

STATE OF MAINE DEPARTMENT OF TRANSPORTATION



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 (2020) AADT	290
Future (2040) AADT	350
DHV - % of AADT	10
Design Hour Volume	35
Heavy Trucks (% of AADT)	12
Heavy Trucks (% of DHV)	10
Directional Distribution (% of DHV)	52
18 kip Equivalent P 2.0	37
18 kip Equivalent P 2.5	35
Design Speed (mph)	45

MATERIALS

Concrete:	
Curbs	Class "LP"
Seals	Class "S"
Precast	Class "P"
All Other	Class "A"
Reinforcing:	
Plain Reinforcing Steel	ASTM A 615/A 615M, Grade 60
Glass Fiber Reinforcing Polymer (GFRP)	ASTM D7957
Low-Carbon Chromium Steel:	ASTM A 1035, Type CS, Grade 100
Prestressing Strands	AASHTO M 203 (ASTM A 416), Grade 270, Low Relaxation

Structural Steel:	
H-Piles	ASTM A572, Grade 50

BASIC DESIGN STRESSES

Concrete:	
Class "A"	f 'c = 4,000 psi
Class "LP"	f 'c = 5,000 psi
Class "S"	f 'c = 3,000 psi
Precast Concrete	f 'c = 8,000 psi
	f 'ci = 6,500 psi
Reinforcing:	
Plain Reinforcing Steel	f y = 60,000 psi
Glass Fiber Reinforced Polymer	
#6 Bar	f fu = 100,000 psi
Minimum Elastic Modulus	E f = 6,500,000 psi
Minimum Nominal Design Tensile Strain	e fu = 1.1%
Low-Carbon Chromium Steel:	f y = 100,000 psi

Structural Steel:	
ASTM A572	F y = 50,000 psi

WEBSTER PLT PENOBSCOT COUNTY MATTAGODUS BRIDGE OVER MATTAGODUS STREAM ROUTE 170 FEDERAL AID PROJECT NO. 2226600 PROJECT LENGTH 0.090 mi. BRIDGE NO. 5116

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UTILITIES

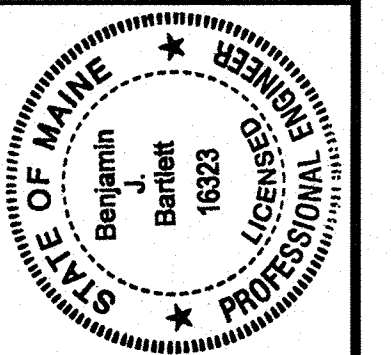
Eastern Maine Electric Coop Inc, Evergreen Wind Power V Llc.
Consolidated Communications of Maine Co.

MAINTENANCE OF TRAFFIC

Maintain alternating one-way traffic on temporary detour bridge with temporary traffic signals.

PROJECT LOCATION	Mattagodus Bridge (#5116) which carries State Route 170 over Mattagodus Stream. Located 0.43 of a mile southeast of the Kingman Twp. town line. Lat./Long. 45°31'22.5" N, 68°9'32.9" W
PROGRAM AREA	Highway Bridges-Traditional
OUTLINE OF WORK	Bridge Replacement

STATE OF MAINE	DEPARTMENT OF TRANSPORTATION	DATE	4-11-23
APPROVED	COMMISSIONER: <i>[Signature]</i>	CHIEF ENGINEER: <i>[Signature]</i>	4-16-2023



<i>[Signature]</i>	SIGNATURE	P.E. NUMBER	DATE
16323	3/13/2023		

PROGRAM	PROJECT INFORMATION
BRIDGE	MARK PARLIN
PROJECT MANAGER	WILLIAM CASEY
DESIGNER	N/A
CONSULTANT	
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

WIN 022266.00

2226600

WEBSTER PLT MATTAGODUS BRIDGE
TITLE SHEET

SHEET NUMBER
1
OF 30

File name: \\00\BRIDGE\MSTA\001_Title.dgn
Division: BRIDGE
Username: Richard.Moyer
Date: 3/13/2023

Date: 3/13/2023

Username: Richard.Moyer

Division: BRIDGE

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ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.19	REMOVING EXISTING BRIDGE (230 CY)	1	LS
202.202	REMOVING PAVEMENT SURFACE	375	SY
202.31	PROFILE MILLING CONCRETE WEARING SURFACE	215	SY
203.20	COMMON EXCAVATION	800	CY
203.24	COMMON BORROW	10	CY
203.25	GRANULAR BORROW	400	CY
206.082	STRUCTURAL EARTH EXCAVATION - MAJOR STRUCTURES	1350	CY
206.092	STRUCTURAL ROCK EXCAVATION - MAJOR STRUCTURES	20	CY
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	690	CY
403.208	HOT MIX ASPHALT 12.5 MM HMA SURFACE	127	T
403.213	HOT MIX ASPHALT 12.5 MM BASE	161	T
409.15	BITUMINOUS TACK COAT - APPLIED	79	G
461.131	TEMPORARY PAVEMENT	143	T
501.231	DYNAMIC LOADING TEST	1	EA
501.50	STEEL H-BEAM PILES 89 LBS/FT, DELIVERED	140	LF
501.501	STEEL H-BEAM PILES 89 LBS/FT, IN PLACE	140	LF
501.90	PILE TIPS	4	EA
501.92	PILE DRIVING EQUIPMENT MOBILIZATION	1	LS
502.219	STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS (222 CY)	1	LS
502.22	STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS (PLACED UNDER WATER)	100	CY
502.261	STRUCTURAL CONCRETE ROADWAY & SIDEWALK SLAB ON CONCRETE BRIDGE (92 CY)	1	LS
502.31	STRUCTURAL CONCRETE APPROACH SLABS (21 CY)	1	LS
502.49	STRUCTURAL CONCRETE CURBS AND SIDEWALKS (7 CY)	1	LS
503.12	REINFORCING STEEL, FABRICATED AND DELIVERED	21200	LB
503.13	REINFORCING STEEL, PLACING	21200	LB
503.19	LOW-CARBON, CHROMIUM REINFORCEMENT - FABRICATED & DELIVERED	8700	LB
503.20	LOW-CARBON, CHROMIUM REINFORCEMENT - PLACING	8700	LB
507.0821	STEEL BRIDGE RAILING, 3 BAR (156 LF)	1	LS
507.0822	STEEL APPROACH RAILING, 3-BAR	4	EA
510.10	SPECIAL DETOUR 16 FOOT ROADWAY WIDTH VEHICULAR & PEDESTRIAN TRAFFIC NOT SEPARATED	1	LS
511.07	COFFERDAM: ABUTMENT 1	1	LS
511.07	COFFERDAM: ABUTMENT 2	1	LS
512.081	FRENCH DRAINS (85 LF)	1	LS
515.21	PROTECTIVE COATING FOR CONCRETE SURFACES (479 CY)	1	LS
526.301	PORTABLE CONCRETE BARRIER TYPE I (60 LF)	1	LS
527.34	WORK ZONE CRASH CUSHIONS	4	UN
530.30	GFRP, REINFORCEMENT BARS, FAB & DEL	15250	LF
530.31	GFRP, REINFORCEMENT BARS, PLACING	15250	LF
535.622	PRESTRESSED STRUCTURAL CONCRETE NEXT BEAM (102 CY)	1	LS
606.1301	3" W-BM GR, MID-WAY SPLICE-SGL FACED	188	LF
606.1305	3" W-BM GR, MID-WAY SPLICE FLARED TERMINAL	4	EA
606.1721	BRIDGE TRANSITION - TYPE I	4	EA
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	8	EA
610.08	PLAIN RIPRAP	430	CY
610.18	STONE DITCH PROTECTION	10	CY
613.319	EROSION CONTROL BLANKET	125	SY
619.14	EROSION CONTROL MIX	110	CY
620.58	EROSION CONTROL GEOTEXTILE	600	SY
620.66	DRAINAGE GEOCOMPOSITE	31	SY
627.733	4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	1425	LF
627.77	REMOVING PAVEMENT MARKINGS	300	SF
627.78	TEMPORARY 4 INCH PAINTED PAVEMENT MARKING LINE, WHITE OR YELLOW	1000	LF
629.05	HAND LABOR, STRAIGHT TIME	10	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	10	HR
631.14	GRADER (INCLUDING OPERATOR)	25	HR
631.15	ROLLER, EARTH AND BASE COURSE (INCLUDING OPERATOR)	25	HR
631.172	TRUCK - LARGE (INCLUDING OPERATOR)	10	HR
639.19	FIELD OFFICE TYPE B	1	EA
643.72	TEMPORARY TRAFFIC SIGNAL	1	LS
652.312	TYPE III BARRICADE	4	EA
652.33	DRUM	25	EA
652.34	CONE	50	EA
652.35	CONSTRUCTION SIGNS	400	SF
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES	1	LS
652.38	FLAGGER	400	HR
656.75	TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	1	LS
659.10	MOBILIZATION	1	LS

GENERAL CONSTRUCTION NOTES

1. For easements, construction limits, and right of way lines, refer to the Right of Way Map.

2. The clearing limits as shown on the plans are approximate. The exact limits will be established in the field by the Resident. Payment for clearing will be considered incidental to Contract items.

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

4. Existing signs within the Project limits shall be removed and reset as directed by the Resident. Payment for removal and reinstallation of existing signs will be considered incidental to the Contract. No separate payment will be made.

5. Do not excavate for Aggregate Subbase Course where existing material is suitable as determined by the Resident.

6. In areas where the Resident directs the Contractor not to excavate to the subgrade line shown on the plans, payment for removing existing pavement, grubbing, shaping, ditching, and compacting the existing subbase and layers of new subbase 6 inches or less thick will be made under appropriate equipment rental items.

7. All embankment material, except as otherwise shown shall be Granular Borrow meeting the requirements of Standard Specifications Subsection 703.19, Granular Borrow, for Material for Underwater Backfill.

8. Construct the riprap shelf at Abutment No. 1 at EL. 322.3.

9. Erosion Control Mix shall be placed in accordance with Standard Specifications Section 619, Mulch in all new or reconstructed sideslopes or as directed by the Resident.

10. Place a 24 inch wide strip of Erosion Control Blanket on the sideslopes along the top of the riprap and behind the wingwalls.

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

12. Where it is apparent that runoff will cause continual erosion, Erosion Control Blanket, seeded gutters, riprap downspouts, and other gutters lined with Stone Ditch Protection shall be constructed after paving and shoulder work is completed. Payment will be made under the appropriate Contract items.

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

- All exposed surfaces of concrete curbs.
- Fascias down to the drip notch.
- Concrete wearing surfaces after profile milling
- Top of abutment backwalls and wingwalls, and
- To one foot below the ground on vertical walls against earth.

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

15. 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 life span.

16. Reports on hydrology and/or hydraulics applicable to the bridge site may be accessed at the MaineDOT web address. The reports are based on MaineDOT's interpretation of the information obtained for the subject site. No assurance is given that the information or the conclusions of the report will be representative of actual conditions at the time of construction.

17. The Project Design Geotechnical report titled: "Geotechnical Design Report, Mattagodus Stream Bridge over Mattagodus Stream No. 5116, MaineDOT WIN 022266.00, Route 170, Webster Plantation, Maine," dated March 2023, may be accessed at the MaineDOT Web Address.

18. 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 Bidders' or Contractor's interpretations of, 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 the boring locations.

19. 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 the 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 a Lump Sum pay item, those requirements will be followed.

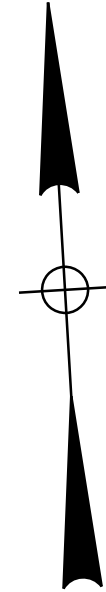
c. If a design change results in changes to estimated quantities for Lump Sum pay items, price adjustments will be made in accordance with Standard Specifications Section 109.7, Equitable Adjustments to Compensation and Time.

20. Excavation required between the front side (stream side) of the existing abutments and the front side of the proposed abutment shall be paid for as Structural Earth Excavation.

21. Excavation required in front of the existing abutments during removal of the existing bridge shall be paid for as Common Excavation.

22. Existing abutments will be removed in their entirety and will be paid for under Removing Existing Bridge.

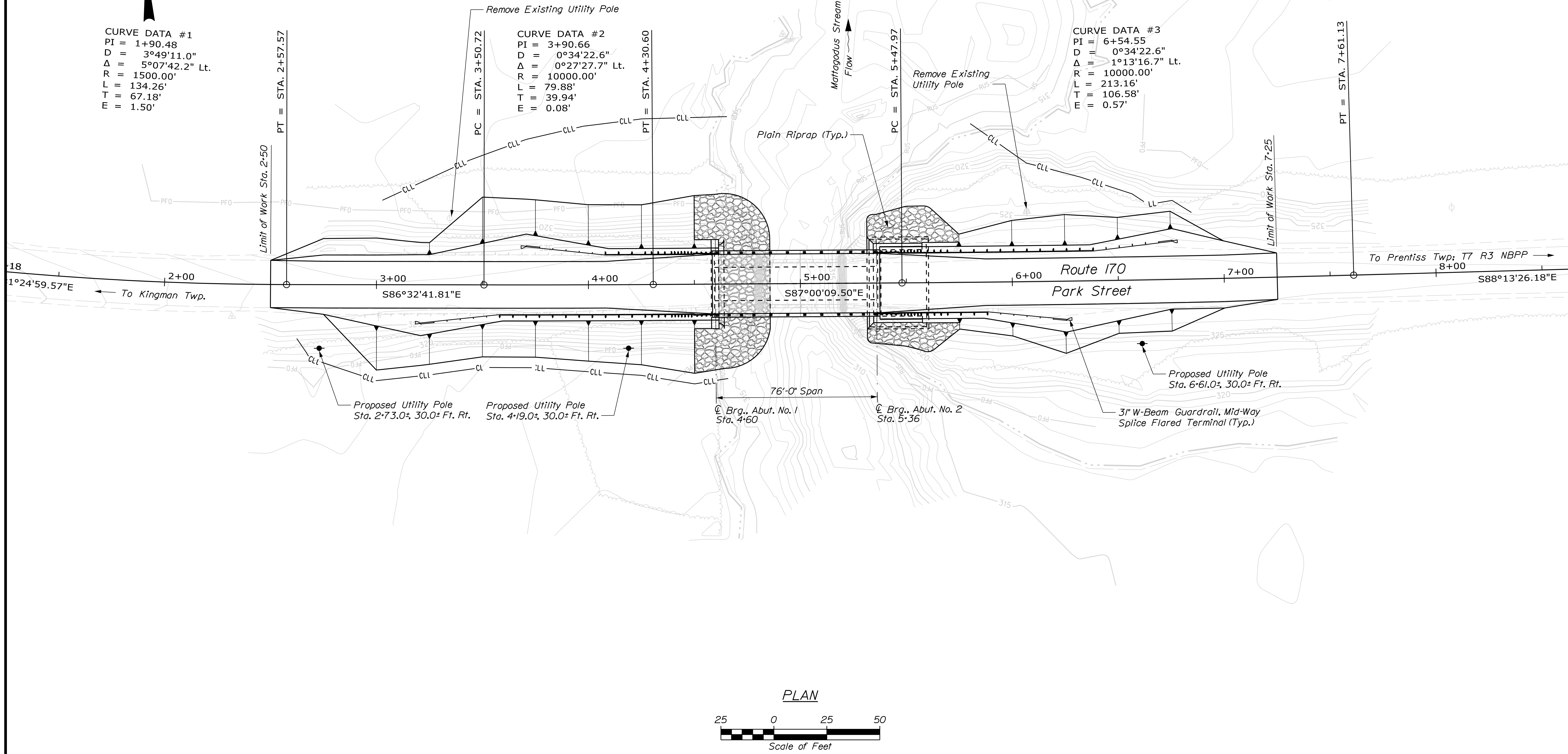
STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		2226600		WIN		022266.00		BRIDGE NO. 5116		BRIDGE PLANS	
MATTAGODUS BRIDGE		MATTAGODUS STREAM		PENOBSCOT COUNTY		WEBSTER PLT		ESTIMATED QUANTITIES & GENERAL CONSTRUCTION NOTES		SHEET NUMBER		2	
PROJ. MANAGER	MARK PARLIN	CHECKED-REVIEWED	W. CASEY B. BARTLETT	DESIGN-DETAILED	R. MAYER D. SHAW	DATE	SEP 2022	SIGNATURE	P.E. NUMBER	DATE	REVISIONS 1	REVISIONS 2	REVISIONS 3
DESIGN-DETAILED	W. CASEY	CHECKED-REVIEWED	B. BARTLETT	DESIGN-DETAILED	R. MAYER	DATE	SEP 2022	SIGNATURE	P.E. NUMBER	DATE	REVISIONS 4	FIELD CHANGES	



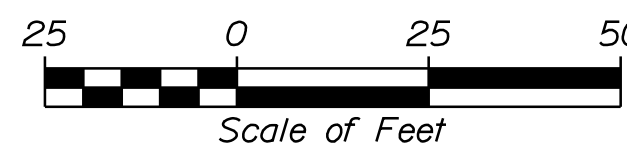
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 PI = 1+90.48
 D = 3°49'11.0"
 Δ = 5°07'42.2" Lt.
 R = 1500.00'
 L = 134.26'
 T = 67.18'
 E = 1.50'

CURVE DATA #2
 PI = 3+90.66
 D = 0°34'22.6"
 Δ = 0°27'27.7" Lt.
 R = 10000.00'
 L = 79.88'
 T = 39.94'
 E = 0.08'

CURVE DATA #3
 PI = 6+54.55
 D = 0°34'22.6"
 Δ = 1°13'16.7" Lt.
 R = 10000.00'
 L = 213.16'
 T = 106.58'
 E = 0.57'



PLAN



POE = STA. 8+77.86

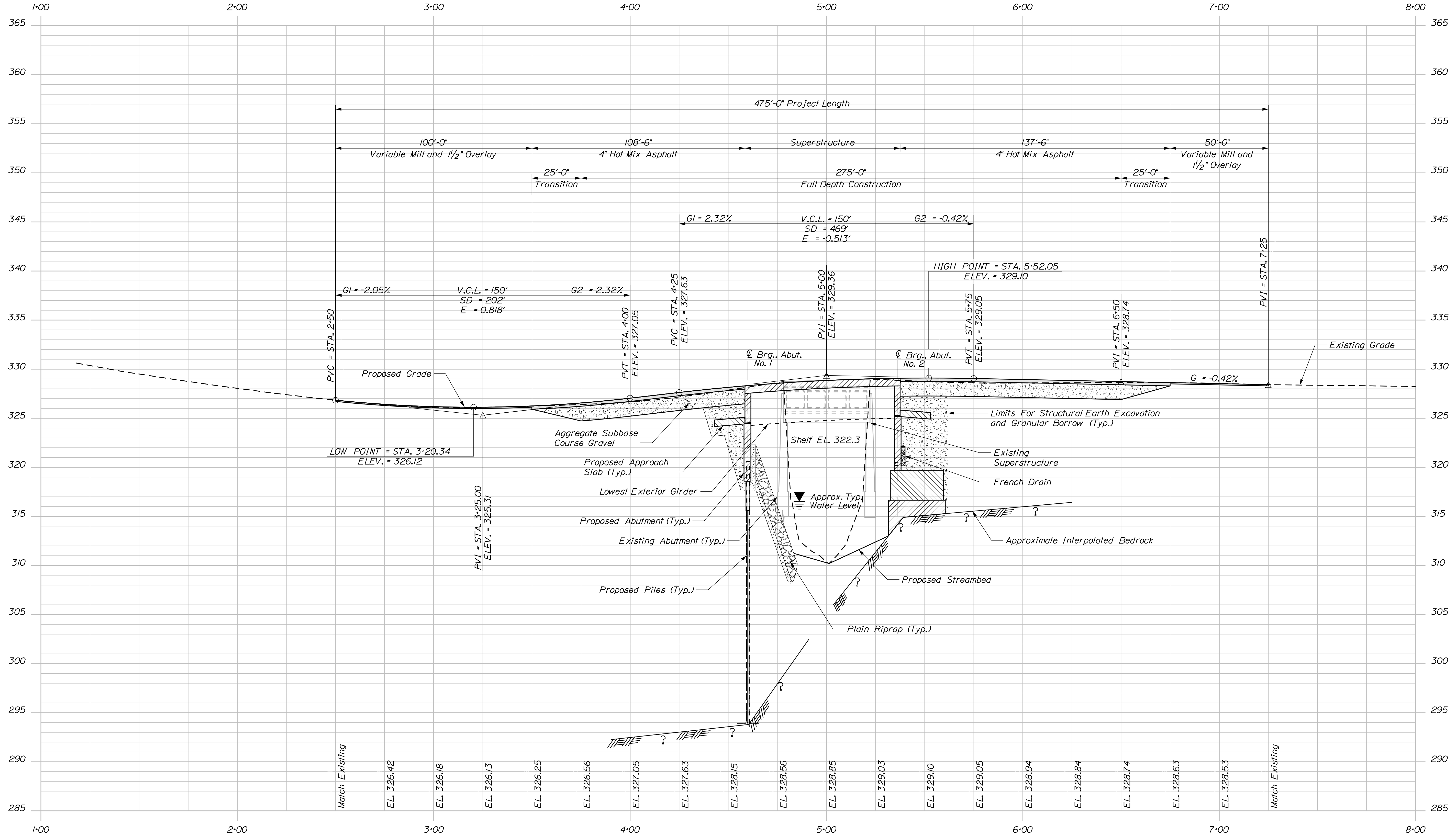
STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION
 2226600
 WIN 022266.00
 BRIDGE NO. 5116
 BRIDGE PLANS

DESIGNED BY	DATE
CHECKED BY	DATE
DESIGNED BY	DATE
DESIGNED BY	DATE
REVISIONS 1	DATE
REVISIONS 2	DATE
REVISIONS 3	DATE
REVISIONS 4	DATE
FIELD CHANGES	DATE

PROJ. MANAGER	MARK PARLIN
DESIGN DETAILER	W. CASEY
CHECKED/REVIEWED	R. MAYER / B. BARTLETT / D. SHAW
DATE	SEP 2022
SIGNATURE	
P.E. NUMBER	
DATE	

MATTAGODUS BRIDGE
 MATTAGODUS STREAM
 WEBSTER PLT PENOBSCOT COUNTY
GENERAL PLAN

SHEET NUMBER
3
 OF 30



PROFILE

DESIGNED BY	DATE
CHECKED BY	DATE
DESIGNED BY	DATE
REVISIONS 1	DATE
REVISIONS 2	DATE
REVISIONS 3	DATE
REVISIONS 4	DATE
FIELD CHANGES	DATE

PROJ. MANAGER	MARK PARLIN
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REVISIONS 4	
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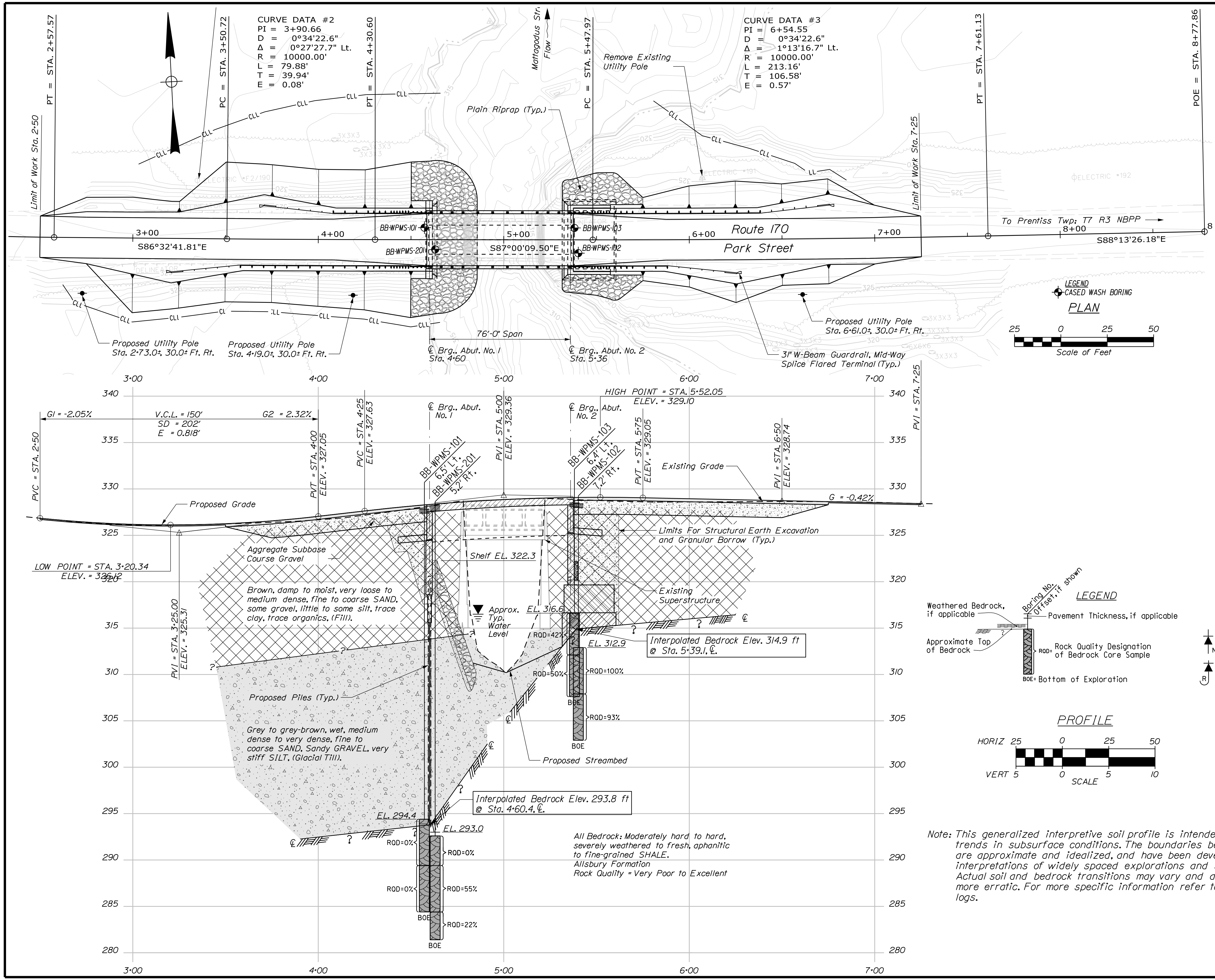
MATTAGODUS BRIDGE
MATTAGODUS STREAM
WEBSTER PLT PENOBSCOT COUNTY
SIGNATURE
P.E. NUMBER
DATE

Date: 3/16/2023

Username: terry.white

Division: GEOTECH

Filename: ... \GEOTECH\STA\005_BLP&ISPl.dgn



Note: 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 and bedrock transitions may vary and are probably more erratic. For more specific information refer to the exploration logs.

STATE OF MAINE DEPARTMENT OF TRANSPORTATION		2226600		BRIDGE NO. 5116		BRIDGE PLANS	
BRYAN C. STERNERT No. 12008 PROFESSIONAL ENGINEER		SIGNATURE		P.E. NUMBER		DATE	
MATTAGODUS STREAM BRIDGE MATTAGODUS STREAM WEBSTER PLT PENOBSCOT COUNTY		DATE		DATE		DATE	
BORING LOCATION PLAN & INTERPRETIVE SUBSURFACE PROFILE		DATE		DATE		DATE	
SHEET NUMBER		5		OF 30			

Maine Department of Transportation Soil/Borehole Exploration Log US CUSTOMER UNITS										Project: Mattagodus Stream Bridge #516 Location: Webster Plantation, Maine										Boring No.: BB-WPMS-101 WIN: 22266.00																																																																																																																																																																																																																																																																																																																						
Driller:		Elevation (ft.):		Auger ID/OD:		Operator:		Date Start/Finish:		Boring Location:		Home Type:		Hydraulic:		Rope & Cathode:		Laboratory Testing Results:																																																																																																																																																																																																																																																																																																																								
MainDOT		327.8		5" Solid Stem		Daggett/Nilies		6/26/2018 07:30-12:00		5420.2, T12 ft RL		Automatic		Hydraulic		Rope & Cathode		ASHTO																																																																																																																																																																																																																																																																																																																								
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<p>Visual Description and Remarks</p> <p>0-4.4' 3" BITUMINOUS CONCRETE.</p> <p>4.4-5.0' Brown, moist, medium dense, fine to coarse SAND, some gravel, little silt, (fossil).</p> <p>5.0-7.0' Brown, moist, very loose, fine to coarse SAND, some gravel, little silt, trace clay, (fossil).</p> <p>7.0-12.0' Brown, moist, very loose, fine to coarse SAND, some gravel, little silt, trace clay, (fossil).</p> <p>12.0-14.0' Grey, wet, medium dense, silty fine to coarse SAND, (little gravel, (fossil)).</p> <p>14.0-19.0' Grey, wet, very dense, gravelly, fine to coarse SAND, little silt, (fossil).</p> <p>19.0-25.0' Roller Cored ahead to 25.0 ft bgs.</p> <p>25.0-27.0' Similar to above, except dense, (fossil).</p> <p>27.0-32.0' Grey-brown, wet, very dense, fine to coarse SAND, some gravel, some silt, (fossil).</p> <p>32.0-34.4' 8100 blows for 0.4 ft.</p> <p>34.4-35.4' Top of Bedrock at Elev. 294.4 ft.</p> <p>35.4-36.4' R1: Bedrock: Brown to grey, fine-grained, SHALE, moderately hard, moderately weathered, fractured from extensive iron and manganese oxidation, joints indistinct.</p> <p>36.4-37.4' R2: Bedrock: Brown to grey, aphatic SHALE, moderately hard, moderately weathered, highly fractured throughout, joints indistinct, secondary low angle to moderately dipping joints.</p> <p>37.4-38.4' R3: Bedrock: Brown to grey, aphatic SHALE, moderately hard, moderately weathered, joints dipping at low to high angles, very close to close, open, highly fractured throughout, dirty brown wash water throughout.</p> <p>38.4-39.4' R4: Bedrock: Brown-grey, aphatic SHALE, moderately hard, moderately weathered, joints dipping at low to high angles, very close to close, open, highly fractured throughout, dirty brown wash water throughout.</p> <p>39.4-40.4' R5: Bedrock: Brown-grey, aphatic SHALE, moderately hard, moderately weathered, joints dipping at low to high angles, very close to close, open, highly fractured throughout, dirty brown wash water throughout.</p> <p>40.4-41.4' R6: Bedrock: Brown-grey, aphatic SHALE, moderately hard, moderately weathered, joints dipping at low to high angles, very close to close, open, highly fractured throughout, dirty brown wash water throughout.</p> <p>41.4-42.4' R7: Bedrock: Brown-grey, aphatic SHALE, moderately hard, moderately weathered, joints dipping at low to high angles, very close to close, open, highly fractured throughout, dirty brown wash water throughout.</p> <p>42.4-43.4' R8: Bedrock: Brown-grey, aphatic SHALE, moderately hard, moderately weathered, joints dipping at low to high angles, very close to close, open, highly fractured throughout, dirty brown wash water throughout.</p> <p>43.4-44.4' R9: Bedrock: Brown-grey, aphatic SHALE, moderately hard, moderately weathered, joints dipping at low to high angles, very close to close, open, highly fractured throughout, dirty brown wash water throughout.</p> <p>44.4-45.4' R10: Bedrock: Brown-grey, aphatic SHALE, moderately hard, moderately weathered, joints dipping at low to high angles, very close to close, open, highly fractured throughout, dirty brown wash water throughout.</p> <p>45.4-46.8' Bottom of Exploration at 46.8 feet below ground surface.</p>																																																																																																																																																																																																																																																																																																																																										

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<p>Visual Description and Remarks</p> <p>0-4.4' 3" BITUMINOUS CONCRETE.</p> <p>4.4-5.0' Brown, damp, loose, fine to coarse SAND, some silt, some gravel, (fossil).</p> <p>5.0-10.0' Similar to above, except little silt, (fossil).</p> <p>10.0-15.5' 950 blows for 0.5 ft.</p> <p>15.5-16.5' Top of Bedrock at Elev. 312.9 ft.</p> <p>16.5-17.5' R1: Bedrock: Black to grey, fine-grained, SHALE with minor calcite veins, hard, fresh, steep 180 degree foliation, single joint of approximately 15.5 ft, moderately dipping, wide, tight.</p> <p>17.5-18.5' R2: Bedrock: Similar to R1, except joints very close to close.</p> <p>18.5-19.5' R3: Bedrock: Similar to R1, except joints very close to close.</p> <p>19.5-20.5' R4: Bedrock: Similar to R1, except joints very close to close.</p> <p>20.5-21.5' R5: Bedrock: Similar to R1, except joints very close to close.</p> <p>21.5-22.5' R6: Bedrock: Similar to R1, except joints very close to close.</p> <p>22.5-23.5' R7: Bedrock: Similar to R1, except joints very close to close.</p> <p>23.5-24.5' R8: Bedrock: Similar to R1, except joints very close to close.</p> <p>24.5-25.5' R9: Bedrock: Similar to R1, except joints very close to close.</p> <p>25.5-29.5' Bottom of Exploration at 29.5 feet below ground surface.</p>																																																																																																																																																																																																																																																																																																																																										

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<p>Visual Description and Remarks</p> <p>0-4.4' 3" BITUMINOUS CONCRETE.</p> <p>4.4-10.0' Similar to above, except little silt, (fossil).</p> <p>10.0-14.0' 985 blows for 0.9 ft.</p> <p>14.0-19.0' Top of Bedrock Elev. 316.6 ft.</p> <p>19.0-20.0' R1: Bedrock: Grey to black, aphatic SHALE, moderately hard, slightly weathered, with dark brown manganese oxide staining, joints dipping at low and high angles, close to moderately close.</p> <p>20.0-21.4' R2: Bedrock: Similar to R1, except fresh to slightly weathered, joints dipping at low and high angles, close to moderately close.</p> <p>21.4-23.0' R3: Bedrock: Similar to R1, except joints very close to close.</p> <p>23.0-25.0' Bottom of Exploration at 25.0 feet below ground surface.</p>																																																																																																																																																																																																																																																																																																																																										

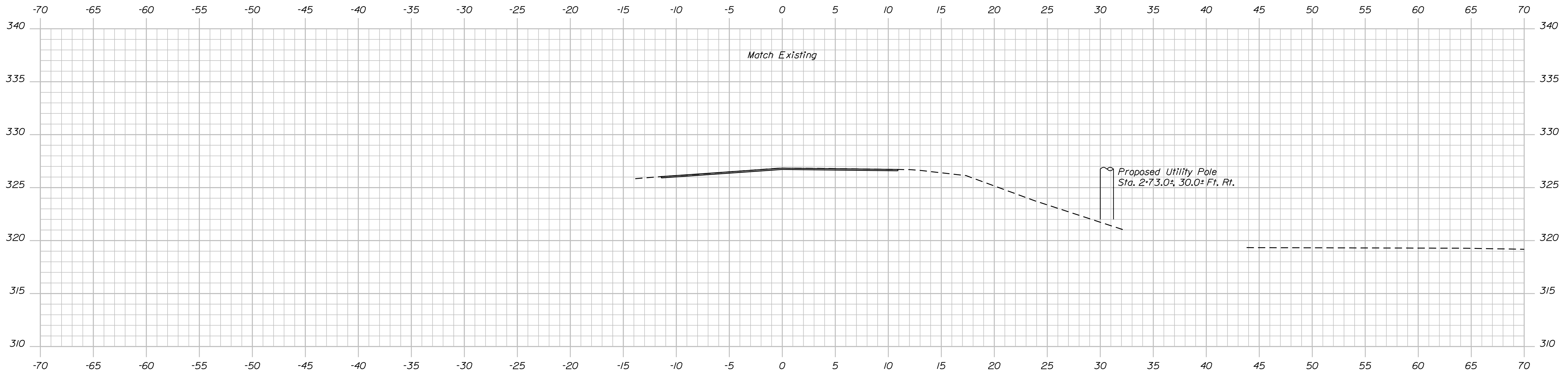
Maine Department of Transportation Soil/Borehole Exploration Log US CUSTOMER UNITS										Project: Mattagodus Stream Bridge #516 Location: Webster Plantation, Maine										Boring No.: BB-WPMS-201 WIN: 22266.00																																																																																																																																																																																																																																																																																																																						
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MainDOT		328.2		5" Solid Stem		Daggett/Nilies		7/12/2021 08:00-16:00		5438.1, 6.4 ft RL		Automatic		Hydraulic		Rope & Cathode		ASHTO																																																																																																																																																																																																																																																																																																																								
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<p>Visual Description and Remarks</p> <p>0-4.4' 3" BITUMINOUS CONCRETE.</p> <p>4.4-10.0' Brown, damp, medium dense, fine to coarse SAND, some gravel, little silt, (fossil).</p> <p>10.0-14.0' Brown, moist, loose, fine to coarse SAND, some gravel, some silt, trace organics, wood in tip of spoon, (fossil).</p> <p>14.0-19.0' Notes: Casing refusal at 12.5</p>																																																																																																																																																																																																																																																																																																																																										

Date: 3/13/2023

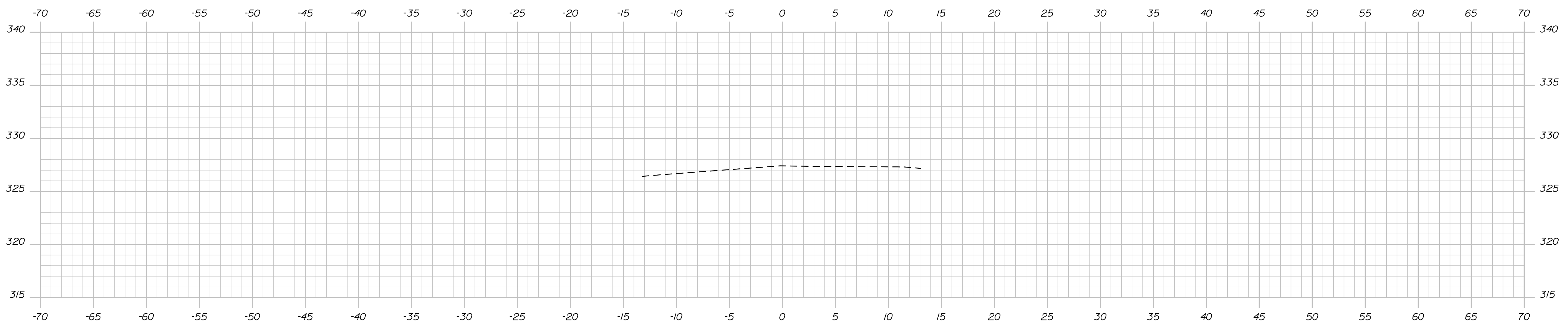
Username: Richard.Mayer

Division: BRIDGE

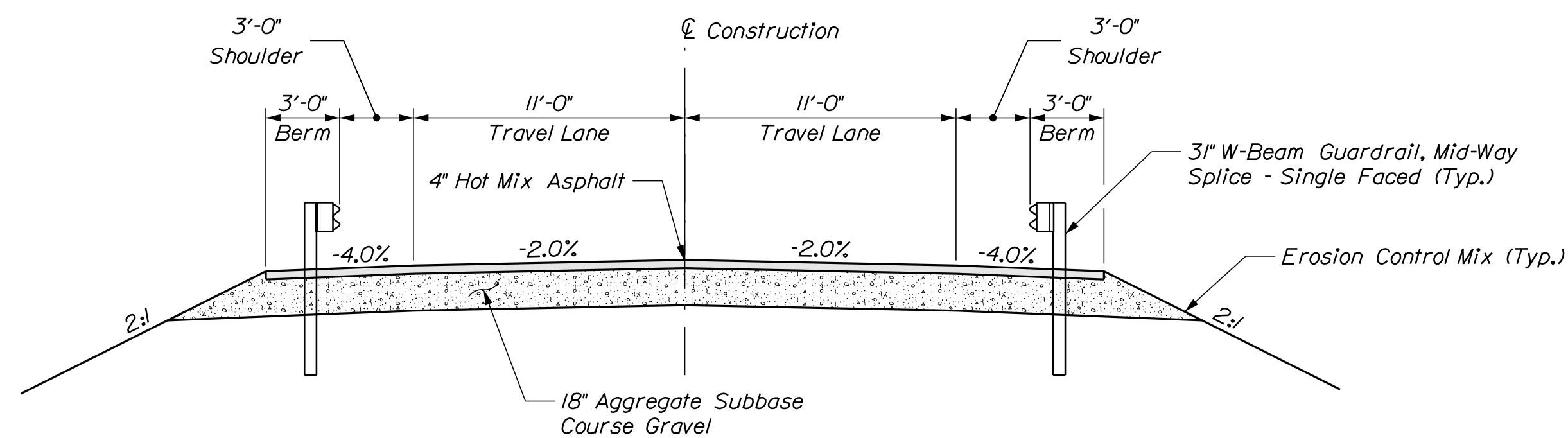
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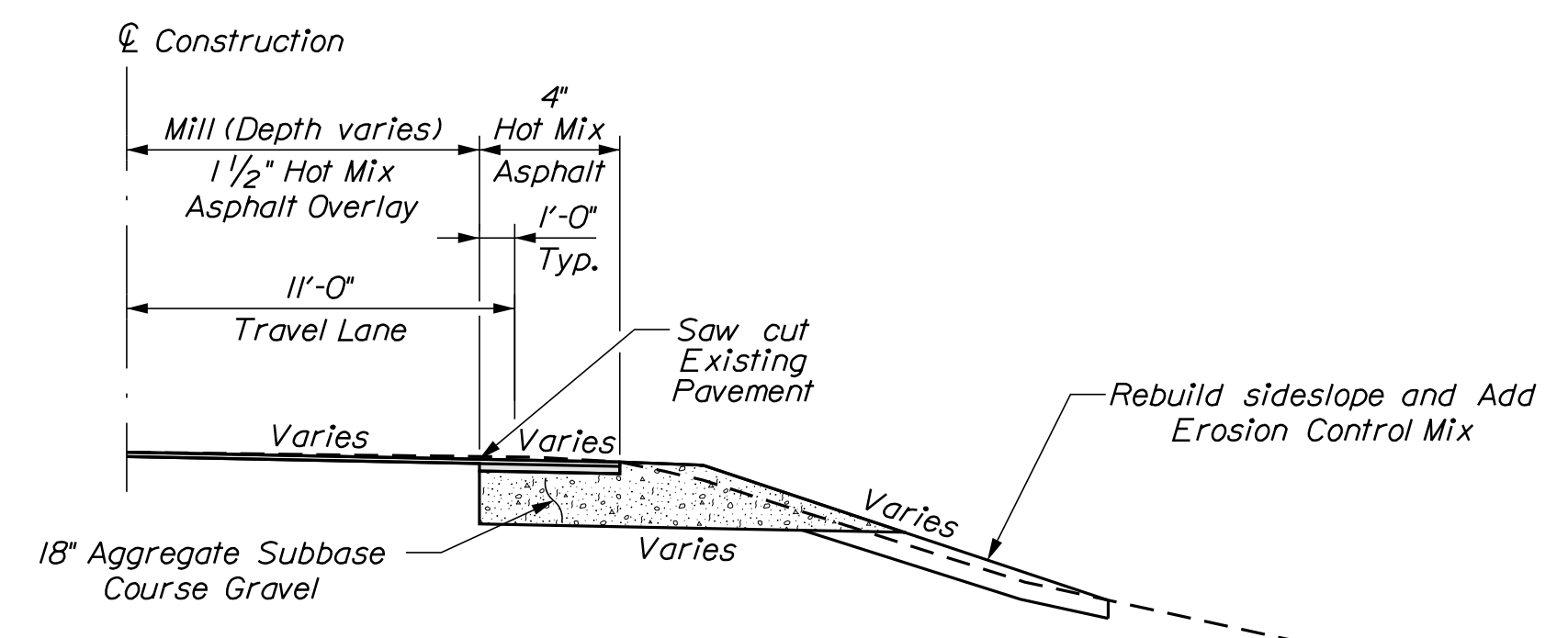
2+50.00
Begin Variable Mill and 1/2" Overlay



2+25.00



TYPICAL APPROACH SECTION



TYPICAL MILL AND OVERLAY APPROACH SECTION WITH SHOULDER RECONSTRUCTION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2226600
WIN
022266.00
BRIDGE NO. 5116
BRIDGE PLANS

PROJ. MANAGER	MARK PARLIN	DATE	SEP 2022
CHECKED/REVIEWED	W. CASEY / R. MAYER	BY	R. MAYER / D. SHAW
DESIGN/DETAILED	B. BARTLETT	SIGNATURE	
REVISIONS 1		P.E. NUMBER	
REVISIONS 2		DATE	
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

DESIGN/DETAILED	W. CASEY	DATE	SEP 2022
CHECKED/REVIEWED	R. MAYER	BY	R. MAYER / D. SHAW
DESIGN/DETAILED	B. BARTLETT	SIGNATURE	
REVISIONS 1		P.E. NUMBER	
REVISIONS 2		DATE	
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

MATTAGODUS BRIDGE
MATTAGODUS STREAM
WEBSTER PLT PENOBSCOT COUNTY
HIGHWAY APPROACH
CROSS-SECTIONS

SHEET NUMBER

7

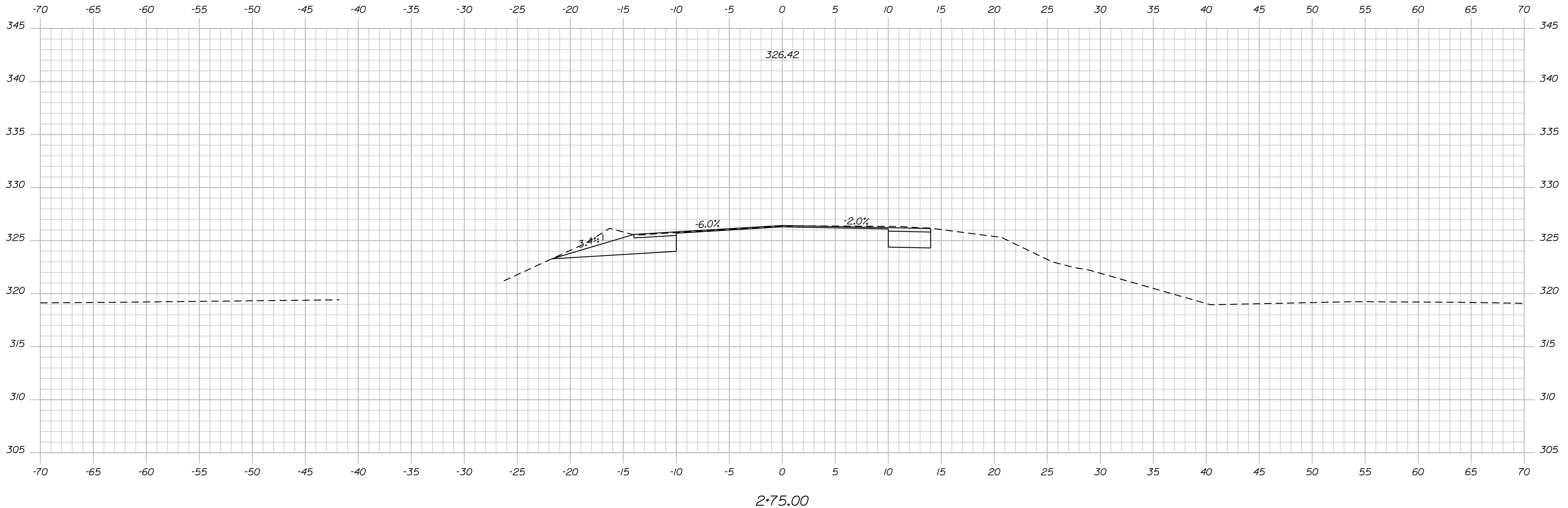
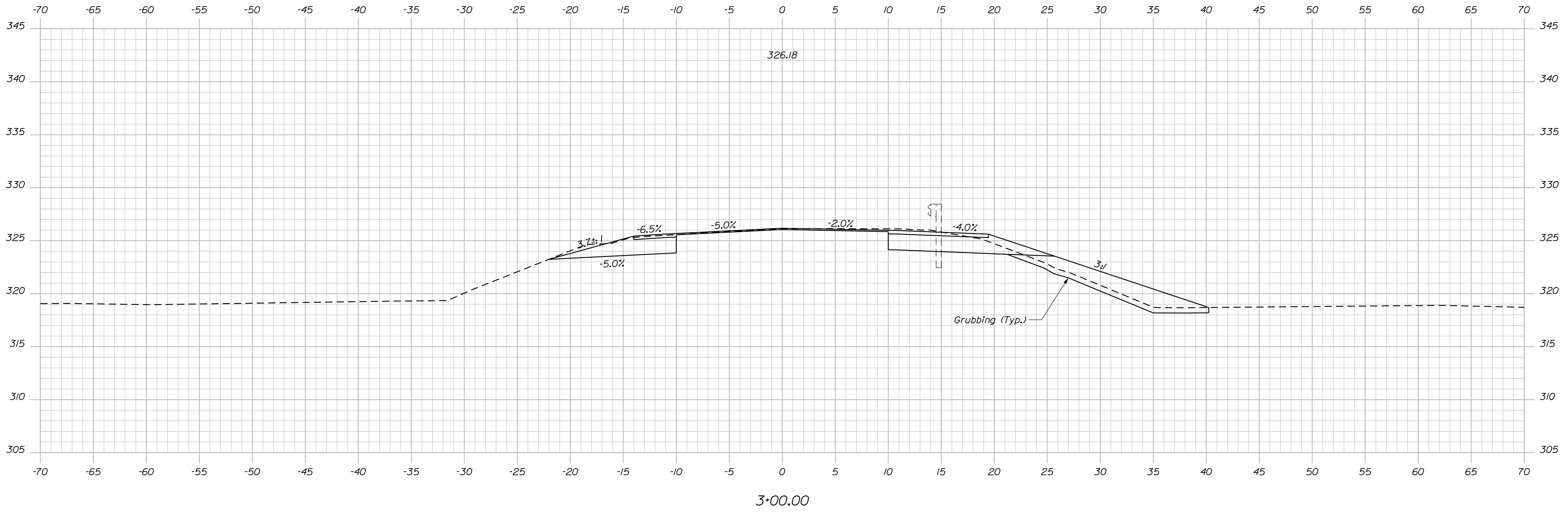
OF 30

Date: 3/13/2023

Username: Richard.Mayer

Division: BRIDGE

Filename: ... \MSTA\008_XSECT_2+75_002.dgn



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2226600
WIN
022266.00
BRIDGE NO. 5116
BRIDGE PLANS

PROJ. MANAGER
MARK PARLIN
DESIGN-DETAILED
W. CASEY
CHECKED-REVIEWED
B. BARTLETT
DESIGNS-DETAILED
D. SHAW
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

BY
R. MAYER
D. SHAW

DATE
SEP. 2022

SIGNATURE
P.E. NUMBER
DATE

MATTAGODUS BRIDGE
MATTAGODUS STREAM
WEBSTER PLT PENOBSCOT COUNTY
HIGHWAY APPROACH
CROSS-SECTIONS

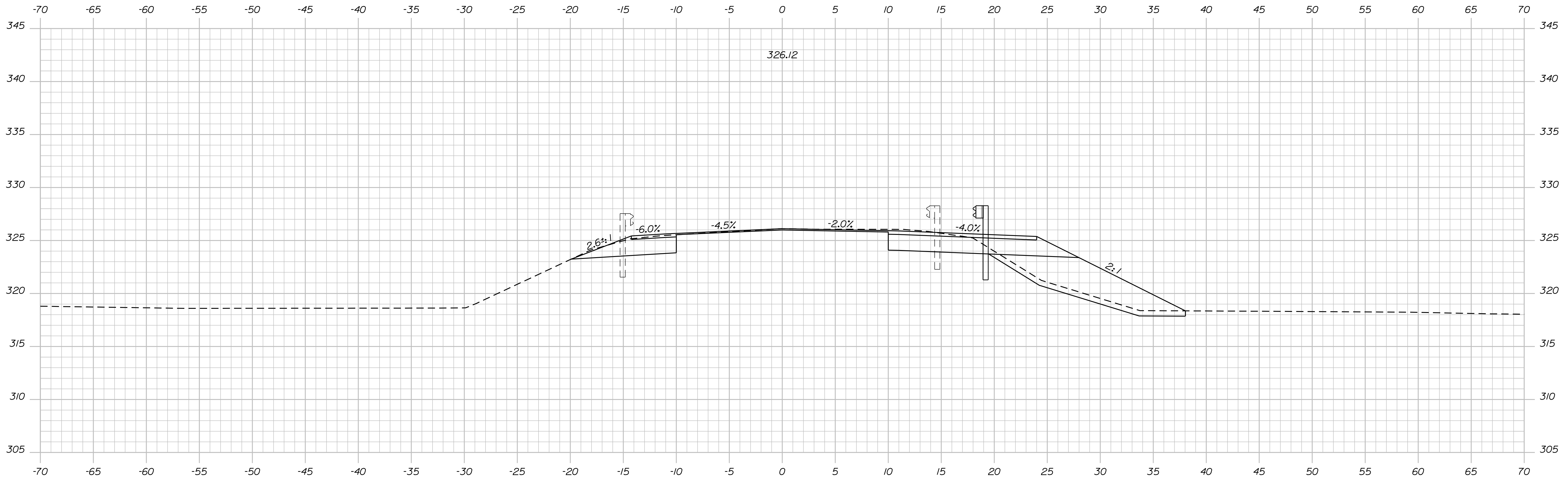
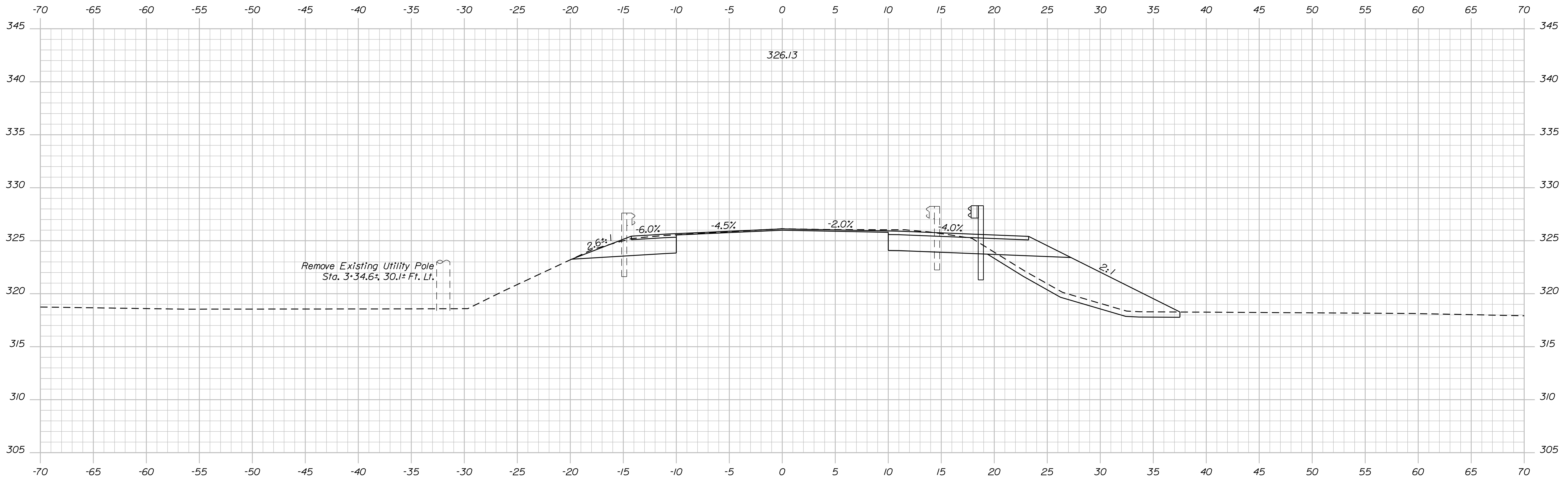
SHEET NUMBER
8
OF 30

Date: 3/13/2023

Username: Richard.Mayer

Division: BRIDGE

Filename: ... \MSTAD09_XSECT_3+21_003.dgn



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2226600
WIN
022266.00
BRIDGE NO. 5116
BRIDGE PLANS

PROJ. MANAGER: MARK PARLIN
DESIGN DETAILED: W. CASEY
CHECKED/REVIEWED: R. MAYER
DESIGNS DETAILED: B. BARTLETT
REVISIONS 1:
REVISIONS 2:
REVISIONS 3:
REVISIONS 4:
FIELD CHANGES:

BY	DATE	SIGNATURE	P.E. NUMBER	DATE
R. MAYER	SEP. 2022			
D. SHAW				

MATTAGODUS BRIDGE
MATTAGODUS STREAM
WEBSTER PLT PENOBSCOT COUNTY
HIGHWAY APPROACH
CROSS-SECTIONS

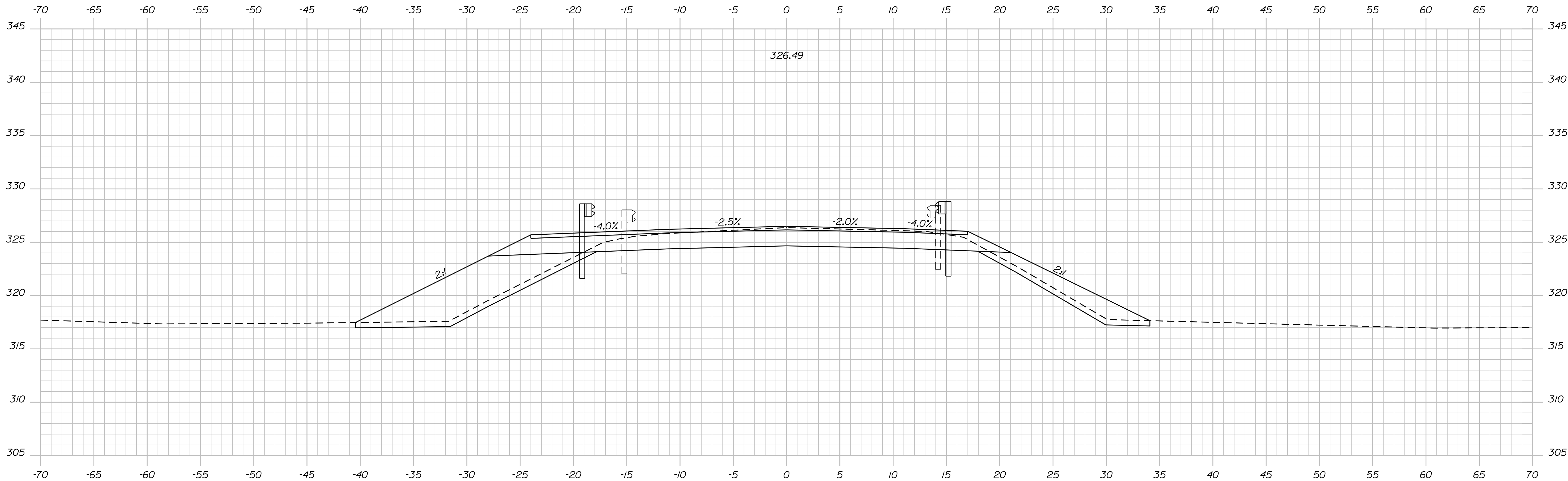
SHEET NUMBER
9
OF 30

Date: 3/13/2023

Username: Richard.Mayer

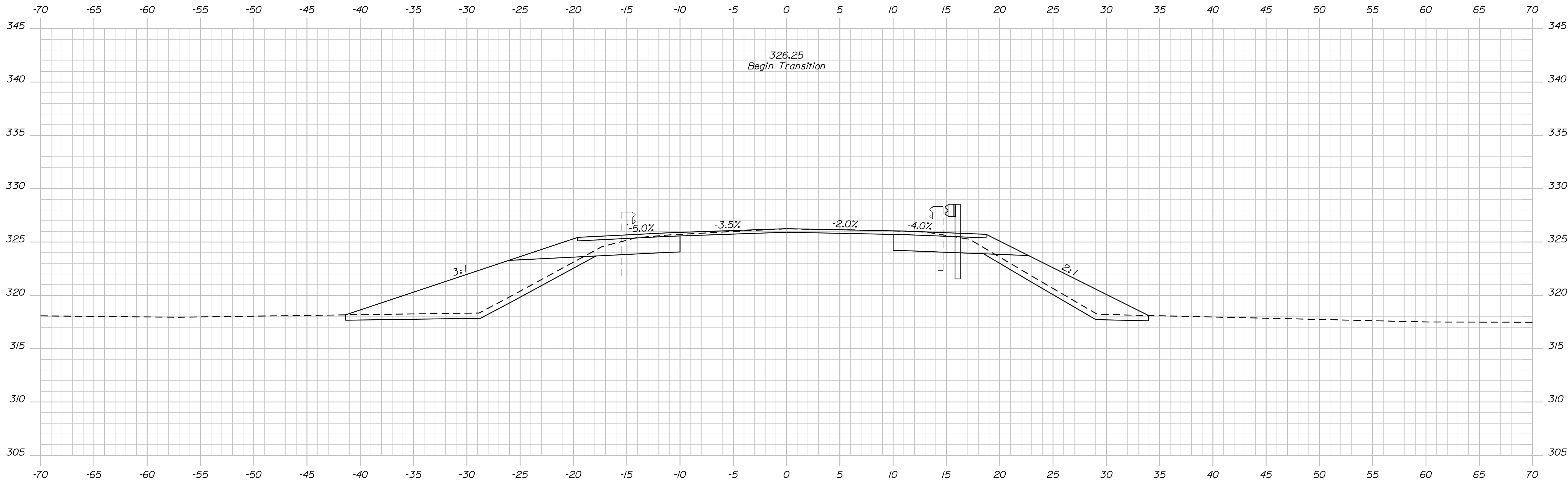
Division: BRIDGE

Filename: ... \MST\A010_XSECT_3+50_004.dgn



Sta. 3+70.7±, 18.0± Ft. Lt. to Sta. 4+08.1±, 14.0± Ft. Lt.
 Install 3" W-Beam Guardrail; Mid-Way Splice Flared Terminal

3+70.73



326.25
 Begin Transition

3+50.00

Sta. 3+58.1±, 14.0± Ft. Rt. to Sta. 4+30.0 ±, 14.0± Ft. Rt.
 Install 71.9 LF of 3" W-Beam Guardrail; Mid-Way Splice

STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION
 2226600
 WIN
 022266.00
 BRIDGE NO. 5116
 BRIDGE PLANS

PROJ. MANAGER: MARK PARLIN
 DESIGN-DETAILED: W. CASEY
 CHECKED-REVIEWED: R. MAYER
 DESIGNS-DETAILED: B. BARTLETT
 REVISIONS 1: D. SHAW
 REVISIONS 2:
 REVISIONS 3:
 REVISIONS 4:
 FIELD CHANGES:
 SIGNATURE:
 P.E. NUMBER:
 DATE:

MATTAGODUS BRIDGE
 MATTAGODUS STREAM
 WEBSTER PLT PENOBSCOT COUNTY
 HIGHWAY APPROACH
 CROSS-SECTIONS

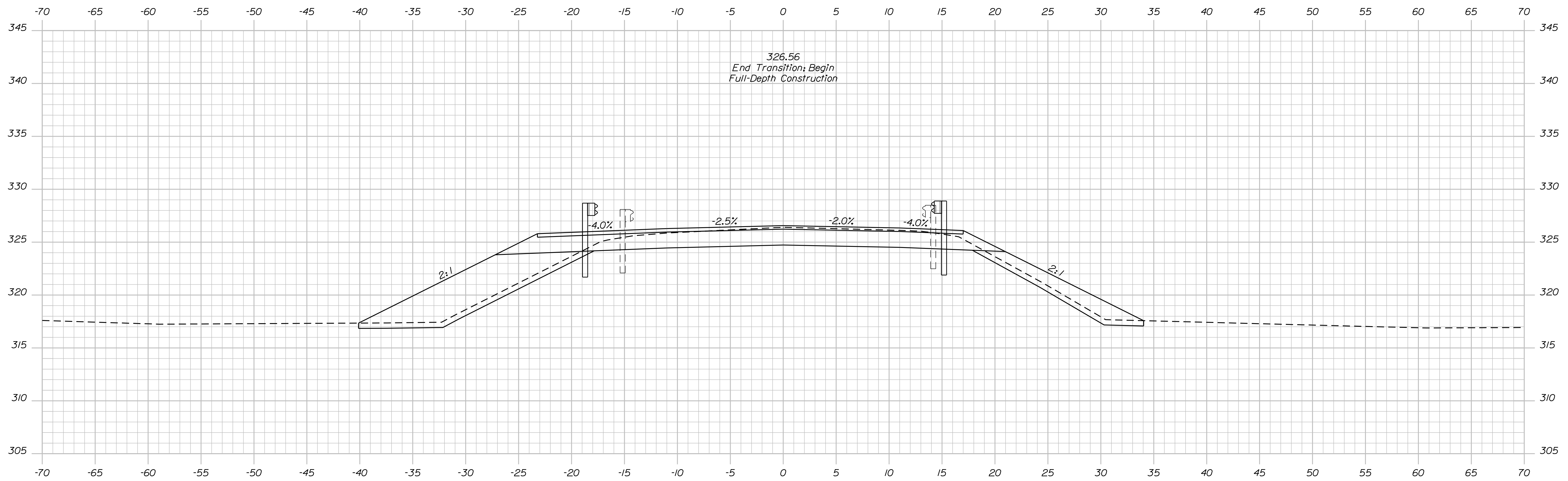
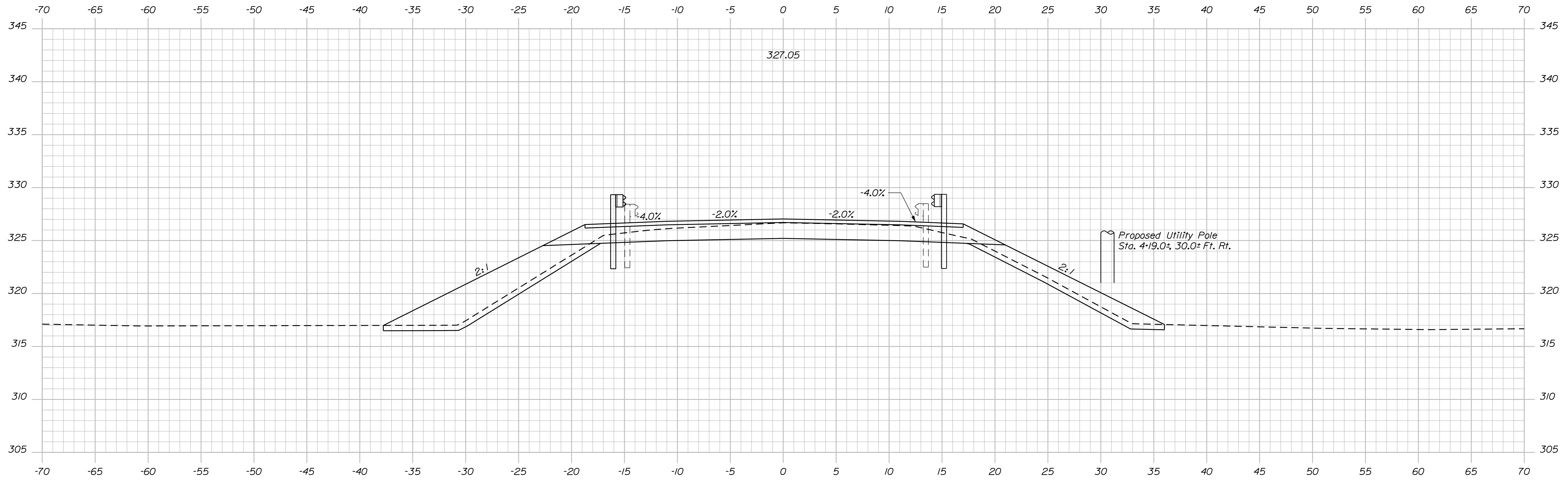
SHEET NUMBER
 10
 OF 30

Date: 3/13/2023

Username: Richard.Mayer

Division: BRIDGE

Filename: ... \MSTA011_XSECT_3+75_005.dgn



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2226600
WIN
022266.00
BRIDGE NO. 5116
BRIDGE PLANS

PROJ. MANAGER: MARK PARLIN
DESIGN-DETAILED: W. CASEY
CHECKED-REVIEWED: R. MAYER
DESIGN-DETAILED: B. BARTLETT
DESIGN-DETAILED: D. SHAW
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

DATE: SEP. 2022

BY: R. MAYER, D. SHAW

SIGNATURE
P.E. NUMBER
DATE

MATTAGODUS BRIDGE
MATTAGODUS STREAM
WEBSTER PLT PENOBSCOT COUNTY
HIGHWAY APPROACH
CROSS-SECTIONS

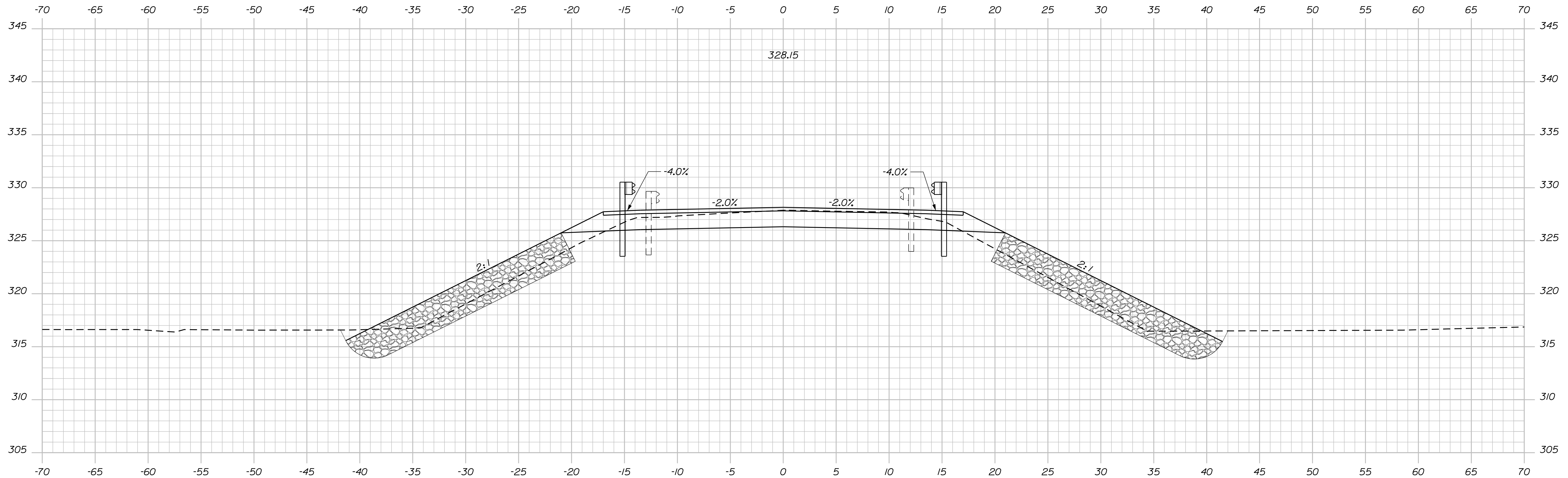
SHEET NUMBER
11
OF 30

Date: 3/13/2023

Username: Richard.Mayer

Division: BRIDGE

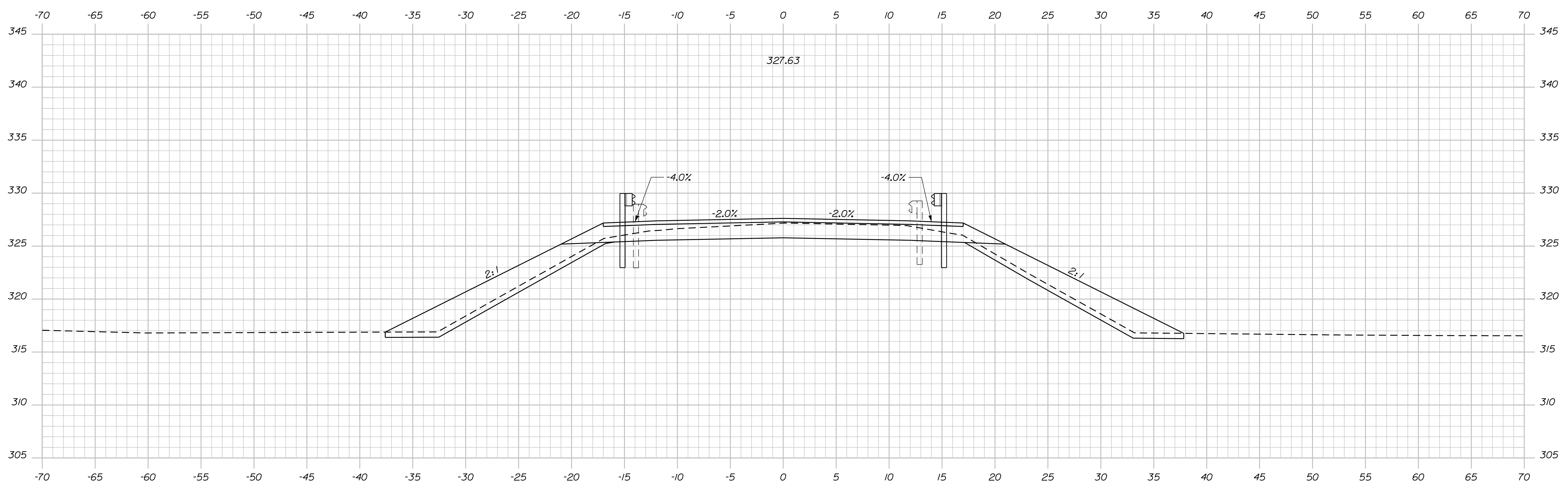
Filename: ... \MSTAO12_XSECT_4+25_006.dgn



Sta. 4+49.6±, 14.0± Ft. Lt. To Bridge
Install Steel Approach Railing, 3 Bar

4+50.00

Sta. 4+49.6±, 14.0± Ft. Rt. To Bridge
Install Steel Approach Railing, 3 Bar



Sta. 4+30.0 ±, 14.0± Ft. Lt. To Sta. 4+49.6±, 14.0± Ft. Lt.
Install Bridge Transition Type 1

4+25.00

Sta. 4+30.0 ±, 14.0± Ft. Rt. To Sta. 4+49.6±, 14.0± Ft. Rt.
Install Bridge Transition Type 1

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2226600
WIN
022266.00
BRIDGE NO. 5116
BRIDGE PLANS

PROJ. MANAGER	MARK PARLIN	DATE	SEP 2022
DESIGN DETAILED	W. CASEY	BY	R. MAYER
CHECKED/REVIEWED	B. BARTLETT	DATE	
DESIGN DETAILED	D. SHAW		
REVISIONS 1		SIGNATURE	
REVISIONS 2		P.E. NUMBER	
REVISIONS 3		DATE	
REVISIONS 4			
FIELD CHANGES			

MATTAGODUS BRIDGE
MATTAGODUS STREAM
WEBSTER PLT PENOBSCOT COUNTY
HIGHWAY APPROACH
CROSS-SECTIONS

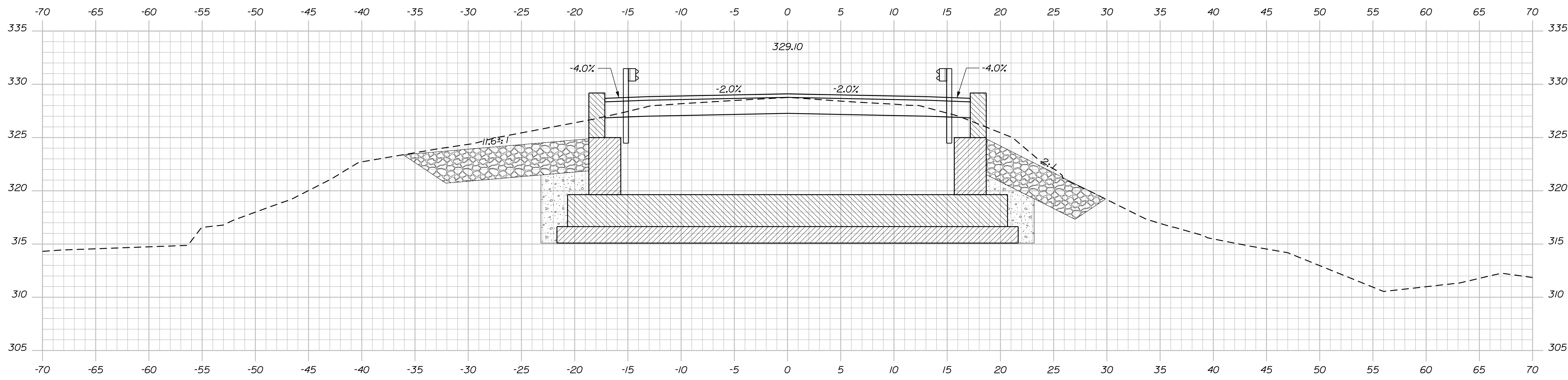
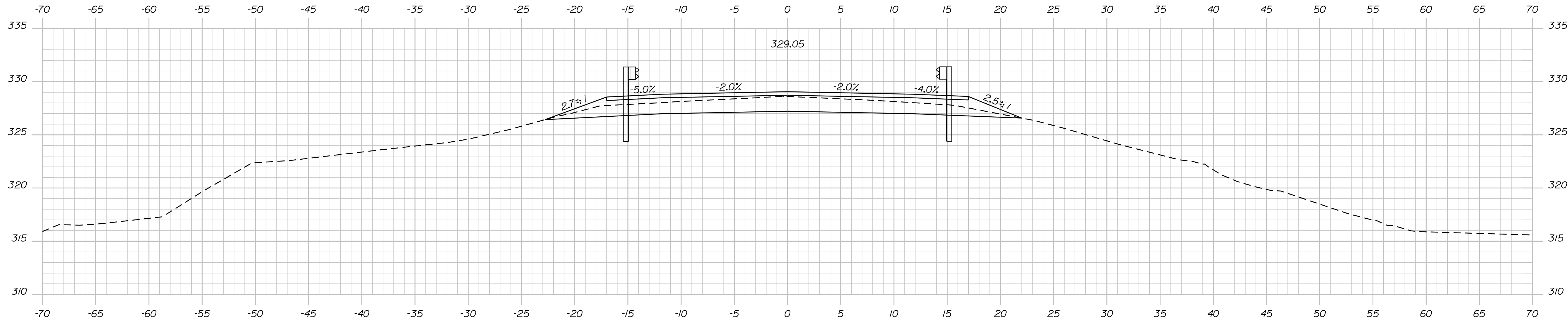
SHEET NUMBER
12
OF 30

Date: 3/13/2023

Username: Richard.Mayer

Division: BRIDGE

Filename: ... \MSTA\013_XSECT_5+50_007.dgn



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2226600
WIN
022266.00
BRIDGE NO. 5116
BRIDGE PLANS

PROJ. MANAGER	MARK PARLIN	DATE	SEP 2022
DESIGN-DETAILED	W. CASEY	BY	R. MAYER
CHECKED-REVIEWED	B. BARTLETT		D. SHAW
DESIGN-DETAILED		SIGNATURE	
REVISIONS 1		P.E. NUMBER	
REVISIONS 2		DATE	
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

MATTAGODUS BRIDGE
MATTAGODUS STREAM
WEBSTER PLT PENOBSCOT COUNTY
HIGHWAY APPROACH
CROSS-SECTIONS

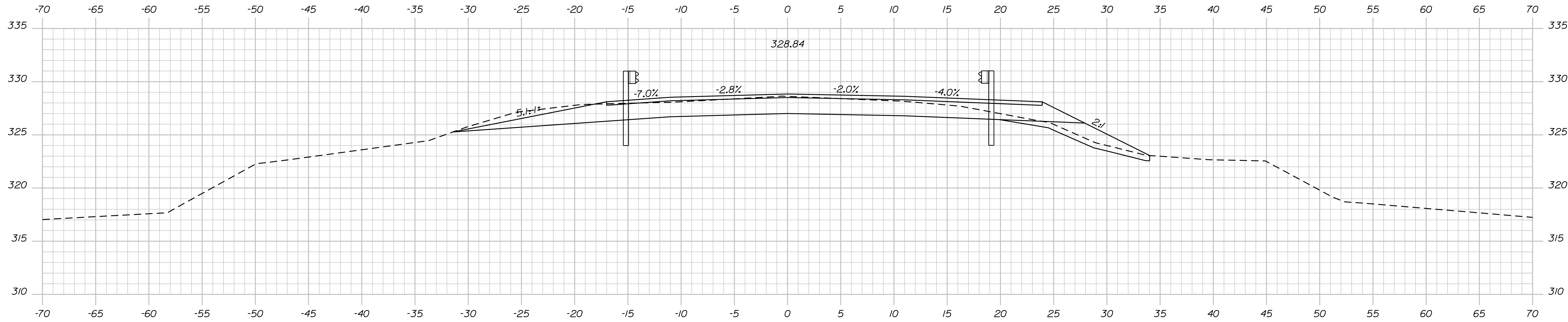
SHEET NUMBER
13
OF 30

Date: 3/13/2023

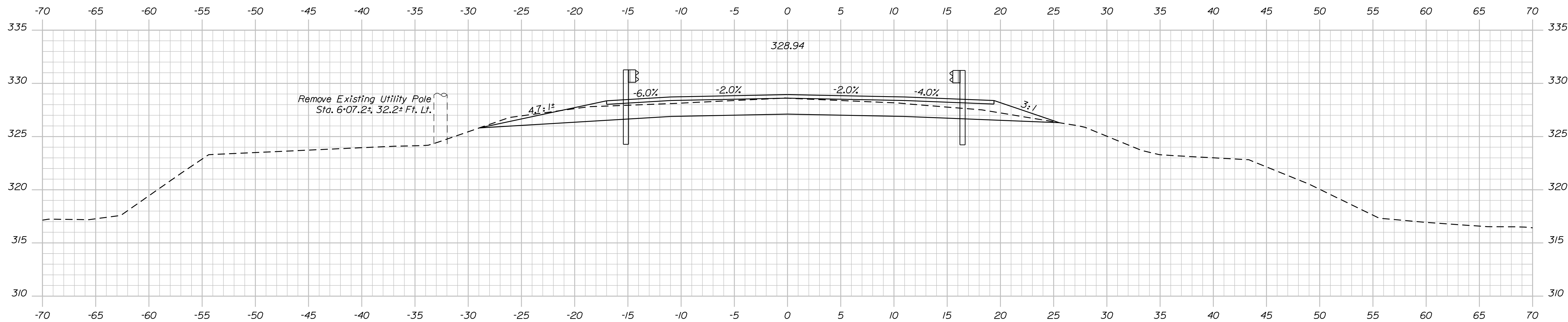
Username: Richard.Mayer

Division: BRIDGE

Filename: ... \MST\A014_XSECT_6+00_008.dgn



Sta. 6+38.4±, 14.0± Ft. Lt. to Sta. 6+75.7±, 18.0± Ft. Lt.
 Install 3" W-Beam Guardrail; Mid-Way Splice Flared Terminal
 6+25.00



Remove Existing Utility Pole
 Sta. 6+07.2±, 32.2± Ft. Lt.

Sta. 5+88.2±, 14.0± Ft. Rt. to Sta. 6+25.4±, 18.0± Ft. Rt.
 Install 3" W-Beam Guardrail; Mid-Way Splice Flared Terminal
 6+00.00

STATE OF MAINE

DEPARTMENT OF TRANSPORTATION

2226600

WIN

BRIDGE NO. 5116 BRIDGE PLANS

DATE

SEP 2022

BY

R. MAYER

MARK PARLIN

W. CASEY

DESIGN-DETAILED

B. BARTLETT

CHECKED-REVIEWED

D. SHAW

DESIGN-DETAILED

REVISIONS 1

DESIGN-DETAILED

REVISIONS 2

REVISIONS 3

REVISIONS 4

FIELD CHANGES

SIGNATURE

P.E. NUMBER

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

SHEET NUMBER

14

OF 30

MATTAGODUS BRIDGE

MATTAGODUS STREAM

WEBSTER PLT PENOBSCOT COUNTY

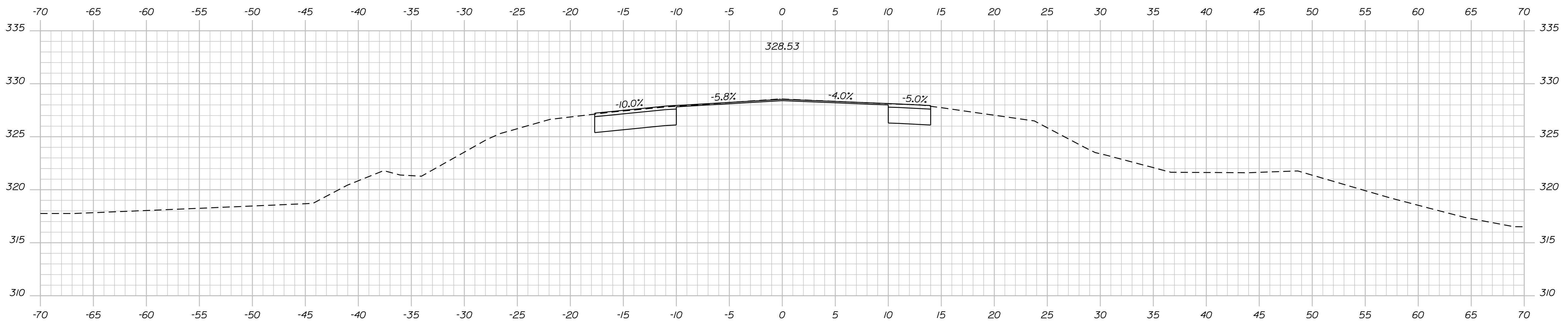
HIGHWAY APPROACH CROSS-SECTIONS

Date: 3/13/2023

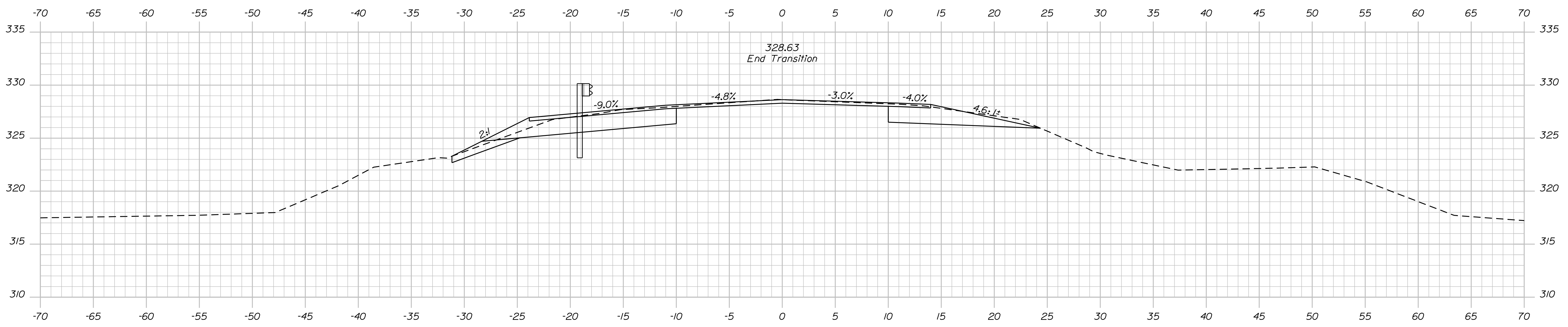
Username: Richard.Mayer

Division: BRIDGE

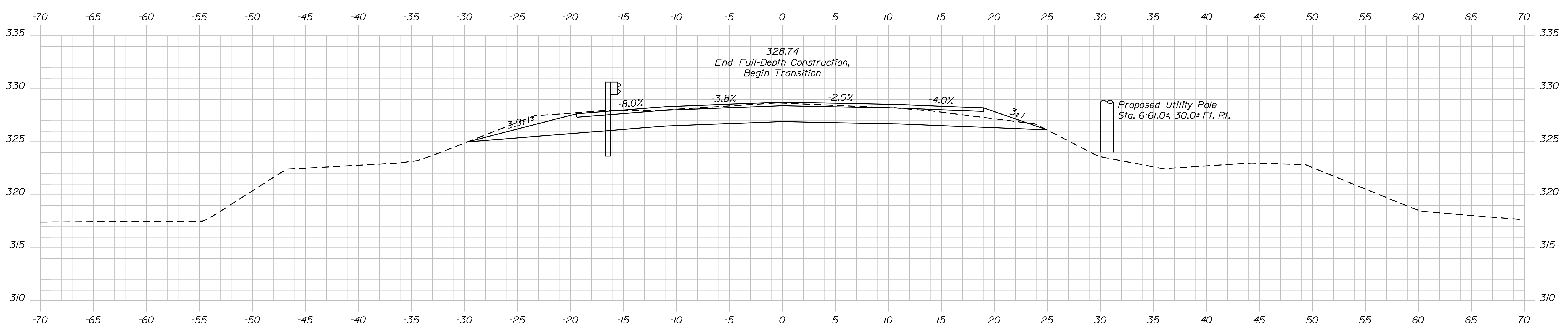
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7+00.00



6+75.00



6+50.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2226600
WIN
022266.00
BRIDGE NO. 5116
BRIDGE PLANS

PROJ. MANAGER: MARK PARLIN
DESIGN-DETAILED: W. CASEY
CHECKED-REVIEWED: R. MAYER
DESIGN-DETAILED: B. BARTLETT
DESIGN-DETAILED: D. SHAW
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

DATE	BY	SIGNATURE	P.E. NUMBER	DATE
SEP 2022	R. MAYER			
	D. SHAW			

MATTAGODUS BRIDGE
MATTAGODUS STREAM
WEBSTER PLT PENOBSCOT COUNTY
HIGHWAY APPROACH
CROSS-SECTIONS

SHEET NUMBER
15
OF 30

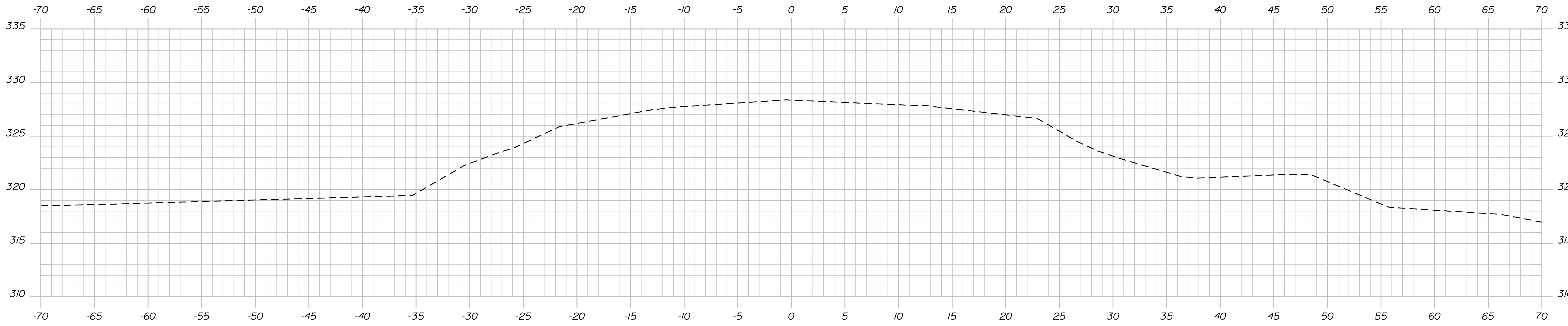
Sta. 6+50.00 to Sta. 7+00.00

Date: 3/13/2023

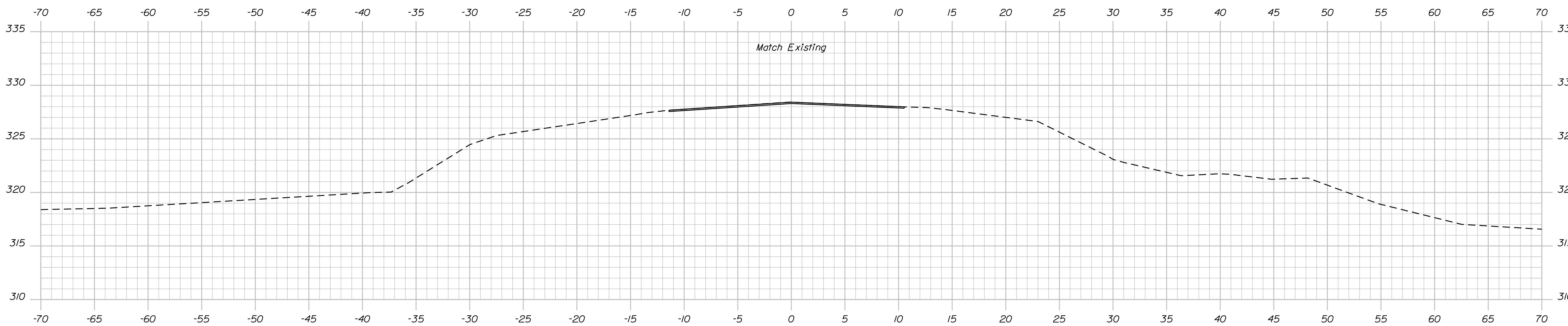
Username: Richard.Mayer

Division: BRIDGE

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7+50.00



7+25.00

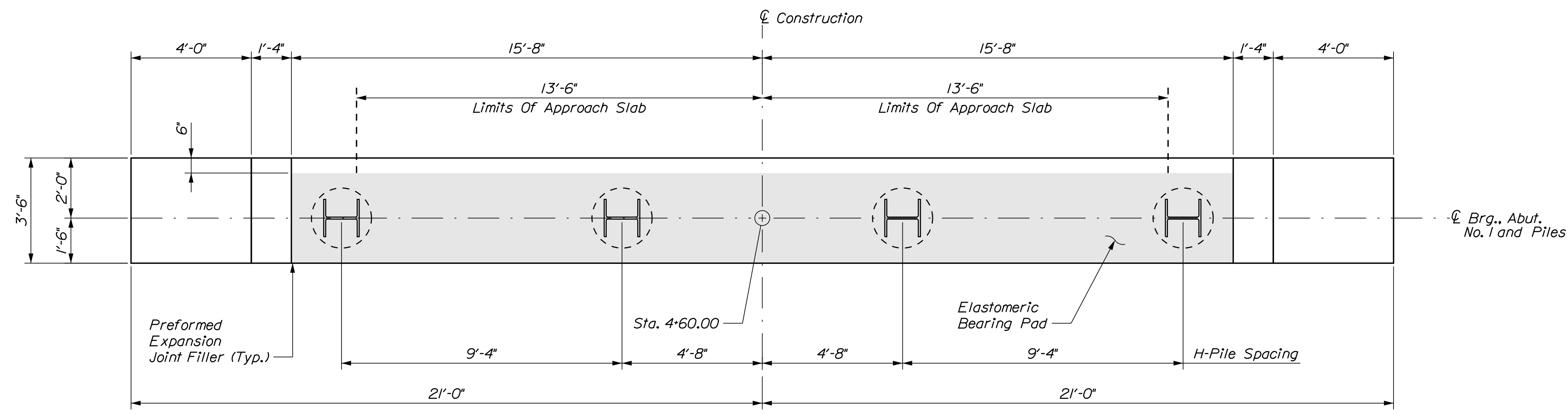
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2226600
WIN
022266.00
BRIDGE NO. 5116
BRIDGE PLANS

PROJ. MANAGER: MARK PARLIN
DESIGN-DETAILED: W. CASEY
CHECKED-REVIEWED: R. MAYER
DESIGN-DETAILED: B. BARTLETT
REVISIONS 1: D. SHAW
REVISIONS 2:
REVISIONS 3:
REVISIONS 4:
FIELD CHANGES:

DATE: SEP 2022
BY: R. MAYER
D. SHAW
SIGNATURE:
P.E. NUMBER:
DATE:

MATTAGODUS BRIDGE
MATTAGODUS STREAM
WEBSTER PLT PENOBSCOT COUNTY
HIGHWAY APPROACH
CROSS-SECTIONS

SHEET NUMBER
16
OF 30



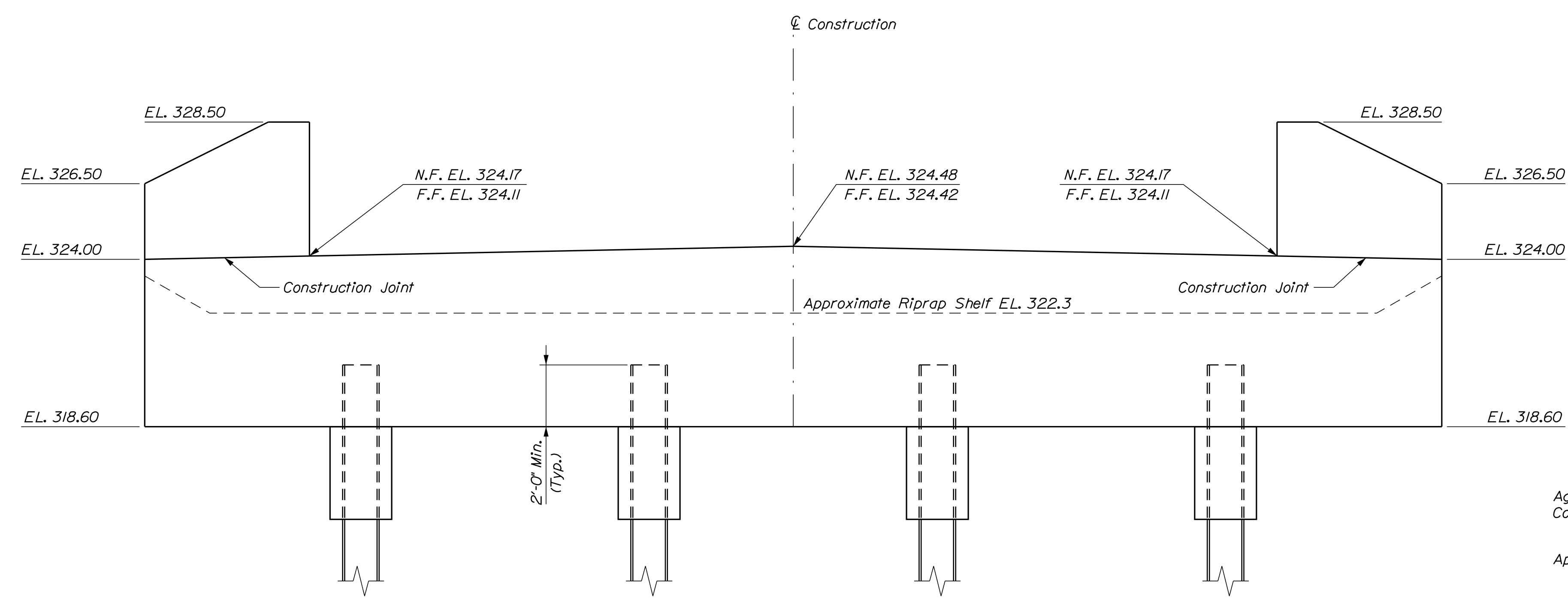
PLAN ~ ABUTMENT NO. 1

PILE NOTES

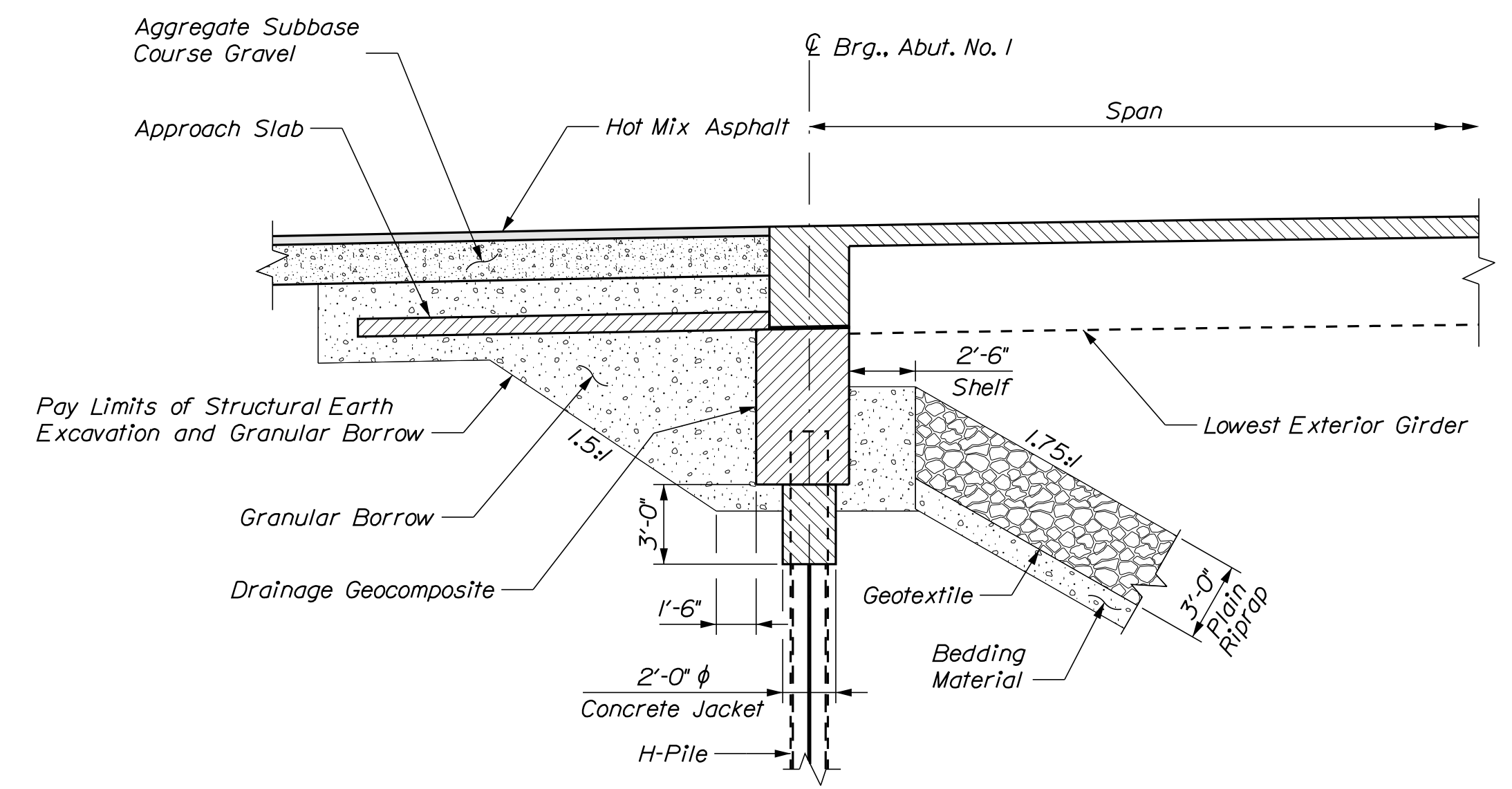
1. The maximum factored axial pile load is 360 kips for the Strength I limit state.
2. H-pile material shall be ASTM A 572, Grade 50.
3. Estimate of piles required:
Abutment No. 1: 4 ~ HP 14x89 @ 35 feet
4. The order lengths of the piles shall include an additional 5 feet of length for each test pile to accommodate dynamic pile testing equipment.
5. All piles shall be equipped with a pile tip in accordance with Standard Specifications Subsection 501.048 - Prefabricated Pile Tips.
6. Piles shall be driven to or into bedrock in accordance with Standard Specifications Section 501 - Foundation Piles.
7. The Contractor shall perform and submit a wave equation analysis for review and acceptance by the Resident. The maximum allowable driving stress is 0.90 times F_y. The submittal analyses shall include the proposed stopping criteria based on the wave equation analysis and the proposed driving system.
8. The Contractor shall perform 1 dynamic load test(s) with 24 hour (min.) restrike tests to confirm the nominal resistance of the piles. The required nominal resistance for the pile is the factored axial pile load divided by a resistance factor of 0.65 per LRFD Specifications. The dynamic test shall be performed on the first production pile driven.

ABUTMENT NO. 1 NOTES

1. Reinforcing steel shall have a minimum concrete cover of 2 inches unless otherwise noted.
2. Place the parapet portions of the wingwalls after erection of the precast units to ensure an accurate match with the superstructure.
3. Cover joints where waterstops are not required in accordance with Standard Details Section 502.
4. Install drainage geocomposite behind the abutments and wingwalls up to the approach slab seat elevation and in accordance with Special Provision Section 620, Drainage Geocomposite.
5. Payment for the concrete jackets around the tops of the H-piles will not be paid for directly, but will be considered incidental to Pay Item 502.219, Structural Concrete Abutments and Retaining Walls. Fill Concrete may be used for the concrete jackets. Payment for excavation necessary to construct the concrete jackets will be considered incidental to Contract items.
6. Place drains with 4 inch diameter in the breastwall and wingwalls at 10 foot maximum spacing. The exact location will be determined by the Resident.
7. Adjust the abutment seat elevations in accordance with Special Provision 535 - Precast, Prestressed Concrete Superstructure (Camber).

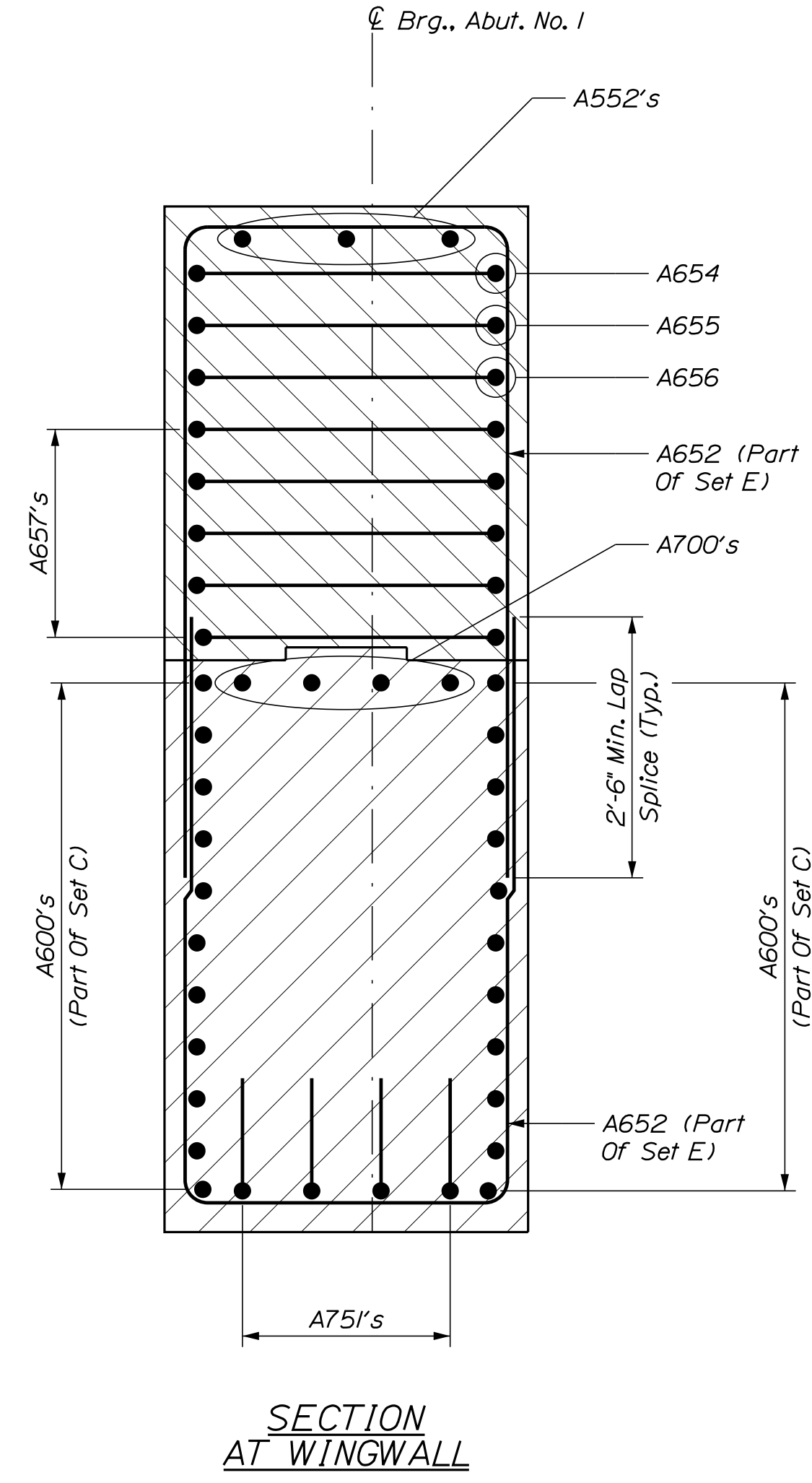
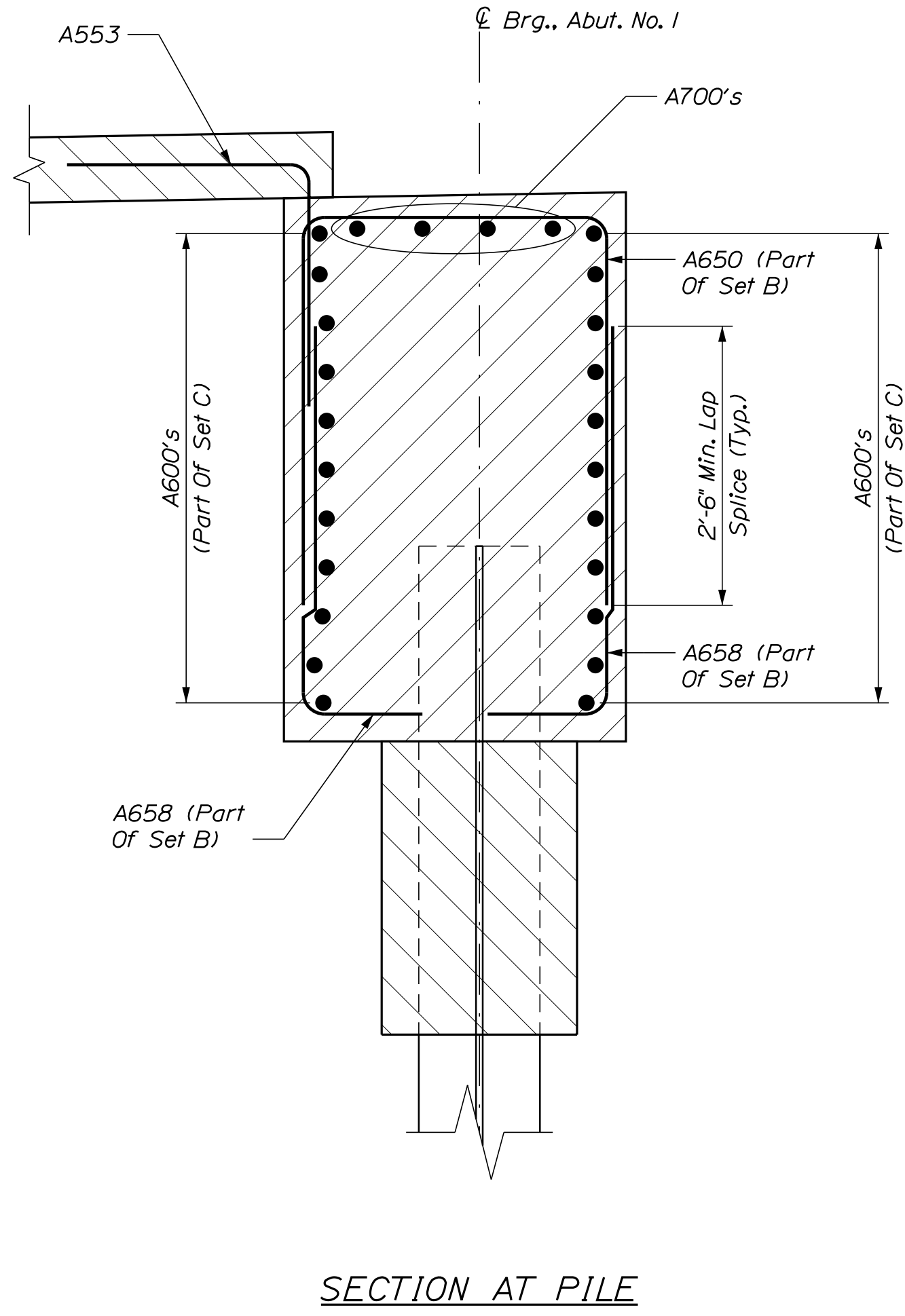
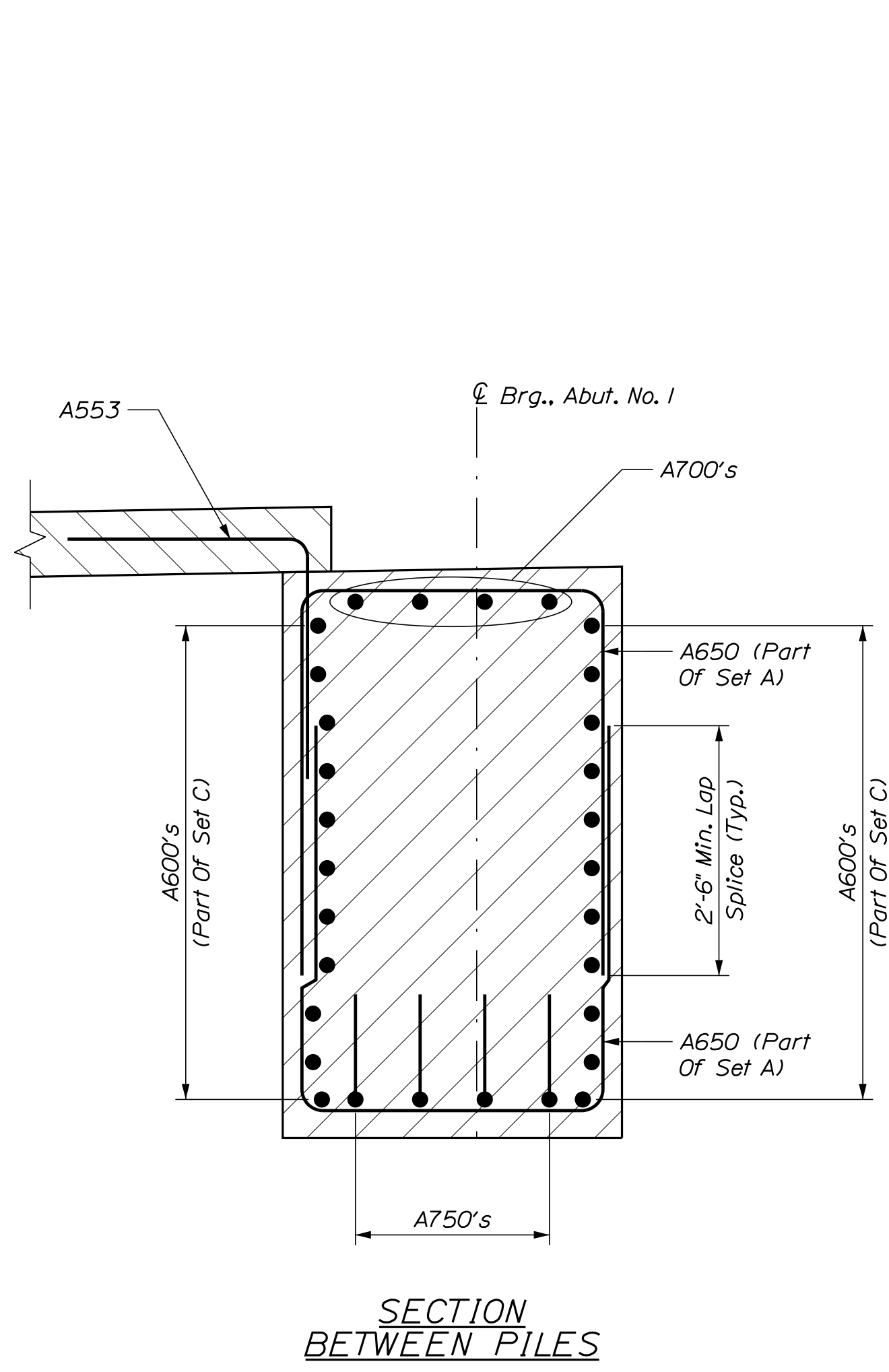


ELEVATION ~ ABUTMENT NO. 1



ABUTMENT NO. 1 SECTION

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		2226600		WIN		022266.00		BRIDGE NO. 5116		BRIDGE PLANS	
MATTAGODUS BRIDGE		MATTAGODUS STREAM		WEBSTER PLT		PENOBSCOT COUNTY		ABUTMENT NO. 1		SHEET NUMBER		17	
PROJ. MANAGER	MARK PARLIN	CHECKED	W. CASEY	DESIGNED	B. BARTLETT	REVISIONS 1		REVISIONS 2		REVISIONS 3		REVISIONS 4	
BY	R. MAYER	DATE	SEP. 2022	SIGNATURE		P.E. NUMBER		DATE		FIELD CHANGES			



SHEET NUMBER

19

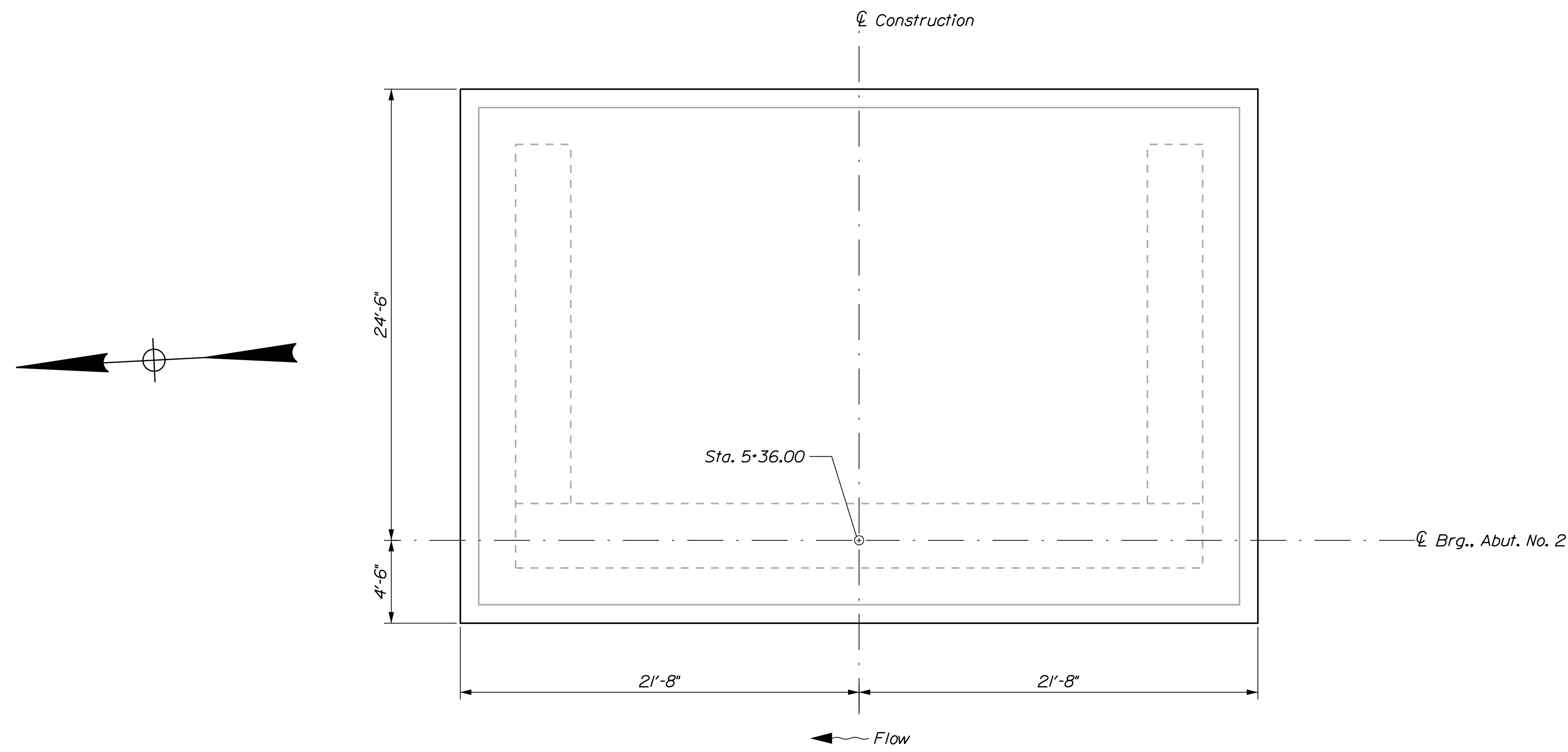
OF 30

MATTAGODUS BRIDGE
 MATTAGODUS STREAM
 WEBSTER PLT PENOBSCOT COUNTY
 ABUTMENT NO. 1
 REINFORCEMENT SECTIONS

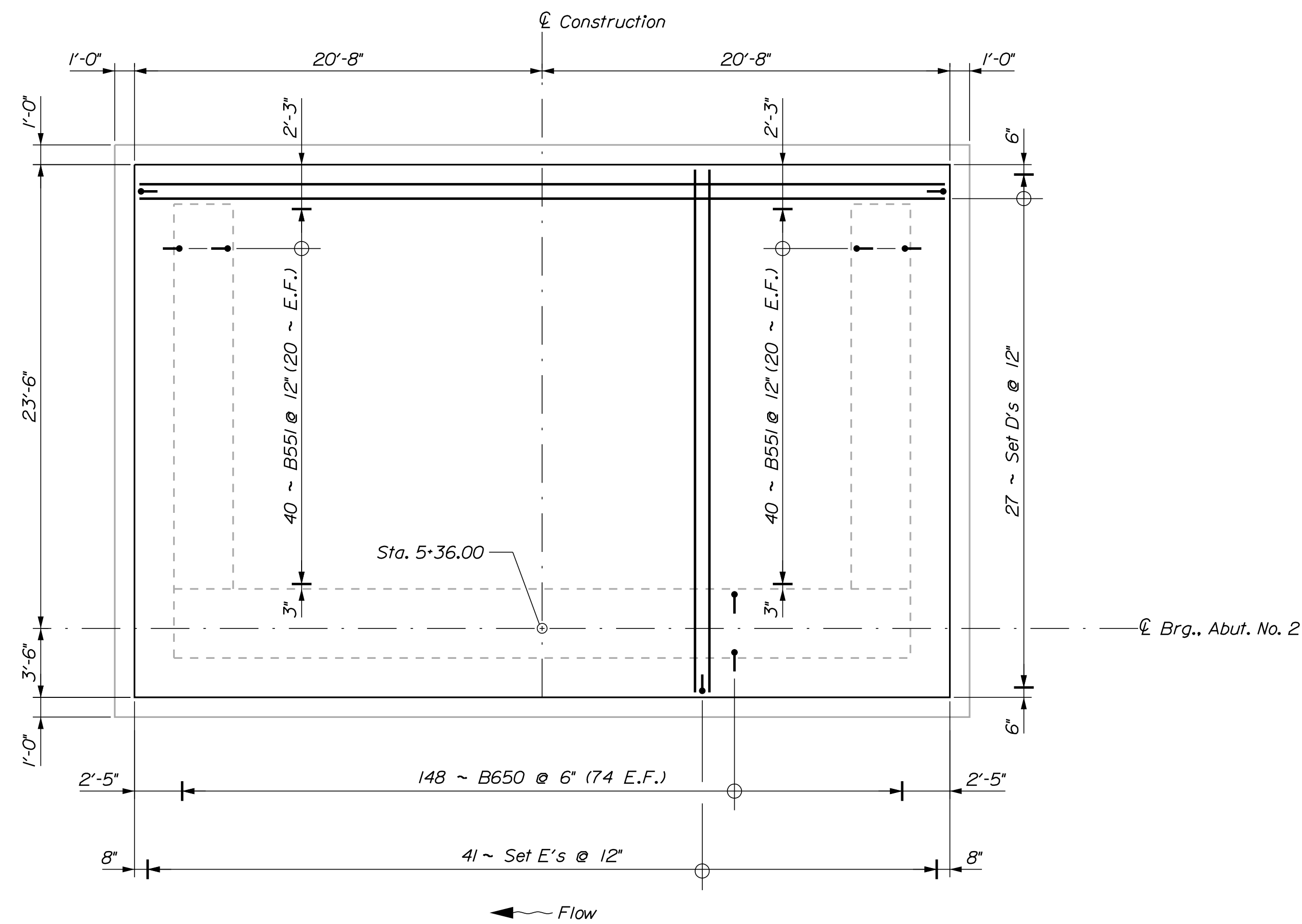
PROJ. MANAGER	MARK PARLIN	BY	R. MAYER	DATE	SEP. 2022
DESIGN/DETAILED	W. CASEY	CHECKED/REVIEWED	B. BARTLETT		
DESIGNS/DETAILED	D. SHAW				
REVISIONS 1					
REVISIONS 2					
REVISIONS 3					
REVISIONS 4					
FIELD CHANGES					

SIGNATURE
 P.E. NUMBER
 DATE

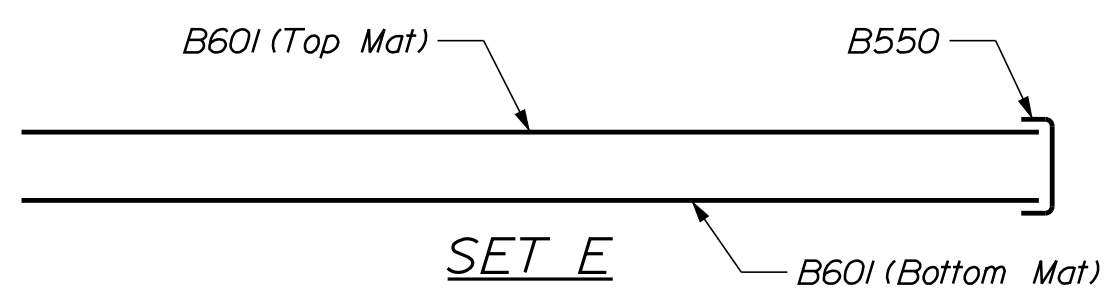
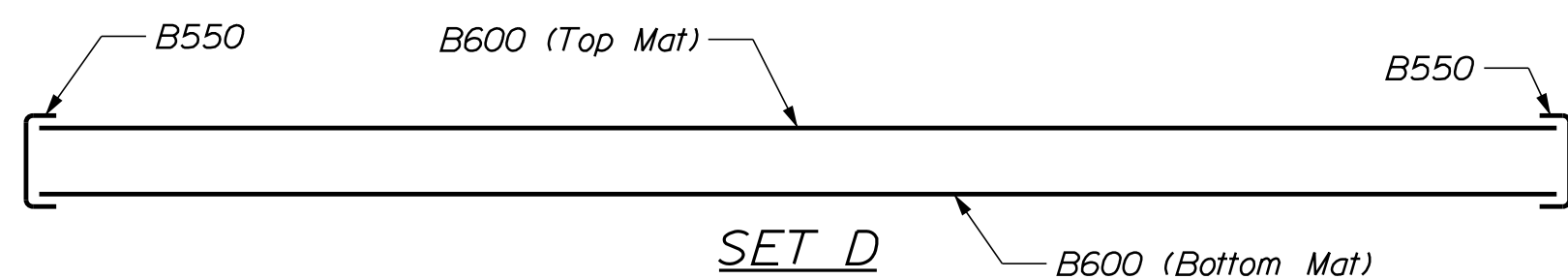
STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION
 22226600
 WIN
 022266.00
 BRIDGE NO. 5116
 BRIDGE PLANS



PLAN ~ ABUTMENT NO. 2 SEAL



PLAN ~ ABUTMENT NO. 2 FOOTING



ABUTMENT NO. 2 NOTES

1. The maximum factored applied footing pressure is 6.5 ksf for Abutment 2 at the Strength Limit State.
2. Abutments, wingwalls, and their footings 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.
3. Reinforcing steel shall have a minimum concrete cover of 2 inches in the walls and 3 inches in the footings unless otherwise noted.
4. Place drains with a 4-inch diameter in the breastwall and wingwalls at 10 feet maximum spacing. The exact location will be determined by the Resident.
5. Cover joints where waterstops are not required in accordance with Standard Details Section 502.
6. Place the parapet portions of the wingwalls after erection of the precast units.
7. At the option of the Resident, bedrock which protrudes above a horizontal plane 12 inches below the proposed bottom of footing elevation may be removed. Payment for bedrock removal shall be made under Item No. 206.092 Structural Rock Excavation - Major Structures.
8. Abutment concrete shall be placed on bedrock cleaned of all weathered rock, loose fractured rock and soil. The bedrock subgrade shall be confirmed to be relatively level. Where the bedrock slope exceeds 4H:1V, the bedrock surface shall be benched to create level steps or made completely level. The Resident shall approve the bedrock subgrade prior to the placement of the abutment concrete.

STATE OF MAINE	BRIDGE NO. 5116	BRIDGE PLANS
DEPARTMENT OF TRANSPORTATION	WIN	022266.00
	2226600	

PROJ. MANAGER	MARK PARLIN	BY	R. MAYER	DATE	SEP. 2022
DESIGN DETAILED	W. CASEY	CHECKED/REVIEWED	B. BARTLETT	SIGNATURE	
DESIGN DETAILED	D. SHAW	DESIGN DETAILED		P.E. NUMBER	
REVISIONS 1		REVISIONS 1		DATE	
REVISIONS 2		REVISIONS 2			
REVISIONS 3		REVISIONS 3			
REVISIONS 4		REVISIONS 4			
FIELD CHANGES					

MATTAGODUS BRIDGE	WEBSTER PLT	PENOBSCOT COUNTY
MATTAGODUS STREAM		
ABUTMENT NO. 2		
SEAL & FOOTING PLAN		

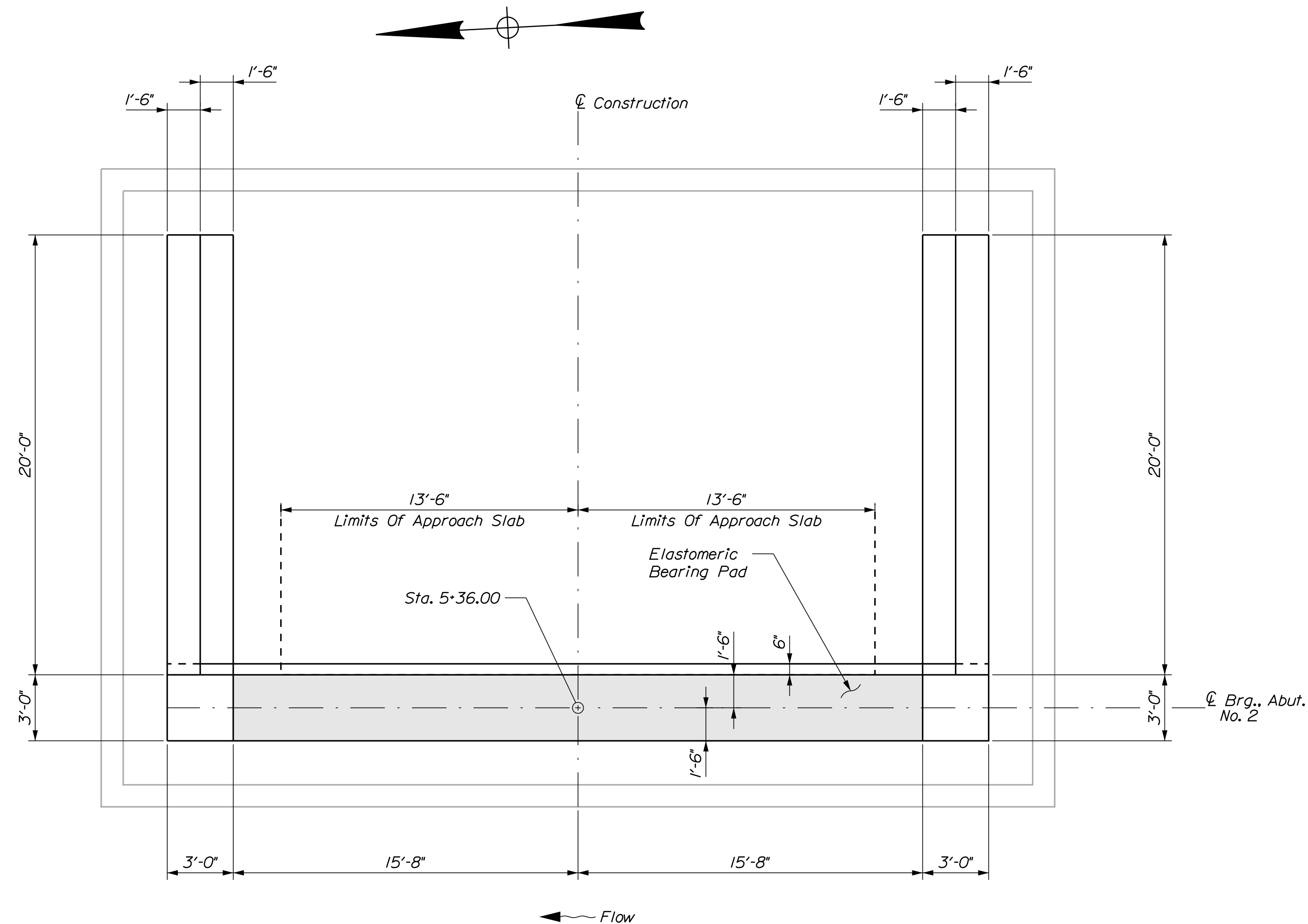
SHEET NUMBER	20
OF 30	

Username: Richard.Mayer

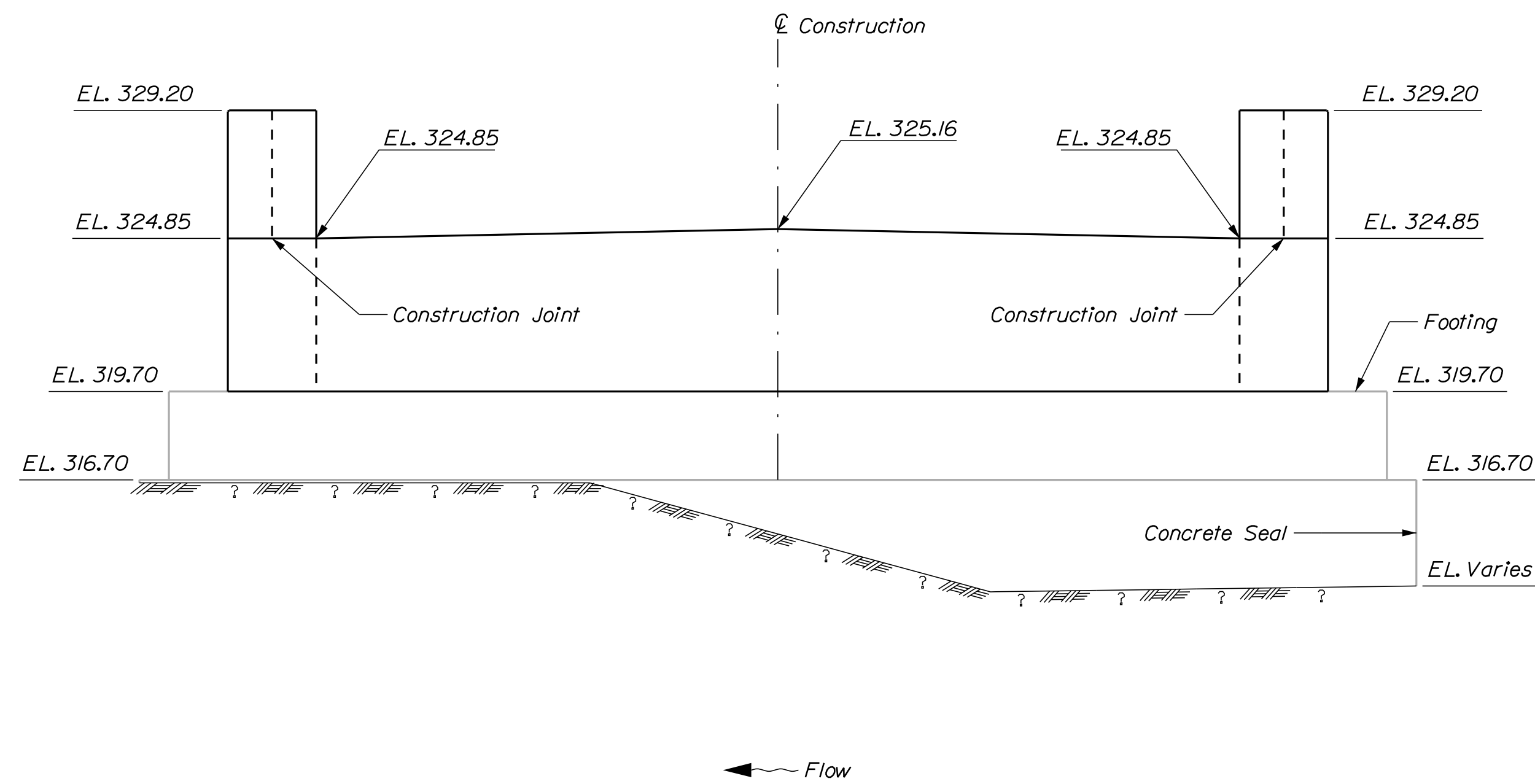
Date: 3/13/2023

Division: BRIDGE

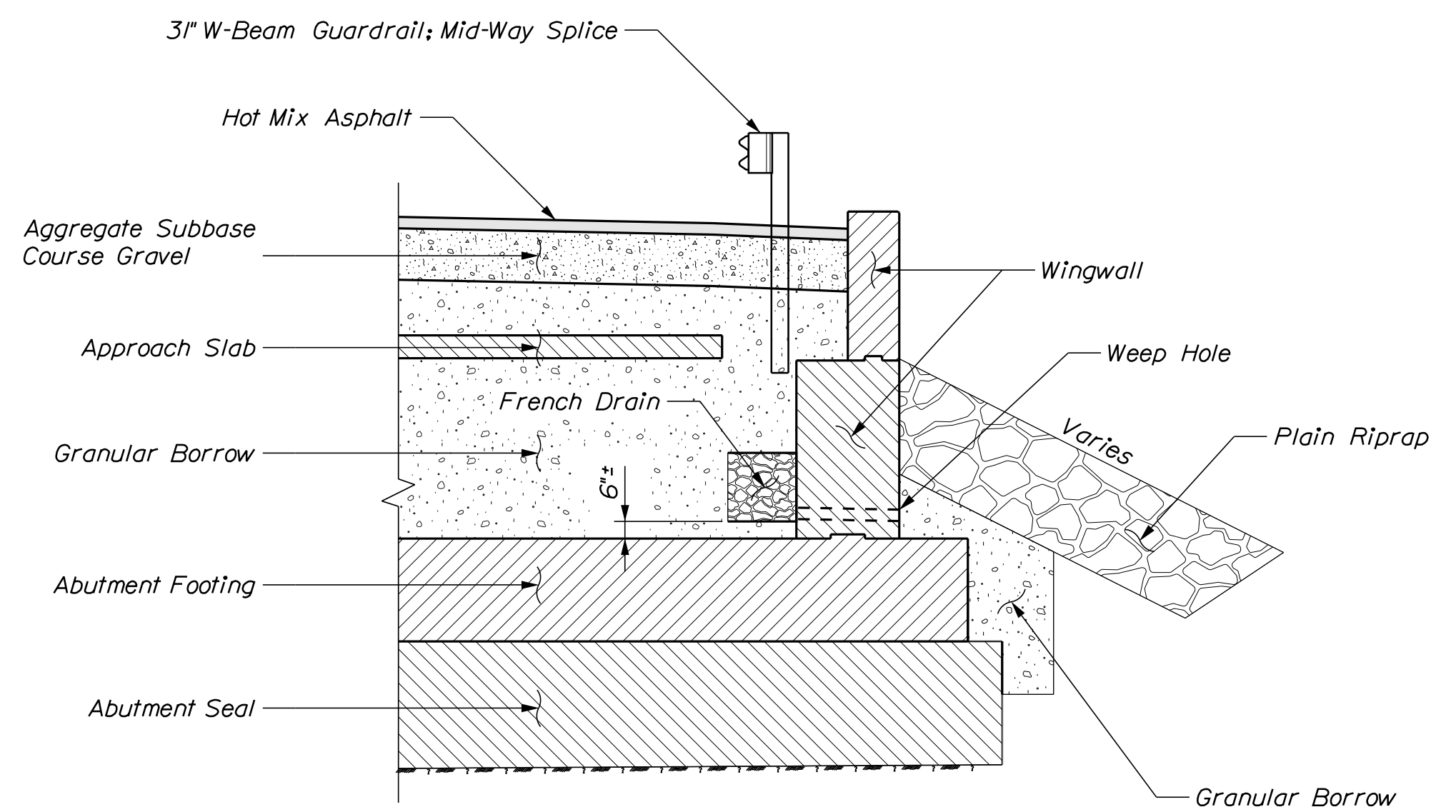
Filename: ... \MSTA\021_Abutment_No. 2.dgn



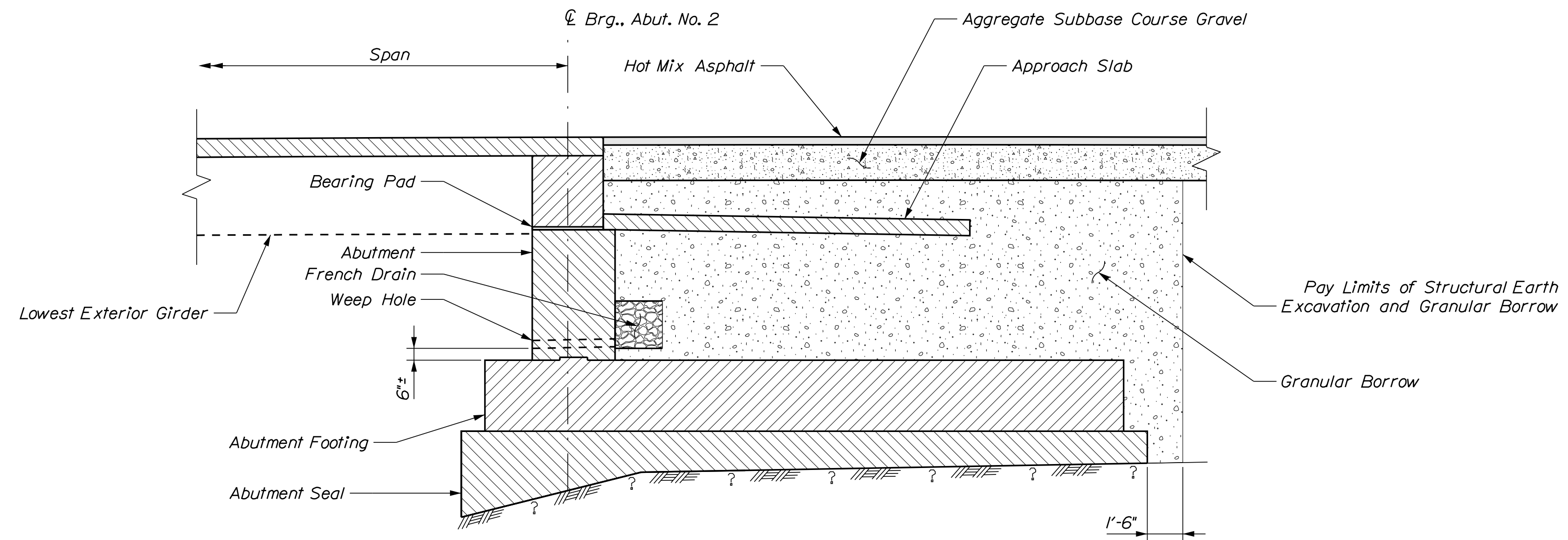
PLAN ~ ABUTMENT NO. 2



ELEVATION ~ ABUTMENT NO. 2

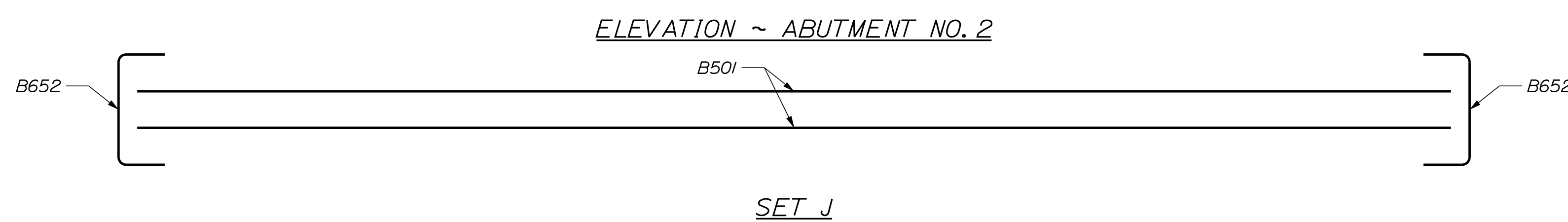
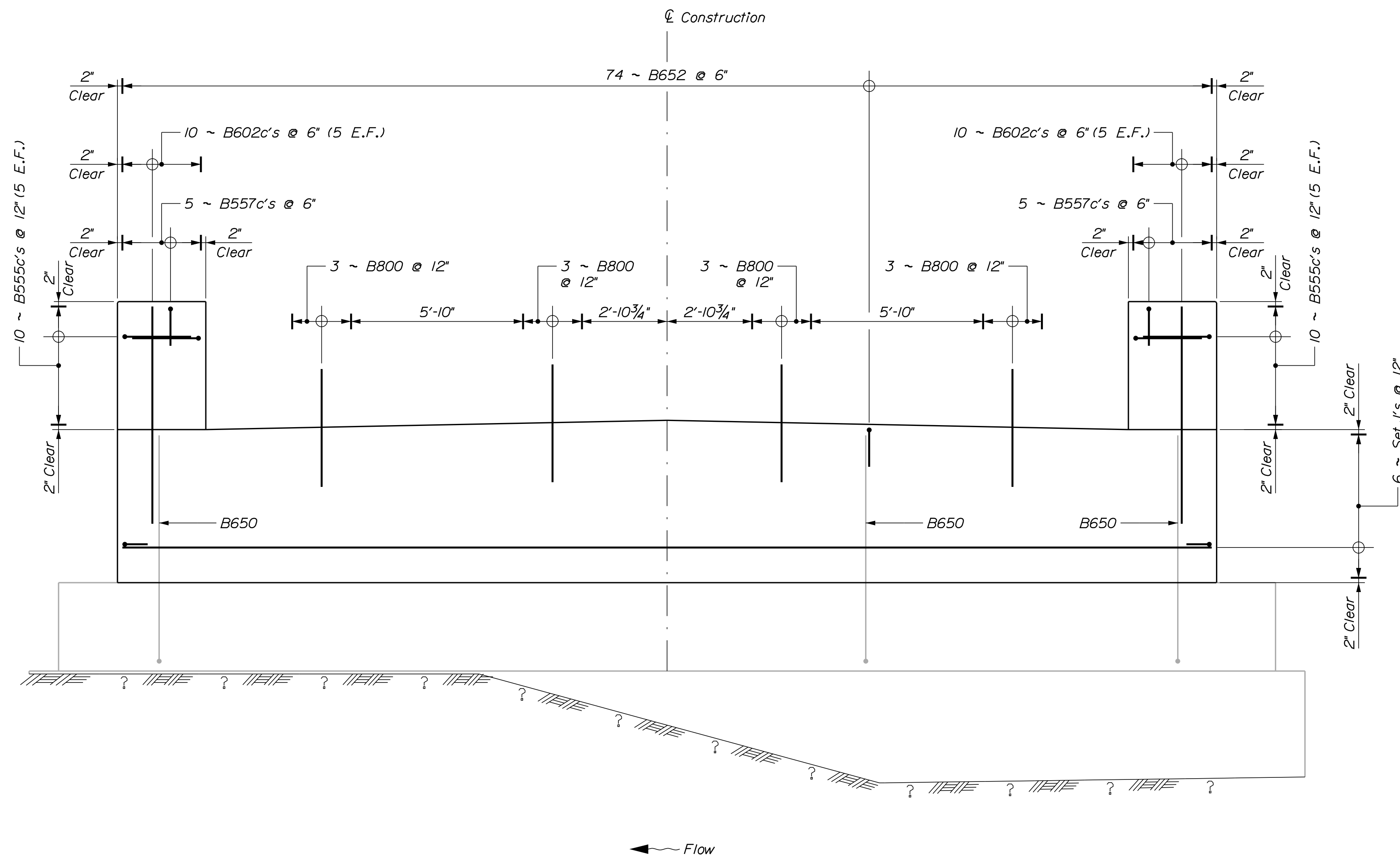
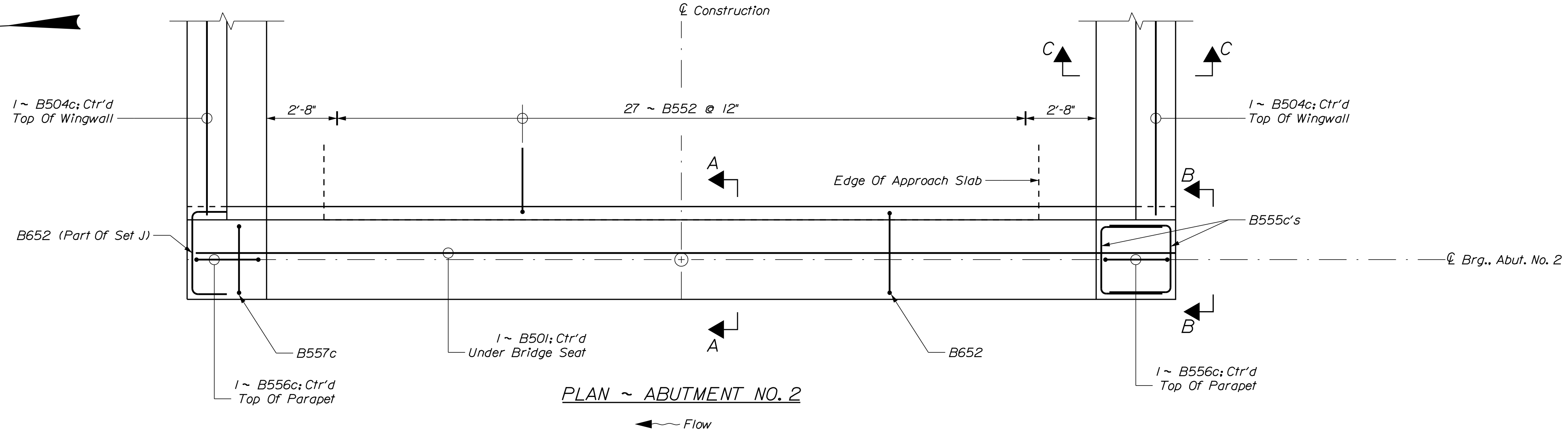
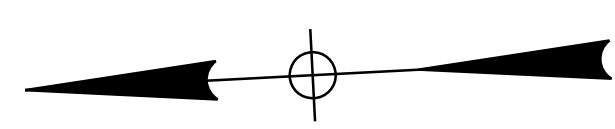


ABUTMENT NO. 2 WINGWALL SECTION



ABUTMENT NO. 2 SECTION

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		2226600		WIN		022266.00		BRIDGE NO. 5116		BRIDGE PLANS	
MATTAGODUS BRIDGE		MATTAGODUS STREAM		WEBSTER PLT		PENOBSCOT COUNTY		ABUTMENT NO. 2		SHEET NUMBER		21	
PROJ. MANAGER	MARK PARLIN	CHECKED	W. CASEY	DESIGNED	B. BARTLETT	REVISIONS 1		REVISIONS 2		REVISIONS 3		REVISIONS 4	
DESIGNED	W. CASEY	CHECKED	R. MAYER	BY	R. MAYER	DATE	SEP. 2022	SIGNATURE		P.E. NUMBER		DATE	
DESIGNED	B. BARTLETT	CHECKED	D. SHAW	BY	D. SHAW	DATE							
REVISIONS 1		REVISIONS 2		REVISIONS 3		REVISIONS 4		FIELD CHANGES					



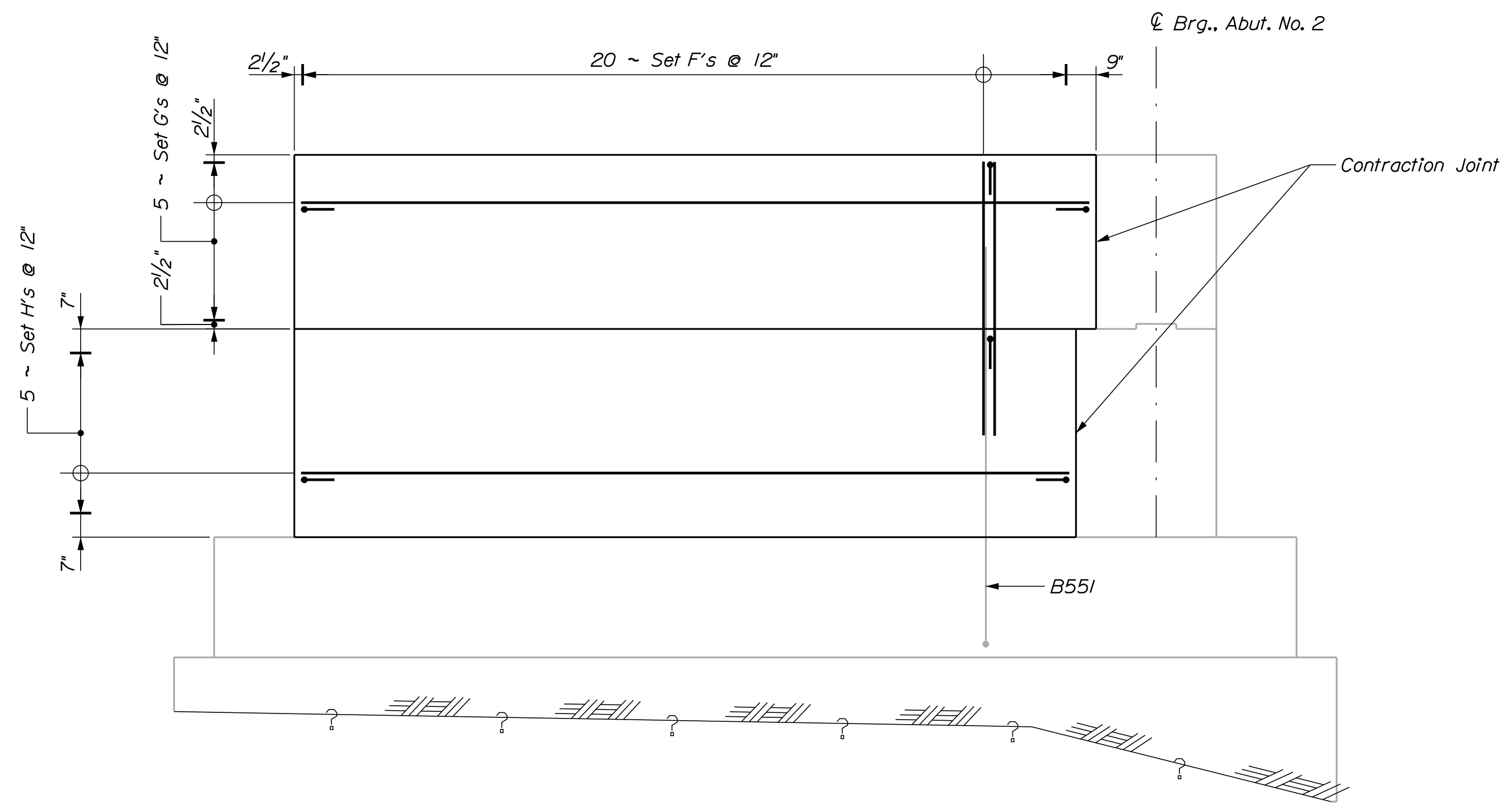
PROJ. MANAGER	MARK PARLIN	BY	DATE
DESIGN-DETAILED	W. CASEY	R. MAYER	SEP. 2022
CHECKED-REVIEWED	B. BARTLETT	D. SHAW	
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

MATTAGODUS BRIDGE
MATTAGODUS STREAM
WEBSTER PLT PENOBSCOT COUNTY
ABUTMENT NO. 2 REINFORCE-
MENT PLAN & ELEVATION

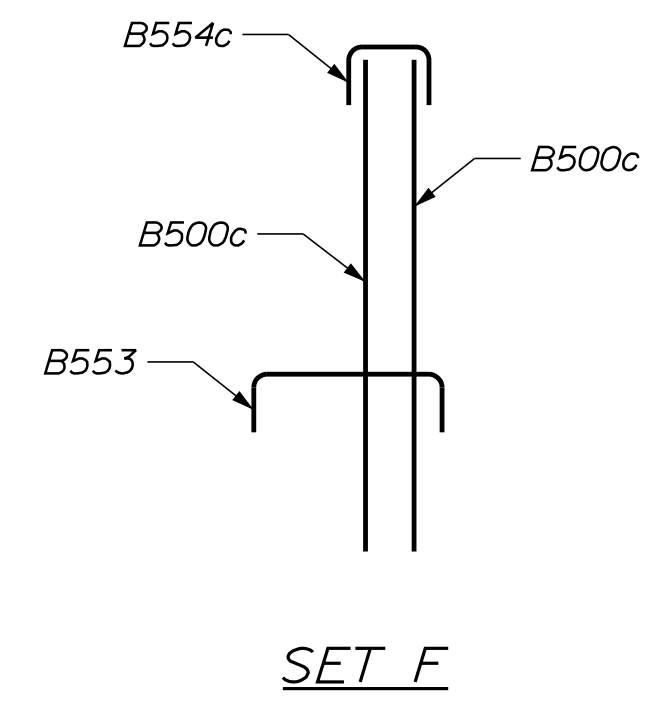
SHEET NUMBER

22

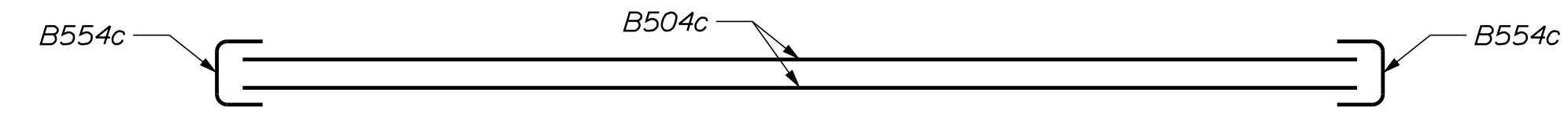
OF 30



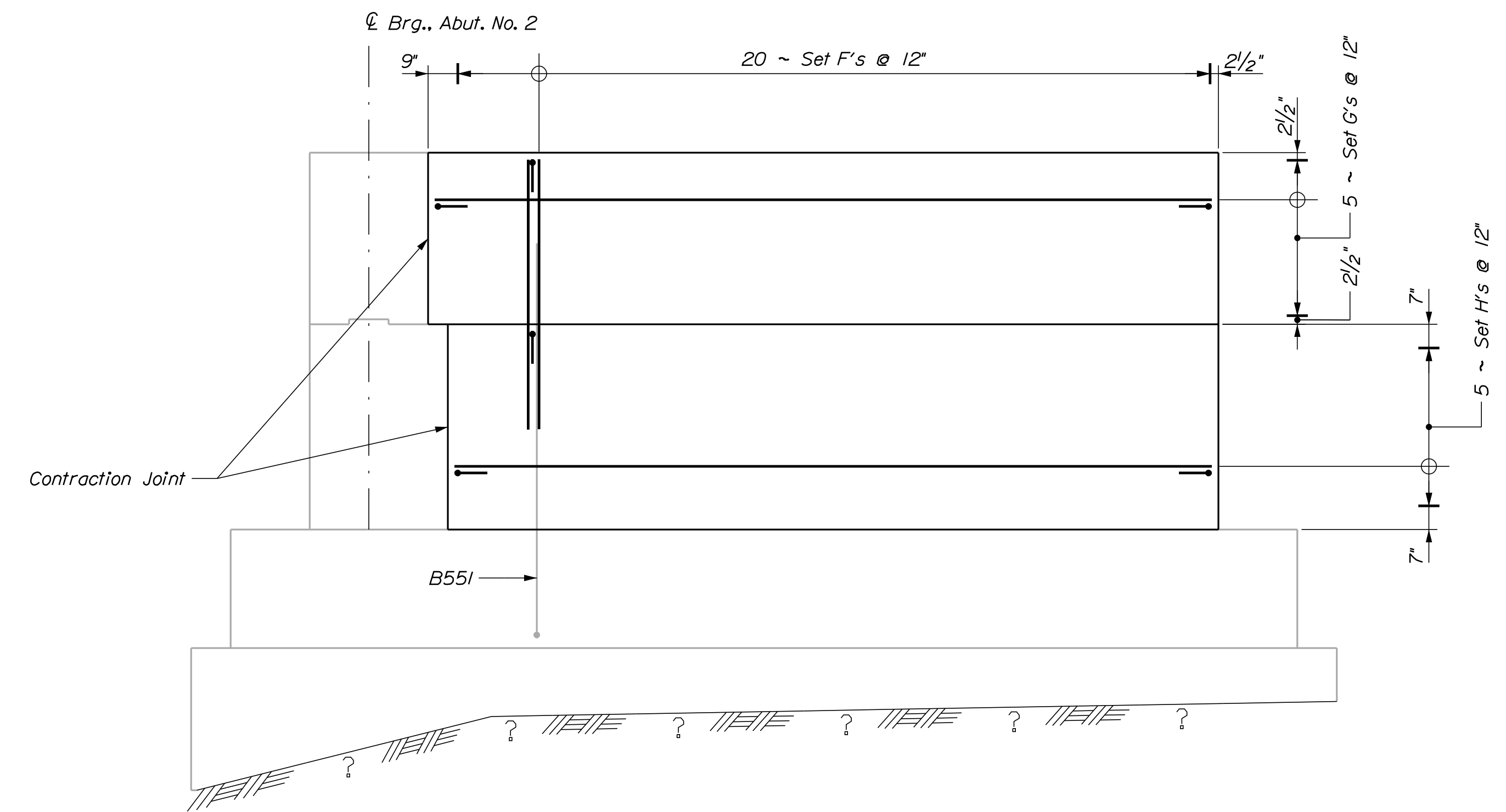
ELEVATION ~ ABUTMENT NO. 2 NORTH WINGWALL



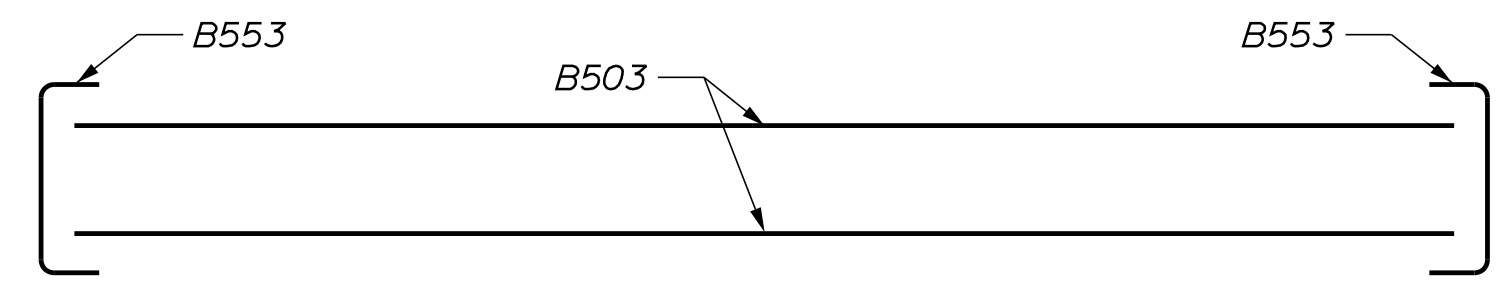
SET F



SET G



ELEVATION ~ ABUTMENT NO. 2 SOUTH WINGWALL



SET H

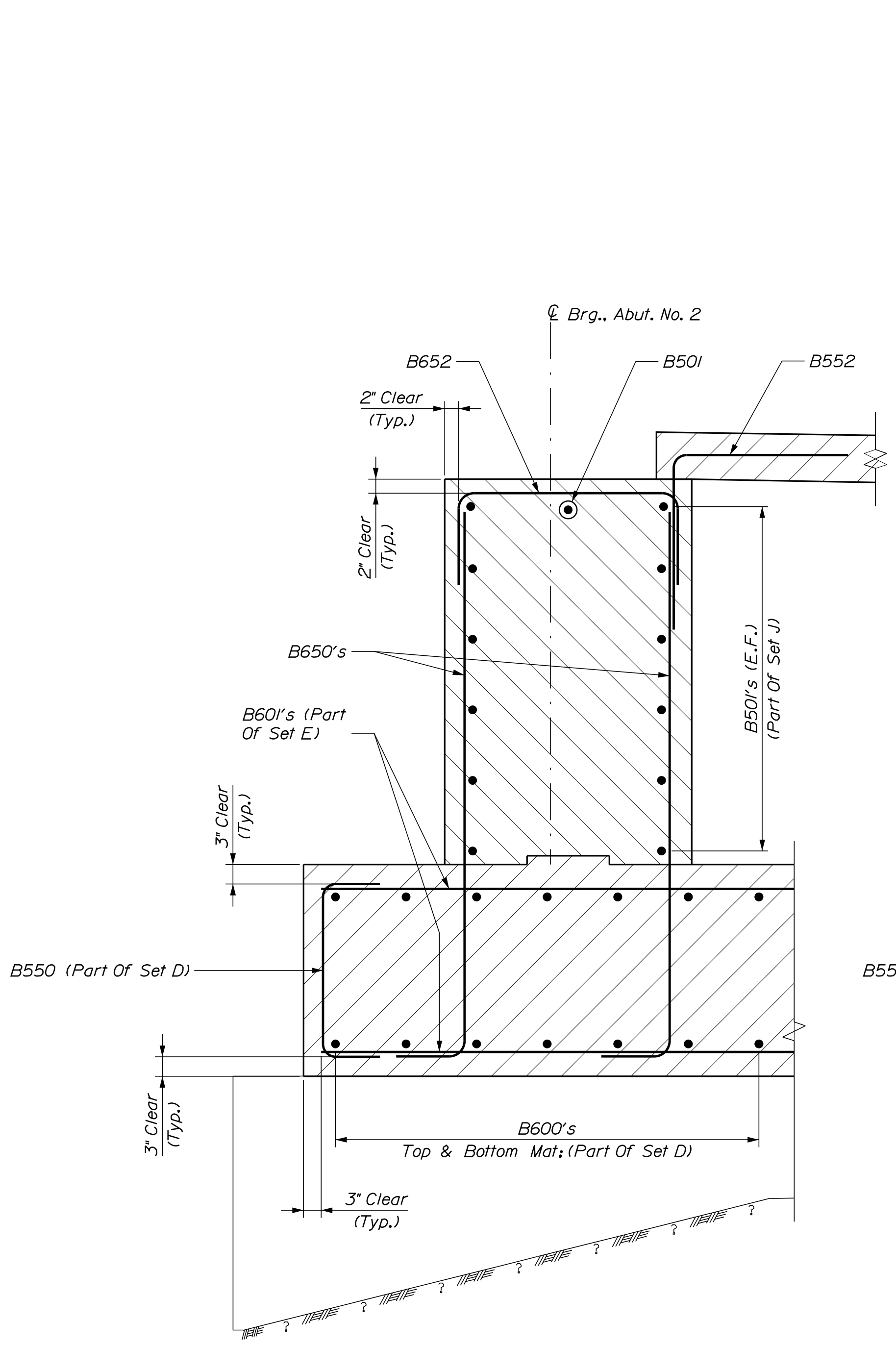
PROJ. MANAGER	MARK PARLIN	BY	R. MAYER	DATE	SEP 2022
DESIGN DETAILED	W. CASEY	CHECKED	B. BARTLETT	REVIEWED	D. SHAW
DESIGN DETAILED		DESIGN DETAILED		DESIGN DETAILED	
REVISIONS 1		REVISIONS 2		REVISIONS 3	
REVISIONS 4		REVISIONS 5		REVISIONS 6	
FIELD CHANGES					
			SIGNATURE		
			P.E. NUMBER		
			DATE		

MATTAGODUS BRIDGE
MATTAGODUS STREAM
WEBSTER PLT PENOBSCOT COUNTY
ABUTMENT NO. 2 WINGWALLS

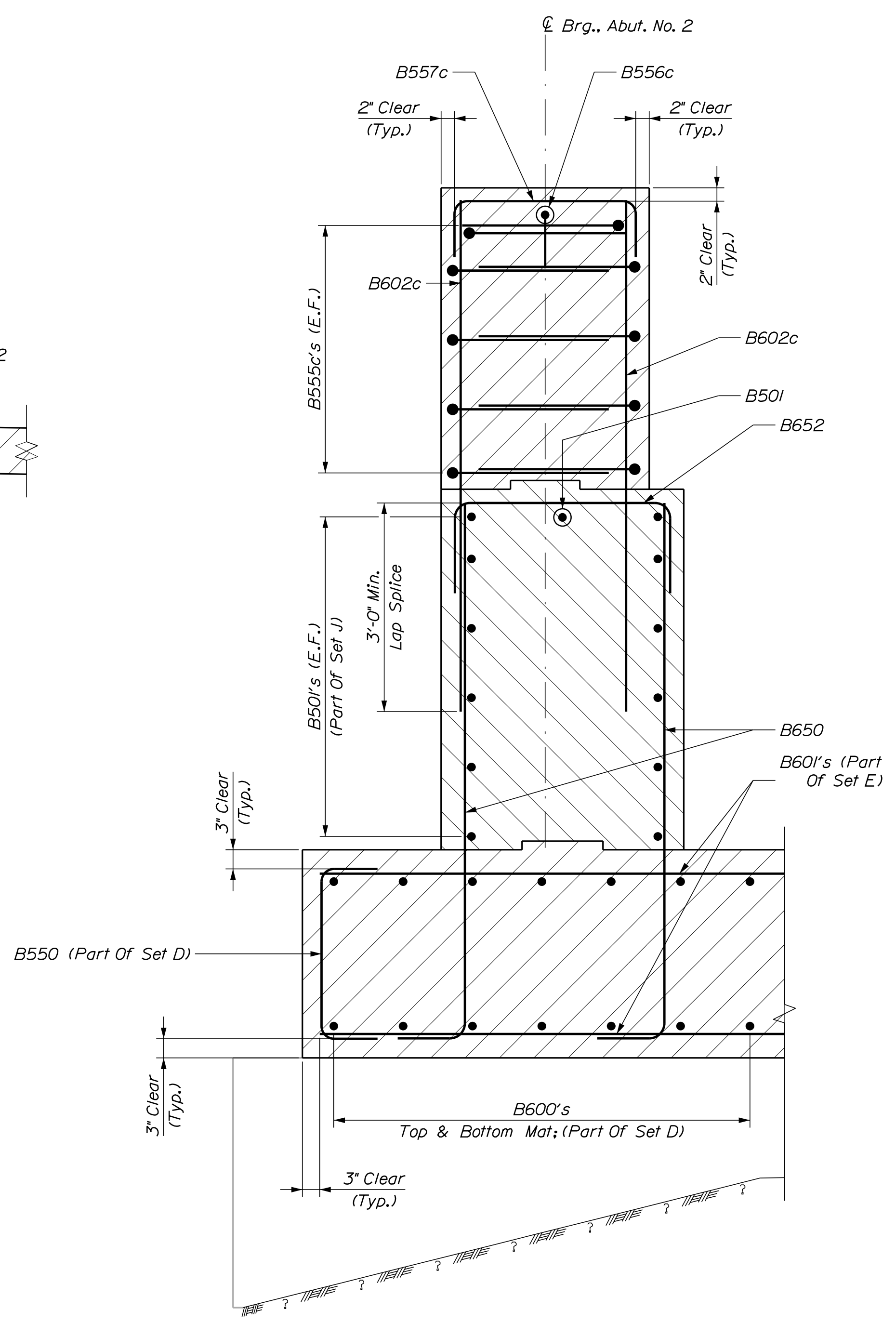
PROJ. MANAGER	MARK PARLIN	BY	DATE
DESIGN-DETAILED	W. CASEY	R. MAYER	SEP 2022
CHECKED-REVIEWED	B. BARTLETT	D. SHAW	
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

MATTAGODUS BRIDGE
MATTAGODUS STREAM
WEBSTER PLT PENOBSCOT COUNTY
ABUTMENT NO. 2 SECTIONS

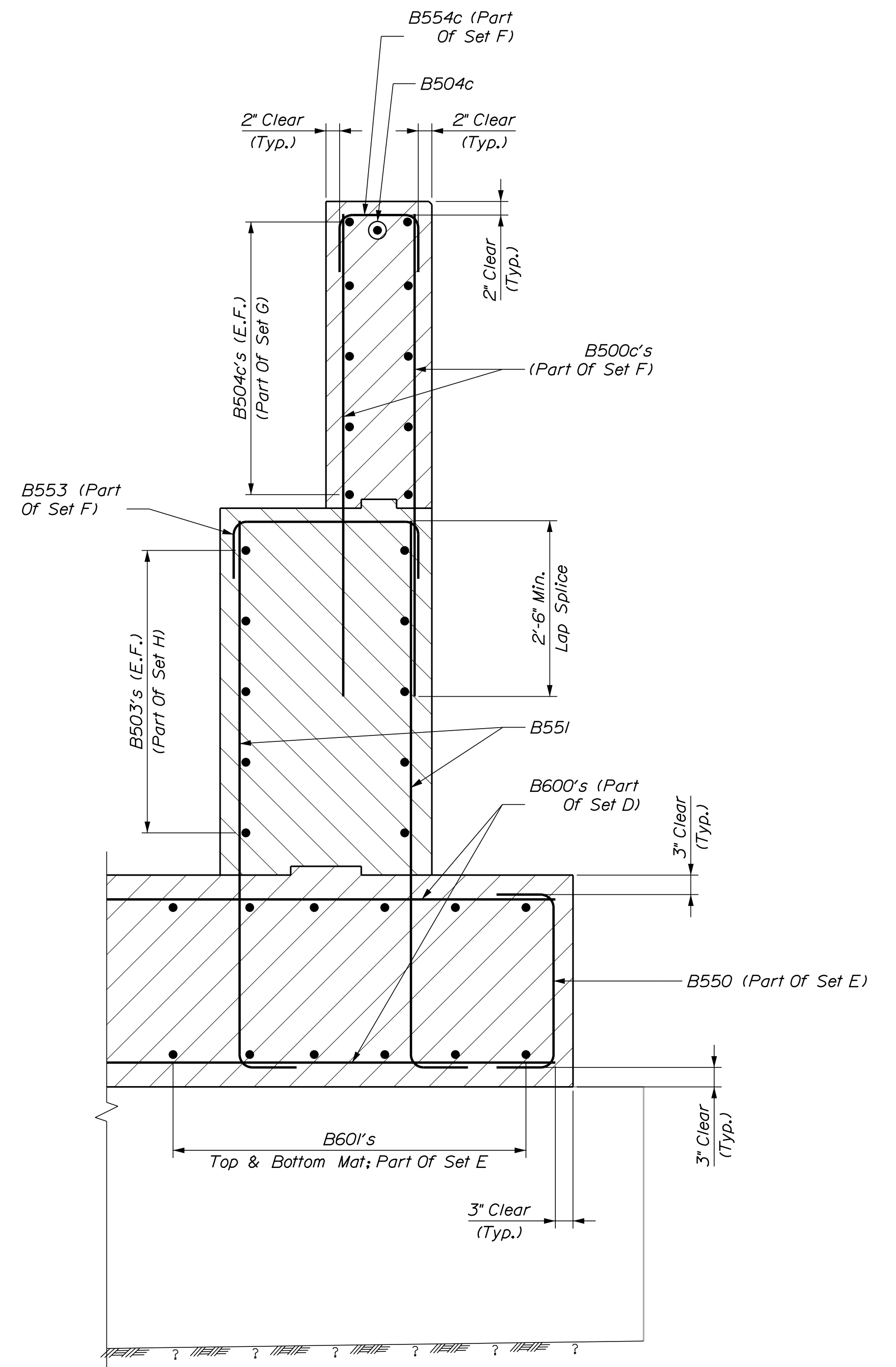
SHEET NUMBER
24
OF 30



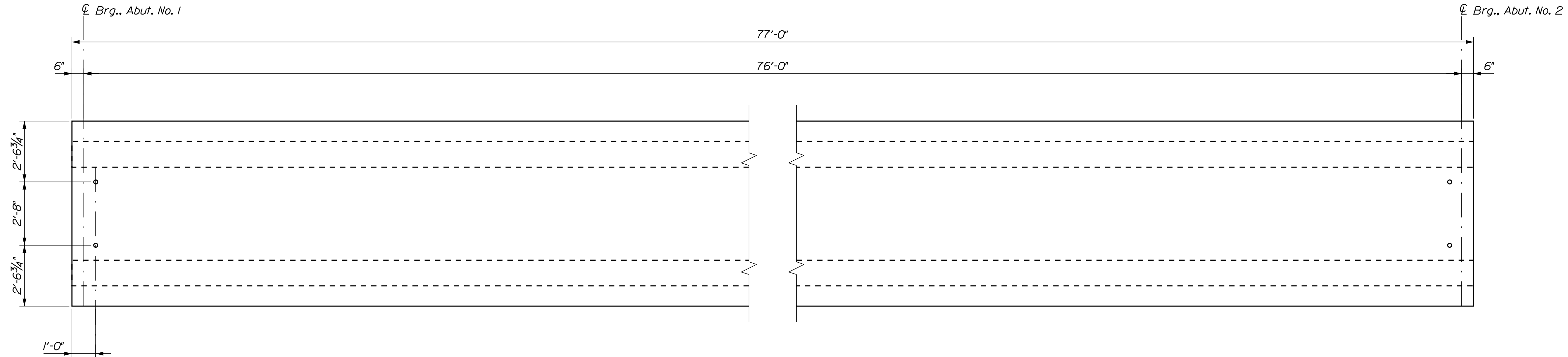
SECTION A-A
(At Abutment No. 2)



SECTION B-B
(At Parapets; Abutment No. 2)

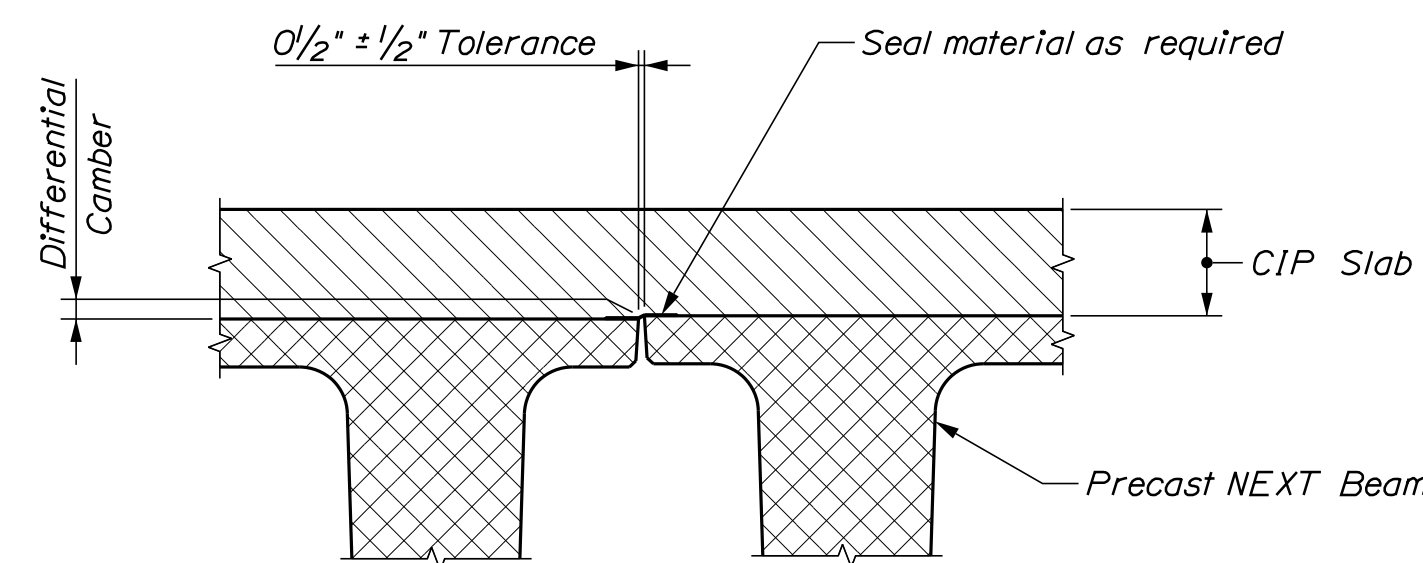


SECTION C-C
(At Wingwall; Abutment No. 2)

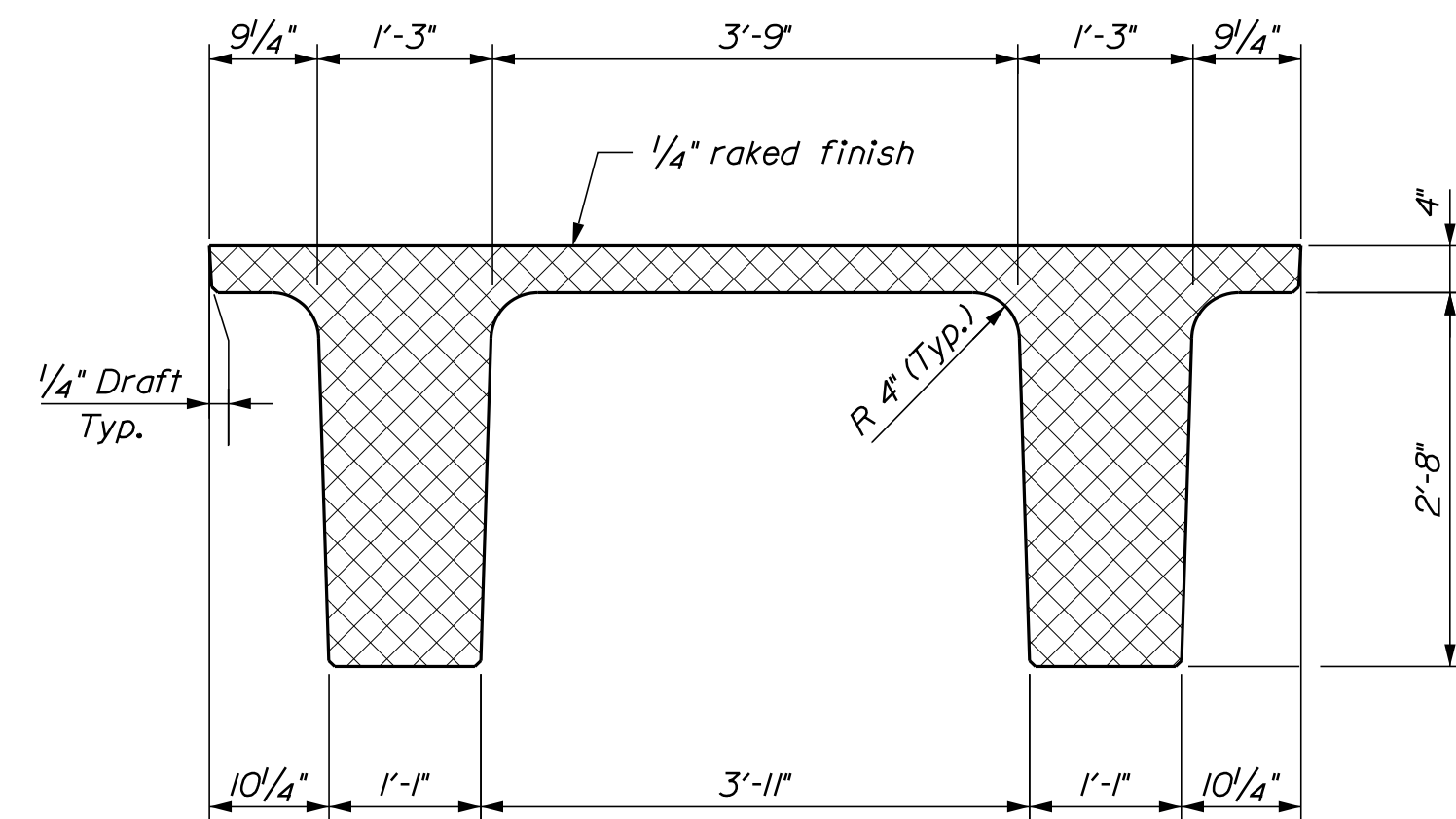


NEXT F BEAM PLAN

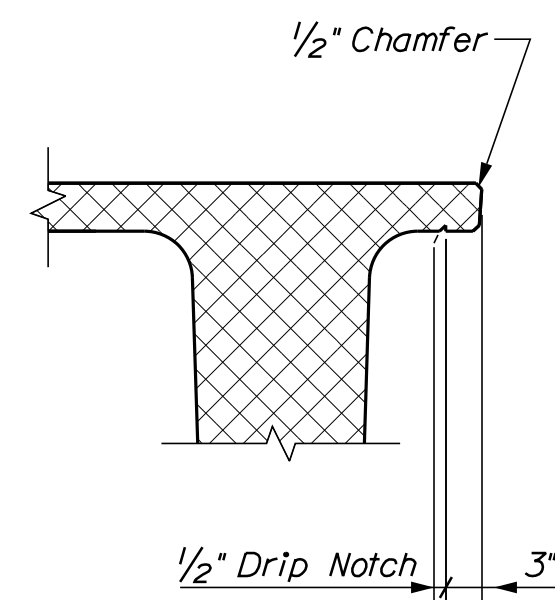
2" Vent Ducts - Typ. Each End
(Adjust To Clear Reinforcing)



NEXT BEAM GAP FORM DETAIL



NEXT 36 F BEAM SECTION



FASCIA OVERHANG DETAIL

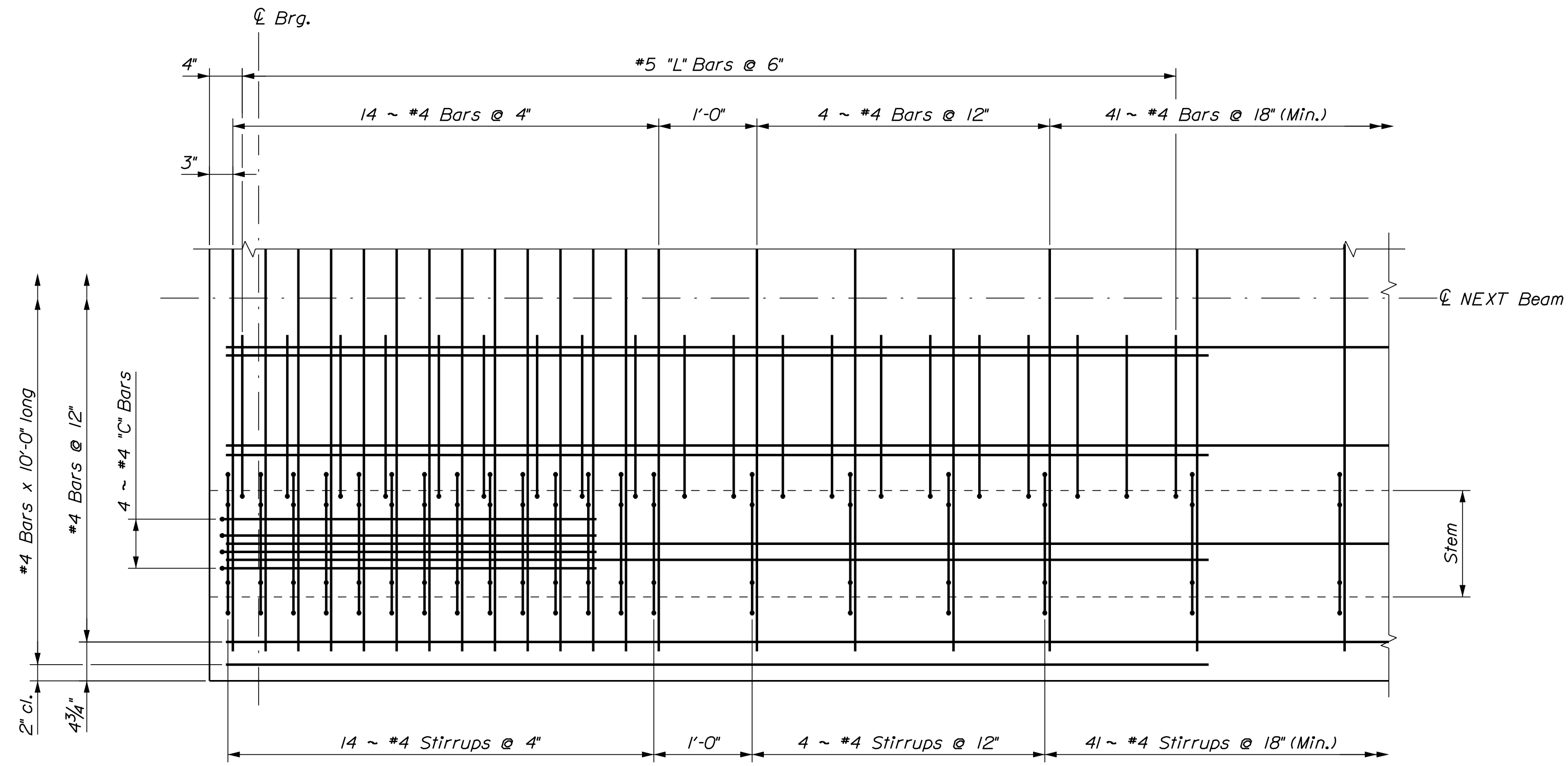
PRECAST CONCRETE SUPERSTRUCTURE NOTES

1. NEXT F Beams are a non - proprietary shape developed by PCI NORTHEAST (PCINE). Standardized section properties and details may be found at <http://www.pcine.org>.
2. The estimated camber at release is 2 inches and the estimated camber at erection is 3.5 inches. Refer to Special Provision Section 535, Precast, Prestressed Concrete Superstructure - Camber.
3. Prestressing strands shall be 0.6 inch diameter. The tensioning force is 44 kips per prestressing strand, including the top strands.
4. Reinforcing steel shall have a minimum concrete cover of 2 inches unless otherwise noted.
5. Do not drill or use powder actuated tools on the prestressed beams without the approval of the Fabrication Engineer.
6. The top surface of the upper flange of the prestressed beams shall be raked to a surface roughness of 1/4 inch, except at 10-ft. increments along the centerline of each beam. At these locations a flattened area of sufficient size shall be left to facilitate taking elevations for setting bottom of slab elevations.
7. Lifting loops and temporary/storage/shipping dunnage shall be a maximum of 2 feet from each beam end.
8. All reinforcement shall be plain deformed steel reinforcement. ASTM A706 reinforcement is acceptable.

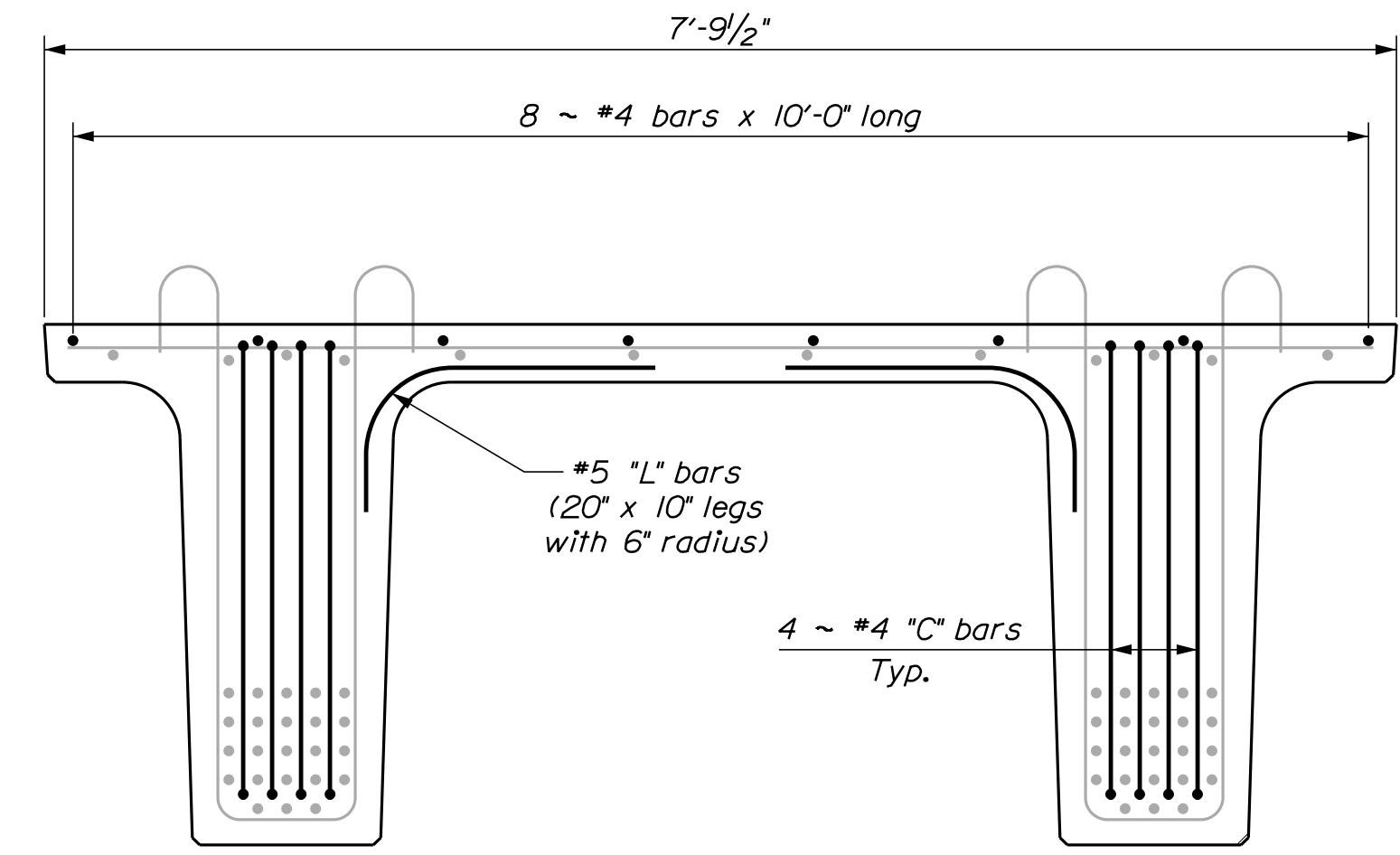
ELASTOMERIC BEARING PAD NOTES

1. Elastomeric Bearing Pads shall be 1"x3'-0"x31'-4" for Abutment No. 1 and 1/2"x3'-0"x31'-4" for Abutment No. 2.
2. The elastomer shall have a shear modulus of 95 psi.
3. Elastomeric Bearing Pads shall conform to the requirements of the latest edition of the AASHTO LRFD Bridge Construction Specifications, Section 18.2.
4. Elastomeric Bearing Pads will not be paid for directly but will be considered incidental to related Contract items. No separate payment will be made.

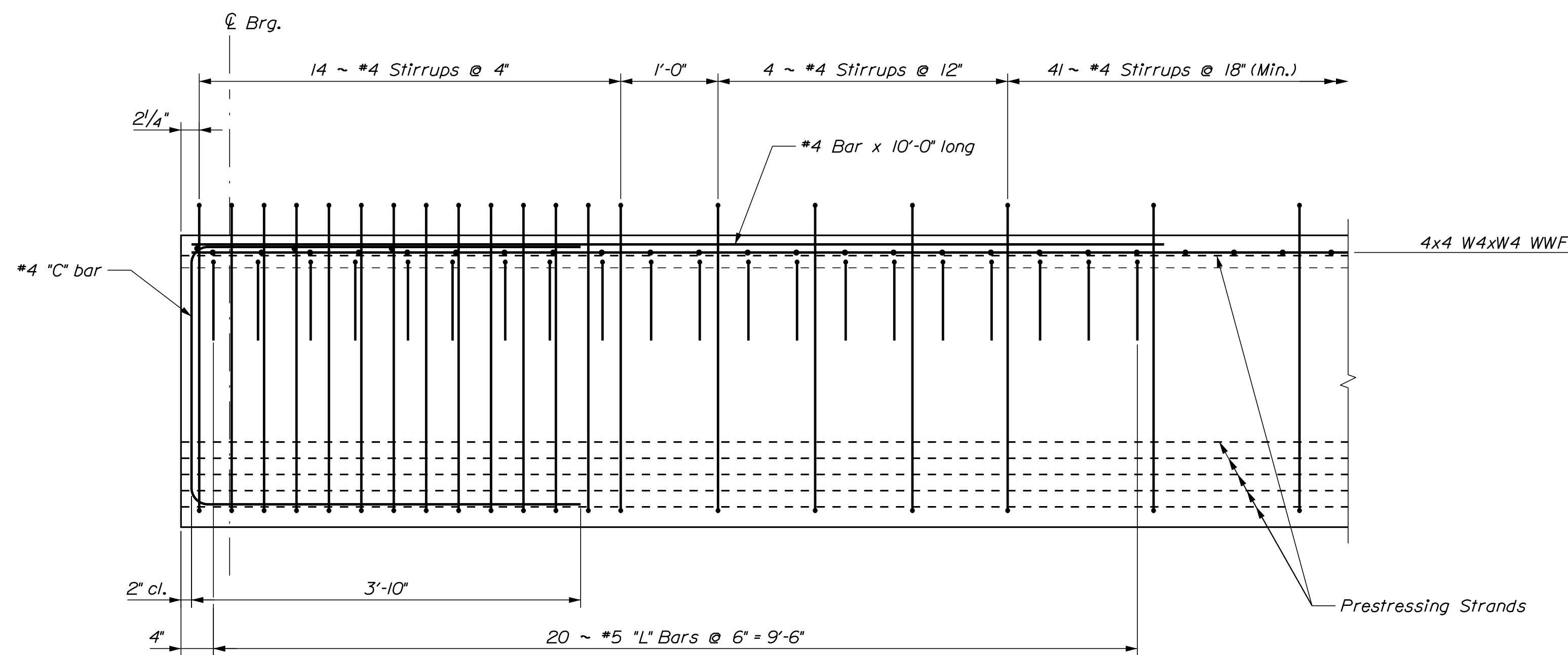
PROJ. MANAGER	MARK PARLIN	BY	DATE
DESIGN DETAILED	W. CASEY	R. MAYER	SEP. 2022
CHECKED/REVIEWED	B. BARTLETT	D. SHAW	
DESIGN DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			



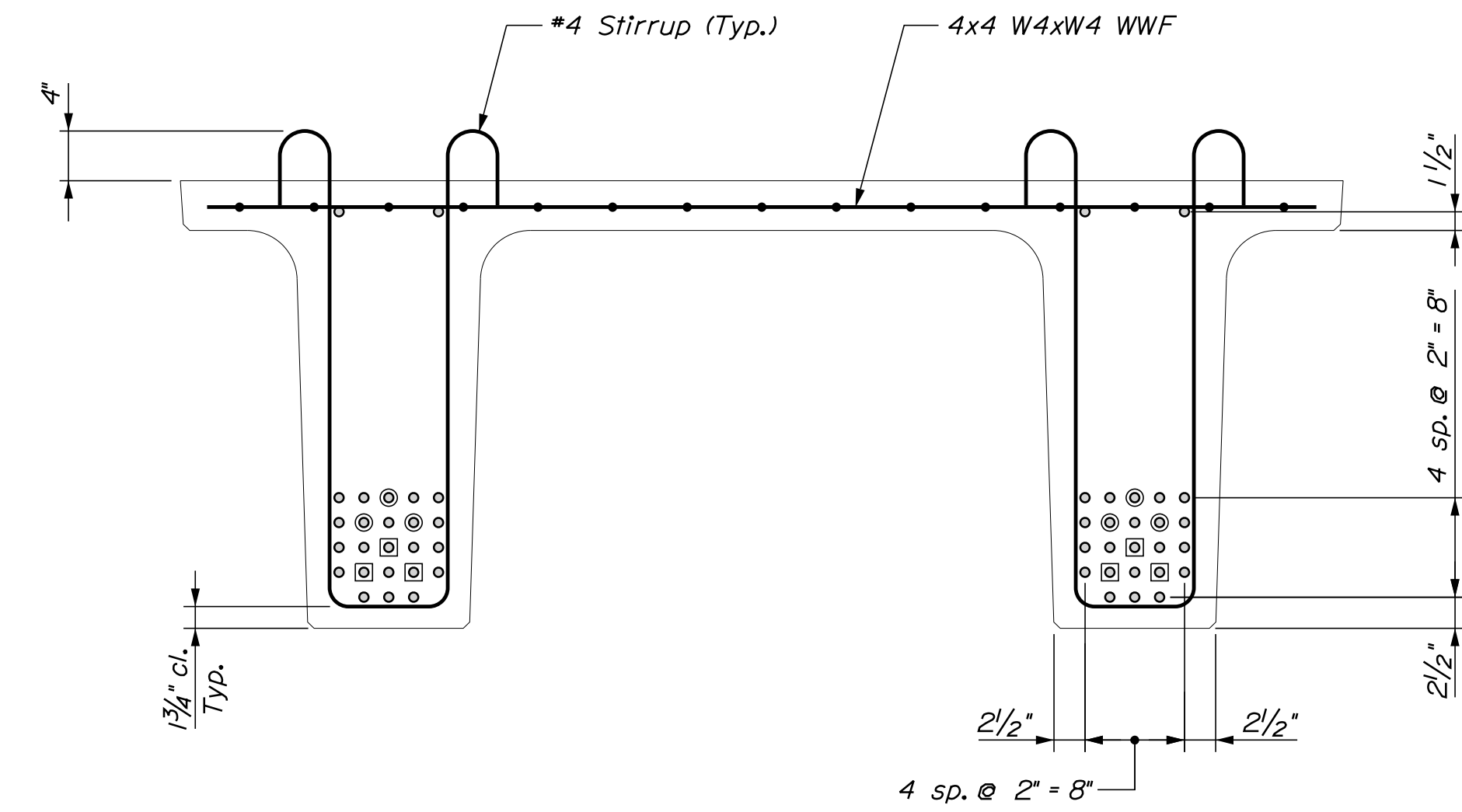
PARTIAL TOP FLANGE REINFORCING PLAN
Prestressing strands not shown



NEXT F BEAM END REINFORCING SECTION



LONGITUDINAL SECTION THROUGH STEM



NEXT F BEAM TYPICAL REINFORCING SECTION

⊙ Strands debonded 5 ft.
⊠ Strands debonded 13 ft.

DATE
BY
SIGNATURE

DATE
BY
SIGNATURE

DATE
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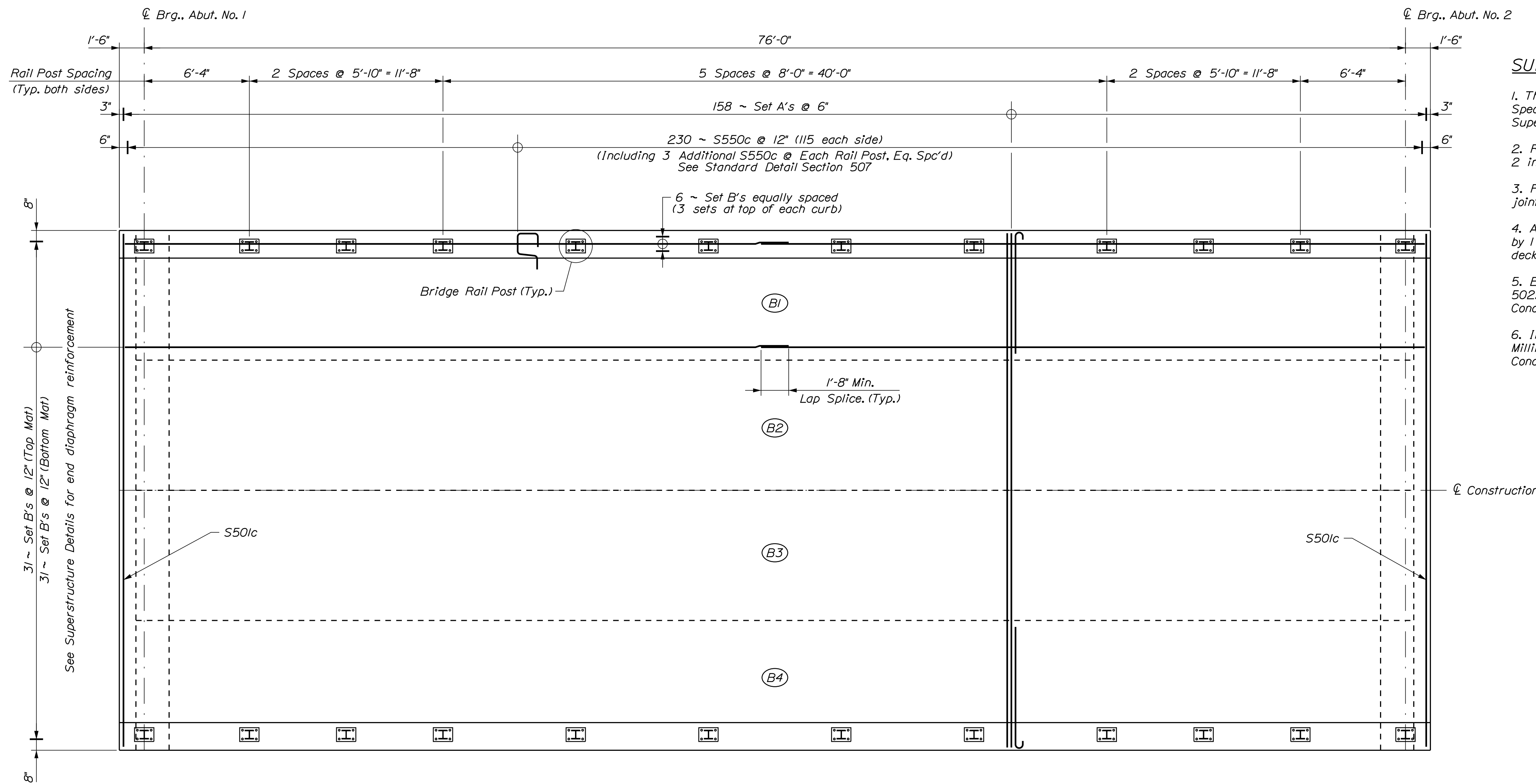
MATTAGODUS BRIDGE
MATTAGODUS STREAM
WEBSTER PLT PENOBSCOT COUNTY

PRECAST NEXT BEAM DETAILS

SHEET NUMBER

26

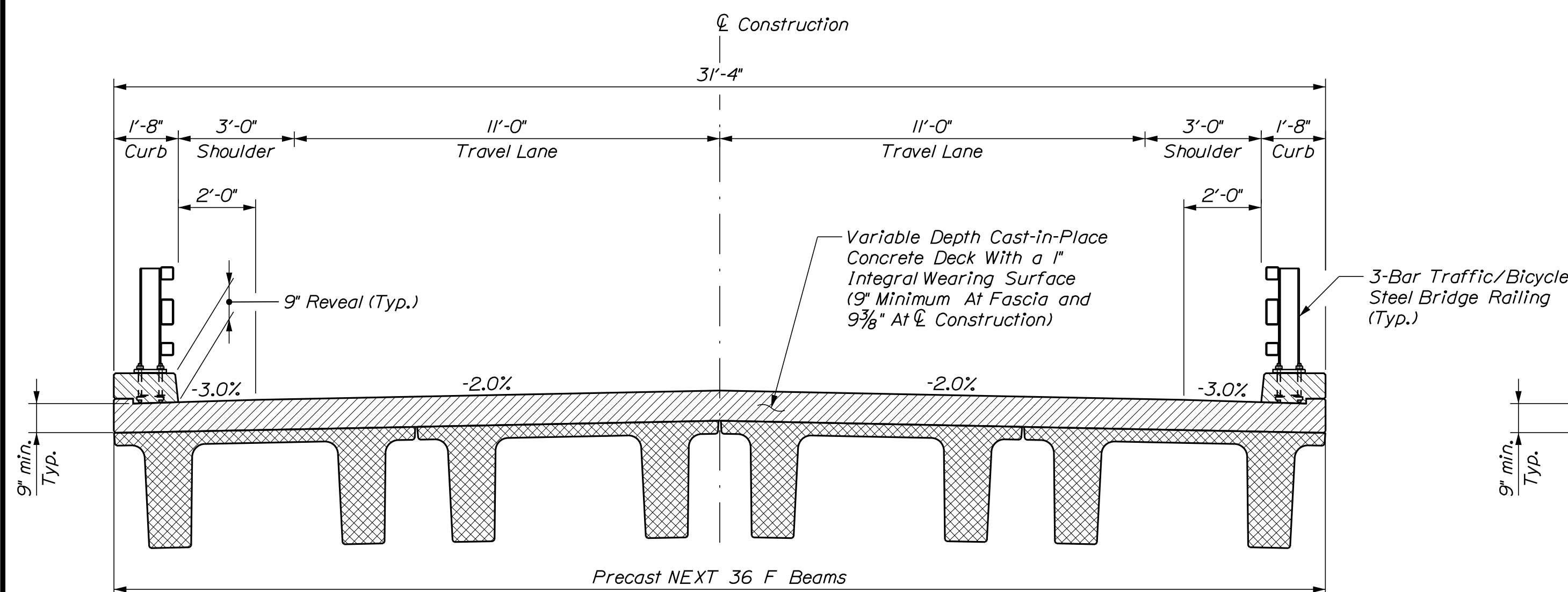
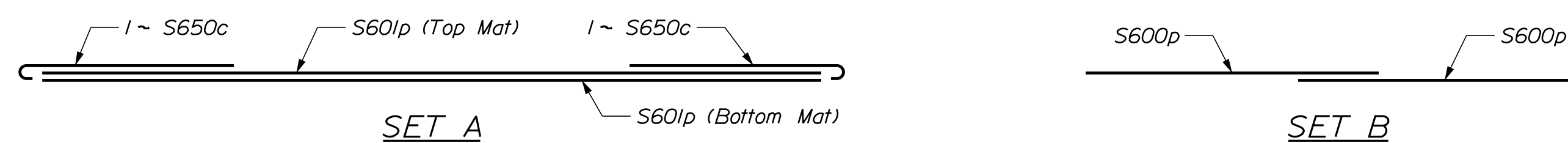
OF 30



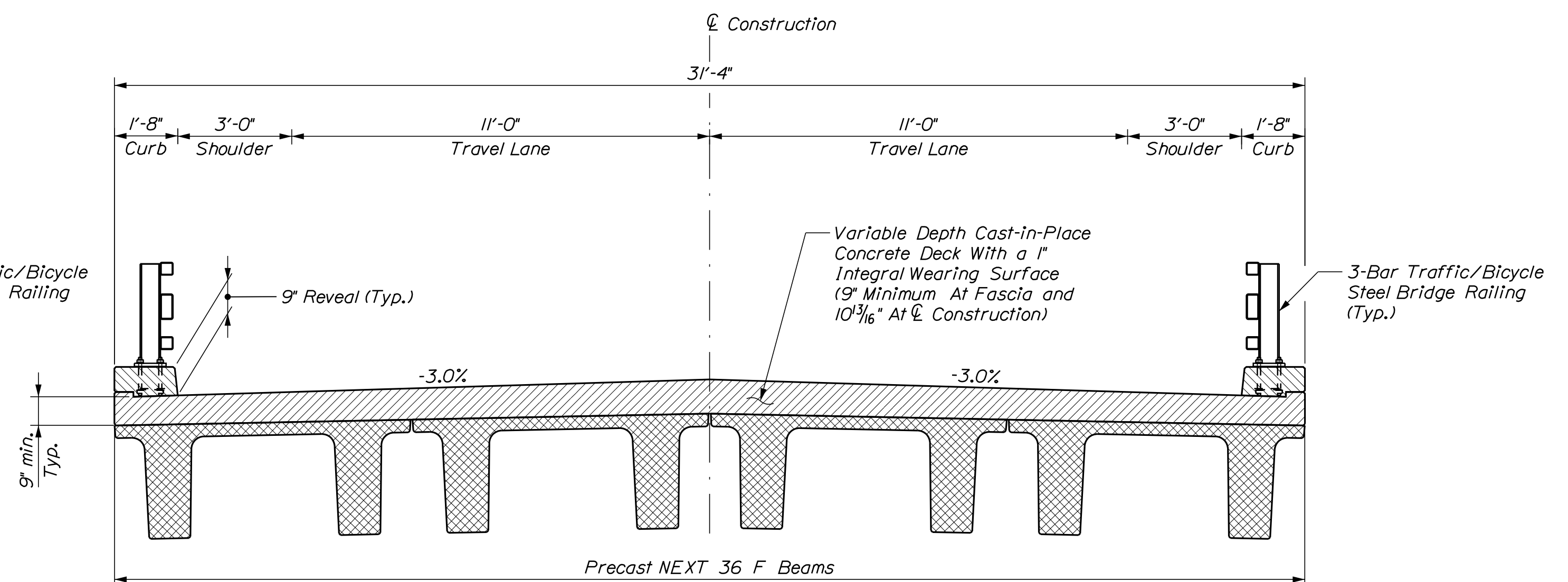
SUPERSTRUCTURE NOTES

- The deck thickness shall be adjusted in accordance with Special Provision Section 535, Precast, Prestressed Concrete Superstructure, Camber.
- Reinforcing steel shall have a minimum concrete cover of 2 inches unless otherwise noted.
- Form a one inch V-groove on the fascias at the horizontal joint between the curb and slab.
- Anchor rods for the steel bridge rail posts shall be shortened by 1 inch to provide additional clearance between the top of the deck and bottom of the anchor rod.
- End diaphragm concrete will be paid for under Item No. 502.261, Structural Concrete Roadway and Sidewalk Slabs on Concrete Bridges and shall be placed with the deck.
- Integral concrete wearing surface shall have a milled finish. Milling shall be paid for under Item 202.31 - Profile Milling Concrete Wearing Surface.

SUPERSTRUCTURE PLAN



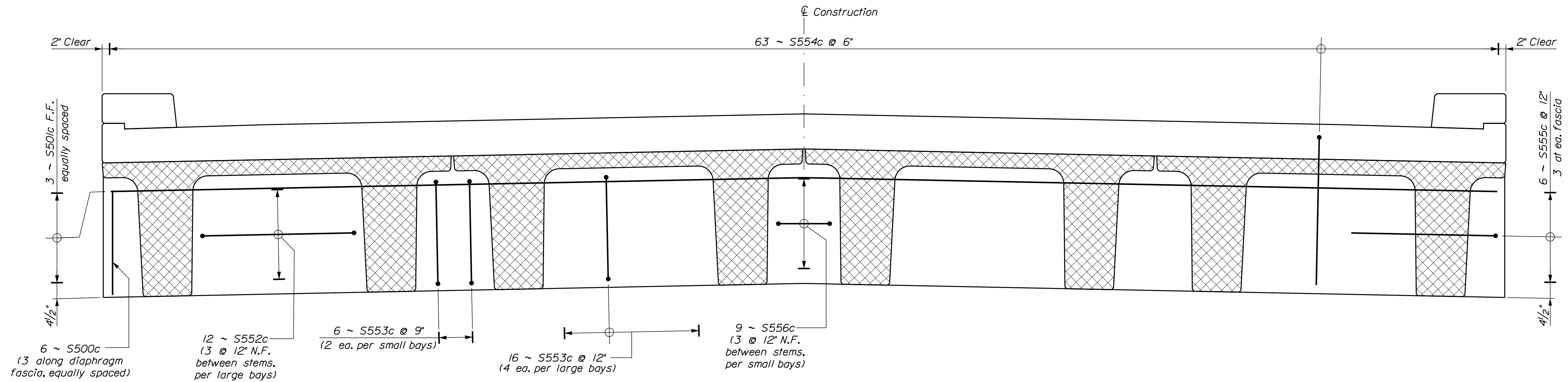
PROPOSED BRIDGE SECTION
Final Deck Section After Milling Procedure



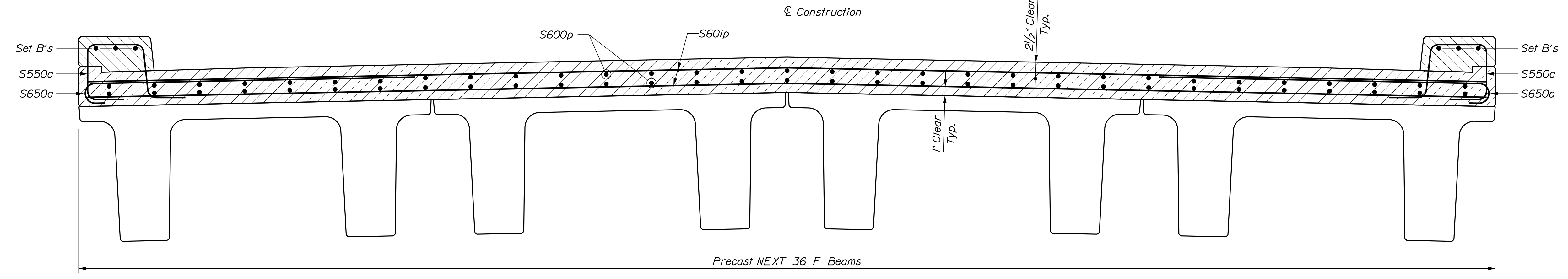
DECK PLACEMENT TYPICAL BRIDGE SECTION

PROJ. MANAGER	MARK PARLIN	BY	DATE
DESIGNED/DETAILED	W. CASEY	R. MAYER	SEP. 2022
CHECKED/REVIEWED	B. BARTLETT	D. SHAW	
DESIGNED/DETAILED			
REVISIONS	1		
REVISIONS	2		
REVISIONS	3		
REVISIONS	4		
FIELD CHANGES			

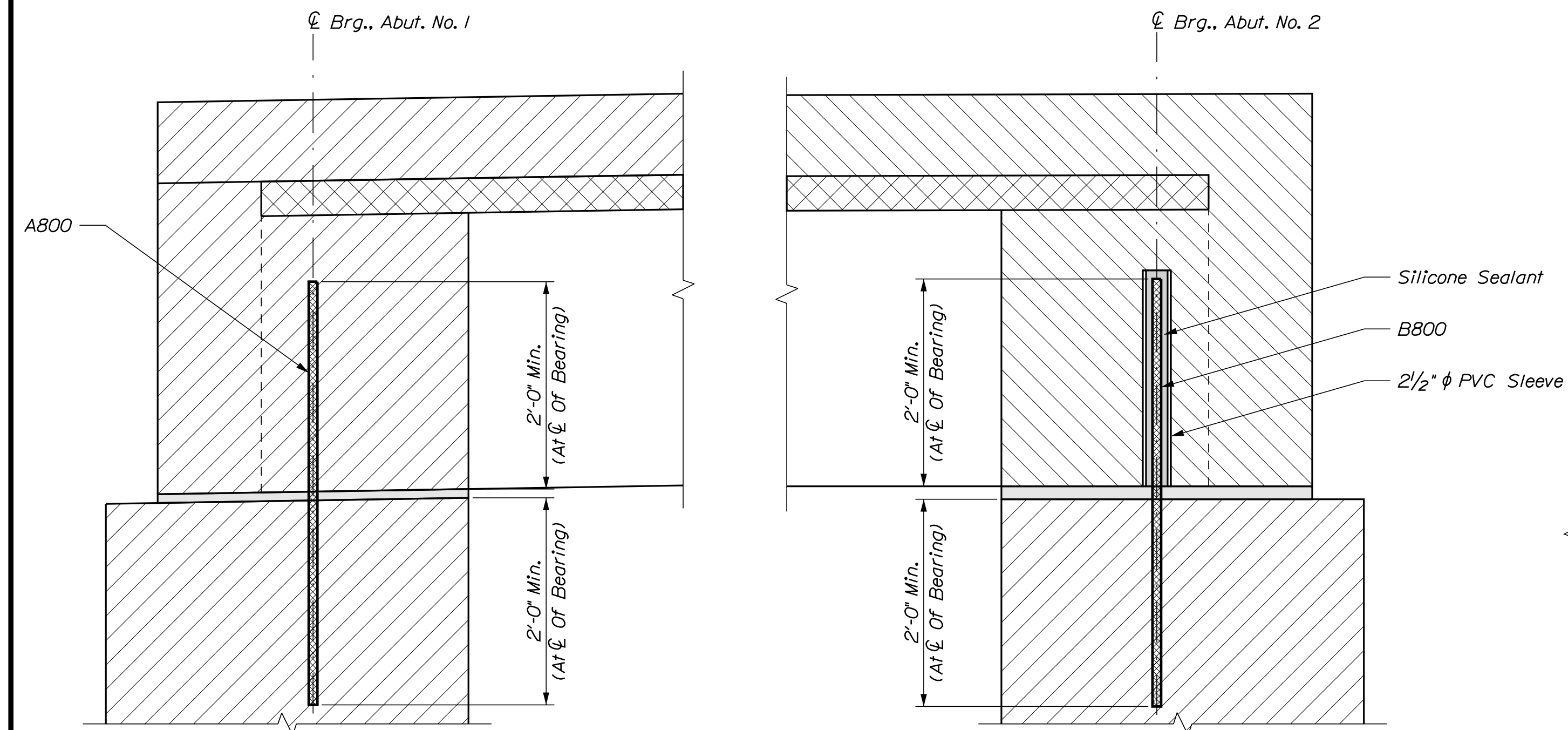
MATTAGODUS BRIDGE
MATTAGODUS STREAM
WEBSTER PLT PENOBSCOT COUNTY
SUPERSTRUCTURE



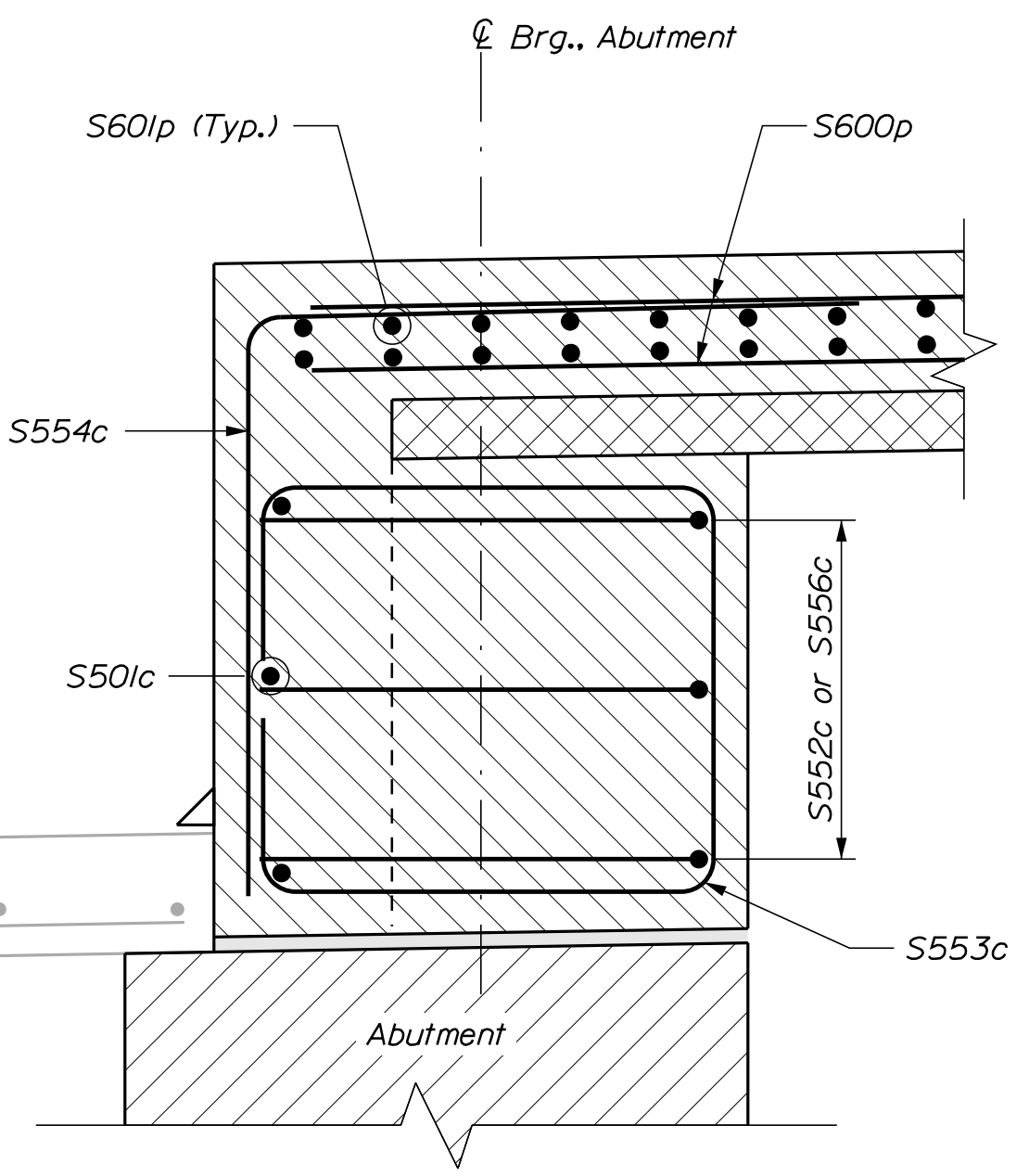
END DIAPHRAGM REINFORCEMENT



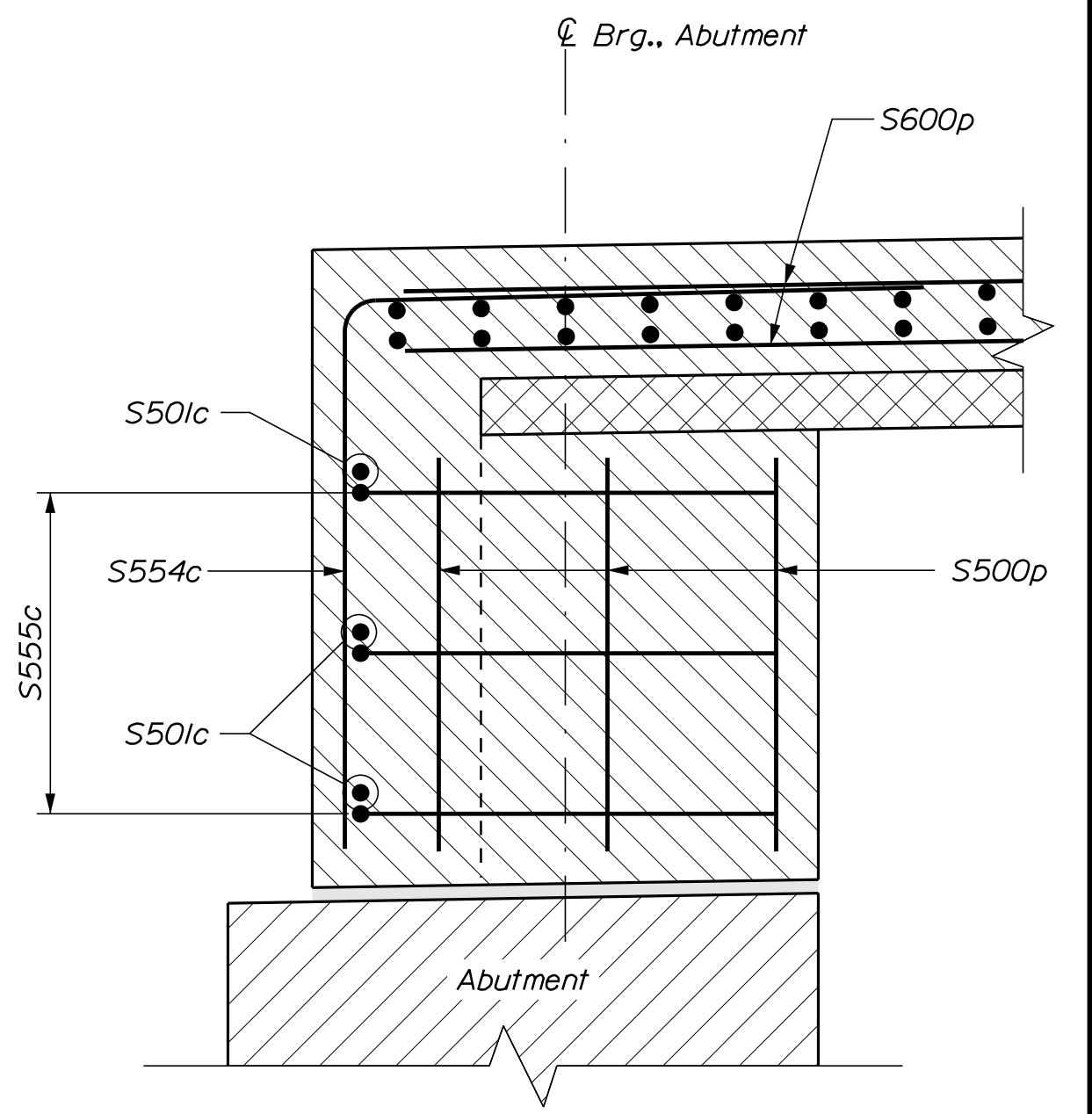
SUPERSTRUCTURE SLAB REINFORCEMENT



SUPERSTRUCTURE ANCHORAGE DETAIL



END DIAPHRAGM SECTION
(Abutment No. 1 Shown, Abutment No. 2 Similar)



END DIAPHRAGM SECTION AT FASCIA
(Abutment No. 1 Shown, Abutment No. 2 Similar)

STATE OF MAINE	BRIDGE NO. 5116	BRIDGE PLANS
DEPARTMENT OF TRANSPORTATION	WIN	022266.00
2226600		

PROJ. MANAGER	MARK PARLIN	DATE	
DESIGN-DETAILED	W. CASEY	BY	R. MAYER
CHECKED-REVIEWED	B. BARTLETT	DATE	SEP. 2022
DESIGN-DETAILED		SIGNATURE	
REVISIONS 1		P.E. NUMBER	
REVISIONS 2		DATE	
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

MATTAGODUS BRIDGE	WEBSTER PLT
MATTAGODUS STREAM	PENOBSCOT COUNTY
SUPERSTRUCTURE DETAILS	

SHEET NUMBER	28
	OF 30

Town, County, State _____
 Approx. Property Lines _____ P.L.
 Existing Right of Way _____
 Limits of Wrought Portion _____ L.O.W.P.
 Control Of Access _____ C.O.A.
 New Right of Way _____
 New Easement _____
 New Temporary Rights _____
 New R/W Within Existing R/W _____

New R/W Along Existing R/W _____
 Building _____
 Trees Conifer _____
 Deciduous _____
 Bush Line _____
 Water Edge _____
 Ledge _____
 Fence CHAIN LINK _____
 BARB WIRE _____
 STOCKADE _____
 Sign _____
 Rock/Boulder _____
 Flag Pole _____
 Well _____
 Mailbox _____

PLAN LEGEND
 Existing Proposed
 Sanitary Sewer _____
 Telephone Line _____
 Electric Line _____
 Water Line _____
 Underdrain Line _____
 Gas Line _____
 Guardrail _____
 Culvert _____

Travelled Way _____
 Ditch _____
 Catch Basin _____
 Manhole _____
 Sewer Manhole _____
 Utility Pole _____
 Fire Hydrant _____
 Curbing _____

Cut Line _____
 Stonewall _____
 Baseline _____
 Monument _____
 Iron Rod Found _____ IRF
 Replacement Pin Set _____
 Fill Line _____
 Retaining Wall _____
 Traverse Point _____
 Pipe Found _____ IPF

STATE OF MAINE
 REGISTRY OF DEEDS
 COUNTY _____
 RECEIVED _____
 at _____ h _____ m _____ M and recorded in
 Plan Book _____, Page _____
 Attest: _____ REGISTER

THIS PLAN WAS PREPARED IN CONNECTION WITH THE DEPARTMENT'S
 ACQUISITION OF REAL PROPERTY FOR TRANSPORTATION PURPOSES.
 IT CANNOT BE USED TO ESTABLISH LEGAL BOUNDARIES BETWEEN
 ADJUTING PROPERTY OWNERS.

25 0 25 50 75 100
 Scale of Feet

STATE OF MAINE
 DEPARTMENT OF
 INLAND FISHERIES AND WILDLIFE
 PARCEL NO. (1)
 SLOPE EASE. = 0.06± AC. (2)
 TEMP. ROAD RIGHTS = 0.36± AC. (1)
 TOTAL AREA = 1,375± AC. (DEED)
 (NORTH AND SOUTH OF ROUTE 170)

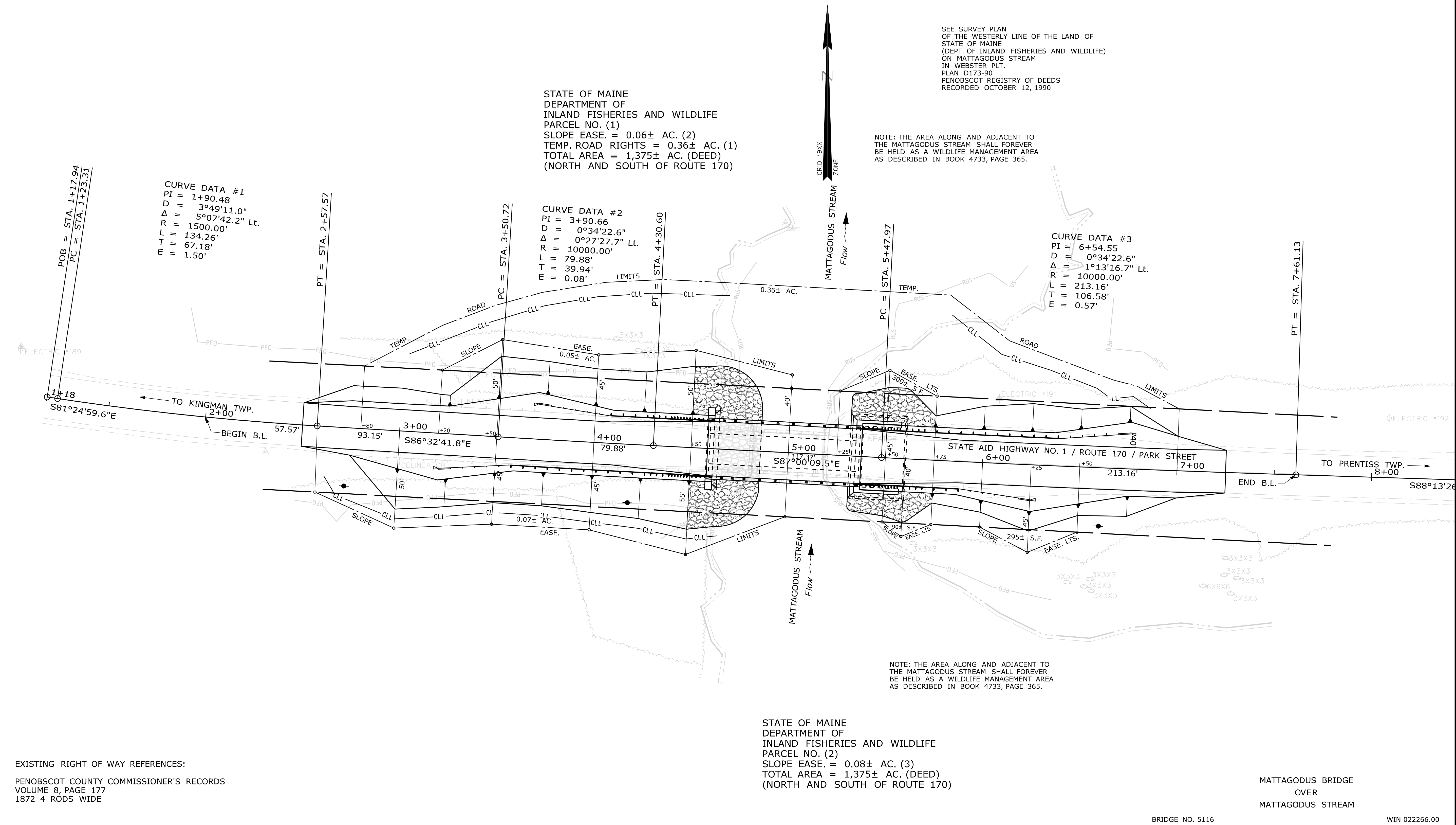
NOTE: THE AREA ALONG AND ADJACENT TO
 THE MATTAGODUS STREAM SHALL FOREVER
 BE HELD AS A WILDLIFE MANAGEMENT AREA
 AS DESCRIBED IN BOOK 4733, PAGE 365.

SEE SURVEY PLAN
 OF THE WESTERLY LINE OF THE LAND OF
 STATE OF MAINE
 (DEPT. OF INLAND FISHERIES AND WILDLIFE)
 ON MATTAGODUS STREAM
 IN WEBSTER PLT.
 PLAN D173-90
 PENOBSCOT REGISTRY OF DEEDS
 RECORDED OCTOBER 12, 1990

CURVE DATA #1
 PI = 1+90.48
 D = 3°49'11.0"
 Δ = 5°07'42.2" Lt.
 R = 1500.00'
 L = 134.26'
 T = 67.18'
 E = 1.50'

CURVE DATA #2
 PI = 3+90.66
 D = 0°34'22.6"
 Δ = 0°27'27.7" Lt.
 R = 10000.00'
 L = 79.88'
 T = 39.94'
 E = 0.08'

CURVE DATA #3
 PI = 6+54.55
 D = 0°34'22.6"
 Δ = 1°13'16.7" Lt.
 R = 10000.00'
 L = 213.16'
 T = 106.58'
 E = 0.57'



STATE OF MAINE
 DEPARTMENT OF
 INLAND FISHERIES AND WILDLIFE
 PARCEL NO. (2)
 SLOPE EASE. = 0.08± AC. (3)
 TOTAL AREA = 1,375± AC. (DEED)
 (NORTH AND SOUTH OF ROUTE 170)

NOTE: THE AREA ALONG AND ADJACENT TO
 THE MATTAGODUS STREAM SHALL FOREVER
 BE HELD AS A WILDLIFE MANAGEMENT AREA
 AS DESCRIBED IN BOOK 4733, PAGE 365.

EXISTING RIGHT OF WAY REFERENCES:
 PENOBSCOT COUNTY COMMISSIONER'S RECORDS
 VOLUME 8, PAGE 177
 1872 4 RODS WIDE

MATTAGODUS BRIDGE
 OVER
 MATTAGODUS STREAM

BRIDGE NO. 5116 WIN 022266.00

REVISIONS			PLAN FILED IN PLAN BOOK				PAGE COUNTY RECORD				
NO.	DATE	DESCRIPTION	BY	NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE	DATE	PAGE

BRUCE A. VAN NOTE
 COMMISSIONER
 JOYCE NOEL TAYLOR
 CHIEF ENGINEER
 DATE _____

STATE AID HIGHWAY NO. 1
 ROUTE 170 / PARK STREET
 WEBSTER PLANTATION PENOBSCOT COUNTY
 FEDERAL AID PROJECT NO. 2226600
 OCTOBER 2022 RIGHT-OF-WAY MAP
 SCALE 1" = 25' SHEET 1 OF 1
 D.O.T. FILE NO. 10-530

ITEM	TECH	CHECKED
EXISTING CONDITION PLAN	T.L.B.	
FINAL RIGHT OF WAY	T.L.B.	
AREAS	T.L.B.	

STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION
 16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460
 WEBSTER PLANTATION
 RIGHT OF WAY MAP

SHEET NUMBER
30
 OF 30

Filename: ... \00\ROW\MSTA001_RWPLAN1.dgn
 Division: ROW
 Username: Terri.L.Blair
 Date: 3/1/2023