STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SPECIFICATIONS

Design: Load and Resistance Factor Design per AASHTO LRFD Bridge Design Specifications, Eighth Edition 2017.

DESIGN LOADING

Live Load ..... HL - 93 Modified for Strength I

TRAFFIC DATA

Current (2017) AADT	3,610
Future (2037) AADT	3,970
DHV - % of AADT	10%
Design Hour Volume	397
Heavy Trucks (% of AADT)	10%
Heavy Trucks (% of DHV)	8%
Directional Distribution (% of DHV)	64%
18 kip Equivalent P 2.0	293
18 kip Equivalent P 2.5	279
Design Speed (mph)	30

HYDROLOGIC DATA

Drainage Area	20.2 sq mi
Design Discharge (Q50)	2,214 cfs
Check Discharge (Q100)	2,570 cfs
Headwater Elevation (Q1.1)	513.9 ft
Headwater Elevation (Q25)	518.9 ft
Headwater Elevation (Q50)	519.5 ft
Headwater Elevation (Q100)	520.3 ft
Discharge Velocity (Q1.1)	4.6 fps
Discharge Velocity (Q50)	5.5 fps
Discharge Velocity (Q100)	5.7 fps

MATERIALS

Concrete:	
Curbs	Class "LP"
All Other	Class "A"
Reinforcing:	
Plain Steel	ASTM A615/A615M, Grade 60
Stainless Steel	ASTM A955/A955M, Grade 75
Glass Fiber Reinforced Polymer (GFRP)	ASTM D7957/D7957M
Structural Steel:	
All Material (except as noted)	ASTM A709/A 709M, Grade 50W (Unpainted)
H-Piles	ASTM A572/A572M, Grade 50
High Strength Bolts	ASTM F 3125, Grade A325, Type 3

BASIC DESIGN STRESSES

Concrete:	
Class "A"	f 'c = 4,000 psi
Class "LP"	f 'c = 5,000 psi
Plain Reinforcing Steel	f y = 60,000 psi
Stainless Reinforcing Steel	f y = 75,000 psi
Structural Steel:	
ASTM A709, Grade 50W	f y = 50,000 psi
ASTM A709, Grade 36	f y = 36,000 psi
ASTM F 3125	F μ = 120,000 psi
Glass Fiber Reinforced Polymer (GFRP):	
#5 Bar	f fμ = 100,000 psi
#6 Bar	f fμ = 100,000 psi
#7 Bar	f fμ = 95,000 psi
Minimum Elastic Modulus	E f = 6,150,000 psi
Minimum Nominal Design Tensile Strain	εfu = 1.226%

FORT KENT
AROOSTOOK COUNTY
PERLEY BROOK BRIDGE
OVER
PERLEY BROOK
ROUTE 161 (MARKET STREET)
FEDERAL AID PROJECT NO. STP-02188(200)
PROJECT LENGTH 0.114 mi.
BRIDGE NO. 3468

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UTILITIES

Versant Power (3 Phase Power and Transmission Lines)
Charter Communications
Fairpoint Communications - Northland Telephone
Fort Kent Water and Sewer

MAINTENANCE OF TRAFFIC

Maintain one lane of alternating traffic using on-site special detour with temporary traffic signals.

STATE OF MAINE
DONALD G. ETTINGER, JR.
No. 9244
LICENSED PROFESSIONAL ENGINEER

Gorrill-Palmer Consulting Engineers, Inc.
Responsible for Roadway/Approach Plans

Thornton Tomasetti

GORRILL PALMER

PROJECT LOCATION	Route 161 (Market Street), 1.4 miles South of US Route 1 intersection 47° 14' 28" N, 68° 34' 45" W
PROGRAM AREA	Bridge
OUTLINE OF WORK	Bridge Replacement

STP-2188(200)

WIN 021882.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED — DATE 12-3-21

COMMISSIONER:

CHIEF ENGINEER: DATE 12.2.2021

STATE OF MAINE JOHN BURGESS 5745 PROFESSIONAL

SIGNATURE 5745
P.E. NUMBER
11-29-2021
DATE

PROJECT INFORMATION

PROGRAM	BRIDGE
PROJECT MANAGER	JASON STETSON
DESIGNER	BRYSON WELCH
CONSULTANT	THORNTON TOMASETTI
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

FORT KENT
PERLEY BROOK BRIDGE

TITLE SHEET

SHEET NUMBER
1
OF 38

Filename: \00\BRIDGE\MSTA\001_Title.dgn Division: BRIDGE Username: common Date: 11/24/2021

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
201.23	REMOVING SINGLE TREE TOP ONLY	5	EA
201.24	REMOVING STUMP	5	EA
202.15	REMOVE EXISTING MANHOLE OR CATCH BASIN	3	EA
202.202	REMOVING PAVEMENT SURFACE	1010	SY
203.20	COMMON EXCAVATION	3875	CY
203.2318	DISPOSAL OF SPECIAL WASTE	42	T
203.25	GRANULAR BORROW	440	CY
203.33	SPECIAL FILL	330	CY
206.082	STRUCTURAL EARTH EXCAVATION	700	CY
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	840	CY
403.208	HOT MIX ASPHALT, 12.5 MM NOM. MAX. SIZE	231	T
403.209	HOT MIX ASPHALT, 9.5 MM NOM. MAX. SIZE (SIDEWALKS, DRIVES, ISLANDS & INCIDENTALS)	43	T
403.213	HOT MIX ASPHALT, 12.5 MM NOM. MAX. SIZE (BASE & INTERMEDIATE BASE COURSE)	336	T
409.15	BITUMINOUS TACK COAT - APPLIED	229	G
461.131	TEMPORARY PAVEMENT	175	T
501.231	DYNAMIC LOAD TEST	2	EA
501.54	STEEL H-BEAM PILES 117 LBS/FT. DELIVERED	610	LF
501.541	STEEL H-BEAM PILES 117 LBS/FT. IN PLACE	610	LF
501.90	PILE TIPS	10	EA
501.91	PILE SPLICES	20	EA
501.92	PILE DRIVING EQUIPMENT MOBILIZATION	1	LS
502.219	STRUCTURAL CONCRETE, ABUT & RET WALLS (165 CY)	1	LS
502.26	STR CONC RD & SW SLABS ON STEEL BRIDGE (116 CY)	1	LS
502.31	STRUCTURAL CONCRETE APPROACH SLAB (27 CY)	1	LS
502.49	STRUCTURAL CONCRETE CURBS AND SIDEWALKS (32 CY)	1	LS
502.77	FRP BRIDGE DRAIN - TYPE B	1	EA
502.77	FRP BRIDGE DRAIN - TYPE F	1	EA
503.12	REINFORCING STEEL, FABRICATED/DELIVERED	30200	LB
503.13	REINFORCING STEEL, PLACING	30200	LB
503.17	MECHANICAL WELDED SPLICE	70	EA
503.26	STAINLESS STEEL REINFORCEMENT-FAB & DEL	11700	LB
503.27	STAINLESS STEEL REINFORCEMENT-PLACING	11700	LB
504.702	STRUCTURAL STEEL FAB'D & DELIV'D, WELDED (130,200 LBS)	1	LS
504.71	STRUCTURAL STEEL ERECTED (130,200 LBS)	1	LS
505.08	SHEAR CONNECTORS (1,854 EA)	1	LS
507.08161	STEEL APPROACH RAILING, 4-BAR	2	EA
507.0821	STEEL BRIDGE RAILING, 3-BAR (100 LF)	1	LS
507.0822	STEEL APPROACH RAILING, 3-BAR	2	EA
507.0831	STEEL BRIDGE RAILING, 4-BAR (100 LF)	1	LS
508.14	HIGH PERFORMANCE WATERPROOFING MEMBRANE (430 SY)	1	LS
510.12	SPECIAL DETOUR, 29 FOOT ROADWAY WIDTH VEHICULAR AND PEDESTRIAN TRAFFIC SEPARATED	1	LS
511.07	COFFERDAM: UPSTREAM	1	LS
511.07	COFFERDAM: DOWNSTREAM	1	LS
515.21	PROT COAT FOR CONC SURFACES (162 SY)	1	LS
519.60	EXPANSION DEVICE - ASPHALTIC PLUG JOINT	74	LF
526.301	PORTABLE CONCRETE BARRIER, TYPE 1 (100 LF)	1	LS
527.34	WORK ZONE CRASH CUSHIONS	4	UN
530.30	GFRP, REINFORCEMENT BARS, FABRICATED & DELIVERED	30700	LF
530.31	GFRP, REINFORCEMENT BARS, PLACED	30700	LF
603.179	18 INCH CULVERT PIPE OPTION III	115	LF
603.199	24 INCH CULVERT PIPE OPTION III	120	LF
604.092	CATCH BASIN TYPE Bi-C	6	EA
604.26	CATCH BASIN TYPE B5	1	EA
605.09	6 INCH UNDERDRAIN TYPE B	170	LF
605.11	12 INCH UNDERDRAIN TYPE C	125	LF
605.12	15 INCH UNDERDRAIN TYPE C	352	LF
605.13	18 INCH UNDERDRAIN TYPE C	23	LF
606.1301	31" W-BEAM GUARDRAIL - MID-WAY SPLICE SINGLE FACED	218.75	LF
606.1303	31" W-BEAM GUARDRAIL - MID-WAY SPLICE, 15' RADIUS AND LESS	50	LF
606.1305	31" W-BEAM GUARDRAIL - MID-WAY SPLICE , FLARED TERMINAL	2	EA
606.1721	BRIDGE TRANSITION - TYPE 1	4	EA
606.259	ANCHORAGE ASSEMBLY	1	EA
606.265	TERMINAL END - SINGLE RAIL - GALVANIZED STEEL	2	EA
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	8	EA
606.47	SINGLE WOOD POST	2	EA
609.31	CURB TYPE 3	720	LF
610.08	PLAIN RIPRAP	1000	CY
610.18	STONE DITCH PROTECTION	22	CY
610.212	STREAMBED ROCK FEATURES	22	CY
613.319	EROSION CONTROL BLANKET	130	SY
615.07	LOAM	100	CY
618.13	SEEDING METHOD NUMBER 1	4	UN
618.14	SEEDING METHOD NUMBER 2	9	UN
619.12	MULCH	13	UN
619.14	EROSION CONTROL MIX	50	CY
620.58	EROSION CONTROL GEOTEXTILE	130	SY
620.66	DRAINAGE GEOCOMPOSITE	108	SY
627.733	4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	1850	LF
627.77	REMOVING EXISTING PAVEMENT MARKING	200	SF
627.78	TEMPORARY 4" PAINTED PAVEMENT MARKING LINE, WHITE OR YELLOW	700	LF
629.05	HAND LABOR, STRAIGHT TIME	10	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	10	HR
631.172	TRUCK - LARGE (INCLUDING OPERATOR)	10	HR
631.18	CHAIN SAW RENTAL (INCLUDING OPERATOR)	10	HR
631.20	STUMP CHIPPER RENTAL (INCLUDING OPERATOR)	10	HR
631.22	FRONT END LOADER (INCLUDING OPERATOR)	10	HR

GENERAL CONSTRUCTION NOTES

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

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

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

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

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

6. All embankment material, except as otherwise shown, placed below EL. 520.00 shall be Granular Borrow meeting the requirements of Subsection 703.19, Material for Underwater Backfill.

7. Construct the riprap shelf at Abutment No. 1 up to EL. 524.00 and at Abutment No. 2 up to EL. 522.00.

8. Stones which cannot be rolled or compacted into the surface of the gravel drives shall be removed by hand raking. Payment for hand raking will be considered incidental to Item No. 304.10, Aggregate Subbase Course - Gravel.

9. Erosion Control Mix may be substituted in those areas normally receiving loam and seed as directed by the Resident. Placement shall be in accordance with Standard Specifications Section 619, Mulch. Payment will be made under Item No. 619.14, Erosion Control Mix.

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

11. An NCHRP350 compliant guardrail end treatment shall be installed concurrently with the placement of each section of beam guardrail.

12. Extended-use 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, where it is apparent that runoff will cause continual erosion. Payment will be made under the appropriate Contract items.

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

-All exposed surfaces of concrete curbs and sidewalks
-Fascias down to the drip notch
-Top of wingwalls and to one foot below the top of wingwalls on the back side

14. Two guardrail delineator posts shall be installed at each leading guardrail end and one at each trailing guardrail end.

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

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

17. The hydrologic report of the bridge site may be accessed at the MaineDOT web address. The hydrologic report is based on MaineDOT's interpretation of the information obtained for the subject site. No assurance is given that the information or the conclusions of the report will be representative of actual conditions at the time of construction.

18. The project geotechnical report titled: Geotechnical Design Report, 20-1403, June 18, 2021: Route 161 over Perley Brook, Perley Brook Bridge #3468, Fort Kent, Maine, WIN 021822.00 may be accessed at the MaineDOT web address: http://www.maine.gov/mdot/contractors/

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

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

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

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

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

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

22. Pavement thicknesses shown on the typical sections are intended to be nominal.

23. Driveway fill side slopes shall be the same as the fill side slopes without guardrail unless otherwise noted on the Plans.

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

25. Plastic end caps shall be placed on the inlet end of all dead-end 6-inch Type B underdrain and shall be considered incidental to this item.

26. A 3-foot by 3-foot square riprap pad shall be constructed at each underdrain outlet.

27. Existing abandoned water mains broken by the Contractor during construction shall have the ends plugged with brick and mortar. Cost for all labor and material will be considered incidental to the Contract and no direct payment will be made.

28. A delineator post (Standard Specifications Item 606.356, Underdrain Delineator Post) will be installed at each underdrain outlet.

29. Loam shall be placed to a nominal depth of 4 inches in lawn areas and 2 inches on all new or reconstructed side slopes or as directed by the Resident.

30. "Undetermined locations" shall be determined by the Resident.

31. The existing structural plate pipe culverts shall be removed and become property of the Contractor. The Contractor is responsible for the management and disposal for the process of demolishing the existing culverts. The Contractor is responsible for implementing appropriate OSHA mandated personal protection standards related to this process. Once the existing culverts are removed the Contractor is solely responsible for the care, custody and removal of the existing culvert components. Payment for all labor, materials, equipment and other costs to remove and dispose of the existing culverts will be considered incidental to Item 203.20, Common Excavation.

32. The Contractor shall give the Environmental Office sufficient time prior to excavating for the Special Fill and Streambed Rock Features to review the in-situ granular material. The Contractor shall not excavate for the Special Fill and Streambed Rock Features prior to the review from the Environmental Office. Where applicable, it is preferred the in-situ granular material be substituted for the Special Fill and Streambed Rock Features.

33. The Contractor shall give the Environmental Office sufficient time to review and approve the streambed construction, Streambed Rock Features and Special Fill, prior to removing cofferdams.

34. Flowable fill shall be used to fill abandoned pipes as noted on the plans and directed by the Resident. Payment for flowable fill shall be incidental to the contract.

35. Gravel entrances shall be constructed with 14 inches of Aggregate Subbase Course - Gravel.

36. A 3 foot paved lip shall be placed at all unpaved entrances unless otherwise noted on the Plans or directed by the Resident.

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
639.18	FIELD OFFICE, TYPE A	1	EA
643.72	TEMPORARY TRAFFIC SIGNAL	1	LS
652.312	TYPE III BARRICADES	4	EA
652.33	DRUM	20	EA
652.34	CONE	20	EA
652.35	CONSTRUCTION SIGNS	320	SF
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES	1	LS
652.38	FLAGGERS	375	HR
652.41	PORTABLE - CHANGEABLE MESSAGE SIGN	2	EA
656.75	TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	1	LS
659.10	MOBILIZATION	1	LS

Thornton Tomasetti

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2188(200)

WIN 021882.00

BRIDGE PLANS

3468

PROJ. MANAGER	J.STETSON	BY	DATE
DESIGN-DETAILED	E.BROWNELL	D.BURGESS	11-10-2021
CHECKED-REVIEWED	B.WELCH	J.BURGESS	11-10-2021
DESIGN2-DETAILED2	-------	-------	-------
DESIGN3-DETAILED3	-------	-------	-------
REVISIONS 1	-------	-------	-------
REVISIONS 2	-------	-------	-------
REVISIONS 3	-------	-------	-------
REVISIONS 4	-------	-------	-------
FIELD CHANGES	-------	-------	-------

SIGNATURE

P.E. NUMBER

DATE

PERLEY BROOK BRIDGE
PERLEY BROOK
FORT KENT AROOSTOOK COUNTY

ESTIMATED QUANTITIES AND GENERAL CONSTRUCTION NOTES

SHEET NUMBER

2

OF 38

Filename: ...\MSTA\002_ConstructionNotes.dgn Division: BRIDGE Username: common Date:11/30/2021

CURVE DATA #1
PI = 10+23.34
D = 4°46'28.7"
Δ = 11°44'13.3" Lt.
R = 1200.00'
L = 245.82'
T = 123.34'
E = 6.32'

Sta. 11+19.83
Limit of Work
Match Existing Pavement
Begin Project
WIN 021882.00

PT = STA. 11+45.82

Midway Splice Guardrail 15' Radius with Terminal End, Single Rail

Proposed Generator Panel (By others)

Limits of 10:1 Grading for Generator Panel

Proposed Pole Station 12+40, 33.0' Lt.

Remove Existing CMP Downspout (Incidental to Related Contract Items)

Remove Unk. Size

Remove 12" Unk.

Remove 12" Unk.

Temporary Utility Pole Station 11+50, 28.0' Lt.

Skew = 15°00'00"

Existing Pole To Remain

Flow

℄ Brg., Abut. No. 1
Sta. 13+51.00

Span = 94'-0"

℄ Brg., Abut. No. 2
Sta. 14+45.08

(2) Existing Corrugated Metal Pipes (To be Removed)

Existing Sewer Force Main, Do Not Disturb or Undermine

Remove Existing Pole (By others)

Remove Existing Generator Panel (By others)

24" Option III

Midway Splice Guardrail 15' Radius with Terminal End Single Rail and Anchorage Assembly

Existing Pole To Remain

Remove CB

R=600'

R=900'

Sta. 17+22.07
Match Existing Pavement
End Project
WIN 021882.00
Limit of Work

6" UD "B"

12" UD "C"

18" UD "C"

ROUTE 161
(MARKET STREET)

6" UD "B"

Remove 18" CMP

Construction ℄

To New Canada

11+00 12+00 13+00 14+00 15+00 16+00 17+00

N 15°37'26.09" W

Remove CB

18" Option III

R=1000'

R=790'

15" UD "C"

To Route 1

W-Beam Guardrail Mid-Splice Flared Terminal (Typ.)

Remove Existing Pole (By others)

Proposed Pole Station 12+59, 30.1' Rt.

Proposed Pole Station 14+85, 35.0' Rt.

Remove Existing Pole (By others)

Remove Existing Pole (By others)

Proposed Pole Station 15+90, 26.7' Rt.

Temporary Utility Pole Station 16+39, 43.9' Rt.

Proposed UD to connect to existing 15" CMP. Match existing invert at the Limit of Work. Maintain 0.5% minimum pipe slope.

Remove 20" Pine

Remove 20" Pine

18" Option III

Abandon Pipe, Fill with Flowable Fill

Special Fill

PC = STA. 14+19.19

Perley Brook

Plain Riprap (Typ.)

Type 3 Curb (Typ.)

Temporary Utility Pole Station 12+42, 78.6' Rt.

Guardrail Embankment Slope Break (Typ.)

Existing Sewer Force Main, Do Not Disturb or Undermine

Approximate Location of Existing Waterline

Temporary Utility Pole Station 13+59, 118.7' Rt.

Clearing Limits for Temporary Detour

Existing Unstable Slope

CURVE DATA #2
PI = 16+36.94
D = 4°46'28.7"
Δ = 20°34'10.8" Rt.
R = 1200.00'
L = 430.81'
T = 217.75'
E = 19.60'

Temporary Utility Pole Station 15+65, 106.3' Rt.

Proposed UD to connect to existing 15" CMP. Match existing invert at the Limit of Work. Maintain 0.5% minimum pipe slope.

Driveways and Entrances

Station	Description	Opening
12+02 Lt.	Paved Entrance	37 FT
15+54 Lt.	Paved Entrance	22 FT
16+25 Lt.	Gravel Entrance	21 FT
16+25 Rt.	Gravel Entrance	20 FT

Clearing

Sta. 11+91 Lt. to Sta. 11+93 Lt.
Sta. 12+50 Rt. to Sta. 14+13 Rt.
Sta. 13+18 Lt. to Sta. 13+51 Lt.
Sta. 13+92 Lt. to Sta. 14+12 Lt.
Sta. 14+56 Rt. to Sta. 14+76 Rt.
Sta. 15+94 Rt. to Sta. 16+14 Rt.

Item 201.23 Removing Single Tree Top Only

Sta. 11+55.60, 71.15' Rt.	20" Pine
Sta. 12+12.89, 77.42' RT.	20" Pine
Sta. 12+78.68, 28.38' Lt.	12" Unk.
Sta. 13+35.44, 28.21' Lt.	12" Unk.
Sta. 13+46.76, 30.04' Lt.	Size Unk.

Item 201.24 Removing Stump

Sta. 11+55.60, 71.15' Rt.	20" Pine
Sta. 12+12.89, 77.42' RT.	20" Pine
Sta. 12+78.68, 28.38' Lt.	12" Unk.
Sta. 13+35.44, 28.21' Lt.	12" Unk.
Sta. 13+46.76, 30.04' Lt.	Size Unk.

Item 202.15 Removing Existing Manhole or Catch Basin

Sta. 12+68.30, 20.90' Rt.
Sta. 15+28.84, 22.35' Lt.
Sta. 15+35.71, 19.67' Rt.

Item 606.1301 31" W-Beam Guardrail-Mid-Way Splice Single Faced LF

Sta. 12+28.07, LT. to Sta. 13+15.47, Lt.	87.50
Sta. 12+54.89, Rt. to Sta. 13+26.71, Rt.	71.875
Sta. 14+69.91, Lt. to Sta. 15+19.06, Lt.	50.00
Sta. 14+83.23, Rt. to Sta. 14+92.79, Rt.	9.375

Item 606.1303 31" W-Beam Guardrail-Mid-Way Splice, 15' Radius and Less LF

Sta. 12+13.32, Lt. to Sta. 12+28.07, Lt.	25
Sta. 15+19.06, Lt. to Sta. 15+33.02, Lt.	25

Item 606.1305 31" W-Beam Guardrail-Mid-Way Splice, Flared Terminal EA

Sta. 12+17.78, Rt.	1
Sta. 14+92.79, Rt.	1

Item 606.1721 Bridge Transition - Type 1 EA

Sta. 13+15.47 to Sta. 13+35.95, Lt.	1
Sta. 13+26.71 to Sta. 13+47.19, Rt.	1
Sta. 14+49.73 to Sta. 14+69.91, Lt.	1
Sta. 14+62.35 to Sta. 14+83.23, Rt.	1

Item 609.31 Curb Type 3

	LF
Sta. 11+19.83, Rt. to Sta. 13+47.27, Rt.	221 (Mold 1)
Sta. 11+19.83, Lt. to Sta. 11+91.93, Lt.	72 (Mold 2)
Sta. 14+56.63, Lt. to Sta. 15+42.36, Lt.	88 (Mold 2)
Sta. 14+69.26, Rt. to Sta. 16+17.59, Rt.	146 (Mold 1)
Sta. 15+63.66, Lt. to Sta. 16+14.59, Lt.	52 (Mold 2)
Sta. 16+35.05, Lt. to Sta. 16+63.90, Lt.	30 (Mold 2)
Sta. 16+37.91, Rt. to Sta. 17+22.07, Rt.	83 (Mold 1)
Sta. 17+03.21, Lt. to Sta. 17+22.07, Lt.	20 (Mold 2)

PLAN

25 0 25 50
Scale of Feet

GORRILL PALMER
Relationships. Responsiveness. Results.
www.gorrillpalmer.com
207.772.2515

Thornton Tomasetti

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP-2188(200)
WIN 021882.00
3468
BRIDGE PLANS

PROJ. MANAGER	J. STETSON		
DESIGN-DETAILED	E.BROWNELL	D.BURGESS	11-10-2021
CHECKED-REVIEWED	B.WELCH	J.BURGESS	11-10-2021
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

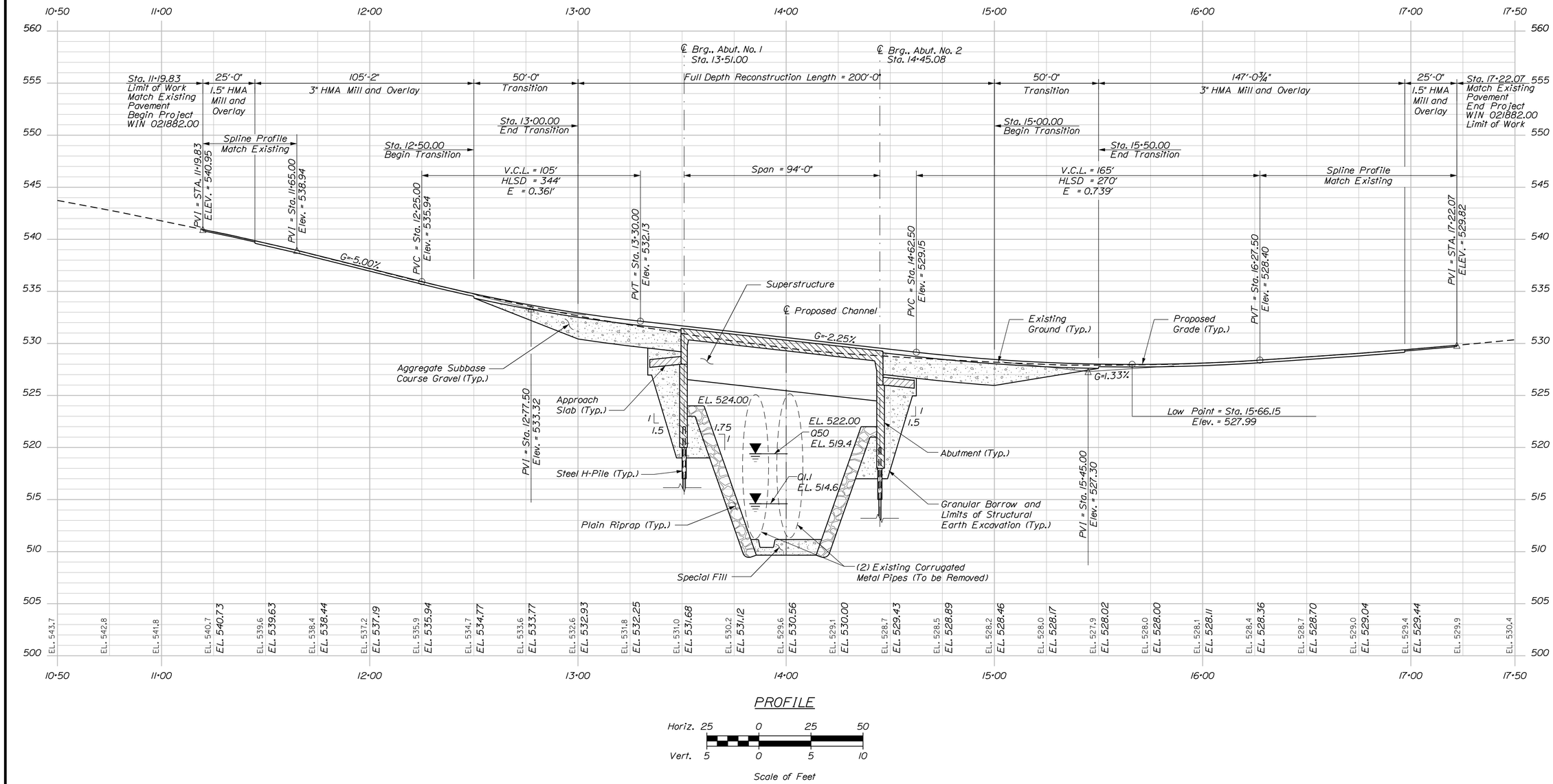
PERLEY BROOK BRIDGE
PERLEY BROOK
AROOSTOOK COUNTY
FORT KENT

GENERAL PLAN

SHEET NUMBER
3
OF 38

Filename: ...\BRIDGE\MSTA\003_BDPlan_01.dgn Division: BRIDGE Username: common Date:11/10/2021

Filename: ...\BRIDGE\MSTA\004_Profile_01.dgn Division: BRIDGE Username: common Date:11/10/2021



PROFILE

Horiz. 25 0 25 50

Vert. 5 0 5 10

Scale of Feet

GORRILL PALMER

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Thornton Tomasetti

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2188(200)

WIN
021882.00

3468

BRIDGE PLANS

PROJ. MANAGER	J. STETSON		
DESIGN-DETAILED	E.BROWNELL	D.BURGESS	11-10-2021
CHECKED-REVIEWED	B.WELCH	J.BURGESS	11-10-2021
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SIGNATURE

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DATE

PERLEY BROOK BRIDGE
PERLEY BROOK
AROOSTOOK COUNTY
FORT KENT

PROFILE

SHEET NUMBER

4

OF 38

Filename: ...\00\GEOTECH\MSTA\005_BLP1.dgn Division: GEOTECH Username: terry.white Date:11/9/2021

CURVE DATA #1
PI = 10+23.34
D = 4°46'28.7"
Δ = 11°44'13.3" Lt.
R = 1200.00'
L = 245.82'
T = 123.34'
E = 6.32'

Sta. 11+19.83
Limit of Work
Match Existing Pavement
Begin Project
WIN 021882.00

PT = STA. 11+45.82

Midway Splice Guardrail 15' Radius with Terminal End. Single Rail

Proposed Generator Panel (By others)

Skew = 15°00'00"

Existing Pole To Remain

Flow

℄ Brg., Abut. No. 1
Sta. 13+51.00

Span = 94'-0"

℄ Brg., Abut. No. 2
Sta. 14+45.08

(2) Existing Corrugated Metal Pipes (To be Removed)

Existing Sewer Force Main. Do Not Disturb or Undermine

Midway Splice Guardrail 15' Radius with Terminal End Single Rail and Anchorage Assembly

Limits of 10:1 Grading for Generator Panel

Proposed Pole Station 12+40. 33.0' Lt.

Remove Existing CMP Downspout (Incidental to Related Contract Items)

Remove Unk. Size

Remove 12" Unk.

Remove 12" Unk.

Remove Existing Pole (By others)

Remove Existing Generator Panel (By others)

24" Option III

Existing Pole To Remain

Remove CB

Temporary Utility Pole Station 11+50. 28.0' Lt.

6" UD "B"

R=600'

12" UD "C"

R=600'

BB-FKPB-101

R=600'

18" UD "C"

ROUTE 161 (MARKET STREET)

6" UD "B"

R=900'

Remove 18" CMP

Construction ℄

11+00

12+00

13+00

14+00

15+00

16+00

17+00

N 15°37'26.09" W

Remove CB

18" Option III

R=1000'

R=1000'

BB-FKPB-102

Remove CB

R=790'

18" Option III

15" UD "C"

15" UD "C"

15" UD "C"

W-Beam Guardrail Mid-Splice Flared Terminal (Typ.)

Remove Existing Pole (By others)

Proposed Pole Station 12+59. 30.1' Rt.

Remove 20" Pine

Remove 20" Pine

Temporary Utility Pole Station 12+42. 78.6' Rt.

Guardrail Embankment Slope Break (Typ.)

Existing Sewer Force Main. Do Not Disturb or Undermine

Approximate Location of Existing Waterline

Temporary Utility Pole Station 13+59. 118.7' Rt.

Clearing Limits for Temporary Detour

18" Option III

Abandon Pipe. Fill with Flowable Fill

Special Fill

PC = STA. 14+19.19

Perley Brook

Plain Riprap (Typ.)

Proposed Pole Station 14+85. 35.0' Rt.

Remove Existing Pole (By others)

Remove Existing Pole (By others)

Proposed Pole Station 15+90. 26.7' Rt.

Temporary Utility Pole Station 16+39. 43.9' Rt.

Temporary Utility Pole Station 15+65. 106.3' Rt.

CURVE DATA #2
PI = 16+36.94
D = 4°46'28.7"
Δ = 20°34'10.8" Rt.
R = 1200.00'
L = 430.81'
T = 217.75'
E = 19.60'

Proposed connect to 15" CMP. M existing i. Limit of W. Maintain C minimum ,

LEGEND
CASED WASH BORING

PLAN

25 0 25 50
Scale in Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2188(200)

WIN 21882.00
BRIDGE NO. 3468

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	M. WIGHT	
DESIGN-DETAILED	-----	-----
CHECKED-REVIEWED	-----	-----
DESIGN2-DETAILED2	M.ST.PIERRE	NOV 2021
DESIGN3-DETAILED3	-----	-----
REVISIONS 1	-----	-----
REVISIONS 2	-----	-----
REVISIONS 3	-----	-----
REVISIONS 4	-----	-----
FIELD CHANGES	-----	-----

SIGNATURE

P.E. NUMBER

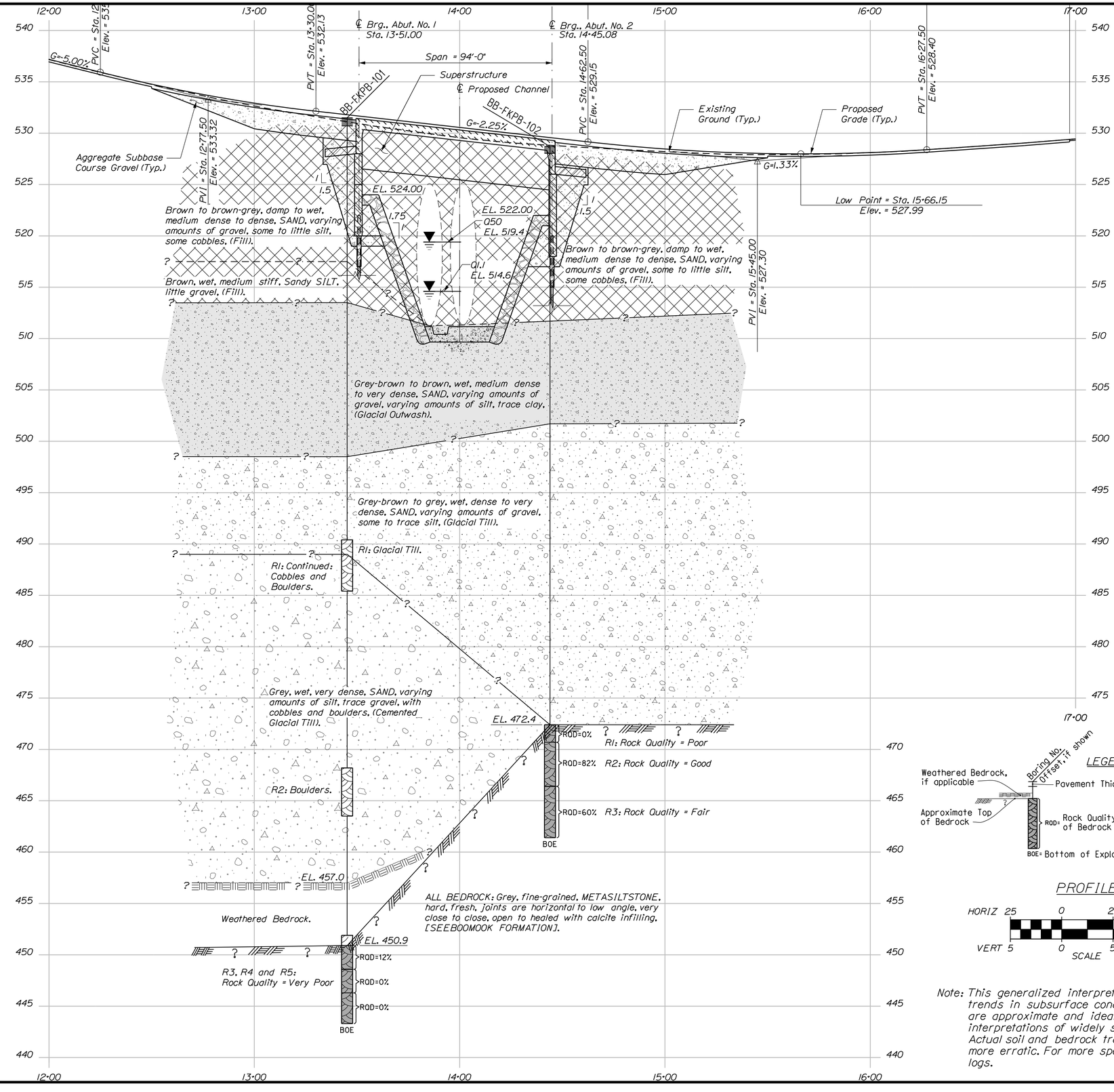
DATE

PERLEY BROOK BRIDGE
PERLEY BROOK
FORT KENT AROOSTOOK COUNTY

BORING LOCATION PLAN

SHEET NUMBER
5
OF 38

Filename: ...\00\GEOTECH\MSTA\006_ISP1.dgn Division: GEOTECH Username: terry.white Date:11/9/2021



Note: This generalized interpretive soil profile is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and have been developed by interpretations of widely spaced explorations and samples. Actual soil and bedrock transitions may vary and are probably more erratic. For more specific information refer to the exploration logs.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2188(200)

WIN 21882.00

BRIDGE NO. 3468 BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	M. WIGHT	
DESIGN-DETAILED	------	------
CHECKED-REVIEWED	------	SIGNATURE
DESIGN2-DETAILED2	M.ST.PIERRE	NOV 2021
DESIGN3-DETAILED3	------	P.E. NUMBER
REVISIONS 1	------	------
REVISIONS 2	------	------
REVISIONS 3	------	DATE
REVISIONS 4	------	------
FIELD CHANGES	------	------

PERLEY BROOK BRIDGE
PERLEY BROOK
AROOSTOOK COUNTY
FORT KENT

INTERPRETIVE SUBSURFACE PROFILE

SHEET NUMBER
6
OF 38

Filename: ...\MSTA\007_BORING LOGS1.dgn Division: GEOTECH Username: terry.white Date:11/9/2021

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Perley Brook Bridge #3468 carries Route 161 over Perley Brook
Location: Fort Kent, Maine

Boring No.: BB-FKPB-101
WIN: 21882.00

Driller:	MaineDOT	Elevation (ft.)	531.5	Auger ID/OD:	5" Solid Stem
Operator:	Travis/James/Rick	Datum:	NAVD88	Sampler:	Standard Split Spoon
Logged By:	B. Wilder	Rig Type:	CME 45C	Hammer Wt./Fall:	140#/30"
Date Start/Finish:	5/18,25/2017	Drilling Method:	Cased Wash Boring	Core Barrel:	NQ-2"
Boring Location:	13+45.2, 10.0 ft Lt.	Casing ID/OD:	HW-4" & NW-3"	Water Level*:	17.0 ft bgs.
Hammer Efficiency Factor:	0.854	Hammer Type:	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MU = Unsuccessful Thin Wall Tube Sample Attempt
V = Field Vane Shear Test, PP = Pocket Penetrometer
MV = Unsuccessful Field Vane Shear Test Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140 lb. Hammer
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(LAB)}$ = Lab Vane Undrained Shear Strength (psf)
q_u = Unconfined Compressive Strength (tsf)
N-uncorrected = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency
MC = 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. Penetration Resistance (or RQD *) (s)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results* AASHTO and Unified Class
							SSA	530.7		9.5" HMA.	
								530.0		0.8	
5	10	24/19	5.00 - 7.00	21/46/29/27	75	107				Brown, damp, very dense, Gravelly SAND, some silt, (Fill),	
10	20	24/12	10.00 - 12.00	10/15/23/27	38	54	35			Similar to above.	
							74				
							98				
							48				
15							20	517.5		14.0	
	30	24/13	15.00 - 17.00	3/2/2/2	4	6	11			Brown, wet, medium stiff, Sandy SILT, little gravel, (Fill),	GM304393 A-4, SM WC=24.7%
							10				
							22	513.5		18.0	
20							58				
							78			Grey-brown, wet, very dense, Gravelly SAND, trace silt, (Glacial Outwash).	GM304394 A-1-a, SW-SM WC=10.6%
	40	24/15	20.00 - 22.00	16/21/22/70	43	61	30				
							48			Hole caved in at 21.5 ft bgs.	
							61				
							55				
25	50	24/17	24.00 - 26.00	14/13/13/13	26	37	17			Grey, wet, dense, Gravelly SAND, little silt,	
							46				
							62				
							72				
							75				
30	60	24/19	29.00 - 31.00	8/9/12/13	21	30	25			Brown, wet, medium dense, Silty fine SAND, trace gravel, trace clay,	GM304395 A-4, SC-SM WC=19.8%
							34				
							66				
							67	498.5		33.0	
							84				
35	70	24/15	34.00 - 36.00	17/20/15/20	35	50	46			Grey-brown, wet, dense, SAND, some gravel, some silt, (Glacial Till),	
							77				
							66				
							67				
							90				
40	80	24/10	39.00 - 41.00	14/16/22/23	38	54	44			Grey-brown, wet, very dense, Gravelly SAND, some silt,	
							60				
	R1	60/30	41.10 - 46.10				88			R1: 50% Recovery	
							154	489.0		42.5	
45							158				
	90		44.00 - 44.10	30(1.2")	---		43			Grey, damp, very dense, Gravelly SAND, some silt, (Cemented Glacial Till),	
							52				
							45				
							56				
							69				
50							OPEN HOLE			Roller Coned ahead to 54.0 ft bgs.	
55	100	6/6	54.00 - 54.50	55	---					Grey, wet, very dense, Silty SAND, (Cemented Glacial Till), Roller Coned ahead to 59.0 ft bgs.	
60	110	2.4/2.4	59.00 - 59.20	55(2.4")	---					Similar to above.	
							28				
							100				
							138			Pulled out NW Casing, then drove HW Casing back down to 60.0 ft bgs. Roller Coned ahead to 77.2 ft bgs. then set in NW Casing back in to 74.5 ft bgs.	
	R2	56.4/28	63.30 - 68.00				968			968 blows for 0.3 ft. R2: Boulders. R2: Core Times (min:sec) 63.3-64.3 ft (2:37) 64.3-65.3 ft (2:16) 65.3-66.3 ft (2:40) 66.3-67.3 ft (0:38) 67.3-68.0 ft (0:25)	
65							99				
							OPEN HOLE				
	120	9.6/5	68.00 - 68.80	50/7(0.3")	---					Grey, wet, very dense, SAND, little silt,	
70								457.0		74.5	

Remarks:

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.

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Perley Brook Bridge #3468 carries Route 161 over Perley Brook
Location: Fort Kent, Maine

Boring No.: BB-FKPB-101
WIN: 21882.00

Driller:	MaineDOT	Elevation (ft.)	531.5	Auger ID/OD:	5" Solid Stem
Operator:	Travis/James/Rick	Datum:	NAVD88	Sampler:	Standard Split Spoon
Logged By:	B. Wilder	Rig Type:	CME 45C	Hammer Wt./Fall:	140#/30"
Date Start/Finish:	5/18,25/2017	Drilling Method:	Cased Wash Boring	Core Barrel:	NQ-2"
Boring Location:	13+45.2, 10.0 ft Lt.	Casing ID/OD:	HW-4" & NW-3"	Water Level*:	17.0 ft bgs.
Hammer Efficiency Factor:	0.854	Hammer Type:	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MU = Unsuccessful Thin Wall Tube Sample Attempt
V = Field Vane Shear Test, PP = Pocket Penetrometer
MV = Unsuccessful Field Vane Shear Test Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140 lb. Hammer
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(LAB)}$ = Lab Vane Undrained Shear Strength (psf)
q_u = Unconfined Compressive Strength (tsf)
N-uncorrected = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency
MC = 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. Penetration Resistance (or RQD *) (s)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results* AASHTO and Unified Class
75										Roller Coned ahead from 77.2-79.6 ft bgs.	
	R3	39.6/ 39.6	79.60 - 82.90	RQD = 12%			NQ-2				
80								450.6		80.6	
	R4	27.6/ 27.6	82.90 - 85.20	RQD = 0%						Top of Bedrock at Elev. 450.9 ft. R3: Bedrock: Grey, fine grained, METASILTSTONE, hard, fresh, very close to close breaks along steep bedding-joints are low angle to horizontal, open to healed by calcite infilling - [SEBOOMOOK FORMATION] Rock Quality = Very Poor. R3: Core Times (min:sec): 80.6-81.6 ft (5:27) 81.6-82.6 ft (10:02) 82.6-82.9 ft (51:08) 100% Recovery Core Blocked	
85	R5	36/36	85.20 - 88.20	RQD = 0%						R4: Bedrock: Similar to above. Rock Quality = Very Poor. R4: Core Times (min:sec): 82.9-83.9 ft (2:53) 83.9-84.9 ft (4:06) 84.9-85.2 ft (71:03) 100% Recovery Core Blocked	
								443.3		R5: Bedrock: Similar to above. Rock Quality = Very Poor. R5: Core Times (min:sec): 85.2-86.2 ft (3:11) 86.2-87.2 ft (3:01) 87.2-88.2 ft (6:37) 100% Recovery	
90										88.2 Bottom of Exploration at 88.2 feet below ground surface.	
95											
100											

Remarks:

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* 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.

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Perley Brook Bridge #3468 carries Route 161 over Perley Brook
Location: Fort Kent, Maine

Boring No.: BB-FKPB-102
WIN: 21882.00

Driller:	MaineDOT	Elevation (ft.)	528.7	Auger ID/OD:	5" Solid Stem
Operator:	Travis/James/Rick	Datum:	NAVD88	Sampler:	Standard Split Spoon
Logged By:	B. Wilder/Bickford	Rig Type:	CME 45C	Hammer Wt./Fall:	140#/30"
Date Start/Finish:	5/23/2017-5/24/2017	Drilling Method:	Cased Wash Boring	Core Barrel:	NQ-2"
Boring Location:	14+44, 13.3 ft Rt.	Casing ID/OD:	HW-4" & NW-3"	Water Level*:	17.0 ft bgs.
Hammer Efficiency Factor:	0.854	Hammer Type:	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample Attempt
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MU = Unsuccessful Thin Wall Tube Sample Attempt
V = Field Vane Shear Test, PP = Pocket Penetrometer
MV = Unsuccessful Field Vane Shear Test Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140 lb. Hammer
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(LAB)}$ = Lab Vane Undrained Shear Strength (psf)
q_u = Unconfined Compressive Strength (tsf)
N-uncorrected = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency
MC = 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. Penetration Resistance (or RQD *) (s)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results* AASHTO and Unified Class
							SSA	528.0		8" HMA.	
								528.0		0.7	
5	10	24/20	5.00 - 7.00	10/13/13/16	26	37				Brown, moist, medium dense, SAND, some gravel, little silt, (Fill),	GM304396 A-1-b, SM WC=5.2%
							61				
	20	24/16	10.00 - 12.00	5/7/10/7	17	24	82			Brown grey, damp, dense, SAND, some silt, some gravel, trace clay, (Fill),	
							52				
							112				
15							117				
	30	24/8	15.00 - 17.00	10/15/30/35	45	64	11			Tan grey, wet, very dense, SAND, some gravel, some cobbles.	
							21	511.7		17.0	
							48			Roller Coned ahead to 20.0 ft bgs.	
							54				
20							94				
	40	24/20	20.50 - 22.50	10/12/14/15	26	37	51			Grey brown, wet, dense, medium to fine SAND, trace gravel, trace silt, (Glacial Outwash).	GM304397 A-1-a, SP-SM WC=17.0%
							78				
							128				
							151				
25	50	24/20	25.00 - 27.00	14/16/15/17	31	44	163			Grey, wet, dense, SAND, some gravel,	
							OPEN HOLE	501.7		27.0	
										Roller coned ahead to 30.0 ft bgs.	
30	60	24/18	30.00 - 32.00	18/19/35/61	54	77				Grey, wet, very dense, Gravelly SAND, little silt, (Glacial Till),	GM304398 A-1-a, SM WC=12.1%
										Roller Coned ahead ro 35.0 ft bgs.	
35	70	24/16	35.00 - 37.00	28/29/35/29	64	91				Grey, very dense, SAND, some gravel, quartz seam, (Glacial Till),	
40	80	19.2/15	40.00 - 41.60	18/12/49/50(1.2)	61	87				Grey, wet, very dense, SAND, some gravel, some silt,	GM304399 A-1-b, SM WC=14.1%
										Cobble from 41.6-42.0 ft bgs.	
45	90	12/7	45.00 - 46.00	21/70	---					Grey, wet, very dense, fine SAND, some silt, some gravel, (Glacial Till),	
50	100	12/12	50.00 - 51.00	45/52	---					Grey, wet, very dense, fine SAND, some silt, little gravel, trace cobble,	
55	MD	1.2/0	55.00 - 55.10	30	---					Failed sample attempt. Cobble from 55.0-55.5 ft bgs. Roller Coned ahead to 56.3 ft bgs.	
	R1	20.4/ 20.4	56.30 - 58.00	RQD = 0%			NQ-2	472.4		56.3	
										Top of Bedrock at Elev. 472.4 ft. R1: Bedrock: Grey, fine grained, METASILTSTONE, hard, fresh, steep bedding, joints are steep to horizontal, open to healed by calcite - [SEBOOMOOK FORMATION] Rock Quality = Poor. R1: Core Times (min:sec) 56.3-57.3 ft (4:38) 57.3-58.0 ft (81:56) 100% Recovery Core Blocked	
60	R2	51.6/ 51.6	58.00 - 62.30	RQD = 82%						R2: Bedrock: Similar to above, except joints are horizontal, wide. Rock Quality = Good. R2: Core Times (min:sec) 58.0-59.0 ft (4:57) 59.0-60.0 ft (3:09) 60.0-61.0 ft (3:04) 61.0-62.0 ft (2:50) 62.0-62.3 ft (11:17) 100% Recovery Core Blocked	
	R3	60/58	62.30 - 67.30	RQD = 60%						R3: Bedrock: Similar to above. Rock Quality = Fair. R3: Core Times (min:sec) 62.3-63.3 ft (2:00) 63.3-64.3 ft (2:14) 64.3-65.3 ft (2:15) 65.3-66.3 ft (2:15) 66.3-67.3 ft (2:05) 96% Recovery	
65								461.4		67.3	
										Bottom of Exploration at 67.3 feet below ground surface.	
70											
75											

Remarks:

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* 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.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2188(200)

WIN 21882.00
BRIDGE NO. 3468

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	M. WIGHT		
DESIGN-DETAILED	-------	-----	------
CHECKED-REVIEWED	-----	-----	NOV 2021
DESIGN2-DETAILED2	M.ST.PIERRE	T.WHITE	------
DESIGN3-DETAILED3	-------	-----	------
REVISIONS 1	------	-----	------
REVISIONS 2	------	-----	------
REVISIONS 3	------	-----	------
REVISIONS 4	------	-----	------
FIELD CHANGES	------	-----	------

SIGNATURE

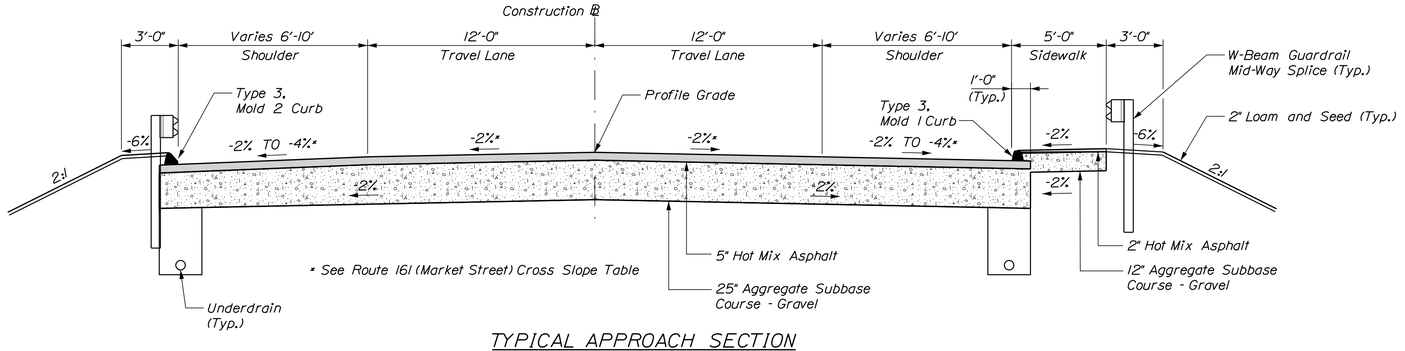
P.E. NUMBER

DATE

PERLEY BROOK BRIDGE
PERLEY BROOK
AROOSTOOK COUNTY
FORT KENT

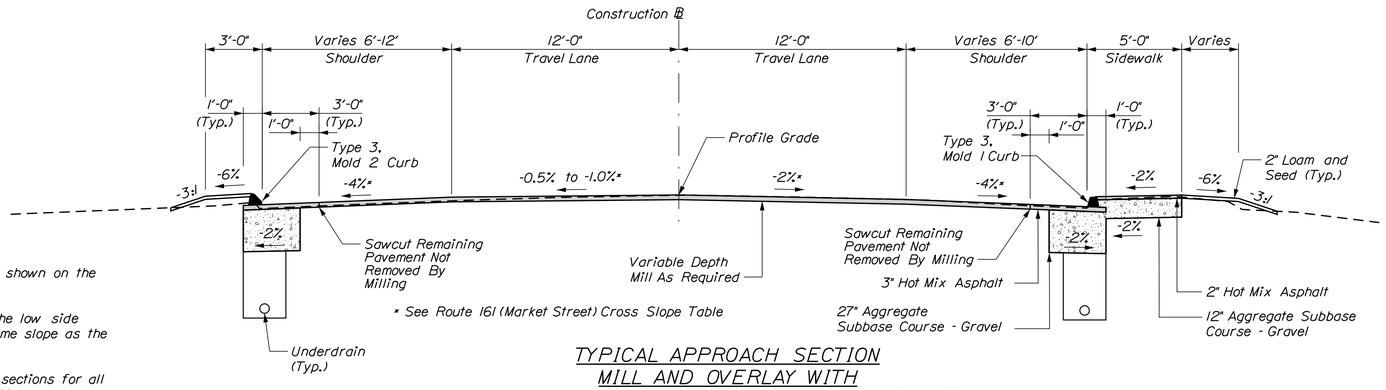
BORING LOGS

SHEET NUMBER
7
OF 38



TYPICAL APPROACH SECTION
FULL DEPTH RECONSTRUCTION

Sta. 12+50 to Sta. 13+51
Sta. 14+45.08 to Sta. 15+50



TYPICAL APPROACH SECTION
MILL AND OVERLAY WITH
BOX SHOULDER AND SIDEWALK RECONSTRUCTION

Sta. 11+19.83 to Sta. 12+25
Sta. 15+75 to Sta. 17+22.07

Notes:

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

2. *When superelevation exceeds the slope of the low side shoulder, the low side shoulder shall have the same slope as the travelway.*

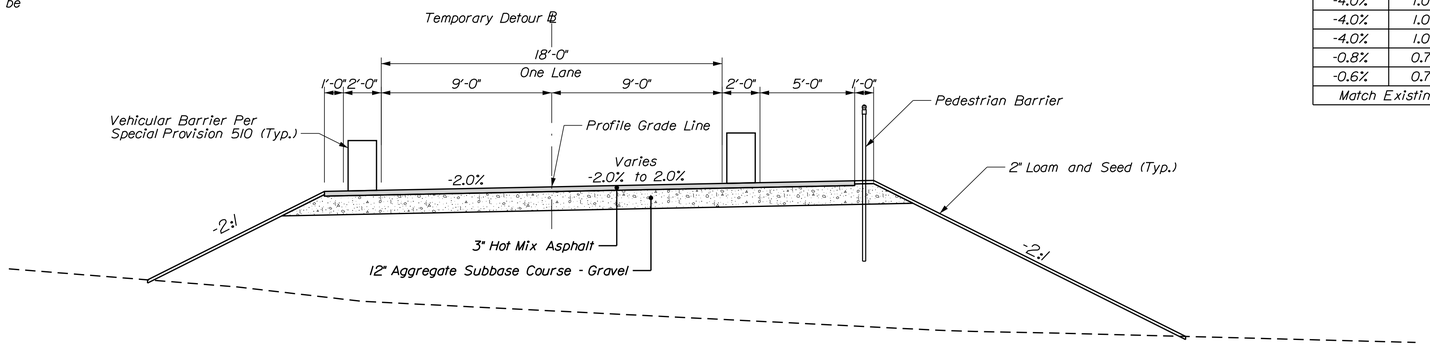
3. *Crowns for both normal and superelevation sections for all courses of subbase and pavement shall be straight.*

4. *The algebraic difference between the shoulder and the travelway cross slopes "rollover" shall not exceed 8%.*

5. *The stationing shown under each typical is approximate.*

6. *Embankment grading presented on the cross sections represents the final finished grade elevations (top of loam to be placed).*

Route 161 (Market Street) Cross Slopes				
Left Shoulder	Travel Lane	Station	Travel Lane	Right Shoulder
Match Existing		11+19.83	Match Existing	
-2.5%	-1.0%	11+25	-2.0%	-4.0%
-4.0%	-1.0%	11+50	-2.0%	-4.0%
		to		
-4.0%	-1.0%	12+50	-2.0%	-4.0%
-4.0%	-2.0%	12+75	-2.0%	-4.0%
		to		
-4.0%	-2.0%	13+25	-2.0%	-4.0%
-2.0%	-2.0%	13+50	-2.0%	-2.0%
		to		
-2.0%	-2.0%	14+50	-2.0%	-2.0%
-4.0%	-2.0%	14+75	-2.0%	-4.0%
-4.0%	-1.2%	15+00	-2.0%	-4.0%
-4.0%	-0.3%	15+25	-2.0%	-4.0%
-4.0%	0.5%	15+50	-3.0%	-4.0%
-4.0%	0.5%	15+75	-3.0%	-4.0%
-4.0%	1.0%	16+00	-3.0%	-4.0%
-4.0%	1.0%	16+25	-3.0%	-4.0%
-4.0%	1.0%	16+50	-3.0%	-3.0%
-0.8%	0.7%	16+75	-3.0%	-3.0%
-0.6%	0.7%	17+00	-2.9%	-1.7%
Match Existing		17+22.07	Match Existing	



TEMPORARY DETOUR
TYPICAL APPROACH SECTION

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STP-2188(200)

WIN
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BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	J.STETSON	
DESIGN-DETAILED	E.BROWNELL	11-10-2021
CHECKED-REVIEWED	B.WELCH	11-10-2021
DESIGN2-DETAILED2	-------	-------
DESIGN3-DETAILED3	-------	-------
REVISIONS 1	-------	-------
REVISIONS 2	-------	-------
REVISIONS 3	-------	-------
REVISIONS 4	-------	-------
FIELD CHANGES	-------	-------

SIGNATURE

P.E. NUMBER

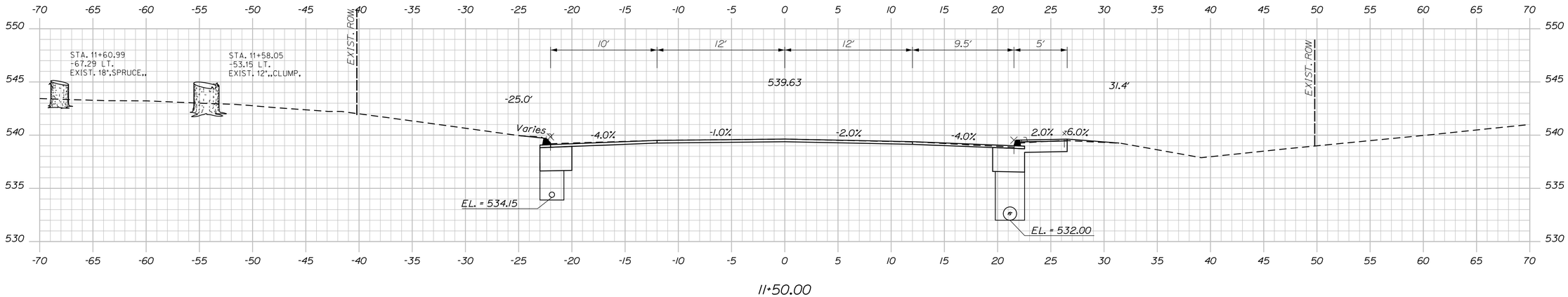
DATE

PERLEY BROOK BRIDGE
PERLEY BROOK
FORT KENT AROOSTOOK COUNTY

TYPICAL SECTIONS

SHEET NUMBER
8
OF 38

Filename: ...\BRIDGE\MSTA\008_Btypical.dgn Division: BRIDGE Username: common Date:11/10/2021



STATE OF MAINE
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STP-2188(200)

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3468 BRIDGE PLANS

				DATE
PROJ. MANAGER	J.STETSON			
DESIGN-DETAILED	T. LANDRY	M. CUNDIFF	-	11-10-2021
CHECKED-REVIEWED	D. ETTINGER	-	-	11-10-2021
DESIGN2-DETAILED2	-	-	-	-
DESIGN3-DETAILED3	-	-	-	-
REVISIONS 1	-	-	-	-
REVISIONS 2	-	-	-	-
REVISIONS 3	-	-	-	-
REVISIONS 4	-	-	-	-
FIELD CHANGES	-	-	-	-

SIGNATURE

P.E. NUMBER

DATE

PERLEY BROOK BRIDGE
PERLEY BROOK
FORT KENT AROOSTOOK COUNTY

CROSS SECTIONS

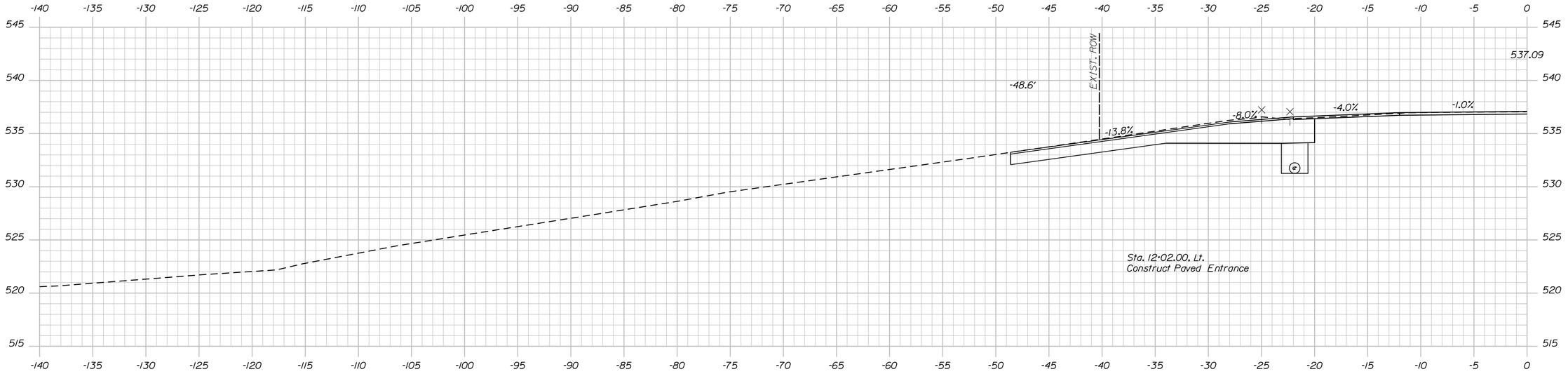
SHEET NUMBER

9

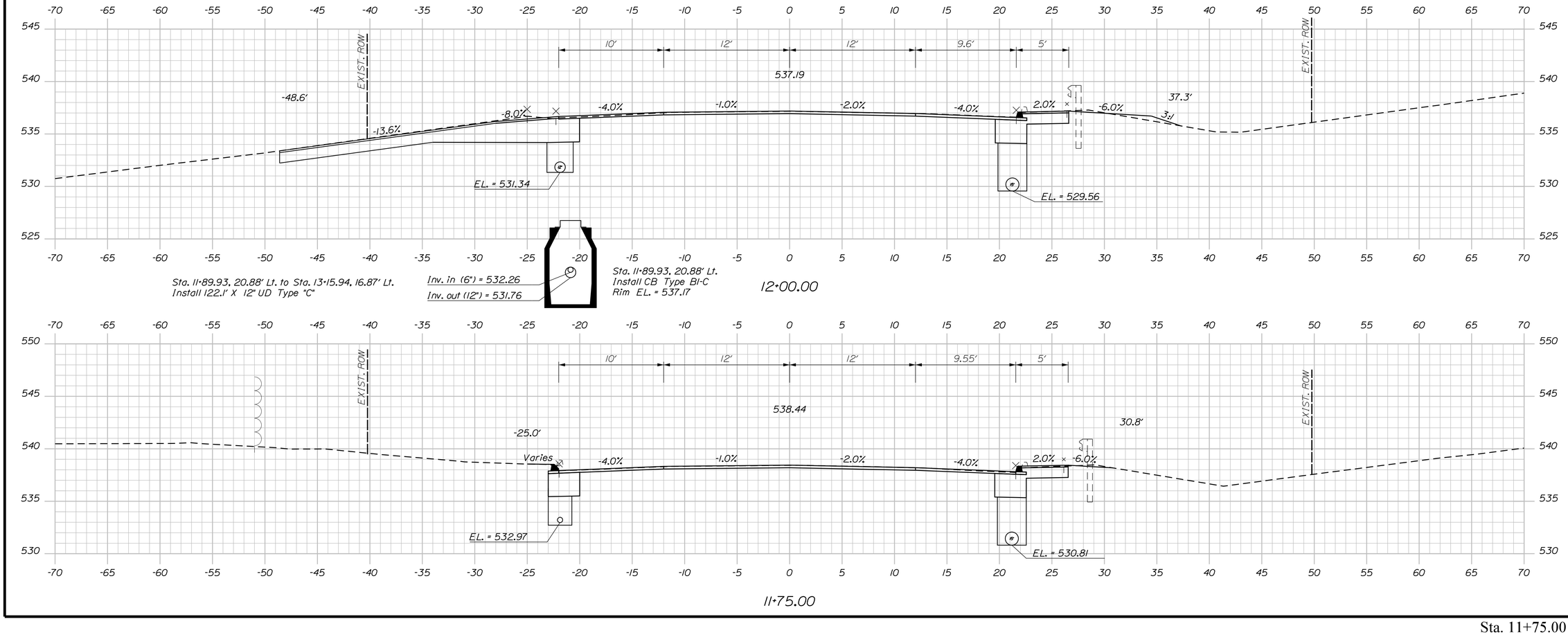
OF 38

Sta. 11+00.00 to Sta. 11+50.00

Filename: ...\00\BRIDGE\MSTA\009_Xsect.dgn Division: BRIDGE Username: common Date:11/10/2021



12+02.00 (Paved Entrance)



Sta. 11+75.00 to Sta. 12+02.00

STATE OF MAINE
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BRIDGE PLANS

3468

PROJ. MANAGER	J.STETSON		
DESIGN-DETAILED	T. LANDRY	M. CUNDIFF	11-10-2021
CHECKED-REVIEWED	D. ETTINGER	-	-
DESIGN2-DETAILED2	-	-	-
DESIGN3-DETAILED3	-	-	-
REVISIONS 1	-	-	-
REVISIONS 2	-	-	-
REVISIONS 3	-	-	-
REVISIONS 4	-	-	-
FIELD CHANGES	-	-	-

SIGNATURE

P.E. NUMBER

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PERLEY BROOK BRIDGE
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AROOSTOOK COUNTY
FORT KENT

CROSS SECTIONS

SHEET NUMBER

10

OF 38

Date:11/10/2021
Username: common
Division: BRIDGE
Filename: ...\00\BRIDGE\MSTA\009_Xsect.dgn

Username: common Date:11/10/2021
Division: BRIDGE
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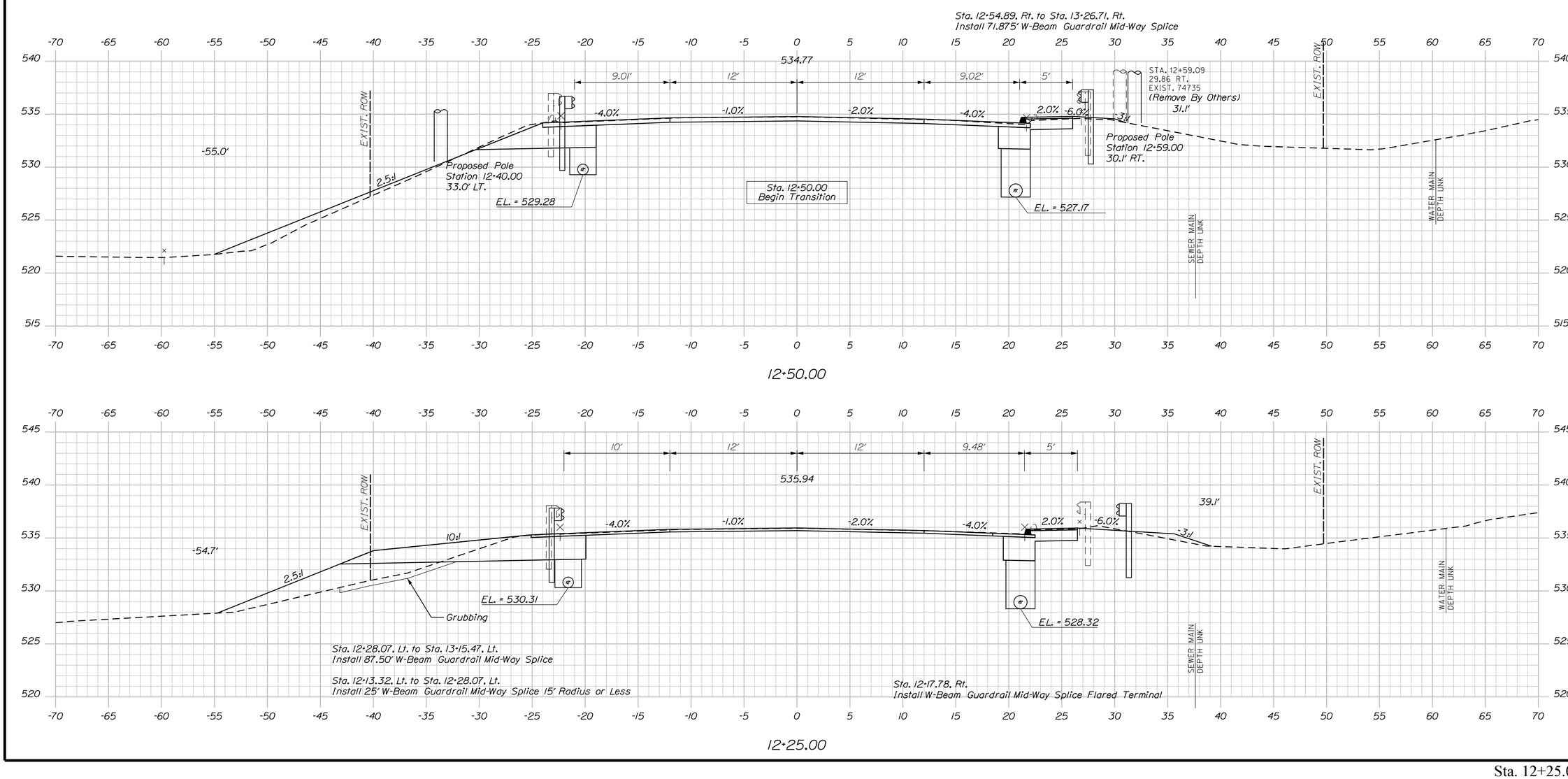

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BRIDGE PLANS

PROJ. MANAGER	J.STEFSON		
DESIGN-DETAILED	T. LANDRY	M. CUNDIFF	11-10-2021
CHECKED-REVIEWED	D. ETTINGER	-	11-10-2021
DESIGN2-DETAILED2	-	-	-
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REVISIONS 2	-	-	-
REVISIONS 3	-	-	-
REVISIONS 4	-	-	-
FIELD CHANGES	-	-	-

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PERLEY BROOK BRIDGE
PERLEY BROOK
FORT KENT AROOSTOOK COUNTY

CROSS SECTIONS

SHEET NUMBER

11

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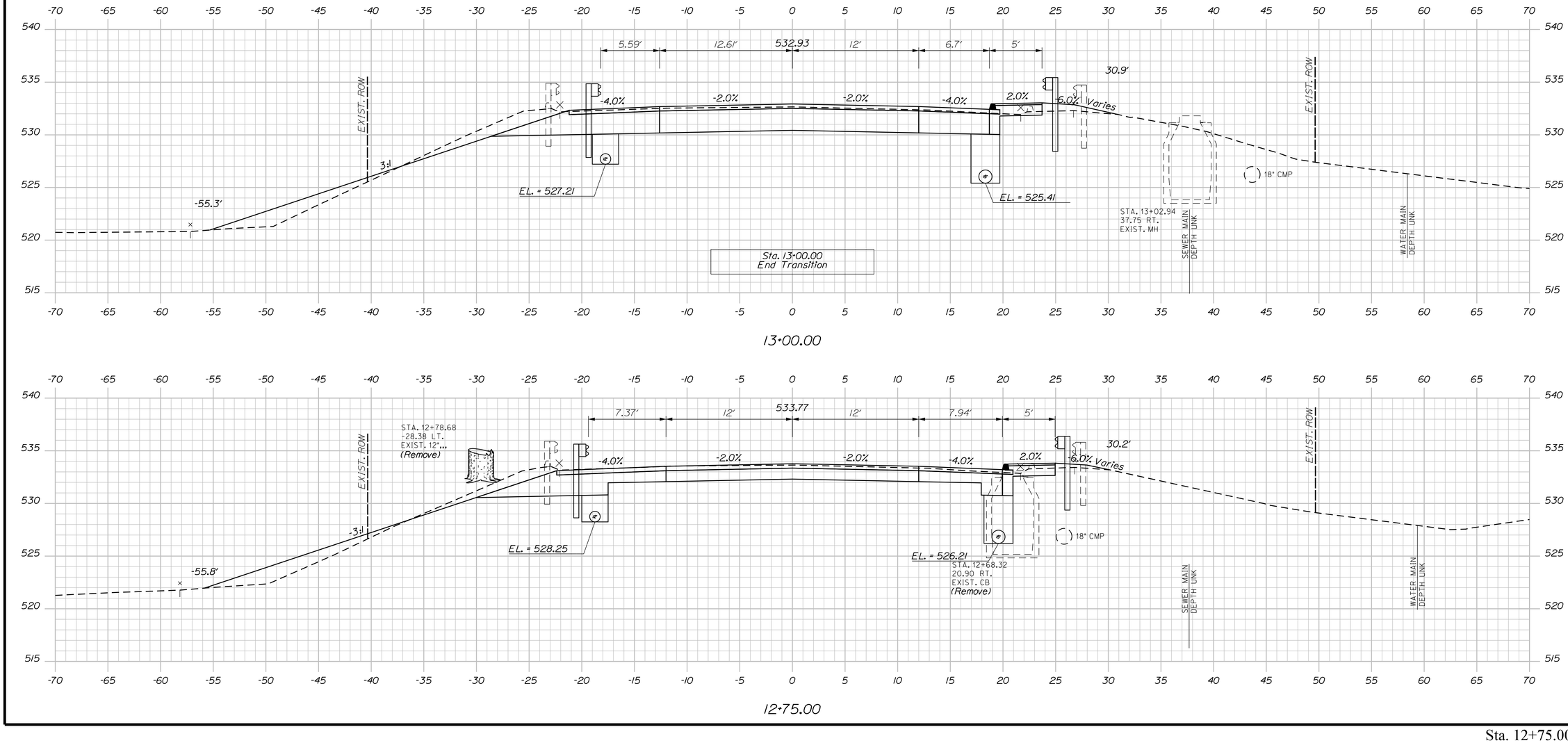
Sta. 12+25.00 to Sta. 12+50.00



Sta. 12+75.00 to Sta. 13+00.00

STATE OF MAINE
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BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	J.STEFSON		
DESIGN-DETAILED	T. LANDRY	M. CUNDIFF	11-10-2021
CHECKED-REVIEWED	D. ETTINGER	-	11-10-2021
DESIGN2-DETAILED2	-	-	-
DESIGN3-DETAILED3	-	-	-
REVISIONS 1	-	-	-
REVISIONS 2	-	-	-
REVISIONS 3	-	-	-
REVISIONS 4	-	-	-
FIELD CHANGES	-	-	-

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PERLEY BROOK BRIDGE
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FORT KENT AROOSTOOK COUNTY

CROSS SECTIONS

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12

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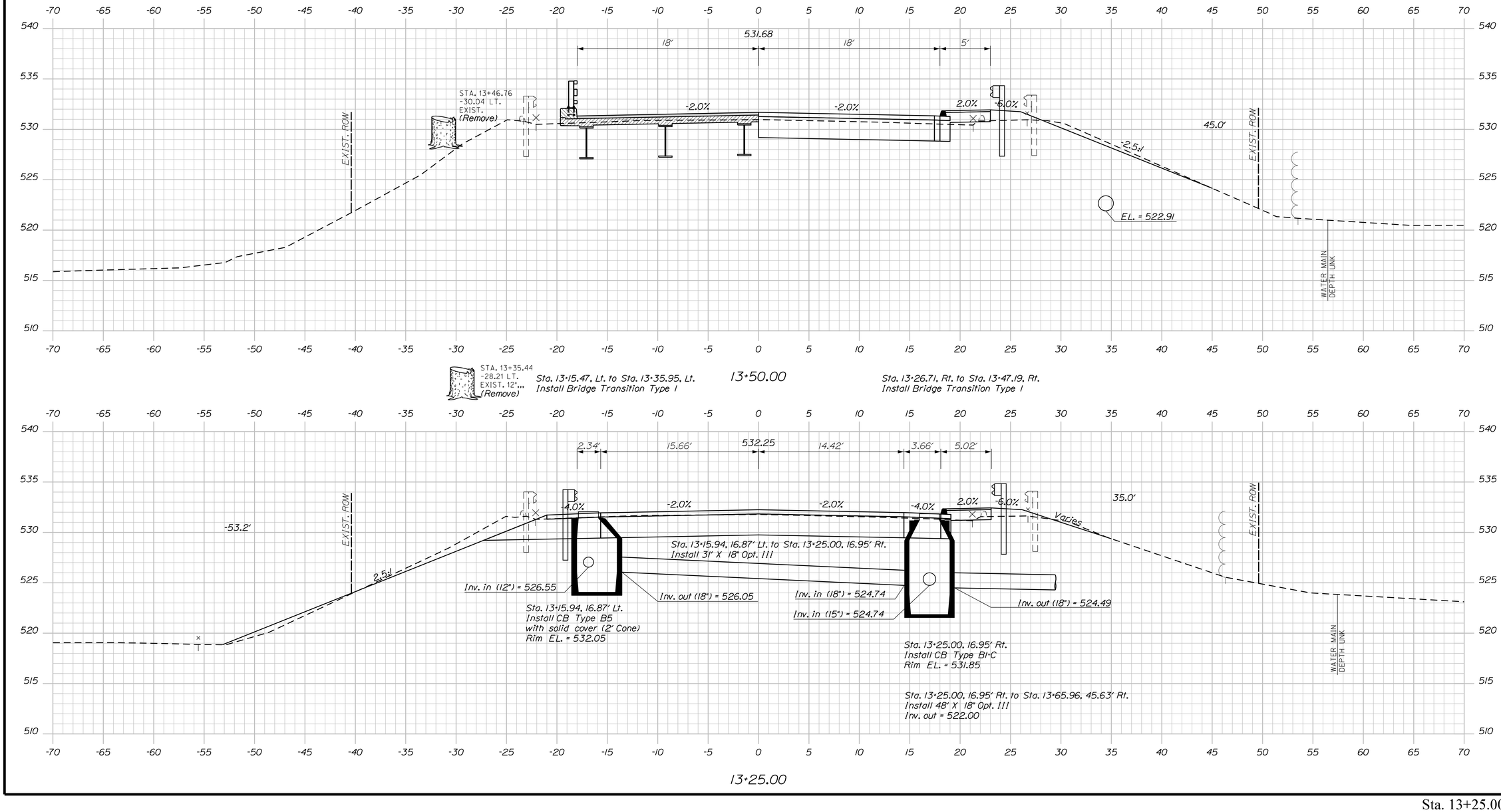

STATE OF MAINE
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BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	J.STETSON	
DESIGN-DETAILED	T. LANDRY	11-10-2021
CHECKED-REVIEWED	D. ETTINGER	-
DESIGN2-DETAILED2	-	-
DESIGN3-DETAILED3	-	-
REVISIONS 1	-	-
REVISIONS 2	-	-
REVISIONS 3	-	-
REVISIONS 4	-	-
FIELD CHANGES	-	-

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PERLEY BROOK BRIDGE
PERLEY BROOK
FORT KENT AROOSTOOK COUNTY

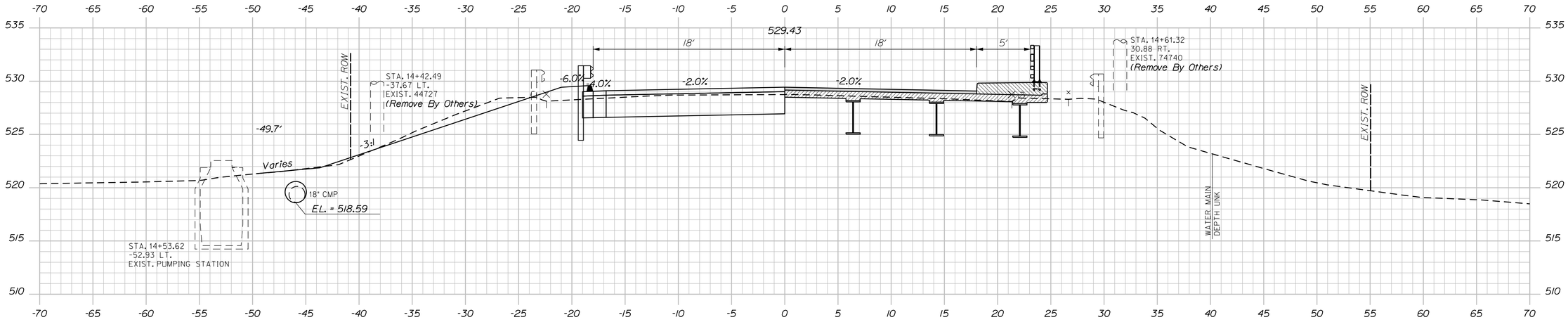
CROSS SECTIONS

SHEET NUMBER

13

OF 38

Sta. 13+25.00 to Sta. 13+50.00



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BRIDGE PLANS

J.STETSON	BY	DATE	SIGNATURE
T. LANDRY	M. CUNDIFF	11-10-2021	
D. ETTINGER	-	-	P.E. NUMBER
-	-	-	
-	-	-	
-	-	-	DATE
-	-	-	
-	-	-	

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

PERLEY BROOK BRIDGE
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FORT KENT AROOSTOOK COUNTY

CROSS SECTIONS

SHEET NUMBER

14

OF 36

Sta. 14+50.00

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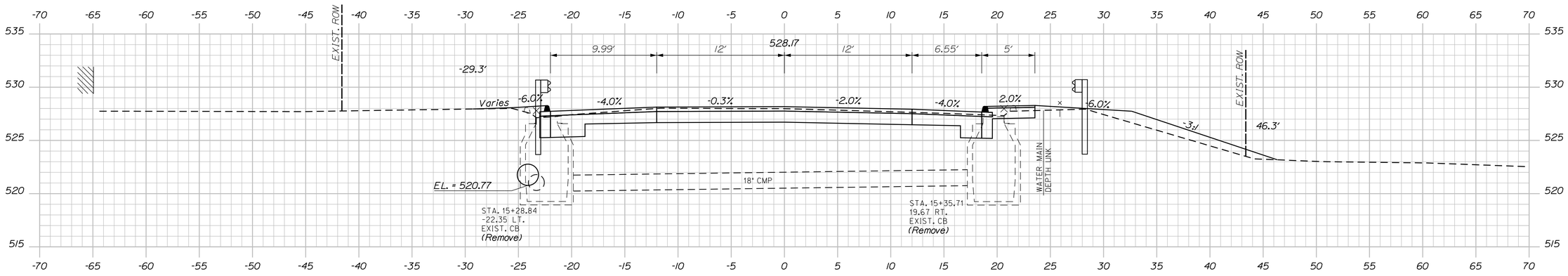
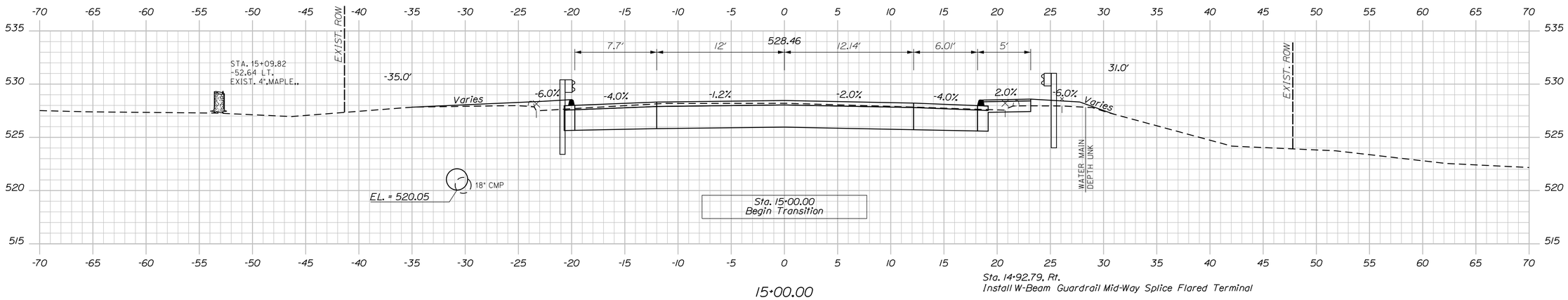


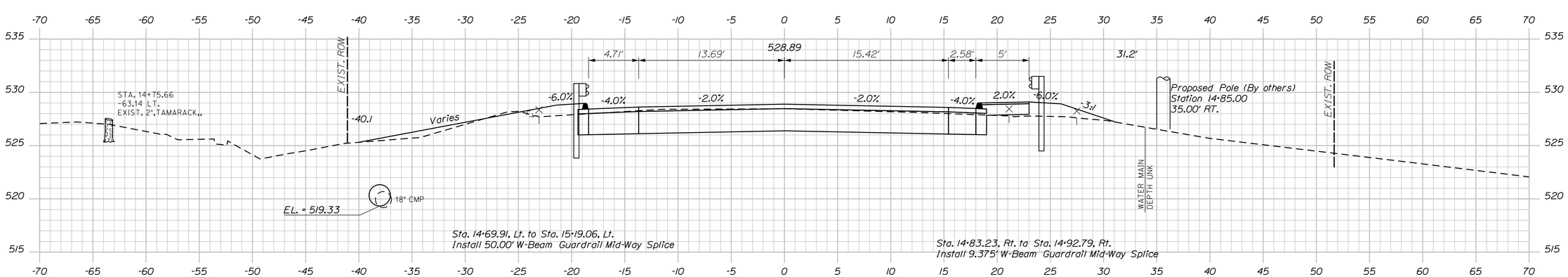
Sta. 15+19.06, Lt. to Sta. 15+33.02, Lt.
Install 25' W-Beam Guardrail Mid-Way Splice 15' Radius or Less

15+25.00



15+00.00

Sta. 14+92.79, Rt.
Install W-Beam Guardrail Mid-Way Splice Flared Terminal



Sta. 14+69.91, Lt. to Sta. 15+19.06, Lt.
Install 50.00' W-Beam Guardrail Mid-Way Splice

Sta. 14+83.23, Rt. to Sta. 14+92.79, Rt.
Install 9.375' W-Beam Guardrail Mid-Way Splice

Sta. 14+62.35, Rt. to Sta. 14+83.23, Rt.
Install Bridge Transition Type I

14+75.00

STATE OF MAINE
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BRIDGE PLANS

		DATE
PROJ. MANAGER	J.STETSON	BY
DESIGN-DETAILED	T. LANDRY	M. CUNDIFF
CHECKED-REVIEWED	D. ETTINGER	-
DESIGN2-DETAILED2	-	-
DESIGN3-DETAILED3	-	-
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REVISIONS 4	-	-
FIELD CHANGES	-	-

11-10-2021
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PERLEY BROOK BRIDGE
PERLEY BROOK
FORT KENT AROOSTOOK COUNTY

CROSS SECTIONS

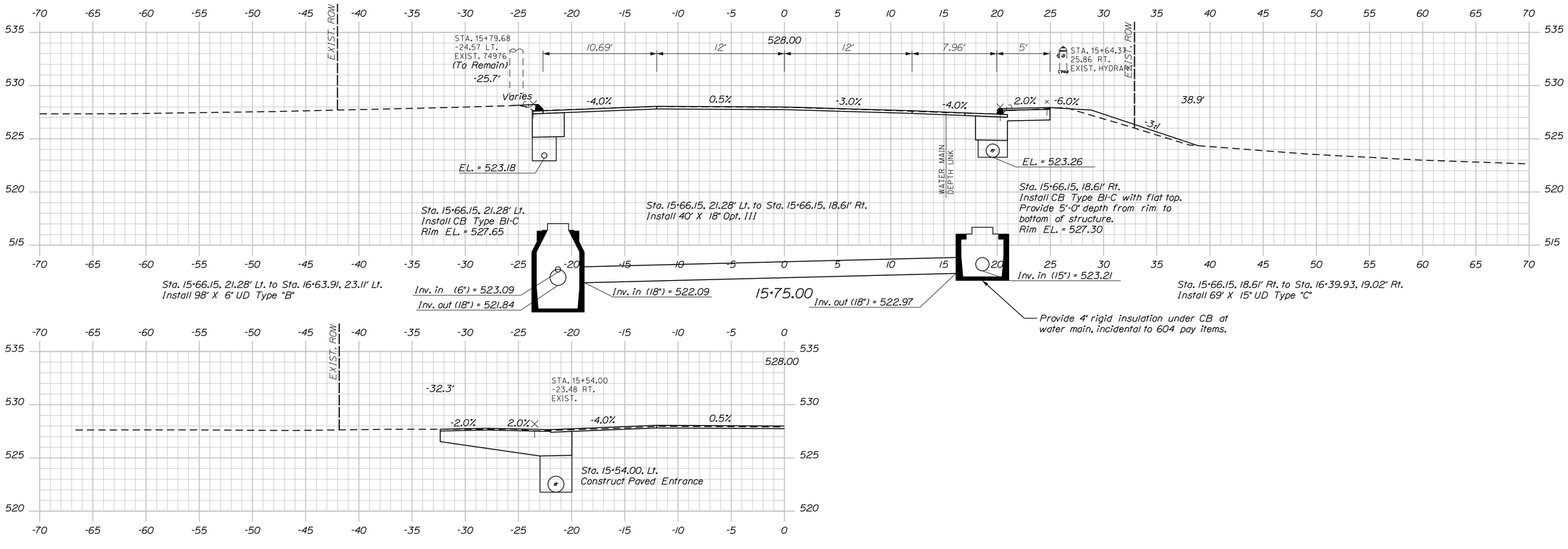
SHEET NUMBER

15

OF 36

Sta. 14+75.00 to Sta. 15+25.00

Filename: ...\00\BRIDGE\MSTA\009_Xsect.dgn Division: BRIDGE Username: common Date:11/10/2021



STATE OF MAINE
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STP-2188(200)

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BRIDGE PLANS

3468

	BY	DATE
PROJ. MANAGER	J.STETSON	
DESIGN-DETAILED	T. LANDRY	11-10-2021
CHECKED-REVIEWED	D. ETTINGER	11-10-2021
DESIGN2-DETAILED2	-	-
DESIGN3-DETAILED3	-	-
REVISIONS 1	-	-
REVISIONS 2	-	-
REVISIONS 3	-	-
REVISIONS 4	-	-
FIELD CHANGES	-	-

SIGNATURE

P.E. NUMBER

DATE

PERLEY BROOK BRIDGE
PERLEY BROOK
FORT KENT AROOSTOOK COUNTY

CROSS SECTIONS

SHEET NUMBER

16

OF 36

Sta. 15+50.00 to Sta. 15+75.00

Filename: ...\00\BRIDGE\MSTA\009_Xsect.dgn Division: BRIDGE Username: common Date:11/10/2021

Filename: ...\00\BRIDGE\MSTA\009_Xsect.dgn Division: BRIDGE Username: common Date:11/10/2021

Sta. 16+00.00 to Sta. 16+25.00

STATE OF MAINE
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STP-2188(200)

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3468 BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	J.STETSON	
DESIGN-DETAILED	T. LANDRY	11-10-2021
CHECKED-REVIEWED	D. ETTINGER	11-10-2021
DESIGN2-DETAILED2	-	-
DESIGN3-DETAILED3	-	-
REVISIONS 1	-	-
REVISIONS 2	-	-
REVISIONS 3	-	-
REVISIONS 4	-	-
FIELD CHANGES	-	-

SIGNATURE

P.E. NUMBER

DATE

PERLEY BROOK BRIDGE
PERLEY BROOK
FORT KENT AROOSTOOK COUNTY

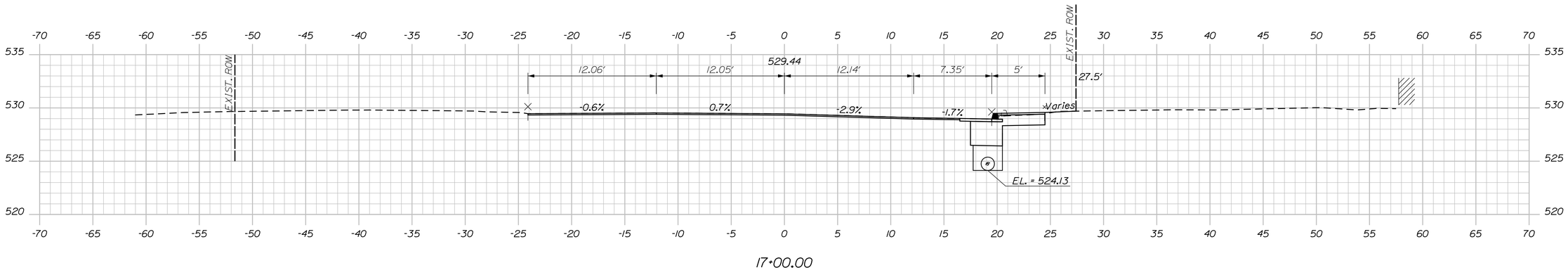
CROSS SECTIONS

SHEET NUMBER

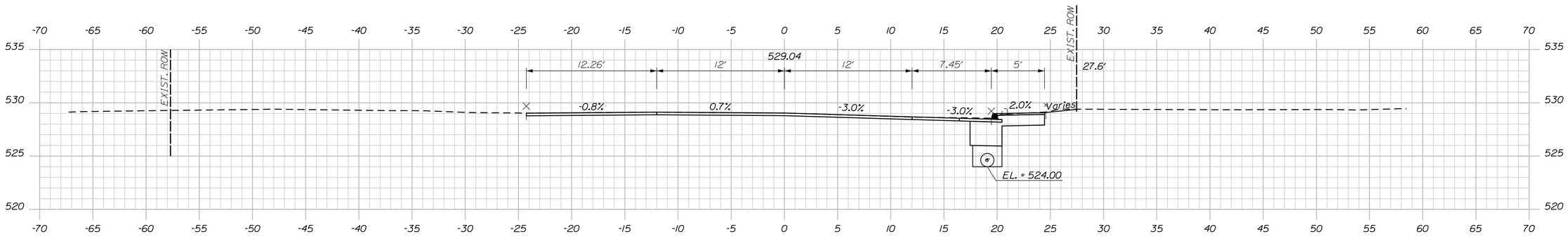
17

OF 36

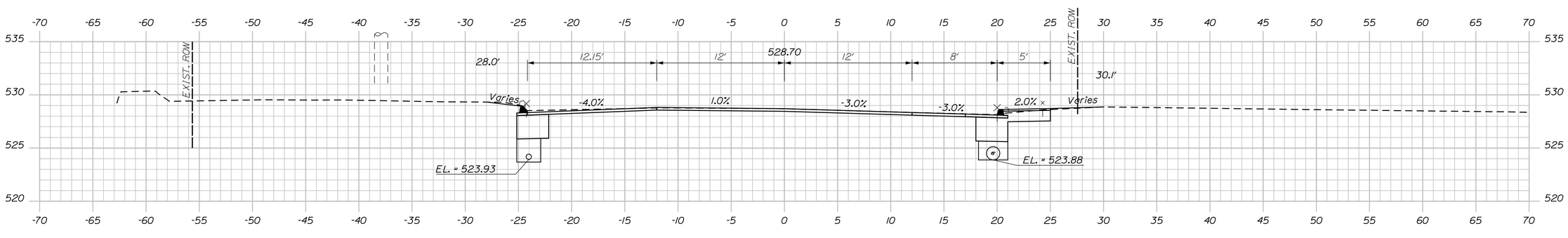
Sta. 17+22.07
Match Existing Pavement
End Project WIN 021882.00
Limit of Work



17+00.00



16+75.00



16+50.00

Sta. 16+50.00 to Sta. 17+00.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

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3468 BRIDGE PLANS

PROJ. MANAGER	J.STETSON		
DESIGN-DETAILED	T. LANDRY	D.BURGESS	11-10-2021
CHECKED-REVIEWED	D. ETTINGER	-	-
DESIGN2-DETAILED2	-	-	-
DESIGN3-DETAILED3	-	-	-
REVISIONS 1	-	-	-
REVISIONS 2	-	-	-
REVISIONS 3	-	-	-
REVISIONS 4	-	-	-
FIELD CHANGES	-	-	-

P.E. NUMBER

SIGNATURE

DATE

PERLEY BROOK BRIDGE
PERLEY BROOK
FORT KENT AROOSTOOK COUNTY

CROSS SECTIONS

SHEET NUMBER

18

OF 36

Filename: ...\00\BRIDGE\MSTA\009_Xsect.dgn Division: BRIDGE Username: common Date:11/10/2021

ABUTMENT NOTES

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

2. Place 4-in. diameter drains in the breastwall and wingwalls at 10-ft maximum spacing. The exact location will be determined by the Resident.

3. Cover joints where waterstops are not required in accordance with Standard Details Section 502.

4. Abutments and wingwalls shall be backfilled with Granular Borrow. Pay limits will be the excavation limits as shown on the Bridge Excavation Detail on this sheet.

5. Payment for excavation necessary to construct the concrete pile jackets will be considered incidental to related contract items. No separate payment will be made.

6. Payment for concrete jacket around the tops of the H-piles will not be paid for directly, but will be considered incidental to Pay Item 502.219 - Structural Concrete, Abutments and Retaining Walls. Fill concrete may be used for the concrete jackets.

7. Install drainage geocomposite behind abutments and wingwalls up to the approach slab seat elevation and in accordance with Special Provision Section 620, Drainage Geocomposite.

PILE NOTES

1. The maximum factored pile load is 349 kips for Strength I Load Combination.

2. H-Pile material shall be ASTM A 572, Grade 50.

3. Estimate of piles required:

Abutment No. 1:	5 ~ HP 14x117 @ 53 feet
Abutment No. 2:	5 ~ HP 14x117 @ 49 feet

The order lengths of the piles shall include an additional 5 feet of length for each test pile to accommodate dynamic pile testing equipment and variability in the bedrock surface.

4. All piles shall be equipped with a pile tip in accordance with Standard Specification Section 501.048, Prefabricated Pile Tips and 711.10, H-Beam Piles, Splices and Tips. Pile webs shall be oriented as shown, perpendicular to the working line.

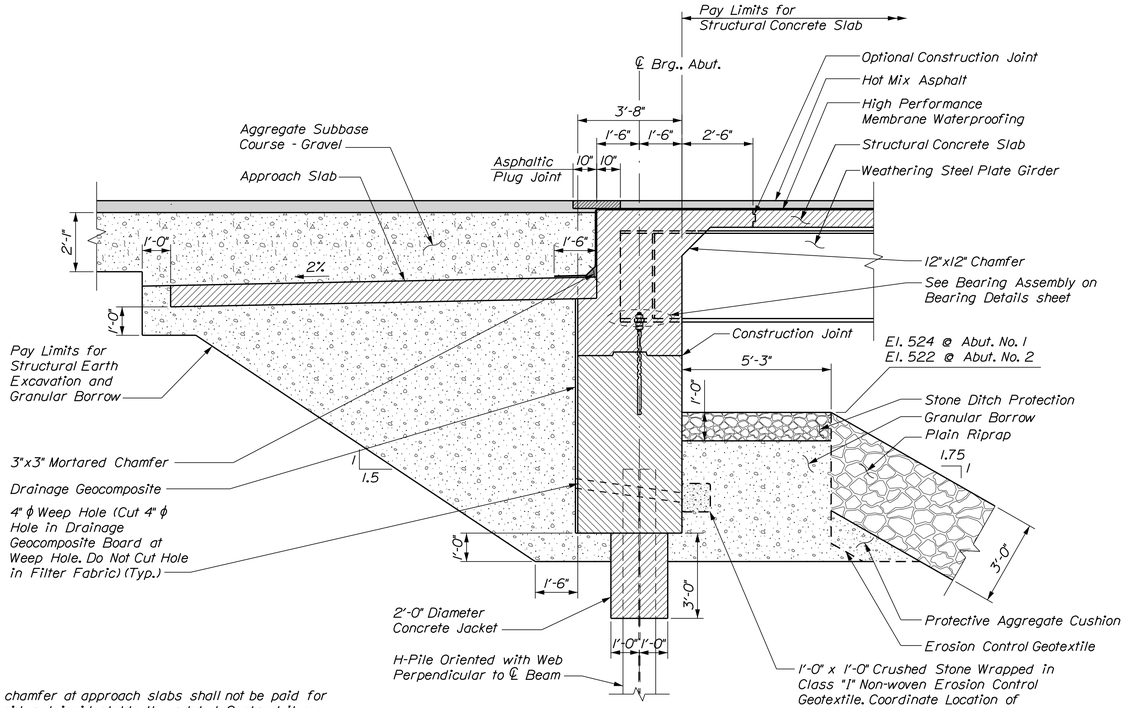
5. Piles shall not be out of position shown by more than 2 inches in any direction.

6. Piles at Abutment No. 1 shall be driven to a tip elevation of 470 or deeper in accordance with Standard Specification Section 501. Piles at Abutment No. 2 shall be driven to the required resistance on or within bedrock.

7. Cobbles and boulders may be encountered at either of the proposed abutment locations and impede pile driving operations. If obstructions are encountered prior to reaching the maximum required penetration resistance on or near bedrock, then they may be cleared by preaugering, predrilling, down-hole hammers or by conventional excavation methods for near surface obstructions. Alternative methods to clear obstructions may be used as approved by the Resident. Removal of obstructions, cobbles and boulders shall be incidental to related Contract Items.

8. The Contractor shall perform and submit a wave equation analysis for review and acceptance by the Resident. The maximum allowable driving stress is 0.90 times Fy. The submittal analyses shall include the proposed stopping criteria based on the wave equation analysis and the proposed driving system. Approval of the proposed driving equipment by the Department will be based on Department-conducted wave equation analyses and the criteria specified in Section 501 of the Standard Specifications.

9. The Contractor shall perform (2) dynamic load tests, one at each abutment, with signal matching and 24-hour (minimum) restrike tests to confirm the nominal resistance of the piles. The dynamic pile load test at each abutment will be completed on the first production pile driven. The required nominal resistance for the pile is the factored axial pile load divided by a resistance factor of 0.65 per LRFD Specifications.

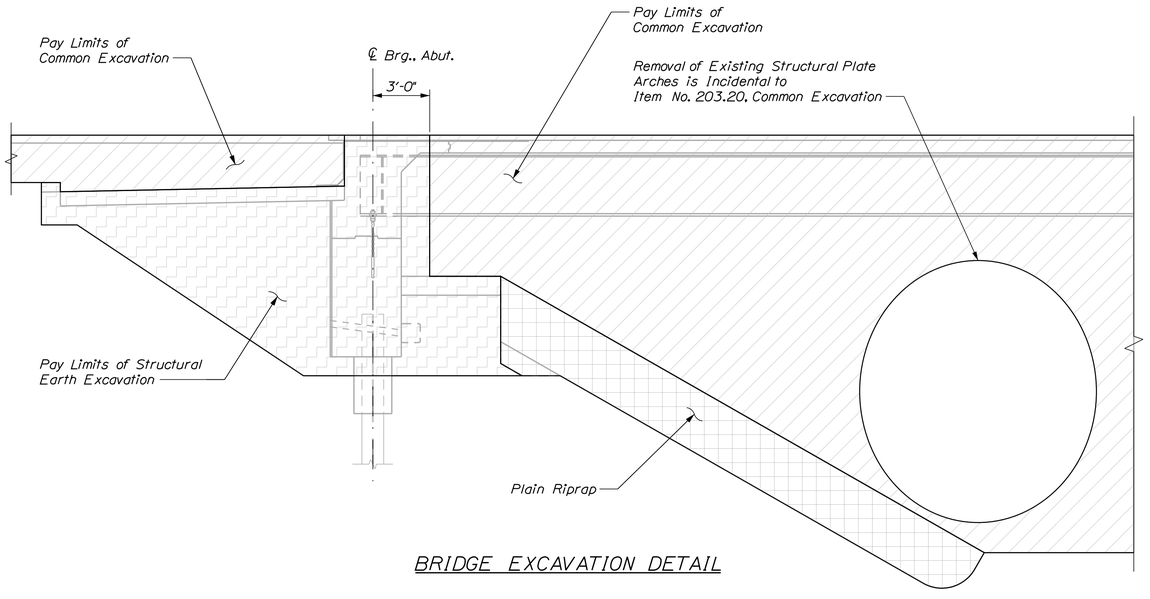


NOTES:

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

2. For Optional Construction Joint information, see Superstructure Notes on the "Superstructure Plan" sheet.

TYPICAL ABUTMENT SECTION



BRIDGE EXCAVATION DETAIL

Thornton Tomasetti

STATE OF MAINE
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BRIDGE PLANS

3468

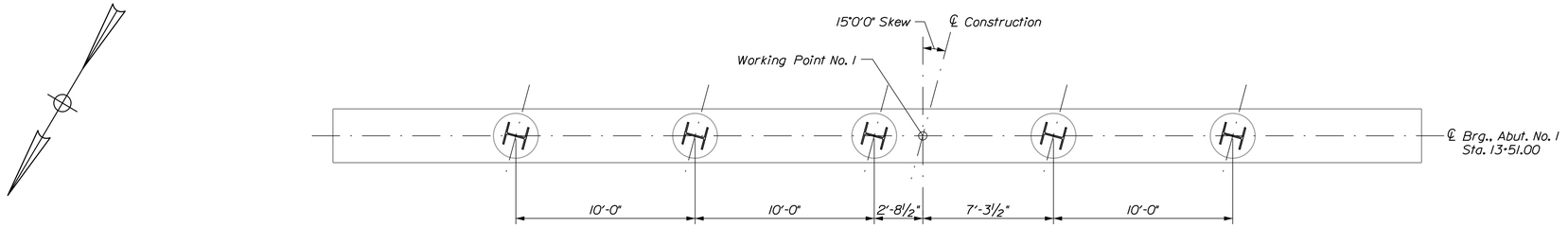
PROJ. MANAGER	J.STETSON			
DESIGN-DETAILED	E.BROWNELL	D.BURGESS	11-10-2021	
CHECKED-REVIEWED	B.WELCH	J.BURGESS	11-10-2021	SIGNATURE
DESIGN2-DETAILED2	-------	-------	-------	P.E. NUMBER
DESIGN3-DETAILED3	-------	-------	-------	
REVISIONS 1	-------	-------	-------	DATE
REVISIONS 2	-------	-------	-------	
REVISIONS 3	-------	-------	-------	
REVISIONS 4	-------	-------	-------	
FIELD CHANGES	-------	-------	-------	

PERLEY BROOK BRIDGE
PERLEY BROOK
FORT KENT AROOSTOOK COUNTY

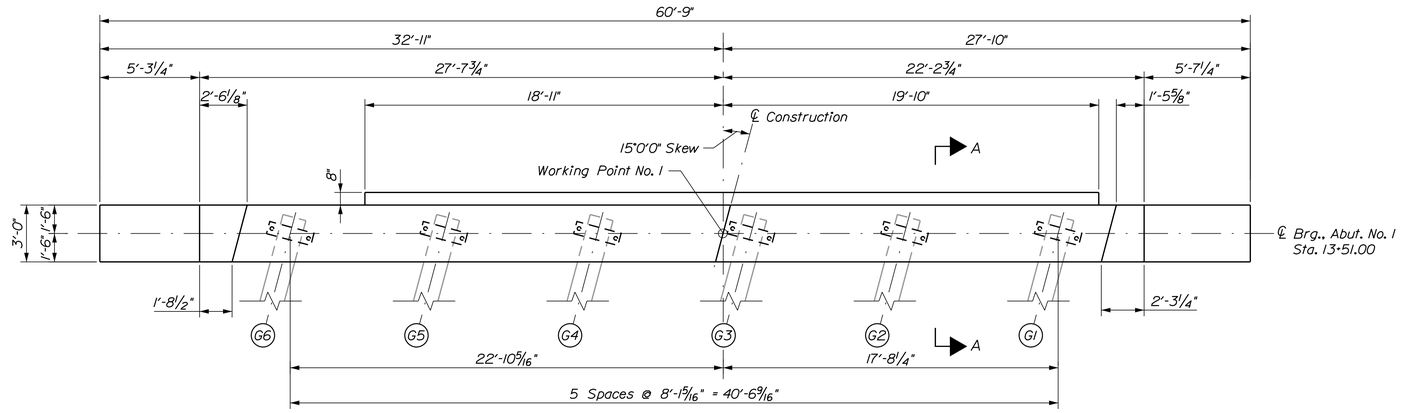
ABUTMENT DETAILS

SHEET NUMBER
19
OF 38

Date:11/23/2021
Username: common
Division: BRIDGE
Filename: ...\MSTA\019_Abutment_Det.dgn



ABUTMENT NO. 1 PILE PLAN



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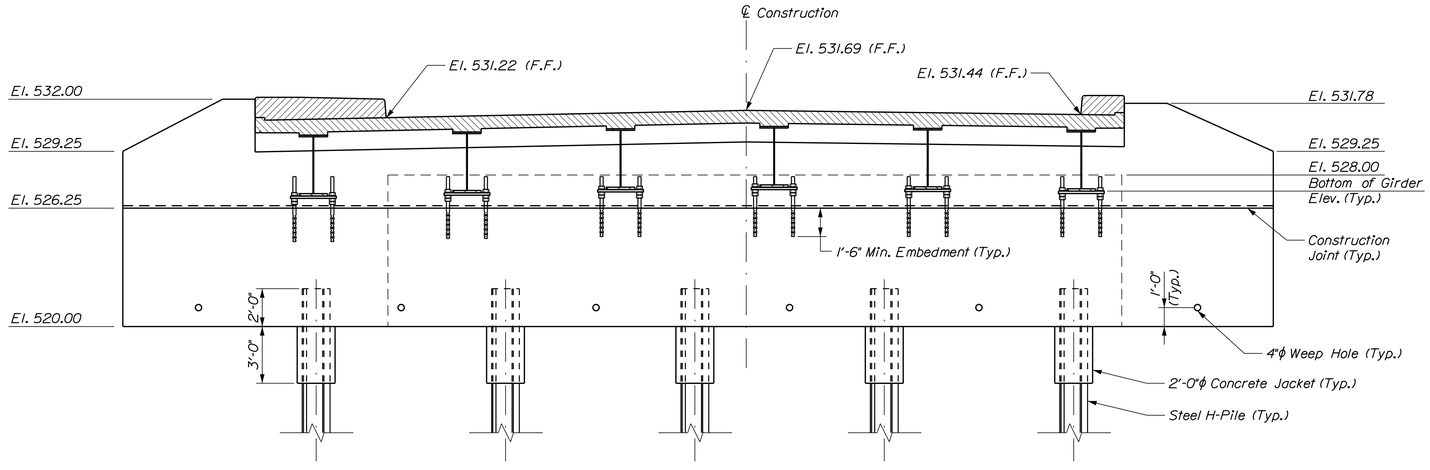

ABUTMENT NO. 1 ELEVATION

ABUTMENT NO. 1 BOTTOM OF GIRDER ELEVATIONS	
Girder	Elevation
G1	527.15
G2	527.26
G3	527.37
G4	527.22
G5	527.02
G6	526.81

N.F. = Near Face
F.F. = Far Face

Thornton Tomasetti

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2188(200)

WIN
021882.00

3468

BRIDGE PLANS

PROJ. MANAGER	J.STETSON		
DESIGN-DETAILED	E.BROWNELL	D.BURGESS	11-10-2021
CHECKED-REVIEWED	B.WELCH	J.BURGESS	11-10-2021
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DESIGN3-DETAILED3	-------	-------	-------
REVISIONS 1	-------	-------	-------
REVISIONS 2	-------	-------	-------
REVISIONS 3	-------	-------	-------
REVISIONS 4	-------	-------	-------
FIELD CHANGES	-------	-------	-------

SIGNATURE

P.E. NUMBER

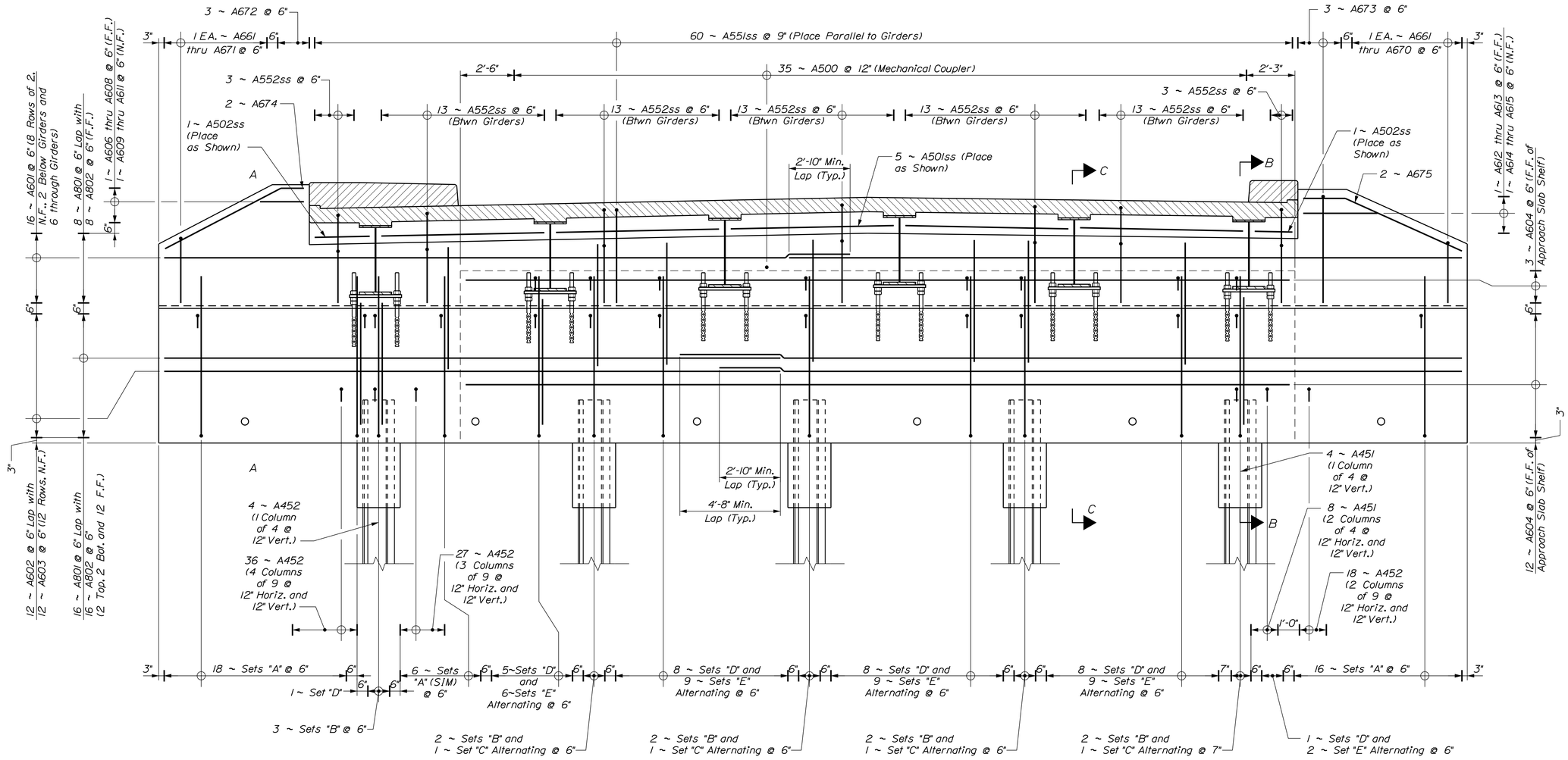
DATE

PERLEY BROOK BRIDGE
PERLEY BROOK
AROOSTOOK COUNTY
FORT KENT

ABUTMENT NO. 1
PLAN AND ELEVATION

SHEET NUMBER
20
OF 38

Username: common Date:11/10/2021
Filename: ...\BRIDGE\MSTA\020_Abutment_1.dgn Division: BRIDGE



ABUTMENT NO. 1 - REINFORCEMENT ELEVATION

N.F. = Near Face
F.F. = Far Face

Thornton Tomasetti

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2188(200)

WIN 021882.00

3468

BRIDGE PLANS

PROJ. MANAGER	J.STETSON	BY	DATE
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REVISIONS 2	-------	-------	-------
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REVISIONS 4	-------	-------	-------
FIELD CHANGES	-------	-------	-------

SIGNATURE

P.E. NUMBER

DATE

PERLEY BROOK BRIDGE
PERLEY BROOK
FORT KENT AROOSTOOK COUNTY

ABUTMENT NO. 1
REINFORCEMENT

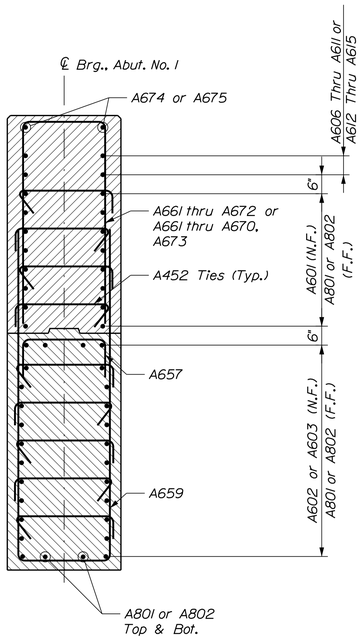
SHEET NUMBER

21

OF 38

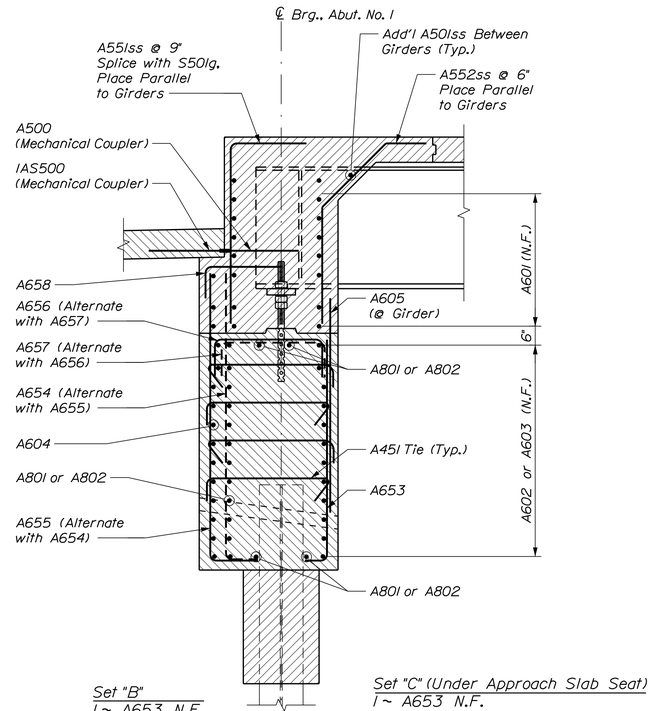
Filename: ...\021_Abutment_1_Reinf_01.dgn Division: BRIDGE Username: common Date:11/10/2021

Filename: ...\022_Abutment_1_Reinf_02.dgn Division: BRIDGE Username: common Date:11/10/2021



Set "A"
I ~ A659
I ~ A657

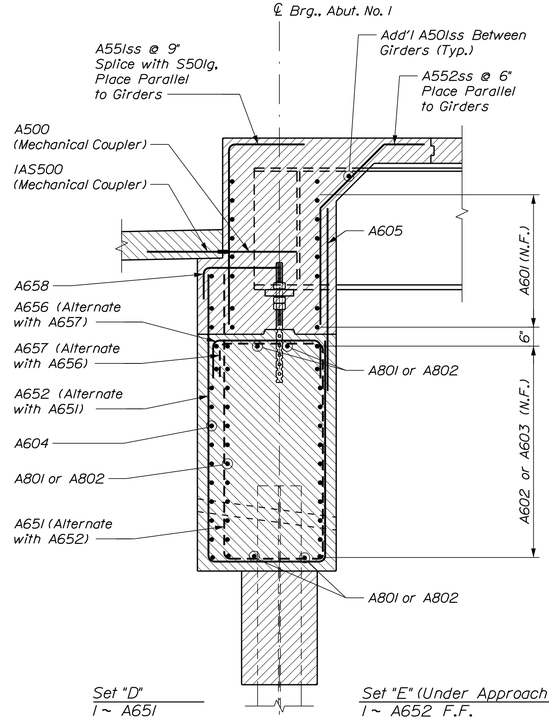
ABUTMENT NO. 1 SECTION A-A



Set "B"
I ~ A653 N.F.
I ~ A654
I ~ A605 N.F.
I ~ A657

Set "C" (Under Approach Slab Seat)
I ~ A653 N.F.
I ~ A655 F.F.
I ~ A605 N.F.
I ~ A656
I ~ A658 F.F.

ABUTMENT NO. 1 SECTION B-B
(AT PILES)



Set "D"
I ~ A651
I ~ A605 N.F.
I ~ A657

Set "E" (Under Approach Slab Seat)
I ~ A652 F.F.
I ~ A605 N.F.
I ~ A656
I ~ A658 F.F.

ABUTMENT NO. 1 SECTION C-C
(BETWEEN PILES)

N.F. = Near Face
F.F. = Far Face

Thornton Tomasetti

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2188(200)

WIN
021882.00

3468

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	J.STETSON	
DESIGN-DETAILED	D.BURGESS	11-10-2021
CHECKED-REVIEWED	J.BURGESS	11-10-2021
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

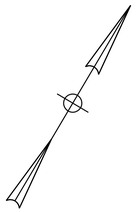
P.E. NUMBER

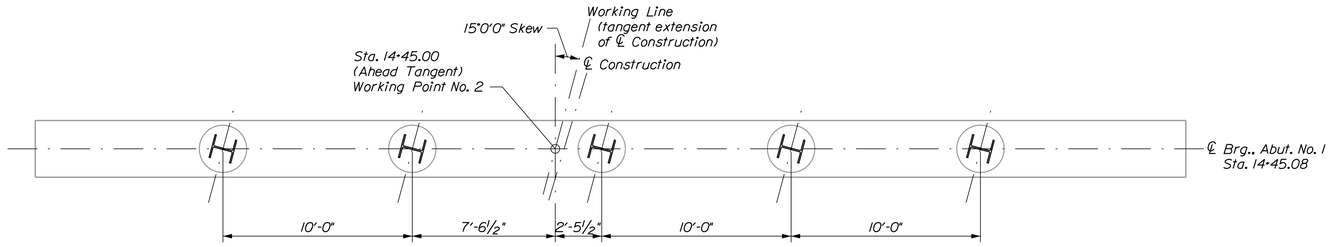
DATE

PERLEY BROOK BRIDGE
PERLEY BROOK
AROOSTOOK COUNTY
FORT KENT

ABUTMENT NO. 1
REINFORCEMENT

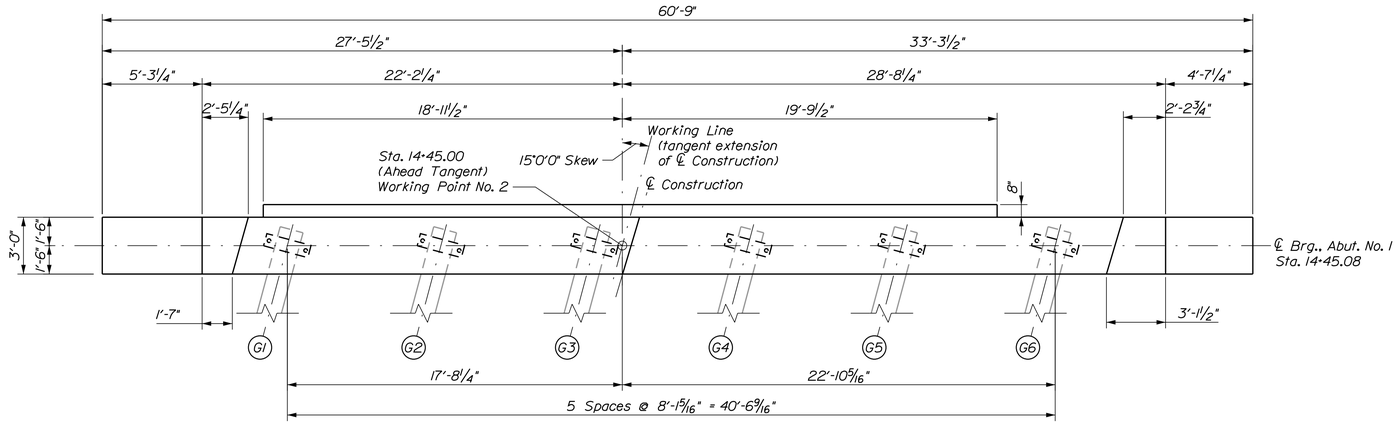
SHEET NUMBER
22
OF 38



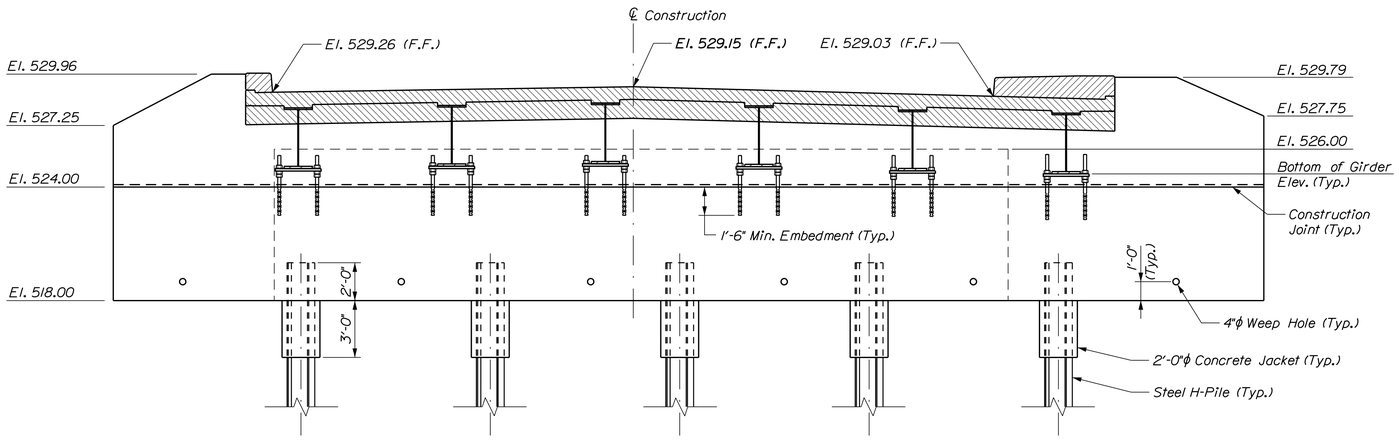


ABUTMENT NO. 2 PILE PLAN

Flow



ABUTMENT NO. 2 PLAN



ABUTMENT NO. 2 ELEVATION

ABUTMENT NO. 2 BOTTOM OF GIRDER ELEVATIONS	
Girder	Elevation
G1	525.04
G2	525.15
G3	525.26
G4	525.11
G5	524.89
G6	524.69

N.F. = Near Face
F.F. = Far Face

Thornton Tomasetti

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2188(200)

WIN 021882.00

3468

BRIDGE PLANS

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REVISIONS 2	-------	-------	-------
REVISIONS 3	-------	-------	-------
REVISIONS 4	-------	-------	-------
FIELD CHANGES	-------	-------	-------

SIGNATURE

P.E. NUMBER

DATE

PERLEY BROOK BRIDGE
PERLEY BROOK
FORT KENT AROOSTOOK COUNTY

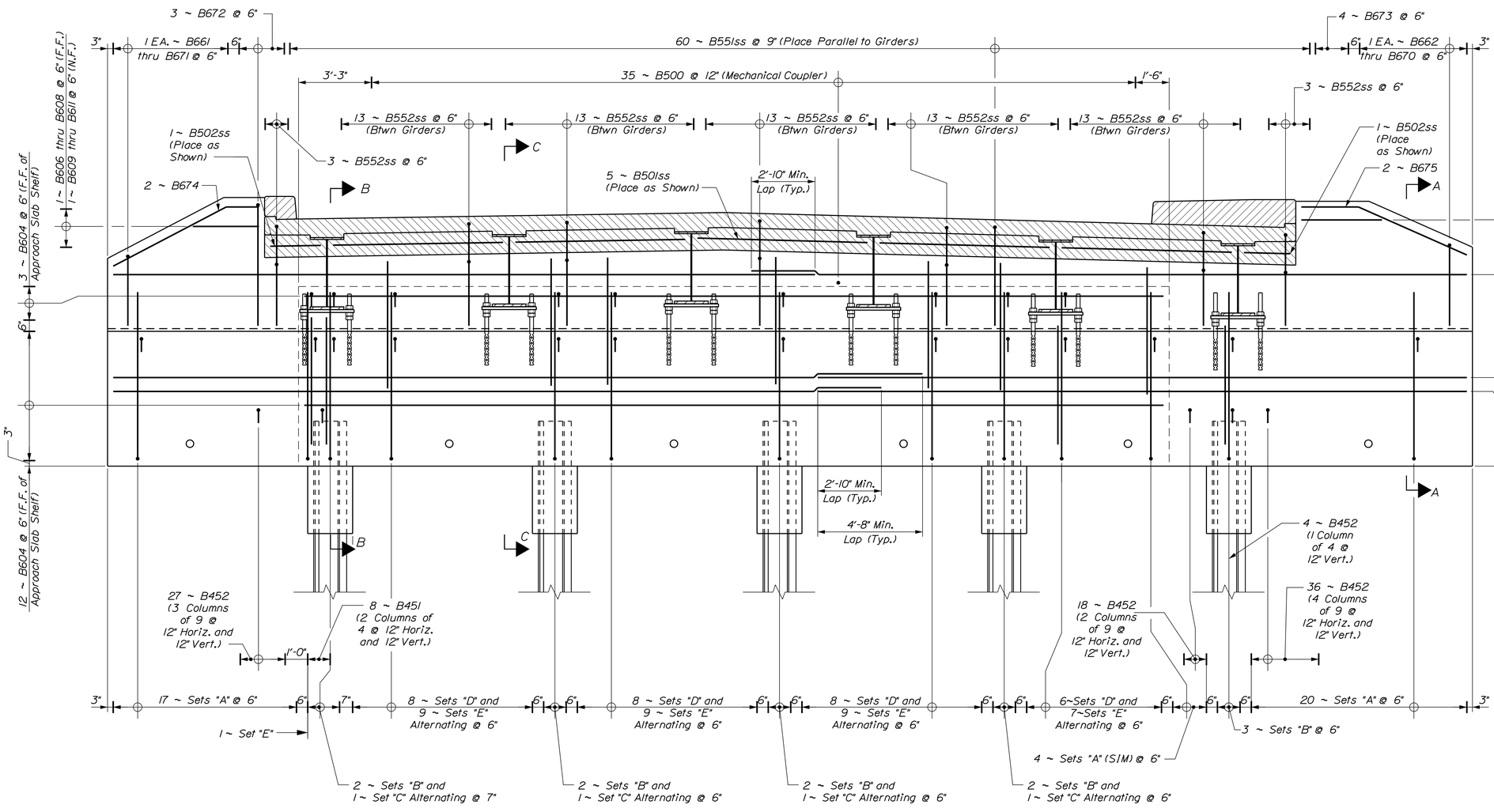
ABUTMENT NO. 2
PLAN AND ELEVATION

SHEET NUMBER

23

OF 38

Filename: ...\BRIDGE\MSTA\023_Abutment_2.dgn Division: BRIDGE Username: common Date:11/10/2021



ABUTMENT NO. 2 - REINFORCEMENT ELEVATION

N.F. = Near Face
F.F. = Far Face

Thornton Tomasetti

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2188(200)

WIN 021882.00

3468

BRIDGE PLANS

PROJ. MANAGER	J.STETSON	BY	DATE
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FIELD CHANGES	-------	-------	-------

SIGNATURE

P.E. NUMBER

DATE

PERLEY BROOK BRIDGE
PERLEY BROOK
AROOSTOOK COUNTY
FORT KENT

ABUTMENT NO. 2
REINFORCEMENT

SHEET NUMBER

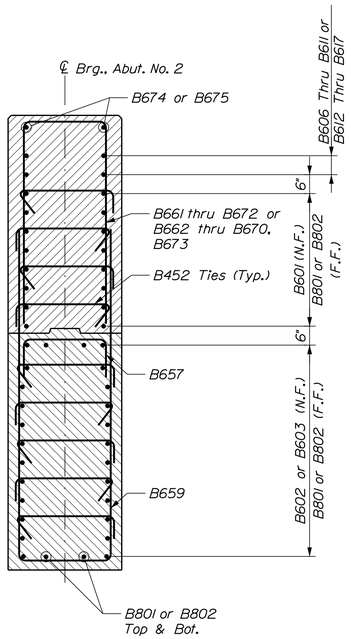
24

OF 38

Username: common Date:11/10/2021

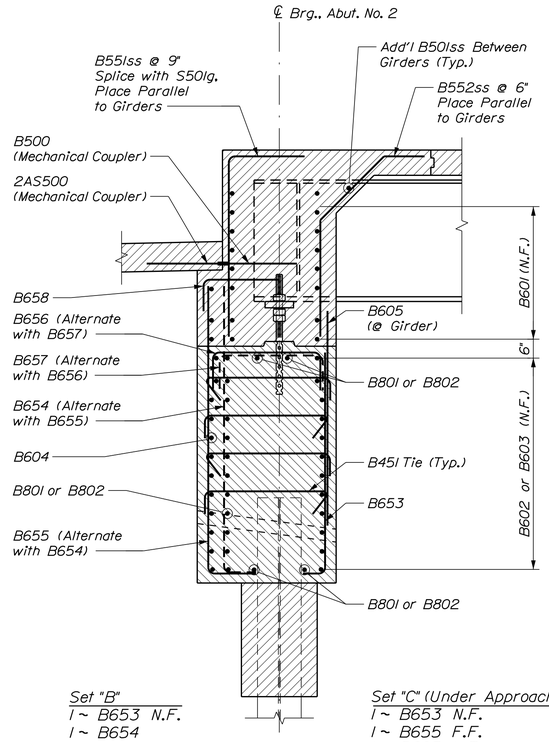
Filename: ...\024_Abutment_2_Reinf_01.dgn Division: BRIDGE

Filename: ...\025_Abutment_2_Reinf_02.dgn Division: BRIDGE Username: common Date:11/10/2021



Set "A"
I ~ B659
I ~ B657

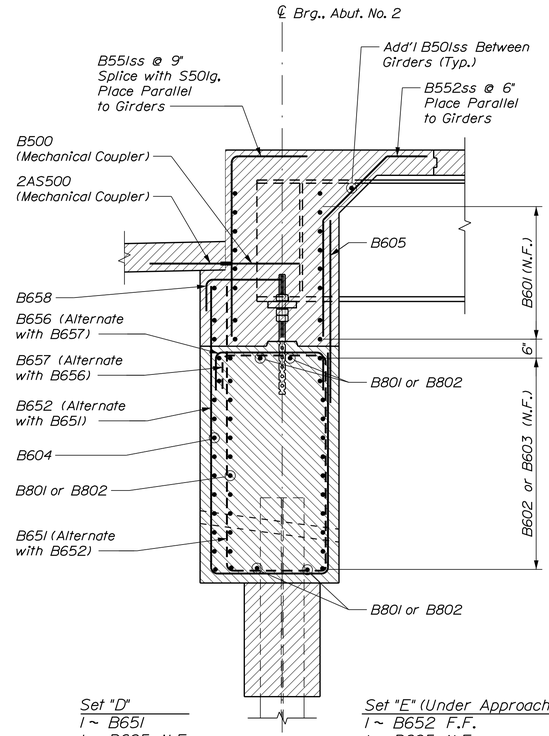
ABUTMENT NO. 2 SECTION A-A



Set "B"
I ~ B653 N.F.
I ~ B654
I ~ B605 N.F.
I ~ B657

Set "C" (Under Approach Slab Seat)
I ~ B653 N.F.
I ~ B655 F.F.
I ~ B605 N.F.
I ~ B656
I ~ B658 F.F.

ABUTMENT NO. 2 SECTION B-B (AT PILES)



Set "D"
I ~ B651
I ~ B605 N.F.
I ~ B657

Set "E" (Under Approach Slab Seat)
I ~ B652 F.F.
I ~ B605 N.F.
I ~ B656
I ~ B658 F.F.

ABUTMENT NO. 2 SECTION C-C (BETWEEN PILES)

N.F. = Near Face
F.F. = Far Face

Thornton Tomasetti

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2188(200)

WIN 021882.00

3468 BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	J.STETSON	
DESIGN-DETAILED	D.BURGESS	11-10-2021
CHECKED-REVIEWED	J.BURGESS	11-10-2021
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

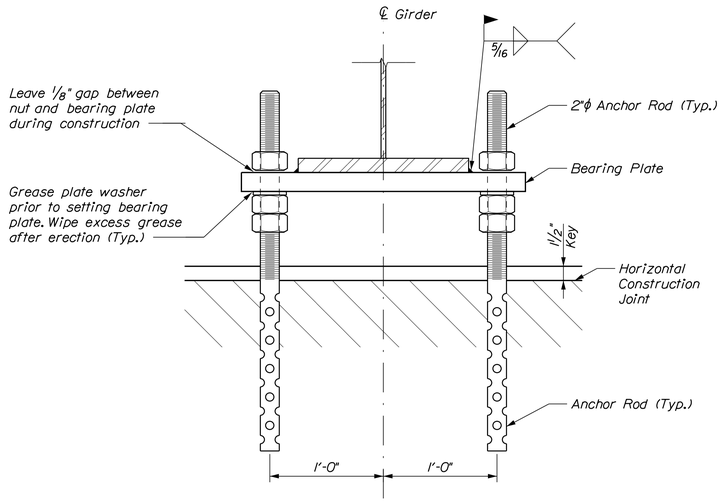
P.E. NUMBER

DATE

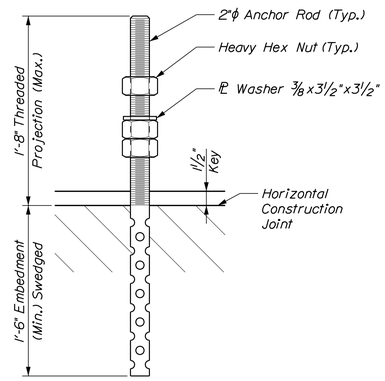
PERLEY BROOK BRIDGE
PERLEY BROOK
FORT KENT AROOSTOOK COUNTY

ABUTMENT NO. 2 REINFORCEMENT

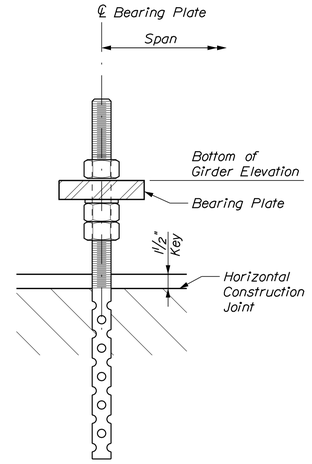
SHEET NUMBER
25
OF 38



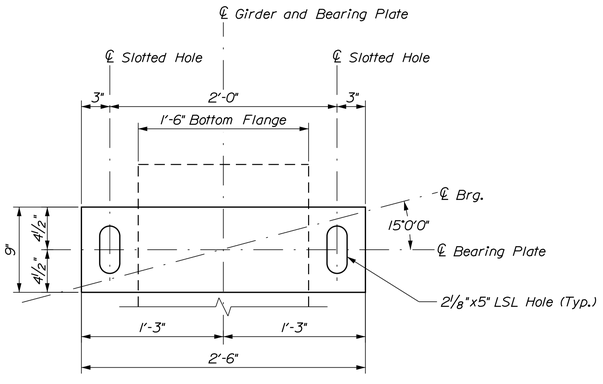
BEARING ASSEMBLY ELEVATION



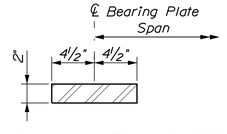
ANCHOR ROD DETAIL



BEARING PLATE INSTALLATION



BEARING PLATE PLAN



BEARING PLATE SECTION

BEARING ASSEMBLY NOTES

1. Payment for fabrication and installation of bearing plate assemblies will be considered incidental to related Contract Items.

2. Bearing plates shall meet the requirements of ASTM A709/A709M, Grade 50.

3. Anchor rods shall be ASTM F1554, Grade 105 and shall be swedged below the horizontal construction joint.

4. Heavy hex nuts for anchor rods shall meet the requirements of ASTM A 563, Grade DH.

5. Anchor bolts, nuts, and washers shall be galvanized to ASTM A153 or ASTM B695, Class 50, Type 1.

Thornton Tomasetti

STATE OF MAINE
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STP-2188(200)

WIN 021882.00

3468

BRIDGE PLANS

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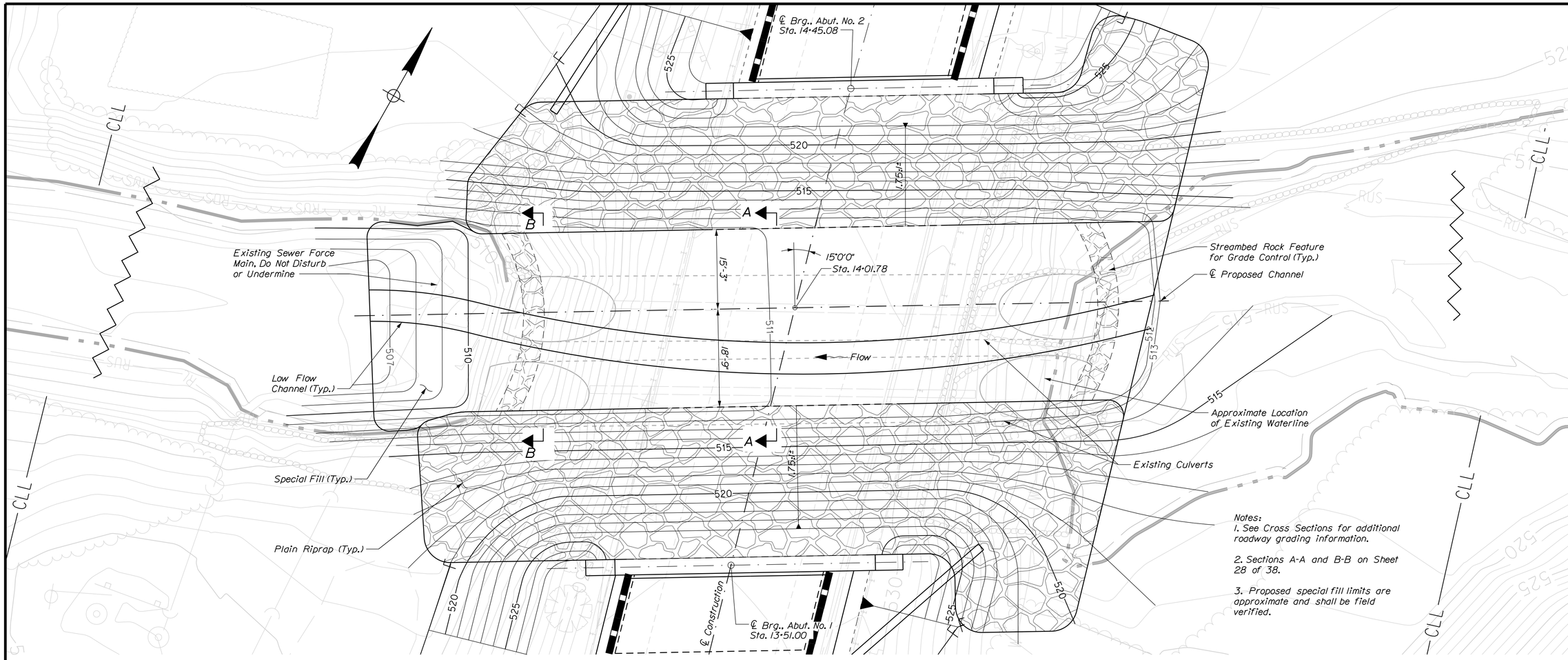
REVISIONS 1	------	------	P.E. NUMBER
REVISIONS 2	------	------	------
REVISIONS 3	------	------	------
REVISIONS 4	------	------	DATE
FIELD CHANGES	------	------	------

PERLEY BROOK BRIDGE
PERLEY BROOK
FORT KENT AROOSTOOK COUNTY

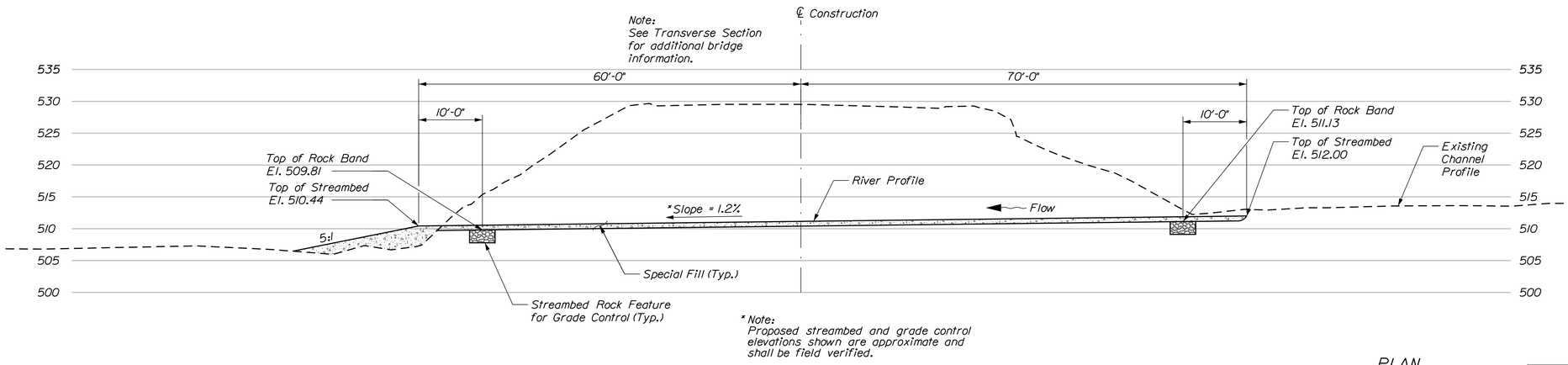
BEARING DETAILS

SHEET NUMBER
26
OF 38

Filename: ...\BRIDGE\MSTA\026_Bearings.dgn Division: BRIDGE Username: common Date:11/10/2021



RIVER CHANNEL PLAN



RIVER CHANNEL PROFILE

PLAN

10 0 10 20

Scale of Feet

Thornton Tomasetti

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2188(200)

WIN 021882.00

3468 BRIDGE PLANS

PROJ. MANAGER	J.STETSON		
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REVISIONS 3	-------	-------	-------
REVISIONS 4	-------	-------	-------
FIELD CHANGES	-------	-------	-------

SIGNATURE

P.E. NUMBER

DATE

PERLEY BROOK BRIDGE
PERLEY BROOK
AROOSTOOK COUNTY
FORT KENT

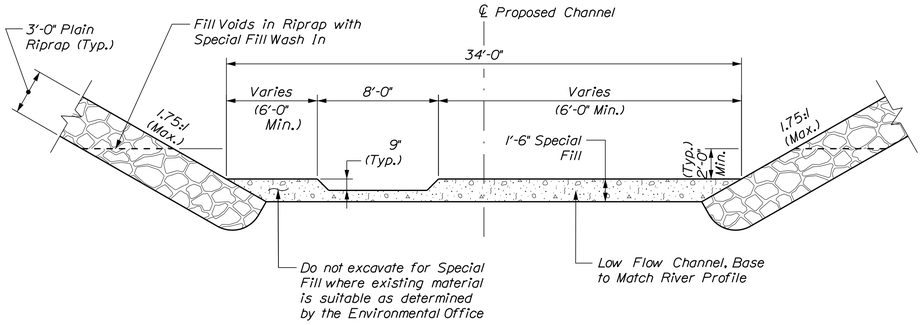
RIVER CHANNEL PLAN AND PROFILE

SHEET NUMBER

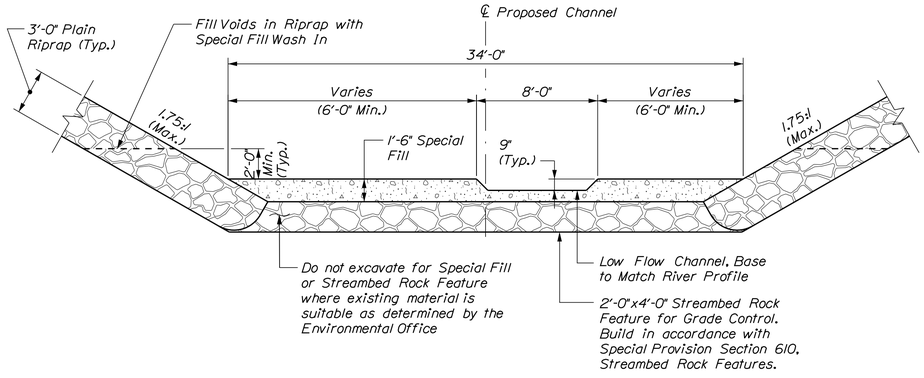
27

OF 38

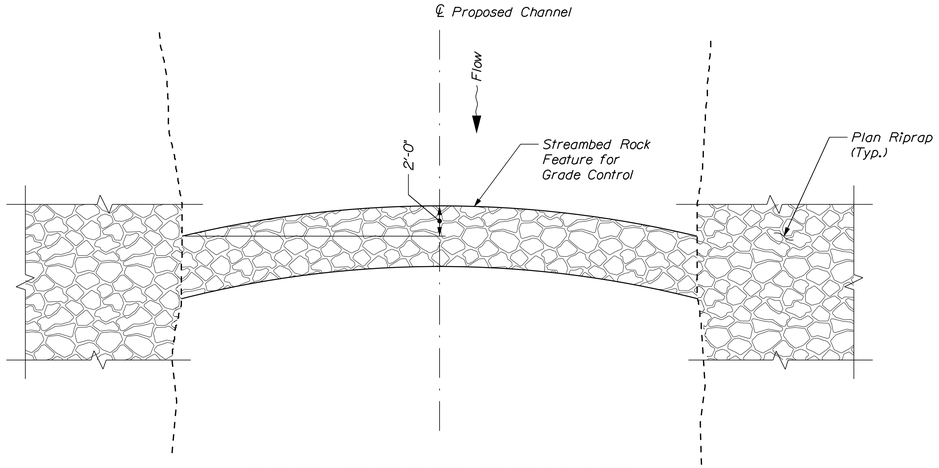
Filename: ...\BRIDGE\MSTA\027_RvrPlan_01.dgn Division: BRIDGE Username: common Date:11/10/2021



RIVER CHANNEL SECTION A-A



RIVER CHANNEL SECTION B-B



TYPICAL PLAN VIEW AT ROCK BAND

Thornton Tomasetti

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2188(200)

WIN 021882.00

3468 BRIDGE PLANS

PROJ. MANAGER	J.STETSON		
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SIGNATURE

P.E. NUMBER

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PERLEY BROOK BRIDGE
PERLEY BROOK
FORT KENT AROOSTOOK COUNTY

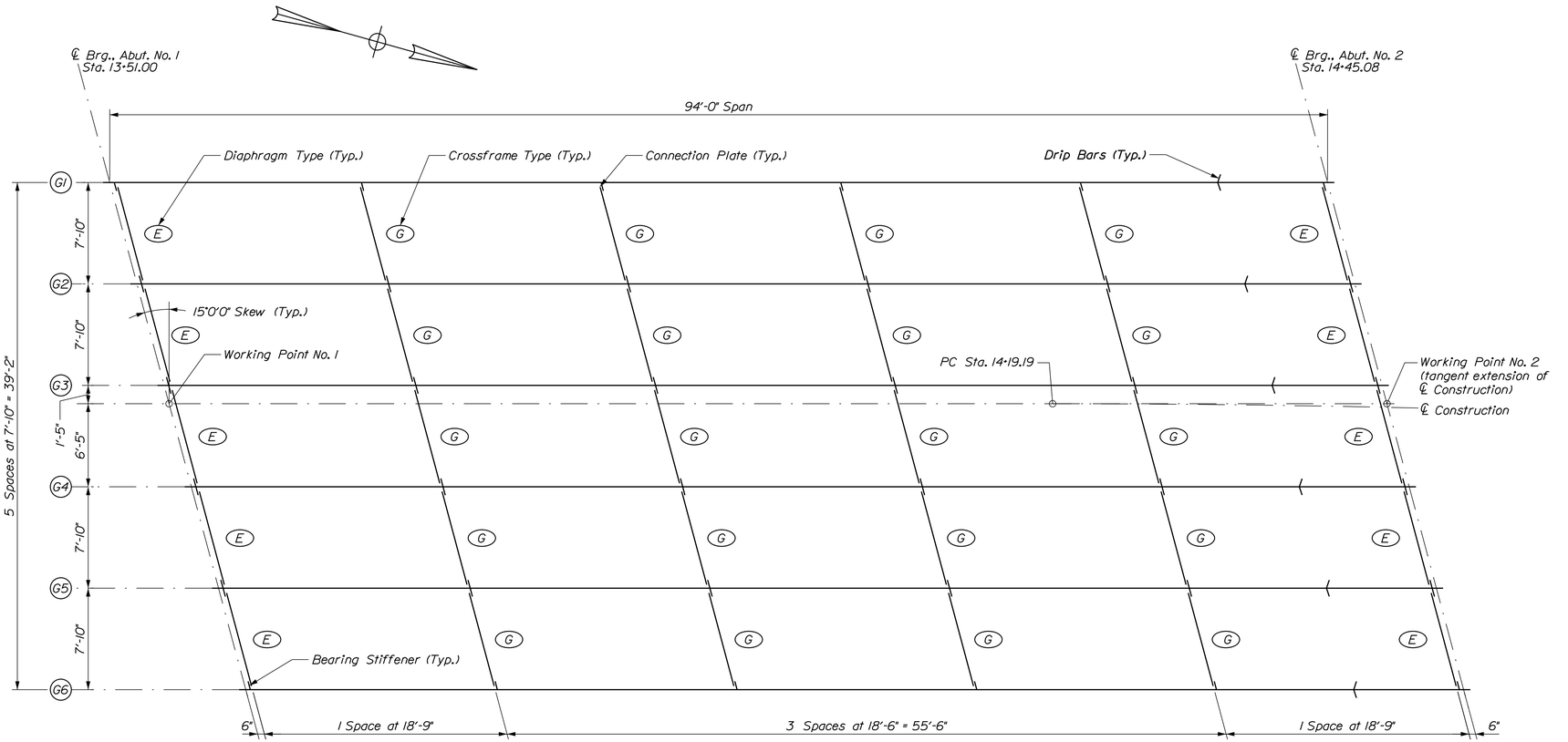
RIVER CHANNEL DETAILS

SHEET NUMBER

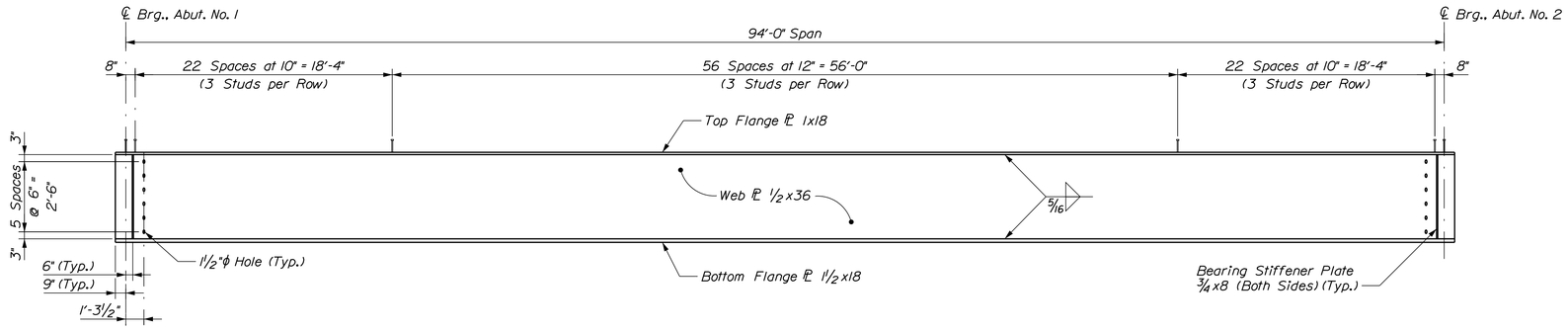
28

OF 38

Filename: ...\BRIDGE\MSTA\028_RvrPlan_02.dgn Division: BRIDGE Username: common Date:11/10/2021



FRAMING PLAN
(Dimensions are Horizontal)



GIRDER ELEVATION AND STUD LAYOUT
(309 Studs Per Girder x 6 Girders = 1,854 Studs)
(Vertical Scale Exaggerated for Clarity)
(Dimensions are Horizontal)

STRUCTURAL STEEL NOTES

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

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

3. Sections of flange plates or web plates between transverse shop splices or between a transverse shop splice and a field splice shall be not less than 20 feet in length unless otherwise shown on the plans.

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

5. Connection plates for intermediate crossframes shall have minumum thickness of 1/2-inch.

6. Crossframe or diaphragm connection plates may be either plumb or normal to the top flange.

7. All connection plates and stiffeners shall be welded to the girder web using a 5/16-inch weld on both sides of plate.

8. The ends of the girders shall be coated with a zinc-rich coating system in accordance with Standard Specifications Section 506, Shop Applied Protective Coating - Steel (Zinc-Rich Coating System), to a distance of 10 feet from the face of the abutments. All costs related to coating will not be paid for directly but will be considered incidental to related structural steel contract items. Paint color shall be Federal Color Standard 30045 (Brown). NEPCOAT Qualified Products List C may be used.

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

10. See Standard Detail 504(10) for drip bar details.

11. Structural steel was designed with a vertical construction load of 50 lb/sf and a lateral wind velocity of 115 mph.

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

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BRIDGE PLANS

PROJ. MANAGER	J.STETSON		
DESIGN-DETAILED	E.BROWNELL	D.BURGESS	11-10-2021
CHECKED-REVIEWED	B.WELCH	J.BURGESS	11-10-2021
DESIGN2-DETAILED2	-------	-------	-------
DESIGN3-DETAILED3	-------	-------	-------
REVISIONS 1	-------	-------	-------
REVISIONS 2	-------	-------	-------
REVISIONS 3	-------	-------	-------
REVISIONS 4	-------	-------	-------
FIELD CHANGES	-------	-------	-------

SIGNATURE

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PERLEY BROOK BRIDGE
PERLEY BROOK
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FORT KENT

FRAMING PLAN

SHEET NUMBER
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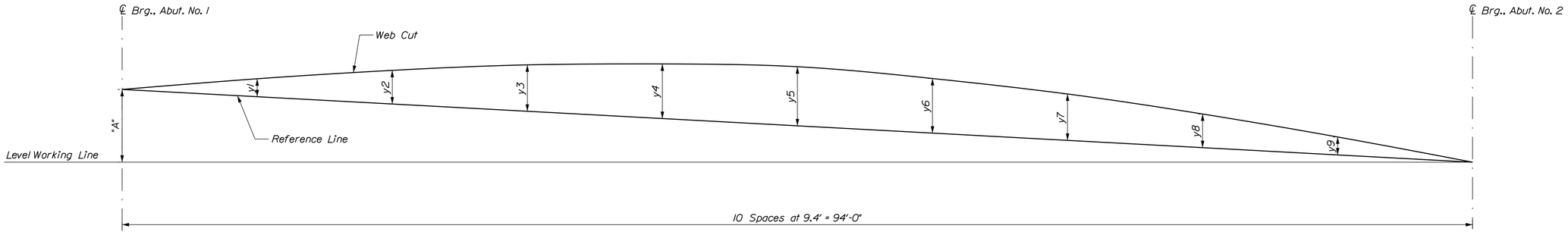
Thornton Tomasetti

Username: common Date:11/10/2021
Filename: ...\00\BRIDGE\MSTA\029_Framing.dgn Division: BRIDGE



Girder	Dim "A" (In.)
G1	25.33
G2	25.33
G3	25.33
G4	25.34
G5	25.48
G6	25.48

CAMBER DETAIL

GIRDER	CAMBER ORDINATES (INCHES)										
	℄ BRG. ABUT. NO. 1	y1	y2	y3	y4	y5	y6	y7	y8	y9	℄ BRG. ABUT. NO. 2
G1-G6	0	1 9/16	3	4 1/8	4 7/8	5 3/16	4 7/8	4 1/8	3	1 9/16	0

GIRDER	DEAD LOAD COMPONENT	DEAD LOAD DEFLECTIONS (INCHES)										
		℄ BRG. ABUT. NO. 1	0.1xL	0.2xL	0.3xL	0.4xL	0.5xL	0.6xL	0.7xL	0.8xL	0.9xL	℄ BRG. ABUT. NO. 2
G1 & G6	STEEL DL	0	0.288	0.545	0.746	0.874	0.917	0.874	0.746	0.545	0.288	0
	DECK CONCRETE DL	0	0.722	1.365	1.869	2.189	2.299	2.189	1.869	1.365	0.722	0
	SUPERIMPOSED DL	0	0.341	0.646	0.884	1.035	1.087	1.035	0.884	0.646	0.341	0
G2 - G5	STEEL DL	0	0.305	0.576	0.789	0.924	0.970	0.924	0.789	0.576	0.305	0
	DECK CONCRETE DL	0	0.869	1.645	2.252	2.637	2.769	2.637	2.252	1.645	0.869	0
	SUPERIMPOSED DL	0	0.280	0.529	0.724	0.848	0.890	0.848	0.724	0.529	0.280	0

Filename: ...\00\BRIDGE\MSTA\030_Girder.dgn Division: BRIDGE Username: common Date:11/10/2021

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PERLEY BROOK BRIDGE
PERLEY BROOK
FORT KENT AROOSTOOK COUNTY

GIRDER DETAILS

Thornton Tomasetti

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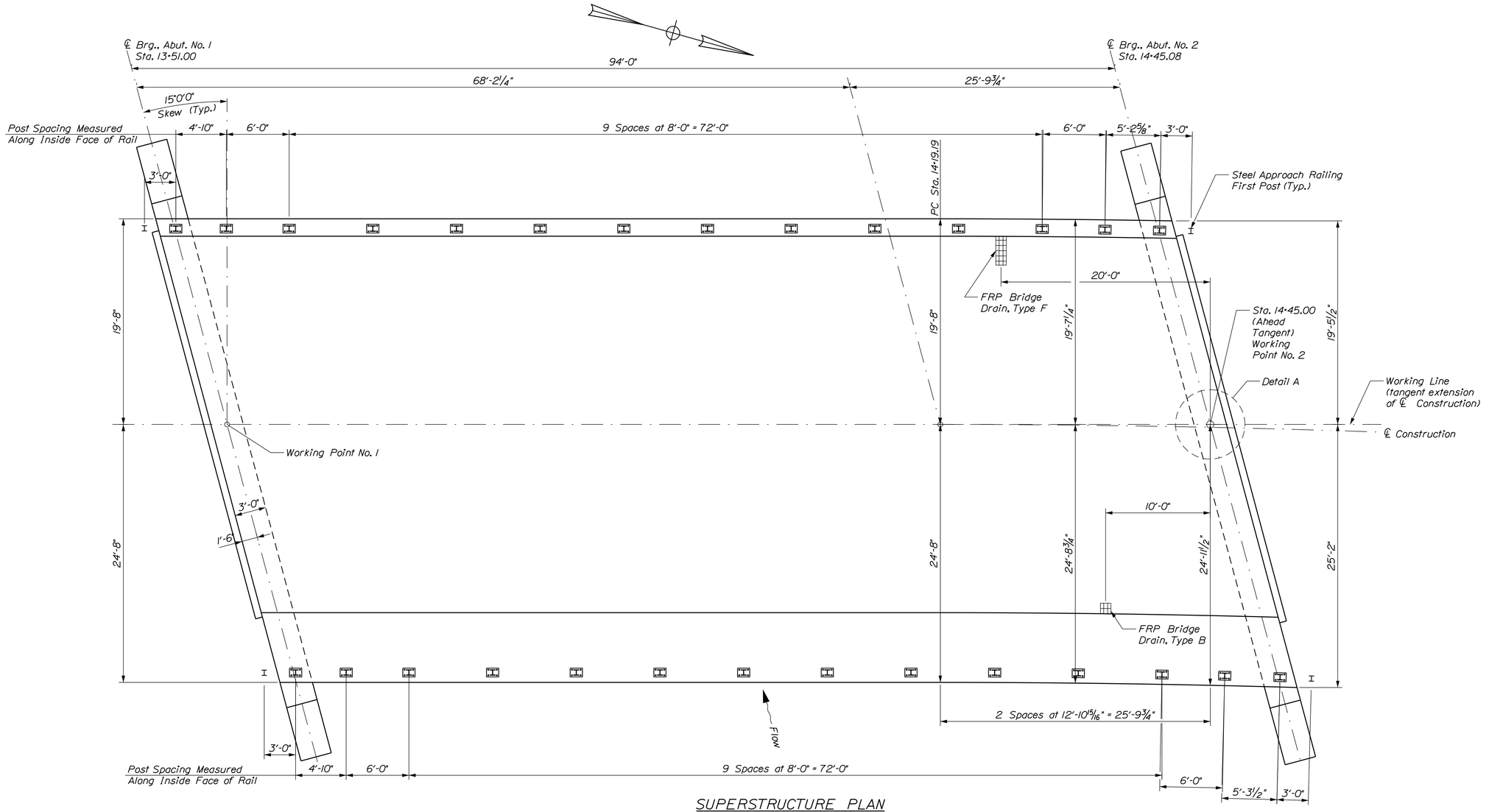
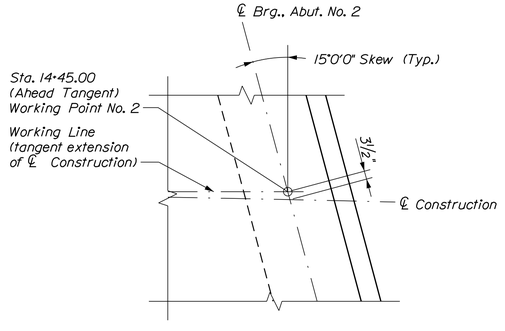


SUPERSTRUCTURE PLAN

GIRDER	BOTTOM OF SLAB ELEVATIONS										
	℄ BRG. ABUT. NO. 1	0.1xL	0.2xL	0.3xL	0.4xL	0.5xL	0.6xL	0.7xL	0.8xL	0.9xL	℄ BRG. ABUT. NO. 2
G1	530.48	530.37	530.25	530.11	529.94	529.75	529.52	529.26	528.98	528.68	528.37
G2	530.59	530.49	530.37	530.23	530.07	529.89	529.65	529.39	529.10	528.79	528.48
G3	530.70	530.59	530.48	530.34	530.18	530.00	529.76	529.50	529.21	528.90	528.59
G4	530.55	530.45	530.33	530.20	530.04	529.85	529.61	529.35	529.06	528.76	528.44
G5	530.35	530.24	530.13	529.99	529.83	529.65	529.41	529.15	528.86	528.55	528.23
G6	530.15	530.03	529.91	529.77	529.61	529.42	529.18	528.92	528.64	528.34	528.02



DETAIL A

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BRIDGE PLANS

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AROOSTOOK COUNTY
FORT KENT

SUPERSTRUCTURE PLAN

Thornton Tomasetti

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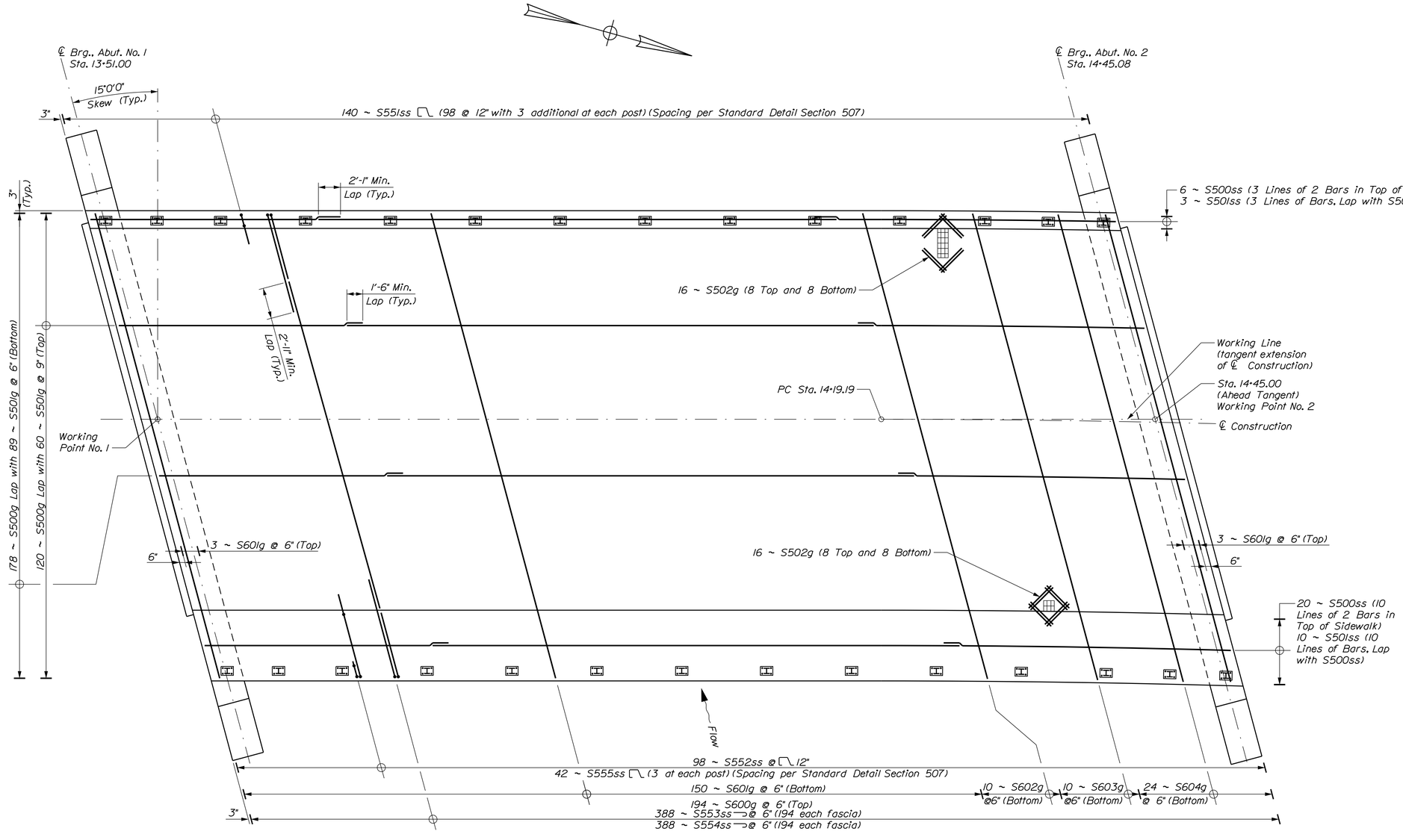
Filename: ...\031_Superstructure_001.dgn Division: BRIDGE Username: common Date:11/24/2021



SUPERSTRUCTURE REINFORCING PLAN

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BRIDGE PLANS

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	BY	DATE
PROJ. MANAGER	J. STETSON	
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CHECKED-REVIEWED	B.WELCH	
DESIGN2-DETAILED2	ED2	
DESIGN3-DETAILED3	ED3	
REVISIONS 1	J.BURGESS	11-10-2021
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

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PERLEY BROOK BRIDGE
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AROOSTOOK COUNTY
FORT KENT

SUPERSTRUCTURE
REINFORCEMENT PLAN

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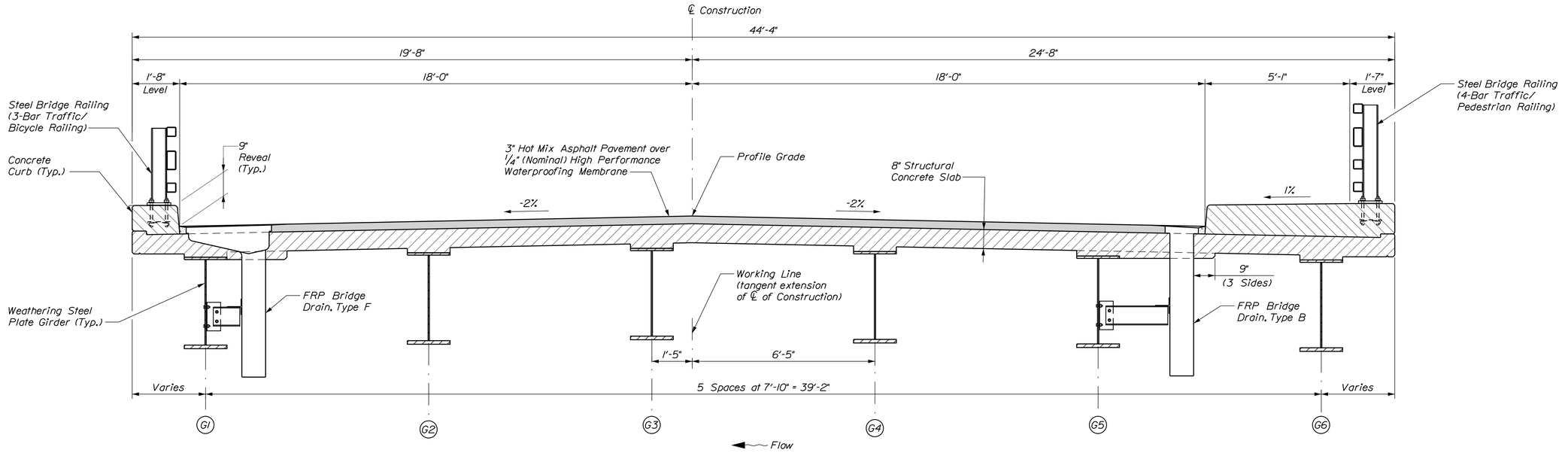
Thornton Tomasetti

Filename: ...\032_SuperstructurerReinf_001.dgn Division: BRIDGE Username: common Date:11/10/2021



TRANSVERSE SECTION

SUPERSTRUCTURE NOTES

1. The theoretical blocking used for design of the structure is 2½" inches (1½" clear) at the centerline of bearing of the abutments. Refer to Standard Detail 502(03) for blocking details.

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

3. Adjust reinforcing steel to fit around the bridge drains in a manner approved by the Resident. Do not cut transverse reinforcing bars.

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

5. The superstructure slab, between optional construction joints, shall be placed in one continuous operation and shall be kept plastic until the entire placement has been made. The superstructure slab shall be completed and cured a minimum of five days prior to placement of the upper portions of the abutments at each end of the slab. For optional construction joint location see Typical Abutment Section, Sheet 19.

6. If the Contractor chooses to omit the optional construction joints, the superstructure slab and the upper portions of the abutments shall be placed in one continuous operation and shall be kept plastic until the entire placement has been made. The upper portions of the abutments shall be finished by hand after removal of the screed machine.

7. Precast Deck Panels are prohibited from use by the Contractor.

8. Superstructure reinforcing marked "g" shall be glass fiber reinforced polymer (GFRP).

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BRIDGE PLANS

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REVISIONS 4			
FIELD CHANGES			

PERLEY BROOK BRIDGE
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AROOSTOOK COUNTY
FORT KENT

SUPERSTRUCTURE DETAILS (1 OF 2)

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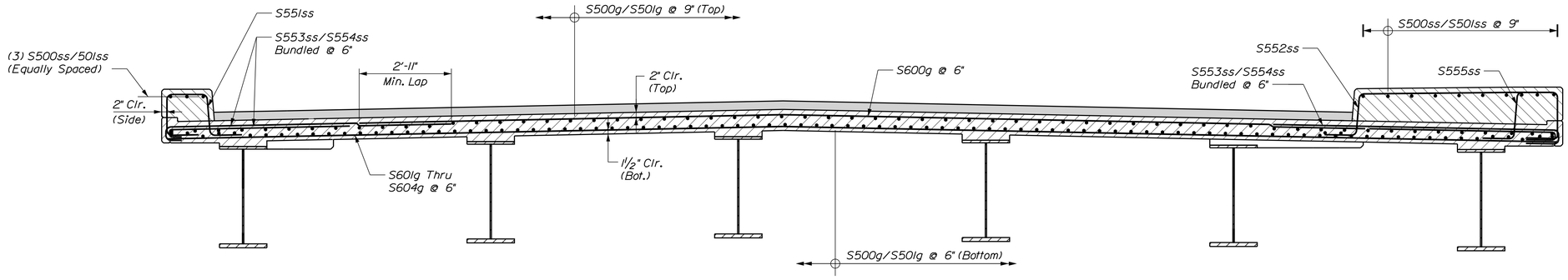
Filename: ...\033_Superstructure_002.dgn Division: BRIDGE Username: common Date:11/10/2021



TRANSVERSE SECTION REINFORCEMENT

Thornton Tomasetti

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2188(200)

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BRIDGE PLANS

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PERLEY BROOK BRIDGE
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SUPERSTRUCTURE DETAILS
(2 OF 2)

SHEET NUMBER

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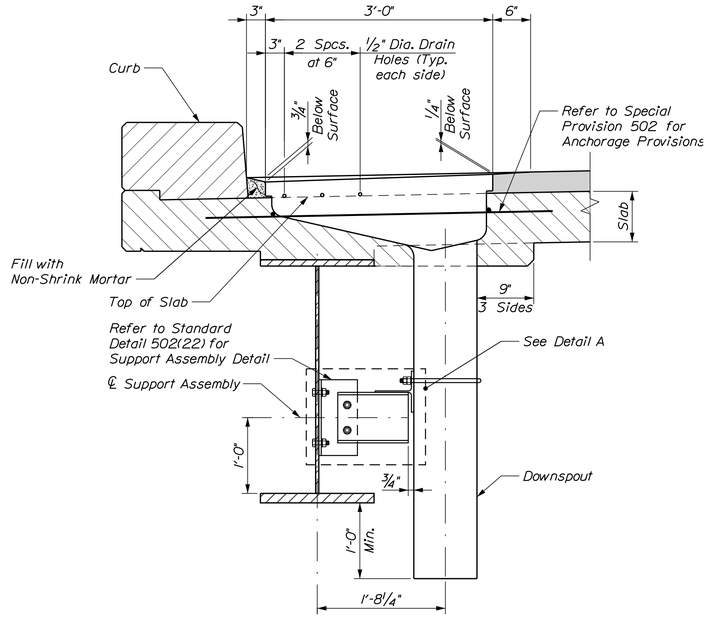
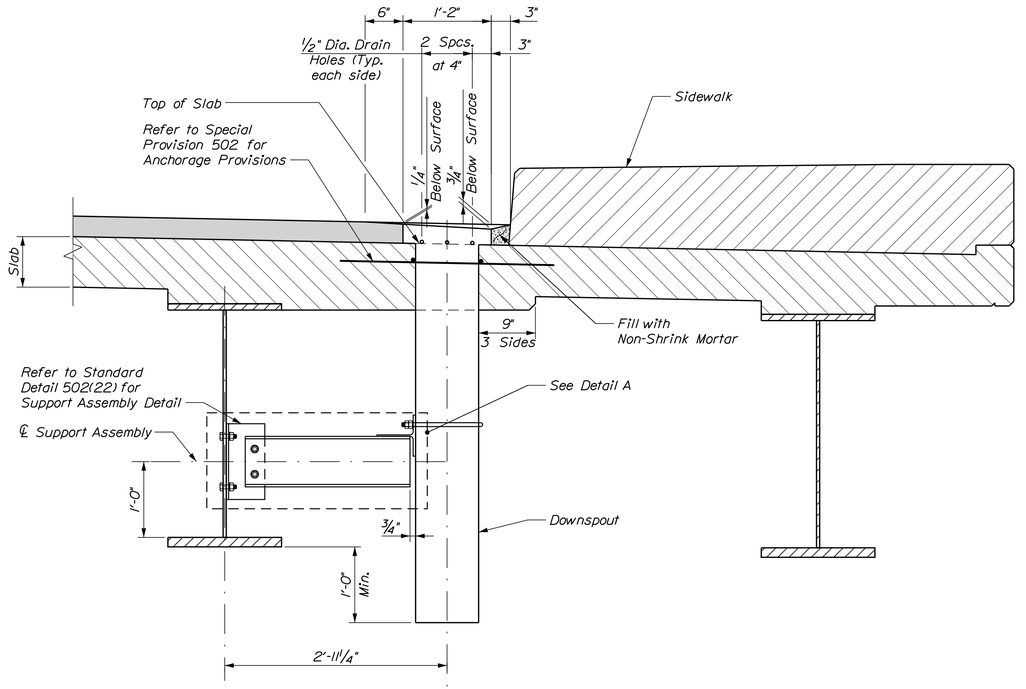
Filename: ...\034_SuperstructurerReinf_002.dgn Division: BRIDGE Username: common Date:11/10/2021

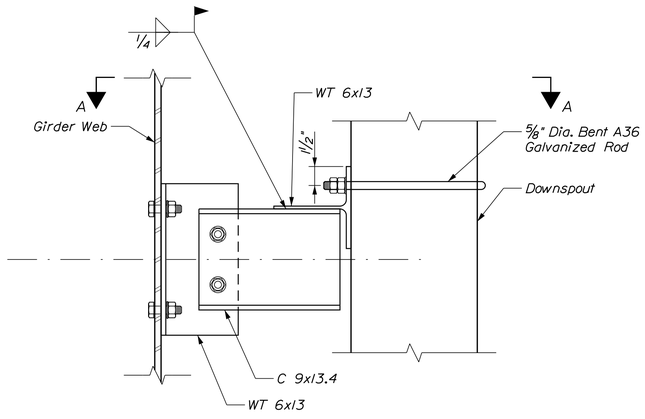
Filename: ...\BRIDGE\MSTA\035_FRP Drain.dgn Division: BRIDGE Username: common Date:11/10/2021



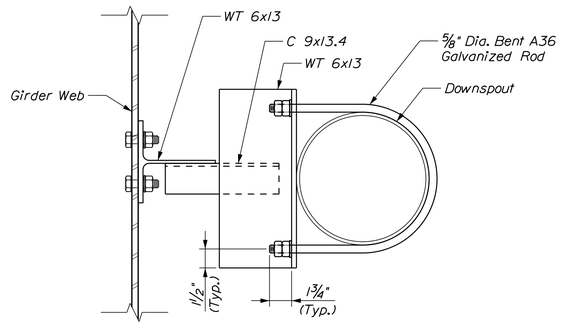
FRP BRIDGE DRAIN TYPE F DETAIL



FRP BRIDGE DRAIN TYPE B DETAIL

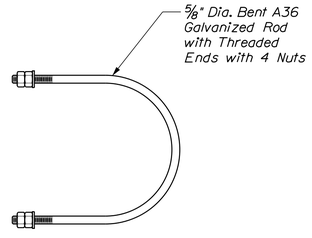


DETAIL A
(Refer to Standard Detail 502(22) for Support Assembly Detail)



Note:
Coordinate dimensions with outside diameter of downspout.

SECTION A-A



U-BOLT DETAIL

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 adjustment to the studs.

3. Support assembly components and hardware shall meet the grade and protective coating requirements identified on Standard Detail 502(24) for Bridge Drains.

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BRIDGE PLANS

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REVISIONS 4	-------	-------	-------
FIELD CHANGES	-------	-------	-------

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PERLEY BROOK BRIDGE
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FORT KENT

FRP BRIDGE DRAIN DETAILS

Thornton Tomasetti

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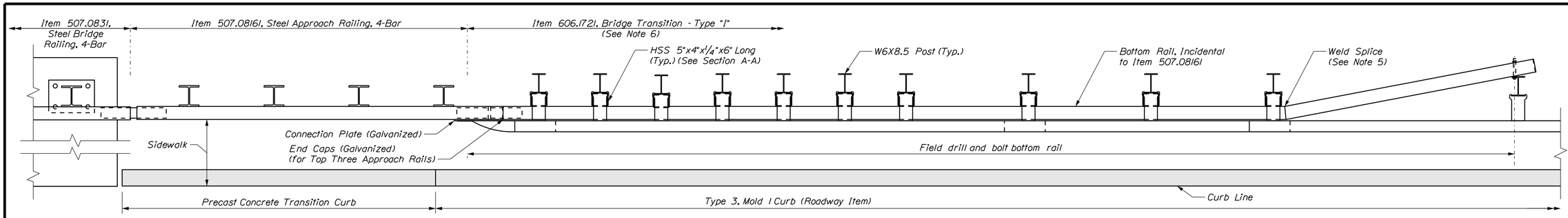
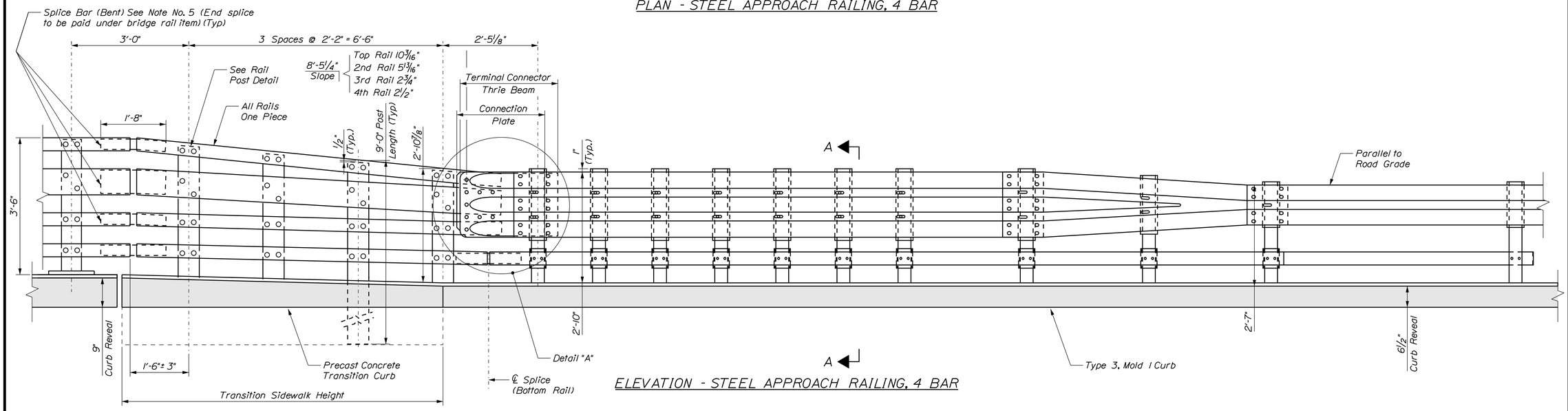
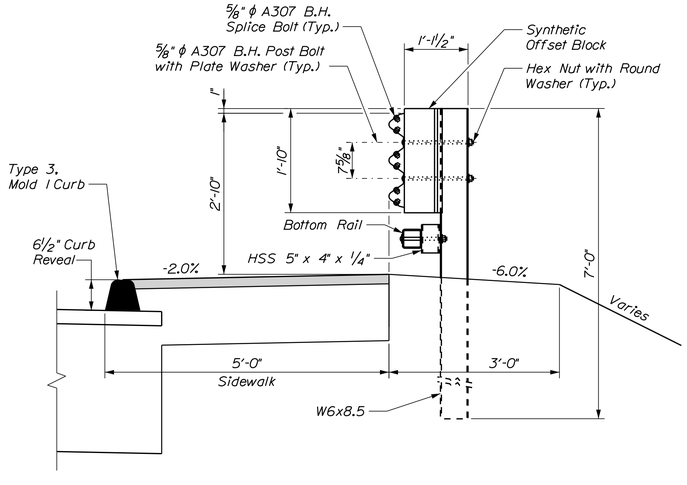


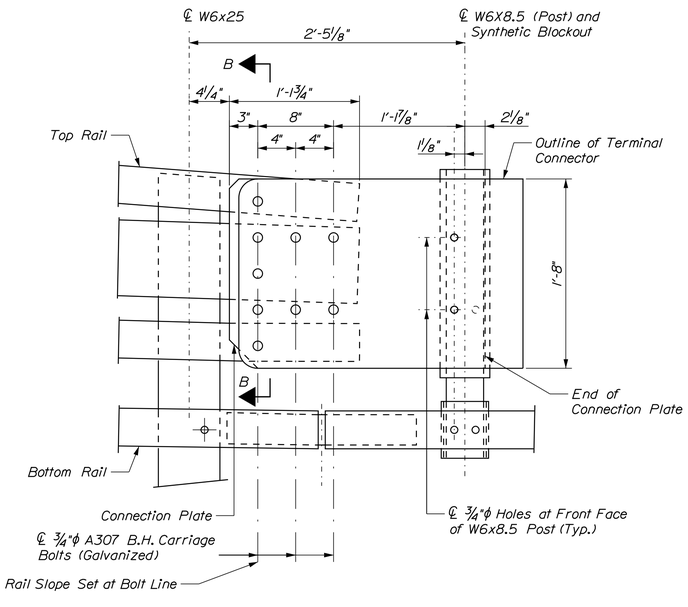
PLAN - STEEL APPROACH RAILING, 4 BAR



ELEVATION - STEEL APPROACH RAILING, 4 BAR

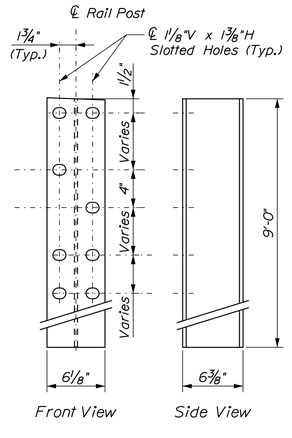


SECTION A-A (POST RAIL ASSEMBLY)



DETAIL A

(Overlapping of Double nested Thrie-Beam not Shown for Clarity)



RAIL POST (W6x25)

NOTES: STEEL BRIDGE RAILING, 4-BAR

1. Refer to Steel Bridge Railing and Steel Approach Railing, 3-Bar Standard Details for additional details, notes and materials specifications. For Section B-B, refer to Standard Detail 507(24).

2. Rail bar welds shall have a minimum penetration of 80% as demonstrated by a test weld performed by the fabricator.

3. The precast concrete vertical or transition curb shall meet the provisions of Section 609 - Curbing of the Standard Specifications. The bridge end of the curb shall be saw-cut in the field to fit flush against the backwall, as dictated by the bridge skew angle and the profile grade. Where curbing is specified on the adjacent highway, the transition shall be modified accordingly.

4. After installation of the guard rail is complete, upset the threads on the anchor bolts in three (3) places around each bolt, at the junction of the nut and the exposed thread, with a center punch or similar tool.

5. Splice Bar (bent): Weld splice bar to fit bend. Use complete joint penetration butt weld (B-U2). End splice bars to be paid under the Bridge Railing Item.

6. Standard Bridge Transition may require longer posts to account for higher rail height. No additional payment will be made for this modification.

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BRIDGE PLANS

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PERLEY BROOK BRIDGE
PERLEY BROOK
FORT KENT AROOSTOOK COUNTY

STEEL APPROACH RAIL
4-BAR

SHEET NUMBER

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STRAIGHT BARS

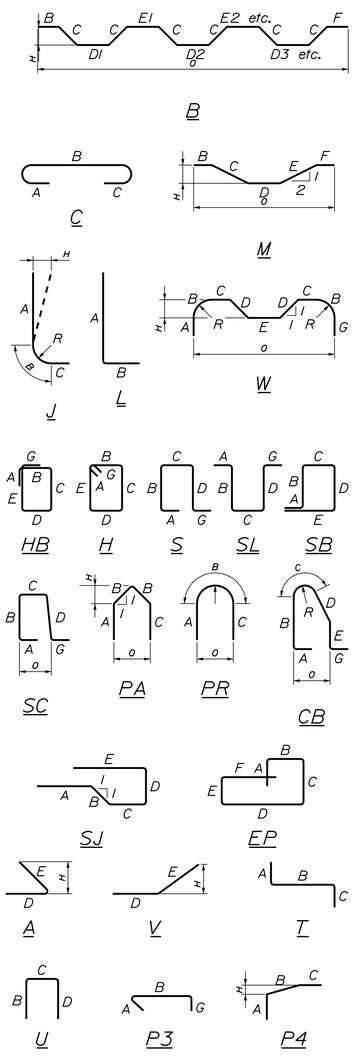
MARK	QTY.	LENGTH	LOCATION
Abutment No. 1			
A500	35	2'-0"	Mechanical Coupler
A501ss	5	7'-8"	
A502ss	2	2'-2"	
A601	16	31'-8"	
A602	12	40'-0"	
A603	12	23'-2"	
A604	15	38'-3"	
A605	81	5'-8"	Set B, C, D, and E
A606	1	5'-2"	SE WW
A607	1	4'-2"	SE WW
A608	1	3'-2"	SE WW
A609	1	4'-4"	SE WW
A610	1	3'-4"	SE WW
A611	1	2'-4"	SE WW
A612	1	3'-4"	SW WW
A613	1	2'-4"	SW WW
A614	1	4'-2"	SW WW
A615	1	3'-2"	SW WW
A801	24	35'-10"	
A802	24	29'-0"	
Abutment No. 1 Approach Slab			
1AS500	35	2'-0"	Mechanical Coupler
1AS501	32	18'-8"	
1AS601	69	15'-2"	
Superstructure			
S500g	298	30'-0"	
S501g	149	40'-0"	
S502g	32	3'-0"	Bridge Drain
S600g	194	33'-9"	
S601g	156	45'-5"	
S602g	10	45'-6"	
S603g	10	45'-7"	
S604g	24	45'-8"	
S500ss	26	30'-6"	Sidewalk/Curb
S501ss	13	40'-0"	Sidewalk/Curb

MARK	QTY.	LENGTH	LOCATION
Abutment No. 2			
B500	35	2'-0"	Mechanical Coupler
B501ss	5	7'-8"	
B502ss	2	2'-2"	
B601	16	31'-8"	
B602	12	40'-0"	
B603	12	23'-2"	
B604	15	38'-3"	
B605	80	5'-8"	Set B, C, D, and E
B606	1	5'-0"	NW WW
B607	1	4'-0"	NW WW
B608	1	3'-0"	NW WW
B609	1	4'-0"	NW WW
B610	1	3'-0"	NW WW
B611	1	2'-0"	NW WW
B612	1	5'-2"	NE WW
B613	1	4'-2"	NE WW
B614	1	3'-2"	NE WW
B615	1	6'-0"	NE WW
B616	1	5'-0"	NE WW
B617	1	4'-0"	NE WW
B801	24	35'-10"	
B802	24	29'-0"	
Abutment No. 2 Approach Slab			
2AS500	35	2'-0"	Mechanical Coupler
2AS501	32	18'-8"	
2AS601	69	15'-2"	

BENT BARS

MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
Abutment No. 1														
A451	12	4'-1"	P3	4 1/2"	3'-4"					4 1/2"				Abutment Stirrup
A452	85	3'-5"	P3	4 1/2"	2'-8"					4 1/2"				Wingwall Stirrup
A551ss	60	6'-3"	L	4'-3"	2'-0"									
A552ss	71	5'-10 1/4"	P4	2'-8"	1'-10 1/4"	1'-4"					1'-3 3/4"			
A651	66	16'-2"	U	5'-11"	2'-8"	7'-7"								Set D and E
A652	35	16'-10"	U	5'-11"	3'-4"	7'-7"								Set D
A653	15	6'-8"	L	5'-11"	9"									Set B and C
A654	11	8'-4"	L	7'-7"	9"									Set B
A655	4	9'-0"	L	7'-7"	1'-5"									Set C
A656	39	5'-8"	U	10"	3'-4"	10"								Set C and E
A657	82	4'-4"	U	10"	2'-8"	10"								Set A, B, and D
A658	39	2'-10"	L	2'-0"	10"									Set C and E
A659	40	17'-10"	U	7'-7"	2'-8"	7'-7"								Set A
A661	2	8'-2"	U	2'-9"	2'-8"	2'-9"								
A662	2	8'-8"	U	3'-0"	2'-8"	3'-0"								
A663	2	9'-2"	U	3'-3"	2'-8"	3'-3"								
A664	2	9'-8"	U	3'-6"	2'-8"	3'-6"								
A665	2	10'-2"	U	3'-9"	2'-8"	3'-9"								
A666	2	10'-8"	U	4'-0"	2'-8"	4'-0"								
A667	2	11'-2"	U	4'-3"	2'-8"	4'-3"								
A668	2	11'-8"	U	4'-6"	2'-8"	4'-6"								
A669	2	12'-2"	U	4'-9"	2'-8"	4'-9"								
A670	2	12'-8"	U	5'-0"	2'-8"	5'-0"								
A671	1	13'-2"	U	5'-3"	2'-8"	5'-3"								
A672	3	13'-4"	U	5'-4"	2'-8"	5'-4"								
A673	3	13'-0"	U	5'-2"	2'-8"	5'-2"								
A674	2	7'-2"	V				1'-6"	5'-8"			8"			
A675	2	7'-1"	V				1'-3"	5'-10"			6"			
Abutment No. 2														
B451	8	4'-1"	P3	4 1/2"	3'-4"					4 1/2"				Abutment Stirrup
B452	85	3'-5"	P3	4 1/2"	2'-8"					4 1/2"				Wingwall Stirrup
B551ss	60	6'-3"	L	4'-3"	2'-0"									
B552ss	58	5'-10 1/4"	P4	2'-8"	1'-10 1/4"	1'-4"					1'-3 3/4"			
B651	30	15'-11"	U	5'-8"	2'-8"	7'-7"								Set D and E
B652	71	16'-7"	U	5'-8"	3'-4"	7'-7"								Set D
B653	15	6'-5"	L	5'-8"	9"									Set B and C
B654	11	8'-4"	L	7'-7"	9"									Set B
B655	4	9'-0"	L	7'-7"	1'-5"									Set C
B656	39	5'-8"	U	10"	3'-4"	10"								Set C and E
B657	82	4'-4"	U	10"	2'-8"	10"								Set A, B, and D
B658	39	2'-10"	L	2'-0"	10"									Set C and E
B659	41	17'-10"	U	7'-7"	2'-8"	7'-7"								Set A
B661	1	8'-8"	U	3'-0"	2'-8"	3'-0"								
B662	2	9'-2"	U	3'-3"	2'-8"	3'-3"								
B663	2	9'-8"	U	3'-6"	2'-8"	3'-6"								
B664	2	10'-2"	U	3'-9"	2'-8"	3'-9"								
B665	2	10'-8"	U	4'-0"	2'-8"	4'-0"								
B666	2	11'-2"	U	4'-3"	2'-8"	4'-3"								
B667	2	11'-8"	U	4'-6"	2'-8"	4'-6"								
B668	2	12'-2"	U	4'-9"	2'-8"	4'-9"								
B669	2	12'-8"	U	5'-0"	2'-8"	5'-0"								
B670	2	13'-2"	U	5'-3"	2'-8"	5'-3"								
B671	1	13'-8"	U	5'-6"	2'-8"	5'-6"								
B672	3	13'-10"	U	5'-7"	2'-8"	5'-7"								
B673	4	13'-6"	U	5'-5"	2'-8"	5'-5"								
B674	2	8'-0"	V				1'-6"	5'-8"			8"			
B675	2	6'-9"	V				1'-3"	5'-10"			6"			
Superstructure														
S551ss	140	5'-7"	SC	10"	1'-4"	1'-3"	1'-4"			10"		1'-4"		Curb
S552ss	98	10'-9"	SC	10"	1'-6"	6'-3"	1'-4"			10"		6'-4"		Sidewalk
S553ss	390	9'-6"	C	7"	8'-11"									Curb and Sidewalk
S554ss	390	6'-3"	C	7"	5'-8"									Curb and Sidewalk
S555ss	42	5'-11"	SC	10"	1'-6"	1'-3"	1'-6"			10"		1'-4"		Sidewalk

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.

Plan Reinforcing Bars: ASTM A615/A615M, Grade 60
S.S. Reinforcing Bars: ASTM A955/A955M, Grade 75

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

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 will be based on crank bars as scheduled on the plans.

3. Bar designations ending with "ss" indicate Stainless Steel Reinforcing.

4. Bar designations ending with "g" indicate Glass Fiber Reinforced Polymer (GFRP).

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2188(200)

WIN 021882.00

BRIDGE PLANS

3468

PROJ. MANAGER	J.STEFSON		
DESIGN-DETAILED	E.BROWNELL	D.BURGESS	11-10-2021
CHECKED-REVIEWED	B.WELCH	J.BURGESS	11-10-2021
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

PERLEY BROOK BRIDGE
PERLEY BROOK
FORT KENT AROOSTOOK COUNTY

REINFORCING STEEL SCHEDULE

SHEET NUMBER

37

OF 38

Filename: ...\00\BRIDGE\MSTA\037_Rebar.dgn Division: BRIDGE Username: common Date:11/10/2021

PLAN LEGEND

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

Existing	Proposed
	T
	E
	W
	G

Existing	Proposed

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

STATE OF MAINE
REGISTRY OF DEEDS
COUNTY _____
RECEIVED _____, _____
at _____h _____m _____M and recorded in
Plan Book _____, Page _____
Attest: _____
REGISTER

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

25 0 25 50 75 100
Scale of Feet

CURVE DATA #1
PI = 10+23.34
D = 4°46'28.7"
Δ = 11°44'13.3" Lt.
R = 1200.00'
L = 245.82'
T = 123.34'
E = 6.32'

TOWN OF FORT KENT
ITEM NO. (2)
CONST. & MAINT. EASE. = 1190± S.F. (1)
TEMP. CONST. RIGHTS = 0.29± AC. (1)
TOTAL AREA = 1.0 AC. (CALC.)

WASTEWATER PUMPING STATION

SEE PLAN FOR VIRGINIA TYLER
BY ERNEST T. SAVAGE, SURVEYOR
DATED JUNE 8, 1942
AROOSTOOK REG. OF DEEDS
NORTHERN DISTRICT
VOL. P1 PAGE 24
LOT 19

DEBRA A. BELANGER
ITEM NO. (3)
DRAINAGE EASE. = (1)
CONST. & MAINT. EASE. = 1630± S.F. (1)
TEMP. CONST. RIGHTS = 0.07± AC. (1)
TOTAL AREA = 2.0± AC. (OWNER)

NOTE: A PORTION OF THE BUILDING EXISTS WITHIN THE LIMITS OF THE EXISTING HIGHWAY RIGHT OF WAY AND IS A PERMITTED TEMPORARY ENCROACHMENT UNDER MAINE LAW FOR THE LIFE OF THE BUILDING ONLY. WHEN THE BUILDING IS REMOVED, THE ORIGINAL ESTABLISHED RIGHT OF WAY LINE SHALL REMAIN THE BOUNDARY OF THE HIGHWAY RIGHT OF WAY.

N/F
JASON P. NADEAU
LIANE M. NADEAU

PERLEY BROOK
P.L.
CONST. CLL
0.29± AC.
FLOW
1630± S.F.
LIMITS
MAINT.
1190± S.F.
0.07± AC.
CONST. &
EASE.
OUTLET DRAINAGE STRUCTURE STA. 14+60 LT.
EXISTING EASE. METAL SLUICE STA. 16+00 S.H.C. FILE NO. 2-206
PT = STA. 11+45.82
TEMP. CLL
EXISTING SLOPE EASE.
EXISTING OPEN DITCH LIMIT LINE
60'±
6" UD "B"
12" UD "C"
18" UD "C"
15" UD "C"
BEGIN B.L. STA. 11+81
STATE HIGHWAY "54" / ROUTE 161 / MARKET STREET
273.37' N 15°37'26.09" W
340.81'
END B.L. STA. 17+60.00
11+00 12+00 13+00 14+00 15+00 16+00 17+00
+81 +75± +45± +13± +65± +96 +100± +56±
35' 55'
34'± 33'± 189'± 890± S.F. 155'± 154'± 186'±
EXISTING SLOPE 0.07± AC.
EXISTING CHANNEL DIVERSION LIMITS SEE S.H.C. FILE NO. 2-206 SHEET 3
EXISTING HIGHWAY DITCH STATION 17+00 RT. SEE S.H.C. FILE NO. 2-206 SHEET 2
PC = STA. 14+19.19
0.30± AC.
TEMP. CLL
CLL
EXISTING CONST. & MAINT. EASE. (D.O.T. FILE NO. 2-386)
EXISTING CONST. & MAINT. EASE. LIMITS (D.O.T. FILE NO. 2-386)
0.29± AC.
PERLEY BROOK
ROAD
LOT 42 LOT 41
BRIDGE NO. 3468
WIN 021882.00

DANA A. THERIAULT
ITEM NO. (1)
TEMP. ROAD RIGHTS = 0.30± AC.(1)
TOTAL AREA = 2.0± AC.
(PER TOWN LOTS 20, 20A & 21 COMBINED)

EXISTING ROW REFERENCES
SEE S.H.C. FILE 2-206 (SHEETS 2&3 OF 3)
SEE D.O.T. FILE 2-386
AROOSTOOK COUNTY COMMISSIONERS RECORDS VOL. 18 PAGE 440

TOWN OF FORT KENT
PARCEL NO. (4)
LAND (EASE. FOR HIGHWAY PURPOSES) = 143± S.F. (1)
TEMP. ROAD RIGHTS = 0.29± AC. (1)
TOTAL AREA = 0.57± AC. (TOWN)
REM. AREA = 0.57± AC.

CURVE DATA #2
PI = 16+36.94
D = 4°46'28.7"
Δ = 20°34'10.8" Rt.
R = 1200.00'
L = 430.81'
T = 217.75'
E = 19.60'

SHAWN D. THERIAULT
WAYNE J. THERIAULT
RINETTE N. THERIAULT (LIFE ESTATE)
PARCEL NO. (5)
LAND (EASE. FOR HIGHWAY PURPOSES) = 890± S.F. (1)
TEMP. ROAD RIGHTS = 0.07± AC. (1)
TOTAL AREA = 0.75± AC. (CALC)
REM. AREA = 0.73± AC.

SEE PLAN FOR VIRGINIA TYLER
BY ERNEST T. SAVAGE, SURVEYOR
DATED JUNE 8, 1942
AROOSTOOK REG. OF DEEDS
NORTHERN DISTRICT
VOL. P1 PAGE 24

PERLEY BROOK BRIDGE OVER PERLEY BROOK
BRIDGE NO. 3468

PRELIMINARY PLAN

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

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

REVISIONS			
NO.	DATE	DESCRIPTION	BY

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

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

STATE HIGHWAY "54"
ROUTE 161 / MARKET STREET
FORT KENT AROOSTOOK COUNTY
FEDERAL AID PROJECT NO. STP-2188(200)

SEPTEMBER 2021	RIGHT-OF-WAY MAP	D.O.T. FILE NO. 2-625
SCALE 1" = 25'	SHEET 1 OF 1	

SHEET NUMBER
38
OF 38

Filename: ...\00\ROW\MSTA\001_RWPLAN1.dgn Division: ROW Username: Terri.L.Blair Date:12/1/2021