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

HYDROLOGIC DATA

Drainage Area	16.91 sq mi
Design Discharge (Q50)	1,362.81 cfs
Check Discharge (Q100)	1,541.55 cfs
Headwater Elevation (Q1.1)	219.48 ft
Headwater Elevation (Q10)	221.61 ft
Headwater Elevation (Q25)	222.22 ft
Headwater Elevation (Q50)	222.68 ft
Headwater Elevation (Q100)	223.13 fps
Discharge Velocity (Q1.1)	5.20 fps
Discharge Velocity (Q10)	8.18 fps
Discharge Velocity (Q25)	8.78 fps
Discharge Velocity (Q50)	9.18 fps
Discharge Velocity (Q100)	9.50 fps

MATERIALS

Concrete:	
Curbs	Class "LP"
All Other	Class "A"
Reinforcing:	
Plain Reinforcing Steel	ASTM A615, Grade 60
Glass Fiber Reinforcing Polymer (GFRP)	ASTM D7957
Low-Carbon Chromium Steel:	ASTM A1035, Type CS, Grade 100
Structural Steel:	
All Material (except as noted)	ASTM A709, Grade 50W (unpainted)
High Strength Bolts	ASTM F3125, Grade A325, Type 3
H-Piles	ASTM A572, Grade 50

BASIC DESIGN STRESSES

Concrete:	
Class "A"	f 'c = 4,000 psi
Class "LP"	f 'c = 5,000 psi
Reinforcing:	
Plain Reinforcing Steel	f y = 60,000 psi
Low-Carbon Chromium Steel	f y = 100,000 psi
Glass Fiber Reinforced Polymer	f fu = 100,000
Minimum Elastic Modulus	E f = 8,700,000 psi
Minimum Nominal Design Tensile Strain	e fu = 1.1%
Structural Steel:	
ASTM A709, Grade 50W	F y = 50,000 psi
ASTM F3125, Grade A325	F μ = 120,000 psi

ALBION
KENNEBEC COUNTY
PUDDLE DOCK BRIDGE
OVER
FIFTEENMILE STREAM
SOUTH FREEDOM ROAD
FEDERAL AID PROJECT NO. 2529900
PROJECT LENGTH 0.110 mi.
BRIDGE NO. 3107

LIST OF DRAWINGS

UTILITIES

Central Maine Power Company
Charter Communications, Inc.
Unitel, Inc.

TRAFFIC DATA

Current (2021) AADT	1070
Future (2041) AADT	1230
DHV - % of AADT	10%
Design Hour Volume	123
Heavy Trucks (% of AADT)	11
Heavy Trucks (% of DHV)	14
Directional Distribution (% of DHV)	51
18 kip Equivalent P 2.0	52
18 kip Equivalent P 2.5	49
Design Speed (mph)	25

MAINTENANCE OF TRAFFIC

Existing bridge is currently closed to traffic and shall remain closed during construction.

PROJECT LOCATION	On the South Freedom Rd. 0.11 of a Mile North of Knights Rd. Over Fifteenmile Stream. Lat./Long. 44°30'48.22" N 69°25'08.39" W
PROGRAM AREA	Highway Bridges - Traditional
OUTLINE OF WORK	Bridge Replacement

02529900 WIN 025299.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
APPROVED — DATE
COMMISSIONER: 11-25-22
CHIEF ENGINEER: 11/30/2024

STATE OF MAINE · ROGER M. NACUS · 9918 · REGISTERED PROFESSIONAL ENGINEER

SIGNATURE
P.E. NUMBER 9918
DATE NOV 19 2024

PROJECT INFORMATION		DATE
PROGRAM	BRIDGE PROGRAM	
PROJECT MANAGER	BRIAN NICHOLS	
DESIGNER	ERIN BREWER	
CONSULTANT		
PROJECT RESIDENT		
CONTRACTOR		
PROJECT COMPLETION DATE		

ALBION
PUDDLE DOCK BRIDGE

TITLE SHEET

SHEET NUMBER
1
OF 31

Username: Mark.Poulin Date:11/14/2024
Division: BRIDGE
Filename:\00\BRIDGE\MSTA\001_Title.dgn

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.19	REMOVING EXISTING BRIDGE (Steel 53,000 lbs)(Concrete 37 cy)	1	LS
202.202	REMOVING PAVEMENT SURFACE	260	SY
203.20	COMMON EXCAVATION	1,640	CY
203.24	COMMON BORROW	50	CY
203.25	GRANULAR BORROW	455	CY
206.07	STRUCTURAL ROCK EXCAVATION - DRAINAGE & MINOR STRUCTURES	30	CY
206.082	STRUCTURAL EARTH EXCAVATION - MAJOR STRUCTURES	600	CY
206.092	STRUCTURAL ROCK EXCAVATION - MAJOR STRUCTURES	110	CY
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	830	CY
403.2081	12.5 MM POLYMER MODIFIED HOT MIX ASPHALT	144	T
403.209	HOT MIX ASPHALT 9.5 MM (SIDEWALKS, DRIVES, ISLANDS, & INCIDENTALS)	3	T
403.2131	12.5 MM POLYMER MODIFIED HMA BASE	200	T
409.15	BITUMINOUS TACK COAT - APPLIED	57	G
501.50	STEEL H-BEAM PILES 89 LBS/FT, DELIVERED	150	LF
501.502	ROCK-SOCKETED H-PILE 89 LB/FT, IN PLACE	150	LF
501.804	DRILLING EQUIPMENT MOBILIZATION, ROCK-SOCKETED H-PILE	1	LS
502.219	STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS (85 CY)	1	LS
502.26	STRUCTURAL CONCRETE ROADWAY & SIDEWALK SLABS ON STEEL BRIDGES (155 CY)	1	LS
502.291	SAW CUT GROOVING (3,000 SF)	1	LS
502.31	STRUCTURAL CONCRETE APPROACH SLABS (21 CY)	1	LS
502.49	STRUCTURAL CONCRETE CURBS AND SIDEWALKS (10 CY)	1	LS
502.77	FIBER REINFORCED POLYMER BRIDGE DRAIN - TYPE: A1	2	EA
503.12	REINFORCING STEEL, FABRICATED AND DELIVERED	16,600	LB
503.13	REINFORCING STEEL, PLACING	16,600	LB
503.19	LOW-CARBON, CHROMIUM REINFORCEMENT - FABRICATED & DELIVERED	8,660	LB
503.20	LOW-CARBON, CHROMIUM REINFORCEMENT - PLACING	8,660	LB
504.702	STRUCTURAL STEEL FABRICATED AND DELIVERED, WELDED (112,500 LB)	1	LS
504.71	STRUCTURAL STEEL ERECTION (112,500 LB)	1	LS
505.08	SHEAR CONNECTORS (850 EA)	1	LS
507.0821	STEEL BRIDGE RAILING, 3 BAR (214 LF)	1	LS
507.0822	STEEL APPROACH RAILING, 3-BAR	4	EA
511.07	COFFERDAM: ABUTMENT 1	1	LS
511.07	COFFERDAM: ABUTMENT 2	1	LS
512.081	FRENCH DRAINS (105 LF)	1	LS
513.50	ROCK BLOCK TOE BUTTRESS STABILIZATION	1	LS
515.21	PROTECTIVE COATING FOR CONCRETE SURFACES (490 SY)	1	LS
526.301	PORTABLE CONCRETE BARRIER TYPE 1 (110 LF)	1	LS
530.30	GFRP, REINFORCEMENT BARS, FAB & DEL	26,000	LF
530.31	GFRP, REINFORCEMENT BARS, PLACING	26,000	LF
606.1301	31" W-BM GR, MID-WAY SPLICE-SGL FACED	255	LF
606.1303	31" W-BM GR, MID-WAY SPLICE-15' RAD AND LESS	25	LF
606.1305	31" W-BM GR, MID-WAY SPLICE FLARED TERMINAL	2	EA
606.1306	31" W-BM GR, MID-WAY SPLICE TANGENT TERMINAL	1	EA
606.1721	BRIDGE TRANSITION - TYPE 1	4	EA
606.265	TERMINAL END - SINGLE RAIL - GALVANIZED STEEL	1	EA
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	8	EA
610.08	PLAIN RIPRAP	650	CY
610.16	HEAVY RIPRAP	110	CY
610.18	STONE DITCH PROTECTION	210	CY
613.319	EROSION CONTROL BLANKET	165	SY
615.07	LOAM	55	CY
618.14	SEEDING METHOD NUMBER 2	10	UN
619.12	MULCH	10	UN
619.14	EROSION CONTROL MIX	125	CY
620.58	EROSION CONTROL GEOTEXTILE	900	SY
627.733	4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	1,815	LF
629.05	HAND LABOR, STRAIGHT TIME	40	HR
631.10	AIR COMPRESSOR (INCLUDING OPERATOR)	20	HR
631.11	AIR TOOL (INCLUDING OPERATOR)	20	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	20	HR
631.15	ROLLER, EARTH AND BASE COURSE (INCLUDING OPERATOR)	20	HR
631.172	TRUCK - LARGE (INCLUDING OPERATOR)	20	HR
639.19	FIELD OFFICE TYPE B	1	EA
645.271	REGULATORY, WARNING, CONFIRMATION & ROUTE MARKER ASSEMBLY SIGNS, TYPE 1	16	SF
652.312	TYPE III BARRICADE	8	EA
652.33	DRUM	25	EA
652.34	CONE	50	EA
652.35	CONSTRUCTION SIGNS	650	SF
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES	1	LS
652.38	FLAGGER	100	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. Construct the riprap shelf at each abutment at
   Abut. No. 1 EL. 239.73
   Abut. No. 2 EL. 237.21

8. Place loam 2 inches deep on all new or reconstructed sideslopes or as directed by the Resident.

9. 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 Pay Item 619.14, Erosion Control Mix.

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. Guardrail posts as shown in the Standard Details shall be modified from the indicated length of 7 feet to a length of 8 feet with an embedment of 5.25 feet. Payment will be considered incidental to the guardrail pay items.

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

13. 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.

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

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

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

16. 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.

17. 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.

18. The project geotechnical report titled: Geotechnical Design Report, Puddle Dock Bridge (No. 3107) over Fifteenmile Stream, Albion, WIN 25299.00 Maine, dated September 13, 2024, 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 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.

20. 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.

21. Advisory Speed Limit Signs will be placed as directed by the Resident. This will be paid for by the applicable pay item.

22. There may be Construction Signs along the detour route since the bridge is already closed. Construction Signs along the detour route shall be placed or replaced as directed by the Resident

23. Place toe buttress detail as directed by the Resident.

24. South Freedom Road is currently closed and blocked off at the project site with portable concrete barrier owned by the Department. Upon mobilization to the site, the Contractor shall install their own portable concrete barrier and type III barricades and coordinate with the Department for removal of Department owned barrier.

25. Prior to any approved work stoppage or shutdown, the Contractor shall install a positive barrier at each end of the project limits to prevent traffic from entering the project site.

26. The existing bridge shall be removed by and become the property of the Contractor. The steel portions of the existing bridge may be coated with a lead-based paint system. The Contractor is responsible for the containment, proper management, and disposal of all lead contaminated hazardous waste generated by the process of demolishing the bridge. The Contractor is responsible for implementing appropriate OSHA mandated personal protection standards related to this process. Once the existing bridge is removed, the Contractor is solely responsible for the care, custody, and control of the components of the existing bridge and any hazardous waste generated as a result of the storage, recycling, or disposal of the bridge components, including lead-coated steel. The Contractor shall recycle or reuse the steel in accordance with the Maine Department Of Environmental Protection's "Main Hazardous Waste Management Reulation," Chapter 850. A copy of this regulation is available at MaineDOT's office on Child Street in Augusta. Payment for all labor, materials, equipment, and other costs required to remove and dispose of the existing bridge will be considered incidental to the bridge removal pay items.

27. All existing bridge material, which includes timber and stone, shall be removed and will be incidental to the bridge removal pay item.

28. Excavation between the existing abutments and proposed abutments will be considered Item 206.082 Structural Excavation.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02529900

WIN 025299.00

BRIDGE NO. 3107

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	BRIAN NICHOLS	
DESIGN-DETAILED	MRP	Nov. 2024
CHECKED-REVIEWED	E. BREWER	Nov. 2024
DESIGN2-DETAILED2	RMN	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

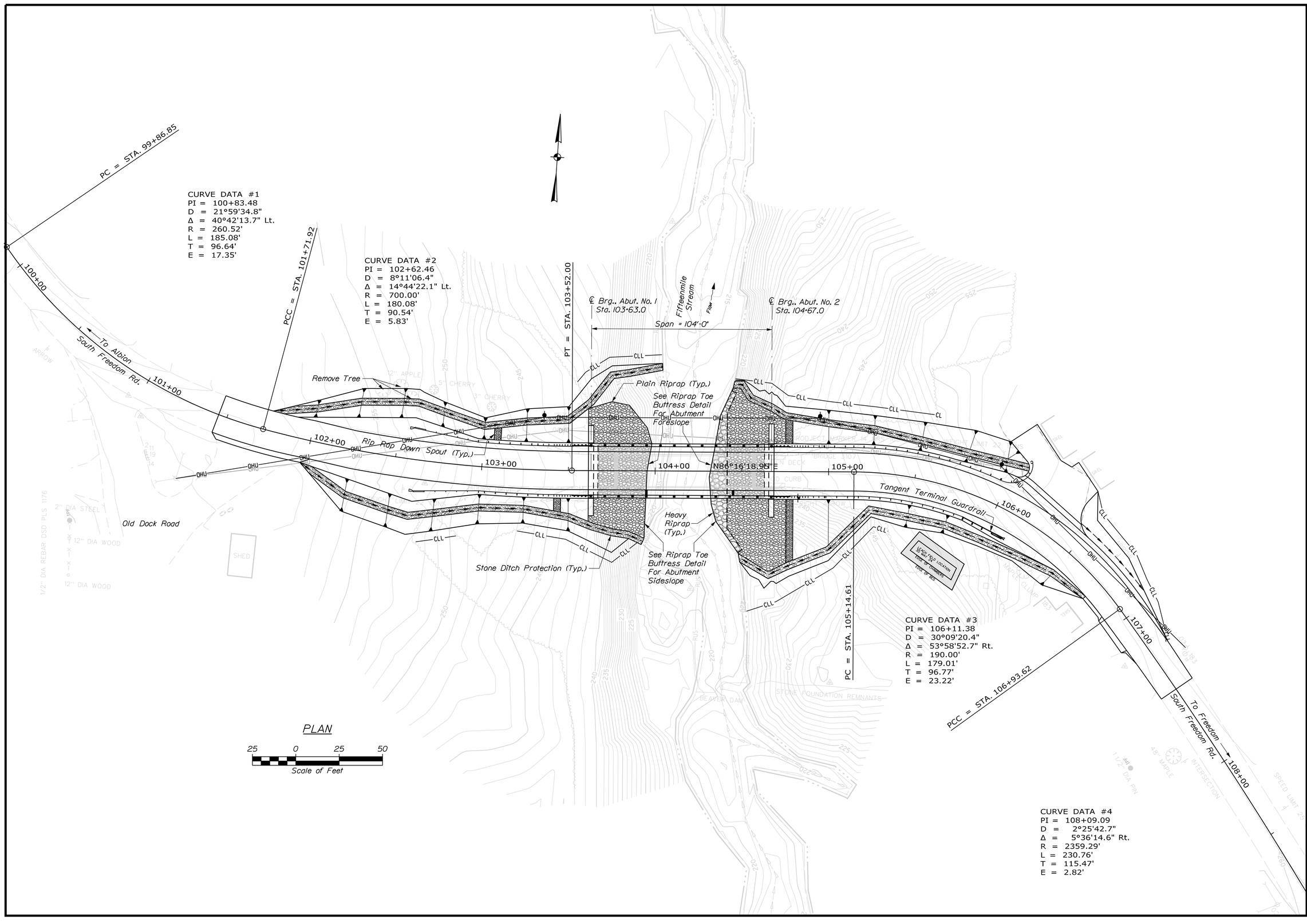
PUDDLE DOCK BRIDGE
FIFTEENMILE STREAM
ALBION KENNEBEC COUNTY

ESTIMATED QUANTITIES &
GENERAL CONSTRUCTION NOTES

SHEET NUMBER

2

OF 31



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02529900

WIN 025299.00

BRIDGE NO. 3107

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER BRIAN NICHOLS		
DESIGN-DETAILED E. BREWER	MRP	Nov. 2024
CHECKED-REVIEWED RWN	E. BREWER	Nov. 2024
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

PUDDLE DOCK BRIDGE
FIFTEENMILE STREAM
ALBION KENNEBEC COUNTY

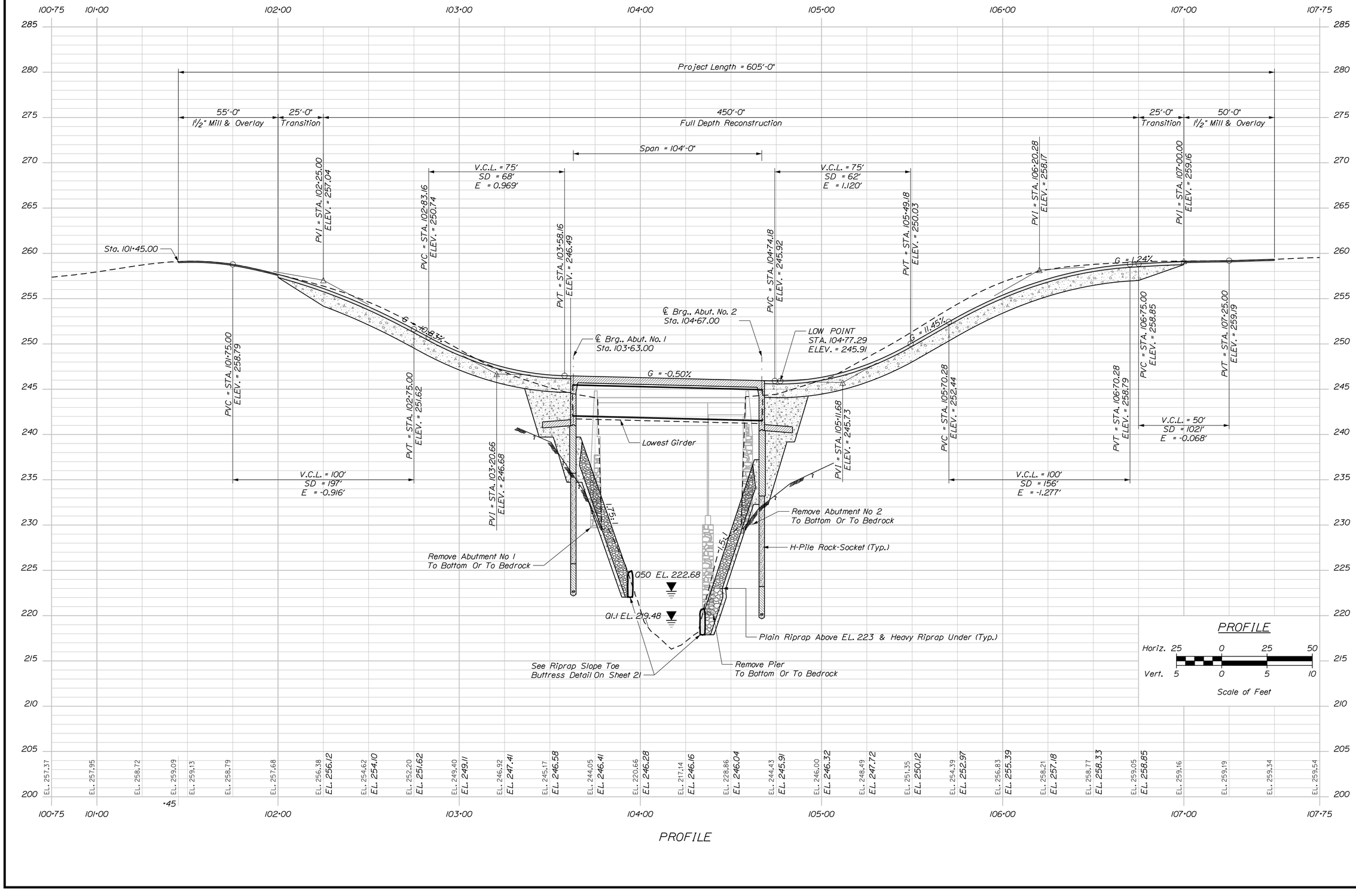
GENERAL PLAN

SHEET NUMBER

3

OF 31

Filename: ...\MSTA\003_General_Plan.dgn Division: BRIDGE Username: Brian.Nichols Date:11/18/2024



PROFILE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02529900

WIN 025299.00

BRIDGE NO. 3107

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	BRIAN NICHOLS	
DESIGN-DETAILED	E. BREWER	MRP Nov. 2024
CHECKED-REVIEWED	RMN	E. BREWER
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

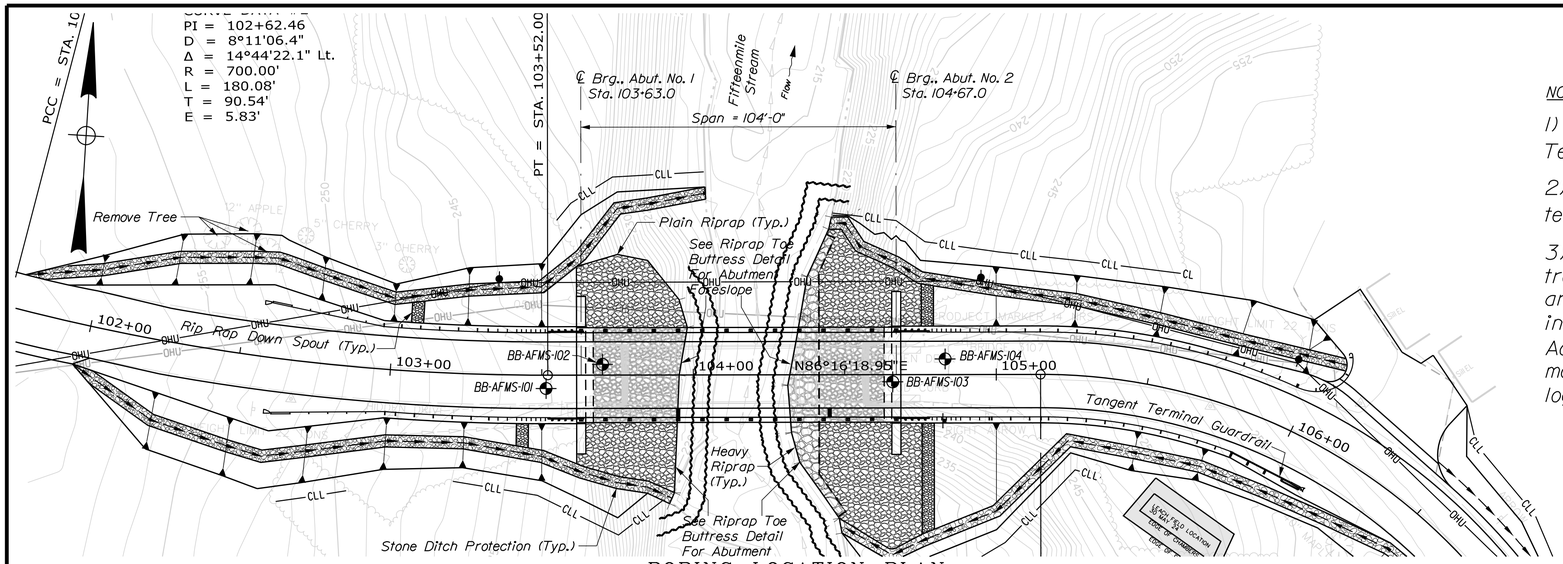
PUDDLE DOCK BRIDGE
FIFTEENMILE STREAM
ALBION KENNEBEC COUNTY

PROFILE

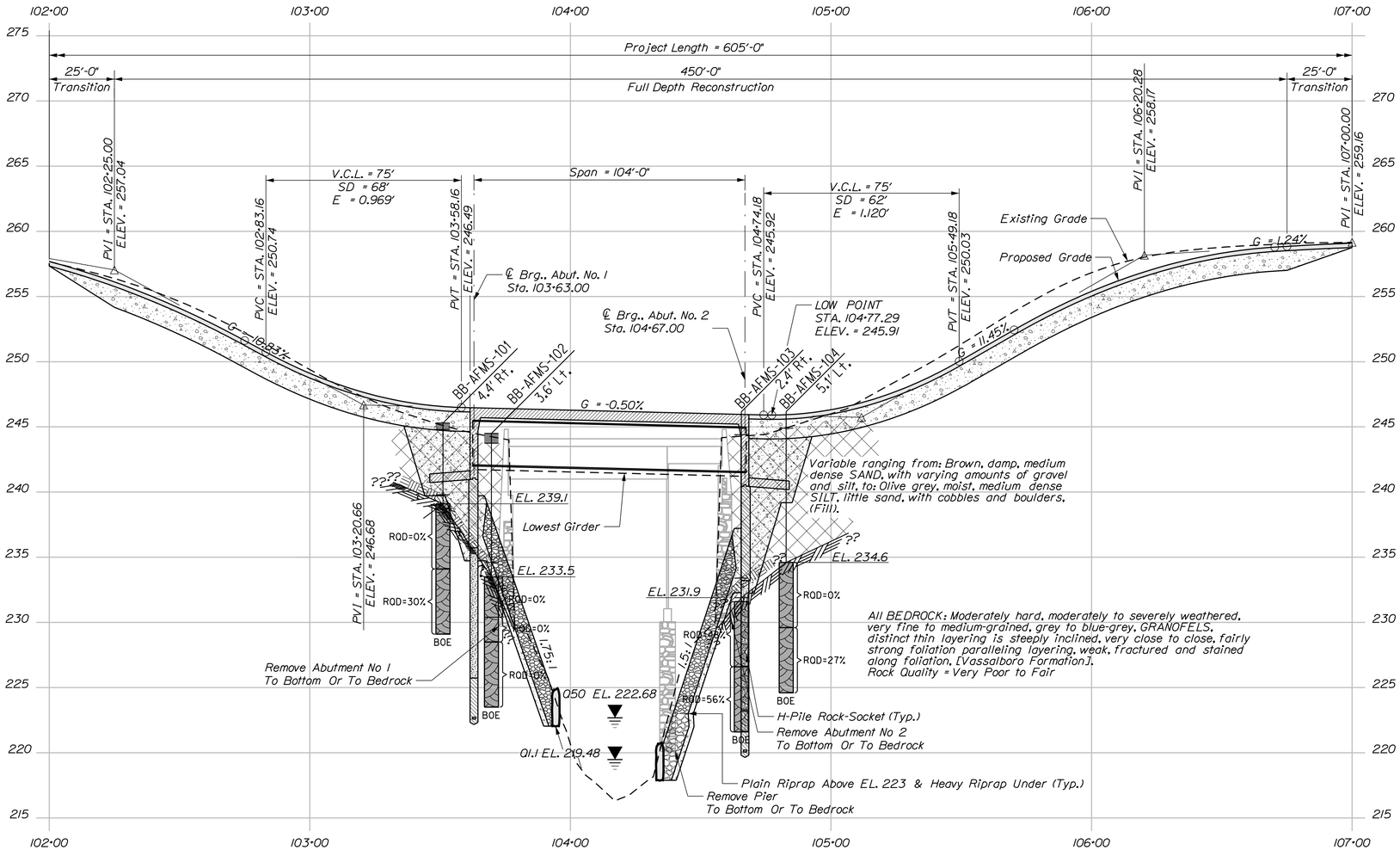
SHEET NUMBER

4

OF 31



BORING LOCATION PLAN



INTERPRETIVE SUBSURFACE PROFILE

NOTES:

1) Base map developed from electronic files (Geoplan.dgn, Topo.dgn, Text.dgn, Contours.dgn and Bridge.dgn).

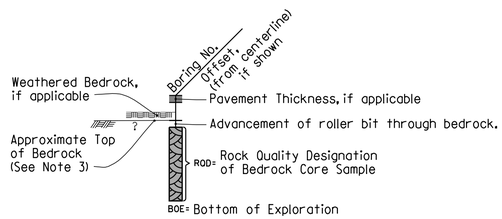
2) The as-drilled locations and elevations of the BB-AFMS-100 series test borings were surveyed by MaineDOT.

3) 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.

BORING LOCATION PLAN LEGEND

BB-AFMS-104 — *Location and designation of BB-AFMS-100 series borings that were performed by MaineDOT between December 21 and 23, 2022.*

INTERPRETIVE SUBSURFACE PROFILE LEGEND



SCALE

HORIZ 25 0 25 50

VERT 5 0 5 10

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02529900

WIN 025299.00

BRIDGE NO. 3107

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	TONY BEAULIEU	
DESIGN-DETAILED	E. BREWER	MRP	Sept 2024
CHECKED-REVIEWED	-----	-----	-----
DESIGN2-DETAILED2	N.WILLIAMS	T.WHITE	AUG 2024
DESIGN3-DETAILED3	----------	----------	----------
REVISIONS 1	----------	----------	----------
REVISIONS 2	----------	----------	----------
REVISIONS 3	----------	----------	----------
REVISIONS 4	----------	----------	----------
FIELD CHANGES	----------	----------	----------

SIGNATURE

P.E. NUMBER

DATE

PUDDLE DOCK BRIDGE
FIFTEENMILE STREAM
ALBION KENNEBEC

BORING LOCATION PLAN & INTERPRETIVE SUBSURFACE PROFILE

SHEET NUMBER

5

OF 31

Filename: ...\GEOTECH\MSTA\005_BLP#SP1.dgn Division: BRIDGE Username: Brian.Nichols Date:11/18/2024

Username: Brian.Nichols Date:11/18/2024

Division: BRIDGE

Filename: ...\MSTA\006_BORING LOGS1.dgn

Maine Department of Transportation — Boring No.: BB-AFMS-101

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Puddle Dock Bridge #3107 carries South Freedom Road over
Location: Albion, Maine

WIN: 25299.00

Driller:	S.W. Cole	Elevation (ft.): 245.3	Auger ID/OD: 5" Solid Stem
Operator:	Kevin/Ryan	Datum: NAVD88	Sampler: Standard Split Spoon
Logged By:	B. Wilder	Rig Type: Diedrich D-50	Hammer Wt./Fall: 140#/30"
Date Start/Finish:	12/23/2022| 09:30-12:00	Drilling Method: Cased Wash Boring	Core Barrel: NQ-2"
Boring Location:	103+51.1, 4.4 ft Rt.	Casing ID/OD: NW-3"	Water Level(*): None Observed

Hammer Efficiency Factor: 0.92 — Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐

Definitions:
D = Split Spoon Sample; SSA = Solid Stem Auger; RC = Roller Cone; q_u = Unconfined Compressive Strength (psf); N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency; q_p = Peak/Remolded Field Vane Unrailned Shear Strength (psf); $S_{ur\,(lab)}$ = Lab Vane Unrailned Shear Strength (psf); N-uncorrected = Raw Field SPT N-value; Hammer Efficiency Factor = Rig Specific Annual Calibration Value; MDH = Weight of Hammer, Cathead or Rods or Casing; WC = Water Content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (#) (in. Strength or RQD (%))	Uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA	244.8		5" HMA. — 0.5 Stiff Auger Flight) Brown, damp, SAND, little gravel, little silt, occasional small cobble. (Fill),	
5	1D	12/5	5.00 - 6.00	35/55	---		W/A	239.8		Brown, damp, SAND, some gravel, little silt, (Fill), — 5.5	GM380781 A-1-b, SM WC=4.6%
	R1	60/57	6.20 - 11.20	RQD = 0%			NQ-2	239.1		Weathered ROCK. Roller Coned ahead to 6.2 ft bgs. — 6.2 Top of Bedrock at Elev. 239.1 ft. R1: Bedrock:Grey to blue-grey, very fine to medium-grained, GRANOFELS, moderately hard, moderately weathered, distinct thin layering is steeply inclined, very close, fairly strong foliation paralleling layering, weak, fractured and stained along foliation. [Vassalboro Formation] Rock Quality = Very Poor. R1: Core Times (minsec) 6.2-7.2 ft (2:34) 7.2-8.2 ft (2:38) 8.2-9.2 ft (3:01) 9.2-10.2 ft (2:48) 10.2-11.2 ft (3:36) 95% Recovery — 11.2 R2: Bedrock: Similar to R1, except frequency of foliation breaks decreases with depth. [Vassalboro Formation] Rock Quality = Poor. R2: Core Times (minsec) 11.2-12.2 ft (3:40) 12.2-13.2 ft (4:21) 13.2-14.2 ft (3:58) 14.2-15.2 ft (3:08) 15.2-16.2 ft (3:43) 100% Recovery — 16.2 Bottom of Exploration at 16.2 feet below ground surface.	
10	R2	60/60	11.20 - 16.20	RQD = 30%				234.1			
15								229.1			
20											
25											
30											

Remarks:
Auto Hammer #367

Stratification lines represent approximate boundaries between soil typest 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.

Page 1 of 1

Boring No.: BB-AFMS-101

Maine Department of Transportation — Boring No.: BB-AFMS-102

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Puddle Dock Bridge #3107 carries South Freedom Road over
Location: Albion, Maine

WIN: 25299.00

Driller:	S.W. Cole	Elevation (ft.): 244.5	Auger ID/OD: 5" Solid Stem
Operator:	Kevin/Ryan	Datum: NAVD88	Sampler: Standard Split Spoon
Logged By:	B. Wilder	Rig Type: Diedrich D-50	Hammer Wt./Fall: 140#/30"
Date Start/Finish:	12/23/2022| 07:30-09:30	Drilling Method: Cased Wash Boring	Core Barrel: NQ-2"
Boring Location:	103+69.7, 3.6 ft Lt.	Casing ID/OD: NW-3"	Water Level(*): None Observed

Hammer Efficiency Factor: 0.92 — Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐

Definitions:
D = Split Spoon Sample; SSA = Solid Stem Auger; RC = Roller Cone; q_u = Unconfined Compressive Strength (psf); N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency; q_p = Peak/Remolded Field Vane Unrailned Shear Strength (psf); $S_{ur\,(lab)}$ = Lab Vane Unrailned Shear Strength (psf); N-uncorrected = Raw Field SPT N-value; Hammer Efficiency Factor = Rig Specific Annual Calibration Value; MDH = Weight of Hammer, Cathead or Rods or Casing; WC = Water Content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (#) (in. Strength or RQD (%))	Uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA	243.8		3" HMA. — 0.8	
5	1D	24/14	5.00 - 7.00	8/9/4/2	13	20				Brown, damp, medium dense, SAND, some gravel, some silt, occasional cobble. (Fill),	GM380782 A-1-b, SM WC=12.1%
										Dense at 8.0 ft bgs.	
10	2D	6/5	10.00 - 10.50	57/6"	---		W/A	234.6		Weathered ROCK. Roller Coned ahead to 11.0 ft bgs. — 9.9	
	R1	37.2/ 37.2	11.00 - 14.10	RQD = 0%			NQ-2	233.5		Top of Bedrock at Elev. 233.5 ft. — 11.0 R1: Bedrock: Grey to blue-grey, very fine to medium-grained GRANOFELS, moderately hard, moderately to severely weathered, distinct thin layering is steeply inclined, very close, fairly strong foliation paralleling layering, weak, fractured and stained along foliation. [Vassalboro Formation] Rock Quality = Very Poor. R1: Core Times (minsec) 11.0-12.0 ft (3:10) 12.0-13.0 ft (3:34) 13.0-14.0 ft (3:42) 14.0-14.1 ft (1:00) Core Blocked 100% Recovery — 14.1 R2: Bedrock: Similar to R1. [Vassalboro Formation] Rock Quality = Very Poor. R2: Core Times (minsec) 14.1-15.1 ft (3:23) 15.1-16.0 ft (3:19) Core Blocked 100% Recovery — 16.0 R3: Bedrock: Similar to R1. [Vassalboro Formation] Rock Quality = Very Poor. R3: Core Times (minsec) 16.0-17.0 ft (2:43) 17.0-18.0 ft (2:45) 18.0-19.0 ft (2:46) 19.0-20.0 ft (3:05) 20.0-21.0 ft (3:26) 92% Recovery — 21.0 Bottom of Exploration at 21.0 feet below ground surface.	
15	R2	22.8/ 22.8	14.10 - 16.00	RQD = 0%				230.4			
20	R3	60/55	16.00 - 21.00	RQD = 0%				228.5			
25								223.5			
30											

Remarks:
Auto Hammer #367

Stratification lines represent approximate boundaries between soil typest 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.

Page 1 of 1

Boring No.: BB-AFMS-102

Maine Department of Transportation — Boring No.: BB-AFMS-103

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Puddle Dock Bridge #3107 carries South Freedom Road over
Location: Albion, Maine

WIN: 25299.00

Driller:	Maine007	Elevation (ft.): 244.4	Auger ID/OD: 5" Solid Stem
Operator:	Daggett/Brooks	Datum: NAVD88	Sampler: Standard Split Spoon
Logged By:	J. Monahan	Rig Type: CME 45C	Hammer Wt./Fall: 140#/30"
Date Start/Finish:	12/21/2022| 07:45-09:45	Drilling Method: Cased Wash Boring	Core Barrel: NQ-2"
Boring Location:	104+65.6, 2.4 ft Rt.	Casing ID/OD: NW-3"	Water Level(*): Lost H2O after coring

Hammer Efficiency Factor: 0.906 — Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐

Definitions:
D = Split Spoon Sample; SSA = Solid Stem Auger; RC = Roller Cone; q_u = Unconfined Compressive Strength (psf); N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency; q_p = Peak/Remolded Field Vane Unrailned Shear Strength (psf); $S_{ur\,(lab)}$ = Lab Vane Unrailned Shear Strength (psf); N-uncorrected = Raw Field SPT N-value; Hammer Efficiency Factor = Rig Specific Annual Calibration Value; MDH = Weight of Hammer, Cathead or Rods or Casing; WC = Water Content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (#) (in. Strength or RQD (%))	Uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA	233.4			
5	1D	24/21	5.00 - 7.00	3/3/5/4	8	12				Brown, damp, medium dense, fine to medium SAND, some silt, trace gravel. (Fill),	GM380783 A-2-4, SM WC=13.9%
										Boulder from 8.0-9.0 ft bgs.	
10	2D	1.2/1.2	10.00 - 10.10	33|(1.2")	---		W/A	233.4		Brown, damp, Silty SAND. — 11.0	
	S1						W/ 1.4			Sample of weathered rock taken from Auger 11.0-12.0 ft bgs. 9149 blows for 0.5 ft.	
	R1	60/60	12.80 - 17.80	RQD = 48%			6"/6 NQ-2	231.9 231.6		Top of Bedrock at Elev. 231.9 ft. — 12.5 R1: Bedrock: Grey to blue-grey, very fine to medium-grained, GRANOFELS, moderately hard, distinct layering is steeply inclined, fairly strong foliation paralleling layering, weak and stained along foliation. Near vertical fractured across foliation, annealed, weathered, close. — 12.8 [Vassalboro Formation] Rock Quality = Poor R1: Core Times (minsec) 12.8-13.8 ft (1:24) 13.8-14.8 ft (1:47) 14.8-15.8 ft (1:54) 15.8-16.8 ft (2:06) 16.8-17.8 ft (3:19) 100% Recovery — 17.8 R2: Bedrock: Similar to R1, except core run increases in competency with depth, and two joint sets steep and moderately dipping noted, fresh and with rock flour/ gouge. Rock Quality = Fair R2: Core Times (minsec) 17.8-18.8 ft (3:18) 18.8-19.8 ft (2:52) 19.8-20.8 ft (3:49) 20.8-21.8 ft (2:17) 21.8-22.8 ft (4:24) 100% Recovery — 22.8 Bottom of Exploration at 22.8 feet below ground surface.	GTX 20.71-21.09 q_u=15,940 psi GTX 22.33-22.71 q_u=15,930 psi
15	R2	60/60	17.80 - 22.80	RQD = 56%				226.6			
20								221.6			
25											
30											

Remarks:

Stratification lines represent approximate boundaries between soil typest 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.

Page 1 of 1

Boring No.: BB-AFMS-103

Maine Department of Transportation — Boring No.: BB-AFMS-104

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Puddle Dock Bridge #3107 carries South Freedom Road over
Location: Albion, Maine

WIN: 25299.00

Driller:	Maine007	Elevation (ft.): 244.9	Auger ID/OD: 5" Solid Stem
Operator:	Daggett/Brooks	Datum: NAVD88	Sampler: Standard Split Spoon
Logged By:	J. Monahan	Rig Type: CME 45C	Hammer Wt./Fall: 140#/30"
Date Start/Finish:	12/21/2022| 10:00-12:30	Drilling Method: Cased Wash Boring	Core Barrel: NQ-2"
Boring Location:	104+82.8, 5.1 ft Lt.	Casing ID/OD: NW-3"	Water Level(*): None Observed

Hammer Efficiency Factor: 0.906 — Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐

Definitions:
D = Split Spoon Sample; SSA = Solid Stem Auger; RC = Roller Cone; q_u = Unconfined Compressive Strength (psf); N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency; q_p = Peak/Remolded Field Vane Unrailned Shear Strength (psf); $S_{ur\,(lab)}$ = Lab Vane Unrailned Shear Strength (psf); N-uncorrected = Raw Field SPT N-value; Hammer Efficiency Factor = Rig Specific Annual Calibration Value; MDH = Weight of Hammer, Cathead or Rods or Casing; WC = Water Content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (#) (in. Strength or RQD (%))	Uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA				
5	1D	24/24	5.00 - 7.00	4/6/6/7	12	18				Olive grey, moist, medium dense, SILT, little sand, little silt, (Fill),	GM380784 A-4, CL WC=20.1%
10	2D	8|1.2/ 60/30	10.00 - 10.30 15.00 - 15.30	25|3.6"; RQD = 0%	---		NQ-2	234.6		Brown, moist, fine to coarse SAND, some gravel, little silt, (Fill), — 10.3 Top of Bedrock at Elev. 234.6 ft. R1: Bedrock: Grey to blue-grey, very fine to medium-grained, GRANOFELS, moderately hard, distinct layering is steeply inclined, weak, weathered and stained. [Vassalboro Formation] Rock Quality = Very Poor R1: Core Times (minsec) 10.3-11.3 ft (2:05) 11.3-12.3 ft (3:15) 12.3-13.3 ft (3:50) 13.3-14.3 ft (2:17) 14.3-15.3 ft (3:43) 50% Recovery — 15.3 R2: Bedrock: Similar to R1, except weakness along foliation not as prominent and competency of rock increases with depth. Near vertical joint set noted across layering, annealed with some weathering. [Vassalboro Formation] Rock Quality = Poor R2: Core Times (minsec) 15.3-16.3 ft (1:15) 16.3-17.3 ft (1:53) 17.3-18.3 ft (4:03) 18.3-19.3 ft (1:14) 19.3-20.3 ft (2:18) 100% Recovery — 20.3 Bottom of Exploration at 20.3 feet below ground surface.	
15	R2	60/60	15.30 - 20.30	RQD = 27%				229.6			
20								224.6			
25											
30											

Remarks:

Stratification lines represent approximate boundaries between soil typest 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.

Page 1 of 1

Boring No.: BB-AFMS-104

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02529900

WIN 025299.00

BRIDGE NO. 3107

BRIDGE PLANS

PROJ. MANAGER	TONY BEAULIEU	BY	DATE
DESIGN-DETAILED	E. BREWER	MRP	Sept 2024
CHECKED-REVIEWED	-----	-----	-----
DESIGN2-DETAILED2	N.WILLIAMS	T.WHITE	SEP 2024
DESIGN3-DETAILED3	-----	-----	-----
REVISIONS 1	-----	-----	-----
REVISIONS 2	-----	-----	-----
REVISIONS 3	-----	-----	-----
REVISIONS 4	-----	-----	-----
FIELD CHANGES	-----	-----	-----

SIGNATURE

P.E. NUMBER

DATE

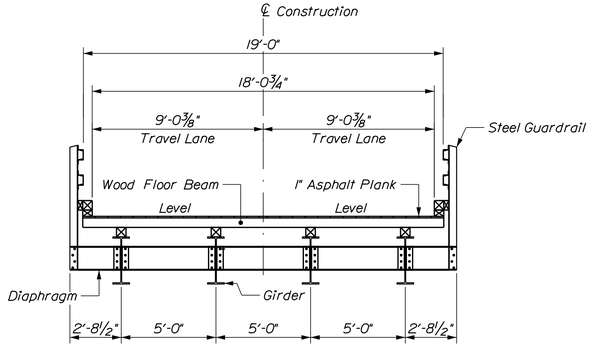
PUDDLE DOCK BRIDGE
FIFTEENMILE STREAM
ALBION
KENNEBEC

BORING LOGS

SHEET NUMBER

6

OF 31



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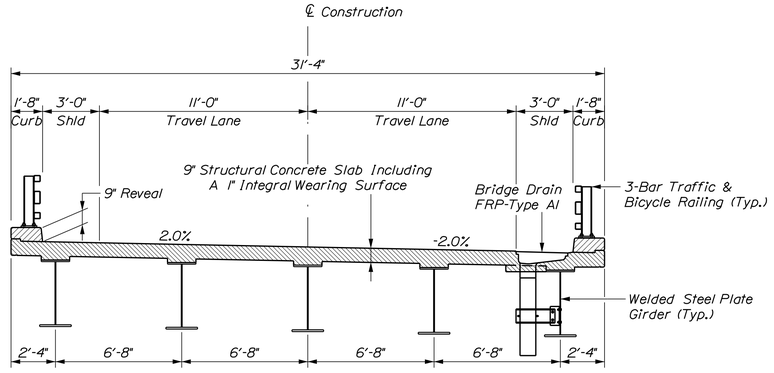

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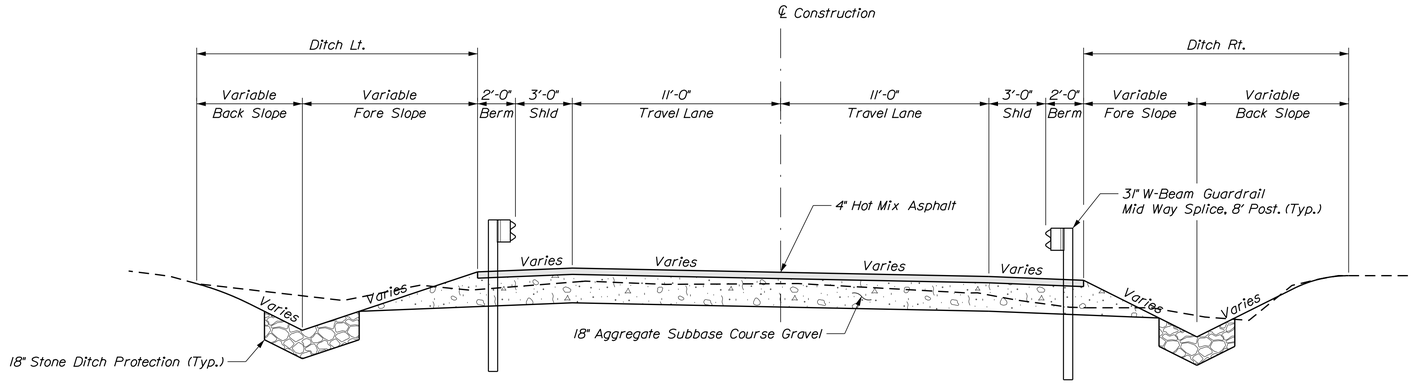

TYPICAL APPROACH SECTION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02529900

WIN 025299.00

BRIDGE NO. 3107

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	BRIAN NICHOLS	
DESIGN-DETAILED	E. BREWER	Nov. 2024
CHECKED-REVIEWED	MRP	Nov. 2024
DESIGN2-DETAILED2	E. BREWER	
DESIGN3-DETAILED3	RNN	
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

PUDDLE DOCK BRIDGE
FIFTEENMILE STREAM
ALBION KENNEBEC COUNTY

TYPICAL SECTIONS

SHEET NUMBER

7

OF 31

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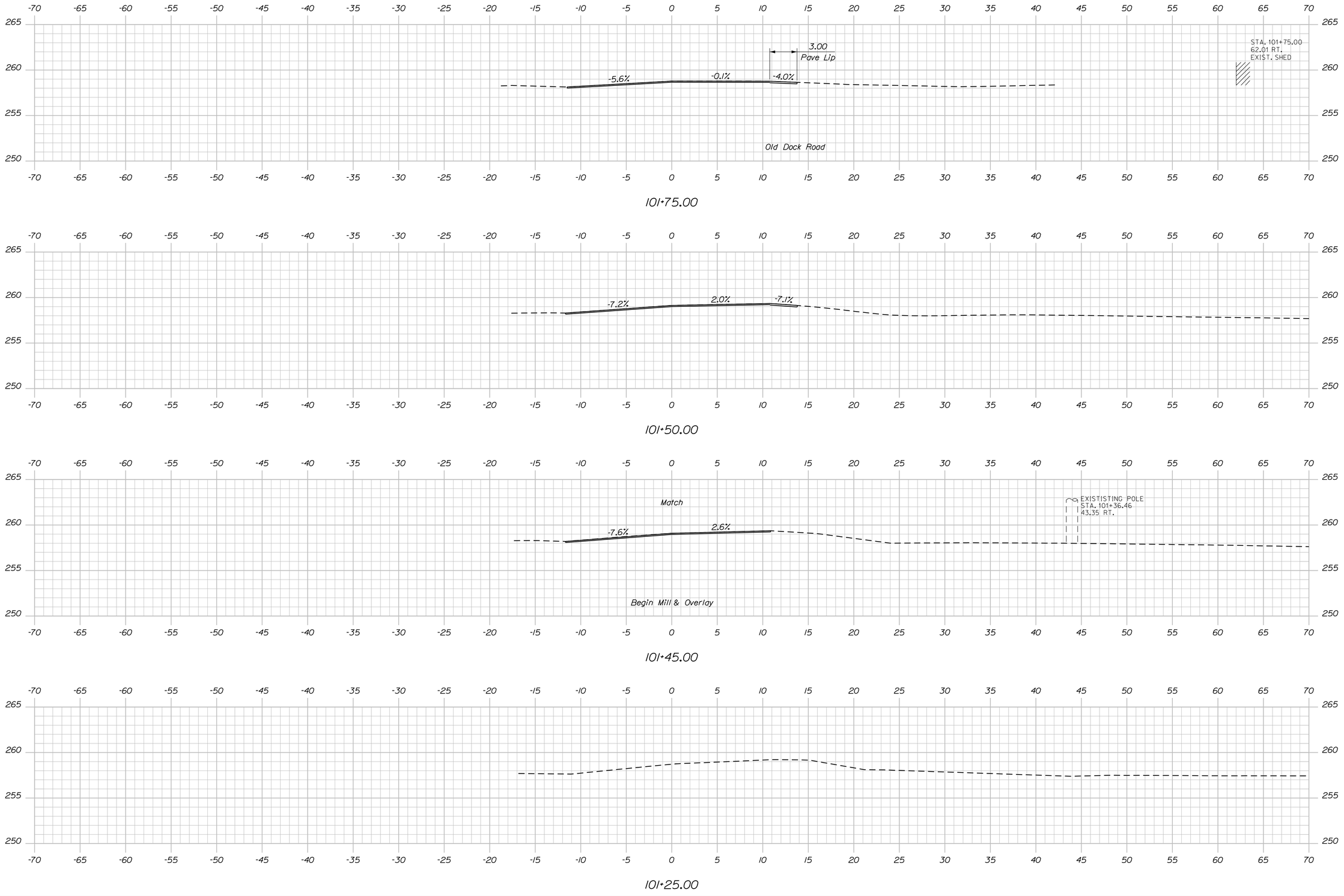

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02529900

WIN 025299.00

BRIDGE NO. 3107

BRIDGE PLANS

PROJ. MANAGER	BRIAN NICHOLS		
DESIGN-DETAILED	E. BREWER	MRP	Nov. 2024
CHECKED-REVIEWED	RMN	E. BREWER	Nov. 2024
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

PUDDLE DOCK BRIDGE
FIFTEENMILE STREAM
ALBION KENNEBEC COUNTY

CROSS SECTIONS

SHEET NUMBER

8

OF 31

Sta. 101+25.00 to Sta. 101+75.00

Username: Brian.Nichols Date:11/18/2024

Division: BRIDGE

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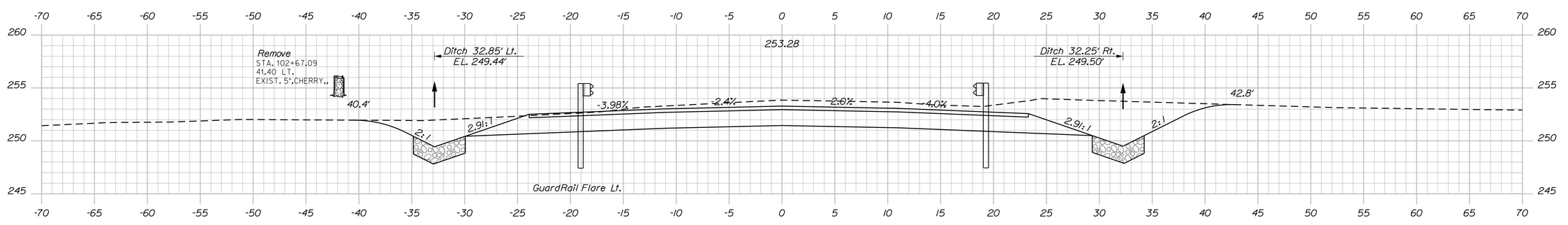

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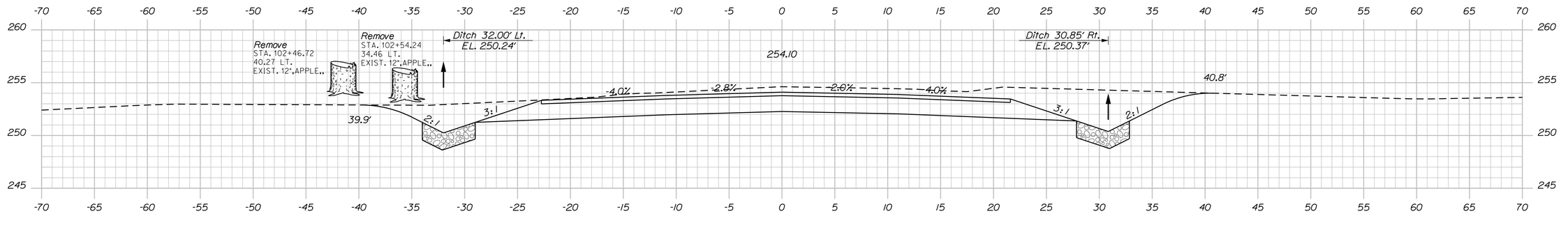
Install 31" W-Beam Guardrail-Mid-Way Splice Flared Terminal

102+58.78



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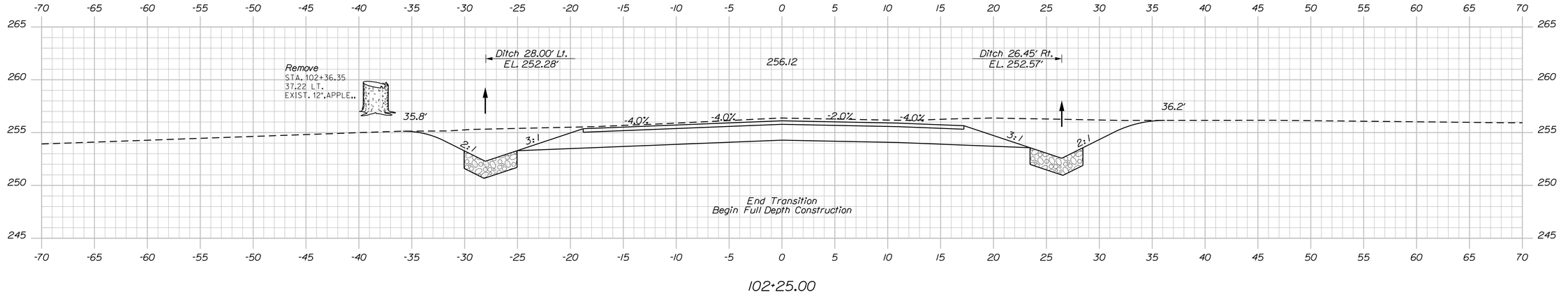

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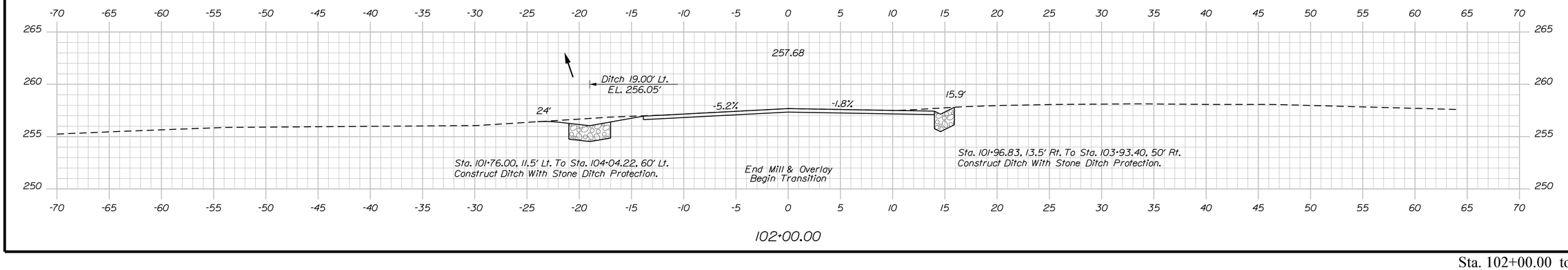


102+00.00

Sta. 102+00.00 to Sta. 102+58.69

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02529900

WIN 025299.00

BRIDGE NO. 3107

BRIDGE PLANS

PROJ. MANAGER	BRIAN NICHOLS	BY	DATE
DESIGN-DETAILED	E. BREWER	MRP	Nov. 2024
CHECKED-REVIEWED	RWN	E. BREWER	Nov. 2024
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

PUDDLE DOCK BRIDGE
FIFTEENMILE STREAM
ALBION KENNEBEC COUNTY

CROSS SECTIONS

SHEET NUMBER

9

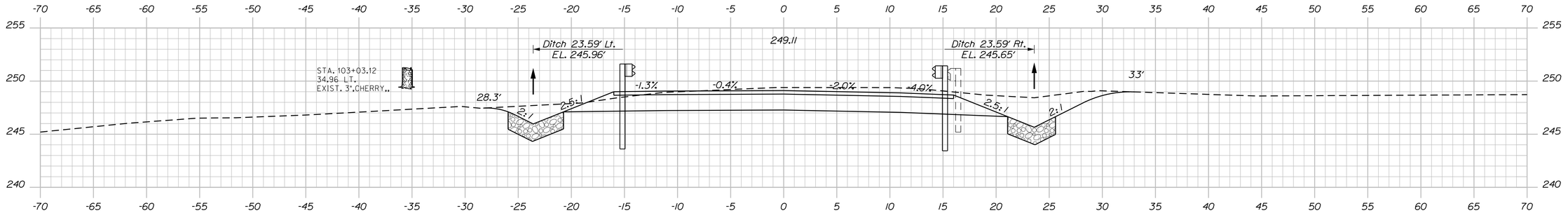
OF 31

Username: Brian.Nichols Date:11/18/2024

Filename: ...\MSTA\009_XSECT_102+00_002.dgn Division: BRIDGE

Sta. 103+32.02, 14.0' Lt. To Sta. 103+52.00, 14.0' Lt.
Install Bridge Transition Type I

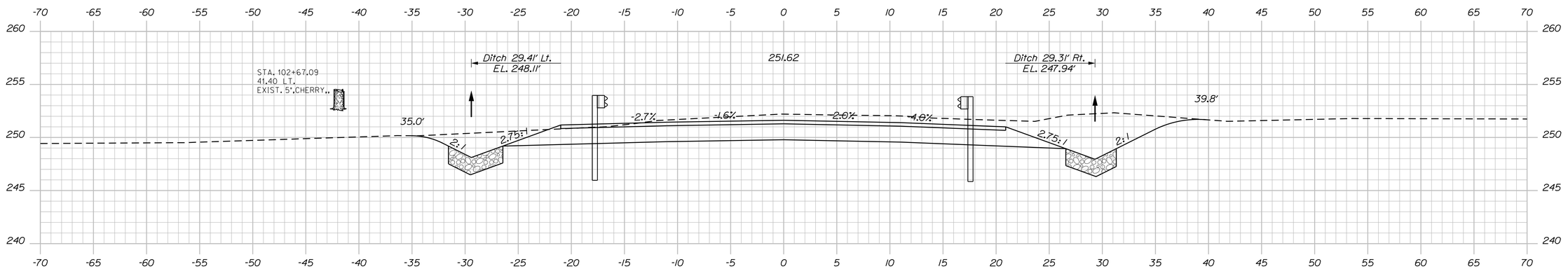
Sta. 103+32.81, 14.0' Rt. To Sta. 103+52.00, 14.0' Rt.
Install Bridge Transition Type I



103+00.00

Sta. 102+96.94, 14.0' Lt. To Sta. 103+32.02, 14.0' Lt.
Install 31" W-Beam Guardrail-Mid-Way Splice (34.375')

Sta. 102+99.10, 14.0' Rt. To Sta. 103+32.81, 14.0' Rt.
Install 31" W-Beam Guardrail-Mid-Way Splice (34.375')



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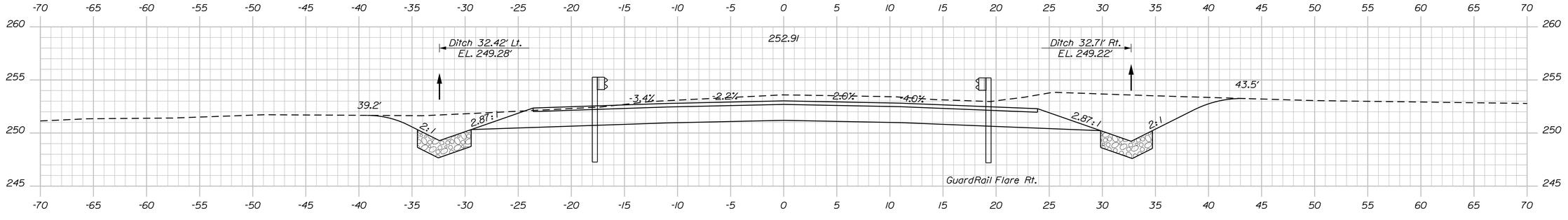


102+62.55

Sta. 102+62.64, 18.0' Rt. To Sta. 102+99.10, 14.0' Rt.
Install 31" W-Beam Guardrail-Mid-Way Splice Flared Terminal

Sta. 102+61.39 to Sta. 103+00.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02529900

WIN 025299.00

BRIDGE NO. 3107

BRIDGE PLANS

P.E. NUMBER

DATE

SIGNATURE

	BY	DATE
PROJ. MANAGER	BRIAN NICHOLS	
DESIGN-DETAILED	E. BREWER	Nov. 2024
CHECKED-REVIEWED	MRP	Nov. 2024
DESIGN2-DETAILED2	E. BREWER	
DESIGN3-DETAILED3	RMN	
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

PUDDLE DOCK BRIDGE
FIFTEENMILE STREAM
ALBION KENNEBEC COUNTY

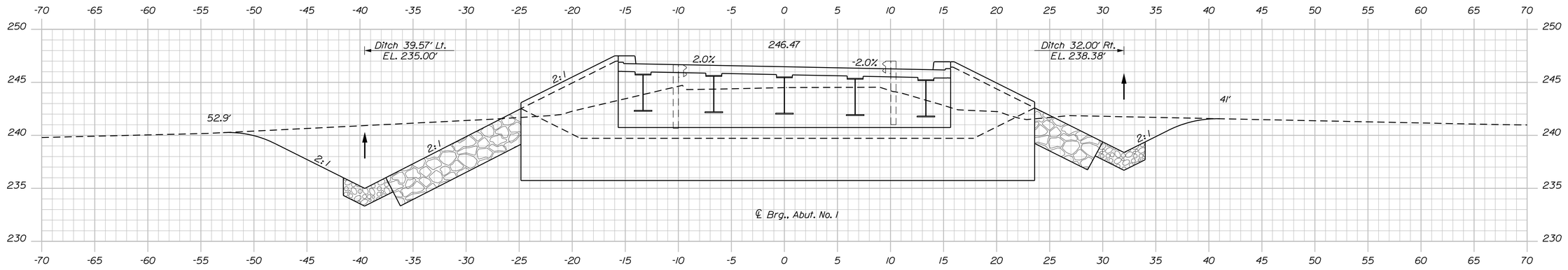
CROSS SECTIONS

SHEET NUMBER

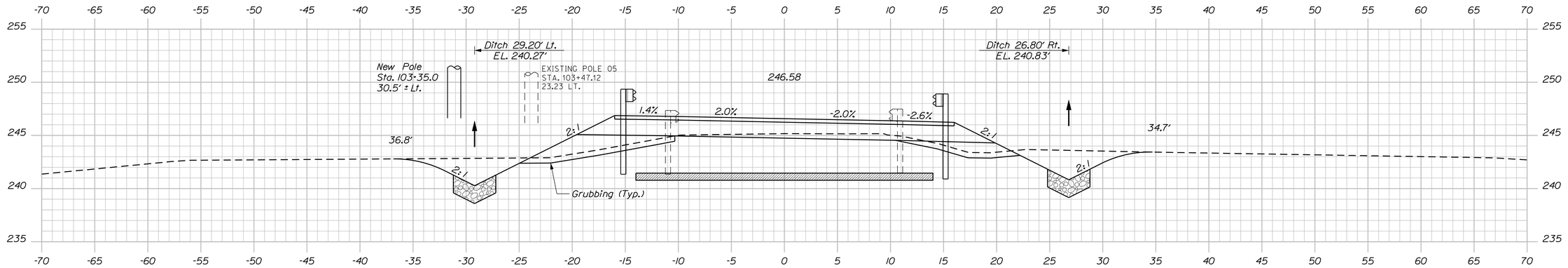
10

OF 31

Filename: ...\010_XSECT_102+62.55_003.dgn Division: BRIDGE Username: Brian.Nichols Date:11/18/2024



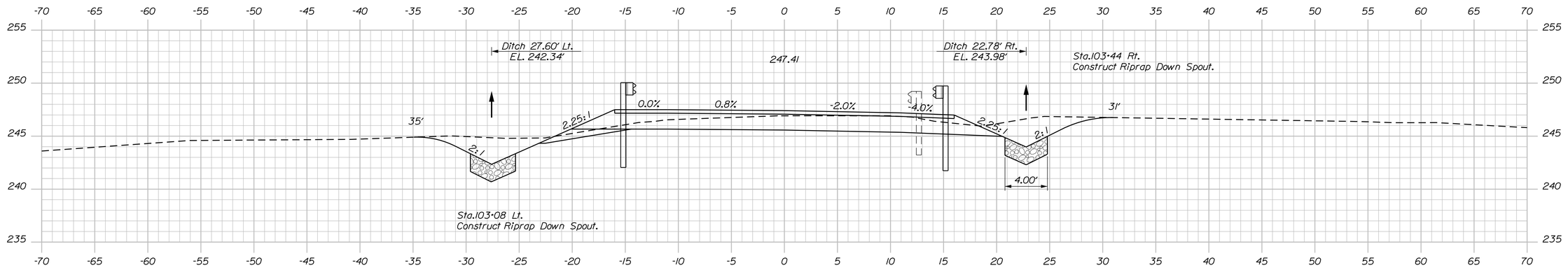
103+63.00



Sta. 103+52.00, 14.0' Lt. To Sta. 103+61.50, 14.0' Lt.
Install Steel Approach Railing, 3 Bar

103+50.00

Sta. 103+52.00, 14.0' Rt. To Sta. 103+61.50, 14.0' Rt.
Install Steel Approach Railing, 3 Bar



103+25.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02529900

WIN 025299.00

BRIDGE NO. 3107

BRIDGE PLANS

PROJ. MANAGER	BRIAN NICHOLS	BY	
DESIGN-DETAILED	E. BREWER	MRP	
CHECKED-REVIEWED	RMN	E. BREWER	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

DATE: Nov. 2024 | Nov. 2024

P.E. NUMBER

SIGNATURE

DATE

PUDDLE DOCK BRIDGE
FIFTEENMILE STREAM
ALBION KENNEBEC COUNTY

CROSS SECTIONS

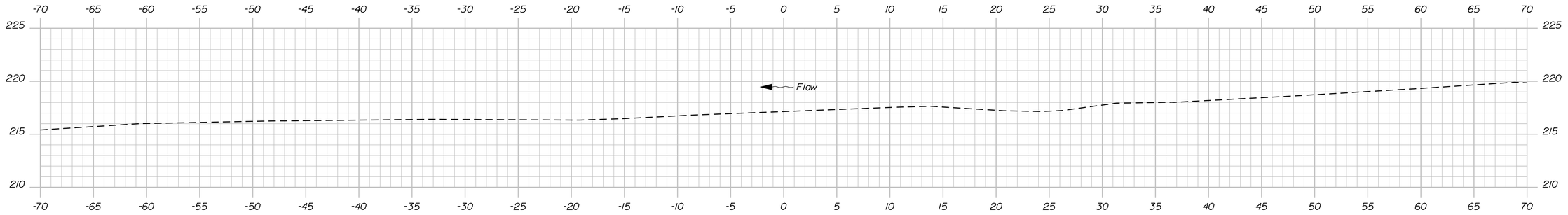
SHEET NUMBER

11

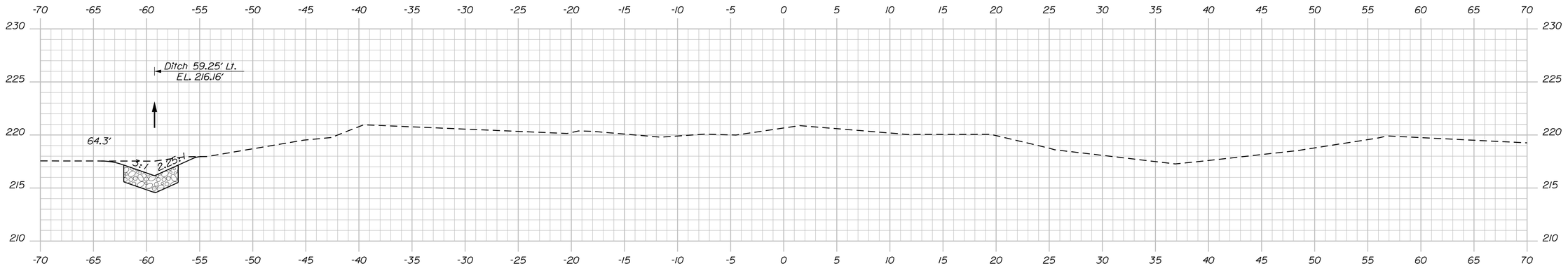
OF 31

Sta. 103+25.00 to Sta. 103+63.00

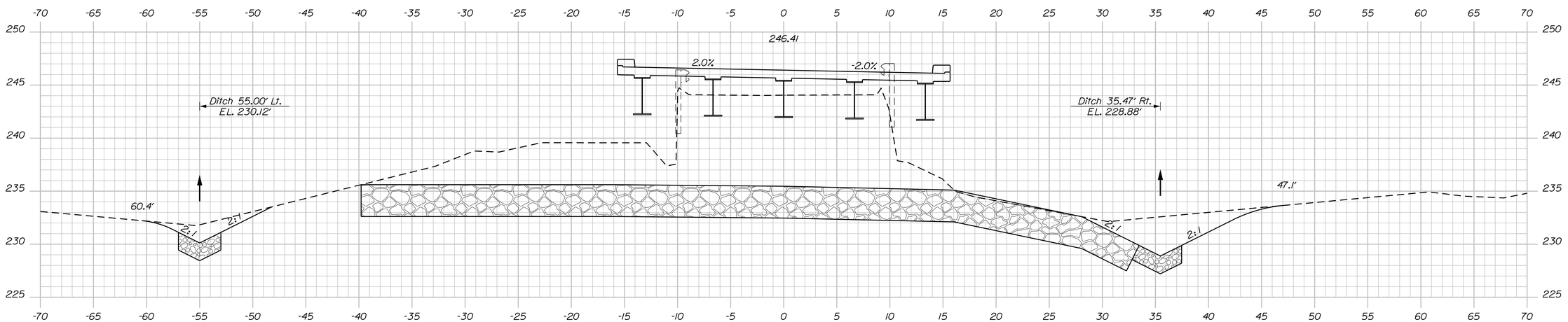
Filename: ...\MSTA\011_XSECT_103+25_004.dgn Division: BRIDGE Username: Brian.Nichols Date:11/18/2024



104+25.00



104+00.00



103+75.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02529900

WIN 025299.00

BRIDGE NO. 3107

BRIDGE PLANS

PROJ. MANAGER	BRIAN NICHOLS	DATE	
DESIGN-DETAILED	E. BREWER	Nov. 2024	
CHECKED-REVIEWED	RMN		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BY: MRP, E. BREWER

SIGNATURE

P.E. NUMBER

DATE

PUDDLE DOCK BRIDGE
FIFTEENMILE STREAM
ALBION KENNEBEC COUNTY

CROSS SECTIONS

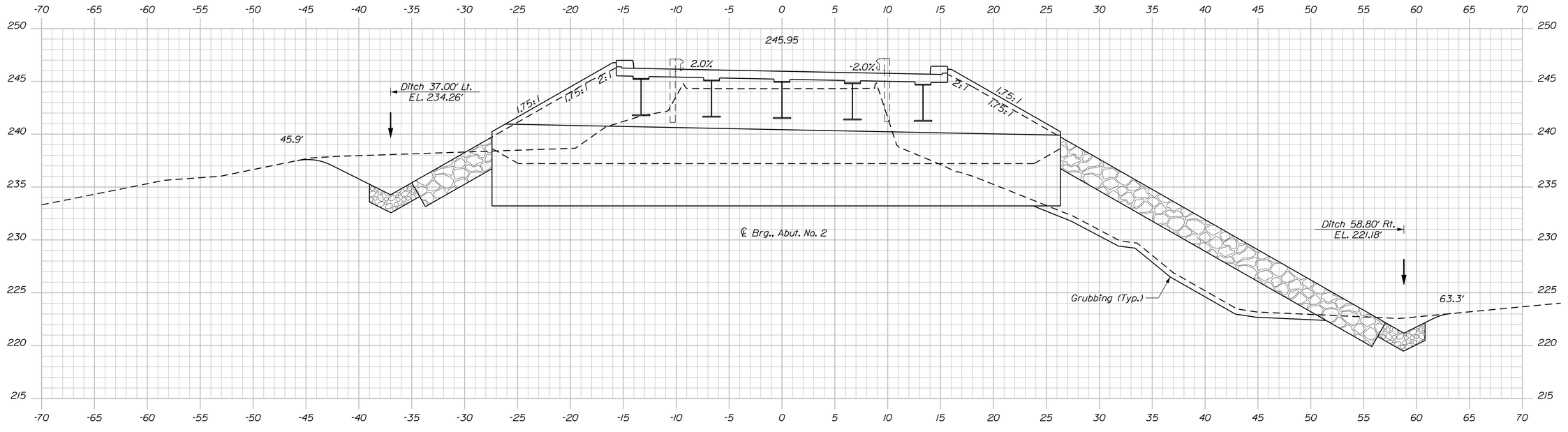
SHEET NUMBER

12

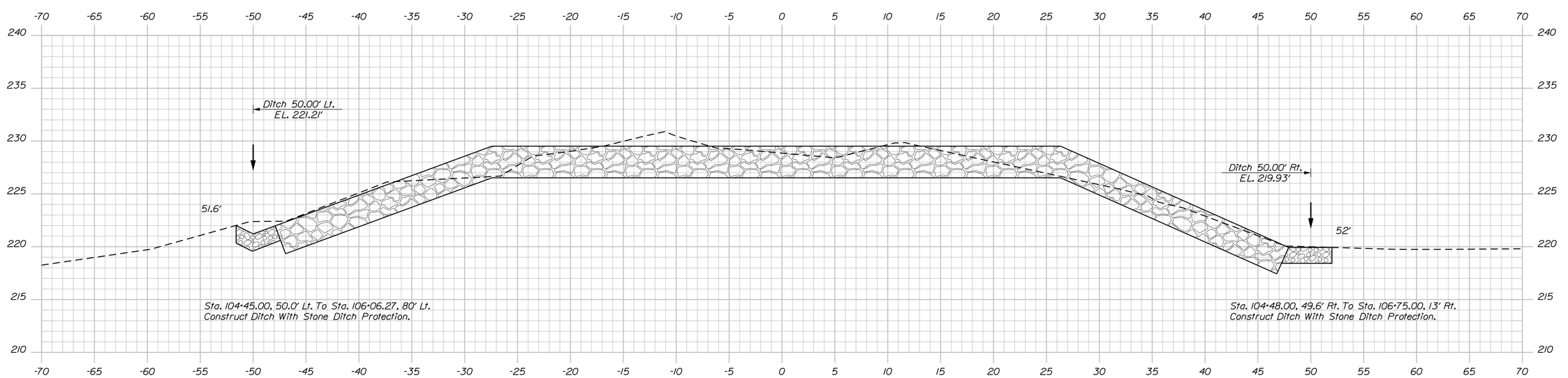
OF 31

Sta. 103+75.00 to Sta. 104+25.00

Filename: ...\MSTA\012_XSECT_103+75_005.dgn Division: BRIDGE Username: Brian.Nichols Date:11/18/2024



104+67.00



104+50.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02529900

WIN 025299.00

BRIDGE NO. 3107

BRIDGE PLANS

PROJ. MANAGER	BRIAN NICHOLS	BY	DATE
DESIGN-DETAILED	E. BREWER	MRP	Nov. 2024
CHECKED-REVIEWED	RWN	E. BREWER	Nov. 2024
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

PUDDLE DOCK BRIDGE
FIFTEENMILE STREAM
ALBION KENNEBEC COUNTY

CROSS SECTIONS

SHEET NUMBER

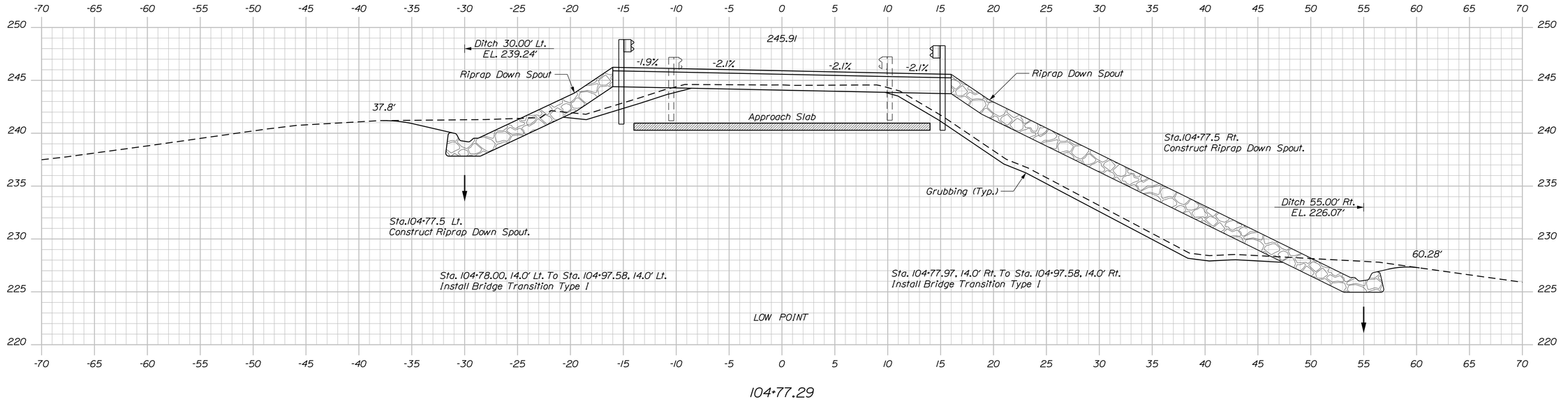
13

OF 31

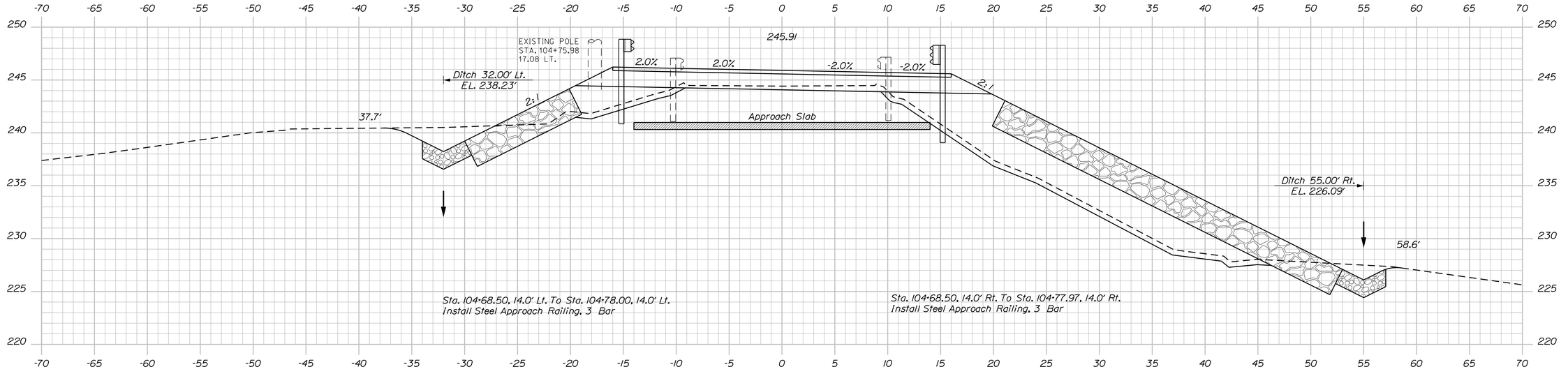
Sta. 104+50.00 to Sta. 104+67.00

Username: Brian.Nichols Date:11/18/2024

Filename: ...\MSTA\013_XSECT_104+50_006.dgn Division: BRIDGE



104+77.29



104+75.00

Sta. 104+75.00 to Sta. 104+77.29

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02529900

WIN 025299.00

BRIDGE NO. 3107

BRIDGE PLANS

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DESIGN3-DETAILED3			
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FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

PUDDLE DOCK BRIDGE
FIFTEENMILE STREAM
KENNEBEC COUNTY
ALBION

CROSS SECTIONS

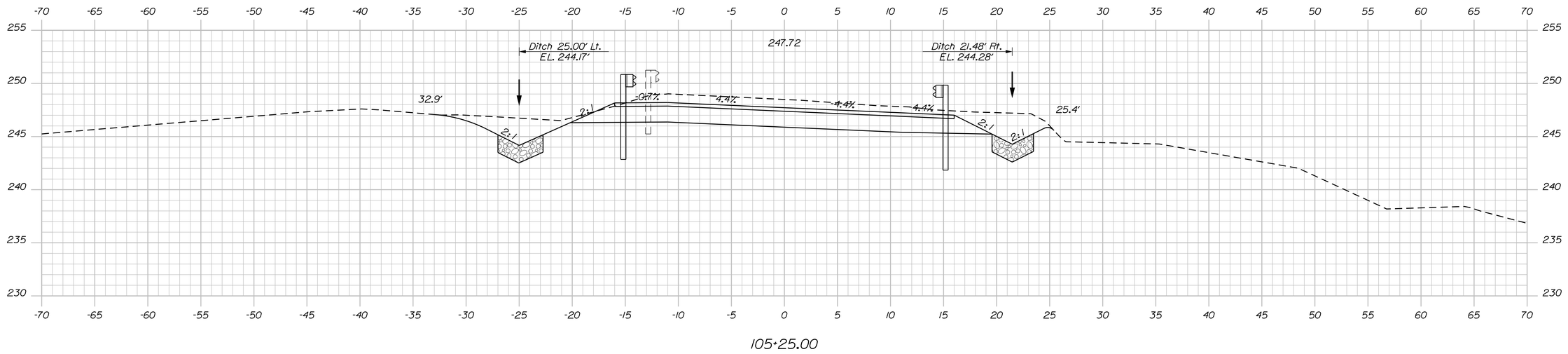
SHEET NUMBER

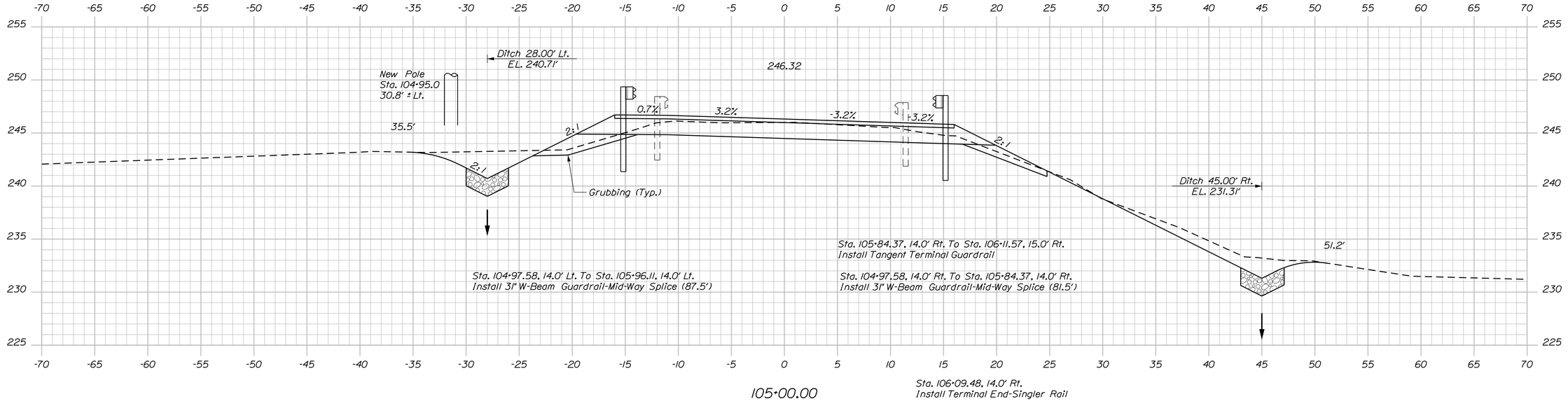
14

OF 31

Username: Brian.Nichols Date:11/18/2024

Filename: ...\MSTA\014_XSECT_104+75_007.dgn Division: BRIDGE





STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02529900

WIN 025299.00

BRIDGE NO. 3107

BRIDGE PLANS

PROJ. MANAGER	BRIAN NICHOLS	BY	
DESIGN-DETAILED	E. BREWER	MRP	
CHECKED-REVIEWED	RMN	E. BREWER	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
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FIELD CHANGES			

	DATE	SIGNATURE
	Nov. 2024	
	Nov. 2024	

P.E. NUMBER

DATE

PUDDLE DOCK BRIDGE
FIFTEENMILE STREAM
ALBION KENNEBEC COUNTY

CROSS SECTIONS

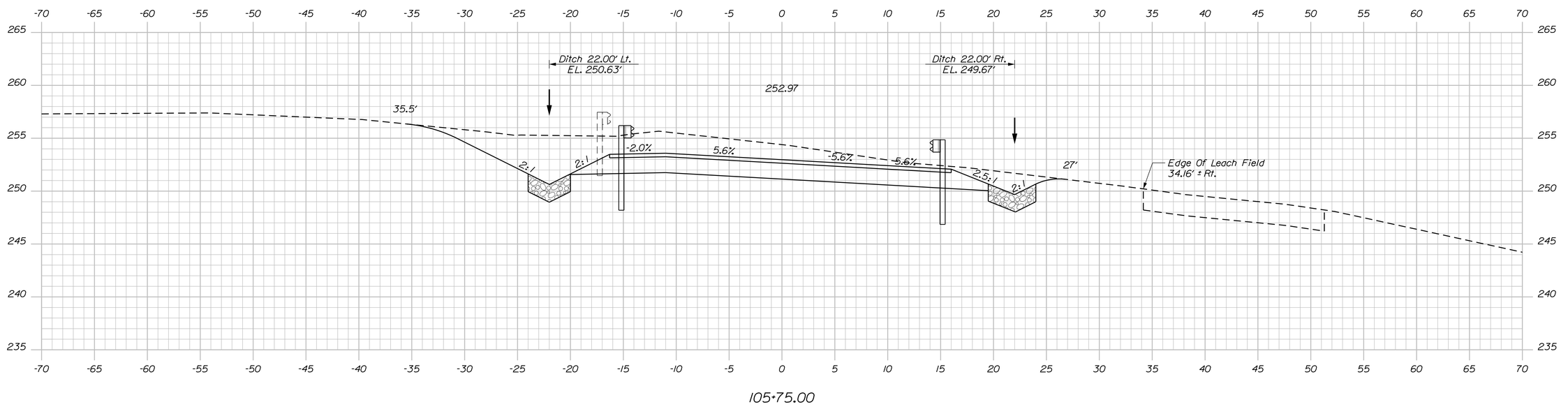
SHEET NUMBER

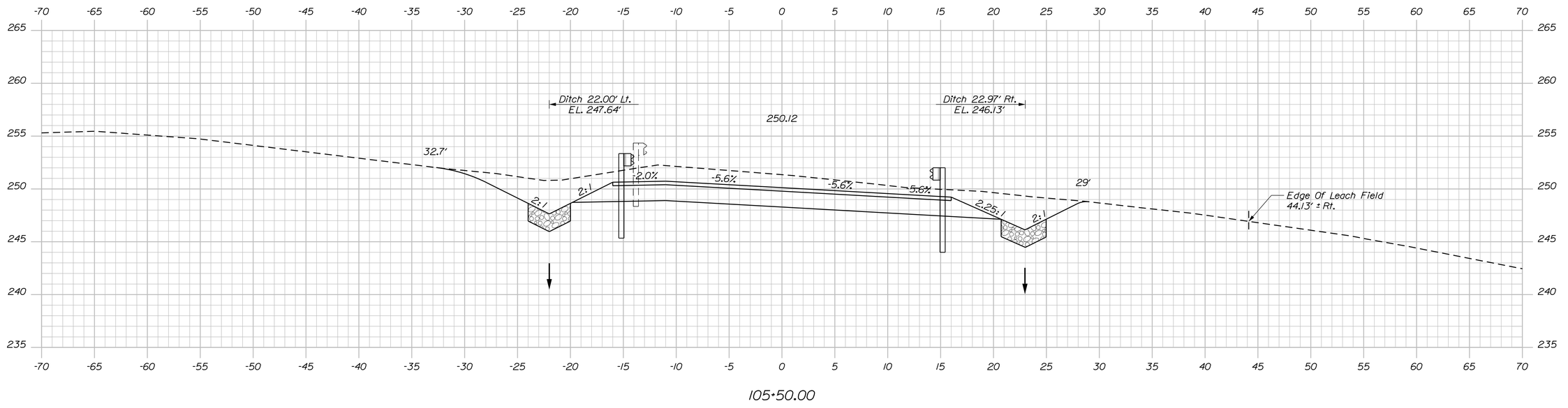
15

OF 31

Sta. 105+00.00 to Sta. 105+25.00

Filename: ...\MSTA\015_XSECT_105+00_008.dgn Division: BRIDGE Username: Brian.Nichols Date:11/18/2024





Sta. 105+50.00 to Sta. 105+75.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02529900

WIN 025299.00

BRIDGE NO. 3107

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	BRIAN NICHOLS	
DESIGN-DETAILED	E. BREWER	Nov. 2024
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DESIGN3-DETAILED3	RWN	
REVISIONS 1		
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REVISIONS 4		
FIELD CHANGES		

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P.E. NUMBER

DATE

PUDDLE DOCK BRIDGE
FIFTEENMILE STREAM
ALBION KENNEBEC COUNTY

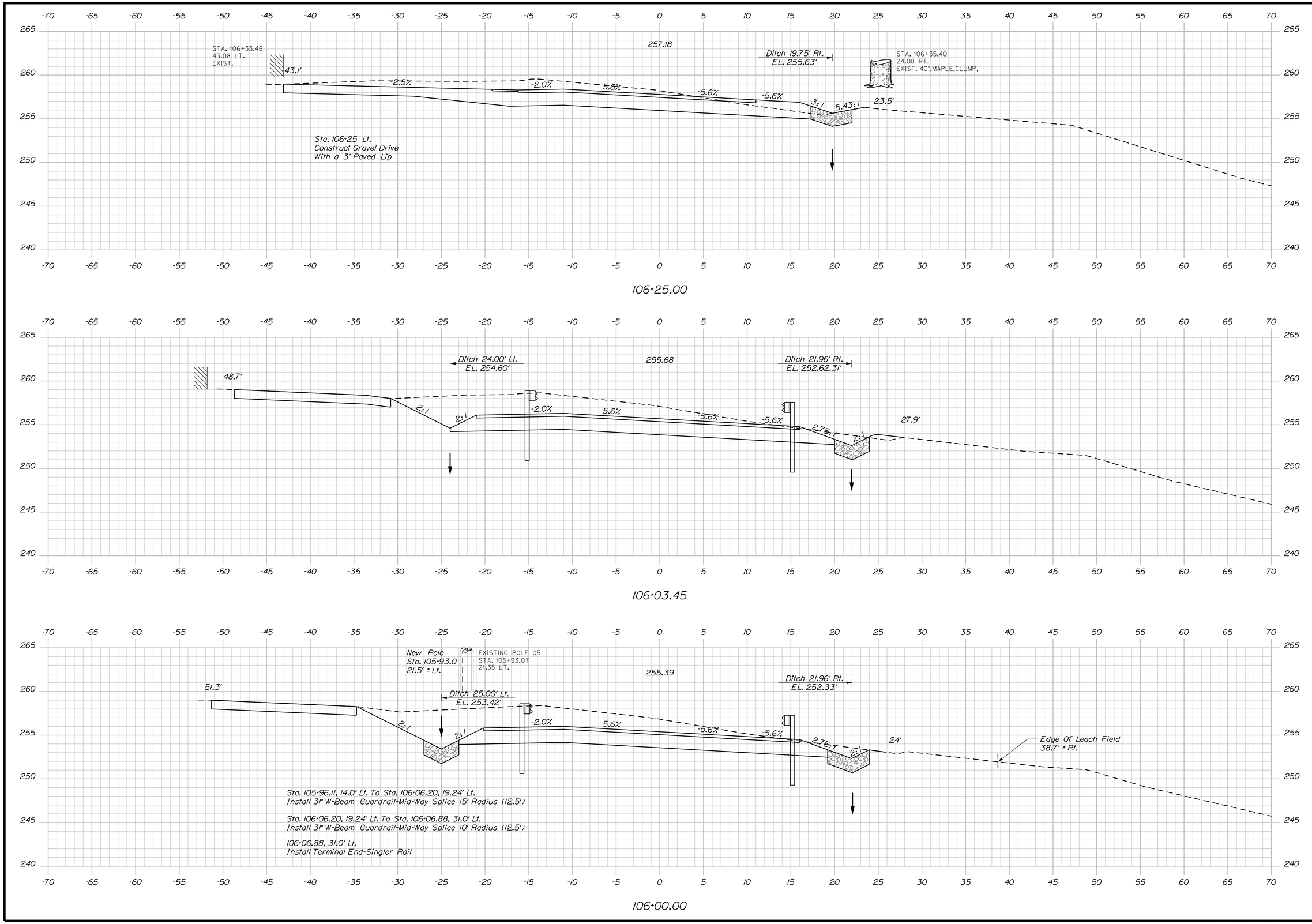
CROSS SECTIONS

SHEET NUMBER

16

OF 31

Filename: ...\MSTA\016_XSECT_105+50_009.dgn Division: BRIDGE Username: Brian.Nichols Date:11/18/2024



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02529900

WIN 025299.00

BRIDGE NO. 3107

BRIDGE PLANS

PROJ. MANAGER	BRIAN NICHOLS		
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FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

PUDDLE DOCK BRIDGE
FIFTEENMILE STREAM
ALBION KENNEBEC COUNTY

CROSS SECTIONS

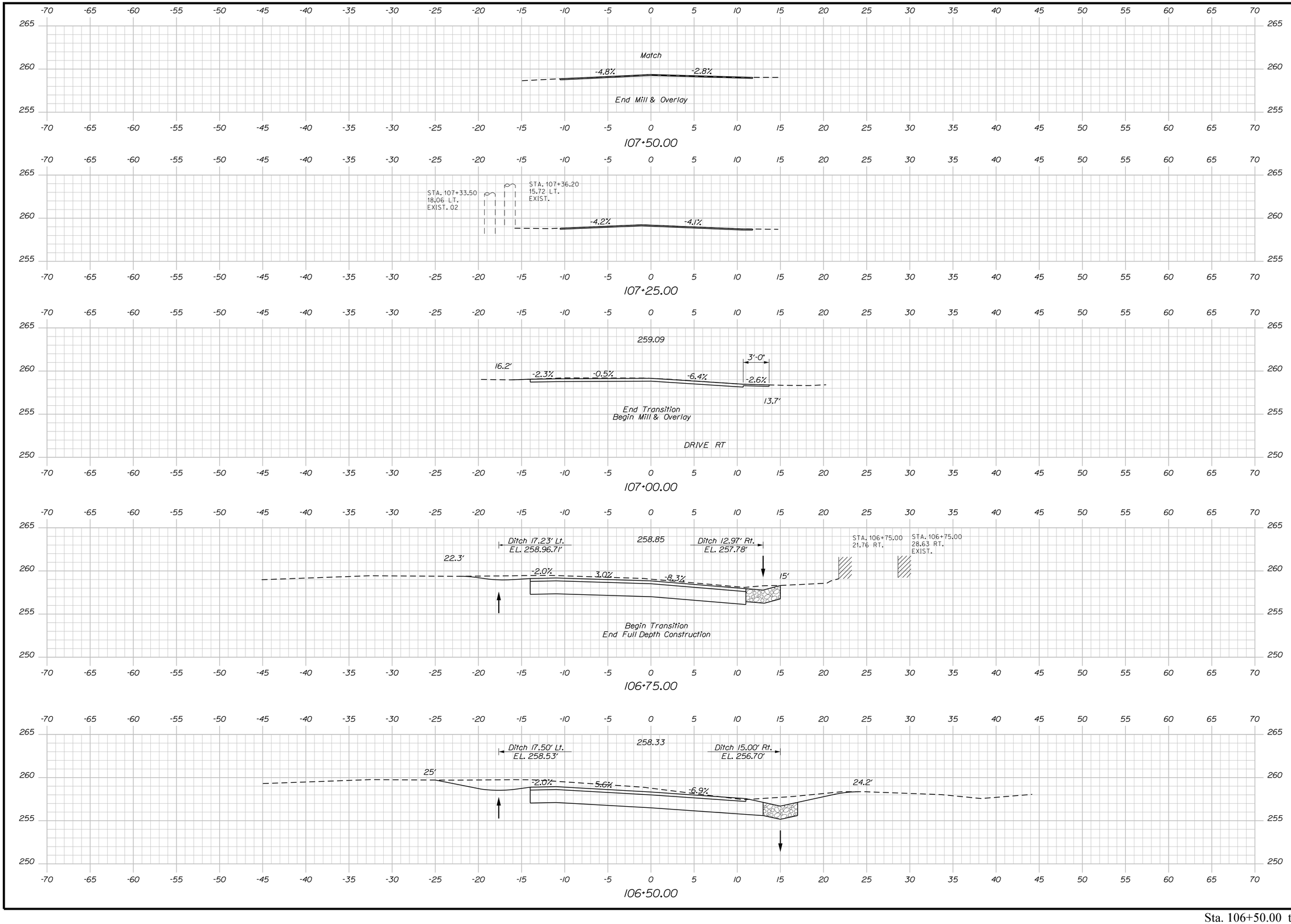
SHEET NUMBER

17

OF 31

Sta. 106+00.00 to Sta. 106+50.00

Filename: ...\MSTA\017_XSECT_106+00_010.dgn Division: BRIDGE Username: Brian.Nichols Date:11/18/2024



Sta. 106+50.00 to Sta. 107+50.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02529900

WIN 025299.00

BRIDGE NO. 3107

BRIDGE PLANS

PROJ. MANAGER	BRIAN NICHOLS		
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REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

PUDDLE DOCK BRIDGE
FIFTEENMILE STREAM
ALBION KENNEBEC COUNTY

CROSS SECTIONS

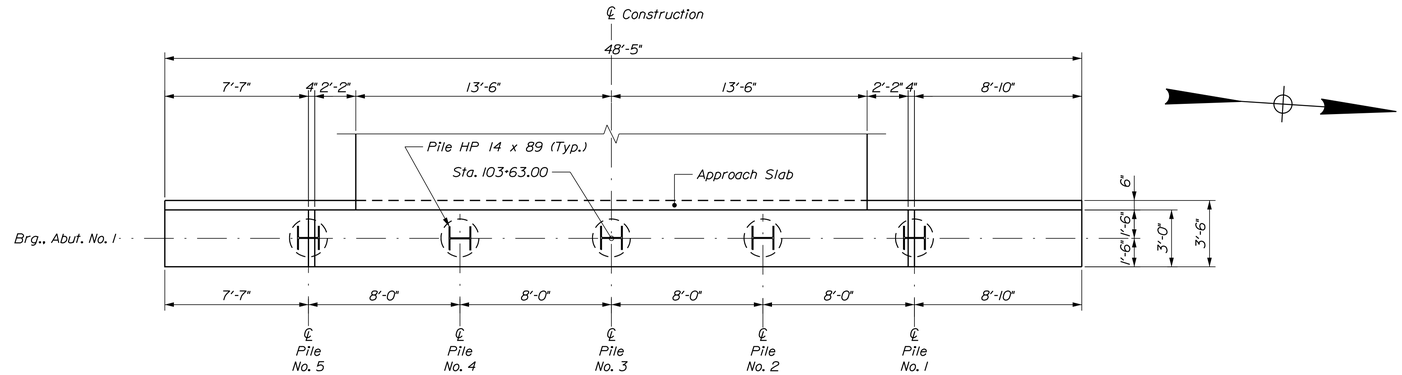
SHEET NUMBER

18

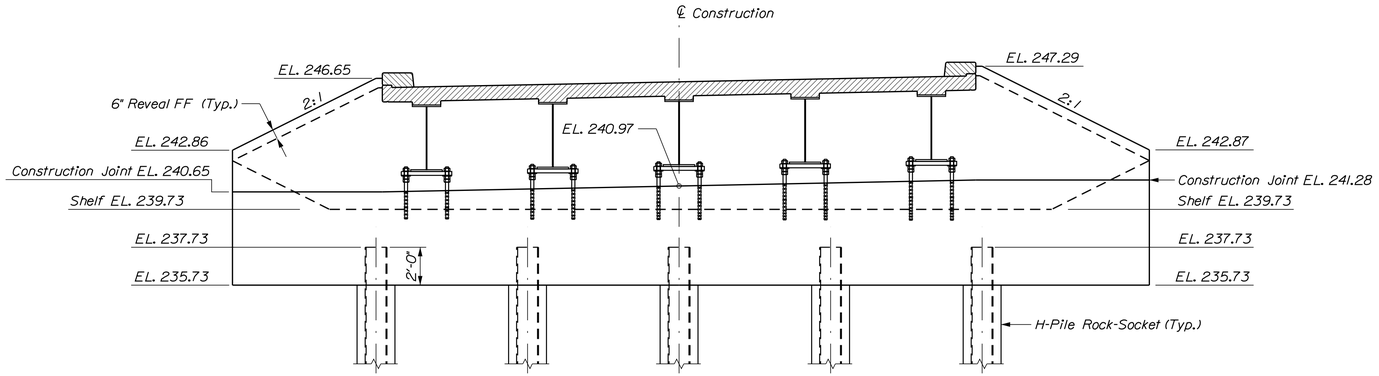
OF 31

Username: Brian.Nichols Date:11/18/2024

Filename: ...\MSTA\018_XSECT_106+50_011.dgn Division: BRIDGE



ABUTMENT NO. 1
(Top View)



ABUTMENT NO. 1
(Elevation View)
Flow

ABUTMENT NOTES

1. Structural Earth Excavation required more than 12 inches below the bottom of the structure will be paid for in accordance with Standard Specifications Section 206, Structural Excavation.

2. Reinforcing steel shall have a minimum concrete cover of 2 inches in the walls and 3 inches in the footings unless otherwise noted.

3. 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.

4. The temporary girder supports, including anchor rods, leveling plates, and any associated hardware and labor required for installation shall not be paid for directly. Payment shall be considered incidental to related Contract items.

5. Cover joints where waterstops are not required in accordance with Standard Detail 502(01).

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02529900

WIN 025299.00

BRIDGE NO. 3107

BRIDGE PLANS

PROJ. MANAGER	BRIAN NICHOLS	BY	
DESIGN-DETAILED	E. BREWER	MRP	
CHECKED-REVIEWED	E. BREWER	RMN	
DESIGN2-DETAILED2		E. BREWER	
DESIGN3-DETAILED3			
REVISIONS 1			
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REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

P.E. NUMBER

SIGNATURE

DATE

Nov. 2024

Nov. 2024

PUDDLE DOCK BRIDGE
FIFTEENMILE STREAM
KENNEBEC COUNTY
ALBION

ABUTMENT NO. 1 DETAILS

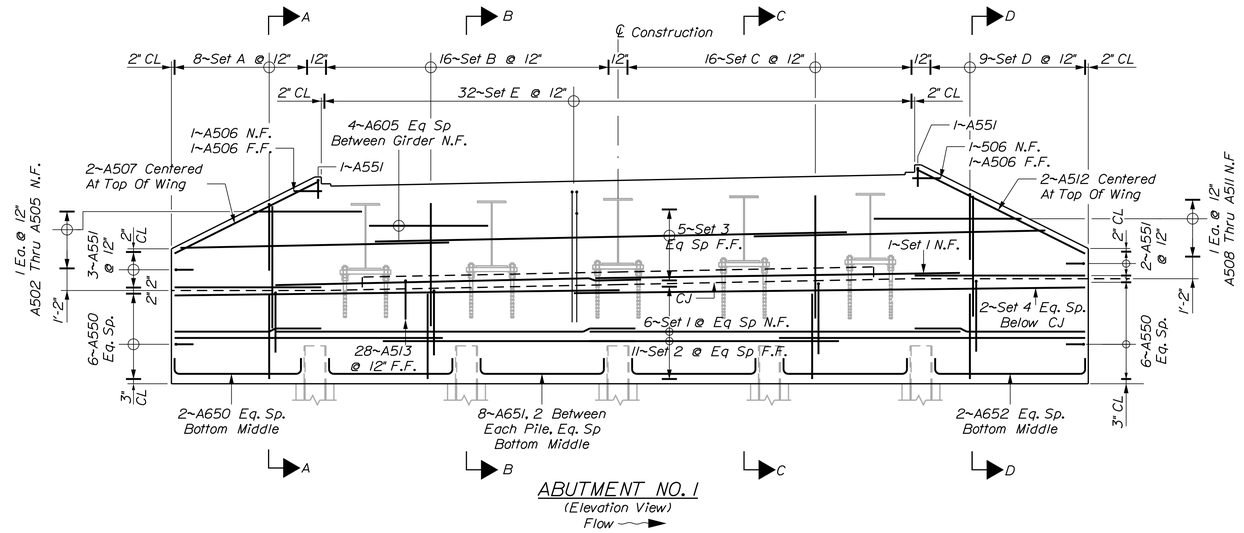
SHEET NUMBER
19
OF 31

Filename: ...\MSTA\019_Abut_1 Details.dgn Division: BRIDGE Username: Brian.Nichols Date:11/18/2024

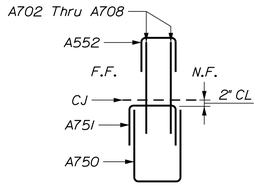
NOTE:
N.F. = Near Face
F.F. = Far Face
E.F. = Each Face
CL = Clear
CJ = Construction Joint
Eq. Sp. = Equally Space

When Two Different Size Rebar Lap Each Other Use The Bigger Bar Size For Lap Splice.

Rebar = (Black) Plain Steel. Other wise Mark.



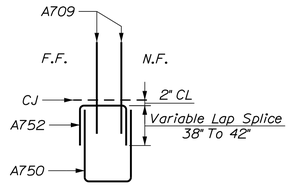
ABUTMENT NO. 1
(Elevation View)
Flow →



SET A

Trim A552 If Needed To Construction Joint

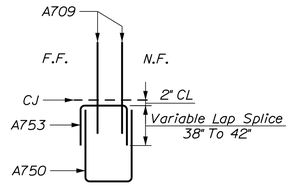
When A750 Interferes With Pile Replace It With 2~A719 1 N.F. & 1 F.F.



SET B

Do Not Install A709 N.F. When It Interferes With Bottom Of Girder.

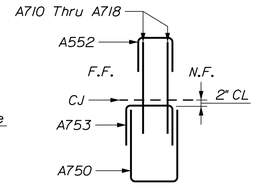
When A750 Interferes With Pile Replace It With 2~A719 1 N.F. & 1 F.F.



SET C

Do Not Install A709 N.F. When It Interferes With Bottom Of Girder.

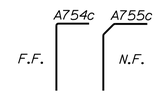
When A750 Interferes With Pile Replace It With 2~A719 1 N.F. & 1 F.F.



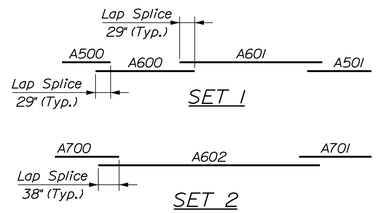
SET D

Trim A552 If Needed To Construction Joint

When A750 Interferes With Pile Replace It With 2~A719 1 N.F. & 1 F.F.

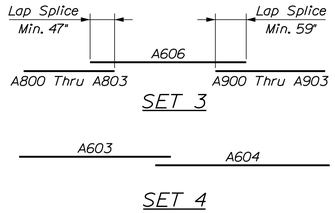


SET E



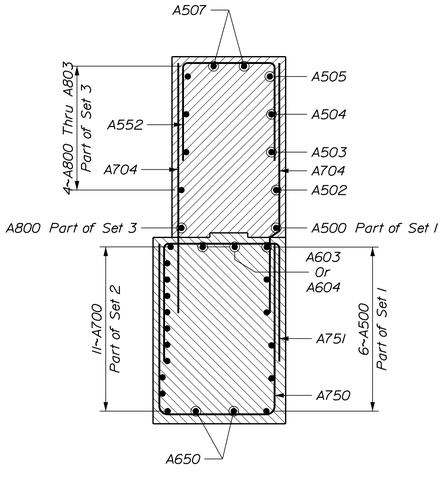
SET 1

SET 2

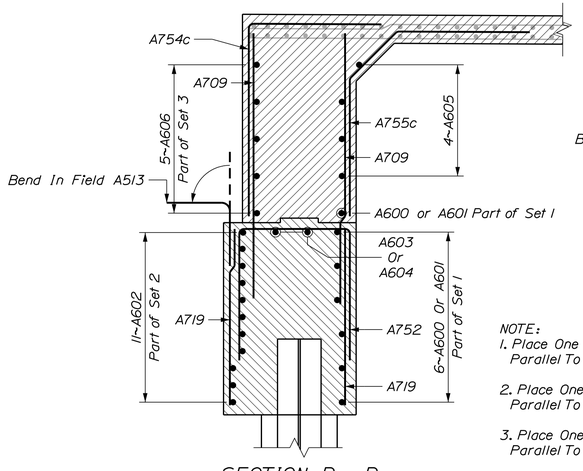


SET 3

SET 4



SECTION A - A
South Wingwall



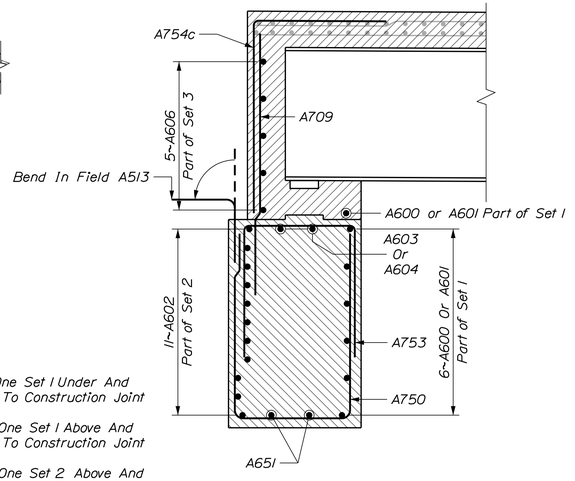
SECTION B - B
At Pile

NOTE:
1. Place One Set 1 Under And Parallel To Construction Joint

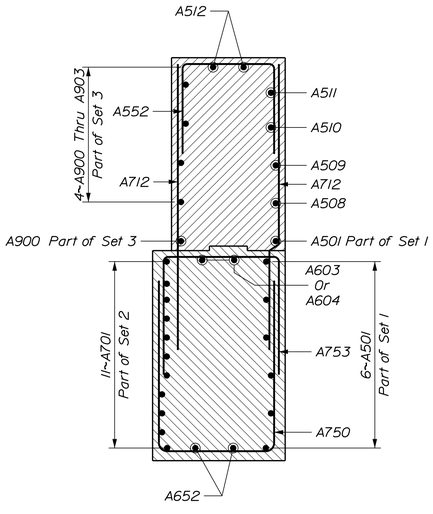
2. Place One Set 1 Above And Parallel To Construction Joint

3. Place One Set 2 Above And Parallel To Construction Joint

4. Place Set 3's Parallel To Construction Joint



SECTION C - C
At Girder



SECTION D - D
North Wingwall

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02529900

WIN 025299.00

BRIDGE NO. 3107

BRIDGE PLANS

			DATE
PROJ. MANAGER	BRIAN NICHOLS	BY	
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SIGNATURE

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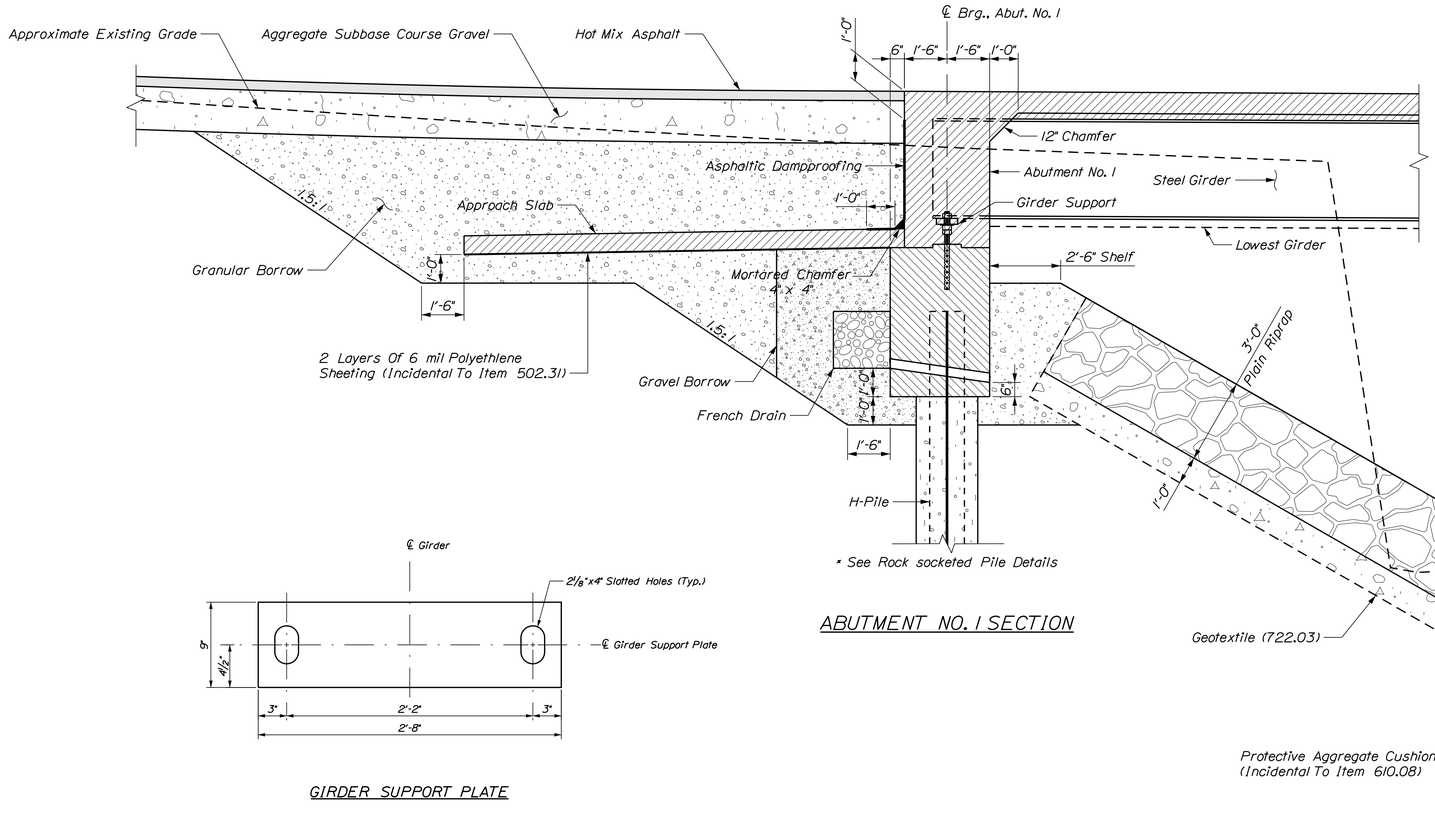
DATE

PUDDLE DOCK BRIDGE
FIFTEENMILE STREAM
ALBION KENNEBEC COUNTY

ABUTMENT NO. 1 REINFORCING

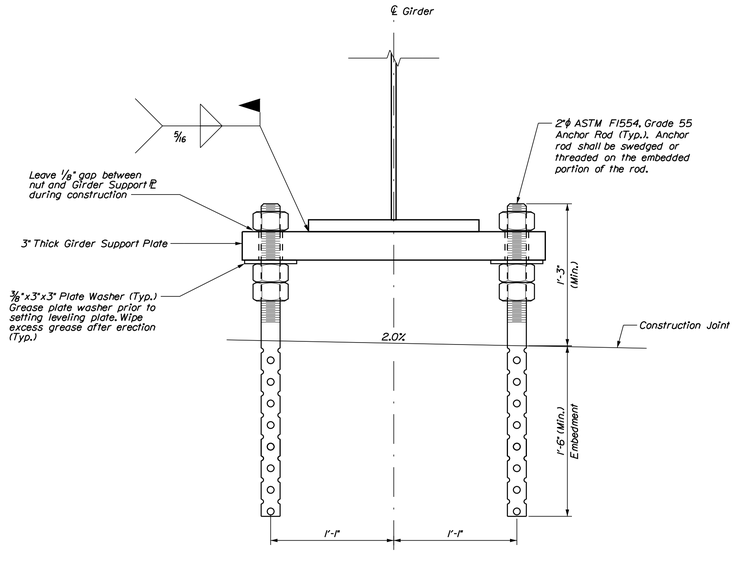
SHEET NUMBER
20
OF 31

Username: Brian.Nichols Date:11/18/2024
Filename: ...\020_Abutment_1 Reinforcing.dgn Division: BRIDGE



ABUTMENT NO. 1 SECTION

GIRDER SUPPORT PLATE



GIRDER SUPPORT DETAIL

ABUTMENT NO. 1 BOTTOM OF GIRDER ELEVATIONS	
Girder	Elevation
G1	242.26
G2	242.13
G3	242.00
G4	241.86
G5	241.73

GIRDER SUPPORT NOTES

1. Payment for fabrication and installation of the girder support assemblies at the abutments will be considered incidental to related contract items.

2. Grease plate washer prior to setting bearing plate. Wipe excess grease after erection.

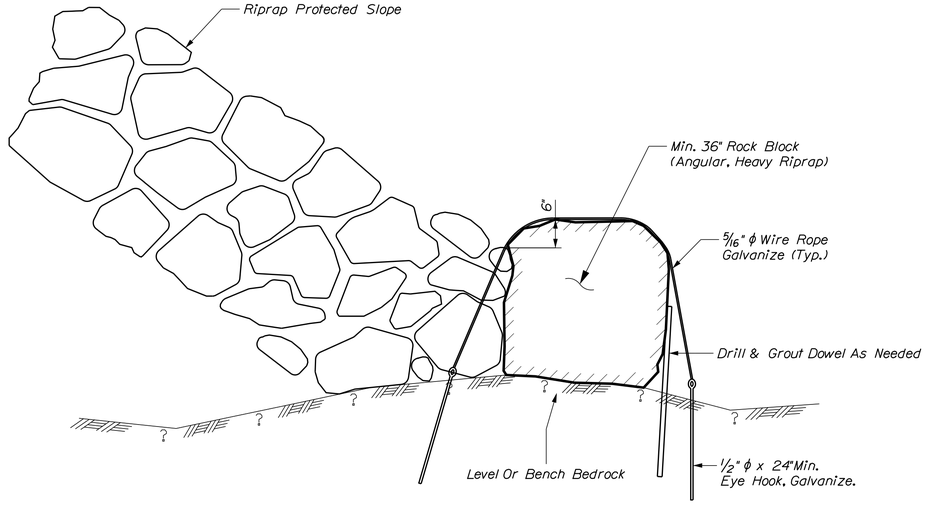
NOTES:

1. Payment for mortared chamfer at approach slabs shall not be paid for directly, but shall be considered incidental to related Contract Items.

2. Asphalt Dampproofing shall meet the requirements of either ASTM D449 Type II, ASTM D1227 Type II-Class 1, or ASTM D1227 Type III-Class 1. The product shall be applied in accordance with the manufacturer's recommendations.

3. Asphalt Dampproofing shall be applied to the backside of the wingwalls up to 1 foot below grade.

4. Payment for Asphalt Dampproofing will not be made directly, but will be considered incidental to related Contract Items.



TOE BUTTRESS DETAIL

(To Be Constructed In Accordance With Special Provision 513)

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02529900

WIN 025299.00

BRIDGE NO. 3107

BRIDGE PLANS

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DESIGN3-DETAILED3				
REVISIONS 1				
REVISIONS 2				DATE
REVISIONS 3				
REVISIONS 4				
FIELD CHANGES				

PUDDLE DOCK BRIDGE
FIFTEENMILE STREAM
ALBION KENNEBEC COUNTY

ABUTMENT NO.1 SECTION & GIRDER SUPPORT

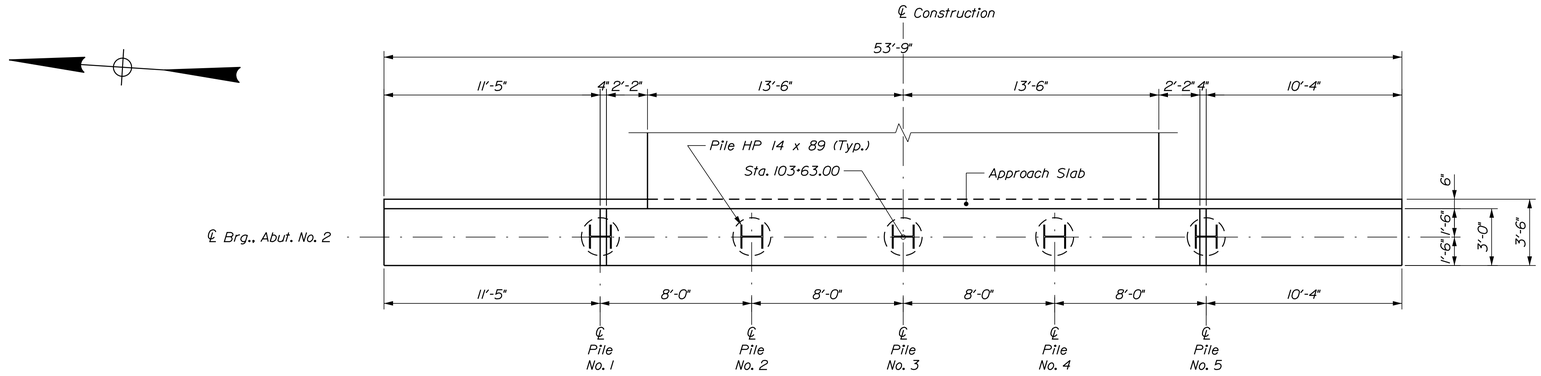
SHEET NUMBER

21

OF 31

Username: Brian.Nichols Date:11/18/2024

Filename: ...\021_Abut 1_Sect & Girder Support.dgnDivision: BRIDGE



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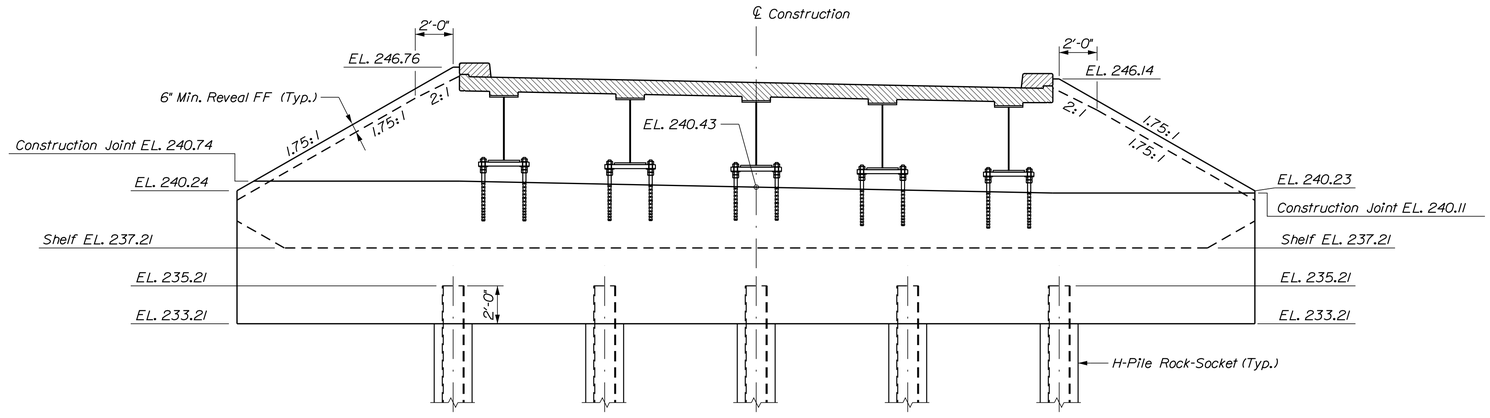
(Top View)



ABUTMENT NO. 2
(Elevation View)
Flow

Filename: ...\MSTA\022_Abut_2 Details.dgn Division: BRIDGE Username: Brian.Nichols Date:11/18/2024

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02529900

WIN 025299.00

BRIDGE NO. 3107

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PUDDLE DOCK BRIDGE
FIFTEENMILE STREAM
ALBION KENNEBEC COUNTY

ABUTMENT NO. 2 DETAILS

SHEET NUMBER
22
OF 31

NOTE:
N.F. = Near Face
F.F. = Far Face
E.F. = Each Face
CL = Clear
CJ = Construction Joint
Eq. Sp. = Equally Space

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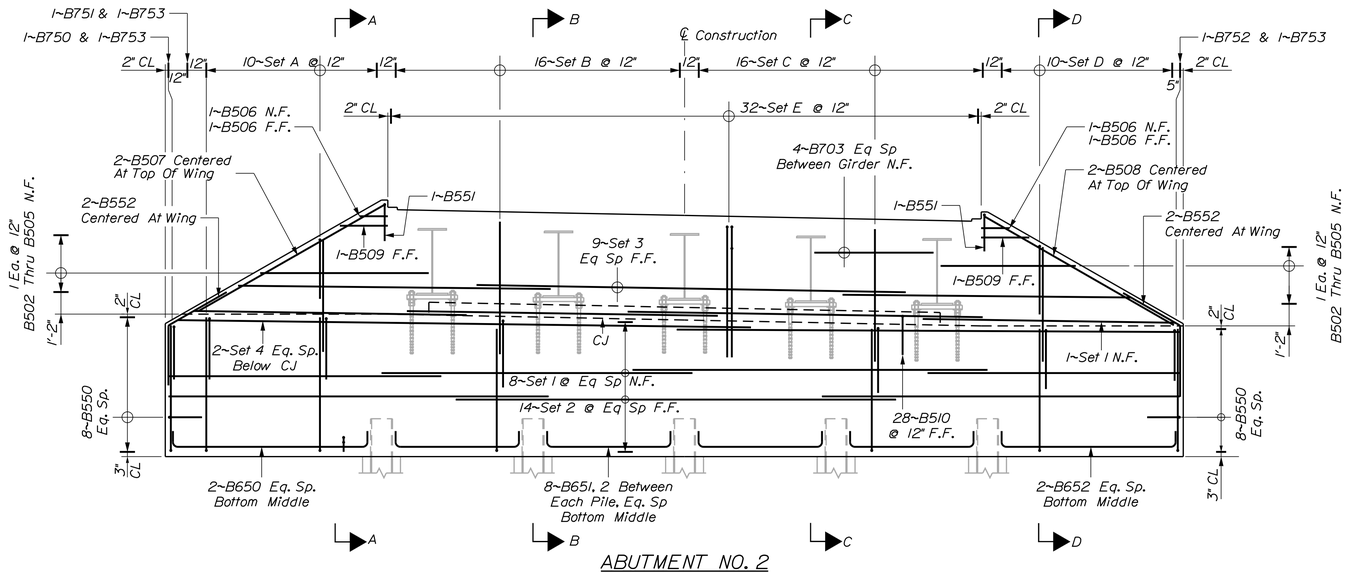
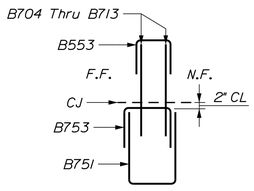


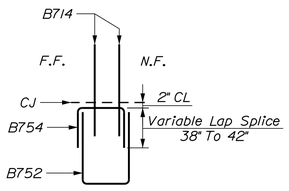
ABUTMENT NO. 2
(Elevation View)
Flow



SET A

Trim B553 If Needed To Construction Joint

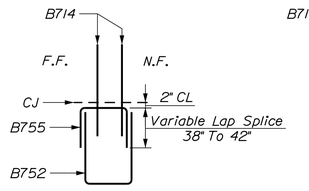
When B751 Interferes With Pile Replace It With 2~B725 1 N.F. & 1 F.F.



SET B

Do Not Install B714 N.F. When It Interferes With Bottom Of Girder.

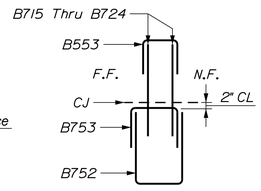
When B752 Interferes With Pile Replace It With 2~B726 1 N.F. & 1 F.F.



SET C

Do Not Install B714 N.F. When It Interferes With Bottom Of Girder.

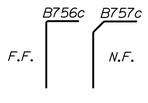
When B752 Interferes With Pile Replace It With 2~B726 1 N.F. & 1 F.F.



SET D

Trim B553 If Needed To Construction Joint

When B752 Interferes With Pile Replace It With 2~B726 1 N.F. & 1 F.F



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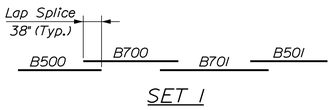

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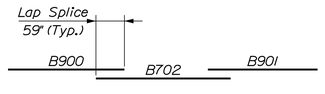
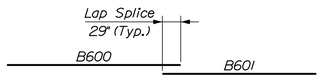


SET 2

SET 3



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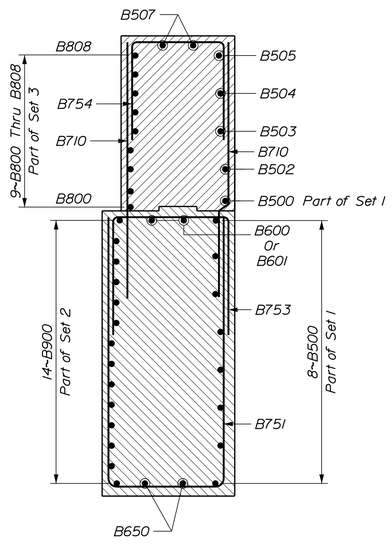
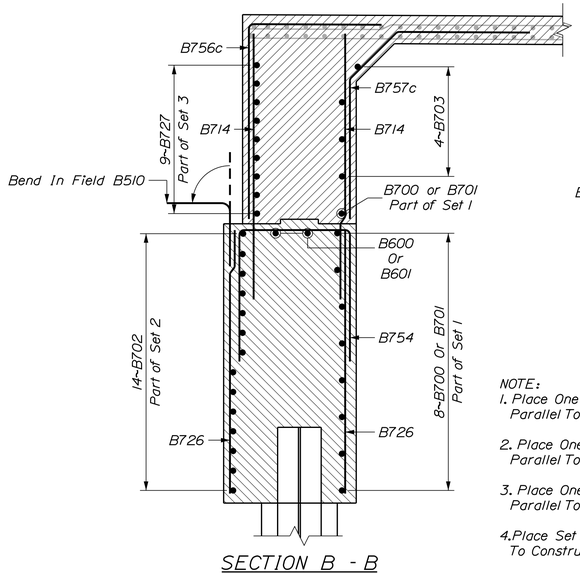


SECTION A - A
North Wingwall



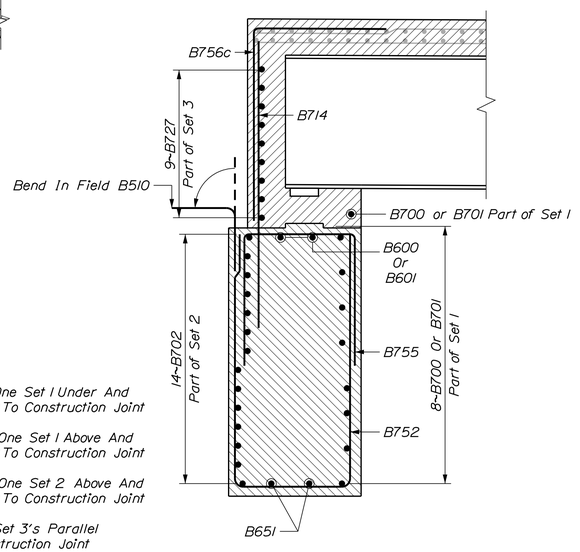
SECTION B - B
At Pile

NOTE:
1. Place One Set 1 Under And Parallel To Construction Joint

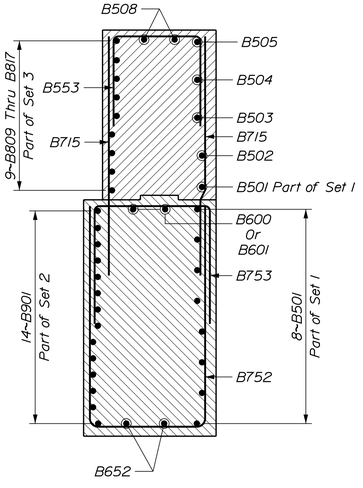
2. Place One Set 1 Above And Parallel To Construction Joint

3. Place One Set 2 Above And Parallel To Construction Joint

4. Place Set 3's Parallel To Construction Joint



SECTION C - C
At Girder



SECTION D - D
South Wingwall

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02529900
WIN 025299.00
BRIDGE NO. 3107
BRIDGE PLANS

		DATE
PROJ. MANAGER	BRIAN NICHOLS	
DESIGN-DETAILED	E. BREWER	Nov. 2024
CHECKED-REVIEWED	MRP	Nov. 2024
DESIGN2-DETAILED2	RMN	E. BREWER
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

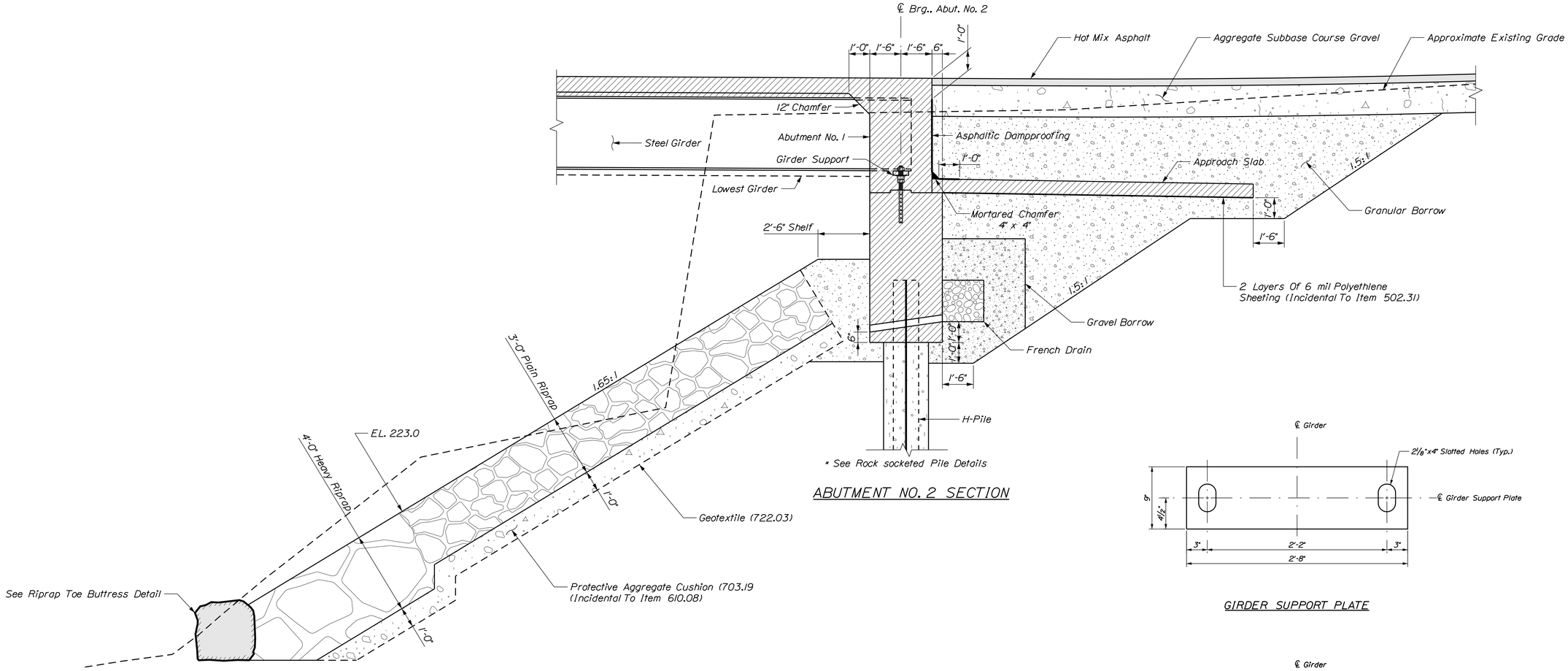
DATE

PUDDLE DOCK BRIDGE
FIFTEENMILE STREAM
ALBION KENNEBEC COUNTY

ABUTMENT NO.2 REINFORCING

SHEET NUMBER
23
OF 31

Filename: ...\023_Abut_2 Reinforcing.dgn Division: BRIDGE Username: Brian.Nichols Date:11/18/2024



ABUTMENT NO. 2 SECTION

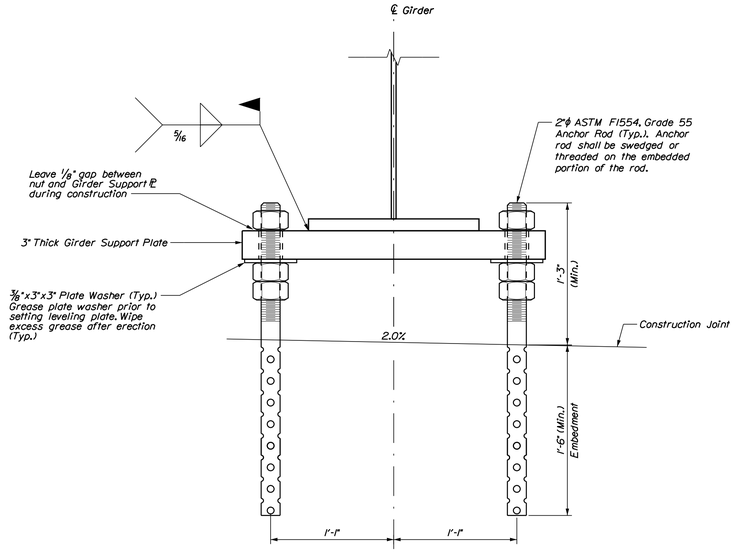
GIRDER SUPPORT PLATE

GIRDER SUPPORT NOTES

1. Payment for fabrication and installation of the girder support assemblies at the abutments will be considered incidental to related contract items.

2. Grease plate washer prior to setting bearing plate. Wipe excess grease after erection.

ABUTMENT NO. 2 BOTTOM OF GIRDER ELEVATIONS	
Girder	Elevation
G1	242.75
G2	241.61
G3	241.48
G4	241.35
G5	241.21



GIRDER SUPPORT DETAIL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02529900

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BRIDGE NO. 3107

BRIDGE PLANS

PROJ. MANAGER	BRIAN NICHOLS		
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CHECKED-REVIEWED	RMN	E. BREWER	Nov. 2024
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DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

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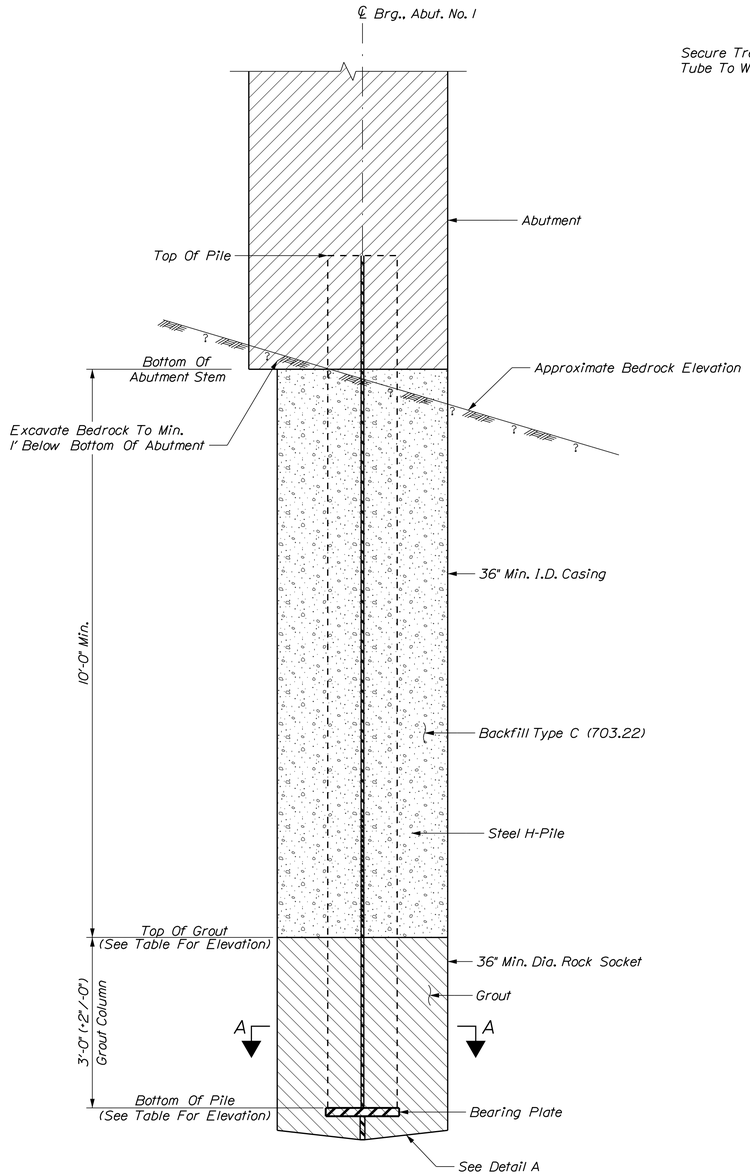
PUDDLE DOCK BRIDGE
FIFTEENMILE STREAM
ALBION KENNEBEC COUNTY

ABUTMENT NO. 2 SECTION & GIRDER SUPPORT

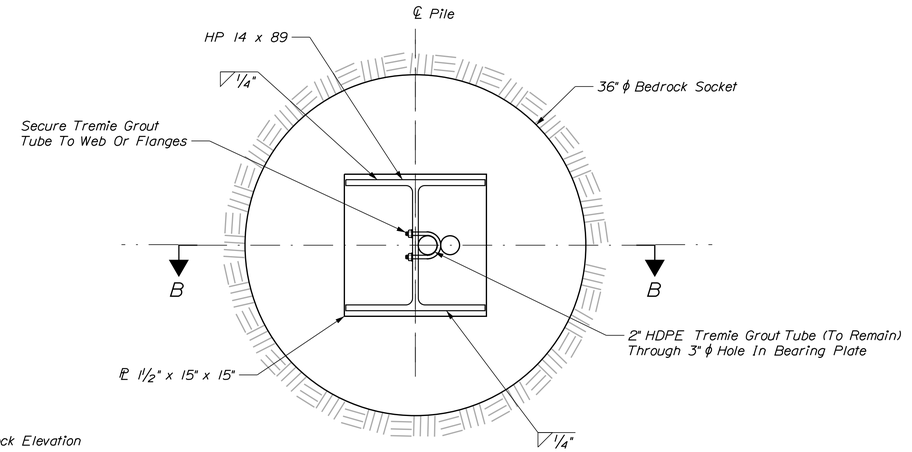
SHEET NUMBER

24

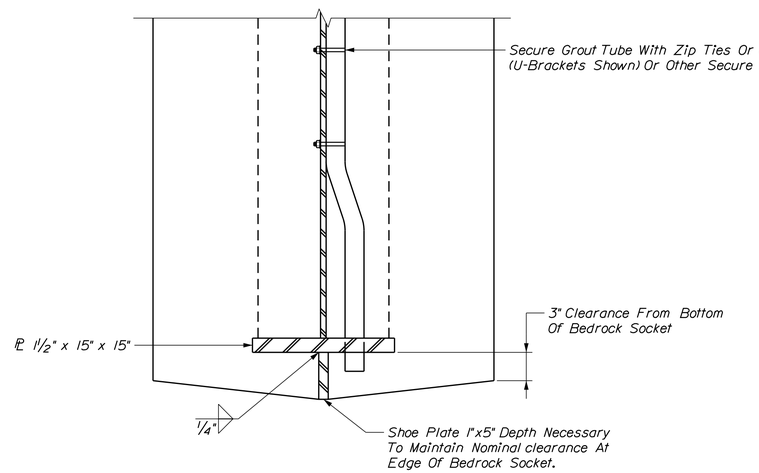
OF 31



ROCK SOCKETED PILE DETAIL
Abutment No. 1 Shown, Abutment No. 2 Similar



SECTION A-A
(Shown prior to grouting)



DETAIL A
(Shown prior to grouting)

PILE NOTES

1. The maximum factored pile load is 357.2 kips at the Strength Limit State.

2. Estimate of piles required:

Abutment No. 1: 5 ~ HP 14x89 @ 15 feet (See chart for pile excavation estimates.)
Abutment No. 2: 5 ~ HP 14x89 @ 15 feet (See chart for pile excavation estimates.)

3. H-pile material shall be ASTM A572, Grade 50.

4. Piles shall not be out of position shown by more than 2 inches in any direction.

5. Piles shall be installed in accordance with Special Provision Section 501, Rock-Socketed H-Pile Foundations.

Abutment	Bottom Of Abutment Stem Elevation (Ft.)	Approximate Top Of Bedrock Elevation (Ft.)	Estimated Top Of Grout Elevation (Ft.)	Estimated Bottom Of Pile Elevation (Ft.)	Approximate Rock Socket Length (Ft.)
1	235.7	233.5	225.7	222.7	10.8
		239.1			16.4
2	233.2	231.9	223.2	220.2	11.7
		234.6			14.4

PILE TABLE NOTES

1. These approximate bedrock elevations have been estimated based on the test borings conducted at each abutment.

2. Top of rock elevations are provided to the nearest 0.1' and are using widely space explorations. Actual elevations may vary.

3. Estimated top of grout elevation is 10' below bottom of abutment stem elevation. If top of rock is more than 10' below bottom of abutment stem, top of grout shall be 1' below the approximate top of rock to provide a minimum rock socket depth of 4' with 3' grouted embedment.

4. Top of rock is defined as penetration of full diameter of rock excavation equipment beneath the bedrock surface, as determined by the Resident.

5. Approximate top of bedrock elevation is based on the range of bedrock elevations encountered in the explorations at each abutment.

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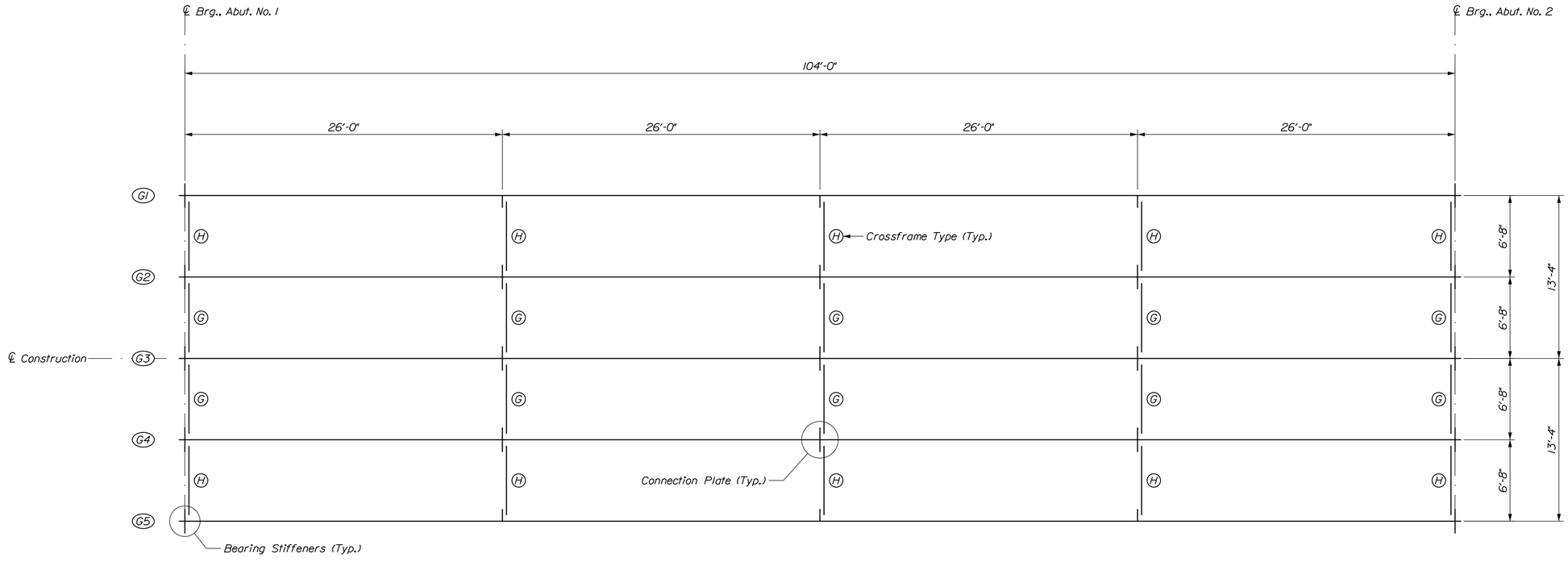
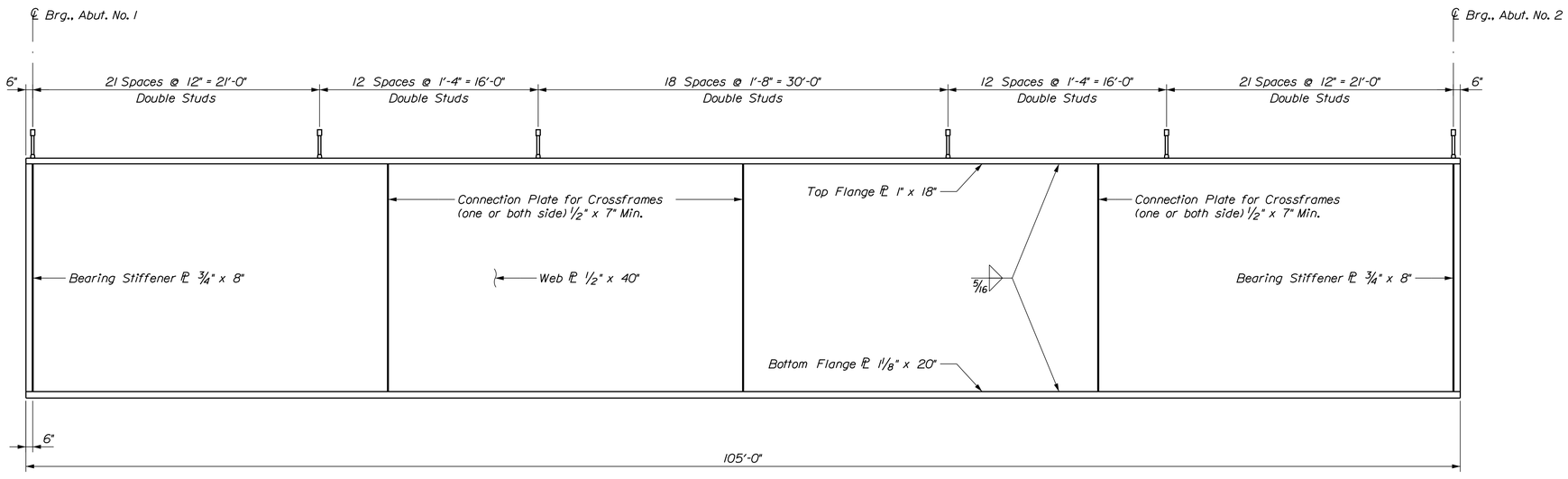
PUDDLE DOCK BRIDGE
FIFTEENMILE STREAM
ALBION KENNEBEC COUNTY

ROCKSOCKET DETAILS

SHEET NUMBER
25
OF 31



FRAMING PLAN



GIRDER ELEVATION

170 Studs Per Girder x 5 Girders
(850 Studs Total)

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02529900

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BRIDGE NO. 3107

BRIDGE PLANS

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DATE

PUDDLE DOCK BRIDGE
FIFTEENMILE STREAM
ALBION KENNEBEC COUNTY

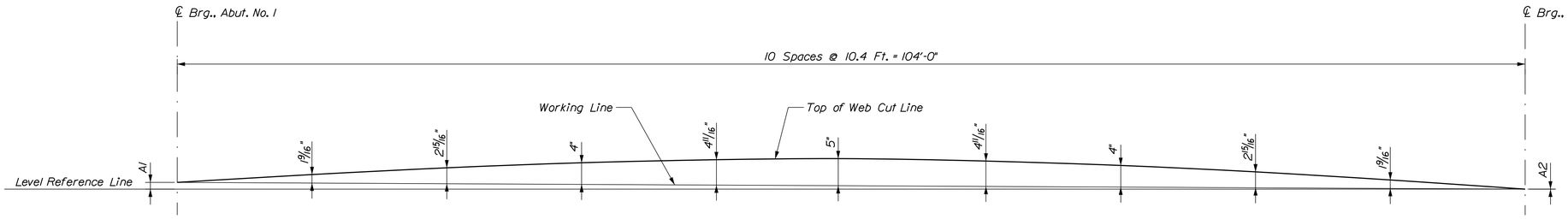
FRAMING & GIRDER DETAILS

SHEET NUMBER

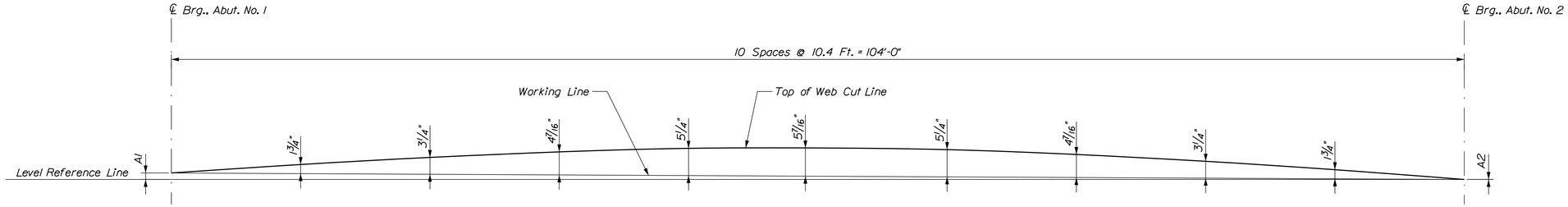
26

OF 31

Filename: ...\026_Framing_Girder_Details.dgn Division: BRIDGE Username: Brian.Nichols Date:11/18/2024



CAMBER DIAGRAM
Exterior Girders



CAMBER DIAGRAM
Interior Girders

Table Of Camber Dimensions (Feet)

Girder	A1	A2
1	0.52	0.00
2	0.52	0.00
3	0.52	0.00
4	0.52	0.00
5	0.52	0.00

Camber Ordinates "CO" (Inches)

	℄ A1										℄ A2
Girder	0'	10.4'	20.8'	31.2'	41.6'	52'	62.4'	72.8'	83.2'	93.6'	104'
Exterior	0	1 9/16	2 5/16	4	4 11/16	5	4 11/16	4	2 5/16	1 9/16	0
Interior	0	1 3/4	3 1/4	4 7/16	5 1/4	5 7/16	5 1/4	4 7/16	3 1/4	1 3/4	0

Bottom Of Slab Elevations

	℄ A1	Span									℄ A2
Girder	0'	10'	20'	30'	40'	50'	60'	70'	80'	90'	100'	104'
1	245.98	246.04	246.08	246.11	246.11	246.08	246.02	245.93	245.82	245.68	245.53	245.48
2	245.85	245.92	245.97	246.01	246.02	245.99	245.93	245.84	245.71	245.56	245.40	245.35
3	245.72	245.78	245.84	245.88	245.88	245.86	245.80	245.70	245.58	245.43	245.26	245.22
4	245.58	245.65	245.71	245.74	245.75	245.72	245.66	245.57	245.44	245.30	245.13	245.08
5	245.45	245.50	245.55	245.58	245.58	245.55	245.49	245.40	245.28	245.14	244.99	244.95

Deflections - Girders (Inches)

Girder	Dead Load Compenent	℄ A1	10.4'	20.8'	31.2'	41.6'	52'	62.4'	72.8'	83.2'	93.6'	℄ A2
Exterior	Steel Dead Load	0.00	0.30	0.58	0.79	0.92	0.96	0.92	0.79	0.58	0.30	0.00
	Fluid Dead Load	0.00	1.18	2.21	3.04	3.56	3.73	3.56	3.04	2.21	1.18	0.00
	Superimposed Dead Load	0.00	0.08	0.14	0.20	0.23	0.25	0.23	0.20	0.14	0.08	0.00
Interior	Steel Dead Load	0.00	0.30	0.58	0.79	0.92	0.96	0.92	0.79	0.58	0.30	0.00
	Fluid Dead Load	0.00	1.34	2.52	3.46	4.06	4.25	4.06	3.46	2.52	1.34	0.00
	Superimposed Dead Load	0.00	0.08	0.14	0.19	0.23	0.23	0.23	0.19	0.14	0.08	0.00

STRUCTURAL STEEL NOTES

1. Camber ordinates, as shown, are computed to compensate for all dead load deflections and for the curvature of the finished grade profile.

2. No transverse butt weld splices will be allowed in the flange plates or web plates within 10 feet or 10 percent of the span length (whichever is greater) from the points of maximum negative moment or maximum positive moment. Butt weld splices in flanges shall be not less than 1 foot from transverse butt welds in the web plates and no transverse web or flange butt welds shall be located within 1 foot of other transverse welds (e.g. connection plates to web welds) on either flange or web. No transverse butt weld splices will be allowed in areas of stress reversal.

3. Sections of flange plates or web plates between transverse shop splices or between a transverse shop splice and a field splice shall be at least 20 feet in length unless otherwise shown on the Plans.

4. Bearing stiffeners shall be plumb after erection and dead loading of the structure.

5. Intermediate crossframe or diaphragm connection plates may be either plumb or normal to the top flange.

6. All connection plate and stiffener welds shall be 5/16 inch fillet welds.

7. Coat girder ends and cross frames to a distance of 10 feet from each Abutment centerline of bearing in accordance with Standard Specifications Section 506, Shop Applied Protective Coating - Steel (Zinc Rich Coating System), except NEPCOAT Qualified Products List C may be used. Payment for the coating will be incidental to Pay Item 504.702.

8. After placement of the superstructure concrete, thoroughly clean the abutments of all stains with a method approved by the Resident. Payment will be considered incidental to related Contract Items.

9. Provide a drip bar on the high side of each abutment on all girders in accordance with Standard Detail 504(10).

10. Structural steel was designed with a vertical construction load of 50 lb/sf and a lateral wind velocity during construction of 20 mph.

11. Bolted diaphragms or cross frame connections shall be made using 7/8 inch diameter, ASTM F3125, Grade A325 Type 3 high strength bolts. Hole size shall be 15/16 inch diameter. The minimum edge distance shall be 1 1/2 inch unless otherwise shown. Oversized or short-slotted holes are not permitted. Bolt threads shall be excluded from the shear plane of cross frame or diaphragms connections

12. Ends of girder webs shall be vertical under full dead load.

STATE OF MAINE
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BRIDGE NO. 3107

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	BRIAN NICHOLS	
DESIGN-DETAILED	E. BREWER	Nov. 2024
CHECKED-REVIEWED	MRP	Nov. 2024
DESIGN2-DETAILED2	RWN	
DESIGN3-DETAILED3	E. BREWER	
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

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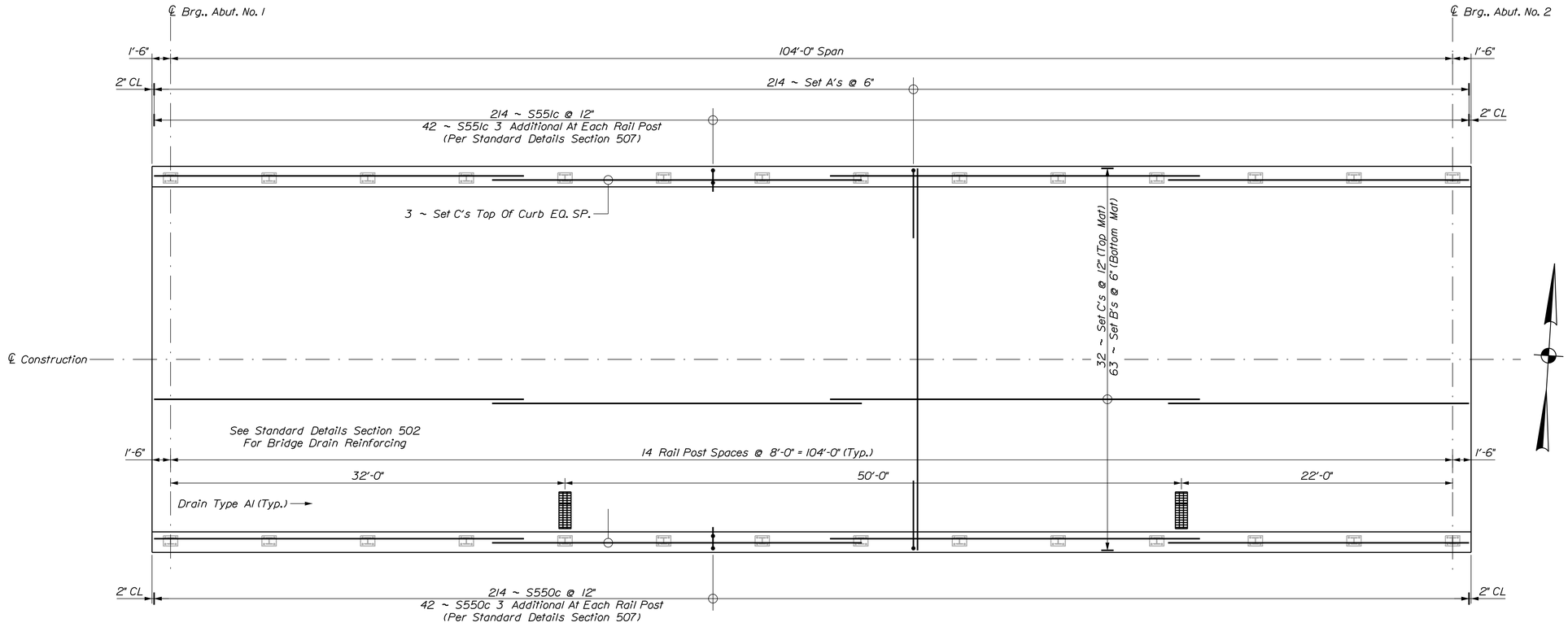
PUDDLE DOCK BRIDGE
FIFTEENMILE STREAM
ALBION KENNEBEC COUNTY

CAMBER DETAILS & BOTTOM OF SLAB ELEVATION

SHEET NUMBER

27

OF 31

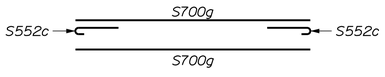


SUPERSTRUCTURE PLAN

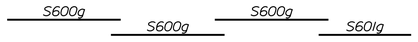
LAP SPLICE		
BAR #	TYPE	INCHES
5	GFRP	24
6	GFRP	31
7	GFRP	36

g = Glass Fiber Reinforcing Polymer
c = High Strength, Low Carbon Chromium

SET "A"
1 ~ S700g & 2 ~ S552c (Top Mat)
1 ~ S700g (Bottom Mat)

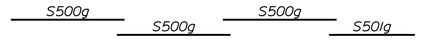


SET "B"
3 ~ S600g & 1 ~ S601c
(Bottom Mat)



Stagger The Lap Splice Locations.

SET "C"
3 ~ S500g & 1 ~ S501c
(Top Mat)



Stagger The Lap Splice Locations.

STATE OF MAINE
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WIN 025299.00

BRIDGE NO. 3107

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DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
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PUDDLE DOCK BRIDGE
FIFTEENMILE STREAM
ALBION KENNEBEC COUNTY

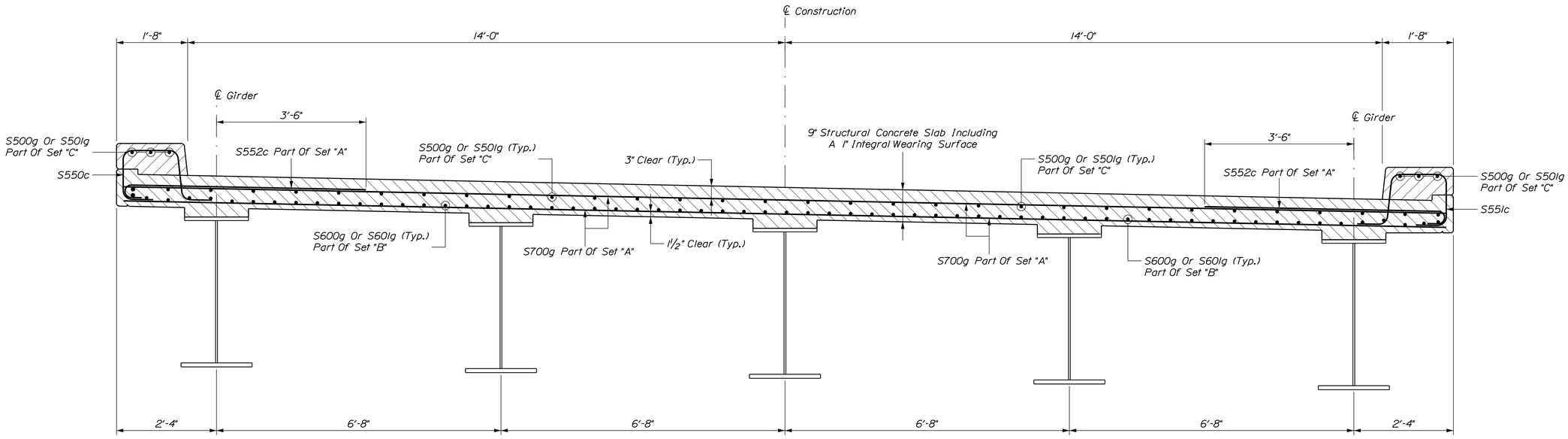
SUPERSTRUCTURE PLAN & REINFORCING

SHEET NUMBER

28

OF 31

Username: Brian.Nichols Date:11/18/2024
Division: BRIDGE
Filename: ...\028_Superstruct_Plan_Rebar.dgn



PROPOSED BRIDGE SECTION

SUPERSTRUCTURE NOTES

1. The theoretical blocking used for design of the structure is 2.5 inch at the centerline of bearing of the abutments. Refer to Standard Detail 502(03) for blocking details.

2. Reinforcing steel shall have a minimum concrete cover of 2 inches unless otherwise noted.

3. Form a one inch V-groove on the fascias at the horizontal joint between the curb and slab.

4. The Saw Cut Grooving shall be in the longitudinal direction.

5. The superstructure slab concrete shall be placed continuously and shall be kept plastic until the entire placement has been made.

6. Precast Concrete Deck Panels are not allowed on this project.

STATE OF MAINE
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WIN 025299.00

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BRIDGE PLANS

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PUDDLE DOCK BRIDGE
FIFTEENMILE STREAM
ALBION KENNEBEC COUNTY

SUPERSTURCTURE SECTION & NOTES

SHEET NUMBER

29

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STRAIGHT BARS

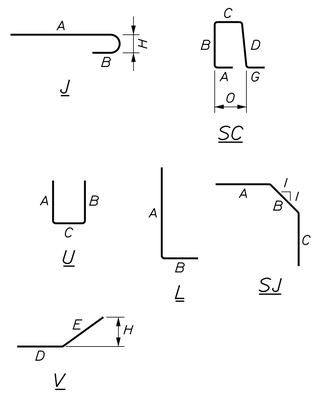
MARK	QTY.	LENGTH	LOCATION
		APPROACH SLAB	
AS500g	16	26'-6"	Approach Slab
AS600g	55	15'-2"	Approach Slab
		SUPERSTRUCTURE	
S500g	114	30'-0"	Deck Slab & Curb
S501g	38	22'-8"	Deck Slab & Curb
S600g	189	30'-0"	Deck Slab
S601g	63	24'-8"	Deck Slab
S700g	428	31'-0"	Deck Slab (Transverse)
		ABUTMENT NO. 1	
A500	7	7'-9"	Abutment N.F.
A501	7	9'-0"	Abutment N.F.
A502	1	8'-7"	South Wingwall N.F.
A503	1	9'-1 1/4"	South Wingwall N.F.
A504	1	7'-9 1/4"	South Wingwall N.F.
A505	1	5'-9 1/4"	South Wingwall N.F.
A506	4	1'-6"	Wingwall N.F. & F.F.
A507	2	9'-11 1/2"	South Wingwall Top Middle
A508	1	10'-9"	North Wingwall N.F.
A509	1	9'-9 1/2"	North Wingwall N.F.
A510	1	7'-9 1/2"	North Wingwall N.F.
A511	1	5'-9 1/2"	North Wingwall N.F.
A512	2	8'-5 1/4"	North Wingwall Top Middle
A513	28	5'-0"	Abutment F.F. (Apr. Slab)
A600	7	19'-0"	Abutment N.F.
A601	7	19'-7"	Abutment N.F.
A602	11	24'-1"	Abutment F.F.
A603	2	23'-6"	Middle Below Construction Joint
A604	2	27'-0"	Middle Below Construction Joint
A605	16	6'-3 1/2"	Between Girders N.F.
A606	5	24'-11"	Abutment F.F.
A700	11	14'-2"	Wingwall F.F.
A701	11	16'-2"	Wingwall F.F.
A702	2	3'-11"	South Wingwall
A703	2	4'-7 1/4"	South Wingwall
A704	2	5'-7 1/4"	South Wingwall
A705	2	6'-1 1/4"	South Wingwall
A706	2	6'-7 1/4"	South Wingwall
A707	2	7'-1 1/4"	South Wingwall
A708	2	7'-7 1/4"	South Wingwall
A709	54	6'-1"	Abutment N.F. & F.F.
A710	2	7'-5 3/4"	North Wingwall
A711	2	6'-11 3/4"	North Wingwall
A712	2	6'-5 3/4"	North Wingwall
A713	2	5'-11 3/4"	North Wingwall
A714	2	5'-5 3/4"	North Wingwall
A715	2	4'-11 3/4"	North Wingwall
A716	2	4'-5 3/4"	North Wingwall
A717	2	3'-11 3/4"	North Wingwall
A718	2	3'-5 3/4"	North Wingwall
A719	20	4'-6"	Abutment & Wingwall
A800	2	14'-6"	South Wingwall F.F.
A801	1	13'-10 3/4"	South Wingwall F.F.
A802	1	11'-9 3/4""	South Wingwall F.F.
A803	1	9'-8 1/2"	South Wingwall F.F.
A900	2	17'-6"	North Wingwall F.F.
A901	1	15'-11 1/2"	North Wingwall F.F.
A902	1	13'-10 1/2"	North Wingwall F.F.
A903	1	11'-9"	North Wingwall F.F.

MARK	QTY.	LENGTH	LOCATION
		ABUTMENT NO. 2	
B500	9	14'-5"	North Abutment N.F.
B501	9	13'-4"	South Abutment N.F.
B502	2	9'-7 1/2"	N-S Wingwall N.F.
B503	2	9'-2 1/2"	N-S Wingwall N.F.
B504	2	7'-5 1/2"	N-S Wingwall N.F.
B505	2	5'-8 1/2"	N-S Wingwall N.F.
B506	4	1'-6"	N-S Wingwall N.F. & F.F.
B507	2	11'-5 1/2"	North Wingwall Top Middle
B508	2	11'-9 3/4"	South Wingwall Top Middle
B509	2	2'-4 1/2"	N-S Wingwall F.F.
B510	28	5'-0"	Abutment F.F. (Apr. Slab)
B600	2	28'-10"	Middle Below Construction Joint
B601	2	27'-0"	Middle Below Construction Joint
B700	9	16'-5"	Abutment N.F.
B701	9	18'-9"	Abutment N.F.
B702	14	23'-3"	Abutment F.F.
B703	16	6'-3 1/2"	Between Girders N.F.
B704	2	2'-8 1/4"	North Wingwall
B705	2	3'-1 1/4"	North Wingwall
B706	2	3'-8 1/4"	North Wingwall
B707	2	4'-3"	North Wingwall
B708	2	4'-10"	North Wingwall
B709	2	5'-4 3/4"	North Wingwall
B710	2	5'-11"	North Wingwall
B711	2	6'-6 1/2"	North Wingwall
B712	2	7'-1 1/4"	North Wingwall
B713	2	7'-8 1/4"	North Wingwall
B714	52	7'-0"	Abutment N.F. & F.F.
B715	2	7'-4 3/4"	South Wingwall
B716	2	6'-10"	South Wingwall
B717	2	6'-3"	South Wingwall
B718	2	5'-8 1/4"	South Wingwall
B719	2	5'-1 1/4"	South Wingwall
B720	2	4'-6 1/2"	South Wingwall
B721	2	3'-11 3/4"	South Wingwall
B722	2	3'-4 3/4"	South Wingwall
B723	2	2'-10"	South Wingwall
B724	2	2'-5"	South Wingwall
B725	2	7'-1 1/4"	North Wingwall
B726	8	6'-6"	Abutment & S.Wingwall
B727	9	22'-8"	Abutment F.F.
B800	1	19'-1"	North Wingwall F.F.
B801	1	18'-2 3/4"	North Wingwall F.F.
B802	1	17'-4 1/2"	North Wingwall F.F.
B803	1	16'-6 1/4"	North Wingwall F.F.
B804	1	15'-7 3/4"	North Wingwall F.F.
B805	1	14'-9 1/2"	North Wingwall F.F.
B806	1	13'-11 1/4"	North Wingwall F.F.
B807	1	13'-1"	North Wingwall F.F.
B808	1	12'-2 3/4"	North Wingwall F.F.
B809	1	11'-11"	South Wingwall F.F.
B810	1	11'-0 1/2"	South Wingwall F.F.
B811	1	10'-1 1/2"	South Wingwall F.F.
B812	1	9'-2 3/4"	South Wingwall F.F.
B813	1	8'-4"	South Wingwall F.F.
B814	1	7'-5 1/4"	South Wingwall F.F.
B815	1	6'-6 3/4"	South Wingwall F.F.
B816	1	5'-8"	South Wingwall F.F.
B817	1	4'-9 1/4"	South Wingwall F.F.
B900	14	20'-1"	North Wingwall
B901	14	18'-11"	South Wingwall

BENT BARS

MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
								SUPERSTRUCTURE						
S550c	256	5'-4"	SC	0'-10"	1'-2 1/2"	1'-3 1/4"	1'-2 1/4"			0'-10"		1'-4 1/2"		Top Of Curb (Low Side)
S551c	256	5'-4"	SC	0'-10"	1'-2 1/4"	1'-3 1/4"	1'-2 1/2"			0'-10"		1'-4 1/2"		Top Of Curb (High Side)
S552c	428	6'-6"	J	5'-8"	0'-7"						0'-5"			Bottom Of Curb & Fascia
S553c	32	6'-0"	L	3'-0"	3'-0"									At Bridge Drain
								ABUTMENT NO. 1						
A550	12	7'-2"	U	2'-0"	2'-0"	3'-2"								End Of Wing
A551	7	6'-8"	U	2'-0"	2'-0"	2'-8"								End Of Wing
A552	17	8'-0"	U	3'-2"	2'-8"	3'-2"								Abutment & Wingwall
A650	2	8'-4"	U	1'-0"	1'-0"	6'-8"								Wingwall Bottom Middle
A651	8	8'-2"	U	1'-0"	1'-0"	6'-6"								Abutment Bottom Middle
A652	2	9'-7"	U	1'-0"	1'-0"	7'-11"								Wingwall Bottom Middle
A750	39	12'-2"	U	4'-6"	4'-6"	3'-2"								Abutment & Wingwall
A751	8	9'-6"	U	3'-2"	3'-2"	3'-2"								Abutment & Wingwall
A752	16	9'-7 1/2"	U	3'-5 3/4"	3'-5 3/4"	2'-8"								Abutment & Wingwall
A753	25	10'-3"	U	3'-9 1/2"	3'-9 1/2"	2'-8"								Abutment & Wingwall
A754c	32	10'-7 1/2"	L	7'-1 1/2"	3'-6"									Abutment F.F.
A755c	32	10'-1"	SJ	3'-6"	1'-7 1/2"	5'-11 1/2"								Abutment N.F.
								ABUTMENT NO. 2						
B550	16	7'-2"	U	2'-0"	2'-0"	3'-2"								End Of Wing
B551	2	6'-8"	U	2'-0"	2'-0"	2'-8"								End Of Wing
B552	4	7'-0"	V				3'-6"	3'-6"			3'-0 1/2"			End Of Wing
B553	20	8'-10"	U	3'-2"	3'-2"	2'-8"								N-S Wingwall
					1'-0"	10'-6"								Wingwall Bottom Middle
B650	2	12'-6"	U	1'-0"	1'-0"	6'-6"								Abutment Bottom Middle
B651	8	8'-6"	U	1'-0"	1'-0"	9'-5"								Wingwall Bottom Middle
B652	2	11'-5"	U	1'-0"										
B750	1	13'-6 1/2"	U	6'-8 1/4"	6'-8 1/4"	3'-2"								North Wingwall
B751	10	17'-4 1/2"	U	7'-1 1/4"	7'-1 1/4"	3'-2"								North Wingwall
B752	39	16'-2"	U	6'-6"	6'-6"	3'-2"								Abutment & Wingwall
B753	23	9'-6"	U	3'-2"	3'-2"	3'-2"								N-S Wingwall
B754	16	10'-3"	U	3'-6 1/2"	3'-6 1/2"	3'-2"								Abutment
B755	16	10'-1"	U	3'-5 1/2"	3'-5 1/2"	3'-2"								Abutment
B756c	32	10'-7 1/2"	L	7'-1 1/2"	3'-6"									Abutment F.F.
B757c	32	10'-1"	SJ	3'-6"	1'-7 1/2"	5'-11 1/2"								Abutment N.F.

TYPE - BENDING DIAGRAMS



All dimensions are out-to-out of bar.

Bending details and hooks shall conform to the recommendations of the current revision of ACI Standard 315 and ACI Standard 318.

Plain Reinforcing Steel: ASTM A 615, Grade 60
Stainless Steel Reinforcing: ASTM A955, Grade 75
Glass Fiber Reinforced Polymer: ASTM D7957
Low-Carbon Chromium Steel: ASTM A1035, Type CS, Grade 100

GENERAL NOTES

1. The first digit(s) following the letter(s) of the mark indicate the size of the bar:

   Mark "A502" = bar size #5
   Mark "P805" = bar size #8
   Mark "S650" = bar size #6
   Mark "P1404" = bar size #14

2. The lower case letter following the bar number indicates the material of the bar.

   "A500" = (Black) Plain Steel
   "A550s", s = Stainless Steel
   "S500g", g = Glass Fiber Reinforced Polymer
   "P510c", c = Low-Carbon Chromium Steel

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02529900

WIN 025299.00

BRIDGE PLANS

BRIDGE NO. 3107

	BY	DATE
PROJ. MANAGER	BRIAN NICHOLS	
DESIGN-DETAILED	E. BREWER	MRP Nov. 2024
CHECKED-REVIEWED	RMN	E. BREWER Nov. 2024
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

PUDDLE DOCK BRIDGE
FIFTEENMILE STREAM
ALBION KENNEBEC COUNTY

REINFORCING STEEL SCHEDULE

SHEET NUMBER

30

OF 31

Filename: ...\00\ROW\MSTA\001_RWPLAN1.dgn Username: Brian.Nichols Division: BRIDGE Date:11/18/2024

PLAN LEGEND

Town, County, State	New R/W Along Existing R/W		Existing	Proposed		Existing	Proposed
Approx. Property Lines P.L.	Building	Clearing Limit Line	Sanitary Sewer		Traveled Way		
Existing Right of Way	Trees Conifer	Deciduous	Telephone Line		Ditch		
Limits of Wrought Portion L.O.W.P.	Tree Line	Bush Line	Electric Line		Catch Basin		
Control Of Access C.O.A.	Water Edge		Water Line		Manhole		
New Right of Way	Ledge	Rock/Boulder Flag Pole	Underdrain Line		Sewer Manhole		
New Easement	Fence CHAIN LINK	BARB WIRE STOCKADE	Gas Line		Utility Pole		
New Temporary Rights	Sign	Well Mailbox	Guardrail		Fire Hydrant		
New R/W Within Existing R/W			Culvert		Curbing		

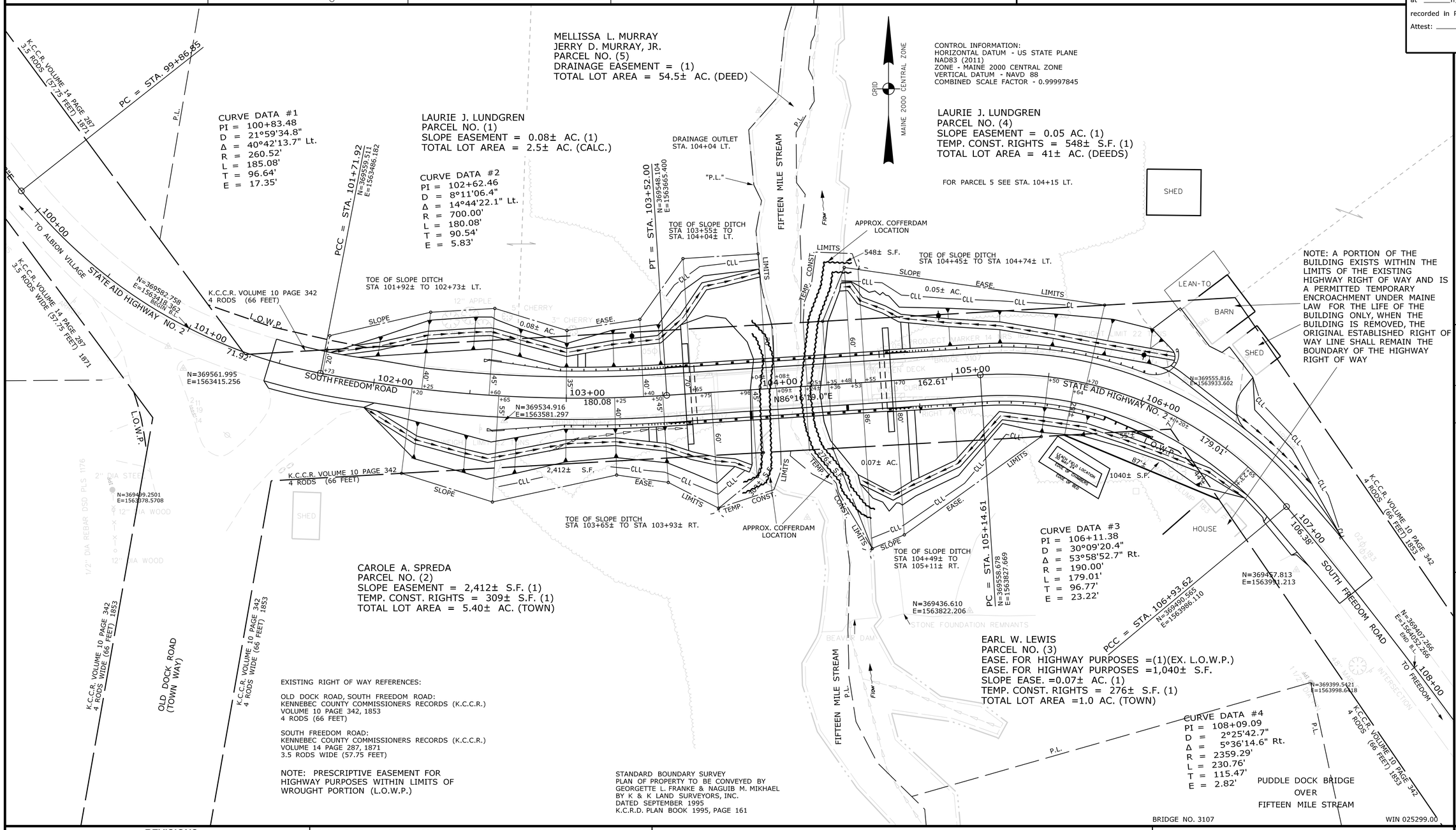
Cut Line	Fill Line
Stonewall	Retaining Wall
Baseline 10+00 11+00 12+00	
Monument	Traverse Point
Iron Rod Found IRF	Pipe Found IPF
Replacement Pin Set	

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 ABUTTING PROPERTY OWNERS.

25 0 25 50 75 100
Scale of Feet

STATE OF MAINE REGISTRY OF DEEDS

COUNTY _____
RECEIVED _____, _____
at _____h _____m _____M and
recorded in Plan Bk _____, Pg. _____
Attest: _____
REGISTER



EXISTING RIGHT OF WAY REFERENCES:

OLD DOCK ROAD, SOUTH FREEDOM ROAD:
KENNEBEC COUNTY COMMISSIONERS RECORDS (K.C.C.R.)
VOLUME 10 PAGE 342, 1853
4 RODS (66 FEET)

SOUTH FREEDOM ROAD:
KENNEBEC COUNTY COMMISSIONERS RECORDS (K.C.C.R.)
VOLUME 14 PAGE 287, 1871
3.5 RODS WIDE (57.75 FEET)

NOTE: PRESCRIPTIVE EASEMENT FOR HIGHWAY PURPOSES WITHIN LIMITS OF WROUGHT PORTION (L.O.W.P.)

STANDARD BOUNDARY SURVEY
PLAN OF PROPERTY TO BE CONVEYED BY
GEORGETTE L. FRANKE & NAGUIB M. MIKHAEL
BY K & K LAND SURVEYORS, INC.
DATED SEPTEMBER 1995
K.C.R.D. PLAN BOOK 1995, PAGE 161

ITEM	TECH	CHECKED
EXISTING CONDITION PLAN	JDF	
FINAL RIGHT OF WAY	KDM	KDM
AREAS	KDM	KDM

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

REVISIONS

NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK PAGE COUNTY RECORD

NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE

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

STATE AID HIGHWAY NO. 2
SOUTH FREEDOM ROAD
ALBION KENNEBEC COUNTY
FEDERAL AID PROJECT NO. 2529900

SEPTEMBER 2024	RIGHT-OF-WAY MAP	D.O.T. FILE NO. 6-504
SCALE 1" = 25'	SHEET 1 OF 1	

SHEET NUMBER
31
OF 31