STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SPECIFICATIONS

Design: Load and Resistance Factor Design per AASHTO LRFD Bridge Design Specifications, Eighth Edition 2017, with interims through 2018.

DESIGN LOADING

Live Load	HL - 93 Modified for Strength I

TRAFFIC DATA

Current (2019) AADT	100
Future (2039) AADT	120
DHV - % of AADT	18%
Design Hour Volume	20
Heavy Trucks (% of AADT)	14%
Heavy Trucks (% of DHV)	14%
Directional Distribution (% of DHV)	57%
18 kip Equivalent P 2.0	6
18 kip Equivalent P 2.5	6
Design Speed (mph)	25

HYDROLOGIC DATA

Drainage Area	23 sq mi
Design Discharge (Q50)	1,488 cfs
Check Discharge (Q100)	1,710 cfs
Headwater Elevation (Q1.1)	137.3 ft
Headwater Elevation (Q25)	139.9 ft
Headwater Elevation (Q50)	140.3 ft
Headwater Elevation (Q100)	140.8 ft
Discharge Velocity (Q1.1)	3.5 fps
Discharge Velocity (Q50)	8.4 fps
Discharge Velocity (Q100)	9.0 fps

MATERIALS

Concrete:	
Curbs	Class "LP"
Precast	Class "P"
Seals	Class "S"
All Other	Class "A"
Reinforcing Steel	ASTM A 615/A 615M, Grade 60
Prestressing Strands	AASHTO M 203 (ASTM A 416), Grade 270, Low Relaxation
Structural Steel:	
All Material (except as noted)	ASTM A 709, Grade 50 (Galvanized)
High Strength Bolts	ASTM F 3125, Grade A 325, Type 1 (Galvanized)

BASIC DESIGN STRESSES

Concrete:	
Class "LP"	f 'c = 5,000 psi
Class "A"	f 'c = 4,000 psi
Class "S"	f 'c = 3,000 psi
Class "P" NEXT Beam	f 'c = 6,000 psi
	f 'ci = 4,500 psi
Class "P" Precast Facing Blocks	f 'c = 4,000 psi
	f 'ci = 3,000 psi
Reinforcing Steel	f y = 60,000 psi
Prestressing Strand	F μ = 270,000 psi
Structural Steel:	
ASTM A 709, Grade 50	F y = 50,000 psi
ASTM F 3125, Grade A 325	F μ = 120,000 psi

B H

STATE OF MAINE
Brandon M. Havu
13726
LICENSED PROFESSIONAL ENGINEER

10/30/2019

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

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NORTH BERWICK
YORK COUNTY
STAPLES BRIDGE
OVER
GREAT WORKS RIVER
CARD MILL ROAD
FEDERAL AID PROJECT NO. 2233600
PROJECT LENGTH 0.07 mi.
BRIDGE NO. 1238

LIST OF DRAWINGS

UTILITIES

Central Maine Power
Consolidated Communications of Northern New England Company
Time Warner Cable

MAINTENANCE OF TRAFFIC

Maintain traffic on existing bridge while replacement bridge is constructed off alignment.

PROJECT LOCATION	Staples Bridge (#1238) over the Great Works River. Located 0.15 miles east of Lebanon Road. Lat./Long. 43°19'00.5" N 70°44'38.7" W
PROGRAM AREA	Bridge
OUTLINE OF WORK	Bridge Replacement

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

	DATE
APPROVED	
COMMISSIONER:	11-18-19
CHIEF ENGINEER:	11-15-19

STATE OF MAINE ELIZABETH S. BROWNELL No. 14337 PROFESSIONAL ENGINEER

Elizabeth Brownell

SIGNATURE	
14337	
P.E. NUMBER	
10-30-2019	
DATE	

PROJECT INFORMATION	
PROGRAM	BRIDGE
PROJECT MANAGER	D. EATON
DESIGNER	JACK BURGESS
CONSULTANT	BECKER STRUCTURAL
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

WIN 022336.00

2233600

NORTH BERWICK
STAPLES BRIDGE

TITLE SHEET

SHEET NUMBER
1
OF 17

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.19	REMOVING EXISTING BRIDGE (225 CY)	1	LS
202.20	REMOVING BITUMINOUS CONCRETE PAVEMENT	146	SY
202.202	REMOVING PAVEMENT SURFACE	22	SY
203.20	COMMON EXCAVATION	1200	CY
203.21	ROCK EXCAVATION	65	CY
203.24	COMMON BORROW	185	CY
203.25	GRANULAR BORROW	250	CY
206.092	STRUCTURAL ROCK EXCAVATION - MAJOR STRUCTURES	75	CY
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	620	CY
403.209	HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (SIDEWALKS, DRIVES, ISLANDS & INCIDENTALS)	3	T
403.210	HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE	93	T
403.213	HOT MIX ASPHALT, 12.5 MM NOMINAL MAXIMUM SIZE (BASE AND INTERMEDIATE BASE COURSE)	148	T
409.15	BITUMINOUS TACK COAT - APPLIED	38	G
502.22	STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS (PLACED UNDER WATER)	85	CY
511.07	COFFERDAM - ABUTMENT NO. 1	1	LS
511.07	COFFERDAM - ABUTMENT NO. 2	1	LS
531.51	BRIDGE STRUCTURE - DETAIL BUILD	1	LS
603.16	15" CULVERT PIPE OPTION 1	44	LF
606.265	TERMINAL END - SINGLE RAIL - GALVANIZED STEEL	2	EA
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	8	EA
606.55	GUARDRAIL TYPE 3 - SINGLE RAIL	237.5	LF
606.59	GUARDRAIL TYPE 3 - 15 FT RADIUS AND LESS	25	LF
606.60	GUARDRAIL TYPE 3 - OVER 15 FT RADIUS	25	LF
606.78	LOW VOLUME GUARDRAIL END - TYPE 3	2	EA
610.08	PLAIN RIPRAP	466	CY
610.18	STONE DITCH PROTECTION	29	CY
613.319	EROSION CONTROL BLANKET	310	SY
615.07	LOAM	60	CY
618.14	SEEDING METHOD NUMBER 2	10	UN
619.12	MULCH	10	UN
619.14	EROSION CONTROL MIX	20	CY
620.58	EROSION CONTROL GEOTEXTILE	1095	SY
629.05	HAND LABOR, STRAIGHT TIME	20	HR
631.10	AIR COMPRESSOR (INCLUDING OPERATOR)	15	HR
631.11	AIR TOOL (INCLUDING OPERATOR)	15	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	20	HR
631.13	BULLDOZER (INCLUDING OPERATOR)	20	HR
631.172	TRUCK - LARGE (INCLUDING OPERATOR)	20	HR
631.18	CHAIN SAW RENTAL (INCLUDING OPERATOR)	10	HR
631.20	STUMP CHIPPER RENTAL (INCLUDING OPERATOR)	10	HR
631.22	FRONT END LOADER (INCLUDING OPERATOR)	15	HR
631.32	CULVERT CLEANER (INCLUDING OPERATOR)	5	HR
639.19	FIELD OFFICE, TYPE B	1	EA
645.292	REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGNS TYPE II	35	SF
652.312	TYPE III BARRICADES	6	EA
652.33	DRUM	20	EA
652.34	CONE	35	EA
652.35	CONSTRUCTION SIGNS	150	SF
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES (210 CD)	1	LS
652.38	FLAGGER	750	HR
652.41	PORTABLE-CHANGEABLE MESSAGE SIGN	2	EA
656.75	TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	1	LS
659.10	MOBILIZATION	1	LS

GENERAL CONSTRUCTION NOTES

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

2. All clearing shall be considered incidental to the Contract and no separate payment will be made. The actual lines for clearing shall be estabilised in the field by the Contractor as indicated on the Plans and approved by the Resident.

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

4. Except as otherwise shown, all embankment material placed below EL. 137.5 and backfill for cast in place abutments and wingwalls shall be Granular Borrow meeting the requirements of Subsection 703.19, Material for Underwater Backfill. Backfill material for GRS-IBS substructure elements shall be as indicated in Special Provisions.

5. Place riprap on sideslopes up to EL. 140.0.

6. Seeding Method No. 2 is anticipated on all disturbed slope areas.

7. Loam shall be placed to a nominal depth of 2 inches unless otherwise noted or directed.

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

9. Guardrail End Treatments shall be installed concurrently with the placement of each section of beam guardrail.

10. Two Reflectorized Flexible Guardrail Markers (Item 606.353) shall be installed at each guardrail end.

11. The Contractor shall plan and conduct their work accordingly so that upon completion of the project there is not a drop-off from the edge of shoulder pavement.

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

13. Gravel entrances shall be constructed with 14 inches of Aggregate Subbase Course - Gravel or 11 inches of Aggregate Subbase Course - Gravel and 3 inches untreated Aggregate Surface Course unless otherwise noted in the Plans or directed by the Resident.

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

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

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

17. Payment for relocating boulders identified on the plans will be considered incidental to Item 203.20, Common Excavation.

18. Sign posts and any associated breakaway devices necessary will be considered incidental to Item 645.292, Regulatory, Warning, Confirmation, and Route Marker Assembly Signs Type II.

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

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

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

21. Inspection field notes of the existing bridge may be accessed at the MaineDOT web address. The inspection notes are field measured dimensions of the existing structure. It is very unlikely that these notes will show any construction field changes or any alterations which may have been made to the bridge during its life span.

22. 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.

23. The project geotechnical report titled: Geotechnical Design Report, Staples Bridge #1238, Soils Report No. 18-0005, dated September 4, 2019, may be accessed at the MaineDOT web address.

24. 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.

25. 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.

26. The Contractor shall submit a Bridge Demolition Plan to the Resident at least 10 business days prior to the start of demolition work. The plan shall outline the methods and equipment to be used to remove and dispose of all materials included in the existing bridge. No work related to the removal of the bridge shall be undertaken by the Contractor until MaineDOT has reviewed the Bridge Demolition Plan for appropriateness and completeness. Payment for all work necessary for developing, submitting and finalizing the Demolition Plan will be considered incidental to the bridge removal pay item.

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

28. The existing bridge shall be removed in its entirety. The existing abutments shall be removed to 1 foot below streambed and the existing retaining walls shall be removed to 2 feet below finished grade. Payment for all labor, materials, equipment, and other costs related to removing and properly disposing of the existing bridge, including the stone retaining walls, will be paid under Item 202.19, Removing Existing Bridge.

29. The granite stones comprising the existing abutments shall be reused on site as slope protection, as directed by the Resident. Payment shall be considered incidental to related contract items.

30. All work shall be done in accordance with the MaineDOT's Best Management Practices for Erosion Control & Sedimentation Control, February 2008.

31. No separate payment for Superintendent or Foreman will be made for the supervision of equipment and layout of work being paid for under the equipment rental items.

32. The Contractor shall be fully responsible for designing and detailing the bridge substructure and superstructure in accordance with the requirements set forth in Special Provision 531. The details included on these plans are conceptual only.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2233600

WIN 022336.00

BRIDGE NO. 1238

BRIDGE PLANS

PROJ. MANAGER	D. EATON				
DESIGN-DETAILED	E.BROWNELL	D.BURGESS	10-25-19		
CHECKED-REVIEWED	E.BROWNELL	J.BURGESS	10-25-19	SIGNATURE	
DESIGN2-DETAILED2					P.E. NUMBER
DESIGN3-DETAILED3					
REVISIONS 1					
REVISIONS 2					
REVISIONS 3					DATE
REVISIONS 4					
FIELD CHANGES					

STAPLES BRIDGE
GREAT WORKS RIVER
NORTH BERWICK YORK COUNTY

ESTIMATED QUANTITIES & GENERAL CONSTRUCTION NOTES

SHEET NUMBER

2

OF 17

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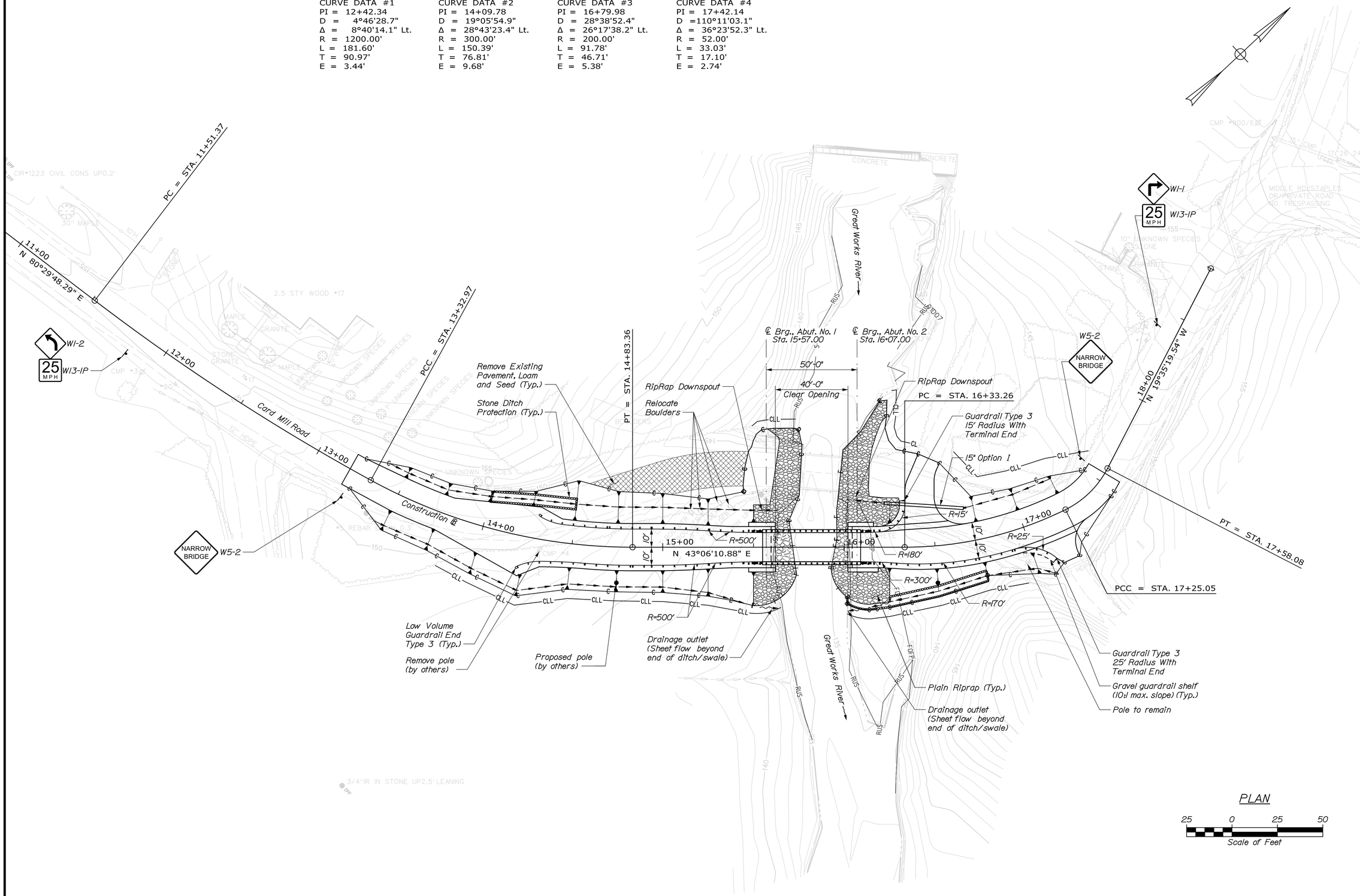
CURVE DATA #1
PI = 12+42.34
D = 4°46'28.7"
Δ = 8°40'14.1" Lt.
R = 1200.00'
L = 181.60'
T = 90.97'
E = 3.44'

CURVE DATA #2
PI = 14+09.78
D = 19°05'54.9"
Δ = 28°43'23.4" Lt.
R = 300.00'
L = 150.39'
T = 76.81'
E = 9.68'

CURVE DATA #3
PI = 16+79.98
D = 28°38'52.4"
Δ = 26°17'38.2" Lt.
R = 200.00'
L = 91.78'
T = 46.71'
E = 5.38'

CURVE DATA #4
PI = 17+42.14
D =110°11'03.1"
Δ = 36°23'52.3" Lt.
R = 52.00'
L = 33.03'
T = 17.10'
E = 2.74'



PLAN

25 0 25 50
Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2233600

WIN 022336.00

BRIDGE NO. 1238

BRIDGE PLANS

PROJ. MANAGER	D. EATON		
DESIGN-DETAILED	E.BROWNELL	D.BURGESS	10-25-19
CHECKED-REVIEWED	E.BROWNELL	J.BURGESS	10-25-19
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BY | DATE

SIGNATURE

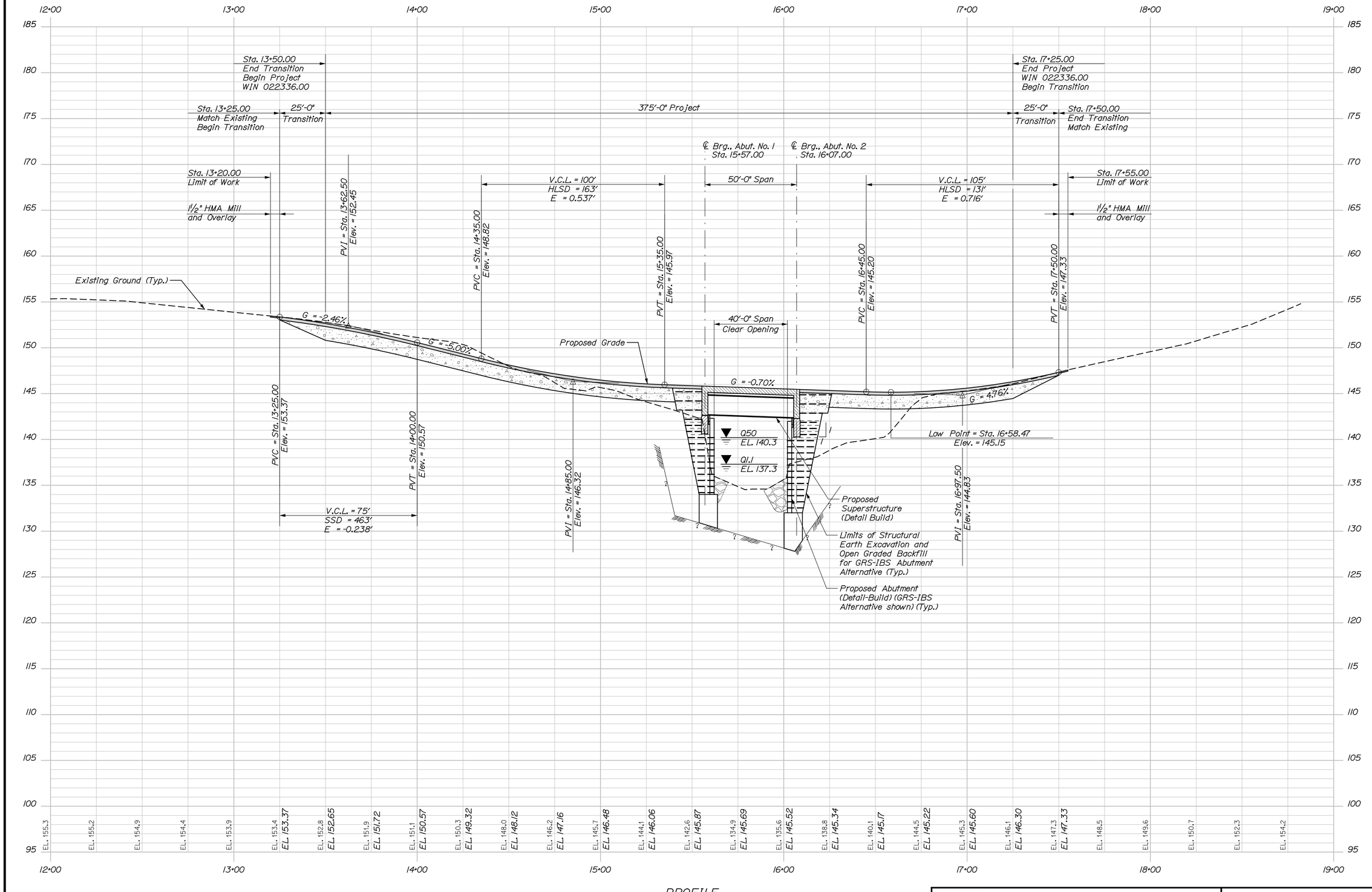
P.E. NUMBER

DATE

STAPLES BRIDGE
GREAT WORKS RIVER
NORTH BERWICK YORK COUNTY

GENERAL PLAN

SHEET NUMBER
3
OF 17



PROFILE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2233600

WIN 022336.00

BRIDGE NO. 1238

BRIDGE PLANS

PROJ. MANAGER	D. EATON		
DESIGN-DETAILED	E.BROWNELL	D.BURGESS	10-25-19
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DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

STAPLES BRIDGE
GREAT WORKS RIVER
NORTH BERWICK YORK COUNTY

PROFILE

SHEET NUMBER

4

OF 17

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RYAN M. GOSSER
STEVEN E. ZGLESZEWSKI

RYAN J. YOST
ELLEN D. GREELEY

PAMELA T. DAVIS

SARAMANDA T. TRUESDALE

GREAT WORKS
REGIONAL LAND TRUST

℄ Brg., Abut. No. 1
Sta. 15+57.00

℄ Brg., Abut. No. 2
Sta. 16+07.00

50'-0"

Remove Existing Pavement, Loam and Seed (Typ.)

Stone Ditch Protection (Typ.)

Rip Rap Downspout

Relocate Boulders

Construction ℄

Great Works River

Plain Riprap (Typ.)

See Inset - Right

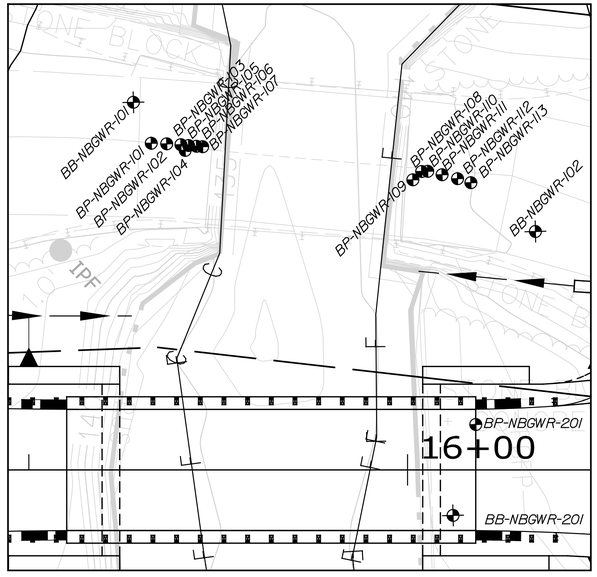
BB-NBGWR-101
BB-NBGWR-102
HB-NBGWR-205
HB-NBGWR-204
HB-NBGWR-203
BB-NBGWR-202
BP-NBGWR-202
BP-NBGWR-201
HB-NBGWR-201
HB-NBGWR-202
BB-NBGWR-201

13+00
14+00
15+00
16+00
17+00
18+00

CLL

PLAN

25 0 25 50
Scale of Feet



INSET

SCALE: 1" = 10'

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

LEGEND

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

No Refusal
Refusal
Cased Wash Boring
Power Auger Probe

PROFILE

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

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2233600

WIN 022336.00

BRIDGE NO. 1238

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. EATON	
DESIGN-DETAILED	E.BROWNELL	D.BURGESS 10-25-19
CHECKED-REVIEWED	E.BROWNELL	J.BURGESS 10-25-19
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

STAPLES BRIDGE
GREAT WORKS RIVER
NORTH BERWICK YORK COUNTY

BORING LOCATION PLAN & INTERPRETIVE SUBSURFACE PROFILE

SHEET NUMBER

5

OF 17

Filename: ...\00\BRIDGE\MSTA\005_BLP&ISP.dgn Username: common Division: BRIDGE Date:10/29/2019

Exploration No.	Location	Station / Offset	Refusal Depth (feet)	Refusal Elevation (feet)
BP-NBGWR-101	Existing South Abutment	Sta. 15+66.2, 43.1 ft Lt.	12.7	132.3
BP-NBGWR-102	Existing South Abutment	Sta. 15+68.2, 43.1 ft Lt.	7.5	137.5
BP-NBGWR-103	Existing South Abutment	Sta. 15+70.1, 42.9 ft Lt.	8.5	136.5
BP-NBGWR-104	Existing South Abutment	Sta. 15+70.6, 42.2 ft Lt.	3.5	141.5
BP-NBGWR-105	Existing South Abutment	Sta. 15+71.2, 42.9 ft Lt.	3.1	141.9
BP-NBGWR-106	Existing South Abutment	Sta. 15+72.1, 42.7 ft Lt.	3.8	141.2
BP-NBGWR-107	Existing South Abutment	Sta. 15+72.9, 42.7 ft Lt.	0.8	144.2
BP-NBGWR-108	Existing North Abutment	Sta. 16+1.9, 39.4 ft Lt.	4.2	140.8
BP-NBGWR-109	Existing North Abutment	Sta. 16+0.7, 38.3 ft Lt.	6.5	138.5
BP-NBGWR-110	Existing North Abutment	Sta. 16+2.7, 39.4 ft Lt.	7.3	137.7
BP-NBGWR-111	Existing North Abutment	Sta. 16+4.6, 39.0 ft Lt.	7.5	137.5
BP-NBGWR-112	Existing North Abutment	Sta. 16+6.6, 38.5 ft Lt.	8.5	136.5
BP-NBGWR-113	Existing North Abutment	Sta. 16+8.4, 37.9 ft Lt.	8.5	136.5
BP-NBGWR-201	Abutment No. 2	Sta. 16+6.0, 6.0 ft Rt.	10.3	127.0
BP-NBGWR-202	Abutment No. 1	Sta. 15+41.0, 13.5 ft Rt.	3.3	146.1

Probe BP-NBGWR-202 encountered what was interpreted to be a cobble or boulder at a depth of 3.3 feet bgs.

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Staples Bridge #1238 carries Card Mill Road over Great Works River
Location: North Berwick, Maine

Boring No.: BB-NBGWR-101
WIN: 022336

Driller: S. W. Cole Explorations, LLC	Elevation (ft.): 145.6 ft	Auger ID/OD:	HSA 2.25"/4.25"
Operator: J. Lee	Datum: NAVD88	Sampler:	Standard Split-Spoon
Logged By: E. Baron	Rig Type: Mobile D53	Hammer Wt./Fall:	140 lbs/30"
Date Start/Finish: 10-29-2018	Drilling Method: Cased Wash	Core Barrel:	NQ2 (2")
Boring Location: Sta. 15+63.8 ft, 48.5 ft Lt	Casing ID/OD: HW 4"/4.5"	Water Level *:	39.0 ft. (after drilling)
Hammer Efficiency Factor: 0.6	Hammer Type: Automatic ☐ Hydraulic ☐		Rope & Cathead ☒

Definition:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
WU = Unsuccessful Thin Wall Tube Sample Attempt
V = Field Vane Shear Test, PP = Pocket Penetrometer
WV = Unsuccessful Field Vane Shear Test Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WOP = Weight of One Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(rem)}$ = 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/60(Hi-uncorrected
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	%Q	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0	1D	24/10	0.50 - 2.50	10/19/9/7	20	20	HSA	145.3		4" of Pavement (0.3)	
										Brown, damp, medium dense, SAND, some gravel, little silt, (Fill).	
	2D	24/12	2.50 - 4.50	7/15/3/2	18	18				Similar to above.	
5	3D	17/2	5.00 - 6.42	27/6/50-5"	- -			140.6		(5.0)	
							OPEN	139.2		Dark brown mottled grey, moist, medium dense, SAND, some silt, little gravel, trace clay, trace organics, fine to medium sand. (6.4)	
										Numerous cobbles and boulders from 6.4 to 9.3 ft bgs.	
10	4D	3/3	9.50 - 9.75	50-3"	- -					Brown, wet, dense, SAND, some silt, some gravel, (Marine Sand).	
	R1	24/21	10.50 - 12.50	RQD = 67%			NQ2	135.3		Top of Bedrock at Elev. 135.3 ft. (10.3) Advanced by rollercone from 10.3 to 10.5 feet bgs. R1Bedrock: Grey, fine-grained, quartz-biotite GRANOFELS with quartzite veins, hard, fresh, joints are low angle to moderate dipping (5-55 degrees), very close to close and tight to open, (Berwick Formation). Rock Mass Quality = Fair. R1Core Times (minsec) 10.5-11.5 ft (3:50) 11.5-12.5 ft (7:00) 87% Recovery R2Bedrock: Similar to R1 except joints are low angle to seefood. Rock Mass Quality = Poor. R2Core Times (minsec) 12.5-13.5 ft (3:45) 13.5-14.5 ft (4:50) 100% Recovery. R3Bedrock: Similar to R1 except joints are low angle and close to wide. Rock Mass Quality = Good. R3Core Times (minsec) 14.5-15.5 ft (3:45) 15.5-16.5 ft (4:15) 16.5-17.5 ft (3:30) 17.5-18.5 ft (3:30) 18.5-19.5 ft (3:15) 100% Recovery. R4Bedrock: Similar to R3 except no joints. Rock Mass Quality = Excellent. R4Core Times (minsec) 19.5-20.5 ft (3:30) 100% Recovery.	
15	R2	21/21	12.50 - 14.25	RQD = 33%							
	R3	60/60	14.50 - 19.50	RQD = 90%							
20	R4	14/14	19.50 - 20.47	RQD = 100%				125.1		Bottom of Exploration at 20.5 feet below ground surface. (20.5)	
25											

Remarks:
bgs = below ground surface

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

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Page 1 of ??
Boring No.: BB-NBGWR-101

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Staples Bridge #1238 carries Card Mill Road over Great Works River
Location: North Berwick, Maine

Boring No.: BB-NBGWR-102
WIN: 022336

Driller: S. W. Cole Explorations, LLC	Elevation (ft.): 144.9 ft	Auger ID/OD:	5" Solid Stem Auger
Operator: J. Lee	Datum: NAVD88	Sampler:	Standard Split-Spoon
Logged By: E. Baron	Rig Type: Mobile D53	Hammer Wt./Fall:	140 lbs/30"
Date Start/Finish: 05-30-2018	Drilling Method: Cased Wash	Core Barrel:	NQ2 (2")
Boring Location: Sta 16+16.9 ft; 34.5 ft Lt	Casing ID/OD: HW 4"/4.5"	Water Level *:	28 Feet (during drilling)
Hammer Efficiency Factor: 0.6	Hammer Type: Automatic ☐ Hydraulic ☐		Rope & Cathead ☒

Definition:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
WU = Unsuccessful Thin Wall Tube Sample Attempt
V = Field Vane Shear Test, PP = Pocket Penetrometer
WV = Unsuccessful Field Vane Shear Test Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WOP = Weight of One Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(rem)}$ = 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/60(Hi-uncorrected
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	%Q	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0	1D	24/7	0.50 - 2.50	12/16/12/8	28	28	SSA	144.6		4" of Pavement (0.3)	
										Grey, damp, medium dense, Sandy GRAVEL, some silt, (Fill).	
	2D	24/6	2.50 - 4.50	10/12/9/16	21	21				Brown, damp, medium dense, Gravelly SAND, little silt, (Fill).	
5	3D	23/4	5.00 - 6.92	4/9/9/50-5"	18	18		139.9		(5.0)	
										Brown, moist, medium dense, SAND, some gravel, little silt, (Marine Sand).	
	4D	21/6	8.00 - 9.75	7/17/13/50-3"	30	30				Brown, wet, dense, Gravelly SAND, little silt, (Marine Sand).	
10	R1	72/59	10.00 - 16.00				NQ2			Advanced by rock core through cobbles from 10 to 11.3 feet bgs.	
				RQD = 41%				132.6		Top of Bedrock at Elev. 132.6 ft. (12.3) R1Bedrock: Grey, fine-grained, quartz-biotite GRANOFELS with calcite-quartzite veins, hard, fresh, joints are low angle to stee (5-85 degrees), very close to close and tight to open with silt infilling in steep joint, (Berwick Formation). Rock Mass Quality = Poor. R1Core Times (minsec) 12.3-13.0 ft (2:45) 13.0-14.0 ft (3:00) 14.0-15.0 ft (2:45) 15.0-16.0 ft (2:30) 82% Recovery. R2Bedrock: Similar to R1 except joints are low angle. Rock Mass Quality = Poor. R2Core Times (minsec) 16.0-17.0 ft (2:45) 17.0-18.0 ft (2:45) 18.0-19.0 ft (3:00) 19.0-20.0 ft (2:45) 20.0-21.0 ft (2:30) 78% Recovery.	
15	R2	60/47	16.00 - 21.00	RQD = 40%							
20								123.9		Bottom of Exploration at 21.0 feet below ground surface. (21.0)	
25											

Remarks:
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Page 1 of ??
Boring No.: BB-NBGWR-102

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Staples Bridge #1238 carries Card Mill Road over Great Works River
Location: North Berwick, Maine

Boring No.: BB-NBGWR-201
WIN: 022336

Driller: S. W. Cole Explorations, LLC	Elevation (ft.): 137.3	Auger ID/OD:	2.25"/4.5 inch Hollow Stem Auger
Operator: S. Shaw	Datum: NAVD88	Sampler:	Standard Split-Spoon
Logged By: A. Santiago	Rig Type: Diedrich D-50	Hammer Wt./Fall:	140 lbs/30"
Date Start/Finish: 5/20/2019	Drilling Method: Cased Wash	Core Barrel:	NQ2 (2")
Boring Location: Sta. 16+06.0, 6.0 ft Rt	Casing ID/OD: HW 4"/4.5"	Water Level *:	1.0 ft (during drill)
Hammer Efficiency Factor: 0.60	Hammer Type: Automatic ☐ Hydraulic ☐		Rope & Cathead ☐

Definition:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample Attempt
WU = Unsuccessful Thin Wall Tube Sample Attempt
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WV = Unsuccessful Field Vane Shear Test Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WOP = Weight of One Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(rem)}$ = 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/60(Hi-uncorrected
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	%Q	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0	1D	24/14	0.00 - 2.00	1/1/1/2	2	2	HSA	136.6		Forest Duff over dark brown, moist to wet, very loose, Sandy SILT, little gravel, with organics (rootlets), (Topsoil). (0.7)	
										Brown, moist to wet, very loose, SAND, some silt, little gravel. Red-brown mottling from 0.8 to 1.2 feet bgs.	
5	2D	24/14	4.00 - 6.00	43/14/21/25	35	35				Brown, wet, dense, Sandy Gravel, trace silt, with cobbles, (Marine Sand).	O*337285 A-1-a, GW-GM WC=12.2%
										Frequent cobbles below 7 feet bgs	
10	R1	60/24	9.50 - 14.50	RQD = 7%			NQ2	128.1		Top of Bedrock at Elev. 128.1 ft. (9.2) Advanced by roller cone from 9.2 to 9.5 feet bgs to seat casing. R1Bedrock: Grey, fine-grained, quartz biotite GRANOFELS with quartzite veins, trace pyrite, hard, fresh, joints are moderate dipping (35-55 degrees), very close to close and open to healed with quartzite, (Berwick Formation). Rock Mass Quality = Very Poor. R1Core Times (minsec) 9.5-10.5 ft (1:20) 10.5-11.5 ft (4:20) 11.5-12.5 ft (4:40) 12.5-13.5 ft (3:30) 13.5-14.5 ft (9:50) 40% Recovery. R2Bedrock: Similar to R1 except joints are low to moderate dipping (5 to 55 degrees). Rock Mass Quality = Very Poor. R2Core Times (minsec) 14.5-15.5 ft (3:15) 15.5-16.5 ft (2:15) 16.5-17.5 ft (2:18) 17.5-18.5 ft (3:24) 18.5-19.5 ft (9:58) 82% Recovery.	
15	R2	60/49	14.50 - 19.50	RQD = 16%							
20								117.8		Bottom of Exploration at 19.5 feet below ground surface. (19.5)	
25											

Remarks:
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Page 1 of ??
Boring No.: BB-NBGWR-201

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Staples Bridge #1238 carries Card Mill Road over Great Works River
Location: North Berwick, Maine

Boring No.: BB-NBGWR-202
WIN: 022336

Driller: S. W. Cole Explorations, LLC	Elevation (ft.): 143.4	Auger ID/OD:	2.25"/4.5 inch Hollow Stem Auger
Operator: S. Shaw	Datum: NAVD88	Sampler:	Standard Split-Spoon
Logged By: A. Santiago	Rig Type: Diedrich D-50	Hammer Wt./Fall:	140 lbs/30"
Date Start/Finish: 5/21/2019	Drilling Method: Cased Wash	Core Barrel:	NQ2 (2")
Boring Location: Sta. 15+40.6, 9.3 ft Lt	Casing ID/OD: HW 4"/4.5"	Water Level *:	1.0 ft (during drill)
Hammer Efficiency Factor: 0.60	Hammer Type: Automatic ☐ Hydraulic ☐		Rope & Cathead ☒

Definition:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
WU = Unsuccessful Thin Wall Tube Sample Attempt
V = Field Vane Shear Test, PP = Pocket Penetrometer
WV = Unsuccessful Field Vane Shear Test Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WOP = Weight of One Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(rem)}$ = 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/60(Hi-uncorrected
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	%Q	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0	1D	24/14	0.00 - 2.00	1/1/2/8	3	3	HSA	142.6		Forest duff over dark brown, moist to damp, very loose, Sandy SILT, little gravel, with organics (rootlets), (Topsoil). (0.8)	
										Red-brown, damp, loose, SAND, little silt, trace gravel, (Marine Sand).	
								139.9		(3.5)	
5	2D	24/6	5.00 - 7.00	7/15/16/20	31	31				Brown with orange staining, wet, dense, Sandy GRAVEL, little silt, (Marine Sand).	
										Frequent cobbles below 7.5 feet bgs.	
10	3D	20/12	10.00 - 11.67	14/20/29/50-2"	49	49	RC			Similar to above except very dense.	
	R1	60/48	11.70 - 16.70	RQD = 66%			NQ2	131.7		Top of Bedrock at Elev. 131.7 ft. (11.7) R1Bedrock: Grey, fine-grained, quartz biotite GRANOFELS with quartzite veins hard, fresh, joints are moderate dipping to steep (35-85 degrees), very close to moderate close and tight to open, (Berwick Formation). Rock Mass Quality = Fair. R1Core Times (minsec) 11.7-12.7 ft (4:15) 12.7-13.7 ft (3:55) 13.7-14.7 ft (4:30) 14.7-15.7 ft (4:20) 15.7-16.7 ft (3:20) 80% Recovery. R2Bedrock: Similar to R1. Rock Mass Quality = Good. R2Core Times (minsec) 16.7-17.7 ft (5:18) 17.7-18.7 ft (5:50) 18.7-19.7 ft (6:48) 19.7-20.7 ft (2:52) 20.7-21.7 ft (9:58) 98% Recovery.	
15	R2	60/59	16.70 - 21.70	RQD = 76%							
20								121.7		Bottom of Exploration at 21.7 feet below ground surface. (21.7)	
25											

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Page 1 of ??
Boring No.: BB-NBGWR-202

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2233600

WIN 022336.00

BRIDGE PLANS

BRIDGE NO. 1238

	BY	DATE
D. EATON		
E.BROWNELL	D.BURGESS	10-25-19
E.BROWNELL	J.BURGESS	10-25-19

SIGNATURE

P.E. NUMBER

DATE

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

STAPLES BRIDGE
GREAT WORKS RIVER
NORTH BERWICK YORK COUNTY

BORING LOGS
1 OF 2

SHEET NUMBER
6
OF 17

Filename: ...\MSTA\006_BoringLogs_001.dgn Division: BRIDGE Username: common Date:10/29/2019

Filename: ...\MSTA\007_BoringLogs_002.dgn Division: BRIDGE Username: common Date:10/29/2019

Maine Department of Transportation — HB-NBGWR-201

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Staples Bridge #1238 carries Card Mill Road over Great Works River
Location: North Berwick, Maine

Boring No.: HB-NBGWR-201
WIN: 022336

Driller: S. W. Cole Explorations, LLC	Elevation (ft.) 144.5	Auger ID/OD:	2.25/4.5 inch Hollow Stem Auger
Operator: S. Shaw	Datum: NAVD88	Sampler:	Standard Split-Spoon
Logged By: A. Santiago	Rig Type: Diedrich D-50	Hammer Wt./Fall:	140 lbs/30"
Date Start/Finish: 5/20/2019	Drilling Method: Hollow Stem Auger	Core Barrel:	N/A
Boring Location: Sta. 16+70.8, 3.1 ft Lt	Casing ID/OD: N/A	Water Level *:	Not observed
Hammer Efficiency Factor: 0.60	Hammer Type: Automatic ☐ Hydraulic ☐ Rope & Cathead ☒		

Definitions
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
WU = Unsuccessful Thin Wall Tube Sample Attempt
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MV = Unsuccessful Field Vane Shear Test Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WOP = Weight of One Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(LAB)}$ = Lab Vane Undrained Shear Strength (psf)
q_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/60(CHE-uncorrected
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Spoon Sheer Strength 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	24/16	0.00 - 2.00	10/9/8/4	15	15	HSA	144.0		Dark brown, damp, medium dense, SAND, some gravel, little silt, with organics (rootlets) and asphalt fragments, (FILL).	
										0.5	
5								140.0		Brown, moist, medium dense, Gravelly SAND, little silt, (Marine Sand).	
										4.5	
10										Bottom of Exploration at 4.5 feet below ground surface. Auger refusal.	
15											
20											
25											

Remarks:
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Page 1 of ??
Boring No.: HB-NBGWR-201

Maine Department of Transportation — HB-NBGWR-202

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Staples Bridge #1238 carries Card Mill Road over Great Works River
Location: North Berwick, Maine

Boring No.: HB-NBGWR-202
WIN: 022336

Driller: S. W. Cole Explorations, LLC	Elevation (ft.) 138.9	Auger ID/OD:	2.25/4.5 inch Hollow Stem Auger
Operator: S. Shaw	Datum: NAVD88	Sampler:	Standard Split-Spoon
Logged By: A. Santiago	Rig Type: Diedrich D-50	Hammer Wt./Fall:	140 lbs/30"
Date Start/Finish: 5/20/2019	Drilling Method: Hollow Stem Auger	Core Barrel:	N/A
Boring Location: Sta. 16+30.9, 7.9 ft Rt	Casing ID/OD: N/A	Water Level *:	Not observed
Hammer Efficiency Factor: 0.60	Hammer Type: Automatic ☐ Hydraulic ☐ Rope & Cathead ☒		

Definitions / Abbreviations: same as HB-NBGWR-201

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Spoon Sheer Strength 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	24/0	0.00 - 2.00	1/1/1/1	2	2	HSA	138.7		Forest duff over topsoil.	
										0.2	
										From auger cutting. Brown, moist to wet, Sandy SILT, little gravel, (Marine Sand).	
5								134.9		Cobble at 3 feet bgs.	
										4.0	
10										Bottom of Exploration at 4.0 feet below ground surface. Auger refusal.	
15											
20											
25											

Remarks:
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Page 1 of ??
Boring No.: HB-NBGWR-202

Maine Department of Transportation — HB-NBGWR-203

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Staples Bridge #1238 carries Card Mill Road over Great Works River
Location: North Berwick, Maine

Boring No.: HB-NBGWR-203
WIN: 022336

Driller: S. W. Cole Explorations, LLC	Elevation (ft.) 143.7	Auger ID/OD:	2.25/4.5 inch Hollow Stem Auger
Operator: S. Shaw	Datum: NAVD88	Sampler:	Standard Split-Spoon
Logged By: A. Santiago	Rig Type: Diedrich D-50	Hammer Wt./Fall:	140 lbs/30"
Date Start/Finish: 5/21/2019	Drilling Method: Hollow Stem Auger	Core Barrel:	N/A
Boring Location: Sta. 15+32.0, 0.0 ft	Casing ID/OD: N/A	Water Level *:	Not observed
Hammer Efficiency Factor: 0.60	Hammer Type: Automatic ☐ Hydraulic ☐ Rope & Cathead ☒		

Definitions / Abbreviations: same as HB-NBGWR-201

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Spoon Sheer Strength 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	24/14	0.00 - 2.00	1/1/2/3	3	3	HSA	143.4		Forest Duff over dark brown, moist, loose, Sandy SILT, trace gravel, with organics (rootlets), (Topsoil).	
										0.3	
										Brown, damp, loose, Sandy SILT, little gravel.	
	2D	5/4	2.00 - 2.42	50-4"	-	-		141.7		2.0	
5										Grey with red mottling, moist, very dense, Silty SAND, some gravel, (Marine Sand). Cobble at 2.4 feet bgs.	
								139.2		4.5	
10										Bottom of Exploration at 4.5 feet below ground surface. Auger refusal.	
15											
20											
25											

Remarks:
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Page 1 of ??
Boring No.: HB-NBGWR-203

Maine Department of Transportation — HB-NBGWR-204

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Staples Bridge #1238 carries Card Mill Road over Great Works River
Location: North Berwick, Maine

Boring No.: HB-NBGWR-204
WIN: 022336

Driller: S. W. Cole Explorations, LLC	Elevation (ft.) 145.5	Auger ID/OD:	2.25/4.5 inch Hollow Stem Auger
Operator: S. Shaw	Datum: NAVD88	Sampler:	Standard Split-Spoon
Logged By: A. Santiago	Rig Type: Diedrich D-50	Hammer Wt./Fall:	140 lbs/30"
Date Start/Finish: 5/21/2019	Drilling Method: Hollow Stem Auger	Core Barrel:	N/A
Boring Location: Sta. 14+65.0, 0.0 ft	Casing ID/OD: N/A	Water Level *:	Not observed
Hammer Efficiency Factor: 0.60	Hammer Type: Automatic ☐ Hydraulic ☐ Rope & Cathead ☒		

Definitions / Abbreviations: same as HB-NBGWR-201

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Spoon Sheer Strength 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	24/6	0.00 - 2.00	1/1/3/9	4	4	HSA	144.9		Forest Duff over dark brown, moist, loose, SILT, some sand, little gravel, with organics (rootlets), (Topsoil).	
										0.6	
	2D	24/18	2.00 - 4.00	14/17/14/11	31	31				Brown with orange staining, damp to moist, dense, Sandy SILT, some gravel, (Marine SAND).	G#337284 A-4, CL WC=13.0%
5	3D	21/6	5.00 - 6.75	9/12/45/50-1"	57	57		138.9		Brown, wet, very dense, Silty SAND, some gravel, (Marine Sand).	
										6.6	
10										Bottom of Exploration at 6.6 feet below ground surface. Sampler Refusal.	
15											
20											
25											

Remarks:
bgs = below ground surface

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 ??
Boring No.: HB-NBGWR-204

Maine Department of Transportation — HB-NBGWR-205

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Staples Bridge #1238 carries Card Mill Road over Great Works River
Location: North Berwick, Maine

Boring No.: HB-NBGWR-205
WIN: 022336

Driller: S. W. Cole Explorations, LLC	Elevation (ft.) 149.5	Auger ID/OD:	2.25/4.5 inch Hollow Stem Auger
Operator: S. Shaw	Datum: NAVD88	Sampler:	Standard Split-Spoon
Logged By: A. Santiago	Rig Type: Diedrich D-50	Hammer Wt./Fall:	140 lbs/30"
Date Start/Finish: 5/21/2019	Drilling Method: Hollow Stem Auger	Core Barrel:	N/A
Boring Location: Sta. 14+40.9, 5.4 ft Lt	Casing ID/OD: N/A	Water Level *:	Not observed
Hammer Efficiency Factor: 0.60	Hammer Type: Automatic ☐ Hydraulic ☐ Rope & Cathead ☒		

Definitions / Abbreviations: same as HB-NBGWR-201

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Spoon Sheer Strength 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	24/10	0.00 - 2.00	4/4/3/8	7	7	HSA			Brown, damp, loose, SAND, some gravel, little silt, with organics (wood fiber), (FILL).	
	2D	24/8	2.00 - 4.00	8/12/16/12	28	28		147.0		Similar to above except medium dense. 2.5	
5	3D	24/12	5.00 - 7.00	15/16/17/18	33	33				2D(3) Brown, moist, medium dense, Sandy SILT, little gravel, (Marine Sand). Similar to above except dense.	
								140.3		9.2	
10										Bottom of Exploration at 9.2 feet below ground surface. Auger Refusal.	
15											
20											
25											

Remarks:
bgs = below ground surface

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 ??
Boring No.: HB-NBGWR-205

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2233600

WIN 022336.00

BRIDGE NO. 1238

BRIDGE PLANS

PROJ. MANAGER	D. EATON		
DESIGN-DETAILED	E.BROWNELL	D.BURGESS	10-25-19
CHECKED-REVIEWED	E.BROWNELL	J.BURGESS	10-25-19
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

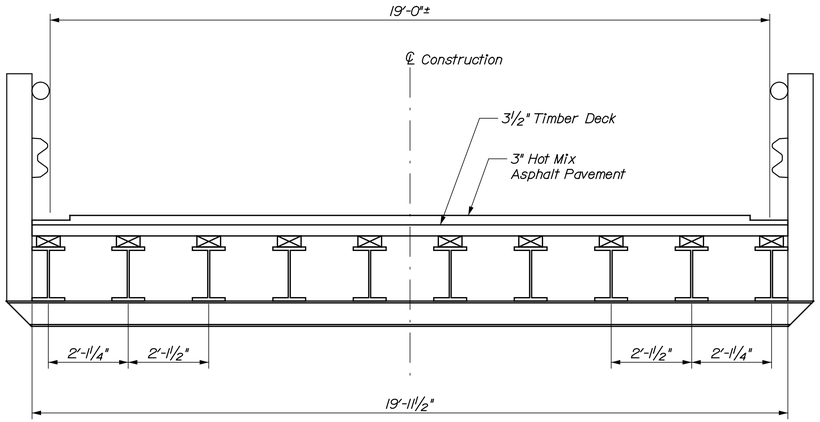
P.E. NUMBER

DATE

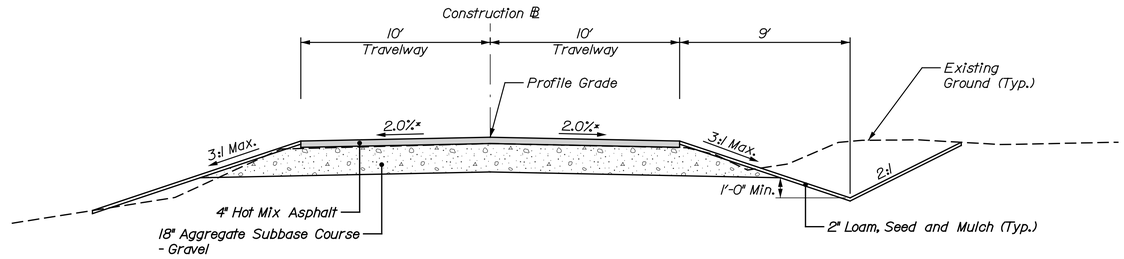
STAPLES BRIDGE
GREAT WORKS RIVER
NORTH BERWICK YORK COUNTY

BORING LOGS
2 OF 2

SHEET NUMBER
7
OF 17



EXISTING BRIDGE SECTION



* See Cross Slope Table

CARD MILL ROAD
FULL DEPTH RECONSTRUCTION
Sta. 13+50 to Sta. 14+23
Sta. 17+11 to Sta. 17+25

* See Cross Slope Table

CARD MILL ROAD
FULL DEPTH RECONSTRUCATION
WITH GUARDRAIL
Sta. 14+31 to Sta. 16+33

CARD MILL ROAD CROSS SLOPE TABLE		
LEFT TRAVELWAY	STATION	RIGHT TRAVELWAY
MATCH EXISTING		MATCH EXISTING
2.6%	13+25	-3.4%
2.0%	13+50	-3.0%
1.0%	13+75	-2.0%
0.0%	14+00	-2.0%
-1.0%	14+25	-2.0%
-2.0%	14+50	-2.0%
	to	
-2.0%	17+25	-2.0%
-2.3%	17+50	-1.7%
MATCH EXISTING		MATCH EXISTING

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2233600

WIN 022336.00

BRIDGE NO. 1238

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	D. EATON	
DESIGN-DETAILED	E.BROWNELL	D.BURGESS 10-25-19
CHECKED-REVIEWED	E.BROWNELL	J.BURGESS 10-25-19
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

STAPLES BRIDGE
GREAT WORKS RIVER
NORTH BERWICK YORK COUNTY

TYPICAL SECTIONS

SHEET NUMBER

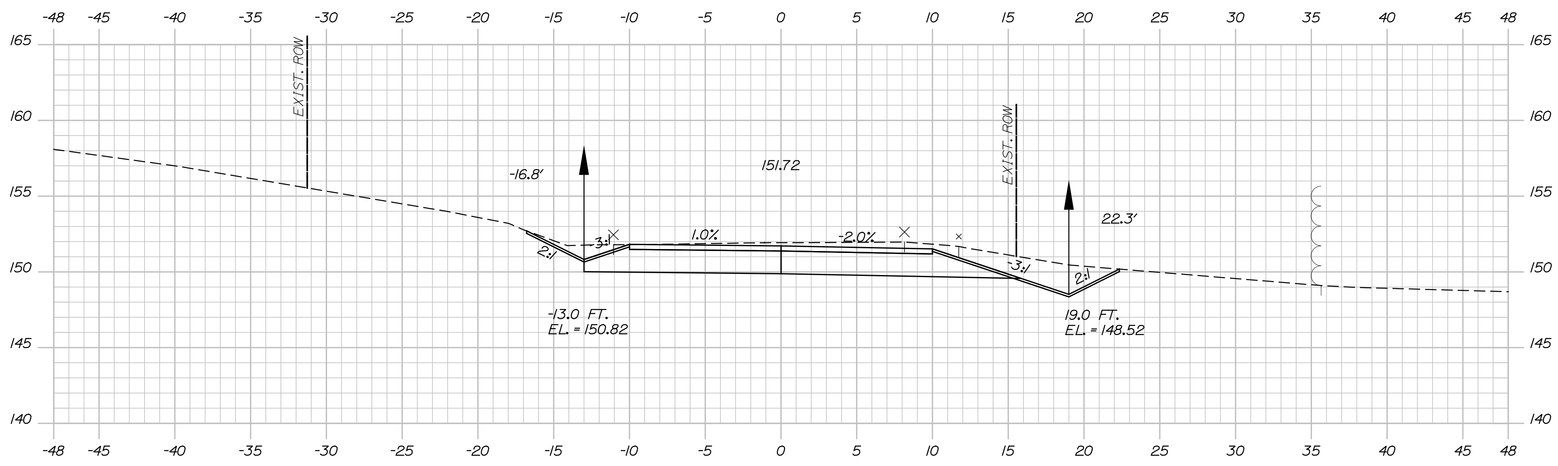
8

OF 17

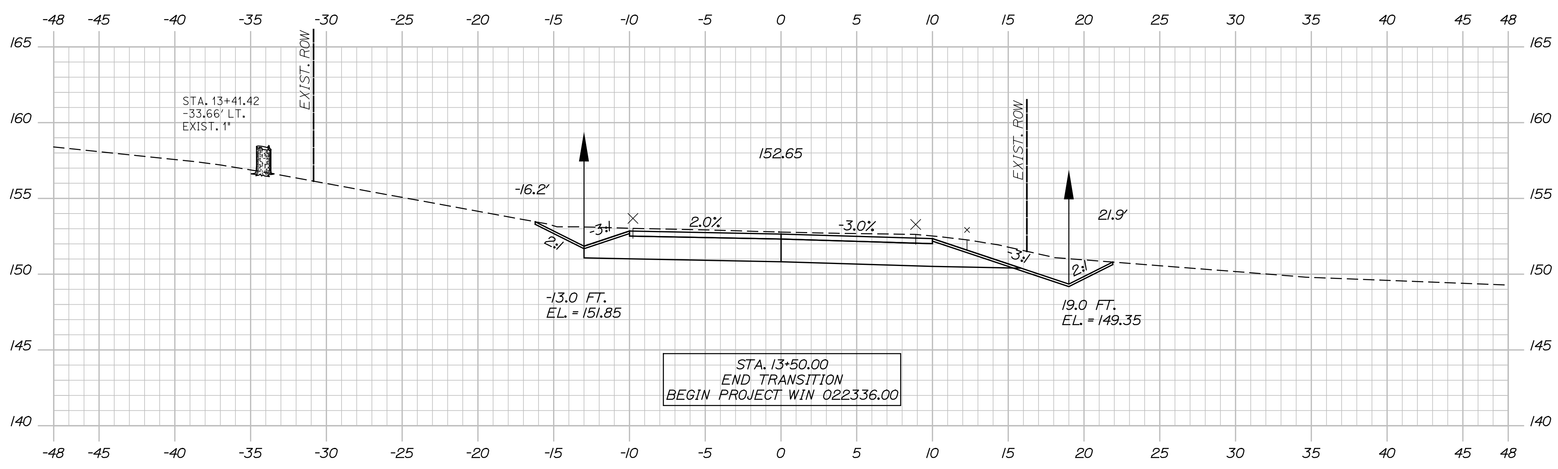
GORRILL PALMER

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

Filename: ...\MSTA\008_Btypical_01.dgn Division: BRIDGE Username: common Date:10/29/2019



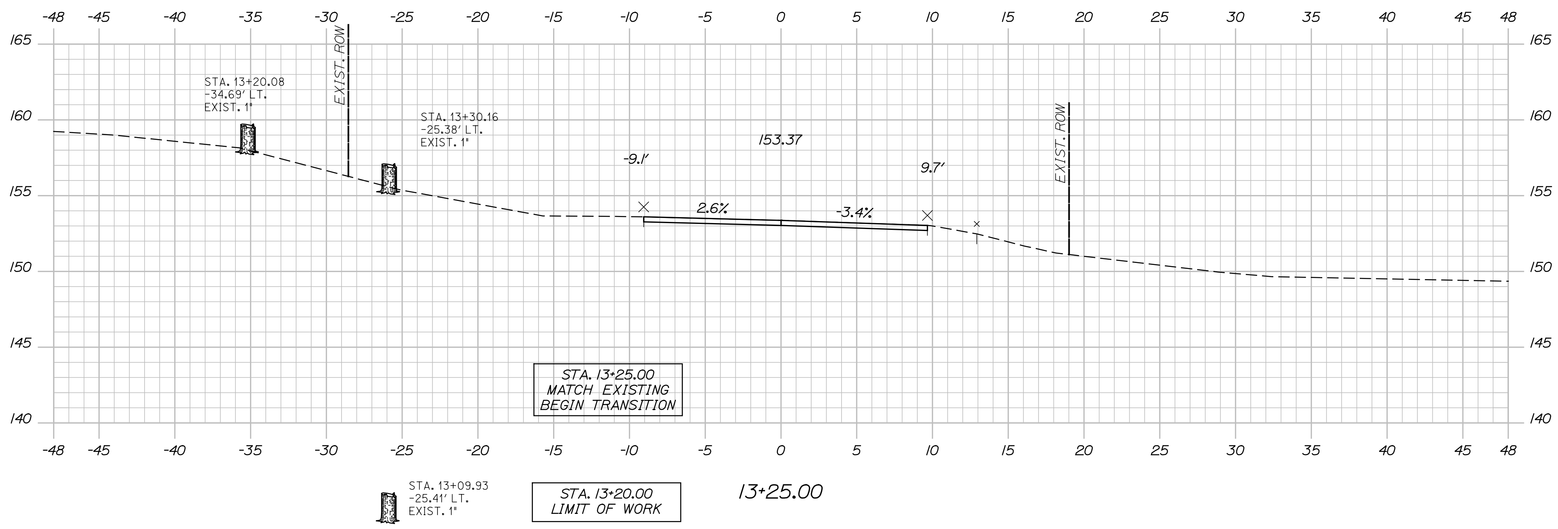
13+75.00



Sta. 13+38 to Sta. 14+00, Lt.
Install Erosion Control Blanket

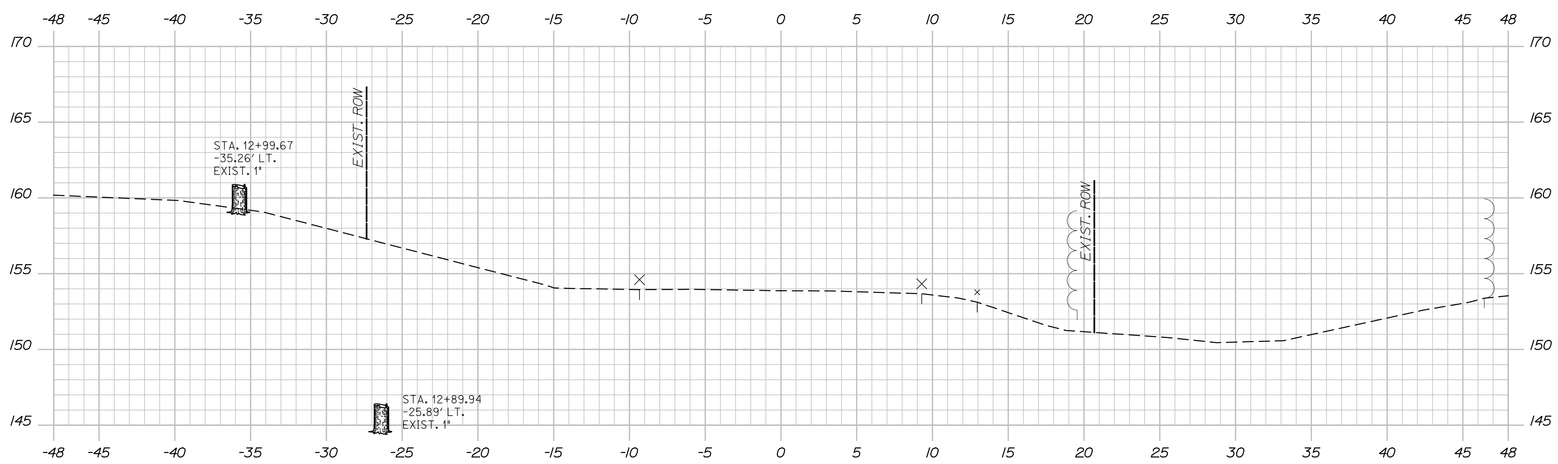
13+50.00

Sta. 13+45 to Sta. 15+47, Rt.
Install Erosion Control Blanket



STA. 13+20.00
LIMIT OF WORK

13+25.00



13+00.00

Sta. 13+00.00 to Sta. 13+75.00

SHEET NUMBER 9 OF 17

STAPLES BRIDGE
GREAT WORKS RIVER
NORTH BERWICK YORK COUNTY

CROSS SECTIONS

PROJ. MANAGER	D. EATON	BY	DATE
DESIGN-DETAILED	B.HAVU	M.CUNDIFF	10-25-19
CHECKED-REVIEWED	B.HAVU		10-25-19
DESIGN2-DETAILED2	_	_	_
DESIGN3-DETAILED3	_	_	_
REVISIONS 1	_		_
REVISIONS 2	_		_
REVISIONS 3	_		_
REVISIONS 4	_		_
FIELD CHANGES	_		_

SIGNATURE

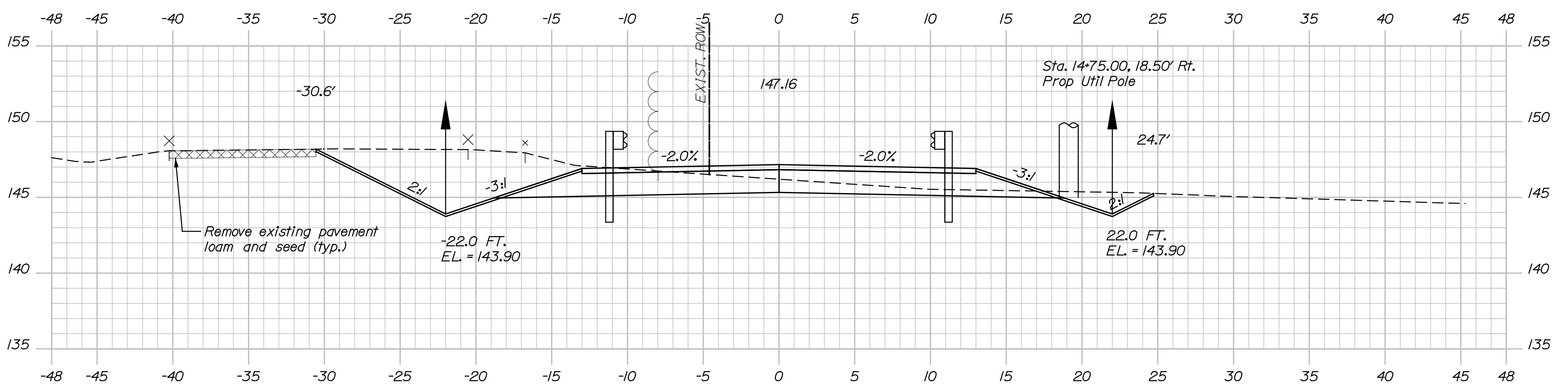
P.E. NUMBER

DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02233600

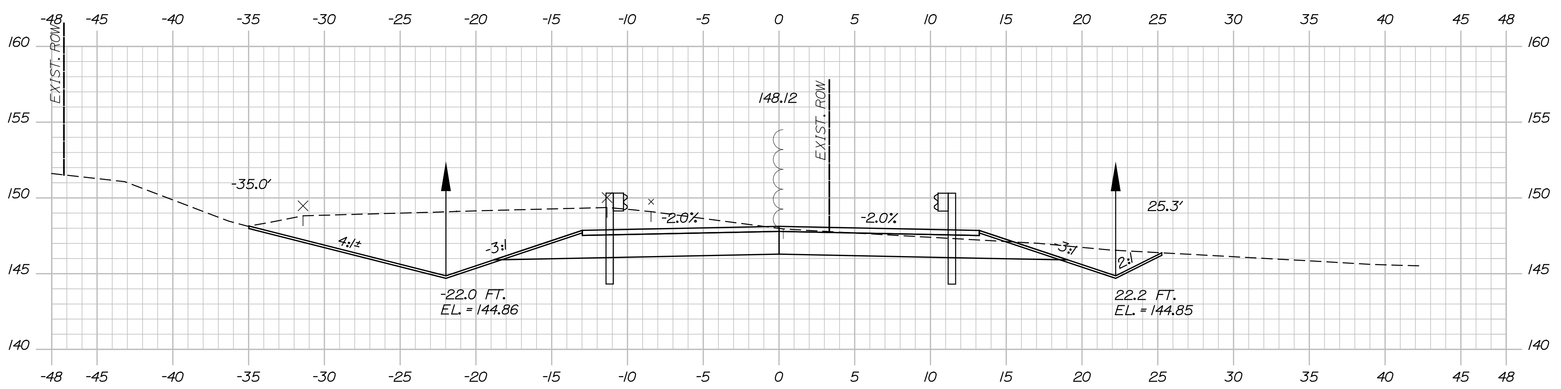
BRIDGE NO. 1238 WIN 022336.00 BRIDGE PLANS



Sta. 14+69.07 to Sta. 15+44.50, Lt.
Install 75.00' Guardrail Type 3, Single Rail

14+75.00

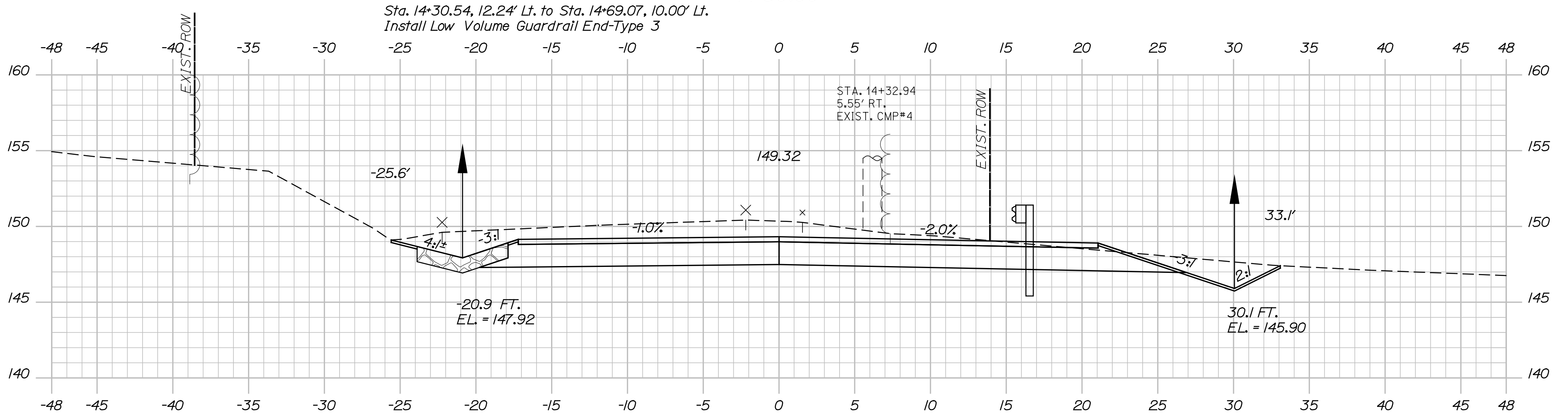
Sta. 14+57.89 to Sta. 15+44.50, Rt.
Install 87.50' Guardrail Type 3, Single Rail



Sta. 14+50 to Sta. 15+47, Lt.
Install Erosion Control Blanket

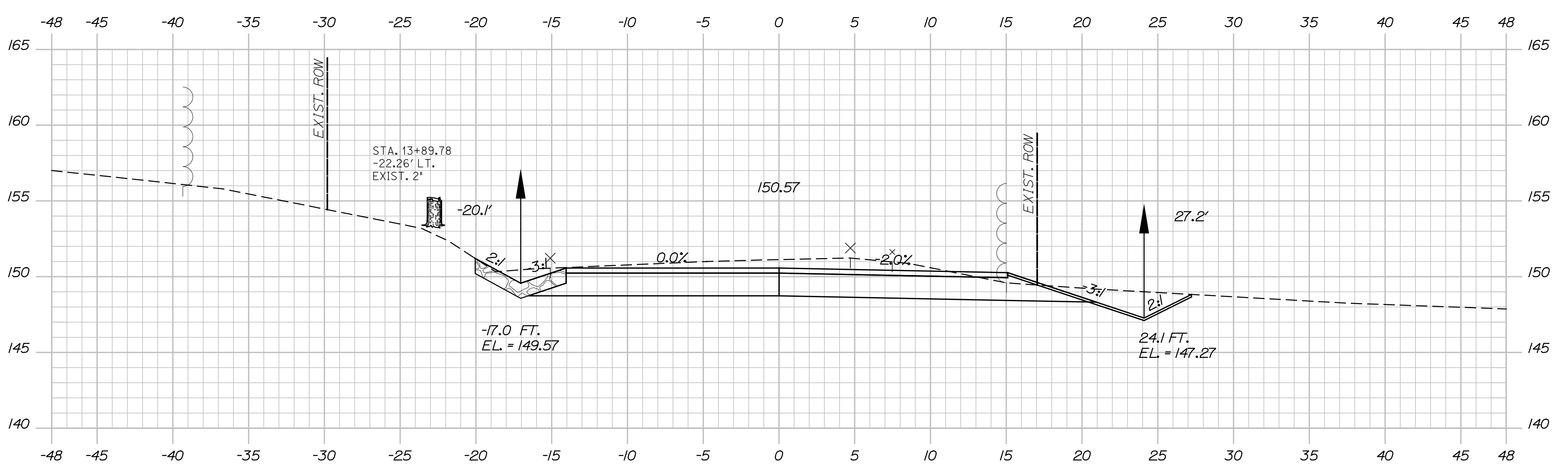
14+50.00

Sta. 14+30.54, 12.24' Lt. to Sta. 14+69.07, 10.00' Lt.
Install Low Volume Guardrail End-Type 3



14+25.00

Sta. 14+22.91, 16.76' Rt. to Sta. 14+57.89, 10.00' Rt.
Install Low Volume Guardrail End-Type 3



Sta. 14+00 to Sta. 14+50, Lt.
Install Stone Ditch Protection

14+00.00

Sta. 14+00.00 to Sta. 14+75.00

SHEET NUMBER 10 OF 17

STAPLES BRIDGE
GREAT WORKS RIVER
NORTH BERWICK YORK COUNTY

CROSS SECTIONS

PROJ. MANAGER	D. EATON	BY	DATE
DESIGN-DETAILED	B.HAVU	M.CUNDIFF	10-25-19
CHECKED-REVIEWED	B.HAVU		10-25-19
DESIGN2-DETAILED2	_	_	_
DESIGN3-DETAILED3	_	_	_
REVISIONS 1	_		_
REVISIONS 2	_		_
REVISIONS 3	_		_
REVISIONS 4	_		_
FIELD CHANGES	_		_

SIGNATURE

P.E. NUMBER

DATE

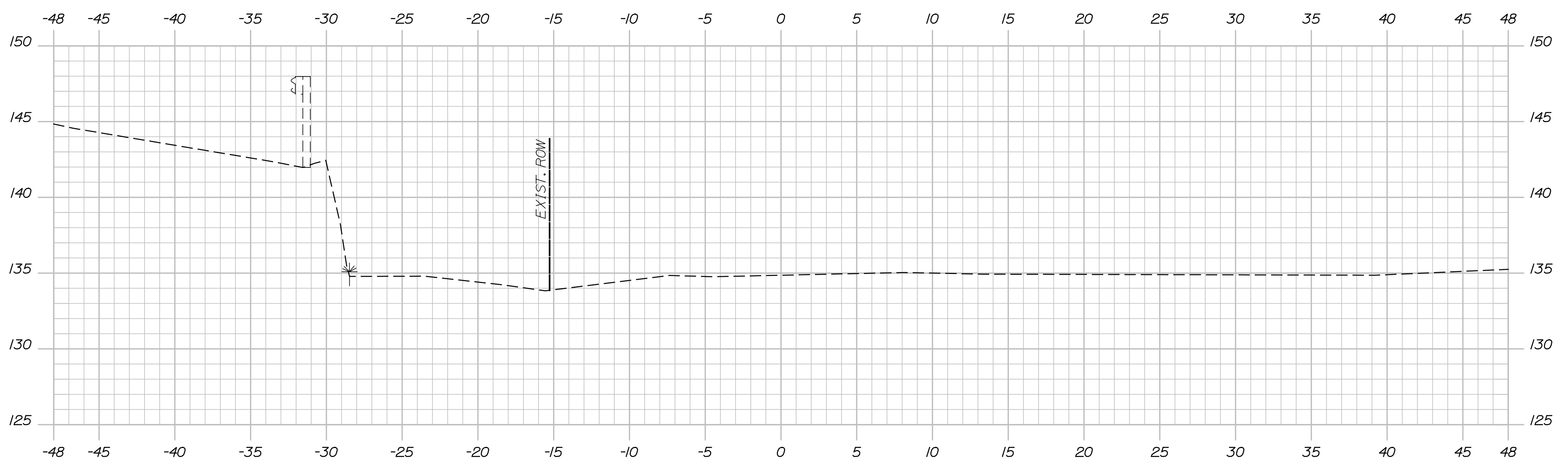
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02233600

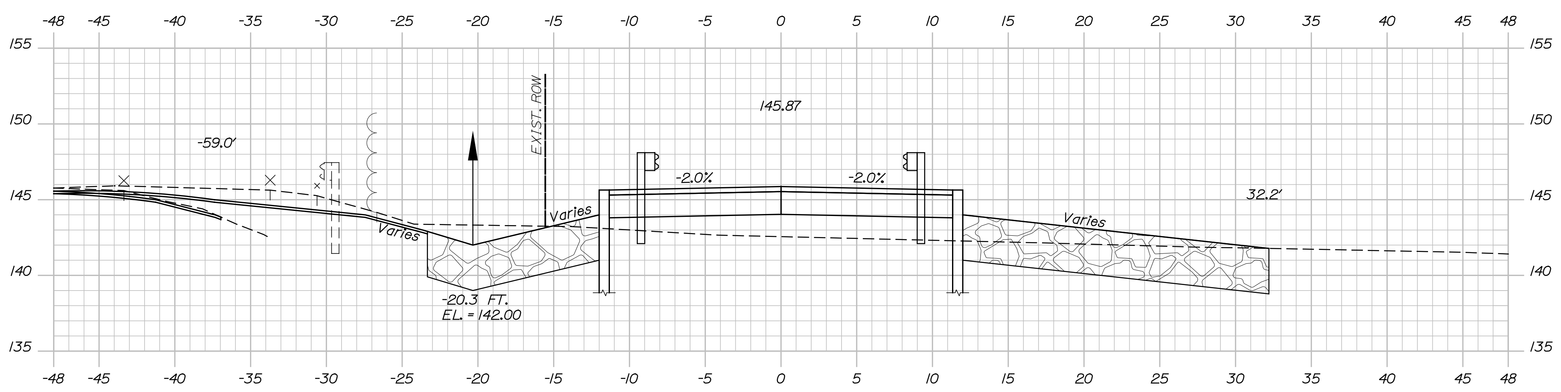
BRIDGE NO. 1238

WIN
022336.00

BRIDGE PLANS



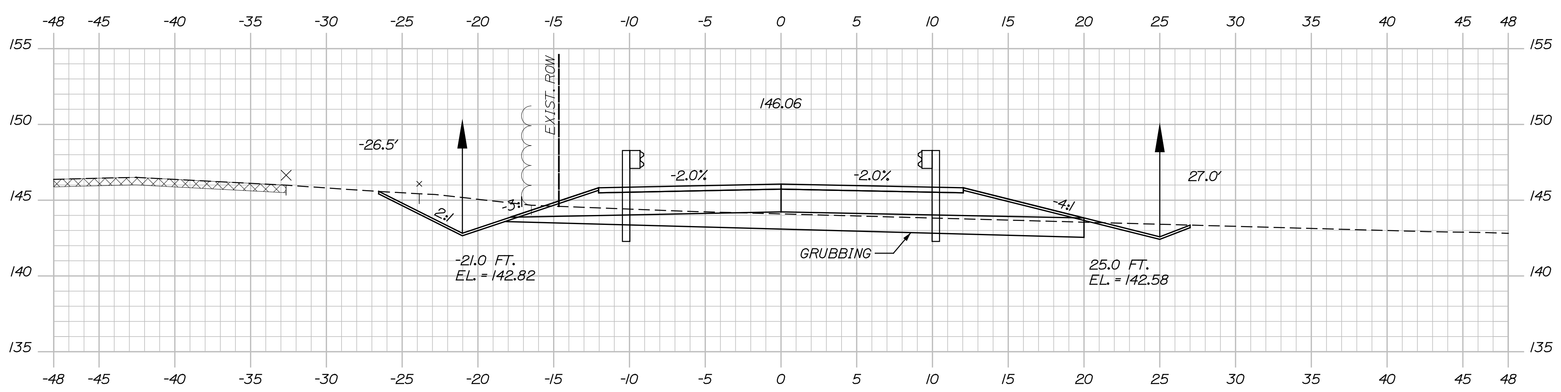
15+75.00



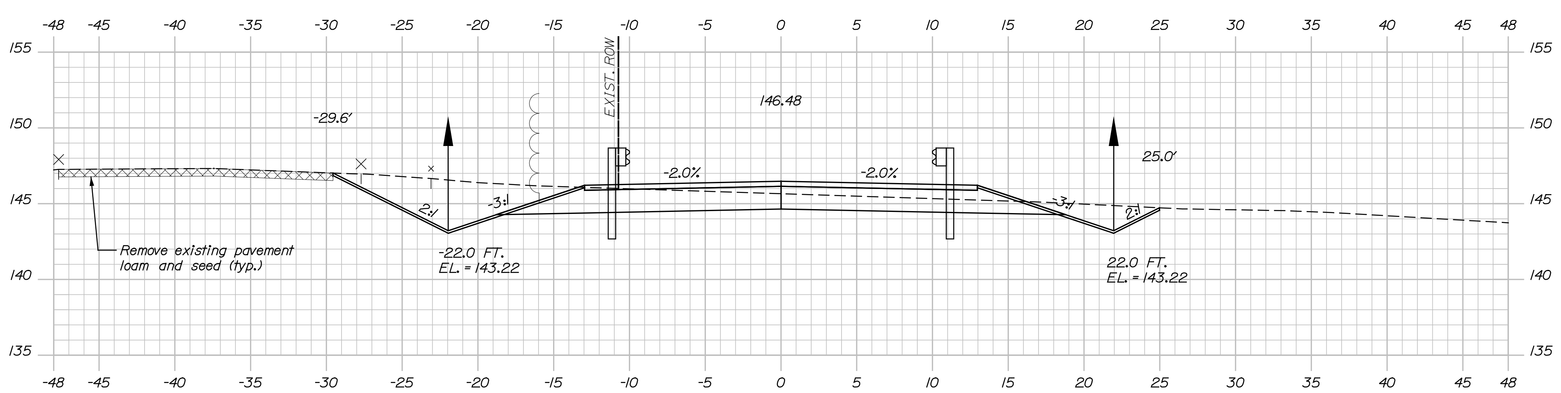
Sta. 15+44.50 to Sta. 16+19.49, Lt.
Install 75.00' Guardrail Type 3, Single Rail, Bridge Mounted

15+50.00

Sta. 15+44.50 to Sta. 16+19.50, Rt.
Install 75.00' Guardrail Type 3, Single Rail, Bridge Mounted



15+25.00



15+00.00

Sta. 15+00.00 to Sta. 15+75.00

SHEET NUMBER 11 OF 17

STAPLES BRIDGE
GREAT WORKS RIVER
NORTH BERWICK YORK COUNTY

CROSS SECTIONS

PROJ. MANAGER	D. EATON	BY	DATE
DESIGN-DETAILED	B.HAVU	M.CUNDIFF	10-25-19
CHECKED-REVIEWED	B.HAVU		10-25-19
DESIGN2-DETAILED2	_	_	_
DESIGN3-DETAILED3	_	_	_
REVISIONS 1	_		_
REVISIONS 2	_		_
REVISIONS 3	_		_
REVISIONS 4	_		_
FIELD CHANGES	_		_

SIGNATURE

P.E. NUMBER

DATE

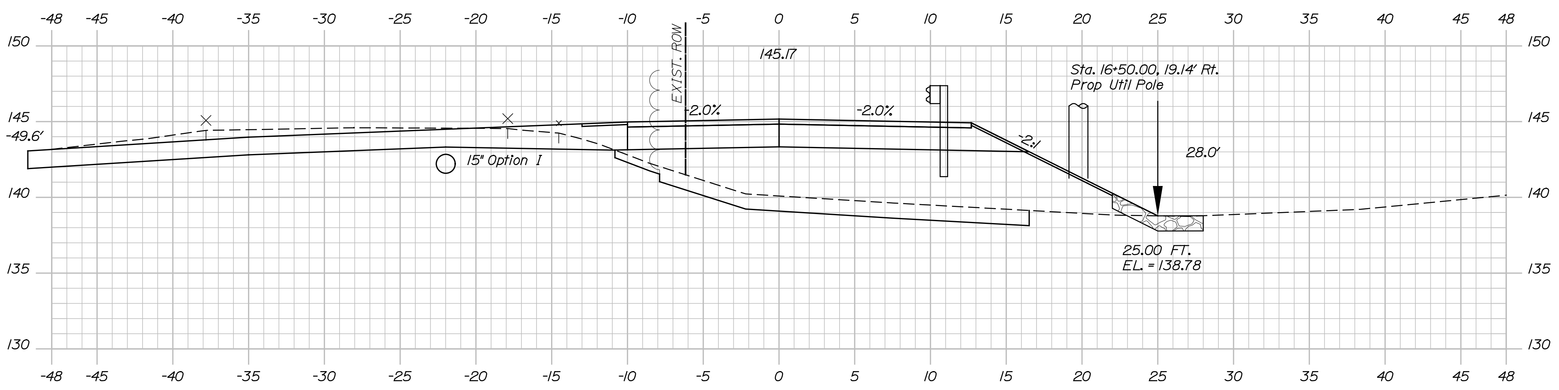
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02233600

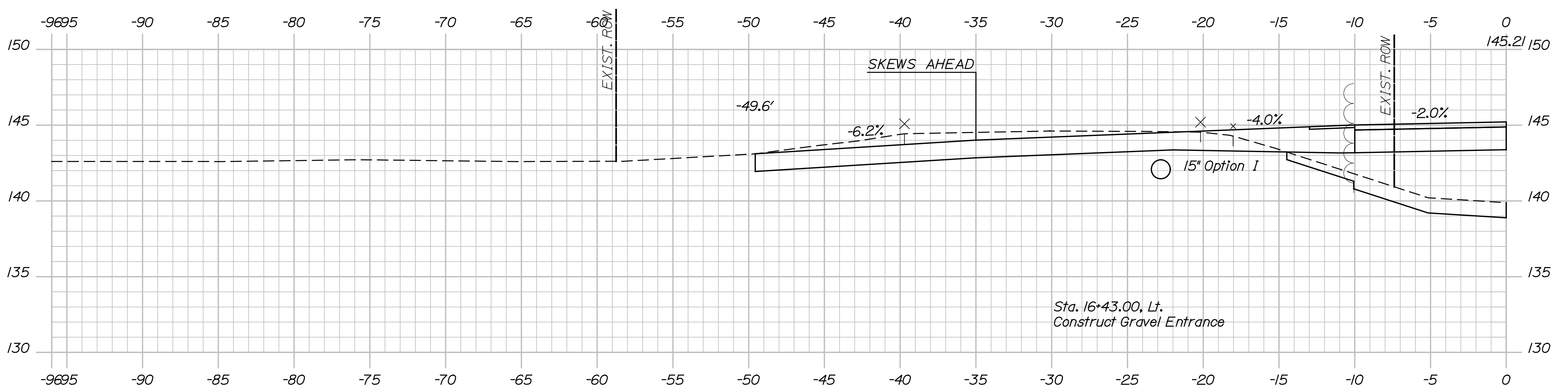
BRIDGE NO. 1238

WIN
022336.00

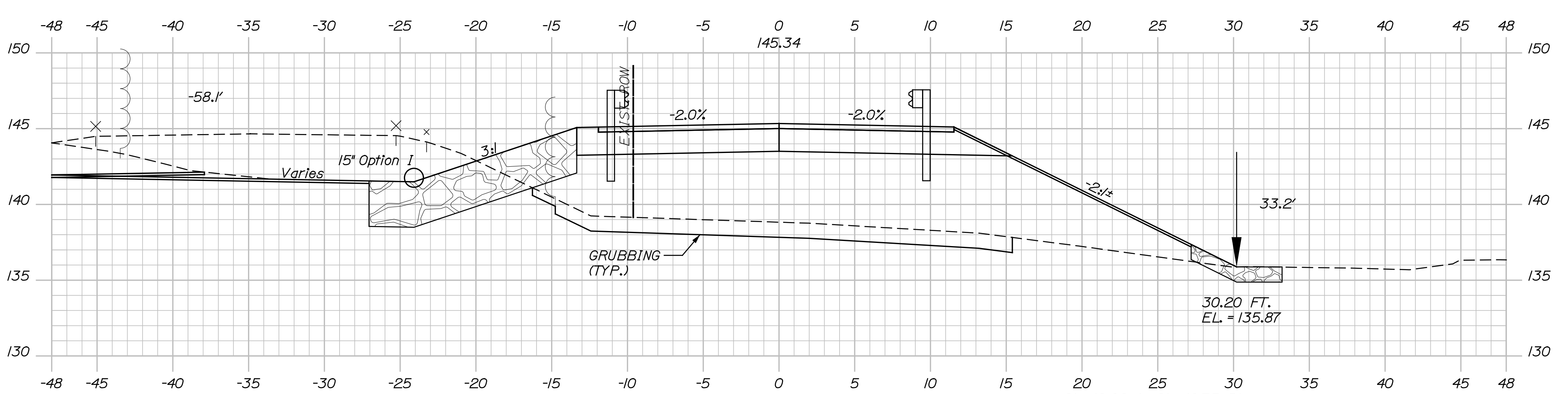
BRIDGE PLANS



16+50.00



16+43.00 (GRAVEL ENTRANCE)



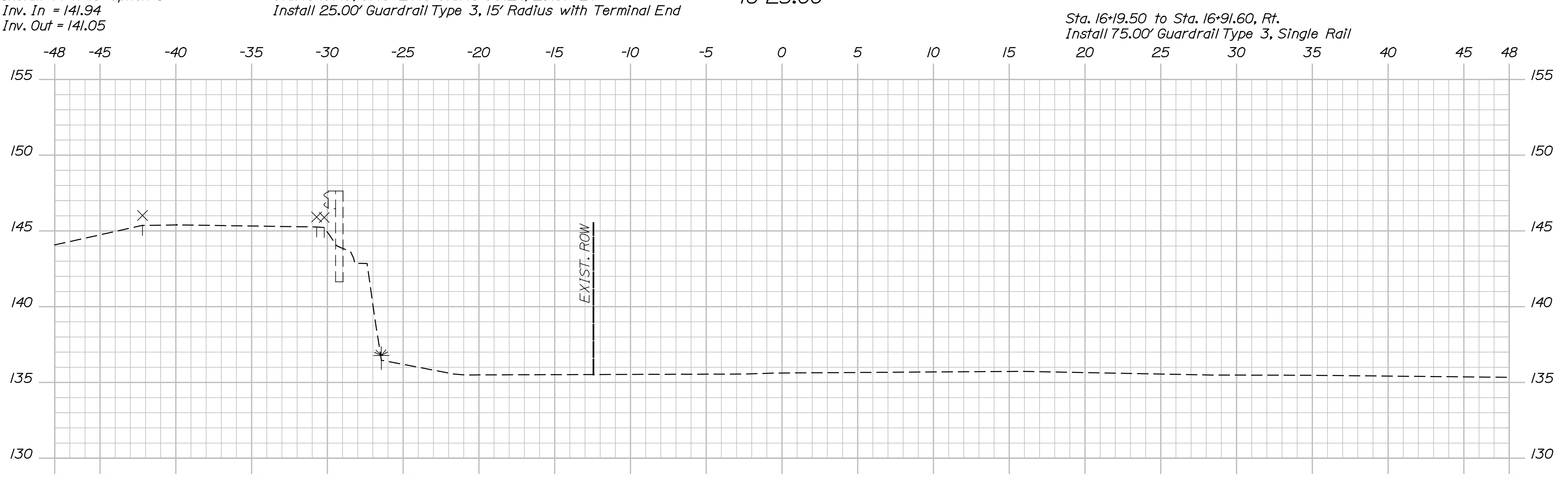
Sta. 16+22.00, Lt. to Sta. 16+69.10, Lt.
Install 44' x 15" Option I
Inv. In = 141.94
Inv. Out = 141.05

Sta. 16+19.49, 8.43' Lt. to Sta. 16+33.24, 25.87' Lt.
Install 25.00' Guardrail Type 3, 15' Radius with Terminal End

16+25.00

Sta. 16+02 to Sta. 16+75, Rt.
Install Stone Ditch Protection

Sta. 16+19.50 to Sta. 16+91.60, Rt.
Install 75.00' Guardrail Type 3, Single Rail



16+00.00

Sta. 16+00.00 to Sta. 16+50.00

SHEET NUMBER 12 OF 17

STAPLES BRIDGE
GREAT WORKS RIVER
NORTH BERWICK YORK COUNTY

CROSS SECTIONS

PROJ. MANAGER	D. EATON	BY	DATE
DESIGN-DETAILED	B.HAVU	M.CUNDIFF	10-25-19
CHECKED-REVIEWED	B.HAVU		10-25-19
DESIGN2-DETAILED2	_	_	_
DESIGN3-DETAILED3	_	_	_
REVISIONS 1	_		_
REVISIONS 2	_		_
REVISIONS 3	_		_
REVISIONS 4	_		_
FIELD CHANGES	_		_

SIGNATURE

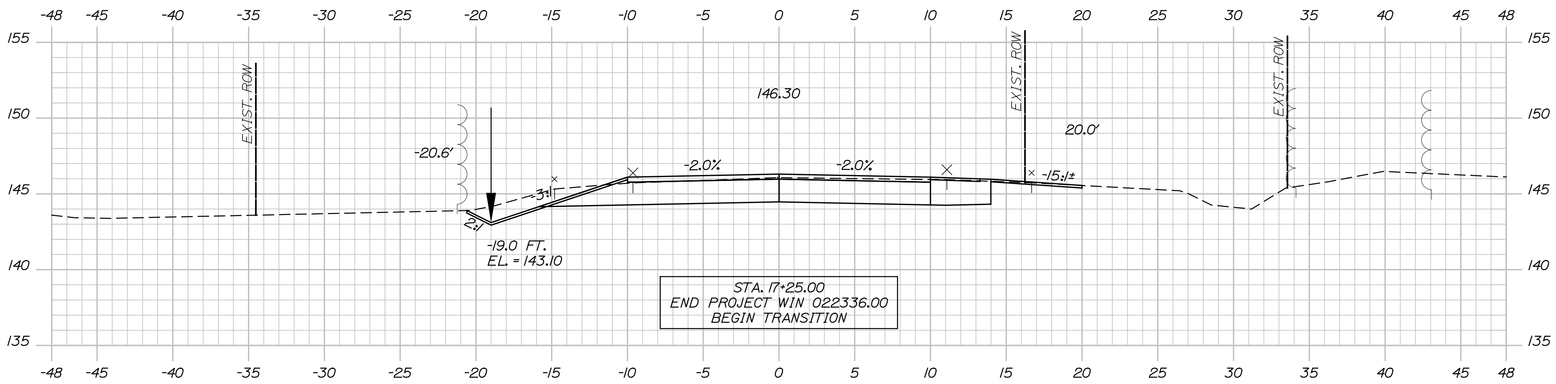
P.E. NUMBER

DATE

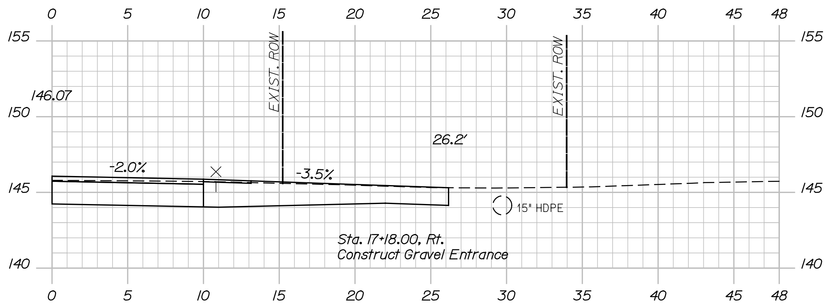
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02233600

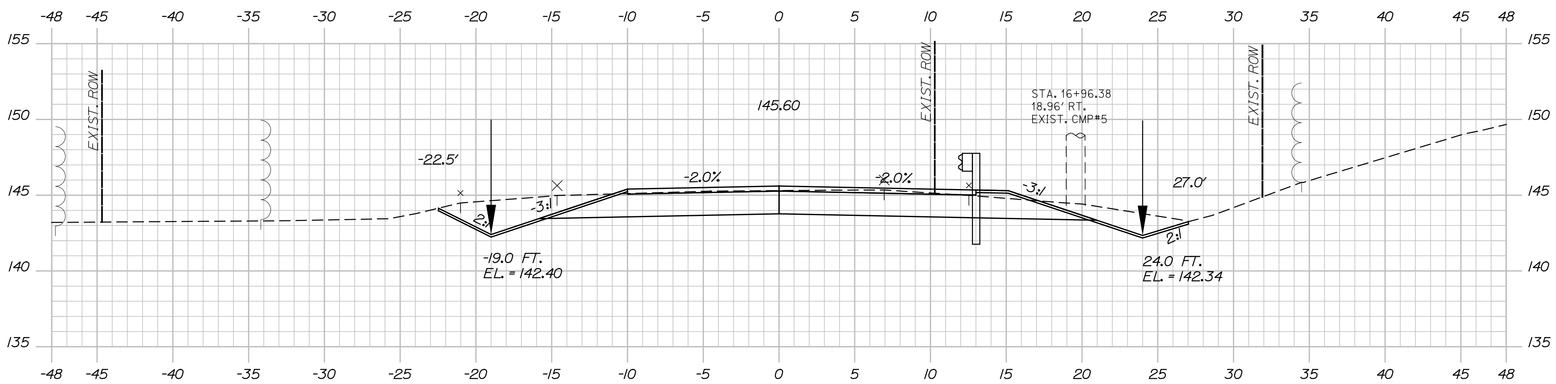
BRIDGE NO. 1238 WIN 022336.00 BRIDGE PLANS



17+25.00

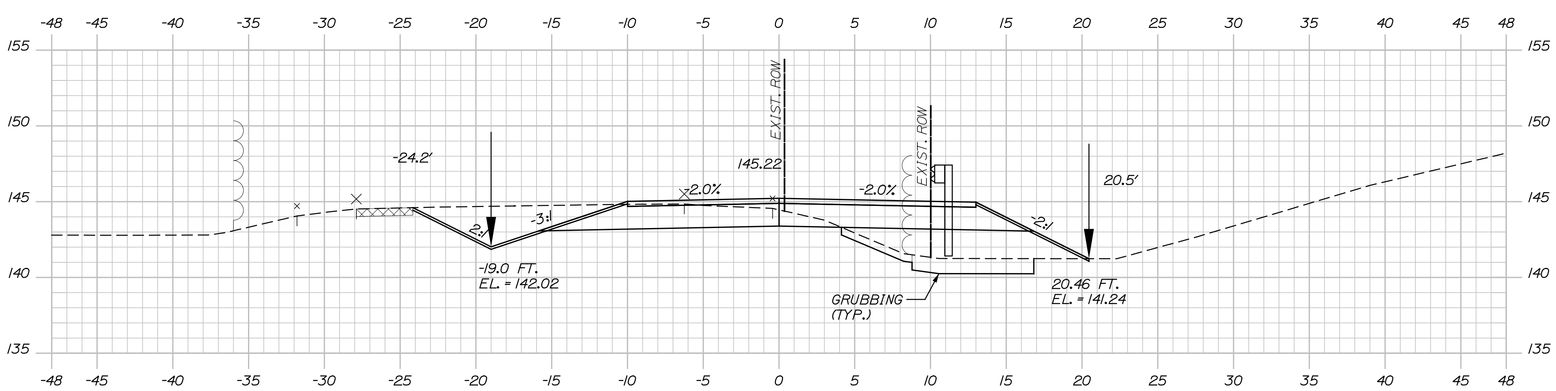


17+18.00 (GRAVEL ENTRANCE)



17+00.00

Sta. 16+91.60, 10.00' Rt. to Sta. 17+10.54, 22.49' Rt.
Install 25.00' Guardrail Type 3, 25' Radius with Terminal End



Sta. 16+69 to Sta. 17+25, Lt.
Install Erosion Control Blanket

16+75.00

Sta. 16+75 to Sta. 17+08, Rt.
Install Erosion Control Blanket

Sta. 16+75.00 to Sta. 17+25.00

SHEET NUMBER 13 OF 17

STAPLES BRIDGE
GREAT WORKS RIVER
NORTH BERWICK YORK COUNTY

CROSS SECTIONS

PROJ. MANAGER	D. EATON	BY	DATE
DESIGN-DETAILED	B.HAVU	M.CUNDIFF	10-25-19
CHECKED-REVIEWED	B.HAVU		10-25-19
DESIGN2-DETAILED2	_	_	_
DESIGN3-DETAILED3	_	_	_
REVISIONS 1	_		_
REVISIONS 2	_		_
REVISIONS 3	_		_
REVISIONS 4	_		_
FIELD CHANGES	_		_

SIGNATURE

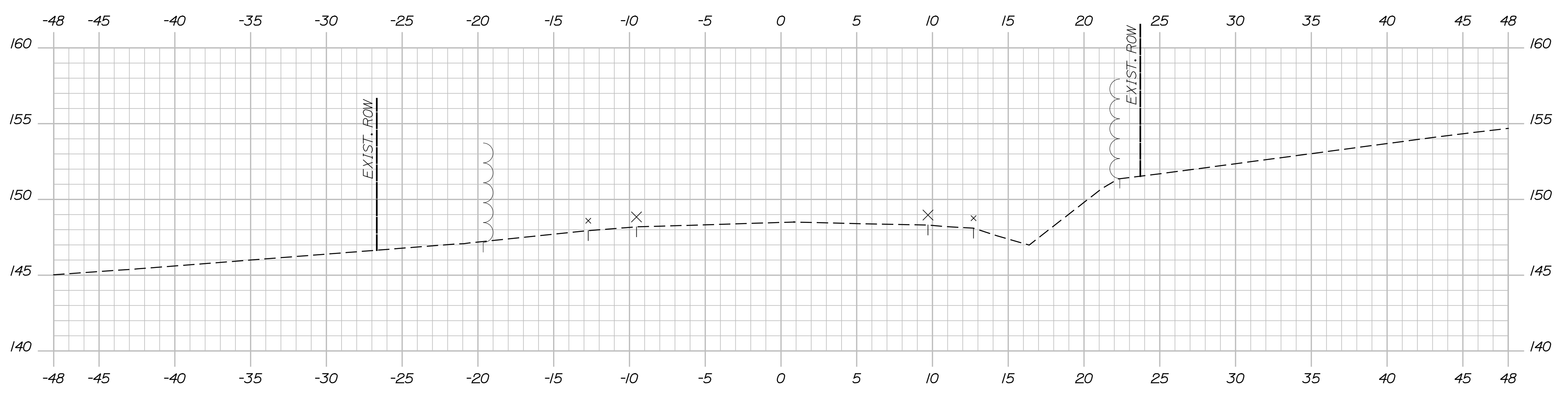
P.E. NUMBER

DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

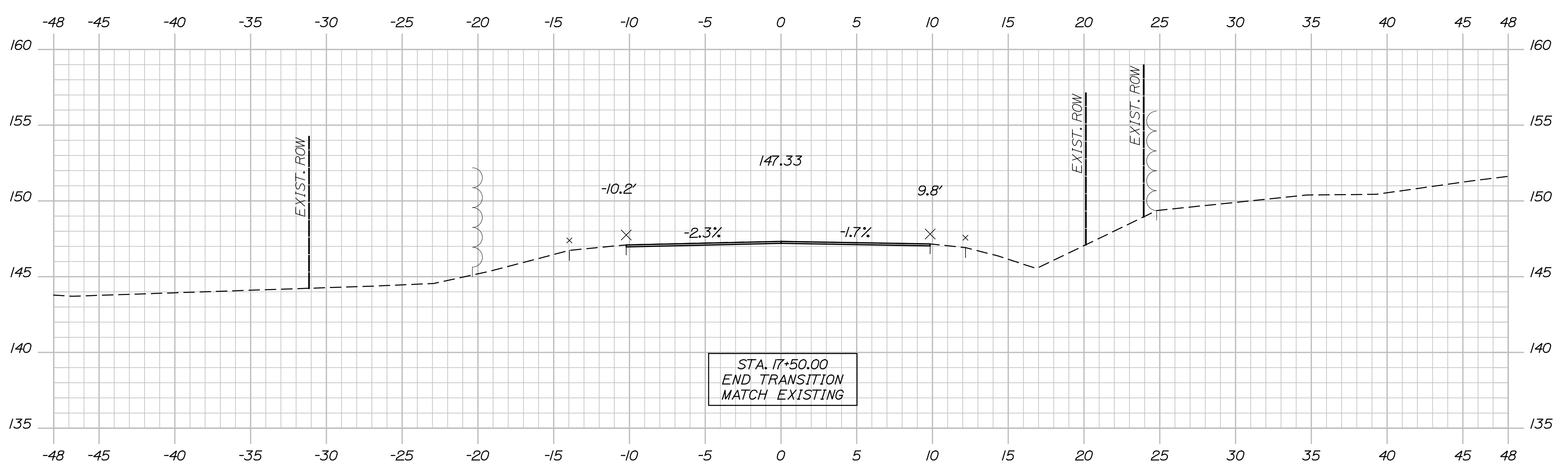
02233600

BRIDGE NO. 1238 WIN 022336.00 BRIDGE PLANS



STA. 17+55.00
LIMIT OF WORK

17+75.00



STA. 17+50.00
END TRANSITION
MATCH EXISTING

17+50.00

Sta. 17+50.00 to Sta. 17+75.00

SHEET NUMBER 14 OF 17

STAPLES BRIDGE
GREAT WORKS RIVER
NORTH BERWICK YORK COUNTY

CROSS SECTIONS

PROJ. MANAGER	D. EATON	BY	DATE
DESIGN-DETAILED	B.HAVU	M.CUNDIFF	10-25-19
CHECKED-REVIEWED	B.HAVU		10-25-19
DESIGN2-DETAILED2	_	_	_
DESIGN3-DETAILED3	_	_	_
REVISIONS 1	_		_
REVISIONS 2	_		_
REVISIONS 3	_		_
REVISIONS 4	_		_
FIELD CHANGES	_		_

SIGNATURE

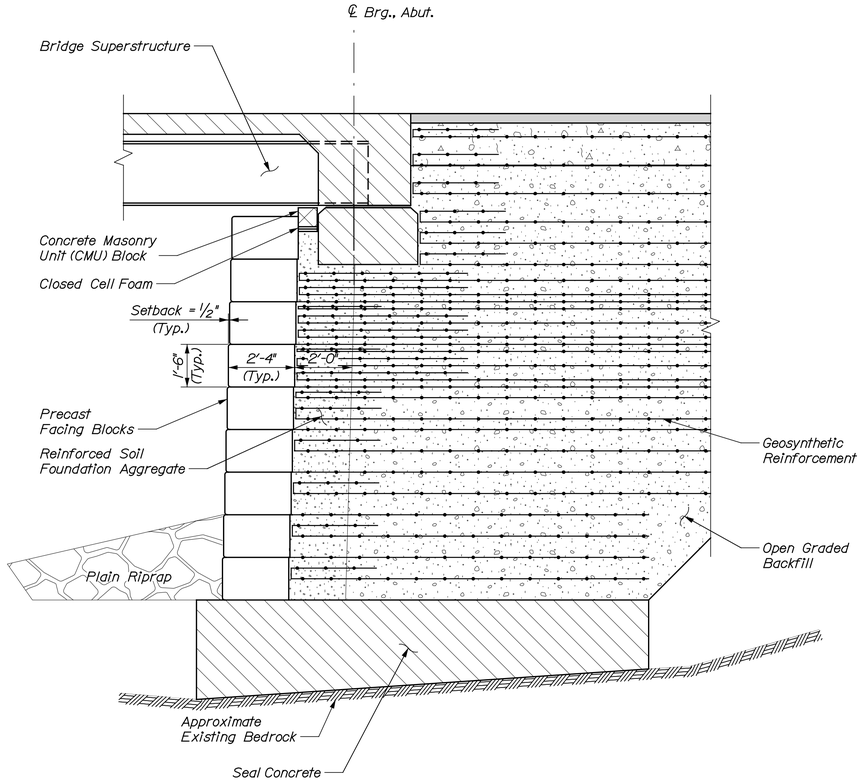
P.E. NUMBER

DATE

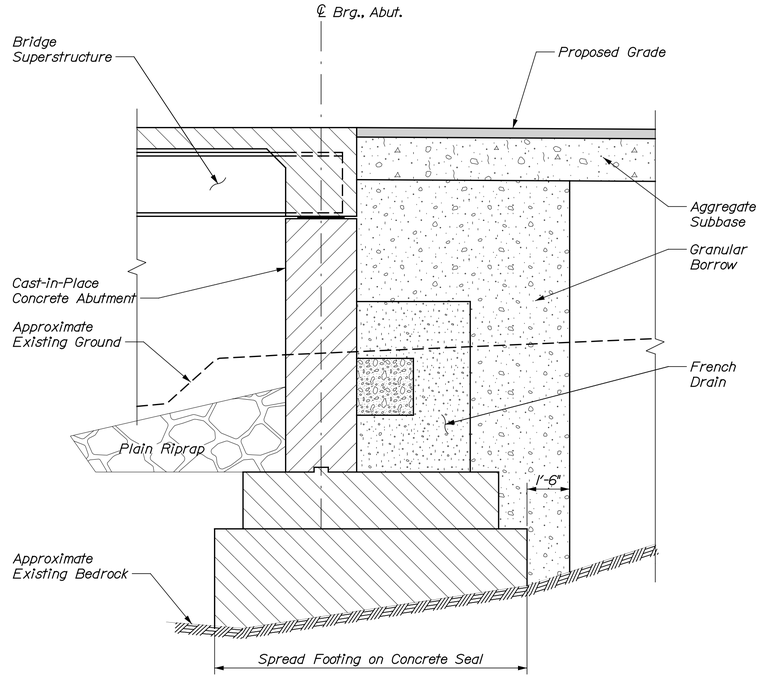
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

02233600

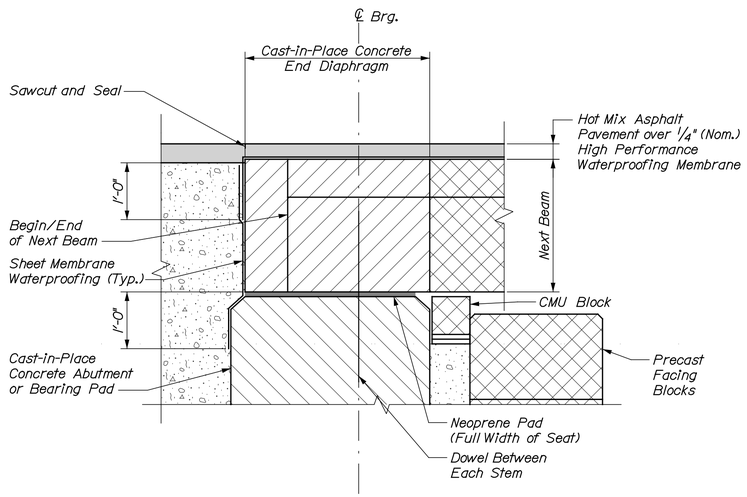
BRIDGE NO. 1238 WIN 022336.00 BRIDGE PLANS



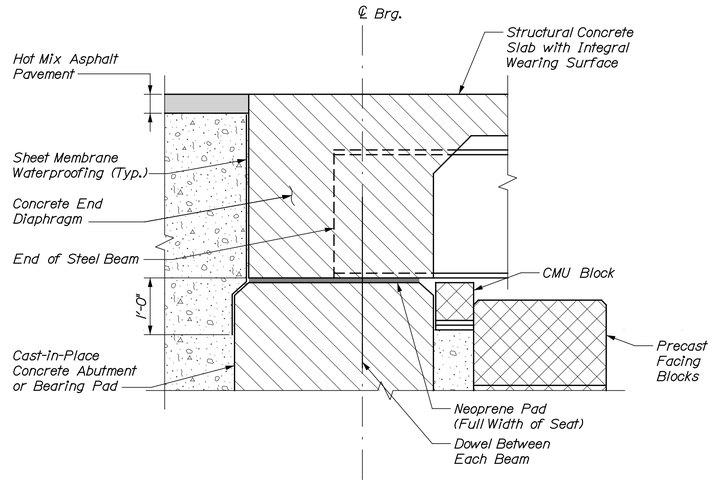
GRS WALL ON BEDROCK
(CONCEPTUAL)



SPREAD FOOTING ON BEDROCK
(CONCEPTUAL)



END OF DECK SECTION
(NEXT BEAM ALTERNATIVE)



END OF DECK SECTION
(STEEL BEAM ALTERNATIVE)

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2233600

WIN 022336.00

BRIDGE NO. 1238 BRIDGE PLANS

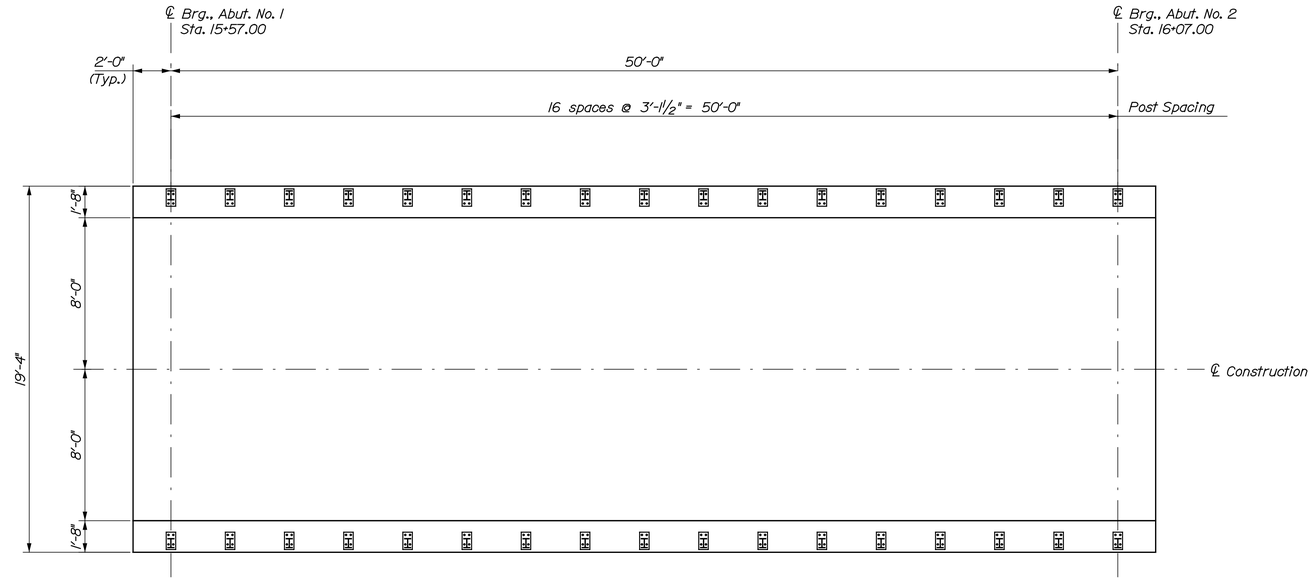
PROJ. MANAGER	D. EATON			
DESIGN-DETAILED	E.BROWNELL	D.BURGESS	10-25-19	SIGNATURE
CHECKED-REVIEWED	E.BROWNELL	J.BURGESS	10-25-19	
DESIGN2-DETAILED2				P.E. NUMBER
DESIGN3-DETAILED3				
REVISIONS 1				DATE
REVISIONS 2				
REVISIONS 3				
REVISIONS 4				
FIELD CHANGES				

STAPLES BRIDGE
GREAT WORKS RIVER
NORTH BERWICK YORK COUNTY

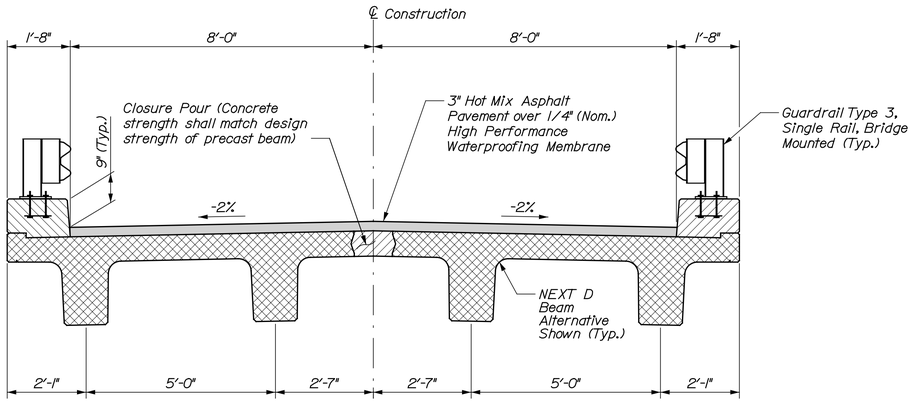
SUBSTRUCTURE DETAILS

SHEET NUMBER
15
OF 17

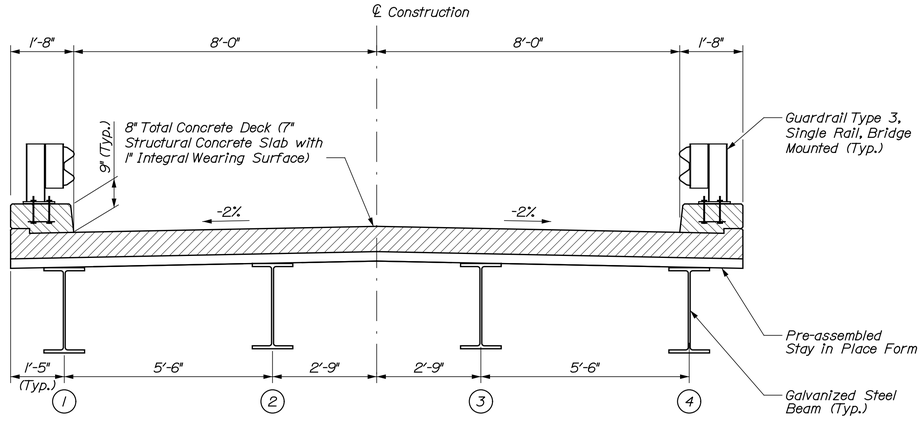
BECKER
75 York Street, Portland, Maine 04101
207.879.1838 ▪ beckerstructural.com



SUPERSTRUCTURE PLAN
(Conceptual plan based on GRS-IBS Substructure Alternative)



TRANSVERSE SECTION - NEXT BEAM ALTERNATIVE



TRANSVERSE SECTION - STEEL BEAM ALTERNATIVE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2233600

WIN 022336.00

BRIDGE NO. 1238 BRIDGE PLANS

PROJ. MANAGER	D. EATON		
DESIGN-DETAILED	E.BROWNELL	D.BURGESS	10-25-19
CHECKED-REVIEWED	E.BROWNELL	J.BURGESS	10-25-19
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

STAPLES BRIDGE
GREAT WORKS RIVER
NORTH BERWICK YORK COUNTY

SUPERSTRUCTURE PLAN & TRANSVERSE SECTIONS

SHEET NUMBER
16
OF 17

BECKER
75 York Street, Portland, Maine 04101
207.879.1838 ▪ beckerstructural.com

PLAN LEGEND

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

	Existing	Proposed
Sanitary Sewer		
Telephone Line	T	T
Electric Line	E	E
Water Line	W	W
Underdrain Line		
Gas Line	G	G
Guardrail		
Culvert		

	Existing	Proposed
Traveled Way		
Ditch		
Catch Basin		
Manhole		
Sewer Manhole		
Utility Pole		
Fire Hydrant		
Curbing		

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

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

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

25 0 25 50 75 100
Scale of Feet

GRID
MAINE 2000 WEST ZONE

CONTROL INFORMATION
HORIZONTAL DATUM - US STATE PLANE
NAD83 (2011)
ZONE - MAINE WEST ZONE
VERTICAL DATUM - NAVD 88
COMBINED SCALE FACTOR - 0.999805

CURVE DATA #1
PI = 12+42.34
D = 4°46'28.7"
Δ = 8°40'14.1" Lt.
R = 1200.00'
L = 181.60'
T = 90.97'
E = 3.44'

CURVE DATA #2
PI = 14+09.78
D = 19°05'54.9"
Δ = 28°43'23.4" Lt.
R = 300.00'
L = 150.39'
T = 76.81'
E = 9.68'

CURVE DATA #3
PI = 16+79.98
D = 28°38'52.4"
Δ = 26°17'38.2" Lt.
R = 200.00'
L = 91.78'
T = 46.71'
E = 5.38'

CURVE DATA #4
PI = 17+42.14
D =110°11'03.1"
Δ = 36°23'52.3" Lt.
R = 52.00'
L = 33.03'
T = 17.10'
E = 2.74'

NOTE: STAPLES DRIVE NORTHWESTERLY OF MIDDLE STREET WAS CONVEYED TO THE TOWN OF NORTH BERWICK ON 9/08/2009, 50-FEET WIDE. SEE Y.C.R.D. BOOK 15719, PAGE 329.

SEE EASEMENT Y.C.R.D. BOOK. 1945, PAGE. 336 CENTRAL MAINE POWER CO. & NEW ENGLAND TELEPHONE AND TELEGRAPH.

RYAN M. GOSSER
STEVEN E. ZGLESZEWSKI
PARCEL NO. (2)
LAND TAKEN = 0.09± AC. (PRESC. EASE.)
LAND TAKEN = 371± S.F. (OTHER)
TOTAL LAND TAKEN = 0.10± AC.
SLOPE EASE. = 1,499± S.F. (1)
TOTAL AREA = 2.05 AC. (TOWN)
REM. AREA = 1.95± AC.

PAMELA T. DAVIS
ITEM NO. (4)
SLOPE EASE. = 1,137± S.F. (1)
TOTAL AREA = 1.50 AC. (TOWN)

PAMELA T. DAVIS
PARCEL NO. (5)
LAND TAKEN = 19± S.F.
(PRESC. EASE.)
LAND TAKEN = 1,083± S.F.
(OTHER)
TOTAL LAND TAKEN = 1,102± S.F.
TOTAL AREA = 1.0± AC. (TOWN)
REM. AREA = 0.98± AC.

RYAN J. YOST
ELLEN D. GREELEY, N/K/A ELLEN YOST
PARCEL NO. (1)
LAND TAKEN = 0.15± AC. (PRESC. EASE.)
LAND TAKEN = 0.21± AC. (OTHER)
TOTAL LAND TAKEN = 0.36± AC.
TEMP. CONST. RIGHTS = 1,211± S.F. (1)
TOTAL AREA = 10.73 AC. (TOWN)
REM. AREA = 10.37± AC.

GREAT WORKS
REGIONAL LAND TRUST
PARCEL NO. (3)
LAND TAKEN = 329± S.F. (PRESC. EASE.)
LAND TAKEN = 0.10± AC. (OTHER)
TOTAL LAND TAKEN = 0.11± AC. (1)
TEMP. CONST. RIGHTS = 475± S.F. (1)
TOTAL AREA = 5.00 AC. (TOWN)
REM. AREA = 4.89± AC.

PLAN REFERENCES:

1) PLAT OF HOME STEAD ACRES, OWNED BY EDWIN SWETT & PETER LITVINCHYK, PREPARED BY EMERY S. LITTLEFIELD DATED 9/06/1972 AND RECORDED AT THE YORK COUNTY REGISTRY OF DEEDS IN PLAN BOOK 59, PAGE 9.

2) PLAN OF LAND OF MALCOLM M. & DORIS C. FILSON, LEBANON ROAD & CARD MILL ROAD, NORTH BERWICK PREPARED BY CIVIL CONSULTANTS, DATED 7/21/1986 RECORDED AT THE YORK COUNTY REGISTRY OF DEEDS IN PLAN BOOK 148, PAGE 43.

3) STANDARD BOUNDARY SURVEY, PORTION OF LAND OF ROBERT & CANDACE YOKE, CARD MILL ROAD, NORTH BERWICK PREPARED BY CIVIL CONSULTANTS, DATED 8/26/1988 RECORDED AT THE YORK COUNTY REGISTRY OF DEEDS IN PLAN BOOK 171, PAGE 19.

EXISTING RIGHT OF WAY REFERENCES:

1) CARD MILL ROAD, LOCATION AND WIDTH BASED ON PLAN REFERENCE 2 AND 3 ABOVE. NO DEFINITIVE RECORDS WERE FOUND AT THE TOWN OF NORTH BERWICK, BERWICK, OR THE COUNTY COMMISSIONER'S RECORDS.

2) STAPLES DRIVE, TOWN OF NORTH BERWICK PLANNING BOARD APPROVED SUBDIVISION DATED SEPT 7, 1972 AND RECORDED AT THE YORK COUNTY REGISTRY OF DEEDS IN PLAN BOOK 59, PAGE 9, ON 9/08/1972. (50-FEET WIDE PER PLAN) ALSO SEE DEEDS, 2152/503 AND 15719/329 FOR CONVEYANCE OF ROADWAY TO THE TOWN.

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

SEE PLAN REFERENCE NO. 3
SEE PLAN REFERENCE NO. 2

SEE PLAN REFERENCE NO. 2

SEE PLAN REFERENCE NO. 1

NOTE: THE DISCONTINUANCE OF CARD MILL ROAD CAN BE FOUND IN VOL. 28, PAGE 21 OF THE YORK COUNTY COMMISSIONER'S RECORDS DATED 11/01/1932.

CENTRAL MAINE POWER CO. & NEW ENGLAND TELEPHONE CO. POLE LOCATION PERMIT NO. 49-330; FROM POLE NO. 3 TO POLE NO. 5, WITH A MIN. CLEARANCE OF 18-FEET, DATED 1/17/1974.

NOTE: STAPLES DRIVE AND MIDDLE STREET WERE CONVEYED TO THE TOWN OF NORTH BERWICK ON 7/09/1975, 50-FEET WIDE. SEE Y.C.R.D. BOOK 2152, PAGE 503.

ITEM	TECH	CHECKED
EXISTING CONDITION PLAN	R.M.C.	C.W.K.
FINAL RIGHT OF WAY	R.M.C.	J.H.
AREAS	R.M.C.	J.H.

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

STAPLES BRIDGE
OVER
GREAT WORKS RIVER
BRIDGE NO. 1238 WIN 022336.00

REVISIONS			
NO.	DATE	DESCRIPTION	BY

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

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

TOWN WAY
CARD MILL ROAD / STAPLES DRIVE
NORTH BERWICK YORK COUNTY
FEDERAL AID PROJECT NO. 2233600

AUGUST 2019 | RIGHT-OF-WAY MAP | D.O.T. FILE NO. 16-532
SCALE 1" = 25' | SHEET 1 OF 1

SHEET NUMBER
17
OF 17

Filename: ...\00\ROW\MSTA\001_RWPLAN1.dgn Division: BRIDGE Username: Devon.C.Eaton Date:10/30/2019