

STATE OF MAINE DEPARTMENT OF TRANSPORTATION



SPECIFICATIONS

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

DESIGN LOADING

Live Load HL - 93 Modified for Strength I

TRAFFIC DATA

Current (2016) AADT	1810
Future (2036) AADT	2170
DHV - % of AADT	11%
Design Hour Volume	239
Heavy Trucks (% of AADT)	8%
Heavy Trucks (% of DHV)	7%
Directional Distribution (% of DHV)	53%
18 kip Equivalent P 2.0	106
18 kip Equivalent P 2.5	101
Design Speed (mph)	50

HYDROLOGIC DATA

Drainage Area	2.0 sq mi
Design Discharge (Q50)	141.6 cfs
Check Discharge (Q100)	165.7 cfs
Headwater Elevation (Q1.1)	63.72 ft
Headwater Elevation (Q25)	65.12 ft
Headwater Elevation (Q50)	73.92 ft
Headwater Elevation (Q100)	75.00 ft
Discharge Velocity (Q1.1)	2.56 fps
Discharge Velocity (Q50)	4.90 fps
Discharge Velocity (Q100)	5.37 fps

MATERIALS

Concrete:	
Precast	Class "P"
All Other	Class "A"
Reinforcing Steel	ASTM A 615/A 615M, Grade 60
Welded Wire Reinforcement	ASTM A1064/A1064M

BASIC DESIGN STRESSES

Concrete	f'c = 4,000 psi
Precast Concrete	f'c = 5,000 psi
Reinforcing Steel	f _y = 60,000 psi
Welded Wire Reinforcement	F _y = 65,000 psi

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WALDOBORO LINCOLN COUNTY WAGNER NO. 2 BRIDGE OVER HOCH BROOK STATE ROUTE 32 (WINSLOWS MILLS ROAD) STATE PROJECT NO. 018230.00 PROJECT LENGTH 0.080 mi. BRIDGE NO. 2905

UTILITIES

Central Maine Power Company Consolidated Communications
Time Warner Cable

MAINTENANCE OF TRAFFIC

Bridge Closure with traffic detoured as shown on the plans.

<u>PROJECT LOCATION</u>	State Route 32 (Winslows Mills Road) Over Hoch Brook, 0.30 Miles South of Depot Street in Waldoboro Lat./Long. 44°08'29"N/69°25'02"W
<u>PROGRAM AREA</u>	Bridge Program
<u>OUTLINE OF WORK</u>	Replace Existing Bridge with a Precast Concrete Box Culvert Rebuild 425 feet of Roadwork and Install Guardrail Around Concrete Box Culvert.

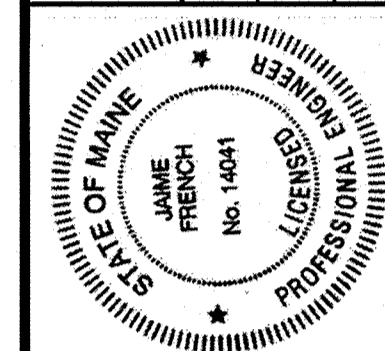
WIN 18230.00

WALDOBORO
WAGNER NO. 2 BRIDGE
TITLE SHEET

SHEET NUMBER

1

OF 22



JAMES FRENCH
 SIGNATURE
 1-4041
 P.E. NUMBER
 11-7-2019
 DATE

PROGRAM	BRIDGE
PROJECT MANAGER	DEVAN EATON
DESIGNER	JAMES FRENCH
CONSULTANT	FUSS & O'NEILL
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION
 APPROVED
 COMMISSIONER: [Signature]
 CHIEF ENGINEER: [Signature]
 DATE: 11/13/19
 11-12-19

Date: 11/7/2019

Username:

Division: BRIDGE

File name: Bentley\ustn\001_Title.dgn

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.19	REMOVING EXISTING BRIDGE (259 CY)	1	LS
202.202	REMOVING PAVEMENT SURFACE	190	SY
203.20	COMMON EXCAVATION	540	CY
203.24	COMMON BORROW	22	CY
203.25	GRANULAR BORROW	520	CY
203.33	SPECIAL FILL	62	CY
206.061	STRUCTURAL EARTH EXCAVATION - DRAINAGE MINOR STRUCTURES BELOW GRADE	351	CY
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	1,200	CY
403.208	HOT MIX ASPHALT, 12.5 MM NOMINAL MAXIMUM SIZE	150	T
403.209	HOT MIX ASPHALT, 9.5 MM MAXIMUM SIZE (SIDEWALKS, DRIVES, ISLANDS & INCIDENTALS)	5	T
403.213	HOT MIX ASPHALT, 12.5 MM NOMINAL MAXIMUM SIZE (BASE AND INTER. BASE COURSE)	230	T
409.15	BITUMINOUS TACK COAT, APPLIED	60	G
508.13	SHEET WATERPROOFING MEMBRANE (100 SY)	1	LS
511.07	COFFERDAM; UPSTREAM	1	LS
511.07	COFFERDAM; DOWNSTREAM	1	LS
513.22	CRUSHED STONE SLOPE PROTECTION	29	SY
515.21	PROTECTIVE COATING FOR CONCRETE SURFACES (99 SY)	1	LS
526.301	TEMPORARY CONCRETE BARRIER, TYPE I (100LF)	1	LS
534.71	PRECAST CONCRETE BOX CULVERT (167 CY)	1	LS
603.16	15' CULVERT PIPE OPTION 1	20	LF
606.1301	31"W-BEAM GUARDRAIL - MID-WAY SPLICE (SINGLE FACED, STEEL POST, 8" OFFSET BLOCKS)	413	LF
606.1305	31"W-BEAM GUARDRAIL - MID-WAY SPLICE - FLARED TERMINAL	4	EA
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	8	EA
607.24	REMOVE AND RESET FENCE	150	LF
610.08	PLAIN RIPRAP	275	CY
610.18	STONE DITCH PROTECTION	29	CY
610.210	STREAM CHANNEL ROCK	80	CY
610.212	STREAM STONE - STREAMBED ROCK FEATURES	6	CY
613.319	EROSION CONTROL BLANKET	22	SY
615.07	LOAM	70	CY
618.14	SEEDING METHOD NUMBER 2	11	UN
619.12	MULCH	11	UN
619.14	EROSION CONTROL MIX	70	CY
620.58	EROSION CONTROL GEOTEXTILE	540	SY
627.733	4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	1500	LF
629.05	HAND LABOR, STRAIGHT TIME	20	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	20	HR
631.172	TRUCK- LARGE (INCLUDING OPERATOR)	20	HR
639.19	FIELD OFFICE, TYPE B	1	EA
652.312	TYPE III BARRICADES	4	EA
652.33	DRUM	20	EA
652.34	CONE	20	EA
652.35	CONSTRUCTION SIGNS	420	SF
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES (60 CD)	1	LS
652.38	FLAGGERS	240	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

- During construction, the road will be closed to traffic for a time period specified in the Special Provisions.
- For easements, construction limits and right of way lines, refer to Right of Way Map.
- The clearing limits as shown on the plans are approximate. The exact limits will be established in the field by the Resident. Payment for clearing will be considered incidental to Contract items.
- All utility facilities shall be adjusted by the respective utilities unless otherwise noted.
- Do not excavate for Aggregate Subbase Course where existing material is suitable as determined by the Resident.
- In areas where the Resident directs the Contractor not to excavate to the subgrade line shown on the plans, payment for removing existing pavement, grubbing, shaping, ditching, and compacting the existing subbase and layers of new subbase 6 inches or less thick will be made under appropriate rental items.
- All embankment material, except as otherwise shown, placed below EL. 67 shall be Granular Borrow meeting the requirements of Subsection 703.19, Material for Underwater Backfill.
- Place riprap as shown on sideslopes up to guardrail berm.
- Place loam 2 inches deep on all new or reconstructed sideslopes or as directed by the Resident.
- 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.
- Place a 24 inch wide strip of Temporary Erosion Control Blanket on the sideslopes along the top of the riprap.
- An NCHRP350 compliant guardrail end treatment shall be installed concurrently with the placement of each section of beam guardrail.
- 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.
- Protective Coating for Concrete Surfaces shall be applied to the following areas:

On all concrete headwalls and box surfaces that are exposed extending one foot inside the box and to limit lines, one foot beyond intersections of surfaces with ground.
- Project information referred to below may be accessed at the following MaineDOT web address: <http://www.maine.gov/mdot/contractors/>.
- 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.
- 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.
- The project geotechnical report titled: Geotechnical Design Report for the replacement of Wagner No. 2 bridge Route 32 over Hoch Brook, Waldoboro, Maine, dated August 29, 2019 may be accessed at the MaineDOT web address.

- 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:
 - If a Lump Sum pay item is eliminated, the requirements of Standard Specifications Section 109.2, Elimination of Items, will take precedence.
 - If other Contract Documents specifically allow a change in payment for a Lump Sum pay item, those requirements will be followed.
 - 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.
- Cattle Fencing on Parcel 4, as shown on the Right of Way map, shall be removed and become property of the Contractor. Payment shall be considered incidental to related Contract items.
- Cattle Fencing on Parcel 5 as shown on the Right of Way Map shall be removed and reset as Directed by the Resident. Payment shall be made under item 607.24 Remove and Reset Fence.
- All excavation required to remove existing roadway subbase material shall be paid for under item 203.20 Common Excavation. The material removed as part of the over excavation greater than 1'-0" below the proposed structure shall be paid for under item 206.061 Structural Excavation - Drainage and Minor Structures Below Grade. All other excavation shall be incidental to Items 202.19 Remove Existing Bridge and 534.71 Precast Concrete Box Culvert.

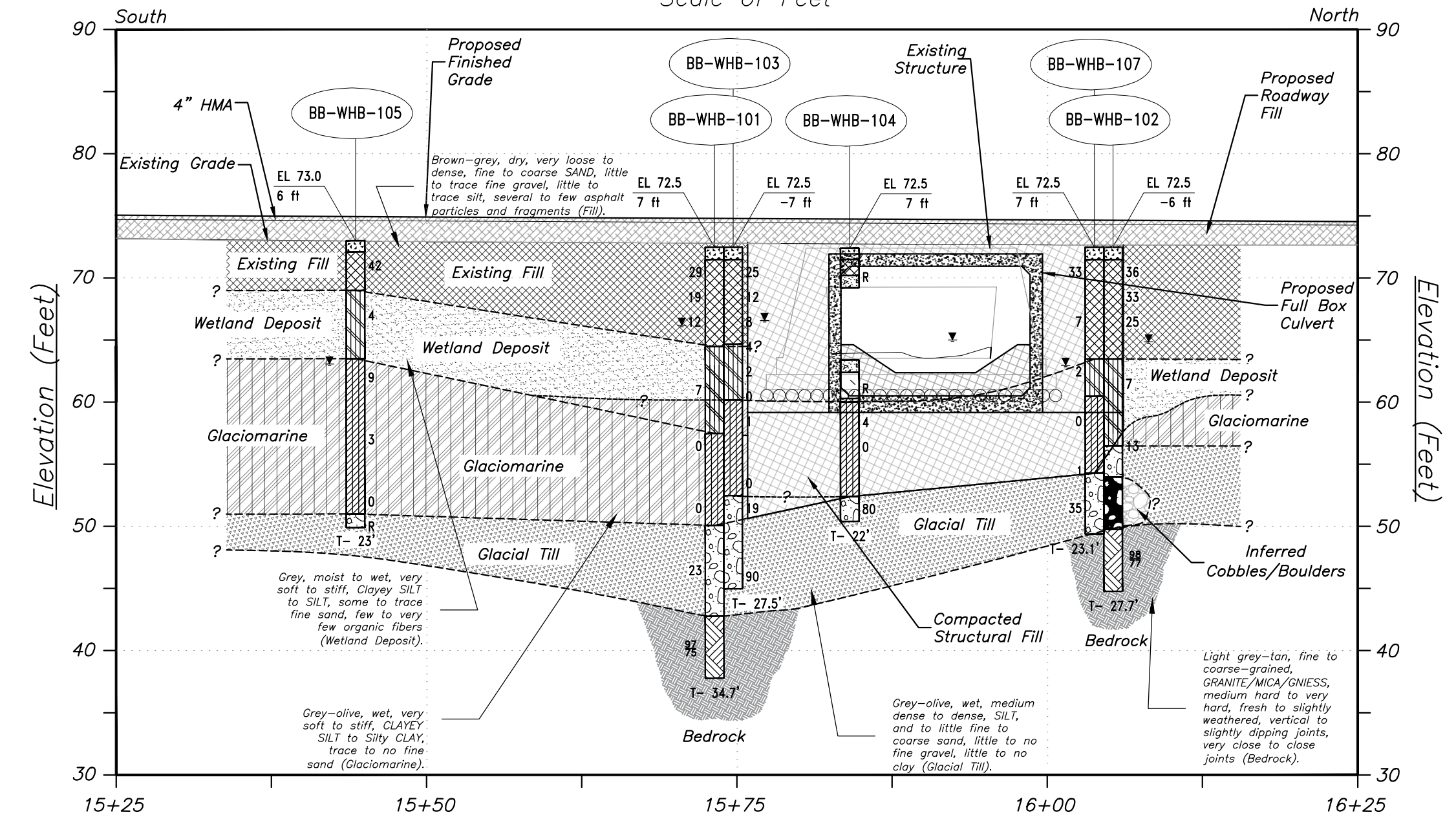
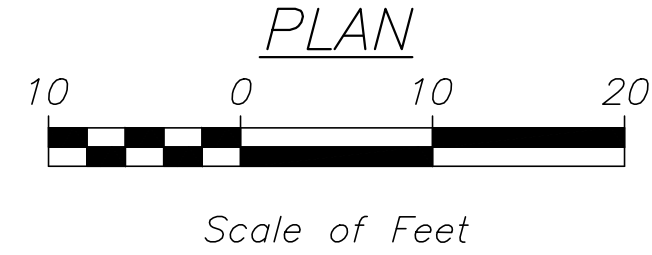
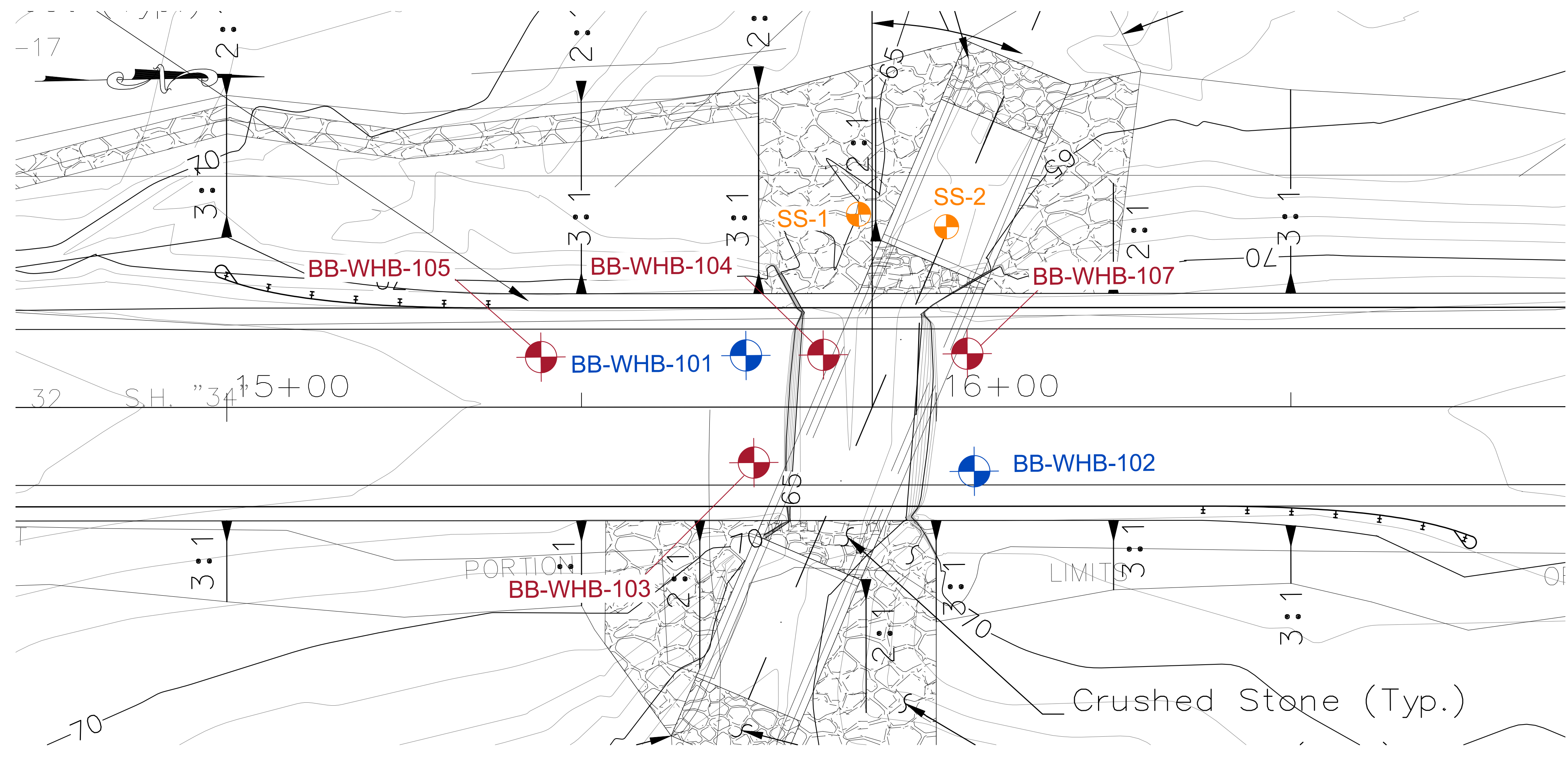
STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		BRIDGE NO. 2905		BRIDGE PLANS	
WAGNER NO. 2 BRIDGE		LINCOLN COUNTY		18230.00		WIN 18230.00	
HOCH BROOK		WALDOBORO		SIGNATURE		P.E. NUMBER	
ESTIMATED QUANTITIES & GENERAL CONSTRUCTION NOTES		DATE		DATE		DATE	
SHEET NUMBER		BY		DATE		DATE	
2		M. W. SMITH		8/19		8/19	
OF 22		M. G. SMITH		8/19		8/19	
		E. MALONEY		8/19		8/19	
		REVISIONS 1		-		-	
		REVISIONS 2		-		-	
		REVISIONS 3		-		-	
		REVISIONS 4		-		-	
		FIELD CHANGES		-		-	

Date: 08/14/2019

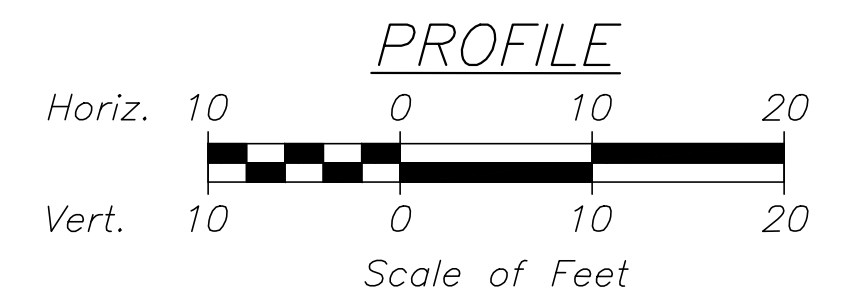
Username:

Division: BRIDGE

Filename:



Interpretive Subsurface Profile
Station along Centerline of Proposed Bridge #2905 (feet)



Legend

- BB-WHB-101 Boring location observed by Nobis in 2017.
- BB-WHB-103 Boring location observed by Nobis in 2019.
- SS-1 Sediment sample location collected by Nobis in 2017.

Note:

1. For additional information relating to the nature and results of the test borings observed by Nobis, refer to the Nobis Geotechnical Design Report, dated August, 2019.

Strata Legend

- Existing Fill
- Proposed Roadway Fill
- Compacted Structural Fill
- Concrete
- Wetland Deposit
- Glaciomarine
- Glacial Till
- Inferred Cobbles / Boulders
- Cored Bedrock

Exploration Legend

- BB-WHB-101 Exploration Designation
- EL 72.5 Approx. Ground Surface elevation
- 7 ft Approx. offset from baseline (feet)*
- 24 Approximate Existing Ground Surface SPT N-Value
- 75 Number of Blows/Depth Sampler
- Observed Water Level
- Major Stratum Boundary Between Different Soil Types
- 100 Rock Core Recovery (%)
92 Rock Quality Designation (%)
- T-30.4' T=Termination Depth

*Positive offsets are in the west direction.
negative offsets are in the east direction.

Note:

1. This 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 subsurface explorations and samples. Actual soil transitions may vary. For more specific information refer to the Nobis Boring Logs.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
18230.00
WIN
18230.00
BRIDGE NO.2905
BRIDGE PLANS



PROJ. MANAGER	D. EATON	DATE	08.15.2019
DESIGN-REVIEWED	J. FRENCH	BY	K. KOCIA
DESIGN-REVIEWED	K. JELINEK	DATE	08.15.2019
DESIGN-REVIEWED	L. GREER	SIGNATURE	<i>K. Jelinek</i>
REVISIONS 1		P.E. NUMBER	11746
REVISIONS 2		DATE	August 15, 2019
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

WAGNER NO. 2 BRIDGE
HOCH BROOK
LINCOLN COUNTY
WALDOBORO
BORING LOCATION PLAN & INTERPRETIVE SUBSURFACE PROFILE

SHEET NUMBER

4

OF 22

Maine Department of Transportation Soils/Back Exploration Log US CUSTOMARY UNITS		Project: Route 32 over Hoch Brook at Vogler No. 2 Bridge #5925 Location: Waldoboro, Maine		Boring No.: <u>BB-WHB-101</u> WIN: <u>18230 00</u>																																																																																		
Driller: New England Boring Contractors	Elevation (ft.): 72.5	Auger ID/DD: 3" / 3.25"																																																																																				
Operator: M. Porter	Datum: NAVD-88	Sampler: 1-3/8" Split-Spoon																																																																																				
Logger: K. Kocis (Nobis)	Rig Type: B-53 Mobile Truck	Hammer Wt./Fall: 140#/30"																																																																																				
Date Start/Finish: 10/28/19 to 10/28/19	Drilling Method: Cased Wash Boring	Core Barrel: N02																																																																																				
Boring Location: STA 15+72.43, 7' LT	Casing ID/DD: 4" / 4.5" / 3" / 3.5"	Water Level*: 6.3' bgs																																																																																				
Hammer Efficiency Factor: 0.869	Hammer Type: Automatic S8 Hydraulic C1	Rope & Catched C1																																																																																				
<p> S = Split Spoon Sample S_u = Soil Shear Strength (psf) S_u(lab) = Lab Shear Strength (psf) S_u = Pocket Torque Shear Strength (psf) NS = Unsuccessful Split Spoon Sample Attempt SA = Soil Stem Auger S_u(lab) = Lab Shear Strength (psf) S_u = Pocket Torque Shear Strength (psf) NS = Unsuccessful Split Spoon Sample Attempt SA = Soil Stem Auger S_u(lab) = Lab Shear Strength (psf) S_u = Pocket Torque Shear Strength (psf) U = Thin Wall Tube Sample RC = Roller Cone N₆₀ = Standard Penetration Test (blows/ft) N₆₀ = Standard Penetration Test (blows/ft) M = Unsuccessful Thin Wall Tube Sample Attempt W = Weight of Hole Hammer W = Weight of Hole Hammer W = Weight of Hole Hammer F = Field Cone Test P = Pocket Penetrometer W = Weight of Hole Hammer W = Weight of Hole Hammer W = Weight of Hole Hammer NS = Unsuccessful Field Cone Test Attempt W = Weight of Hole Hammer W = Weight of Hole Hammer W = Weight of Hole Hammer </p>																																																																																						
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30	R1	60/58	29.70 - 34.70	ROD = 75%	Top of Bedrock at Elev. 42.80 ft R1: Bedrock: Grey-tan, fine to medium-grained, GRANITE/MICA/QUARTZ, medium hard to hard, fresh to moderately weathered, slightly dipping to 45 degree-angle-dipping, very close to close joints, (Waldoboro Pluton). Rock Mass Quality = Fair R1 Core Lines (in sec): 29.7-30.7 feet (1:45) 30.7-31.7 feet (1:45) 31.7-32.7 feet (1:13) 32.7-33.7 feet (1:13) 33.7-34.7 feet (1:30)																																																																																	
37.8					Bottom of Exploration at 34.7 feet below ground surface																																																																																	
<p> -Borehole backfilled with 5 bags of gravel and native soils. -Pavement restored with asphalt cold patch. -Top = below ground surface. -Automatic Hammer ID# B-24. </p>																																																																																						
<p> 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. </p>																																																																																						

Maine Department of Transportation Soils/Back Exploration Log US CUSTOMARY UNITS		Project: Route 32 over Hoch Brook at Vogler No. 2 Bridge #5925 Location: Waldoboro, Maine		Boring No.: <u>BB-WHB-102</u> WIN: <u>18230 00</u>																																																																																									
Driller: New England Boring Contractors	Elevation (ft.): 72.5	Auger ID/DD: 3" / 3.25"																																																																																											
Operator: M. Porter	Datum: NAVD-88	Sampler: 1-3/8" Split-Spoon																																																																																											
Logger: K. Kocis (Nobis)	Rig Type: B-59 Mobile Truck	Hammer Wt./Fall: 140#/30"																																																																																											
Date Start/Finish: 10/28/19 to 10/28/19	Drilling Method: Cased Wash Boring	Core Barrel: N02																																																																																											
Boring Location: STA 16+06.52, 6' RT	Casing ID/DD: 4" / 4.5" / 3" / 3.5"	Water Level*: 7.6' bgs																																																																																											
Hammer Efficiency Factor: 0.869	Hammer Type: Automatic S8 Hydraulic C1	Rope & Catched C1																																																																																											
<p> S = Split Spoon Sample S_u = Soil Shear Strength (psf) S_u(lab) = Lab Shear Strength (psf) S_u = Pocket Torque Shear Strength (psf) NS = Unsuccessful Split Spoon Sample Attempt SA = Soil Stem Auger S_u(lab) = Lab Shear Strength (psf) S_u = Pocket Torque Shear Strength (psf) U = Thin Wall Tube Sample RC = Roller Cone N₆₀ = Standard Penetration Test (blows/ft) N₆₀ = Standard Penetration Test (blows/ft) M = Unsuccessful Thin Wall Tube Sample Attempt W = Weight of Hole Hammer W = Weight of Hole Hammer W = Weight of Hole Hammer F = Field Cone Test P = Pocket Penetrometer W = Weight of Hole Hammer W = Weight of Hole Hammer W = Weight of Hole Hammer NS = Unsuccessful Field Cone Test Attempt W = Weight of Hole Hammer W = Weight of Hole Hammer W = Weight of Hole Hammer </p>																																																																																													
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Maine Department of Transportation Soils/Back Exploration Log US CUSTOMARY UNITS		Project: Route 32 over Hoch Brook at Vogler No. 2 Bridge #5925 Location: Waldoboro, Maine		Boring No.: <u>BB-WHB-103</u> WIN: <u>18230 00</u>																																																																																																							
Driller: New England Boring Contractors	Elevation (ft.): 72.5	Auger ID/DD: 3" / 3.25"																																																																																																									
Operator: T. Schaeffer	Datum: NAVD-88	Sampler: 1-3/8" Split-Spoon																																																																																																									
Logger: K. Kocis (Nobis)	Rig Type: B-53 Mobile Truck	Hammer Wt./Fall: 140#/30"																																																																																																									
Date Start/Finish: June 22, 2019 to June 22, 2019	Drilling Method: Auger/Cased Wash Boring	Core Barrel: N/A																																																																																																									
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Sample Depth) per R/C (12)	71.5					Asphalt (11.7")		10	1D	24/14	1.00 - 3.00	9/13/12/10	Brown-grey, dry, medium dense, fine to coarse SAND, little fine to coarse gravel, trace silt, few asphalt particles/fragments, (F.ill).		5	2B	24/12	3.00 - 5.00	5/6/6/5	Brown-grey, dry, medium dense, fine to coarse SAND, trace fine gravel, trace silt, very few asphalt particles/fragments, (F.ill).		5	3D	24/11	5.00 - 7.00	5/4/4/3	Brown, dry, loose, fine to coarse SAND, little fine gravel, trace silt, very few asphalt particles/fragments, (F.ill).		5	4B	24/12	7.00 - 9.00	4/2/1/1	4B-A (6.5"-thick) Brown, dry, very loose, fine to coarse SAND, little fine gravel, trace silt, (F.ill) 4B-B (5.5"-thick) Drabish-brown-grey, moist-wet, soft, CLAYEY SILT, some fine to coarse sand, few woody/organic fibers, faint redoximorphic staining present, (Wetland Deposit). Brownish-grey, wet, very soft, CLAYEY SILT, trace fine to medium sand, several organic fibers, (Wetland Deposit).		10	5B	24/10	9.00 - 11.00	3/1/1/1	6D-M9"-thick) Brownish-grey, wet, very soft, CLAYEY SILT, some fine to coarse sand, several organic fibers, (Wetland Deposit). 6D-BE'-thick) Grey, wet, very soft, SILT & CLAY, (Glaciomarine). Grey-silt, wet, very soft, SILT & CLAY, (Glaciomarine).		15	6B	24/15	11.00 - 13.00	WDH/WDH/WDH/3	47		15	7B	24/24	13.00 - 15.00	WDH/WDH/1/2	1		15	8B	24/23	15.00 - 17.00	PUSH	PUSH	Dark Grey, wet, silty CLAY, trace fine sand, (Glaciomarine).	20	9B	24/24	18.00 - 20.00	WDH/WDH/WDH/0	0	Grey, wet, very soft, SILT & CLAY, (Glaciomarine).	20	10B	24/9	20.00 - 22.00	9/8/11/4	19	Grey, wet, medium dense, SILT, some fine to coarse sand, trace fine to coarse gravel, trace clay, (Glacial Till).	25	100	24/9	25.30 - 27.50	35/45/45/28	90	Grey, fine to coarse SAND, some silt, trace fine gravel, trace clay, (Glacial Till). Tip of sample with weathered rock present.	27.5					Bottom of Exploration at 27.5 feet below ground surface	
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25	100	24/9	25.30 - 27.50	35/45/45/28	90	Grey, fine to coarse SAND, some silt, trace fine gravel, trace clay, (Glacial Till). Tip of sample with weathered rock present.																																																																																																					
27.5					Bottom of Exploration at 27.5 feet below ground surface																																																																																																						
<p> -Borehole backfilled with 5 bags of gravel and native soils. -Pavement restored with asphalt cold patch. -Top = below ground surface. -Automatic Hammer ID# B-19. </p>																																																																																																											
<p> 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. </p>																																																																																																											

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WAGNER NO. 2 BRIDGE
HOCH BROOK
WALDOBORO LINCOLN COUNTY

BORING LOGS (1 OF 2)

18230.00
WIN
18230.00

BRIDGE NO. 2905
BRIDGE PLANS

PROJ. MANAGER	DATE	BY
DESIGN-DETAILED: A. GRADY	8/19	M. W. SMITH
CHECKED-REVIEWED: J. FRENCH	8/19	M. G. SMITH
DESIGN-DETAILED: E. MALONEY		
DESIGN-DETAILED: J. MALONEY		
REVISIONS: 1		
REVISIONS: 2		
REVISIONS: 3		
REVISIONS: 4		
FIELD CHANGES		

SHEET NUMBER
5
OF 22

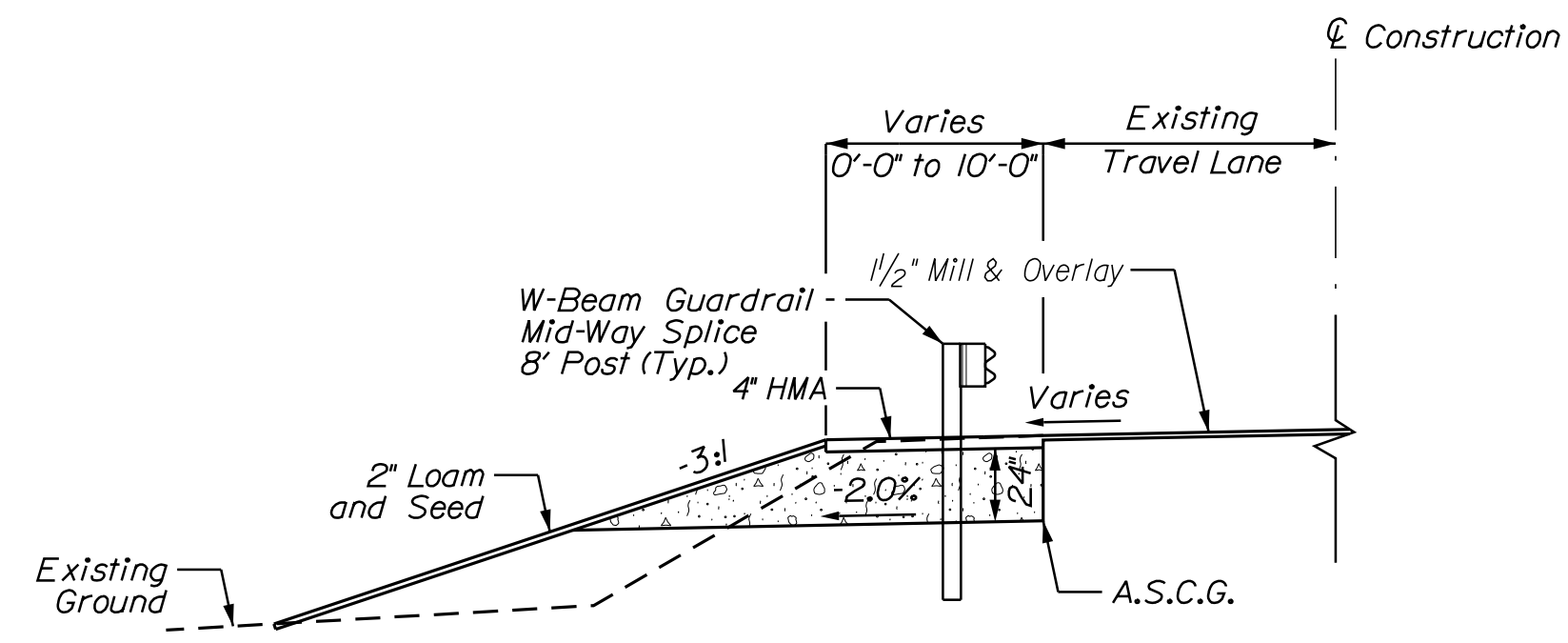
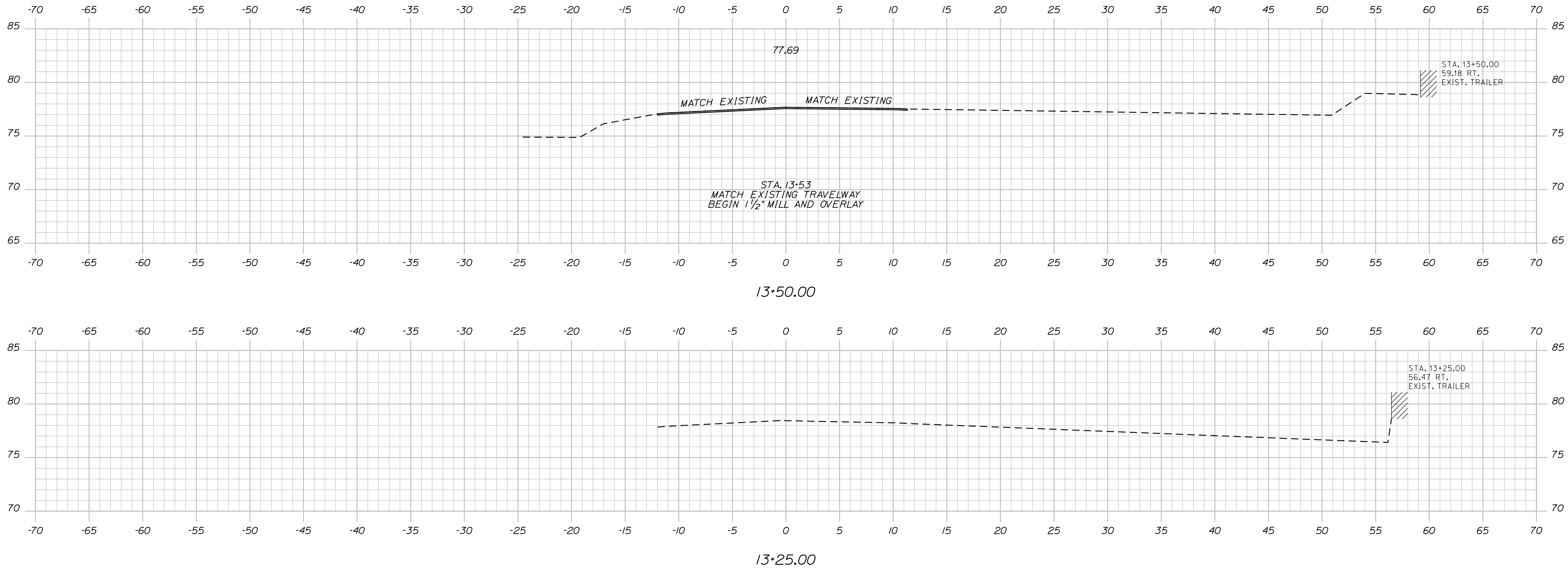
Date: 11/1/2019

Username:

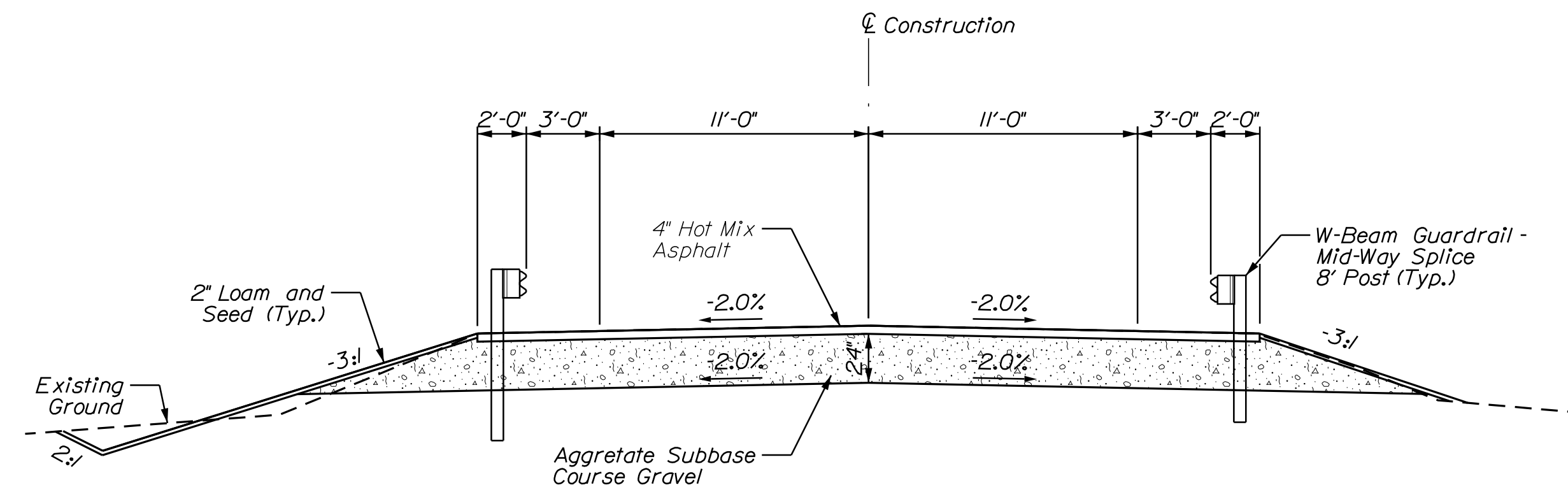
Division: BRIDGE

Filename: ... \ustn\007_XSECT_13+00_001.dgn

Sta. 13+00.00 to Sta. 13+50.00



ROADWAY WIDENING
 STA. 13+53 - STA. 13+75 RT
 STA. 18+00 - STA. 18+50 LT



TYPICAL APPROACH SECTION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

18230.00

WIN

BRIDGE NO. 2905 18230.00

PROJ. MANAGER	D. EATON	BY	M. W. SMITH	DATE	8/19
CHECKED/REVIEWED	A. GRALDI	DESIGNED/REVIEWED	M. G. SMITH	SIGNATURE	
DESIGNED/REVIEWED	E. MALONEY	DESIGNED/REVIEWED		P.E. NUMBER	
REVISIONS 1		REVISIONS 1		DATE	
REVISIONS 2		REVISIONS 2			
REVISIONS 3		REVISIONS 3			
REVISIONS 4		REVISIONS 4			
FIELD CHANGES		FIELD CHANGES			

WAGNER NO. 2 BRIDGE	HOCH BROOK
WALDOBORO	LINCOLN COUNTY

CROSS SECTIONS

SHEET NUMBER

2

OF 22

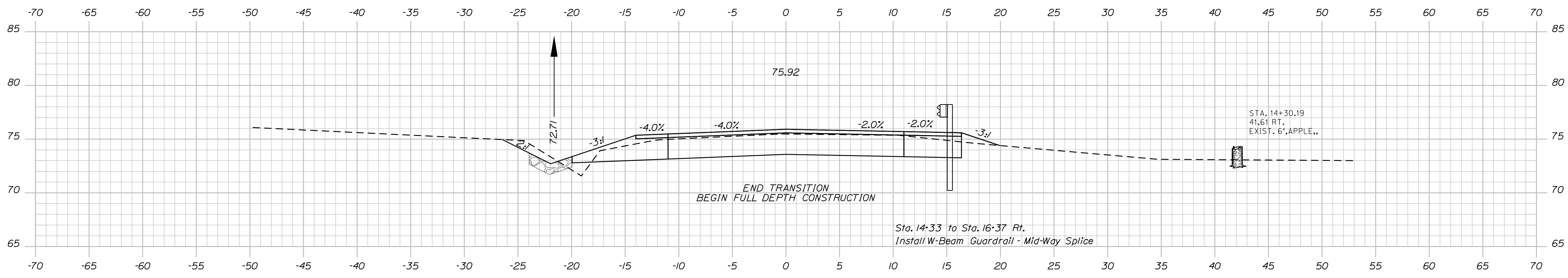
Date: 11/1/2019

Username:

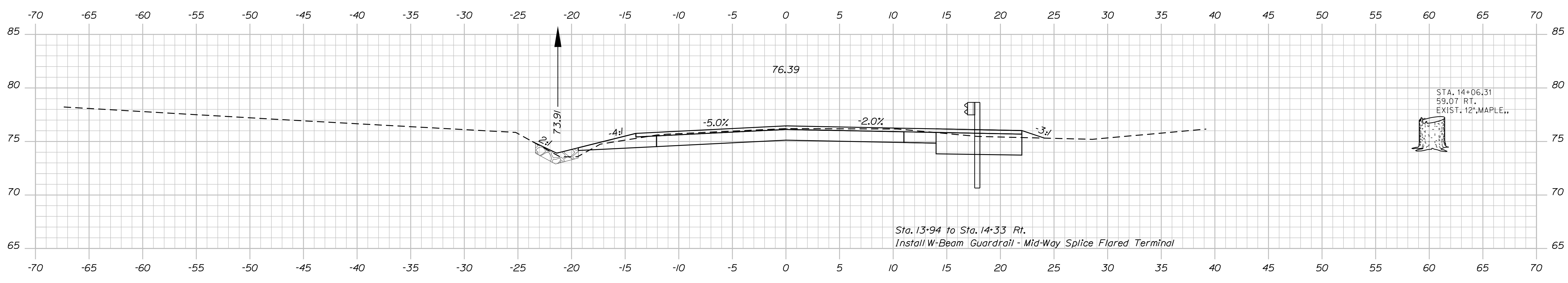
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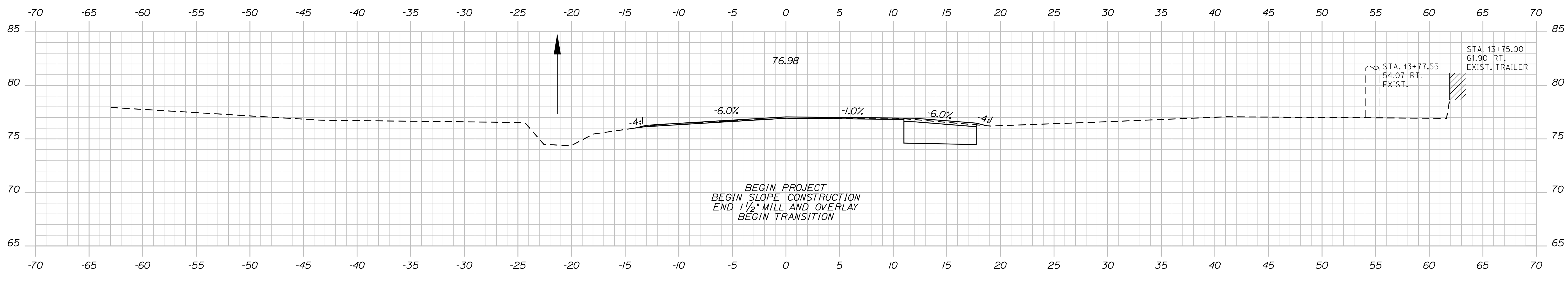
Sta. 13+75.00 to Sta. 14+25.00



14+25.00



14+00.00



13+75.00

STATE OF MAINE DEPARTMENT OF TRANSPORTATION		18230.00		BRIDGE NO. 2905		WIN		18230.00		BRIDGE PLANS	
WAGNER NO. 2 BRIDGE HOCH BROOK LINCOLN COUNTY		WALDOBORO		CROSS SECTIONS		SHEET NUMBER		8		OF 22	
PROJ. MANAGER	D. EATON	BY	M. W. SMITH	DATE	8/19	DESIGN-REVIEWED	A. GRALDI	SIGNATURE		P.E. NUMBER	
CHECKED-REVIEWED	E. MALONEY	DESIGN-REVIEWED	M. G. SMITH	DATE	8/19	DESIGN-REVIEWED		SIGNATURE		P.E. NUMBER	
DESIGN-REVIEWED		DESIGN-REVIEWED		DATE		DESIGN-REVIEWED		SIGNATURE		P.E. NUMBER	
REVISIONS 1		REVISIONS 1		DATE		REVISIONS 1		SIGNATURE		P.E. NUMBER	
REVISIONS 2		REVISIONS 2		DATE		REVISIONS 2		SIGNATURE		P.E. NUMBER	
REVISIONS 3		REVISIONS 3		DATE		REVISIONS 3		SIGNATURE		P.E. NUMBER	
REVISIONS 4		REVISIONS 4		DATE		REVISIONS 4		SIGNATURE		P.E. NUMBER	
FIELD CHANGES		FIELD CHANGES		DATE		FIELD CHANGES		SIGNATURE		P.E. NUMBER	

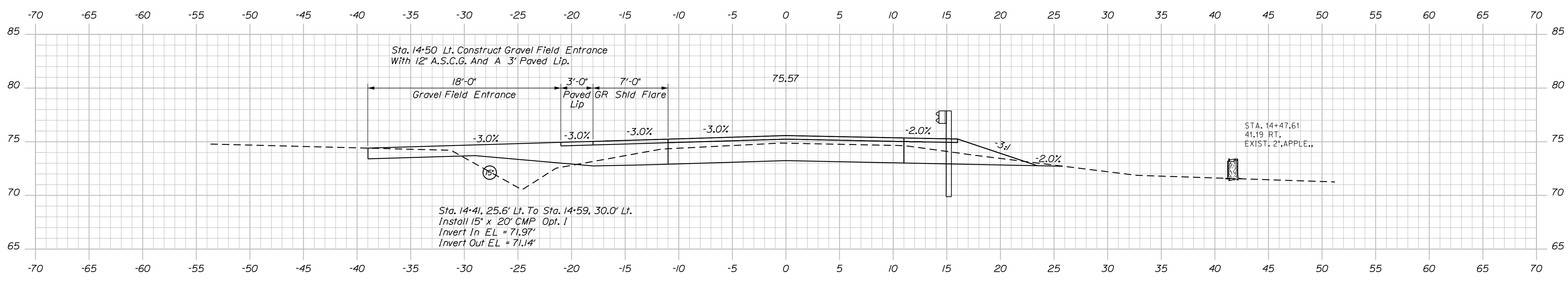
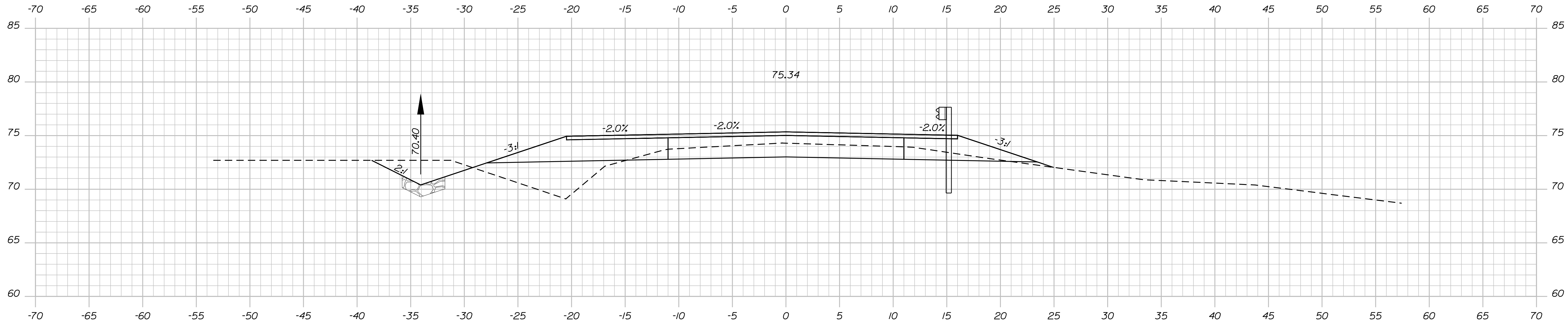
Date: 11/5/2019

Username: Mark.Poulin

Division: BRIDGE

Filename: ... \MSTAN09_XSECT_14+50_003.dgn

Sta. 14+50.00 to Sta. 14+75.00



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
18230.00
WIN
18230.00
BRIDGE NO. 2905
BRIDGE PLANS

PROJ. MANAGER	D. EATON	BY	DATE
CHECKED/REVIEWED	A. GRALDI	M. W. SMITH	8/19
DESIGNED/DETAILED	E. MALONEY	M. G. SMITH	8/19
DESIGNED/DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

WAGNER NO. 2 BRIDGE
HOCH BROOK
LINCOLN COUNTY
WALDOBORO
CROSS SECTIONS

SHEET NUMBER
9
OF 22

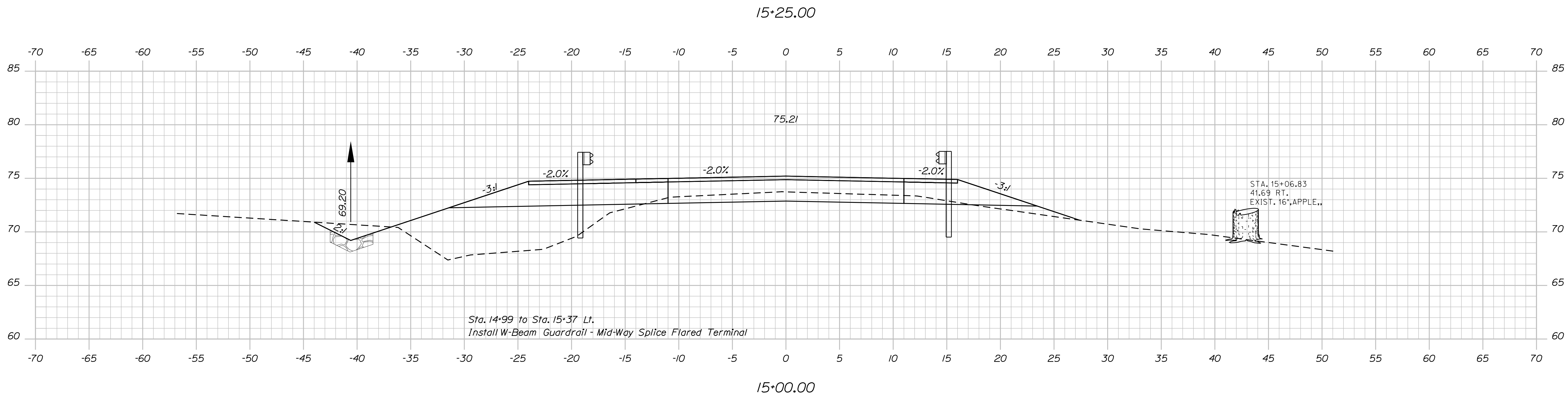
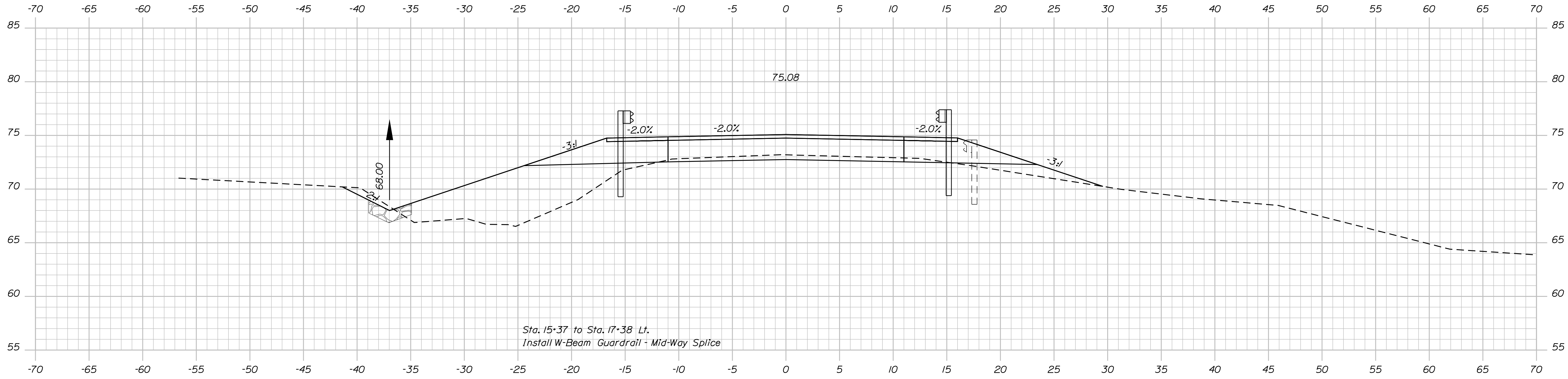
Date: 11/1/2019

Username:

Division: BRIDGE

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Sta. 15+00.00 to Sta. 15+25.00



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

18230.00

WIN

18230.00

BRIDGE NO. 2905 BRIDGE PLANS

SIGNATURE

DATE

BY
M. W. SMITH

DESIGN-DETAILED
A. GRALDI

CHECKED-REVIEWED
M. W. SMITH

DESIGN-DETAILED
E. MALONEY

DESIGN-DETAILED
M. G. SMITH

REVISIONS 1

REVISIONS 2

REVISIONS 3

REVISIONS 4

FIELD CHANGES

P.E. NUMBER

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

WAGNER NO. 2 BRIDGE
HOCH BROOK
LINCOLN COUNTY

WALDOBORO

CROSS SECTIONS

SHEET NUMBER

10

OF 22

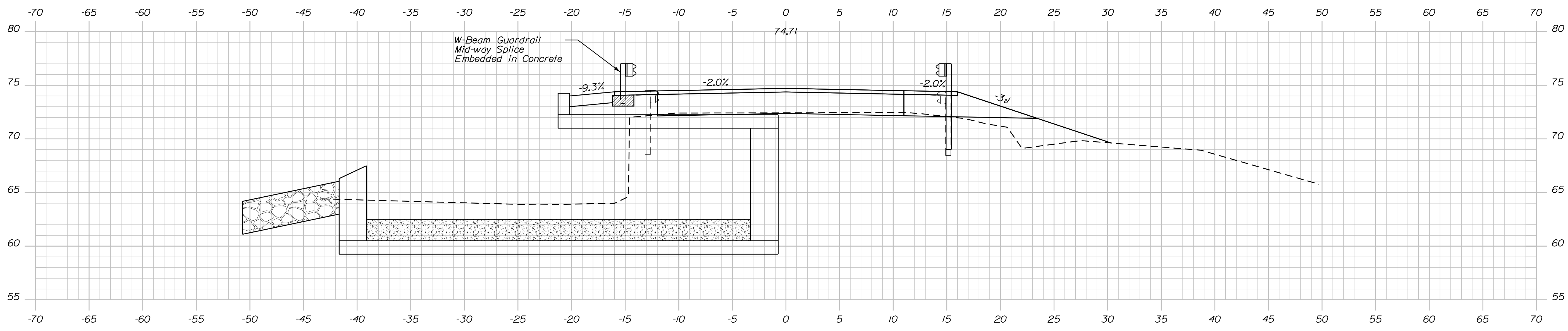
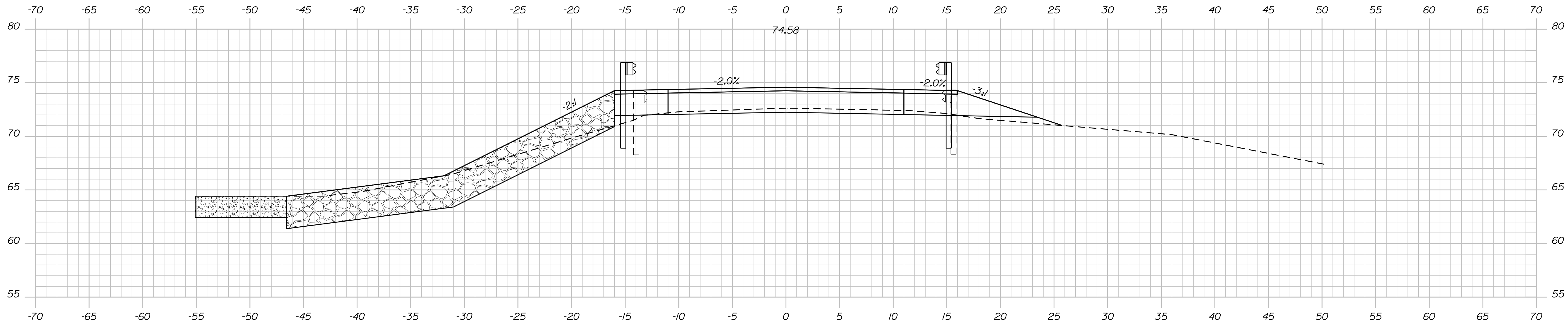
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Username:

Division: BRIDGE

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Sta. 16+00.00 to Sta. 16+25.00



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
18230.00
WIN
18230.00
BRIDGE NO. 2905
BRIDGE PLANS

PROJ. MANAGER
DESIGN-DETAILED
CHECKED-REVIEWED
DESIGN-DETAILED
DESIGN-DETAILED
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

D. EATON
A. GRALDI
E. MALONEY

BY
M. W. SMITH
M. G. SMITH

DATE
8/19
8/19

SIGNATURE
P.E. NUMBER
DATE

WAGNER NO. 2 BRIDGE
HOCH BROOK
LINCOLN COUNTY
WALDOBORO

CROSS SECTIONS

SHEET NUMBER
12
OF 22

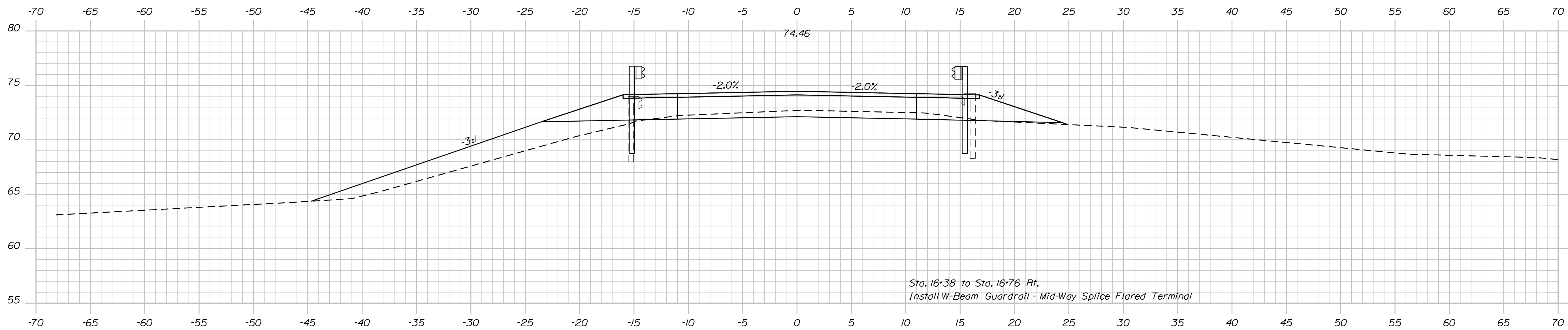
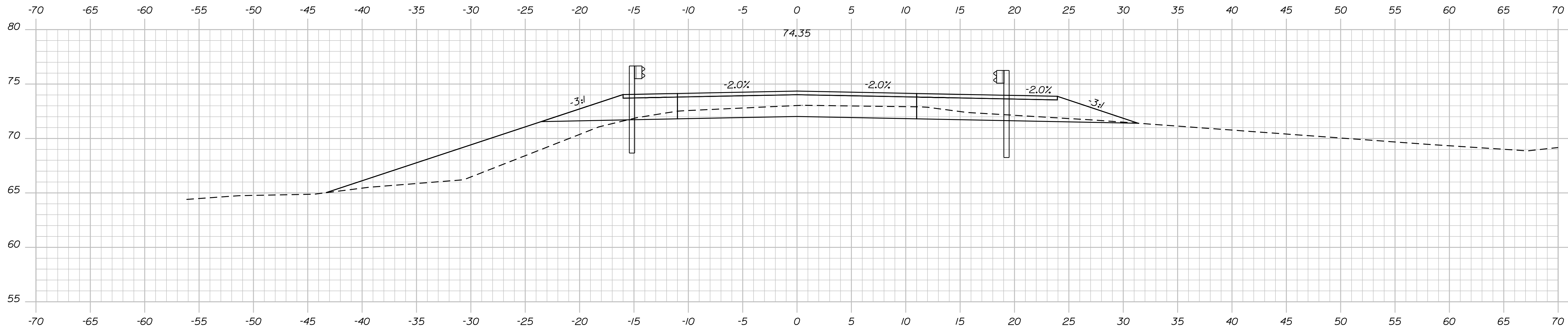
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Username:

Division: BRIDGE

Filename: ... \ustn\013_XSECT_16+50_007.dgn

Sta. 16+50.00 to Sta. 16+75.00



STATE OF MAINE		DEPARTMENT OF TRANSPORTATION	
18230.00		WIN	
BRIDGE NO. 2905		BRIDGE PLANS	
WAGNER NO. 2 BRIDGE		LINCOLN COUNTY	
HOCH BROOK		CROSS SECTIONS	
WALDOBORO		SHEET NUMBER	
13		OF 22	
PROJ. MANAGER	D. EATON	BY	M. W. SMITH
DESIGN/DETAILED	A. GRALDI	DATE	8/19
CHECKED/REVIEWED	E. MALONEY	SIGNATURE	
DESIGN/DETAILED	M. G. SMITH	P.E. NUMBER	
REVISIONS 1		DATE	
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

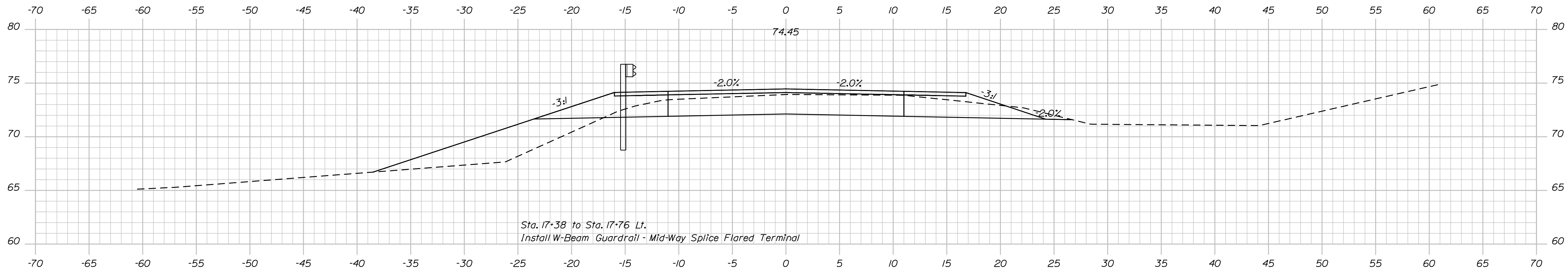
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Username:

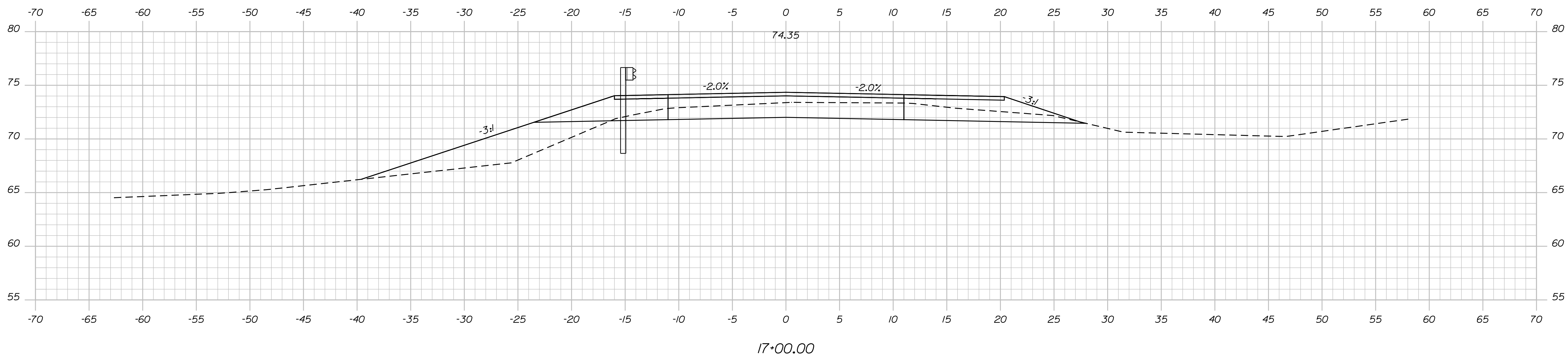
Division: BRIDGE

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Sta. 17+00.00 to Sta. 17+25.00



Sta. 17+38 to Sta. 17+76 Lt.
Install W-Beam Guardrail - Mid-Way Splice Flared Terminal



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

18230.00

BRIDGE NO. 2905
WIN
18230.00
BRIDGE PLANS

SIGNATURE

DATE

BY

D. EATON

PROJ. MANAGER

DESIGN/DETAILED

CHECKED/REVIEWED

DESIGN/DETAILED

REVISIONS 1

REVISIONS 2

REVISIONS 3

REVISIONS 4

FIELD CHANGES

DATE

P.E. NUMBER

DATE

DATE

DATE

DATE

DATE

DATE

WAGNER NO. 2 BRIDGE
HOCH BROOK
LINCOLN COUNTY
WALDOBORO

CROSS SECTIONS

SHEET NUMBER

14

OF 22

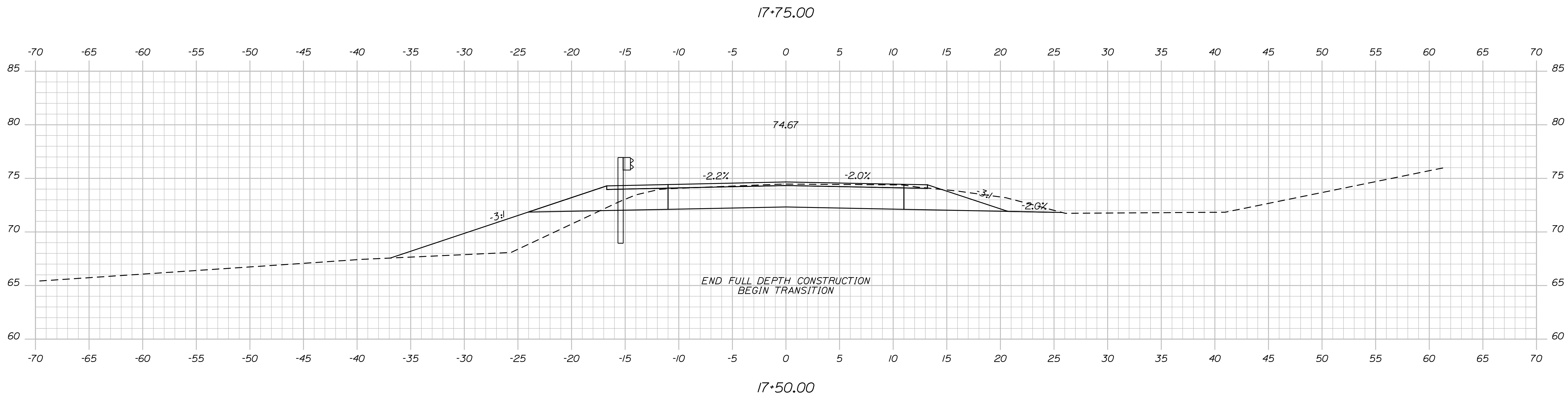
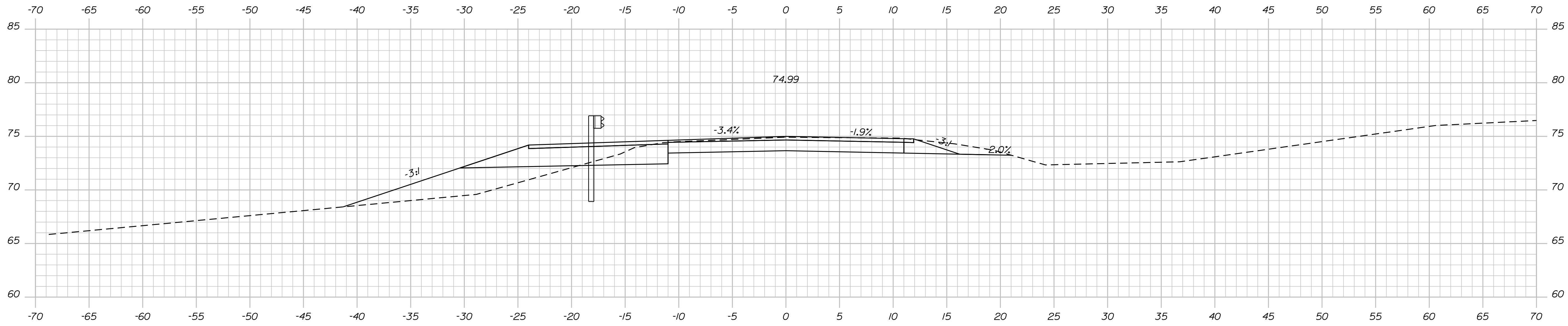
Date: 11/1/2019

Username:

Division: BRIDGE

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Sta. 17+50.00 to Sta. 17+75.00



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

18230.00

BRIDGE NO. 2905
WIN
18230.00
BRIDGE PLANS

SIGNATURE

DATE

BY

D. EATON

CHECKED/REVIEWED

DESIGNED/DETAILED

REVISIONS 1

REVISIONS 2

REVISIONS 3

REVISIONS 4

FIELD CHANGES

WAGNER NO. 2 BRIDGE
HOCH BROOK
LINCOLN COUNTY
WALDOBORO

CROSS SECTIONS

SHEET NUMBER

15

OF 22

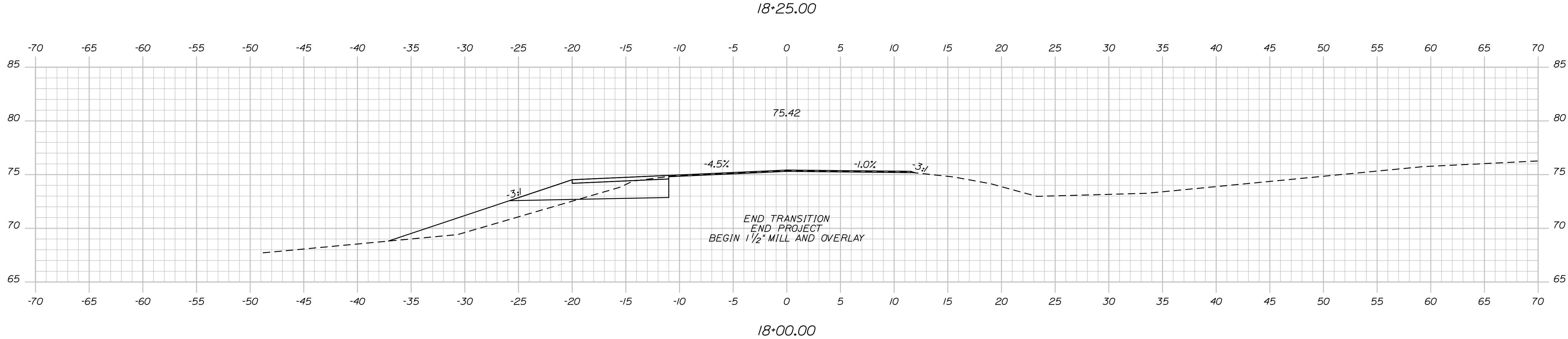
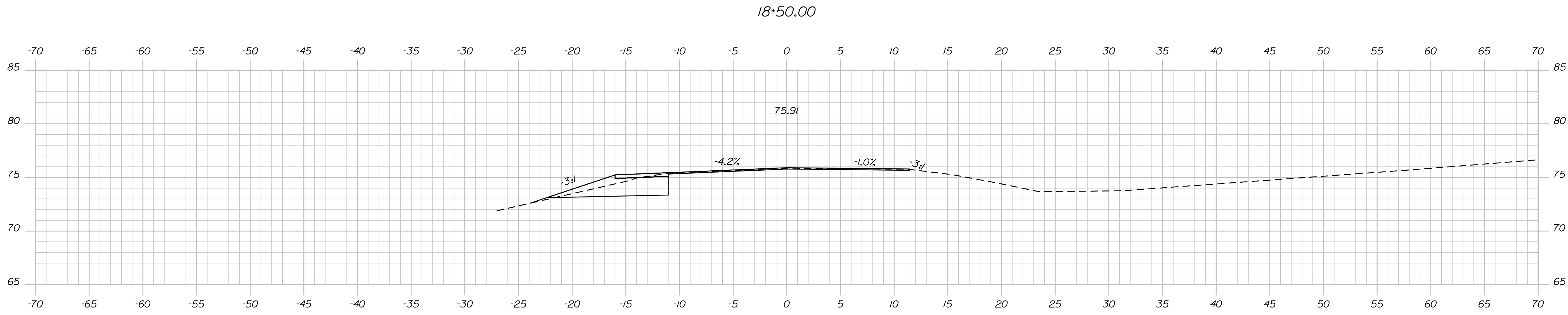
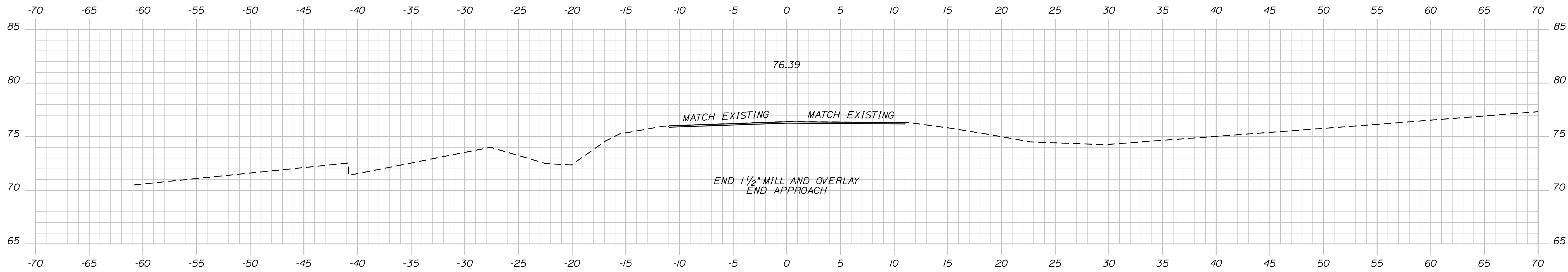
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Username:

Division: BRIDGE

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Sta. 18+00.00 to Sta. 18+50.00



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

18230.00

BRIDGE NO. 2905
WIN
18230.00
BRIDGE PLANS

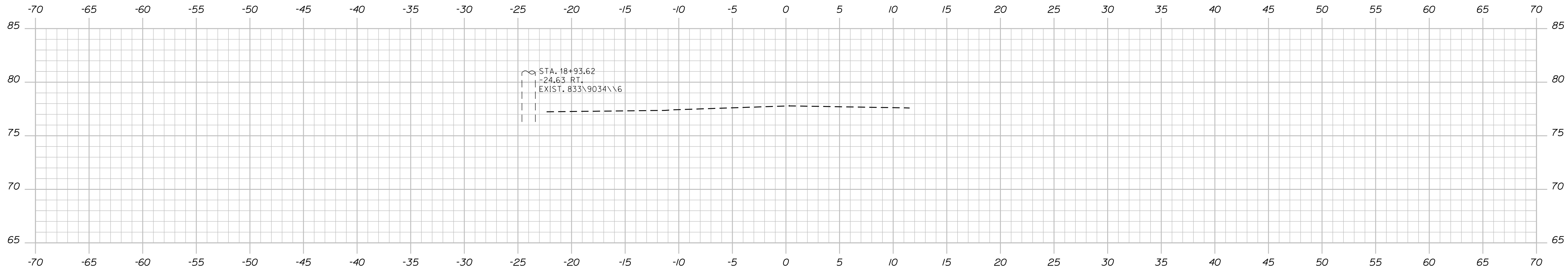
PROJ. MANAGER	D. EATON	BY	DATE
DESIGN-DETAILED	A. GRALDI	M. W. SMITH	8/19
CHECKED-REVIEWED	E. MALONEY	M. G. SMITH	8/19
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

WAGNER NO. 2 BRIDGE
HOCH BROOK
LINCOLN COUNTY
WALDOBORO
CROSS SECTIONS

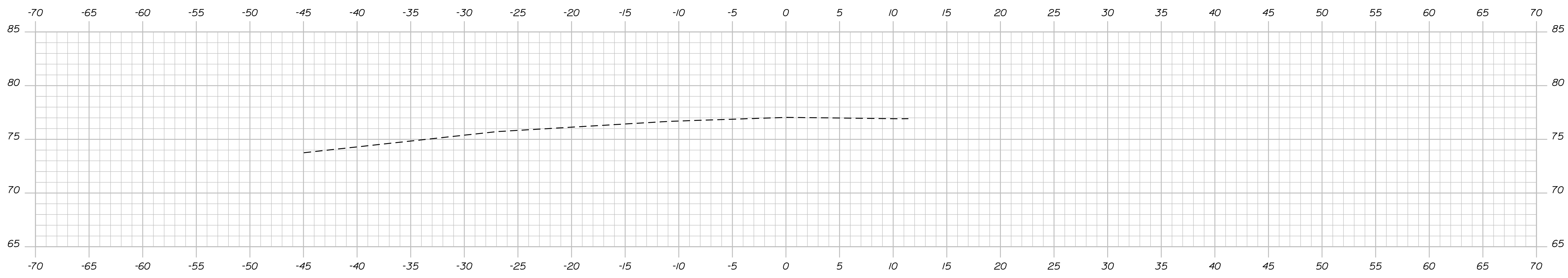
SHEET NUMBER

16

OF 22



19+00.00



18+75.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

18230.00

BRIDGE NO. 2905
WIN
18230.00
BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE

PROJ. MANAGER	D. EATON	BY	DATE
DESIGN-DETAILED	A. GRALDI	M. W. SMITH	8/19
CHECKED-REVIEWED	E. MALONEY	M. G. SMITH	8/19
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

WAGNER NO. 2 BRIDGE
HOCH BROOK
LINCOLN COUNTY
WALDOBORO

CROSS SECTIONS

SHEET NUMBER

17

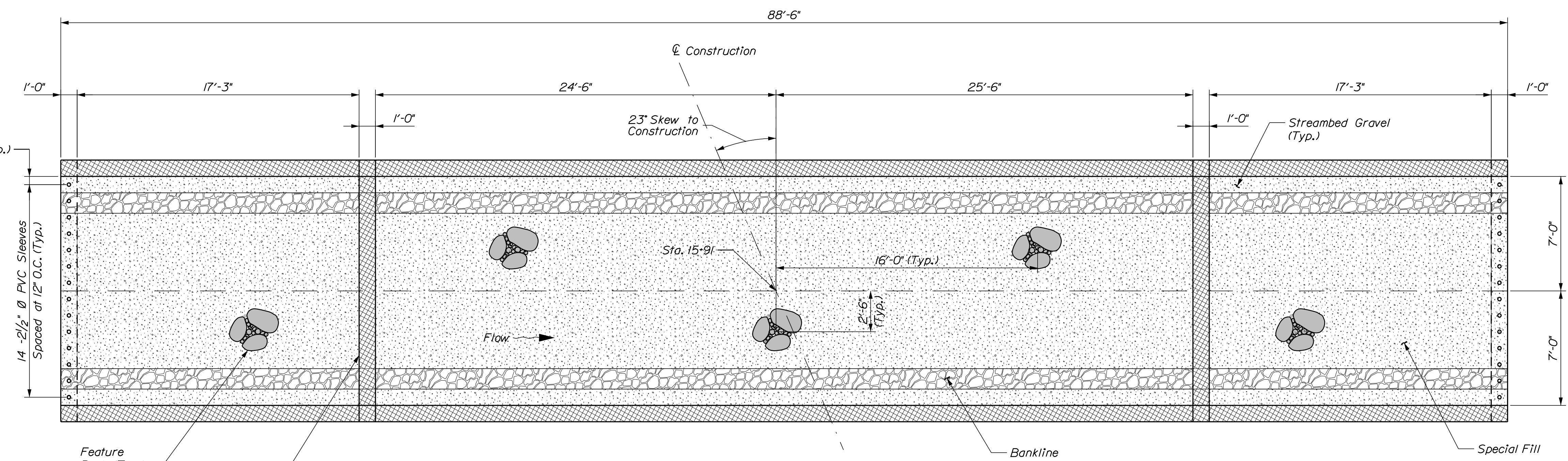
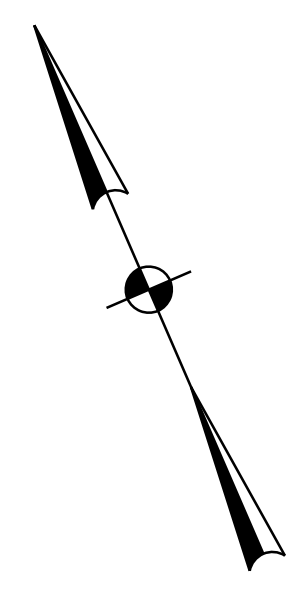
OF 22

Date: 11/1/2019

Username:

Division: BRIDGE

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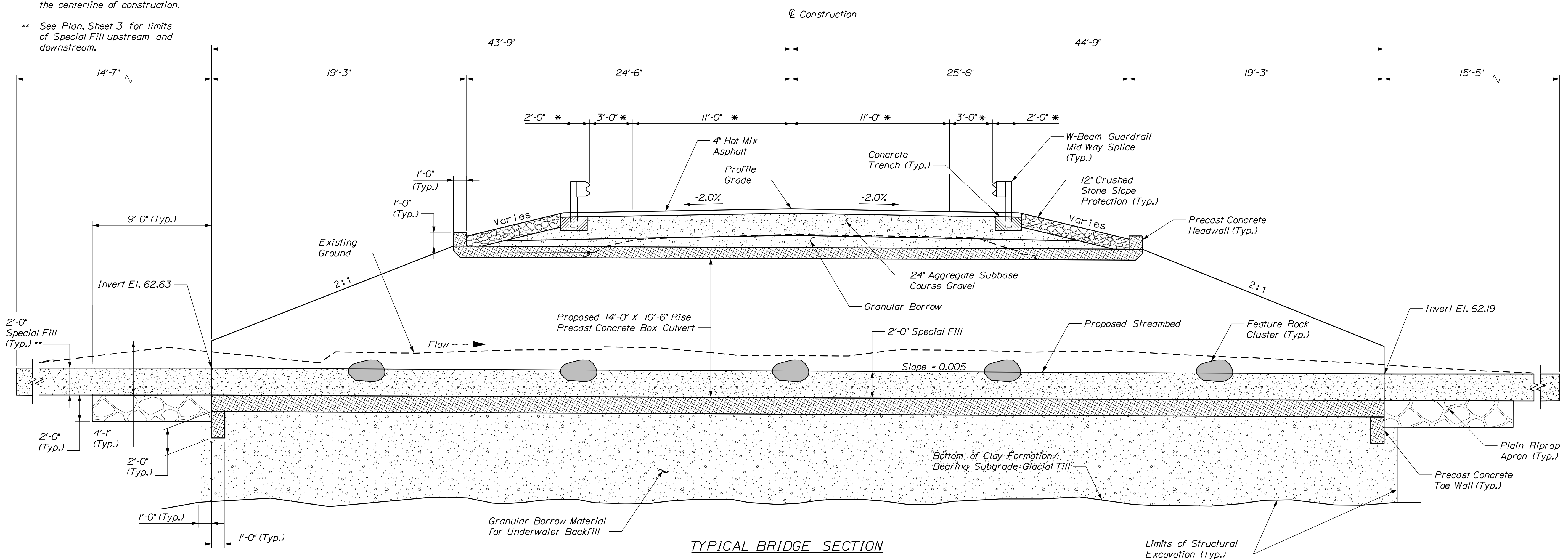


PRECAST CONCRETE BOX PLAN

Feature Rocks Layout

Place 3 Feature Rocks Per Cluster. Individual Feature Rocks Shall Be 18 in. To 24 in. Diameter. Voids between the Feature Rocks Shall be Filled with Smaller Stones of Varying Gradations.

- * Dimensions and grades shown are measured perpendicular to the centerline of construction.
- ** See Plan, Sheet 3 for limits of Special Fill upstream and downstream.



TYPICAL BRIDGE SECTION

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		BRIDGE NO. 2905		BRIDGE PLANS	
		18230.00		WIN		18230.00	
WAGNER NO. 2 BRIDGE		HOCH BROOK		LINCOLN COUNTY		PRECAST CONCRETE BOX	
WALDOBORO						DETAILS (1 OF 2)	
SHEET NUMBER		18		OF 22			

PROJ. MANAGER	D. EATON	BY	DATE
DESIGN DETAILED	A. GRALDI	M. W. SMITH	8/19
CHECKED/REVIEWED	J. FRENCH	M. G. SMITH	8/19
DESIGN DETAILED	E. MALONEY		
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

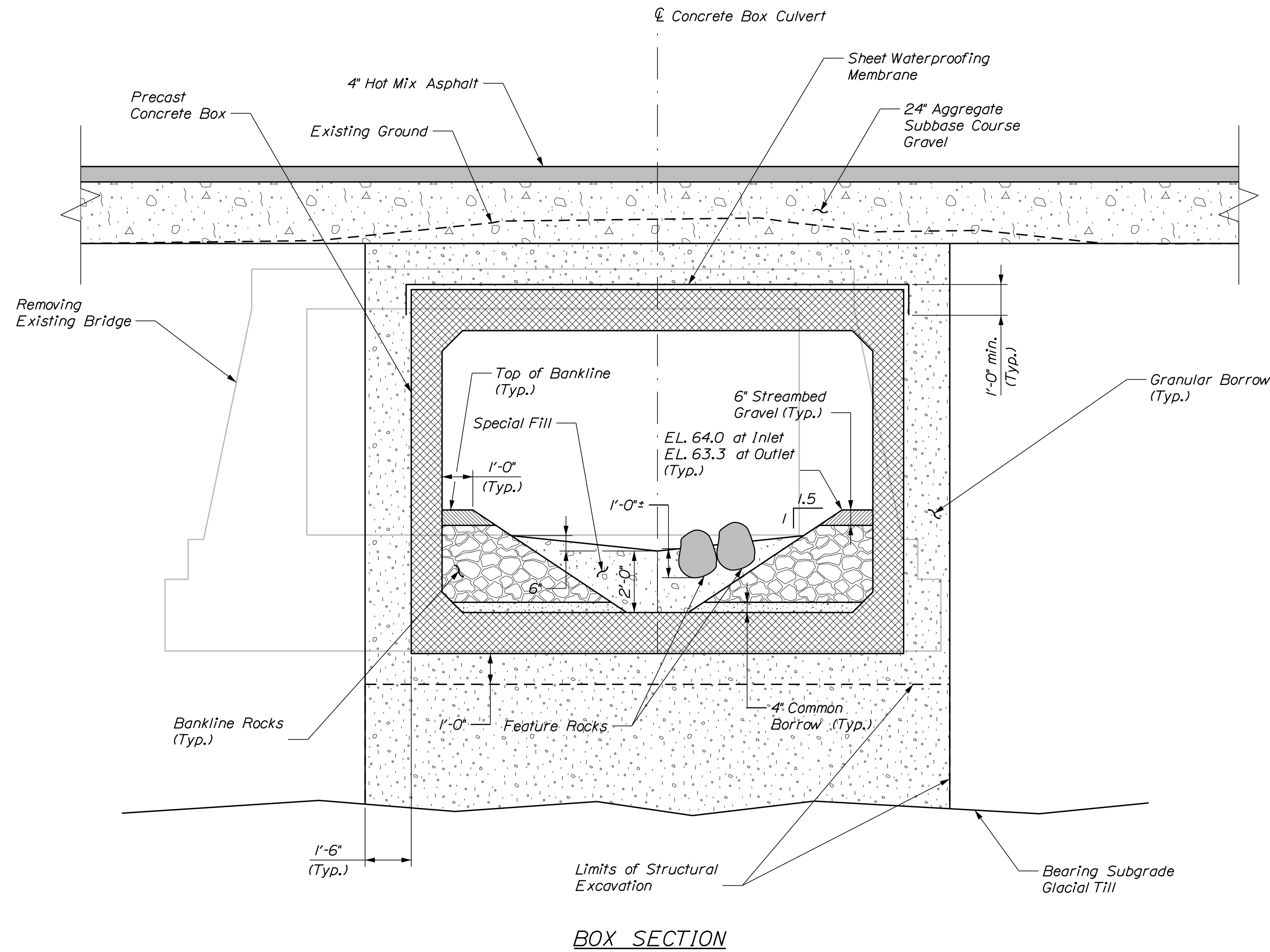
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Date: 11/1/2019

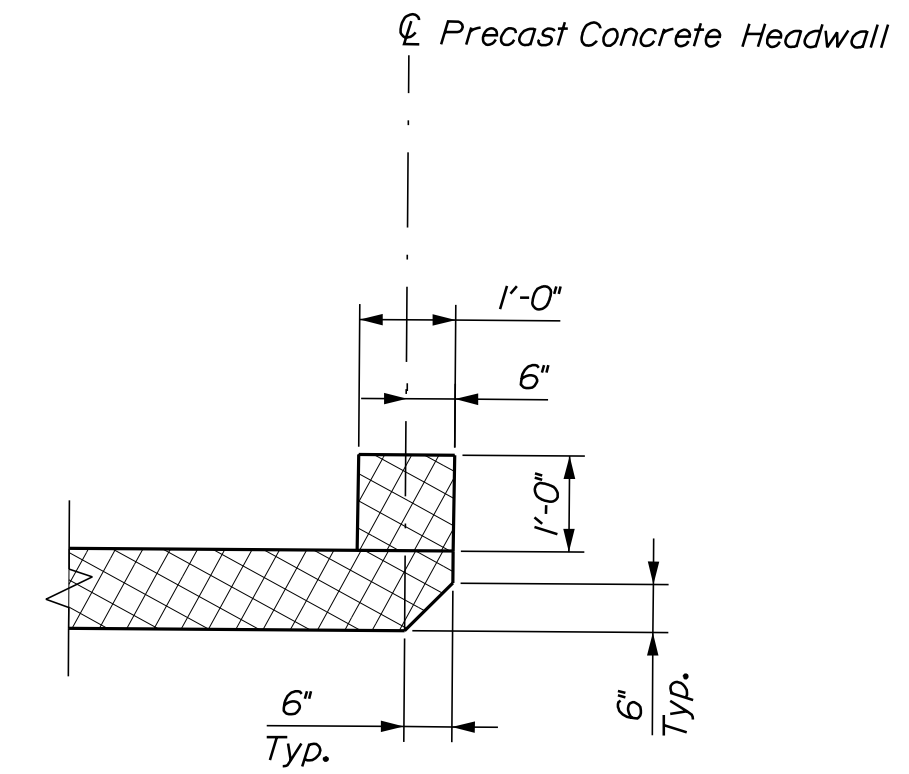
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Division: BRIDGE

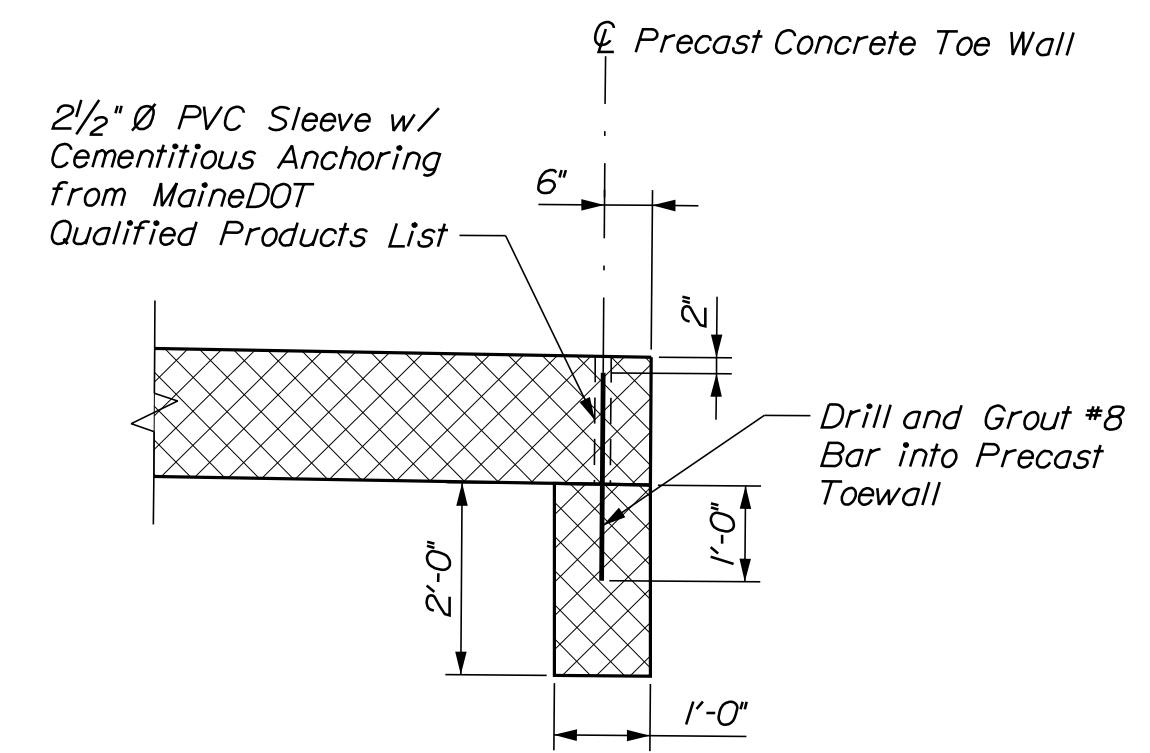
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BOX SECTION



PRECAST CONCRETE HEADWALL DETAIL



PRECAST CONCRETE TOEWALL DETAIL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

18230.00

WIN

BRIDGE NO. 2905

BRIDGE PLANS

PROJ. MANAGER
DESIGN-DETAILED
CHECKED-REVIEWED
DESIGN-DETAILED
DESIGN-DETAILED
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

D. EATON
A. GRALDI
M. W. SMITH
J. FRENCH
E. MALONEY
M. G. SMITH

DATE
8/19
8/19
8/19
8/19
8/19
8/19
8/19
8/19

BY
M. W. SMITH
J. FRENCH
E. MALONEY
M. G. SMITH

SIGNATURE

P.E. NUMBER

DATE

WAGNER NO. 2 BRIDGE
HOCH BROOK
LINCOLN COUNTY
WALDOBORO

PRECAST CONCRETE BOX
DETAILS (2 OF 2)

SHEET NUMBER

19

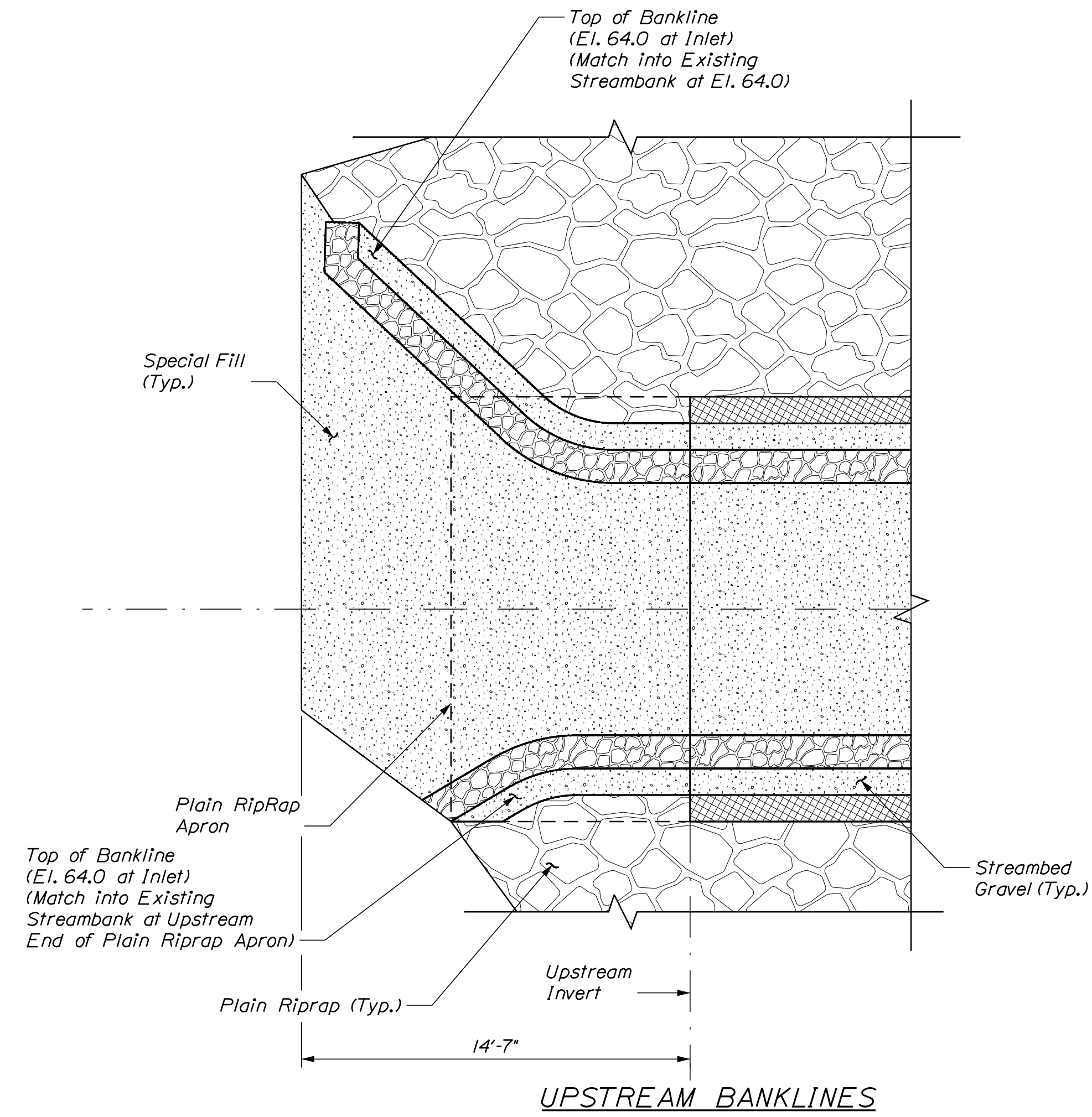
OF 22

Date: 11/1/2019

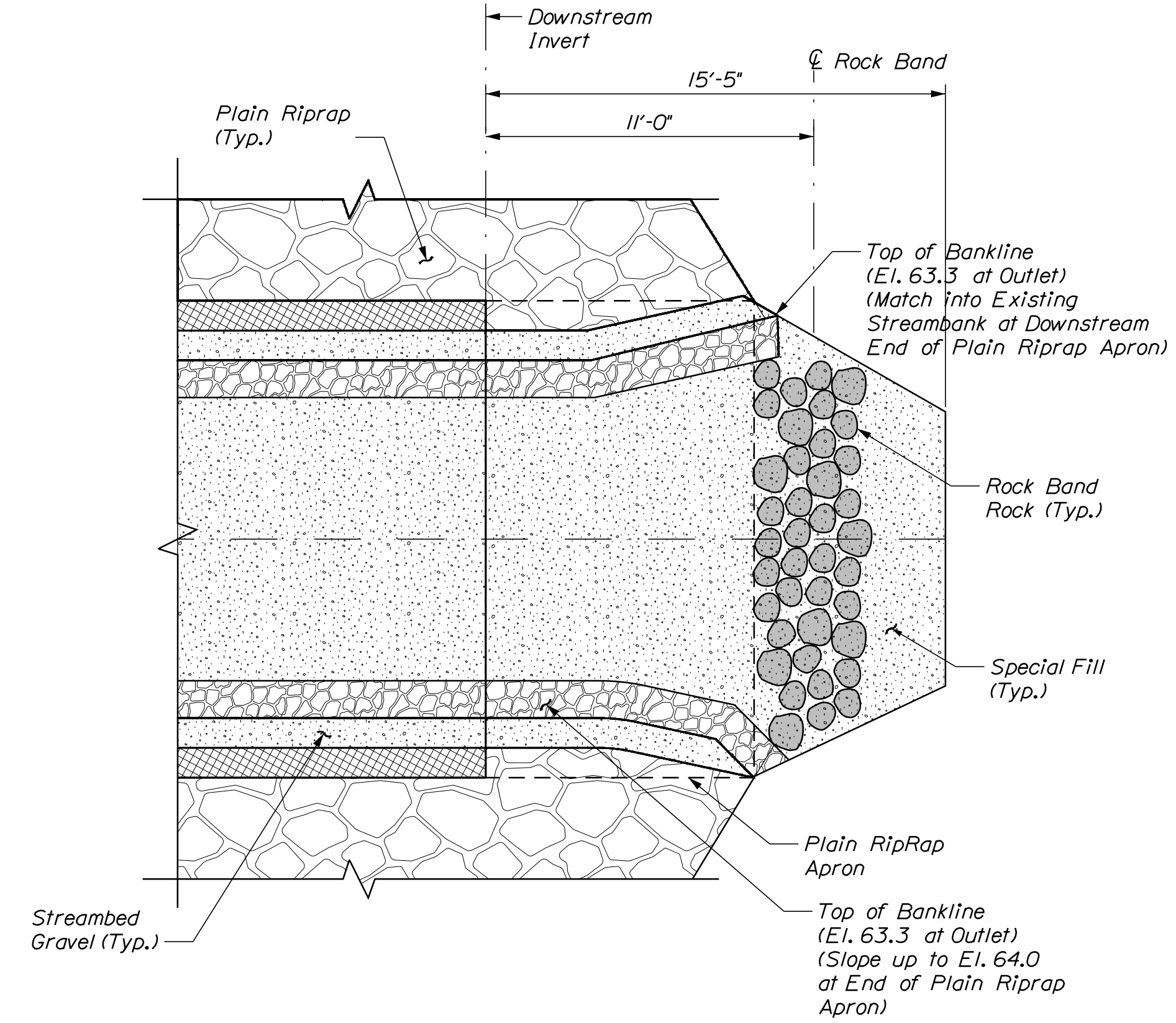
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Division: BRIDGE

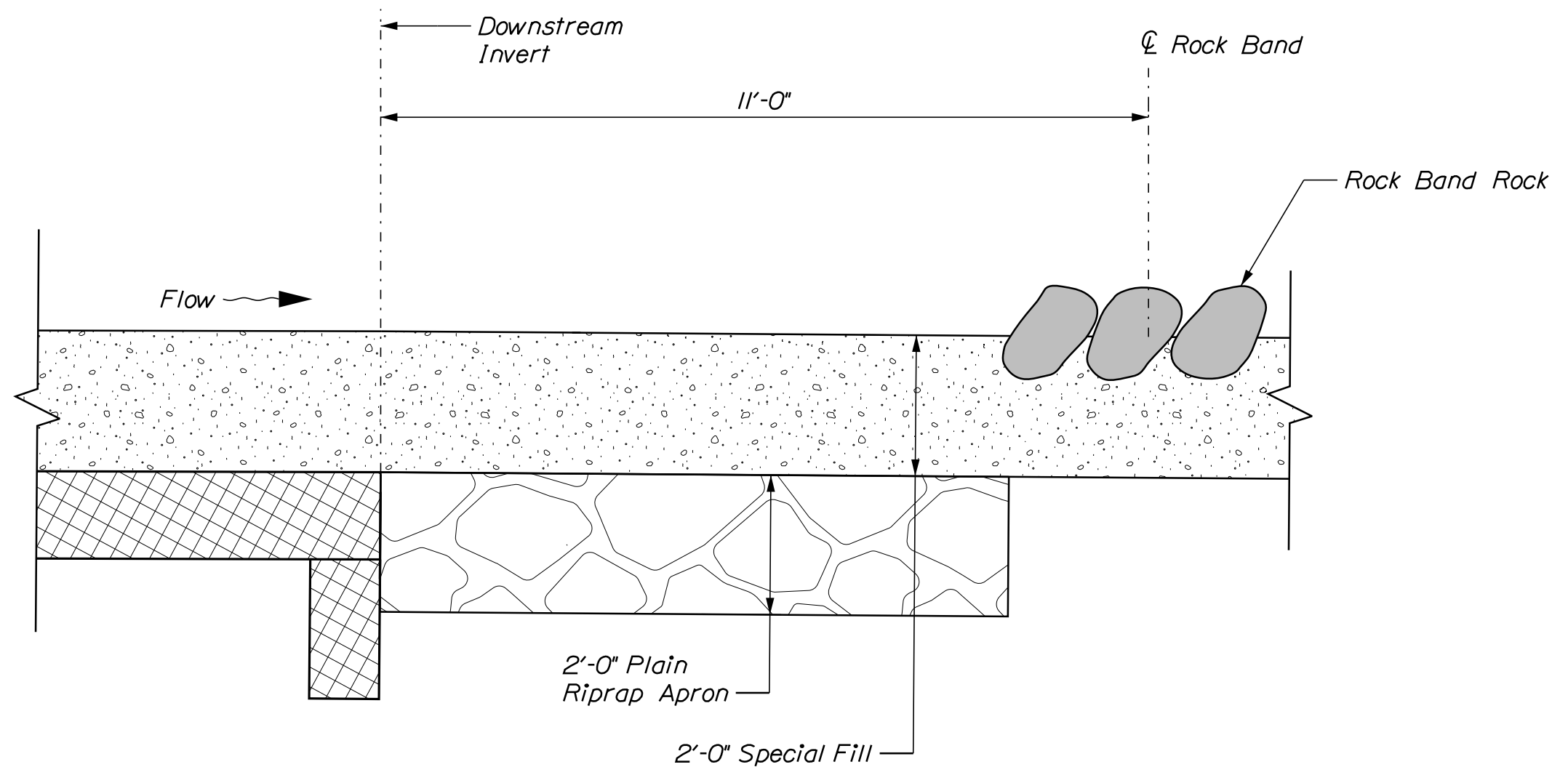
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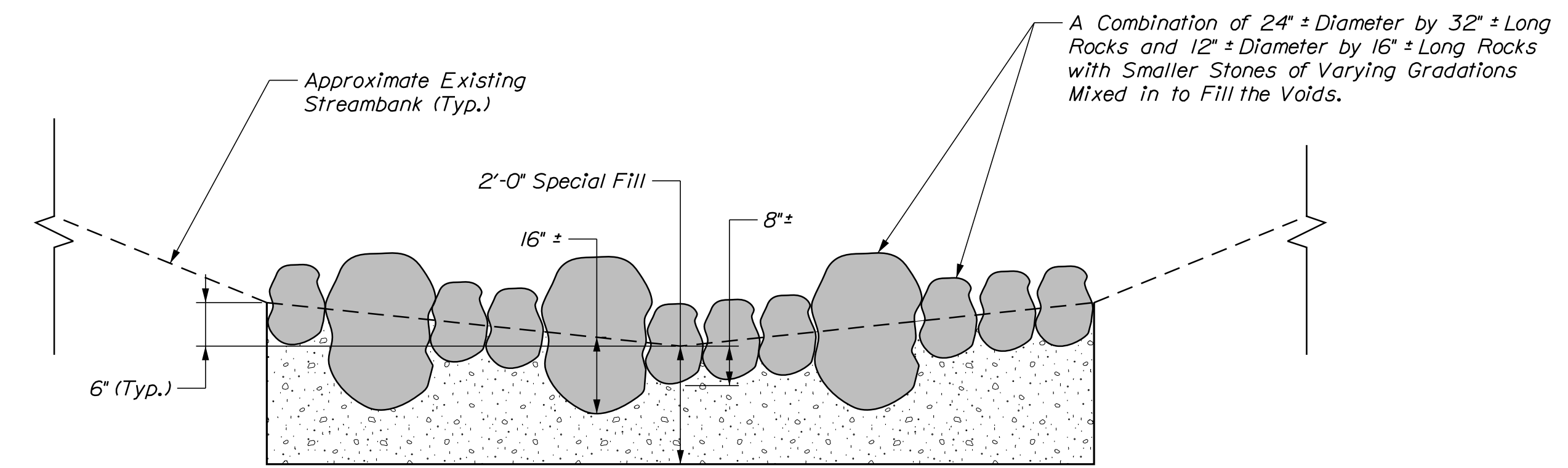
UPSTREAM BANKLINES



DOWNSTREAM BANKLINES



ROCK BAND DETAIL



ROCK BAND SECTION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
18230.00
WIN
18230.00
BRIDGE NO. 2905
BRIDGE PLANS

PROJ. MANAGER	D. EATON	BY	DATE
DESIGN DETAILED	S. BEAUMONT	M. W. SMITH	8/9
CHECKED/REVIEWED	A. CRALDI	J. FRENCH	8/9
DESIGN DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

WAGNER NO. 2 BRIDGE
HOCH BROOK
LINCOLN COUNTY
WALDOBORO
STREAM SIMULATION DETAILS

SHEET NUMBER
20
OF 22

Date: 11/1/2019

Username:

Division: BRIDGE

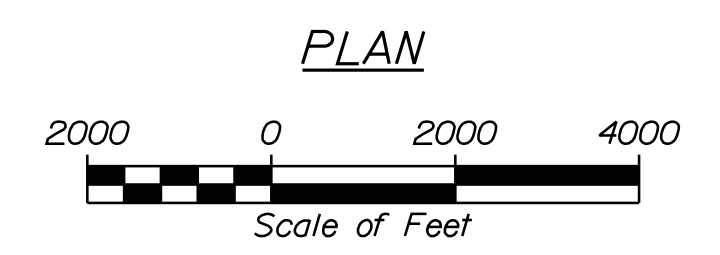
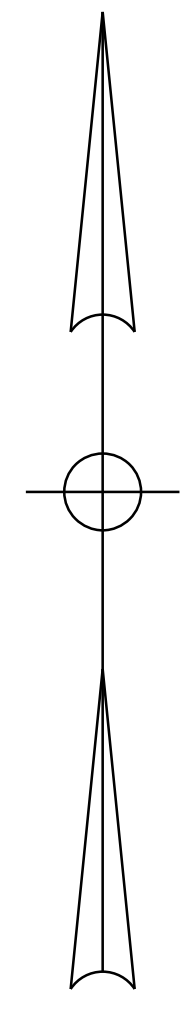
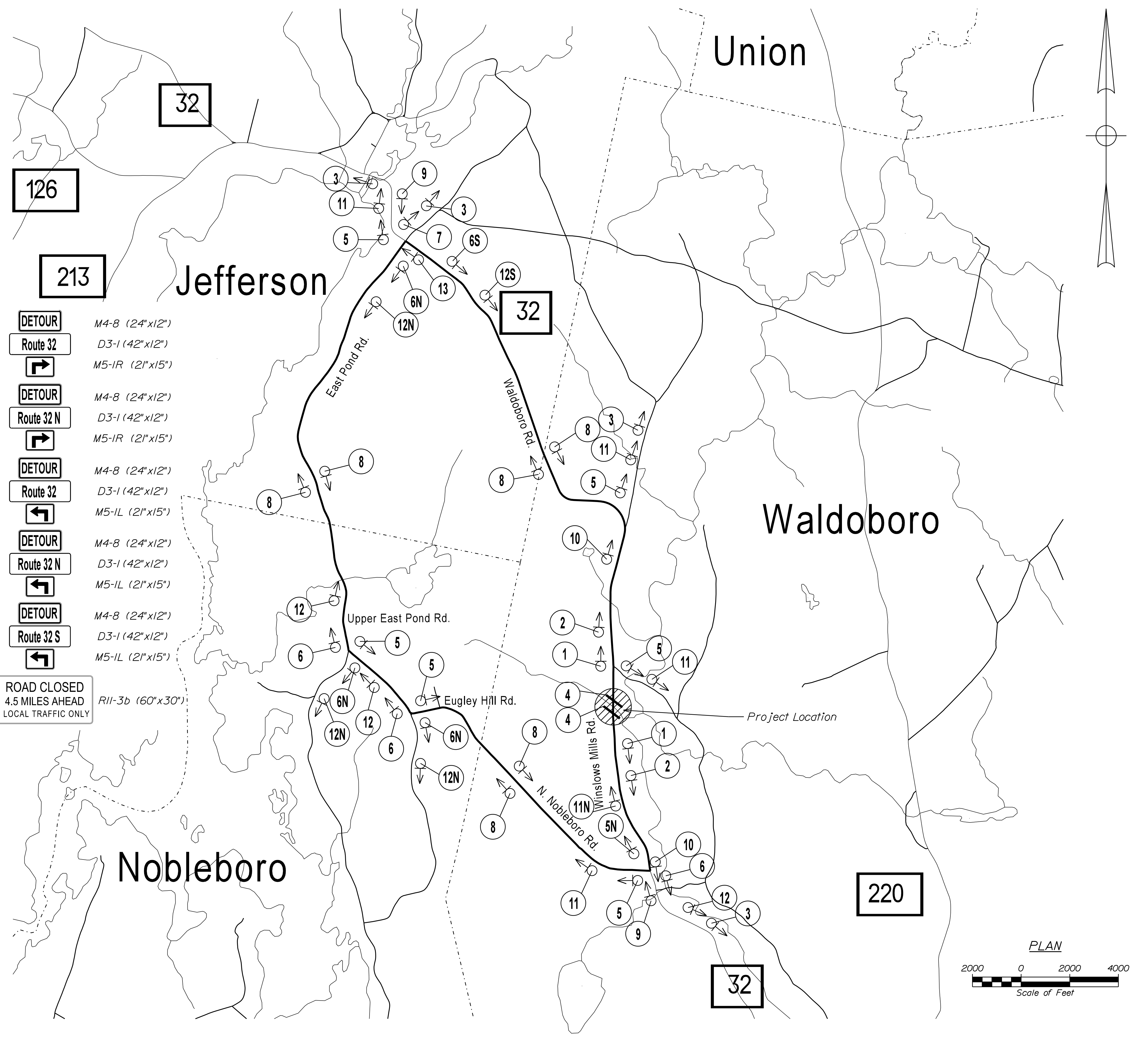
Filename: ... \ustn\018_DetourPlan.dgn

- 1 W20-4 (36"x36")
- 2 W20-4 (36"x36")
- 3 W20-2 (36"x36")
- 4 R11-2 (48"x30")
TYPE III BARRICADE TYPE III BARRICADE
- 5 M4-8 (24"x12")
 D3-1 (42"x12")
 M6-3 (21"x15")
- 5N M4-8 (24"x12")
 D3-1 (42"x12")
 M6-3 (21"x15")
- 6 M4-8 (24"x12")
 D3-1 (42"x12")
 M6-3 (21"x15")
- 6N M4-8 (24"x12")
 D3-1 (42"x12")
 M6-3 (21"x15")
- 6S M4-8 (24"x12")
 D3-1 (42"x12")
 M6-3 (21"x15")
- 7 M4-8 (24"x12")
 D3-1 (42"x12")
 M6-3 (21"x15")
- 8 M4-8 (24"x12")
 D3-1 (42"x12")
- 9 M4-8 (24"x12")
- 10 R11-3b (60"x30")
ROAD CLOSED 1 MILE AHEAD LOCAL TRAFFIC ONLY

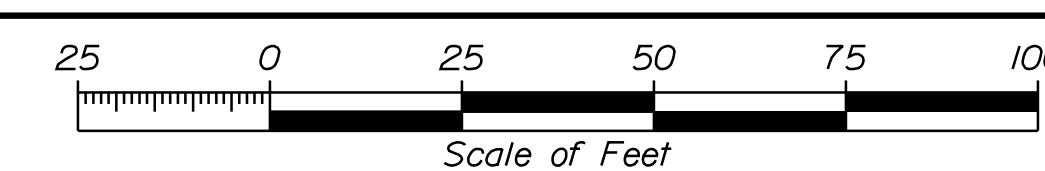
- 11 M4-8 (24"x12")
 D3-1 (42"x12")
 M5-1R (21"x15")
- 11N M4-8 (24"x12")
 D3-1 (42"x12")
 M5-1R (21"x15")
- 12 M4-8 (24"x12")
 D3-1 (42"x12")
 M5-1L (21"x15")
- 12N M4-8 (24"x12")
 D3-1 (42"x12")
 M5-1L (21"x15")
- 12S M4-8 (24"x12")
 D3-1 (42"x12")
 M5-1L (21"x15")

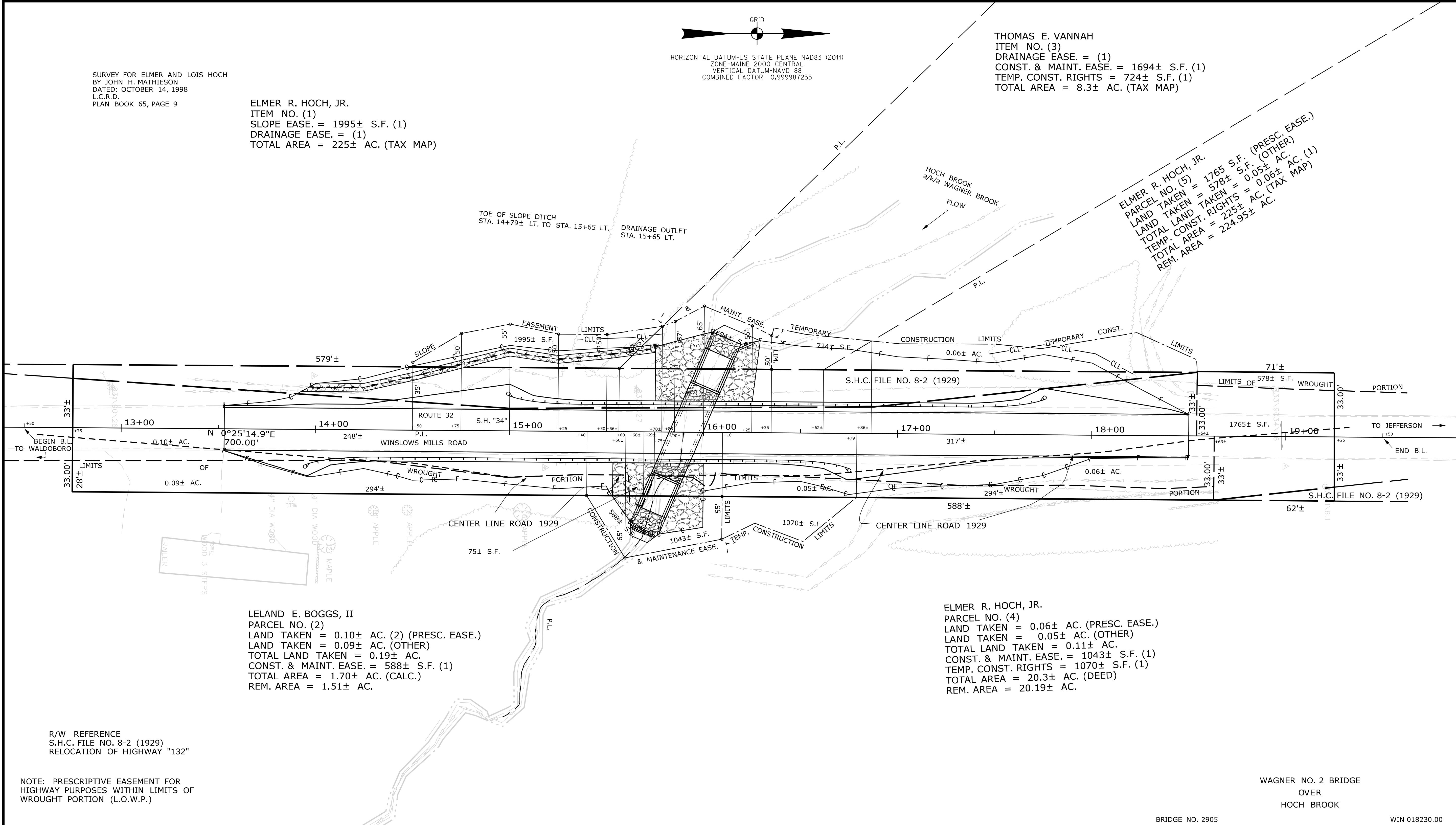
R11-3b (60"x30")
ROAD CLOSED 4.5 MILES AHEAD LOCAL TRAFFIC ONLY

- DETOUR NOTES:
- SPACING TO BE DETERMINED BY THE RESIDENT IN ACCORDANCE WITH MUTCD.
 - OTHER SIGNS MAY BE NEEDED AS DIRECTED BY THE RESIDENT.
 - CONFLICTING DIRECTIONAL AND ROUTE SIGNS SHALL BE COVERED.
 - PLACE ADVANCED WARNING SIGNS PER SPECIAL PROVISION 652.



STATE OF MAINE DEPARTMENT OF TRANSPORTATION		BRIDGE NO. 2905 WIN 18230.00	
WAGNER NO. 2 BRIDGE HOCH BROOK LINCOLN COUNTY		DETOUR PLAN	
WALDOBORO		SHEET NUMBER	
21		OF 22	
PROJ. MANAGER	D. EATON	BY	M. W. SMITH
CHECKED/REVIEWED	A. GRALDI	DATE	8/19
DESIGNED/DETAILED	E. MALONEY	DATE	8/19
DESIGNED/DETAILED	M. G. SMITH	DATE	-
REVISIONS 1	-	P.E. NUMBER	-
REVISIONS 2	-	DATE	-
REVISIONS 3	-	DATE	-
REVISIONS 4	-	DATE	-
FIELD CHANGES	-	DATE	-

Town, County, State _____ Approx. Property Lines _____ Existing Right of Way _____ Limits of Wrought Portion _____ Control Of Access _____ New Right of Way _____ New Easement _____ New Temporary Rights _____ New R/W Within Existing R/W _____	PLAN LEGEND <table border="0" style="width:100%;"> <tr> <td>Existing</td> <td>Proposed</td> <td>Existing</td> <td>Proposed</td> </tr> <tr> <td>Sanitary Sewer</td> <td>Telephone Line</td> <td>Traveled Way</td> <td>Ditch</td> </tr> <tr> <td>Electric Line</td> <td>Water Line</td> <td>Catch Basin</td> <td>Manhole</td> </tr> <tr> <td>Underdrain Line</td> <td>Gas Line</td> <td>Sewer Manhole</td> <td>Utility Pole</td> </tr> <tr> <td>Guardrail</td> <td>Culvert</td> <td>Fire Hydrant</td> <td>Curbing</td> </tr> </table>	Existing	Proposed	Existing	Proposed	Sanitary Sewer	Telephone Line	Traveled Way	Ditch	Electric Line	Water Line	Catch Basin	Manhole	Underdrain Line	Gas Line	Sewer Manhole	Utility Pole	Guardrail	Culvert	Fire Hydrant	Curbing	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 ADJUTING PROPERTY OWNERS. 
Existing	Proposed	Existing	Proposed																				
Sanitary Sewer	Telephone Line	Traveled Way	Ditch																				
Electric Line	Water Line	Catch Basin	Manhole																				
Underdrain Line	Gas Line	Sewer Manhole	Utility Pole																				
Guardrail	Culvert	Fire Hydrant	Curbing																				



STATE OF MAINE DEPARTMENT OF TRANSPORTATION 16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460	WALDOBORO RIGHT OF WAY MAP	SHEET NUMBER 22 OF 22	TECH CHECKED	D.W.B. D.W.B. D.W.B.
ITEM	EXISTING CONDITION PLAN	FINAL RIGHT OF WAY AREAS	D.W.B.	D.W.B.

NO.	DATE	REVISIONS DESCRIPTION	BY	PLAN FILED IN PLAN BOOK	PAGE	COUNTY RECORD	INSTRUMENT	DATE	BOOK	PAGE

BRUCE A. VAN NOTE
 COMMISSIONER
 JOYCE NOEL TAYLOR
 CHIEF ENGINEER

DATE _____

STATE HIGHWAY "34"
 ROUTE 32, WINSLOWS MILLS ROAD
 WALDOBORO LINCOLN COUNTY
 STATE PROJECT NO. 18230.00

SEPTEMBER 2019 RIGHT-OF-WAY MAP
 SCALE 1" = 25' SHEET 1 OF 1

D.O.T. FILE NO. 8-192

Date: 10/10/2019

Username: Mark.Poulin

Division: BRIDGE

Filename: ... \00\ROW\WSTA\001_RWP\PLAN1.dgn