

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



BLUE HILL
HANCOCK COUNTY
BLUE HILL FALLS BRIDGE
OVER
SALT POND OUTLET
STATE ROUTE 175/FALLS BRIDGE ROAD
FEDERAL AID PROJECT NO. STP-1771(200)X
PROJECT LENGTH 0.138 mi.
BRIDGE NO. 5038

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UTILITIES

Versant Power
Charter Communications
Consolidated Communications LLC

MAINTENANCE OF TRAFFIC

A single lane temporary bridge with one lane of alternating one way traffic using temporary traffic signals.

PROJECT LOCATION:	Blue Hill Falls Bridge #5038 in Blue Hill carrying Route 175 and Falls Bridge Road over Salt Pond Outlet. Lat./Long. 44° 22' 26" N 68° 33' 33" W
PROGRAM AREA:	Bridge
OUTLINE OF WORK:	Bridge Replacement and associated approach work.



SPECIFICATIONS

Design: Load and Resistance Factor Design per AASHTO LRFD Bridge Design Specifications, Ninth Edition, 2020.

DESIGN LOADING

Live Load HL - 93 Modified for Strength I

TRAFFIC DATA

Current (2019) AADT	1620
Future (2039) AADT	1780
DHV - % of AADT	13%
Design Hour Volume	231
Heavy Trucks (% of AADT)	5%
Heavy Trucks (% of DHV)	3%
Directional Distribution (% of DHV)	56%
18 kip Equivalent P 2.0	22
18 kip Equivalent P 2.5	21
Design Speed (mph)	20 mph

HYDROLOGIC DATA

Drainage Area	34.2 sq mi
Design Discharge Fresh Water (Q50)	2334 cfs
Check Discharge Fresh Water (Q100)	2679 cfs
Headwater Elevation (Q50)	10.8 ft
Headwater Elevation (Q100)	10.9 ft
Estimated Daily Discharge Saltwater	8500 cfs
Estimated Daily Maximum Velocity	7-15 fps
Headwater Elevation Plus Storm Surge (Q100)	14.4 ft
Mean Lower Low Water (MLLW)	-5.71 ft
Mean Low Water (MLW)	-5.36 ft
Mean Tide Level (MTL)	0.31 ft
Mean High Water (MHW)	4.74 ft
Mean Higher High Water (MHHW)	5.09 ft

MATERIALS

Concrete:	
Precast	Class "P"
Curbs & Transition Barriers	Class "LP"
All Other	Class "A"

Reinforcing Steel	
Stainless Reinforcing Steel	ASTM A 955, Grade 75

Prestressing Strands	ASTM A1114 Grade 240, Low Relaxation
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BASIC DESIGN STRESSES

Precast/Prestressed Concrete (NEBT)	f 'c = 10,000 psi f 'ci = 8,000 psi
Precast Concrete (Approach Beams)	f 'c = 5,000 psi

Concrete, Class "LP"	f 'c = 5,000 psi
Concrete, Class "A"	f 'c = 4,000 psi
Stainless Reinforcing Steel	f y = 75,000 psi
Prestressing Strand	F μ = 240,000 psi

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	APPROVED	DATE
COMMISSIONER: <i>[Signature]</i>	<i>[Signature]</i>	10-5-20
CHIEF ENGINEER: <i>[Signature]</i>	<i>[Signature]</i>	10-4-2023

STATE OF MAINE DEPARTMENT OF TRANSPORTATION THOMAS R. COTE No. 10871	SIGNATURE: <i>[Signature]</i>	P.E. NUMBER: 10671	DATE: 9/17/2021
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PROJECT INFORMATION	BRIDGE	PROJECT MANAGER	DESIGNER	CONSULTANT	PROJECT RESIDENT	CONTRACTOR	PROJECT COMPLETION DATE
PROGRAM	ANDREW LATHÉ	TIM COTE	HNTB				

BLUE HILL BLUE HILL FALLS BRIDGE	TITLE SHEET
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SHEET NUMBER	1
OF 70	

Date:9/16/2021

Username:

Division:

Filename: 001_Title.dgn

WIN 17712.00

STP-1771(200)X

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.191	Removing Existing Bridge (350 CY)	1	LS
202.202	Removing Pavement Surface	290	SY
203.20	Common Excavation	1,380	CY
203.21	Rock Excavation	70	CY
203.24	Common Borrow	50	CY
203.25	Granular Borrow	90	CY
206.082	Structural Earth Excavation - Major Structures, Plan Quantity	130	CY
304.10	Aggregate Subbase Course - Gravel	1,100	CY
403.1021	Textured Asphalt Pavement w/Color Coating	280	SY
403.208	Hot Mix Asphalt - 12.5 mm Nominal Maximum Size	225	Ton
403.209	Hot Mix Asphalt, 9.5 mm (Sidewalk, Drives, Incidentals)	8	Ton
403.213	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (Base and Intermediate Base course)	345	Ton
409.15	Bituminous Tack Coat, Applied	160	Gal
461.131	Temporary Pavement	160	Ton
501.222	Micropiles	590	LF
501.2331	Micropile Verification Load Test	2	EA
501.2341	Micropile Proof Load Test	2	EA
501.8031	Coring - 14" Core Hole	130	LF
501.8032	Coring Equipment Mobilization	1	LS
501.804	Drilling Equipment Mobilization	1	LS
502.219	Structural Concrete, Abutments and Retaining Walls (260 CY)	1	LS
502.261	Structural Concrete Roadway and Sidewalk Slab on Concrete Bridges (220 CY)	1	LS
502.49	Structural Concrete Curbs and Sidewalks (26 CY)	1	LS
503.26	Stainless Steel Reinforcement, Fabricated and Delivered	80,200	LB
503.27	Stainless Steel Reinforcement, Placing	80,200	LB
507.0834	Wyoming Steel Bridge Railing (384 LF)	1	LS
508.14	High Performance Waterproofing Membrane (680 SY)	1	LS
510.10	Special Detour, 16 foot Roadway Width Vehicular and Pedestrian Traffic Not Separated	1	LS
515.2011	Pigmented Protective Coating for Concrete Surfaces (170 SY)	1	LS
515.21	Protective Coating for Concrete Surfaces (790 SY)	1	LS
518.60	Repair of Vertical Surfaces < 8 inches	10	SF
518.70	Repair of Overhead Surfaces < 8 inches	20	SF
519.60	Expansion Device - Asphaltic Plug Joint	90	LF
523.52	Bearing Installation	42	EA
523.5401	Laminated Elastic Bearings, Fixed	5	EA
523.5402	Laminated Elastic Bearings, Expansion	37	EA
525.262	Repointing Granite Masonry	120	CF
525.329	Dry-Laid Stone Wall - Remove and Reset	1	LS
525.331	Additional Stones for Masonry Wall	15	CY
526.301	Portable Concrete Barrier, Type I (40 LF)	1	LS
526.34	Permanent Concrete Transition Barrier	4	EA
527.34	Work Zone Crash Cushions	4	UNIT
534.7612	Precast Approach Beams (270 CY)	1	LS
534.7613	Precast Aesthetic Panels (2200 SF)	1	LS
535.61	Prestressed Structural Concrete I-Girders (525 LF)	1	LS
603.16	15 inch Culvert Pipe Option I	27	LF
603.175	18 inch RCP Class III	24	LF
603.179	18 inch Culvert Pipe Option III	15	LF
604.262	Catch Basin Type B5-C	2	EA
606.1301	31" W-Beam Guardrail - Mid-way Splice (Steel Posts, 8" Offset, Single faced)	350	LF
606.1305	31" W-Beam Guardrail - Mid-way Splice Flared Terminal (31" Height)	1	EA
606.1306	31" W-Beam Guardrail - Mid-way Splice Tangent Terminal (31" Height)	3	EA
606.1307	Bridge Transition (Asymmetrical) - Type 1A	4	EA
606.353	Reflectorized Flexible Guardrail Marker	5	EA
606.356	Underdrain Delineator Post	1	EA
609.11	Vertical Curb Type I	190	LF
609.234	Terminal Curb Type I - 4 foot	5	EA
610.08	Plain Riprap	530	CY
610.18	Stone Ditch Protection	140	CY
615.07	Loam	43	CY
615.081	Compost Blanket	300	CY
618.146	Seeding Hydromulch Growth Medium	29	UNIT
618.149	Special Seed Mix	35	UNIT
619.12	Mulch	4	UNIT
619.14	Erosion Control Mix	50	CY
620.58	Erosion Control Geotextile	1,300	SY
621.025	Evergreen Trees 3'-4' Group A B&B/Cont.	16	EA
621.179	Medium Decid. Trees 6'-8' Group B Cont.	16	EA
621.389	Evergreen Shrubs 15'-18" Group A Cont.	40	EA
621.5351	Deciduous Shrubs 15'-18" Group A Cont.	40	EA

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
621.54	Deciduous Shrubs 18"-24" Group A Cont.	40	EA
627.733	4" White or Yellow Painted Pavement Marking Line	2,200	LF
627.78	Temporary 4" Painted Pavement Marking Line, White or Yellow	230	LF
629.05	Hand Labor, Straight Time	110	HR
629.07	Stone Mason	60	HR
631.10	Air Compressor (including operator)	20	HR
631.11	Air Tool (including operator)	60	HR
631.12	All Purpose Excavator (including operator)	20	HR
631.14	Grader (including operator)	20	HR
631.172	Truck-Large (including operator)	20	HR
631.22	Front End Loader (including operator)	20	HR
639.18	Field Office, Type A	1	EA
643.72	Temporary Traffic Signal: Route 175	1	LS
652.312	Type III Barricade	12	EA
652.33	Drum	25	EA
653.34	Cone	50	EA
652.35	Construction Signs	740	SF
652.361	Maintenance of Traffic Control Devices	1	LS
652.38	Flaggers	760	HR
652.41	Portable Changeable Message Sign	2	EA
656.75	Temporary Soil Erosion and Water Pollution Control	1	LS
659.10	Mobilization	1	LS
660.21	On-The-Job Training	1,000	HR

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1771(200)X

WIN
17712.00
Bridge No. 5038
BRIDGE PLANS

PROJ. MANAGER
DESIGN-DETAILED
CHECKED-REVIEWED
DESIGN-DETAILED
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

BY
A. LaThe
E. Raymond
T. Cote
-
-
-
-
-

DATE
09/21
09/21
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SIGNATURE
P.E. NUMBER
DATE

BLUE HILL FALLS BRIDGE
SALT POND OUTLET
BLUE HILL
HANCOCK COUNTY

ESTIMATED QUANTITIES

SHEET NUMBER
2
OF 70

HNTB

Date:9/28/2021

Username:

Division:

Filename: 003_General Notes.dgn

GENERAL CONSTRUCTION NOTES:

1. All utility facilities shall be adjusted by the respective utilities unless otherwise noted.

2. For easements, construction limits and right of way lines, refer to Right of Way Maps.

3. Unless otherwise noted, all embankment material shall be Granular Borrow meeting the requirements of Standard Specifications Subsection 703.19, Material for Underwater Backfill.

4. The clearing limits as shown on the Plans are approximate. The exact limits will be established in the field by the Resident. Single trees and stump removal shall be considered clearing.

5. Payment for clearing will be considered incidental to contract items.

6. Clearing on the southwest quadrant requires one week's notice to the property owner(s).

7. In the area of the Special Detour (beyond the limit of proposed grading or the limit of the State's permanent ROW, whichever is greater), the following shall apply:

a. The removal of trees and other vegetation must be cut flush to the road without skidder or mechanized equipment on the site, leaving the roots in place. No herbicide shall be applied to stumps.

b. Rocks and boulders can be removed and stacked to accommodate temporary access with approval of the Resident. The stacked boulders shall be returned to the approximate existing locations at contract completion.

c. Separation geotextile shall be placed directly atop the existing native soils prior to the placement of temporary fill materials. A minimum depth of fill of 1' shall be placed over the separation geotextile.

d. Upon completion of construction, all non-native soils shall be removed from above the separation geotextile, and the separation geotextile shall be removed to uncover the underlying native soils. Ground disturbance shall be avoided.

e. The Contractor shall place Special Seed Mix, Compost Blanket, Hydromulch Growth Medium and plantings outside of the States Permanent R/W in conformance with specifications 615, 618, and 621. Within the areas of Shoreland Buffer Zones no Compost Blanket shall be applied.

f. Payment for the above work shall be incidental to the Special Detour item, except for landscaping which will be paid for under the 621 items.

8. The location of proposed plantings are not shown on the plans. The MaineDOT Landscape Architect will stake the locations of the proposed plantings in the field at the time of the planting. Contractor shall coordinate work with the Resident and MaineDOT Landscape Architect.

9. From Station 14+75 LT. to Station 15+90 LT. between the proposed edge of pavement and the clearing limit line, the following restrictions apply:

a. No grubbing beyond the limits shown on the cross sections.

b. No equipment will be permitted on vegetated areas or beyond the clearing limit line.

c. No mechanical compaction of fill materials on vegetated areas. Plate compaction is acceptable.

d. The removal of trees and other vegetation must be cut flush to the road without skidder or mechanized equipment on the site, leaving the roots in place.

10. Loam shall be placed to a nominal depth of 2 in. on all new or reconstructed sideslopes unless otherwise shown on the plans or as directed by the Resident. Traditional loam may not be substituted for Loam Compost Mix. All seeding called for on the plans shall be Special Seed Mix.

11. Erosion Control Mix may be substituted in those areas normally receiving loam and seed as directed by the resident. Placement shall be in accordance with Standard Specifications Section 619, Mulch. Payment will be made under Item Number 619.14, Erosion Control Mix.

12. A MASH Compliant guardrail end treatment shall be installed concurrently with the placement of each section of end beam guardrail.

13. Extended Use Erosion Control Blankets, seeded gutters, riprap downspouts, and other gutters lined with Stone Ditch Protection shall be constructed after paving and shoulder work is completed, where it is apparent that runoff will cause continual erosion. Payment will be made under the appropriate Contract Items.

14. Protective Coating for Concrete Surfaces shall be applied to the following areas:

All exposed surfaces of concrete curbs,
All surfaces of fascias panels,
All exposed surfaces of Concrete Transition Barriers,
Top of abutment backwalls and to one foot below the top of backwalls on the back side, and roadway face to one foot below roadway grade.

15. The exposed exterior face and bottom of the NEBT Girders 1 and 5 shall be coated with a Pigmented Protective Coating for Concrete Surfaces in accordance with Special Provision 515.

16. Project information referred to below may be accessed at the following MaineDOT web address: <http://www.maine.gov/mdot/contractors/>.

17. The existing bridge plans may be accessed at the MaineDOT web address. The plans are reproductions of the original drawings as prepared for the construction of the bridge. It is very unlikely that the plans will show any construction field changes or any alterations which may have been made to the bridge during its lifespan.

18. The project geotechnical report titled: Geotechnical Design Report for the Replacement of Blue Hill Falls Bridge State Route 175 over Salt Pond Outlet, MaineDOT WIN 17712 Blue Hill Falls, ME dated August 2021 may be accessed at the MaineDOT web address.

19. Geotechnical information furnished or referred to in this Plan set is for the use of the Bidders and the Contractor. No assurance is given that the information or interpretations will be representative of actual subsurface conditions at the construction site. MaineDOT will not be responsible for the Bidder's or Contractor's interpretations or conclusions drawn from the geotechnical information. The boring logs contained in the plan set present factual and interpretive subsurface information collected at discrete locations. Data provided may not be representative of the subsurface conditions between boring locations.

20. Except for portions specified to become the property of the Town, the existing bridge shall be removed by and become the property of the Contractor.

21. The Contractor shall submit a Bridge Demolition Plan to the Resident at least 60 business days prior to the start of demolition work. This plan shall outline the methods and equipment to be used to remove and dispose of all materials included in the existing bridge. The Bridge Demolition Plan shall include plans and calculations designed by a Professional Engineer in the State of Maine. No work related to the removal of the bridge shall be undertaken by the Contractor until the MaineDOT has reviewed the Bridge Demolition Plan for appropriateness and completeness. Payment for all work necessary for developing, submitting and finalizing the Demolition Plan will be considered incidental to the bridge removal pay item.

22. Quantities included for pay items measured and paid for by Lump Sum are estimated quantities and are provided by MaineDOT for informational purposes only. Lump Sum pay items will be paid for at the Contract Bid amount, with no addition or reduction in payment to the contractor if the actual final quantities are different from MaineDOT provided estimated quantities, except as follows:

a. If a Lump Sum pay item is eliminated, the requirements of Standard Specifications Section 109.2, Elimination of Items will take precedence.

b. If other Contract Documents specifically allow a change in payment for Lump Sum pay item, those requirements will be followed.

c. If a design change results in changes to estimated quantities for Lump Sum pay items, price and adjustments will be made in accordance with Standard Specifications Section 109.7, Equitable Adjustments to Compensation and Time.

23. No existing drainage shall be abandoned, removed or plugged without prior approval of the Resident.

24. Gravel entrances shall be constructed with 14 in. Aggregate Subbase Course Gravel.

25. A 3 ft. Paved lip shall be placed at all unpaved entrances unless otherwise noted on the plans or directed by the Resident.

26. Remove and reset, and remove and dispose of signs shall be performed in accordance with section 645 - Highway Signing and as directed by the Resident. Payment will be incidental to related Contract Items.

27. Work required to remove and relocate the Stone Pillars shown on the plans shall be incidental to the contract. Final location to be determined by the Resident.

28. Work required to remove and dispose the Stone Chimney shall be incidental to the contract.

29. Prior to any work in the waterway, contact the Coast Guard at least 30 days prior to commencement to allow for review of construction plans and determination of other requirements for work over the navigable channel.

a. If this project will require waterborne equipment, water closures/restrictions or safety zones, requests must be made a minimum of 90 days in advance. Please contact Jeffrey Stieb, Bridge Management Specialist, at 617-113-8364 (w) or 781-901-0348 (m) if waterway closures will be required.

b. Refer to USCG Permit and conditions for additional information.

30. The Contractor shall repair and repoint the granite masonry stones at Abutment 2 prior to commencing coring and micropile installation work. Additional stones that become loose during coring and micropile installation work shall be repaired as directed by MaineDOT and will be measured for payment.

31. Minor repairs to the Hales Hill Road Bridge shall be completed by the Contractor prior to detouring traffic away from the Falls Bridge project site. A 14' travel lane shall be maintained at all times along Hales Hill Road bridge and approaches. Repairs will be directed by the Resident and paid for using hourly and quantity based items. Repairs are anticipated to include:

a. 518.60 Repair of Vertical Surfaces < 8 inches (10 SF)
b. 518.70 Repair of Overhead Surfaces < 8 inches (20 SF)

SHEET NUMBER 3 OF 70	BLUE HILL FALLS BRIDGE SALT POND OUTLET BLUE HILL HANCOCK COUNTY				PROJ. MANAGER	A. Lathé	BY	DATE
					DESIGN-DETAILED	A. Sweet	E. Raymond	09/21
					CHECKED-REVIEWED	L. Driscoll	T. Cote	
					DESIGN2-DETAILED2	-	-	SIGNATURE
					DESIGN3-DETAILED3	-	-	
					REVISIONS 1	-	-	P.E. NUMBER
					REVISIONS 2	-	-	
					REVISIONS 3	-	-	
					REVISIONS 4	-	-	DATE
					FIELD CHANGES	-	-	
STATE OF MAINE DEPARTMENT OF TRANSPORTATION STP-1771(200)X WIN 17712.00 Bridge No. 5038 BRIDGE PLANS								

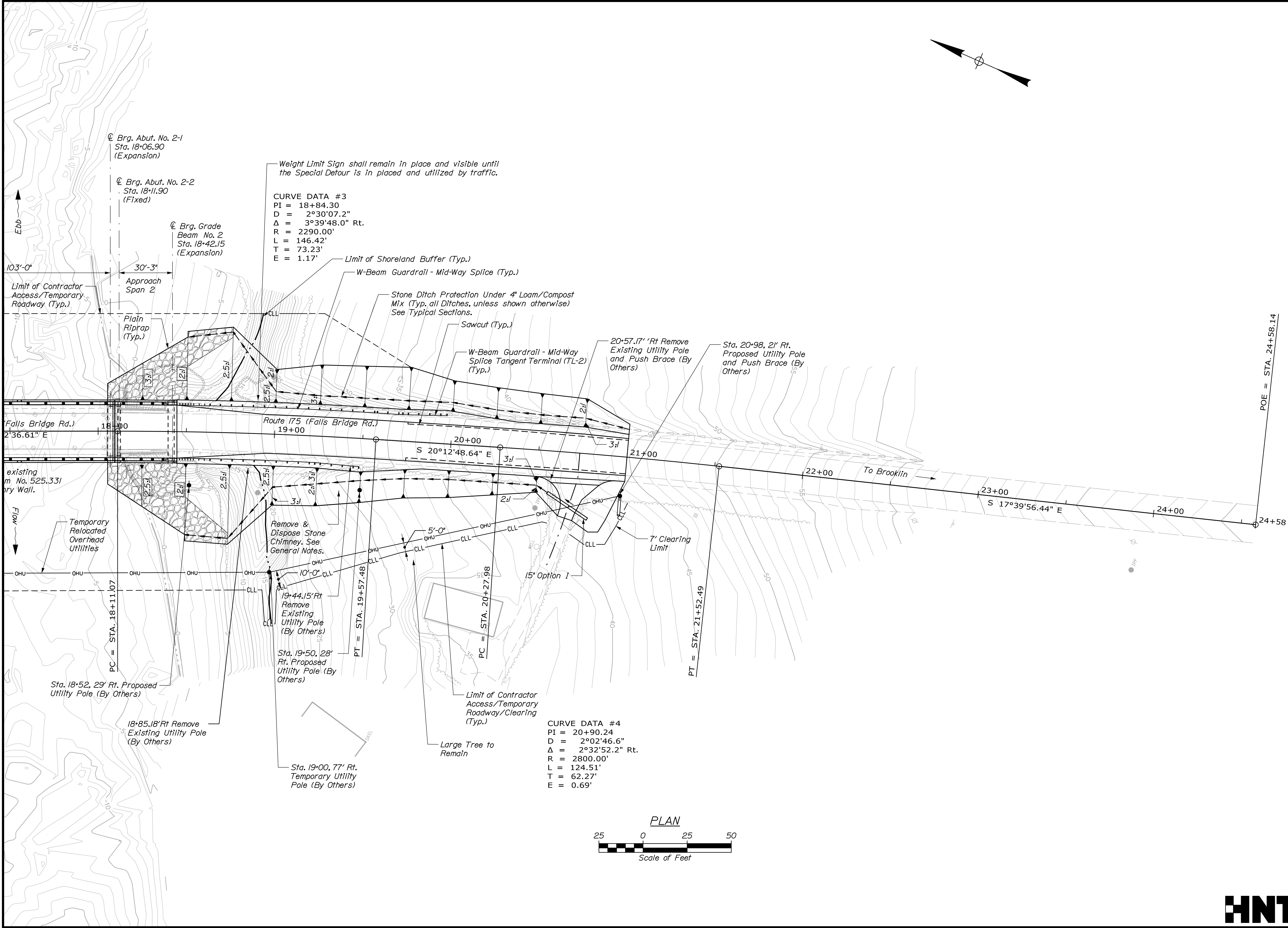


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Division:

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							P.E. NUMBER	
								DATE
STP-1771(200)X								
WIN 17712.00								
Bridge No. 5038								
BRIDGE PLANS								

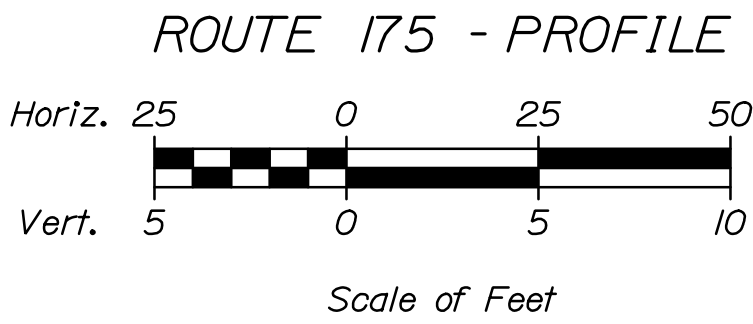
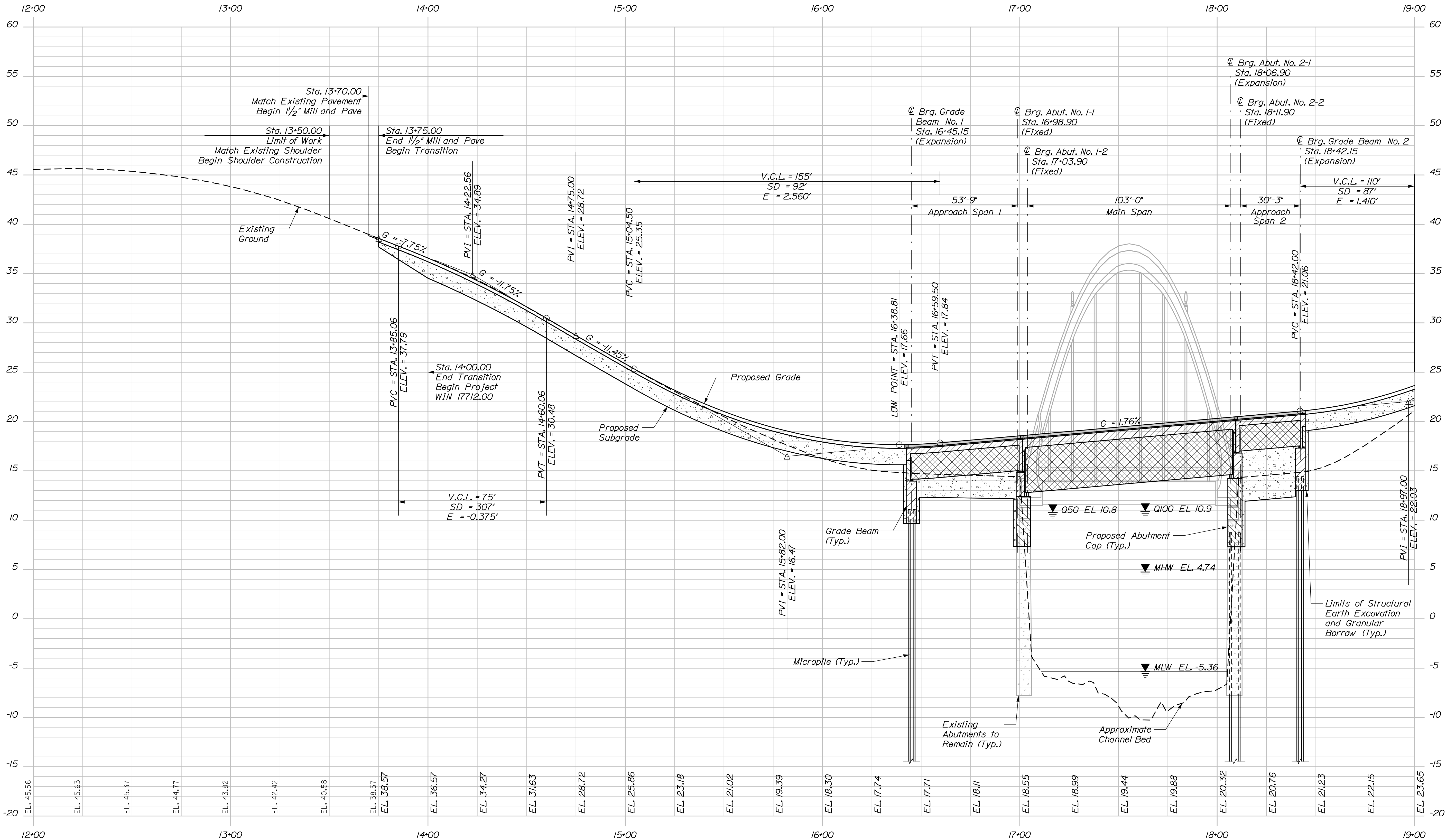
SHEET NUMBER 5 OF 70	BLUE HILL FALLS BRIDGE SALT POND OUTLET HANCOCK COUNTY					PROJ. MANAGER		A. Letha	BY	DATE
	BLUE HILL GENERAL PLAN 2					DESIGN-DETAILED	E. Raymond	E. Raymond	09/21	SIGNATURE
						CHECKED-REVIEWED	A. Sweet	T. Cole	09/21	
						DESIGN2-DETAILED2	-	-	-	
						DESIGN3-DETAILED3	-	-	-	
						REVISIONS 1	-	-	-	P.E. NUMBER
						REVISIONS 2	-	-	-	
						REVISIONS 3	-	-	-	
						REVISIONS 4	-	-	-	
						FIELD CHANGES	-	-	-	DATE

Date: 9/28/2021

Username:

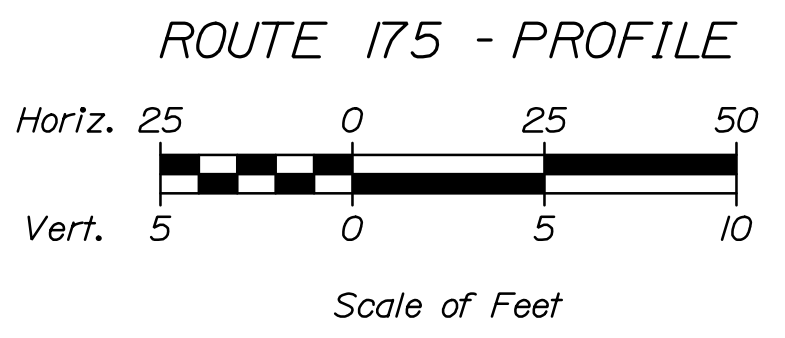
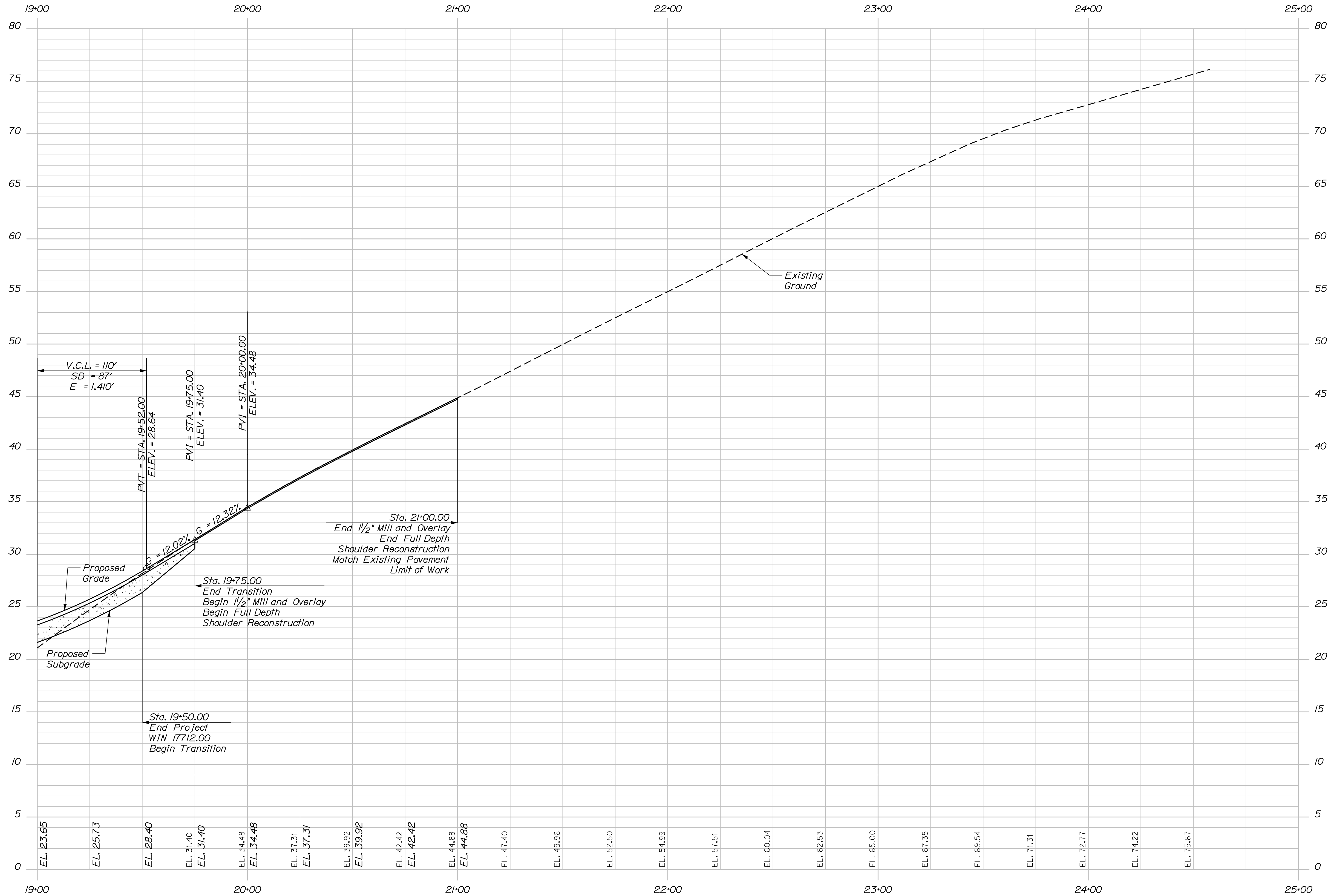
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HNTB

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		STP-1771(200)X		WIN		BRIDGE PLANS	
BLUE HILL FALLS BRIDGE		SALT POND OUTLET		HANTCOCK COUNTY		PROFILE 1		SHEET NUMBER	
BLUE HILL		HANTCOCK COUNTY		DATE		P.E. NUMBER		6	
DESIGNED		CHECKED		DESIGNED		REVISIONS 1		OF 70	
BY		DATE		SIGNATURE		REVISIONS 2			
A. Lathe		09/21		E. Raymond		REVISIONS 3			
E. Raymond		09/21		T. Cote		REVISIONS 4			
T. Cote						FIELD CHANGES			



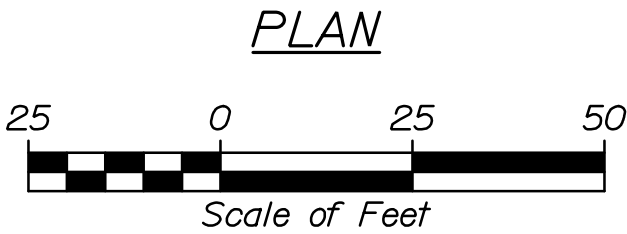
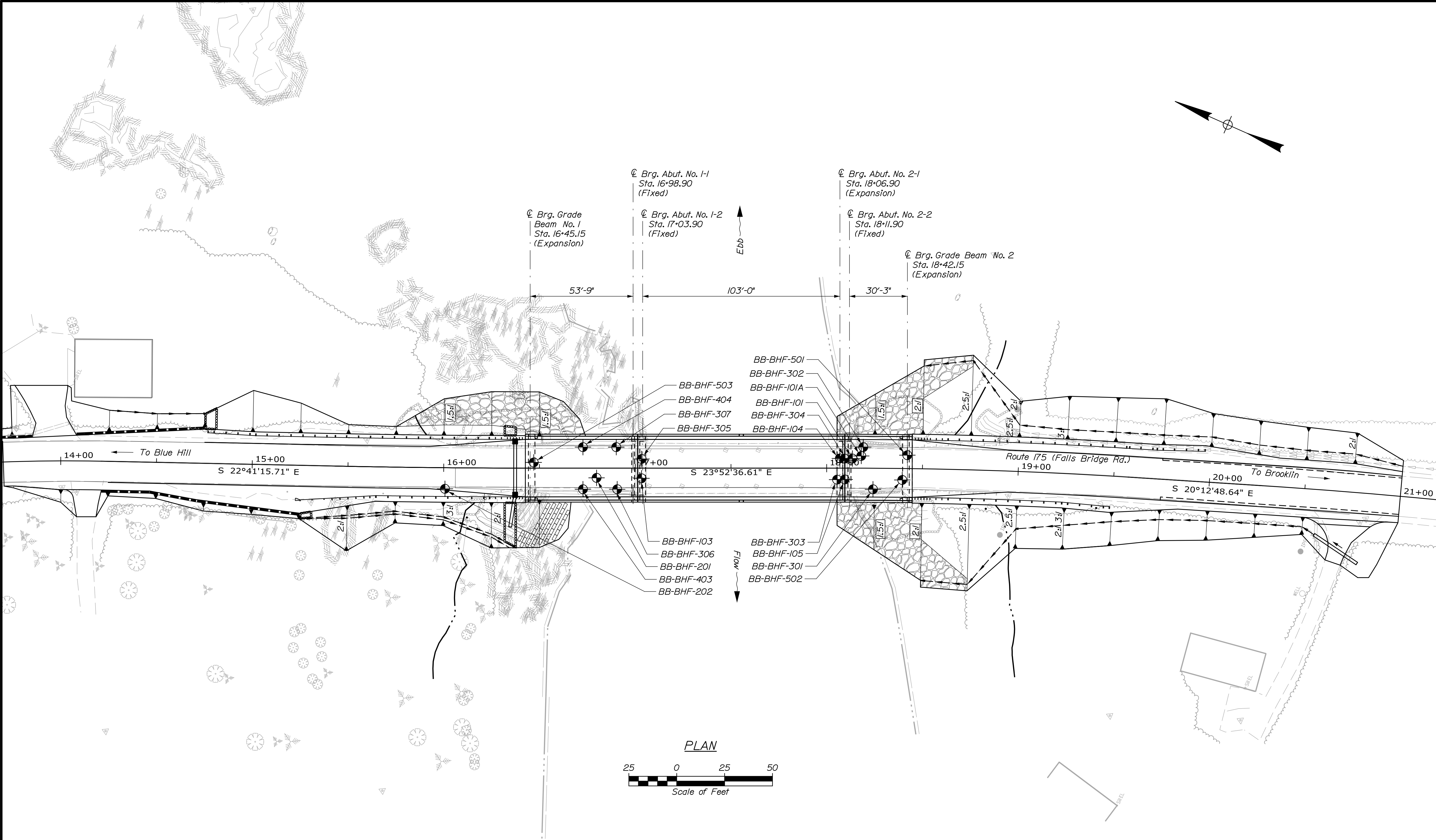
BLUE HILL FALLS BRIDGE SALT POND OUTLET BLUE HILL HANCOCK COUNTY
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Date:9/28/2021

Username:

Division:

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LEGEND

⊕ CASED WASH BORING



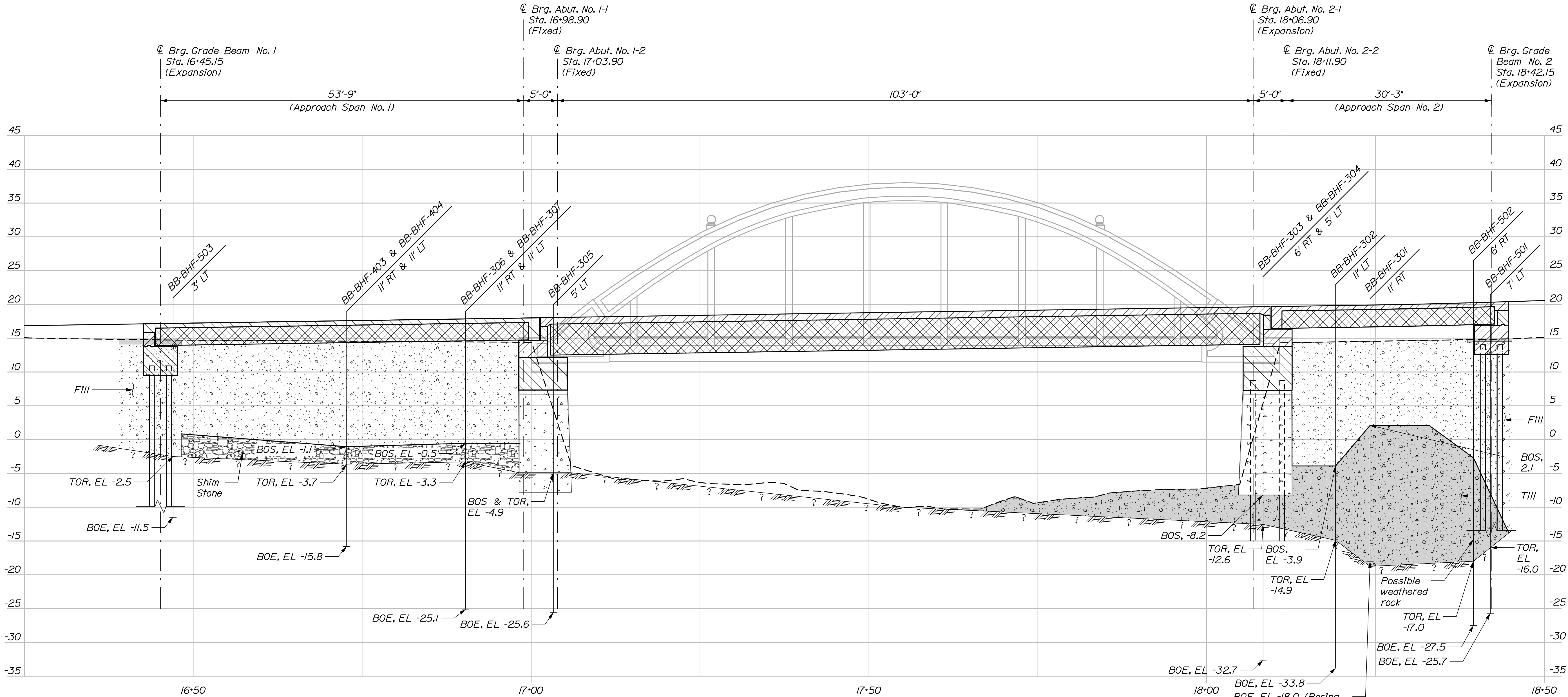
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	SIGNATURE		
	P.E. NUMBER		
STP-1771(200)X	DATE		
WIN	DATE		
17712.00	DATE		
Bridge No. 5038	DATE		
BRIDGE PLANS			

BLUE HILL FALLS BRIDGE SALT POND OUTLET BLUE HILL HANCOCK COUNTY	PROJ. MANAGER A. LaRue	BY H. Walton T. Cote	DATE 09/21 09/21
BORING LOCATION PLAN	CHECKED-DETAILED	H. Walton	09/21
	CHECKED-REVIEWED	K. Broyles	
	DESIGN-DETAILED		
	DESIGN-DETAILED		
	DESIGN-DETAILED		
SHEET NUMBER	8		
OF 70			

Date:9/28/2021

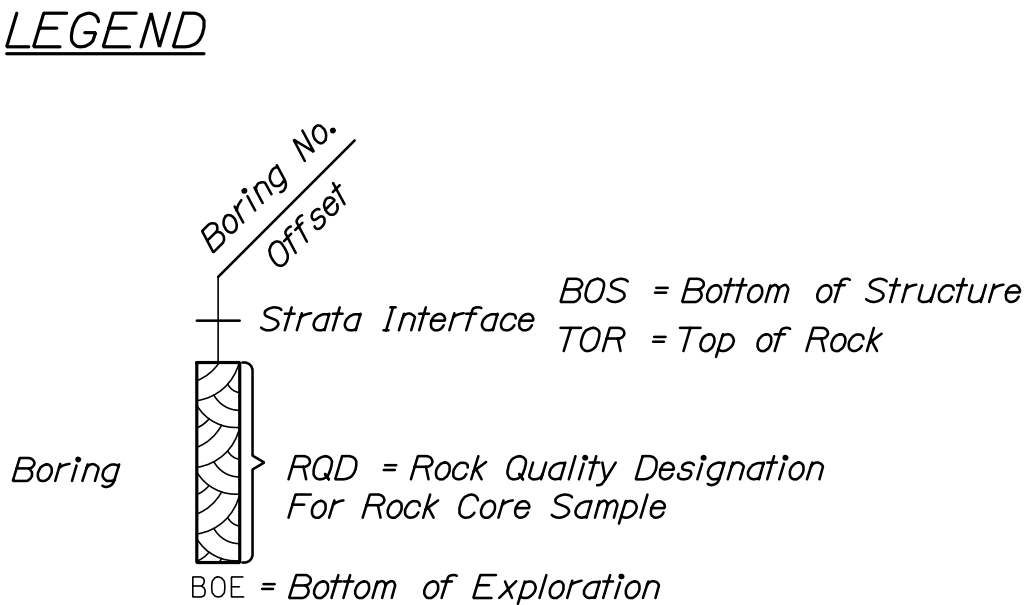
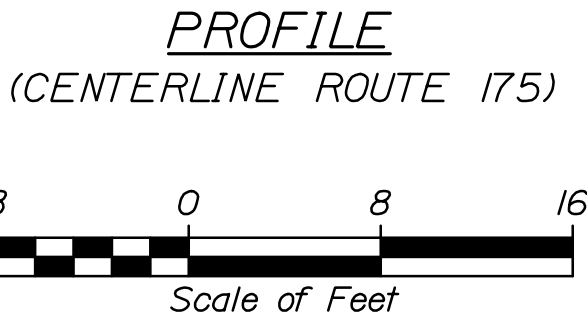
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NOTES:

1. This generalized interpretive soil profile is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and have been developed by interpretations of widely spaced explorations and samples. Actual soil transitions may vary and are probably more erratic. For more specific information refer to the exploration logs.
2. The borings that occur at the same station with different offsets have been averaged for the purpose of this profile.



[illegible]

Maine Department of Transportation										Project: Blue Hill Falls Bridge #6039		Boring No.: BB-BHF-101A	
Soil/Bank Exploration Log US CUSTOMARY UNITS										Location: Blue Hill, Maine		WIN: 17712-00	
Driller's Name:		MainDOT		Elevation (ft.):		14.9		Auger ID/DB:		5" Split Stem			
Operator:		Giguere/Giles		Datum:		NAVE88		Sampler:		Standard Split Spoon			
Logged By:		B. Wileor		Rtg Type:		DM-450		Hammer Wt./Fall:		140w/30"			
Date Start/Finish:		12/30/10-1/3/11		Drilling Method:		Cased Shown Boring		Core Barrel:		ND-3"			
Boring Location:		5+12.6, 6.4 L.R.		Casing ID/DB:		HW & NW		Water Level:		None Observed			
Hammer Efficiency Factor: 0.84				Hammer Type:		Automatic () Hydraulic ()		Rod & Cathod ()					
Soil Test Notes: S = Split Spoon Sample M = Successful Split Spoon Sample Interval U = This Well Tube Sample N = Unsuccessful Split Well Tube Sample Interval V = Field Note Sheet Taken W = Unsuccessful Field Note Sheet Taken				S = Top Core Sample SSA = Split Stem Auger SS = Split Stem Auger R = Reiller Core RD = Weight of 140lb. Hammer RDW = Weight of Rod or Casing N = Hammer Efficiency Factor (0.84) (0.84) (0.84)				S = Split Stem Sample SSA = Split Stem Auger SS = Split Stem Auger R = Reiller Core RD = Weight of 140lb. Hammer RDW = Weight of Rod or Casing N = Hammer Efficiency Factor (0.84) (0.84) (0.84)					
Soil Information													
Depth (ft.)	Soil No.	Pen. (lb./in.)	Soil Depth (ft.)	Soil Description and Remarks	Laboratory Testing Results/ASD/10 and Unified Class.								
0													
5													
10	MD	6/0	9.00 - 9.50	50(6")	---								
15													
20	1D	24/12	16.00 - 18.00	3/6/33/7	39 55								
25	2D	24/15	19.00 - 21.00	5/10/15/11	25 35								
30													
35	R1	60/60	28.70 - 33.70	R2D = 13%	No								
40													
45													
50													
Bottom of Exploration at 38.7 feet below ground surface.													
Stratification lines represent approximate boundaries between soil types. Transitions may be gradual.													
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.													
Boring No.: BB-BHF-101A													

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Maine Department of Transportation Soil/Slope Erosion Log US CUSTOMARY UNITS				Project: Blue Hill Fells Bridge #9038 Carries Route 175 over Soil-Pan Location: Blue Hill, Maine		Boring No.: BB-BHF-103	
				WIN:		17712.00	
Driller's: Method		Elevation (ft.):	14.5	Auger ID/OD:		N/A	
Operator: Giguere/Giles		Datum: NAVD83		Sampler:		N/A	
Logged by: B. Wiler		Rip Type:	CMC 45C	Monorail Wt./ft (lb):		N/A	
Date Started/Finish: 12/2/10, 08:30-14:00		Drilling Method: N/A		Core Barrels:		BX	
Boring Location: 3198.2, 5.3, R1		Casing ID/OD:		Motor Level(s):			
Header Efficiency Factors Definitions: R = Soil/Slope Sample S = Solid Spoon Sample SS = Solid Spoon Sample T = Thin Wall Tube Sample U = Unconsolidated Thin Wall Tube Sample V = Field Van Shear Test, P = Pocket Penetrometer W = Unconsolidated Thin Wall Tube Sample X = Unconsolidated Thin Wall Tube Sample Y = Unconsolidated Thin Wall Tube Sample Z = Unconsolidated Thin Wall Tube Sample				Header Type ☐ Automatic ☐ Hydraulic ☐ Rod & Cathode ☐ Notes: R = Rod & Cathode S = Solid Spoon Sample SS = Solid Spoon Sample T = Thin Wall Tube Sample U = Unconsolidated Thin Wall Tube Sample V = Field Van Shear Test, P = Pocket Penetrometer W = Unconsolidated Thin Wall Tube Sample X = Unconsolidated Thin Wall Tube Sample Y = Unconsolidated Thin Wall Tube Sample Z = Unconsolidated Thin Wall Tube Sample			
Sample Information Sample No. Date Time Depth (ft.) Elevation (ft.) Sample Depth (ft.) Sample ID Sample Description and Remarks Laboratory Testing Results AASHTO and Unified Classification				Sample Information Sample No. Date Time Depth (ft.) Elevation (ft.) Sample Depth (ft.) Sample ID Sample Description and Remarks Laboratory Testing Results AASHTO and Unified Classification			
R1: CONCRETE. R1CORE Times (min:sec) 0:0-0:0 (ft 1845) 1:0-2:0 (ft 1610) 2:0-2:1 (ft 1130) 85% Recovery Core Blotted R2: CONCRETE R2CORE Times (min:sec) 2:1-2:1 (ft 1020) 3:1-4:1 (ft 1310) 4:1-5:1 (ft 1310) 5:1-6:1 (ft 1415) 6:1-7:1 (ft 1415) 7:1-8:1 (ft 1415) 8:1-9:1 (ft 1415) 9:1-10:1 (ft 1415) 10:1-11:1 (ft 1415) 11:1-12:1 (ft 1415) 95% Recovery				R1: CONCRETE. R1CORE Times (min:sec) 0:0-0:0 (ft 1845) 1:0-2:0 (ft 1610) 2:0-2:1 (ft 1130) 85% Recovery Core Blotted R2: CONCRETE R2CORE Times (min:sec) 2:1-2:1 (ft 1020) 3:1-4:1 (ft 1310) 4:1-5:1 (ft 1310) 5:1-6:1 (ft 1415) 6:1-7:1 (ft 1415) 7:1-8:1 (ft 1415) 8:1-9:1 (ft 1415) 9:1-10:1 (ft 1415) 10:1-11:1 (ft 1415) 11:1-12:1 (ft 1415) 95% Recovery			
R3: GRANITE BLOCKS. R3CORE Times (min:sec) 1:1-1:1 (ft 1415) 85% Recovery 1:1-2:1 (ft 1415) 2:1-3:1 (ft 1415) 3:1-4:1 (ft 1415) 4:1-5:1 (ft 1415) 5:1-6:1 (ft 1415) 6:1-7:1 (ft 1415) 7:1-8:1 (ft 1415) 8:1-9:1 (ft 1415) 9:1-10:1 (ft 1415) 10:1-11:1 (ft 1415) 11:1-12:1 (ft 1415) 95% Recovery				R3: GRANITE BLOCKS. R3CORE Times (min:sec) 1:1-1:1 (ft 1415) 85% Recovery 1:1-2:1 (ft 1415) 2:1-3:1 (ft 1415) 3:1-4:1 (ft 1415) 4:1-5:1 (ft 1415) 5:1-6:1 (ft 1415) 6:1-7:1 (ft 1415) 7:1-8:1 (ft 1415) 8:1-9:1 (ft 1415) 9:1-10:1 (ft 1415) 10:1-11:1 (ft 1415) 11:1-12:1 (ft 1415) 95% Recovery			
R4: GRANITE BLOCKS. R4CORE Times (min:sec) 1:1-1:1 (ft 1415) 85% Recovery 1:1-2:1 (ft 1415) 2:1-3:1 (ft 1415) 3:1-4:1 (ft 1415) 4:1-5:1 (ft 1415) 5:1-6:1 (ft 1415) 6:1-7:1 (ft 1415) 7:1-8:1 (ft 1415) 8:1-9:1 (ft 1415) 9:1-10:1 (ft 1415) 10:1-11:1 (ft 1415) 11:1-12:1 (ft 1415) 95% Recovery				R4: GRANITE BLOCKS. R4CORE Times (min:sec) 1:1-1:1 (ft 1415) 85% Recovery 1:1-2:1 (ft 1415) 2:1-3:1 (ft 1415) 3:1-4:1 (ft 1415) 4:1-5:1 (ft 1415) 5:1-6:1 (ft 1415) 6:1-7:1 (ft 1415) 7:1-8:1 (ft 1415) 8:1-9:1 (ft 1415) 9:1-10:1 (ft 1415) 10:1-11:1 (ft 1415) 11:1-12:1 (ft 1415) 95% Recovery			
R5: GRANITE BLOCKS. R5CORE Times (min:sec) 1:1-1:1 (ft 1415) 85% Recovery 1:1-2:1 (ft 1415) 2:1-3:1 (ft 1415) 3:1-4:1 (ft 1415) 4:1-5:1 (ft 1415) 5:1-6:1 (ft 1415) 6:1-7:1 (ft 1415) 7:1-8:1 (ft 1415) 8:1-9:1 (ft 1415) 9:1-10:1 (ft 1415) 10:1-11:1 (ft 1415) 11:1-12:1 (ft 1415) 95% Recovery				R5: GRANITE BLOCKS. R5CORE Times (min:sec) 1:1-1:1 (ft 1415) 85% Recovery 1:1-2:1 (ft 1415) 2:1-3:1 (ft 1415) 3:1-4:1 (ft 1415) 4:1-5:1 (ft 1415) 5:1-6:1 (ft 1415) 6:1-7:1 (ft 1415) 7:1-8:1 (ft 1415) 8:1-9:1 (ft 1415) 9:1-10:1 (ft 1415) 10:1-11:1 (ft 1415) 11:1-12:1 (ft 1415) 95% Recovery			
R6: GRANITE BLOCKS. R6CORE Times (min:sec) 1:1-1:1 (ft 1415) 85% Recovery 1:1-2:1 (ft 1415) 2:1-3:1 (ft 1415) 3:1-4:1 (ft 1415) 4:1-5:1 (ft 1415) 5:1-6:1 (ft 1415) 6:1-7:1 (ft 1415) 7:1-8:1 (ft 1415) 8:1-9:1 (ft 1415) 9:1-10:1 (ft 1415) 10:1-11:1 (ft 1415) 11:1-12:1 (ft 1415) 95% Recovery				R6: GRANITE BLOCKS. R6CORE Times (min:sec) 1:1-1:1 (ft 1415) 85% Recovery 1:1-2:1 (ft 1415) 2:1-3:1 (ft 1415) 3:1-4:1 (ft 1415) 4:1-5:1 (ft 1415) 5:1-6:1 (ft 1415) 6:1-7:1 (ft 1415) 7:1-8:1 (ft 1415) 8:1-9:1 (ft 1415) 9:1-10:1 (ft 1415) 10:1-11:1 (ft 1415) 11:1-12:1			

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SHEET NUMBER		11		OF 70	
BLUE HILL FALLS BRIDGE		BLUE HILL		HANCOCK COUNTY	
SALT POND OUTLET					
BORING LOGS II					
PROJ. MANAGER	A. Lethin	BY	DATE		
DESIGN-DETAILED	K. Reidy	P. Bishop	09/21		
CHECKED-REVIEWED	H. Walton	T. Cote	09/21	SIGNATURE	
DESIGN-DETAILED2	-	-	-		
DESIGN-DETAILED3	-	-	-		
REVISIONS 1	-	-	-	P.E. NUMBER	
REVISIONS 2	-	-	-		
REVISIONS 3	-	-	-		
REVISIONS 4	-	-	-	DATE	
FIELD CHANGES	-	-	-		
STATE OF MAINE			BRIDGE PLANS		
DEPARTMENT OF TRANSPORTATION			WIN		
STP-1771(200)X			17712.00		
Bridge No. 5038					

		PROJECT: MaineDOT Blue Hill Falls Bridge				Boring No.: BB-BHF-201	
		LOCATION: Blue Hill, Maine				WIN: 17712.00	
Driller: New England Boring Contractors		Elevation (ft.): 14.5 (est'd)				Core Bore(s): N02 (wireline)	
Operator: Schoenwald / Titus / Royal		Datum: NADA				Sampler: standard split+spoon	
Logged By: Schoenwald		Rig Type: Mobile Drill B-53 (track)				Hammer Wt./Fall: 140 lbs / 30 in	
Date Start/Finish: 4/24/17: 0800-1530		Drilling Method: coiled wash boring				Hammer Type: rope and cathead	
Boring Location: station 3414, 1 ft RT		Casing ID/OD: 18 to 15 ft NW (approx) to 18.5 ft				Hammer Efficiency: 0.6	
		Auger ID/OD: 55A to 5 ft				Water Level(s): ---	
TESTING SAMPLING AND TESTING:		ADDITIONAL TESTS/NOTES:				SPECIAL COMMENTS/NOTES:	
p = Split Spoon Sample		N _{uncorrected} = N value				Standard Error (SE) = 1.0	
q = uncorrected Split Spoon Sample strength		N ₆₀ = N value corrected for hammer efficiency				Standard Error (SE) = 1.0	
u = Thin Wall Tube Sample		LLiquid Limit / PLPlastic Limit / PIPlasticity Index				Standard Error (SE) = 1.0	
q = uncorrected Thin Wall Tube Sample strength		N ₆₀ = N value corrected for hammer efficiency				Standard Error (SE) = 1.0	
v = Thin Wall Shear Test		N ₆₀ = N value corrected for hammer efficiency				Standard Error (SE) = 1.0	
N = Standard Penetration Test		N ₆₀ = N value corrected for hammer efficiency				Standard Error (SE) = 1.0	
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Maine Department of Transportation				Project: Blue Hill Falls Bridge #583 Route 175 over Soil Pond Location: Blue Hill, Maine				Boring No.: BB-BHF-305			
Soil/Rock Exploration Log US CUSTOMARY UNITS								WIN: 17712.00			
Driller: New England Boring Contractors		Elevation (ft.): 14.4 ft (test d)		Age: 10/00:		n/a		Sampler:		n/a	
Operator: Schonefeld / Titus		Datum: NAVD88		Home: Wt./Fall:		n/a		Core Barrel:		100' wireline core d	
Logged By: Schonefeld		Rig Type: MOD16 DPT11 BPS TIGOR INESC 485-24		Water Levels:		100' wireline connection					
Date Start/Finish: 5/18/2018 0840 - 5/18/2018 1245		Drilling Method: NO wireline coring									
Boring Location: Sta. 17+5.3, 4.8 ft LT		Coring 10/00: NO rods (2.58"/2.75")									
Home: Efficiency Factor		Home: Type:		Home: Type:		Home: Type:					
1 = Split Spoon Sample 2 = Unconsolidated Soil Spoon Sample 3 = Thin Soil Tube Sample 4 = Unconsolidated Thin Soil Tube Sample 5 = Thin Soil Tube Sample 6 = Consolidated Soil Tube Sample 7 = Thin Soil Tube Sample 8 = Thin Soil Tube Sample 9 = Thin Soil Tube Sample 10 = Thin Soil Tube Sample 11 = Thin Soil Tube Sample 12 = Thin Soil Tube Sample 13 = Thin Soil Tube Sample 14 = Thin Soil Tube Sample 15 = Thin Soil Tube Sample 16 = Thin Soil Tube Sample 17 = Thin Soil Tube Sample 18 = Thin Soil Tube Sample 19 = Thin Soil Tube Sample 20 = Thin Soil Tube Sample 21 = Thin Soil Tube Sample 22 = Thin Soil Tube Sample 23 = Thin Soil Tube Sample 24 = Thin Soil Tube Sample 25 = Thin Soil Tube Sample 26 = Thin Soil Tube Sample 27 = Thin Soil Tube Sample 28 = Thin Soil Tube Sample 29 = Thin Soil Tube Sample 30 = Thin Soil Tube Sample 31 = Thin Soil Tube Sample 32 = Thin Soil Tube Sample 33 = Thin Soil Tube Sample 34 = Thin Soil Tube Sample 35 = Thin Soil Tube Sample 36 = Thin Soil Tube Sample 37 = 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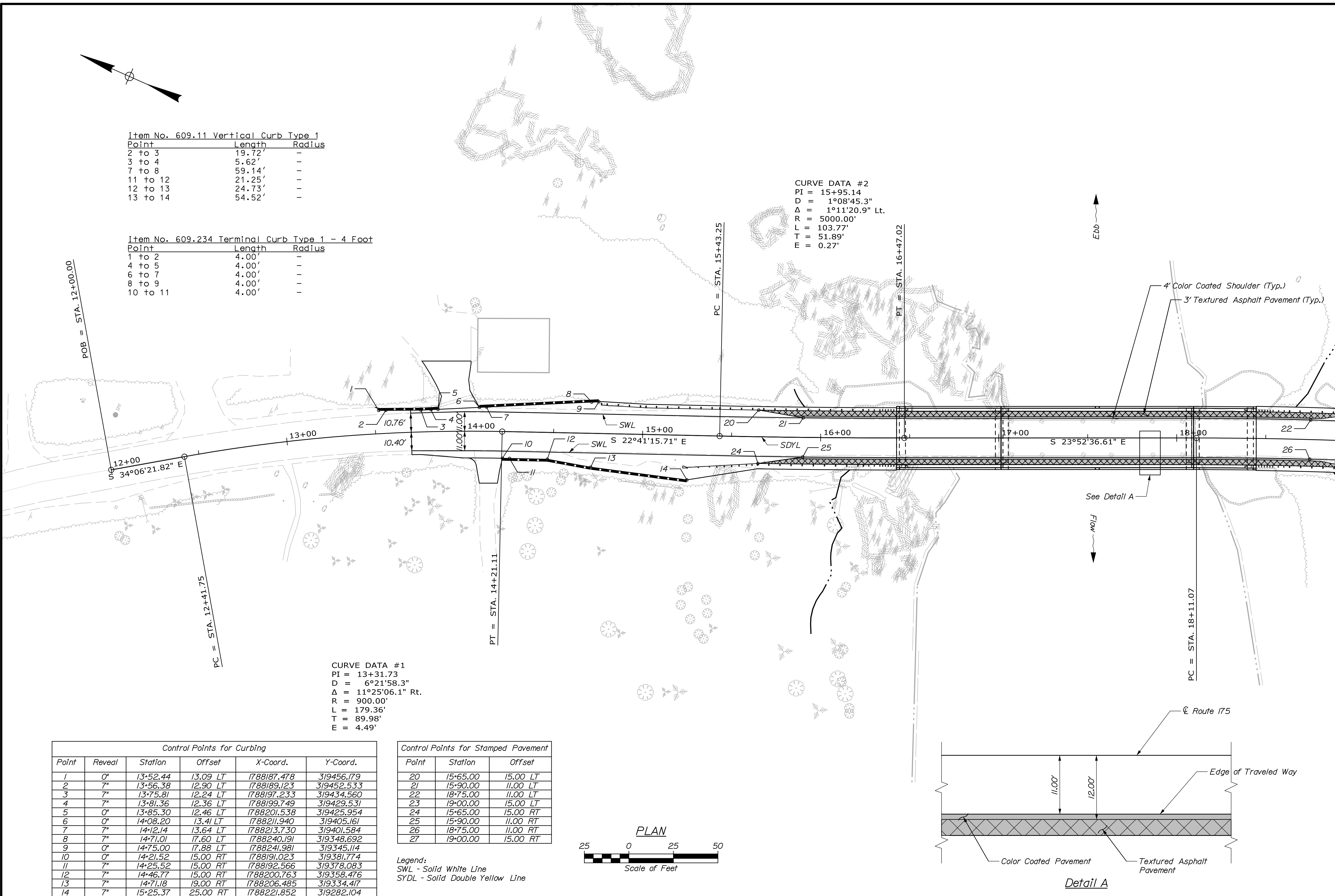
Maine Department of Transportation Salt/Rock Exploration Log US CUSTOMARY UNITS		Project:Blue Hill Falls Bridge #503 Route 175 over Salt Pond Location: Blue Hill, Maine		Boring No.: BB-BHF-307 WIN: 17712.00	
Operator: New England Boring Contractors Elevation (ft.): 15.1 ft (last'd)		Datum: NAVD83		Auger ID/OD: n/a	
Operator: Enos/Lovefield		Sonar: n/a		Sampler: n/a	
Logged By: Schonwald		Rig Type: MODTIE DPT11 B-53 INBC ATY RIG		Homeer Wt./Fall: n/a	
Date Start/Finish: 5/20/201815 - 5/20/20181200		Drilling Method: NO wireline coring		Core Barrel: NO WPT/THS CORB DR	
Boring Location: Sta. 16+90.5, 11.0 ft LT		Casing ID/OD: NO rods (2.38"/2.75")		Water Level#: no data	
Homeer Efficiency Factor: 1		Homeer Type: Automatic GS Hydraulic GS		Rope & Cathode: 1	
Definitions: S = Soil Core Sample SS = Solid Shear Auger MS = Unconsolidated Soil U = Thin Wall Tube Sample MS = Unconsolidated Thin Wall Tube Sample W = Field Vane Shear Test, PP = Pocket Penetrometer W = Unconsolidated Thin Wall Tube Sample W = Unconsolidated Thin Wall Tube Sample		S = Soil Core Sample SS = Solid Shear Auger MS = Unconsolidated Soil U = Thin Wall Tube Sample MS = Unconsolidated Thin Wall Tube Sample W = Field Vane Shear Test, PP = Pocket Penetrometer W = Unconsolidated Thin Wall Tube Sample W = Unconsolidated Thin Wall Tube Sample		S = Soil Core Sample SS = Solid Shear Auger MS = Unconsolidated Soil U = Thin Wall Tube Sample MS = Unconsolidated Thin Wall Tube Sample W = Field Vane Shear Test, PP = Pocket Penetrometer W = Unconsolidated Thin Wall Tube Sample W = Unconsolidated Thin Wall Tube Sample	
Sample Information		Sample Information		Sample Information	
Depth (ft.)		Sample No.		Sample No.	
R1		60/58		60/58	
0.0 - 5.0		R02: not apply		R02: not apply	
R2		63/58		63/58	
5.0 - 10.3		R02: not apply		R02: not apply	
R3		55/49		55/49	
10.3 - 14.3		R02: not apply		R02: not apply	
R4		72/54		72/54	
14.3 - 20.9		R02: not apply		R02: not apply	
R4A		43/43		43/43	
17.0 - 20.6		R02: 26" = 61% BDR		R02: 26" = 61% BDR	
R5		60/58		60/58	
20.9 - 29.9		R02: 26" = 43%		R02: 26" = 43%	
R6		60/60		60/60	
29.9 - 30.9		R02: 50" = 83%		R02: 50" = 83%	
R7		60/54		60/54	
30.9 - 35.9		R02: 31" = 62%		R02: 31" = 62%	
Bottom of Exploration at 35.9 feet below ground surface.		Bottom of Exploration at 35.9 feet below ground surface.		Bottom of Exploration at 35.9 feet below ground surface.	
Remarks:		Remarks:		Remarks:	
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.		Stratification lines represent approximate boundaries between soil types; transitions may be gradual.		Stratification lines represent approximate boundaries between soil types; transitions may be gradual.	
* After, Low, readings have been made at time and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.		* After, Low, readings have been made at time and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.		* After, Low, readings have been made at time and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.	
Page 1 of 1		Page 1 of 1		Page 1 of 1	
Boring No.: BB-BHF-307		Boring No.: BB-BHF-403		Boring No.: BB-BHF-404	

Maine Department of Transportation Salt/Rock Exploration Log US CUSTOMARY UNITS		Project:Blue Hill Falls Bridge #503 Route 175 over Salt Pond Location: Blue Hill, Maine		Boring No.: BB-BHF-403 WIN: 17712.00	
Operator: New England Boring Contractors Elevation (ft.): 15.3 ft (last'd)		Datum: NAVD83		Auger ID/OD: n/a	
Operator: Enos/Lovefield		Sonar: n/a		Sampler: n/a	
Logged By: Schonwald		Rig Type: MODTIE DPT11 B-53 INBC ATY RIG		Homeer Wt./Fall: n/a	
Date Start/Finish: 5/22/2018105 - 5/22/20181350		Drilling Method: NO wireline coring		Core Barrel: NO WPT/THS CORB DR	
Boring Location: Sta. 16+72.7, 11.0 ft RT		Casing ID/OD: NO rods (2.38"/2.75")		Water Level#: no data	
Homeer Efficiency Factor: 1		Homeer Type: Automatic GS Hydraulic GS		Rope & Cathode: 1	
Definitions: S = Soil Core Sample SS = Solid Shear Auger MS = Unconsolidated Soil U = Thin Wall Tube Sample MS = Unconsolidated Thin Wall Tube Sample W = Field Vane Shear Test, PP = Pocket Penetrometer W = Unconsolidated Thin Wall Tube Sample W = Unconsolidated Thin Wall Tube Sample		S = Soil Core Sample SS = Solid Shear Auger MS = Unconsolidated Soil U = Thin Wall Tube Sample MS = Unconsolidated Thin Wall Tube Sample W = Field Vane Shear Test, PP = Pocket Penetrometer W = Unconsolidated Thin Wall Tube Sample W = Unconsolidated Thin Wall Tube Sample		S = Soil Core Sample SS = Solid Shear Auger MS = Unconsolidated Soil U = Thin Wall Tube Sample MS = Unconsolidated Thin Wall Tube Sample W = Field Vane Shear Test, PP = Pocket Penetrometer W = Unconsolidated Thin Wall Tube Sample W = Unconsolidated Thin Wall Tube Sample	
Sample Information		Sample Information		Sample Information	
Depth (ft.)		Sample No.		Sample No.	
R1		60/58		60/58	
0.0 - 5.0		R02: not apply		R02: not apply	
R2		60/56		60/56	
5.0 - 10.0		R02: not apply		R02: not apply	
R3		60/53		60/53	
10.0 - 15.0		R02: not apply		R02: not apply	
R4		58/39		58/39	
15.0 - 19.8		R02: not apply		R02: not apply	
R5		74/64		74/64	
19.8 - 26.0		R02: 22" = 30%		R02: 22" = 30%	
R6		36/33		36/33	
26.0 - 29.0		R02: 0" = 0%		R02: 0" = 0%	
R7		52/40		52/40	
29.0 - 33.3		R02: 4" = 8%		R02: 4" = 8%	
Bottom of Exploration at 33.3 feet below ground surface.		Bottom of Exploration at 33.3 feet below ground surface.		Bottom of Exploration at 33.3 feet below ground surface.	
Remarks:		Remarks:		Remarks:	
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.		Stratification lines represent approximate boundaries between soil types; transitions may be gradual.		Stratification lines represent approximate boundaries between soil types; transitions may be gradual.	
* After, Low, readings have been made at time and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.		* After, Low, readings have been made at time and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.		* After, Low, readings have been made at time and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.	
Page 1 of 1		Page 1 of 1		Page 1 of 1	
Boring No.: BB-BHF-403		Boring No.: BB-BHF-404		Boring No.: BB-BHF-404	

Maine Department of Transportation Salt/Rock Exploration Log US CUSTOMARY UNITS		Project:Blue Hill Falls Bridge #503 Route 175 over Salt Pond Location: Blue Hill, Maine		Boring No.: BB-BHF-404 WIN: 17712.00	
Operator: New England Boring Contractors Elevation (ft.): 15.3 ft (last'd)		Datum: NAVD83		Auger ID/OD: n/a	
Operator: Enos/Lovefield		Sonar: n/a		Sampler: n/a	
Logged By: Schonwald		Rig Type: MODTIE DPT11 B-53 INBC ATY RIG		Homeer Wt./Fall: n/a	
Date Start/Finish: 5/20/20181230 - 5/20/20181520		Drilling Method: NO wireline coring		Core Barrel: NO WPT/THS CORB DR	
Boring Location: Sta. 16+72.7, 11.0 ft LT		Casing ID/OD: NO rods (2.38"/2.75")		Water Level#: no data	
Homeer Efficiency Factor: 1		Homeer Type: Automatic GS Hydraulic GS		Rope & Cathode: 1	
Definitions: S = Soil Core Sample SS = Solid Shear Auger MS = Unconsolidated Soil U = Thin Wall Tube Sample MS = Unconsolidated Thin Wall Tube Sample W = Field Vane Shear Test, PP = Pocket Penetrometer W = Unconsolidated Thin Wall Tube Sample W = Unconsolidated Thin Wall Tube Sample		S = Soil Core Sample SS = Solid Shear Auger MS = Unconsolidated Soil U = Thin Wall Tube Sample MS = Unconsolidated Thin Wall Tube Sample W = Field Vane Shear Test, PP = Pocket Penetrometer W = Unconsolidated Thin Wall Tube Sample W = Unconsolidated Thin Wall Tube Sample		S = Soil Core Sample SS = Solid Shear Auger MS = Unconsolidated Soil U = Thin Wall Tube Sample MS = Unconsolidated Thin Wall Tube Sample W = Field Vane Shear Test, PP = Pocket Penetrometer W = Unconsolidated Thin Wall Tube Sample W = Unconsolidated Thin Wall Tube Sample	
Sample Information		Sample Information		Sample Information	
Depth (ft.)		Sample No.		Sample No.	
R1		60/48		60/48	
0.0 - 5.0		R02: not apply		R02: not apply	
R2		72/57		72/57	
5.0 - 11.0		R02: not apply		R02: not apply	
R3		60/48		60/48	
11.0 - 16.0		R02: not apply		R02: not apply	
R4		60/58		60/58	
16.0 - 21.0		R02: not apply		R02: not apply	
R4A		40/40		40/40	
17.0 - 21.0		R02: 28" = 70% BDR		R02: 28" = 70% BDR	
R5		44/43		44/43	
21.0 - 24.7		R02: 23" = 52%		R02: 23" = 52%	
R6		50/49		50/49	
24.7 - 28.9		R02: 22" = 44%		R02: 22" = 44%	
Bottom of Exploration at 28.9 feet below ground surface.		Bottom of Exploration at 28.9 feet below ground surface.		Bottom of Exploration at 28.9 feet below ground surface.	
Remarks:		Remarks:		Remarks:	
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.		Stratification lines represent approximate boundaries between soil types; transitions may be gradual.		Stratification lines represent approximate boundaries between soil types; transitions may be gradual.	
* After, Low, readings have been made at time and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.		* After, Low, readings have been made at time and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.		* After, Low, readings have been made at time and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.	
Page 1 of 1		Page 1 of 1		Page 1 of 1	
Boring No.: BB-BHF-404		Boring No.: BB-BHF-404		Boring No.: BB-BHF-404	

Maine Department of Transportation Salt/Rock Exploration Log US CUSTOMARY UNITS		Project:Blue Hill Falls Bridge #503 Route 175 over Salt Pond Location: Blue Hill, Maine		Boring No.: BB-BHF-501 WIN: 17712.00	
Operator: New England Boring Contractors Elevation (ft.): 15 ft (last'd)		Datum: NAVD83		Auger ID/OD: SSA (4.5" OD)	
Operator: Enos/Lovefield		Sonar: n/a		Sampler: standard split-spacer	
Logged By: Schonwald		Rig Type: MODTIE DPT11 B-53 INBC ATY RIG		Homeer Wt./Fall: 140 lbs / 30 inches	
Date Start/Finish: 4/20/21 0820-1330		Drilling Method: cased wash boring		Core Barrel: NO WPT/THS CORB DR	
Boring Location: Sta 18+42, 7 ft LT		Casing ID/OD: HW (4.0/4.5) / NW (3.0/3.5")		Water Level#: no data	
Homeer Efficiency Factor: 1		Homeer Type: Automatic GS Hydraulic GS		Rope & Cathode: 1	
Definitions: S = Soil Core Sample SS = Solid Shear Auger MS = Unconsolidated Soil U = Thin Wall Tube Sample MS = Unconsolidated Thin Wall Tube Sample W = Field Vane Shear Test, PP = Pocket Penetrometer W = Unconsolidated Thin Wall Tube Sample W = Unconsolidated Thin Wall Tube Sample		S = Soil Core Sample SS = Solid Shear Auger MS = Unconsolidated Soil U = Thin Wall Tube Sample MS = Unconsolidated Thin Wall Tube Sample W = Field Vane Shear Test, PP = Pocket Penetrometer W = Unconsolidated Thin Wall Tube Sample W = Unconsolidated Thin Wall Tube Sample		S = Soil Core Sample SS = Solid Shear Auger MS = Unconsolidated Soil U = Thin Wall Tube Sample MS = Unconsolidated Thin Wall Tube Sample W = Field Vane Shear Test, PP = Pocket Penetrometer W = Unconsolidated Thin Wall Tube Sample W = Unconsolidated Thin Wall Tube Sample	
Sample Information		Sample Information		Sample Information	
Depth (ft.)		Sample No.		Sample No.	
R1		60/58		60/58	
0.0 - 5.0		R02: not apply		R02: not apply	
R2		63/58		63/58	
5.0 - 10.3		R02: not apply		R02: not apply	
R3		55/49		55/49	
10.3 - 14.3		R02: not apply		R02: not apply	
R4		72/54		72/54	
14.3 - 20.9		R02: not apply		R02: not apply	
R4A		43/43		43/43	
17.0 - 20.6		R02: 26" = 61% BDR		R02: 26" = 61% BDR	
R5		60/58		60/58	
20.9 - 29.9		R02: 26" = 43%		R02: 26" = 43%	
R6		60/60		60/60	
29.9 - 30.9		R02: 50" = 83%		R02: 50" = 83%	
R7		60/54		60/54	
30.9 - 35.9		R02: 31" = 62%		R02: 31" = 62%	
Bottom of Exploration at 35.9 feet below ground surface.		Bottom of Exploration at 35.9 feet below ground surface.		Bottom of Exploration at 35.9 feet below ground surface.	
Remarks:		Remarks:		Remarks:	
Stratification lines represent approximate boundaries between soil types; transitions may be gradual.		Stratification lines represent approximate boundaries between soil types; transitions may be gradual.		Stratification lines represent approximate boundaries between soil types; transitions may be gradual.	
* After, Low, readings have been made at time and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.		* After, Low, readings have been made at time and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.		* After, Low, readings have been made at time and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.	
Page 1 of 1		Page 1 of 1		Page 1 of 1	
Boring No.: BB-BHF-501		Boring No.: BB-BHF-501		Boring No.: BB-BHF-501	

Maine Department of Transportation										Project: Blue Hill Falls Bridge #583		Boring No.: BB-BHF-503	
Soil/Bank Exploration Log										Route 175 over Soil Pond			
U.S. CUSTOMARY UNITS										Location: Blue Hill, Maine			
Drillier: New England Boring Contractors										Elevation (ft.): 15 ft (ast'd)		WATER: 17712.00	
Operator: Enow/ McQuig										Datum: NAVD88		Auger: standard split-spoon	
Logged By: Schneider										Rig Type: RMDT BPTT BPS TBMC ATTY RIG		Sampler: HW, Fails: 140 lbs / 30 inches	
Date Start/Finish: 4/19/21 0920-1430										Drilling Method: cased wash boring		Core Barrel: 102" BPTT BPS BPS	
Boring Location: Sta 16+47, 3 ft LT										Casing ID/OD: HW (4.0/4.5") x HW (3.0/3.5")		Water Levels: 17712.00	
Header Efficiency Factor: .815										Header Type: Automatic		Pipe & Method: 102" BPTT BPS BPS	
Notes:										1. 1" = 1" (1" = 1")		2. 1" = 1" (1" = 1")	
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146. 1" = 1" (1" = 1")										147. 1" = 1" (1" = 1")		148. 1"	



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1771(200)X

WIN
17712.00

BRIDGE No. 5038
BRIDGE PLANS

PROJ. MANAGER	BY	DATE
A. Lathrop	E. Raymond	09/21
E. Raymond	T. Cote	09/21

DESIGN-DETAILED	CHECKED-REVIEWED	SIGNATURE
-	-	-
DESIGN-DETAILED	-	-
REVISIONS 1	-	-
REVISIONS 2	-	-
REVISIONS 3	-	-
REVISIONS 4	-	-
FIELD CHANGES	-	-

P.E. NUMBER	DATE
-	-
-	-
-	-
-	-

BLUE HILL FALLS BRIDGE
SALT POND OUTLET
HANCOCK COUNTY
BLUE HILL
STRIPING & CURBING PLAN 1

SHEET NUMBER
16
OF 70

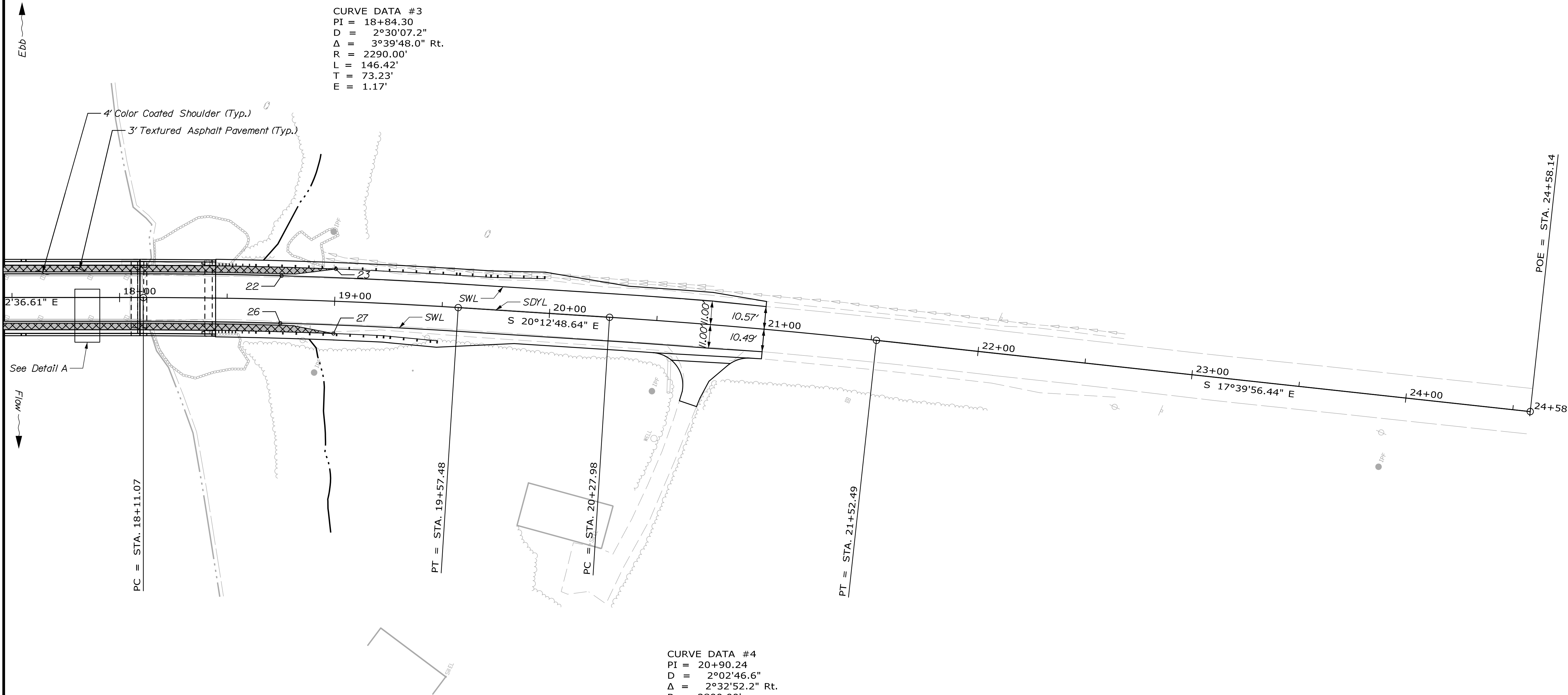


Date:9/28/2021

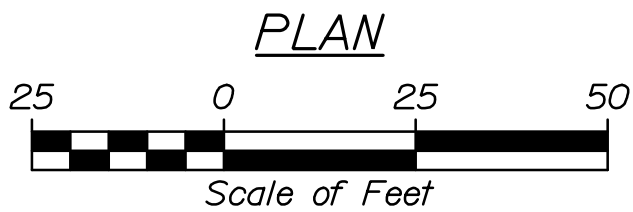
Username:

Division:

Filename: 017_StripingPlan 2.dgn



Control Points for Stamped Pavement		
Point	Station	Offset
20	15+88.00	15.00 LT
21	16+13.00	11.00 LT
22	18+75.00	11.00 LT
23	19+00.00	15.00 LT
24	15+88.00	15.00 RT
25	16+13.00	11.00 RT
26	18+75.00	11.00 RT
27	19+00.00	15.00 RT



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP-1771(200)X

BRIDGE No. 5038
WIN
17712.00
BRIDGE PLANS

PROJ. MANAGER	A. Lotth	BY	DATE
CHECKED-DESIGNED	E. Raymond	E. Raymond	09/21
CHECKED-REVIEWED	A. Sweet	T. Cote	09/21
DESIGN-DETAILED	-	-	-
DESIGN-DETAILED	-	-	-
REVISIONS 1	-	-	-
REVISIONS 2	-	-	-
REVISIONS 3	-	-	-
REVISIONS 4	-	-	-
FIELD CHANGES	-	-	-

BLUE HILL FALLS BRIDGE
SALT POND OUTLET
HANCOCK COUNTY
BLUE HILL

STRIPING & CURBING PLAN 2

SHEET NUMBER

17

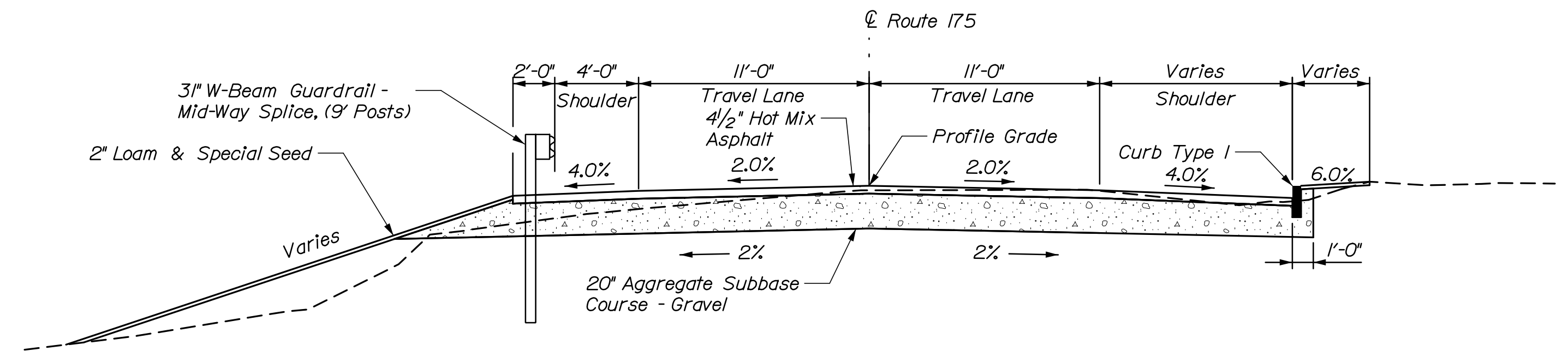
OF 70

Date:9/28/2021

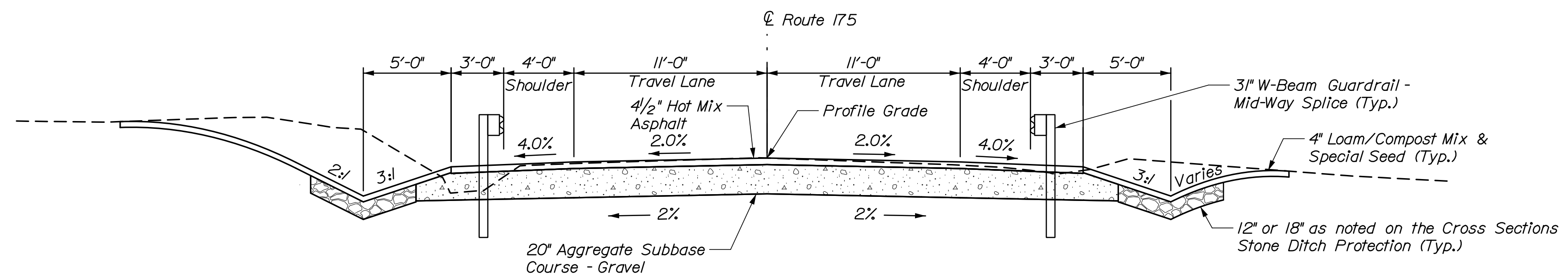
Username:

Division:

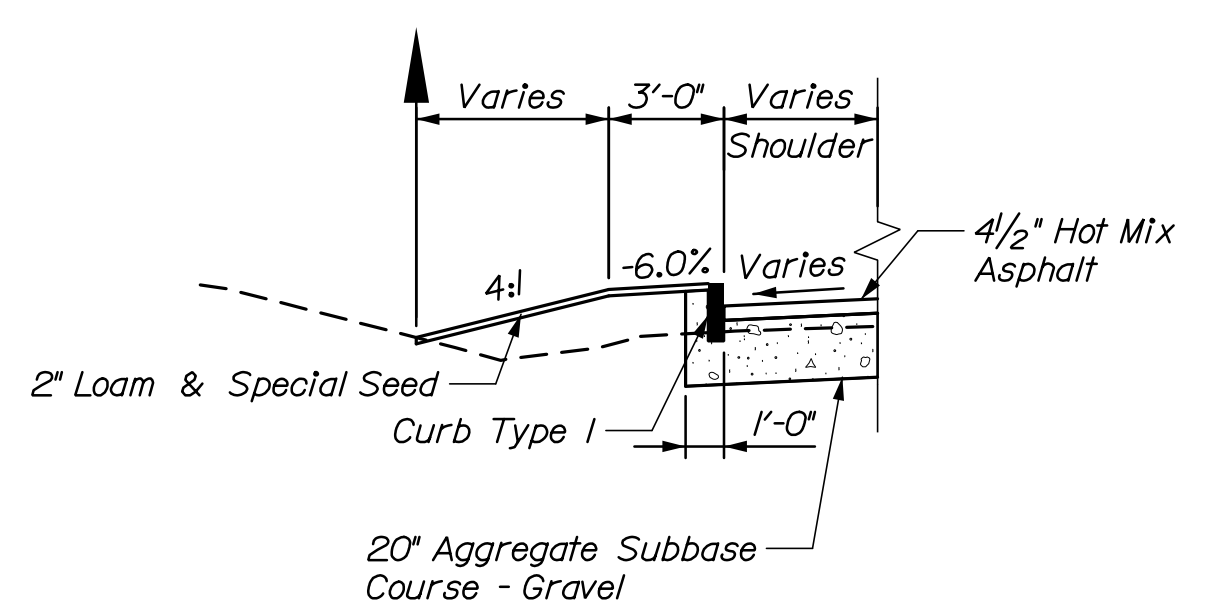
Filename: 018_TypicalSections 1.dgn



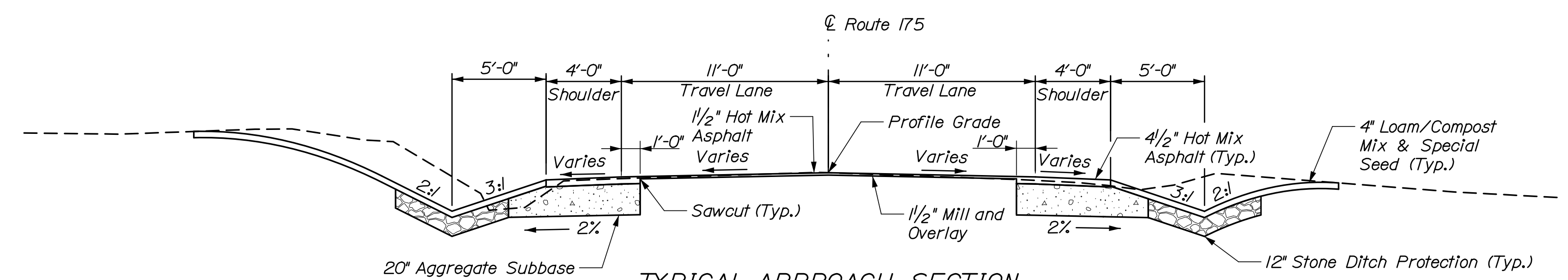
TYPICAL APPROACH SECTION
(With Curbing)



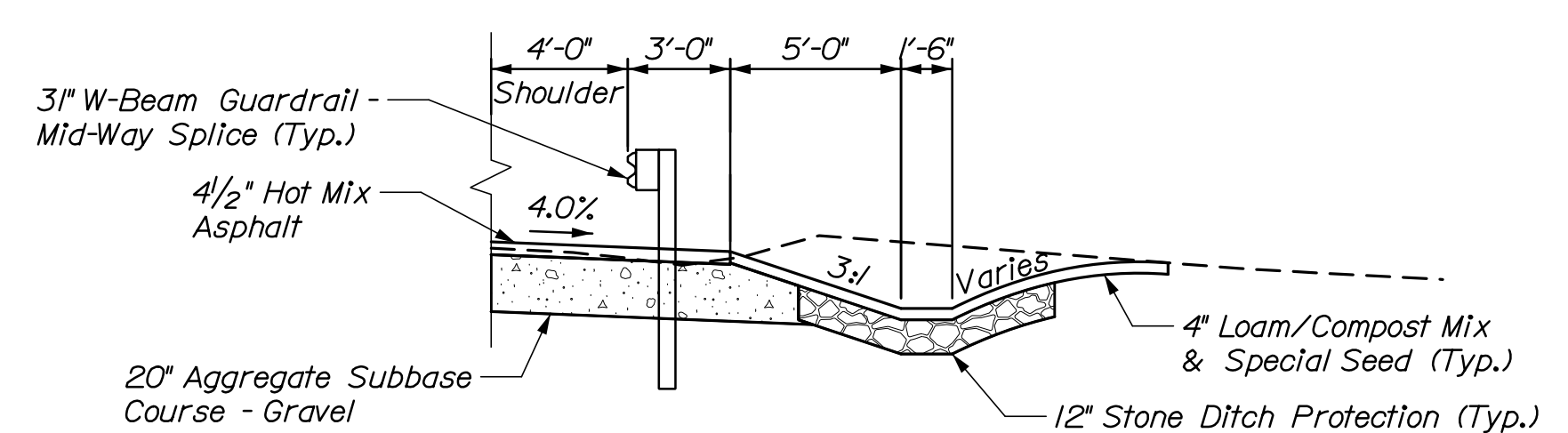
TYPICAL APPROACH SECTION
(With Ditching)



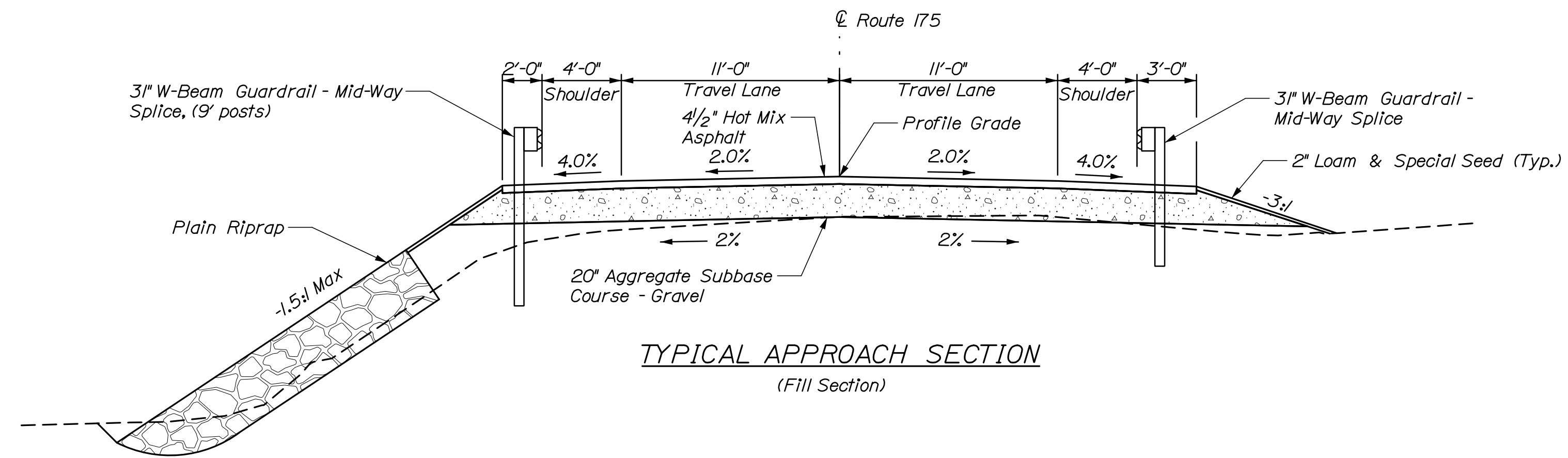
TYPICAL APPROACH SECTION
(Curbing with Toe Ditch)



TYPICAL APPROACH SECTION
(Mill & Overlay)



TYPICAL APPROACH SECTION
(Trapezoidal Ditch)



TYPICAL APPROACH SECTION
(Fill Section)

- NOTES:**
1. The pavement, base and subbase depths as shown on the plans are intended to be nominal.
 2. Crowns for all courses of subbase and pavement shall be straight, unless otherwise noted on the plans.
 3. Backslope Rounding shall follow Standard Detail 203(03) unless otherwise noted on the cross sections.

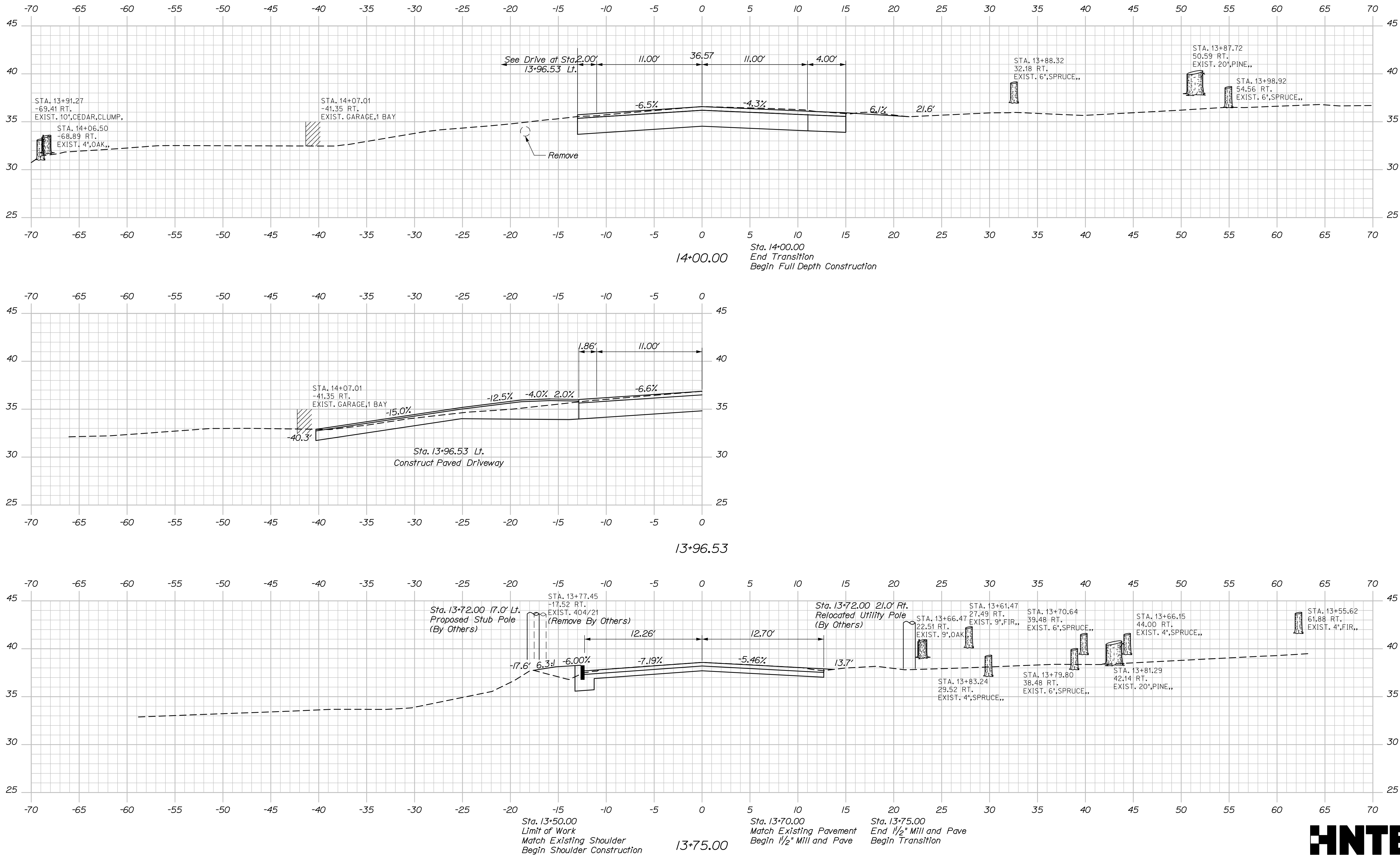
STATE OF MAINE DEPARTMENT OF TRANSPORTATION		STP-1771(200)X		BRIDGE PLANS	
		WIN		17712.00	
		Bridge No. 5038			
BLUE HILL FALLS BRIDGE SALT POND OUTLET BLUE HILL HANCOCK COUNTY		TYPICAL SECTIONS		SHEET NUMBER	
				18	
				OF 70	

Date:9/28/2021

Username:

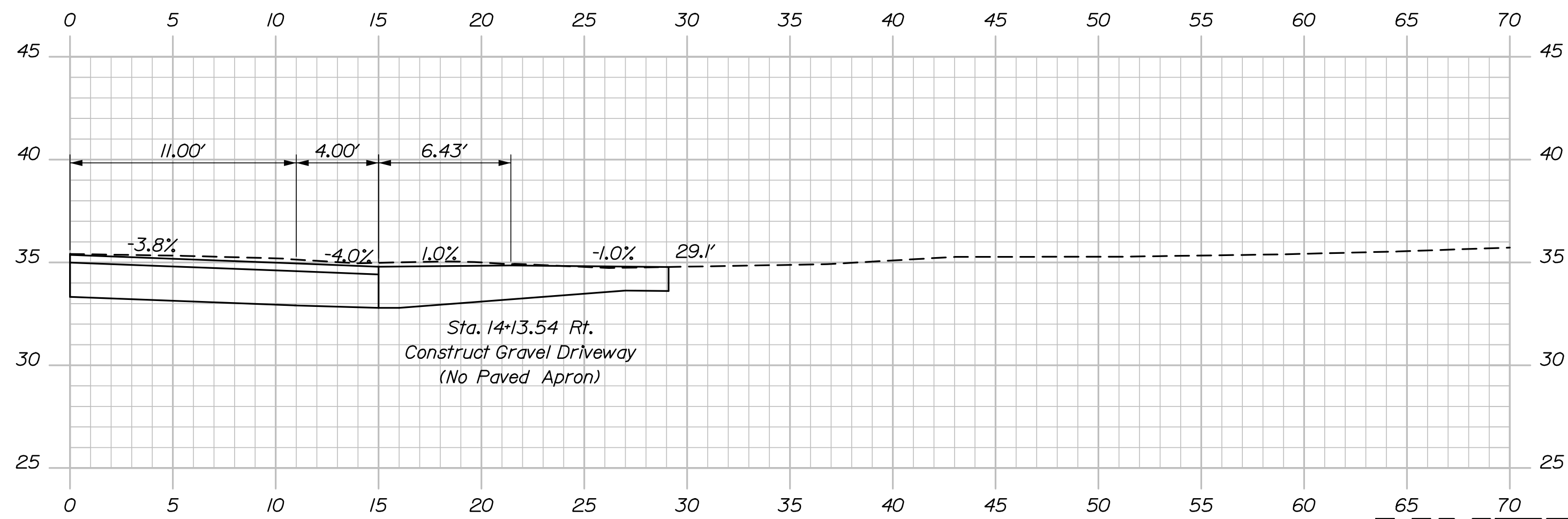
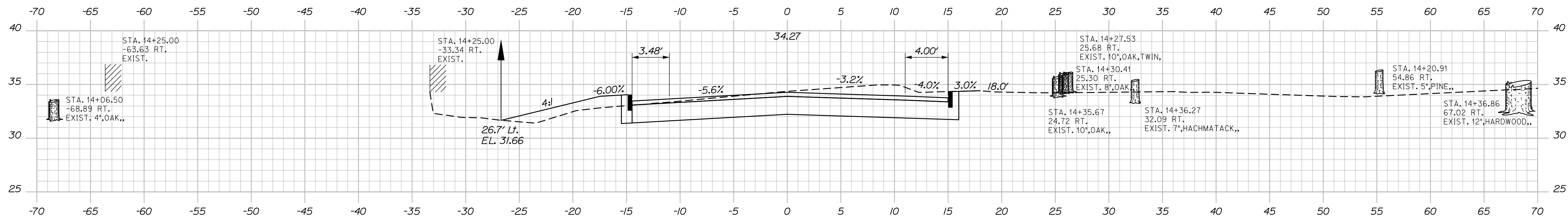
Division:

Filename: Xsections.dgn



SHEET NUMBER		19		OF 70	
BLUE HILL FALLS BRIDGE		SALT POND OUTLET		HANCOCK COUNTY	
BLUE HILL		HANCOCK COUNTY		CROSS SECTIONS	
PROJ. MANAGER		A. Luthie		BY	
DESIGN-DETAILED		E. Raymond		DATE	
CHECKED-REVIEWER		L. Driscoll		09/21	
DESIGN2-DETAILED02		-		SIGNATURE	
DESIGNS-DETAILED03		-		P.E. NUMBER	
REVISONS 1		-		-	
REVISONS 2		-		-	
REVISONS 3		-		-	
REVISONS 4		-		DATE	
FIELD CHANGES		-		-	
STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		STP-1771(200)X	
Bridge No. 5038		WIN		17712.00	
BRIDGE PLANS					

Filename: Xsections.dgn



HNTB

Sta. 14+13.54 to Sta. 14+50.00

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	WIN 17712.00	BRIDGE PLANS
STP-1771(200)X		
Bridge No. 5038		

PROJ. MANAGER	A. Lettice	BY	DATE
DESIGN-DETAILED	A. Sweet	E. Raymond	09/21
CHECKED-REVIEWED	L. Driscoll	T. Cote	09/21
DESIGN-BE-PAIRED	-	-	-
DESIGN-PAIRED	-	-	-
REVISIONS 1	-	-	-
REVISIONS 2	-	-	-
REVISIONS 3	-	-	-
REVISIONS 4	-	-	-
FIELD CHANGES	-	-	-

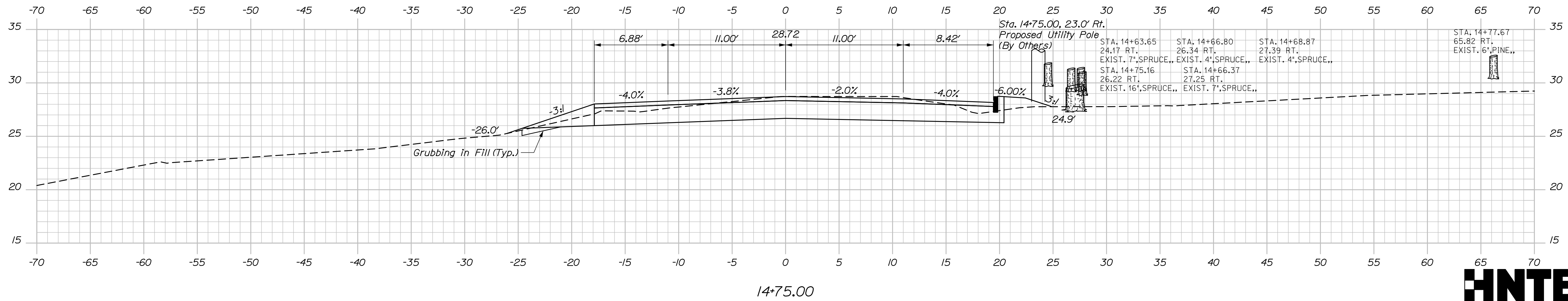
BLUE HILL FALLS BRIDGE
SALT POND OUTLET
BLUE HILL HANCOCK COUNTY
CROSS SECTIONS

SHEET NUMBER

20

OF 70

Filename: Xsections.dgn



Sta. 14+76.73 16.00' Lt. to
Sta. 15+01.71, 15.00' Lt.
Install 31" W-Beam
Guardrail - Mid-way Splice
Tangential Terminal (TL-2)

14+75.00

Rt.					
/e					
STA. 14+63.65	STA. 14+66.80	STA. 14+68.87			
24.17 RT.	26.34 RT.	27.39 RT.			
EXIST. 7',SPRUCE,,	EXIST. 4',SPRUCE,,	EXIST. 4',SPRUCE,,			
STA. 14+75.16	STA. 14+66.37				
26.22 RT.	27.25 RT.				
EXIST. 16',SPRUCE,,	EXIST. 7',SPRUCE,,				

SHEET NUMBER

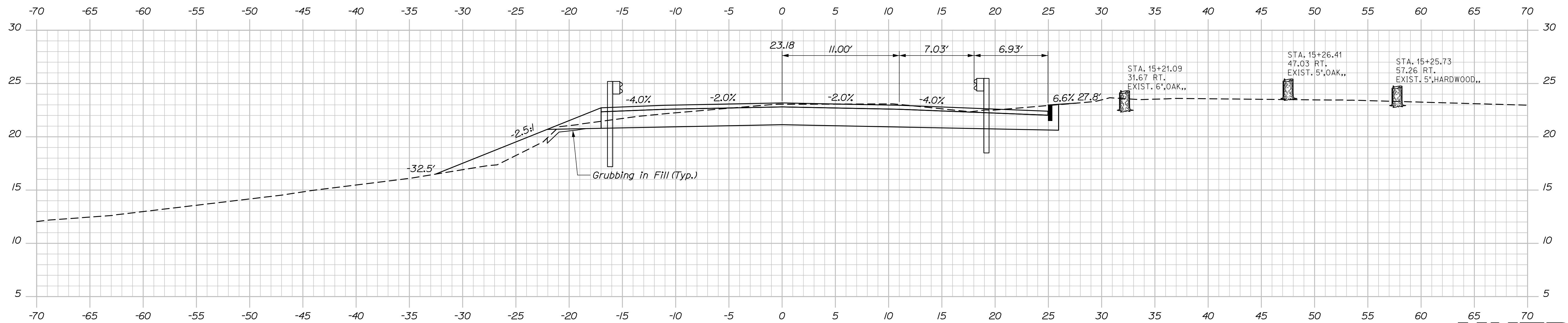
21

OF 70

HNTB

Sta. 14+75.00 to Sta. 15+00.00

Filename: Xsections.dgn



SHEET NUMBER

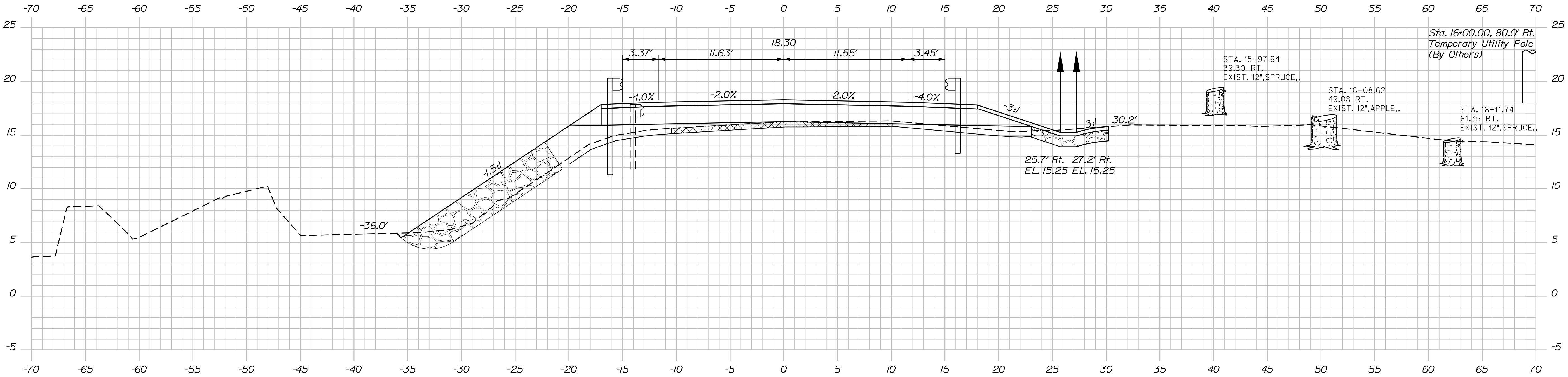
22

OF 70

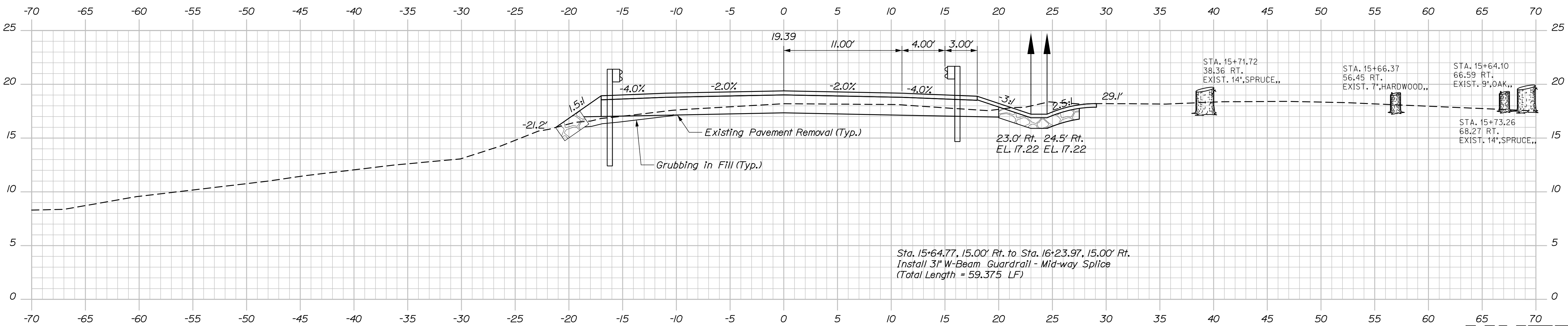
Username:

Division:

Filename: Xsections.dgn



16+00.00



15+75.00

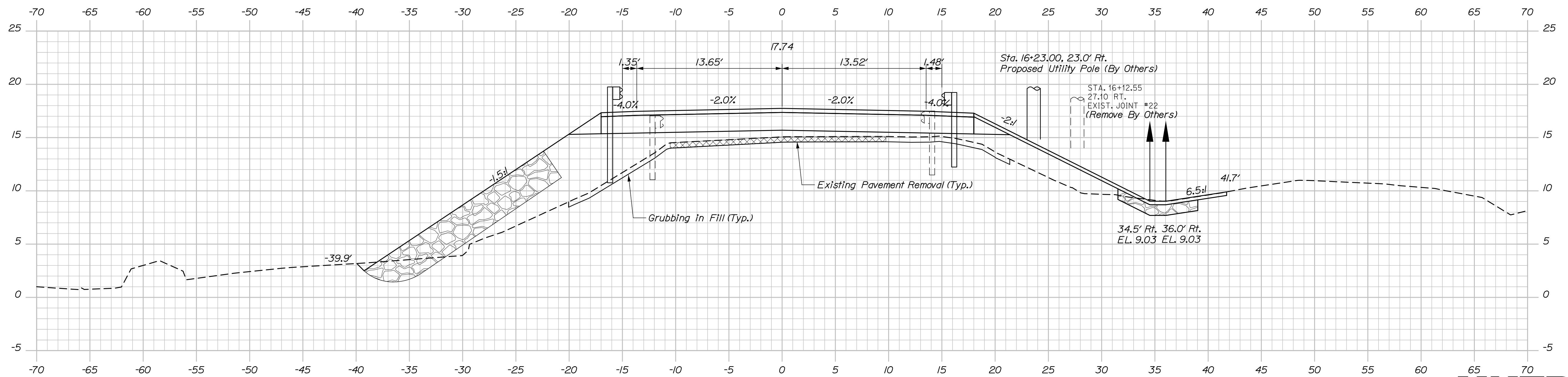
HNTB

Sta. 15+75.00 to Sta. 16+00.00

PROJ. MANAGER	BY	DATE	SIGNATURE
A. LaRue	E. Raymond	09/21	
A. Sweet	T. Cote	09/21	
L. Driscoll	-	-	
CHECKED-REVIEWED			P.E. NUMBER
DESIGNS-DETAILED			DATE
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BLUE HILL FALLS BRIDGE
SALT POND OUTLET
BLUE HILL HANCOCK COUNTY
CROSS SECTIONS

Filename: Xsections.dgn



Note: Stacked stones to be placed to replicate the existing condition.

Sta. 16+23.97, 15.00' Rt. to Sta. 16+44.39, 15.00' Rt.
Install Bridge Transition Type 1A with 5' Transition Curbing

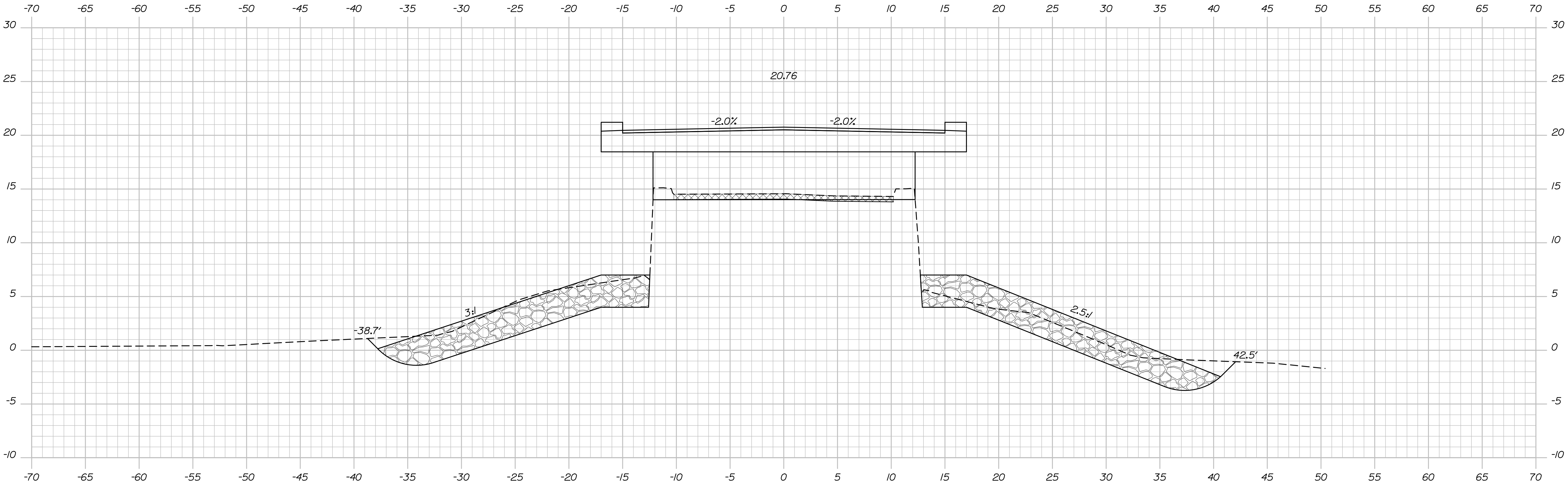
HNTB

Date:9/28/2021

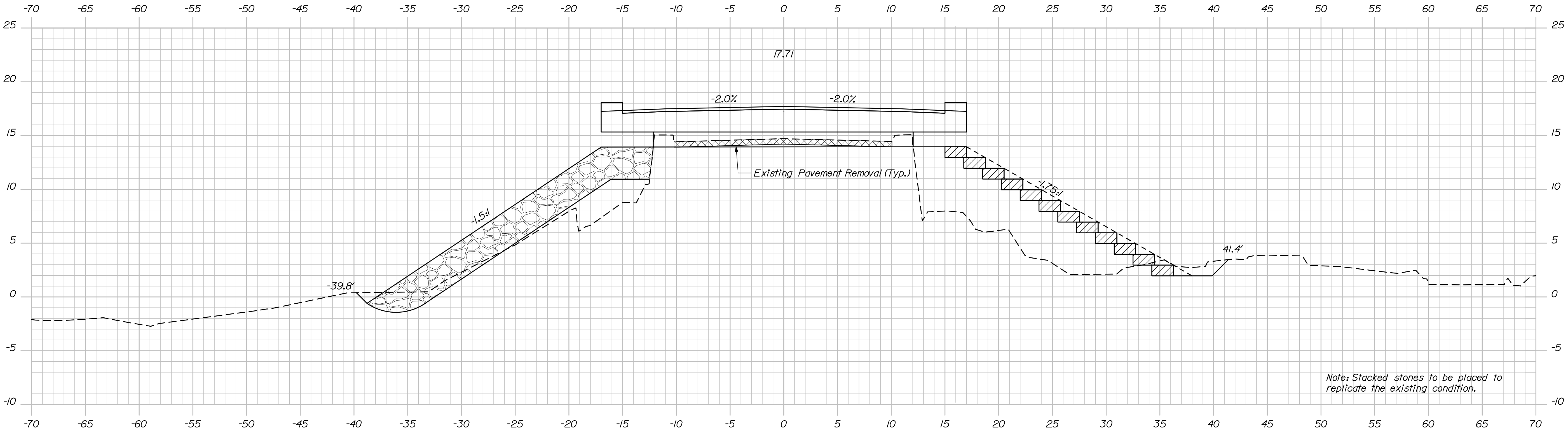
Username:

Division:

Filename: Xsections.dgn



18+25.00



16+50.00

Note: Stacked stones to be placed to replicate the existing condition.



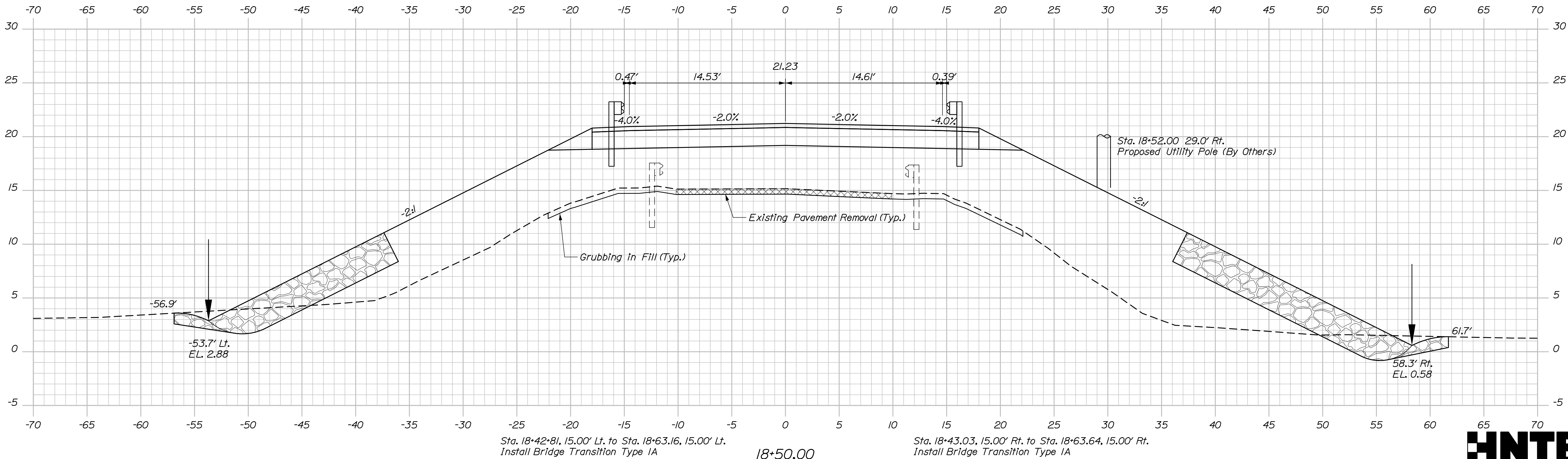
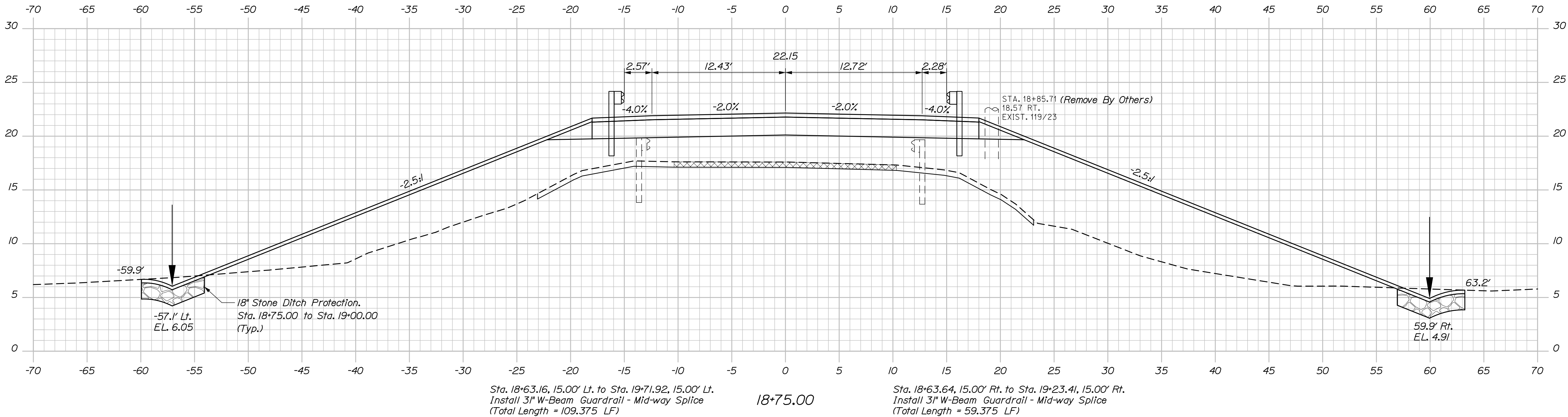
STATE OF MAINE DEPARTMENT OF TRANSPORTATION		STP-1771(200)X		WIN 17712.00 BRIDGE No. 5038 BRIDGE PLANS	
PROJECT: BLUE HILL FALLS BRIDGE SALT POND OUTLET BLUE HILL HANCOCK COUNTY		DESIGN-DETAILED CHECKED-REVIEWED DESIGN-DETAILED REVISIONS 1 REVISIONS 2 REVISIONS 3 REVISIONS 4 FIELD CHANGES		DATE 09/21 09/21 - - - - - - -	
SIGNATURE		P.E. NUMBER		DATE	
SHEET NUMBER 25 OF 70					

Date:9/28/2021

Username:

Division:

Filename: Xsections.dgn



PROJ. MANAGER	BY	DATE
A. LaRue	E. Raymond	09/21
A. Sweet	T. Cote	09/21
CHECKED-REVIEWED	L. Driscoll	-
DESIGNED-DETAILED2	-	-
DESIGNED-DETAILED3	-	-
REVISIONS 1	-	-
REVISIONS 2	-	-
REVISIONS 3	-	-
REVISIONS 4	-	-
FIELD CHANGES	-	-

SIGNATURE

P.E. NUMBER

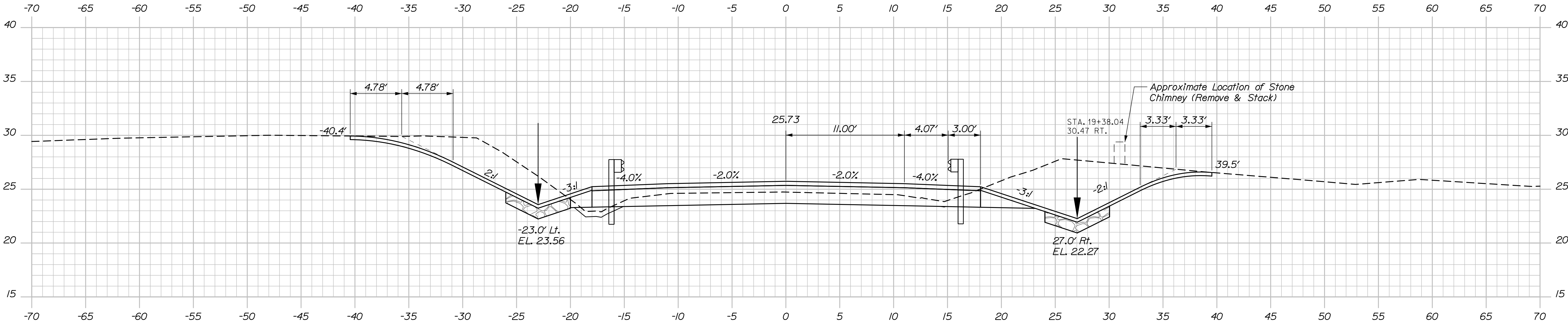
DATE

Date:9/28/2021

Username:

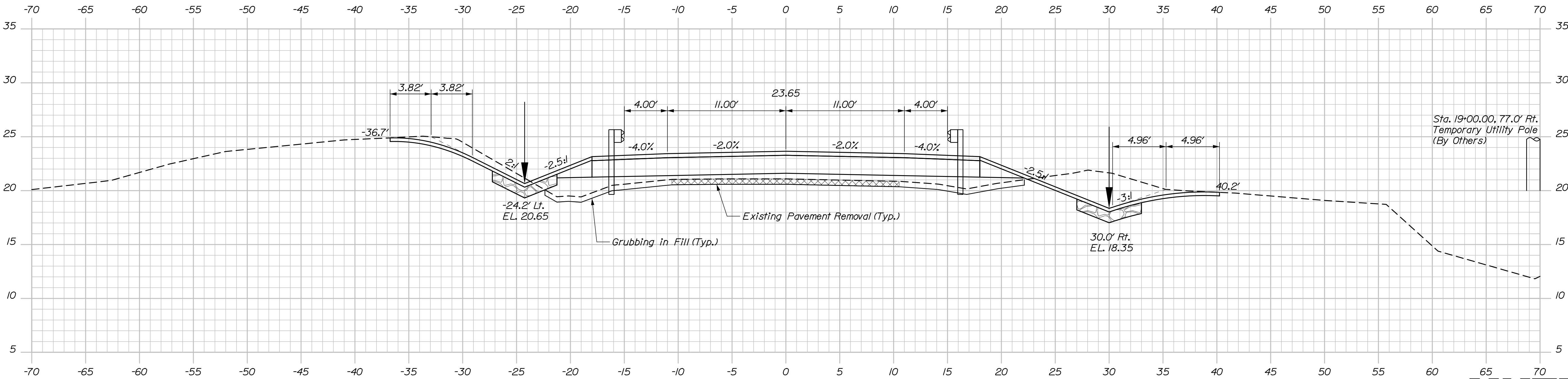
Division:

Filename: Xsections.dgn



19+25.00

Sta. 19+23.41, 15.00' Rt. to Sta. 19+48.56, 16.00' Rt.
Install 31" W-Beam Guardrail - Mid-way Splice Tangential Terminal (TL-2)



19+00.00

HNTB

Sta. 19+00.00 to Sta. 19+25.00

PROJ. MANAGER	BY	DATE	SIGNATURE
A. LaRue	E. Raymond	09/21	
A. Sweet	T. Cote	09/21	
L. Driscoll	-	-	
DESIGNED-DETAILED	-	-	P.E. NUMBER
REVISIONS 1	-	-	DATE
REVISIONS 2	-	-	
REVISIONS 3	-	-	
REVISIONS 4	-	-	
FIELD CHANGES	-	-	

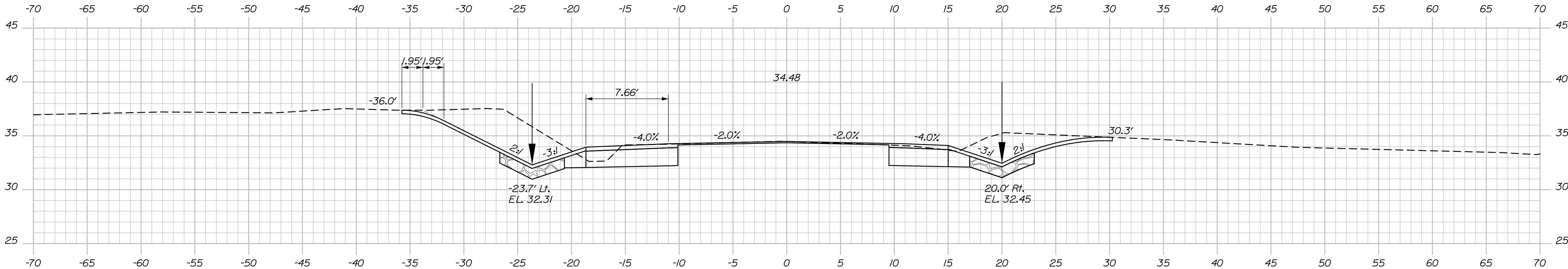
BLUE HILL FALLS BRIDGE
SALT POND OUTLET
HANCOCK COUNTY
BLUE HILL
CROSS SECTIONS

Date:9/28/2021

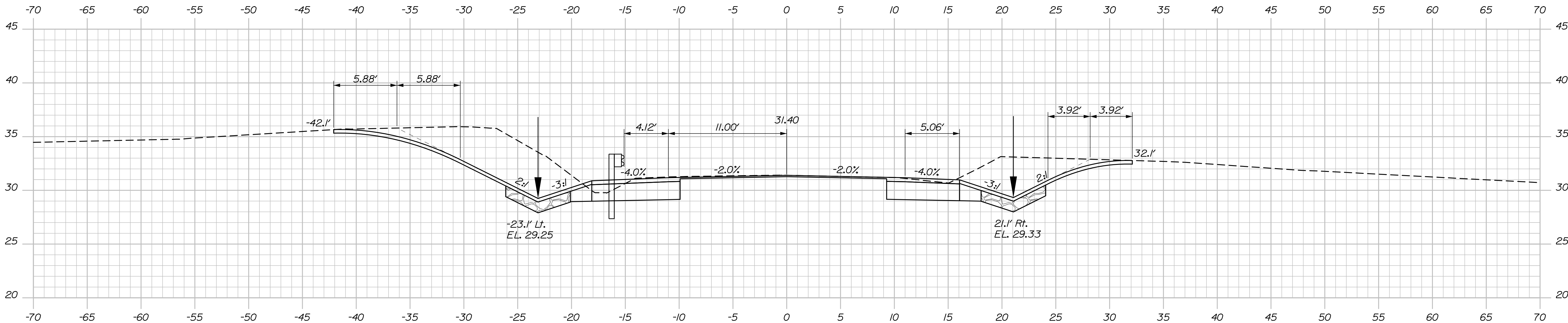
Username:

Division:

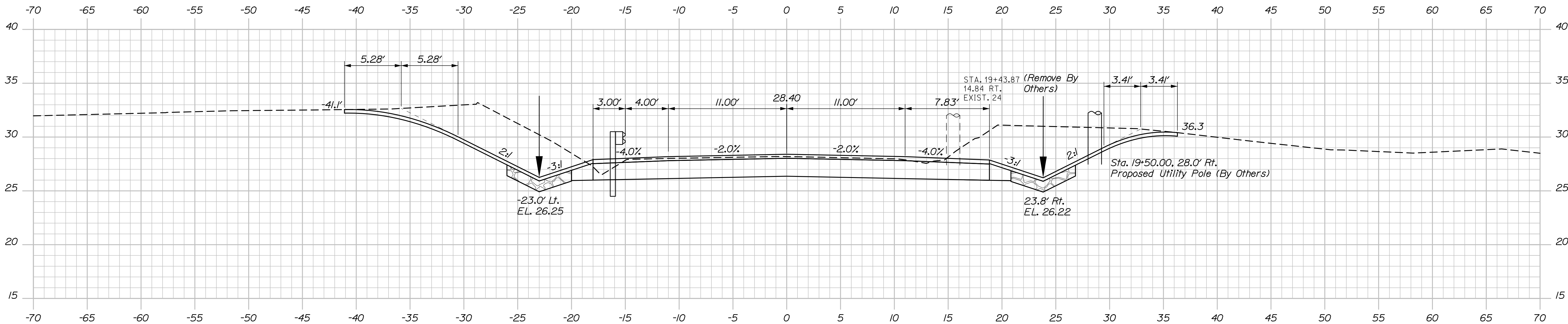
Filename: Xsections.dgn



20+00.00



19+75.00



19+50.00

Sta. 19+75.00
End Transition
Begin 1/2" Mill and Overlay
Begin Full Depth Shoulder Reconstruction

Sta. 19+50.00
End Full Depth Construction
Begin Transition

HNTB

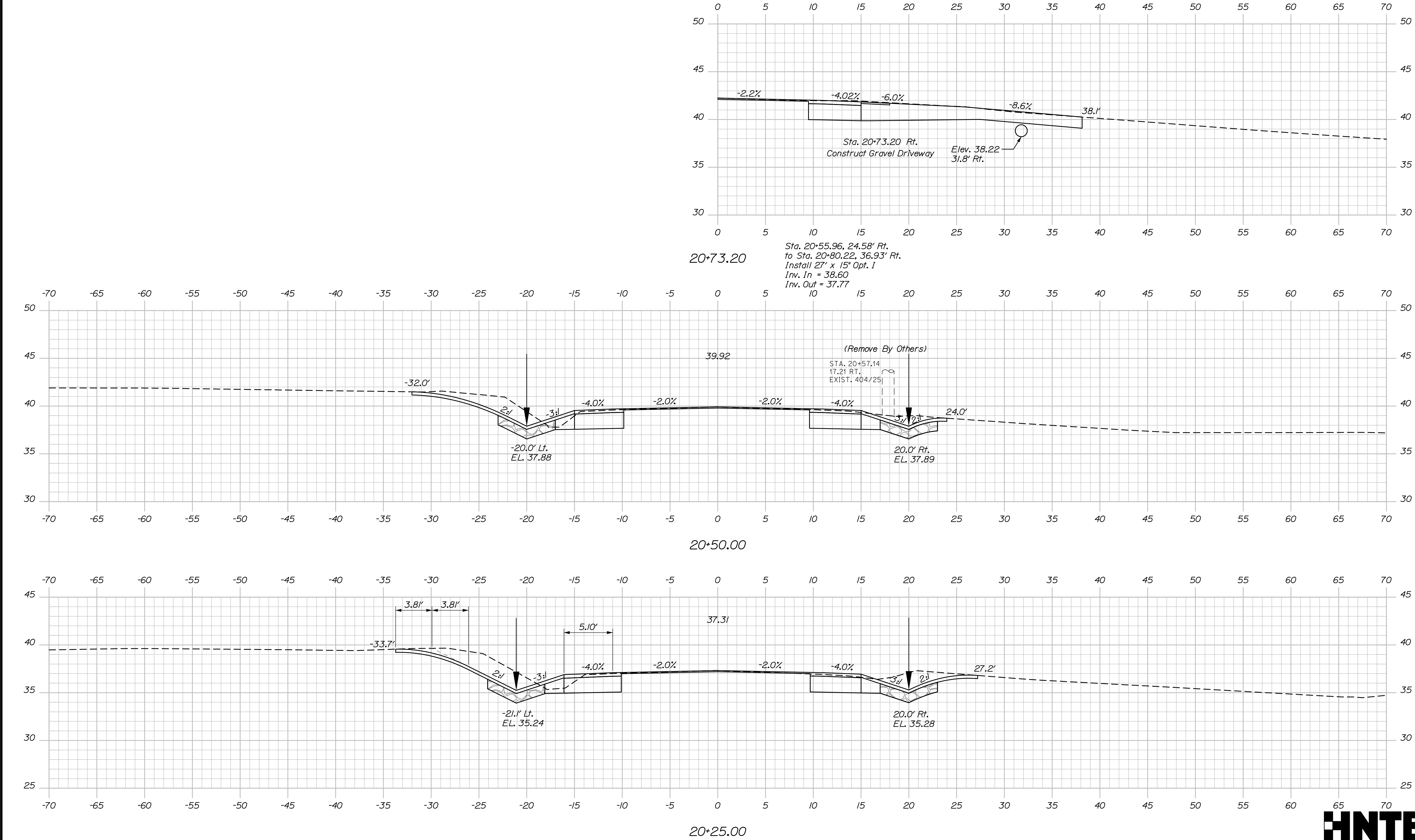
PROJ. MANAGER	BY	DATE	SIGNATURE
A. LaFollette	E. Raymond	09/21	
DESIGN-DETAILED	T. Cote	09/21	
CHECKED-REVIEWED	L. Driscoll	-	
DESIGN-DETAILED	-	-	
DESIGN-DETAILED	-	-	
REVISIONS 1	-	-	
REVISIONS 2	-	-	
REVISIONS 3	-	-	
REVISIONS 4	-	-	
FIELD CHANGES	-	-	

Date:9/28/2021

Username:

Division:

Filename: Xsections.dgn



Sta. 20+25.00 to Sta. 20+73.20

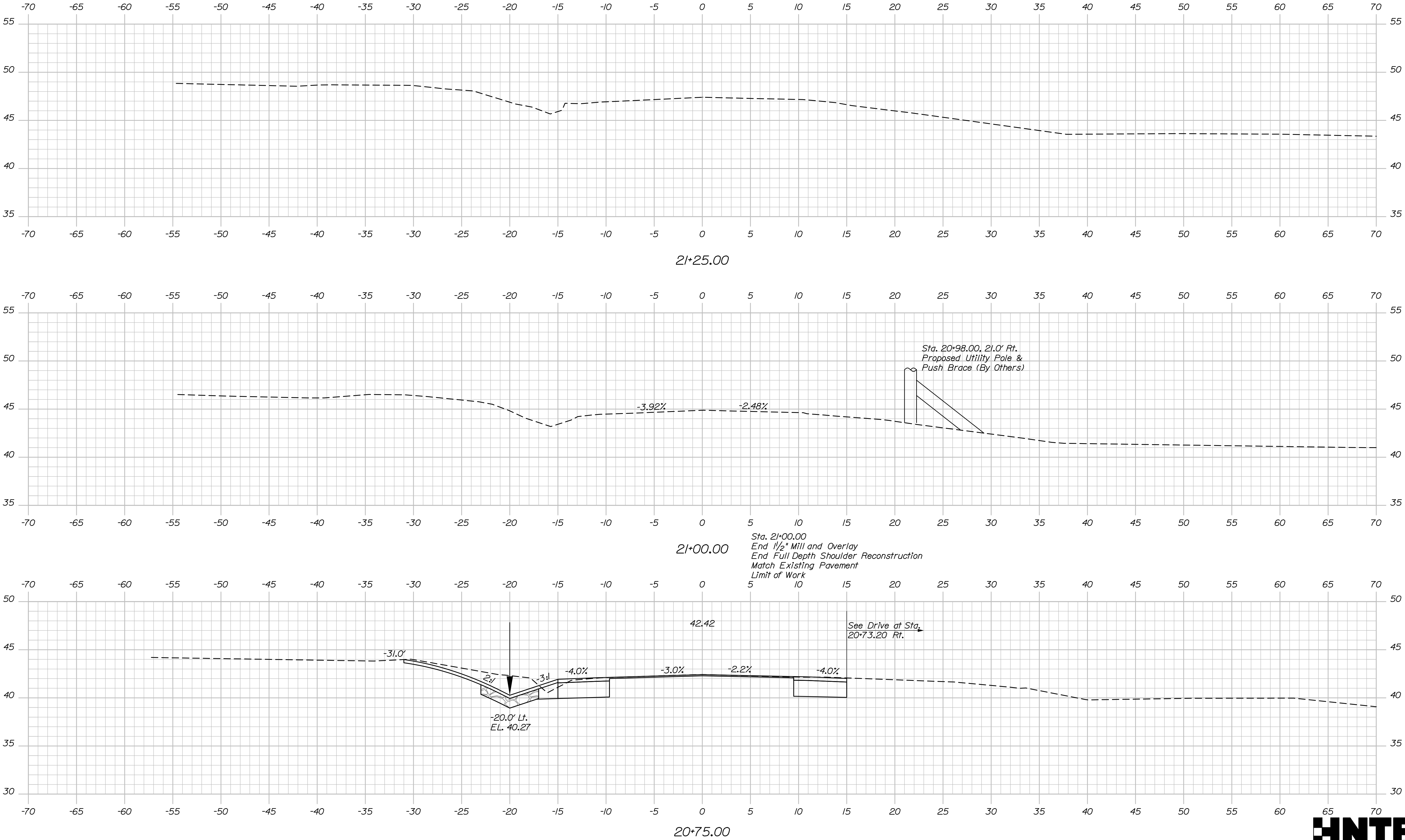
STATE OF MAINE DEPARTMENT OF TRANSPORTATION	STP-1771(200)X		BRIDGE PLANS WIN 17712.00 Bridge No. 5038
BLUE HILL FALLS BRIDGE SALT POND OUTLET BLUE HILL HANCOCK COUNTY	PROJ. MANAGER	BY	DATE
	DESIGN-DETAILED	A. LaThe	09/21
	CHECKED-REVIEWED	E. Raymond	09/21
	DESIGNED-DETAILED	T. Cote	09/21
CROSS SECTIONS	DESIGN-DETAILED	-	-
	REVISIONS 1	-	-
	REVISIONS 2	-	-
	REVISIONS 3	-	-
FIELD CHANGES		-	-
SHEET NUMBER		29	
		OF 70	

Date:9/28/2021

Username:

Division:

Filename: Xsections.dgn



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1771(200)X

WIN
17712.00
BRIDGE No. 5038
BRIDGE PLANS

PROJECT: BLUE HILL FALLS BRIDGE
SALT POND OUTLET
BLUE HILL HANCOCK COUNTY

DESIGN-DETAILED: A. LaThe
CHECKED-REVIEWED: E. Raymond
DESIGN-DETAILED: L. Driscoll
DESIGN-DETAILED: -
REVISIONS 1: -
REVISIONS 2: -
REVISIONS 3: -
REVISIONS 4: -
FIELD CHANGES: -

DATE: 09/21
BY: E. Raymond
T. Cote
SIGNATURE: _____
P.E. NUMBER: _____
DATE: _____

SHEET NUMBER

30

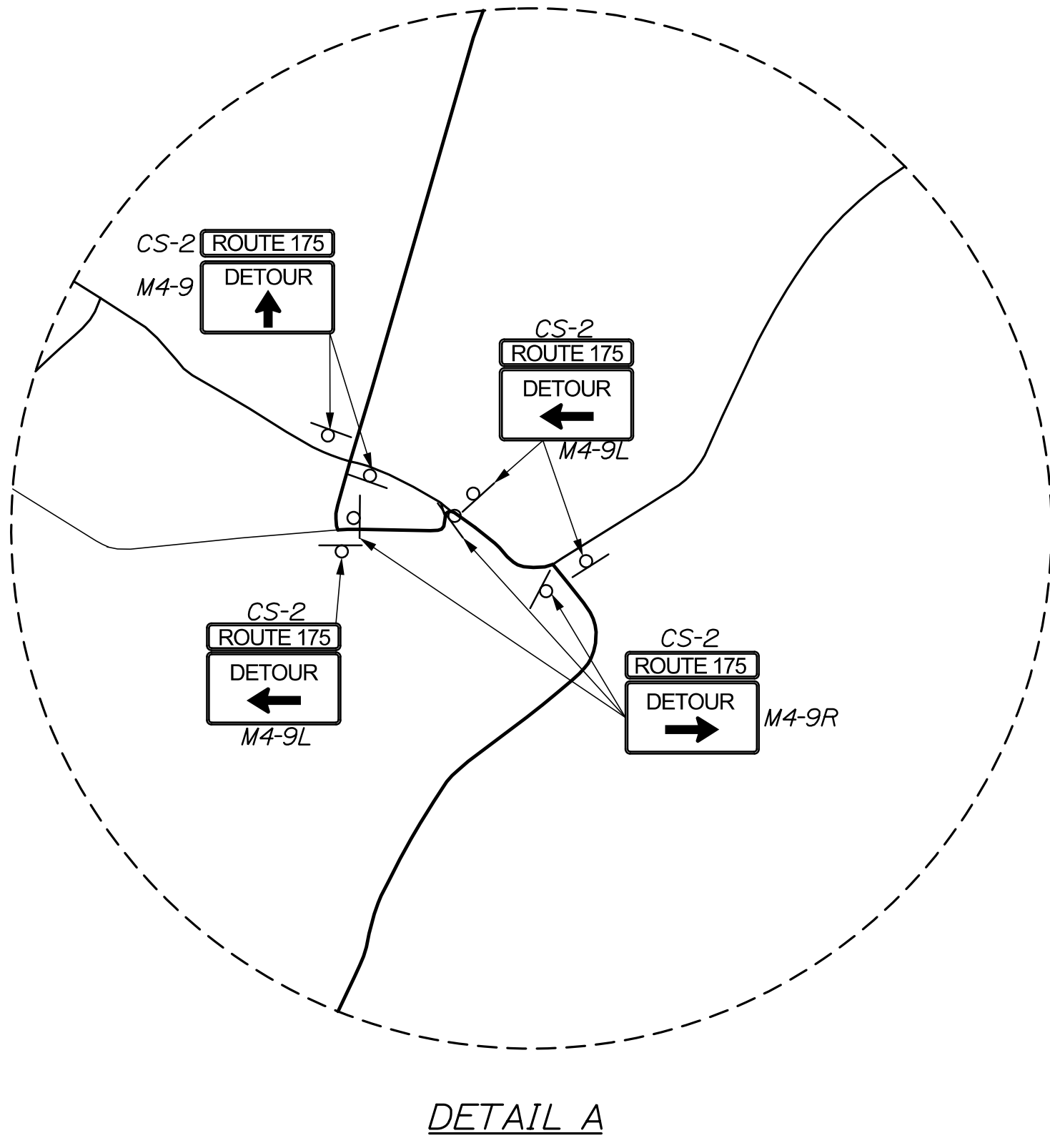
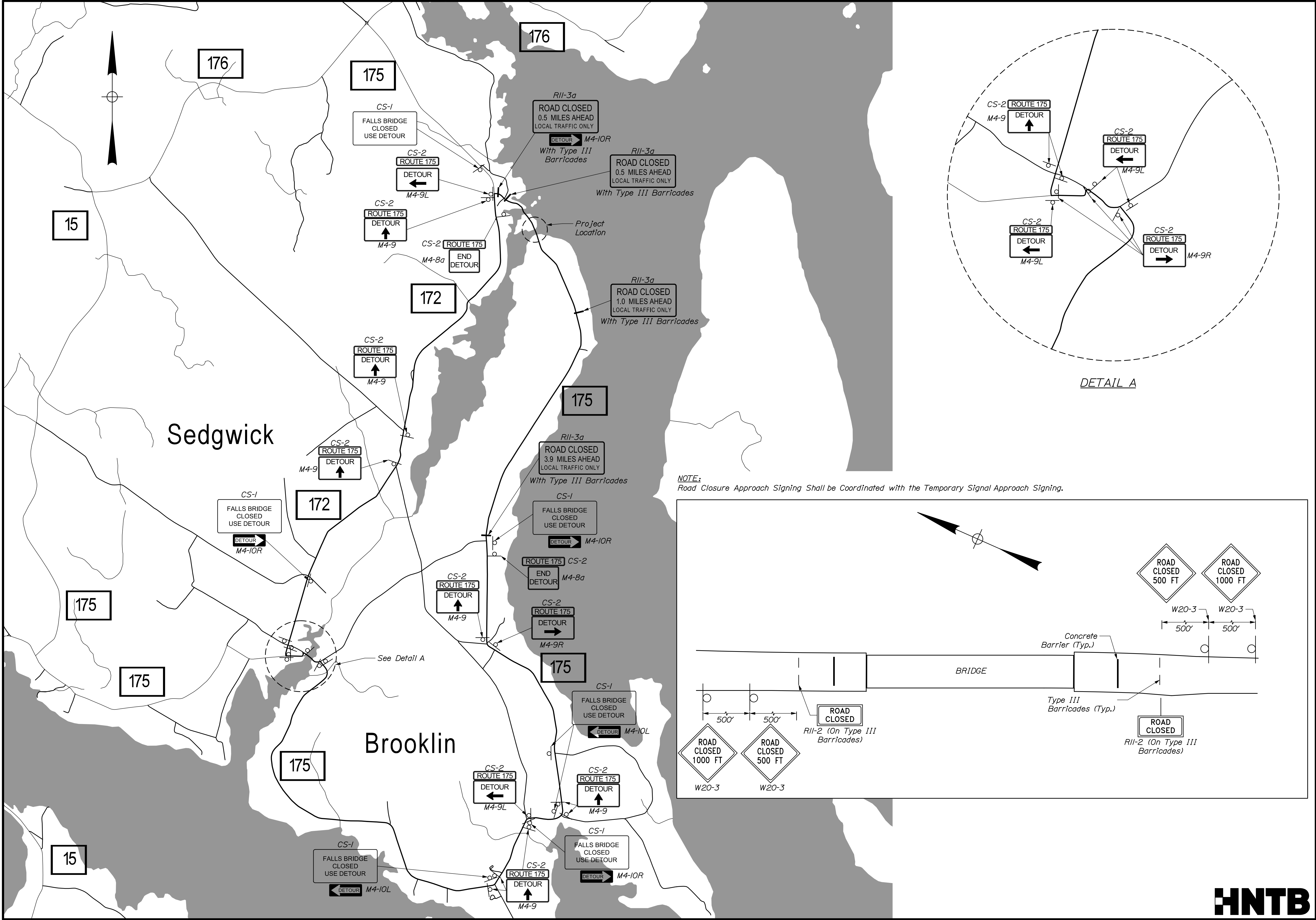
OF 70

Date:9/28/2021

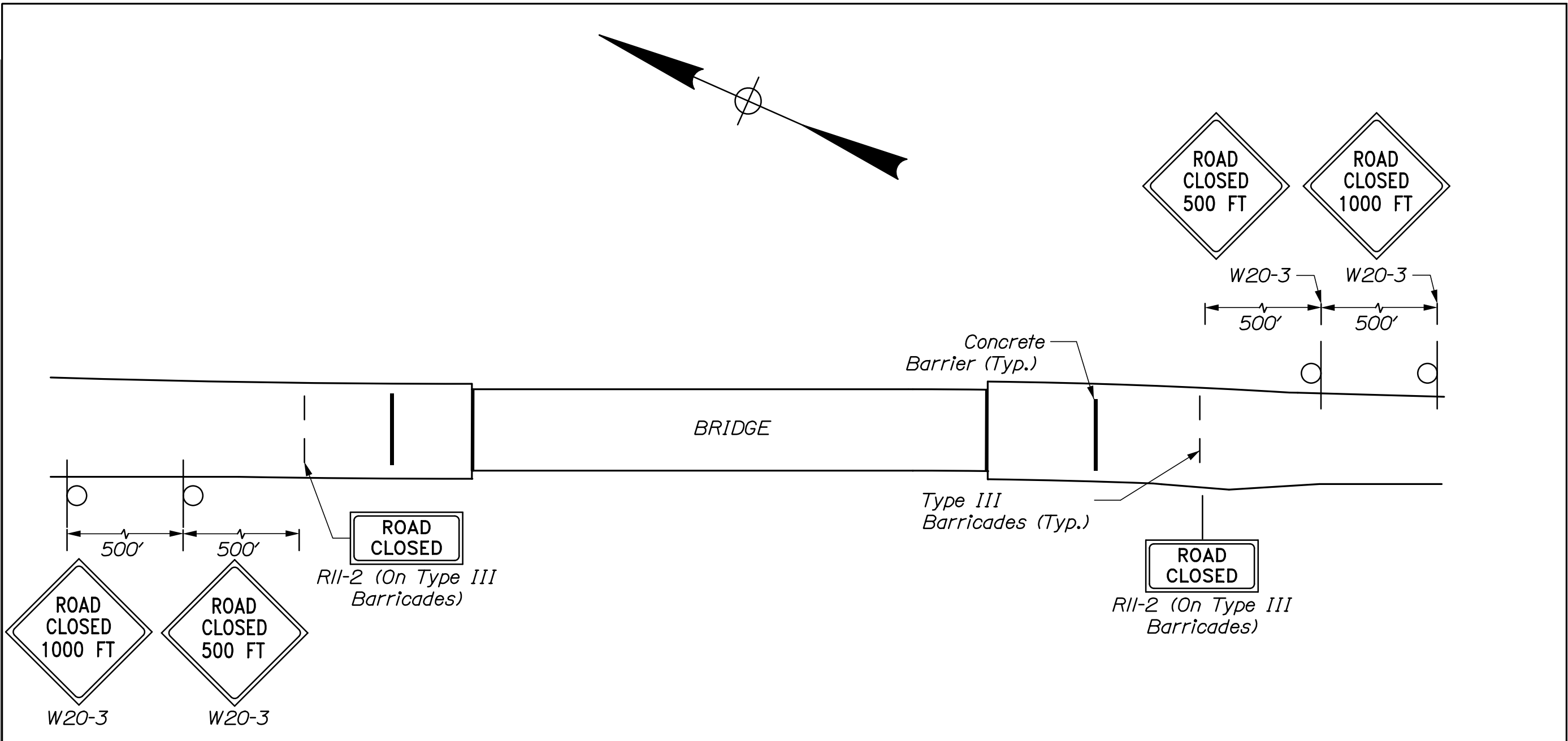
Username:

Division:

Filename: 031_Detour Plan.dgn



NOTE:
Road Closure Approach Signing Shall be Coordinated with the Temporary Signal Approach Signing.



STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		STP-1771(200)X		BRIDGE PLANS	
PROJECT MANAGER		DESIGNED-Detailed		CHECKED-Reviewed		DESIGNED-Detailed	
BY		DATE		SIGNATURE		P.E. NUMBER	
A. Lathe		09/21		T. Cote		-	
A. Sweet		09/21		-		-	
L. Driscoll		-		-		-	
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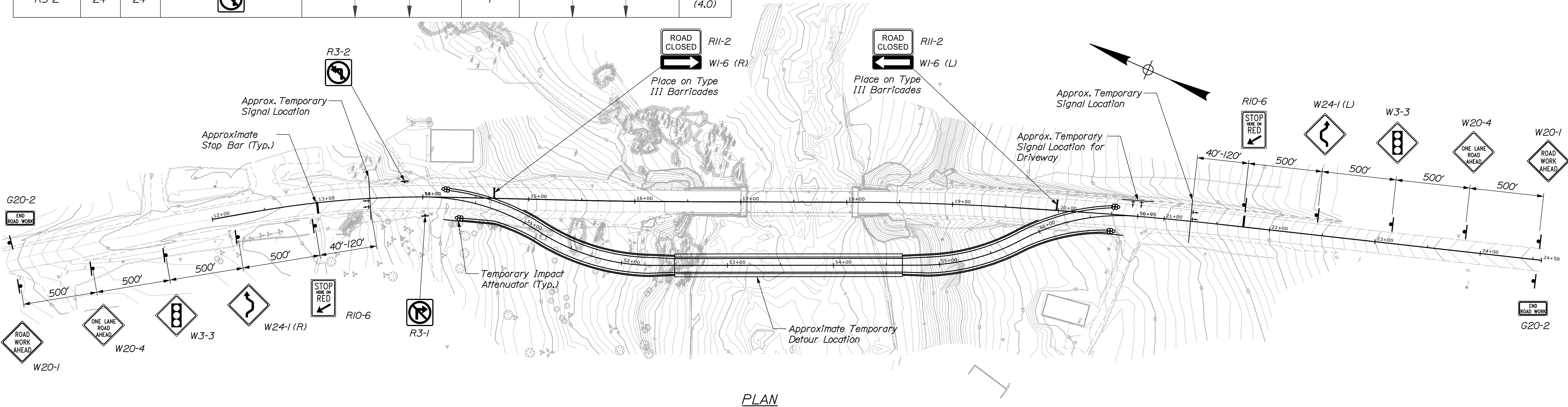
TEMPORARY SIGNAL SIGN SUMMARY

IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		BORDER RADIUS	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK- GROUND	LEGEND BORDER		
G20-2	36"	18"	END ROAD WORK	TEXT DIMENSIONS SHALL CONFORM TO "STANDARD HIGHWAY SIGNS"			2	COLORS SHALL CONFORM TO STANDARD HIGHWAY SIGN DETAILS			4.50 (9)
R10-6	24"	36"	STOP HERE ON RED				2				6.00 (12)
R11-2	48"	30"	ROAD CLOSED				2				10.00 (20)
W1-6 (L)	48"	24"	➡				1				8.00 (8)
W1-6 (R)	48"	24"					1				8.00 (8)
W3-3	48"	48"	⬆				2				16.00 (32)
W20-1	48"	48"	ROAD WORK AHEAD				2				16.00 (32)
W20-4	48"	48"	ONE LANE ROAD AHEAD				2				16.00 (32)
W24-1 (L)	48"	48"	⤵				1				16.00 (16)
W24-1 (R)	48"	48"	⤴				1				16.00 (16)
R3-1	24"	24"	⊘				1				4.0 (4.0)
R3-2	24"	24"	⊘				1				4.0 (4.0)

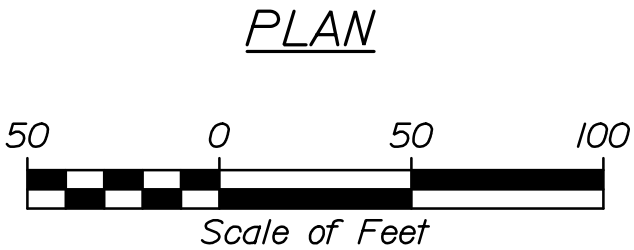
OFF-SITE DETOUR PLAN SIGN SUMMARY

IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		BORDER RADIUS	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK- GROUND	LEGEND BORDER		
CS-1	42"	30"	FALLS BRIDGE CLOSED USE DETOUR	4" C 4" C 4" C	3" 3"		7	ORANGE	BLACK		8.75 (61.25)
CS-2	30"	12"	ROUTE 175	4" C			22	ORANGE	BLACK		2.50 (55)
M4-8a	24"	18"	END DETOUR	TEXT DIMENSIONS SHALL CONFORM TO "STANDARD HIGHWAY SIGNS"			2	COLORS SHALL CONFORM TO STANDARD HIGHWAY SIGN DETAILS			3.00 (6)
M4-9	30"	24"	DETOUR ↑				11				5.00 (55)
M4-9L	30"	24"	DETOUR ←				5 4				5.00 (25) (20)
M4-10L	48"	18"	← DETOUR				3 4				6.00 (18) (24)
W20-3 (500) (1000)	48"	48"	ROAD CLOSED XXX FT				2 2				16.00 (32) (32)
R11-2	48"	30"	ROAD CLOSED				*				*
R11-3a (0.5) (1.0) (3.9)	60"	30"	ROAD CLOSED X.X MILES AHEAD LOCAL TRAFFIC ONLY				2 1 1				12.50 (25) (12.5) (12.5)
CS-3	96"	48"	NAVIGATIONAL CHANNEL CLOSED DO NOT PROCEED	6" C 6" C 6" C	3" 3"		2	ORANGE	BLACK		32.00 (64)

*R11-2 is used in both the temporary signal and off-site detour setups.



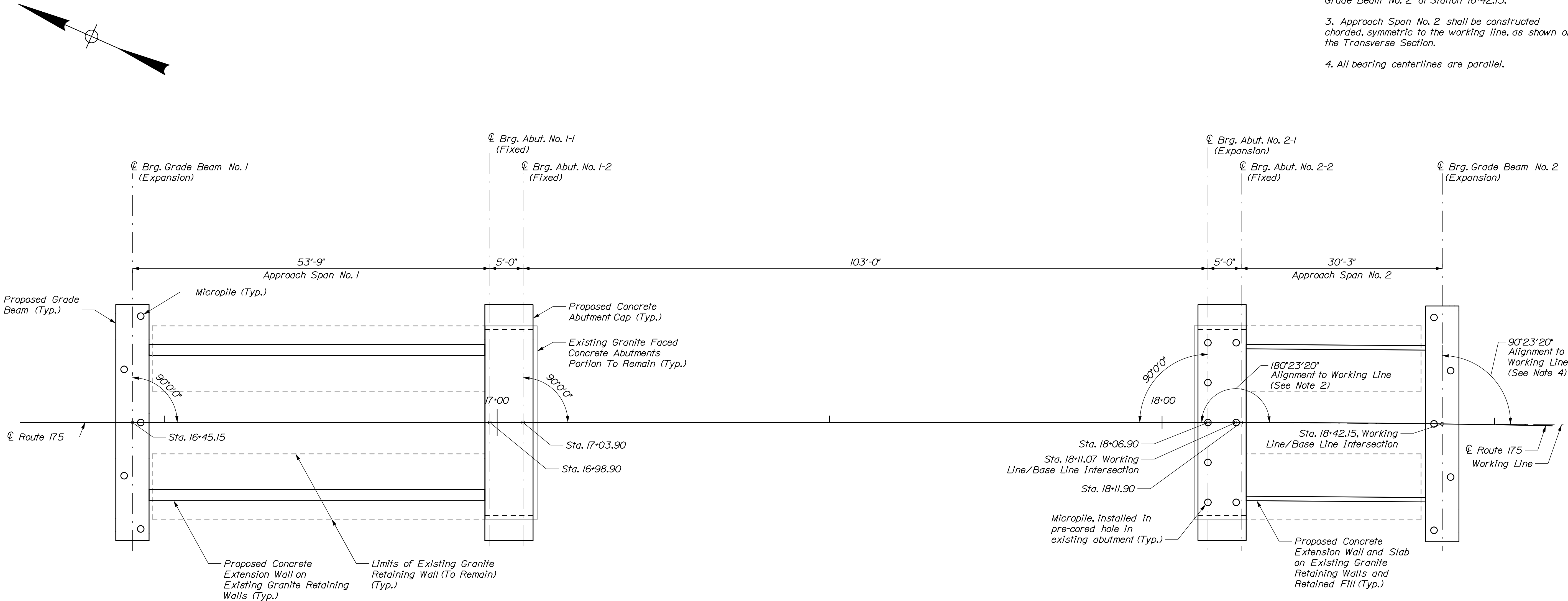
NOTE:
Contractor shall maintain sight distance
for left turning vehicles out of driveway
at Sta. 14+13.54 Rt.



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP-1771(200)X
WIN 17712.00
Bridge No. 5038
BRIDGE PLANS

BLUE HILL FALLS BRIDGE
SALT POND OUTLET
BLUE HILL HANCOCK COUNTY
TEMPORARY SIGNAL PLAN

SHEET NUMBER
32
OF 70



NOTES:

- Existing and proposed substructure elements are presented as singular outlines for clarity.
- The working line for Approach Span No. 2 is defined as being the chord along the centerline of Route 175 from the start of the horizontal curve at Station 18+11.07 to the Centerline of Bearing at Grade Beam No. 2 at Station 18+42.15.
- Approach Span No. 2 shall be constructed chorded, symmetric to the working line, as shown on the Transverse Section.
- All bearing centerlines are parallel.

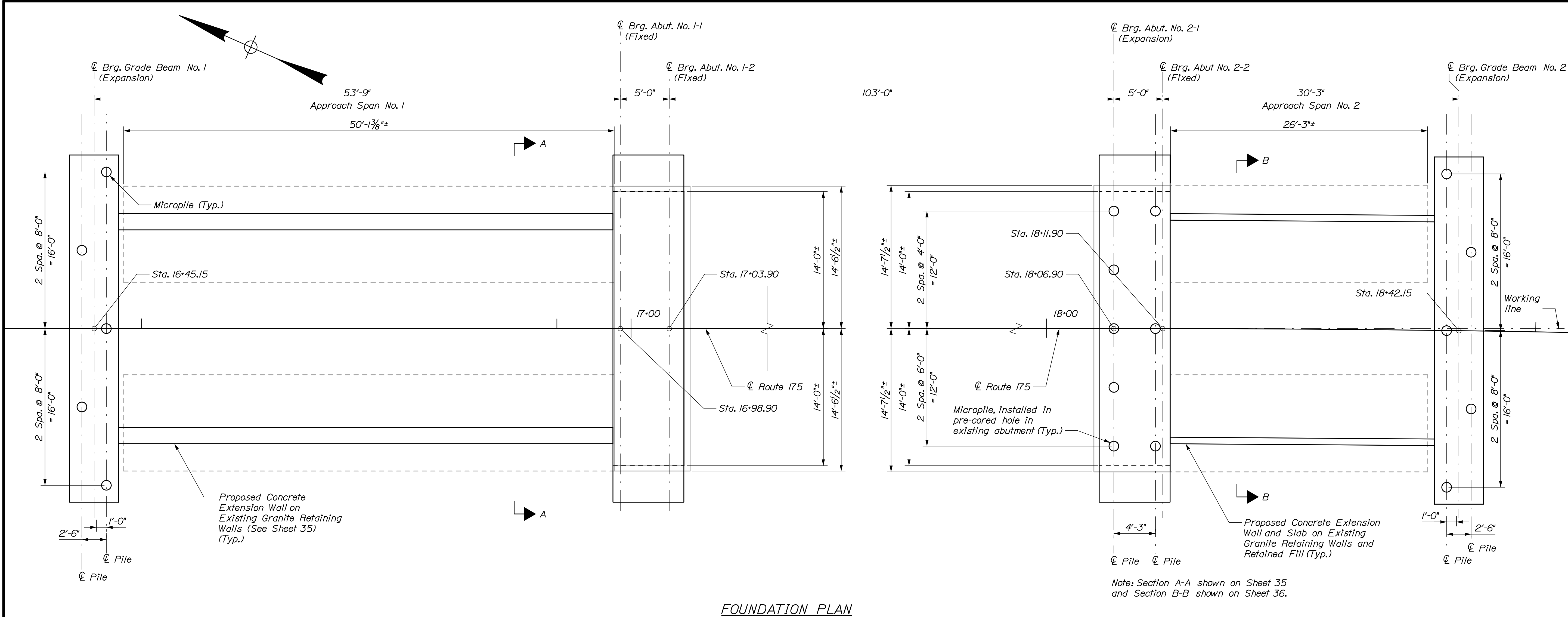
SHEET NUMBER		BLUE HILL FALLS BRIDGE		PROJ. MANAGER		A. Lethe		BY		DATE	
33		SALT POND OUTLET		DESIGN-DETAILED		H. Walton		E. Beausoleil		09/21	
		BLUE HILL		CHECKED-REVIEWED		K. Brayley		T. Cote		SIGNATURE	
		HANCOCK COUNTY		DESIGN2-DETAILED2		-		-		-	
				DESIGN3-DETAILED3		-		-		-	
				REVISIONS 1		-		-		P.E. NUMBER	
				REVISIONS 2		-		-			
				REVISIONS 3		-		-			
				REVISIONS 4		-		-		DATE	
				FIELD CHANGES		-		-		-	
		GEOMETRIC LAYOUT PLAN									

Date:9/28/2021

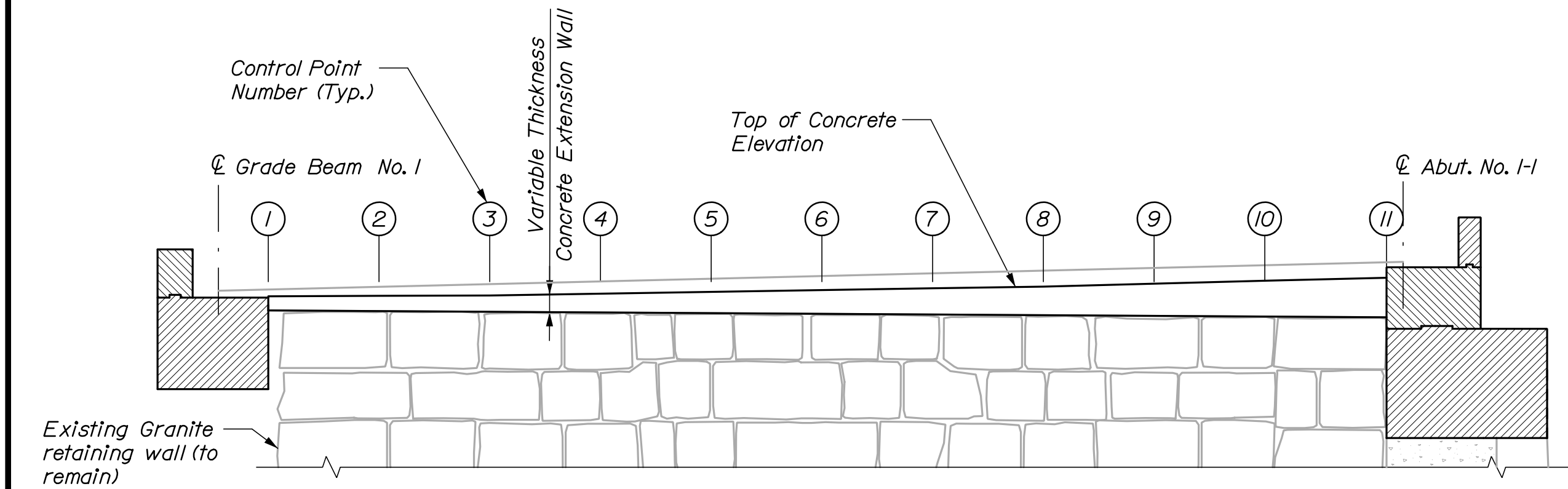
Username:

Division:

Filename: 034_Foundation Plan.dgn

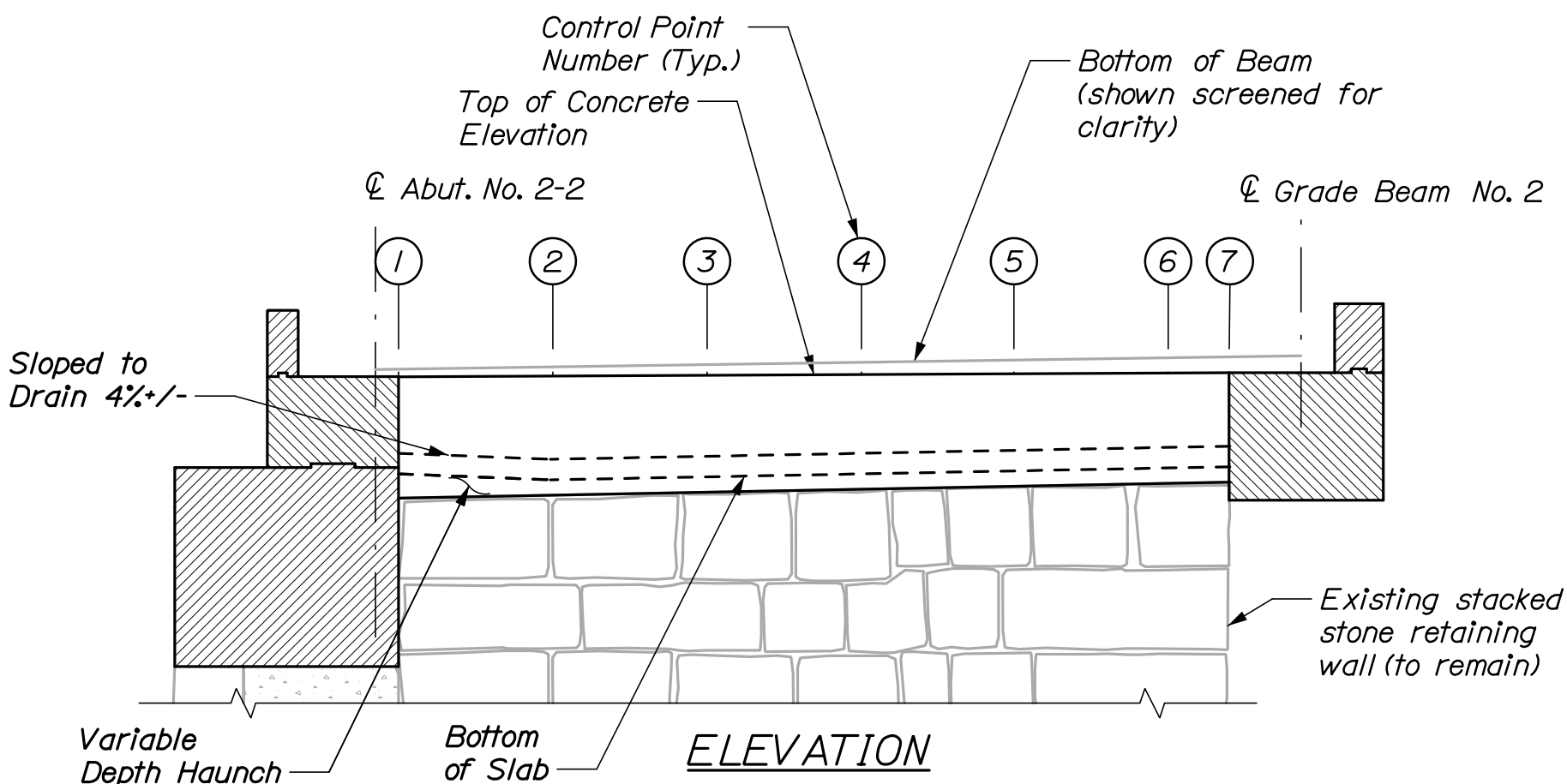


FOUNDATION PLAN



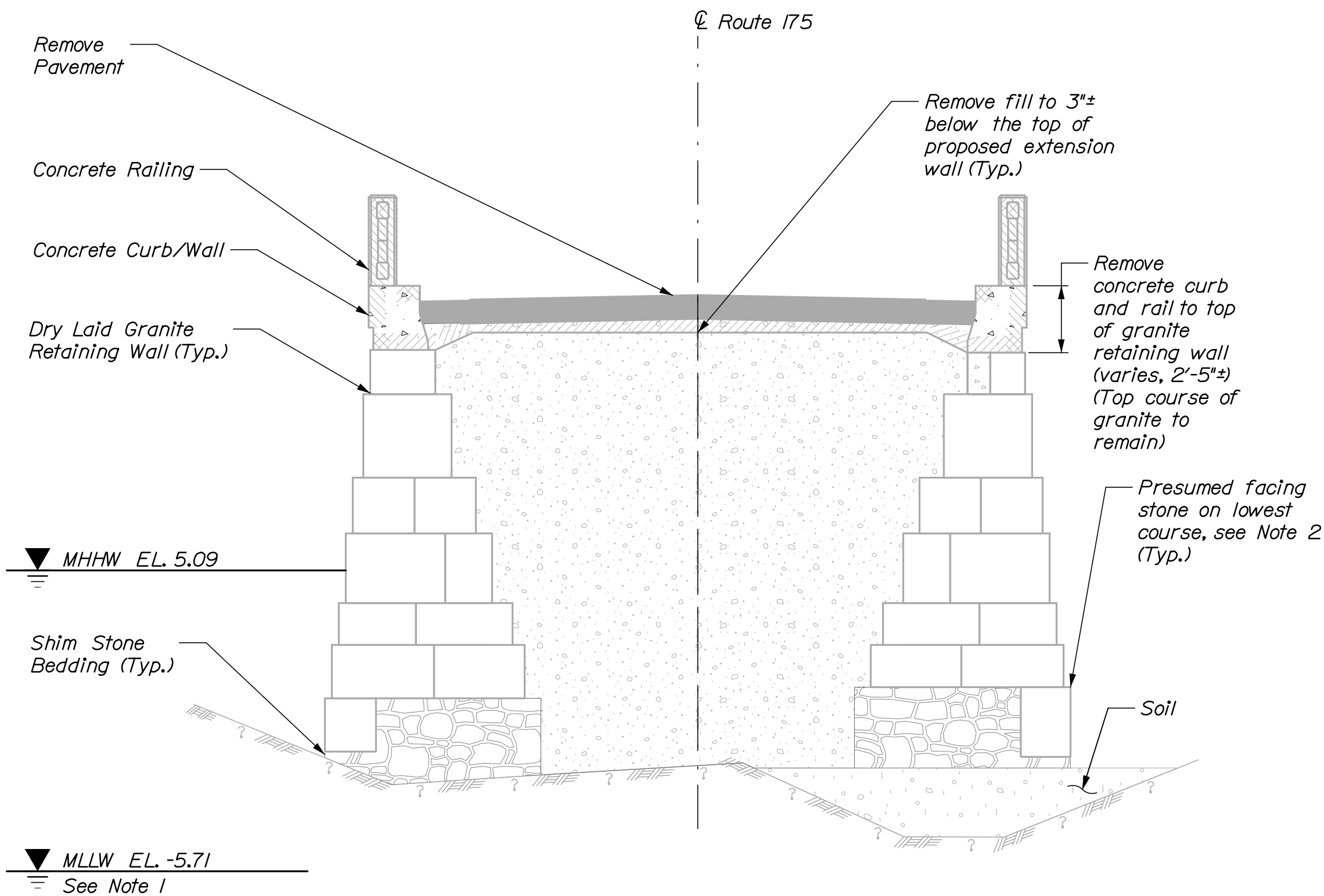
ELEVATION

Concrete Extension Wall Finished Elevation - Approach 1											
Control Point	1	2	3	4	5	6	7	8	9	10	11
Station	16+47.65	16+52.65	16+57.65	16+62.65	16+67.65	16+72.65	16+77.65	16+82.65	16+87.65	16+92.65	16+98.15
Top of Concrete Elevation	13.76	13.73	13.71	13.72	13.81	13.89	13.98	14.07	14.24	14.41	14.59

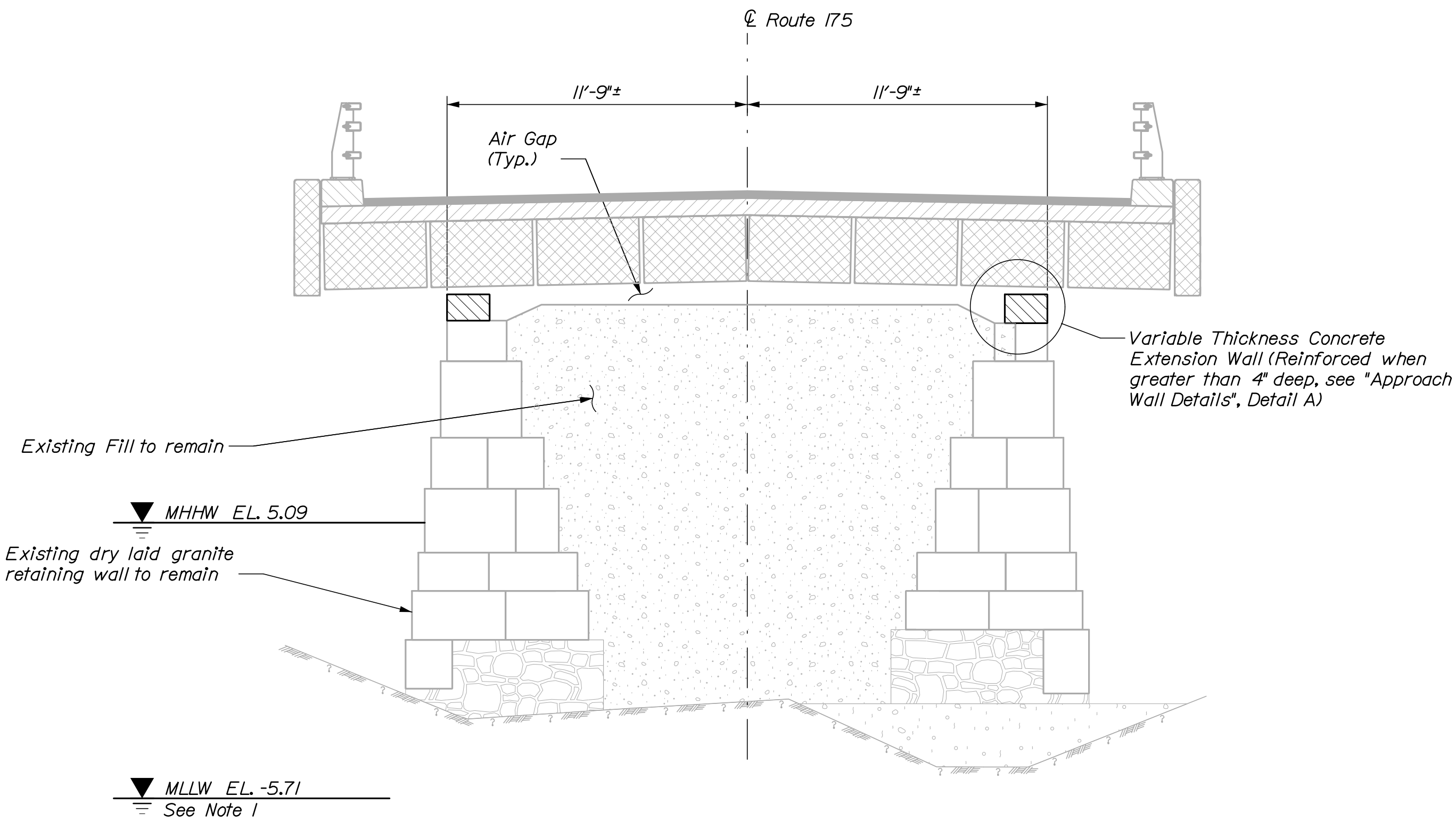


ELEVATION

Concrete Extension Wall Finished Elevation - Approach 2							
Control Point	1	2	3	4	5	6	7
Station	18+12.65	18+17.65	18+22.65	18+27.65	18+32.65	18+37.65	18+39.65
Top of Concrete Elevation	16.52	16.61	16.70	16.79	16.88	16.96	17.00
Bottom of Slab	13.18	12.98	13.07	13.14	13.23	13.32	13.35



SECTION A-A DEMOLITION

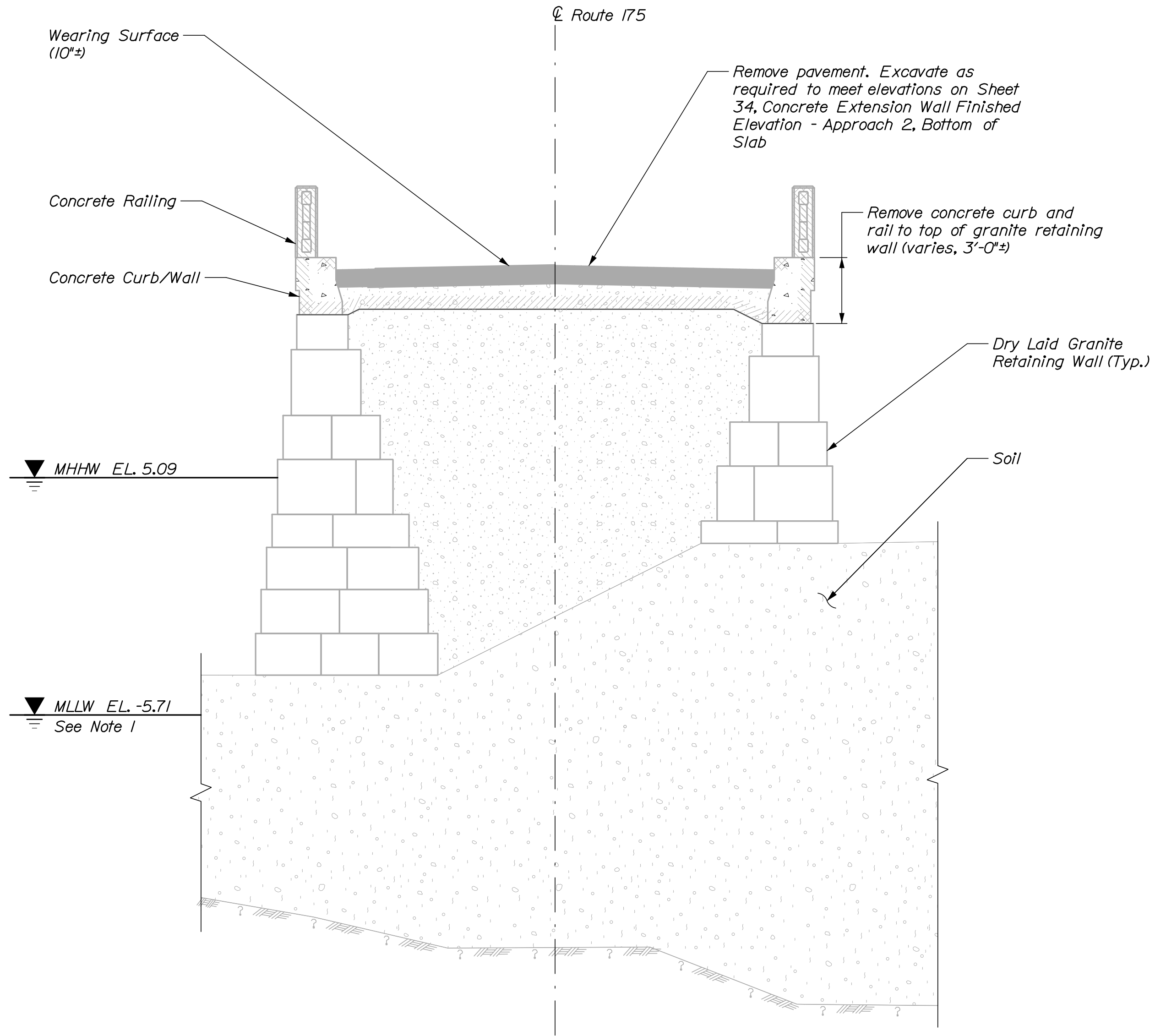


SECTION A-A CONSTRUCTION
(Superstructure Shown Screened for Clarity)

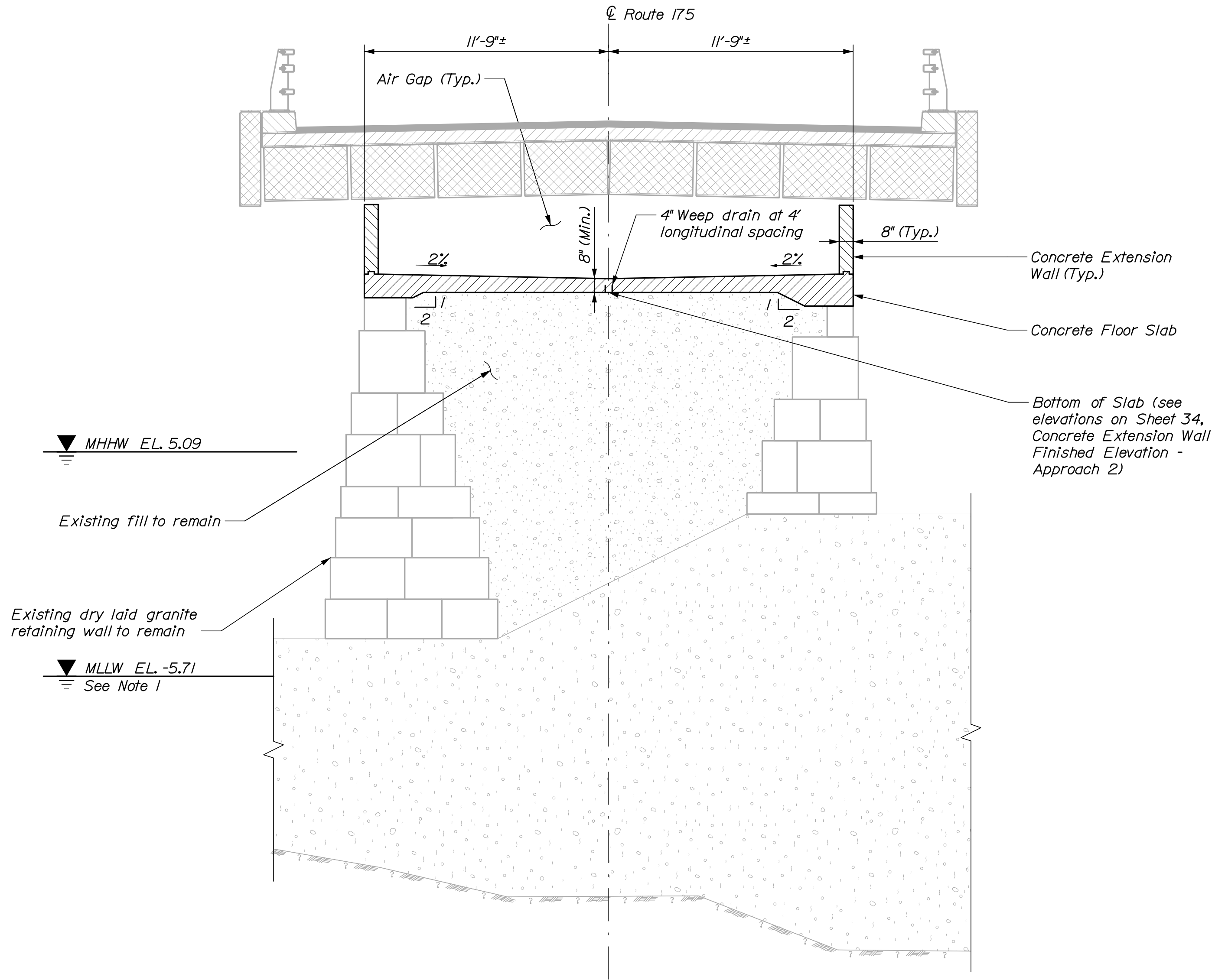
APPROACH WALL NOTES:

1. MLLW shown corresponds to the Blue Hill Bay low tide water elevation. Locally at the bridge, low tide water elevation on both sides of the structure is higher due to water flow out of the Salt Pond.
2. Scaled site photographs indicate 1' to 2' additional visible block wall height than the granite block depth measured on the wall borings. This indicates the possibility that a large stone was placed in front of the shim stone bedding at the base of the retaining walls.
3. Top of granite wall elevations shown are illustrative and approximate. Top of wall elevation varies from wall to wall and along the length of each wall.
4. Removal of concrete curb and retaining wall shall be incidental to the bridge demolition pay item.
5. Remove concrete level with the top of the top course of granite. Sound concrete behind the top course of granite may remain.

SHEET NUMBER		BLUE HILL FALLS BRIDGE				PROJ. MANAGER		A. Lothe	BY	DATE	STATE OF MAINE	
35 OF 70		SALT POND OUTLET				DESIGN-DETAILED		H. Walton	E. Beausoleil	09/21	DEPARTMENT OF TRANSPORTATION	
		BLUE HILL HANCOCK COUNTY				CHECKED-REVIEWED		K. Brayley	T. Cole	09/21	SIGNATURE	
						DESIGN2-DETAILED2		-	-	-	P.E. NUMBER	
						DESIGN3-DETAILED3		-	-	-	REVISIONS 1	
APPROACH WALL NO. 1		SECTIONS				REVISIONS 2		-	-	-	REVISIONS 3	
REVISIONS 4						-	-	-	DATE			
FIELD CHANGES						-	-	-	BRIDGE No. 5038			
						-	-	-	WIN			
											17712.00	
											BRIDGE PLANS	

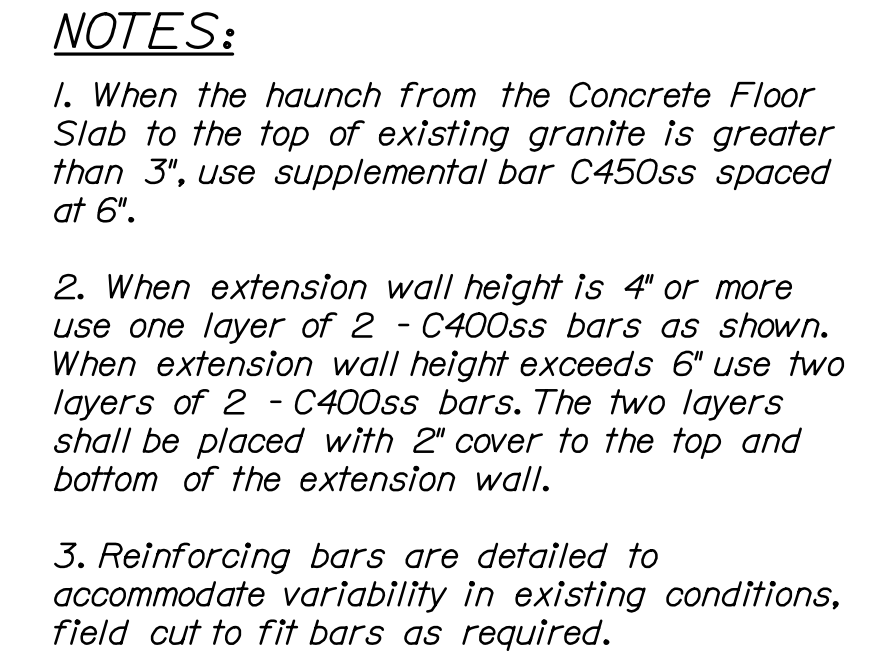


SECTION B-B DEMOLITION

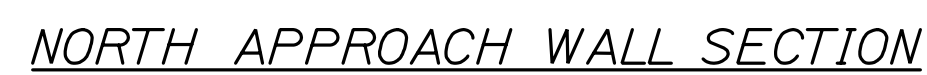


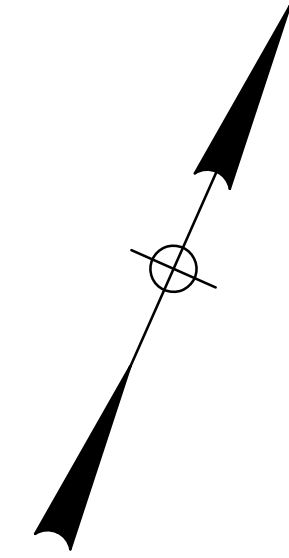
SECTION B-B CONSTRUCTION
(Superstructure Shown Screened for Clarity)

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION	
BLUE HILL FALLS BRIDGE		STP-1771(200)X	
SALT POND OUTLET		WIN	
BLUE HILL		17712.00	
HANCOCK COUNTY		BRIDGE No. 5038	
APPROACH WALL NO. 2		BRIDGE PLANS	
SECTIONS			
SHEET NUMBER			
36			
OF 70			
PROJ. MANAGER	A. LaRue	BY	DATE
DESIGN-DETAILED	H. Walton	E. Beausoleil	09/21
CHECKED-REVIEWED	K. Brayley	T. Cote	09/21
DESIGN-DETAILED	-	-	-
REVISIONS 1	-	-	-
REVISIONS 2	-	-	-
REVISIONS 3	-	-	-
REVISIONS 4	-	-	-
FIELD CHANGES	-	-	-
SIGNATURE		P.E. NUMBER	
DATE			

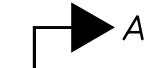


SOUTH APPROACH CONCRETE FLOOR SLAB AND EXTENSION WALL SECTION
(Existing granite walls and fill not shown)

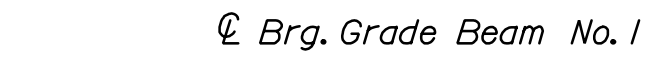




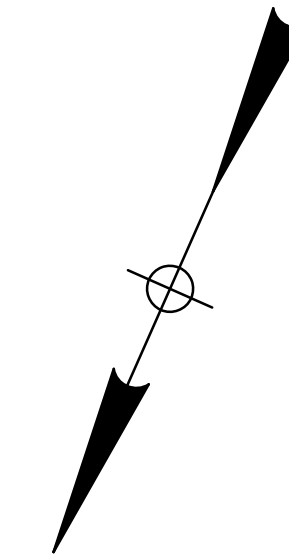
GRADE BEAM NO. 1 PLAN



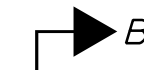
GRADE BEAM NO. 1 ELEVATION



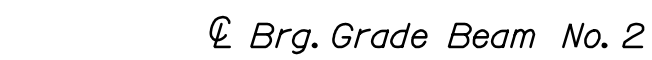
SECTION A-A



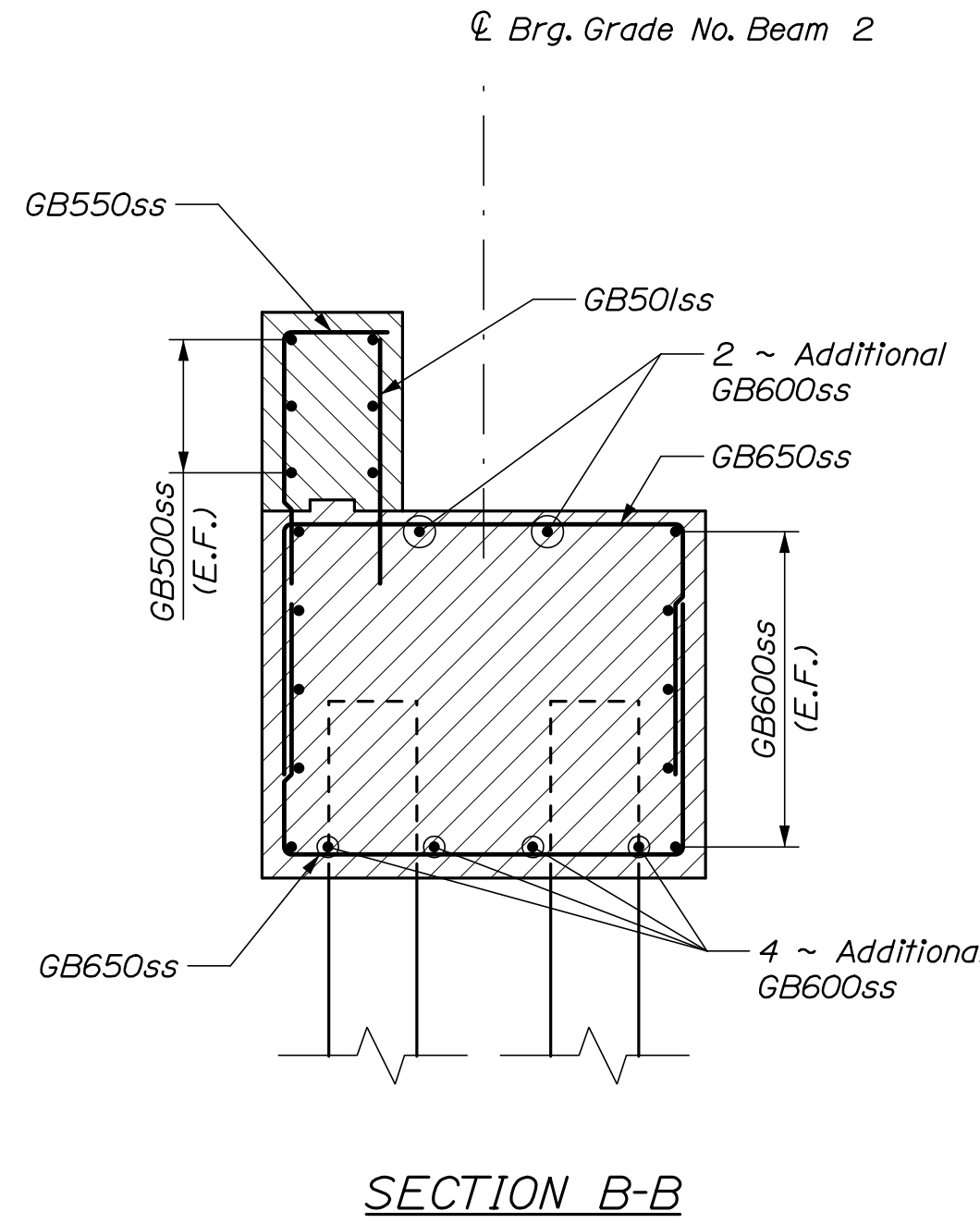
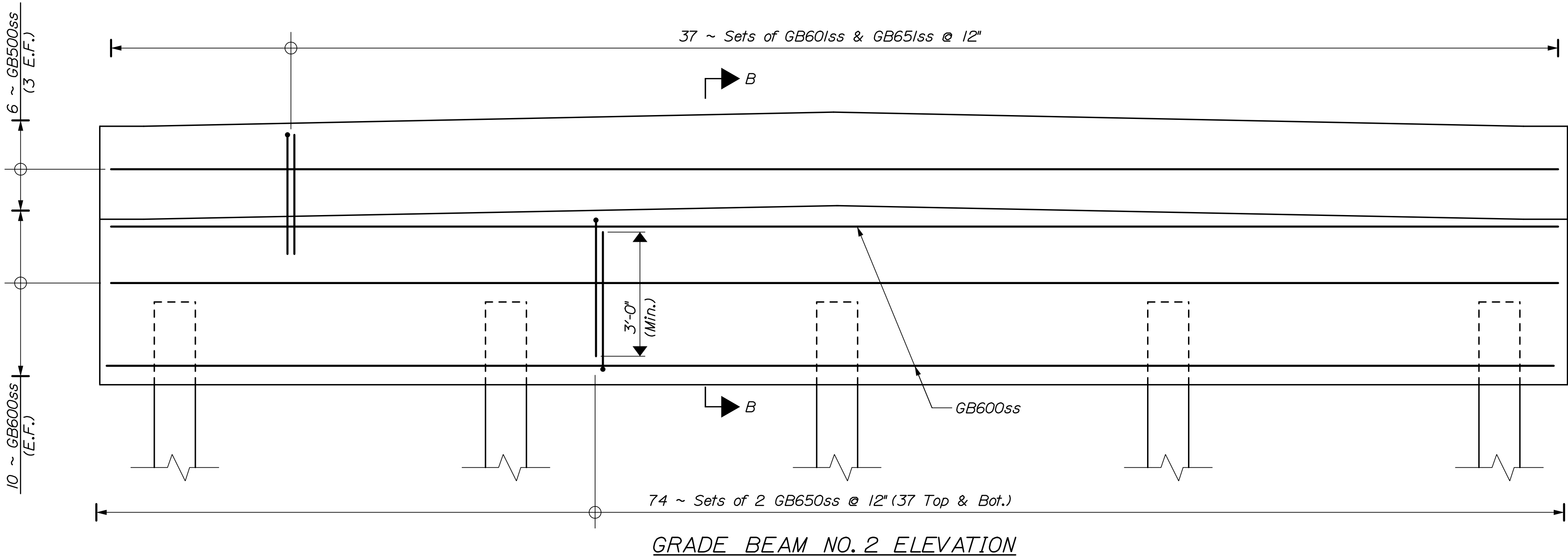
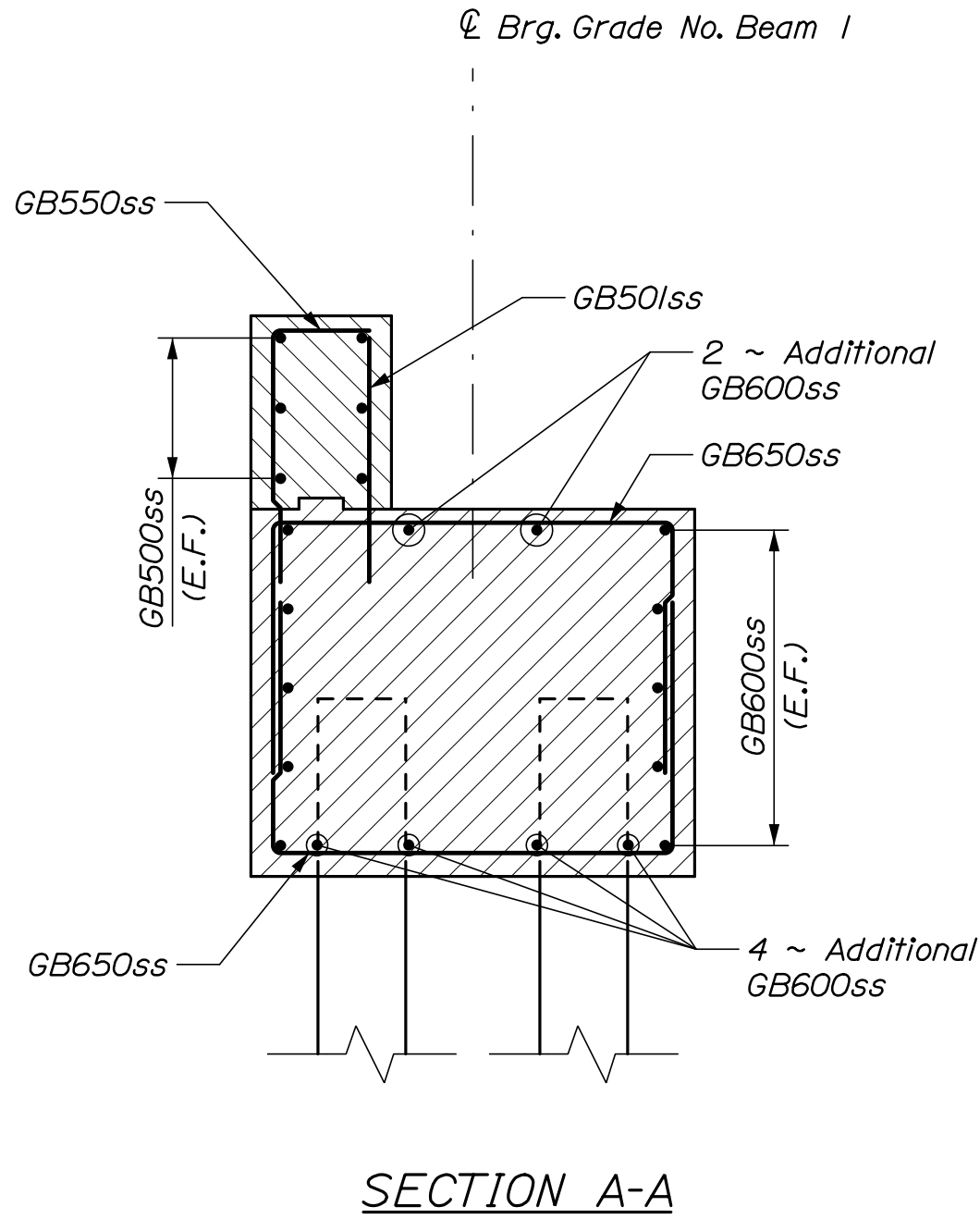
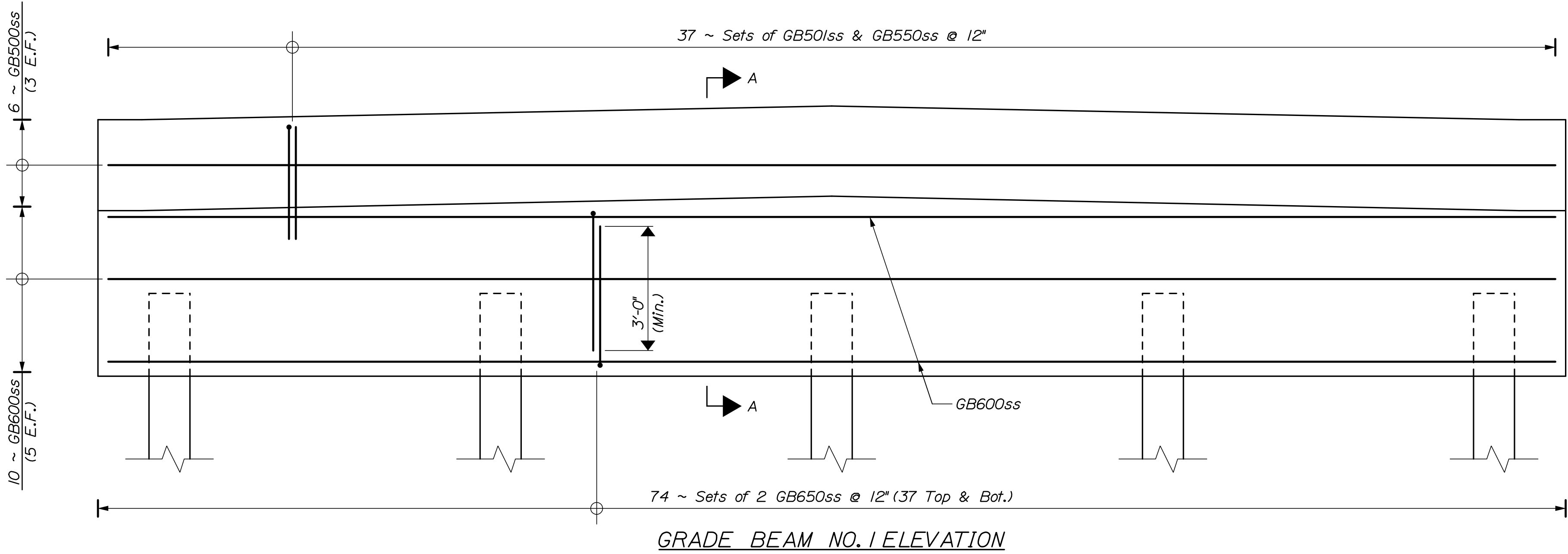
GRADE BEAM NO. 2 PLAN



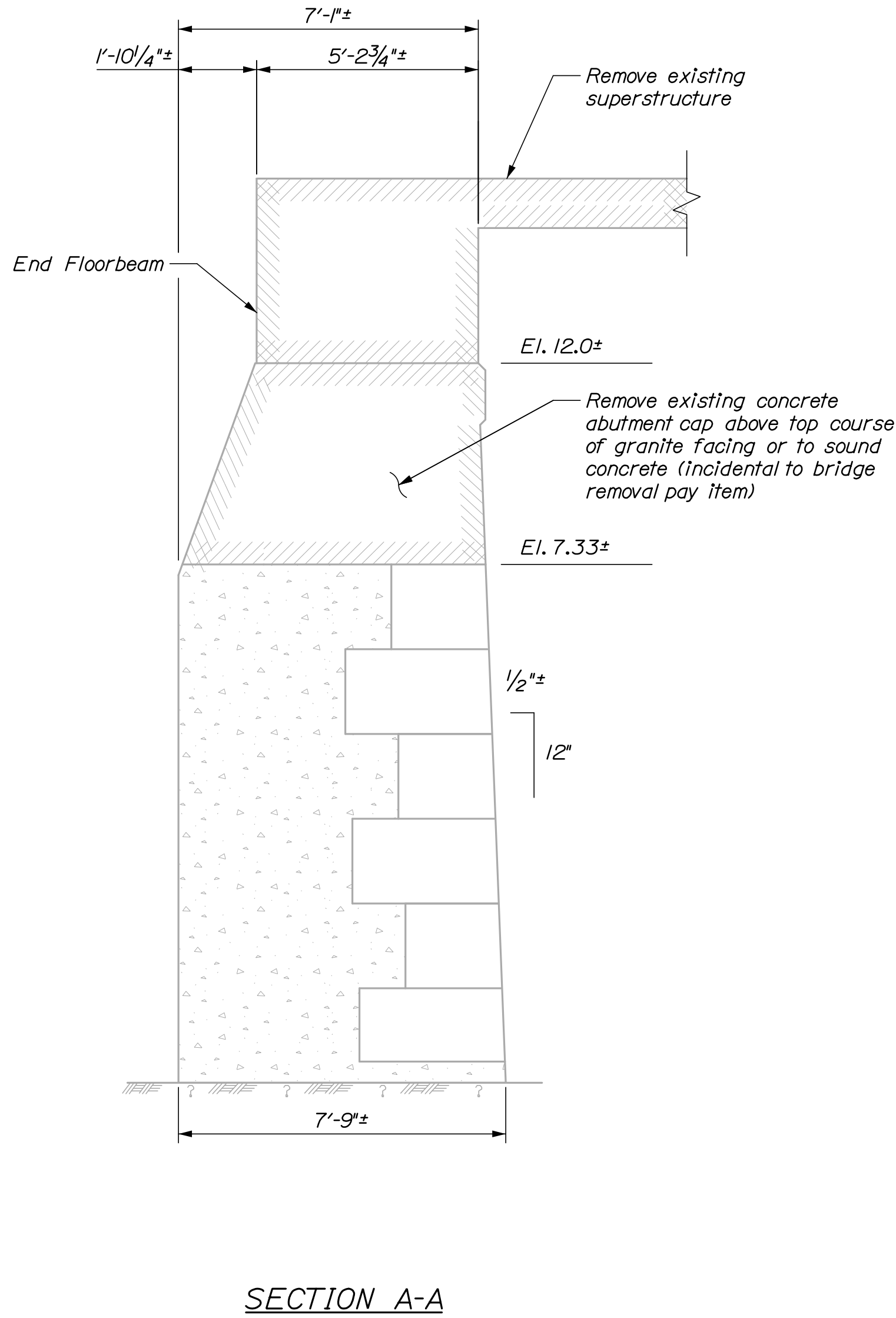
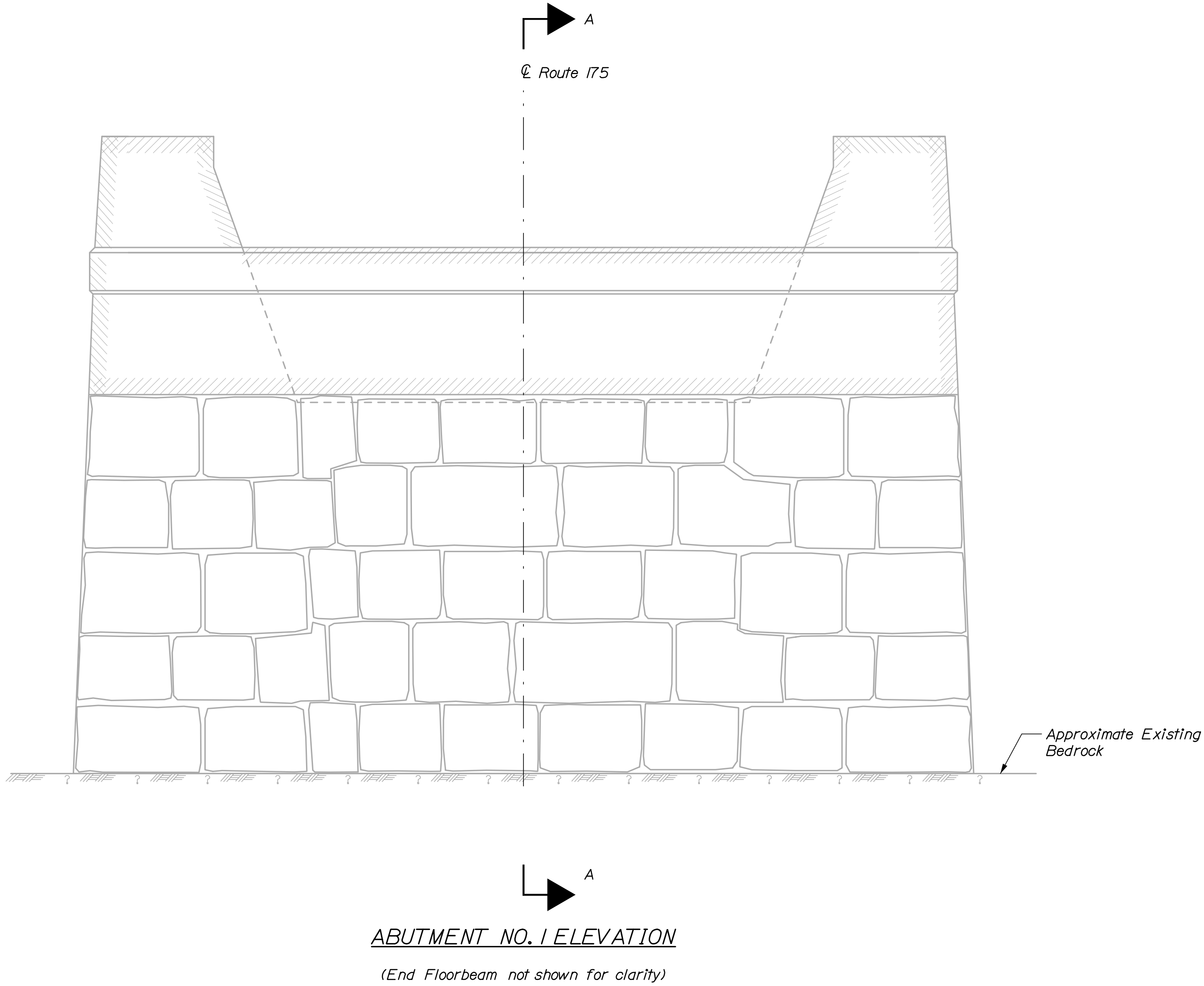
GRADE BEAM 2 NO. ELEVATION



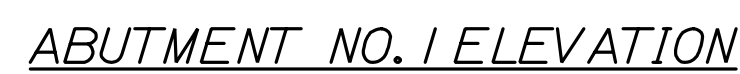
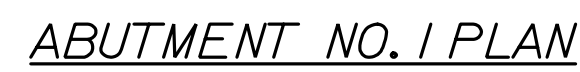
SECTION B-B



BLUE HILL FALLS BRIDGE SALT POND OUTLET BLUE HILL HANCOCK COUNTY					PROJ. MANAGER	A. Lethé	BY	DATE
GRADE BEAM REINFORCING					DESIGN-DETAILED	H. Walton	K. Broyley	09\21
					CHECKED-REVIEWED	K. Broyley		
					DESIGN2-DETAILED2	-	-	SIGNATURE
					DESIGN3-DETAILED3	-	-	
					REVISIONS 1	-	-	P.E. NUMBER
					REVISIONS 2	-	-	
					REVISIONS 3	-	-	
					REVISIONS 4	-	-	DATE
					FIELD CHANGES	-	-	
SHEET NUMBER					STATE OF MAINE DEPARTMENT OF TRANSPORTATION STP-1771(200)X Bridge No. 5038 WIN 17712.00 BRIDGE PLANS			
39								
OF 70								



SHEET NUMBER			STATE OF MAINE			
40			DEPARTMENT OF TRANSPORTATION			
			STP-1771(200)X			
			WIN			
			17712.00			
			BRIDGE No. 5038			
BRIDGE PLANS						
BLUE HILL FALLS BRIDGE SALT POND OUTLET BLUE HILL HANCOCK COUNTY ABUTMENT NO. 1 DEMOLITION ELEVATION AND SECTION			PROJ. MANAGER	A. Lethe	BY	DATE
			DESIGN-DETAILED	H. Walton	E. Beausoleil	09/21
			CHECKED-REVIEWED	K. Brayley	T. Cote	09/21
			DESIGN2-DETAILED2	-	-	-
			DESIGN3-DETAILED3	-	-	-
			REVISIONS 1	-	-	-
			REVISIONS 2	-	-	-
			REVISIONS 3	-	-	-
			REVISIONS 4	-	-	-
			FIELD CHANGES	-	-	-

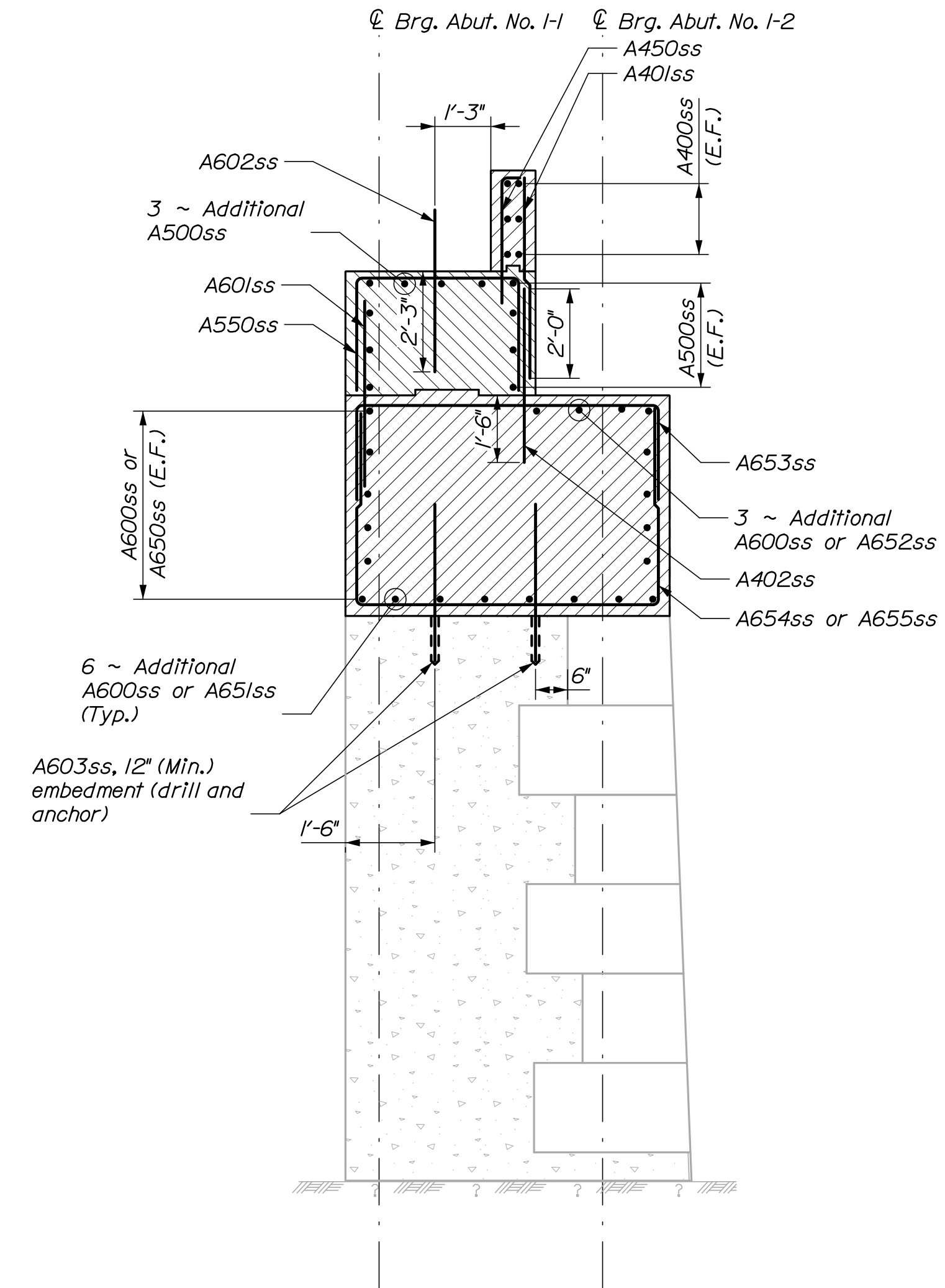


1. The maximum force applied pressure is 21 ksf (Strength I).
2. Reinforcing steel shall have a minimum concrete cover of 2 inches unless otherwise noted.
3. Cover joints where waterstops are not required in accordance with Standard Details Section 502.
4. Except where air gaps are specified, abutments and grade beams shall be backfilled with Granular Borrow. Pay limits will be the structural excavation limits in cut areas and a vertical plane located 10 feet behind the walls in fill areas.
5. Prior to forming the abutment cap at Abutment 1, or coring holes for micropiles at Abutment 2, the Resident will inspect the existing stones to determine which abutment stones are loose and require repair to secure them into the abutment. The method of repair will be determined by the Contractor with approval by the Resident. Payment for this repair will be made by Force Account and applicable Pay Items.
6. After repairing any loose granite blocks per Note 5 and prior to coring holes for micropiles in Abutment 2, the Contractor shall clean and replace all loose and damaged grout per Special Provision 525 and as directed by the Resident. The surface area of abutment repaired will be measured for payment under Pay Item 525.262, Repointing Granite Masonry.

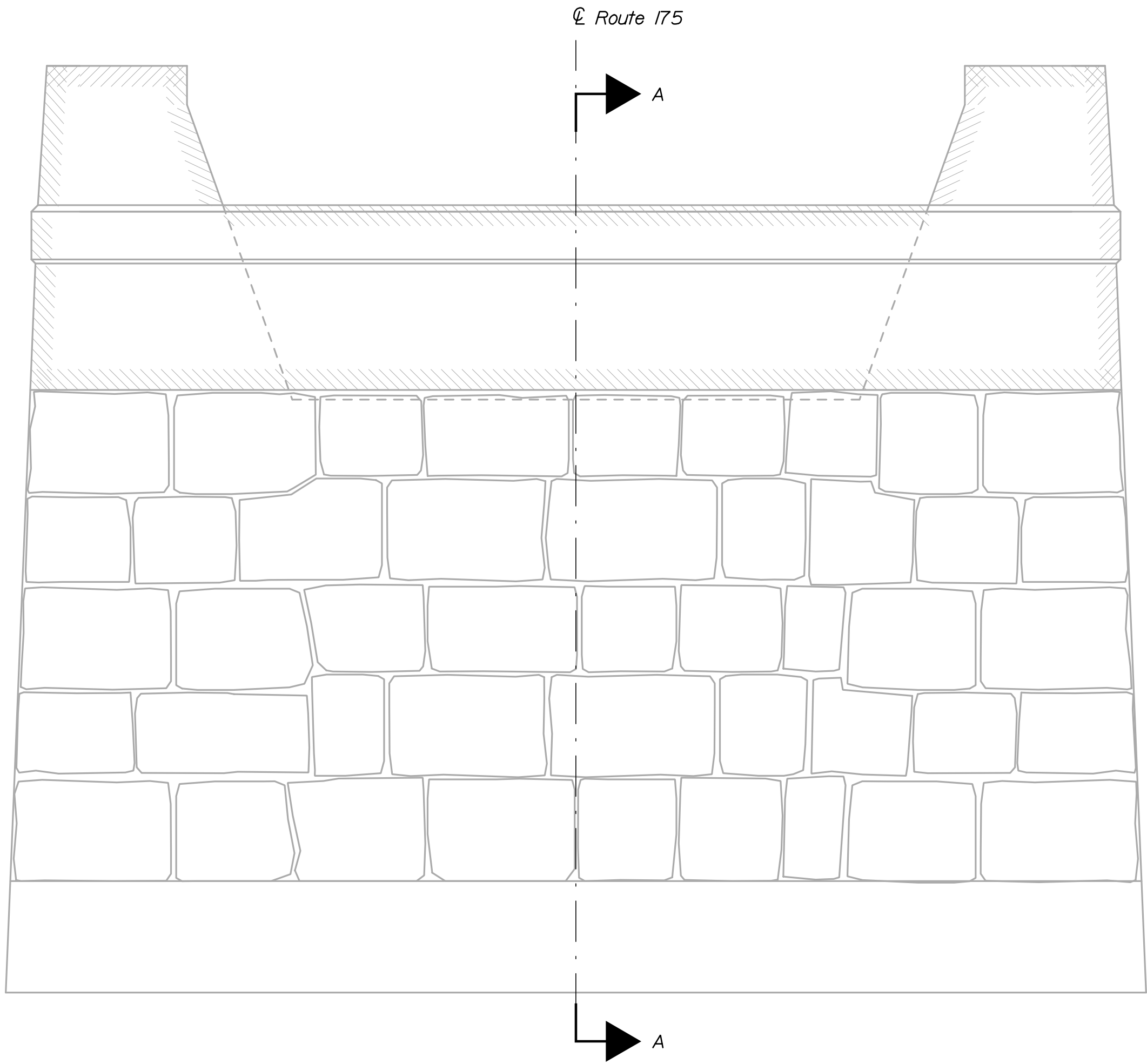




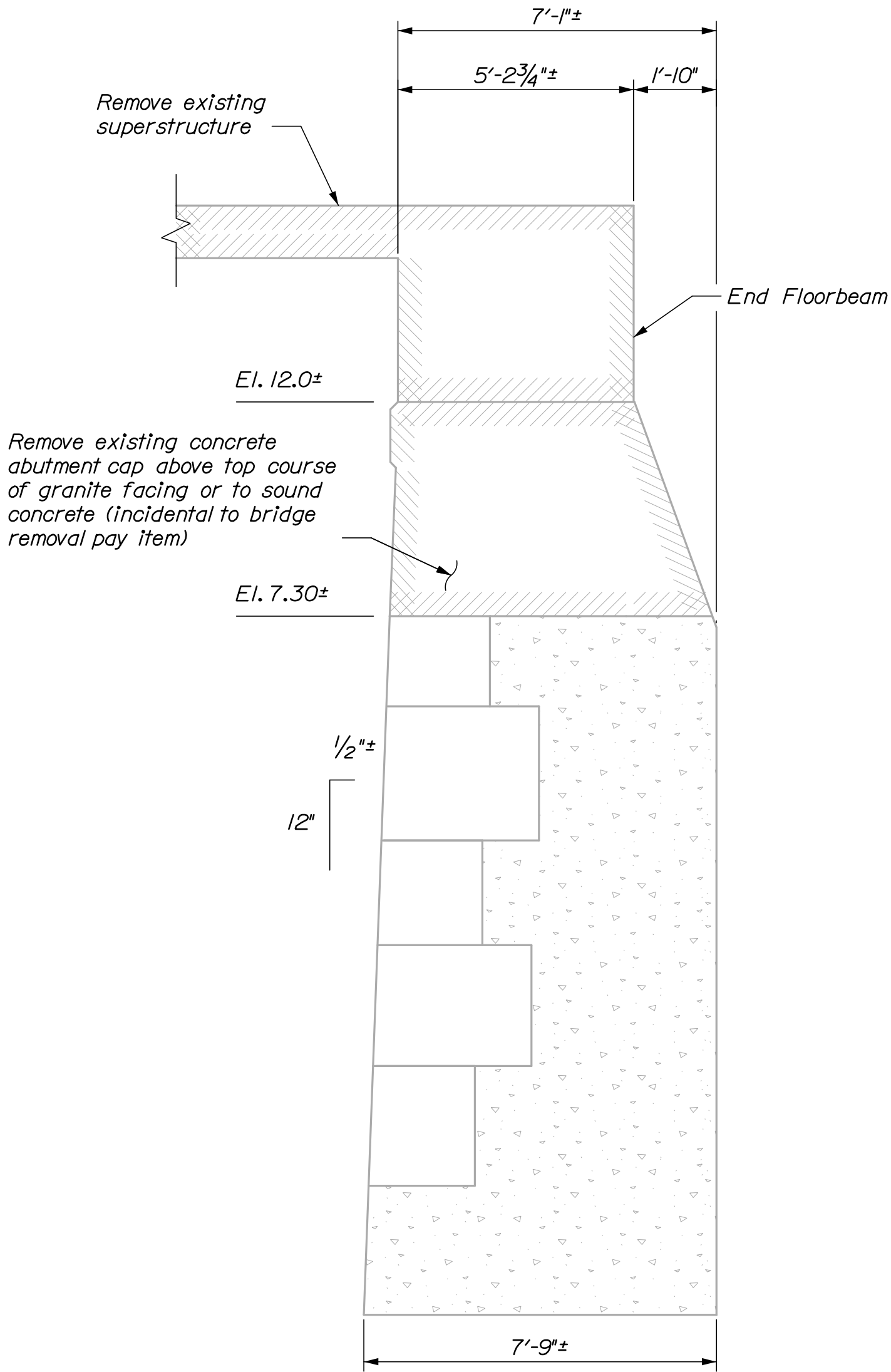
1. Reinforcing bars are detailed to accommodate variability in existing conditions, field cut to fit bars as required.



HNTB

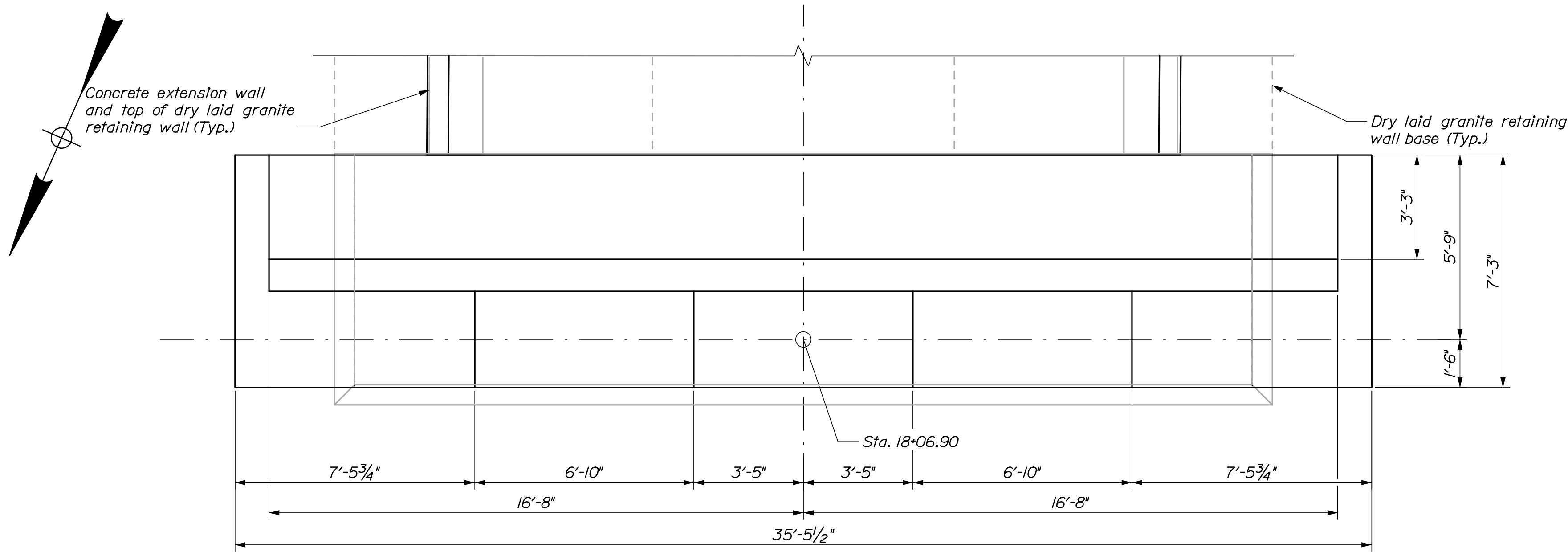


ABUTMENT NO. 2 ELEVATION
(End Floorbeam not shown for clarity)

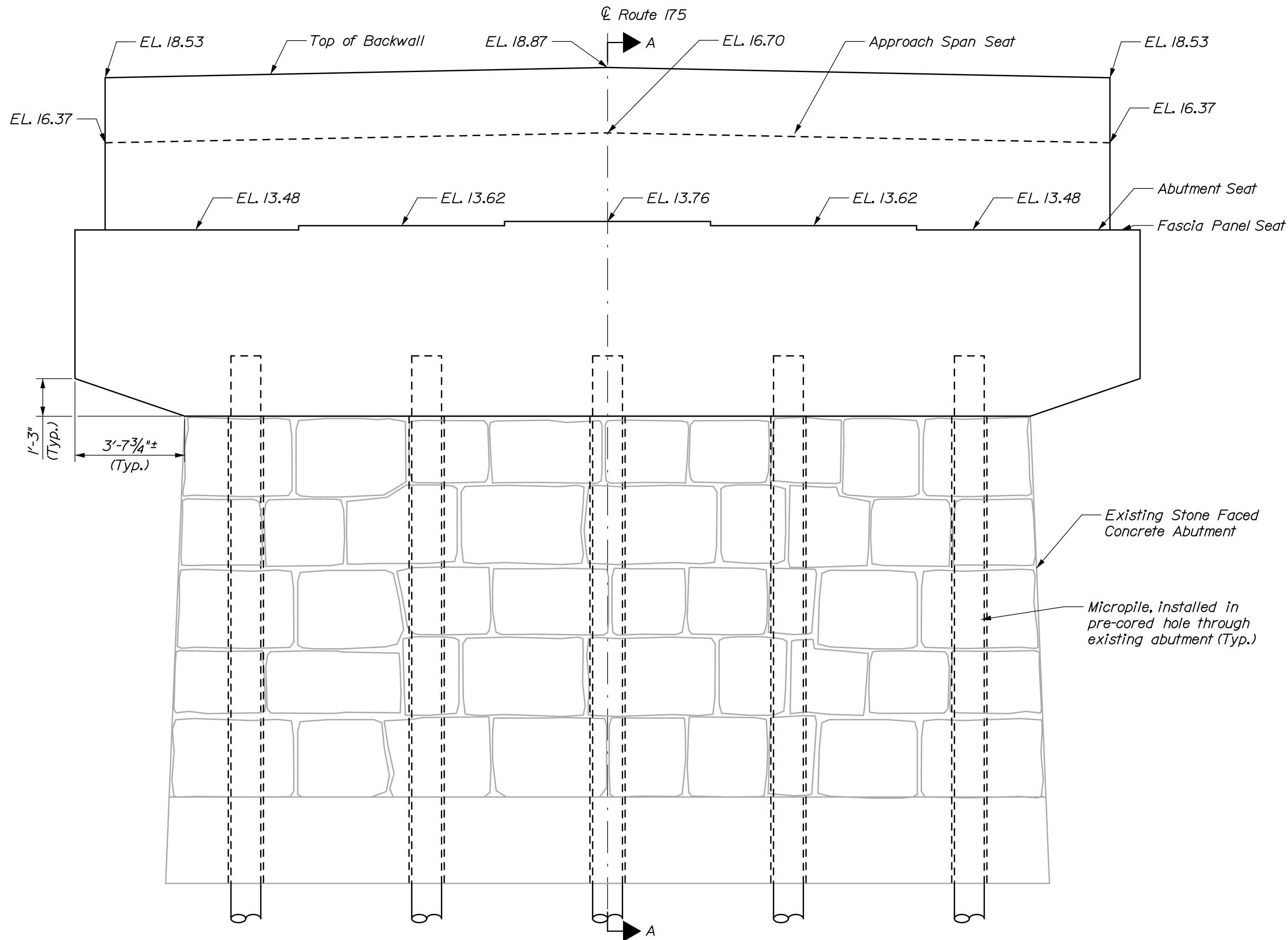


SECTION A-A

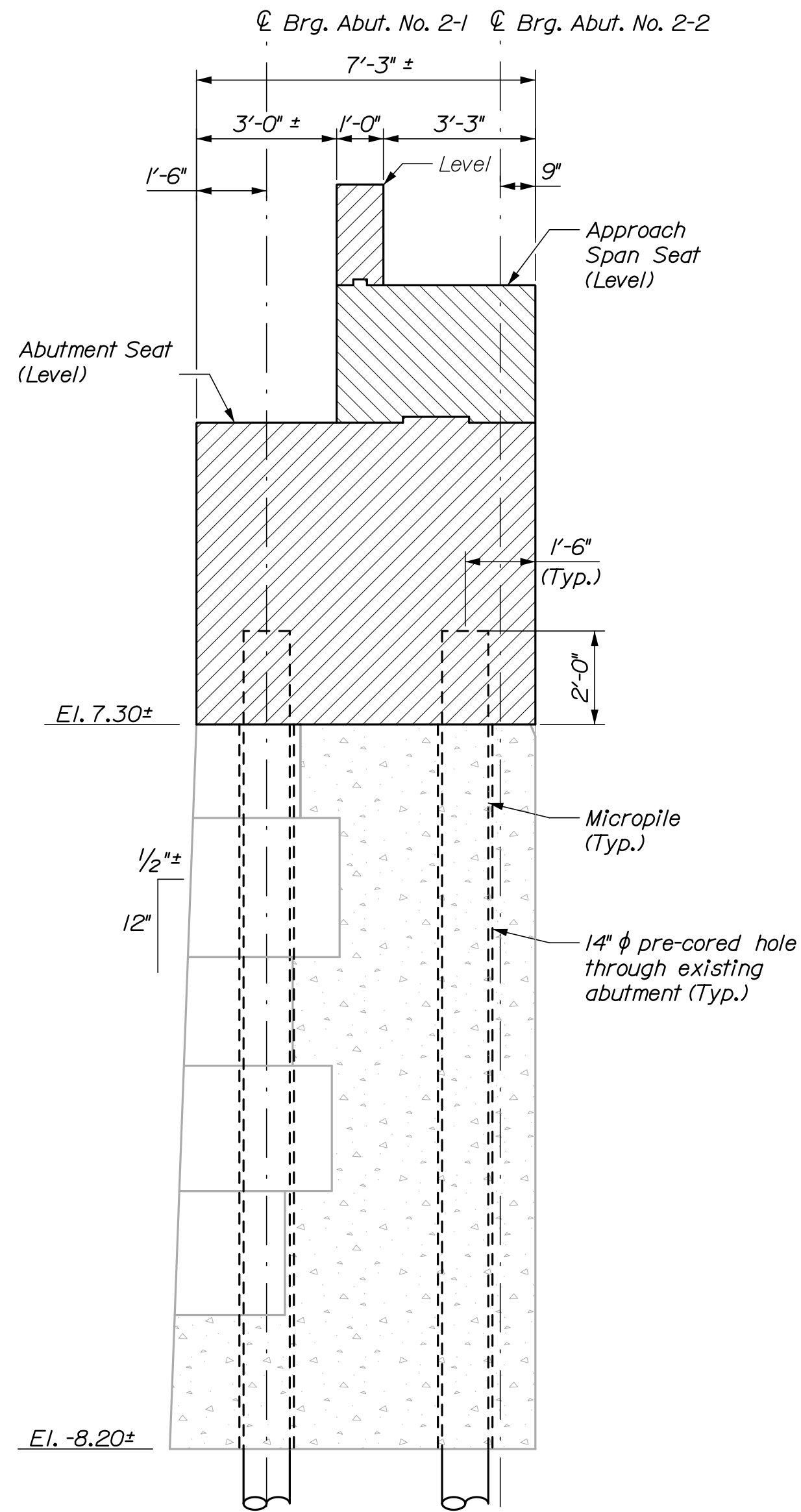
SHEET NUMBER 43 OF 70	BLUE HILL FALLS BRIDGE SALT POND OUTLET BLUE HILL HANCOCK COUNTY		PROJ. MANAGER DESIGN-DETAILED CHECKED-REVIEWED DESIGN-DETAILED REVISIONS 1 REVISIONS 2 REVISIONS 3 REVISIONS 4 FIELD CHANGES	A. Lathe H. Walton E. Benisioff T. Cote -	BY E. Benisioff T. Cote -	DATE 03/21 03/21 -	STATE OF MAINE DEPARTMENT OF TRANSPORTATION STP-1771(200)X Bridge No. 5038 WIN 17712.00 BRIDGE PLANS
	ABUTMENT NO. 2 DEMOLITION ELEVATION AND SECTION		DESIGN-DETAILED CHECKED-REVIEWED DESIGN-DETAILED REVISIONS 1 REVISIONS 2 REVISIONS 3 REVISIONS 4 FIELD CHANGES	T. Cote -	-	-	
			DESIGN-DETAILED CHECKED-REVIEWED DESIGN-DETAILED REVISIONS 1 REVISIONS 2 REVISIONS 3 REVISIONS 4 FIELD CHANGES	-	-	-	
			DESIGN-DETAILED CHECKED-REVIEWED DESIGN-DETAILED REVISIONS 1 REVISIONS 2 REVISIONS 3 REVISIONS 4 FIELD CHANGES	-	-	-	



ABUTMENT NO. 2 PLAN

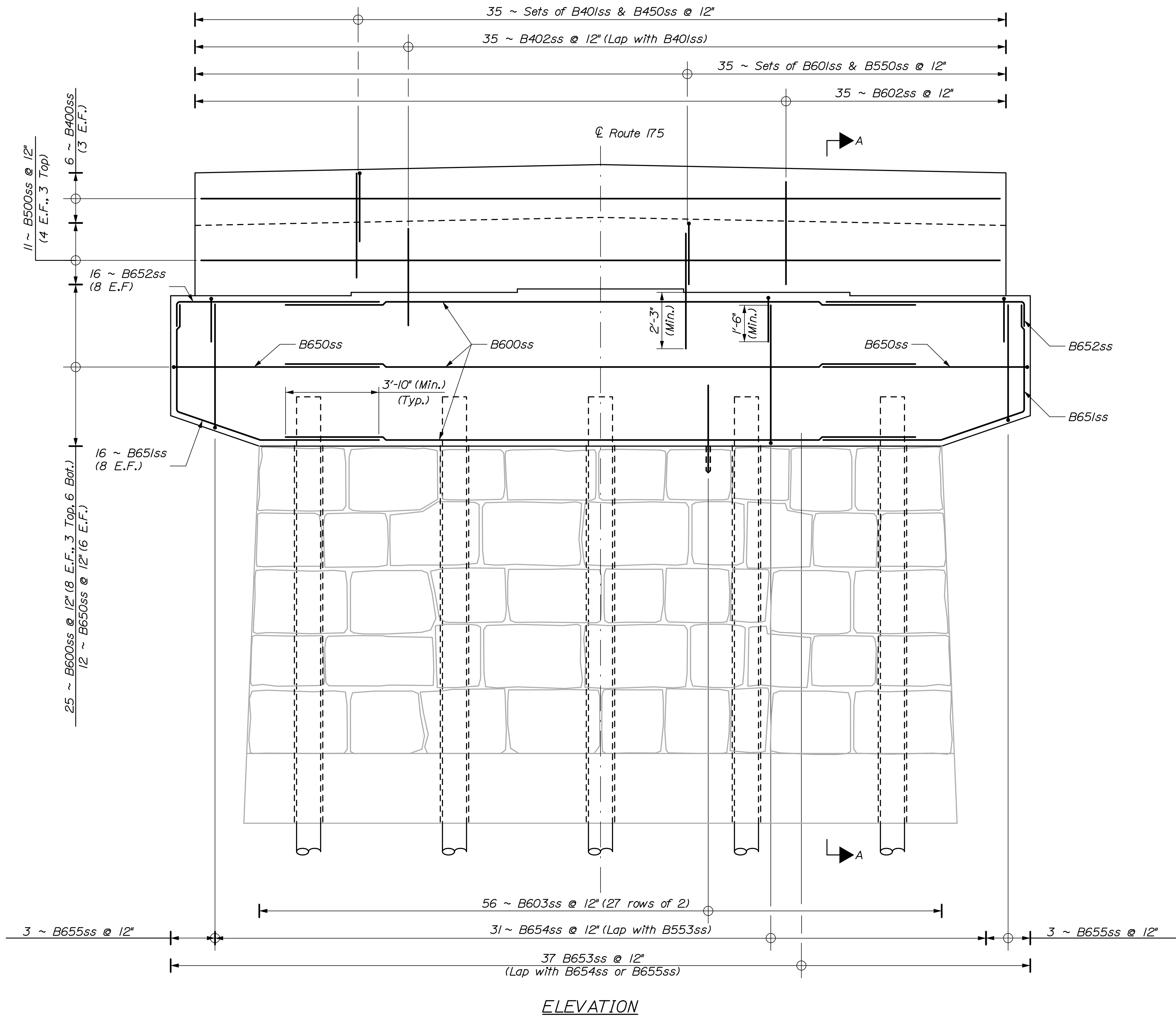


ABUTMENT NO. 2 ELEVATION

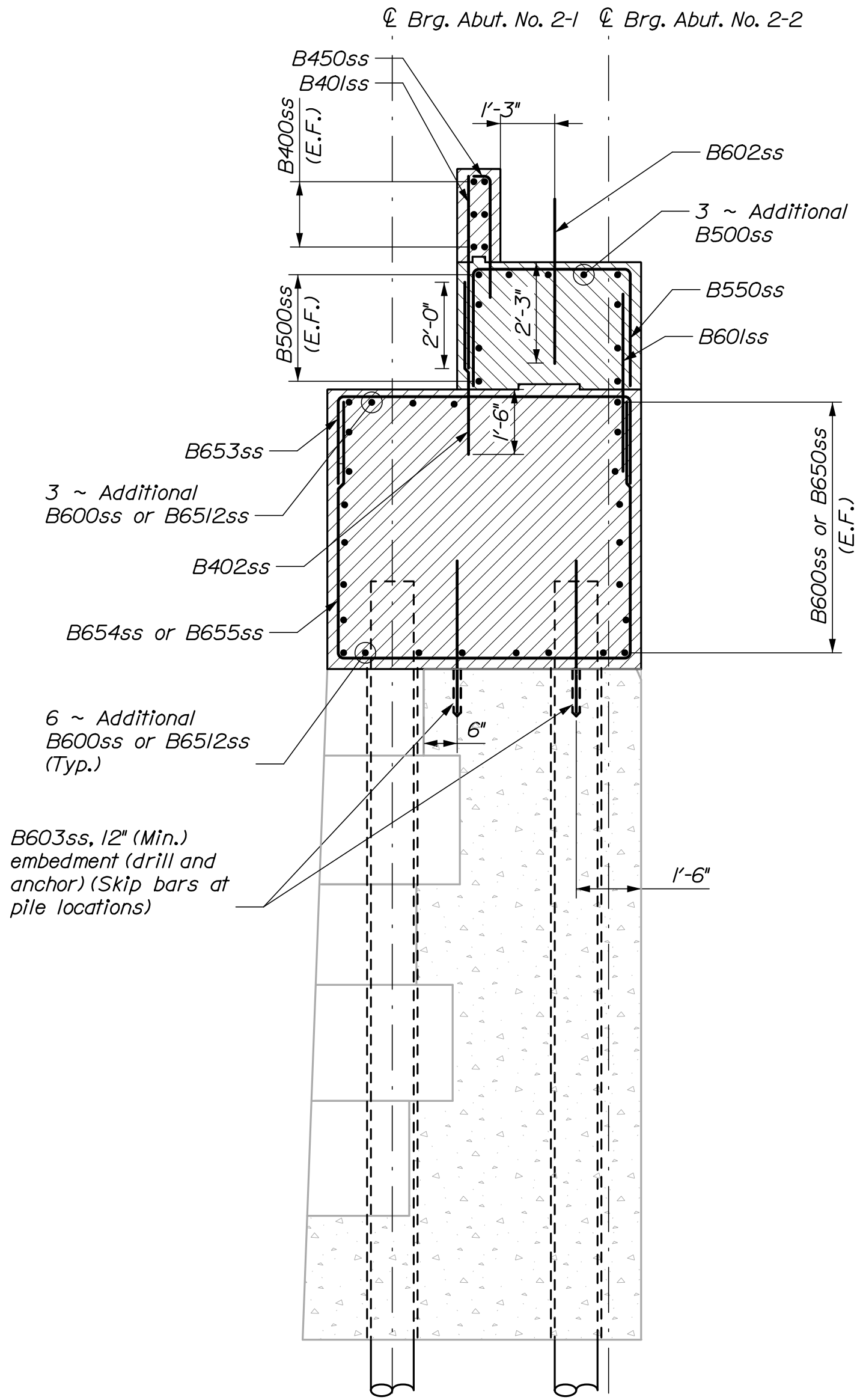


SECTION A-A

STATE OF MAINE DEPARTMENT OF TRANSPORTATION STP-1771(200)X WIN 17712.00 Bridge No. 5038 BRIDGE PLANS					



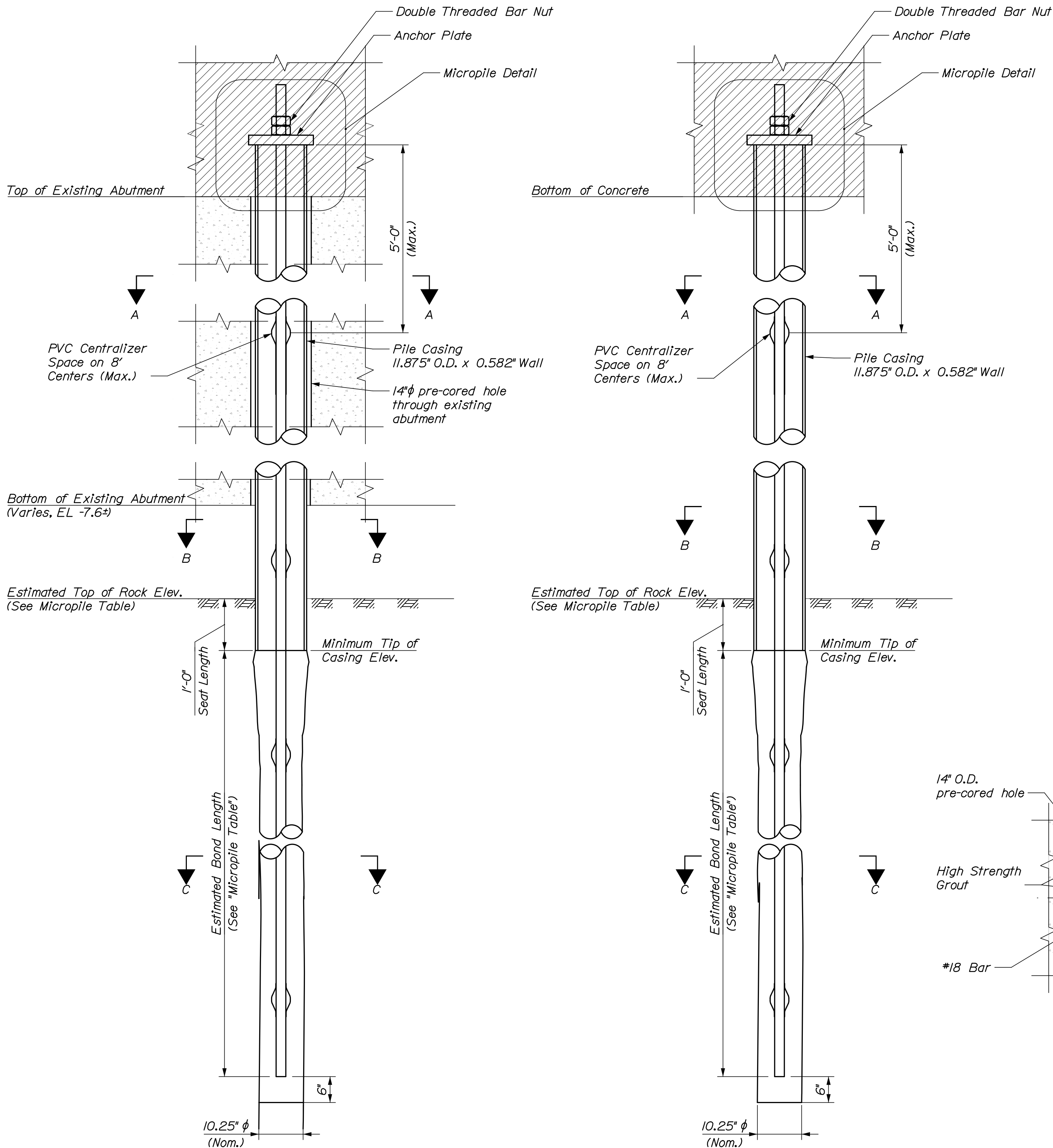
SECTION A-A



NOTE:

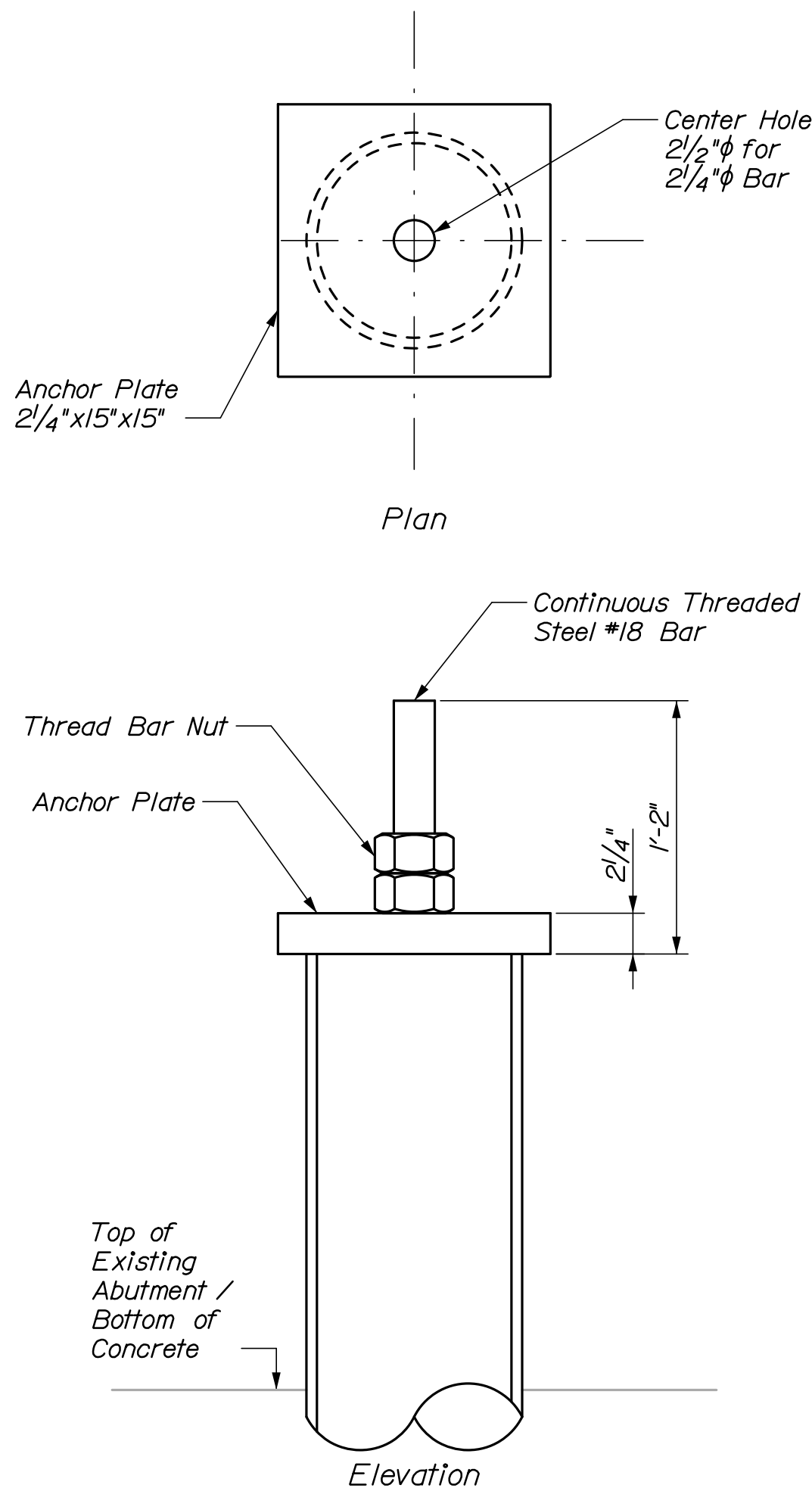
1. Reinforcing bars are detailed to accommodate variability in existing conditions, field cut to fit bars as required.

SHEET NUMBER				STATE OF MAINE DEPARTMENT OF TRANSPORTATION					
45									
OF 70									
BLUE HILL FALLS BRIDGE SALT POND OUTLET BLUE HILL HANCOCK COUNTY ABUTMENT 2 RETROFIT REINFORCING				PROJ. MANAGER		A. Letha	BY	DATE	
				DESIGN-DETAILED		H. Walton	E. Beausoleil	09/21	
				CHECKED-REVIEWED		K. Brayley	T. Cole	09/21	
				DESIGN2-DETAILED2		-	-	-	
				DESIGN3-DETAILED3		-	-	-	
				REVISIONS 1		-	-	P.E. NUMBER	
				REVISIONS 2		-	-	-	
				REVISIONS 3		-	-	-	
				REVISIONS 4		-	-	DATE	
				FIELD CHANGES		-	-	-	
						Bridge No. 5038		WIN	BRIDGE PLANS
						17712.00			

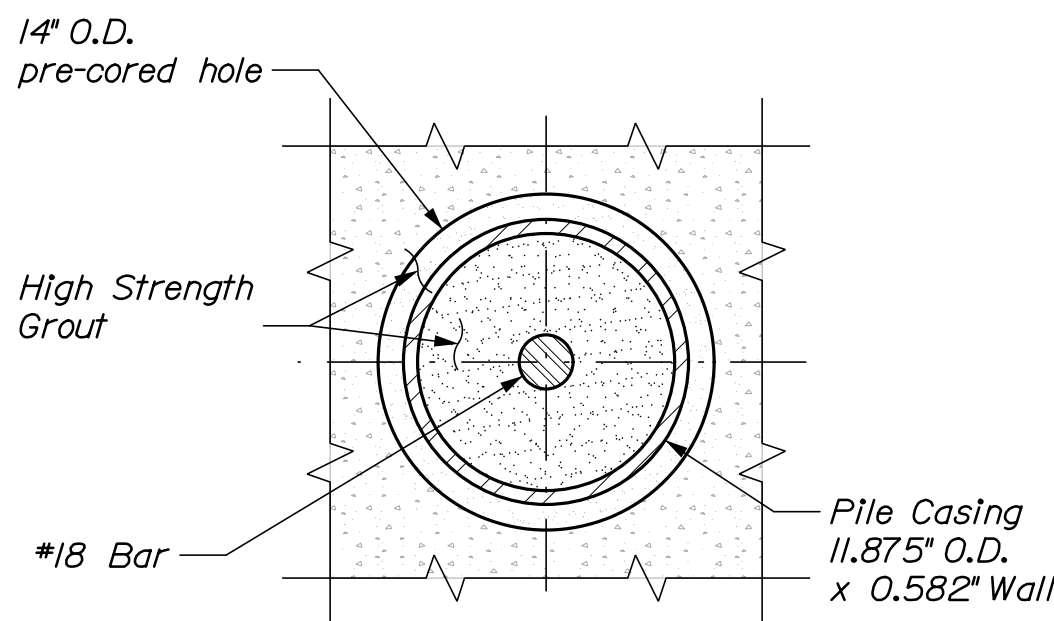


ABUTMENT MICROPILE ELEVATION

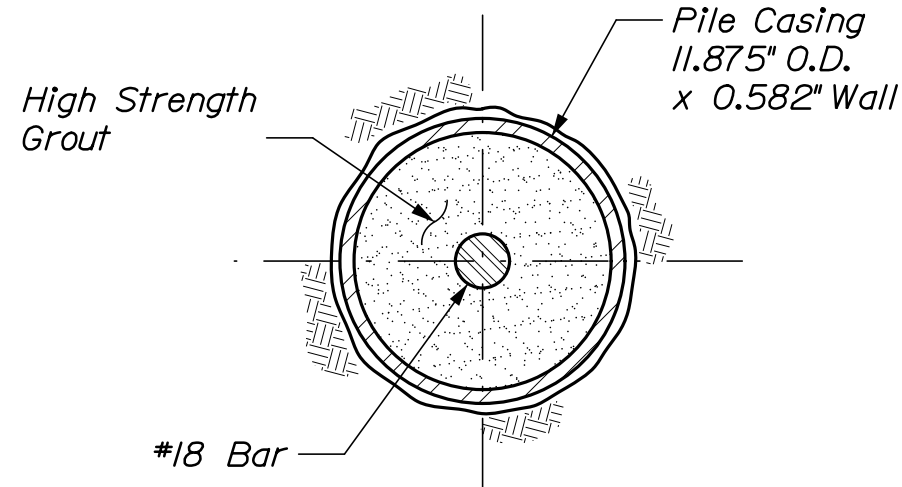
GRADE BEAM MICROPILE ELEVATION



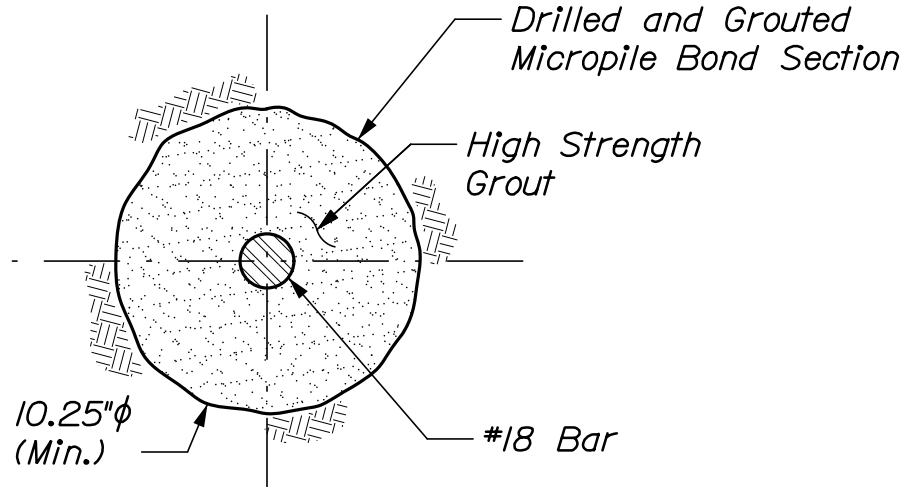
MICROPILE DETAIL



SECTION A-A
(Abutment 2)



SECTION B-B
(Cased Zone)
(In Bedrock Shown, in Soil Similar)



SECTION C-C
(Bond Zone in Bedrock)

NOTES:

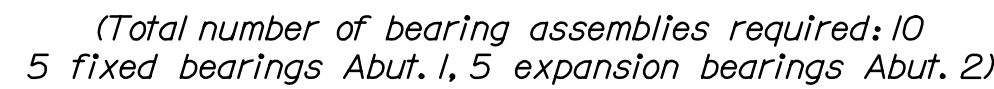
1. Micropiles shall not be installed closer than 10 feet from an adjacent micropile which has been grouted for a period of less than 24 hours.
2. Following structural repairs to existing granite blocks and repairing granite masonry joints at Abutment 2, and prior to micropile installation, the Contractor shall drill 14-inch diameter vertical cores at each Abutment 2 micropile location. Cores shall extend from the top of the existing abutment to to the bottom of the existing abutment and shall be located and sized to allow a minimum 1" temporary annulus between existing masonry or concrete and micropile outer casing. Annulus shall be tremie grouted with micropile grout upon completion of micropile installation. Vertical coring for micropiles shall be paid for under Item 501.8031, Coring - 14" Core Hole.
3. Top of Rock Elevations indicated in the Micropile Table are estimated based on subsurface investigation data and may vary. Actual Top of Rock Elevation shall be verified at each micropile location during micropile installation. Micropile casing shall be seated a minimum of 1'-0" below top of rock.

MICROPILE TABLE							
Substructure Unit	Required Nominal Resistance		Factored Design Load (FDL)		Bottom of Concrete* Elevation	Estimated Top of Rock Elevation	Estimated Bond Zone Length (ft.)
	Compression	Tension	Compression	Tension			
Grade Beam 1	447 kips	0 kips	313 kips	0 kips	9.62	-2.5	10
Abutment 2	563 kips	45 kips	394 kips	31 kips	7.30	-12.6	10
Grade Beam 2	352 kips	0 kips	247 kips	0 kips	13.00	-16.0	10

*At Abutment 2, bottom of proposed cap given. See boring logs for approximate bottom of existing abutment elevation.

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	STP-1771(200)X		WIN	17712.00	BRIDGE PLANS
	Bridge No. 5038				
BLUE HILL FALLS BRIDGE SALT POND OUTLET HANCOCK COUNTY BLUE HILL MICROPILE DETAILS	PROJ. MANAGER	A. Lathe	BY	E. Benoit	DATE
	DESIGN-DETAILED	H. Walton	09/21		
	CHECKED-REVIEWED	K. Reidy	09/21		
	DESIGN-DETAILED				
	REVISIONS	1			
REVISIONS	2				
REVISIONS	3				
REVISIONS	4				
FIELD CHANGES					
SHEET NUMBER					
46					
OF 70					

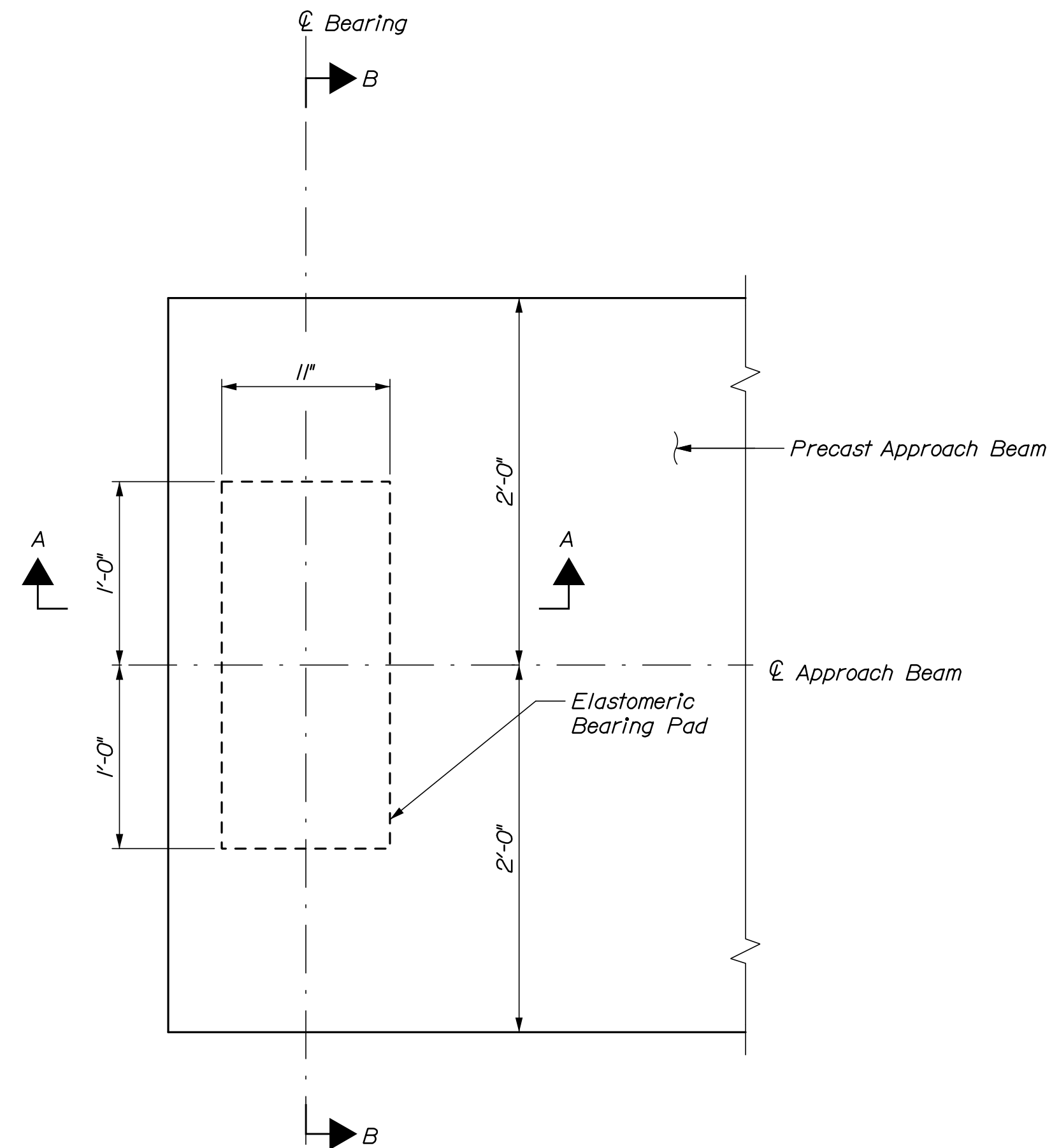
Filename: 047_Bearing Details 1.dgn



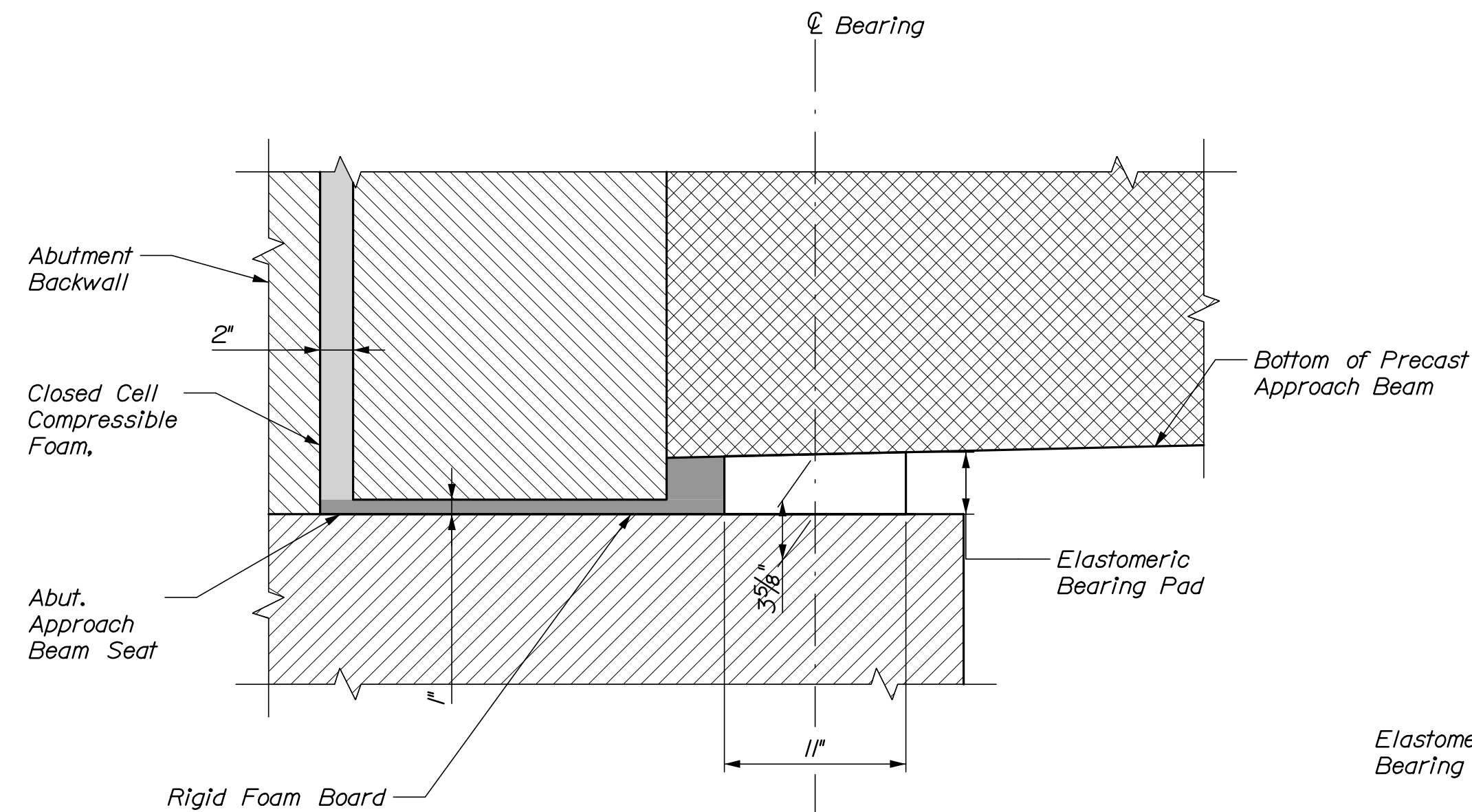
1. Elastomer shall be 100% polychloroprene (neoprene) grade 4, meeting the requirements of AASHTO M251. Elastomer shall have a durometer hardness of 50. The shear modulus of the elastomer shall be 115 psi $\pm$ 5%.
2. Vulcanize elastomer to sole plate during the primary mold process.
3. Upset the threads on the anchor rods after assembly.
4. Sole plate and anchor block shall be AASHTO M270 Grade 50. Anchor rods shall meet the requirements of ASTM F1554, Grade 105, and shall be swaged or threaded on the embedded portion of the rod.
5. Bearings shall be covered during transit.
6. Sole plate, anchor block, anchor rods, nuts, and washers shall be hot-dip galvanized in accordance with ASTM A153 and A123 as applicable.
7. All bearings shall be marked prior to shipping. The marks shall include the bearing location on the bridge, and a direction arrow that points up-station. All marks shall be permanent and shall be visible after the bearing is installed.
8. All precautions necessary shall be taken to protect bearing components from field weld flash and splatter. Welding procedures shall be established by the Contractor to restrict the maximum temperature of steel adjacent to the elastomer to 200°F through use of temperature indicating crayons or other suitable means.
9. Bearing pads were designed using "Method B" from the AASHTO LRFD specifications and shall be subsequently tested in accordance with the specifications.
10. All steel reinforcing plates shall meet the requirements of ASTM A36 unless otherwise noted. Steel reinforcement plates shall be deburred prior to molding the bearing.
11. Contractor shall re-finish galvanizing, in accordance with ASTM A780, after welding.

SHEET NUMBER		BLUE HILL FALLS BRIDGE				PROJ. MANAGER		A. LaHe	BY	DATE	STATE OF MAINE	
47		SALT POND OUTLET				DESIGN-DETAILED	H. Walton	E. Boussoled		09/21	DEPARTMENT OF TRANSPORTATION	
		BLUE HILL HANCOCK COUNTY				CHECKED-REVIEWED	G. Papp	T. Cote		09/21	SIGNATURE	
						DESIGN2-DETAILED2	-	-	-	P.E. NUMBER		
						DESIGN3-DETAILED3	-	-	-			
OF 70		BEARING DETAILS I				REVISIONS 1	-	-	-	-	STP-1771(200)X	
						REVISIONS 2	-	-	-	DATE		
						REVISIONS 3	-	-	-			
						REVISIONS 4	-	-	-			
						FIELD CHANGES	-	-	-	-	WIN 17712.00	
								Bridge No. 5038		BRIDGE PLANS		

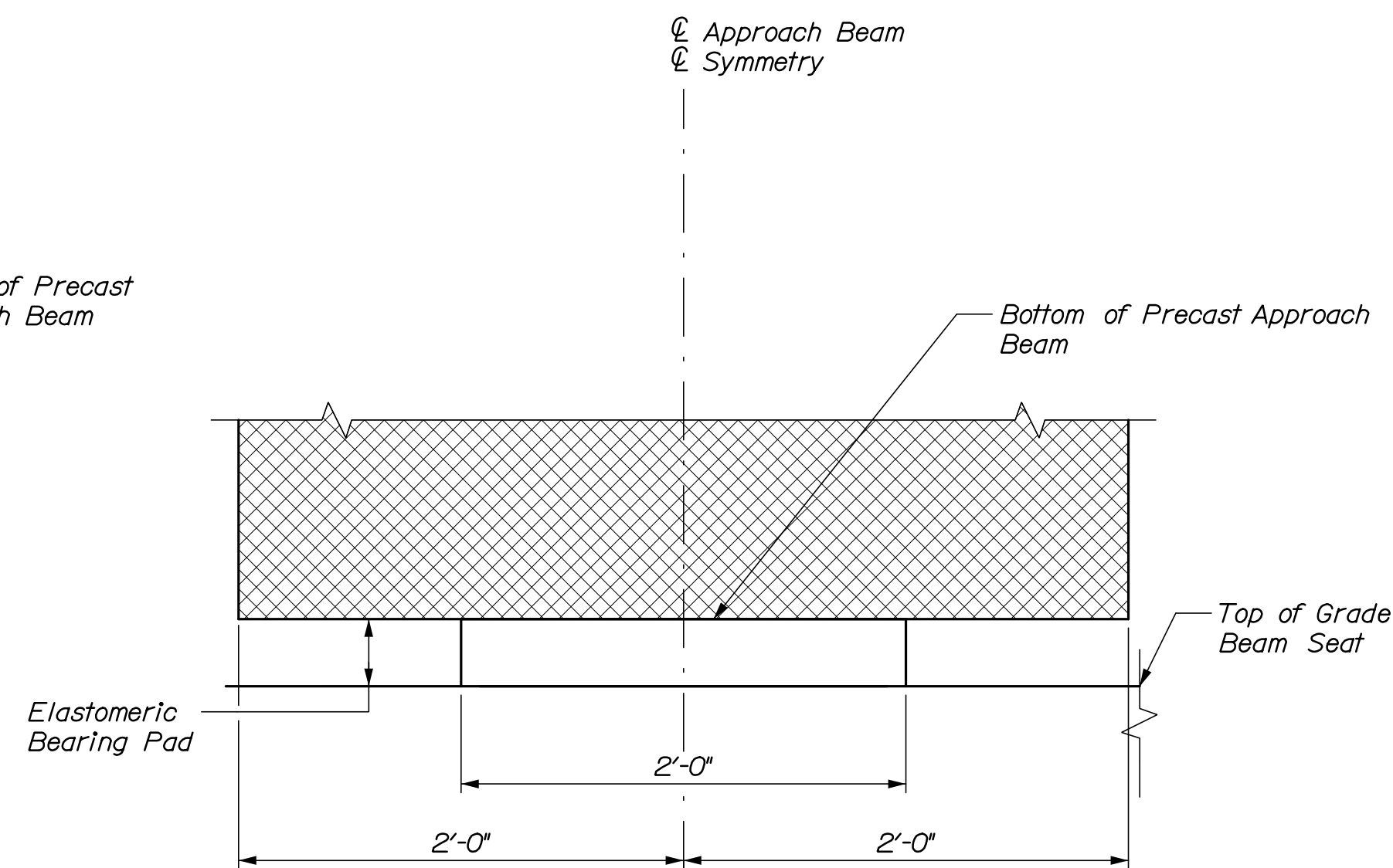
Filename: 048_Bearing Details 2.dgn



PLAN: APPROACH BEAM ELASTOMERIC BEARING ASSEMBLY
(Total number of bearing assemblies required: 32)



SECTION A-A
(Cast-in-place deck slab not shown for clarity)
(Abutment End Shown, Grade Beam End Similar)



SECTION B-B

Approach Beam Elastomeric Bearing Design Criteria				
Criteria	Grade Beam 1	Abut. App. Beam 1	Abut. App. Beam 2	Grade Beam 2
Unfactored dead load	76 kips	76 kips	34 kips	37 kips
Unfactored live load	44 kips	44 kips	41 kips	41 kips
Max. longitudinal displ.	0.32 inch	0.00 inch	0.00 inch	0.18 inch
Max. dead load rotation	0.015 rad.	0.037 rad.	0.016 rad.	0.019 rad.
Max. live load rotation	0.005 rad.	0.005 rad.	0.001 rad.	0.001 rad.
Rotational tolerance	0.005 rad.	0.005 rad.	0.005 rad.	0.005 rad.

APPROACH SPAN BEARING NOTES:

1. Elastomer shall be 100% polychloroprene (neoprene) grade 4, meeting the requirements of AASHTO M251. Elastomer shall have a durometer hardness of 50. The shear modulus of the elastomer shall be 115 psi $\pm$ 5%.

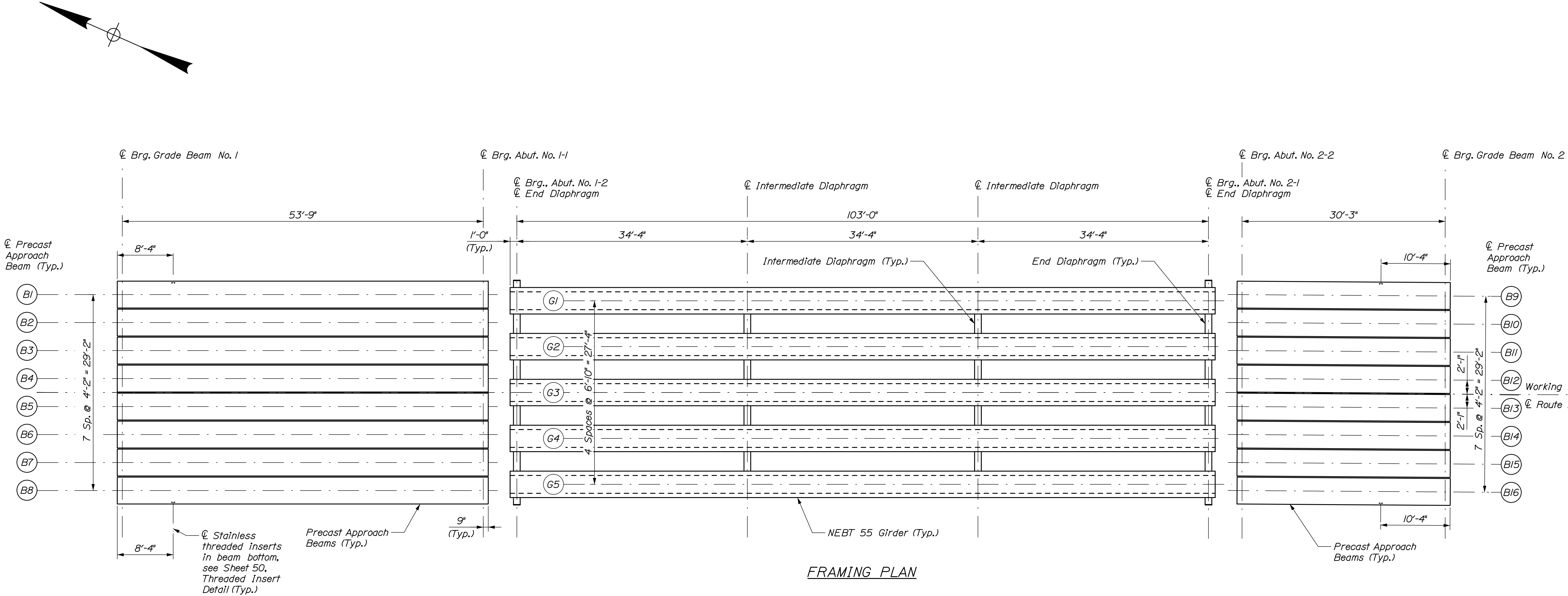
2. Bearings shall be covered during transit.

3. All bearings shall be marked prior to shipping. The marks shall include the bearing location on the bridge, and a direction arrow that points up-station. All marks shall be permanent and shall be visible after the bearing is installed.

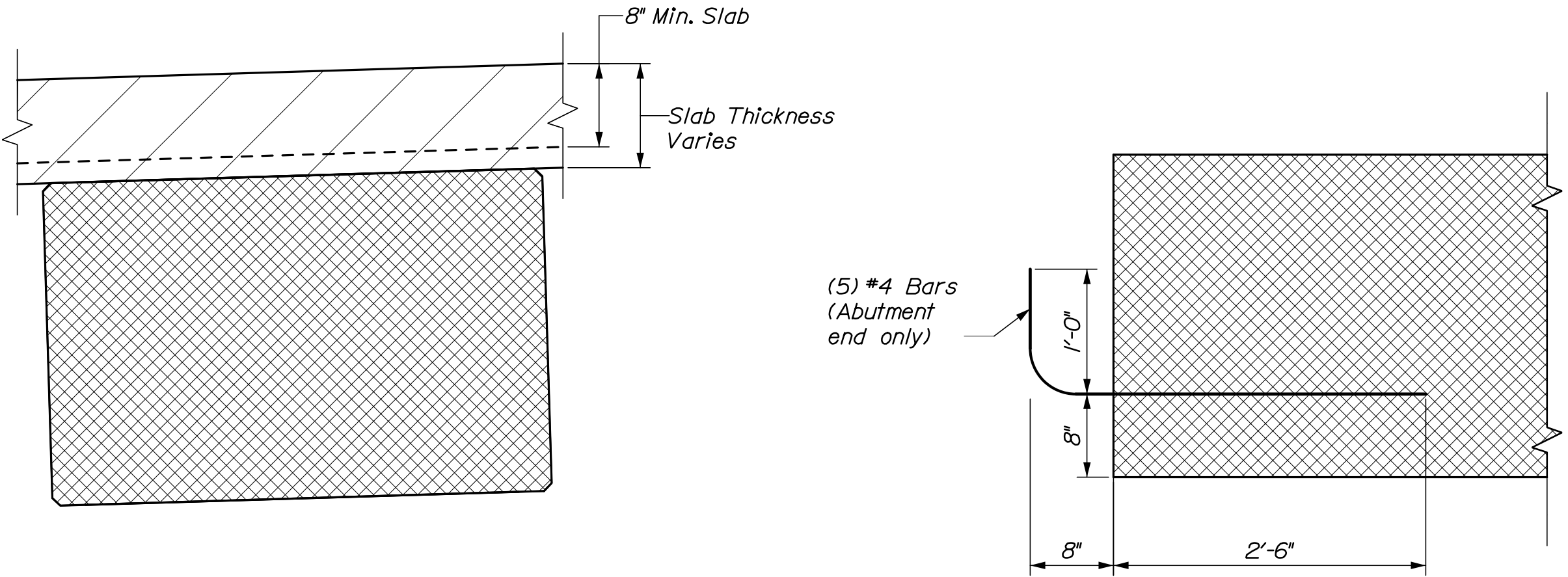
4. Bearing pads were designed using "Method A" from the AASHTO LRFD specifications and shall be subsequently tested in accordance with the specifications.

5. All steel reinforcing plates shall meet the requirements of ASTM A36 unless otherwise noted. Steel reinforcement plates shall be deburred prior to molding the bearing.

SHEET NUMBER 48 OF 70		BLUE HILL FALLS BRIDGE SALT POND OUTLET BLUE HILL HANCOCK COUNTY BEARING DETAILS II				STATE OF MAINE DEPARTMENT OF TRANSPORTATION STP-1771(200)X	
		PROJ. MANAGER		A. Lefth	BY	DATE	WIN 17712.00 BRIDGE PLANS
		DESIGN-DETAILED		H. Walton	H. Walton	09/21	
		CHECKED-REVIEWED		G. Pipp	T. Cole	09/21	
		DESIGN2-DETAILED2		-	-	-	
		DESIGN3-DETAILED3		-	-	-	P.E. NUMBER
		REVISIONS 1		-	-	-	
		REVISIONS 2		-	-	-	
		REVISIONS 3		-	-	-	
		REVISIONS 4		-	-	-	DATE
		FIELD CHANGES		-	-	-	

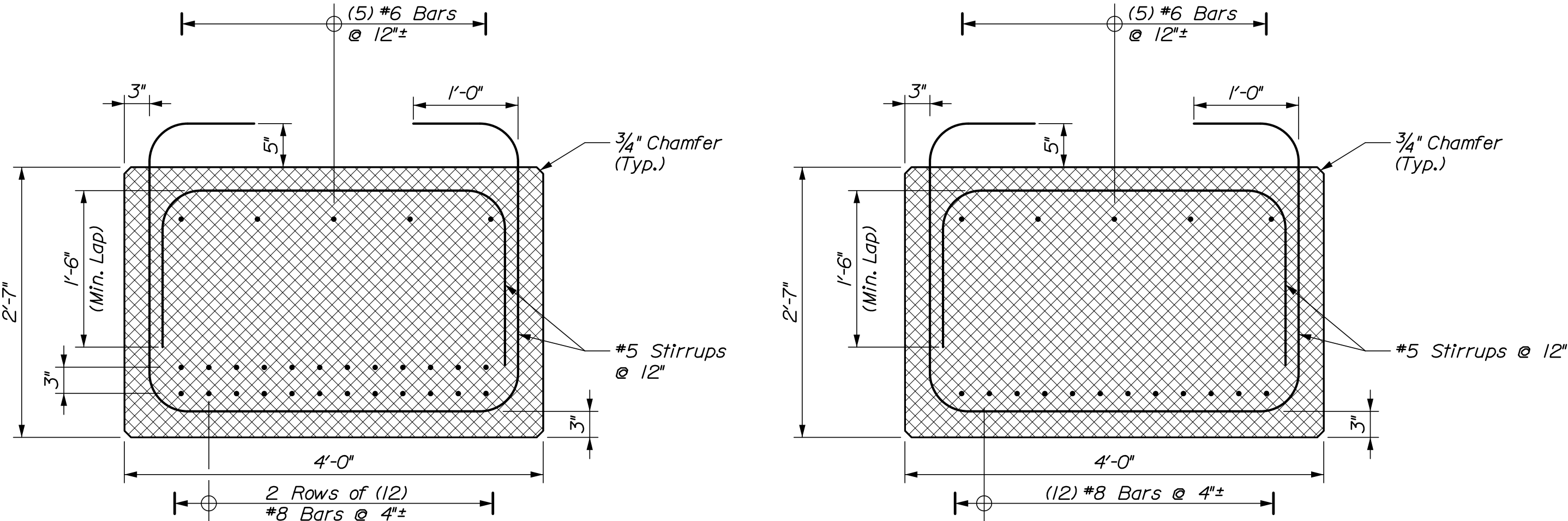


NOTES:
1. Approach span 2 beams are kinked and spaced around the working line. See Geometric Layout Plan and Transverse Section.



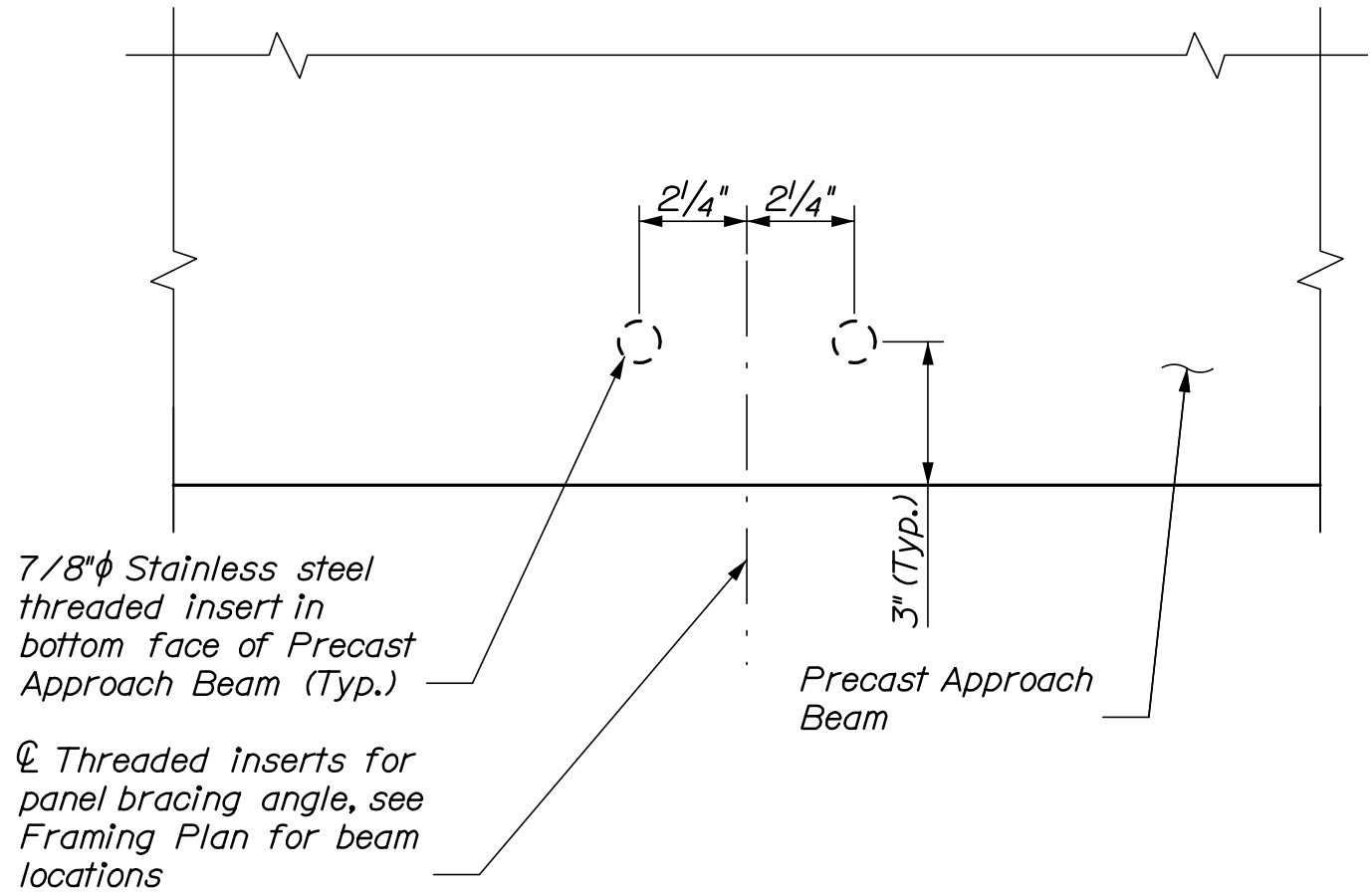
DECK THICKNESS DETAIL

PRECAST APPROACH BEAM
END REINFORCING

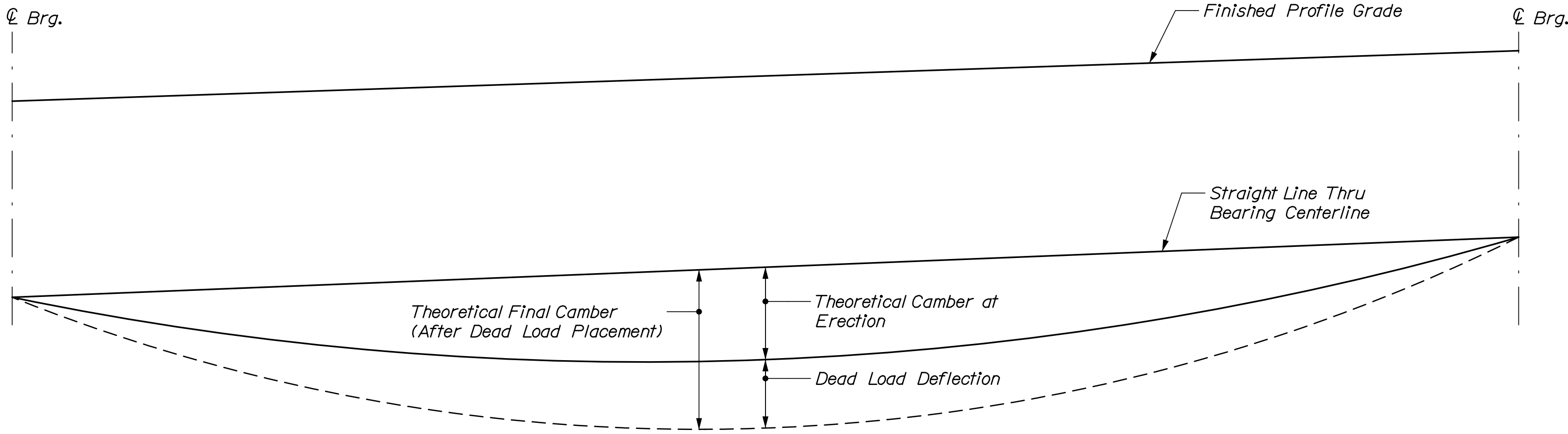


PRECAST APPROACH BEAM BI - B8
TYPICAL SECTION

PRECAST APPROACH BEAM B9 - BI6
TYPICAL SECTION



THREADED INSERT DETAIL

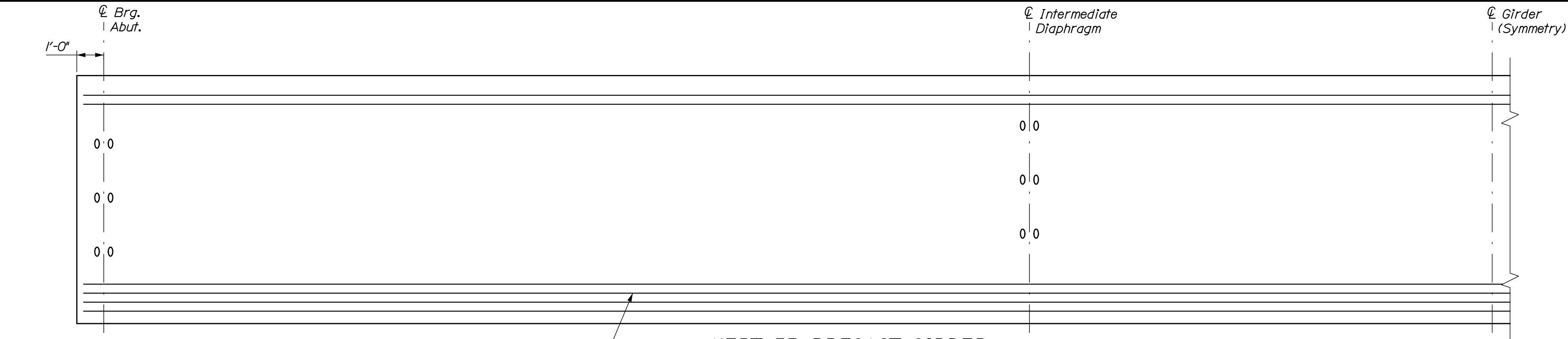


APPROACH BEAM CAMBER DIAGRAM
Not to Scale

PRECAST APPROACH BEAM NOTES:

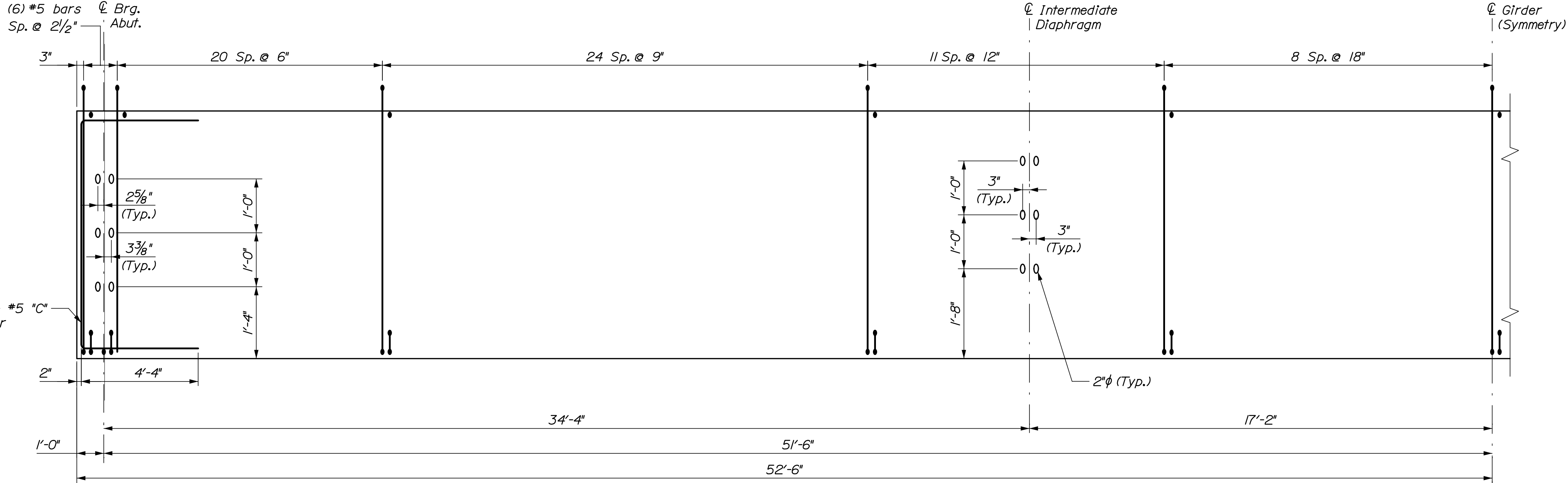
1. For Approach Beams BI-B8, the estimated camber at release is -.05 inches (downward); the estimated camber at erection is -.94 inches; and the estimated camber at completion of the project is -2.50 inches.
2. For Approach Beams B9-BI6, the estimated camber at release is -.06 inches (downward); the estimated camber at erection is -.10 inches; and the estimated camber at completion of the project is -.12 inches.
3. Reinforcing steel shall have a minimum bottom concrete cover of 3 inches and shall have minimum clear cover in all other dimensions of 2 inches unless otherwise noted.
4. All mild reinforcing bars in the approach beams shall be stainless steel conforming to ASTM A955 Grade 75.
5. All reinforcing steel, sleeves, inserts, and other items embedded in approach beams shall be stainless steel unless otherwise indicated. Payment for reinforcing steel, sleeves, inserts, and other items embedded in approach beams shall be included for payment under Item 534.7612 Precast Approach Beams.
6. The top surface of the approach beams shall be rake finished to a surface roughness of 1/4 inch.
7. After beams are removed from forms, beams shall be supported from center of bearing locations and aged for a minimum of 30 days to induce creep deformations prior to erecting in place.

BEAM SPAN	DEAD LOAD DEFLECTIONS (IN)										
	Centerline Abut. No. 1	0.1 Span	0.2 Span	0.3 Span	0.4 Span	0.5 Span	0.6 Span	0.7 Span	0.8 Span	0.9 Span	Centerline Abut. No. 2
APPROACH SPAN 1	0.00	0.20	0.36	0.47	0.53	0.56	0.53	0.47	0.36	0.20	0.00
APPROACH SPAN 2	0.00	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.00



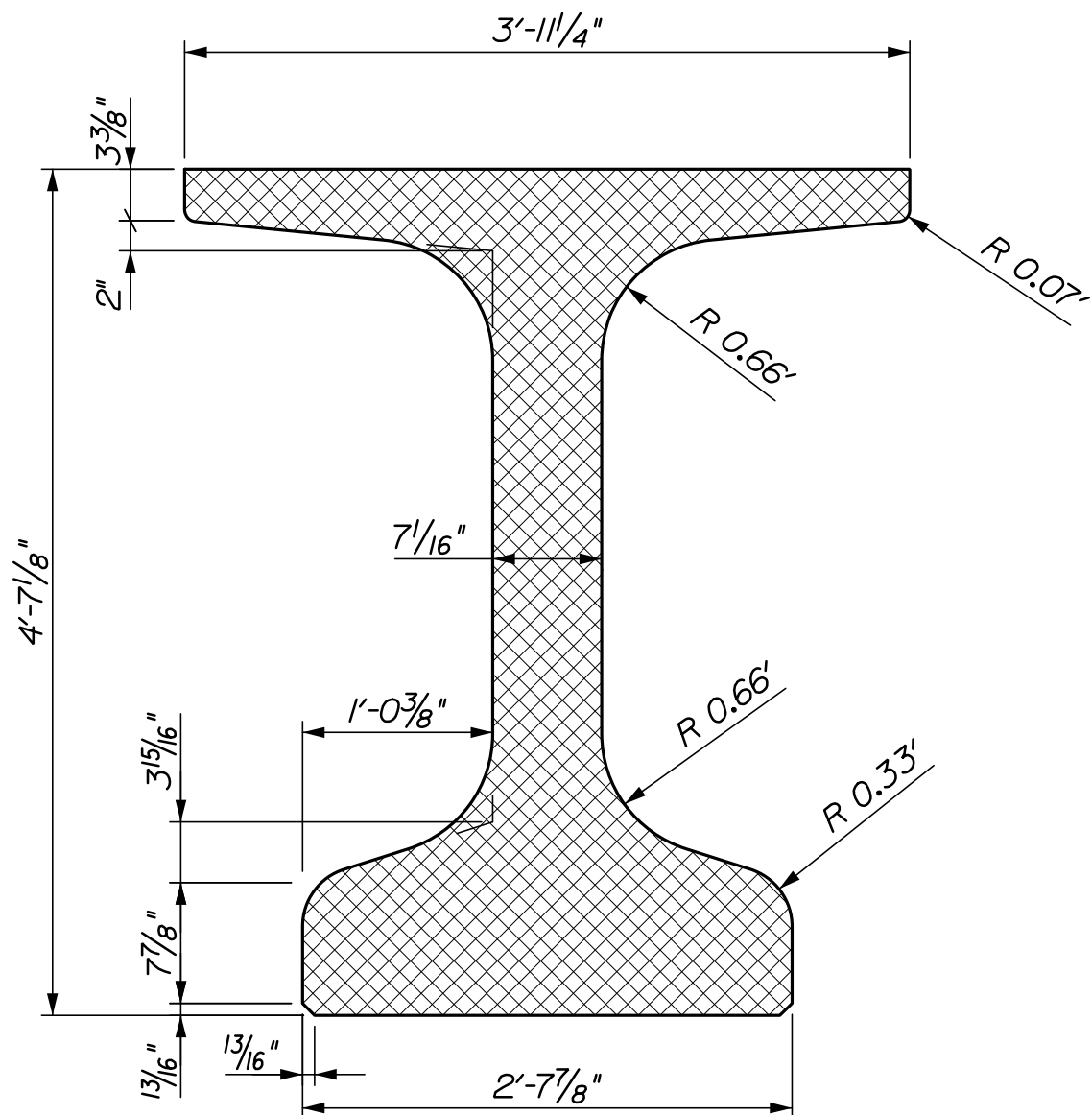
NEBT 55 PRECAST GIRDER

Strand Layout
Vertically Exaggerated for Clarity



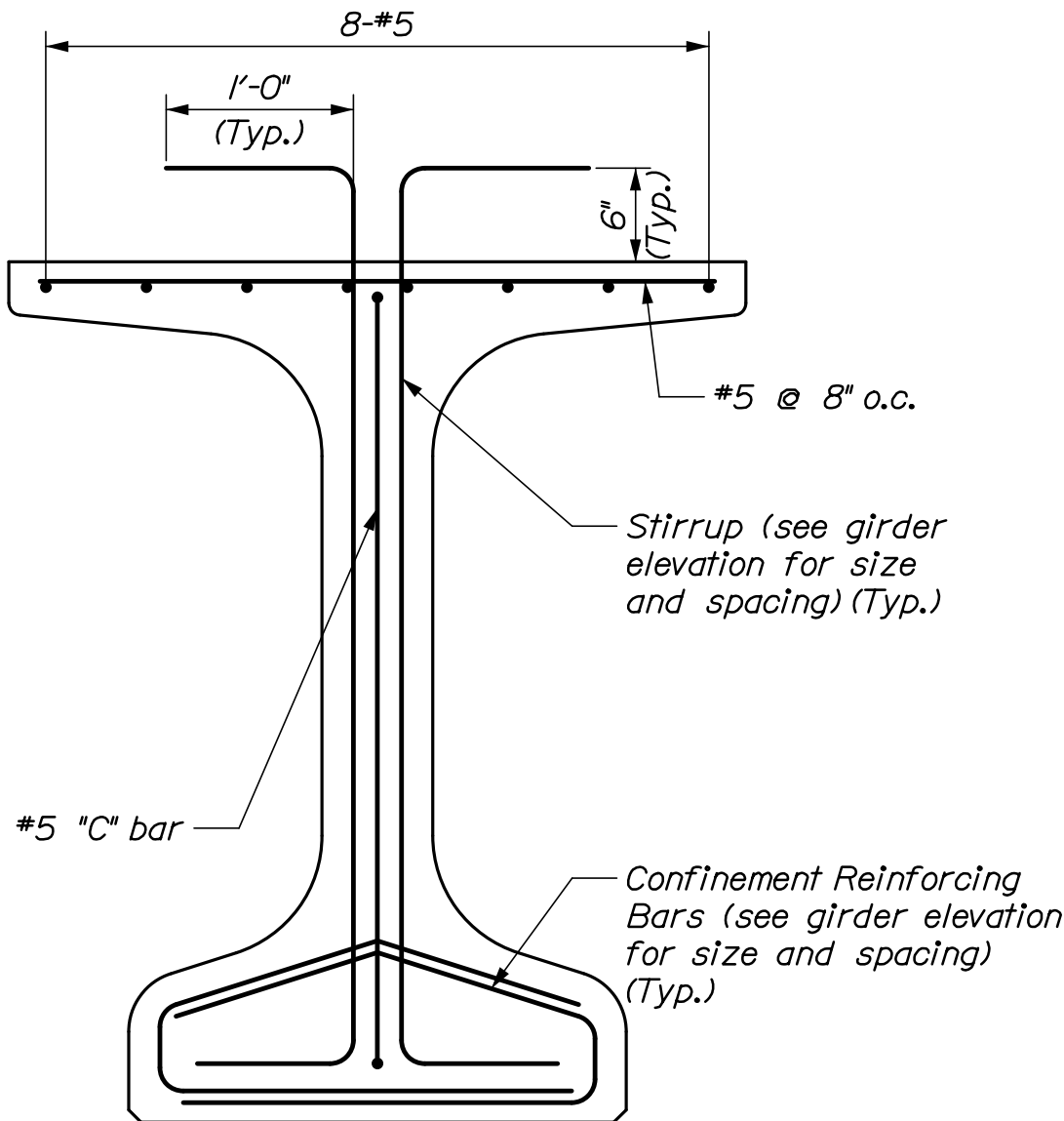
NEBT 55 PRECAST GIRDER

Reinforcing Layout
Vertically Exaggerated for Clarity
(All bars #4 unless otherwise noted)

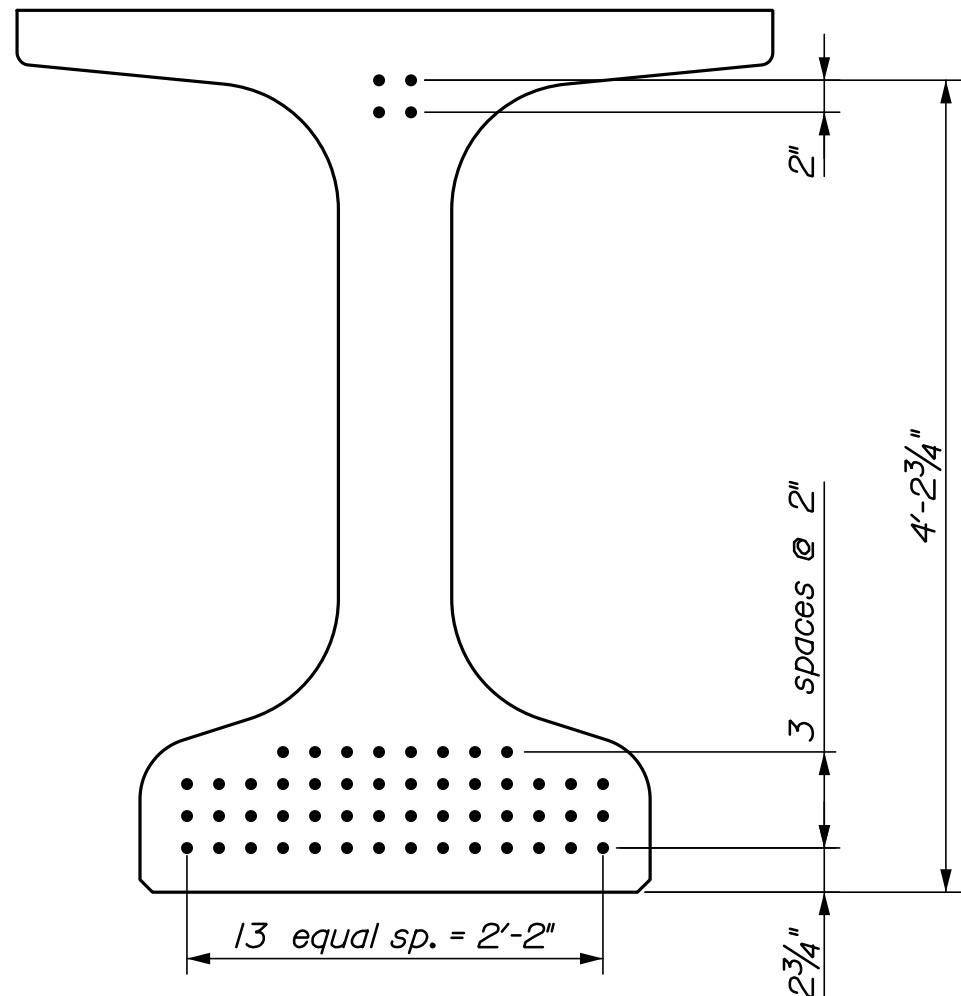


TYPICAL GIRDER SECTION

NEBT 55



GIRDER REINFORCING



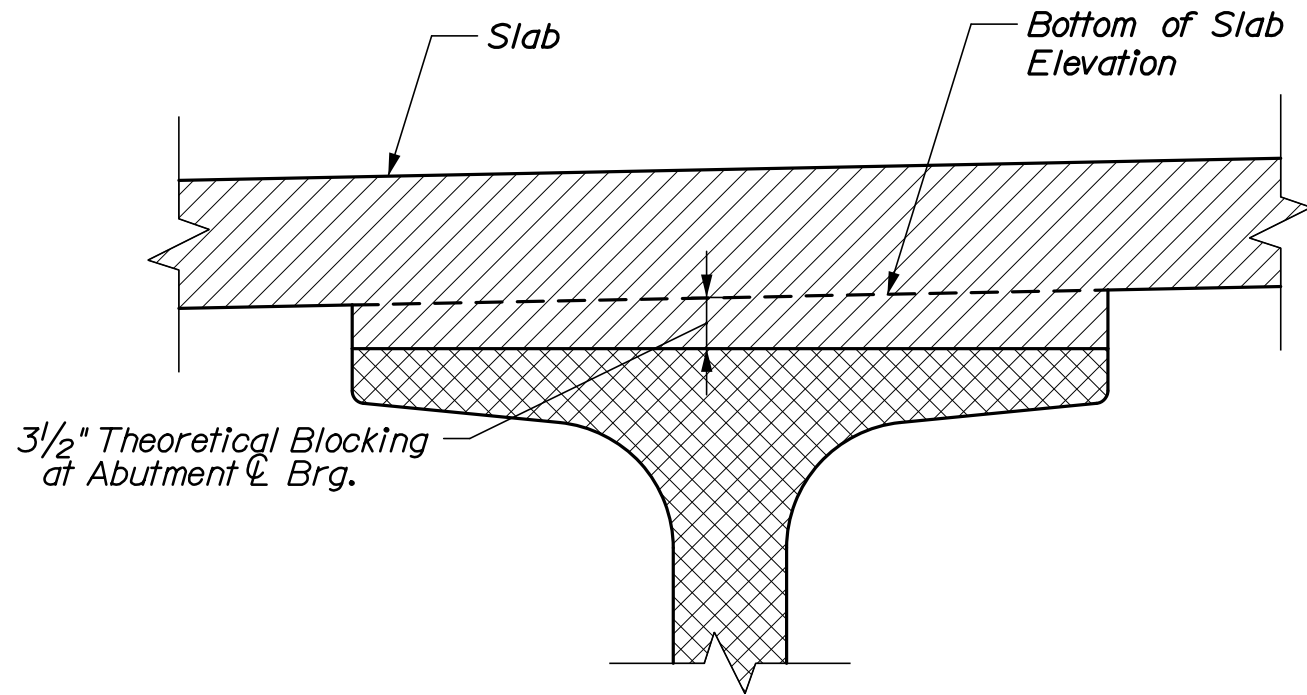
PRESTRESSING STRANDS

NEBT PRECAST GIRDER NOTES:

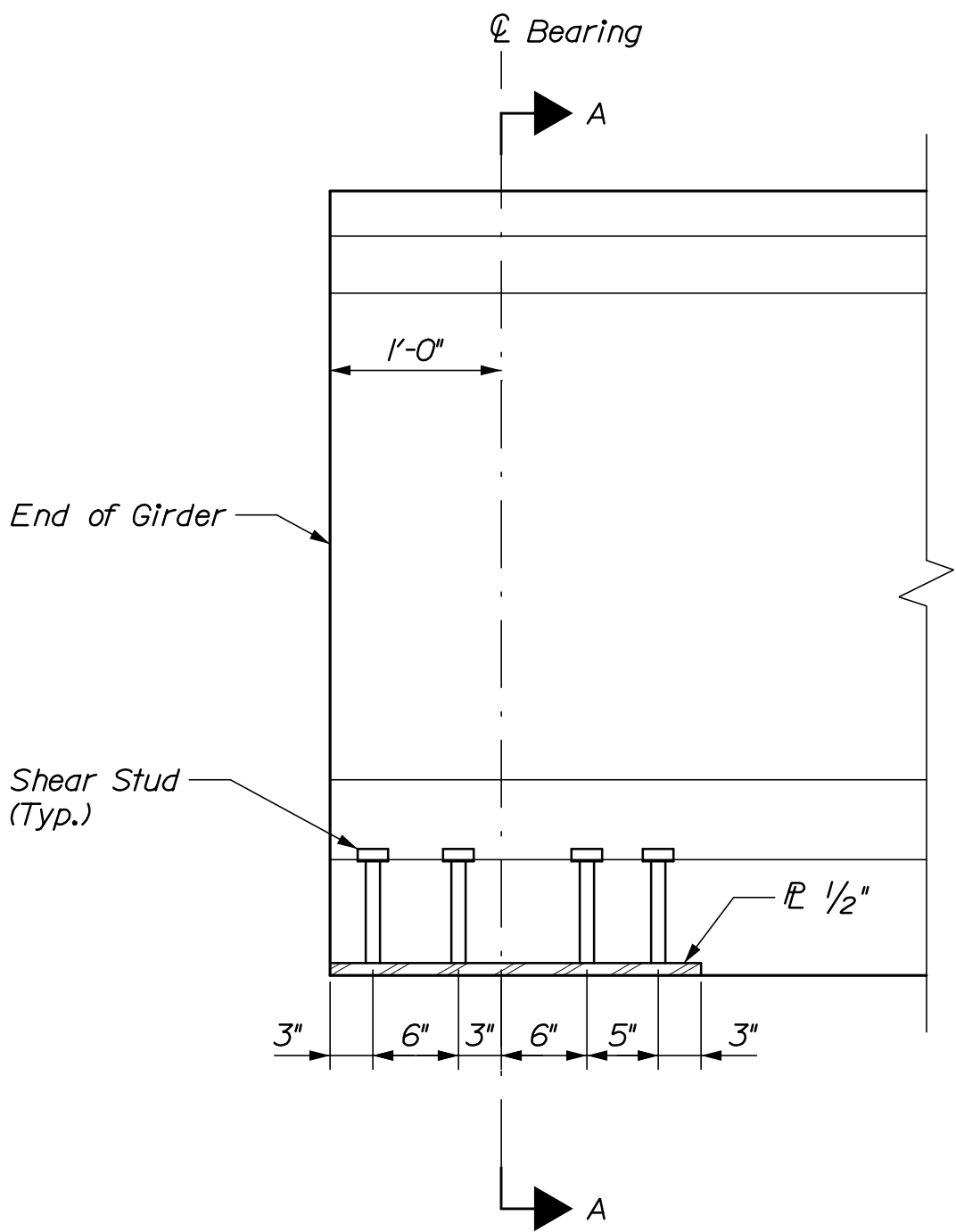
1. Prestressing strands shall be 0.62-in. diameter stainless steel. The tensioning force is 36 kips per prestressing strand.
2. Reinforcing steel shall have a minimum concrete cover of 2 inches unless otherwise noted.
3. The estimated camber at release is 2.24 inches and the estimated camber at erection is 3.97 inches. Refer to Special Provision 535, Precast, Prestressed Concrete Superstructure - Camber.
4. The top surface of the upper flange of the prestressed beams shall be rake finished to a surface roughness of 1/4 inch, except at locations corresponding to the blocking points. At these locations a flattened area of sufficient size shall be finished to facilitate taking elevations for setting bottom of slab elevations.
5. The drilling of holes in the prestressed beams and the use of power actuated tools on the beams will not be permitted.
6. All mild reinforcing bars in the NEBT beams shall be stainless steel conforming to ASTM A955 Grade 75.
7. All reinforcing steel, sleeves, inserts, and other items embedded in girders shall be stainless steel unless otherwise indicated. Payment for reinforcing steel, sleeves, inserts, and other items embedded in girders shall be included for payment under Item 535.6I, Prestressed Structural Concrete I-Girders.
8. At girder diaphragm locations, 2" phi PVC sleeves or threaded inserts shall be provided. All sleeves and threaded inserts shall be placed perpendicular to the girder.
9. Suggested end zone reinforcement may be adjusted by the fabricator to reflect the fabricator's experience and to reduce the potential for cracking. All adjustments shall be clearly flagged on the girder shop drawings and will be subject to the engineer's approval.
10. Threaded inserts and embedded plate studs shall not interfere with prestressing strands. Payment for fabrication and installation shall be incidental to Item 535.6I, Prestressed Structural Concrete I-Girders.

TYPE OF GIRDER	NO. STRANDS	Fi	g
NEBT 55	54	1944	8.68"

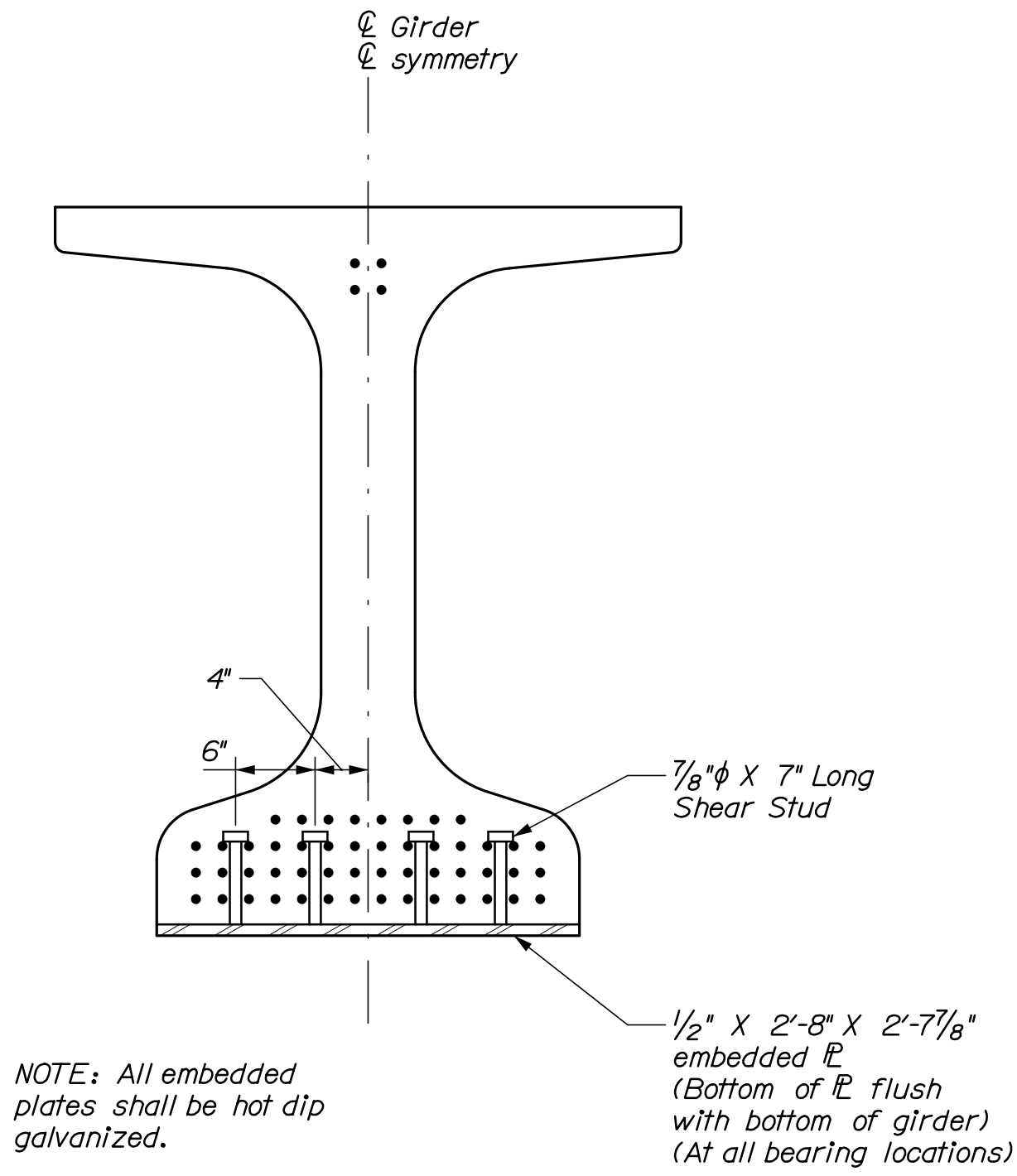
Fi = Total initial prestress force before losses (kips).
g = Distance from bottom of girder to C.G. of all prestressing strands (inches) (See girder elevation).



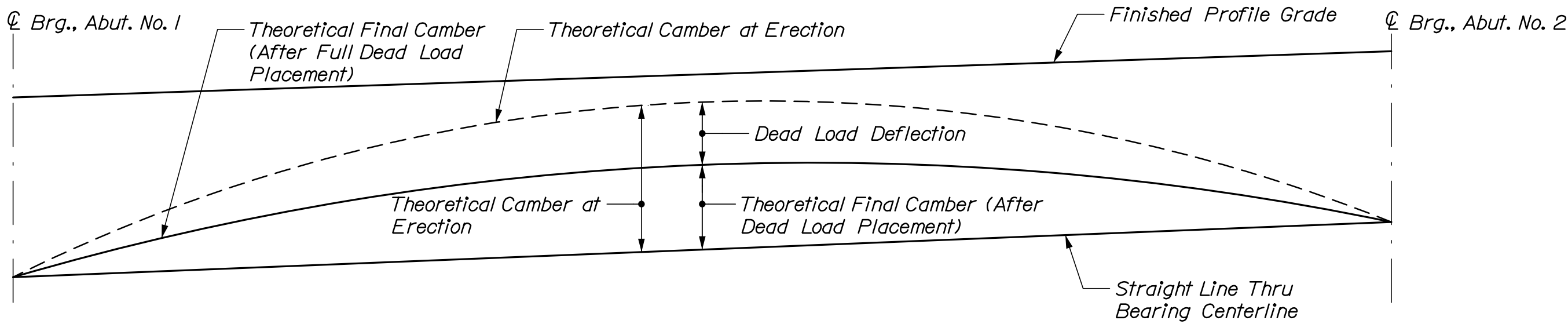
BLOCKING DETAIL



GIRDER END ELEVATION



SECTION A-A



NEBT GIRDER CAMBER DIAGRAM
Not to Scale

GIRDER	BOTTOM OF SLAB ELEVATIONS										
	℄ Brg., Abut. No. 1	0.1 Span	0.2 Span	0.3 Span	0.4 Span	0.5 Span	0.6 Span	0.7 Span	0.8 Span	0.9 Span	℄ Brg., Abut. No. 2
G1	17.41	17.63	17.86	18.07	18.27	18.46	18.63	18.79	18.95	19.08	19.22
G2	17.55	17.77	17.99	18.20	18.40	18.59	17.76	18.93	19.08	19.22	19.36
G3	17.68	17.91	18.13	18.39	18.54	18.73	18.90	19.06	19.21	19.36	19.50
G4	17.55	17.77	17.99	18.20	18.40	18.59	17.76	18.93	19.08	19.22	19.36
G5	17.41	17.63	17.86	18.07	18.27	18.46	18.63	18.79	18.95	19.08	19.22

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1771(200)X

WIN
17712.00

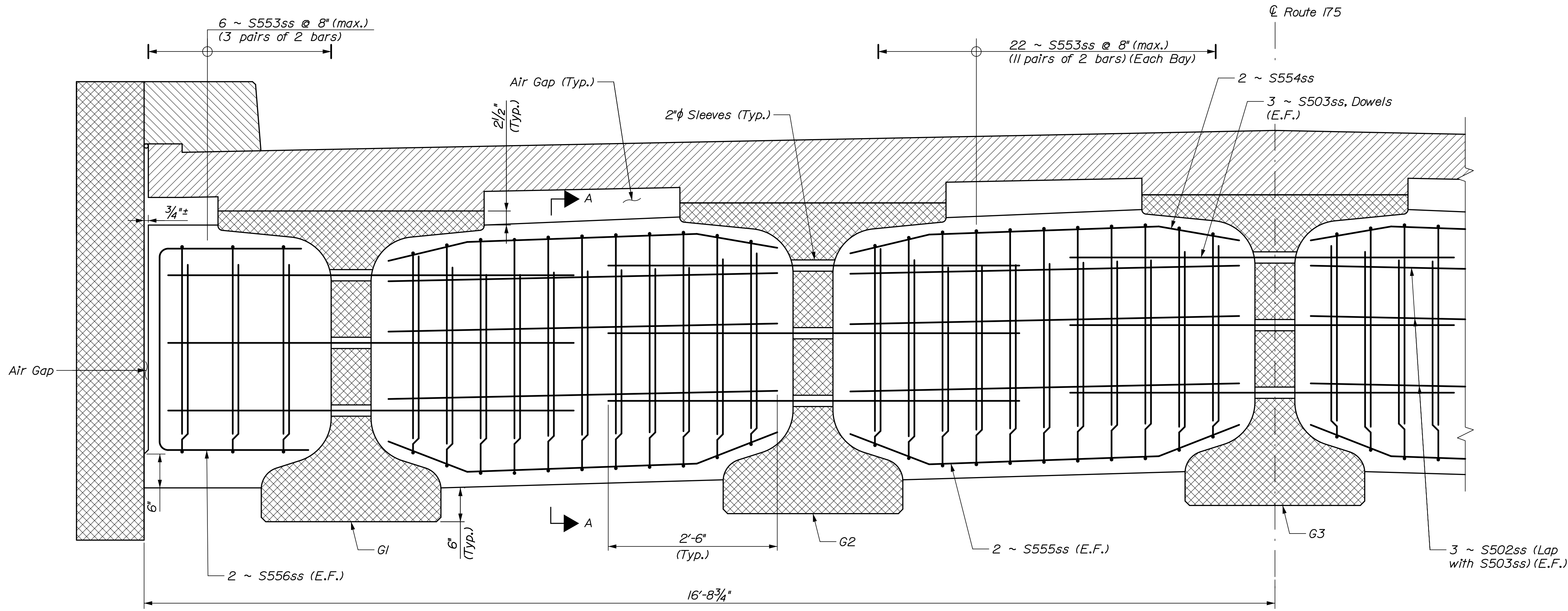
BRIDGE No. 5038
BRIDGE PLANS

PROJ. MANAGER	A. Lathé	BY	DATE
DESIGN-DETAILED	H. Walton	E. Benisiolel	09/21
CHECKED-REVIEWED	G. Pipp	T. Cote	09/21
DESIGN-DETAILED	-	-	-
REVISIONS 1	-	-	-
REVISIONS 2	-	-	-
REVISIONS 3	-	-	-
REVISIONS 4	-	-	-
FIELD CHANGES	-	-	-

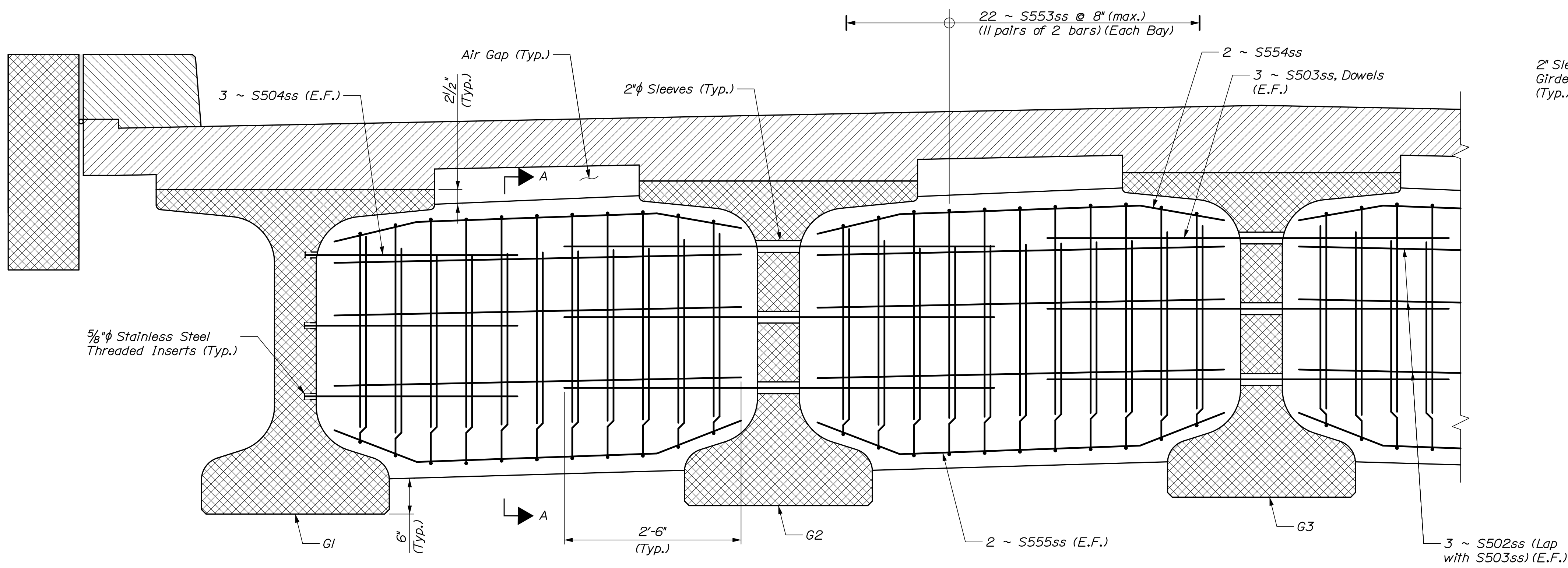
BLUE HILL FALLS BRIDGE
SALT POND OUTLET
BLUE HILL HANCOCK COUNTY

BEAM DETAILS III

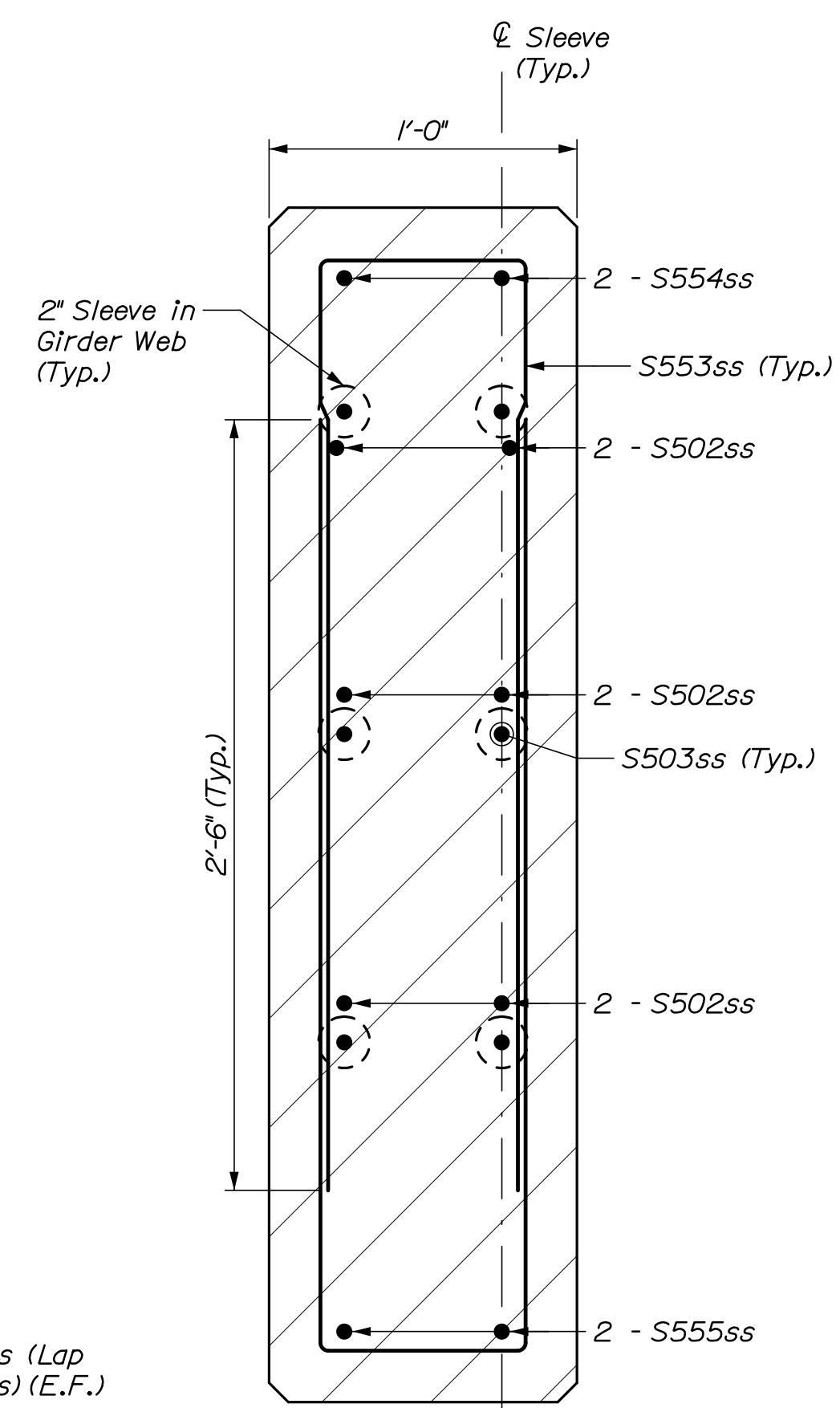
SHEET NUMBER
52
OF 70



END DIAPHRAGM HALF SECTION



INTERMEDIATE DIAPHRAGM HALF SECTION



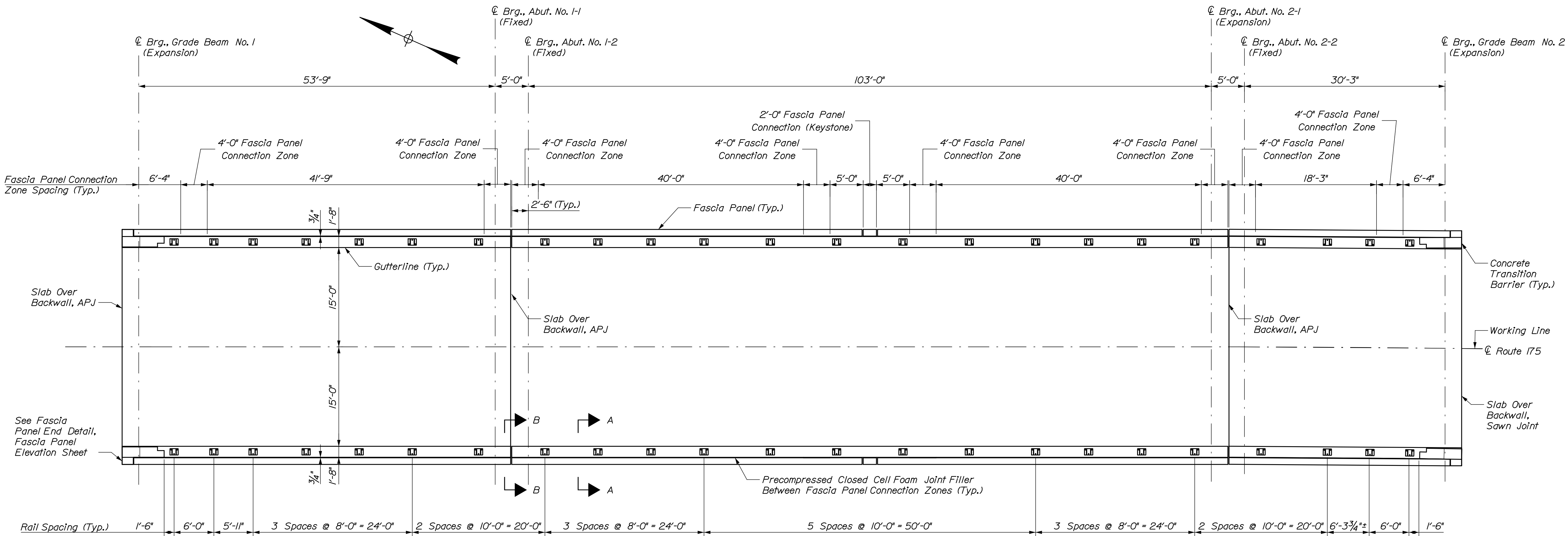
SECTION A-A

Date:9/28/2021

Username:

Division:

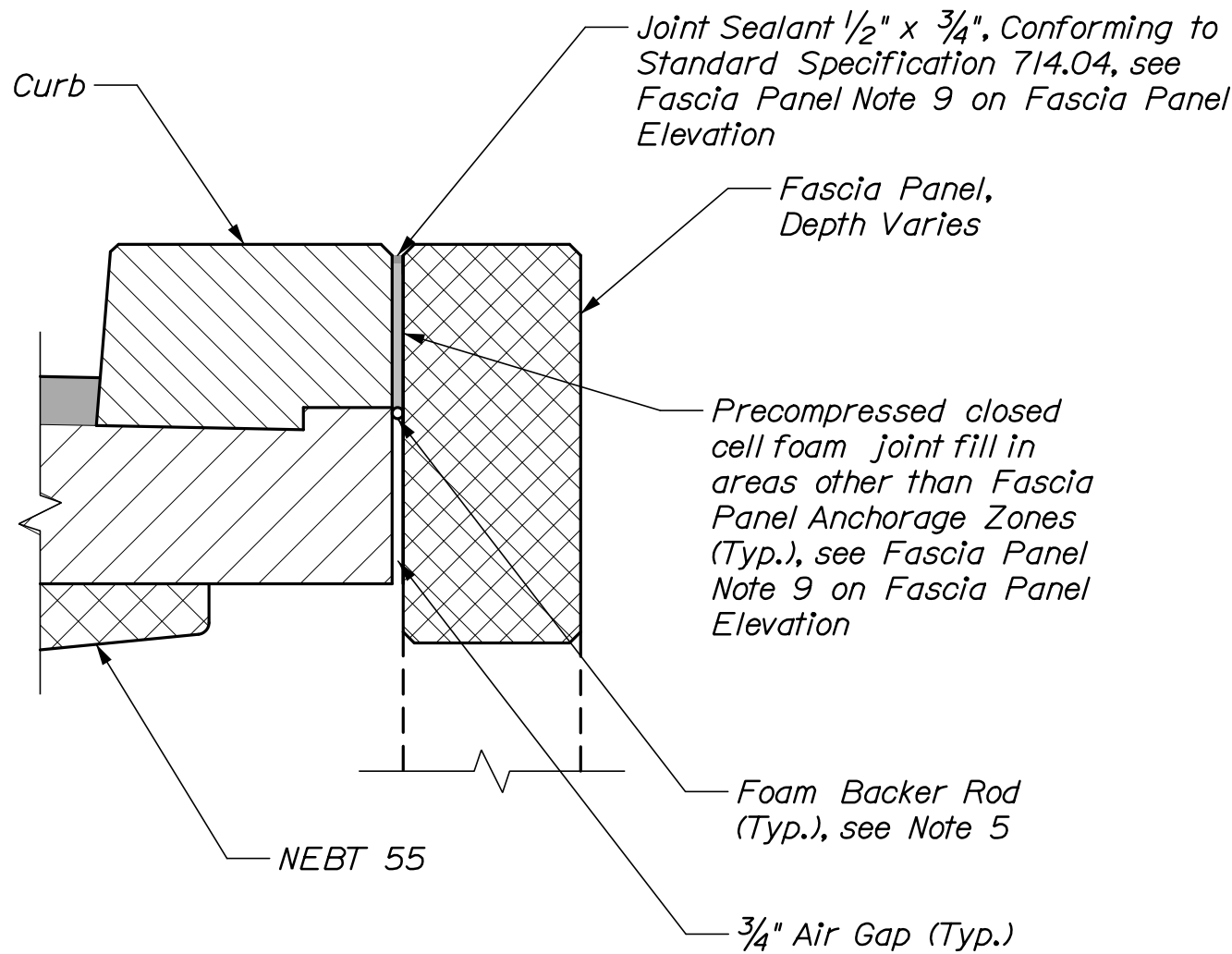
Filename: 054_Superstructure Plan.dgn



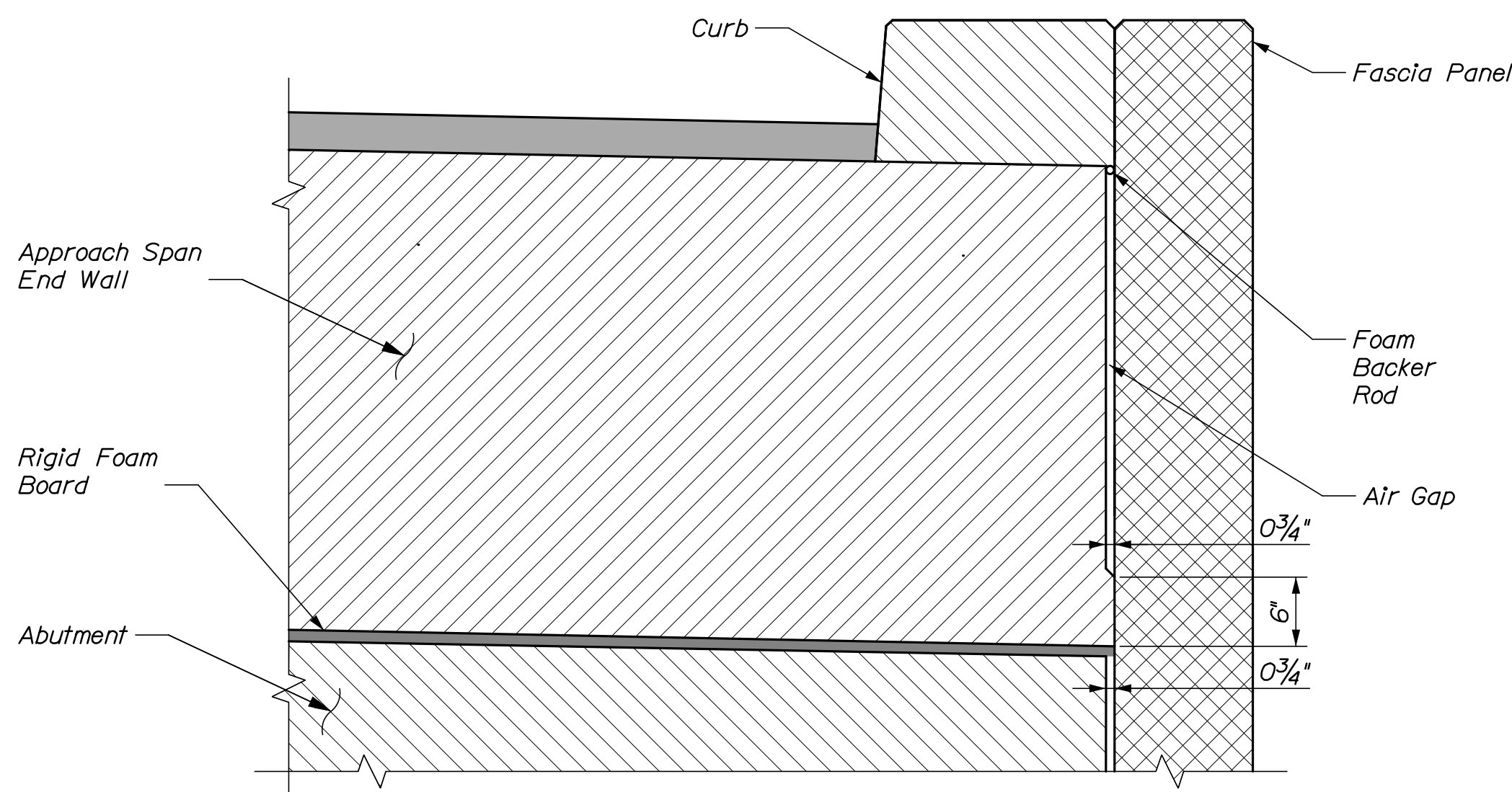
SUPERSTRUCTURE PLAN

SUPERSTRUCTURE NOTES

1. Reinforcing shall have a minimum concrete cover of 2 inches unless otherwise noted.
2. The superstructure slab concrete shall be placed in one continuous operation and shall be kept plastic until the entire placement has been made.
3. The theoretical blocking used for design of the structure is $3\frac{1}{2}$ inches at the centerline of bearings of the abutments. Refer to Beam Details III for blocking details.
4. Anchorages for fascia panel are cast in the curb and deck. See Fascia Panel Elevation sheet and Fascia Panel Details sheet for additional information.
5. Foam backer rods between the deck and the fascia panel will be incidental to Pay Item 502.49, Structural Concrete Curbs and Sidewalks.
6. See Precast Fascia Connection Note 4 on Precast Fascia Details I.



SECTION A-A



SECTION B-B

HNTB

BLUE HILL FALLS BRIDGE					PROJ. MANAGER		A. Lefebvre	BY	DATE
SALT POND OUTLET					DESIGN-DETAILED		H. Walton	E. Beausoleil	09/21
					CHECKED-REVIEWED		K. Broyley	T. Cote	09/21
					DESIGN2-DETAILED2		-	-	-
BLUE HILL HANCOCK COUNTY					DESIGN3-DETAILED3		-	-	-
					REVISIONS 1		-	-	-
					REVISIONS 2		-	-	-
SUPERSTRUCTURE PLAN					REVISIONS 3		-	-	-
					REVISIONS 4		-	-	-
					FIELD CHANGES		-	-	-

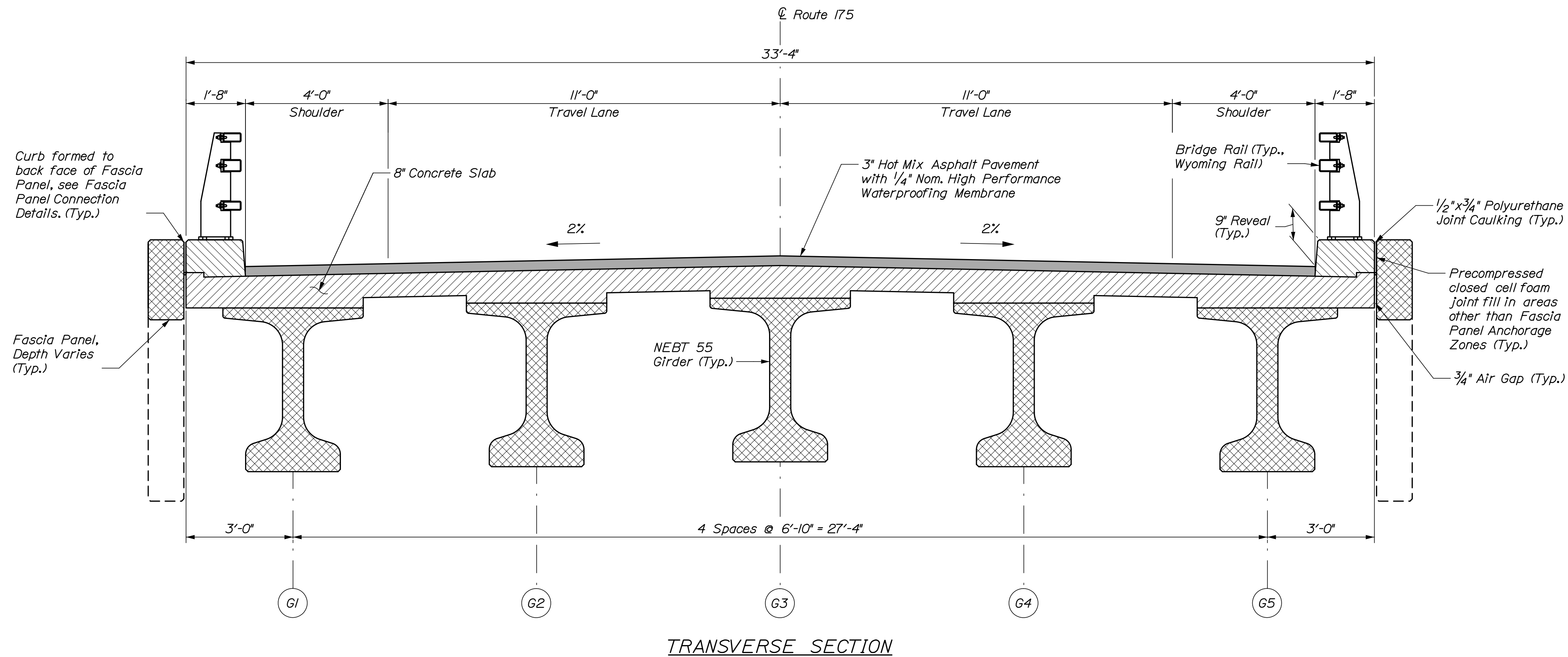
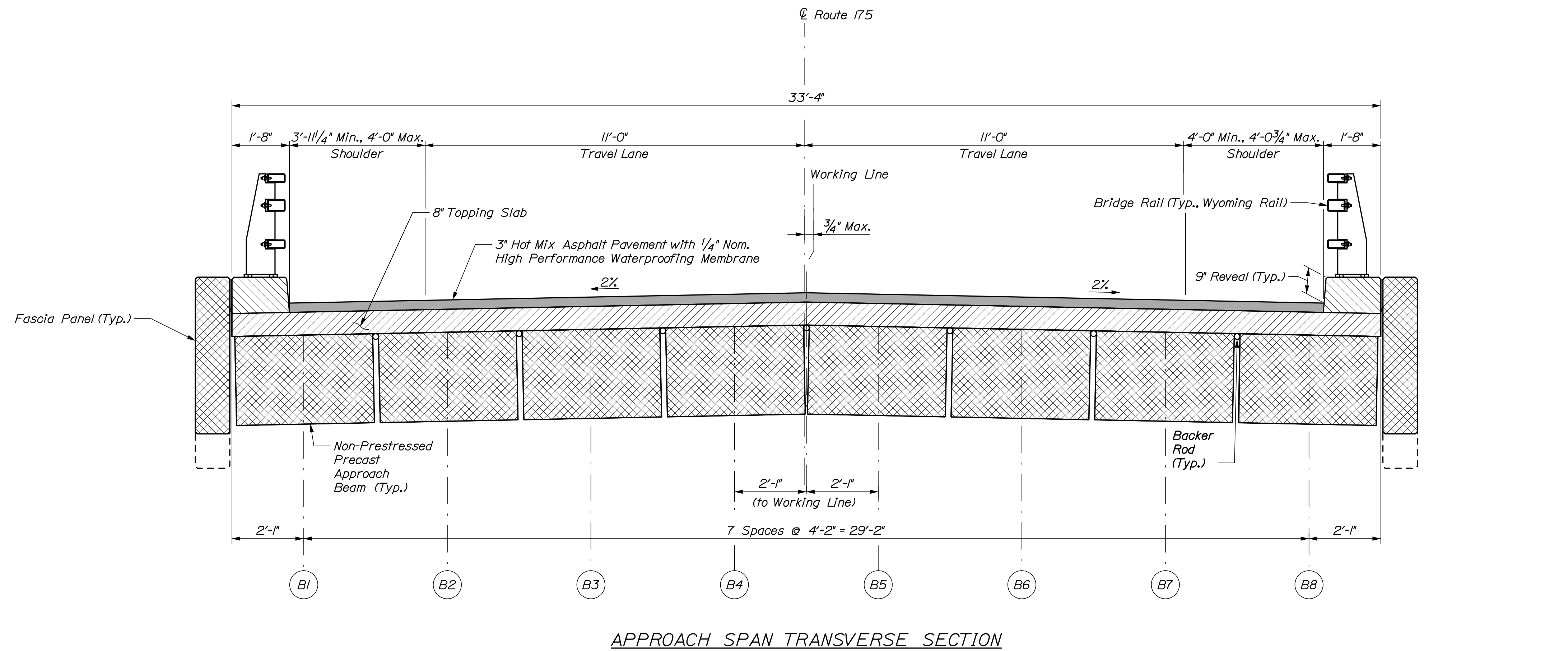
STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		STP-1771(200)X	
BRIDGE No. 5038		WIN		17712.00	
BRIDGE PLANS					

Date:10/8/2021

Username:

Division:

Filename: 055_Superstructure Transverse Sections.dgn



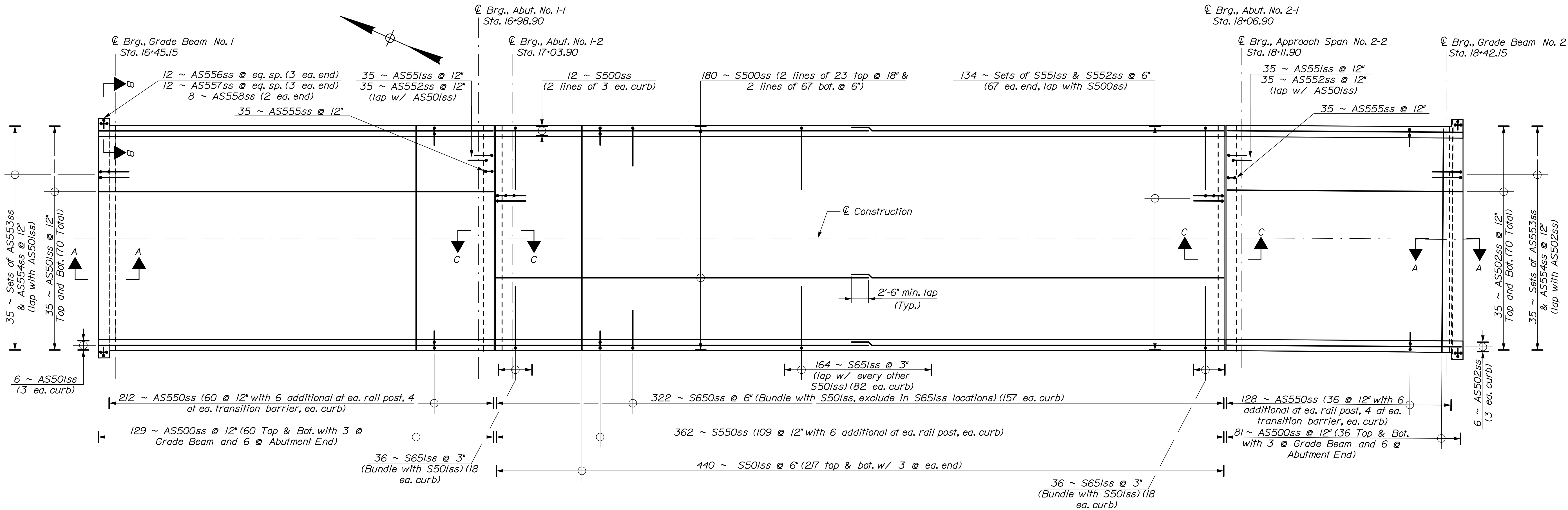
STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		STP-1771(200)X		WIN		BRIDGE PLANS	
BLUE HILL FALLS BRIDGE		SALT POND OUTLET		Hancock County		SUPERSTRUCTURE		TRANSVERSE SECTIONS	
BLUE HILL		SHEET NUMBER		55		OF 70			
PROJ. MANAGER	A. Lathe	BY	H. Walton	DATE	09/21	SIGNATURE		Bridge No. 5038	17712.00
DESIGN-DETAILED	H. Walton	CHECKED	T. Cote	DATE	09/21	P.E. NUMBER			
DESIGN-REVIEWED	K. Broyley	DESIGN-DETAILED	-		-	DATE			
REVISIONS 1	-	REVISIONS 1	-		-				
REVISIONS 2	-	REVISIONS 2	-		-				
REVISIONS 3	-	REVISIONS 3	-		-				
REVISIONS 4	-	REVISIONS 4	-		-				
FIELD CHANGES	-	FIELD CHANGES	-		-				

Date:9/28/2021

Username:

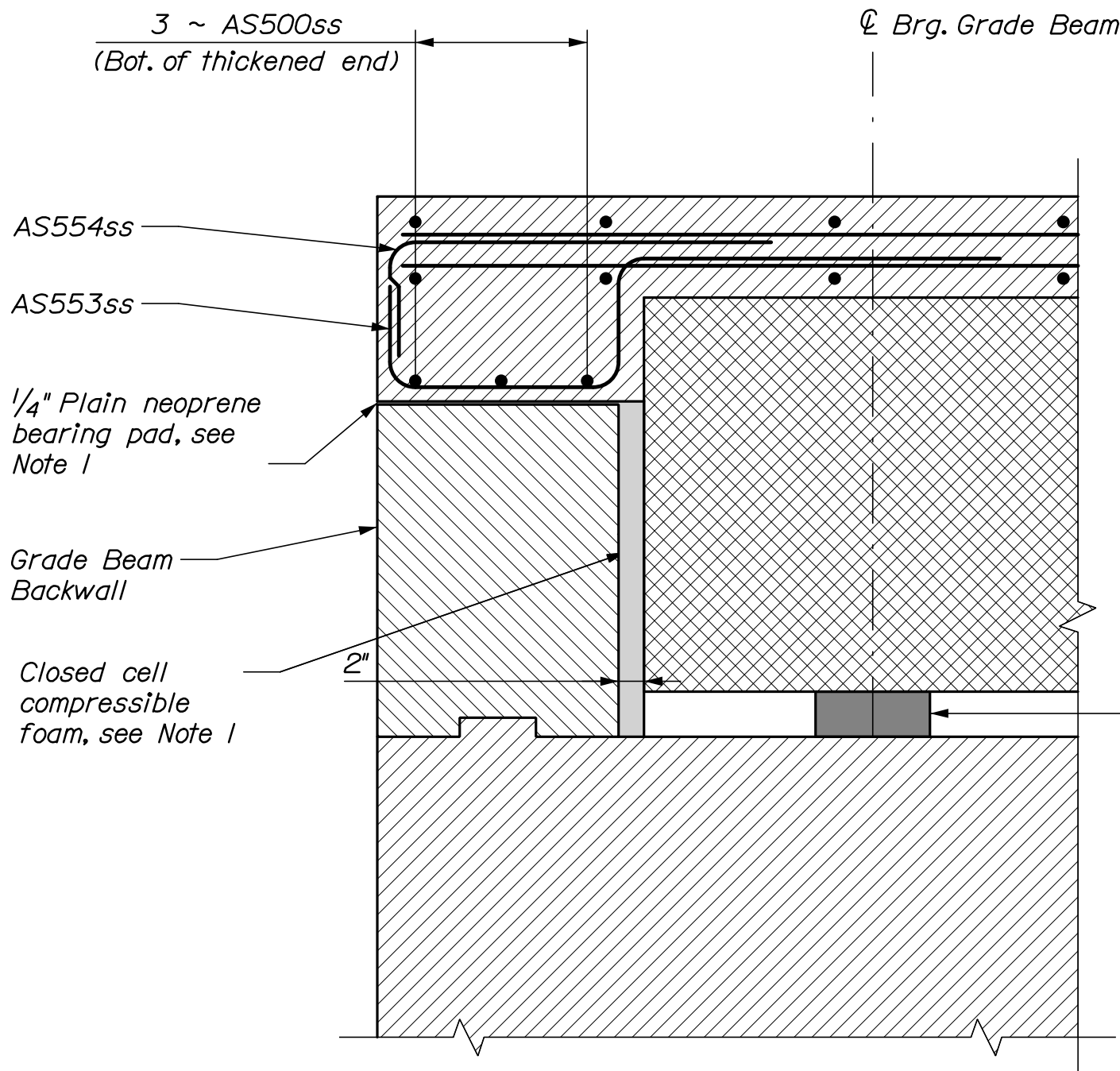
Division:

Filename: 056_Superstructure Reinforcing Plandgn

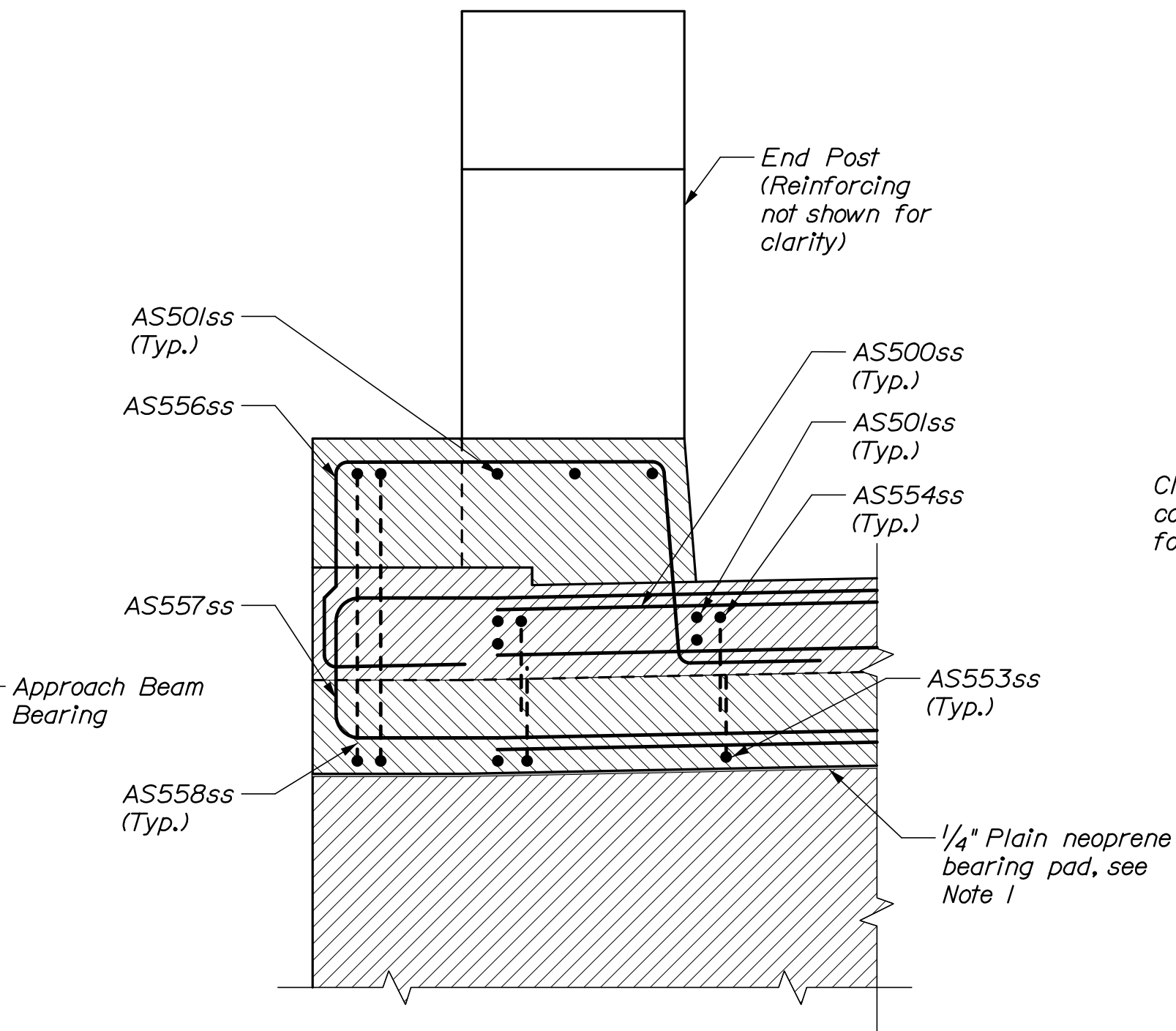


SUPERSTRUCTURE REINFORCING PLAN

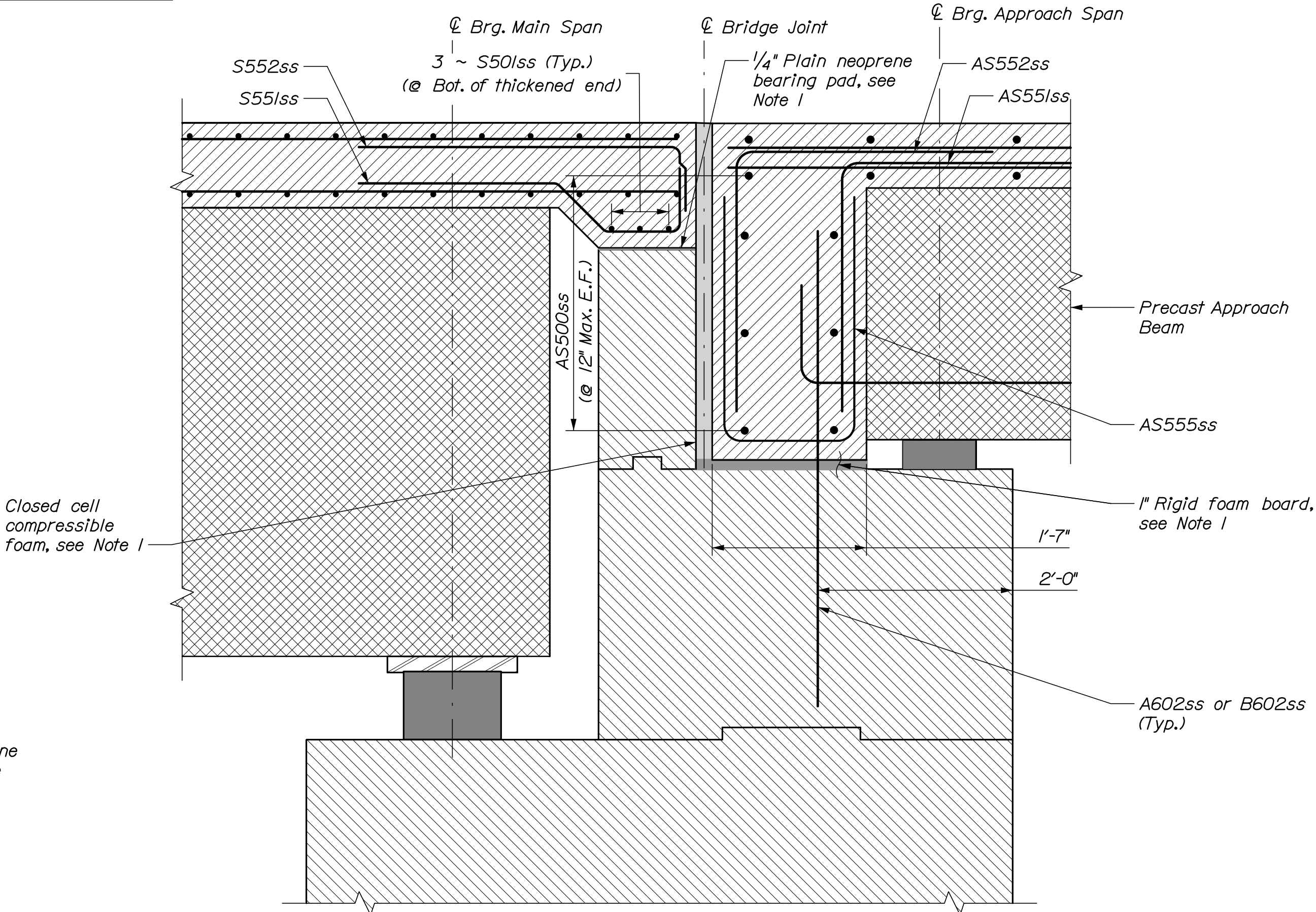
NOTES:
1. Neoprene pads, closed cell compressible foam, and rigid foam board shall be incidental to Item 502.261, Structural Concrete Roadway and Sidewalk Slab on Concrete Bridges. Neoprene pads shall meet the requirements of Standard Specifications Section 711.09, closed cell compressible foam shall meet the requirements of Special Provision 711.14, and rigid foam board shall meet the requirements of Special Provision 711.15.



SECTION A-A

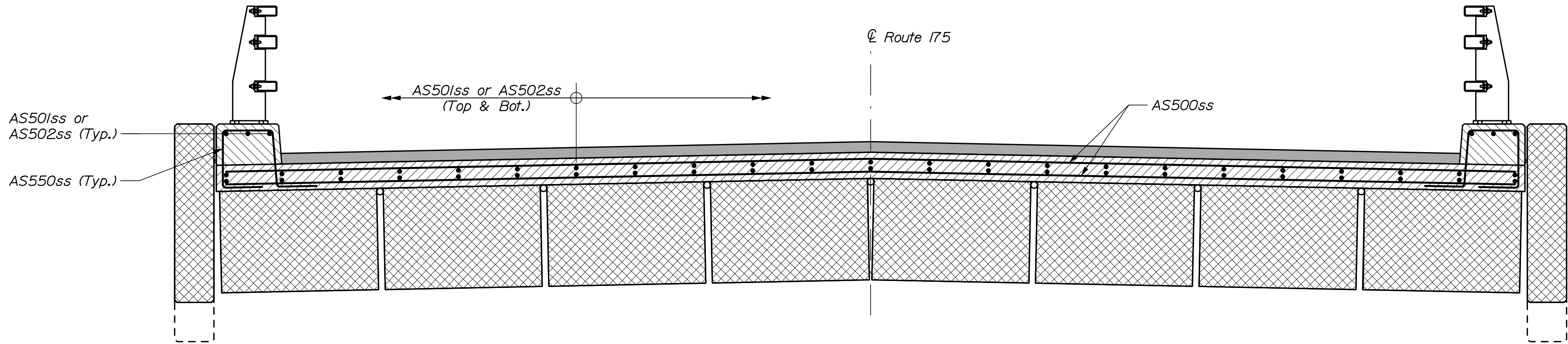


SECTION B-B

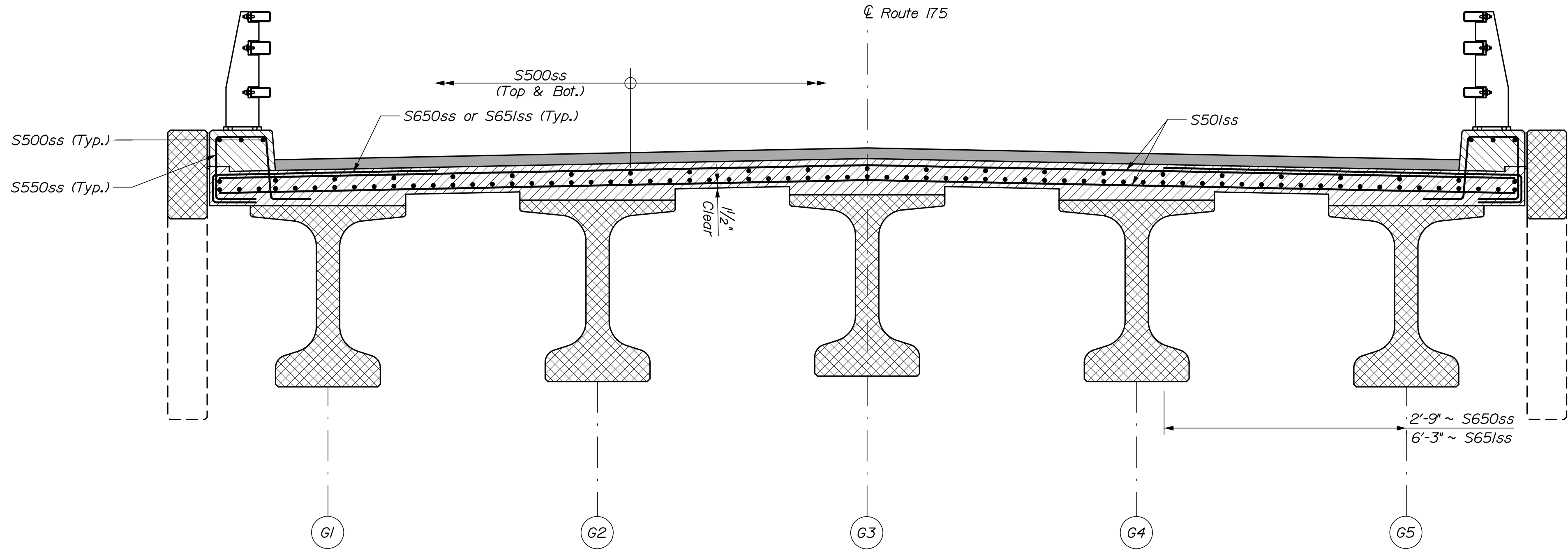


SECTION C-C

BLUE HILL FALLS BRIDGE SALT POND OUTLET BLUE HILL HANCOCK COUNTY				PROJ. MANAGER A. Lathe		BY E. Beausoleil	DATE 09\21
SUPERSTRUCTURE REINFORCING PLAN				DESIGN-DETAILED		CHECKED-REVIEWED	
				K. Broyley		T. Cote	
				DESIGN2-DETAILED2		-	
				DESIGN3-DETAILED3		-	
				REVISIONS 1		-	
				REVISIONS 2		-	
				REVISIONS 3		-	
				REVISIONS 4		-	
				FIELD CHANGES		-	
SHEET NUMBER				56		OF 70	
STATE OF MAINE DEPARTMENT OF TRANSPORTATION STP-1771(200)X				SIGNATURE		P.E. NUMBER	
BRIDGE No. 5038				WIN		17712.00	
BRIDGE PLANS							

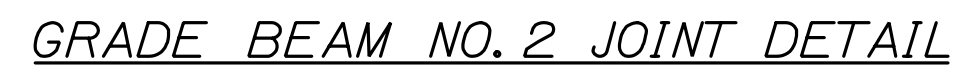
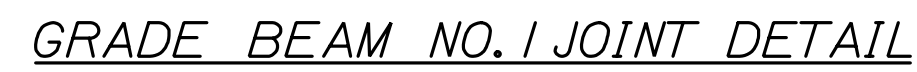
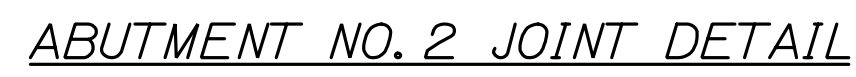
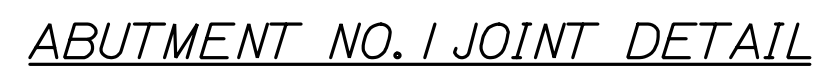


APPROACH SPAN REINFORCING TRANSVERSE SECTION
(Span 1 shown, Span 2 similar)



REINFORCING TRANSVERSE SECTION

SHEET NUMBER 57 OF 70	BLUE HILL FALLS BRIDGE				PROJ. MANAGER	A. Lethé	BY	DATE
	SALT POND OUTLET					H. Walton	H. Walton	09/21
	BLUE HILL HANCOCK COUNTY				CHECKED-REVIEWED	T. Cote	09/21	SIGNATURE
					DESIGN2-DETAILED2	-	-	
					DESIGN3-DETAILED3	-	-	
					REVISIONS 1	-	-	
	SUPERSTRUCTURE REINF. TRANSVERSE SECTIONS				REVISIONS 2	-	-	P.E. NUMBER
					REVISIONS 3	-	-	
					REVISIONS 4	-	-	
					FIELD CHANGES	-	-	
						DATE		



1. All work and materials shall conform to the requirements of Standard Specification Section 526 - Concrete Barrier.

3. The quantities of reinforcing bars shown are for one transition barrier only.

4. Payment for the guardrail anchorage will be considered incidental to the transition barrier pay item.

5. After installation of the guardrail is complete, upset the threads on the anchor bolts in 3 places around each bolt at the junction of the nut and the exposed thread, with a center punch or similar tool. Payment for the nut will be considered incidental to the guardrail pay items.

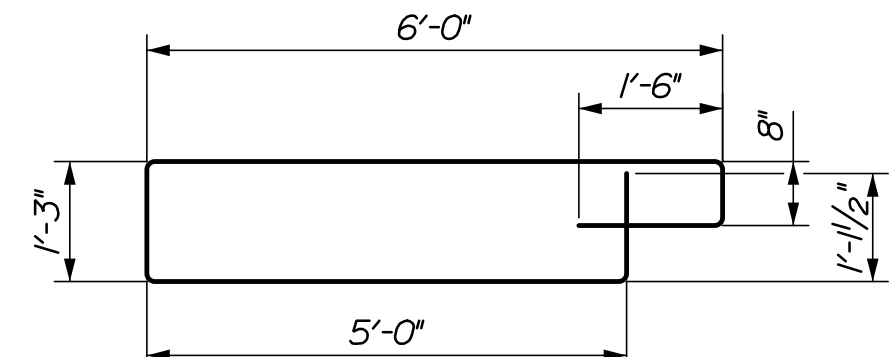
<i>Mark</i>	<i>Qty.</i>	<i>Length</i>
<i>TB551</i>	<i>4</i>	<i>5'-10 1/2"</i>
<i>TB552</i>	<i>19</i>	<i>6'-6"</i>
<i>TB553</i>	<i>5</i>	<i>5'-5"</i>
<i>TB554</i>	<i>5</i>	<i>15'-6 1/2"</i>
<i>TB561</i>	<i>2</i>	<i>5'-8"</i>
<i>TB562</i>	<i>1</i>	<i>4'-8"</i>

Diagram illustrating a structure with a 2'-4" (TB562) section and a 3'-4" (TB561) base. The structure is shown in cross-section, with a vertical dimension of 2'-4" and a horizontal dimension of 3'-4". A vertical line segment is labeled 2'-4" (TB562), and a horizontal line segment is labeled 3'-4" (TB561). A vertical dimension of 2'-4" is also indicated on the left side of the structure.

2'-8" (TB552)
2'-1 1/2" (TB553)

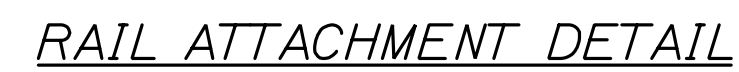
- TB551 - - TB552 & TB553 -

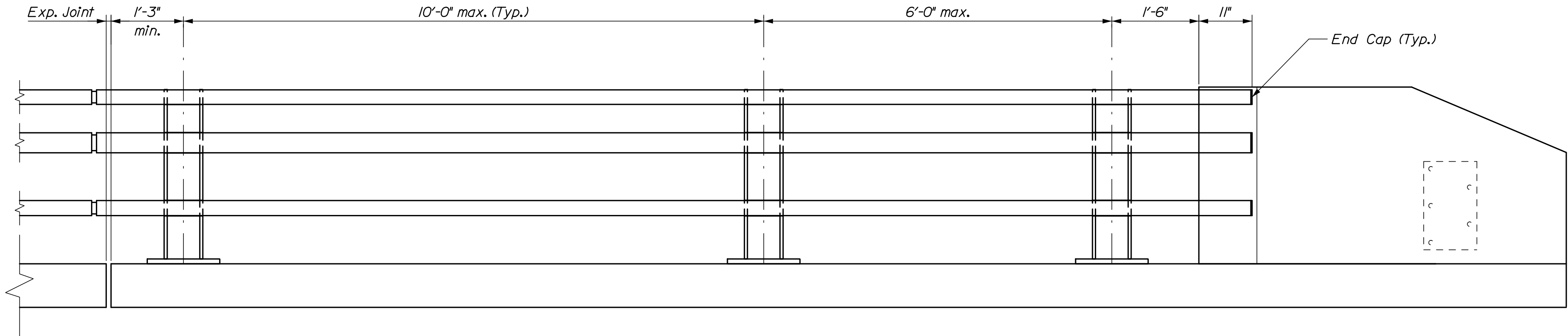
- TB554 -



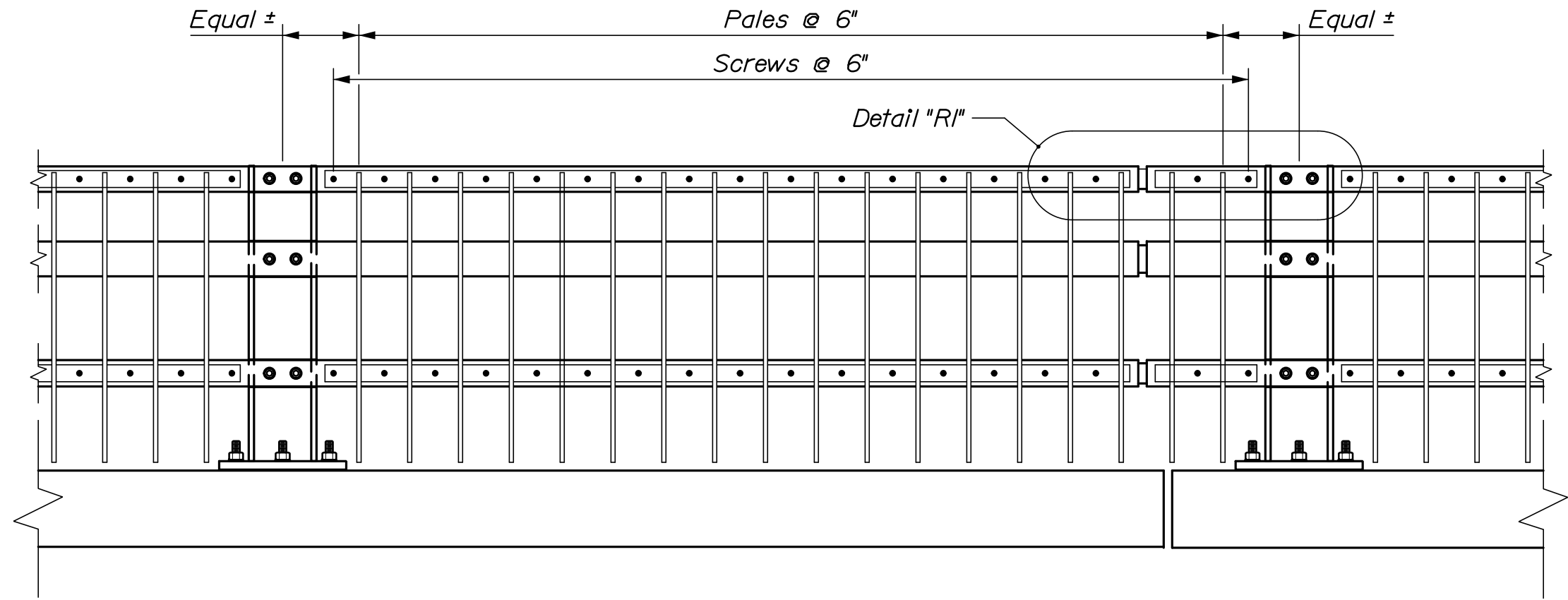
Technical drawing of a rectangular plate with the following dimensions and features:

- Overall Dimensions:**
 - Width: 11"
 - Height: 1'-6 1/4"
- Internal Dimensions and Spacing:**
 - Top edge: 1 1/2" from left and right edges to the first vertical line.
 - Distance between first and second vertical lines: 8"
 - Distance between second and third vertical lines: 1 1/2"
 - Left edge: 5 5/8" from top to first hole, 7 5/8" between first and second holes, 5 5/16" from second hole to bottom.
 - Right edge: 1 1/2" from top to first hole, 7 5/8" between first and second holes, 7 5/8" between second and third holes, 1 1/2" from third hole to bottom.
- Holes:**
 - Three 1" diameter holes (1" ϕ Holes) are located along the right edge.
 - Three 5/8" diameter holes (5/8" Holes) are located along the left edge.

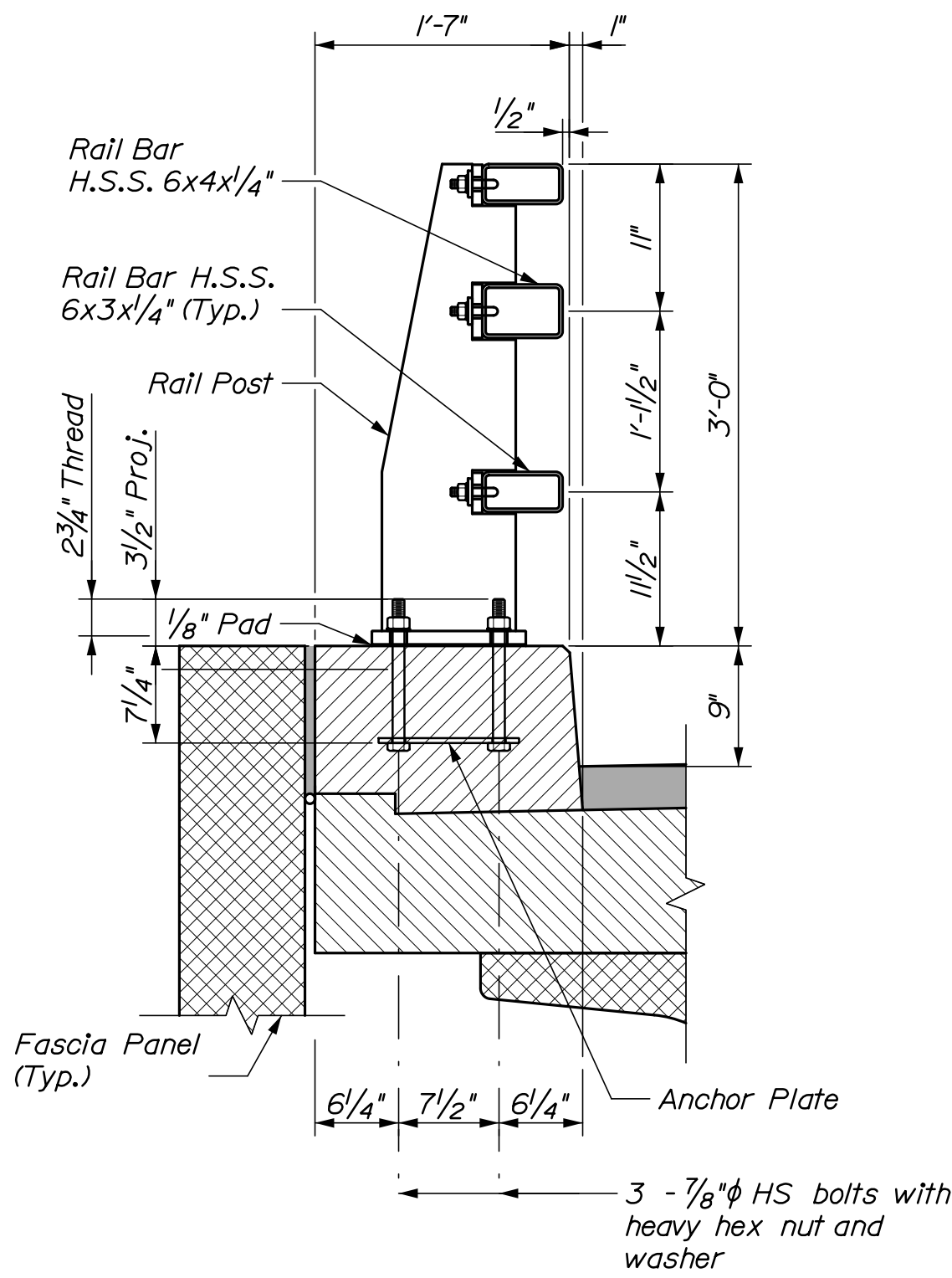




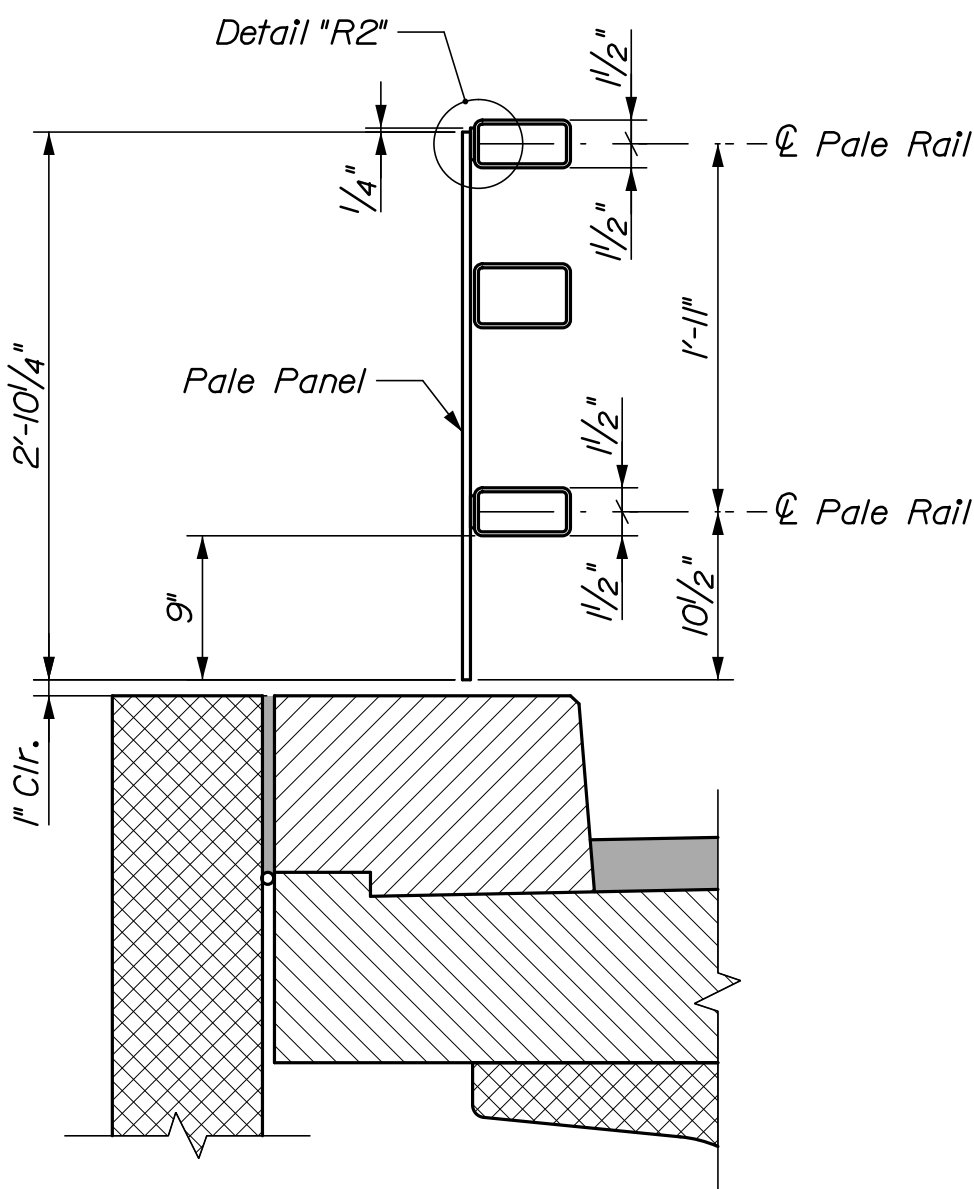
WYOMING BRIDGE RAILING ELEVATION
(Pales not shown for clarity)



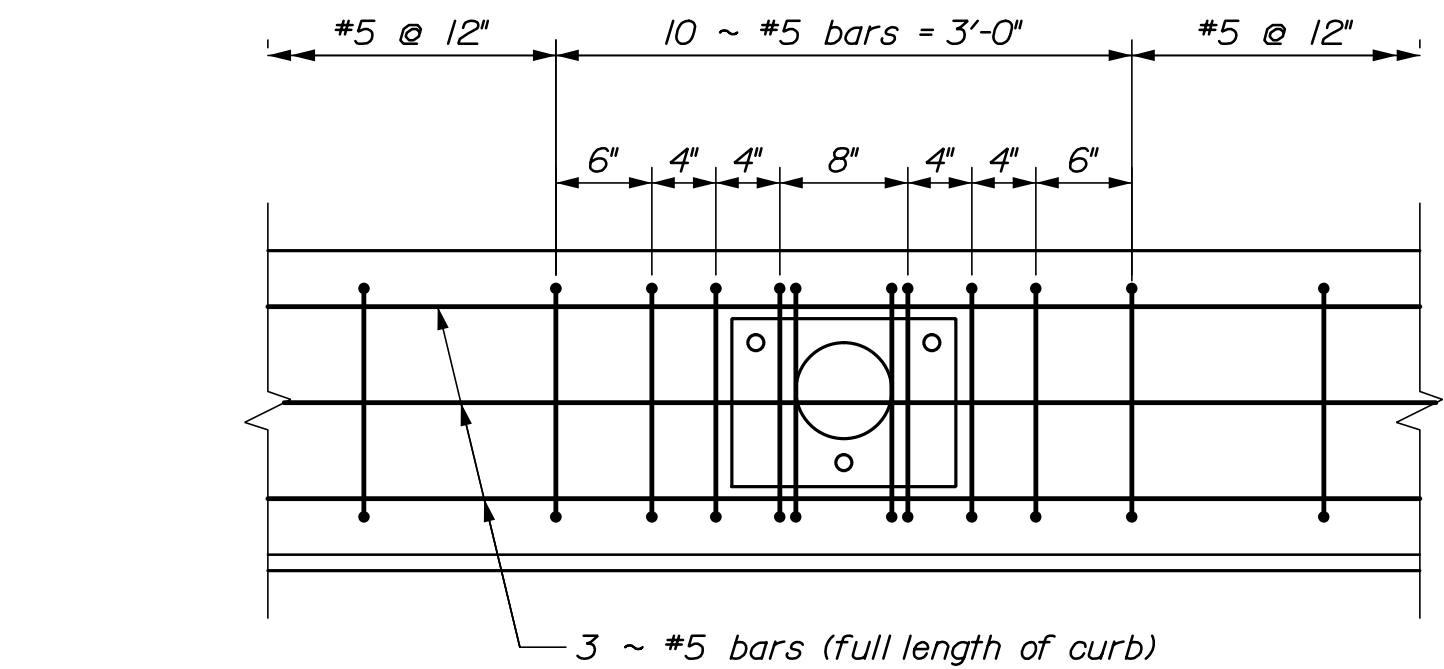
PALE PANEL REAR ELEVATION



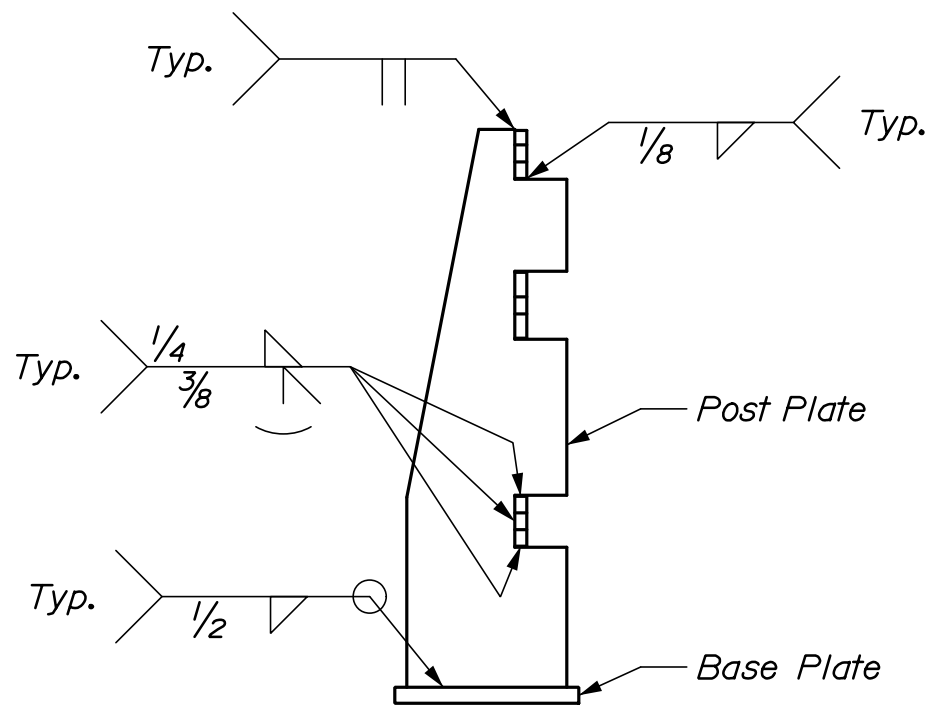
TYPICAL RAILING SECTION



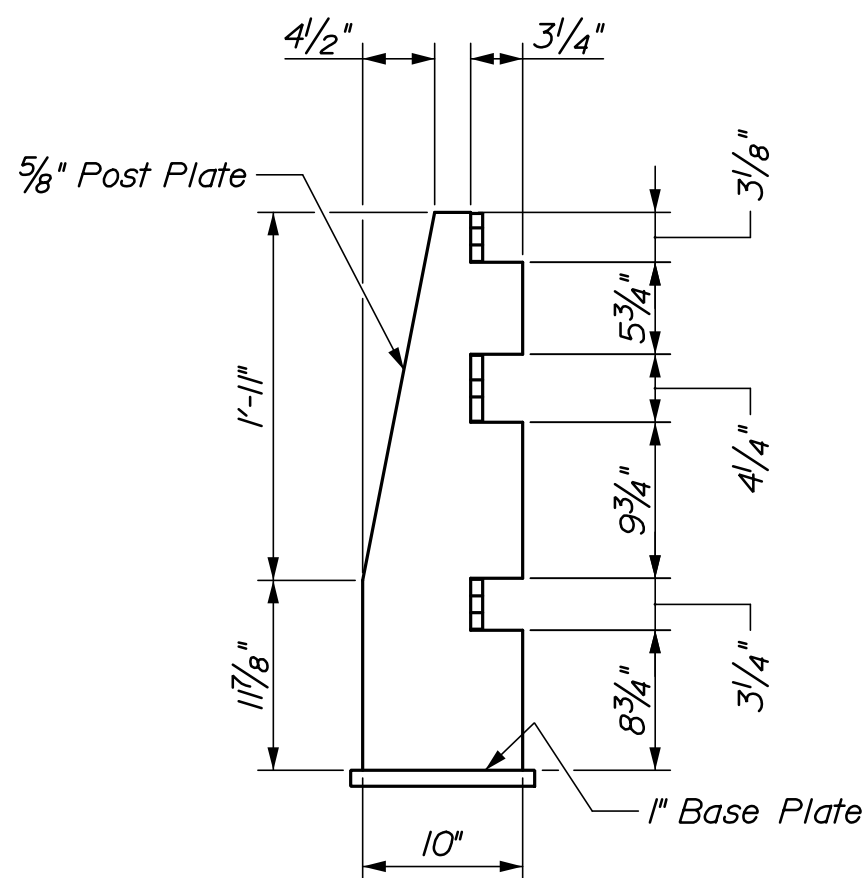
PALE PANEL SECTION



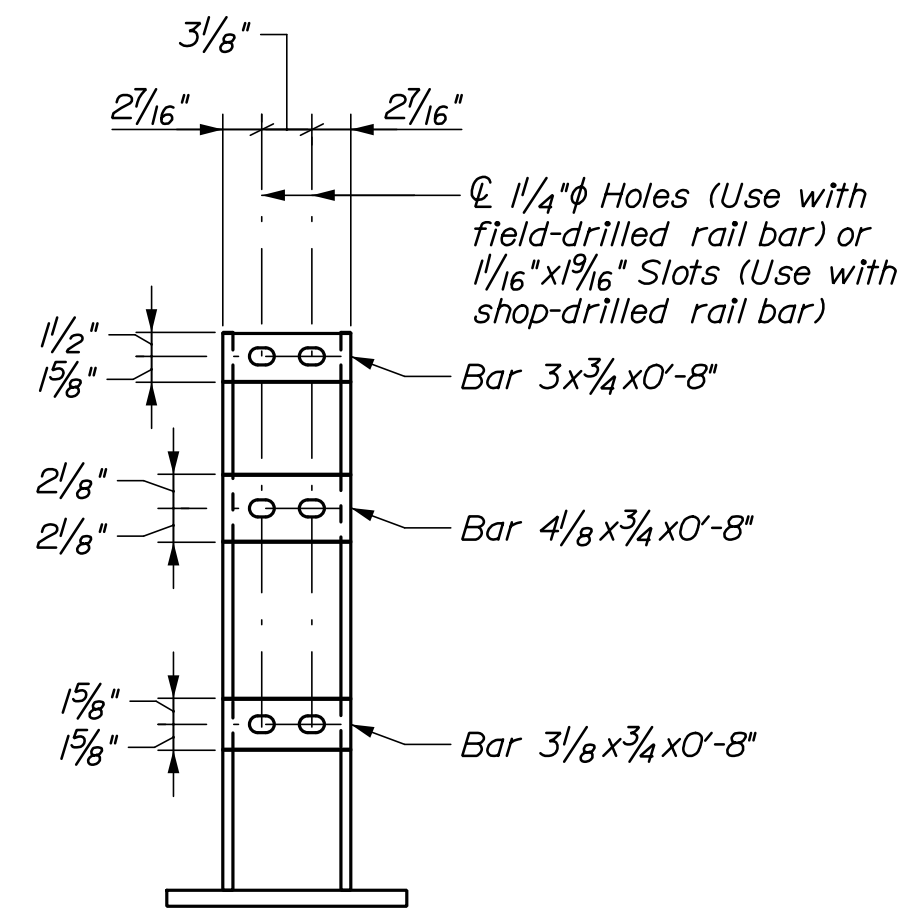
CURB REINFORCING PLAN



RAIL POST SIDE ELEVATION
(Welds)



RAIL POST SIDE ELEVATION
(Geometry)



RAIL POST FRONT ELEVATION

BRIDGE RAILING NOTES

1. All work and materials shall conform to the provisions of Section 507 - Railings of the Standard Specifications.
2. Tubing shall meet to longitudinal CVN requirements of 15 ft. lb. at 0°F or proportional values of subsize specimens. Testing shall be done in accordance with ASTM A 673. The "H" frequency shall be used and the material shall be as - rolled.
3. 25% of the post-to-base welds in a production lot shall be tested by the Magnetic Particle Method. If rejectable discontinuities are found, another 25% of that production shall be tested. If rejectable discontinuities are found in the second 25%, all post - to-base welds in that lot shall be tested. Acceptance criteria shall be with the latests edition of the AWS D1.5 Bridge Welding Code.
4. All exposed cut or sheared edges shall be broken and free of burrs.
5. Rail bars shall not be shop spliced.
6. Rail bar expansion joints shall be provided in any bay spanning a superstructure joint. Expansion joint width shall be 1" at 45°F.
7. All parts shall be galvanized after fabrication in accordance with ASTM A 123, except that hardware shall meet the requirements of either ASTM A 153 or ASTM B 695, Class 50, Type 1. Parts except hardware to be galvanized shall be blast cleaned prior to galvanizing in accordance with Standard Specification Section 506.
8. Venting and pick-up holes shall be shown on the shop drawings.
9. Anchor bolts may be tack welded to anchorage.
10. After installation of the rail bars, the exposed rail bolt threads receive two coats of zinc-rich paint.
11. Rail post anchorages and curb rebar shall be coordinated with proposed fascia panel anchorage and reinforcing locations.

MATERIALS

- Rail Bars ASTM A 500, Grade B
Rail Post Plates & Bases ASTM A 572, Grade 50
Rail Bar Splice Sleeves ASTM A 572, Grade 50
Anchor & Reinforcement Assemblies ASTM A 36
Plate Washers ASTM A 36
Anchor Bolts ASTM A 325, ASTM A 449, or ASTM F 1554, Grade 105
Rail Bolts ASTM A 36
Nuts for Rail Bolts ASTM A 563
Splice Bolts ASTM A 325
Lock Washers ANSI/ASME B18.21.1-1994

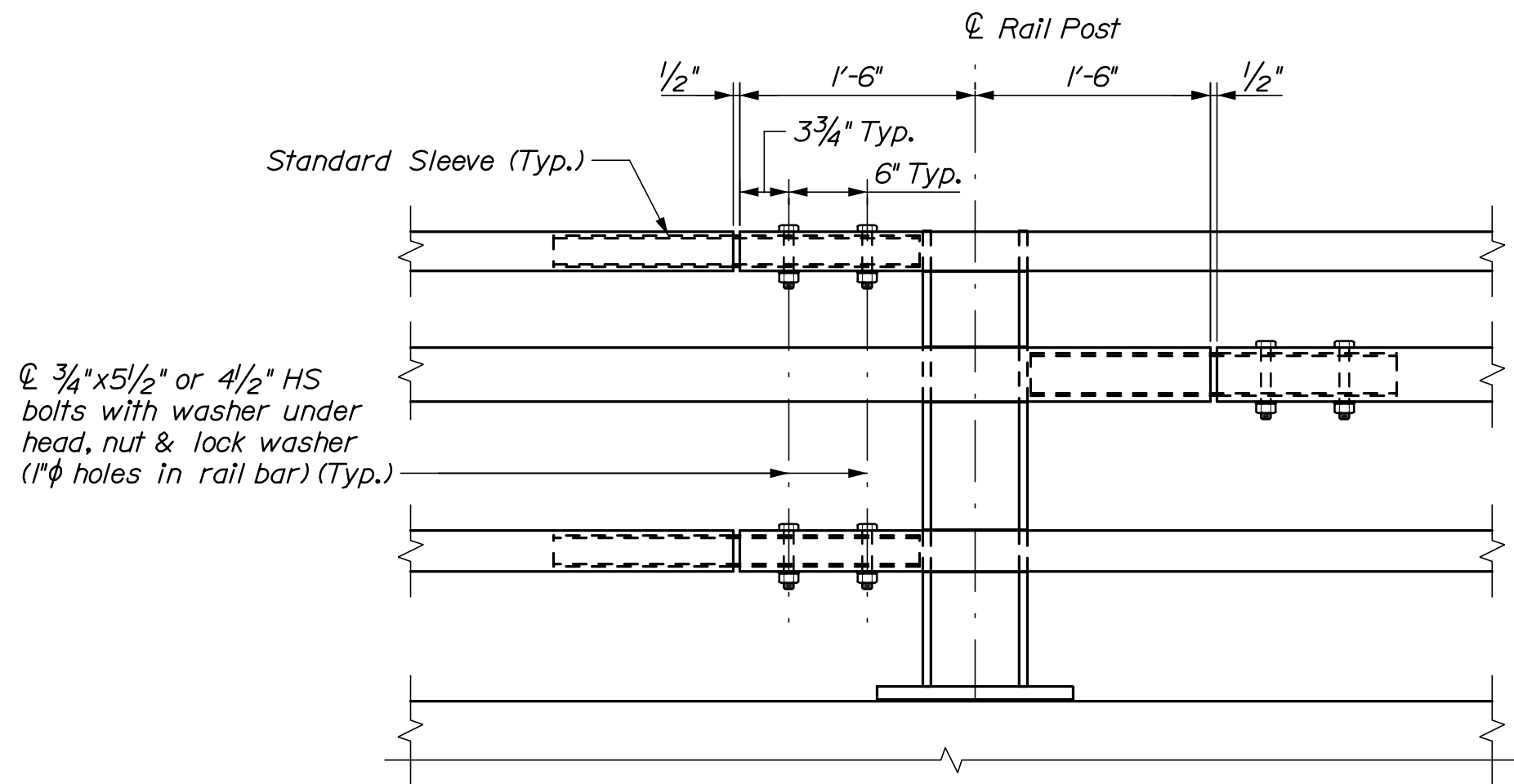
STATE OF MAINE DEPARTMENT OF TRANSPORTATION	STP-1771(200)X		WIN 17712.00		BRIDGE PLANS	
	SIGNATURE		P.E. NUMBER		DATE	
	DATE		BY		DATE	
BLUE HILL FALLS BRIDGE SALT POND OUTLET HANCOCK COUNTY BLUE HILL BRIDGE RAILING DETAILS I	PROJ. MANAGER	A. LaFollette				
	DESIGN-DETAILED	J. H. Walton	P. Bishop	09/21		
	CHECKED-REVIEWED	K. Broyley	T. Cote	09/21		
	DESIGN-DETAILED					
	REVISIONS 1					
SHEET NUMBER		60		OF 70		

Date:9/28/2021

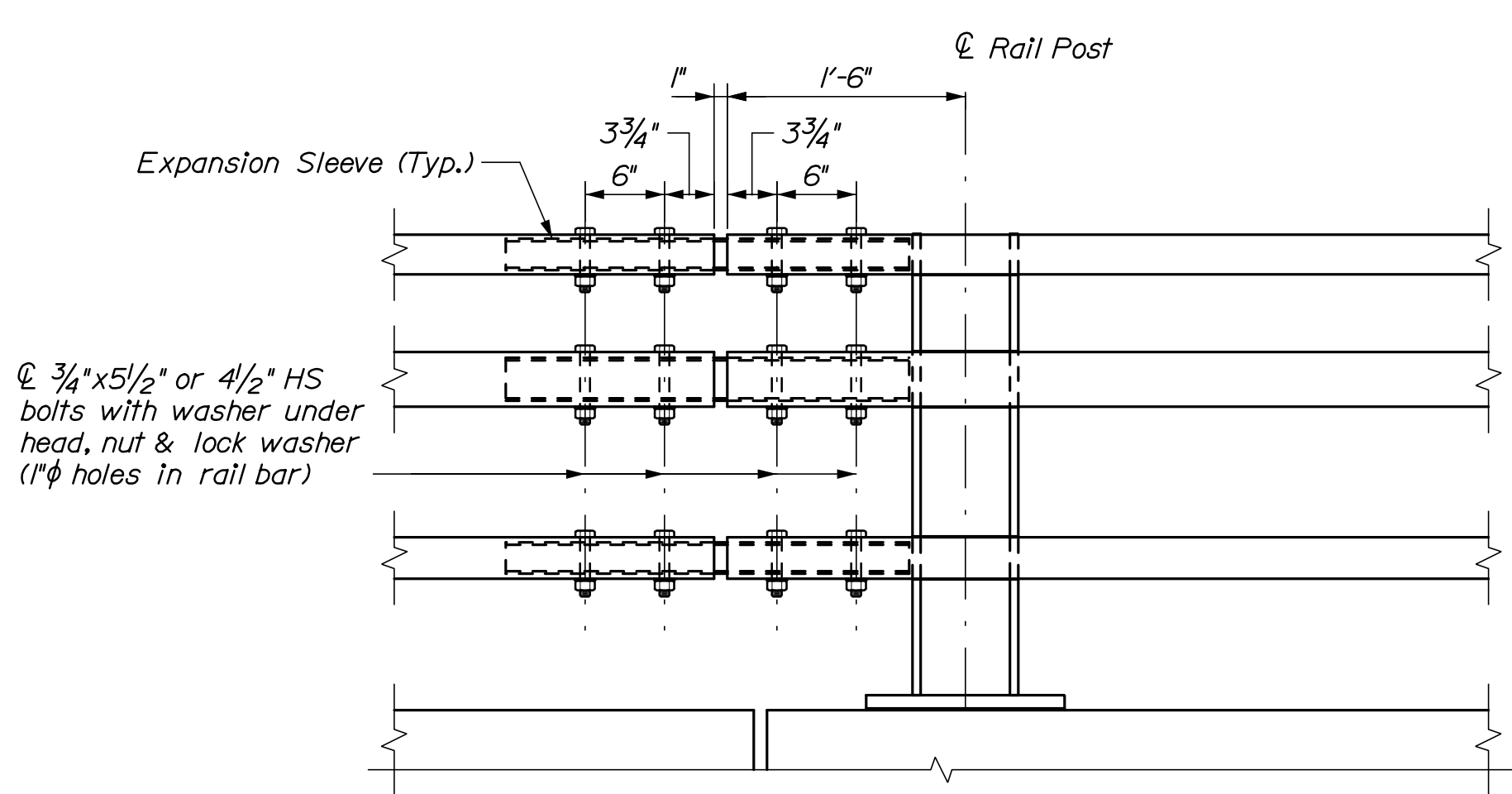
Username:

Division:

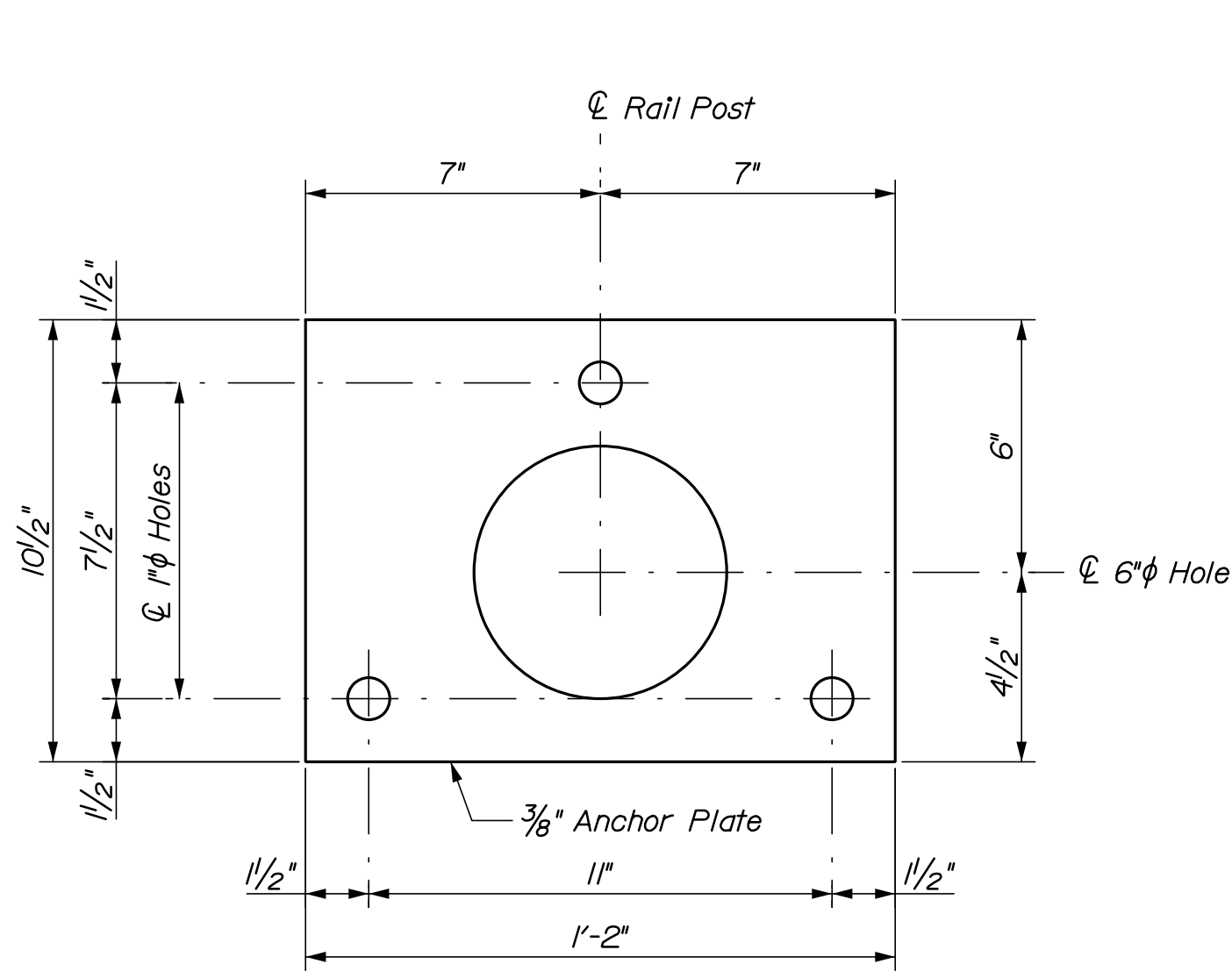
Filename: 061_Railing Details 2.dgn



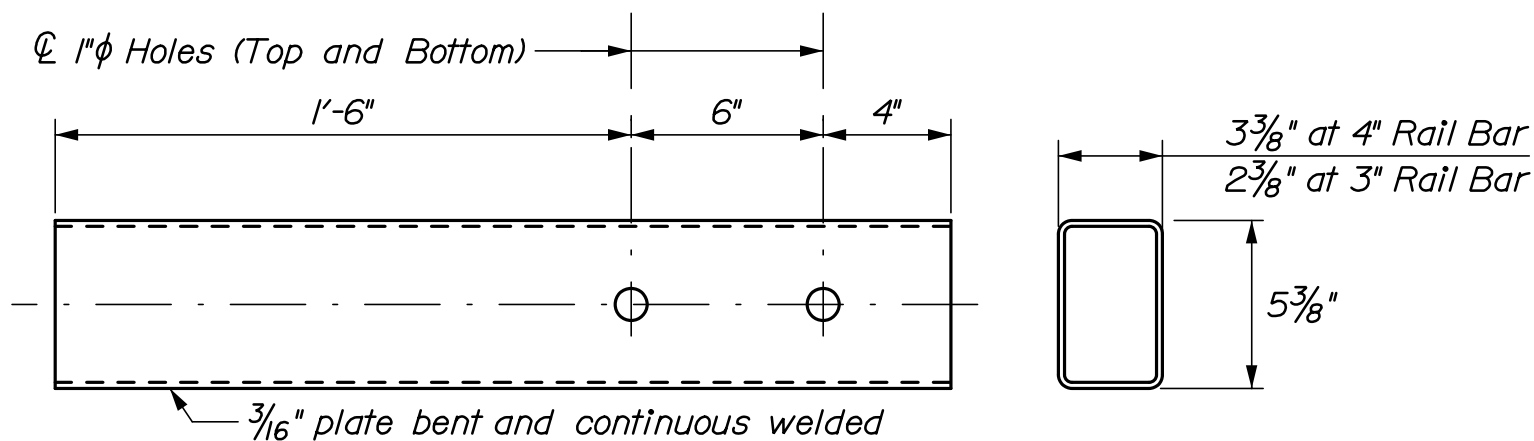
STANDARD SPLICE ELEVATION



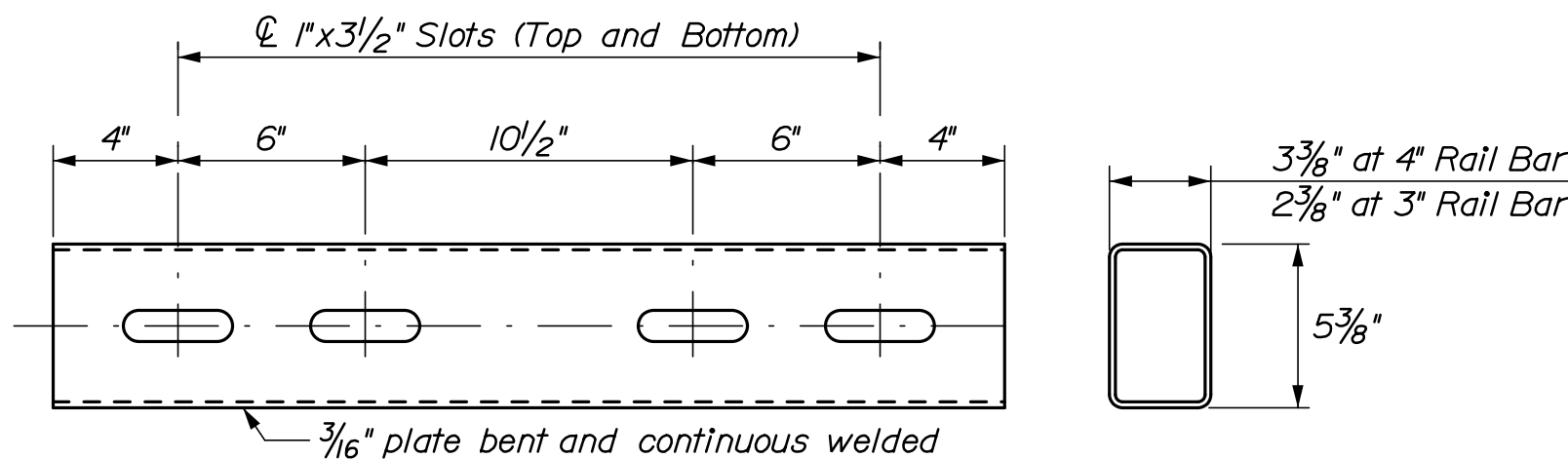
EXPANSION SPLICE ELEVATION



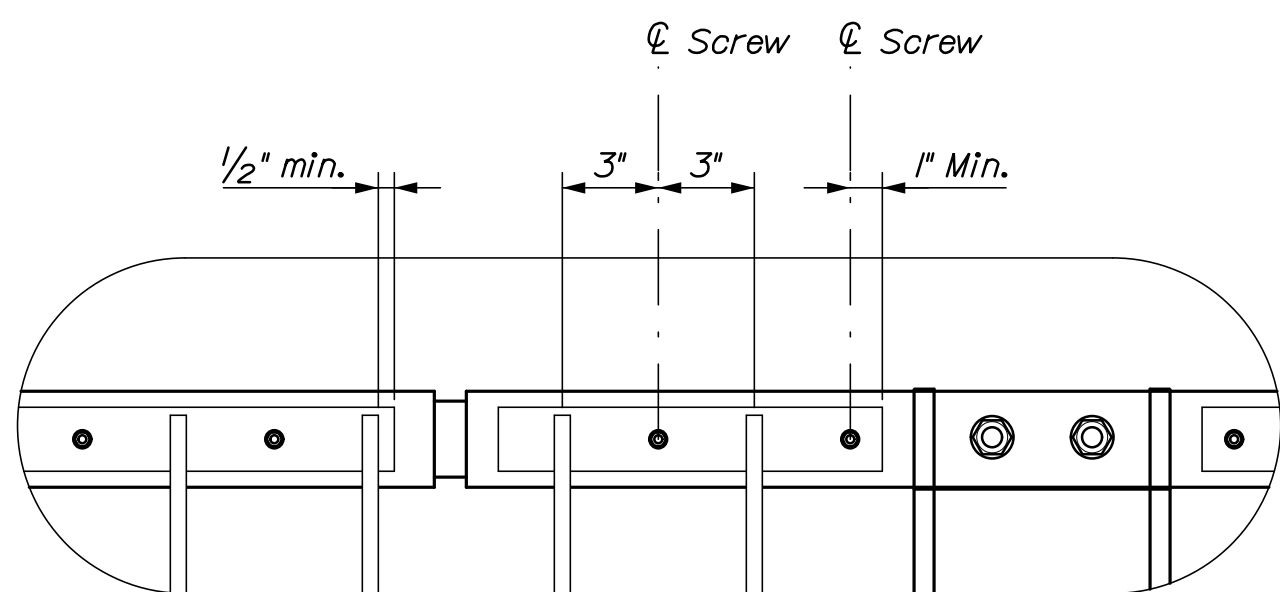
ANCHOR PLATE PLAN



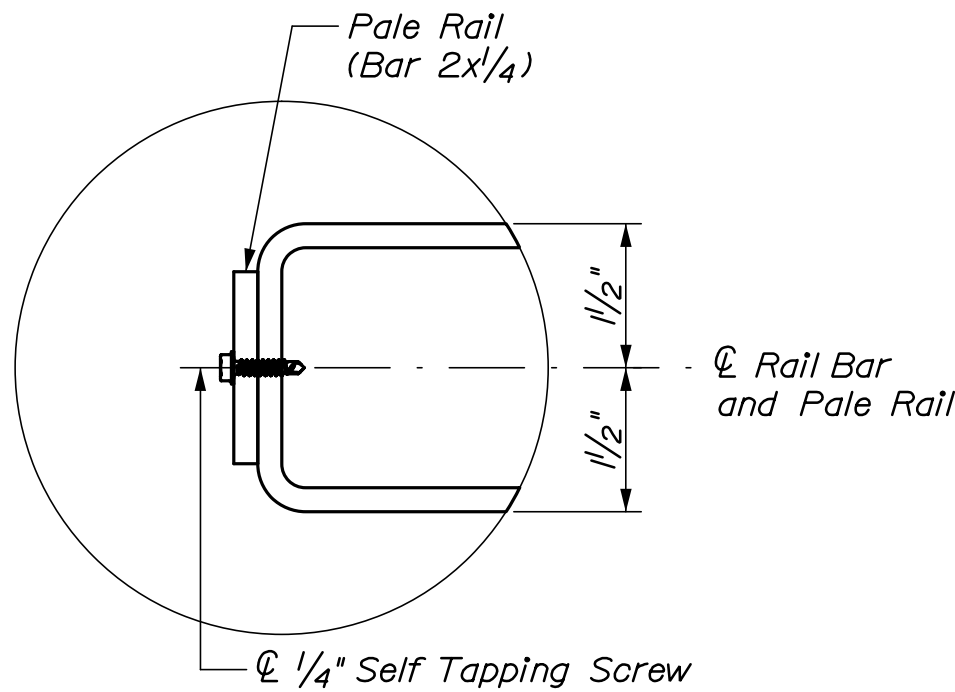
STANDARD SLEEVE DETAILS



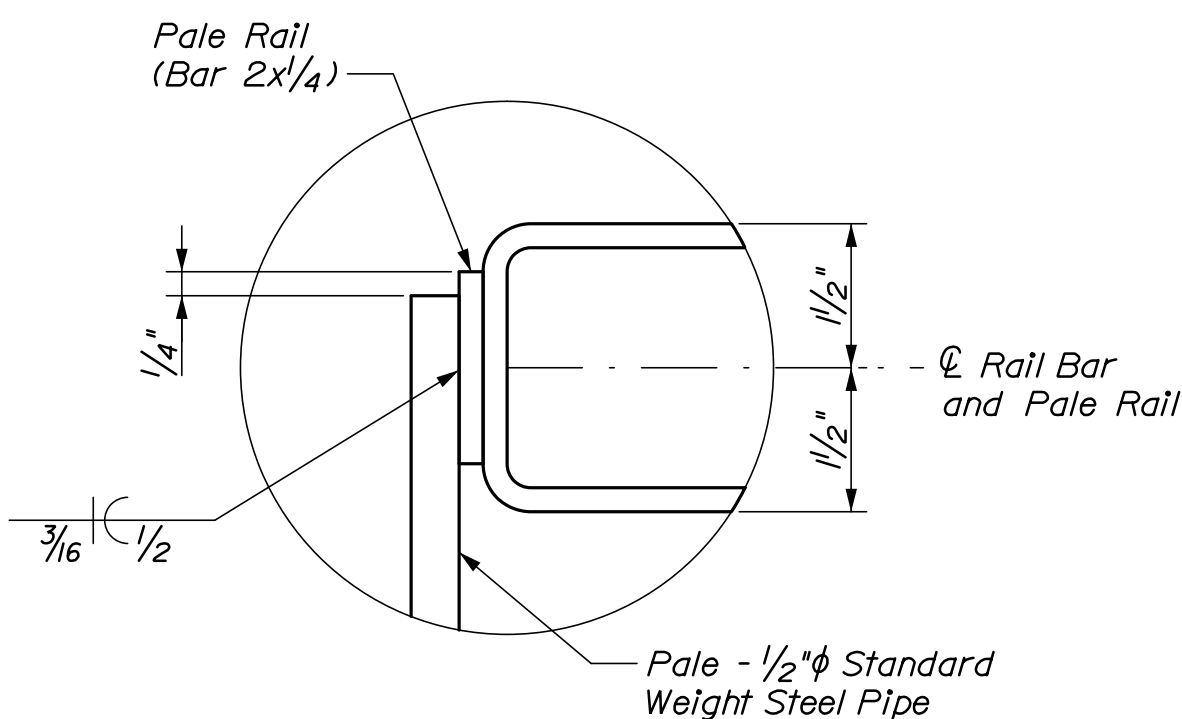
EXPANSION SLEEVE DETAILS



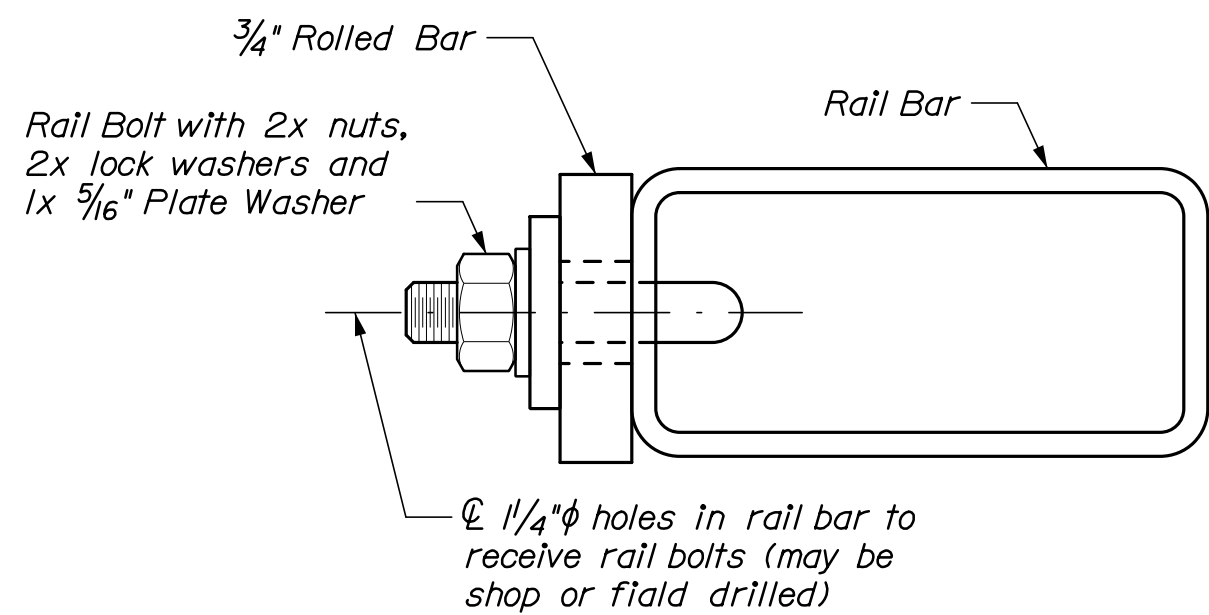
DETAIL "R1"



DETAIL "R2"
Between Pales



DETAIL "R2"
At Pale



RAIL BAR CONNECTION DETAIL

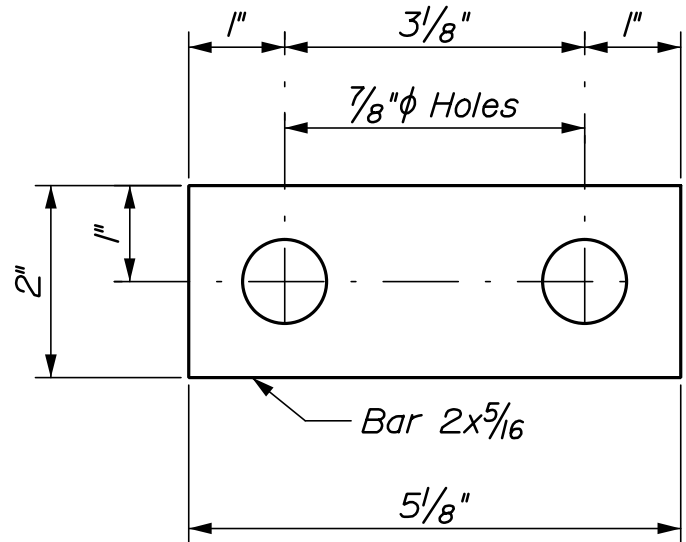
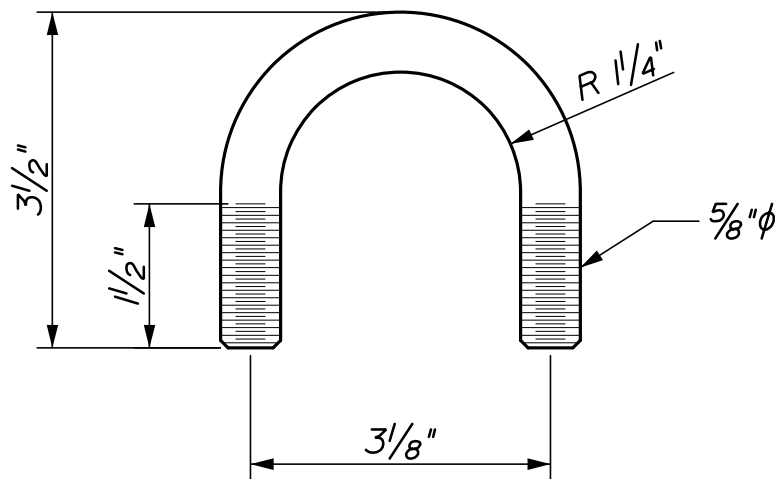
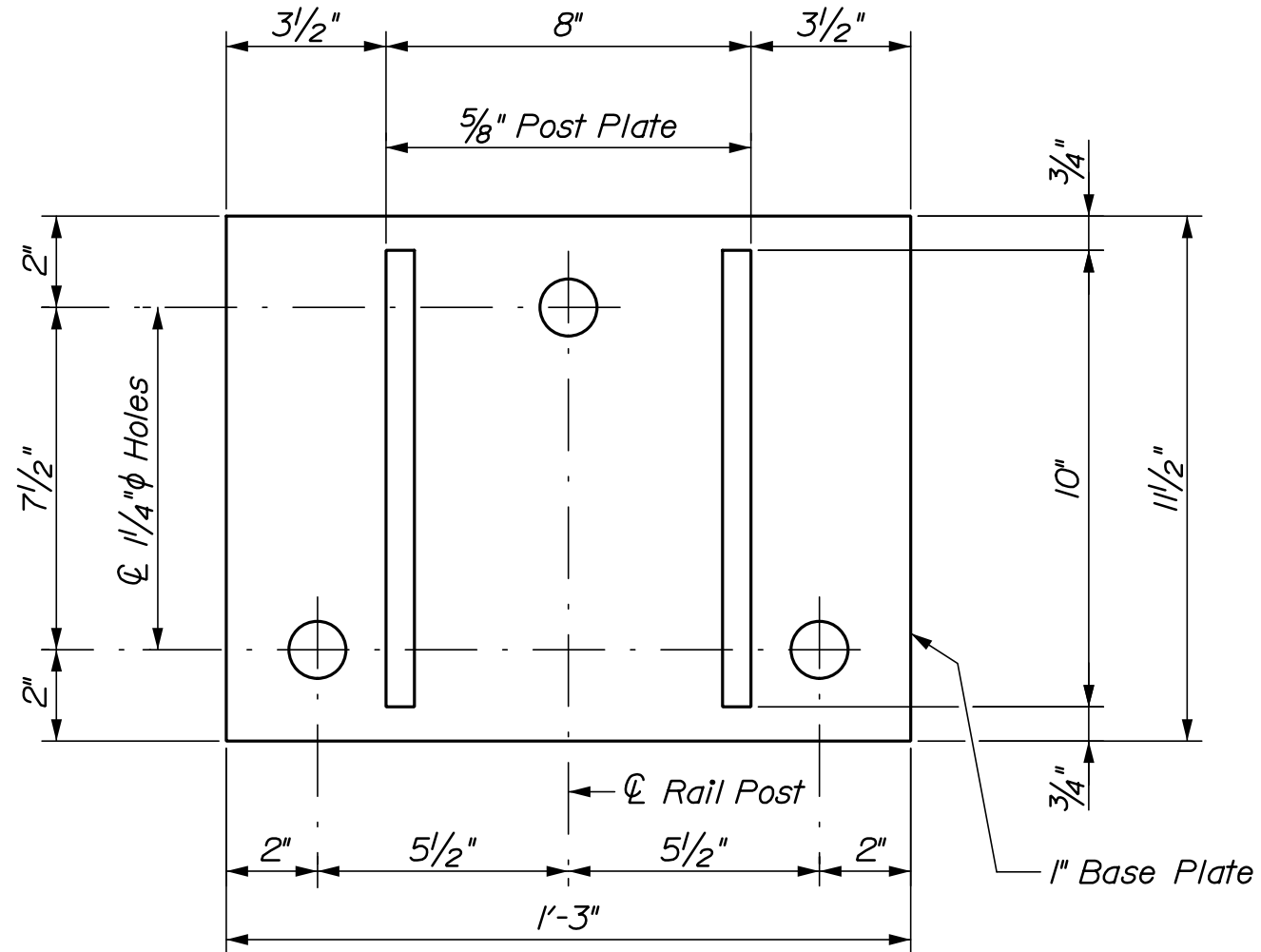


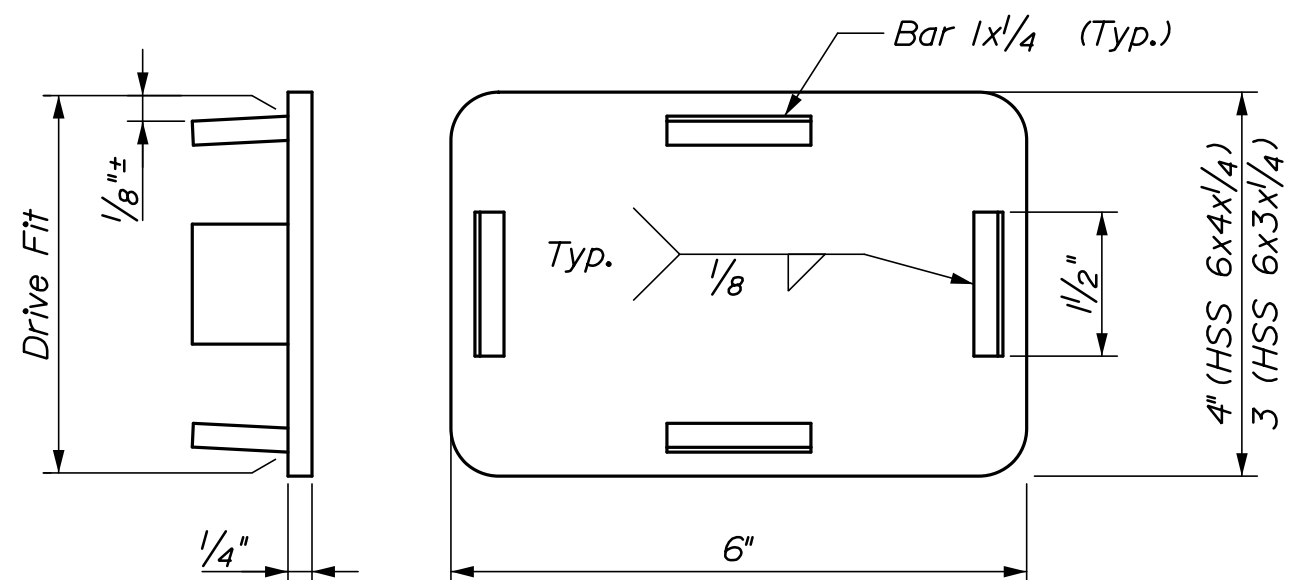
PLATE WASHER



RAIL BOLT DETAIL



RAIL POST PLAN



RAIL BAR END CAP

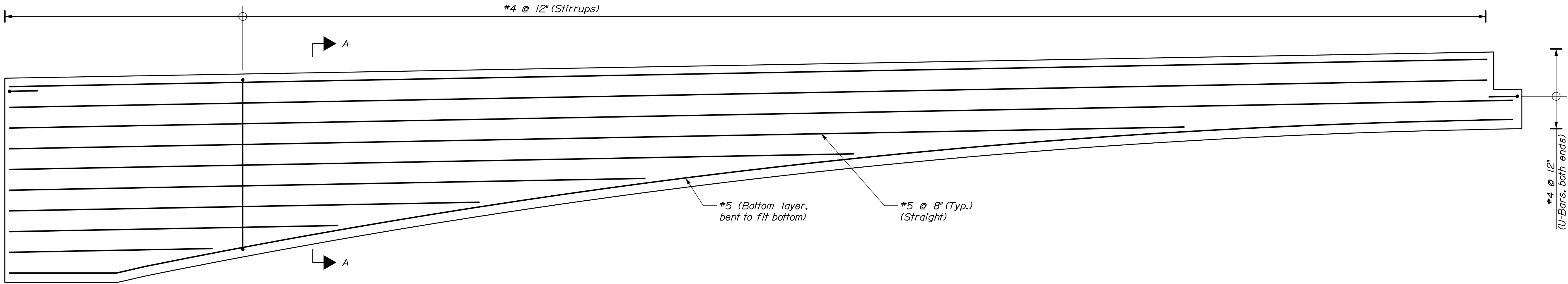
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP-1771(200)X
WIN
17712.00
Bridge No. 5038
BRIDGE PLANS

PROJ. MANAGER	BY	DATE
A. Lath	P. Bishop	09/21
CHECKED-REVIEWED	T. Cote	09/21
DESIGN-DETAILED		
DESIGN-DETAILED		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BLUE HILL FALLS BRIDGE
SALT POND OUTLET
HANCOCK COUNTY
BLUE HILL
BRIDGE RAILING DETAILS II

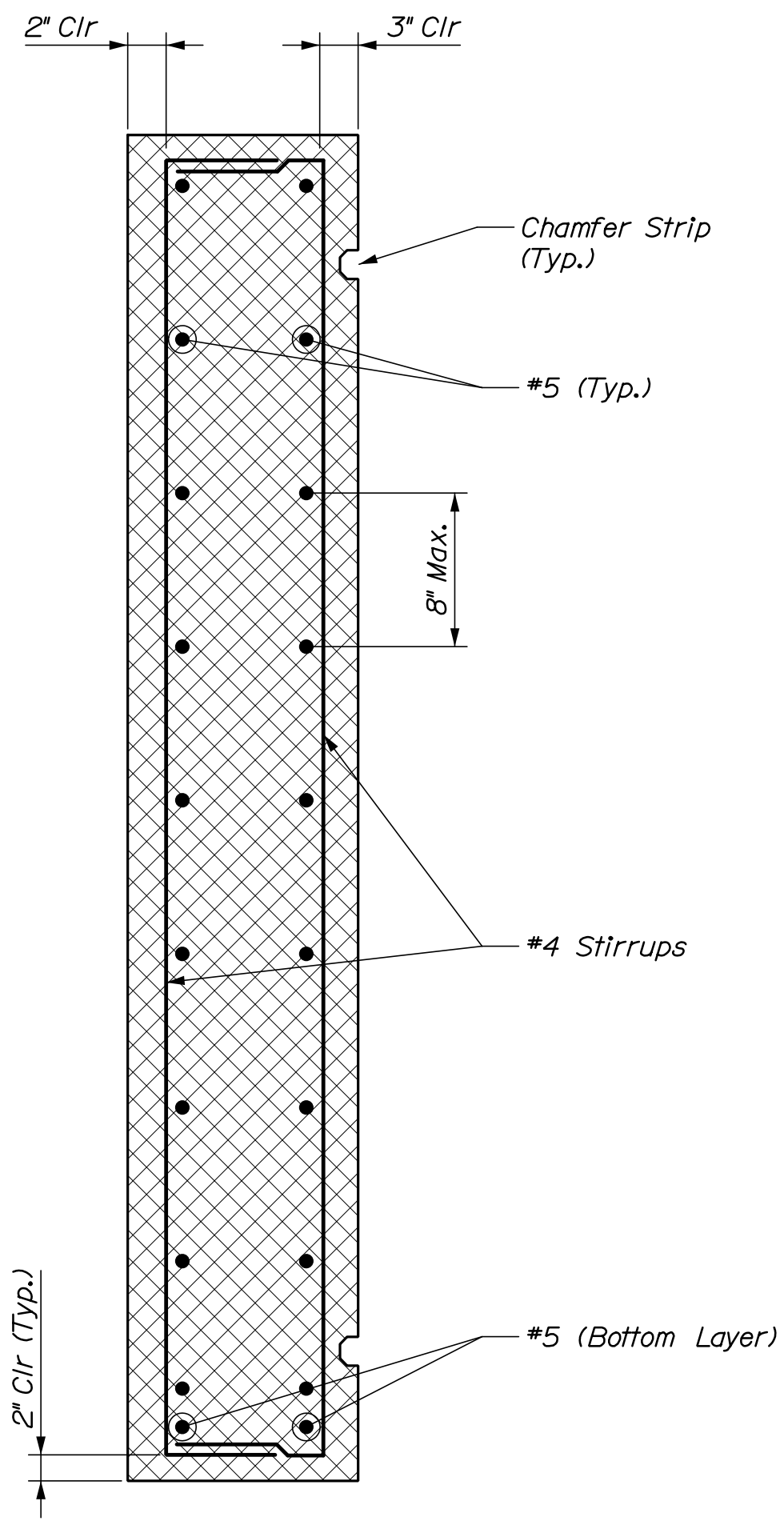
SHEET NUMBER
61
OF 70

HNTB

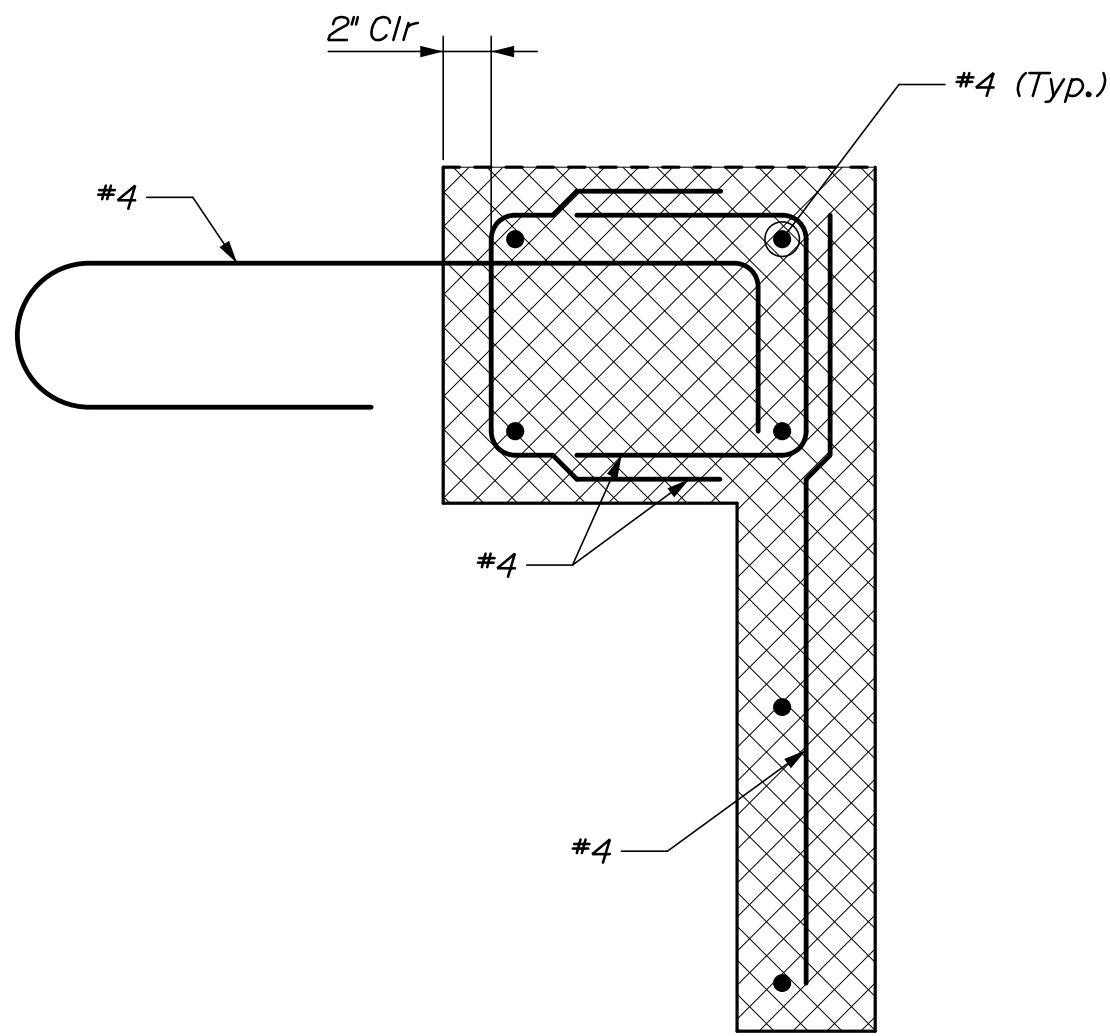


PANEL REINFORCEMENT ELEVATION

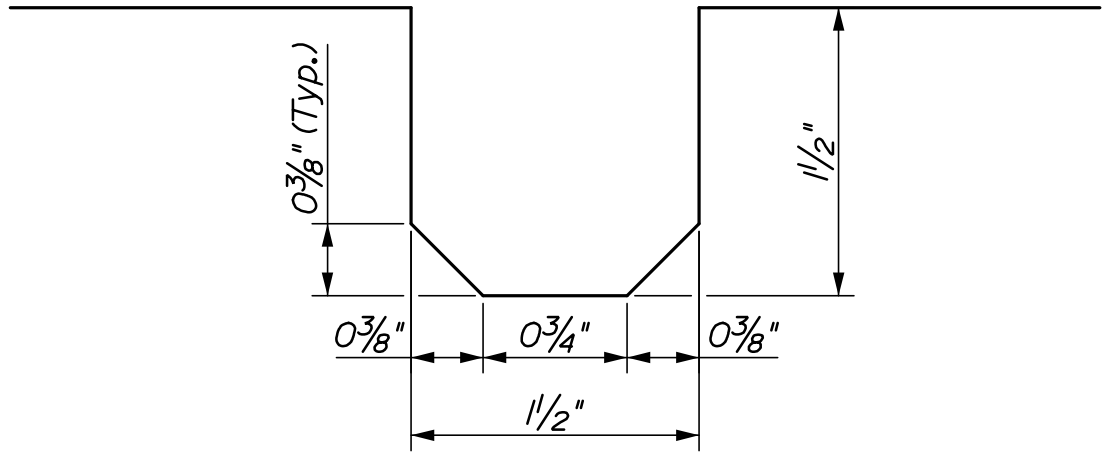
(Panel 2 shown, all others similar)
(Chamfer strip not shown for clarity)



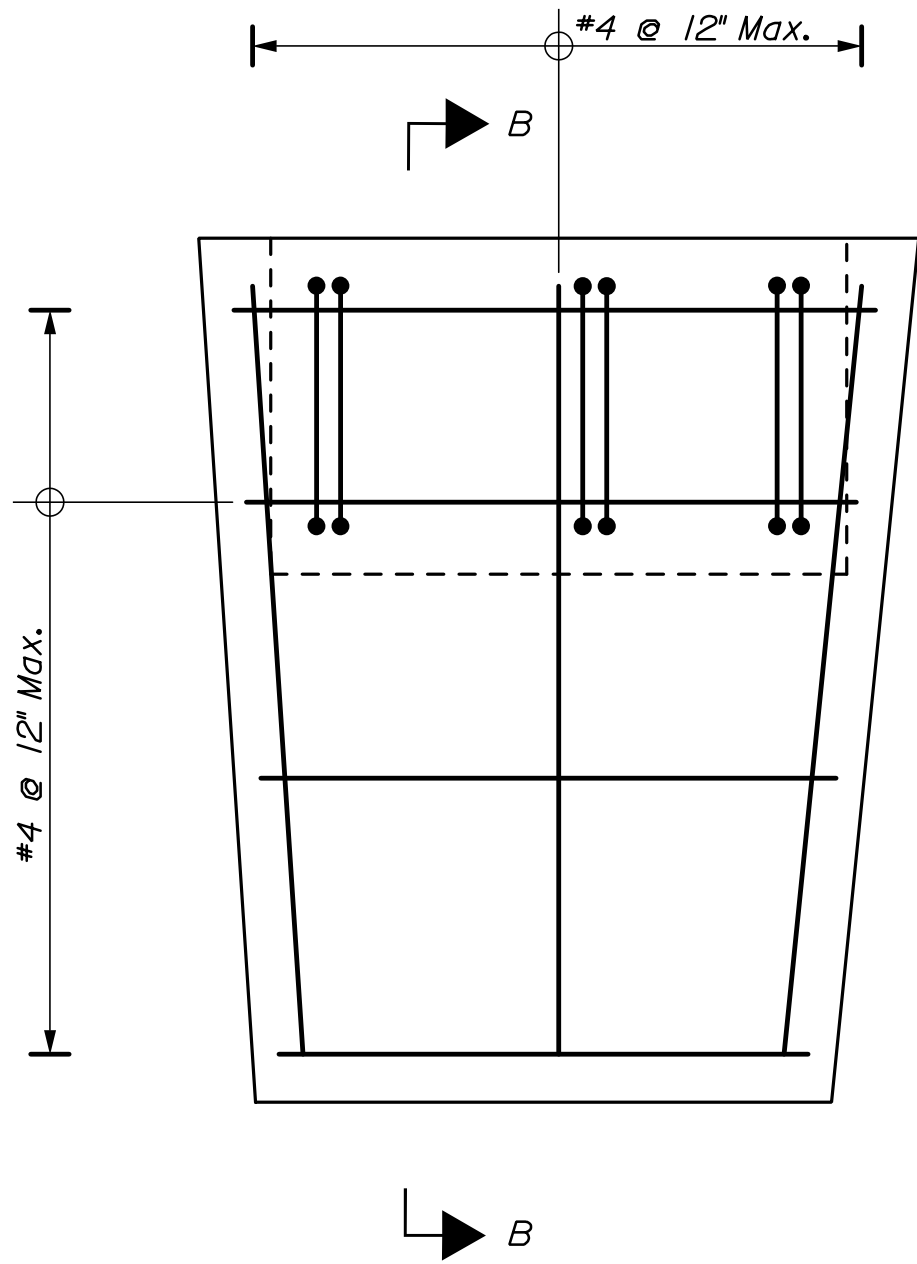
SECTION A-A



SECTION B-B



CHAMFER STRIP DETAIL



KEYSTONE REINFORCEMENT ELEVATION

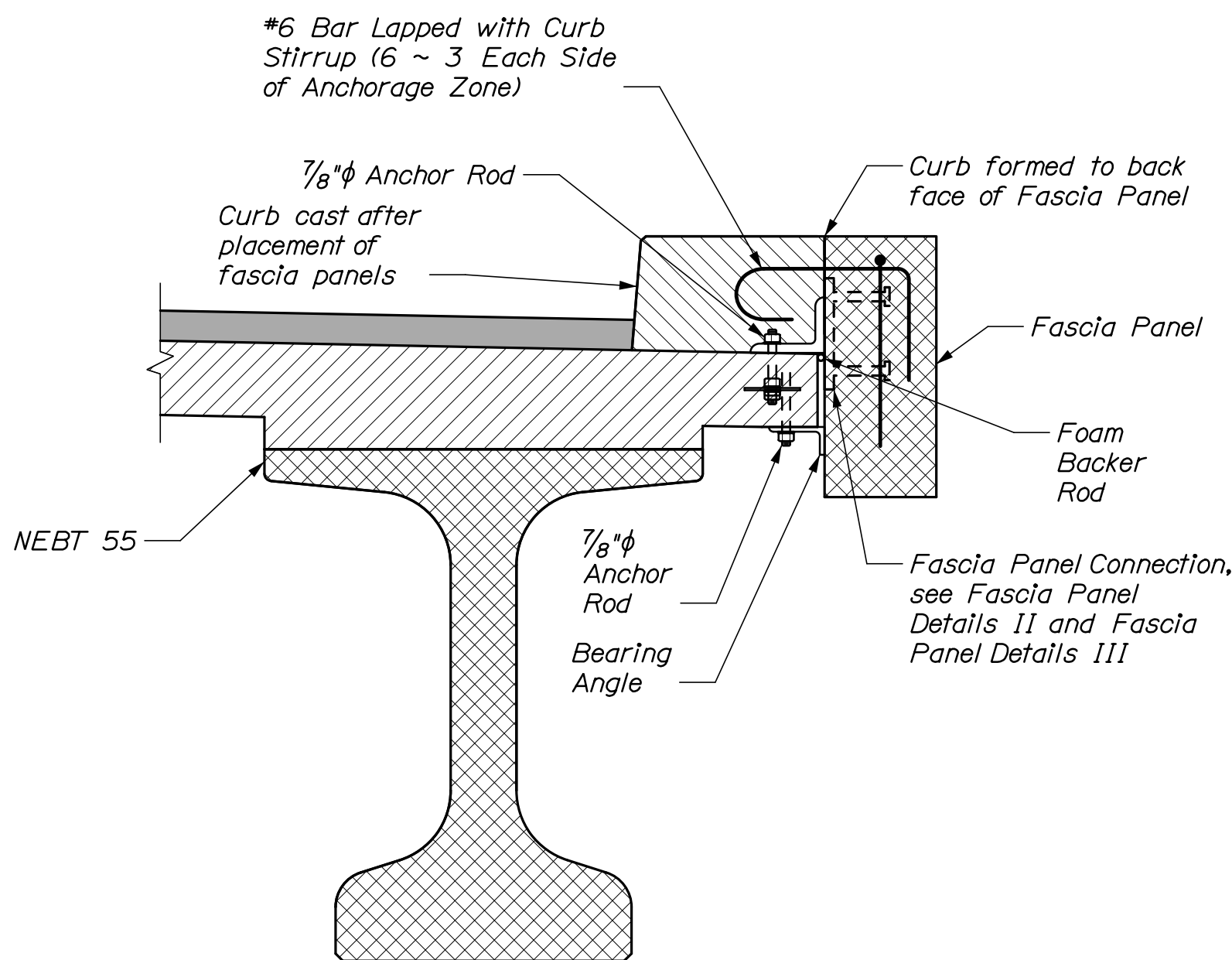
STATE OF MAINE				SIGNATURE	DATE
DEPARTMENT OF TRANSPORTATION					
STP-1771(200)X					
Bridge No. 5038				WIN	BRIDGE PLANS
17712.00				DATE	

Date:9/28/2021

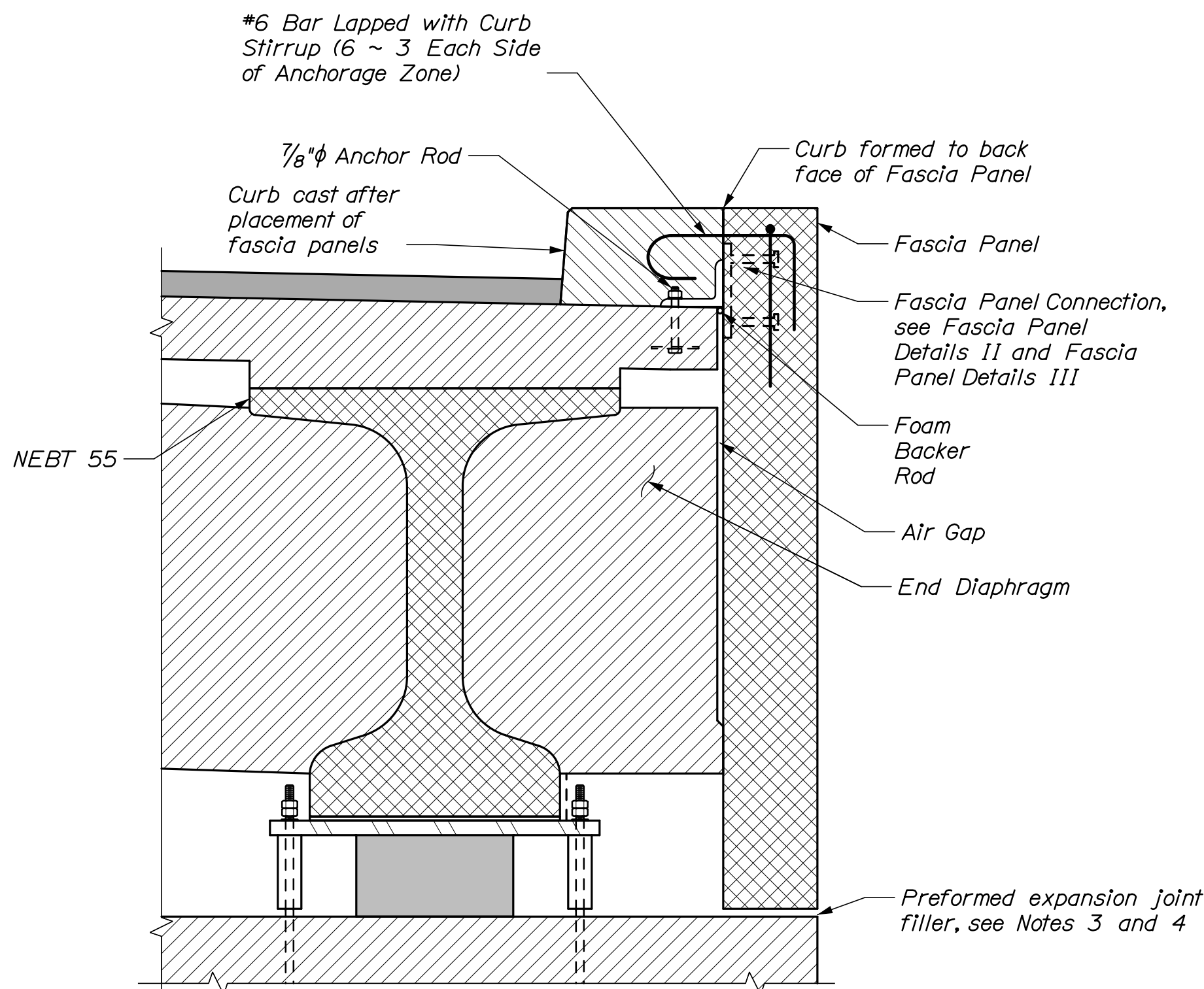
Username:

Division:

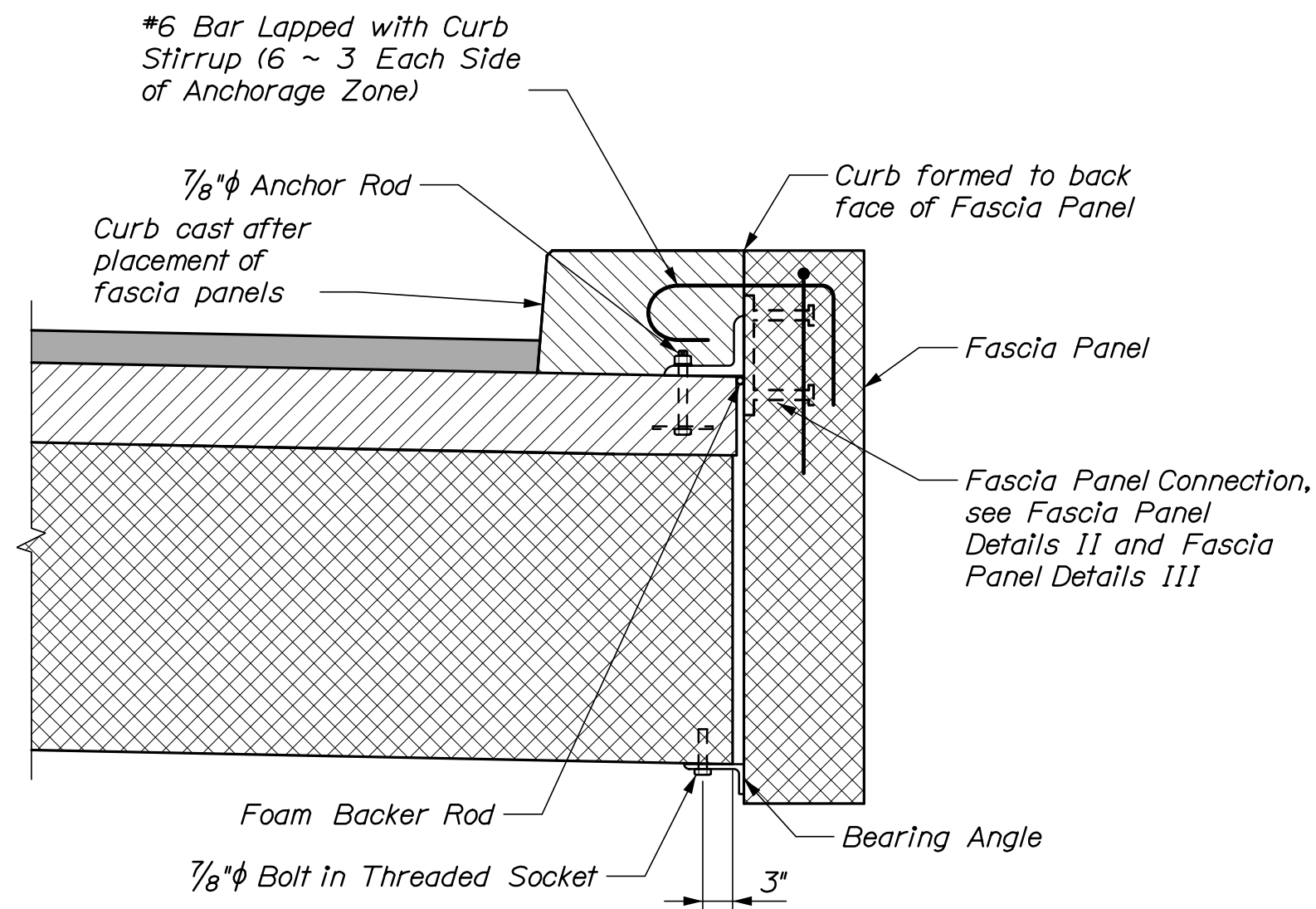
Filename: 064_Fascia Details 1.dgn



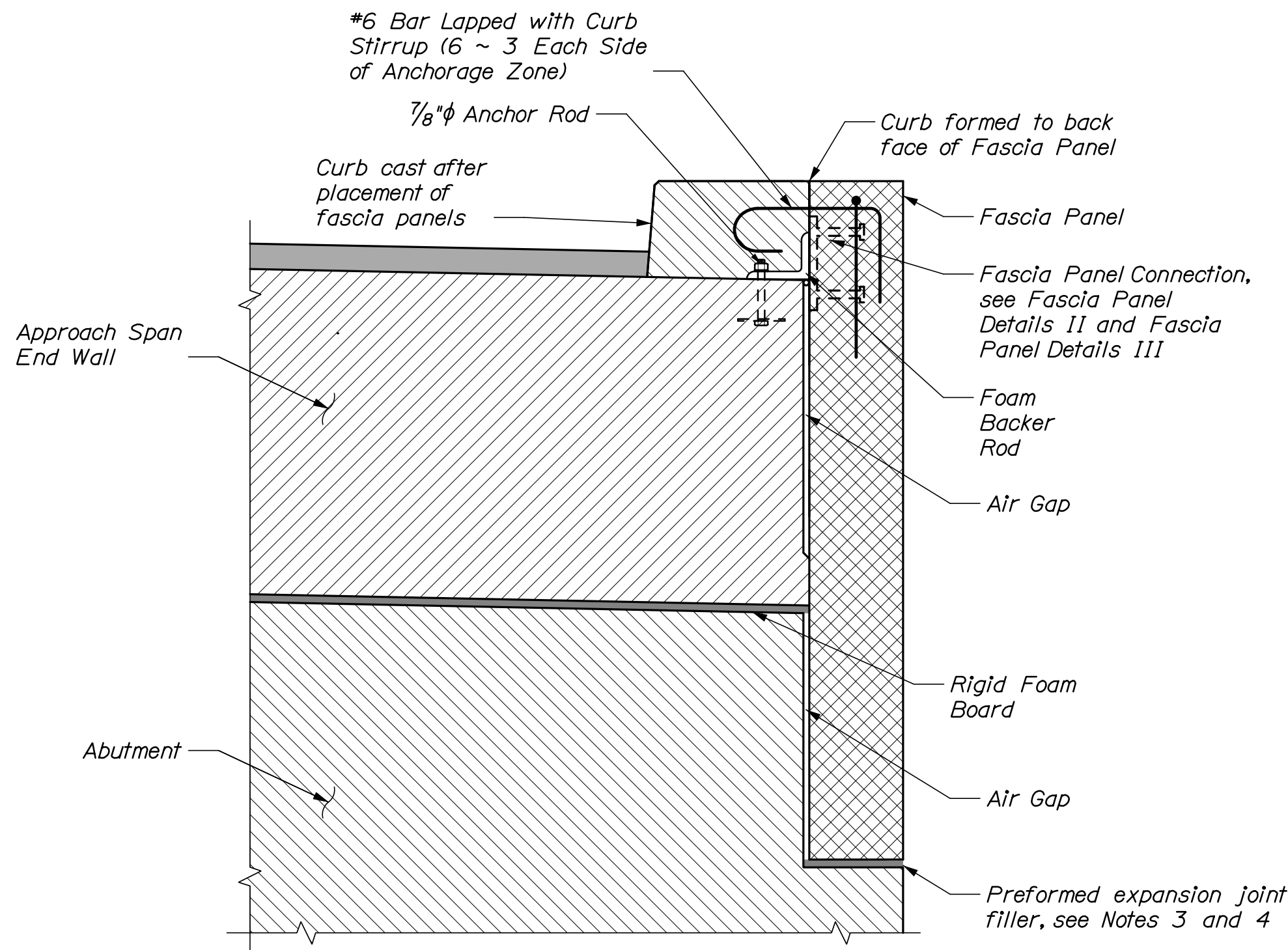
FASCIA PANEL CONNECTION DETAIL
MAIN SPAN AT MIDSPAN



FASCIA PANEL CONNECTION DETAIL
MAIN SPAN AT ABUTMENT



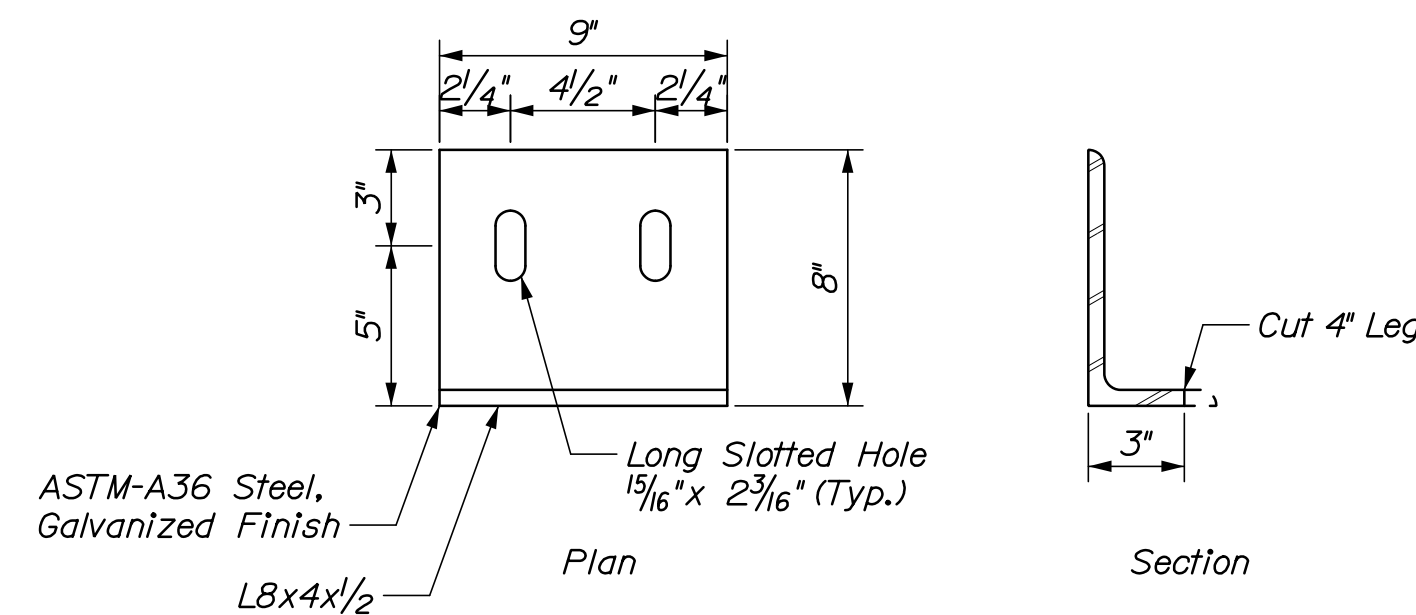
FASCIA PANEL CONNECTION DETAIL
APPROACH SPAN AT GRADE BEAM



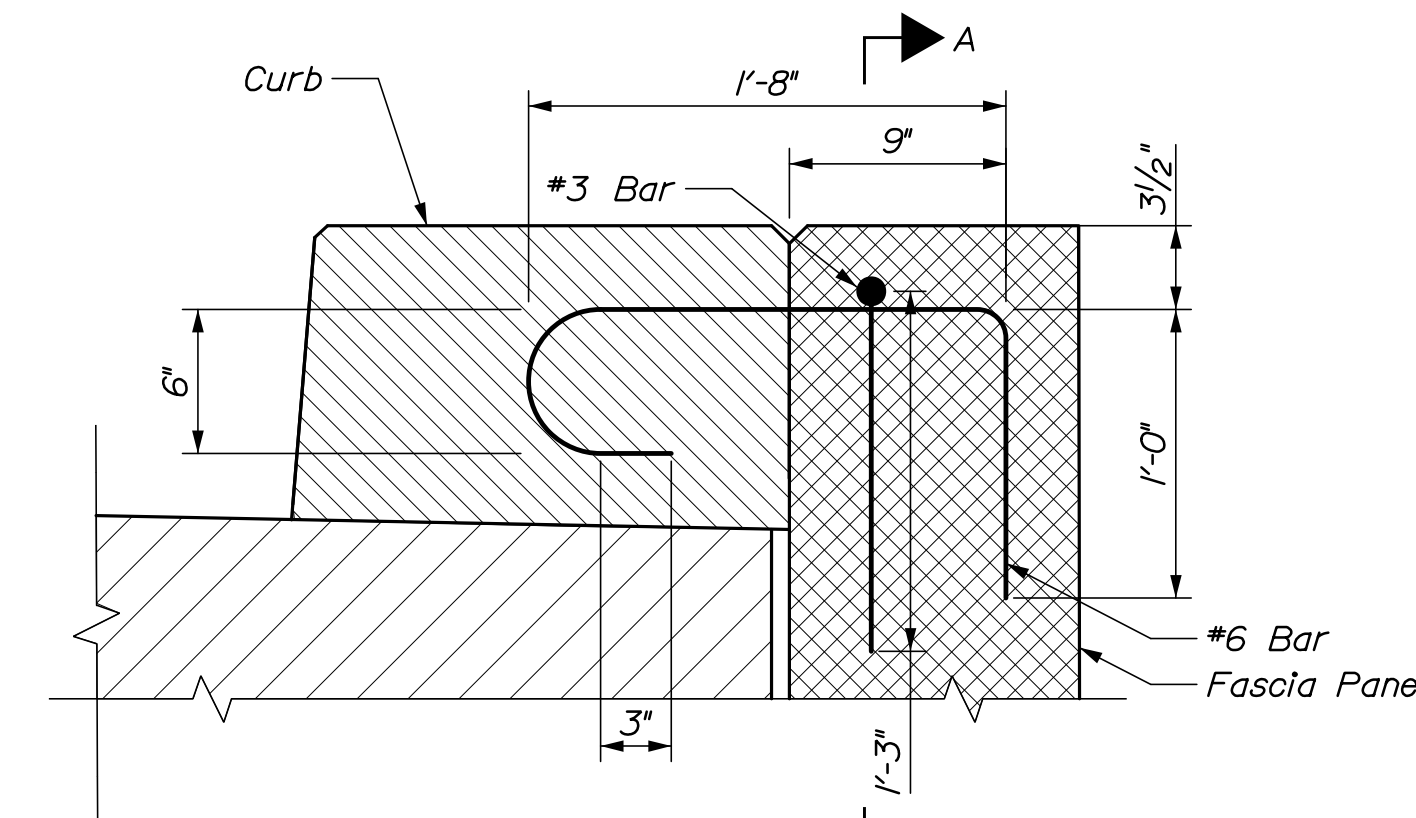
FASCIA PANEL CONNECTION DETAIL
APPROACH SPAN AT ABUTMENT

FASCIA PANEL CONNECTION NOTES:

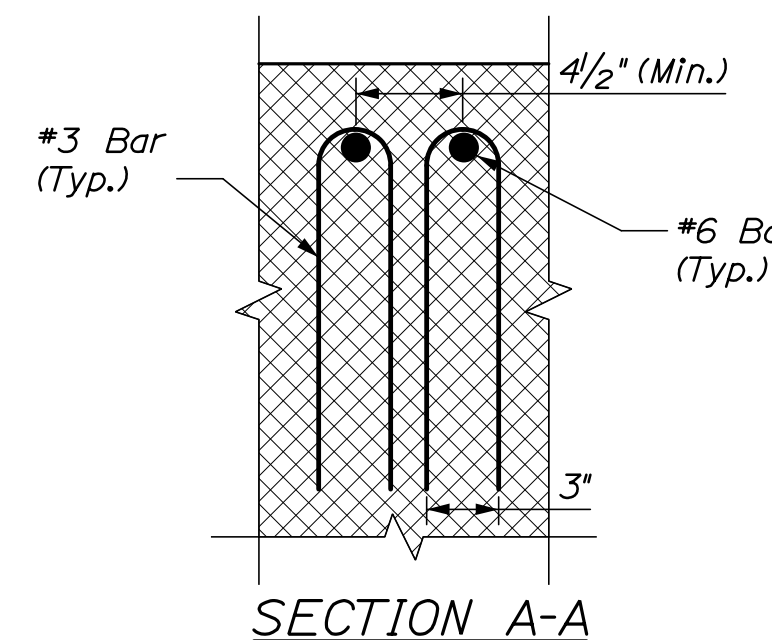
1. The contractor may use either the Bolted Fascia Panel Connection or the Welded Fascia Panel Connection for the top panel connection. All anchor bolts, connection angles, connection plates, and bolts will be incidental to Pay Item 534.7613 Precast Aesthetic Panels.
2. Bearing Angles on the bottoms of the fascia panel shall be adjusted to be tight to the back of the fascia panel after the top fascia panel connections are completed.
3. Preformed Expansion Joint Filler installed between the fascia panels and the abutment or grade beam shall meet the requirements of Standard Specification Section 705.1 and will be incidental to Pay Item 534.7613 Precast Aesthetic Panels.
4. Before placing the deck and approach span topping slabs, the Contractor shall submit calculations/measurements to the Resident determining the anticipated vertical clearance between the precast fascia panels and the adjacent substructure fascia panel seat. Calculations shall be based on the measured elevation of the substructure seats, the as-fabricated fascia panel height and fascia panel connection height, and the measured bottom of slab elevations. The nominal thickness of the precompressed joint filler is 1" and it is acceptable to use joint fillers in the range of 1/2" to 2" thickness to accommodate variations in construction.
5. All fascia panel connection hardware including anchor rods, embedded plates, shim plates, angles, washers, and nuts shall be hot-dip galvanized in accordance with ASTM A123 or ASTM A153 as applicable. Field welded surfaces may be masked or have the galvanized finish removed prior to welding. Field touch up all galvanized surfaces with cold galvanizing compound from the Qualified Products List.



BEARING ANGLE DETAIL



FASCIA PANEL CURB REBAR DETAIL



SECTION A-A

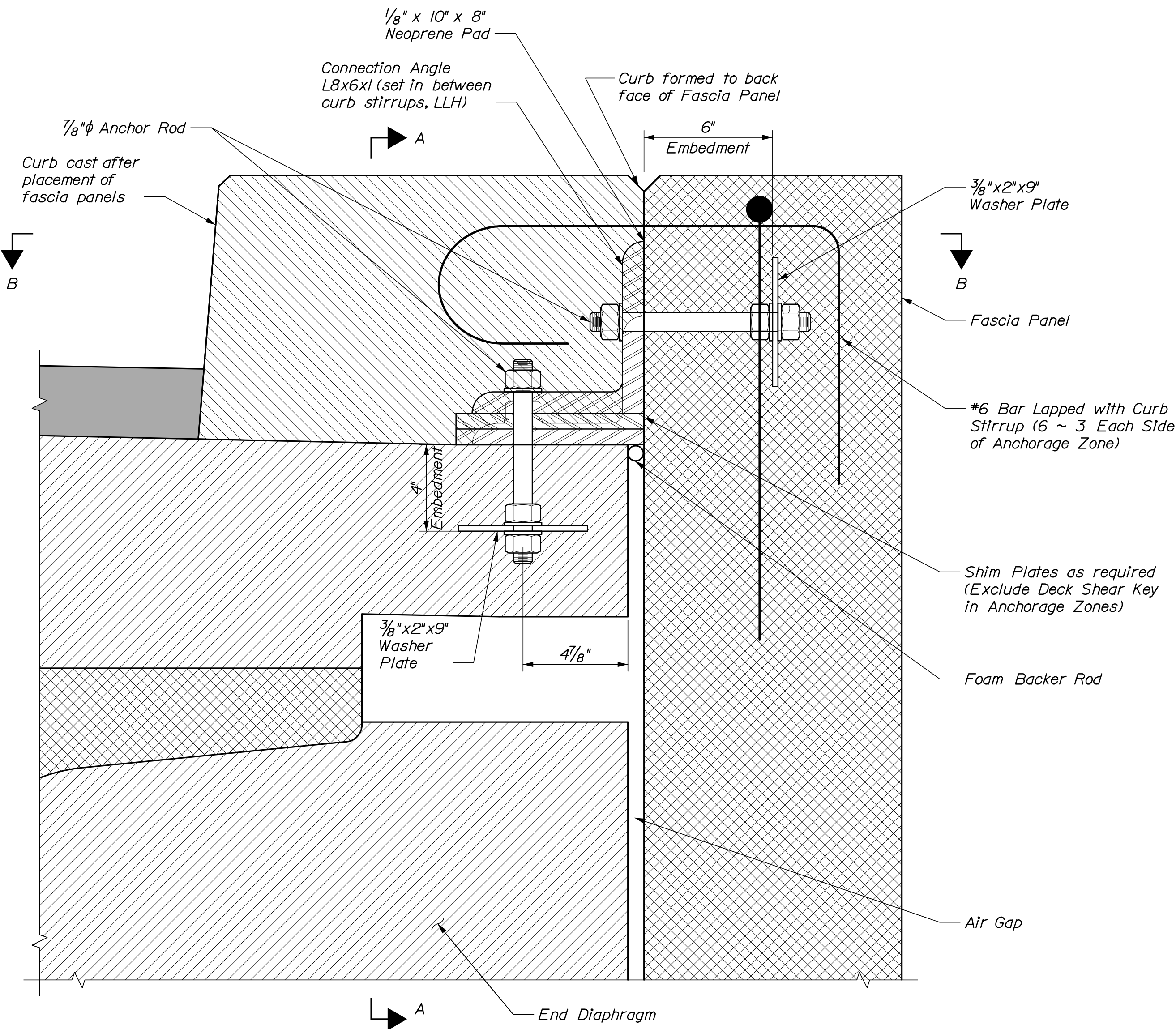
BLUE HILL FALLS BRIDGE SALT POND OUTLET BLUE HILL HANCOCK COUNTY										PROJ. MANAGER A. Lathel		BY K. Brovley	DATE 09/21	STATE OF MAINE DEPARTMENT OF TRANSPORTATION STP-1771(200)X		
FASCIA PANEL DETAILS I										DESIGN-DETAILED K. Brovley		09/21				
										CHECKED-REVIEWED H. Wotton		-	SIGNATURE			
										DESIGNS-DETAILED 2 -		-	P.E. NUMBER			
										REVISIONS 1 -		-	DATE			
										REVISIONS 2 -		-				
										REVISIONS 3 -		-				
										REVISIONS 4 -		-				
FIELD CHANGES -										-	-	-	Bridge No. 5038	WIN 17712.00	BRIDGE PLANS	
SHEET NUMBER 64																
OF 70																

Filename: 065_Fascia Details II.dgn

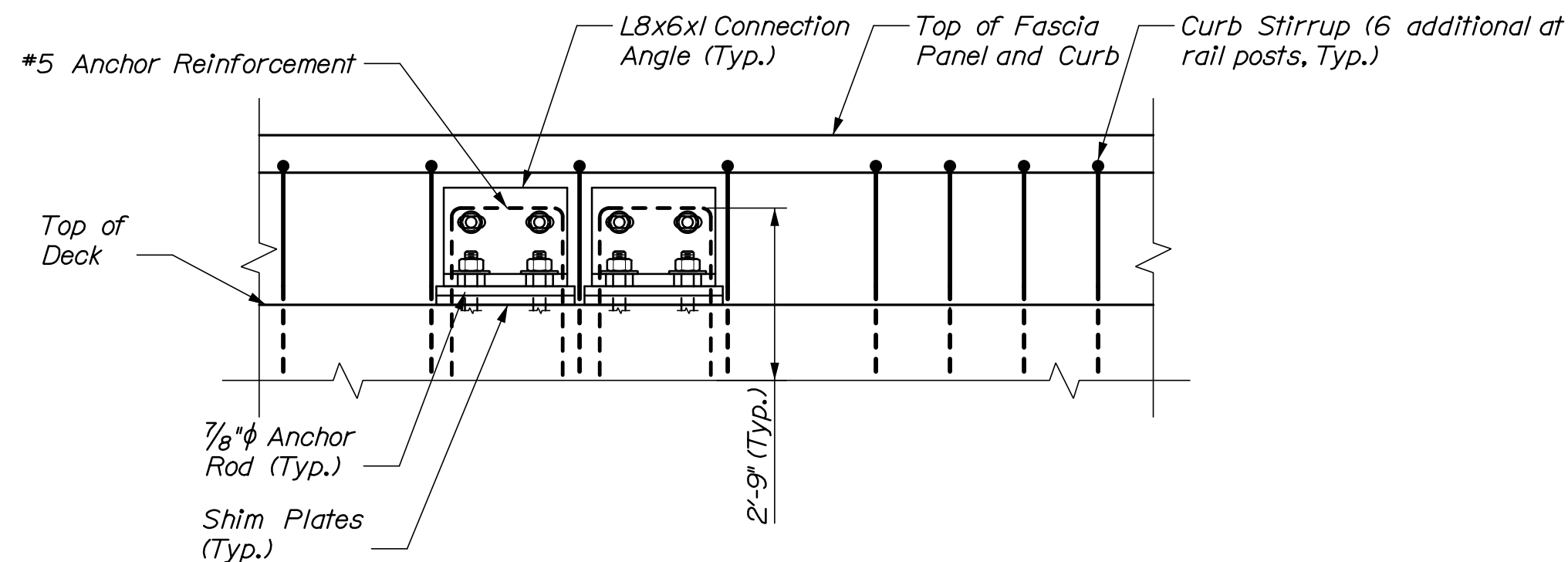
Date: 9/28/2021

Username:

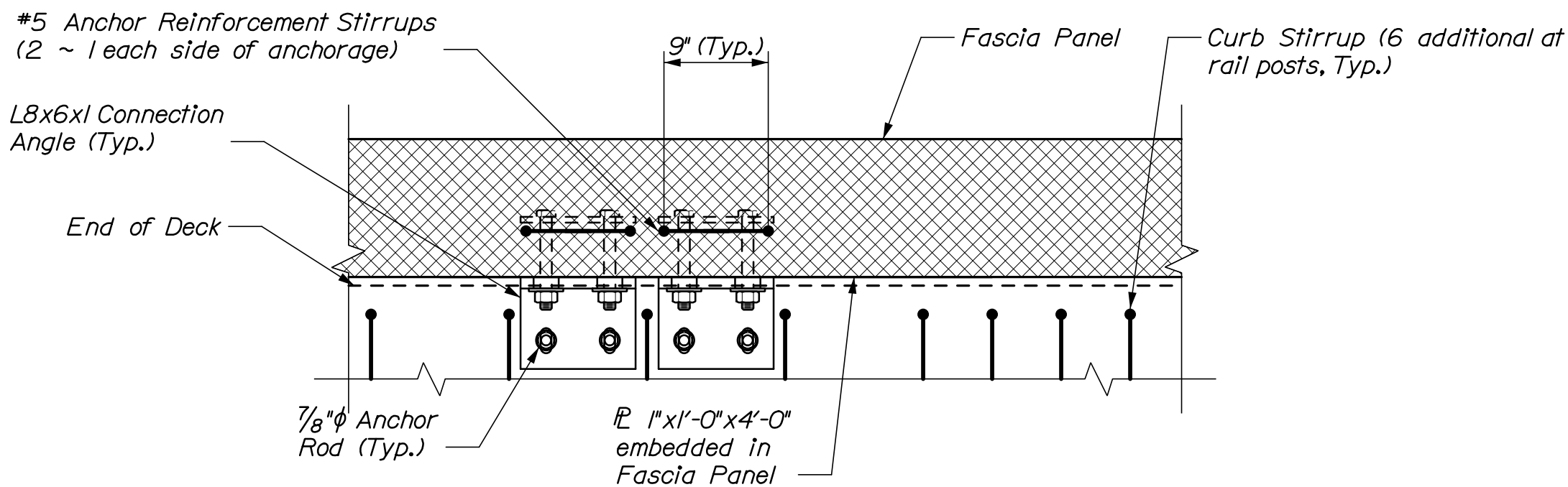
Division:



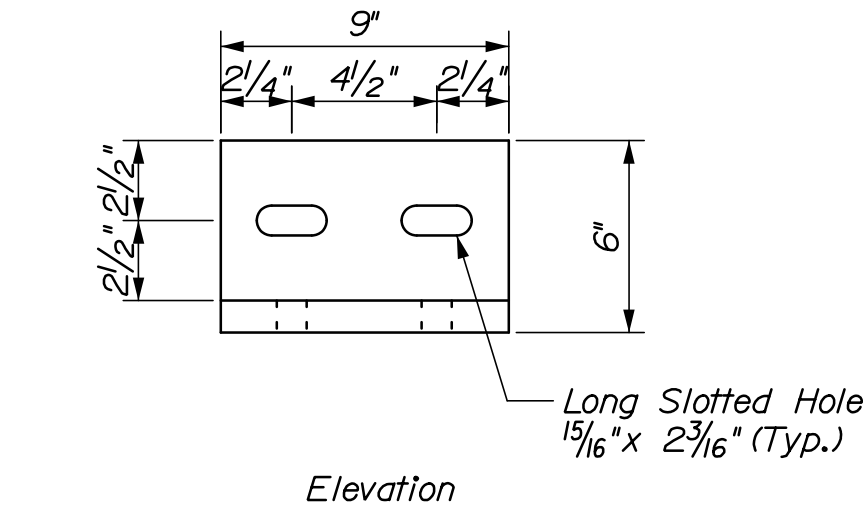
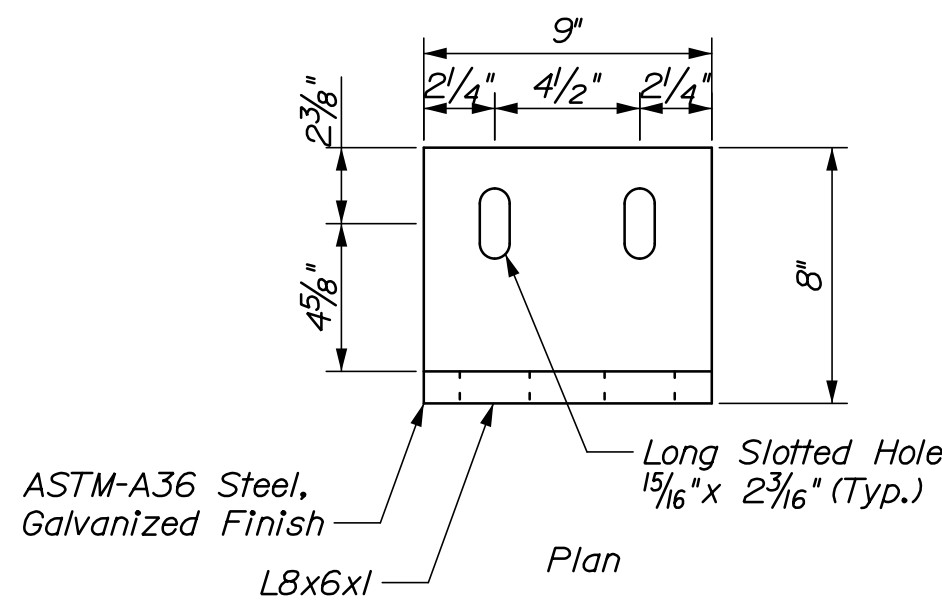
BOLTED FASCIA PANEL CONNECTION DETAIL
(Main Span shown, Approach Span similar)



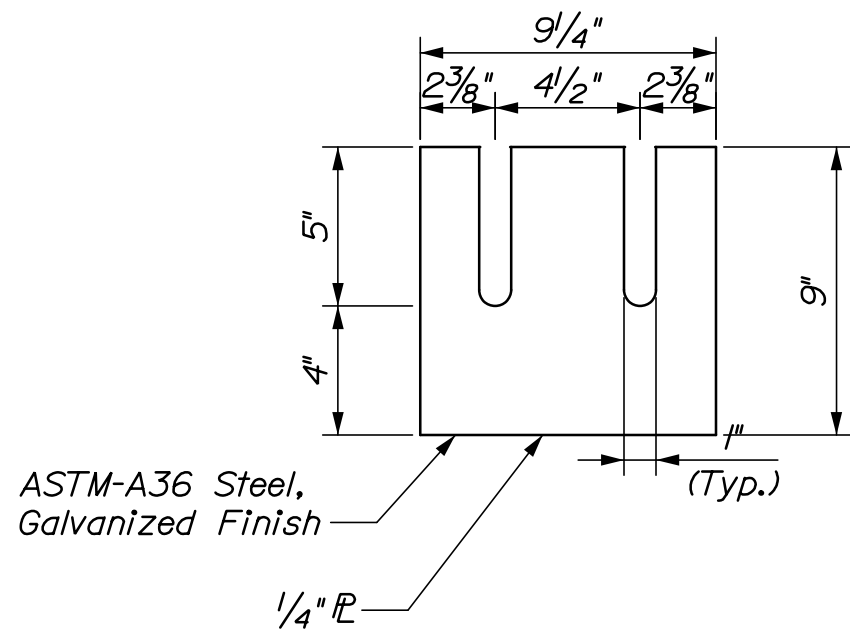
SECTION A-A



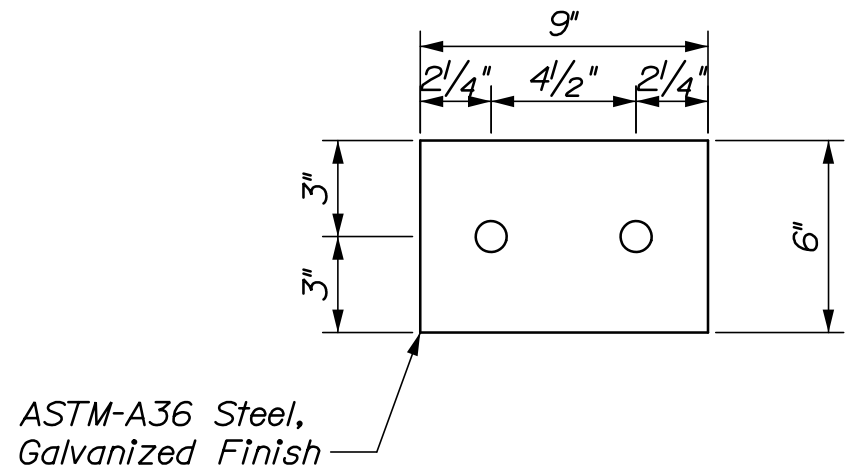
SECTION B-B



CONNECTION ANGLE DETAIL



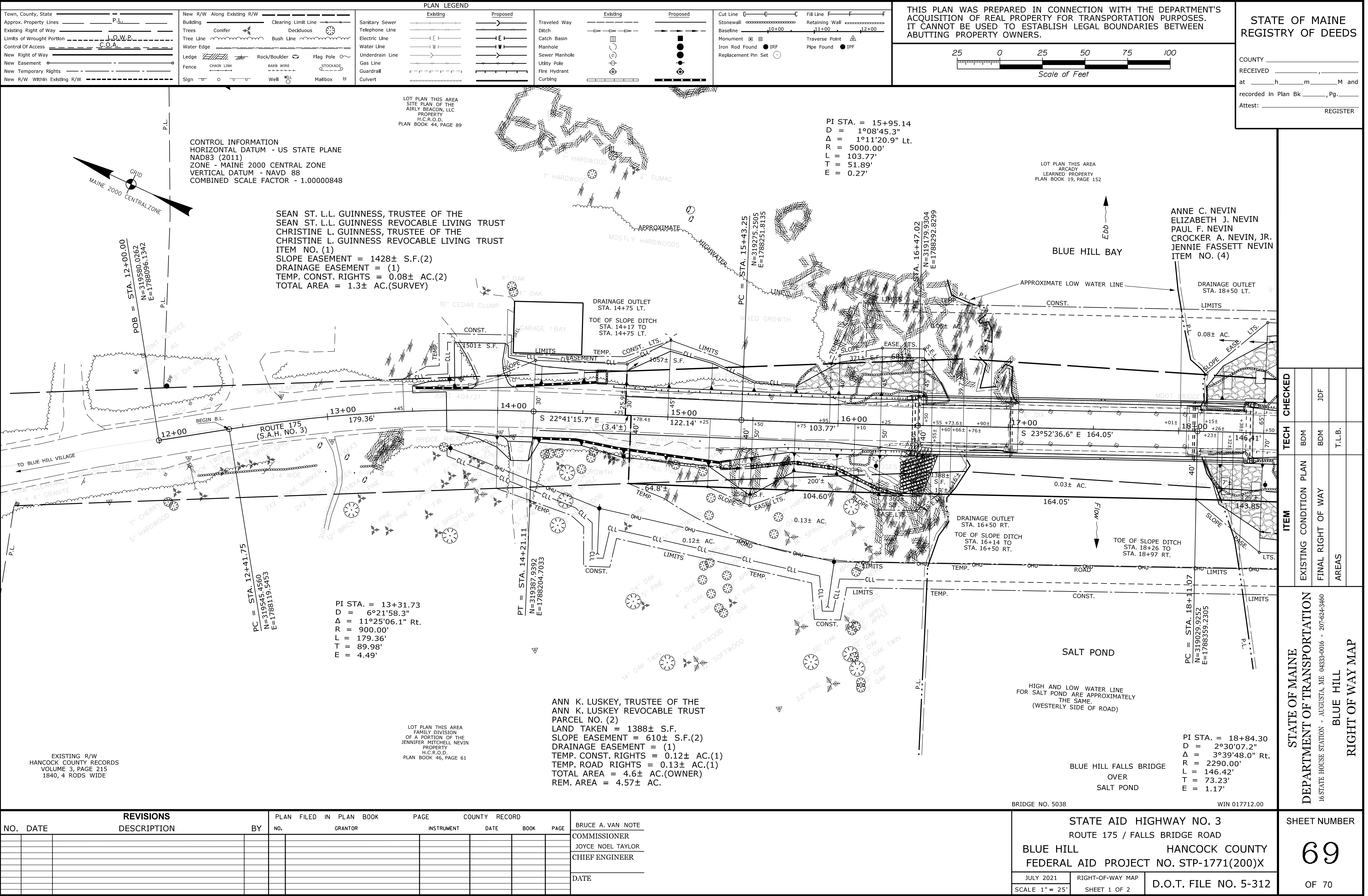
SHIM PLATE DETAIL
(64 Shims Total, 2 per Angle)



WASHER PLATE DETAIL

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	STP-1771(200)X		BRIDGE PLANS	
	WIN		17712.00	
	Bridge No. 5038			
BLUE HILL FALLS BRIDGE SALT POND OUTLET BLUE HILL HANCOCK COUNTY	PROJ. MANAGER	BY	DATE	
	DESIGN-DETAILED	K. Brayley	09/21	
	CHECKED-REVIEWED	H. Walton	09/21	SIGNATURE
	DESIGN-DETAILED			P.E. NUMBER
	REVISIONS 1			DATE
FASCIA PANEL DETAILS II BOLTED CONNECTION ALT.				
SHEET NUMBER				
65				
OF 70				





Date:9/17/2021

Username: Guy Lodd

Division: ROW

Filename: ...\\00\\ROW\\MSTA070_RWPLAN2.dgn

