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 (2021) AADT	17,430
Future (2041) AADT	20,920
DHV - % of AADT	10%
Design Hour Volume	2092
Heavy Trucks (% of AADT)	3%
Heavy Trucks (% of DHV)	1%
Directional Distribution (% of DHV)	57%
18 kip Equivalent P 2.0	224
18 kip Equivalent P 2.5	214
Design Speed (mph)	25

HYDROLOGIC DATA

Drainage Area	5,399 sq mi
Discharge (<Q1.1, see General Note 31)	21,100 cfs
Discharge Q10	98,200 cfs
Discharge Q25	121,000 cfs
Design Discharge (Q50)	141,000 cfs
Check Discharge (Q100)	160,000 cfs
Head Pond	
Headwater Elevation (Design Low)	50.9 ft
Headwater Elevation (Normal)	52.2 ft
Headwater Elevation (<Q1.1, see General Note 31)	55.5 ft
Headwater Elevation (Q10)	62.0 ft
Headwater Elevation (Q25)	63.8 ft
Headwater Elevation (Q50)	65.4 ft
Headwater Elevation (Q100)	66.8 ft
Discharge Velocity (Q10)	2.5 fps
Discharge Velocity (Q50)	3.0 fps
Discharge Velocity (Q100)	3.5 fps
Lower Basin	
Headwater Elevation (Design Low)	30.5 ft
Headwater Elevation (Normal)	32.0 ft
Headwater Elevation (<Q1.1, see General Note 31)	36.5 ft
Headwater Elevation (Q10)	52.6 ft
Headwater Elevation (Q25)	56.2 ft
Headwater Elevation (Q50)	58.9 ft
Headwater Elevation (Q100)	61.5 ft
Discharge Velocity (Q10)	15.0 fps
Discharge Velocity (Q50)	17.0 fps
Discharge Velocity (Q100)	20.0 fps

MATERIALS

Concrete:	
Curbs, Sidewalks, Transition Barriers, and Roadway Median	Class "LP"
All Other	Class "A"
Reinforcing Steel	
Plain	ASTM A 615/A 615M, Grade 60
Low-Carbon Chromium	ASTM A 1035, Type CS, Grade 100
Structural Steel:	
Flanges	ASTM A 709, Grade HPS 70W (metallized)
All Material (except as noted)	ASTM A 709, Grade 50 (metallized)
High Strength Bolts	ASTM F 3125, Grade A 325, Type 1

BASIC DESIGN STRESSES

Concrete, Class "A"	f 'c = 4000 psi
Concrete, Class "LP"	f 'c = 5000 psi
Plain Reinforcing Steel	f y = 60,000 psi
Low-Carbon Chromium Reinforcing Steel	f y = 100,000 psi
Structural Steel:	
ASTM A 709, Grade HPS 70W	F y = 70,000 psi
ASTM A 709, Grade 50	F y = 50,000 psi
ASTM F 3125, Grade A 325, Type 1	F μ = 120,000 psi

WATERVILLE-WINSLOW
KENNEBEC COUNTY
TICONIC BRIDGE
OVER
KENNEBEC RIVER
U.S. ROUTE 201
FEDERAL AID PROJECT NO. 2313800
PROJECT LENGTH 0.156 mi.
BRIDGE NO. 2854

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UTILITIES

Central Maine Power	Kennebec Sanitary Treatment District
Consolidated Communications	Oxford Networks
Charter Communications	Summit Natural Gas
Kennebec Water District	PanAm Railways
Waterville Sewer District	Brookfield

MAINTENANCE OF TRAFFIC

Maintain two lanes of eastbound one-way traffic and pedestrians on the bridge. Westbound traffic will be detoured off site.

PROJECT LOCATION	Ticonic Bridge #2854 in Waterville-Winslow carrying U.S. Route 201 over the Kennebec River Reservoir. Lat./Long. 44°32'50" N 69°37'38" W
PROGRAM AREA	Bridge
OUTLINE OF WORK	Replacement of Ticonic Bridge #2854 in Waterville-Winslow with associated approach work.

HNTB

WIN 023138.00

2313800

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

		DATE
APPROVED		
COMMISSIONER:		8-30-22
CHIEF ENGINEER:		8-30-2022

STATE OF MAINE — TIMOTHY R. COTE No. 10671 — LICENSED PROFESSIONAL ENGINEER

		DATE
SIGNATURE		
P.E. NUMBER	10671	
DATE	7/29/2022	

PROJECT INFORMATION

PROGRAM	BRIDGE
PROJECT MANAGER	Mark Parlin
DESIGNER	Tim Cole, PE
CONSULTANT	HNTB
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

WATERVILLE-WINSLOW
TICONIC BRIDGE

TITLE SHEET

SHEET NUMBER
1
OF 111

Date:7/29/2022 Username: Division: Filename:001_Title Sheet.dgn

ROADWAY AND BRIDGE QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.13	Removing Existing Railings Retained by Department	1300	LF
202.15	Removing Existing Manhole or Catch Basin	6	EA
202.19	Removing Existing Bridge (Steel = 1,800,000 LB, Concrete = 8,200 CY)	1	LS
202.19	Removing Existing Bridge - Arch Structure	1	LS
202.202	Removing Pavement Surface	1250	SY
203.20	Common Excavation	2550	CY
203.25	Granular Borrow	1200	CY
206.082	Structural Earth Excavation - Major Structures, Plan Quantity	3700	CY
206.09	Structural Rock Excavation - Major Structures	360	CY
304.10	Aggregate Subbase Course-Gravel	1950	CY
403.2081	Hot Mix Asphalt - 12.5 mm Nominal Maximum Size (Polymer Modified)	670	Ton
403.209	Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (sidewalks, drives, islands & incidentals)	71	Ton
403.211	Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (Shimming)	35	Ton
403.2131	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (Base and Intermediate Base course, Polymer Modfied)	880	Ton
409.15	Bituminous Tack Coat, Applied	690	Gal
461.131	Temporary Pavement	9	Ton
501.220	Micropiles	670	LF
501.2221	Abandoned Micropiles	50	LF
501.2331	Micropile Verification Load Test (includes Verification Pile)	1	EA
501.804	Drilling Equipment Mobilization - Micropiles	1	LS
501.83	Confirmatory Core Boring	660	LF
502.21	Structural Concrete, Abutments and Retaining Walls	560	CY
502.219	Structural Concrete, Abutments and Retaining Walls (690 CY)	1	LS
502.23	Structural Concrete Piers	16	CY
502.239	Structural Concrete Piers (660 CY)	1	LS
502.24	Structural Concrete Piers (placed under water)	730	CY
502.26	Structural Concrete Roadway and Sidewalk Slab on Steel Bridges (1280 CY)	1	LS
502.31	Structural Concrete Approach Slab (51 CY)	1	LS
502.341	Structural Concrete, Roadway Median	5	CY
502.49	Structural Concrete Curbs and Sidewalks (400 CY)	1	LS
502.77	Fiber Reinforced Polymer Bridge Drain - Type: G	8	EA
503.12	Reinforcing Steel, Fabricated and Delivered	108700	LB
503.13	Reinforcing Steel, Placing	108700	LB
503.17	Mechanical/Welded Splice	2286	EA
503.19	Low-Carbon Chromium Reinforcement, Fabricated and Delivered	510300	LB
503.20	Low-Carbon Chromium Reinforcement, Placing	510300	LB
504.702	Structural steel fabricated and delivered, welded (3,600,000 LB)	1	LS
504.71	Structural steel erection (3,600,000 LB)	1	LS
505.08	Shear Connectors (12,312 EA)	1	LS
506.9104	Thermal Spray Coating (Shop Applied) (3,600,000 LB)	1	LS
507.0834	Wyoming Steel Bridge Railing (1150 LF)	1	LS
508.14	High Performance Waterproofing Membrane (4,150 SY)	1	LS
511.07	Cofferdam: Existing Pier 1 Removal	1	LS
511.07	Cofferdam: Riprap and Bridge Removal	1	LS
511.07	Cofferdam: Pier	1	LS
511.07	Cofferdam: Abutment 1	1	LS
511.07	Cofferdam: Abutment 2	1	LS
512.081	French Drains (140 LF)	1	LS
515.21	Protective Coating for Concrete Surfaces (1430 SY)	1	LS
521.23	Expansion Device - Finger Joint (165 LF)	2	EA
523.52	Bearing Installation	27	EA
523.5551	Pot or Disc Bearings, Fixed	9	EA
523.5552	Pot or Disc Bearings, Expansion	18	EA
524.301	Temporary Structural Support (Abut 1)	1	LS
524.301	Temporary Structural Support (Abut 2)	1	LS
524.301	Temporary Structural Support (Closure Wall)	1	LS
524.304	Temporary Access Construction	1	LS
526.301	Portable Concrete Barrier, Type 1 (770 LF)	1	LS
526.304	Portable Concrete Barrier, Anchored Type 1 (1140 LF)	1	LS
526.34	Permanent Concrete Transition Barrier	4	EA
527.34	Work Zone Crash Cushions	3	Unit
603.155	12 inch Reinforced Concrete Pipe Class III	70	LF
603.159	12 inch Culvert Pipe Option III	26	LF
603.169	15 inch Culvert Pipe Option III	44	LF
603.179	18 inch Culvert Pipe Option III	64	LF
603.199	24 inch Culvert Pipe Option III	52	LF
604.072	Catch Basin Type A1-C	3.7	EA
604.092	Catch Basin Type B1-C	2	EA
604.16	Altering Catch Basin to Manhole	2	EA
604.164	Rebuilding Catch Basin	2	EA
604.18	Adjusting Manhole or Catch Basin to Grade	1	EA
604.247	Catch Basin Type F5-C	1	EA
604.249	Catch Basin Type F6-C	1	EA
604.252	Catch Basin Type A5-C	4.2	EA
605.09	6 inch Underdrain Type B	350	LF
605.11	12 inch Underdrain Type C	60	LF
605.12	15 inch Underdrain Type C	44	LF
605.15	24 inch Underdrain Type C	48	LF
606.1301	31" W-Beam Guardrail - Mid-Way Splice (Steel Post, 8" Offset Blocks, Single Faced)	79	LF
606.1304	31" W-Beam Guardrail - Mid-Way Splice (Steel Post, 8" Offset Blocks, Over 15' Radius)	25	LF
606.1306	31" W-Beam Guardrail - Mid-Way Splice Tangent Terminal	3	EA
606.1307	Bridge Transition (Asymmetrical) - Type 1A	2	EA
606.1307	Bridge Transition (Asymmetrical) - Type 1A - Modified	2	EA

ROADWAY AND BRIDGE QUANTITIES CONTINUED

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
606.259	Anchorage Assembly	1	EA
606.353	Reflectorized Flexible Guardrail Marker	7	EA
606.356	Underdrain Delineator Post	2	EA
606.47	Single Wood Post	1	EA
607.17	Chain Link Fence - 6 foot	35	LF
608.26	Curb Ramp Detectable Warning Field	98	SF
609.12	Vertical Curb Type 1 - Circular	4	LF
609.221	Terminal Curb Type 1	31	LF
609.222	Terminal Curb Type 1 - Circular	38	LF
609.31	Curb Type 3	330	LF
609.38	Reset Curb Type 1	520	LF
609.40	Reset Curb Type 5	460	LF
610.08	Plain Riprap	11	CY
610.16	Heavy Riprap	260	CY
610.18	Stone Ditch Protection	5	CY
613.319	Erosion Control Blanket	190	SY
615.07	Loam	67	CY
618.13	Seeding Method Number 1	2	Unit
618.14	Seeding Method Number 2	11	Unit
619.12	Mulch	13	Unit
620.58	Erosion Control Geotextile	227	SY
620.66	Drainage Geocomposite	110	SY
623.11	Remove and Load Monument	1	LS
626.11	Precast Concrete Junction Box	4	EA
626.21	Metallic Conduit	20	LF
626.22	Non-metallic Conduit	1400	LF
626.421	24-inch Diameter Foundation	28	LF
627.733	4" White or Yellow Painted Pavement Marking Line	6400	LF
627.75	White or Yellow Pavement & Curb Marking	1900	SF
627.77	Removing Existing Pavement Marking	1450	SF
627.78	Temporary 4" Painted Pavement Marking Line, White or Yellow	10000	LF
629.05	Hand Labor, Straight Time	140	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
631.14	Grader (including operator)	20	HR
631.172	Truck-large (including operator)	220	HR
631.22	Front End Loader (including operator)	20	HR
631.32	Culvert Cleaner (including operators)	20	HR
634.160	Highway Lighting	1	LS
634.70	Ornamental Lighting	15	EA
639.18	Field Office, Type A	1	EA
643.71	Traffic Signal Modification at: Carter Memorial Drive/Augusta Road	1	LS
643.71	Traffic Signal Modification at: Bridge Street/Benton Avenue/Clinton Avenue/Bay Street	1	LS
643.711	Temporary Traffic Signal Modification at: Spring Street/Main Street/Water Street/Front Street/Bridge Street	1	LS
643.711	Temporary Traffic Signal Modification at: Bridge Street/Benton Avenue/Clinton Avenue/Bay Street	1	LS
643.713	Temporary Emergency System Preemption Modification	1	LS
645.103	Demount Guide Sign	15	EA
645.106	Demount Regulatory, Warning, Confirmation and Route Marker Assembly Sign	53	EA
645.108	Demount Pole	12	EA
645.113	Reinstall Guide Sign	15	EA
645.116	Reinstall Regulatory, Warning, Confirmation and Route Marker Assembly Sign	41	EA
645.118	Reinstall Pole	11	EA
645.292	Regulatory, Warning, Confirmation and Route Marker Assembly Signs Type II	80	SF
652.312	Type III Barricades	12	EA
652.33	Drum	70	EA
652.34	Cone	70	EA
652.35	Construction Signs	1200	SF
652.361	Maintenance of Traffic Control Devices (1152 CD)	1	LS
652.38	Flaggers	300	HR
652.41	Portable-Changeable Message Sign	4	EA
659.10	Mobilization	1	LS
660.21	On-The-Job Training	4,000	HR
801.03	Test Pits	7	EA
910.30	Special Work - Winter Maintenance & Snowplowing	12	EA

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

PROJ. MANAGER	M. Perlin	BY	DATE
DESIGN-DETAILED	C. Helmick	C. Helmick	6\2022
CHECKED-REVIEWED	L. Driscoll	T. Cote	6\2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
KENNEBEC
WATERVILLE-WINSLOW

ESTIMATED QUANTITIES 1

SHEET NUMBER

2

OF 111

Filename: 002_Estimated Quantities_01.dgn Division: Username: Date:8/19/2022

WATER QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.15	Removing Existing Manhole or Catch Basin	1	EA
203.21	Rock Excavation	50	CY
403.2131	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (Base and Intermediate Base Course, Polymer Modfied)	40	TON
461.131	Temporary Pavement	40	TON
501.25	Steel casing, 24-inch galvanized	32	LF
602.30	Flowable Concrete Fill	40	CY
652.38	Flaggers	200	HR
801.03	Test Pits	3	EA
822.33	6-inch Ductile Iron Pipe	30	LF
822.34	8-inch Class 52 Ductile Iron Pipe	100	LF
822.363	12-inch Class 52 Ductile Iron Pipe	300	LF
822.50	24-inch Class 52 Ductile Iron Pipe	8	LF
823.311	12-inch Gate Valve with Box	2	EA
823.3251	8-inch Gate Valve with Box	1	EA
823.33	6-inch Gate Valve with Box	2	EA
824.30	Fire Hydrant	2	EA
825.321	1" Corporation	1	EA
827.33	Trench Insulation	40	LF
830.104	Water Main Bridge Crossing, 12-inch Preinsulated	610	LF

WINSLOW SEWER QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
604.18	Adjusting Manhole or Catch Basin to Grade	1	EA

COMMUNICATIONS QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
524.301	Temporary Structural Support Consolidated Communications	1	LS
845.10	Structural Steel Utility Support - Consolidated Communications	1	LS
910.301	Special Work - Utility Conduit and Hangers on Bridge - Consolidated Communications	1	LS
910.301	Special Work - Utility Conduit - Concrete Duct Bank - Consolidated Communications	1	LS

CABLE QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
845.10	Structural Steel Utility Support - Charter Communications	1	LS
910.301	Special Work - Utility Conduit and Hangers on Bridge - Charter Communications	1	LS
910.301	Special Work - Utility Conduit - Charter Communications	1	LS

GAS QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
501.25	Steel Casing, Flanged, 12 Inch Galv	42	LF
822.3407	8 Inch Expansion Joints (Owner Furnished)	2	EA
830.163	Gas Main Bridge Crossing (Owner Furnished) - 8-Inch Steel (Owner Furnished)	620	LF
830.164	Hanger/Roller Assemblies	56	EA
845.102	Structural Steel Utility Supports (L5x5x5/16")	56	EA

ELECTRICAL QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
604.18	Adjusting Manhole or Catch Basin to Grade	1	EA
845.10	Structural Steel Utility Support - Central Maine Power	1	LS
910.301	Special Work - Utility Conduit and Hangers on Bridge - Central Maine Power	1	LS
910.301	Special Work - Utility Conduit - Concrete Duct Bank - Central Maine Power	1	LS

Date:8/19/2022

Username:

Division:

Filename: 003_Estimated Quantities_02.dgn

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

PROJ. MANAGER	M. Pearlin	BY	DATE
DESIGN-DETAILED	C. Helmick	C. Helmick	6\2022
CHECKED-REVIEWED	L. Driscoll	T. Cote	6\2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

ESTIMATED QUANTITIES 2

SHEET NUMBER

3

OF 111

GENERAL CONSTRUCTION NOTES

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

2. The location of utilities shown are approximate and should be verified in the field by the Contractor.

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

4. Seeding Method No. 1 shall be utilized on all lawn and developed areas. Seeding Method No. 2 shall be utilized on all other areas, unless otherwise noted or directed.

5. Two Reflectorized Flexible Guardrail Markers shall be installed at each guardrail end.

6. 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.

7. Tree and stump removal within the clearing limits as shown on the Plans shall be considered clearing.

8. Place loam 2 inches deep on all new or reconstructed side slopes and 4 inches in lawn areas or as directed by the Resident.

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

10. 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.

11. Place a 24 inch wide strip of Erosion Control Blanket on the side slopes along the top of riprap and behind the wingwalls.

12. 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,
    Top of abutment backwalls and wingwalls, and
    To one foot below the ground on vertical walls against earth.

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

14. 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.

15. The project geotechnical report titled: Geotechnical Design Report, Waterville-Winslow, Ticonic Bridge Replacement #2854, Waterville, Maine, MaineDOT WIN 023138.00 dated July, 2022 may be accessed at the MaineDOT web address.

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

17. The existing bridge shall be removed by and become the property of the Contractor. Bridge removal shall be to the limits shown on the Plans. The steel portions of the existing bridge are 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 "Maine Hazardous Waste Management Regulations," Chapter 850. A copy of this regulation is available at MaineDOT's offices 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 Item.

18. All bridge demolition excluding the concrete arch and the retaining walls associated with the concrete arch as described in Special Provision 202 shall be paid under Item 202.19 Bridge Demolition.

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

21. Any necessary cutting of existing pipes to fit in areas of proposed catch basins will not be paid for separately and will be considered incidental to Standard Specifications Section 604 Manholes, Inlets, and Catch Basins.

22. Any necessary cutting of existing catch basins to allow for proposed pipe connections will not be paid for separately and will be considered incidental to Standard Specifications Section 603 Pipe Culverts and Storm Drains or Section 605 Underdrains.

23. Existing culverts and catch basins will be cleaned as directed by the Resident under the appropriate pay items.

24. Inlets and outlets of all culverts shall be riprapped unless otherwise noted on the Plans or directed by the Resident.

25. Existing culverts and catch basins to be removed that are beyond the limits of subgrade or proposed excavation shall be paid for under item 203.20 Common Excavation.

26. Where called for on the Plans, where new pavement joins existing pavement, the existing pavement shall be sawcut along a smooth line to a neat, even, vertical joint as directed by the Resident. Broken or ravelled edges will not be permitted. All work necessary for the preparation of this joint will be considered incidental to the related contract items.

27. Any base pavement not surfaced before winter will require temporary pavement markings of paint, both yellow centerline and white edge lines and will be considered part of Standard Specifications Item 627.78, Temporary Pavement Marking Line, White or Yellow.

28. The off-site improvements at the intersection of Augusta Road and Carter Memorial Drive shall be completed before any long term lane restrictions are implemented on the bridge.

29. The Contractor shall handle the Winslow Veterans Monument in accordance with Special Provision Section 623.

30. The discharge volume, flow velocities, and elevations shown for the recurrence interval <Q1.1 is the design flow developed for a proposed fishway to be built at the Lockwood Dam. This design flow is 21,100 CFS and is less than the calculated Q1.1 flow of 29,000 CFS. The design normal flow for the proposed fishway is approximately 5,000 CFS and represents the flow at which minimal overtopping of the spillway occurs.

31. The Contractor shall note that the bridge site experiences rapid changes in water level and velocity. Temporary structures and construction activities shall be planned accordingly. Retrieval and clean-up of materials displaced during flood events shall be the responsibility of the Contractor.

32. In addition to the provisions in Standard Specifications Section 105.2.2, Health and Safety Plan, the Contractor shall provide a copy of the Safety Plan to Brookfield Renewable Energy, David.Watson@Brookfieldrenewable.com, prior to Contract award. The Safety Plan will be reviewed at the preconstruction meeting and any comments shall be resolved to the satisfaction of the Resident prior to the start of construction.

33. The Contractor is required to complete the work in a manner that does not allow for, or result in, damage to the Lockwood Dam. The Contractor will be responsible for repairing any damages resulting from the Contractor's operations to the satisfaction of the Resident at no additional cost to the Department.

34. The limit of work around Front Street includes regrading and repaving of areas that may be disturbed as a result of water main installation. The final grade in this area shall generally match the finished grades constructed under WIN 24371.00. In areas where full depth pavement is required to be removed and repaved, a minimum of 9" of new gravel is assumed for compaction.

35. Paved walkways and sidewalks shall be constructed with 2" hot mix asphalt.

36. Work on dry portions of the riverbed is not considered in water work.

37. Areas of temporary fill and water controls constructed within the river basin located downstream from the spillway may remain in place for the duration of the project.

38. This site lends itself to different cofferdam configurations for riprap installation and existing bridge removal, depending on water depth, time of year the work is done, and the Contractor's means and methods. Rather than speculate on how the bidders will want to configure the riprap installation and existing bridge pier removal cofferdams, the Department has provided a single pay item (511.07 Cofferdam: Riprap and Bridge Removal) to be used to cover all riprap installation and existing bridge removal cofferdams on the project, regardless of how many are used. Item 511.07 Cofferdam: Existing Pier 1 Removal has been included for Pier 1, Upstream as identified on the "Existing Pier Demolition" sheet and is separate from Item 511.07 Cofferdam: Riprap and Bridge Removal.

39. The Contractor shall close the south sidewalk (the sidewalk on the Arch) and detour pedestrian traffic to the Two-Cent Bridge as defined in Special Provision 107 - Work Times.

40. The use of a Safety Boat, if required, will not be measured for payment but shall be incidental to the related Contract Items.

41. The Contractor will be allowed to request and complete adjustments to the flashboards mounted atop the Lockwood Dam spillway. See Special Provision 104 for additional information.

TRAFFIC SIGNAL NOTES

1. Traffic signal work shall be completed in a manner and order that will cause the minimum disruption to traffic.

2. All existing traffic and pedestrian signal equipment, poles, and guy anchors shall be carefully removed and protected. Where applicable, the City of Waterville and Town of Winslow shall have first right of refusal of existing equipment after removal for equipment not called to be reset. If requested by the municipality, the Contractor shall deliver and unload the salvaged equipment to the public works garage at a location to be designated by the municipality. If the municipality is not interested in the salvaged equipment, the Contractor will be responsible for disposal. Work will be incidental to payment under item 643.71.

3. Signal assemblies shall be polycarbonate with 5-inch louvered backplates and yellow retroreflective tape around the display face perimeter of the backplates. Temporary assemblies shall have double span wire support. All signal assemblies and signage attached to span wires shall be stabilized with a bottom tether.

4. The bottom of signal assemblies and backplates shall have at least 17 feet of vertical clearance above the pavement grade at the center of the roadway. The bottom of the green led signal display of each assembly shall be no more than 19 feet above the pavement grade at the center of the roadway.

5. Modified detection equipment shall be connected to the field monitoring unit and cell modem with the remote monitoring and adjustment capability.

6. Overhead lane use signing installed on span wires will be paid as item 645.292.

7. At the time of final project inspection, the Contractor shall furnish to the Resident three complete sets of as-built traffic signal plans for the intersections with permanent modifications, wiring diagrams, box prints and equipment manuals. One additional set shall remain in the cabinet.

8. The maintenance of traffic signal systems is the responsibility of the Contractor during construction until MaineDOT verifies existing signals have been returned to the existing condition and permanent signal modifications are accepted by MaineDOT.

9. The Contractor shall provide the Resident, with a schedule of work for constructing the traffic improvements at least two weeks prior to the commencement of work.

10. All material schedules shown on the Plans are for general information only. The Contractor shall prepare a material schedule based upon their plan review. All schedules shall be verified in the field by the Contractor prior to ordering material or performing work.

11. Equipment

    a. The Contractor shall be solely responsible for providing the project with working and fully configured signal system for all temporary and permanent signal modifications.

    b. The Contractor shall be solely responsible for furnishing and installing all other equipment to include new wood pole with guy(s) and span wire, vehicle traffic signals, advanced vehicle detection device, remote detection devices, video detection camera(s), field wiring, and all other equipment necessary to provide complete and operational temporary and permanent traffic signal systems. The Contractor shall be aware of and conform to all details for the material specifications in Standard Specification Section 718.

    c. The locations of all equipment shown are approximate. Final locations shall be determined in the field by the Resident.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

PROJ. MANAGER	M. Perlin	BY	DATE
DESIGN-DETAILED	C. Helmick	C. Helmick	6\2022
CHECKED-REVIEWED	L. Driscoll	T. Cote	6\2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

GENERAL NOTES AND
TRAFFIC SIGNAL NOTES

SHEET NUMBER

4

OF 111

Username:

Division:

Filename: 004_GeneralNotes.dgn

Date:8/19/2022

Username:

Division:

Filename: 005_BDPlan_01.dgn

Date:8/19/2022

Main Street
Route 100/201

Front Street
Route 100/201

Spring Street
Route 137

11+00

12+00

13+00

14+00

15+00

16+00

17+00

To Waterville

Water Street

IPF

CLL

Existing Concrete
Foundation

1½" Mill and
Overlay

Repave
Walkway

Bridge Transition
Type IA Modified

31" W-Beam Guardrail -
Mid-Way Splice (Typ.)

℄ Brg., Abut. No. 1
Sta. 15+34.99

283'-0"

Rebuild CB
to Grade

Remove Existing
Guardrail

Anchorage
Assembly

Existing Drainage
Culvert

Dam/Spillway

Heavy Riprap (Typ.)

Reset Curb
Type 5

34' X 12"
UD "C"

9' X 12"
Opt. III
After CB
to MH

Flush Concrete Island

Bridge St./Spring St.
Route 100/137/201

℄ Route 201

Remove CB
& Pipes
70' X 12" RCP

111' X 6" UD "B"

Remove
CB

Adjust Drainage
Manhole to Grade

31" W-Beam Guardrail - Mid-Way
Splice Tangent Terminal (TL-2)

26' X 12"
UD "C"

26' X 6"
UD "B"

Upper Retaining Wall
Reconstruction

Bridge Transition
Type IA

Chain Link Fence

Headgate
Structure

PLAN

25 0 25 50

Scale of Feet

NOTE:
The limit of contractor access will be subject to some reserved limits in the area of CSX Railroad, see Special Provision 104.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN
023138.00

Bridge No. 2854

BRIDGE PLANS

			DATE	SIGNATURE
PROJ. MANAGER	M. Perlin	BY		
DESIGN-DETAILED	C. Helmick	C. Helmick	6\2022	
CHECKED-REVIEWED	L. Driscoll	R. Hanf	6\2022	
DESIGN2-DETAILED2				P.E. NUMBER
DESIGN3-DETAILED3				
REVISIONS 1				DATE
REVISIONS 2				
REVISIONS 3				
REVISIONS 4				
FIELD CHANGES				

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

GENERAL PLAN 1

SHEET NUMBER

5

OF 111

Approximate Limits of Future Fishway (By Others)

℄ Brg., Pier No. 1 Sta. 18+18.00

283'-0"

283'-0"

℄ Brg., Abut. No. 2 Sta. 21+01.00

Dam/Spillway

Flow

Heavy Riprap (Typ.)

Bridge Transition Type IA (Typ.)

52' X 24" Opt. III

31" W-Beam Guardrail - Mid-Way Splice (Typ.)

Remove, Stack, & Reset Wood Pole, Span Wires and Guy Wires.

Remove Existing Guardrail

31" W-Beam Guardrail - Mid-Way Splice Tangent Terminal (TL-2) (Typ.)

ADA Improvements To Be Completed By WIN 024301.00

Benton Avenue

Bridge St./Spring St. Route 100/137/201

18+00 19+00 20+00 21+00 22+00 23+00 24+00

℄ Route 201

48" X 24" UD "C"

52' X 6" UD "B"

Remove CB & Pipe

Remove CB & Pipe

Clinton Avenue

To Winslow

Remove Exist. Mast Arm (Typ.) (To Remain)

44' X 15" Opt. III

Rebuild CB to Grade

15' X 12" Opt. III

44' X 15" UD "C"

Remove existing overburden to top of bedrock

Bridge Transition Type IA Modified

Riprap Downspout (Typ.)

Remove and Load Winslow Monument. See General Note 29

64' X 18" Opt. III

Remove and Reset Wood Pole, Span Wires, and Guy Wires

Lower Basin

Kennebec River

Approximate Channel Location

Abandon Existing Pipe

Bay Street Route 100/137/201

NOTE:
The limit of contractor access will be subject to some reserved limits in the area of CSX Railroad, see Special Provision 104.

PLAN

25 0 25 50

Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

	BY	DATE
M. Perlin	C. Helmick	6\2022
C. Helmick	R. Hanf	6\2022
L. Driscoll		

SIGNATURE

P.E. NUMBER

DATE

PROJ. MANAGER	DESIGN-DETAILED	CHECKED-REVIEWED	DESIGN2-DETAILED2	DESIGN3-DETAILED3	REVISIONS 1	REVISIONS 2	REVISIONS 3	REVISIONS 4	FIELD CHANGES

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

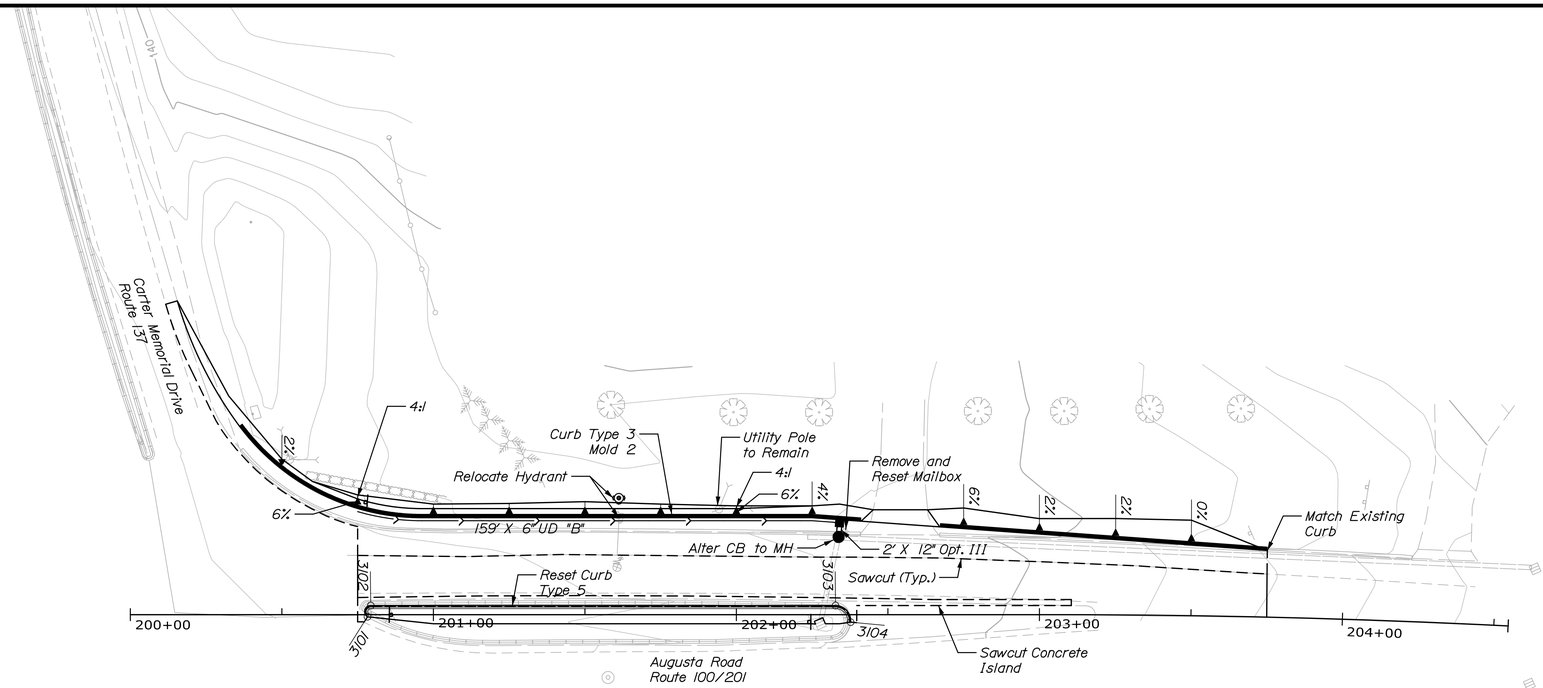
GENERAL PLAN 2

SHEET NUMBER

6

OF 111

Date:8/19/2022 Username: Division: Filename: 006_BDPlan_02.dgn

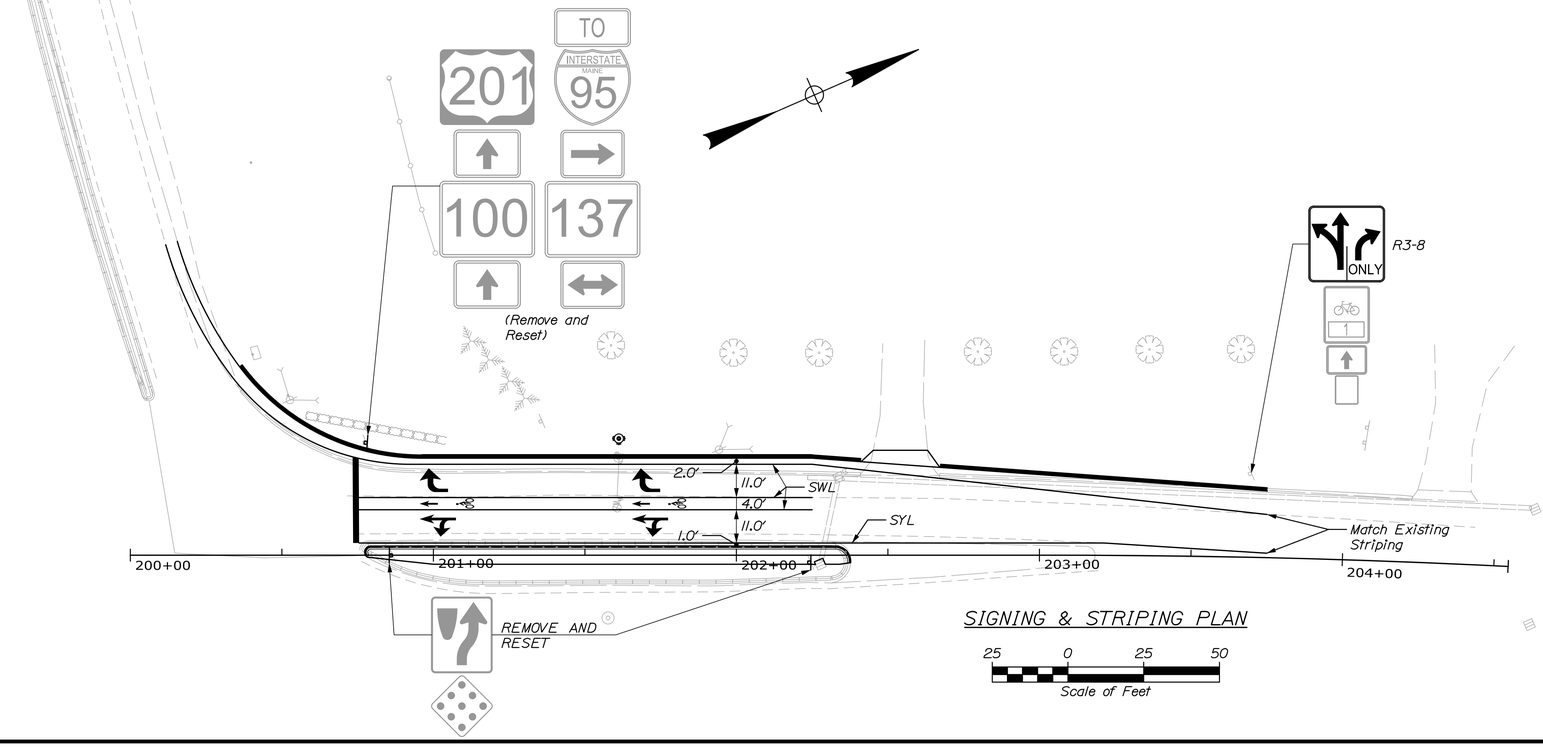


GENERAL PLAN

CONTROL POINTS FOR CURBING - AUGUSTA RD.				
POINT	STATION	OFFSET	X-COORD	Y-COORD
3101	200+78.25	0.69' RT.	1175807.538	618701.509
3102	200+79.32	3.00' LT.	1175804.586	618703.966
3103	202+32.71	3.00' LT.	1175865.892	618844.566
3104	202+37.68	2.47' RT.	1175872.892	618846.945

Item No. 609.40 Reset Curb Type 5

Point	Length	Radius
3101 to 3102	5.16'	2'
3102 to 3103	153.39'	-
3103 to 3104	8.32'	5'



SIGNING & STRIPING PLAN

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	C. Helmick	C. Helmick	6\2022
CHECKED-REVIEWED	L. Driscoll	R. Hanf	6\2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

ROUTE 201 (AUGUSTA RD)
OFF SITE IMPROVEMENT PLAN

SHEET NUMBER

7

OF 111

HNTB

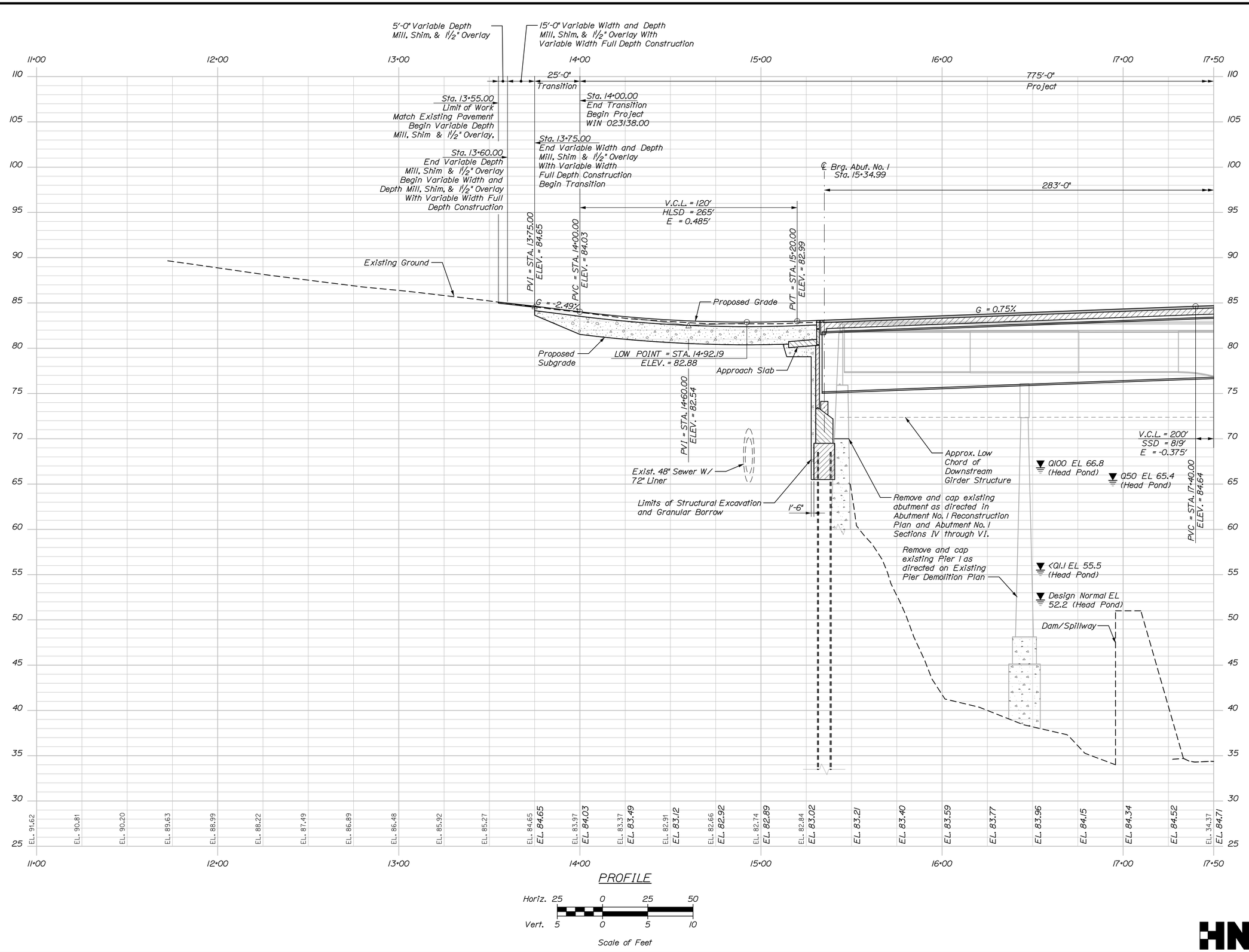
Username:

Division:

Filename: 007_BDPlan_03.dgn

Date:8/19/2022

Filename: 008_Profile_01.dgn Division: Username: Date:8/19/2022



PROFILE

Horiz. 25 0 25 50

Vert. 5 0 5 10

Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

P.E. NUMBER

DATE

SIGNATURE

	BY	DATE
PROJ. MANAGER	M. Parlin	
DESIGN-DETAILED	C. Hémick	6\2022
CHECKED-REVIEWED	L. Driscoll	R. Hanf 6\2022
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

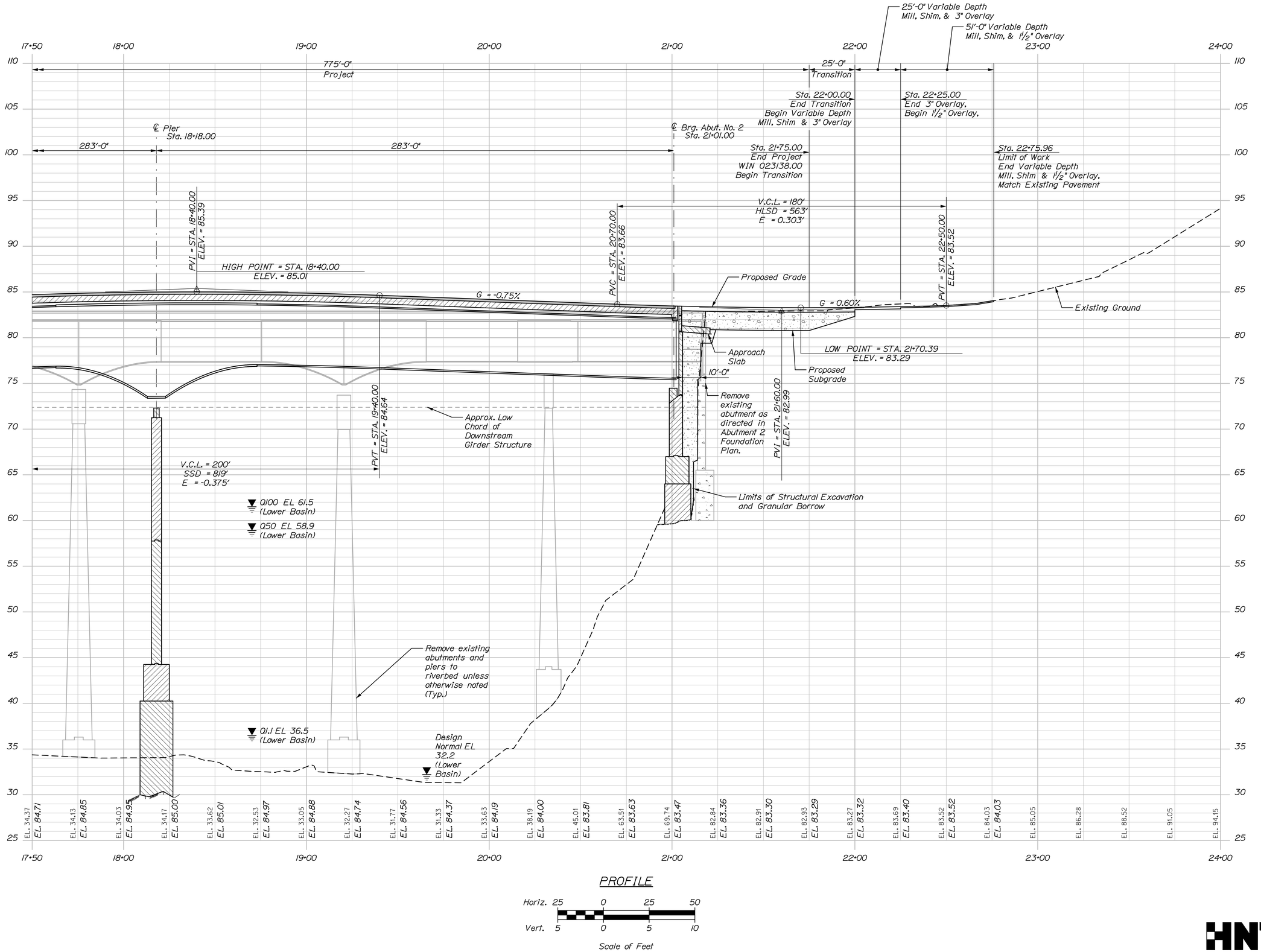
PROFILE 1

SHEET NUMBER

8

OF 111

Username:
Division:
Filename: 009_Profile_02.dgn
Date:8/19/2022



PROFILE

Horiz. 25 0 25 50

Vert. 5 0 5 10

Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

			DATE
PROJ. MANAGER	M. Perlin	BY	
DESIGN-DETAILED	C. Helmick	C. Helmick	6\2022
CHECKED-REVIEWED	L. Driscoll	R. Hanf	6\2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

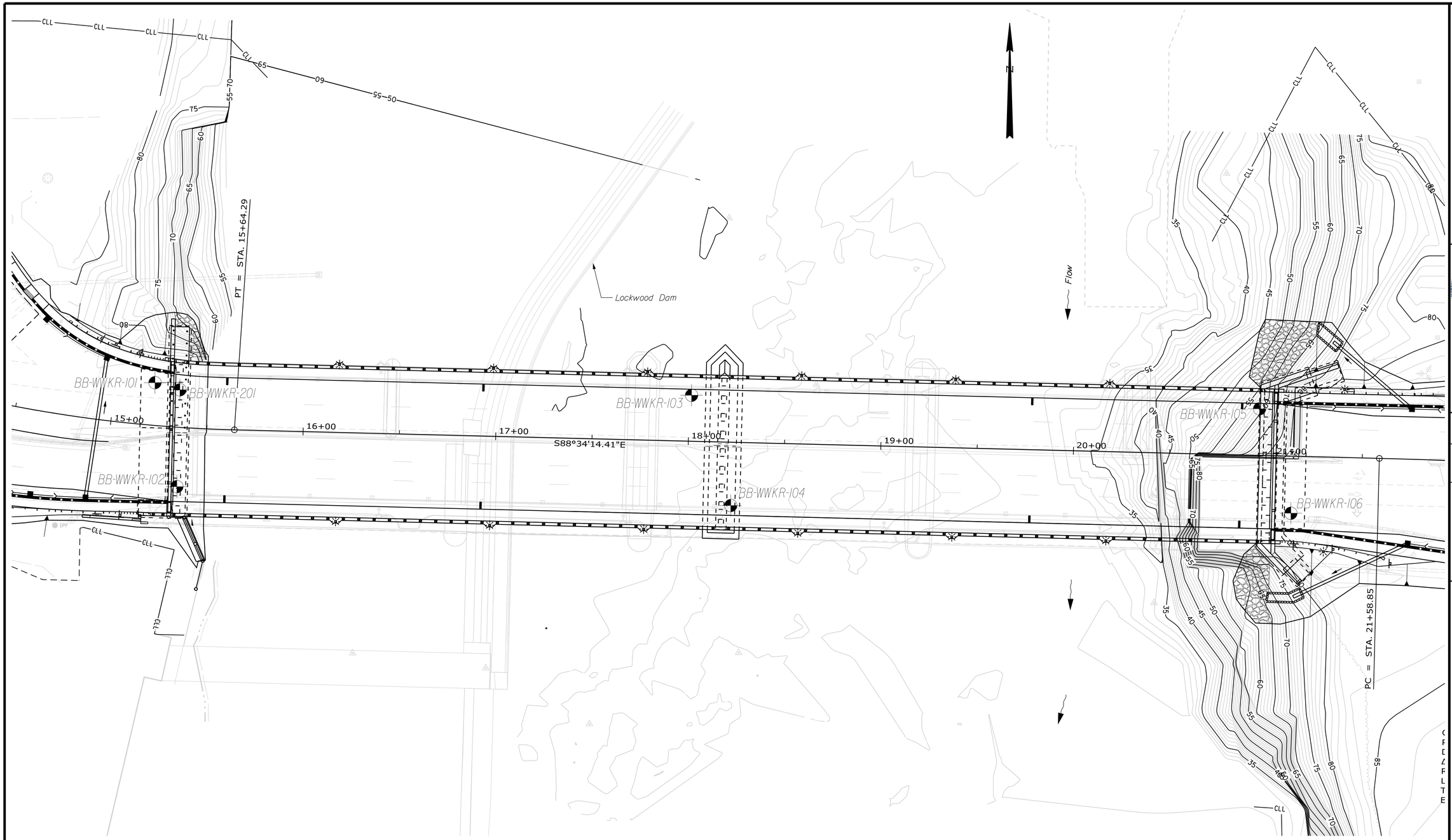
TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

PROFILE 2

SHEET NUMBER

9

OF 111



NOTES

1) Base map developed from electronic files (3DContours.dgn, Allignments.dgn, Bridge.dgn, and Topo_HNTB.dgn) provided by HNTB on April 9, 2022.

2) The as-drilled locations of the test borings were surveyed by MaineDOT and provided to GZA in an electronic file (SURVEY.DGN).

3) BB-WWKR-100 series bridge borings were performed by MaineDOT and observed by GZA personnel between June 9 and 24, 2021.

4) BB-WWKR-200 series bridge boring was performed by New England Boring Contractors of Hermon Maine, and observed by GZA personnel between February 10 and 14, 2022.

BORING LOCATION PLAN LEGEND

- *BB-WWKR-106* — *Location and designation of 100-Series cased wash boring*
- *BB-WWKR-201* — *Location and designation of 200-Series cased wash boring*

PLAN

25 0 25 50

Scale

PREPARED BY:

GZA

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

BRIDGE NO. 2854

STATE OF MAINE — Andrew R Blaisdell — 12057 — LICENSED PROFESSIONAL ENGINEER — 8/19/2022

	SIGNATURE	P.E. NUMBER	DATE

	BY	DATE
PROJ. MANAGER	A. LATHE	
DESIGN-DETAILED		
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

TICONIC BRIDGE ROUTE 100 (BRIDGE STREET)
OVER KENNEBEC RIVER
WATERVILLE-WINSLOW KENNEBEC COUNTY

BORING LOCATION PLAN

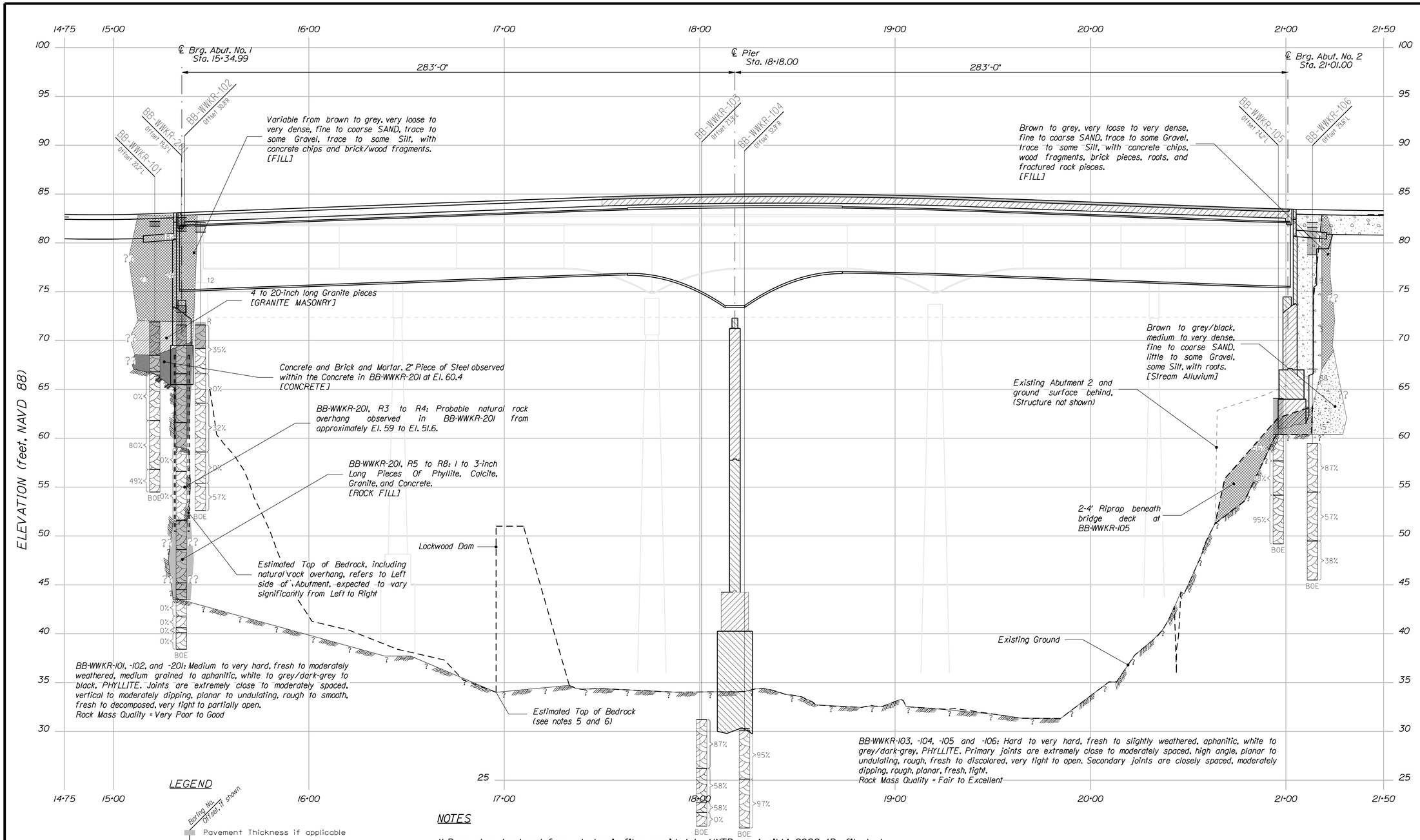
SHEET NUMBER

10

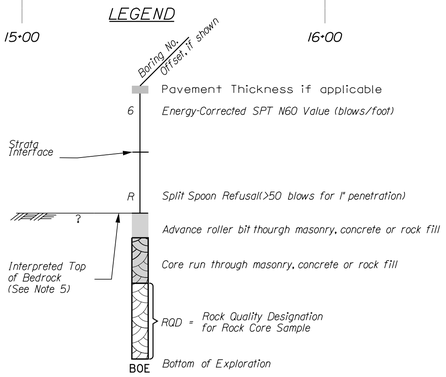
OF 111

Filename: ...\Figures\09.0026115.01_BLP.dgn Division: HIGHWAY Username: common Date:8/19/2022

Username: common Date:8/2/2022
Division: HIGHWAY
Filename: ...\Figures\09.0026115.01_ISP.dgn



LEGEND



NOTES

1) Base plan developed from electronic files provided by HNTB on April 14, 2022 (Profile.dgn)

2) The as-drilled boring locations were surveyed by a MaineDOT survey crew and provided to GZA in an electronic file (Survey.dgn).

3) BB-WWKR-100 series bridge borings were performed by MaineDOT and observed by GZA personnel between June 9 and 24, 2021.

4) BB-WWKR-200 series bridge boring was performed by New England Boring Contractors of Hermon Maine, and observed by GZA personnel between February 10 and 14, 2022.

5) The exposed river bed was observed to consist of bedrock along the bridge profile. Therefore, the estimated top of bedrock follows the riverbed profile developed from the survey.

6) 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 rock transitions may vary and are probably more erratic. Boring data are shown for borings drilled off alignment, but interpreted strata are based on the borings drilled closest to the project baseline. For more specific information refer to the exploration logs.

PROFILE

Horiz. 25 0 25 50
Vert. 5 0 5 10
Scale of Feet

PREPARED BY:

GZA

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

BRIDGE NO. 2854

STATE OF MAINE Andrew R. Blaisdell 12852 LICENSED PROFESSIONAL ENGINEER

	SIGNATURE	P.E. NUMBER	DATE

	BY	DATE
PROJ. MANAGER	A. LATHE	
DESIGN-DETAILED		
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

TICONIC BRIDGE ROUTE 100 (BRIDGE STREET)
OVER KENNEBEC RIVER
WATERVILLE-WINSLOW KENNEBEC COUNTY

INTEPRETIVE SUBSURFACE PROFILE

SHEET NUMBER

11

OF 111

Filename: ...\Boring Logs\Boring Logs.dgn Division: HIGHWAY Username: common Date:8/2/2022

Maine Department of Transportation — BORING NO.: BB-WWKR-101

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Ticonic Bridge Route 100 (Bridge Street)
Location: Waterville-Winslow, Maine
WIN: 023138.00

Driller: Maine007	Elevation (ft.): 82.2'	Auger ID/OD: 5"	
Operator: T. Daggett	Datum: NAVD 88	Sampler: Standard Splitspoon	
Logged By: G. Basabinka	Rig Type: Trailer Mounted	Hammer Wt./Fall: 140#/30"	
Date Start/Finish: 6/14/21 - 6/14/21	Drilling Method: Drive & Wash	Core Barrel: NQ2	
Boring Location: Sta. 15+21.1, 22.2' LT	Casing ID/OD: 3"/3.5"	Water Level *: 24.6'	
Hammer Efficiency Factor: 0.89	Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions: D = Split Spoon Sample; WO = Unsuccessful Split Spoon Sample Attempt; U = Thin Wall Tube Sample; WU = Unsuccessful Thin Wall Tube Sample Attempt; V = Field Vane Shear Test, FP = Pocket Penetrometer; WV = Unsuccessful Field Vane Shear Test Attempt; R = Rock Core Sample; SSA = Solid Stem Auger; HSA = Hollow Stem Auger; RC = Roller Cone; WOH = Weight of 140lb. Hammer; WOR/C = Weight of Rods or Casing; WOP = Weight of Pen Person; S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf); $S_{u(r)}$ = Lab Vane Undrained Shear Strength (psf); q_u = Unconfined Compressive Strength (psf); N-uncorrected = Raw Field SPT N-value; Hammer Efficiency Factor = Rig Specific Annual Calibration Value; N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency; T_v = Pocket Torvane Shear Strength (psf); 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/ (6 in.) Stroke Strength or RQD (*)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0							SSA	81.7		0'-0.5': Asphalt	
								81.2		0.5	
5	10	24/6	5.0' - 7.0'	14-11-7-9	18	27				Brown, dry, medium dense, fine to coarse SAND, some silt, little gravel, rock in spoon tip. (F.ill).	21-5-26.4 A-1-b, SM WC= 3.1
10	2D R1	24/6 6/55	10.0' - 12.0' 10.3' - 15.4'	36/2*	R		NQ2	71.9		Brown, dry, fine to coarse SAND, little gravel, little silt. (F.ill). Coarse concrete chips observed. *Splitspoon refusal at 10.2'. Advanced roller cone to 10.3' and set up to core. R1: 10.3'-13.7': Granite (Masonry, 12" and 20" long pieces.	
15	R2	60/39	15.4' - 20.4'	RQD = 0%				68.5		R1: 13.7'-15.4': Concrete Recovery = 92% Rock Core Times (min/sec): 10.3-11.3' (2:18), 11.3-12.3' (1:55), 12.3-13.3' (2:36), 13.3-14.3' (2:47), 14.3-15.4' (1:55) R2: 15.4'-15.6': Concrete	
20	R3	60/60	20.4' - 25.4'	RQD = 80%				66.6		Apparent top of bedrock at 15.6'. R2': 15.6'-20.4': Medium hard, moderately weathered, aphanitic, grey-black PHYLLITE. Joints are extremely close to very close, high angle, planar, rough, discolored, tight to open. Rock Quality = Very Poor Recovery = 65% Rock Core Times (min/sec): 15.4-16.4' (1:51), 16.4-17.4' (1:55), 17.4-18.4' (2:02), 18.4-19.4' (1:30), 19.4-20.4' (0:25) R3: Hard to very hard, fresh, aphanitic, dark grey, PHYLLITE. Joints are very close, high angle, undulating, rough, fresh to discolored, very tight to tight. Rock Quality = Good Recovery = 100% Rock Core Times (min/sec): 20.4-21.4' (1:55), 21.4-22.4' (1:30), 22.4-23.4' (1:36), 23.4-24.4' (2:01), 24.4-25.4' (2:12)	q_u=1128 ksf
25	R4	28/24	25.4' - 27.7'	RQD = 49%				54.5		R4: Hard to very hard, fresh, aphanitic, dark grey, PHYLLITE. Joints are very close, high angle, undulating, rough, fresh to discolored, tight to partially open. Rock Quality = Poor Recovery = 87% Rock Core Times (min/sec): 24.4-26.4' (1:38), 26.4-27.4' (1:37), 27.4-27.6' (1:32)	
30								52.7		Bottom of Exploration at 27.7 feet below ground surface.	
35											
40											
45											
50											

Remarks:
1. Automatic Hammer MaineDOT CME 45C. Energy Transfer Ratio = 0.89.
2. Reported water level was measured before casing removal.
3. As-drilled boring locations were surveyed by MaineDOT in the field (N625714.9, E1178907.2).

Stratification lines represent approximate boundaries between soil types: transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: BB-WWKR-101

Maine Department of Transportation — BORING NO.: BB-WWKR-201

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Ticonic Bridge Route 100 (Bridge Street)
Location: Waterville-Winslow, Maine
WIN: 023138.00

Driller: New England Boring Contractors	Elevation (ft.): 82.6'	Auger ID/OD: ---	
Operator: M. Porter	Datum: NAVD 88	Sampler: Standard Splitspoon	
Logged By: E. Tome	Rig Type: ATV - Mobile Drill B53	Hammer Wt./Fall: 140#/30"	
Date Start/Finish: 2/10/22-2/14/22	Drilling Method: Spin & Wash	Core Barrel: NQ	
Boring Location: Sta. 15+34.7, 19.5' LT	Casing ID/OD: 4"/4.5", 3"/3.5"	Water Level *: 29.3'	
Hammer Efficiency Factor: 0.92	Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions: D = Split Spoon Sample; WO = Unsuccessful Split Spoon Sample Attempt; U = Thin Wall Tube Sample; WU = Unsuccessful Thin Wall Tube Sample Attempt; V = Field Vane Shear Test, FP = Pocket Penetrometer; WV = Unsuccessful Field Vane Shear Test Attempt; R = Rock Core Sample; SSA = Solid Stem Auger; HSA = Hollow Stem Auger; RC = Roller Cone; WOH = Weight of 140lb. Hammer; WOR/C = Weight of Rods or Casing; WOP = Weight of Pen Person; S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf); $S_{u(r)}$ = Lab Vane Undrained Shear Strength (psf); q_u = Unconfined Compressive Strength (psf); N-uncorrected = Raw Field SPT N-value; Hammer Efficiency Factor = Rig Specific Annual Calibration Value; N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency; T_v = Pocket Torvane Shear Strength (psf); 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/ (6 in.) Stroke Strength or RQD (*)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0							SPT/N	81.8		0'-0.8': Asphalt	
								81.0		0.8	
5	10	24/12	1.7' - 3.7'	70-67-58-45	119	182		80.9		0.3'-1.7': Advanced casing through reinforced Concrete 1.7 Brown, dry, very dense, fine to coarse SAND, some gravel, trace silt, (F.ill). Advanced 4" casing to 5.0' prior to sampling 2D.	
10	2D	24/7	5.0' - 7.0'	15-8-9-18	17	26				Brown, wet, medium dense, fine to coarse SAND, some gravel, little silt. (F.ill).	
15	R1	60/44	11.0' - 16.0'				N2	73.6		9.0': 9.0'-9.7': Increase in resistance during roller cone advancement, granite fragments observed in wash return. 9.7 9.7'-11.0': Concrete chips observed in wash return. Advanced roller cone and 3" casing to 11.0 feet and set up to core. R1: Concrete Recovery = 73% Rock Core Times (min/sec): 11.0-12.0' (1:22), 12.0-13.0' (1:33), 13.0-14.0' (1:42), 14.0-15.0' (1:46), 15.0-16.0' (1:44)	
20	R2	60/51	16.0' - 21.0'					72.9		R2: Concrete. Brick and concrete/mortar in bottom 3". Recovery = 85% Rock Core Times (min/sec): 16.0-17.0' (2:09), 17.0-18.0' (1:47), 18.0-19.0' (1:37), 19.0-20.0' (1:37), 20.0-21.0' (1:28)	
25	R3	60/50	21.0' - 26.0'	RQD = 0%				59.0		R3: (21.0'-23.6') Concrete/mortar and brick with 2" steel plate at 22.2' Recovery = 100% in concrete portion 23.6 R3: (23.6'-26.0'): Hard, moderately weathered, aphanitic, grey, PHYLLITE. Joints are extremely close to close, high angle, planar, smooth, discolored. Rock is fractured into gravel pieces from 23.5'-23.8' and 24.4'-25.1'. Probable Rock Overhang. Rock Quality = Very Poor Recovery = 66% in rock portion Rock Core Times (min/sec): 21.0-22.0' (1:12), 22.0-23.0' (1:22), 23.0-24.0' (1:47), 24.0-25.0' (3:07), 25.0-26.0' (2:08) R4: Hard, slightly weathered, aphanitic, grey, PHYLLITE. Joints are extremely close, vertical, planar, smooth, discolored, rock is fractured into gravel pieces throughout run. Probable Rock Overhang. Rock Quality = Very Poor Recovery = 87% Rock Core Times (min/sec): 26.0-27.0' (2:09), 27.0-28.0' (4:05), 28.0-29.0' (4:00), 29.0-30.0' (3:06), 30.0-31.0' (3:20)	
30	R4	60/52	26.0' - 31.0'	RQD = 0%				51.6		31.0 R5: Probable Rock Fill: 1"-2" long grey phyllite and concrete pieces. Recovery = 36% Rock Core Times (min/sec): 31.0-32.0' (2:10), 32.0-33.0' (1:53), 33.0-34.0' (1:10)	
35	R5	36/13	31.0' - 34.0'							R6: Probable Rock Fill: gravel-sized to 3" long grey phyllite pieces. Recovery = 37% Rock Core Times (min/sec): 34.0-35.0' (2:11), 35.0-36.0' (1:47), 36.0-37.0' (1:53), 37.0-37.4' (1:19)	
40	R6	41/15	34.0' - 37.4							R7: Probable Rock Fill: gravel-sized to 3" long grey phyllite, granite and concrete pieces. Recovery = 100% Rock Core Times (min/sec): 37.4-38.1' (2:14) R8: Probable Rock Fill: 1"-3" long grey phyllite and calcite pieces. Recovery = 83% Rock Core Times (min/sec): 38.1-39.1' (4:07)	
45	R7	8/8	37.4' - 38.1'					43.5		39.1 R9: Hard, slightly weathered, aphanitic, grey, PHYLLITE. Joints are extremely close to very close, high angle, planar to undulating, rough, fresh to discolored. Rock is fractured into gravel pieces from 39.1'-40.0' indicating probable weathered rock. Rock Quality = Very Poor Recovery = 100% Rock Core Times (min/sec): 39.1-40.1' (4:26), 40.1-40.8' (3:11) R10: Hard, slightly weathered, aphanitic, grey, PHYLLITE. One joint is high angle, rough, fresh. Rock is fractured into gravel pieces from 40.8'-41.0' and 41.7'-42.0'. Rock Quality = Very Poor Recovery = 93% Rock Core Times (min/sec): 40.8-41.8' (4:10), 41.8-42.0' (3:20) R11: Hard, fresh, aphanitic, grey, PHYLLITE. One joint is high angle, unbuilding, rough, discolored, open. Rock Quality = Very Poor Recovery = 100% Rock Core Times (min/sec): 42.0-42.5' (3:42) R12: Hard, fresh, aphanitic, grey, PHYLLITE. Joints are high angle, planar, rough, discolored, open. Sand infilling at 42.9'. Rock Quality = Very Poor Recovery = 100% Rock Core Times (min/sec): 42.5-43.5' (5:04), 43.5-44.2' (2:15)	
50	R8	12/10	38.1' - 39.1					38.4			
55	R9	20/20	39.1' - 40.8	RQD = 0%							
60	R10	14/13	40.8' - 42.0	RQD = 0%							
65	R11 R12	6/6 20/20	42.0' - 42.5' 42.9' - 44.2	RQD = 0% RQD = 0%				38.4		44.2 Bottom of Exploration at 44.2 feet below ground surface.	
70											

Remarks:
1. Automatic Hammer NEBC #028. Energy Transfer Ratio = 0.92.
2. Water level reported on 2/11/22 was measured before beginning drilling. Water level reported on 2/14/22 was measured prior to casing removal.
3. As-drilled boring locations were surveyed by MaineDOT in the field (N625711.2, E1178921.0).

Stratification lines represent approximate boundaries between soil types: transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: BB-WWKR-201

Maine Department of Transportation — BORING NO.: BB-WWKR-102

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Ticonic Bridge Route 100 (Bridge Street)
Location: Waterville-Winslow, Maine
WIN: 023138.00

Driller: Maine007	Elevation (ft.): 82.1'	Auger ID/OD: 5"	
Operator: T. Daggett	Datum: NAVD 88	Sampler: Standard Splitspoon	
Logged By: G. Basabinka	Rig Type: Trailer Mounted	Hammer Wt./Fall: 140#/30"	
Date Start/Finish: 6/9/21 - 6/10/21	Drilling Method: Drive & Wash	Core Barrel: NQ2	
Boring Location: Sta. 15+36.4, 30.8' RT	Casing ID/OD: 3"/3.5"	Water Level *: Not observed.	
Hammer Efficiency Factor: 0.89	Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions: D = Split Spoon Sample; WO = Unsuccessful Split Spoon Sample Attempt; U = Thin Wall Tube Sample; WU = Unsuccessful Thin Wall Tube Sample Attempt; V = Field Vane Shear Test, FP = Pocket Penetrometer; WV = Unsuccessful Field Vane Shear Test Attempt; R = Rock Core Sample; SSA = Solid Stem Auger; HSA = Hollow Stem Auger; RC = Roller Cone; WOH = Weight of 140lb. Hammer; WOR/C = Weight of Rods or Casing; WOP = Weight of Pen Person; S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf); $S_{u(r)}$ = Lab Vane Undrained Shear Strength (psf); q_u = Unconfined Compressive Strength (psf); N-uncorrected = Raw Field SPT N-value; Hammer Efficiency Factor = Rig Specific Annual Calibration Value; N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency; T_v = Pocket Torvane Shear Strength (psf); 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/ (6 in.) Stroke Strength or RQD (*)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0							SSA	81.7		0'-0.4': Asphalt.	
								81.1		0.4'-1.0': Concrete. 1.0	
5	10	24/7	5.0' - 7.0'	4-3-5-13	8	12	7			Brown, dry, medium dense, fine to coarse SAND, some gravel, fractured rock, (F.ill).	21-5-26.3 A-1-b, SM WC= 4.6
10	2D R1	2/1 60/48	10.0' - 10.2' 10.2' - 15.5'	50/2* RQD = 35%	R		34 12 25 36 75+6" NQ2	71.6		Splitspoon refusal at 10.2' bgs. Advanced roller cone to 10.5' and set up to core. R1: 10.5'-12.9': Granite (Masonry or Boulders), 4" to 8" long pieces. 10.5	
15	R2	36/36	15.5' - 18.5	RQD = 0%				69.2		12.9 R1: 12.9'-14.5': Hard to very hard, fresh to slightly weathered, medium grained to aphanitic, grey, PHYLLITE. Joints are very close, vertical, undulating, rough, discolored, partially open. Rock Quality = Poor Recovery = 100% (Phyllite) Rock Core Times (min/sec): 10.5-11.5' (0:46), 11.5-12.5' (1:02), 12.5-13.5' (0:54), 13.5-14.5' (0:12), 14.5-15.5' (1:11) R2: Hard, slightly to moderately weathered, aphanitic, grey, PHYLLITE. Joints are extremely close to very close, high angle, undulating, rough, discolored to decomposed, partially open to open. Rock fractured into gravel pieces from 16.6'-17.3' and from 17.9'-18.5'. Rock Quality = Poor Recovery = 100% Rock Core Times (min/sec): 15.5-16.5' (0:40), 16.5-17.5' (1:16), 17.5-18.5' (1:56) R3: Hard, slightly weathered, aphanitic, white and grey, PHYLLITE. Quartz vein from 21.2'-22.2'. Primary joints are very close, high angle, undulating, rough, discolored, partially open to open. Secondary joints are moderately spaced, moderately dipping, smooth to rough, undulating, discolored, partially open to open. Rock Quality = Poor Recovery = 100% Rock Core Times (min/sec): 18.5-19.5' (2:03), 19.5-20.5' (4:30), 20.5-21.5' (3:58), 21.5-22.5' (4:12), 22.5-23.5' (4:31)	
20	R3	60/60	18.5' - 23.5	RQD = 32%							
25	R4	38/28	23.5' - 26.7'	RQD = 0%							
30	R5	34/34	26.7' - 29.5	RQD = 57%				52.6		R4: Hard, slightly weathered, aphanitic, grey, PHYLLITE. Joints are extremely close to very close, high angle, undulating, rough to smooth, discolored, partially open to open. Rock Quality = Very Poor Recovery = 74% Rock Core Times (min/sec): 23.5-24.5' (2:28), 24.5-25.5' (2:32), 25.5-26.5' (3:50), 26.5-26.7' (1:05) R5: Hard, slightly weathered, aphanitic, dark grey, PHYLLITE. Joints are extremely close, moderately dipping, undulating, rough, discolored, partially open. Rock Quality = Fair Recovery = 100% Rock Core Times (min/sec): 26.7-27.7' (3:09), 27.7-28.7' (4:24), 28.7-29.5' (4:02)	
35										29.5 Bottom of Exploration at 29.5 feet below ground surface.	
40											
45											
50											

Remarks:
1. Automatic Hammer MaineDOT CME 45C. Energy Transfer Ratio = 0.89.
2. Reported water level was measured before casing removal.
3. As-drilled boring locations were surveyed by MaineDOT in the field (N625660.9, E1178918.6).

Stratification lines represent approximate boundaries between soil types: transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: BB-WWKR-102

Maine Department of Transportation — BORING NO.: BB-WWKR-103

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Ticonic Bridge Route 100 (Bridge Street)
Location: Waterville-Winslow, Maine
WIN: 023138.00

Driller: Maine007	Elevation (ft.): 31.2'	Auger ID/OD: ---	
Operator: T. Daggett	Datum: NAVD 88	Sampler: Standard Splitspoon	
Logged By: G. Basabinka	Rig Type: Trailer Mounted	Hammer Wt./Fall: 140#/30"	
Date Start/Finish: 6/16/21 - 6/16/21	Drilling Method: Drive & Wash	Core Barrel: NQ2	
Boring Location: Sta. 18+1.1, 23.8' LT	Casing ID/OD: 4"/4.5"	Water Level *: River	
Hammer Efficiency Factor: 0.89	Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions: D = Split Spoon Sample; WO = Unsuccessful Split Spoon Sample Attempt; U = Thin Wall Tube Sample; WU = Unsuccessful Thin Wall Tube Sample Attempt; V = Field Vane Shear Test, FP = Pocket Penetrometer; WV = Unsuccessful Field Vane Shear Test Attempt; R = Rock Core Sample; SSA = Solid Stem Auger; HSA = Hollow Stem Auger; RC = Roller Cone; WOH = Weight of 140lb. Hammer; WOR/C = Weight of Rods or Casing; WOP = Weight of Pen Person; S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf); $S_{u(r)}$ = Lab Vane Undrained Shear Strength (psf); q_u = Unconfined Compressive Strength (psf); N-uncorrected = Raw Field SPT N-value; Hammer Efficiency Factor = Rig Specific Annual Calibration Value; N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency; T_v = Pocket Torvane Shear Strength (psf); 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/ (6 in.) Stroke Strength or RQD (*)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0											
5	R1	60/55	0.0' - 5.0'	RQD = 87%			NQ2			Set casing through deck and start core run. R1: Very hard, fresh, aphanitic, dark grey, PHYLLITE. Primary joints are very close to moderately spaced, high angle, planar, rough, fresh, tight to partially open. Secondary joints are closely spaced, moderately dipping, rough, planar, fresh, tight. Rock Quality = Good Recovery = 92% Rock Core Times (min/sec): 0.0-1.0' 12:06), 1.0-2.0' (2:01), 2.0-3.0' (2:51), 3.0-4.0' (2:11), 4.0-5.0' (2:02)	
10	R2	42/42	5.0' - 8.5	RQD = 58%						R2: Very hard, fresh, aphanitic, dark grey, PHYLLITE. Primary joints are very close, high angle, undulating to planar, rough, fresh, partially open. Secondary joints are closely spaced, moderately dipping, rough, planar, fresh, tight. Rock Quality = Fair Recovery = 100% Rock Core Times (min/sec): 5.0-6.0' (2:26), 6.0-7.0' (1:59), 7.0-8.0' (2:04), 8.0-8.5' (4:24) R3: Very hard, fresh, aphanitic, dark grey, PHYLLITE. Joints are very close, high angle, undulating, rough, fresh, light to partially open. Rock Quality = Fair Recovery = 83% Rock Core Times (min/sec): 8.5-9.5' (3:31) R4: Very hard, fresh, aphanitic, dark grey, PHYLLITE. Joints are close, high angle, undulating, rough, fresh, partially open to open. Rock Quality = Very Poor Recovery = 95% Rock Core Times (min/sec): 9.5-10.5' (3:57), 10.5-10.9' (4:11)	
15	R3	12/10	8.5' - 9.5	RQD = 58%				19.6			
20	R4	17/16	9.5' - 10.9	RQD = 0%						21.6 Bottom of Exploration at 11.6 feet below ground surface.	
25											
30											
35											
40											
45											
50											

Remarks:
1. Automatic Hammer MaineDOT CME 45C. Energy Transfer Ratio = 0.89.
2. Cored through 12" concrete deck. Depth measured from mudline elevation, 51.3' below top of bridge deck.
3. As-drilled boring locations were surveyed by MaineDOT in the field (N625708.3, E1179185.8).

Stratification lines represent approximate boundaries between soil types: transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: BB-WWKR-103

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2867

STATE OF MAINE — Andrew Blaisdell — 12057 — LICENSED PROFESSIONAL ENGINEER — 8/2/22

	BY	DATE
PROJ. MANAGER	A. LATHE	
DESIGN-DETAILED		
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE ROUTE 100 (BRIDGE STREET)
OVER KENNEBEC RIVER
WATERVILLE-WINSLOW KENNEBEC COUNTY

BORING LOGS 1

PREPARED BY: GZA

SHEET NUMBER 12 OF 111

Maine Department of Transportation

Soil/Rock Exploration Log

US CUSTOMARY UNITS

Project: Ticonic Bridge Route 100 (Bridge Street)
Location: Waterville-Winslow, Maine

Boring No.: BB-WWKR-104
WIN: 023138.00

Driller:	MaineDOT	Elevation (ft.)	30.3	Auger ID/OD:	--
Operator:	T. Daggett	Datum:	NAVD 88	Sampler:	Standard Split-spoon
Logged By:	G. Basabinka	Rig Type:	Trailer Mounted	Hammer Wt./Fall:	140#/30"
Date Start/Finish:	6/21/21 - 6/21/21	Drilling Method:	Drive & Wash	Core Barrel:	NQ2
Boring Location:	Sta. 18+22.9, 32.9' RT	Casing ID/OD:	4"/4.5"	Water Level *:	River

Hammer Efficiency Factor: 0.89 Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐

Definitions:
D = Split Spoon Sample
WD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
WU = Unsuccessful Thin Wall Tube Sample Attempt
V = Field Vane Shear Test, PP = Pocket Penetrometer
WV = Unsuccessful Field Vane Shear Test Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WOP = Weight of One Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(LAB)}$ = Lab Vane Undrained Shear Strength (psf)
q_u = Unconfined Compressive Strength (ksf)
N-uncorrected = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency
N_{60} = Hammer Efficiency Factor-ISO/Th-uncorrected
S_t = Peak-Remolded Field Vane Undrained Shear Strength (psf)
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/ (ft. or in.) or Strength or RQD (#)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0											
	R1	60/55	0.2 - 5.2	RQD = 87%			NQ2			Set casing through deck. Advanced roller cone at 0.2' and set up to core. R1: Hard, fresh, aphanitic, dark grey, PHYLLITE. Joints are close to moderately spaced, high angle, fresh, planar, rough, tight to partially open. Rock Quality = Excellent Recovery = 92% Rock Core Times (min:sec): 0.2-1.2' (4:57), 1.2-2.2' (1:41), 2.2-3.2' (1:38), 3.2-4.2' (1:55), 4.2-5.2' (2:09)	q_u=1080 ksf
	R2	60/60	5.2 - 10.2	RQD = 97%						R2: Hard, fresh, aphanitic, dark grey, PHYLLITE. Joints are close to moderately spaced, high angle, planar, rough, fresh, tight to partially open. Rock Quality = Excellent Recovery = 100% Rock Core Times (min:sec): 5.2-6.2' (2:43), 6.2-7.2' (2:39), 7.2-8.2' (2:43), 8.2-9.2' (2:40), 9.2-10.2' (3:43)	
5											
10								20.1		Bottom of Exploration at 10.2 feet below ground surface.	10.2
15											
20											
25											

Remarks:

1. Automatic Hammer MaineDOT CME 45C. Energy Transfer Ratio = 0.89.
2. Cored through 12" concrete deck. Depth measured from mudline elevation, 52.3' below top of bridge deck.
3. As-drilled boring locations were surveyed by MaineDOT in the field (N625651.0, E1179206.1).

Stratification lines represent approximate boundaries between soil types: transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1
Boring No.: BB-WWKR-104

Maine Department of Transportation

Soil/Rock Exploration Log

US CUSTOMARY UNITS

Project: Ticonic Bridge Route 100 (Bridge Street)
Location: Waterville-Winslow, Maine

Boring No.: BB-WWKR-105
WIN: 023138.00

Driller:	MaineDOT	Elevation (ft.)	64.7	Auger ID/OD:	--
Operator:	T. Daggett	Datum:	NAVD 88	Sampler:	Standard Split-spoon
Logged By:	G. Basabinka	Rig Type:	Trailer Mounted	Hammer Wt./Fall:	140#/30"
Date Start/Finish:	6/14/21 - 6/16/21	Drilling Method:	Drive & Wash	Core Barrel:	NQ2
Boring Location:	Sta. 20+96.0, 24.2' LT	Casing ID/OD:	4"/4.5"	Water Level *:	Not Observed

Hammer Efficiency Factor: 0.89 Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐

Definitions:
D = Split Spoon Sample
WD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
WU = Unsuccessful Thin Wall Tube Sample Attempt
V = Field Vane Shear Test, PP = Pocket Penetrometer
WV = Unsuccessful Field Vane Shear Test Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WOP = Weight of One Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(LAB)}$ = Lab Vane Undrained Shear Strength (psf)
q_u = Unconfined Compressive Strength (ksf)
N-uncorrected = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency
N_{60} = Hammer Efficiency Factor-ISO/Th-uncorrected
S_t = Peak-Remolded Field Vane Undrained Shear Strength (psf)
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/ (ft. or in.) or Strength or RQD (#)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0											
	R1	32/32	3.7 - 6.4	RQD = 56%			NQ2	60.4		Advanced roller cone through boulders. Boulders were observed below the bridge deck overlying bedrock, (FB). Top of Rock at 3.7'. R1: Very hard, fresh, aphanitic, dark grey, PHYLLITE. Joints are very close to moderately spaced, high angle, undulating, rough, fresh to discolored, partially open.	3.7 q_u=287 ksf
	R2	42/42	6.4 - 9.9	RQD = 88%						R2: Very hard, fresh, aphanitic, dark grey, PHYLLITE. Joints are very close to moderately spaced, high angle, planar to undulating, rough to smooth, fresh to discolored, partially open to open. Rock Quality = Good Recovery = 100% Rock Core Times (min:sec): 6.4-7.4' (1:52), 7.4-8.4' (1:41), 8.4-9.4' (2:00), 9.4-9.9' (3:06)	q_u = 472 ksf
5											
10	R3	60/60	9.9 - 14.9	RQD = 95%						R3: Very hard, fresh, aphanitic, dark grey, PHYLLITE. Joints are very close to moderately spaced, high angle, undulating to planar, rough to smooth, fresh to discolored, very tight to tight. Rock Quality = Excellent Recovery = 100% Rock Core Times (min:sec): 9.9-10.9' (2:40), 10.9-11.9' (2:48), 11.9-12.9' (3:01), 12.9-13.9' (2:35), 13.9-14.9' (3:26)	
15								49.2		Bottom of Exploration at 14.9 feet below ground surface.	14.9
20											
25											

Remarks:

1. Automatic Hammer MaineDOT CME 45C. Energy Transfer Ratio = 0.89.
2. Cored through 12" concrete deck. Depth measured from ground surface elevation, 18.1' below top of bridge deck.
3. As-drilled boring locations were surveyed by MaineDOT in the field (N625701.3, E1179480.6).

Stratification lines represent approximate boundaries between soil types: transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1
Boring No.: BB-WWKR-105

Maine Department of Transportation

Soil/Rock Exploration Log

US CUSTOMARY UNITS

Project: Ticonic Bridge Route 100 (Bridge Street)
Location: Waterville-Winslow, Maine

Boring No.: BB-WWKR-106
WIN: 023138.00

Driller:	MaineDOT	Elevation (ft.)	82.1	Auger ID/OD:	5"
Operator:	T. Daggett	Datum:	NAVD 88	Sampler:	Standard Split-spoon
Logged By:	G. Basabinka	Rig Type:	Trailer Mounted	Hammer Wt./Fall:	140#/30"
Date Start/Finish:	6/10/21 - 6/24/21	Drilling Method:	Drive & Wash	Core Barrel:	NQ2
Boring Location:	Sta. 21+13.7, 29.7' RT	Casing ID/OD:	3"/3.5"	Water Level *:	31.6

Hammer Efficiency Factor: 0.89 Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐

Definitions:
D = Split Spoon Sample
WD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
WU = Unsuccessful Thin Wall Tube Sample Attempt
V = Field Vane Shear Test, PP = Pocket Penetrometer
WV = Unsuccessful Field Vane Shear Test Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WOP = Weight of One Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(LAB)}$ = Lab Vane Undrained Shear Strength (psf)
q_u = Unconfined Compressive Strength (ksf)
N-uncorrected = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency
N_{60} = Hammer Efficiency Factor-ISO/Th-uncorrected
S_t = Peak-Remolded Field Vane Undrained Shear Strength (psf)
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/ (ft. or in.) or Strength or RQD (#)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0							SSA	81.6		0'-0.5': Asphalt.	0.5
										0.5'-3.3': Advanced SSA through concrete. Abandoned hole and moved east. Concrete was not encountered at the relocated boring. See Remark 3.	3.3
	10	24/9	5.0 - 7.0	2-3-5-1	6	9		78.8		Grey, moist, loose, fine to coarse SAND, some gravel, little silt, brick pieces in bottom 3" of splitspoon, (FB).	21-5-2644 A-1-b, SM WC= 7.3
	20	24/14	10.0 - 12.0	WOR-WOR-2-2	2	3	9			Brown, moist, very loose, fine SAND, little silt, trace gravel, trace brick pieces, (FB).	
							10				
							12				
							20				
							24	67.1			15.0
	30	24/10	15.0 - 17.0	24-31-28-26	59	88	WOH			Brown, wet, very dense, fine to medium SAND, some silt, some gravel, little roots, (Stream Alluvium).	21-5-2643, A-2-4(0), SM WC=15.2
							5				
							17				
							10				
	40	24/14	20.0 - 22.0	3-5-5-24/1"	10	15				Grey/black, wet, medium dense, fine to coarse SAND, some silt, little gravel, (Stream Alluvium).	21-5-4648, A-2-4(0), SM WC= 27.0
	R1	60/56	22.6 - 27.6	RQD = 87%			NQ2	59.5		Splitspoon refusal at 22.6'. Set up to core. R1: Hard, fresh to slightly weathered, aphanitic, grey/white, PHYLLITE with QUARTZ veins. Joints are very close, high angle, undulating, rough, discolored, partially open. One wide joint at 25.4'. Rock Quality = Good Recovery = 93% Rock Core Times (min:sec): 22.6-23.6' (3:04), 23.6-24.6' (3:18), 24.6-25.6' (3:38), 25.6-26.6' (3:37), 26.6-27.6' (5:10)	22.6
	R2	60/54	27.6 - 32.6	RQD = 57%						R2: Hard, fresh, aphanitic, grey/white, PHYLLITE with QUARTZ veins. Joints are extremely close to very close, high angle, undulating, rough, fresh to discolored, partially open to open. Rock Quality = Fair Recovery = 90% Rock Core Times (min:sec): 27.6-28.6' (3:48), 28.6-29.6' (3:25), 29.6-30.6' (3:57), 30.6-31.6' (4:14), 31.6-32.6' (7:02)	
	R3	48/34	32.6 - 36.6	RQD = 38%						R3: Very hard, fresh to slightly weathered, aphanitic, grey, PHYLLITE. Quartz vein from 34.1'-34.9'. Joints are very close, high angle, undulating, rough, fresh, partially open. Rock Quality = Poor Recovery = 71% Rock Core Times (min:sec): 32.6-33.6' (2:31), 33.6-34.6' (2:32), 34.6-35.6' (2:02), 35.6-36.6' (3:03)	
								45.5		Bottom of Exploration at 36.6 feet below ground surface.	36.6

Remarks:

1. Automatic Hammer MaineDOT CME 45C. Energy Transfer Ratio = 0.89.
2. Reported water level was measured before casing removal.
3. As-drilled boring location corresponds to relocated boring that did not encounter concrete at 0.5'-3.3'. Concrete was encountered 3.0' west from the coordinates listed on the log.
4. As-drilled boring locations were surveyed by MaineDOT in the field (N625647.0, E1179496.91.

Stratification lines represent approximate boundaries between soil types: transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1
Boring No.: BB-WWKR-106

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2867

STATE OF MAINE · Andrew Blaisdell · 10857 · LICENSED PROFESSIONAL ENGINEER · 3/31/2022

	BY	DATE
SIGNATURE		
P.E. NUMBER		
DATE		

PROJ. MANAGER: A. LATHE

DESIGN-DETAILED	
CHECKED-REVIEWED	
DESIGN2-DETAILED2	
DESIGN3-DETAILED3	
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

TICONIC BRIDGE ROUTE 100 (BRIDGE STREET)
OVER KENNEBEC RIVER
WATERVILLE-WINSLOW KENNEBEC COUNTY

BORING LOGS 2

PREPARED BY: GZA

SHEET NUMBER
13
OF 111

Filename: ...\Boring Logs\Boring Logs.dgn Division: HIGHWAY Username: common Date:8/2/2022

Date:8/19/2022

Username:

Division:

Filename: 014_Utility Plan_01.dgn

Main St.

Front St.

Spring St.

Water St.

11+00

12+00

13+00

14+00

15+00

16+00

17+00

Abandoned Water Main

Light Pole to Remain

Abandoned Sewer

Temporary Pole for Cable (By Others)

Access to Sewer MH Shall be Maintained During Construction

Culvert for Equipment Crossing if Required for Contractor Access

Temporary Cable Mounted to Bridge Rail (By Others)

Proposed Water Line

Proposed Electric

Proposed Communications

Proposed Lighting and Conduit

Existing Electrical and Communication Vaults to Remain

Remove and Reset Light Standard

Proposed Electrical Duct Bank

Proposed Electrical Vault

Remove Existing Junction Box

Proposed Communications Duct Bank

Existing Utility Vault to be Removed

Temporary Overhead Cable (Stage 2 Construction) (By Others)(Typ.)

Adjust Water Gate to Grade

Remove Existing Electric

Proposed Gas

Remove and Salvage Hydrant

Remove Existing Water

Proposed Cable

4" Metallic Conduit (Schedule 40) on Riser Pole

Remove Utility Pole (By Others)

Remove Existing Communications

Proposed Cable

Proposed Lighting Conduit

Abandoned Water Manhole (Remove)

Proposed Lighting and Conduit

Proposed Junction Box (Typ.)

Remove Light Pole

Remove Riser Poles

Light Standard to Remain

OHU

IPF

Notes:

1. Existing utilities are approximate.
2. Conduit not shown on the bridge for clarity.

PLAN

25 0 25 50

Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	M. Perlin	
DESIGN-DETAILED	C. Helmick	6\2022
CHECKED-REVIEWED	L. Driscoll	6\2022
DESIGN2-DETAILED2	R. Honf	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
KENNEBEC
WATERVILLE-WINSLOW

UTILITY PLAN 1

SHEET NUMBER

14

OF 111

Date:8/19/2022

Username:

Division:

Filename: 015_Utility Plan_02.dgn

Proposed Lighting and Conduit

Proposed Communications

Proposed Water Line

Proposed Electric

Temporary Cable Mounted to Bridge Rail (By Others)

Culvert for Equipment Crossing if Required for Contractor Access

Proposed Junction Box (Typ.)

Light Pole to Remain (See Note 3)

Hydrant Location to Avoid Light Pole

Railroad Signal Communications (To Remain Undisturbed)

Contractor Installed Utility Stub Pole for Power to Upstream Bridge Lighting

Temporary Riser Pole for Cable (By Others)

Lighting Control Cabinet and Electrical Service for Upstream Lighting

Temporary Overhead Cable (By Others) (Typ.)

Benton Ave.

18+00

19+00

20+00

21+00

22+00

23+00

24+00

Clinton Ave.

Proposed Electrical Vault

Proposed Electrical Duct Bank

Proposed Communications Vault (By Others)

Proposed Communications Duct Bank (By Others)

Adjust Sewer MH to Grade

Adjust Electrical MH to Grade

Abandon Water Gates

Proposed Cable

Remove Existing Electric

Remove Existing Water

Remove Existing Communications

Proposed Lighting and Conduit

Proposed Gas

Remove Electrical Manhole

Communication Manhole to Remain (Adjust to Grade by Others)

Remove Existing Utility Pole (By Others)

Remove and Salvage Hydrant

Stub and Mark Cable Conduit at Limit of Work

Bay St.

Pole #29/35/1

Notes:

1. Existing utilities are approximate.
2. Conduit not shown on the bridge for clarity.
3. The power source for the existing light pole at Sta. 22+10 Lt. shall be field verified. If the source of the power for this pole is via conduit from the Waterville side crossing the bridge, this connection shall be discontinued and the pole shall become connected to the new circuit from the lighting contol cabinet at Sta. 22+15 Lt.

PLAN

25 0 25 50

Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

	BY	DATE
M. Perlin		
C. Helmick	C. Helmick	6\2022
L. Driscoll	R. Hanf	6\2022

SIGNATURE

P.E. NUMBER

DATE

PROJ. MANAGER	
DESIGN-DETAILED	
CHECKED-REVIEWED	
DESIGN2-DETAILED2	
DESIGN3-DETAILED3	
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

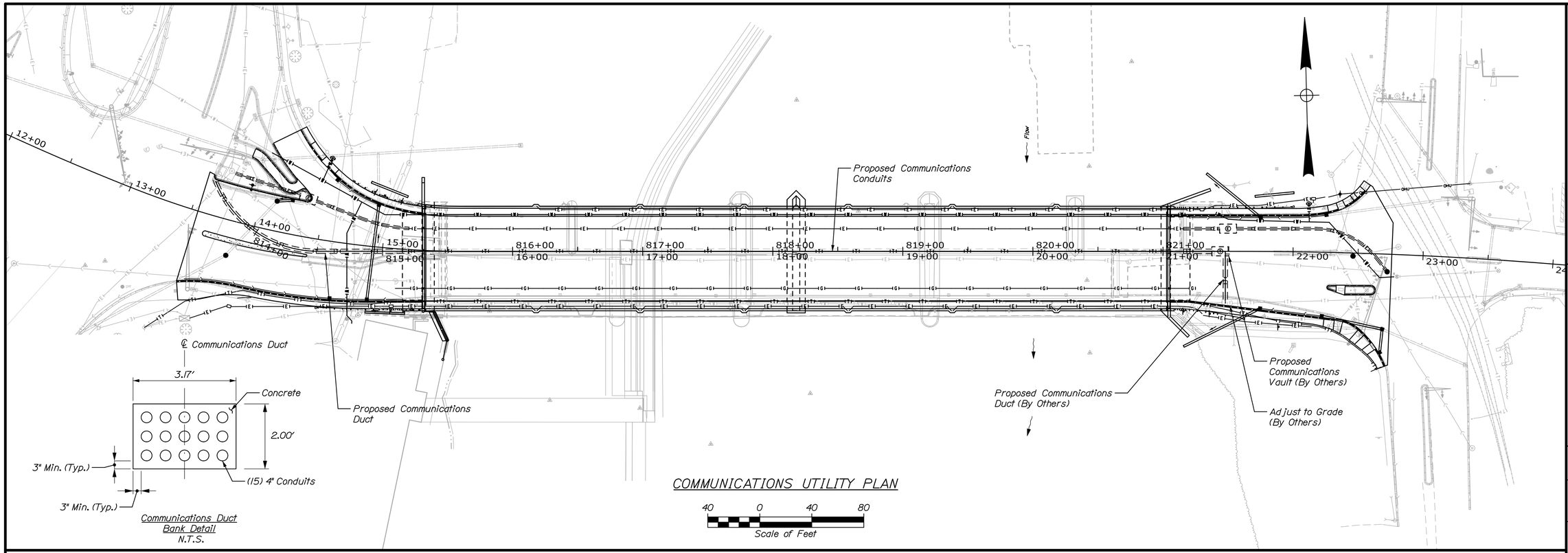
TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

UTILITY PLAN 2

SHEET NUMBER

15

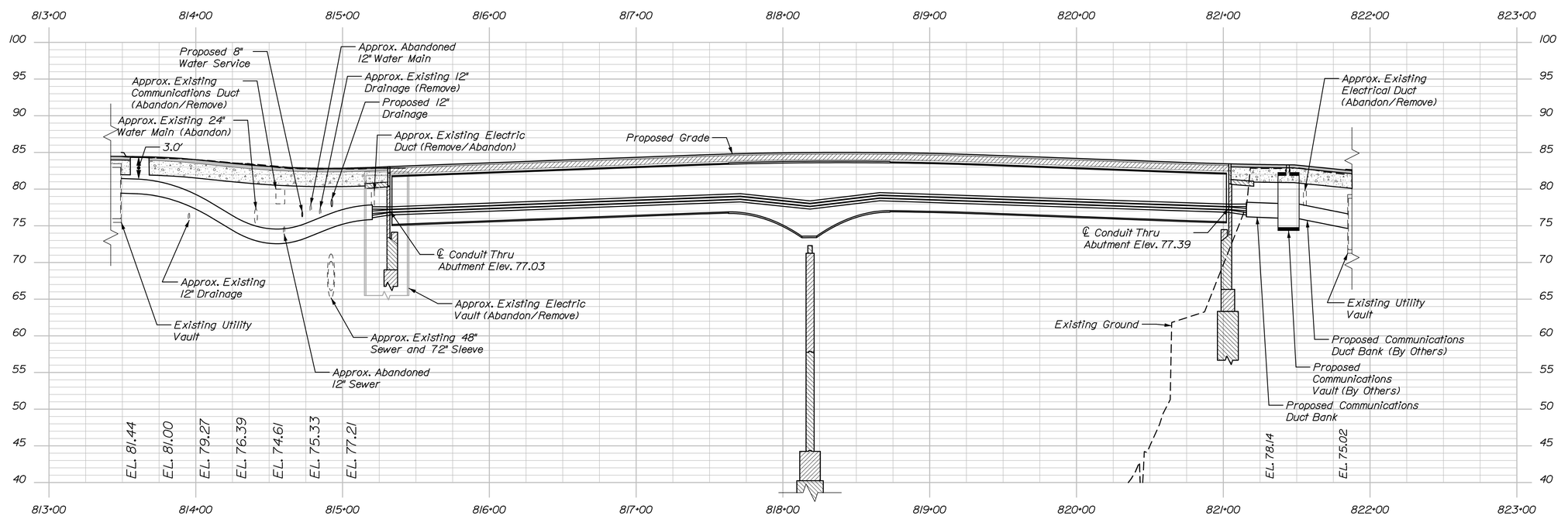
OF 111



Communications Duct Bank Detail
N.T.S.

COMMUNICATIONS UTILITY PLAN

40 0 40 80
Scale of Feet



NOTE:
Elevations shown are to the top of the communcations duct bank

COMMUNICATIONS UTILITY PROFILE

Horiz. 40 0 40 80
Vert. 8 0 8 16
Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	C. Helmick	BY	C. Helmick
CHECKED-REVIEWED	L. Driscoll		A. Stephens
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

	DATE
	6\2022
	6\2022

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

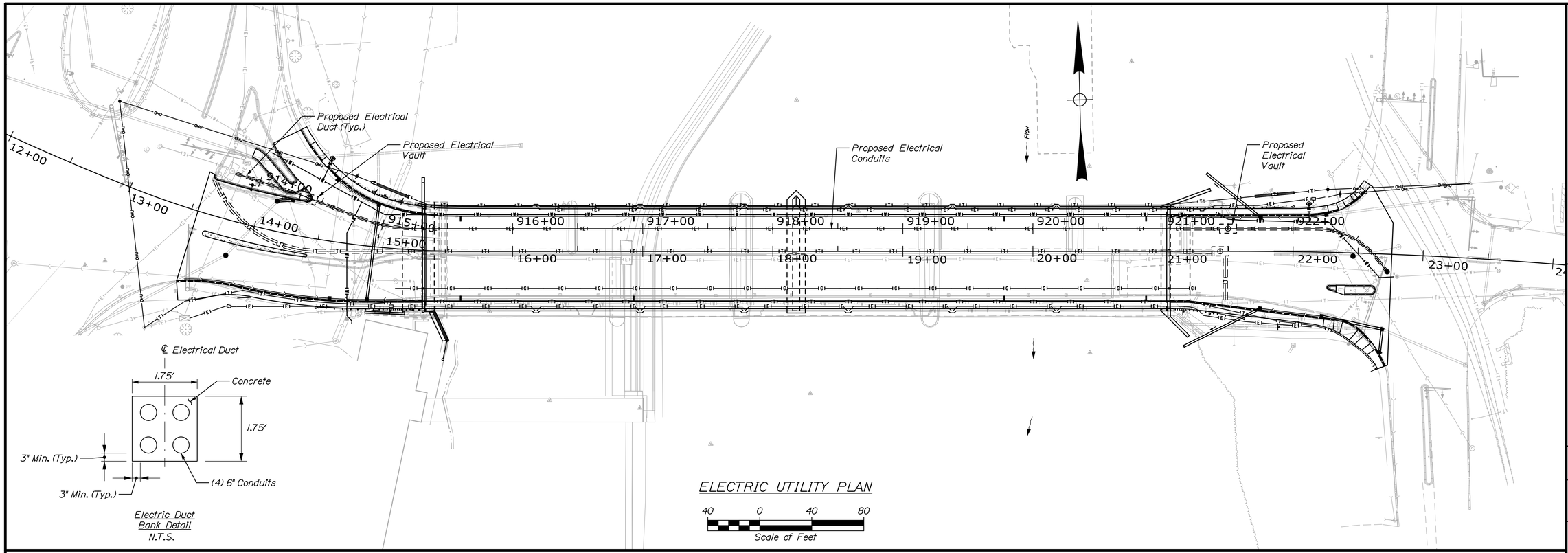
COMMUNICATIONS UTILITY DETAILS

SHEET NUMBER

16

OF 111

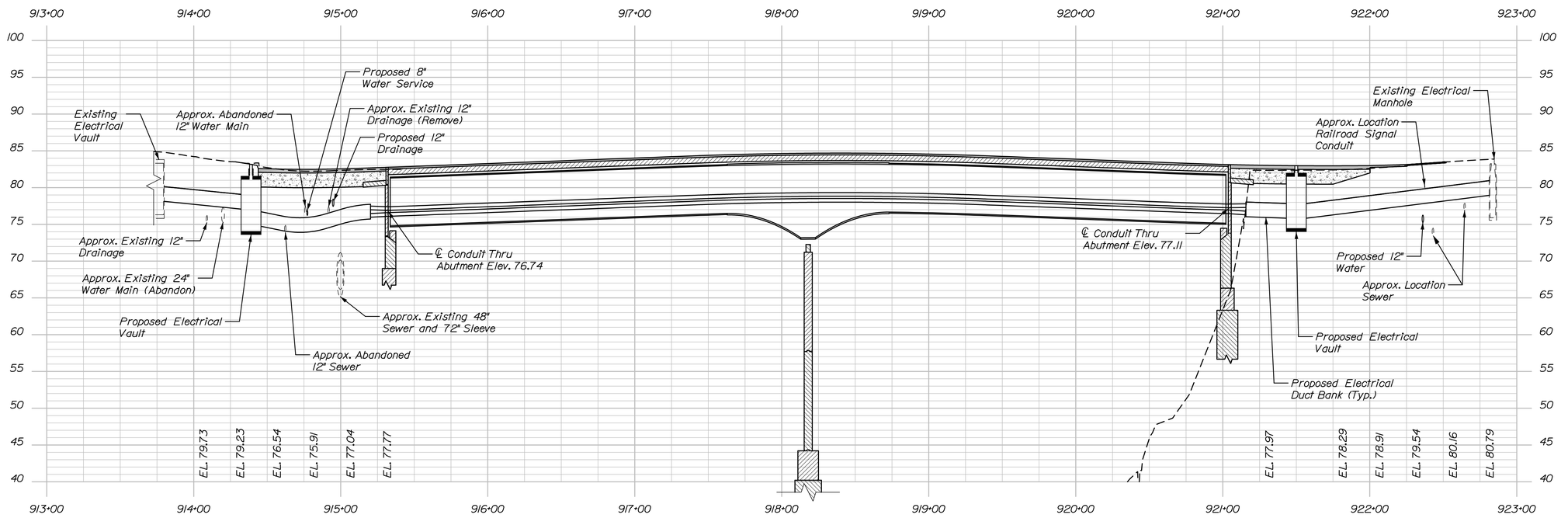
Username:
Division:
Date:8/19/2022
Filename: 016_Communication Details.dgn



Electric Duct Bank Detail
N.T.S.

ELECTRIC UTILITY PLAN

40 0 40 80
Scale of Feet



NOTE:
Elevations shown are to the top of the electric duct bank

ELECTRIC UTILITY PROFILE

Horiz. 40 0 40 80
Vert. 8 0 8 16
Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	C. Helmick	C. Helmick	6\2022
CHECKED-REVIEWED	L. Driscoll	A. Stephens	6\2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

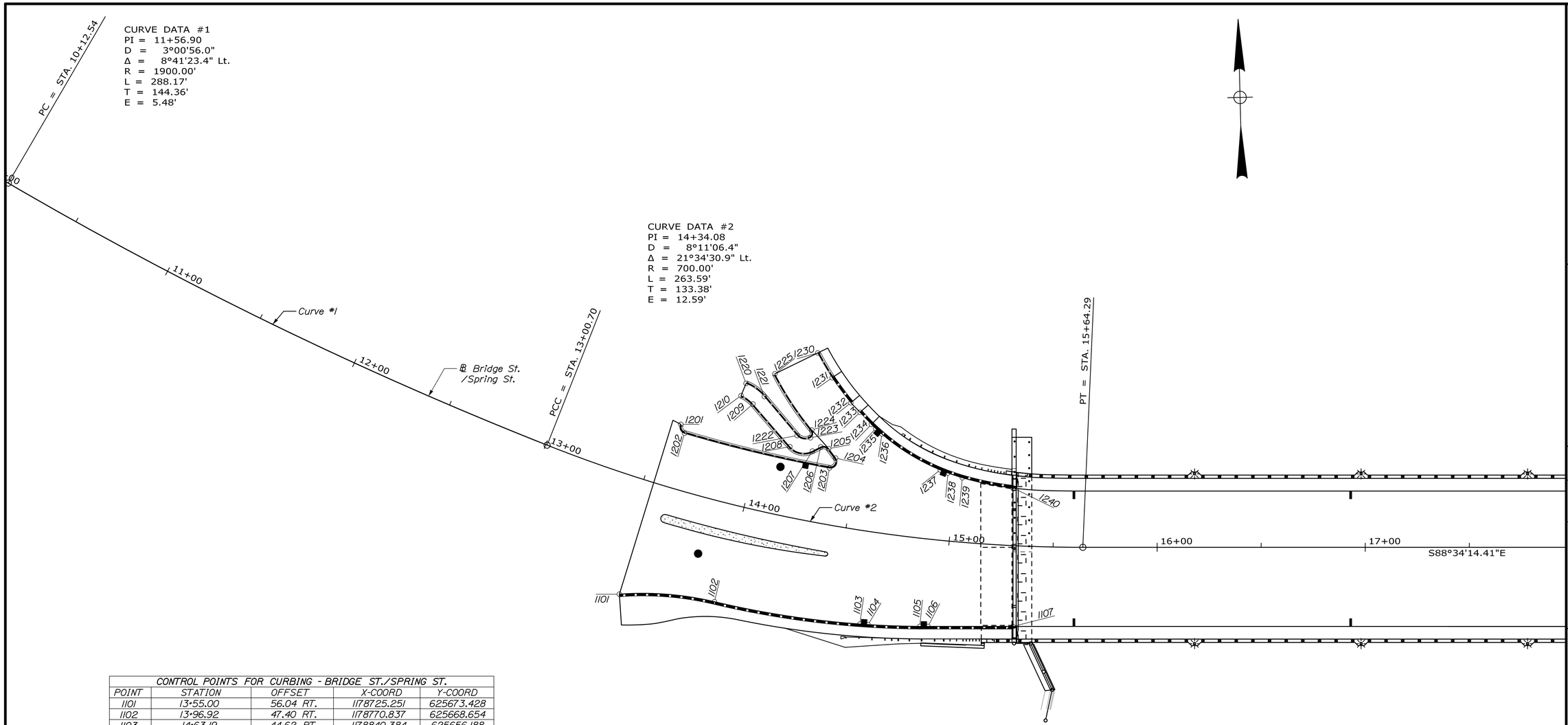
DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
KENNEBEC
WATERVILLE-WINSLOW

ELECTRICAL UTILITY DETAILS

SHEET NUMBER
17
OF 111

Date:8/19/2022
Username:
Division:
Filename: 017_Electrical Details.dgn



CONTROL POINTS FOR CURBING - BRIDGE ST./SPRING ST.				
POINT	STATION	OFFSET	X-COORD	Y-COORD
1101	13+55.00	56.04 RT.	1178725.251	625673.428
1102	13+96.92	47.40 RT.	1178770.837	625668.654
1103	14+63.19	44.62 RT.	1178840.384	625656.188
1104	14+66.95	44.32 RT.	1178844.371	625655.819
1105	14+90.22	42.15 RT.	1178869.126	625654.338
1106	14+93.97	41.74 RT.	1178873.127	625654.235
1107	15+32.50	38.76 RT.	1178913.959	625653.216
1201	13+59.36	30.58 LT.	1178756.782	625754.228
1202	13+62.44	27.00 LT.	1178758.477	625749.913
1203	14+36.94	27.00 LT.	1178827.687	625731.500
1204	14+39.09	32.19 LT.	1178830.734	625736.162
1205	14+34.71	36.08 LT.	1178827.501	625740.762
1206	14+30.69	36.19 LT.	1178823.759	625741.741
1207	14+26.98	33.44 LT.	1178819.719	625739.817
1208	14+15.36	33.31 LT.	1178808.910	625742.213
1209	13+92.04	49.19 LT.	1178791.670	625763.092
1210	13+85.04	51.71 LT.	1178786.105	625767.289
1220	13+85.94	57.96 LT.	1178788.629	625773.067
1221	13+96.87	54.00 LT.	1178797.257	625766.551
1222	14+17.82	39.26 LT.	1178812.569	625747.450
1223	14+24.65	39.49 LT.	1178818.894	625746.204
1224	14+24.55	43.28 LT.	1178819.656	625749.925
1225	13+99.47	65.80 LT.	1178802.610	625777.331
1230	14+19.45	80.11 LT.	1178823.451	625786.854
1231	14+29.71	69.84 LT.	1178830.098	625774.796
1232	14+41.83	59.65 LT.	1178838.751	625762.554
1233	14+47.40	55.90 LT.	1178843.030	625757.877
1234	14+54.28	51.04 LT.	1178848.373	625751.921
1235	14+56.79	49.42 LT.	1178850.366	625749.920
1236	14+60.38	47.24 LT.	1178853.284	625747.177
1237	14+92.20	33.64 LT.	1178880.880	625729.232
1238	14+96.24	32.56 LT.	1178884.564	625727.681
1239	15+03.65	30.92 LT.	1178891.403	625725.228
1240	15+29.35	27.64 LT.	1178915.618	625719.704

Item No. 609.40 Reset Curb Type 5

Point	Length	Radius
1201 to 1202	5.30′	3′
1202 to 1203	71.63′	673′
1203 to 1204	7.17′	3′
1204 to 1205	5.70′	-
1205 to 1206	4.12′	3′
1206 to 1207	4.48′	-
1207 to 1208	11.93′	9′
1208 to 1209	27.08′	-
1209 to 1210	7.03′	15′
1220 to 1221	10.92′	22′
1221 to 1222	24.47′	-
1222 to 1223	7.01′	5′
1223 to 1224	4.31′	2.5′
1224 to 1225	32.33′	155′

Item No. 609.38 Reset Curb Type 1

Point	Length	Radius	
1101 to 1102	46.02′	150′	
1102 to 1103	70.73′	440′	
1104 to 1105	24.81′	440′	
1106 to 1107	40.85′	-	
1230 to 1231	13.78′	135′	
1231 to 1232	15.00′	130′	*Match Existing Terminal Curb Ends
1233 to 1234	8.00′	104′	*Match Existing Terminal Curb Ends
1234 to 1235	2.82′	104′	
1236 to 1237	33.06′	104′	
1238 to 1239	7.27′	104′	
1239 to 1240	24.87′	146′	

PLAN

25 0 25 50

Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	M. Perlin	
DESIGN-DETAILED	C. Helmick	6\2022
CHECKED-REVIEWED	L. Driscoll	6\2022
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

CURBING & GEOMETRIC PLAN 1

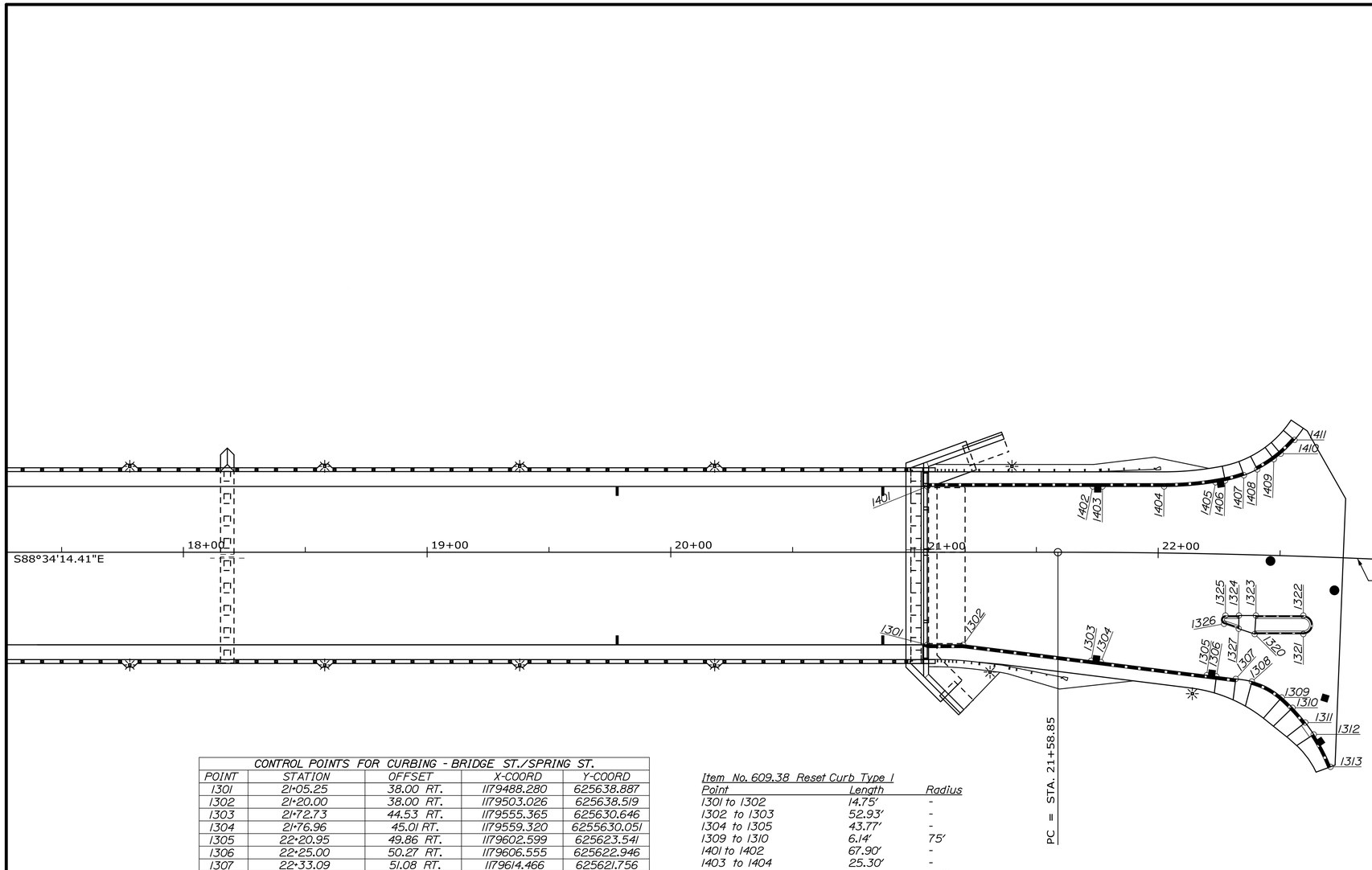
SHEET NUMBER

18

OF 111

HNTB

Filename: 018_Geometric and Curbing Plan_01.dgn Division: Username: Date:8/19/2022



CONTROL POINTS FOR CURBING - BRIDGE ST./SPRING ST.				
POINT	STATION	OFFSET	X-COORD	Y-COORD
1301	21+05.25	38.00 RT.	1179488.280	625638.887
1302	21+20.00	38.00 RT.	1179503.026	625638.519
1303	21+72.73	44.53 RT.	1179555.365	625630.646
1304	21+76.96	45.01 RT.	1179559.320	6255630.051
1305	22+20.95	49.86 RT.	1179602.599	625623.541
1306	22+25.00	50.27 RT.	1179606.555	625622.946
1307	22+33.09	51.08 RT.	1179614.466	625621.756
1308	22+39.86	51.99 RT.	1179621.055	625620.501
1309	22+52.52	58.16 RT.	1179633.132	625613.672
1310	22+57.18	62.26 RT.	1179637.461	625609.318
1311	22+62.73	68.13 RT.	1179642.533	625603.137
1312	22+66.47	72.89 RT.	1179645.892	625598.167
1313	22+74.06	85.91 RT.	1179652.464	625584.711
1320	22+40.49	32.48 RT.	1179622.696	625639.958
1321	22+60.95	31.86 RT.	1179642.666	625639.460
1322	22+60.42	24.28 RT.	1179642.857	625647.045
1323	22+40.80	24.87 RT.	1179623.396	625647.541
1324	22+33.78	25.05 RT.	1179616.437	625647.718
1325	22+28.19	25.18 RT.	1179610.896	625647.860
1326	22+27.71	28.60 RT.	1179610.256	625644.465
1327	22+33.81	30.46 RT.	1179616.199	625642.312
1401	21+05.25	27.00 LT.	1179489.902	625703.866
1402	21+73.02	27.03 LT.	1179557.778	625702.173
1403	21+76.98	27.06 LT.	1179561.777	625702.073
1404	22+02.05	27.31 LT.	1179587.064	625701.442
1405	22+22.91	29.41 LT.	1179608.190	625702.637
1406	22+26.79	30.21 LT.	1179612.143	625703.248
1407	22+34.35	32.55 LT.	1179619.888	625705.216
1408	22+39.72	35.11 LT.	1179625.437	625707.489
1409	22+46.31	39.50 LT.	1179632.337	625711.520
1410	22+49.03	41.81 LT.	1179635.210	625713.680
1411	22+54.42	47.64 LT.	1179641.002	625719.193

Item No. 609.38 Reset Curb Type 1

Point	Length	Radius
1301 to 1302	14.75'	-
1302 to 1303	52.93'	-
1304 to 1305	43.77'	-
1309 to 1310	6.14'	75'
1401 to 1402	67.90'	-
1403 to 1404	25.30'	-
1404 to 1405	21.18'	130'

Item No. 609.12 Vertical Curb Type 1 - Circular

Point	Length	Radius
1409 to 1410	3.60'	50'

Item No. 609.221 Terminal Curb Type 1

Point	Length	Radius
1306 to 1307	8.00'	-
1310 to 1311	8.00'	75'
1312 to 1313	15.00'	75'

Item No. 609.222 Terminal Curb Type 1 - Circular

Point	Length	Radius
1308 to 1309	14.00'	30'
1406 to 1407	8.00'	50'
1408 to 1409	8.00'	50'
1410 to 1411	8.00'	50'

Item No. 609.40 Reset Curb Type 5

Point	Length	Radius	
1320 to 1321	20.25'	-	*Match Existing Terminal Curb Ends
1321 to 1322	11.92'	3.8'	
1322 to 1323	19.47'	-	*Match Existing Terminal Curb Ends
1324 to 1325	5.54'	-	*Match Existing Terminal Curb Ends
1325 to 1326	4.93'	1.8'	
1326 to 1327	6.31'	-	*Match Existing Terminal Curb Ends

CURVE DATA #3
PI = 22+81.85
D = 1°54'35.5"
Δ = 4°41'44.7" Rt.
R = 3000.00'
L = 245.87'
T = 123.00'
E = 2.52'

PLAN

25 0 25 50
Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

	NAME	DATE
BY	C. Helmick	6\2022
	R. Hanf	6\2022
PROJ. MANAGER	M. Parlin	
DESIGN-DETAILED	C. Helmick	
CHECKED-REVIEWED	L. Driscoll	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

CURBING & GEOMETRIC PLAN 2

SHEET NUMBER

19

OF 111

HNTB

Filename: 019_Geometric and Curbing Plan_02.dgn Division: Username: Date:8/19/2022

Username:

Division:

Date:8/19/2022

Filename: 020_Signing&Striping_01.dgn

Main St.

Front St.

Spring St.

Water St.

11+00

12+00

13+00

14+00

15+00

16+00

17+00

SWL

SYL

BWL

DYCL

12.6'

12.3'

12.0'

11.0'

(Remove and Reset)

WATERVILLE ROTARY CLUB
BEST WESTERN PLUS
MONDAY 12:00 NOON

SUNRISE ROTARY CLUB
ALFOND 120TH CENTER
THURSDAY 7:15 AM

H MaineGeneral Medical Center

Thayer Campus Emergency Services

Quarry Road Trails 3½

(Remain)

CONTROLLED ACCESS HIGHWAY OFFICIAL HIGHWAY SIGNS ONLY

(Remove and Reset)

THE DISCHARGE OF FIREARMS WITHIN CITY LIMITS IS PROHIBITED

(Remove and Reset)

(Reset to New Light Pole)

SOUTH INTERSTATE MAINE 95

NORTH INTERSTATE MAINE 95

(Reset to New Light Pole)

137

201

100

CONTROLLED ACCESS HIGHWAY OFFICIAL HIGHWAY SIGNS ONLY

(Remove and Reset)

ONLY ONLY ONLY

(Reset to New Light Pole

AUGUSTA
CHINA
VASSALBORO

(Reset to New Light Pole)

BUSINESS

137

SOUTH SOUTH

201 100

(Reset to Post)

LEGEND:
SWL - Solid White Line
SYL - Solid Yellow Line
DYCL - Double Yellow Center Line
BWL - Broken White Line

PLAN

25 0 25 50

Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

PROJ. MANAGER	M. Perlin	
DESIGN-DETAILED	C. Helmick	6\2022
CHECKED-REVIEWED	L. Driscoll	R. Hanf 6\2022
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

SIGNING & STRIPING
PLAN 1

SHEET NUMBER

20

OF 111

Filename: 021_Signing&Striping_02.dgn Division: Username: Date:8/19/2022

(Reset to New Light Pole)

SOUTH INTERSTATE MAINE 95 NORTH INTERSTATE MAINE 95

1'-0" (TYP.)

EXISTING PAVEMENT MARKING TO BE REMOVED

1'-0" (TYP.)

PAY LIMIT FOR REMOVAL OF EXISTING PAVEMENT MARKING (TYP.)

Existing Pavement Marking Removal Detail
N.T.S.

Flow

(Remove) ONLY ONLY

(Replace) ONLY ONLY ONLY
R3-8b

STOP HERE ON RED
R10-6

Front Back
(Remove)

NO TURN ON RED
(Retain)

11.0' 11.0' 11.0'

SWL

DYCL

Benton Ave.

Replace existing with proposed markings. See Existing Pavement Marking Removal Detail (Typ.)

24" Stop Bar (Typ.)

R3-5L ONLY

ONLY *R3-1
R3-5a

ONLY **R3-5R

*R3-5L ONLY

TURNING VEHICLES TO
R10-15R

*R3-5R **R3-6R ONLY

ONLY *R3-5L

*R10-11a NO TURN ON RED

ONLY **R3-5R

ONLY **R3-5a

OAKLAND FAIRFIELD
(Reset to New Light Pole)

BWL

18+00 19+00 20+00 21+00 22+00 23+00 24+00

11.0' 11.0' 11.0' 11.0' 11.0' 11.0' 11.0' 14.0'

DYCL

BWL

SWL

SWL

11.5' 11.1'

AUGUSTA CHINA VASSALBORO
(Reset to New Light Pole)

Bouchers Meats
SPEED LIMIT ENFORCED BY RADAR
CONTROLLED ACCESS HIGHWAY OFFICIAL HIGHWAY SIGNS ONLY
(Remove and Reset)

GARLAND ROAD ANIMAL HOSPITAL 1/8
PYRO CITY MAINE FIREWORKS STORE 1/8
(Remove and Reset)

Front
TOWN LINE WINSLOW
(Reset to New Light Pole)

Back
TOWN LINE WATERVILLE

Century 21 Nason Realty 1/10
FORTIN'S HOME FURNISHINGS 1/4
LOBSTER TRAP & STEAKHOUSE 2/10
(Remove and Reset)

Front
Welcome To WINSLOW

Back
DRIVE SAFE and Have a Great day Come Back Soon
(Remove and Reset)

(Remove and Reset)

RIGHT ON RED AFTER STOP
**R10-17a

TURNING VEHICLES TO
R10-15R

CONTROLLED ACCESS HIGHWAY OFFICIAL HIGHWAY SIGNS ONLY
(Remain)

R3-6R
*R3-2

ONLY **R3-5L

SWL

12.0' 12.0'

Bay St.

LEGEND:
SWL - Solid White Line
SYL - Solid Yellow Line
DYCL - Double Yellow Center Line
BWL - Broken White Line

NOTE:
1. For Traffic Signs Associated With the Mast Arms and Pedestal Poles, see Signal Plan Sheets
2. Winslow Intersection Final Condition Phasing to be Further Analyzed at Next Submission

PLAN
25 0 25 50
Scale of Feet

EXISTING MAST ARM SIGNS FROM STAGE 2

R3-6R	R3-5a	R3-5L	R3-5R	R3-1	R3-2	R10-11a	R10-17a	R10-15R
x2 *EB	x2 **EB	x5 *EB **EB/NB	x2 *WB **SB	x1 *SB	x1 *NB	x1 *EB **SB	x1 **EB	x2

* INDICATES LANE USE SIGN TO BE REMOVED AND SALVAGED FOR FINAL CONDITION
** INDICATES LANE USE SIGN TO BE UNCOVERED FOR FINAL CONDITION

PROPOSED MAST ARM SIGNS

R3-6R
x1
**REINSTALLED

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

	BY	DATE
PROJ. MANAGER	M. Parlin	
DESIGN-DETAILED	C. Helmick	6\2022
CHECKED-REVIEWED	L. Driscoll	6\2022
DESIGN2-DETAILED2	C. Helmick	
DESIGN3-DETAILED3	R. Hanf	
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

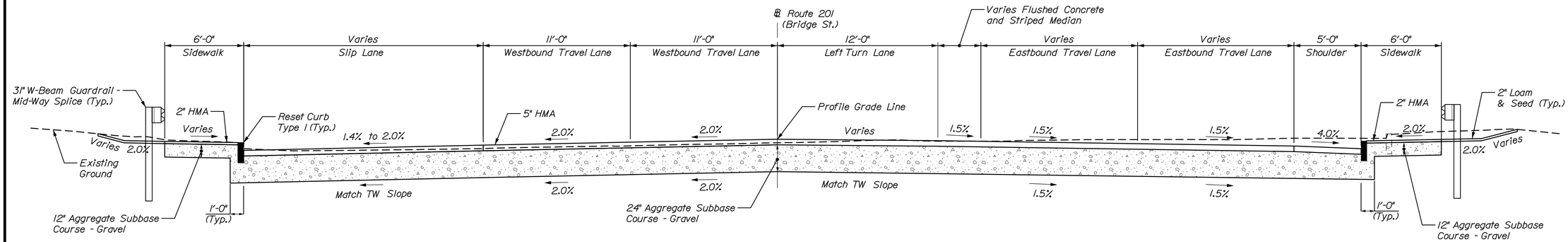
P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

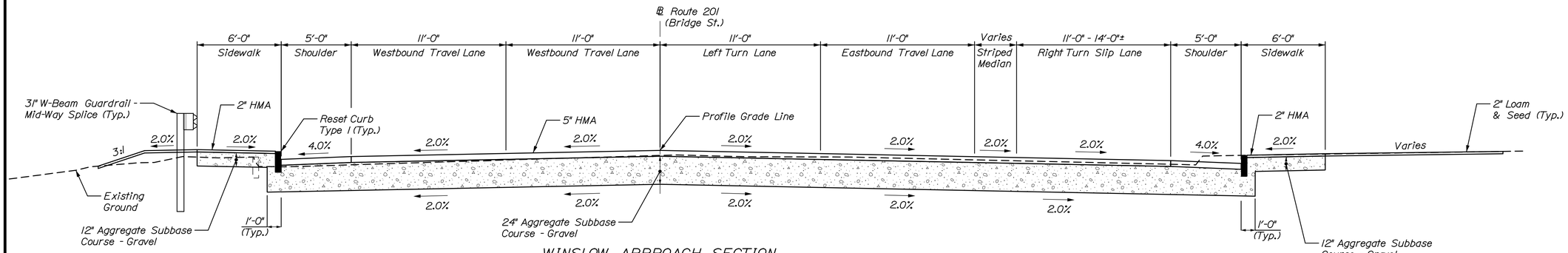
SIGNING & STRIPING PLAN 2

SHEET NUMBER
21
OF 111



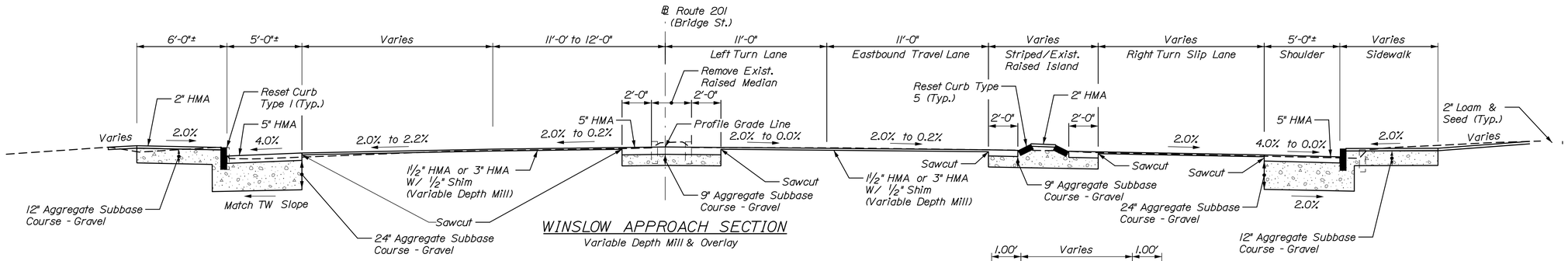
WATERVILLE APPROACH SECTION

Full Depth Construction



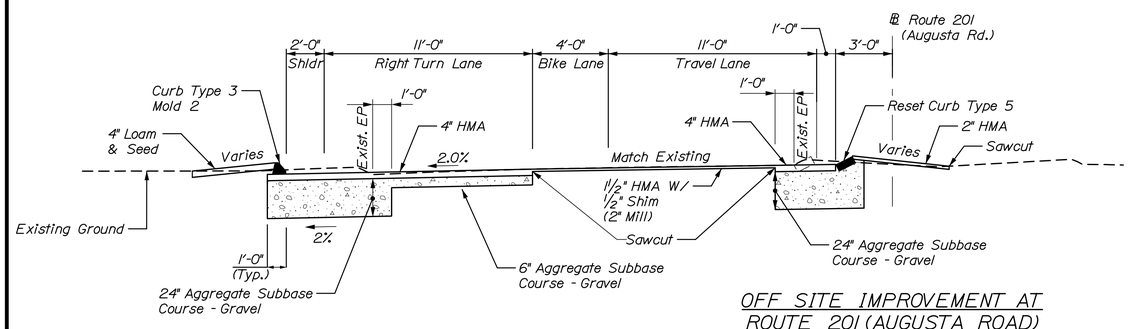
WINSLOW APPROACH SECTION

Full Depth Construction

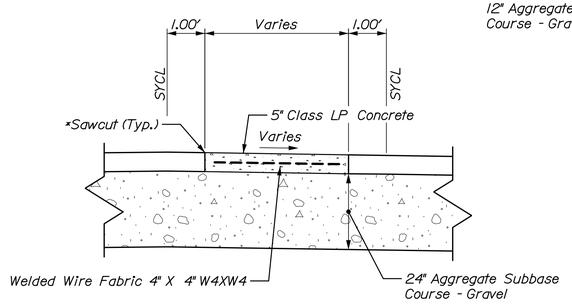


WINSLOW APPROACH SECTION

Variable Depth Mill & Overlay



OFF SITE IMPROVEMENT AT ROUTE 201 (AUGUSTA ROAD)



FLUSH CONCRETE ISLAND DETAIL

*HMA Shall be Placed Through Area of Islands. Sawcut and Remove Full Depth HMA for Placement of Flush Concrete Island Following Surface Paving.

**Install Expansion Joints as Determined by The Resident

NOTES:

1. The pavement, base and subbase depths as shown on the plans are intended to be nominal.

2. Crowns for both normal and superelevation sections for all courses of subbase and pavement shall be straight, unless otherwise noted on the plans.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	A. Stephens	E. Beausoleil	6\2022
CHECKED-REVIEWED	L. Driscoll	T. Cote	6\2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW
KENNEBEC

TYPICAL SECTIONS

SHEET NUMBER

22

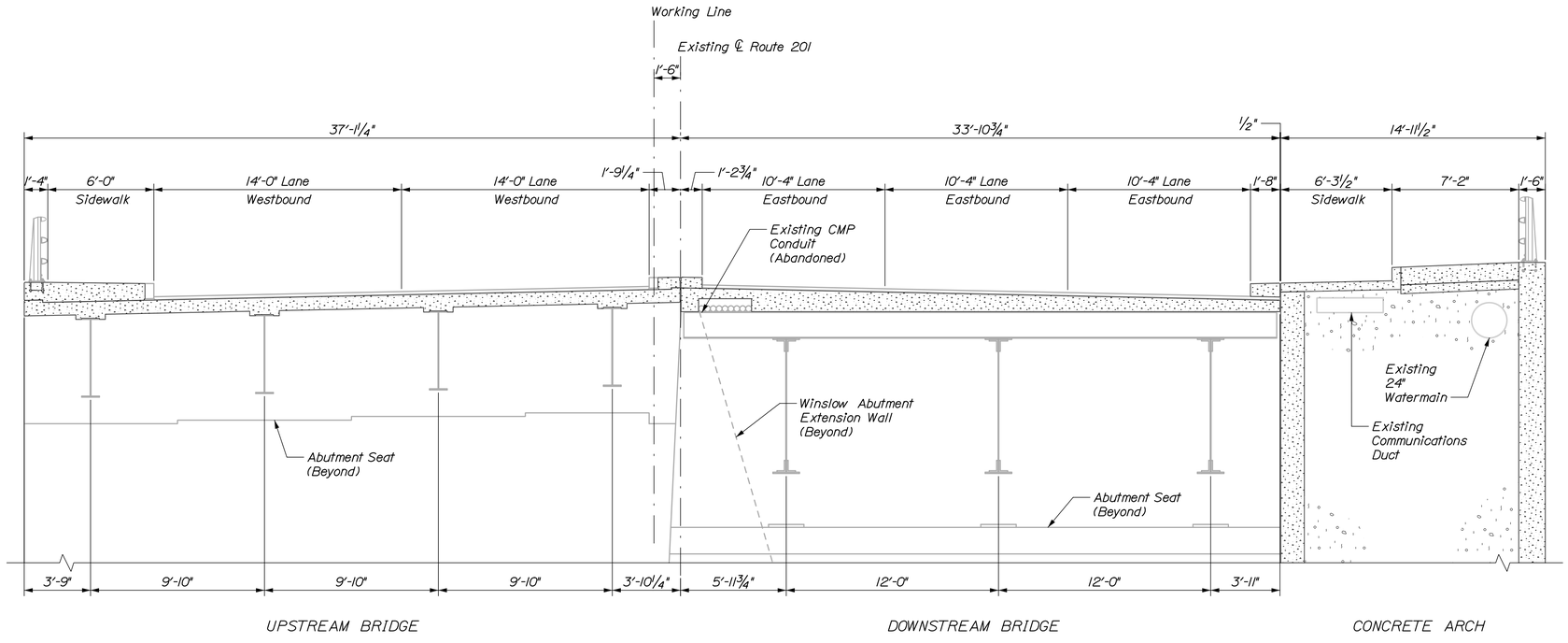
OF 111

Date:8/19/2022

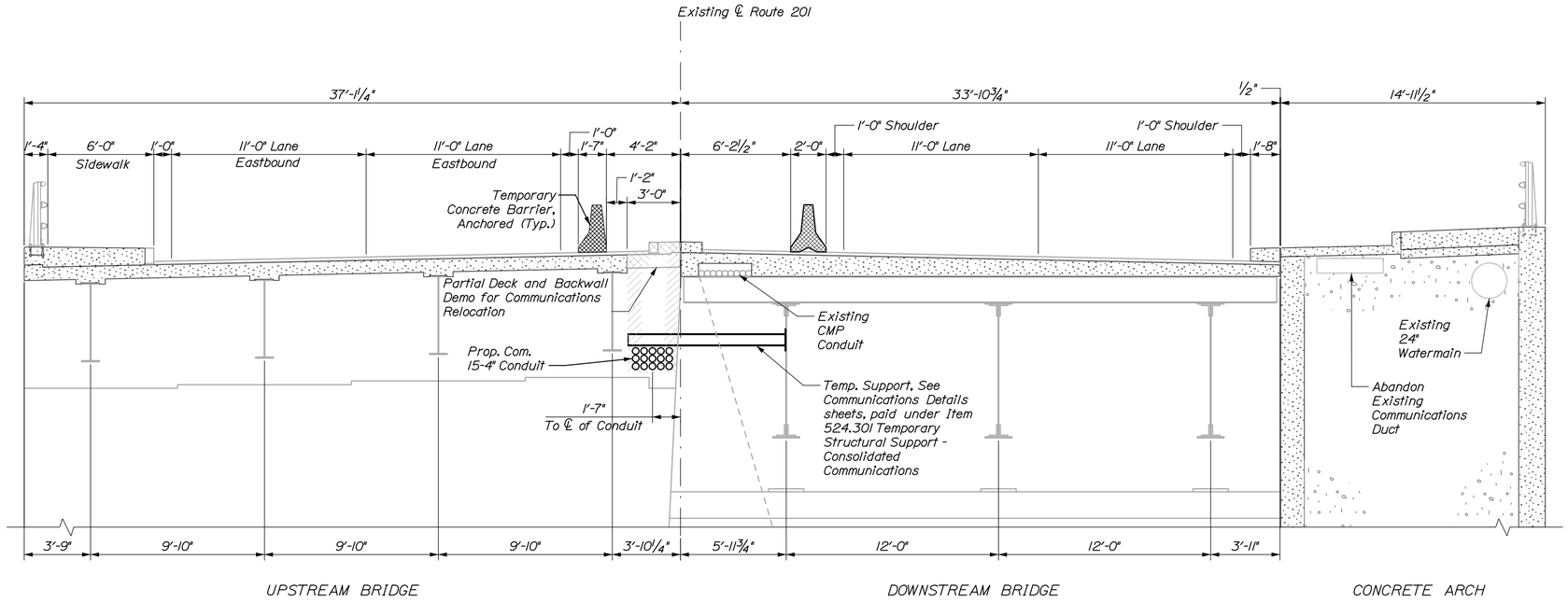
Username:

Division:

Filename: 022_Typical Sections_01.dgn



EXISTING SECTION



UTILITY STAGE

NOTES:

1. All dimensions are approximate and are based on limited design plans and field investigations. The Contractor is responsible for verifying all dimensions.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

PROJ. MANAGER	M. Pearlin		
DESIGN-DETAILED	A. Stephens	E. Beausoleil	6\2022
CHECKED-REVIEWED	L. Driscoll	T. Cote	6\2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

CONSTRUCTION STAGING PLANS I

SHEET NUMBER

23

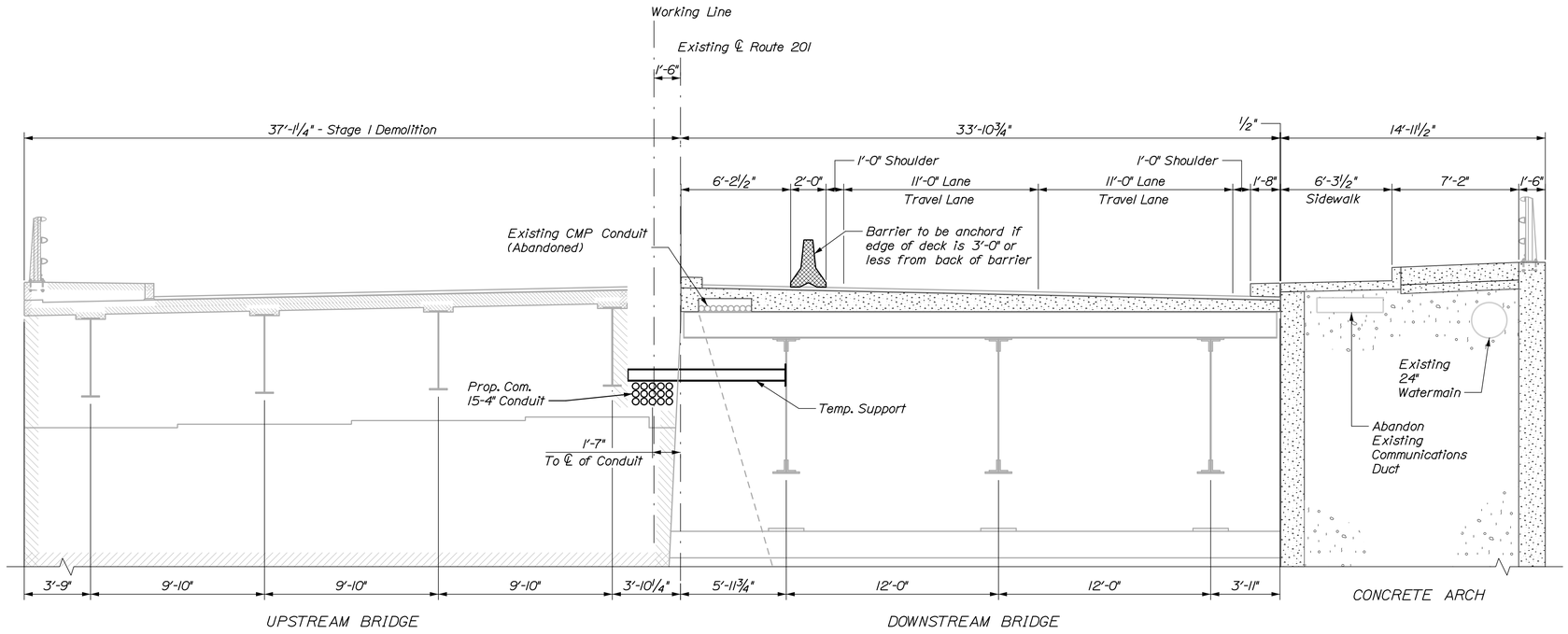
OF 111

Date:8/19/2022

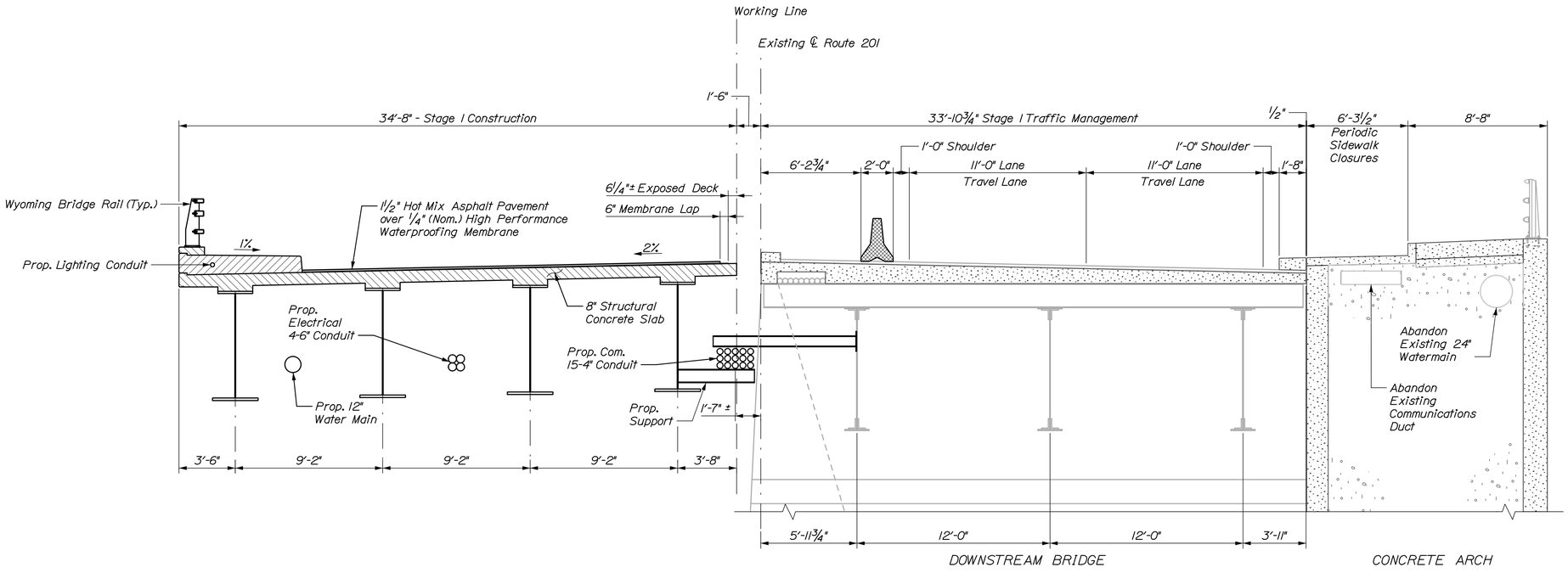
Username:

Division:

Filename: 023_Staged Consruction 1.dgn



STAGE I DEMOLITION



STAGE I CONSTRUCTION

NOTES:

1. The Contractor shall install temporary pavement tapers around bridge drains and deck joints as directed by Resident before allowing traffic on the base pavement. Taper length shall be 4 feet per inch of transition depth. Temporary pavement shall be paid under Item 461.131, Temporary Pavement.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

	BY	DATE
PROJ. MANAGER	M. Parlin	
DESIGN-DETAILED	A. Stephens	E. Beausoleil 6\2022
CHECKED-REVIEWED	L. Driscoll	T. Cote 6\2022
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

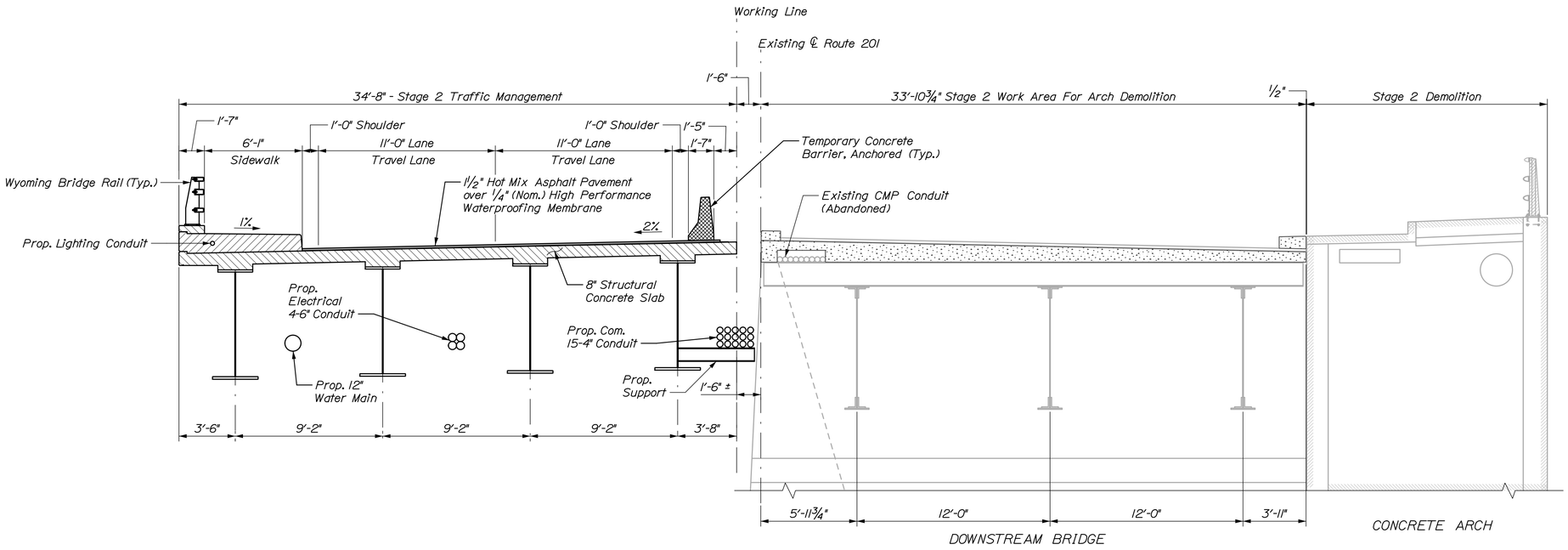
CONSTRUCTION
STAGING PLANS II

SHEET NUMBER

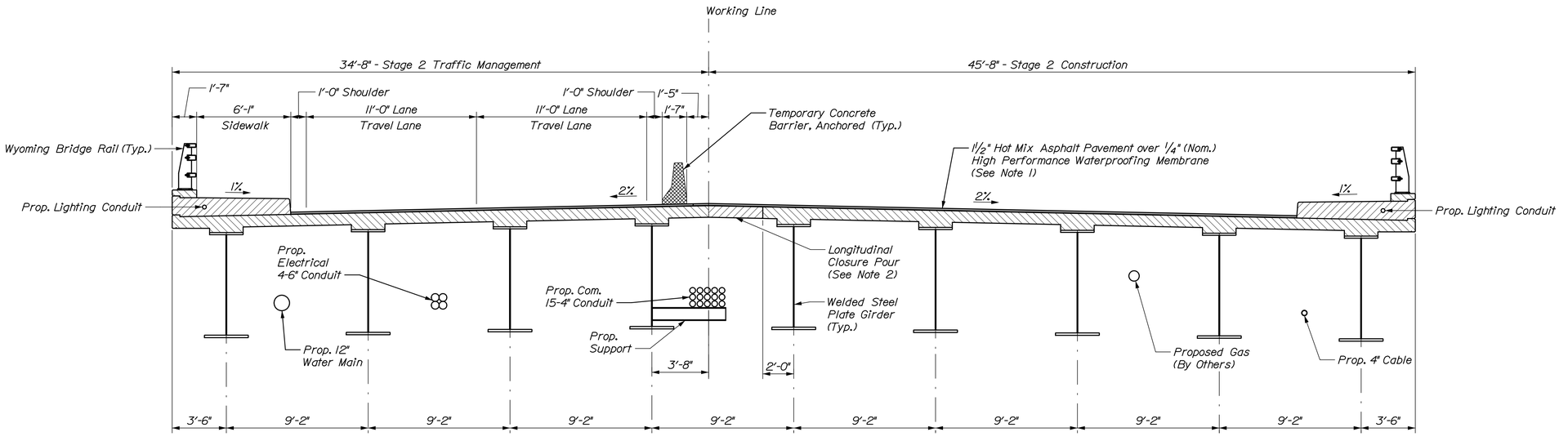
24

OF 111

Filename: 024_Staged Consruction 2.dgn Username: Division: Date:8/19/2022



STAGE 2 DEMOLITION



STAGE 2 CONSTRUCTION

NOTES:

1. Surface pavement course shall be applied after removal of temporary concrete barrier (not shown in Stage 2 Construction)

2. The Contractor shall ballast the Stage 2 bridge to achieve a maximum elevation differential at all Stations from the Stage 2 deck to the Stage 1 deck of 3/8" to 1 3/8" using hourly items including item Truck-large (including operator). Vehicles will be paid for up to 2 calendar days prior to closure placement to 3 days after closure placement and will be paid 70% of unit cost when operators are not required to be in vehicles. The expected deflection difference is 2" +/- ½" at midspan.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

PROJ. MANAGER	M. Pearlin		
DESIGN-DETAILED	A. Stephens	E. Beausoleil	6\2022
CHECKED-REVIEWED	L. Driscoll	T. Cote	6\2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

CONSTRUCTION
STAGING PLANS III

SHEET NUMBER

25

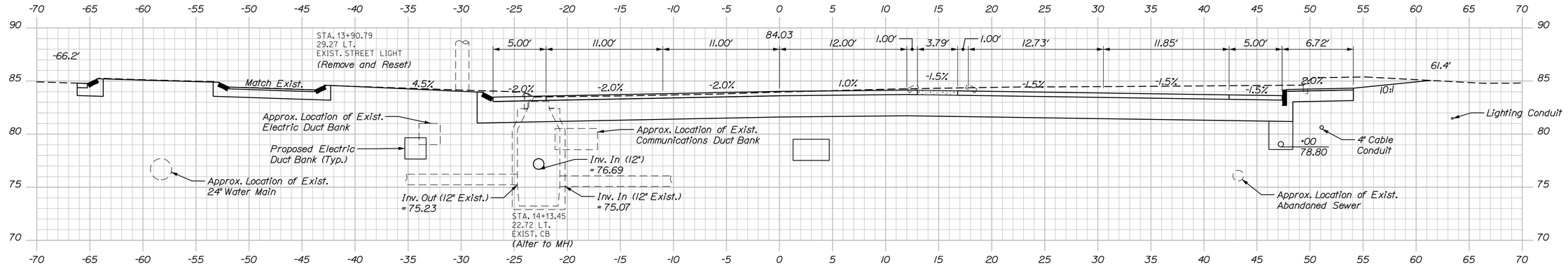
OF 111

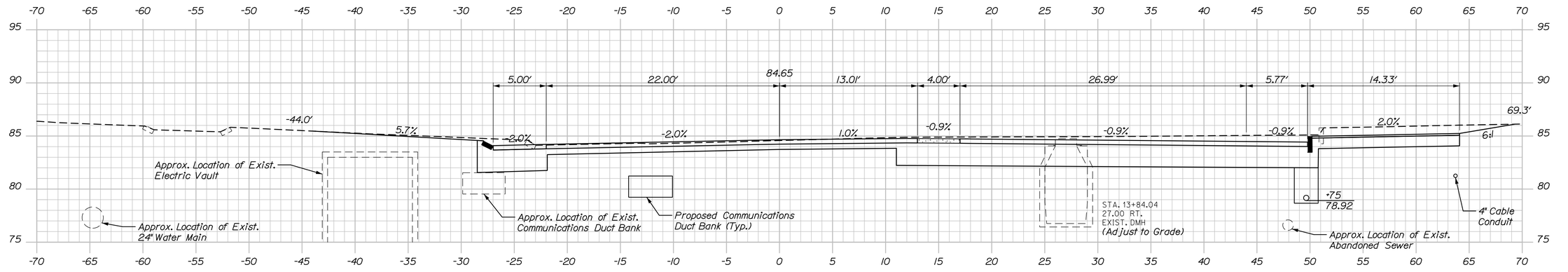
Date:8/19/2022

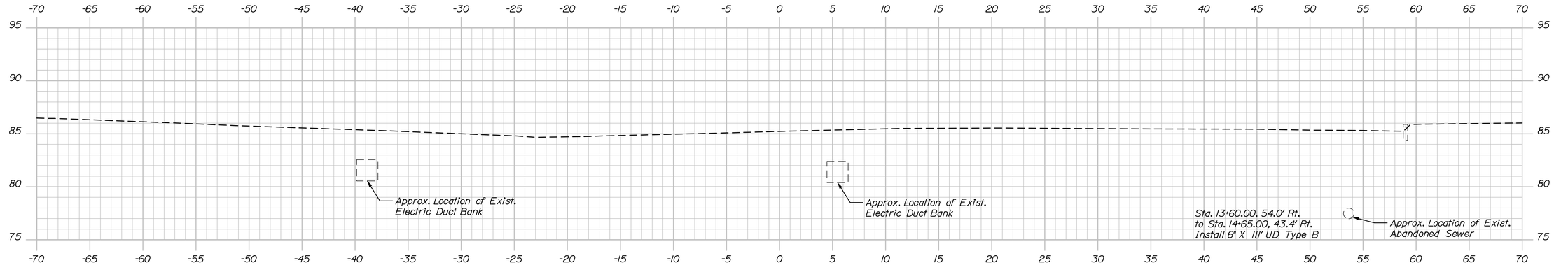
Username:

Division:

Filename: 025_Staged Consruction 3.dgn







STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	C. Helmick	C. Helmick	6\2022
CHECKED-REVIEWED	L. Driscoll	R. Hanf	6\2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

BRIDGE ST./SPRING ST.
CROSS SECTIONS

SHEET NUMBER

26

OF 111

HNTB

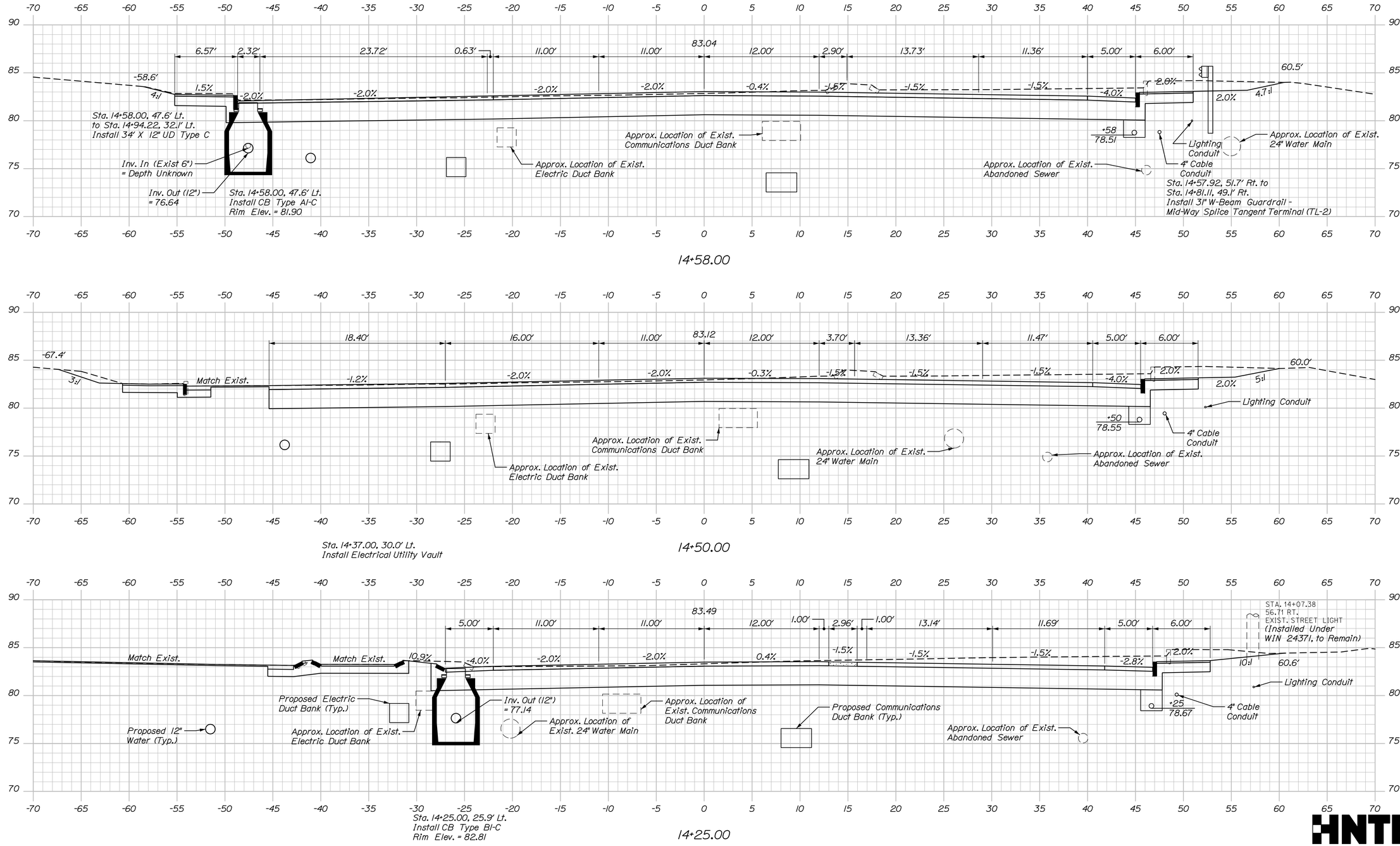
Sta. 13+50.00 to Sta. 14+00.00

Date:8/19/2022

Username:

Division:

Filename: Xsect_BridgeSt.dgn



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

	BY	DATE
DESIGNED-DETAILED	M. Perlin	6\2022
CHECKED-REVIEWED	C. Helmick	6\2022
DESIGN2-DETAILED2	L. Driscoll	R. Hanf
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

BRIDGE ST./SPRING ST. CROSS SECTIONS

SHEET NUMBER

27

OF 111

HNTB

Sta. 14+25.00 to Sta. 14+58.00

Filename: Xsect_BridgeSt.dgn Division: Username: Date:8/19/2022

Date:8/19/2022
Username:
Division:
Filename: Xsect_BridgeSt.dgn

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

	BY	DATE
PROJ. MANAGER	M. Perlin	
DESIGN-DETAILED	C. Helmick	6\2022
CHECKED-REVIEWED	L. Driscoll	6\2022
DESIGN2-DETAILED2	C. Helmick	
DESIGN3-DETAILED3	R. Hanf	
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

BRIDGE ST./SPRING ST. CROSS SECTIONS

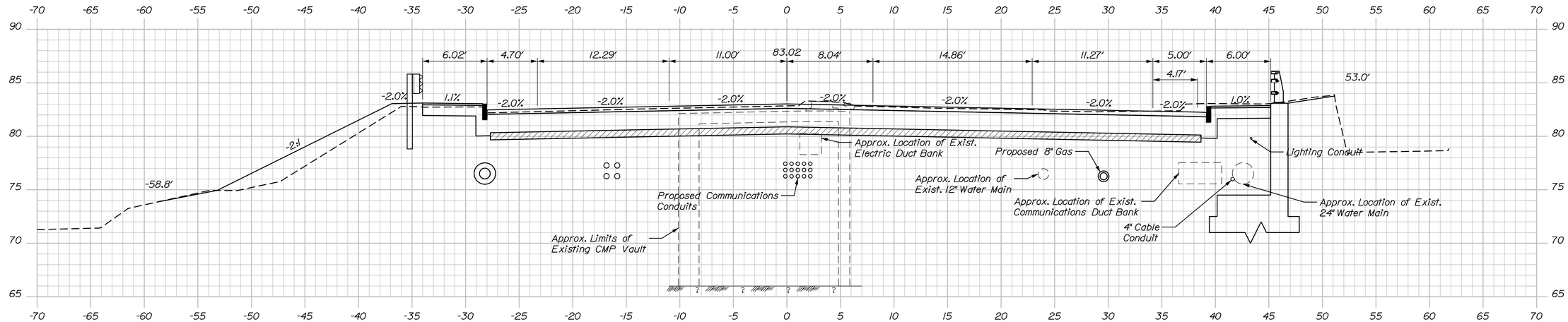
SHEET NUMBER

28

OF 111

HNTB

Sta. 14+65.00 to Sta. 14+92.00



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	M. Perlin	
DESIGN-DETAILED	C. Helmick	6\2022
CHECKED-REVIEWED	L. Driscoll	6\2022
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

BRIDGE ST./SPRING ST.
CROSS SECTIONS

SHEET NUMBER

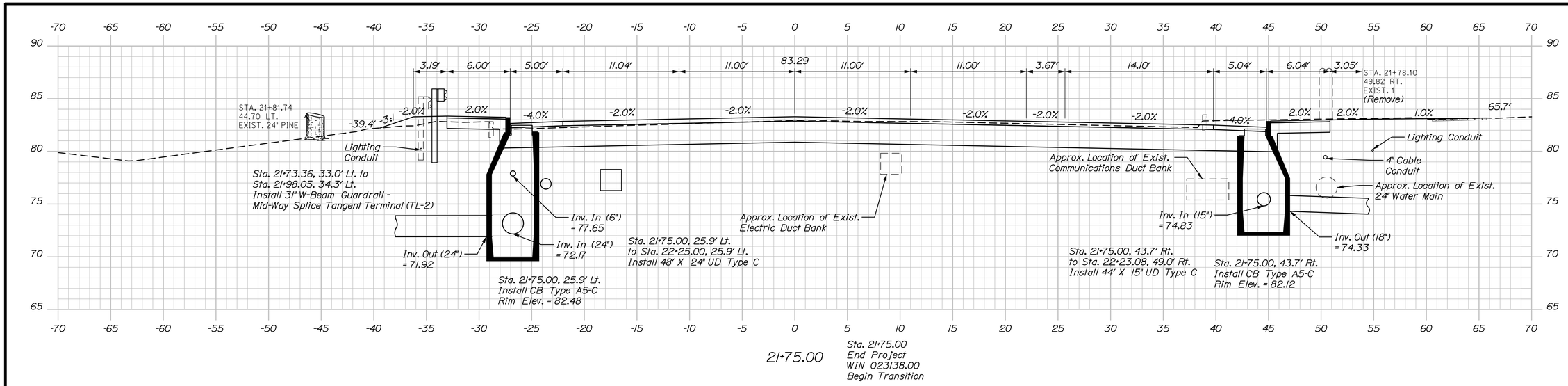
29

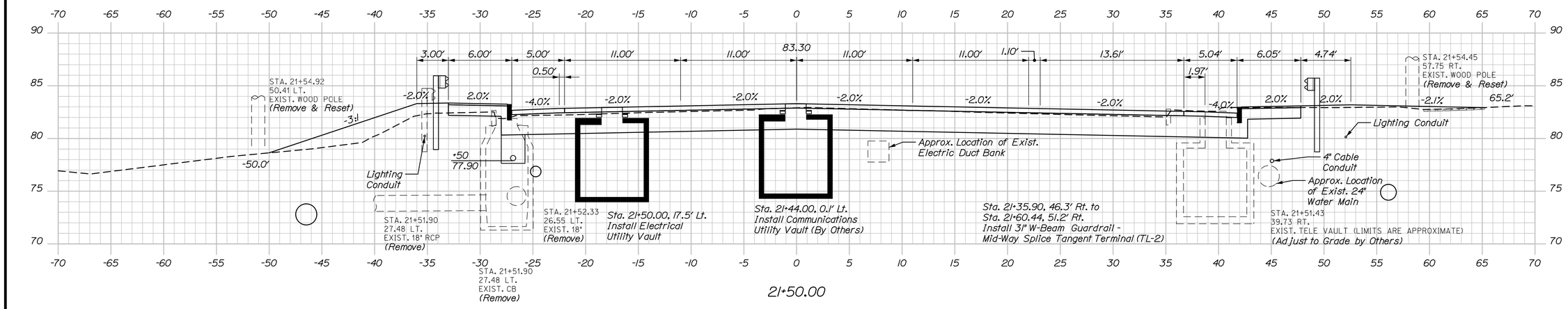
OF 111

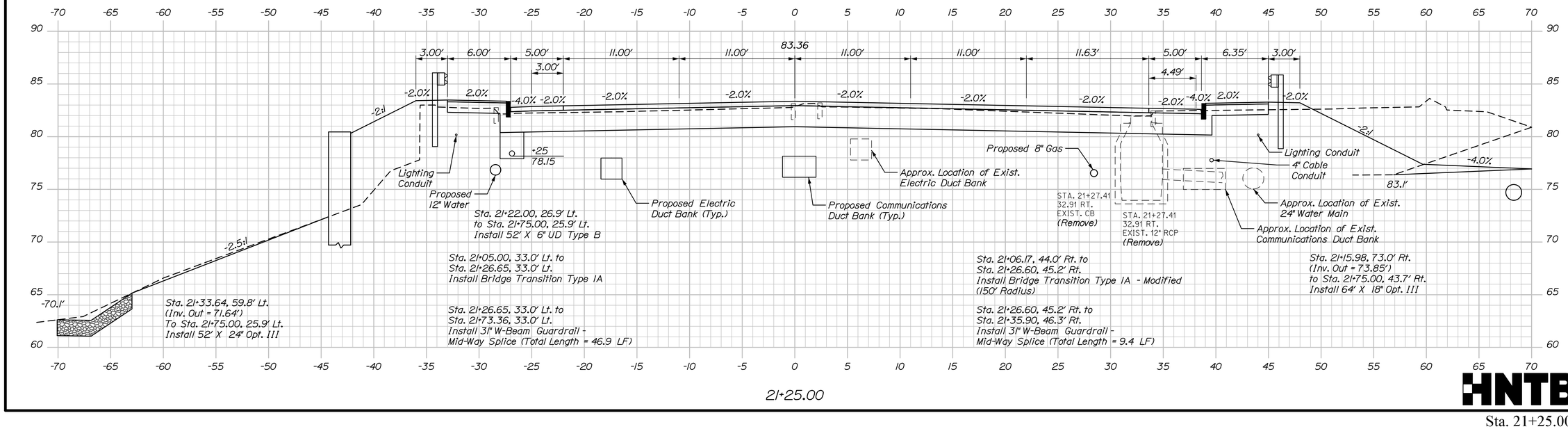
HNTB

Sta. 15+00.00 to Sta. 15+25.00

Filename: Xsect_BridgeSt.dgn Division: Username: Date:8/19/2022







HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

		DATE
PROJ. MANAGER	M. Perlin	
DESIGN-DETAILED	C. Helmick	6\2022
CHECKED-REVIEWED	L. Driscoll	6\2022
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BY: C. Helmick, R. Hanf

SIGNATURE

P.E. NUMBER

DATE

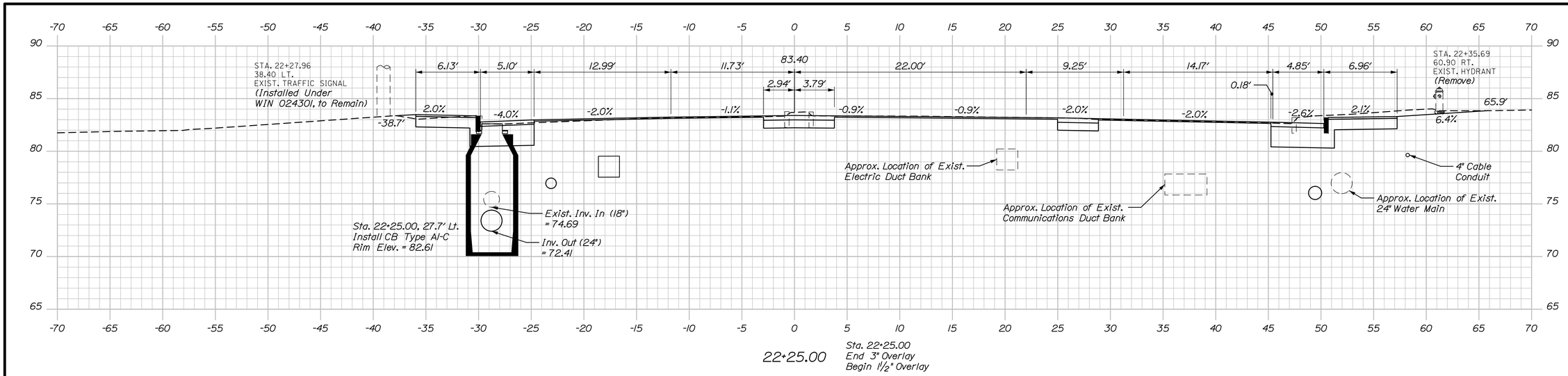
TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW
KENNEBEC

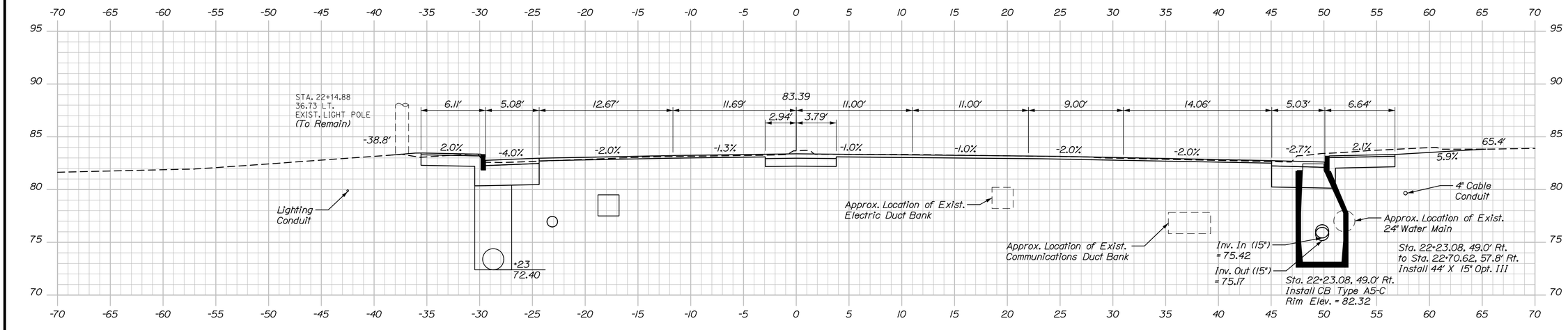
BRIDGE ST./SPRING ST.
CROSS SECTIONS

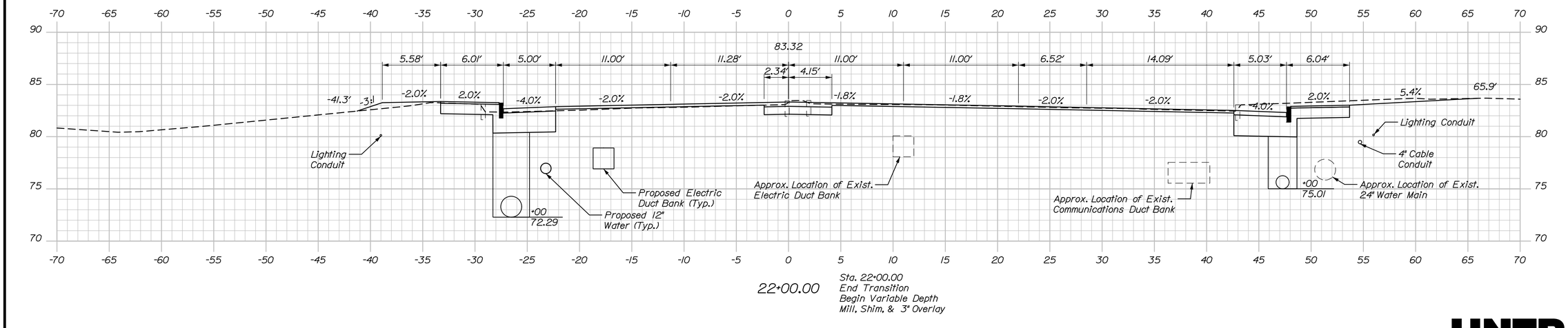
SHEET NUMBER
30
OF 111

Date:8/19/2022
Username:
Division:
Filename: Xsect_BridgeSt.dgn

Sta. 21+25.00 to Sta. 21+75.00







STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

	BY	DATE
PROJ. MANAGER	M. Perlin	
DESIGN-DETAILED	C. Hélmick	6\2022
CHECKED-REVIEWED	L. Driscoll	6\2022
DESIGN2-DETAILED2		ED2
DESIGN3-DETAILED3		ED3
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

BRIDGE ST./SPRING ST.
CROSS SECTIONS

SHEET NUMBER

31

OF 111

HNTB

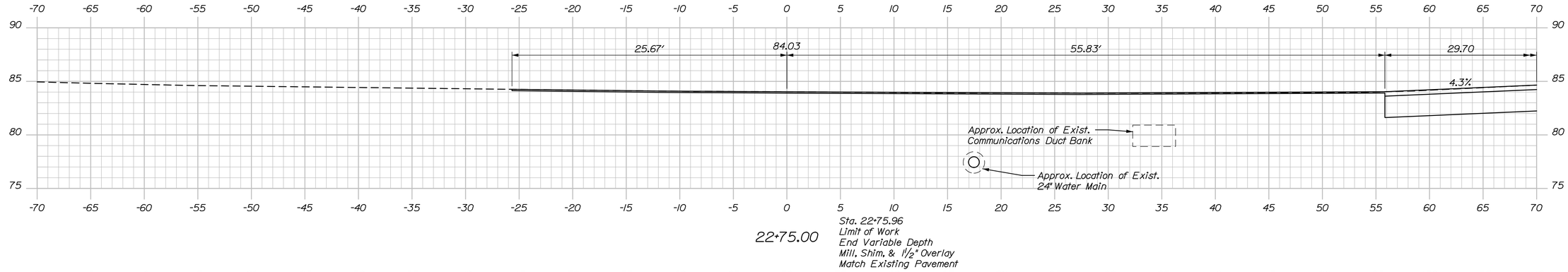
Sta. 22+00.00 to Sta. 22+46.00

Date:8/19/2022

Username:

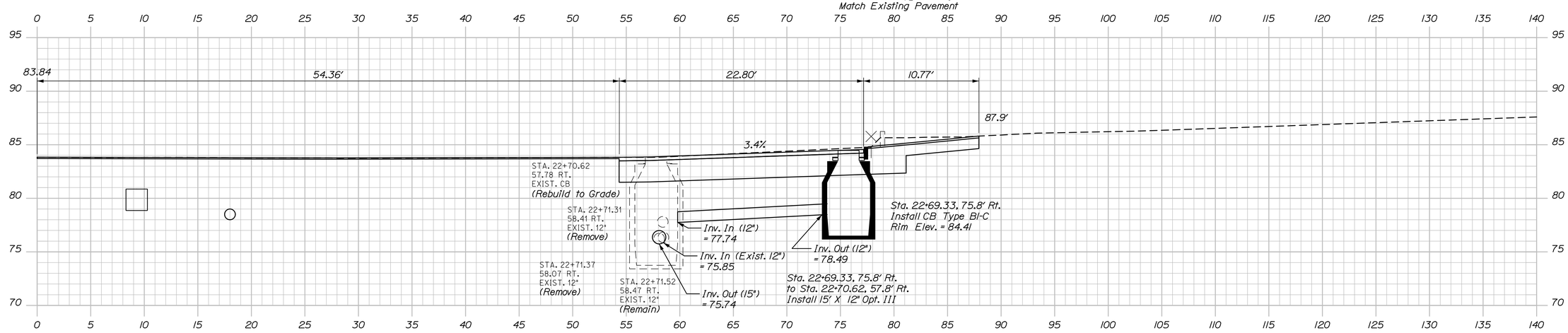
Division:

Filename: Xsect_BridgeSt.dgn

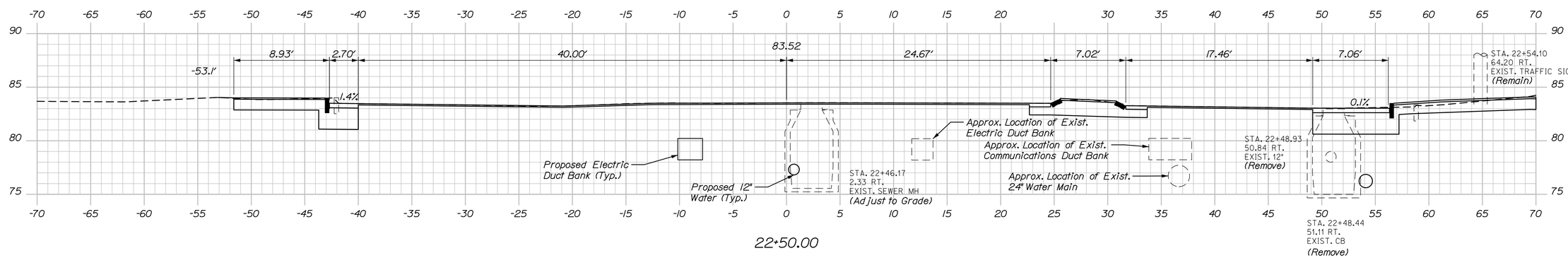


22+75.00

Sta. 22+75.96
Limit of Work
End Variable Depth
Mill, Shim, & 1½" Overlay
Match Existing Pavement



22+69.33



22+50.00

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN
023138.00

BRIDGE PLANS

Bridge No. 2854

SIGNATURE

P.E. NUMBER

DATE

PROJ. MANAGER	M. Parlin		
DESIGN-DETAILED	C. Helmick	BY	DATE
CHECKED-REVIEWED	L. Driscoll	C. Helmick	6\2022
DESIGN2-DETAILED2		R. Hanf	6\2022
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

BRIDGE ST./SPRING ST. CROSS SECTIONS

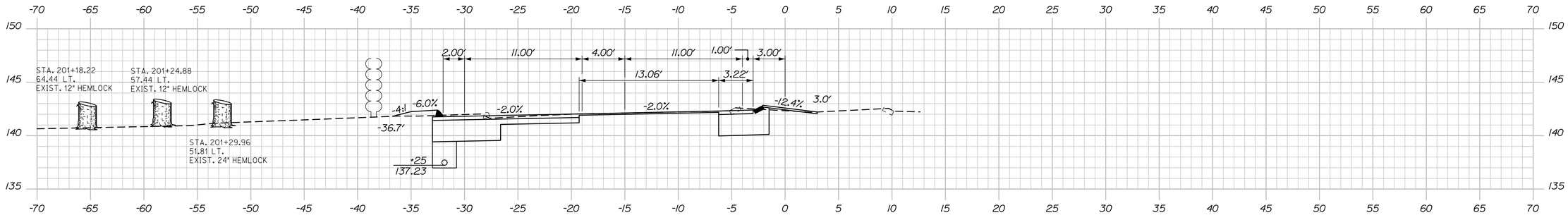
SHEET NUMBER

32

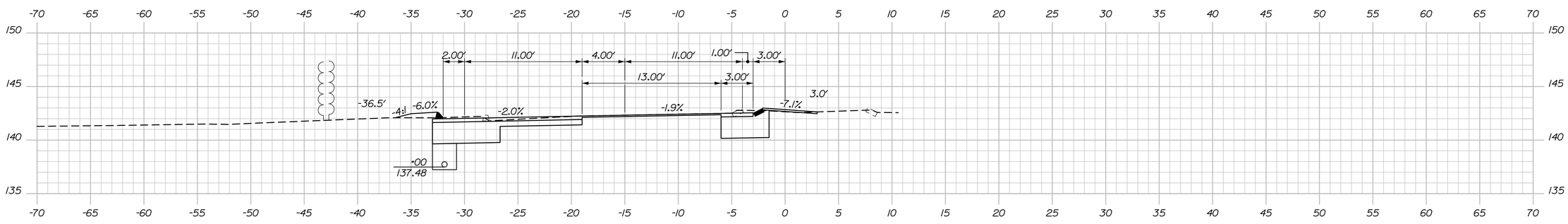
OF 111

Sta. 22+50.00 to Sta. 22+75.00

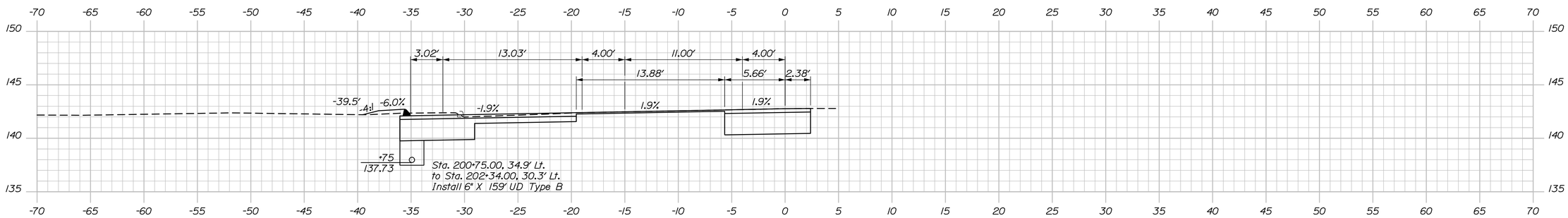
Filename: Xsect_BridgeSt.dgn Division: Username: Date:8/19/2022



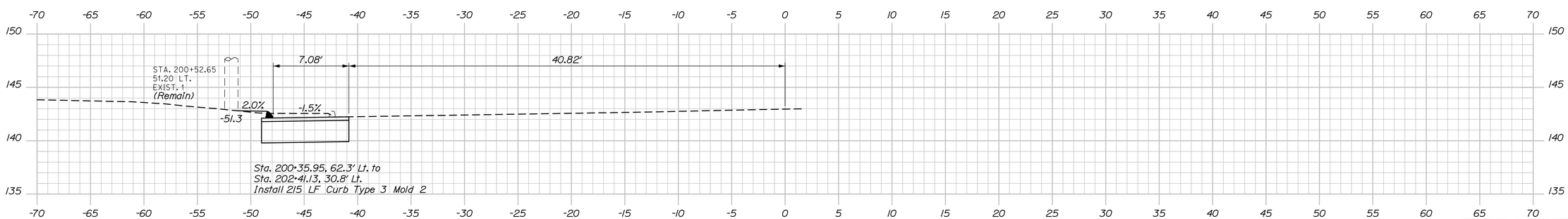
201+25.00



201+00.00



200+75.00



200+50.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	C. Hémick	6\2022	
CHECKED-REVIEWED	L. Driscoll	6\2022	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BY | DATE

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW
KENNEBEC

ROUTE 201 (AUGUSTA RD)
CROSS SECTIONS

SHEET NUMBER

33

OF 111

HNTB

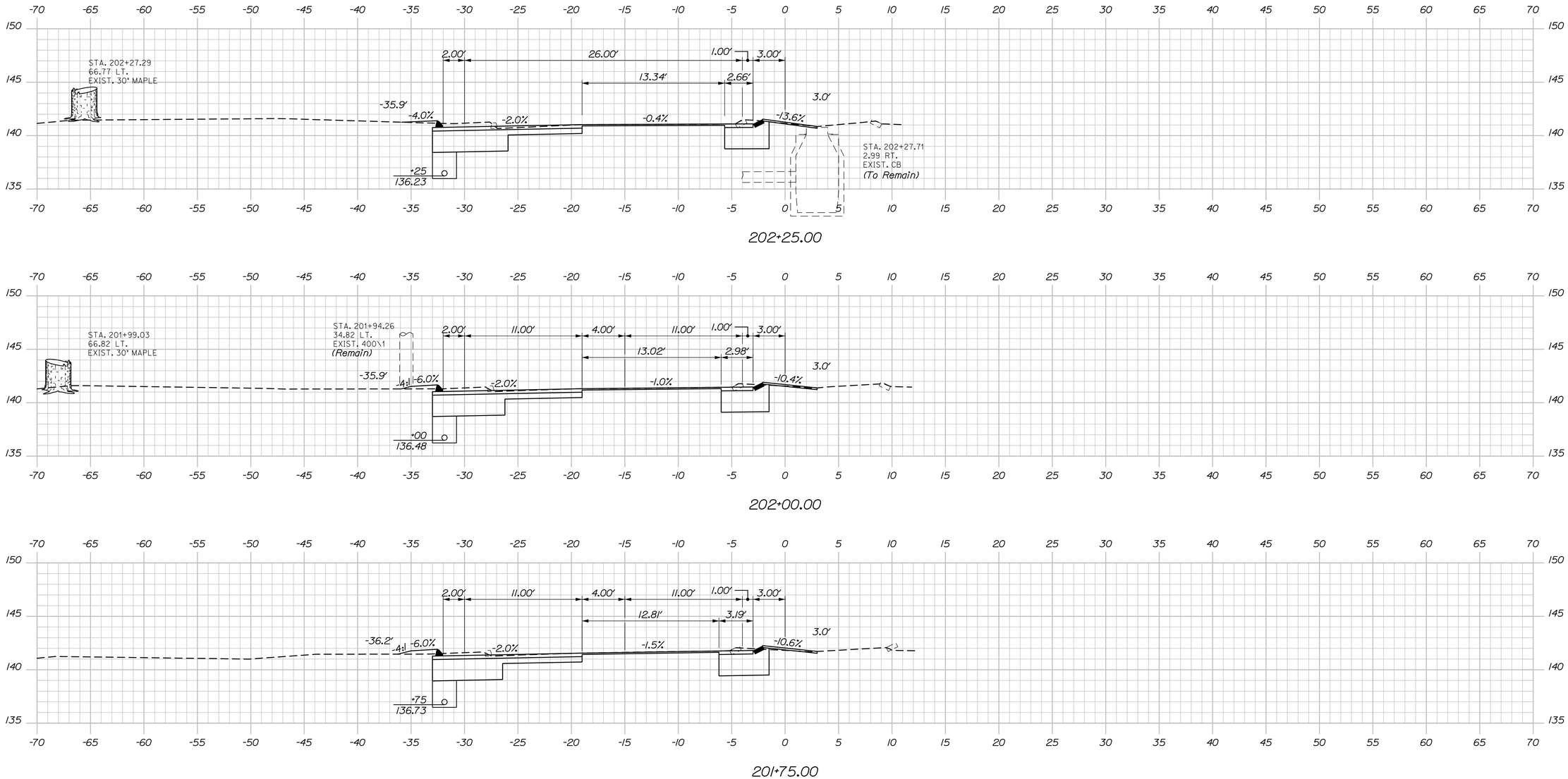
Sta. 200+50.00 to Sta. 201+25.00

Username:

Division:

Date:8/19/2022

Filename: Xsect_AugustaRd.dgn



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	C. Helmick	6\2022	
CHECKED-REVIEWED	L. Driscoll	6\2022	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			1
REVISIONS 2			2
REVISIONS 3			3
REVISIONS 4			4
FIELD CHANGES			5

BY | DATE

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW
KENNEBEC

ROUTE 201 (AUGUSTA RD)
CROSS SECTIONS

SHEET NUMBER

34

OF 111

HNTB

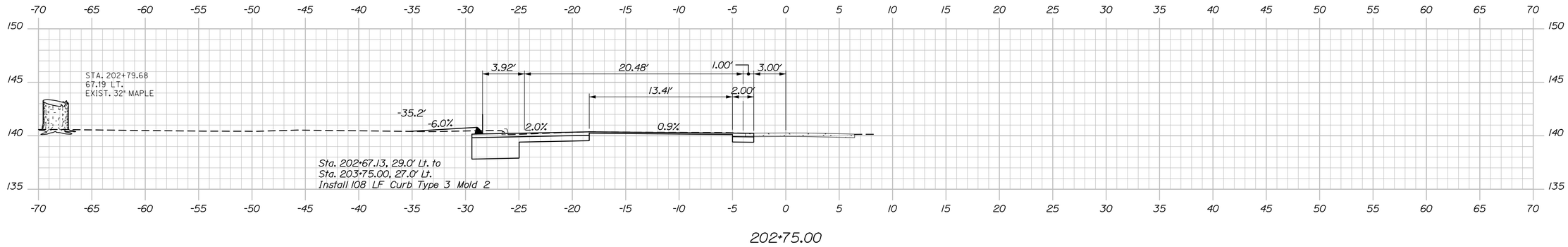
Sta. 201+50.00 to Sta. 202+25.00

Date:8/19/2022

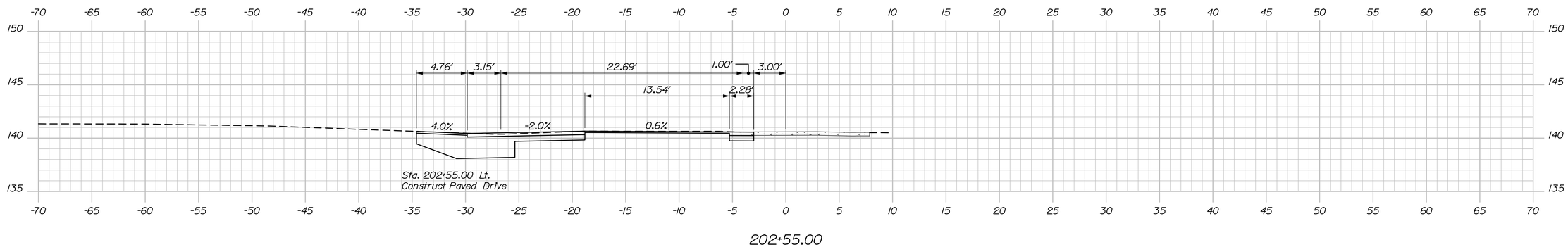
Username:

Division:

Filename: Xsect_AugustaRd.dgn



202+75.00



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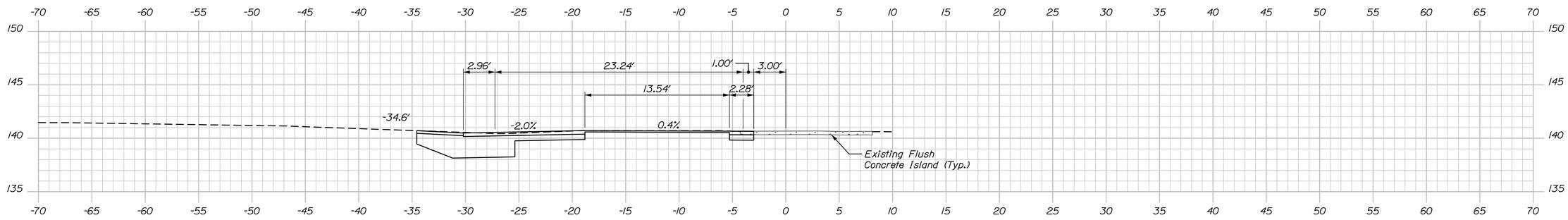

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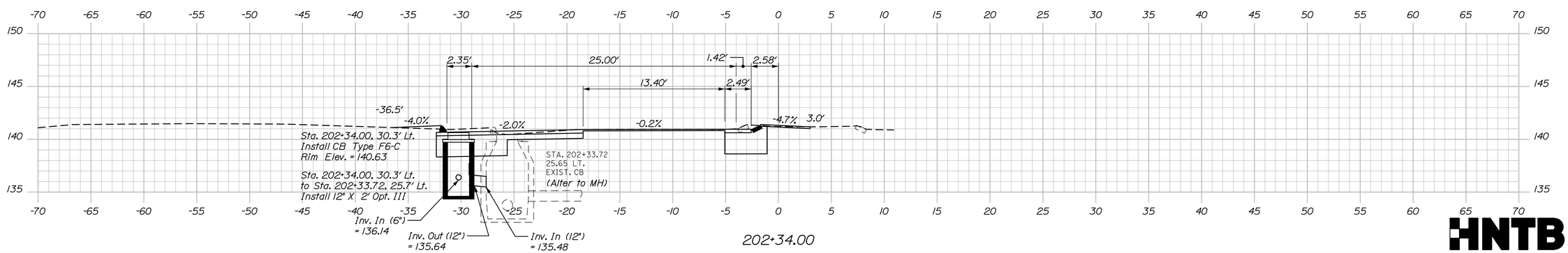


202+34.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	M. Perlin	
DESIGN-DETAILED	C. Helmick	6\2022
CHECKED-REVIEWED	L. Driscoll	6\2022
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW
KENNEBEC

ROUTE 201 (AUGUSTA RD)
CROSS SECTIONS

SHEET NUMBER

35

OF 111

HNTB

Sta. 202+34.00 to Sta. 202+75.00

Username:

Division:

Date:8/19/2022

Filename: Xsect_AugustaRd.dgn

Date:8/19/2022

Username:

Division:

Filename: Xsect_AugustaRd.dgn

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN
023138.00

BRIDGE PLANS

Bridge No. 2854

	BY	DATE
PROJ. MANAGER	M. Purin	
DESIGN-DETAILED	C. Helmick	6\2022
CHECKED-REVIEWED	C. Helmick	6\2022
DESIGN2-DETAILED2	L. Driscoll	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW
KENNEBEC

ROUTE 201 (AUGUSTA RD)
CROSS SECTIONS

SHEET NUMBER

36

OF 111

HNTB

Sta. 203+00.00 to Sta. 204+00.00

Username:

Division:

Date:8/19/2022

Filename: 037_Detour Plan_01.dgn

*CS-2A
BRIDGE ST CLOSED
WINSLOW
USE DETOUR

*CS-1
BRIDGE ST.
DETOUR
*M4-9L

*CS-1
BRIDGE ST.
DETOUR
*M4-9R

CS-1
BRIDGE ST.
DETOUR
M4-9

CS-1
BRIDGE ST.
END
DETOUR
M4-8a

*CS-1
BRIDGE ST.
END
DETOUR
*M4-8a

BRIDGE ST CLOSED
WATERVILLE
USE DETOUR
CS-2

DETOUR
AHEAD
W20-2

BRIDGE ST
CLOSED
CS-3

1000'

500'

1500'

SEE SHEETS
40 & 41

Main St.

Front St.

Benton Ave.

Elm St.

Cool St.

Silver St.

Bridge St/Spring St.

Bay St.

Clinton Ave.

Halifax St.

Water St.

Kennebec River

Garland Rd.

China Rd.

Cushman Rd.

Carter Memorial Dr.

Augusta Rd.

100

201

137

104

32

Location of Off
Site Improvement -
See Sheet 7

*CS-4R

CS-4L

PLAN

500 0 500 1000

Scale of Feet

*Signs Required Only During
Full Bridge Closure

Note: Preemption for One-Way
Traffic Will be Designed by
City of Waterville Public Works

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN
023138.00

BRIDGE PLANS

Bridge No. 2854

PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	C. Helmick	BY	DATE
CHECKED-REVIEWED	L. Driscoll	C. Helmick	6\2022
DESIGN2-DETAILED2		A. Stephens	6\2022
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW
KENNEBEC

DETOUR PLAN 1
WESTBOUND TRAFFIC DETOUR

SHEET NUMBER

37

OF 111

Username:

Division:

Date:8/19/2022

Filename: 038_Detour Plan_02.dgn

Two Cent Bridge

Temple St.

Front St.

Main St.

Water St.

Bridge St./Spring St.

Benton Ave.

Bay St.

Clinton Ave.

DETOUR M4-9b

DETOUR M4-9bL

DETOUR M4-9bR

BRIDGE CLOSED PEDS USE DETOUR CS-5

R9-9 SIDEWALK CLOSED (On Type III Barricade)

PEDESTRIAN DETOUR NOTES:

1. Pedestrian detour shall only be in effect during certain times in Stage I as laid out in the Special Provisions. When detour is not in effect, the Type III Barricades shall be removed and pedestrian detour signs covered up.

2. Aerial imagery on the Waterville side does not reflect the final condition of the intersection and roadways as constructed under WIN 24371.

3. Loations of the Pedestrian Detour signs are approximate. Final locations of all signs shall be approved by the Resident.

PLAN

100 0 100 200

Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	C. Helmick	C. Helmick	6\2022
CHECKED-REVIEWED	L. Driscoll	A. Stephens	6\2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

DETOUR PLAN 2 PEDESTRIAN DETOUR

SHEET NUMBER

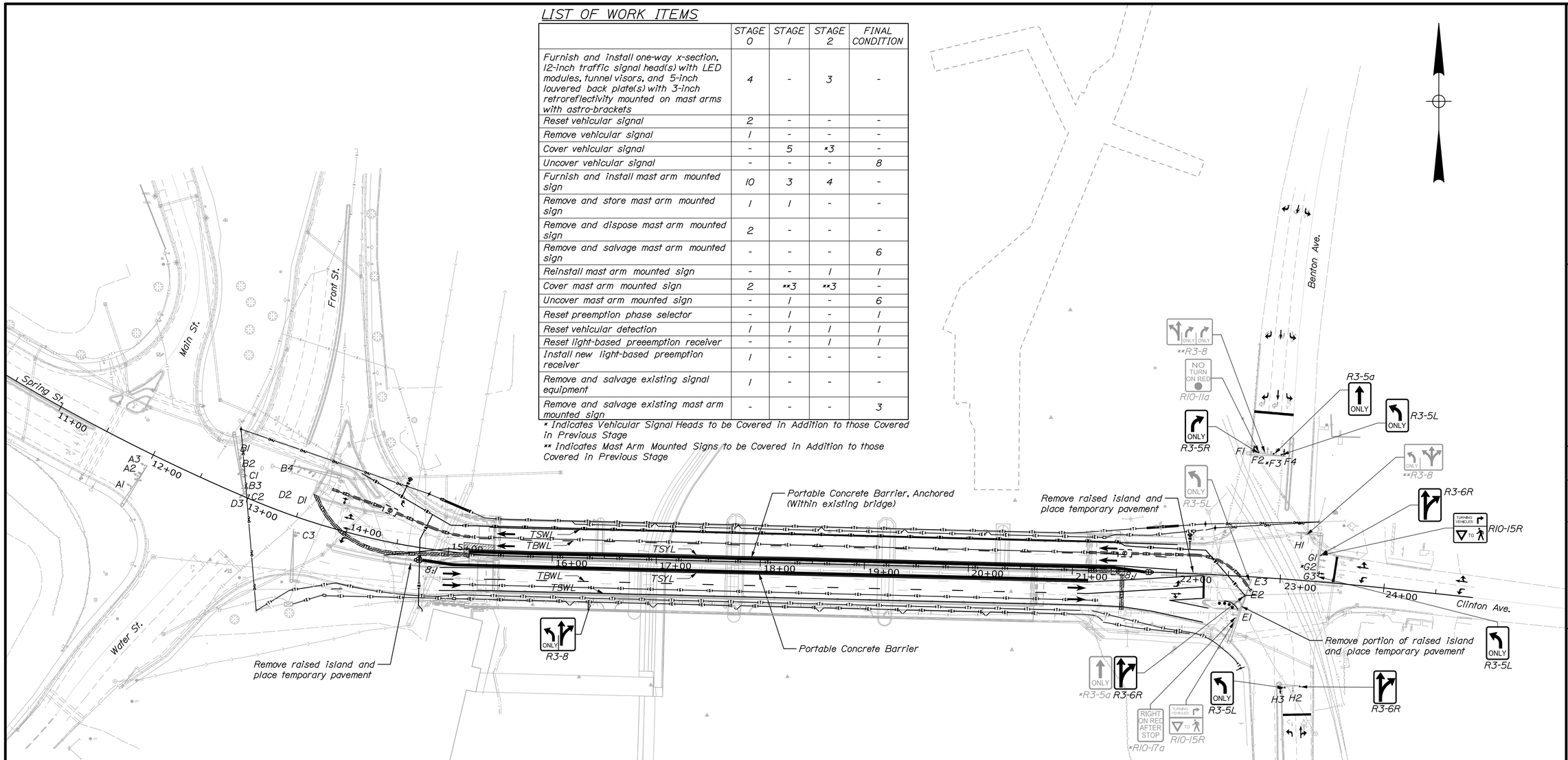
38

OF 111

LIST OF WORK ITEMS

	STAGE 0	STAGE 1	STAGE 2	FINAL CONDITION
Furnish and install one-way x-section, 12-inch traffic signal head(s) with LED modules, tunnel visors, and 5-inch louvered back plate(s) with 3-inch retroreflectivity mounted on mast arms with astro-brackets	4	-	3	-
Reset vehicular signal	2	-	-	-
Remove vehicular signal	1	-	-	-
Cover vehicular signal	-	5	*3	-
Uncover vehicular signal	-	-	-	8
Furnish and install mast arm mounted sign	10	3	4	-
Remove and store mast arm mounted sign	1	1	-	-
Remove and dispose mast arm mounted sign	2	-	-	-
Remove and salvage mast arm mounted sign	-	-	-	6
Reinstall mast arm mounted sign	-	-	1	1
Cover mast arm mounted sign	2	**3	**3	-
Uncover mast arm mounted sign	-	1	-	6
Reset preemption phase selector	-	1	-	1
Reset vehicular detection	1	1	1	1
Reset light-based preeemption receiver	-	-	1	1
Install new light-based preemption receiver	1	-	-	-
Remove and salvage existing signal equipment	1	-	-	-
Remove and salvage existing mast arm mounted sign	-	-	-	3

* Indicates Vehicular Signal Heads to be Covered in Addition to those Covered in Previous Stage
** Indicates Mast Arm Mounted Signs to be Covered in Addition to those Covered in Previous Stage



TRAFFIC CONTROL LEGEND

- Long term work area (behind barrier)
- Short term work area (other traffic control)
- Utility installation

STRIPING LEGEND:
TSWL - Temporary Solid White Line
TSYL - Temporary Solid Yellow Line
TBWL - Temporary Broken White Line
TDWL - Temporary Dotted White Line

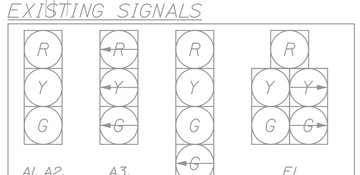
UTILITY STAGE TRAFFIC CONTROL NOTES:

1. The Traffic Control Plan is conceptual and is to be used for reference only. The Contractor shall design and submit traffic control plans for approval.

2. The purpose of this stage is for the installation of the new communications conduits, duct bank, vault, and temporary supports for the new conduit on the existing bridge. The Contractor may choose to complete this work before stage 1 or during stage 1.

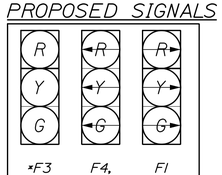
3. Existing signs or striping that conflict with utility stage traffic control shall be covered or removed.

EXISTING SIGNALS



* INDICATES SIGNAL HEAD TO BE RESET
** INDICATES SIGNAL HEAD TO BE REMOVED

PROPOSED SIGNALS

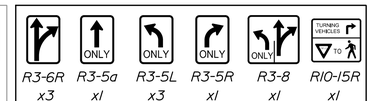


*All proposed signal heads that remain in the final condition will be paid under item 643.71

EXISTING MAST ARM SIGNS

* INDICATES LANE USE SIGN TO BE COVERED FOR THIS STAGE
** INDICATES LANE USE SIGN TO BE REMOVED AND DISPOSED

PROPOSED TRAFFIC CONTROL MAST ARM SIGNS



UTILITY STAGE PLAN

50 0 50 100
Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	M. Parlin	
DESIGN-DETAILED	C. Hėmick	6\2022
CHECKED-REVIEWED	C. Hėmick	6\2022
DESIGN2-DETAILED2	L. Driscoll	A. Stephens
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

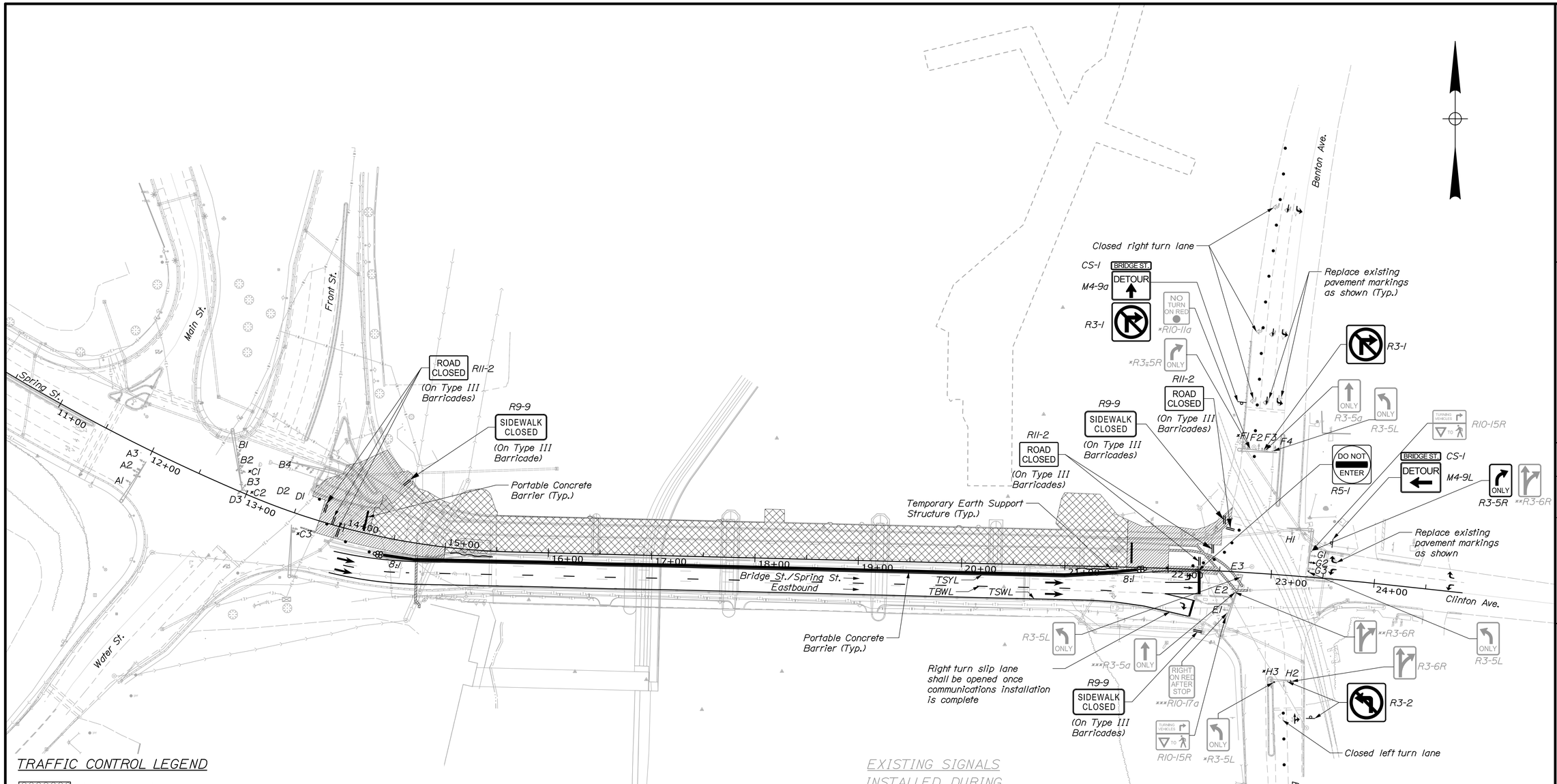
DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

TRAFFIC CONTROL PLAN UTILITY STAGE

SHEET NUMBER
39
OF 111

Filename: 039_Traffic Control Plan_01.dgn Division: Username: Date:8/19/2022



TRAFFIC CONTROL LEGEND

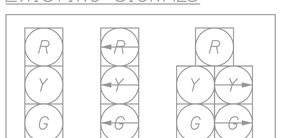
- Long term work area (behind barrier)
- Short term work area (Other traffic control)
- Utility installation

STRIPING LEGEND:
TSWL - Temporary Solid White Line
TSYL - Temporary Solid Yellow Line
TBWL - Temporary Broken White Line
TDWL - Temporary Dotted White Line

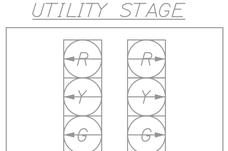
STAGE I TRAFFIC CONTROL NOTES:

1. The Traffic Control Plan is conceptual and is to be used for reference only. The Contractor shall design and submit traffic control plans for approval.
2. Existing pavement markings and existing signs that conflict with the proposed detour plan shall be removed or covered.
3. Existing pavement markings shall be restored to their original condition upon removal of the detour unless otherwise shown on the plans.
4. Signal heads that conflict with traffic pattern across bridge shall be covered.
5. See Pedestrian Detour Sheet for periodic sidewalk closures that occur during Stage I Construction.
6. Emergency vehicle preemption shall have activation capabilities via Waterville Dispatch Center during westbound detour. See Special Provision 643.712: Temporary Emergency Preemption System Modification for more information.

EXISTING SIGNALS

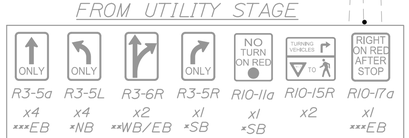


EXISTING SIGNALS INSTALLED DURING UTILITY STAGE



* INDICATES SIGNAL HEAD TO BE COVERED FOR THIS STAGE

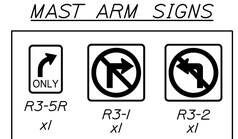
EXISTING MAST ARM SIGNS FROM UTILITY STAGE



* INDICATES LANE USE SIGN TO BE COVERED FOR THIS STAGE
** INDICATES LANE USE SIGN TO BE REMOVED AND STORED
*** INDICATES LANE USE SIGN TO BE UNCOVERED FOR THIS STAGE

Note: If no separate utility stage is utilized, signal heads and lane use signs not installed during the Utility Stage must be installed in Stage I as noted in the List of Work Items.

PROPOSED TRAFFIC CONTROL MAST ARM SIGNS



STAGE I PLAN

50 0 50 100
Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00 — BRIDGE PLANS

Bridge No. 2854

	BY	DATE
PROJ. MANAGER	M. Parlin	
DESIGN-DETAILED	C. Helmick	6\2022
CHECKED-REVIEWED	C. Helmick	6\2022
DESIGN2-DETAILED2	L. Driscoll	A. Stephens
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

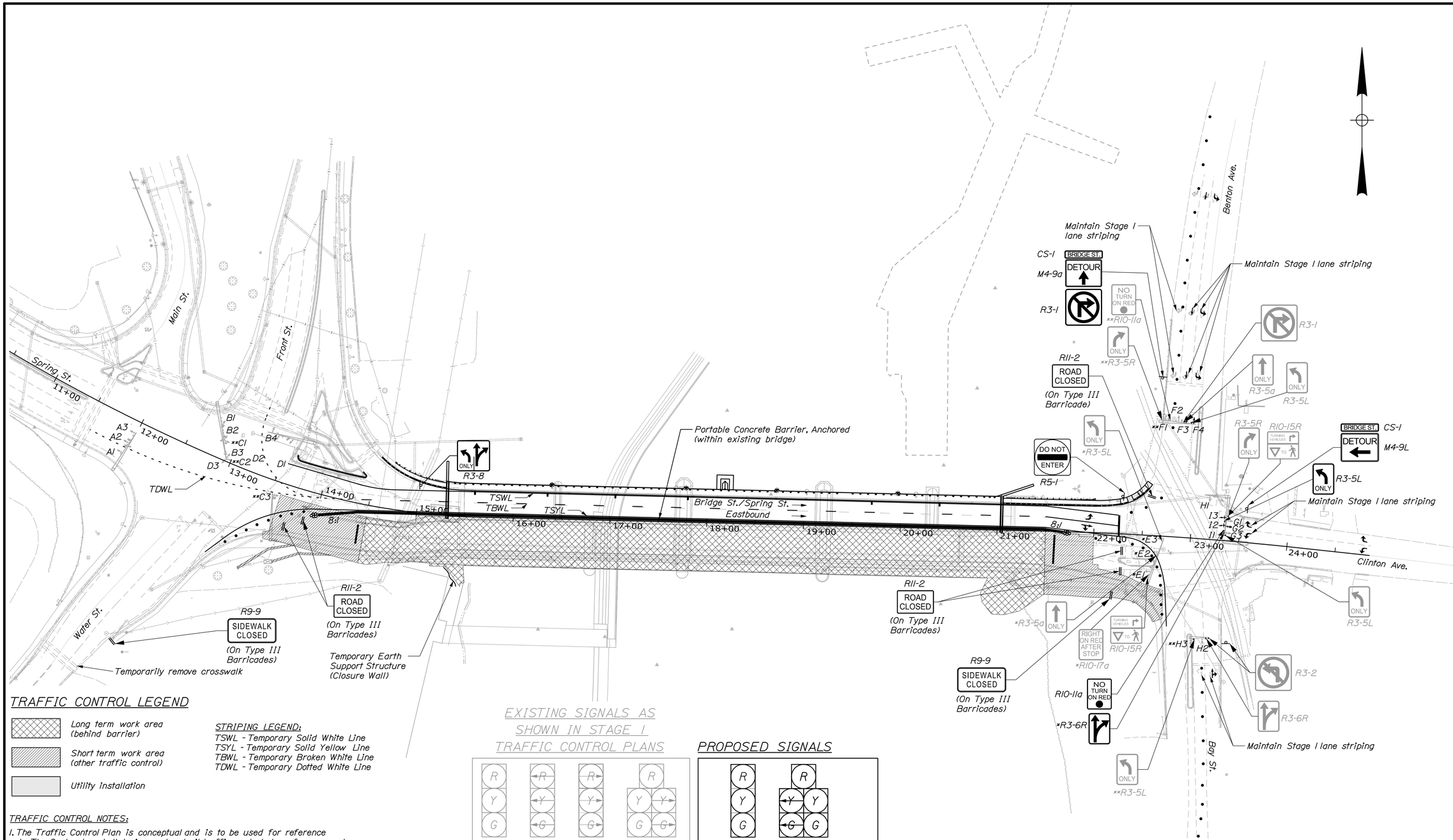
DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

TRAFFIC CONTROL PLAN STAGE 1

SHEET NUMBER
40
OF 111

Filename: 040_Traffic ControlPlan_02.dgn Division: Username: Date:8/19/2022



TRAFFIC CONTROL LEGEND

- Long term work area (behind barrier)
- Short term work area (other traffic control)
- Utility installation

STRIPING LEGEND:
TSWL - Temporary Solid White Line
TSYL - Temporary Solid Yellow Line
TBWL - Temporary Broken White Line
TDWL - Temporary Dotted White Line

TRAFFIC CONTROL NOTES:

1. The Traffic Control Plan is conceptual and is to be used for reference only. The Contractor shall design and submit traffic control plans for approval.
2. Existing pavement markings and existing signs that conflict with the proposed detour plan shall be removed or covered.
3. Existing pavement markings shall be restored to their original condition upon removal of the detour unless otherwise shown on the plans.
4. Signal heads that conflict with traffic pattern across bridge shall be covered.
5. Emergency vehicle preemption shall have activation capabilities via Waterville Dispatch Center during westbound detour. See Special Provision 643.712: Temporary Emergency Preemption System Modification for more information.

EXISTING SIGNALS AS SHOWN IN STAGE I TRAFFIC CONTROL PLANS

A1, A2, B1, B2, **C1, **C2, D1, D2, *E2, F2, F3, G1, G2, H1, H2	A3, B3, B4, **C3, D3, *E3, F4, G3, **H3	**F1	*E1

PROPOSED SIGNALS

I1, I2	I3	

* INDICATES SIGNAL HEAD TO BE COVERED FOR THIS STAGE
** INDICATES SIGNAL HEAD TO REMAIN COVERED FOR THIS STAGE
*** SIGNALS I1, I2, AND I3 TO BE REMOVED FOR FINAL CONDITION

STAGE 2 PLAN

50 0 50 100
Scale of Feet

EXISTING MOT MAST ARM SIGNS FROM STAGE I TRAFFIC CONTROL PLAN

R3-6R	R3-5a	R3-5L	R3-5R	R3-1	R3-2	R10-11a	R10-15R	R10-17a
xI	x2 *EB	x4 *EB **NB	x2 **SB	xI	xI	xI **SB	x2	xI *EB

* INDICATES LANE USE SIGN TO BE COVERED FOR THIS STAGE
** INDICATES LANE USE SIGN TO REMAIN COVERED FOR THIS STAGE

PROPOSED NEW STAGE 2 MAST ARM SIGNS

R3-6R	R3-5L	R10-11a	R3-8
xI *REINSTALLED	xI	xI	xI

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	M. Parlin	
DESIGN-DETAILED	C. Helmick	6\2022
CHECKED-REVIEWED	C. Driscoll	6\2022
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

TRAFFIC CONTROL PLAN STAGE 2

SHEET NUMBER
41
OF 111

HNTB

Filename: 041_Traffic ControlPlan_03.dgn Division: Username: Date:8/19/2022

DETOUR SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN WIDTH	SIZE OF SIGN HEIGHT	TEXT	TEXT DIMENSIONS (INCHES) LETTER HEIGHT	TEXT DIMENSIONS (INCHES) VERTICAL SPACING	TEXT DIMENSIONS (INCHES) ARROW RTE. MKR.	NUMBER OF SIGNS REQUIRED	COLOR BACK-GROUND	COLOR LEGEND BORDER	BORDER RADIUS	AREA IN SQUARE FEET	NOTES
CS-1	30"	12"	BRIDGE ST.	4"C			27	ORANGE	BLACK	1.5"	2.50 (67.50)	
CS-2	48"	30"	BRIDGE ST CLOSED WATERVILLE USE DETOUR	4"C 4"C 4"C	3" 3"		6	ORANGE	BLACK	1.5"	10.00 (60.00)	
CS-2A	48"	30"	BRIDGE ST CLOSED WINSLOW USE DETOUR	4"C 4"C 4"C	3" 3"		4	ORANGE	BLACK	1.5"	10.00 (40.00)	
CS-3	30"	24"	BRIDGE ST CLOSED	4"C 4"C	3"		2	ORANGE	BLACK	1.5"	5.00 (10.00)	
CS-4L	30"	24"	DETOUR ←	4"C	3"		1	ORANGE	BLACK	1.5"	5.00 (5.00)	
CS-4R	30"	24"	DETOUR →	4"C	3"		1	ORANGE	BLACK	1.5"	5.00 (5.00)	
CS-5	42"	30"	BRIDGE CLOSED PEDS USE DETOUR	4"C 4"C 4"C	3" 3"		7	ORANGE	BLACK	1.5"	8.75 (61.25)	
M4-8a	24"	18"	END DETOUR	TEXT DIMENSIONS SHALL CONFORM TO "STANDARD HIGHWAY SIGNS" - 2000			2	SHALL CONFORM TO "STANDARD HIGHWAY SIGNS" - 2000			3.00 (6.00)	
M4-9	30"	24"	DETOUR ↑				8				5.00 (40.00)	
M4-9L	30"	24"	DETOUR ←				10				5.00 (50.00)	
M4-9R	30"	24"	DETOUR →				5				5.00 (25.00)	
M4-9b	30"	24"	DETOUR ↑				11				5.00 (55.00)	
M4-9bL	30"	24"	DETOUR ←				5				5.00 (25.00)	
M4-9bR	30"	24"	DETOUR →				10				5.00 (50.00)	
R3-1	30"	30"					2				6.25 (12.50)	
R3-2	30"	30"					2				6.25 (12.50)	
R3-5L	30"	36"	ONLY ↰				1				7.50 (7.50)	
R3-5R	30"	36"	ONLY ↱				1				7.50 (7.50)	
R3-6R	30"	36"					1				7.50 (7.50)	
R3-8	30"	30"	ONLY ↰ ↑				1				6.25 (6.25)	

NOTE:

1. Detour sign summary only includes signs necessary for traffic and pedestrian detours.

DETOUR SIGN SUMMARY CONT'D

IDENTIFICATION NUMBER	SIZE OF SIGN WIDTH	SIZE OF SIGN HEIGHT	TEXT	TEXT DIMENSIONS (INCHES) LETTER HEIGHT	TEXT DIMENSIONS (INCHES) VERTICAL SPACING	TEXT DIMENSIONS (INCHES) ARROW RTE. MKR.	NUMBER OF SIGNS REQUIRED	COLOR BACK-GROUND	COLOR LEGEND BORDER	BORDER RADIUS	AREA IN SQUARE FEET	NOTES
R5-1	30"	30"	DO NOT ENTER	TEXT DIMENSIONS SHALL CONFORM TO "STANDARD HIGHWAY SIGNS" - 2000			1	SHALL CONFORM TO "STANDARD HIGHWAY SIGNS" - 2000			6.25 (6.25)	
R9-9	24"	12"	SIDEWALK CLOSED				6				2.00 (12.00)	
R10-11a	30"	36"	NO TURN ON RED				1				7.50 (7.50)	
R11-2	48"	30"	ROAD CLOSED				6				10.00 (60.00)	
W20-2	36"	36"	DETOUR AHEAD				2				9.00 (18.00)	

PROPOSED SIGN SUMMARY

ITEM NUMBER	IDENTIFICATION NUMBER	SIZE OF SIGN WIDTH	SIZE OF SIGN HEIGHT	TEXT	TEXT DIMENSIONS (INCHES) LETTER HEIGHT	TEXT DIMENSIONS (INCHES) VERTICAL SPACING	TEXT DIMENSIONS (INCHES) ARROW RTE. MKR.	NUMBER OF SIGNS REQUIRED	COLOR BACK-GROUND	COLOR LEGEND BORDER	TOTAL AREA IN SQUARE FEET	POST
645.292	R3-5a	30"	36"	ONLY ↑	TEXT DIMENSIONS SHALL CONFORM TO "STANDARD HIGHWAY SIGNS"			1	COLORS SHALL CONFORM TO "STANDARD HIGHWAY SIGNS"		7.50 (7.50)	MOUNT ON MAST ARM
645.292	R3-5L	30"	36"	ONLY ↰				3			7.50 (22.50)	MOUNT ON MAST ARM
645.292	R3-5R	30"	36"	ONLY ↱				1			7.50 (7.50)	MOUNT ON MAST ARM
645.292	R3-6R	30"	36"					2			7.50 (15.00)	MOUNT ON MAST ARM
645.292	R3-8	30"	30"	↰ ↑ ONLY				1			6.25 (6.25)	METAL POST
645.292	R3-8b	48"	30"	ONLY ↰ ONLY ↑ ONLY ↱				1			10.00 (10.00)	METAL POST
645.292	R10-6	24"	30"	STOP HERE ON RED				1			5.00 (5.00)	METAL POST
645.292	R10-15R	30"	30"	TURNING VEHICLES ↱ / TO				1			6.25 (6.25)	MOUNT ON MAST ARM

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

	BY	DATE
PROJ. MANAGER	M. Parlin	
DESIGN-DETAILED	C. Helmick	6\2022
CHECKED-REVIEWED	C. Helmick	6\2022
DESIGN2-DETAILED2	L. Driscoll	
DESIGN3-DETAILED3	A. Stephens	
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

SIGN SUMMARY

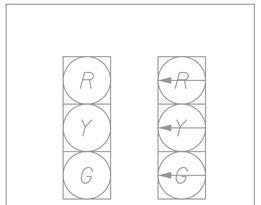
SHEET NUMBER

42

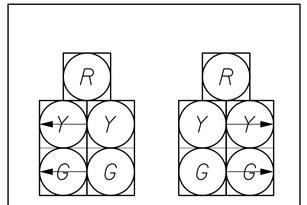
OF 111

Filename: 042_Sign Summary.dgn Username: Division: Date:8/19/2022

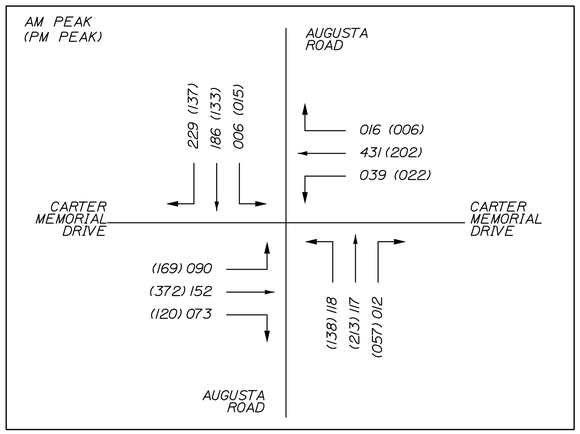
EXISTING SIGNALS



PROPOSED SIGNALS



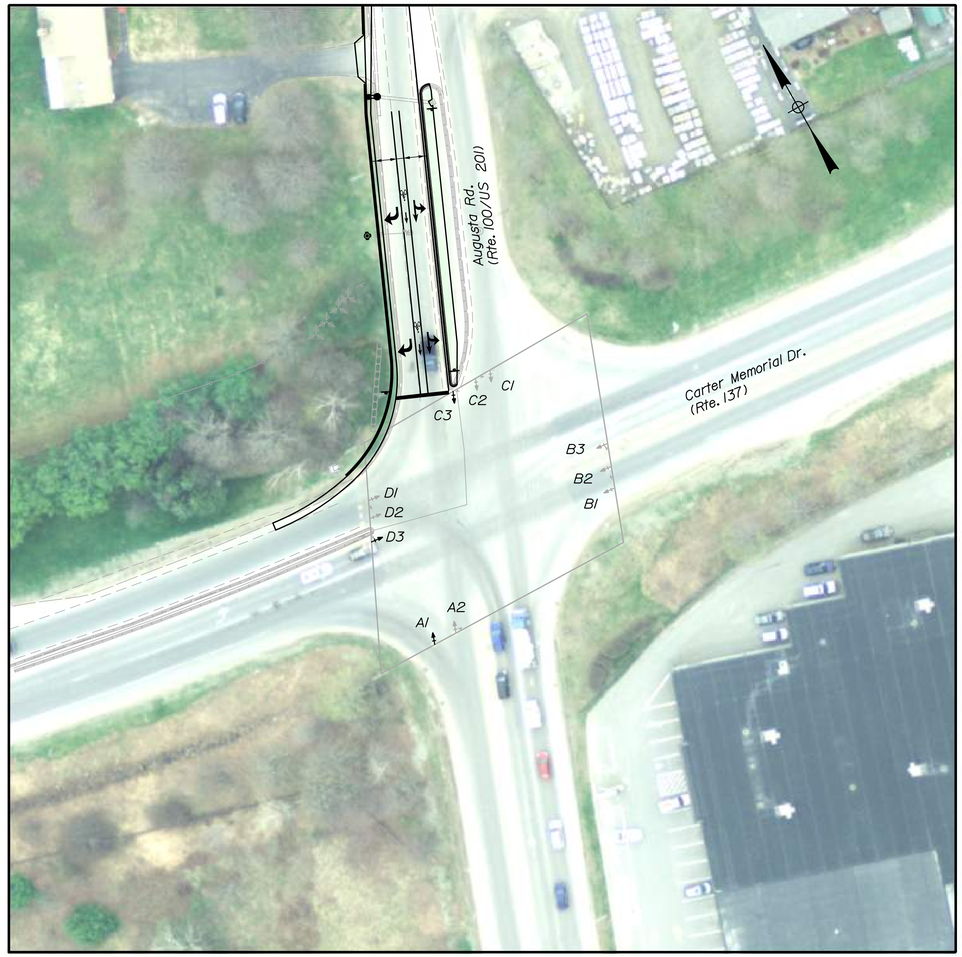
2020 SYSTEM DESIGN VOLUMES



* VOLUMES FROM STATEWIDE TRAFFIC SIGNAL MODERNIZATION STATE WIN 024301.00

SIGNAL PLAN LEGEND

	Existing	Proposed
Mast Arm & Steel Pole On Foundation		
Signal Head		
Pedestrian Signal Head		
Pedestrian Push Button & Sign		
Control Cabinet & Foundation		
Junction Box		
Mast Arm Or Span Wire Mounted Sign		
Detector Zone		
Non-Invasive Detection		
Preemption Receiver		
Preemption Confirmation Strobe		
3" Underground Conduit	E1	E1
5.8 GHZ Wireless Radio		
Dual Mode DSRC/C-V2X (Dedicated Short Range Communications)		
Advance Detection		



NOTES:

1. Improvements to Carter Memorial Drive and Augusta Road intersection must be done prior to detouring Ticonic bridge traffic.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	M. Perlin	
DESIGN-DETAILED	A. Greenlaw	6\2022
CHECKED-REVIEWED	L. Driscoll	6\2022
DESIGN2-DETAILED2	A. Stephens	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

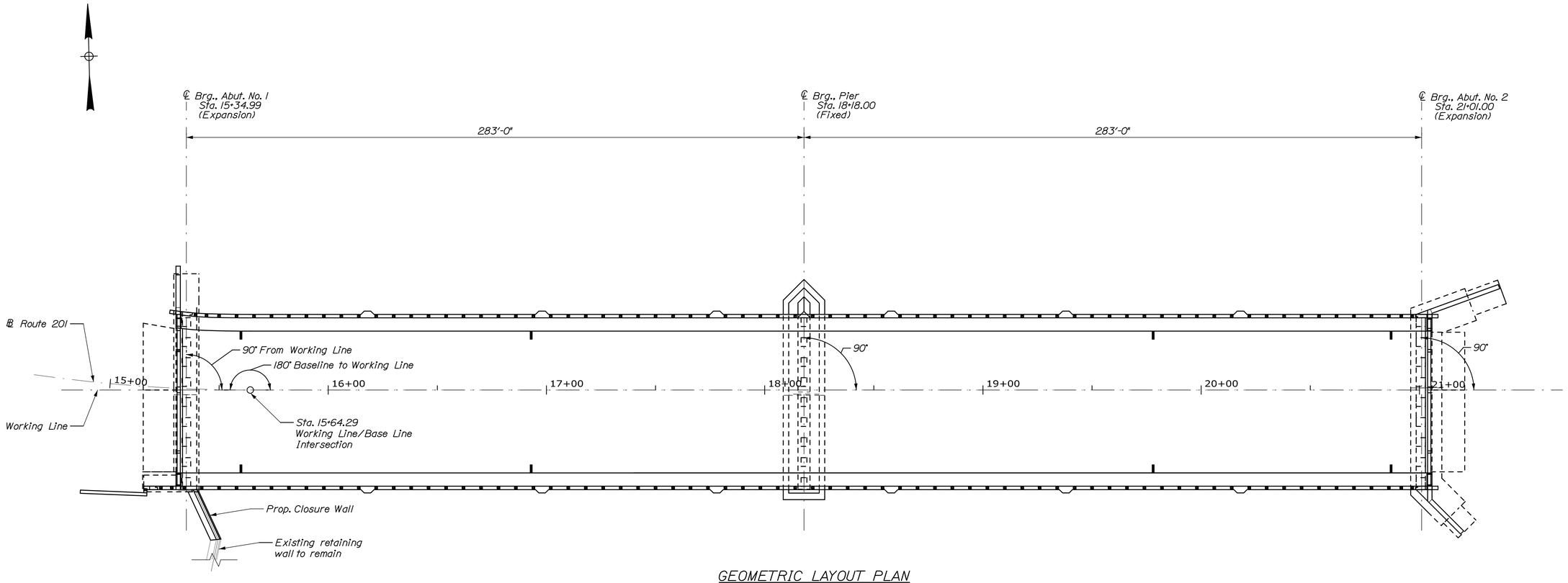
AUGUSTA RD./
CARTER MEMORIAL DR.
SIGNAL PLAN

SHEET NUMBER

43

OF 111

Filename: 043_Signal Plan.dgn Division: Username: Date:8/19/2022



GEOMETRIC LAYOUT PLAN

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	H. Walton	BY	DATE
CHECKED-REVIEWED	N. Boert	H. Walton	07\2022
DESIGN2-DETAILED2		T. Cote	07\2022
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

GEOMETRIC LAYOUT PLAN

SHEET NUMBER

44

OF 111

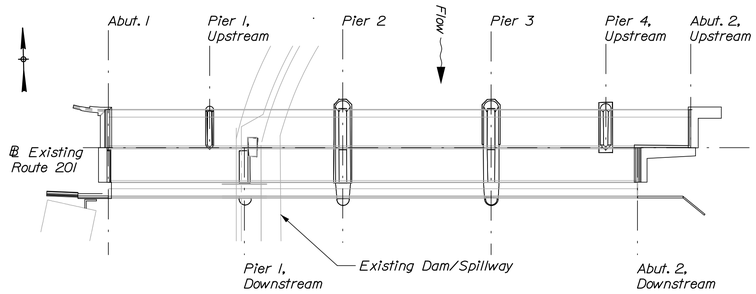
HNTB

Username:

Division:

Date:7/29/2022

Filename: 044_Geometric Layout Plan.dgn



EXISTING SUBSTRUCTURE KEY PLAN

NOTES:

1. Upstream abutment and piers in the 1970 As-Built plans use reverse stationing. Key Plan call outs are per proposed stationing layout and will not match existing 1970 As-Builts.

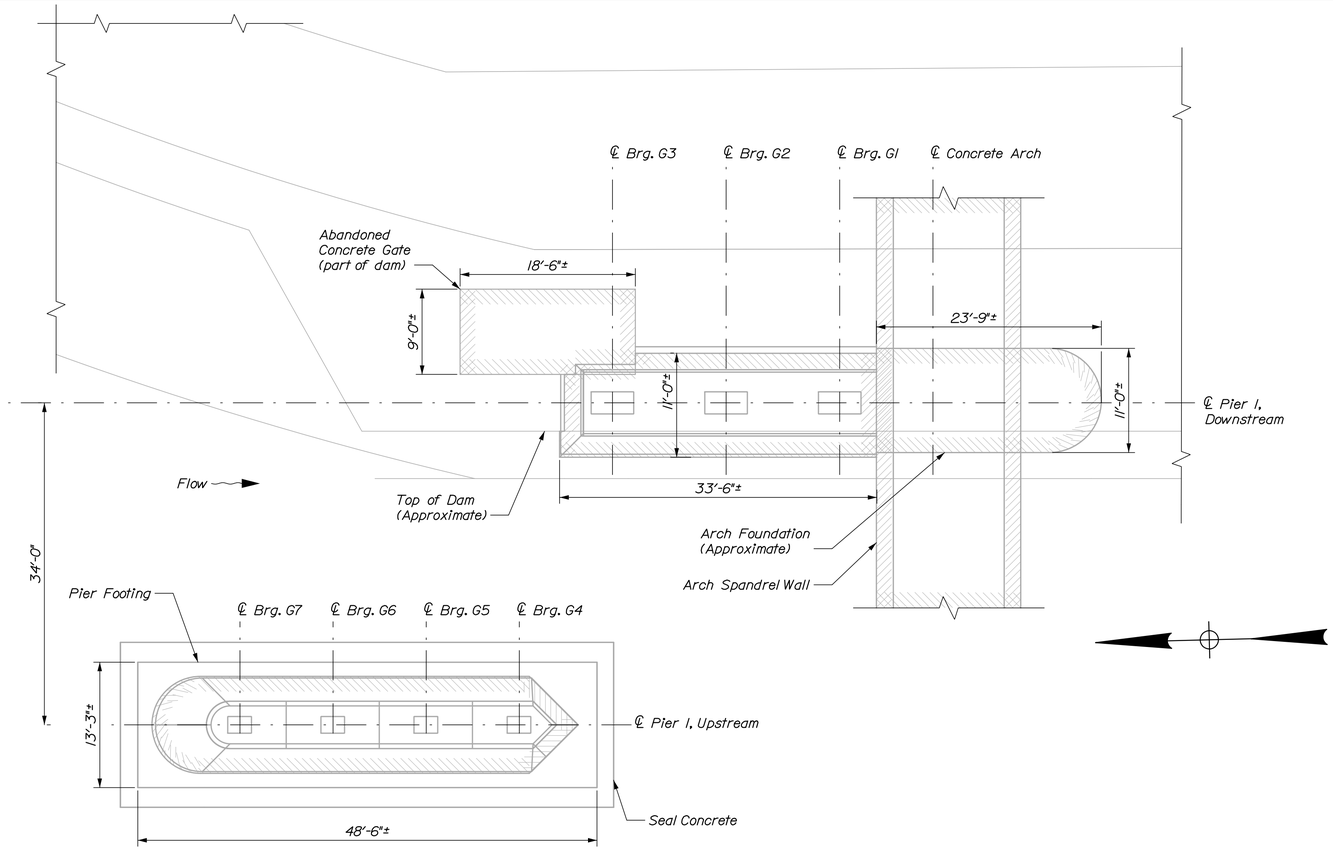
NOTES:

1. Concrete gate in dam was decommissioned and filled with concrete as part of the 1970 bridge rehabilitation.

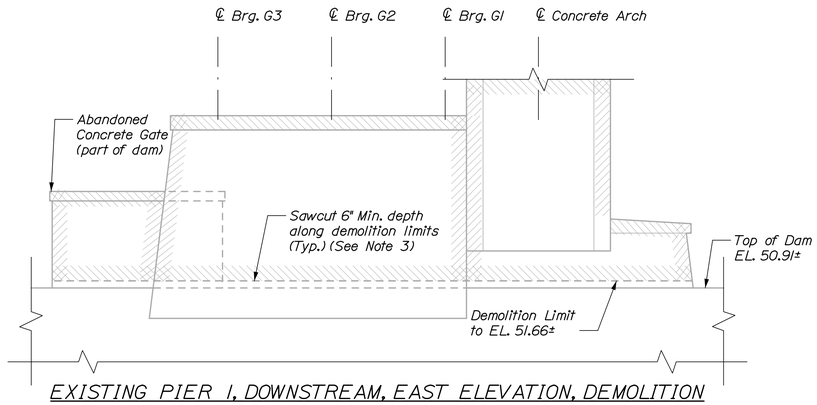
2. Existing Pier 1 Downstream is concrete-jacketed granite blocks. Remove granite blocks to the closest joint to the demolition elevation. Final removal limits shall be as determined by the Resident.

3. Payment for pier concrete sawcutting, demolition, and removal will be under Items 202.19 Removing Existing Bridge and 202.19 Removing Existing Bridge - Arch Structure as appropriate. Removal of the Abandoned Concrete Gate will be paid under Item 202.19 Removing Existing Bridge.

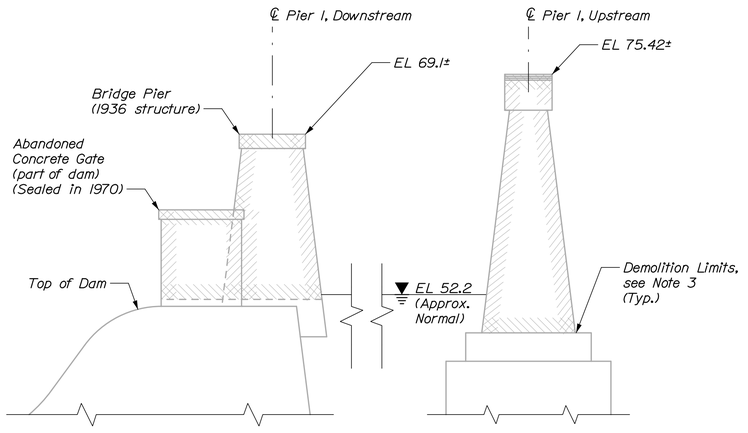
4. All dimensions for existing structures are approximate and shall be verified in the field.



EXISTING PIER 1 PLAN, UPSTREAM & DOWNSTREAM



EXISTING PIER 1, DOWNSTREAM, EAST ELEVATION, DEMOLITION



EXISTING PIER 1, NORTH ELEVATION, UPSTREAM AND DOWNSTREAM

(Arch behind pier not shown for clarity)

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	H. Walton	BY	DATE
CHECKED-REVIEWED	H. Walton	H. Walton	12/21
DESIGN2-DETAILED2	N. Boert	T. Cote	12/21
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

EXISTING PIER DEMOLITION

SHEET NUMBER

45

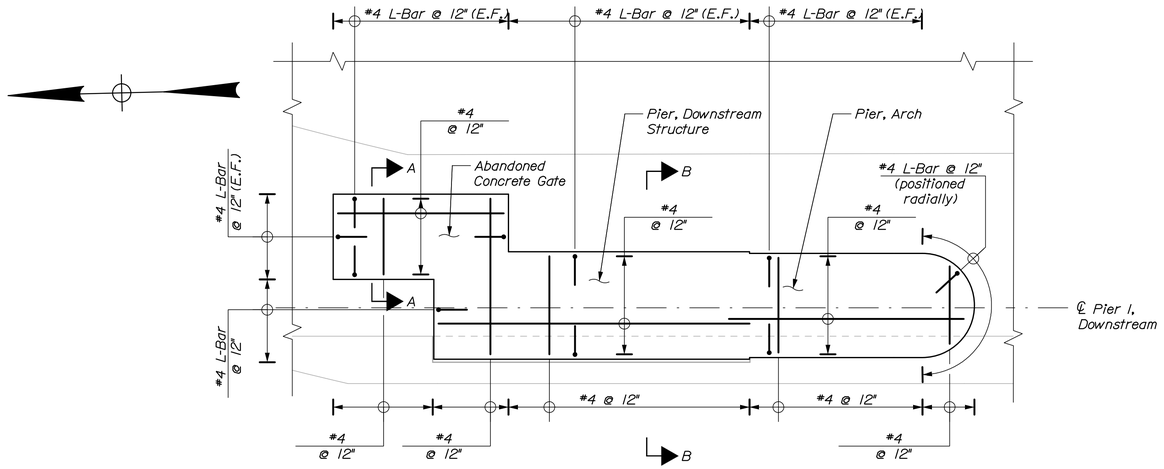
OF 111

Date:7/29/2022

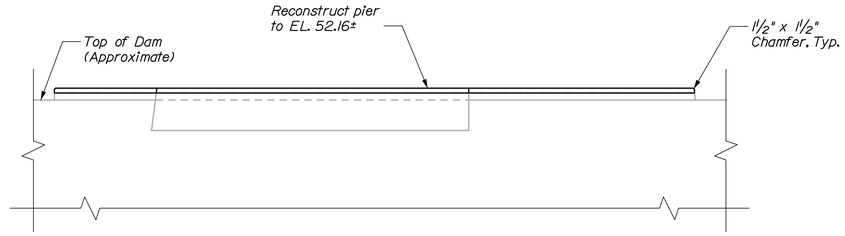
Username:

Division:

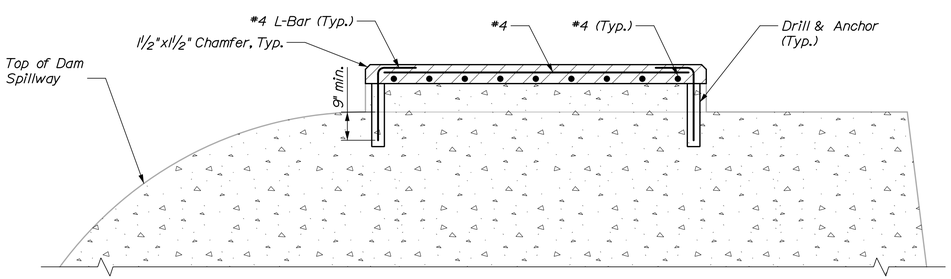
Filename: 045_Pier Demolition.dgn



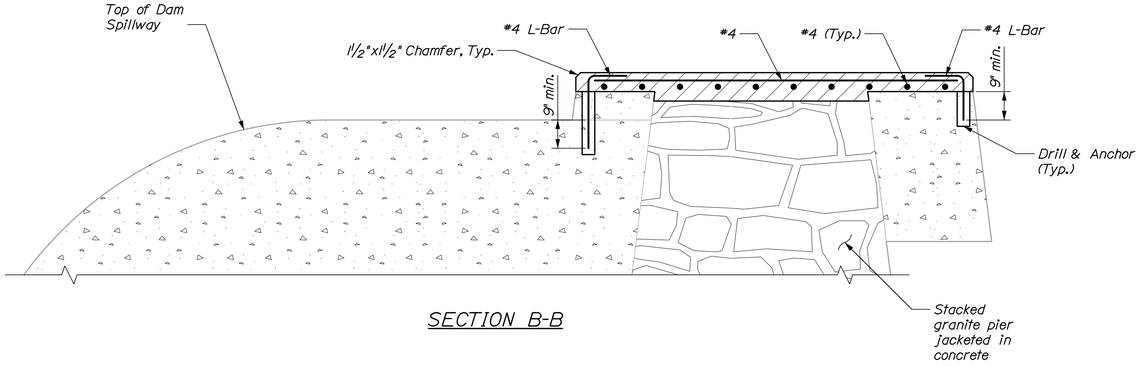
EXISTING PIER I RECONSTRUCTION PLAN



EXISTING PIER I, DOWNSTREAM, EAST ELEVATION, RECONSTRUCTION



SECTION A-A



SECTION B-B

NOTES:

1. Payment for fabrication, delivery, and placing of #4 L-Bars and #4 straight bars shown for this existing Pier I reconstruction shall be incidental to Item 502.23, Structural Concrete Piers.

2. All reinforcing bars for pier reconstruction are not scheduled. The Contractor shall determine number and length of all pier reconstruction reinforcing bars based on field measurements of the existing structure. Bars, as detailed, are #4 plain reinforcing steel @ 12" spacing each direction. Bars shall have a 3" clear cover.

3. All concrete for reconstructing the existing piers will be quantified for payment under Item 502.23, Structural Concrete Piers.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	H. Walton	BY	DATE
CHECKED-REVIEWED	N. Boert	H. Walton	12/21
DESIGN2-DETAILED2		T. Cote	12/21
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

EXISITING PIER RECONSTRUCTION

SHEET NUMBER

46

OF 111

Username:

Division:

Date:7/29/2022

Filename: 046_Pier Reconstruction.dgn

ABUTMENT NOTES

1. Reinforcing steel shall have a minimum concrete cover of 3 inches unless otherwise noted.

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

3. Place drains with a 4 inch diameter in breastwalls, wingwalls, and closure wall at 10 feet maximum spacing. The front elevation of the drain shall be 1 foot above the wall footing or subfooting, as appropriate. The exact location will be determined by the Resident.

4. 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, as shown on Abutment Sections sheets.

5. The subfooting concrete and the Abutment 1 Closure Wall concrete shall be Class A. The subfooting and the Abutment 1 Closure wall will be quantified for payment under Item 502.21, Structural Concrete, Abutments and Retaining Walls.

6. The maximum factored applied subfooting pressure is as follows:

    Abutment No. 1: 15.4 ksf - Strength 1
    Abutment No. 2: 15.0 ksf - Strength 1

7. Where the bedrock protrudes above the bottom of the footing/breastwall shown, the footing/breastwall may be raised a maximum of 12 inches from the elevation shown on the Plans and vertical reinforcing may be cut in the field with the approval of the Resident. Payment for adjusting footing/breastwall depth and adjusting reinforcing steel will be considered incidental to related Contract Items. No separate payment will be made.

8. At the option of the Resident, bedrock which protrudes above a horizontal plane 12 inches below the proposed footing/breastwall elevation may be removed. Payment for bedrock removal shall be made under Item No. 206.092, Structural Rock Excavation - Major Structures.

9. Unless supported by micropiles, subfootings shall be placed on either bedrock cleaned of weathered rock, loose fractured bedrock, boulders and soil or on existing sound cleaned concrete founded on bedrock, as determined by the Resident. Where the bedrock inclination is steeper than 6H:1V under the abutment breastwalls or 12H:1V under the abutment wingwalls, the bedrock shall be benched in steps to create an effective slope of less than 6H:1V under the breastwall or 12H:1V under the wingwall. Dowels may be installed in accordance with an approved design submittal in lieu of meeting the slope requirement; dowels shall be quantified for payment under Items 503.12 Reinforcing Steel, Fabricated and Delivered and 503.13 Reinforcing Steel, Placing. The Resident shall approve the bedrock or other subgrade prior to placement of the subfooting concrete.

10. The abutment bearing pedestal elevations shown are based on bearing heights presented on the "BEARING DETAILS" sheet. Adjustments to the pedestal elevations, if necessary, shall be made in accordance with Note 1 on the "BEARING DETAILS" sheet.

11. The subfooting under the Southwest Wingwall may be stepped in 3'-0" vertical increments to accommodate sloping bedrock along the length of the wall as shown on the Southwest Wingwall Elevation. Up to 2 steps may be used. In no case shall the top of subfooting be lowered from the elevation shown on the plans. The Contractor shall be responsible for field cutting abutment and retaining wall reinforcing as required to accommodate the final subfooting geometry. This work shall be incidental to Pay Item 502.219 Structural Concrete, Abutments and Retaining Walls.

12. The top surface of the subfooting in areas directly below the footing, breastwall, or wingwall shall recieve a raked finish with a minimum roughness of 1/4 inch.

13. Adjust reinforcing to avoid conflict with utilities. Field bend bars as necessary.

14. Where applicable, Transition Barrier vertical stirrups, as shown on the Transition Barrier Detail Sheets, shall be in place prior to the placement of the associated wingall, sidewalk, and curb concrete.

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854 BRIDGE PLANS

PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	H. Walton	BY	DATE
CHECKED-REVIEWED	N. Boert	H. Walton	07\2022
DESIGN2-DETAILED2		T. Cote	07\2022
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

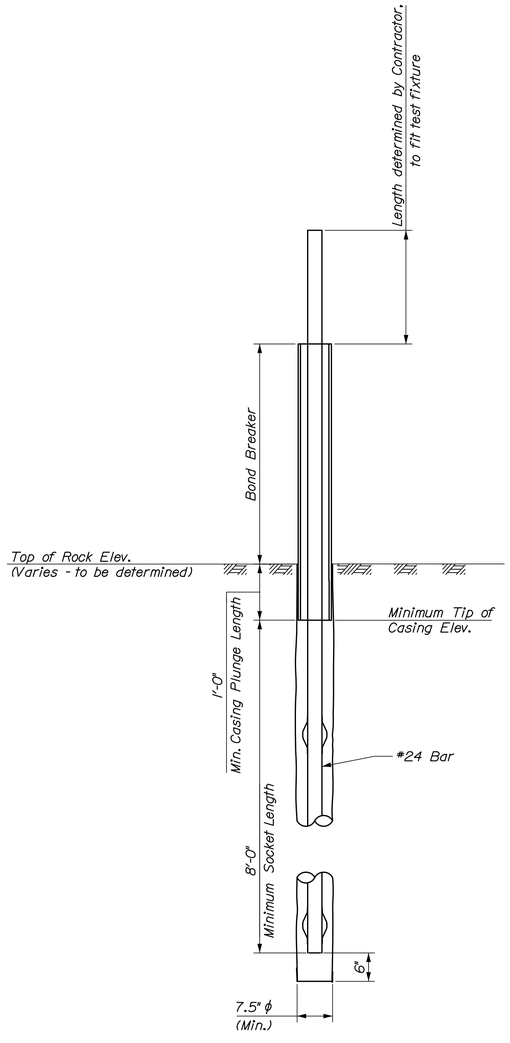
ABUTMENT NOTES

SHEET NUMBER

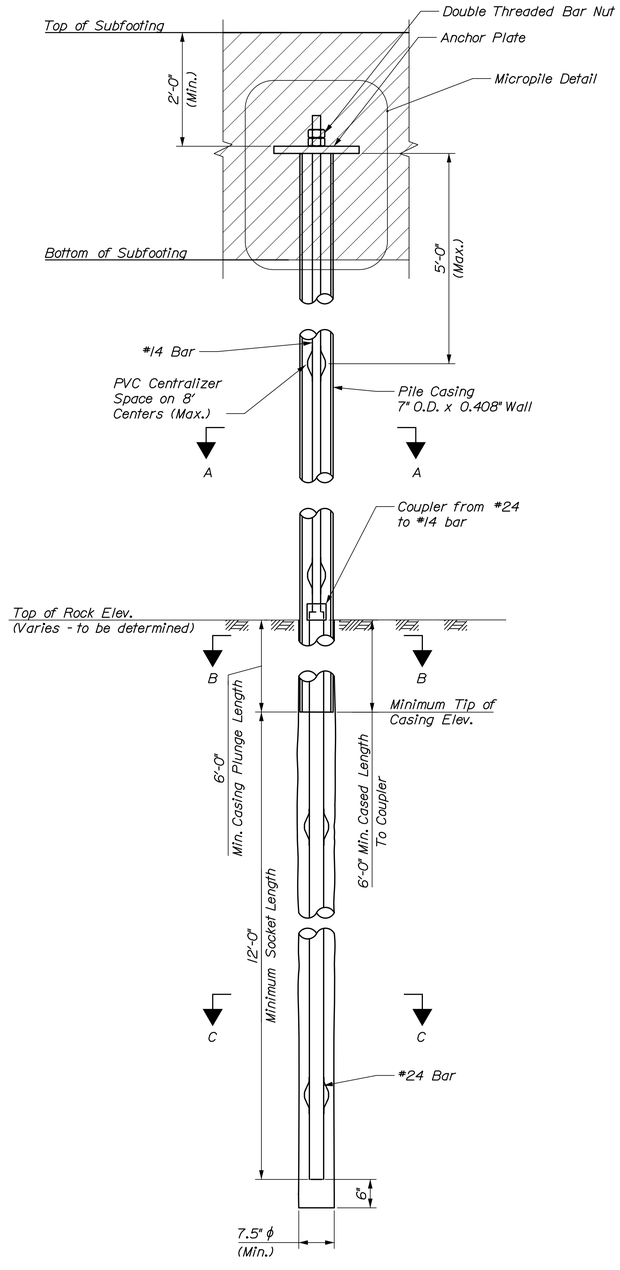
47

OF 111

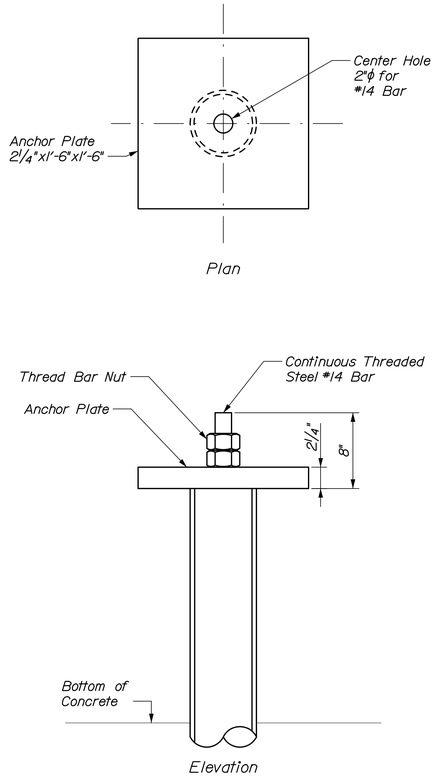
Filename: 047_Abutment Notes.dgn Division: Username: Date:7/29/2022



TEST PILE ELEVATION



MICROPILE ELEVATION



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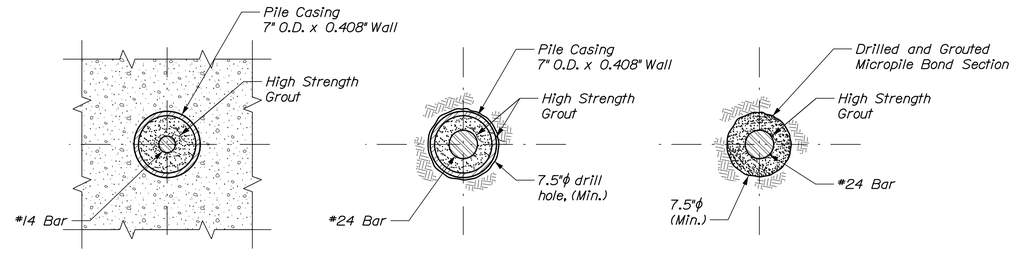

SECTION A-A
(Cased Zone)
(In Soil shown, through existing structure similar)

SECTION B-B
(Plunge Zone)
(In Bedrock)

SECTION C-C
(Socketed Zone in Bedrock)

NOTES:

1. Micropiles shall not be installed closer than 5 feet from an adjacent micropile which has been grouted for a period of less than 24 hours.

2. Micropiles at Abutment No. 1 shall be installed to a minimum depth as shown on the Plans and indicated by the results of the confirmatory cores.

3. Micropiles at Abutment No. 1 are anticipated to be installed in accordance with the following sequence:

   -Advance the permanent casing to the required depth into rock to achieve the minimum plunge length as shown on the Plans and indicated by the results of the confirmatory cores.

   -Drill the micropile rock socket to the required depth below the bottom of casing as shown on the Plans using an underreamer drill bit.

   -Place the central bar and grout via tremie methods using a tube attached to the central bar. Place grout until clean grout flow is observed from the top of the casing.

   -Raise the tip of the permanent casing, maintaining an embedment of one (1) foot below the top of rock.

   -Place additional grout until clean grout flow is observed from the top of the casing. Hold the casing at this elevation for a minimum of 10 minutes and monitor the grout level. Continue to add grout until the grout level is constant for at least 5 minutes.

   -Readvance the permanent casing to the required casing tip elevation.

   -Place additional grout until clean grout flow is observed from the top of casing if necessary.

4. For load testing, the test design load (TDL) is 227 kips. The test pile shall be loaded in tension to 150% of the TDL using the load increments provided in SP501, Foundation Piles (Micropiles).

5. The verification test pile shall be located within 5 feet of test boring BB-WWKR-201. The actual location shall be selected by the Contractor and approved by the Resident.

MICROPILE TABLE

Substructure Unit	Required Nominal Resistance	Factored Design Load (FDL)
	Compression	Compression
Abutment 1 Front	747 kips	411 kips
Abutment 1 Back	747 kips	411 kips

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

	BY	DATE
PROJ. MANAGER	M. Perlin	
DESIGN-DETAILED	E. Beausoleil	07/2022
CHECKED-REVIEWED	H. Walton / N. Boert / T. Cote	07/2022
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

ABUTMENT NO. 1 MICROPILE DETAILS

SHEET NUMBER

48

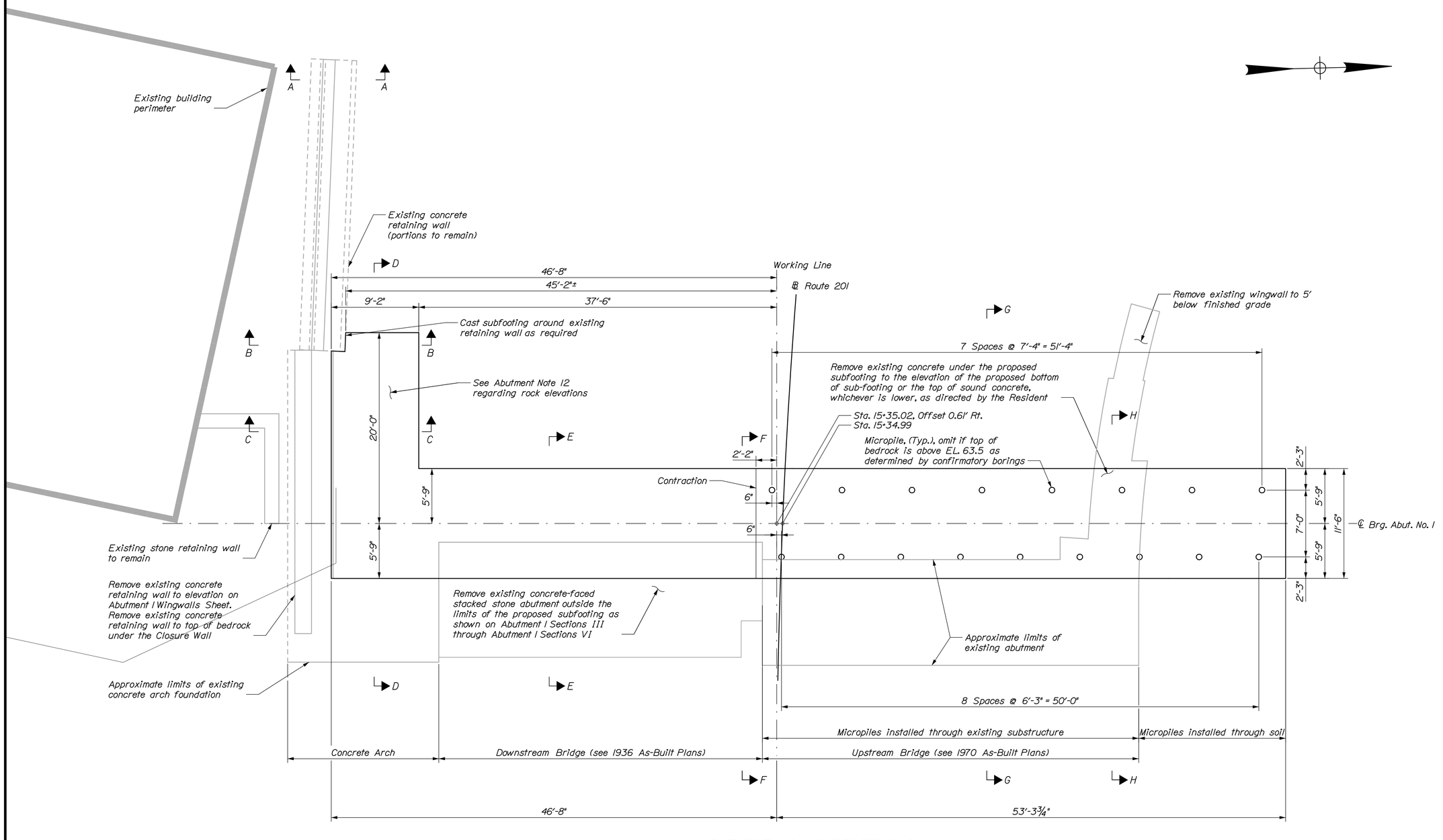
OF 111

Username:

Division:

Date:7/29/2022

Filename: 048_Micropile Details.dgn



ABUTMENT NO. 1 SUBFOOTING PLAN

NOTE:

1. Abutment sections A-A through H-H are shown on sheets Abutment 1 Sections III through Abutment 1 Sections VI

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

	BY	DATE
M. Perlin		
PROJ. MANAGER	H. Walton	07/2022
DESIGN-DETAILED	H. Walton	07/2022
CHECKED-REVIEWED	N. Boert	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW
KENNEBEC

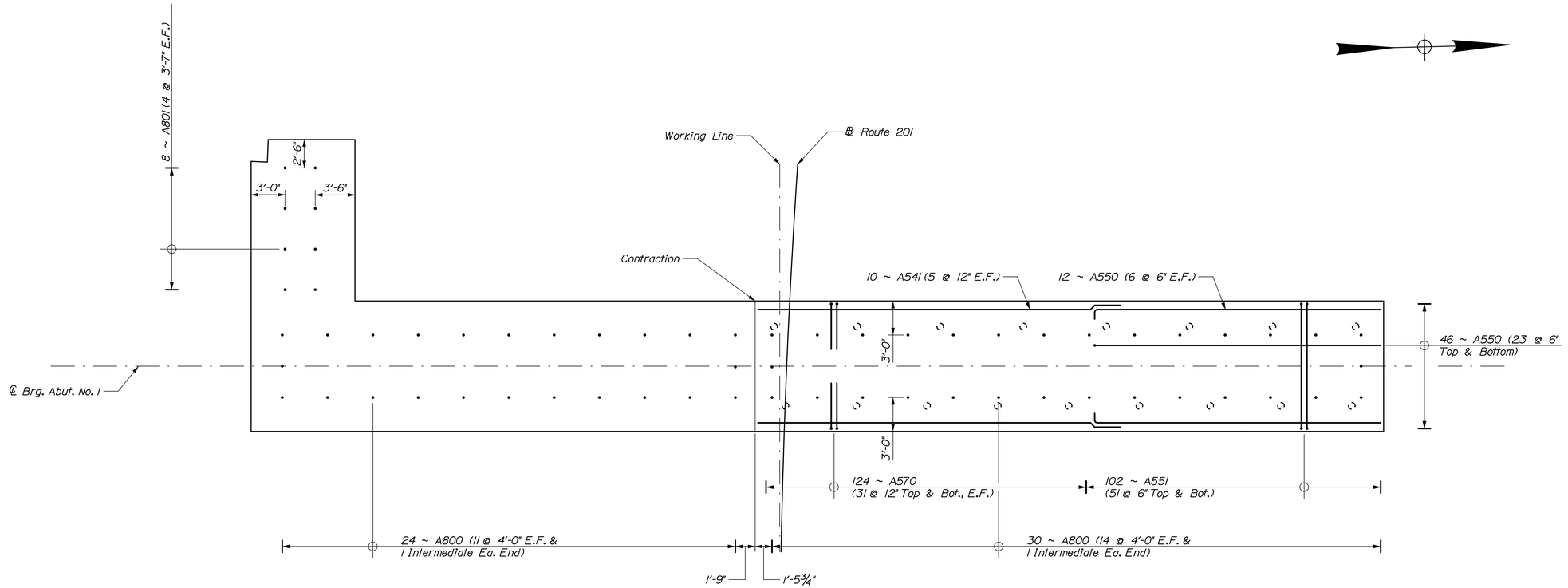
ABUTMENT NO. 1 SUBFOOTING PLAN

SHEET NUMBER

49

OF 111

Filename: 049_Abutment 1 Footing Plan.dgn Division: Username: Date:7/29/2022



ABUTMENT NO. 1 SUBFOOTING REINFORCING PLAN

NOTES:

1. Subfooting concrete will be unreinforced in areas where rebar is not detailed on the Subfooting Reinforcing Plan.

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	M. Parlin	
DESIGN-DETAILED	H. Walton	07\2022
CHECKED-REVIEWED	H. Walton	07\2022
DESIGN2-DETAILED2	N. Baert	
DESIGN3-DETAILED3	T. Cote	
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

ABUTMENT NO. 1 SUBFOOTING REINFORCING PLAN

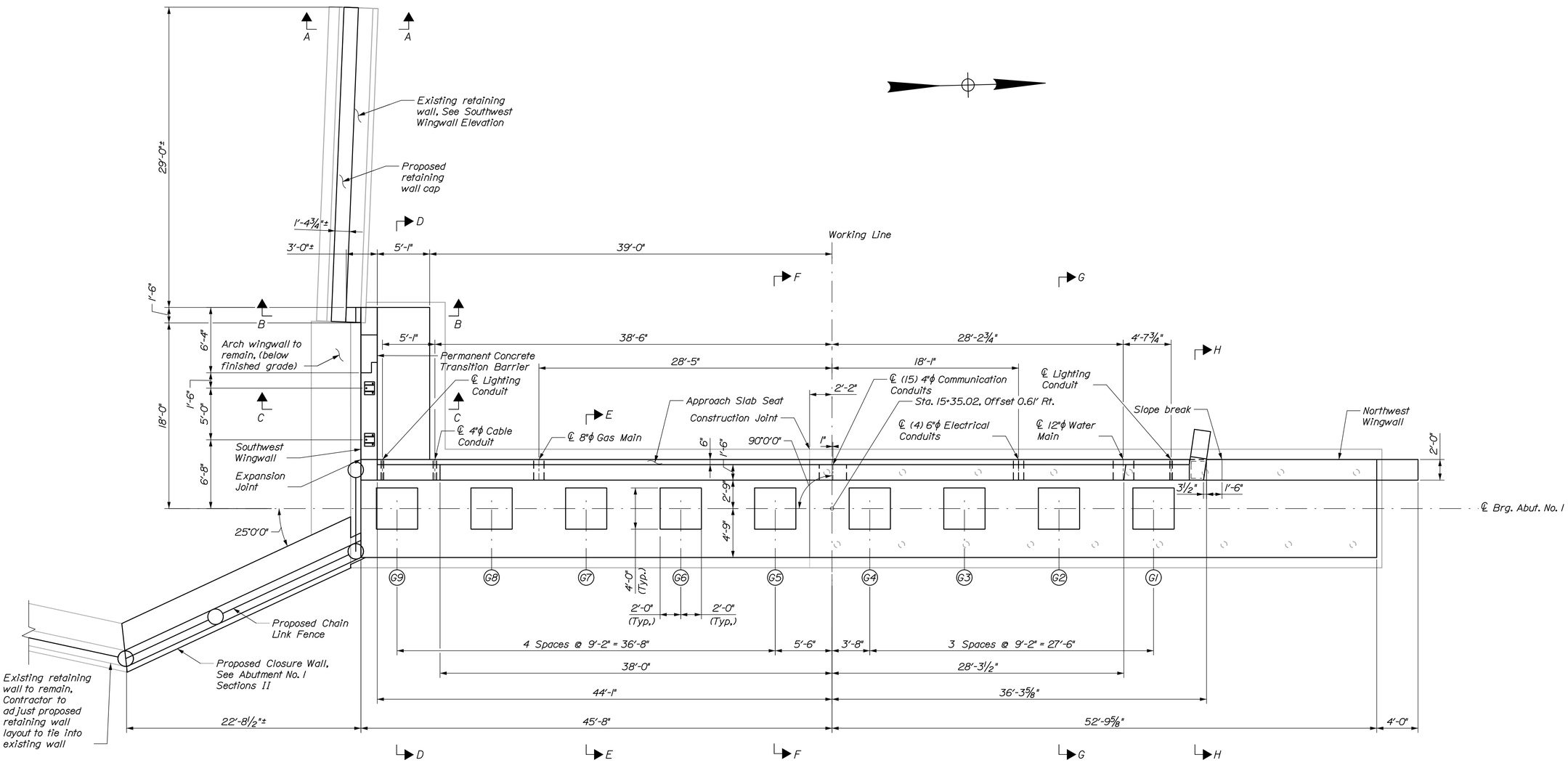
SHEET NUMBER

50

OF 111

Filename: 050_Abutment 1 Footing Reinforcing.dgn Division: Username: Date:7/29/2022

Username:
Date:7/29/2022
Division:
Filename: 051_Abutment 1 Plan.dgn



ABUTMENT NO. 1 PLAN

(Abutment seal and footing shown screened for clarity)

NOTES:

1. Abutment sections A-A through H-H are shown on sheets Abutment 1 Sections III through Abutment 1 Sections VI

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	H. Walton	H. Walton	12/21
CHECKED-REVIEWED	N. Baert	T. Cote	12/21
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

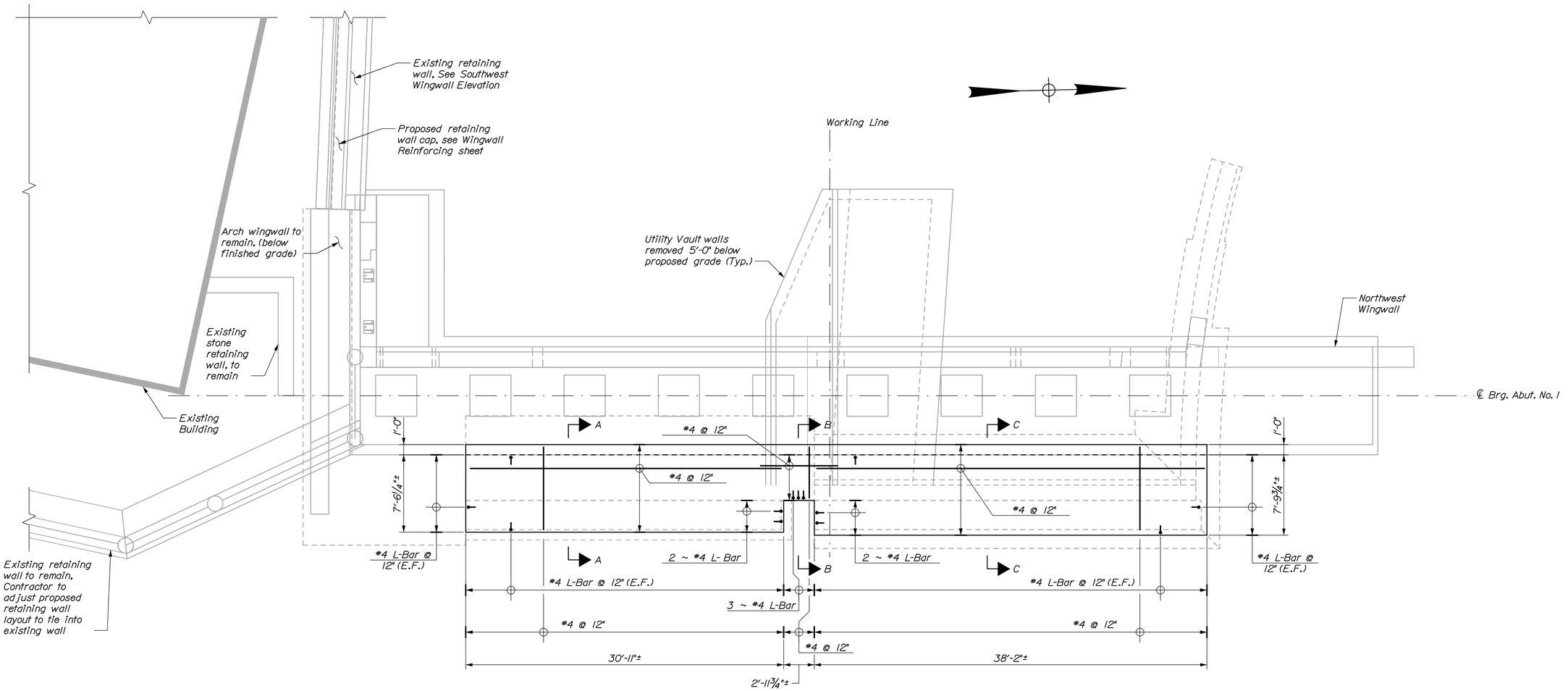
ABUTMENT NO. 1 PLAN

SHEET NUMBER

51

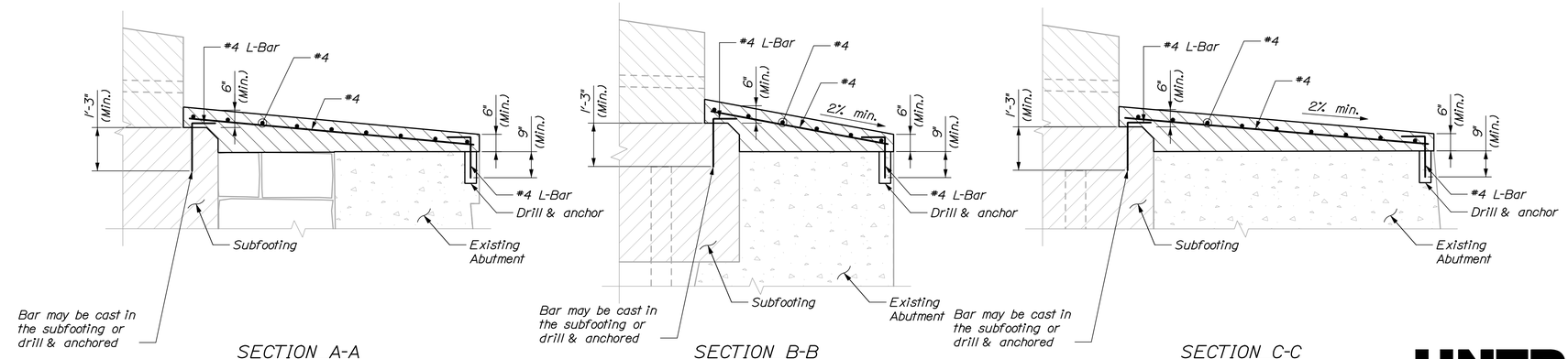
OF 111

HNTB



ABUTMENT NO. 1 RECONSTRUCTION PLAN

(Abutment seal and footing shown screened for clarity)



SECTION A-A

SECTION B-B

SECTION C-C

NOTES:

1. Payment for fabrication, delivery, and placing of #4 L-Bars and #4 straight bars shown on this sheet shall be incidental to Item 502.21, Structural Concrete Abutments and Retaining Walls.

2. All reinforcing bars for abutment reconstruction are not scheduled. The Contractor shall determine number and length of all abutment reconstruction reinforcing bars based on field measurements of the existing structure. Bars, as detailed, are #4 plain reinforcing steel @ 12" spacing each direction. Bars shall have a 3" clear cover.

3. All concrete for reconstructing the top of Abutment 1 will be quantified for payment under Item 502.21, Structural Concrete Abutments and Retaining Walls.

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

PROJ. MANAGER	M. Perlin	BY	DATE
DESIGN-DETAILED	H. Walton	H. Walton	12/21
CHECKED-REVIEWED	N. Baert	T. Cote	12/21
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

ABUTMENT NO. 1
RECONSTRUCTION PLAN

SHEET NUMBER

52

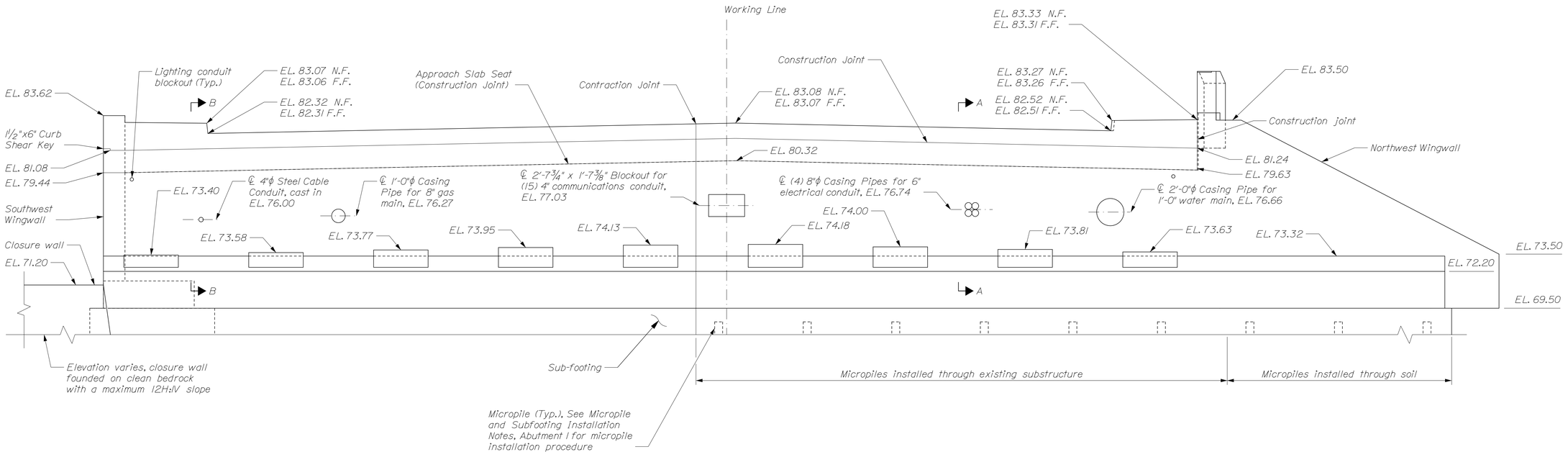
OF 111

Username:

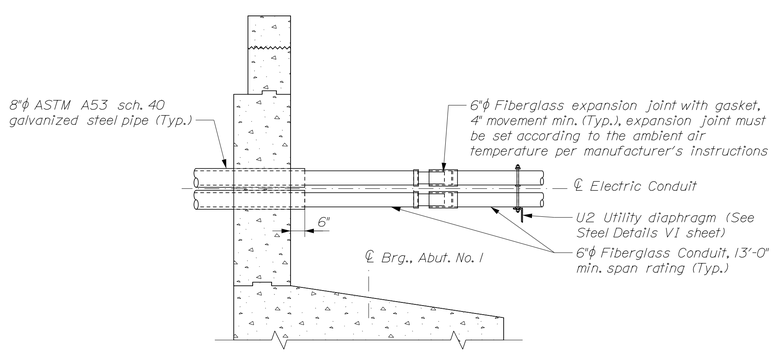
Date:7/29/2022

Division:

Filename: 052_Abutment 1 Reconstruction Plan.dgn

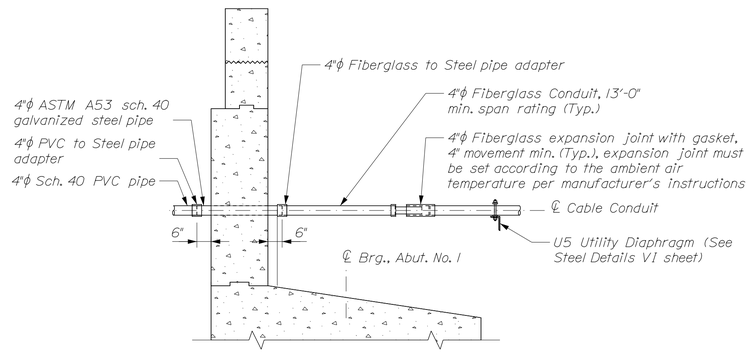


ABUTMENT NO. 1 ELEVATION



SECTION A-A

(Abut. No. 1 shown, Abut. No. 2 similar)



SECTION B-B

(Abut. No. 1 shown, Abut. No. 2 similar)

NOTES

1. Steel pipe conduits shall be parallel to the girders and at the same longitudinal slope as the girders.

2. Payment for electrical conduit installation in the backwall shall be paid under Item 910.301, Special Work - Utility Conduit and Hangers on Bridge - Central Maine Power.

3. Payment for cable conduit installation in the backwall shall be paid under Item 910.301, Special Work - Utility Conduit and Hangers on Bridge - Charter Communications.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

PROJ. MANAGER	M. Perkins		
DESIGN-DETAILED	H. Walton	BY	DATE
CHECKED-REVIEWED	N. Boert	H. Walton	12/21
DESIGN2-DETAILED2		T. Cote	12/21
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW
KENNEBEC

ABUTMENT NO. 1 ELEVATION

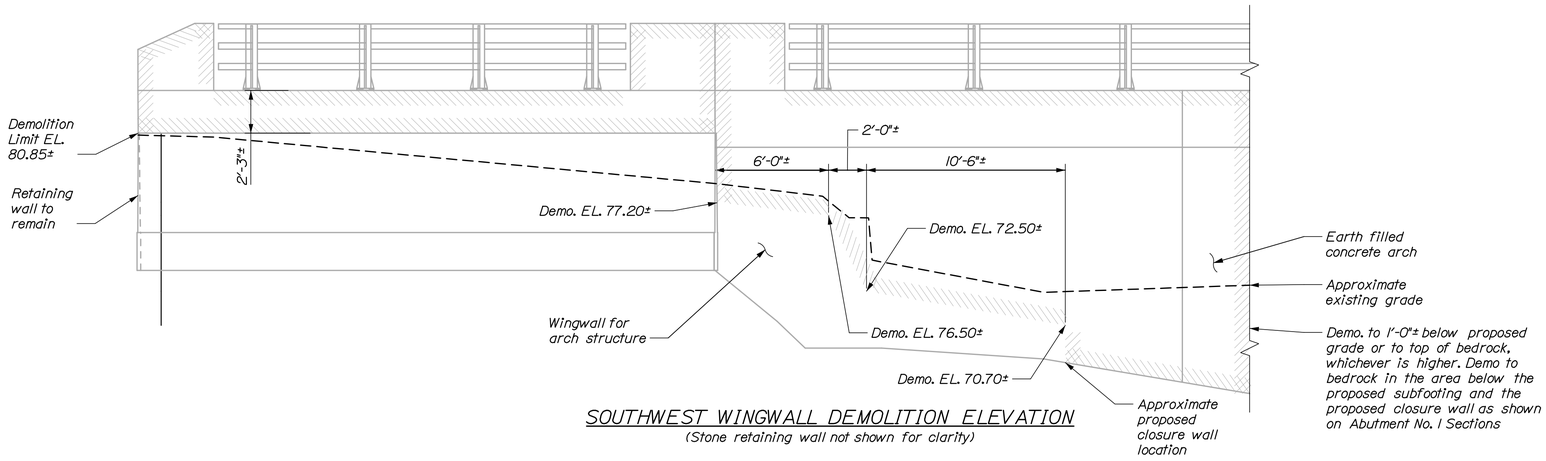
SHEET NUMBER

53

OF 111

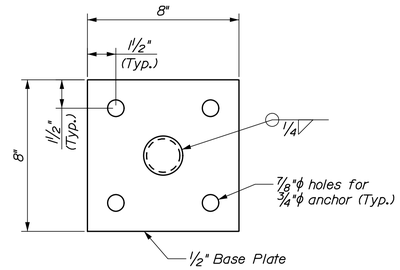
HNTB

Filename: 053_Abutment 1 Elevation.dgn Division: Username: Date:8/1/2022

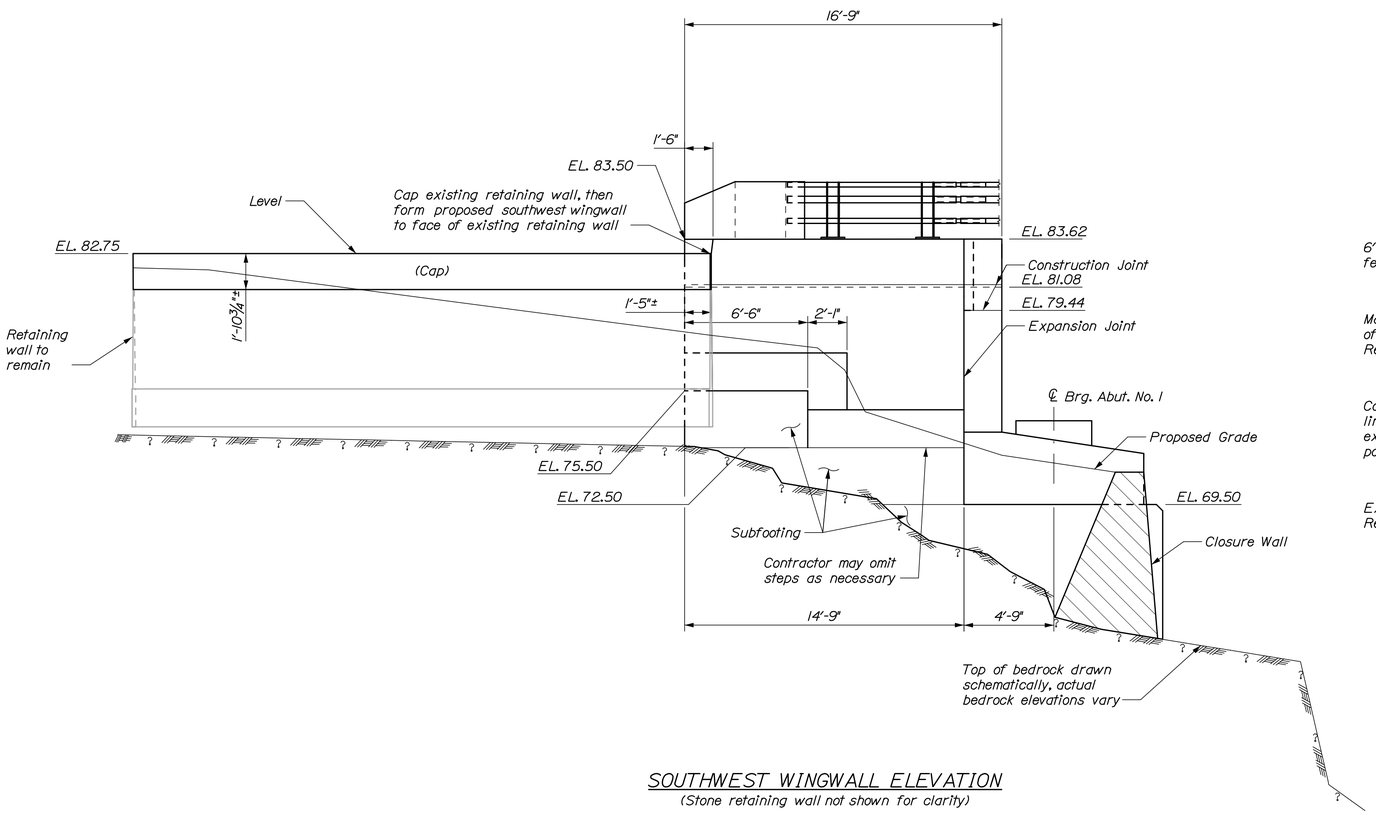


SOUTHWEST WINGWALL DEMOLITION ELEVATION

(Stone retaining wall not shown for clarity)

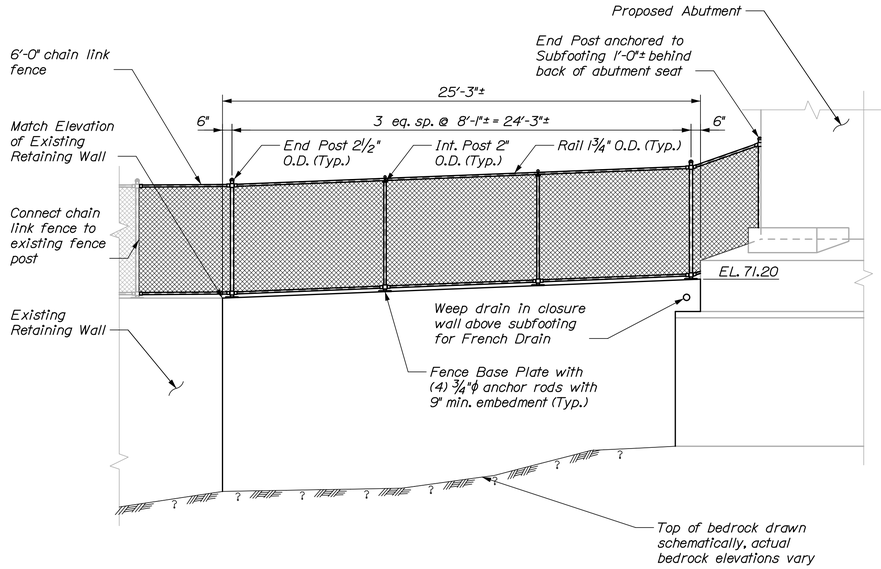


BASE PLATE DETAIL



SOUTHWEST WINGWALL ELEVATION

(Stone retaining wall not shown for clarity)



CLOSURE WALL ELEVATION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

PROJ. MANAGER	M. Parlin		
DESIGN-DETAILED	H. Walton	07\2022	
CHECKED-REVIEWED	N. Baert	07\2022	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BY | DATE

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

ABUTMENT NO. 1
WINGWALLS

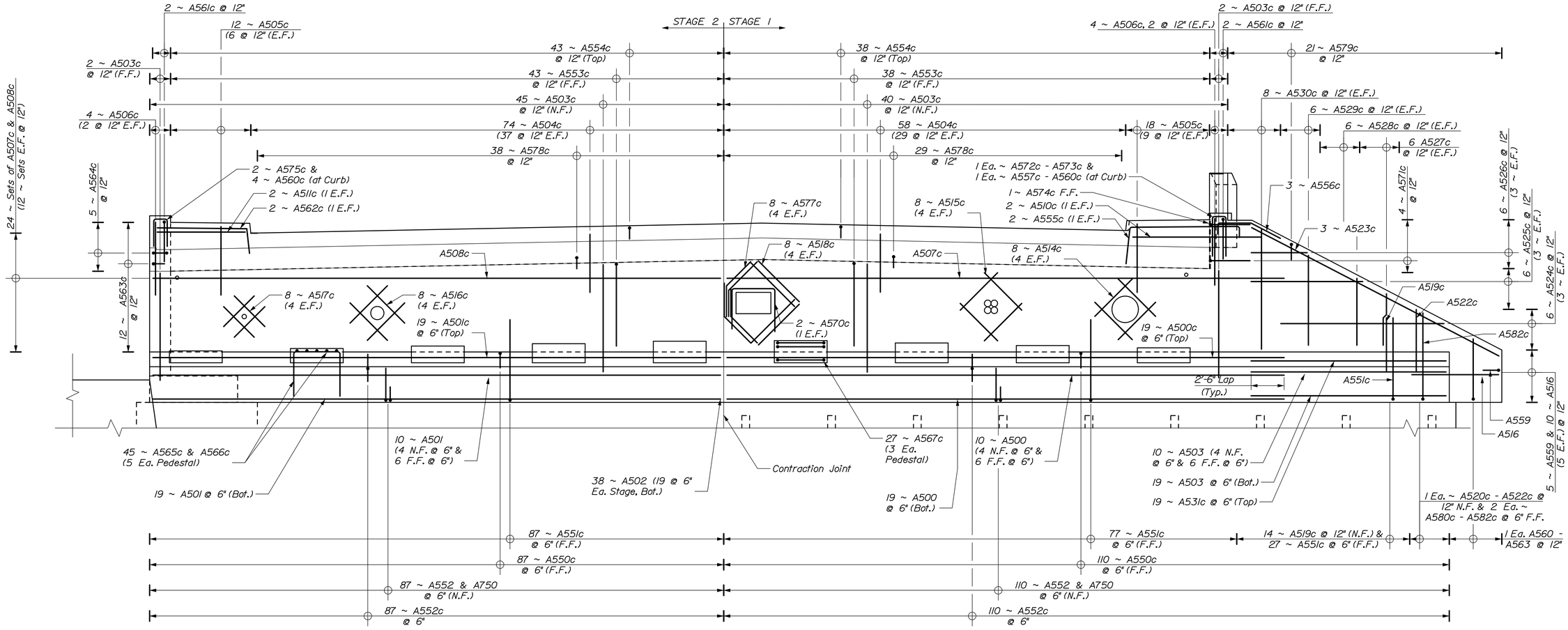
SHEET NUMBER

54

OF 111

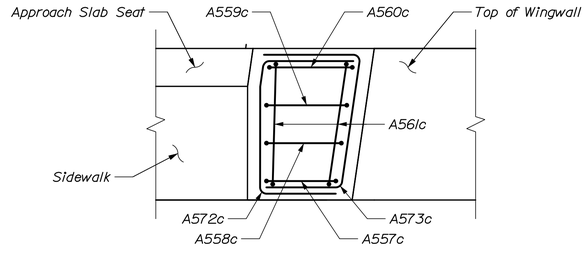
HNTB

Filename: 054_Abutment 1 Wingwalls.dgn Division: Username: Date:7/29/2022

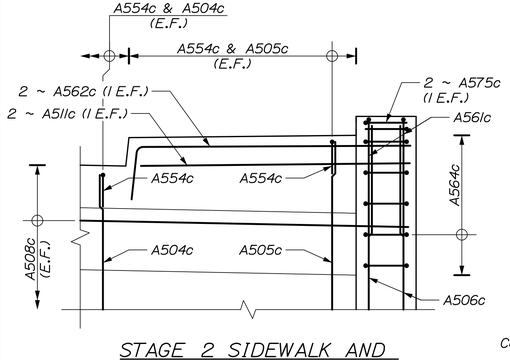


ABUTMENT NO. 1 REINFORCING ELEVATION

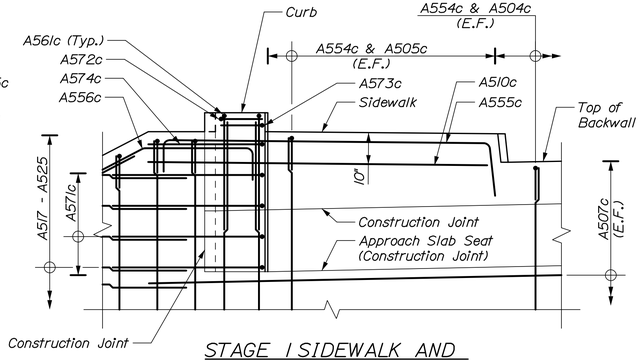
(Stem side reinforcing not shown for clarity, see Abutment End Reinforcing Detail)



STAGE 1 CURB REINFORCING PLAN

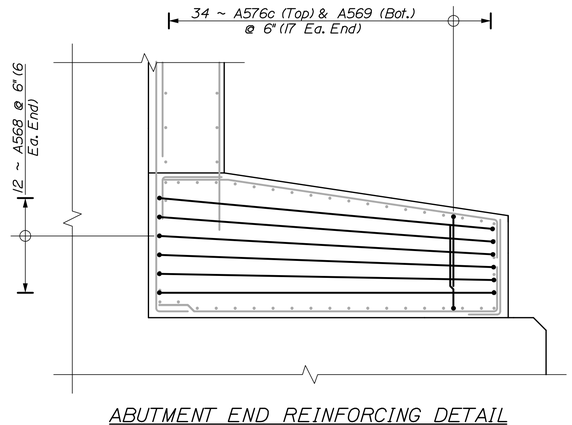


STAGE 2 SIDEWALK AND WINGWALL REAR ELEVATION

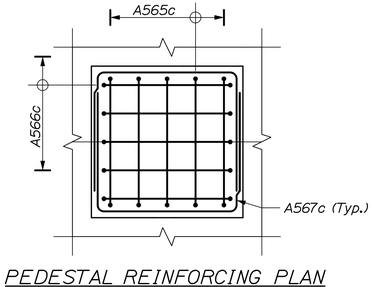


STAGE 1 SIDEWALK AND WINGWALL REAR ELEVATION

(Transition Barrier and Transition Barrier reinforcing not shown for clarity)



ABUTMENT END REINFORCING DETAIL



PEDESTAL REINFORCING PLAN

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

	BY	DATE
PROJ. MANAGER	M. Parlin	
DESIGN-DETAILED	H. Walton	E. Beausoleil 07\2022
CHECKED-REVIEWED	N. Boert	T. Cote 07\2022
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

ABUTMENT NO. 1 REINFORCING

SHEET NUMBER

55

OF 111

Filename: 055_Abutment 1 Reinforcing.dgn Division: Username: Date:7/29/2022

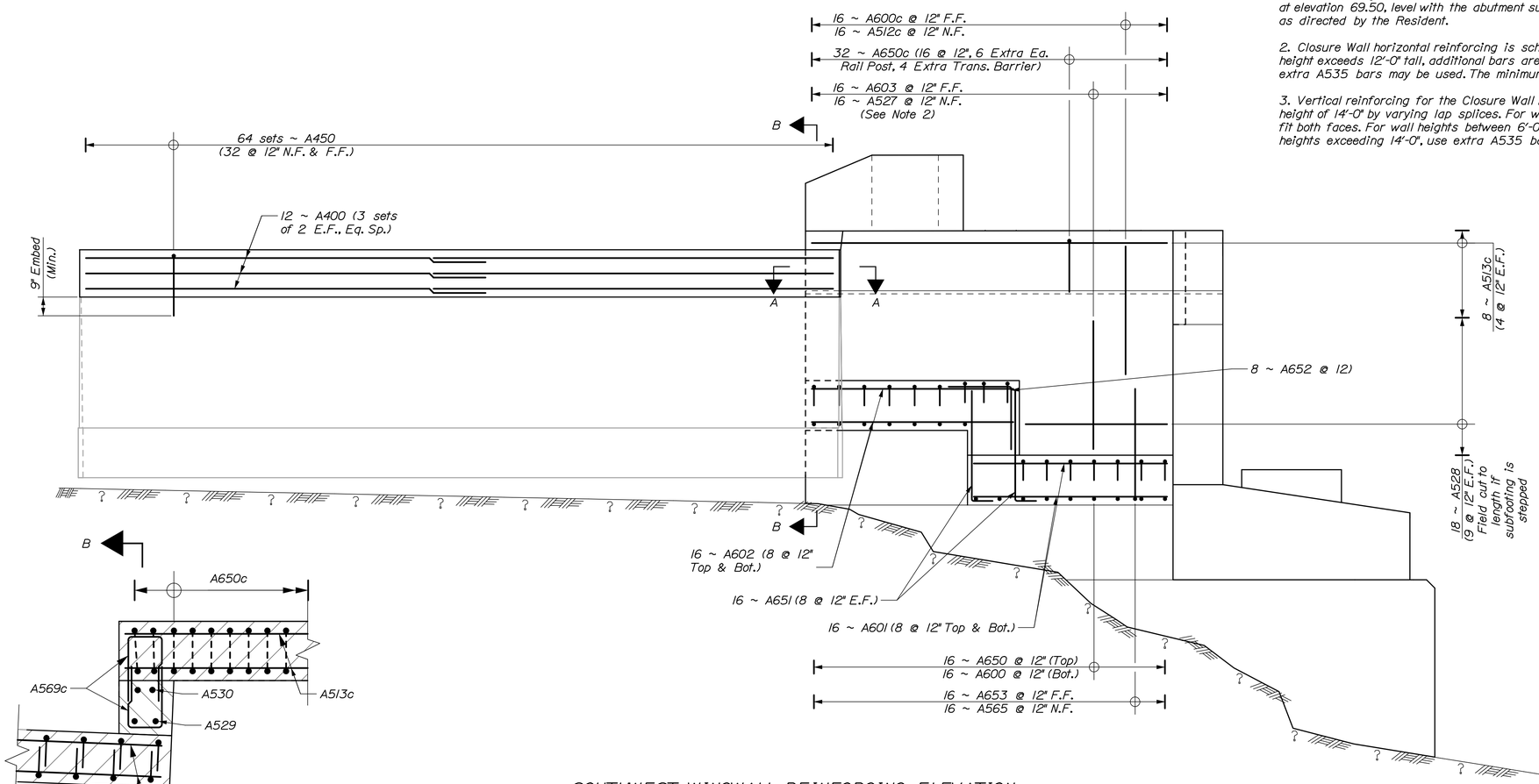
Filename: 056_Abutment 1 Wingwall Reinforcing.dgn Username: Division: Date:7/29/2022

NOTES:

1. All reinforcing bar bends in the Southwest Wingwall are scheduled assuming the subfooting is at elevation 69.50, level with the abutment subfooting. If the subfooting is stepped adjust rebar as directed by the Resident.

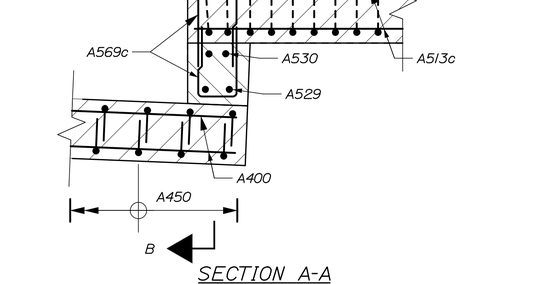
2. Closure Wall horizontal reinforcing is scheduled assuming a 12'-0" tall uniform wall. If wall height exceeds 12'-0" tall, additional bars are required. Cut lengths of horizontal A533 Bars or extra A535 bars may be used. The minimum horizontal lap splice is 2'-6".

3. Vertical reinforcing for the Closure Wall is scheduled to fit a wall height of 6'-0" to a wall height of 14'-0" by varying lap splices. For wall heights less than 6'-0", cut a single A535 bar to fit both faces. For wall heights between 6'-0" and 10'-0", one A535 bar may be omitted. For wall heights exceeding 14'-0", use extra A535 bars omitted from sections where the wall is shorter.

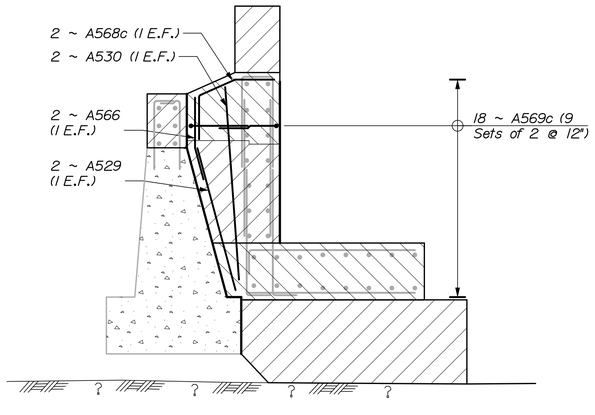


SOUTHWEST WINGWALL REINFORCING ELEVATION

(Cheek wall rebar not shown for clarity, see Section B-B)
(A801 footing dowels not shown for clarity)

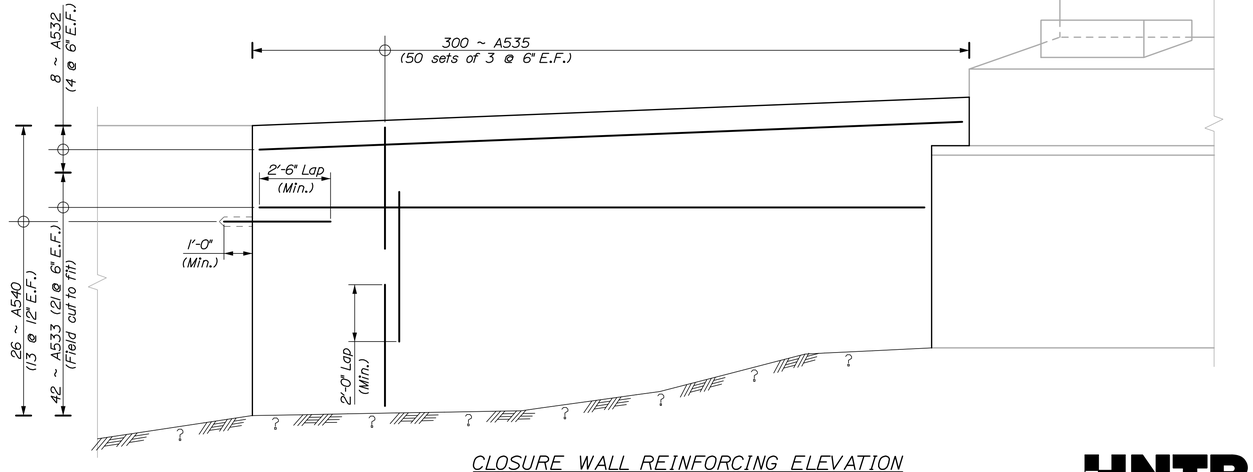


SECTION A-A



SECTION B-B

(Wingwall reinforcing shown screened for clarity)
(Transition barrier reinforcing omitted for clarity)



CLOSURE WALL REINFORCING ELEVATION

(Fence not shown for clarity)

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

	BY	DATE
PROJ. MANAGER	M. Parlin	
DESIGN-DETAILED	H. Walton	07\2022
CHECKED-REVIEWED	D. Guzzi	07\2022
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

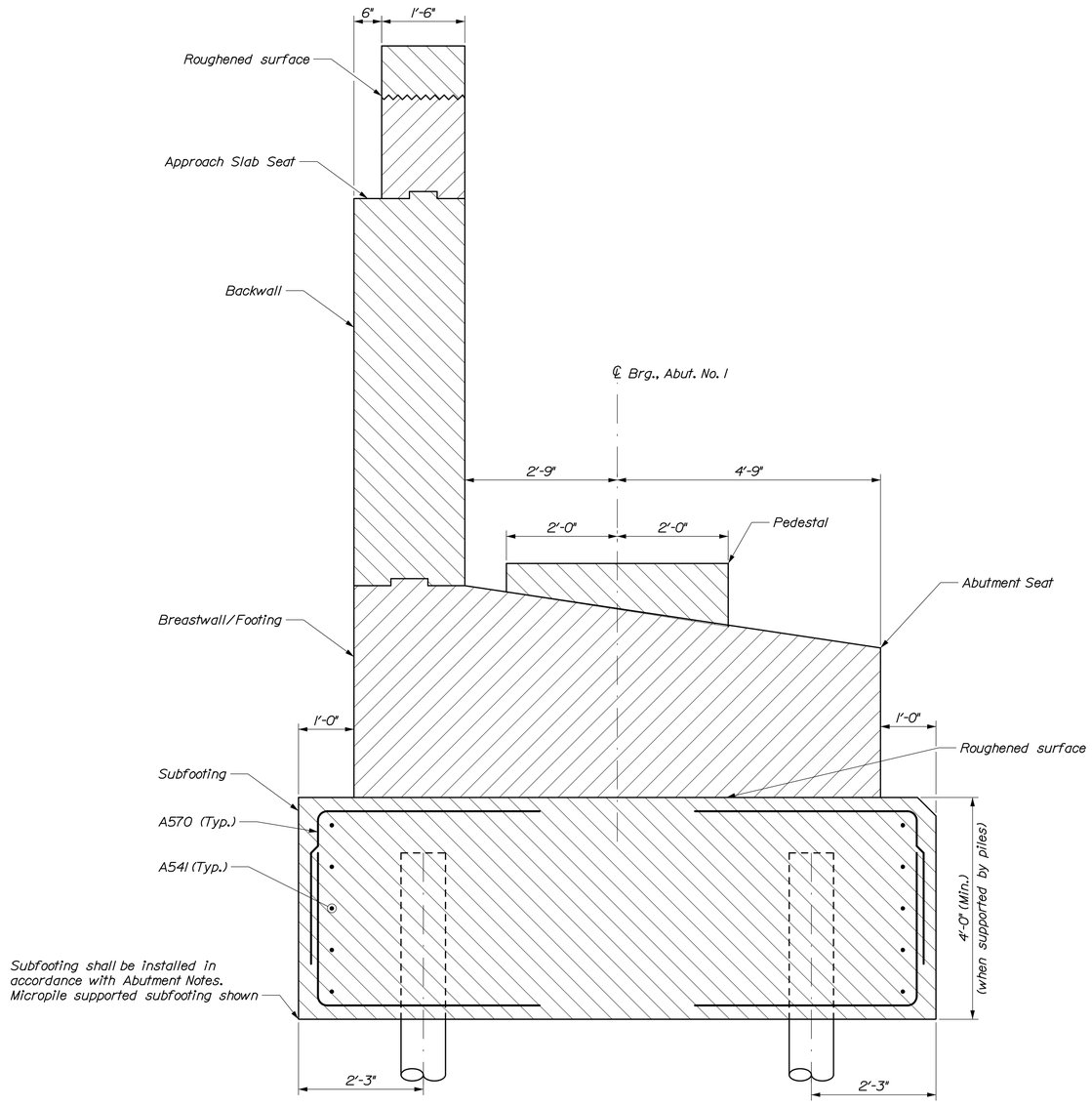
TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

ABUTMENT NO.1 WINGWALL REINFORCING

SHEET NUMBER

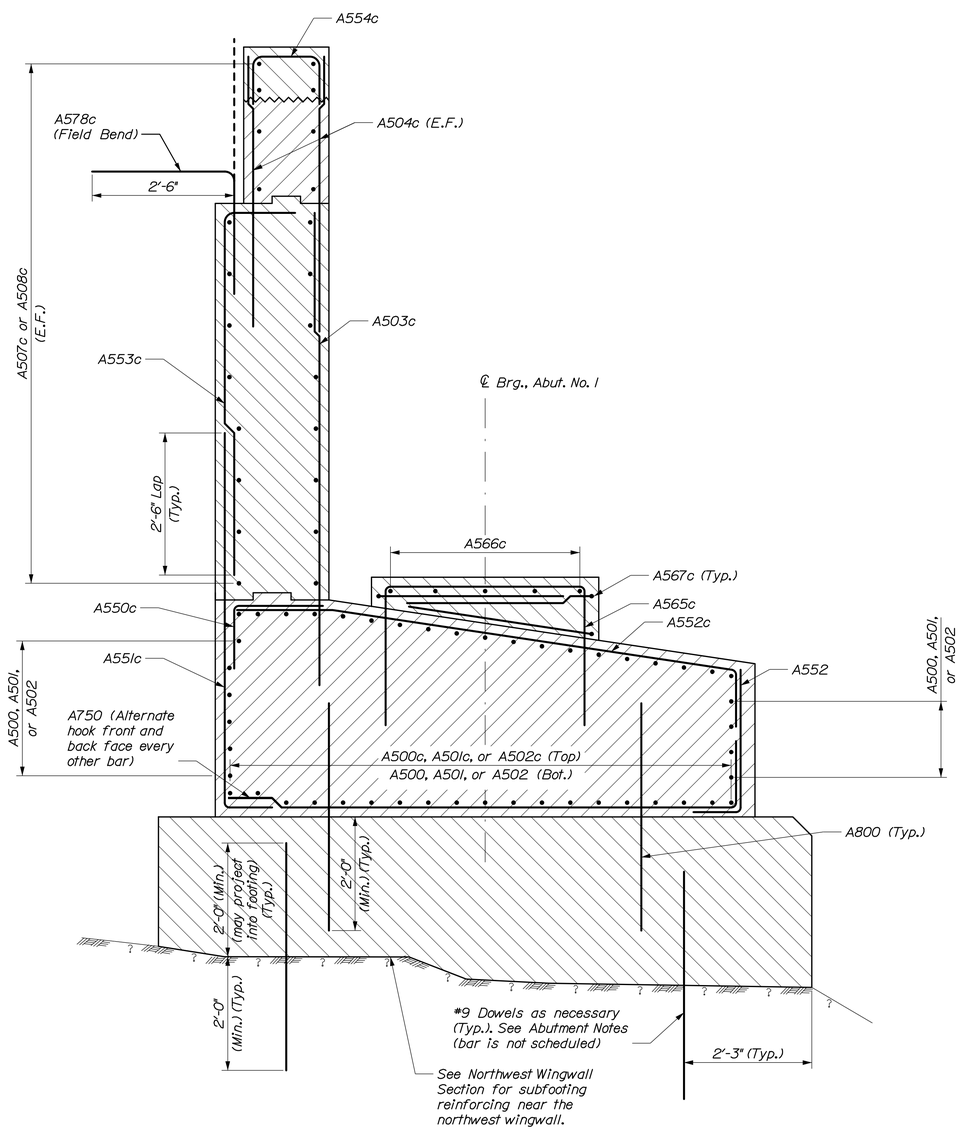
56

OF 111



ABUTMENT NO. 1 SECTION

(Section shown on micropile, section on bedrock similar)
(Reinforcing shown for Phase I subfooting)



ABUTMENT NO. 1 REINFORCING SECTION

(Section shown on bedrock, section on micropile similar)

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	M. Pierce	
DESIGN-DETAILED	H. Walton	07\2022
CHECKED-REVIEWED	T. Cote	07\2022
DESIGN2-DETAILED2	N. Boert	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

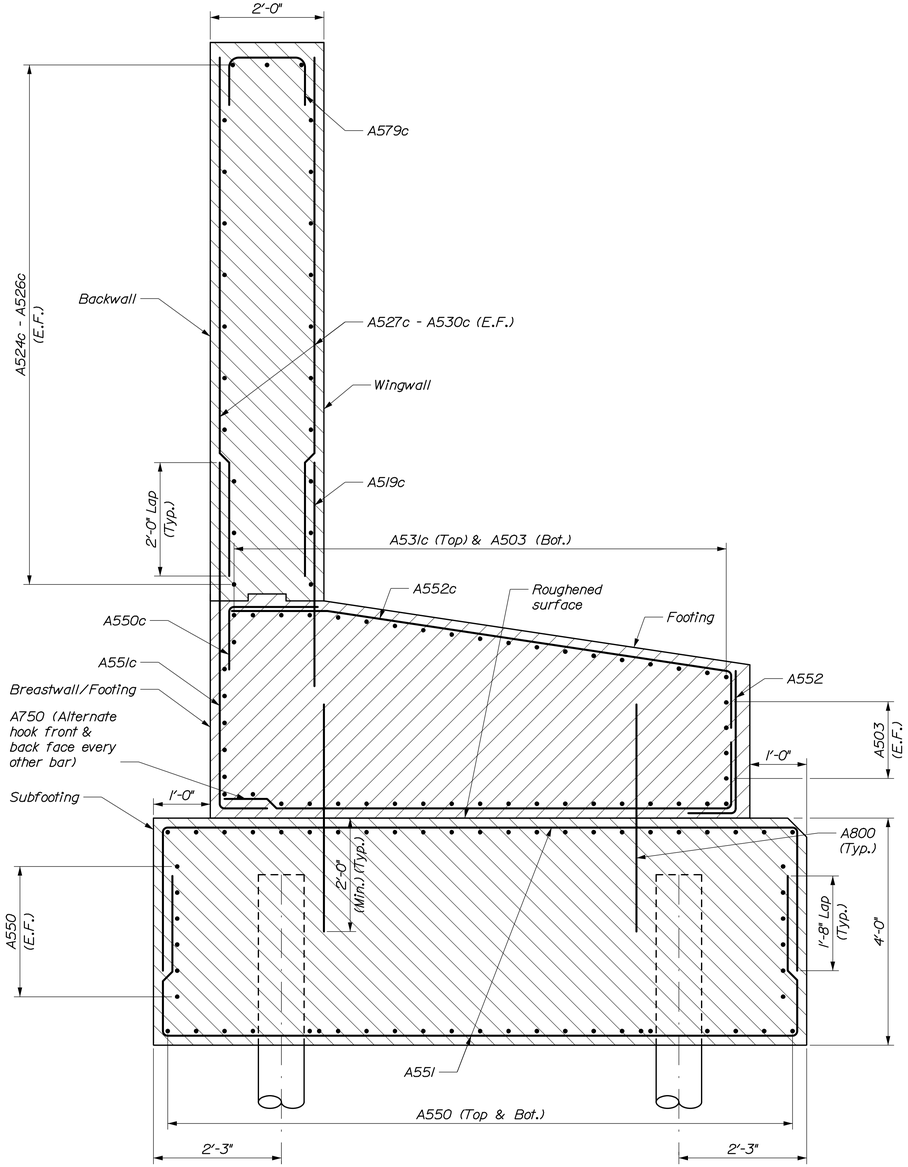
ABUTMENT NO. 1
SECTIONS I

SHEET NUMBER

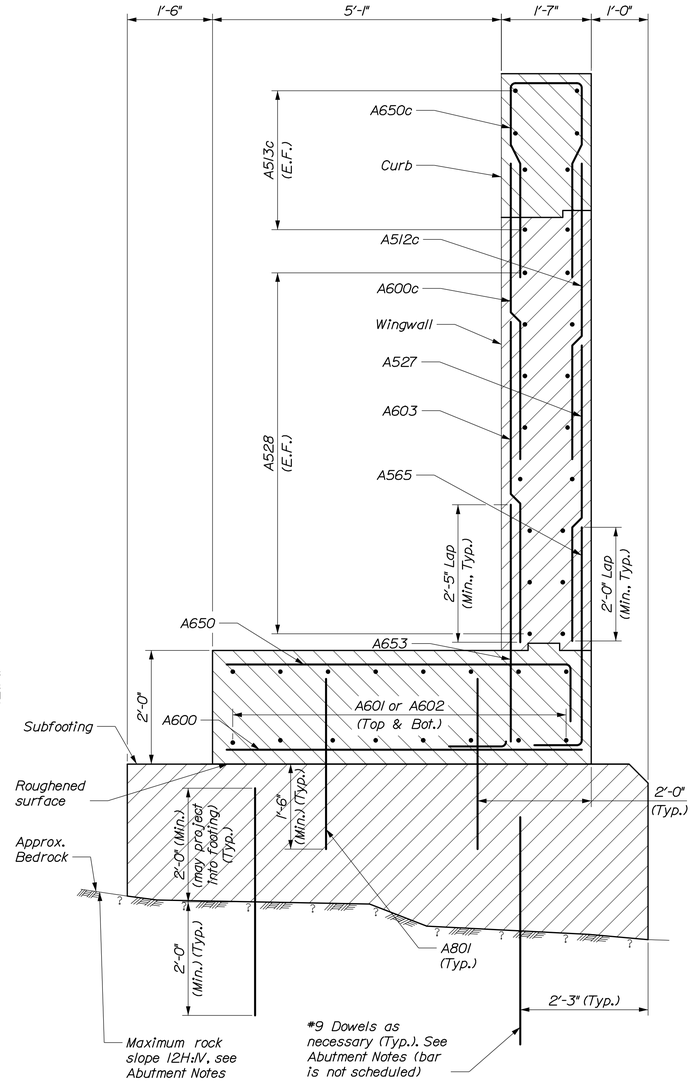
57

OF 111

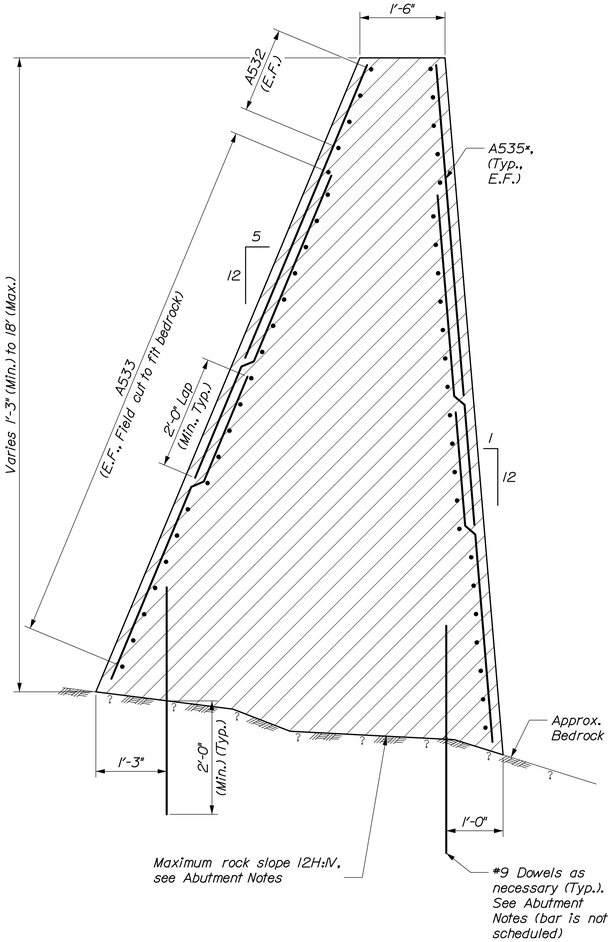
Filename: 057_Abutment 1 Sections I.dgn Division: Username: Date:7/31/2022



NORTHWEST WINGWALL SECTION



SOUTHWEST WINGWALL SECTION



CLOSURE WALL SECTION

* See Note 5 Abutment No. 1 Wingwall Reinforcing sheet for number of A535 bars in section.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	M. Parish	
DESIGN-DETAILED	H. Walton	07\2022
CHECKED-REVIEWED	T. Cote	07\2022
DESIGN2-DETAILED2	D. Guzzi	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW
KENNEBEC

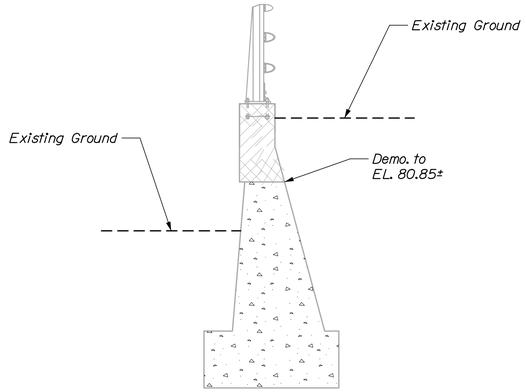
ABUTMENT NO. 1
SECTIONS II

SHEET NUMBER

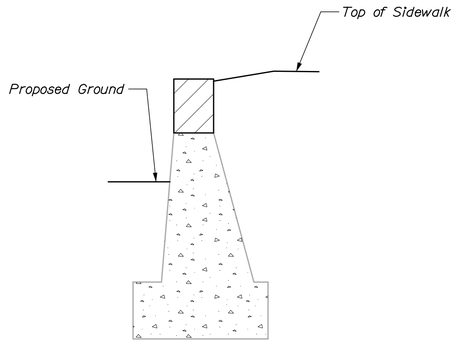
58

OF 111

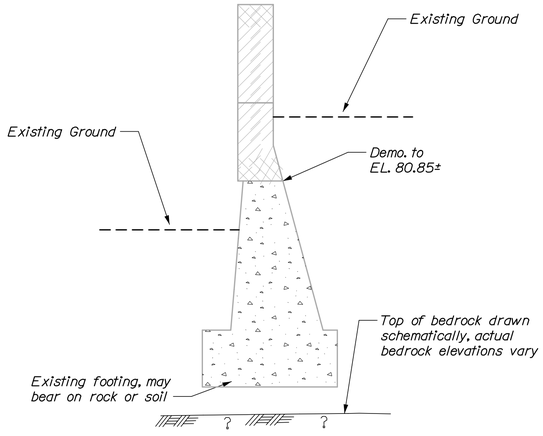
Filename: 058_Abutment 1 Sections II.dgn Division: Username: Date:7/29/2022



SECTION A-A EXISTING



SECTION A-A PROPOSED



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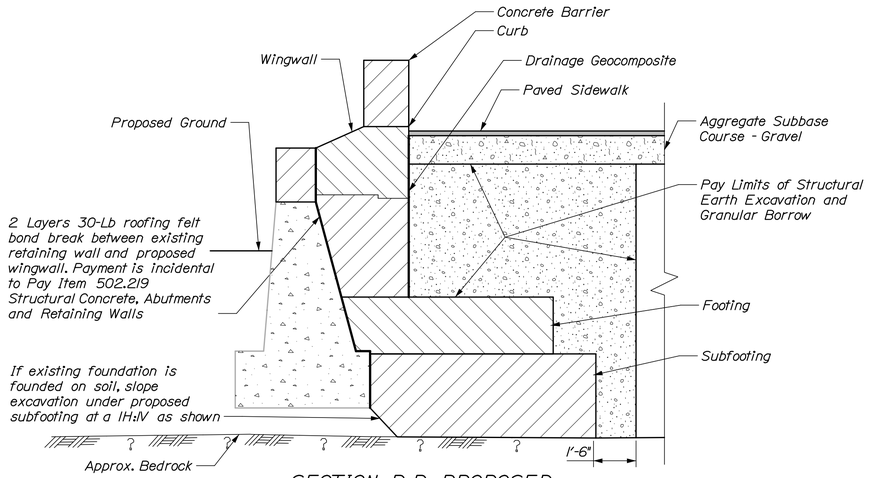

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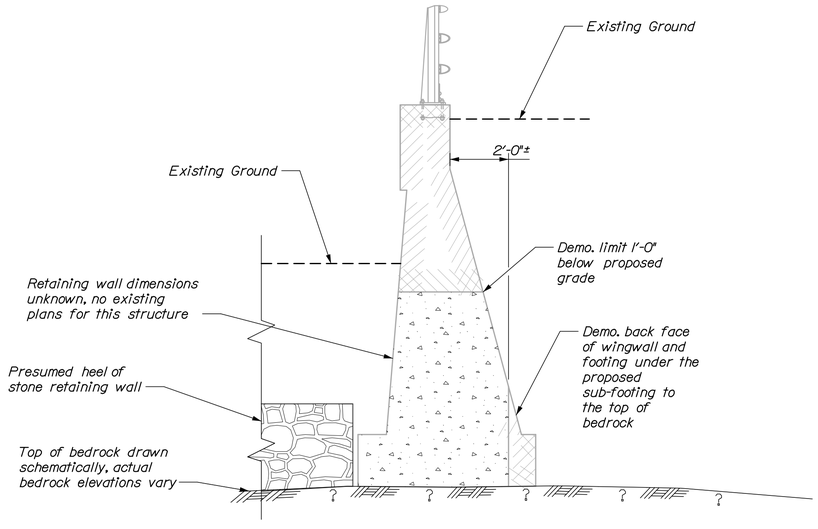

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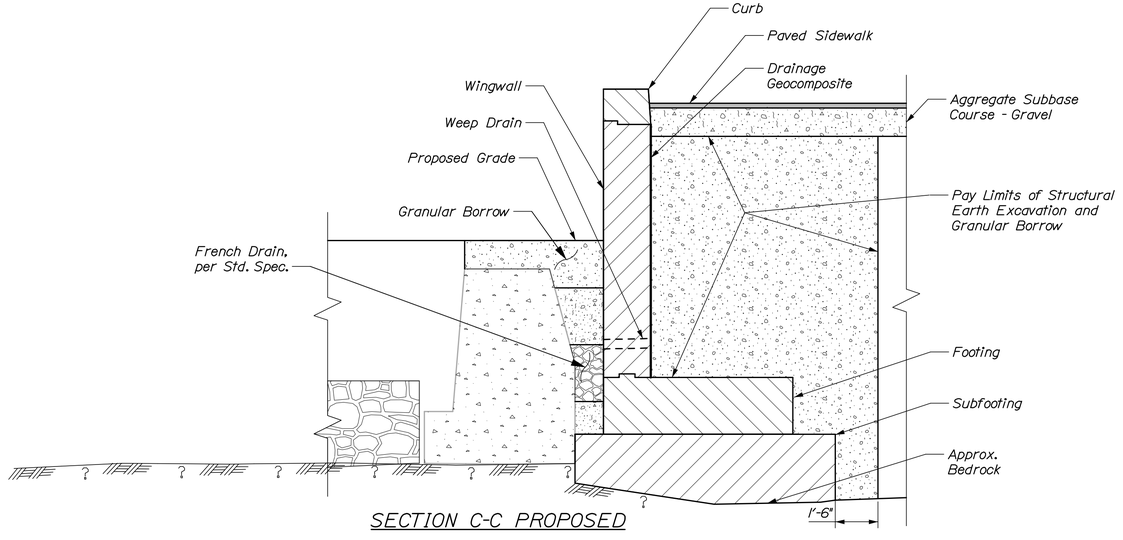


SECTION C-C PROPOSED

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	H. Walton	H. Walton	07\2022
CHECKED-REVIEWED	A. Stephens	T. Cote	07\2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

ABUTMENT NO. 1
SECTIONS III

SHEET NUMBER

59

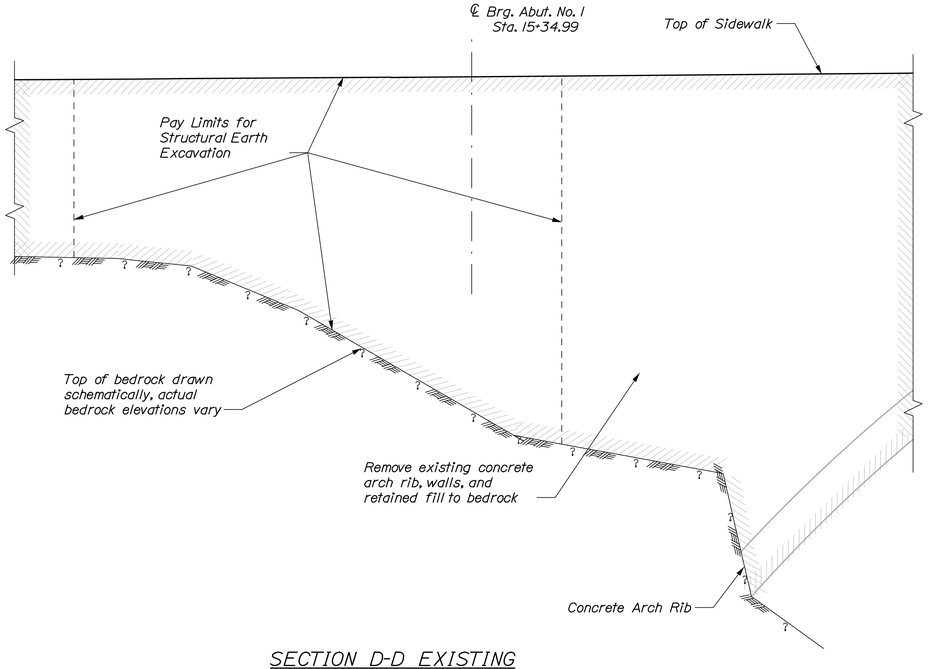
OF 111

Date:7/29/2022

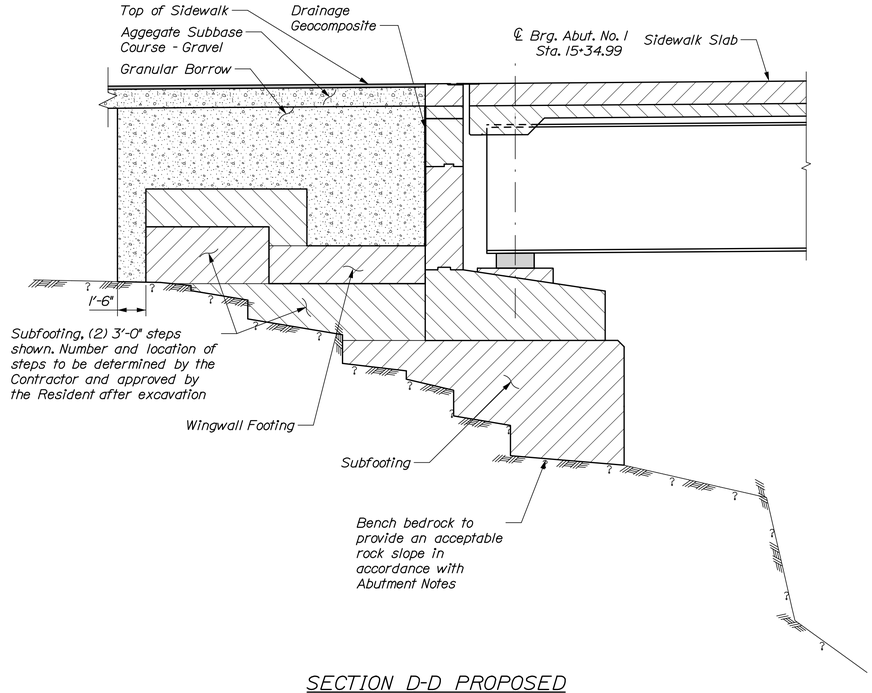
Username:

Division:

Filename: 059_Abutment 1 Sections III.dgn



SECTION D-D EXISTING



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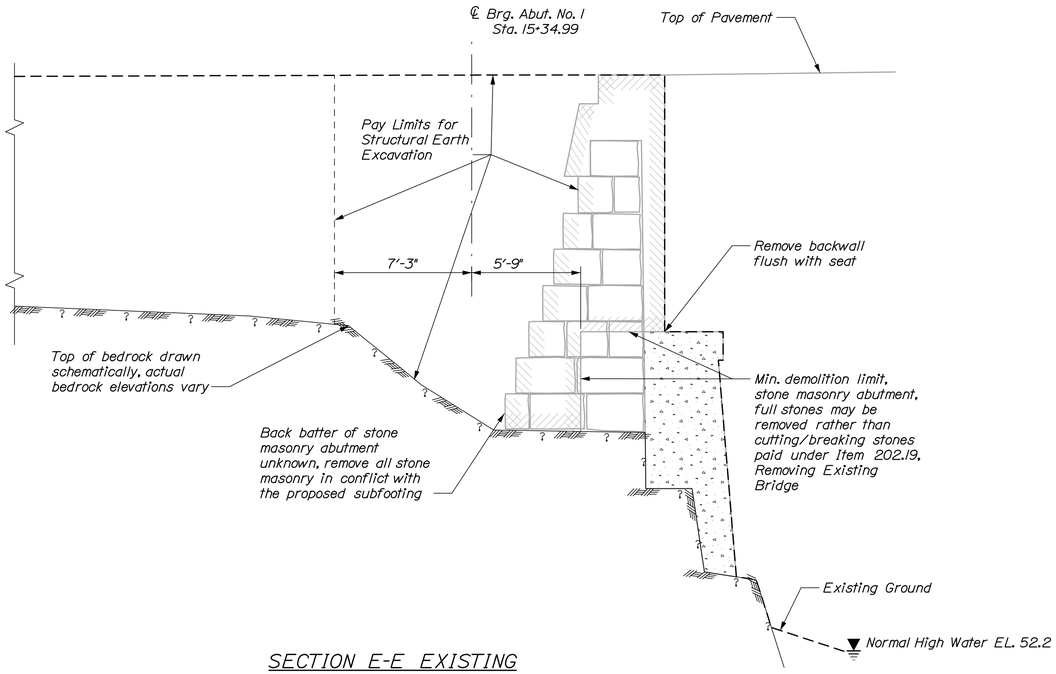
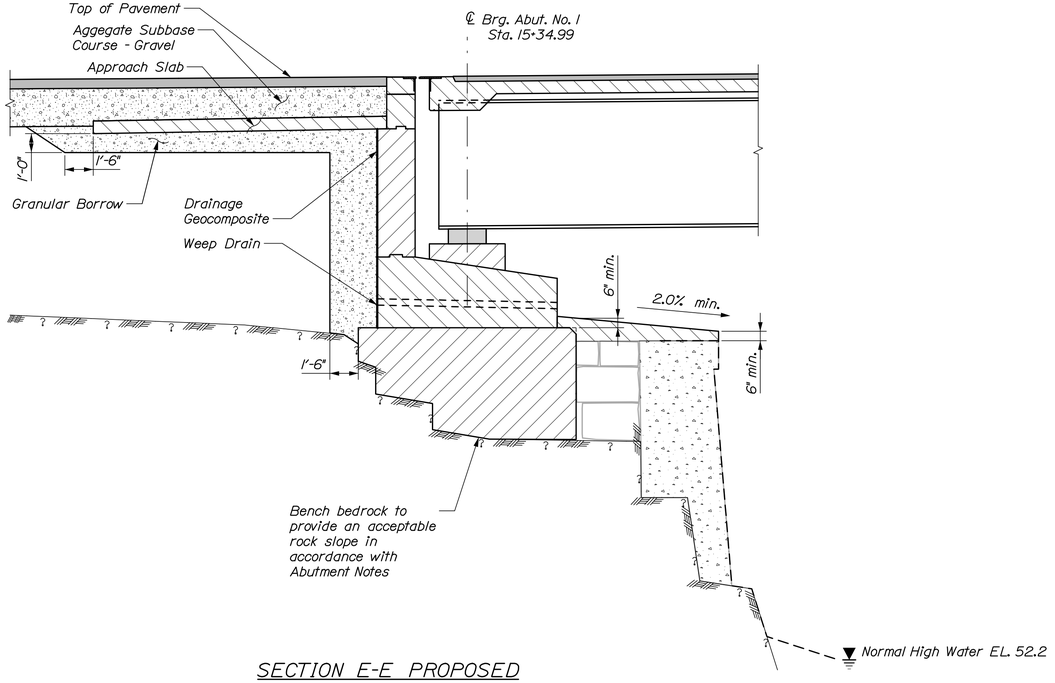


SECTION E-E EXISTING
(Superstructure not shown for clarity)



SECTION E-E PROPOSED

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	H. Walton	BY	DATE
CHECKED-REVIEWED	A. Stephens	T. Cote	07\2022
DESIGN2-DETAILED2			07\2022
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

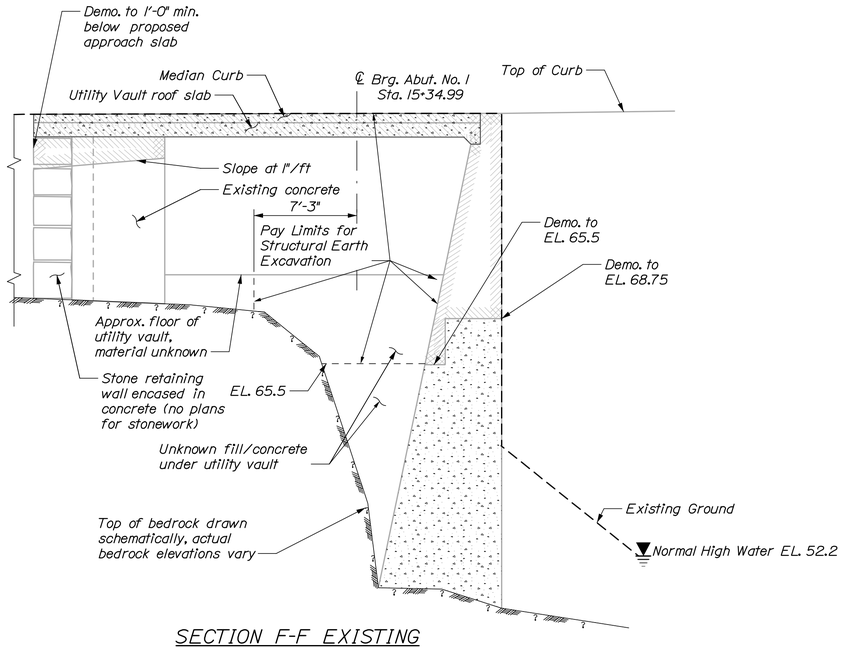
ABUTMENT NO. 1
SECTIONS IV

SHEET NUMBER

60

OF 111

Filename: 060_Abutment 1 Sections IV.dgn Division: Username: Date:7/29/2022



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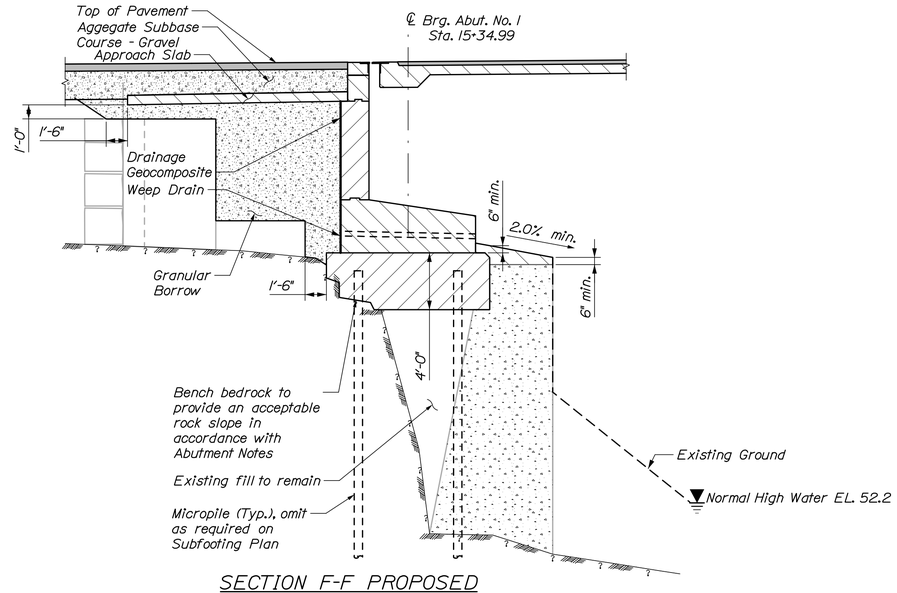
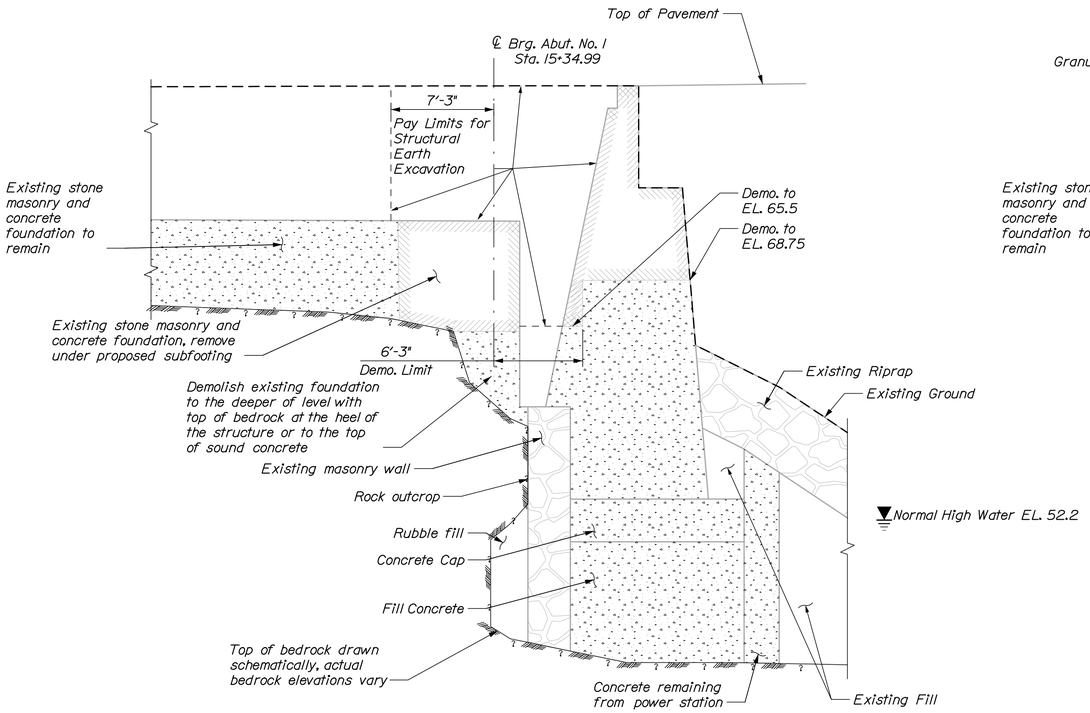


SECTION F-F PROPOSED



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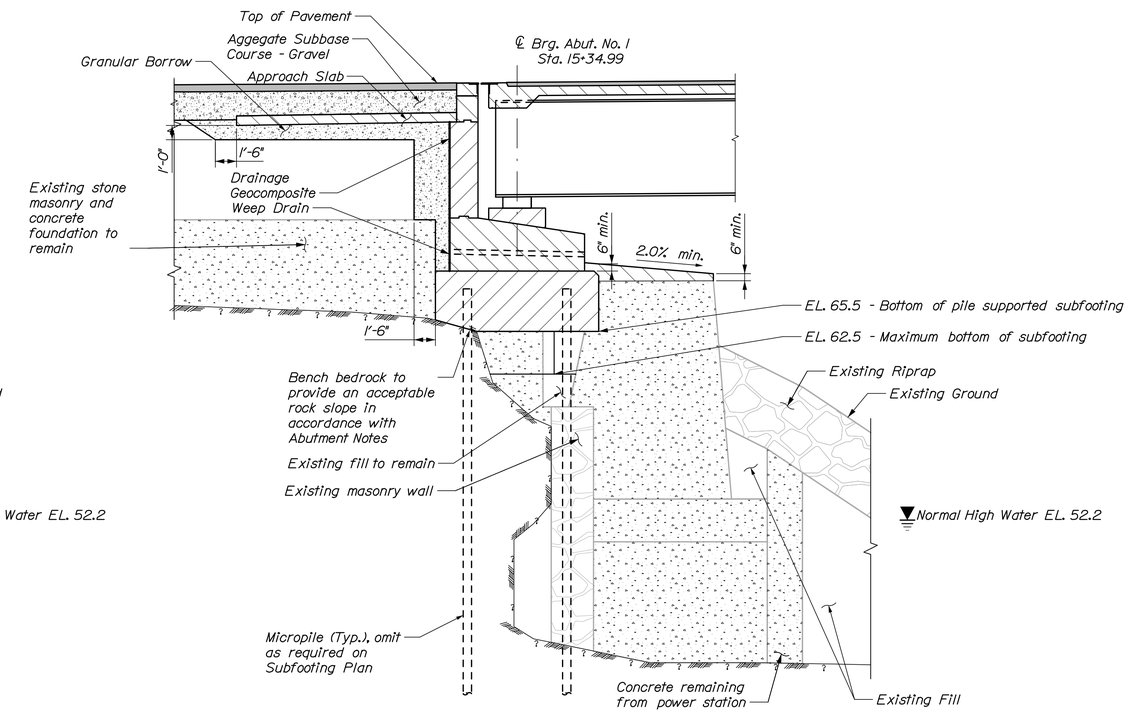


SECTION G-G PROPOSED

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	M. Parlin	
DESIGN-DETAILED	H. Walton	07.2022
CHECKED-REVIEWED	A. Stephens	07.2022
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

ABUTMENT NO. 1
SECTIONS V

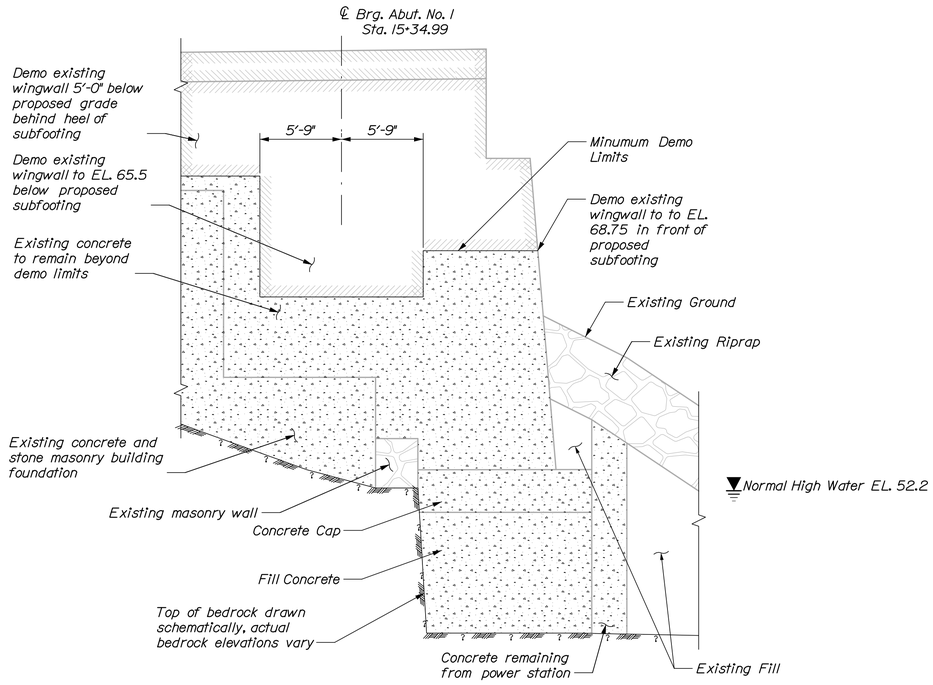
SHEET NUMBER

61

OF 111

HNTB

Filename: 061_Abutment 1 Sections V.dgn Division: Username: Date:7/29/2022



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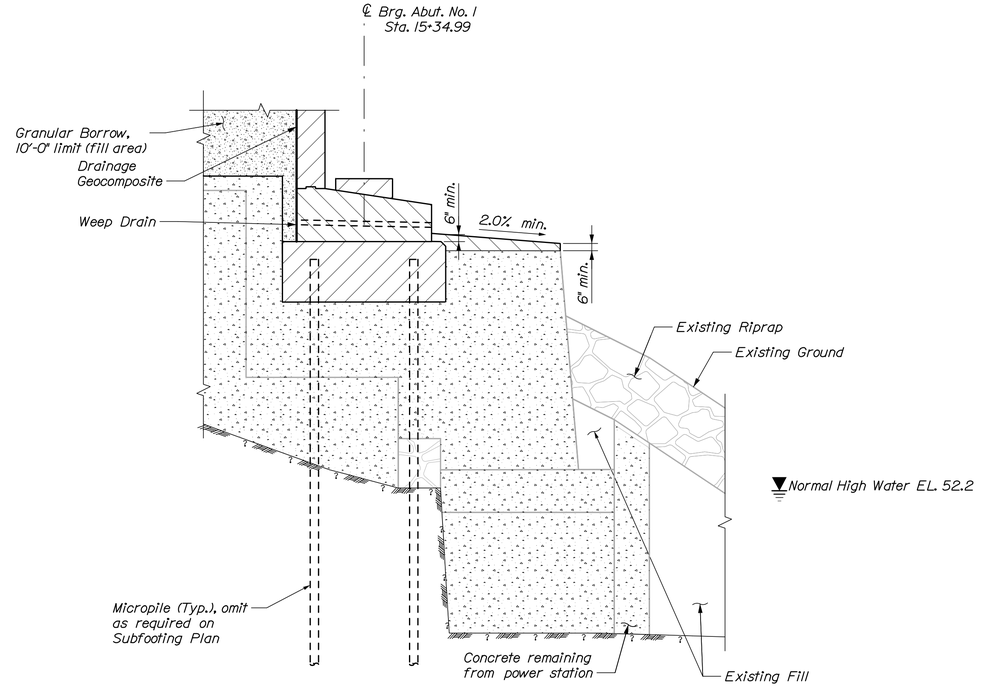


SECTION H-H PROPOSED

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	H. Walton	BY	DATE
CHECKED-REVIEWED	A. Stephens	T. Cote	07\2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

ABUTMENT NO. 1
SECTIONS VI

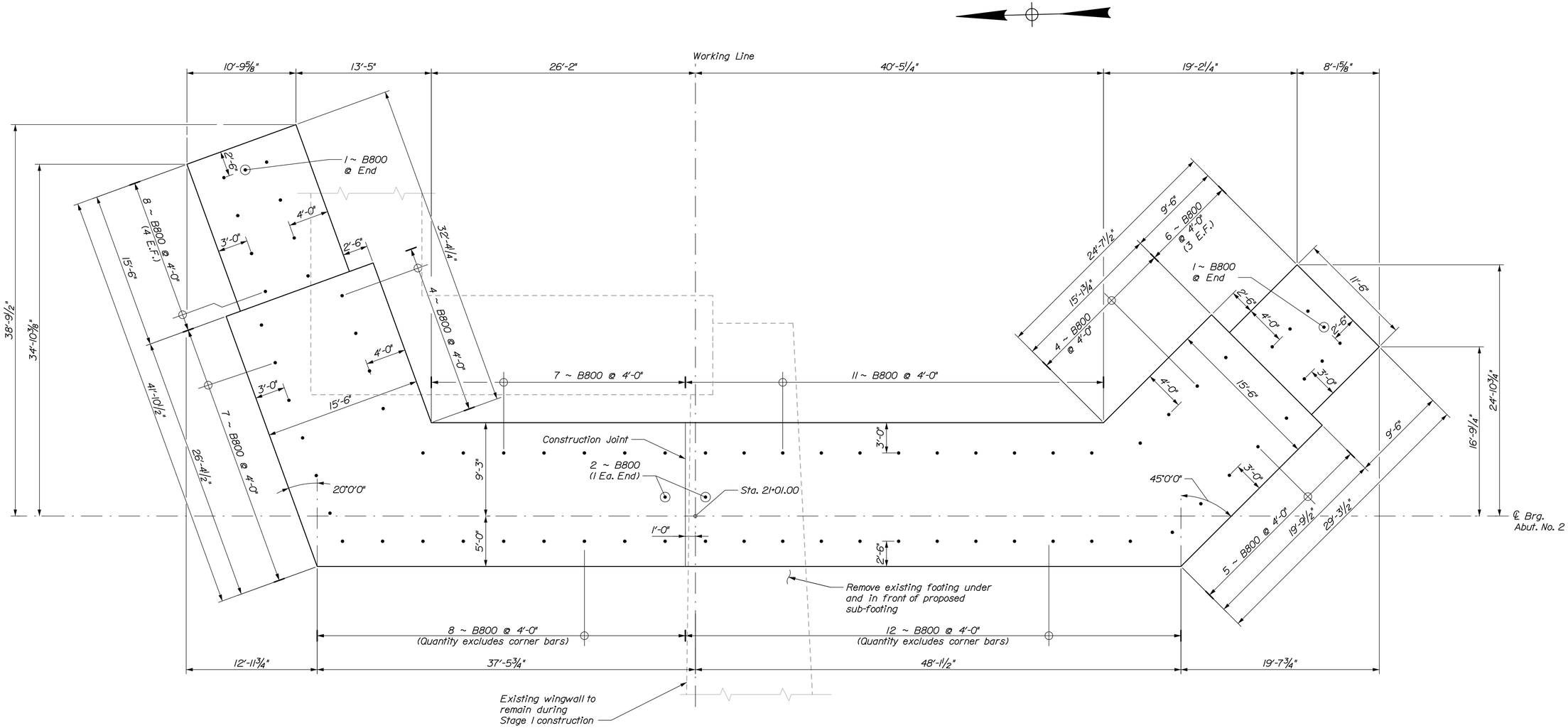
SHEET NUMBER

62

OF 111

HNTB

Filename: 062_Abutment 1 Sections VI.dgn Division: Username: Date:7/29/2022



ABUTMENT NO. 2 SUBFOOTING PLAN

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

	BY	DATE
M. Perlin		
H. Walton	H. Walton	07\2022
N. Boert	T. Cote	07\2022

SIGNATURE

P.E. NUMBER

DATE

PROJ. MANAGER	
DESIGN-DETAILED	H. Walton
CHECKED-REVIEWED	N. Boert
DESIGN2-DETAILED2	
DESIGN3-DETAILED3	
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

ABUTMENT NO. 2
SUBFOOTING PLAN

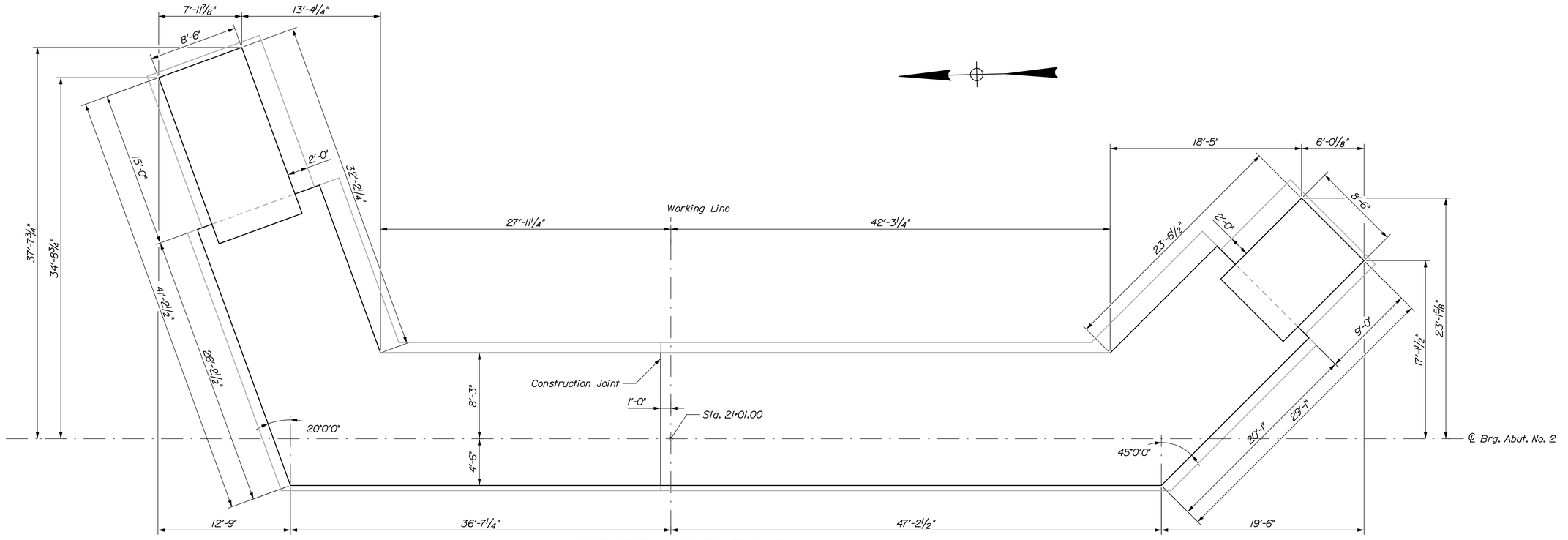
SHEET NUMBER

63

OF 111

HNTB

Filename: 063_Abutment 2 Subfooting Plan.dgn Division: Username: Date:7/29/2022



ABUTMENT NO. 2 FOOTING PLAN

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	H. Walton	H. Walton	07\2022
CHECKED-REVIEWED	H. Walton	N. Boert	07\2022
DESIGN2-DETAILED2	N. Boert		
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

ABUTMENT NO. 2
FOOTING PLAN

SHEET NUMBER

64

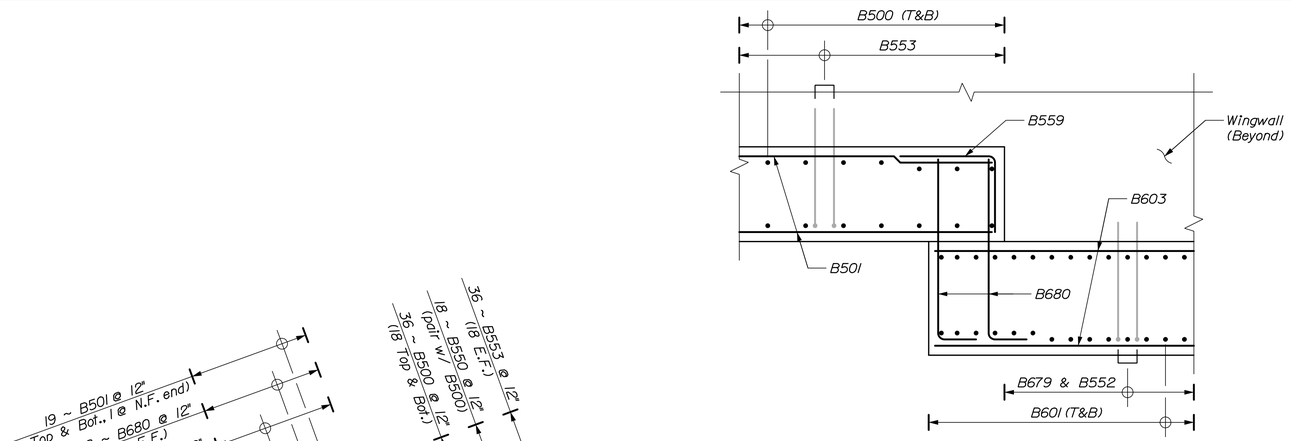
OF 111

Username:

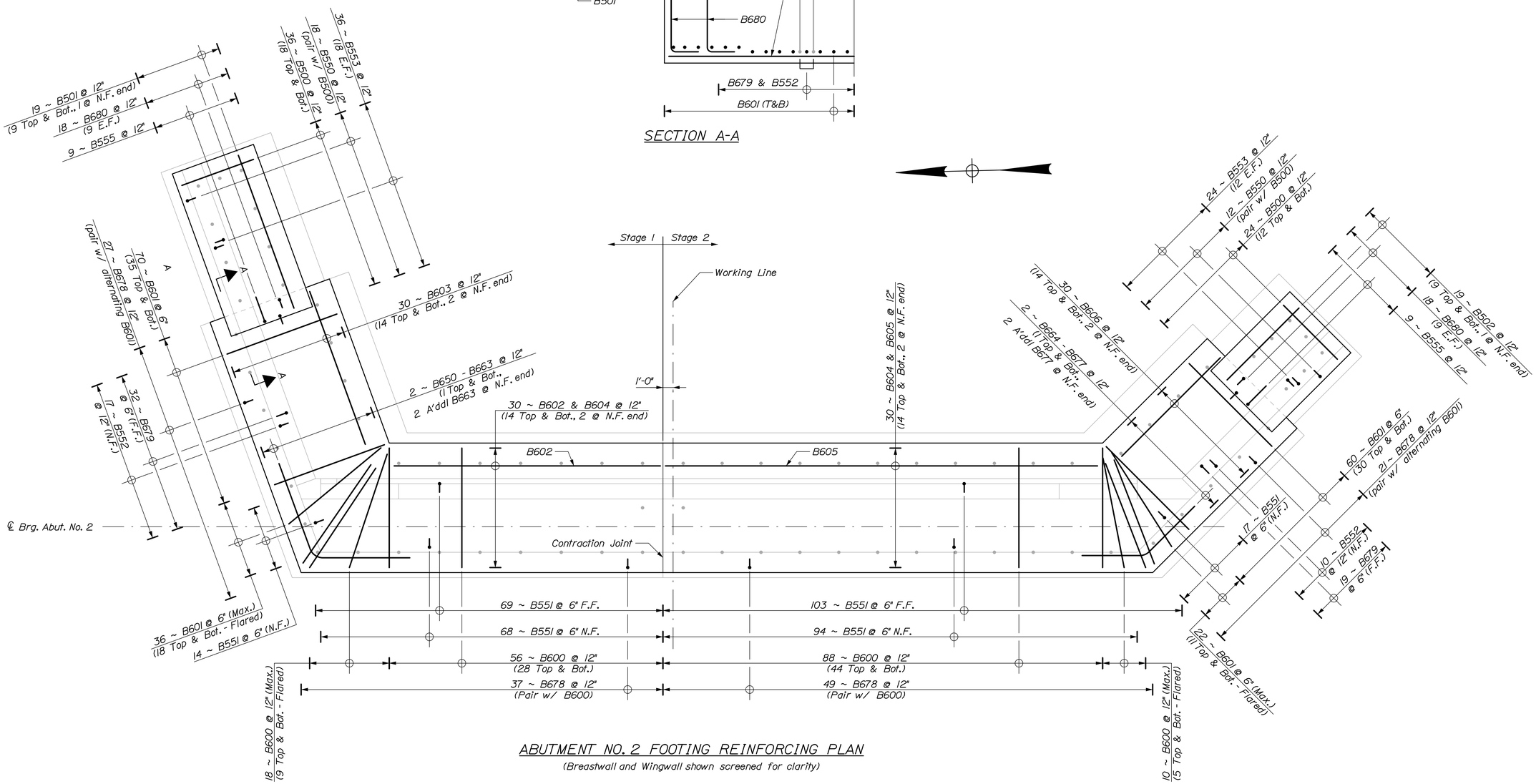
Date:7/29/2022

Division:

Filename: 064_Abutment 2 Footing Plan.dgn



SECTION A-A



ABUTMENT NO. 2 FOOTING REINFORCING PLAN

(Breastwall and Wingwall shown screened for clarity)

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	H. Walton	BY	DATE
CHECKED-REVIEWED	H. Walton	H. Walton	07/2022
DESIGN2-DETAILED2	N. Boert	T. Cote	07/2022
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

ABUTMENT NO. 2 FOOTING REINFORCING PLAN

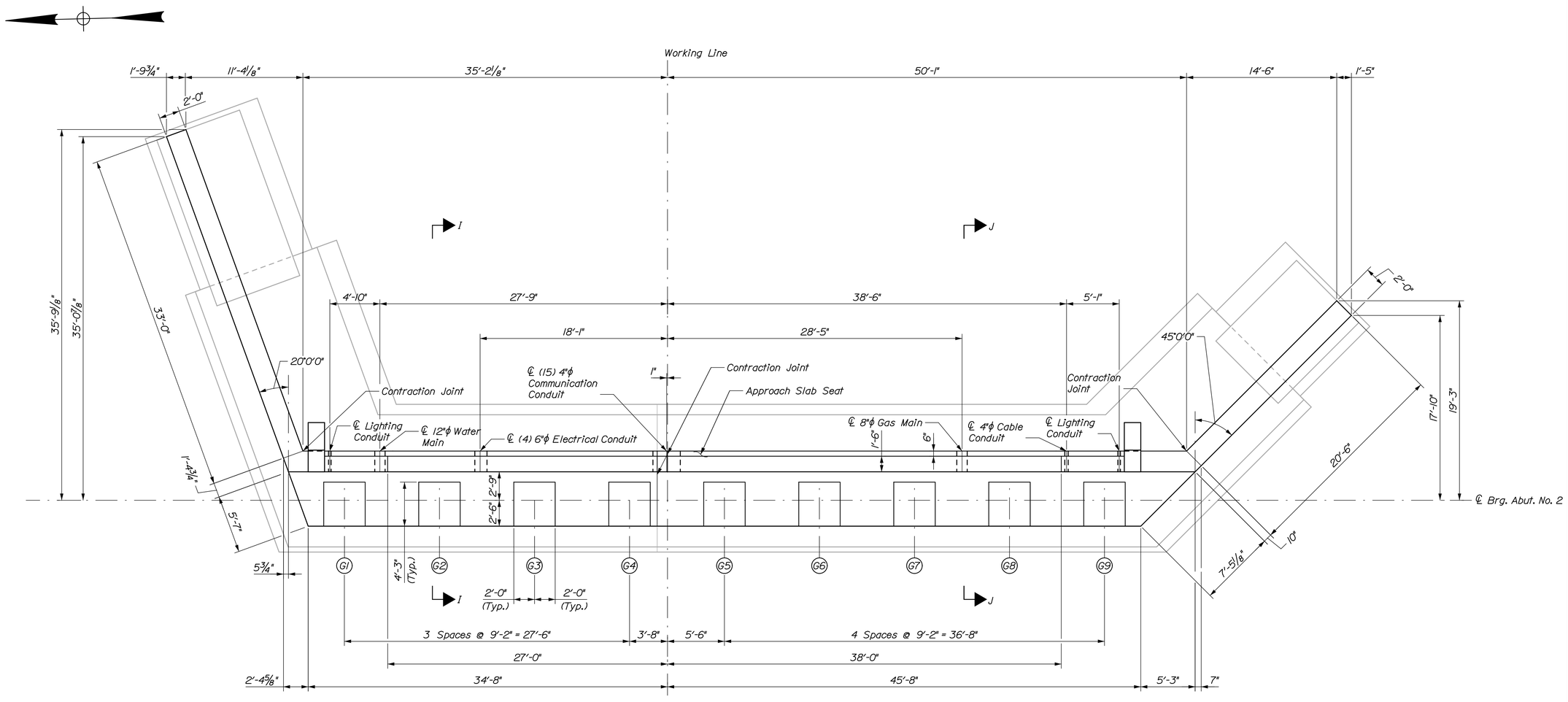
SHEET NUMBER

65

OF 111

HNTB

Filename: 065_Abutment 2 Footing Reinforcing.dgn Division: Username: Date:7/29/2022



ABUTMENT NO. 2 PLAN

(Seal and Footing shown screened for clarity)

NOTES:

Sections I-I and J-J are on sheet Abutment 2 Sections III.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	H. Walton	BY	DATE
CHECKED-REVIEWED	N. Boert	H. Walton	07\2022
DESIGN2-DETAILED2		T. Cote	07\2022
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

ABUTMENT NO. 2 PLAN

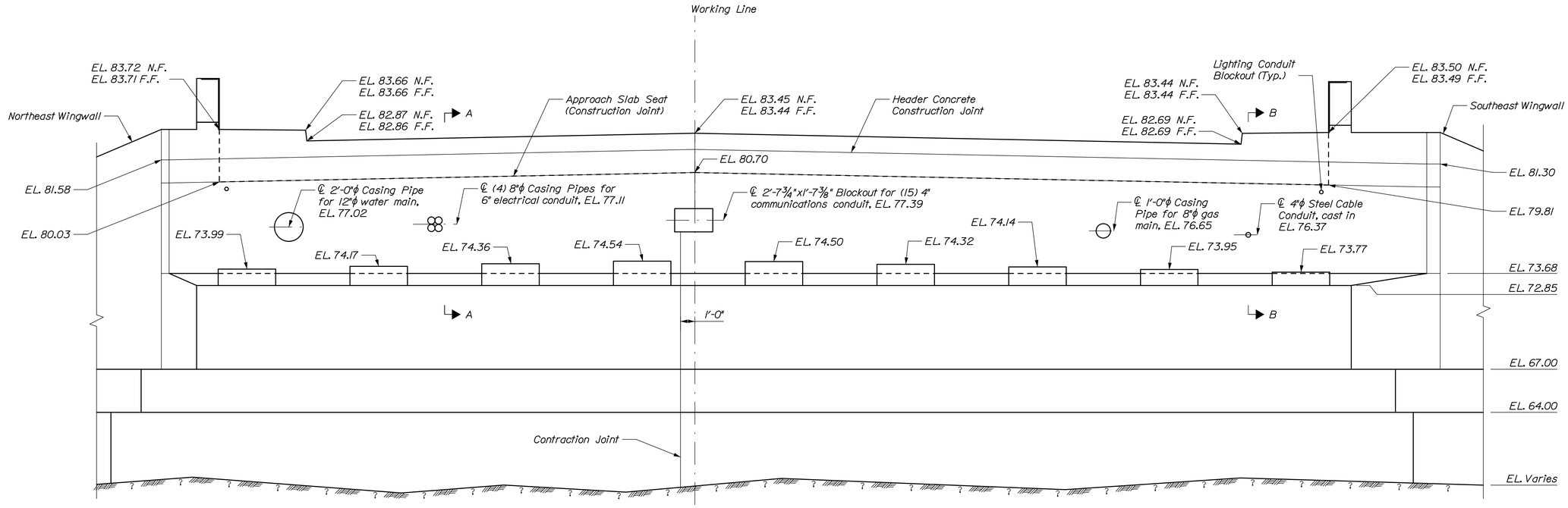
SHEET NUMBER

66

OF 111

HNTB

Filename: 066_Abutment 2 Plan.dgn Division: Username: Date:7/29/2022



ABUTMENT NO. 2 ELEVATION

NOTES

1. For Section A-A and Section B-B see Abutment 1 Elevation Sheet.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

P.E. NUMBER

DATE

SIGNATURE

PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	H. Walton	BY	DATE
CHECKED-REVIEWED	N. Boert	H. Walton	07\2022
DESIGN2-DETAILED2		T. Cote	07\2022
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

ABUTMENT NO. 2
ELEVATION

SHEET NUMBER

67

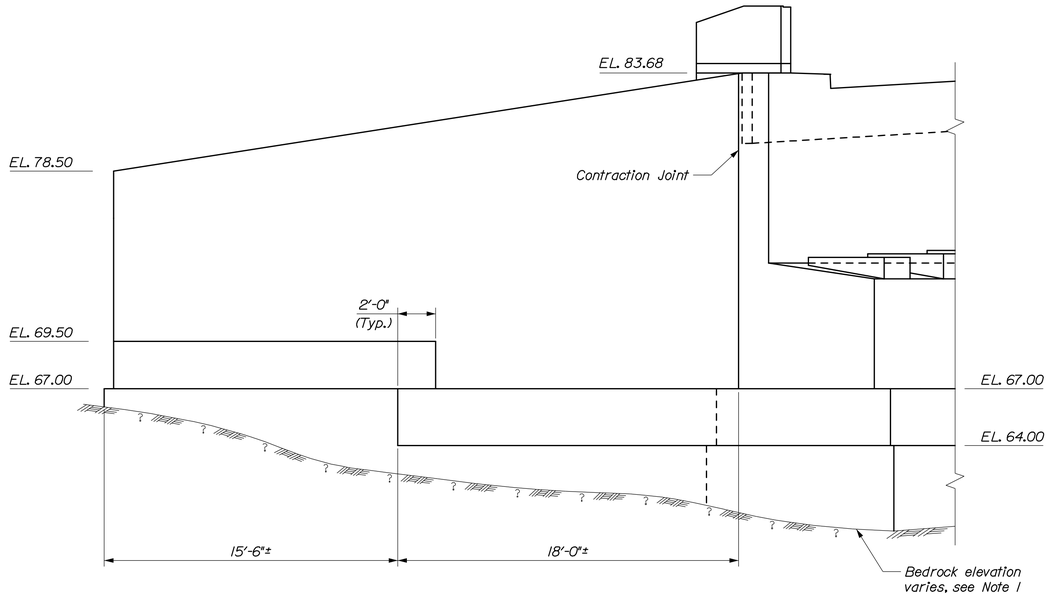
OF 111

Date:7/29/2022

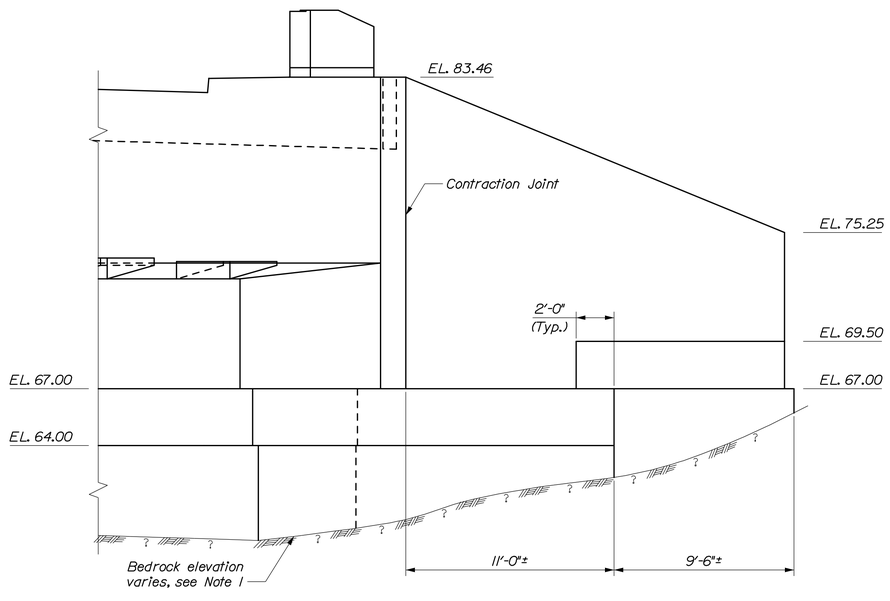
Username:

Division:

Filename: 067_Abutment 2 Elevation.dgn



NORTHEAST WINGWALL ELEVATION



SOUTHEAST WINGWALL ELEVATION

NOTES:

1. Bedrock elevations are drawn schematically based on boring elevations and 1970 As-Built plan bedrock elevations. Actual bedrock elevations will vary from what is shown. No rock information is available where the Abutment No. 2 breastwall and the Northeast Wingwall meet and there may be a significant drop in bedrock compared to what is shown in the Northeast Wingwall Elevation.

2. The wingwall subfooting is designed for a minimum bedrock heel elevation of 56.0 feet at wall locations where the top of wingwall subfooting is elevation 64.0 feet and a minimum bedrock elevation of 59.0 feet at wall locations where the top of wingwall subfooting is elevation 67.0 feet. If the top of bedrock elevation at the heel of the subfooting the Contractor shall notify the Resident and the subfooting design will be evaluted by the Department.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

PROJ. MANAGER	M. Pearl		
DESIGN-DETAILED	H. Walton	BY	DATE
CHECKED-REVIEWED	N. Boert	H. Walton	07\2022
DESIGN2-DETAILED2		T. Cote	07\2022
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

ABUTMENT NO. 2
WINGWALLS

SHEET NUMBER

68

OF 111

Username:

Date:7/29/2022

Division:

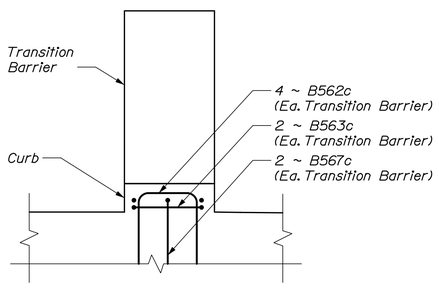
Filename: 068_Abutment 2 Wingwalls.dgn

Username:
Division:
Date:7/29/2022
Filename: 069_Abutment 2 Reinforcing.dgn

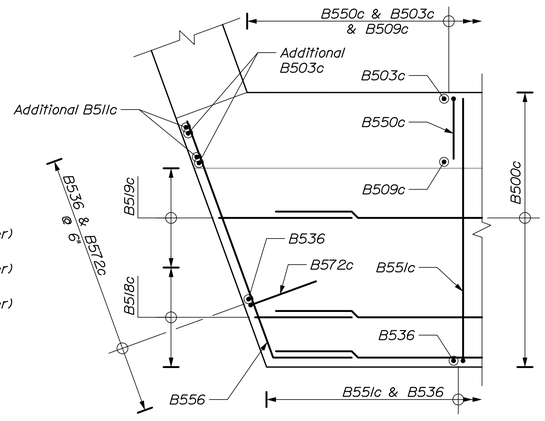
STAGE 1 | STAGE 2

6 ~ B557c @ 12" (Top)
2 ~ B558c (Top) @ 12" w/ 5 ~ B511c (3 N.F., 2 F.F.)
27 ~ B555c @ 12" (Top)
66 ~ B510c @ 12" (33 E.F.)
27 ~ B556c @ 12" (into App. Slab)
33 ~ B554c @ 12" (F.F.)
35 ~ B509c @ 12" (N.F.)
40 ~ B555c @ 12" (Top)
92 ~ B510c @ 12" (46 E.F.)
38 ~ B556c @ 12" (into App. Slab)
46 ~ B554c @ 12" (F.F.)
52 ~ B509c @ 12" (N.F.)
6 ~ B557c @ 12" (Top)
6 ~ B558c (Top) @ 12" w/ 12 ~ B511c (6 E.F.)
1 ~ B561c w/ B511c & B503c @ Angled Backwall Face
2 ~ B561c w/ B511c & B503c @ Angled Backwall Face
Detail A (Typ.)
2 ~ B568c (1 E.F.)
8 ~ B513c (4 E.F.)
2 ~ B565c (1 E.F.)
16 ~ B566c (8 E.F.)
2 ~ B569c (1 E.F.)
2 ~ B517c (E.F.)
2 ~ B516c (E.F.)
B561c
A
A
B
B
B511
B503c
B507c
B504c
B508c
B506c
B511c
B503c
B573c
8 ~ B512c (4 E.F.)
2 ~ B564c (1 E.F.)
8 ~ B514c (4 E.F.)
8 ~ B515c (4 E.F.)
1 ~ B589c
B536
B572c
B550c
B551c
B500c
7 ~ B518c & B519c @ 6"
B503
45 ~ B552c & B553c (5 Ea. Pedestal)
27 ~ B588c (3 Ea. Pedestal)
B502c
B506
B551c
7 ~ B520c & B521c @ 6"
1 ~ B590c
B536
B551
B504
B507
B551
B551
Contraction Joint
11 ~ B570c (N.F.) (Lap w/ B504c or B507c)
5 ~ B559c @ 12" (F.F.)
12 ~ sets of B505c & B507c @ 12" (6 E.F.)
10 ~ sets of B504c & B505c @ 12" (5 E.F.)
15 ~ sets of B500c & B501c @ 6" (Top)
11 ~ B556 @ 6" (Angled Face)
13 ~ sets of B503 & B505 @ 6" (F.F.)
11 ~ sets of B504 & B505 @ 6" (N.F.)
5 ~ B560c @ 12" (F.F.)
11 ~ B571c (N.F.) (Lap w/ B506c or B508c)
12 ~ sets of B505c & B508c @ 12" (6 E.F.)
15 ~ sets of B501c & B502c @ 6" (Top)
10 ~ sets of B505c & B506c @ 12" (5 E.F.)
11 ~ sets of B505 & B507 @ 6" (N.F.)
13 ~ sets of B505 & B506 @ 6" (F.F.)
11 ~ B557 @ 6" (Angled Face)
11 ~ Pairs of B536 & B572c @ 6" (N.F. - Angle)
68 ~ B536 @ 6" (N.F.)
68 ~ pairs of B550c & B551c @ 6"
69 ~ B503c @ 6" (F.F.)
94 ~ B536 @ 6" (N.F.)
94 ~ pairs of B550c & B551c @ 6"
103 ~ B503c @ 6" (F.F.)
1 ~ Pairs of B536 & B573c @ 6" (N.F. - Angle) (Field Cut B573c as necessary)

ABUTMENT NO. 2 REINFORCING ELEVATION

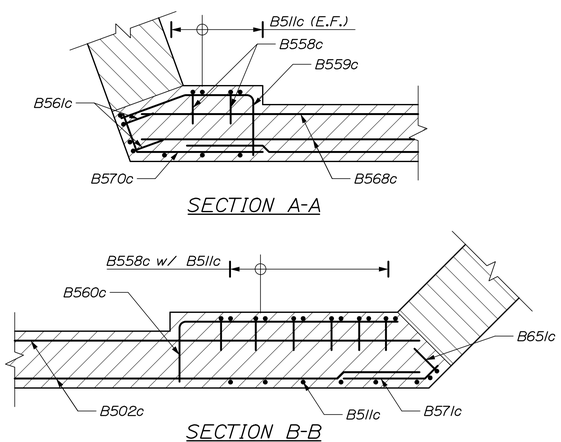


DETAIL A



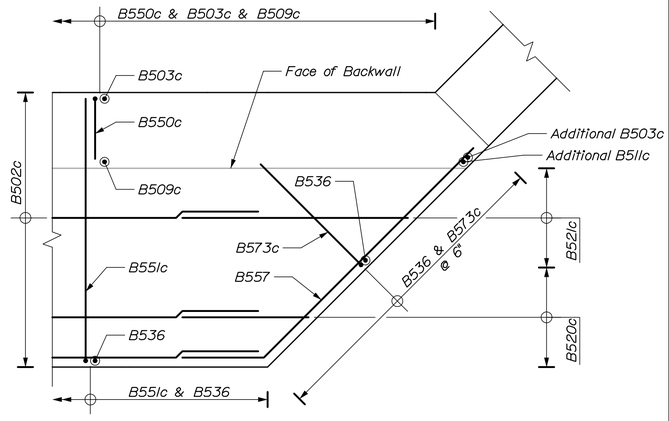
NORTHEAST CORNER SEAT PLAN

(Backwall shown screened for clarity)
(Wingwall reinforcing not shown for clarity)



SECTION A-A

SECTION B-B



SOUTHEAST CORNER SEAT PLAN

(Backwall shown screened for clarity)
(Wingwall reinforcing not shown for clarity)

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

PROJ. MANAGER	M. Perlin	BY	DATE
DESIGN-DETAILED	H. Walton	H. Walton	07\2022
CHECKED-REVIEWED	H. Walton	N. Boert	T. Cote
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

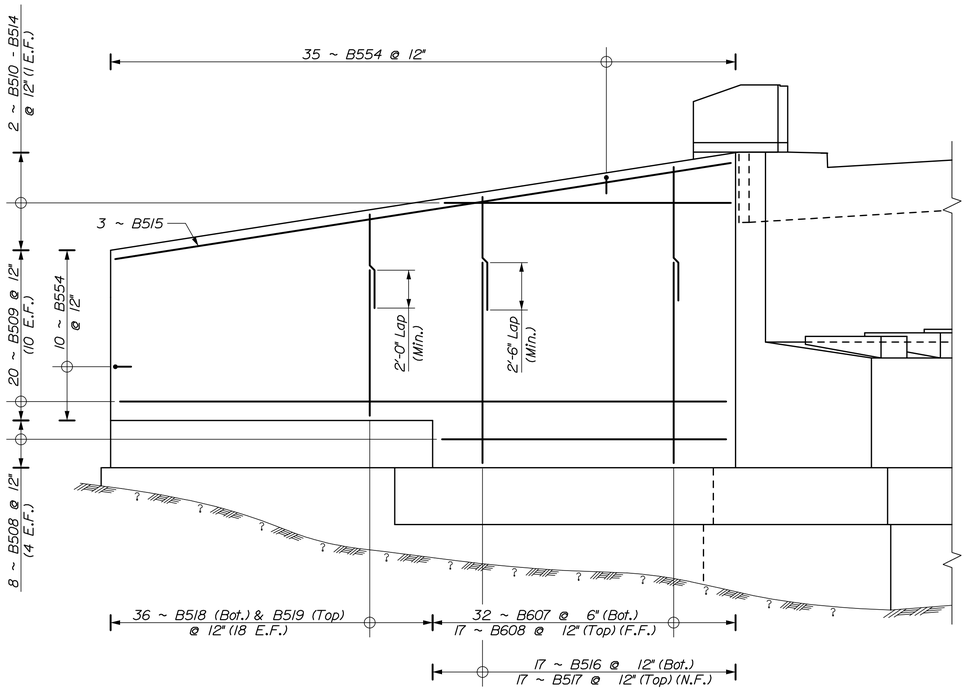
TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

ABUTMENT NO. 2 REINFORCING

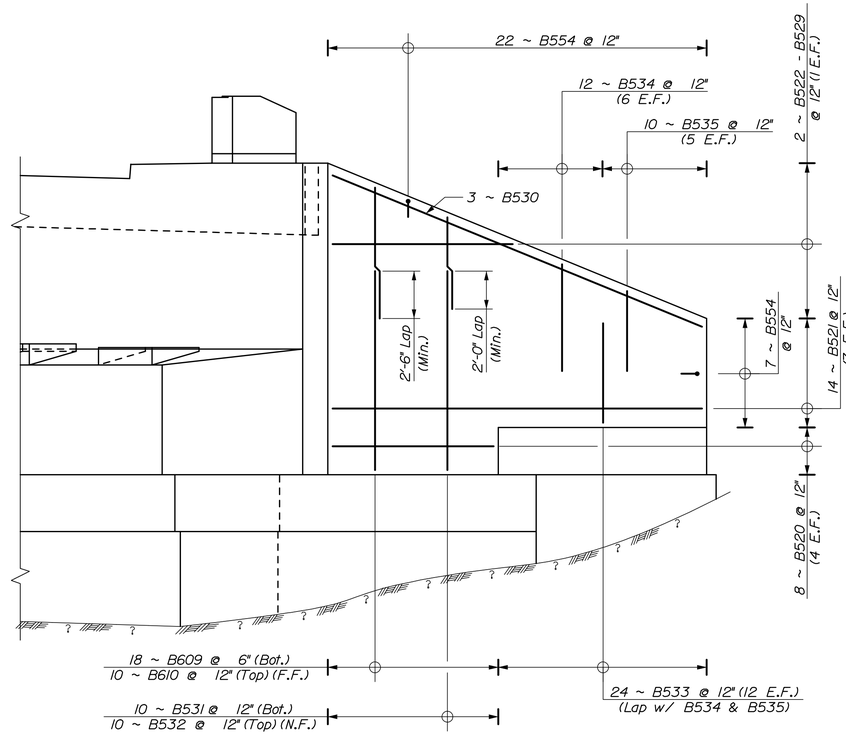
SHEET NUMBER

69

OF 111



NORTHEAST WINGWALL REINFORCING ELEVATION



SOUTHEAST WINGWALL REINFORCING ELEVATION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	M. Parlin	
DESIGN-DETAILED	E. Beausoleil	07\2022
CHECKED-REVIEWED	H. Walton	07\2022
DESIGN2-DETAILED2	N. Boert	
DESIGN3-DETAILED3	T. Cote	
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

ABUTMENT NO. 2
WINGWALLS REINFORCING

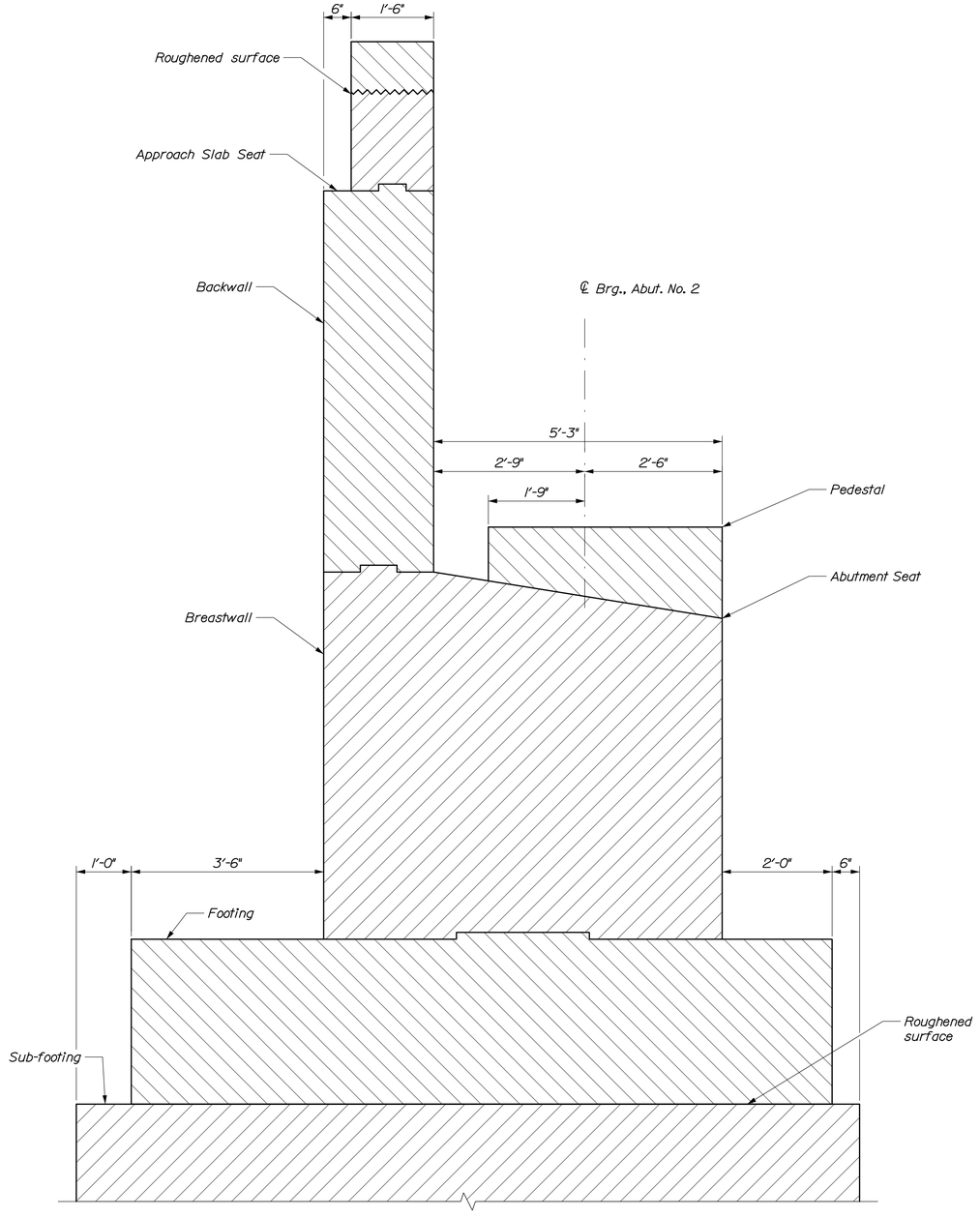
SHEET NUMBER

70

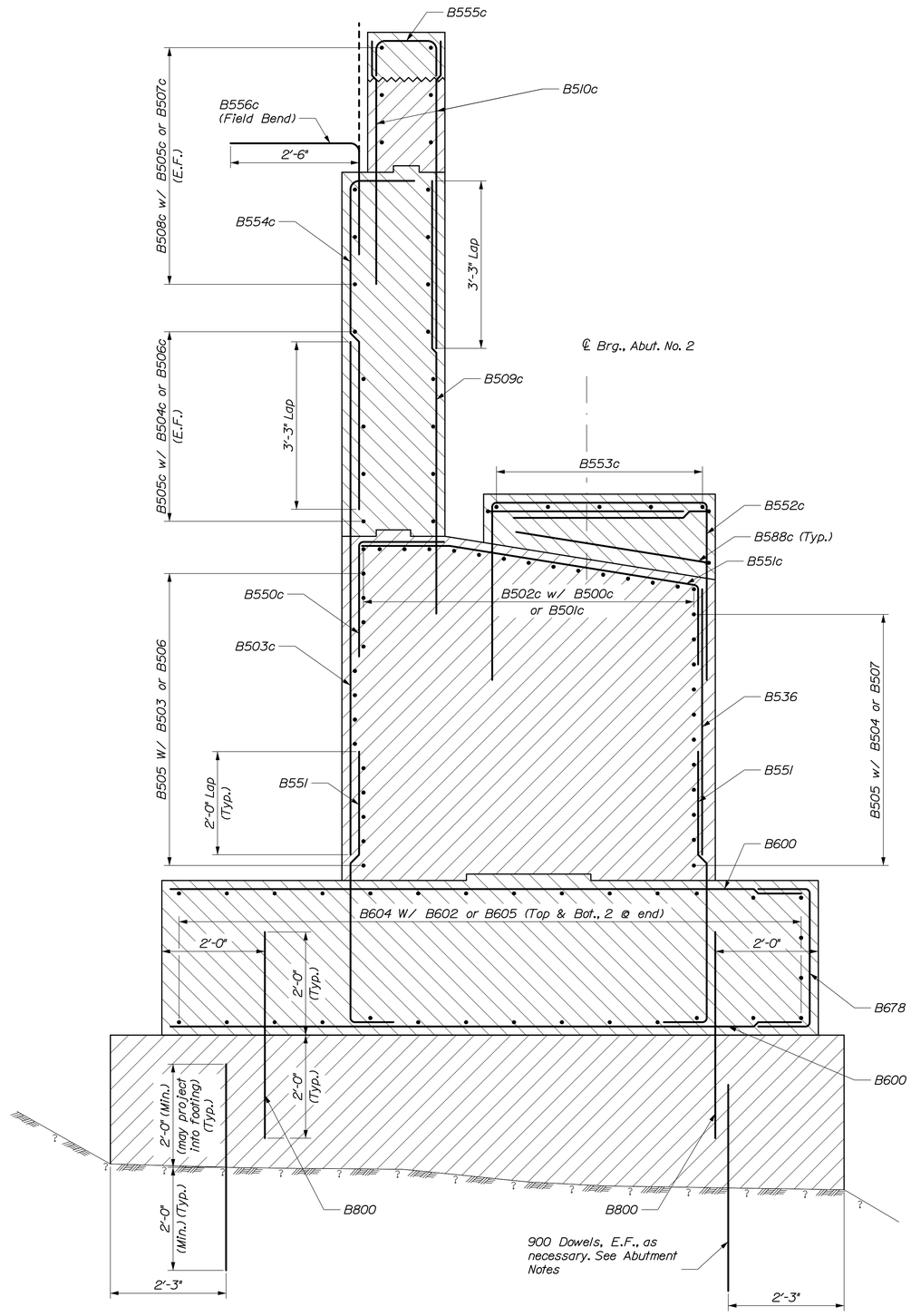
OF 111

HNTB

Filename: 070_Abutment 2 WingwallReinforcing.dgn Division: Username: Date:7/29/2022



ABUTMENT NO. 2 SECTION



ABUTMENT NO. 2 REINFORCING SECTION

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

PROJ. MANAGER	M. Pearl		
DESIGN-DETAILED	H. Walton	E. Beausoleil	07\2022
CHECKED-REVIEWED	N. Boert	T. Cote	07\2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

ABUTMENT NO. 2
SECTIONS I

SHEET NUMBER

71

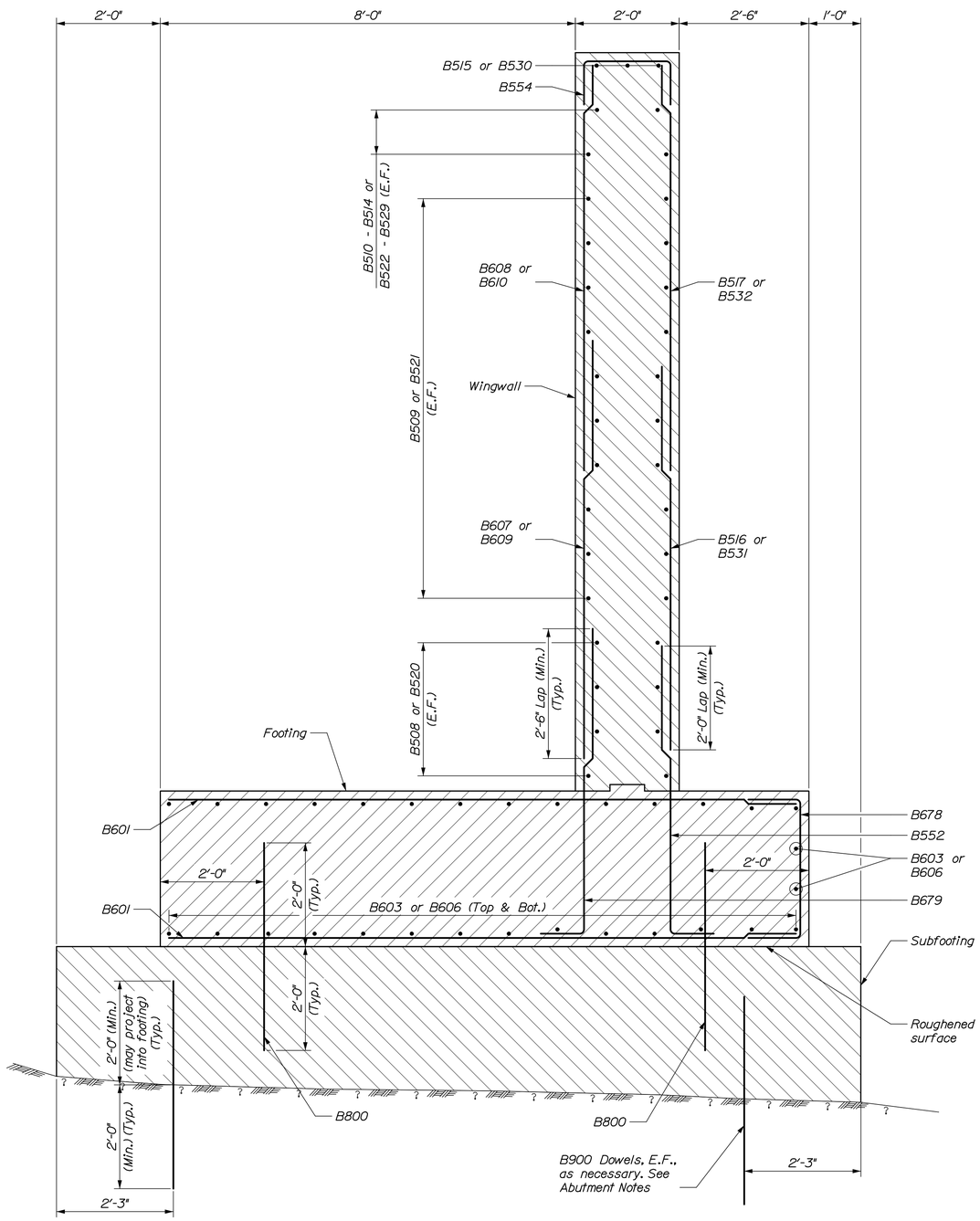
OF 111

Username:

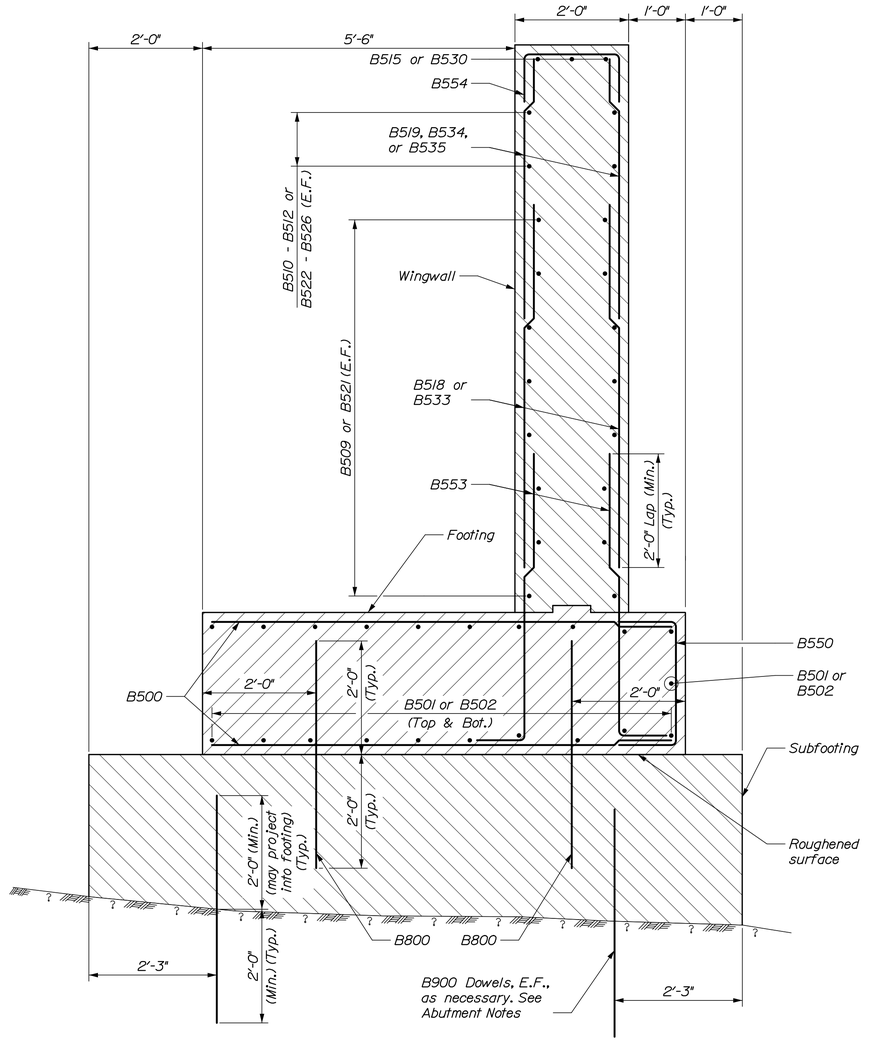
Division:

Date:7/31/2022

Filename: 071_Abutment 2 Section I.dgn



SOUTHEAST/NORTHEAST WINGWALL SECTION, TALLER PORTION



SOUTHEAST/NORTHEAST WINGWALL SECTION, SHORTER PORTION

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

PROJ. MANAGER	M. Parlin	BY	DATE
DESIGN-DETAILED	H. Walton	E. Beausoleil	07\2022
CHECKED-REVIEWED	N. Boert	T. Cote	07\2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW
KENNEBEC

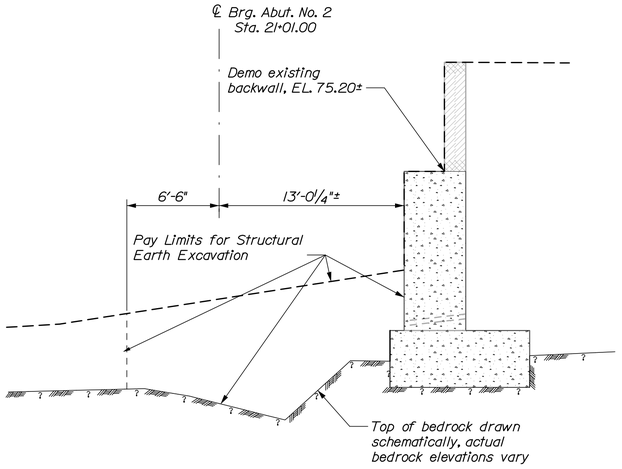
ABUTMENT NO. 2
SECTIONS II

SHEET NUMBER

72

OF 111

Filename: 072_Abutment 2 Section II.dgn Division: Username: Date:7/29/2022



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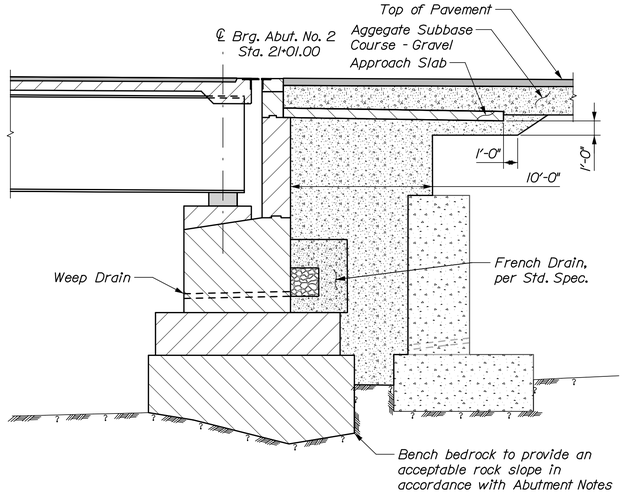

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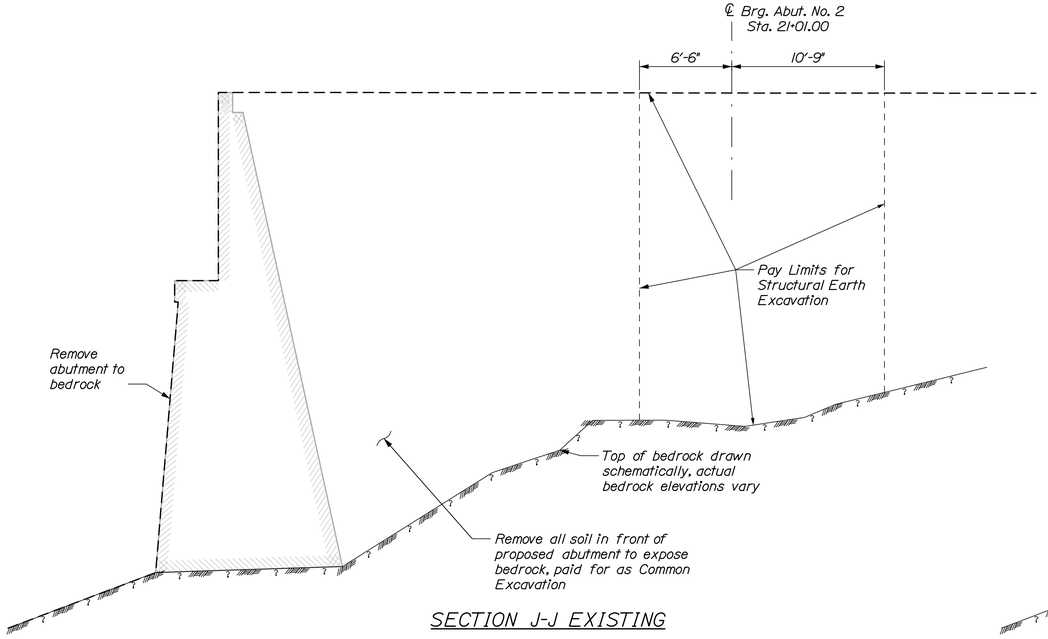
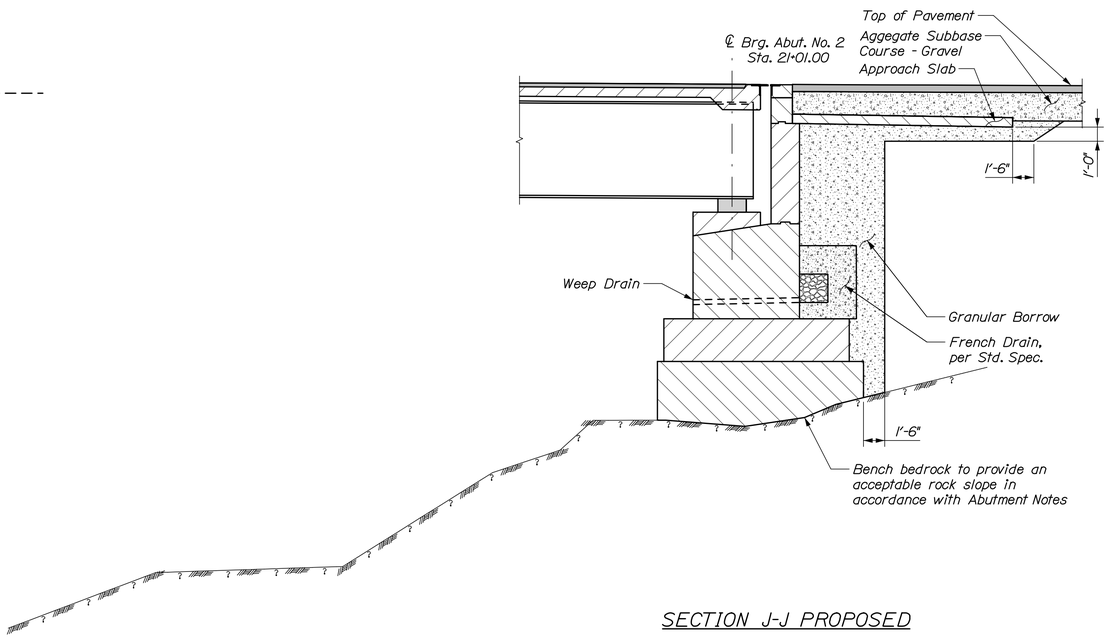


SECTION J-J EXISTING



SECTION J-J PROPOSED

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

			DATE
PROJ. MANAGER	M. Perlin	BY	
DESIGN-DETAILED	H. Walton	H. Walton	07\2022
CHECKED-REVIEWED	A. Stephens	T. Cote	07\2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

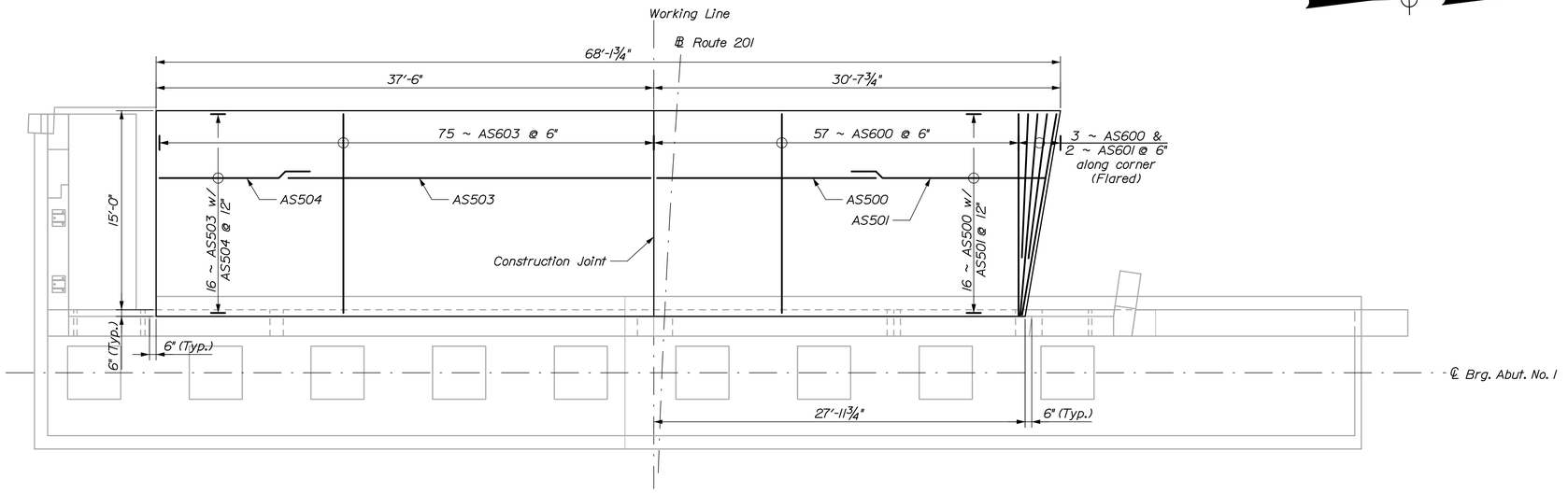
ABUTMENT NO. 2 SECTIONS III

SHEET NUMBER

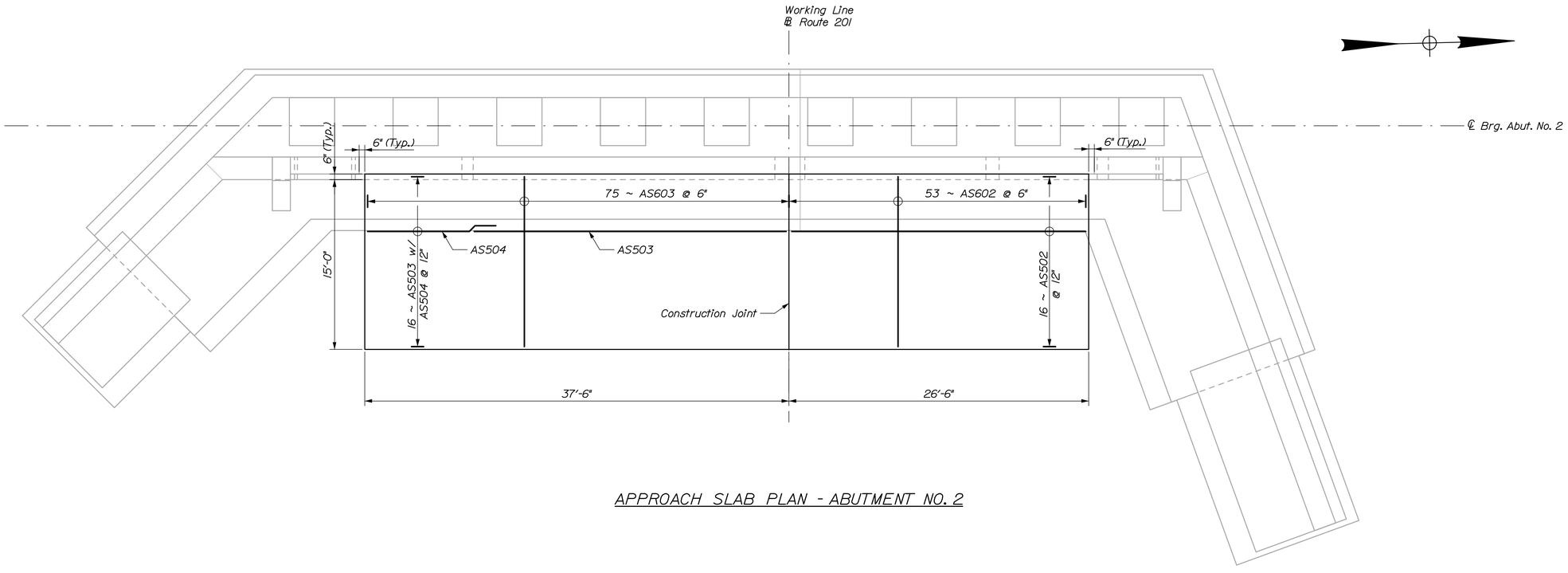
73

OF 111

Filename: 073_Abutment 2 Sections III.dgn Division: Username: Date:7/29/2022



APPROACH SLAB PLAN - ABUTMENT NO. 1



APPROACH SLAB PLAN - ABUTMENT NO. 2

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

		DATE
PROJ. MANAGER	M. Parlin	
DESIGN-DETAILED	H. Walton	07\2022
CHECKED-REVIEWED	N. Baert	07\2022
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

APPROACH SLAB PLAN

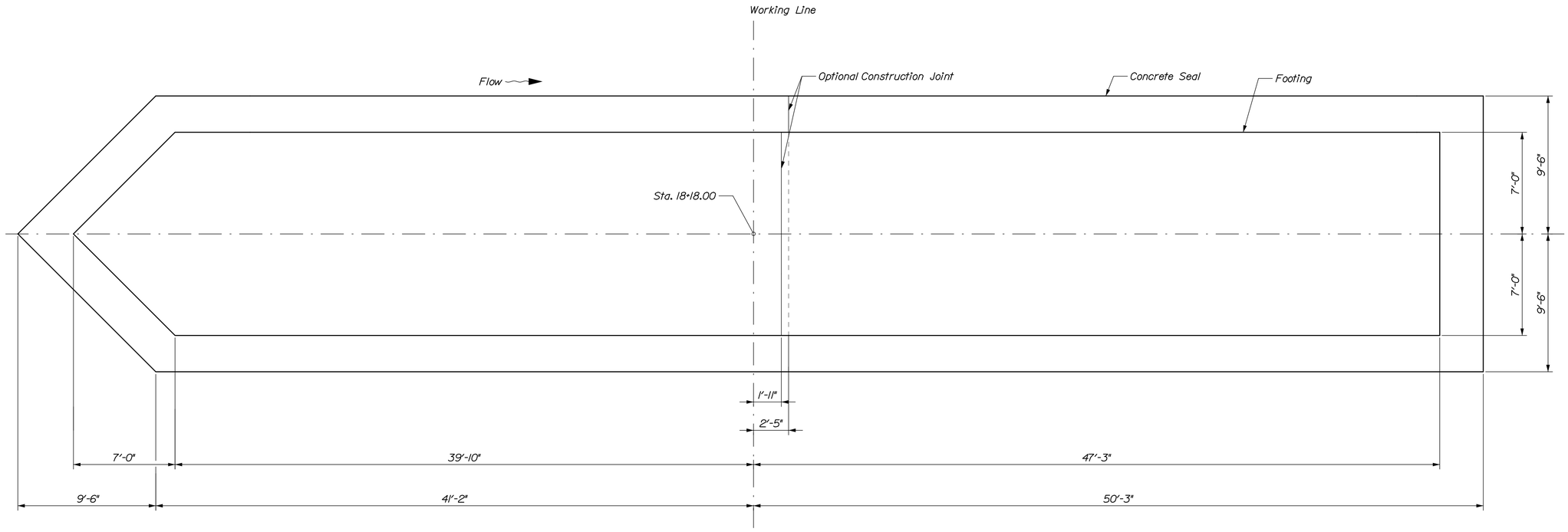
SHEET NUMBER

74

OF 111

HNTB

Filename: 074_Approach Slab Plan.dgn Division: Username: Date:7/29/2022



PIER SEAL AND FOOTING PLAN

PIER NOTES:

1. The maximum factored applied footing pressure is 22 ksf at the Strength III Limit State.

2. Reinforcing steel shall have a minimum concrete cover of 3 inches unless otherwise noted.

3. The pier pedestal elevations shown are based on bearing heights presented on the "BEARING DETAILS" sheet. Adjustments to the pedestal elevations, if necessary, shall be made in accordance with Note 1 on the "BEARING DETAILS" sheet.

4. 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.

5. Construction joints are optional.

6. Jacking points on the pier cap are detailed to support service loads as shown on the Bearing Details Sheet.

PIER NOSE ARMOR NOTES:

1. Payment for furnishing and placing the concrete anchors and pier nose shall be incidental to the unit price bid for the concrete pier.

2. Pier Nose Protection shall extend from the top of the footing to top of the pier stem.

3. Nose armor, including anchor studs, shall be hot dip galvanized in accordance with Section 506 of the Standard Specifications and included in Pay Item 502.239 - Structural Concrete Piers.

PIER DESIGN CRITERIA:

1. Controlling AASHTO Load Combinations - Strength I and Strength III Limit States.

2. Buoyancy - Water level assumed at Elevation 36.5 and 58.9 (Design High and Q50 Water). Q50 water elevations are assumed for Extreme Event Limit State.

3. Stream flow - Velocity of 20 fps skewed at 0 degrees to longitudinal centerline of pier.

4. Wind - 115 mph or 0.06 ksf, Strength III Limit State.

5. Ice - Thickness 2 feet, pressure 14 ksf at EL. 58.9, 30% of nose force applied transverse to pier.

6. Scour - Seal concrete detailed for the pier includes 1'-0" additional concrete on all sides beyond what is used in design calculations as sacrificial bearing area around the perimeter of the foundation.

SEAL COFFERDAM NOTES:

1. The seal concrete placement dimensions shown represent the minimum seal size necessary to meet design requirements and are not based on the use of any particular cofferdam.

2. The horizontal Pay Limit for seal concrete will be to the dimensions shown on the Plans. No additional payment will be made for concrete placed outside these Limits.

3. The depth of seal is set for a water elevation of 52.6 (Q10 water elevation) and an average top of rock elevation of 30.9. If the water elevation at the time of construction is higher and/or the average top of rock elevation is higher, the depth of seal shall be adjusted.

4. The method of placing dowels in the seal concrete shall be approved by the Resident. The anchoring material shall be one of the products listed on the MaineDOT Qualified Products List of Grout Materials.

5. Roughen the top surface of the seal concrete to a surface roughness of ±1/4" prior to placing footing concrete.

6. Pier seal concrete shall be placed on bedrock cleaned of weathered rock, loose fractured bedrock, boulders and soil. Where the bedrock inclination is steeper than 4H:1V, the bedrock shall be benched in steps to create an effective slope of less than 4H:1V.

7. If the seal is placed in the wet, each stage of the seal shall be cored full depth in at least 4 locations to ensure that the seal is satisfactorily placed. Each core run shall sample the bedrock interface and a minimum of 1 foot of bedrock. Seal core locations will be approved by the Department. Seal concrete cores will be a minimum 3 inch outer diameter and be stored in boxes and labeled. In the event that voids, unsuitable interface materials such as soil, or other defects are indicated, the Contractor shall correct the defects in a manner approved by the Department. For each core that reveals a defect, 2 additional cores shall be taken in approximately the same area in locations approved by the Department. All core holes shall be filled using non-shrink grout selected from the MaineDOT Qualified Products List of Grout Materials. The cost of coring and repairs will be considered incidental to related pay items. If the rock subgrade is in a dry condition and can be visually inspected by the Resident, seal cores are not required.

8. Seal concrete shall be Class "A".

9. Seal concrete shall have a smooth, regular surface. Cofferdams with an irregular inside surface, such as sand bags, shall have formwork for the seal concrete installed inside the cofferdam. Seal formwork will not be paid for separately, but will be considered incidental to other related items.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

PROJ. MANAGER	M. Perlin	BY	DATE
DESIGN-DETAILED	H. Walton	H. Walton	07\2022
CHECKED-REVIEWED	K. Brayley	T. Cote	07\2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

PIER FOUNDATION PLAN

SHEET NUMBER

75

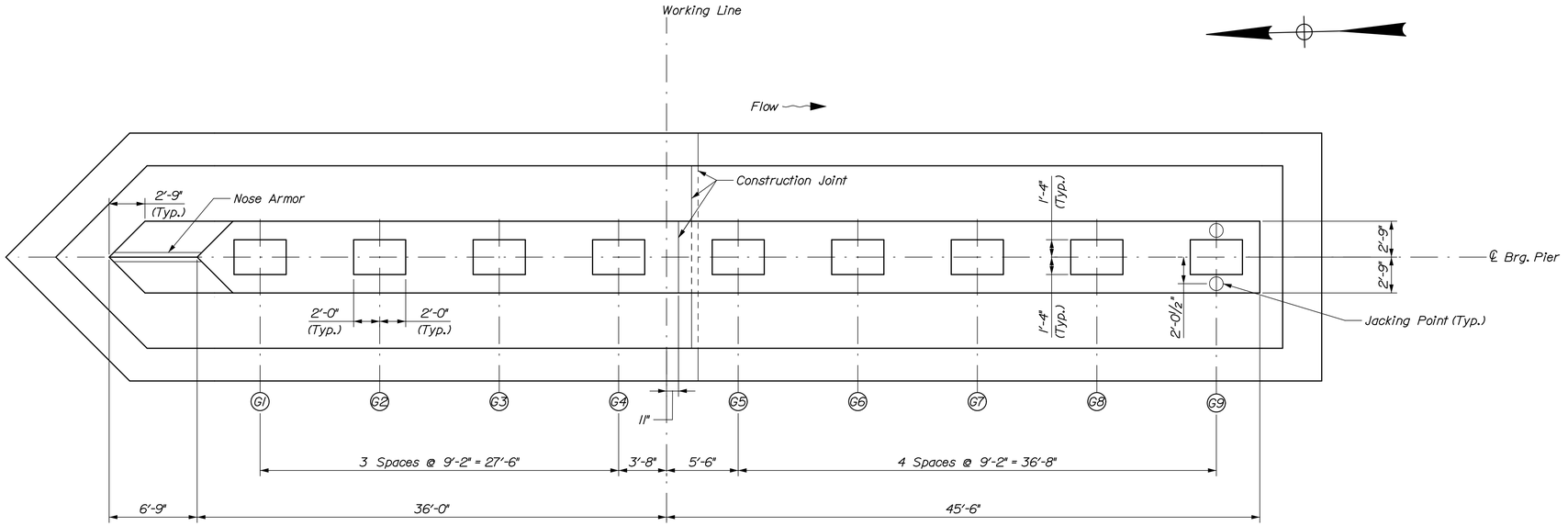
OF 111

Username:

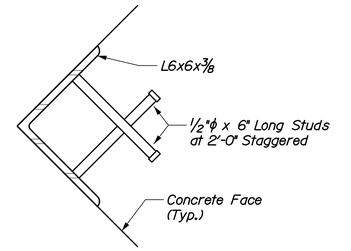
Date:7/29/2022

Division:

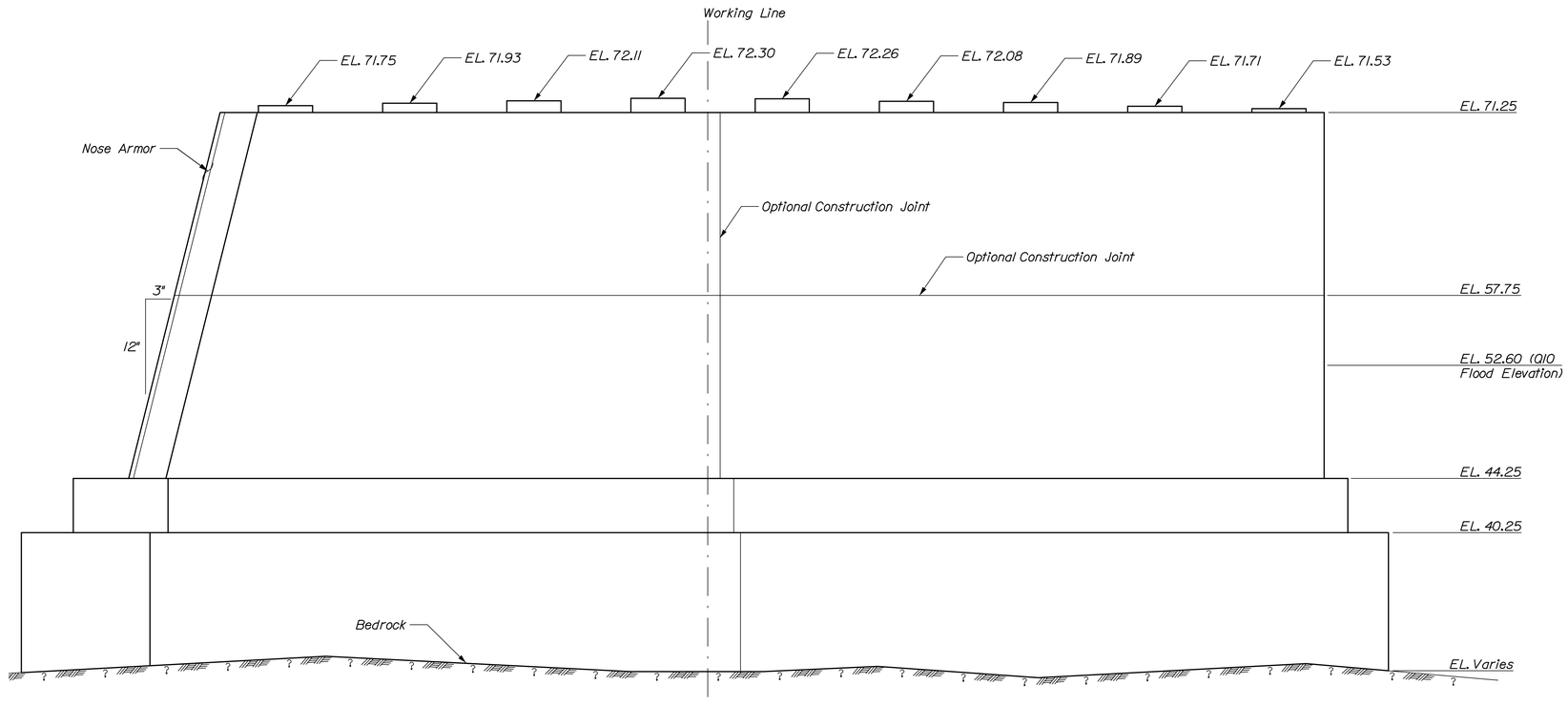
Filename: 075_Pier Foundation Plan.dgn



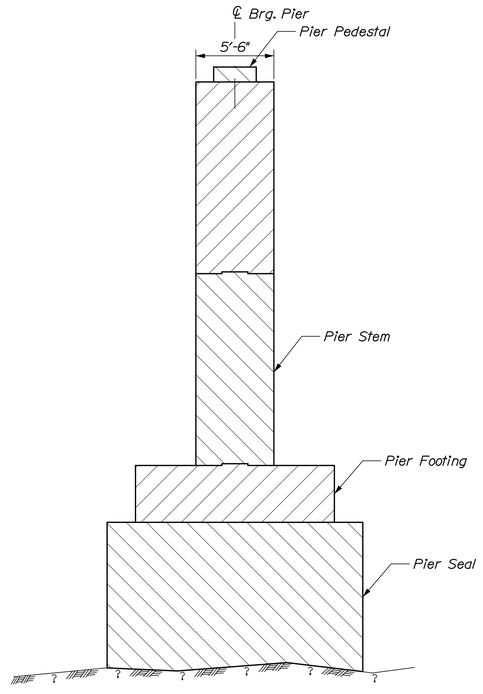
PIER PLAN



NOSE ARMOR DETAIL



PIER ELEVATION



PIER SECTION

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

PROJ. MANAGER	M. Parlin		
DESIGN-DETAILED	H. Walton	07\2022	
CHECKED-REVIEWED	K. Brayley	07\2022	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BY | DATE

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

PIER PLAN AND ELEVATION

SHEET NUMBER

76

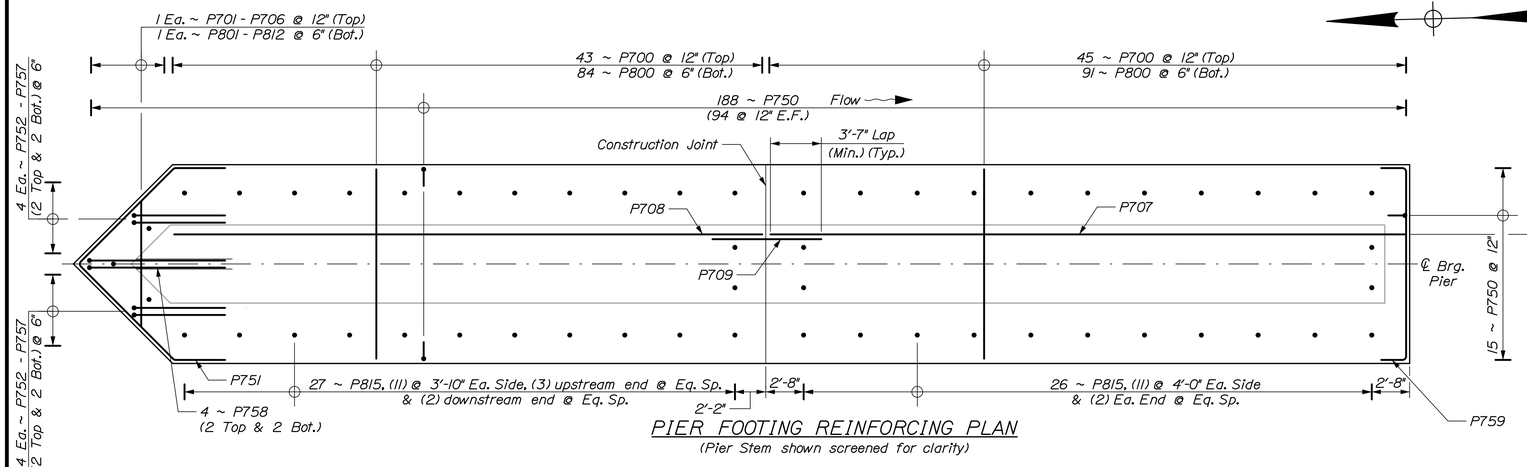
OF 111

Date:7/29/2022

Username:

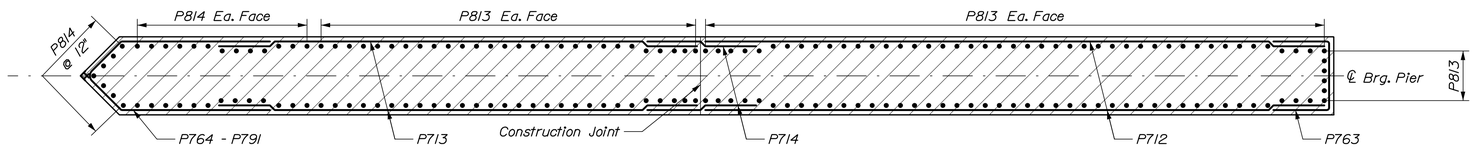
Division:

Filename: 076_Pier Plan and Elevation.dgn

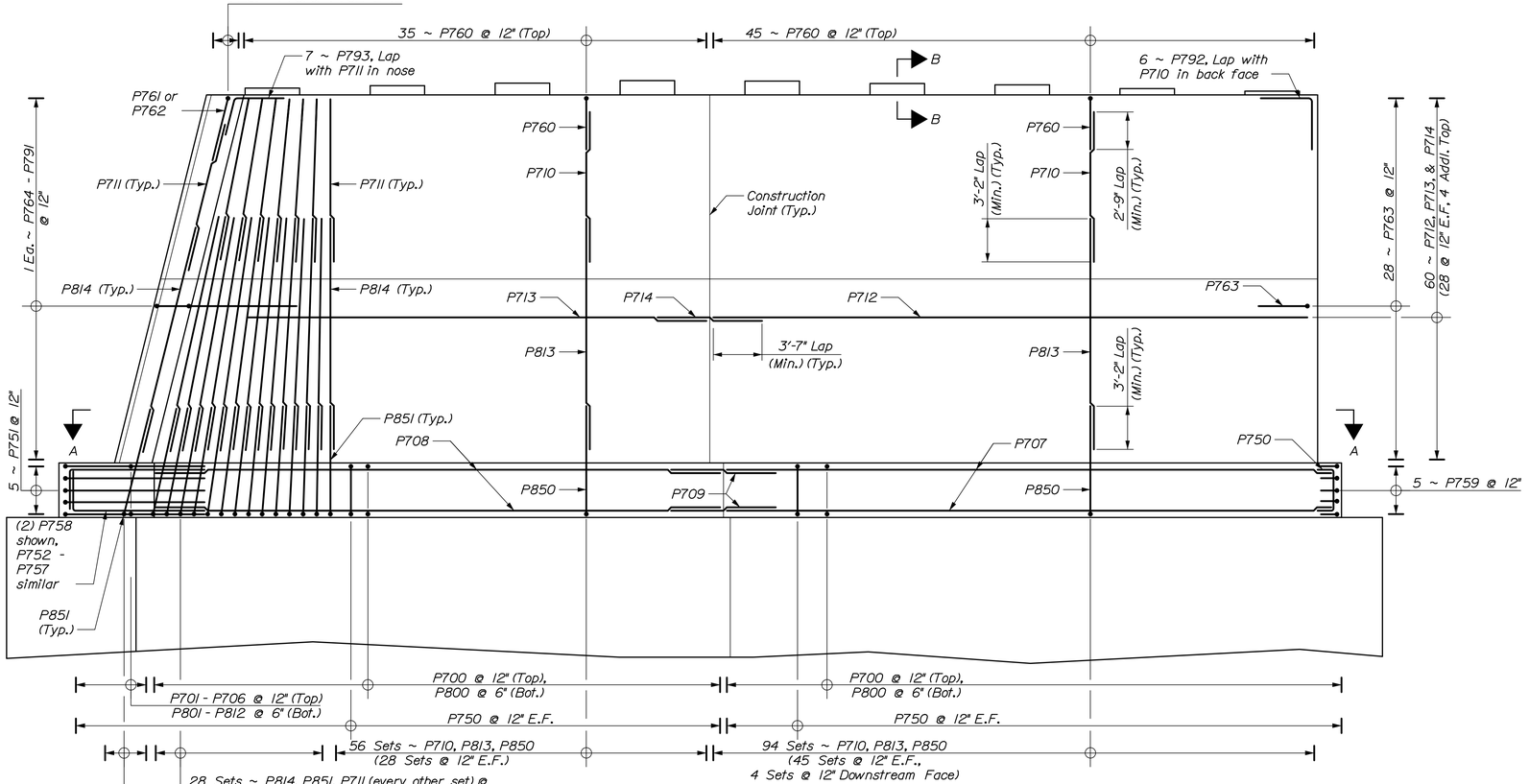


PIER FOOTING REINFORCING PLAN

(Pier Stem shown screened for clarity)



SECTION A-A



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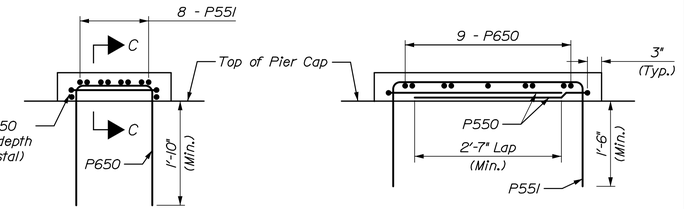
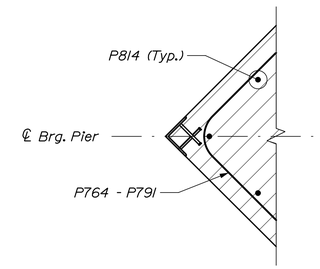


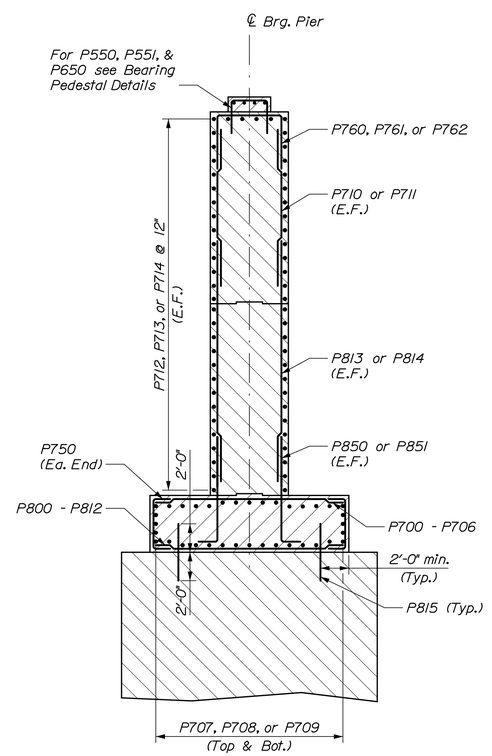
Section B-B

Section C-C

BEARING PEDESTAL DETAILS



NOSE REINFORCING DETAIL



PIER REINFORCING SECTION

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

	BY	DATE
PROJ. MANAGER	M. Parlin	
DESIGN-DETAILED	H. Walton	07\2022
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DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

E. Beausoleil
T. Cote

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

PIER REINFORCING

SHEET NUMBER

77

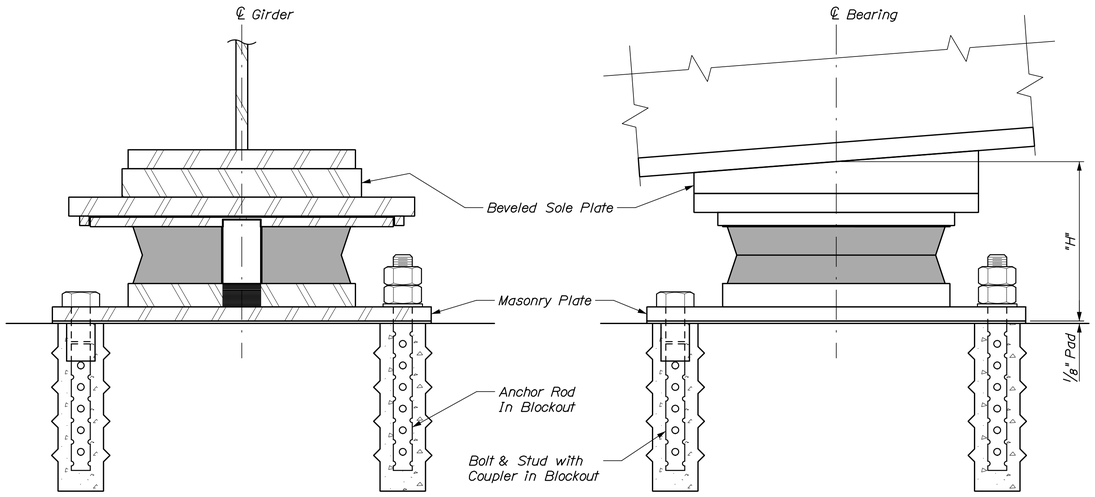
OF 111

Date:7/29/2022

Username:

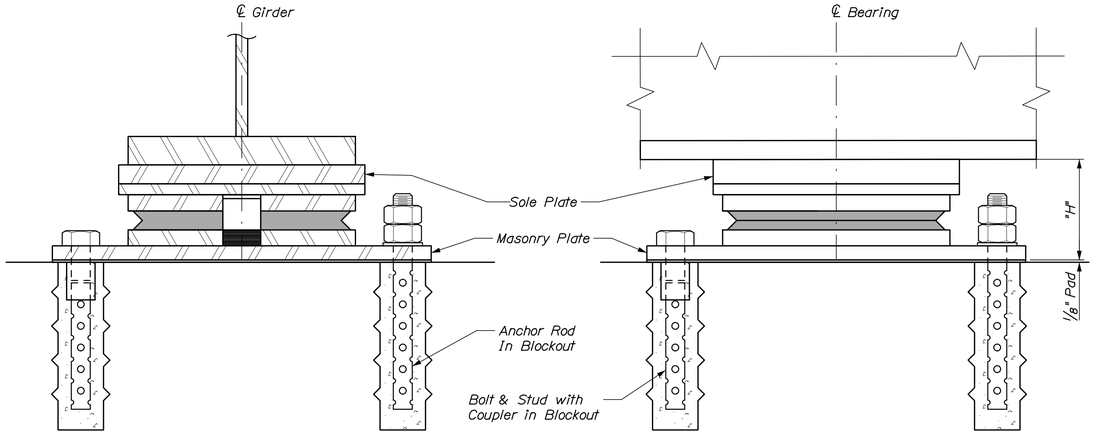
Division:

Filename: 077_Pier Reinforcing.dgn



~ TRANSVERSE SECTION ~ ~ LONGITUDINAL ELEVATION ~

EXPANSION BEARING



~ TRANSVERSE SECTION ~ ~ LONGITUDINAL ELEVATION ~

FIXED BEARING

DISC BEARING NOTES:

1. The actual dimension "H" shall be the responsibility of the Contractor. Dimensions and sizes of plates not shown are dependent on design loads, capacity, and the manufacturer of the bearings. The shop drawings, prepared by the manufacturer, shall provide all pertinent bearing information. The final bearing pedestal elevations shall be determined by the Contractor and submitted with the shop drawings for approval prior to construction of the substructure units.

2. Masonry plates shall be placed on 1/8" thick preformed pads in accordance with the specifications.

3. All steel, unless otherwise specified, shall meet the requirements of ASTM A709, Grade 50.

4. Bearing anchorage shall be either Anchor Rod with double nuts and washers in blockout, or Bolt & Stud with Coupler in blockout, at the Contractor's option.

5. Anchorage spacing shall be coordinated with the bearing manufacturer.

6. Anchor bolts shall meet the requirements of ASTM F3125, Grade A325 Type 1.

7. Anchor rods shall meet the requirements of ASTM F1554, Grade 105 and shall be swedged on the embedded portion of the rod.

8. Heavy hex nuts for anchor rods shall meet the requirements of ASTM A563, Grade D or DH.

9. Anchor bolts, rods, washers, and nuts shall be galvanized to ASTM A153 or ASTM B695, Class 50, Type 1. Payment for galvanizing will be considered incidental to the disc bearing pay items.

10. For pier and abutment bearings, all steel shall be hot dip galvanized or shall be coated in accordance with Standard Specifications Section 506, Protective Coating - Steel (Thermal Spray Coating). Payment for Coatings for Disc Bearings will be considered incidental to Item 523.5551, Pot or Disc Bearings, Fixed or Item 523.5552 Pot or Disc Bearings, Expansion as applicable.

11. The abbreviation "PTFE" indicates polytetraflouroethylene.

12. All PTFE, including guide and restraint surfaces, shall be unfilled.

13. PTFE minimum bearing pressure shall be 3 ksi under strength loading.

14. Average compressive stresses on the disc shall be computed using the minimum plan area of the unstressed disc, excluding the area of any holes.

15. The design temperature range shall be 150°F (-30°F to 120°F).

16. Design of the sole plates and masonry plates is the responsibility of the Bearing Manufacturer. Payment for these shall be made under Item 523.5551, Pot or Disc Bearings, Fixed or Item 523.5552, Pot or Disc Bearings, Expansion as applicable.

17. Sole plate shall be beveled according to the grade defined at each substructure location in the Disc Bearing Design Table.

18. Strength Limit State rotations shown in the Disc Bearing Design Table do not include an allowance for uncertainties of 0.005 radians, as defined in AASHTO LRFD Bridge Design Specifications, 9th Edition 2020.

19. Bearings shall be designed with a thermal load factor of 1.2.

20. Longitudinal horizontal forces do not include friction forces at expansion bearings.

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

22. Bearing installation shall be in strict conformance with the Standard Specifications and the manufacturer's recommendations.

23. In the Disc Bearing Setting Corrections Table, a negative dimension indicates a direction away from the nearer expansion joint. A positive dimension indicates a direction toward the nearer expansion joint.

24. Temperatures shown in the Disc Bearing Setting Corrections Table are those of the steel girders and not necessarily the ambient air temperature.

DISC BEARING DESIGN TABLE

Location	Bearing Type	Design Loads Per Bearing (kips)											Dim "H" (in.) (Note No. 1)	Design Rotation (Note No. 18)		Total Long. Movement (in.)	Sole Plate Bevel
		Vertical					Horizontal										
		Strength	Extreme Event	Service			Strength		Extreme Event		Service			Strength	Service		
		Total Load	Total Load	Dead Load *	Max. Live Load **	Min Live Load **	Longitudinal (Note No. 20)	Transverse	Longitudinal (Note No. 20)	Transverse	Longitudinal (Note No. 21)	Transverse		Rotation (radians)	Rotation (radians)		
Abut. No. 1	Uni-directional	646	333	253	161	-24	0	10	0	60	0	3	9 3/8"	0.0053	0.0047	3.97	0.75%
Pier	Fixed	2005	1188	1006	364	0	17	39	338	224	9	13	12"	0.0035	0.0031	0	0.17%
Abut. No. 2	Uni-directional	644	332	251	161	-24	0	10	0	60	0	3	9 3/8"	0.0053	0.0047	3.97	-0.52%

* Tabulated Dead Loads include DC1, DC2, and DW loads.

** Tabulated Live Loads include IM loading and multiple presence factors.

Disc Bearing Setting Corrections Table

	15 °F	30 °F	45°F	60 °F	75 °F	90 °F
Abut. No. 1	-5/8"	-3/8"	0"	3/8"	5/8"	1"
Pier No. 1	--	--	--	--	--	--
Abut. No. 2	-5/8"	-3/8"	0"	3/8"	5/8"	1"

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

	BY	DATE
PROJ. MANAGER	M. Perlin	
DESIGN-DETAILED	E. Beausoleil	07\2022
CHECKED-REVIEWED	H. Walton	T. Cote	07\2022
DESIGN2-DETAILED2	N. Boert	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

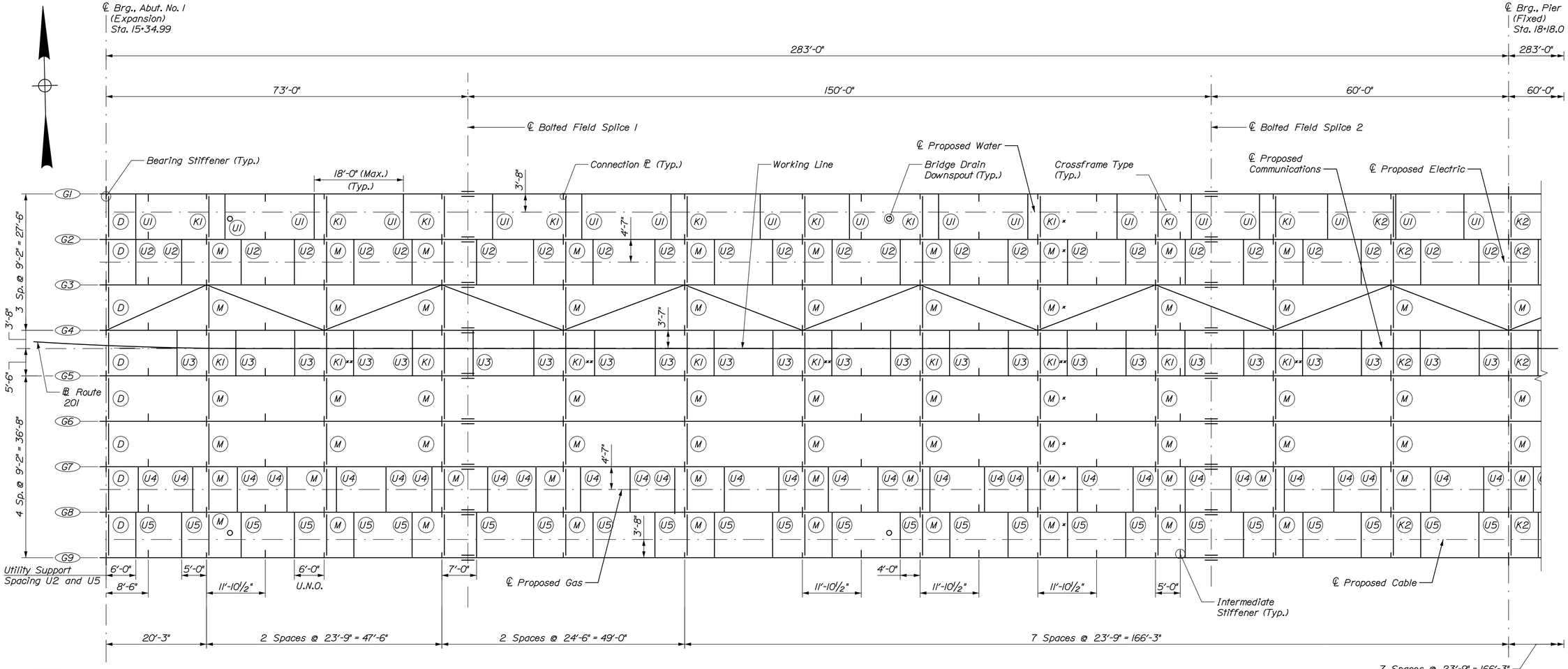
BEARING DETAILS

SHEET NUMBER

78

OF 111

Filename: 078_Bearing Details.dgn Division: Username: Date:7/29/2022



FRAMING PLAN - SPAN 1

NOTES

1. UI, U3, and U4 see details provided on Sheets W1-W7, C1-C14, and G1-G4.

2. For U2 and U5 Utility Support Details see Structural Steel Details V1.

3. Cross frame locations with a ** designation shall use Temporary Lateral Braces during Stage 2 construction. See Structural Steel Details V.

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% 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 3 feet from transverse butt-welds in the web plates and no transverse web or flange butt-welds shall be located within 3 feet 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 not less than 20 feet in length unless otherwise shown on the plans.

4. Bearing and Jacking stiffeners shall be plumb after erection and dead loading of the structure. Intermediate web stiffeners may be either plumb or normal to the top flange.

5. Crossframe or diaphragm connection plates may be either plumb or normal to the top flange and shall be 5/8" thick x 10" wide.

6. All connection plates shall be welded to the top and bottom flanges using 5/16" fillet welds.

7. Filler plates shall be steel conforming to the requirements of ASTM A709, Grade 50.

8. The abutment end diaphragms and pier crossframe between Girder G4 and G5 shall be connected during Stage 2 girder erection. Intermediate crossframes between Girder G4 and G5 shall be connected to G5 after Stage 2 Deck Placement and prior to the closure pour, deck sequence 7. Connection holes on the G5 end of the intermediate crossframes shall be field drilled to fit the holes in the connection plates.

9. At locations marked with an asterisk (*), the designated cross frames may be changed to a Type D to accommodate the Contractor's deck placement sequence. No extra compensation will be allowed for any cross frames so substituted, and any additional costs will be considered incidental to the contract items.

10. All bolted connections shall be made using 7/8"ϕ ASTM F3125 Grade A325, Type I bolts in 15/16"ϕ holes. Bolts shall be installed with heads down at all bottom flange connections and heads up at all top flange connections. Bolt threads shall be excluded from the shear plane of the field splice connections.

11. Utility Support Angles shall be placed to meet the specified limits and final layout shall be approved by the Engineer.

12. Lateral bracing is designed to control flange bending stresses due to wind load during erection of the structural steel. The lateral bracing is intended to be placed between the first pair of girders to be erected. If the Contractor chooses to erect a pair of girders other than G3 and G4 first, the location of the lateral bracing shall be modified and so shown on the shop drawings. No additional payment will be made for this change.

13. The Contractor may eliminate the lateral bracing system by providing other methods of ensuring stability and controlling wind loads during erection of the structural steel and placement of the concrete deck. If the Contractor chooses to eliminate the lateral bracing system, the Contractor shall submit for approval a plan which includes any relevant calculations and working drawings, signed and sealed by a Professional Engineer.

14. Contact surface shall conform to Class B Surface for all connections.

15. Butt welds shall be ground flush in the longitudinal direction of the girder.

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

17. Structural steel was designed with a vertical construction load of 50 lb/sf over a 50-ft length and a lateral wind velocity during construction of 120 mph prior to deck placement.

18. All bolts, nuts, and washers shall be hot dip galvanized in accordance with ASTM A153.

19. Repairs to the Thermal Spray Coating that modify the surface roughness in the area of the faying surfaces shall not be performed without the approval of the Fabrication Engineer.

20. Bolted diaphragms or cross frame connections shall be made using 7/8" diameter, ASTM F3125, Grade A325 Type I high strength bolts. Hole size shall be 15/16" diameter. The minimum edge distance shall be 1 1/2" 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.

21. At the Contractor's option, the Diaphragms and Cross Frames may be Hot-Dipped Galvanized in accordance with Standard Specifications Section 506, Shop Applied Protective Coating, as approved by the Resident. Payment will be considered incidental to Item 506.9104, Thermal Spray Coating (Shop Applied), no separate payment will be made. The bolted cross frame connections are designed with a Class B slip coefficient.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	H. Walton	BY	DATE
CHECKED-REVIEWED	A. Stephens	T. Cote	07/2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

FRAMING PLAN
SPAN NO. 1

SHEET NUMBER

79

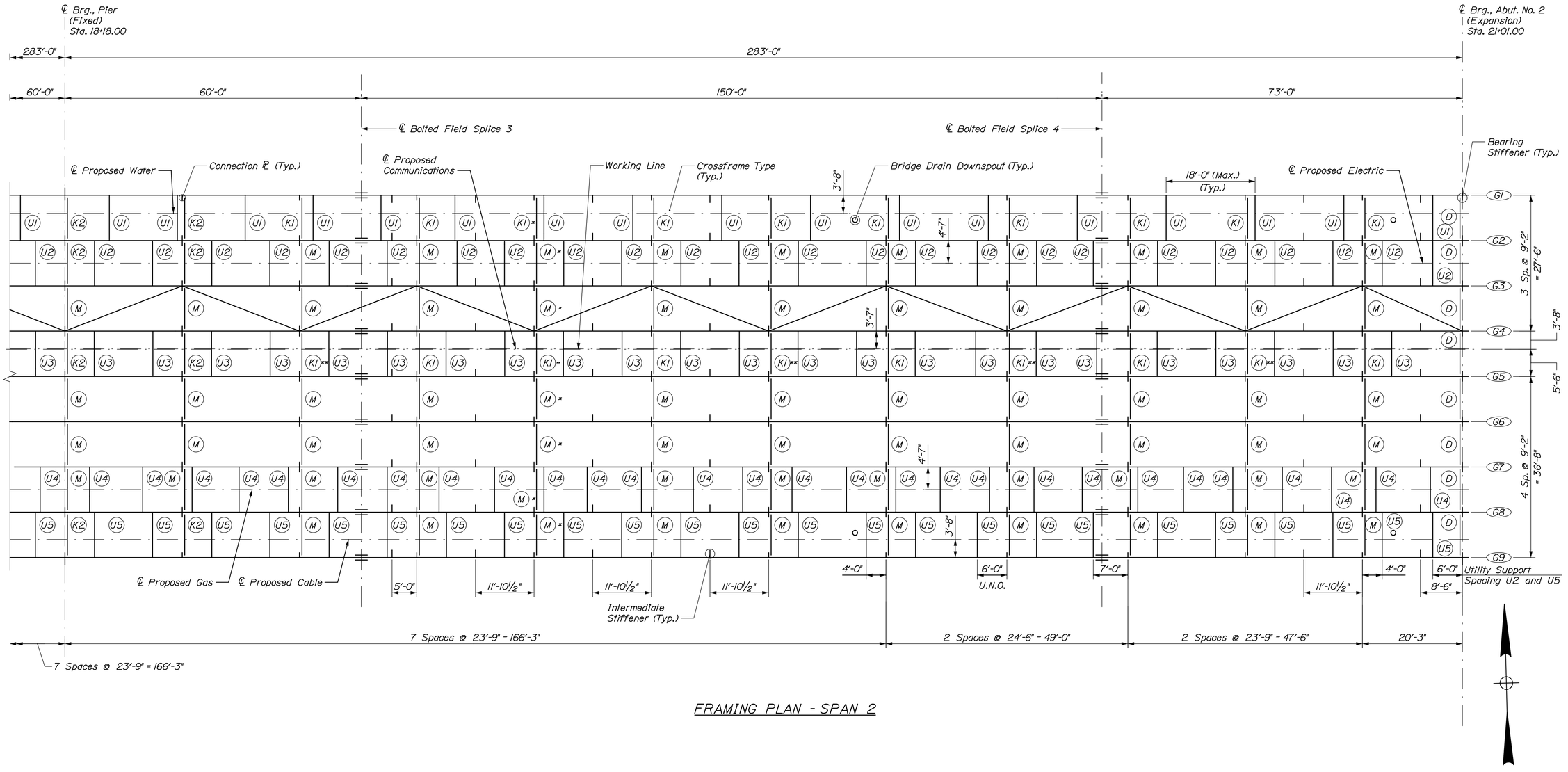
OF 111

Username:

Date:8/15/2022

Division:

Filename: 079_Framing Plan 1.dgn



FRAMING PLAN - SPAN 2

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	H. Walton	BY	DATE
CHECKED-REVIEWED	A. Stephens	T. Cote	07\2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

FRAMING PLAN
SPAN NO. 2

SHEET NUMBER

80

OF 111

HNTB

Date:7/29/2022

Username:

Division:

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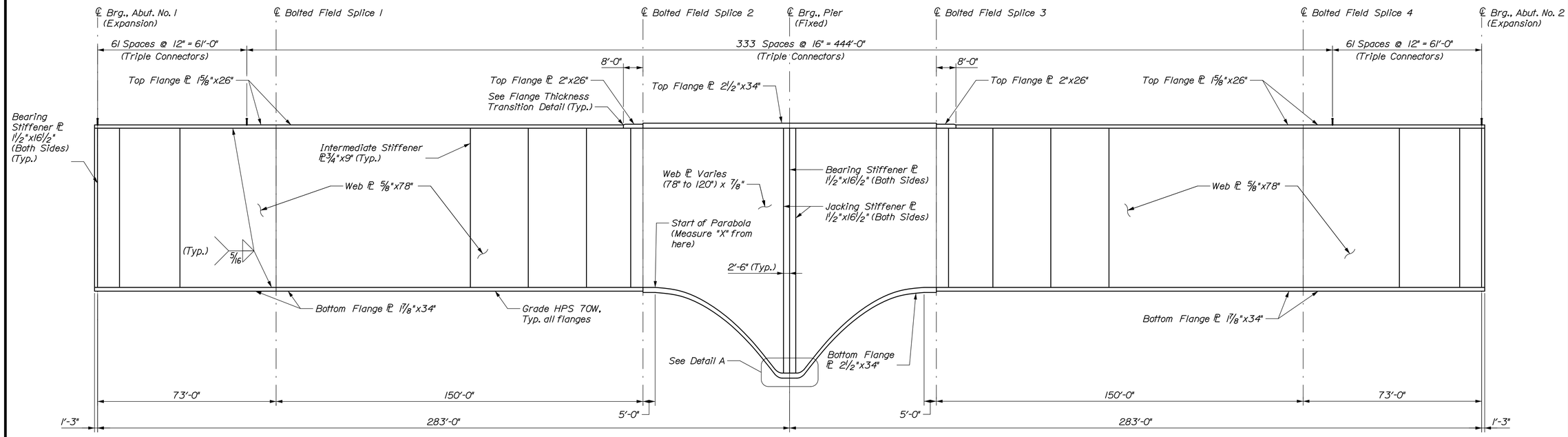
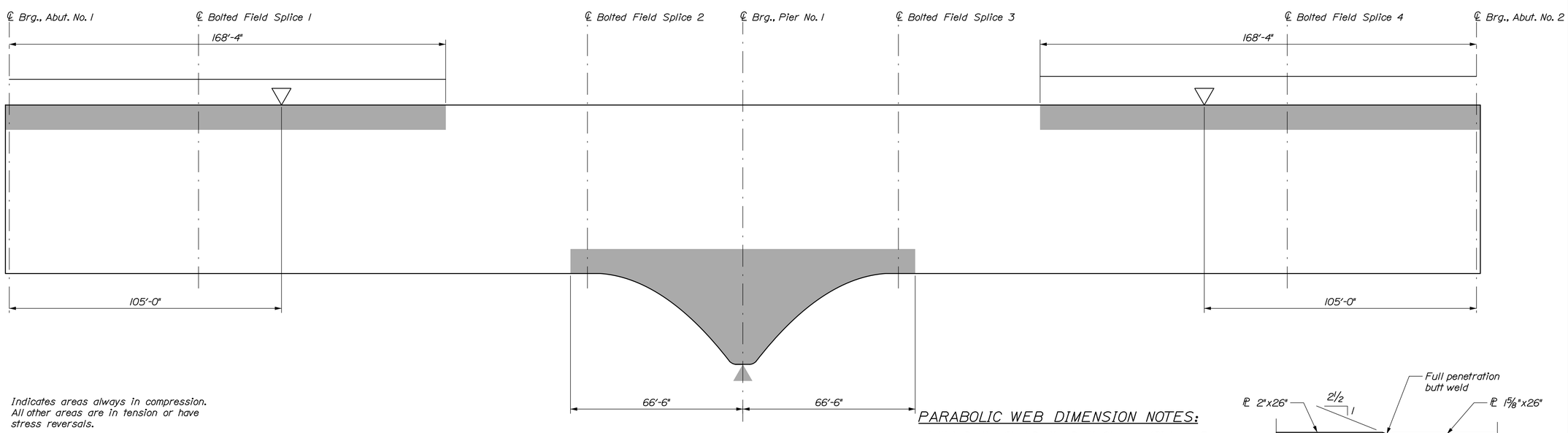


GIRDER ELEVATION

1368 studs per girder



LEGEND

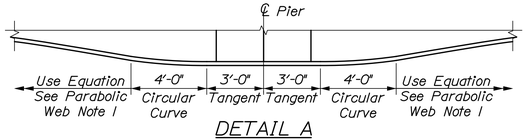
Indicates areas always in compression. All other areas are in tension or have stress reversals.

Point of Maximum Positive Moment

Point of Maximum Negative Moment

NOTES

1. See Structural Steel Notes.



DETAIL A

BEAM STRESS DIAGRAM

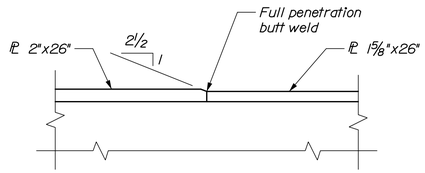
PARABOLIC WEB DIMENSION NOTES:

1. Web Depth = Start Depth + Depth Change × (Distance From Start / Parabola Length)^2

   Web Depth: D = 78" + 42" × (X / 50')^2

2. Depth Change = Algebraic difference in web depth between start location and Pier, minus 3.293" to account for the circular curve transition at the Pier. (See Web Haunch Detail).

3. X is measured in feet. D is normal to the top of web.



FLANGE TRANSITION DETAIL

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STATE OF MAINE
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BRIDGE PLANS

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TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

GIRDER ELEVATION

SHEET NUMBER

81

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Username:

Division:

Date:7/29/2022

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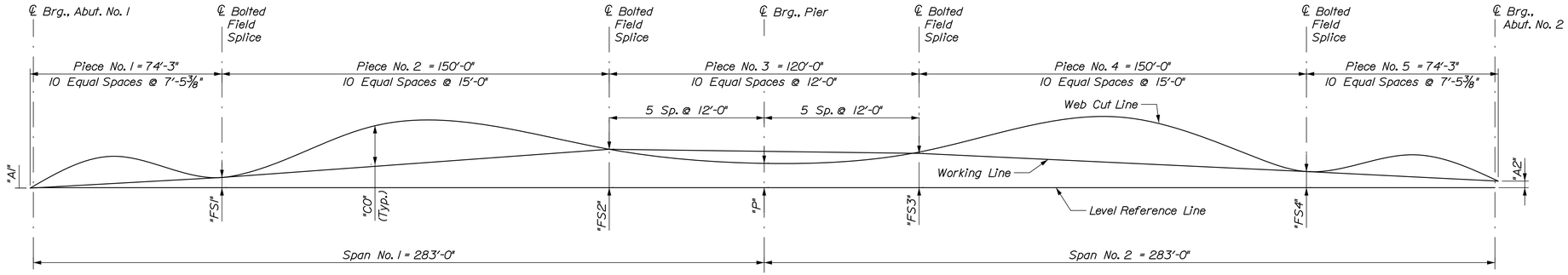


CAMBER DIAGRAM

GIRDER	TABLE OF CAMBER ORDINATES "CO" (Inches)																				GIRDER
	℄ Brg. Abut. 1	0.10xL	0.20xL	0.30xL	0.40xL	0.50xL	0.60xL	0.70xL	0.80xL	0.90xL	FS1	0.10xL	0.20xL	0.30xL	0.40xL	0.50xL	0.60xL	0.70xL	0.80xL	0.90xL	FS2	
G1	0.00	0.33	0.66	0.95	1.20	1.32	1.34	1.23	0.98	0.57	0.00	2.77	4.78	6.02	6.51	6.32	5.56	4.35	2.88	1.39	0.00	G1
G2	0.00	0.30	0.61	0.89	1.12	1.25	1.27	1.17	0.93	0.54	0.00	2.68	4.63	5.82	6.30	6.12	5.39	4.22	2.79	1.35	0.00	G2
G3	0.00	0.29	0.57	0.83	1.04	1.16	1.18	1.09	0.87	0.51	0.00	2.52	4.34	5.47	5.92	5.75	5.06	3.97	2.63	1.27	0.00	G3
G4	0.00	0.27	0.54	0.78	0.98	1.10	1.12	1.04	0.83	0.49	0.00	2.42	4.17	5.25	5.68	5.52	4.85	3.80	2.52	1.22	0.00	G4
G5	0.00	0.32	0.61	0.84	0.99	1.07	1.07	0.97	0.77	0.45	0.00	2.09	3.61	4.54	4.91	4.77	4.19	3.29	2.18	1.07	0.00	G5
G6	0.00	0.35	0.66	0.92	1.09	1.19	1.20	1.09	0.86	0.50	0.00	2.41	4.15	5.23	5.66	5.50	4.84	3.80	2.51	1.22	0.00	G6
G7	0.00	0.36	0.68	0.94	1.12	1.22	1.23	1.12	0.89	0.52	0.00	2.49	4.29	5.41	5.85	5.69	5.00	3.92	2.60	1.26	0.00	G7
G8	0.00	0.37	0.70	0.97	1.15	1.27	1.28	1.17	0.93	0.54	0.00	2.62	4.51	5.68	6.15	5.97	5.25	4.12	2.72	1.32	0.00	G8
G9	0.00	0.38	0.72	0.99	1.18	1.30	1.31	1.20	0.95	0.56	0.00	2.70	4.66	5.87	6.35	6.17	5.42	4.24	2.81	1.36	0.00	G9

GIRDER	TABLE OF CAMBER ORDINATES "CO" (Inches)																				GIRDER
	FS2	0.10xL	0.20xL	0.30xL	0.40xL	0.50xL	0.60xL	0.70xL	0.80xL	0.90xL	FS3	0.10xL	0.20xL	0.30xL	0.40xL	0.50xL	0.60xL	0.70xL	0.80xL	0.90xL	FS4	
G1	0.00	-0.98	-1.79	-2.36	-2.69	-2.79	-2.69	-2.36	-1.79	-0.99	0.000	1.69	3.41	4.93	6.03	6.62	6.67	6.09	4.80	2.77	0.00	G1
G2	0.00	-0.91	-1.66	-2.19	-2.49	-2.59	-2.49	-2.19	-1.66	-0.91	0.000	1.61	3.26	4.71	5.76	6.32	6.37	5.81	4.58	2.64	0.00	G2
G3	0.00	-0.81	-1.48	-1.95	-2.22	-2.31	-2.22	-1.96	-1.48	-0.82	0.000	1.54	3.10	4.46	5.44	5.95	5.99	5.46	4.30	2.48	0.00	G3
G4	0.00	-0.77	-1.39	-1.84	-2.09	-2.17	-2.09	-1.84	-1.40	-0.77	0.000	1.51	3.04	4.36	5.31	5.80	5.83	5.31	4.18	2.41	0.00	G4
G5	0.00	-0.59	-1.08	-1.43	-1.62	-1.68	-1.62	-1.43	-1.08	-0.59	0.000	1.40	2.79	3.97	4.79	5.19	5.20	4.72	3.70	2.13	0.00	G5
G6	0.00	-0.75	-1.36	-1.80	-2.04	-2.12	-2.04	-1.80	-1.36	-0.75	0.000	1.49	2.99	4.29	5.22	5.70	5.72	5.22	4.11	2.37	0.00	G6
G7	0.00	-0.80	-1.45	-1.91	-2.17	-2.26	-2.17	-1.91	-1.45	-0.80	0.000	1.52	3.07	4.42	5.38	5.88	5.92	5.39	4.25	2.45	0.00	G7
G8	0.00	-0.87	-1.59	-2.09	-2.38	-2.47	-2.38	-2.10	-1.59	-0.87	0.000	1.58	3.20	4.61	5.63	6.17	6.21	5.67	4.47	2.58	0.00	G8
G9	0.00	-0.94	-1.72	-2.26	-2.57	-2.67	-2.57	-2.26	-1.72	-0.94	0.000	1.65	3.34	4.82	5.89	6.46	6.51	5.94	4.68	2.70	0.00	G9

GIRDER	TABLE OF CAMBER ORDINATES "CO" (Inches)											GIRDER
	FS4	0.10xL	0.20xL	0.30xL	0.40xL	0.50xL	0.60xL	0.70xL	0.80xL	0.90xL	℄ Brg. Abut. 2	
G1	0.00	0.52	0.88	1.09	1.17	1.12	0.90	0.69	0.45	0.21	0.00	G1
G2	0.00	0.50	0.84	1.04	1.11	1.06	0.85	0.65	0.42	0.20	0.00	G2
G3	0.00	0.46	0.78	0.97	1.03	0.98	0.78	0.59	0.38	0.18	0.00	G3
G4	0.00	0.45	0.75	0.93	0.99	0.94	0.74	0.56	0.36	0.17	0.00	G4
G5	0.00	0.38	0.65	0.80	0.85	0.80	0.61	0.45	0.28	0.13	0.00	G5
G6	0.00	0.44	0.74	0.92	0.97	0.93	0.73	0.55	0.35	0.16	0.00	G6
G7	0.00	0.46	0.77	0.95	1.02	0.97	0.77	0.58	0.37	0.17	0.00	G7
G8	0.00	0.48	0.82	1.01	1.08	1.03	0.82	0.62	0.41	0.19	0.00	G8
G9	0.00	0.51	0.86	1.06	1.13	1.08	0.87	0.66	0.43	0.21	0.00	G9

GIRDER	TABLE OF CAMBER DIMENSIONS (Feet)						
	"A1"	"FS1"	"FS2"	"P"	"FS3"	"FS4"	"A2"
G1	0.00	1.90	2.05	1.89	2.20	2.15	0.36
G2	0.00	1.85	2.04	1.89	2.17	2.09	0.35
G3	0.00	1.77	2.01	1.89	2.14	2.00	0.35
G4	0.00	1.71	1.99	1.88	2.13	1.97	0.35
G5	0.00	1.58	1.97	1.90	2.12	1.85	0.37
G6	0.00	1.72	2.01	1.90	2.14	1.96	0.37
G7	0.00	1.76	2.02	1.90	2.15	2.00	0.37
G8	0.00	1.82	2.04	1.90	2.17	2.06	0.36
G9	0.00	1.86	2.04	1.89	2.19	2.12	0.36

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

P.E. NUMBER

DATE

SIGNATURE

	BY	DATE
PROJ. MANAGER	M. Parlin	
DESIGN-DETAILED	E. Beausoleil	07\2022
CHECKED-REVIEWED	T. Cote	07\2022
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

STRUCTURAL STEEL DETAILS I

SHEET NUMBER

82

OF 111

Filename: 082_Structural Steel Details 1.dgn Username: Division: Date:7/29/2022

BOTTOM OF SLAB ELEVATIONS

GIRDER	℄ Brg. Abut. 1	SPAN NO. 1 LENGTH = 283'-0"																									℄ Brg. Pier
DISTANCE	0'-0"	10'-0"	20'-0"	30'-0"	40'-0"	50'-0"	60'-0"	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"	160'-0"	170'-0"	180'-0"	190'-0"	200'-0"	210'-0"	220'-0"	230'-0"	240'-0"	250'-0"	260'-0"	270'-0"	280'-0"	283'-0"
G1	81.54	81.78	82.02	82.26	82.48	82.68	82.87	83.05	83.20	83.33	83.44	83.54	83.60	83.65	83.68	83.70	83.69	83.67	83.65	83.61	83.58	83.54	83.51	83.48	83.45	83.44	83.43	83.43	83.43	83.44
G2	81.73	81.96	82.18	82.41	82.62	82.82	83.00	83.17	83.31	83.44	83.55	83.64	83.71	83.76	83.80	83.81	83.82	83.81	83.79	83.76	83.73	83.70	83.67	83.65	83.63	83.62	83.61	83.61	83.62	83.62
G3	81.92	82.13	82.34	82.55	82.75	82.94	83.12	83.28	83.42	83.54	83.65	83.74	83.81	83.86	83.90	83.92	83.93	83.93	83.91	83.89	83.87	83.85	83.83	83.82	83.80	83.79	83.79	83.79	83.80	83.80
G4	82.10	82.30	82.51	82.71	82.90	83.08	83.24	83.40	83.53	83.65	83.76	83.85	83.92	83.97	84.01	84.04	84.05	84.05	84.04	84.03	84.02	84.01	83.99	83.98	83.97	83.97	83.97	83.97	83.98	83.99
G5	82.04	82.24	82.43	82.62	82.79	82.96	83.11	83.25	83.38	83.50	83.60	83.68	83.75	83.81	83.85	83.88	83.91	83.92	83.92	83.92	83.92	83.92	83.92	83.92	83.92	83.92	83.93	83.93	83.95	83.95
G6	81.87	82.08	82.30	82.50	82.70	82.88	83.05	83.21	83.35	83.47	83.57	83.66	83.73	83.79	83.83	83.85	83.86	83.86	83.85	83.83	83.82	83.80	83.79	83.77	83.76	83.75	83.75	83.75	83.76	83.77
G7	81.68	81.91	82.12	82.33	82.53	82.72	82.89	83.05	83.19	83.31	83.42	83.51	83.58	83.63	83.67	83.69	83.70	83.70	83.69	83.67	83.65	83.63	83.61	83.60	83.58	83.57	83.57	83.57	83.58	83.58
G8	81.50	81.73	81.96	82.17	82.38	82.58	82.76	82.92	83.07	83.19	83.30	83.39	83.46	83.51	83.55	83.57	83.57	83.56	83.54	83.52	83.49	83.47	83.45	83.42	83.41	83.39	83.39	83.39	83.40	83.40
G9	81.32	81.56	81.80	82.02	82.24	82.45	82.63	82.80	82.96	83.09	83.20	83.29	83.36	83.41	83.44	83.45	83.45	83.44	83.41	83.38	83.35	83.31	83.28	83.26	83.23	83.21	83.21	83.21	83.21	83.22

BOTTOM OF SLAB ELEVATIONS

GIRDER	℄ Brg. Pier	SPAN NO. 2 LENGTH = 283'-0"																									℄ Brg. Abut. 2
DISTANCE	0'-0"	10'-0"	20'-0"	30'-0"	40'-0"	50'-0"	60'-0"	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"	160'-0"	170'-0"	180'-0"	190'-0"	200'-0"	210'-0"	220'-0"	230'-0"	240'-0"	250'-0"	260'-0"	270'-0"	280'-0"	283'-0"
G1	83.44	83.45	83.47	83.50	83.54	83.59	83.64	83.70	83.76	83.81	83.86	83.89	83.91	83.92	83.91	83.89	83.85	83.79	83.71	83.61	83.49	83.35	83.20	83.01	82.82	82.62	82.40	82.18	81.97	81.90
G2	83.62	83.63	83.65	83.68	83.71	83.75	83.80	83.85	83.90	83.94	83.98	84.01	84.02	84.02	84.00	83.98	83.93	83.87	83.80	83.70	83.58	83.45	83.31	83.13	82.95	82.76	82.55	82.35	82.15	82.09
G3	83.80	83.82	83.83	83.86	83.89	83.92	83.96	84.00	84.04	84.08	84.11	84.13	84.14	84.13	84.11	84.08	84.03	83.97	83.89	83.80	83.69	83.56	83.42	83.26	83.08	82.90	82.70	82.51	82.32	82.27
G4	83.99	84.00	84.02	84.04	84.07	84.10	84.13	84.17	84.20	84.24	84.26	84.27	84.27	84.26	84.24	84.20	84.16	84.09	84.02	83.92	83.81	83.69	83.56	83.40	83.23	83.06	82.87	82.68	82.51	82.45
G5	83.95	83.96	83.98	84.00	84.02	84.05	84.08	84.10	84.13	84.15	84.17	84.17	84.16	84.14	84.11	84.07	84.02	83.96	83.88	83.79	83.68	83.57	83.44	83.29	83.14	82.97	82.80	82.63	82.46	82.42
G6	83.77	83.78	83.80	83.82	83.85	83.88	83.91	83.95	83.99	84.02	84.05	84.06	84.07	84.06	84.04	84.00	83.96	83.89	83.82	83.72	83.61	83.49	83.35	83.19	83.02	82.84	82.65	82.47	82.29	82.23
G7	83.58	83.60	83.61	83.64	83.67	83.70	83.74	83.78	83.82	83.85	83.88	83.90	83.91	83.90	83.88	83.85	83.80	83.74	83.66	83.57	83.46	83.33	83.20	83.03	82.86	82.68	82.48	82.29	82.10	82.05
G8	83.40	83.41	83.43	83.46	83.49	83.53	83.57	83.62	83.66	83.70	83.74	83.76	83.78	83.77	83.76	83.73	83.68	83.62	83.54	83.45	83.33	83.20	83.06	82.89	82.71	82.52	82.32	82.12	81.92	81.87
G9	83.22	83.23	83.25	83.28	83.32	83.37	83.42	83.47	83.53	83.58	83.62	83.66	83.67	83.68	83.67	83.64	83.60	83.54	83.46	83.36	83.24	83.11	82.96	82.78	82.59	82.38	82.17	81.95	81.74	81.68

TABLE OF DEFLECTIONS ~ GIRDER 1 (Inches)

	℄ Brg. Abut. 1	SPAN NO. 1 LENGTH = 283'-0"																									℄ Brg. Pier
DISTANCE	0'-0"	10'-0"	20'-0"	30'-0"	40'-0"	50'-0"	60'-0"	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"	160'-0"	170'-0"	180'-0"	190'-0"	200'-0"	210'-0"	220'-0"	230'-0"	240'-0"	250'-0"	260'-0"	270'-0"	280'-0"	283'-0"
Steel Dead Load	0.00	-0.70	-1.38	-2.03	-2.63	-3.18	-3.65	-4.05	-4.37	-4.60	-4.74	-4.79	-4.75	-4.63	-4.43	-4.16	-3.83	-3.44	-3.02	-2.57	-2.12	-1.68	-1.27	-0.91	-0.60	-0.35	-0.17	-0.05	-0.00	0.00
Fluid Dead Load	0.00	-1.14	-2.26	-3.33	-4.32	-5.21	-6.00	-6.67	-7.21	-7.61	-7.86	-7.97	-7.94	-7.76	-7.46	-7.04	-6.50	-5.88	-5.18	-4.43	-3.67	-2.93	-2.25	-1.65	-1.13	-0.70	-0.37	-0.15	-0.02	0.00
Superimposed Dead Load	0.00	-0.88	-1.73	-2.55	-3.30	-3.99	-4.59	-5.09	-5.50	-5.79	-5.98	-6.05	-6.02	-5.88	-5.64	-5.31	-4.90	-4.42	-3.90	-3.33	-2.76	-2.20	-1.67	-1.20	-0.79	-0.46	-0.22	-0.07	-0.00	0.00
	℄ Brg. Pier	SPAN NO. 2 LENGTH = 283'-0"																									℄ Brg. Abut. 2
DISTANCE	0'-0"	10'-0"	20'-0"	30'-0"	40'-0"	50'-0"	60'-0"	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"	160'-0"	170'-0"	180'-0"	190'-0"	200'-0"	210'-0"	220'-0"	230'-0"	240'-0"	250'-0"	260'-0"	270'-0"	280'-0"	283'-0"
Steel Dead Load	0.00	-0.03	-0.13	-0.29	-0.52	-0.81	-1.16	-1.55	-1.98	-2.44	-2.89	-3.32	-3.72	-4.07	-4.36	-4.58	-4.72	-4.79	-4.76	-4.65	-4.44	-4.15	-3.82	-3.33	-2.80	-2.22	-1.58	-0.91	-0.21	0.00
Fluid Dead Load	0.00	0.01	-0.07	-0.26	-0.55	-0.93	-1.40	-1.95	-2.57	-3.21	-3.86	-4.50	-5.09	-5.61	-6.05	-6.40	-6.64	-6.75	-6.74	-6.60	-6.33	-5.93	-5.47	-4.77	-4.02	-3.18	-2.27	-1.30	-0.30	0.00
Superimposed Dead Load	0.00	-0.04	-0.16	-0.38	-0.68	-1.06	-1.52	-2.03	-2.59	-3.16	-3.73	-4.27	-4.76	-5.19	-5.55	-5.82	-5.99	-6.05	-6.01	-5.86	-5.60	-5.23	-4.80	-4.18	-3.52	-2.78	-1.98	-1.14	-0.26	0.00

TABLE OF DEFLECTIONS ~ GIRDER 2 (Inches)

	℄ Brg. Abut. 1	SPAN NO. 1 LENGTH = 283'-0"																									℄ Brg. Pier
DISTANCE	0'-0"	10'-0"	20'-0"	30'-0"	40'-0"	50'-0"	60'-0"	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"	160'-0"	170'-0"	180'-0"	190'-0"	200'-0"	210'-0"	220'-0"	230'-0"	240'-0"	250'-0"	260'-0"	270'-0"	280'-0"	283'-0"
Steel Dead Load	0.00	-0.74	-1.46	-2.15	-2.79	-3.36	-3.86	-4.29	-4.62	-4.86	-5.01	-5.07	-5.03	-4.90	-4.69	-4.40	-4.05	-3.64	-3.19	-2.72	-2.24	-1.77	-1.34	-0.96	-0.63	-0.37	-0.18	-0.06	-0.00	0.00
Fluid Dead Load	0.00	-1.28	-2.54	-3.73	-4.84	-5.85	-6.74	-7.49	-8.09	-8.54	-8.83	-8.95	-8.92	-8.73	-8.39	-7.91	-7.32	-6.62	-5.83	-4.99	-4.14	-3.31	-2.54	-1.87	-1.28	-0.79	-0.43	-0.17	-0.02	0.00
Superimposed Dead Load	0.00	-0.60	-1.19	-1.75	-2.27	-2.74	-3.16	-3.50	-3.78	-3.99	-4.12	-4.17	-4.14	-4.05	-3.88	-3.66	-3.38	-3.05	-2.69	-2.30	-1.91	-1.52	-1.15	-0.83	-0.54	-0.32	-0.15	-0.05	-0.00	0.00
	℄ Brg. Pier	SPAN NO. 2 LENGTH = 283'-0"																									℄ Brg. Abut. 2
DISTANCE	0'-0"	10'-0"	20'-0"	30'-0"	40'-0"	50'-0"	60'-0"	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"	160'-0"	170'-0"	180'-0"	190'-0"	200'-0"	210'-0"	220'-0"	230'-0"	240'-0"	250'-0"	260'-0"	270'-0"	280'-0"	283'-0"
Steel Dead Load	0.00	-0.03	-0.13	-0.30	-0.55	-0.86	-1.22	-1.64	-2.10	-2.58	-3.05	-3.51	-3.93	-4.30	-4.61	-4.85	-5.00	-5.06	-5.04	-4.92	-4.70	-4.40	-4.04	-3.52	-2.97	-2.35	-1.67	-0.96	-0.22	0.00
Fluid Dead Load	0.00	0.02	-0.07	-0.27	-0.59	-1.02	-1.54	-2.15	-2.83	-3.55	-4.27	-4.97	-5.63	-6.21	-6.71	-7.09	-7.36	-7.49	-7.48	-7.32	-7.03	-6.58	-6.07	-5.29	-4.46	-3.54	-2.52	-1.45	-0.34	0.00
Superimposed Dead Load	0.00	-0.03	-0.11	-0.26	-0.47	-0.74	-1.05	-1.41	-1.79	-2.18	-2.57	-2.94	-3.28	-3.58	-3.82	-4.01	-4.12	-4.17	-4.14	-4.03	-3.85	-3.60	-3.30	-2.87	-2.42	-1.91	-1.36	-0.78	-0.18	0.00

TABLE OF DEFLECTIONS ~ GIRDER 3 (Inches)

	℄ Brg. Abut. 1	SPAN NO. 1 LENGTH = 283'-0"																									℄ Brg. Pier
DISTANCE	0'-0"	10'-0"	20'-0"	30'-0"	40'-0"	50'-0"	60'-0"	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"	160'-0"	170'-0"	180'-0"	190'-0"	200'-0"	210'-0"	220'-0"	230'-0"	240'-0"	250'-0"	260'-0"	270'-0"	280'-0"	283'-0"
Steel Dead Load	0.00	-0.73	-1.44	-2.11	-2.74	-3.31	-3.80	-4.22	-4.55	-4.79	-4.93	-4.99	-4.95	-4.82	-4.61	-4.33	-3.98	-3.58	-3.14	-2.68	-2.21	-1.75	-1.32	-0.95	-0.62	-0.36	-0.17	-0.05	-0.00	0.00
Fluid Dead Load	0.00	-1.28	-2.54	-3.73	-4.84	-5.85	-6.74	-7.49	-8.09	-8.54	-8.83	-8.95	-8.92	-8.73	-8.39	-7.91	-7.32	-6.62	-5.83	-4.99	-4.14	-3.31	-2.54	-1.87	-1.28	-0.79	-0.43	-0.17	-0.02	0.00
Superimposed Dead Load	0.00	-0.45	-0.89	-1.32	-1.71	-2.06	-2.37	-2.63	-2.84	-3.00	-3.09	-3.13	-3.11	-3.04	-2.92	-2.75	-2.54	-2.29	-2.02	-1.73	-1.43	-1.14	-0.87	-0.62	-0.41	-0.24	-0.11	-0.04	-0.00	0.00
	℄ Brg. Pier	SPAN NO. 2 LENGTH = 283'-0"																									℄ Brg. Abut. 2
DISTANCE	0'-0"	10'-0"	20'-0"	30'-0"	40'-0"	50'-0"	60'-0"	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"	160'-0"	170'-0"	180'-0"	190'-0"	200'-0"	210'-0"	220'-0"	230'-0"	240'-0"	250'-0"	260'-0"	270'-0"	280'-0"	283'-0"
Steel Dead Load	0.00	-0.03	-0.13	-0.30	-0.54	-0.84	-1.20	-1.61	-2.06	-2.53	-3.00	-3.45	-3.87	-4.23	-4.54	-4.77	-4.92	-4.98	-4.96	-4.84	-4.63	-4.33	-3.98	-3.46	-2.92	-2.31	-1.65	-0.94	-0.22	0.00
Fluid Dead Load	0.00	0.02	-0.07	-0.27	-0.59	-1.02	-1.54	-2.15	-2.83	-3.55	-4.27	-4.97	-5.63	-6.21	-6.71	-7.09	-7.36	-7.49	-7.48	-7.32	-7.02	-6.58	-6.07	-5.29	-4.46	-3.53	-2.52	-1.45	-0.34	0.00
Superimposed Dead Load	0.00	-0.02	-0.09	-0.20	-0.35	-0.55	-0.79	-1.06	-1.34	-1.64	-1.93	-2.21	-2.47	-2.69	-2.87	-3.01	-3.10	-3.13	-3.11	-3.03	-2.89	-2.70	-2.48	-2.16	-1.82	-1.44	-1.02	-0.59	-0.14	0.00

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

PROJ. MANAGER	M. Parlin
DESIGN-DETAILED	N. Baert
CHECKED-REVIEWED	B. Grenier
DESIGN2-DETAILED2	
DESIGN3-DETAILED3	

BY	DATE
E. Beausoleil	07\2022
T. Cote	07\2022

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

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

STRUCTURAL STEEL DETAILS II

SHEET NUMBER

83

OF 111

Filename: 083_Structural Steel Details 2.dgn Username: Division: Date:7/29/2022

TABLE OF DEFLECTIONS ~ GIRDER 4 (Inches)

	℄ Brg. Abut. 1	SPAN NO. 1 LENGTH = 283'-0"																										℄ Brg. Pier
DISTANCE	0'-0"	10'-0"	20'-0"	30'-0"	40'-0"	50'-0"	60'-0"	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"	160'-0"	170'-0"	180'-0"	190'-0"	200'-0"	210'-0"	220'-0"	230'-0"	240'-0"	250'-0"	260'-0"	270'-0"	280'-0"	283'-0"
Steel Dead Load	0.00	-0.76	-1.51	-2.22	-2.88	-3.47	-3.99	-4.42	-4.77	-5.02	-5.17	-5.23	-5.19	-5.06	-4.84	-4.54	-4.18	-3.76	-3.30	-2.81	-2.31	-1.83	-1.38	-0.99	-0.65	-0.38	-0.18	-0.06	0.00	0.00
Fluid Dead Load	0.00	-1.16	-2.30	-3.38	-4.39	-5.30	-6.10	-6.78	-7.33	-7.73	-7.99	-8.10	-8.07	-7.89	-7.58	-7.15	-6.61	-5.98	-5.27	-4.51	-3.73	-2.98	-2.29	-1.68	-1.14	-0.71	-0.38	-0.15	-0.02	0.00
Superimposed Dead Load	0.00	-0.44	-0.87	-1.28	-1.66	-2.01	-2.31	-2.57	-2.77	-2.92	-3.01	-3.05	-3.04	-2.97	-2.84	-2.68	-2.47	-2.23	-1.97	-1.68	-1.39	-1.11	-0.84	-0.60	-0.40	-0.23	-0.11	-0.03	0.00	0.00
	℄ Brg. Pier	SPAN NO. 2 LENGTH = 283'-0"																										℄ Brg. Abut. 2
DISTANCE	0'-0"	10'-0"	20'-0"	30'-0"	40'-0"	50'-0"	60'-0"	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"	160'-0"	170'-0"	180'-0"	190'-0"	200'-0"	210'-0"	220'-0"	230'-0"	240'-0"	250'-0"	260'-0"	270'-0"	280'-0"	283'-0"
Steel Dead Load	0.00	-0.03	-0.14	-0.31	-0.56	-0.88	-1.25	-1.68	-2.15	-2.63	-3.12	-3.59	-4.02	-4.40	-4.72	-4.96	-5.11	-5.18	-5.15	-5.03	-4.81	-4.50	-4.14	-3.60	-3.03	-2.40	-1.71	-0.98	-0.23	0.00
Fluid Dead Load	0.00	0.01	-0.07	-0.26	-0.55	-0.94	-1.42	-1.98	-2.60	-3.26	-3.92	-4.56	-5.16	-5.69	-6.14	-6.49	-6.73	-6.85	-6.84	-6.70	-6.42	-6.02	-5.55	-4.84	-4.08	-3.23	-2.30	-1.32	-0.31	0.00
Superimposed Dead Load	0.00	-0.02	-0.08	-0.19	-0.34	-0.53	-0.76	-1.02	-1.29	-1.58	-1.86	-2.13	-2.38	-2.59	-2.77	-2.90	-2.99	-3.02	-3.00	-2.92	-2.79	-2.60	-2.38	-2.08	-1.75	-1.39	-0.99	-0.57	-0.13	0.00

TABLE OF DEFLECTIONS ~ GIRDER 5 (Inches)

	℄ Brg. Abut. 1	SPAN NO. 1 LENGTH = 283'-0"																										℄ Brg. Pier
DISTANCE	0'-0"	10'-0"	20'-0"	30'-0"	40'-0"	50'-0"	60'-0"	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"	160'-0"	170'-0"	180'-0"	190'-0"	200'-0"	210'-0"	220'-0"	230'-0"	240'-0"	250'-0"	260'-0"	270'-0"	280'-0"	283'-0"
Steel Dead Load	0.00	-0.66	-1.31	-1.93	-2.50	-3.02	-3.47	-3.85	-4.15	-4.37	-4.50	-4.55	-4.51	-4.40	-4.21	-3.95	-3.64	-3.27	-2.87	-2.45	-2.01	-1.60	-1.21	-0.87	-0.57	-0.33	-0.16	-0.05	-0.00	0.00
Fluid Dead Load	0.00	-0.95	-1.88	-2.75	-3.56	-4.30	-4.96	-5.51	-5.95	-6.27	-6.48	-6.57	-6.54	-6.39	-6.14	-5.79	-5.34	-4.83	-4.25	-3.63	-3.01	-2.40	-1.84	-1.34	-0.91	-0.56	-0.30	-0.12	-0.02	0.00
Superimposed Dead Load	0.00	-0.44	-0.87	-1.28	-1.66	-2.00	-2.31	-2.56	-2.76	-2.91	-3.00	-3.04	-3.02	-2.95	-2.83	-2.67	-2.46	-2.22	-1.96	-1.67	-1.39	-1.10	-0.84	-0.60	-0.40	-0.23	-0.11	-0.03	-0.00	0.00
	℄ Brg. Pier	SPAN NO. 2 LENGTH = 283'-0"																										℄ Brg. Abut. 2
DISTANCE	0'-0"	10'-0"	20'-0"	30'-0"	40'-0"	50'-0"	60'-0"	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"	160'-0"	170'-0"	180'-0"	190'-0"	200'-0"	210'-0"	220'-0"	230'-0"	240'-0"	250'-0"	260'-0"	270'-0"	280'-0"	283'-0"
Steel Dead Load	0.00	-0.03	-0.14	-0.14	-0.56	-0.88	-1.26	-1.69	-2.16	-2.66	-3.15	-3.62	-4.06	-4.44	-4.76	-5.00	-5.16	-5.23	-5.20	-5.08	-4.86	-4.54	-4.17	-3.63	-3.06	-2.42	-2.42	-0.99	-0.23	0.00
Fluid Dead Load	0.00	0.01	-0.07	-0.07	-0.55	-0.94	-1.42	-1.98	-2.60	-3.26	-3.92	-4.56	-5.16	-5.69	-6.14	-6.49	-6.73	-6.85	-6.84	-6.70	-6.42	-6.02	-5.55	-4.83	-4.08	-3.23	-3.23	-1.32	-0.31	0.00
Superimposed Dead Load	0.00	-0.02	-0.08	-0.08	-0.34	-0.54	-0.77	-1.03	-1.31	-1.60	-1.88	-2.15	-2.40	-2.62	-2.80	-2.93	-3.02	-3.05	-3.03	-2.95	-2.82	-2.63	-2.41	-2.11	-1.77	-1.40	-1.40	-0.57	-0.13	0.00

TABLE OF DEFLECTIONS ~ GIRDER 6 (Inches)

	℄ Brg. Abut. 1	SPAN NO. 1 LENGTH = 283'-0"																										℄ Brg. Pier
DISTANCE	0'-0"	10'-0"	20'-0"	30'-0"	40'-0"	50'-0"	60'-0"	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"	160'-0"	170'-0"	180'-0"	190'-0"	200'-0"	210'-0"	220'-0"	230'-0"	240'-0"	250'-0"	260'-0"	270'-0"	280'-0"	283'-0"
Steel Dead Load	0.00	-0.69	-1.36	-2.00	-2.59	-3.12	-3.59	-3.98	-4.29	-4.52	-4.66	-4.71	-4.67	-4.55	-4.36	-4.09	-3.76	-3.39	-2.97	-2.53	-2.08	-1.65	-1.25	-0.90	-0.59	-0.34	-0.16	-0.05	-0.00	0.00
Fluid Dead Load	0.00	-1.28	-2.54	-3.73	-4.84	-5.85	-6.74	-7.49	-8.09	-8.54	-8.83	-8.95	-8.92	-8.73	-8.39	-7.91	-7.32	-6.62	-5.83	-4.99	-4.14	-3.31	-2.54	-1.87	-1.28	-0.79	-0.43	-0.17	-0.02	0.00
Superimposed Dead Load	0.00	-0.38	-0.76	-1.11	-1.44	-1.74	-2.00	-2.22	-2.40	-2.53	-2.61	-2.64	-2.63	-2.57	-2.47	-2.32	-2.14	-1.94	-1.71	-1.46	-1.21	-0.96	-0.73	-0.53	-0.35	-0.20	-0.10	-0.03	-0.00	0.00
	℄ Brg. Pier	SPAN NO. 2 LENGTH = 283'-0"																										℄ Brg. Abut. 2
DISTANCE	0'-0"	10'-0"	20'-0"	30'-0"	40'-0"	50'-0"	60'-0"	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"	160'-0"	170'-0"	180'-0"	190'-0"	200'-0"	210'-0"	220'-0"	230'-0"	240'-0"	250'-0"	260'-0"	270'-0"	280'-0"	283'-0"
Steel Dead Load	0.00	-0.03	-0.12	-0.28	-0.51	-0.80	-1.14	-1.53	-1.95	-2.40	-2.84	-3.26	-3.65	-4.00	-4.28	-4.50	-4.65	-4.71	-4.68	-4.57	-4.37	-4.08	-3.76	-3.27	-2.76	-2.18	-1.55	-0.89	-0.21	0.00
Fluid Dead Load	0.00	0.02	-0.07	-0.27	-0.59	-1.02	-1.54	-2.15	-2.83	-3.55	-4.27	-4.97	-5.63	-6.21	-6.71	-7.09	-7.36	-7.49	-7.48	-7.32	-7.03	-6.58	-6.07	-5.29	-4.46	-3.54	-2.52	-1.45	-0.34	0.00
Superimposed Dead Load	0.00	-0.02	-0.07	-0.17	-0.30	-0.47	-0.67	-0.89	-1.14	-1.39	-1.63	-1.87	-2.08	-2.27	-2.43	-2.54	-2.62	-2.65	-2.63	-2.56	-2.44	-2.28	-2.10	-1.82	-1.54	-1.21	-0.87	-0.50	-0.12	0.00

TABLE OF DEFLECTIONS ~ GIRDER 7 (Inches)

	℄ Brg. Abut. 1	SPAN NO. 1 LENGTH = 283'-0"																										℄ Brg. Pier
DISTANCE	0'-0"	10'-0"	20'-0"	30'-0"	40'-0"	50'-0"	60'-0"	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"	160'-0"	170'-0"	180'-0"	190'-0"	200'-0"	210'-0"	220'-0"	230'-0"	240'-0"	250'-0"	260'-0"	270'-0"	280'-0"	283'-0"
Steel Dead Load	0.00	-0.72	-1.42	-2.08	-2.70	-3.26	-3.74	-4.15	-4.48	-4.71	-4.85	-4.91	-4.87	-4.75	-4.54	-4.26	-3.92	-3.53	-3.09	-2.64	-2.17	-1.72	-1.30	-0.93	-0.61	-0.36	-0.17	-0.05	-0.00	0.00
Fluid Dead Load	0.00	-1.28	-2.54	-3.73	-4.84	-5.85	-6.74	-7.49	-8.09	-8.54	-8.83	-8.95	-8.92	-8.73	-8.39	-7.91	-7.32	-6.62	-5.83	-4.99	-4.14	-3.31	-2.54	-1.87	-1.28	-0.79	-0.43	-0.17	-0.02	0.00
Superimposed Dead Load	0.00	-0.44	-0.86	-1.27	-1.64	-1.98	-2.28	-2.53	-2.73	-2.88	-2.97	-3.01	-2.99	-2.92	-2.81	-2.64	-2.44	-2.20	-1.94	-1.66	-1.38	-1.10	-0.83	-0.60	-0.39	-0.23	-0.11	-0.03	-0.00	0.00
	℄ Brg. Pier	SPAN NO. 2 LENGTH = 283'-0"																										℄ Brg. Abut. 2
DISTANCE	0'-0"	10'-0"	20'-0"	30'-0"	40'-0"	50'-0"	60'-0"	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"	160'-0"	170'-0"	180'-0"	190'-0"	200'-0"	210'-0"	220'-0"	230'-0"	240'-0"	250'-0"	260'-0"	270'-0"	280'-0"	283'-0"
Steel Dead Load	0.00	-0.03	-0.13	-0.29	-0.53	-0.83	-1.18	-1.59	-2.03	-2.50	-2.96	-3.40	-3.81	-4.17	-4.47	-4.69	-4.84	-4.91	-4.88	-4.76	-4.56	-4.26	-3.91	-3.41	-2.87	-2.27	-1.62	-0.93	-0.22	0.00
Fluid Dead Load	0.00	0.02	-0.07	-0.27	-0.59	-1.02	-1.54	-2.15	-2.83	-3.55	-4.27	-4.97	-5.63	-6.21	-6.71	-7.09	-7.36	-7.49	-7.48	-7.32	-7.03	-6.58	-6.07	-5.29	-4.46	-3.54	-2.52	-1.45	-0.34	0.00
Superimposed Dead Load	0.00	-0.02	-0.08	-0.19	-0.34	-0.53	-0.76	-1.02	-1.29	-1.58	-1.86	-2.13	-2.37	-2.59	-2.76	-2.89	-2.98	-3.01	-2.99	-2.91	-2.78	-2.60	-2.39	-2.08	-1.75	-1.38	-0.98	-0.56	-0.13	0.00

TABLE OF DEFLECTIONS ~ GIRDER 8 (Inches)

	℄ Brg. Abut. 1	SPAN NO. 1 LENGTH = 283'-0"																										℄ Brg. Pier
DISTANCE	0'-0"	10'-0"	20'-0"	30'-0"	40'-0"	50'-0"	60'-0"	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"	160'-0"	170'-0"	180'-0"	190'-0"	200'-0"	210'-0"	220'-0"	230'-0"	240'-0"	250'-0"	260'-0"	270'-0"	280'-0"	283'-0"
Steel Dead Load	0.00	-0.73	-1.44	-2.12	-2.74	-3.31	-3.80	-4.22	-4.55	-4.79	-4.93	-4.99	-4.95	-4.82	-4.62	-4.33	-3.99	-3.58	-3.14	-2.68	-2.21	-1.75	-1.32	-0.95	-0.62	-0.36	-0.17	-0.05	-0.00	0.00
Fluid Dead Load	0.00	-1.28	-2.54	-3.73	-4.84	-5.85	-6.74	-7.49	-8.09	-8.54	-8.83	-8.95	-8.92	-8.73	-8.39	-7.91	-7.32	-6.62	-5.83	-4.99	-4.14	-3.31	-2.54	-1.87	-1.28	-0.79	-0.43	-0.17	-0.02	0.00
Superimposed Dead Load	0.00	-0.55	-1.08	-1.59	-2.07	-2.49	-2.87	-3.19	-3.44	-3.63	-3.74	-3.79	-3.77	-3.68	-3.53	-3.33	-3.07	-2.77	-2.44	-2.09	-1.73	-1.38	-1.05	-0.75	-0.50	-0.29	-0.14	-0.04	-0.00	0.00
	℄ Brg. Pier	SPAN NO. 2 LENGTH = 283'-0"																										℄ Brg. Abut. 2
DISTANCE	0'-0"	10'-0"	20'-0"	30'-0"	40'-0"	50'-0"	60'-0"	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"	160'-0"	170'-0"	180'-0"	190'-0"	200'-0"	210'-0"	220'-0"	230'-0"	240'-0"	250'-0"	260'-0"	270'-0"	280'-0"	283'-0"
Steel Dead Load	0.00	-0.03	-0.13	-0.30	-0.54	-0.84	-1.20	-1.61	-2.07	-2.54	-3.01	-3.46	-3.87	-4.24	-4.54	-4.77	-4.92	-4.99	-4.96	-4.84	-4.63	-4.33	-3.98	-3.46	-2.92	-2.31	-1.65	-0.94	-0.22	0.00
Fluid Dead Load	0.00	0.02	-0.07	-0.27	-0.59	-1.02	-1.54	-2.15	-2.83	-3.55	-4.27	-4.97	-5.63	-6.21	-6.71	-7.09	-7.36	-7.49	-7.48	-7.32	-7.03	-6.58	-6.07	-5.29	-4.46	-3.54	-2.52	-1.45	-0.34	0.00
Superimposed Dead Load	0.00	-0.03	-0.10	-0.24	-0.43	-0.67	-0.96	-1.28	-1.63	-1.99	-2.34	-2.68	-2.98	-3.25	-3.48	-3.64	-3.75	-3.79	-3.76	-3.67	-3.50	-3.27	-3.00	-2.61	-2.20	-1.74	-1.24	-0.71	-0.17	0.00

TABLE OF DEFLECTIONS ~ GIRDER 9 (Inches)

	℄ Brg. Abut. 1	SPAN NO. 1 LENGTH = 283'-0"																										℄ Brg. Pier
DISTANCE	0'-0"	10'-0"	20'-0"	30'-0"	40'-0"	50'-0"	60'-0"	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"	160'-0"	170'-0"	180'-0"	190'-0"	200'-0"	210'-0"	220'-0"	230'-0"	240'-0"	250'-0"	260'-0"	270'-0"	280'-0"	283'-0"
Steel Dead Load	0.00	-0.68	-1.34	-1.96	-2.54	-3.07	-3.53	-3.92	-4.22	-4.44	-4.58	-4.63	-4.59	-4.48	-4.28	-4.02	-3.70	-3.33	-2.92	-2.49	-2.05	-1.62	-1.23	-0.88	-0.58	-0.34	-0.16	-0.05	-0.00	0.00
Fluid Dead Load	0.00	-1.14	-2.26	-3.33	-4.32	-5.21	-6.00	-6.67	-7.21	-7.61	-7.86	-7.97	-7.94	-7.76	-7.46	-7.04	-6.50	-5.88	-5.18	-4.43	-3.67	-2.93	-2.25	-1.65	-1.13	-0.70	-0.37	-0.15	-0.02	0.00
Superimposed Dead Load	0.00	-0.83	-1.64	-2.41	-3.13	-3.78	-4.35	-4.83	-5.21	-5.49	-5.67	-5.74	-5.71	-5.57	-5.35	-5.03	-4.64	-4.19	-3.69	-3.16	-2.62	-2.08	-1.58	-1.13	-0.75	-0.43	-0.21	-0.07	-0.00	0.00
	℄ Brg. Pier	SPAN NO. 2 LENGTH = 283'-0"																										℄ Brg. Abut. 2
DISTANCE	0'-0"	10'-0"	20'-0"	30'-0"	40'-0"	50'-0"	60'-0"	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"	160'-0"	170'-0"	180'-0"	190'-0"	200'-0"	210'-0"	220'-0"	230'-0"	240'-0"	250'-0"	260'-0"	270'-0"	280'-0"	283'-0"
Steel Dead Load	0.00	-0.03	-0.12	-0.28	-0.50	-0.78	-1.12	-1.50	-1.92	-2.36	-2.79	-3.21	-3.59	-3.93	-4.21	-4.43	-4.57	-4.63	-4.60	-4.49	-4.30	-4.02	-3.69	-3.22	-2.71	-2.14	-1.53	-0.88	-0.20	0.00
Fluid Dead Load	0.00	0.01	-0.07	-0.26	-0.55	-0.93	-1.40	-1.95	-2.57	-3.21	-3.86	-4.50	-5.09	-5.61	-6.05	-6.40	-6.64	-6.75	-6.74	-6.60	-6.33	-5.93	-5.47	-4.77	-4.02	-3.18	-2.27	-1.30	-0.30	0.00
Superimposed Dead Load	0.00	-0.04	-0.16	-0.36	-0.64	-1.01	-1.44	-1.93	-2.45	-3.00	-3.53	-4.05	-4.51	-4.92	-5.26	-5.51	-5.68	-5.74	-5.70	-5.55	-5.31	-4.95	-4.55	-3.96	-3.33	-2.64	-1.88	-1.08	-0.25	0.00

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

	BY	DATE
PROJ. MANAGER	M. Perlin	
DESIGN-DETAILED	E. Beausoleil	07\2022
CHECKED-REVIEWED	T. Cote	07\2022
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

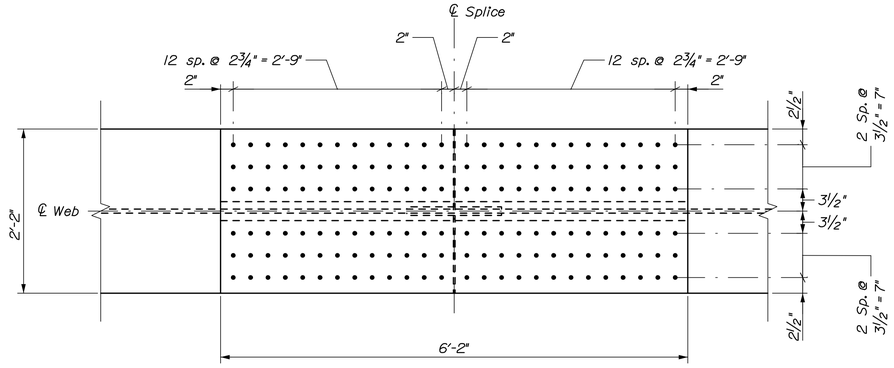
STRUCTURAL STEEL DETAILS III

SHEET NUMBER

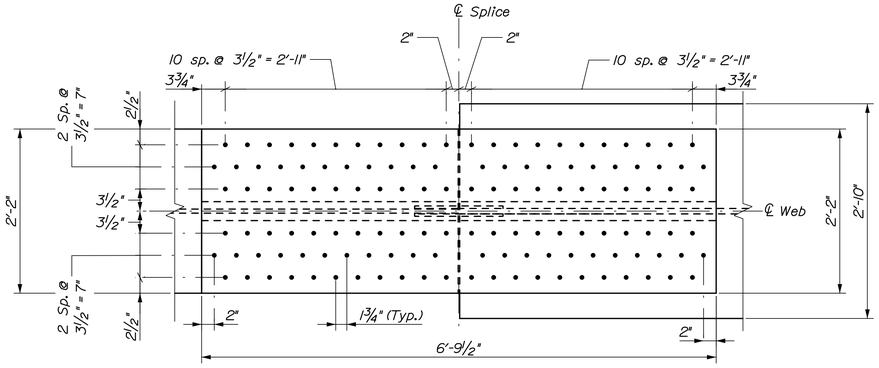
84

OF 111

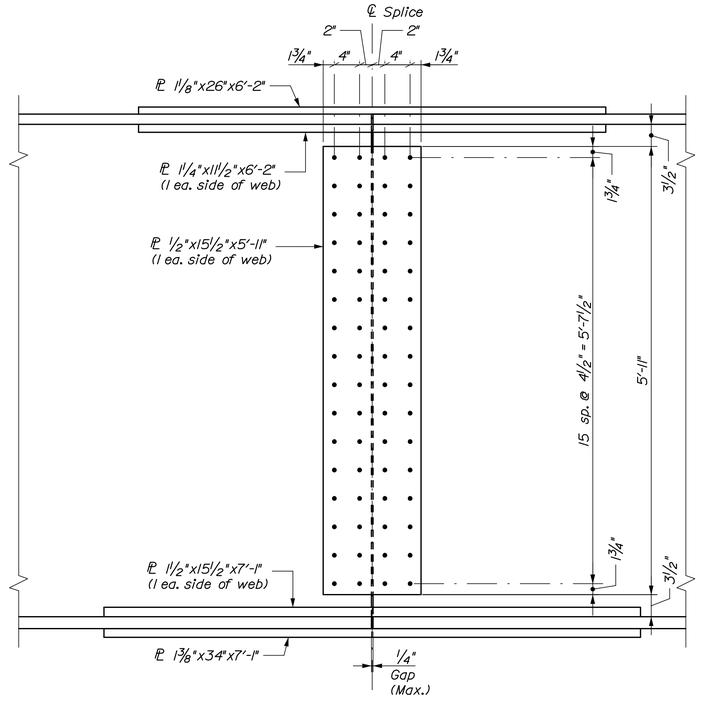
Filename: 084_Structural Steel Details 3.dgn Division: Username: Date:7/29/2022



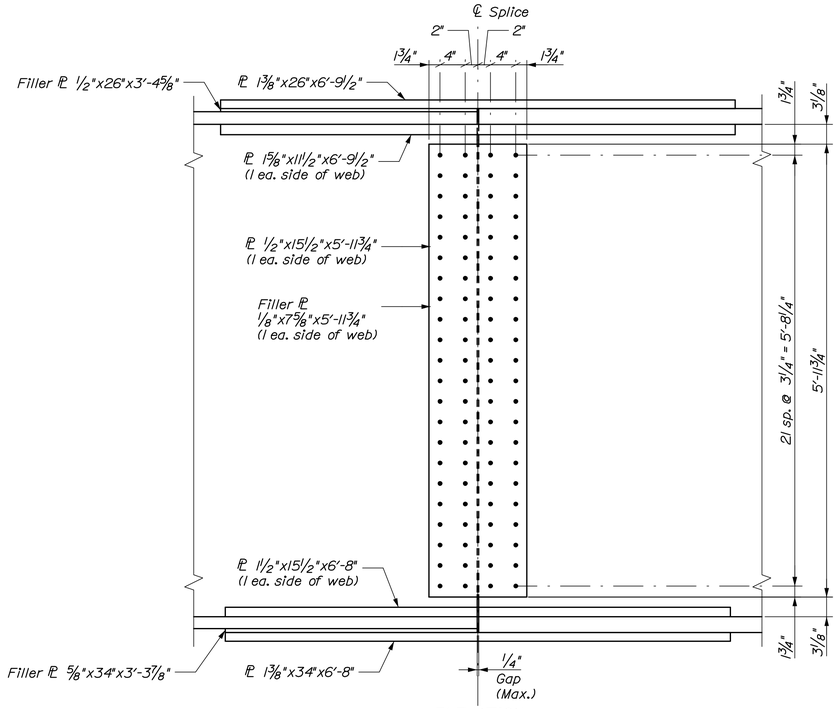
PLAN - TOP FLANGE



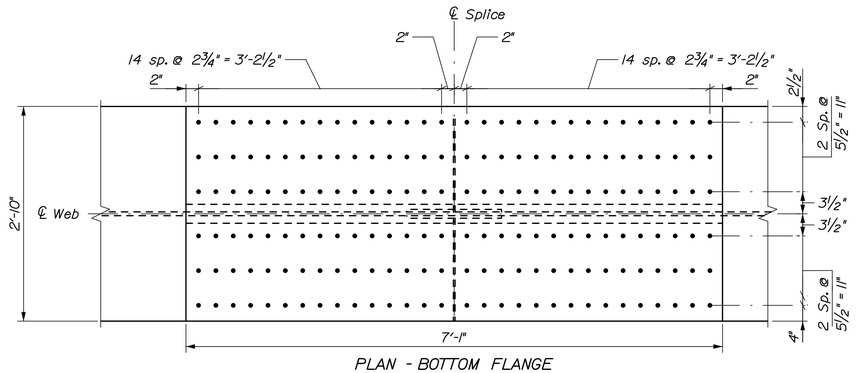
PLAN - TOP FLANGE



ELEVATION



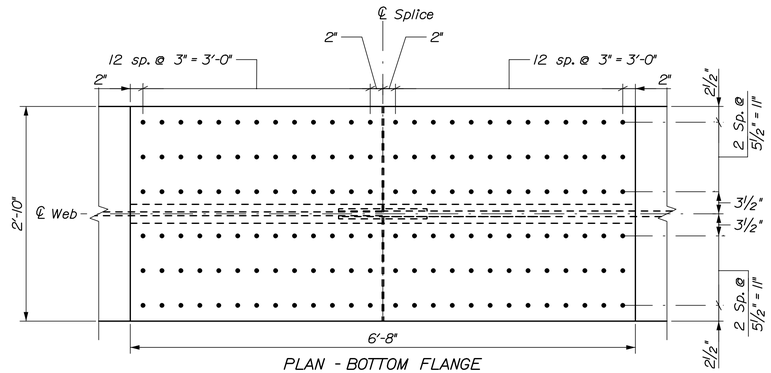
ELEVATION



PLAN - BOTTOM FLANGE

BOLTED FIELD SPLICE (FS1, FS4)

(Field Splice 1 Shown, Field Splice 4 Similar)



PLAN - BOTTOM FLANGE

BOLTED FIELD SPLICE (FS2, FS3)

(Field Splice 2 Shown, Field Splice 3 Opposite Hand)

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

PROJ. MANAGER	M. Perlin	BY	DATE
DESIGN-DETAILED	N. Baert	E. Beausoleil	07\2022
CHECKED-REVIEWED	B. Grenier	T. Cote	07\2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

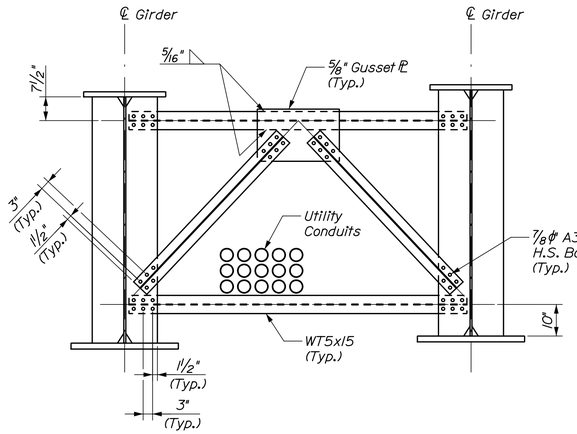
STRUCTURAL STEEL DETAILS IV

SHEET NUMBER

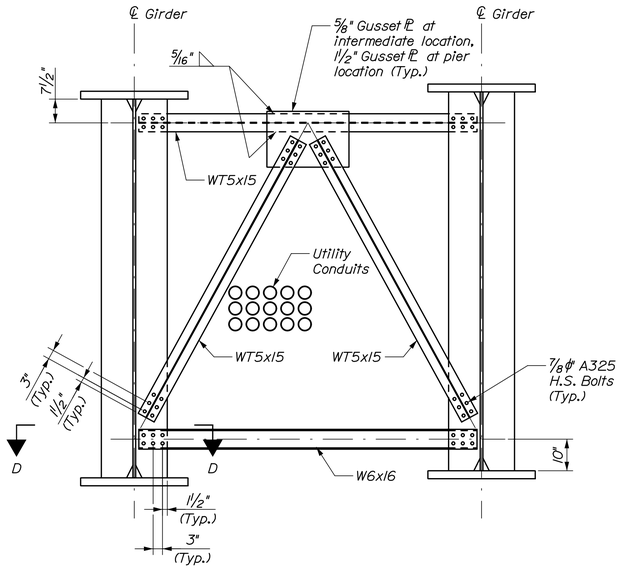
85

OF 111

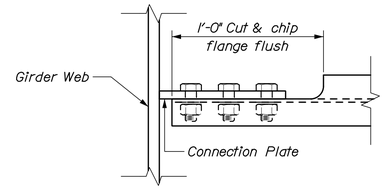
Filename: 085_Structural Steel Details 4.dgn Division: Username: Date:7/29/2022



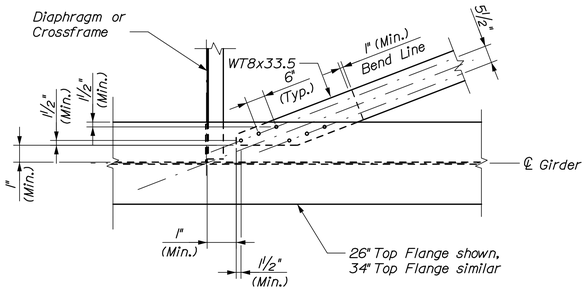
CROSS FRAME - TYPE "K1"



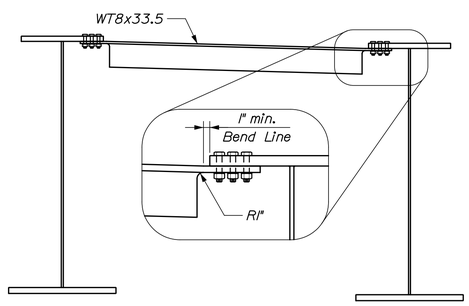
CROSS FRAME - TYPE "K2"



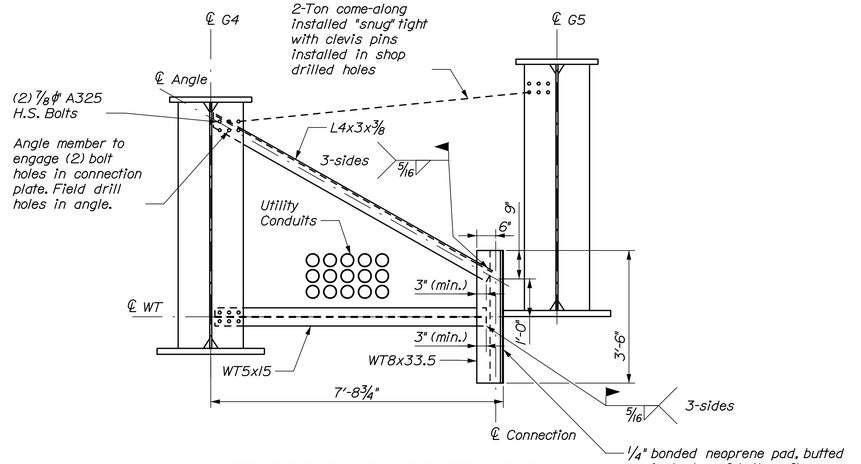
SECTION D-D



LATERAL BRACING PLAN



LATERAL BRACING SECTION



TEMPORARY BRACE, STAGE 2
(G5 shown with camber prior to concrete placement)

NOTES

1. The Temporary Brace, Stage 2 is designed to resist lateral wind load prior to Stage 2 deck placement. The Temporary Brace, Stage 2, does not provide stability during girder erection. The Contractor shall design temporary bracing for erection as part of the Erection Plan. Temporary bracing is incidental to Item 504.71 Structural Steel Erection.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	B. Grenier	E. Beausoleil	07\2022
CHECKED-REVIEWED	H. Walton	T. Cote	07\2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW
KENNEBEC

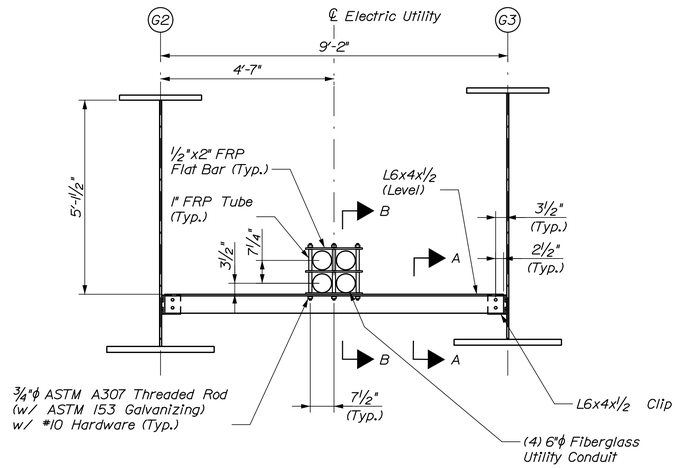
STRUCTURAL STEEL DETAILS V

SHEET NUMBER

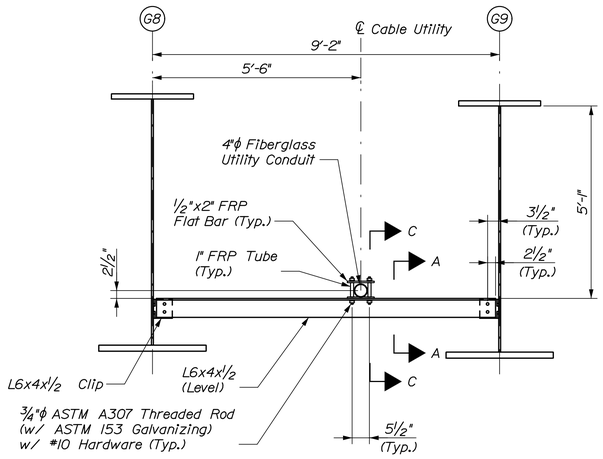
86

OF 111

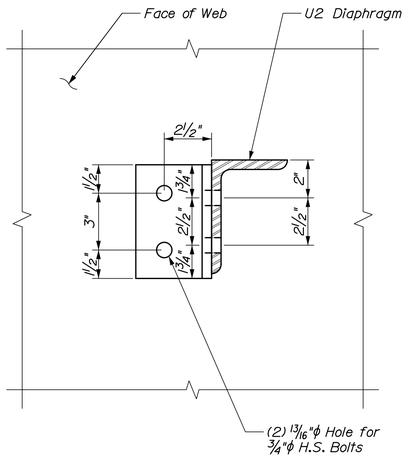
Filename: 086_StructuralSteelDetails 5.dgn Division: Username: Date:7/29/2022



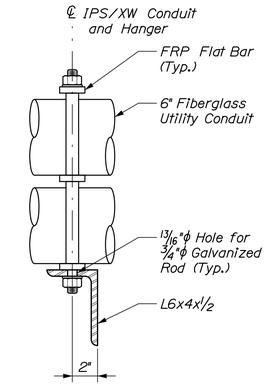
TYPICAL "U2" TYPE DIAPHRAGM



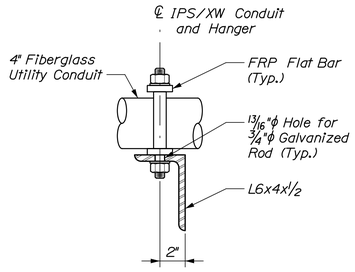
TYPICAL "U5" TYPE DIAPHRAGM



SECTION A-A
(TYPE "U2" SHOWN, TYPE "U5" SIM.)



SECTION B-B



SECTION C-C

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	B. Grenier	E. Beausoleil	07.2022
CHECKED-REVIEWED	H. Walton	T. Cote	07.2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

STRUCTURAL STEEL
DETAILS VI

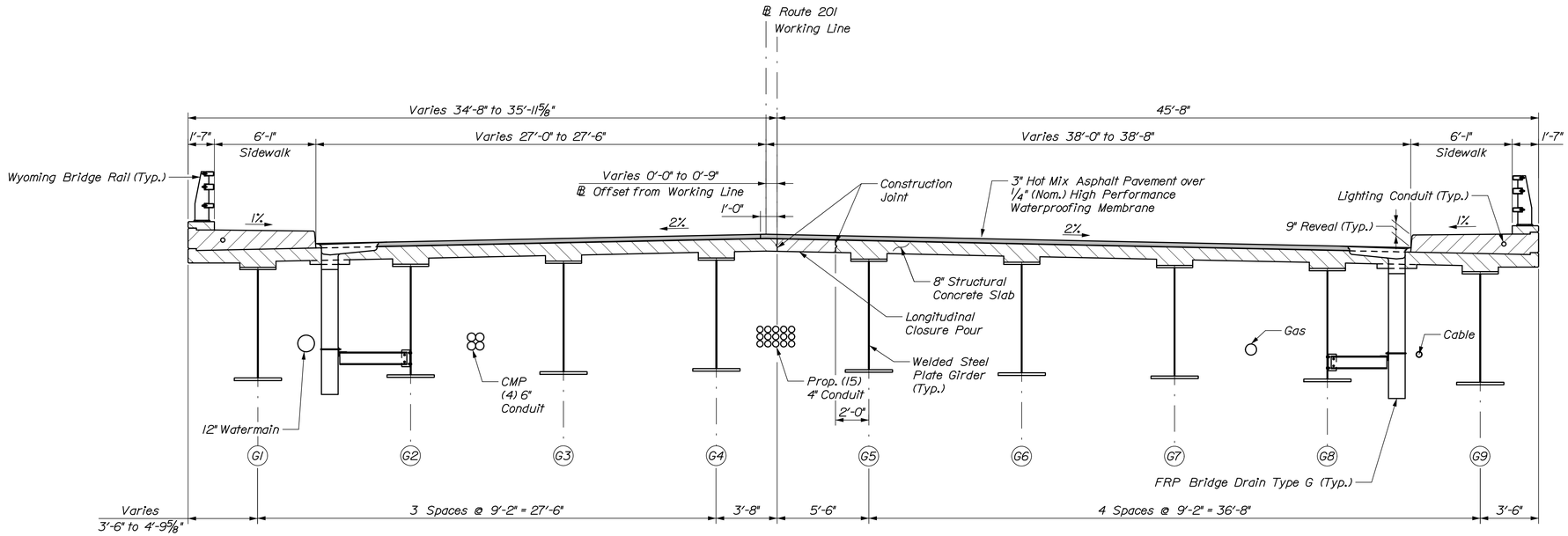
SHEET NUMBER

87

OF 111

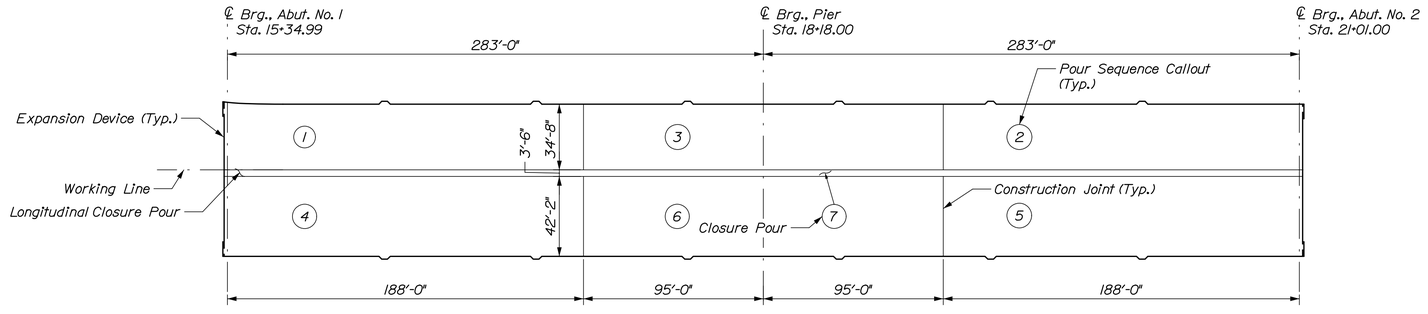
HNTB

Filename: 087_Structural Steel Details 6.dgn Division: Username: Date:7/29/2022



TRANSVERSE SECTION

(Deck Width Varies from Sta. 15+33.24 to Sta. 15+64.29)



DECK POUR SEQUENCE PLAN

(Sidewalks, railings, and curbs not shown for clarity)

SUPERSTRUCTURE NOTES:

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

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

3. Expansion device opening shall be set to 3⅛" inch(es) at 45 degrees and adjusted for temperature in the field at the time of installation in accordance with MaineDOT Standard Detail 521(11), Type B.

4. The theoretical blocking used for design of the structure is 5⅝" inch(es) at the centerline of bearings of the abutments and piers. Refer to Standard Detail 502(03) for blocking details.

5. The use of Precast Concrete Deck Panels will not be allowed on this project.

6. Unless the superstructure slab is placed in one continuous operation, the placement shall follow the Deck Pour Sequence identified herein. Successive partial placements shall proceed from the low end of the previous placement. Concrete in a partial placement shall be kept plastic until the entire section is placed. A minimum of 5 days shall elapse between successive partial placements. Alternate superstructure slab concrete placements shall be approved by the Resident. The placement sequence used for Stage 2 shall match the sequence used for Stage 1.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	N. Baert	E. Beausoleil	07.2022
CHECKED-REVIEWED	B. Grenier	T. Cote	07.2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

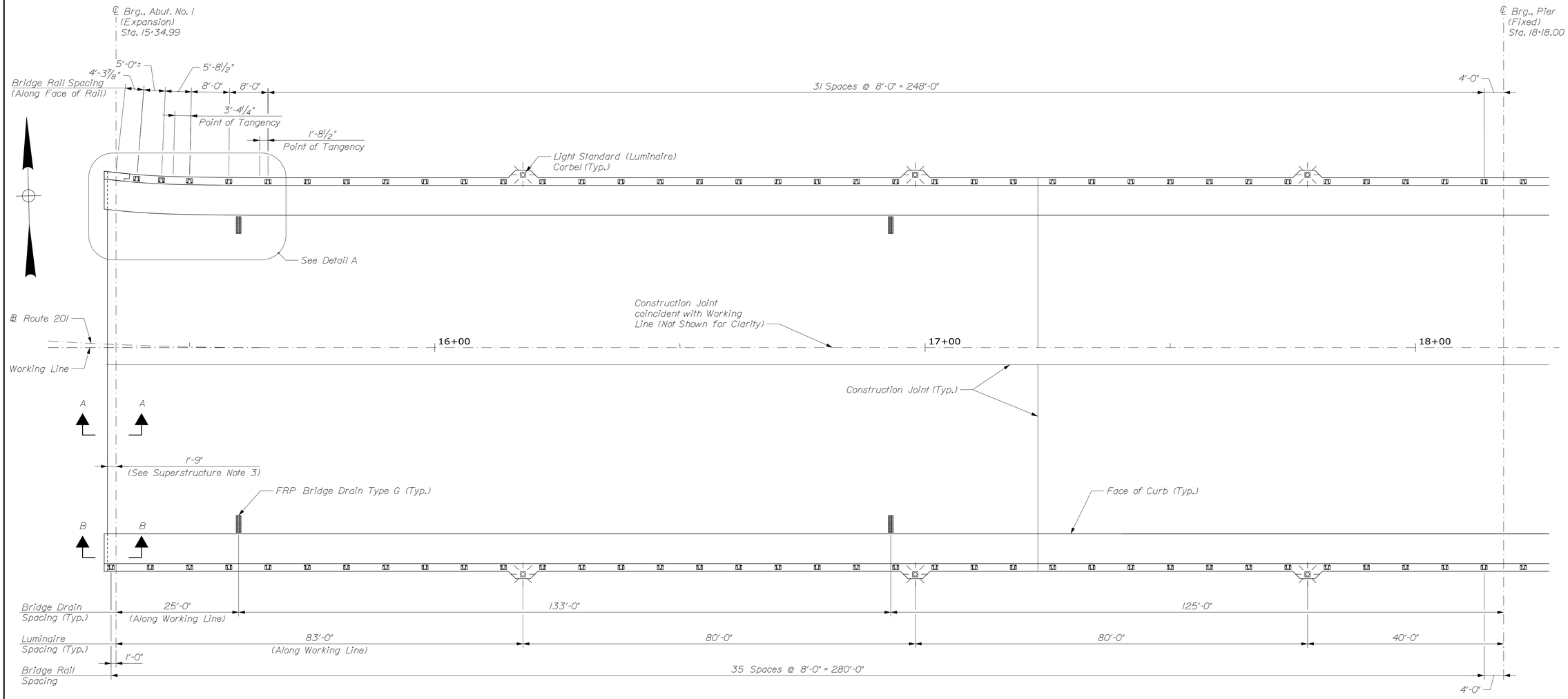
TRANSVERSE SECTION

SHEET NUMBER

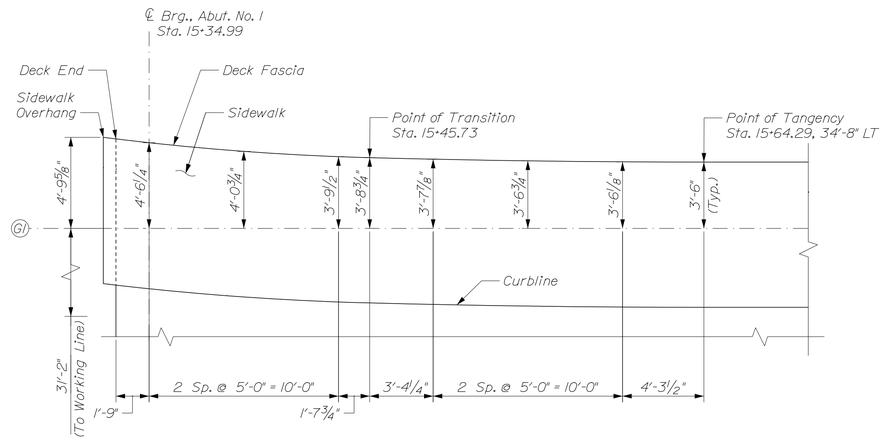
88

OF 111

Filename: 088_Transverse Section.dgn Division: Username: Date:7/29/2022



SUPERSTRUCTURE PLAN - SPAN NO. 1



DETAIL A
(Measured along GI centerline)

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

	BY	DATE
PROJ. MANAGER	M. Parlin	
DESIGN-DETAILED	E. Beausoleil	07\2022
CHECKED-REVIEWED	N. Baert	T. Cote	07\2022
DESIGN2-DETAILED2	K. Brayley	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW
KENNEBEC

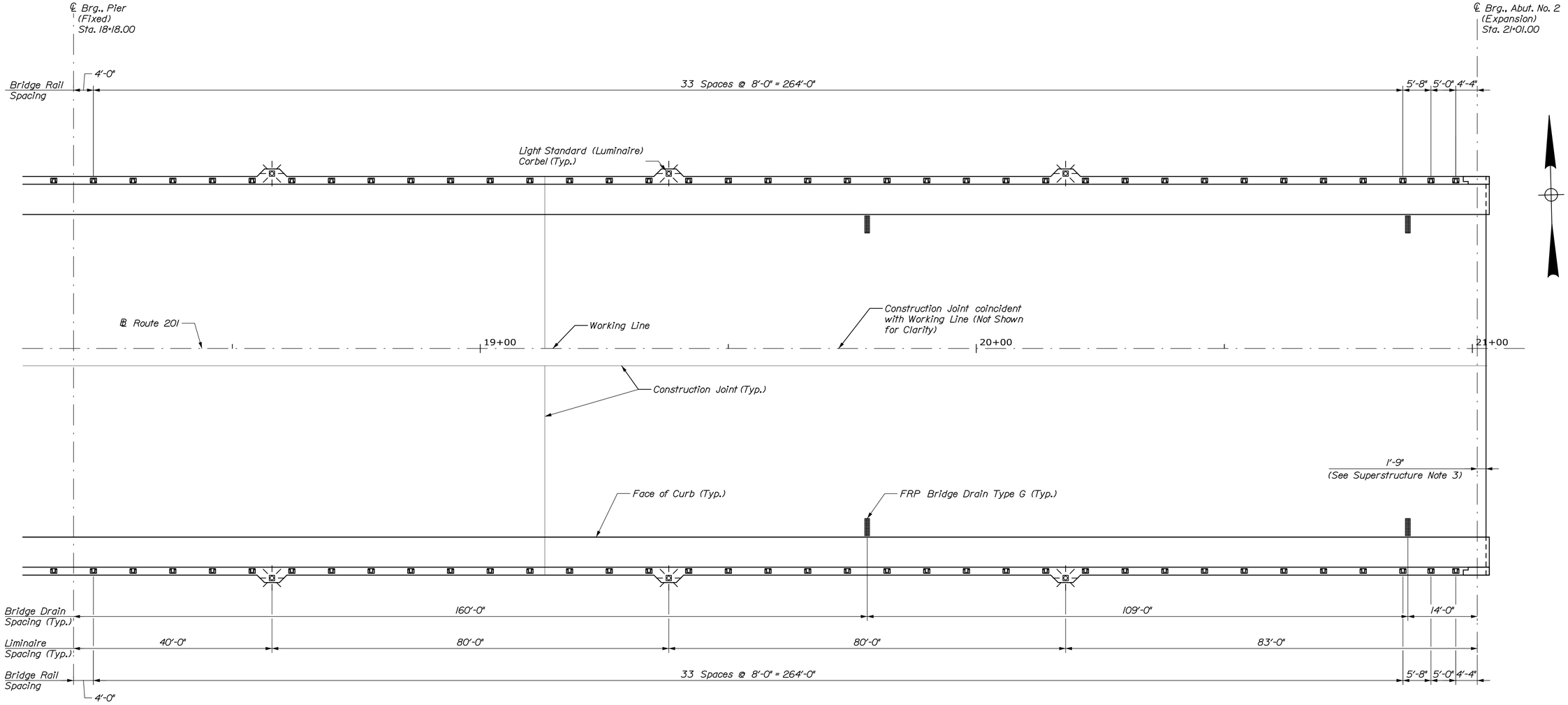
SUPERSTRUCTURE PLAN SPAN NO. 1

SHEET NUMBER

89

OF 111

Filename: 089_Superstructure Plan 1.dgn Division: Username: Date:8/1/2022



SUPERSTRUCTURE PLAN - SPAN NO. 2

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	N. Baert	E. Beausoleil	07\2022
CHECKED-REVIEWED	K. Brayley	T. Cote	07\2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

SUPERSTRUCTURE PLAN
SPAN NO. 2

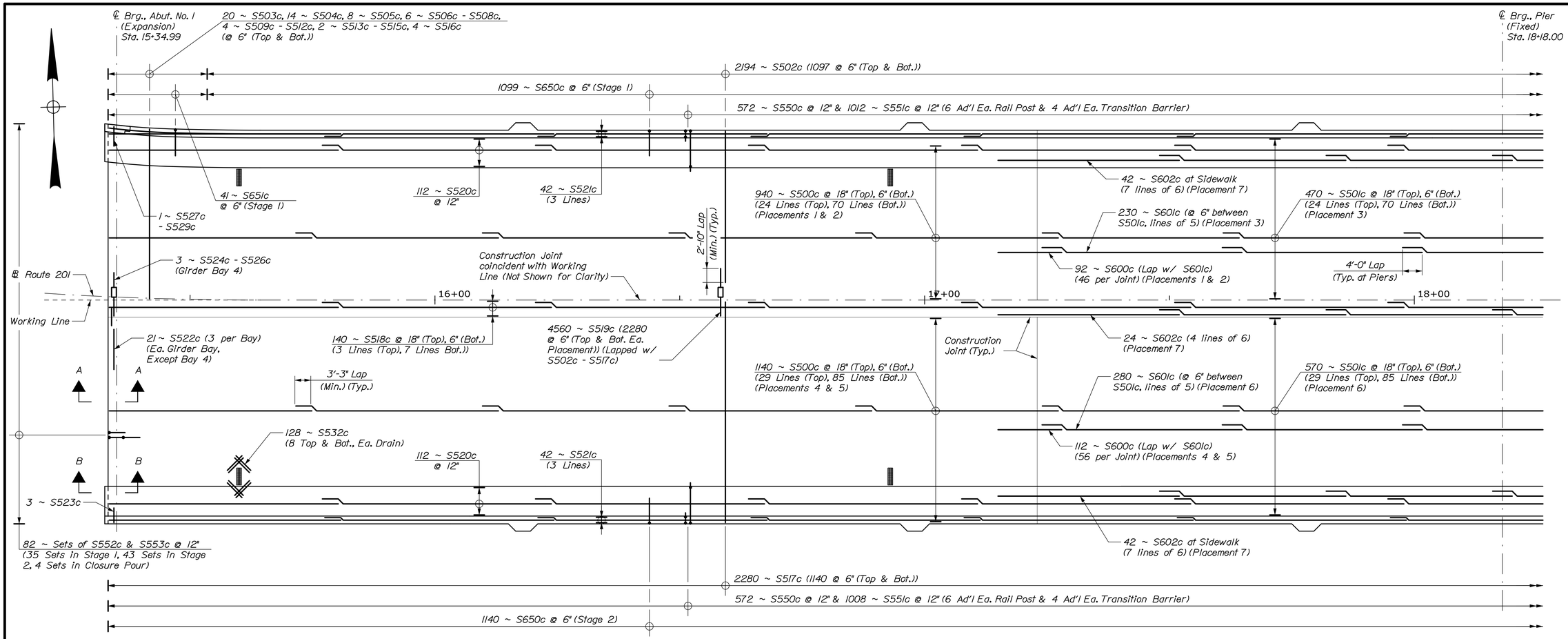
SHEET NUMBER

90

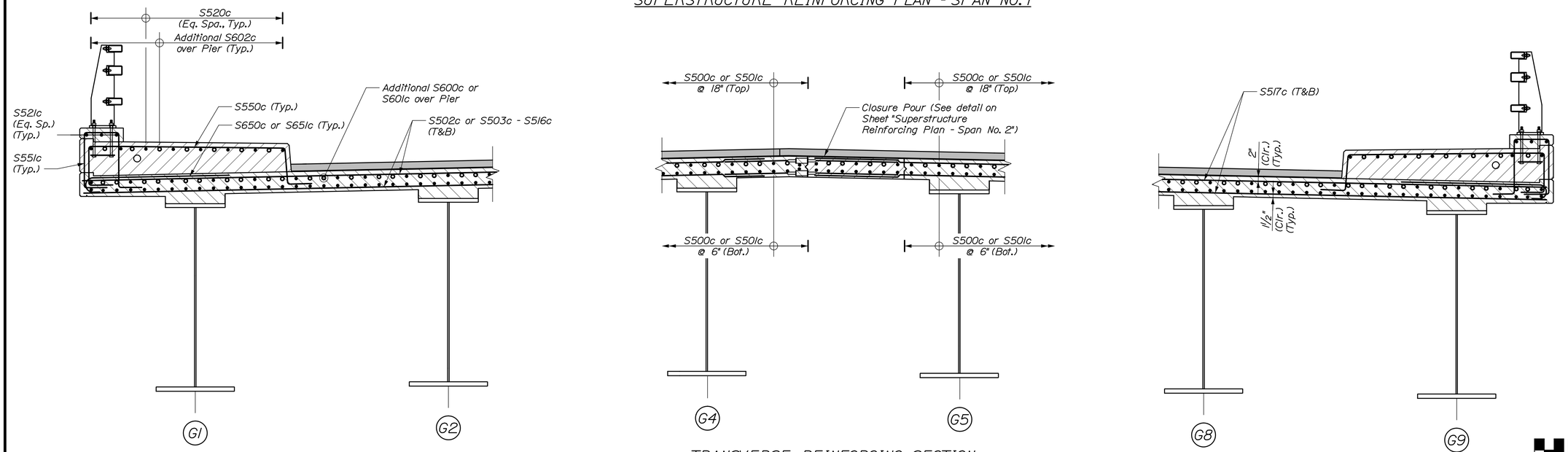
OF 111

HNTB

Date:7/29/2022
Username:
Division:
Filename: 090_Superstructure Plan 2.dgn



SUPERSTRUCTURE REINFORCING PLAN - SPAN NO. 1



TRANSVERSE REINFORCING SECTION

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN
023138.00

BRIDGE PLANS

Bridge No. 2854

PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	N. Baart	E. Beausoleil	07\2022
CHECKED-REVIEWED	K. Brayley	T. Cote	07\2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW
KENNEBEC

SUPERSTRUCTURE REINFORCING
PLAN - SPAN NO. 1

SHEET NUMBER

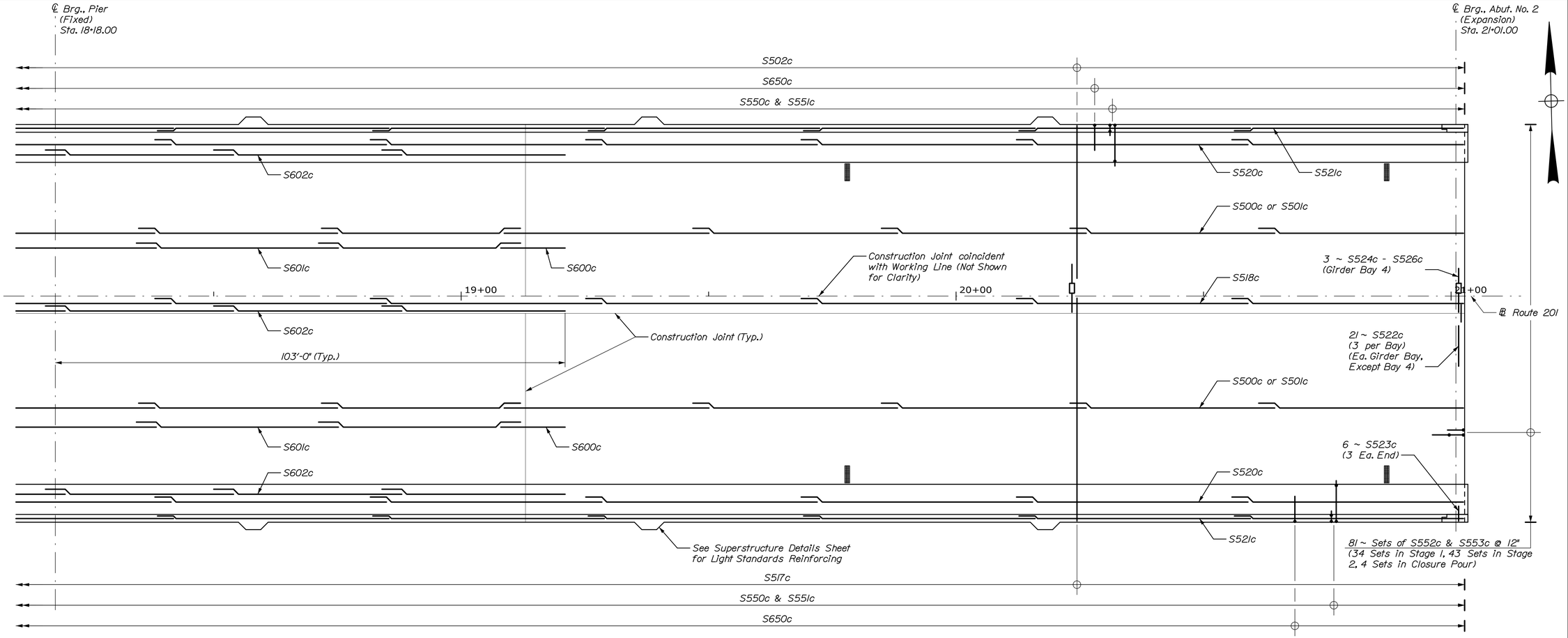
91

OF 111

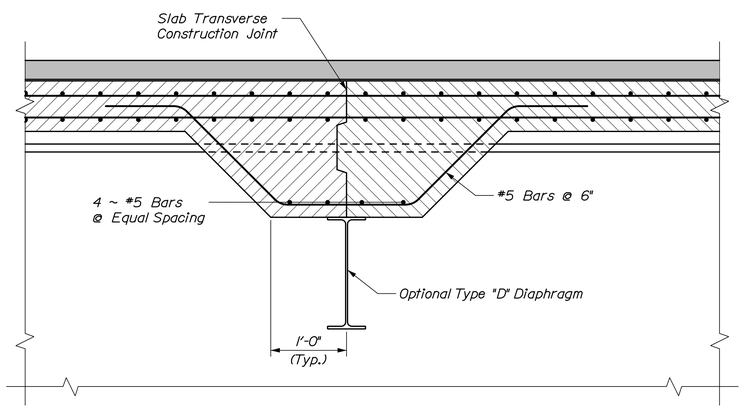
Date:7/29/2022

Username:

Filename: 091_Superstructure Reinforcing Span 1.dgn Division:

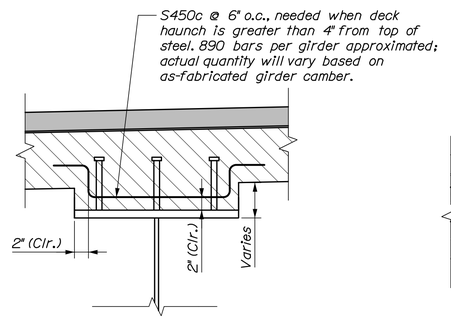


SUPERSTRUCTURE REINFORCING PLAN - SPAN NO. 2

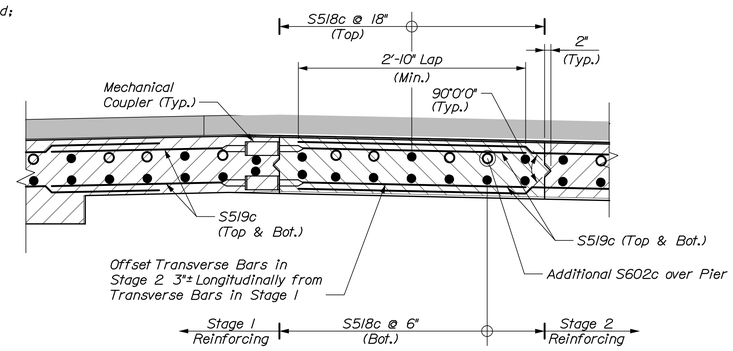


LONGITUDINAL SECTION AT CONSTRUCTION JOINT

(Optional slab blockout if Type "D" Diaphragm used)



HAUNCH REINFORCING



DECK CLOSURE POUR REINFORCING

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	M. Perlin	
DESIGN-DETAILED	N. Baert	07\2022
CHECKED-REVIEWED	K. Brayley	07\2022
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW
KENNEBEC

SUPERSTRUCTURE REINFORCING
PLAN - SPAN NO. 2

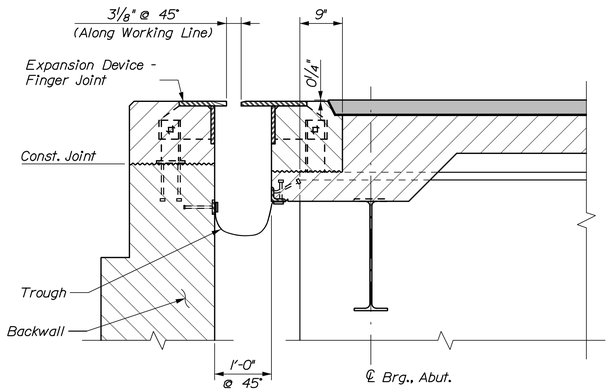
SHEET NUMBER

92

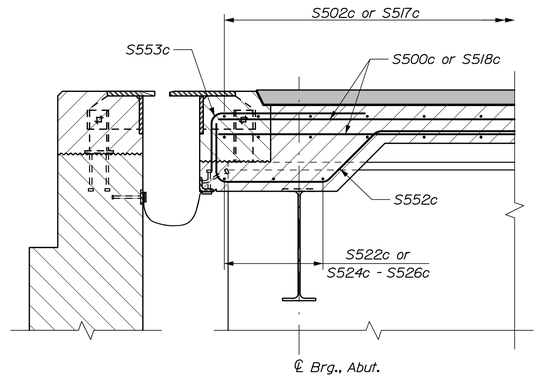
OF 111

HNTB

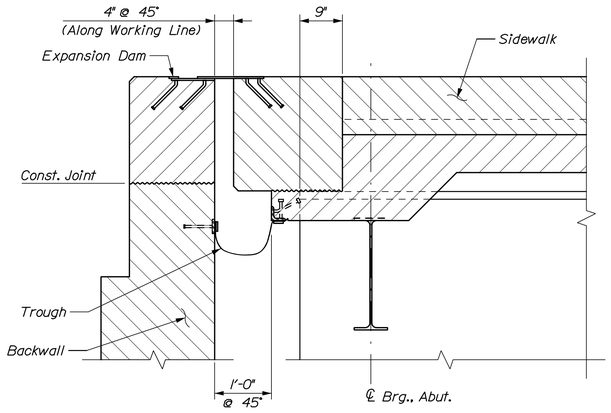
Filename: 092_Superstructure Reinforcing Span 2.dgn Division: Username: Date:7/29/2022



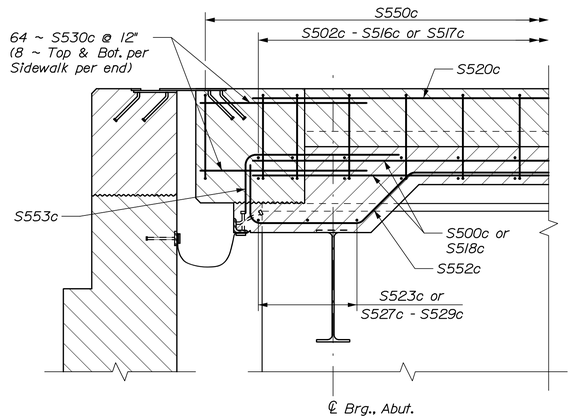
SECTION A-A
(Construction)



SECTION A-A
(Reinforcing)
(Note: Abutment reinforcing not shown for clarity)



SECTION B-B
(Construction)



SECTION B-B
(Reinforcing)
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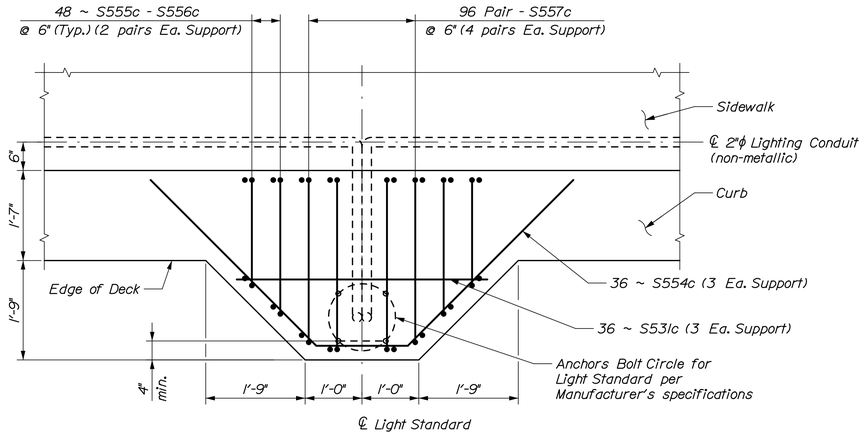
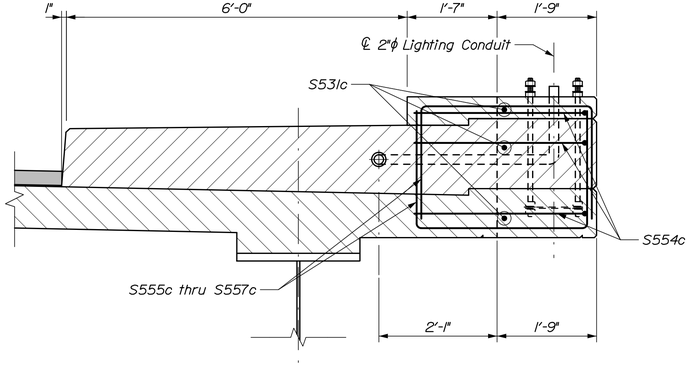


LIGHT STANDARD SUPPORT PLAN
(Note: Typical deck reinforcing not shown for clarity)



LIGHT STANDARD SUPPORT SECTION
(Note: Typical deck reinforcing not shown for clarity)

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	M. Parlin	
DESIGN-DETAILED	N. Baert	07\2022
CHECKED-REVIEWED	K. Brayley	07\2022
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

SUPERSTRUCTURE DETAILS

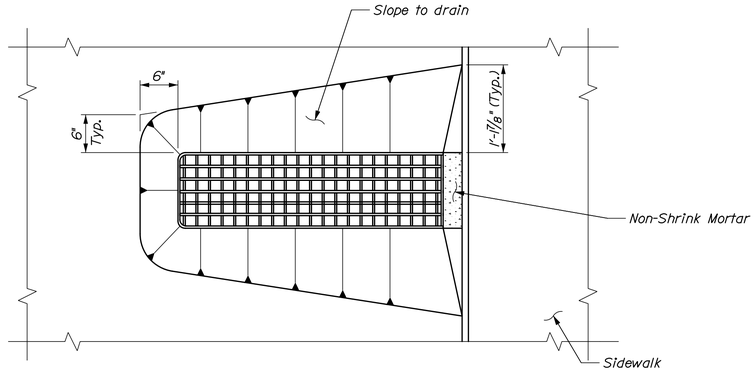
SHEET NUMBER

93

OF 111

HNTB

Filename: 093_Superstructure Details.dgn Division: Username: Date:7/29/2022



BRIDGE DRAIN PLAN

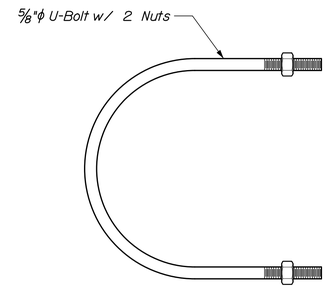
BRIDGE DRAIN NOTES:

1. FRP Bridge Drains shall be designed and detailed based on the dimensions for the bridge drain details shown, and in accordance with Special Provisions Section 502, Fiber Reinforced Polymer Bridge Drains and Downspouts.

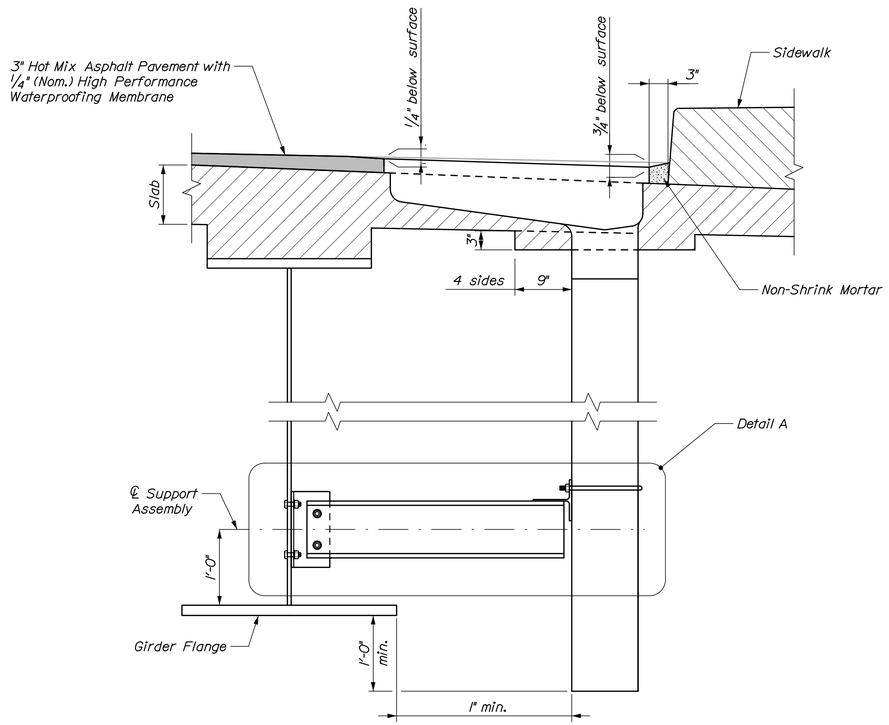
2. Shear connectors welded to the top flange of the steel beams may require adjustment to clear the bridge drains. No extra payment will be made for needed adjustments to the studs.

3. The drain support assembly and all associated hardware shall be galvanized in accordance with Standard Specification 506.

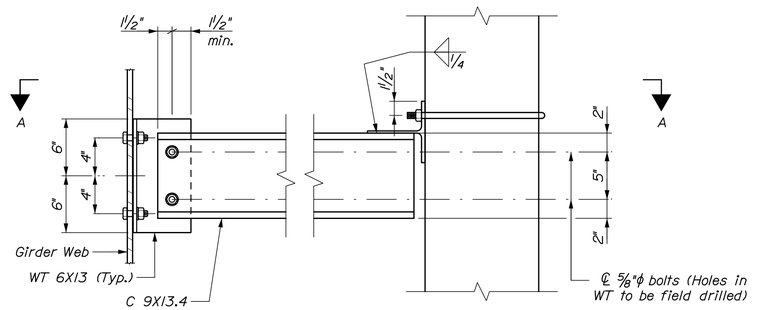
4. Non-Shrink Mortar shall be selected from the Qualified Products List. Payment Shall be incidental to Item 502.77, FRP Bridge Drain - Type G.



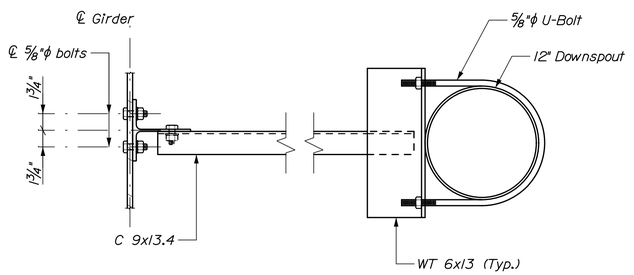
U-BOLT DETAIL



BRIDGE DRAIN ELEVATION



DETAIL A



SECTION A-A

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

PROJ. MANAGER	M. Parlin		
DESIGN-DETAILED	N. Baert	E. Beausoleil	07\2022
CHECKED-REVIEWED	K. Brayley	T. Cote	07\2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW
KENNEBEC

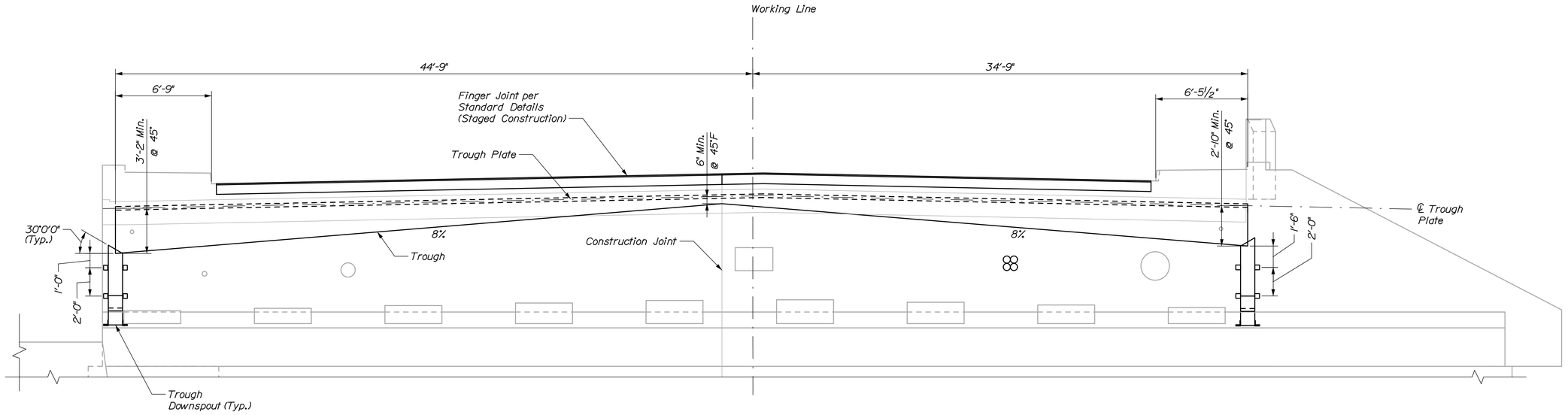
BRIDGE DRAIN DETAILS

SHEET NUMBER

94

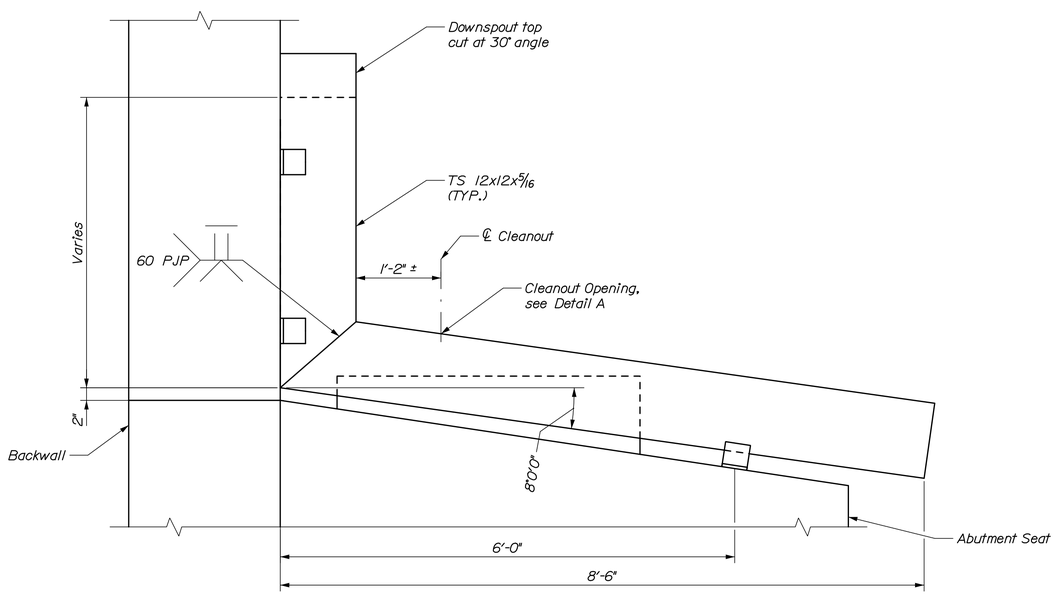
OF 111

Filename: 094_Bridge Drain Details.dgn Division: Username: Date:7/29/2022

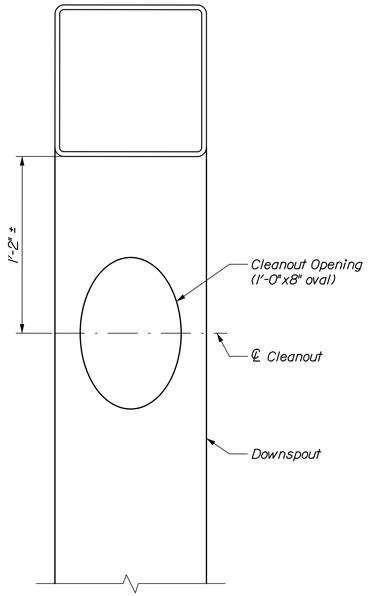


ABUTMENT NO. 1 TROUGH ELEVATION

(Abutment screened for clarity)



ABUTMENT NO. 1
TROUGH DOWNSPOUT END ELEVATION



DETAIL A

DOWNSPOUT NOTES:

1. The exact position of the downspouts shall be determined in the field and shall be coordinated with Trough Details.

2. All plates, downspouts, and bars shall conform to AASHTO M270 Grade 36 and shall be galvanized in accordance with AASHTO M111 (ASTM 123) after fabrication.

3. Brackets shall be galvanized in accordance with AASHTO M111 (ASTM 123) after fabrication.

4. All rods and related hardware shall be ASTM A307 and shall be galvanized in accordance with ASTM A153 (AASHTO M232).

5. At Contractor's option, alternate downspout details and locations may be submitted to the Resident for approval.

6. Any place where the galvanizing has been removed from the downspout either by cutting, burning, welding, placing, or any other means shall be repaired to the requirements of ASTM A780 and Annexes A1, A2, or A3.

EXPANSION DEVICE NOTES:

1. Expansion Device - Finger Joints shall be fabricated and installed in accordance with Standard Details 521(01) thru 521(12). The joint geometry shall conform to Type B.

2. The finger joints for both abutments shall be installed in two stages to accommodate the bridge deck and abutment construction joint locations. Connection between the two stages shall be achieved using a prequalified V-groove field weld.

3. Refer to "Superstructure Details" Sheet for deck end sections.

4. Payment for downspouts and curtain troughs shall be incidental to Item 521.23 Expansion Device - Finger Joint.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	M. Parlin	
DESIGN-DETAILED	E. Beausoleil	07\2022
CHECKED-REVIEWED	H. Walton	07\2022
DESIGN2-DETAILED2	K. Brayley	
DESIGN3-DETAILED3	T. Cote	
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

EXPANSION DEVICE DETAILS 1

SHEET NUMBER

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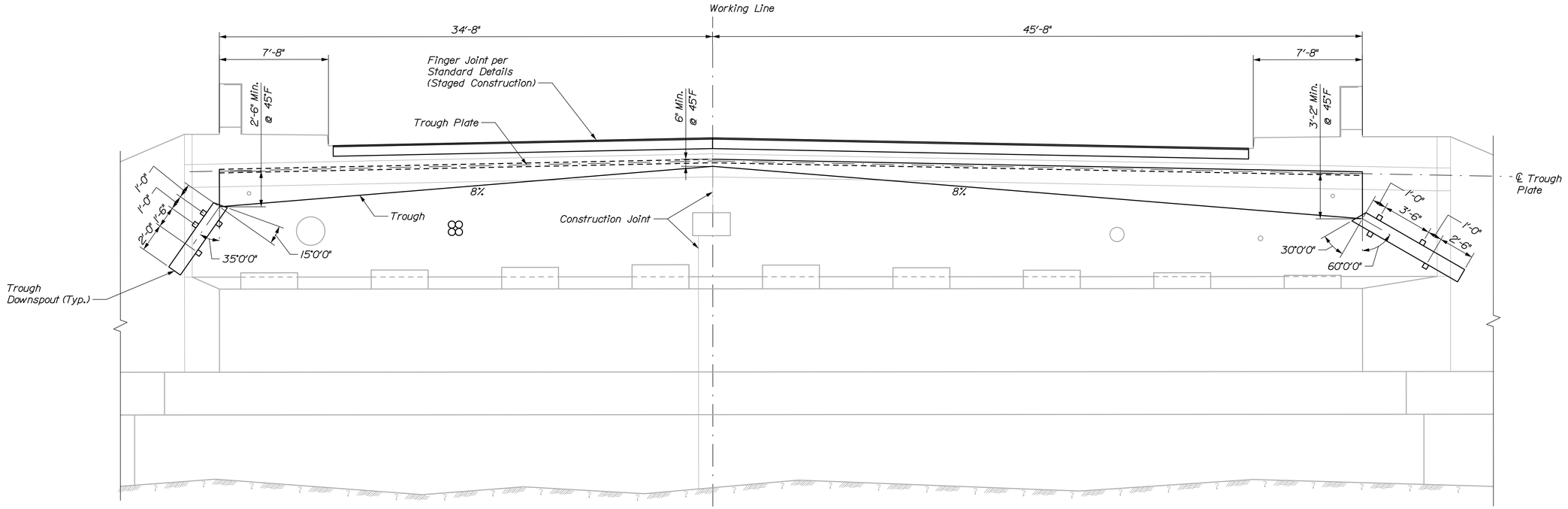
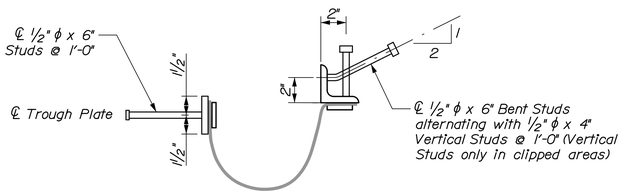
Filename: 095_Abutment 1 Finger Joint.dgn Division: Username: Date:7/29/2022

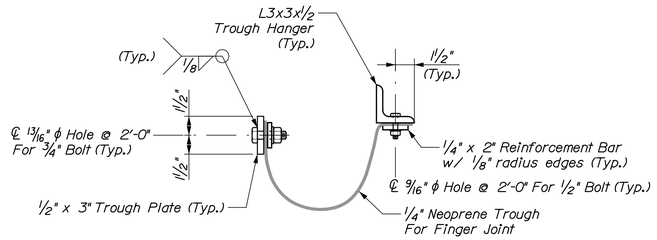


ABUTMENT NO. 2 TROUGH ELEVATION

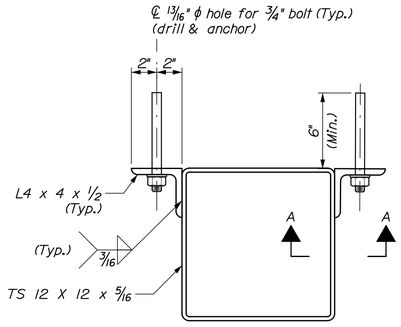
(Abutment screened for clarity)



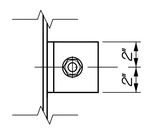
TROUGH SECTION - ANCHORAGE



TROUGH SECTION



DOWNSPOUT SECTION



SECTION A-A

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

PROJ. MANAGER	M. Perlin	BY	DATE
DESIGN-DETAILED	H. Walton	E. Beausoleil	07/2022
CHECKED-REVIEWED	K. Brayley	T. Cote	07/2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

EXPANSION DEVICE
DETAILS II

SHEET NUMBER

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Filename: 096_Abutment 2 Finger Joint.dgn Division: Username: Date:7/29/2022

NOTES:

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

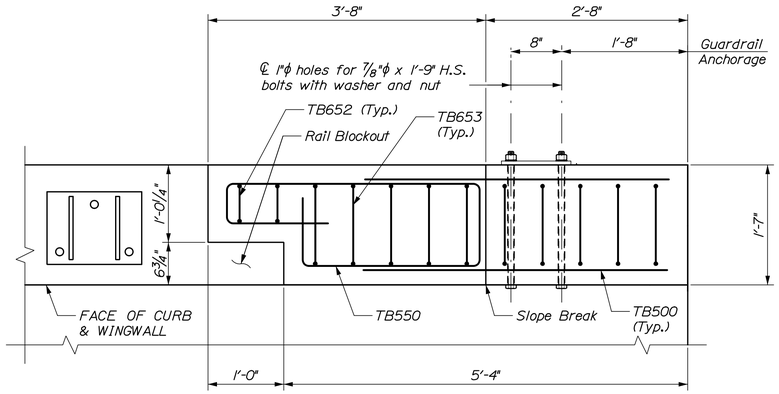
2. Reinforcing steel shall have minimum concrete cover of 2 inches.

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

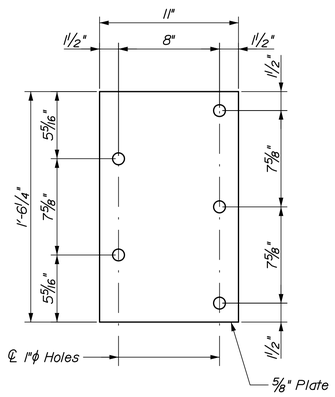
4. Payment for the guardrail anchorage will be considered incidental to Pay Item 526.34, Permanent Concrete Transition Barrier.

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

6. All reinforcing steel for Concrete Transition Barrier shall be Low-Carbon Chromium Reinforcing Steel.



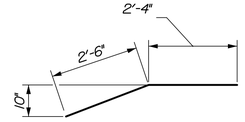
SOUTHWEST TRANSITION BARRIER PLAN



BEARING PLATE

SOUTHWEST TRANSITION BARRIER REINFORCING STEEL SCHEDULE

Mark	Qty.	Length
TB500	8	5'-0"
TB501	2	3'-6"
TB550	6	10'-2"
TB560	2	4'-10"
TB650	5	9'-10 1/2"
TB651	10	10'-5 1/2"
TB652	2	5'-6 1/2"
TB653	5	6'-11 1/2"
TB654	1	5'-9 1/2"
TB655	1	5'-5 1/2"
TB656	1	5'-1 1/2"
TB657	1	4'-9 1/2"
TB658	1	4'-5 1/2"



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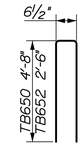

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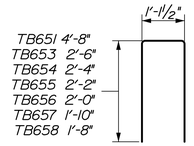
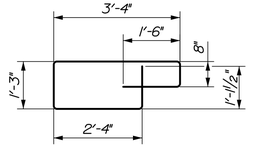


- TB651 & TB653 Thru TB658 -



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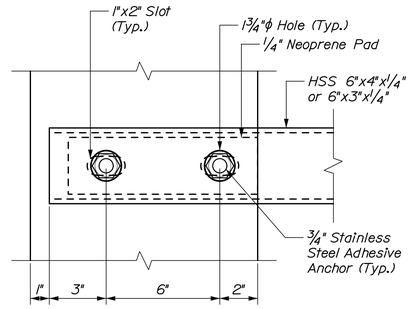
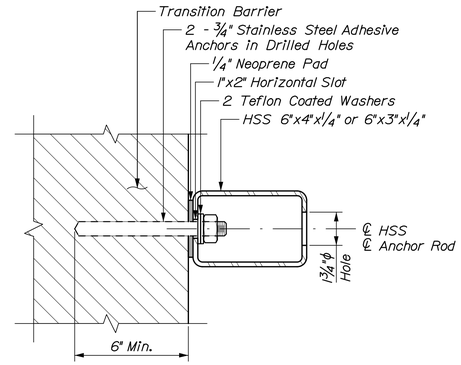
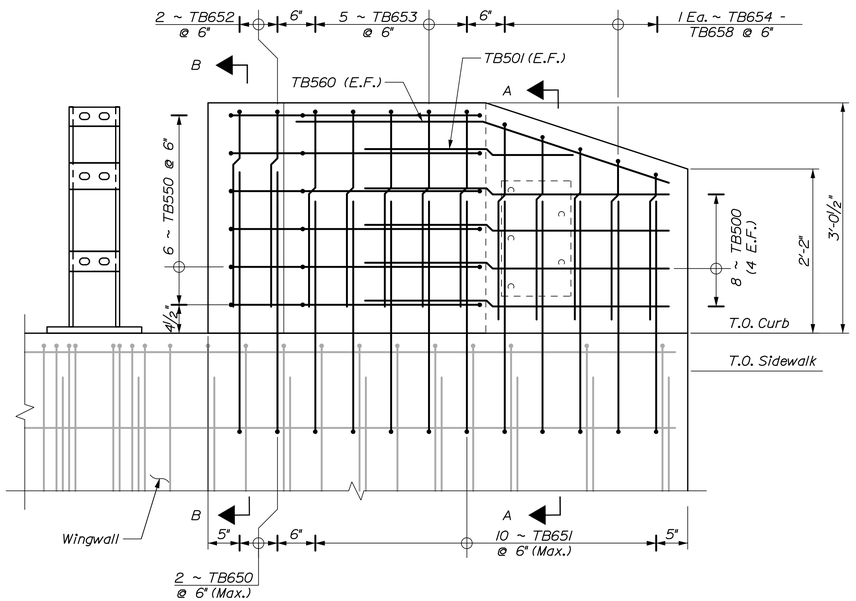


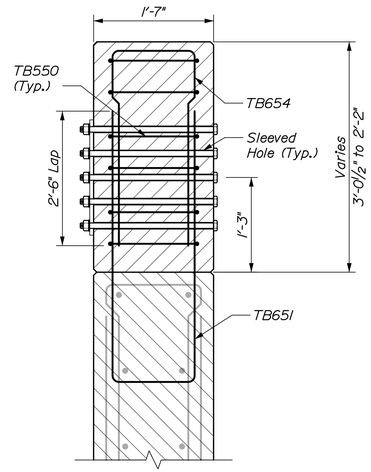
RAIL ATTACHMENT DETAIL



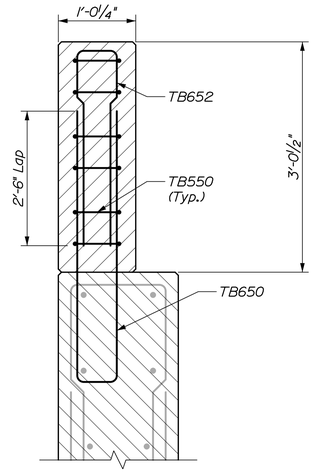
ANCHOR DETAIL



SOUTHWEST TRANSITION BARRIER ELEVATION



SECTION A-A



SECTION B-B

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

		BY	DATE
PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	H. Walton	E. Beausoleil	07\2022
CHECKED-REVIEWED	B. Gremer	T. Cote	07\2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

TRANSITION BARRIER DETAILS 1

SHEET NUMBER

97

OF 111

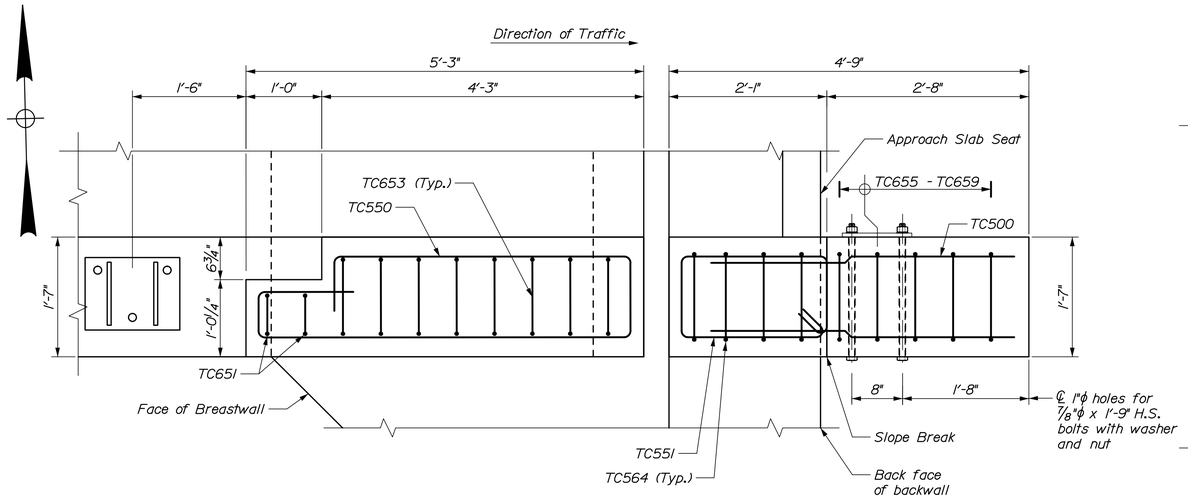
HNTB

Date:7/29/2022

Username:

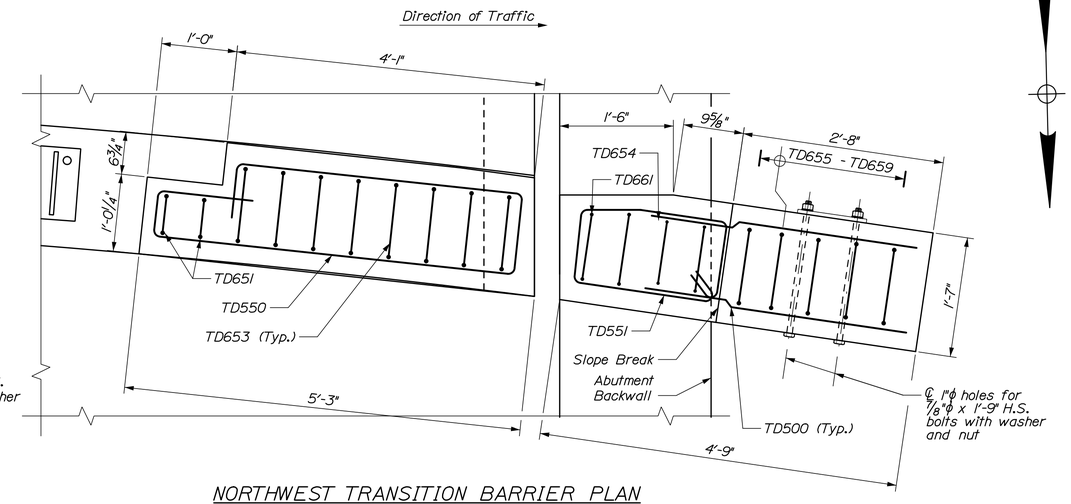
Division:

Filename: 097_End Post Details 1.dgn



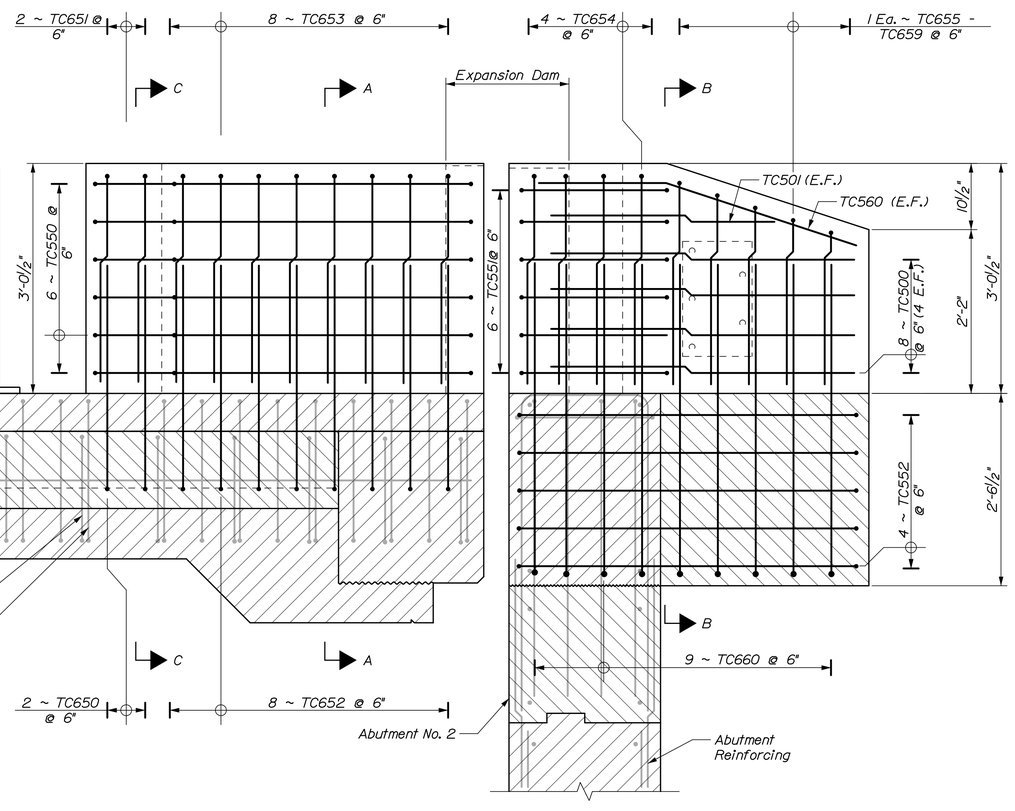
SOUTHEAST TRANSITION BARRIER PLAN

(Northeast barrier similar)
(Expansion dam not shown for clarity)



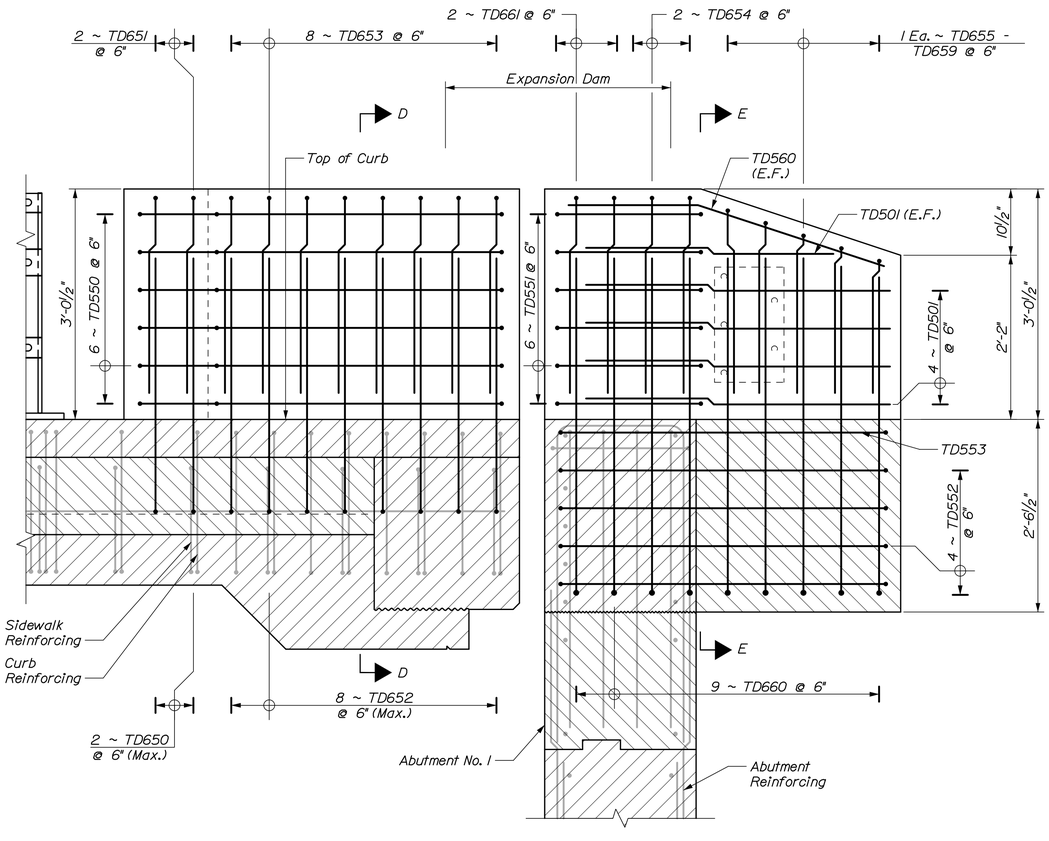
NORTHWEST TRANSITION BARRIER PLAN

(Expansion dam not shown for clarity)



SOUTHEAST TRANSITION BARRIER ELEVATION

(Northeast barrier similar)



NORTHWEST TRANSITION BARRIER ELEVATION

NOTES:

1. Each unit of Item 526.34, Permanent Concrete Transition Barrier, shall consist of a substructure portion, a superstructure portion, steel expansion dams (excluding the Southwest Transition Barrier), and reinforcing steel.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

P.E. NUMBER

DATE

SIGNATURE

PROJ. MANAGER	M. Parlin	BY	DATE
DESIGN-DETAILED	H. Walton	E. Beausoleil	07.2022
CHECKED-REVIEWED	B. Grenier	T. Cote	07.2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
KENNEBEC
WATERVILLE-WINSLOW

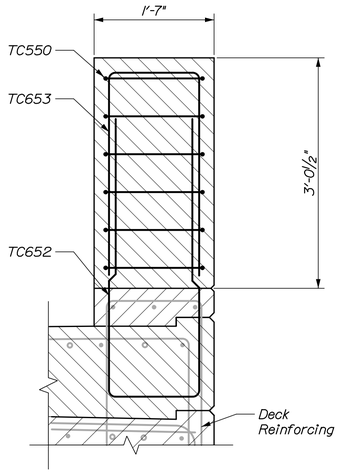
TRANSITION BARRIER DETAILS II

SHEET NUMBER

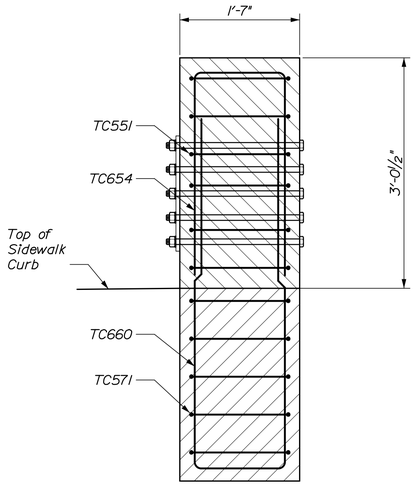
98

OF 111

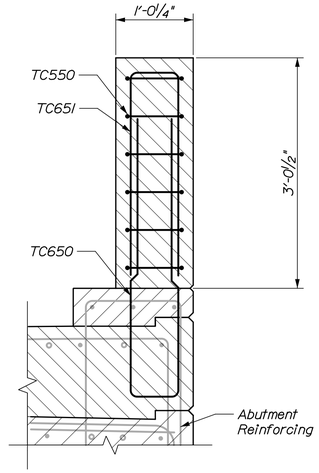
Filename: 098_End Post Details II.dgn Division: Username: Date:7/29/2022



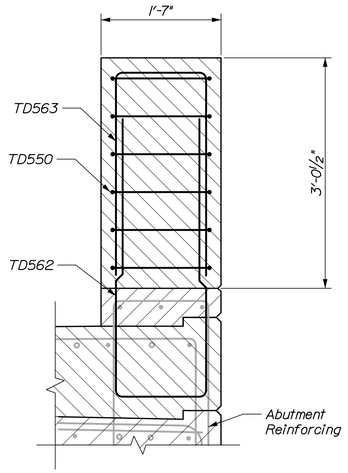
SECTION A-A



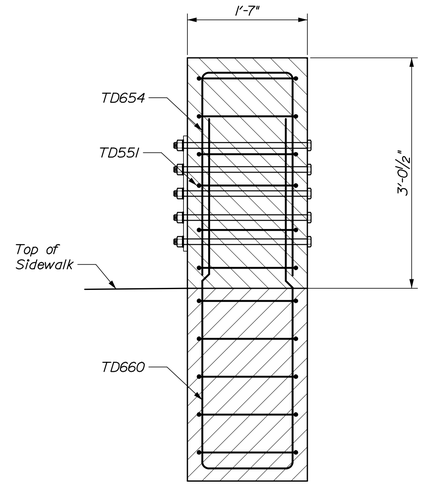
SECTION B-B



SECTION C-C



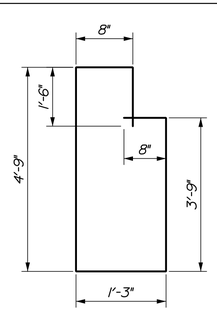
SECTION D-D



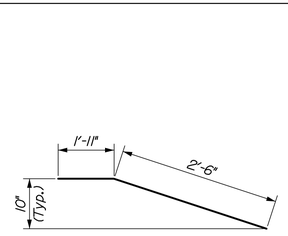
SECTION E-E

NORTHWEST TRANSITION BARRIER REINFORCING STEEL SCHEDULE

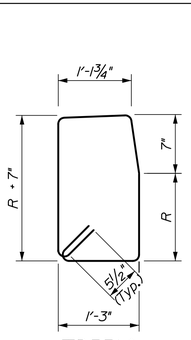
Mark	Qty.	Length	Dim "R"
TD500	8	4'-5"	
TDD501	2	3'-6"	
TD550	6	12'-7"	
TD551	6	6'-9¾"	1'-2"
TD552	5	12'-5"	4'-5"
TD553	1	10'-11¾"	3'-3"
TD560	2	4'-5"	
TD650	2	8'-2½"	3'-10"
TD651	2	5'-10½"	2'-8"
TD652	8	8'-9½"	3'-10"
TD653	8	6'-5½"	2'-8"
TD654	4	6'-5½"	2'-8"
TD655	1	6'-1½"	2'-6"
TD656	1	5'-9½"	2'-4"
TD657	1	5'-5½"	2'-2"
TD658	1	5'-1½"	2'-0"
TD659	1	4'-9½"	1'-10"
TD660	9	9'-9½"	4'-4"
TD661	2	6'-3½"	2'-8"



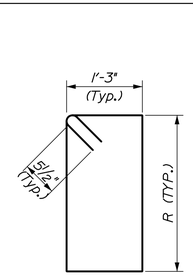
TD550



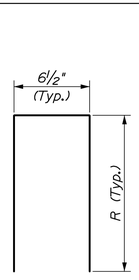
TD560



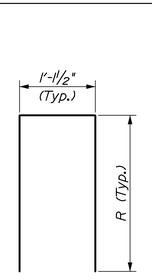
TD551 &
TD553



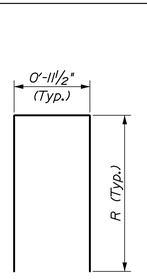
TD552



TD650 & TD651



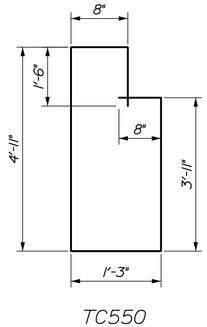
TD652 Thru
TD660



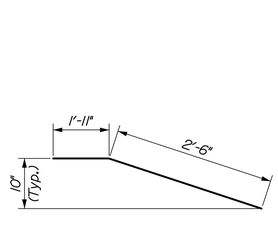
TD661

SOUTHEAST & NORTHEAST TRANSITION BARRIER REINFORCING STEEL SCHEDULE

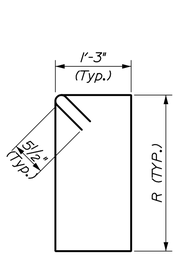
Mark	Qty.	Length	Dim "R"
TC500	8	4'-5"	
TC501	2	3'-6"	
TC550	6	12'-11"	
TC551	6	6'-4"	1'-11"
TC552	5	12'-3"	4'-5"
TC560	2	4'-5"	
TC650	2	8'-2½"	3'-10"
TC651	2	5'-10½"	2'-8"
TC652	8	8'-9½"	3'-10"
TC653	8	6'-5½"	2'-8"
TC654	2	6'-5½"	2'-8"
TC655	1	6'-1½"	2'-6"
TC656	1	5'-9½"	2'-4"
TC657	1	5'-5½"	2'-2"
TC658	1	5'-1½"	2'-0"
TC659	1	4'-9½"	1'-10"
TC660	9	9'-9½"	4'-4"
TC661	2	6'-4"	2'-8"



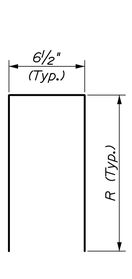
TC550



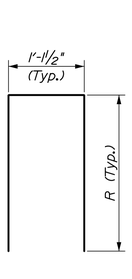
TC560



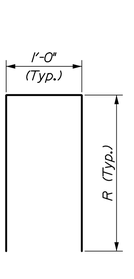
TC551 Thru
TC552



TC650 & TC651



TC652 Thru
TC660



TC661

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	M. Parlin	
DESIGN-DETAILED	H. Walton	07\2022
CHECKED-REVIEWED	B. Grenier	07\2022
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

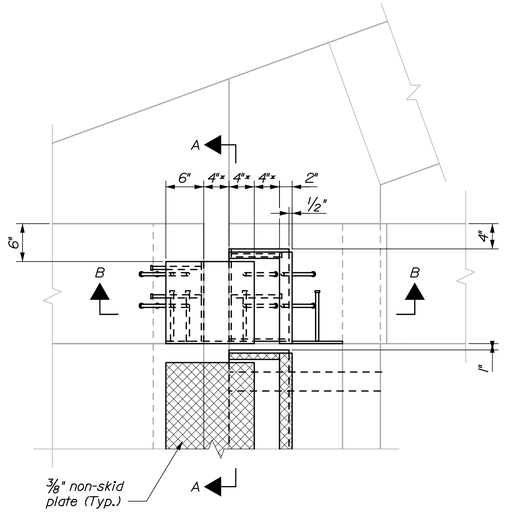
TRANSITION BARRIER DETAILS III

SHEET NUMBER

99

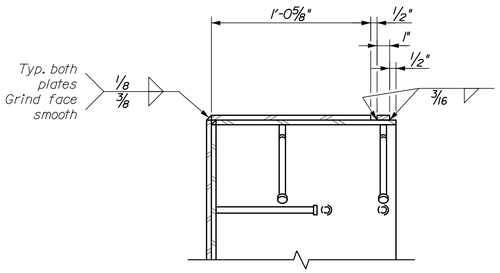
OF 111

Date:7/29/2022 Username: Division: Filename: 099_End Post Details III.dgn



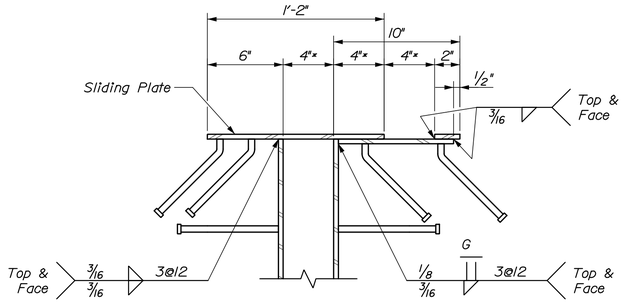
NORTHEAST EXPANSION DAM PLAN

(Southeast Expansion Dam similar)
× Dimension @ 45°F
(Abutment, Deck, and Transition Barrier shown screened for clarity)



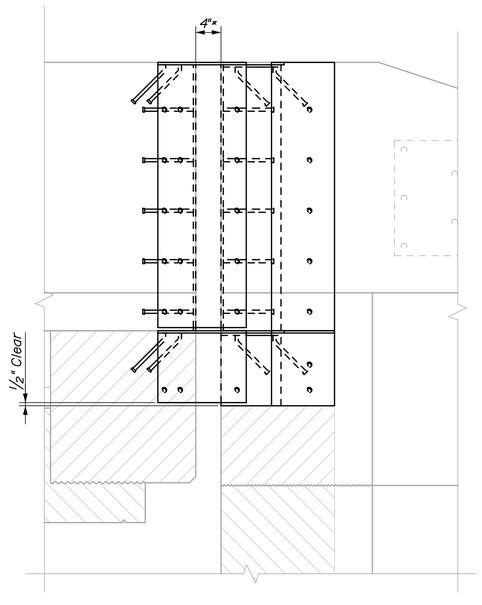
DETAIL A

(All plates 3/8" thick)



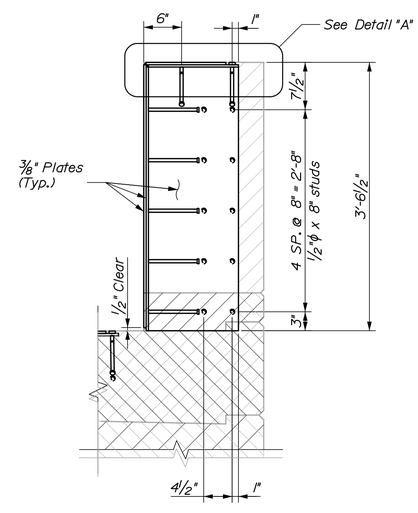
DETAIL B

(All plates 3/8" thick)
× Dimension @ 45°



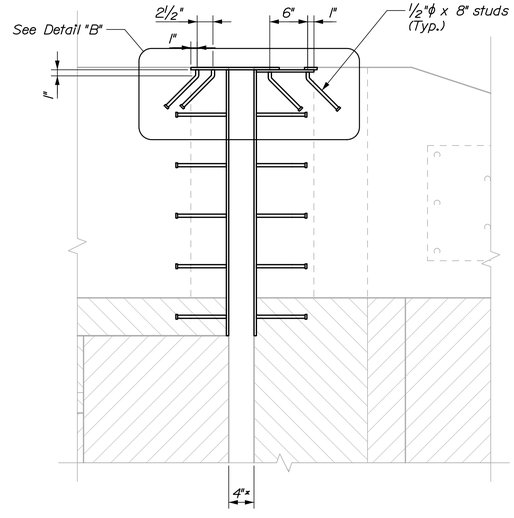
NORTHEAST EXPANSION DAM ELEVATION

(Southeast Expansion Dam similar)
(Abutment, Deck, and Transition Barrier shown screened for clarity)
× Dimension @ 45°



SECTION A-A

(Deck and Transition Barrier shown screened for clarity)



SECTION B-B

(Deck, Abutment, and Transition Barrier shown screened for clarity)
× Dimension @ 45°

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	M. Perlin	
DESIGN-DETAILED	E. Beausoleil	07\2022
CHECKED-REVIEWED	T. Cote	07\2022
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

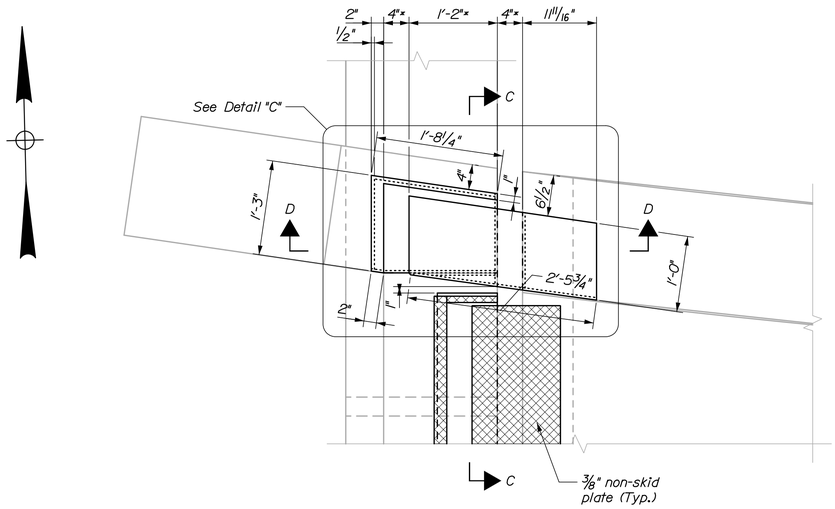
TRANSITION BARRIER EXPANSION DAM DETAILS I

SHEET NUMBER

100

OF 111

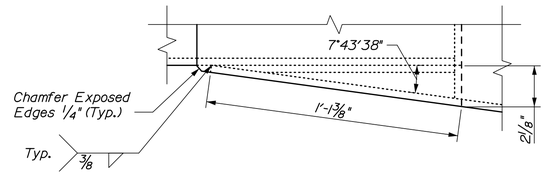
Filename: 100_End Post Details IV.dgn Division: Username: Date:7/29/2022



NORTHWEST EXPANSION DAM PLAN

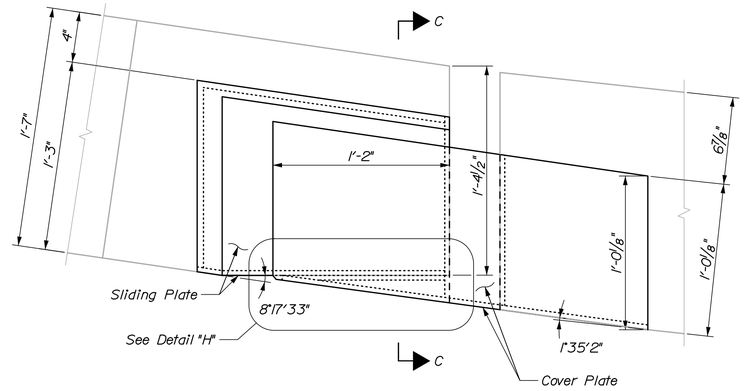
x Dimension @ 45°F

(Abutment, Deck, and Transition Barrier shown screened for clarity)



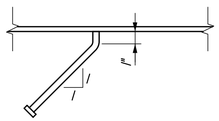
DETAIL H

(All Plates 3/8" Thick)

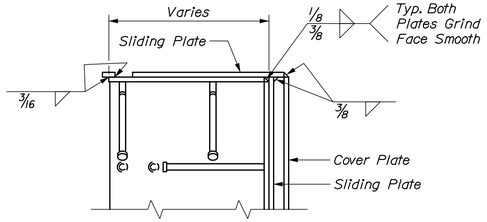


DETAIL C

(All Plates 3/8" Thick)

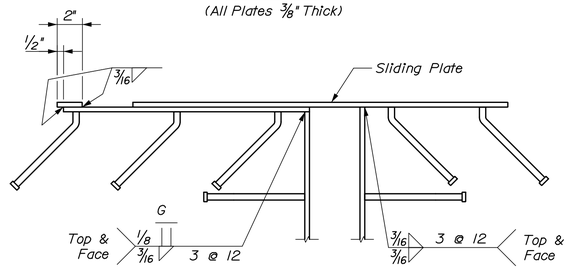


BENT STUD DETAIL



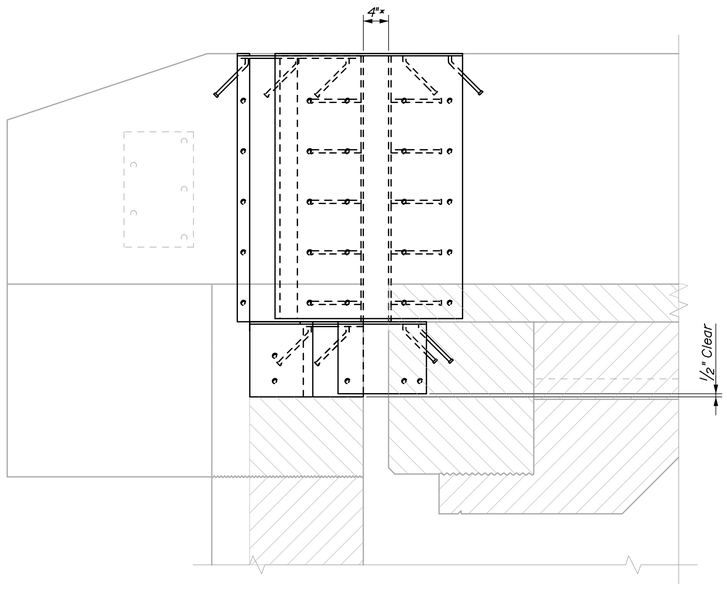
DETAIL D

(All Plates 3/8" Thick)



DETAIL E

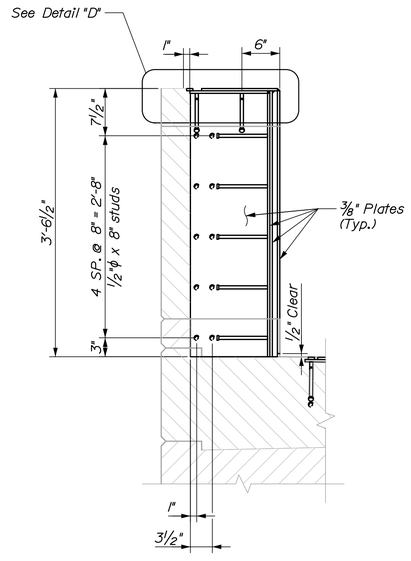
(All Plates 3/8" Thick)



NORTHWEST EXPANSION DAM ELEVATION

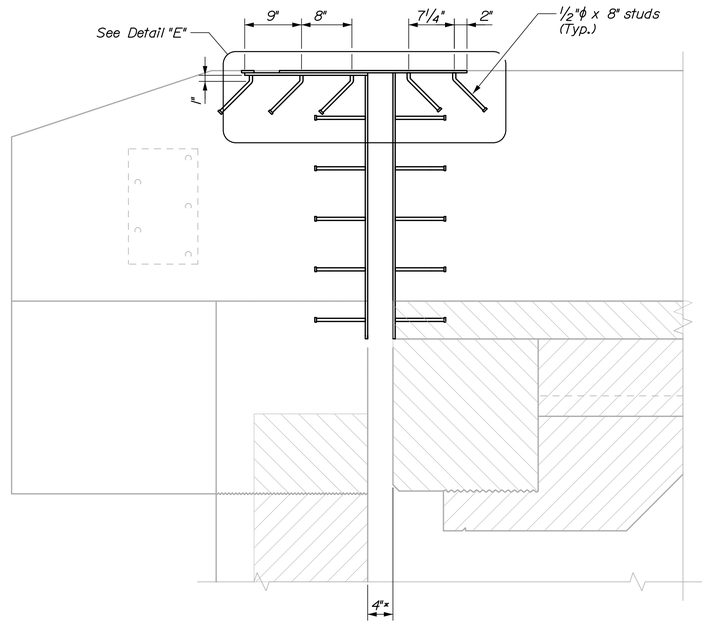
(Abutment, Deck, and End Post shown screened for clarity)

x Dimension @ 45°



SECTION C-C

(Deck and Transition Barrier shown screened for clarity)



SECTION D-D

(Deck, Abutment, and Transition Barrier shown screened for clarity)

x Dimension @ 45°

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	H. Walton	E. Beausoleil	07\2022
CHECKED-REVIEWED	B. Grenier	T. Cote	07\2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW
KENNEBEC

TRANSITION BARRIER EXPANSION DAM DETAILS II

SHEET NUMBER

101

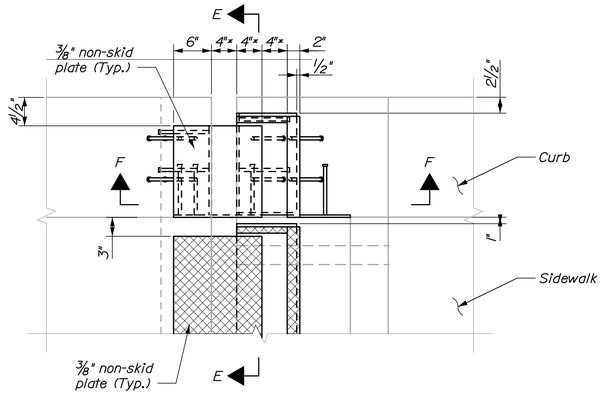
OF 111

Username:

Division:

Date:7/29/2022

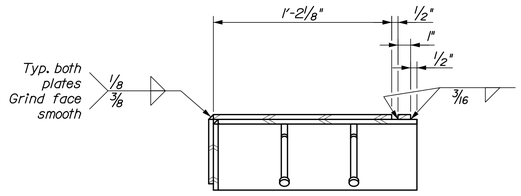
Filename: 101_End Post Details V.dgn



SOUTHWEST EXPANSION DAM PLAN

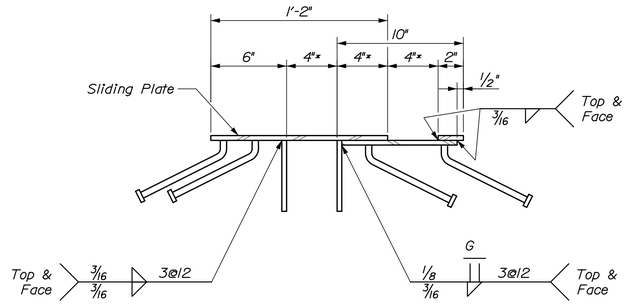
x Dimension @ 45°F

(Abutment, Deck, and Transition Barrier shown screened for clarity)
(non-skid hatching not shown on curb plates for clarity)



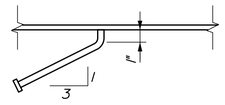
DETAIL F

(All Plates 3/8" Thick)

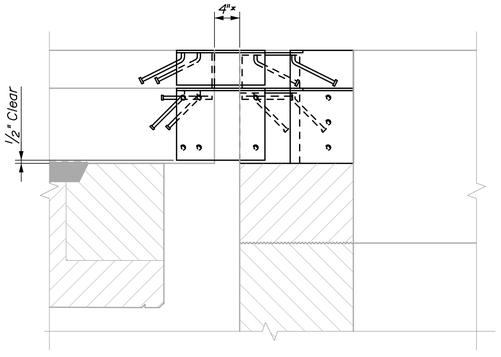


DETAIL G

(All Plates 3/8" Thick)
x Dimension @ 45°

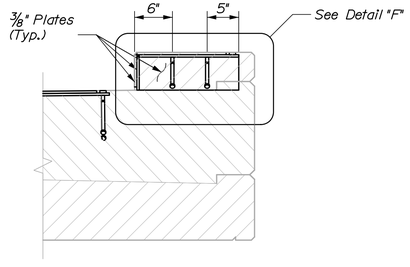


BENT STUD DETAIL



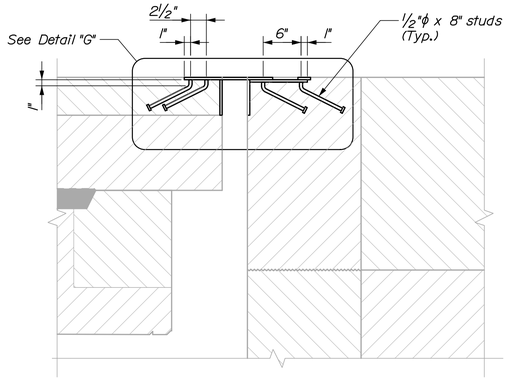
SOUTHWEST EXPANSION DAM ELEVATION

(Abutment, Deck, and Transition Barrier shown screened for clarity)
x Dimension @ 45°



SECTION E-E

(Deck and Transition Barrier shown screened for clarity)



SECTION F-F

(Deck, Abutment, and Transition Barrier shown screened for clarity)

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	H. Walton	E. Beausoleil	07.2022
CHECKED-REVIEWED	B. Grenier	T. Cote	07.2022
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

TRANSITION BARRIER EXPANSION DAM DETAILS III

SHEET NUMBER

102

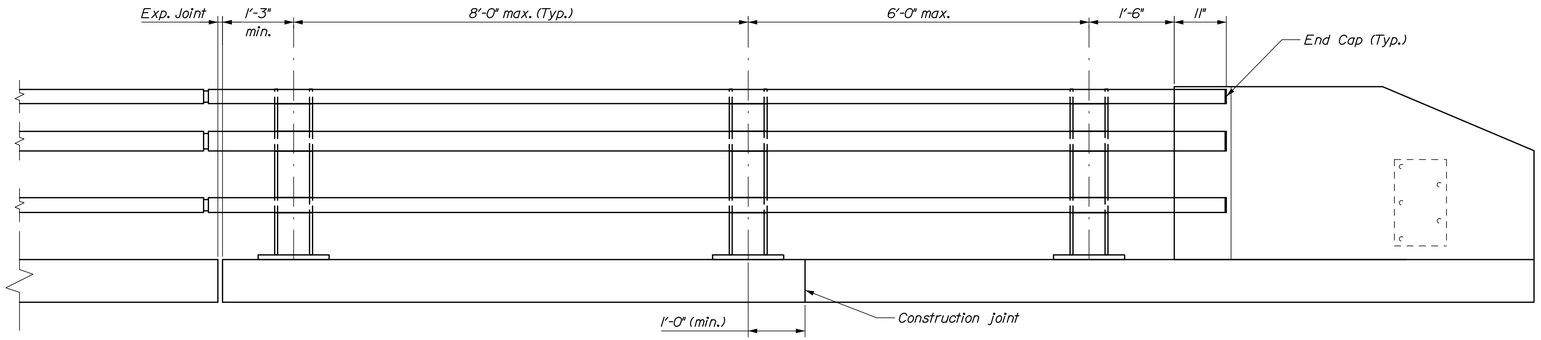
OF 111

Date:7/29/2022

Username:

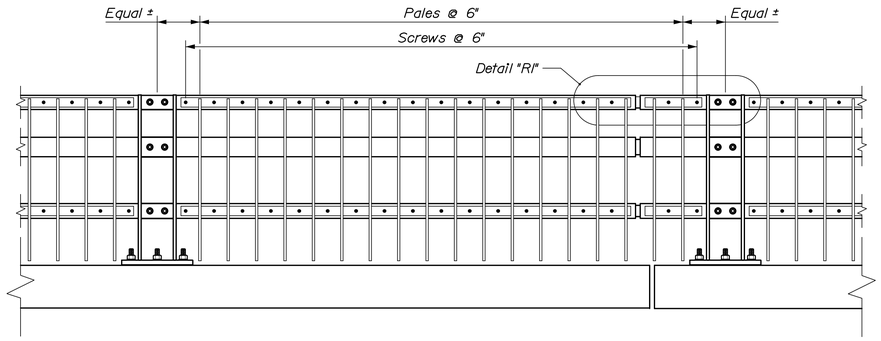
Division:

Filename: 102_End Post Details VI.dgn



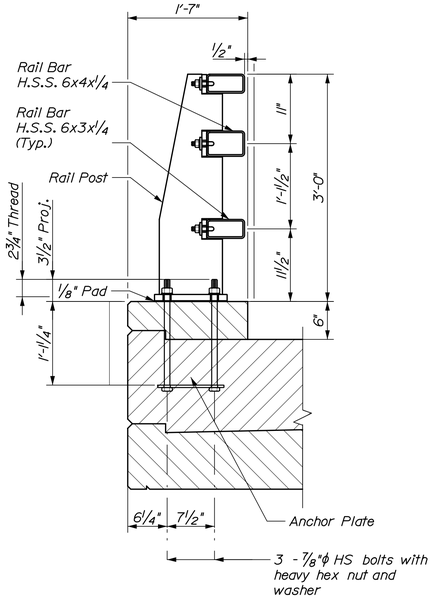
WYOMING BRIDGE RAILING ELEVATION

(Pales not shown for clarity)

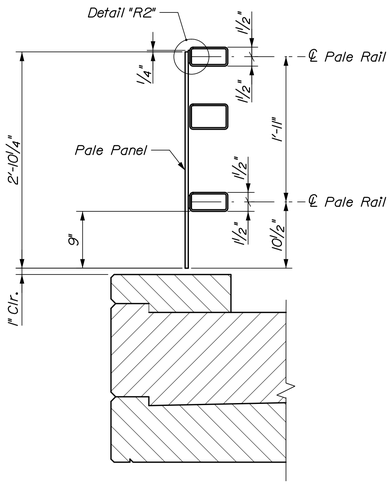


PALE PANEL REAR ELEVATION

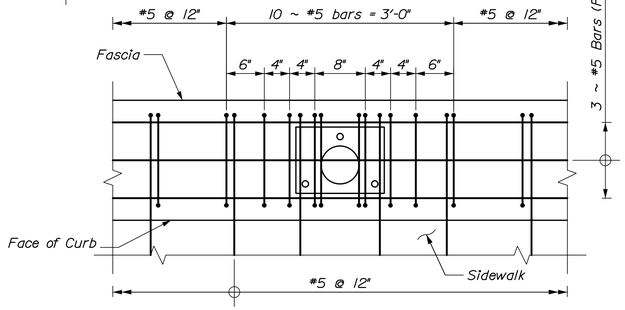
(Pales to be installed full length of bridge)



TYPICAL RAILING SECTION

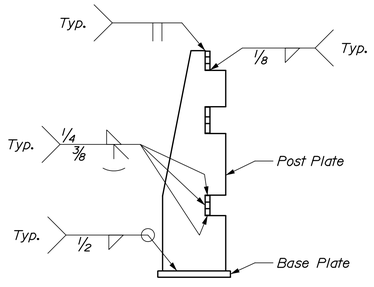


PALE PANEL SECTION



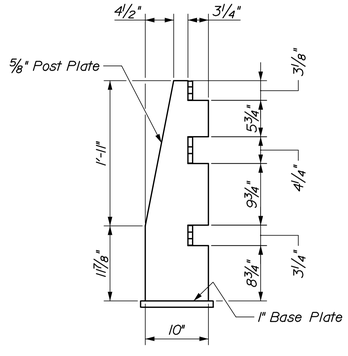
CURB REINFORCING PLAN

(Sidewalk longitudinal reinforcing not shown for clarity)



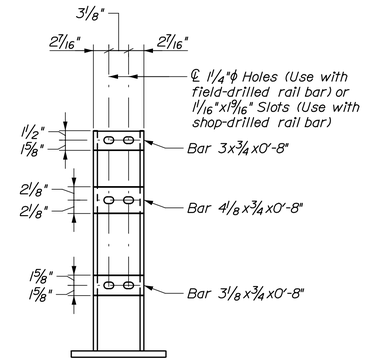
RAIL POST SIDE ELEVATION

(Welds)



RAIL POST SIDE ELEVATION

(Geometry)



RAIL POST FRONT ELEVATION

BRIDGE RAILING NOTES:

1. Tubing shall meet to longitudinal CVN requirements of 15 ft. lb. at 0°F or proportional values of subsize specimens. Testing shall be done in accordance with ASTM A 673. The "H" frequency shall be used and the material shall be as - rolled.

2. 25% of the post-to-base welds in a production lot shall be tested by the Magnetic Particle Method. If rejectable discontinuties are found, another 25% of that production shall be tested. If rejectable discontinuities are found in the second 25%, all post - to-base welds in that lot shall be tested. Acceptance criteria shall be with the latests edition of the AWS D1.5 Bridge Welding Code.

3. All exposed cut or sheared edges shall be broken and free of burrs.

4. Rail bars shall not be shop spliced.

5. Rail bar expansion joints shall be provided in any bay spanning a superstructure joint. Expansion joint width shall be 3" at 45°F.

6. All parts shall be galvanized after fabrication in accordance with ASTM A 123, except that hardware shall meet the requirements of either ASTM A 153 or ASTM B 695, Class 50, Type 1. Parts except hardware to be galvanized shall be blast cleaned prior to galvanizing in accordance with Standard Specification Section 506.

7. Venting and pick-up holes shall be shown on the shop drawings.

8. Anchor bolts may be tack welded to anchorage.

9. After installation of the rail bars, the exposed rail bolt threads receive two coats of zinc-rich paint.

MATERIALS

Rail Bars	ASTM A 500, Grade B
Rail Post Plates & Bases	ASTM A 572, Grade 50
Rail Bar Splice Sleeves	ASTM A 572, Grade 50
Anchor & Reinforcement Assemblies	ASTM A 36
Plate Washers	ASTM A 36
Anchor Bolts	ASTM F3125, GRADE A325, or ASTM A 449, or ASTM F 1554, Grade 105
Rail Bolts	ASTM A 36
Nuts for Rail Bolts	ASTM A 563
Splice Bolts	ASTM F3125, GRADE A325
Lock Washers	ANSI/ASME B18.21.1-1994

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

	BY	DATE
PROJ. MANAGER	M. Parlin	
DESIGN-DETAILED	H. Walton	07\2022
CHECKED-REVIEWED	K. Brayley	07\2022
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1	N. Boert	
REVISIONS 2	T. Cote	
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

BRIDGE RAILING DETAILS I

SHEET NUMBER

103

OF 111

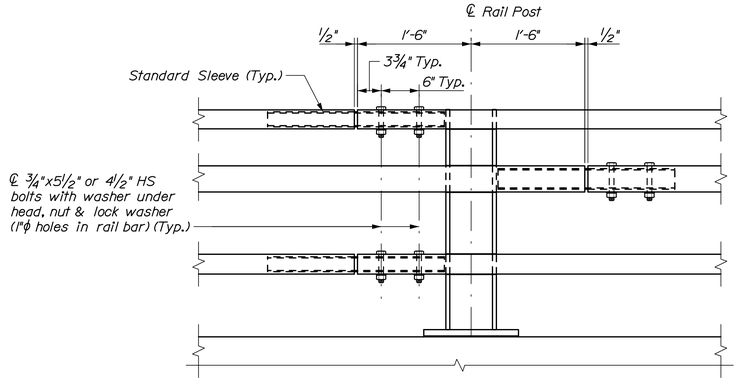
HNTB

Date:7/29/2022

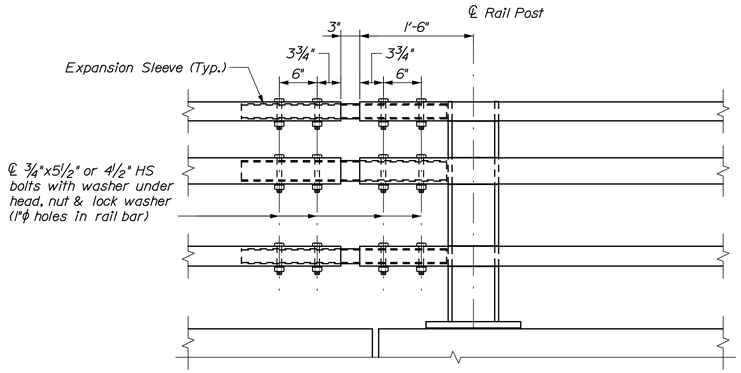
Username:

Division:

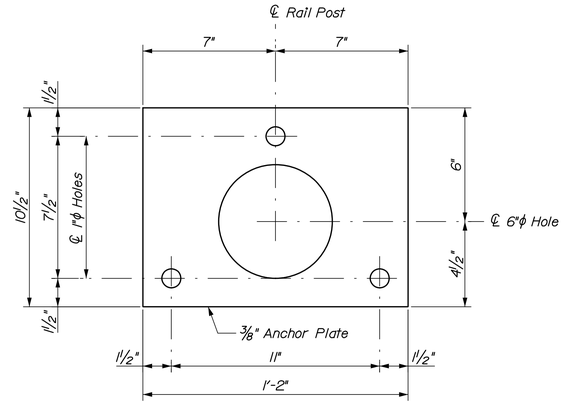
Filename: 103_Railing Details 1.dgn



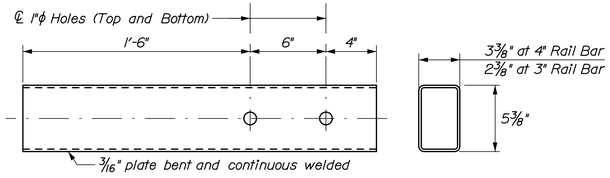
STANDARD SPLICE ELEVATION



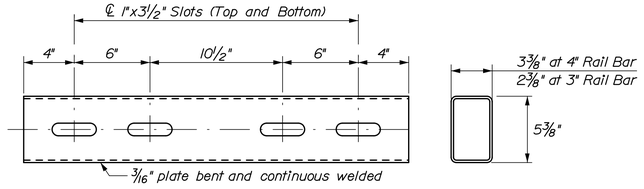
EXPANSION SPLICE ELEVATION



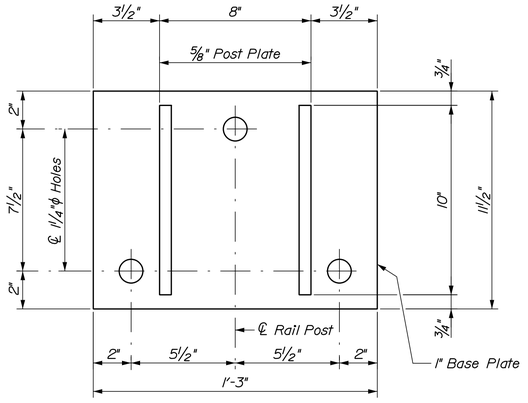
ANCHOR PLATE PLAN



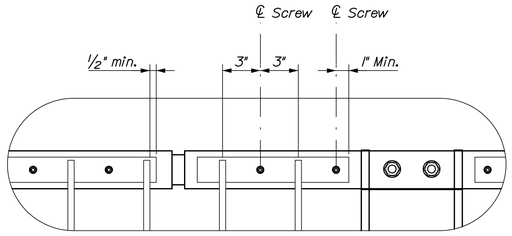
STANDARD SLEEVE DETAILS



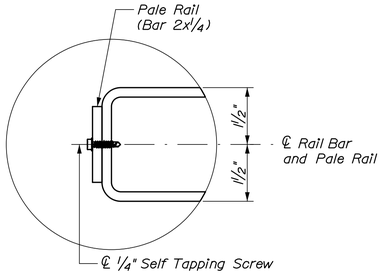
EXPANSION SLEEVE DETAILS



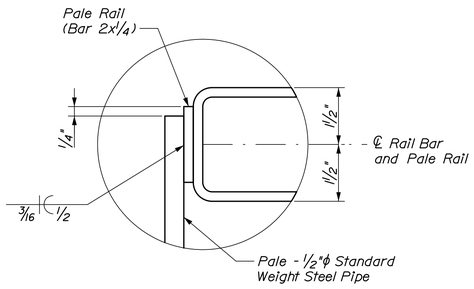
RAIL POST PLAN



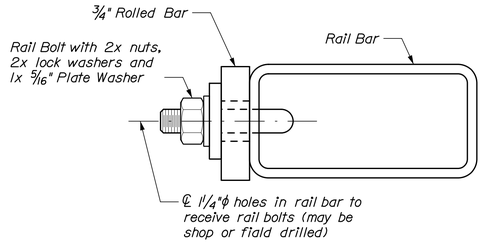
DETAIL "R1"



DETAIL "R2"
Between Pales



DETAIL "R2"
At Pale



RAIL BAR CONNECTION DETAIL

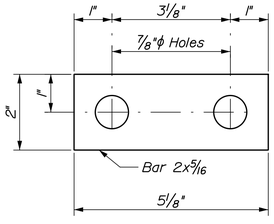
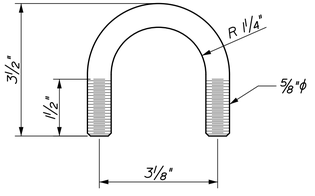
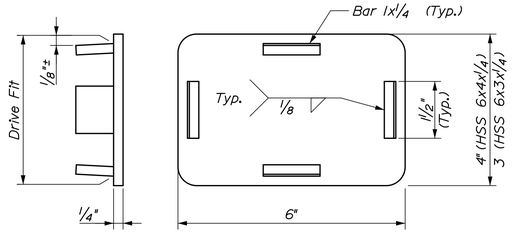


PLATE WASHER



RAIL BOLT DETAIL



RAIL BAR END CAP

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

		DATE
PROJ. MANAGER	M. Parlin	
DESIGN-DETAILED	H. Walton	07\2022
CHECKED-REVIEWED	K. Brayley	07\2022
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BY: N. Boert, T. Cote

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW
KENNEBEC

BRIDGE RAILING DETAILS II

SHEET NUMBER
104
OF 111

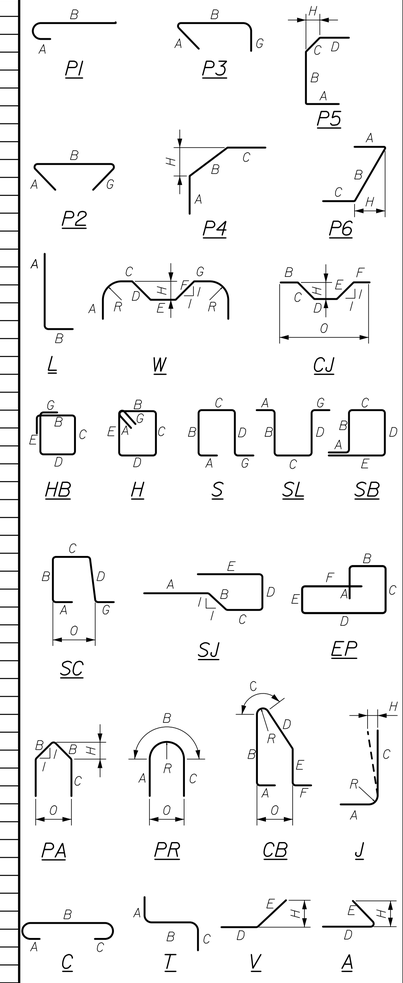
HNTB

Filename: 104_Railing Details 2.dgn Division: Username: Date:7/29/2022

Filename: 105_Reinforcing Schedule 1.dgn Username: Division: Date:7/29/2022

STRAIGHT BARS				BENT BARS													
MARK	QTY.	LENGTH	LOCATION	MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
Abutment No.1 (Plain)																		
A400	12	16'-7"	*Reconstructed Wingwall Horizontal*	A450	64	3'-1"	L	2'-5"	8"					0"				*Reconstructed Wingwall Vertical Dowels*
A500	29	41'-0"	*Stage 1 Horizontal Stem*	A550	58	26'-1"	L	25'-3"	10"									*Subfooting Cantilever Longitudinal*
A501	29	43'-0"	*Stage 2 Horizontal Stem*	A551	102	16'-6"	S	0"	2'-9"	11'-0"	2'-9"			0"				*Subfooting Cantilever Transverse*
A503	29	16'-0"	*Stage 1 WW Horizontal Footing*	A552	197	3'-0"	L	2'-2"	10"									*Stem Front Face Vertical*
A516	10	6'-6"	*Stage 1 Wingwall Horizontal*	A559	5	3'-1"	S	0"	10"	1'-5"	10"			0"				*Stage 1 WW Horizontal End Stirrup*
A527	16	8'-2"	*Stage 2 WW Front Vertical*	A560	1	9'-10"	S	0"	4'-2"	1'-6"	4'-2"			0"				*Stage 1 WW Vertical Bottom Stirrup*
A528	18	14'-3"	*Stage 2 WW Horizontal*	A561	1	10'-10"	S	0"	4'-8"	1'-6"	4'-8"			0"				*Stage 1 WW Vertical Bottom Stirrup*
A529	2	4'-11"	*Stage 2 Cheek Wall Vertical*	A562	1	12'-0"	S	0"	5'-3"	1'-6"	5'-3"			0"				*Stage 1 WW Vertical Bottom Stirrup*
A530	2	6'-8"	*Stage 2 Cheek Wall Vertical*	A563	1	13'-0"	S	0"	5'-9"	1'-6"	5'-9"			0"				*Stage 1 WW Vertical Bottom Stirrup*
A532	8	24'-6"	*Closure Wall Horizontal*	A565	16	5'-1"	L	10"	4'-3"									*Stage 2 WW Front Footing Vertical*
A533	42	23'-5"	*Closure Wall Horizontal*	A566	2	3'-0"	V				1'-6"	1'-6"		5"				*Cheek Wall Top End*
A535	300	5'-10"	*Closure Wall Vertical*	A568	12	10'-8"	S	0"	10"	9'-0"	10"			0"				*Stem Side Horizontal*
A540	26	4'-0"	*Closure Wall Dowel*	A569	34	2'-11"	L	2'-1"	10"									*Stem Side Vertical*
A541	10	32'-3"	*Stage 1 Subfooting Longitudinal*	A570	124	6'-9"	L	4'-0"	2'-9"									*Stage 1 Subfooting Transverse*
A600	16	6'-2"	*Stage 2 WW Footing Transverse*	A650	16	7'-2"	L	6'-2"	1'-0"									*Stage 2 WW Footing Top Transverse*
A601	16	7'-9"	*Stage 2 WW Footing Longitudinal*	A651	16	4'-6"	L	3'-6"	1'-0"									*Stage 2 WW Footing Step Bottom*
A602	16	8'-0"	*Stage 2 WW Footing Longitudinal*	A652	8	4'-7"	L	1'-6"	3'-1"									*Stage 2 WW Footing Step Top*
A603	16	8'-6"	*Stage 2 WW Back Vertical*	A653	16	5'-7"	L	4'-7"	1'-0"									*Stage 2 WW Back Footing Vertical*
A800	54	4'-0"	*Stem to Subfooting Dowels*	A750	197	10'-2"	L	9'-0"	1'-2"									*Stem Bottom Transverse*
A801	8	3'-0"	*Stage 2 WW Footing to Subfooting Dowels*															
				Abutment No.1 (Low-Carbon Chromium)														
Abutment No.1 (Low-Carbon Chromium)				A550c	197	2'-7"	L	1'-9"	10"									*Stem Top Back Transverse*
A500c	19	41'-0"	*Stage 1 Horizontal Stem*	A551c	191	8'-3"	L	7'-5"	10"									*Stem Back Face Vertical*
A501c	19	43'-0"	*Stage 2 Horizontal Stem*	A552c	197	9'-11"	P4	10"	7'-4"	1'-9"					1'-1"			*Stem Top Front Transverse*
A503c	89	9'-3"	*Backwall Front Vertical*	A553c	81	6'-9"	L	5'-8"	1'-1"									*Backwall Back Vertical*
A504c	132	5'-3"	*Backwall Vertical Front and Back*	A554c	81	2'-8"	S	0"	10"	1'-0	10"			0"				*Header Top Stirrup*
A505c	30	6'-2"	*Backwall Sidewalk Vertical Front and Back*	A555c	2	12'-10"	SC	0"	10"	8'-9"	3'-3"			0"		9'-0"		*Stage 1 Sidewalk Top Horizontal*
A506c	8	6'-10"	*Backwall Curb Vertical Front and Back*	A556c	3	6'-8"	SC	0"	10"	2'-7"	3'-3"			0"		5'-5½"		*Stage 1 Sidewalk To WW Top*
A507c	24	41'-0"	*Stage 1 Backwall Horizontal*	A557c	1	6'-8"	S	0"	3'-0"	8"	3'-0"			0"				*Stage 1 Curb Vertical Transverse*
A508c	24	43'-0"	*Stage 2 Backwall Horizontal*	A558c	1	6'-10"	S	0"	3'-0"	10"	3'-0"			0"				*Stage 1 Curb Vertical Transverse*
A510c	2	9'-8"	*Stage 1 below Curb Horizontal*	A559c	1	7'-0"	S	0"	3'-0"	1'-0"	3'-0"			0"				*Stage 1 Curb Vertical Transverse*
A511c	2	7'-2"	*Stage 2 below Curb Horizontal*	A560c	5	7'-1"	S	0"	3'-0"	1'-1"	3'-0"			0"				*Stage 1 Curb Vertical Transverse*
A512c	16	5'-2"	*Stage 2 WW Vertical Front*	A561c	4	7'-6"	S	0"	3'-0"	1'-6"	3'-0"			0"				*Stage 1 Curb Vertical Longitudinal*
A513c	8	14'-3"	*Stage 2 WW Horizontal*	A562c	2	10'-5"	SC	0"	0"	7'-2"	3'-3"			0"		7'-5¼"		*Stage 2 Curb Top Horizontal*
A514c	8	4'-6"	*Water Main Blockout*	A563c	11	3'-1"	S	0"	10"	1'-5"	10"			0"				*Stage 2 Backwall End Stirrup*
A515c	8	4'-3"	*Electric Conduit Blockout*	A564c	5	2'-9"	S	0"	10"	1'-1"	10"			0"				*Backwall Under Curb Stirrup*
A516c	8	3'-6"	*Gas Main Blockout*	A565c	45	10'-0"	S	0"	3'-4"	3'-4"	3'-4"			0"				*Pedestal Longitudinal*
A517c	8	3'-9"	*Cable Conduit Blockout*	A566c	45	10'-0"	S	0"	3'-4"	3'-4"	3'-4"			0"				*Pedestal Transverse*
A518c	8	5'-3"	*Communication Conduit Blockout*	A567c	27	10'-2"	S	0"	3'-4"	3'-6"	3'-4"			0"				*Pedestal Horizontal Stirrup*
A519c	14	5'-0"	*Stage 1 Wingwall Vertical*	A568c	2	4'-2"	P4	1'-6"	1'-4"	1'-4"					7½"			*Cheek Wall Top Bar*
A520c	1	3'-6"	*Stage 1 Wingwall Vertical*	A569c	18	4'-6"	S	0"	1'-10"	10"	1'-10"			0"				*Cheek Wall Stirrup*
A521c	1	4'-0"	*Stage 1 Wingwall Vertical*	A570c	2	9'-7"	S	0"	3'-2"	3'-3"	3'-2"			0"				*Communication Conduit Blockout*
A522c	1	4'-6"	*Stage 1 Wingwall Vertical*	A571c	4	5'-8"	L	4'-7"	1'-1"									*Stage 1 Back Face Top of Backwall*
A523c	3	22'-2"	*Stage 1 WW Top Bar*	A572c	1	3'-11½"	P5	1'-0½"	1'-4"	4"	1'-3"				½"			*Stage 1 Curb Horizontal Inside*
A524c	6	18'-6"	*Stage 1 Wingwall Horizontal*	A573c	1	3'-11¾"	P6	1'-3"	1'-8¼"	1'-0½"					3"			*Stage 1 Curb Horizontal Outside*
A525c	6	12'-9"	*Stage 1 Wingwall Horizontal*	A574c	1	3'-8"	L	2'-7"	1'-1"									*Stage 2 Back Face Top of Backwall*
A526c	6	6'-11"	*Stage 1 Wingwall Horizontal*	A575c	2	4'-2"	S	0"	1'-3"	1'-8"	1'-3"			0"				*Stage 2 Curb Horizontal*
A527c	6	3'-11"	*Stage 1 Wingwall Vertical*	A576c	34	2'-11"	L	2'-1"	10"									*Stem Side Vertical*
A528c	6	5'-6"	*Stage 1 Wingwall Vertical*	A577c	8	7'-3"	V				4'-0"	3'-3"			2'-4"			*Communication Conduit Blockout*
A529c	6	7'-0"	*Stage 1 Wingwall Vertical*	A579c	21	3'-2"	S	0"	10"	1'-6"	10"			0"				*Stage 1 WW Top Stirrup*
A530c	8	8'-7"	*Stage 1 Wingwall Vertical*	A580c	2	6'-6"	L	5'-8"	10"									*Stage 1 WW Footing to Wall Back*
A531c	19	16'-0"	*Stage 1 WW Horizontal Footing Top*	A581c	2	7'-1"	L	6'-3"	10"									*Stage 1 WW Footing to Wall Back*
A578c	67	5'-6"	*Approach Slab Dowel*	A582c	2	7'-7"	L	6'-9"	10"									*Stage 1 WW Footing to Wall Back*
A600c	16	5'-2"	*Stage 2 WW Back Vertical*	A650c	32	7'-6"	S	0"	3'-2"	1'-2"	3'-2"			0"				*Stage 2 WW Curb Stirrup*
MARK	QTY.	LENGTH	LOCATION	MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION

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.

Reinforcing Bar: ASTM A615/A615M, Grade 60
ASTM A1035, Grade 100

GENERAL NOTES

1. The first two digits 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 'S650c' = bar size #6 Low-Carbon Chromium

2. Each crank bar, Type B, may be replaced by two (2) straight bars (one top and one bottom) of the same bar size as the crank bar. Payment in either case shall be based on crank bars as schedule on the plans.

3. Bar marks ending with 'c' indicate Low-Carbon Chromium. All other bars are plain (uncoated).

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

PROJ. MANAGER	M. Parlin
DESIGN-DETAILED	H. Walton
CHECKED-REVIEWED	K. Brayley
DESIGN2-DETAILED2	
DESIGN3-DETAILED3	

	DATE	BY
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES	07\2022	E. Beaudett
	07\2022	T. Cote

P.E. NUMBER

DATE

SIGNATURE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

REINFORCING STEEL SCHEDULE I

SHEET NUMBER

105

OF 111

Filename: 106_Reinforcing Schedule 2.dgn Division: Username: Date:7/29/2022

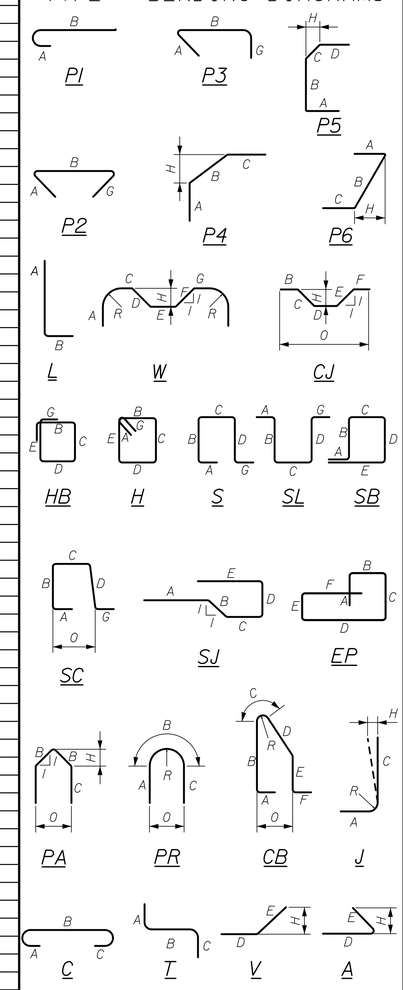
STRAIGHT BARS

MARK	QTY.	LENGTH	LOCATION
			Abutment No. 2 (Plain)
B500	60	8'-0"	Short Wingwall Transverse Bars
B501	19	16'-6"	Short Wingwall Long. Bars, Stage 1
B502	19	10'-6"	Short Wingwall Long. Bars, Stage 2
B503	13	33'-8"	F.F. Stem Horizontal Bars, Stage 1
B504	11	33'-2"	N.F. Stem Horizontal Bars, Stage 1
B506	13	50'-7"	F.F. Stem Horizontal Bars, Stage 2
B507	11	46'-2"	N.F. Stem Horizontal Bars, Stage 2
B508	8	15'-6"	Tall Wingwall Horizontal Bars, Stage 1
B509	20	32'-5"	Wingwall Horizontal Bars, Stage 1, Typ.
B510	2	30'-11"	Wingwall Horizontal Bars, Stage 1
B511	2	24'-7"	Wingwall Horizontal Bars, Stage 1
B512	2	18'-2"	Wingwall Horizontal Bars, Stage 1
B513	2	11'-10"	Wingwall Horizontal Bars, Stage 1
B514	2	5'-5"	Wingwall Horizontal Bars, Stage 1
B515	3	32'-10"	Wingwall Top Horizontal Bars, Stage 1
B516	17	10'-7"	Tall Wingwall Vert. Bar, Stage 1, N.F. Bot
B517	17	7'-8"	Tall Wingwall Vert. Bar, Stage 1, N.F. Top
B518	36	7'-8"	Short Wingwall Vert. Bar, Stage 1, Bot
B519	36	5'-6"	Short Wingwall Vert. Bar, Stage 1, Top
B520	8	8'-6"	Tall Wingwall Horizontal Bars, Stage 2
B521	14	20'-0"	Wingwall Horizontal Bars, Stage 2, Typ.
B522	2	19'-4"	Wingwall Horizontal Bars, Stage 2
B523	2	16'-10"	Wingwall Horizontal Bars, Stage 2
B524	2	14'-4"	Wingwall Horizontal Bars, Stage 2
B525	2	11'-10"	Wingwall Horizontal Bars, Stage 2
B526	2	9'-4"	Wingwall Horizontal Bars, Stage 2
B527	2	6'-10"	Wingwall Horizontal Bars, Stage 2
B528	2	4'-4"	Wingwall Horizontal Bars, Stage 2
B529	2	1'-10"	Wingwall Horizontal Bars, Stage 2
B530	3	21'-5"	Wingwall Top Horizontal Bars, Stage 2
B531	10	10'-6"	Tall Wingwall Vert. Bar, Stage 2, N.F. Bot
B532	10	7'-6"	Tall Wingwall Vert. Bar, Stage 2, N.F. Top
B533	24	5'-3"	Short Wingwall Vert. Bar, Stage 2, Bot
B534	12	6'-8"	Short Wingwall Vert. Bar, Stage 2, Top
B535	10	4'-4"	Short Wingwall Vert. Bar, Stage 2, Top
B536	188	5'-4"	Abut. Stem Vertical Bars, N.F.
B600	172	12'-3"	Abutment Footing Transverse Bars
B601	188	12'-0"	Tall Wingwall Footing Transverse Bars
B602	30	26'-8"	Abutment Footing Long. Bars, Stage 1
B603	30	16'-11"	Tall Wingwall Footing Long. Bars, Stage 1
B605	30	43'-0"	Abutment Footing Long. Bars, Stage 2
B606	30	14'-3"	Tall Wingwall Footing Long. Bars, Stage 2
B607	32	10'-7"	Tall Wingwall Vert. Bar, Stage 1, F.F. Bot
B608	17	8'-2"	Tall Wingwall Vert. Bar, Stage 1, F.F. Top
B609	18	10'-6"	Tall Wingwall Vert. Bar, Stage 2, F.F. Bot
B610	10	8'-0"	Tall Wingwall Vert. Bar, Stage 2, F.F. Top
B800	76	4'-0"	Subfooting-Footing Interface Bars
			Abutment No. 2 (Low-Carbon Chromium)
B500c	15	33'-5"	Abutment Stem Top Horiz. Bars, Stage 1
B502c	15	46'-2"	Abutment Stem Top Horiz. Bars, Stage 2
B503c	175	10'-9"	Abutment Stem Vertical Bars, F.F.
B504c	10	33'-11"	Lower Backwall Horiz. Bars, Stage 1
B506c	10	50'-7"	Lower Backwall Horiz. Bars, Stage 2
B507c	12	34'-11"	Upper Backwall Horiz. Bars, Stage 1
B508c	12	49'-7"	Upper Backwall Horiz. Bars, Stage 2
B509c	87	8'-4"	Backwall Vertical Bars, N.F.
B510c	158	5'-0"	Header Vertical Bars
B511c	20	9'-4"	Vertical Bars at End
B512c	8	4'-6"	Watermain Blockout Reinforcing
B513c	8	6'-9"	Electrical Blockout Reinforcing
B514c	8	3'-7"	Gas Blockout Reinforcing
B515c	8	3'-9"	Cable Blockout Reinforcing
B516c	2	7'-8"	Sidewalk Horizontal Reinforcement, Stage 1
B517c	2	11'-8"	Sidewalk Horizontal Reinforcement, Stage 2
B518c	7	1'-7"	Horizontal Top Bars, Angled End, Stage 1
B519c	7	2'-6"	Horizontal Top Bars, Angled End, Stage 1
B520c	7	3'-3"	Horizontal Top Bars, Angled End, Stage 2
B521c	7	5'-10"	Horizontal Top Bars, Angled End, Stage 2
B556c	65	5'-3"	Approach Slab Connection Bars

BENT BARS

MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
								Abutment No. 2 (Plain)						
B550	30	3'-8"	S	0"	10"	2'-0"	10"			0"				Short Wingwall N.F. U-Bars
B551	365	6'-1"	L	5'-3"	10"									Abutment Footing-Stem Connection L-Bar
B552	27	6'-1"	L	5'-3"	10"									Tall Wingwall-Footing Connection L-Bars, N.F.
B553	60	5'-7"	L	4'-9"	10"									Short Wingwall-Footing Connection L-Bars
B554	74	3'-2"	S	0"	10"	1'-6"	10"			0"				Wingwall U-Bars
B555	18	4'-6"	L	2'-6"	2'-0"									Short Wingwall End L-Bars
B556	11	7'-4"	V				6'-6"	10"			9½"			Angled Face Horizontal Bars, Stage 1
B557	11	8'-7"	V				7'-9"	10"			7"			Angled Face Horizontal Bars, Stage 2
B650	2	7'-0"	V				3'-6"	3'-6"			3'-3½"			Footing Elbow Bars, Stage 1
B651	2	8'-2"	V				4'-2"	4'-2"			3'-11"			Footing Elbow Bars, Stage 1
B652	2	9'-8"	V				4'-10"	4'-10"			4'-6½"			Footing Elbow Bars, Stage 1
B653	2	11'-0"	V				5'-5"	5'-7"			5'-3"			Footing Elbow Bars, Stage 1
B654	2	12'-4"	V				6'-1"	6'-3"			5'-10½"			Footing Elbow Bars, Stage 1
B655	2	13'-8"	V				6'-9"	6'-11"			6'-6"			Footing Elbow Bars, Stage 1
B656	2	14'-11"	V				7'-4"	7'-7"			7'-1½"			Footing Elbow Bars, Stage 1
B657	2	16'-3"	V				8'-0"	8'-3"			7'-9"			Footing Elbow Bars, Stage 1
B658	2	17'-7"	V				8'-8"	8'-11"			8'-4½"			Footing Elbow Bars, Stage 1
B659	2	18'-11"	V				9'-3"	9'-8"			9'-1¼"			Footing Elbow Bars, Stage 1
B660	2	20'-3"	V				9'-11"	10'-4"			9'-8½"			Footing Elbow Bars, Stage 1
B661	2	21'-7"	V				10'-7"	11'-0"			10'-4"			Footing Elbow Bars, Stage 1
B662	2	22'-10"	V				11'-2"	11'-8"			10'-11¾"			Footing Elbow Bars, Stage 1
B663	4	24'-2"	V				11'-10"	12'-4"			11'-7"			Footing Elbow Bars, Stage 1
B664	2	6'-10"	V				3'-5"	3'-5"			2'-5"			Footing Elbow Bars, Stage 2
B665	2	7'-8"	V				3'-10"	3'-10"			2'-8½"			Footing Elbow Bars, Stage 2
B666	2	8'-6"	V				4'-2"	4'-3"			3'-0"			Footing Elbow Bars, Stage 2
B667	2	9'-3"	V				4'-6"	4'-9"			3'-3¼"			Footing Elbow Bars, Stage 2
B668	2	10'-0"	V				4'-11"	5'-1"			3'-7"			Footing Elbow Bars, Stage 2
B669	2	10'-9"	V				5'-3"	5'-6"			3'-10¾"			Footing Elbow Bars, Stage 2
B670	2	11'-8"	V				5'-8"	6'-0"			4'-3"			Footing Elbow Bars, Stage 2
B671	2	12'-4"	V				6'-0"	6'-4"			4'-5¾"			Footing Elbow Bars, Stage 2
B672	2	13'-2"	V				6'-4"	6'-10"			4'-10"			Footing Elbow Bars, Stage 2
B673	2	13'-11"	V				6'-9"	7'-2"			5'-1"			Footing Elbow Bars, Stage 2
B674	2	14'-9"	V				7'-1"	7'-8"			5'-5"			Footing Elbow Bars, Stage 2
B675	2	15'-5"	V				7'-5"	8'-0"			5'-8"			Footing Elbow Bars, Stage 2
B676	2	16'-3"	V				7'-10"	8'-5"			5'-11½"			Footing Elbow Bars, Stage 2
B677	4	17'-1"	V				8'-2"	8'-11"			6'-3¾"			Footing Elbow Bars, Stage 2
B678	134	4'-6"	S	0"	1'-0"	2'-6"	1'-0"			0"				Footing N.F. U-Bars
B679	51	6'-9"	L	5'-9"	1'-0"									Tall Wingwall-Footing Connection L-Bars, F.F.
B680	36	6'-0"	L	5'-0"	1'-0"									Wingwall Footing End Connection L-Bars
								Abutment No. 2 (Low-Carbon Chromium)						
B550c	162	4'-0"	L	1'-6"	2'-6"									Abutment Stem L-Bar
B551c	162	9'-4"	P4	2'-6"	5'-1"	1'-9"					10"			Abutment Stem Top Corbel
B552c	45	12'-3"	S	0"	4'-3"	3'-9"	4'-3"			0"				Pedestal U-Bars, Long.
B553c	45	11'-10"	S	0"	4'-2"	3'-6"	4'-2"			0"				Pedestal U-Bars, Trans.
B554c	79	6'-10"	L	5'-8"	1'-2"									Backwall F.F. Approach L-Bars
B555c	67	2'-8"	S	0"	10"	1'-0"	10"			0"				Shorter Header Top U-Bars
B557c	12	6'-0"	S	0"	2'-6"	1'-0"	2'-6"			0"				Taller Header Top U-Bars
B558c	8	6'-8"	S	0"	2'-7"	1'-6"	2'-7"			0"				Wider Section Top U-Bars at End
B559c	5	4'-2"	SC	0"	1'-1"	1'-7"	1'-6"			0"		3'-0"		Horizontal End Bars, Stage 1, F.F.
B560c	5	6'-7"	L	5'-6"	1'-1"									Horizontal End Bars, Stage 2, F.F.
B561c	3	3'-2"	L	1'-8"	1'-6"									Vertical Backwall Hooks at End
B562c	8	7'-1"	S	0"	3'-0"	1'-1"	3'-0"			0"				Trans. Transition Barrier Connection Bars
B563c	4	4'-7"	S	0"	1'-8"	1'-3"	1'-8"			0"				Transition Barrier Tie Bars
B564c	2	4'-6"	L	1'-9"	2'-9"									Communications Blockout Top L-Bar, Stage 1
B565c	2	4'-4"	L	1'-7"	2'-9"									Communications Blockout Top L-Bar, Stage 2
B566c	16	6'-9"	V				2'-6"	4'-3"			3'-0"			Communications Blockout, Corner Bars
B567c	4	7'-6"	S	0"	3'-0"	1'-6"	3'-0"			0"				Long. Transition Barrier Connection Bars
B568c	2	10'-1"	L	7'-8"	2'-5"									Top Sidewalk Horizontal Bars, Stage 1
B569c	2	14'-1"	L	11'-8"	2'-5"									Top Sidewalk Horizontal Bars, Stage 2
B570c	11	5'-11"	V				4'-0"	1'-11"			1'-9½"			Backwall Horizontal End Bars, Stage 1, N.F.
B571c	11	3'-9"	V				3'-5"	4"			2¾"			Backwall Horizontal End Bars, Stage 2, N.F.
B572c	11	4'-4"	L	1'-10"	2'-6"									Angled Corner Top L-Bars, Stage 1
B573c	15	6'-3"	L	3'-9"	2'-6"									Angled Corner Top L-Bars, Stage 2
B588c	27	10'-10"	S	0"	3'-7"									Pedestal Horizontal Reinforcing
B589c	1	6'-0"	V											Abut. Seat Corner Top Bar, Stage 1
B590c	1	7'-10"	V											Abut. Seat Corner Top Bar, Stage 2

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 AASHTO Standard 315 and AASHTO Standard 318.

Reinforcing Bar: ASTM A615/A615M, Grade 60
ASTM A1035, Grade 100

GENERAL NOTES

1. The first two digits 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 'S650c' = bar size #6 Low-Carbon Chromium

2. Each crank bar, Type B, may be replaced by two (2) straight bars (one top and one bottom) of the same bar size as the crank bar. Payment in either case shall be based on crank bars as schedule on the plans.

3. Bar marks ending with 'c' indicate Low-Carbon Chromium. All other bars are plain (uncoated).

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

PROJ. MANAGER	M. Parlin
DESIGN-DETAILED	H. Walton
CHECKED-REVIEWED	K. Broyley
DESIGN2-DETAILED2	
DESIGN3-DETAILED3	

	BY	DATE
REVISIONS 1	E. Beaudett	07\2022
REVISIONS 2	T. Cote	07\2022
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

P.E. NUMBER

DATE

SIGNATURE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

REINFORCING STEEL SCHEDULE II

SHEET NUMBER

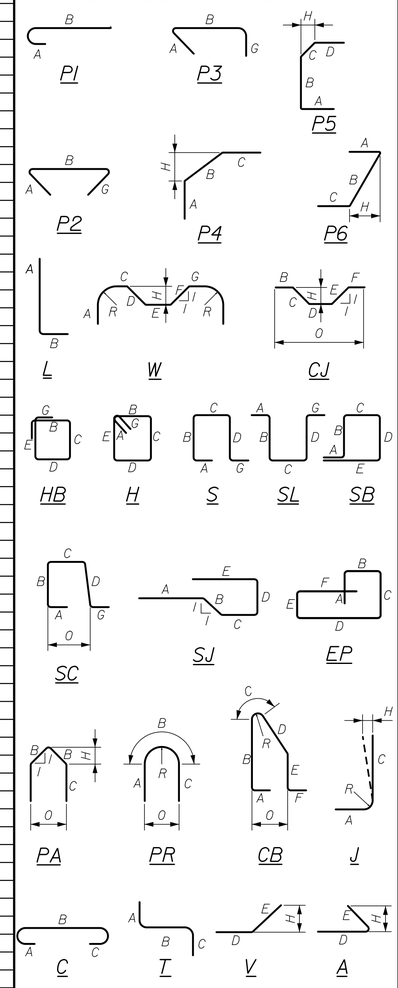
106

OF 111

Filename: 107_Reinforcing Schedule 3.dgn Username: Division: Date:7/29/2022

STRAIGHT BARS				BENT BARS														
MARK	QTY.	LENGTH	LOCATION	MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
Pier (Plain)														*Pier (Plain)*				
P700	88	13'-6"	Footing Transverse Top	P550	18	8'-2"	S	0'-0"	3'-0"	2'-2"	3'-0"			0'-0"				Pedestal Stirrup
P701	1	1'-6"	Footing Transerverse Top, Nose	P551	72	8'-8"	S	0'-0"	2'-8"	3'-4"	2'-8"			0'-0"				Pedestal Transverse Anchorage
P702	1	3'-6"	Footing Transerverse Top, Nose															
P703	1	5'-6"	Footing Transerverse Top, Nose	P650	81	8'-0"	S	0'-0"	3'-0"	2'-0"	3'-0"			0'-0"				Pedestal Longitudinal Anchorage
P704	1	7'-6"	Footing Transerverse Top, Nose															
P705	1	9'-6"	Footing Transerverse Top, Nose	P750	203	7'-6"	S	0'-0"	2'-0"	3'-6"	2'-0"			0'-0"				Transverse Vertical Stirrups, Back Face Stirrups
P706	1	11'-6"	Footing Transerverse Top, Nose	P751	5	26'-3"	PA		9'-6½"	3'-7"					6'-9"	13'-6"		Footing Nose Front Face
P707	36	44'-10"	Footing Longitudinal Top and Bottom, Stage 2	P752	8	7'-11"	L	4'-10"	3'-1"									Footing Longitudinal Top and Bottom, Nose
P708	36	41'-3"	Footing Longitudinal Top and Bottom, Stage 1	P753	8	8'-11"	L	5'-10"	3'-1"									Footing Longitudinal Top and Bottom, Nose
P709	36	7'-8"	Footing Longitudinal Top and Bottom, Splice	P754	8	9'-11"	L	6'-10"	3'-1"									Footing Longitudinal Top and Bottom, Nose
P710	150	13'-0"	Stem Vertical, Upper Portion	P755	8	10'-11"	L	7'-10"	3'-1"									Footing Longitudinal Top and Bottom, Nose
P711	19	13'-0"	Stem Vertical, Upper Portion, Nose	P756	8	11'-11"	L	8'-10"	3'-1"									Footing Longitudinal Top and Bottom, Nose
P712	60	44'-1"	Stem Horizontal, Stage 2	P757	8	12'-11"	L	9'-10"	3'-1"									Footing Longitudinal Top and Bottom, Nose
P713	60	33'-8"	Stem Horizontal, Stage 1	P758	4	13'-11"	L	10'-10"	3'-1"									Footing Longitudinal Top and Bottom, Nose
P714	60	7'-8"	Stem Horizontal, Splice	P759	5	15'-8"	S	0'-0"	1'-2"	13'-4"	1'-2"			0'-0"				Footing Back Face
				P760	80	10'-10"	S	0'-0"	3'-0"	4'-10"	3'-0"			0'-0"				Pier Stem Top Stirrup
P800	175	13'-6"	Footing Transverse Bottom	P761	1	9'-3"	S	0'-0"	3'-0"	3'-3"	3'-0"			0'-0"				Pier Stem Top Stirrup, Nose
P801	1	1'-6"	Footing Transverse Bottom, Nose	P762	1	7'-7"	S	0'-0"	3'-0"	1'-7"	3'-0"			0'-0"				Pier Stem Top Stirrup, Nose
P802	1	2'-6"	Footing Transverse Bottom, Nose	P763	28	12'-8"	S	0'-0"	3'-10"	5'-0"	3'-10"			0'-0"				Stem Horizontal, Back Face
P803	1	3'-6"	Footing Transverse Bottom, Nose	P764	1	14'-9"	PA		3'-6½"	3'-10"					2'-6"	5'-0"		Stem Front Face, Nose
P804	1	4'-6"	Footing Transverse Bottom, Nose	P765	1	15'-3"	PA		3'-6½"	4'-1"					2'-6"	5'-0"		Stem Front Face, Nose
P805	1	5'-6"	Footing Transverse Bottom, Nose	P766	1	15'-9"	PA		3'-6½"	4'-4"					2'-6"	5'-0"		Stem Front Face, Nose
P806	1	6'-6"	Footing Transverse Bottom, Nose	P767	1	16'-3"	PA		3'-6½"	4'-7"					2'-6"	5'-0"		Stem Front Face, Nose
P807	1	7'-6"	Footing Transverse Bottom, Nose	P768	1	16'-9"	PA		3'-6½"	4'-10"					2'-6"	5'-0"		Stem Front Face, Nose
P808	1	8'-6"	Footing Transverse Bottom, Nose	P769	1	17'-3"	PA		3'-6½"	5'-1"					2'-6"	5'-0"		Stem Front Face, Nose
P809	1	9'-6"	Footing Transverse Bottom, Nose	P770	1	17'-9"	PA		3'-6½"	5'-4"					2'-6"	5'-0"		Stem Front Face, Nose
P810	1	10'-6"	Footing Transverse Bottom, Nose	P771	1	18'-3"	PA		3'-6½"	5'-7"					2'-6"	5'-0"		Stem Front Face, Nose
P811	1	11'-6"	Footing Transverse Bottom, Nose	P772	1	18'-9"	PA		3'-6½"	5'-10"					2'-6"	5'-0"		Stem Front Face, Nose
P812	1	12'-6"	Footing Transverse Bottom, Nose	P773	1	19'-3"	PA		3'-6½"	6'-1"					2'-6"	5'-0"		Stem Front Face, Nose
P813	150	16'-11"	Stem Vertical, Lower Portion	P774	1	19'-9"	PA		3'-6½"	6'-4"					2'-6"	5'-0"		Stem Front Face, Nose
P814	33	17'-9"	Stem Vertical, Lower Portion, Nose	P775	1	20'-3"	PA		3'-6½"	6'-7"					2'-6"	5'-0"		Stem Front Face, Nose
P815	53	4'-0"	Footing to Subfooting Dowel	P776	1	20'-9"	PA		3'-6½"	6'-10"					2'-6"	5'-0"		Stem Front Face, Nose
				P777	1	21'-3"	PA		3'-6½"	7'-1"					2'-6"	5'-0"		Stem Front Face, Nose
Superstructure (Low-Carbon Chromium)				P778	1	21'-9"	PA		3'-6½"	7'-4"					2'-6"	5'-0"		Stem Front Face, Nose
S500c	2080	41'-11"	Primary Long. Bar, Placements 1-2 & 4-5	P779	1	22'-3"	PA		3'-6½"	7'-7"					2'-6"	5'-0"		Stem Front Face, Nose
S501c	1040	40'-6"	Primary Long. Bar, Placements 3 & 6	P780	1	22'-9"	PA		3'-6½"	7'-10"					2'-6"	5'-0"		Stem Front Face, Nose
S502c	2194	34'-4"	Primary Transverse Bar, Stage 1	P781	1	23'-3"	PA		3'-6½"	8'-1"					2'-6"	5'-0"		Stem Front Face, Nose
S503c	20	34'-5"	Primary Transverse Bar, Stage 1 (Placement 1) Flareout	P782	1	23'-9"	PA		3'-6½"	8'-4"					2'-6"	5'-0"		Stem Front Face, Nose
S504c	14	34'-6"	Primary Transverse Bar, Stage 1 (Placement 1) Flareout	P783	1	24'-3"	PA		3'-6½"	8'-7"					2'-6"	5'-0"		Stem Front Face, Nose
S505c	8	34'-7"	Primary Transverse Bar, Stage 1 (Placement 1) Flareout	P784	1	24'-9"	PA		3'-6½"	8'-10"					2'-6"	5'-0"		Stem Front Face, Nose
S506c	6	34'-8"	Primary Transverse Bar, Stage 1 (Placement 1) Flareout	P785	1	25'-3"	PA		3'-6½"	9'-1"					2'-6"	5'-0"		Stem Front Face, Nose
S507c	6	34'-9"	Primary Transverse Bar, Stage 1 (Placement 1) Flareout	P786	1	25'-9"	PA		3'-6½"	9'-4"					2'-6"	5'-0"		Stem Front Face, Nose
S508c	6	34'-10"	Primary Transverse Bar, Stage 1 (Placement 1) Flareout	P787	1	26'-3"	PA		3'-6½"	9'-7"					2'-6"	5'-0"		Stem Front Face, Nose
S509c	4	34'-11"	Primary Transverse Bar, Stage 1 (Placement 1) Flareout	P788	1	26'-9"	PA		3'-6½"	9'-10"					2'-6"	5'-0"		Stem Front Face, Nose
S510c	4	35'-0"	Primary Transverse Bar, Stage 1 (Placement 1) Flareout	P789	1	27'-3"	PA		3'-6½"	10'-1"					2'-6"	5'-0"		Stem Front Face, Nose
S511c	4	35'-1"	Primary Transverse Bar, Stage 1 (Placement 1) Flareout	P790	1	27'-9"	PA		3'-6½"	10'-4"					2'-6"	5'-0"		Stem Front Face, Nose
S512c	4	35'-2"	Primary Transverse Bar, Stage 1 (Placement 1) Flareout	P791	1	28'-3"	PA		3'-6½"	10'-7"					2'-6"	5'-0"		Stem Front Face, Nose
S513c	2	35'-3"	Primary Transverse Bar, Stage 1 (Placement 1) Flareout	P792	6	6'-4"	L	3'-7"	2'-9"									Top and Back Face
S514c	2	35'-4"	Primary Transverse Bar, Stage 1 (Placement 1) Flareout	P793	7	9'-1"	V				6'-4"	2'-9"			2'-8"			Top and Front Face
S515c	2	35'-5"	Primary Transverse Bar, Stage 1 (Placement 1) Flareout															
S516c	4	35'-6"	Primary Transverse Bar, Stage 1 (Placement 1) Flareout	P850	150	8'-9"	L	7'-5"	1'-4"									Vertical Footing to Stem
S517c	2280	45'-4"	Primary Transverse Bar, Stage 2	P851	33	8'-11"	L	7'-7"	1'-4"									Vertical Footing to Stem, Nose
S518c	140	43'-8"	Primary Longitudinal Bar, Deck Placement 7															
S519c	4560	3'-3"	Primary Transverse Bar at C.J.	*Superstructure (Low-Carbon Chromium)*														
S520c	224	43'-8"	Sidewalk Longitudinal Bar	S450c	8000	4'-4"	SL	8"	7"	1'-10"	7"			8"				Haunch Reinforcement
S521c	84	43'-8"	Curb Longitudinal Bar															
S522c	42	8'-8"	End of Slab, Transverse	S550c	1144	11'-7"	SC	10"	1'-5"	7'-3"	1'-3"			10"		7'-4"		Sidewalk Stirrups
S523c	9	3'-1"	End of Slab, Transverse at Overhang	S551c	2020	6'-9"	S	10"	1'-11"	1'-3"	1'-11"			10"				Curb Stirrups
S524c	6	3'-4"	End of Slab, Transverse, Stage 1	S552c	163	7'-5"	SJ	3'-3"	1'-1"	2'-0"	1'-1"	0"						Deck End Long. Bot. Stirrup
S525c	6	4'-11"	End of Slab, Transverse, Stage 2	S553c	163	4'-7"	L	3'-6"	1'-1"									Deck End Long. Top L-Bar
S526c	6	3'-0"	End of Slab, Transverse, Placement 7	S554c	36	10'-0"	CJ		0"	4'-2"	1'-8"	4'-2"	0"		2'-11¼"	7'-6½"		Light Standard Corbel
S527c	1	4'-1"	End of Slab, Transverse at Overhang Flareout	S555c	48	5'-8"	S	0"	1'-10"	2'-0"	1'-10"	0"		0"				Light Standard U-Bar
S528c	1	4'-2"	End of Slab, Transverse at Overhang Flareout	S556c	48	6'-2"	S	0"	1'-10"	2'-6"	1'-10"	0"		0"				Light Standard U-Bar
S529c	1	4'-3"	End of Slab, Transverse at Overhang Flareout	S557c	96	6'-8"	S	0"	1'-10"	3'-0"	1'-10"	0"		0"				Light Standard U-Bar
S530c	64	3'-1"	End of Slab, Longitudinal Bar at Sidewalk															
S531c	36	4'-9"	Light Standard Longitudinal Bar	S650c	2239	7'-1"	C	8"	6'-5"	0"								Deck Overhang Hook, Typ.
S532c	128	3'-0"	Drain Diagonals	S651c	41	8'-1"	C	8"	7'-5"	0"								Deck Overhang Hook, Flareout
S600c	204	12'-6"	Pier Reinforcing, Placements 1-2 & 4-5															
S601c	510	41'-2"	Pier Reinforcing, Placements 3 & 6															
S602c	108	37'-8"	Pier Reinforcing, Placement 7															
Approach Slab (Plain)																		
AS500	16	20'-0"	Abut. No. 1, Stage 1, Transverse Bar															
AS501	16	12'-2"	Abut. No. 1, Stage 1, Transverse Bar															
AS502	16	26'-2"	Abut. No. 2, Stage 1, Transverse Bar															
AS503	32	30'-0"	Stage 2, Transverse Bar															
AS504	32	9'-0"	Stage 2, Transverse Bar															
AS600	60	15'-2"	Abut. No. 1, Stage 1, Long. Bar															
AS601	2	10'-10"	Abut. No. 1, Stage 1, Long. Bar															
AS602	53	15'-2"	Abut. No. 2, Stage 1, Long. Bar															
AS603	150	15'-2"	Stage 2, Long. Bar															
MARK	QTY.	LENGTH	LOCATION	MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION

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.

Reinforcing Bar: ASTM A615/A615M, Grade 60
ASTM A1035, Grade 100

GENERAL NOTES

1. The first two digits 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 'S650c' = bar size #6 Low-Carbon Chromium

2. Each crank bar, Type B, may be replaced by two (2) straight bars (one top and one bottom) of the same bar size as the crank bar. Payment in either case shall be based on crank bars as schedule on the plans.

3. Bar marks ending with 'c' indicate Low-Carbon Chromium. All other bars are plain (uncoated).

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

BRIDGE PLANS

Bridge No. 2854

PROJ. MANAGER	M. Parlin
DESIGN-DETAILED	H. Walton
CHECKED-REVIEWED	K. Broyley
DESIGN2-DETAILED2	
DESIGN3-DETAILED3	

BY	DATE	REVISIONS
E. Beaudett	07\2022	1
T. Cote	07\2022	2
		3
		4
		FIELD CHANGES

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR KENNEBEC
WATERVILLE-WINSLOW

REINFORCING STEEL SCHEDULE III

SHEET NUMBER

107

OF 111

LIGHTING NOTES

1. Scope of work: Install lighting on bridge as shown on these plans. Install lighting control cabinet and new conduit, wiring, ornamental light standards, LED luminaires and related hardware.

2. All materials and workmanship shall conform to applicable provisions of the Maine Department of Transportation Standard Specifications and Standard Details, National Electrical Code, and any requirements of the power company.

3. The Contractor shall notify utility companies at least 48 hours before any operations are conducted that potentially could conflict with aerial utilities.

4. Locations of any existing underground utilities shown are approximate. The Contractor shall be responsible for determining the presence of underground utility facilities prior to commencing any excavation work or installation of poles, foundations, conduit, junction boxes, or other work involving subsurface disturbance and shall notify utilities of proposed work in accordance with MRSA Title 23 Section 3360-A, Maine "Dig Safe" system. The Contractor shall contact Dig Safe at least 3 working days prior to the beginning of excavation.

5. Fixture voltage shall be 240 volts.

6. All exposed steel fittings and hardware shall be galvanized except non-conductive bushings, which shall be used for connection of rigid metal conduit to aluminum cabinets.

7. All conduit within bridge sidewalk or buried off the bridge shall be 2" PVC schedule 40 conduit and all buried conduit under pavement shall be 2" PVC schedule 80 conduit. All exposed conduit shall be galvanized rigid metal conduit.

8. Pull wire shall be installed in all conduit and payment shall be considered incidental to 626 items.

9. All galvanized rigid metal conduit threads shall have non-metallic insulated bushing. Payment shall be considered incidental to Item 626.21 Metallic Conduit.

10. Secondary circuit wiring shall be stranded copper XHHW-2. All wiring shall be no. 4 AWG.

11. All lighting fixtures shall be gasketed, have surge protection, and a double fuse kit. Payment shall be considered incidental to the 634 items.

12. All field wiring shall be neatly bundled and clearly identified with permanent, legible, weatherproof tags securely attached to each cable.

13. Upon completion of this project, the Contractor shall furnish to MaineDOT a set of as-built lighting plans for future reference and system maintenance. This work shall be considered incidental to Item 634.160 Highway Lighting.

14. Install lighting control cabinet at the location shown on the plans. The cabinet at Station 22+18 Lt. shall be a single circuit, with all luminaires on the upstream (Station Left) side of the bridge on this circuit.

15. Lighting on the downstream side (Station Right) shall be connected to the existing lighting control cabinet at Station 13+68 Rt. creating a separate circuit from existing lighting.

16. Power supply to the new lighting cabinet shall be 240V. The Contractor shall install a meter disconnect in a separate NEMA 3R enclosure with lighting cabinet. Cabinet and disconnect enclosure shall be lockable. Each shall be marked with arc hazard type 1, 2, 3, or 4 and the appropriate PPE required.

17. New power service conduit required between the power source and the meter shall be rigid metal conduit. Other new buried conduit shall be a 2 inch minimum diameter. Requirement of larger conduit size shall be determined by the Contractor in accordance with conduit fill requirements of the National Electrical Code. All conduit in the highway right of way shall be schedule 80 unless concrete-encased. If schedule 40 PVC conduit encased in concrete is used, concrete encasement will be incidental to payment for conduit.

18. All lighting circuits are to be photocell activated by a photocell mounted on lighting control cabinet.

19. All conduit threads shall be red-headed. There shall be no splices or junction boxes for lighting except as noted on the project plans or approved by the Resident. Junction boxes are intended for wire pulling access only. Estimated quantities include an allowance for installation of Item 626.11, Precast Junction Box, at undetermined locations.

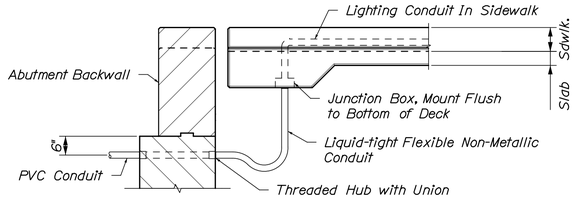
20. Foundations for light standards shall be 24 inch diameter precast foundations in accordance with Standard Specification 626.036 unless otherwise directed by the Resident. The Contractor shall be responsible for calculation of pole base reactions at the top of foundation in accordance with the latest revision of AASHTO "LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals" and the latest revision of MaineDOT Standard Specification Section 634.

21. All lighting foundations shall have a ground rod located in or adjacent to the foundation that is bonded to the grounding connector. Payment for the ground rod shall be included in Item 634.160 Highway Lighting.

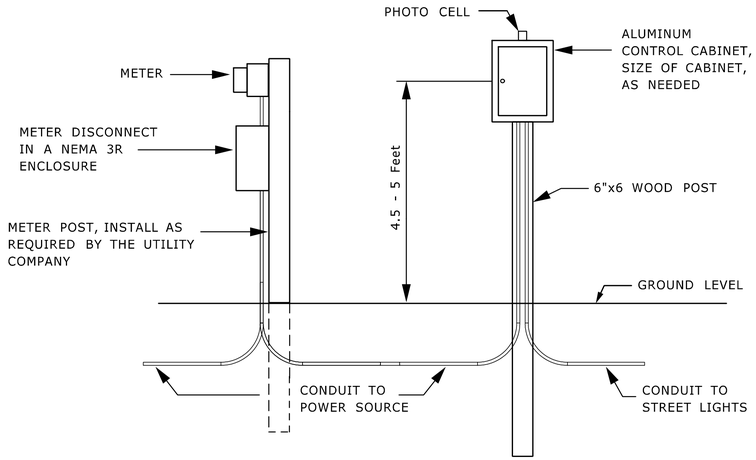
22. All lighting equipment shall be bonded to the grounding connector.

23. Pole offsets stated on the plans are to the center of foundations.

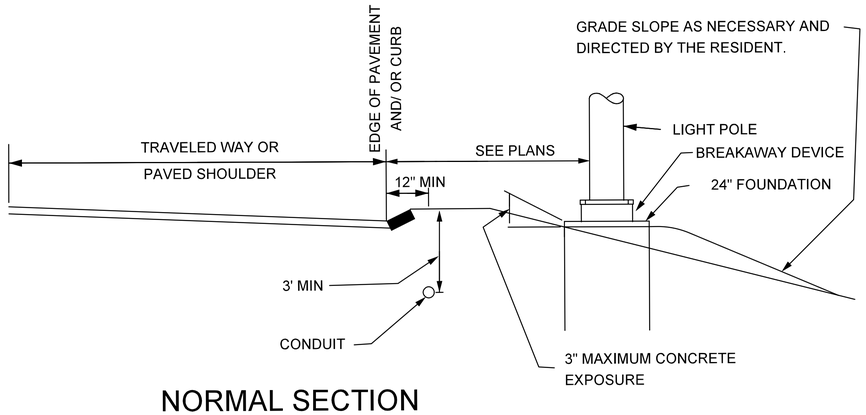
24. If structural rock is encountered during installation of foundations, payment for excavation and doweling reinforcement into rock shall be considered incidental to foundation items.



LIGHTING CONDUIT EXPANSION DETAIL



CONTROL CABINET AND SERVICE



NORMAL SECTION

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2313800

WIN 023138.00

Bridge No. 2854

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	C. Helmick	C. Helmick	07\2022
CHECKED-REVIEWED	C. Helmick	L. Driscoll	07\2022
DESIGN2-DETAILED2		T. Cote	
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TICONIC BRIDGE
KENNEBEC RIVER RESERVOIR
WATERVILLE-WINSLOW KENNEBEC

LIGHTING DETAILS & NOTES

SHEET NUMBER

108

OF 111

Date:7/29/2022

Username:

Division:

Filename: 108_Lighting Details and Notes.dgn

PLAN LEGEND

	Existing	Proposed
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		
Sanitary Sewer		
Telephone Line		
Electric Line		
Water Line		
Underdrain Line		
Gas Line		
Guardrail		
Culvert		
Traveled Way		
Ditch		
Catch Basin		
Manhole		
Sewer Manhole		
Utility Pole		
Fire Hydrant		
Curbing		

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

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

ITEMS 3 AND 4 ARE AFFECTED BY THE LOCKWOOD HYDROELECTRIC PROJECT NO. 2574
F.E.R.C. LINES TRACED FROM "LOCKWOOD HYDROELECTRIC PROJECT:
PROJECT BOUNDARY MAP: MERIMIL LIMITED PARTNERSHIP: SHEET 1 OF 1"

CONTROL INFORMATION

HORIZONTAL DATUM - U.S. STATE PLANE NAD83(2011)
ZONE - MAINE 2000 WEST ZONE
VERTICAL DATUM - NAVD88
COMBINED FACTOR - 1.00002215

GRID MAINE 2000 WEST ZONE

CONTROLLED ACCESS LIMIT
CONTROLLED ACCESS LIMIT LINE ALONG R/W LINE
R/W LINE
CONTROLLED ACCESS LIMIT LINE NOT ON R/W LINE
NO ACCESS WILL BE PERMITTED TO OR FROM STATE HIGHWAY "33" AND ADJOINING PROPERTIES WITHIN BOUNDARIES DEFINED BY CONTROLLED ACCESS LIMIT LINES

CITY BOUNDARY (APPROX.) TOWN LINE

FRONT STREET

TEMPORARY CONSTRUCTION LIMITS
CLL CLL CLL CLL CLL CLL

0.32± AC.

S.H.C. FILE NO. 6-163

CITY OF WATERVILLE
ITEM NO. (2)
TEMP. CONST. RIGHTS = 0.32± AC. (1)
TOTAL AREA = 1± AC. (CITY)

F.E.R.C. LINE P.L.

LIMIT OF CONTRACTOR ACCESS LIMITS

FLOW

DAM/SPILLWAY

0.73± AC.

CANAL

THE MERIMIL LIMITED PARTNERSHIP
ITEM NO. (4)
TEMP. CONST. RIGHTS = 0.73± AC. (1)
TOTAL AREA = VAST HOLDINGS

CURVE DATA #2
PI = 14+34.08
D = 8°11'06.4"
Δ = 21°34'30.9" Lt.
R = 700.00'
L = 263.59'
T = 133.38'
E = 12.59'

P.T. = STA. 15+64.29
N=625690.37
E=1178948.44

TO ELM STREET
ROUTE 11/104

12+00
STATE HIGHWAY "31"

BEGIN B.L.
P.C.C. = STA. 13+00.70
N=625745.82
E=1178692.34

13+00

CURVE DATA #1
PI = 11+56.90
D = 3°00'56.0"
Δ = 8°41'23.4" Lt.
R = 1900.00'
L = 288.17'
T = 144.36'
E = 5.48'

263.59'
14+00
15+00
16+00
17+00
18+00

C.O.A.
BEGIN C.O.A.

XX-XX-XX

STATE HIGHWAY "33"
U.S. ROUTES 201
ROUTES 137B & 100
SPRING STREET

S88°34'14.4"E
594.56'

STATE HIGHWAY "33"
U.S. ROUTE 201
ROUTES 137B & 100
BRIDGE STREET

S.H.C. FILE NO. 6-150
BEGIN C.O.A.
N=625640.80
E=1178855.27

0.09± AC.
LIMIT OF CONTRACTOR ACCESS
CONSTRUCTION
TEMPORARY
LIMITS

WATER STREET

IPF
N=625551.00
E=1178580.28
D.O.T. FILE NO. 6-486

NORTH RIVER LOCKWOOD I, LLC
ITEM NO. (1)
CONST. & MAINT. EASE. = 119± S.F. (1)
TEMP. CONST. RIGHTS = 0.11± AC. (2)
TOTAL AREA = 2.01± AC. (CITY)

RIGHT OF WAY REFERENCES:

S.H.C. FILE NO. 6-150
SHEET 1 OF 5, 1968

S.H.C. FILE NO. 6-163
SHEET 3 OF 5, 1970

D.O.T. FILE NO. 6-163A
SHEET 1 OF 1, 2001

D.O.T. FILE NO. 6-486
SHEET 1 OF 3, 2020

ALTA/ACSM LAND TITLE SURVEY
PROPERTY OF CATHERINE M. MARDEN
FOR LOCKWOOD MILLS III, LLC
BY PLISGA AND DAY
DATED MAY 11, 2007
BOOK 2007 PAGE 78 K.C.R.D.

119± S.F.
486± S.F.
199± S.F.

TEMP. CONST. EASEMENT
CONST. & MAINT. EASEMENT
WINGWALL

THE MERIMIL LIMITED PARTNERSHIP
ITEM NO. (3)
CONST. & MAINT. EASE. = 199± S.F. (1)
TEMP. CONST. RIGHTS = 0.97± AC. (1)
TOTAL AREA = VAST HOLDINGS

LIMIT OF CONTRACTOR ACCESS
TEMPORARY CONSTRUCTION
CANAL

BUILDING

FLOWGATE/WALKWAY

TO DAM/POWERHOUSE FLOW

RESERVOIR/CANAL

ITEMS 3 AND 4 ARE AFFECTED BY THE LOCKWOOD HYDROELECTRIC PROJECT NO. 2574
F.E.R.C. LINES TRACED FROM "LOCKWOOD HYDROELECTRIC PROJECT:
PROJECT BOUNDARY MAP: MERIMIL LIMITED PARTNERSHIP: SHEET 1 OF 1"

0.97± AC.

WATERVILLE
WINSLOW

KENNEBEC RIVER

FLOW

LIMIT OF CONTRACTOR ACCESS

TICONIC BRIDGE
OVER
KENNEBEC RIVER

BRIDGE NO. 2854 WIN 023138.00

ITEM	CHECKED
EXISTING CONDITION PLAN	G.L.L.
FINAL RIGHT OF WAY	B.S.
AREAS	B.S.
TECH	J.D.F.
PLAN	J.D.F.
	J.D.F.

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

REVISIONS

NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK PAGE COUNTY RECORD

NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE
1	THE MERIMIL LIMITED PARTNERSHIP	C & M EASE. T.C.R.	07-18-22	14514	215

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

STATE HIGHWAY "33"
U.S. ROUTE 201 / ROUTES 100 & 137B
WATERVILLE-WINSLOW KENNEBEC COUNTY
FEDERAL AID PROJECT NO. 2313800

MARCH 2022 | RIGHT-OF-WAY MAP | D.O.T. FILE NO. 6-494
SCALE 1" = 25' | SHEET 1 OF 3

SHEET NUMBER
109
OF 111

Filename: $file$ Division: $wkgroup$ Username: $user$ Date: $date$

Filename: $file$ Division: $wkgroup$ Username: $user$ Date:$date$

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 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

MAINE CENTRAL RAILROAD COMPANY
ITEM NO. (6)
TEMP. CONST. RIGHTS = 0.10± AC. (1)
TOTAL AREA = VAST HOLDINGS

GRID MAINE 2000 WEST ZONE

CONTROL INFORMATION

HORIZONTAL DATUM - U.S. STATE PLANE NAD83(2011)
ZONE - MAINE 2000 WEST ZONE
VERTICAL DATUM - NAVD88
COMBINED FACTOR - 1.00002215

ITEMS 3 AND 4 ARE AFFECTED BY THE LOCKWOOD HYDROELECTRIC PROJECT NO. 2574
F.E.R.C. LINES TRACED FROM "LOCKWOOD HYDROELECTRIC PROJECT:
PROJECT BOUNDARY MAP: MERIMIL LIMITED PARTNERSHIP: SHEET 1 OF 1"

CONTROLLED ACCESS LIMIT
CONTROLLED ACCESS LIMIT LINE ALONG R/W LINE
CONTROLLED ACCESS LIMIT LINE NOT ON R/W LINE
NO ACCESS WILL BE PERMITTED TO OR FROM STATE HIGHWAY "33" AND ADJOINING PROPERTIES WITHIN BOUNDARIES DEFINED BY CONTROLLED ACCESS LIMIT LINES

THE MERIMIL LIMITED PARTNERSHIP
ITEM NO. (4)
TEMP. CONST. RIGHTS = 0.73± AC. (1)
TOTAL AREA = VAST HOLDINGS

CITY BOUNDARY (APPROX.)
TOWN LINE

283'-0"
TEMPORARY CONSTRUCTION

LIMIT OF CONTRACTOR ACCESS
0.73± AC.

KENNEBEC RIVER Flow

BEGIN C.O.A.

S.H.C. FILE NO. 6-163

STATE OF MAINE (DOT)
S.H.C. FILE NO. 6-162

MAINE CENTRAL RAILROAD COMPANY

M.C.R.R. V-175

TEMPORARY CLL 0.10± AC.
CONSTRUCTION CLL
LIMITS CLL

F.E.R.C. LINE P.L.

N=625738.25
E=1179573.02
HIGHWAY MON

S.H.C. FILE NO. 6-163 EXISTING SLOPE EASEMENT

HIGHWAY MON

TO BENTON

STATE AID HIGHWAY NO. 6
BENTON AVENUE

IPF

CASEL

S.H.C. FILE NO. 6-163

S.H.C. FILE NO. 6-163

IPF

STATE AID HIGHWAY NO. 7
CLINTON AVENUE

TO ROUTE 100A
HALIFAX STREET

POE = STA. 24+85.67

24+86

S83°52'29.7"E

24+00

END B.L.
STA. 23+00.00

141.15'

23+00

N=625668.70
E=1179683.78

18+00 19+00 20+00 21+00 22+00 23+00

S88°34'14.4"E
594.56'

STATE HIGHWAY "33"
U.S. ROUTE 201
ROUTES 137B & 100
BRIDGE STREET

95' 95'

MAINVEST, INC.
CITIZENS BANK, N.A. BY MERGER OF USTRUST
ITEM NO. (5)
CONST. & MAINT. EASE. = 1,020± S.F. (1)
TEMP. CONST. RIGHTS = 0.26± AC. (1)
TOTAL AREA = 0.31± AC. (CALC)

THE MERIMIL LIMITED PARTNERSHIP
ITEM NO. (3)
CONST. & MAINT. EASE. = 199± S.F.
TEMP. CONST. RIGHTS = 0.97± AC. (1)
TOTAL AREA = VAST HOLDINGS

ITEMS 3 AND 4 ARE AFFECTED BY THE LOCKWOOD HYDROELECTRIC PROJECT NO. 2574
F.E.R.C. LINES TRACED FROM "LOCKWOOD HYDROELECTRIC PROJECT: PROJECT BOUNDARY MAP: MERIMIL LIMITED PARTNERSHIP: SHEET 1 OF 1"

RIGHT OF WAY REFERENCES:
S.H.C. FILE NO. 6-162
S.H.C. FILE NO. 6-163
D.O.T. FILE NO. 6-163A
D.O.T. FILE NO. 6-203

BEGIN C.O.A.
0.97± AC.
WATERVILLE
WINSLOW
KENNEBEC RIVER Flow
LIMIT OF CONTRACTOR ACCESS
TEMPORARY CONSTRUCTION LIMITS

S.H.C. FILE NO. 6-163
BEGIN C.O.A.
S.H.C. FILE NO. 6-163
1,020± S.F. & MAINT. CONST. EASE.
EXISTING STORM SEWER OUTLET S.H.C. FILE NO. 6-163
F.E.R.C. LINE P.L.
GOVERNOR & COUNCIL DEED DATED: 3-3-76 RECORDED: 3-8-76 BOOK: 1888, PAGE 278
0.26± AC.
P.C. = STA. 21+58.85
N=625675.54
E=1179542.81
P.L.
C.O.A.
S.H.C. FILE NO. 6-163
EXISITING CONSTRUCTION & MAINTENANCE EASEMENT
S.H.C. FILE NO. 6-163A

CURVE DATA #3
PI = 22+81.85
D = 1°54'35.5"
Δ = 4°41'44.7" Rt.
R = 3000.00'
L = 245.87'
T = 123.00'
E = 2.52'

0.60± AC.
BEGIN C.O.A.
TO VASSALBORO
STATE HIGHWAY "33"
U.S. ROUTE 201
ROUTE 137B & 100
BAY STREET

PARKMAN, LLC
ITEM NO. (7)
TEMP. CONST. RIGHTS = 0.60± AC. (1)
TOTAL AREA = 1.49± AC. (TOWN)

MAINE CENTRAL RAILROAD COMPANY
P.T. = STA. 24+04.72
M.C.R.R. V-175
S.H.C. FILE NO. 6-165
S.H.C. FILE NO. 6-163
CASEL
IPF
M.C.R.R. V-175
TICONIC BRIDGE
OVER
KENNEBEC RIVER
BRIDGE NO. 2854
WIN 023138.00

ITEM	TECH	CHECKED
EXISTING CONDITION PLAN	J.D.F.	G.L.L.
FINAL RIGHT OF WAY	J.D.F.	B.S.
AREAS	J.D.F.	B.S.

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

REVISIONS

NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK PAGE COUNTY RECORD						
NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE
1	THE MERIMIL LIMITED PARTNERSHIP	C & M EASE. T.C.R.	07-18-22	14514	215
" "	" " " " " "	" "	" "	" "	" "

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

STATE HIGHWAY "33"
U.S. ROUTE 201 / ROUTES 100 & 137B
WATERVILLE-WINSLOW KENNEBEC COUNTY
FEDERAL AID PROJECT NO. 2313800

MARCH 2022	RIGHT-OF-WAY MAP	D.O.T. FILE NO. 6-494
SCALE 1" = 25'	SHEET 2 OF 3	

SHEET NUMBER
110
OF 111

Username: $username$ Division: $wkgroup$ Filename: $file$ Date: $date$

PLAN LEGEND

Town, County, State	New R/W Along Existing R/W	Existing / Proposed	Existing / Proposed
Approx. Property Lines P.L.	Building	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

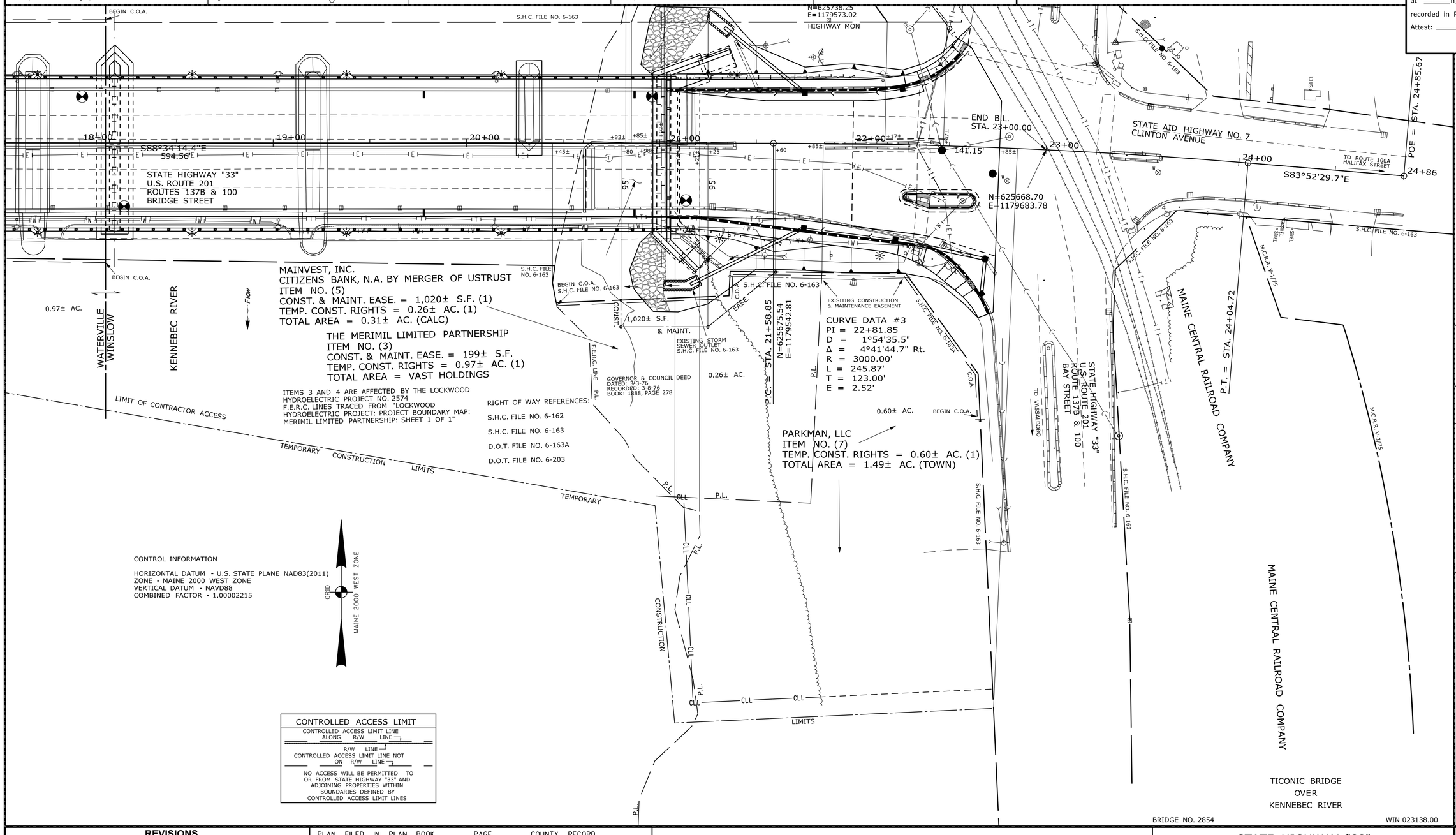
Cut Line	Fill Line	Monument
Stonewall	Retaining Wall	Traverse Point
Baseline 10+00 11+00 12+00		Iron Rod Found IRF / Pipe Found IPF
		Replacement Pin Set

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



CONTROL INFORMATION

HORIZONTAL DATUM - U.S. STATE PLANE NAD83(2011)
ZONE - MAINE 2000 WEST ZONE
VERTICAL DATUM - NAVD88
COMBINED FACTOR - 1.00002215

GRID MAINE 2000 WEST ZONE

CONTROLLED ACCESS LIMIT

CONTROLLED ACCESS LIMIT LINE ALONG R/W LINE
R/W LINE
CONTROLLED ACCESS LIMIT LINE NOT ON R/W LINE

NO ACCESS WILL BE PERMITTED TO OR FROM STATE HIGHWAY "33" AND ADJOINING PROPERTIES WITHIN BOUNDARIES DEFINED BY CONTROLLED ACCESS LIMIT LINES

TECH	CHECKED
G.L.L.	B.S.
J.D.F.	B.S.
J.D.F.	B.S.

ITEM	
EXISTING CONDITION PLAN	J.D.F.
FINAL RIGHT OF WAY	J.D.F.
AREAS	

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

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

STATE HIGHWAY "33"
U.S. ROUTE 201 / ROUTES 100 & 137B
WINSLOW KENNEBEC COUNTY
FEDERAL AID PROJECT NO. 2313800

MARCH 2022 | RIGHT-OF-WAY MAP | D.O.T. FILE NO. 6-494
SCALE 1" = 25' | SHEET 3 OF 3

SHEET NUMBER
111
OF 111

KENNEBEC WATER DISTRICT

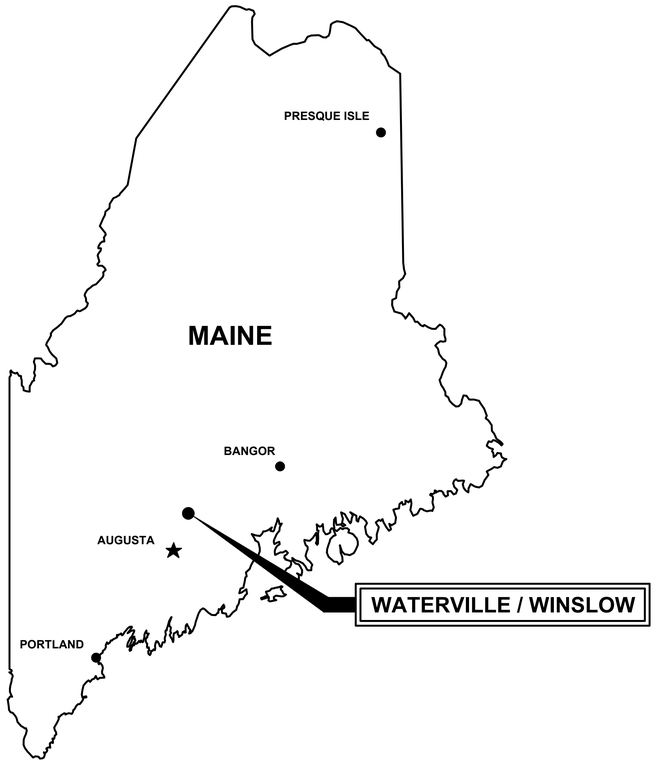
CONTRACT DRAWINGS FOR

TICONIC BRIDGE WATER MAIN CROSSING
WATERVILLE - WINSLOW, MAINE

KWD PROJECT No:22-W13

AUGUST 2022

CONTRACT DRAWINGS



DRAWING INDEX

GENERAL

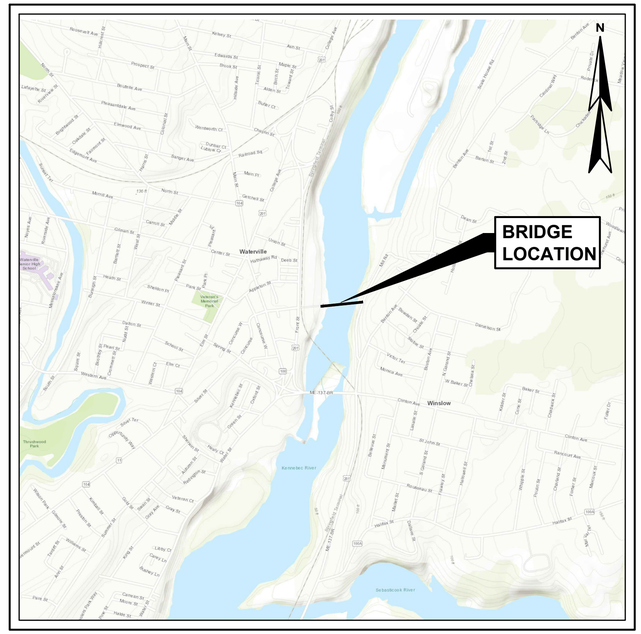
---	COVER SHEET

CIVIL

C-1	GENERAL NOTES, LEGEND, AND ABBREVIATIONS
C-2	PLAN AND PROFILE I - STA. 14+00 TO STA. 18+00
C-3	PLAN AND PROFILE II - STA. 18+00 TO STA. 23+00
C-4	PLAN AND PROFILE III - 8" FIRE SERVICE - STA. 100+00 TO STA. 101+14
C-5	DETAILS I
C-6	DETAILS II
C-7	DETAILS III

STATE OF MAINE
DUSTIN J. LACOMBE
No. 15226
LICENSED PROFESSIONAL ENGINEER

8/23/22



LOCATION PLAN
SCALE: N.T.S.

WRIGHT-PIERCE
Engineering a Better Environment

207.725.8721 | www.wright-pierce.com

WP PROJECT No. 20961

LAST SAVED BY: WILLIAM.EDGAR 5/26/2022 9:55 AM

GENERAL NOTES

1. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).

2. BELOW GRADE UTILITY INFORMATION IS BASED ON INFORMATION PROVIDED BY EACH UTILITY. LOCATION OF PUBLIC UTILITIES SHOWN IS ONLY APPROXIMATE AND IS NOT COMPLETE. PRIVATE UNDERGROUND UTILITIES SUCH AS, BUT NOT LIMITED TO, SEWER LINES, WATER LINES AND BURIED ELECTRICAL SERVICE ENTRANCES ARE NOT SHOWN. THE CONTRACTOR SHALL ASCERTAIN THE LOCATION AND SIZE OF EXISTING UTILITIES IN THE FIELD WITH THE RESPECTIVE UTILITY REPRESENTATIVE PRIOR TO COMMENCING WORK. ADDITIONAL TEST PITS, BEYOND THOSE SHOWN, MAY BE REQUIRED. UTILITY CONTACTS ARE AS FOLLOWS:

WATER:
KENNEBEC WATER DISTRICT
6 COOL STREET
WATERVILLE, ME 04901
TEL. 207-872-2763

CABLE TELEVISION:
SPECTRUM
1-207-620-3416

DIG SAFE:
TEL: 1-888-344-7233

GAS:
SUMMIT NATURAL GAS
2 DELORME DR., SUITE 100
YARMOUTH, ME 04096
1-207-621-8000

CITY:
CITY OF WATERVILLE
6 WENTWORTH COURT
WATERVILLE, ME 04901
1-207-680-4232

ELECTRIC:
CENTRAL MAINE POWER
83 EDISON DRIVE
AUGUSTA, ME 04336
TEL. 207-721-8087

TELEPHONE:
CONSOLIDATED COMMUNICATIONS OF NORTHERN NEW ENGLAND COMPANY, LLC
5 DAVIS FARM ROAD
PORTLAND, ME 04103
207-272-7538

SEWER:
WATERVILLE SEWERAGE DISTRICT
353 WATER STREET
WATERVILLE, ME 04901
1-207-873-5191

TOWN:
TOWN OF WINSLOW
114 BENTON AVENUE
WINSLOW, ME 04901
PAUL FONGEMIE
PUBLIC WORKS DIRECTOR
1-207-872-1972

3. ALL EXISTING STORM DRAIN LINES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE. ANY EXISTING STORM DRAIN LINES OR CULVERTS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. EXISTING DRAINAGE STRUCTURES SHOWN ON PLANS THAT ARE PLUGGED OR FULL OF SAND AND ARE NOT BEING REPLACED WITH A NEW DRAINAGE STRUCTURE ARE TO BE CLEANED BY CONTRACTOR AND THE MATERIAL DISPOSED OF PER CITY ORDINANCE.

4. ALL STRUCTURES AND PIPELINES LOCATED ADJACENT TO THE CONTRACTOR'S EXCAVATIONS SHALL BE PROTECTED AND FIRMLY SUPPORTED BY THE CONTRACTOR UNTIL THE TRENCH IS BACK FILLED. INJURY TO ANY SUCH STRUCTURES CAUSED BY, OR RESULTING FROM, THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. ALL UTILITIES REQUIRING REPAIR, RELOCATION OR ADJUSTMENT AS A RESULT OF THE PROJECT SHALL BE COORDINATED THROUGH THE RESPECTIVE UTILITY.

5. IN THOSE INSTANCES WHERE POWER OR TELEPHONE POLE SUPPORT IS REQUIRED, THE CONTRACTOR SHALL PROVIDE A MINIMUM 48-HOUR NOTIFICATION TO CMP OR FAIRPOINT/CONSOLIDATED COMMUNICATIONS, RESPECTIVELY. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR TEMPORARY BRACING OF UTILITIES.

6. CONTRACTOR SHALL INSTALL AND MAINTAIN TRAFFIC CONTROL SIGNS IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

7. TRAFFIC CONTROL PLANS SHALL BE SUBMITTED TO MAINE DEPARTMENT OF TRANSPORTATION (MDOT).

8. ALL TEST PITS SHALL BE EXCAVATED PRIOR TO CONSTRUCTION LAYOUT AND RESULTS REPORTED TO ENGINEER FOR REVIEW FOR CONFORMANCE WITH PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LAYOUT OF ALL PROPOSED LINES AND GRADES AS SHOWN ON THE DRAWINGS.

9. THE ENGINEER SHALL PROVIDE THE NECESSARY HORIZONTAL CONTROL POINTS FOR THE CONTRACTOR AND THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THIS INFORMATION THROUGHOUT CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ALL ELEVATION REFERENCE INFORMATION PRIOR TO USE IN CONSTRUCTION.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREVENTION OF EROSION. ALL DISTURBED EARTH SURFACES ARE TO BE STABILIZED IN THE SHORTEST PRACTICAL TIME AND TEMPORARY EROSION CONTROL DEVICES SHALL BE EMPLOYED UNTIL SUCH TIME AS ADEQUATE SOIL STABILIZATION HAS BEEN ACHIEVED. TEMPORARY STORAGE OF EXCAVATED MATERIAL IS TO BE IN A MANNER THAT WILL MINIMIZE EROSION. MATERIALS AND METHODS USED FOR TEMPORARY EROSION CONTROL SHALL BE AS SPECIFIED BY THE "MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES" PREPARED BY THE MAINE SOIL AND WATER CONSERVATION COMMISSION.

11. COMPACTION TESTS SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS. ANY SETTLEMENT OCCURRING WITHIN ONE YEAR OF SUBSTANTIAL COMPLETION OF THE PROJECT WILL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.

12. ALL TRENCHES SHALL BE BACKFILLED AND CLOSED AT THE END OF EACH WORK DAY. THE USE OF BARRICADES AND STEEL PLATES SHALL BE CONSIDERED BY THE OWNER, ENGINEER, AND CITY ON A CASE BY CASE BASIS IF REQUESTED BY THE CONTRACTOR.

13. ALL VEGETATED AREAS THAT ARE EXCAVATED, FILLED OR OTHERWISE DISTURBED BY THE CONTRACTOR AND ARE NOT TO BE PAVED OR OTHERWISE DEVELOPED SHALL BE LOAMED, GRADED, LIMED, FERTILIZED, SEEDED AND MULCHED AT NO ADDITIONAL EXPENSE TO THE OWNER.

14. THE CONTRACTOR SHALL NOT HAVE ANY RIGHT OF PROPERTY IN ANY MATERIALS TAKEN FROM ANY EXCAVATION. SUITABLE EXCAVATED MATERIAL MAY BE INCORPORATED IN THE PROJECT, WITH EXCESS MATERIAL DISPOSED OF. THESE PROVISIONS SHALL IN NO WAY RELIEVE THE CONTRACTOR OF HIS OBLIGATIONS TO PROPERLY DISPOSE OF AND REPLACE ANY MATERIAL DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACK FILLING. THE CONTRACTOR SHALL DISPOSE OF UNSUITABLE AND EXCESS MATERIAL IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE CONTRACT DOCUMENTS.

15. THE CONTRACTOR IS TO TAKE SPECIAL CARE NOT TO DAMAGE TREES WITHIN THE CONSTRUCTION AREA UNLESS THEY ARE NOTED TO BE REMOVED. TREES TO BE REMOVED ARE TO HAVE THE STUMPS REMOVED AND THE RESULTING PIT SHALL BE LOAMED AND SEEDED.

16. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THEIR OWN LAY DOWN AREA.

17. INITIAL PAVING SHALL BE CONDUCTED WITHIN ONE WEEK OF COMPLETION OF PLACEMENT OF FINAL BACKFILL WITHIN TRAVEL LANES UNLESS OTHERWISE AUTHORIZED BY ENGINEER. INITIAL PAVEMENT SHALL BE INSTALLED AND MAINTAINED BY CONTRACTOR FOR A MINIMUM PERIOD OF 2 MONTHS BEFORE FINAL PAVEMENT IS PLACED. FINAL PAVEMENT MAY BE PLACED OVER THE INITIAL PAVING PROVIDED INITIAL PAVING COURSE IS IN GOOD REPAIR. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND SHIMMING THE INITIAL PAVEMENT AS NECESSARY TO ACCEPT THE FINAL PAVING COURSE. IF CONDITIONS WARRANT, THE CONTRACTOR MAY BE REQUIRED TO REMOVE AND REPLACE INITIAL PAVING PRIOR TO FINAL PAVING.

18. IN THE EVENT THAT DISCREPANCIES OR CONFLICTS BETWEEN MDOT SPECIFICATIONS, SPECIAL PROVISIONS, AND PLANS OCCUR WITH THE WATER UTILITIES SPECIFICATIONS, SPECIAL PROVISIONS AND PLANS, MDOT OR MORE RESTRICTIVE SHALL PREVAIL.

19. ALL REFERENCES TO "ENGINEER" IN TICONIC BRIDGE WATER MAIN CROSSING PLANS SHALL REFER TO REPRESENTATIVE DESIGNATED BY THE KENNEBEC WATER DISTRICT (KWD), NOT MDOT ENGINEER.

CIVIL DEMOLITION NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND DISPOSING OF ALL DEMOLISHED PIPING, EQUIPMENT AND MATERIALS. DISPOSAL SHALL BE IN ACCORDANCE WITH ALL STATE AND LOCAL REGULATIONS. THE OWNER RESERVES THE RIGHT TO RETAIN ANY SUCH PIPING, EQUIPMENT AND MATERIALS DESIGNATED FOR DEMOLITION FOR HIS USE. SUCH MATERIALS TO BE RETAINED SHALL BE PROPERLY STORED IN AN ON-SITE LOCATION. COORDINATE LOCATION AND MATERIALS TO BE SALVAGED WITH THE OWNER/ENGINEER.

2. THE CONTRACTOR SHALL KEEP A RECORD OF DEMOLITION AS PART OF THE PROJECT RECORD DOCUMENTS.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE APPROPRIATE DISPOSAL OF FLOWS RESULTING FROM PRECIPITATION AND HIS DEWATERING OPERATIONS.

SITE GRADING NOTES

1. ALL ROAD AND PARKING AREA SURFACES SHALL PITCH 1/4 INCH PER FOOT MINIMUM UNLESS OTHERWISE NOTED.

2. ALL AREAS THAT ARE EXCAVATED, FILLED, OR OTHERWISE DISTURBED BY THE CONTRACTOR SHALL BE LOAMED, GRADED, LIMED, FERTILIZED, SEEDED AND MULCHED, UNLESS OTHERWISE NOTED. THE TOP 4 INCHES OF SOIL SHALL BE LOAM.

3. CONTRACTOR SHALL CONTROL DUST ON THE CONSTRUCTION SITE TO A REASONABLE LIMIT, AS DETERMINED BY THE ENGINEER.

4. CONTRACTOR SHALL NOT TRACK OR SPILL EARTH, DEBRIS OR OTHER CONSTRUCTION MATERIAL ON PUBLIC OR PRIVATE STREETS AND PLANT DRIVES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE ASSOCIATED CLEAN UP.

5. WHERE EXISTING PAVEMENT IS REMOVED AND REPLACED, MATCH EXISTING GRADES TO THE EXTENT POSSIBLE. COORDINATE FINE GRADING WITH THE ENGINEER.

SITE LAYOUT NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LAYOUT OF ALL PROPOSED WORK AS SHOWN ON THE DRAWINGS. THE ENGINEER WILL PROVIDE PROJECT BENCHMARKS THAT DEFINE THE HORIZONTAL CONTROL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THIS PROVIDED LAYOUT INFORMATION THROUGHOUT THE COURSE OF CONSTRUCTION. REPORT ANY LAYOUT DISCREPANCIES IMMEDIATELY TO THE ENGINEER.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RE-ESTABLISHING AND RESETTING ALL EXISTING PROPERTY MONUMENTATION DISTURBED BY HIS OPERATIONS. THIS WORK SHALL BE DONE BY A LAND SURVEYOR REGISTERED IN THE STATE OF MAINE, AT NO ADDITIONAL COST TO THE OWNER.

3. WRITTEN DIMENSIONS SHALL PREVAIL. DO NOT SCALE DISTANCES FROM THE DRAWINGS. REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER.

SURVEY NOTES

1. THE VERTICAL DATUM SHOWN IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988).

2. SURVEY BASE PLAN IS BASED ON SURVEY DATA PROVIDED BY HNTB. HORIZONTAL DATUM IS STATE PLANE COORDINATES, NAD83, MAINE 2000 WEST.

PIPELINE GENERAL NOTES

1. THE LOCATIONS OF ALL EXISTING DRAINS, SEWERS, WATER MAINS, POWER LINES, TELEPHONE CABLES AND OTHER UTILITIES ARE APPROXIMATE ONLY. FIELD LOCATIONS SHALL BE CONFIRMED BY THE CONTRACTOR PRIOR TO STARTING THE WORK.

2. WHERE NEW PIPING IS TO BE CONNECTED TO EXISTING PIPING, THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ADAPTERS, FITTINGS, AND ADDITIONAL PIPE AS REQUIRED TO COMPLETE THE CONNECTION. CONTRACTOR SHALL VERIFY LOCATION, ELEVATION, ORIENTATION AND MATERIAL OF CONSTRUCTION. TEST PITS SHALL BE USED AS REQUIRED.

3. ANY UNDERGROUND STRUCTURES, CABLES, AND PIPELINES LOCATED ADJACENT TO THE TRENCH EXCAVATIONS SHALL BE PROTECTED AND FIRMLY SUPPORTED BY THE CONTRACTOR UNTIL THE TRENCH IS BACKFILLED. DAMAGE TO ANY SUCH STRUCTURES, CABLES, AND PIPELINES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE OWNERS OF THE STRUCTURES, CABLES, AND PIPELINES.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LAYOUT OF THE NEW WATER MAIN. LAYOUT SHALL BE REVIEWED AND ACCEPTED BY THE WATER DISTRICT AND ENGINEER. THE NEW WATER MAIN MUST BE LOCATED WITHIN THE RIGHTS-OF-WAY SHOWN ON THE DRAWINGS.

5. MINIMUM DEPTH OF COVER SHALL BE 6'-0" AND MAXIMUM DEPTH OF COVER SHALL BE 7'-0" UNLESS SHOWN OTHERWISE ON THE DRAWINGS. THE NEW MAIN SHALL GENERALLY FOLLOW THE GROUND CONTOUR, HOWEVER, ABRUPT CHANGES IN GRADE SHALL BE AVOIDED. AT LOCAL HIGH POINTS OR WHERE AIR RELEASE VALVES ARE SHOWN, THE CONTRACTOR SHALL SLOPE NEW MAIN AS NEEDED TO MAINTAIN HIGH POINT AT AIR RELEASE VALVE. DUE TO UTILITY CONFLICTS THE DEPTH OF COVER SHALL NOT BE LESS THAN 4'-0" AND 2" RIGID BOARD INSULATION SHALL BE USED AS DETAILED. RIGID BOARD INSULATION SHALL BE 40PSI COMPRESSIVE STRENGTH, DOW STYROFOAM HIGHLOAD 40, CERTIFOAM 40 OR EQUAL.

6. NEW HYDRANTS SHALL BE FIELD LOCATED AND INSPECTED BY THE KWD.

7. ALL BENDS, TEES, REDUCERS, HYDRANTS AND PLUGS SHALL BE RESTRAINED BY USING CONCRETE THRUST BLOCKS AND GRIP-RINGS OR OTHER METHOD AS SHOWN ON THE DRAWINGS. ANCHOR TEES SHALL BE USED FOR ALL HYDRANT BRANCHES.

8. TEST PRESSURES FOR THE COMBINATION PRESSURE AND LEAKAGE TESTS SHALL BE 150 PSI. TEST DURATION SHALL BE TWO HOURS.

9. CONNECTIONS TO EXISTING WATER MAIN SHALL BE COORDINATED WITH KWD.

10. ALL WATER MAINS THAT ARE TO BE LEFT IN PLACE SHALL BE CAPPED WITH A M.J. CAP OR PLUG. ABANDONED WATER MAINS GREATER THAN 8" IN DIAMETER SHALL BE COMPLETELY FILLED WITH FLOWABLE FILL.

11. BELOW GRADE UTILITY INFORMATION IS BASED ON RECORD DRAWINGS. LOCATION OF PUBLIC UTILITIES SHOWN IS ONLY APPROXIMATE AND MAY NOT BE COMPLETE. PRIVATE UNDERGROUND UTILITIES SUCH AS, BUT NOT LIMITED TO, SEWER LINES, WATER LINES AND BURIED ELECTRICAL SERVICE ENTRANCES ARE NOT SHOWN.

12. ALL EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE UNLESS OTHERWISE NOTED. AT NO ADDITIONAL COST TO THE OWNER THE CONTRACTOR SHALL REPAIR OR COORDINATE WITH THE RESPECTIVE UTILITY ON DAMAGE TO EXISTING UTILITIES.

13. SUITABLE EXCAVATED MATERIALS MAY BE INCORPORATED INTO THE PROJECT. THIS PROVISION SHALL IN NO WAY RELIEVE THE CONTRACTOR OF HIS OBLIGATIONS TO REMOVE AND DISPOSE OF ANY MATERIAL DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING.

14. PLANNED SHUTDOWNS OF 8 HOURS, OR LESS ARE ACCEPTABLE WITH A MINIMUM OF 72 HOURS NOTICE TO THE DISTRICT FOR COORDINATION.

15. CONTRACTOR SHALL INSTALL 18" OF DI PIPE STUB BETWEEN TEE AND GATE VALVE FITTINGS AT THE INTERCONNECTION CLUSTERS NOTED IN THE PLANS.

16. THE EXISTING WATER 24" WATER MAIN SHALL REMAIN IN SERVICE UNTIL THE NEW 12" WATER MAIN IS COMMISSIONED AND PLACED ONLINE.

17. EXISTING HYDRANTS TO BE REMOVED SHALL BE STORED AT AN OWNER APPROVED LOCATION AND REMAIN PROPERTY OF THE OWNER UNLESS OTHERWISE NOTED.

CIVIL ABBREVIATIONS

&	AND
DIA	DIAMETER
#, NO	NUMBER
APP'D	APPROVED
BLDG	BUILDING
CB	CATCH BASIN
CEN	CENTER
CFS	CUBIC FEET PER SECOND
CI	CAST IRON
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
CONC	CONCRETE
COR	CORNER
CY	CUBIC YARD
DEMO	DEMOLITION
DMH	DRAIN MANHOLE
DI	DUCTILE IRON
DR	DRAIN
DWG	DRAWING
EL	ELEVATION
EMH	ELECTRIC MANHOLE
FM	FORCE MAIN
FT	FEET
G	GAS
HYD	HYDRANT
IN	INCH
INF	INFLUENT
INV	INVERT
IRF	IRON ROD FOUND
LBS	POUNDS
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MW	MONITORING WELL
N	NORTH
NGVD	NATIONAL GEODETIC VERTICAL DATUM
N/A	NOT AVAILABLE/APPLICABLE
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
PC	PERFORATED CLAY
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PS	PRIMARY SLUDGE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
REQ'D	REQUIRED
S	SLOPE, SEWER
SD	STORM DRAIN
SF	SQUARE FEET
SMH	SANITARY SEWER MANHOLE
SQ	SQUARE
SS	SANITARY SEWER
STA	STATION
T, XFMR	TRANSFORMER
TBM	TEMPORARY BENCH MARK
THK	THICKNESS
TOS	TOP OF STRUCTURE
TYP	TYPICAL
UD	UNDERDRAIN
UG	UNDERGROUND
UGE	UNDERGROUND ELECTRIC
VC	VITRIFIED CLAY
W/	WITH
W	POTABLE WATER

LEGEND

EXISTING		PROPOSED
	PROPERTY/ROW LINE	
	SETBACK LINE	
	EASEMENT LINE	
	CENTERLINE	
	EDGE OF PAVEMENT	
	CURBING	
	EDGE OF GRAVEL	
	EDGE OF CONCRETE	
122	CONTOUR	123
	BUILDING	
	STONEWALL	
	TREELINE	
	CHAIN LINK FENCE	
	STOCKADE FENCE	
x x	BARB WIRE FENCE	x x
	RETAINING WALL	
	GUARDRAIL	
8" S	SEWER	8"S
4" FM	SEWER FORCE MAIN	4"FM
	GAS	4"G
4" W	WATER	8"W
15" SD	STORM DRAIN	15"SD
6" UD	UNDERDRAIN	6"UD
12" CMP	CULVERT	12" CMP
UGE	UNDERGROUND ELECTRIC	UGE
OHE	OVERHEAD ELECTRIC	OHE
	IRON PIPE/REBAR	
	DRILLHOLE	
	MONUMENT	
	SURVEY CONTROL POINT	
x 124.6	SPOT ELEVATION	x 134.5
SMH	SEWER MANHOLE	SMH
DMH	DRAINAGE MANHOLE	DMH
CB CB	CATCH BASIN	CB CB
EMH	ELECTRIC MANHOLE	EMH
TMH	TELEPHONE MANHOLE	TMH
	GATE VALVE	
	CURB STOP	
	YARD HYDRANT	
	HYDRANT	
	UTILITY POLE	
	UTILITY POLE W/ GUY	
	UTILITY POLE W/ LIGHT	
	LIGHT POLE	
	BOLLARD	
	FLAGPOLE	
	CONIFEROUS TREE	
	DECIDUOUS TREE	
	SHRUB	
	EDGE OF WATER	
	STREAM	
	EDGE OF WETLANDS	
	FLOODPLAIN	
	WETLANDS	
	DRAINAGE FLOW	
	DRAINAGE SWALE	
	PAVEMENT MARKINGS	
	SIGN	
MB	MAILBOX	
	TEMPORARY BENCH MARK	
TP-2	TEST PIT	
B-3	TEST BORING	
P-4	TEST PROBE	
MW	MONITORING WELL	
	LIMIT OF WORK	
	SILT FENCE	
	RIPRAP	
	RAILROAD	
	MATCHLINE	
	ROCK OUTCROP	

NO	REVISIONS	APP'D	DATE
1			
2			
3			
4			
5			

PROJECT NO: 20961
DESIGNED: D.LACOMBE
CAD COORD: W.EDGAR
CAD: W.EDGAR
CHECKED: D.LARY
DATE: 04/26/2022
APPROVED: D.LACOMBE
DATE: 08/23/2022
SUBMISSION: CONTRACT DRAWINGS

STATE OF MAINE
DUSTIN J. LACOMBE
No. 15226
REGISTERED PROFESSIONAL ENGINEER
6/23/22

WRIGHT-PIERCE
207.725.8721 | www.wright-pierce.com
11 BOWDOIN MILL ISLAND, SUITE 140, TOPSHAM, ME 04086

KENNEBEC WATER DISTRICT
TICONIC BRIDGE WATER MAIN CROSSING
WATERVILLE-WINSLOW, MAINE

GENERAL NOTES, LEGEND, AND ABBREVIATIONS

DRAWING
C-1

J:\ENG\ME\KENNEBECWD\20961-TICONICBRIDGEWTRMAINCROSSING\DRAWINGS\CIV\20961-CS-GENNOTESLEGEND.DWG | GenNotesLegend | 1:10.1236d677 | ---- | 8/23/2022 10:50:43 AM | WILLIAM.EDGAR

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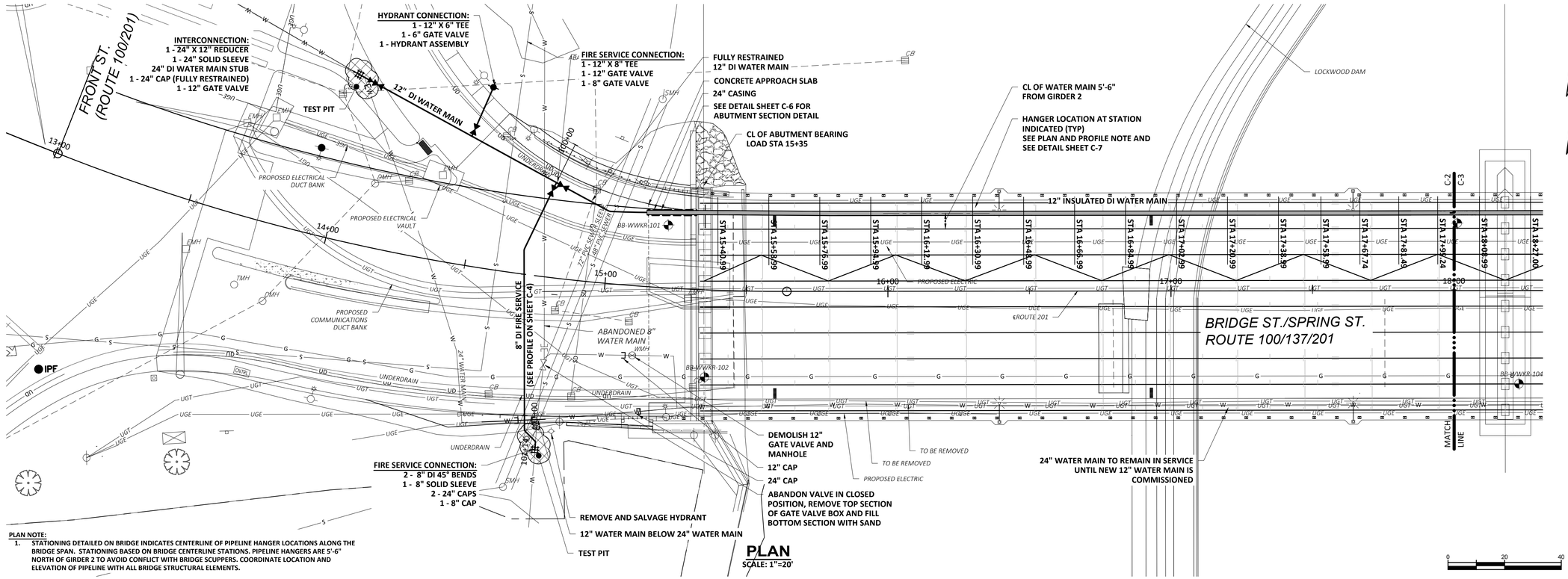
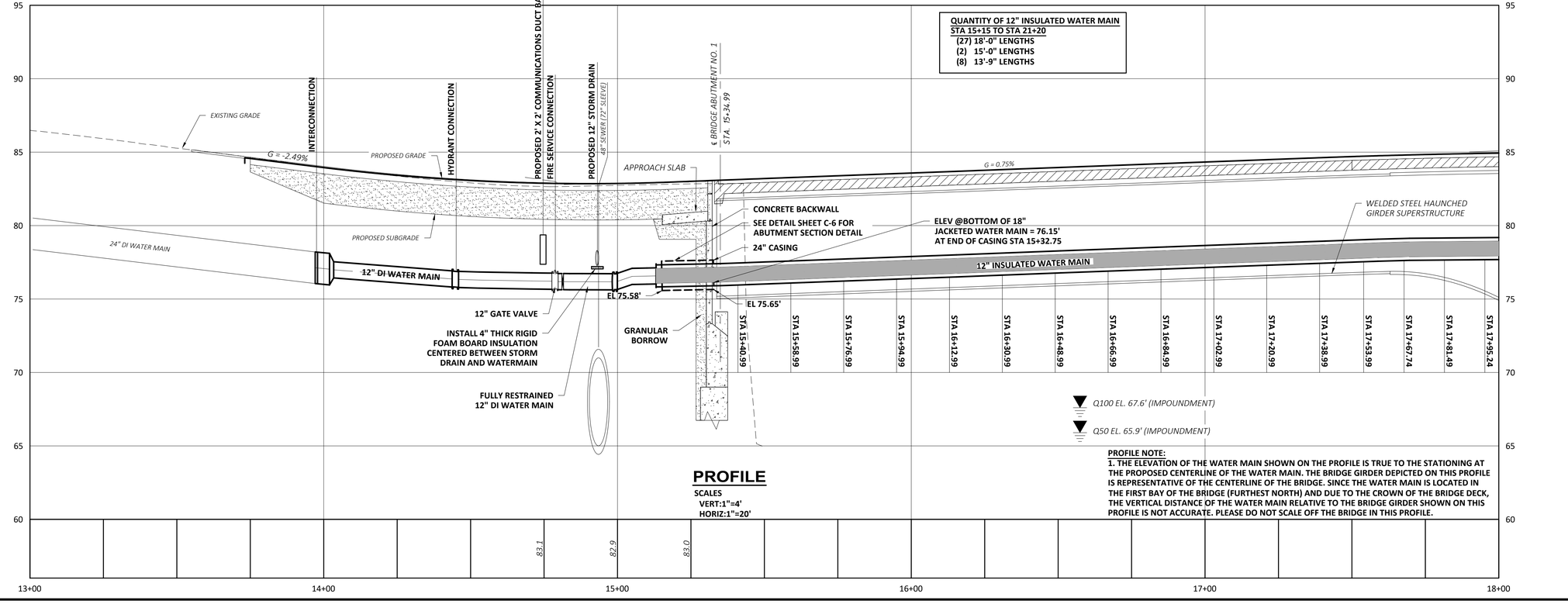


PLAN NOTE:

1. STATIONING DETAILED ON BRIDGE INDICATES CENTERLINE OF PIPELINE HANGER LOCATIONS ALONG THE BRIDGE SPAN. STATIONING BASED ON BRIDGE CENTERLINE STATIONS. PIPELINE HANGERS ARE 5'-6" NORTH OF GIRDER 2 TO AVOID CONFLICT WITH BRIDGE SCUPPERS. COORDINATE LOCATION AND ELEVATION OF PIPELINE WITH ALL BRIDGE STRUCTURAL ELEMENTS.

PLAN
SCALE: 1"=20'



PROFILE
SCALES
VERT:1"=4'
HORIZ:1"=20'

PROFILE NOTE:
1. THE ELEVATION OF THE WATER MAIN SHOWN ON THE PROFILE IS TRUE TO THE STATIONING AT THE PROPOSED CENTERLINE OF THE WATER MAIN. THE BRIDGE GIRDER DEPICTED ON THIS PROFILE IS REPRESENTATIVE OF THE CENTERLINE OF THE BRIDGE. SINCE THE WATER MAIN IS LOCATED IN THE FIRST BAY OF THE BRIDGE (FURTHEST NORTH) AND DUE TO THE CROWN OF THE BRIDGE DECK, THE VERTICAL DISTANCE OF THE WATER MAIN RELATIVE TO THE BRIDGE GIRDER SHOWN ON THIS PROFILE IS NOT ACCURATE. PLEASE DO NOT SCALE OFF THE BRIDGE IN THIS PROFILE.

NO	REVISIONS	APP'D	DATE
1			
2			
3			
4			
5			

PROJECT NO: 20961
DESIGNED: D.LACOMBE
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CAD: W.EDGAR
CHECKED: D.LARY
DATE: 04/26/2022
APPROVED: D.LACOMBE
DATE: 08/23/2022
SUBMISSION: CONTRACT DRAWINGS

STATE OF MAINE
DUSTIN J. LACOMBE
No. 15226
REGISTERED PROFESSIONAL ENGINEER
8/23/22

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KENNEBEC WATER DISTRICT
TICONIC BRIDGE WATER MAIN CROSSING
WATERVILLE-WINSLOW, MAINE

PLAN AND PROFILE I
STA. 14+00 TO STA. 18+00

DRAWING
C-2

J:\ENGV\ME\KENNEBECWD\20961-TICONICBRIDGEWTRMAINCROSSING\DRAWINGS\CIV\20961-CS-PLANPROFILES.DWG | PlanProfile-I | 1:10.1236457 | ---- | 8/23/2022 11:02:15 AM | WILLIAM.EDGAR

LAST SAVED BY: WILLIAM.EDGAR 8/23/2022 11:00 AM

KENNEBEC RIVER

FLOW

INSTALL CORPORATION STOP FOR AIR RELEASE AT HIGH POINT OF WATER MAIN APPROX STA 18+62 PROVIDE FITTING INSULATION KIT OVER CORPORATION

CL OF WATER MAIN 5'-6" FROM GIRDER 2

RIPRAP DOWNSPOUT

BRIDGE TRANSITION (TYP)

HYDRANT CONNECTION:
1 - 12" X 6" TEE
1 - 6" GATE VALVE
1 - HYDRANT ASSEMBLY

OFFSET 12" WATER MAIN w/(2) 22.5° BENDS

12" INSULATED DI WATER MAIN

12" DI WATER MAIN

BENDS AS REQ'D FOR OFFSET

45° BEND

24" CASING
SEE DETAIL SHEET C-6 FOR ABUTMENT SECTION DETAIL

CL OF ABUTMENT BEARING LOAD STA 21+01

CONCRETE APPROACH SLAB

TEST PIT

TEST PIT AT EXISTING ABANDONED 8" MAIN, CUT AND CAP

INTERCONNECTION:
1 - 24" X 12" REDUCER
1 - 24" DI WATER MAIN STUB
1 - 24" SOLID SLEEVE @ RAILROAD ROW
1 - 24" CAP (FULLY RESTRAINED)
1 - 12" GATE VALVE

ABANDON VALVES IN THE OFF POSITION, REMOVE TOP SECTION OF GATE VALVE BOX AND FILL BOTTOM SECTION WITH SAND

REMOVE AND SALVAGE HYDRANT

24" CAP

DEMOLISH EXISTING 8" BLOWOFF OR ABANDON VALVE IN CLOSED POSITION, REMOVE TOP SECTION OF GATE VALVE BOX AND FILL BOTTOM SECTION WITH SAND

24" WATER MAIN TO REMAIN IN SERVICE UNTIL NEW 12" WATER MAIN IS COMMISSIONED

BRIDGE ST./SPRING ST.
ROUTE 100/137/201

BENTON AVE.

CLINTON AVE.

MATCH LINE

C-2 C-3

STA 17+95.24 | STA 18+08.99 | STA 18+27.00 | STA 18+40.75 | STA 18+54.50 | STA 18+68.25 | STA 18+82.00 | STA 18+97.00 | STA 19+15.00 | STA 19+33.00 | STA 19+51.00 | STA 19+69.00 | STA 19+87.00 | STA 20+05.00 | STA 20+23.00 | STA 20+41.00 | STA 20+59.00 | STA 20+77.00 | STA 20+95.00 | STA 21+13.00

18+00 | 19+00 | 20+00 | 21+00 | 22+00 | 23+00

BB-WWKR-104 | BB-WWKR-106

PLAN NOTE:
1. STATIONING DETAILED ON BRIDGE INDICATES CENTERLINE OF PIPELINE HANGER LOCATIONS ALONG THE BRIDGE SPAN. STATIONING BASED ON BRIDGE CENTERLINE STATIONS. PIPELINE HANGERS ARE 5'-6" NORTH OF GIRDER 2 TO AVOID CONFLICT WITH BRIDGE SCUPPERS. COORDINATE LOCATION AND ELEVATION OF PIPELINE WITH ALL BRIDGE STRUCTURAL ELEMENTS.

PLAN
SCALE: 1"=20'

QUANTITY OF 12" INSULATED WATER MAIN
STA 15+15 TO STA 21+20
(27) 18'-0" LENGTHS
(2) 15'-0" LENGTHS
(8) 13'-9" LENGTHS

℄ PIER STA. 18+18.00

PVI=STA 18+40.00 EL.=85.39' (HIGH POINT EL.=85.01')

℄ BRIDGE ABUTMENT NO. 2 STA. 21+01.00

LIMIT OF WORK STA. 22+75.96

INTERCONNECTION

HYDRANT CONNECTION

PROPOSED 2' X 4' DUCT BANK

G = -0.75%

G = 0.60%

PROPOSED GRADE

EXISTING GRADE

AIR RELEASE CORPORATION AND INSULATION KIT

ELEV @BOTTOM OF 18" JACKETED WATER MAIN = 76.49' AT END OF CASING STA 20+03.63

CONCRETE BACKWALL

APPROACH SLAB

PROPOSED SUBGRADE

12" INSULATED WATER MAIN

12" DI WATER MAIN

BENDS AS REQ'D FOR OFFSET

WELDED STEEL HAUNCHED GIRDER SUPERSTRUCTURE

EL 76.00'

22.5° BENDS

45° BENDS

12" GATE VALVE

12" x 24" REDUCER

24" COUPLING

24" DI WATER MAIN w/12" TEE

24" CASING PIPE EL 75.93'

SEE DETAIL SHEET C-6 FOR ABUTMENT SECTION DETAIL

GRANULAR BORROW

LIMITS OF STRUCTURAL EXCAVATION AND GRANULAR BORROW

Q100 EL. 64.9' (TAILWATER)

Q50 EL. 60.9' (TAILWATER)

PROFILE NOTE:
1. THE ELEVATION OF THE WATER MAIN SHOWN ON THE PROFILE IS TRUE TO THE STATIONING AT THE PROPOSED CENTERLINE OF THE WATER MAIN. THE BRIDGE GIRDER DEPICTED ON THIS PROFILE IS REPRESENTATIVE OF THE CENTERLINE OF THE BRIDGE. SINCE THE WATER MAIN IS LOCATED IN THE FIRST BAY OF THE BRIDGE (FURTHEST NORTH) AND DUE TO THE CROWN OF THE BRIDGE DECK, THE VERTICAL DISTANCE OF THE WATER MAIN RELATIVE TO THE BRIDGE GIRDER SHOWN ON THIS PROFILE IS NOT ACCURATE. PLEASE DO NOT SCALE OFF THE BRIDGE IN THIS PROFILE.

PROFILE
SCALES
VERT:1"=4'
HORIZ:1"=20'

95 | 90 | 85 | 80 | 75 | 70 | 65 | 60

82.5 | 82.9 | 83.0 | 83.1 | 83.3 | 83.6 | 84.0 | 85.0

18+00 | 19+00 | 20+00 | 21+00 | 22+00 | 23+00

NO	REVISIONS	APP'D	DATE
1			
2			
3			
4			
5			

PROJECT NO: 20961
DESIGNED: D.LACOMBE
CAD COORD: W.EDGAR
CAD: W.EDGAR
CHECKED: D.LARY
DATE: 04/26/2022
APPROVED: D.LACOMBE
DATE: 08/23/2022
SUBMISSION: CONTRACT DRAWINGS

STATE OF MAINE
DUSTIN J. LACOMBE
No. 15226
REGISTERED PROFESSIONAL ENGINEER
8/23/22

WRIGHT-PIERCE
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KENNEBEC WATER DISTRICT
TICONIC BRIDGE WATER MAIN CROSSING
WATERVILLE-WINSLOW, MAINE

PLAN AND PROFILE II
STA. 18+00 TO STA. 23+00

DRAWING
C-3

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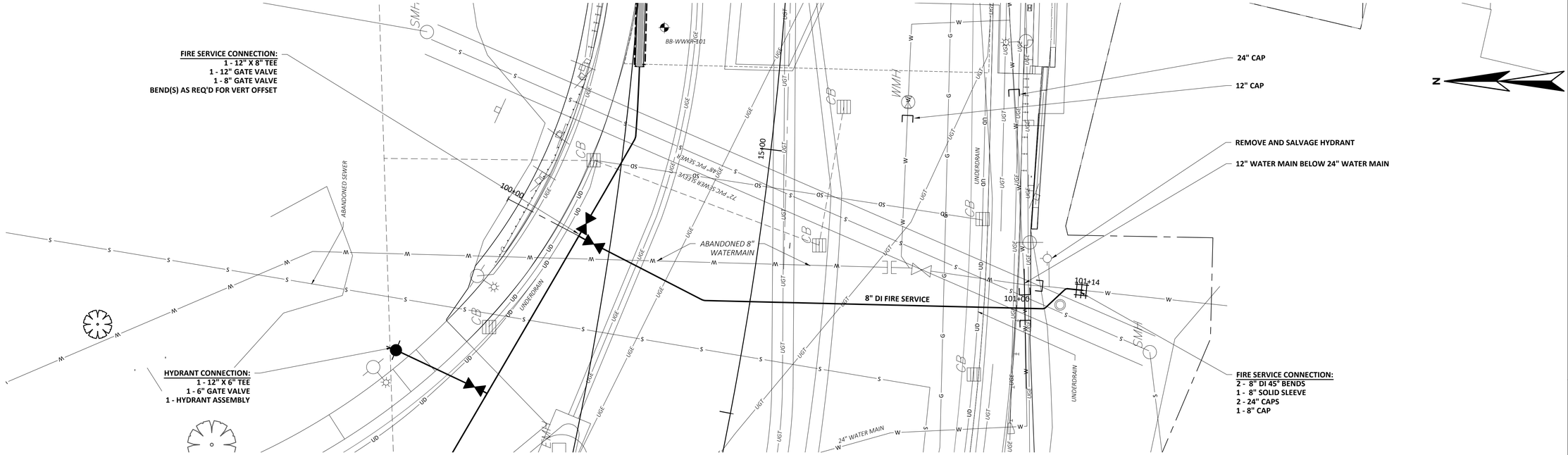
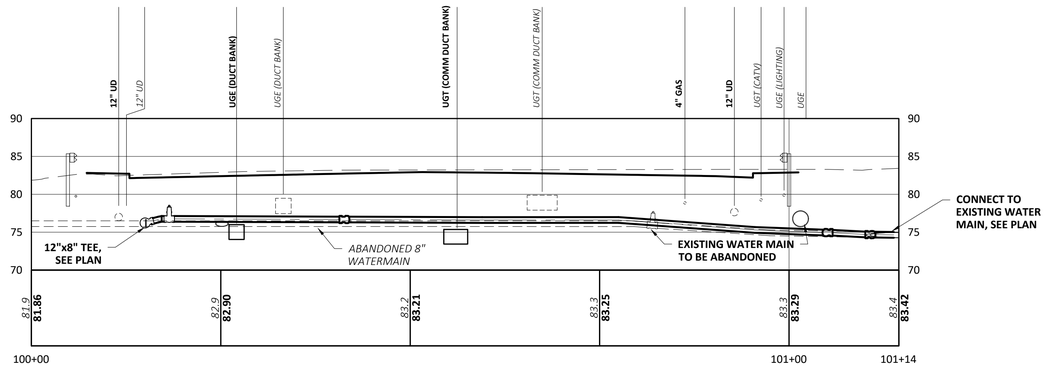


PLAN
SCALE: 1"=10'



PROFILE
SCALES
VERT:1"=10'
HORIZ:1"=10'

NO	REVISIONS	APP'D	DATE
1			
2			
3			
4			
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PROJECT NO: 20961
DESIGNED: D.LACOMBE
CAD COORD: W.EDGAR
CAD: W.BAILEY
CHECKED: D.LARY
DATE: 04/26/2022
APPROVED: D.LACOMBE
DATE: 08/23/2022
SUBMISSION: CONTRACT DRAWINGS

STATE OF MAINE
DUSTIN J. LACOMBE
No. 15276
REGISTERED PROFESSIONAL ENGINEER
8/23/22

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KENNEBEC WATER DISTRICT
TICONIC BRIDGE WATER MAIN CROSSING
WATERVILLE-WINSLOW, MAINE

PLAN AND PROFILE III
8" FIRE SERVICE - STA 100+00 TO STA 101+14

DRAWING
C-4

LAST SAVED BY: WOODY.BAILEY 5/2/2022 10:18 AM
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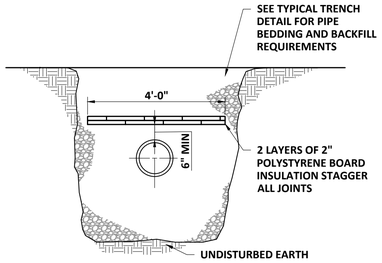
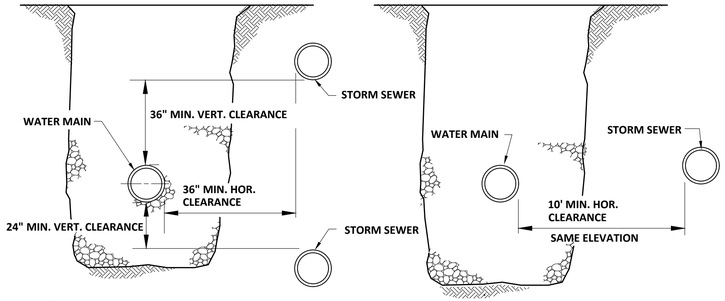
LAST SAVED BY: WILLIAM.EDGAR 5/25/2022 1:37 PM



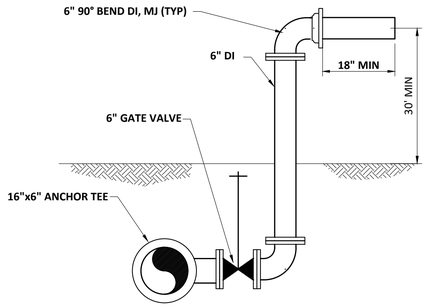
NOTE:
TRENCH PIPE INSULATION TO BE USED WHERE DEPTH OF COVER IS LESS THAN 5 FEET OR AS DIRECTED BY THE ENGINEER

TRENCH PIPE INSULATION DETAIL
SCALE: NTS

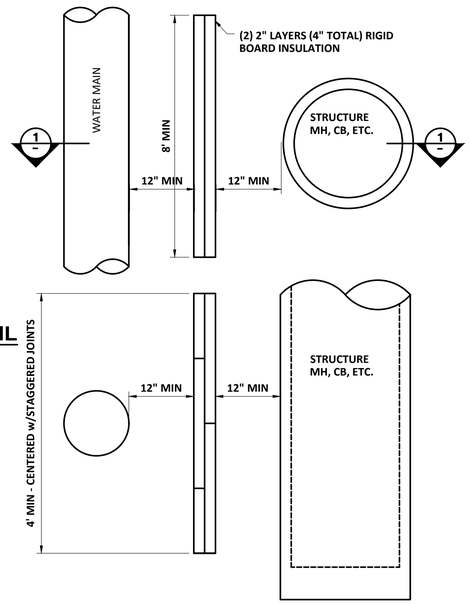


NOTE:
SUGGESTED CLEARANCE MAY NOT ALWAYS BE ACHIEVABLE IN WHICH CASE EXCEPTION MAY BE GRANTED AT THE ENGINEERS DISCRETION. RIGID INSULATION MAY ALSO BE REQUIRED IN CASES WHERE MINIMUM UTILITY SEPARATION CANNOT BE ACHIEVED.

TRENCH PIPE CLEARANCE DETAIL
NTS

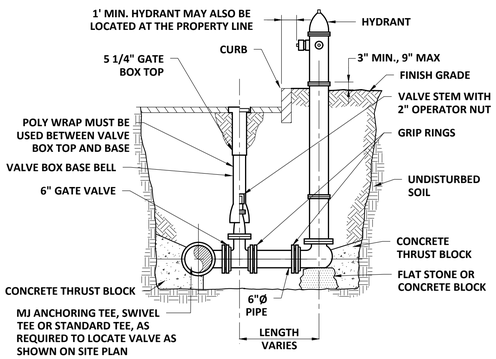


TEMPORARY FLUSHING CONNECTION DETAIL
NTS

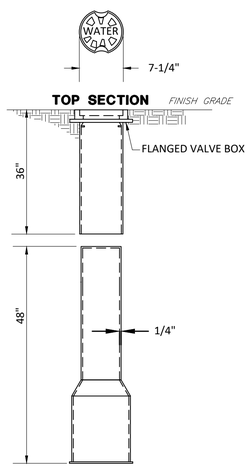


SECTION 1 -
SCALE: NTS

WATER MAIN-STRUCTURE INSULATION DETAIL
NTS

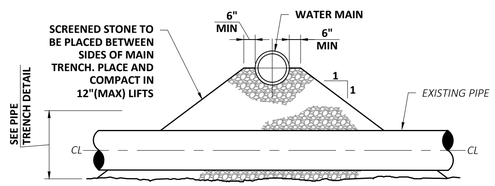


FIRE HYDRANT
SCALE: NTS



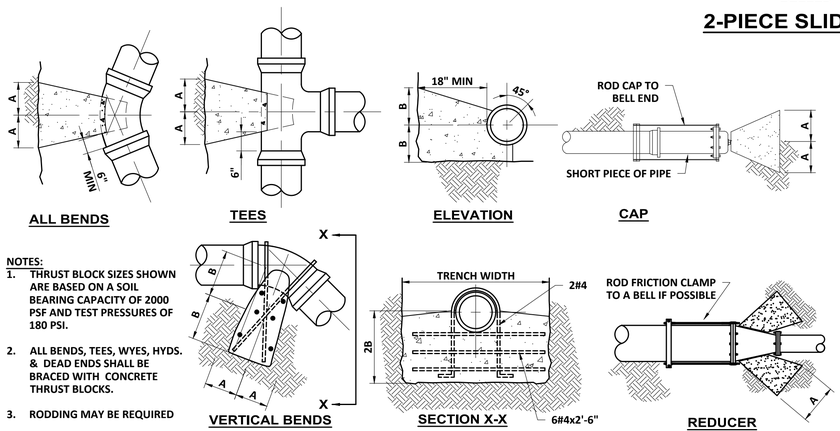
BELLED BASE SECTION

2-PIECE SLIDING VALVE BOX
NTS



NOTE:
JOINTS ON EACH PIPE TO BE AS FAR FROM INTERSECTION AS POSSIBLE.

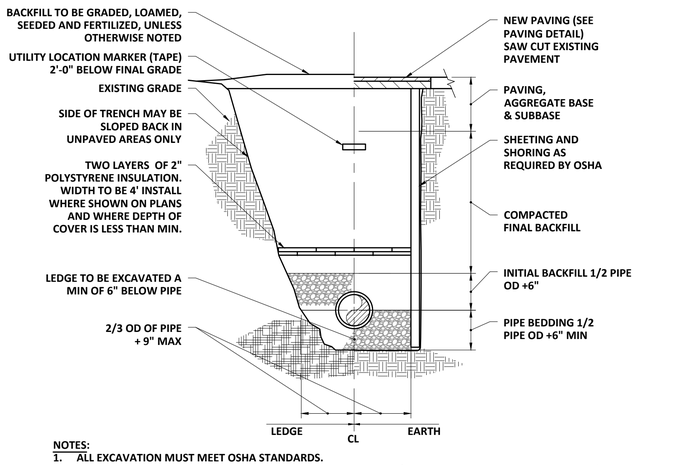
PIPE CROSSING DETAIL
SCALE: NTS



NOTES:
1. THRUST BLOCK SIZES SHOWN ARE BASED ON A SOIL BEARING CAPACITY OF 2000 PSF AND TEST PRESSURES OF 180 PSI.
2. ALL BENDS, TEES, WYES, HYDS. & DEAD ENDS SHALL BE BRACED WITH CONCRETE THRUST BLOCKS.
3. RODDING MAY BE REQUIRED

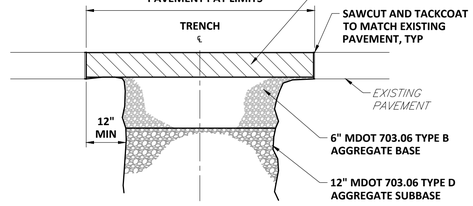
PIPE SIZE	90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND		TEE		VERTICAL BEND (DOWN)		PLUG		REDUCER	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
4"	15"	12"	12"	9"	9"	6"	6"	6"	12"	12"	24"	21"	12"	12"	12"	12"
6"	15"	12"	12"	9"	9"	6"	6"	6"	12"	12"	24"	21"	12"	12"	12"	12"
8"	20"	15"	14"	12"	9"	9"	9"	6"	18"	12"	33"	24"	14"	14"	18"	12"
10"	21"	21"	18"	15"	15"	9"	9"	9"	20"	18"	40"	27"	16"	16"	20"	18"
12"	27"	24"	23"	15"	15"	12"	12"	9"	25"	18"	48"	30"	18"	18"	25"	18"
16"	37"	30"	30"	21"	21"	15"	13"	12"	32"	24"	57"	36"	22"	22"	32"	24"

THRUST BLOCKS
NTS



NOTES:
1. ALL EXCAVATION MUST MEET OSHA STANDARDS.
2. INSTALL 3 FOOT LONG IMPERVIOUS MATERIAL DAM IN BEDDING/INITIAL BACKFILL MATERIAL EVERY 100' AND WHERE SHOWN ON PLANS TO PREVENT TRENCH GROUNDWATER FROM BEING CHANNELED ALONG BEDDING/INITIAL BACKFILL.

PIPE TRENCH
NTS



PAVEMENT PAY LIMITS	
	"W"
PIPE I.D.	(FOR 0' - 10' DEEP)
6" - 15"	7'-0"
16" - 21"	8'-0"

"W" SHALL BE INCREASED BY 1'-0" FOR TRENCHES 10' - 15', AND BY 2'-0" FOR TRENCHES 15' - 20' DEEP.

TRENCH PAVING
NTS

PAVEMENT NOTES:

1. WHEREVER PAVEMENT IS DISTURBED ALONG ANY STATE OR STATE AID ROADWAY, THE MINIMUM WIDTH OF PAVEMENT THAT SHALL BE REPLACED MUST BE AT LEAST 2' WIDE. ALL DISTURBED PAVEMENT AREAS SHALL BE REMOVED BY MACHINE CUTTING STRAIGHT EDGES THAT RUN PARALLEL TO THE ℄ OF THE ROADWAY.
2. WHEN OVERLAY ABUTS GRAVEL SHOULDER, THE SHOULDER SHALL BE BROUGHT TO THE AGGREGATE GRADE WITH BASE TYPE A.
3. WHEN PAVEMENT OVERLAY AND TRENCH PATCH ABUTS PAVEMENT, PAVED DRIVES, OR ENTRANCES, THE EXISTING PAVEMENT IS TO BE GROUND 1"± TO CREATE A SMOOTH TRANSITION BETWEEN THE EXISTING SURFACE AND THE NEW PAVEMENT.
4. TEMPORARY PAVEMENT SHALL MEET THE REQUIREMENTS OF SP 461.
5. PERMANENT TRENCH PAVEMENT TO BE INSTALLED WHERE WATER MAIN REPLACEMENT EXTENDS BEYOND THE PROJECT LIMITS OF MDOT BRIDGE. TEMPORARY PAVEMENT SHALL BE INSTALLED ON WATER MAIN TRENCH WITHIN THE MDOT PROJECT LIMITS.

NO	REVISIONS	APP'D	DATE
1			
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KENNEBEC WATER DISTRICT
TICONIC BRIDGE WATER MAIN CROSSING
WATERVILLE-WINSLOW, MAINE

DETAILS I

DRAWING
C-5

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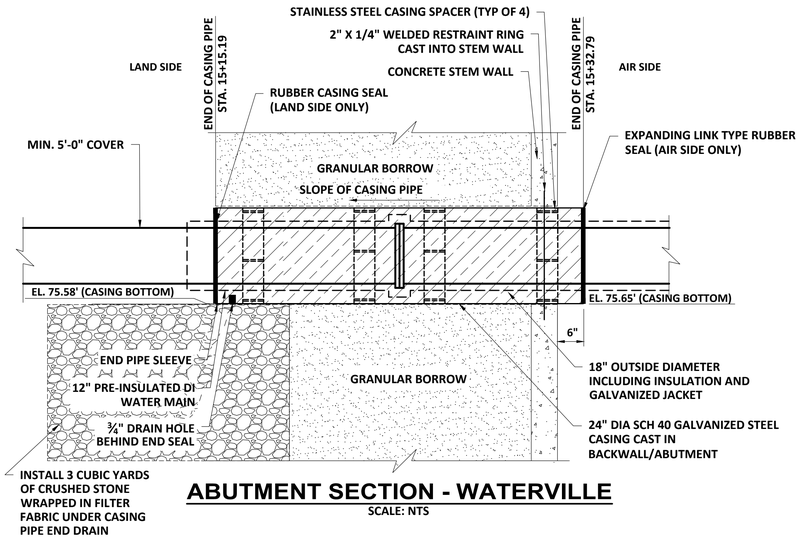
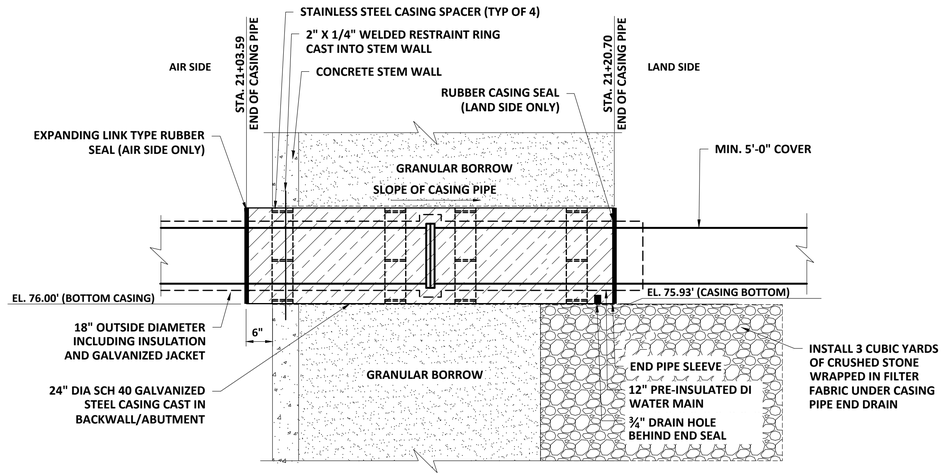


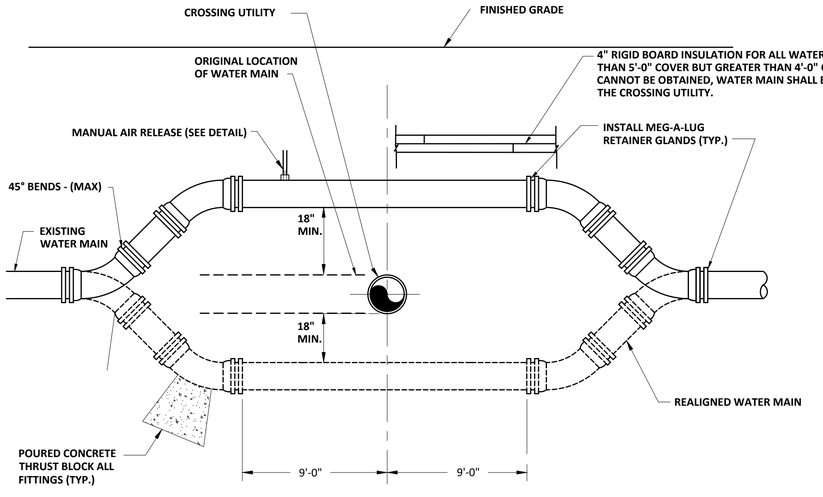
ABUTMENT SECTION - WATERVILLE

SCALE: NTS



ABUTMENT SECTION - WINSLOW

SCALE: NTS

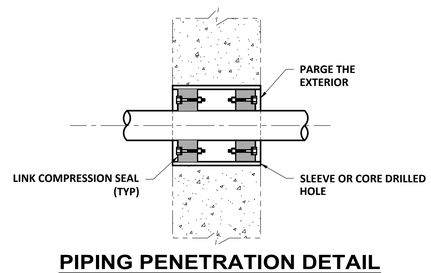


WATER MAIN RELOCATION

NTS

NOTES:

1. ALL FITTINGS AND JOINTS IN LOWERING AREA TO BE RESTRAINED.
2. WHEN IT IS IMPOSSIBLE TO OBTAIN HORIZONTAL OR VERTICAL SEPARATION AS INDICATED IN THE DETAIL ABOVE, BOTH THE WATER AND THE SEWER SHOULD BE ENCASED IN CONTROLED DENSITY FILL FOR A DISTANCE OF 10 FEET ON EITHER SIDE OF THE CROSSING.
3. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE WRAPPED WITH POLYETHYLENE ENCASEMENT WHEN CONTACTING POURED CONCRETE PRODUCTS.



PIPING PENETRATION DETAIL

SCALE: NTS

NO	REVISIONS	APP'D	DATE
1			
2			
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DATE: 08/23/2022
SUBMISSION: CONTRACT DRAWINGS

STATE OF MAINE
DUSTIN J. LACOMBE
No. 15216
REGISTERED PROFESSIONAL ENGINEER
8/23/22

WRIGHT-PIERCE
207.725.8721 | www.wright-pierce.com
11 BOWDOIN MILL ISLAND, SUITE 140, TOPSHAM, ME 04086

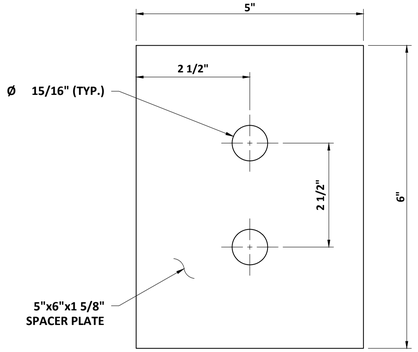
KENNEBEC WATER DISTRICT
TICONIC BRIDGE WATER MAIN CROSSING
WATERVILLE-WINSLOW, MAINE

DETAILS II

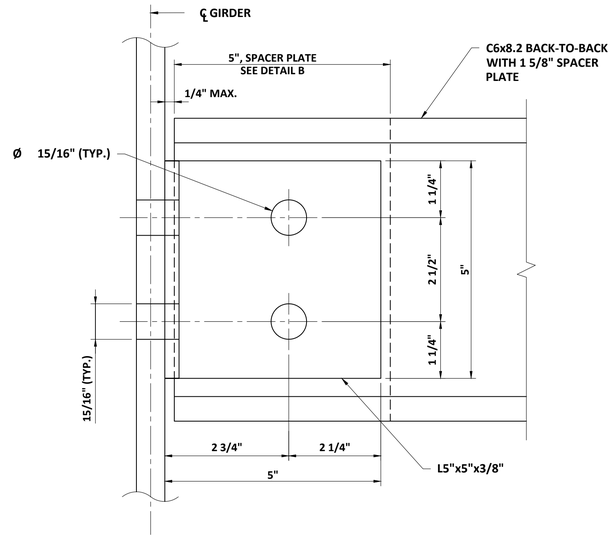
DRAWING
C-6

J:\ENG\WE\VENNEBECWD\20961-TICONICBRIDGEWTRMAINCROSSING\DRAWINGS\CIV\20961-CS-DETAILS.DWG | Details II | 1:10.1236467 | ---- | 8/23/2022 10:51:35 AM | WILLIAM.EDGAR

LAST SAVED BY: WILLIAM.EDGAR 5/25/2022 1:37 PM



SPACER PLATE DETAIL
SCALE: NTS



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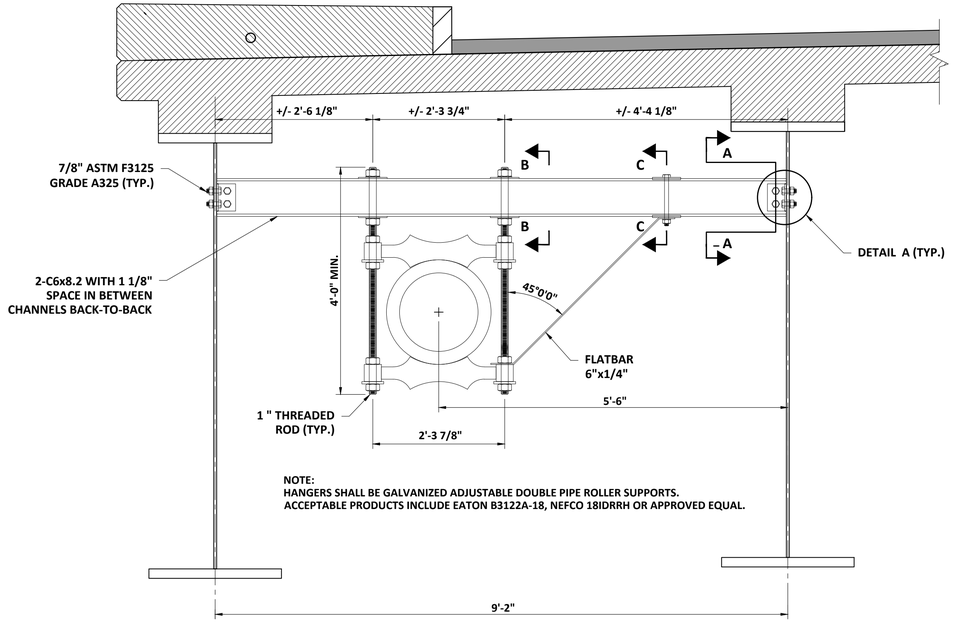
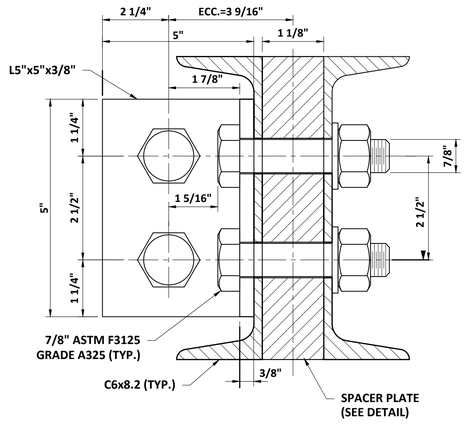
SCALE: NTS



NOTE:
HANGERS SHALL BE GALVANIZED ADJUSTABLE DOUBLE PIPE ROLLER SUPPORTS.
ACCEPTABLE PRODUCTS INCLUDE EATON B3122A-18, NEFCO 18IDRRH OR APPROVED EQUAL.

WATERLINE UTILITY SUPPORT
SCALE: NTS



SECTION A-A
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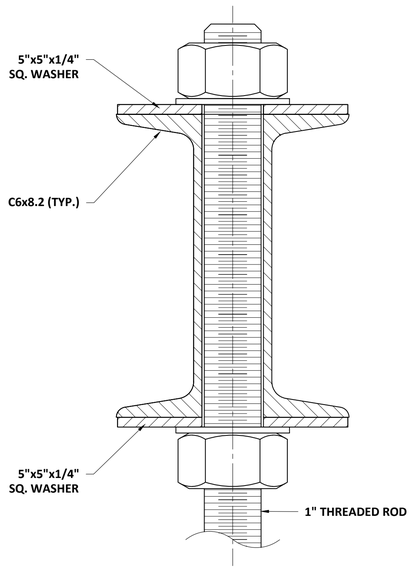

SECTION B-B
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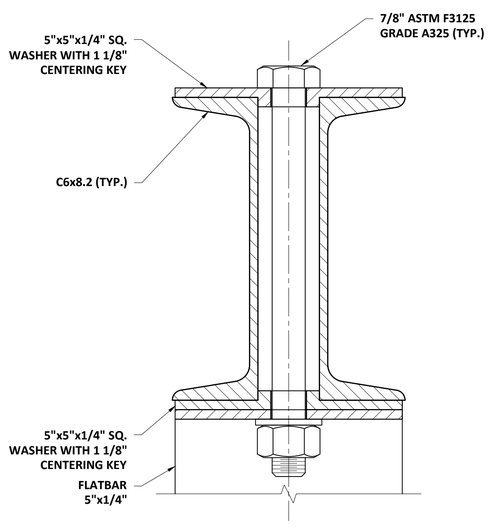

SECTION C-C
SCALE: NTS

NO	REVISIONS	APP'D	DATE
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2			
3			
4			
5			

PROJECT NO: 20961
DESIGNED: D.LACOMBE
CAD COORD: W.EDGAR
CAD:
CHECKED: D.LARY
DATE: 04/26/2022
APPROVED: D.LACOMBE
DATE: 08/23/2022
SUBMISSION: CONTRACT DRAWINGS

STATE OF MAINE
DUSTIN J. LACOMBE
No. 15226
REGISTERED PROFESSIONAL ENGINEER
8/23/22

WRIGHT-PIERCE
207.725.8721 | www.wright-pierce.com
11 BOWDOIN MILL ISLAND, SUITE 140, TOPSHAM, ME 04086

KENNEBEC WATER DISTRICT
TICONIC BRIDGE WATER MAIN CROSSING
WATERVILLE-WINSLOW, MAINE

DETAILS III

DRAWING
C-7

J:\ENG\WE\KENNEBECWD\20961-TICONICBRIDGEWTRMAINCROSSING\DRAWINGS\CIV\20961-CS-DETAILS.DWG | Details III | 1:10.12364677 | ---- | 8/23/2022 10:51:40 AM | WILLIAM.EDGAR

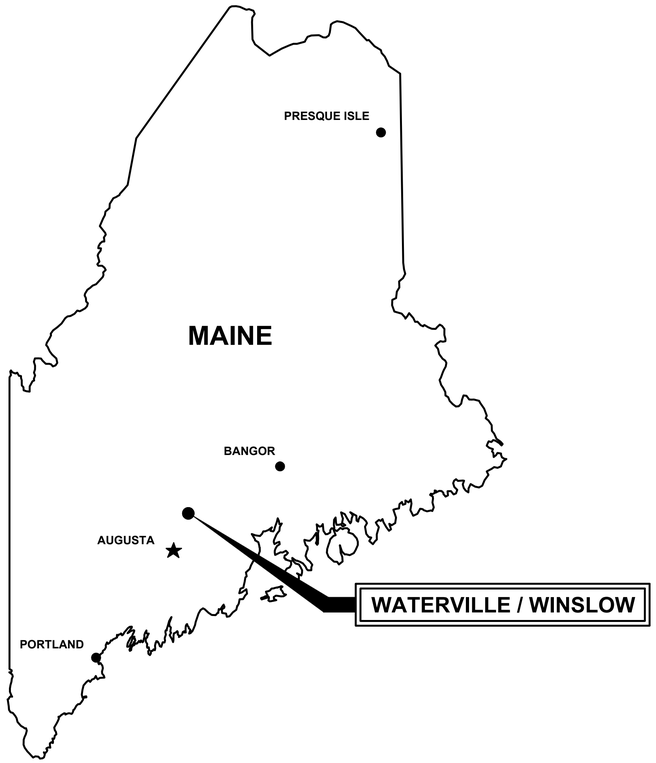
SUMMIT NATURAL GAS

CONTRACT DRAWINGS FOR

TICONIC BRIDGE GAS MAIN CROSSING
WATERVILLE - WINSLOW, MAINE

AUGUST 2022

CONTRACT DWGS



DRAWING INDEX

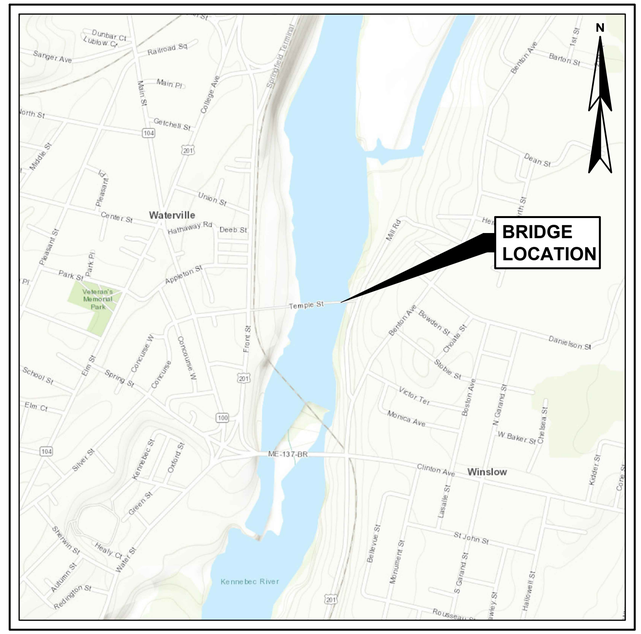
GENERAL

---	COVER SHEET

CIVIL

C-1	GENERAL NOTES, LEGEND, AND ABBREVIATIONS
C-2	GAS MAIN HANGER LOCATION PLAN AND PROFILE - STA. 15+15.19 TO STA. 21+20.70
C-3	DETAILS I
C-4	DETAILS II

STATE OF MAINE
DUSTIN J. LACOMBE
No. 15226
REGISTERED PROFESSIONAL ENGINEER
8/23/22



LOCATION PLAN
SCALE: N.T.S.

WRIGHT-PIERCE
Engineering a Better Environment

207.725.8721 | www.wright-pierce.com

WP PROJECT No. 21044

LAST SAVED BY: WILLIAM.EDGAR 8/23/2022 10:30 AM

GENERAL NOTES

1. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).

2. BELOW GRADE UTILITY INFORMATION IS BASED ON INFORMATION PROVIDED BY EACH UTILITY. LOCATION OF PUBLIC UTILITIES SHOWN IS ONLY APPROXIMATE AND IS NOT COMPLETE. PRIVATE UNDERGROUND UTILITIES SUCH AS, BUT NOT LIMITED TO, SEWER LINES, WATER LINES AND BURIED ELECTRICAL SERVICE ENTRANCES ARE NOT SHOWN. THE CONTRACTOR SHALL ASCERTAIN THE LOCATION AND SIZE OF EXISTING UTILITIES IN THE FIELD WITH THE RESPECTIVE UTILITY REPRESENTATIVE PRIOR TO COMMENCING WORK. ADDITIONAL TEST PITS, BEYOND THOSE SHOWN, MAY BE REQUIRED. UTILITY CONTACTS ARE AS FOLLOWS:

WATER:
KENNEBEC WATER DISTRICT
6 COOL STREET
WATERVILLE, ME 04901
TEL. 207-872-2763

CABLE TELEVISION:
SPECTRUM
1-207-620-3416

DIG SAFE:
TEL: 1-888-344-7233

GAS:
SUMMIT NATURAL GAS
2 DELORME DR., SUITE 100
YARMOUTH, ME 04096
1-207-621-8000

CITY:
CITY OF WATERVILLE
6 WENTWORTH COURT
WATERVILLE, ME 04901
1-207-680-4232

ELECTRIC:
CENTRAL MAINE POWER
83 EDISON DRIVE
AUGUSTA, ME 04336
TEL. 207-721-8087

TELEPHONE:
CONSOLIDATED COMMUNICATIONS OF NORTHERN NEW ENGLAND COMPANY, LLC
5 DAVIS FARM ROAD
PORTLAND, ME 04103
207-272-7538

SEWER:
WATERVILLE SEWERAGE DISTRICT
353 WATER STREET
WATERVILLE, ME 04901
1-207-873-5191

TOWN:
TOWN OF WINSLOW
114 BENTON AVENUE
WINSLOW, ME 04901
PAUL FONGEMIE
PUBLIC WORKS DIRECTOR
1-207-872-1972

3. ALL STRUCTURES AND PIPELINES LOCATED ADJACENT TO THE CONTRACTOR'S EXCAVATIONS SHALL BE PROTECTED AND FIRMLY SUPPORTED BY THE CONTRACTOR UNTIL THE TRENCH IS BACK FILLED. INJURY TO ANY SUCH STRUCTURES CAUSED BY, OR RESULTING FROM, THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. ALL UTILITIES REQUIRING REPAIR, RELOCATION OR ADJUSTMENT AS A RESULT OF THE PROJECT SHALL BE COORDINATED THROUGH THE RESPECTIVE UTILITY.

4. CONTRACTOR SHALL INSTALL AND MAINTAIN TRAFFIC CONTROL SIGNS IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

5. TRAFFIC CONTROL PLANS SHALL BE SUBMITTED TO MAINE DEPARTMENT OF TRANSPORTATION (MDOT).

6. IN THE EVENT THAT DISCREPANCIES OR CONFLICTS BETWEEN MDOT SPECIFICATIONS, SPECIAL PROVISIONS, AND PLANS OCCUR WITH THE GAS UTILITIES SPECIFICATIONS, SPECIAL PROVISIONS AND PLANS, MDOT OR MORE RESTRICTIVE SHALL PREVAIL.

7. ALL REFERENCES TO "ENGINEER" IN TICONIC BRIDGE WATER MAIN CROSSING PLANS SHALL REFER TO REPRESENTATIVE DESIGNATED BY THE SUMMIT NATURAL GAS (SNG), NOT MDOT ENGINEER.

SITE LAYOUT NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LAYOUT OF ALL PROPOSED WORK AS SHOWN ON THE DRAWINGS. THE ENGINEER WILL PROVIDE PROJECT BENCHMARKS THAT DEFINE THE HORIZONTAL CONTROL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THIS PROVIDED LAYOUT INFORMATION THROUGHOUT THE COURSE OF CONSTRUCTION. REPORT ANY LAYOUT DISCREPANCIES IMMEDIATELY TO THE ENGINEER.

2. WRITTEN DIMENSIONS SHALL PREVAIL. DO NOT SCALE DISTANCES FROM THE DRAWINGS. REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER.

SURVEY NOTES

1. THE VERTICAL DATUM SHOWN IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988).

2. SURVEY BASE PLAN IS BASED ON SURVEY DATA PROVIDED BY HNTB. HORIZONTAL DATUM IS STATE PLANE COORDINATES, NAD83, MAINE 2000 WEST.

PIPELINE GENERAL NOTES

1. ANY UNDERGROUND STRUCTURES, CABLES, AND PIPELINES LOCATED ADJACENT TO THE TRENCH EXCAVATIONS SHALL BE PROTECTED AND FIRMLY SUPPORTED BY THE CONTRACTOR UNTIL THE TRENCH IS BACKFILLED. DAMAGE TO ANY SUCH STRUCTURES, CABLES, AND PIPELINES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE OWNERS OF THE STRUCTURES, CABLES, AND PIPELINES.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LAYOUT OF THE NEW GAS MAIN. LAYOUT SHALL BE REVIEWED AND ACCEPTED BY SNG AND ENGINEER. THE NEW GAS MAIN MUST BE LOCATED WITHIN THE RIGHTS-OF-WAY SHOWN ON THE DRAWINGS.

3. TEST PRESSURES FOR THE COMBINATION PRESSURE AND LEAKAGE TESTS SHALL BE 150 PSI. TEST DURATION SHALL BE 1 HOUR. TESTING PROCEDURES SHALL BE PER GAS UTILITY SPECIFICATIONS.

4. BELOW GRADE UTILITY INFORMATION IS BASED ON RECORD DRAWINGS. LOCATION OF PUBLIC UTILITIES SHOWN IS ONLY APPROXIMATE AND MAY NOT BE COMPLETE. PRIVATE UNDERGROUND UTILITIES SUCH AS, BUT NOT LIMITED TO, SEWER LINES, WATER LINES AND BURIED ELECTRICAL SERVICE ENTRANCES ARE NOT SHOWN.

5. ALL EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE UNLESS OTHERWISE NOTED. AT NO ADDITIONAL COST TO THE OWNER THE CONTRACTOR SHALL REPAIR OR COORDINATE WITH THE RESPECTIVE UTILITY ON DAMAGE TO EXISTING UTILITIES.

6. SUITABLE EXCAVATED MATERIALS MAY BE INCORPORATED INTO THE PROJECT. THIS PROVISION SHALL IN NO WAY RELIEVE THE CONTRACTOR OF HIS OBLIGATIONS TO REMOVE AND DISPOSE OF ANY MATERIAL DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING.

7. ALL SUPPORT MEMBERS, CLIPS, HARDWARE, THREADED ROD, AND HANGER ASSEMBLIES UNLESS OTHERWISE NOTES SHALL BE GALVANIZED STEEL MATERIAL.

CIVIL ABBREVIATIONS

&	AND
DIA	DIAMETER
#, NO	NUMBER
APP'D	APPROVED
BLDG	BUILDING
CB	CATCH BASIN
CEN	CENTER
CFS	CUBIC FEET PER SECOND
CI	CAST IRON
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
CONC	CONCRETE
COR	CORNER
CY	CUBIC YARD
DEMO	DEMOLITION
DMH	DRAIN MANHOLE
DI	DUCTILE IRON
DR	DRAIN
DWG	DRAWING
EL	ELEVATION
EMH	ELECTRIC MANHOLE
FM	FORCE MAIN
FT	FEET
G	GAS
HYD	HYDRANT
IN	INCH
INF	INFLUENT
INV	INVERT
IRF	IRON ROD FOUND
LBS	POUNDS
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MW	MONITORING WELL
N	NORTH
NGVD	NATIONAL GEODETIC VERTICAL DATUM
N/A	NOT AVAILABLE/APPLICABLE
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
PC	PERFORATED CLAY
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PS	PRIMARY SLUDGE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
REQ'D	REQUIRED
S	SLOPE, SEWER
SD	STORM DRAIN
SF	SQUARE FEET
SMH	SANITARY SEWER MANHOLE
SQ	SQUARE
SS	SANITARY SEWER
STA	STATION
T, XFMR	TRANSFORMER
TBM	TEMPORARY BENCH MARK
THK	THICKNESS
TOS	TOP OF STRUCTURE
TYP	TYPICAL
UD	UNDERDRAIN
UG	UNDERGROUND
UGE	UNDERGROUND ELECTRIC
VC	VITRIFIED CLAY
W/	WITH
W	POTABLE WATER

LEGEND

EXISTING		PROPOSED
	PROPERTY/ROW LINE	
	SETBACK LINE	
	EASEMENT LINE	
	CENTERLINE	
	EDGE OF PAVEMENT	
	CURBING	
	EDGE OF GRAVEL	
	EDGE OF CONCRETE	
122	CONTOUR	123
	BUILDING	
	STONEWALL	
	TREELINE	
	CHAIN LINK FENCE	
	STOCKADE FENCE	
	BARB WIRE FENCE	
	RETAINING WALL	
	GUARDRAIL	
8" S	SEWER	8"S
4" FM	SEWER FORCE MAIN	4"FM
4" G	GAS	4"G
4" W	WATER	8"W
15" SD	STORM DRAIN	15"SD
6" UD	UNDERDRAIN	6"UD
12" CMP	CULVERT	12" CMP
UGE	UNDERGROUND ELECTRIC	UGE
OHE	OVERHEAD ELECTRIC	OHE
	IRON PIPE/REBAR	
	DRILLHOLE	
	MONUMENT	
	SURVEY CONTROL POINT	
124.6	SPOT ELEVATION	134.5
SMH	SEWER MANHOLE	SMH
DMH	DRAINAGE MANHOLE	DMH
CB CB	CATCH BASIN	CB CB
EMH	ELECTRIC MANHOLE	EMH
TMH	TELEPHONE MANHOLE	TMH
	GATE VALVE	
	CURB STOP	
	YARD HYDRANT	
	HYDRANT	
	UTILITY POLE	
	UTILITY POLE W/ GUY	
	UTILITY POLE W/ LIGHT	
	LIGHT POLE	
	BOLLARD	
	FLAGPOLE	
	CONIFEROUS TREE	
	DECIDUOUS TREE	
	SHRUB	
	EDGE OF WATER	
	STREAM	
	EDGE OF WETLANDS	
	FLOODPLAIN	
	WETLANDS	
	DRAINAGE FLOW	
	DRAINAGE SWALE	
	PAVEMENT MARKINGS	
	SIGN	
MB	MAILBOX	
	TEMPORARY BENCH MARK	
TP-2	TEST PIT	
B-3	TEST BORING	
P-4	TEST PROBE	
MW	MONITORING WELL	
	LIMIT OF WORK	
	SILT FENCE	
	RIPRAP	
	RAILROAD	
	MATCHLINE	
	ROCK OUTCROP	

NO	REVISIONS	APP'D	DATE
1			
2			
3			
4			
5			

PROJECT NO: 21044
DESIGNED: D.LACOMBE
CAD COORD: W.EDGAR
CAD:
CHECKED: D.LARY
DATE: 05/25/2022
APPROVED: D.LACOMBE
DATE: 08/23/2022
SUBMISSION: CONTRACT DRAWINGS

STATE OF MAINE
DUSTIN J. LACOMBE
No. 15216
REGISTERED PROFESSIONAL ENGINEER
8/23/22

WRIGHT-PIERCE
207.725.8721 | www.wright-pierce.com
11 BOWDOIN MILL ISLAND, SUITE 140, TOPSHAM, ME 04086

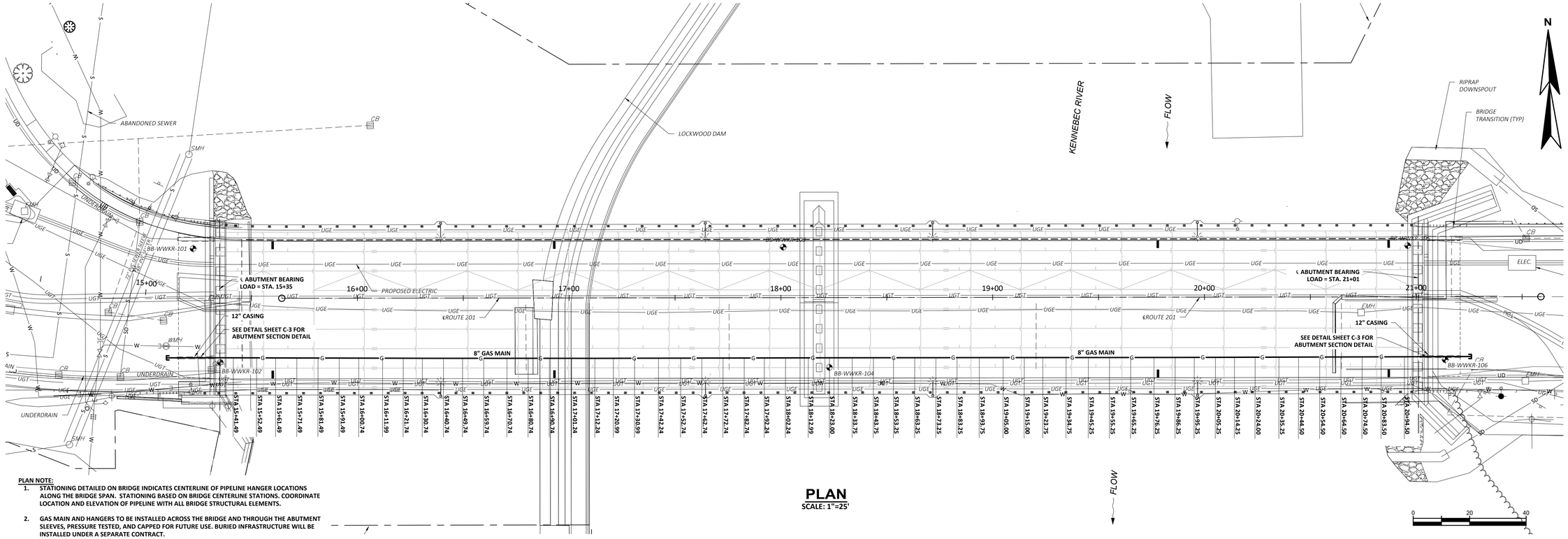
SUMMIT NATURAL GAS
TICONIC BRIDGE GAS MAIN CROSSING
WATERVILLE-WINSLOW, MAINE

GENERAL NOTES, LEGEND, AND ABBREVIATIONS

DRAWING
C-1

J:\ENG\ME\WATERVILLE\21044-TICONICBRIDGEGASMAINHANGERDESIGN\DRAWINGS\CIV\21044-CS-GENNOTESLEGEND.DWG | GenNotesLegend | 1:10.1236477 | ---- | 8/23/2022 10:36:36 AM | WILLIAM.EDGAR

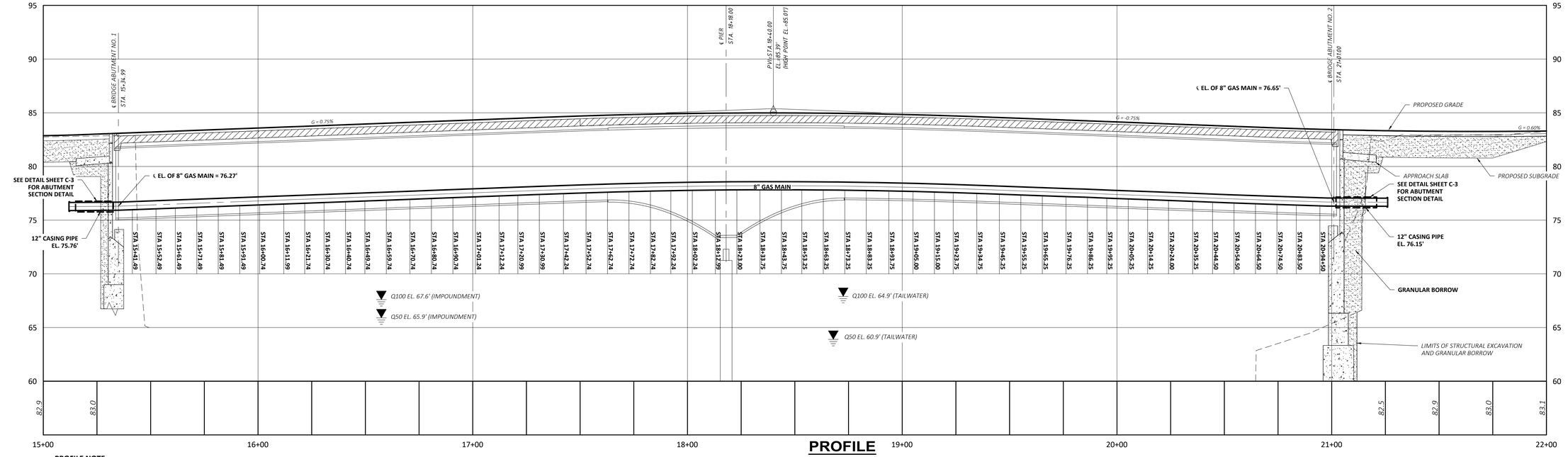
LAST SAVED BY: WILLIAM.EDGAR 8/23/2022 10:33 AM



PLAN
SCALE: 1"=25'

PLAN NOTE:

1. STATIONING DETAILED ON BRIDGE INDICATES CENTERLINE OF PIPELINE HANGER LOCATIONS ALONG THE BRIDGE SPAN. STATIONING BASED ON BRIDGE CENTERLINE STATIONS. COORDINATE LOCATION AND ELEVATION OF PIPELINE WITH ALL BRIDGE STRUCTURAL ELEMENTS.
2. GAS MAIN AND HANGERS TO BE INSTALLED ACROSS THE BRIDGE AND THROUGH THE ABUTMENT SLEEVES, PRESSURE TESTED, AND CAPPED FOR FUTURE USE. BURIED INFRASTRUCTURE WILL BE INSTALLED UNDER A SEPARATE CONTRACT.



PROFILE
SCALES
VERT:1"=5'
HORIZ:1"=25'

PROFILE NOTE:
1. THE ELEVATION OF THE GAS MAIN SHOWN ON THE PROFILE IS TRUE TO THE STATIONING AT THE PROPOSED CENTERLINE OF THE GAS MAIN. THE BRIDGE GIRDER DEPICTED ON THIS PROFILE IS REPRESENTATIVE OF THE CENTERLINE OF THE BRIDGE. SINCE THE GAS MAIN IS LOCATED IN THE SEVENTH BAY OF THE BRIDGE (SECOND FURTHEST SOUTH) AND DUE TO THE CROWN OF THE BRIDGE DECK, THE VERTICAL DISTANCE OF THE GAS MAIN RELATIVE TO THE BRIDGE GIRDER SHOWN ON THIS PROFILE IS NOT ACCURATE. PLEASE DO NOT SCALE OFF THE BRIDGE IN THIS PROFILE.

NO	REVISIONS	APP'D	DATE
1			
2			
3			
4			
5			

PROJECT NO: 21044
DESIGNED: D.LACOMBE
CAD COORD: W.EDGAR
CAD: W.EDGAR
CHECKED: D.LARY
DATE: 05/25/2022
APPROVED: D.LACOMBE
DATE:
SUBMISSION: CONTRACT DRAWINGS

STATE OF MAINE
DUSTIN J. LACOMBE
No. 15276
REGISTERED PROFESSIONAL ENGINEER
8/23/22

WRIGHT-PIERCE
207.725.8721 | www.wright-pierce.com
11 BOWDOIN MILL ISLAND, SUITE 140, TOPSHAM, ME 04086

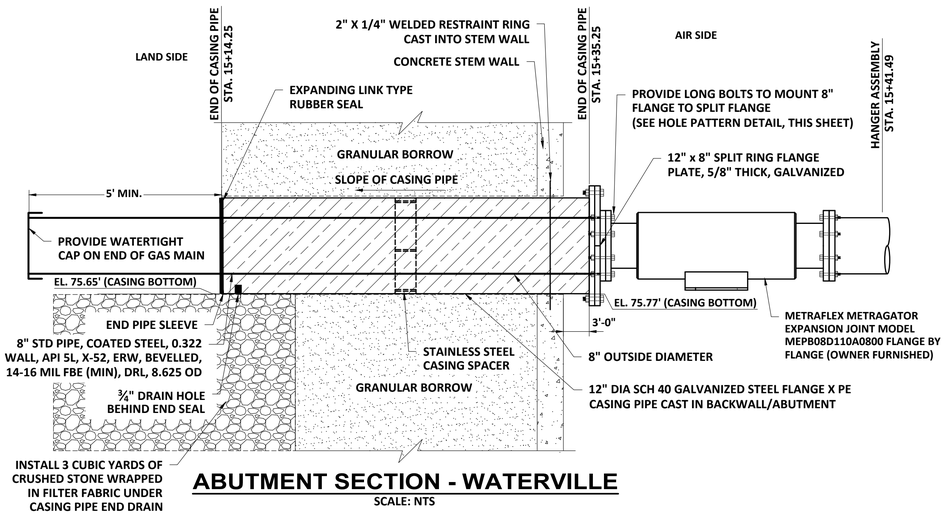
SUMMIT NATURAL GAS
TICONIC BRIDGE GAS MAIN CROSSING
WATERVILLE-WINSLOW, MAINE

GAS MAIN HANGER LOCATION PLAN AND PROFILE
STA. 15+15.19 TO STA. 21+20.70

DRAWING
C-2

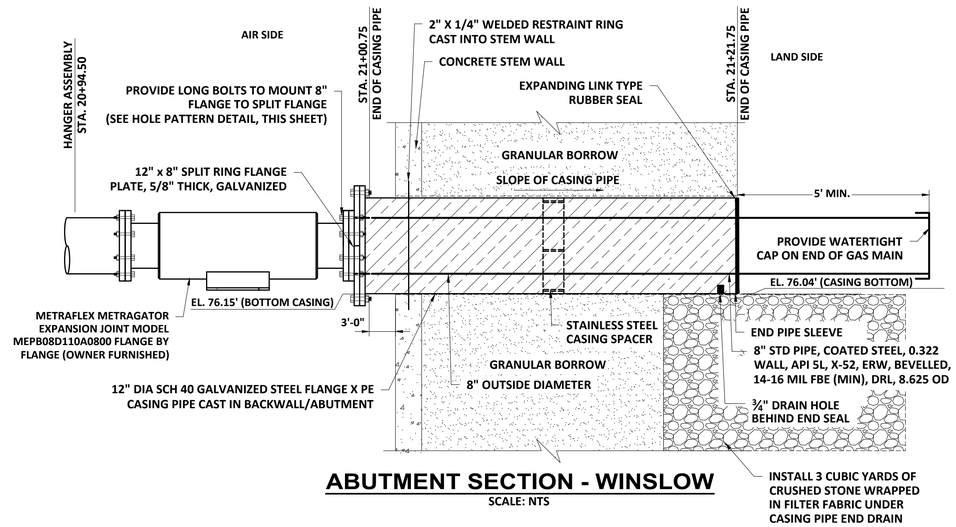
J:\ENG\ME\WATERVILLE\21044-TICONICBRIDGEGASMAINHANGERDESIGN\DRAWINGS\CIV\21044-CS-PLANPROFILE.DWG | PlanProfile | 1:10.12364677 | --- | 8/23/2022 10:36:53 AM | WILLIAM.EDGAR

LAST SAVED BY: WILLIAM.EDGAR 8/23/2022 10:34 AM



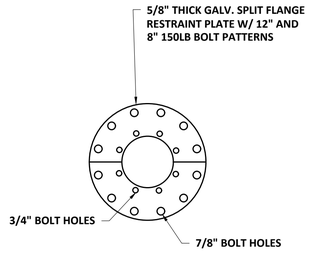
ABUTMENT SECTION - WATERVILLE

SCALE: NTS



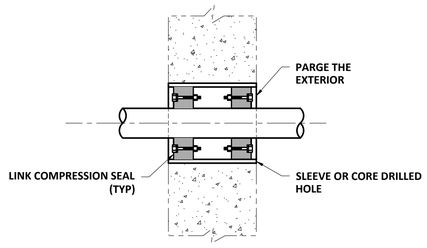
ABUTMENT SECTION - WINSLOW

SCALE: NTS



SPLIT RING FLANGE PLATE DETAIL

SCALE: NTS



PIPING PENETRATION DETAIL

SCALE: NTS

NO	REVISIONS	APP'D	DATE
1			
2			
3			
4			
5			

PROJECT NO: 21044
DESIGNED: D.LACOMBE
CAD COORD: W.EDGAR
CAD: W.EDGAR
CHECKED: D.LARY
DATE: 05/25/2022
APPROVED: D.LACOMBE
DATE: 08/23/2022
SUBMISSION: CONTRACT DRAWINGS

STATE OF MAINE
DUSTIN J. LACOMBE
No. 15226
REGISTERED PROFESSIONAL ENGINEER
8/23/22

WRIGHT-PIERCE
207.725.8721 | www.wright-pierce.com
11 BOWDOIN MILL ISLAND, SUITE 140, TOPSHAM, ME 04086

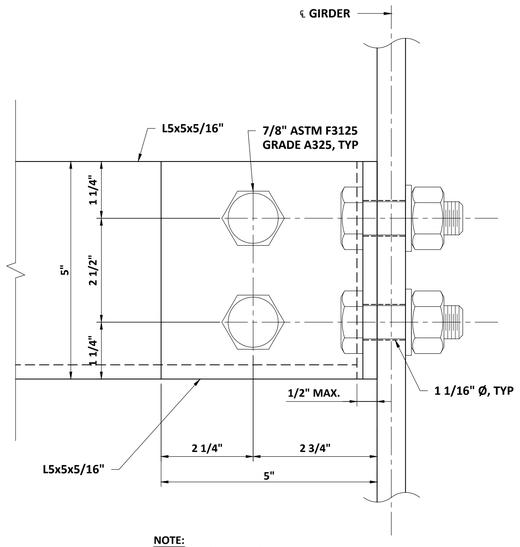
SUMMIT NATURAL GAS
TICONIC BRIDGE GAS MAIN CROSSING
WATERVILLE-WINSLOW, MAINE

DETAILS I

DRAWING
C-3

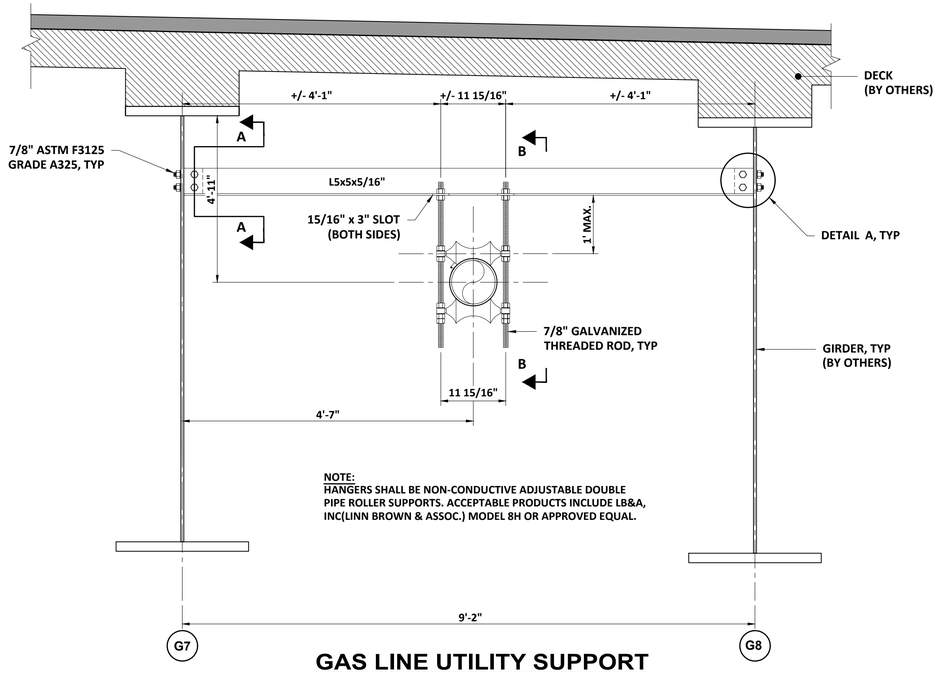
J:\ENG\ME\WATERVILLE\21044-TICONICBRIDGEGASMAINHANGERDESIGN\DRAWINGS\CIV\21044-CS-DETAILS.DWG | Details I | 1:1.0.12364677 | ---- | 8/23/2022 10:37:03 AM | WILLIAM.EDGAR

LAST SAVED BY: RYAN.BEISAW 8/23/2022 10:32 AM



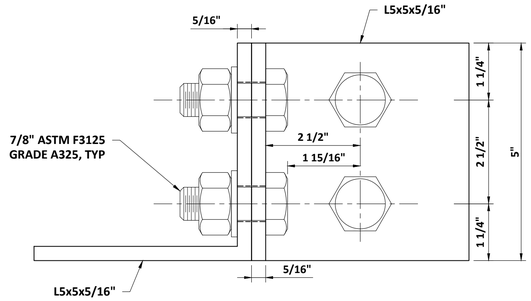
NOTE:
BACK SIDE SHOWN FOR CLARITY.

DETAIL A
SCALE: NTS

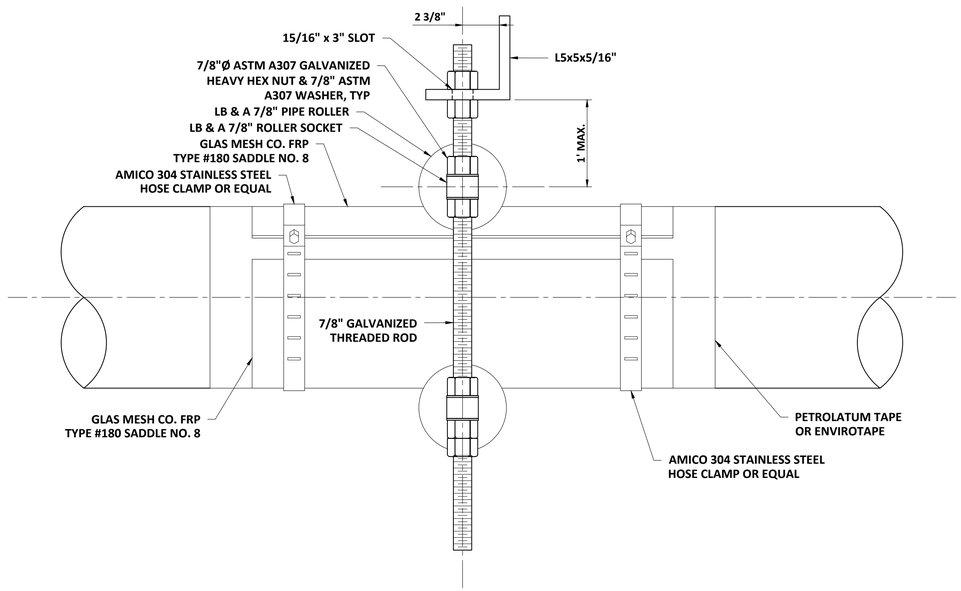


NOTE:
HANGERS SHALL BE NON-CONDUCTIVE ADJUSTABLE DOUBLE PIPE ROLLER SUPPORTS. ACCEPTABLE PRODUCTS INCLUDE LB&A, INC(LINN BROWN & ASSOC.) MODEL 8H OR APPROVED EQUAL.

GAS LINE UTILITY SUPPORT
SCALE: NTS



SECTION A-A
SCALE: NTS



SECTION B-B
SCALE: NTS

NO	REVISIONS	APP'D	DATE
1			
2			
3			
4			
5			

PROJECT NO: 21044
DESIGNED: D.LACOMBE
CAD COORD: W.EDGAR
CAD: R.BEISAW
CHECKED: D.LABY
DATE: 05/25/2022
APPROVED: D.LACOMBE
DATE: 08/23/2022
SUBMISSION: CONTRACT DRAWINGS

STATE OF MAINE
DUSTIN J. LACOMBE
No. 15276
REGISTERED PROFESSIONAL ENGINEER
8/23/22

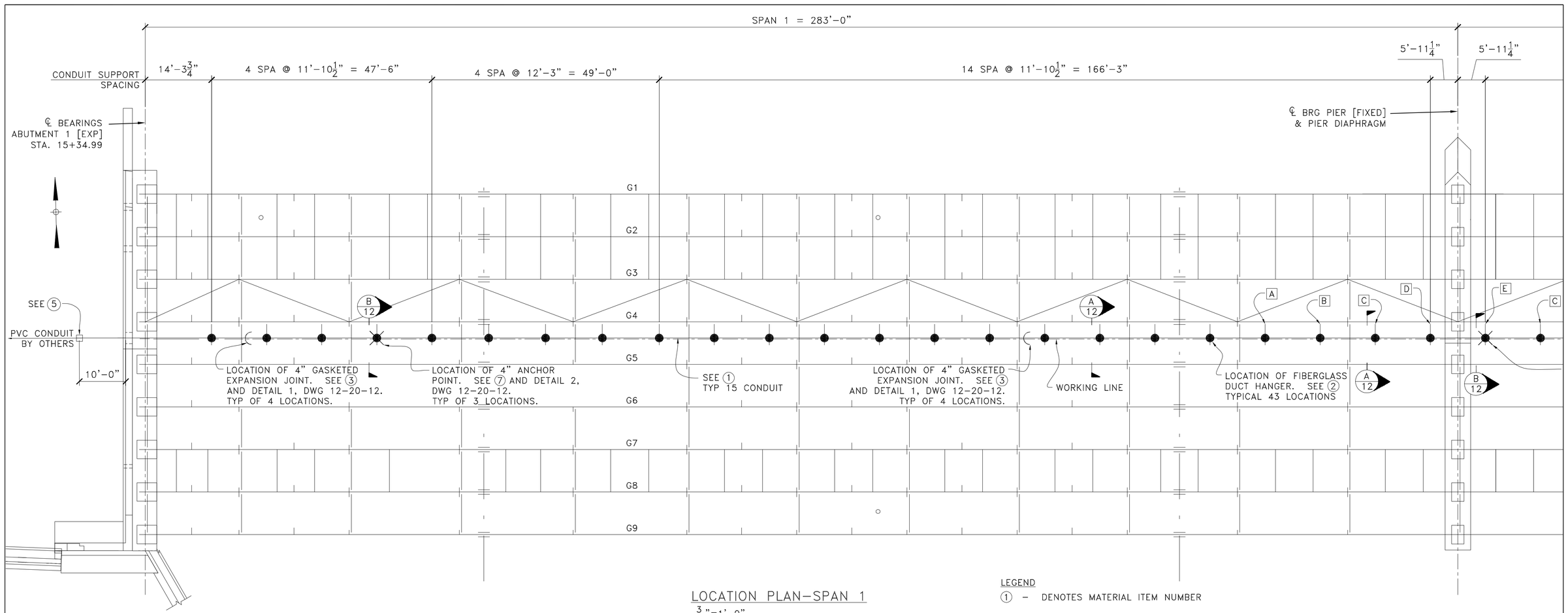
WRIGHT-PIERCE
207.725.8721 | www.wright-pierce.com
11 BOWDOIN MILL ISLAND, SUITE 140, TOPSHAM, ME 04086

SUMMIT NATURAL GAS
TICONIC BRIDGE GAS MAIN CROSSING
WATERVILLE-WINSLOW, MAINE

DETAILS II

DRAWING
C-4

J:\ENG\ME\WATERVILLE\21044-TICONICBRIDGEGASMAINHANGERDESIGN\DRAWINGS\CIVIL\21044-CS-DETAILSII.DWG | Details II | 1:10.12364677 | — | 8/23/2022 10:37:06 AM | WILLIAM.EDGAR



LOCATION PLAN-SPAN 1

$\frac{3}{32}$"=1'-0"

GENERAL NOTES

1) ALL ITEMS WITH PART NUMBERS ARE AMERICAN U-TEL, INC. STANDARD ITEMS SUPPLIED BY:
AMERICAN U-TEL, INC.
9760 SMITH ROAD
WILLOUGHBY, OHIO 44094
UNLESS OTHERWISE NOTED.
2) THESE DRAWINGS ARE BASED ON AVAILABLE PRELIMINARY BRIDGE DESIGN DRAWINGS. CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE FABRICATION AND INSTALLATION OF CONDUITS AND SUPPORTS.
3) SUBGRADE CONDUIT INSTALLATION BY OTHERS.
4) FIBERGLASS DUCT SUPPORTS ARE DESIGNED FOR A MAXIMUM CABLE LOAD OF 8.0 LBS PER FT PER DUCT. THE TOTAL TELEPHONE AND CONDUIT LOAD AT A SUPPORT IS 600 LBS MAXIMUM.
5) 4" STRAIGHT COUPLINGS SHALL BE INSTALLED AS REQUIRED.
6) THE CONTRACTOR IS REQUIRED TO COMPLY WITH ALL NATIONALLY ACCEPTED SAFETY PRACTICES, OSHA AND ANY OTHER SAFETY REQUIREMENTS IMPOSED BY THE OWNER, AGENCY OR ANY OTHER PARTIES WHICH MAY HAVE JURISDICTION OVER SAFETY.
7) DESIGN OF 4" DUCT BASED ON AMERICAN U-TEL PART NO. [12370] FIBERGLASS CONDUIT WITH THE FOLLOWING CHARACTERISTICS LISTED IN A THRU D:
A)4" FIBERGLASS DUCTS ARE TO HAVE THREADED JOINTS WITH 3000 LBS PULL OUT STRENGTH UNBONDED.
B)4" DIA. FIBERGLASS DUCTS ARE TO HAVE ULTIMATE TENSILE STRENGTH OF 10,500 PSI PER ASTM D-2105.
C)4" IPS:4.5" O.D. x 4.36" I.D. x 30 FT LENGTH
D)CAPABLE OF MAIN/INTERIOR HANGER SUPPORT SPANS OF UP TO 21.2 FT. FOR 3 LBS. PER FT. CABLE, 17.2 FT. FOR 8 LBS. PER FT. CABLE, AND 25.5 FT. FOR 1 LBS. PER FT. CABLE BASED ON NOT EXCEEDING 5/8" MIDSPAN DEFLECTION.
8) DURING INSTALLATION, THE DUCT EXPANSION JOINTS MUST BE SET TO THE PROPER LENGTH ACCORDING TO THE AMBIENT TEMPERATURE. REFER TO THE EXPANSION JOINT MANUFACTURER'S INSTRUCTIONS. DURING TRANSFER OF CONDUIT FROM TEMPORARY TO FINAL LOCATION, BE SURE TO MAINTAIN THE EXPANSION JOINTS.
9) ALL CONNECTION BETWEEN DUCT SECTIONS, GASKETED EXPANSION JOINTS, SPLIT ANCHOR RINGS, ADAPTERS AND COUPLINGS ARE TO BE BONDED. REFER TO MANUFACTURER'S INSTRUCTIONS FOR BONDING PROCEDURES.
10) CAP THE ENDS OF THE DUCTS IF THE UNDERGROUND PORTION OF THE WORK IS NOT DONE AT THE SAME TIME AS THE BRIDGE PORTION.
11) ALL ATTACHMENT RODS, SPACER RODS, NUTS, LOCK AND FLAT WASHERS IN ITEM 2 AND 12 TO BE ZINC PLATED.
12) THIS DESIGN IS FOR THE EXPRESS PURPOSE FOR USE ON THE TICONIC BRIDGE OVER THE KENNEBEK RIVER IN WATERVILLE-WINSLOW, MAINE AND IS NOT TO BE USED ELSEWHERE.
13) ALL ROLLED SHAPES FOR CONDUIT SUPPORTS TO BE ASTM A992, MIN Fy=50 KSI, GALVANIZED. ALL PLATE TO BE ASTM A572, MIN Fy=50KSI. ALL HIGH STRENGTH BOLTS (ITEM 11 AND 13) TO BE ASTM A325 WITH NUTS AND HARDENED FLAT WASHERS, GALVANIZED.
14) ROLLED SHAPES AND PLATES TO BE GALVANIZED PER ASTM A123. ITEM 8, 9 AND 10 TO BE GALVANIZED ONLY AFTER ASSEMBLY. HIGH STRENGTH BOLTS AND HARDENED WASHERS TO BE GALVANIZED PER ASTM A153.
15) ALL $\frac{3}{4}$"ø HIGH STRENGTH BOLTS (ITEM 11 AND 13) TO BE TIGHTENED PER A.I.S.C. "STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS", SECTION 5 TO A MINIMUM FASTENER TENSION OF 28 KIPS. GALVANIZED SURFACES IN CONTACT AT CONNECTIONS SHALL BE HAND ROUGHENED PER SECTION 3(C).
16) REINFORCEMENT AROUND UTILITY OPENINGS AT EACH ABUTMENTS BY OTHERS.
17) CONDUIT SUPPORT SPACING CAN BE MODIFIED 12"± TO AVOID SPLICES, ETC. SPACING ADJUSTMENTS HAVE TO BE COORDINATED WITH THE LOCATIONS OF THE TEMPORARY SUPPORTS ON THE EXISTING BRIDGE THAT ARE PLACED DURING STAGE 1.
18) ALL HOLES FOR TELEPHONE UTILITY SUPPORTS TO BE $\frac{13}{16}$"ø U.O.N.

LEGEND
(1) – DENOTES MATERIAL ITEM NUMBER
– DENOTES GASKETED EXPANSION JOINT
– DENOTES HANGER AND CONDUIT SUPPORT LOCATION
– DENOTES ANCHOR POINT, HANGER AND CONDUIT SUPPORT LOCATION
[A] – HANGER SUPPORT LOCATIONS AT VARIABLE DEPTH GIRDER

REV	COMMENTS	BY	DATE
1	FOR APPROVAL	AE	06/20/22
B	PRELIMINARY	AE	05/27/22
A	PRELIMINARY	AE	02/28/22

JOB NO. 12-20

STATE OF MAINE ANDREW J. ELD 10262 LICENSED PROFESSIONAL ENGINEER

PE NO. 10262

TICONIC BRIDGE OVER THE KENNEBEK RIVER
WATERVILLE-WINSLOW, MAINE

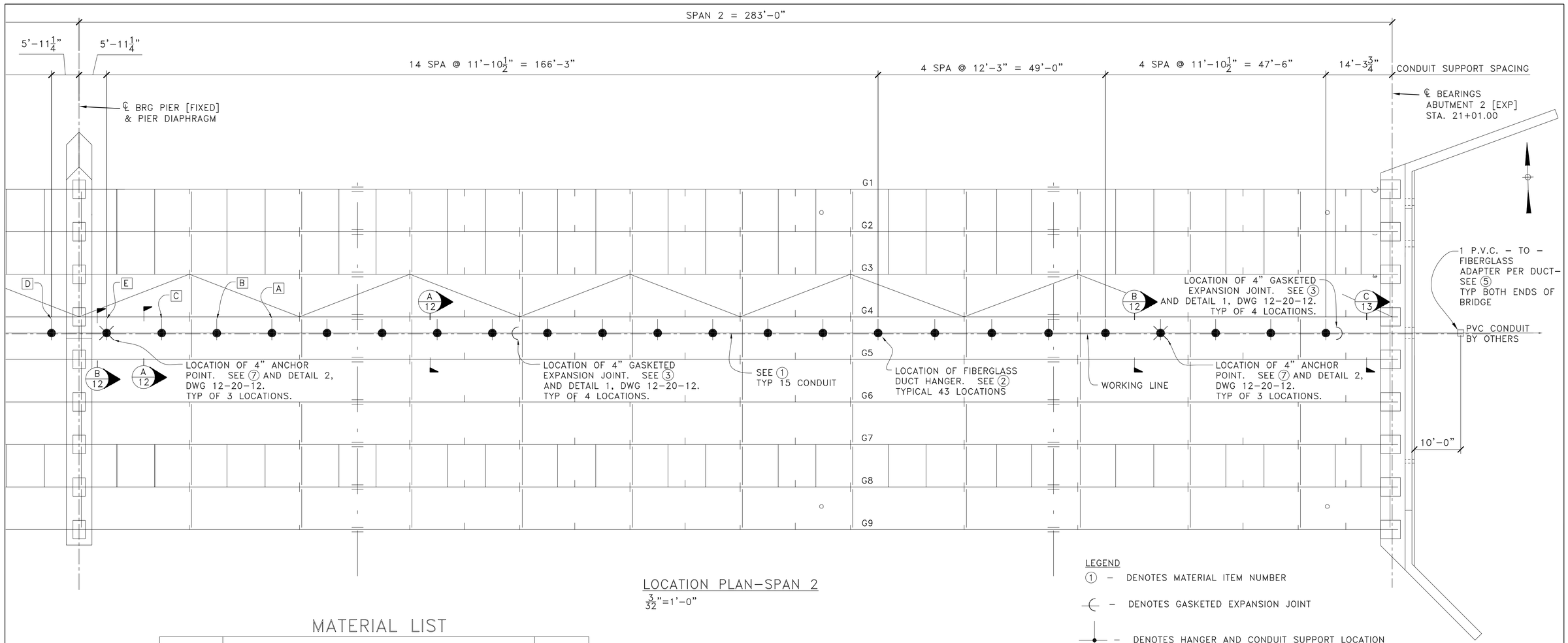
TELEPHONE CONDUIT SUPPORTS LOCATION PLAN 1

ANDREW J. ELD, P.E.

OWNER: FAIRPOINT

FURNISHED BY: AMERICAN U-TEL
9957 HOBART ROAD
WILLOUHGBY, OHIO 44094
(440)946-6027 FAX (440)946-7285

CHECKED BY: AE DATE: 02-13-22
DRAWN BY: WS DATE: 02-11-22
DRAWING NO: 12-20-10 SH. 1 OF 1



LOCATION PLAN–SPAN 2

3/32"=1'–0"

LEGEND

(1) – DENOTES MATERIAL ITEM NUMBER

– DENOTES GASKETED EXPANSION JOINT

– DENOTES HANGER AND CONDUIT SUPPORT LOCATION

– DENOTES ANCHOR POINT, HANGER AND CONDUIT SUPPORT LOCATION

[A] – HANGER SUPPORT LOCATIONS AT VARIABLE DEPTH GIRDER

MATERIAL LIST

ITEM NO.	DESCRIPTION AND AMERICAN U–TEL[PART NO.]	QUANTITY
(1)	*4" IPS – 4 1/2" O.D. FIBERGLASS DUCT WITH THREADED ENDS [12370]. SEE G.N. NO'S 7 & 9.	9,000 FT
(2)	*FIBERGLASS 5Wx3H STANDARD 4" DUCT HANGER. SEE G.N. NO. 11.	43
(3)	*4" GASKETED EXPANSION JOINT [12352]. SEE G.N. NO'S 8 & 9.	60
(4)	*4" STRAIGHT COUPLING [12348]. SEE G.N. NO'S 5 & 9.	480
(5)	*4" PVC ADAPTER TO FIBERGLASS [12357]. SEE G.N. NO 9.	30
(6)	ADHESIVE KIT [12358].	100
(7)	4" SPLIT ANCHOR RINGS [12351]. SEE G.N. NO. 9.	90
(8)	GALVANIZED CONDUIT SUPPORT W8x40 x 4'–11 7/16" LONG. SEE G.N. NO'S 13 & 14.	43
(9)	GALVANIZED CONDUIT SUPPORT W8x40 x 4'–11 7/16" LONG. SEE G.N. NO'S 13 & 14.	3
(10)	GALVANIZED CONDUIT SUPPORT W8x40 x 4'–11 7/16" LONG. SEE G.N. NO'S 13 & 14.	3
(11)	3/4" DIA. ASTM A325 FASTENER SET: 3/4" DIA. x 2 1/2" LONG TYPE 1 BOLT. ONE HEX NUT AND TWO HARDENED FLAT WASHERS. ALL PARTS GALVANIZED. SEE G.N. NO. 13 TO 15 THESE BOLTS TO BE USED WHERE THE GIRDER WEB IS 5/8"	380

MATERIAL LIST

ITEM NO.	DESCRIPTION AND AMERICAN U–TEL[PART NO.]	QUANTITY
(12)	*FIBERGLASS 5Wx3H MODIFIED 4" DUCT HANGER. SEE G.N. NO. 11.	3
(13)	3/4" DIA. ASTM A325 FASTENER SET: 3/4" DIA. x 2 3/4" LONG TYPE 1 BOLT. ONE HEX NUT AND TWO HARDENED FLAT WASHERS. ALL PARTS GALVANIZED. SEE G.N. NO. 13 TO 15 THESE BOLTS TO BE USED WHERE THE GIRDER WEB IS 7/8"	110
(14)	4" IPS – 4 1/2" O.D. FIBERGLASS SPLIT DUCTx 2'–9" WITH H–STRIP [12370–SP]. SEE G.N. NO. 7 & 9.	30

*NOTE–NUMEROUS COMPONENTS OF THE FINAL TELEPHONE CONDUIT SYSTEM WILL BE MOVED FROM THE TEMPORARY SUPPORT SYSTEM [SEE DRAWINGS 12–20–20 TO 12–20–28] TO THE FINAL AND PERMANENT TELEPHONE CONDUIT SUPPORT SYSTEM SHOWN ON DRAWINGS 12–20–10 TO 12–20–14. THESE DRAWINGS ARE DEPICTING WHAT THE AS–BUILTS OF THE FINAL CONDUIT SUPPORT SYSTEM IS TO LOOK LIKE, THEREFORE THE QUANTITIES ON THE TEMPORARY SUPPORT DRAWINGS ARE LISTED ON THIS DRAWING AS WELL.

REV	COMMENTS	BY	DATE
1	FOR APPROVAL	AE	06/20/22
B	PRELIMINARY	AE	05/27/22
A	PRELIMINARY	AE	02/28/22

JOB NO. 12–20

STATE OF MAINE
ANDREW J. ELD
10262
LICENSED PROFESSIONAL ENGINEER

PE NO. 10262

TICONIC BRIDGE OVER THE KENNEBEK RIVER
WATERVILLE–WINSLOW, MAINE

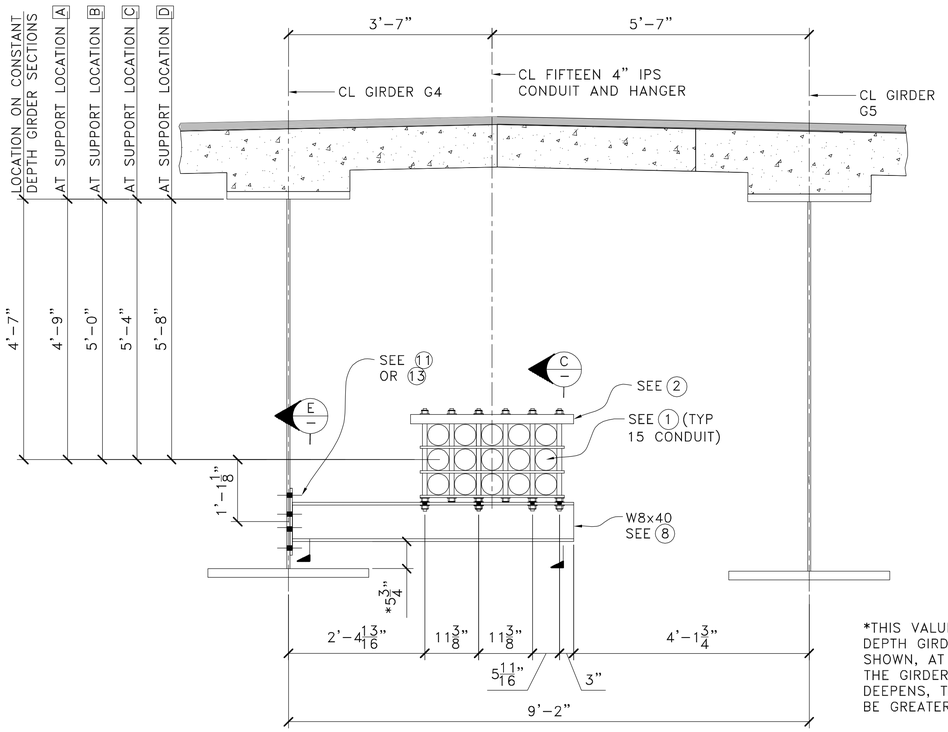
TELEPHONE CONDUIT SUPPORTS
LOCATION PLAN 2

ANDREW J. ELD, P.E.

OWNER: FAIRPOINT

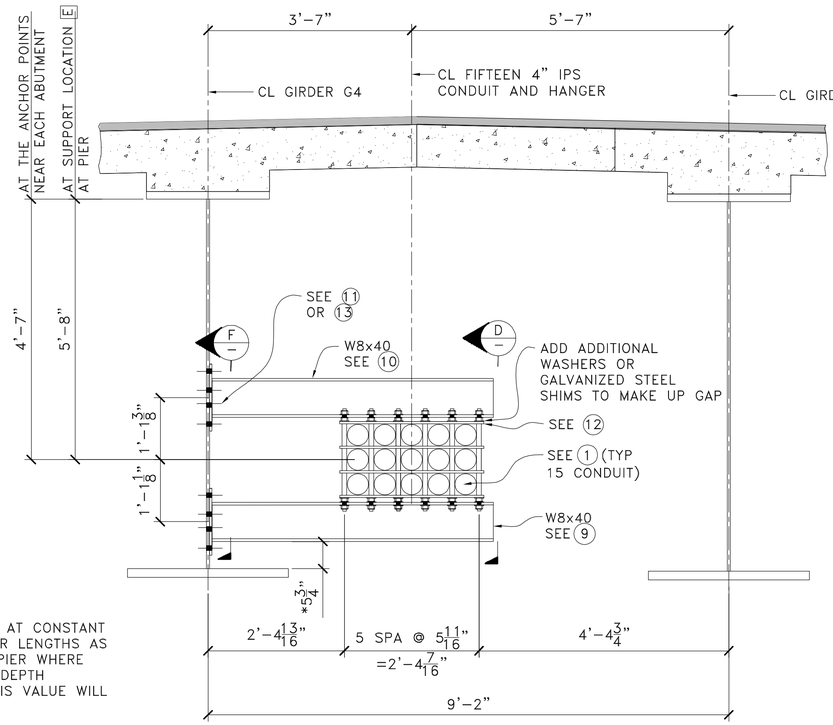
FURNISHED BY: AMERICAN U–TEL
9957 HOBART ROAD
WILLOUHGBY, OHIO 44094
(440)946–6027 FAX (440)946–7285

CHECKED BY: AE	DATE: 02–13–22
DRAWN BY: WS	DATE: 02–11–22
DRAWING NO: 12–20–11	SH. 1 OF 1



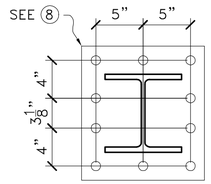
SECTION A/10 A/11 HANGER DETAIL AT TYPICAL SUPPORT. TYP OF 43 TOTAL SUPPORTS.
3/4"=1'-0

*THIS VALUE AT CONSTANT DEPTH GIRDER LENGTHS AS SHOWN, AT PIER WHERE THE GIRDER DEPTH DEEPENS, THIS VALUE WILL BE GREATER

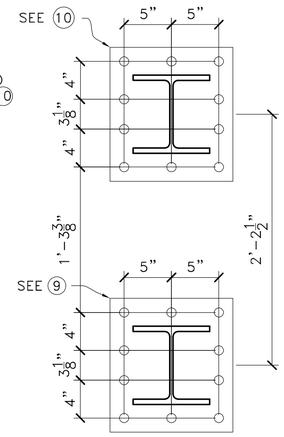


SECTION B/10 B/11 HANGER DETAIL AT ANCHOR POINT. TYP OF 3 TOTAL SUPPORTS.
3/4"=1'-0

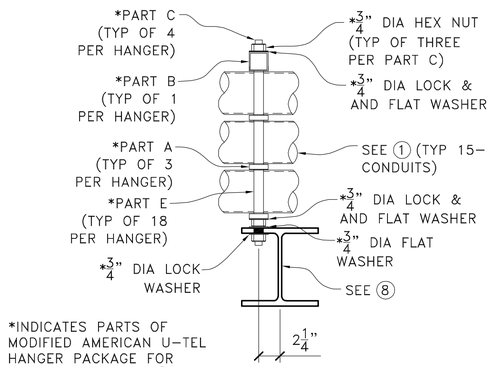
SEE 11 AND 13 FOR BOLTS TO BE USED TO CONNECT ITEMS 8 TO 10 TO THE NEW GIRDERS



SECTION E/— 1 1/2"=1'-0 CONNECTION TO GIRDER WEB AT TYP SUPPORT

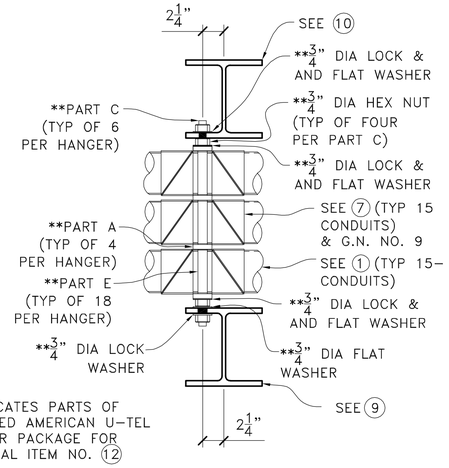


SECTION F/— 1 1/2"=1'-0 CONNECTION TO GIRDER WEB AT ANCHOR POINT



*INDICATES PARTS OF MODIFIED AMERICAN U-TEL HANGER PACKAGE FOR MATERIAL ITEM NO. 2

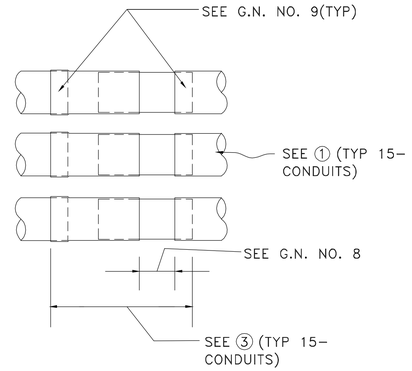
SECTION C/— 1 1/2"=1'-0 STANDARD SUPPORT



**INDICATES PARTS OF MODIFIED AMERICAN U-TEL HANGER PACKAGE FOR MATERIAL ITEM NO. 12

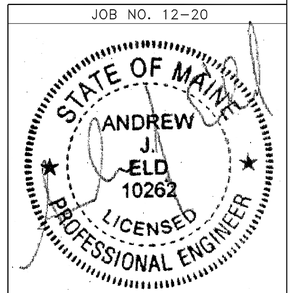
SECTION D/— 1 1/2"=1'-0 ANCHOR POINT

DETAIL 2/10 2/11 1 1/2"=1'-0



DETAIL 1/10 1/11 ITEM 3 1 1/2"=1'-0

JOB NO. 12-20



PE NO. 10262

REV	COMMENTS	BY	DATE
1	FOR APPROVAL	AE	06/20/22
B	PRELIMINARY	AE	05/27/22
A	PRELIMINARY	AE	02/28/22

TICONIC BRIDGE OVER THE KENNEBEC RIVER
WATERVILLE-WINSLOW, MAINE

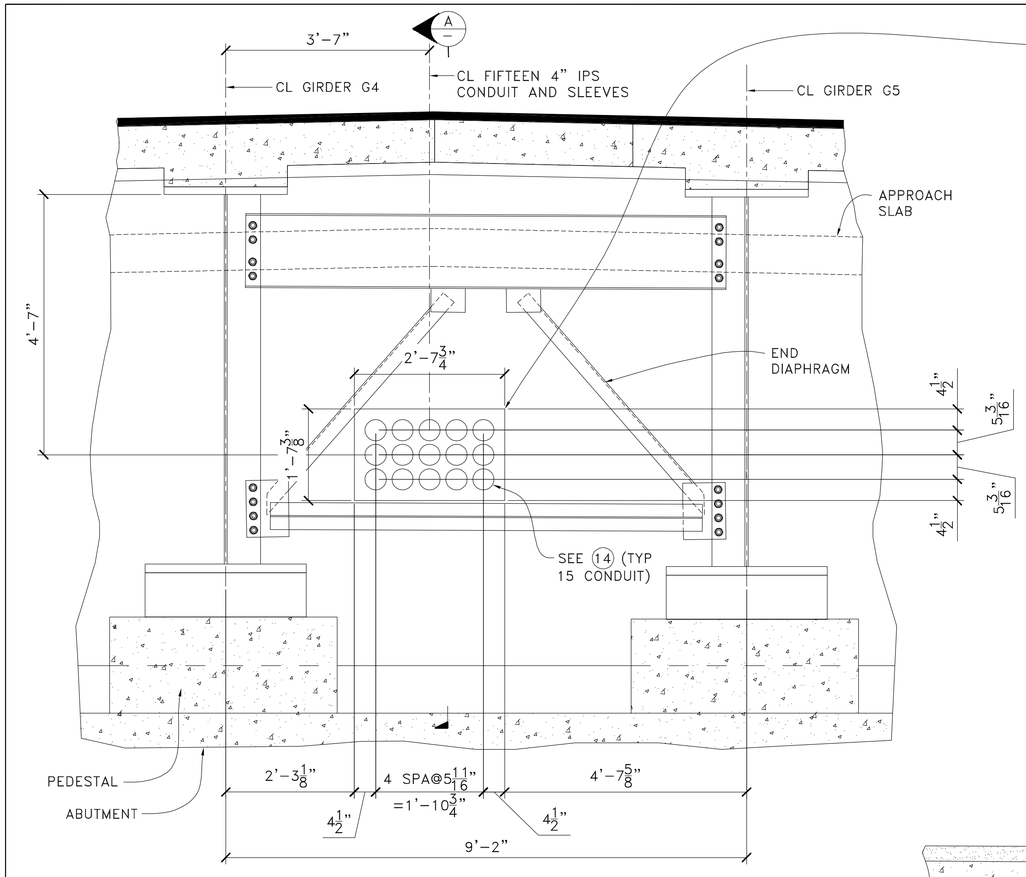
TELEPHONE CONDUIT SUPPORTS UTILITY SUPPORT DETAILS

ANDREW J. ELD, P.E.

OWNER: FAIRPOINT

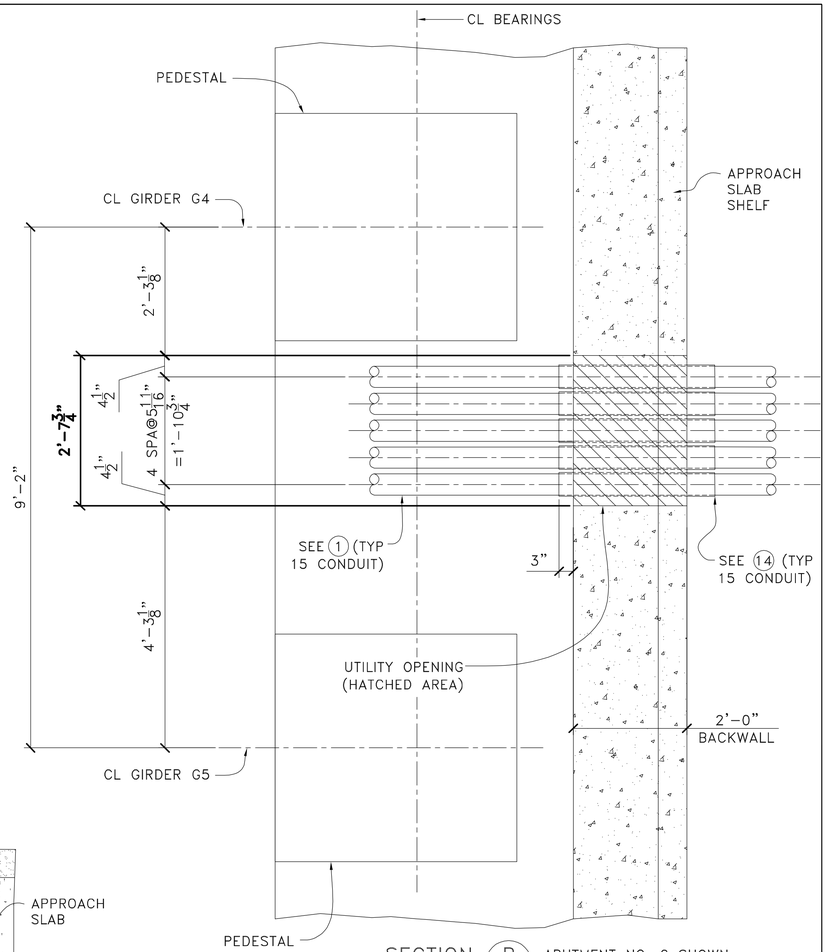
FURNISHED BY: AMERICAN U-TEL
9957 HOBART ROAD
WILLOUHGBY, OHIO 44094
(440)946-6027 FAX (440)946-7285

CHECKED BY: AE	DATE: 02-13-22
DRAWN BY: WS	DATE: 02-11-22
DRAWING NO: 12-20-12	SH. 1 OF 1

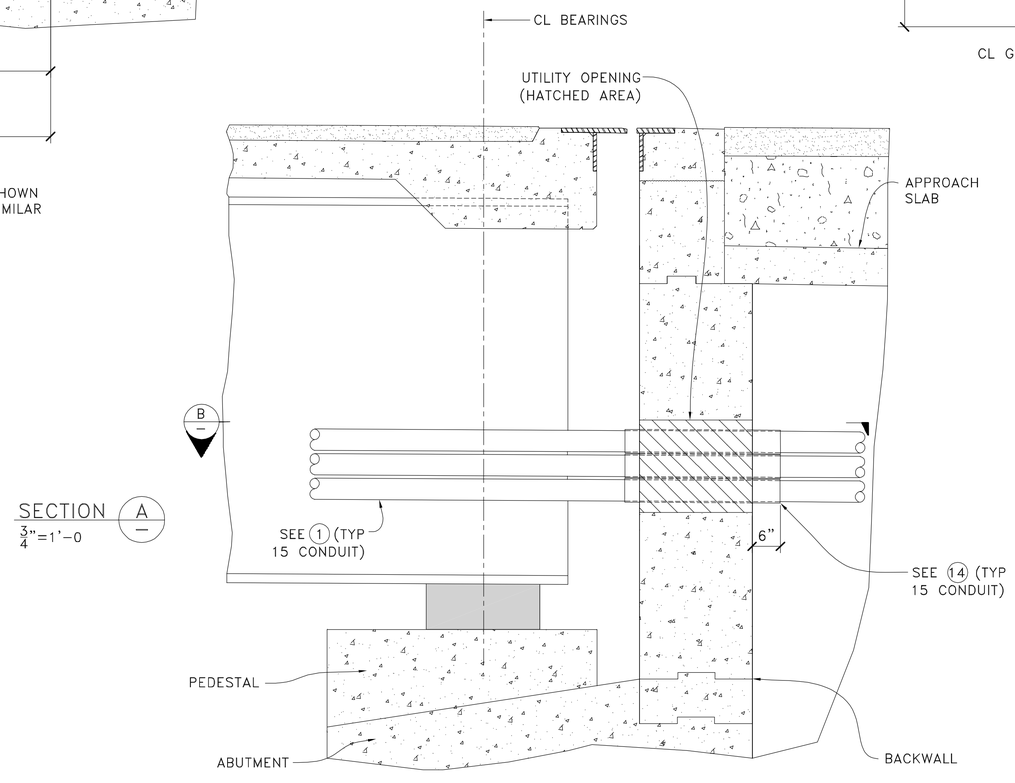


PROVIDE 1'-7 3/8" x 2'-7 3/4" UTILITY OPENING IN BACKWALL. STEEL SLEEVES (SEE (14)) TO BE SET INTO OPENING IN BACKWALL UTILIZING TEMPLATE. PACK WITH NON-SHRINK GROUT. INSTALL SLEEVES PARALLEL TO GIRDERS AND AT SAME LONGITUDINAL SLOPE AS GIRDERS. THE UTILITY OPENING TO HAVE THE SIDES OF THE OPENING PARALLEL TO THE GIRDERS.
ALTERNATE: CAST SLEEVES INTO BACKWALL DURING BACKWALL CONSTRUCTION.

SECTION C / 11
3/4"=1'-0
ABUTMENT NO. 2 SHOWN
ABUTMENT NO. 1 SIMILAR



SECTION B / —
3/4"=1'-0
ABUTMENT NO. 2 SHOWN
ABUTMENT NO. 1 SIMILAR



SECTION A / —
3/4"=1'-0

REV	COMMENTS	BY	DATE
1	FOR APPROVAL	AE	06/20/22
B	PRELIMINARY	AE	05/27/22
A	PRELIMINARY	AE	02/28/22

JOB NO. 12-20

STATE OF MAINE
ANDREW J. ELD 10262
LICENSED PROFESSIONAL ENGINEER

PE NO. 10262

TICONIC BRIDGE OVER THE KENNEBEK RIVER
WATERVILLE-WINSLOW, MAINE

TELEPHONE CONDUIT SUPPORTS ABUTMENT DETAILS

ANDREW J. ELD, P.E.

OWNER: FAIRPOINT

FURNISHED BY: AMERICAN U-TEL
9957 HOBART ROAD
WILLOUHGBY, OHIO 44094
(440)946-6027 FAX (440)946-7285

CHECKED BY: AE DATE: 02-13-22
DRAWN BY: WS DATE: 02-11-22
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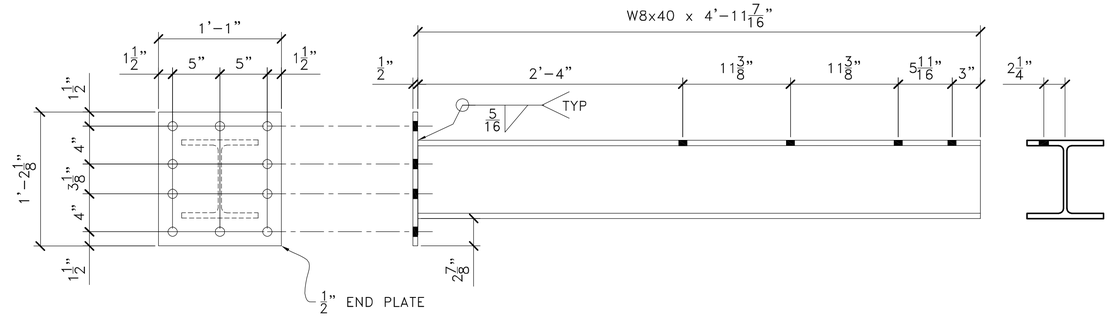
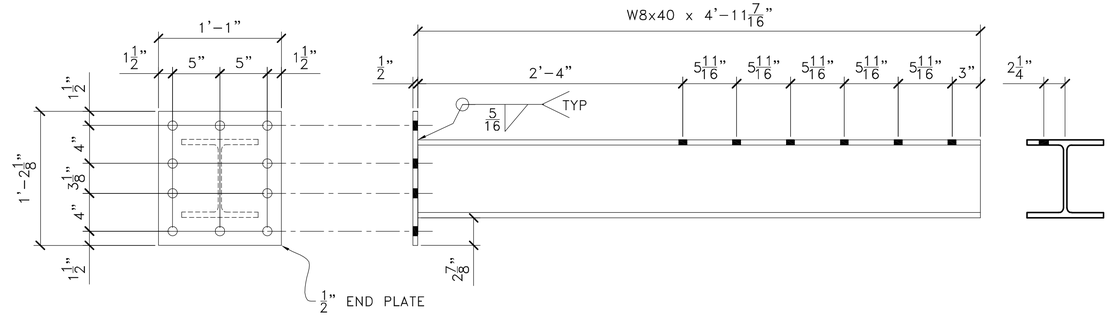
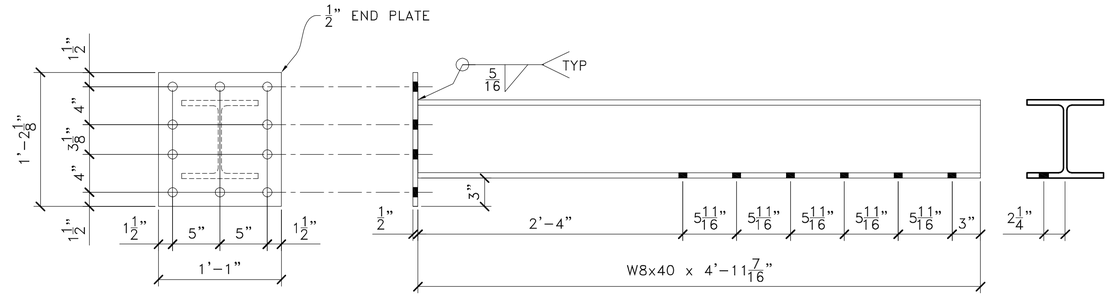


ITEM 8
QTY 43



ITEM 9
QTY 3



ITEM 10
QTY 3

NOTE:
1. ALL HOLES $1\frac{3}{16}$"ø U.O.N.

JOB NO. 12-20

STATE OF MAINE
ANDREW J. ELD
10262
LICENSED PROFESSIONAL ENGINEER

PE NO. 10262

REV	COMMENTS	BY	DATE
1	FOR APPROVAL	AE	06/20/22
A	PRELIMINARY	AE	05/27/22

TICONIC BRIDGE OVER THE
KENNEBEK RIVER
WATERVILLE-WINSLOW, MAINE

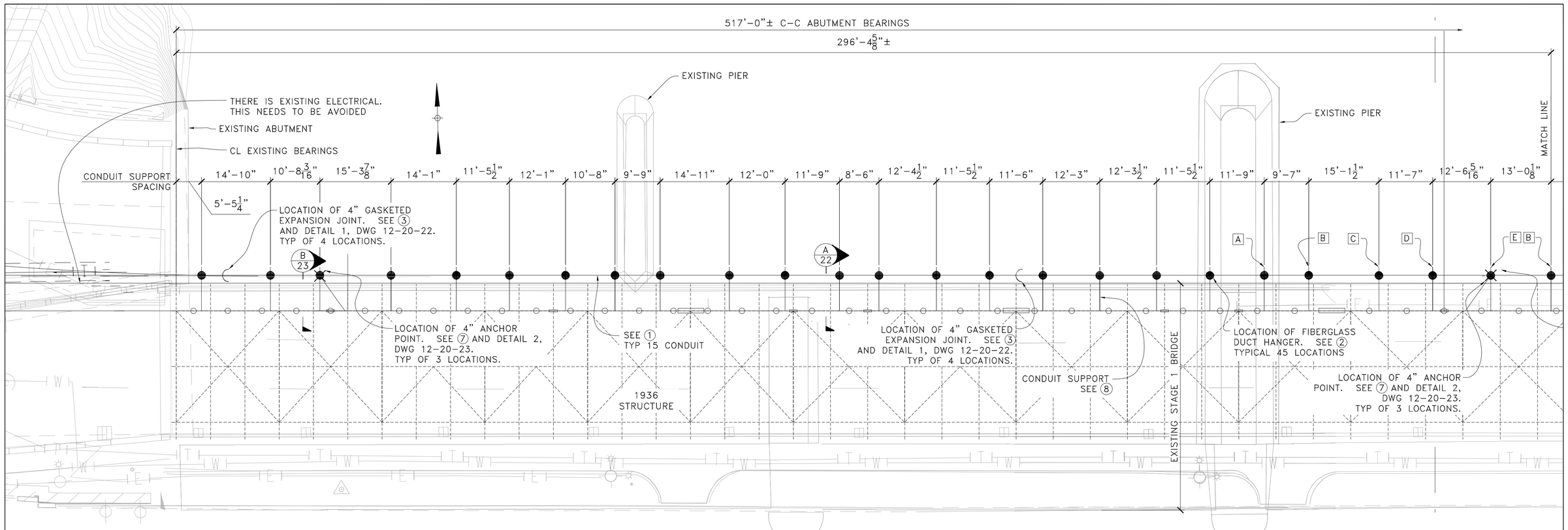
TELEPHONE CONDUIT SUPPORTS
UTILITY SUPPORT DETAILS

ANDREW J. ELD, P.E.

OWNER: FAIRPOINT

FURNISHED BY: AMERICAN U-TEL
9957 HOBART ROAD
WILLOUHGBY, OHIO 44094
(440)946-6027 FAX (440)946-7285

CHECKED BY: AE	DATE: 05-22-22
DRAWN BY: WS	DATE: 05-15-22
DRAWING NO: 12-20-14	SH. 1 OF 1



LOCATION PLAN–WEST HALF EXISTING BRIDGE

$\frac{3}{32}$"=1'–0"

LEGEND

(1) – DENOTES MATERIAL ITEM NUMBER

– DENOTES GASKETED EXPANSION JOINT

– DENOTES HANGER AND CONDUIT SUPPORT LOCATION

– DENOTES ANCHOR POINT, HANGER AND CONDUIT SUPPORT LOCATION

[A] – HANGER SUPPORT LOCATIONS ACROSS FROM VARIABLE DEPTH NEW GIRDER

GENERAL NOTES

1) ALL ITEMS WITH PART NUMBERS ARE AMERICAN U–TEL, INC. STANDARD ITEMS SUPPLIED BY:
AMERICAN U–TEL, INC.
9760 SMITH ROAD
WILLOUGHBY, OHIO 44094
UNLESS OTHERWISE NOTED.

2) THESE DRAWINGS ARE BASED ON AVAILABLE PRELIMINARY BRIDGE DESIGN DRAWINGS. CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE FABRICATION AND INSTALLATION OF CONDUITS AND SUPPORTS.

3) SUBGRADE CONDUIT INSTALLATION BY OTHERS.

4) FIBERGLASS DUCT SUPPORTS ARE DESIGNED FOR A MAXIMUM CABLE LOAD OF 8.0 LBS PER FT PER DUCT. THE TOTAL TELEPHONE AND CONDUIT LOAD AT A SUPPORT IS 600 LBS MAXIMUM.

5) 4" STRAIGHT COUPLINGS SHALL BE INSTALLED AS REQUIRED.

6) THE CONTRACTOR IS REQUIRED TO COMPLY WITH ALL NATIONALLY ACCEPTED SAFETY PRACTICES, OSHA AND ANY OTHER SAFETY REQUIREMENTS IMPOSED BY THE OWNER, AGENCY OR ANY OTHER PARTIES WHICH MAY HAVE JURISDICTION OVER SAFETY.

7) DESIGN OF 4" DUCT BASED ON AMERICAN U–TEL PART NO. [12370] FIBERGLASS CONDUIT WITH THE FOLLOWING CHARACTERISTICS LISTED IN A THRU D:
A)4" FIBERGLASS DUCTS ARE TO HAVE THREADED JOINTS WITH 3000 LBS PULL OUT STRENGTH UNBONDED.
B)4" DIA. FIBERGLASS DUCTS ARE TO HAVE ULTIMATE TENSILE STRENGTH OF 10,500 PSI PER ASTM D–2105.
C)4" IPS:4.5" O.D. x 4.36" I.D. x 30 FT LENGTH
D)CAPABLE OF MAIN/INTERIOR HANGER SUPPORT SPANS OF UP TO 21.2 FT. FOR 3 LBS. PER FT. CABLE, 17.2 FT. FOR 8 LBS. PER FT. CABLE, AND 25.5 FT. FOR 1 LBS. PER FT. CABLE BASED ON NOT EXCEEDING 5/8" MIDSPAN DEFLECTION.

8) DURING INSTALLATION, THE DUCT EXPANSION JOINTS MUST BE SET TO THE PROPER LENGTH ACCORDING TO THE AMBIENT TEMPERATURE. REFER TO THE EXPANSION JOINT MANUFACTURER'S INSTRUCTIONS.

9) ALL CONNECTION BETWEEN DUCT SECTIONS, GASKETED EXPANSION JOINTS, SPLIT ANCHOR RINGS, ADAPTERS AND COUPLINGS ARE TO BE BONDED. REFER TO MANUFACTURER'S INSTRUCTIONS FOR BONDING PROCEDURES.

10) CAP THE ENDS OF THE DUCTS IF THE UNDERGROUND PORTION OF THE WORK IS NOT DONE AT THE SAME TIME AS THE BRIDGE PORTION.

11) ALL ATTACHMENT RODS, SPACER RODS, NUTS, LOCK AND FLAT WASHERS IN ITEM 2 AND 6 TO BE ZINC PLATED.

12) THIS DESIGN IS FOR THE EXPRESS PURPOSE FOR USE ON THE TICONIC BRIDGE OVER THE KENNEBEK RIVER IN WATERVILLE–WINSLOW, MAINE AND IS NOT TO BE USED ELSEWHERE.

13) ALL CONDUIT SUPPORTS TO BE Fy=50 KSI MIN, GALVANIZED. ALL HIGH STRENGTH BOLTS (ITEM 12 AND 13) TO BE ASTM A325 WITH NUTS AND HARDENED FLAT WASHERS, GALVANIZED. HSS TUBE (ITEM 9) TO BE ASTM A500, GR B GALVANIZED.

14) ROLLED SHAPES, PLATES AND TUBE TO BE GALVANIZED PER ASTM A123. HIGH STRENGTH BOLTS AND HARDENED WASHERS TO BE GALVANIZED PER ASTM A153.

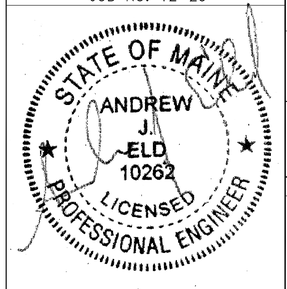
15) ALL $\frac{3}{4}$"ø HIGH STRENGTH BOLTS (ITEM 12 AND 13) TO BE TIGHTENED PER A.I.S.C. "STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS", SECTION 5 TO A MINIMUM FASTENER TENSION OF 28 KIPS. GALVANIZED SURFACES IN CONTACT AT CONNECTIONS SHALL BE HAND ROUGHENED PER SECTION 3(C).

16) REINFORCEMENT AROUND UTILITY OPENINGS AT EACH ABUTMENTS BY OTHERS.

17) CONDUIT SUPPORT SPACING CAN BE MODIFIED 12"± TO AVOID SPLICES, ETC. SPACING ADJUSTMENTS HAVE TO BE COORDINATED WITH THE LOCATIONS OF THE PERMANENT SUPPORTS ON THE PROPOSED BRIDGE THAT ARE PLACED DURING STAGE 1.

REV	COMMENTS	BY	DATE
1	FOR APPROVAL	AE	06/20/22
A	PRELIMINARY	AE	06/10/22

JOB NO. 12–20



PE NO. 10262

TICONIC BRIDGE OVER THE KENNEBEK RIVER
WATERVILLE–WINSLOW, MAINE

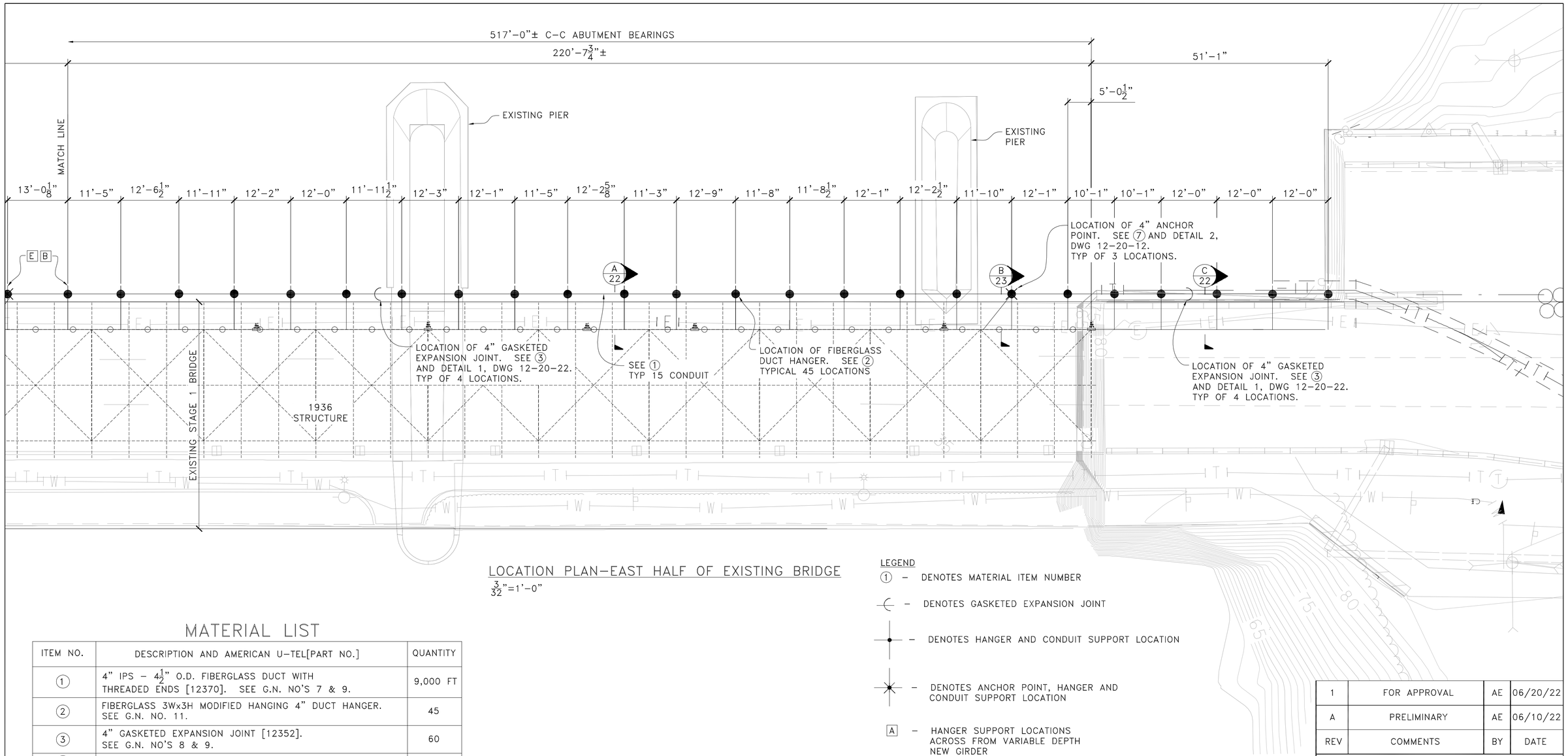
TEMPORARY TELEPHONE CONDUIT SUPPORTS LOCATION PLAN 1

ANDREW J. ELD, P.E.

OWNER: FAIRPOINT

FURNISHED BY: AMERICAN U–TEL
9957 HOBART ROAD
WILLOUHGBY, OHIO 44094
(440)946–6027 FAX (440)946–7285

CHECKED BY: AE	DATE: 02–13–22
DRAWN BY: WS	DATE: 02–11–22
DRAWING NO: 12–20–20	SH. 1 OF 1



LOCATION PLAN–EAST HALF OF EXISTING BRIDGE

$\frac{3}{32}$"=1'-0"

LEGEND

1 – DENOTES MATERIAL ITEM NUMBER

– DENOTES GASKETED EXPANSION JOINT

– DENOTES HANGER AND CONDUIT SUPPORT LOCATION

– DENOTES ANCHOR POINT, HANGER AND CONDUIT SUPPORT LOCATION

A – HANGER SUPPORT LOCATIONS ACROSS FROM VARIABLE DEPTH NEW GIRDER

MATERIAL LIST

ITEM NO.	DESCRIPTION AND AMERICAN U-TEL[PART NO.]	QUANTITY
1	4" IPS – $4\frac{1}{2}$" O.D. FIBERGLASS DUCT WITH THREADED ENDS [12370]. SEE G.N. NO'S 7 & 9.	9,000 FT
2	FIBERGLASS 3Wx3H MODIFIED HANGING 4" DUCT HANGER. SEE G.N. NO. 11.	45
3	4" GASKETED EXPANSION JOINT [12352]. SEE G.N. NO'S 8 & 9.	60
4	4" STRAIGHT COUPLING [12348]. SEE G.N. NO'S 5 & 9.	480
5	ADHESIVE KIT [12358].	100
6	FIBERGLASS 3Wx3H MODIFIED BASEMOUNT 4" DUCT HANGER. SEE G.N. NO. 11.	3
7	4" SPLIT ANCHOR RINGS [12351]. SEE G.N. NO. 9.	90
8	GALVANIZED CONDUIT SUPPORT W8x35 x 8'-$10\frac{1}{2}$" LONG. SEE G.N. NO'S 13 & 14.	40
9	GALVANIZED CONDUIT SUPPORT HSS8x8x$\frac{3}{8}$ x 9'-$4\frac{1}{2}$" LONG. SEE G.N. NO'S 13 & 14.	3
10	GALVANIZED CONDUIT SUPPORT C4x7.25 x 3'-$8\frac{7}{16}$" LONG. SEE G.N. NO'S 13 & 14.	3
11	GALVANIZED CONDUIT SUPPORT W8x35 x TBD. SEE G.N. NO'S 13 & 14.	5

MATERIAL LIST

ITEM NO.	DESCRIPTION AND AMERICAN U-TEL[PART NO.]	QUANTITY
12	$\frac{3}{4}$" DIA. ASTM A325 FASTENER SET: $\frac{3}{4}$" DIA. x $2\frac{1}{2}$" LONG TYPE 1 BOLT. ONE HEX NUT AND TWO HARDENED FLAT WASHERS. ALL PARTS GALVANIZED. SEE G.N. NO. 13 TO 15.	196
13	$\frac{3}{4}$" DIA. ASTM A325 FASTENER SET: $\frac{3}{4}$" DIA. x $2\frac{1}{4}$" LONG TYPE 1 BOLT. ONE HEX NUT AND TWO HARDENED FLAT WASHERS. ALL PARTS GALVANIZED. SEE G.N. NO. 13 TO 15.	6

REV	COMMENTS	BY	DATE
1	FOR APPROVAL	AE	06/20/22
A	PRELIMINARY	AE	06/10/22

JOB NO. 12-20

STATE OF MAINE ANDREW J. ELD 10262 LICENSED PROFESSIONAL ENGINEER

PE NO. 10262

TICONIC BRIDGE OVER THE KENNEBEK RIVER
WATERVILLE–WINSLOW, MAINE

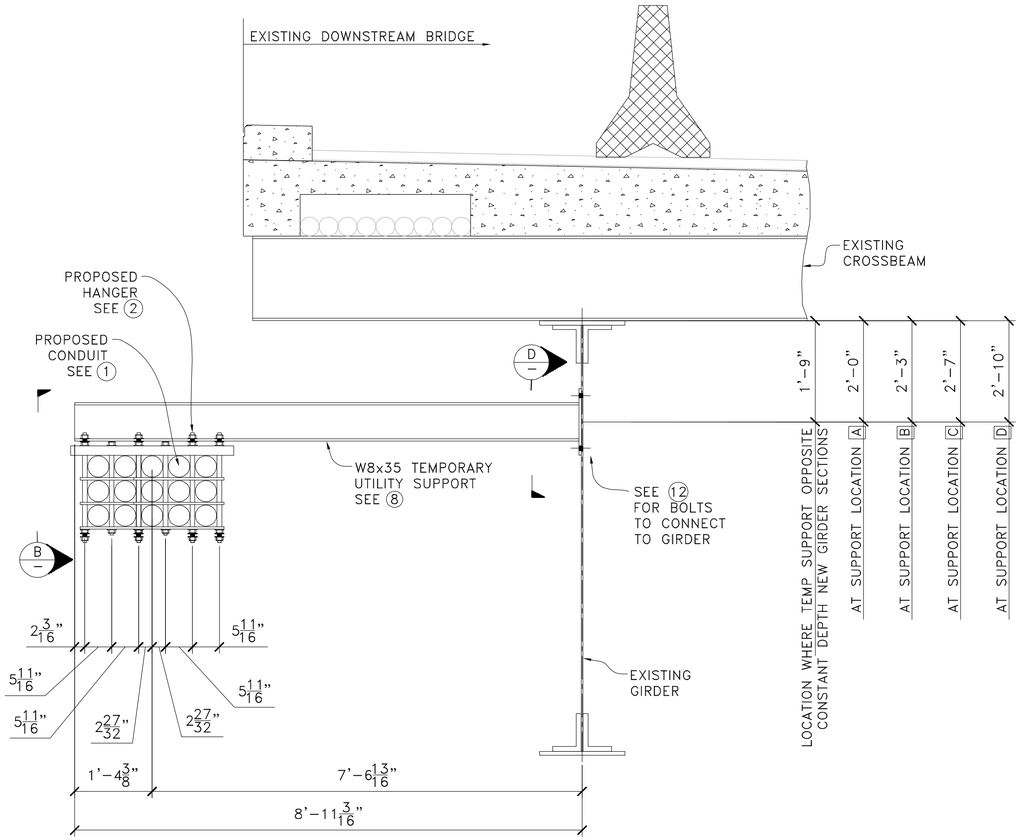
TEMPORARY TELEPHONE CONDUIT SUPPORTS LOCATION PLAN 2

ANDREW J. ELD, P.E.

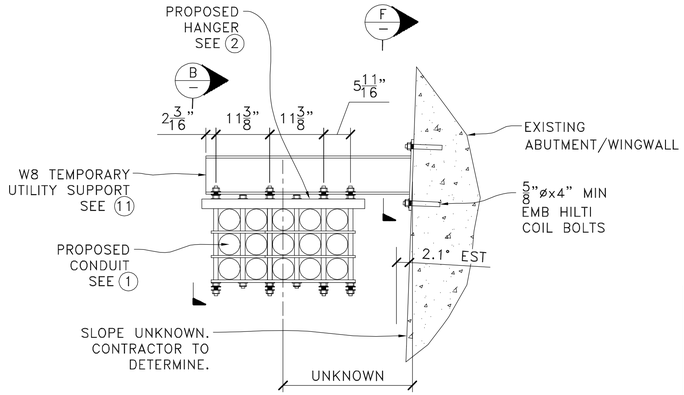
OWNER: FAIRPOINT

FURNISHED BY: AMERICAN U-TEL
9957 HOBART ROAD
WILLOUHGBY, OHIO 44094
(440)946-6027 FAX (440)946-7285

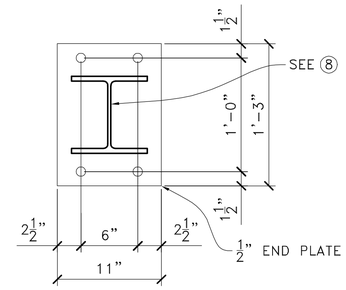
CHECKED BY: AE DATE: 02-13-22
DRAWN BY: WS DATE: 02-11-22
DRAWING NO: 12-20-21 SH. 1 OF 1



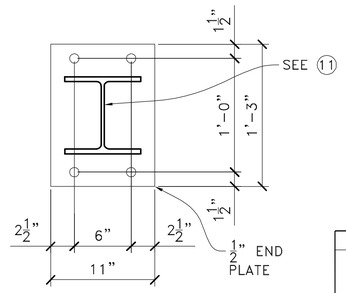
SECTION A/20 A/21 HANGER DETAIL AT TYPICAL SUPPORT. TYP OF 40 TOTAL SUPPORTS.
3/4"=1'-0



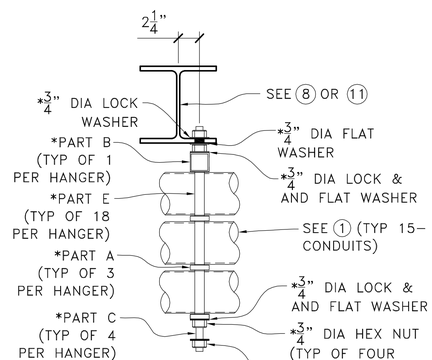
SECTION C/21 HANGER DETAIL AT ABUTMENT WINGWALL SUPPORT. TYP OF 5 TOTAL SUPPORTS.
3/4"=1'-0



SECTION D
1 1/2"=1'-0

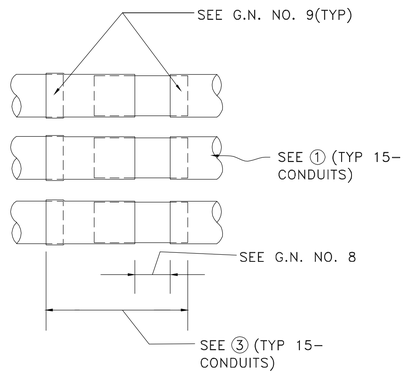


SECTION F
1 1/2"=1'-0



*INDICATES PARTS OF MODIFIED AMERICAN U-TEL HANGER PACKAGE FOR MATERIAL ITEM NO. (2)

SECTION B STANDARD SUPPORT
1 1/2"=1'-0



DETAIL 1/20 1/21 ITEM (3)
1 1/2"=1'-0

JOB NO. 12-20

STATE OF MAINE
ANDREW J. ELD
10262
LICENSED PROFESSIONAL ENGINEER

PE NO. 10262

REV	COMMENTS	BY	DATE
1	FOR APPROVAL	AE	06/20/22
A	PRELIMINARY	AE	06/10/22

TICONIC BRIDGE OVER THE KENNEBEK RIVER
WATERVILLE-WINSLOW, MAINE

TEMPORARY TELEPHONE CONDUIT SUPPORTS UTILITY SUPPORT DETAILS 1

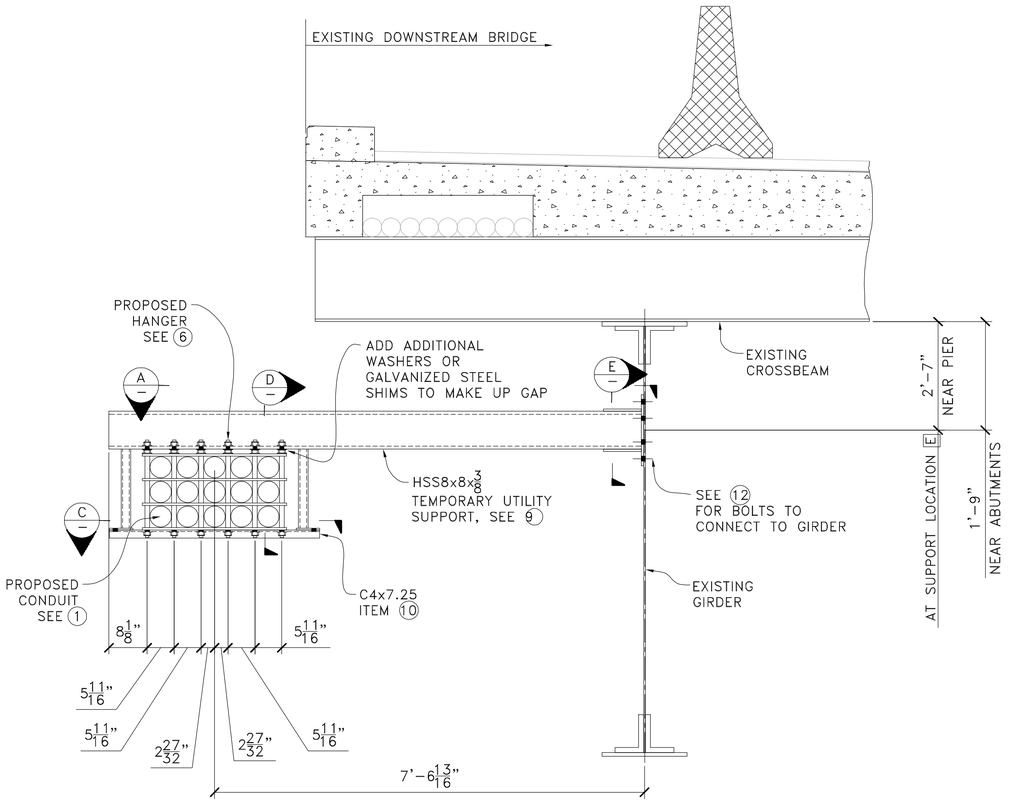
ANDREW J. ELD, P.E.

*INDICATE MODIFIED HANGER F MATERIAL

OWNER: FAIRPOINT

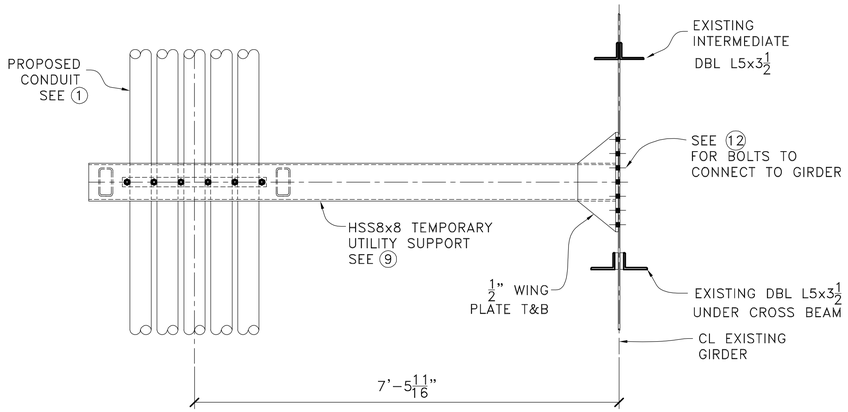
FURNISHED BY: AMERICAN U-TEL
9957 HOBART ROAD
WILLOUHGBY, OHIO 44094
(440)946-6027 FAX (440)946-7285

CHECKED BY: AE DATE: 02-13-22
DRAWN BY: WS DATE: 02-11-22
DRAWING NO: 12-20-22 SH. 1 OF 1

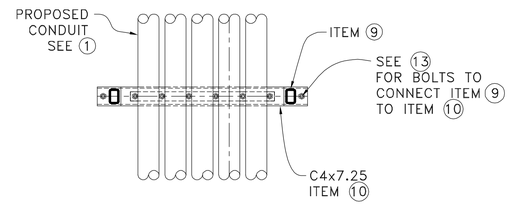


SECTION B/20 B/21
3/4"=1'-0

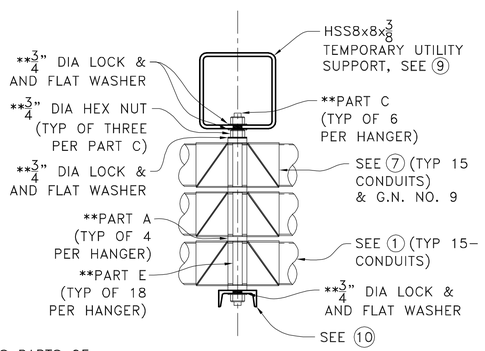
HANGER DETAIL AT ANCHOR POINT.
TYP OF 2 TOTAL SUPPORTS NEAR EXISTING ABUTMENTS AND ONE NEAR MIDSPAN.



SECTION A/—
3/4"=1'-0



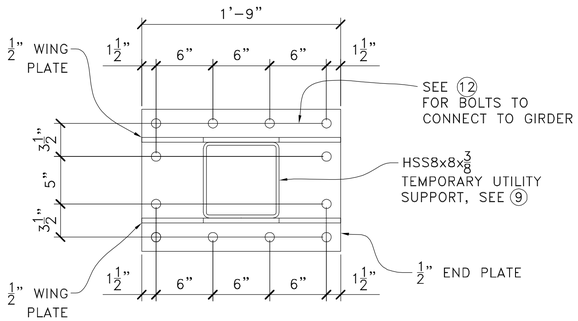
SECTION C/—
3/4"=1'-0



**INDICATES PARTS OF MODIFIED AMERICAN U-TEL HANGER PACKAGE FOR MATERIAL ITEM NO. (6)

SECTION D/— ANCHOR POINT
1 1/2"=1'-0

DETAIL 2/10 2/11
1 1/2"=1'-0



SECTION E/—
1 1/2"=1'-0

REV	COMMENTS	BY	DATE
1	FOR APPROVAL	AE	06/20/22
A	PRELIMINARY	AE	06/10/22

JOB NO. 12-20

STATE OF MAINE
ANDREW J. ELD
10262
LICENSED PROFESSIONAL ENGINEER

PE NO. 10262

TICONIC BRIDGE OVER THE KENNEBEK RIVER
WATERVILLE-WINSLOW, MAINE

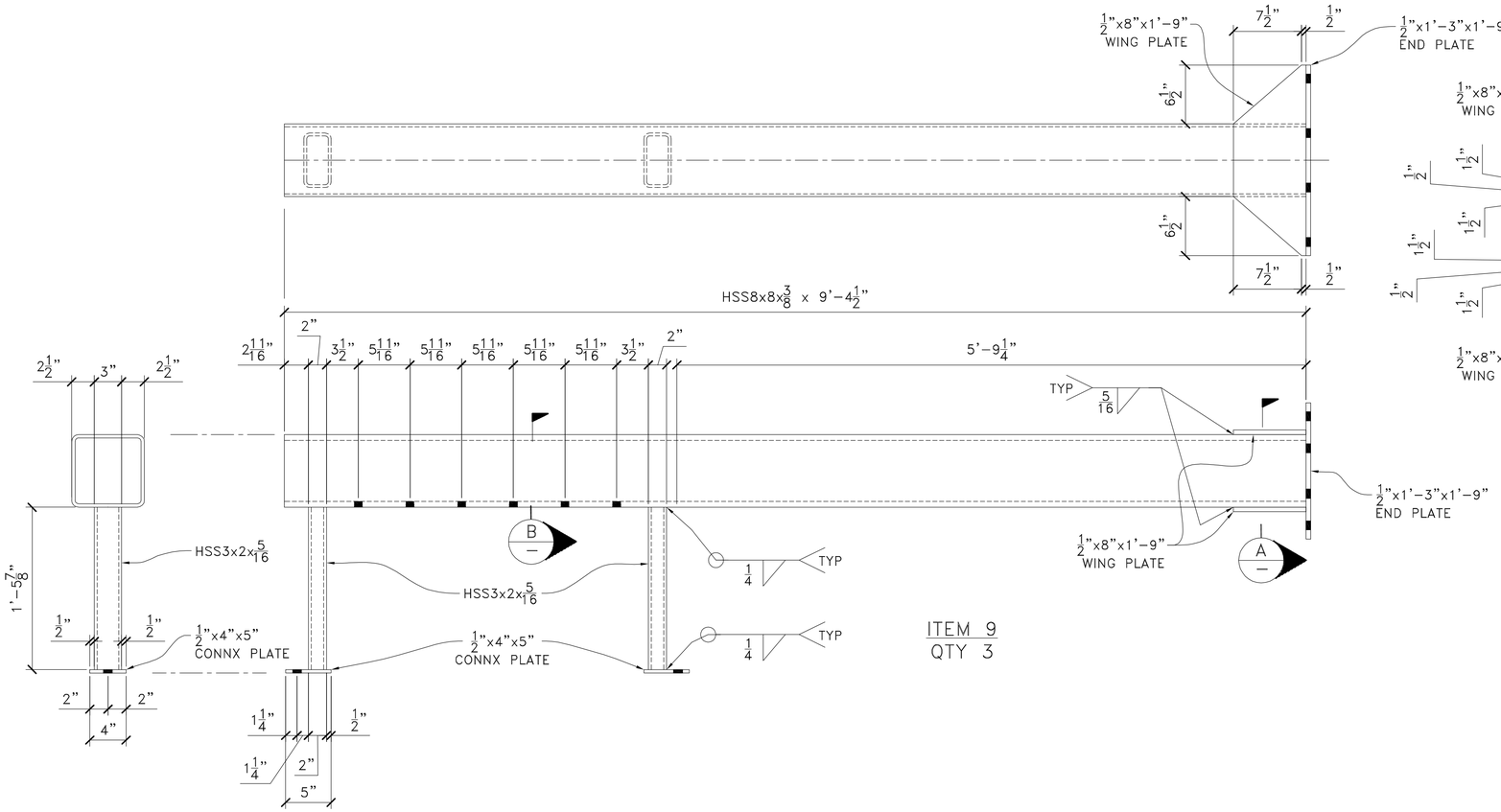
TEMPORARY TELEPHONE CONDUIT SUPPORTS UTILITY SUPPORT DETAILS 2

ANDREW J. ELD, P.E.

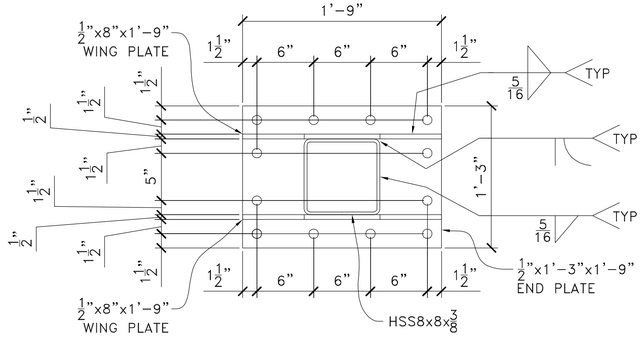
OWNER: FAIRPOINT

FURNISHED BY: AMERICAN U-TEL
9957 HOBART ROAD
WILLOUHGBY, OHIO 44094
(440)946-6027 FAX (440)946-7285

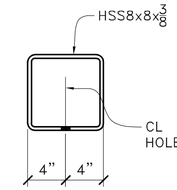
CHECKED BY: AE	DATE: 03-13-22
DRAWN BY: WS	DATE: 03-11-22
DRAWING NO: 12-20-23	SH. 1 OF 1



ITEM 9
QTY 3

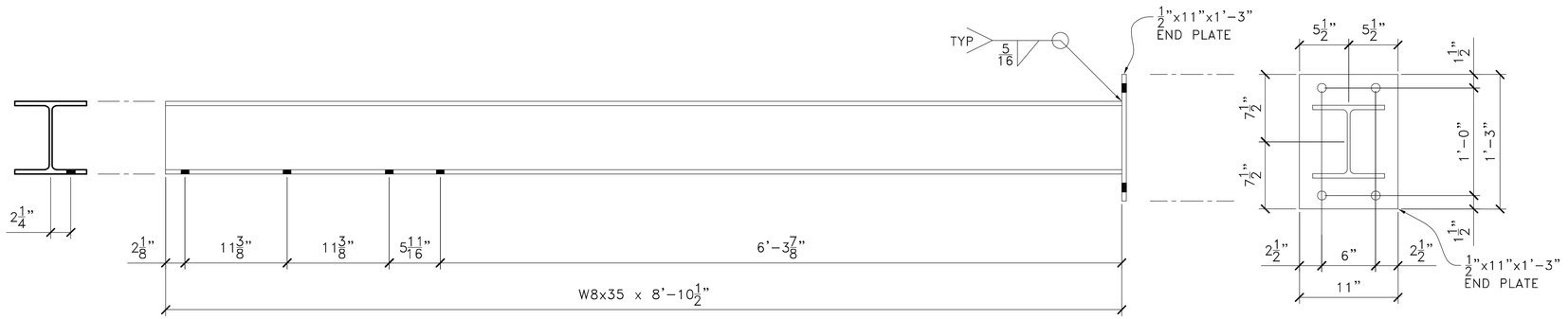


SECTION A
1 1/2"=1'-0



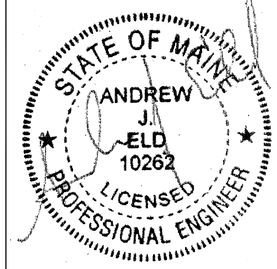
SECTION B
1 1/2"=1'-0

NOTE:
1. ALL HOLES 1 3/16"ø U.O.N.



ITEM 8
QTY 40

JOB NO. 12-20



PE NO. 10262

REV	COMMENTS	BY	DATE
1	FOR APPROVAL	AE	06/20/22
A	PRELIMINARY	AE	06/10/22

TICONIC BRIDGE OVER THE
KENNEBEK RIVER
WATERVILLE–WINSLOW, MAINE

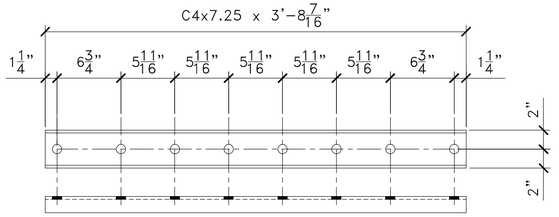
TEMPORARY TELEPHONE
CONDUIT SUPPORTS
UTILITY SUPPORT DETAILS 3

ANDREW J. ELD, P.E.

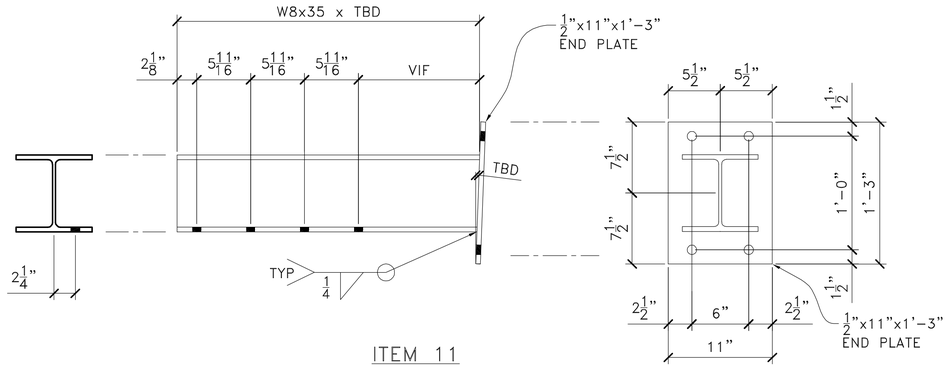
OWNER: FAIRPOINT

FURNISHED BY: AMERICAN U–TEL
9957 HOBART ROAD
WILLOUHGBY, OHIO 44094
(440)946-6027 FAX (440)946-7285

CHECKED BY: AE	DATE: 05-22-22
DRAWN BY: WS	DATE: 05-15-22
DRAWING NO: 12-20-24	SH. 1 OF 1



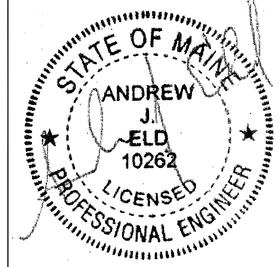
ITEM 10
QTY 3



ITEM 11
QTY 5

NOTE:
1. ALL HOLES $1\frac{3}{16}$"ø U.O.N.

JOB NO. 12-20



PE NO. 10262

REV	COMMENTS	BY	DATE
1	FOR APPROVAL	AE	06/20/22
A	PRELIMINARY	AE	06/10/22

TICONIC BRIDGE OVER THE
KENNEBEK RIVER
WATERVILLE–WINSLOW, MAINE

TEMPORARY TELEPHONE CONDUIT SUPPORTS UTILITY SUPPORT DETAILS 4

ANDREW J. ELD, P.E.

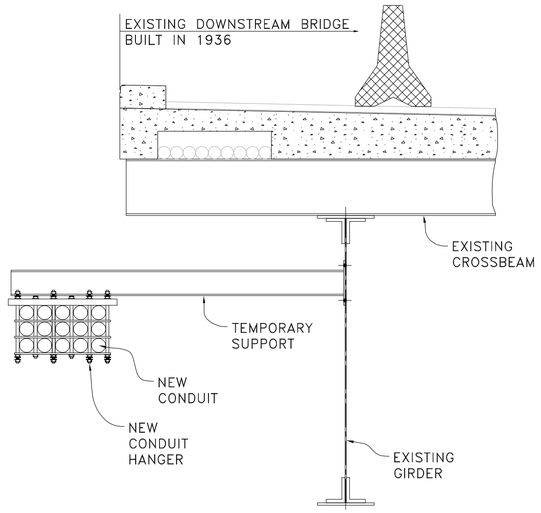
OWNER: FAIRPOINT

FURNISHED BY: AMERICAN U–TEL
9957 HOBART ROAD
WILLOUHGBY, OHIO 44094
(440)946–6027 FAX (440)946–7285

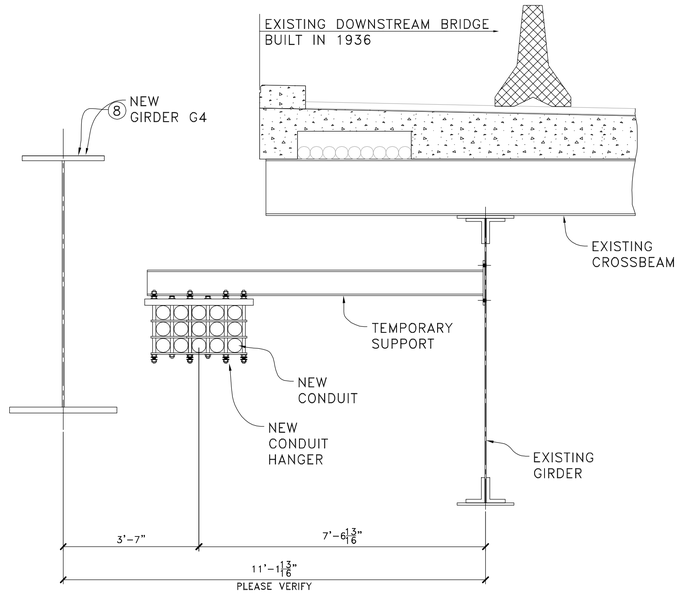
CHECKED BY: AE DATE: 05–22–22
DRAWN BY: WS DATE: 05–15–22
DRAWING NO: 12–20–25 SH. 1 OF 1

CONSTRUCTION SEQUENCE

1. REMOVE EXISTING UPSTREAM STRUCTURE [STRUCTURE BUILT IN 1970] DURING STAGE 1 DEMOLITION.
2. INSTALL TEMPORARY SUPPORT SYSTEM AS SHOWN ON DRAWINGS 12–20–20 TO 12–20–25.
3. INSTALL 15 NEW FIBERGLASS CONDUIT.
4. ERECT NEW GIRDERS G1 TO G4 DURING STAGE 1 CONSTRUCTION.
5. INSTALL NEW PERMANENT CONDUIT SUPPORTS PER DRAWINGS 12–20–10 TO 12–20–14.
6. TRANSFER EXISTING CONDUIT FROM TEMPORARY SUPPORTS TO THE NEW PERMANENT SUPPORTS. UTILIZE THE EXISTING HANGERS FROM THE TEMPORARY SUPPORT.

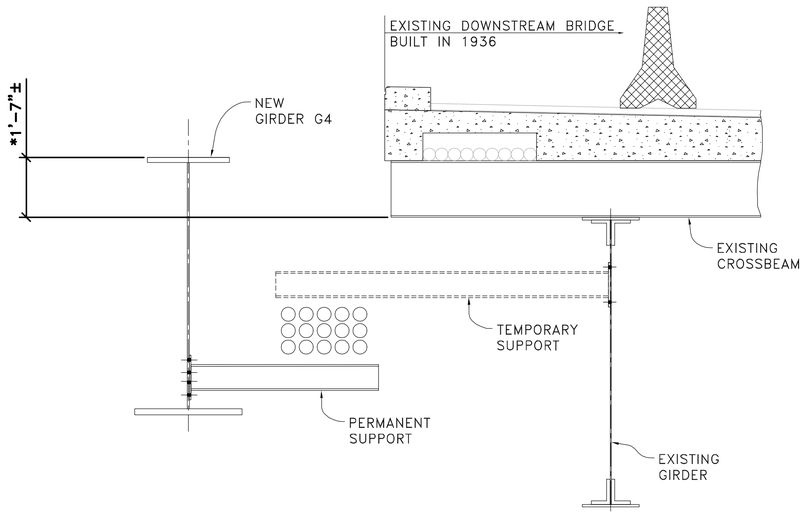


STEPS 1 TO 3

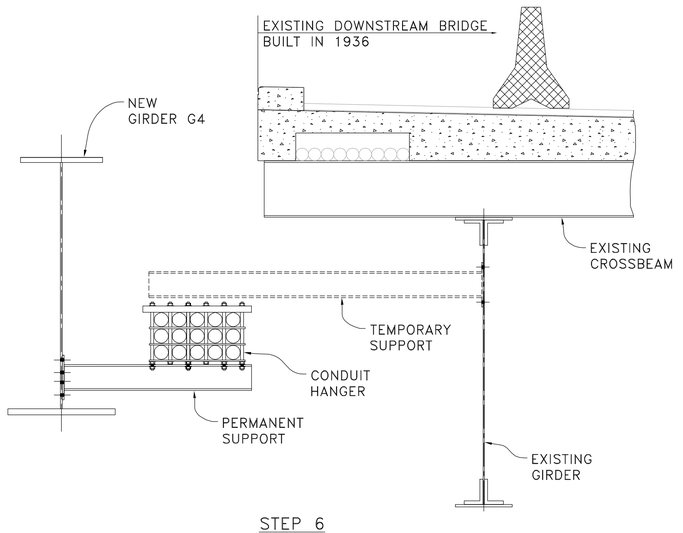


STEP 4

*THE LOCATIONS OF THE TEMPORARY AND PERMANENT SUPPORTS VERTICALLY ON THE NEW GIRDERS AS WELL AS THE EXISTING GIRDERS IS BASED ON THE HEIGHT DIFFERENCE BETWEEN THE TOPS OF THE NEW/EXISTING GIRDERS. IT WAS ASSUMED THAT THE DIFFERENCE BETWEEN THE GIRDERS IS AS STATED. THE CONTRACTOR TO VERIFY THIS DISTANCE ALONG THE LENGTH OF THE CONDUIT RUN. IF THE DISTANCE VARIES FROM WHAT IS STATED [WE WERE UNABLE TO DETERMINE EXACTLY], CONTACT AMERICAN U–TEL SO THAT THE WE CAN ADJUST SUPPORT LOCATIONS IN ORDER TO AVOID INTERFERENCE BETWEEN THE TEMPORARY SUPPORTS/CONDUITS AND THE PROPOSED CONDUIT SUPPORTS ON THE NEW BRIDGE.

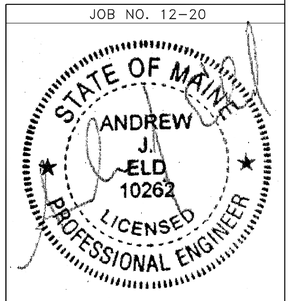


STEP 5



STEP 6

JOB NO. 12–20



PE NO. 10262

REV	COMMENTS	BY	DATE
1	FOR APPROVAL	AE	06/20/22

TICONIC BRIDGE OVER THE
KENNEBEK RIVER
WATERVILLE–WINSLOW, MAINE

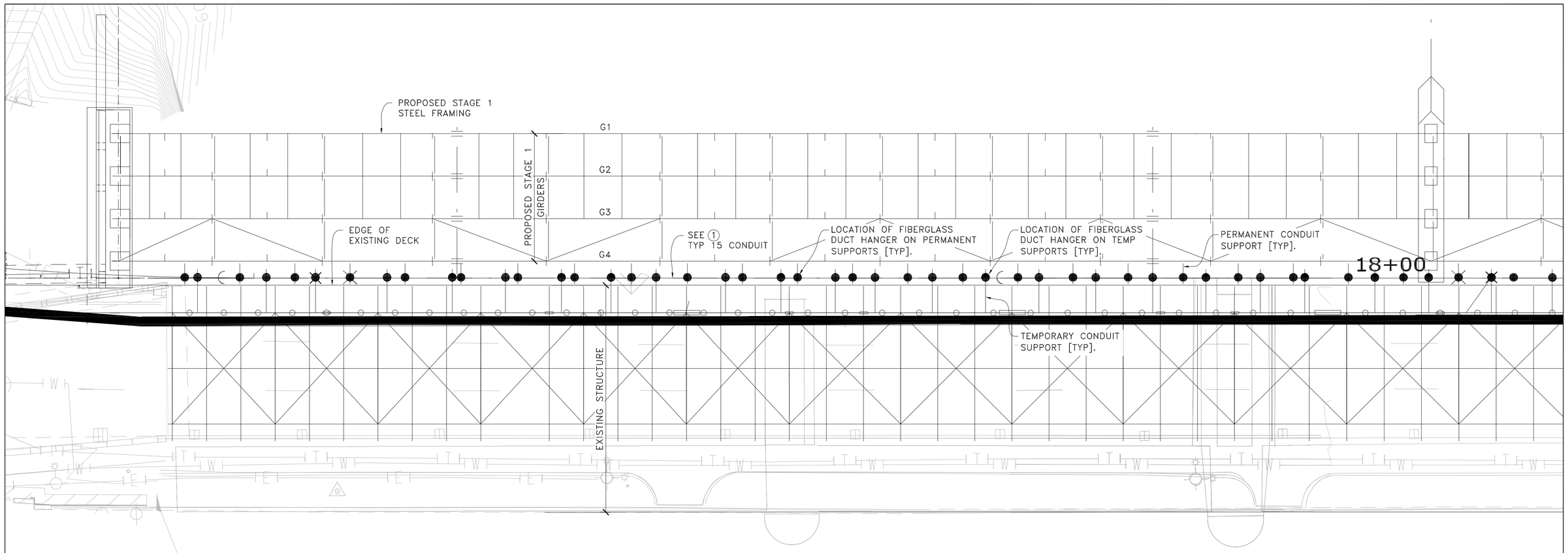
TEMPORARY TELEPHONE
CONDUIT SUPPORTS
SEQUENCE OF CONSTRUCTION

ANDREW J. ELD, P.E.

OWNER: FAIRPOINT

FURNISHED BY: AMERICAN U–TEL
9957 HOBART ROAD
WILLOUHGBY, OHIO 44094
(440)946–6027 FAX (440)946–7285

CHECKED BY: AE	DATE: 06–16–22
DRAWN BY: WS	DATE: 06–15–22
DRAWING NO: 12–20–26	SH. 1 OF 1



LOCATION PLAN–SPAN 1
EXISTING AND PROPOSED CONDUIT SUPPORTS
$\frac{3}{32}$"=1'–0"

NOTE: PLAN VIEW INTENDED TO SHOW WHEN BOTH THE TEMPORARY AND PERMANENT ARE IN PLACE. THE TEMPORARY AND PERMANENT ANCHOR POINTS ARE NEAR EACH OTHER. WHEN THE CONDUIT ID TRANSFERRED FROM THE EXISTING BRIDGE TO THE NEW BRIDGE, THERE WILL BE NEW ANCHOR POINTS WITH NEW SPLIT ANCHOR RINGS. WE WILL BE USING THE SAME EXPANSION JOINTS.

REV	COMMENTS	BY	DATE
1	FOR APPROVAL	AE	06/20/22

JOB NO. 12–20

STATE OF MAINE
ANDREW J. ELD 10262
LICENSED PROFESSIONAL ENGINEER

PE NO. 10262

TICONIC BRIDGE OVER THE
KENNEBEK RIVER
WATERVILLE–WINSLOW, MAINE

TEMPORARY AND PERMANENT
TELEPHONE CONDUIT SUPPORTS
PLAN VIEW

ANDREW J. ELD, P.E.

OWNER: FAIRPOINT

FURNISHED BY: AMERICAN U–TEL
9957 HOBART ROAD
WILLOUHGBY, OHIO 44094
(440)946–6027 FAX (440)946–7285

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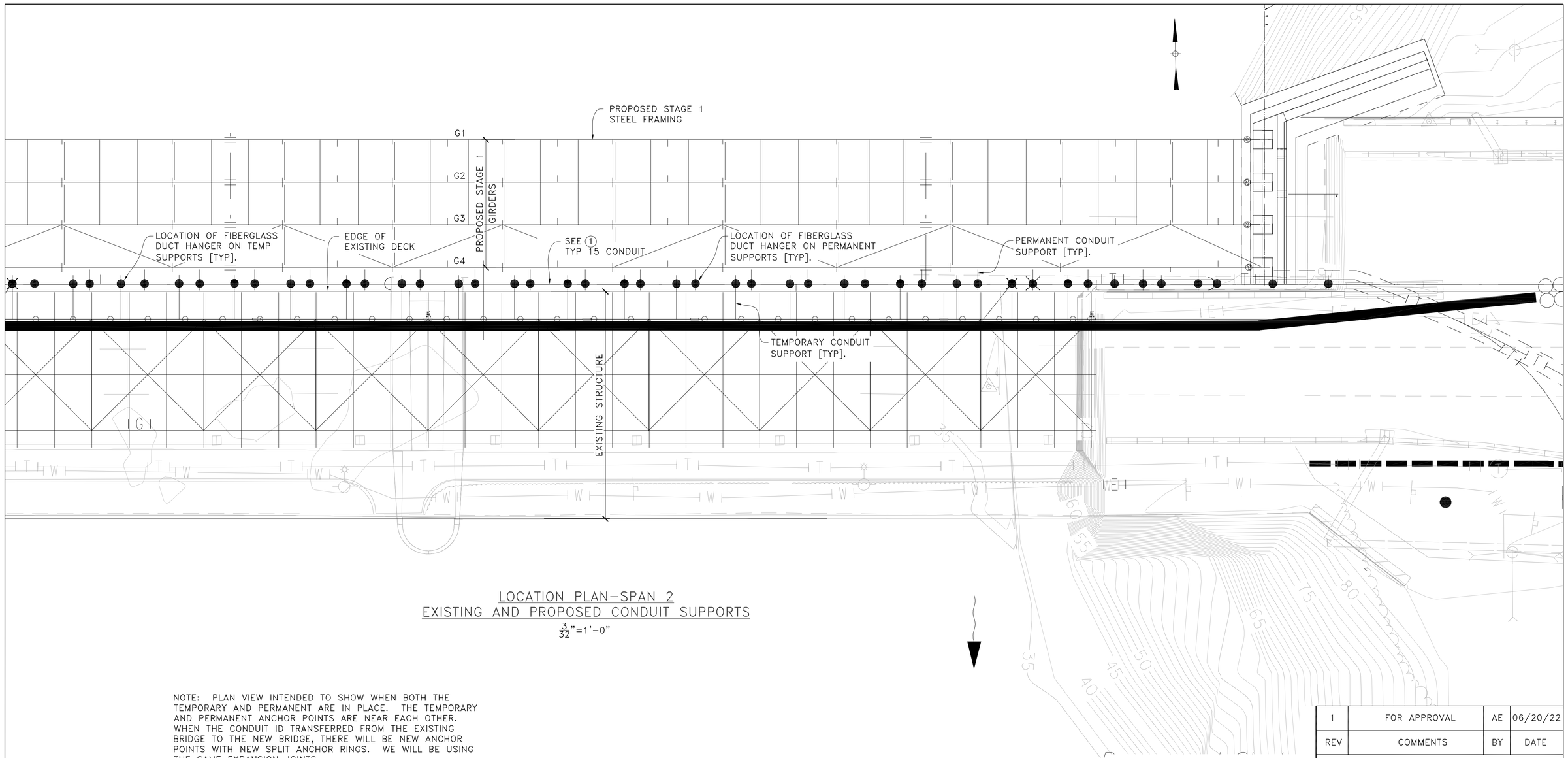
DRAWING NO: 12–20–27	SH. 1 OF 1



LOCATION PLAN–SPAN 2
EXISTING AND PROPOSED CONDUIT SUPPORTS
$\frac{3}{32}$"=1'–0"

NOTE: PLAN VIEW INTENDED TO SHOW WHEN BOTH THE TEMPORARY AND PERMANENT ARE IN PLACE. THE TEMPORARY AND PERMANENT ANCHOR POINTS ARE NEAR EACH OTHER. WHEN THE CONDUIT ID TRANSFERRED FROM THE EXISTING BRIDGE TO THE NEW BRIDGE, THERE WILL BE NEW ANCHOR POINTS WITH NEW SPLIT ANCHOR RINGS. WE WILL BE USING THE SAME EXPANSION JOINTS.

REV	COMMENTS	BY	DATE
1	FOR APPROVAL	AE	06/20/22

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STATE OF MAINE
ANDREW J. ELD
10262
LICENSED PROFESSIONAL ENGINEER

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TICONIC BRIDGE OVER THE
KENNEBEK RIVER
WATERVILLE–WINSLOW, MAINE

TEMPORARY AND PERMANENT
TELEPHONE CONDUIT SUPPORTS
SEQUENCE OF CONSTRUCTION

ANDREW J. ELD, P.E.

OWNER: FAIRPOINT

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