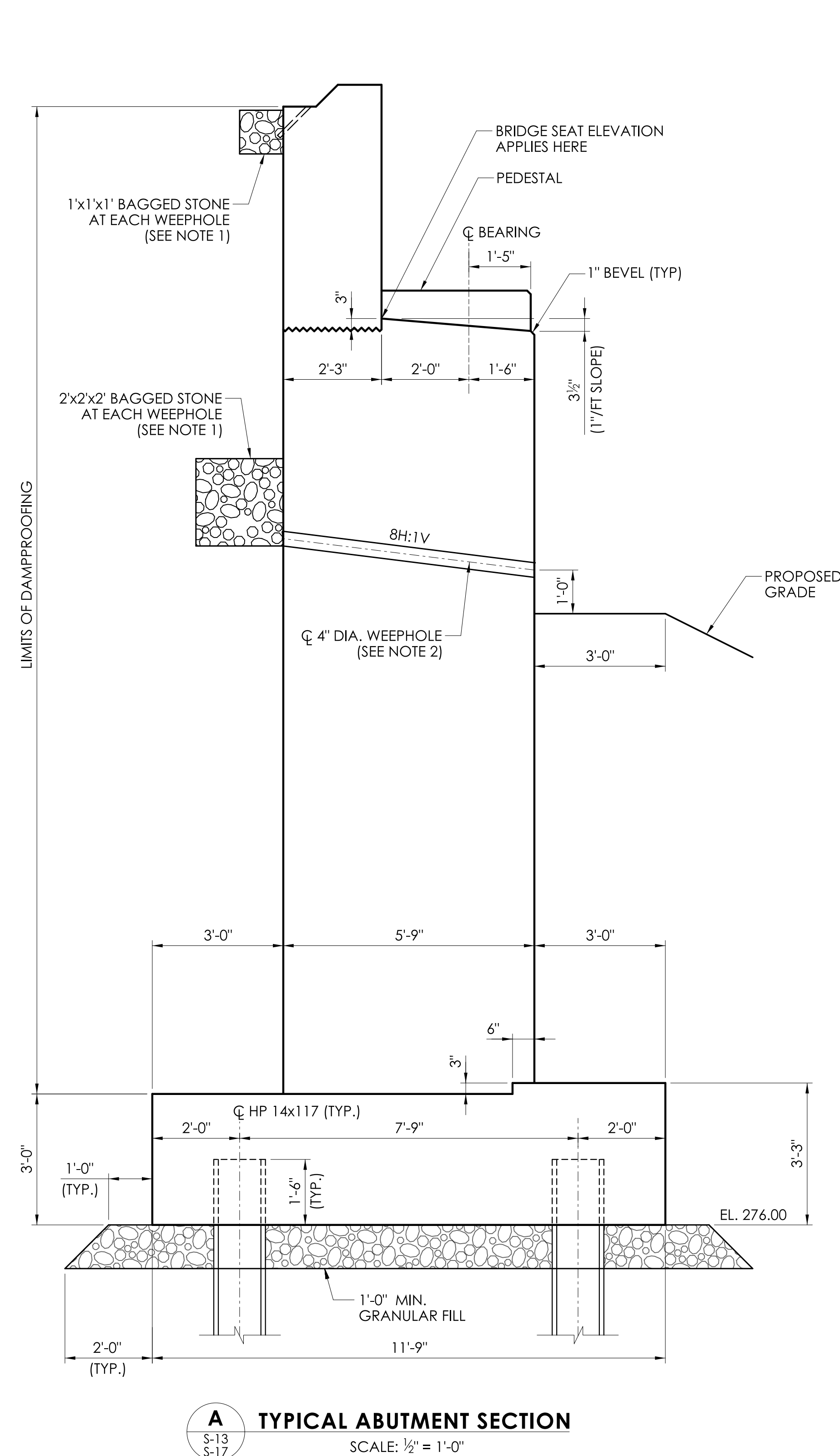
REV.	DATE	REVISION DESCRIPTION

DESIGNER/DRAFTER: CLG/DRW	CHECKED BY: DMK	SIGNATURE: BLOCK:  McFarland Johnson 273 Corporate Drive Suite 200 Portsmouth, NH 03801	 ROXBURY CONNECTICUT	PROJECT NUMBER: 0119-0121 PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 05068-WELLERS BRIDGE ROAD OVER SHEPAUG RIVER TOWN(S): ROXBURY DRAWING TITLE: ABUTMENT 2 FOUNDATION PLAN	DRAWING NO. S-15 SHEET NO. 04.15
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1. FILL 1/2" EXPANSION JOINTS WITH "1/2" PERFORMED EXPANSION JOINT FILLER FOR BRIDGES".
2. THE COST OF BAGGED STONE AT EACH WEEPHOLE TO BE INCLUDED IN THE ITEM "PERVIOUS STRUCTURE BACKFILL".
3. THE COST OF 4" DIA. WEEPHOLES TO BE INCLUDED IN THE ITEM "ABUTMENT AND WALL CONCRETE".

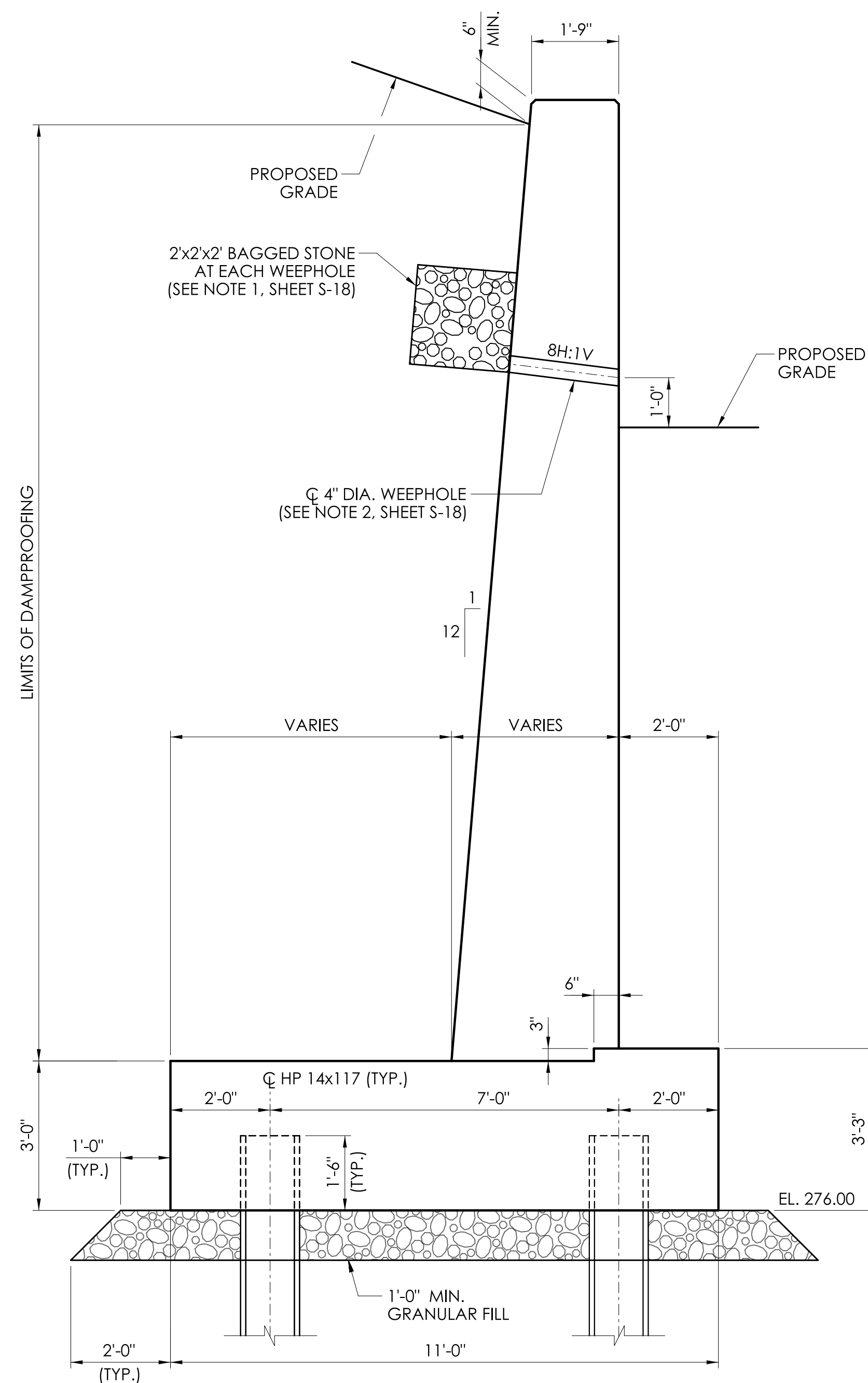
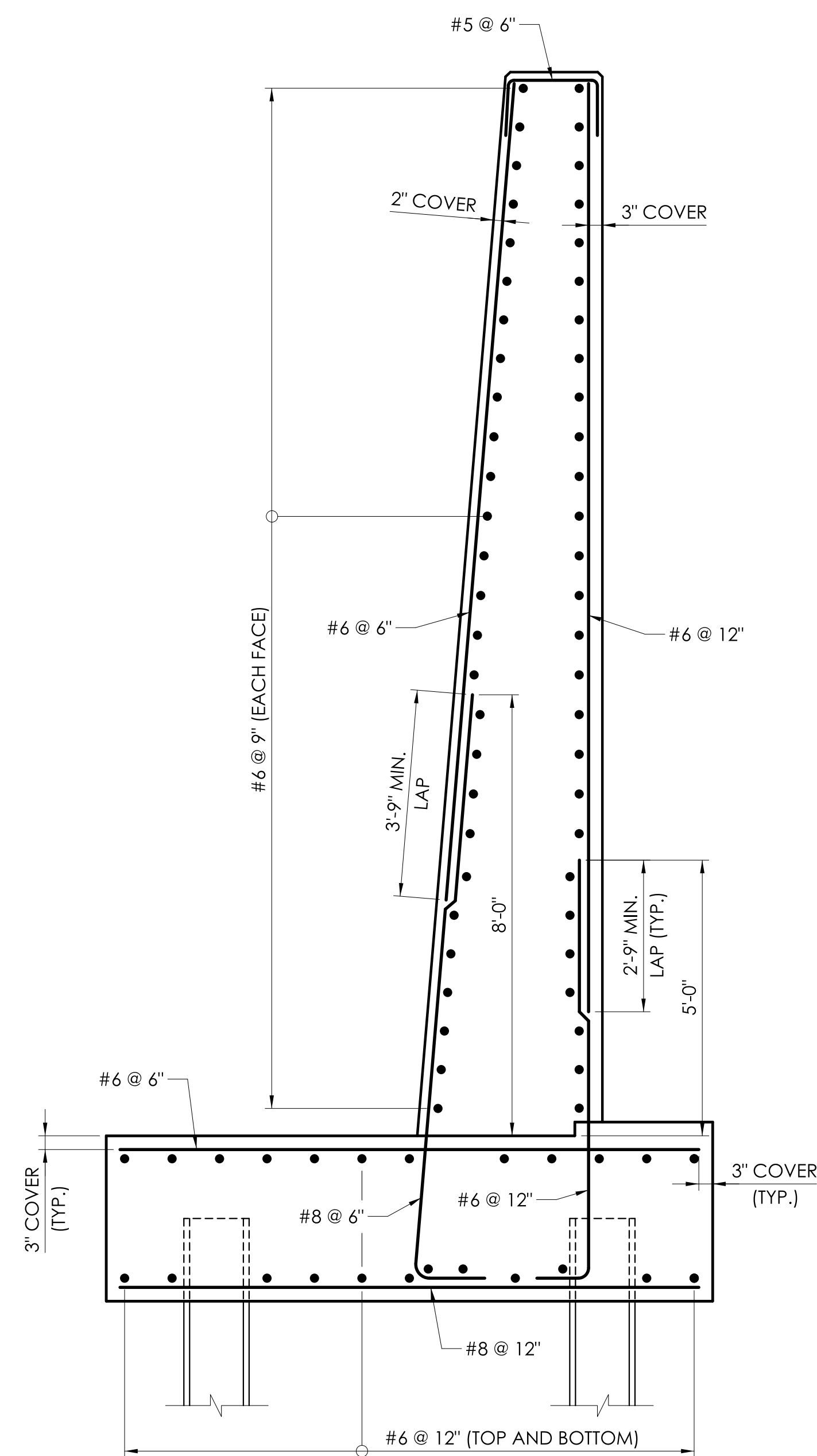
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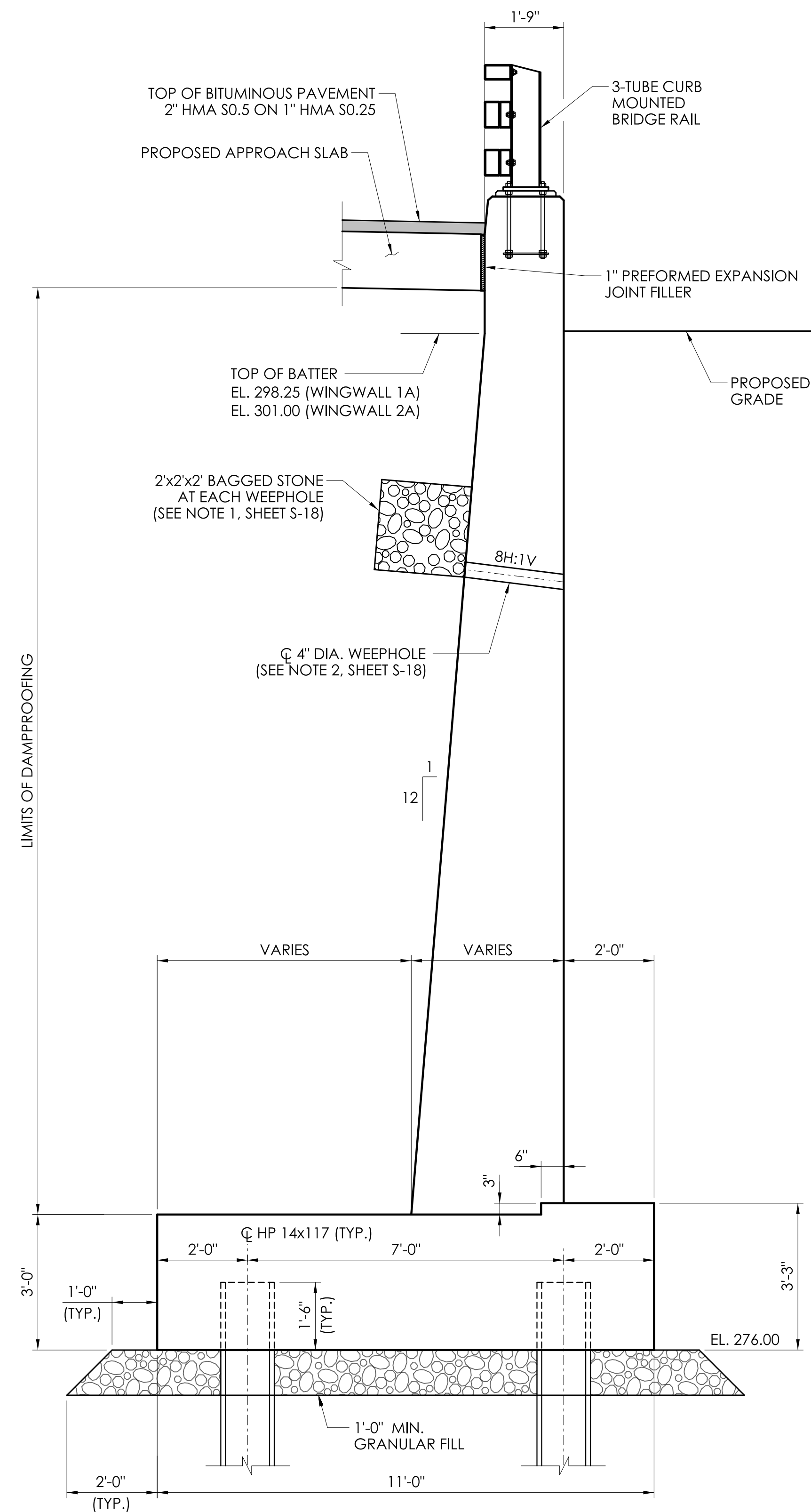
NOTES

1. THE COST FOR PAYMENT TO FURNISH AND INSTALL BAGGED STONE SHALL BE INCLUDED IN THE ITEM "PERVIOUS STRUCTURE BACKFILL".
2. THE COST FOR PAYMENT TO FURNISH AND INSTALL WEEPHOLES IN THE PROPOSED ABUTMENTS SHALL BE INCLUDED IN THE ITEM "ABUTMENT AND WALL CONCRETE".
3. THE COST FOR PAYMENT TO FURNISH AND INSTALL 1/2" x 1/2" JOINT SEAL SHALL BE INCLUDED IN THE ITEM "ABUTMENT AND WALL CONCRETE".

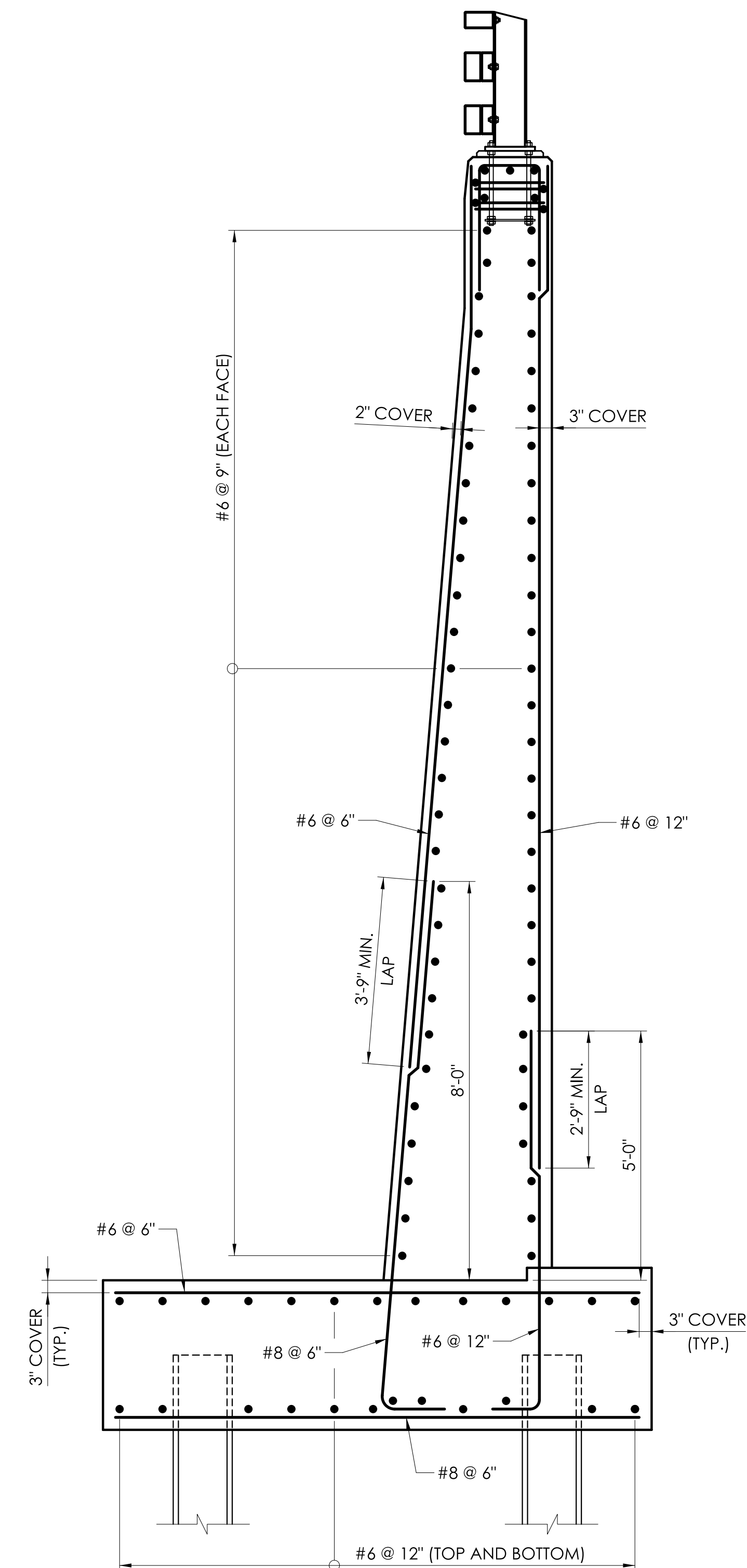
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1. THE COST FOR PAYMENT TO FURNISH AND INSTALL BAGGED STONE SHALL BE INCLUDED IN THE ITEM "PREVIOUS STRUCTURE BACKFILL".
2. THE COST FOR PAYMENT TO FURNISH AND INSTALL WEEPHOLES IN THE PROPOSED WINGWALLS SHALL BE INCLUDED IN THE ITEM "ABUTMENT AND WALL CONCRETE".



C **TYPICAL WINGWALL SECTION (U-BACK)**
S-13
S-17
SCALE: 1/2" = 1'-0"



C TYPICAL WINGWALL REINFORCEMENT SECTION (U-BACK)
S-13
S-17
SCALE: 1/2" = 1'-0"

NOTES

1. THE COST FOR PAYMENT TO FURNISH AND INSTALL BAGGED STONE SHOULD BE INCLUDED IN THE ITEM "PERVIOUS STRUCTURE BACKFILL".
2. THE COST FOR PAYMENT TO FURNISH AND INSTALL WEEPHOLES IN THE PROPOSED WINGWALLS SHALL BE INCLUDED IN THE ITEM "ABUTMENT AND WALL CONCRETE".

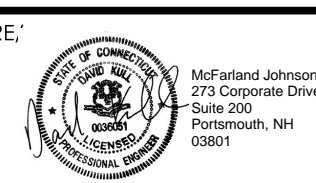
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DESIGNER/DRAFTER: CLG/DRW CHECKED BY: DMK

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PLOTTED DATE: 11/21/2025

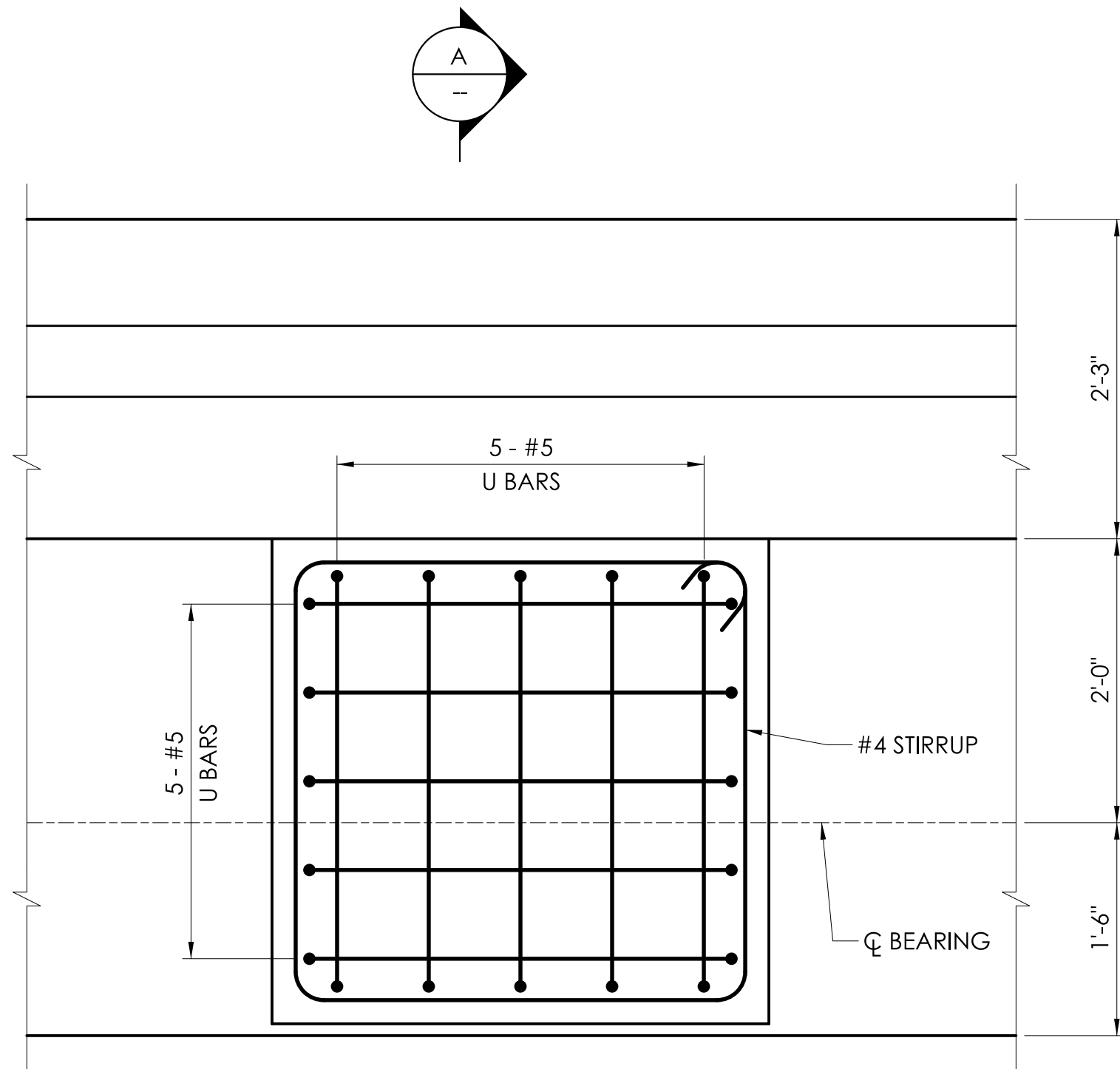
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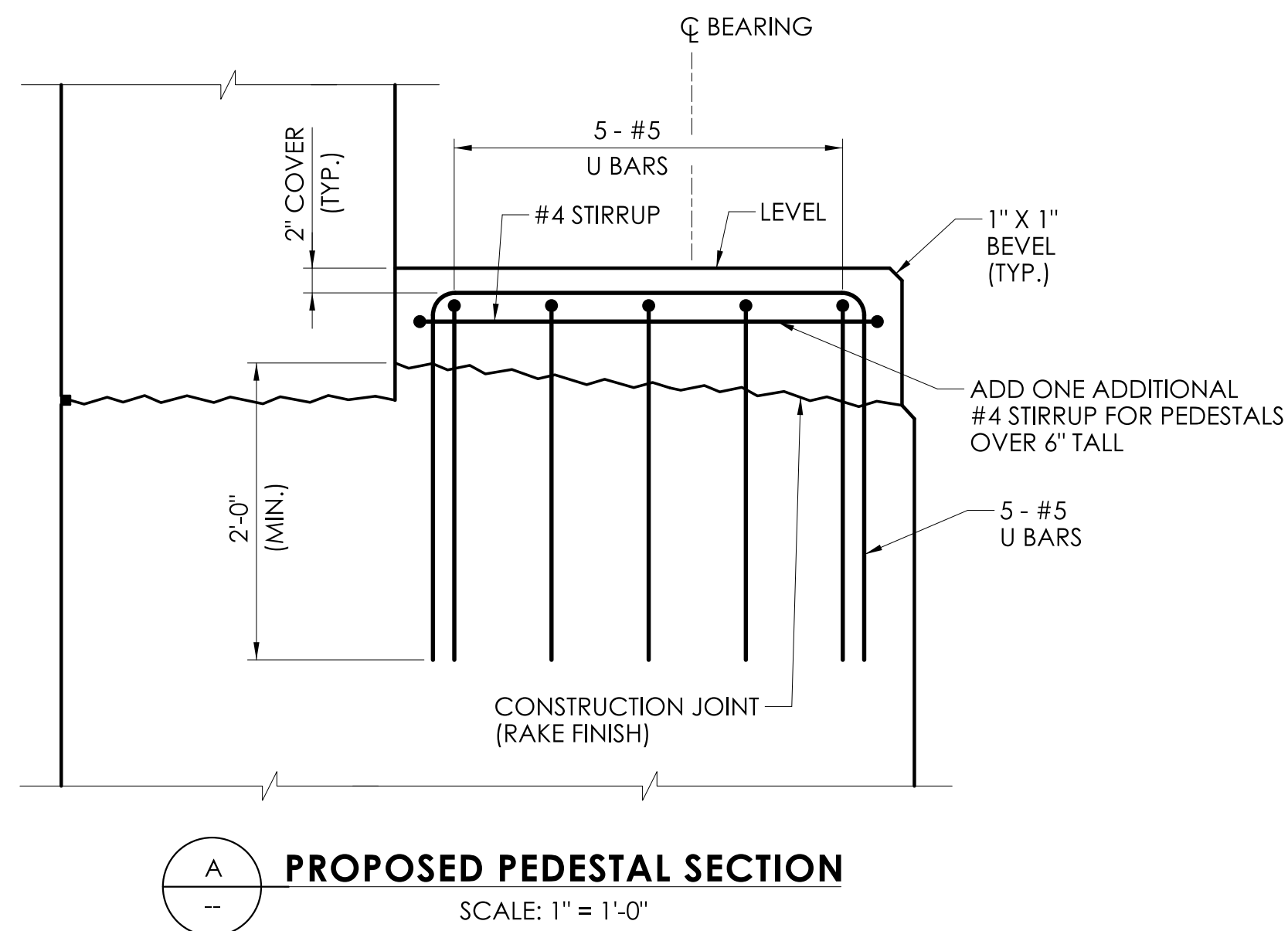
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PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 05068-WELLERS BRIDGE ROAD OVER SHEPAUG RIVER
TOWN(S): ROXBURY
DRAWING TITLE: ABUTMENT DETAILS (3 OF 4)

DRAWING NO.
S-20

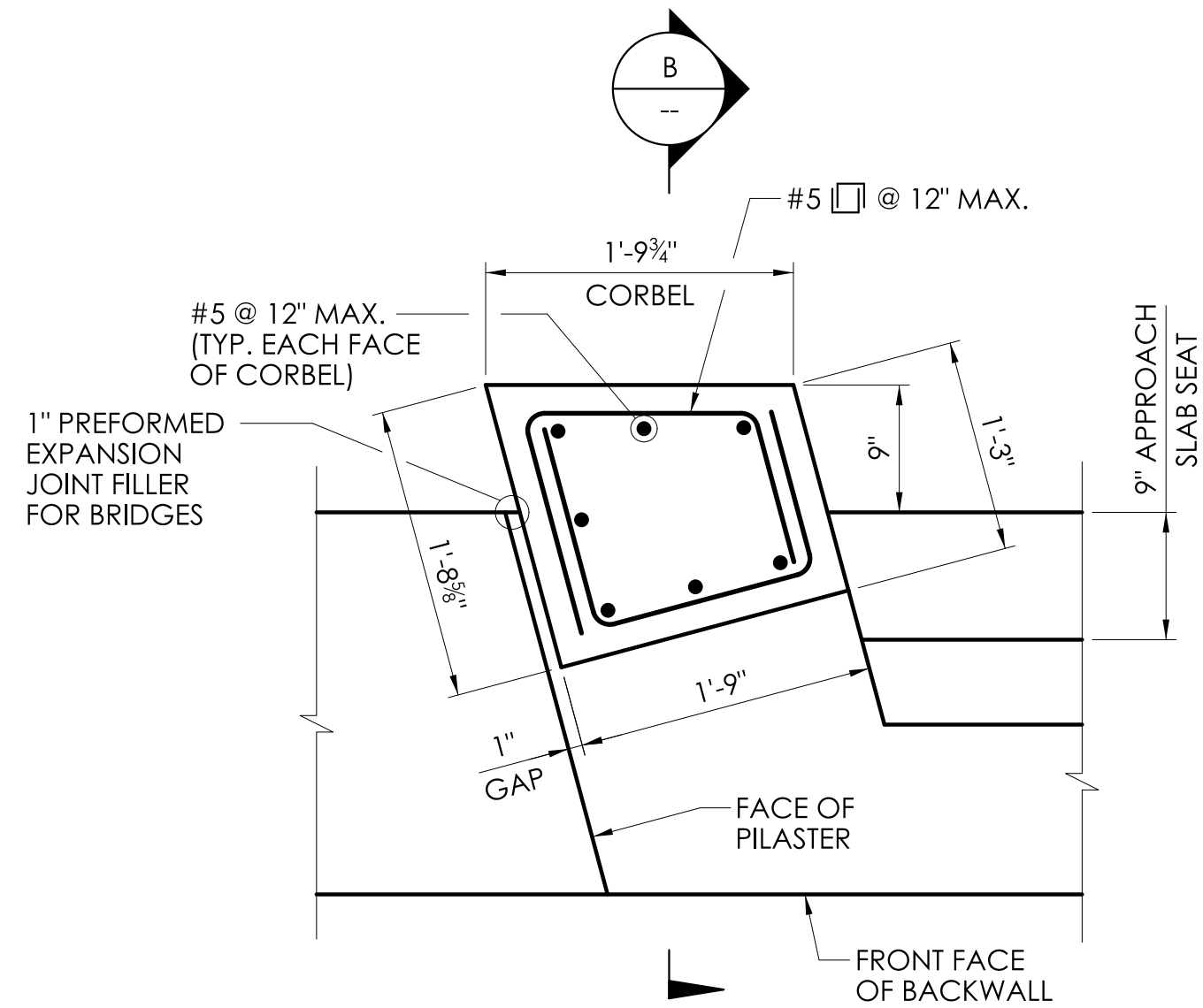
SHEET NO.
04.20



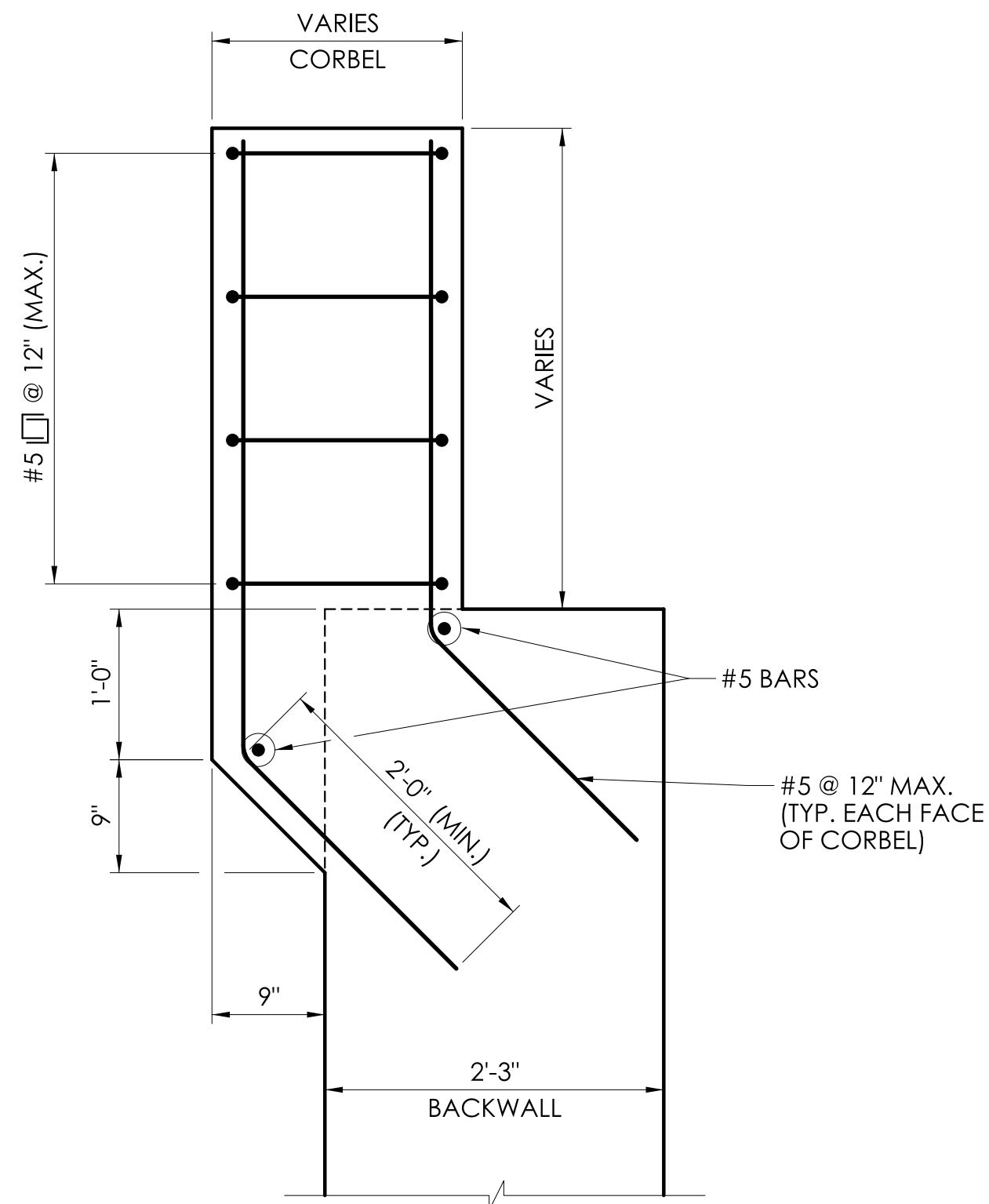
PROPOSED PEDESTAL REINFORCEMENT DETAIL
SCALE: 1" = 1'-0"



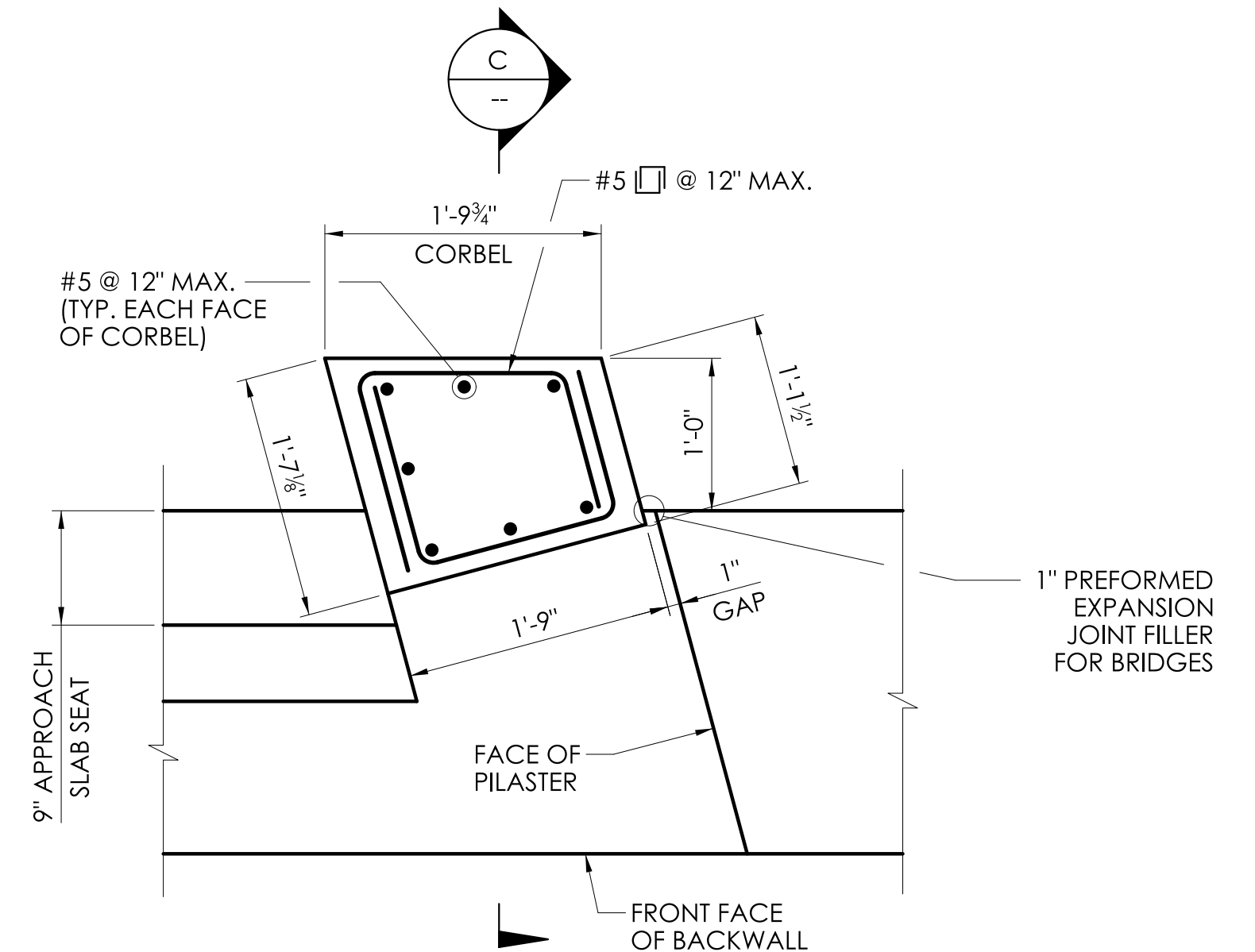
PROPOSED PEDESTAL SECTION
SCALE: 1" = 1'-0"



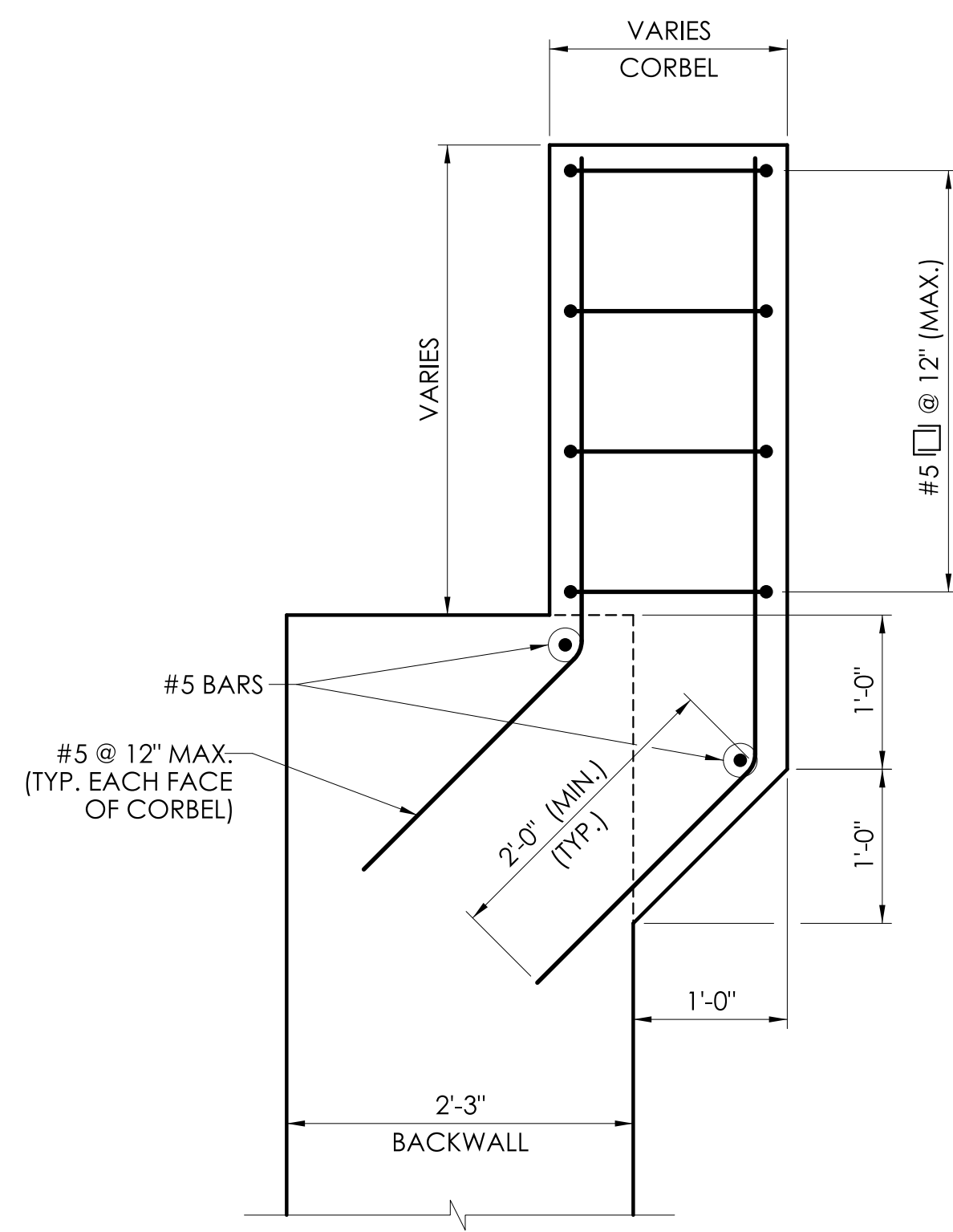
ABUTMENT 1 CORBEL DETAIL
SCALE: 1" = 1'-0"



ABUTMENT 1 CORBEL SECTION
SCALE: 1" = 1'-0"

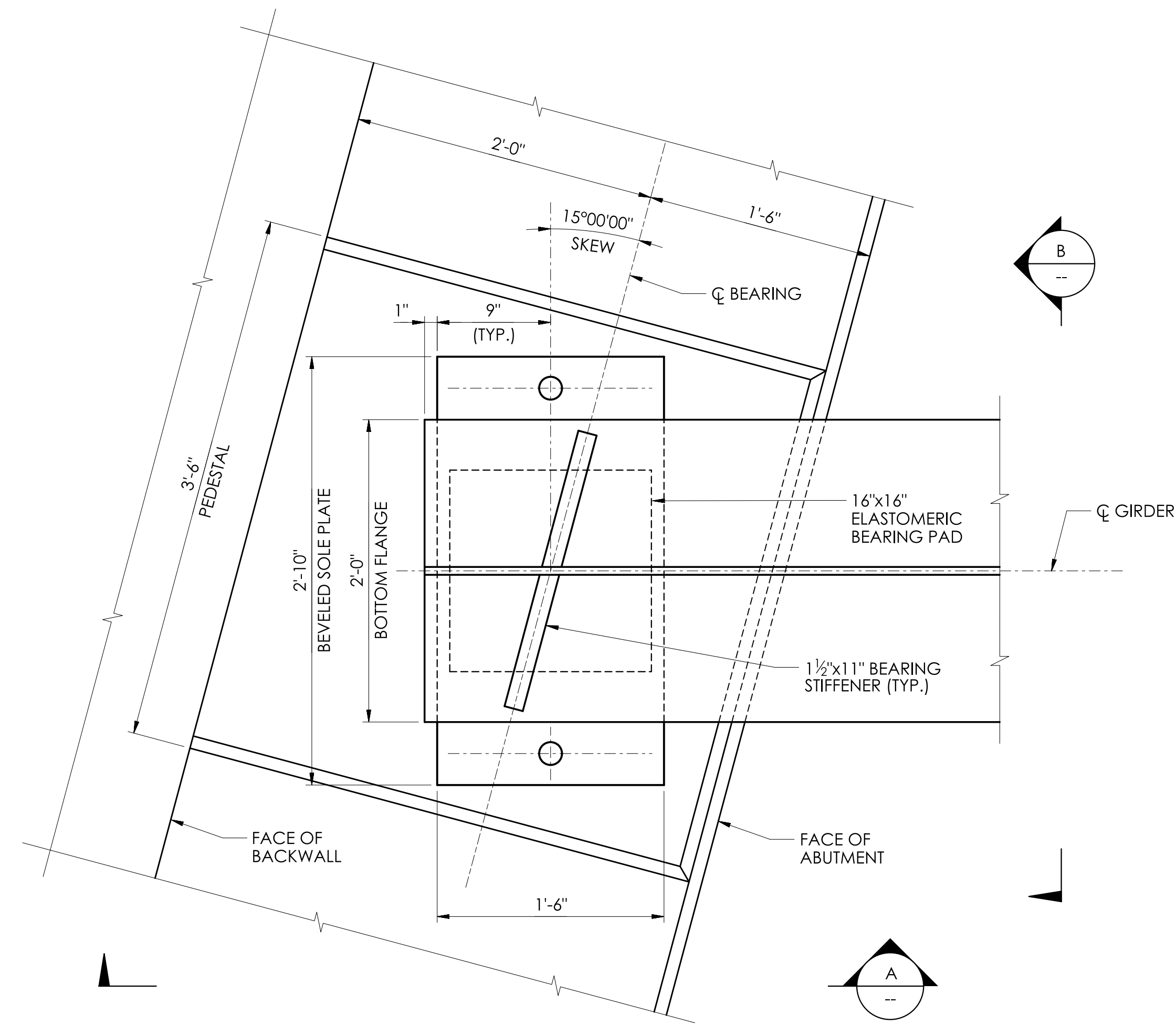


ABUTMENT 2 CORBEL DETAIL
SCALE: 1" = 1'-0"

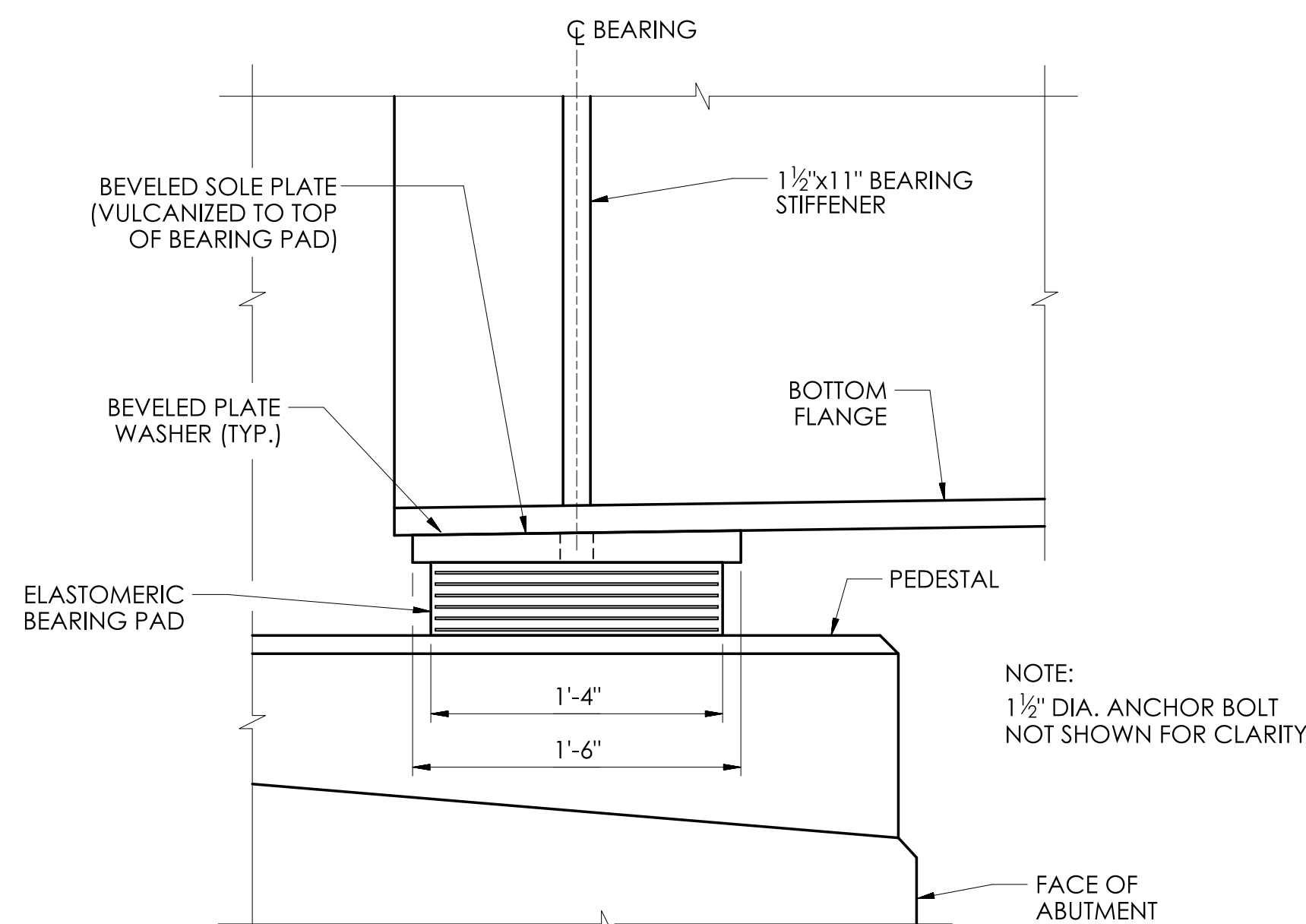


ABUTMENT 2 CORBEL SECTION
SCALE: 1" = 1'-0"

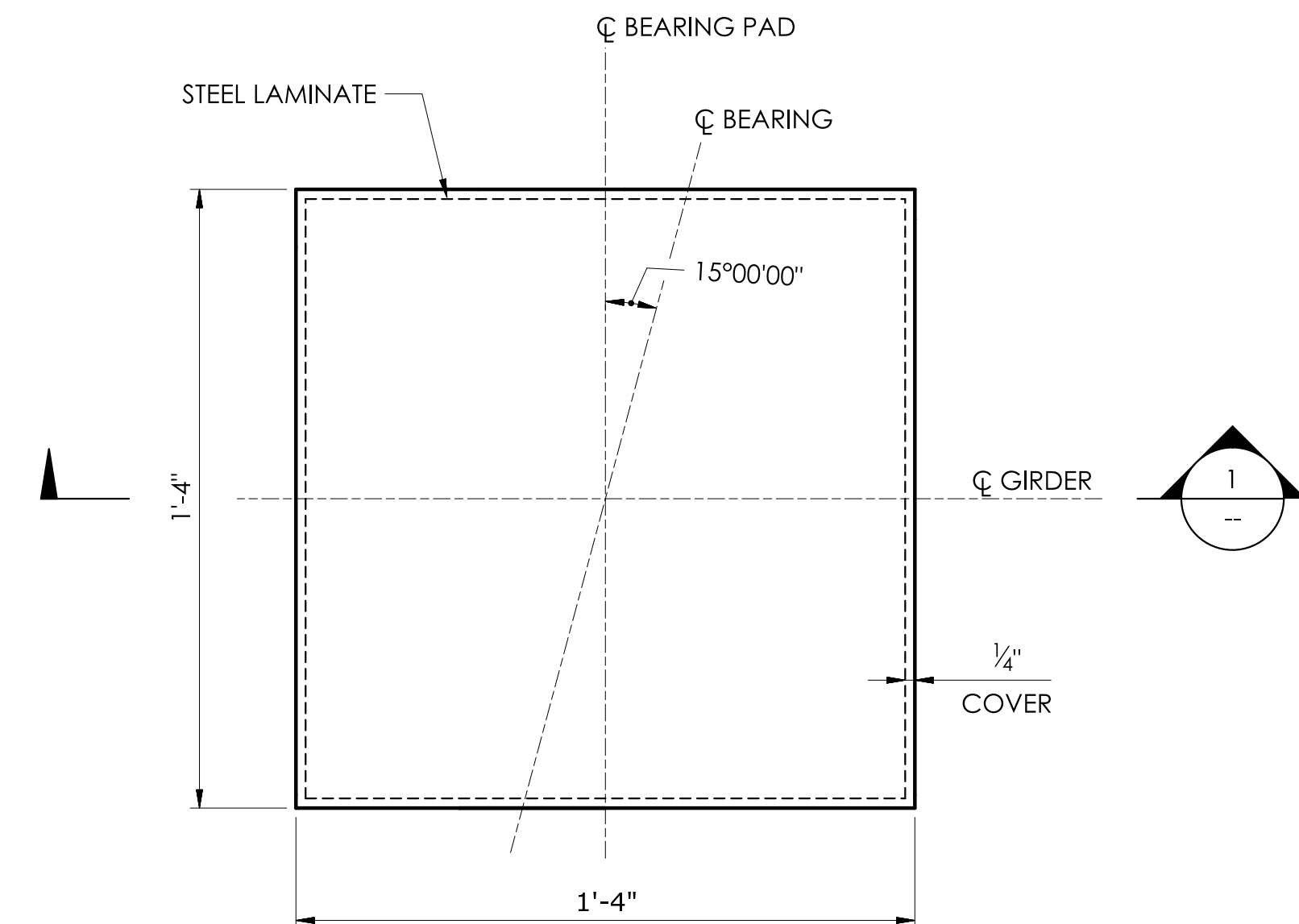
REV.	DATE	REVISION DESCRIPTION



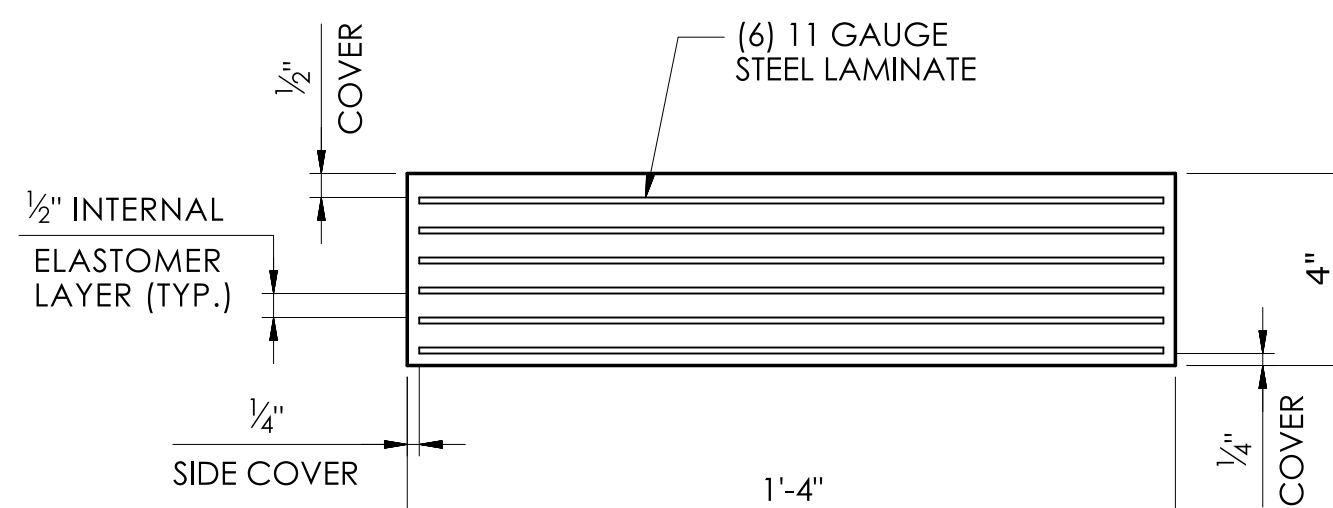
FIXED BEARING PLAN - ABUTMENT 1
SCALE: 1 1/2" = 1'-0"



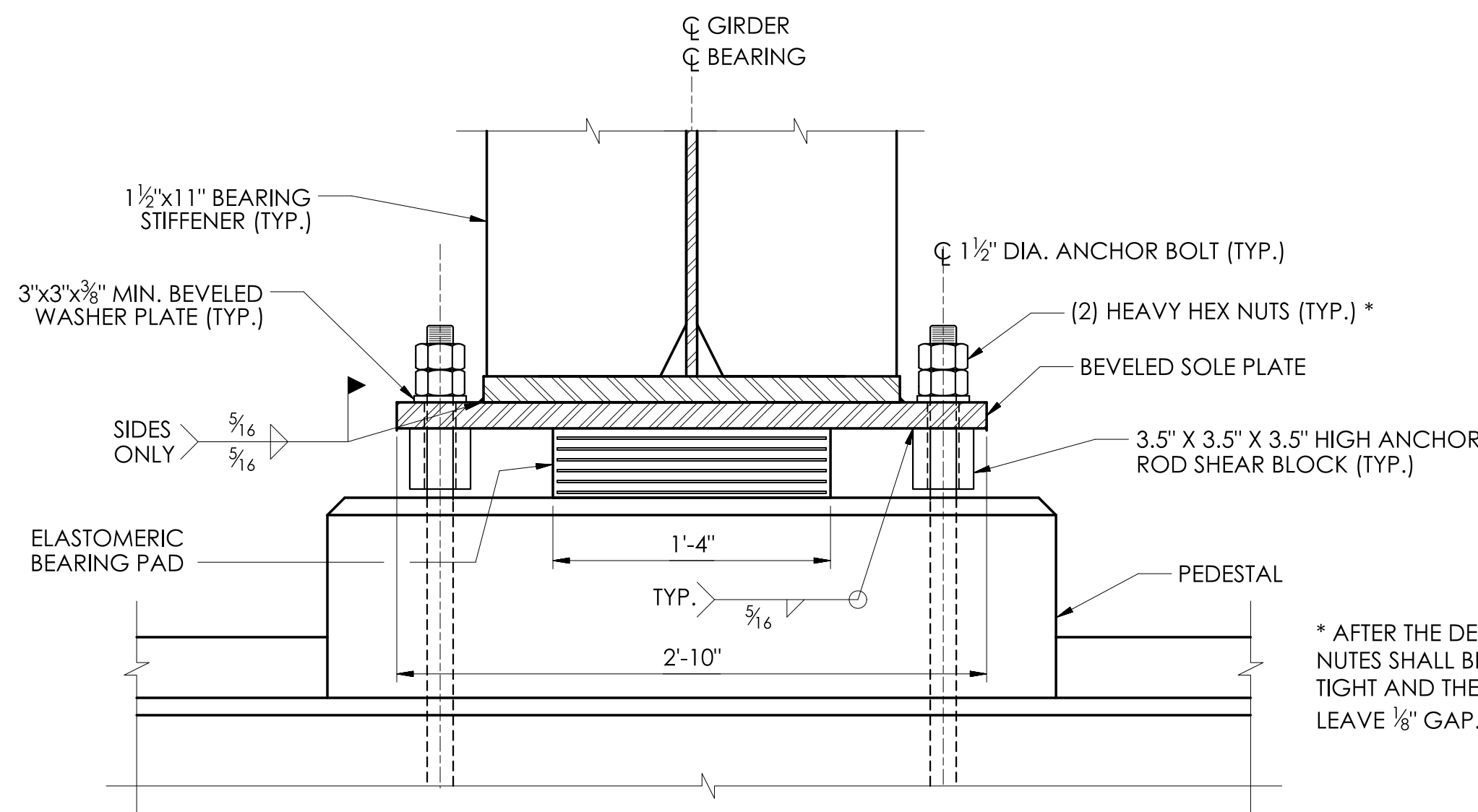
SIDE VIEW
SCALE: 1 1/2" = 1'-0"



ELASTOMERIC BEARING PAD PLAN
SCALE: 3" = 1'-0"



ELASTOMERIC BEARING PAD SECTION
SCALE: 3" = 1'-0"



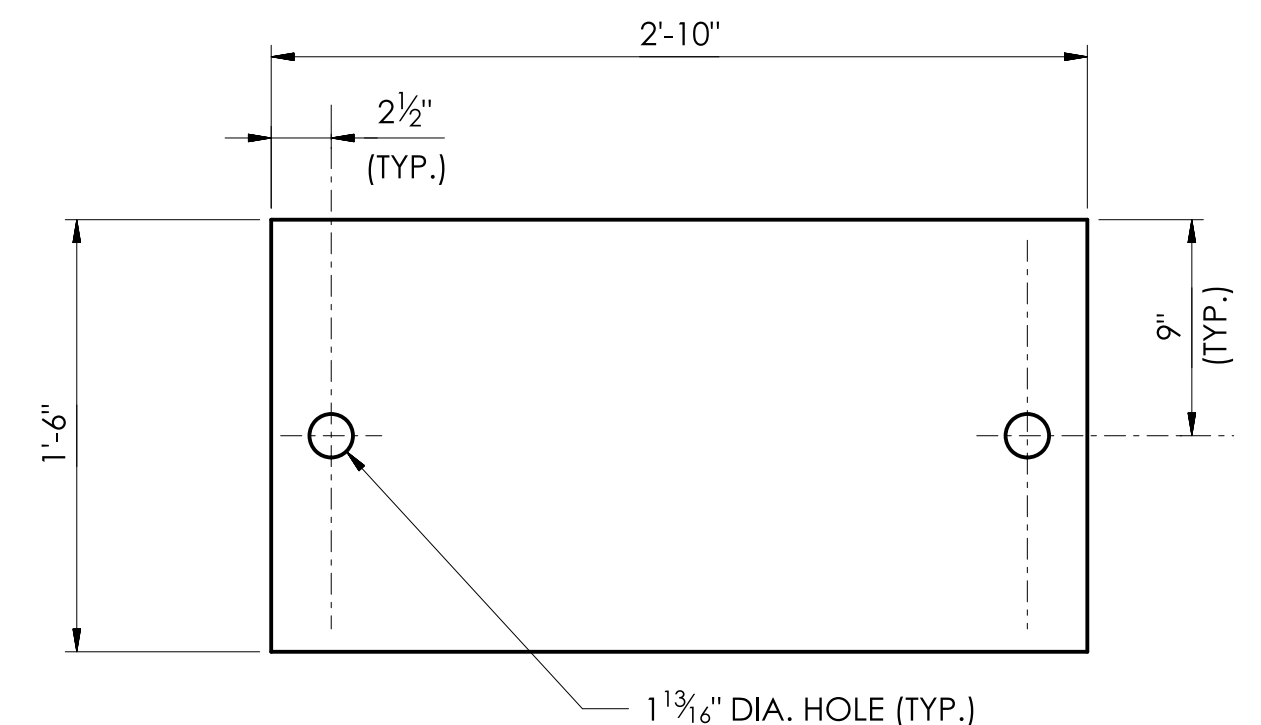
FRONT VIEW
SCALE: 1 1/2" = 1'-0"

BEARING NOTES:

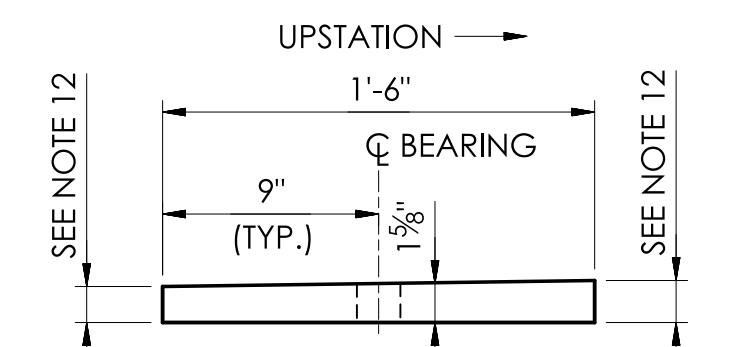
- THE ELASTOMERIC BEARINGS ARE DESIGNED USING METHOD A OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.
- THE STEEL FOR THE EXTERNAL SOLE PLATES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M270, GRADE 50 T2, AND SHALL BE METALLIZED.
- THE ELASTOMER SHALL BE VIRGIN NEOPRENE (POLYCHLOROPRENE). THE ELASTOMER COMPOUND SHALL BE HARDNESS (SHORE A) 60 AND HAVE A SHEAR MODULUS RANGE OF 0.130 TO 0.200 KSI AND MEET THE REQUIREMENTS OF AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS, SECTION 18.
- THE STEEL LAMINAE SHALL CONFORM TO ASTM A36 OR APPROVED EQUAL. ALL LAMINAE SHALL HAVE A 1/4" (MIN.) SIDE COVER.
- THE MAXIMUM DESIGN LOAD (DL + LL WITHOUT IMPACT) FOR EACH BEARING ARE NOTED ON THE BEARING DETAILS. THIS INFORMATION IS PROVIDED FOR THE PROOF LOAD TEST DESCRIBED IN THE SPECIAL PROVISION "STEEL-LAMINATED ELASTOMERIC BEARINGS".
- THE ELASTOMERIC BEARINGS SHALL BE INSTALLED WHEN THE AMBIENT AIR AND BEARING TEMPERATURES IS BETWEEN 40°F TO 80°F AND HAS BEEN WITHIN THIS RANGE FOR AT LEAST TWO HOURS.
- THE COST OF FURNISHING AND INSTALLING THE ELASTOMERIC BEARINGS SHALL BE PAID FOR UNDER ITEM "STEEL-LAMINATED ELASTOMERIC BEARINGS".
- THE COMPRESSION IN THE ELASTOMERIC BEARINGS SHALL BE NO GREATER THAN 1/8".
- ANCHOR BOLTS SHALL BE STAINLESS STEEL AND CONFORM TO ASTM F1554, GRADE 105, THREADED BOLTS.
- THE COST OF FURNISHING AND INSTALLING THE ELASTOMERIC BEARINGS, INCLUDING THE BEVELED SOLE PLATE, SHALL BE PAID FOR UNDER THE ITEM "STEEL-LAMINATED ELASTOMERIC BEARINGS". THE COST OF THE ANCHOR BOLTS, NUTS AND PLATE WASHERS SHALL BE PAID FOR UNDER THE ITEM "STRUCTURAL STEEL".
- THE GIRDER BOTTOM FLANGE SHALL NOT BE FIELD WELDED TO THE TOP OF THE STEEL SOLE PLATE UNTIL THE CONCRETE DECK IS POURED.
- THE STEEL FABRICATOR IS RESPONSIBLE FOR DETERMINING THE SOLE PLATE BEVEL BASED ON SITE GEOMETRY AND MEMBER CAMBER. THE BEVELED SOLE PLATE THICKNESS AT C OF BEARING STATED ON THE PLANS OF SHALL NOT BE ADJUSTED.

BEARING DESIGN LOADS:

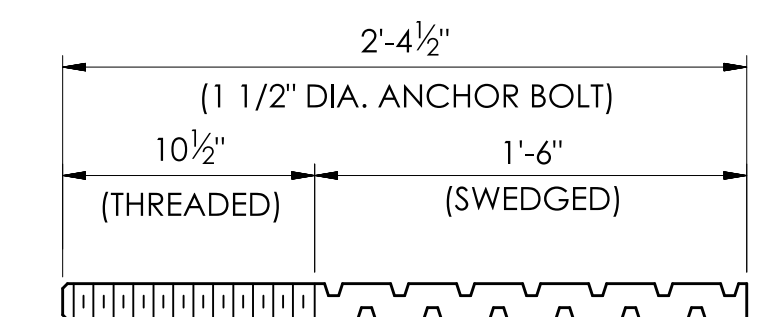
DEAD LOAD	135 KIPS
LIVE LOAD	100 KIPS
TOTAL LOAD	235 KIPS



BEVELED SOLE PLATE DETAIL
SCALE: 1 1/2" = 1'-0"



BEVELED SOLE PLATE SECTION
SCALE: 1 1/2" = 1'-0"



ANCHOR BOLT DETAIL
SCALE: 1 1/2" = 1'-0"

REV.	DATE	REVISION DESCRIPTION

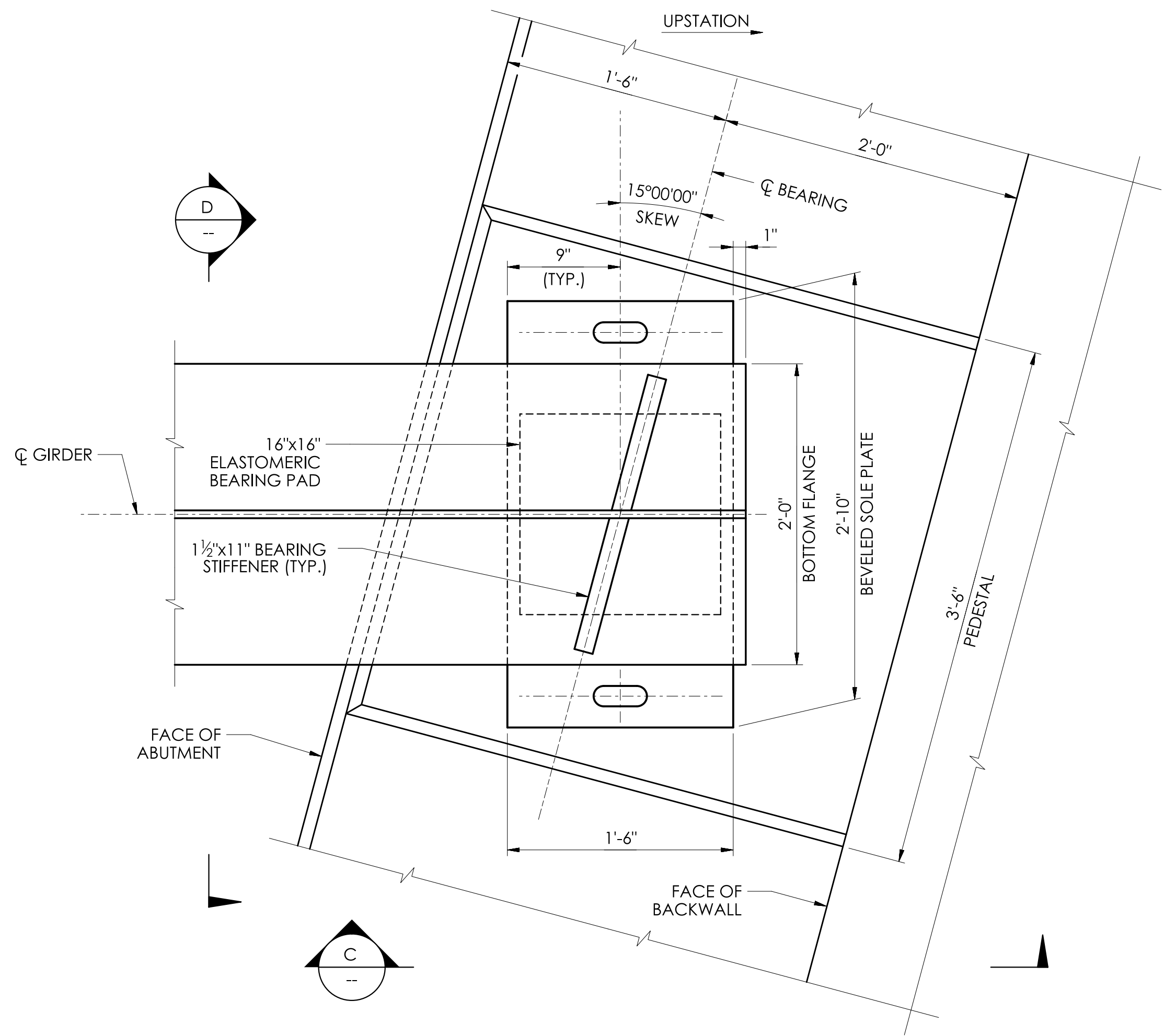
DESIGNER/DRAFTER: RB/CLG CHECKED BY: D. KULL
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PLOTTED DATE: 11/21/2025

SIGNATURE:
BLOCK:
McFarland Johnson
273 Corporate Drive
Suite 200
Portsmouth, NH
03801

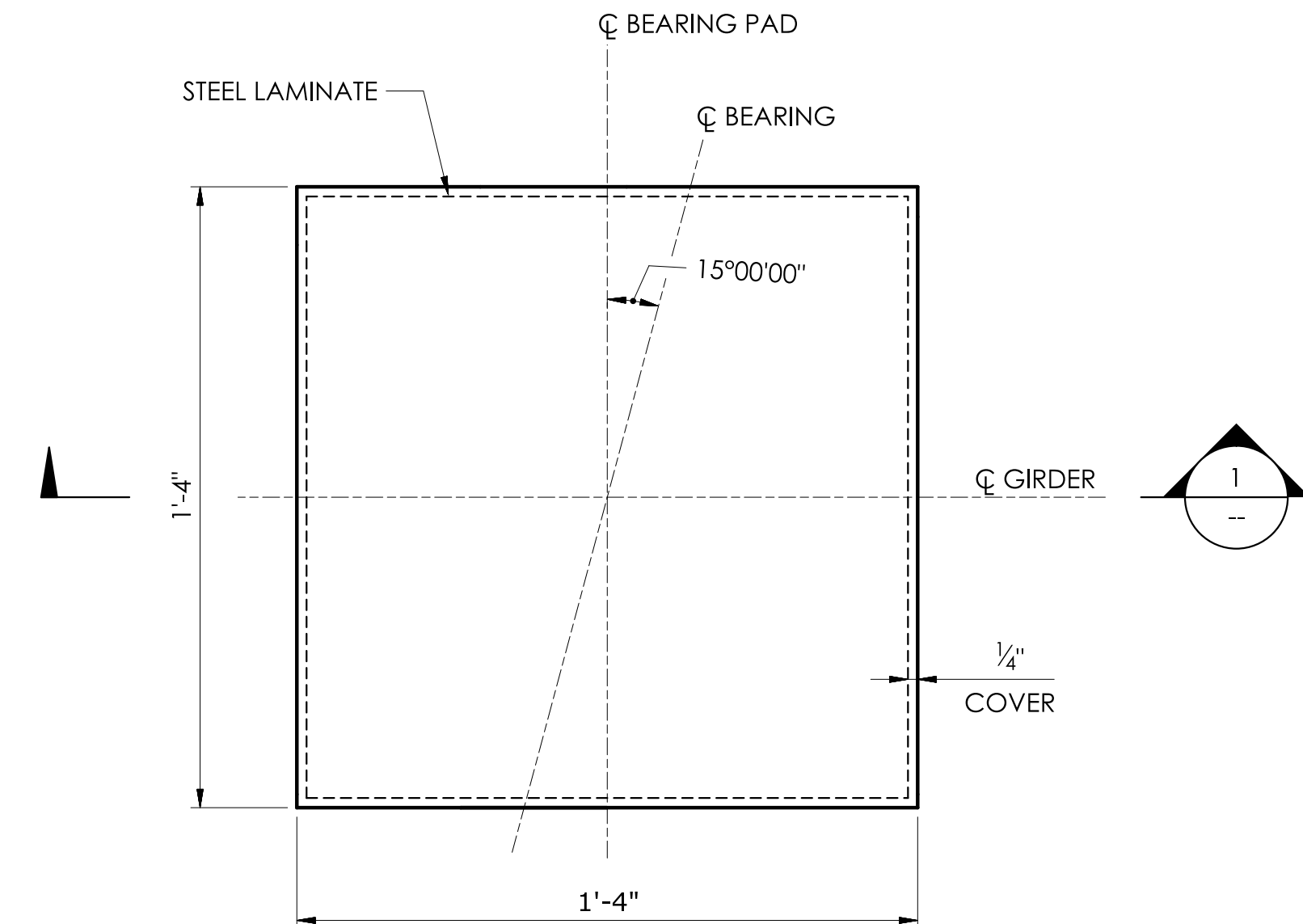


PROJECT NUMBER: 0119-0121
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 05068-WELLERS BRIDGE ROAD OVER SHEPAUG RIVER
TOWN(S): ROXBURY
DRAWING TITLE: FIXED BEARING DETAILS - ABUTMENT 1

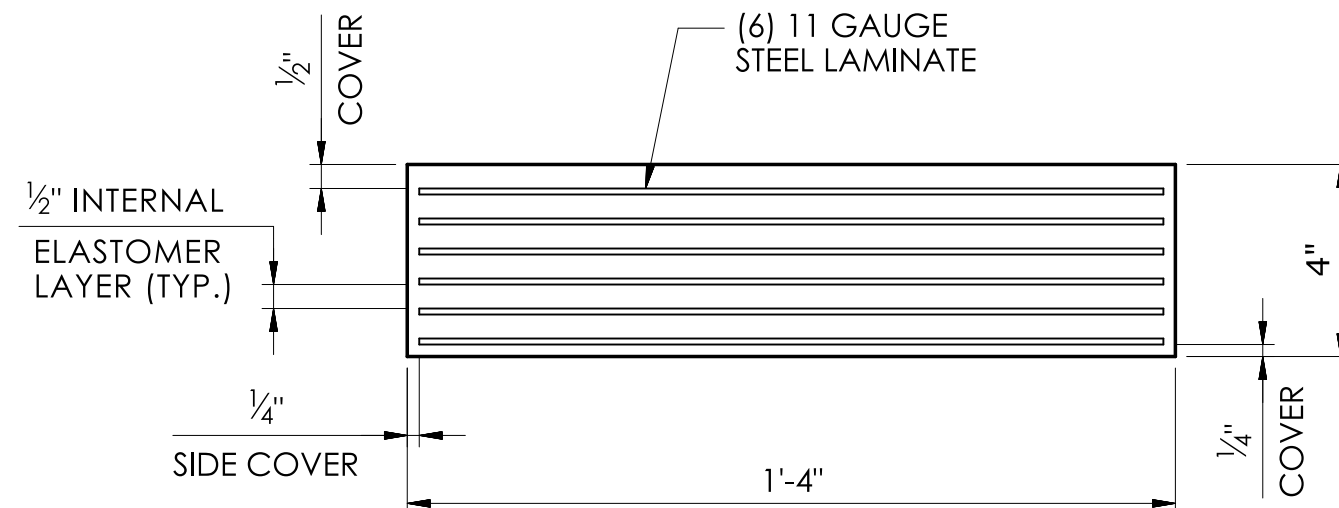
DRAWING NO.
S-22
SHEET NO.
04.22



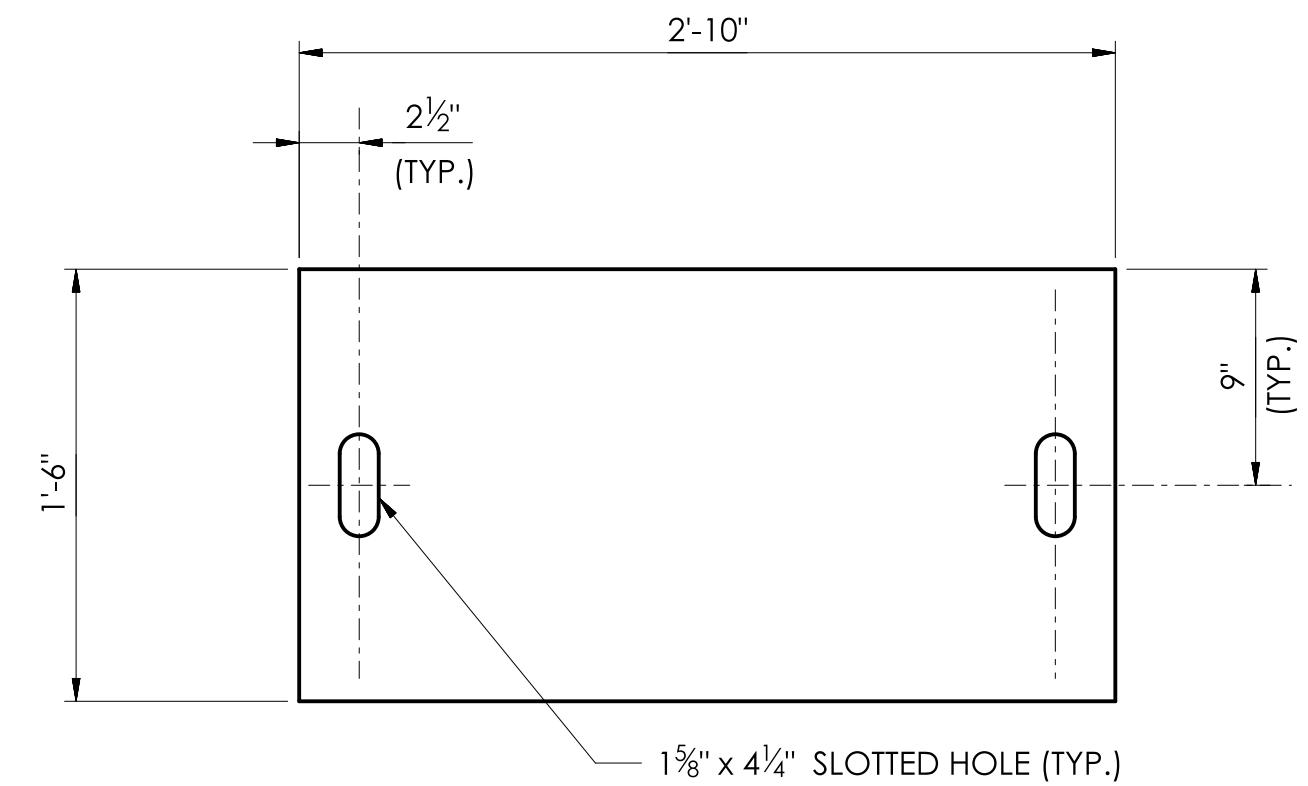
EXPANSION BEARING PLAN - ABUTMENT 2
SCALE: 1 1/2" = 1'-0"



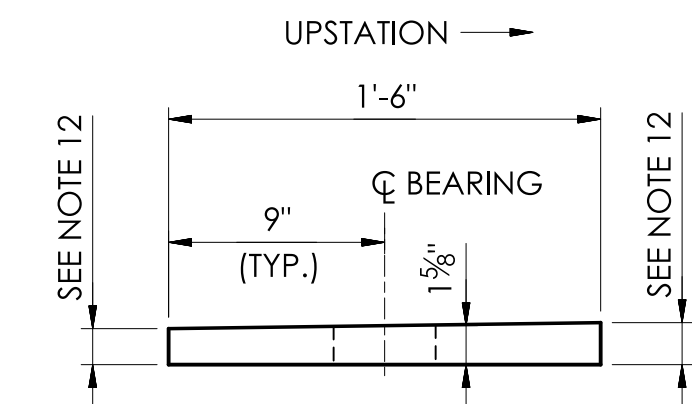
ELASTOMERIC BEARING PAD PLAN
SCALE: 3" = 1'-0"



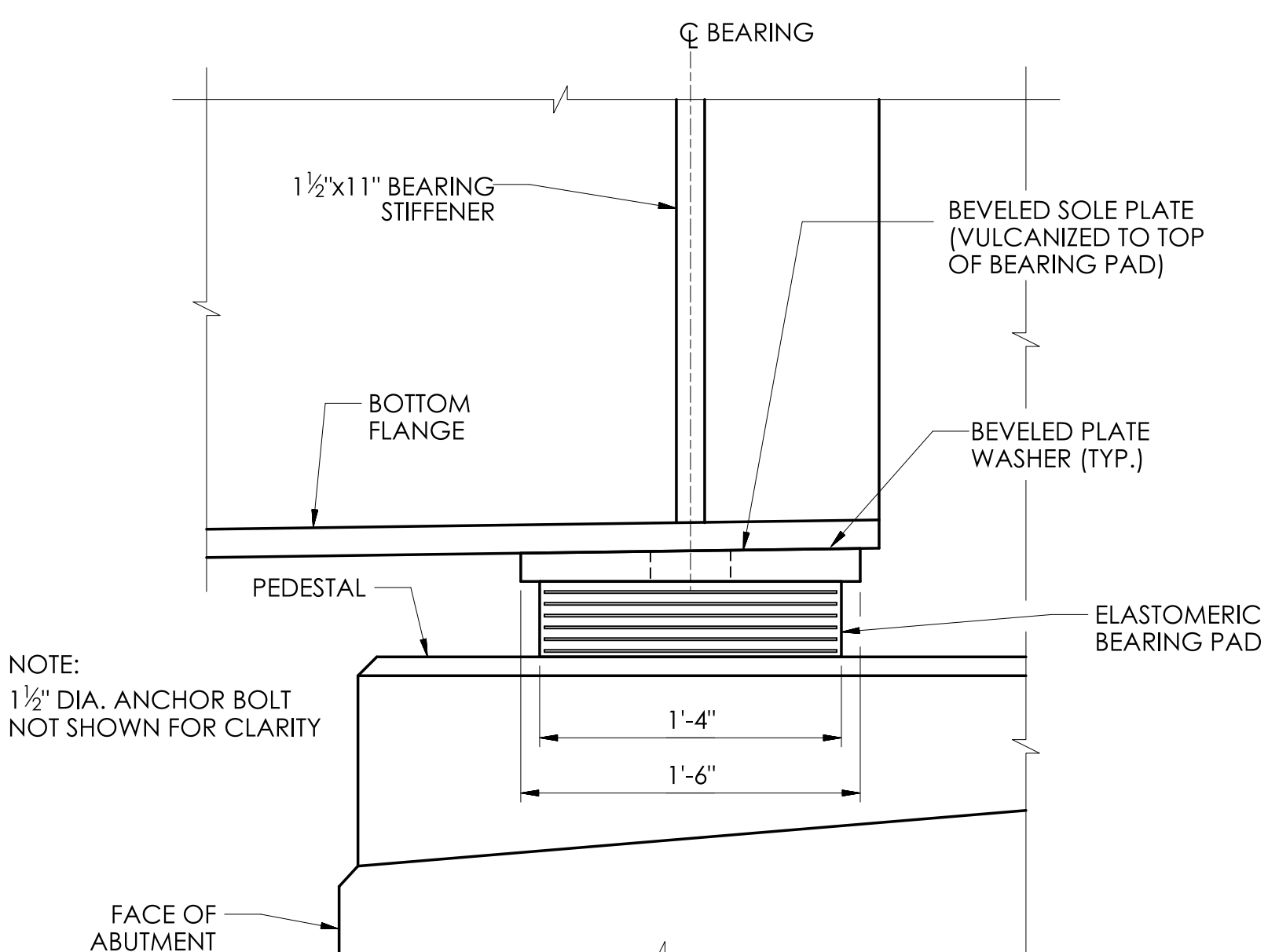
ELASTOMERIC BEARING PAD SECTION
SCALE: 3" = 1'-0"



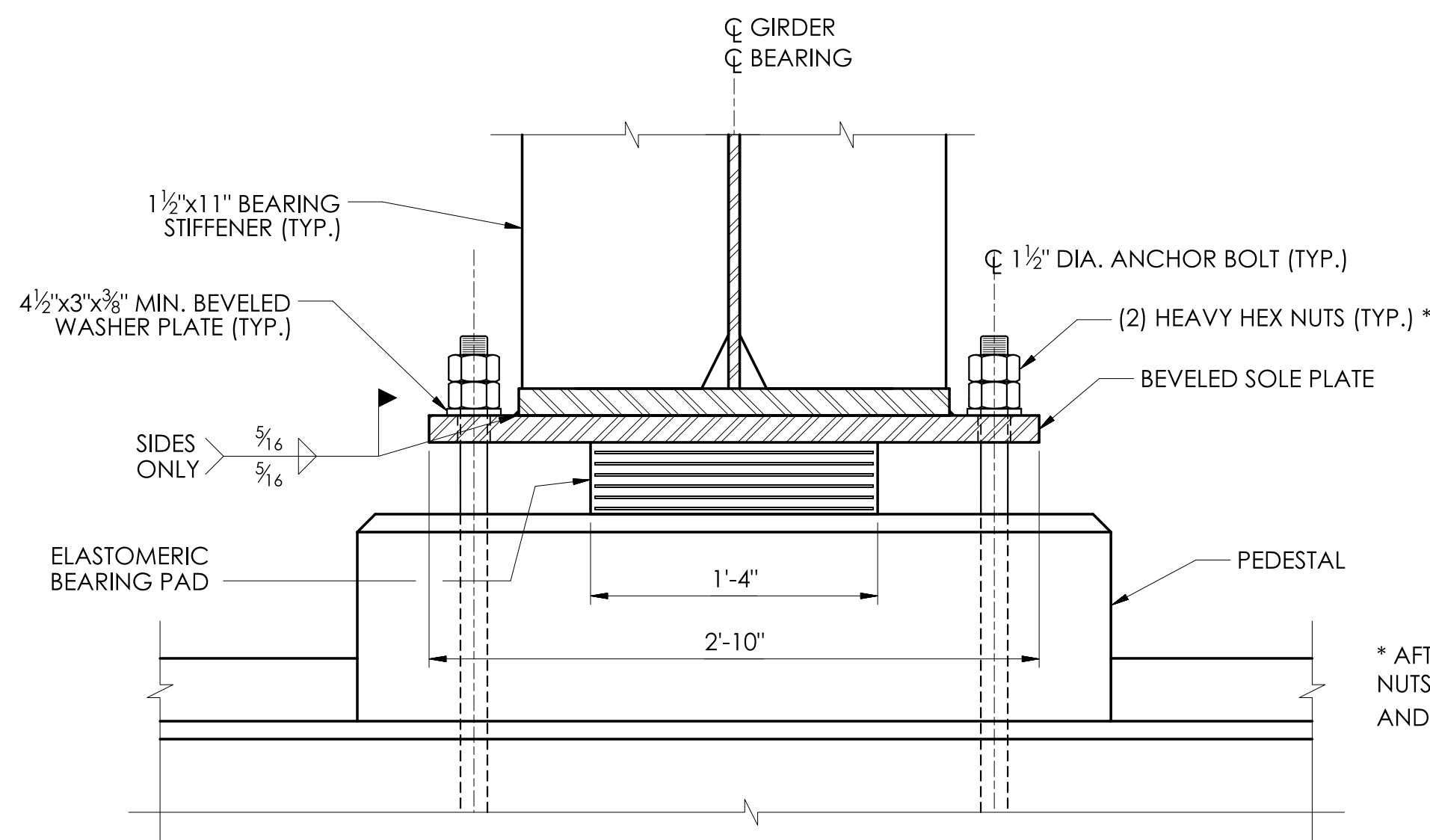
BEVELED SOLE PLATE DETAIL
SCALE: 1 1/2" = 1'-0"



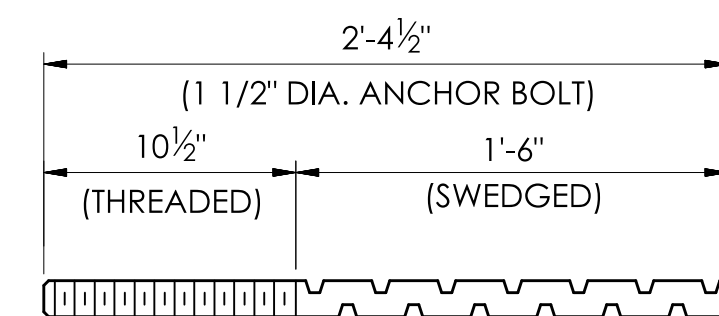
BEVELED SOLE PLATE SECTION
SCALE: 1 1/2" = 1'-0"



SIDE VIEW
SCALE: 1 1/2" = 1'-0"



FRONT VIEW
SCALE: 1 1/2" = 1'-0"



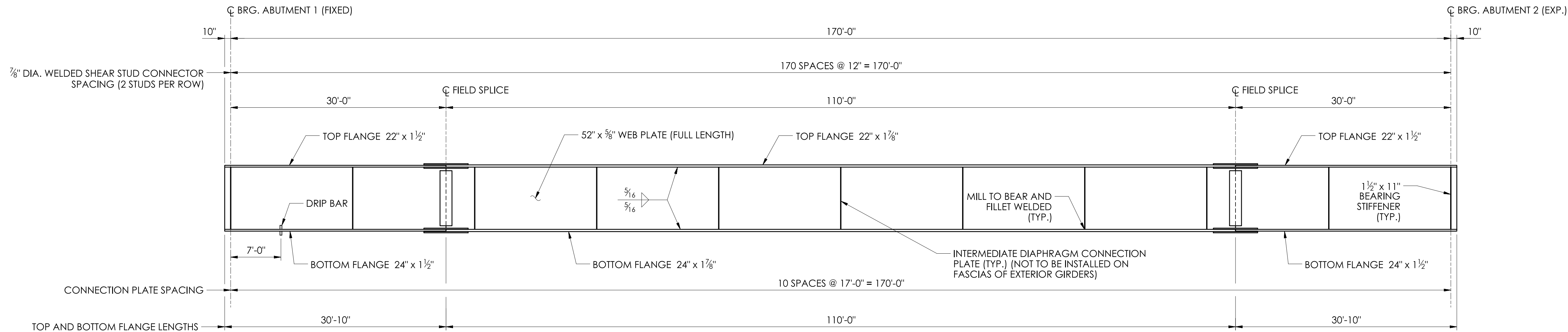
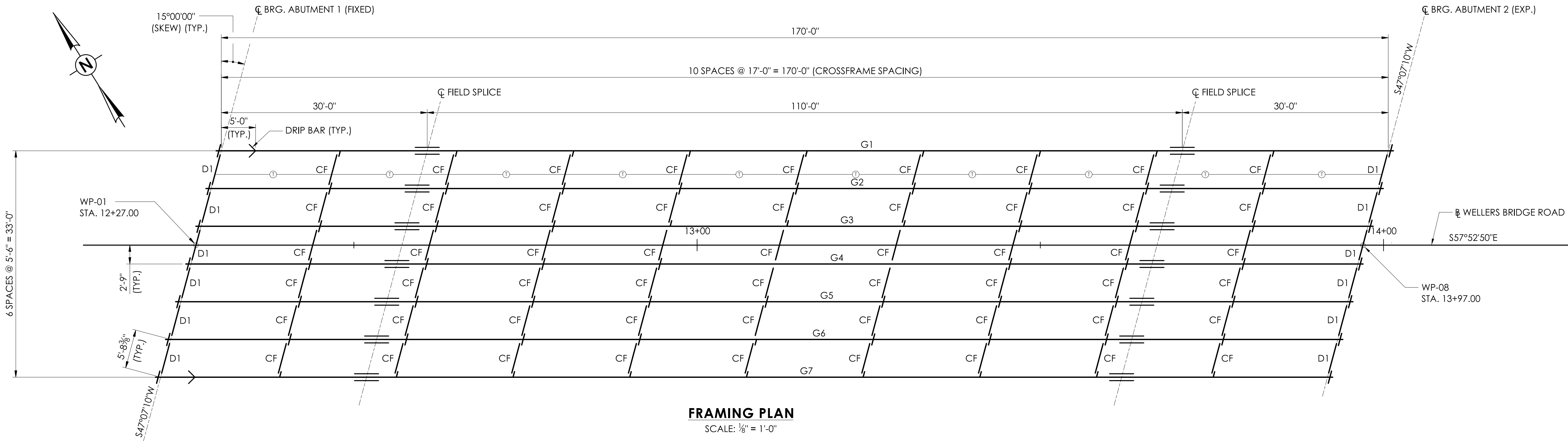
ANCHOR BOLT DETAIL
SCALE: 1 1/2" = 1'-0"

* AFTER THE DECK HAS BEEN POURED,
NUTS SHALL BE DRAWN UP FINGER TIGHT
AND THEN BACKED OFF TO LEAVE 1/8" GAP.

NOTES:

- FOR BEARING NOTES AND BEARING LOADS, SEE SHEET S-22.

REV.	DATE	REVISION DESCRIPTION



STRUCTURAL STEEL NOTES

- ALL STRUCTURAL STEEL (LOW ALLOY) SHALL CONFORM TO AASHTO M270 GRADE 50 T2 AND SHALL BE METALLIZED.
- WELDING, WELDING PROCEDURES, WELDING INSPECTION, AND TESTING METHODS SHALL MEET THE ANSI/AASHTO/AWS D1.5 - BRIDGE WELDING CODE, UNLESS OTHERWISE NOTED ON THE PLANS. THE FREQUENCY, QUANTITY, AND TYPE OF NON-DESTRUCTIVE TESTING OF SHOP AND FIELD WELDS SHALL BE IN ACCORDANCE WITH D1.5 AND ANY ADDITIONAL REQUIREMENTS SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS.
- BOLTED FIELD SPLICES, OTHER THAN THOSE INDICATED ON THE PLANS, WILL NOT BE ALLOWED EXCEPT WITH THE WRITTEN PERMISSION OF THE ENGINEER PRIOR TO THE SUBMISSION OF SHOP DRAWINGS. IF ALLOWED, THESE SPLICES SHALL BE DESIGNED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. THE COST OF THESE SPLICES, INCLUDING THE COST OF DESIGN, SHALL BE AT NO EXTRA EXPENSE TO THE TOWN. WELDED FIELD SPLICES WILL NOT BE ALLOWED.
- ALL WEB TO FLANGE, WEB TO BEARING STIFFENER AND BEARING STIFFENER TO FLANGE FILLET WELDS SHALL BE INSPECTED BY THE MAGNETIC PARTICLE METHOD.
- MULTIPLE PASS WELDS, INSPECTED BY THE MAGNETIC PARTICLE METHOD, SHALL HAVE EACH PASS OR LAYER INSPECTED AND ACCEPTED BEFORE PROCEEDING TO THE NEXT PASS OR LAYER, AS DETERMINED BY THE ENGINEER.
- SHOP FLANGE SPLICES SHALL BE LOCATED A MINIMUM OF 6 INCHES FROM WEB SPLICES.

- FLANGE OR WEB SPLICES SHALL BE LOCATED A MINIMUM OF 6 INCHES FROM STIFFENERS AND CONNECTION PLATES.
- ENDS OF BEAMS SHALL BE VERTICAL AFTER THE APPLICATION OF FULL DEAD LOADS.
- THE STRUCTURAL STEEL FABRICATORS SHALL BE CERTIFIED UNDER THE AISC CERTIFICATION PROGRAM CATEGORY BRIDGE FABRICATOR INTERMEDIATE (IBR).
- THE CONTRACTOR SHALL TAKE THE PROPER PRECAUTIONS TO ENSURE STABILITY OF THE GIRDERS UNTIL THE BRIDGE DECK HAS ACHIEVED REQUIRED DESIGN STRENGTH.
- THE TOP OF THE TOP FLANGE OF THE GIRDER SHALL BE MASKED OFF FROM METALLIZING, SEALING AND TOPCOATS. THIS SURFACE SHALL BE COATED WITH ZINC-RICH PRIMER ONLY.
- BEARING PLATES FOR ELASTOMERIC BEARINGS SHALL BE METALLIZED, SEALED AND TOP COATED AFTER VULCANIZATION. ELASTOMERIC BEARING PADS SHALL BE MASKED PROPERLY TO AVOID DAMAGE DURING THE METALLIZING, SEALER AND TOPCOAT APPLICATION.

LEGEND

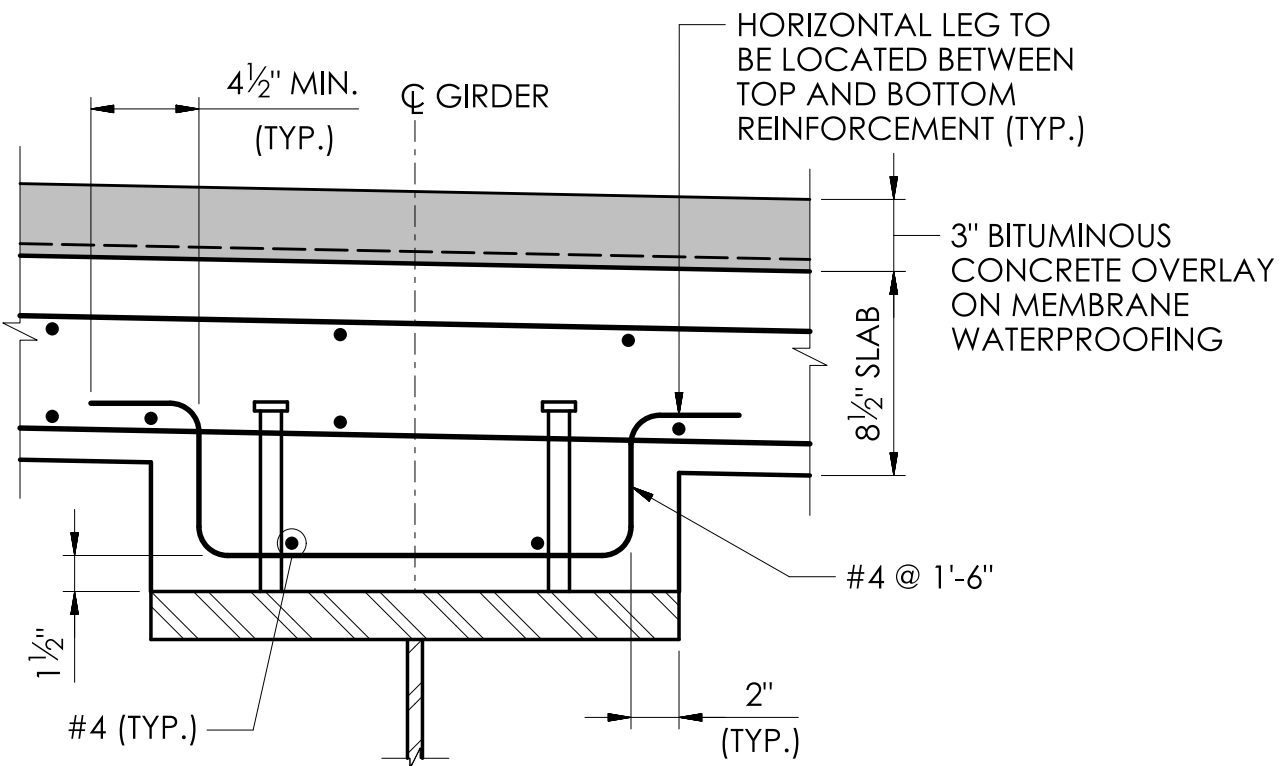
- D1 DENOTES END DIAPHRAGMS
CF DENOTES INTERIOR CROSSFRAME

REV.	DATE	REVISION DESCRIPTION

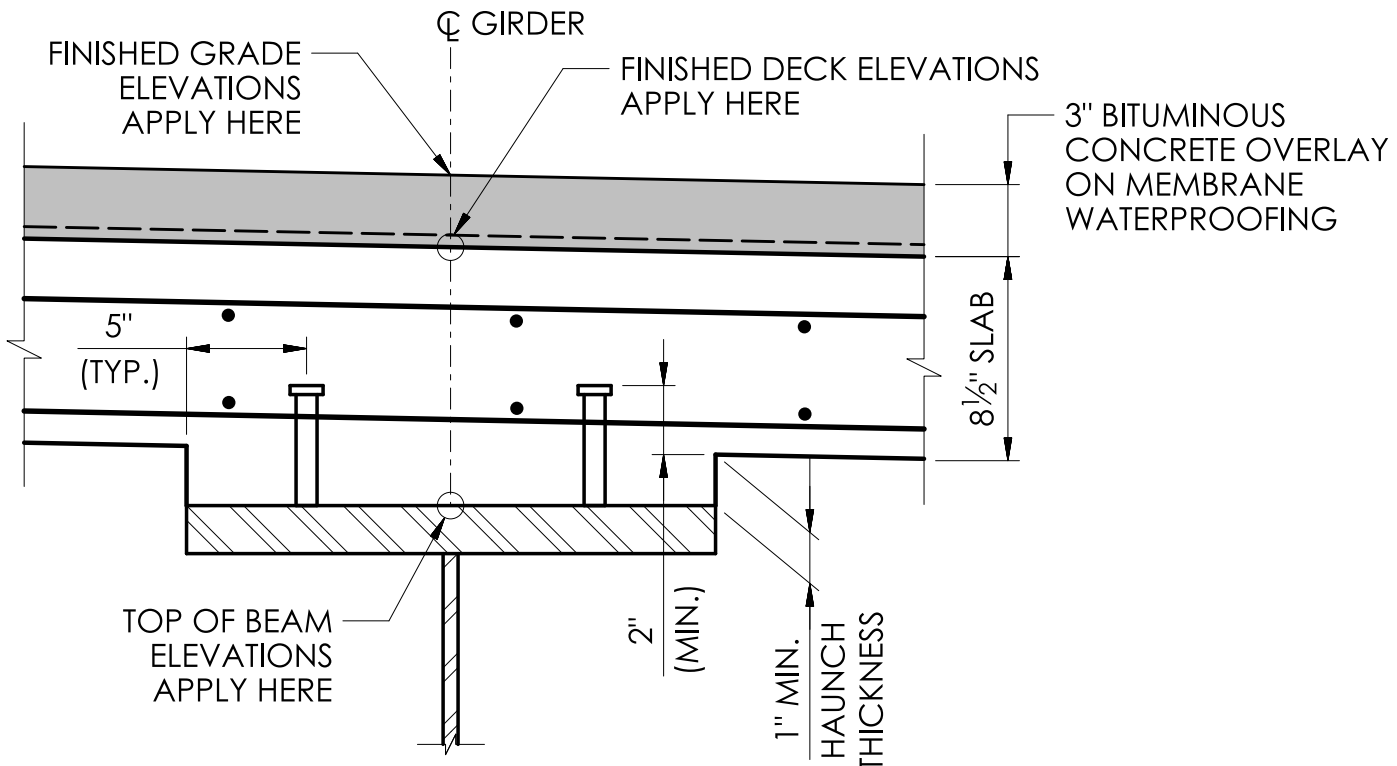
CAMBER TABLE (INCHES)																						
GIRDER MARK		CL BRG. ABUT. 1	0.05 L	0.10 L	0.15 L	0.20 L	0.25 L	0.30 L	0.35 L	0.40 L	0.45 L	0.50 L	0.55 L	0.60 L	0.65 L	0.70 L	0.75 L	0.80 L	0.85 L	0.90 L	0.95 L	CL BRG. ABUT. 2
G1	STRUCTURAL STEEL DEFLECTION	0.00	0.70	1.37	2.00	2.57	3.06	3.49	3.82	4.07	4.22	4.27	4.22	4.07	3.82	3.49	3.06	2.57	2.00	1.37	0.70	0.00
	ADDITIONAL DEAD LOAD DEFLECTION (D)	0.00	0.46	0.91	1.33	1.71	2.04	2.32	2.55	2.71	2.82	2.85	2.82	2.71	2.55	2.32	2.04	1.71	1.33	0.91	0.46	0.00
	COMPOSITE DEAD LOAD DEFLECTION (E)	0.00	0.92	1.81	2.64	3.38	4.04	4.60	5.05	5.38	5.58	5.64	5.58	5.38	5.05	4.60	4.04	3.38	2.64	1.81	0.92	0.00
	TOTAL DEAD LOAD CAMBER	0.00	2.08	4.09	5.96	7.65	9.15	10.41	11.43	12.16	12.61	12.76	12.61	12.16	11.43	10.41	9.15	7.65	5.96	4.09	2.08	0.00
	EXTRA CAMBER	0.00	0.32	0.61	0.87	1.09	1.28	1.43	1.55	1.63	1.68	1.70	1.68	1.63	1.55	1.43	1.28	1.09	0.87	0.61	0.32	0.00
	TOTAL CAMBER	0.00	2.40	4.70	6.83	8.74	10.42	11.84	12.97	13.80	14.30	14.46	14.30	13.80	12.97	11.84	10.42	8.74	6.83	4.70	2.40	0.00
G2	STRUCTURAL STEEL DEFLECTION	0.00	0.72	1.41	2.06	2.64	3.15	3.59	3.94	4.19	4.35	4.40	4.35	4.19	3.94	3.59	3.15	2.64	2.06	1.41	0.72	0.00
	ADDITIONAL DEAD LOAD DEFLECTION (D)	0.00	0.45	0.88	1.29	1.66	1.98	2.26	2.48	2.64	2.74	2.77	2.74	2.64	2.48	2.26	1.98	1.66	1.29	0.88	0.45	0.00
	COMPOSITE DEAD LOAD DEFLECTION (E)	0.00	1.01	1.98	2.89	3.70	4.43	5.04	5.53	5.89	6.10	6.18	6.10	5.89	5.53	5.04	4.43	3.70	2.89	1.98	1.01	0.00
	TOTAL DEAD LOAD CAMBER	0.00	2.17	4.27	6.23	8.00	9.56	10.89	11.95	12.72	13.19	13.34	13.19	12.72	11.95	10.89	9.56	8.00	6.23	4.27	2.17	0.00
	EXTRA CAMBER	0.00	0.32	0.61	0.87	1.09	1.28	1.43	1.55	1.63	1.68	1.70	1.68	1.63	1.55	1.43	1.28	1.09	0.87	0.61	0.32	0.00
	TOTAL CAMBER	0.00	2.50	4.88	7.10	9.09	10.84	12.31	13.49	14.35	14.87	15.04	14.87	14.35	13.49	12.31	10.84	9.09	7.10	4.88	2.50	0.00
G3	STRUCTURAL STEEL DEFLECTION	0.00	0.72	1.41	2.06	2.64	3.15	3.59	3.94	4.19	4.35	4.40	4.35	4.19	3.94	3.59	3.15	2.64	2.06	1.41	0.72	0.00
	ADDITIONAL DEAD LOAD DEFLECTION (D)	0.00	0.45	0.88	1.29	1.66	1.98	2.26	2.48	2.64	2.74	2.77	2.74	2.64	2.48	2.26	1.98	1.66	1.29	0.88	0.45	0.00
	COMPOSITE DEAD LOAD DEFLECTION (E)	0.00	1.01	1.98	2.89	3.70	4.43	5.04	5.53	5.89	6.10	6.18	6.10	5.89	5.53	5.04	4.43	3.70	2.89	1.98	1.01	0.00
	TOTAL DEAD LOAD CAMBER	0.00	2.17	4.27	6.23	8.00	9.56	10.89	11.95	12.72	13.19	13.34	13.19	12.72	11.95	10.89	9.56	8.00	6.23	4.27	2.17	0.00
	EXTRA CAMBER	0.00	0.32	0.61	0.87	1.09	1.28	1.43	1.55	1.63	1.68	1.70	1.68	1.63	1.55	1.43	1.27	1.09	0.87	0.61	0.32	0.00
	TOTAL CAMBER	0.00	2.50	4.88	7.10	9.09	10.84	12.31	13.49	14.35	14.87	15.04	14.87	14.35	13.49	12.31	10.84	9.09	7.10	4.88	2.50	0.00
G4	STRUCTURAL STEEL DEFLECTION	0.00	0.72	1.41	2.06	2.64	3.15	3.59	3.94	4.19	4.35	4.40	4.35	4.19	3.94	3.59	3.15	2.64	2.06	1.41	0.72	0.00
	ADDITIONAL DEAD LOAD DEFLECTION (D)	0.00	0.45	0.88	1.29	1.66	1.98	2.26	2.48	2.64	2.74	2.77	2.74	2.64	2.48	2.26	1.98	1.66	1.29	0.88	0.45	0.00
	COMPOSITE DEAD LOAD DEFLECTION (E)	0.00	1.01	1.98	2.89	3.70	4.43	5.04	5.53	5.89	6.10	6.18	6.10	5.89	5.53	5.04	4.43	3.70	2.89	1.98	1.01	0.00
	TOTAL DEAD LOAD CAMBER	0.00	2.17	4.27	6.23	8.00	9.56	10.89	11.95	12.72	13.19	13.34	13.19	12.72	11.95	10.89	9.56	8.00	6.23	4.27	2.17	0.00
	EXTRA CAMBER	0.00	0.32	0.61	0.87	1.09	1.28	1.43	1.55	1.63	1.68	1.70	1.68	1.63	1.55	1.43	1.28	1.09	0.87	0.61	0.32	0.00
	TOTAL CAMBER	0.00	2.50	4.88	7.10	9.09	10.84	12.31	13.49	14.35	14.87	15.04	14.87	14.35	13.49	12.31	10.84	9.09	7.10	4.88	2.50	0.00
G5	STRUCTURAL STEEL DEFLECTION	0.00	0.72	1.41	2.06	2.64	3.15	3.59	3.94	4.19	4.35	4.40	4.35	4.19	3.94	3.59	3.15	2.64	2.06	1.41	0.72	0.00
	ADDITIONAL DEAD LOAD DEFLECTION (D)	0.00	0.45	0.88	1.29	1.66	1.98	2.26	2.48	2.64	2.74	2.77	2.74	2.64	2.48	2.26	1.98	1.66	1.29	0.88	0.45	0.00
	COMPOSITE DEAD LOAD DEFLECTION (E)	0.00	1.01	1.98	2.89	3.70	4.43	5.04	5.53	5.89	6.10	6.18	6.10	5.89	5.53	5.04	4.43	3.70	2.89	1.98	1.01	0.00
	TOTAL DEAD LOAD CAMBER	0.00	2.17	4.27	6.23	8.00	9.56	10.89	11.95	12.72	13.19	13.34	13.19	12.72	11.95	10.89	9.56	8.00	6.23	4.27	2.17	0.00
	EXTRA CAMBER	0.00	0.32	0.61	0.87	1.09	1.28	1.43	1.55	1.63	1.68	1.70	1.68	1.63	1.55	1.43	1.28	1.09	0.87	0.61	0.32	0.00
	TOTAL CAMBER	0.00	2.50	4.88	7.10	9.09	10.84	12.31	13.49	14.35	14.87	15.04	14.87	14.35	13.49	12.31	10.84	9.09	7.10	4.88	2.50	0.00
G6	STRUCTURAL STEEL DEFLECTION	0.00	0.72	1.41	2.06	2.64	3.15	3.59	3.94	4.19	4.35	4.40	4.35	4.19	3.94	3.59	3.15	2.64	2.06	1.41	0.72	0.00
	ADDITIONAL DEAD LOAD DEFLECTION (D)	0.00	0.45	0.88	1.29	1.66	1.98	2.26	2.48	2.64	2.74	2.77	2.74	2.64	2.48	2.26	1.98	1.66	1.29	0.88	0.45	0.00
	COMPOSITE DEAD LOAD DEFLECTION (E)	0.00	1.01	1.98	2.89	3.70	4.43	5.04	5.53	5.89	6.10	6.18	6.10	5.89	5.53	5.04	4.43	3.70	2.89	1.98	1.01	0.00
	TOTAL DEAD LOAD CAMBER	0.00	2.17	4.27	6.23	8.00	9.56	10.89	11.95	12.72	13.19	13.34	13.19	12.72	11.95	10.89	9.56	8.00	6.23	4.27	2.17	0.00
	EXTRA CAMBER	0.00	0.32	0.61	0.87	1.09	1.28	1.43	1.55	1.63	1.68	1.70	1.68	1.63	1.55	1.43	1.28	1.09	0.87	0.61	0.32	0.00
	TOTAL CAMBER	0.00	2.50	4.88	7.10	9.09	10.84	12.31	13.49	14.35	14.87	15.04	14.87	14.35	13.49	12.31	10.84	9.09	7.10	4.88	2.50	0.00
G7	STRUCTURAL STEEL DEFLECTION	0.00	0.70	1.37	2.00	2.57	3.06	3.49	3.82	4.07	4.22	4.27	4.22	4.07	3.82	3.49	3.06	2.57	2.00	1.37	0.70	0.00
	ADDITIONAL DEAD LOAD DEFLECTION (D)	0.00	0.46	0.91	1.33	1.71	2.04	2.32	2.55	2.71	2.82	2.85	2.82	2.71	2.55	2.32	2.04	1.71	1.33	0.91	0.46	0.00
	COMPOSITE DEAD LOAD DEFLECTION (E)	0.00	0.92	1.81	2.64	3.38	4.04	4.60	5.05	5.38	5.58	5.64	5.58	5.38	5.05	4.60	4.04	3.38	2.64	1.81	0.92	0.00
	TOTAL DEAD LOAD CAMBER	0.00	2.08	4.09	5.96	7.65	9.15	10.41	11.43	12.16	12.61	12.76	12.61	12.16	11.43	10.41	9.15	7.65	5.96	4.09	2.08	0.00
	EXTRA CAMBER	0.00	0.32	0.61	0.87	1.09	1.28	1.43	1.55	1.63	1.68	1.70	1.68	1.63	1.55	1.43	1.28	1.09	0.87	0.61	0.32	0.00
	TOTAL CAMBER	0.00	2.40	4.70	6.83	8.74	10.42	11.84	12.97	13.80	14.30	14.46	14.30	13.80	12.97	11.84	10.42	8.74	6.83	4.70	2.40	0.00

CAMBER DATA NOTES:

1. THE TABULATED DEFLECTIONS ARE GIVEN AND ARE MEASURED AT 20TH POINTS ALONG THE GIRDER SPAN FROM C_g BEARING TO C_g BEARING.
2. STRUCTURAL STEEL DEFLECTION INCLUDES NONCOMPOSITE DEFLECTIONS DUE TO THE GIRDER SELF-WEIGHT, A 5% DETAIL FACTOR, AND CROSS FRAMES.
3. ADDITIONAL DEAD LOAD DEFLECTION INCLUDES NONCOMPOSITE DEFLECTIONS DUE TO THE DECK SLAB POUR AND HAUNCHES.
4. COMPOSITE DEAD LOAD DEFLECTION INCLUDES COMPOSITE DEFLECTIONS DUE TO UTILITIES, BRIDGE RAILS, THE SIDEWALK, THE CLOSURE POUR, THE WEARING SURFACE, AND THE INSTALLATION AND REMOVAL OF TEMPORARY TRAFFIC CONTROL LOADS.



HAUNCH REINFORCEMENT DETAIL - GREATER THAN 4"
SCALE: 1 1/2" = 1'-0"



HAUNCH DETAIL - LESS THAN 4"
SCALE: 1 1/2" = 1'-0"

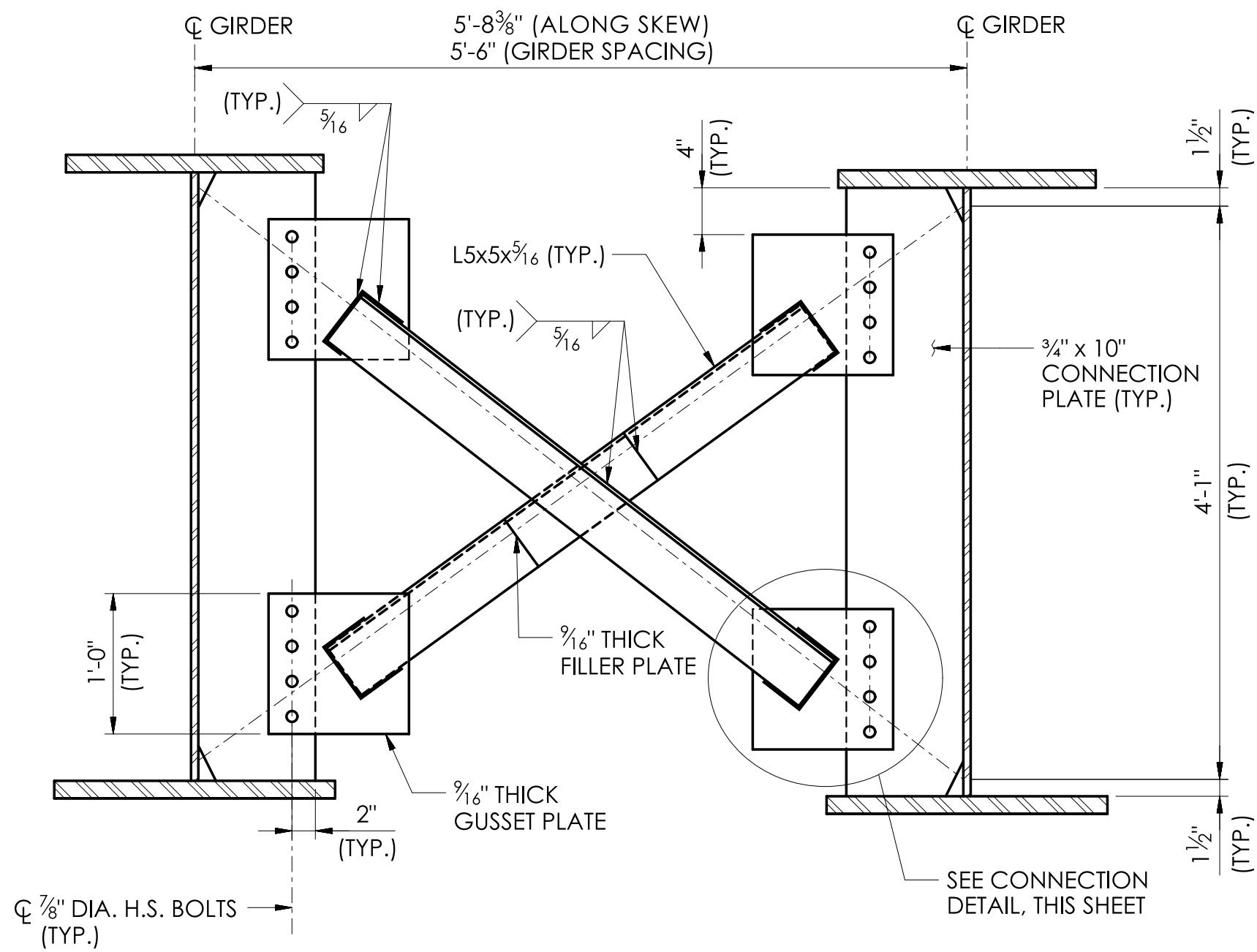
HAUNCH NOTES:

1. PRIOR TO PLACING SLAB FORMS, THE CONTRACTOR SHALL TAKE ELEVATIONS ALONG THE TOP OF THE BEAMS AT POINTS SHOWN IN THE TABLE.
2. THE HAUNCH THICKNESS SHALL BE DETERMINED AS FOLLOWS:

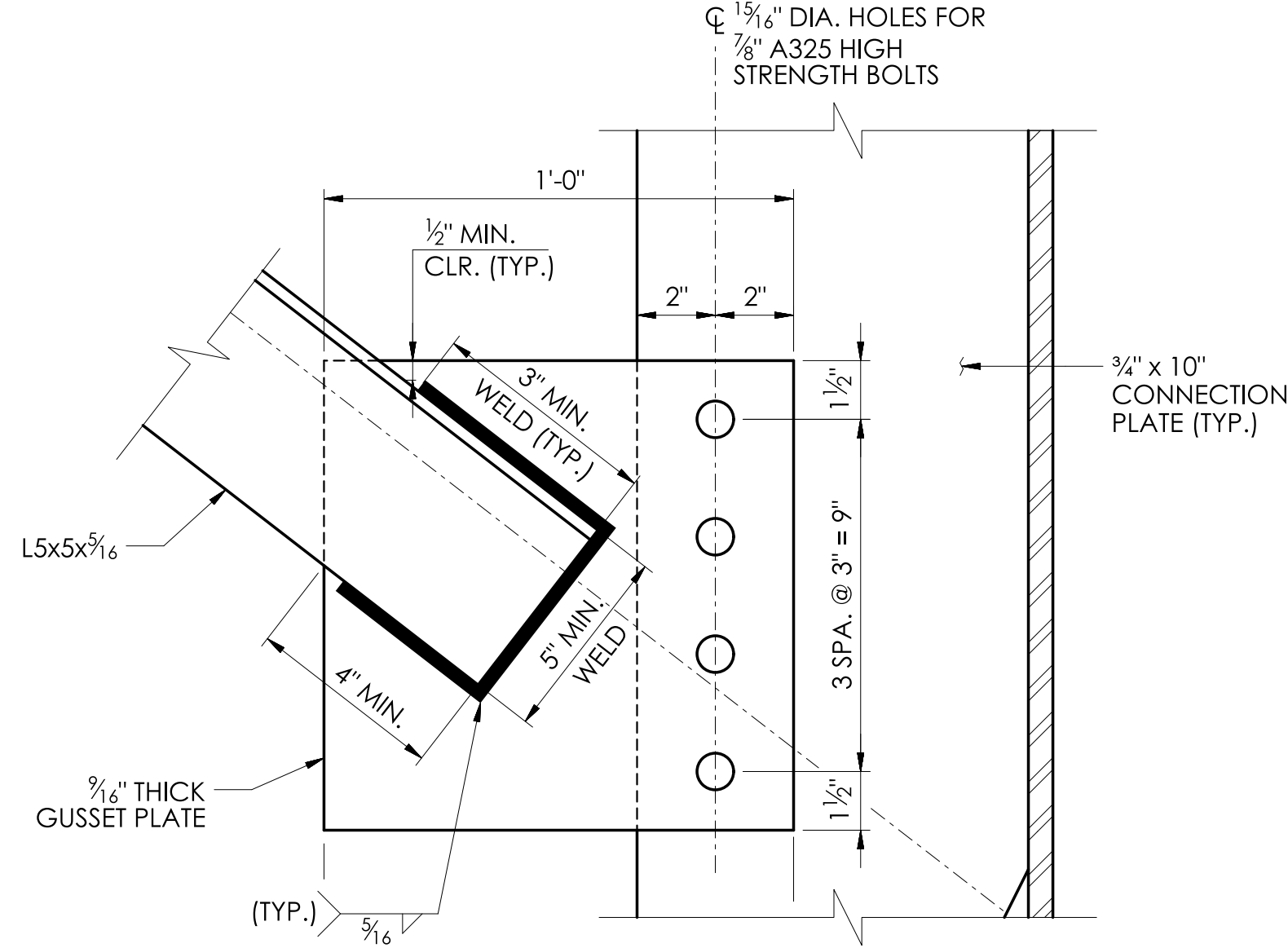
FINISHED SLAB ELEVATION
SLAB THICKNESS
TOP OF BEAM ELEVATION
ADDITIONAL DEAD LOAD DEFLECTION
COMPOSITE DEAD LOAD DEFLECTION
HAUNCH THICKNESS

= REFERENCE SHEET S-29
= 8-1/2"
= C (FIELD MEASURE)
= D
= E
= (A - B) + D + E - C
3. THE MINIMUM HAUNCH THICKNESS SHALL BE 1". IF IT IS DETERMINED THAT THE MINIMUM HAUNCH CANNOT BE MAINTAINED, THEN THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
4. ADDITIONAL HAUNCH REINFORCEMENT IS REQUIRED FOR HAUNCHES THAT EXCEEDS 4". SEE DETAIL TO LEFT.

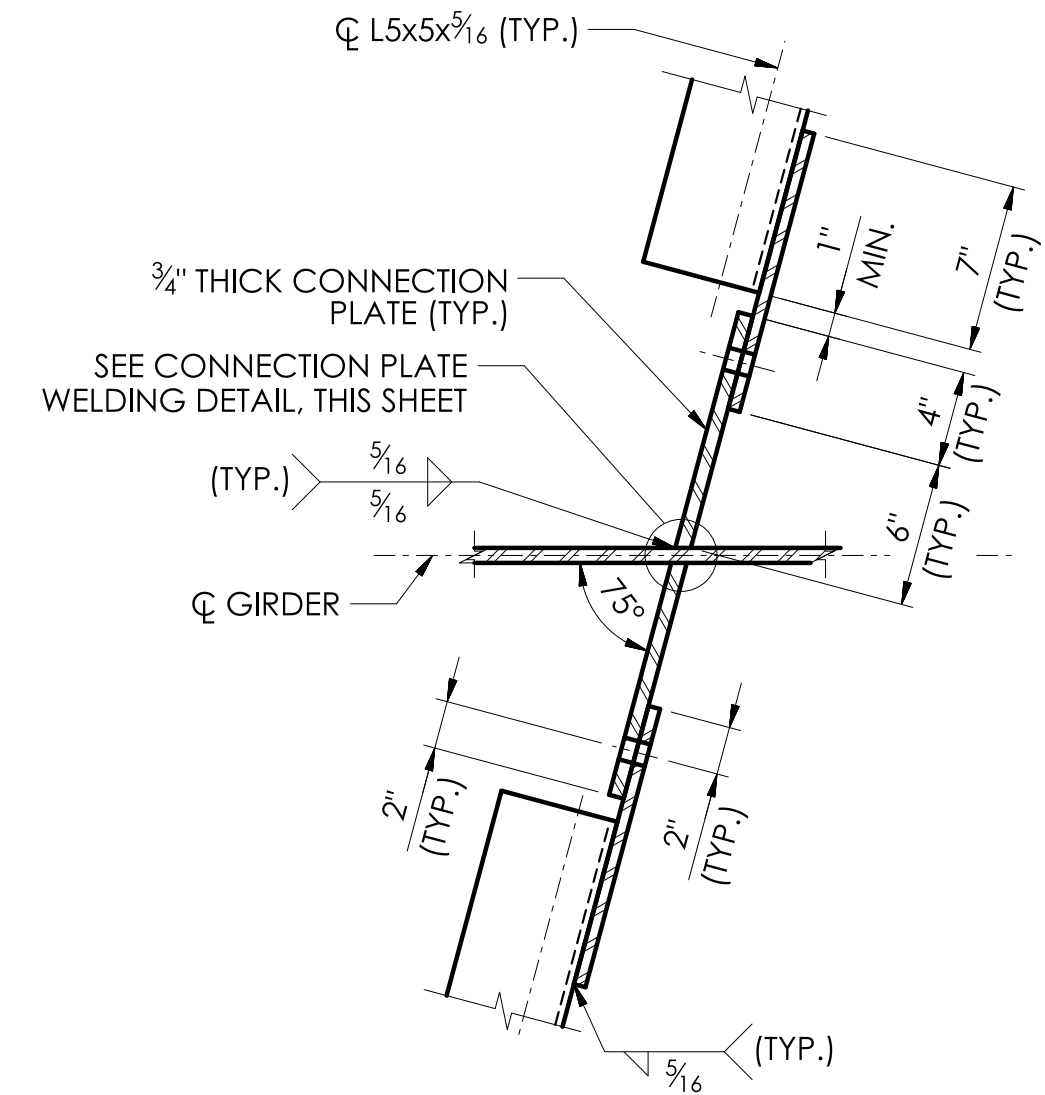
REV.	DATE	REVISION DESCRIPTION



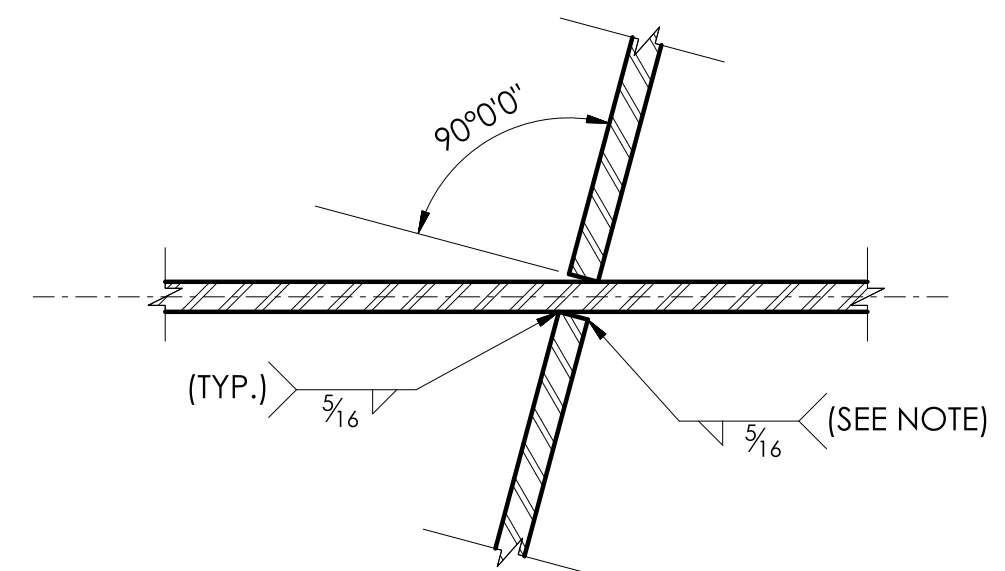
INTERMEDIATE CROSS FRAME - CF
SCALE 1"=1'-0"



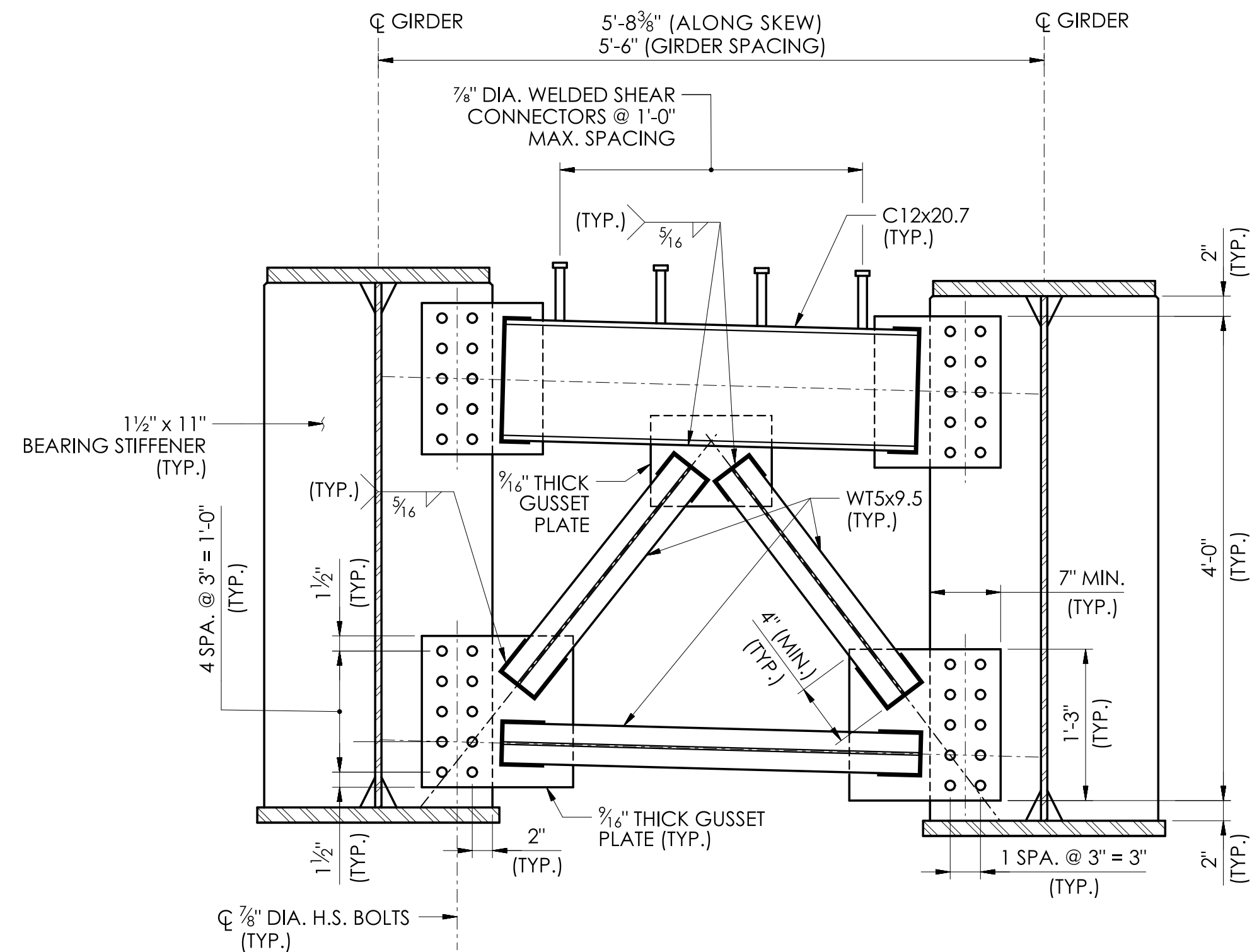
CONNECTION DETAIL
SCALE: 3" = 1'-0"



CROSS MEMBER CONNECTION PLATE DETAIL
SCALE: 1 1/2" = 1'-0"




CONNECTION PLATE WELDING DETAIL
SCALE: 3" = 1'-0"



END DIAPHRAGM - D1
SCALE 1"=1'-0"

REV.	DATE	REVISION DESCRIPTION

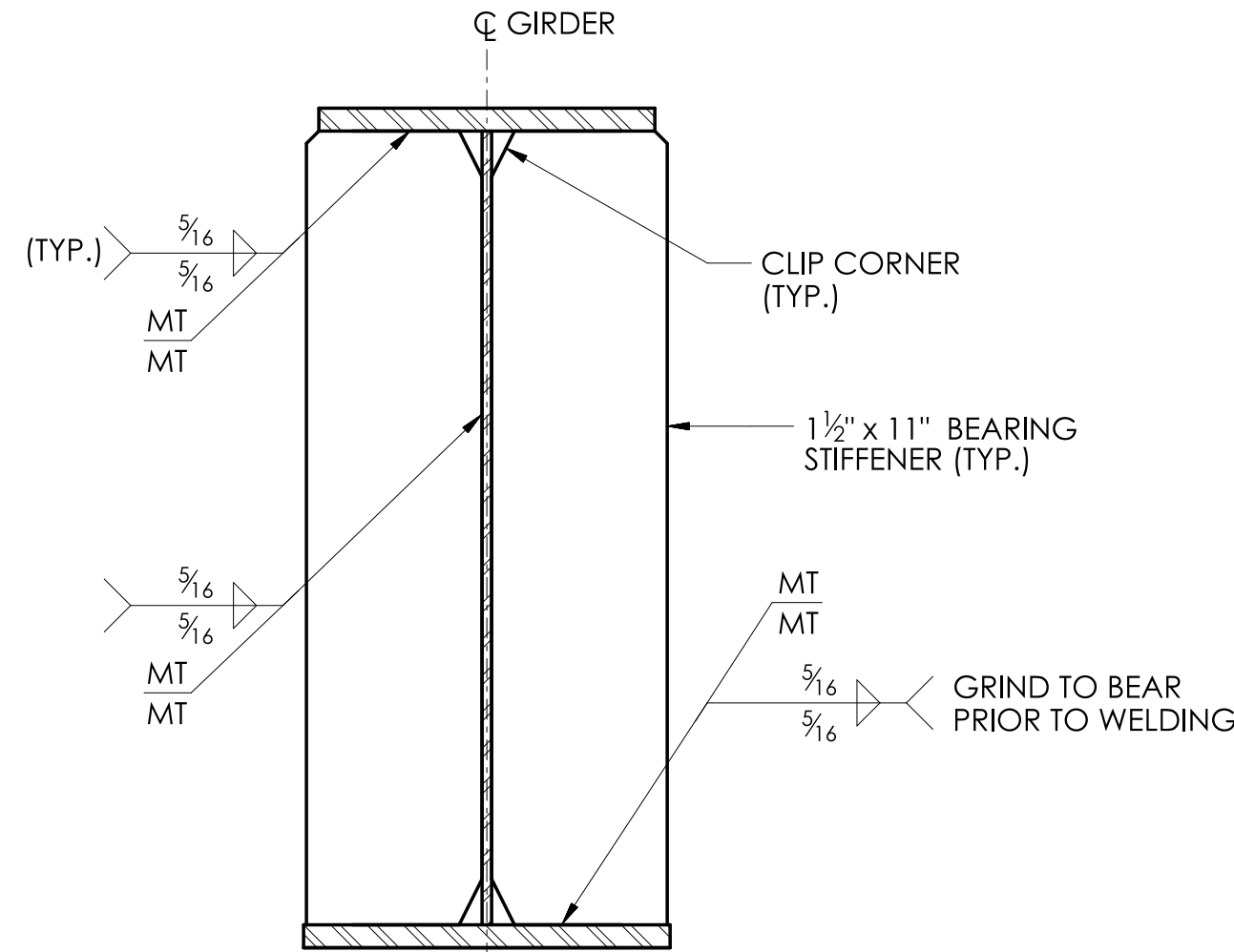
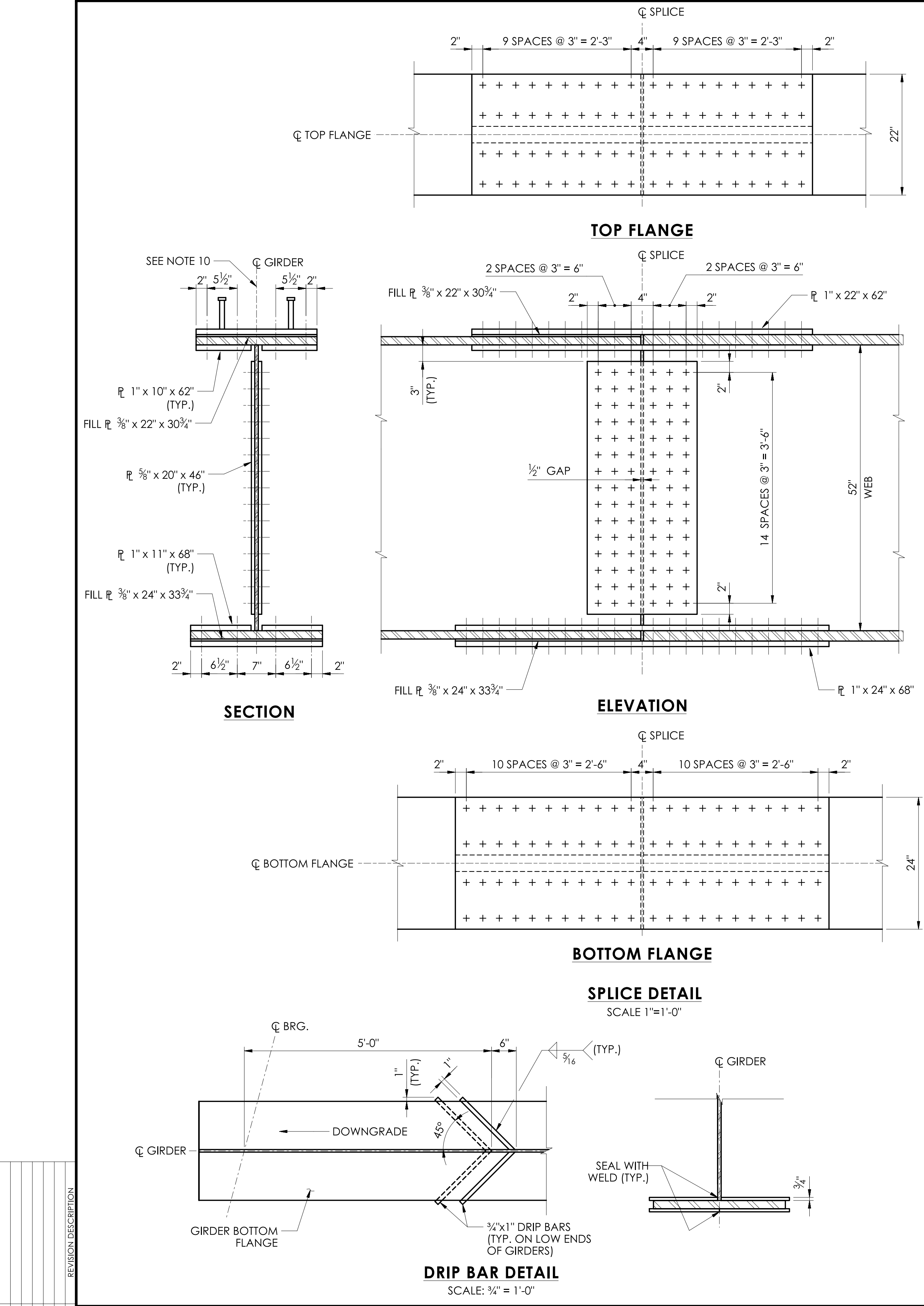
DESIGNER/DRAFTER: _____ CHECKED BY: _____

SIGNATURE:
BLOCK:

McFarland Johnson
273 Corporate Drive
Suite 200
Portsmouth, NH
03801

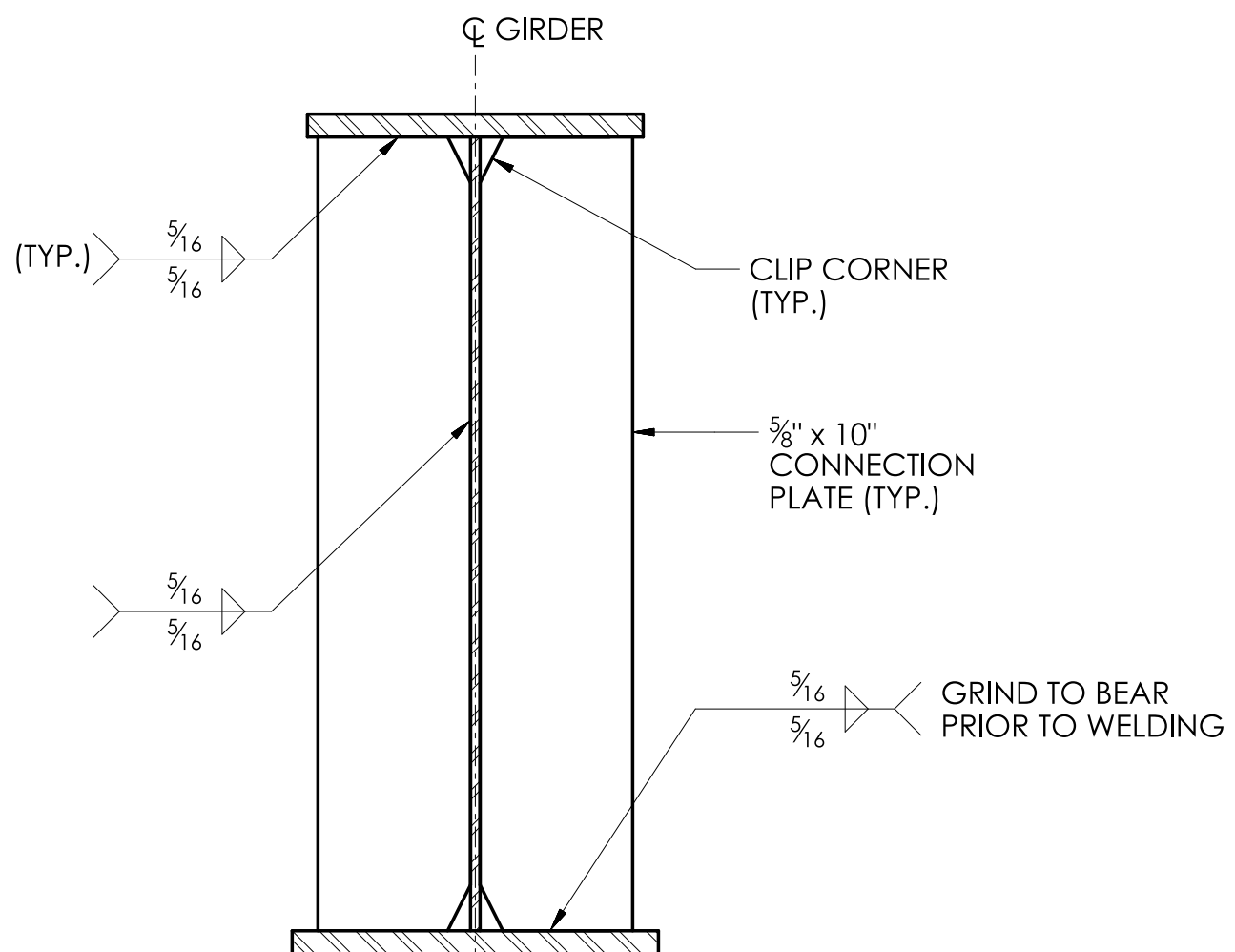


PROJECT NUMBER: 0119-0121
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 05068-WELLERS BRIDGE ROAD OVER SHEPAUG RIVER
TOWN(S): ROXBURY
DRAWING TITLE: STRUCTURAL STEEL DETAILS (2 OF 3)

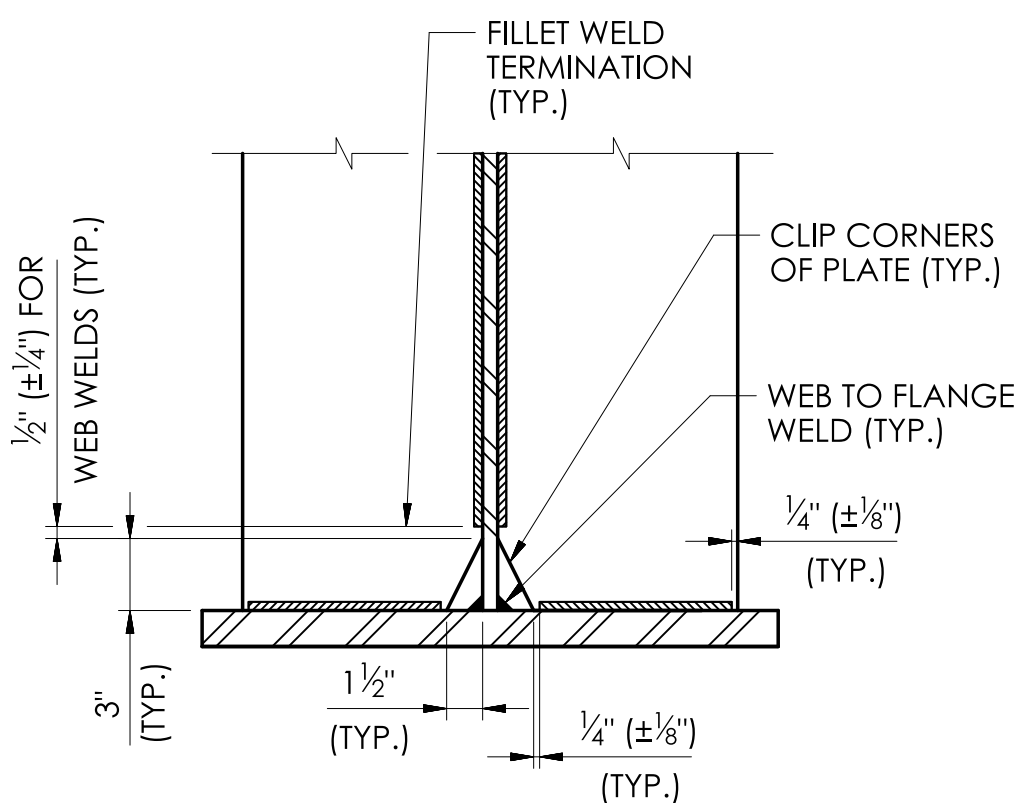
DRAWING NO.
S-26
SHEET NO.
04.26



BEARING STIFFENER DETAIL
SCALE 1"=1'-0"

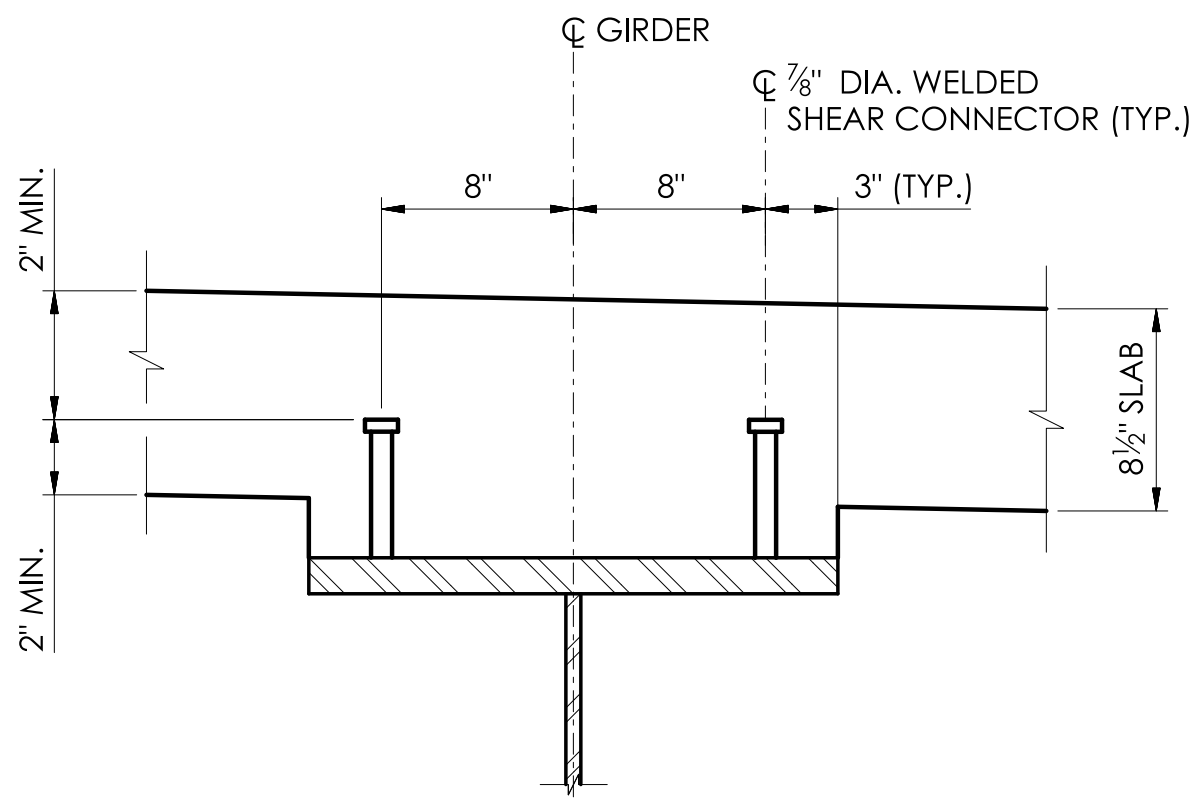


CONNECTION PLATE DETAIL
SCALE 1"=1'-0"



CLIP AND WELD TERMINATION DETAIL
SCALE: 1 1/2" = 1'-0"

NOTE:
DETAILS ARE SHOWN FOR BOTTOM FLANGE,
TOP FLANGE IS SIMILAR



WELDED SHEAR CONNECTOR DETAIL
SCALE: 1 1/2" = 1'-0"

SHEAR CONNECTOR NOTES

1. SHEAR CONNECTOR DIAMETER SHALL BE 7/8".
2. THE CONTRACTOR SHALL DETERMINE THE SHEAR CONNECTOR LENGTH AFTER THE GIRDERS HAVE BEEN SURVEYED AND HAUNCH DEPTHS HAVE BEEN CALCULATED.
3. THE MAXIMUM UNSTACKED SHEAR CONNECTOR LENGTH SHALL BE 8".
4. THE MINIMUM SHEAR CONNECTOR LENGTH SHALL BE 4".

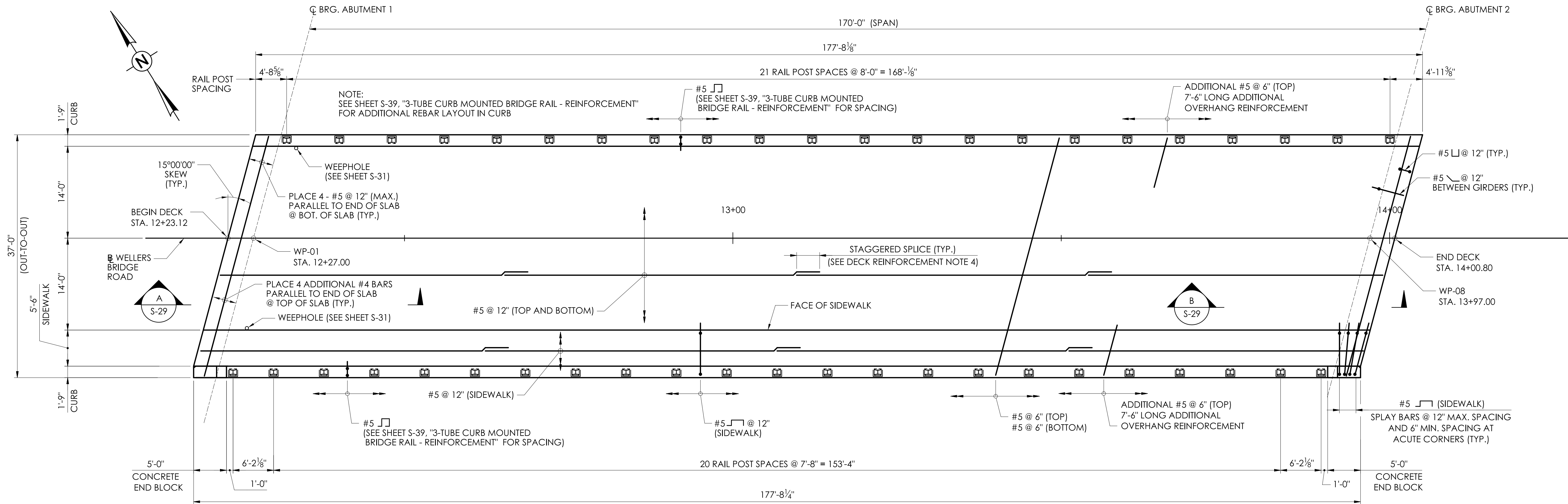
BOLTED CONNECTION NOTES

1. FOR LOCATION OF FIELD SPLICE, SEE GIRDER ELEVATION, SHEET NO. S-24.
2. ALL BOLTS SHALL BE 7/8" DIA. AND CONFORM TO ASTM F3125 GRADE A325, TYPE 1 AND BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM F2329 OR MECHANICALLY GALVANIZED IN ACCORDANCE WITH ASTM B695, CLASS 55. NUTS SHALL CONFORM TO ASTM A563 GRADE DH. WASHERS SHALL CONFORM TO "ASTM F3125" 6.4.3.1.3. THESE COMPONENTS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM F2329 OR MECHANICALLY GALVANIZED IN ACCORDANCE WITH ASTM B695, CLASS 55.
3. ALL BOLT HOLES FOR GIRDER SPLICES, SHALL BE DRILLED TO A FINISHED DIAMETER OF 1 5/16".
4. BOLTS, NUTS AND WASHERS, FOR THE FASCIA GIRDER SPLICES, SHALL BE COATED AFTER INSTALLATION TO MATCH THE FINISH COLOR OF THE SURROUNDING METALLIZED ELEMENTS. PROPER SURFACE PREPARATION OF THE FASTENER IS REQUIRED FOR ADHESION OF THE TOP COAT IN ACCORDANCE WITH PAINT MANUFACTURER'S WRITTEN INSTRUCTIONS.
5. ALL BOLTED CONNECTIONS SHALL BE "SLIP CRITICAL" CONNECTIONS WITH CLASS 'B' SURFACE CONDITIONS. FAYING SURFACES FOR BOLTED CONNECTIONS OF METALLIZED COMPONENTS SHALL BE METALLIZED, BUT NOT SHOP SEALED OR TOPCOATED. SEALER AND TOPCOAT MAY NOT BE SHOP APPLIED WITHIN 1" OF ANY BOLT HOLE AND WITHIN THE BOLT PATTERN.
6. ALL FASTENERS SHALL HAVE ONE HEAVY HEX NUT AND ONE HARDENED WASHER UNDER THE TURNED ELEMENT.
7. ALL BOLT HOLES FOR CROSS FRAMES SHALL BE DRILLED. THE FINISHED HOLE DIAMETER SHALL BE 1 5/16" (STANDARD).
8. ALL SPLICE AND FILLER PLATES SHALL BE FREE FROM BURRS, NICKS AND GOUGES.
9. BOLT HEADS SHALL FACE DOWNWARD ON BOTTOM FLANGE SPLICES AND SHALL FACE OUTWARD ON FASCIA GIRDER WEB SPLICES. BOLT HEADS SHALL FACE UPWARD ON TOP FLANGES.
10. PLACE SHEAR CONNECTORS IN A ROW ON THE OUTER SPLICE PLATE AS SHOWN. SPACING TO EQUAL SPECIFIED SPACING ON SHEET S-24.

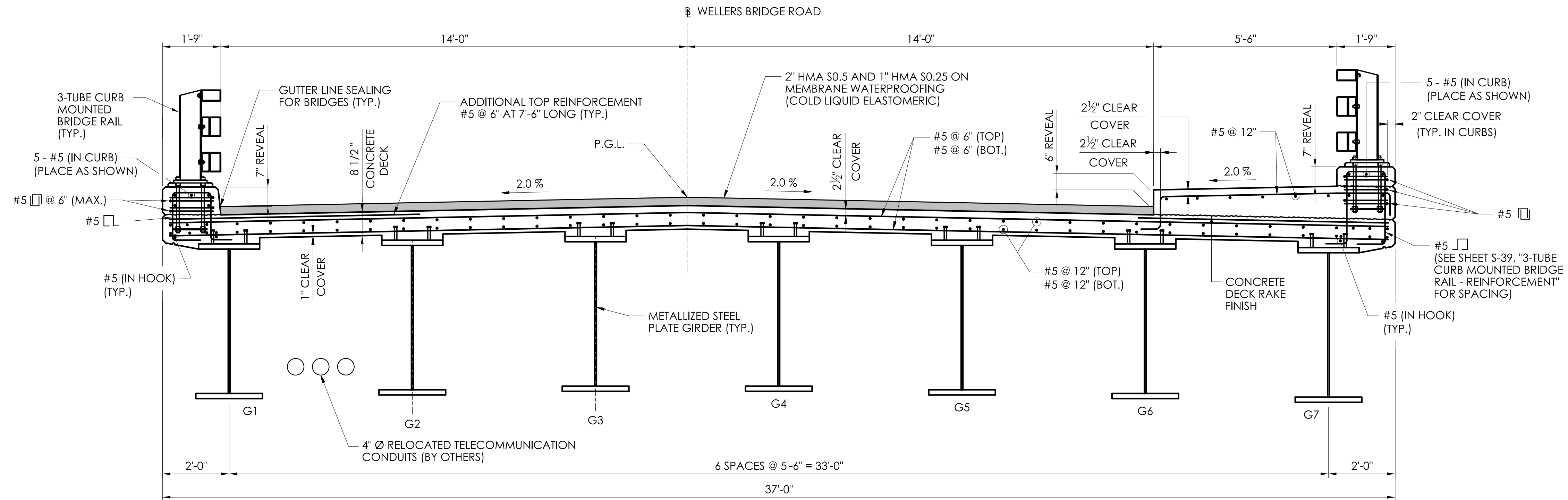
DRIP BAR NOTES

1. DRIP BAR ON TOP OF BOTTOM FLANGE SHALL BE SEALED AGAINST FLANGE, WEB AND FILLET WELD WITH SILICONE JOINT SEALANT AND SHALL BE PAID FOR UNDER ITEM "STRUCTURAL STEEL".

REV.	DATE	REVISION DESCRIPTION



DECK PLAN
SCALE: 1/8" = 1'-0"



TYPICAL DECK REINFORCEMENT SECTION

SCALE: 1/2" = 1'-0"
NOTE: TIE DOWN BARS, CROSSFRAMES, AND UTILITIES NOT SHOWN FOR CLARITY

DECK PLAN NOTES

- CONCRETE FOR THE DECK SHALL BE PLACED IN A UNIFORM MANNER ACROSS THE WIDTH OF THE DECK. NO HEAVY CONCENTRATION OF PLASTIC CONCRETE WILL BE ALLOWED.
- NO TEMPORARY INTERMEDIATE SUPPORTS SHALL BE USED DURING THE PLACING/SETTING OF THE CONCRETE DECK. CONSTRUCTION LOADS AND DEAD LOADS WILL BE PERMITTED WHEN DIRECTED BY THE ENGINEER BUT ONLY WHEN CONCRETE HAS ATTAINED A MINIMUM STRENGTH OF $f'_c = 3000$ PSI. VEHICULAR LIVE LOADS ARE PERMITTED ON THE STRUCTURE AFTER CONCRETE HAS ACHIEVED A STRENGTH OF $f'_c = 4000$ PSI.
- FOR FINISHED GRADE ELEVATIONS AT DECK END POINTS, SEE "DECK END FINISHED GRADE ELEVATION TABLE" ON SHEET S-29.

DECK REINFORCEMENT NOTES

- FOR SPACING AND LAYOUT OF BARS IN CURB, SEE "3-TUBE CURB MOUNTED BRIDGE RAIL - REINFORCEMENT", SHEET S-39.
- AT AREAS WHERE EXACT REBAR SPACING SHOWN IN PLANS CANNOT BE ACHIEVED, REINFORCEMENT SHALL BE PLACED EVENLY AND SHALL NOT EXCEED MAXIMUM REBAR SPACING SHOWN ON THE PLANS.
- SPLICES SHALL BE STAGGERED AND ALTERNATED SO NO MORE THAN 1/3 OF SPLICES OCCUR AT ANY SPECIFIC LOCATION.
- THE SPLICE LENGTHS FOR THE REINFORCEMENT IN THE DECK, SIDEWALK AND CURBS SHALL BE AS FOLLOWS UNLESS DIMENSIONED OTHERWISE:

BAR SIZE	SPLICE LENGTH
#4	2'-0"
#5	2'-6"
#6	2'-10"

REV.	DATE	REVISION DESCRIPTION

DESIGNER/DRAFTER: RHB/EBM
CHECKED BY: DMK

SIGNATURE:
BLOCK:



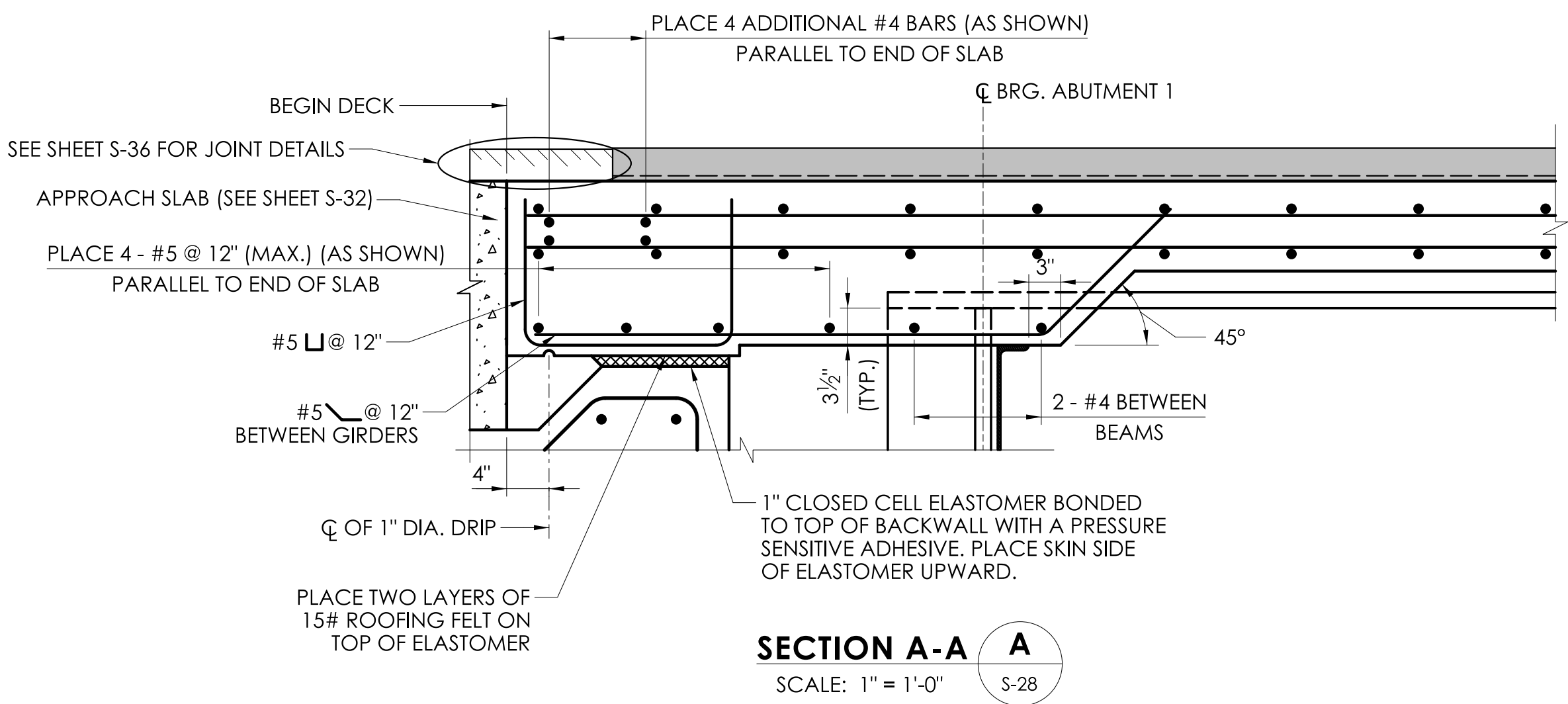
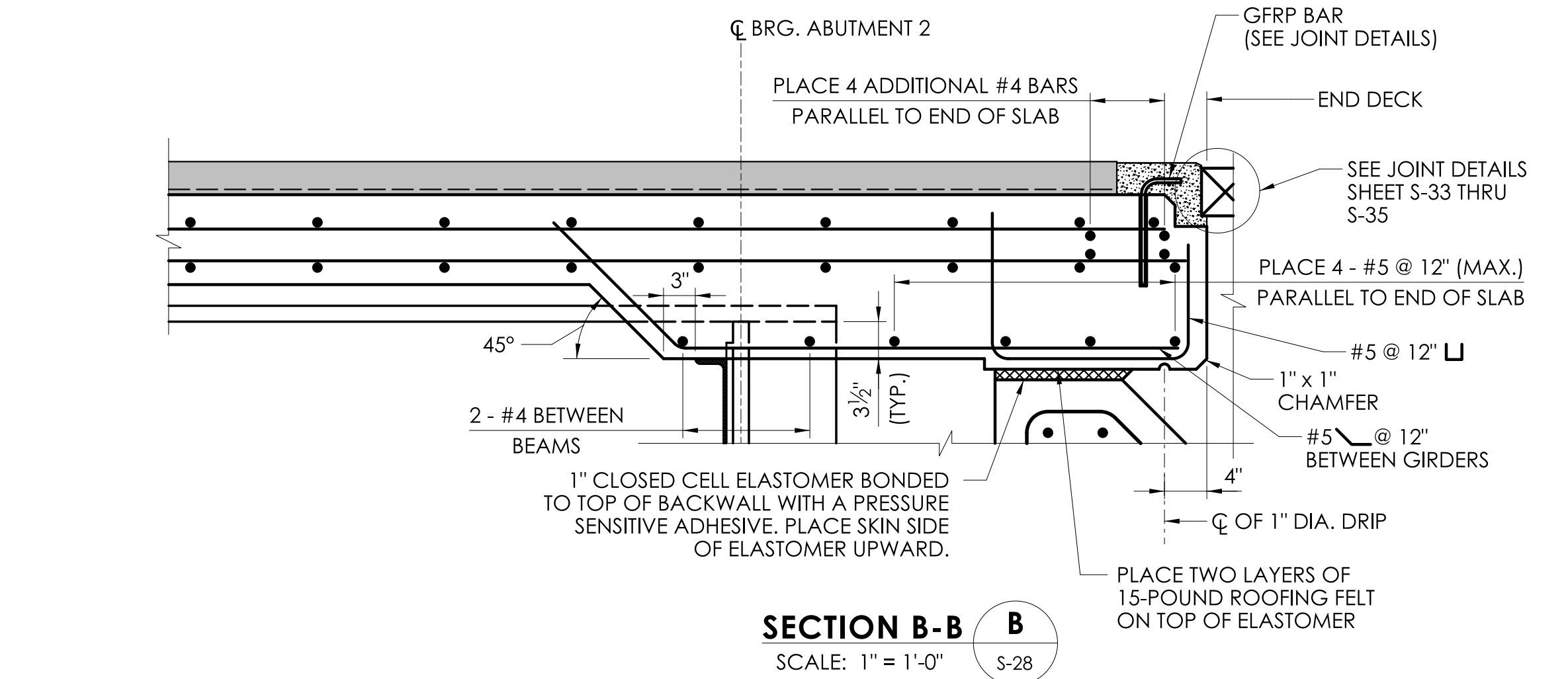
ROXBURY
CONNECTICUT

PROJECT NUMBER: 0119-0121
PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 05068-WELLERS BRIDGE ROAD OVER SHEPAUG RIVER
TOWN(S): ROXBURY
DRAWING TITLE: DECK PLAN

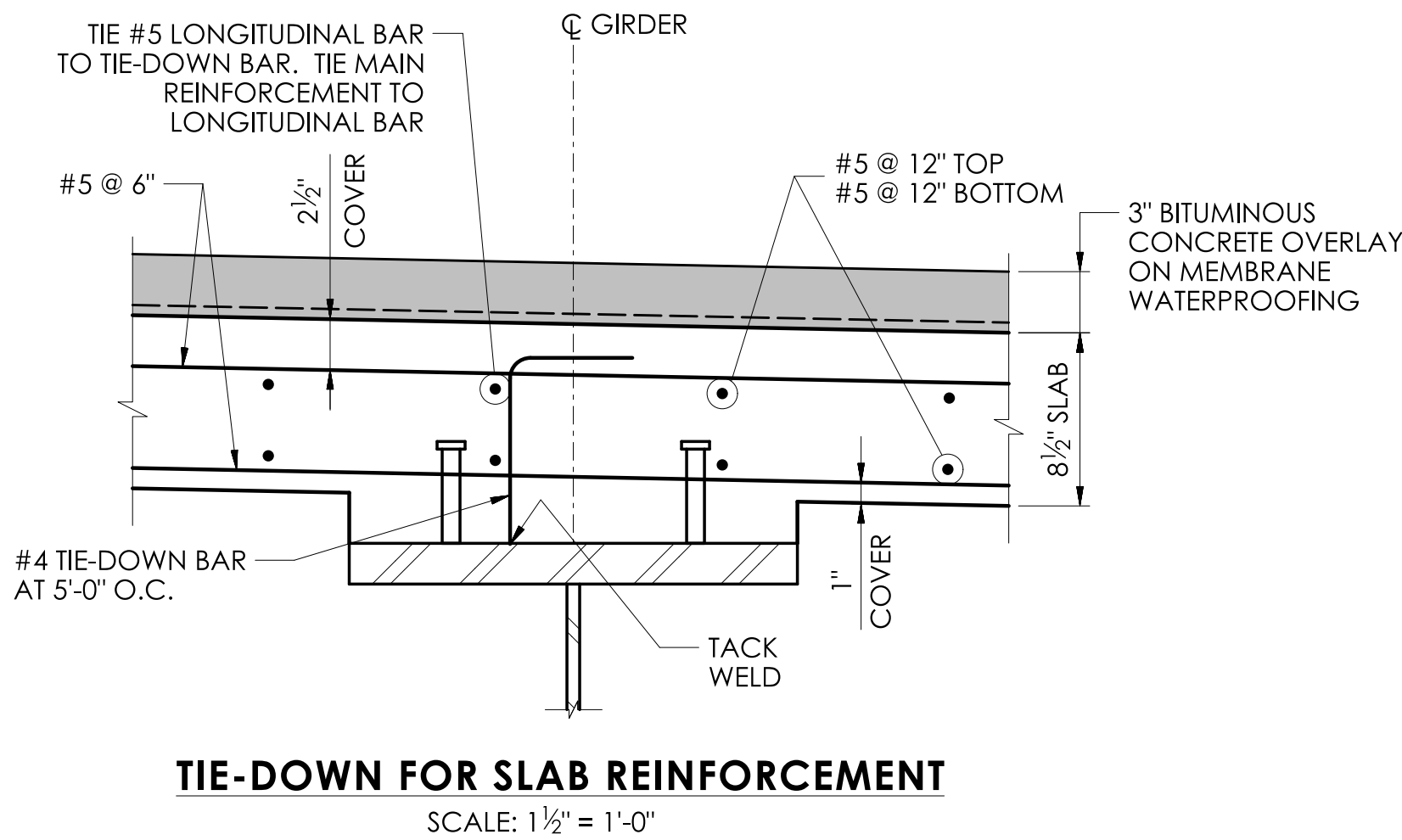
DRAWING NO.
S-28
SHEET NO.
04.28

TOP OF CONCRETE DECK ELEVATIONS ALONG CENTERLINE OF GIRDER																					
GIRDER MARK	CL BRG. ABUT. 1	0.05 L	0.10 L	0.15 L	0.20 L	0.25 L	0.30 L	0.35 L	0.40 L	0.45 L	0.50 L	0.55 L	0.60 L	0.65 L	0.70 L	0.75 L	0.80 L	0.85 L	0.90 L	0.95 L	CL BRG. ABUT. 2
G1	300.93	301.05	301.18	301.31	301.44	301.57	301.69	301.82	301.95	302.08	302.20	302.33	302.46	302.59	302.71	302.84	302.97	303.10	303.23	303.35	303.48
G2	301.02	301.14	301.27	301.40	301.53	301.65	301.78	301.91	302.04	302.16	302.29	302.42	302.55	302.67	302.80	302.93	303.06	303.19	303.31	303.44	303.57
G3	301.10	301.23	301.36	301.49	301.61	301.74	301.87	302.00	302.12	302.25	302.38	302.51	302.64	302.76	302.89	303.02	303.15	303.27	303.40	303.53	303.66
G4	301.08	301.21	301.34	301.46	301.59	301.72	301.85	301.97	302.10	302.23	302.36	302.49	302.61	302.74	302.87	303.00	303.12	303.25	303.38	303.51	303.63
G5	300.95	301.08	301.20	301.33	301.46	301.59	301.71	301.84	301.97	302.10	302.23	302.35	302.48	302.61	302.74	302.86	302.99	303.12	303.25	303.37	303.50
G6	300.82	300.94	301.07	301.20	301.33	301.45	301.58	301.71	301.84	301.97	302.09	302.22	302.35	302.48	302.60	302.73	302.86	302.99	303.11	303.24	303.37
G7	300.68	300.81	300.94	301.07	301.20	301.32	301.45	301.58	301.71	301.83	301.96	302.09	302.22	302.34	302.47	302.60	302.73	302.86	302.98	303.11	303.24

DECK END FINISHED GRADE ELEVATION TABLE		
DECK END LOCATION		ELEVATION
ABUTMENT 1	LEFT GUTTER	301.13
	PROFILE GRADE LINE	301.35
	RIGHT GUTTER	301.01
ABUTMENT 2	LEFT GUTTER	303.79
	PROFILE GRADE LINE	304.02
	RIGHT GUTTER	303.68



DECK END SECTIONS



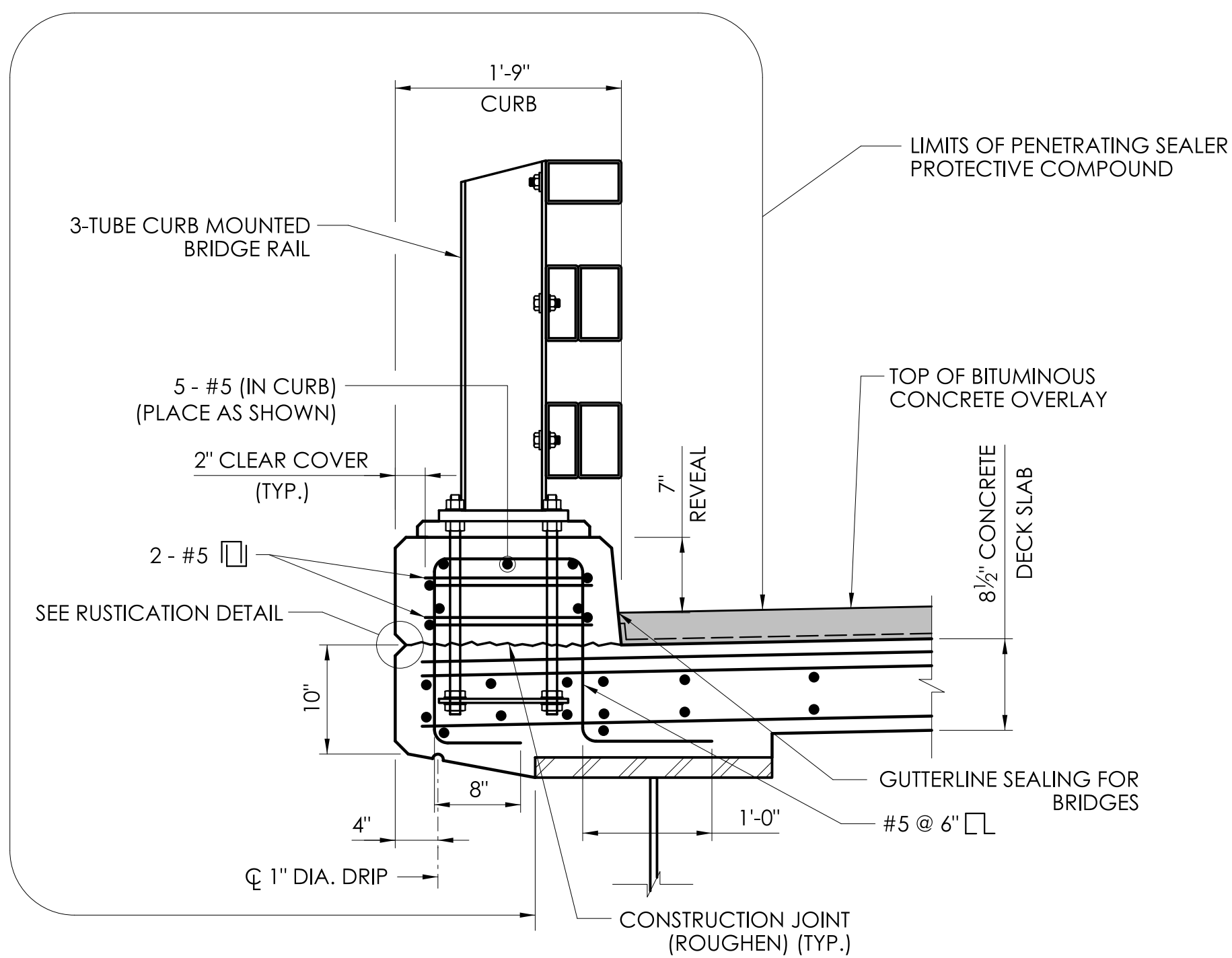
TIE-DOWN NOTES:

1. TIE-DOWN BARS DO NOT EXCLUDE THE USE OF CHAIRS FOR SUPPORTING THE REINFORCING MAT.
2. THE COST OF FURNISHING AND PLACING TIE-DOWN BARS SHALL BE INCLUDED IN THE CONTRACT ITEM "DEFORMED STEEL BARS - GALVANIZED".
3. TIE-DOWN BARS AND LONGITUDINAL BARS SHALL CLEAR SHEAR CONNECTORS.

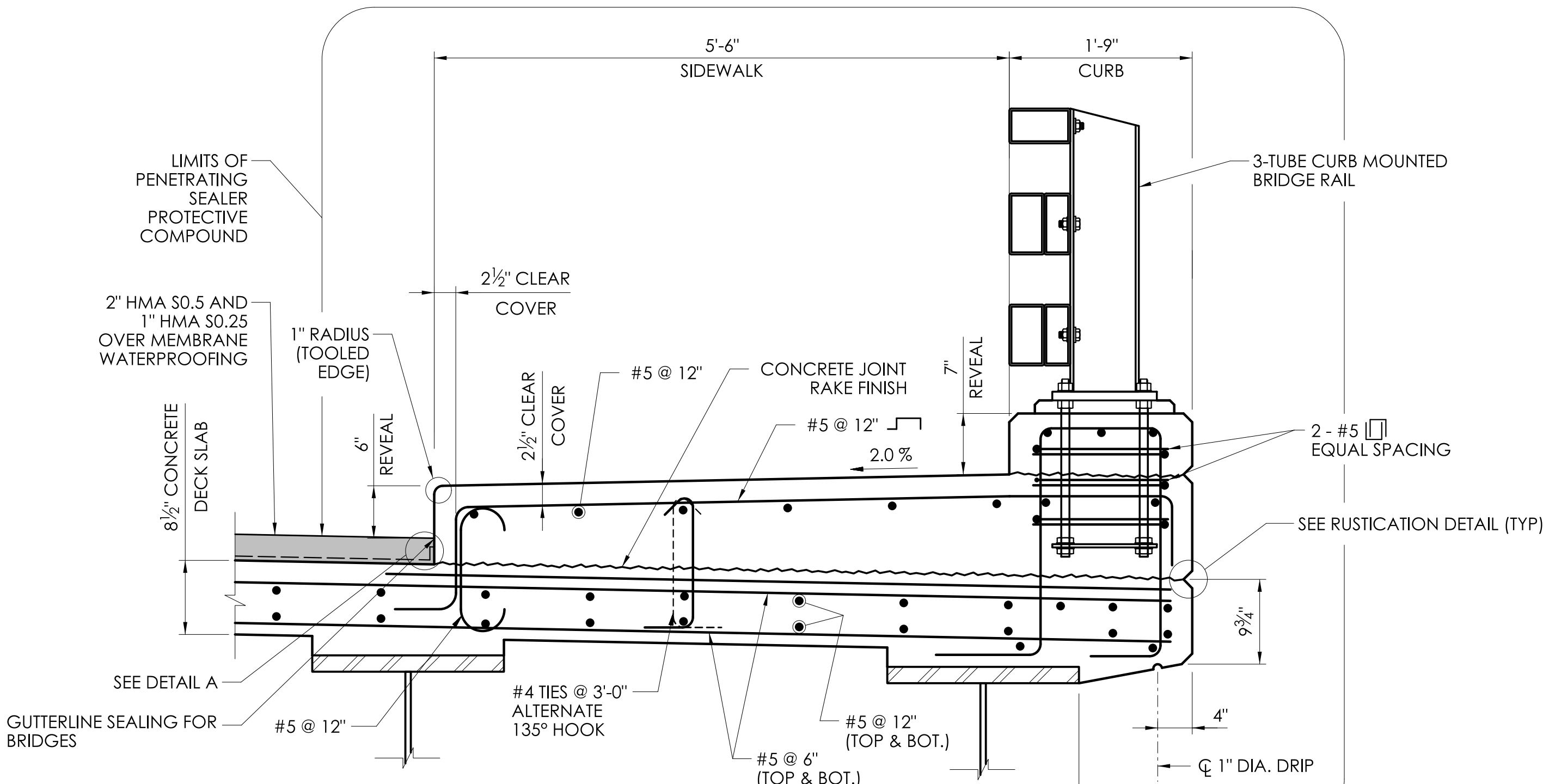
NOTES:

1. THE COST FOR FURNISHING AND PLACING 15# ROOFING FELT SHALL BE INCLUDED IN THE ITEM "1" CLOSED CELL ELASTOMER".

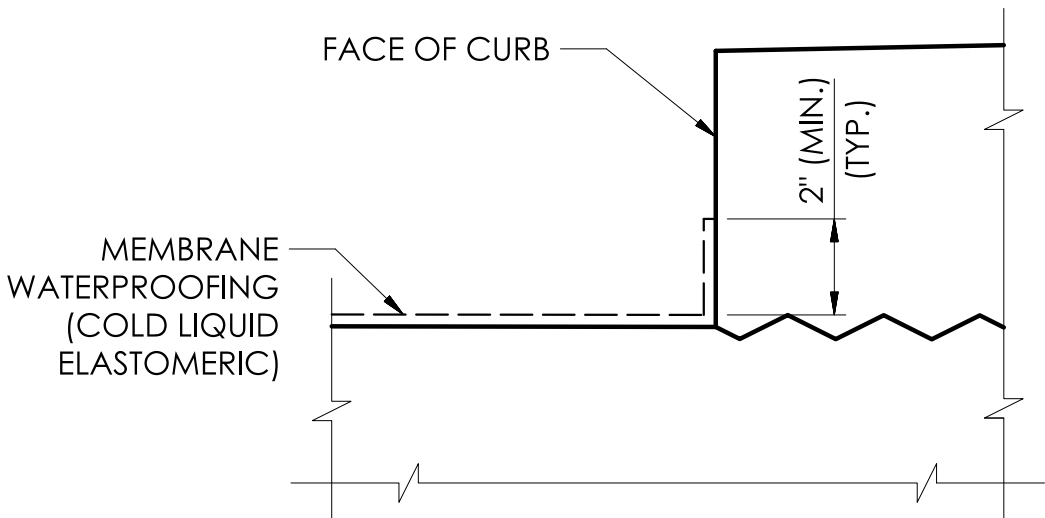
REV.	DATE	REVISION DESCRIPTION



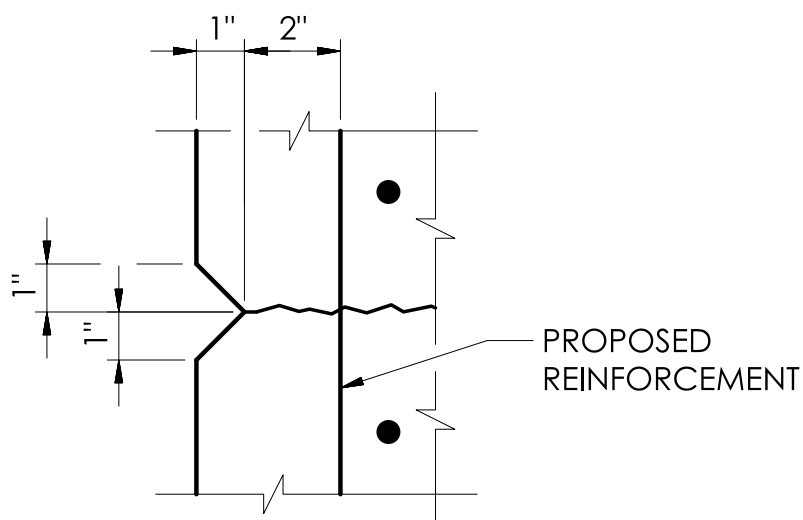
CURB DETAIL
SCALE: 1" = 1'-0"



SIDEWALK / CURB DETAIL
SCALE: 1" = 1'-0"

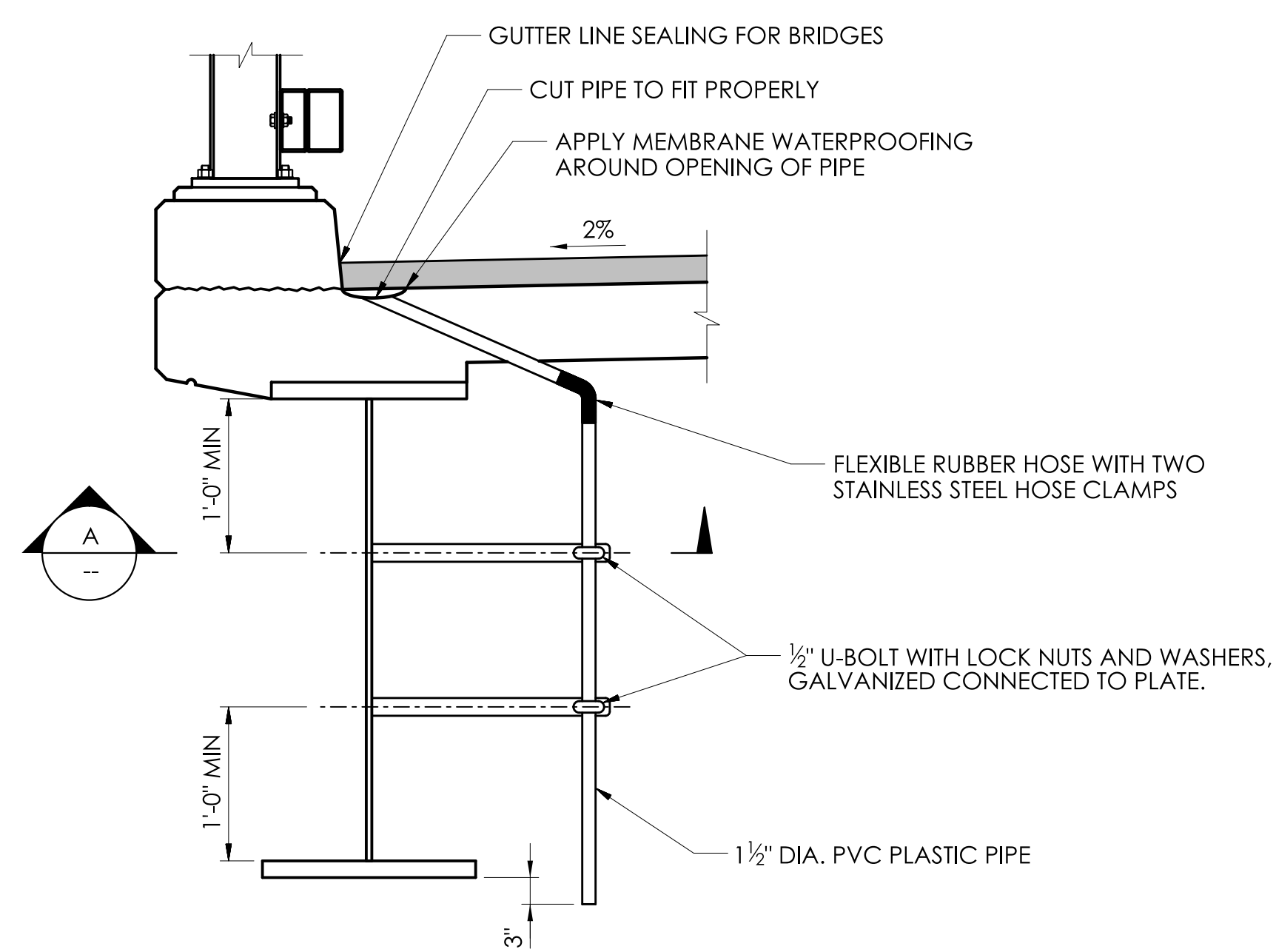


DETAIL A - MEMBRANE DETAIL AT SIDEWALK
SCALE: 3" = 1'-0"

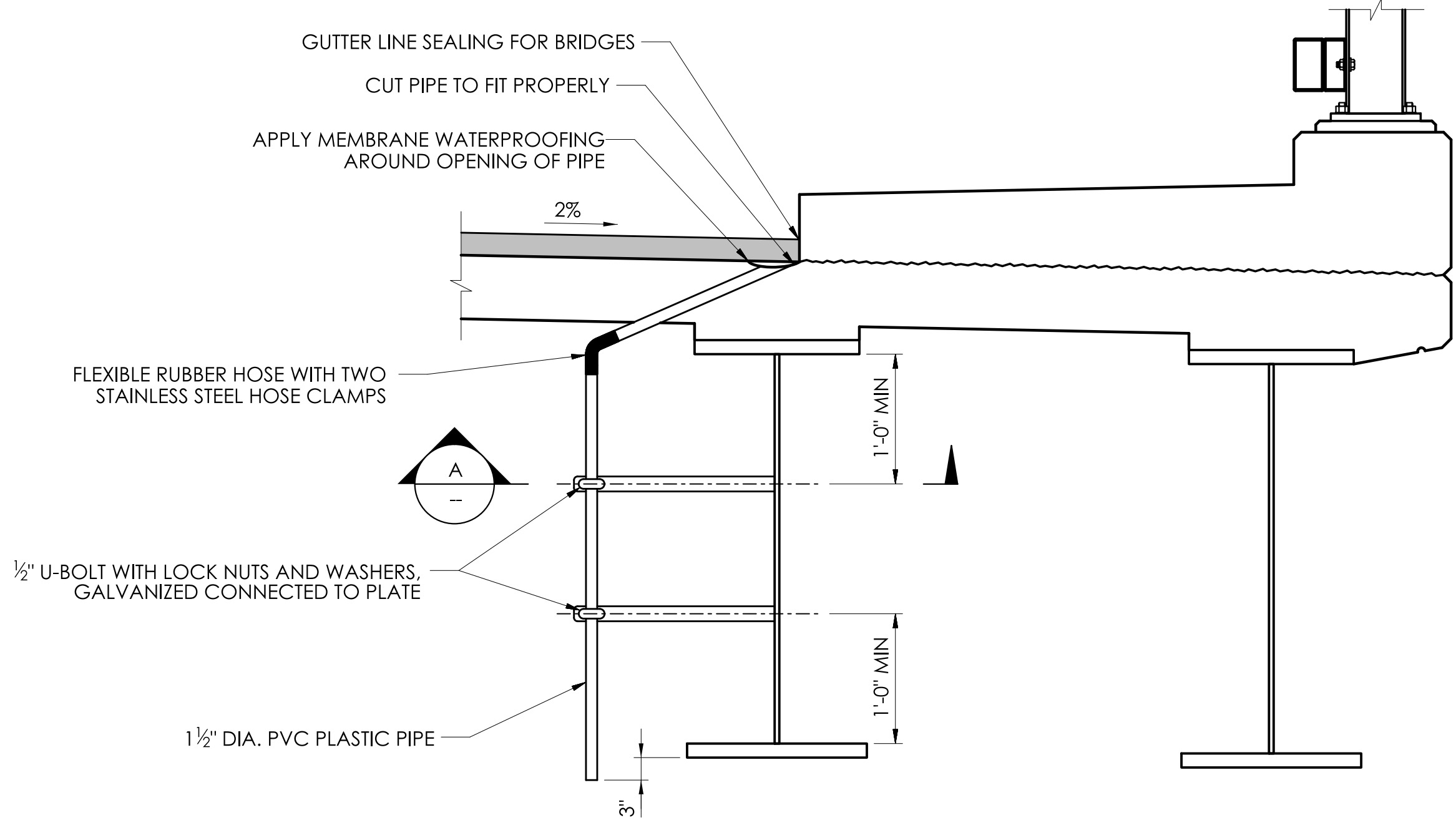


RUSTICATION DETAIL
SCALE: 3" = 1'-0"

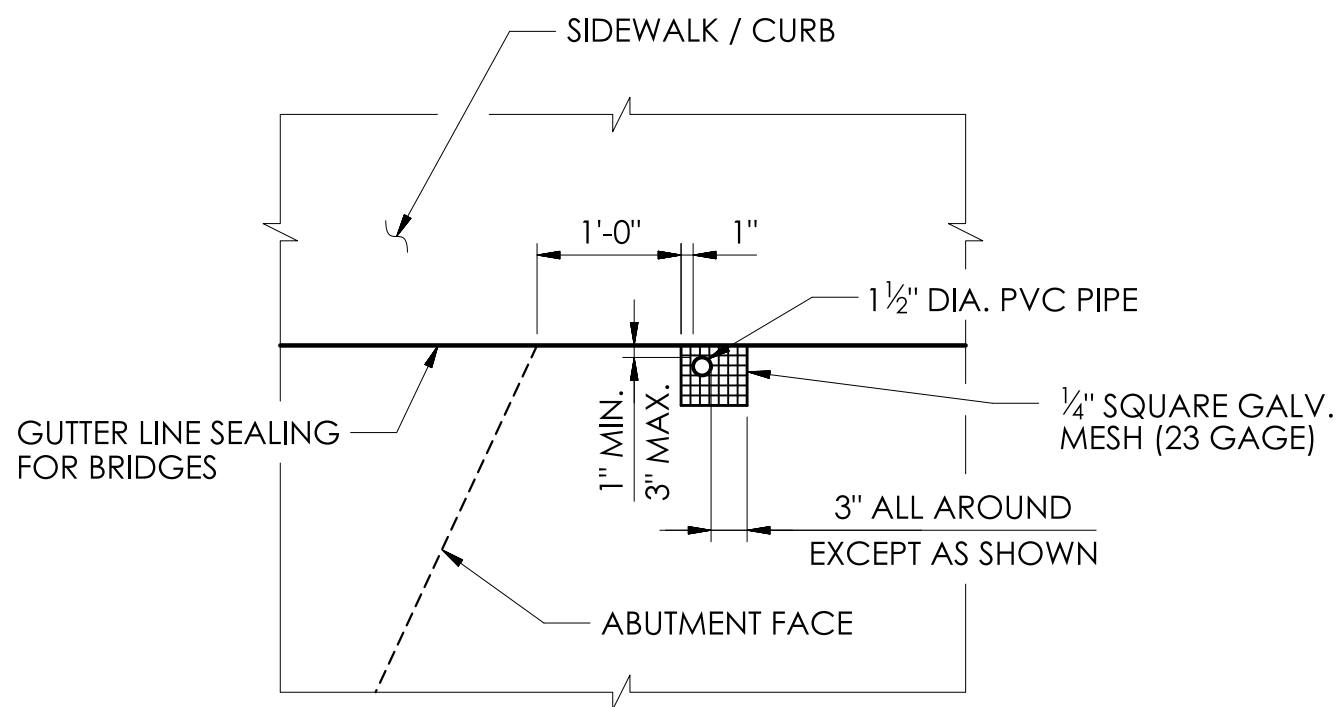
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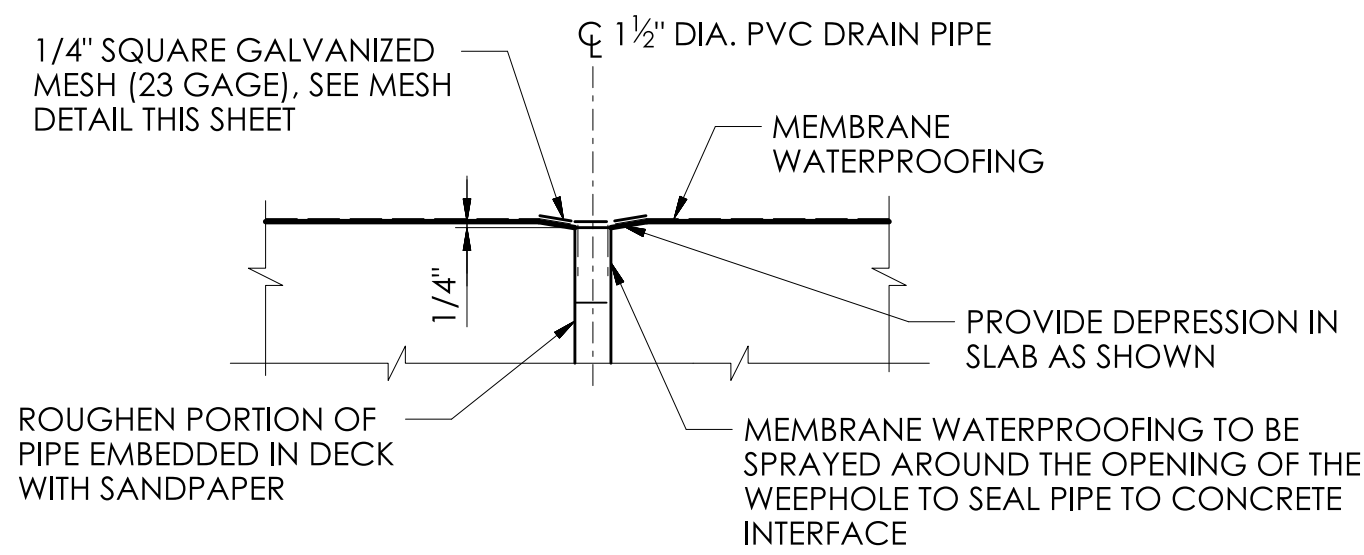
DECK WEEPHOLE DETAIL AT BRUSH CURB
SCALE: 3/4" = 1'-0"



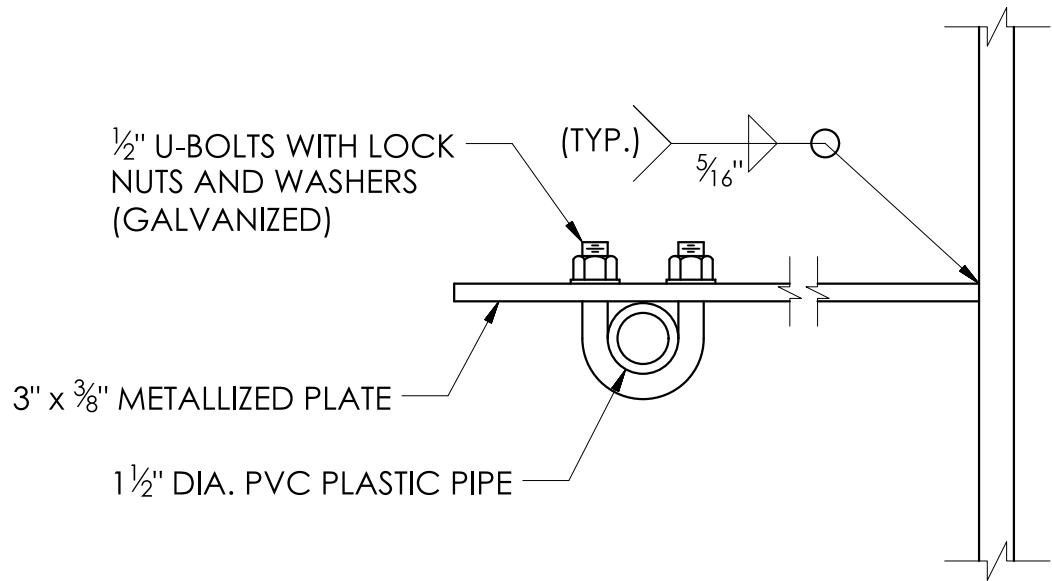
DECK WEEPHOLE DETAIL AT SIDEWALK
SCALE: 3/4" = 1'-0"



DECK WEEPHOLE AT ABUTMENT
SCALE: 3/4" = 1'-0"



TYPICAL DRAIN DETAIL
NOT TO SCALE

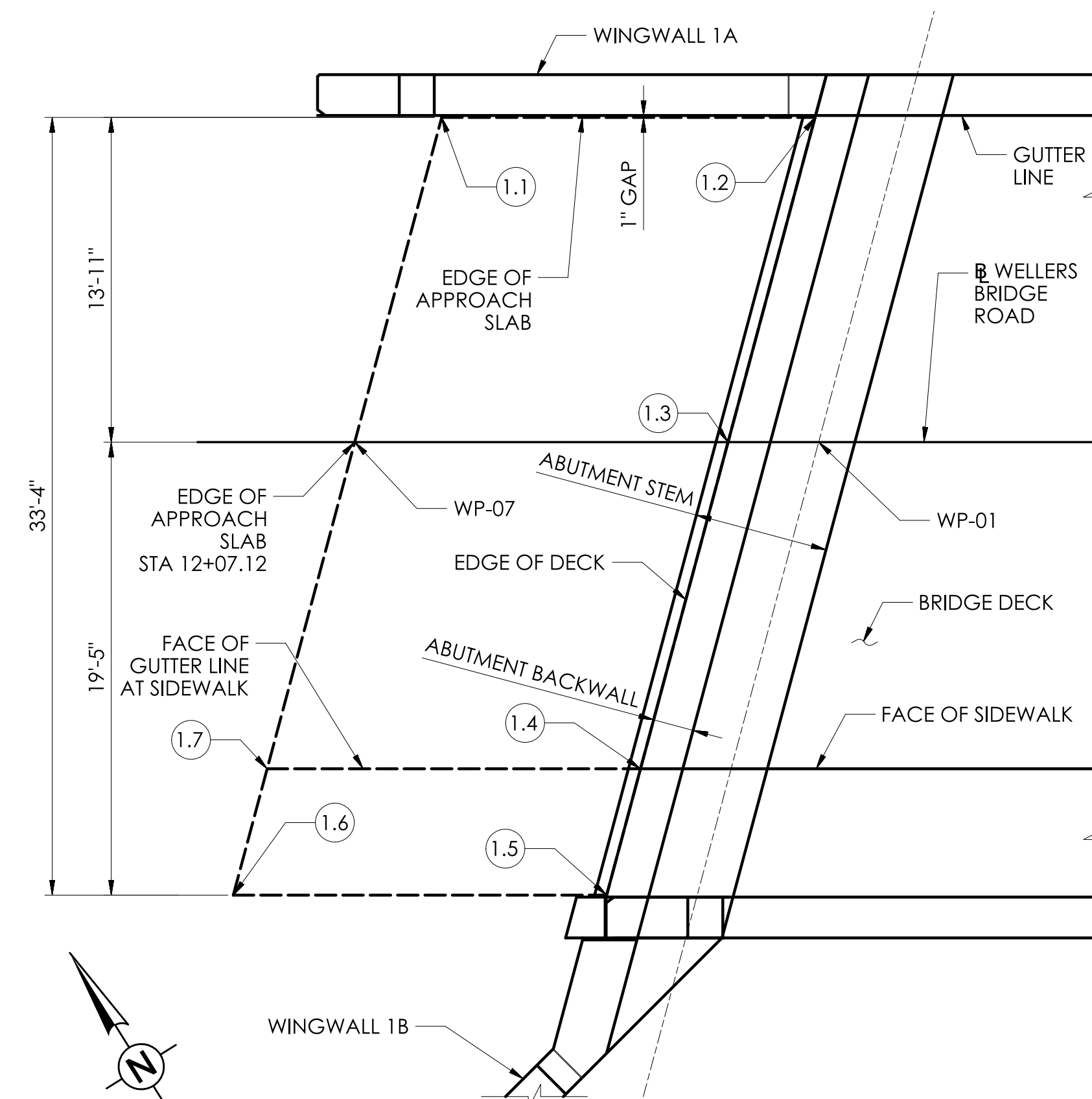


SECTION A-A
SCALE: 3" = 1'-0"

DECK WEEPHOLE NOTES

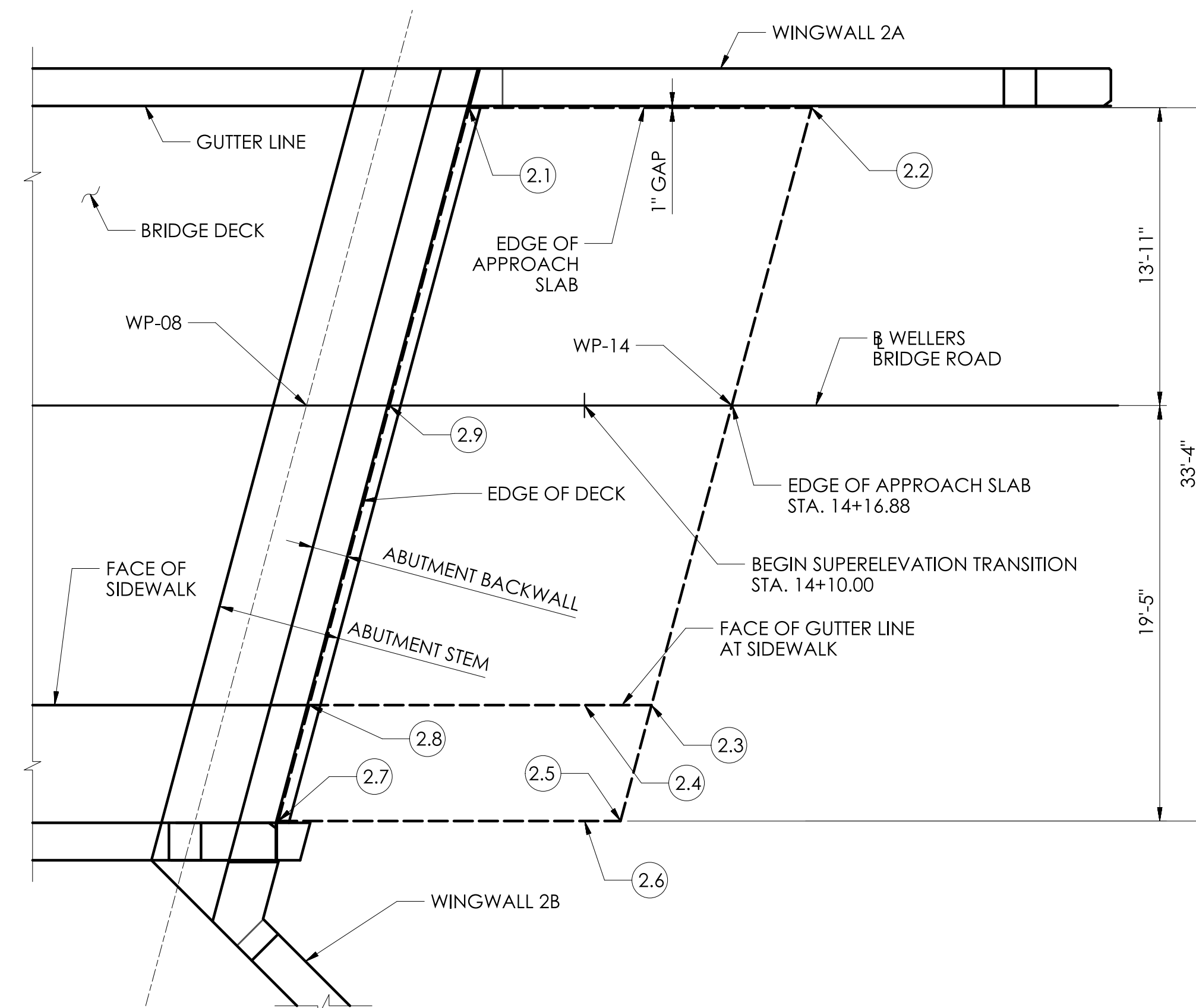
1. PAYMENT FOR THE PVC PIPE AND FLEXIBLE RUBBER HOSE SHALL BE INCLUDED UNDER ITEM "1 1/2" POLYVINYL CHLORIDE PLASTIC PIPE".
2. PAYMENT FOR MISCELLANEOUS STEEL HARDWARE FOR ATTACHING 1 1/2" DIA. WEEPHOLES SHALL BE INCLUDED UNDER ITEM "STRUCTURAL STEEL (SITE NO. 1)".
3. PAYMENT FOR GALVANIZED STEEL MESH SHALL BE INCLUDED UNDER ITEM "HMA S0.5".

REV.	DATE	REVISION DESCRIPTION



NORTH APPROACH SLAB PLAN

SCALE: $\frac{3}{16}" = 1'-0"$

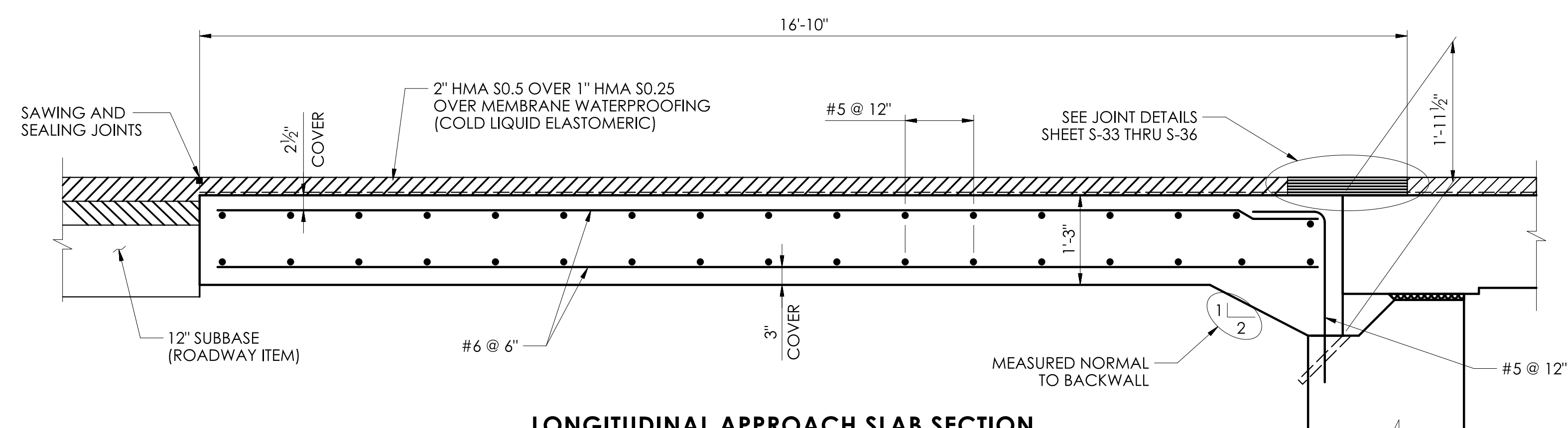


SOUTH APPROACH SLAB PLAN

SCALE: $\frac{3}{16}" = 1'-0"$

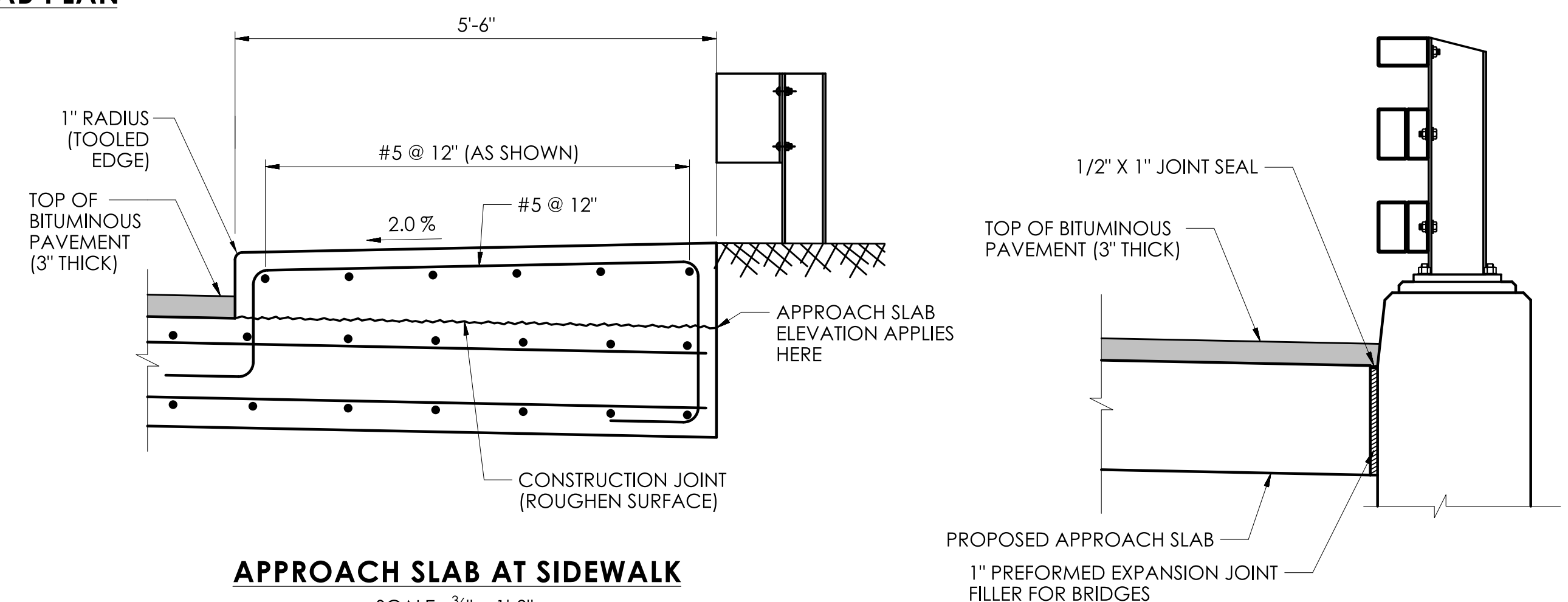
TOP OF APPROACH SLAB ELEVATION TABLE		
LOCATION	WP #	ELEVATION
APPROACH SLAB 1	1.1	300.63
	1.2	300.87
	1.3	301.09
	1.4	300.75
	1.5	300.62
	1.6	300.38
	1.7	300.51
	WP-07	300.85
APPROACH SLAB 2	2.1	303.54
	2.2	303.78
	2.3	303.69
	2.4	303.62
	2.5	303.55
	2.6	303.51
	2.7	303.29
	2.8	303.42
	2.9	303.76
	WP-14	304.00

APPROACH SLAB FINISHED GRADE ELEVATION TABLE			
LOCATION		WP #	ELEVATION
APPROACH SLAB 1	L GUTTER @ END	1.1	300.89
	L GUTTER @ ABUT.	1.2	301.13
	PGL @ ABUT.	1.3	301.35
	R GUTTER @ ABUT.	1.4	301.01
	R GUTTER @ END	1.7	300.77
	PGL @ END	WP-07	301.11
APPROACH SLAB 2	L GUTTER @ ABUT.	2.1	303.80
	L GUTTER @ END	2.2	304.04
	R GUTTER @ END	2.3	303.95
	R GUTTER @ ABUT.	2.8	303.68
	PGL @ ABUT.	2.9	304.02
	PGL @ END	WP-14	304.26



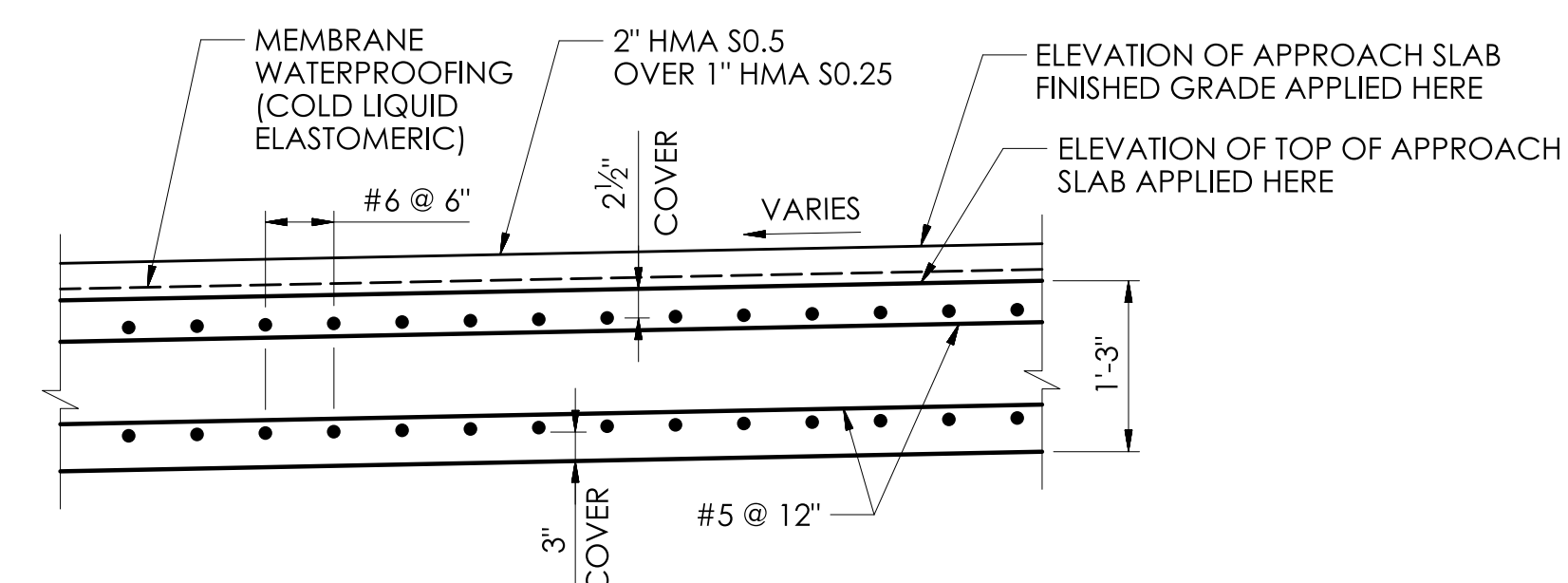
LONGITUDINAL APPROACH SLAB SECTION

SCALE: $\frac{3}{4}" = 1'-0"$
ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR



APPROACH SLAB AT SIDEWALK

SCALE: $\frac{3}{4}" = 1'-0"$



TRANSVERSE APPROACH SLAB SECTION

SCALE: $\frac{3}{4}" = 1'-0"$

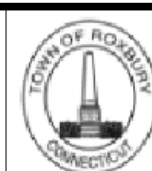
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DESIGNER/DRAFTER: RHB/EBM	CHECKED BY: DMK	
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SIGNATURE
BLOCK:



McFarland Johnson
273 Corporate Drive
Suite 200
Portsmouth, NH
03801



ROXBURY
CONNECTICUT

PROJECT NUMBER: 0119-0121

PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 05068-WELLERS BRIDGE ROAD OVER SHEPAUG RIVER

TOWN(S): ROXBURY

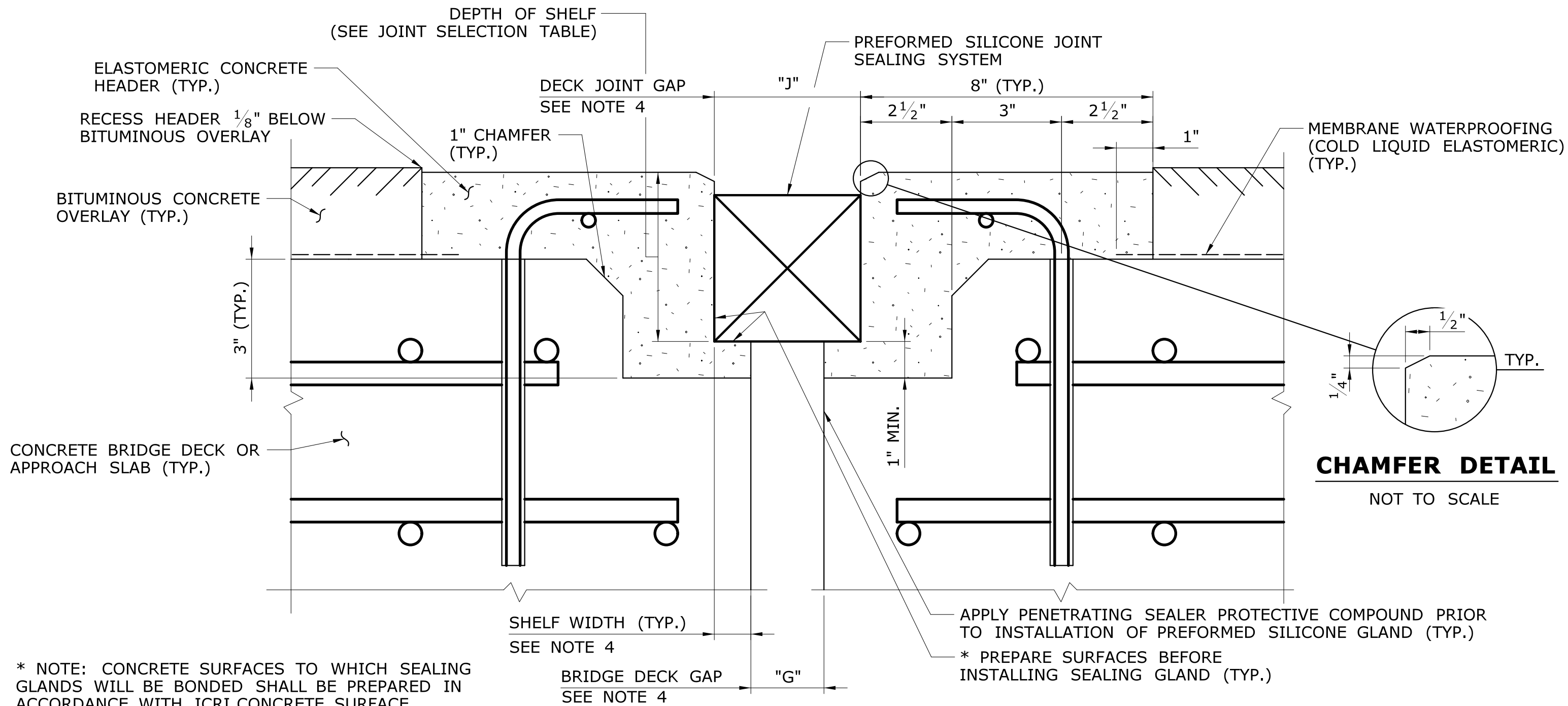
DRAWING TITLE: APPROACH SLAB DETAILS

DRAWING NO.

S-32

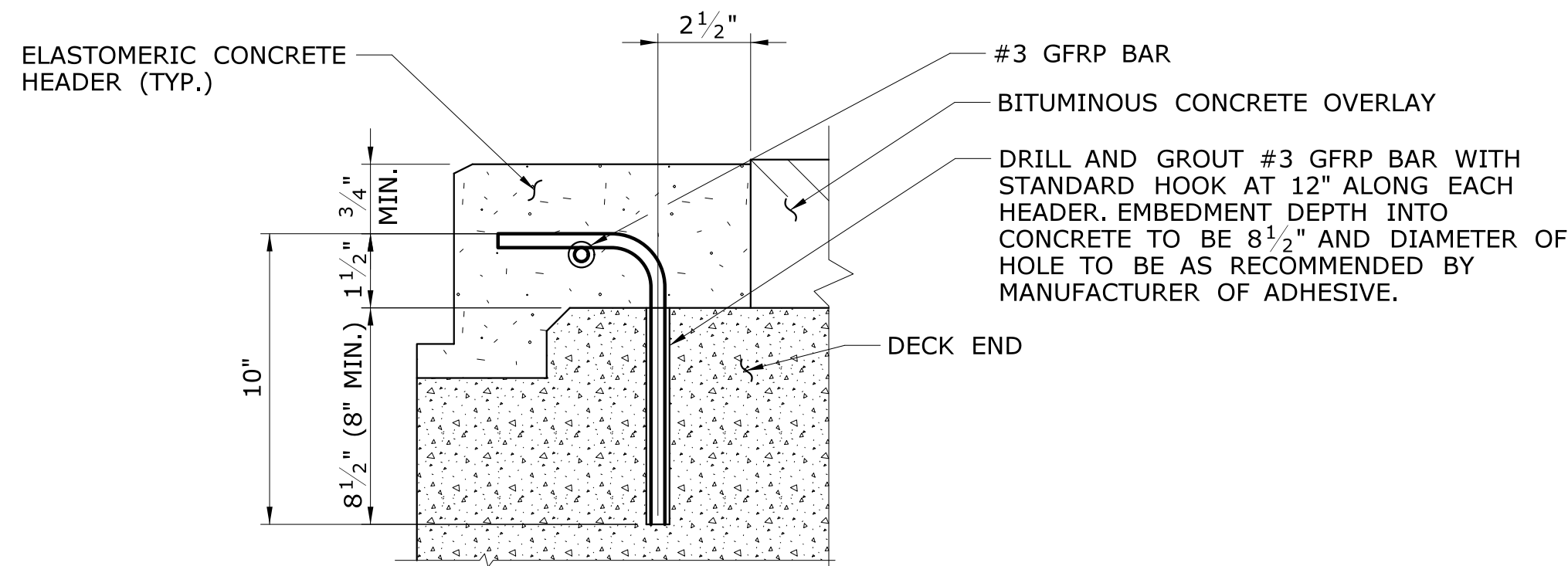
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04.32



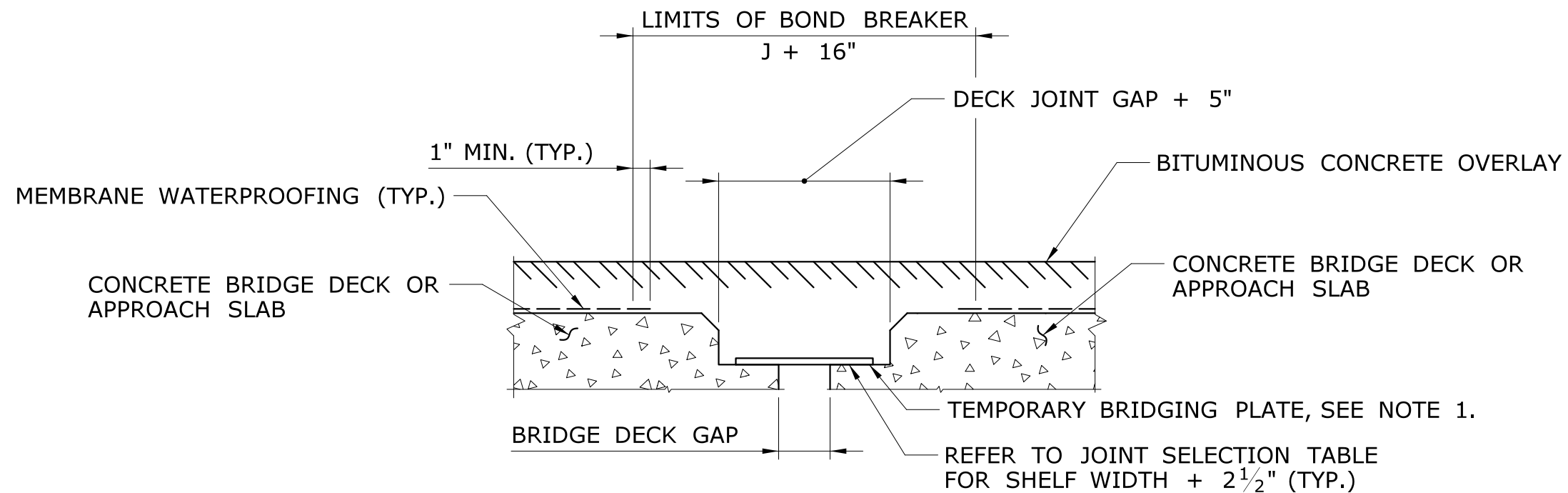
SECTION - ELASTOMERIC CONCRETE HEADERS AND PREFORMED JOINT SEAL

1
S-34



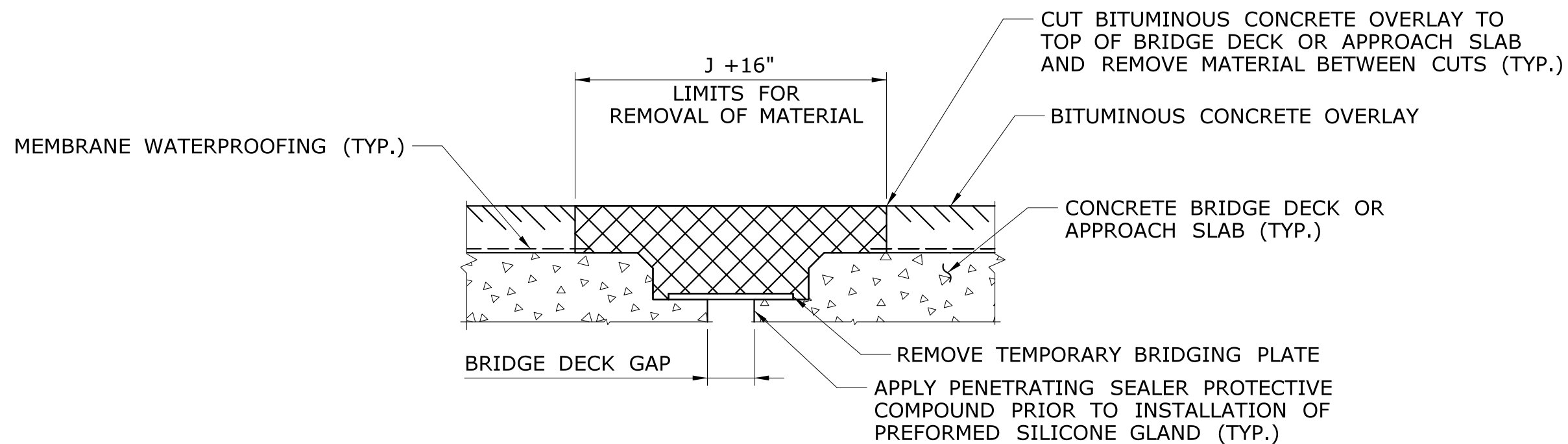
SECTION - HOOKED BAR EMBEDMENT AT HEADER

NOT TO SCALE



CONSTRUCT NEW BRIDGE DECK AND SHELF, AND APPLY OVERLAY

NOT TO SCALE



REMOVE OVERLAY FOR CONSTRUCTION OF HEADERS

NOT TO SCALE

PROPOSED SEQUENCE FOR DECK PREPARATION FOR INSTALLATION OF ELASTOMERIC CONCRETE HEADERS AND PREFORMED JOINT SEAL

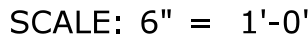
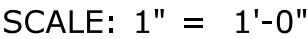
JOINT AND HEADER NOTES

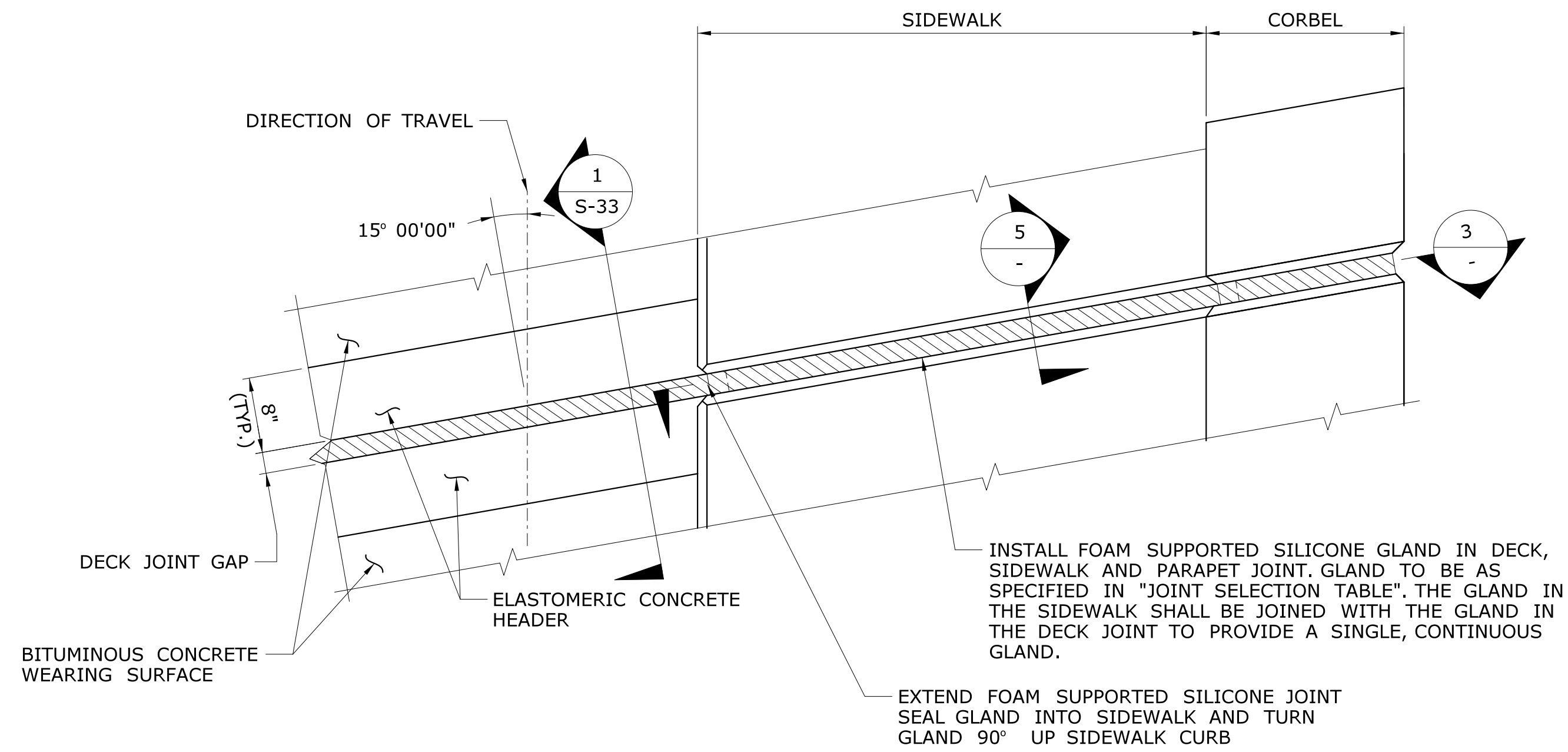
- 1) THE ELASTOMERIC CONCRETE HEADER AND PREFORMED JOINT SEAL SHALL BE INSTALLED AFTER THE PAVEMENT HAS BEEN PLACED.
- 2) ELASTOMERIC CONCRETE HEADERS WILL BE PAID FOR UNDER THE ITEM "ELASTOMERIC CONCRETE HEADER", THE PREFORMED SILICONE JOINT SEAL GLAND WILL BE PAID FOR UNDER ITEM, "PREFORMED JOINT SEAL."
- 3) DRILLING AND GROUTING GFRP DOWELS AND FURNISHING AND INSTALLING TRANSVERSE GFRP BARS ARE INCLUDED IN THE UNIT PRICE FOR "ELASTOMERIC CONCRETE HEADER".
- 4) DIMENSIONS "J", "G" AND SHELF WIDTH ARE MEASURED PERPENDICULAR TO THE DECK END. SEE JOINT SELECTION TABLE FOR VALUES.
- 5) THE PREFORMED JOINT SEAL SHALL BE INSTALLED IN ACCORDANCE WITH THE PLANS, WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND AS DIRECTED BY THE ENGINEER.
- 6) SURFACE PREPARATION IS CRITICAL FOR ADHESION OF ELASTOMERIC CONCRETE TO THE BRIDGE DECK AND FOR ADHESION OF THE PREFORMED GLAND WITHIN THE JOINT OPENING. THE CONTRACTOR SHALL NOT PROCEED WITH THE INSTALLATION OF THE HEADERS OR PREFORMED GLANDS WITHOUT AUTHORIZATION FROM THE ENGINEER.
- 7) THE CONTRACTOR MUST INSTALL ONE OF THE PREFORMED JOINT SEAL GLANDS SHOWN IN THE JOINT SELECTION TABLE. (SEE SHEET S-34)
- 8) THE THERMAL MOVEMENT RANGE USED FOR DESIGN OF THE PREFORMED JOINT SEAL IS 1.875 INCHES.

SEQUENCE NOTES:

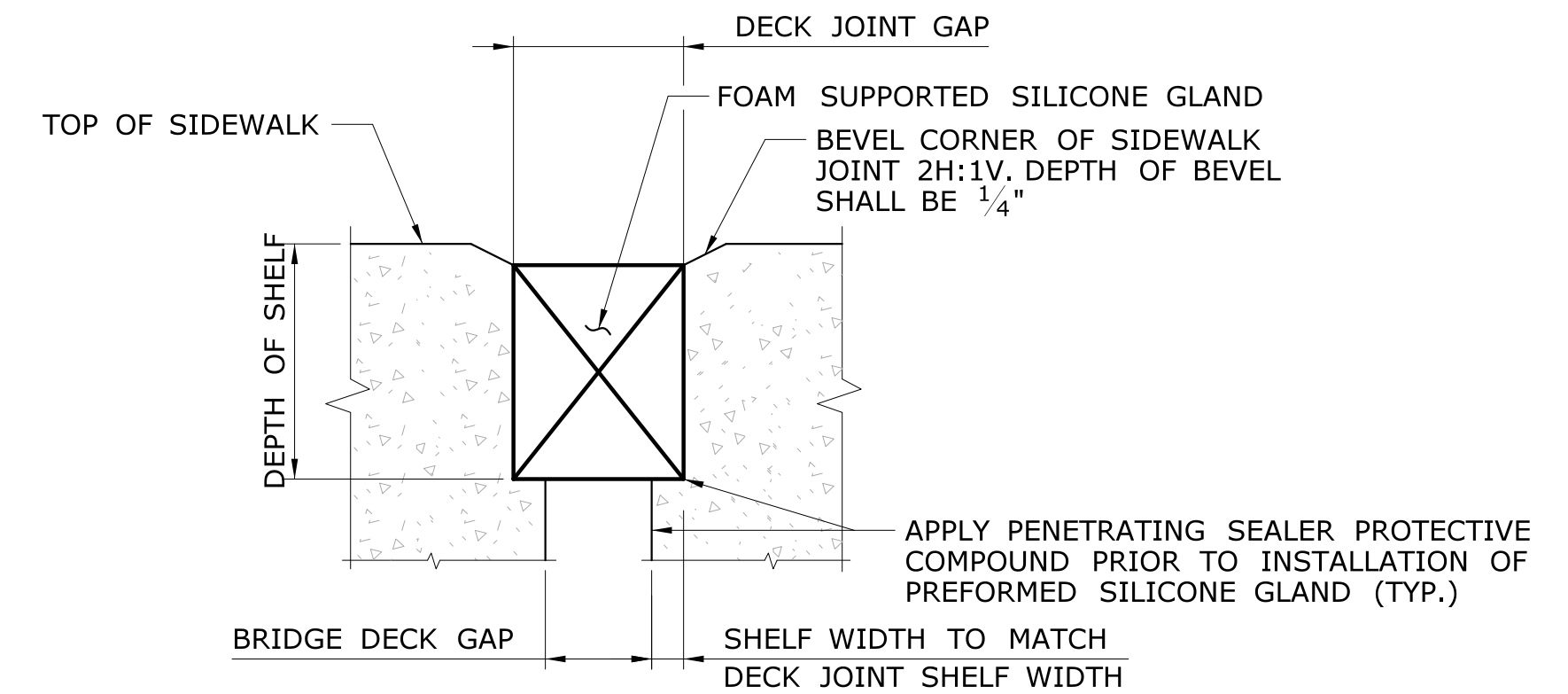
- 1) A TEMPORARY BACKER ROD MAY BE USED IN LIEU OF A TEMPORARY BRIDGING PLATE IF THE BRIDGE DECK GAP WIDTH IS LESS THAN 3 INCHES.
- 2) FOR DETAIL OF COMPLETED HEADERS AND PREFORMED JOINT SEAL, SEE SECTION-1.

REV.	DATE	REVISION DESCRIPTION

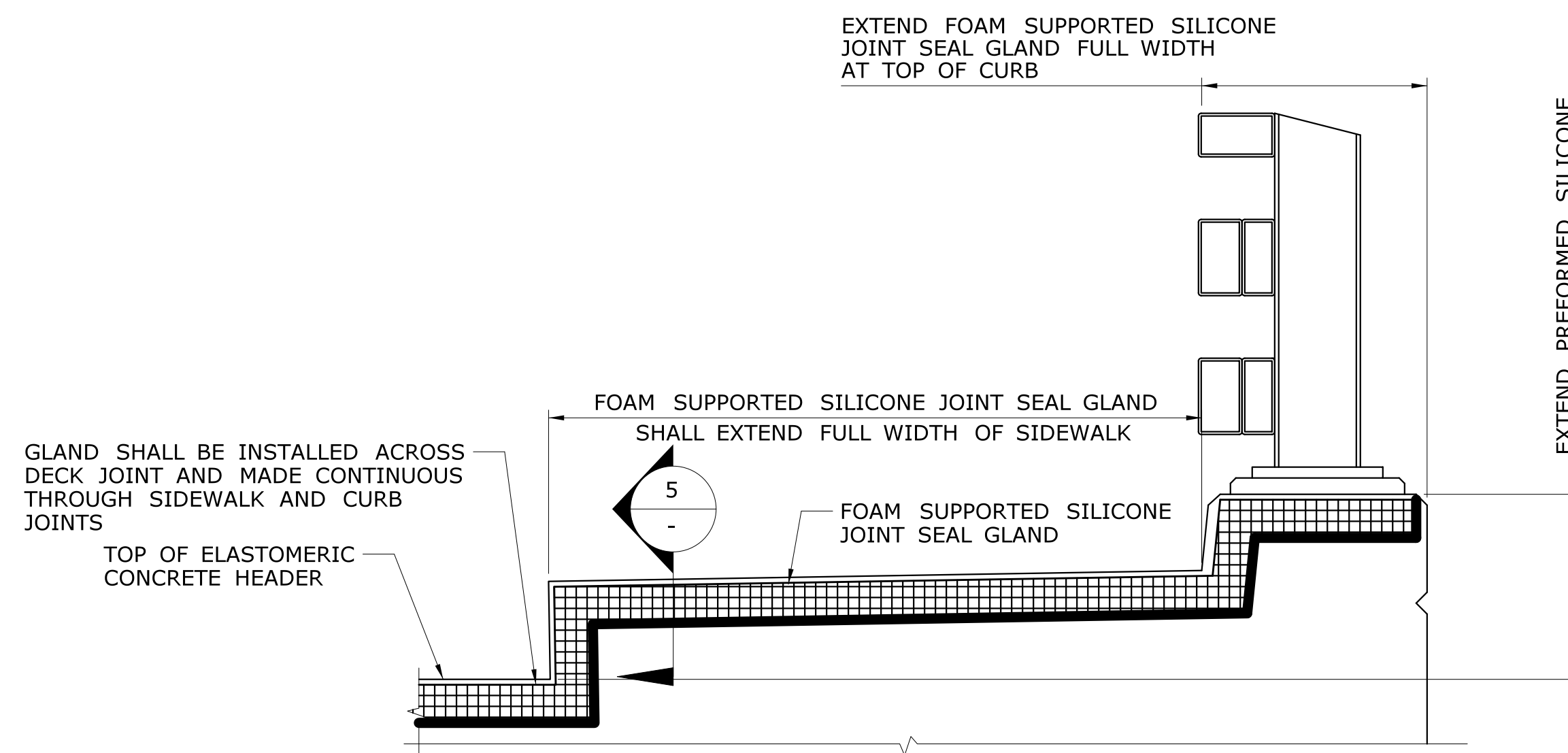
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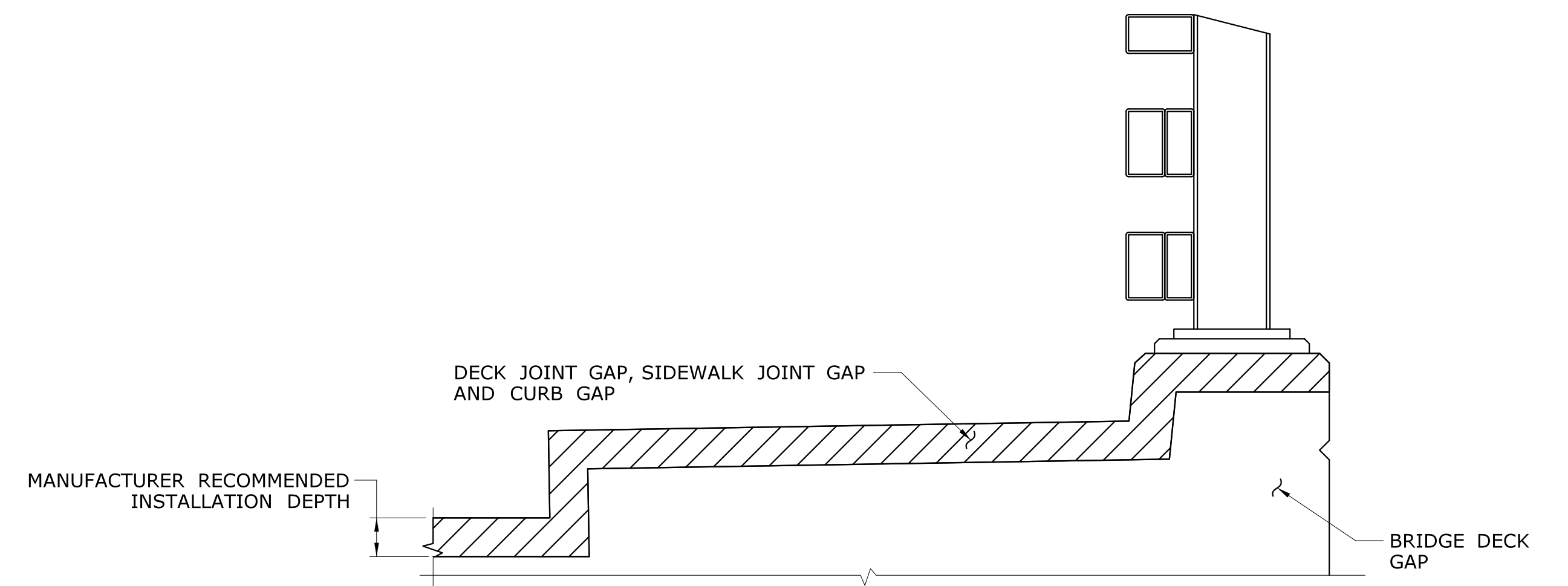
PLAN - EXPANSION JOINT AT SIDEWALK
SCALE: 1" = 1'-0"



SECTION - SIDEWALK EXPANSION JOINT
SCALE: 6" = 1'-0"



SECTION THROUGH CURB WITH SIDEWALK
SCALE: 1" = 1'-0"



SECTION THROUGH CURB WITH SIDEWALK - GAP DIAGRAM
SCALE: 1" = 1'-0"

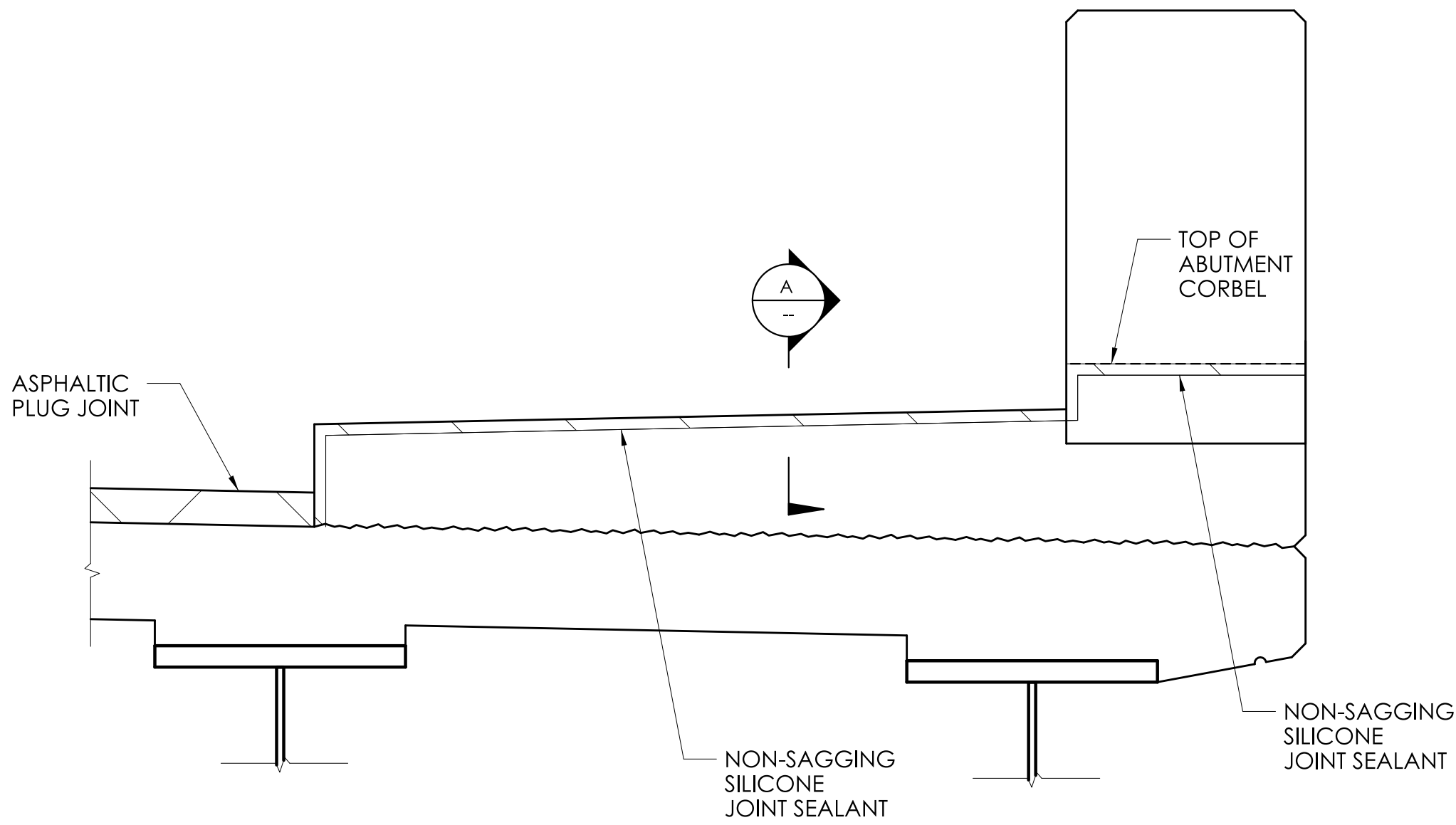
REV.	DATE	REVISION DESCRIPTION

BITUMINOUS CONCRETE PLACEMENT
AT ASPHALTIC PLUG JOINTS (APJ)

1. THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 4.06 SHALL BE MET EXCEPT IN LIEU OF DENSITY TESTING, THE METHODS DESCRIBED BELOW SHALL BE FOLLOWED TO ASSURE PROPER COMPACTION.
2. TOP LIFT MUST BE UNIFORM THICKNESS; INTERMEDIATE LIFTS CAN BE PLACED AT 1 1/4" TO 2 1/2" COMPACTED.
3. REQUIREMENTS FOR PROPER COMPACTION:
- a. MINIMUM 265° F DELIVERY TEMPERATURE OF MATERIAL. PLACE AND SPREAD MATERIAL BEFORE IT COOLS TO 260° F. MATERIAL BELOW TEMPERATURE REQUIREMENT WILL BE REJECTED.
- b. COMPACT NON-SURFACE LIFTS WITH VIBRATORY PLATE COMPACTOR MEETING THE FOLLOWING REQUIREMENTS:
- i. DESIGNED TO COMPACT ASPHALT
- ii. EQUIPPED WITH A WATER TANK
- iii. CENTRIFUGAL FORCE 3200 LBS TO 6000 LBS
- iv. WEIGHS MINIMUM 160 LBS (WITHOUT WATER)
- v. MINIMUM 4400 VIBRATIONS PER MINUTE
- c. COMPACT TOP LIFT WITH 3 1/2 TO 4 1/2 TON DOUBLE DRUM ROLLER, DESIGNED TO COMPACT BITUMINOUS CONCRETE.
- d. PROVIDE NUMBER OF PASSES BASED ON LIFT THICKNESS AS FOLLOWS:
- | LIFT THICKNESS (INCHES) | NUMBER OF PASSES |
|-------------------------|------------------|
| 1 1/4 TO 1 1/2 | 8 |
| 1 1/2 TO 2 | 10 |
| 2 TO 2 1/2 | 12 |
- e. ADDITIONAL COMPACTING EQUIPMENT MAY BE REQUIRED TO COMPLETE LIFT COMPACTION BEFORE MATERIAL COOLS TO 180° F.
- f. AT CORNERS OR OTHER AREAS INACCESSIBLE TO PLATE TAMPER, HAND TAMP 20 TIMES MINIMUM BEFORE MATERIAL COOLS TO 180° F.
4. ALTERNATE EQUIPMENT MAY BE REQUESTED AS A SUPPLEMENT TO CONTRACTOR'S QC PLAN. THE EQUIPMENT AND PROCEDURES MUST BE APPROVED BY THE ENGINEER PRIOR TO USE.
5. IF THESE METHODS ARE NOT PERFORMED TO THE SATISFACTION OF THE ENGINEER, DENSITY VERIFICATION MAY BE REQUIRED WHEREIN THE CONTRACTOR SHALL PROVIDE DENSITY TESTING WITH A QC NUCLEAR DENSITY GAUGE OR COLLECT CORE SAMPLES AS SPECIFIED IN SECTION 4.06.

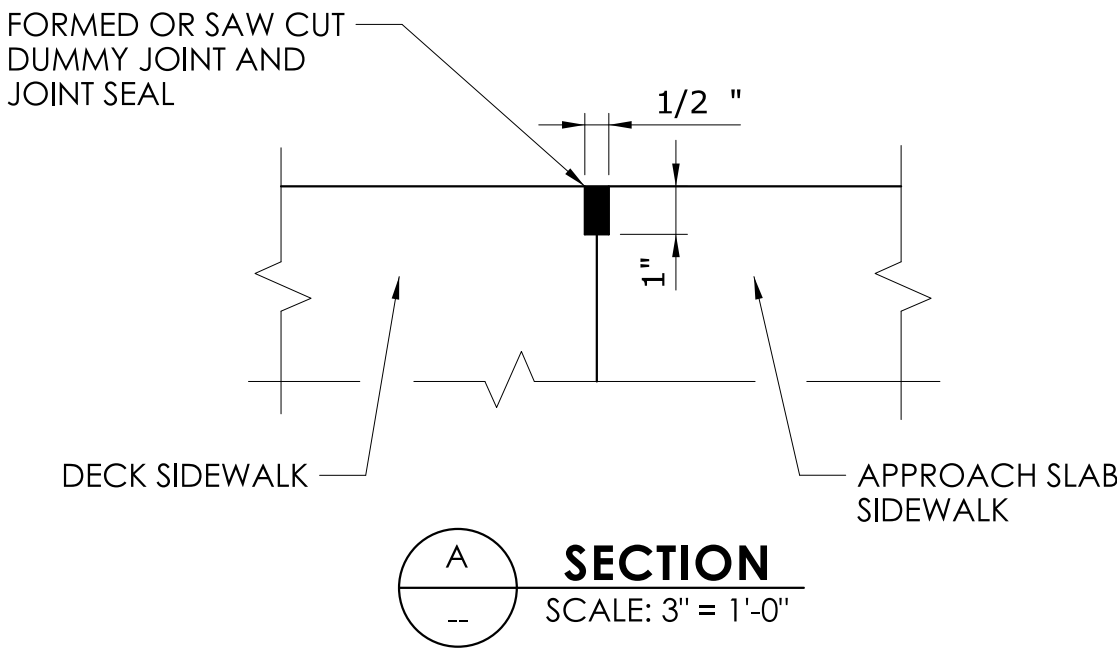
ASPHALTIC PLUG EXPANSION JOINT SYSTEM NOTES

1. A BRIDGING PLATE SHALL BE USED TO SPAN THE GAP BETWEEN TWO DECK ENDS OR THE JOINT BETWEEN A DECK END AND A CONCRETE APPROACH SLAB.
2. DISCONTINUE THE INSTALLATION OF THE BRIDGING PLATE WHERE THE APPROACH SLAB IS DISCONTINUED (TYPICALLY IN THE ROADWAY SHOULDERS). SEE "ASPHALTIC PLUG EXPANSION JOINT SYSTEM" SPECIAL PROVISION.
3. NEW STEEL BRIDGING PLATES SHALL BE A MINIMUM OF 1/4" THICK BY 8" WIDE. FOR JOINT OPENINGS WHICH EXCEED 3", A 3/8" THICK BY 12" WIDE PLATE WILL BE REQUIRED.
4. INSTALLATION OF MEMBRANE WITHIN THE LIMITS SHOWN TO BE PAID UNDER THE ITEM, "MEMBRANE WATERPROOFING (COLD LIQUID ELASTOMERIC)".
5. THE FURNISHING AND PLACING OF HMA S0.50 AND S0.25 SHALL BE INCLUDED FOR PAYMENT UNDER THE ITEMS "HMA S0.50" AND "HMA S0.25".
6. SAW-CUTTING AND REMOVAL OF PAVEMENT FOR JOINT INSTALLATION TO BE INCLUDED FOR PAYMENT UNDER THE ITEM "ASPHALTIC PLUG EXPANSION JOINT SYSTEM".
7. INSTALLATION OF FOAM SUPPORTED SILICONE GLAND TO BE PAID UNDER THE ITEM "PREFORMED JOINT SEAL".
8. ASPHALTIC PLUG EXPANSION JOINT SYSTEMS MAY BE INSTALLED ONLY WITHIN THE TEMPERATURE RANGE SPECIFIED IN THE SPECIAL PROVISION "ASPHALTIC PLUG EXPANSION JOINT SYSTEM". REFERENCE THE RANGE OF THERMAL MOVEMENT FOR THE SELECTED JOINT PRODUCT IN THE TABLE FOR "INSTALLATION RESTRICTIONS" IN THE SPECIAL PROVISION.
9. INSTALL CRACK SEAL AT THE CURB LINE ALONG THE LENGTH OF THE BRIDGE, BOTH SIDES. CRACK SEALING SHALL BE INCLUDED FOR PAYMENT UNDER ITEM "GUTTER LINE SEALING FOR BRIDGES".

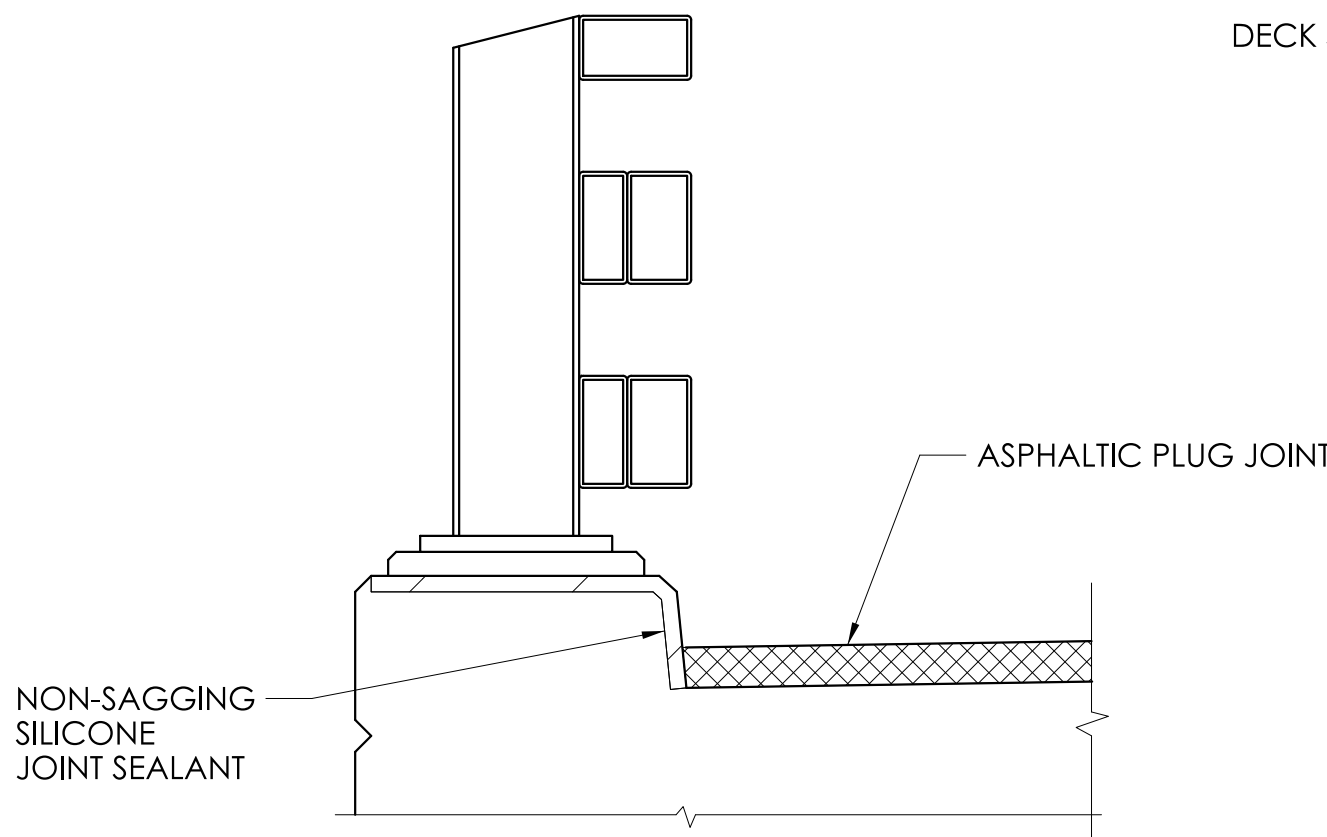


SCHEMATIC OF ASPHALTIC PLUG JOINT
AT SIDEWALK/ END BLOCK

SCALE: 1" = 1'-0"

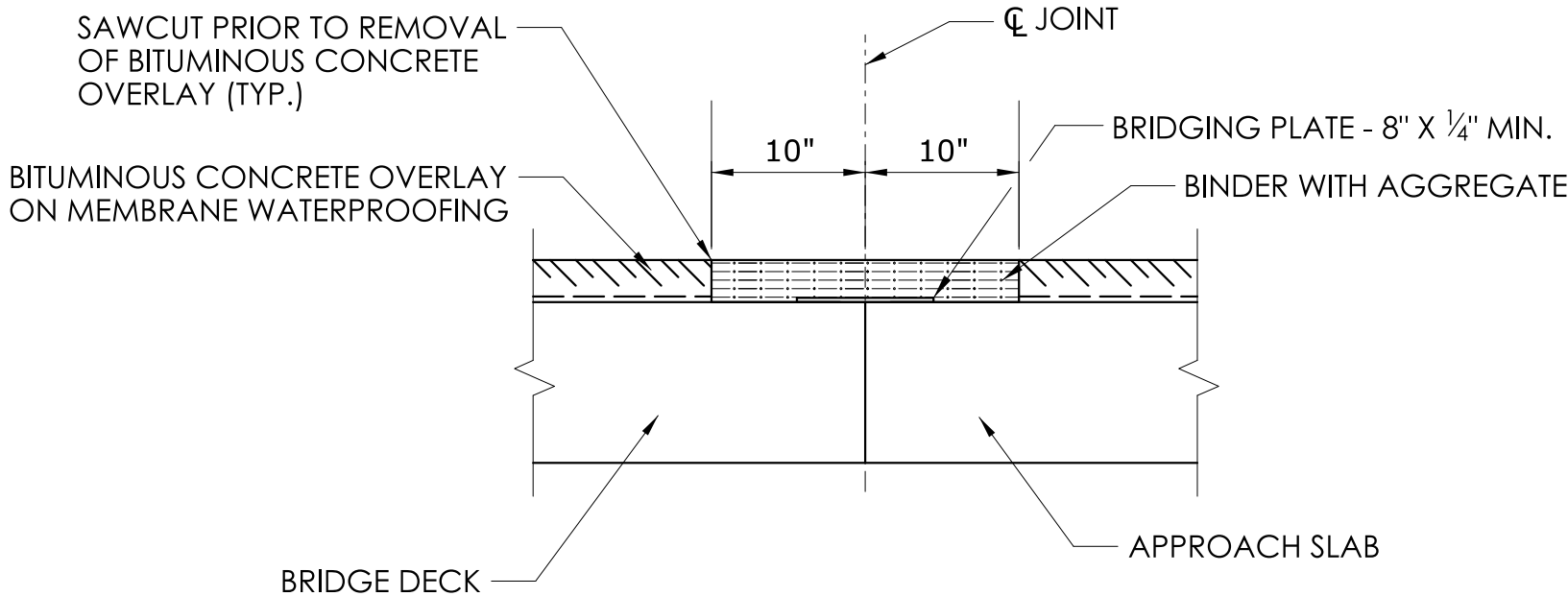


SECTION
SCALE: 3" = 1'-0"



SCHEMATIC OF ASPHALTIC PLUG JOINT AT CURB

SCALE: 1" = 1'-0"



TYPICAL SECTION ASPHALTIC PLUG JOINT

SCALE: 1" = 1'-0"

REV.	DATE	REVISION DESCRIPTION

BRIDGE RAIL NOTES

THE 3-TUBE CURB MOUNTED BRIDGE RAIL HAS BEEN EVALUATED AT TEST LEVEL 4 (TL-4) AND COMPLIES WITH MASH 2016.

CONCRETE FOR THE CURB AND END BLOCK SHALL BE CLASS PCC04462. THE COMPRESSIVE STRENGTH OF THE CONCRETE, BASED ON TEST CYLINDERS, SHALL BE NO LESS THAN 4,000 PSI PRIOR TO INSTALLING THE EPOXY GROUT BELOW THE BASEPLATES.

PRIOR TO ALLOWING THE RAIL, CURB AND END BLOCK TO BE PLACED IN SERVICE FOR THE PROTECTION OF VEHICULAR TRAFFIC, THE COMPRESSIVE STRENGTH OF THE GROUT, BASED ON STRENGTH GAIN OVER TIME LISTED IN THE GROUT MANUFACTURER'S DATA SHEET, SHALL BE NO LESS THAN 5,000 PSI.

THE REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60 AND BE HOT-DIP GALVANIZED.

THE 1 IN. DIAMETER PIPE SHALL CONFORM TO ASTM A53, GRADE B OR ASTM A501 AND SHALL BE GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A123.

HOLLOW STRUCTURAL SHAPES SHALL CONFORM TO ASTM A500 GRADE C OR ASTM A501, GRADE B.

ALL OTHER STEEL SHALL CONFORM TO ASTM A572, GRADE 50
UNLESS NOTED OTHERWISE.

THE SILICON CONTENT OF THE STEEL USED FOR THE EXPOSED MEMBERS AND PLATE COMPONENTS SHALL FALL WITHIN THE RANGE OF 0 TO 0.04% OR 0.15% TO 0.25%.

ALL STEEL SHAPES, PLATES AND HOLLOW STRUCTURAL SECTIONS SHALL BE METALLIZED IN ACCORDANCE WITH "METALLIZING STRUCTURAL STEEL (SITE NO. 2)".

THE ANCHOR BOLTS SHALL CONFORM TO ASTM F1554, GRADE 105
THE NUTS SHALL CONFORM TO ASTM A563, GRADE DH. THE
WASHERS SHALL CONFORM TO ASTM F436. THE BOLTS, NUTS AND
WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM
F2329, OR ASTM B695, CLASS 55.

ALL HIGH STRENGTH BOLTS SHALL CONFORM TO ASTM F3125 GRADE A325, TYPE 1. NUTS SHALL CONFORM TO ASTM A563, GRADE DH. CIRCULAR, FLAT, HARDENED STEEL WASHERS SHALL CONFORM TO ASTM F436. THE BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM F2329, OR ASTM B695, CLASS 55.

DOME HEAD BOLTS WITH WRENCH SLOTS USED FOR THE TOP RAIL SHALL CONFORM TO ASTM F3125 GRADE A325, TYPE 1 OR ASTM A449, GRADE 1. SUBSTITUTION OF DOME HEAD BOLTS FOR BOLTS MEETING DIFFERENT MATERIAL REQUIREMENTS IS NOT PERMITTED. NUTS SHALL CONFORM TO ASTM A563, GRADE DH. FLAT WASHERS, HARDENED STEEL WASHERS SHALL CONFORM TO ASTM F436. THE BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM F2329 OR ASTM B695, CLASS 55.

RAIL ELEMENTS SHALL BE FABRICATED TO THE HORIZONTAL AND VERTICAL ALIGNMENT OF THE STRUCTURE. POSTS SHALL BE INSTALLED NORMAL TO GRADE IN THE LONGITUDINAL DIRECTION AND VERTICAL IN THE TRANSVERSE DIRECTION.

ALL BRIDGE RAIL MATERIALS, INCLUDING ANCHOR PLATES, ANCHOR BOLTS, CONCRETE INSERTS, HARDWARE AND EPOXY GROUT, SHALL BE PAID FOR UNDER THE ITEM "3-TUBE CURB MOUNTED BRIDGE RAIL".

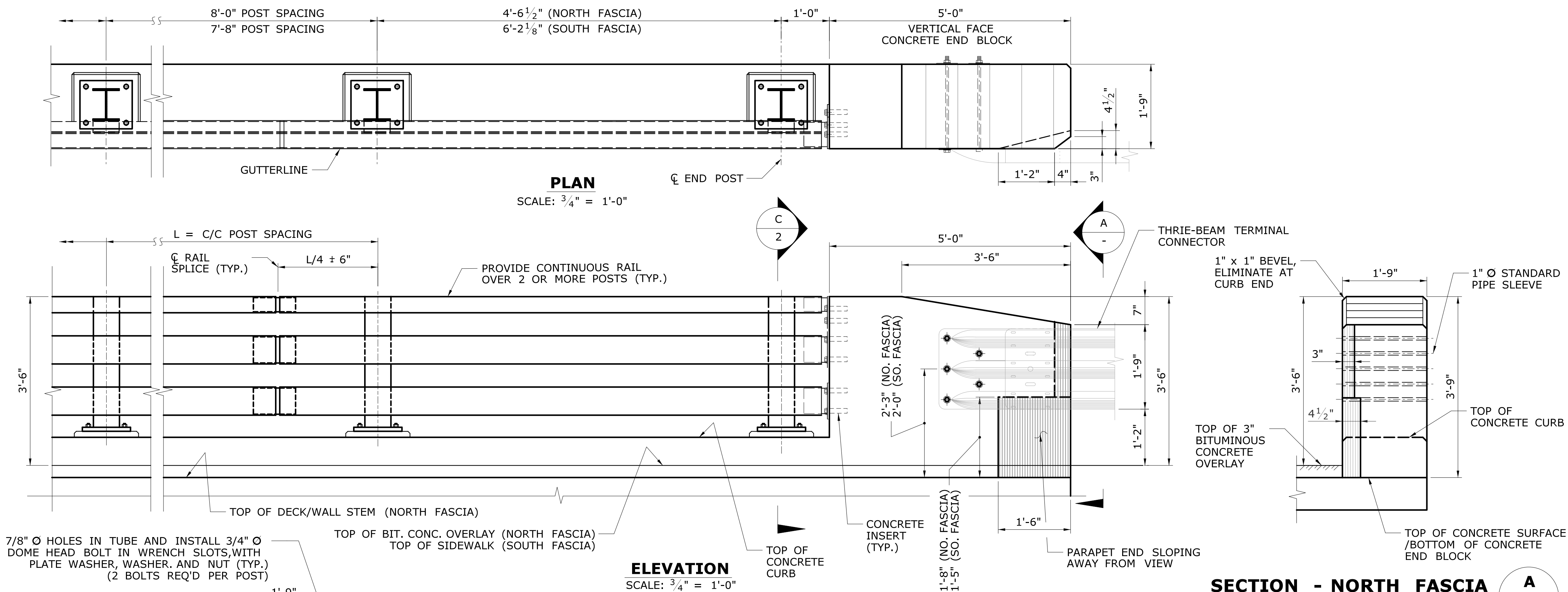
3-TUBE CURB MOUNTED BRIDGE RAIL COLOR SHALL BE IN
ACCORDANCE WITH AMS-STD-595-10055 DOT HIGHWAY BROWN (GLOSS)

ALL EXPOSED GALVANIZED BOLT HEADS, WASHERS AND NUTS SHALL BE HAND TOOL CLEANED TO THE SATISFACTION OF THE ENGINEER PRIOR TO FIELD COLOR TOP COAT APPLICATION.

THE COLORED TOPCOAT USED TO PAINT THE EXPOSED GALVANIZED BOLT HEADS, WASHERS AND NUTS SHALL BE FROM THE SAME MANUFACTURER AND LOT OF COLORED TOP COAT THAT WAS SHOP APPLIED TO THE METALLIZED STEEL POSTS, TUBES AND PLATES.

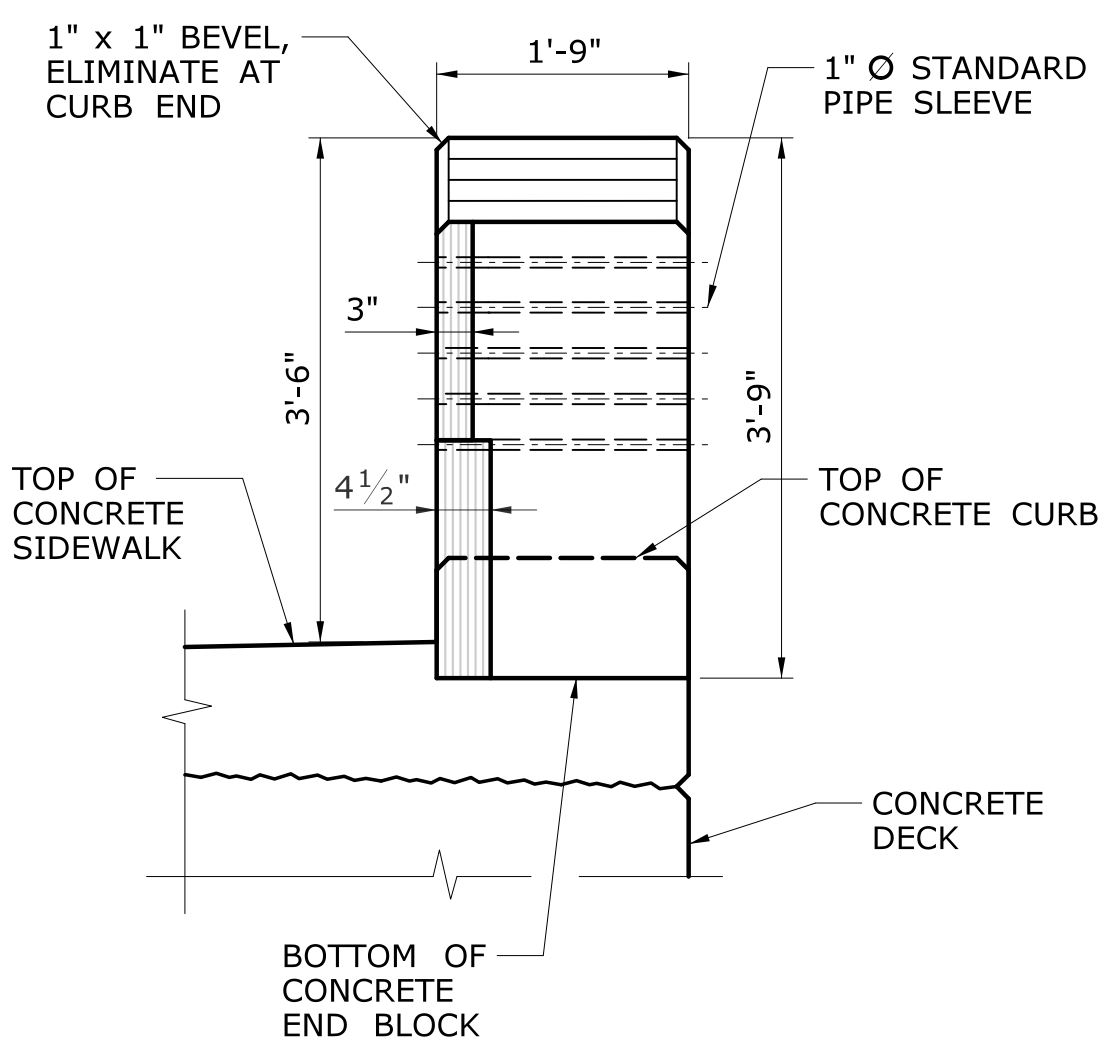
THE METALLIZING ALONG WITH THE FIELD TOUCH UP PAINTING AND SEALING OF THE STEEL PLATES, POSTS AND RAILS ARE INCLUDED FOR PAYMENT UNDER THE ITEM "METALLIZING STRUCTURAL STEEL (SITE NO. 2)".

THE FIELD TOUCH UP PAINTING OF THE GALVANIZED FASTENERS IS INCLUDED FOR PAYMENT UNDER THE ITEM "METALLIZING STRUCTURAL STEEL (SITE NO. 2)".



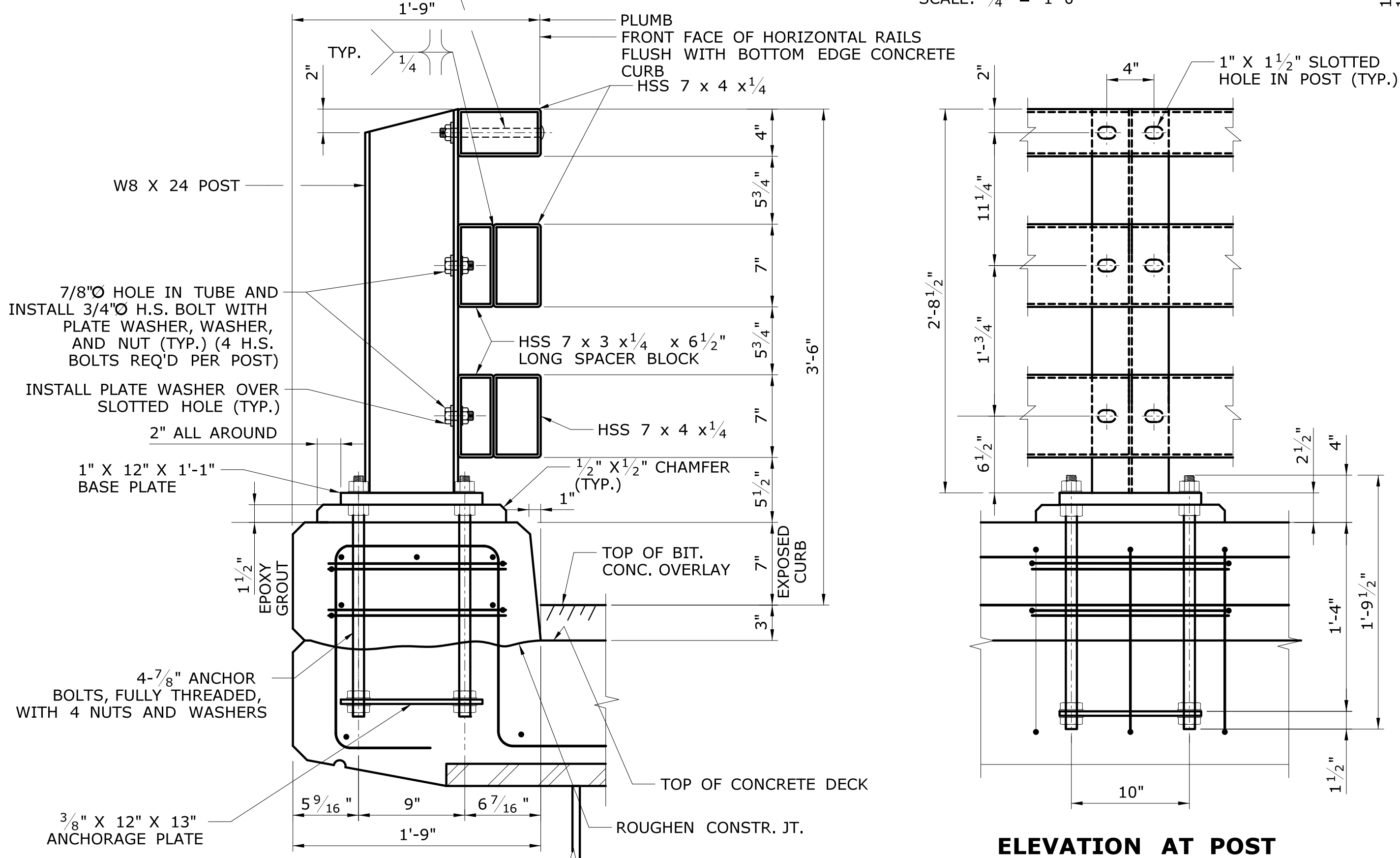
SECTION - NORTH FASCIA

SCALE: $\frac{3}{4}" = 1'-0"$



SECTION - SOUTH FASCIA

SCALE: $\frac{3}{4}" = 1'-0"$



ELEVATION AT POST

TYPICAL SECTION AT POST

CURB AND POST DETAILS

(NORTH FASCIA SHOWN, SOUTH FASCIA SIMILAR)

SCALE: $1\frac{1}{2}" = 1'-0"$

[illegible]

DESIGNER/DRAFTER: CHECKED BY:

LASTED SAVED BY: PSurrenant **FILE NAME:** M:\DDE\Worksets\CTDOT\0119-0121\Bridge\Contract_Plans\SB_CP_0119_0121_Rail Details.dgn
PLOTTED DATE: 11/21/2025

SIGNATURE
BLOCK:



McFarland Johnson
273 Corporate Drive
Suite 200
Portsmouth, NH
03801

**ROXBURY**
CONNECTICUT

PROJECT NUMBER: 0119-0121

PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE NO. 05068-WELLERS BRIDGE ROAD OVER SHEPAUG RIVER

TOWN(S): ROXBURY

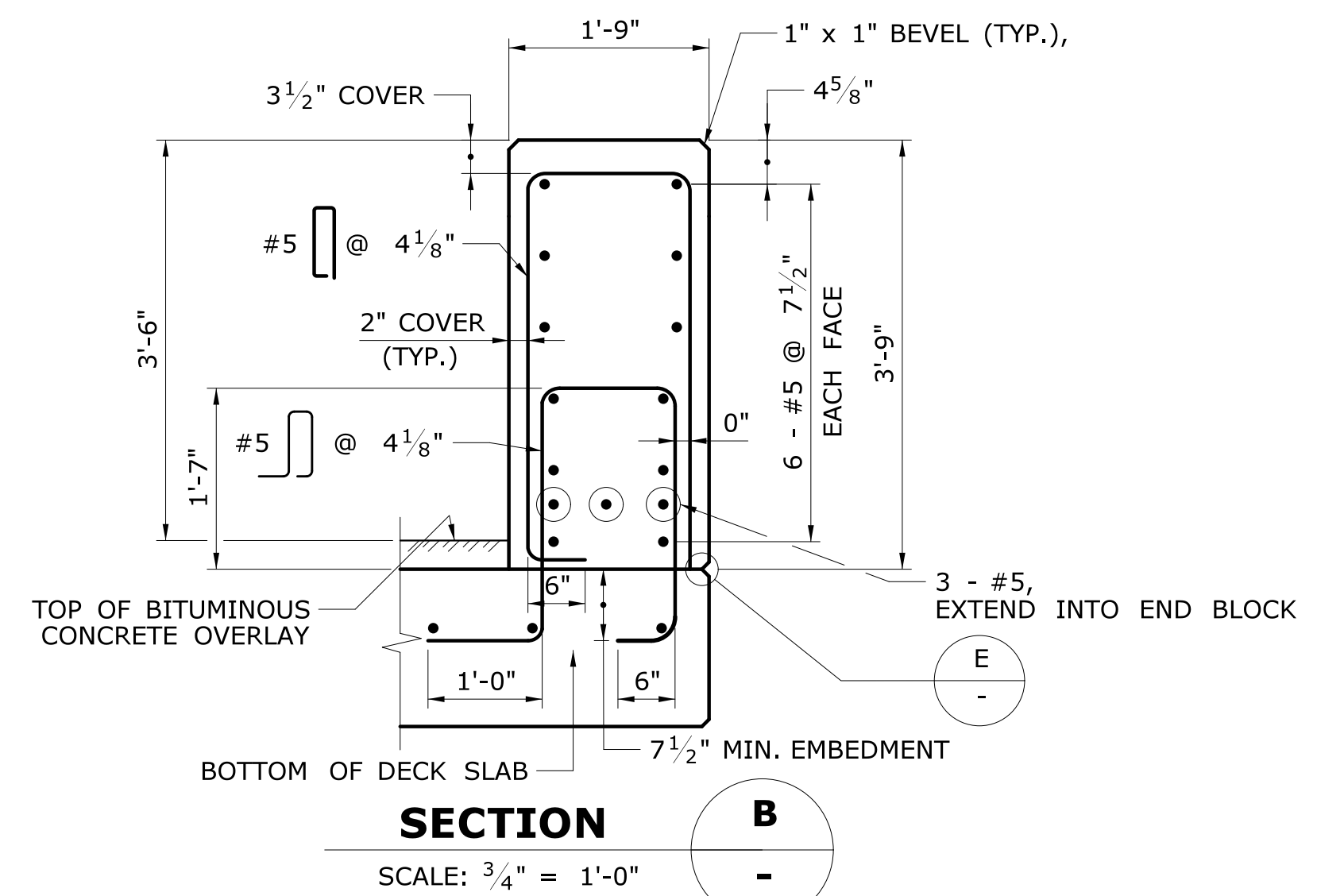
DRAWING TITLE: 3-TUBE CURB MOUNTED BRIDGE RAIL DETAILS (1 OF 4)

DRAWING NO.

S-3

SHEET NO.

04.3



ISOMETRIC VIEW - REINFORCEMENT DETAIL AT END BLOCK
SCALE: N.T.S.

DRAWING NO.
S-39

SHEET NO.
04.39

