STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SPECIFICATIONS

Design: Load and Resistance Factor Design per AASHTO LRFD Bridge Design Specifications, 8th Edition.

DESIGN LOADING

Live Load ..... HL - 93 Modified for Strength I (Truck only increased 25%)

TRAFFIC DATA

Current (2015) AADT	18860
Future (2035) AADT	22630
DHV - % of AADT	10%
Design Hour Volume	2263
Heavy Trucks (% of AADT)	3%
Heavy Trucks (% of DHV)	3%
Directional Distribution (% of DHV)	50%
18 kip Equivalent P 2.0	189
18 kip Equivalent P 2.5	181
Design Speed (mph)	25 mph

HYDROLOGIC DATA

Drainage Area	3435 sq mi
Ordinary High Water Discharge (Q1.1)	27,500 cfs
Design Discharge (Q50)	89,300 cfs
Check Discharge (Q100)	99,700 cfs

Headwater Elevation & Discharge Velocities vary due to nearby dam and due to riverbed ropography

MATERIALS

Concrete:

Sidewalk and Concrete Barrier	Class "LP"
Seals	Class "S" (Unless Noted)
All Other	Class "A"

Reinforcing Steel

Deck, Sidewalk and Concrete Barrier	ASTM A 955/A 955M, Grade 75
All Other	ASTM A 615/A 615M, Grade 60

Structural Steel:

All Material (except as noted)	ASTM A 709, Grade 50 Metalized
High Strength Bolts	ASTM F 3125, Type I, Galvanized

BASIC DESIGN STRESSES

Concrete (Class A)	f 'c = 4000 psi
Concrete (Class LP)	f 'c = 5000 psi
Concrete (Class S)	f 'c = 3000 psi

Reinforcing Steel:

ASTM A 955, Grade 75	f y = 75,000 psi
ASTM A 615, Grade 60	f y = 60,000 psi

Structural Steel:

ASTM A 709, Grade 50	F y = 50,000 psi
ASTM F 3125	F μ = 120,000 psi

BRUNSWICK - TOPSHAM
CUMBERLAND & SAGADAHOC COUNTIES
FRANK J. WOOD BRIDGE
OVER
ANDROSCOGGIN RIVER
ROUTE 201/24
PROJECT NO. STP-2260(300)X
PROJECT LENGTH 0.3 mi.
BRIDGE NO. 2016

90% PROGRESS PLANS
7/22/2020

LIST OF DRAWINGS

UTILITIES

Central Maine Power	Brunswick & Topsham Water District
Consolidated Communications	FirstLight Fiber
Comcast Corporation	Great Works Internet
Topsham Sewer District	Lincolnville Communications

MAINTENANCE OF TRAFFIC

Maintain two lanes of traffic (one each direction) over existing bridge and approaches during construction.

PROJECT LOCATION	Frank J. Wood Bridge # 2016 on the Brunswick-Topsham TL which carries Route 201/24 over the Androscoggin River. Latitude 43 55'14.27N" Longitude 69 57'57.46W"
PROGRAM AREA	BRIDGE PROGRAM
OUTLINE OF WORK	BRIDGE REPLACEMENT

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED — DATE

COMMISSIONER:

CHIEF ENGINEER:

PROJECT INFORMATION			
PROGRAM	BRIDGE	SIGNATURE	DATE
PROJECT MANAGER	S. ROLLINS		
DESIGNER	D. BRYANT	P.E. NUMBER	
CONSULTANT	T.Y. LIN INTERNATIONAL		
PROJECT RESIDENT			
CONTRACTOR			
PROJECT COMPLETION DATE			

TOPSHAM - BRUNSWICK
FRANK J. WOOD BRIDGE

TITLE SHEET

STP-2260(300)X WIN 22603.00

SHEET NUMBER 1 OF 128

Filename:\55422\106180_1\001_Title.dgn Division: Username: Date:7/23/2020

ESTIMATED QUANTITIES		
ITEM NO.	DESCRIPTION	UNIT
201.23	Removing Single Tree Top Only	EA
201.24	Removing Stump	EA
202.15	Removing Existing Manhole Or Catch Basin	EA
202.19	Removing Existing Bridge	LS
202.20	Removing Bituminous Concrete Pavement	SY
202.60	Remove Storm Drain Or Sewer Pipe	LF
203.20	Common Excavation	CY
203.21	Rock Excavation	CY
203.24	Common Borrow	CY
203.25	Granular Borrow	CY
206.061	Structural Earth Excavation - Drainage And Minor Structures Below Grade	CY
206.082	Structural Earth Excavation - Major Structures, Plan Quantity	CY
206.092	Structural Rock Excavation - Major Structures	CY
304.10	Aggregate Subbase Course - Gravel	CY
304.14	Aggregate Base Course - Type A	CY
403.2081	Hot Mix Asphalt, 12.5 MM Nominal Max. Size (Polymer ModifiedXWearing Course)	Ton
403.209	Hot Mix Asphalt, 9.5 MM Nominal Max. Size (Sidewalks, Drives and Incidentals)	Ton
403.213	Hot Mix Asphalt, 12.5 MM Nominal Max. Size (Base Course)	Ton
403.2131	Hot Mix Asphalt, 12.5 MM Nominal Max. Size (Base And Intermendiate Course)	Ton
409.15	Bituminous Tack Coat, Applied	G
461.131	Temporary Pavement	Ton
502.219	Structural Concrete Abutment And Retaining Walls	LS
502.22	Structural Concrete Abutment And Retaining Walls (Placed Under Water)	CY
502.239	Structural Concrete Piers	LS
502.24	Structural Concrete Piers (Placed Under Water)	CY
502.26	Structural Concrete Roadway And Sidewalk Slab On Steel Bridges	LS
502.31	Structural Concrete Approach Slabs	LS
502.49	Structural Concrete Curbs And Sidewalks	LS
502.565	Concrete Fill	CY
502.77	FRP Bridge Drain - Type "C"	EA
503.12	Reinforcing Steel, Fabricated And Delivered	LB
503.13	Reinforcing Steel, Placing	LB
503.26	Stainless Steel Reinforcement, Fabricated And Delivered	LB
503.27	Stainless Steel Reinforcement, Placing	LB
504.702	Structural Steel Fabricated And Delivered, Welded	LS
504.71	Structural Steel Erection	LS
505.08	Shear Connectors	LS
507.0961	Aluminum Bridge Railing, Pedestrian, with Pales	LS
507.XX	Ornamental Steel Bridge Railing, 4 Bar, with Pales	LS
507.XX	Barrier-Mounted Aluminum Pedestrian Railing	LS
508.14	High Performance Waterproofing Membrane	LS
511.07	Cofferdam - Pier 1	LS
511.07	Cofferdam - Pier 2	LS
511.07	Cofferdam - Pier 3	LS
512.081	French Drains	LS
514.06	Curing Box For Concrete Cylinders	EA
515.21	Protective Coating For Concrete Structures	LS
518.60	Repair Of Vertical Surfaces < 8 Inches	SF
521.23	Expansion Device - Finger Joint	EA
521.32	Fabric Trough For Finger Joint	EA
523.52	Bearing Installation	EA
523.5551	Pot Or Disc Bearings, Fixed	EA
523.5552	Pot Or Disc Bearings, Expansion	EA
524.30	Temporary Structural Support	EA
525.19	Granite Seating Blocks	EA
525.20	Granite Masonry Wall	SF
526.301	Temporary Concrete Barrier - Type 1	LS
526.341	Permanent Concrete Barrier, Special	LS
603.132	8" Culv Pipe Option 111	LF
603.169	15" Culvert Pipe Option 111	LF
603.179	18" Culvert Pipe Option 111	LF
604.072	Catch Basin Type A1-C	EA
604.16	Alter Catch Basin To Manhole	EA
604.18	Adjust Manhole Or Catch Basin To Grade	EA
604.241x	Nyloplast Area Drain	EA
605.09	6" Underdrain Type B	LF
606.353	Reflectorized Flexible Guardrail Marker	EA
606.363	Guardrail Remove And Dispose	LF
606.xx	Box Beam Guardrail (Coated Black)	LF
607.xx	Ornamental Aluminum Pedestrian Fence	LF
607.19	Chain Link Fence - 8 Foot	LF
607.2323	Chain Fence Gate 6'X8' Opening	EA
607.243	Remove Chain Link Fence	LF
608.08	Reinforced Concrete Sidewalk	SY
608.15	Brick Sidewalk with Bituminous Base	SY
608.26	Curb Ramp Detectable Warning Field	SF
608.28	Granite Pavers with Sand Base	SY
608.282	Granite Pavers with Concrete Base	SY
608.47	Sand Cement Base	CY

ESTIMATED QUANTITIES CONTINUED		
ITEM NO.	DESCRIPTION	UNIT
609.11	Vertical Curb Type 1	LF
609.12	Vertical Curb Type 1 - Circular	LF
609.23	Terminal Curb Type 1	LF
609.441	Curbing Removed And Stacked	LF
610.08	Plain Riprap	CY
610.203	Feature Rocks	EA
613.319	Erosion Control Blanket	SY
615.07	Loam	CY
615.071	Loam, Seed, Mulch	SY
616.08	Sodding	SY
618.13	Seeding Method Number 1	Unit
619.1201	Mulch	Unit
619.13	Bark Mulch	CY
620.56	Drainage Geotextile	SY
620.58	Erosion Control Geotextile	SY
621.129	Small Deciduous Tree (6'-8'), Multi-stem Group C	EA
621.197	Medium Deciduous Tree (1.75"-2" cal.), Multi-stem Group C	EA
621.385	Evergreen Shrubs (6"-8") Group A	EA
621.3851	Evergreen Shrubs (12"-15") Group A	EA
621.542	Deciduous Shrubs (18"-24") Group C	EA
621.548	Deciduous Shrubs (2'-3') Group C	EA
621.554	Deciduous Shrubs (3'-4') Group C	EA
621.556	Deciduous Shrubs (4'-5') Group C	EA
621.712	Herbaceous Perennials Group C	EA
621.75	Large Deciduous Tree (2"-2.50" cal.), Group C	EA
626.101	Metalic Junction Box (Cast Iron Sidewalk)	EA
626.22	Non-Metalic Conduit	LF
626.411	18 Inch Diameter Foundation	LF
627.733	4" White Or Yellow Painted Pavement Marking Line	LF
627.75	White or Yellow Pavement & Curb Marking	SF
627.76	Temporary Pavement Makring Line, White Or Yellow	LS
627.943	Colored Glass Pavement Marking System	SF
629.05	Hand Labor, Straight Time	MH
631.10	Air Compressor (Including Operator)	HR
631.11	Air Tool (Including Operator)	HR
631.12	All Purpose Excavator (Including Operator)	HR
631.172	Truck - Large (Including Operator)	HR
631.20	Stump Chipper Rental (Including Operator)	HR
631.221	Small Front End Loader (Including Operator)	HR
631.32	Culvert Cleaner (Including Operators)	HR
633.01	Seat Walls	LF
634.1944	2" Schedule 40 PVC Conduit	LF
634.2042	LED Luminaries (Decorative)	EA
634.208	Remove & Reset Light Standard	EA
634.2082	Remove Existing Light Standard	EA
634.21	Conventional Light Standard	EA
634.212	Light Standard, Over 9' to 15' (Decorative)	EA
634.241	2" Duct Under Pave, In Trench	LF
634.25	Service Pole Complete W/Cabinet & Contr	EA
634.251	Entrance Rack With Equipment and Controls	EA
634.315	#8 AWG Copper Wire	LF
634.316	#10 AWG Coppe Wire	LF
634.3161	#12 AWG Copper Wiring	LF
634.xx	Composite Concrete Hand Hole	EA
637.071	Dust Control	LS
639.18	Field Office, Type A	EA
641.34	Trash Receptacle	EA
641.71	Specialty Unit Paving, Granite	SF
642.17	Cast-in-place Concrete Steps	CY
642.185	Granite Steps, Amphitheater	LF
645.103	Demount Guide Sign	EA
645.106	Demount Reg, Wrng, Conf & Rte Marker Sgn	EA
645.108	Demount Pole	EA
645.113	Reinstall Guide Sign	EA
645.116	Reinst Reg, Wrn, Conf, & Rte Marker Sign	EA
645.118	Reinstall Pole	EA
645.309	Salvage of Architectural Signage (Bridge)	LS
645.5103	Interpretive Sign Panel Holder System	EA
652.311	Type II Barricade	EA
652.312	Type III Barricade	EA
652.33	Drum	EA
652.34	Cone	EA
652.35	Construction Signs	SF
652.36	Maintenance Of Traffic Control Devices	CD
652.38	Flaggers	HR
656.71	Level Lip Spreader	CY
656.75	Temporary Soil Erosion And Water Pollution Control	LS
658.20	Acrylic Laytex Finish, Green	SY
659.10	Mobilization	LS
660.21	On The Job Training	HR
802.40	5"x12" Flush Granite Curb	LF
832.48	Bollards	EA
832.481	Removable Bollard	EA

90% PROGRESS PLANS

T-Y LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	B.Toothaker	7/20
CHECKED-REVIEWED	D.Myers	7/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

ESTIMATED QUANTITIES

SHEET NUMBER

2

OF 128

Filename: ...\106180_109\002_Estimate_01.dgn Division: Username: Date:7/23/2020

GENERAL CONSTRUCTION NOTES

1. The utilities involved in this contract are as follows: Central Maine Power Company, Brunswick & Topsham Water District, Topsham Sewer District, Consolidated Communications, Inc., Lincolnville Communications, Inc., FirstLight Fiber, Great Works Internet, and Comcast Corp.

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

3. Existing aerial utilities are not shown on the plans.

4. The location of existing underground utilities and drainage shown on plans and cross-sections is approximate and should be confirmed by the Contractor.

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

6. Where pavement under this contract joins an existing pavement, the existing pavement shall be saw cut along a smooth line to a neat, even, vertical joint, as directed by the Resident. Broken or raveled edges will not be permitted. All work necessary for the preparation of this joint will be considered incidental to the related contract items.

7. Clearing limits shall be 5' beyond and parallel to the construction slope lines or as shown on the plans unless otherwise authorized by the Resident.

8. The clearing and selective clearing lines shown on the plans are for estimating purposes only. The actual lines for clearing shall be established in the field by the contractor and approved by the Resident.

9. Stumps have been estimated to be removed under Item 201.24, Removing Stump. However, where directed by the Resident, Item 631.20 Stump Chipper Rental (Including Operator), may be used to remove stumps.

10. Driveway fill side slopes shall be the same as the non-guardrail fill slopes unless otherwise noted on the plans.

11. All waste material not used on the project shall be disposed of off the project in waste areas approved by the Resident. Grading, seeding and mulching of waste areas shall be considered incidental.

12. If foundation material is required under culverts, it shall meet the requirements for granular borrow - underwater backfill and will be paid for as granular borrow.

13. Existing inslopes steeper than 2:1 in proposed fill areas shall be benched as directed by the Resident.

14. Commercial paved entrances shall be constructed with 3 inches of hot mix asphalt and 11 inches of aggregate subbase course gravel.

15. Cross slopes for normal and superelevated sections will be straight unless otherwise directed by the Department.

16. Existing culverts and catch basins to remain shall be cleaned as directed by the Resident. Payment will be made under Item 631.32, Culvert Cleaner (Including Operators).

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

18. The culvert sizes shown on the plans and cross sections are for smooth lined pipes. For comparable corrugated sizes see the drainage tabulation.

19. Flat tops for catch basins are not allowed unless noted on the Plans or directed by the Resident.

20. Concrete pipe ties shall be installed at the last joint of the inlet and outlet ends of all open ended RCP. Payment shall be made under Item 603.55, Concrete Pipe Ties.

21. 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.

22. All existing guardrail to be removed shall become the property of the Contractor. Removal and disposal shall be considered incidental to the guardrail items.

23. Two Reflectorized Flexible Guardrail Markers (Item 606.353) will be installed at each leading guardrail end and one at each trailing guardrail end.

24. A delineator post (item 606.356) will be installed at each underdrain outlet.

25. Loam has been estimated for all disturbed slope areas. Actual placement of the loam shall be as noted on the plans or designated by the Resident.

26. Unless otherwise noted Seeding Method No. 1 shall be utilized on all lawns and developed areas; Seeding Method No. 2 shall be utilized on all other areas.

27. Loam shall be placed to a nominal depth of 4 inches in Method No. 1 lawn areas and 2 inches in all other areas unless otherwise noted or directed by the Resident.

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

29. Any damage to the slopes caused by the contractor's equipment, personnel, or operation shall be repaired to the satisfaction of the resident. All work, equipment, and materials required to make repairs shall be at the Contractor's expense.

30. Areas requiring fill on the project will come from suitable excavation from excavation areas.

31. Estimated quantities for required structural earth excavation, drainage and minor structures are informational only and represent the approximate minimum quantity required to install drainage structures. Additional excavation for the contractor's convenience or to comply with backsloping requirements will not be paid for directly but will be considered incidental to the related drainage items.

32. No separate payment for superintendent or foreman will be made for the supervision of equipment being paid for under the equipment rental items.

33. 7/32 Undetermined locations 9/32 shall be determined by the Resident.

34. All work shall be done in accordance with the Maine Department of Transportation's Best Management Practices for Erosion Control & Sediment Control, February, 2008.

35. Final striping for the project shall be done by the Contractor per the striping layout in the Contract documents or as provided by the Department. Payment shall be made under appropriate Contract items.

36. The Contractor will place appropriately-marked stakes at the following locations on the project: striping pattern changes, cross-slope changes, and every 500 feet for stationing. The Contractor will paint every full station (100 feet) on the existing roadway and will transfer the painted stationing through all intermediate lifts (not surface). Appropriately-sized striping pattern changes will be painted on surface. Stationing control must be placed before work can commence. Cross-slope and striping change controls must be placed before paving can commence.

37. Coordinates shown throughout these plans are given as a convenience to the Contractor and are in no way intended to relieve the Contractor's responsibilities under Section 105, General Scope of Work.

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

39. Place a 24 inch wide strip of Erosion Control Blanket (Item 613.319) on the side slopes along the top of the riprap and behind the wingwalls.

40. Riprap and stone ditch protection shall be placed on Class 1, non-woven erosion control geotextile as shown in Standard Details 610(03). Plain riprap shall be placed to a minimum depth of 3'-0", unless otherwise noted.

41. The following shall be incidental to the 603 item(s):

    - Any connectors necessary to install new culvert replacements or extensions
    - All pipe excavation including any cutting and removal of pavement and all ditching at pipe ends
    - Granular borrow under the pipe shall meet the requirements for underwater backfill
    - Any necessary clearing of brush and non-pay trees at culvert ends

42. Pavement markings shall conform to the standard details and latest edition of the Manual on Uiform Traffic Control Devices. The abbreviations shown on the plans are as follow.
    DYCL - 4" Double Yellow Centerline
    SWEL - 4" Single White Edge Line
    SL - 12" White Stop Line

43. Protective coating for concrete surfaces shall be applied to the following areas: All exposed surfaces of concrete curbs and sidewalks. Fascia down to drip notch. All exposed surfaces of concrete transition barriers. Top of abutment backwalls and to 1'-0" below the top of backwalls on the back side.

44. Project information referred to herein may be accessed at the following MaineDOT web address: http://www.maine.gov/mdot/comprehensive-list-projects/project-information.php.

45. 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.

46. 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.

47. The project geotechnical reports are as listed below. These reports may be accessed at the MaineDOT web address: <to be determined>

48. 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.

49. 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.

50. All costs for cofferdams not associated with the construction of Pier No. 1, Pier No. 2, or Pier No. 3 including pumping, maintenance, related temporary soil erosion and water pollution controls and removal, will not be paid for directly, but will be considered incidental to related Contract items.

51. The existing bridge shall be removed by, and become the property of, the Contractor. The steel portions of the existing bridge are coated with a lead-based paint system. The Contractor is responsible for the containment, proper management and disposal of all lead-contaminated hazardous waste generated by the process of demolishing the bridge. MaineDOT will assume generator responsibility for any hazardous waste generated as a result of the removal process at the bridge site; this waste shall be transported and managed by a MaineDOT approved vendor (e.g., Environmental Projects, Inc or EnPro Environmental Services, Inc). The Contractor is responsible for implementing appropriate OSHA mandated personal protection standards related to this process. Once the existing bridge is removed from the bridge site, the Contractor is solely responsible for the care, custody and control of the components of the existing bridge - any hazardous waste generated as a result of the storage, recycling or disposal of the bridge components, including the lead-coated steel shall be the responsibility of the Contractor. The Contractor shall recycle or reuse the steel in accordance with Maine Department of Environmental Regulation Chapter 850; a copy of which is available at MaineDOT's offices on Child Street in Augusta. Payment for all labor, materials, equipment and other costs required to remove and dispose of the existing bridge will not be made separately, but shall be considered incidental to Item 202.19, Removing Existing Bridge.

52. Existing bridge superstructure and Pier 1 shall be removed in their entirety. Masonry piers shall be removed to an elevation flush with the existing river bed. Concrete and granite masonry abutments shall be removed down to the elevation of the existing bridge seat.

53. MaineDOT Bridge Maintenance will be maintaining the existing bridge, which is in poor condition and needing regular maintenance and inspection. The Contractor shall allow for mobilization of equipment and no additional compensation shall be paid to the Contractor for delay as a result of repairs or inspection completed by MaineDOT Bridge Maintenance.

54. The communication and cable service utility lines located on the existing bridge will be relocated to the proposed bridge by others. The Contractor will coordinate all bridge and approach construction with utility relocation work as required. See the Utility Special Provision for additional information and requirements.

55. All dimensions shown in the plans are horizontal or vertical at 45° F, unless noted otherwise.

56. No provisions have been made for the contractor to perform work or set up staging outside the existing and proposed right-of-way.

57. The contractor shall be responsible for costs associated with coordination with the utility companies, if needed.

Date:7/23/2020

Username:

Division:

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE PLANS

BRIDGE NO. 2016

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	D.Myers	4/20
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1	S.Morgan	4/20
REVISIONS 2	D.Myers	
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER CUMBERLAND
BRUNSWICK-TOPSHAM

GENERAL NOTES

SHEET NUMBER

3

OF 128

90% PROGRESS PLANS

TY LIN INTERNATIONAL

ITEM 201.23 - REMOVE SINGLE TREE TOP ONLY

STATION	OFFSET	TYPE
3+57.02	113.15' RT	15" PINE
3+75.08	62.91' RT	CLUMP 8-12" HARDWOODS
12+88.32	10.33' LT	HARDWOOD
13+33.00	12.23' LT	CLUMP 9", 11", 13", 13" HARDWOODS
13+41.28	14.76' LT	CLUMP 11-13" HARDWOODS
13+65.64	18.68' LT	CLUMP 12", 13", 17" HARDWOODS

ITEM 201.24 - REMOVE STUMP

STATION	OFFSET	TYPE
3+57.02	113.15' RT	15" PINE
3+75.08	62.91' RT	CLUMP 8-12" HARDWOODS
12+88.32	10.33' LT	HARDWOOD
13+33.00	12.23' LT	CLUMP 9", 11", 13", 13" HARDWOODS
13+41.28	14.76' LT	CLUMP 11-13" HARDWOODS
13+65.64	18.68' LT	CLUMP 12", 13", 17" HARDWOODS

ITEM 604.18 - ADJUST MANHOLE OR CATCH BASIN TO GRADE

STATION	OFFSET	TYPE
3+77.10	21.56' RT	CB

ITEM 603.169 - 15" CULVERT PIPE OPTION III

STATION	OFFSET	TO	STATION	OFFSET	LENGTH
13+61.64	16.85' RT		13+68.93	39.63' RT	23.92'

ITEM 603.179 - 18" CULVERT PIPE OPTION III

STATION	OFFSET	TO	STATION	OFFSET	LENGTH
4+16.30	43.19' LT		4+18.34	16.88' LT	26.29'
4+17.81	12.88' RT		4+18.34	12.88' LT	25.75'

ITEM 604.072 - CATCH BASIN TYPE AI-C

STATION	OFFSET
4+17.81	14.88' RT
4+18.34	14.88' LT
13+61.03	14.95' RT

ITEM 604.16 - ALTER CATCH BASIN TO MANHOLE

STATION	OFFSET
13+69.53	41.54' RT
14+03.41	33.91' RT

ITEM 604.18 - ADJUST MANHOLE OR CATCH BASIN TO GRADE

STATION	OFFSET	TYPE
0+82.73	24.23' RT	CB
14+21.73	50.18' RT	CB
15+48.12	22.33' RT	CB
15+70.82	14.91' LT	CB

ITEM 605.09 - 6" UNDERDRAIN TYPE B

STATION	OFFSET	TO	STATION	OFFSET	LENGTH
0+70.00	17.26' LT		4+16.34	12.88' LT	341.14'
0+88.64	23.09' RT		4+15.81	12.88' RT	332.95'
12+75.75	15.88' LT		15+68.82	15.17' LT	293.07'
12+75.75	15.88' RT		13+59.03	15.88' RT	83.28'
13+67.00	15.00' RT		15+46.17	21.91' RT	179.88'

ITEM 606.XX - TL-2 APPROACH RAIL

STATION	OFFSET	TO	STATION	OFFSET	LENGTH
1+81.93	26.30' RT		3+64.21	27.59' RT	190.52'
3+64.21	27.58' RT		4+38.13	22.58' RT	88.95'
4+09.40	67.59' LT		4+37.79	22.58' LT	97.23'
12+57.29	22.58' RT		13+17.68	29.35' RT	63.52'
12+64.25	22.23' LT		12+92.84	22.00' LT	28.66'
12+99.28	22.00' LT		13+95.00	22.00' LT	95.72'
13+27.35	29.35' RT		13+65.57	22.71' LT	41.59'

ITEM 606.XX - BOX BEAM GUARDRAIL (COATED BLACK)

STATION	OFFSET	TO	STATION	OFFSET	LENGTH
2+23.62	25.16' LT		3+07.47	32.75' LT	85.28'

ITEM 606.363 - GUARDRAIL REMOVE AND DISPOSE

STATION	OFFSET	TO	STATION	OFFSET	LENGTH
2+77.48	31.98' RT		4+08.64	62.99' RT	142.31'
3+59.07	11.63' LT		3+57.97	8.32' RT	20.00'
12+58.63	29.06' RT		13+98.47	9.06' RT	144.54'
12+68.63	65.87' RT		13+20.18	56.61' RT	52.57'

ITEM 607.19 - CHAIN LINK FENCE - 8 FOOT

STATION	OFFSET	TO	STATION	OFFSET	LENGTH
4+08.94	66.87' LT		4+37.23	28.17' LT	54.21'

ITEM 607.2323 - CHAIN FENCE GATE 6'X8' OPENING

STATION	OFFSET
4+39.50	30.45' LT

ITEM 607.243 - REMOVE CHAIN LINK FENCE

STATION	OFFSET	TO	STATION	OFFSET	LENGTH
3+59.97	10.14' LT		4+09.40	66.87' LT	116.49'

ITEM 608.26 - CURB RAMP DECTECTABLE WARNING FIELD

STATION	OFFSET	AREA (SF)
13+89.07	32.04' RT	26.77
14+36.23	32.47' RT	15.22

ITEM 609.11 - VERTICAL CURB TYPE I

STATION	OFFSET	TO	STATION	OFFSET	LENGTH
0+70.00	25.95' RT		4+35.69	16.00' RT	371.67'
0+70.00	20.72' LT		1+49.80	16.00' LT	80.05'
2+26.38	16.00' LT		3+03.34	16.00' LT	75.42'
3+74.86	16.00' LT		4+14.54	16.00' LT	60.44'
12+59.31	16.00' RT		13+87.89	28.69' RT	99.24'
12+59.19	16.00' LT		15+68.66	16.00' LT	309.74'
13+17.09	28.00' LT		13+93.51	32.67' LT	76.80'
13+97.67	47.15' RT		14+01.86	65.62' RT	18.94'
14+71.38	19.20' RT		14+82.75	24.01' RT	12.34'

ITEM 609.12 - VERTICAL CURB TYPE I - CIRCULAR

STATION	OFFSET	TO	STATION	OFFSET	RADIUS	LENGTH
13+58.66	16.00'		13+97.67	47.15'	40.00'	53.91'
14+20.88	61.27'		14+27.83	40.15'	30.63'	22.59'
14+45.88	16.97'		14+61.70	17.71'	34.30'	16.97'
14+61.70	17.71'		14+71.38	19.20'	20.00'	9.90'

ITEM 609.23 - TERMINAL CURB TYPE I

STATION	OFFSET	TO	STATION	OFFSET	RADIUS	LENGTH
1+49.80	16.00'		1+68.30	16.02'	784'	18.00'
2+18.21	16.00'		2+26.38	16.00'	784'	8.00'
3+03.34	16.00'		3+13.54	16.00'	784'	10.00'
3+66.69	16.00'		3+74.86	16.00'	784'	8.00'
13+75.19	19.58'		13+85.21	26.09'	40'	12.00'
13+93.95	37.18'		13+96.99	44.56'	40'	8.00'
14+27.83	40.15'		14+32.23	34.58'	0'	7.00'
14+38.54	28.58'		14+45.88	23.35'	0'	9.00'

ITEM 609.441 - CURBING REMOVED AND STACKED

STATION	OFFSET	TO	STATION	OFFSET	LENGTH
0+70.00	20.48' LT		1+68.17	16.00' LT	97.45'
0+70.00	25.95' RT		3+99.98	59.92' RT	345.59'
2+18.09	14.70' LT		3+02.55	0.21' RT	84.98'
3+55.86	14.10' RT		4+08.97	31.71' RT	57.39'
12+62.30	37.01' RT		15+68.82	15.30' LT	338.79'
12+71.92	63.58' RT		14+01.86	65.62' RT	151.57'
14+20.88	61.27' RT		14+45.88	23.35' RT	46.27'

ITEM 610.08 - PLAIN RIPRAP

STATION	TO	STATION
3+90. LT		4+76. LT

ITEM 618.13 - SEEDING METHOD I

STATION	TO	STATION
0+70. RT		4+00. RT
12+58. RT		14+00. RT
12+67. LT		15+74. LT
14+29. RT		14+52. RT

DRIVES AND ENTRANCES

STATION	TYPE	OPENING WIDTH
1+93.19 LT	CONSTRUCT PAVED DRIVE	49.03'
3+37.03 LT	CONSTRUCT PAVED DRIVE	46.34'
14+11.28 RT	CONSTRUCT PAVED DRIVE	105.25'

EARTHWORK SUMMARY

TO BE INCLUDED FOR

DRAFT PS&E SUBMITTAL

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	B.McClure	7/2020
CHECKED-REVIEWED	D.Burhons	7/2020
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

CONSTRUCTION NOTES / EARTHWORK SUMMARY

SHEET NUMBER

4

OF 128

Date:7/23/2020

Username:

Division:

Filename: ...\004_ConstructionNotes_01.dgn

STATION	CULVERT PIPE												CATCH BASIN					PIPE ARCH				MH	UNDERDRAIN						ELBOWS, TEES, WYES AND INLET GRATE UNITS	REMARKS
	RCP			CMP		OPTION I		OPTION III																TYPE B		TYPE C					
								SMOOTHLINED		CORRUGATED											GAGE OR WALL THICKNESS		TYPE B	OUTLET	SMOOTHLINED		CORRUGATED		DESCRIPTIONS	
	SIZE	LENGTH	CLASS	SIZE	LENGTH	SIZE	LENGTH	SIZE	LENGTH	SIZE	LENGTH	F4	F5-C	B1	A1-C	OTHER	SPAN	RISE	LENGTH			LENGTH	LENGTH	SIZE	LENGTH	SIZE	LENGTH		
STA. 0+82.73, 24.23' RT																													ADJUST CB TO GRADE
STA. 0+70.00, 17.26' LT TO STA. 4+16.34, 12.88' LT																						341.14'							
STA. 0+88.64, 23.09' RT TO STA. 4+15.81, 12.88' RT																						332.95'							
STA. 4+17.81, 14.88' LT															1														
STA. 4+18.34, 14.88' RT															1														
STA. 4+17.81, 12.88' RT TO STA. 4+18.34, 12.88' LT								15"	25.75'	15"	25.75'																		
STA. 4+16.30, 43.19' LT TO STA. 4+18.34, 16.88' LT								18"	26.29'	18"	26.29'																		
STA. 12+75.75, 15.88' LT TO STA. 15+68.82, 15.17' LT																						293.07'							
STA. 12+75.75, 15.88' RT TO STA. 13+59.03, 15.88' RT																						83.28'							
STA. 13+61.03, 14.95' RT															1														
STA. 13+61.03, 17.00' RT TO STA. 13+69.53, 39.54' RT								18"	23.92'	18"	23.92'																		
STA. 13+67.00, 15.00' RT TO STA. 15+46.17, 21.91' RT																						179.88'							
STA. 13+69.53, 41.54' RT																													ALTER CB TO MH
STA. 14+03.41, 33.91' RT																													ALTER CB TO MH
STA. 14+21.73, 50.18' RT																													ADJUST CB TO GRADE
STA. 15+48.12, 22.33' RT																													ADJUST CB TO GRADE
STA. 15+70.82, 14.91' LT																													ADJUST CB TO GRADE
SITE AMENITIES																													
STA. 2+80.14, 43.85' RT									27'		27'																		INLINE DRAIN NDI-1
STA. 2+80.14, 43.85' RT TO STA. 2+96.38, 66.98' RT																													8" HDPE STORM DRAIN - 25.00'
STA. 2+96.38, 66.98' RT																													8" STORM DRAIN FLARED END SECTION
STA. 3+60.29, 40.40' RT																													INLINE DRAIN NDI-2
STA. 3+60.29, 40.40' RT TO STA. 3+58.00, 60.04' RT																													8" HDPE STORM DRAIN - 19.00'
STA. 3+58.00, 60.04' RT																													INLINE DRAIN NDMH
STA. 3+58.00, 60.04' RT TO STA. 3+50.87, 92.91' RT																													8" HDPE STORM DRAIN - 34.00'
STA. 3+50.87, 92.91' RT																													8" STORM DRAIN FLARED END SECTION
STA. 3+58.00, 60.04' RT TO STA. 4+04.56, 53.16' RT																													8" HDPE STORM DRAIN - 49.00'
STA. 3+71.27, 57.76' RT																													INLINE DRAIN NDI-4
STA. 3+71.27, 57.76' RT TO STA. 3+76.49, 50.11' RT																													8" HDPE STORM DRAIN - 9.00'
STA. 3+76.49, 50.11' RT																													INLINE DRAIN NDI-3
STA. 12+57.21, 17.86' LT TO STA. 12+97.19, 23.63' LT																													8" STORM DRAIN - DUCTILE IRON - 40.57'
STA. 12+97.19, 23.63' LT																													INLINE DRAIN NDI-6
STA. 12+78.33, 36.99' RT																													INLINE DRAIN NDI-7
STA. 12+78.33, 36.99' RT TO STA. 12+85.45, 56.03' RT																													8" HDPE STORM DRAIN - 19'
STA. 12+85.45, 56.03' RT																													INLINE DRAIN NDI-8
STA. 12+85.45, 56.03' RT TO STA. 13+00.40, 61.97' RT																													8" HDPE STORM DRAIN - 14'
STA. 13+00.40, 61.97' RT																													INLINE DRAIN NDI-9
STA. 13+00.40, 61.97' RT TO STA. 12+95.19, 72.37' RT																													8" HDPE STORM DRAIN - 11'
STA. 12+95.19, 72.37' RT																													8" STORM DRAIN FLARED END SECTION
STA. 13+51.06, 32.35' RT																													INLINE DRAIN NDI-6
STA. 13+51.06, 32.35' RT TO STA. 13+67.73, 40.66' RT																													8" HDPE STORM DRAIN - 19'

90% PROGRESS PLANS

TY LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE PLANS

BRIDGE NO. 2016

	BY	DATE
PROJ. MANAGER		
DESIGN-DETAILED	P.McClure	7/20
CHECKED-REVIEWED	D.Burhans	7/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

D. Bryant
P.McClure
D.Bryant

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

DRAINAGE SUMMARY

SHEET NUMBER

5

OF 128

Date:7/23/2020

Username:

Division:

Filename: ...\005_Drainage_Summary.dgn

Filename: ...\106207_4\006_HDPlan_01.DGN Division: Username: Date:7/23/2020

CURVE DATA #1
PI = 2+73.46
D = 7°09'43.1"
Δ = 20°25'20.6" Lt.
R = 800.00'
L = 285.15'
T = 144.10'
E = 12.88'

WATERFRONT, MAINE BRUNSWICK LLC

BROOKFIELD WHITE PINE HYDRO LLC

TOWN OF BRUNSWICK

AREA LEASED TO THE TOWN OF BRUNSWICK

BROOKFIELD WHITE PINE HYDRO LLC

STATE HIGHWAY "17" / US ROUTE 201 & ROUTE 24B / MAIN STREET

US Route 201 & Route 24

STATE HIGHWAY 17 SOUTHBOUND RAMP

CABOT MILL

CLAMP SHOP

GRANITE

SAND PAIL ROAD

DEPOT STREET

CIRCLE ROAD

BRUNSWICK BOARDING HOUSE

RIVERSIDE PARK

RIVERSIDE PARK PATH

PINE PLACE

TRAFFIC CONTROL CABINET

Androscoggin River

APPROXIMATE BRIDGE LOCATION PRIOR TO 1932

APPROXIMA

TOWN OF BRU
TOWN OF

Match Line STA. 6+00

Measured Along ℄ Construction

Span 1 = 260'-0"

Approximate Limits of Coffer Dam Wall

Remove 15" Pipe

Adjust to Grade (By Others)

Remove and Reset Sign

New Pole (By Others)

Remove and Reset Sign

Remove Pole (By Others)

Remove Retaining Wall

Remove and Reset Sign

Remove Trees

Remove Pole (By Others)

Remove and Reset Sign

Remove Fence (Partial)

Adjust to Grade

℄ Proposed Construction U.S. Route 201 & Route 24

New Pole (By Others)

Remove Fence

Remove and Reset Sign

Remove Shrubs

Remove Tree

Adjust to Grade (By Others)

Remove and Reset Sign

Remove Sign

Adjust to Grade (By Others)

Remove Tree

Remove Tree

Remove Tree

Remove 12" Pipe

Remove CB

Adjust to Grade (By Others)

Partially Remove Existing Abutment

Existing Bridge To Be Removed

Remove and Reset Sign (See Note 5)

Remove Guardrail

Chain Ling Fence - 8' PVC Coated

℄ Brg. Abut. 1 Sta. 4+40.00

Wingwall (Typ.)

6'x8' Gate

4" Conduit Duct Bank

6" Conduit Duct Bank

16" Water Line

12" Conduit Duct Bank

18" Opt. III

Relocate Sign (By Others)

18" Opt. III

Al-C

99.85

16.69

68.17

91.87

18.21

13.54

PC = STA. 1+29.36

PT = STA. 4+14.51

30.00' Transition

STA. 0+70.00 Limit of Work

Match Existing Pavement and Curb

Begin Mill & Overlay

STA. 1+00.00 End Mill & Overlay

Begin Project

Begin Full Depth Construction

0+00

1+00

2+00

3+00

5+00

N15°36'51.02"E

To Brunswick

Curve 1

P.I.

P.L.

APPROX. LOCATION FERC PROJECT BOUNDARY

ACCESS EASEMENT TO CMP C.C.R.D BK. 4504, PAGE 270

CONTROL OF ACCESS

APPROX. LOCATION TWDC PROJECT BOUNDARY

ST BOUNDARY

Approximate Location FERC Project Boundary

PLAN

25 0 25 50
Scale of Feet

Notes:

1. See Plan Sheet 3 for Bike Lane Pavement Marking Details.
2. Brunswick Amenities, Sta. 1+50.00, RT. to Sta. 4+20.00, RT. are detailed in the Brunswick Site Amenities Sheets.
3. See Lighting Plans and Details for Lighting Information.
4. See Retaining Wall Key Plan sheets for moment slab and retaining wall layouts.
5. Town Line signs shall be removed from their existing locations and reset to the center of the bridge.
6. Removal of existing fence shall be considered incidental to excavation items. The fence noted for partial removal shall be removed between Sta. 1+42.22 RT and Sta. 1+62.66 RT only.

90% PROGRESS PLANS

TY LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016 BRIDGE PLANS

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	D. Burhoms	T. Aritzi	7/2020/19
CHECKED-REVIEWED	D. Bryant	D. Burhoms	7/2020/19
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

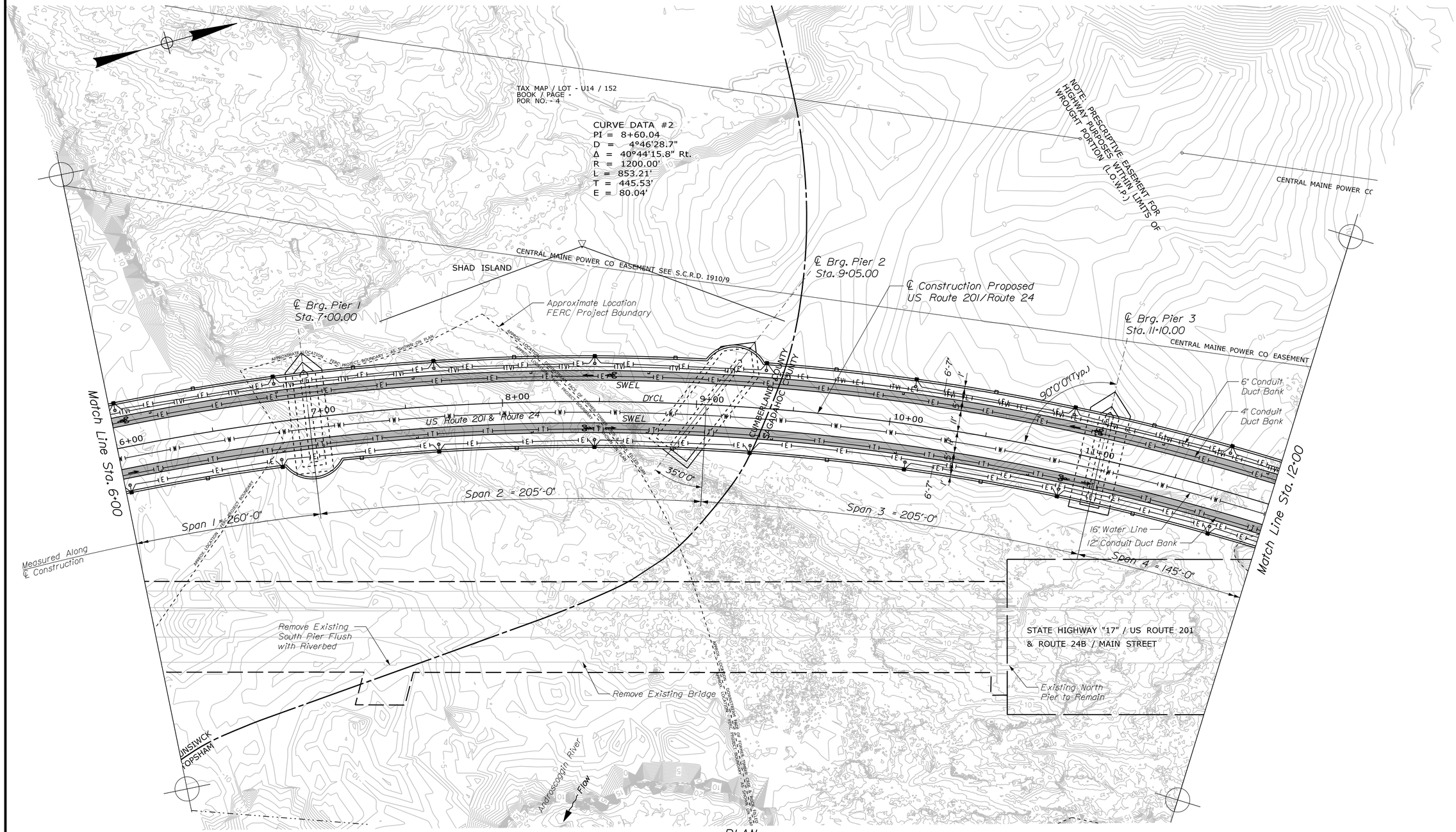
P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

PLAN
SHEET 1 OF 3

SHEET NUMBER
6
OF 128



PLAN

25 0 25 50
Scale of Feet

Notes:

1. See Plan Sheet 3 for Bike Lane Pavement Marking Details.
2. See Lighting Plans and Details for Lighting Information.

90% PROGRESS PLANS

TY·LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016 — BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	D.Burhons	7/2020
CHECKED-REVIEWED	D.Bryant	7/2020
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

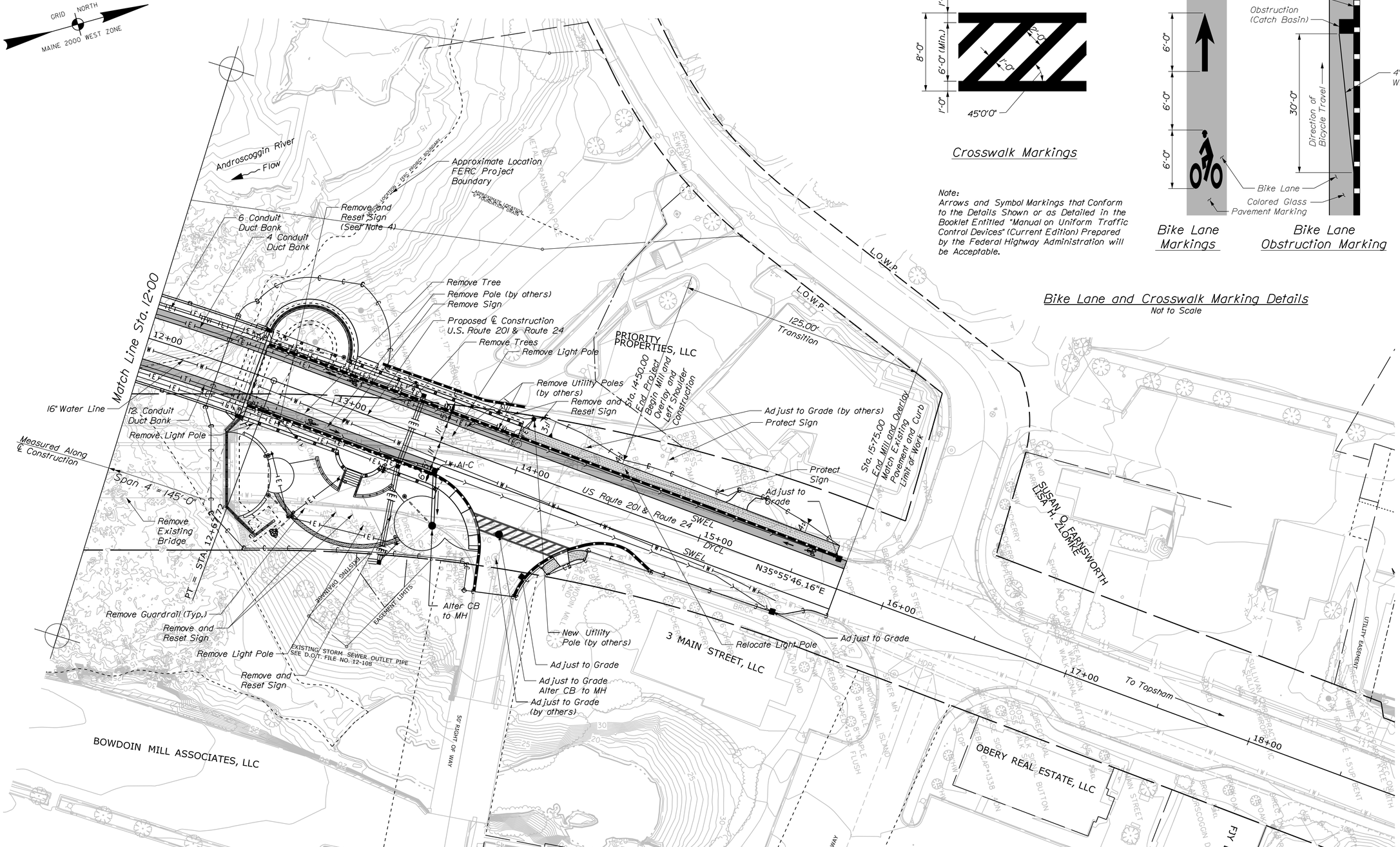
DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

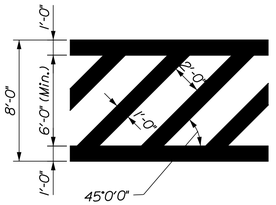
PLAN
SHEET 2 OF 3

SHEET NUMBER
7
OF 128

Filename: ...\106207_5\007_HDPlan_02.DGN Division:
Username:
Date:7/23/2020



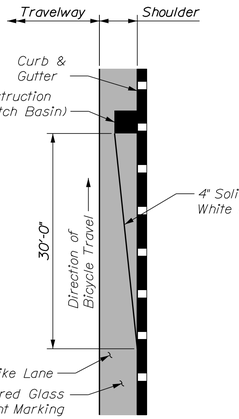
Crosswalk Markings



Note:
Arrows and Symbol Markings that Conform to the Details Shown or as Detailed in the Booklet Entitled "Manual on Uniform Traffic Control Devices" (Current Edition) Prepared by the Federal Highway Administration will be Acceptable.

Bike Lane Markings

Bike Lane Obstruction Marking



Bike Lane and Crosswalk Marking Details

Not to Scale

Notes:

1. See Plan Sheet 3 for Bike Lane Pavement Marking Details.
2. Topsham Amenities, Sta. 12+55.00, RT. to Sta. 14+00.00, RT., and Sta. 12+55.00 LT. to Sta. 13+20.00, LT., are detailed in the Topsham Site Amenities Sheets.
3. See Lighting Plans and Details for Lighting Information.
4. Town Line Signs shall be removed from their existing locations and reset to the center of the bridge.
5. Removal of existing brick sidewalks shall be considered incidental to excavation items.

PLAN

25 0 25 50

Scale of Feet

90% PROGRESS PLANS

TY LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant	BY	DATE
DESIGN-DETAILED	D.Burhons	T. Artz	7/20
CHECKED-REVIEWED	D.Burhons	D.Burhons	7/20
DESIGN2-DETAILED2	D.Bryant	D.Bryant	
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

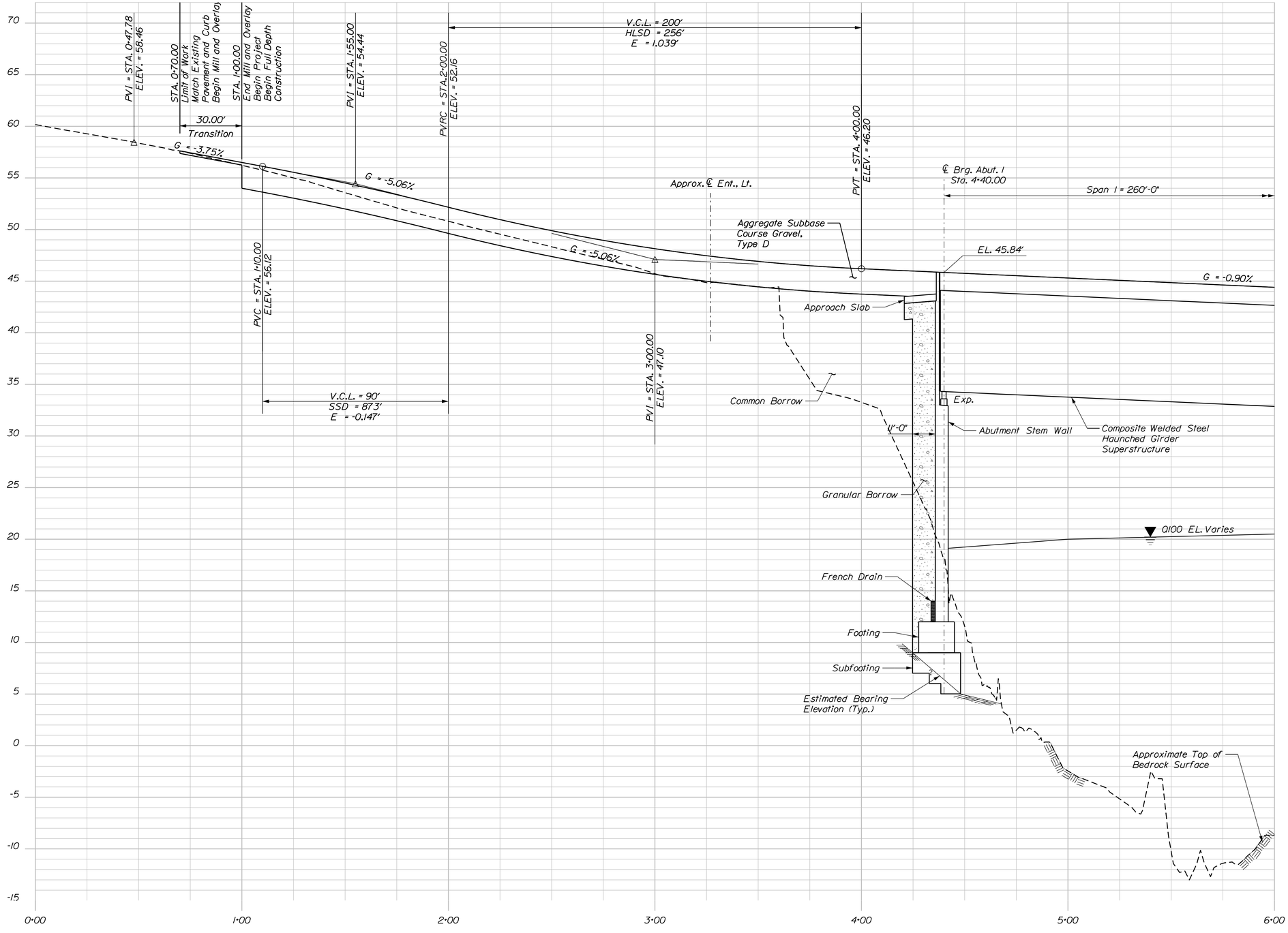
PLAN
SHEET 3 OF 3

SHEET NUMBER

8

OF 128

Filename: ...\106207_6\008_HDPlan_03.DGN Division: Username: Date:7/23/2020



PROFILE: U.S. ROUTE 201 / ROUTE 24B

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

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

Filename: ...\106207_7\009_HDProfile_01.DGN Division: Username: Date:7/22/2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	T. Aritz	7/20
CHECKED-REVIEWED	D.Burhons	7/20
DESIGN2-DETAILED2	D.Bryant	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

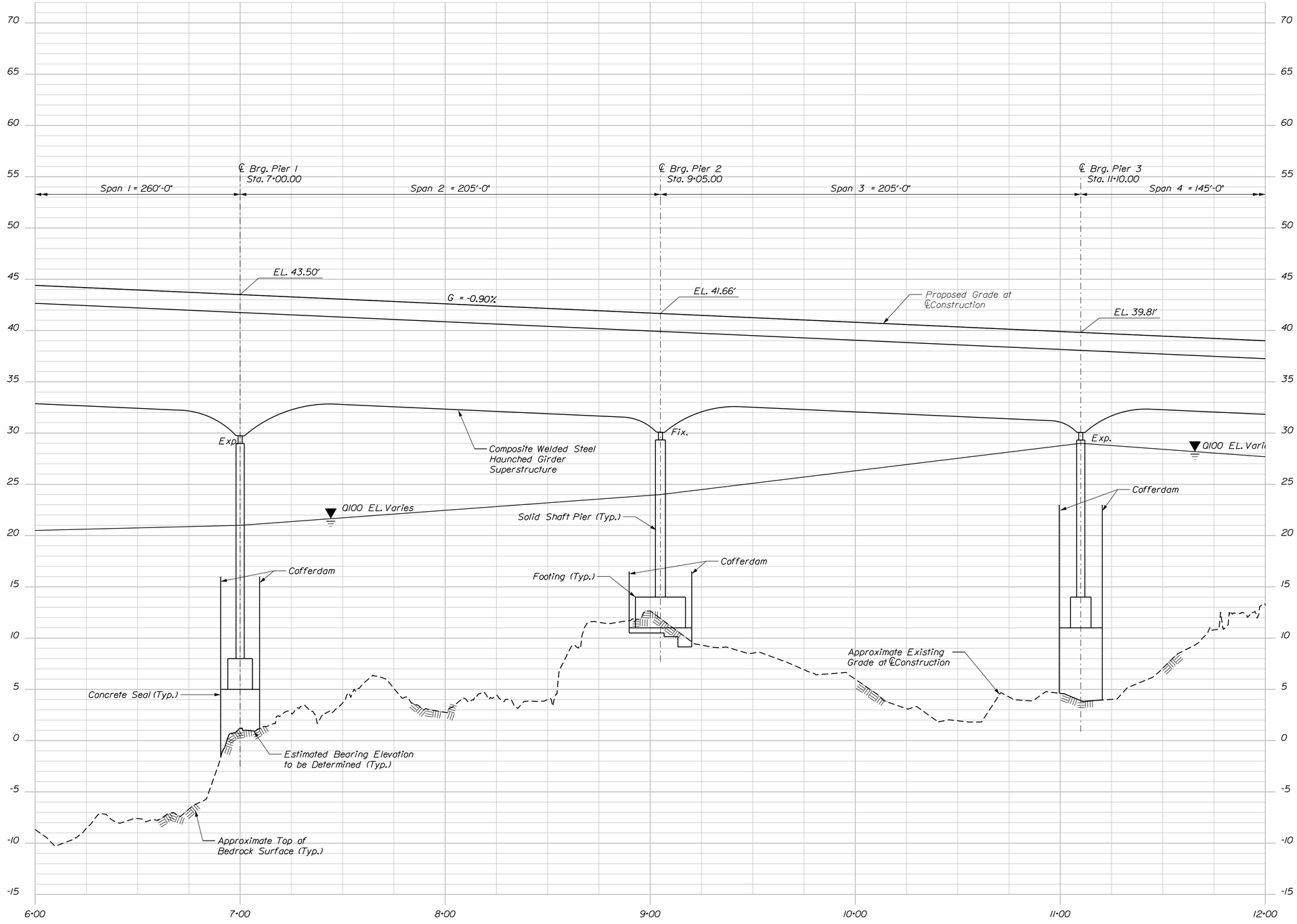
P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

PROFILE
SHEET 1 OF 3

SHEET NUMBER
9
OF 128



PROFILE: U.S. ROUTE 201 / ROUTE 24B

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

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN
22603.00

BRIDGE NO. 2016

BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	D.Burhans	7/20
CHECKED-REVIEWED	D.Bryant	7/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

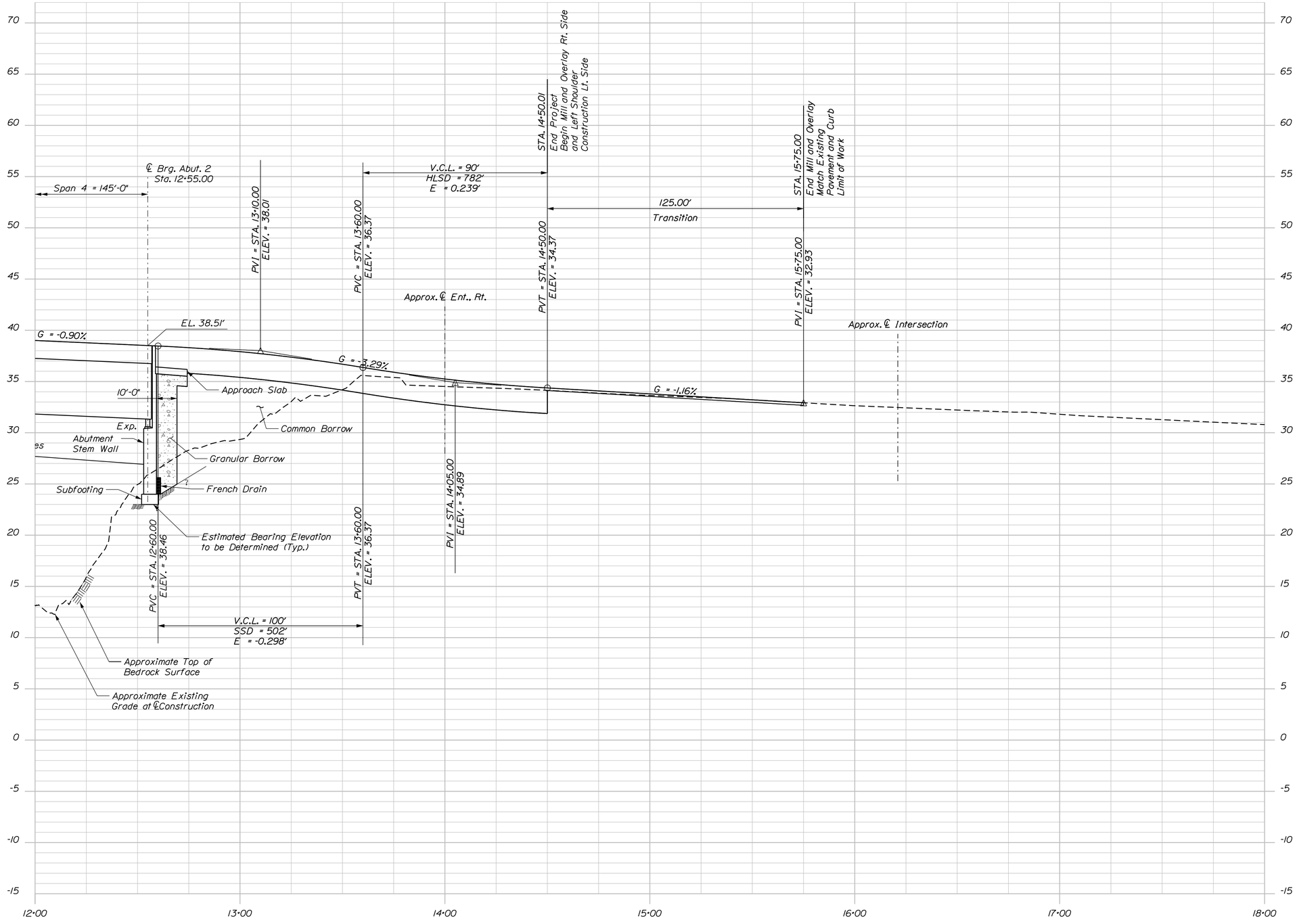
FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

PROFILE
SHEET 2 OF 3

SHEET NUMBER

10

OF 128



PROFILE: U.S. ROUTE 201 / ROUTE 24B

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

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	D.Burhons	7/20
CHECKED-REVIEWED	D.Bryant	7/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BY | DATE

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

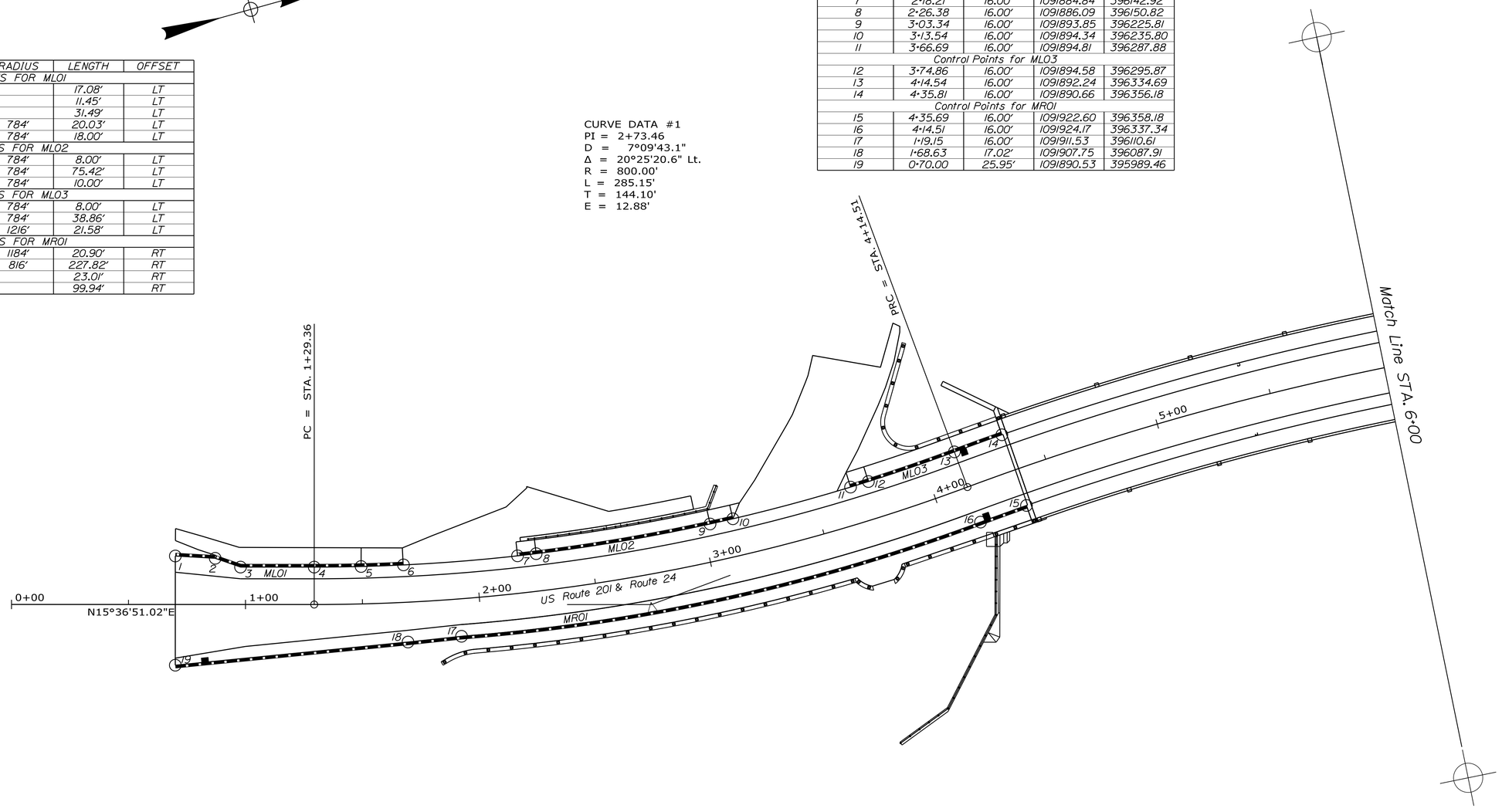
PROFILE
SHEET 3 OF 3

SHEET NUMBER
11
OF 128

PT. TO PT.	RADIUS	LENGTH	OFFSET
CONTROL POINTS FOR ML01			
1-2		17.08'	LT
2-3		11.45'	LT
3-4		31.49'	LT
4-5	784'	20.03'	LT
5-6	784'	18.00'	LT
CONTROL POINTS FOR ML02			
7-8	784'	8.00'	LT
8-9	784'	75.42'	LT
9-10	784'	10.00'	LT
CONTROL POINTS FOR ML03			
11-12	784'	8.00'	LT
12-13	784'	38.86'	LT
13-14	1216'	21.58'	LT
CONTROL POINTS FOR MR01			
15-16	1184'	20.90'	RT
16-17	816'	227.82'	RT
17-18		23.01'	RT
18-19		99.94'	RT

CURVE DATA #1
PI = 2+73.46
D = 7°09'43.1"
Δ = 20°25'20.6" Lt.
R = 800.00'
L = 285.15'
T = 144.10'
E = 12.88'

Point No.	Station	Offset	X Coord.	Y Coord.
Control Points for ML01				
1	0+70.00	20.72'	1091845.58	396002.03
2	0+87.05	19.75'	1091851.11	396018.19
3	0+97.87	16.00'	1091857.63	396027.60
4	1+29.36	16.00'	1091866.11	396057.93
5	1+49.80	16.00'	1091871.25	396077.29
6	1+68.30	16.02'	1091875.46	396094.92
Control Points for ML02				
7	2+18.21	16.00'	1091884.84	396142.92
8	2+26.38	16.00'	1091886.09	396150.82
9	3+03.34	16.00'	1091893.85	396225.81
10	3+13.54	16.00'	1091894.34	396235.80
11	3+66.69	16.00'	1091894.81	396287.88
Control Points for ML03				
12	3+74.86	16.00'	1091894.58	396295.87
13	4+14.54	16.00'	1091892.24	396334.69
14	4+35.81	16.00'	1091890.66	396356.18
Control Points for MR01				
15	4+35.69	16.00'	1091922.60	396358.18
16	4+14.51	16.00'	1091924.17	396337.34
17	1+19.15	16.00'	1091911.53	396110.61
18	1+68.63	17.02'	1091907.75	396087.91
19	0+70.00	25.95'	1091890.53	395989.46



PLAN

25 0 25 50
Scale of Feet

90% PROGRESS PLANS

T·Y·LIN INTERNATIONAL

Date:7/22/2020
Username:
Division:
Filename: ...\012_Curb_Geometry_01.DGN

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	T. Antz	7/20
CHECKED-REVIEWED	D.Bryant	7/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

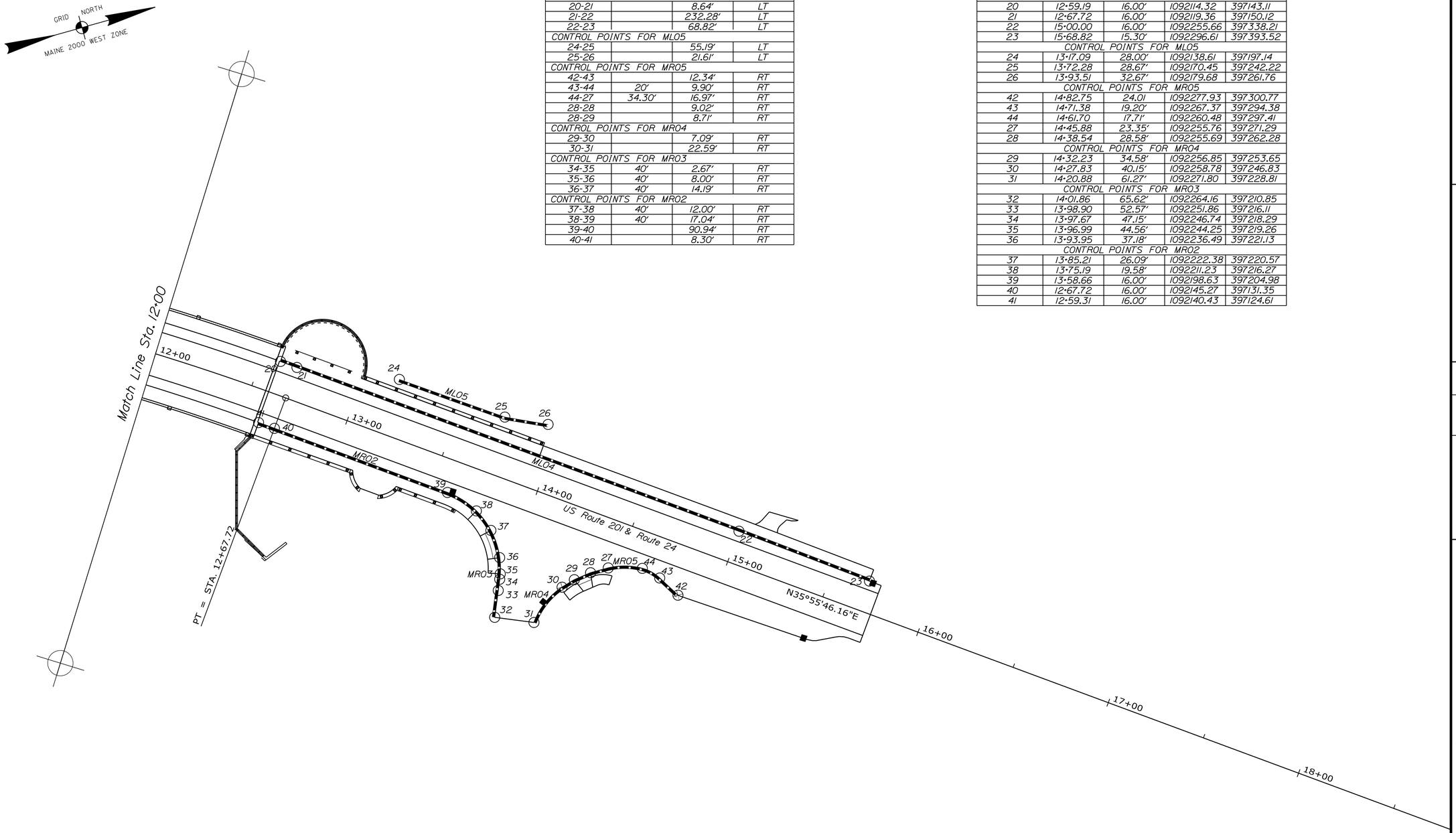
FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

CURB GEOMETRY
SHEET 1 OF 2

SHEET NUMBER
12
OF 128

PT. TO PT.	RADIUS	LENGTH	OFFSET
CONTROL POINTS FOR ML04			
20-21		8.64'	LT
21-22		232.28'	LT
22-23		68.82'	LT
CONTROL POINTS FOR ML05			
24-25		55.19'	LT
25-26		21.61'	LT
CONTROL POINTS FOR MR05			
42-43		12.34'	RT
43-44	20'	9.90'	RT
44-27	34.30'	16.97'	RT
28-28		9.02'	RT
28-29		8.71'	RT
CONTROL POINTS FOR MR04			
29-30		7.09'	RT
30-31		22.59'	RT
CONTROL POINTS FOR MR03			
34-35	40'	2.67'	RT
35-36	40'	8.00'	RT
36-37	40'	14.19'	RT
CONTROL POINTS FOR MR02			
37-38	40'	12.00'	RT
38-39	40'	17.04'	RT
39-40		90.94'	RT
40-41		8.30'	RT

Point No.	Station	Offset	X Coord.	Y Coord.
Control Points for ML04				
20	12+59.19	16.00'	1092114.32	397143.11
21	12+67.72	16.00'	1092119.36	397150.12
22	15+00.00	16.00'	1092255.66	397338.21
23	15+68.82	15.30'	1092296.61	397393.52
CONTROL POINTS FOR ML05				
24	13+17.09	28.00'	1092138.61	397197.14
25	13+72.28	28.67'	1092170.45	397242.22
26	13+93.51	32.67'	1092179.68	397261.76
CONTROL POINTS FOR MR05				
42	14+82.75	24.01	1092277.93	397300.77
43	14+71.38	19.20'	1092267.37	397294.38
44	14+61.70	17.71'	1092260.48	397297.41
27	14+45.88	23.35'	1092255.76	397271.29
28	14+38.54	28.58'	1092255.69	397262.28
CONTROL POINTS FOR MR04				
29	14+32.23	34.58'	1092256.85	397253.65
30	14+27.83	40.15'	1092258.78	397246.83
31	14+20.88	61.27'	1092271.80	397228.81
CONTROL POINTS FOR MR03				
32	14+01.86	65.62'	1092264.16	397210.85
33	13+98.90	52.57'	1092251.86	397216.11
34	13+97.67	47.15'	1092246.74	397218.29
35	13+96.99	44.56'	1092244.25	397219.26
36	13+93.95	37.18'	1092236.49	397221.13
CONTROL POINTS FOR MR02				
37	13+85.21	26.09'	1092222.38	397220.57
38	13+75.19	19.58'	1092211.23	397216.27
39	13+58.66	16.00'	1092198.63	397204.98
40	12+67.72	16.00'	1092145.27	397131.35
41	12+59.31	16.00'	1092140.43	397124.61



PLAN

25 0 25 50

Scale of Feet

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

Username: Date:7/22/2020

Division:

Filename: ...\013_Curb_Geometry_02.DGN

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	T. Antz	BY	DATE
CHECKED-REVIEWED	D.Bryant	T. Antz	7/20
DESIGN2-DETAILED2		D.Bryant	7/20
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

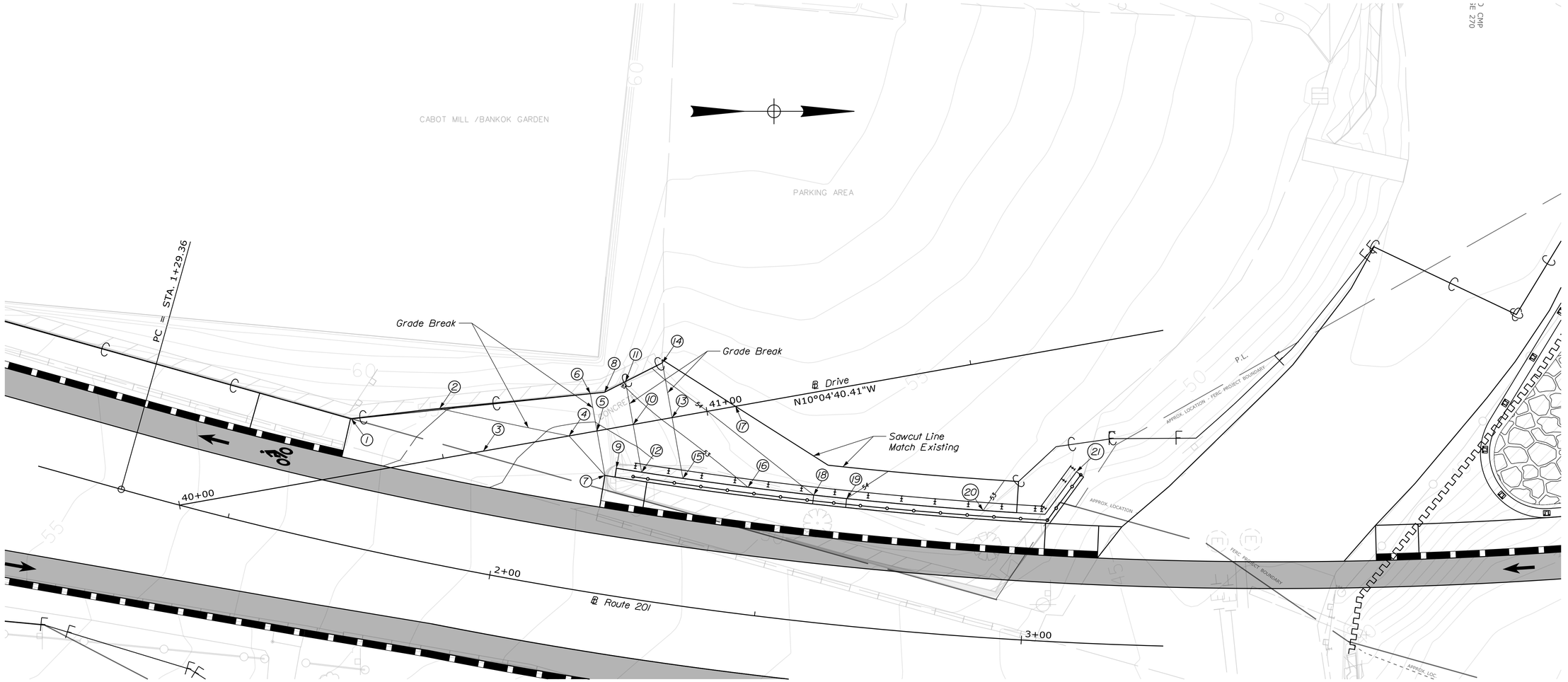
FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

CURB GEOMETRY
SHEET 2 OF 2

SHEET NUMBER

13

OF 128



Point	Station	offset	Elevation	X Coord.	Y Coord.	Notes/Description
1	40+34.56	23.33' LT	53.64'	1091868.33	396096.54	Back of Sidewalk
2	40+50.95	9.26' LT	53.07'	1091866.43	396113.02	Edge of Wall
3	40+57.59	0.00'	52.34'	1091874.39	396121.18	Baseline of Drive
4	40+73.84	0.00'	51.77'	1091871.55	396137.19	Baseline of Drive/Grade Break
5	40+79.14	0.00'	51.86'	1091870.62	396142.41	Baseline of Drive/Grade Break
6	40+79.14	7.07' LT	52.47'	1091863.66	396141.17	Edge of Wall
7	40+79.14	8.43' RT	51.13'	1091878.92	396143.88	Edge of Wall
8	40+81.79	6.86' LT	52.41'	1091863.40	396143.82	Exist. Elev./Edge of Wall
9	40+81.49	7.49' RT	51.38'	1091877.58	396146.03	Edge of Pavement/Back Face of Wall
10	40+86.00	0.00'	52.38'	1091869.42	396149.16	Baseline of Drive/Grade Break
11	40+86.00	8.13' LT	53.12'	1091861.41	396147.73	Edge of Wall
12	40+86.00	9.04' RT	51.51'	1091878.33	396150.74	Edge of Pavement/Back Face of Wall
13	40+93.38	0.00'	53.23'	1091868.13	396156.43	Baseline of Drive/Grade Break
14	40+93.38	10.37' LT	54.36'	1091857.92	396154.61	Edge of Wall
15	40+93.38	11.52' RT	51.97'	1091879.47	396158.44	Edge of Pavement/Back Face of Wall
16	41+05.00	15.21' RT	53.00'	1091881.12	396170.58	Edge of Pavement/Back Face of Wall
17	41+05.40	0.00'	54.61'	1091866.03	396168.26	Exist. Elev./Centerline of Drive
18	41+16.86	18.86' RT	54.00'	1091882.59	396182.85	Edge of Pavement/Back Face of Wall
19	41+22.80	20.59' RT	54.00'	1091883.25	396188.99	Edge of Pavement/Back Face of Wall
20	41+47.50	27.22' RT	53.00'	1091885.46	396214.48	Edge of Pavement/Back Face of Wall
21	41+65.92	23.15' RT	52.75'	1091878.23	396231.90	Back Face/End of Wall

NOTES:

1. See Plan Sheets and Cross Sections for Additional Information.
2. See Structural Plans for Retaining Wall and Hand Rail Information.

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	T.Kelley	7/20
CHECKED-REVIEWED	T.Aritz	7/20
DESIGN2-DETAILED2	T.Aritz	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

GRADING PLAN

SHEET NUMBER

14

OF 128

Filename: ...\106207_37\014_Grading Plan.dgn Division: Username: Date:7/22/2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

SIGNATURE

P.E. NUMBER
1857

DATE
7-13-20

	BY	DATE
PROJ. MANAGER		
DESIGN-DETAILED	W. MacDonald	7-X-20
D. Bryant		
M. Johnson		

FRANK J. WOODS BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK - TOPSHAM

CUMBERLAND

BRUNSWICK SITE AMENITIES
OVERALL SITE PLAN

SHEET NUMBER
15
OF 128

CABOT STREET

SEE SHEETS LA-101, LA-201, LA-301 FOR BRUNSWICK SITE AMENITIES

ACCESS EASEMENT TO CMP C.C.R.D. BK. 4564, PAGE 270

APPROX. LOCATION FERC PROJECT BOUNDARY

APPROX. LOCATION - FERC PROJECT BOUNDARY

STATE HIGHWAY "17" / US ROUTE 201
& ROUTE 24B / MAIN STREET

TOWN OF BRUNSWICK
TOWN OF TOPSHAM

STATE HIGHWAY "295" SOUTHBOUND RAMP / RAMP C

U.S. ROUTE 1

PROJECT NORTH
TRUE NORTH

30 0 30 60
1" = 30'

90% PROGRESS PLANS

SMRT
Architecture • Engineering • Planning

TY LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

TAX MAP / LOT - U14 / 152
BOOK / PAGE -
POR NO. - 4

CENTRAL MAINE POWER CO EASEMENT SEE S.C.R.D. 1910/9

SHAD ISLAND

CUMBERLAND COUNTY
ANDROSCOGGIN COUNTY

CENTRAL MAINE POWER CO EASEMENT SEE S.C.R.D. 1910/9

TAX MAP / LOT - U2 / 69
BOOK / PAGE - 139 / 62

CENTRAL MAINE POWER CO EASEMENT SEE S.C.R.D. 1910/9

APPROXIMATE LOCATION OF CONSTRUCTION

SUMMER STREET

NSD

TAX MAP / LOT - U2 / 4
BOOK / PAGE - 2466 / 32
POR NO. - 5

STATE HIGHWAY "17" / US ROUTE 201
& ROUTE 24B / MAIN STREET

SEE SHEETS LA-102, LA-202, LA-302 FOR TOPSHAM SITE AMENITIES

GRANNY HOLE STREAM

ANDROSCOGGIN WATER POWER CO. APPROX. LOCATION OF CONCRETE WEIR SEE "BRUNSWICK PROJECT PLAN"

APPROX. LOCATION OF FERC PROJECT BOUNDARY

APPROXIMATE LOCATION OF FERC PROJECT BOUNDARY AS SHOWN ON PLAN 5

TAX MAP / LOT - U2 / 3
BOOK / PAGE - 1626 / 63
POR NO. - 6

50' RIGHT OF WAY

TAX MAP / LOT - U2 / 3-5
BOOK / PAGE - 2208 / 141
POR NO. - 8

50' RIGHT OF WAY

TAX MAP / LOT - U2 /
BOOK / PAGE - 3130 /
POR NO. - 9

STATE HIGHWAY "17" / US ROUTE 201 & ROUTE 24B / MAIN STREET

TAX MAP / LOT - U2 /
BOOK / PAGE - 11
POR NO. - 11

CENTRAL MAINE POWER CO
ACCESS EASEMENT
SEE S.C.R.D. 1910/9

PROJECT NORTH
TRUE NORTH

30 0 30 60
1" = 30'

90% PROGRESS PLANS

SMRT
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TYLIN INTERNATIONAL

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	M. Johnson	
	W. MacDonald	7-X-20

SIGNATURE

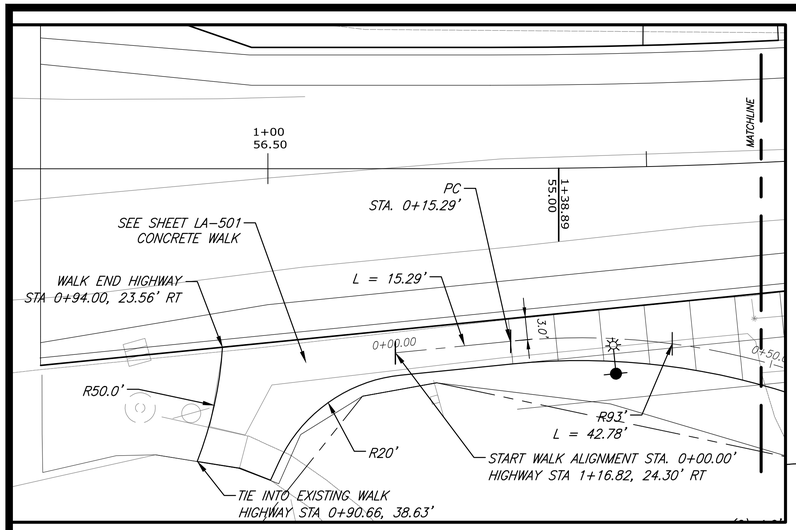
P.E. NUMBER
1857

DATE
7-13-20

FRANK J. WOODS BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK - TOPSHAM
CUMBERLAND

TOPSHAM SITE AMENITIES
OVERALL SITE PLAN

SHEET NUMBER
16
OF 128



PROJECT NORTH
TRUE NORTH
10 0 10 20
1" = 10'

90% PROGRESS PLANS

SMRT
Architecture • Engineering • Planning

TYLININTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE PLANS

BRIDGE NO. 2016

SIGNATURE

P.E. NUMBER 1857

DATE 7-13-20

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	M. Johnson	
	W. MacDaniels	7-X-20

FRANK J. WOODS BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK - TOPSHAM
CUMBERLAND

BRUNSWICK SITE AMENITIES
LAYOUT & MATERIALS PLAN

SHEET NUMBER
17
OF 128

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

SEE SHEET 26
MONOLITHIC GRANITE BENCH (TYP. OF 3)

18" (TYP.)

5.0' TYP.

42.0'

42.0'

MATCH WALK TO WALL END (TYP.)

12+00
39.00

WALL W/ RAIL, SEE BRIDGE DRAWINGS

13+00
37.91

SEE SHEET 26
CONCRETE WALL

SEE BRIDGE DRAWINGS
UPPER WALL & RAIL

SEE SHEET 26
CONCRETE WALL

CENTER POINT
STA 12+85.80, 45.14' RIGHT

SEE BRIDGE DRAWINGS
UPPER WALL & RAIL

CENTER POINT
STA 13+22.43,
18.00' RIGHT

SEE SHEET 26
CONCRETE WALL

6.0' TYP.

38.0'

SEE SHEET 26
4.0' MONOLITHIC
GRANITE BENCH (TYP. OF 3)

22.0'

12"

4.0'

4.0'

14+00
35.25

R 24'

22.0'

18" TYP.

129.5°

R9.0'

4.0' TYP.

CENTER POINT AT
INSIDE FACE OF WALL

(4) EQUAL SPACES

59.5° TYP.

12"

SEE SHEET
6.0' TIPDOWN AND RAMP

SEE SHEET 26
CONCRETE WALK

44.2'

4.8' TYP

SEE SHEET 26
GRANITE PAVERS ON CONCRETE
BASE
SYMMETRICAL LAYOUT

(4) EQUAL SPACES

CENTER POINT
STA 13+87.4, 25.38' RIGHT

SEE SHEET 26
CAST IRON DETECTABLE WARNING PLATES
35.0' RADIUS

SEE BRIDGE DRAWINGS, GRANITE
CURB TIPDOWN EACH SIDE AND
FLUSH CURB AT RAMP

SEE SHEET 26
CONCRETE WALL

21.1' TYP.

24.0'
W/ (5) EQUAL SPACES

CENTER POINT
STA 13+64.01,
42.29' RIGHT

4.0' TYP.

12.0'

3.3' TYP.

R14.0'

SEE SHEET 26
REMOVABLE BOLLARD
(TYP. OF 3); 7.0' O.C.
CENTER WITHIN CONCRETE
BAND

15+00
33.79

6.0'

7.0'

7.0'

R48.0'

22.0'

SEE SHEETS 24
AND 26
CONCRETE STEPS

JNCT

SEE BRIDGE DRAWINGS
CONCRETE WALK AND RAMP WITH
TACTILE WARNING PLATES

5.0'

6.0'

6.0'

SEE SHEET 26, CONCRETE WALK
ALTERNATE POURS: POUR (3) 'A' BANDS AS SHOWN
PRIOR TO 'B' BANDS

SEE SHEET 26
6.0' MONOLITHIC
GRANITE BENCH (TYP. OF 3)

22.0'

SEE SHEET 26
GRANITE PAVERS ON
CONCRETE BASE

RESET EXISTING BRICK PAVING IN
RAMP FLARES TO MATCH EXISTING

SEE SHEET 26
FIXED BOLLARD
(TYP. OF 3, INCLUDING WEST END);
7.0' O.C. CENTER WITHIN
CONCRETE BAND

STREAM

APPROX. LOCATION - FERC PROJECT BOUNDA

PROJECT NORTH
TRUE NORTH

10 0 10 20
1" = 10'

90% PROGRESS PLANS

SMRT
Architecture • Engineering • Planning

TYLIN INTERNATIONAL

PROJ. MANAGER	D. Bryant	
DESIGN–DETAILED	M. Johnson	W. MacDaniels 7–X–20

SIGNATURE

P.E. NUMBER
1857

DATE
7–13–20

FRANK J. WOODS BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK - TOPSHAM
CUMBERLAND

TOPSHAM SITE AMENITIES LAYOUT & MATERIALS PLAN

SHEET NUMBER
18
OF 128

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

SIGNATURE

P.E. NUMBER
1857

DATE
7-13-20

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	M. Johnson	
	W. MacDaniels	7-X-20

FRANK J. WOODS BRIDGE
ANDROSCOGGIN RIVER

BRUNSWICK - TOPSHAM

CUMBERLAND

BRUNSWICK SITE AMENITIES
GRADING & DRAINAGE PLAN

SHEET NUMBER

19

OF 128

APPROX. LOCATION – FERC PROJECT BOUNDARY

SEE SHEET 27
INLINE DRAIN
NDI–2
RIM 41.2
INV. 36.5

15 RISERS @ 6" EA = 7.5'
14 TREADS @ 14" EA = 16'–4"

BW 47.0

8" STORM DRAIN
L 19.0'
S 0.035

TS 46.9

SEE SHEET 27
INLINE DRAIN
NDI–1
RIM 42.8
INV. 40.0

TRANSITION WALL
CROSS PITCH

S=.038

40.23

40.11

40.33

40.21

BS 39.4

TW 41.0

39.0

38.3

SEE SHEET 27
INLINE DRAIN
NDI–4
RIM 38.2
INV. 36.3

8" STORM DRAIN
L 49.0'
S 0.01

SEE SHEET 27
INLINE DRAIN
NDI–3
RIM 39.0
INV. 36.05

8" STORM DRAIN
L 9.0'
S 0.01

SEE SHEET 27
INLINE DRAIN
NDMH
RIM 39.0
INV. 35.8

8" STORM DRAIN
W/ FLARED END
SECTION
L 34.0'
S 0.01

38.5

38.3

53.0

S=.08

50.50

50.40

S=.02

50.62

50.52

47.88

47.78

48.00

47.90

45.18

45.28

45.35

45.40

42.60

42.72

42.82

42.70

.02

INV. OUT
39.5

40.5

INV. OUT
35.5

35.9

SEE SHEET 27
STORM WATER PIPE TRENCH (TYP.)

8" STORM DRAIN
W/ FLARED END SECTION–TYP.
S 0.02
L 25.0'

SEE SHEET 25
AMPHITHEATER GRADING

SEE SHEET 27
LEVEL SPREADER

PROJECT NORTH
TRUE NORTH

10 0 10 20
1" = 10'

90% PROGRESS PLANS

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8" STORM DRAIN (DUCTILE IRON THIS LINE ONLY)
SEE SHEET 27
SEE BRIDGE PLANS FOR OUTFALL

SEE SHEET 27
INLINE DRAINS
(2) NDI-6
RIM 38.15
INV. 34.50

NSD — NSD — NSD — NSD

35.00

SEE SHEET 27
INLINE DRAINS
NDI-7
RIM 34.40
INV. 31.40

8" STORM DRAIN
SEE SHEET 27
L 19.0'
S 0.02
STORM WATER
PIPE TRENCH (TYP.)

SEE SHEET 27
INLINE DRAINS
NDI-8
RIM 34.40
INV. 31.00

8" STORM DRAIN
SEE SHEET 27
L 14.0'
S 0.02
STORM WATER
PIPE TRENCH (TYP.)

8" STORM DRAIN
L 11.0'
S 0.018
SEE SHEET 27
STORM WATER
PIPE TRENCH (TYP.)

SEE SHEET 27
FLARED END SECTION
RIP RAP OUTLET PROTECTION
INV. OUT 30.50

SEE SHEET 27
INLINE DRAINS
NDI-9
RIM 34.40
INV. 30.70

SEE SHEET 27
STONE DRIP STRIP

SEE BRIDGE
PLANS FOR CATCH BASIN

34.50
35.00

S .025
S .020
S .020
2.0'

TS 38.00
BW 35.30
TW 36.50
BW 34.90
TW 36.50
BW 34.90
BS 35.00
34.40

JNCT

SEE SHEET 27
INLINE DRAINS
(2) NDI-6
RIM 34.20
INV. 32.50

8" STORM DRAIN
SEE SHEET 27
L 19.0'
S 0.018
INVERT IN TO EXISTING MANHOLE 32.15
STORM WATER
PIPE TRENCH (TYP.)

35.00

SEE BRIDGE PLANS
FOR MANHOLE

SEE BRIDGE PLANS
FOR OUTFALL

APPROX. LOCATION - FERC PROJECT BOUNDARY

STREAM

PROJECT NORTH
TRUE NORTH

10 0 10 20
1" = 10'

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN
22603.00

BRIDGE PLANS

BRIDGE NO. 2016

SIGNATURE

P.E. NUMBER
1857

DATE
7-13-20

	BY	DATE
DESIGN-DETAILED	W. MacDaniels	7-X-20
PROJ. MANAGER	D. Bryant	
	M. Johnson	

FRANK J. WOODS BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK - TOPSHAM
CUMBERLAND

TOPSHAM SIDE
GRADING & DRAINAGE PLAN

SHEET NUMBER
20
OF 128

PLANTING NOTES:

1. THE LANDSCAPE CONTRACTOR SHALL SUPPLY AND INSTALL ALL PLANTS IN SUFFICIENT QUANTITIES TO COMPLETE THE WORK AS SHOWN ON THE DRAWINGS. DISCREPANCIES BETWEEN QUANTITIES NOTED ON THE DRAWINGS AND THOSE GRAPHICALLY SHOWN SHALL BE REPORTED IMMEDIATELY TO THE LANDSCAPE ARCHITECT AND SHALL NOT ENTITLE THE CONTRACTOR TO ADDITIONAL REMUNERATION.

2. THE LANDSCAPE CONTRACTOR IS ADVISED THAT BELOW GROUND UTILITIES EXIST ON SITE, THE LOCATIONS OF WHICH SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF OPERATIONS (SEE GENERAL NOTES REGARDING DIGSAFE). SHOULD THE LOCATION OF ANY PROPOSED PLANTING CONFLICT WITH ANY UTILITY, THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY FOR DECISION.

3. ANY AND ALL PAVING, CURBING, UTILITIES, LAWNS, ETC., DAMAGED AS A RESULT OF THE LANDSCAPE CONTRACTOR'S OPERATIONS SHALL BE REPLACED OR REPAIRED TO ORIGINAL CONDITION BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

4. LOCATIONS OF PROPOSED PLANTINGS AND BED LINES SHALL BE REVIEWED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

5. PLANTS SHALL BE PLACED NO CLOSER THAN ONE–HALF THE NOTED SPACING TO PAVEMENT EDGES, BED LINES, OR STRUCTURE FACES, UNLESS NOTED OR SHOWN OTHERWISE.

6. PLANT MASSES SHALL BE LAID OUT AND INSTALLED STARTING AT THE PRINCIPAL, FORM–DEFINING PERIMETER, THEN FILLING INWARD IN DOUBLE–ROW–STAGGERED FASHION, UNLESS NOTED OR SHOWN OTHERWISE.

7. ALL PLANTING BEDS INCLUDING TREE AND SHRUB PITS AS INDICATED SHALL RECEIVE 3" APPROVED CLEAN, UNIFORMLY GROUND OR SHREDDED PINE OR HEMLOCK BARK MULCH.

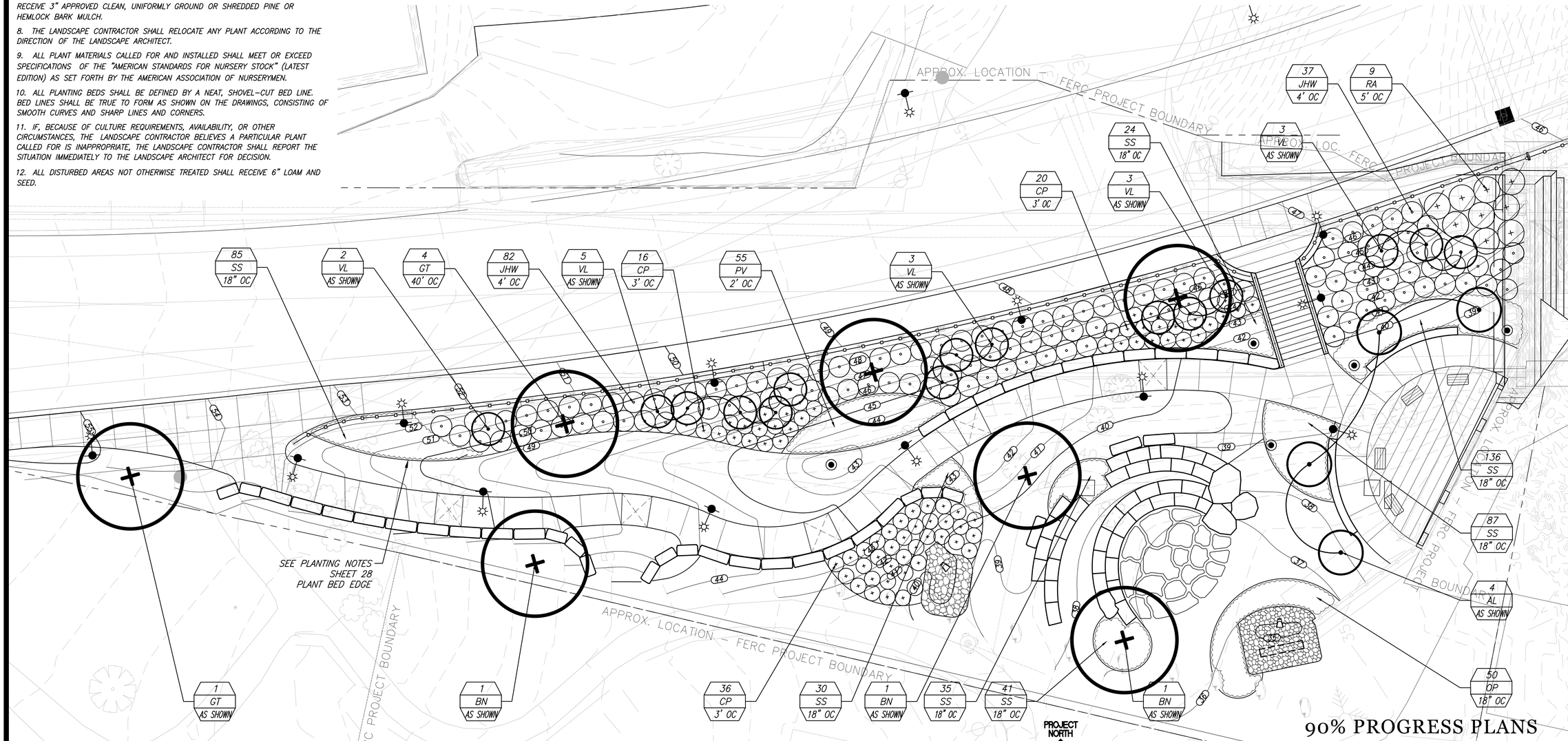
8. THE LANDSCAPE CONTRACTOR SHALL RELOCATE ANY PLANT ACCORDING TO THE DIRECTION OF THE LANDSCAPE ARCHITECT.

9. ALL PLANT MATERIALS CALLED FOR AND INSTALLED SHALL MEET OR EXCEED SPECIFICATIONS OF THE "AMERICAN STANDARDS FOR NURSERY STOCK" (LATEST EDITION) AS SET FORTH BY THE AMERICAN ASSOCIATION OF NURSERYMEN.

10. ALL PLANTING BEDS SHALL BE DEFINED BY A NEAT, SHOVEL–CUT BED LINE. BED LINES SHALL BE TRUE TO FORM AS SHOWN ON THE DRAWINGS, CONSISTING OF SMOOTH CURVES AND SHARP LINES AND CORNERS.

11. IF, BECAUSE OF CULTURE REQUIREMENTS, AVAILABILITY, OR OTHER CIRCUMSTANCES, THE LANDSCAPE CONTRACTOR BELIEVES A PARTICULAR PLANT CALLED FOR IS INAPPROPRIATE, THE LANDSCAPE CONTRACTOR SHALL REPORT THE SITUATION IMMEDIATELY TO THE LANDSCAPE ARCHITECT FOR DECISION.

12. ALL DISTURBED AREAS NOT OTHERWISE TREATED SHALL RECEIVE 6" LOAM AND SEED.



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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER		
DESIGN–DETAILED	M. Johnson	D. Bryant
	W. MacDonald	7–X–20

SIGNATURE

P.E. NUMBER 1857

DATE 7–13–20

FRANK J. WOODS BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK - TOPSHAM
CUMBERLAND

BRUNSWICK SITE AMENITIES PLANTING PLAN

SHEET NUMBER

21

OF 128

1 GT AS SHOWN

3 GT AS SHOWN

4 AL AS SHOWN

15 AV 3' OC

16 AV 3' OC

5 JHW 4' OC

20 JHW 4' OC

55 SS 18" OC

2 AL 10' OC

35 SS 18" OC

34 SS 18" OC

2 CP 3' OC

3 BN 20' OC

27 PV 2' OC

1 GT AS SHOWN

NSD — NSD — NSD — NSD

NSD — NSD — NSD

NSD — NSD

NSD

JNCT

SEE PLANTING NOTES SHEET 28 PLANT BED EDGE

APPROX. LOCATION - FERC PROJECT BOUNDARY

STREAM

PROJECT NORTH

TRUE NORTH

10 0 10 20

1" = 10'

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BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN–DETAILED	M. Johnson	W. MacDonald
		7–X–20

SIGNATURE

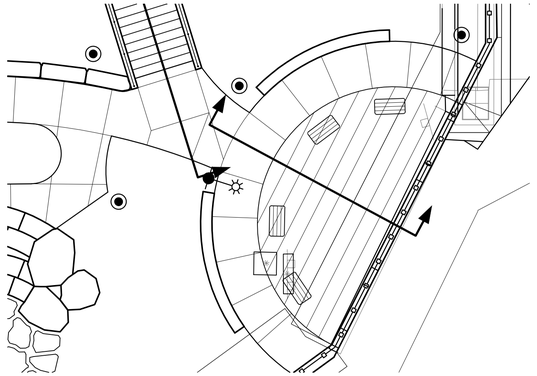
P.E. NUMBER
1857

DATE
7–13–20

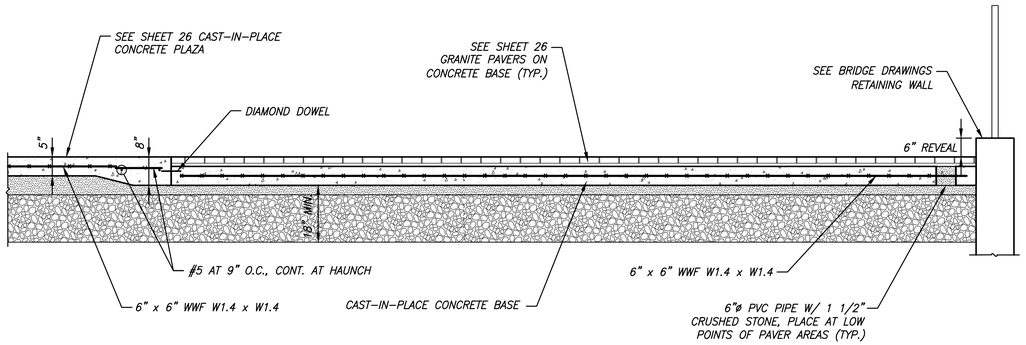
FRANK J. WOODS BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK - TOPSHAM
CUMBERLAND

TOPSHAM SITE AMENITIES
PLANTING PLAN

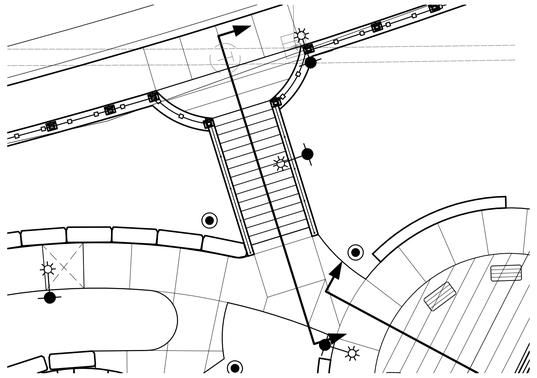
SHEET NUMBER
22
OF 128



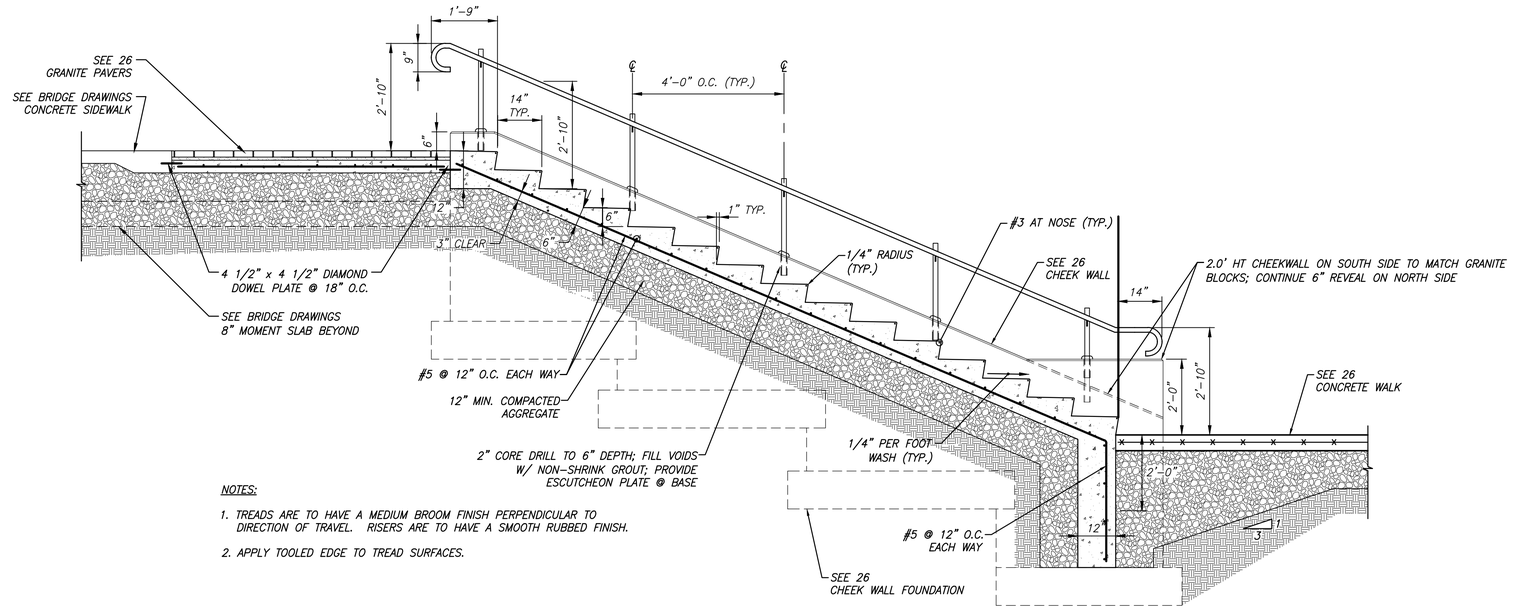
BRUNSWICK PLAZA REFERENCE PLAN
1/2" = 1'-0"



BRUNSWICK PLAZA SECTION
1/2" = 1'-0"



BRUNSWICK STAIR REFERENCE PLAN
1" = 10'



NOTES:

1. TREADS ARE TO HAVE A MEDIUM BROOM FINISH PERPENDICULAR TO DIRECTION OF TRAVEL. RISERS ARE TO HAVE A SMOOTH RUBBED FINISH.
2. APPLY TOOLED EDGE TO TREAD SURFACES.

BRUNSWICK STAIR SECTION
1/2" = 1'-0"

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BRIDGE PLANS

BRIDGE NO. 2016

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	BY	DATE
D. Bryant	W. MacDaniels	7-X-20
M. Johnson		
PROJ. MANAGER		
DESIGN-DETAILED		

FRANK J. WOODS BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK - TOPSHAM
CUMBERLAND

BRUNSWICK SITE AMENITIES SITE SECTIONS

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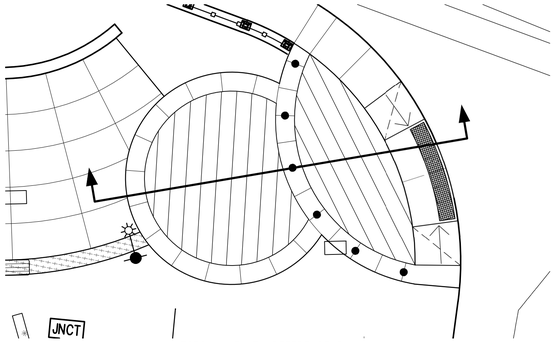
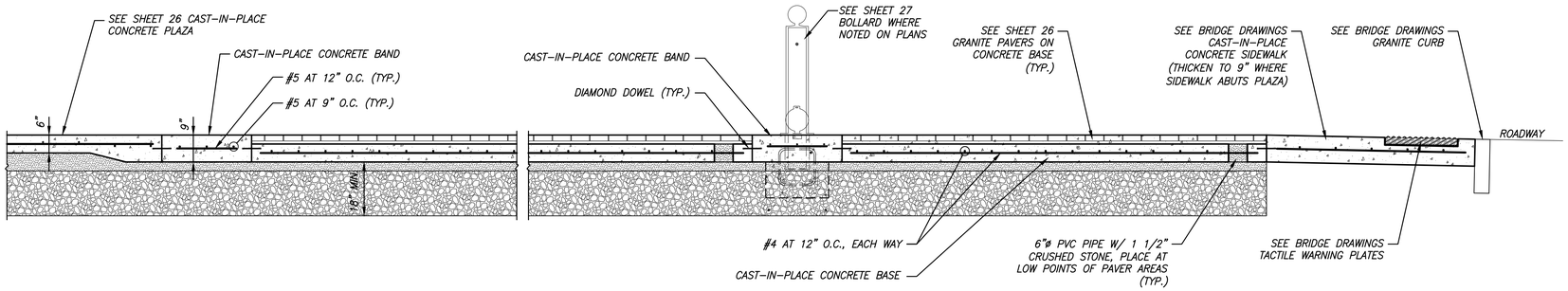
SHEET NUMBER 23

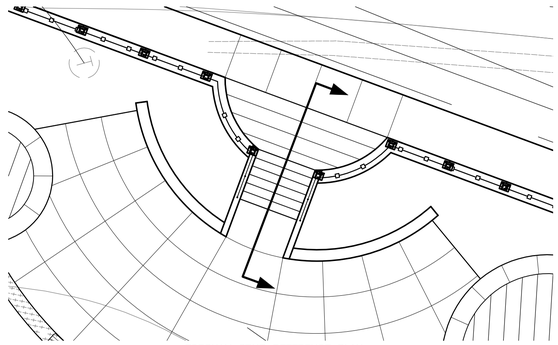
OF 128



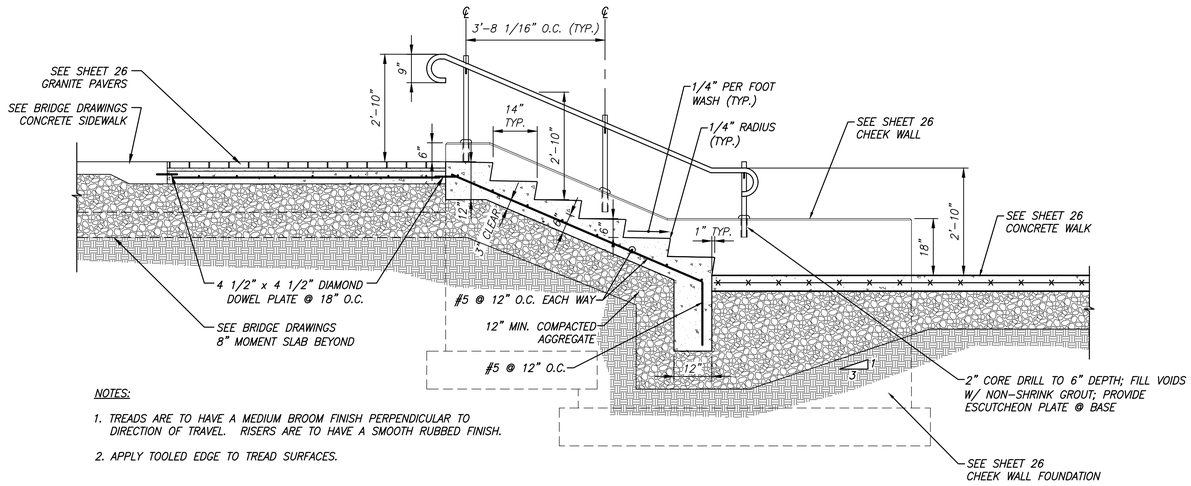
TOPSHAM PLAZA REFERENCE PLAN
1" = 10'



TOPSHAM PLAZA SECTION
1/2" = 1'-0"



TOPSHAM STAIR REFERENCE PLAN
1" = 10'



NOTES:

1. TREADS ARE TO HAVE A MEDIUM BROOM FINISH PERPENDICULAR TO DIRECTION OF TRAVEL. RISERS ARE TO HAVE A SMOOTH RUBBED FINISH.
2. APPLY TOOLED EDGE TO TREAD SURFACES.

TOPSHAM STAIR SECTION
1/2" = 1'-0"

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BRIDGE PLANS

BRIDGE NO. 2016

SIGNATURE

P.E. NUMBER 1857

DATE 7-13-20

	BY	DATE
D. Bryant	W. MacDaniels	7-X-20
M. Johnson		

PROJ. MANAGER
DESIGN-DETAILED

FRANK J. WOODS BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK - TOPSHAM
CUMBERLAND

TOPSHAM SITE AMENITIES
SITE SECTIONS

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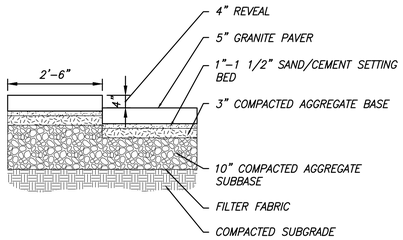
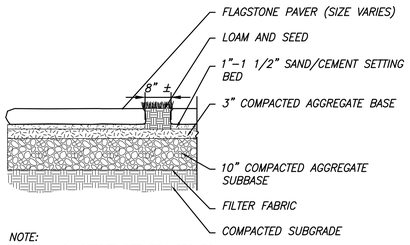
SHEET NUMBER
24
OF 128

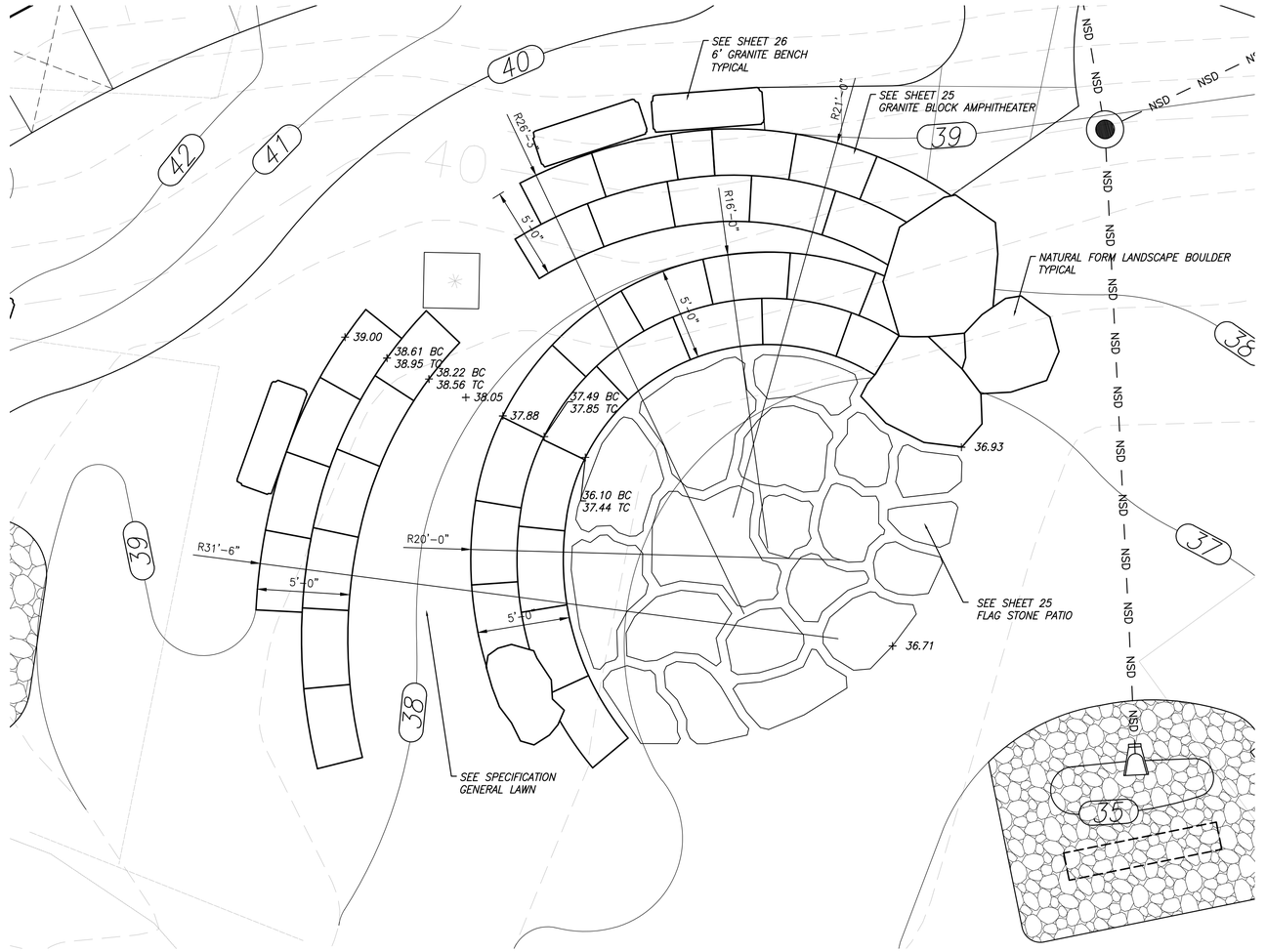


GRANITE AMPHITHEATER STEPS
1/2" = 1'–0"



NOTE:
MAINTAIN 8" OFFSET BETWEEN STONES

FLAGSTONE PATIO
1/2" = 1'–0"



PROJECT NORTH
TRUE NORTH

0" 1/4" 1/2" 3/4" 1" 2" 3"
1/4" = 1'-0"

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BRIDGE PLANS

BRIDGE NO. 2016

	BY	DATE
PROJ. MANAGER		
DESIGN–DETAILED	M. Johnson	
D. Bryant	W. MacDaniels	7–X–20

SIGNATURE

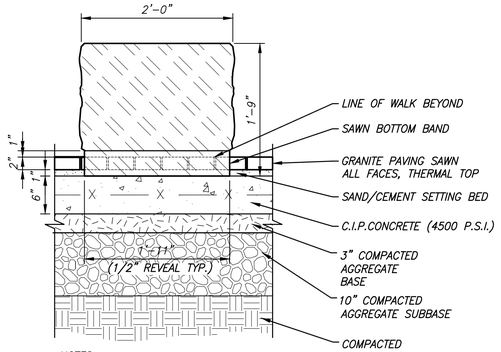
P.E. NUMBER
1857

DATE
7–13–20

FRANK J. WOODS BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK - TOPSHAM
CUMBERLAND

BRUNSWICK SITE AMENITIES
AMPHITHEATER PLAN & DETAILS

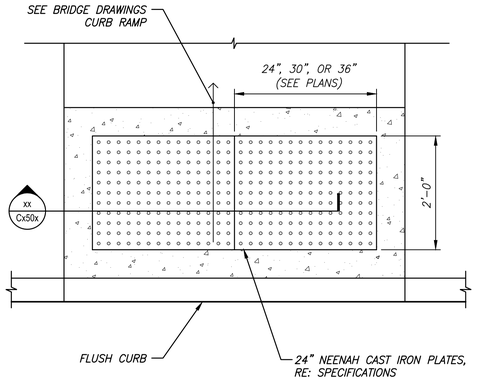
SHEET NUMBER
25
OF 128



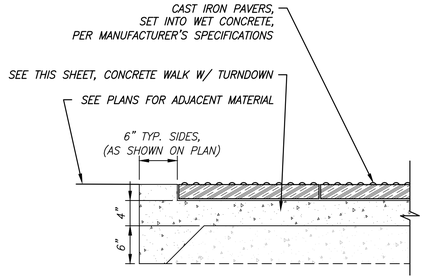
NOTES:

1. SAWN BOTTOM.
2. SAWN TOP WITH HONED FINISH
3. ROCKFACE SIDES WITH SAWN BOTTOM BAND
4. 4' AND 6' LENGTHS SEE PLAN

MONOLITHIC GRANITE BENCH
1" = 1'-0"

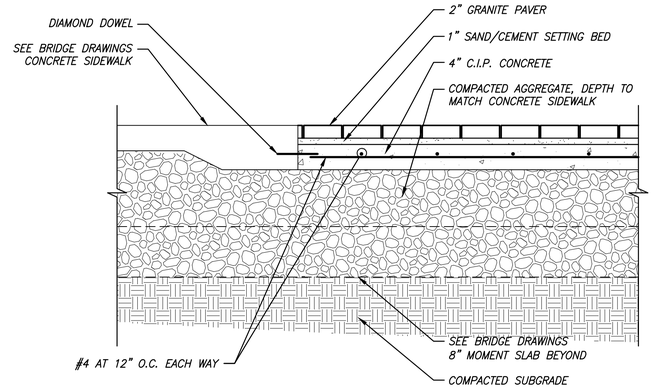


PLAN

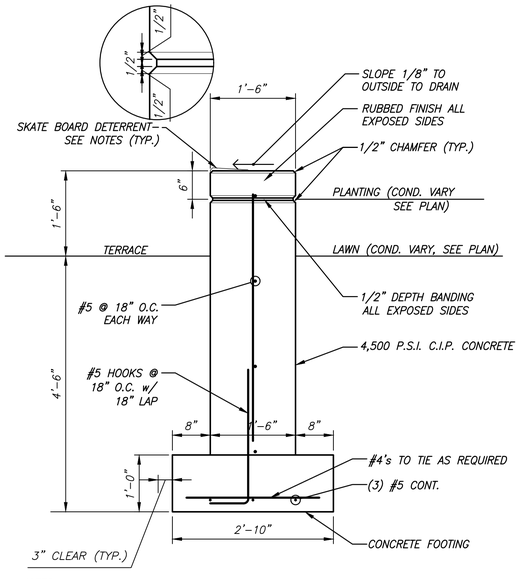


SECTION

CAST IRON DETECTABLE WARNING PLATES
3/4" = 1'-0"



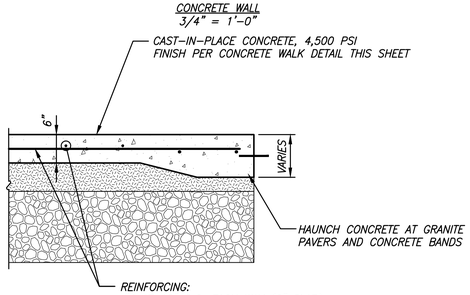
GRANITE PAVERS
1" = 1'-0"



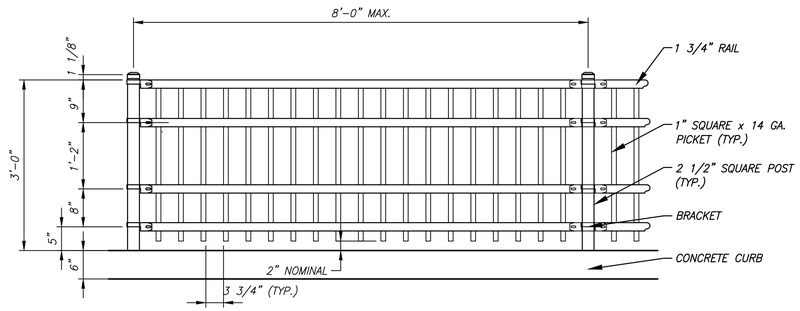
NOTES:

1. SKATEBOARD DETERRENTS SHALL BE 'SURFACE MOUNT ALUMINUM GORILLA 135' AS MANUFACTURED BY 'PARK WAREHOUSE' 888-321-5334 (OR EQUAL).
2. MATERIAL SHALL BE 6061-T6 ALUMINUM WITH A TYPE II HARD ANODIZED FINISH.
3. ANCHORING SHALL BE CONCEALED 'C' PIN ANCHORS IN CONJUNCTION WITH A TWO-PART EPOXY.
4. INSTALL PER MANUFACTURER RECOMMENDATION.
5. SPACING SHALL BE 18" ON CENTER MAXIMUM. SEE DETAILS.

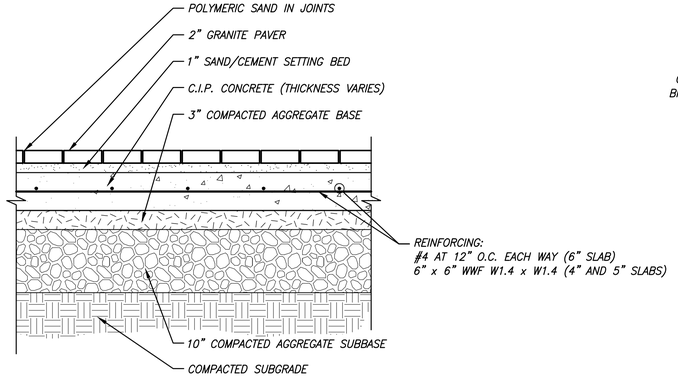
CONCRETE WALL
3/4" = 1'-0"



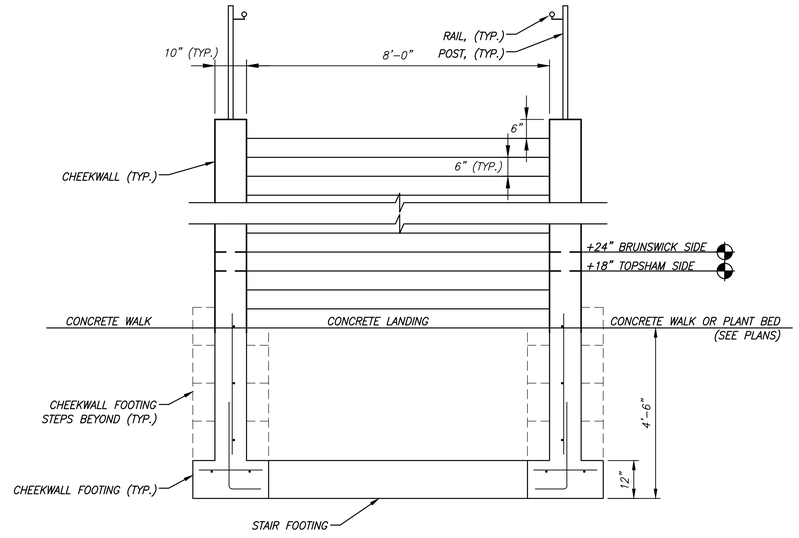
CAST-IN-PLACE CONCRETE PLAZA
3/4" = 1'-0"



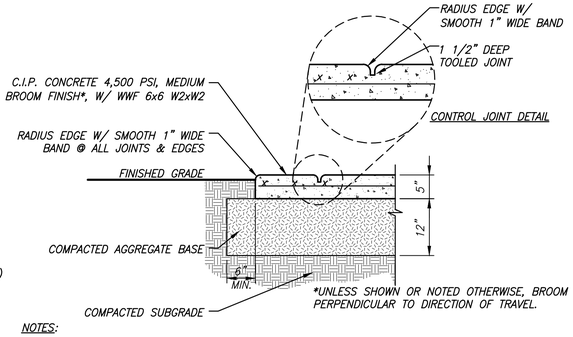
FENCE
N.T.S.



GRANITE PAVERS ON CONCRETE BASE
1" = 1'-0"



STAIR ELEVATION
1/2" = 1'-0"



NOTES:

1. PROVIDE ISOLATION JOINT W/ SILICONE SEALANT WHERE WALK ABUTS ANY VERTICAL SURFACE.
2. DEPTH OF CONTROL JOINT MUST BE AS INDICATED FOR ACCEPTANCE OF WORK.

CONCRETE WALK
3/4" = 1'-0"

0 1/2" 1" 2" 3"

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DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE PLANS

BRIDGE NO. 2016

SIGNATURE

P.E. NUMBER 1857

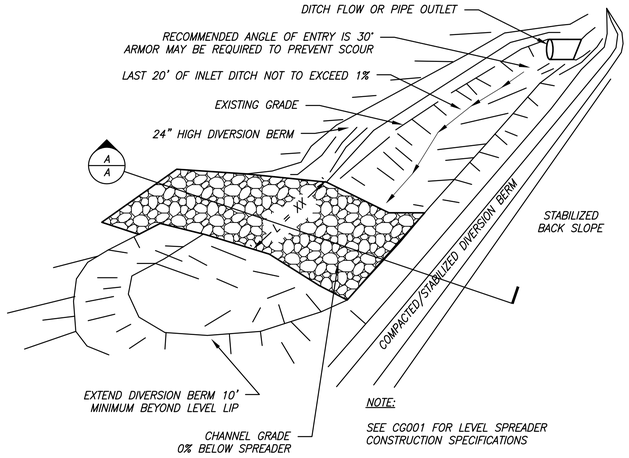
DATE 7-13-20

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	M. Johnson	
	W. MacDaniels	7-X-20

FRANK J. WOODS BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK - TOPSHAM
CUMBERLAND

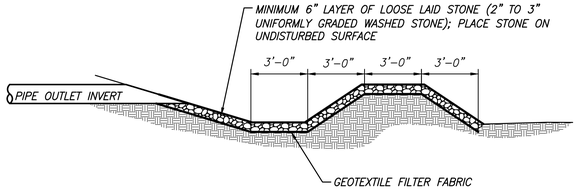
SITE AMENITIES DETAILS

SHEET NUMBER
26
OF 128



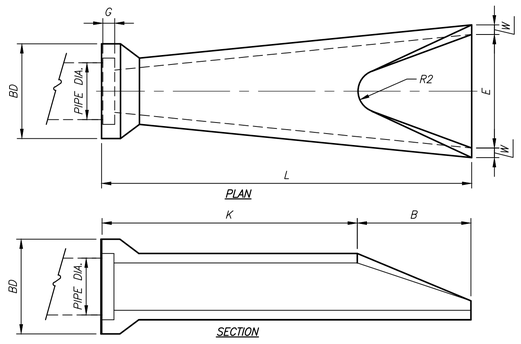
NOTE:

SEE CG001 FOR LEVEL SPREADER CONSTRUCTION SPECIFICATIONS



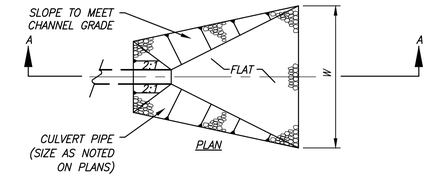
A–A

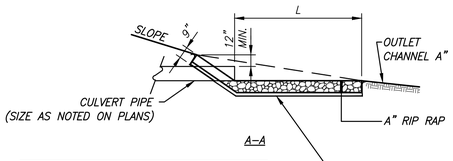
LEVEL SPREADER
N.T.S.



DIA.	W	A	B	E	BD	G	K	L	R2
12"	2"	4"	2'–0"	2'–0"	20"	2 1/2"	4'–6 1/8"	6'–6 1/8"	9"
15"	2 1/4"	6"	2'–3"	2'–6"	24"	2 1/2"	4'–3 11/16"	6'–6 11/16"	11"
18"	2 1/2"	9"	2'–3"	3'–0"	28"	2 3/4"	4'–3 7/8"	6'–6 7/8"	12"
21"	2 3/4"	9"	2'–11"	3'–6"	32"	2 3/4"	3'–8 5/16"	6'–7 5/16"	13"
24"	3"	9 1/2"	3'–7 1/2"	4'–0"	36"	3"	3'–0 1/2"	6'–8"	14"
30"									
36"									

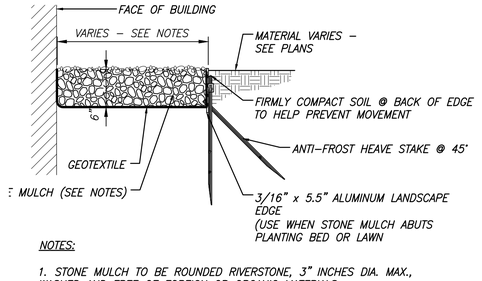
FLARED END SECTION
N.T.S.





DIAMETER	L	W	A	D_{50}
12"	12'	13'	14"	6"
18"	20'	22'	20"	9"
24"	30'	32'	27"	12"
30"	35'	38'	32"	18"
36"	40'	43'	32"	18"

RIP RAP OUTLET PROTECTION
N.T.S.



NOTES:

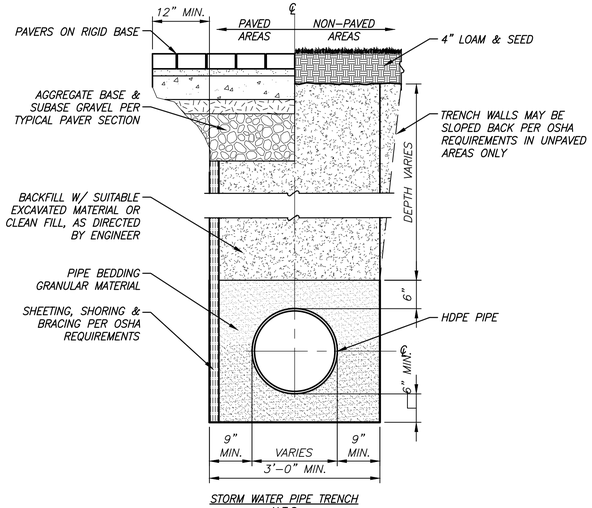
1. STONE MULCH TO BE ROUNDED RIVERSTONE, 3" INCHES DIA. MAX., WASHED AND FREE OF FOREIGN OR ORGANIC MATERIALS.

2. STANDARD MAINTENANCE STRIP TO BE 12" WIDE.

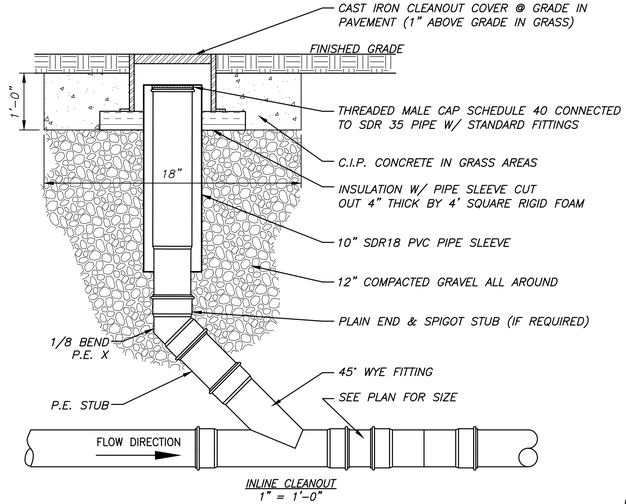
3. STANDARD DRIP STRIP TO BE WIDTH OF BUILDING EAVE PLUS 12" UNLESS SHOWN OTHERWISE.

4. EDGE TO BE BY SURE–LOC ALUMINUM EDGING CORP, OR APPROVED EQUAL.
   - MILL FINISH
   - 12" STAKES
   - ANTI–FROST HEAVE STAKE POCKETS @ 8" O.C.

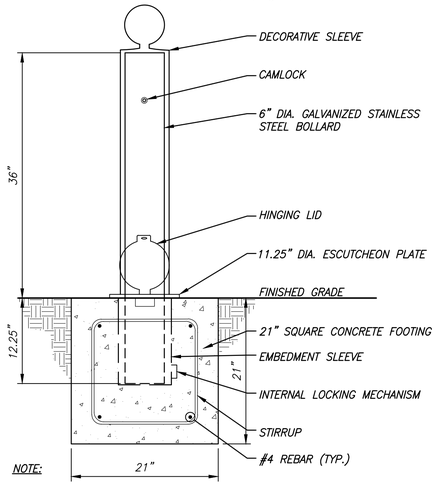
STONE DRIP STRIP
N.T.S.



STORM WATER PIPE TRENCH
N.T.S.



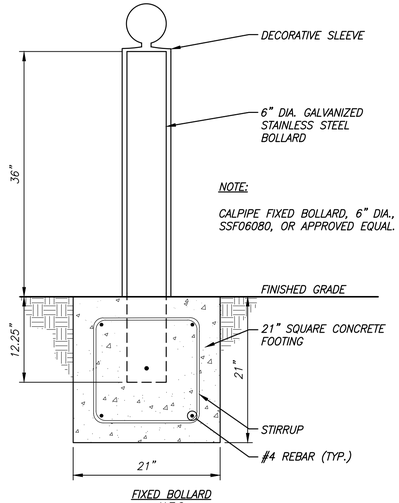
INLINE CLEANOUT
1" = 1'–0"



NOTE:

CALPIPE INTERNAL LOCKING REMOVABLE BOLLARD, 6" DIA., SSR06080, OR APPROVED EQUAL.

REMOVABLE BOLLARD
N.T.S.



NOTE:

CALPIPE FIXED BOLLARD, 6" DIA., SSF06080, OR APPROVED EQUAL.

FIXED BOLLARD
N.T.S.

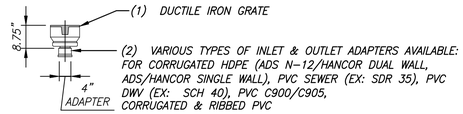
GRATE OPTIONS	LOAD RATING	PART #
PEDESTRIAN/STANDARD	LIGHT DUTY	1099CGS
SOLID COVER	LIGHT DUTY	1099CGC
BRONZE	N/A	1099CGB
DOME	N/A	1099CGD

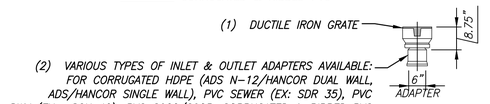
NOTES:

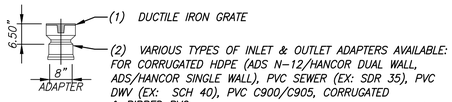
(1) GRATES/SOLID COVERS SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70–50–05.

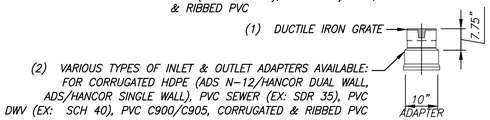
(2) FOR COMPLETE DESIGN DETAILS.

(3) DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N–12/HANCOR DUAL WALL), & PVC SEWER.







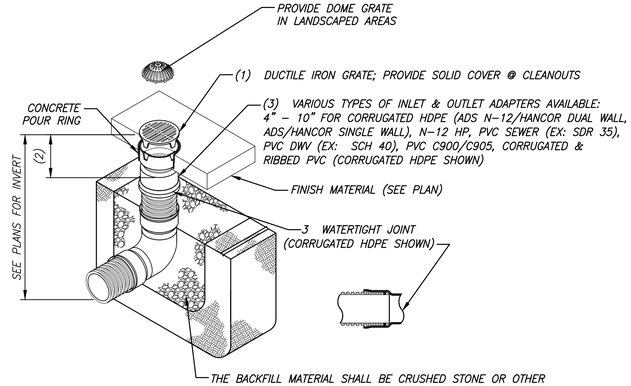


NOTES:

(1)DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS & HANCOR DUAL WALL) & SDR 35 PVC.

(2)DIMENSIONS ARE FOR REFERENCE ONLY, ACTUAL DIMENSIONS MAY VARY.

DESIGN DETAILS



INLINE DRAIN
N.T.S.

90% PROGRESS PLANS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE PLANS

BRIDGE NO. 2016

SIGNATURE		
P.E. NUMBER		
DATE		
D. Bryant	M. Johnson	
BY	W. MacDaniels	7–X–20
PROJ. MANAGER		
DESIGN–DETAILED		

FRANK J. WOODS BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK - TOPSHAM
CUMBERLAND

SITE AMENITIES DETAILS

SHEET NUMBER
27
OF 128

SMRT
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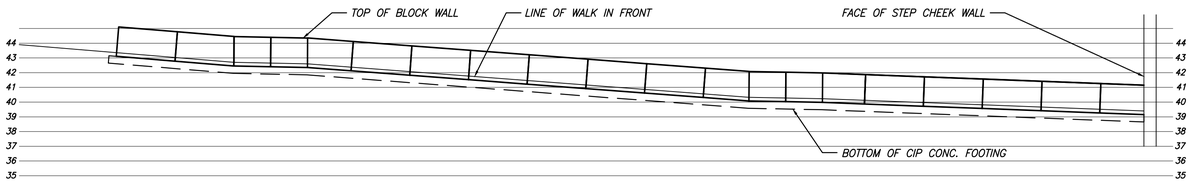
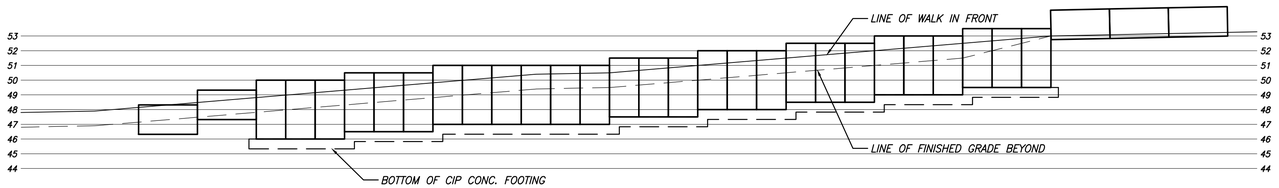
MARK	SCIENTIFIC NAME / COMMON NAME	SIZE CAL	SIZE HT	ROOT	REMARKS
TREES					
AC1	Amelanchier laevis / Alleghany Serviceberry	1 1/2"	6'-8'	B & B	Clump form, 3-stem minimum
BN	Betula nigra 'Heritage' / Heritage River Birch	1 3/4"	10' - 12'	B & B	Clump form, 3-stem minimum
GT	Gleditsia triacanthos var. inermis 'Shademaster' / Shademaster Thornless Honeylocust	2" - 2.5"	12'-14'	B & B	Full, matched specimens
SHRUBS					
AU	Arctostaphylos uva-ursi / Bearberry	#2	6"	Cont.	
CP	Comptonia peregrina / Sweetfern	#2	3'	Cont.	
JHW	Juniperus horizontalis 'Wiltonii' / Creeping Juniper	#2	3'	Cont.	
RA	Rhus aromatica 'Gro-Low' / Aromatic Sumac	#2	3'	Cont.	
VC	Viburnum carlesii / Koreanspice Viburnum	#3	4'	Cont.	
PERENNIALS					
DP	Denstaedtia punctlloba / Hayscented Fern	-	-	Sod	
PV	Panicum virgatum 'Hans Herms' / Hans Herms Switchgrass	#1	-	Cont.	
SS	Schizachyrium scoparium 'The Blues'/Little Bluestem	#1	-	Cont.	

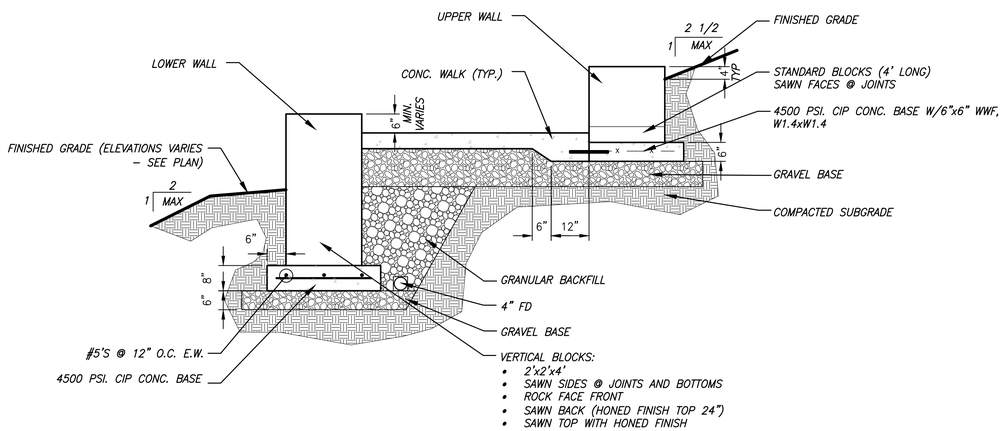
PLANT SCHEDULE



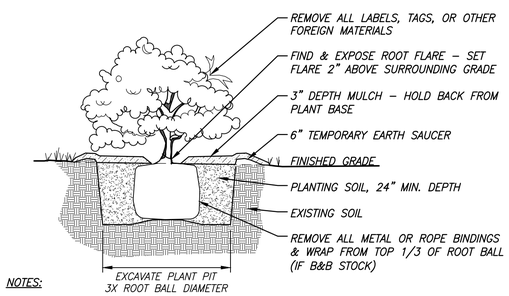
LOWER BLOCK WALL ELEVATION
N.T.S



UPPER BLOCK WALL ELEVATION
N.T.S

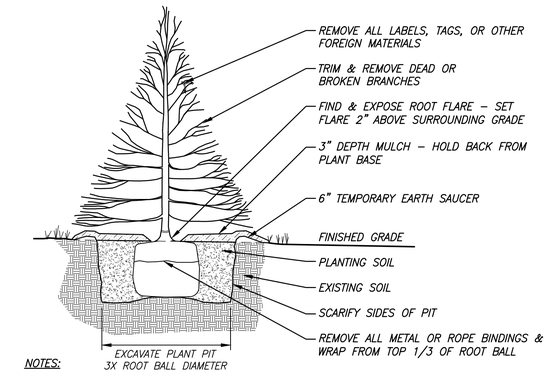


BLOCK WALL SECTION
1/2" = 1'–0"



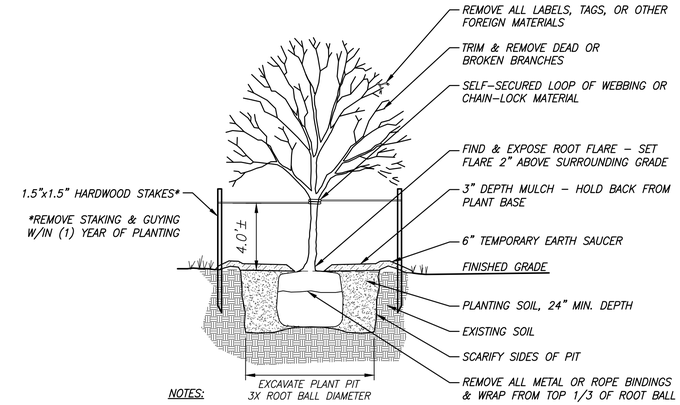
NOTES:
1. SHRUB TO BE SET PLUMB.

SHRUB PLANTING
3/8" = 1'–0"



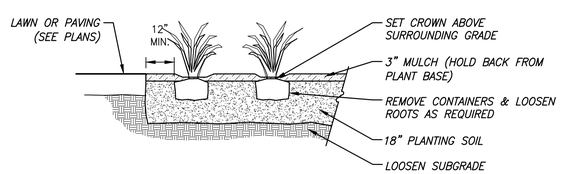
NOTES:
1. TREE TO BE SET PLUMB.
2. SECURE TREE AS MAY BE REQUIRED ACCORDING TO TREE SIZE, LOCATION, & WIND/WEATHER CONDITIONS.
3. IF USING ROOTBALL STABILIZATION, FOLLOW MANUFACTURER'S RECOMMENDATIONS.

EVERGREEN TREE PLANTING
3/8" = 1'–0"



NOTES:
1. TREE TO BE SET PLUMB.
2. SECURE TREE AS MAY BE REQUIRED ACCORDING TO TREE SIZE, LOCATION, & WIND/WEATHER CONDITIONS.
3. IF USING ROOTBALL STABILIZATION, FOLLOW MANUFACTURER'S RECOMMENDATIONS.

DECIDUOUS TREE PLANTING
3/8" = 1'–0"



PERENNIAL PLANTING
3/8" = 1'–0"

90% PROGRESS PLANS

1" 1/2" 0 1" 2"

SMRT Architecture • Engineering • Planning

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE PLANS

BRIDGE NO. 2016

SIGNATURE

P.E. NUMBER 1857

DATE 7–13–20

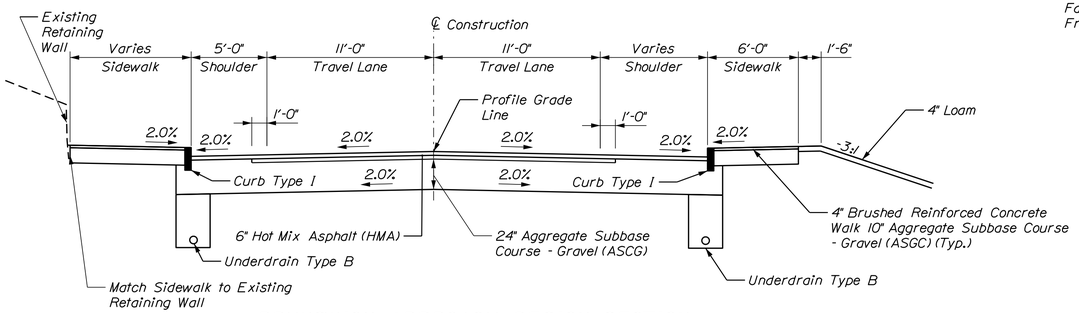
	BY	DATE
D. Bryant	W. MacDaniels	7–X–20
M. Johnson		

PROJ. MANAGER
DESIGN–DETAILED

FRANK J. WOODS BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK - TOPSHAM
CUMBERLAND

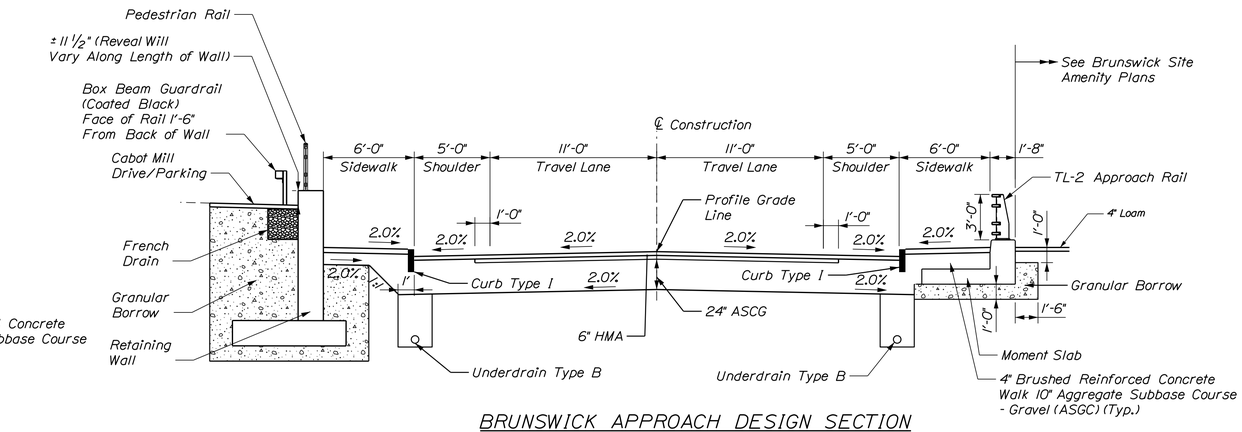
SITE AMENITIES
PLANTING DETAILS AND SCHEDULE

SHEET NUMBER
28
OF 128



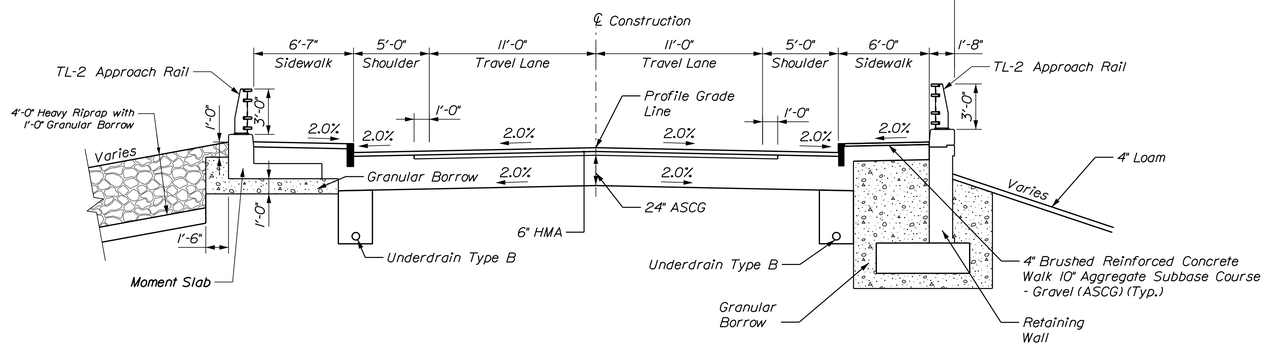
BRUNSWICK APPROACH DESIGN SECTION

Sta 0+70.00 to Sta 2+20.17 LT
Sta 0+70.00 to Sta 1+79.94 RT



BRUNSWICK APPROACH DESIGN SECTION

Sta 2+20.17 to Sta 3+11.51 LT
Sta 1+79.94 to Sta 3+78.75 RT



BRUNSWICK APPROACH DESIGN SECTION

Sta 3+11.51 to Sta 4+37.75 LT
Sta 3+78.75 to Sta 4+37.75 RT

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 travelway cross slopes "rollover" shall not exceed 8%.
5. The stationing shown under each typical is approximate.
6. Existing gravel will be regraded with applicable rental items. Type "C" gravel will be added in variable gravel areas or as directed.

SUPERELEVATION TABLE

LT. SHOULDER	LT. TRAVEL LANE	STATION	RT. TRAVEL LANE	RT. SHOULDER
Match Existing	Match Existing	0+70.00	Match Existing	Match Existing
-2.00%	-2.00%	1+00	-2.00%	-2.00%
-2.00%	-2.00%	14+59	-2.00%	-2.00%
-3.63%	-2.00%	15+00	-2.00%	-2.00%
-3.63%	-2.00%	15+35	-2.00%	-2.00%
Match Existing	Match Existing	15+75.00	Match Existing	Match Existing

90% PROGRESS PLANS

T·Y·LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE PLANS

BRIDGE NO. 2016

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	T. Antz	7/20
CHECKED-REVIEWED	D.Bryant	7/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

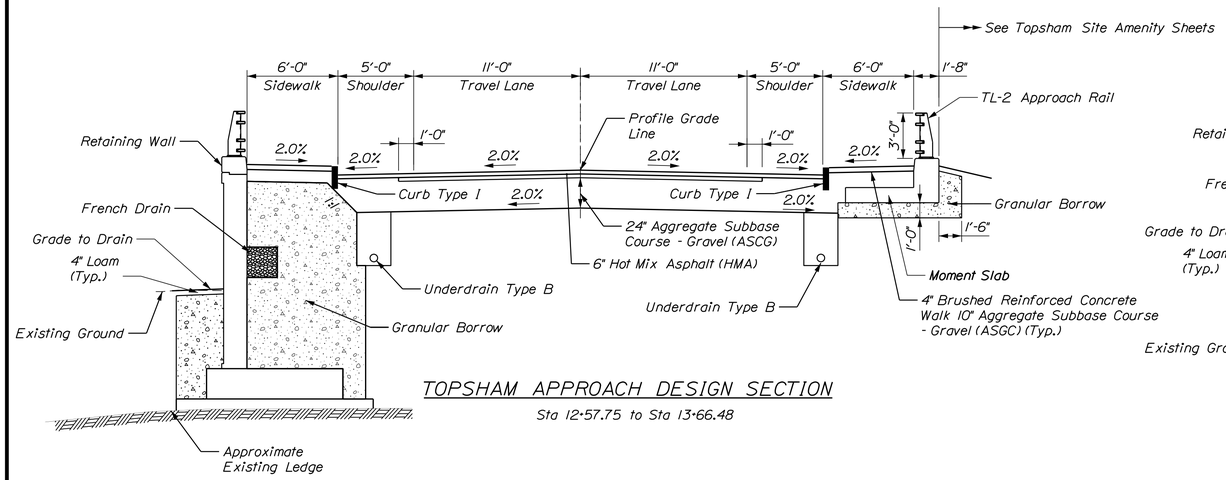
TYPICAL ROADWAY SECTIONS
SHEET 1 OF 2

SHEET NUMBER

29

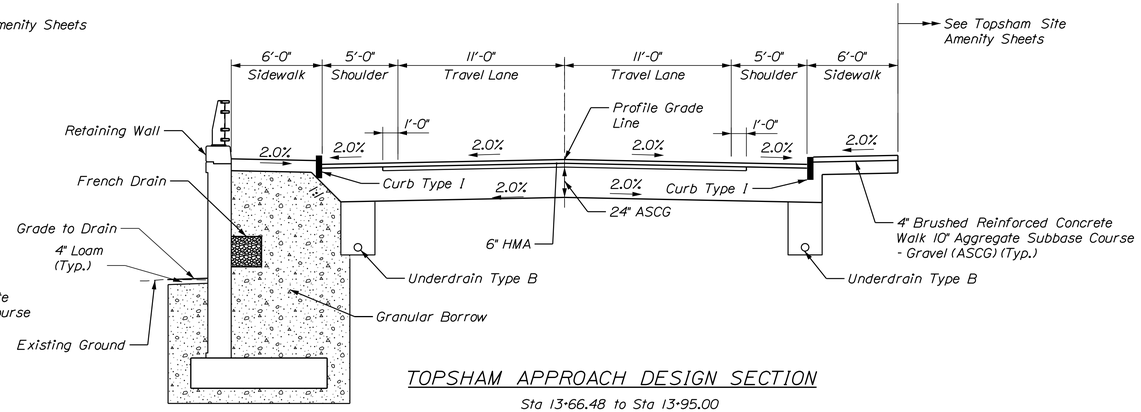
OF 128

Date:7/22/2020 Username: Division: Filename: ...\106207_10\029_Typical_01.dgn



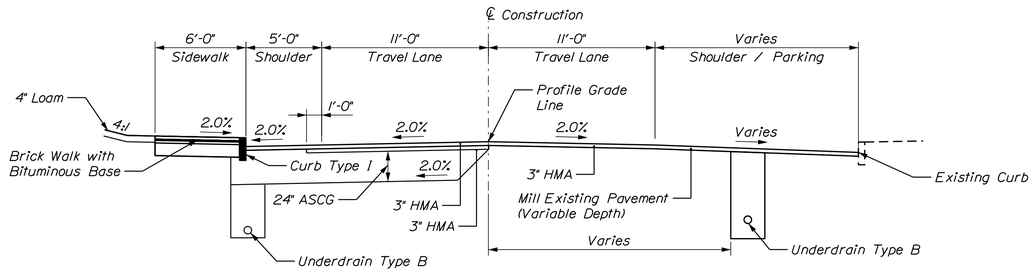
TOPSHAM APPROACH DESIGN SECTION

Sta 12+57.75 to Sta 13+66.48



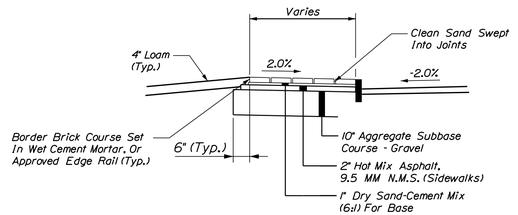
TOPSHAM APPROACH DESIGN SECTION

Sta 13+66.48 to Sta 13+95.00



TOPSHAM APPROACH DESIGN SECTION

Sta 13+95.00 to Sta 15+75.00



Bricks To Be Used:

Bricks Shall Meet Maine Department Of Transportation Standard Specifications Section 704.02 And Shall Match The Existing Bricks As Closely As Possible. Final Brick Selection To Be Approved By The Resident.

ITEM 608.15 BRICK WALK WITH BITUMINOUS BASE

90% PROGRESS PLANS

TYLIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	T. Aretz	7/22/2019
CHECKED-REVIEWED	D. Bryant	7/22/2019
DESIGN2-DETAILED2	T. Aretz	
DESIGN3-DETAILED3	D. Bryant	
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

TYPICAL ROADWAY SECTIONS
SHEET 2 OF 2

SHEET NUMBER

30

OF 128

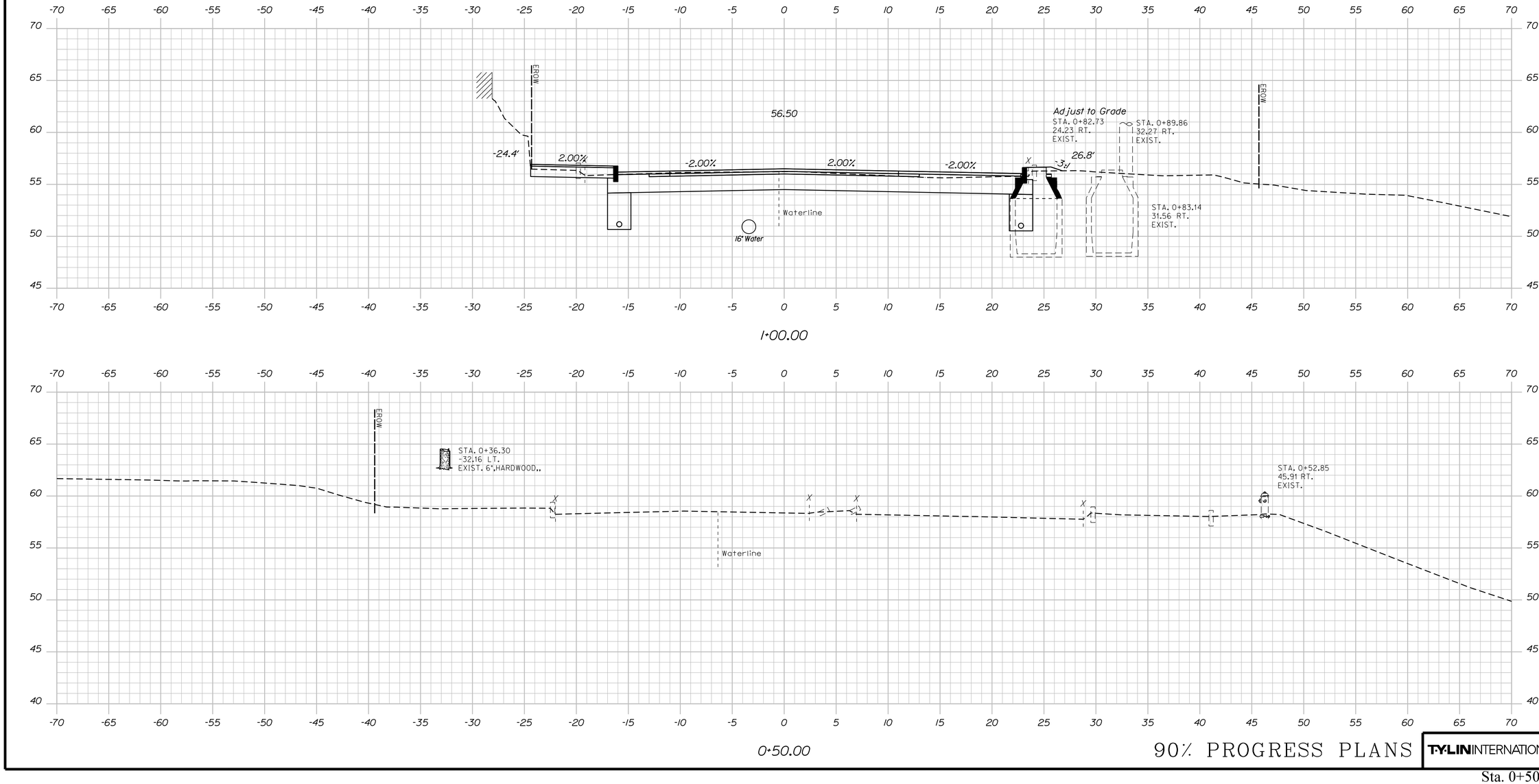
Filename: ...\106207_48\030_Typical_02.dgn Division: Username: Date:7/22/2020

Username:

Date:7/23/2020

Division:

Filename: ...\106207_11\031_XSections_01.dgn



90% PROGRESS PLANS

TY LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	D.Burhons	7/20
CHECKED-REVIEWED	P.McClure	7/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

CROSS SECTIONS

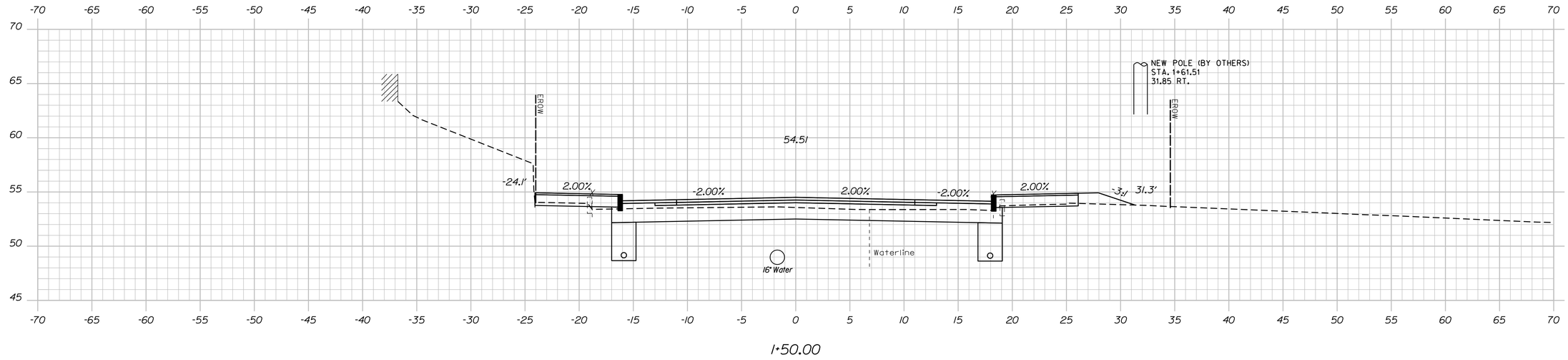
SHEET NUMBER

31

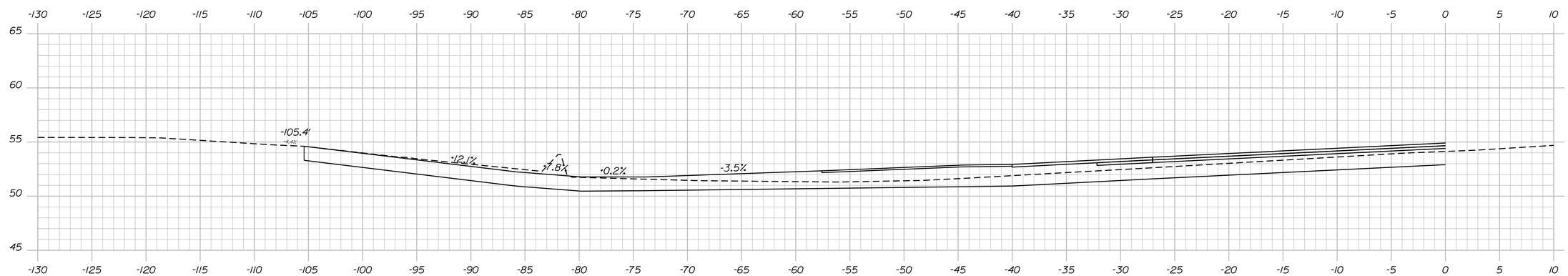
OF 128

Sta. 0+50.00 to Sta. 1+00.00

Filename: ...\106207_40\032_XSections_02.dgn Division: Username: Date:7/23/2020



1+50.00



1+40.62
(Skewed Drive Lt.)

90% PROGRESS PLANS

T·Y·LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	D.Burhons	7/20
CHECKED-REVIEWED	P.McClure	7/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

CROSS SECTIONS

SHEET NUMBER

32

OF 128

Sta. 1+40.62 to Sta. 1+50.00

Date:7/23/2020

Username:

Division:

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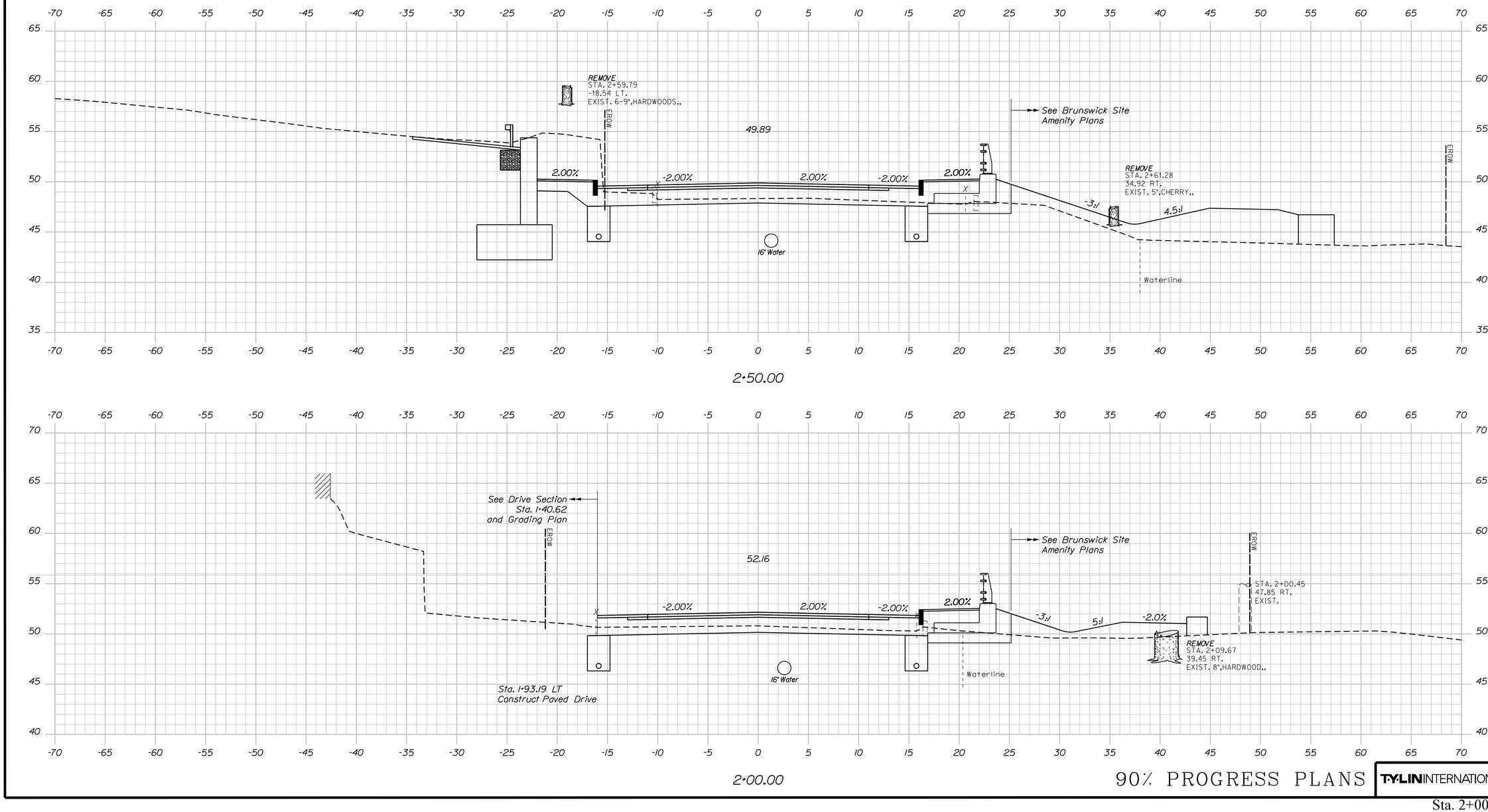

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	D.Burhons	M.Devoid	7/20
CHECKED-REVIEWED	P.McClure	P.McClure	7/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

CROSS SECTIONS

SHEET NUMBER

33

OF 128

Sta. 2+00.00 to Sta. 2+50.00

Date:7/23/2020

Username:

Division:

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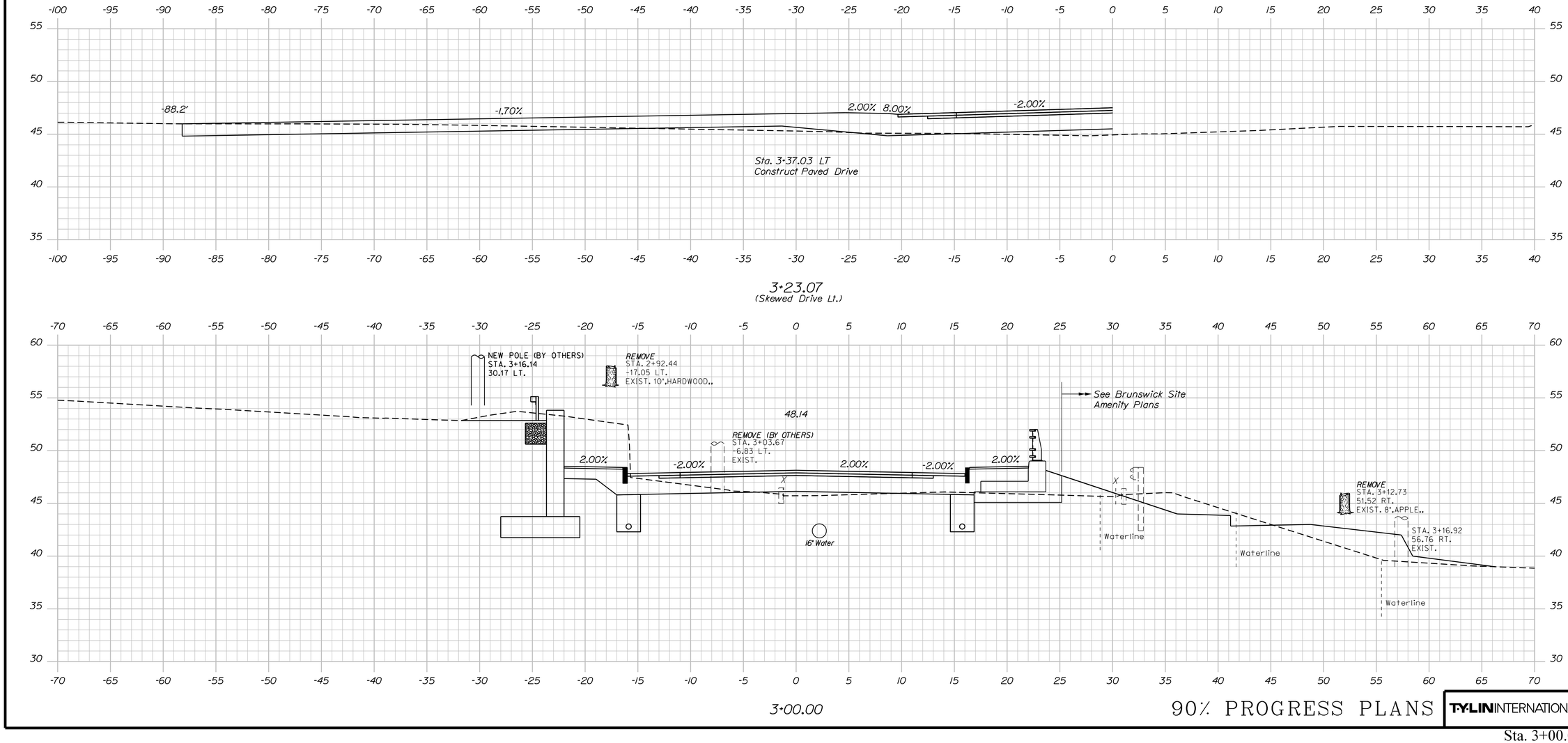


90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

Sta. 3+00.00 to Sta. 3+23.07

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	D.Burhons	M.Devoid	7/20
CHECKED-REVIEWED	P.McClure	P.McClure	7/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

CROSS SECTIONS

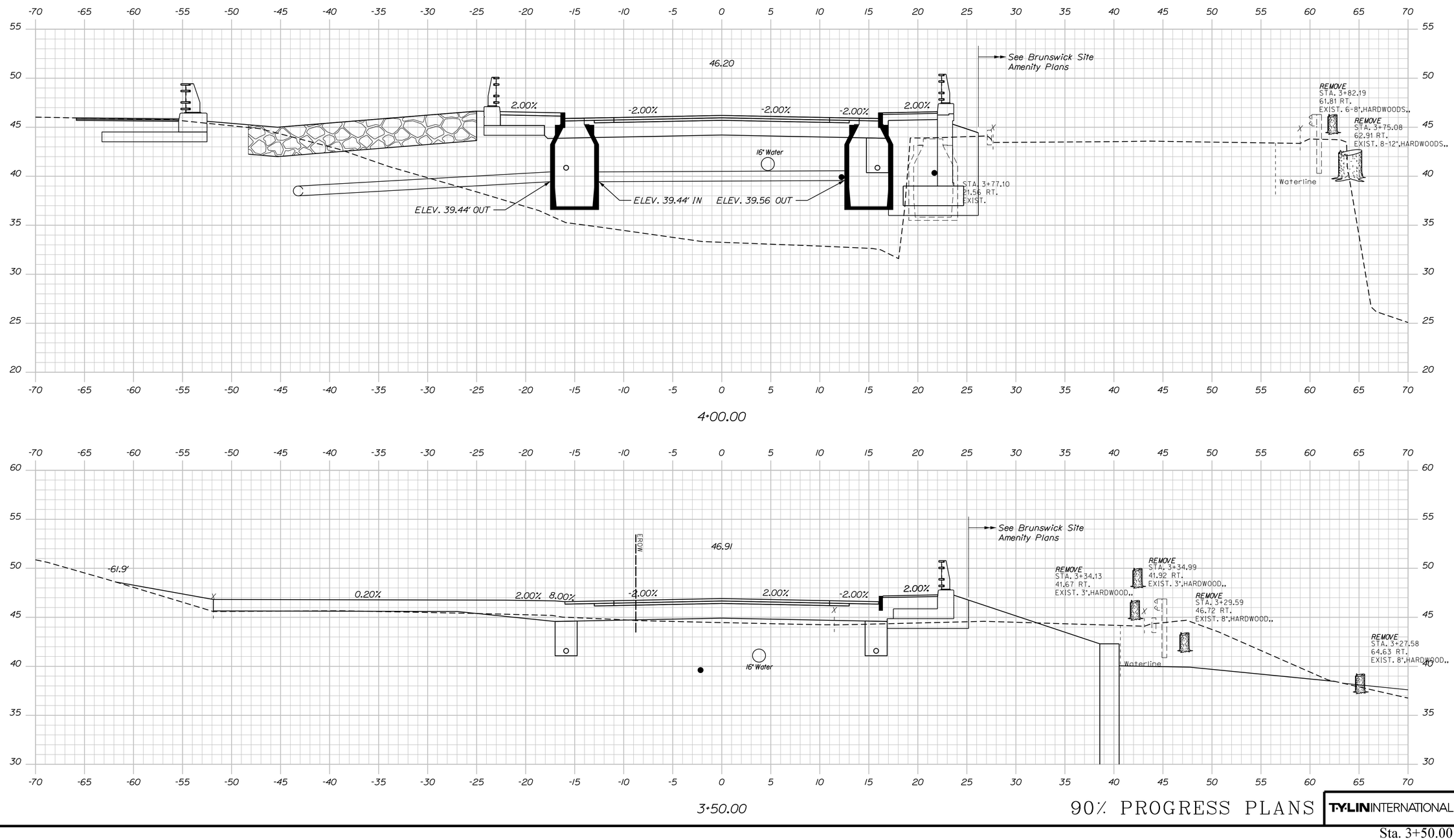
SHEET NUMBER

34

OF 128

Filename: ...\106207_43\035_XSections_05.dgn Division: Username: Date:7/23/2020

STA. 4+40 TO STA. 12+55
BRIDGE



90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	D.Burhons	M.Devoid	7/20
CHECKED-REVIEWED	P.McClure	P.McClure	7/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

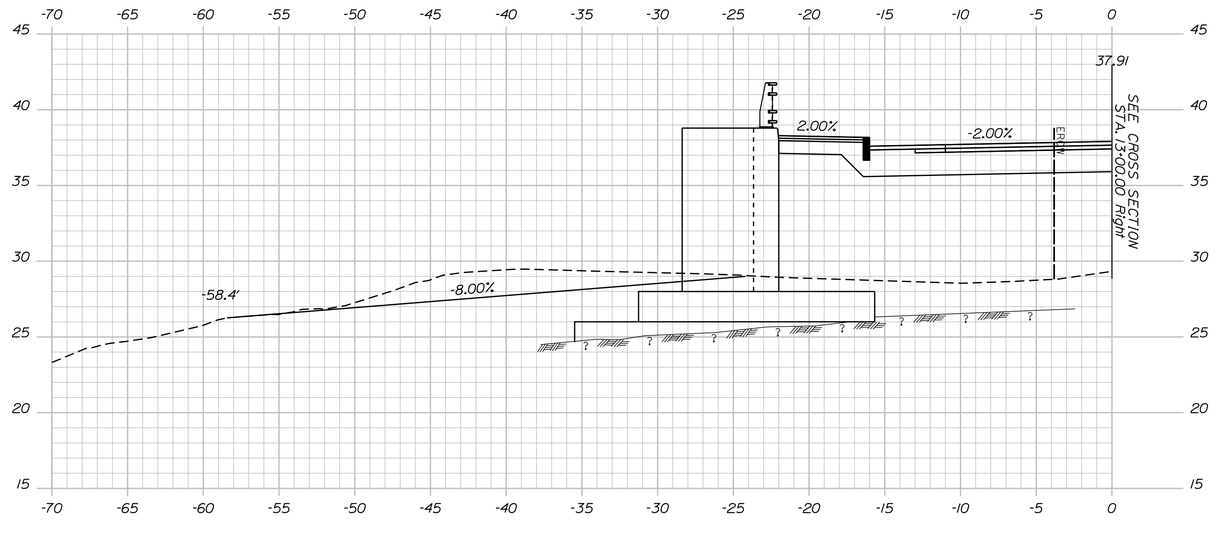
CROSS SECTIONS

SHEET NUMBER

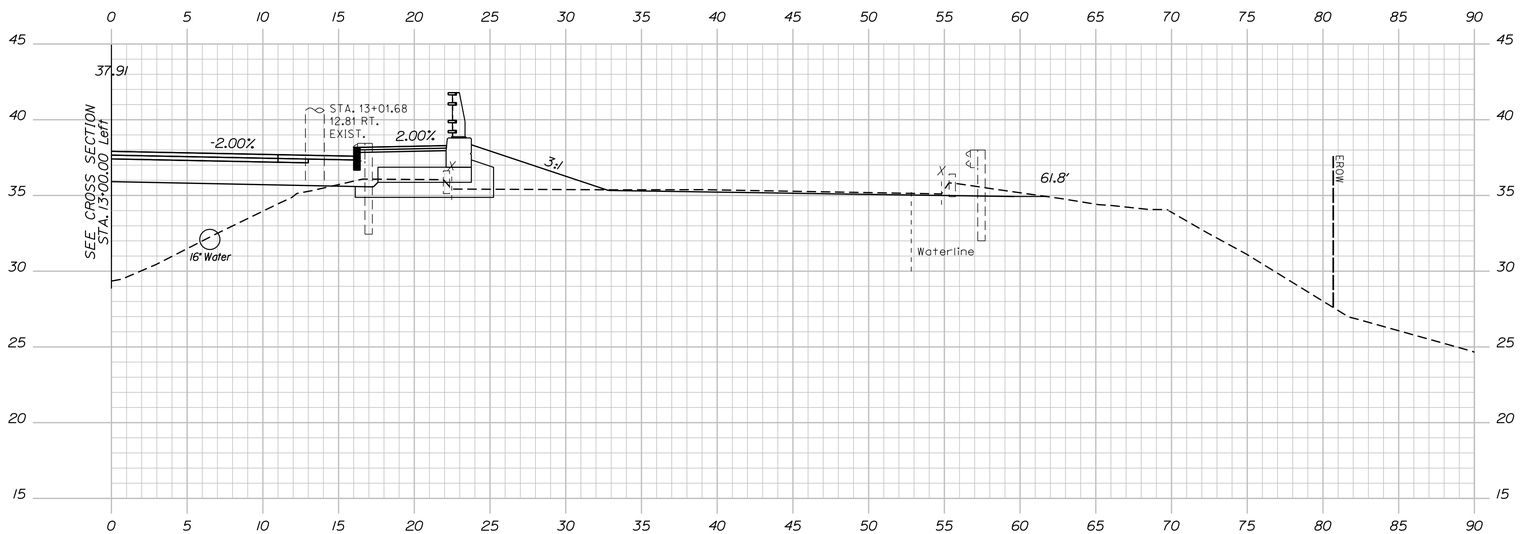
35

OF 128

Sta. 3+50.00 to Sta. 4+00.00



13+00.00, Left



13+00.00, Right

STA. 4+40 TO STA. 12+55
BRIDGE

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	D.Burhons	M.Devoid	7/20
CHECKED-REVIEWED	P.McClure	P.McClure	7/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

P.E. NUMBER

SIGNATURE

DATE

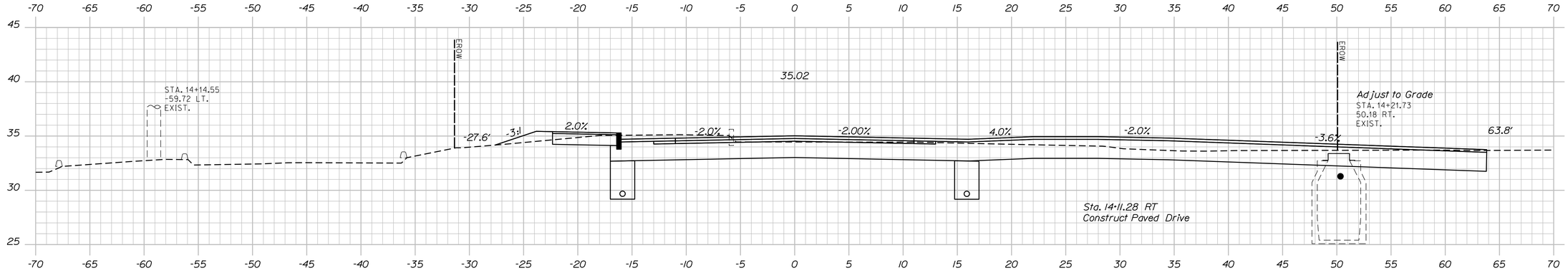
FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

CROSS SECTIONS

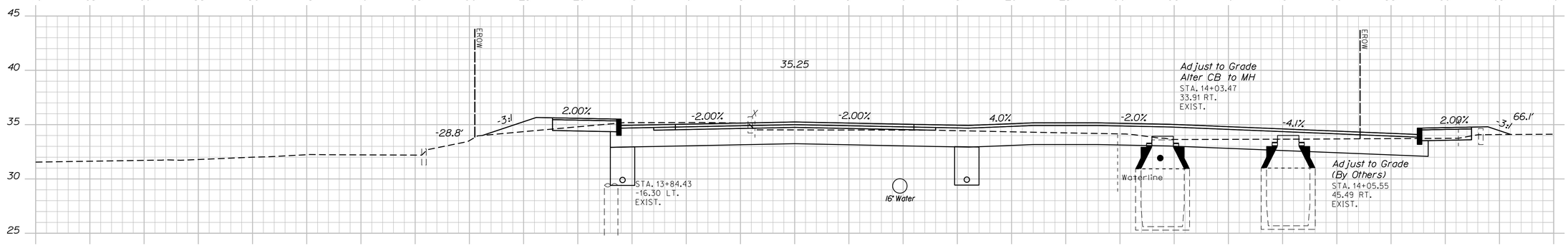
SHEET NUMBER
36
OF 128

Sta. 13+00.00 Right to Sta. 13+00.00 Left

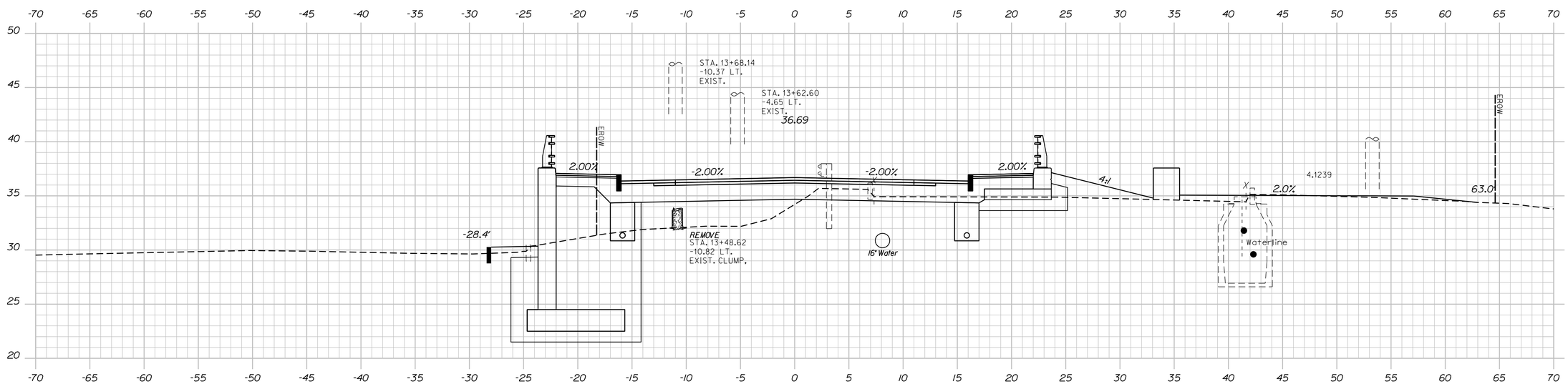
Filename: ...\106207_44\036_XSections_06.dgn Division: Username: Date:7/23/2020



14+10.00



14+00.00



13+50.00

90% PROGRESS PLANS

TY LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	D.Burhons	7/20
CHECKED-REVIEWED	P.McClure	7/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

CROSS SECTIONS

SHEET NUMBER

37

OF 128

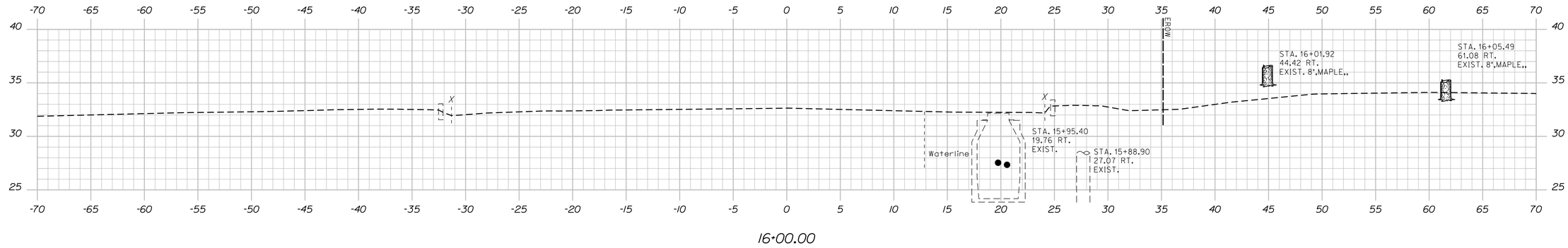
Sta. 13+50.00 to Sta. 14+50.00

Date:7/23/2020

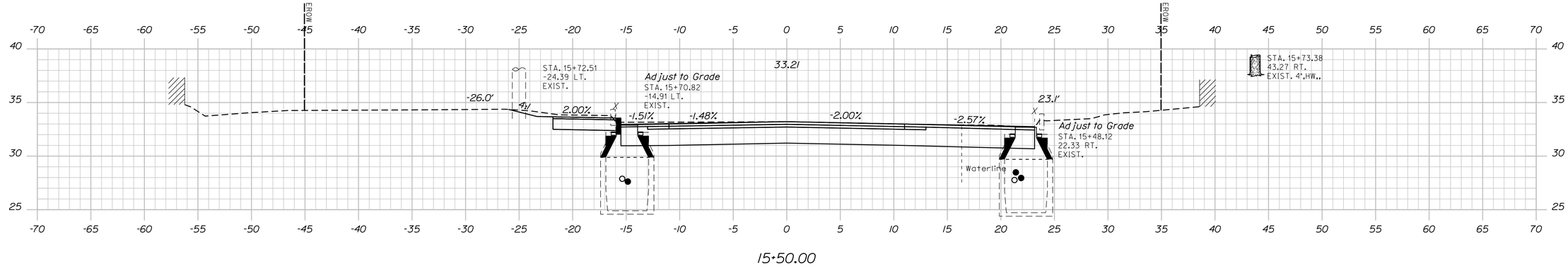
Username:

Division:

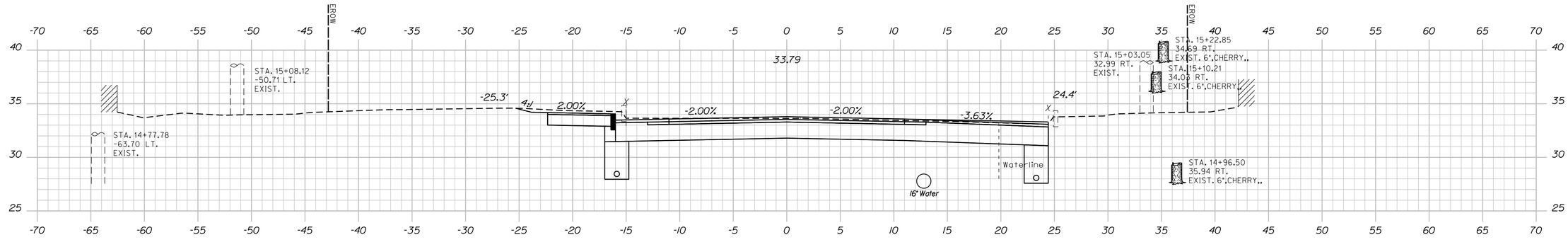
Filename: ...\106207_45\037_XSections_07.dgn



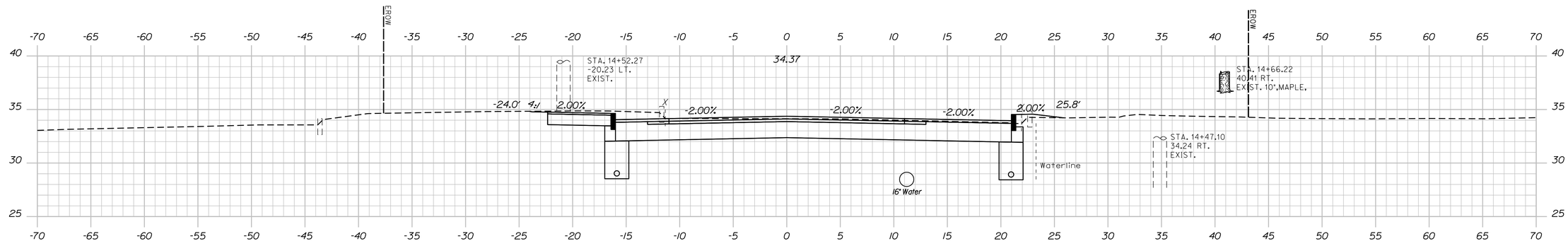
16+00.00



15+50.00



15+00.00



14+50.00

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
D. Bryant		
PROJ. MANAGER	D.Barthons	7/20
DESIGN-DETAILED	M.Devoid	7/20
CHECKED-REVIEWED	P.McClure	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

CROSS SECTIONS

SHEET NUMBER

38

OF 128

Sta. 15+00.00 to Sta. 16+00.00

Date:7/23/2020

Username:

Division:

Filename: ...\106207_46\038_XSections_08.dgn

90% PLANS

FIGURE 39 OF 128

FRANK J WOOD
ANDROSCOGGIN RIVER
BRUNSWICK - TOPSHAM CUMBERLAND - SAGADAHOC

BORING LOCATION PLAN

		BY	DATE
PROJ. MANAGER			
DESIGN-DETAILED			
CHECKED-REVIEWED			
DESIGN2-DETAILED2	N.SHERWOOD	T.WHITE	SEP 2016
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

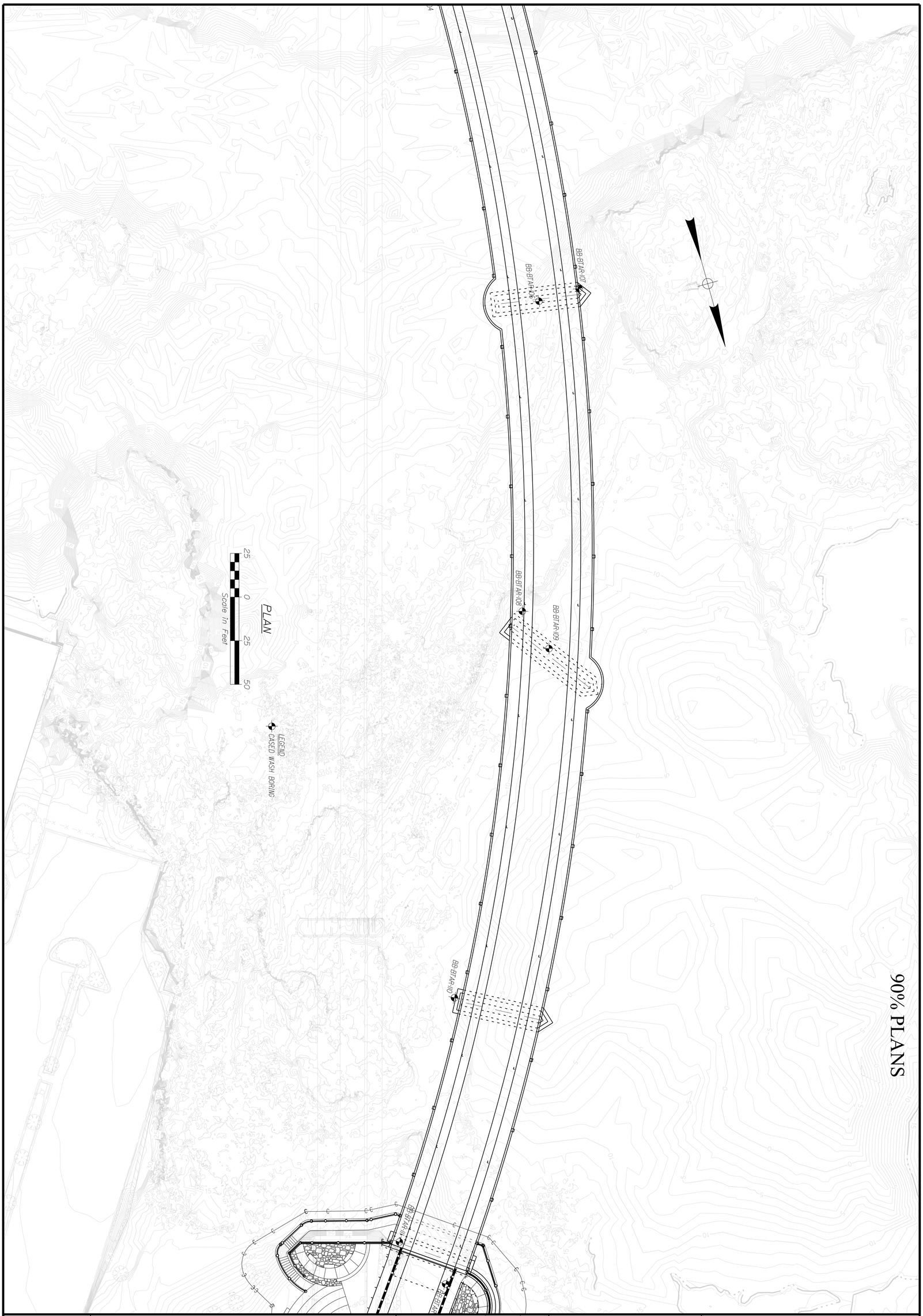
P.E. NUMBER

DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)

BRIDGE NO. 2016 WIN 22603.00 BRIDGE PLANS



90% PLANS

FRANK J WOOD
ANDROSCOGGIN RIVER
BRUNSWICK - TOPSHAM CUMBERLAND - SAGADAHOC

BORING LOCATION PLAN &
INTERPRETIVE SUBSURFACE PROFILE

		BY	DATE
PROJ. MANAGER			
DESIGN-DETAILED			
CHECKED-REVIEWED			
DESIGN2-DETAILED2	N.SHERWOOD	T.WHITE	SEP 2016
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

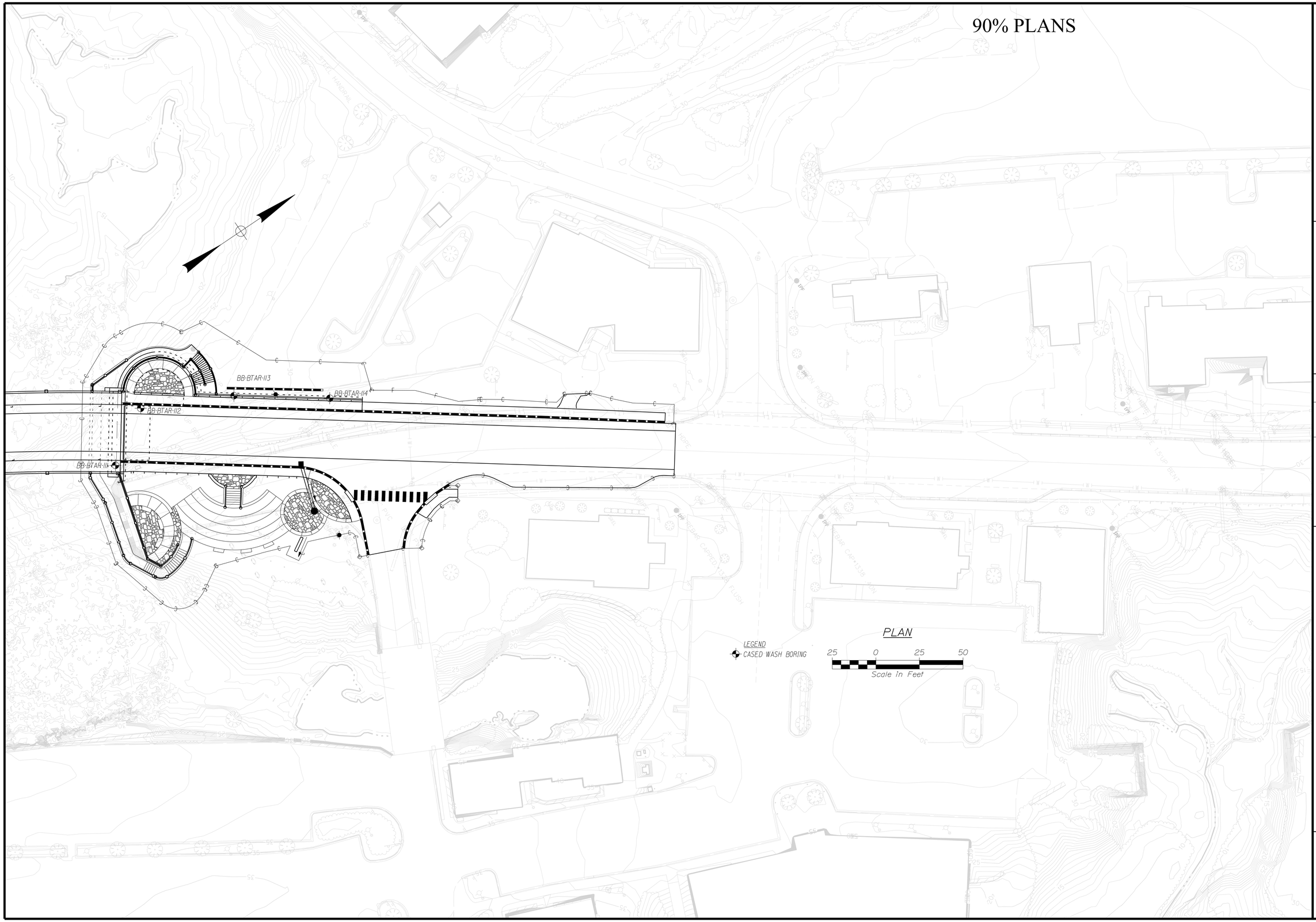
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)

BRIDGE NO. 2016 WIN 22603.00 BRIDGE PLANS

FIGURE 40 OF 128

90% PLANS



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)

WIN 22603.00

BRIDGE NO. 2016 — BRIDGE PLANS

	BY	DATE
PROJ. MANAGER		
DESIGN-DETAILED		
CHECKED-REVIEWED	N.SHERWOOD	SEP 2016
DESIGN2-DETAILED2	T.WHITE	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J WOOD
ANDROSCOGGIN RIVER
BRUNSWICK - TOPSHAM CUMBERLAND - SAGADAHOC

BORING LOCATION PLAN

FIGURE

41

OF 128

90% PLANS

PVI = STA. 0+47.78
ELEV. = 58.46

STA. 0+70.00
Limit of Work
Match Existing Pavement and Curb
Begin Mill and Overlay

30.00'
Transition

G = -3.75%

STA. 1+00.00
End Mill and Overlay
Begin Project
Begin Full Depth Construction

PVI = STA. 1+55.00
ELEV. = 54.44

G = -5.06%

PVC = STA. 1+10.00
ELEV. = 56.12

V.C.L. = 90'
SSD = 87.3'
E = -0.147'

V.C.L. = 200'
HLSD = 256'
E = 1.039'

Approx. ℄ Ent., Lt.

PVI = STA. 3+00.00
ELEV. = 47.10

PVT = STA. 4+00.00
ELEV. = 46.20

℄ Brg. Abut. 1
Sta. 4+40.00

℄ Brg. Pier 2
Sta 7+0

Span 1 = 260'-0"

Aggregate Subbase Course Gravel, Type D

BB-BTAR-201
71.5' Lt.

EL. 45.84'

Approach Slab
EL. 39.2

Common Borrow

RQD=0%
RQD=42%
10'-0"
RQD=53%
RQD=0%
BOE

Fix

Abutment Stem Wall

Granular Borrow

Pedestrian Underpass

Composite Welded Steel Haunched Girder Superstructure

Fix

Q100 EL. Varies

French Drain

Footing

Subfooting

Varies
1.75 (Max.)

Cofferdam

Heavy Riprap

Estimated Bearing Elevation to be Determined (Typ.)

BB-BTAR-202
30.4' Rt.

EL. 2.0
RQD=0%
RQD=0%
BOE

BB-BTAR-105
24.1' Lt.
BB-BTAR-104
26.0' Rt.

EL. 0.1

EL. -0.8

RQD=28%
RQD=16%
RQD=48%
RQD=90%
RQD=95%
RQD=95%
RQD=47%
BOE

Approximate Top of Bedrock Surface

Approximate Top of Bedrock Surface (Typ.)

Concrete Seal (Typ.)

BB-BTAR-107
24.0' Lt.

EL. 5.8

RQD=41%
RQD=60%
RQD=75%
BOE

BB-BTAR-1
0.3' Lt.

RQD=7
RQD=5
RQD=4
BOE

Generalized Rock Descriptions:

GNEISS: hard, fresh to slightly weathered, gray and white, and fine to medium grained. Joints are typically low to high angle, smooth, planar, close to moderately spaced, fresh to discolored, and tight to moderately wide. (Observed in all borings except BB-BTAR-111 and -112)

PEGMATITE: hard, fresh, white and gray, and coarse to very coarse grained. Joints are typically very close to moderately spaced, horizontal to low angle, fresh to discolored, and tight to moderately wide. Encountered intrusions range in thickness from less than 1 foot to greater than 15 feet. (Observed in borings BB-BTAR-105, -107, -108, -109, -111, -112, -113, -114, -201, -202)

LEGEND

Weathered Bedrock, if applicable

Boring No.
Offset, if shown

Pavement Thickness, if applicable

Approximate Top of Bedrock

RQD= Rock Quality Designation of Bedrock Core Sample

BOE= Bottom of Exploration

No Refusal
NR
Refusal
R

PROFILE

HORIZ 25 0 25 50
VERT 5 0 5 10
SCALE

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-2260(300)

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER		
DESIGN-DETAILED		
CHECKED-REVIEWED	N.SHERWOOD	SEP 2016
DESIGN2-DETAILED2	T.WHITE	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J WOOD
ANDROSCOGGIN RIVER
BRUNSWICK - TOPSHAM CUMBERLAND - SAGADAHOC

INTERPRETIVE SUBSURFACE PROFILE

FIGURE

42

OF 128

Filename: ...\00\GEOTECH\MSTA\005_ISP1.dgn Division: GEOTECH Username: Terry.White Date:5/27/2020

90% PLANS

6+00 7+00 8+00 9+00 10+00 11+00 12+00 13+00

℄ Brg. Pier 1 Sta 7+00.00
℄ Brg. Pier 2 Sta 9+05.00
℄ Brg. Pier 3 Sta 11+10.00
℄ Brg. Abut. 2 Sta 12+55.00

Span 2 = 205'-0"
Span 3 = 205'-0"
Span 4 = 145'-0"

PVI = STA. 13+10.00
ELEV. = 38.0'

EL. 43.50'
EL. 41.66'
EL. 39.81'
EL. 38.51'

Proposed Grade at ℄ Construction

Fix
Exp.
Exp.
Exp.

Composite Welded Steel Haunched Girder Superstructure

Q100 EL. Varies
Q100 EL. Varies

Approach Slab
10'-0"

BB-BTAR-112
14.2' Lt.
BB-BTAR-111
16.8' Rt.
EL. 26.9
EL. 24.7

Brown, mois. trace to little

Pedestrian Underpass

Solid Shaft Pier (Typ.)
Footing (Typ.)
Cofferdam
Cofferdam
Cofferdam

BB-BTAR-108
17.0' Lt.
BB-BTAR-109
0.6' Rt.
EL. 12.6
EL. 11.3
BB-BTAR-110
27.1' Rt.
EL. 10.9

Concrete Seal (Typ.)
BB-BTAR-107
24.0' Lt.
BB-BTAR-106
0.35' Lt.
EL. 5.8
EL. 1.2

Estimated Bearing Elevation to be Determined (Typ.)

Approximate Existing Grade at ℄ Construction

Approximate Top of Bedrock Surface

Approximate Top of Bedrock Surface (Typ.)

V.C.L. = 100'
SSD = 5025
E = -0.298

PVC = STA. 12+00.00
ELEV. = 38.46

BOE

RQD=41% RQD=60% RQD=75% RQD=58% RQD=46%
RQD=75% RQD=78% RQD=100% RQD=92% RQD=100%
RQD=70% RQD=75% RQD=98% RQD=95% RQD=95%
RQD=75% RQD=100% RQD=93% RQD=93% RQD=0% RQD=84%
RQD=38% RQD=40% RQD=23% RQD=83% RQD=55% RQD=48%

Generalized Rock Descriptions:

GNEISS: hard, fresh to slightly weathered, gray and white, and fine to medium grained. Joints are typically low to high angle, smooth, planar, close to moderately spaced, fresh to discolored, and tight to moderately wide. (Observed in all borings except BB-BTAR-111 and -112)

PEGMATITE: hard, fresh, white and gray, and coarse to very coarse grained. Joints are typically very close to moderately spaced, horizontal to low angle, fresh to discolored, and tight to moderately wide. Encountered intrusions range in thickness from less than 1 foot to greater than 15 feet. (Observed in borings BB-BTAR-105, -107, -108, -109, -111, -112, -113, -114, -201, -202)

LEGEND

Weathered Bedrock, if applicable
Approximate Top of Bedrock
Boring No.
Offset, if shown
Pavement Thickness, if applicable
RQD= Rock Quality Designation of Bedrock Core Sample
BOE= Bottom of Exploration

No Refusal
NR
Refusal
R

PROFILE
HORIZ 25 0 25 50
VERT 5 0 5 10
SCALE

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-2260(300)

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE

	BY	DATE
PROJ. MANAGER		
DESIGN-DETAILED		
CHECKED-REVIEWED	N.SHERWOOD	SEP 2016
DESIGN2-DETAILED2	T.WHITE	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

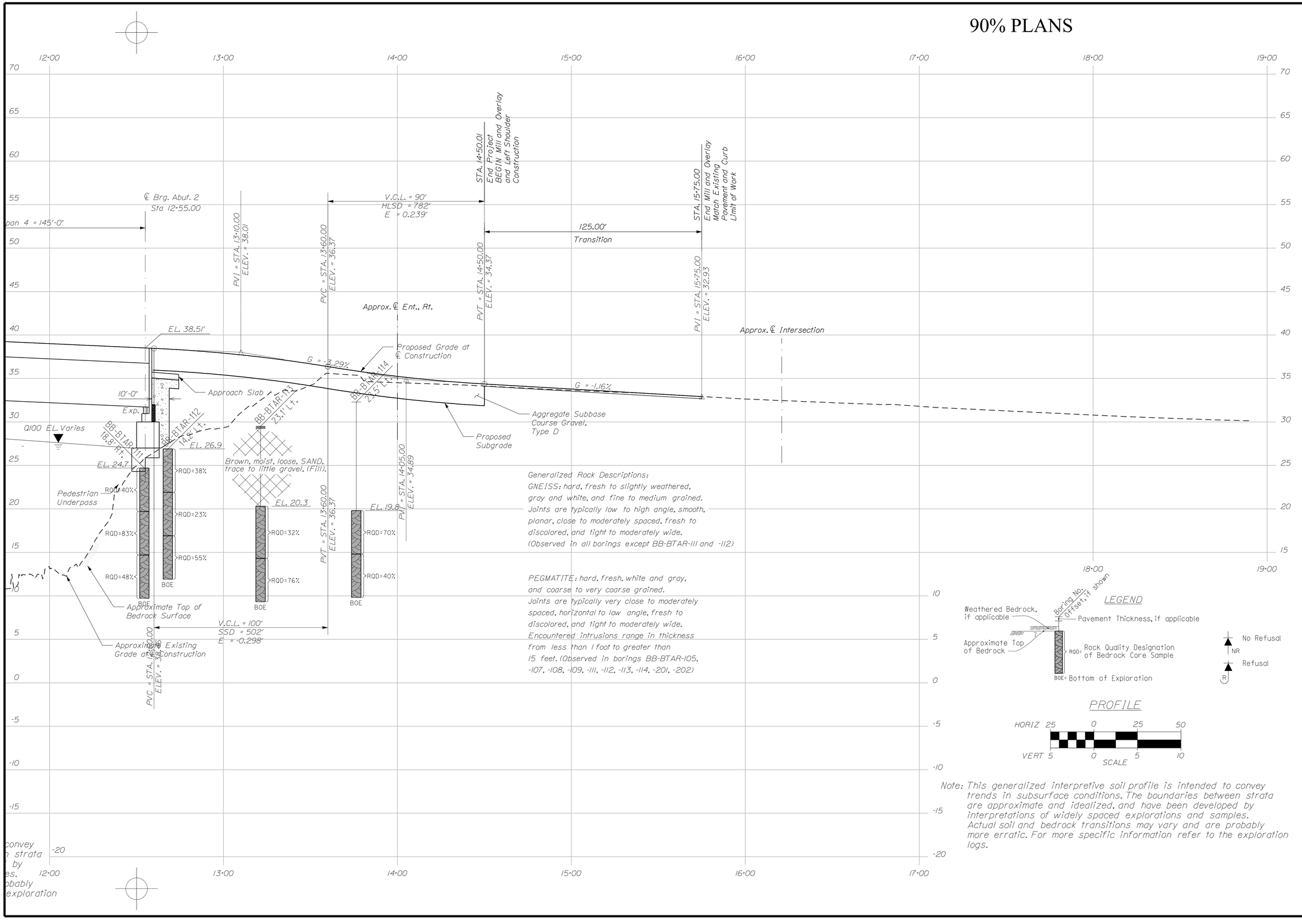
FRANK J WOOD
ANDROSCOGGIN RIVER
BRUNSWICK - TOPSHAM CUMBERLAND - SAGADAHOC

INTERPRETIVE SUBSURFACE PROFILE

FIGURE
43
OF 128

Filename: ...\00\GEOTECH\MSTA\006_ISP2.dgn Division: GEOTECH Username: Terry.White Date:5/27/2020

90% PLANS



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)

WIN 22603.00

BRIDGE NO. 2016 — BRIDGE PLANS

	BY	DATE
PROJ. MANAGER		
DESIGN-DETAILED		
CHECKED-REVIEWED	N.SHERWOOD	SEP 2016
DESIGN2-DETAILED2	T.WHITE	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J WOOD
ANDROSCOGGIN RIVER
BRUNSWICK - TOPSHAM CUMBERLAND - SAGADAHOC

INTERPRETIVE SUBSURFACE PROFILE

FIGURE

44

OF 128

Filename: ...\00\GEOTECH\MSTA\007_ISP3.dgn Division: GEOTECH Username: Terry.White Date:5/27/2020

90% PLANS

Maine Department of Transportation — BB-BTAR-104

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Frank J. Wood Bridge #2016 carries Route 201 over the Location: Brunswick-Topsham, Maine

Boring No.: BB-BTAR-104 — WIN: 22603.00

Driller:	Northern Test Boring	Elevation (ft.): -0.8	Auger ID/OD: N/A
Operator:	Mike/Will	Datum: NAVD88	Sampler: N/A
Logged By:	Wilder/Sherwood	Rig Type: Diedrich D-50	Hammer Wt./Fall: N/A
Date Start/Finish:	8/24/2016 15:30-17:30	Drilling Methods: NQ-2"	Core Barrel: NQ-2"
Boring Location:	4+99.9, 26.0 ft Rt.	Casing ID/OD: N/A	Water Level(*): None Observed

Hammer Efficiency Factors: 0.9901 — Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐

Definitions: D = Split Spoon Sample; MD = Unsuccessful Split Spoon Sample Attempt; U = Thin Wall Tube Sample; WO = Unsuccessful Thin Wall Tube Sample Attempt; V = Field Vane Shear Test; W = Unsuccessful Field Vane Shear Test Attempt; R = Rock Core Sample; SSA = Solid Stem Auger; HSA = Hollow Stem Auger; RC = Roller Cone; WOH = Weight of Hole; PP = Pocket Penetrometer; WOR/C = Weight of Rods or Casing; q_u = Pocket Penetrometer Unconfined Compressive Strength (psf); s_u (UC) = Lab Vane Undrained Shear Strength (psf); s_u (UU) = Lab Vane Undrained Shear Strength (psf); q_p = Unconfined Compressive Strength (psf); N-uncorrected = Raw Field SPT N-value; N60 = SPT N-uncorrected Corrected for Hammer Efficiency; Hammer Efficiency Factor = Rig Specific Annual Calibration Value; WC = Water Content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows/6in. (N-Uncorrected) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0	R1	60/60	0.00 - 5.00	RQD = 95%			NQ-2			Top of Bedrock at Elev. -0.8 feet. R1: Hard, fresh, fine to medium grained, gray and white, foliated, GNEISS. Joints are moderately spaced, low angle, planar, tight, foliated, quartz seam at 0.7', horizontal fracture at 2.3'. R1: Rock Mass Quality = Excellent R1: Core Times (minsec): 0.0-1.0 ft (0145), 1.0-2.0 ft (2111), 2.0-3.0 ft (1151), 3.0-4.0 ft (1150), 4.0-5.0 ft (1128) 100% Recovery	q_u=21.2 ksf
5	R2	60/60	5.00 - 10.00	RQD = 95%						R2: Hard, fresh, fine to medium grained, gray and white, foliated, GNEISS. Joints are moderately spaced, low angle, planar, smooth, slightly discolored to fresh, tight, foliated. Pegmatite seam at 5.1' (1/4" thick) and 6.3' (3/4" thick). R2: Rock Mass Quality = Excellent R2: Core Times (minsec): 5.0-6.0 ft (1120), 6.0-7.0 ft (1122), 7.0-8.0 ft (1100), 8.0-9.0 ft (1100), 9.0-10.0 ft (1108) 100% Recovery	
10	R3	60/54	10.00 - 15.00	RQD = 47%						R3: Hard, fresh, fine to medium grained, gray and white, foliated, GNEISS. Joints are close, low to high angle (vertical) fractures from 11'-12', 13', and 14'+, planar, smooth, discolored, brown staining and occasional brown Clay Infilling, tight. R3: Rock Mass Quality = Poor R3: Core Times (minsec): 10.0-11.0 ft (1117), 11.0-12.0 ft (1137), 12.0-13.0 ft (1129), 13.0-14.0 ft (2111), 14.0-15.0 ft (2100) 50% Recovery	
15								-15.8		Bottom of Exploration at 15.0 feet below ground surface.	-15.0
20											
25											

Remarks:

Hammer No. 283
600-800 pounds of down pressure on Core Barrel.
Bedrock classifications made by Erik Friede (GZA) by observing rock core specimens in boxes after drilling.
As-drilled boring locations and ground surface elevations were surveyed by MaineDOT.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: BB-BTAR-104

Maine Department of Transportation — BB-BTAR-105

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Frank J. Wood Bridge #2016 carries Route 201 over the Location: Brunswick-Topsham, Maine

Boring No.: BB-BTAR-105 — WIN: 22603.00

Driller:	Northern Test Boring	Elevation (ft.): 0.1	Auger ID/OD: N/A
Operator:	Mike/Will	Datum: NAVD88	Sampler: N/A
Logged By:	Wilder/Sherwood	Rig Type: Diedrich D-50	Hammer Wt./Fall: N/A
Date Start/Finish:	8/24/2016 13:00-15:00	Drilling Methods: NQ-2"	Core Barrel: NQ-2"
Boring Location:	4+99.9, 24.1 ft Lt.	Casing ID/OD: N/A	Water Level(*): None Observed

Hammer Efficiency Factor: 0.9901 — Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐

Definitions: D = Split Spoon Sample; MD = Unsuccessful Split Spoon Sample Attempt; U = Thin Wall Tube Sample; WO = Unsuccessful Thin Wall Tube Sample Attempt; V = Field Vane Shear Test; W = Unsuccessful Field Vane Shear Test Attempt; R = Rock Core Sample; SSA = Solid Stem Auger; HSA = Hollow Stem Auger; RC = Roller Cone; WOH = Weight of Hole; PP = Pocket Penetrometer; WOR/C = Weight of Rods or Casing; q_u = Pocket Penetrometer Unconfined Compressive Strength (psf); s_u (UC) = Lab Vane Undrained Shear Strength (psf); s_u (UU) = Lab Vane Undrained Shear Strength (psf); q_p = Unconfined Compressive Strength (psf); N-uncorrected = Raw Field SPT N-value; N60 = SPT N-uncorrected Corrected for Hammer Efficiency; Hammer Efficiency Factor = Rig Specific Annual Calibration Value; WC = Water Content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows/6in. (N-Uncorrected) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0	R1	28.8/24	0.00 - 2.40	RQD = 28%			NQ-2			Top of Bedrock at Elev. 0.1 feet. R1: Hard, fresh, fine to medium grained, gray and white, foliated, GNEISS. Joints are close, low angle, planar, smooth. Slightly discolored, trace gray Clay Infilling, tight to open. R1: Rock Mass Quality = Poor R1: Core Times (minsec): 0.0-1.0 ft (2:54), 1.0-2.0 ft (2:41), 2.0-2.4 ft (2:00) 83% Recovery Core Blocked R2: 2.4'-3.1': Hard, fresh, fine to medium grained, gray and white, foliated, GNEISS. Joints are close, low angle, planar, smooth, fresh to slightly discolored, tight to open.	
5	R2	32.4/29	2.40 - 5.10	RQD = 16%				-3.0		R2: 3.1'-5.1': Hard, fresh, coarse grained, tan/white/gray, PEGMATITE. Joints are very close, horizontal to low angle, planar, rough, discolored (dirty), tight to open. R2: Rock Mass Quality = Very Poor R2: Core Times (minsec): 2.4-3.4 ft (1:10) 3.4-4.4 ft (2:38), 4.4-5.1 ft (3:00) 50% Recovery Core Blocked R3: Hard, fresh, coarse to very coarse grained, tan/gray/white, PEGMATITE. Joints are very close to close, horizontal, planar, smooth to rough, fresh, partially open to open. R4: Rock Mass Quality = Poor R3: Core Times (minsec): 5.1-6.1 ft (2:36) 6.1-7.1 ft (2:33), 7.1-8.1 ft (2:04), 8.1-9.1 ft (3:08) 100% Recovery Core Blocked R4: 9.1'-9.6': Hard, fresh, coarse to very coarse grained, tan/gray/white, PEGMATITE. Joints are very close to close, horizontal, planar, smooth to rough, fresh. Partially open to open. R4: 9.6'-14.1': Hard, fresh, fine to medium grained, gray and white, foliated, GNEISS. Joints are close to moderately spaced, low angle, planar, smooth, fresh. R4: Rock Mass Quality = Good R4: Core Times (minsec): 9.1-10.1 ft (1:59), 10.1-11.1 ft (1:36), 11.1-12.1 ft (1:31), 12.1-13.1 ft (1:33), 13.1-14.1 ft (1:44) 92% Recovery	q_u=16.5 ksi
10	R3	48/48	5.10 - 9.10	RQD = 48%				-9.5			
15	R4	60/57	9.10 - 14.10	RQD = 90%				-14.0			
20								-14.1		Bottom of Exploration at 14.1 feet below ground surface.	
25											

Remarks:

Hammer No. 283
600-800 pounds of down pressure on Core Barrel.
Bedrock classifications made by Erik Friede (GZA) by observing rock core specimens in boxes after drilling.
As-drilled boring locations and ground surface elevations were surveyed by MaineDOT.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: BB-BTAR-105

Maine Department of Transportation — BB-BTAR-106

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Frank J. Wood Bridge #2016 carries Route 201 over the Location: Brunswick-Topsham, Maine

Boring No.: BB-BTAR-106 — WIN: 22603.00

Driller:	Northern Test Boring	Elevation (ft.): 1.2	Auger ID/OD: N/A
Operator:	Mike/Will	Datum: NAVD88	Sampler: N/A
Logged By:	Wilder/Sherwood	Rig Type: Diedrich D-50	Hammer Wt./Fall: N/A
Date Start/Finish:	8/24/2016 11:00-12:30	Drilling Methods: NQ-2"	Core Barrel: NQ-2"
Boring Location:	7+01.1, 0.35 ft Lt.	Casing ID/OD: N/A	Water Level(*): None Observed

Hammer Efficiency Factor: 0.9901 — Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐

Definitions: D = Split Spoon Sample; MD = Unsuccessful Split Spoon Sample Attempt; U = Thin Wall Tube Sample; WO = Unsuccessful Thin Wall Tube Sample Attempt; V = Field Vane Shear Test; W = Unsuccessful Field Vane Shear Test Attempt; R = Rock Core Sample; SSA = Solid Stem Auger; HSA = Hollow Stem Auger; RC = Roller Cone; WOH = Weight of Hole; PP = Pocket Penetrometer; WOR/C = Weight of Rods or Casing; q_u = Pocket Penetrometer Unconfined Compressive Strength (psf); s_u (UC) = Lab Vane Undrained Shear Strength (psf); s_u (UU) = Lab Vane Undrained Shear Strength (psf); q_p = Unconfined Compressive Strength (psf); N-uncorrected = Raw Field SPT N-value; N60 = SPT N-uncorrected Corrected for Hammer Efficiency; Hammer Efficiency Factor = Rig Specific Annual Calibration Value; WC = Water Content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows/6in. (N-Uncorrected) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0	R1	54/51	0.00 - 4.50	RQD = 70%			NQ-2			Top of Bedrock at Elev. 1.2 feet. R1: Hard, fresh, fine to medium grained, gray and white, foliated, GNEISS. Joints are close to moderately spaced, low angle, planar, smooth, slightly discolored near top, partially open to moderately wide. R1: Rock Mass Quality = Fair R1: Core Times (minsec): 0.0-1.0 ft (1:43), 1.0-2.0 ft (2:39), 2.0-3.0 ft (2:59), 3.0-4.0 ft (1:40), 4.0-5.0 ft (1:42) 96% Recovery Core Blocked R2: Hard, fresh, fine to medium grained, gray and white, foliated, GNEISS. Joints are moderately spaced to very close at bottom, low angle, planar, smooth, fresh to slightly discolored at 8.0', brown Clay Infilling, open. R2: Rock Mass Quality = Fair R2: Core Times (minsec): 4.5-5.5 ft (1:28), 5.5-6.5 ft (2:07), 6.5-7.5 ft (2:02), 7.5-8.5 ft (1:24), 8.5-9.5 ft (1:25) 97% Recovery	q_u=19.2 ksi
5	R2	60/58	4.50 - 9.50	RQD = 58%						R3: Hard, fresh, fine to medium grained, gray and white, foliated, GNEISS. Joints are close, low angle, planar, smooth, fresh to slightly discolored at 10.5' (brown), partially open, foliated. R3: Rock Mass Quality = Fair R3: Core Times (minsec): 9.5-10.5 ft (1:12), 10.5-11.5 ft (1:12), 11.5-12.5 ft (1:21), 12.5-13.5 ft (1:10), 13.5-14.0 ft (1:08) 95% Recovery Core Blocked	
10	R3	54/50	9.50 - 14.00	RQD = 46%				-12.8			
15								-14.0		Bottom of Exploration at 14.0 feet below ground surface.	
20											
25											

Remarks:

Hammer No. 283
600-800 pounds of down pressure on Core Barrel.
Bedrock classifications made by Erik Friede (GZA) by observing rock core specimens in boxes after drilling.
As-drilled boring locations and ground surface elevations were surveyed by MaineDOT.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

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Page 1 of 1 — Boring No.: BB-BTAR-106

Maine Department of Transportation — BB-BTAR-107

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Frank J. Wood Bridge #2016 carries Route 201 over the Location: Brunswick-Topsham, Maine

Boring No.: BB-BTAR-107 — WIN: 22603.00

Driller:	Northern Test Boring	Elevation (ft.): 5.8	Auger ID/OD: N/A
Operator:	Mike/Will	Datum: NAVD88	Sampler: N/A
Logged By:	Wilder/Sherwood	Rig Type: Diedrich D-50	Hammer Wt./Fall: N/A
Date Start/Finish:	8/24/2016 09:00-10:30	Drilling Method: NQ-2"	Core Barrel: NQ-2"
Boring Location:	6+96.6, 24.0 ft Lt.	Casing ID/OD: N/A	Water Level(*): None Observed

Hammer Efficiency Factor: 0.9901 — Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐

Definitions: D = Split Spoon Sample; MD = Unsuccessful Split Spoon Sample Attempt; U = Thin Wall Tube Sample; WO = Unsuccessful Thin Wall Tube Sample Attempt; V = Field Vane Shear Test; W = Unsuccessful Field Vane Shear Test Attempt; R = Rock Core Sample; SSA = Solid Stem Auger; HSA = Hollow Stem Auger; RC = Roller Cone; WOH = Weight of Hole; PP = Pocket Penetrometer; WOR/C = Weight of Rods or Casing; q_u = Pocket Penetrometer Unconfined Compressive Strength (psf); s_u (UC) = Lab Vane Undrained Shear Strength (psf); s_u (UU) = Lab Vane Undrained Shear Strength (psf); q_p = Unconfined Compressive Strength (psf); N-uncorrected = Raw Field SPT N-value; N60 = SPT N-uncorrected Corrected for Hammer Efficiency; Hammer Efficiency Factor = Rig Specific Annual Calibration Value; WC = Water Content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows/6in. (N-Uncorrected) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0	R1	49/49	0.00 - 4.08	RQD = 41%			NQ-2	5.6		Top of Bedrock at Elev. 5.8 feet. R1: 0'-0.2': PEGMATITE.	-0.2
5	R2	60/54	4.10 - 9.10	RQD = 60%				1.7		R1: 0.2'-4.1': Hard, fresh (slightly weathered in top 12"), fine to medium grained, gray and white, foliated, GNEISS. Joints are close to moderately spaced, low angle, planar smooth, fresh to slightly discolored, tight. R1: Rock Mass Quality = Poor R1: Core Times (minsec): 0.0-1.0 ft (3:13), 1.0-2.0 ft (11:40), 2.0-3.0 ft (2:11), 3.0-4.0 ft (2:25), 4.0-5.0 ft (1:00) 100% Recovery Core Blocked	-4.1
10	R3	60/55	9.10 - 14.10	RQD = 75%				-1.8		R2: 4.1'-4.8': Hard, fresh (slightly weathered in top 12"), fine to medium grained, gray and white, foliated, GNEISS. Joints are close to moderately spaced, low angle, planar smooth, fresh to slightly discolored, tight. Banding of GNEISS and PEGMATITE in 0.3'-0.7' thick layers from 4.8'-7.6'.	-7.6
15								-8.3		R2: 7.6'-9.1': Hard, fresh, coarse to very coarse, white and gray banded, PEGMATITE. Joints are moderately spaced, low angle, planar, rough, fresh, tight. R2: Rock Mass Quality = Fair R2: Core Times (minsec): 4.1-5.1 ft (1:50), 5.1-6.1 ft (2:53), 6.1-7.1 ft (5:02), 7.1-8.1 ft (4:12), 8.1-9.1 ft (1:53) 99% Recovery R3: Hard, fresh, coarse to very coarse grained, white and gray banded, PEGMATITE. Joints are close to moderately spaced, horizontal, planar, rough, fresh, open to wide. R3: Rock Mass Quality = Good R3: Core Times (minsec): 9.1-10.1 ft (2:13), 10.1-11.1 ft (2:43), 11.1-12.1 ft (2:59), 12.1-13.1 ft (3:07), 13.1-14.1 ft (2:44) 92% Recovery	
20										Bottom of Exploration at 14.1 feet below ground surface.	-14.1
25											

Remarks:

Hammer No. 283
600-800 pounds of down pressure on Core Barrel.
Bedrock classifications made by Erik Friede (GZA) by observing rock core specimens in boxes after drilling.
As-drilled boring locations and ground surface elevations were surveyed by MaineDOT.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

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Maine Department of Transportation — BB-BTAR-108

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Frank J. Wood Bridge #2016 carries Route 201 over the Location: Brunswick-Topsham, Maine

Boring No.: BB-BTAR-108 — WIN: 22603.00

Driller:	Northern Test Boring	Elevation (ft.): 11.3	Auger ID/OD: N/A
Operator:	Mike Nadeau	Datum: NAVD88	Sampler: N/A
Logged By:	E. Friede (GZA)	Rig Type: Diedrich D-50	Hammer Wt./Fall: N/A
Date Start/Finish:	8/30/2016 08:53-10:30	Drilling Method: NQ-2"	Core Barrel: NQ-2"
Boring Location:	8+79.4, 17.0 ft Rt.	Casing ID/OD: N/A	Water Level(*): None Observed

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

Definitions: D = Split Spoon Sample; MD = Unsuccessful Split Spoon Sample Attempt; U = Thin Wall Tube Sample; WO = Unsuccessful Thin Wall Tube Sample Attempt; V = Field Vane Shear Test; W = Unsuccessful Field Vane Shear Test Attempt; R = Rock Core Sample; SSA = Solid Stem Auger; HSA = Hollow Stem Auger; RC = Roller Cone; WOH = Weight of Hole; PP = Pocket Penetrometer; WOR/C = Weight of Rods or Casing; q_u = Pocket Penetrometer Unconfined Compressive Strength (psf); s_u (UC) = Lab Vane Undrained Shear Strength (psf); s_u (UU) = Lab Vane Undrained Shear Strength (psf); q_p = Unconfined Compressive Strength (psf); N-uncorrected = Raw Field SPT N-value; N60 = SPT N-uncorrected Corrected for Hammer Efficiency; Hammer Efficiency Factor = Rig Specific Annual Calibration Value; WC = Water Content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows/6in. (N-Uncorrected) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0	R1	55/55	0.00 - 4.58	RQD = 75%						Top of Bedrock at Elev. 11.3 feet. R1: Hard, slightly weathered to fresh, fine to medium grained, light gray and white, foliated, GNEISS. Joints are close to moderately spaced, low angle planar smooth, discolored (rusty), partially open. R1: Rock Mass Quality = Good R1: Core Times (minsec): 0.0-1.0 ft (2:09), 1.0-2.0 ft (1:48), 2.0-3.0 ft (2:26), 3.0-4.0 ft (1:32), 4.0-4.6 ft (1:03) 100% Recovery	
5	R2	60/58	4.60 - 9.60	RQD = 78%				5.7		R2: 4.6'-5.6': Hard, fresh, fine to medium grained, dark gray, GNEISS. Joints are very close to moderately spaced, moderately dipping, planar, smooth, fresh, open, tight to partially open. Biotite rich.	-5.6
10	R3	60/60	9.60 - 14.60	RQD = 100%				-2.3		R3: 5.6'-6.1': Hard, fresh, coarse to very coarse grained, white and light gray, PEGMATITE.	-6.1
15	R4	60/58	14.60 - 19.60	RQD = 92%						R2: 6.1'-9.6': Hard, fresh, light gray and white, foliated, GNEISS. Joints are close to moderately spaced, horizontal to moderately dipping, planar, smooth fresh, tight to open. Biotite rich. R2: Rock Mass Quality = Good R2: Core Times (minsec): 4.6-5.6 ft (1:20), 5.6-6.6 ft (1:26), 6.6-7.6 ft (1:33), 7.6-8.6 ft (1:15), 8.6-9.6 ft (1:42) 97% Recovery R3: Hard, fresh, fine to medium grained, light gray and white, foliated, GNEISS. Joints are close to wide, moderately dipping, planar, smooth, fresh, moderately wide. R1: Rock Mass Quality = Excellent R3: Core Times (minsec): 9.6-10.6 ft (1:36), 10.6-11.6 ft (2:06), 11.6-12.6 ft (2:02), 12.6-13.6 ft (2:07), 13.6-14.6 ft (2:38) 100% Recovery R4: Hard, fresh, fine to medium grained, light gray and white, foliated, GNEISS. Joints are close to wide, low angle, planar, smooth, fresh, tight to partially open. R4: Rock Mass Quality = Excellent R4: Core Times (minsec): 14.6-15.6 ft (2:36), 15.6-16.6 ft (2:43), 16.6-17.6 ft (3:11), 17.6-18.6 ft (2:28), 18.6-19.6 ft (2:12) 97% Recovery	
20	R5	60/60	19.60 - 24.60	RQD = 100%				-13.3		R5: Hard, fresh, fine to medium grained, gray and white, foliated, GNEISS. Joints are moderately spaced, low angle, planar, smooth, fresh, open to moderately wide. R5: Rock Mass Quality = Excellent R5: Core Times (minsec): 19.6-20.6 ft (2:18), 20.6-21.6 ft (2:17), 21.6-22.6 ft (2:38), 22.6-23.6 ft (2:17), 23.6-24.6 ft (3:09) 100% Recovery	
25								-24.6		Bottom of Exploration at 24.6 feet below ground surface.	-24.6

Remarks:

As-drilled boring locations and ground surface elevations were surveyed by MaineDOT.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: BB-BTAR-108

Maine Department of Transportation — BB-BTAR-109

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Frank J. Wood Bridge #2016 carries Route 201 over the Location: Brunswick-Topsham, Maine

Boring No.: BB-BTAR-109 — WIN: 22603.00

Driller:	Northern Test Boring	Elevation (ft.): 12.6	Auger ID/OD: N/A
Operator:	Mike/Will	Datum: NAVD88	Sampler: N/A
Logged By:	E. Friede (GZA)	Rig Type: Diedrich D-50	Hammer Wt./Fall: N/A
Date Start/Finish:	8/29/2016 10:53-11:30	Drilling Methods: NQ-2"	Core Barrel: NQ-2"
Boring Location:	9+00.4, 0.8 ft Rt.	Casing ID/OD: N/A	Water Level(*): None Observed

Hammer Efficiency Factors: -- — Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐

Definitions: D = Split Spoon Sample; MD = Unsuccessful Split Spoon Sample Attempt; U = Thin Wall Tube Sample; WO = Unsuccessful Thin Wall Tube Sample Attempt; V = Field Vane Shear Test; W = Unsuccessful Field Vane Shear Test Attempt; R = Rock Core Sample; SSA = Solid Stem Auger; HSA = Hollow Stem Auger; RC = Roller Cone; WOH = Weight of Hole; PP = Pocket Penetrometer; WOR/C = Weight of Rods or Casing; q_u = Pocket Penetrometer Unconfined Compressive Strength (psf); s_u (UC) = Lab Vane Undrained Shear Strength (psf); s_u (UU) = Lab Vane Undrained Shear Strength (psf); q_p = Unconfined Compressive Strength (psf); N-uncorrected = Raw Field SPT N-value; N60 = SPT N-uncorrected Corrected for Hammer Efficiency; Hammer Efficiency Factor = Rig Specific Annual Calibration Value; WC = Water Content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows/6in. (N-Uncorrected) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0	R1	34/34	0.00 - 2.83	RQD = 44%						Top of Bedrock at Elev. 12.6 feet. R1: Hard, fresh, fine to medium grained, light gray and white, foliated, GNEISS. Joints are close, moderately dipping, planar, smooth, fresh, partially open to moderately wide. R1: Rock Mass Quality = Poor R1: Core Times (minsec): 0.0-1.0 ft (4:37), 1.0-2.0 ft (5:04), 2.0-2.8 ft (4:49) 100% Recovery R2: 2.8'-7.4': Hard, fresh, fine to medium grained, light gray, GNEISS. Joints are very close to moderately spaced, horizontal to low angle, planar, fresh, smooth, open to moderately wide.	q_u=32.7 ksf
5	R2	60/60	2.80 - 7.80	RQD = 70%				5.2			
	R3	36/36	7.80 - 10.80	RQD = 75%				4.3			-7.4
10	R4	60/60	10.80 - 15.80	RQD = 98%						R2: 7.4'-7.8': Hard, fresh, coarse grained, white, PEGMATITE. R2: Rock Mass Quality = Excellent R2: Core Times (minsec): 2.8-3.8 ft (3:52), 3.8-4.8 ft (3:00), 4.8-5.8 ft (2:45), 5.8-6.8 ft (1:24), 6.8-7.9 ft (2:50) 99% Recovery R3: 7.8'-8.5': Hard, fresh, coarse grained, white, PEGMATITE. Joints are close, low angle, planar, rough, fresh, moderately wide.	
15	R5	60/57	15.80 - 20.80	RQD = 95%						R3: 8.5'-10.8': Hard fresh, fine to medium grained, light gray and white, foliated, GNEISS. Joints are close to moderately spaced, horizontal, planar, smooth, fresh, open. R3: Rock Mass Quality = Good R3: Core Times (minsec): 7.8-8.8 ft (1:59), 8.8-9.8 ft (4:41), 9.8-10.8 ft (2:02) 100% Recovery R4: Hard, fresh, fine to medium grained, light gray and white, foliated, GNEISS. Joints are very close to widely spaced, moderately dipping to low angle, planar, smooth, fresh, open. R4: Rock Mass Quality = Excellent R4: Core Times (minsec): 10.8-11.8 ft (1:53), 11.8-12.8 ft (2:30), 12.8-13.8 ft (2:14), 13.8-14.8 ft (2:30), 14.8-15.8 ft (3:34) 100% Recovery R5: Hard, fresh, fine to medium grained, light gray and white, foliated, GNEISS. Joints are wide, low angle, planar, smooth, fresh, partially open, Biotite rich. R5: Rock Mass Quality = Excellent R5: Core Times (minsec): 15.8-16.8 ft (3:00), 16.8-17.8 ft (2:24), 17.8-18.8 ft (1:48), 18.8-19.8 ft (1:43), 19.8-20.8 ft (1:51) 95% Recovery R6: Hard, fresh, fine to medium grained, light gray and white, foliated, GNEISS. Joints are moderately spaced, low angle, planar, smooth, fresh, open to moderately wide. R6: Rock Mass Quality = Excellent R6: Core Times (minsec): 20.8-21.8 ft (1:36), 21.8-22.8 ft (1:48), 22.8-23.8 ft (1:52), 23.8-24.8 ft (2:24), 24.8-25.8 ft (1:58) 95% Recovery	
20	R6	60/57	20.80 - 25.80	RQD = 95%				-13.2			
25								-25.8		Bottom of Exploration at 25.8 feet below ground surface.	
30											
35											
40											
45											
50											

Remarks:

As-drilled boring locations and ground surface elevations were surveyed by MaineDOT.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

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Page 1 of 1 — Boring No.: BB-BTAR-109

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	----------	----------
DESIGN-DETAILED	T. WHITE	MAY 2020
CHECKED-REVIEWED	C.SNOW	----------
DESIGN2-DETAILED2	----------	----------
DESIGN3-DETAILED3	----------	----------
REVISIONS 1	----------	----------
REVISIONS 2	----------	----------
REVISIONS 3	----------	----------
REVISIONS 4	----------	----------
FIELD CHANGES	----------	----------

SIGNATURE

P.E. NUMBER

DATE

FRANK J WOOD
ANDROSCOGGIN RIVER - SAGADAHOC
BRUNSWICK - TOPSHAM CUMBERLAND

BORING LOGS

FIGURE
45
OF 128

Username: Terry.White Date:5/27/2020 Division: GEOTECH Filename: ...\MSTA\008_BORING LOGS1.dgn

Maine Department of Transportation — Boring No.: BB-BTAR-110

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Frank J. Wood Bridge #2016 carries Route 201 over the Locations Brunswick-Topsham, Maine

WIN: 22603.00

Driller: Northern Test Boring	Elevation (ft.): 10.9	Auger ID/OD:	N/A
Operator: Mike/Will	Datum: NAVD88	Sampler:	N/A
Logged By: E. Friede (GZA)	Rig Type: Diedrich D-50	Hammer Wt./Fall:	N/A
Date Start/Finish: 8/30/2016; 12:40-14:45	Drilling Methods: NQ-2"	Core Barrel:	NQ-2"
Boring Location: 11+08.6, 27.7 ft Rt.	Casing ID/OD: N/A	Water Level(ft):	None Observed

Hammer Efficiency Factor: --

Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐

Definitions:
D = Split Spoon Sample
WO = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
WO = Unsuccessful Thin Wall Tube Sample Attempt
V = Field Vane Shear Test.
WV = Unsuccessful Field Vane Shear Test Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WOP = Weight of the Person
q_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(LAB)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = 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
N_{60} = Hammer Efficiency Factor*ER*uncorrected
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (#s /in. Pen. Driving Strength (psf or ROD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0	R1	54/52	0.00 - 4.50	ROD = 75%						Top of Bedrock at Elev. 10.9 feet. R1: Hard, fresh, fine to medium grained, light gray, GNEISS. Joints are close to moderately spaced, low angle, planar, smooth, discolored in top 1.0' to fresh, partially open. R1: Rock Mass Quality = Good R1: Core Times (minsec): 0.0-1.0 ft (2:34), 1.0-2.0 ft (3:35), 2.0-3.0 ft (2:44), 3.0-4.0 ft (1:42), 4.0-4.5 ft (0:36) 96% Recovery R2: Hard, fresh, fine to medium grained, light gray and white, foliated, GNEISS. Joints are moderately spaced, moderately dipping, planar, smooth, fresh, partially open, Biotite rich. R2: Rock Mass Quality = Excellent R2: Core Times (minsec): 4.5-5.5 ft (1:18), 5.5-6.5 ft (1:55), 6.5-7.5 ft (2:15), 7.5-8.5 ft (2:09), 8.5-9.5 ft (2:33) 100% Recovery R3: Hard, fresh, fine to medium grained, light gray and white, foliated, GNEISS. Joints are moderately spaced, low angle, planar, smooth, fresh, tight to partially open, Biotite rich. R3: Rock Mass Quality = Excellent R3: Core Times (minsec): 9.5-10.5 ft (2:26), 10.5-11.5 ft (2:55), 11.5-12.5 ft (2:19), 12.5-13.5 ft (2:13), 13.5-14.5 ft (2:46) 100% Recovery R4: Hard, fresh, fine to medium grained, light gray and white, foliated, GNEISS. Joints are moderately spaced, low angle, planar, smooth, fresh, tight. Biotite rich. R4: Rock Mass Quality = Excellent R4: Core Times (minsec): 14.5-15.5 ft (3:36), 15.5-16.5 ft (3:09), 16.5-17.5 ft (2:39), 17.5-18.5 ft (3:48), 18.5-19.5 ft (2:30) 100% Recovery R5: 19.5'-20.0': Hard, fresh, fine to medium grained, foliated, light gray and white GNEISS. Quartz band from 20.0'-20.3'. Core blocked at 20.3'. R5: Rock Mass Quality = Very Poor R5: Core Times (minsec): 19.5-20.3 ft (2:20) 94% Recovery R6: Hard, fresh, fine to medium grained, light gray and white, foliated, GNEISS. Joints are close to moderately spaced, moderately dipping, planar, smooth, fresh, partially open. Biotite rich. R6: Rock Mass Quality = Good R6: Core Times (minsec): 20.3-20.5 ft (0:47), 20.5-21.5 ft (1:27), 21.5-22.5 ft (1:30), 22.5-23.5 ft (1:31), 23.5-24.5 ft (1:54) 94% Recovery Bottom of Exploration at 24.5 feet below ground surface.	q_p=6 ksf
5	R2	60/60	4.50 - 9.50	ROD = 100%							
10	R3	56/60	9.50 - 14.17	ROD = 93%							
15	R4	60/60	14.50 - 19.50	ROD = 93%							
20	R5	9/9	19.50 - 20.25	ROD = 0%							
	R6	51/48	20.30 - 24.55	ROD = 84%							
25											
30											
35											
40											
45											
50											

Remarks:
2" void observed at 3.8', noted by drop in drill rods. Clay observed at joint surface at bottom of the void.
As-drilled boring locations and ground surface elevations were surveyed by MaineDOT.

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

Page 1 of 1 — Boring No.: BB-BTAR-110

Maine Department of Transportation — Boring No.: BB-BTAR-111

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Frank J. Wood Bridge #2016 carries Route 201 over the Locations Brunswick-Topsham, Maine

WIN: 22603.00

Driller: Northern Test Boring	Elevation (ft.): 24.7	Auger ID/OD:	N/A
Operator: Mike/Will	Datum: NAVD88	Sampler:	N/A
Logged By: E. Friede (GZA)	Rig Type: Diedrich D-50	Hammer Wt./Fall:	N/A
Date Start/Finish: 8/31/2016; 08:50-10:00	Drilling Methods: NQ-2"	Core Barrel:	NQ-2"
Boring Location: 12+54.5, 18.8 ft Rt.	Casing ID/OD: N/A	Water Level(ft):	None Observed

Hammer Efficiency Factor: --

Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐

Definitions: (same as BB-BTAR-110)

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (#s /in. Pen. Driving Strength (psf or ROD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0	R1	60/60	0.00 - 5.00	ROD = 40%						Top of Bedrock at Elev. 24.7 feet. R1: Hard, fresh, coarse to very coarse grained, white, gray and black, PEGMATITE with Biotite. Joints are close, horizontal, planar, rough, fresh to discolored, tight to moderately tight. R1: Rock Mass Quality = Poor R1: Core Times (minsec): 0.0-1.0 ft (2:20), 1.0-2.0 ft (1:54), 2.0-3.0 ft (2:02), 3.0-4.0 ft (2:12), 4.0-5.0 ft (2:13) 100% Recovery R2: Hard, fresh, coarse to very coarse grained, gray and white, PEGMATITE. Joints are close to moderately close, horizontal to low angle, planar, rough, fresh to discolored, moderately wide. R2: Rock Mass Quality = Good R2: Core Times (minsec): 5.0-6.0 ft (1:34), 6.0-7.0 ft (1:58), 7.0-8.0 ft (2:09), 8.0-9.0 ft (2:25), 9.0-10.0 ft (1:51) 100% Recovery. R3: Hard, fresh, coarse to very coarse grained, white and gray, PEGMATITE. Joints are close, low angle, planar, rough, fresh to slightly discolored, moderately wide. R3: Rock Mass Quality = Poor R3: Core Times (minsec): 10.0-11.0 ft (2:35), 11.0-12.0 ft (2:33), 12.0-13.0 ft (1:58), 13.0-14.0 ft (1:39), 14.0-15.0 ft (1:33) 93% Recovery.	q_p=9.6 ksf
5	R2	60/60	5.00 - 10.00	ROD = 83%							
10	R3	60/56	10.00 - 15.00	ROD = 48%							
15								9.7		Bottom of Exploration at 15.0 feet below ground surface.	
20											
25											

Remarks:
As-drilled boring locations and ground surface elevations were surveyed by MaineDOT.

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

Page 1 of 1 — Boring No.: BB-BTAR-111

Maine Department of Transportation — Boring No.: BB-BTAR-112

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Frank J. Wood Bridge #2016 carries Route 201 over the Locations Brunswick-Topsham, Maine

WIN: 22603.00

Driller: MaineDOT	Elevation (ft.): 26.9	Auger ID/OD:	N/A
Operator: Doggett/Burpee	Datum: NAVD88	Sampler:	N/A
Logged By: N. Sherwood	Rig Type: CME 45C	Hammer Wt./Fall:	N/A
Date Start/Finish: 8/25/2016; 08:20-11:08	Drilling Methods: NQ-2"	Core Barrel:	NQ-2"
Boring Location: 12+68.1, 14.2 ft Lt.	Casing ID/OD: N/A	Water Level(ft):	None Observed

Hammer Efficiency Factor: 0.943

Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐

Definitions: (same as BB-BTAR-110)

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (#s /in. Pen. Driving Strength (psf or ROD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0	R1	60/58	0.00 - 5.00	ROD = 38%		NQ-2				Top of Bedrock at Elev. 26.9 feet. R1: Hard, fresh, coarse to very coarse grained, white and gray, PEGMATITE. Joints are very close to close, horizontal (vertical fracture at 8.5'), planar, rough, fresh, moderately wide. 5.3'-10.0': Quartz seam. Lost water at 9.3 ft. R1: Rock Mass Quality = Very Poor R1: Core Times (minsec): 0.0-5.0 ft (4:30), 5.0-7.0 ft (3:57), 7.0-8.0 ft (3:50), 8.0-9.0 ft (6:00), 9.0-10.0 ft (6:10) 97% Recovery R2: Hard, fresh, coarse to very coarse grained, white and gray, PEGMATITE. Joints are close, horizontal to low angle, planar, rough, fresh, tight to open to moderately wide. Rock Mass Quality = Fair R2: Core Times (minsec): 10.0-11.0 ft (6:50), 11.0-12.0 ft (5:38), 12.0-13.0 ft (3:53), 13.0-14.0 ft (4:08), 14.0-15.0 ft (5:25) 100% Recovery R3: Hard, fresh, coarse to very coarse grained, white and gray, PEGMATITE. Joints are close, horizontal to low angle, planar, rough, fresh, tight to open to moderately wide. Rock Mass Quality = Fair R3: Core Times (minsec): 10.0-11.0 ft (6:50), 11.0-12.0 ft (5:38), 12.0-13.0 ft (3:53), 13.0-14.0 ft (4:08), 14.0-15.0 ft (5:25) 100% Recovery	q_p=9.6 ksi
5	R2	60/58	5.00 - 10.00	ROD = 23%							
10	R3	60/60	10.00 - 15.00	ROD = 55%							
15								11.9		Bottom of Exploration at 15.0 feet below ground surface.	
20											
25											

Remarks:
#60-500 pounds of down pressure on Core Barrel.
Bedrock classifications made by Erik Friede (GZA) by observing rock core specimens in boxes after drilling.
As-drilled boring locations and ground surface elevations were surveyed by MaineDOT.

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

Page 1 of 1 — Boring No.: BB-BTAR-112

Maine Department of Transportation — Boring No.: BB-BTAR-113

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Frank J. Wood Bridge #2016 carries Route 201 over the Locations Brunswick-Topsham, Maine

WIN: 22603.00

Driller: MaineDOT	Elevation (ft.): 29.5	Auger ID/OD:	5" Solid Stem
Operator: Doggett/Burpee	Datum: NAVD88	Sampler:	Standard Split Spoon
Logged By: N. Sherwood	Rig Type: CME 45C	Hammer Wt./Fall:	140lb/30"
Date Start/Finish: 8/25/2016; 12:20-13:47	Drilling Method: Cased Wash Boring	Core Barrel:	NQ-2"
Boring Location: 13+21.3, 23.1 ft Lt.	Casing ID/OD: NW-3"	Water Level(ft):	None Observed

Hammer Efficiency Factor: 0.943

Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐

Definitions: (same as BB-BTAR-110)

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (#s /in. Pen. Driving Strength (psf or ROD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA	29.2		3-inch-layer HMA.	
								29.1		0.1 Brown, moist, loose, SAND, trace gravel, (Fill).	
5								23.1		6.0 Red-brown and light gray, moist, loose, SAND, little gravel, trace rootlets, (Fill).	
	10	24/20	5.00 - 7.00	3/4/3/3	7	11					
							10				
							13				
							35				
10	R1	72/55	9.20 - 15.20	ROD = 32%			0185 NQ-2	20.3		9.2 0145 blows for 0.2 feet. Top of Bedrock at Elev. 20.3 feet. R1: Hard, slightly weathered (brown, dull), fine to medium grained, light gray, GNEISS. Joints are extremely close from 9.2'-11.2' to close, horizontal to moderately dipping, planar, smooth, discolored (brown staining and Clay Infilling), open.	
								16.2		13.3 R1: 13.3'-13.8': PEGMATITE	
15								15.7		13.8 R1: 13.8'-15.2': GNEISS, same as above. R1: Rock Mass Quality = Poor R1: Core Times (minsec): 9.2-10.2 ft (3:55), 10.2-11.2 ft (2:30), 11.2-12.2 ft (4:15), 12.2-13.2 ft (4:20), 13.2-14.2 ft (3:46), 14.2-15.2 ft (4:08) 76% Recovery R2: Hard, fresh, fine to medium grained, light gray and white, foliated, GNEISS. Joints are moderately spaced, low angle, planar, smooth, discolored brown, staining), open. R2: Rock Mass Quality = Good R2: Core Times (minsec): 15.2-16.2 ft (2:21), 16.2-17.2 ft (2:31), 17.2-18.2 ft (3:30), 18.2-19.2 ft (3:19), 19.2-20.2 ft (3:30) 97% Recovery	
20								9.3		20.2 Bottom of Exploration at 20.2 feet below ground surface.	
25											
30											
35											
40											
45											
50											

Remarks:
Bedrock classifications made by Erik Friede (GZA) by observing rock core specimens in boxes after drilling.
As-drilled boring locations and ground surface elevations were surveyed by MaineDOT.

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

Page 1 of 1 — Boring No.: BB-BTAR-113

Maine Department of Transportation — Boring No.: BB-BTAR-114

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Frank J. Wood Bridge #2016 carries Route 201 over the Locations Brunswick-Topsham, Maine

WIN: 22603.00

Driller: MaineDOT	Elevation (ft.): 32.3	Auger ID/OD:	N/A
Operator: Doggett/Burpee	Datum: NAVD88	Sampler:	N/A
Logged By: N. Sherwood	Rig Type: CME 45C	Hammer Wt./Fall:	N/A
Date Start/Finish: 8/25/2016; 14:48-16:30	Drilling Methods: Cased Wash Boring	Core Barrel:	NQ-2"
Boring Location: 13+76.3, 23.5 ft Lt.	Casing ID/OD: NW-3"	Water Level(ft):	None Observed

Hammer Efficiency Factor: 0.943

Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐

Definitions: (same as BB-BTAR-110)

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (#s /in. Pen. Driving Strength (psf or ROD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							7			Drilling through trace roots; gravel in cuttings.	
							7				
5							9				
							16				
							25				
10							23				
							28				
							21				
15							22				
							21				
							33				
							29				
20	R1	60/59	12.50 - 17.50	ROD = 70%			040 NQ-2	19.8		12.5 040 blows for 0.5 feet. Top of Bedrock at Elev. 19.8 feet. R1: 12.5'-14.5': Hardy, slightly weathered, fine to medium grained, gray and white, foliated, GNEISS. Joints are close, low angle, planar, smooth, discolored brown and rusty stain, light gray Clay/Silt infilling, staining extends up beyond fracture), open to moderately wide, foliated.	
								17.8		14.5 R1: 14.5'-16.0': Hardy, slightly weathered, coarse grained, white to gray, PEGMATITE. Joints are moderately spaced, low angle, planar, rough to smooth, discolored (gold stain, white Clay Infilling), open,	
								16.3		16.0 R1: 16.0'-17.5': Hardy, slightly weathered, coarse grained, white and gray, GNEISS. Joints are moderately spaced, low angle, planar, rough to smooth, discolored, open. R1: Rock Mass Quality = Fair R1: Core Times (minsec): 12.5-13.5 ft (2:05), 13.5-14.5 ft (1:51), 14.5-15.5 ft (2:29), 15.5-16.5 ft (2:31), 16.5-17.5 ft (2:25) 98% Recovery R2: Hard, slightly weathered, fine to medium grained, gray and white, foliated, GNEISS. Joints are close, low angle, planar, smooth, discolored brown, friable), tight.	
25	R2	57/57	17.50 - 22.50	ROD = 40%				10.5		21.8 R2: 21.8'-22.5': PEGMATITE. R2: Rock Mass Quality = Poor R2: Core Times (minsec): 17.5-18.5 ft (1:40), 18.5-19.5 ft (1:20), 19.5-20.5 ft (1:20), 20.5-21.5 ft (1:33), 21.5-22.5 ft (2:26) 80% Recovery	
								9.8		22.5 Bottom of Exploration at 22.5 feet below ground surface.	
30											
35											
40											
45											
50											

Remarks:
Bedrock classifications made by Erik Friede (GZA) by observing rock core specimens in boxes after drilling.
As-drilled boring locations and ground surface elevations were surveyed by MaineDOT.

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

Page 1 of 1 — Boring No.: BB-BTAR-114

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ MANAGER	----	----
DESIGN-DETAILED	T. WHITE	MAY 2020
CHECKED-REVIEWED	C.SNOW	----
DESIGN2-DETAILED2	----	----
DESIGN3-DETAILED3	----	----
REVISIONS 1	----	----
REVISIONS 2	----	----
REVISIONS 3	----	----
REVISIONS 4	----	----
FIELD CHANGES	----	----

SIGNATURE

P.E. NUMBER

DATE

FRANK J WOOD
ANDROSCOGGIN RIVER - SAGADAHOC
BRUNSWICK - TOPSHAM CUMBERLAND

BORING LOGS

FIGURE 46 OF 128

Username: Terry.White Date:5/27/2020 Division: GEOTECH Filename: ...\MSTA\009_BORING LOGS2.dgn

90% PLANS

Maine Department of Transportation — BB-BTAR-201

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Frank J. Wood Bridge #2016 carries Route 201 over the
Location: Brunswick-Topsham, Maine

Boring No.: BB-BTAR-201
WIN: 22603.00

Driller:	New England Boring Contractors	Elevation (ft.):	45.9	Auger ID/OD:	
Operator:	M. Porter	Datum:	NAVD88	Sampler:	Split Spoon
Logged By:	E. Friede	Rig Type:	B-53	Hammer Wt./Fall:	140/30
Date Start/Finish:	12/7/18 – 12/7/18	Drilling Methods:	Drive & Wash	Hammer:	NO2
Boring Location:	N396321.0, E1091837.7	Casing ID/OD:	4/4.5", 3/3.5"	Water Level*:	None Observed
Hammer Efficiency Factor: 0.931		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.
MV = Unsuccessful Field Vane Shear Test Attempt.
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Reiter Cone
WOH = Weight of 140lb. Hammer
WOR = Weight of Rods or Casing
WOP = Weight of One Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(UC)}$ = Lab Vane Undrained Shear Strength (psf)
q_u = Unconfined Compressive Strength (ksf)
RQD = Rock Quality Designation
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency
N_{60} = Hammer Efficiency Factor/60%•N-uncorrected
S_r = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Prioritity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Rec./Rec. (in)	Sample Depth (ft.)	Blows / 6 in. Spoon Pen. (last 12 in. or RQD (%))	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0	1D	24/24	0.30 – 2.30	29-20-12-12	32	50	55A	45.6		ASPHALT – 0.3 Brown and gray, medium to coarse SAND, little Gravel, trace Silt. -FILL-	
5	2D	24/24	4.50 – 6.50	3-3-7-6	10	16	34			Brown, moist, fine to coarse SAND, trace Gravel, trace Silt, trace roots, trace weathered rock fragments at bottom. -FILL-	
							40	39.2		Top of rock. – 6.7	
							100/5"				
	R1	26/26	8.00 – 10.17	RQD = 0%			NO2			R1: Hard, slightly weathered, coarse to very coarse, white, PEGMATITE, joints are extremely close to close, low to high angle, planar to undulating, discolored, trace grey Silt infilling, open. Rock Mass Quality = Very Poor Recovery = 100% Rock Core Times (minssec): 8.0-9.0' (3:17), 9.0-10.0' (2:56), 10.0-10.5' (1:11) (7)	
10	R2	48/48	10.30 – 14.30	RQD = 42%				35.6		R2: Hard, fresh to slightly weathered, medium to coarse, grey and white foliated, GNEISS. Joints are very close to close, low angle to moderately dipping, discolored to slightly weathered, planar, tight. Rock Mass Quality = Poor Recovery = 100% Rock Core Times (minssec): 10.3-11.3' (1:28), 11.3-12.3' (1:34), 12.3-13.3' (2:26), 13.3-14.3' (1:56) – 10.3 R3: Hard, fresh to slightly weathered, medium to coarse, grey and white foliated, GNEISS. Joints are very close to close, low angle to moderately dipping, discolored to slightly weathered, planar, tight. Silt infilling at 17.3'. Rock Mass Quality = Fair Recovery = 8% Rock Core Times (minssec): 14.3-15.3' (2:45), 15.3-16.3' (1:25), 16.3-17.3' (1:16) – 14.3 R4: Recovery, remainder of core left in hole. Rock Mass Quality = Very Poor Recovery = 8% – 18.3 Bottom of Exploration at 18.3 feet below ground surface.	
	R3	36/36	14.30 – 17.30	RQD = 53%							
15	R4	12/1	17.30 – 18.30	RQD = 0%				27.6			
20											
25											

Remarks:
1. Casing refusal at 6.7', advance roller cone to 8.0'. Set up to core.
2. Attempt to retrieve R4 rock core unsuccessful.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

Page 1 of 1

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Boring No.: BB-BTAR-201

Maine Department of Transportation — BB-BTAR-202

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Frank J. Wood Bridge #2016 carries Route 201 over the
Location: Brunswick-Topsham, Maine

Boring No.: BB-BTAR-202
WIN: 22603.00

Driller:	New England Boring Contractors	Elevation (ft.):	2.0	Auger ID/OD:	N/A
Operator:	M. Porter	Datum:	NAVD88	Sampler:	Split Spoon
Logged By:	E. Friede	Rig Type:	B-53	Hammer Wt./Fall:	140/30
Date Start/Finish:	12/6/18 – 12/6/18	Drilling Methods:	Core Barrels	Hammer:	NO2
Boring Location:	N396378.2, E1091845.0	Casing ID/OD:	3/3.5"	Water Level*:	River Level
Hammer Efficiency Factor: 0.931		Hammer Type:	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions: (same as BB-BTAR-201)

Depth (ft.)	Sample No.	Rec./Rec. (in)	Sample Depth (ft.)	Blows / 6 in. Spoon Pen. (last 12 in. or RQD (%))	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0	R1 R2	8/6 18/12	0.00 – 0.67 0.70 – 2.20	RQD = 0% RQD = 0%				1.3 1.0 -0.2		R1: Hard, fresh to slightly weathered, medium grained, grey and white foliated, GNEISS. Joints are very close, low angle to moderately dipping, planar, discolored, open. Rock Mass Quality = Very Poor Recovery = 75% Rock Core Times (minssec): 0-0.7' (4:57) – 0.7 R2: 0.7'-1.0': Soft, highly weathered, grey, Rock fragments. – 1.0 R2: 1.0'-2.2': Hard, slightly weathered, medium grained, grey and white foliated, GNEISS. Joints are very close, low angle, planar to undulating, fresh, open. Rock Mass Quality = Very Poor Recovery = 67% Rock Core Times (minssec): 0.7-1.7' (6:30), 1.7-2.2' (4:50) – 2.2 Bottom of Exploration at 2.2 feet below ground surface.	
5											
10											
15											
20											
25											

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

Page 1 of 1

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Boring No.: BB-BTAR-202

Maine Department of Transportation — BB-BTAR-302A

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Frank J. Wood Bridge #2016 carries Route 201 over the
Location: Brunswick-Topsham, Maine

Boring No.: BB-BTAR-302A
WIN: 22603.00

Driller:	New England Boring Contractors	Elevation (ft.):	53.0	Auger ID/OD:	4.25" OD SSA
Operator:	Eric Baron	Datum:	NAVD 88	Sampler:	Standard Splitspoon
Logged By:	M. Johnsosu	Rig Type:	Mobile B53	Hammer Wt./Fall:	140#/30"
Date Start/Finish:	11/25/19-11/25/19	Drilling Method:	Drive & Wash	Core Barrels:	3" OD / 2.25" ID
Boring Location:	2+84.5, 27.9 ft Lt.	Casing ID/OD:	4"/4.25"	Water Level*:	Not Observed
Hammer Efficiency Factor: 0.937		Hammer Type:	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions: (same as BB-BTAR-201)

Depth (ft.)	Sample No.	Rec./Rec. (in)	Sample Depth (ft.)	Blows / 6 in. Spoon Pen. (last 12 in. or RQD (%))	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							55A			See boring BB-BTAR-302 for samples from 0'-6.0'. Advanced boring to 6.0' and continued sampling.	
5	4D	24/13	6.00 – 8.00	1-2-2-4	4	6				Brown, moist, medium stiff, Clayey SILT, little sand, little gravel, trace roots. (Fill).	
	5D	24/7	8.00 – 10.00	6-6-7-7	13	20	40			Brown, moist, very stiff, Clayey SILT, some gravel, little sand, brick fragments. (Fill).	
							34				
	6D	24/5	10.00 – 12.00	5-5-6-5	11	17	51			Brown and grey, dry, medium dense, Sandy GRAVEL, trace silt. (Fill); Brick and glass fragments in wash return, heavy rig chatter.	
							72				
							41	40.0		– 13.0	
10							35				
							72				
	7D	19/14	15.00 – 16.58	19-43-95-40/1"	158	247	84			Brown and grey, wet, very dense, SAND, some gravel, some silt, (Glacial Till).	
							100	36.4		– 16.6	
15	R1	60/55	17.20 – 22.20	RQD = 60%			N/A			Splitspoon refusal at 16.6', probable top of rock. Roller coned from 16.6'-17.2' and set up to core. R1: Hard, fresh, medium grained, grey and white, SCHIST with marginal Gneiss. Joints are extremely close to moderately close, planar, rough, fresh to discolored, tight to partially open, with silt and sand infilling. One horizontal joint. Rock Mass Quality = Fair Recovery = 92% Rock Core Times (minssec): 17.2-18.2' (2:12), 18.2-19.2' (1:54), 19.2-20.2' (1:53), 20.2-21.2' (1:47), 21.2-22.2' (2:01)	
	R2	60/60	22.20 – 27.20	RQD = 60%				25.8		R2: Hard to soft, fresh with highly weathered rock at 26.7', medium grained, SCHIST, with Pegmatite at 24.0'-24.6' and 25.9'-26.5'. Joints are extremely close to moderately spaced, moderately dipping, planar to undulating, rough, fresh to decomposed, tight to moderately wide, with silt and sand infilling. Rock Mass Quality = Fair Recovery = 98% Rock Core Times (minssec): 22.2-23.2' (1:59), 23.2-24.2' (1:52), 24.2-25.2' (1:40), 25.2-26.2' (1:33), 26.2-27.2' (1:34)	
20										– 27.2 Bottom of Exploration at 27.2 feet below ground surface.	
25											
30											
35											
40											
45											
50											

Remarks:
1. Automatic hammer NEBC #B-24 Energy Transfer Ratio = 0.937

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

Page 1 of 1

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Boring No.: BB-BTAR-302A

Maine Department of Transportation — BB-BTAR-301

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Frank J. Wood Bridge #2016 carries Route 201 over the
Location: Brunswick-Topsham, Maine

Boring No.: BB-BTAR-301
WIN: 22603.00

Driller:	New England Boring Contractors	Elevation (ft.):	54.8	Auger ID/OD:	4.25" OD SSA
Operator:	Eric Baron	Datum:	NAVD 88	Sampler:	Standard Splitspoon
Logged By:	M. Johnsosu	Rig Type:	Mobile B53	Hammer Wt./Fall:	140#/30"
Date Start/Finish:	11/25/19-11/25/19	Drilling Methods:	Drive & Wash	Core Barrels:	3" OD / 2.25" ID
Boring Location:	2+41.7, 20.5 ft Lt.	Casing ID/OD:	4"/4.25"	Water Level*:	Not Observed
Hammer Efficiency Factor: 0.937		Hammer Type:	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions: (same as BB-BTAR-201)

Depth (ft.)	Sample No.	Rec./Rec. (in)	Sample Depth (ft.)	Blows / 6 in. Spoon Pen. (last 12 in. or RQD (%))	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0	1D	24/8	0.00 – 2.00	1-3-6-4	9	14	55A			Brown and tan, moist, loose, SAND, little silt, little gravel, trace roots. (Fill).	
	2D	24/9	2.00 – 4.00	3-3-3-3	6	9				Brown, moist, loose, SAND, little gravel, little silt, trace brick fragments. (Fill).	
5	3D	24/4	4.00 – 6.00	1-2-1-2	3	5				Brown, moist, loose, SAND, little gravel, little silt, trace roots. (Fill).	
	4D	24/12	6.00 – 8.00	WOH-1-1-2	2	3				Brown and black, moist, soft, Clayey SILT, little sand, trace gravel, trace roots. (Fill).	
	5D	24/24	8.00 – 10.00	3-4-5-7	9	14				Brown and grey, moist, stiff, Clayey SILT, little sand, trace roots. (Fill).	
10	6D	24/24	10.00 – 12.00	6-8-10-10	18	28	41 58			Brown, moist, medium dense, Silty SAND. (Fill).	
							64	42.7		– 12.1	
	R1	60/54	12.40 – 17.40	RQD = 64%			100/6			Casing refusal at 12.1', probable top of rock, advanced roller bit to 12.4' and set up to core. R1: Hard to soft, fresh to moderately weathered, medium grained, grey and brown, SCHIST. Joints are very close to moderately spaced, moderately dipping, planar, rough, fresh to decomposed, partially open to moderately wide, silt and sand infilling. Rock Mass Quality = Fair Recovery = 90% Rock Core Times (minssec): 12.4-13.4' (1:42), 13.4-14.4' (1:05), 14.4-15.4' (1:07), 15.4-16.4' (1:19), 16.4-17.4' (1:16)	
15							NR				
	R2	60/60	17.40 – 22.40	RQD = 73%						R2: Hard, fresh to slightly weathered, medium grained, SCHIST. Joints are extremely close to moderately spaced, planar to undulating, rough, fresh to discolored, partially open to open, silt and sand infilling. Rock Mass Quality = Fair Recovery = 100% Rock Core Times (minssec): 17.4-18.4' (1:41), 18.4-19.4' (1:26), 19.4-20.4' (1:32), 20.4-21.4' (1:57), 21.4-22.4' (1:44)	
20								32.4		– 22.4 Bottom of Exploration at 22.4 feet below ground surface.	
25											

Remarks:
1. Casing stopped at 12.1', drilled down inside, heavy rig chatter, little loss of water.
2. Automatic hammer NEBC #B-24 Energy Transfer Ratio = 0.937

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

Page 1 of 1

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Boring No.: BB-BTAR-301

Maine Department of Transportation — BB-BTAR-302

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Frank J. Wood Bridge #2016 carries Route 201 over the
Location: Brunswick-Topsham, Maine

Boring No.: BB-BTAR-302
WIN: 22603.00

Driller:	New England Boring Contractors	Elevation (ft.):	53.0	Auger ID/OD:	4.25" OD SSA
Operator:	Eric Baron	Datum:	NAVD 88	Sampler:	Standard Splitspoon
Logged By:	M. Johnsosu	Rig Type:	Mobile B53	Hammer Wt./Fall:	140#/30"
Date Start/Finish:	11/25/19-11/25/19	Drilling Methods:	Drive & Wash	Core Barrels:	3" OD / 2.25" ID
Boring Location:	2+95.3, 30.4 ft Lt.	Casing ID/OD:	4"/4.25"	Water Level*:	Not Observed
Hammer Efficiency Factor: 0.937		Hammer Type:	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions: (same as BB-BTAR-201)

Depth (ft.)	Sample No.	Rec./Rec. (in)	Sample Depth (ft.)	Blows / 6 in. Spoon Pen. (last 12 in. or RQD (%))	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0	1D	18/7	0.20 – 1.70	8-6-5	11	17	55A	52.8		ASPHALT – 0.2 Bottom 5": Brown, dry, medium dense, S AND, some gravel, little silt, (Fill), No asphalt in sample.	
	2D	24/6	2.00 – 4.00	5-7-10-38	17	27				Brown, dry, medium dense, SAND, some gravel, little silt, (Fill).	
5	3D	24/12	4.00 – 6.00	5-3-3-2	6	9				Brown, moist, stiff, Clayey SILT, little sand, roots present, (Fill).	
								47.0		– 6.0 Bottom of Exploration at 6.0 feet below ground surface.	
10											
15											
20											
25											
30											
35											
40											
45											
50											

Remarks:
1. Driller encountered cobble in hole below sample 3D1 augers skewed around cobble. Hole abandoned; boring offset 2.0', see boring BB-BTAR-302A.
2. Automatic hammer NEBC #B-24 Energy Transfer Ratio = 0.937

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

Page 1 of 1

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Boring No.: BB-BTAR-302

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-22260(300)

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	----------	----------
DESIGN-DETAILED	T. WHITE	MAY 2020
CHECKED-REVIEWED	C.SNOW	----------
DESIGN2-DETAILED2	----------	----------
DESIGN3-DETAILED3	----------	----------
REVISIONS 1	----------	----------
REVISIONS 2	----------	----------
REVISIONS 3	----------	----------
REVISIONS 4	----------	----------
FIELD CHANGES	----------	----------

SIGNATURE

P.E. NUMBER

DATE

FRANK J WOOD
ANDROSCOGGIN RIVER - SAGADAHOC
BRUNSWICK - TOPSHAM CUMBERLAND

BORING LOGS

FIGURE

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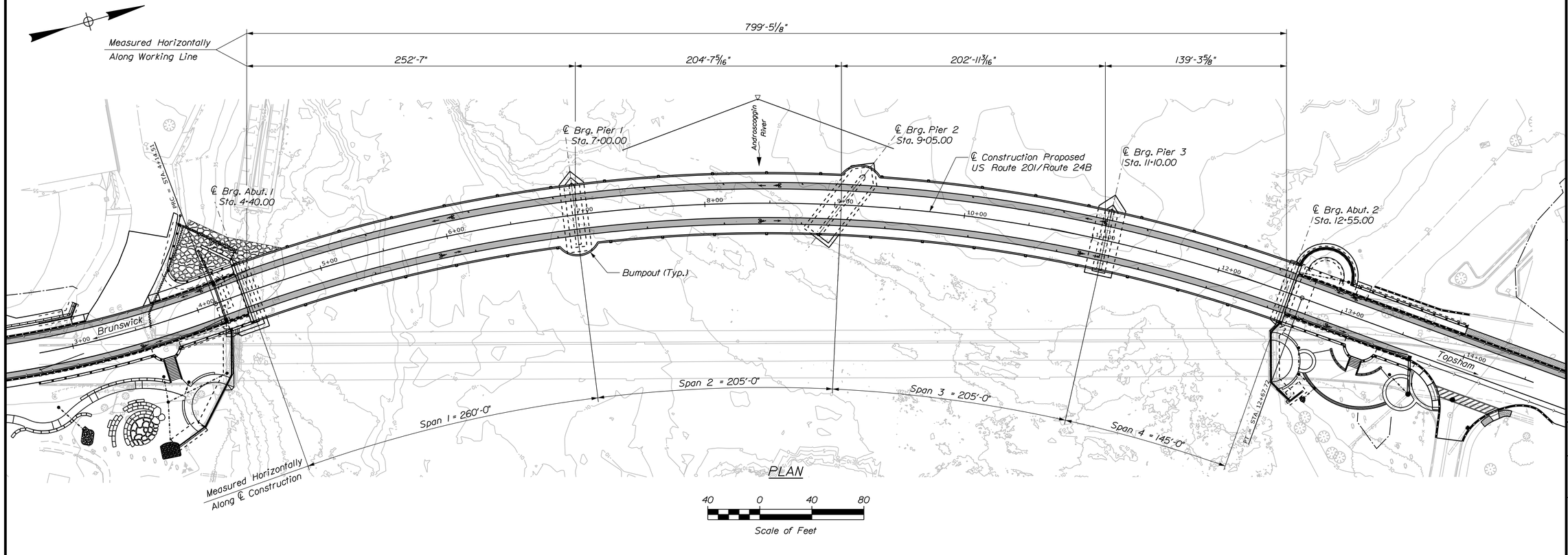
OF 128



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Division:

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	S.Morgan	BY	DATE
CHECKED-REVIEWED	D.Myers	S.Morgan	4/20
DESIGN2-DETAILED2		D.Myers	4/20
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

BRIDGE PLAN & ELEVATION

SHEET NUMBER

48

OF 128

90% PROGRESS PLANS

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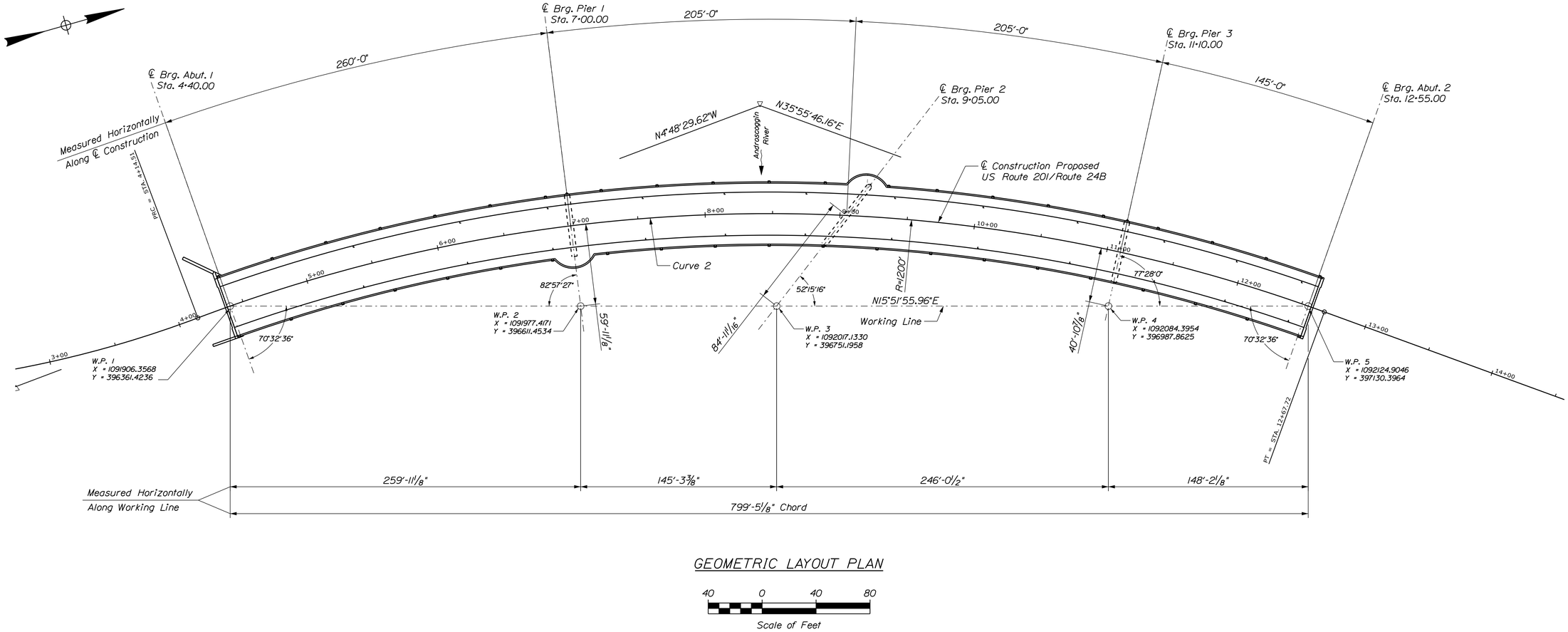

GEOMETRIC LAYOUT PLAN

40 0 40 80

Scale of Feet

Note:

1. Retaining walls and moment slabs on approaches not shown for clarity. See retaining wall key plan sheets for approach structure layouts not shown.

90% PROGRESS PLANS

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	S.Morgan	4/20	SIGNATURE
CHECKED-REVIEWED	J.Legere	4/20	
DESIGN2-DETAILED2			P.E. NUMBER
DESIGN3-DETAILED3			
REVISIONS 1			DATE
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

GEOMETRIC LAYOUT PLAN

SHEET NUMBER

49

OF 128

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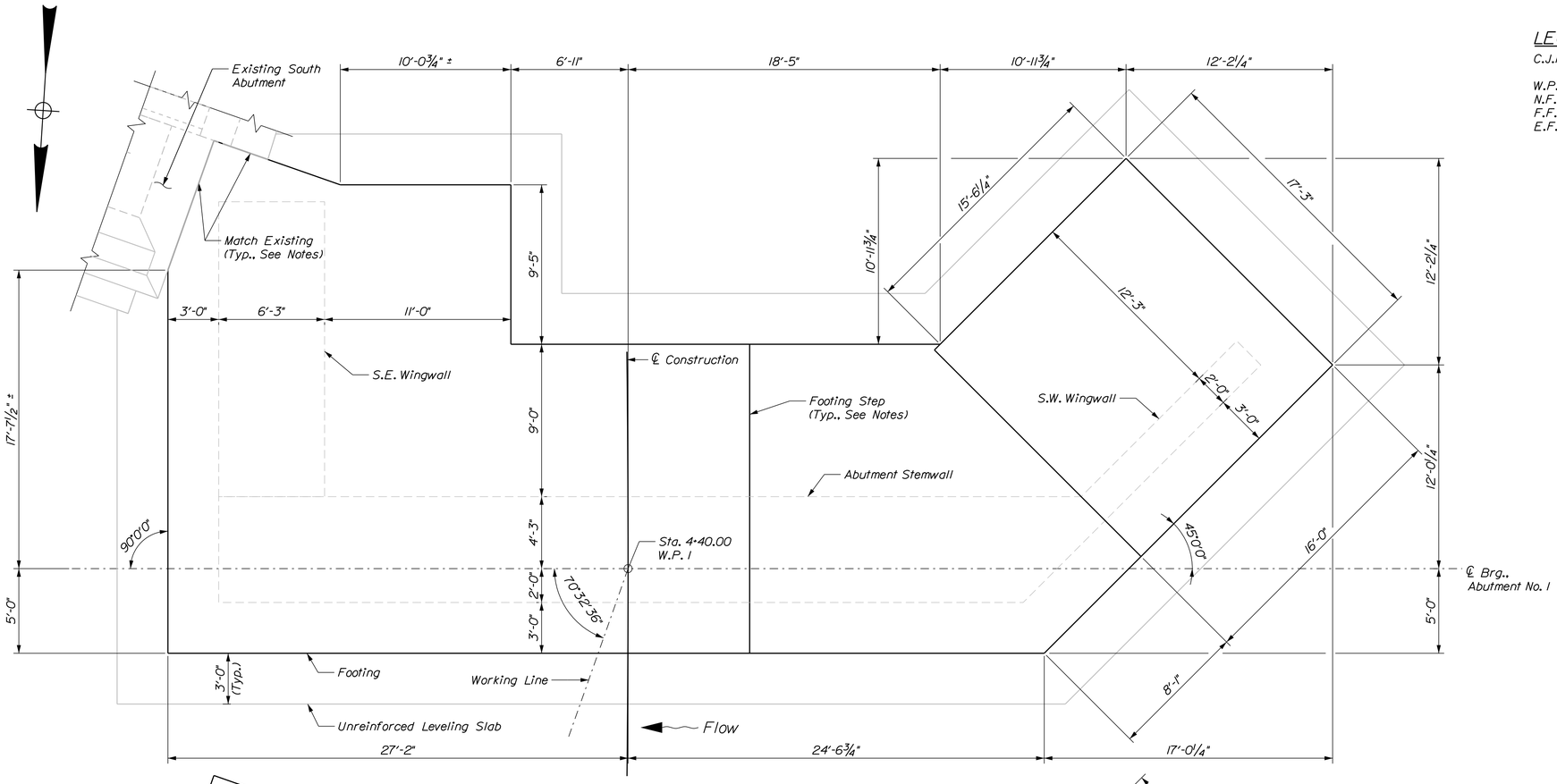
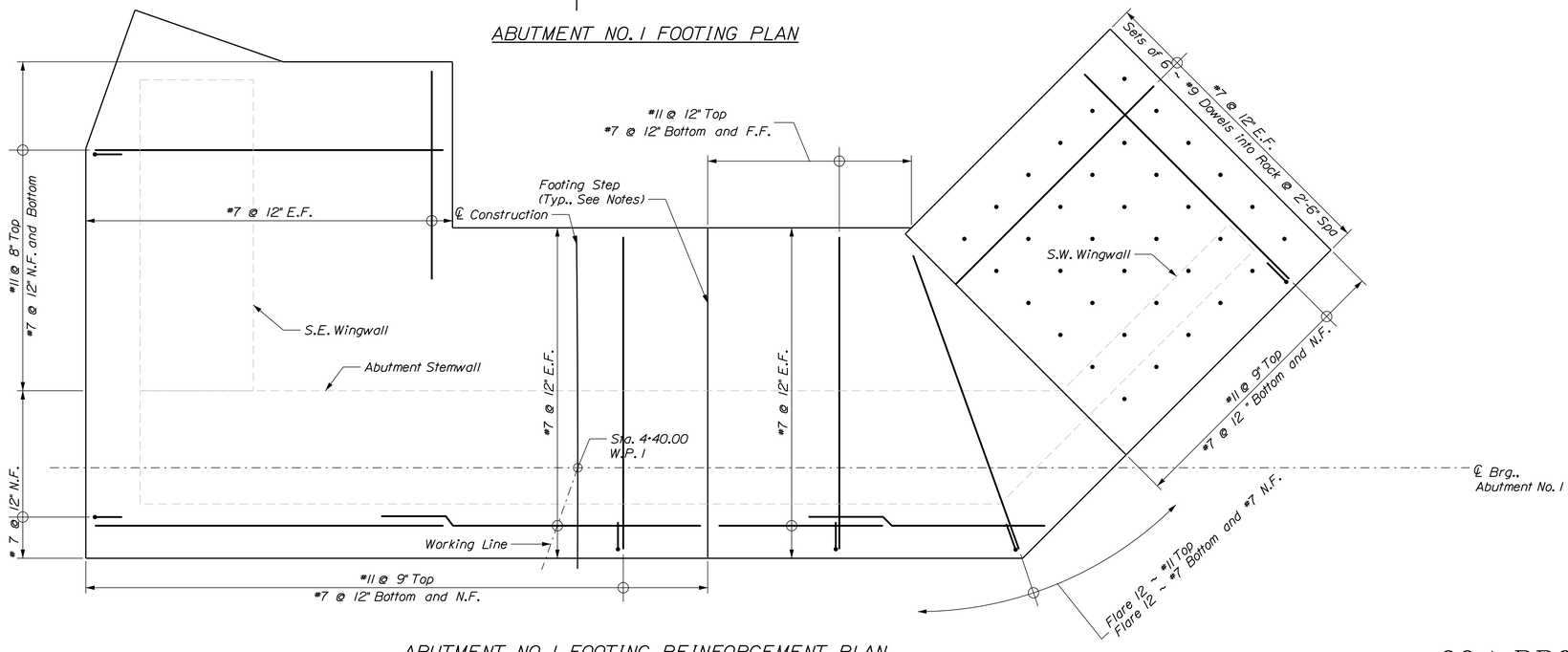


ABUTMENT NO. 1 FOOTING PLAN



ABUTMENT NO. 1 FOOTING REINFORCEMENT PLAN

LEGEND:

C.J.R. = Construction Joint. Roughen Surface ¼" profile Min. (Typ.)
W.P. = Working Point
N.F. = Near Face
F.F. = Far Face
E.F. = Each Face

FOOTING NOTES:

1. The maximum factored applied footing pressures are 26.4 ksf at Abutment No. 1 and 18.7 ksf at Abutment No. 2 at the strength limit state.
2. When the prepared bedrock surface is below the bottom of the footing elevation shown on the plans, a leveling slab shall be placed to the elevation shown on the plans. Unreinforced leveling slab shall be paid under item 502.565, "Concrete Fill". Alternatively, the footing thickness may be increased up to an additional 1 foot as approved by the Resident. If the footing thickness is increased, the top of the footing elevation shall be as shown on the plans, and no pay adjustment shall be made to item 502.219, "Structural Concrete Abutments and Retaining Walls.
3. Reinforcing steel shall have a minimum concrete cover of 3 inches in the footings unless noted otherwise.
4. Unreinforced leveling slab and footing, where applicable, shall be placed on sound bedrock cleaned of all weathered or fractured rock or loose soil. Prior to placing the footing, the bearing surface shall be washed with high pressure water and air, and smooth bedrock shall be roughened, as approved by the Resident. Where the bedrock surface slope exceeds 4H:1V, the bedrock surface shall be benched in level steps or made completely level. The bedrock bearing surface beneath the near face of abutments and walls shall have a level surface of 3 feet minimum, measured perpendicular to the face.
5. Concrete in footings shall be paid under item 502.219, "Structural Concrete, Abutments and Retaining Walls".
6. Factored bearing resistances of the bedrock material are 29 ksf for the strength and service limit states, and 64 ksf for the extreme event limit state.
7. Resident and/or Project Geotechnical Engineer shall confirm final bedrock subgrade surface prior to any leveling slab or footing concrete pours.
8. Bedrock elevations are anticipated to vary significantly at the Abutment No. 1 site. The footing step shown on the plans under the Abutment No. 1 stemwall is an optional step, with final location to be determined by the Resident and/or Project Geotechnical Engineer, prior to placement of any foundation concrete. The footing step shown at the S.W. Wingwall expansion joint will be required at that location and the footing shall not be placed below the elevations shown on the plans.
9. Dowels under the S.W. Wingwall footing shall be drilled and grouted into the prepared bedrock and shall project into the concrete footing, as shown on the plans, in a manner approved by the Resident.
10. The footing and leveling slab, as required, shall be cast against the existing abutment in areas where there is insufficent space to match the offsets noted on the plans. Prior to placing concrete, bond breakers shall be applied at interfaces between existing and proposed concrete. Reinforcing bars in areas impacted by the existing abutments shall be cut in field, as required, to maintain appropriate concrete cover.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

			DATE
PROJ. MANAGER	D. Bryant	BY	
DESIGN-DETAILED	R.Kravchuk	S.Morgan	4/20
CHECKED-REVIEWED	B.Toothaker	B.Toothaker	7/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

ABUTMENT NO. 1
FOOTING PLAN

SHEET NUMBER
50
OF 128

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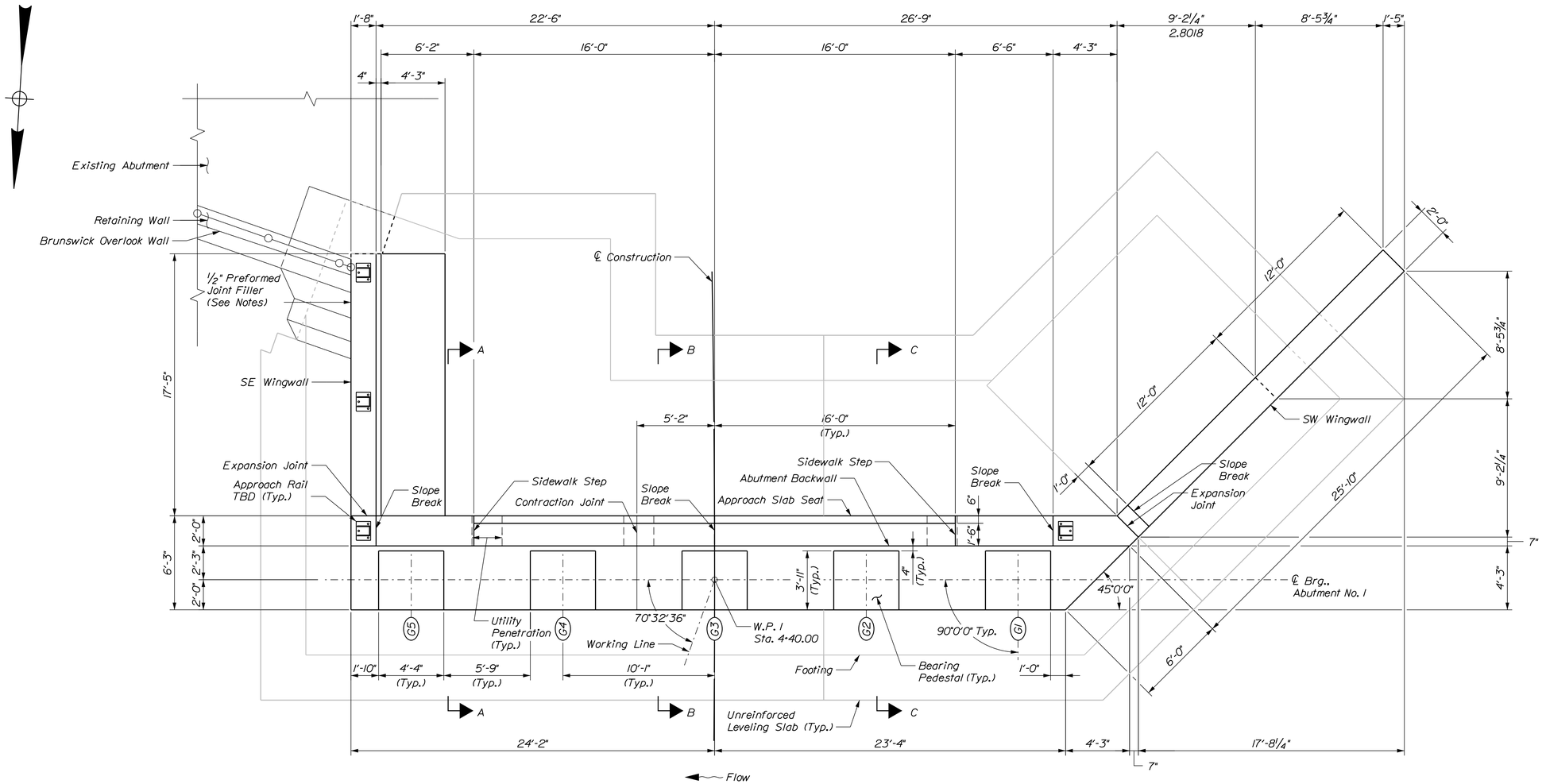

ABUTMENT NO. 1 PLAN

ABUTMENTS NOTES:

1. Reinforcing steel shall have a minimum concrete cover of 2 inches unless otherwise noted.
2. Cover joints where waterstops are not required in accordance with Standard Detail 502 (01).
3. Place 4 inch diameter drains in breastwall and wingwalls at 10 feet maximum spacing. The exact location will be determined by the Resident.
4. Construct French Drains behind the abutments and wingwalls in accordance with Standard Specification Section 512, French Drains.
5. Abutment, wingwalls, and their footings shall be backfilled with Granular Borrow. Pay limits will be the structural excavation limits in cut areas and a vertical plane located 10 feet behind the walls in fill areas.
6. The Contractor shall install curb vertical closed stirrups as shown on wingwall sheets prior to the placement of the curb concrete.
7. Pedestal Elevations are approximate. The actual elevations shall be adjusted to accommodate the bearings supplied by the Contractor. For additional information on the bearing heights used in setting pedestal elevations, see "Bearing Layout" sheet.
8. See "Abutment No. 1 Sections" or "Abutment No.2 Sections" for abutment sections.
9. Details for Expansion & Construction Joints are Shown in Standard Details Section 502(01).
10. Coordinate location of construction joint with placement of Expansion Device Finger-Joint.
11. Coordinate vertical location of utility and bridge lighting conduit blockouts with placement of bridge supported utility and bridge lighting conduits. Place to clear bottom of curtain trough by a minimum of 3". Adjust spacing of reinforcement at blockouts.
12. The top of wall elevations provided in abutment elevation views are provided to the concrete finish grade at all back face locations and to the final joint armor elevation or concrete finish grade elevation as appropriate at all front face locations. See Finger Joint Detail sheets for additional details.
13. For proposed Brunswick Overlook Park retaining wall notes and details, see sheet "Abutment No. 1, Overelook Park Wall".
14. Concrete in abutment stems, wingwalls, and footings will be paid under Item 502.219, "Structural Concrete Abutments and Retaining Walls". Concrete in unreinforced leveling slab shall be paid under Item 502.565, "Concrete Fill".
15. See "Abutment No.1 Footing Plan" for additional footing and unreinforced leveling slab information.

LEGEND:

C.J.R. = Construction Joint, Roughen Surface 1/4" profile Min. (Typ.)
W.P. = Working Point

90% PROGRESS PLANS

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	S.Morgan	4/20
CHECKED-REVIEWED	R.Kravchuk	
DESIGN2-DETAILED2	B.Toothaker	7/20
DESIGN3-DETAILED3	B.Toothaker	
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

ABUTMENT NO. 1 PLAN

SHEET NUMBER

51

OF 128

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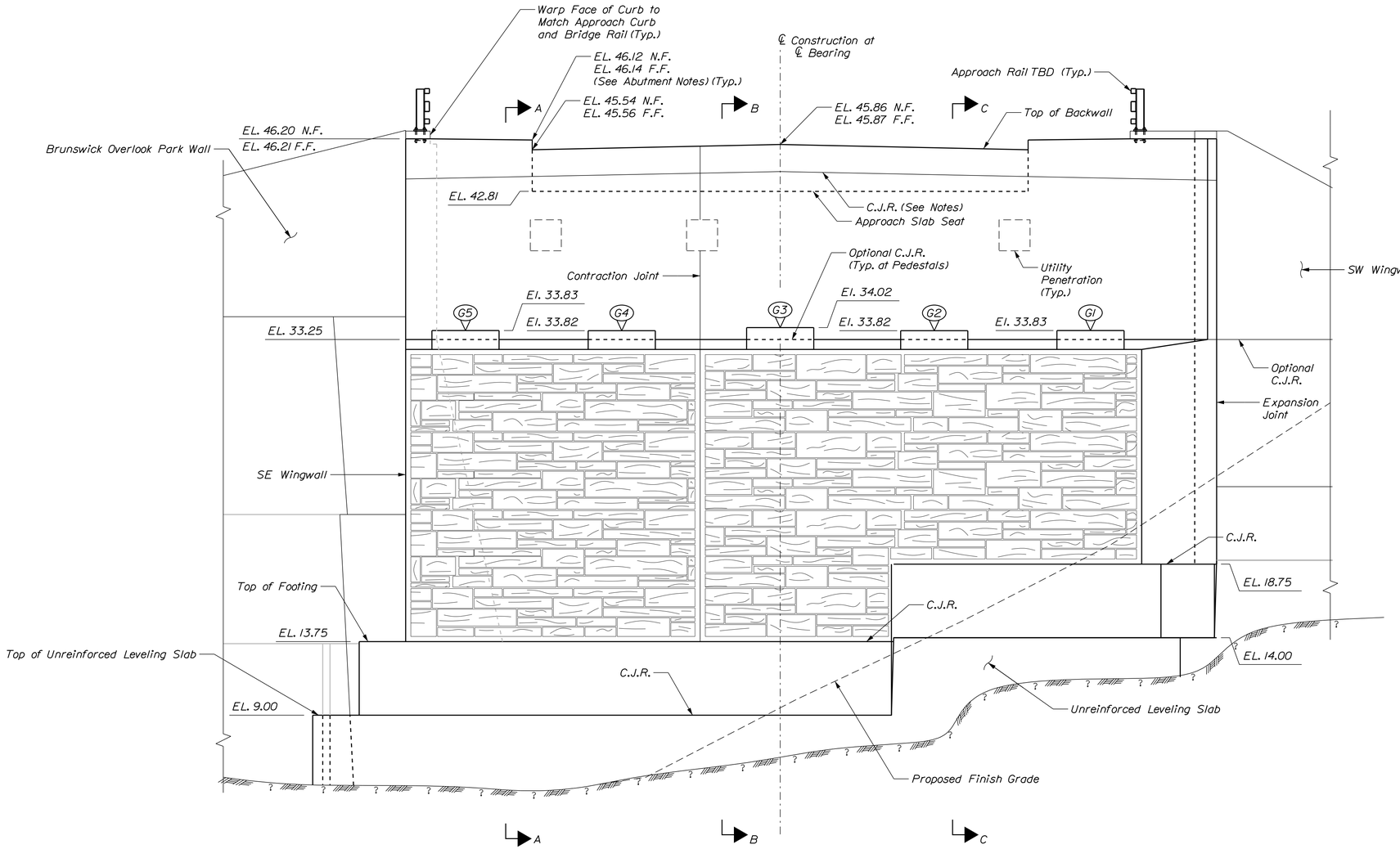


ABUTMENT NO 1 ELEVATION

Flow

Notes:

1. For additional notes and details, see sheet "Abutment No. 1 Plan".
2. For additional details on Proposed Brunswick Overlook Park Wall, see sheet "Abutment No. 1, Overlook Park Wall".
3. See Wingwall sheets for additional information and limits of architectural features.

LEGEND:

C.J.R. = Construction Joint, Roughen Surface 1/4" profile Min. (Typ.)
W.P. = Working Point
N.F. = Near Face
F.F. = Far Face

90% PROGRESS PLANS

TY·LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	R.Kravchuk	S.Morgan	4/20
CHECKED-REVIEWED	B.Toothaker	B.Toothaker	7/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

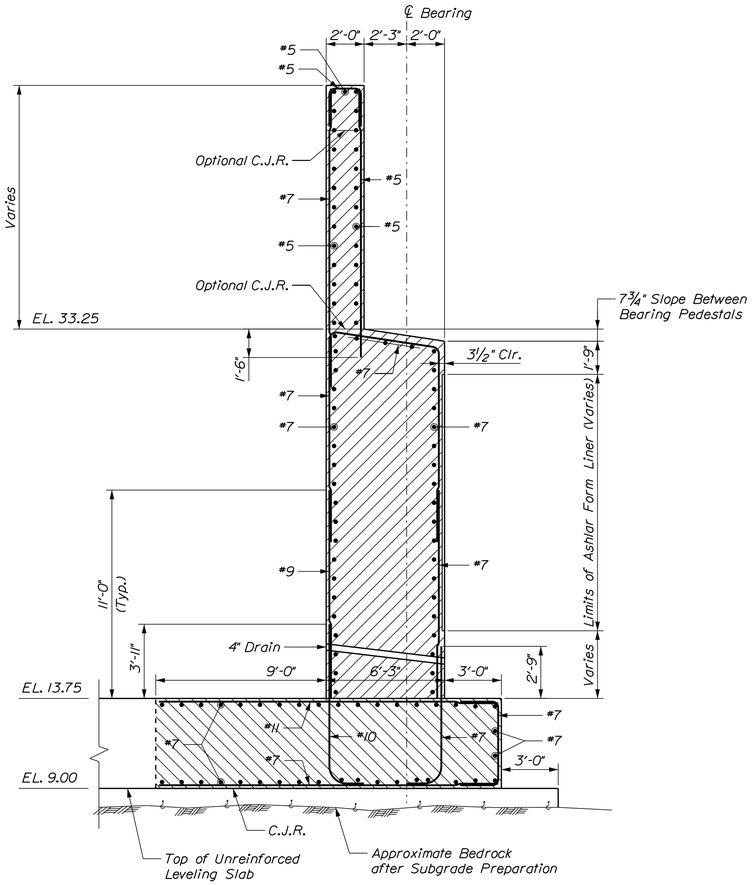
ABUTMENT NO. 1
ELEVATION

SHEET NUMBER

52

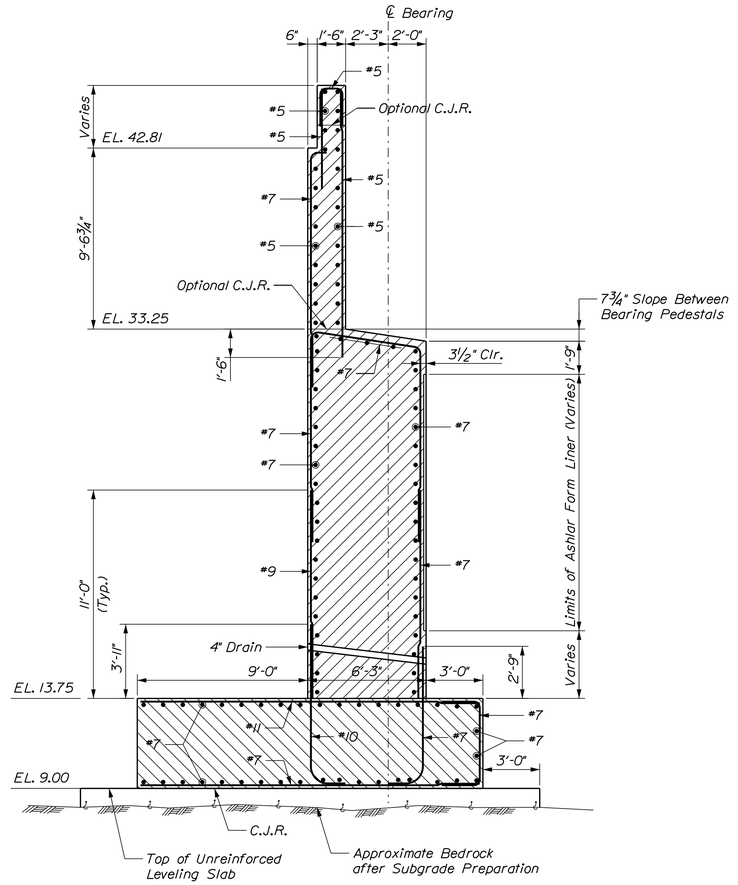
OF 128

Filename: ...\106180_7\062_Abut_1_Elev.dgn Division: Username: Date:7/23/2020

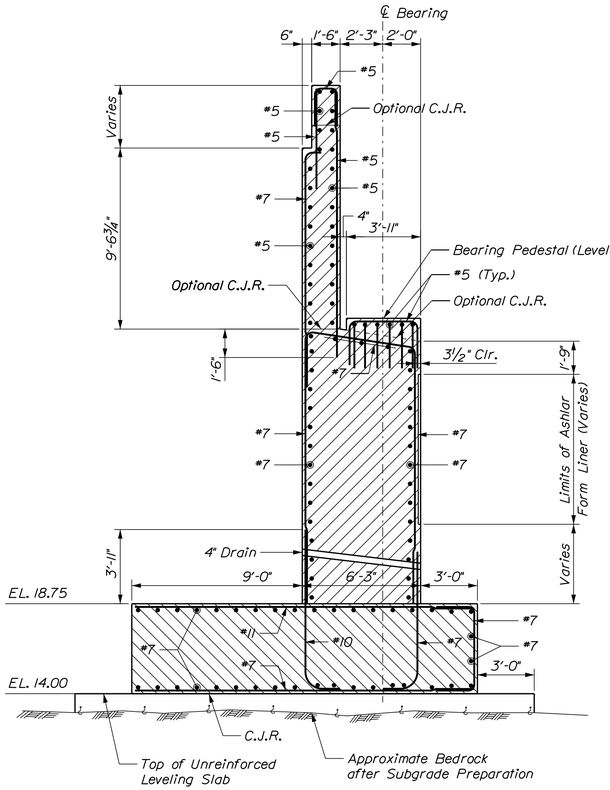


SECTION A-A

(Wingwall footing reinforcement not shown for clarity)



SECTION B-B



SECTION C-C

Note:
1. For additional notes and details, see sheet "Abutment No. 1 Plan".

LEGEND:

C.J.R. = Construction Joint, Roughen Surface ¼" profile Min. (Typ.)
W.P. = Working Point

MIN. LAPS:

#5 - 2'-7" (Horiz.)
2'-0" (Vert.)
#7 - 3'-7" (Horiz.)
2'-9" (Vert.)
#9 - 3'-11"

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	R.Kravchuk	S.Morgan	4/20
CHECKED-REVIEWED	B.Toothaker	B.Toothaker	7/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

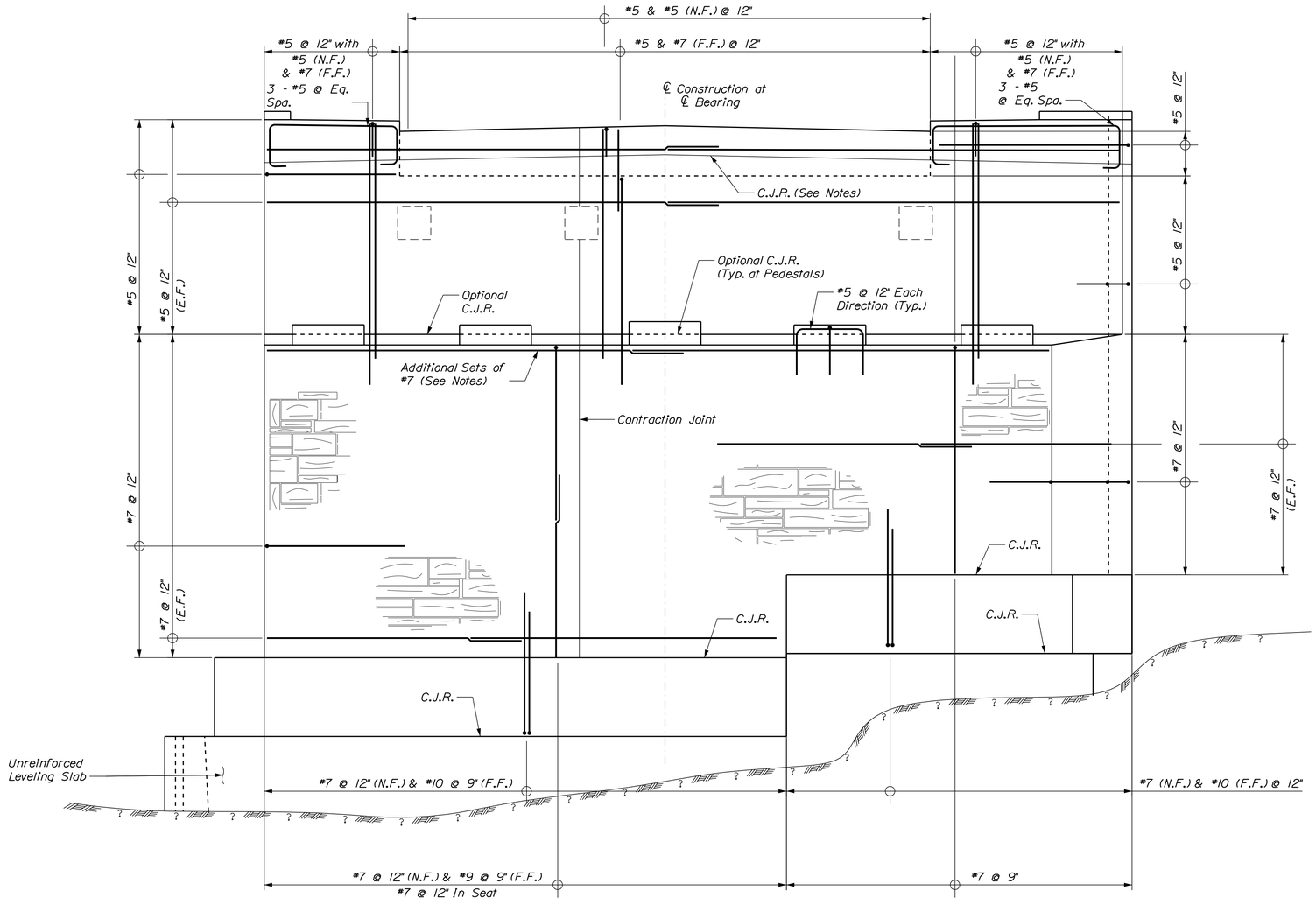
ABUTMENT NO. 1
SECTIONS

SHEET NUMBER

53

OF 128

Filename: ...\063_Abut_1_Sections.dgn Division: Username: Date:7/23/2020



ABUTMENT NO 1 ELEVATION

Flow

Notes:
1. For additional notes and details, see sheet "Abutment No. 1 Plan".
2. For additional details on footing reinforcement, see "Abutment No. 1, Footing Plan" sheet.

LEGEND:

C.J.R. = Construction Joint, Roughen Surface 1/4" profile Min. (Typ.)
W.P. = Working Point
N.F. = Near Face
F.F. = Far Face

90% PROGRESS PLANS

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STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016 — BRIDGE PLANS

			DATE
PROJ. MANAGER	D. Bryant	BY	
DESIGN-DETAILED	R.Kravchuk	S.Morgan	4/20
CHECKED-REVIEWED	B.Toothaker	B.Toothaker	7/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

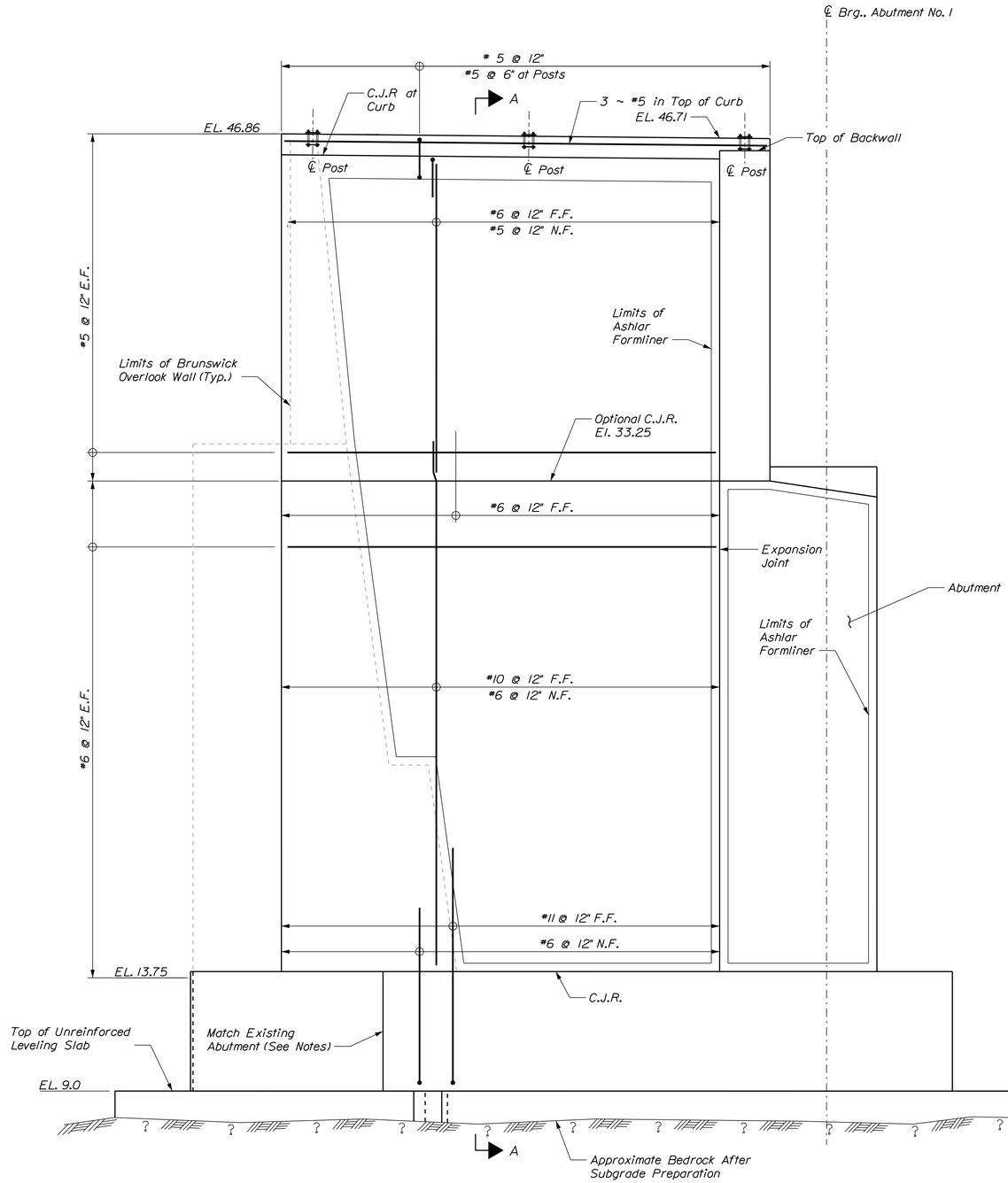
FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

ABUTMENT NO. 1 REINFORCEMENT

SHEET NUMBER

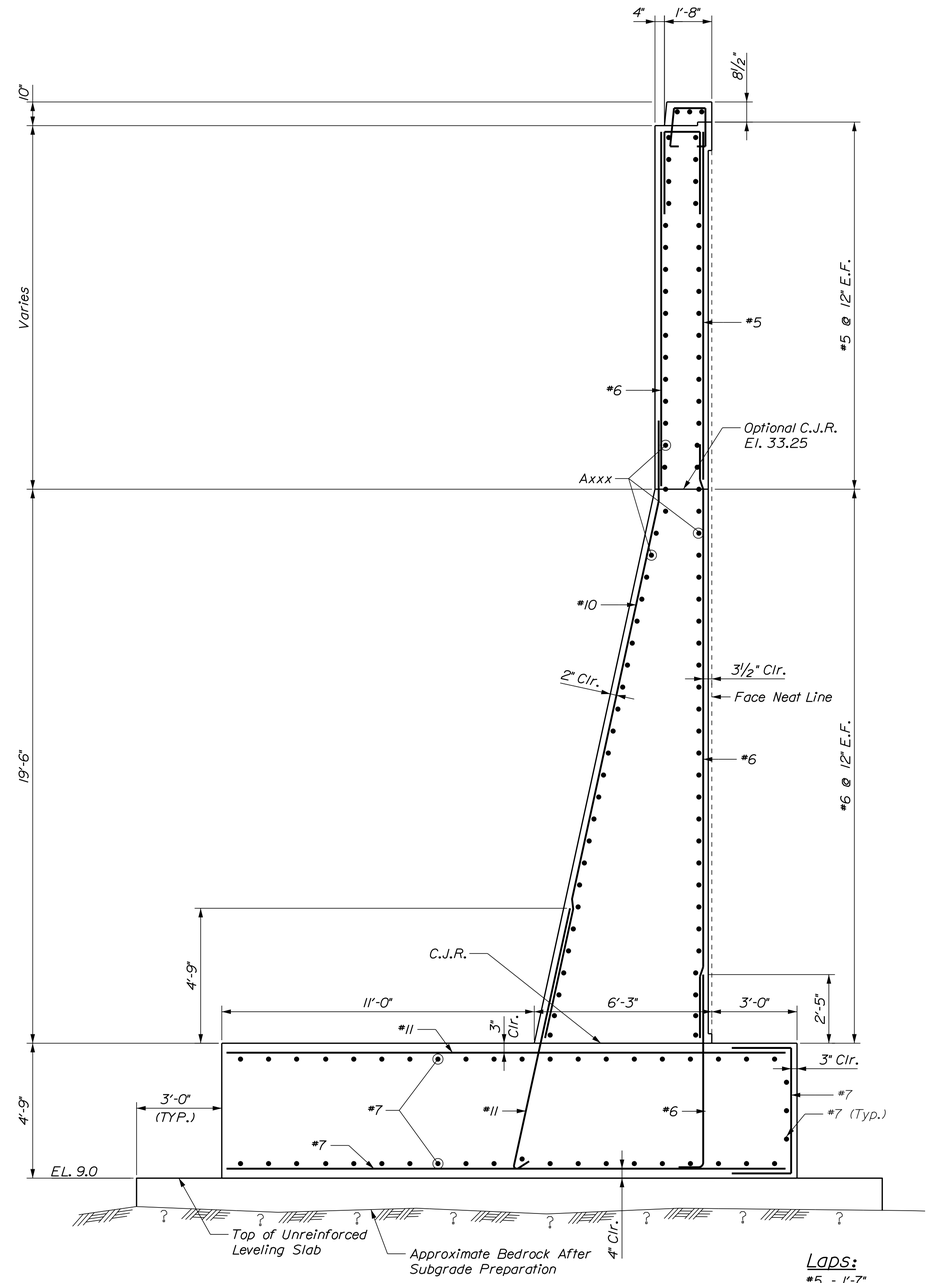
54

OF 128



SOUTHEAST WINGWALL ELEVATION

(Footing and Abutment reinforcement not shown for clarity)



SECTION A-A

Laps:
#5 - 1'-7"
#6 - 2'-5"
#10 - 5'-9"

LEGEND:

C.J.R. = Construction Joint, Roughen Surface ¼" profile Min. (Typ.)

N.F. = Near Face

F.F. = Far Face

E.F. = Each Face

NOTES:

1. Wingwall footing reinforcement will be placed to the inside of the abutment reinforcement.
2. Apply bond breaker between footing or unreinforced leveling slab and existing south abutment.
3. See "Abutment No. 1 Overlook Park Wall" for additional notes and details.
4. See Approach Rail Detail sheets for additional post and curb details.

90% PROGRESS PLANS

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WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	B.Smith	S.Morgan	4/20
CHECKED-REVIEWED	B.Toothaker	B.Toothaker	7/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

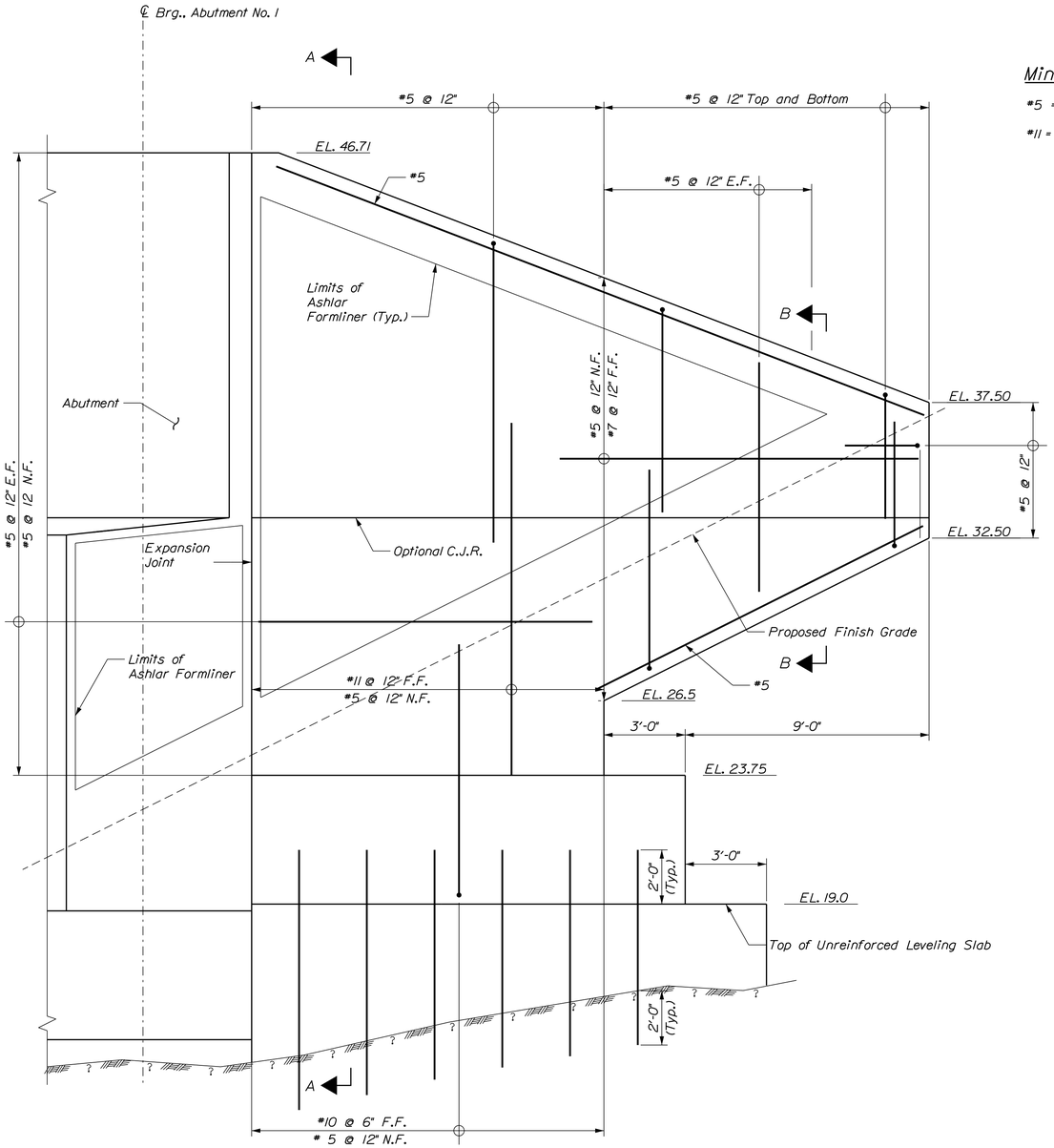
FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

ABUTMENT NO. 1
SOUTHEAST WINGWALL

SHEET NUMBER

55

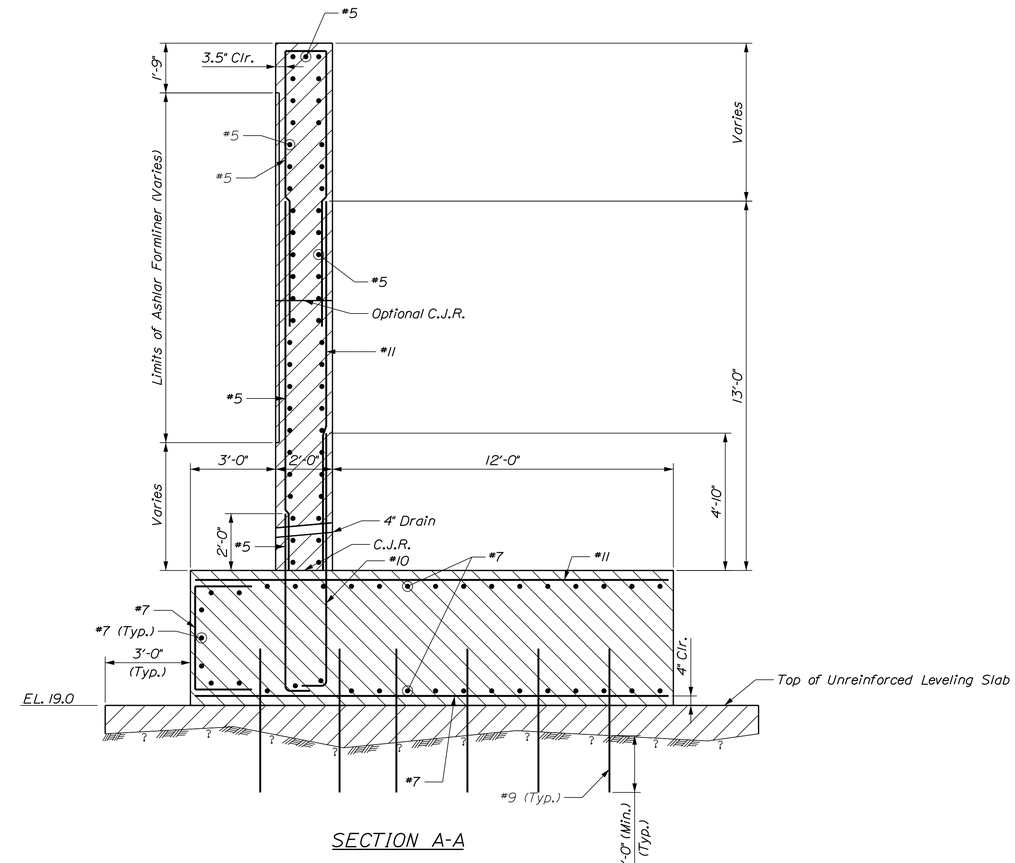
OF 128



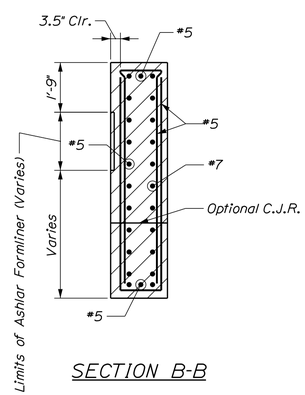
NORTHWEST WINGWALL ELEVATION

Min. Laps

#5 = 2'-0" (Vert.)
2'-7" (Horz.)
#11 = 5'-9"



SECTION A-A



SECTION B-B

LEGEND:

C.J.R. = Construction Joint, Roughen Surface 1/4" profile Min. (Typ.)

N.F. = Near face

F.F. = Far face

E.F. = Each face

NOTES:

1. For abutment notes see "Abument No. 1 Plan" sheet.
2. For footing notes see "Abutment No. 1 Footing" sheet.

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STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
D. Bryant		
PROJ. MANAGER	B.Smith	4/20
DESIGN-DETAILED	S.Morgan	7/20
CHECKED-REVIEWED	B.Toothaker	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

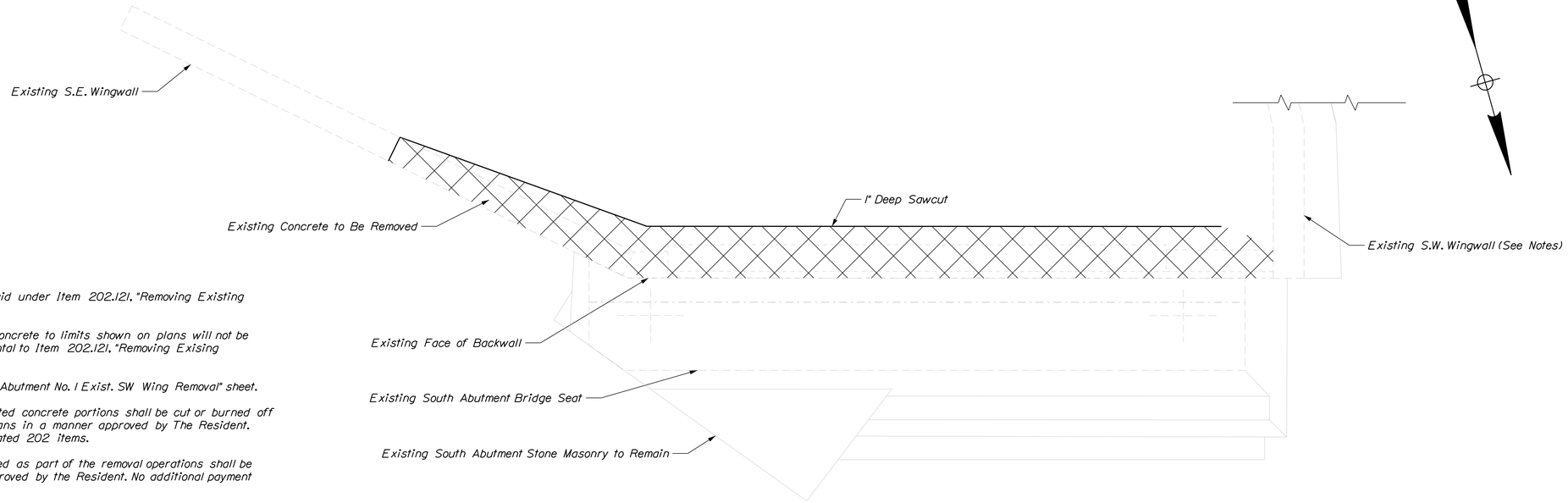
ABUTMENT NO.1
SOUTHWEST WINGWALL

SHEET NUMBER

56

OF 128

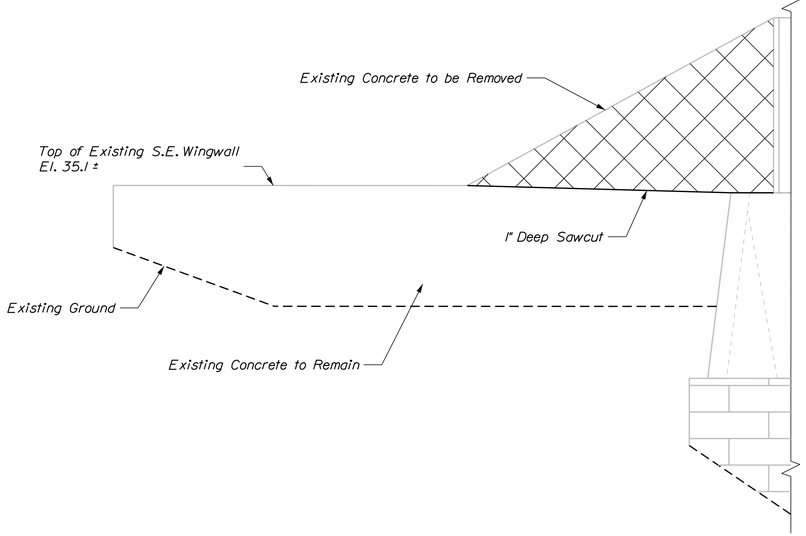
Filename: ...\066_Abut_1_SW_Wing_Wall_Elev.dgn Division: Username: Date:7/23/2020



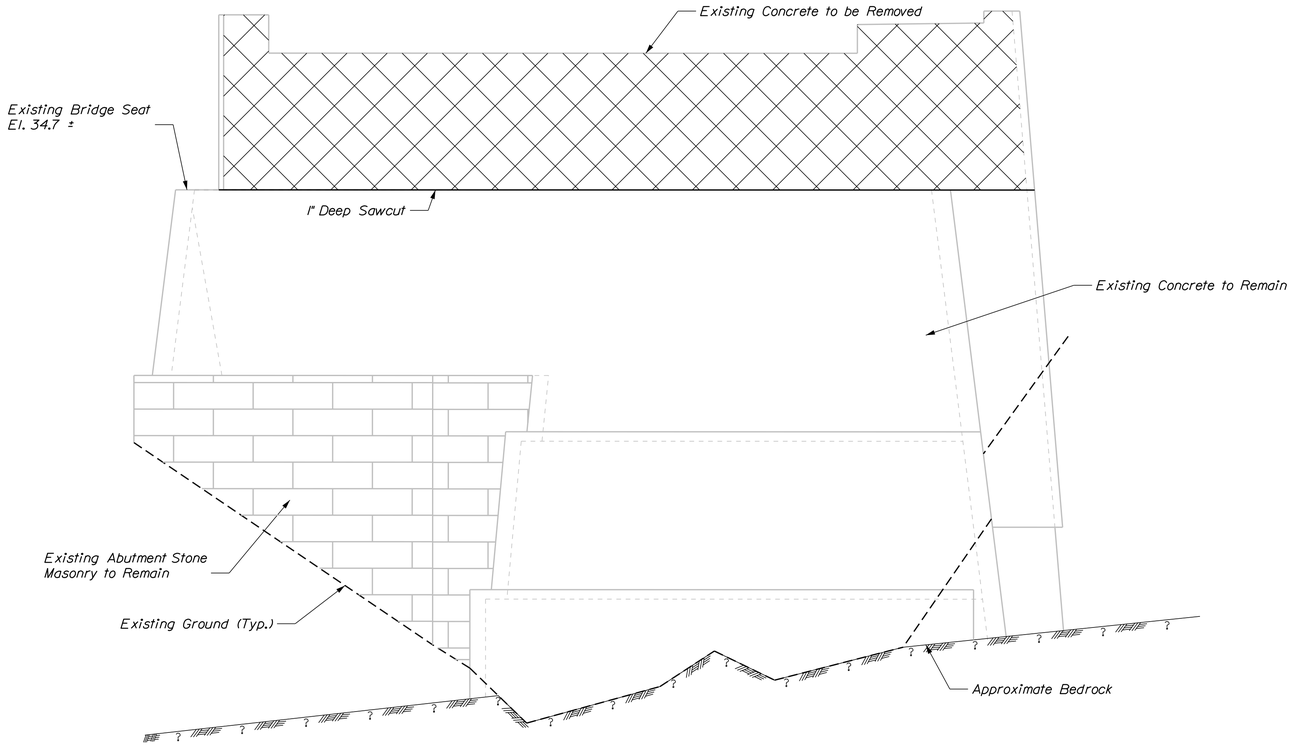
EXISTING SOUTH ABUTMENT REMOVAL PLAN

Notes:

1. Existing abutment concrete removal will be paid under Item 202.121, "Removing Existing Concrete"
2. Payment for excavation required to remove concrete to limits shown on plans will not be made directly, but shall be considered incidental to Item 202.121, "Removing Exising Concrete"
3. For removal limits on the S.W. Wingwall, see "Abutment No. 1 Exist. SW Wing Removal" sheet.
4. Existing reinforcement encountered in jacketed concrete portions shall be cut or burned off at or near the saw cut line shown on the plans in a manner approved by The Resident. Payment shall be considered incidental to related 202 items.
5. Existing concrete to remain which is damaged as part of the removal operations shall be repaired by The Contractor in a manner approved by the Resident. No additional payment shall be made.
6. The Resident and Contractor shall determine concrete repair areas for areas of damaged/delaminated concrete which will be visible in the final condition, prior to the start of removal operations. Payment for concrete repair areas will be made under 518 items.



EXISTING SOUTHEAST WINGWALL REMOVAL ELEVATION



EXISTING SOUTH ABUTMENT REMOVAL ELEVATION

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T.Y.LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	B.Toothaker	4/20
CHECKED-REVIEWED	B.Toothaker	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1	S.Morgan	
REVISIONS 2	B.Toothaker	
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

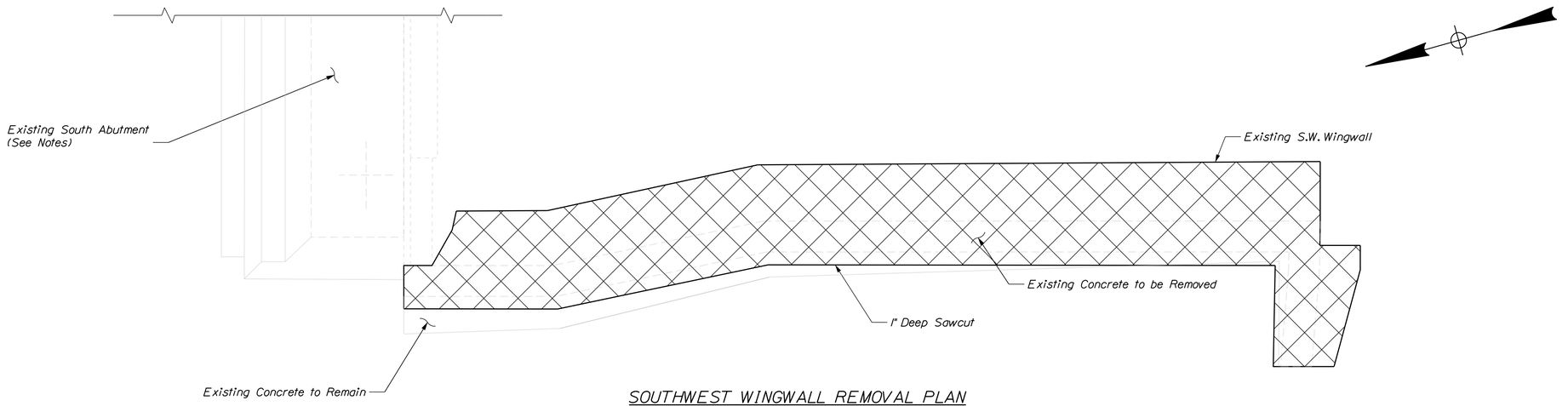
ABUTMENT NO.1
EXISTING ABUT. REMOVAL

SHEET NUMBER

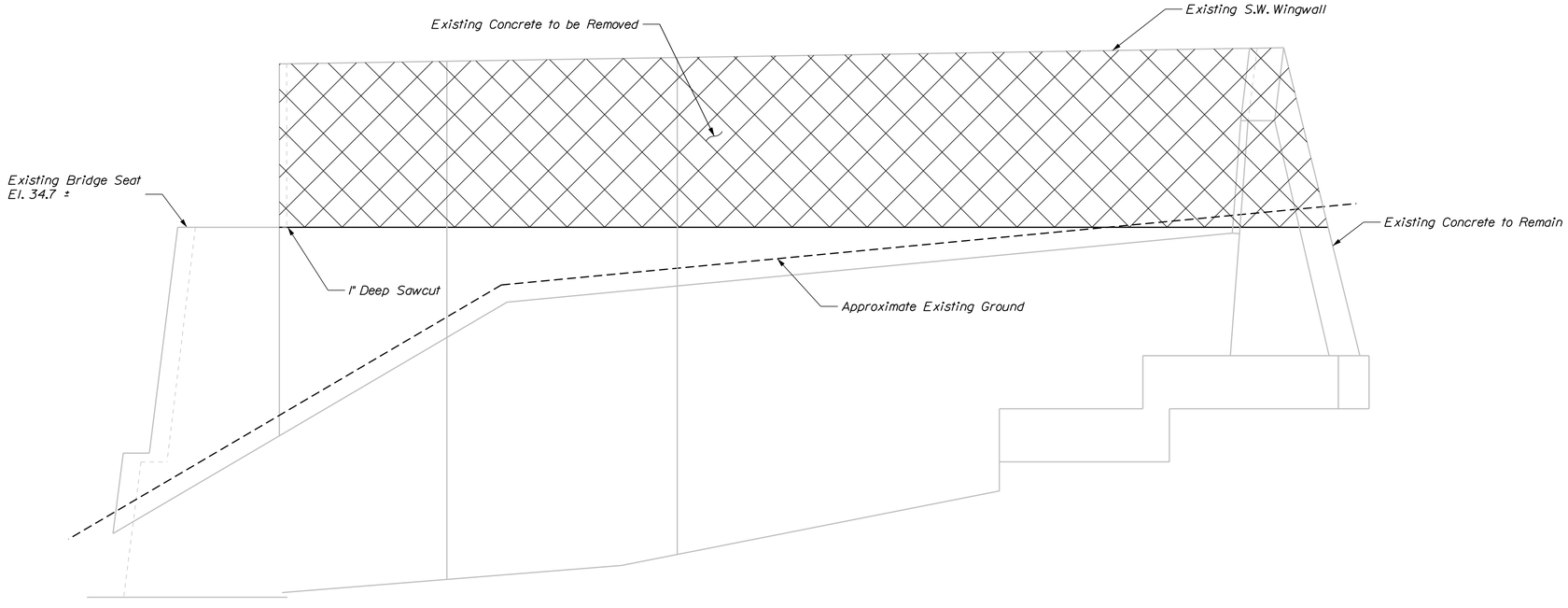
57

OF 128

Date:7/23/2020 Username: Division: Filename: ...\067_Abut_1_Removal.dgn



SOUTHWEST WINGWALL REMOVAL PLAN



SOUTHWEST WINGWALL REMOVAL ELEVATION

Notes:

For additional notes and details, see "Abutment No. 1 Existing Abut Removal" sheet.

90% PROGRESS PLANS

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant	BY	DATE
DESIGN-DETAILED	B.Toothaker	S.Morgan	4/20
CHECKED-REVIEWED		B.Toothaker	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

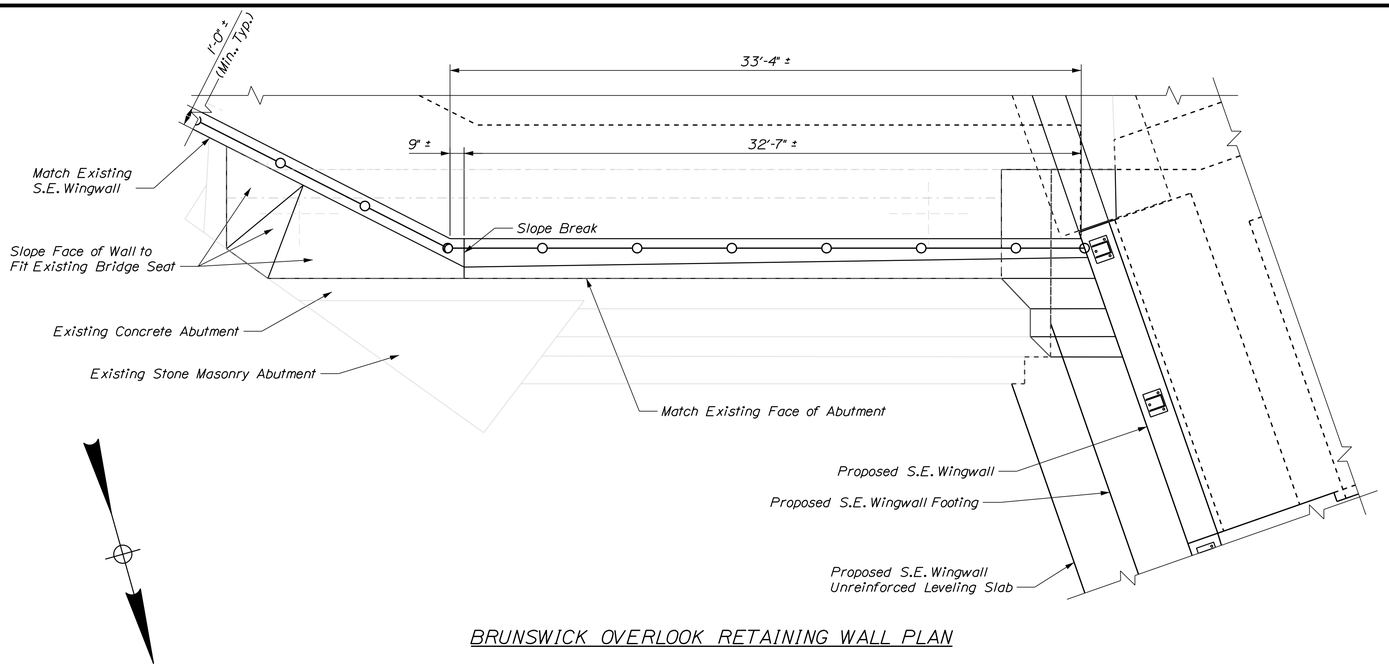
ABUTMENT NO. 1
EXIST. SW WING REMOVAL

SHEET NUMBER

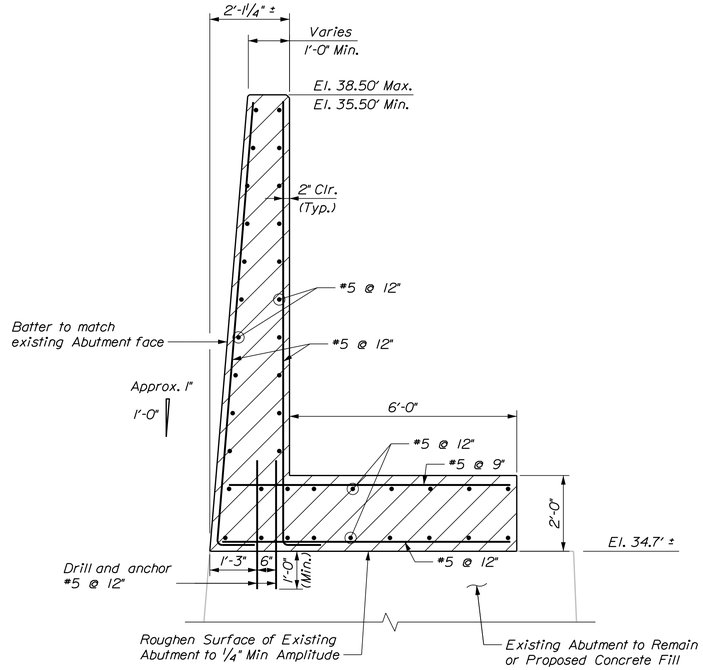
58

OF 128

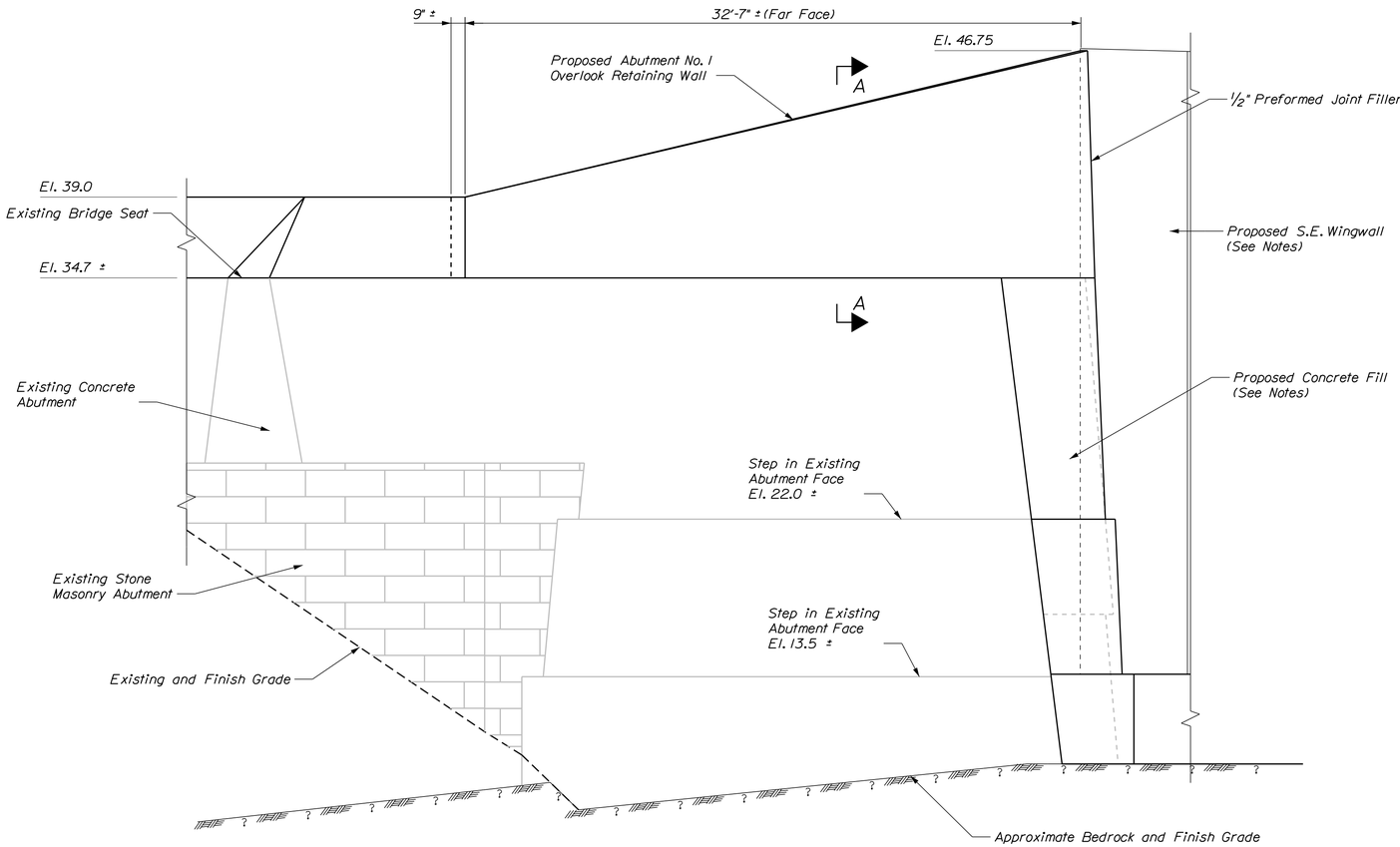
Filename: ...\068_Abut_1_Removal_SW_Wing.dgn Division: Username: Date:7/23/2020



BRUNSWICK OVERLOOK RETAINING WALL PLAN



SECTION A-A



BRUNSWICK OVERLOOK RETAINING WALL ELEVATION

Notes:

1. Concrete fill shall be placed as shown on the plans in areas adjacent to existing concrete abutments to remain, and proposed concrete abutments. The exposed face of the concrete fill shall match the batter and direction of the existing abutment to remain, up to the elevation of the adjacent bridge seat, as shown on the plans. Existing concrete interfaces with proposed concrete fill shall be roughened to 1/4" minimum amplitude, in a manner approved by the Resident. Roughened surfaces shall be cleaned with high pressure water and air in a manner approved by the Resident, prior to placement of any concrete fill. Payment for surface preparation and joint filler shall not be made directly, but shall be considered incidental to related 502 items. Payment for concrete fill will be made under Item 502.565, "Concrete Fill".

2. Existing concrete surfaces and proposed concrete fill surfaces which are within the bearing limits for the proposed retaining walls shall be roughened to 1/4" minimum amplitude, in a manner approved by the Resident. Roughened surfaces shall be cleaned with high pressure water and air in a manner approved by the resident prior to the placement of any wall concrete. Payment for surface preparation will not be made directly, but shall be considered incidental to related 502 items.

3. The dimensions provided on the plans are approximate. Final wall layout will match the batter and direction of the existing concrete abutment and proposed concrete fill on which the retaining wall will be cast.

4. In the sloped portions of the retaining wall, the park face of the wall will be held constant, with the top of wall thickness varying to match the batter of the existing abutment and concrete fill below.

5. The top of wall over the exsiting S.E. bearing pad shall match the direction of the adjacent S.E. wingwall and be a contant width. The exposed surface of the wall in this location shall slope to match the limits of the existing bridge seat. Level surfaces other than the top of wall as shown on the plans will not be allowed.

6. Preformed joint filler will be provided at all interfaces between the proposed abutments/wingwalls and the adjacent overlook park wall or concrete fill. Payment for joint filler will not be made directly, but shall be considered incidental to related 502 items.

7. All exposed concrete surfaces of existing and proposed concrete shall be coated with concrete protective coating to 1'-0" below finish grade.

90% PROGRESS PLANS

TY LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

		DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	B.Toothaker	S.Morgan 7/20
CHECKED-REVIEWED		B.Toothaker
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

ABUTMENT NO.1
OVERLOOK WALL PLAN 1

SHEET NUMBER

59

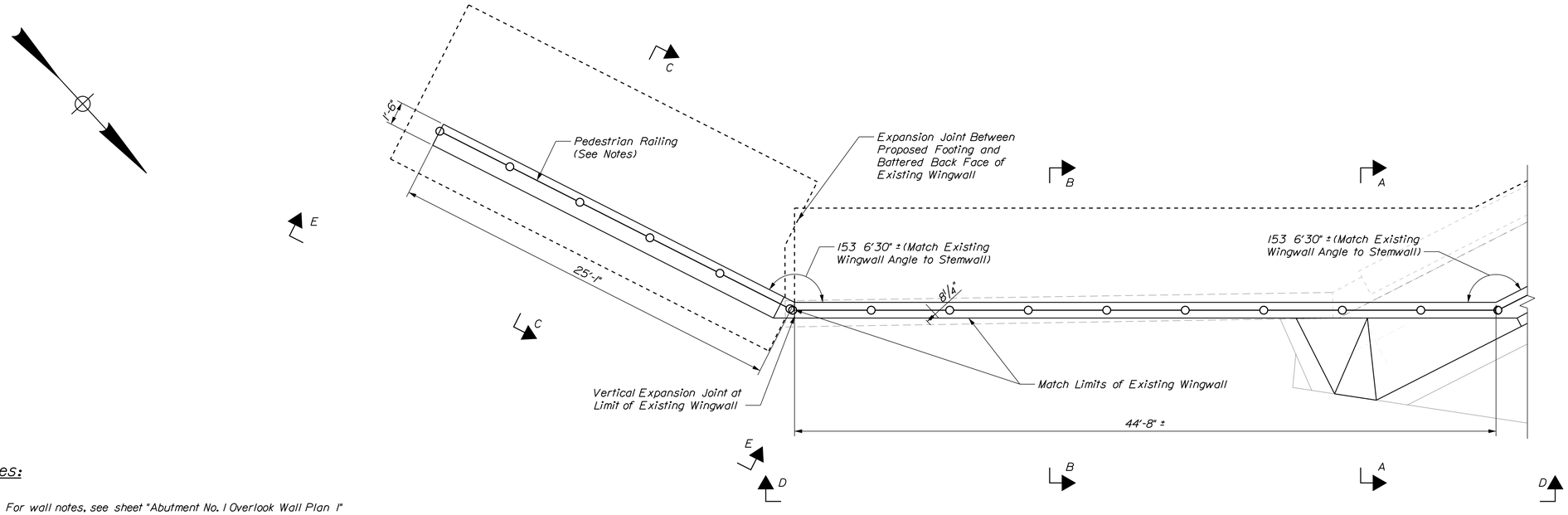
OF 128

Date:7/23/2020

Username:

Division:

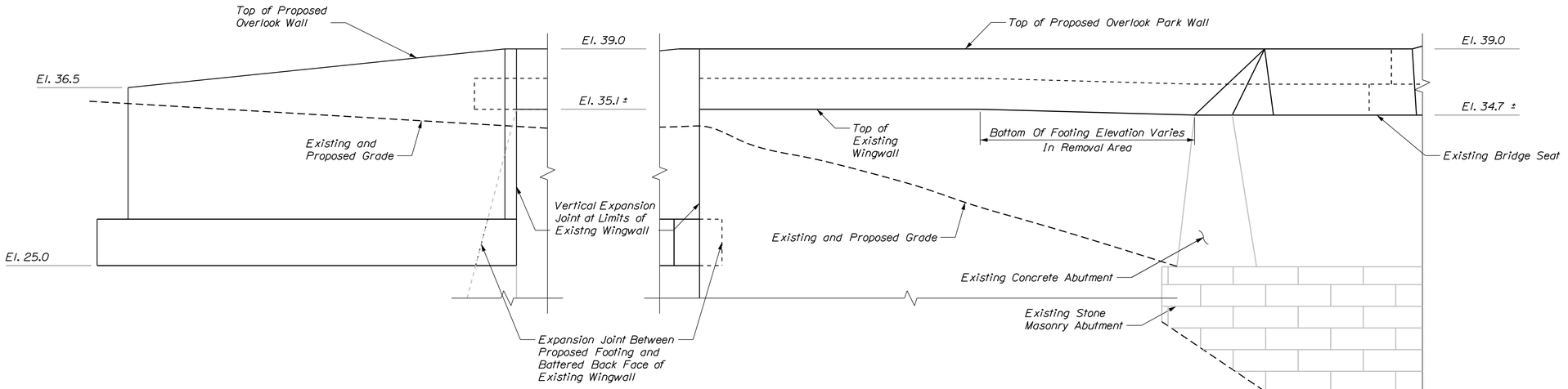
Filename: ...\069_Abut_1_Overlook_Wall_1.dgn



ABUTMENT 1 OVERLOOK WALL PLAN

Notes:

1. For wall notes, see sheet "Abutment No. 1 Overlook Wall Plan 1"
2. For railing details and grading, see landscaping sheets.
3. For sections A-A, B-B, and C-C, see sheet "Abutment No. 1 Overlook Wall Sections"



ELEVATION E-E

ELEVATION D-D

90% PROGRESS PLANS

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	B.Toothaker	S.Morgan	7/20
CHECKED-REVIEWED		B.Toothaker	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

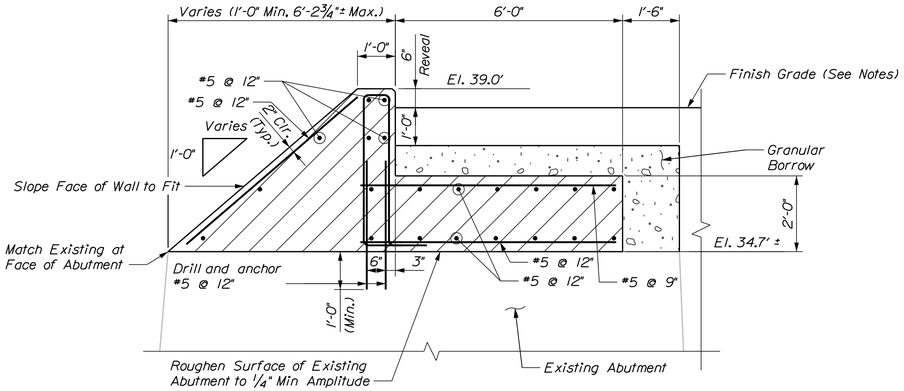
ABUTMENT NO.1
OVERLOOK WALL PLAN 2

SHEET NUMBER

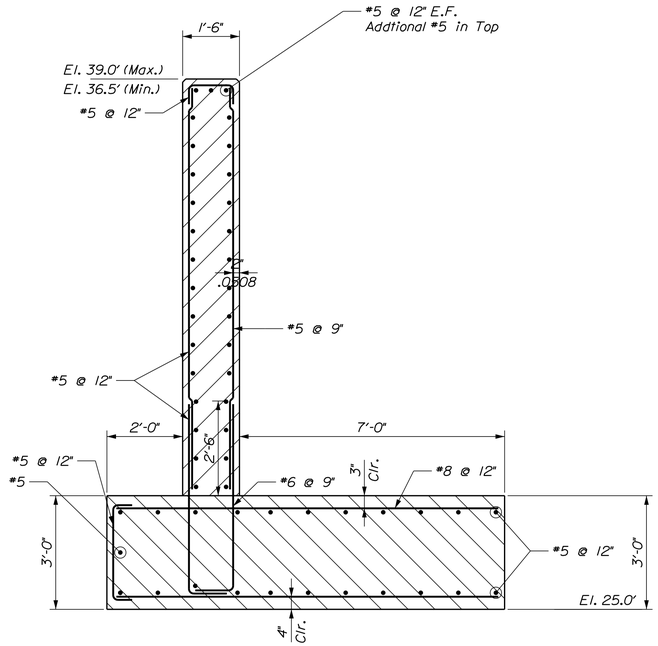
60

OF 128

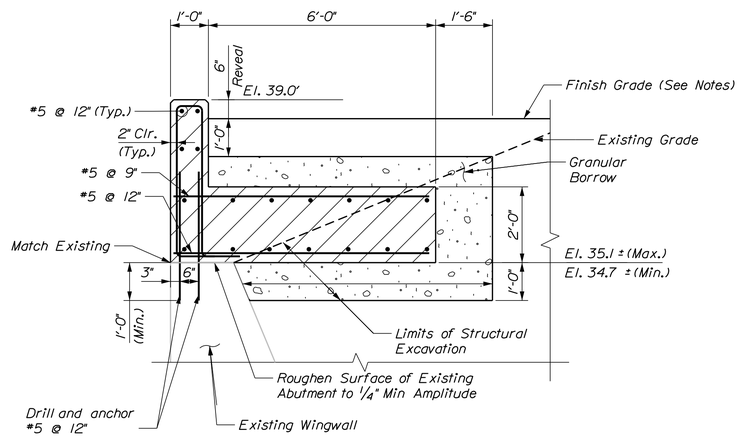
Filename: ...\070_Abut_1_Overlook_Wall_2.dgn Division: Username: Date:7/23/2020



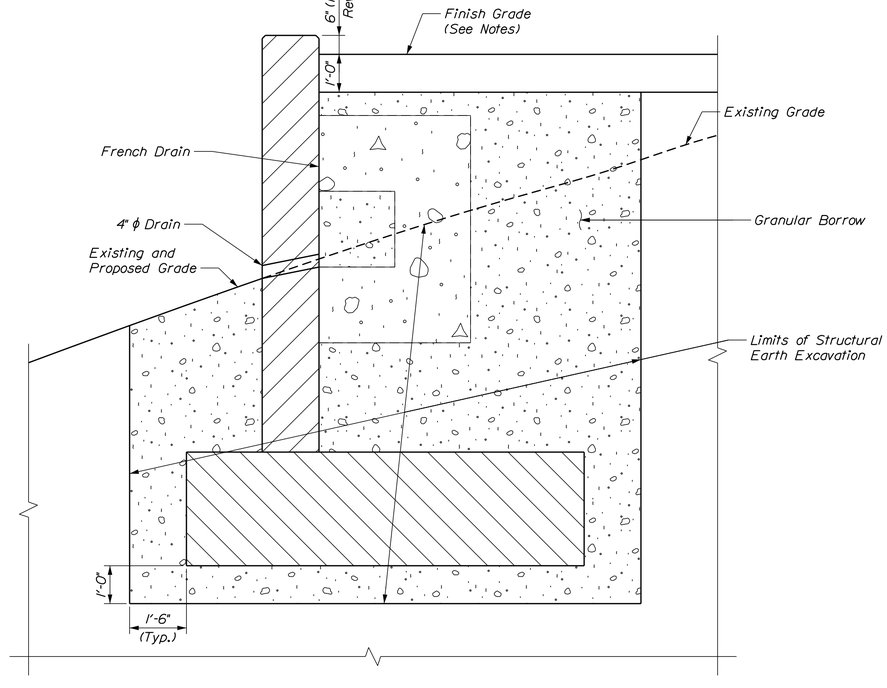
SECTION A-A



SECTION C-C (REINFORCEMENT)



SECTION B-B



SECTION C-C (EARTHWORKS)

LEGEND:

C.J.R. = Construction Joint, Roughen Surface 1/4" profile Min. (Typ.)
W.P. = Working Point

Notes:

1. For Wall Notes, see "Abutment No. 1 Overlook Wall I" sheet.
2. For railing and grading details, see Landscaping Sheets.

Min Laps:
#5 = 2'-0" (Vert)
2'-7" (Horz)
#6 = 2'-5" (Vert)
3'-1" (Horz)

STATE OF MAINE
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STP-2260(300)X

WIN 22603.00 BRIDGE PLANS

BRIDGE NO. 2016

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	B.Toothaker	7/20
CHECKED-REVIEWED	S.Morgan	
DESIGN2-DETAILED2	B.Toothaker	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

ABUTMENT NO. 1
OVERLOOK WALL SECTIONS

SHEET NUMBER
61
OF 128

90% PROGRESS PLANS

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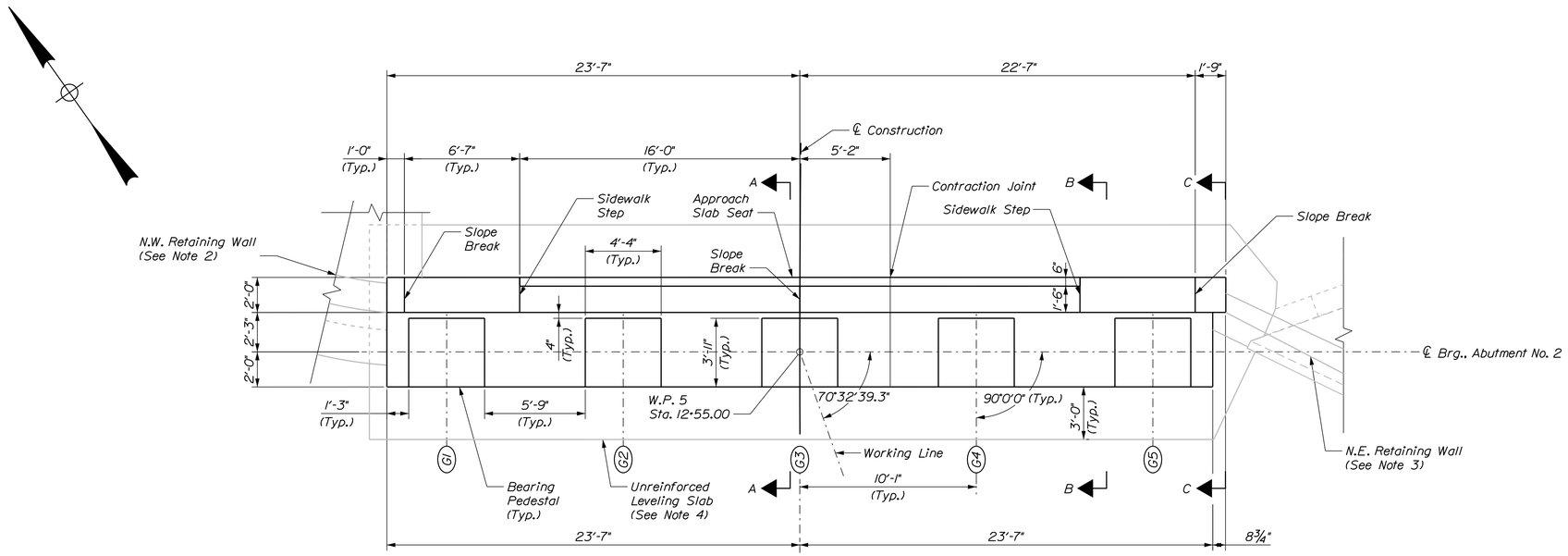
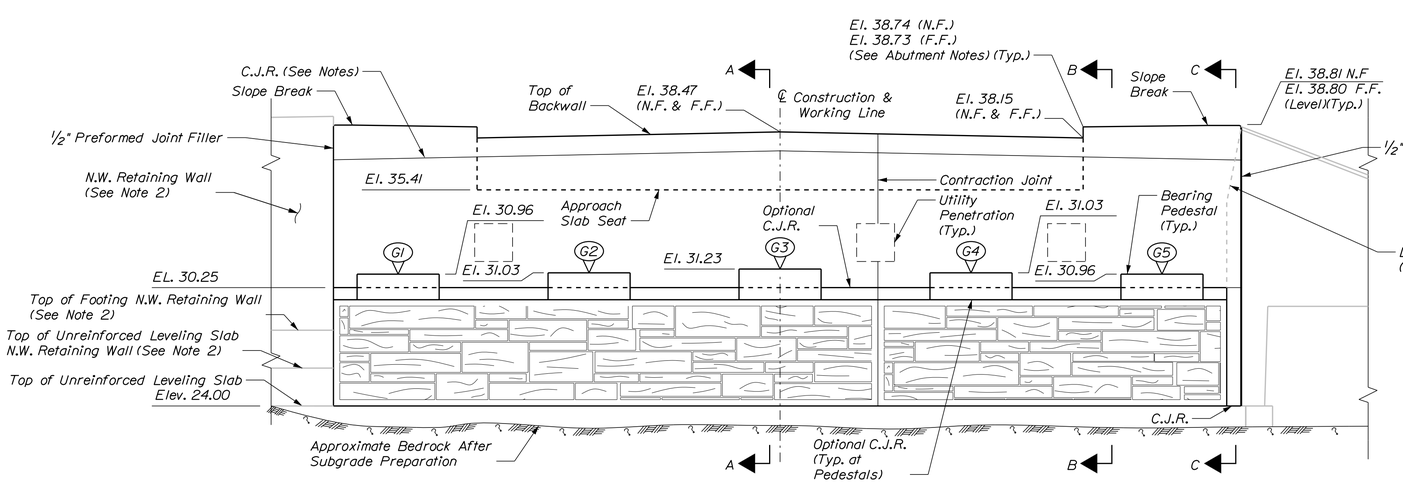
Filename: ...\071_Abut_1_Overlook_Wall_Sections.dgn Division: Username: Date:7/23/2020



ABUTMENT NO. 2 PLAN

Flow



ABUTMENT NO. 2 ELEVATION

Flow

Notes:

1. For Abutment Notes, see "Abutment No. 1 Plan" sheet.
2. For N.W. Retaining Wall notes and details, see sheet 37, "Retaining Wall No. 1".
3. For N.E. Retaining Wall notes and details, see sheet 27, "Abutment No. 2 Overlook Park Wall".
4. Coordinate placement of leveling slab with removal limits for Existing Abutment No. 2 and with reconstruction limits for N.E. Retaining Wall. Unreinforced leveling slab will be cast against existing abutment after removal of the interfering wingwall. A bond breaker shall be applied between existing and fresh concrete.

LEGEND:

C.J.R. = Construction Joint, Roughen Surface ¼" profile Min. (Typ.)
W.P. = Working Point

90% PROGRESS PLANS

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

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WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	R.Kravchuk	S.Morgan	4/20
CHECKED-REVIEWED	B.Toothaker	B.Toothaker	7/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

ABUTMENT NO. 2
PLAN & ELEVATION

SHEET NUMBER

62

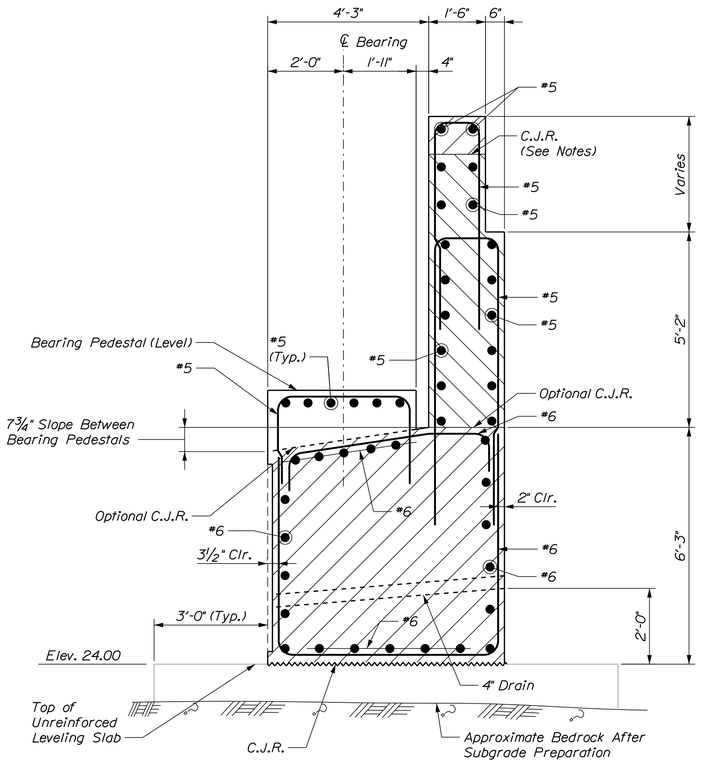
OF 128

Username:

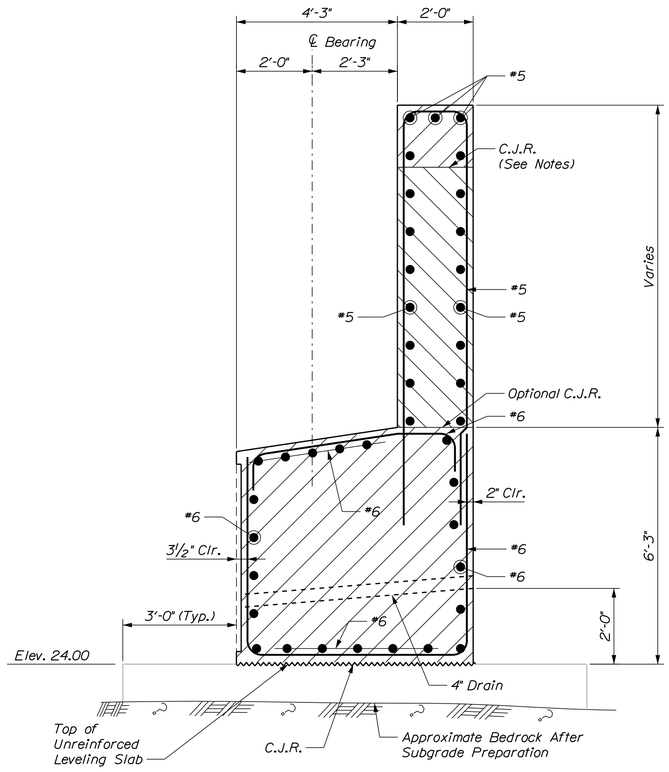
Date:7/23/2020

Division:

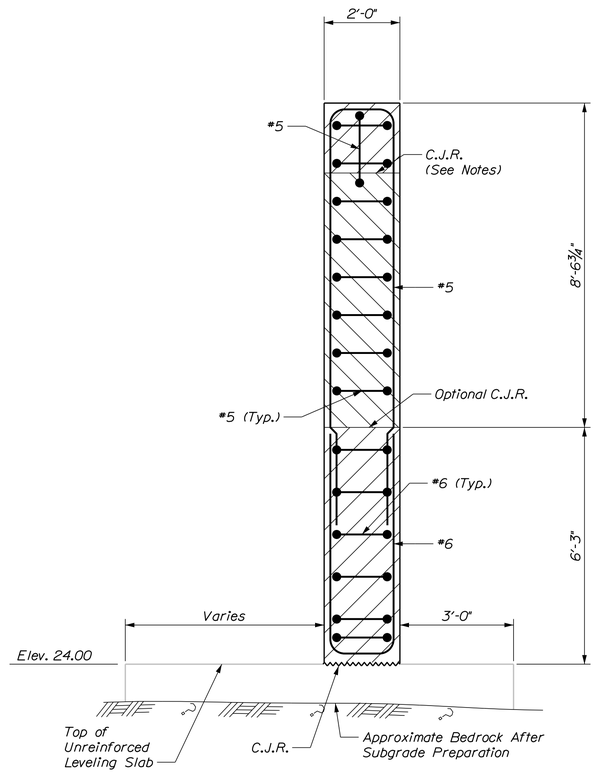
Filename: ...\072_Abut_2_Plan_Elev.dgn



SECTION A-A



SECTION B-B



SECTION C-C

Min Laps:
#5 = 2'-0" (Vert)
2'-7" (Horz)
#6 = 2'-5" (Vert)
3'-1" (Horz)

Notes:

1. For Abutment Notes, see "Abutment No. 1 Plan" sheet.
2. For Topsham Overlook Park Wall Notes and Details, see "Abutment No. 2 Overlook Park Wall" sheet.

LEGEND:

C.J.R. = Construction Joint, Roughen Surface ¼" profile Min. (Typ.)
W.P. = Working Point

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	R.Kravchuk	4/20
CHECKED-REVIEWED	B.Toothaker	7/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

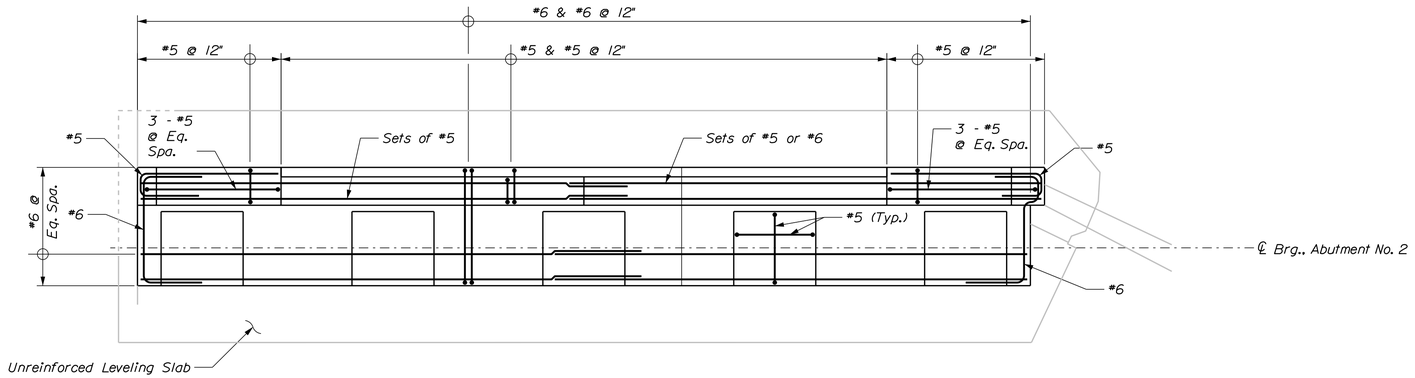
FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

ABUTMENT NO. 2
SECTIONS

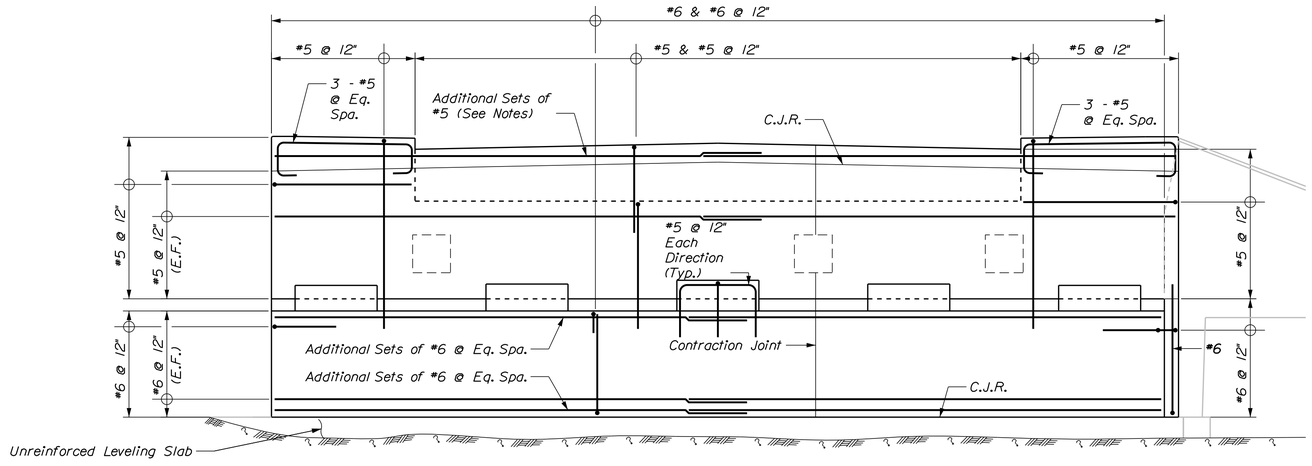
SHEET NUMBER

63

OF 128



ABUTMENT NO. 2 PLAN



ABUTMENT NO. 2 ELEVATION

LEGEND:

C.J.R. = Construction Joint, Roughen Surface 1/4" profile Min. (Typ.)
W.P. = Working Point

90% PROGRESS PLANS

TY LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	R.Kravchuk	S.Morgan	4/20
CHECKED-REVIEWED	B.Toothaker	B.Toothaker	7/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

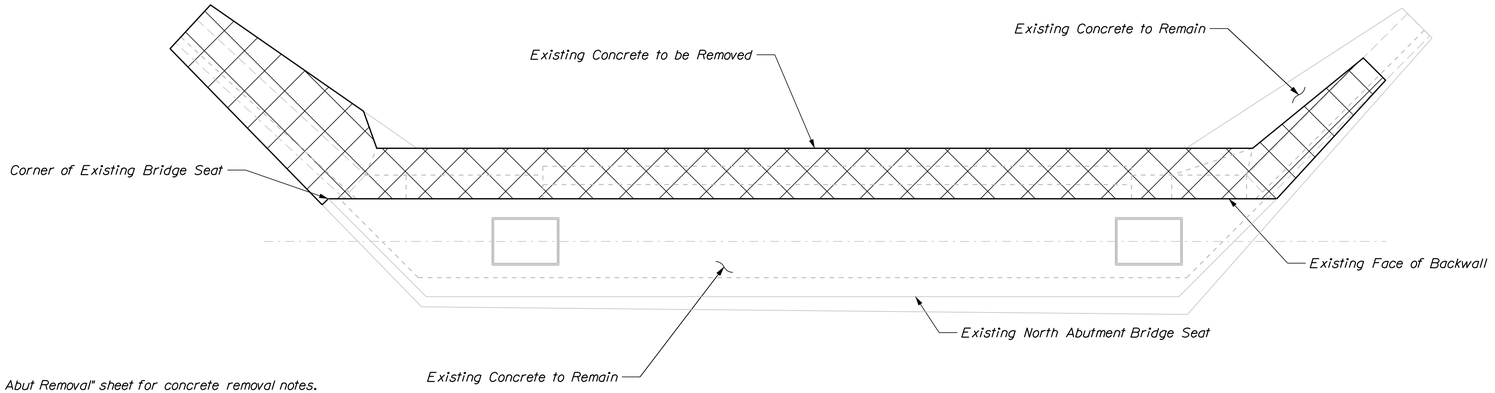
ABUTMENT NO. 2 REINFORCEMENT

SHEET NUMBER

64

OF 128

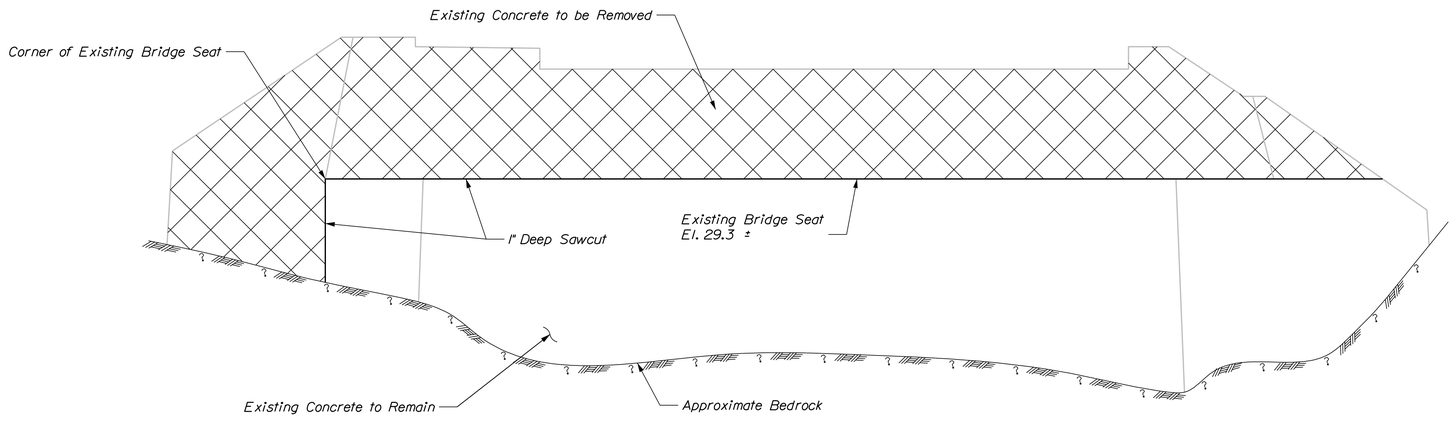
Filename: ...\074_Abut_2_Reinforcement.dgn Division: Username: Date:7/23/2020



EXISTING NORTH ABUTMENT REMOVAL PLAN

Notes:

1. See "Abutment No. 1 Existing Abut Removal" sheet for concrete removal notes.
2. Removal limits for the N.W. Wingwall shall be coordinated to allow construction of proposed Abutment No. 2. The removal limits for this wingwall can be adjusted by the Resident as required for maintenance of traffic.



EXISTING NORTH ABUTMENT REMOVAL ELEVATION

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	B.Toothaker	S.Morgan	4/20
CHECKED-REVIEWED		B.Toothaker	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

ABUTMENT NO. 2
EXISTING ABUT. REMOVAL

SHEET NUMBER

65

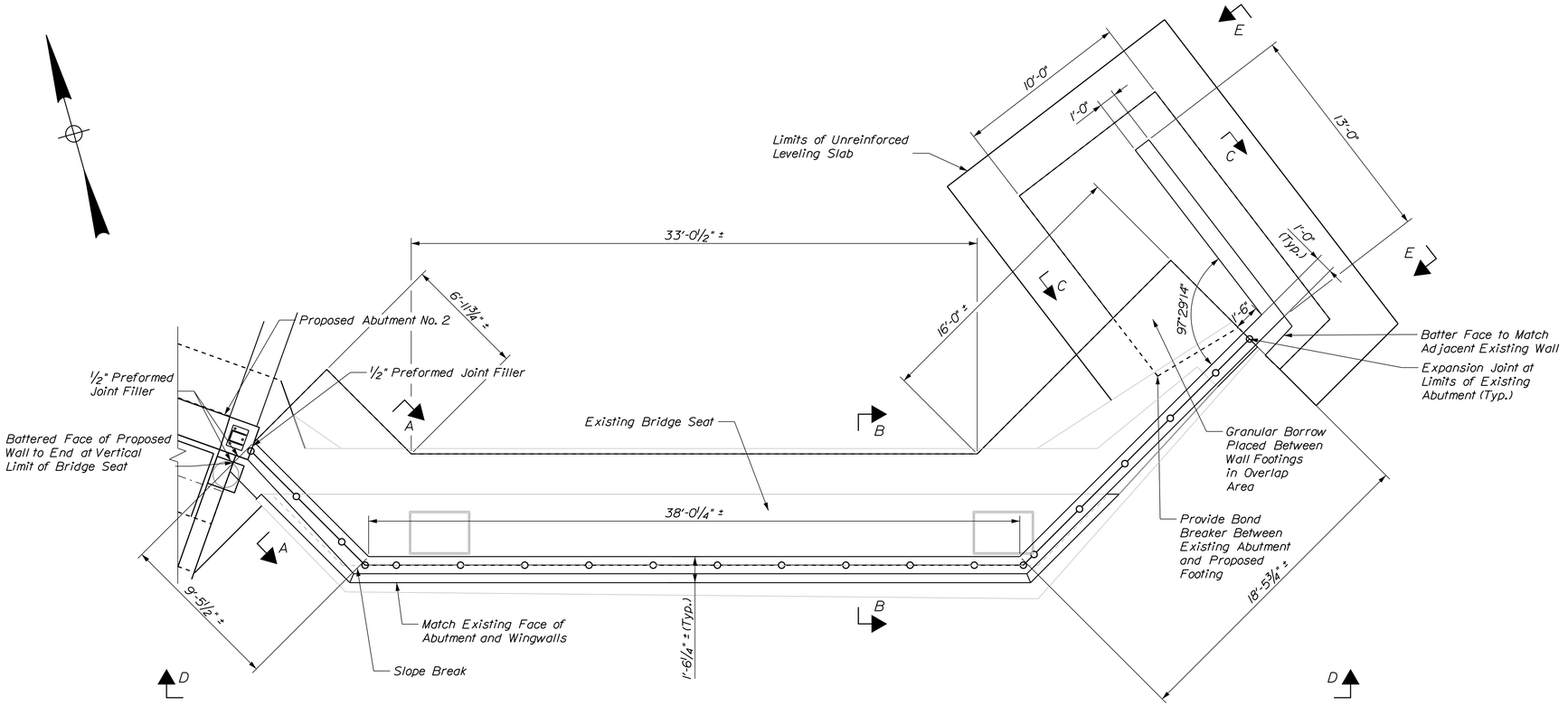
OF 128

Date:7/23/2020

Username:

Division:

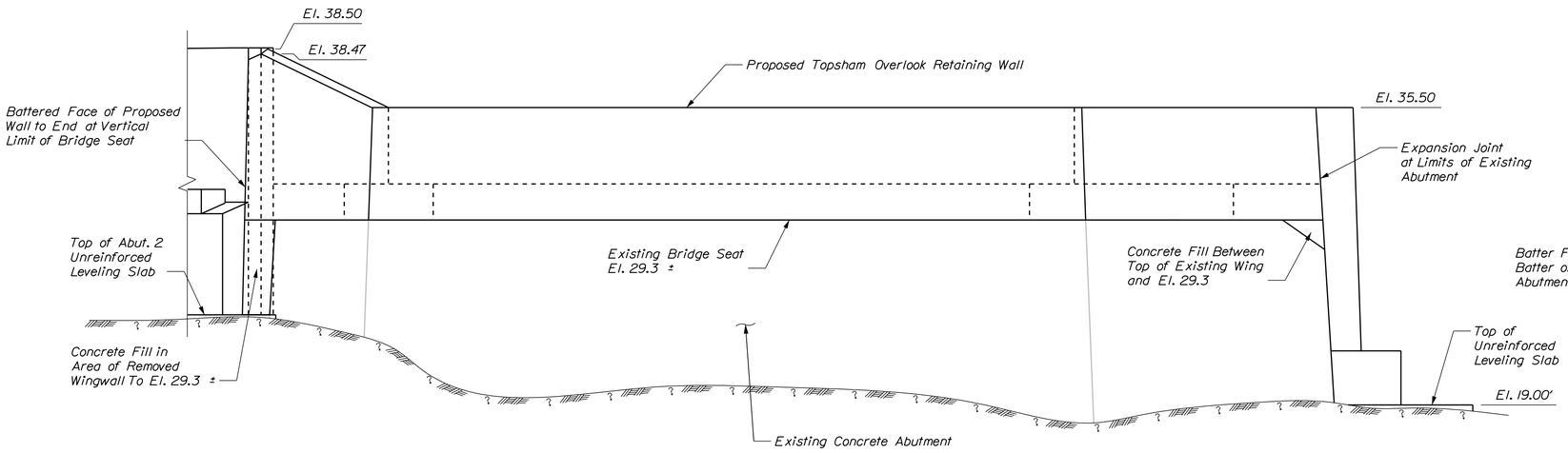
Filename: ...\075_Abut_2_Removal.dgn



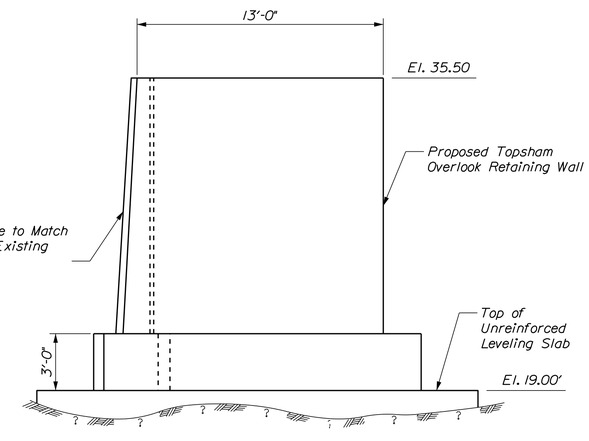
ABUTMENT NO. 2 OVERLOOK WALL PLAN

Notes:

1. See "Abutment No. 1 Overlook Wall" sheet for wall construction notes.
2. See Landscaping Sheets for Grading and Handrail Details.



ELEVATION D-D



ELEVATION E-E

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	B.Toothaker	S.Morgan	7/20
CHECKED-REVIEWED		B.Toothaker	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

ABUTMENT NO. 2
OVERLOOK WALL PLAN

SHEET NUMBER

66

OF 128

90% PROGRESS PLANS

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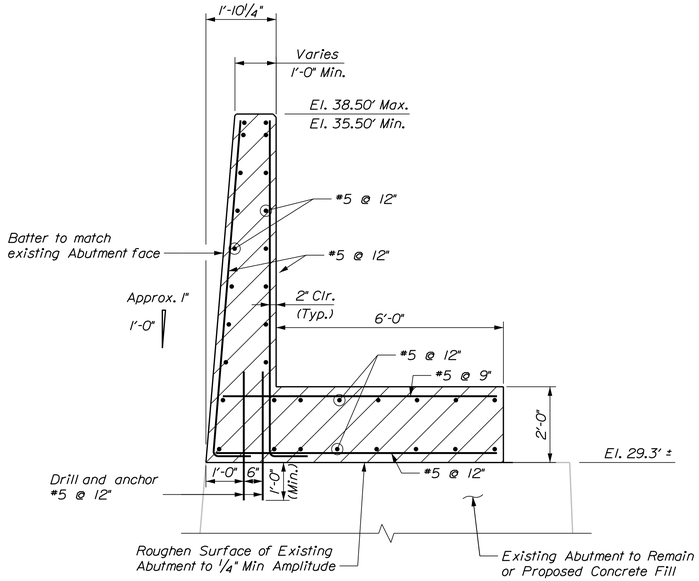
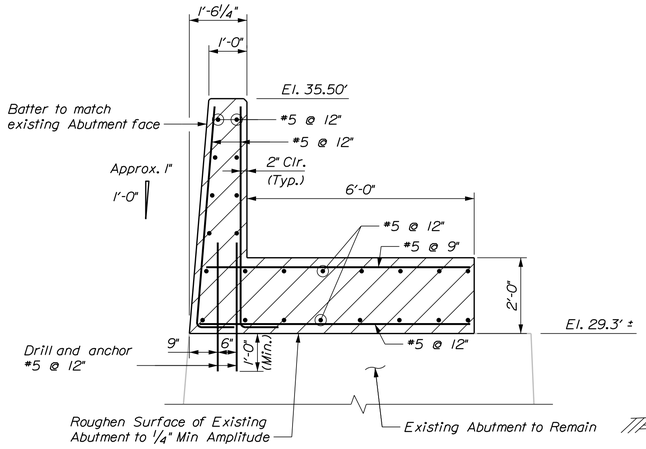
Username: Date:7/23/2020

Division:

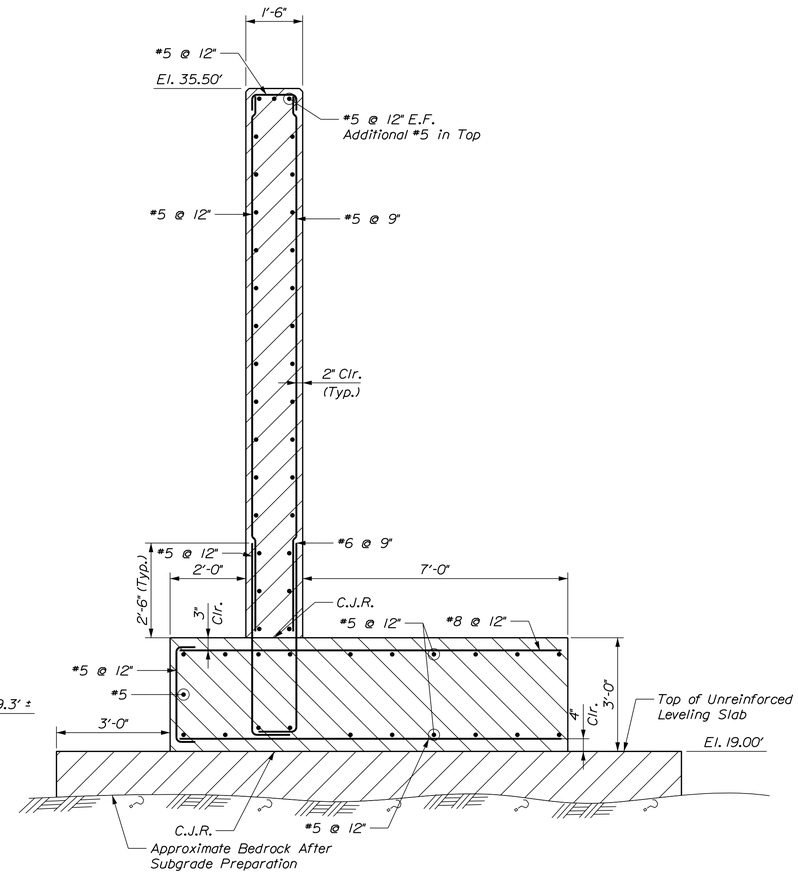
Filename: ...\076_Abut_2_Overlook_Wall1.dgn



SECTION A-A



SECTION B-B



SECTION C-C

LEGEND:

C.J.R. = Construction Joint. Roughen Surface 1/4" profile Min. (Typ.)
W.P. = Working Point

NOTES:

1. For Topsham Overlook Park Wall Notes and Details, see "Abutment No. 2 Overlook Wall I" sheet.
2. Earthworks limits not shown for clarity. See sheet "Abutment No. 1 Overlook Wall Sections" for similar earthwork limits and details.

Min Laps:
#5 = 2'-0" (Vert)
2'-7" (Horz)
#6 = 2'-5" (Vert)
3'-1" (Horz)

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	B.Toothaker	7/20
CHECKED-REVIEWED	S.Morgan	
DESIGN2-DETAILED2	B.Toothaker	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

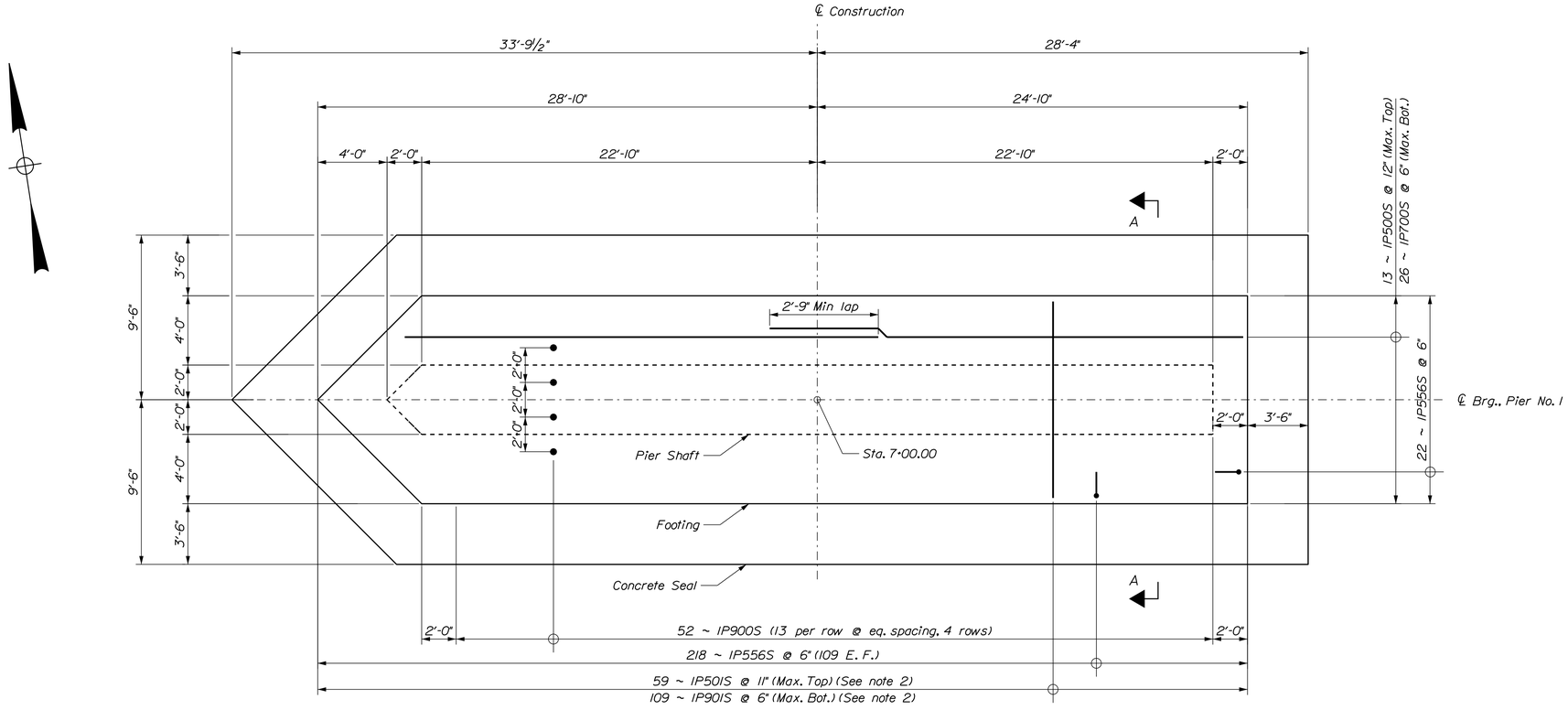
ABUTMENT NO. 2
OVERLOOK WALL SECTIONS

SHEET NUMBER

67

OF 128

Filename: ...\077_Abut_2_Overlook_Wall_2.dgn Division: Username: Date:7/23/2020



PIER NO. 1 FOOTING PLAN

Flow →

SEAL COFFERDAM NOTES:

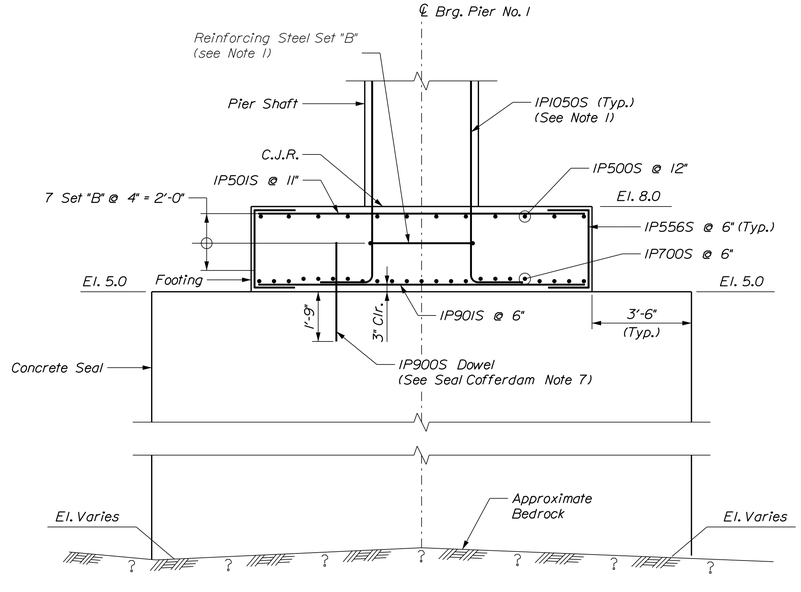
1. The seal concrete placement dimensions shown represent the minimum seal size necessary to meet design requirements and are not based on the use of any particular sheet pile section.
2. The horizontal pay limit for seal concrete shall be to the dimensions shown on the plans. No additional payment will be made for concrete placed outside of these limits.
3. When sheet piling is used for seal cofferdams, appropriate rolled corners shall be used, and the inside face of the sheet piling shall be at or outside of the seal concrete dimensions shown.
4. The depth of the seal at Pier 1 is set for a water elevation of 16' and the cofferdam shall be vented at this elevation. The depth of the seal at Pier 2 is set for a water elevation of 16.5' and the cofferdam shall be vented at this elevation. The depth of the seal at Pier 3 is set for a water elevation of 23' and the cofferdam shall be vented at this elevation. If the water elevation at the time of construction is higher, the depth of the seals shall be adjusted.
5. Concrete seals at Piers 1, 2 and 3 shall be paid under Item 502.24, Structural Concrete Piers (Placed Under Water).
6. The Contractor shall provide a seal dowel submittal for review and approval by the Resident. The submittal shall indicate propsed method of hole preparation, hole diameter, proposed cleaning methods, grout material and grouting methods. The method of placing dowels in the Seal concrete shall be approved by the Resident.
7. Pier seal concrete shall be placed on bedrock cleaned of all weathered rock, loose fractured rock, boulders and soil. Where the bedrock surface slope exceeds 4H:1V, the bedrock surface shall be benched in level steps or made completely level. Cofferdam excavation inspection shall be the responsibility of the Contractor and be conducted in accordance with Standard Specification Section 511 - Cofferdams. An inspection report shall be submitted to the Resident for review. The report shall include bedrock elevation measurements and observations and assess the levelness, cleanliness, and sediment thickness. Sediment measurements and bedrock elevation measurements will be taken at a minimum of 20 evenly disturbed locations.
8. Each seal shall be cored full depth in at least (3) locations to ensure that the seal was satisfactorily placed. The final core run shall sample the bedrock surface. These locations will be approved by the Resident. Seal concrete core samples will be a minimum of 3-in o.d., be adequately stored in boxes and each core run labeled. In the event that voids or any other defects are found, the Contractor shall correct the defects in a manner approved by the Resident. For each core that reveals a void or defect, two additional cores shall be taken after repairs are made. One additional core shall be taken in approximately the same location as the original core. The other core will be located by the Resident. All core holes shall be refilled using a non-shrink grout. The cost of all coring and repairs will be considered incidental to related contract items.

LEGEND:

C.J.R. = Construction Joint, Roughen Surface ¼" profile Min. (Typ.)
W.P. = Working Point

NOTE:

1. See "Pier No. 1 Reinforcement" for reinforcing steel set "B" bars and shaft dowel bar locations.
2. Adjust bar size at pier nose.



SECTION A-A

90% PROGRESS PLANS

TY LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	R.Kravchuk	S.Morgan	4/20
CHECKED-REVIEWED	D.Myers	D.Myers	4/20
DESIGN2-DETAILED2	ED2		
DESIGN3-DETAILED3	ED3		
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

PIER NO. 1
FOOTING PLAN

SHEET NUMBER

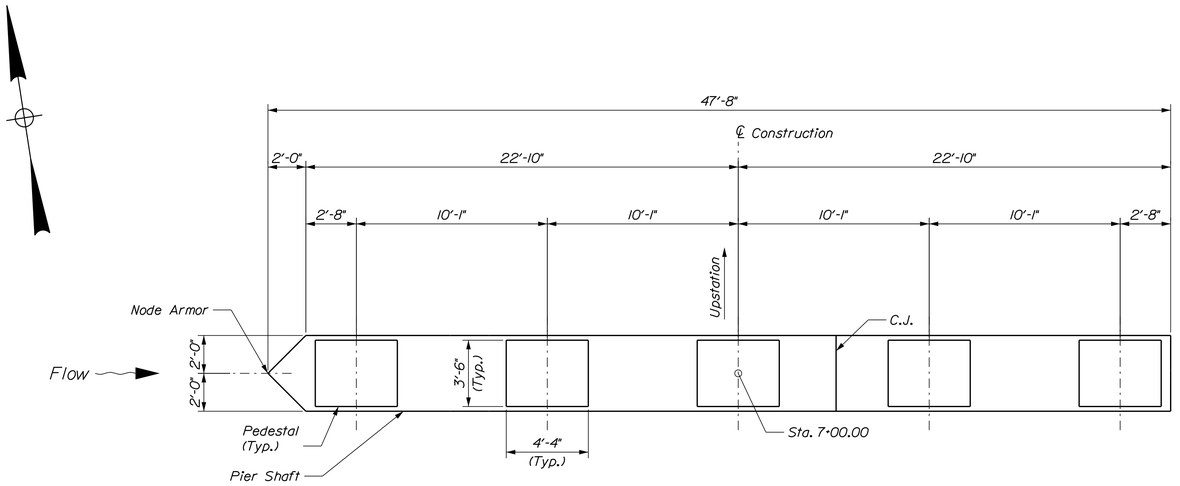
68

OF 128

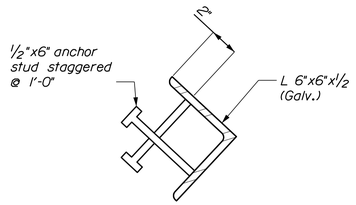
Username: Date:7/23/2020

Division:

Filename: ...\078_Pier_1_Footing_Plan.dgn



PIER NO. 1 SHAFT PLAN



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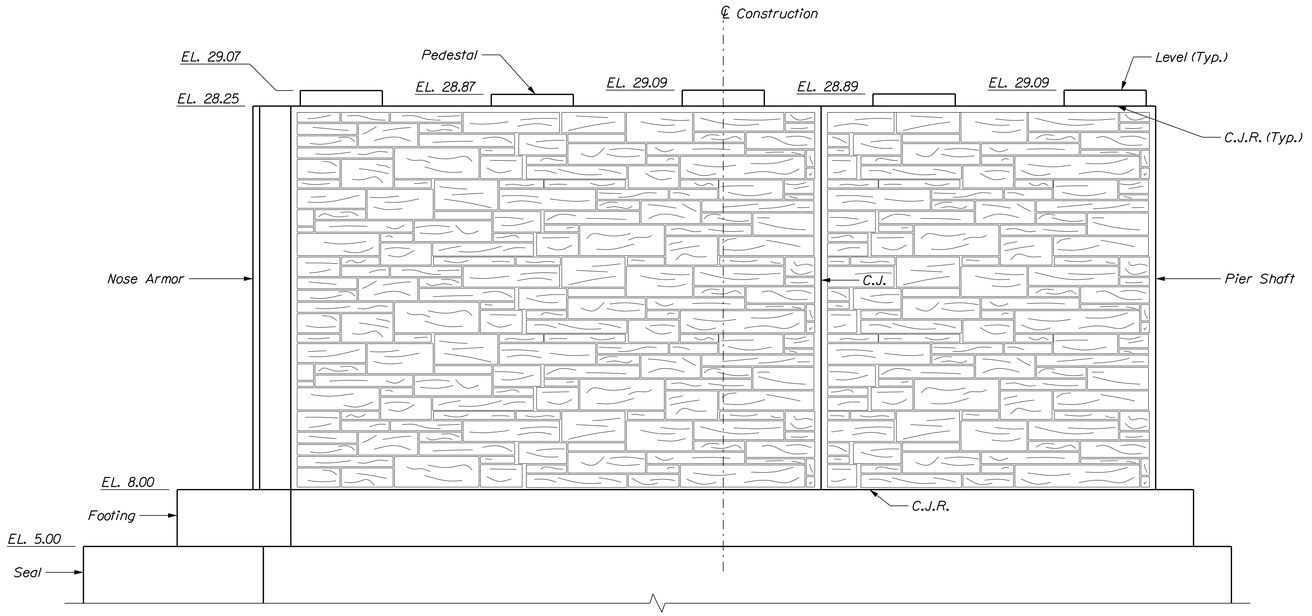
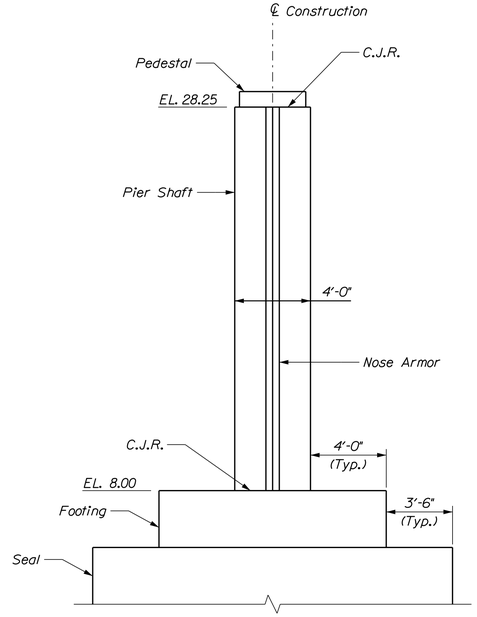


PIER NO. 1 ELEVATION



PIER NO. 1 END ELEVATION

Upstream End Shown

LEGEND:

C.J. = Construction Joint
C.J.R. = Construction Joint, Roughen Surface 1/4" profile Min. (Typ.)
W.P. = Working Point

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	R.Kravchuk	4/20
CHECKED-REVIEWED	D.Myers	4/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

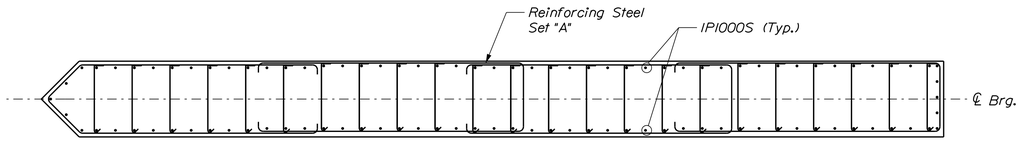
PIER NO. 1
SHAFT PLAN & ELEVATION

SHEET NUMBER

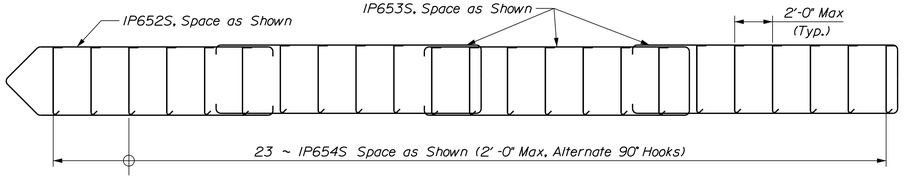
69

OF 128

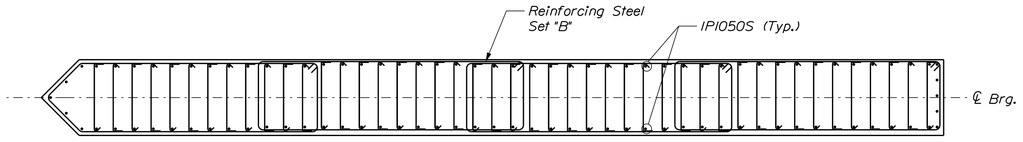
Filename: ...\079_Pier_1_Plan_Elev.dgn Division: Username: Date:7/23/2020



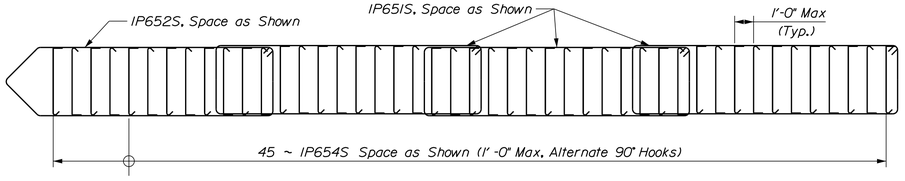
SECTION A-A



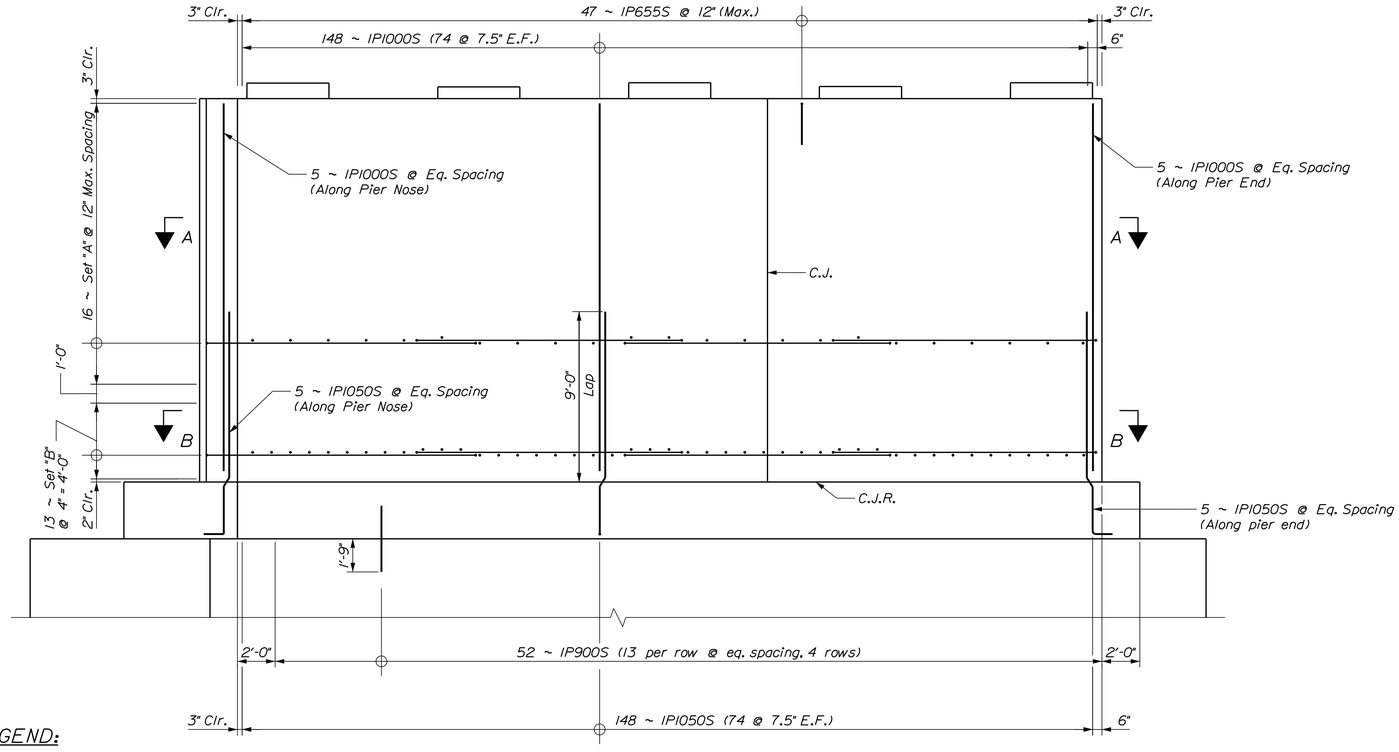
REINFORCING STEEL SET "A"



SECTION B-B

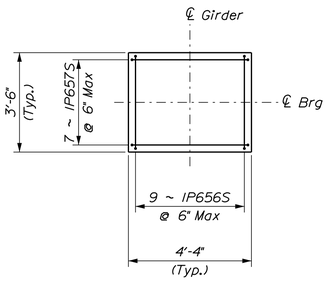


REINFORCING STEEL SET "B"

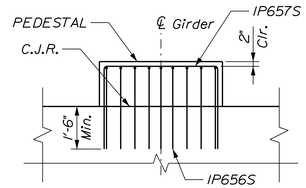


PIER NO. 1 ELEVATION

Flow



PEDESTAL REINFORCEMENT PLAN



PEDESTAL REINFORCEMENT ELEVATION

LEGEND:

C.J. = Construction Joint
C.J.R. = Construction Joint, Roughen Surface 1/4" profile Min. (Typ.)
E.F. = Each Face

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	S.Morgan	4/20
CHECKED-REVIEWED	R.Krovchuk	
DESIGN2-DETAILED2	D.Myers	4/20
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

PIER NO. 1
REINFORCEMENT

SHEET NUMBER

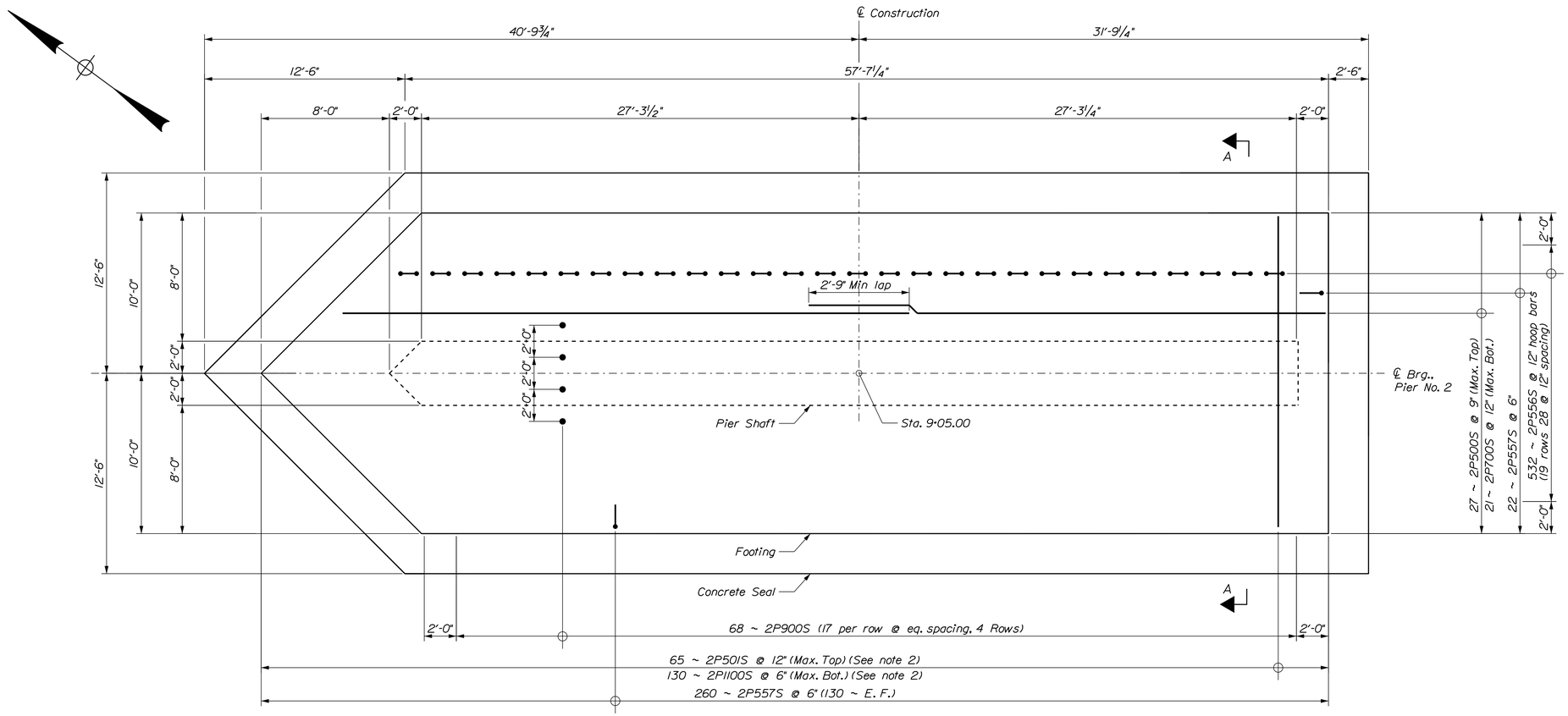
70

OF 128

Date:7/23/2020

Username:

Filename: ...\080_Pier_1_Reinforcing_Plan_Elev.dgn Division:

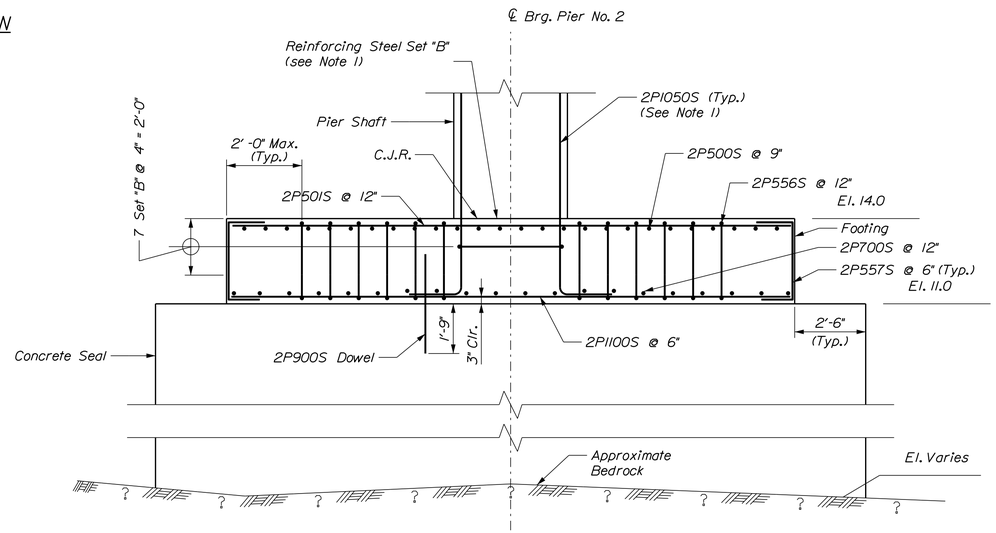


PIER NO. 2 FOOTING PLAN

Flow ~~~►

NOTE:

1. See "Pier No. 2 Reinforcement" for reinforcing steel set "B" bars and shaft dowel bar locations.
2. Adjust bar size at pier nose.



SECTION A-A

LEGEND:

C.J.R. = Construction Joint, Roughen Surface ¼" profile Min. (Typ.)
W.P. = Working Point

90% PROGRESS PLANS

T·Y·LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	R.Kravchuk	S.Morgan	4/20
CHECKED-REVIEWED	D.Myers	D.Myers	4/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

PIER NO. 2
FOOTING PLAN

SHEET NUMBER

71

OF 128

Username: Date:7/23/2020

Division:

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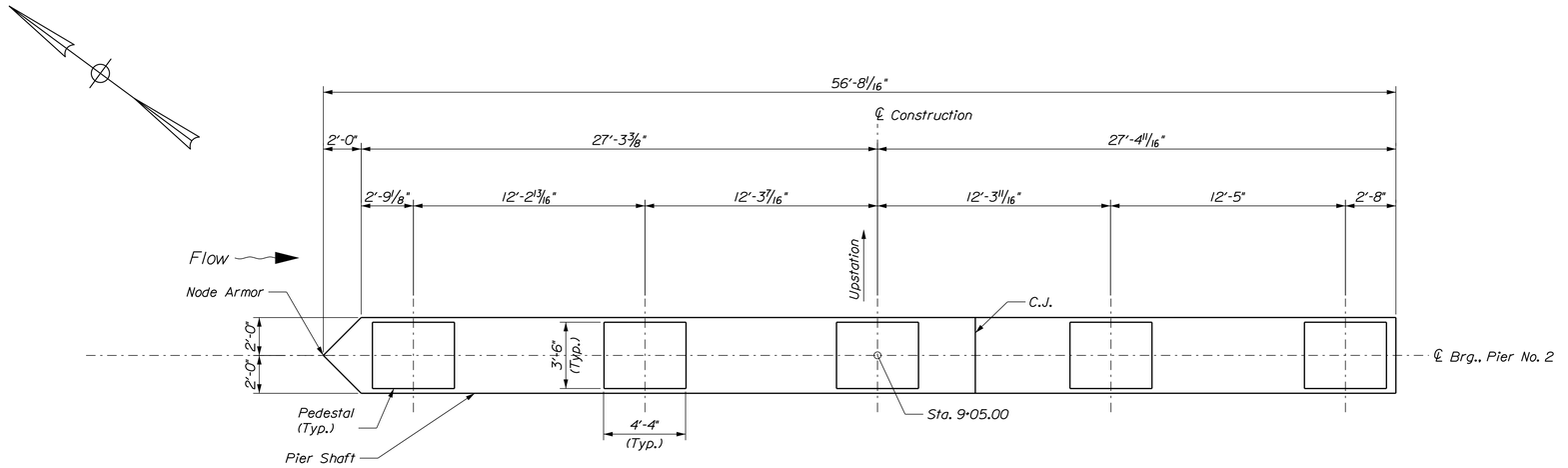
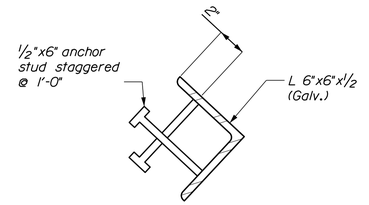


PIER NO. 2 SHAFT PLAN



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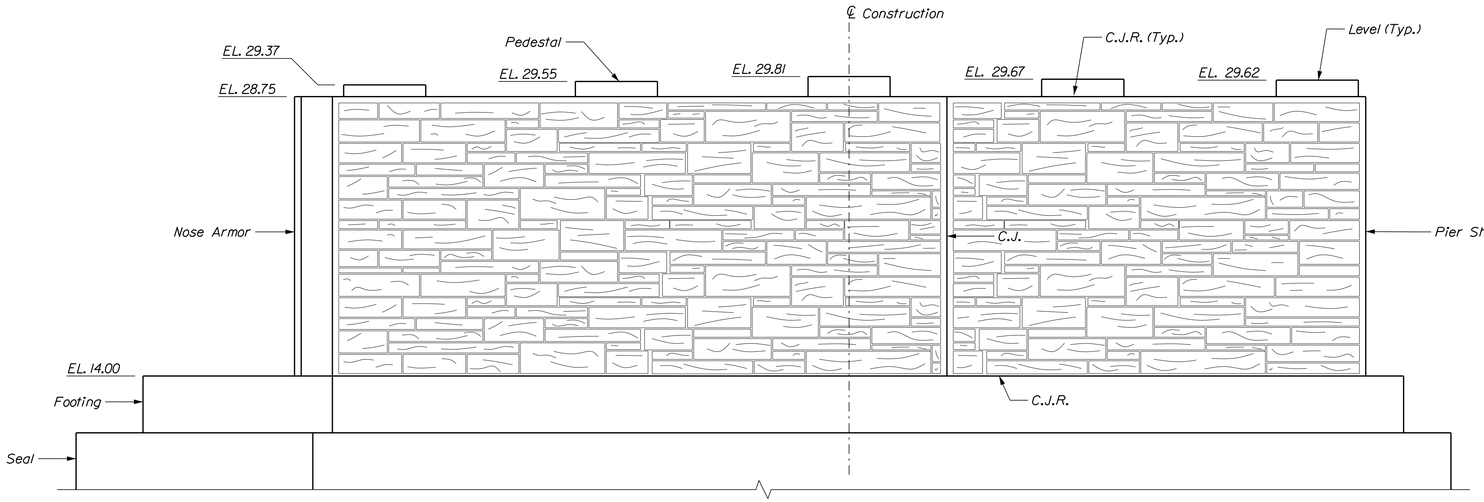

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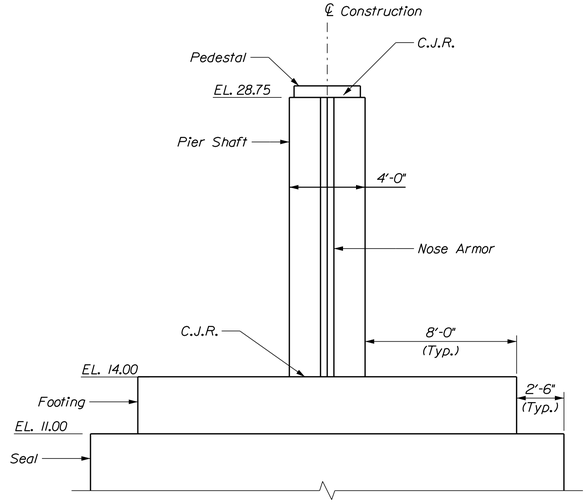


PIER NO. 2 END ELEVATION

Upstream End Shown

LEGEND:

C.J. = Construction Joint
C.J.R. = Construction Joint, Roughen Surface 1/4" profile Min. (Typ.)
W.P. = Working Point

90% PROGRESS PLANS

T.Y. LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	R.Kravchuk	S.Morgan 4/20
CHECKED-REVIEWED	D.Myers	D.Myers 4/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER CUMBERLAND
BRUNSWICK-TOPSHAM

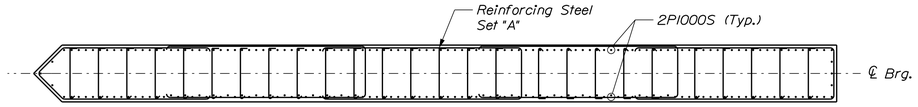
PIER NO. 2
SHAFT PLAN & ELEVATION

SHEET NUMBER

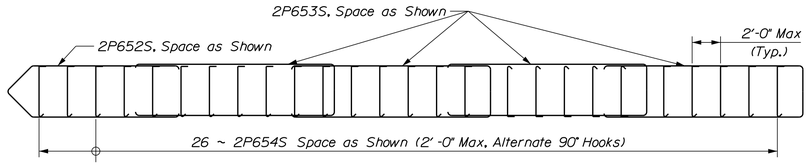
72

OF 128

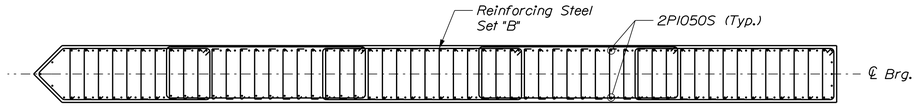
Filename: ...\082_Pier_2_Plan_Elev.dgn Division: Username: Date:7/23/2020



SECTION A-A



REINFORCING STEEL SET 'A'



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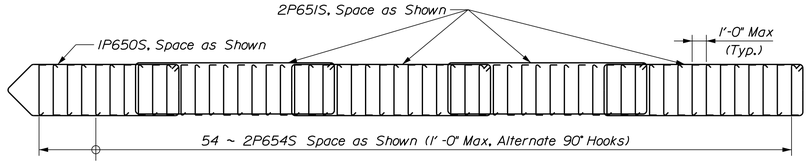

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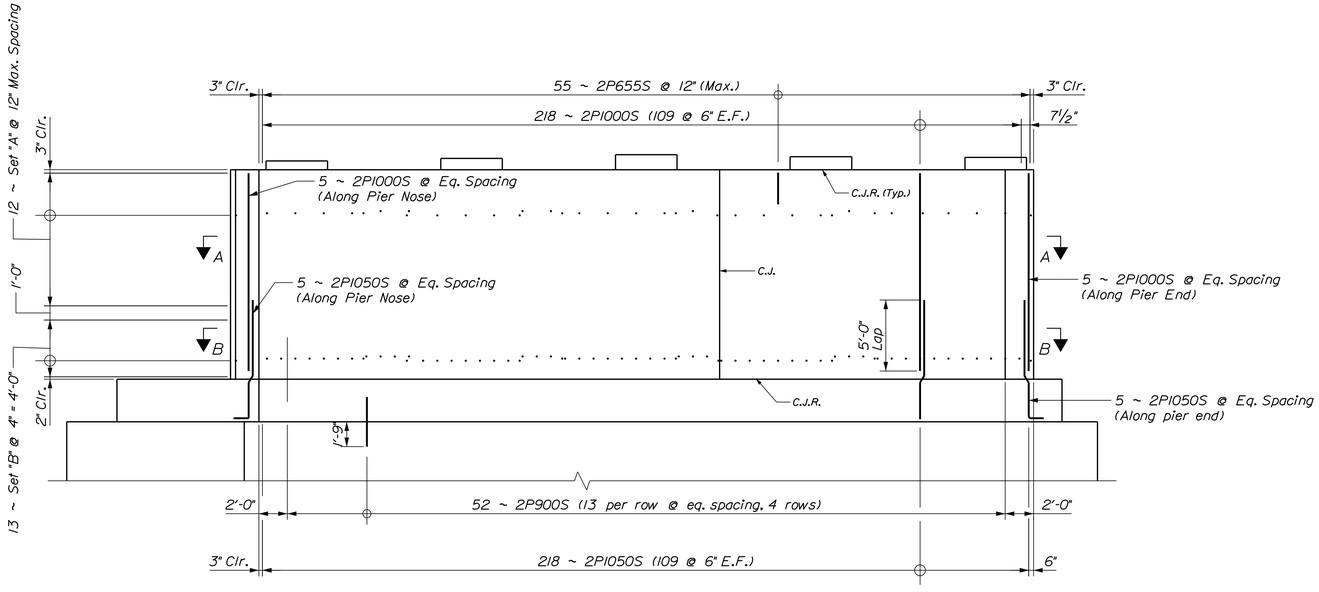
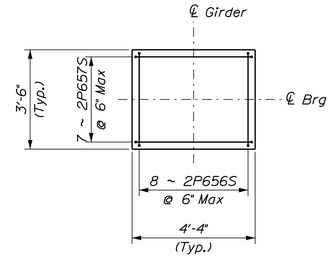


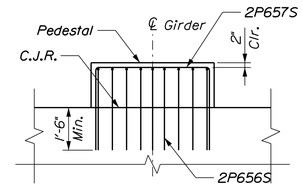
PIER NO. 2 ELEVATION

Flow

C.J. = Construction Joint
C.J.R. = Construction Joint, Roughen Surface ¼" profile Min. (Typ.)
E.F. = Each Face



PEDESTAL REINFORCEMENT PLAN



PEDESTAL REINFORCEMENT ELEVATION

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	S.Morgan	4/2020
CHECKED-REVIEWED	R.Krovchuk	4/20
DESIGN2-DETAILED2	D.Myers	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

PIER NO. 2
REINFORCEMENT

SHEET NUMBER

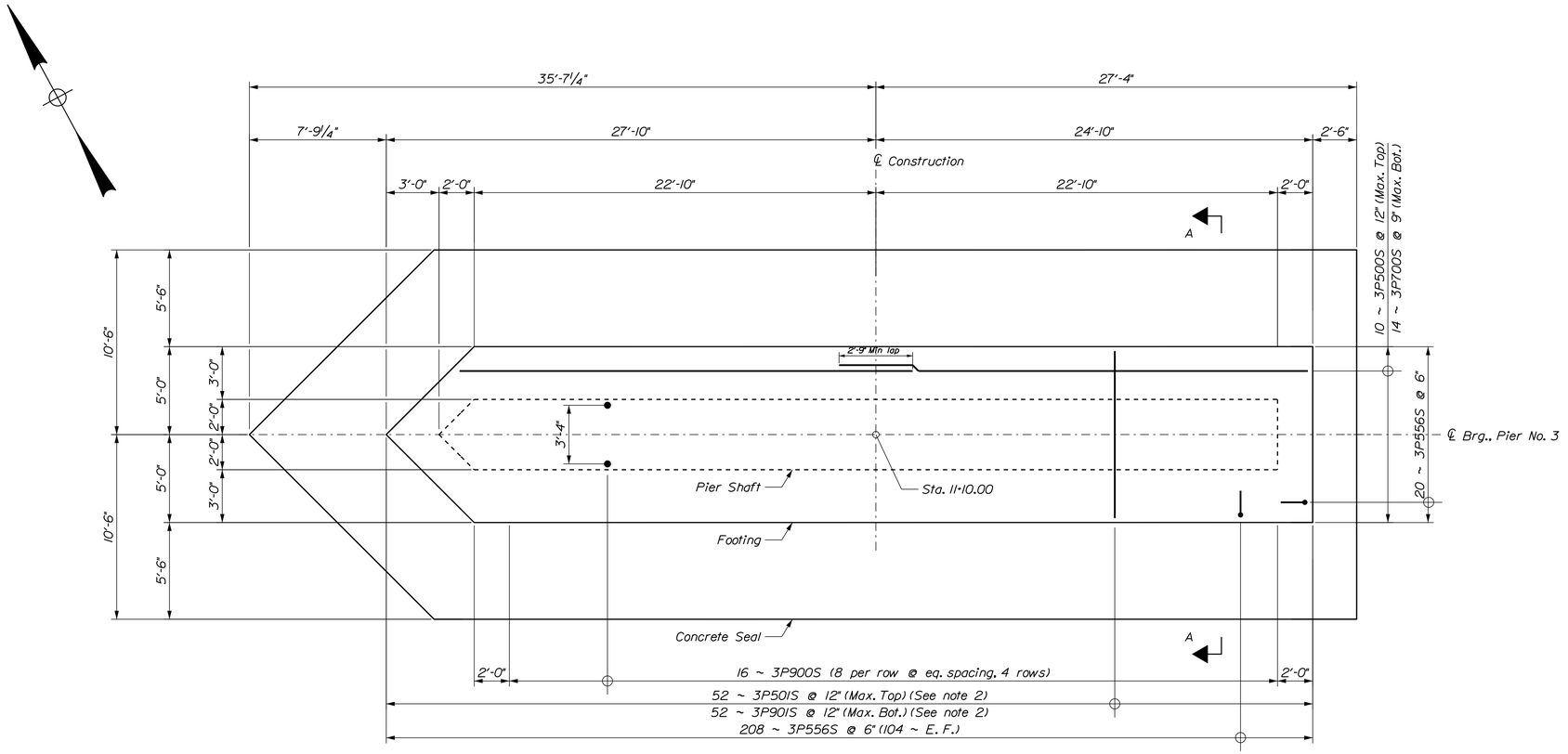
73

OF 128

Date:7/23/2020

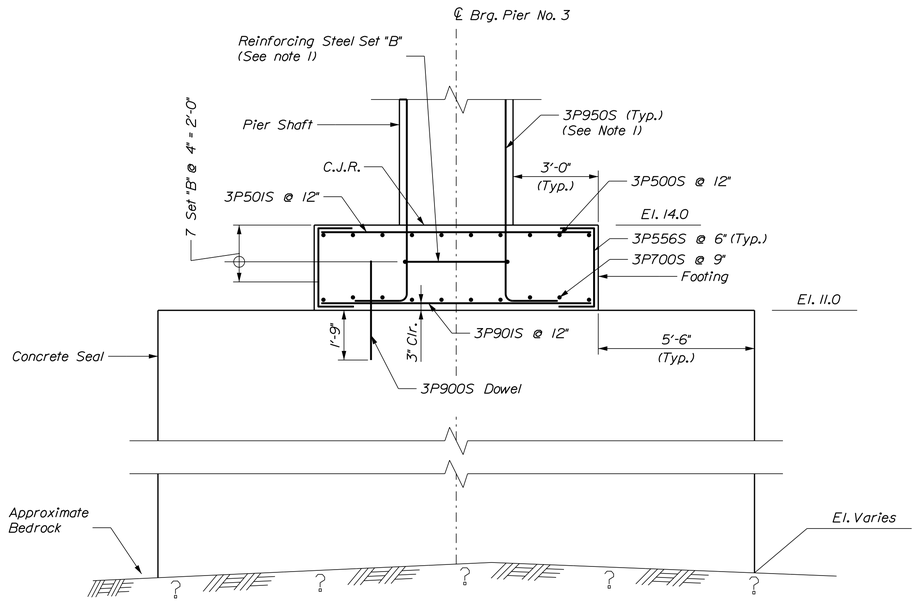
Username:

Filename: ...\083_Pier_2_Reinforcing_Plan_Elev.dgnDivision:



PIER NO. 3 FOOTING PLAN

Flow ~~~►



SECTION A-A

NOTE:

1. See "Pier No. 3 Reinforcement" for reinforcing steel set "B" bars and shaft dowel bar locations.
2. Adjust bar size at pier nose.

LEGEND:

C.J.R. = Construction Joint, Roughen Surface 1/4" profile Min. (Typ.)
W.P. = Working Point

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

Username: Date:7/23/2020

Division:

Filename: ...\084_Pier_3_Footing_Plan.dgn

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	R.Kravchuk	S.Morgan	4/20
CHECKED-REVIEWED	D.Myers	D.Myers	4/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

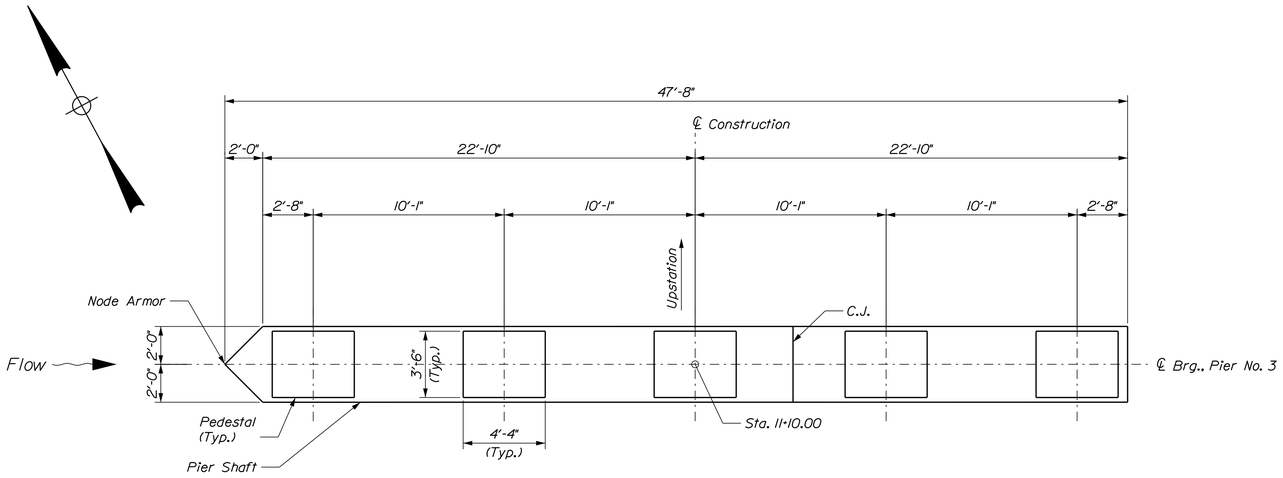
FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

PIER NO. 3
FOOTING PLAN

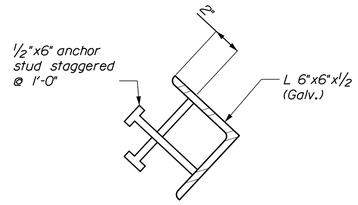
SHEET NUMBER

74

OF 128



PIER NO. 3 SHAFT PLAN



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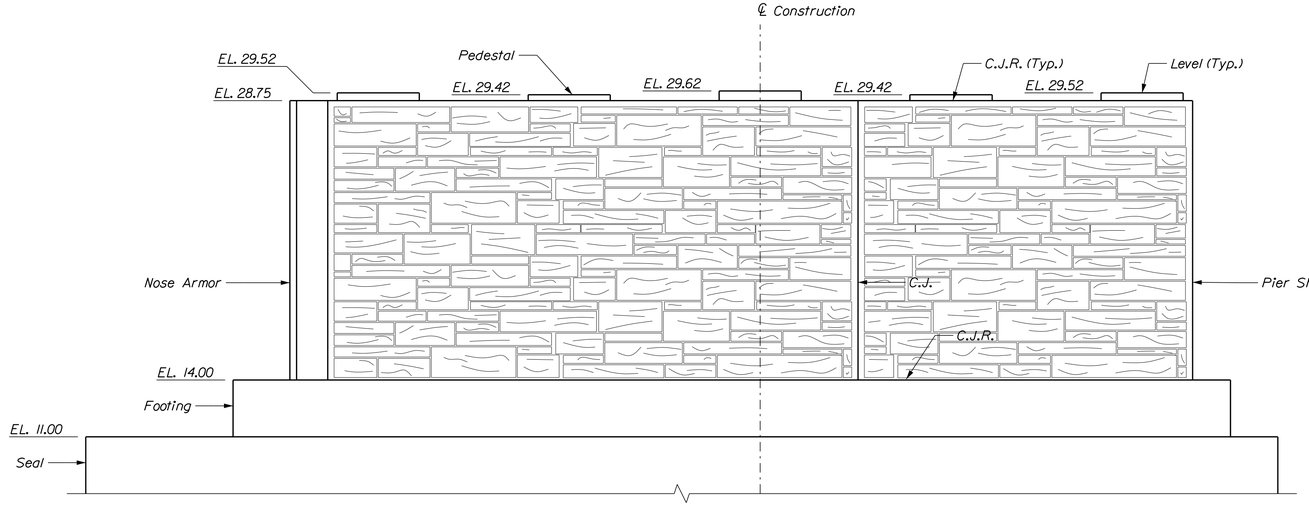
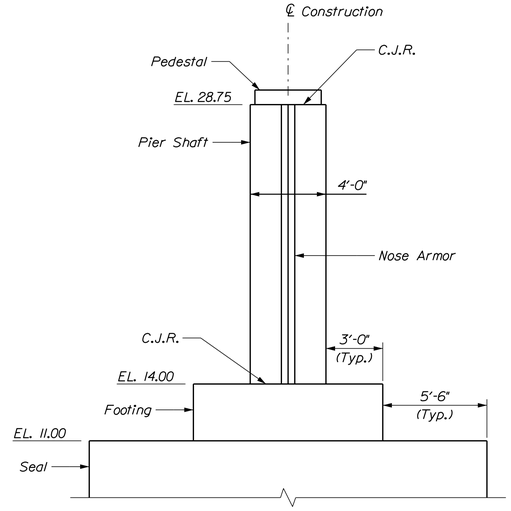


PIER NO. 3 ELEVATION



PIER NO. 3 END ELEVATION

Upstream End Shown

LEGEND:

C.J. = Construction Joint
C.J.R. = Construction Joint, Roughen Surface 1/4" profile Min. (Typ.)
W.P. = Working Point

90% PROGRESS PLANS

TY LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

		DATE
D. Bryant	S.Morgan	4/20
	D.Myers	4/20

PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	R.Kravchuk	
CHECKED-REVIEWED	D.Myers	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

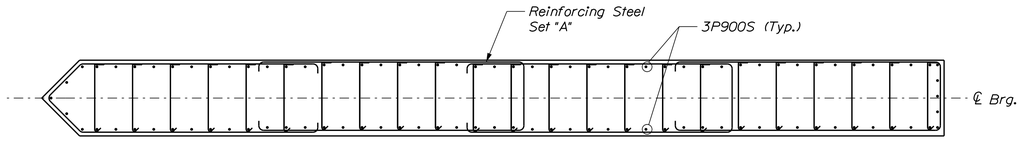
PIER NO. 3
SHAFT PLAN & ELEVATION

SHEET NUMBER

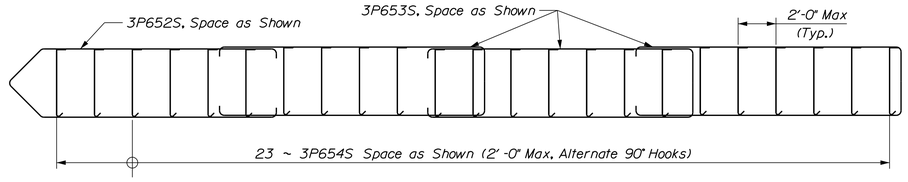
75

OF 128

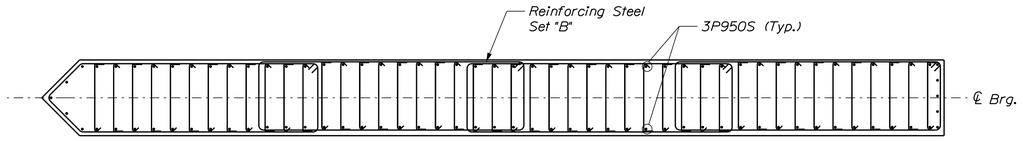
Filename: ...\085_Pier_3_Plan_Elev.dgn Division: Username: Date:7/23/2020



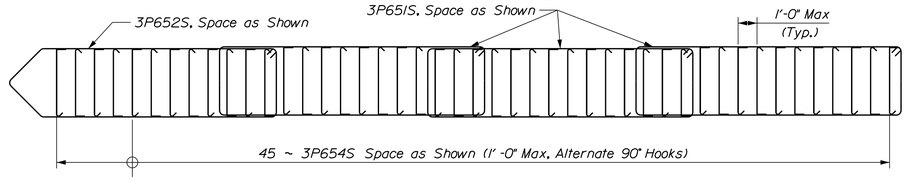
SECTION A-A



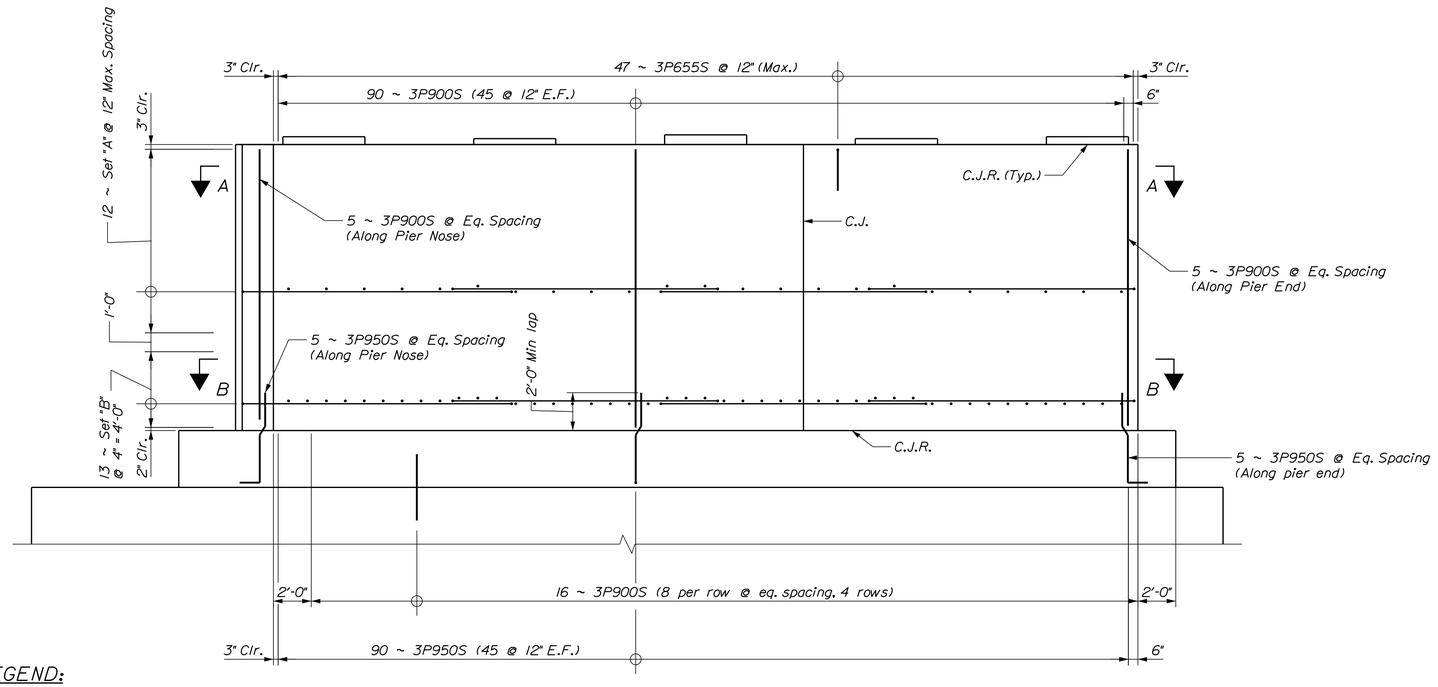
REINFORCING STEEL SET "A"



SECTION B-B

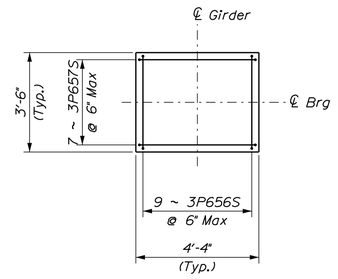


REINFORCING STEEL SET "B"

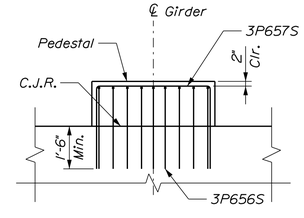


PIER NO. 3 ELEVATION

Flow



PEDESTAL REINFORCEMENT PLAN



PEDESTAL REINFORCEMENT ELEVATION

LEGEND:

C.J. = Construction Joint
C.J.R. = Construction Joint, Roughen Surface 1/4" profile Min. (Typ.)
E.F. = Each Face

90% PROGRESS PLANS

TYLIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	R.Kravchuk	4/20
CHECKED-REVIEWED	D.Myers	4/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

PIER NO. 3
REINFORCEMENT

SHEET NUMBER

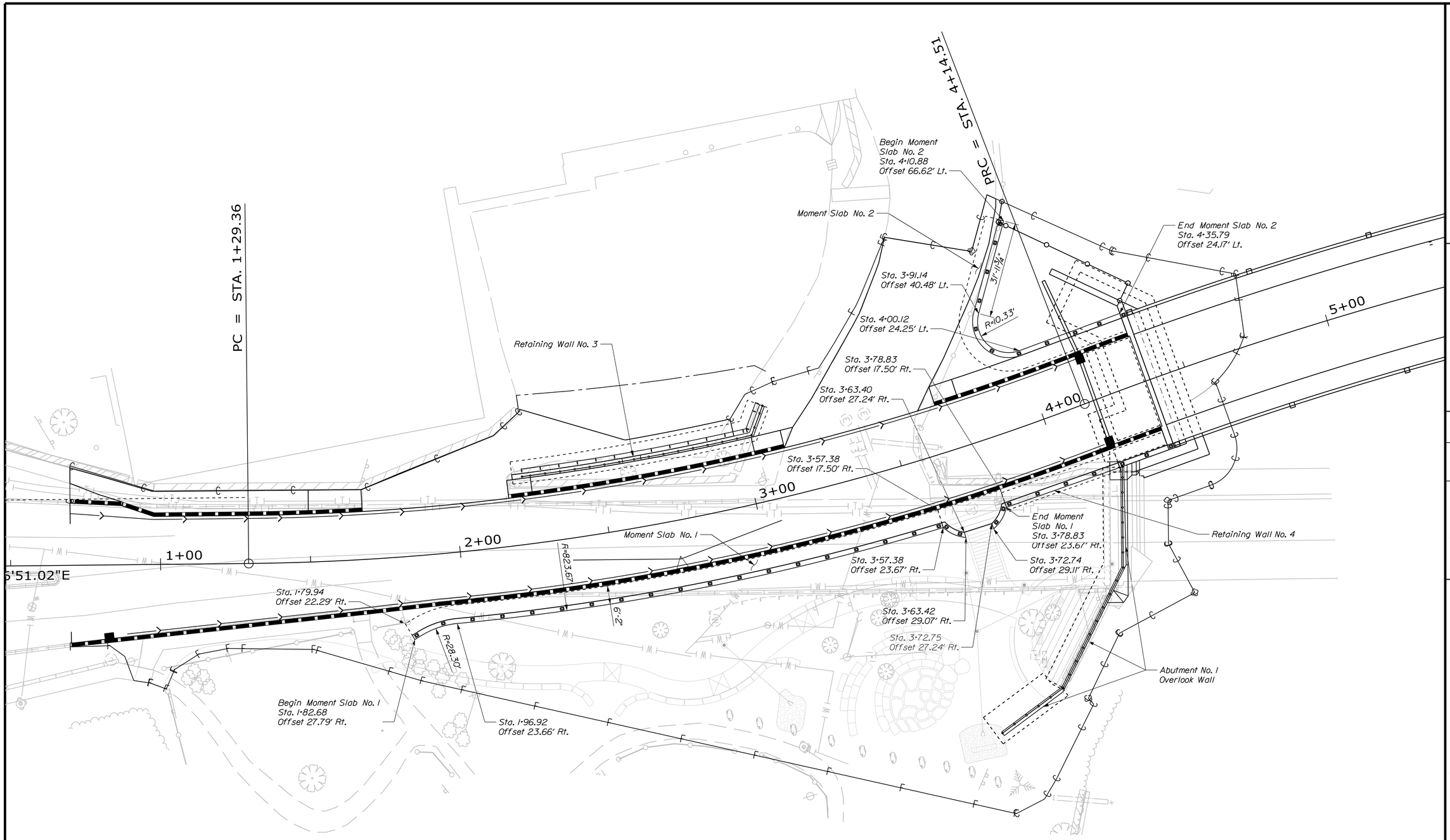
76

OF 128

Date:7/23/2020

Username:

Filename: ...\086_Pier_3_Reinforcing_Plan_Elev.dgnDivision:



Notes:

1. *See individual retaining wall sheets for retaining wall geometry layout and details.*
2. *See sheet "Approach Traffic Rail Moment Slab" for moment slab details.*

90% PROGRESS PLANS

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE

		BY	DATE
PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	S.Morgan	S.Morgan	7/20
CHECKED-REVIEWED	D.Myers	D.Myers	7/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

RETAINING WALL KEY PLAN
SHEET 1 OF 2

SHEET NUMBER

77

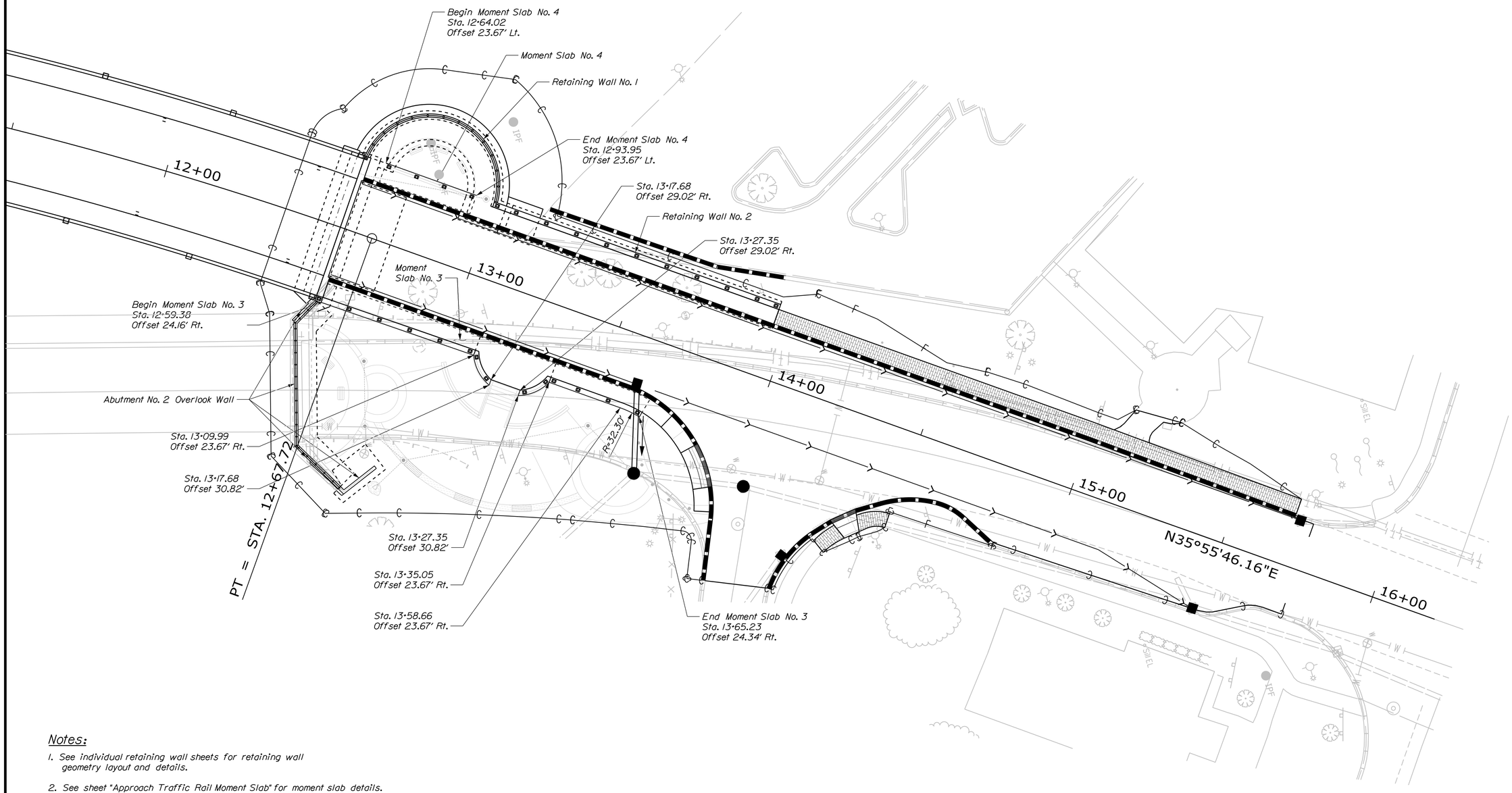
OF 128

Date:7/23/2020

Username:

Division:

Filename: ...\087_Retaining_Wall_Key_Plan_1.dgn



Notes:

1. See individual retaining wall sheets for retaining wall geometry layout and details.
2. See sheet "Approach Traffic Rail Moment Slab" for moment slab details.

90% PROGRESS PLANS

T·Y LIN INTERNATIONAL

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	S.Morgan	BY	DATE
CHECKED-REVIEWED	D.Myers	S.Morgan	7/20
DESIGN2-DETAILED2		D.Myers	7/20
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

RETAINING WALL KEY PLAN
SHEET 2 OF 2

SHEET NUMBER

78

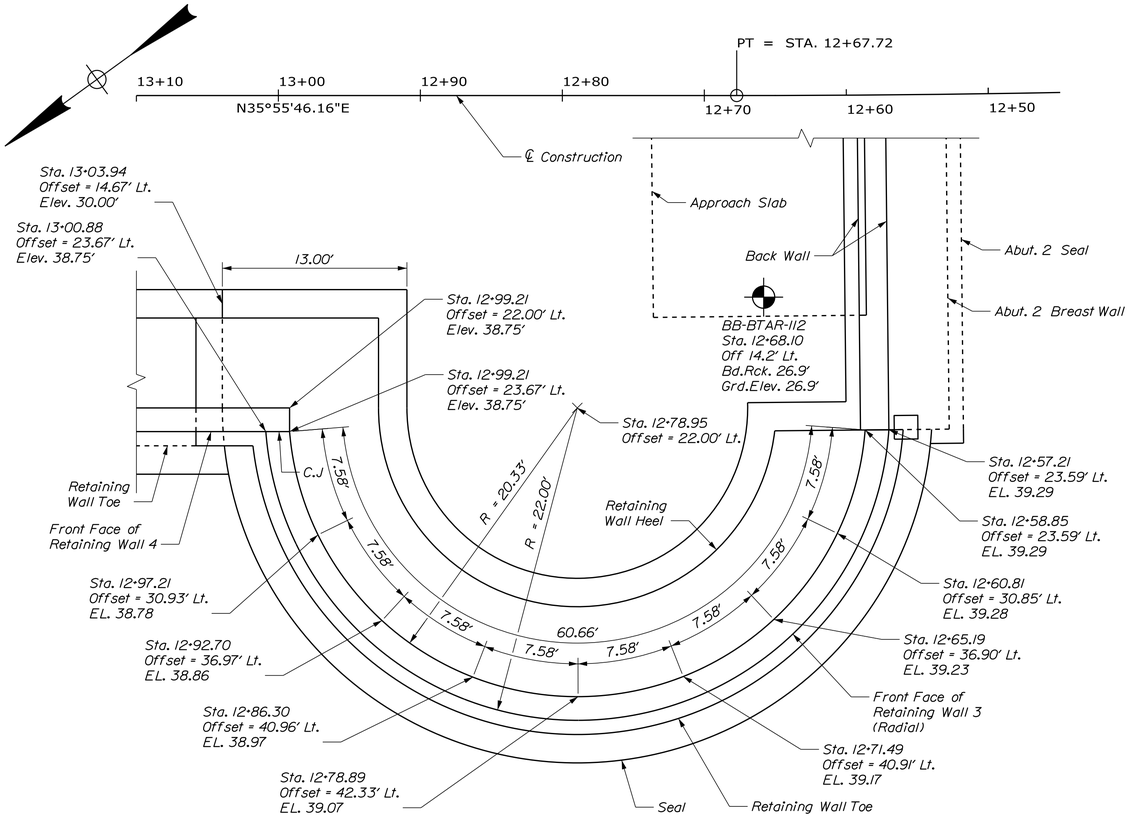
OF 128

Username:

Date:7/23/2020

Division:

Filename: ...\088_Retaining_Wall_Key_Plan_2.dgn



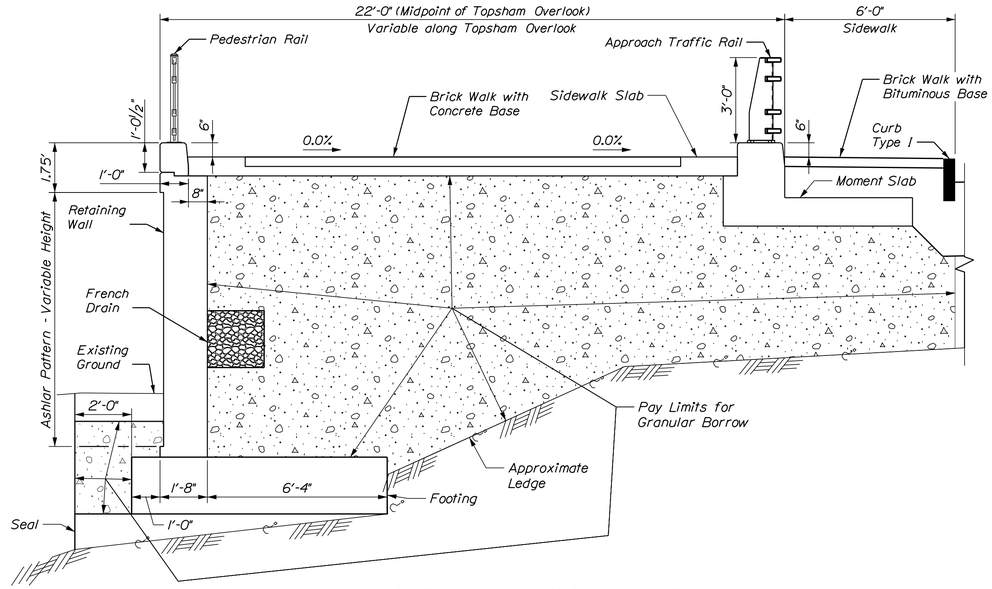
PLAN RETAINING WALL 1

LEGEND

CASED WASH BORING

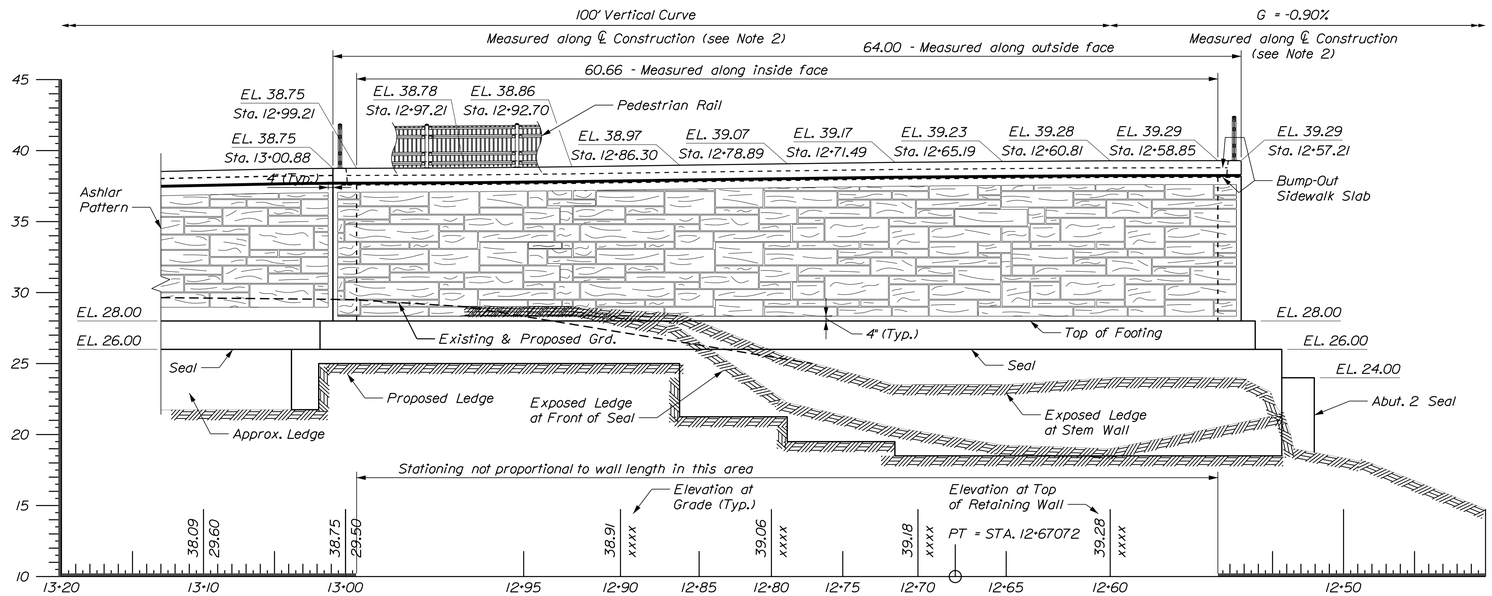
KEY

BB = Bridge Boring



RETAINING WALL 1 DESIGN SECTION

Scale: 3/8" to 1'



ELEVATION RETAINING WALL 1

(Radial Retaining Wall)

Scale: 3/16" to 1'

RETAINING WALL NOTES:

1. See "PLAN" drawings for ℄ Construction and horizontal curve data.
2. See "PROFILE" drawings for ℄ Construction profile and vertical curve data.
3. See "RETAINING WALL FOOTING DETAILS" drawing for retaining wall footing details.
4. The maximum factored applied footing pressure is 5.82 ksf.
5. Structural Earth Excavation for Retaining Walls require more than 12 inches below the bottom of the structure, will be paid for in accordance with Standard Specifications Section 206, Structural Excavation.
6. Reinforcing steel shall have a minimum concrete cover of 2 inches in the walls and 3 inches in the footings unless otherwise noted.
7. Place 4-in. diameter drains in stem wall at 10-ft maximum spacing. The exact location will be determined by the Resident.
8. Cover joints where waterstops are not required in accordance with Standard Details Section 502.
9. Construct French Drains behind the stew walls in accordance with Standard Specifications Section 512, French Drains.
9. Retaing walls and their footings shall be backfilled with Granular Borrow. Pay limits will be the structural excavation limits in cut areas and a vertical plane located 1 foot behind the footing heel in fill areas.

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STP-2260(300)X

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BRIDGE PLANS

BRIDGE NO. 2016

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	J.Legere	7/20
CHECKED-REVIEWED	J.Legere	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

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FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

RETAINING WALL NO. 1
PLAN & ELEVATION

SHEET NUMBER

79

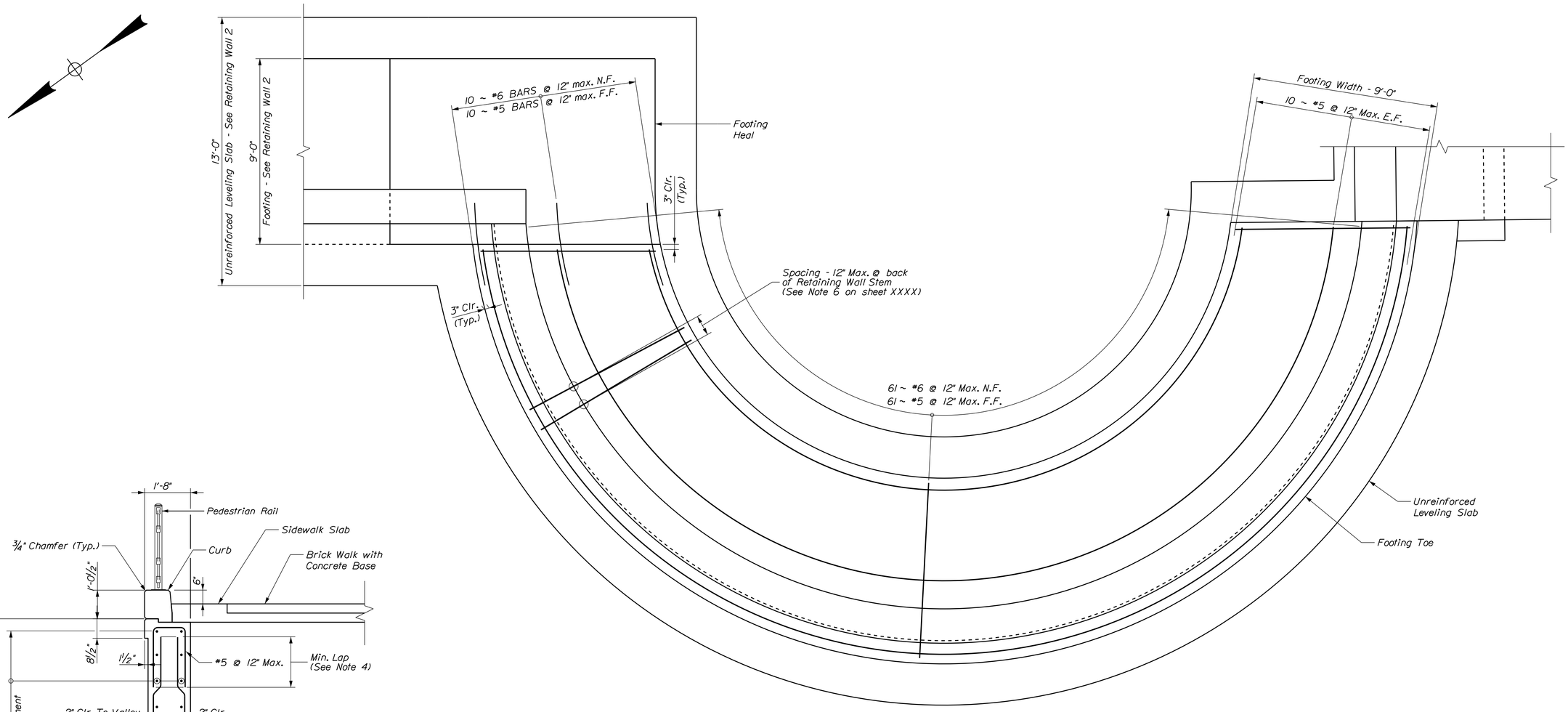
OF 128

Date:7/23/2020

Username:

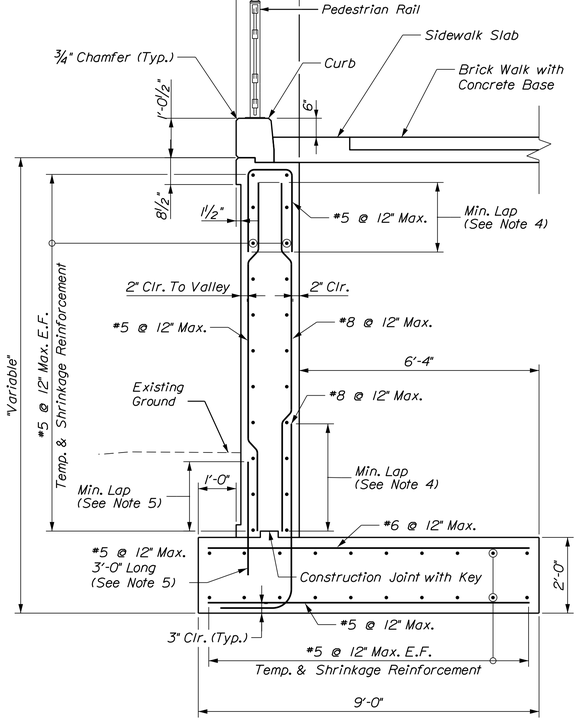
Division:

Filename: ...\089_Wall_01_Plan_Elev.dgn



RETAINING WALL FOOTING PLAN

Scale: 3/8" to 1'



RETAINING WALL SECTION REINFORCEMENT

Scale: 1/2" to 1'

NOTES:

1. For Curb details and reinforcment, see sheet XXX.
2. For Pedestrian Rail details, see sheet XXX.
3. Sidewalk slab and brick walk details, see sheet XXX.
4. Provide adequate lap length.
5. #5 Dowel shall be 3 feet long with a minimum embedment into footing of 1ft. The excess shall be imbedded into the stem to account for variation in height of the stem wall and to provide a minimum lap of 1ft with vertical bar of same size and spacing in the front face of the stem wall.
6. Critical area for bar spacing is located at the back face of the stem wall.

STATE OF MAINE
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PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	J.Legere	7/20
CHECKED-REVIEWED	J.Legere	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BY | DATE

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

RETAINING WALL NO.1
REINFORCEMENT 1 OF 2

SHEET NUMBER

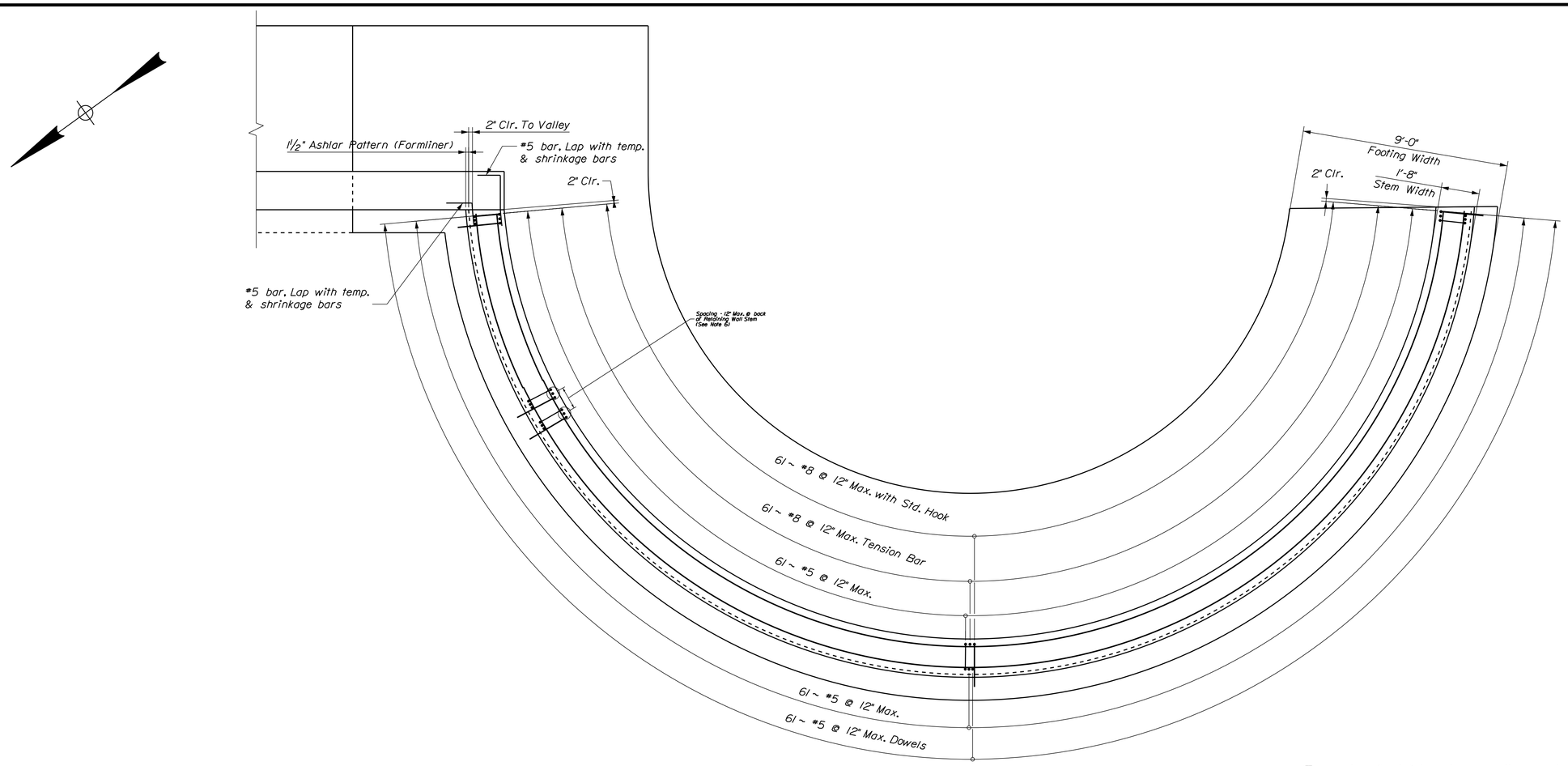
80

OF 128

90% PROGRESS PLANS

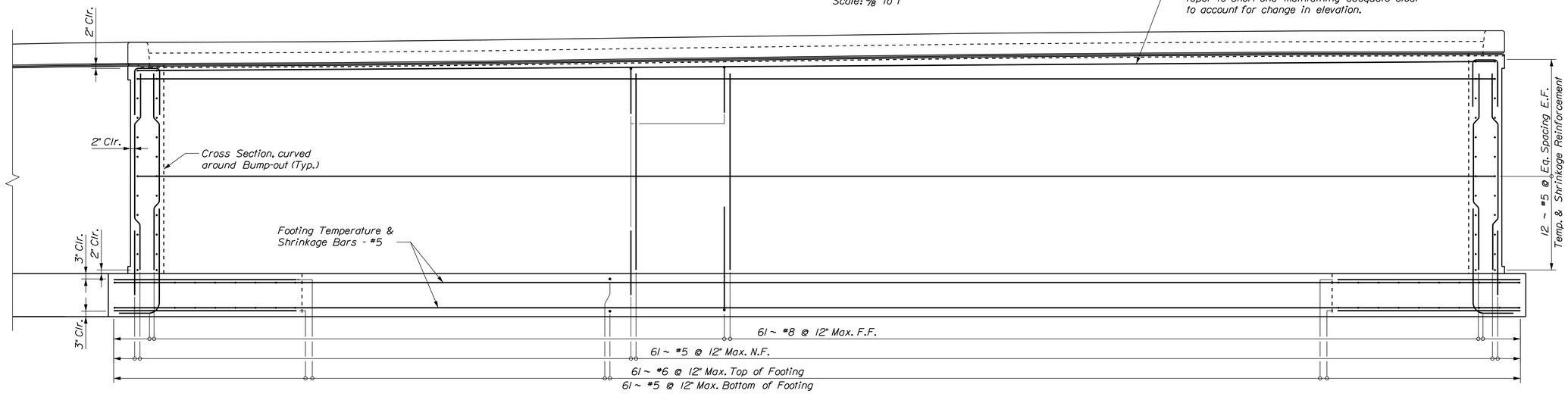
T.Y.LIN INTERNATIONAL

Filename: ...\090_Wall_01_Reinforcing_1.dgn Division: Username: Date:7/23/2020



RETAINING WALL STEM REINFORCEMENT

Scale: 3/8" to 1'



RETAINING WALL ELEVATION

Scale: 3/8" to 1'

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	J.Legere	BY	DATE
CHECKED-REVIEWED		J.Legere	7/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

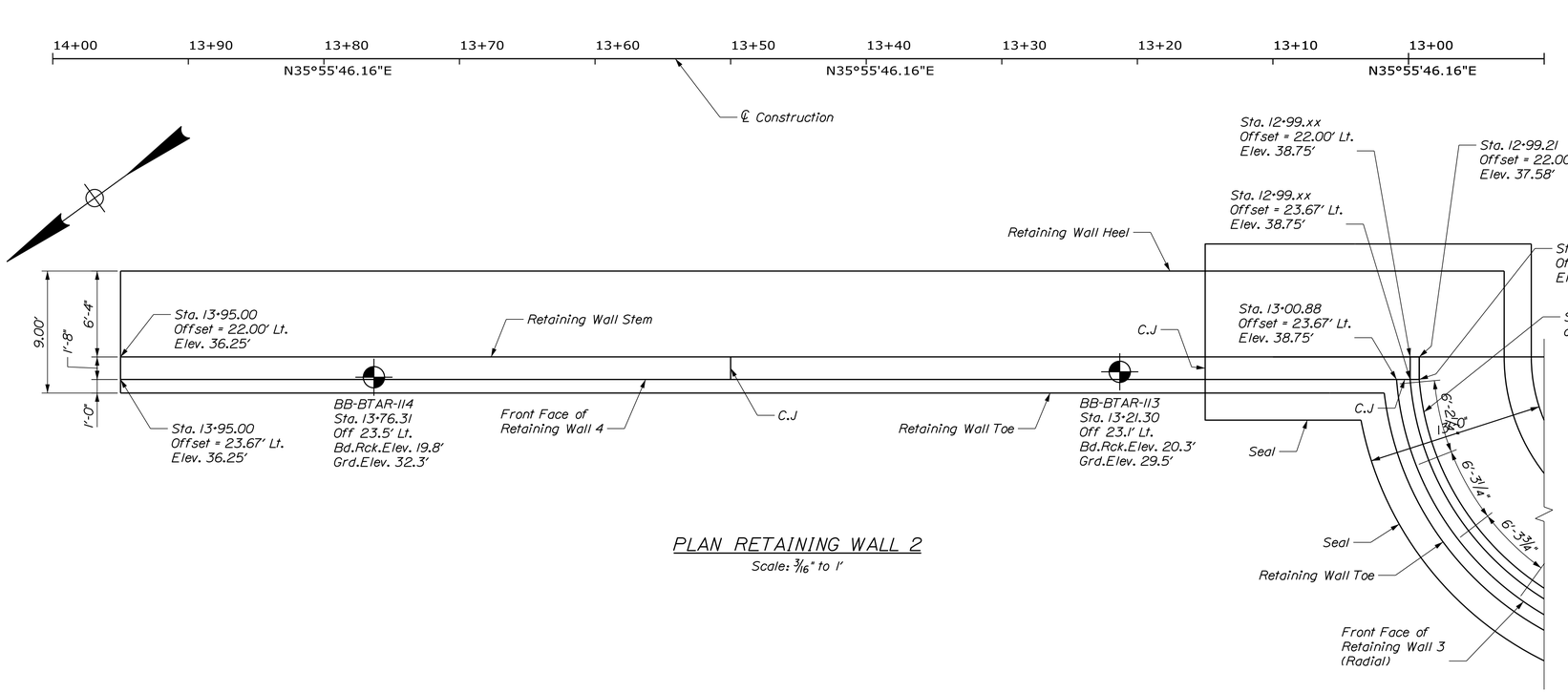
RETAINING WALL NO. 1 REINFORCEMENT 2 OF 2

SHEET NUMBER

81

OF 128

Filename: ...\091_Wall_01_Reinforcing_2.dgn Division: Username: Date:7/23/2020



PLAN RETAINING WALL 2

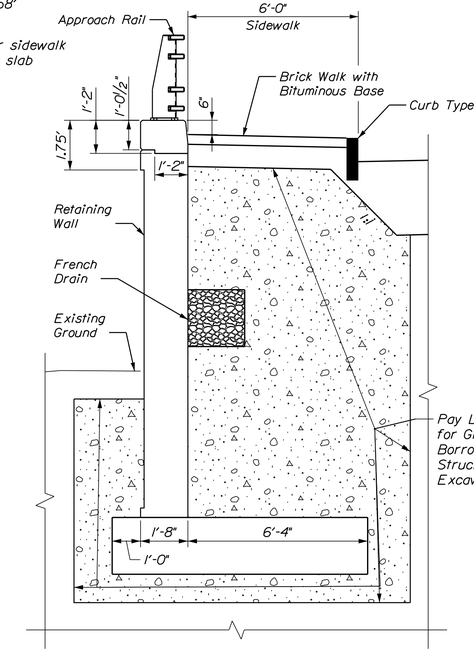
Scale: 3/16" to 1'

LEGEND

CASED WASH BORING

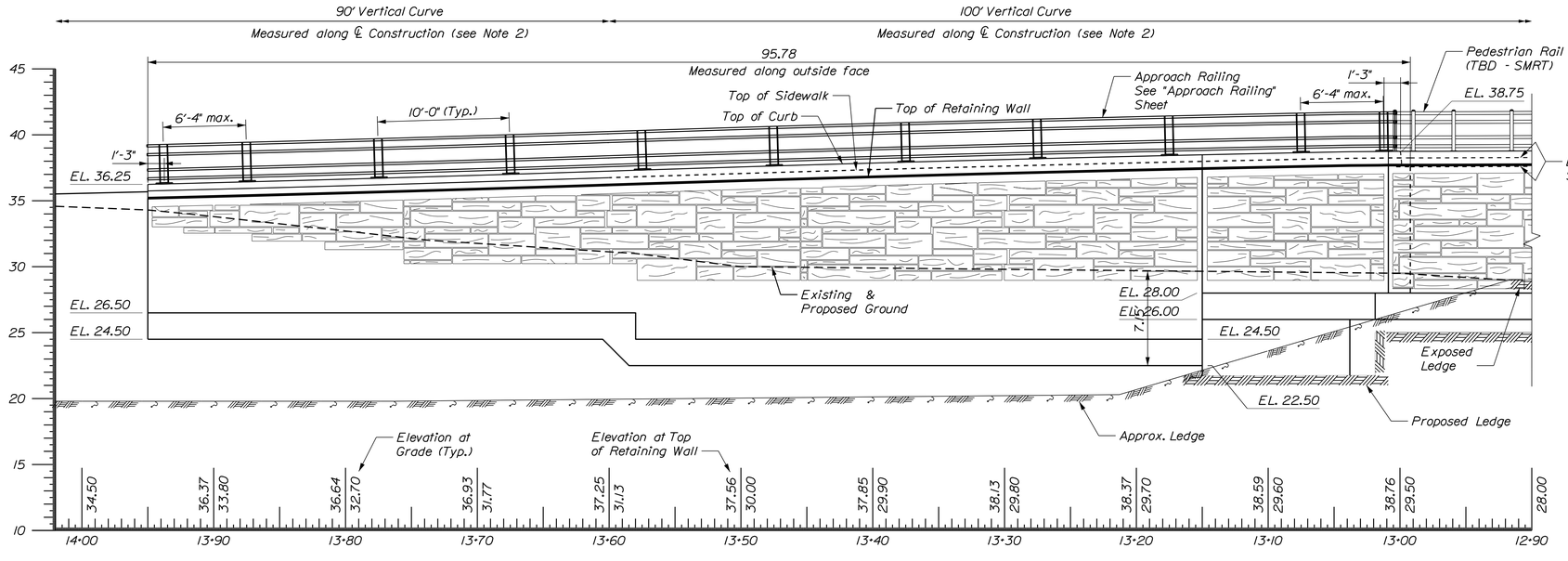
KEY

BB = Bridge Boring



RETAINING WALL 2 DESIGN SECTION

Scale: 3/8" to 1'



ELEVATION RETAINING WALL 2

Scale: 3/16" to 1'

NOTES:

1. See "PLAN" drawings for ℄ Construction horzontal curve data.
2. See "PROFILE" drawings for ℄ Construction profile and vertical curve data.
3. See "RETAINING WALL FOOTING DETAILS" drawing for retaining wall footing details.
5. The maximum factored applied footing pressure for pier 1 is 14.0 ksf.

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	J.Legere	05/20
CHECKED-REVIEWED		05/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

RETAINING WALL NO. 2
PLAN & ELEVATION

SHEET NUMBER

82

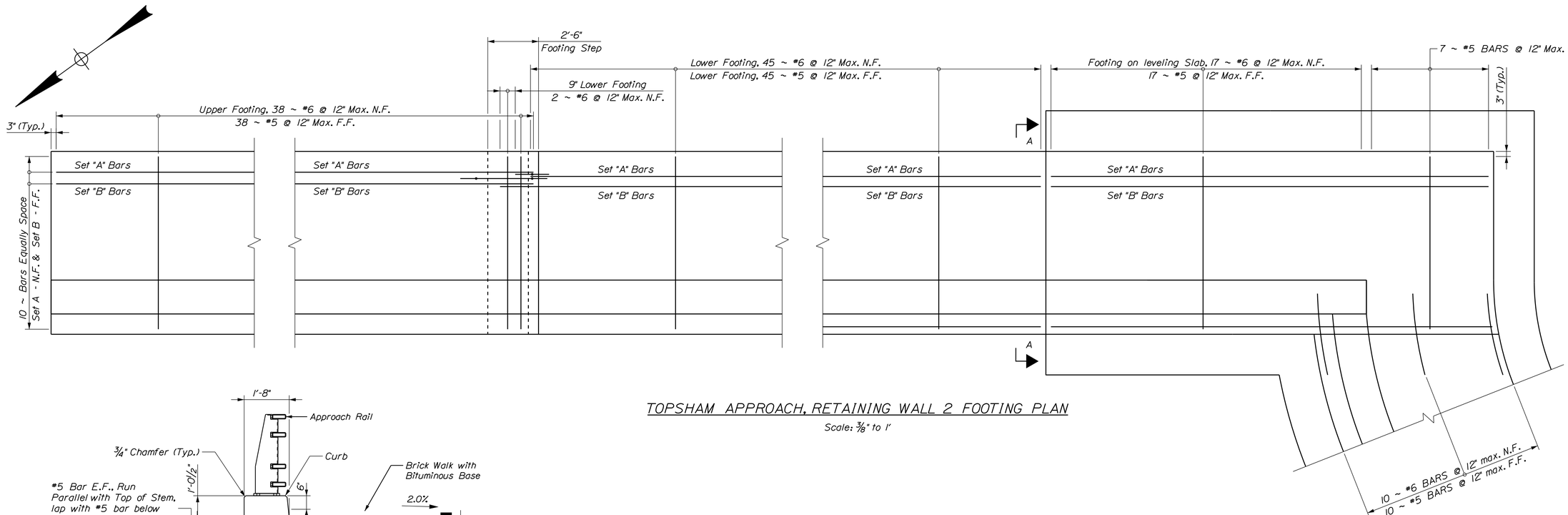
OF 128

Date:7/23/2020

Username:

Division:

Filename: ...\092_Wall_02_Plan_Elev.dgn



TOPSHAM APPROACH, RETAINING WALL 2 FOOTING PLAN

Scale: 3/8" to 1'

SECTION A-A, RETAINING WALL REINFORCEMENT

Scale: 1/2" to 1'

NOTES:

1. See "PLAN" drawings for ℄ Construction horzontal curve data.
2. See "PROFILE" drawings for ℄ Construction profile and vertical curve data.
3. See "RETAINING WALL FOOTING DETAILS" drawing for retaining wall footing details.
5. The maximum factored applied footing pressure for pier 1 is 14.0 ksf.

90% PROGRESS PLANS

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STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	J.Legere	7/20
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

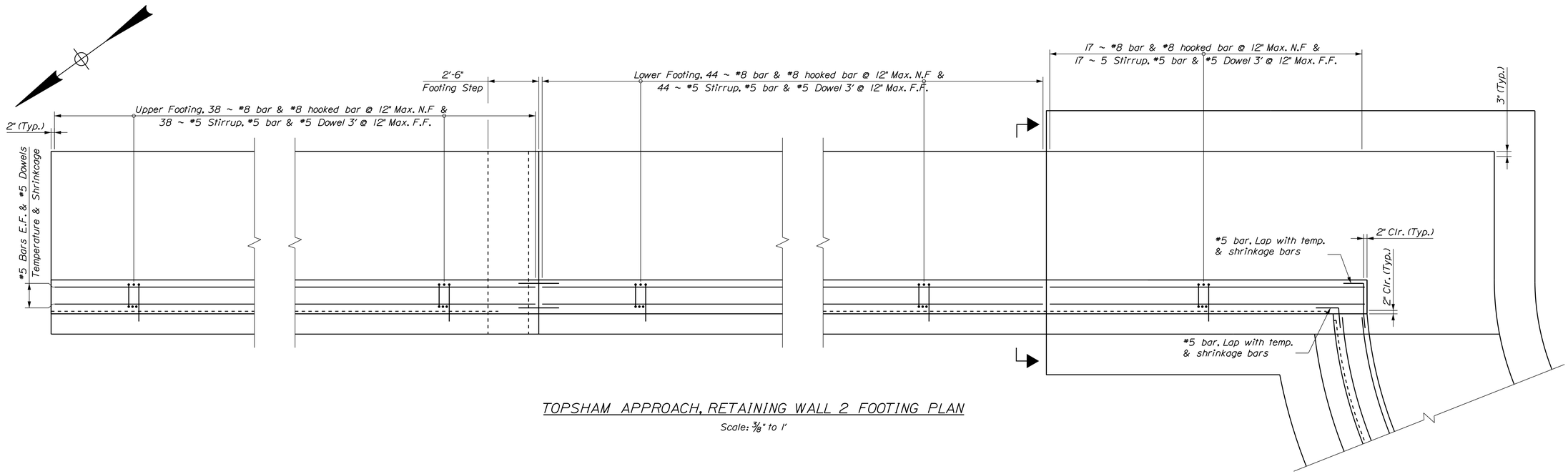
RETAINING WALL NO. 2
REINFORCEMENT 1 OF 2

SHEET NUMBER

83

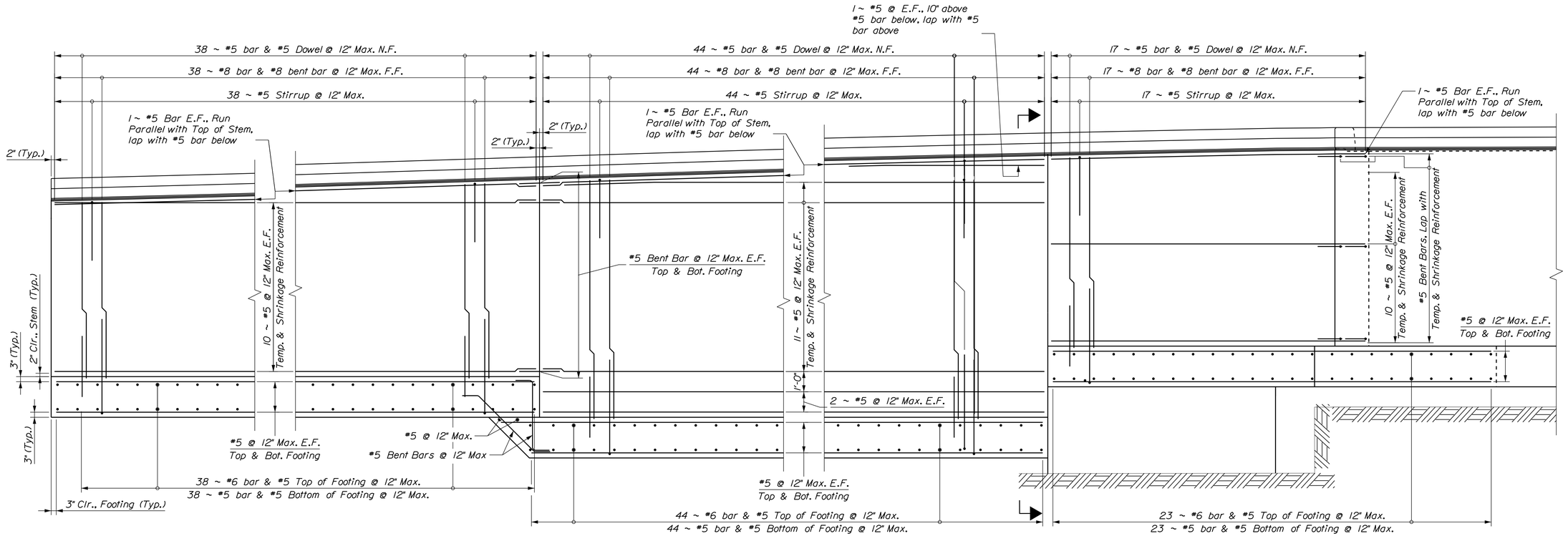
OF 128

Filename: ...\093_Wall_02_Reinforcing_1.dgn Division: Username: Date:7/23/2020



TOPSHAM APPROACH, RETAINING WALL 2 FOOTING PLAN

Scale: 3/8" to 1'



TOPSHAM APPROACH, RETAINING WALL 2 ELEVATION

Scale: 3/8" to 1'

90% PROGRESS PLANS

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	J.Legere	7/20
CHECKED-REVIEWED	J.Legere	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER CUMBERLAND
BRUNSWICK-TOPSHAM

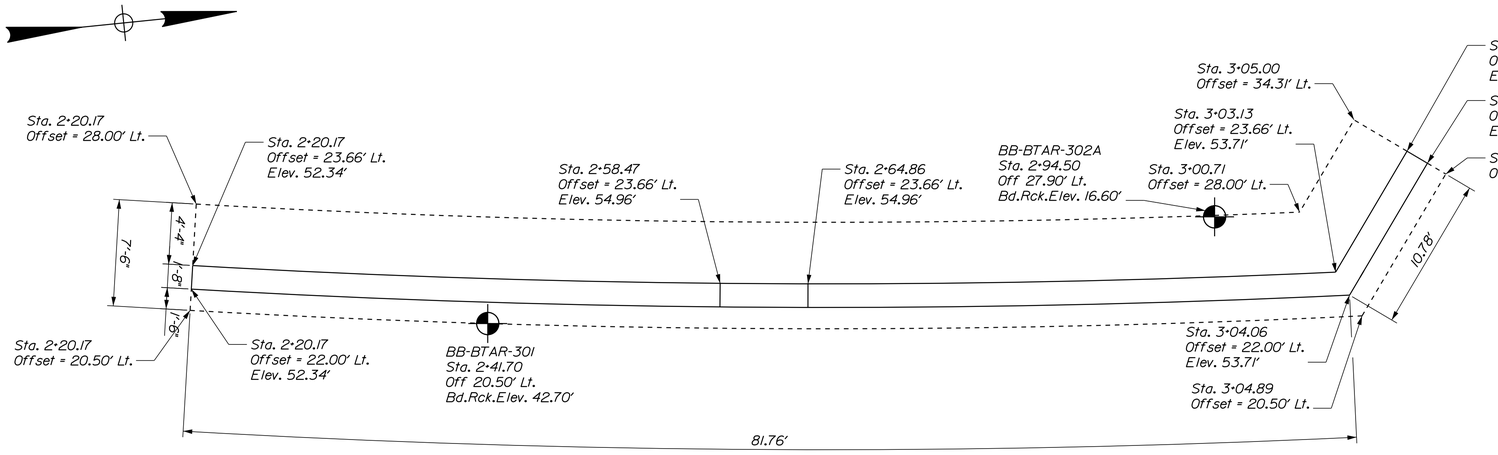
RETAINING WALL NO. 2
REINFORCEMENT 2 OF 2

SHEET NUMBER

84

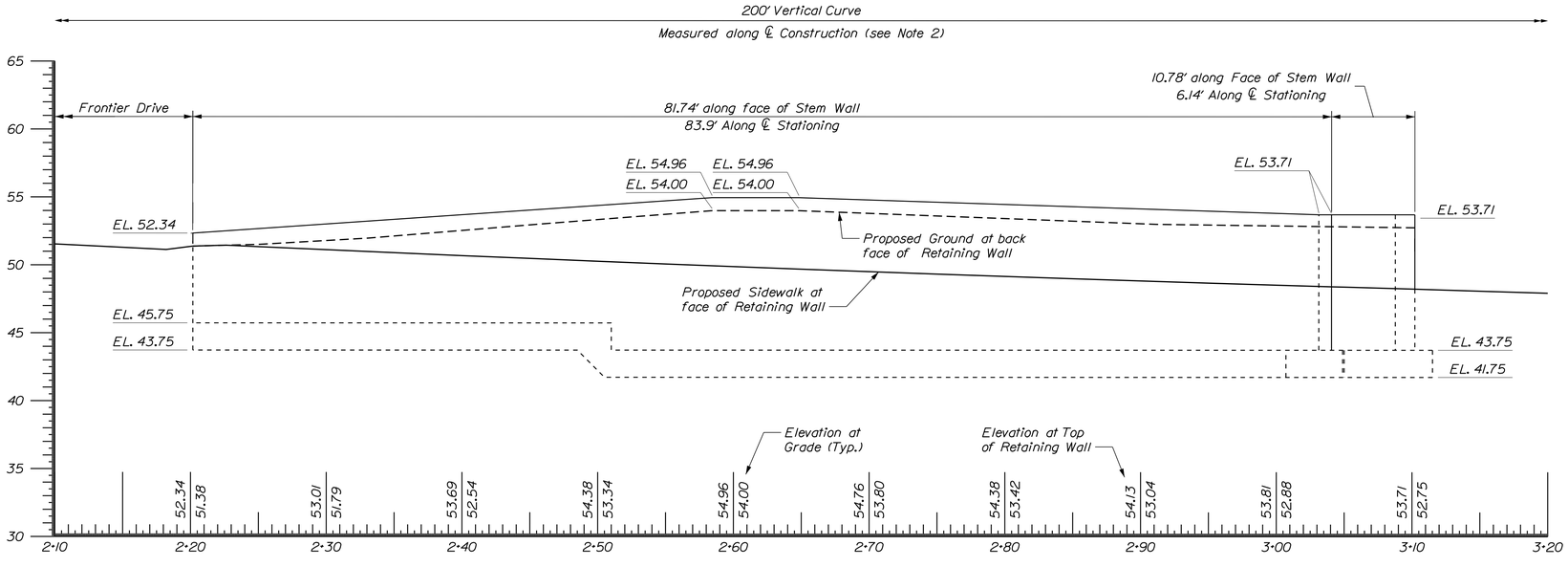
OF 128

Filename: ...\094_Wall_02_Reinforcing_2.dgn Division: Username: Date:7/23/2020



PLAN RETAINING WALL 3

Scale: 3/16" to 1'



ELEVATION RETAINING WALL 3

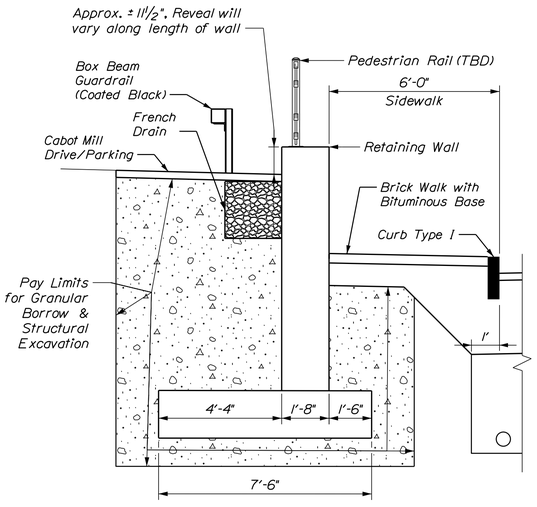
Scale: 3/16" to 1'

LEGEND

CASED WASH BORING

KEY

BB = Bridge Boring



RETAINING WALL 3 DESIGN SECTION

Scale: 3/8" to 1'

NOTES:

1. See "PLAN" drawings for ℄ Construction horzontalcurve data.
2. See "PROFILE" drawings for ℄ Construction profile and vertical curve data.
3. See "RETAINING WALL FOOTING DETAILS" drawing for retaining wall footing details.
4. Pedestal Elevations are approximate. The actual elevations shall be adjusted to accomadate the bearings supplied by the contractor. The elevations given assume an overall bearing height for Pier 1 & 2 of 6¾" for Girders 1 & 5 and 10⅞" for Girders 2, 3 & 4 and a bearing height for Pier 2 of 6¾" for Girders 1 & 5 and 8" for Girders 2, 3 & 4.
5. The maximum factored applied footing pressure for pier 1 is 14.0 ksf.

90% PROGRESS PLANS

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant	BY	DATE
DESIGN-DETAILED	J.Legere	J.Legere	7/20
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

RETAINING WALL NO. 3
PLAN & ELEVATION

SHEET NUMBER

85

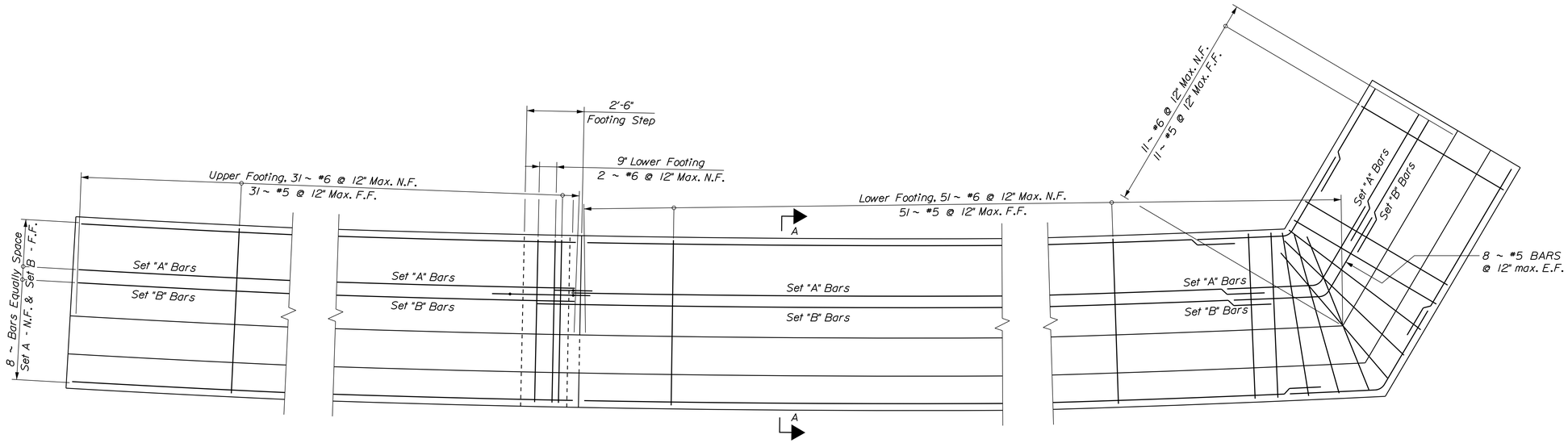
OF 128

Date:7/23/2020

Username:

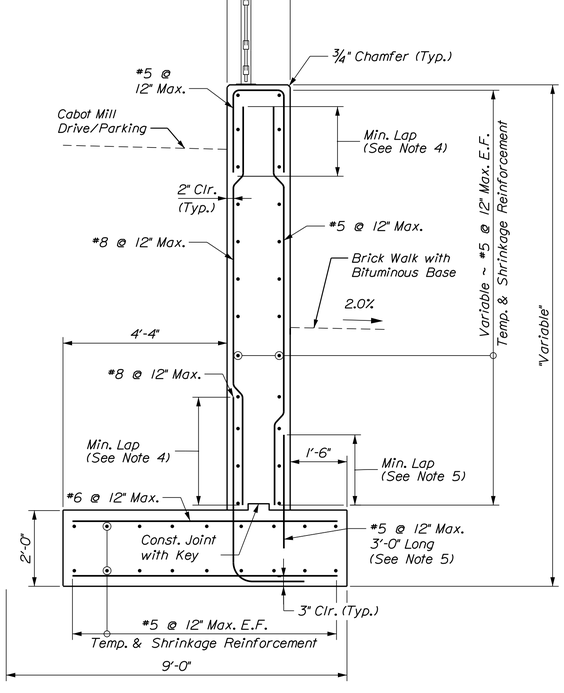
Division:

Filename: ...\095_Wall_03_Plan_Elev.dgn



BRUNSWICK APPROACH, RETAINING WALL 3 FOOTING PLAN

Scale: 3/8" to 1'



SECTION A-A, RETAINING WALL REINFORCEMENT

Scale: 1/2" to 1'

NOTES:

1. See "PLAN" drawings for ℄ Construction horzontalcurve data.

2. See "PROFILE" drawings for ℄ Construction profile and vertical curve data.

3. See "RETAINING WALL FOOTING DETAILS" drawing for retaining wall footing details.

4. Pedestal Elevations are approximate. The actual elevations shall be adjusted to accomadate the bearings supplied by the contractor. The elevations given assume an overall bearing height for Pier 1 & 2 of 6 3/4" for Girders 1 & 5 and 10 7/8" for Girders 2, 3 & 4 and a bearing height for Pier 2 of 6 3/4" for Girders 1 & 5 and 8" for Girders 2, 3 & 4.

5. The maximum factored applied footing pressure for pier 1 is 14.0 ksf.

90% PROGRESS PLANS

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	J.Legere	7/20
CHECKED-REVIEWED	J.Legere	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

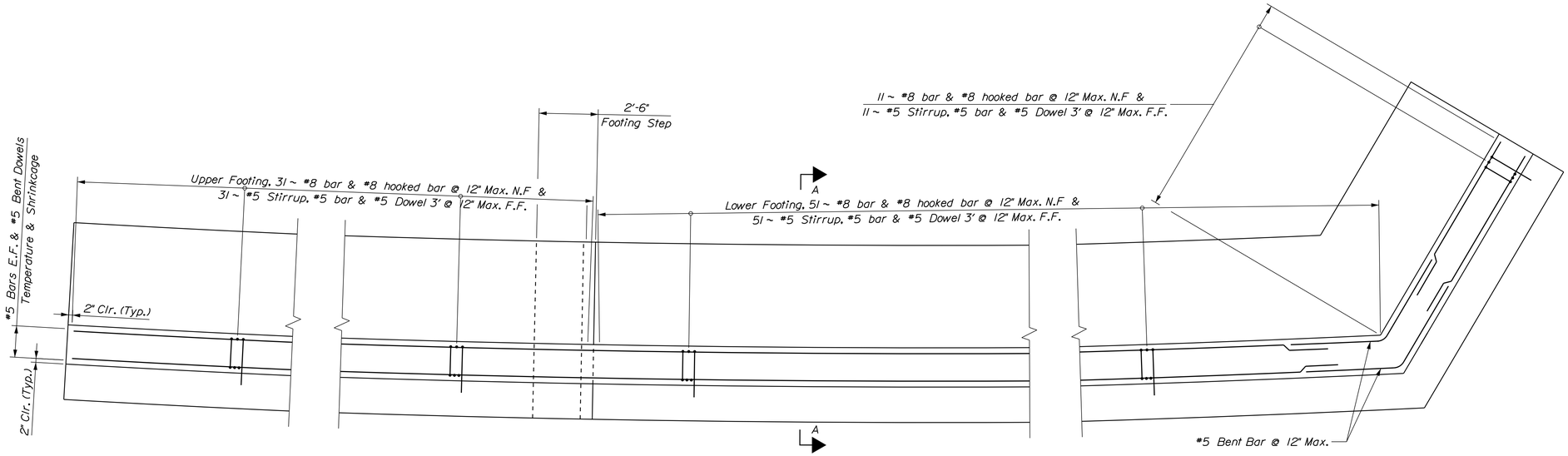
RETAINING WALL NO. 3
REINFORCEMENT 1 OF 2

SHEET NUMBER

86

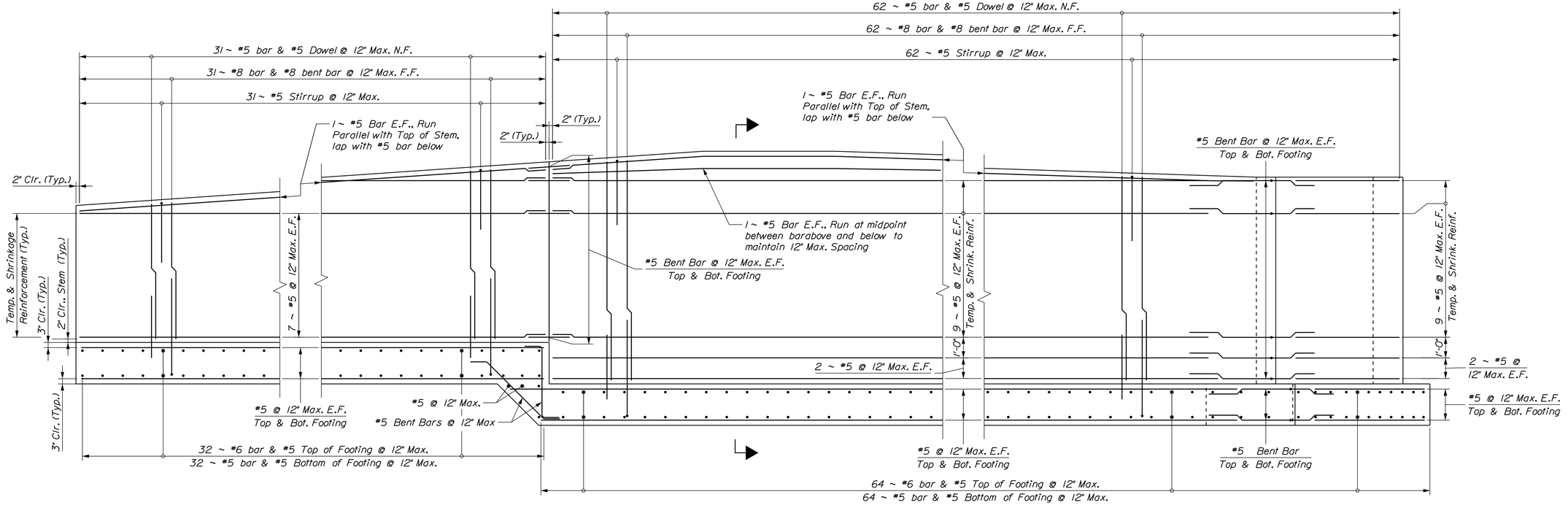
OF 128

Filename: ...\096_Wall_03_Reinforcing_1.dgn Division: Username: Date:7/23/2020



BRUNSWICK APPROACH, RETAINING WALL 3 FOOTING PLAN

Scale: 3/8" to 1'



BRUNSWICK APPROACH, RETAINING WALL 3 FOOTING PLAN

Scale: 3/8" to 1'

90% PROGRESS PLANS

TY LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	J.Legere	7/20
CHECKED-REVIEWED	J.Legere	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

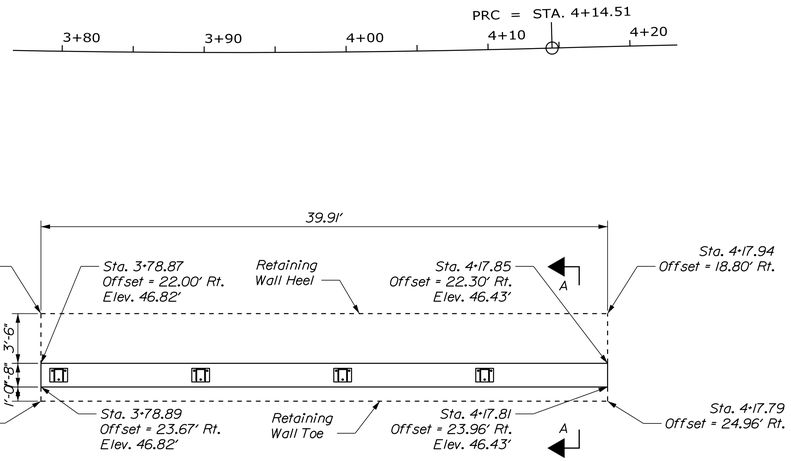
RETAINING WALL NO. 3
REINFORCEMENT 2 OF 2

SHEET NUMBER

87

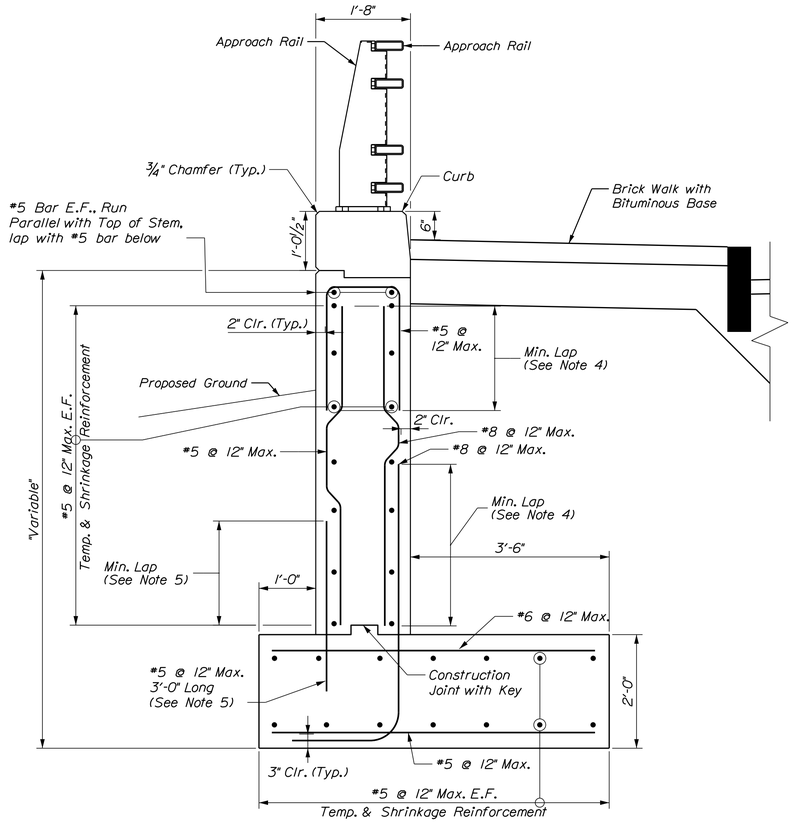
OF 128

Filename: ...\097_Wall_03_Reinforcing_2.dgn Division: Username: Date:7/23/2020



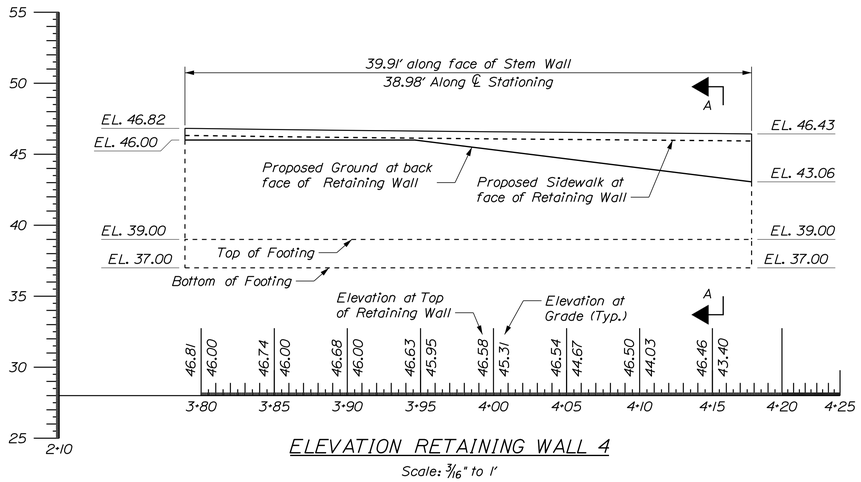
PLAN RETAINING WALL 4

Scale: 3/16" to 1'



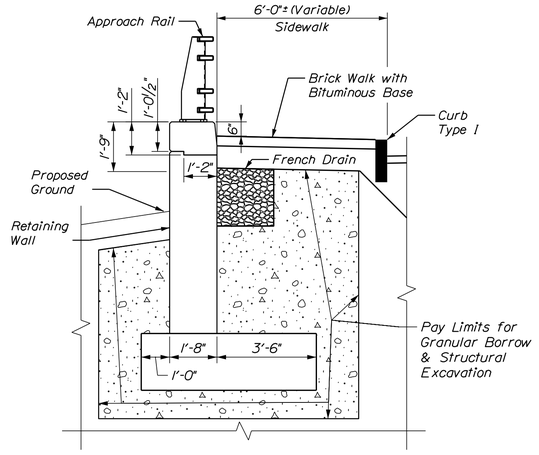
REINFORCING SECTION A-A

Scale: 3/4" to 1'



ELEVATION RETAINING WALL 4

Scale: 3/16" to 1'



RETAINING WALL 4 DESIGN SECTION A-A

Scale: 3/8" to 1'

NOTES:

1. See "PLAN" drawings for ℄ Construction horzontalcurve data.
2. See "PROFILE" drawings for ℄ Construction profile and vertical curve data.
3. See "RETAINING WALL FOOTING DETAILS" drawing for retaining wall footing details.
4. Pedestal Elevations are approximate. The actual elevations shall be adjusted to accomadate the bearings supplied by the contractor. The elevations given assume an overall bearing height for Pier 1 & 2 of 6 3/4" for Girders 1 & 5 and 10 3/8" for Girders 2, 3 & 4 and a bearing height for Pier 2 of 6 3/4" for Girders 1 & 5 and 8" for Girders 2, 3 & 4.
5. The maximum factored applied footing pressure for pier 1 is 14.0 ksf.

90% PROGRESS PLANS

TY LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	J.Legere	J.Legere	7/20
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

RETAINING WALL NO. 4
PLAN & ELEVATION

SHEET NUMBER

88

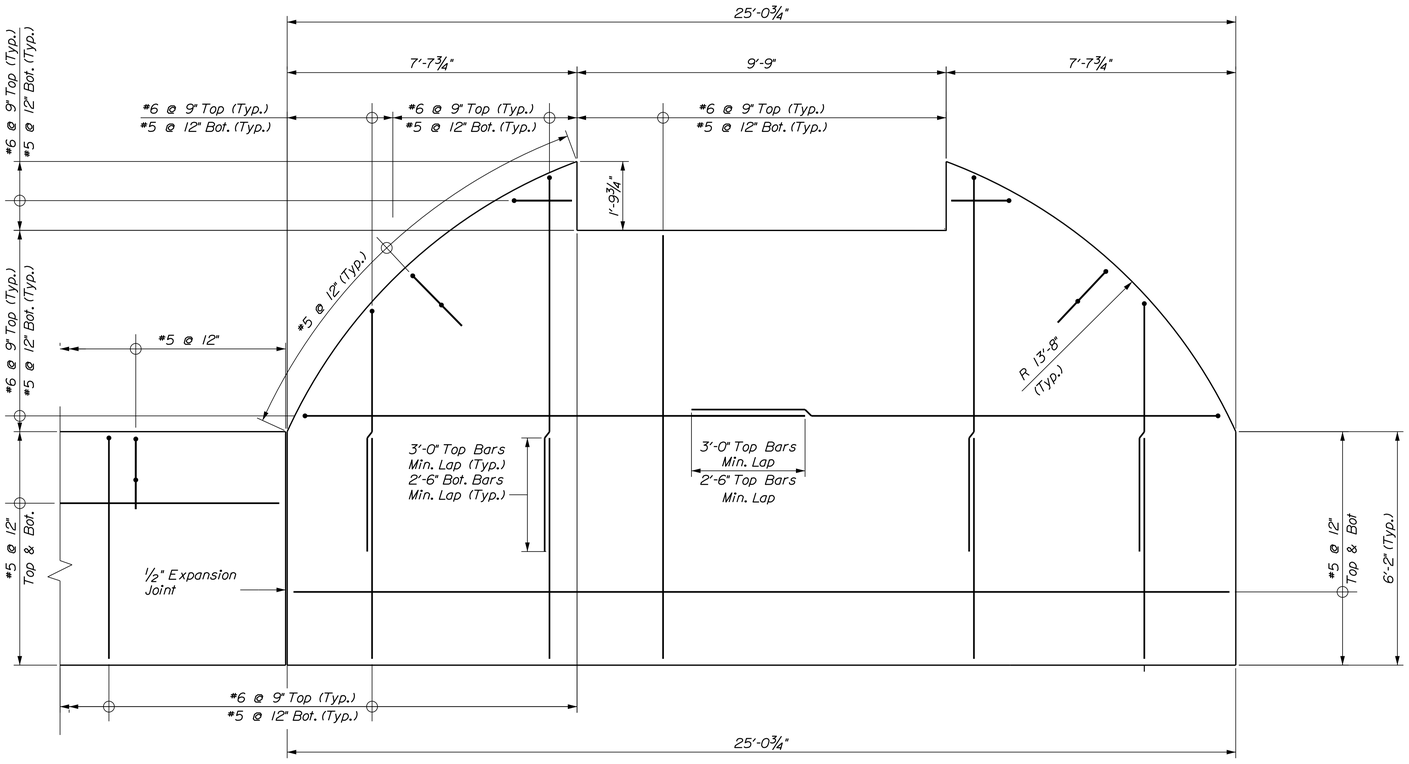
OF 128

Username:

Division:

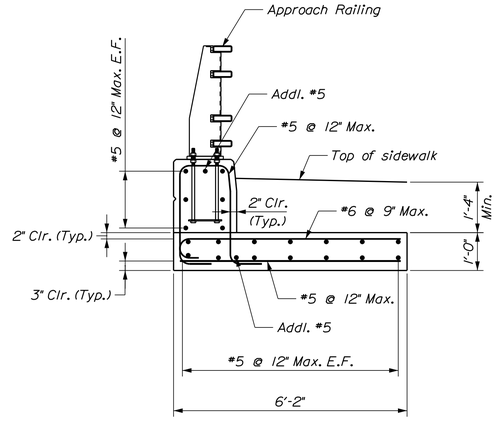
Date:7/23/2020

Filename: ...\098_Wall_04_Plan_Elev.dgn



MOMENT SLAB REINFORCEMENT

(Topsham approach shown. Brunswick approach similar)



MOMENT SLAB TYPICAL SECTION REINFORCEMENT

NOTES:

1. For Approach Rail details, see sheet 93.
2. Provide adequate lap length.

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	B.Smith	R.Kravchuk	7/20
CHECKED-REVIEWED	B.Toothaker		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

APPROACH TRAFFIC RAIL
MOMENT SLAB

SHEET NUMBER

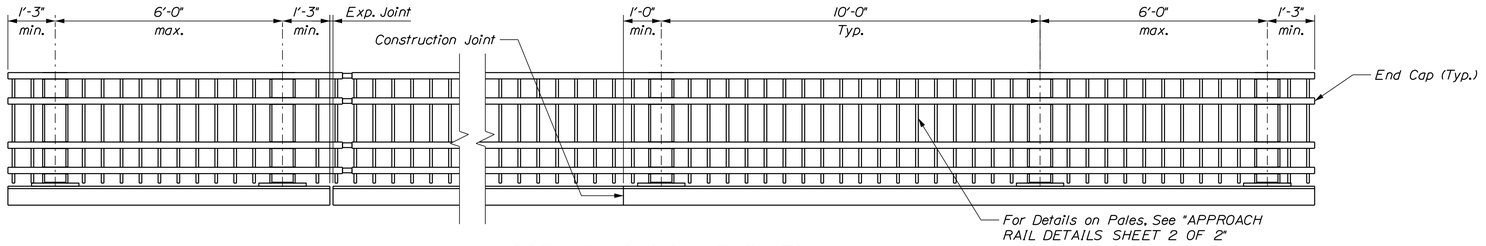
89

OF 128

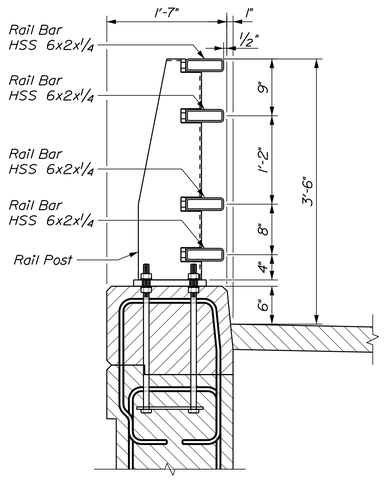
Username: Date:7/23/2020

Division:

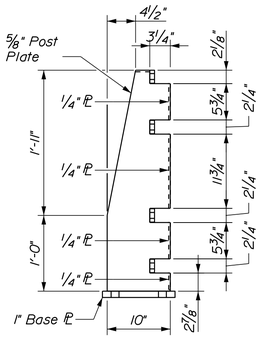
Filename: ...\106180_131\099_Moment_Slab.dgn



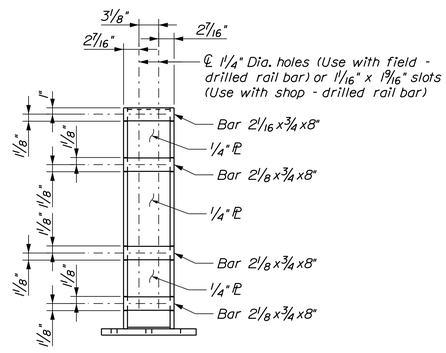
APPROACH RAILING ELEVATION



TYPICAL RAILING SECTION
Pale Panel not shown



RAIL POST SIDE ELEVATION



RAIL POST FRONT ELEVATION

APPROACH RAILING NOTES

1. All work and materials shall conform to the provisions of section 507 - Railings of the Standard Specifications.

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

3. Twenty - five percent of the post - to - base welds in a production lot shall be tested by the Magnetic Particle Method. If reject able discontinuities are found, another twenty - five percent of that production lot shall be tested. If reject able discontinuities are found in the second twenty - five percent, all post - to - base welds in that lot shall be tested. Acceptance criteria shall be in accordance with the latest edition of the AWS D1.5 Bridge Welding Code.

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

5. Rail posts shall set normal to grade unless otherwise shown.

6. Post base plates shall be flat after fabrication.

7. Lengths of rail bar shall be attached to a minimum of 2 rail posts and to at least 4 posts whenever possible.

8. Rail bars shall not be shop spliced.

9. Rail bar expansion joints shall be provided in any bay spanning a super-structure expansion joint. Expansion joint width shall be one inch at 45°F.

10. All parts except the post anchorage, the reinforcement assembly and the anchor plate shall be galvanized after fabrication in accordance with ASTM A 123, except that hardware shall meet the requirements of either ASTM A 153 or ASTM B 695, Class 50, Type 1. Parts except hardware to be galvanized shall be blast cleaned prior to galvanizing in accordance with SSPC - SP6.

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

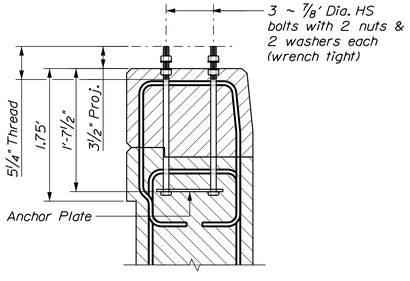
12. Anchor bolts may be tack welded to anchorage.

13. Rail posts shall be in place and in proper alignment prior to placing the curb concrete.

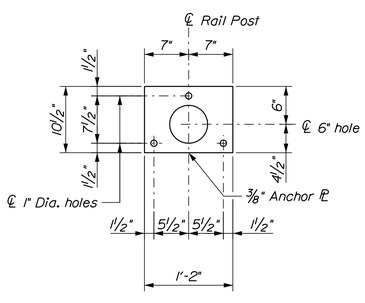
14. After installation of the rail bars, the exposed rail bolt threads shall receive two coats of zinc - rich paint.

MATERIALS

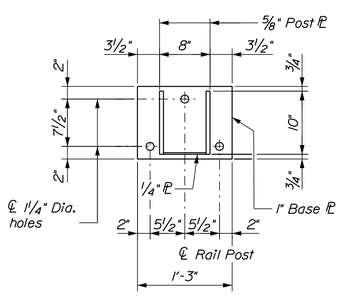
Rail Bars	ASTM A 500, Grade B
Rail Post Plates & Bases	ASTM A 572, Grade B
Rail Bar Splice Sleeves	ASTM A 572, Grade B
Anchor & Reinforcement Assemblies	ASTM A 36
Plate Washers	ASTM A 36
Anchor Bolts	ASTM A 325, ASTM A 449, or ASTM F 1554, Grade 105
Rail Bolts	ASTM A 36
Nuts for Rail Bolts	ASTM A 563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



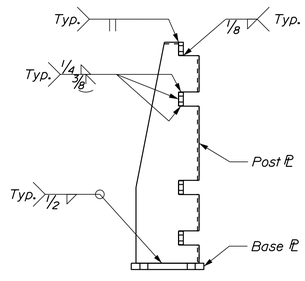
ANCHORAGE DETAIL



ANCHOR PLATE PLAN



RAIL POST PLAN



RAIL POST WELD DETAIL

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

STATE OF MAINE
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STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	J.Legere	J.Legere	7/20
CHECKED-REVIEWED	D.Myers	D.Myers	7/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

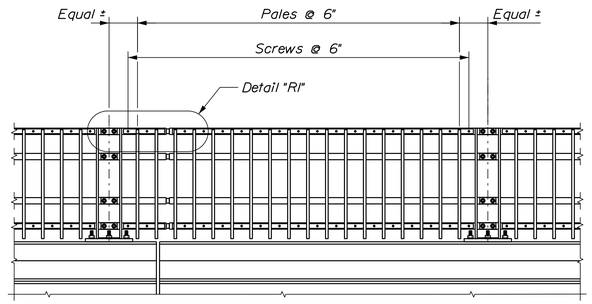
APPROACH RAIL DETAILS
SHEET 1 OF 2

SHEET NUMBER

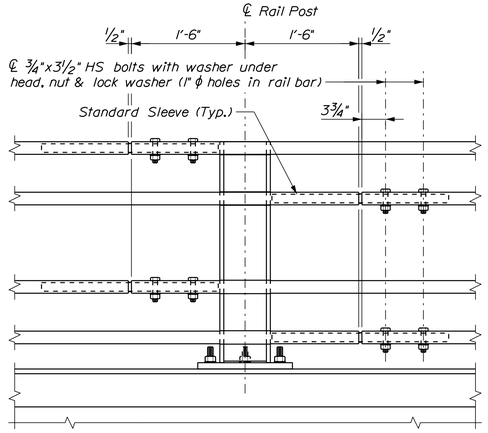
90

OF 128

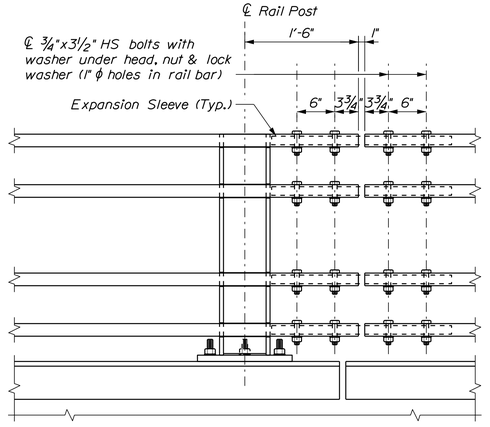
Filename: ...\100_Approach_Traffic_Rail_1.dgn Division: Username: Date:7/23/2020



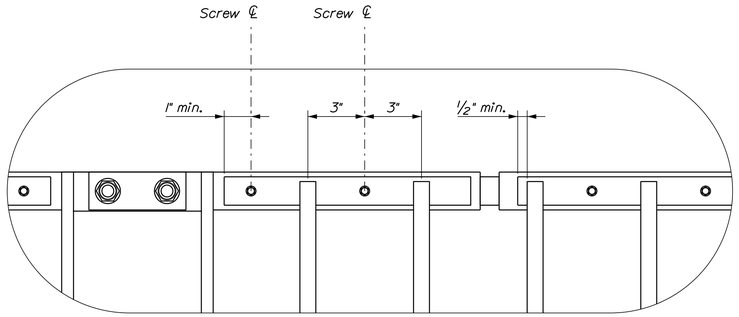
PALE PANEL REAR ELEVATION



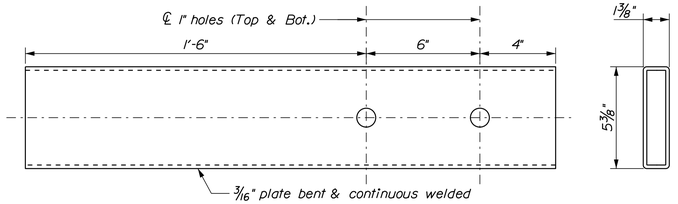
STANDARD SPLICE ELEVATION



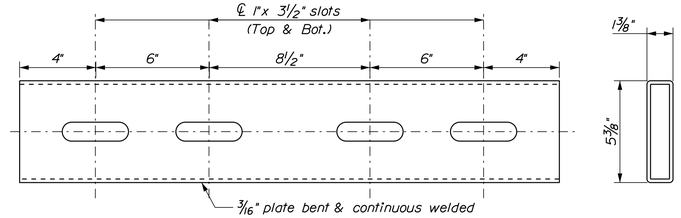
EXPANSION SPLICE ELEVATION



DETAIL "R1"



STANDARD SLEEVE DETAILS



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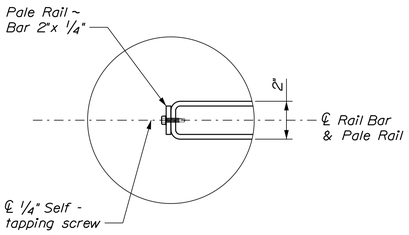
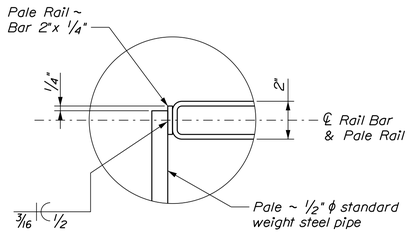
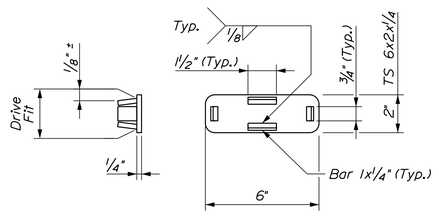


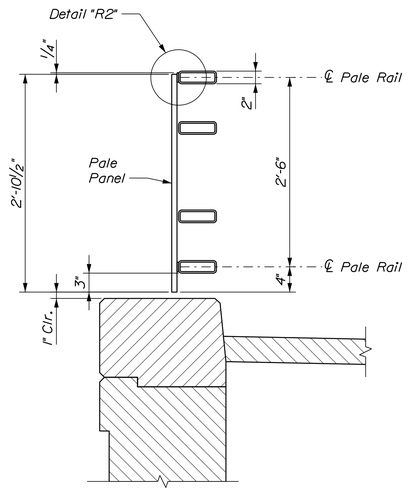
DETAIL "R2"
Between Pales



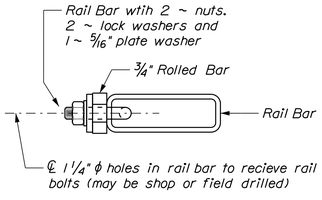
DETAIL "R2"
At Pale



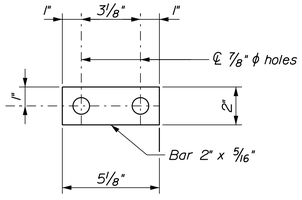
RAIL BAR END CAP



PALE PANEL SECTION



RAIL BAR CONNECTION DETAIL



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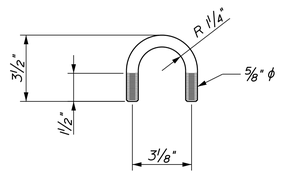

RAIL BOLT DETAIL

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STP-2260(300)X

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BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	J.Legere	BY	7/20
CHECKED-REVIEWED	D.Myers	BY	7/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

APPROACH RAIL DETAILS
SHEET 2 OF 2

SHEET NUMBER

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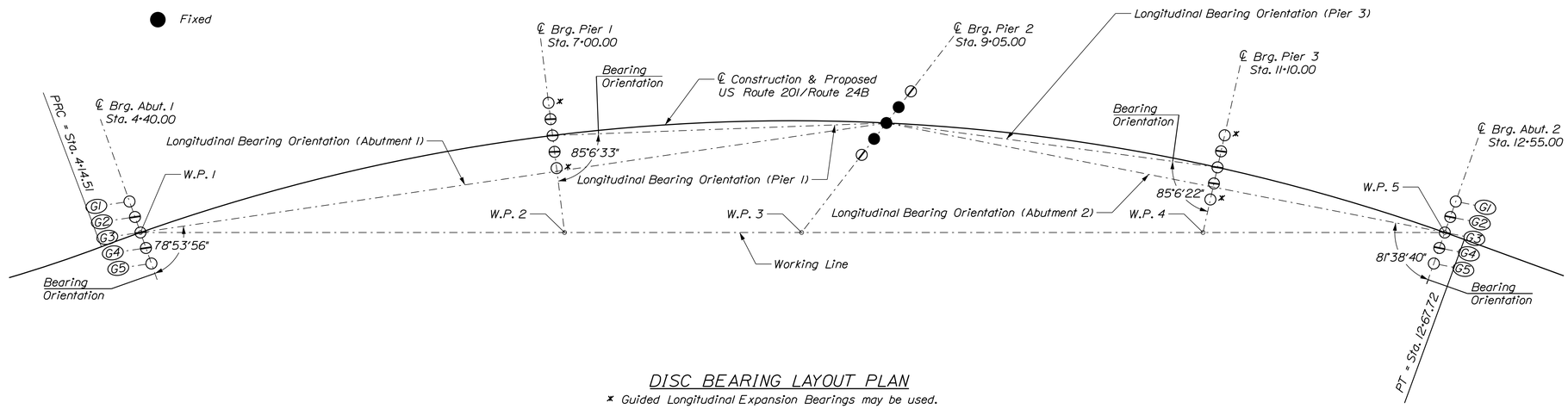
Filename: ...\101_Approach_Traffic_Rail_2.dgn Division: Username: Date:7/23/2020

LEGEND:

- Non - Guided Expansion
- Guided Longitudinal Expansion
- Guided Radial Expansion
- Fixed



DISC BEARING LAYOUT PLAN

* Guided Longitudinal Expansion Bearings may be used.

BEARING NOTES:

1. The actual dimension "H" shall be the responsibility of the Contractor. Dimensions and sizes of plates not shown are dependent on design loads, bearing type, capacity, and the manufacturer of the bearings. The shop drawings, prepared by the manufacturer, shall provide all pertinent bearing information. The final bridge seat elevations shall be determined by the Contractor and submitted with the shop drawings for approval prior to construction of the substructure units.
2. Masonry plates shall be placed on 1/8" thick preformed pads in accordance with the specifications.
3. Anchor rod spacing shall be coordinated with the bearing manufacturer.
4. Bearing installation shall be in strict conformance with the Standard Specifications Section 523 and the manufacturer's recommendations.
5. The design temperature range shall be 125°F (-20°F to 105°F).
6. In the disk bearing setting corrections table, a negative dimension (-1 1/8) indicates a downstation direction. A positive dimension (-1/2) indicates an upstation direction.
7. All steel, unless otherwise specified, shall meet the requirements of ASTM A709/A709M, Grade 50W.
8. All bearings shall be marked prior to shipping. The marks shall include the bearing locations on the bridge, and a direction arrow that points upstation. All marks shall be permanent and shall be visible after the bearing is installed.
9. Temperatures shown in the Bearing Setting Corrections Section of the "Disk Bearing Table" are those of the steel girders and not necessarily the ambient air temperature.
10. Design of the sole plates, masonry plates, and anchor rods is the responsibility of the bearing Manufacturer. Payment for these shall be made under item, 523.5551, Pot or Disc Bearings, Fixed or Item 523.5552, Pot or Disc Bearing, Expansion as applicable.
11. Strength Limit State rotations shown in the Bearing Table do not include allowances for uncertainties, fabrication, or installation, as defined in AASHTO LRFD Bridge Design Specifications, 8th Edition 2017.
12. Bearing Sole Plate Bevel % is positive upstation.
13. Coordinate placement of the anchor rods with placement of reinforcing steel.

BEARING TABLE

Location	Girder	Bearing Type	Vertical				Horizontal						Dim. "H" (in) (Note No. 1)	Design Rotation (radians) (Note No. 13)		Total Long. Movement (in.)
			Strength	Extreme Event	Service		Strength		Extreme Event		Service					
			Total Load	Total Load	Dead Load	Total Load	Longitudinal	Transverse	Longitudinal	Transverse	Longitudinal	Transverse		Dead Load	Live Load	
Abut. No. 1	1 & 5	Non-Guided	780	490	420	575	15 **	15 **	25 *	25 *	10 **	10 **	7.000	0.015	0.008	5.44
	2, 3, & 4	Guided Longitudinally	730	445	375	530	15 **	25	25 *	90	10 **	20	9.625	0.014	0.006	5.44
Pier No. 1	1 & 5	Non-Guided	1785	1130	975	1310	20 **	30 **	50 *	50 *	15 **	20 **	9.375	0.012	0.003	2.4
	2, 3, & 4	Guided Longitudinally	1785	1130	975	1310	20 **	45	60 *	235	15 **	30	14.125	0.011	0.003	2.4
Pier No. 2	1 & 5	Guided Radially	1240	720	575	880	40	25 **	140	35 *	30	15 **	8.375	0.011	0.005	-
	2, 3, & 4	Fixed	1240	720	575	880	40	35	140	145	30	25	9.375	0.011	0.004	-
Pier No. 3	1 & 5	Non-Guided	1135	685	580	815	15 **	20 **	35 *	35 *	15 **	15 **	7.875	0.01	0.005	2.4
	2, 3, & 4	Guided Longitudinally	1135	685	580	815	15 **	30	35 *	160	15 **	20	11.500	0.01	0.004	2.4
Abut. No. 2	1 & 5	Non-Guided	300	165	125	210	10 **	10 **	10 *	10 *	10 **	5 **	5.750	0.012	0.007	4.1
	2, 3, & 4	Guided Longitudinally	355	180	125	240	10 **	10	10 *	35	10 **	10	7.250	0.012	0.006	4.1

* Horizontal Extreme Event loads for unrestrained directions will equal maximum horizontal load that can be transferred via friction of the sliding surface (values shown are estimated based on a coefficient of friction of 0.05)

** Horizontal loads for unrestrained directions assume no slip of the sliding surface. If maximum horizontal force transmitted via friction of the sliding surface is less, use the friction-based limiting load instead.

BEARING SETTING CORRECTIONS TABLE

	Dimension "X" (in)					
	15° F	30° F	45° F	60° F	75° F	90° F
Abutment No. 1	1 1/8	1/2	0	-1/2	-1 1/8	-1 5/8
Pier No. 1	1/2	1/4	0	-1/4	-1/2	-3/4
Pier No. 2	0	0	0	0	0	0
Pier No. 3	-1/2	-1/4	0	1/4	1/2	3/4
Abutment No. 2	-7/8	-3/8	0	3/8	7/8	1 1/4

BEARING SOLE PLATE BEVEL (%)

	ABUTMENT 1	PIER 1	PIER 2	PIER 3	ABUTMENT 2
Girder 1	-0.90	-0.90	-0.90	-0.90	-0.90
Girder 2	-0.90	-0.90	-0.90	-0.90	-0.90
Girder 3	-0.90	-0.90	-0.90	-0.90	-0.90
Girder 4	-0.90	-0.90	-0.90	-0.90	-0.90
Girder 5	-0.90	-0.90	-0.90	-0.90	-0.90

90% PROGRESS PLANS

TY LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	B.Smith	B.Smith	4/20
CHECKED-REVIEWED	B.Toothaker	B.Toothaker	4/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

BEARING LAYOUT

SHEET NUMBER

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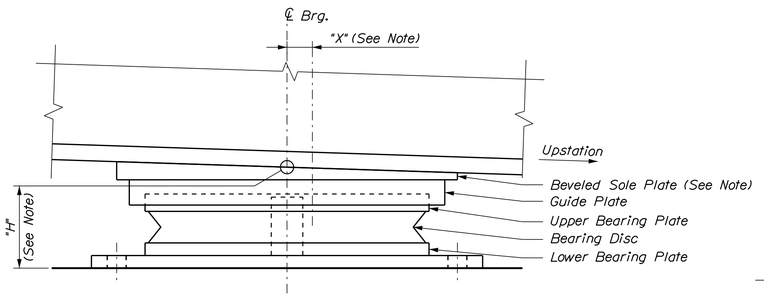
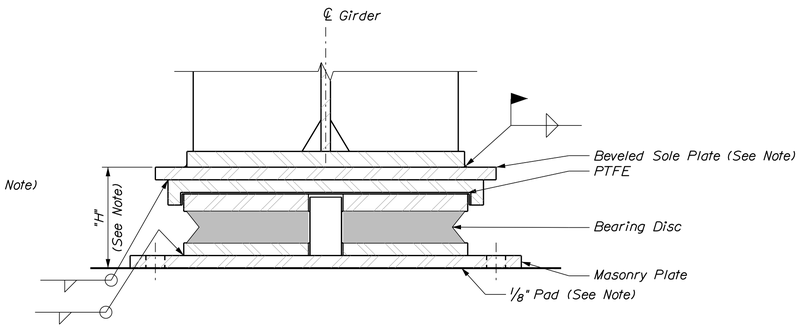


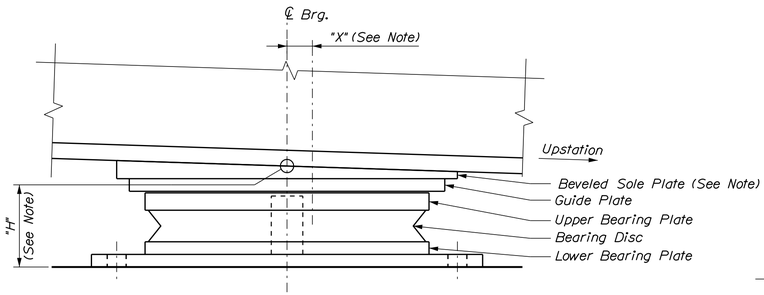
LONGITUDINAL ELEVATION



TRANSVERSE SECTION

GUIDED BEARING

(Guided Longitudinally Shown, Guided Transversely Similar)



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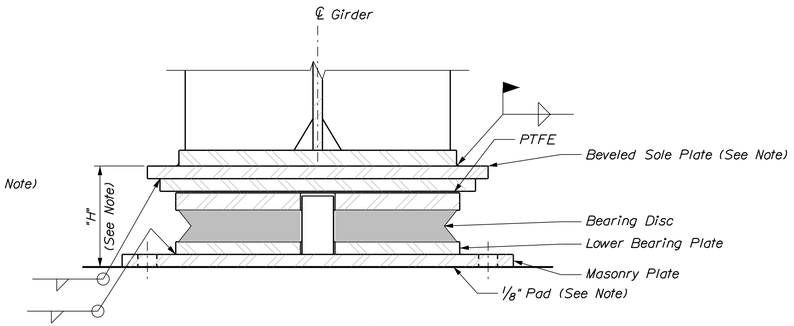
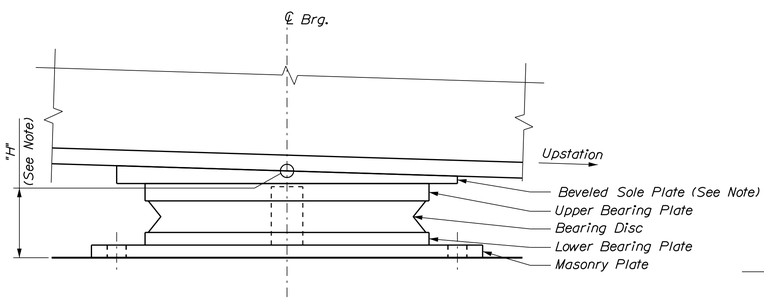


TRANSVERSE SECTION

NON-GUIDED BEARING



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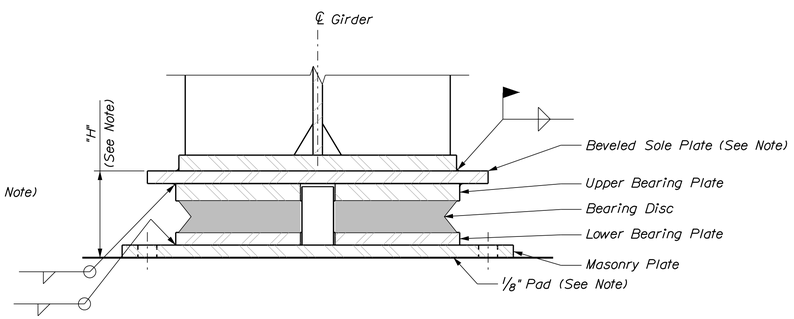

TRANSVERSE SECTION

FIXED BEARING

Note:
See sheet "BEARING LAYOUT" for Bearing notes, setting, and design tables.

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FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

BEARING DETAILS

SHEET NUMBER

93

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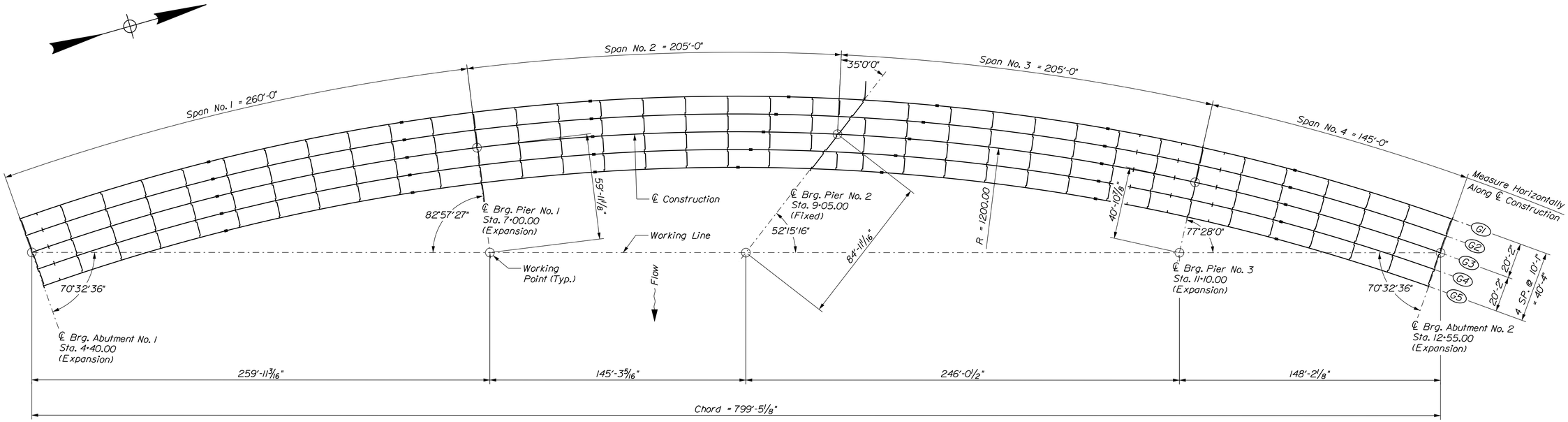

FRAMING PLAN LAYOUT

30 0 30 60
Scale of Feet

STRUCTURAL STEEL NOTES

1. Girders may be either heat curved or cut curved in accordance with AASHTO specifications at the option of the Contractor.
2. Camber ordinates, as shown, are computed to compensate for all dead load deflections and for the curvature of the finished grade profile.
3. No transverse butt - weld splices will be allowed in the flange plates or web plates within 10 ft. or 10 percent of the span length (whichever is greater) from the points of maximum negative moment or maximum positive moment. Butt - weld splices in flanges shall be not less than 3 ft. from tranverse butt - welds in the web plates and no transverse web or flange butt - welds shall be located within 3 ft. of other transverse welds (e.g. connection plates to web welds) on either flange or web. No tranverse butt - weld splices will be allowed in areas of stress reversal.
4. 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 ft. in length unless otherwise shown on the plans.
5. Filler plates may be steel conforming to the requirements of A709, Grade 36.
6. Bolted field splice connections shall be made using 7/8" diameter, ASTM A325 Type 1 H.S. bolts. Hole size shall be 15/16" diameter unless otherwise shown. Bolt threads shall be excluded from the shear plane of field splice connections.
7. Steel for cross frames, connection plates and stiffeners shall be ASTM A709, Grade 50.
8. Bearing stiffeners shall be plumb after erection and dead loading of the structure. Intermediate web stiffeners may be either plumb or normal to the top flange.
9. Cross frame connection plates may be either plumb or normal to the top flange.
10. All cross frames except those at Pier No. 2 are radial.
11. Bolted cross frame connections shall be made using 7/8" diameter, ASTM A325 Type 1 H.S. bolts. Hole size shall be 15/16" diameter. The minimum edge distance shall be 1 1/2" unless otherwise shown. Oversized or short-slotted holes are not permitted for use in cross frame connections.
12. Connection plates shall be 5/8" minimum thickness and 8" minimum width except where either flange exceeds 32 in. The connection plates shall be 9" minimum width. Intermediate stiffeners shall be 5/8"x6 3/4" minimum.
13. Stiffeners not used as connection plates shall be tight fit to flanges and welded to the web only, except stiffeners on fascia girders shall also be welded to both flanges.
14. Cross frames shall be detailed and fabricated to fit under steel dead load.
15. Girder webs shall be vertical under steel dead load.
16. Prior to structural steel erection, the Contractor shall submit an erection sequence to the Engineer for approval.
17. All web, flange, field splice plates, and cross frame members (including connection plates) in tension or stress reversal areas shall conform to Zone 2 Charpy V-notch impact test requirements of AASHTO M270.

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P.E. NUMBER

DATE

SIGNATURE

BY	DATE
S.Morgan	4/20
D.Myers	4/20

	D. Bryant
PROJ. MANAGER	
DESIGN-DETAILED	C.Taylor
CHECKED-REVIEWED	D.Myers
DESIGN2-DETAILED2	
DESIGN3-DETAILED3	
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

FRAMING LAYOUT PLAN

SHEET NUMBER
94
OF 128

Date:7/23/2020
Username:
Division:
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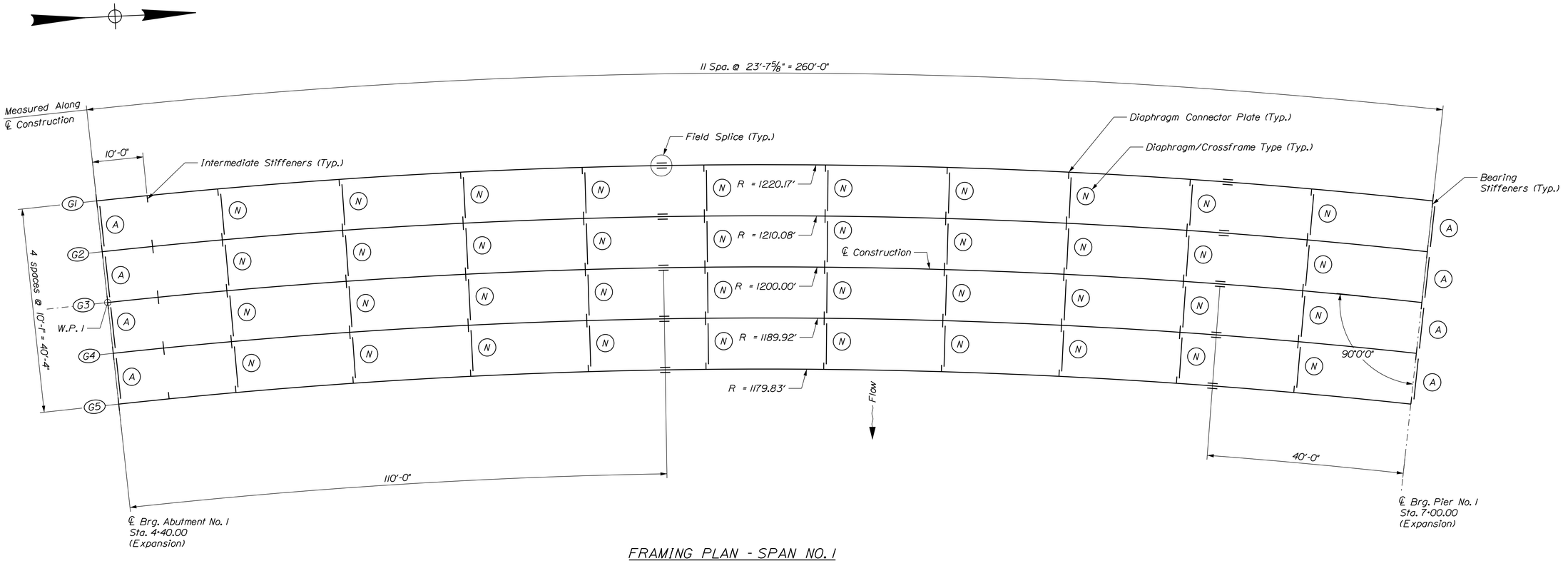

FRAMING PLAN - SPAN NO. 1

Username:

Division:

Filename: ...\105_Framing_Span_1.dgn

Date:7/23/2020

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STP-2260(300)X

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PROJ. MANAGER	D. Bryant		
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CHECKED-REVIEWED	D.Myers	D.Myers	4/20
DESIGN2-DETAILED2			
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FRANK J. WOOD BRIDGE
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BRUNSWICK-TOPSHAM CUMBERLAND

FRAMING PLAN
SPAN NO. 1

SHEET NUMBER

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OF 128

90% PROGRESS PLANS

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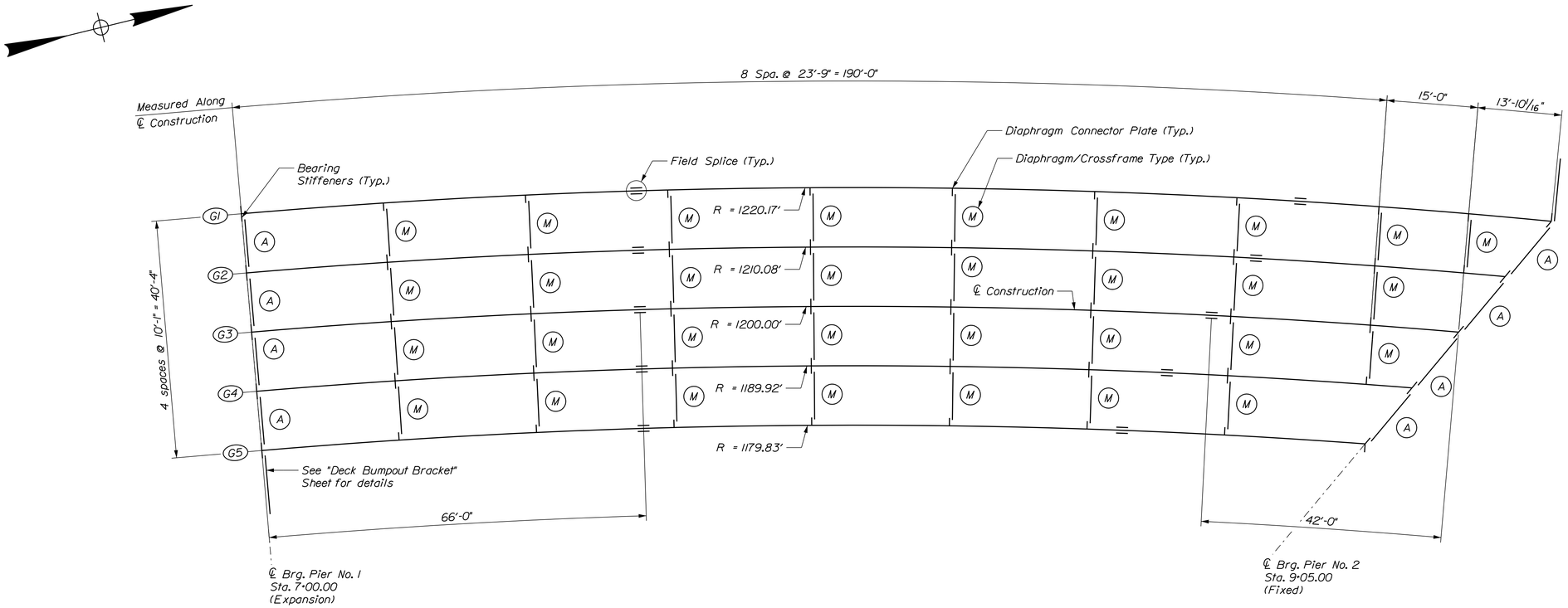

FRAMING PLAN - SPAN NO. 2

90% PROGRESS PLANS

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DESIGN-DETAILED	C.Taylor	S.Morgan	4/20
CHECKED-REVIEWED	D.Myers	D.Myers	4/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

FRAMING PLAN
SPAN NO. 2

SHEET NUMBER

96

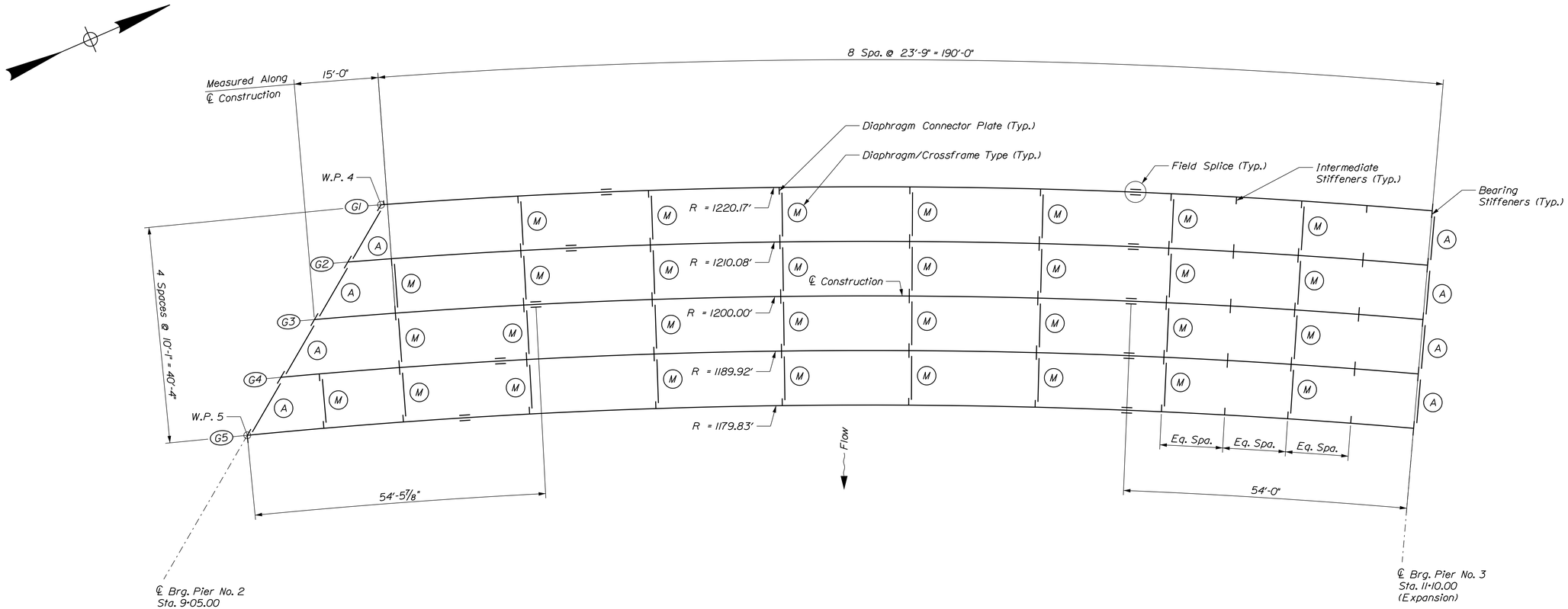
OF 128

Username:

Date:7/23/2020

Division:

Filename: ...\106_Framing_Span_2.dgn



FRAMING PLAN - SPAN NO. 3

90% PROGRESS PLANS

TY LIN INTERNATIONAL

Filename: ...\107_Framing_Span_3.dgn Division: Username: Date:7/23/2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	C.Taylor	S.Morgan	4/20
CHECKED-REVIEWED	D.Myers	D.Myers	4/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

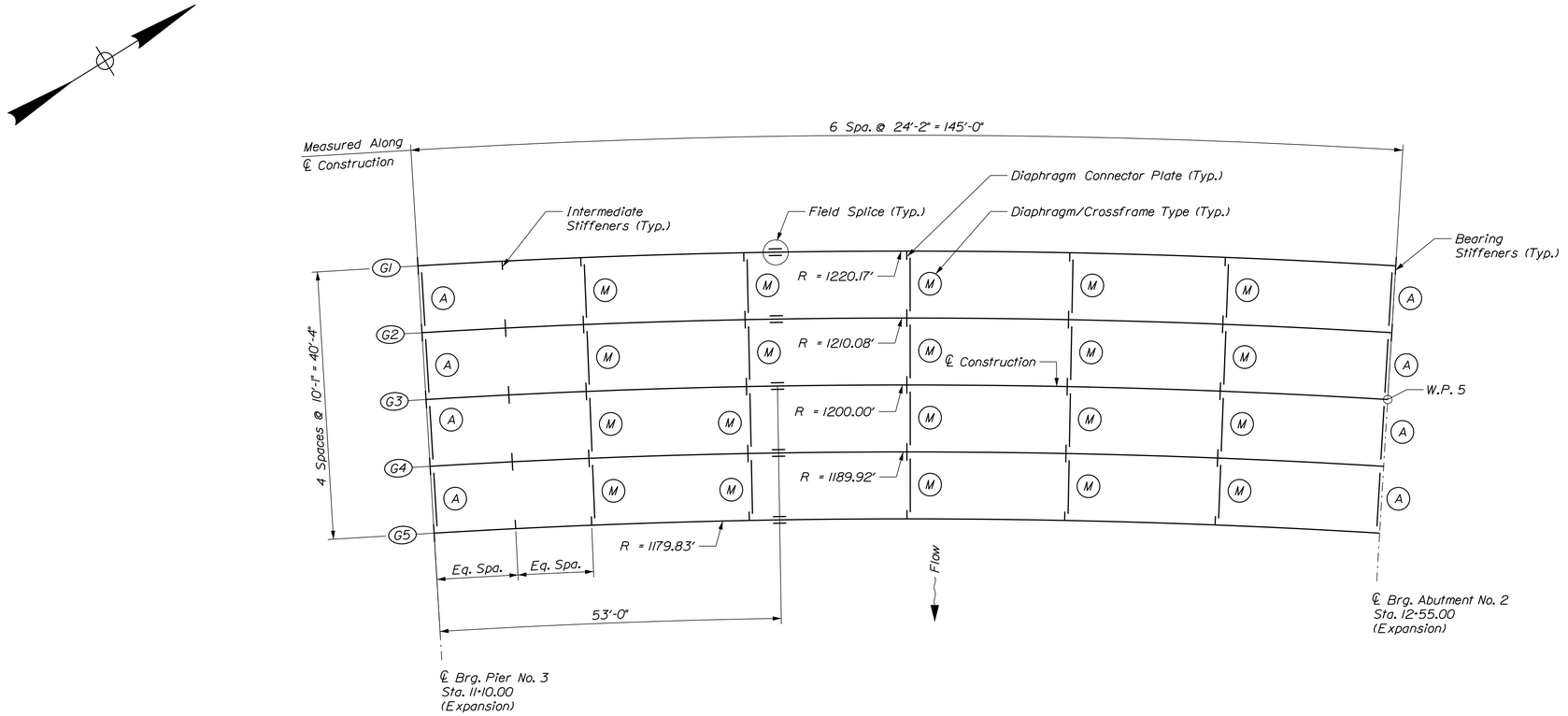
FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

FRAMING PLAN SPAN NO. 3

SHEET NUMBER

97

OF 128



FRAMING PLAN - SPAN NO. 4

90% PROGRESS PLANS

T·Y·LIN INTERNATIONAL

Username:

Date:7/23/2020

Division:

Filename: ...\108_Framing_Span_4.dgn

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	C.Taylor	S.Morgan	4/20
CHECKED-REVIEWED	D.Myers	D.Myers	4/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

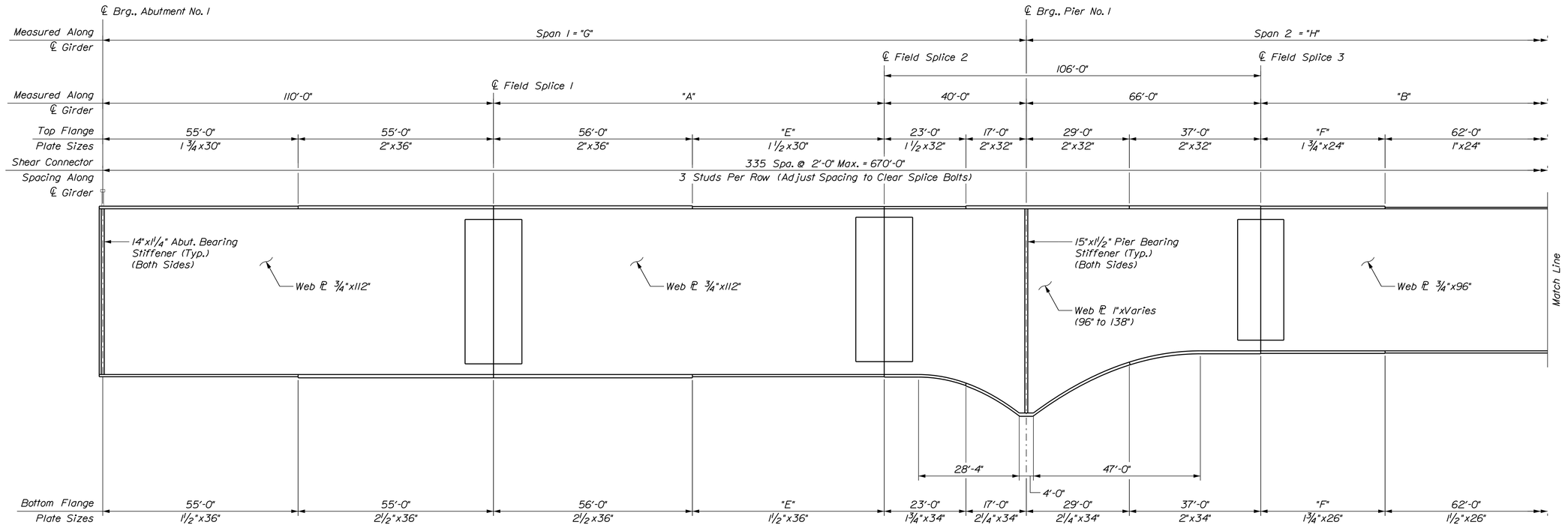
FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

FRAMING PLAN
SPAN NO. 4

SHEET NUMBER

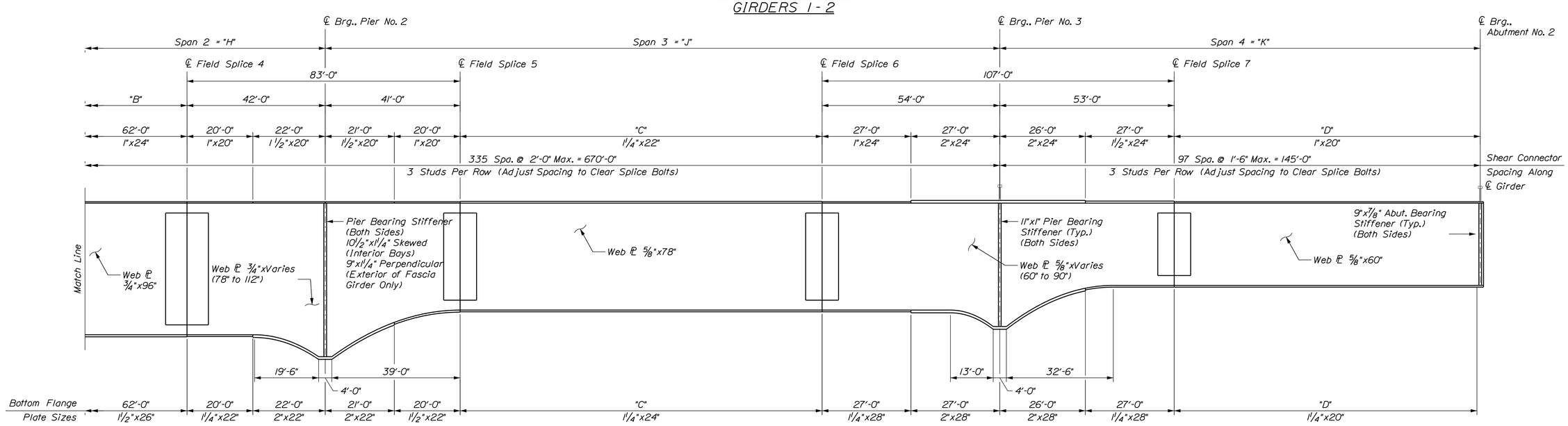
98

OF 128



GIRDER ELEVATION

GIRDER ELEVATION GIRDERS 1 - 2



GIRDER ELEVATION GIRDERS 1 - 2

TABLE OF GIRDER DIMENSIONS											
Girder	Radius	A	B	C	D	E	F	G	H	J	K
1	1220.17'	114'-4 7/16"	114-6 3/16"	99'-4 1/2"	94'-5 1/4"	58'-4 7/16"	52'-6 3/16"	264'-4 7/16"	222'-6 3/16"	194'-4 1/2"	147'-5 1/4"
2	1210.08'	112'-2 3/16"	105'-9 1/4"	104'-8 1/16"	93'-2 3/8"	56'-2 3/16"	43'-9 1/4"	262'-2 3/16"	213'-9 1/4"	199'-8 1/16"	146'-2 3/8"
3	1200.00'	110'-0"	97'-0"	110'-0"	92'-0"	54'-0"	35'-0"	260'-0"	205'-0"	205'-0"	145'-0"
4	1189.92'	107'-9 3/16"	88'-2 1/2"	115'-4 3/16"	90'-9 3/8"	51'-9 3/16"	26'-2 1/2"	257'-9 3/16"	196'-2 1/2"	210'-4 3/16"	143'-9 3/8"
5	1179.83'	105'-7 9/16"	79'-3 3/16"	120'-9 3/4"	89'-6 3/4"	49'-7 9/16"	17'-3 3/16"	255'-7 9/16"	187'-3 9/16"	215'-9 3/4"	142'-6 3/4"

GIRDER ELEVATION
GIRDERS 1 - 2

NOTE:

One longintudinal butt weld splice will be allowed in the web of the haunched sections of the girders. Feather edges between the longitudinal welds and the bottom flanges will not be allowed.

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE PLANS

BRIDGE NO. 2016

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	S.Morgan	4/20
CHECKED-REVIEWED	D.Myers	4/20
DESIGN2-DETAILED2	C.Taylor	
DESIGN3-DETAILED3	D.Myers	
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

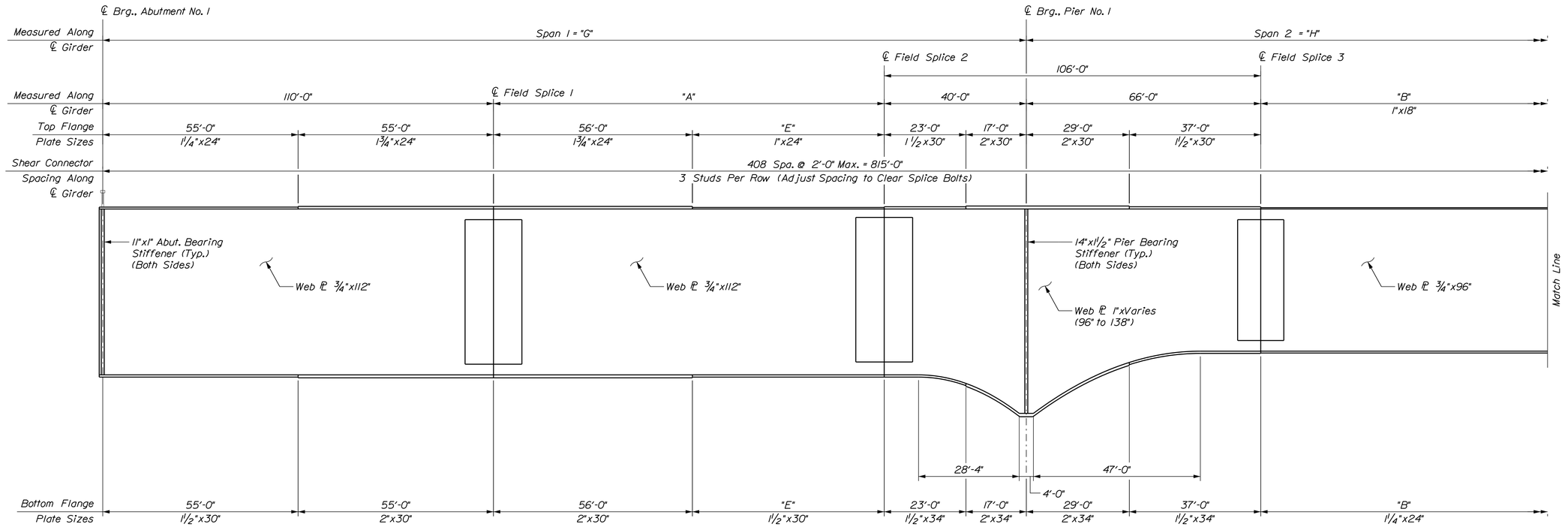
GIRDER ELEVATION 1

SHEET NUMBER

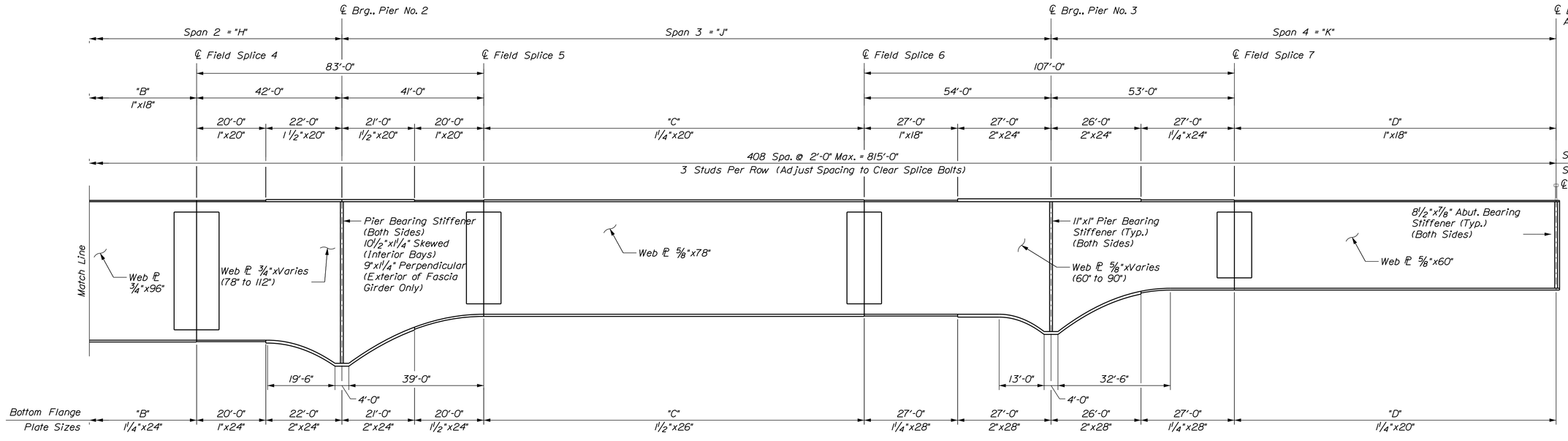
99

OF 128

Date:7/23/2020 Username: Division: Filename: ...\109_Girder_Elev_1.dgn



GIRDER ELEVATION
GIRDERS 3 - 5



GIRDER ELEVATION
GIRDERS 3 - 5

90% PROGRESS PLANS

T·Y LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	C.Taylor	S.Morgan	4/20
CHECKED-REVIEWED	D.Myers	D.Myers	4/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

GIRDER ELEVATION 2

SHEET NUMBER

100

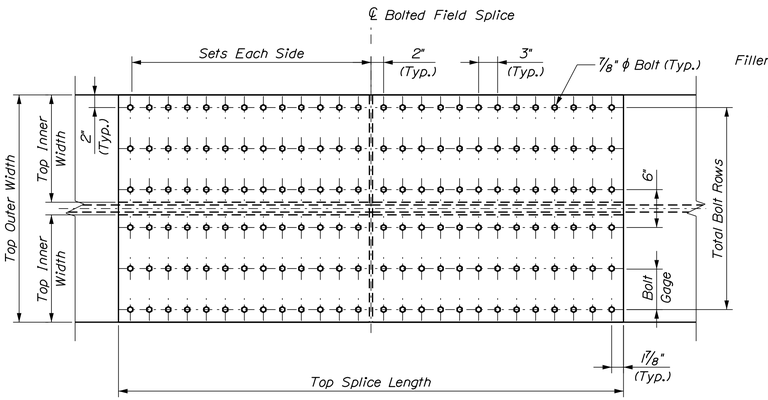
OF 128

Username:

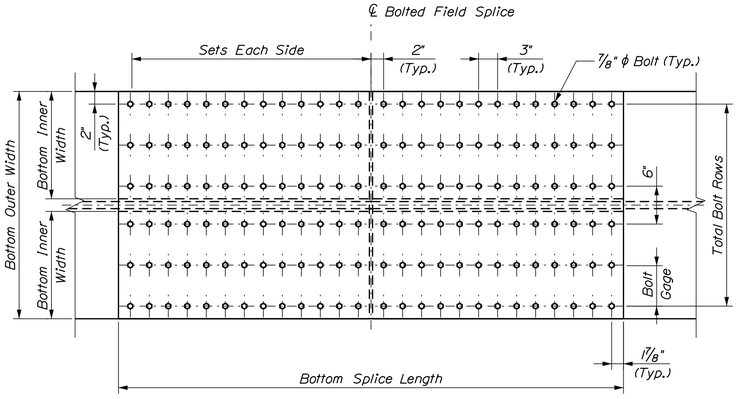
Division:

Filename: ...\110_Girder_Elev_2.dgn

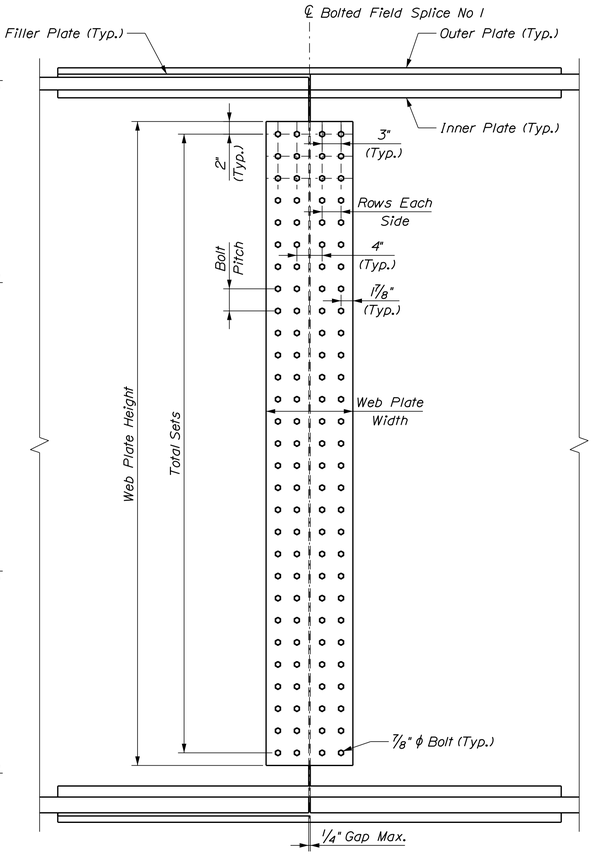
Date:7/23/2020



BOLTED FIELD SPLICE TOP VIEW



BOLTED FIELD SPLICE BOTTOM VIEW



BOLTED FIELD SPLICE ELEVATION

	Top Splice Length		Top Outer Thick		Top Outer Width		Top Inner Thick		Top Inner Width		Total Bolt Rows		Set Each Side		Bolt Gage	
	Gl & G2	G3-G5	Gl & G2	G3-G5	Gl & G2	G3-G5	Gl & G2	G3-G5	Gl & G2	G3-G5	Gl & G2	G3-G5	Gl & G2	G3-G5	Gl & G2	G3-G5
Field Splice 1	79 3/4"	43 3/4"	1"	1"	36"	24"	1 1/4"	1 1/4"	17"	11"	6	6	13	7	6 1/2"	3 1/2"
Field Splice 2	37 3/4"	37 3/4"	7/8"	3/4"	30"	24"	7/8"	3/4"	14"	11"	6	4	6	6	5"	7"
Field Splice 3	55 3/4"	31 3/4"	1"	5/8"	24"	18"	1 1/4"	5/8"	11"	8"	4	4	9	5	7"	4"
Field Splice 4	25 3/4"	25 3/4"	5/8"	5/8"	18"	18"	5/8"	5/8"	8"	8"	4	4	4	4	4"	4"
Field Splice 5	31 3/4"	31 3/4"	5/8"	5/8"	20"	20"	5/8"	5/8"	9"	9"	4	4	5	5	5"	5"
Field Splice 6	37 3/4"	25 3/4"	5/8"	5/8"	22"	18"	5/8"	3/4"	10"	8"	4	4	6	4	6"	4"
Field Splice 7	31 3/4"	25 3/4"	5/8"	5/8"	20"	18"	5/8"	5/8"	9"	8"	4	4	5	4	5"	4"

	Bottom Splice Length		Bottom Outer Thick		Bottom Outer Width		Bottom Inner Thick		Bottom Inner Width		Total Bolt Rows		Set Each Side		Bolt Gage	
	Gl & G2	G3-G5	Gl & G2	G3-G5	Gl & G2	G3-G5	Gl & G2	G3-G5	Gl & G2	G3-G5	Gl & G2	G3-G5	Gl & G2	G3-G5	Gl & G2	G3-G5
Field Splice 1	79 3/4"	49 3/4"	1 1/2"	1"	36"	30"	1 3/4"	1 1/4"	17"	14"	6	6	13	8	6 1/2"	5"
Field Splice 2	49 3/4"	37 3/4"	7/8"	7/8"	34"	30"	1"	7/8"	16"	14"	6	6	8	6	6"	5"
Field Splice 3	43 3/4"	43 3/4"	1"	3/4"	26"	24"	1 1/4"	3/4"	12"	11"	6	4	7	7	4"	7"
Field Splice 4	37 3/4"	37 3/4"	3/4"	3/4"	24"	24"	3/4"	3/4"	11"	11"	4	4	6	6	7"	7"
Field Splice 5	43 3/4"	43 3/4"	3/4"	7/8"	22"	24"	7/8"	7/8"	10"	11"	4	4	7	7	6"	7"
Field Splice 6	49 3/4"	49 3/4"	3/4"	3/4"	24"	26"	3/4"	7/8"	11"	12"	4	4	8	8	7"	8"
Field Splice 7	31 3/4"	31 3/4"	3/4"	3/4"	20"	20"	3/4"	3/4"	9"	9"	4	4	5	5	5"	5"

	Top Filler Length		Top Filler Thick		Top Filler Width		Bot Filler Length		Bot Filler Thick		Bot Filler Width	
	Gl & G2	G3-G5	Gl & G2	G3-G5	Gl & G2	G3-G5	Gl & G2	G3-G5	Gl & G2	G3-G5	Gl & G2	G3-G5
Field Splice 1	-	-	-	-	-	-	-	-	-	-	-	-
Field Splice 2	-	18 3/4"	-	1/2"	-	24"	24 3/4"	-	1/4"	1/4"	34"	-
Field Splice 3	27 3/4"	15 3/4"	1/4"	1/2"	24"	18"	21 3/4"	21 3/4"	1/4"	1/4"	26"	24"
Field Splice 4	-	-	-	-	-	-	18 3/4"	18 3/4"	1/4"	1/4"	24"	24"
Field Splice 5	15 3/4"	15 3/4"	1/4"	1/4"	20"	20"	21 3/4"	-	1/4"	-	22"	-
Field Splice 6	18 3/4"	12 3/4"	1/4"	1/4"	22"	18"	24 3/4"	24 3/4"	1/4"	1/4"	24"	26"
Field Splice 7	15 3/4"	12 3/4"	1/2"	1/4"	20"	18"	-	-	-	-	-	-

	Web Plate Height		Web Plate Width		Web Plate Thick		Rows Each Side		Total Sets		Bolt Pitch	
	Gl & G2	G3-G5	Gl & G2	G3-G5	Gl & G2	G3-G5	Gl & G2	G3-G5	Gl & G2	G3-G5	Gl & G2	G3-G5
Field Splice 1	102"	106"	13 3/4"	13 3/4"	3/8"	3/8"	2	2	29	25	3 1/2"	4 1/4"
Field Splice 2	102"	106"	13 3/4"	13 3/4"	3/8"	3/8"	2	2	29	25	3 1/2"	4 1/4"
Field Splice 3	89"	89"	13 3/4"	13 3/4"	3/8"	3/8"	2	2	18	18	5"	5"
Field Splice 4	89"	89"	13 3/4"	13 3/4"	3/8"	3/8"	2	2	18	18	5"	5"
Field Splice 5	74"	73 7/8"	13 3/4"	13 3/4"	3/8"	3/8"	2	2	15	14	5"	5 3/8"
Field Splice 6	73 7/8"	73 7/8"	13 3/4"	13 3/4"	3/8"	3/8"	2	2	14	14	5 3/8"	5 3/8"
Field Splice 7	54"	54"	13 3/4"	13 3/4"	3/8"	3/8"	2	2	11	11	5"	5"

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	C. Taylor	S. Morgan	4/20
CHECKED-REVIEWED	B. Toothaker	B. Toothaker	7/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

GIRDER DETAILS 1

SHEET NUMBER

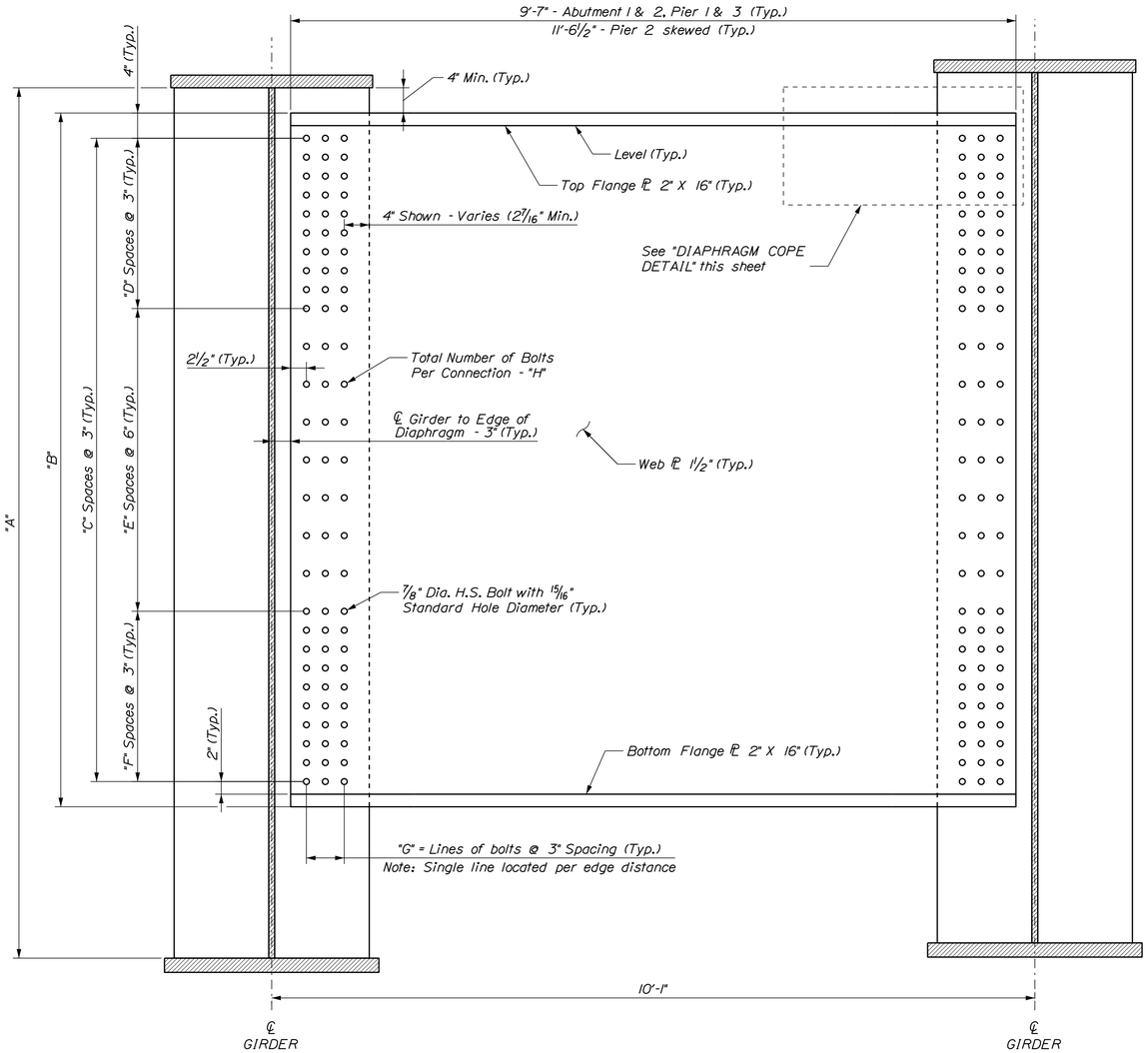
101

OF 128

Username: Date:7/23/2020

Division:

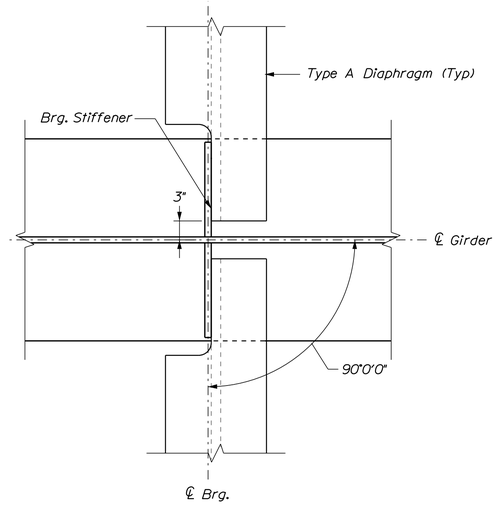
Filename: ...\111_Girder_Details_1.dgn



"TYPE A" DIAPHRAGM

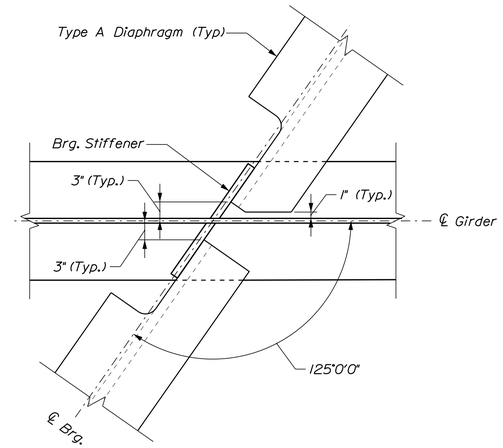
(Pier 1, other locations similar)
(Pesdestals & Utilities not shown for clarity)

JACKING DIAPHRAGMS - TABLE OF DIMENSIONS								
Location	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"
Abutment 1	9'- 4"	7'- 2"	NA	5 Spaces	8 Spaces	5 Spaces	2 Lines	38 Bolts
Pier 1	11'- 6"	9'- 2"	NA	9 Spaces	8 Spaces	9 Spaces	3 Lines	81 Bolts
Pier 2	9'- 4"	7'- 2"	NA	5 Spaces	8 Spaces	5 Spaces	2 Lines	38 Bolts
Pier 3	7'- 6"	6'- 2"	NA	3 Spaces	8 Spaces	3 Spaces	2 Lines	30 Bolts
Abutment 2	5'- 0"	3'- 11"	13 Spaces	NA	NA	NA	1 Line	14 Bolts



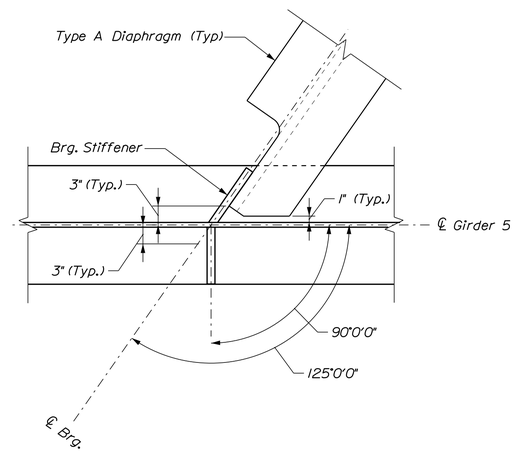
BEARING STIFFENER LAYOUT -ABUT. 1 & 2, PIER 1 & 3-

(Pier 1 shown, Abut 1 & 2, Pier 3 Similar)



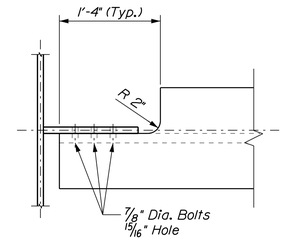
BEARING STIFFENER LAYOUT -PIER 2-

(Interior Girder Shown)



BEARING STIFFENER LAYOUT -PIER 2-

(Girder 5 shown, Girder 1 Similar)



DIAPHRAGM COPE DETAIL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER		
DESIGN-DETAILED	J.Legere	4/20
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

D. Bryant J.Legere

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

GIRDER DETAILS 2

SHEET NUMBER

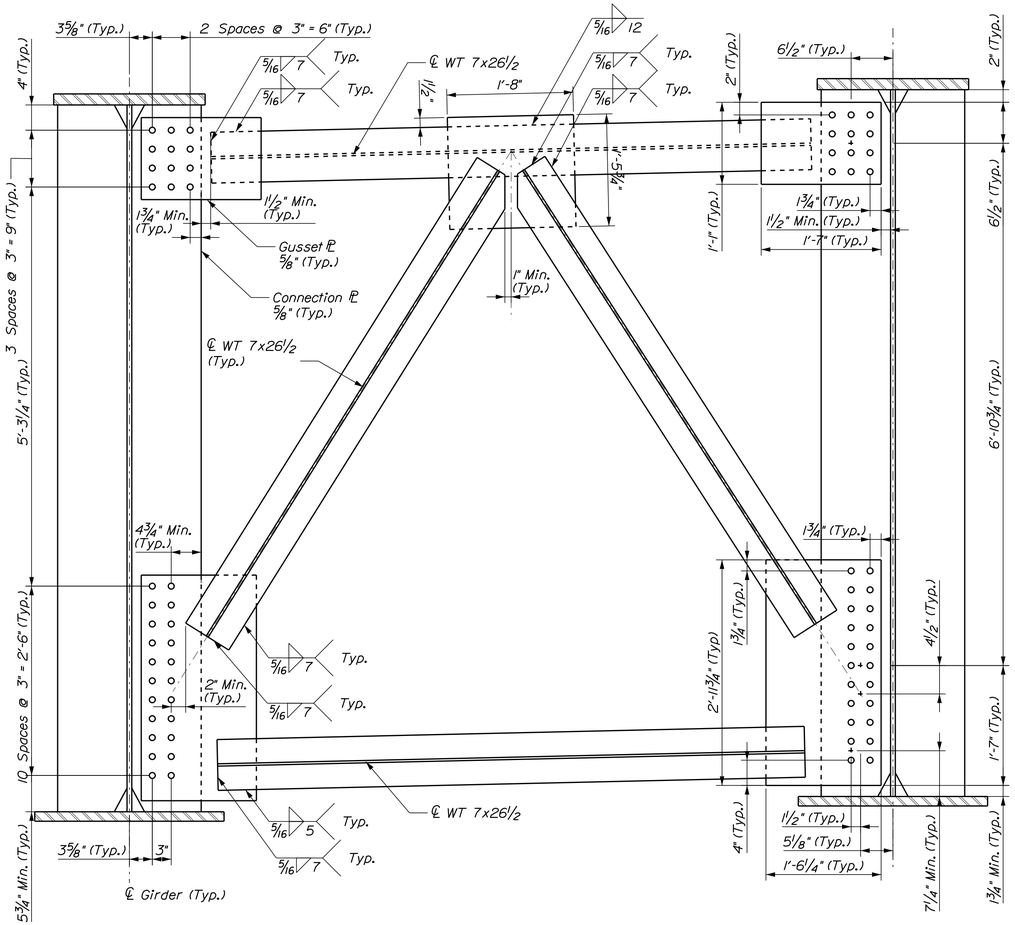
102

OF 128

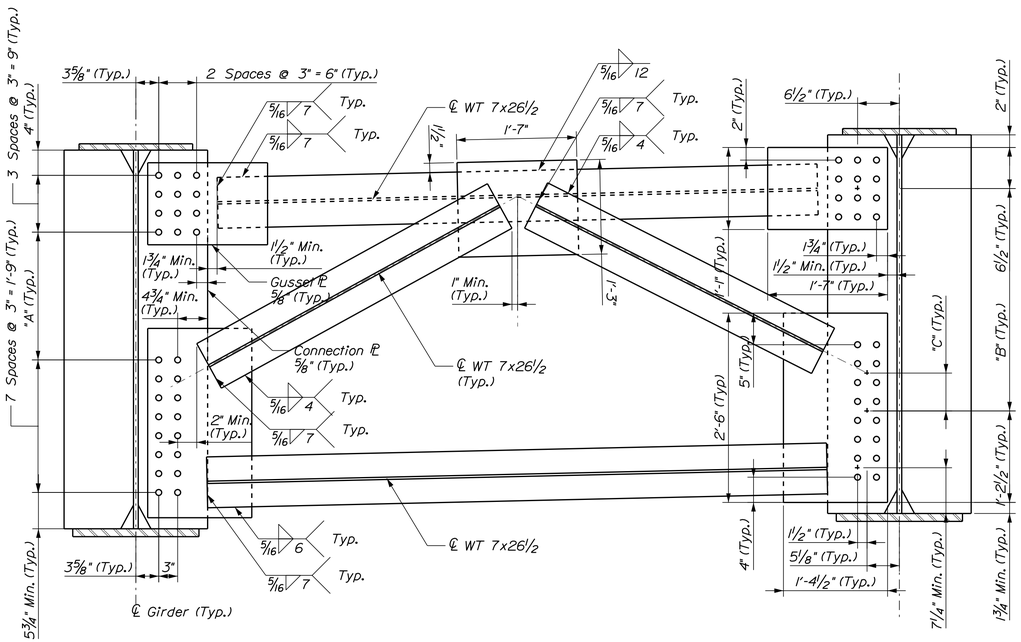
90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

Filename: ...\112_Girder_Details_2.dgn Division: Username: Date:7/23/2020



TYPE N CROSSFRAME



TYPE M CROSS FRAME

INTERMEDIATE CROSSFRAMES
TABLE OF DIMENSIONS

Location	"A"	"B"	"C"
Span 2	4'- 8 ¼"	5' - 11 ¼"	0' - 0"
Span 3	3'- 2 ¼"	4' - 5 ¼"	0' - 3"
Span 4	1'- 8 ¼"	2' - 11 ¼"	0' - 6"

90% PROGRESS PLANS

TYLIN INTERNATIONAL

PROJ. MANAGER	D. Bryant	BY	DATE
DESIGN-DETAILED	R.Kravchuk	R.Kravchuk	4/20
CHECKED-REVIEWED		D.Myers	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

GIRDER DETAILS 3

SHEET NUMBER

103

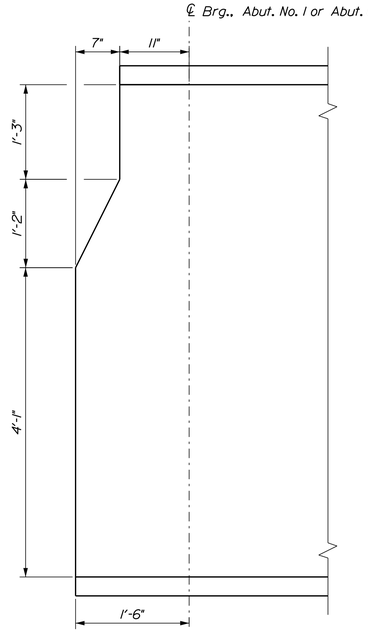
OF 128

Username:

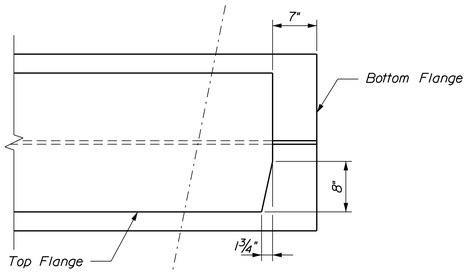
Date:7/23/2020

Division:

Filename: ...\113_Girder_Details_3.dgn

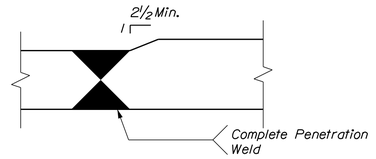


GIRDER END ELEVATION ~ SPAN NO. 1 or 4



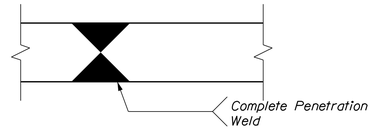
TOP FLANGE CLIP

Abutment No. 2

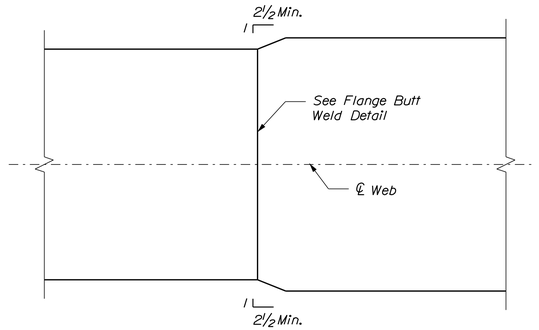


FLANGE BUTT WELD

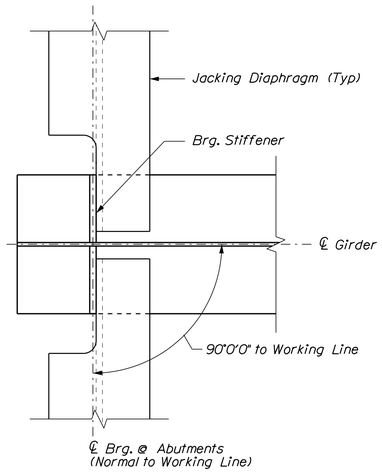
N.T.S.



FLANGE OR WEB BUTT WELD

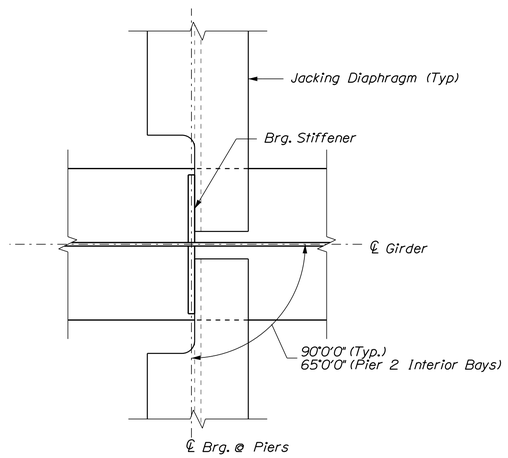


FLANGE WIDTH TRANSITION

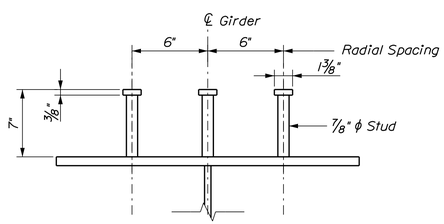


BEARING STIFFENER LAYOUT
-ABUTMENT LOCATIONS-

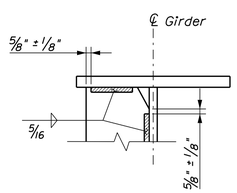
(Abutment No. 1 shown, Abutment No. 2 Similar)



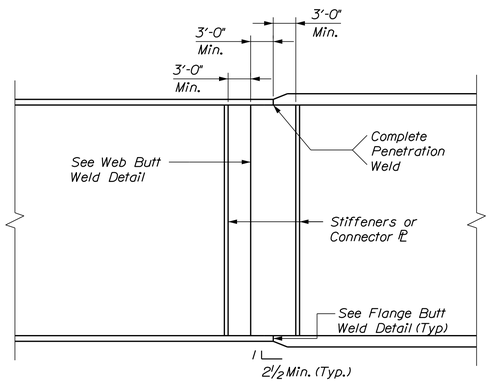
BEARING STIFFENER LAYOUT
-PIER LOCATIONS-



SHEAR CONNECTOR DETAIL



DETAIL A



WELDED SPLICE TRANSITION

NOTES:

1. Butt welds at web and flange splices shall be ground flush in longitudinal direction of girder.
2. Transverse rows of shear connectors shall be placed radially along curved girders.

90% PROGRESS PLANS

TY LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE PLANS

BRIDGE NO. 2016

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	C. Taylor	4/20
CHECKED-REVIEWED	B. Toothaker	7/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

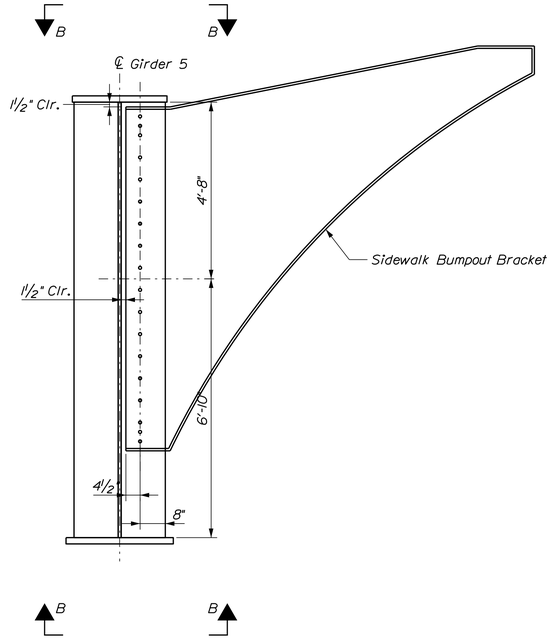
GIRDER DETAILS 4

SHEET NUMBER

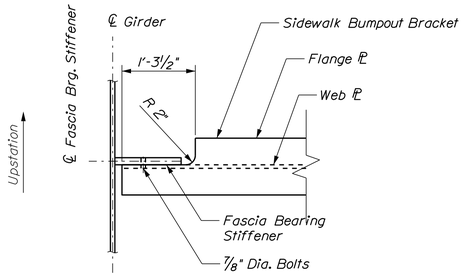
104

OF 128

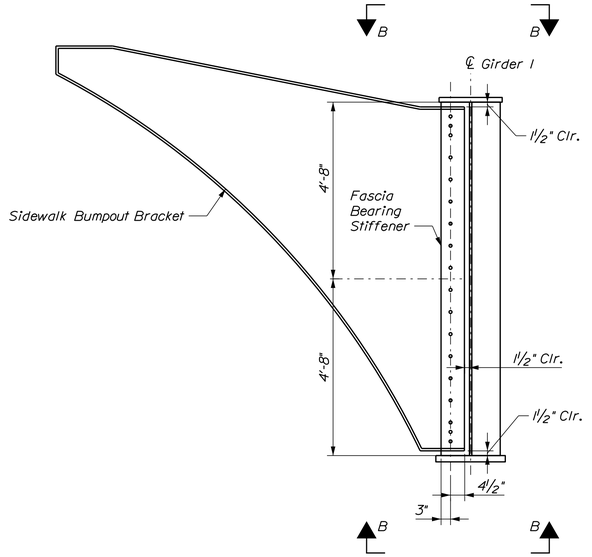
Filename: ...\114_Girder_Details_4.dgn Division: Username: Date:7/23/2020



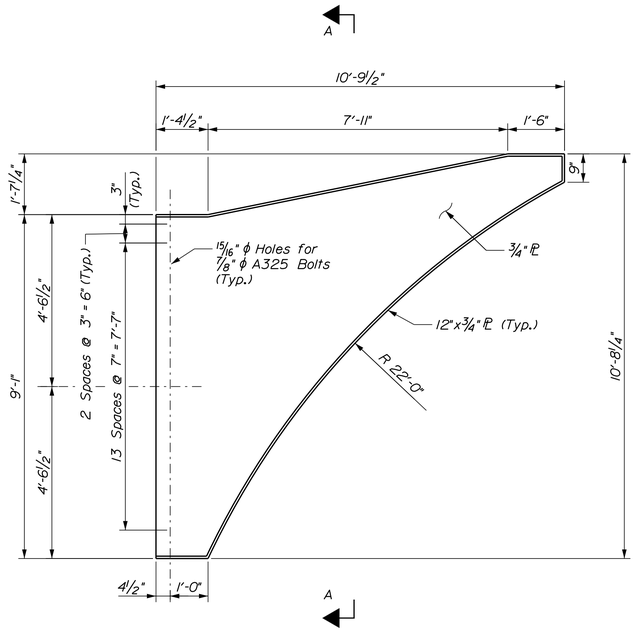
PIER 1 BUMPOUT ELEVATION



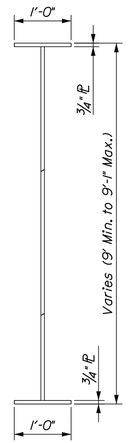
VIEW B-B
(Pier 1 Shown, Pier 2 Similar)



PIER 2 BUMPOUT ELEVATION



SIDEWALK BUMPOUT BRACKET



SECTION A-A

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	J.Legere	4/20
CHECKED-REVIEWED	D.Myers	4/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

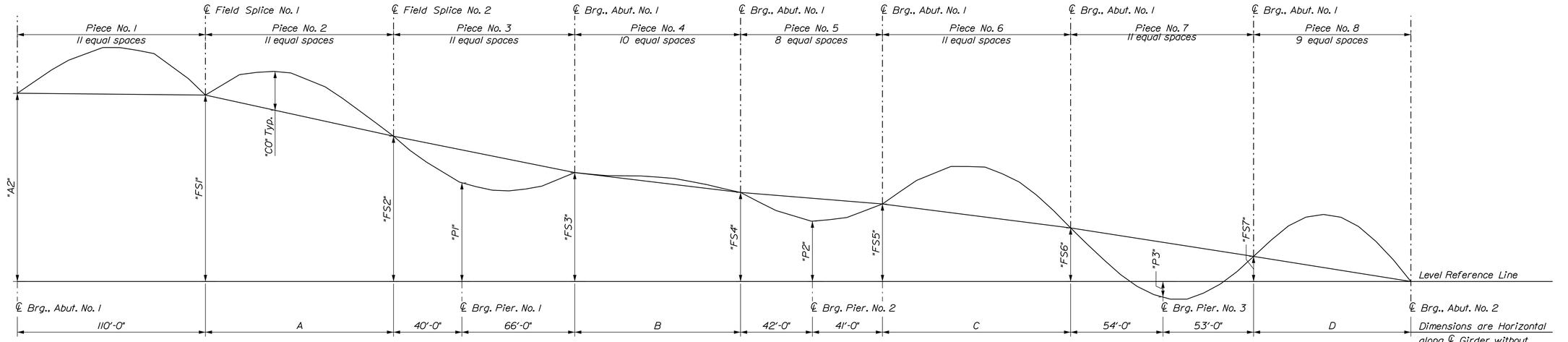
DECK BUMPOUT BRACKET

SHEET NUMBER
105
OF 128

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

Filename: ...\116_Girder_Bumpout_Bracket_Details.dgn Username: Division: Date:7/23/2020



CAMBER DIAGRAM

TABLE OF CAMBER DIMENSIONS (Feet-Inches)

Girder	"A1"	"FS1"	"FS2"	"P1"	"FS3"	"FS4"	"P2"	"FS5"	"FS6"	"P3"	"FS7"	A	B	C	D	Girder
G1	7.34	7.02	5.56	4.96	4.31	3.61	2.95	3.12	2.04	1.20	1.02	114'-4 7/16"	114'-6 3/16"	99'-4 1/2"	94'-5 1/4"	G1
G2	7.33	7.14	5.61	4.98	4.28	3.53	3.05	3.07	2.07	1.25	1.00	112'-2 3/16"	105'-9 1/4"	104'-8 1/16"	93'-2 5/8"	G2
G3	7.33	7.26	5.66	4.99	4.25	3.47	3.15	3.02	2.09	1.30	0.98	110'-0"	97'-0"	110'-0"	92'-0"	G3
G4	7.34	7.38	5.71	5.01	4.21	3.40	3.25	2.97	2.11	1.36	0.96	107'-9 13/16"	88'-2 1/2"	115'-4 3/16"	90'-9 3/8"	G4
G5	7.33	7.52	5.77	5.03	4.16	3.34	3.35	2.92	2.12	1.41	0.94	105'-7 9/16"	79'-3 9/16"	120'-9 3/4"	89'-6 3/4"	G5

TABLE OF CAMBER ORDINATES "CO" (Inch)

		Piece No. 1											Piece No. 2											
Girder	Abut. 1	1	2	3	4	5	6	7	8	9	10	FS1	1	2	3	4	5	6	7	8	9	10	FS2	Girder
G1	0	3/8	13/16	1 1/8	1 3/8	1 9/16	1 9/16	1 1/2	1 3/8	15/16	9/16	0	7/16	15/16	1 1/8	1 1/4	1 5/16	1 1/4	1 1/8	7/8	9/16	5/16	0	G1
G2	0	1/2	15/16	1 5/16	1 5/8	1 7/8	1 7/8	1 3/4	1 5/8	1 1/8	5/8	0	9/16	1 1/8	1 3/8	1 9/16	1 5/8	1 1/2	1 3/8	1 1/16	11/16	3/8	0	G2
G3	0	9/16	1 1/16	1 9/16	1 7/8	2 1/8	2 1/8	2 1/16	1 7/8	1 5/16	3/4	0	5/8	1 5/16	1 9/16	1 13/16	1 7/8	1 3/4	1 9/16	1 1/4	13/16	7/16	0	G3
G4	0	5/8	1 1/4	1 3/4	2 1/8	2 1/2	2 1/2	2 5/16	2 3/16	1 1/2	7/8	0	3/4	1 1/2	1 13/16	2 1/16	2 3/16	2	1 7/8	1 7/16	1	1/2	0	G4
G5	0	3/4	1 7/16	2 1/16	2 7/16	2 13/16	2 13/16	2 11/16	2 1/2	1 3/4	1	0	7/8	1 11/16	2 1/16	2 3/8	2 1/2	2 5/16	2 1/8	1 11/16	1 1/8	9/16	0	G5

TABLE OF CAMBER ORDINATES "CO" (Inch)

		Piece No. 3											Piece No. 4										
Girder	FS2	1	2	3	4	5	6	7	8	9	10	FS3	1	2	3	4	5	6	7	8	9	FS4	Girder
G1	0	-3/8	-1 11/16	-7/8	-1 1/8	-1 1/8	-1 1/8	-1	-1 3/16	-5/8	-5/16	0	0	1/16	1/8	3/16	3/16	3/16	1/8	1/8	1/16	0	G1
G2	0	-7/16	-1 3/16	-1 1/16	-1 5/16	-1 3/8	-1 3/8	-1 1/4	-1	-3/4	-3/8	0	0	1/16	1/8	3/16	3/16	3/16	1/8	1/8	1/16	0	G2
G3	0	-1/2	-7/8	-1 3/16	-1 1/2	-1 9/16	-1 9/16	-1 7/16	-1 1/4	-15/16	-7/16	0	0	1/16	1/8	3/16	1/4	1/4	3/16	1/8	1/16	0	G3
G4	0	-9/16	-1	-1 3/8	-1 3/4	-1 13/16	-1 13/16	-1 11/16	-1 7/16	-1 1/16	-9/16	0	0	0	1/8	1/4	1/4	5/16	1/4	3/16	1/8	0	G4
G5	0	-5/8	-1 1/8	-1 1/2	-1 15/16	-2 1/16	-2 1/8	-1 15/16	-1 11/16	-1 5/16	-5/8	0	0	1/16	3/16	5/16	3/8	1/2	3/8	5/16	1/8	0	G5

TABLE OF CAMBER ORDINATES "CO" (Inch)

		Piece No. 5								Piece No. 6											
Girder	FS4	1	2	3	4	5	6	7	FS5	1	2	3	4	5	6	7	8	9	10	FS6	Girder
G1	0	-3/8	-3/4	-1	-1 3/16	-1 1/16	-13/16	-7/16	0	11/16	1 3/8	1 7/8	2 3/8	2 1/2	2 9/16	2 5/16	2	1 7/16	3/4	0	G1
G2	0	-3/8	-3/4	-15/16	-1 3/16	-1	-13/16	-7/16	0	11/16	1 5/16	1 3/4	2 1/4	2 3/8	2 7/16	2 1/4	2	1 7/16	3/4	0	G2
G3	0	-3/8	-11/16	-7/8	-1 1/16	-15/16	-3/4	-3/8	0	11/16	1 5/16	1 11/16	2 1/8	2 1/4	2 3/8	2 3/16	1 7/8	1 3/8	3/4	0	G3
G4	0	-3/8	-11/16	-13/16	-1	-7/8	-11/16	-3/8	0	5/8	1 1/4	1 5/8	2 1/16	2 1/8	2 3/16	2	1 3/4	1 1/4	11/16	0	G4
G5	0	-3/8	-11/16	-13/16	-1	-7/8	-11/16	-3/8	0	5/8	1 1/4	1 5/8	2	2 1/16	2 1/8	1 7/8	1 5/8	1 3/16	5/8	0	G5

TABLE OF CAMBER ORDINATES "CO" (Inch)

		Piece No. 7											Piece No. 8									
Girder	FS6	1	2	3	4	5	6	7	8	9	10	FS7	1	2	3	4	5	6	7	8	Abut. 2	Girder
G1	0	-5/8	-1 3/16	-1 3/4	-2 3/16	-2 1/2	-2 9/16	-2 7/16	-2	-1 1/2	-13/16	0	11/16	1 3/8	1 13/16	2 1/16	2 1/16	1 13/16	1 5/16	3/4	0	G1
G2	0	-5/8	-1 1/4	-1 13/16	-2 1/4	-2 9/16	-2 5/8	-2 1/2	-2 1/16	-1 9/16	-7/8	0	13/16	1 9/16	2 1/16	2 5/16	2 5/16	2 1/16	1 1/2	13/16	0	G2
G3	0	-5/8	-1 1/4	-1 13/16	-2 1/4	-2 9/16	-2 5/8	-2 1/2	-2 1/8	-1 9/16	-7/8	0	7/8	1 11/16	2 1/4	2 1/2	2 1/2	2 3/16	1 5/8	7/8	0	G3
G4	0	-5/8	-1 1/4	-1 13/16	-2 1/4	-2 1/2	-2 5/8	-2 1/2	-2 1/16	-1 9/16	-13/16	0	15/16	1 13/16	2 3/8	2 11/16	2 11/16	2 3/8	1 3/4	15/16	0	G4
G5	0	-11/16	-1 5/16	-1 13/16	-2 1/4	-2 1/2	-2 9/16	-2 1/2	-2 1/16	-1 9/16	-13/16	0	1 1/16	2	2 9/16	2 7/8	2 7/8	2 1/2	1 7/8	1	0	G5

NOTE:
Positive camber values are upward.

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	B.Smith	4/20
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

CAMBER DIAGRAM

SHEET NUMBER
106
OF 128

Date:7/23/2020

Username:

Division:

Filename: ...\117_Girder_Camber_Deflections.dgn

TABLE OF DEFLECTIONS (Inch)

Girder	Load	Abut. 1	Piece No. 1										FS1	Piece No. 2										FS2
			1	2	3	4	5	6	7	8	9	10		1	2	3	4	5	6	7	8	9	10	
G1	Steel Dead Load	0.00	0.28	0.56	0.82	1.06	1.30	1.48	1.64	1.80	1.88	1.96	2.00	2.00	1.99	1.92	1.84	1.73	1.58	1.43	1.24	1.05	0.85	0.66
	Fluid Dead Load	0.00	0.52	1.05	1.54	1.98	2.42	2.75	3.05	3.33	3.47	3.60	3.67	3.66	3.65	3.51	3.35	3.15	2.88	2.60	2.26	1.89	1.53	1.18
	Superimposed Dead Load	0.00	0.31	0.63	0.92	1.19	1.45	1.65	1.83	2.01	2.10	2.19	2.23	2.23	2.23	2.14	2.05	1.93	1.76	1.59	1.38	1.16	0.94	0.72
G2	Steel Dead Load	0.00	0.36	0.72	1.06	1.36	1.67	1.90	2.11	2.31	2.42	2.52	2.58	2.58	2.58	2.49	2.39	2.25	2.06	1.87	1.63	1.38	1.12	0.87
	Fluid Dead Load	0.00	0.60	1.21	1.77	2.28	2.78	3.17	3.51	3.83	3.99	4.15	4.24	4.22	4.21	4.05	3.87	3.65	3.33	3.01	2.61	2.19	1.78	1.36
	Superimposed Dead Load	0.00	0.37	0.73	1.08	1.39	1.70	1.94	2.15	2.36	2.46	2.56	2.62	2.62	2.61	2.51	2.40	2.26	2.06	1.86	1.62	1.36	1.10	0.85
G3	Steel Dead Load	0.00	0.44	0.88	1.30	1.67	2.04	2.33	2.59	2.83	2.96	3.09	3.17	3.17	3.17	3.07	2.94	2.78	2.55	2.32	2.03	1.72	1.41	1.09
	Fluid Dead Load	0.00	0.68	1.35	1.99	2.56	3.12	3.56	3.94	4.30	4.48	4.66	4.76	4.75	4.73	4.56	4.37	4.12	3.77	3.41	2.97	2.50	2.03	1.56
	Superimposed Dead Load	0.00	0.42	0.84	1.24	1.59	1.95	2.22	2.47	2.70	2.82	2.94	3.00	3.00	2.99	2.88	2.76	2.60	2.37	2.14	1.86	1.57	1.27	0.98
G4	Steel Dead Load	0.00	0.53	1.06	1.55	2.00	2.45	2.79	3.10	3.40	3.55	3.70	3.79	3.80	3.80	3.68	3.54	3.35	3.08	2.81	2.47	2.10	1.73	1.34
	Fluid Dead Load	0.00	0.75	1.51	2.22	2.85	3.48	3.96	4.38	4.79	4.98	5.18	5.29	5.28	5.27	5.09	4.88	4.61	4.22	3.84	3.35	2.83	2.30	1.77
	Superimposed Dead Load	0.00	0.48	0.96	1.42	1.82	2.23	2.54	2.81	3.08	3.21	3.34	3.41	3.41	3.40	3.28	3.14	2.96	2.71	2.45	2.13	1.80	1.46	1.12
G5	Steel Dead Load	0.00	0.63	1.25	1.84	2.37	2.90	3.31	3.68	4.03	4.21	4.39	4.49	4.50	4.51	4.37	4.20	3.98	3.66	3.34	2.93	2.50	2.06	1.60
	Fluid Dead Load	0.00	0.84	1.68	2.48	3.18	3.89	4.42	4.89	5.35	5.57	5.79	5.91	5.90	5.89	5.69	5.46	5.16	4.73	4.30	3.75	3.17	2.59	1.99
	Superimposed Dead Load	0.00	0.55	1.10	1.62	2.09	2.55	2.91	3.22	3.52	3.67	3.82	3.90	3.89	3.88	3.74	3.58	3.38	3.09	2.80	2.43	2.05	1.66	1.28

TABLE OF DEFLECTIONS (Inch)

Girder	Load	FS2	Piece No. 3										FS3	Piece No. 4									FS4
			1	2	3	4	5	6	7	8	9	10		1	2	3	4	5	6	7	8	9	
G1	Steel Dead Load	0.66	0.48	0.32	0.17	0.02	-0.08	-0.16	-0.23	-0.28	-0.33	-0.35	-0.36	-0.36	-0.35	-0.34	-0.32	-0.30	-0.29	-0.28	-0.27	-0.25	-0.23
	Fluid Dead Load	1.18	0.84	0.56	0.30	0.04	-0.12	-0.27	-0.37	-0.44	-0.50	-0.50	-0.50	-0.45	-0.40	-0.34	-0.29	-0.27	-0.25	-0.26	-0.27	-0.29	-0.31
	Superimposed Dead Load	0.72	0.52	0.34	0.18	0.02	-0.07	-0.16	-0.22	-0.26	-0.29	-0.29	-0.30	-0.28	-0.26	-0.24	-0.21	-0.20	-0.19	-0.19	-0.20	-0.20	-0.20
G2	Steel Dead Load	0.87	0.63	0.42	0.22	0.03	-0.11	-0.23	-0.33	-0.41	-0.48	-0.51	-0.54	-0.53	-0.53	-0.50	-0.48	-0.45	-0.42	-0.39	-0.36	-0.32	-0.28
	Fluid Dead Load	1.36	0.98	0.64	0.34	0.05	-0.15	-0.32	-0.45	-0.53	-0.59	-0.58	-0.57	-0.51	-0.44	-0.35	-0.28	-0.23	-0.19	-0.19	-0.20	-0.22	-0.24
	Superimposed Dead Load	0.85	0.61	0.40	0.21	0.03	-0.09	-0.20	-0.27	-0.32	-0.36	-0.37	-0.37	-0.34	-0.32	-0.28	-0.25	-0.23	-0.21	-0.20	-0.20	-0.20	-0.19
G3	Steel Dead Load	1.09	0.80	0.53	0.28	0.04	-0.14	-0.31	-0.44	-0.54	-0.63	-0.67	-0.71	-0.71	-0.71	-0.67	-0.63	-0.58	-0.54	-0.49	-0.44	-0.39	-0.33
	Fluid Dead Load	1.56	1.12	0.74	0.40	0.05	-0.18	-0.38	-0.53	-0.62	-0.69	-0.67	-0.66	-0.58	-0.49	-0.38	-0.28	-0.22	-0.16	-0.16	-0.16	-0.19	-0.22
	Superimposed Dead Load	0.98	0.70	0.46	0.25	0.03	-0.11	-0.24	-0.33	-0.39	-0.43	-0.44	-0.44	-0.40	-0.37	-0.32	-0.28	-0.25	-0.22	-0.21	-0.20	-0.20	-0.19
G4	Steel Dead Load	1.34	0.98	0.66	0.35	0.05	-0.18	-0.40	-0.57	-0.70	-0.81	-0.86	-0.91	-0.91	-0.90	-0.85	-0.79	-0.72	-0.66	-0.58	-0.51	-0.44	-0.37
	Fluid Dead Load	1.77	1.28	0.85	0.45	0.06	-0.21	-0.45	-0.62	-0.73	-0.81	-0.80	-0.79	-0.69	-0.58	-0.44	-0.31	-0.22	-0.15	-0.13	-0.12	-0.16	-0.18
	Superimposed Dead Load	1.12	0.81	0.53	0.28	0.04	-0.13	-0.28	-0.39	-0.46	-0.51	-0.51	-0.52	-0.47	-0.43	-0.36	-0.30	-0.26	-0.22	-0.20	-0.18	-0.18	-0.17
G5	Steel Dead Load	1.60	1.17	0.78	0.42	0.06	-0.23	-0.50	-0.72	-0.89	-1.04	-1.10	-1.16	-1.14	-1.12	-1.04	-0.96	-0.85	-0.75	-0.66	-0.57	-0.49	-0.40
	Fluid Dead Load	1.99	1.44	0.96	0.51	0.07	-0.25	-0.55	-0.76	-0.90	-1.01	-0.99	-0.98	-0.85	-0.70	-0.53	-0.36	-0.23	-0.11	-0.09	-0.08	-0.11	-0.14
	Superimposed Dead Load	1.28	0.92	0.61	0.32	0.04	-0.15	-0.34	-0.47	-0.56	-0.62	-0.62	-0.62	-0.56	-0.49	-0.40	-0.32	-0.25	-0.18	-0.17	-0.15	-0.15	-0.15

TABLE OF DEFLECTIONS (Inch)

Girder	Load	FS4	Piece No. 5							FS5	Piece No. 6										FS6
			1	2	3	4	5	6	7		1	2	3	4	5	6	7	8	9	10	
G1	Steel Dead Load	-0.23	-0.19	-0.15	-0.08	0.00	0.15	0.31	0.51	0.71	0.89	1.06	1.18	1.31	1.36	1.39	1.36	1.32	1.22	1.10	0.95
	Fluid Dead Load	-0.31	-0.28	-0.23	-0.12	-0.01	0.30	0.62	1.06	1.50	1.89	2.27	2.56	2.84	2.93	3.01	2.93	2.81	2.58	2.28	1.94
	Superimposed Dead Load	-0.20	-0.18	-0.14	-0.07	0.00	0.18	0.37	0.63	0.89	1.13	1.35	1.53	1.70	1.75	1.79	1.74	1.67	1.54	1.37	1.17
G2	Steel Dead Load	-0.28	-0.23	-0.18	-0.09	0.00	0.15	0.31	0.52	0.71	0.88	1.04	1.16	1.27	1.32	1.36	1.34	1.30	1.20	1.08	0.93
	Fluid Dead Load	-0.24	-0.23	-0.22	-0.11	-0.01	0.28	0.58	1.01	1.43	1.80	2.17	2.43	2.69	2.79	2.89	2.82	2.72	2.49	2.19	1.84
	Superimposed Dead Load	-0.19	-0.17	-0.15	-0.08	0.00	0.17	0.35	0.60	0.85	1.06	1.27	1.42	1.56	1.62	1.67	1.64	1.59	1.46	1.29	1.09
G3	Steel Dead Load	-0.33	-0.27	-0.20	-0.10	0.00	0.15	0.32	0.51	0.71	0.87	1.03	1.13	1.24	1.28	1.32	1.30	1.25	1.16	1.04	0.89
	Fluid Dead Load	-0.22	-0.21	-0.20	-0.10	0.00	0.26	0.54	0.94	1.34	1.70	2.05	2.30	2.54	2.64	2.72	2.65	2.55	2.32	2.03	1.70
	Superimposed Dead Load	-0.19	-0.17	-0.14	-0.07	0.00	0.15	0.32	0.55	0.78	0.99	1.18	1.32	1.45	1.51	1.55	1.52	1.47	1.34	1.18	1.00
G4	Steel Dead Load	-0.37	-0.30	-0.22	-0.11	-0.01	0.16	0.32	0.51	0.70	0.86	1.01	1.11	1.22	1.25	1.28	1.24	1.20	1.11	0.99	0.86
	Fluid Dead Load	-0.18	-0.19	-0.19	-0.10	0.00	0.24	0.51	0.88	1.26	1.59	1.92	2.16	2.39	2.45	2.51	2.43	2.31	2.09	1.82	1.51
	Superimposed Dead Load	-0.17	-0.16	-0.14	-0.07	0.00	0.14	0.30	0.52	0.74	0.93	1.12	1.24	1.37	1.41	1.44	1.40	1.33	1.22	1.07	0.90
G5	Steel Dead Load	-0.40	-0.32	-0.24	-0.12	-0.01	0.16	0.33	0.52	0.71	0.87	1.02	1.11	1.20	1.22	1.24	1.21	1.15	1.06	0.95	0.81
	Fluid Dead Load	-0.14	-0.16	-0.17	-0.09	0.00	0.23	0.48	0.83	1.19	1.52	1.84	2.03	2.22	2.26	2.29	2.20	2.06	1.85	1.59	1.29
	Superimposed Dead Load	-0.15	-0.15	-0.13	-0.07	0.00	0.14	0.30	0.51	0.72	0.91	1.09	1.20	1.30	1.33	1.35	1.30	1.23	1.11	0.97	0.80

TABLE OF DEFLECTIONS (Inch)

Girder	Load	FS6	Piece No. 7										FS7	Piece No. 8								Abut. 2
			1	2	3	4	5	6	7	8	9	10		1	2	3	4	5	6	7	8	
G1	Steel Dead Load	0.95	0.77	0.58	0.39	0.22	0.08	-0.03	-0.10	-0.12	-0.12	-0.08	-0.02	0.05	0.13	0.19	0.22	0.23	0.21	0.16	0.09	0.00
	Fluid Dead Load	1.94	1.51	1.09	0.69	0.36	0.13	-0.01	-0.04	0.06	0.23	0.48	0.81	1.14	1.43	1.60	1.64	1.55	1.32	0.96	0.51	0.00
	Superimposed Dead Load	1.17	0.92	0.68	0.43	0.23	0.08	-0.01	-0.03	0.03	0.13	0.27	0.44	0.61	0.76	0.84	0.85	0.80	0.68	0.49	0.27	0.00
G2	Steel Dead Load	0.93	0.75	0.56	0.38	0.21	0.08	-0.03	-0.09	-0.11	-0.10	-0.06	0.01	0.09	0.18	0.24	0.27	0.28	0.25	0.19	0.10	0.00
	Fluid Dead Load	1.84	1.41	1.01	0.62	0.32	0.11	0.00	-0.01	0.13	0.34	0.65	1.02	1.40	1.74	1.92	1.94	1.83	1.55	1.12	0.60	0.00
	Superimposed Dead Load	1.09	0.85	0.62	0.39	0.21	0.07	0.00	-0.02	0.06	0.17	0.32	0.51	0.69	0.85	0.94	0.95	0.89	0.76	0.55	0.30	0.00
G3	Steel Dead Load	0.89	0.72	0.54	0.36	0.20	0.07	-0.03	-0.09	-0.10	-0.09	-0.04	0.03	0.12	0.21	0.28	0.31	0.31	0.28	0.20	0.11	0.00
	Fluid Dead Load	1.70	1.30	0.91	0.56	0.28	0.10	0.01	0.03	0.20	0.44	0.77	1.17	1.58	1.94	2.13	2.16	2.02	1.71	1.23	0.66	0.00
	Superimposed Dead Load	1.00	0.78	0.56	0.35	0.18	0.06	0.00	0.00	0.09	0.22	0.38	0.58	0.78	0.95	1.05	1.05	0.98	0.82	0.59	0.32	0.00
G4	Steel Dead Load	0.86	0.68	0.51	0.34	0.19	0.07	-0.03	-0.09	-0.09	-0.07	-0.02	0.06	0.15	0.24	0.30	0.34	0.34	0.30	0.22	0.12	0.00
	Fluid Dead Load	1.51	1.14	0.79	0.47	0.23	0.08	0.02	0.07	0.27	0.54	0.90	1.32	1.75	2.12	2.30	2.32	2.17	1.83	1.32	0.70	0.00
	Superimposed Dead Load	0.90	0.69	0.49	0.31	0.16	0.06	0.01	0.03	0.13	0.28	0.46	0.68	0.89	1.07	1.15	1.15	1.07	0.90	0.65	0.35	0.00
G5	Steel Dead Load	0.81	0.65	0.48	0.32	0.18	0.06	-0.03	-0.08	-0.09	-0.07	-0.02	0.07	0.17	0.26	0.33	0.36	0.36	0.32	0.24	0.13	0.00
	Fluid Dead Load	1.29	0.94	0.62	0.36	0.17	0.06	0.03	0.11	0.34	0.64	1.03	1.49	1.95	2.33	2.52	2.52	2.34	1.97	1.41	0.75	0.00
	Superimposed Dead Load	0.80	0.60	0.42	0.25	0.12	0.04	0.01	0.05	0.17	0.34	0.55	0.79	1.02	1.21	1.30	1.30	1.20	1.01	0.73	0.39	0.00

NOTES:

1. *See "Camber Diagram" for piece No. locations and span dimensions.*
2. *Steel Dead Load Deflection is due to girders and cross frames.*
3. *Fluid Dead Load Deflection is due to deck concrete, including haunch.*
4. *Superimposed Dead Load is due to curb, sidewalk, and transition barrier concrete, bridge rail, and pavement.*
5. *Positive deflections are downward.*

90% PROGRESS PLANS

TY LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

		DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	B.Smith	4/20
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

DEAD LOAD DEFLECTIONS

SHEET NUMBER

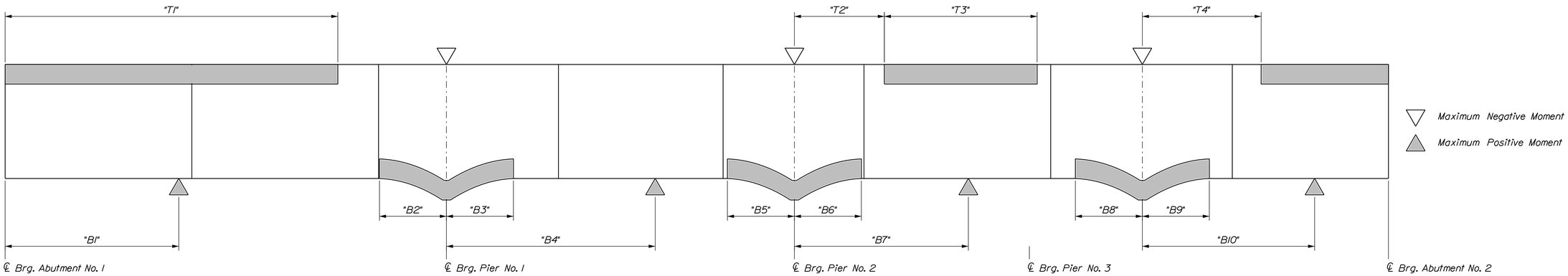
107

OF 128

Date:7/23/2020

Username:

Filename: ...\118_Girder_Dead_Load_Deflections.dgnDivision:



GIRDER STRESS DIAGRAM

Shaded areas are always in compression.
Other areas are in tension or have stress reversal.

TABLE OF STRESS DIAGRAM DIMENSIONS *

Girder	"T1"	"T2"	"T3"	"T4"	"B1"	"B2"	"B3"	"B4"	"B5"	"B6"	"B7"	"B8"	"B9"	"B10"
G1	198'-0"	57'-0"	70'-0"	67'-0"	106'-0"	44'-0"	74'-0"	145'-0"	31'-0"	21'-0"	97'-0"	35'-0"	39'-0"	103'-0"
G2	198'-0"	52'-0"	84'-0"	66'-0"	105'-0"	44'-0"	68'-0"	128'-0"	32'-0"	24'-0"	100'-0"	36'-0"	38'-0"	102'-0"
G3	196'-0"	53'-0"	90'-0"	70'-0"	104'-0"	44'-0"	68'-0"	123'-0"	35'-0"	27'-0"	103'-0"	36'-0"	40'-0"	102'-0"
G4	192'-0"	52'-0"	96'-0"	68'-0"	103'-0"	44'-0"	60'-0"	108'-0"	34'-0"	26'-0"	105'-0"	36'-0"	42'-0"	101'-0"
G5	184'-0"	55'-0"	94'-0"	77'-0"	102'-0"	44'-0"	56'-0"	103'-0"	37'-0"	29'-0"	108'-0"	35'-0"	41'-0"	100'-0"

* Measured Horizontally Along Girder, without accounting for vertical profile.

BOTTOM OF SLAB ELEVATIONS

Span No. 1

Horizontal Distance Along Centerline of Girder (FT) from ℄ Brg., Abut. 1

Girder	EL. @ ℄ Brg. @ Abut 1	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260
G1	44.77	44.75	44.73	44.71	44.68	44.65	44.61	44.56	44.51	44.44	44.37	44.29	44.20	44.11	44.00	43.90	43.78	43.66	43.54	43.41	43.27	43.14	43.00	42.87	42.73	42.61	42.43
G2	44.97	44.96	44.96	44.94	44.92	44.90	44.86	44.82	44.78	44.71	44.64	44.56	44.47	44.38	44.27	44.16	44.04	43.91	43.78	43.64	43.49	43.35	43.21	43.06	42.92	42.79	42.63
G3	45.17	45.18	45.18	45.18	45.16	45.15	45.12	45.08	45.04	44.98	44.91	44.83	44.74	44.65	44.53	44.41	44.29	44.15	44.02	43.87	43.71	43.56	43.41	43.26	43.11	42.97	42.83
G4	44.97	44.99	45.00	45.01	45.01	45.00	44.98	44.95	44.91	44.84	44.78	44.70	44.61	44.51	44.39	44.27	44.14	44.00	43.85	43.69	43.53	43.37	43.21	43.05	42.89	42.75	42.63
G5	44.77	44.80	44.83	44.85	44.86	44.87	44.85	44.82	44.78	44.73	44.67	44.58	44.49	44.39	44.26	44.14	44.00	43.85	43.69	43.52	43.35	43.18	43.00	42.83	42.67	42.52	42.43

Span No. 2

Horizontal Distance Along Centerline of Girder (FT) from ℄ Brg., Pier 1

Girder	EL. @ ℄ Brg. @ Pier 1	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200
G1	42.43	42.32	42.21	42.11	42.01	41.92	41.83	41.75	41.66	41.58	41.50	41.41	41.33	41.24	41.15	41.06	40.97	40.88	40.79	40.71	40.63
G2	42.63	42.52	42.40	42.30	42.20	42.11	42.02	41.93	41.85	41.77	41.69	41.61	41.52	41.44	41.35	41.26	41.17	41.08	40.99	40.90	40.83
G3	42.83	42.71	42.59	42.49	42.38	42.29	42.20	42.12	42.04	41.96	41.88	41.80	41.72	41.63	41.54	41.45	41.36	41.27	41.18	41.10	41.03
G4	42.63	42.50	42.37	42.27	42.16	42.07	41.98	41.90	41.82	41.75	41.67	41.59	41.51	41.42	41.34	41.24	41.15	41.06	40.97	40.90	40.83
G5	42.43	42.29	42.15	42.04	41.93	41.84	41.75	41.68	41.61	41.54	41.47	41.39	41.31	41.22	41.13	41.03	40.94	40.85	40.77	40.70	40.64

Span No. 3

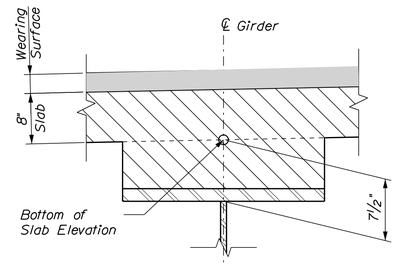
Horizontal Distance Along Centerline of Girder (FT) from ℄ Brg., Pier 2

Girder	EL. @ ℄ Brg. @ Pier 2	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200
G1	40.46	40.41	40.36	40.33	40.30	40.27	40.24	40.19	40.14	40.06	39.97	39.87	39.75	39.62	39.48	39.34	39.19	39.05	38.91	38.79	38.69
G2	40.72	40.67	40.62	40.58	40.55	40.51	40.47	40.42	40.37	40.29	40.21	40.11	40.01	39.87	39.74	39.60	39.45	39.31	39.17	39.06	38.94
G3	40.99	40.93	40.87	40.83	40.79	40.75	40.71	40.65	40.60	40.52	40.44	40.35	40.24	40.12	39.99	39.85	39.71	39.57	39.44	39.31	39.20
G4	40.85	40.79	40.73	40.68	40.63	40.59	40.54	40.49	40.43	40.35	40.27	40.18	40.07	39.96	39.83	39.70	39.56	39.43	39.30	39.17	39.06
G5	40.72	40.65	40.59	40.54	40.49	40.44	40.39	40.33	40.26	40.19	40.10	40.01	39.90	39.79	39.67	39.54	39.41	39.27	39.15	39.02	38.91

Span No. 4

Horizontal Distance Along Centerline of Girder (FT) from ℄ Brg., Pier 3

Girder	EL. @ ℄ Brg. @ Pier 3	10	20	30	40	50	60	70	80	90	100	110	120	130	140	EL. @ ℄ Brg. @ Abut 2
G1	38.74	38.65	38.56	38.49	38.44	38.39	38.34	38.29	38.23	38.15	38.06	37.95	37.83	37.69	37.55	37.43
G2	38.94	38.85	38.77	38.70	38.65	38.61	38.57	38.52	38.46	38.38	38.29	38.17	38.04	37.89	37.74	37.64
G3	39.14	39.06	38.98	38.91	38.87	38.83	38.79	38.74	38.68	38.60	38.50	38.38	38.24	38.09	37.92	37.84
G4	38.94	38.86	38.78	38.72	38.68	38.64	38.61	38.56	38.50	38.42	38.31	38.18	38.04	37.88	37.70	37.64
G5	38.74	38.66	38.59	38.53	38.50	38.46	38.43	38.39	38.32	38.24	38.13	37.99	37.84	37.67	37.48	37.44



BLOCKING DETAIL

Theoretical blocking is 7 1/2" at ℄ Brg., Abutments and Piers
(Do not use theoretical blocking to set forms)

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	B.Smith	4/20
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER CUMBERLAND
BRUNSWICK-TOPSHAM

GIRDER STRESS DIAGRAM & BOS ELEVATIONS

SHEET NUMBER

108

OF 128

Date:7/23/2020

Username:

Division:

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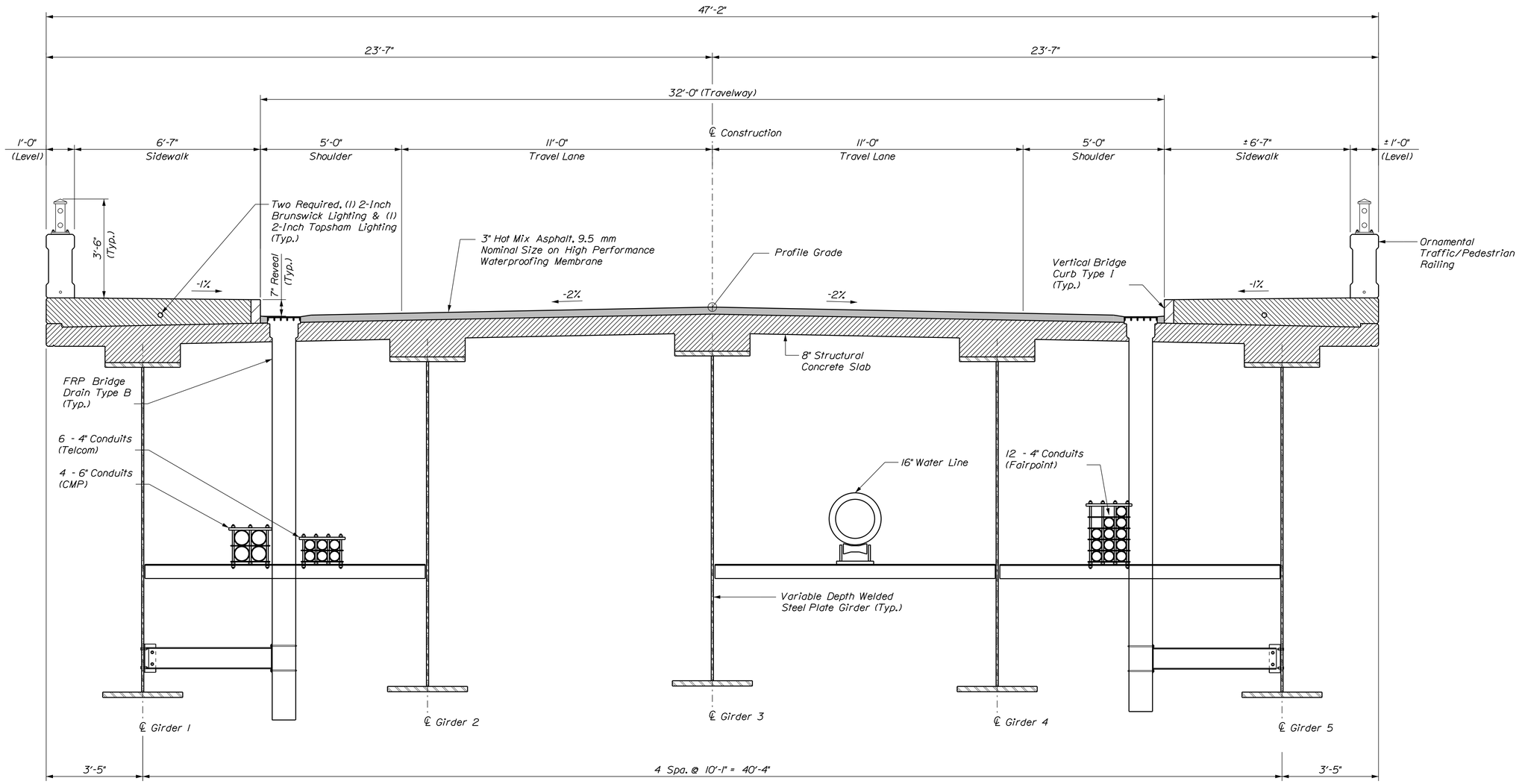


TRANSVERSE SECTION

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

Filename: ...\106180_55\120_Sup_Section.dgn Division: Username: Date:7/23/2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	C.Taylor	4/20
CHECKED-REVIEWED	D.Myers	4/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

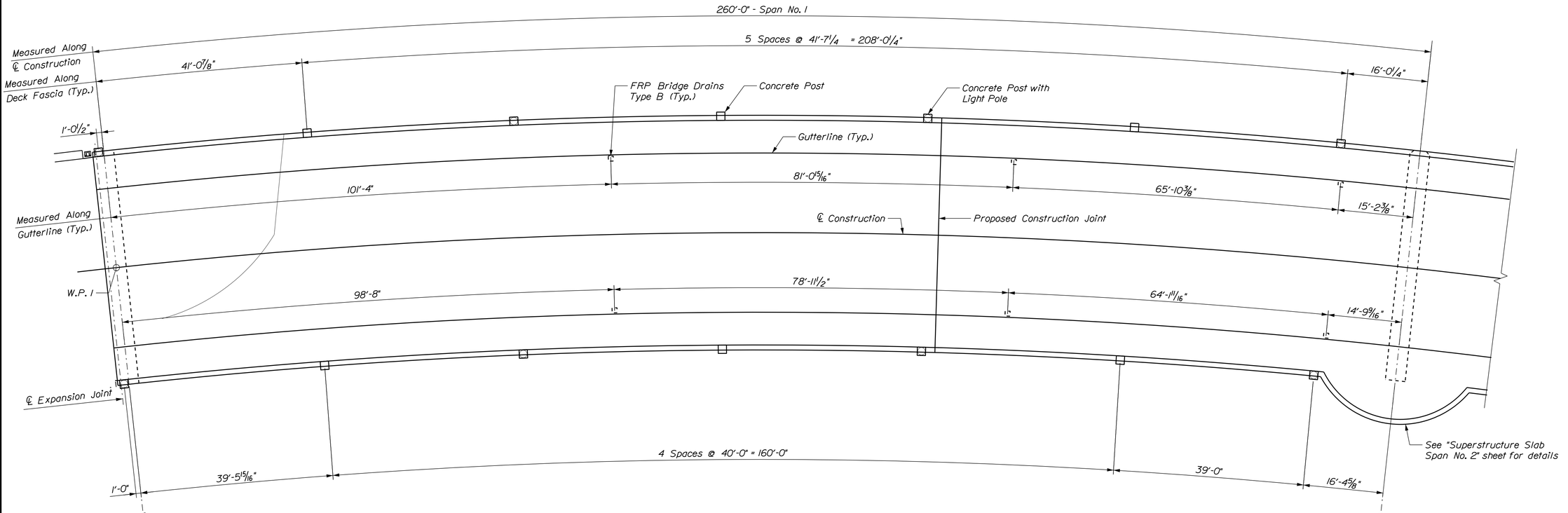
FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

TRANSVERSE SECTION

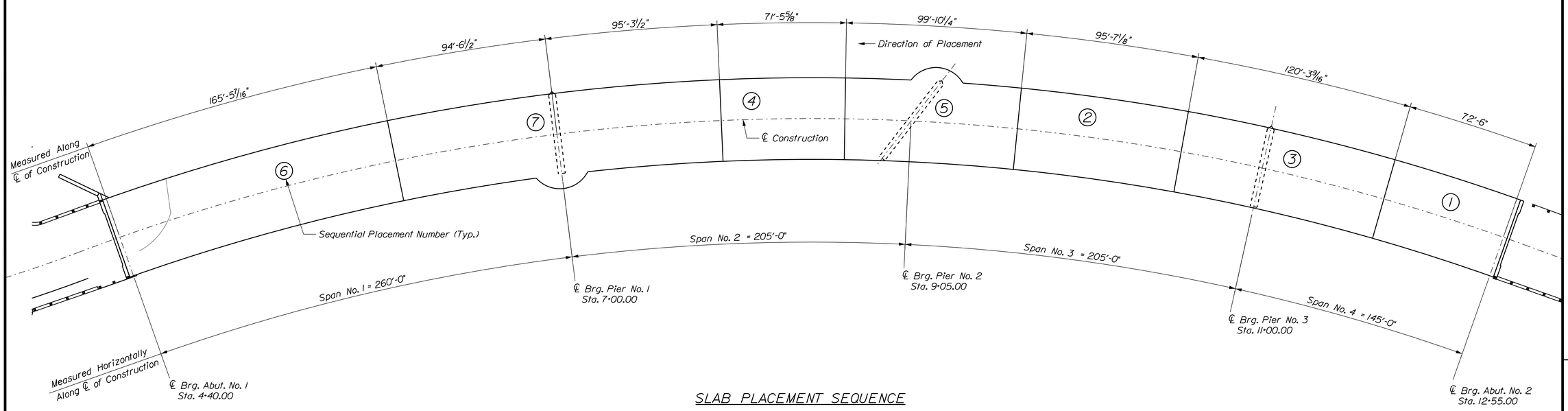
SHEET NUMBER

109

OF 128



SUPERSTRUCTURE SLAB - SPAN NO. 1



SLAB PLACEMENT SEQUENCE

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	S.Morgan	BY	4/20
CHECKED-REVIEWED	D.Myers	BY	4/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

SUPERSTRUCTURE SLAB
SPAN NO. 1

SHEET NUMBER

110

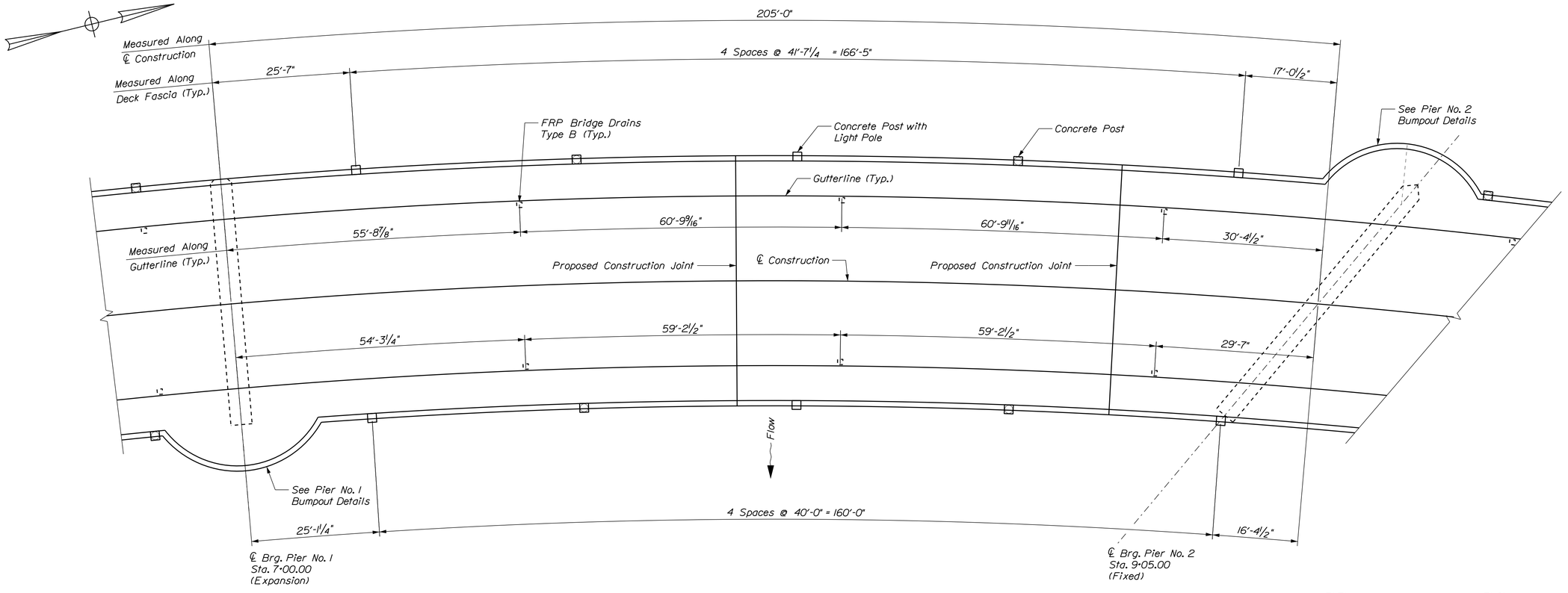
OF 128

Date:7/23/2020

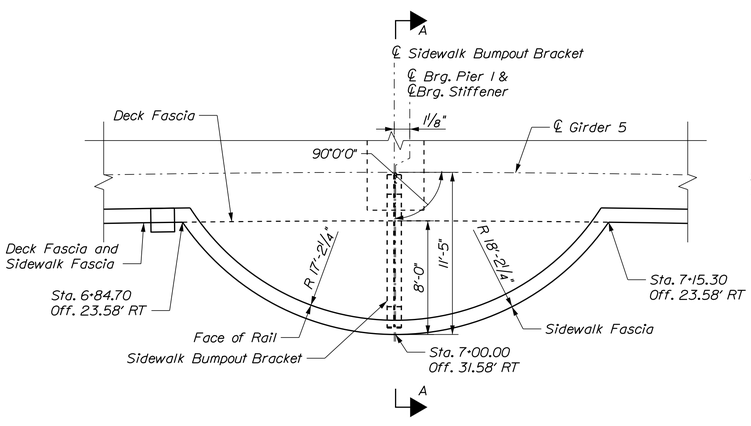
Username:

Division:

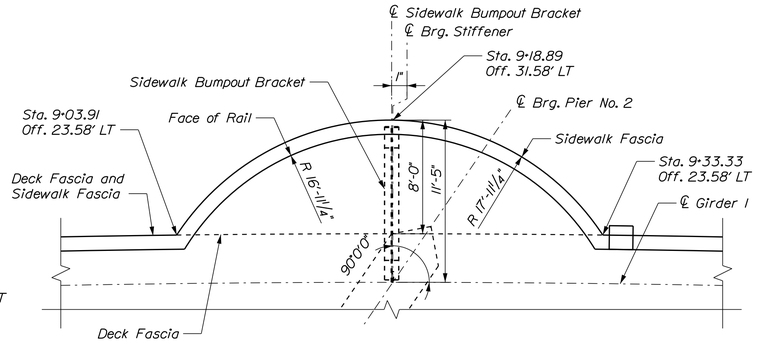
Filename: ...\121_Sup_Slab_Plan_Span_1.dgn



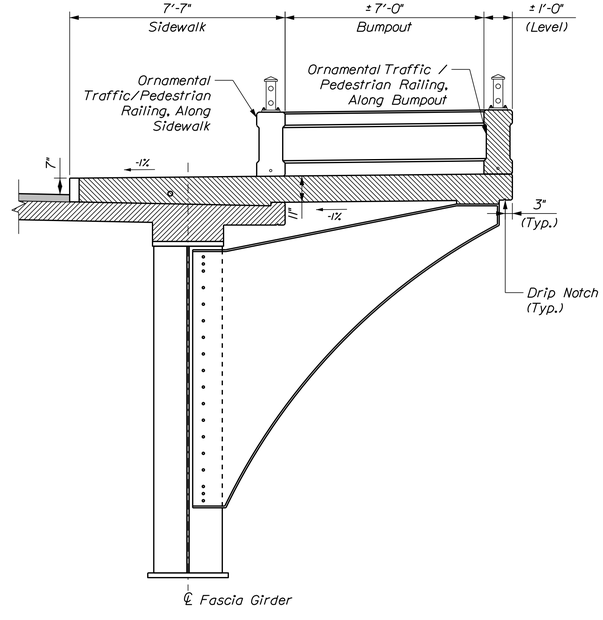
SUPERSTRUCTURE SLAB - SPAN NO. 2



PIER NO. 1 SIDEWALK BUMPOUT PLAN



PIER NO. 2 SIDEWALK BUMPOUT PLAN



SECTION A-A
(Pier No. 1 Shown, Pier No. 2 Similar)

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	S.Morgan	4/20/xx
CHECKED-REVIEWED	D.Myers	4/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

SUPERSTRUCTURE SLAB
SPAN NO. 2

SHEET NUMBER

111

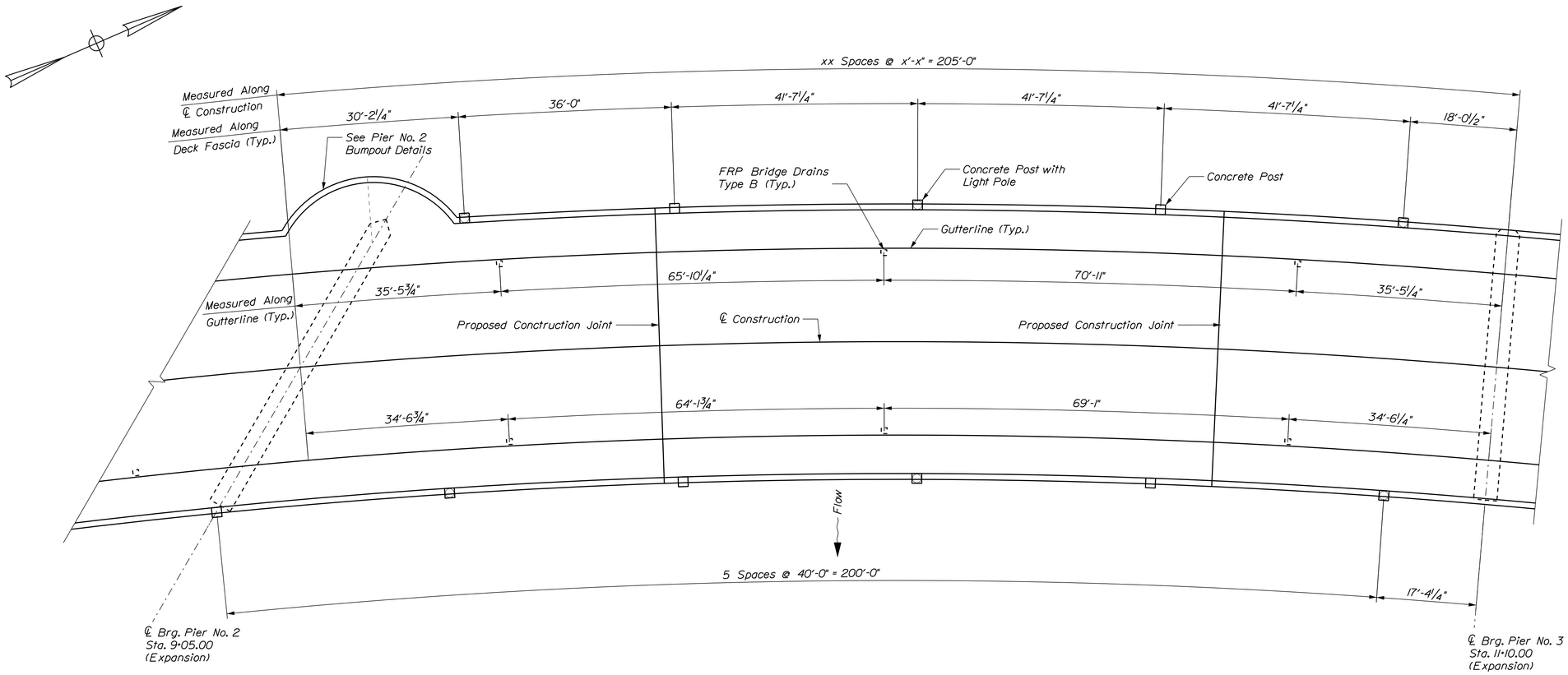
OF 128

Username:

Date:7/23/2020

Division:

Filename: ...\122_Sup_Slab_Plan_Span_2.dgn



SUPERSTRUCTURE SLAB - SPAN NO. 3

90% PROGRESS PLANS

TY LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	S.Morgan	BY	4/20
CHECKED-REVIEWED	D.Myers	DATE	4/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

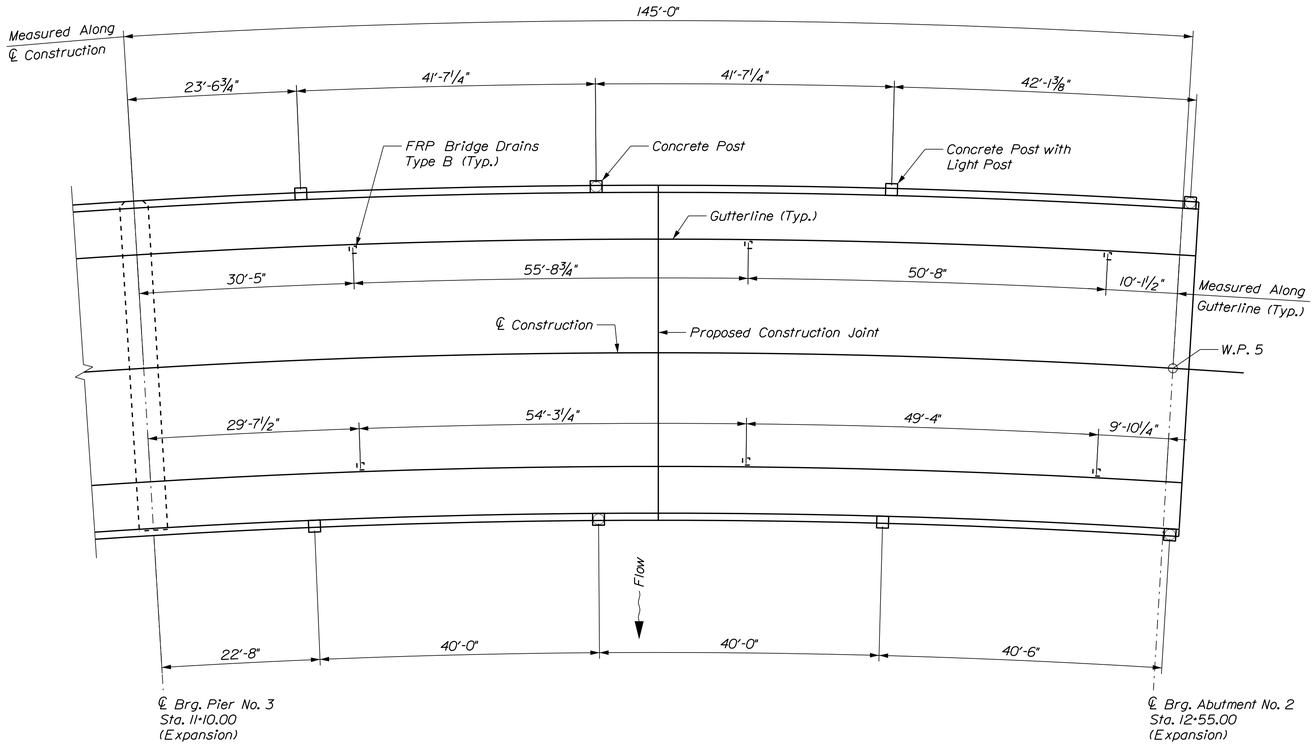
SUPERSTRUCTURE SLAB
SPAN NO. 3

SHEET NUMBER

112

OF 128

Filename: ...\123_Sup_Slab_Plan_Span_3.dgn Division: Username: Date:7/23/2020



SUPERSTRUCTURE SLAB - SPAN NO. 4

90% PROGRESS PLANS

TY LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	S.Morgan	BY	DATE
CHECKED-REVIEWED	D.Myers	S.Morgan	4/20
DESIGN2-DETAILED2		D.Myers	4/20
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

SUPERSTRUCTURE SLAB
SPAN NO. 4

SHEET NUMBER

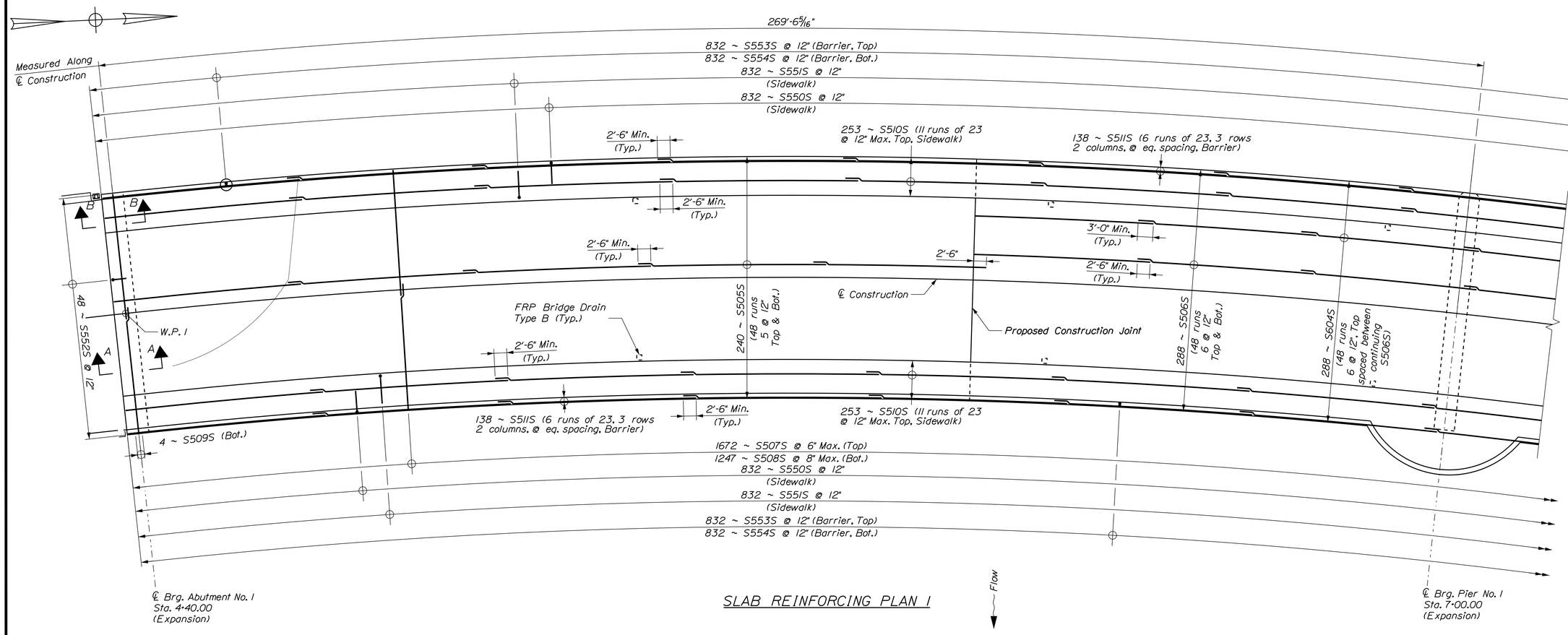
113

OF 128

Username: Date:7/23/2020

Division:

Filename: ...\124_Sup_Slab_Plan_Span_4.dgn



SLAB REINFORCING PLAN 1

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	B.Smith	BY	DATE
CHECKED-REVIEWED	B.Smith	B.Smith	4/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

SLAB REINFORCEMENT PLAN
SPAN NO. 1

SHEET NUMBER

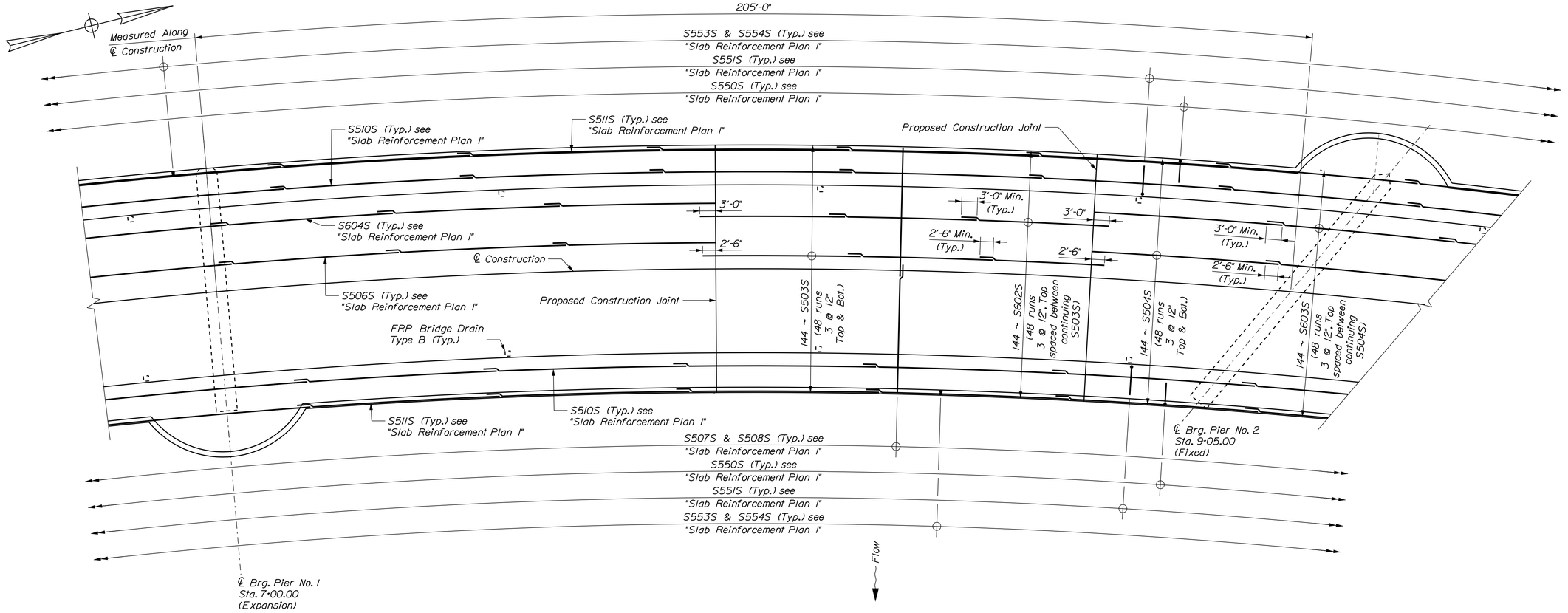
114

OF 128

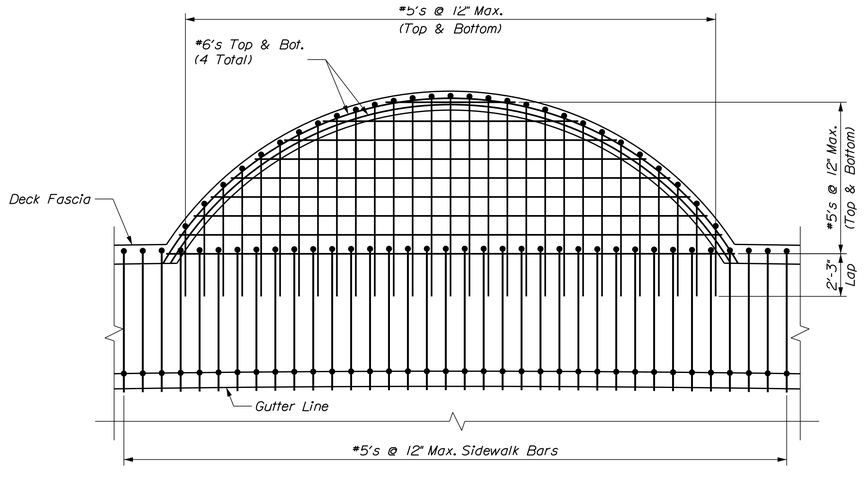
Username:

Date:7/23/2020

Filename: ...\125_Sup_Slab_Reinforcing_Plan_1.dgn Division:

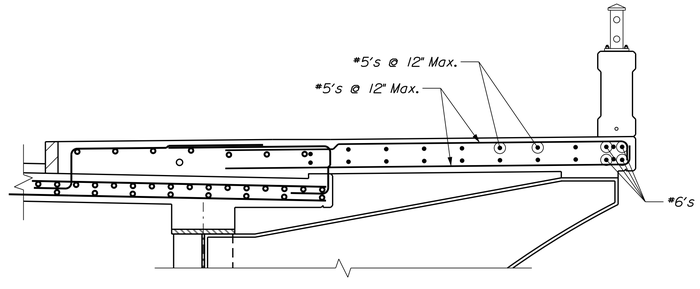


SLAB REINFORCING PLAN 2



NOTE:
For layout of Bumpout See Superstructure Slab Span No. 2.

PLAN
(Pier No. 2 shown. Pier No. 1 Similar)



SECTION

90% PROGRESS PLANS

TY LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	B.Smith	BY	B.Smith
CHECKED-REVIEWED		DATE	4/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

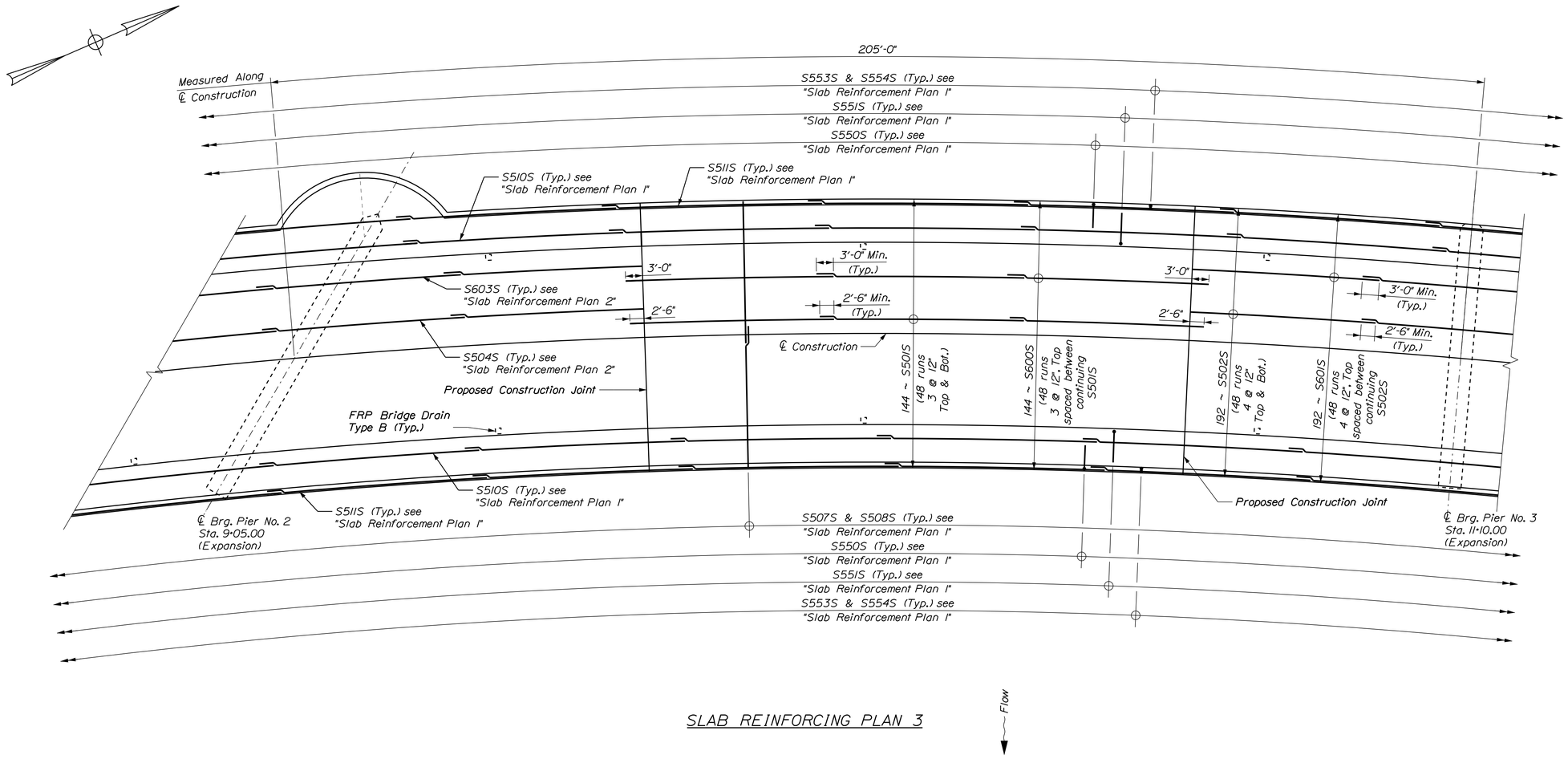
SLAB REINFORCEMENT PLAN SPAN NO. 2

SHEET NUMBER

115

OF 128

Filename: ...\126_Sup_Slab_Reinforcing_Plan_2.dgn Division: Username: Date:7/23/2020



SLAB REINFORCING PLAN 3

90% PROGRESS PLANS

TY LIN INTERNATIONAL

Filename: ...\127_Sup_Slab_Reinforcing_Plan_3.dgn Division:

Username:

Date:7/23/2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant	BY	DATE
DESIGN-DETAILED	B.Smith	B.Smith	4/20
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

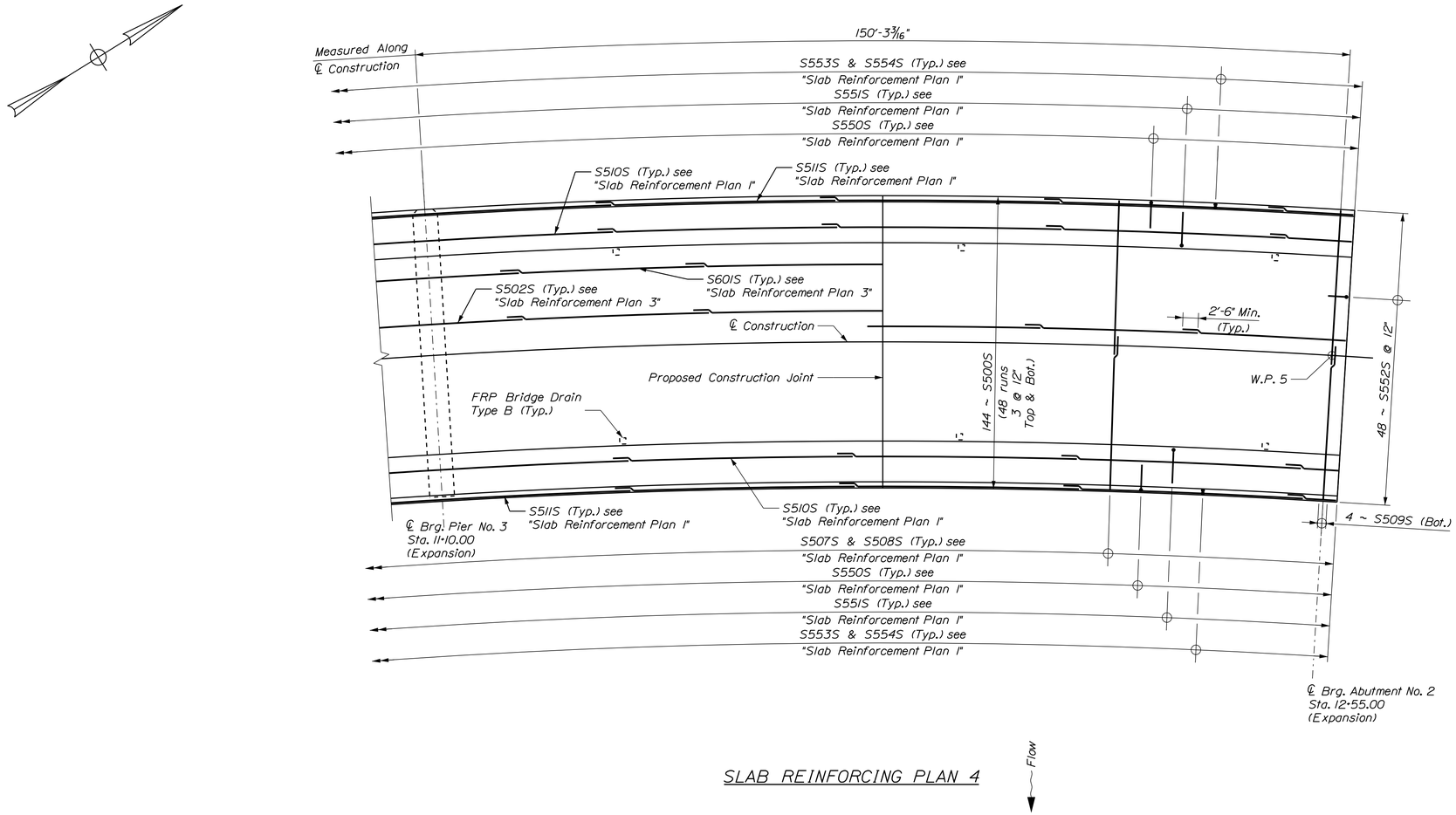
FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

SLAB REINFORCEMENT PLAN
SPAN NO. 3

SHEET NUMBER

116

OF 128



SLAB REINFORCING PLAN 4

90% PROGRESS PLANS

T·Y·LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	B.Smith	BY	DATE
CHECKED-REVIEWED		B.Smith	4/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

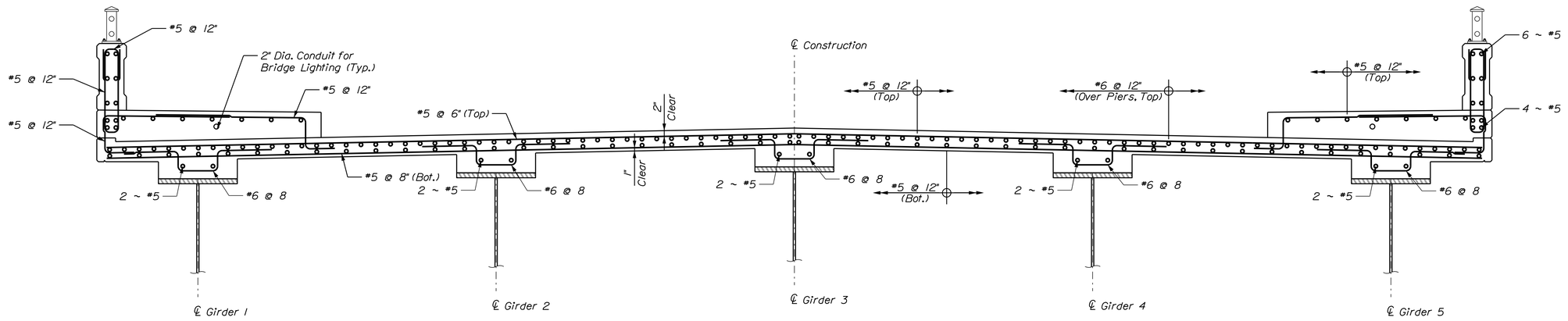
SLAB REINFORCEMENT PLAN
SPAN NO. 4

SHEET NUMBER

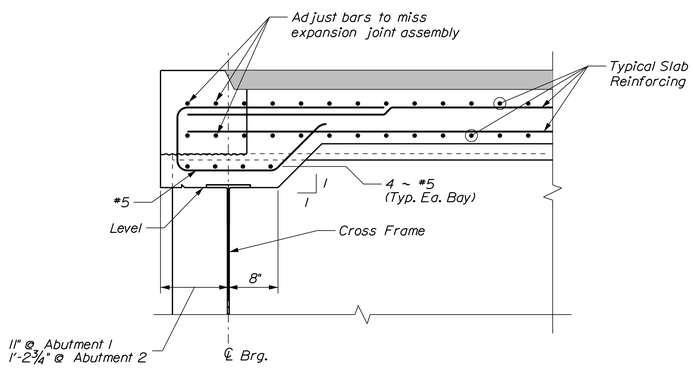
117

OF 128

Filename: ...\128_Sup_Slab_Reinforcing_Plan_4.dgn Division: Username: Date:7/23/2020

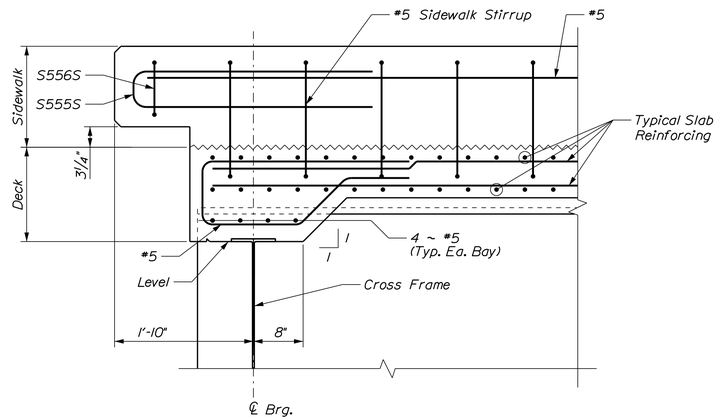


TRANSVERSE REINFORCING SECTION



SECTION A-A ~ LONGITUDINAL SECTION

(See MaineDOT Standard Details Section 521(02) for full dimensions)



SECTION B-B ~ LONGITUDINAL SECTION

(At Sidewalk)

(Expansion Dam not shown for clarity)

(See MaineDOT Standard Details Section 521(02) for full dimensions)

90% PROGRESS PLANS

TY·LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	B.Smith	B.Smith	4/20
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

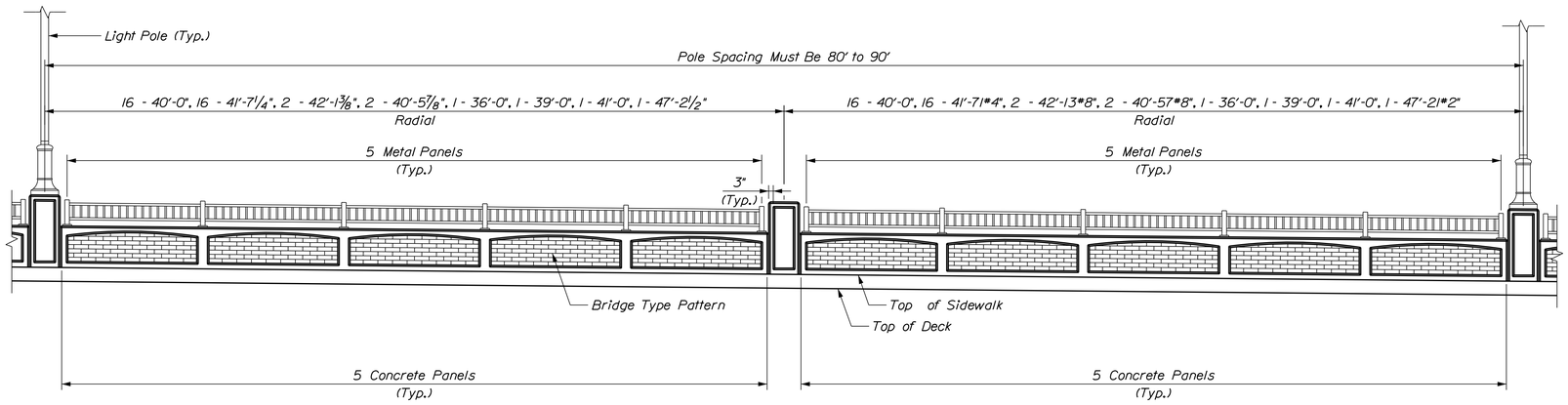
SLAB REINFORCEMENT SECTION

SHEET NUMBER

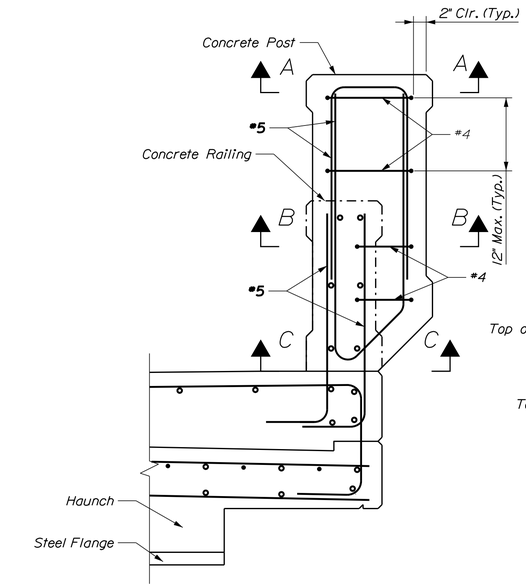
118

OF 128

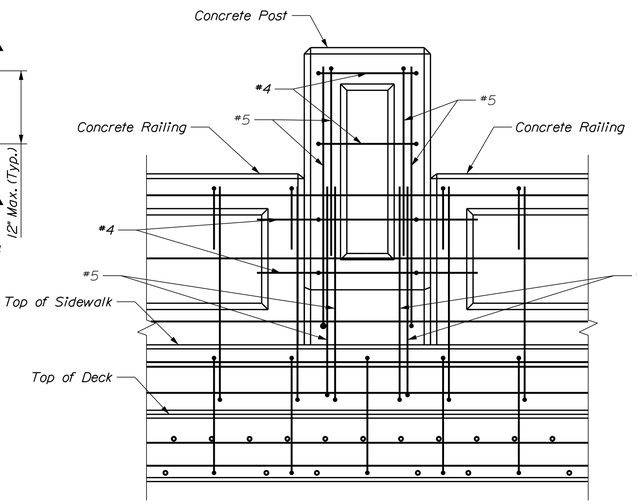
Filename: ...\129_Sup_Slab_Reinforcing_Section.dgn Division: Username: Date:7/23/2020



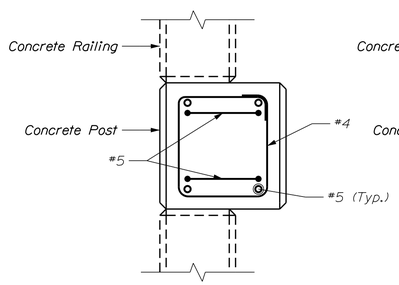
TYPICAL ELEVATION



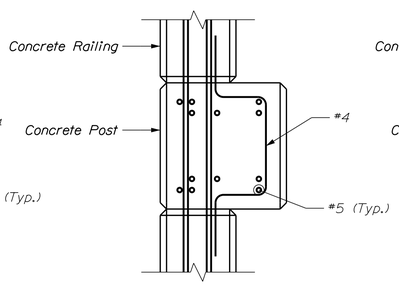
BRIDGE RAIL SECTION



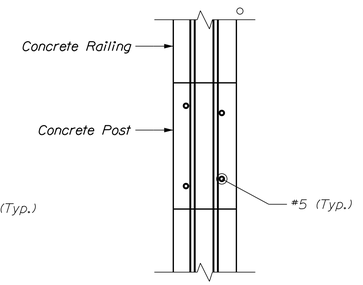
BRIDGE RAIL ELEVATION



SECTION A-A



SECTION B-B



SECTION C-C

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	B.Smith	S.Morgan	4/20
CHECKED-REVIEWED	D.Myers	D.Myers	4/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

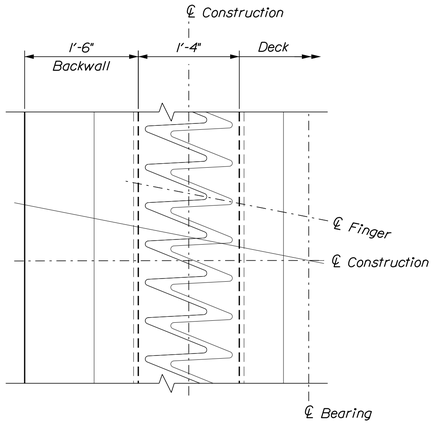
BRIDGE RAIL DETAILS

SHEET NUMBER

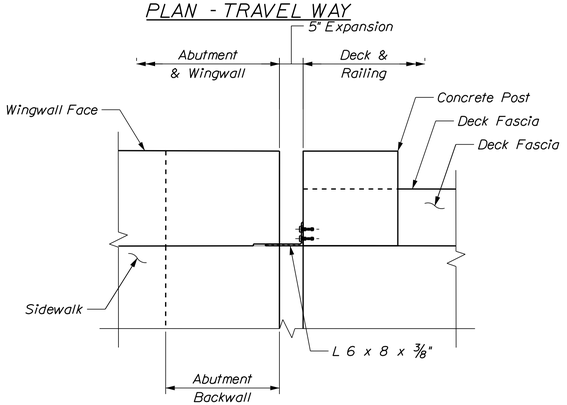
119

OF 128

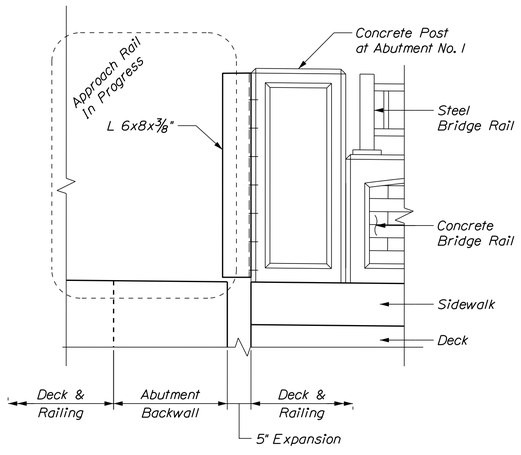
Filename: ...\130_Rail_1_Details.dgn Division: Username: Date:7/23/2020



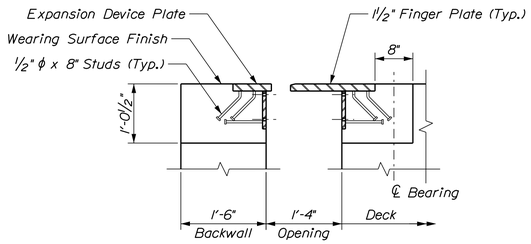
PLAN - TRAVEL WAY



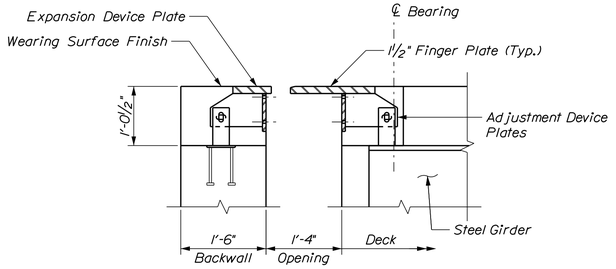
PLAN OF RAIL EXPANSION



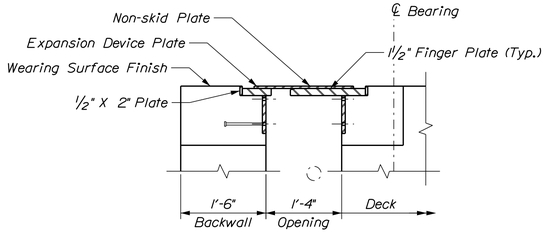
ELEVATION OF RAIL EXPANSION



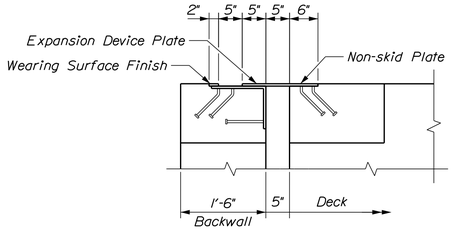
SECTION AT TRAVEL WAY



SECTION AT GIRDER



SECTION AT SHOULDER



SECTION AT SIDEWALK

NOTES:

1. Each "Expansion Device - Finger Joint" consists of one backwall element and one superstructure element (or two superstructure elements over piers) with expansion dams as required.
2. The Expansion Device shall be fabricated to be installed normal to grade.
3. Anchor studs shall be installed using automatically timed stud welding equipment.
4. The Expansion Device shall be installed with a joint opening of "J" at 45 °F. The joint opening shall be adjusted for temperature in the field at the time of installation using the following formula:

   0.00008 x "D" x "△ T" = Adjustment (in inches)

   "D" is the distance in feet between the backwall and the nearest fixed bearings (for joints at abutments) or between the fixed bearings at either side of the expansion joint (for joints at piers). "△ T" is the difference between the temperature of the structure and 45 °F.

   A structure temperature above 45 °F will result in a smaller joint opening.
5. Welding to reinforcing steel will be allowed in the top of the abutment backwall above the block - out joint.
6. After the Expansion Device is in final position, weld the bar and angle of the adjustment devices together with a 1/4-in. fillet weld.
7. The slab and backwall concrete shall be in place before the Expansion Device is fixed in position. No allowance for movement due to dead load deflection is necessary.
8. The concrete in the block - out may be placed with the curb / sidewalk concrete. An approved epoxy bonding agent shall be applied to all vertical surfaces of the block - out before making the final concrete placement.
9. For details not shown see Standard Details 521(01) to 521(12).

MATERIALS:

All shapes and plates ..... AASHTO M 270M/M 270, Grade 36

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

		DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	S.Morgan	4/20
CHECKED-REVIEWED	D.Myers	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

FINGER JOINT DETAILS 1

SHEET NUMBER

120

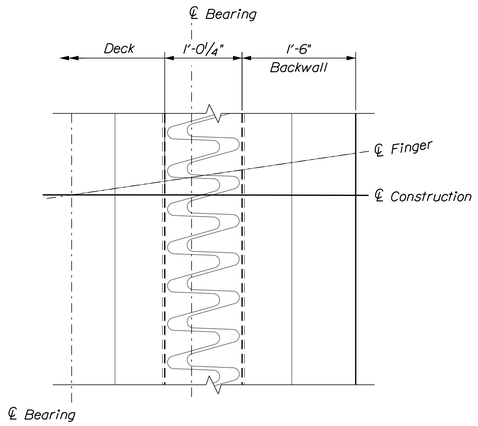
OF 128

90% PROGRESS PLANS

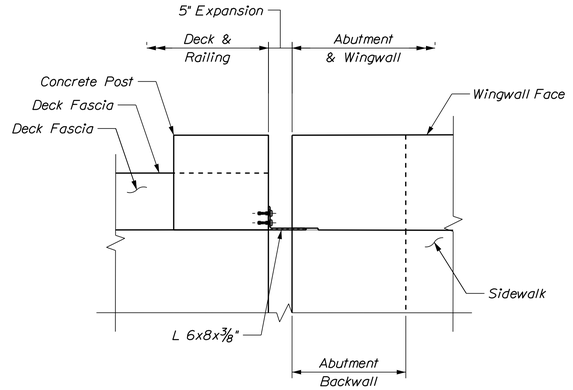
TY·LIN INTERNATIONAL

Username: Division: Date:7/23/2020

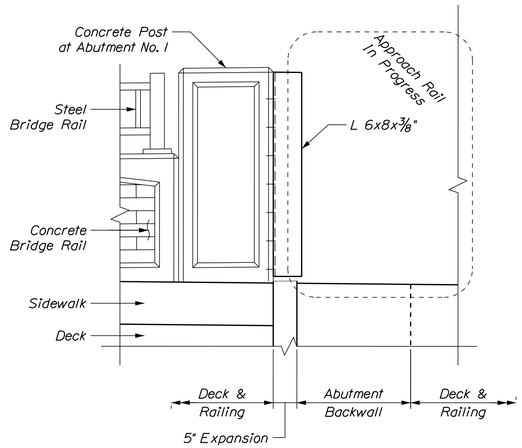
Filename: ...\132_Sup_Finger_Joints_1.dgn



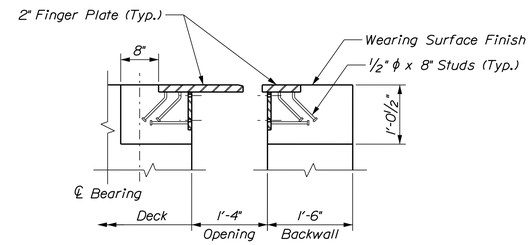
PLAN - TRAVEL WAY



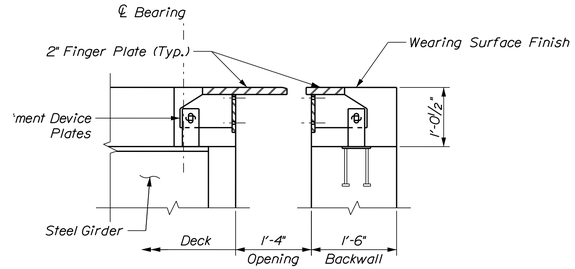
PLAN OF RAIL EXPANSION



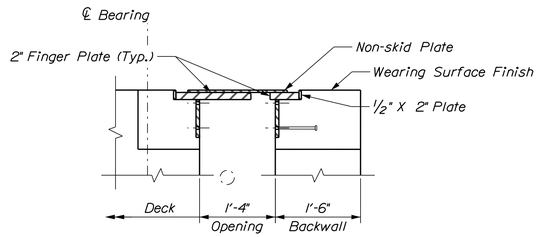
ELEVATION OF RAIL EXPANSION



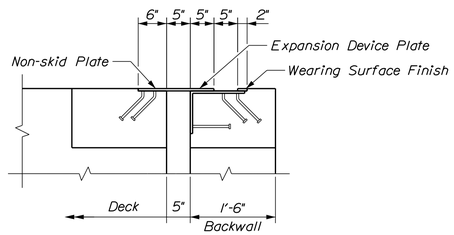
SECTION AT TRAVEL WAY



SECTION AT GIRDER



SECTION AT SHOULDER



SECTION AT SIDEWALK

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	S.Morgan	4/20
CHECKED-REVIEWED	S.Morgan	
DESIGN2-DETAILED2	D.Myers	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

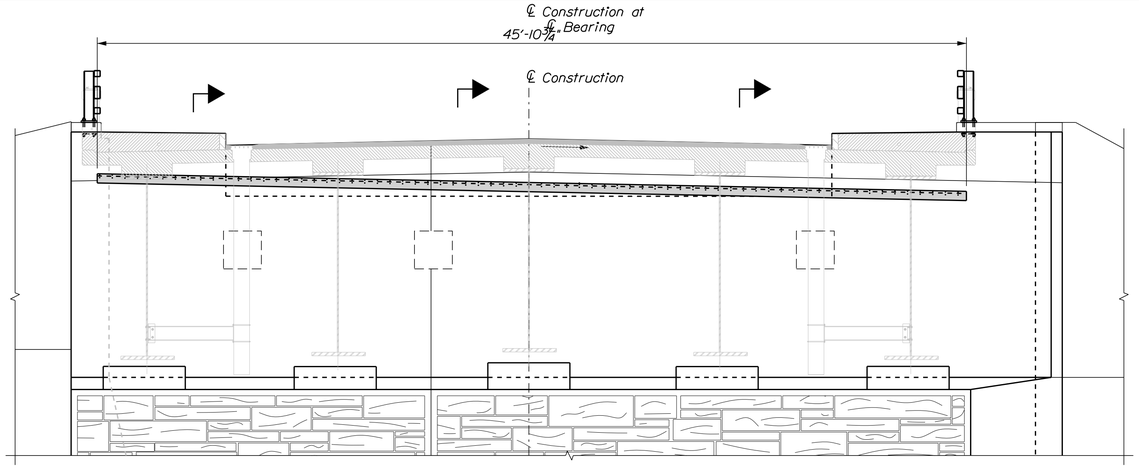
FINGER JOINT DETAILS 2

SHEET NUMBER

121

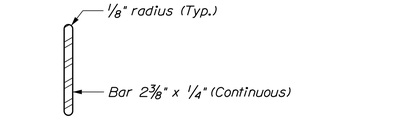
OF 128

Filename: ...\133_Sup_Finger_Joints_2.dgn Division: Username: Date:7/23/2020

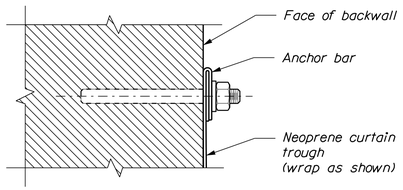


CURTAIN TROUGH ELEVATION

Flow



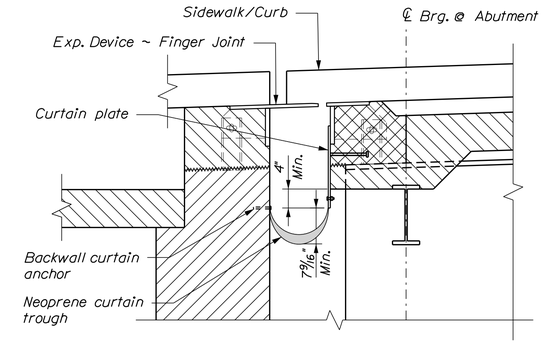
ANCHOR BAR



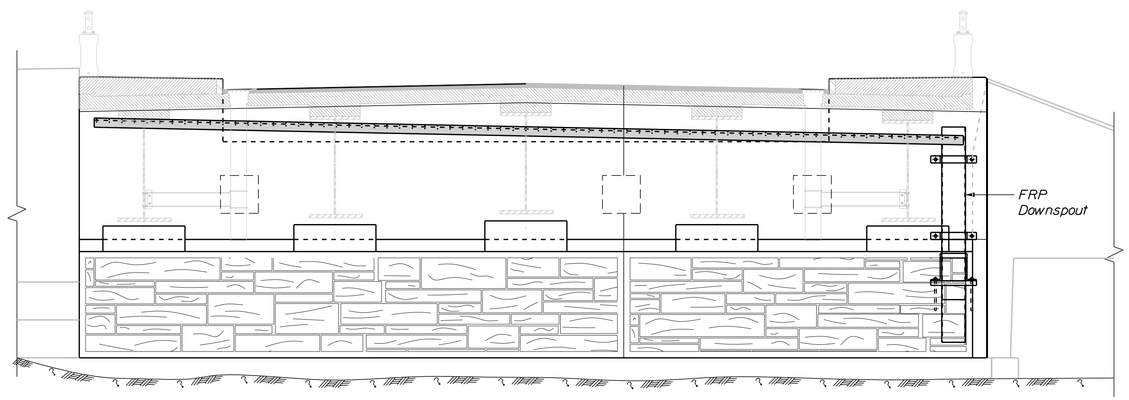
CURTAIN ANCHOR DETAIL

CURTAIN TROUGH NOTES

1. Fabrication and materials for the curtain trough, including galvanization of steel components, shall be in accordance with the provisions of Standard Specifications Section 521, Finger Joint and Fabric Trough.
2. The neoprene sheets shall be fabricated in one piece with no seams.
3. Curtain troughs shall be installed no less than two days after the placement of concrete.
4. Payment for curtain plates will be considered incidental to Item No. 521.23, Expansion Device - Finger Joint.
5. Payment for curtain troughs (per each), including anchor bars and associated hardware, will be made under Item No. 521.32, Fabric Trough for Finger Joint.
6. Curtain plate and anchor bar shall be hot dipped galvanized to the requirements of AASHTO M111 (ASTM 123).

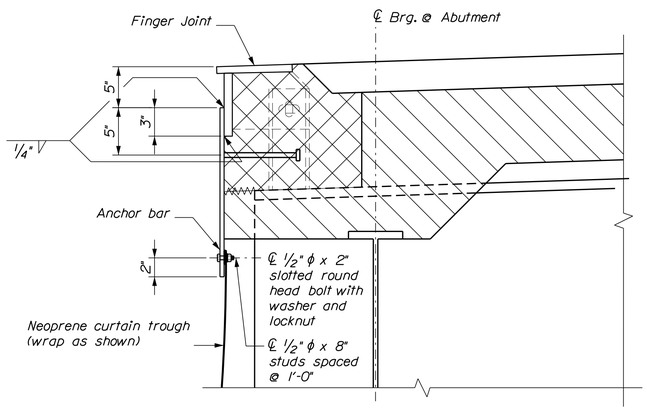


SECTION AT EXPANSION JOINT



CURTAIN TROUGH ELEVATION

Flow



CURTAIN PLATE DETAIL AT EXPANSION JOINT

90% PROGRESS PLANS

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE PLANS

BRIDGE NO. 2016

PROJ. MANAGER	D. Bryant		
DESIGN-DETAILED	S.Morgan	S.Morgan	4/20
CHECKED-REVIEWED	S.Morgan	D.Myers	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

CURTAIN TROUGH DETAILS 1

SHEET NUMBER

122

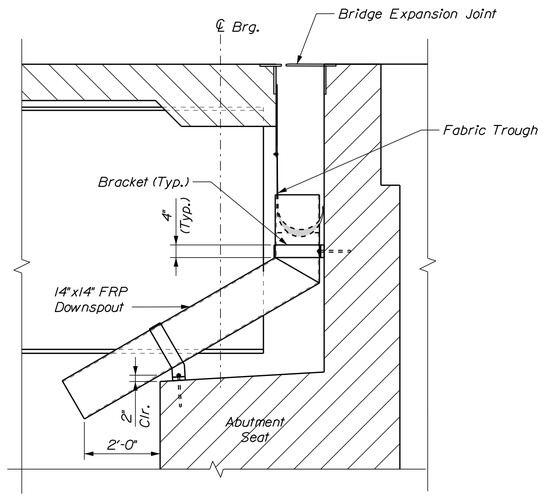
OF 128

Date:7/23/2020

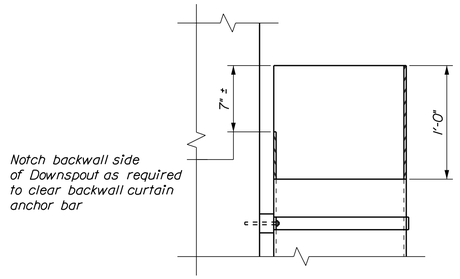
Username:

Division:

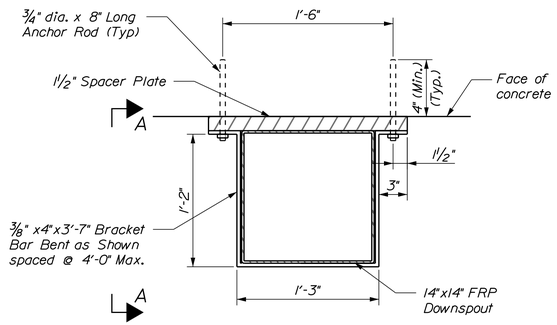
Filename: ...\134_Sup_Curtain_Troughs_1.dgn



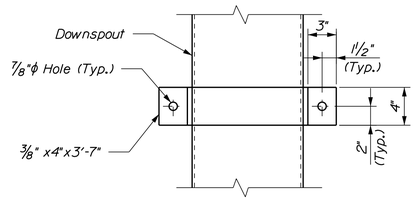
DOWNSPOUT ELEVATION AT ABUTMENT 2



DOWNSPOUT CUTOUT FOR TROUGH - VIEW A-A



DOWNSPOUT ATTACHMENT BRACKET DETAIL



ELEVATION VIEW OF BRACKET

DOWNSPOUT NOTES:

1. FRP Downspouts shall be designed and detailed based on the dimensions for the downspouts shown, and in accordance with Special Provisions Section 502, Fiber Reinforced Polymer Bridge Drains and Downspouts.
2. The exact position of the downspouts shall be determined in the field and shall be coordinated with Curtain Trough Details.
3. All plates and bars shall conform to AASHTO M270 Grade 36.
4. Brackets shall be galvanized in accordance with AASHTO M111 (ASTM 123) after fabrication.
5. All rods and related hardware shall be ASTM A307 and shall be galvanized in accordance with ASTM A153 (AASHTO M232).
6. Downspout and all anchor rods and related hardware shall be paid for under Item No. 502.703 FRP Downspout.
7. At the contractors option, alternate downspout details and locations may be submitted to the Resident for approval.

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

PROJ. MANAGER	D. Bryant	DATE	
DESIGN-DETAILED	S.Morgan	BY	S.Morgan
CHECKED-REVIEWED	D.Bryant		D.Myers
DESIGN2-DETAILED2	S.Morgan		
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

FRANK J. WOOD BRIDGE
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

CURTAIN TROUGH DETAILS 2

SHEET NUMBER

123

OF 128

Filename: ...\135_Sup_Curtain_Troughs_2.dgn Division: Username: Date:7/23/2020

Filename: ...\106273_4\140_Lighting_01.DGN Division: Username: Date:7/23/2020

GRID NORTH
MAINE 2000 WEST ZONE

WATERFRONT, MAINE BRUNSWICK LLC

CURVE DATA #1
PI = 2+73.46
D = 7°09'43.1"
Δ = 20°25'20.6" Lt.
R = 800.00'
L = 285.15'
T = 144.10'
E = 12.88'

PC = STA. 1+29.36

BROOKFIELD WHITE PINE HYDRO LLC

PRC = STA. 4+14.51

ACCESS EASEMENT TO CMP C.C.R.D. BK. 4564, PAGE 270

FERC APPROX. LOCATION PROJECT BOUNDARY

2-Inch Lighting Conduit Run In Sidewalk (Typ.)

2-Inch Lighting Conduit Run Under Sidewalk (Typ.)

See Lighting Note 14

See Lighting Note 13

See Lighting Note 12

March Line STA 6+00

STATE HIGHWAY "17" / US ROUTE 201
& ROUTE 24B / MAIN STREET

TOWN OF BRUNSWICK

AREA LEASED TO THE TOWN OF BRUNSWICK

APPROXIMATE BRIDGE LOCATION PRIOR TO 1932

TOWN OF BRU
TOWN OF

N15°36'51.02"E

0+00 1+00 2+00 3+00 4+00 5+00

P1-B P2-B P3-B P4-B P5-B P6-B P7-B P8-B P10-B P12-B P14-B
P1-A P2-A P3-A P4-A P5-A P6-A P7-A P8-A P10-A P12-A P14-A
PB P1-E PB P3-D PB P4-D PB P5-D PB P6-D PB P7-D PB P2-D
P2-C P4-C P6-C

LEGEND

Conduit
Light Fixture and Pole
Junction Box or Handhole (Refer to Note)
P2-C P2 = Pole Number C = Pole Type

WIRE SCHEDULE
A 3 #10 & #10 GR.
B 3 #8 & #8 GR.
C 3 #8, 2 #10 & #8 GR.

90% PROGRESS PLANS

T-Y LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016 BRIDGE PLANS

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

BY	DATE
P.McClure	7/20

SIGNATURE

P.E. NUMBER

DATE

ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

LIGHTING PLAN

SHEET NUMBER
124
OF 128

Filename: ...\106273_5\141_Lighting_02.DGN Division: Username: Date:7/23/2020

CURVE DATA #2
PI = 8+60.04
D = 4°46'28.7"
Δ = 40°44'15.8" Rt.
R = 1200.00'
L = 853.21'
T = 445.53'
E = 80.04'

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

CENTRAL MAINE POW

GRID NORTH
MAINE 2000 WEST ZONE

SHAD ISLAND

CENTRAL MAINE POWER CO EASEMENT SEE S.C.R.D. 1910/9

2-Inch Lighting Conduit
Run In Sidewalk (Typ.)

Brunswick Lighting

CENTRAL MAINE POWER CO EASEMENT

Brunswick Lighting Conduit
3 #10 & #10 GR.

Topsham Lighting Conduit
3 #12 & #12 GR.

Match Line Sta. 6+00

P9-A P11-A P13-A P15-A P17-A P19-A P21-A P23-A
P16-A P18-A P20-A P22-A P24-A P26-A P28-A P30-A

6+00 7+00 8+00 9+00 10+00 11+00

CUMBERLAND COUNTY
SAGADAHOC COUNTY

Topsham Lighting

Brunswick Lighting Conduit
3 #8, 2 #10 & #8 GR.

Topsham Lighting Conduit
3 #12 & #12 GR.

STATE HIGHWAY "17" / US ROUTE 201
& ROUTE 24B / MAIN STREET

Match Line Sta. 12+00

BRUNSWICK
TOPSHAM

APPROX. LOCATION - FERC PROJECT BOUNDARY - AS SHOWN ON FERC EXHIBIT G DRAWING

APPROX. LOCATION - FERC PROJECT BOUNDARY

APPROX. LOCATION - UPSTREAM FACE OF TIMBER TIMBER CRIB & ROCK FILL DAM - FERC PROJECT BOUNDARY - AS SHOWN ON FERC EXHIBIT G DRAWING

APPROX. LOCATION - FERC PROJECT BOUNDARY

LEGEND

- Conduit
- Light Fixture and Pole
- Junction Box or Handhole (Refer to Note)
- P2-C P2 = Pole Number C = Pole Type

WIRE SCHEDULE
A 3 #10 & #10 GR.
B 3 #8 & #8 GR.
C 3 #8, 2 #10 & #8 GR.
D 3 #12 & #12 GR.

PLAN
25 0 25 50
Scale of Feet

90% PROGRESS PLANS

TY·LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016 BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	C.Anderson	7/20
CHECKED-REVIEWED	P.McClure	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

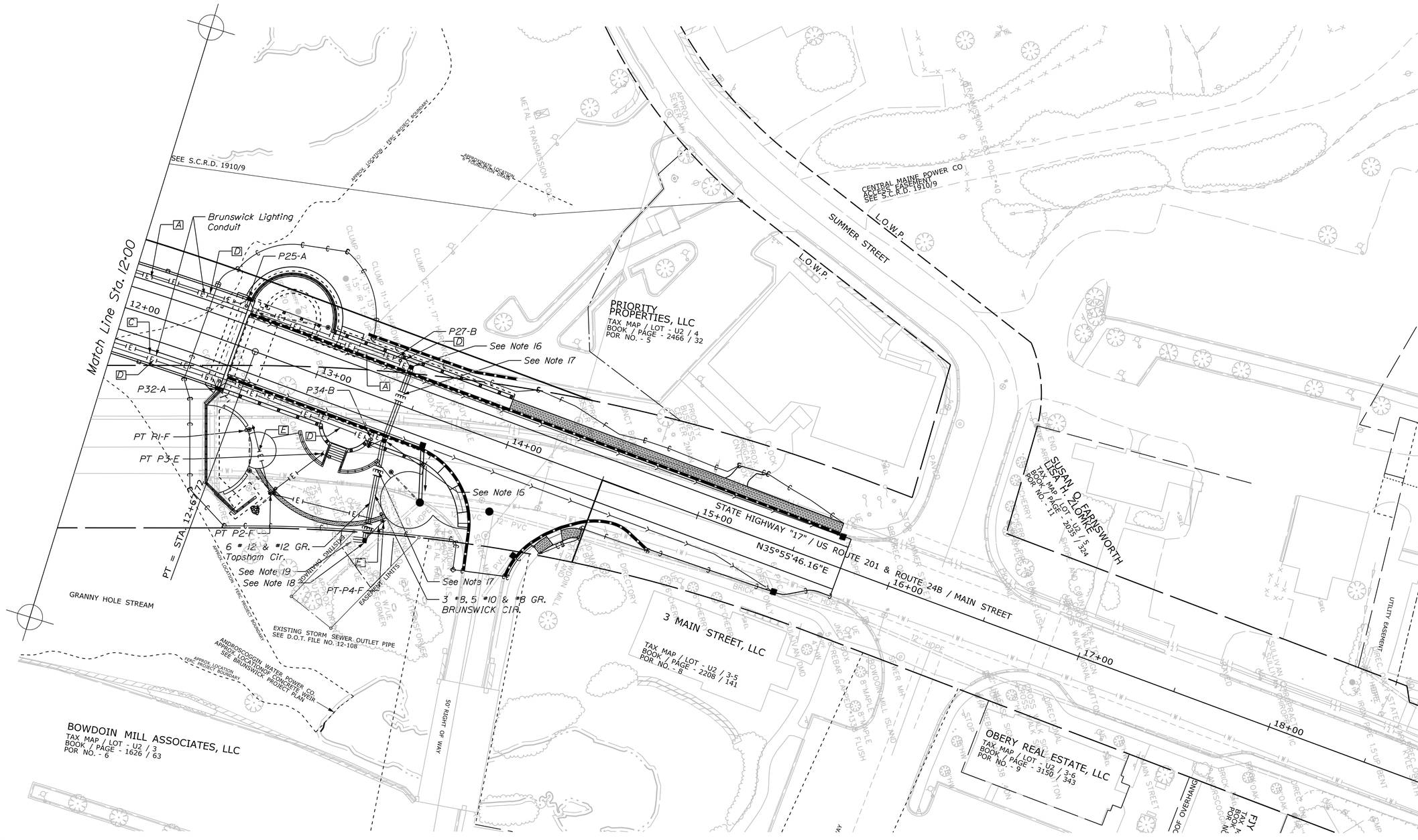
DATE

ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

LIGHTING PLAN

SHEET NUMBER
125
OF 128

Filename: ...\106273_3\142_Lighting_03.DGN Username: Division: Date:7/23/2020



LEGEND

- Conduit
- Light Fixture and Pole
- Junction Box or Handhole (Refer to Note)
- P2-C P2 = Pole Number C = Pole Type

WIRE SCHEDULE
A 3 #10 & #10 GR.
B 3 #8 & #8 GR.
C 3 #8, 2 #10 & #8 GR.
D 3 #12 & #12 GR.
E 2 #12 & #12 GR.

PLAN

25 0 25 50

Scale of Feet

90% PROGRESS PLANS

TY LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016 BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	C.Anderson	7/20
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

LIGHTING PLAN

SHEET NUMBER

126

OF 128

GENERAL NOTES - LIGHTING

1. PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL CONTACT DIG SAFE TO LOCATE ALL EXISTING UNDERGROUND UTILITIES WITHIN THE WORK AREA AND TAKE ALL NECESSARY PRECAUTIONS FOR PROTECTION OF THESE UTILITIES. ANY DAMAGE TO UNDERGROUND UTILITIES SHALL BE REPAIRED TO THE SATISFACTION OF THE UTILITY OWNER. WITH NO COST TO THE DEPARTMENT.

2. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE (NEC), THE TOWNS OF BRUNSWICK AND TOPSHAM REQUIREMENTS AND MOST RECENT MAINE DEPT. OF TRANSPORTATION (MEDOT) SPECIFICATIONS FOR MISCELLANEOUS CONSTRUCTION, SECTION 634- HIGHWAY LIGHTING AND STANDARD DETAILS FOR DIVISION 600 MISCELLANEOUS CONTRUCTION UNLESS NOTED OTHERWISE.

3. ALL PEDESTRIAN PATH LIGHT POLE FOUNDATIONS SHALL BE 18-INCH DIAMETER, 6-FT. 6-INCHES DEEP AND CONSTRUCTED IN ACCORDANCE WITH MEDOT STANDARD DETAIL 626 (01).

4. ALL LIGHT POLE FOUNDATIONS SHALL HAVE A GROUND ROD, LOCATED IN OR IMMEDIATELY ADJACENT TO THE FOUNDATION, THAT IS BONDED TO THE POLE GROUNDING CONDUCTOR. ALL GROUND RODS SHALL BE 3/4-INCH DIAMETER, 10-FT. LONG WITH TOP OF ROD SET 1-FT. BELOW FINISH GRADE WHERE ROD IS PLACED. IN GENERAL, UNLESS OTHERWISE NOTED, THE TOP SURFACE OF ALL POLE FOUNDATIONS SHALL BE SET 2-INCHES ABOVE FINISH GRADE WHERE POLE IS PLACED.

5. THE CONTRACTOR SHALL FIELD VERIFY FINAL POLE LOCATIONS TO AVOID SUB-SURFACE UTILITIES, NATURAL AND BUILT SITE FEATURES SUCH AS BUT NOT LIMITED TO SIDEWALKS, DRAINAGE STRUCTURES, GUARD RAILS, AND SUCH FEATURES THAT WOULD INTERFERE WITH THE INSTALLATION OF PROPER POLE FOUNDATIONS. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO ENSURE THAT HE IS FULLY AWARE OF THE SITE CONDITIONS WHICH MAY AFFECT HIS MEANS AND METHODS OF CONSTRUCTION.

6. WHERE CONDUIT IS RUN UNDER EXISTING PAVEMENT THE CONTRACTOR SHALL UTILIZE THE DIRECTIONAL BORING OR JACKING METHOD FOR CONDUIT INSTALLATION TO AVOID DESTURBING EXISTING PAVEMENT.

7. WHERE LIGHTING CONDUIT IS REQUIRED TO PASS OVER DRAINAGE CULVERTS AND THE SPECIFIED BURIAL DEPTH OF CONDUIT CANNOT BE MAINTAINED THE CONTRACTOR SHALL PROVIDE CONCRETE PROTECTION OF CONDUIT IN ACCORDANCE WITH NEC TABLE 300.5.

8. IN GENERAL, THE SCOPE OF WORK WILL INCLUDE THE INSTALLATION OF A COMPLETE SYSTEM OF BURRIED CONDUIT, CONDUIT ENCASED IN POURED IN PLACE CONCRETE, CONDUCTORS, HANDHOLES (WHERE REQUIRED) AND PRE-CAST OR CAST-IN-PLACE REINFORCED CONCRETE POLE FOUNDATIONS WITH ANCHOR BOLTS, ELECTRIC SERVICE, POLES AND LUMINAIRES.

9. THE CONTRACTOR WILL COORDINATE THIS WORK WITH ALL OTHER CONTRACTORS WORKING ON THIS PROJECT.

10. INSTALLATION OF ALL UNDERGROUND CONDUIT WILL COMPLY WITH MAINE DOT STANDARD DETAIL 626 (07).

11. ANCHOR BOLT PATERN FOR POLES SHALL BE COORDINATED WITH APPROVED POLE SHOP DRAWINGS, SHALL BE HOT DIP GALVANIZED, DIAMETER AND LENGTH AS RECOMMENDED AND SUPPLIED BY POLE MANUFACTURER.

12. WHEREVER MANUFACTURERS NAMES AND CATALOG NUMBERS ARE NOTED, THEY ARE NOTED TO ESTABLISH THE QUALITY, PERFORMANCE AND FEATURES REQUIRED. IT IS NOT THE INTENT TO RESTRICT MATERIALS TO THAT MANUFACTURER. ALTERNATE MANUFACTURERS OF EQUAL QUALITY, PERFORMANCE AND FEATURES WILL BE ACCEPTABLE IF IN THE JUDGEMENT OF THE DEPARTMENT THE PROPOSED PRODUCT IS EQUAL TO THOSE SPECIFIED.

13. EXISTING UTILITY POLE AND LUMINAIRE TO REMAIN.

14. TURN CONDUIT OUT OF BASE 2 FT. AND CAP FOR FUTURE USE.

15. PROVIDE EXPANSION AND DEFLECTION FITTINGS IN CONDUITS CROSSING EXPANSION JOINTS. FITTINGS SHALL BE OZ/GEDNEY CATALOG NUMBERS AXB-8-200 AND DX-200. SEE DETAIL SHEET.

16. WATERTIGHT CAST IRON, HOT DIP GALVANIZED JUNCTION BOX, CROUSE-HINDS CATALOG NUMBER WJBFI81812. PROVIDE GROUNDING LUG ATTACHED TO INTERIOR OF BOX AND EXTRA FLEXIBLE, BRAIDED TINED COPPER GROUNDING STRAP ATTACHED TO COVER. PROVIDE DRILLED AND TAPPED CONDUIT OPENINGS FOR 2-INCH CONDUITS.

17. (2) 2-INCH CONDUITS (BRUNSWICK LIGHTING AND TOPSHAM LIGHTING). PROVIDE ONE SPARE CONDUIT UNDER ROADWAY BETWEEN SIDEWALK JUNCTION BOXES, BETWEEN SIDEWALK JUNCTION BOX AND HAND HOLE, AND HAND HOLE TO SERVICE.

18. QUAZITE POLYMER CONCRETE HAND HOLE 24 X 36 X 18 CAT. NO. 2436BA18/PG2436CA0041 SET ON A BASE OF 18-INCHES OF CRUSHED STONE.

19. EXISTING, TOWN OF TOPSHAM STREET LIGHTING ELECTRIC SERVICE, SEE DETAIL SHEET FOR SERVICE UPGRADE.

POLE SCHEDULE

TYPE	MANUFACTURER	LUMINAIRE	POLE/BASE/ARM/HEIGHT	LOCATIONS	AO SET
A	HOLOPHANE	GSLF2-P20-30K-AS-2-B-L3-AO	L5J/ROCKFORD HARBOR/SL BISHOPS CROOK/14 Ft.	ON BRIDGE	
B	HOLOPHANE	GSLF2-P20-30K-AS-2-B-L3-AO	L5J/ROCKFORD HARBOR/SL BISHOPS CROOK/18 Ft.	ON GRADE	
C	HOLOPHANE	GSLF2-P20-30K-AS-2-B-L4-AO	L5J/ROCKFORD HARBOR/SL BISHOPS CROOK/18 Ft.	STA. 1+45 TO 2+63	
D	HOLOPHANE	GSLF2-P20-30K-AS-2-B-L2-AO	L5J/ROCKFORD HARBOR/SL BISHOPS CROOK/12 Ft.	BRUNSWICK PARK	
E	HOLOPHANE	GSLF2-P50-30K-AS-2-B-L3-AO	L5J/ROCKFORD HARBOR/SL BISHOPS CROOK/12 Ft.	TOPSHAM PARK	
F	HOLOPHANE	GSLF2-P20-30K-AS-2-B-L3-AO	L5J/ROCKFORD HARBOR/SL BISHOPS CROOK/12 Ft.	TOPSHAM PARK	

Filename: ...\143_LightingNotes_01.dgn Username: Division: Date:7/23/2020

90% PROGRESS PLANS

T.Y.LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE PLANS

BRIDGE NO. 2016

		DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	C.Anderson	7/20
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BY P.McClure

SIGNATURE

P.E. NUMBER

DATE

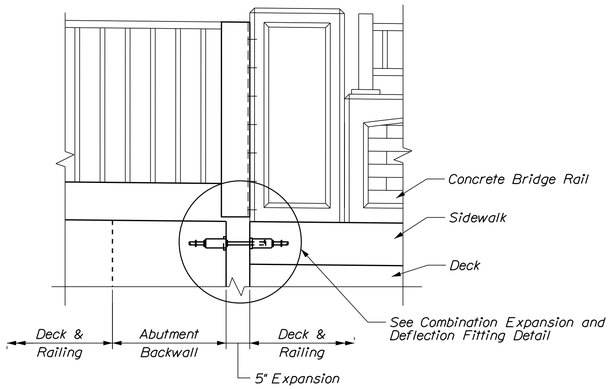
ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

LIGHTING NOTES

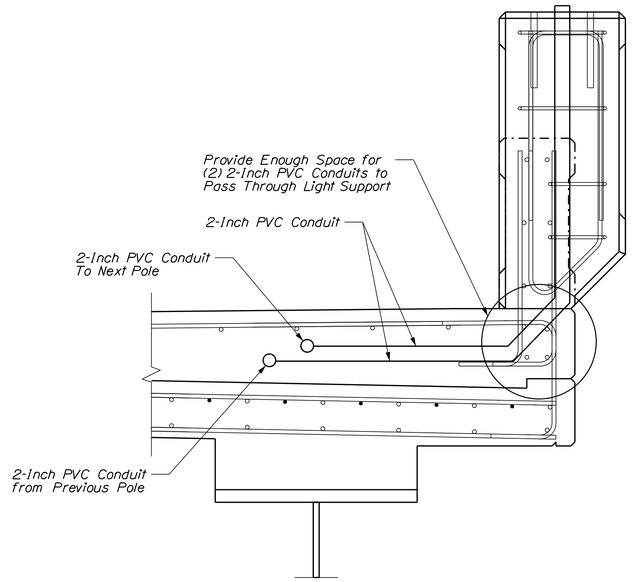
SHEET NUMBER

127

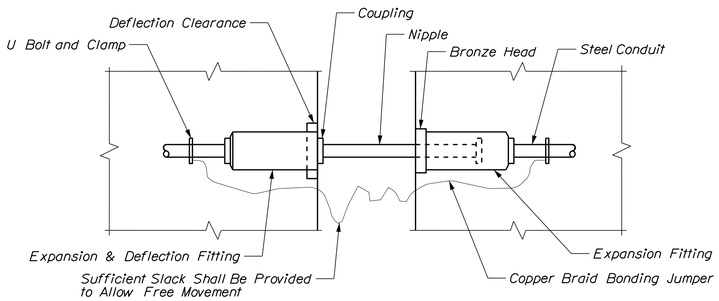
OF 128



ELEVATION OF RAIL EXPANSION



RAIL SECTION



COMBINATION EXPANSION AND DEFLECTION FITTING

See Lighting Note 15 For Fitting Specifications.

Date:7/23/2020
Username:
Division:
Filename: ...\144_Light_Support_Details.dgn

90% PROGRESS PLANS

TY LIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2260(300)X

WIN 22603.00

BRIDGE NO. 2016

BRIDGE PLANS

		DATE
PROJ. MANAGER	D. Bryant	
DESIGN-DETAILED	C.Anderson	7/20
CHECKED-REVIEWED	P.McClure	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

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DATE

ANDROSCOGGIN RIVER
BRUNSWICK-TOPSHAM CUMBERLAND

LIGHTING DETAILS

SHEET NUMBER

128

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