

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



SPECIFICATIONS

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

DESIGN LOADING

Live Load HL - 93 Modified for Strength I

TRAFFIC DATA

Current (2018) AADT 12,660
Future (2038) AADT 13,930
DHV - % of AADT 11%
Design Hour Volume 1,532
Heavy Trucks (% of AADT) 6%
Heavy Trucks (% of DHV) 3%
Directional Distribution (% of DHV) 55%
18 kip Equivalent P 2.0 363
18 kip Equivalent P 2.5 346
Design Speed (mph) 35

HYDROLOGIC DATA

Drainage Area 21.1 sq mi
Design Discharge (Q50) 996 cfs
Check Discharge (Q100) 1,138 cfs
Headwater Elevation (Q1.1) 9.2 ft
Headwater Elevation (Q25) 12.0 ft
Headwater Elevation (Q50) 12.5 ft
Headwater Elevation (Q100) 13.0 ft
Discharge Velocity (Q1.1) 1.9 fps
Discharge Velocity (Q50) 4.7 fps
Discharge Velocity (Q100) 5.1 fps
Mean Lower Low Water (MLLW) -5.8 ft
Mean Low Water (MLW) -5.4 ft
Mean Tide Level (MTL) -0.3 ft
Mean High Water (MHW) 4.8 ft
Mean Higher High Water (MHHW) 5.2 ft
2017 Predicted High Tide 7.3 ft

MATERIALS

Concrete:
Precast Class "P"
All Other Class "A"
Reinforcing Steel ASTM A615/A615M, Grade 60
Welded Wire Reinforcement ASTM A185/A185M or ASTM A497/A497M

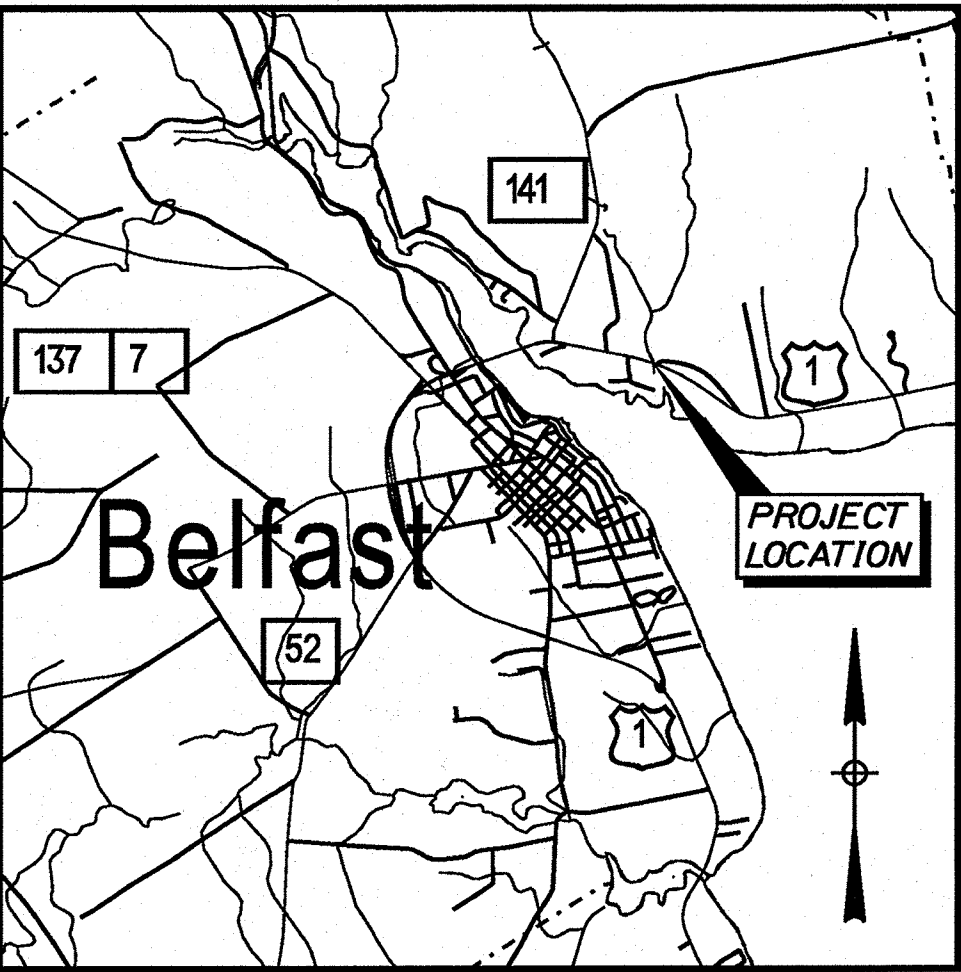
BASIC DESIGN STRESSES

Concrete f'c = 4000 psi
Precast Concrete f'c = 5000 psi
Reinforcing Steel fy = 60,000 psi
Welded Wire Reinforcement fy = 65,000 psi min.

BELFAST
WALDO COUNTY
GOOSE RIVER BRIDGE
OVER
GOOSE RIVER
US ROUTE 1\STATE ROUTE 3
PROJECT NO. STP-2187(400)
PROJECT LENGTH 0.162 mi.
BRIDGE NO. 2319

LIST OF DRAWINGS

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Interpretive Subsurface Profile 8
Boring Logs 9
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City of Belfast Sewer Plans G1,C1-C4
Belfast Water District Water Plans W1-W3



Scale in Miles
LOCATION MAP

UTILITIES

Central Maine Power
Spectrum Communications (TWC)
City of Belfast Sewer
Consolidated Communications
Belfast Water District

MAINTENANCE OF TRAFFIC

Maintain two-way traffic on an on-site temporary detour bridge.

PROJECT LOCATION	Goose River Bridge #2319 in Belfast carrying US Route 1 / State Route 3 over the Goose River, located 0.50 of a mile east of Swan Lake Ave / State Route 141. Latitude - 44° 25' 58" N, Longitude - 68° 59' 39" W
PROGRAM AREA	Bridge
OUTLINE OF WORK	Replacement of Goose River Bridge #2319 in Belfast with Precast Concrete Box Culvert with 627' of approaches.



WIN 21874.00

STP-2187(400)

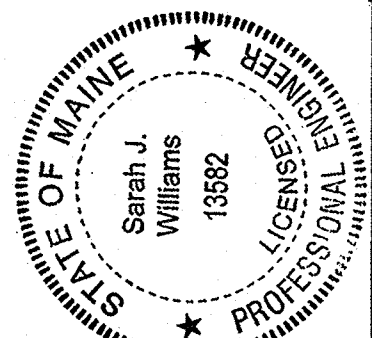
BELFAST
GOOSE RIVER BRIDGE

TITLE SHEET

SHEET NUMBER

1

OF 34



Signature: Sarah J. Williams
P.E. NUMBER: 13582
DATE: 5/17/2020

PROJECT INFORMATION	PROGRAM	BRIDGE	PROJECT MANAGER	DESIGNER	CONSULTANT	PROJECT RESIDENT	CONTRACTOR	PROJECT COMPLETION DATE
			DEVAN EATON	SARAH WILLIAMS	STANTEC			

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	APPROVED	DATE
		4-17-2020
COMMISSIONER: Sarah J. Williams		
CHIEF ENGINEER: Sarah J. Williams		4-16-2020

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.19	REMOVING EXISTING BRIDGE (232 CY)	1	LS
202.202	REMOVING PAVEMENT SURFACE	2200	SY
203.20	COMMON EXCAVATION	1950	CY
203.2318	DISPOSAL OF SPECIAL WASTE	575	T
203.24	COMMON BORROW	2500	CY
203.25	GRANULAR BORROW	620	CY
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	1350	CY
403.2081	HOT MIX ASPHALT -12.5 MM (POLYMER MODIFIED)	340	T
403.213	HOT MIX ASPHALT -12.5 MM (BASE AND INTERMEDIATE COURSE)	180	T
403.2131	HOT MIX ASPHALT -12.5 MM (BASE AND INTERMEDIATE COURSE POLYMER MODIFIED)	330	T
409.15	BITUMINOUS TACK COAT - APPLIED	330	G
461.131	TEMPORARY PAVEMENT	290	T
508.13	SHEET WATERPROOFING MEMBRANE (390 SY)	1	LS
510.10	SPECIAL DETOUR 30FT ROADWAY WIDTH VEHICULAR & PEDESTRIAN TRAFFIC NOT SEPARATED	1	LS
511.07	COFFERDAM; UPSTREAM	1	LS
511.07	COFFERDAM; DOWNSTREAM	1	LS
515.21	PROTECTIVE COATING FOR CONCRETE SURFACES (82 SY)	1	LS
526.301	TEMPORARY CONCRETE BARRIER, TYPE 1 (1088 LF)	1	LS
527.34	WORK ZONE CRASH CUSHIONS	4	UN
534.7101	PRECAST CONCRETE BOX CULVERT - STATE SUPPLIED	1	LS
606.1301	3"W-BEAM GUARDRAIL, MID-WAY SPLICE - SINGLE FACED	712.5	LF
606.1303	3"W-BEAM GUARDRAIL, MID-WAY SPLICE - 15' RADUIS AND LESS	25	LF
606.1305	3"W-BEAM GUARDRAIL, MID-WAY SPLICE - FLARED TERMINAL	2	EA
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	6	EA
610.08	PLAIN RIPRAP	720	CY
610.18	STONE DITCH PROTECTION	20	CY
613.319	EROSION CONTROL BLANKET	110	SY
615.07	LOAM	160	CY
618.14	SEEDING METHOD NUMBER 2	26	UN
619.12	MULCH	26	UN
619.14	EROSION CONTROL MIX	320	CY
620.58	EROSION CONTROL GEOTEXTILE	780	SY
627.733	4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	2500	LF
627.75	WHITE OR YELLOW PAVEMENT & CURB MARKING	25	SF
627.78	TEMPORARY 4" PAINTED PAVEMENT MARKING LINE, WHITE OR YELLOW	2500	LF
629.05	HAND LABOR, STRAIGHT TIME	20	HR
631.12	ALL-PURPOSE EXCAVATOR (INCLUDING OPERATOR)	10	HR
631.172	TRUCK-LARGE (INCLUDING OPERATOR)	10	HR
639.18	FIELD OFFICE, TYPE A	0.5	EA
645.106	DEMOUNT REGULATORY, WARNING, CONFIRMATION & ROUTE MARKER ASSEMBLY SIGN	6	EA
645.116	REINSTALL REGULATORY, WARNING, CONFIRMATION & ROUTE MARKER ASSEMBLY SIGN	4	EA
645.292	REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGNS TYPE II	10	SF
652.312	TYPE III BARRICADES	6	EA
652.33	DRUM	25	EA
652.34	CONE	50	EA
652.35	CONSTRUCTION SIGNS	400	SF
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES (260 CD)	1	LS
652.38	FLAGGERS	200	HR
652.41	PORTABLE CHANGEABLE MESSAGE SIGN	2	EA
656.75	TEMPORARY SOIL EROSION & WATER POLLUTION CONTROL	1	LS
659.10	MOBILIZATION	1	LS

GENERAL NOTES

1. For easements, construction limits and right of way lines, refer to Right of Way Map.
2. The clearing limits as shown on the plans are approximate. The exact limits will be established in the field by the Resident. Payment for clearing will be considered incidental to Contract items.
3. All utility facilities shall be adjusted by the respective utilities unless otherwise noted.
4. Do not excavate for Aggregate Subbase Course where existing material is suitable as determined by the Resident.
5. In areas where the Resident directs the Contractor not to excavate to the subgrade line shown on the plans, payment for removing existing pavement, grubbing, shaping, ditching, and compacting the existing subbase and layers of new subbase 6 inches or less thick will be made under appropriate equipment rental items.
6. All embankment material, except as otherwise shown, placed below EL.12.5 shall be Granular Borrow meeting the requirements of Subsection 703.19, Material for Underwater Backfill.
7. Place riprap on sideslopes up to EL.13.00.
8. Bench existing fill slope soils in accordance with MaineDOT Standard Specification 203.09, Preparation of Embankment Area, where new fill slope extensions are constructed over existing slopes with grades greater than 2:1 (H:V).
9. Stones which cannot be rolled or compacted into the surface of the shoulder shall be removed by hand raking. Payment for hand raking will be considered incidental to Item No. 304.10, Aggregate Subbase Course - Gravel.
10. Place loam 2 inches deep on all new or reconstructed sideslopes or as directed by the Resident.
11. 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.
12. Place a 24-in. wide strip of Temporary Erosion Control Blanket on the sideslopes on the top of the riprap.
13. Guardrail posts shall be modified from a length of 7 feet to a length of 8 feet with an embedment of 5.4 feet. Payment will be considered incidental to the guardrail pay items.
14. A MASH compliant guardrail end treatment shall be installed concurrently with the placement of each section of beam guardrail.
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. Protective Coating for Concrete Surfaces shall be applied to the following areas:

On all concrete headwalls and box surfaces that are exposed and to limit lines, one foot beyond intersections of surfaces and ground.
17. Payment for pavement saw cuts shall be incidental to related contract items.

ESTIMATED QUANTITIES - CITY OF BELFAST			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.15	REMOVING EXISTING MANHOLE OR CATCH BASIN	3	LF
202.202	REMOVING PAVEMENT SURFACE	200	EA
202.60	REMOVE STORM DRAIN OR SEWER PIPE	500	SY
461.131	TEMPORARY PAVEMENT	10	T
801.03	TEST PITS	2	EA
801.07	TEMPORARY SEWER BYPASS, 8"	1	LS
801.17	8" PVC SANITARY SEWER (SDR-35)	5	LF
801.18	12" PVC SANITARY SEWER (SDR-35)	455	LF
803.16	4" DIAMETER PRECAST SEWER MANHOLE	4	EA
812.162	ADJUSTING SEWER MANHOLE TO GRADE	1	EA
812.166	EXISTING WET WELL MODIFICATION	1	LS
812.167	4" DIAMETER PRECAST TEMPORARY SEWER MANHOLE	2	EA
822.34	8" CLASS 52 DUCTILE IRON PIPE	5	LF
822.363	12" CLASS 52 DUCTILE IRON PIPE	40	LF
827.331	2" RIGID TRENCH INSULATION	56	SY

ESTIMATED QUANTITIES - BELFAST WATER DISTRICT			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
206.07	STRUCTURAL ROCK EXCAVATION - DRAINAGE & MINOR STRUCTURES	10	CY
602.30	FLOWABLE CONCRETE FILL	25	CY
801.03	TEST PITS	2	EA
822.363	12 INCH CLASS 52 DUCTILE IRON PIPE	1200	LF
827.364	ASBESTOS CEMENT PIPE DISPOSAL	6	T
890.01	SPECIAL WORK NO. 1 WATER CONNECTION (STA. 29+40)	1	LS
890.021	SPECIAL WORK NO. 2 WATER CONNECTION (STA. 31+20)	1	LS
890.022	SPECIAL WORK NO. 3 WATER CONNECTION (STA. 41+15)	1	LS

18. Project information referred to below may be accessed at the following MaineDOT web address: <http://www.maine.gov/mdot/contractors/>.
19. 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.
20. 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.
21. The project geotechnical report titled: Soils report 2019-03 Belfast, Waldo County, Goose River Bridge, February 7, 2019, may be accessed at the MaineDOT web address.
22. 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.
23. 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

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.
24. Riprap adjacent to the box culvert shall be placed so as not to damage the culvert. Any damage to the box culvert during construction shall be repaired or replaced as determined by the Resident at the Contractor's expense.
25. The Removal of Abandoned Penstock shall be incidental to Item No. 202.19 Removing Existing Bridge.
26. Any damage to the slopes caused by the Contractor's equipment, personnel, or operations shall be repaired to the satisfaction of the Resident. All work, equipment, and materials required to make repairs shall be at no cost to the Department.
27. Payment for removing the material on top of the existing bridge shall not be made separately and shall be incidental to Item 202.19 Removing Existing Bridge.
28. Payment for Channel Regrading shall be included under Common Excavation and Common Borrow as appropriate.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2178(400)

WIN
21784.00

BRIDGE NO. 2319
BRIDGE PLANS

GOOSE RIVER BRIDGE
GOOSE RIVER
BELFAST
WALDO COUNTY

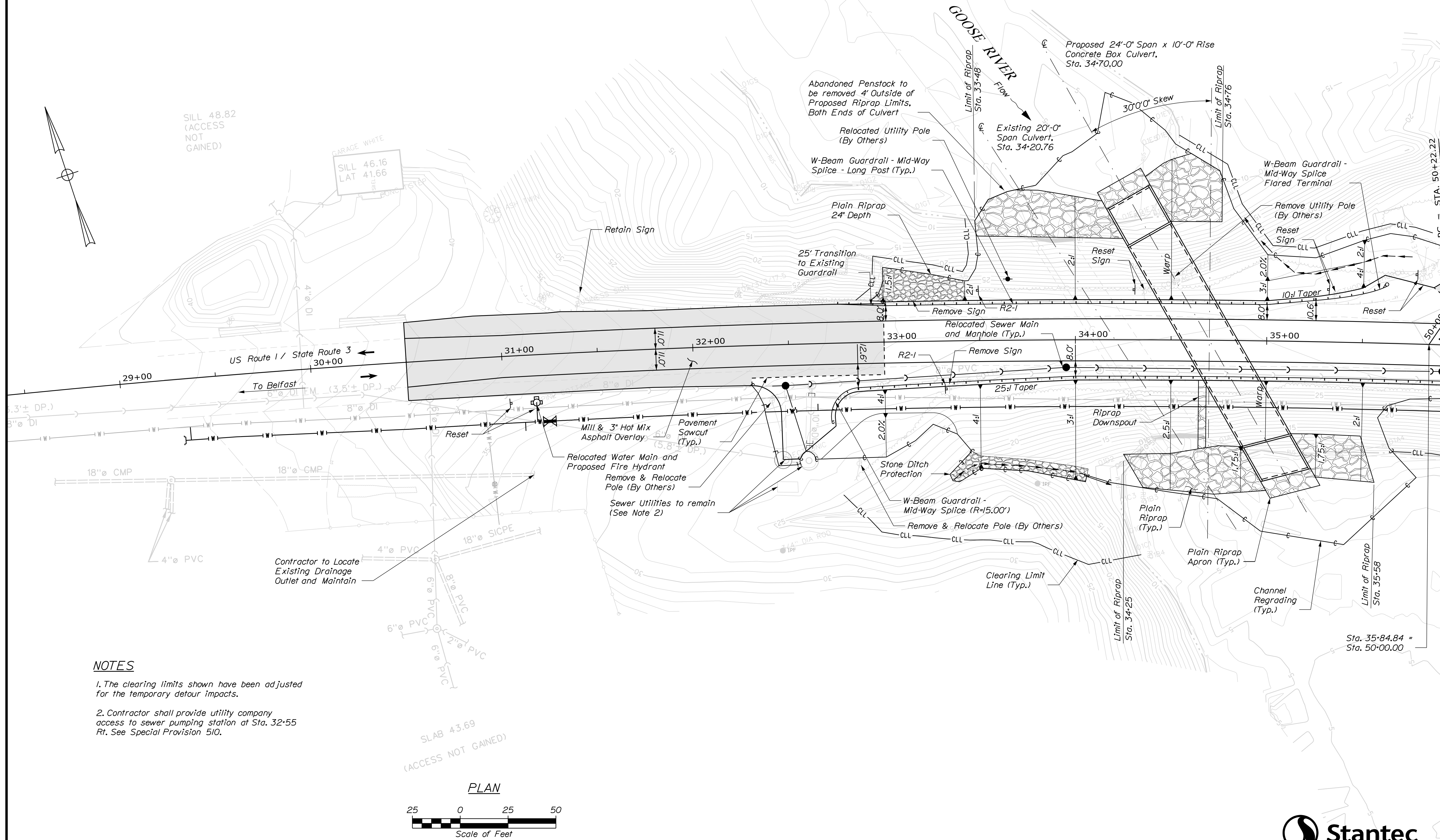
ESTIMATED QUANTITIES &
GENERAL NOTES

SHEET NUMBER

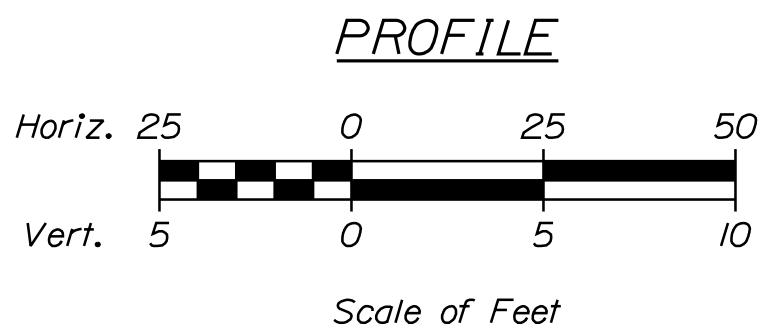
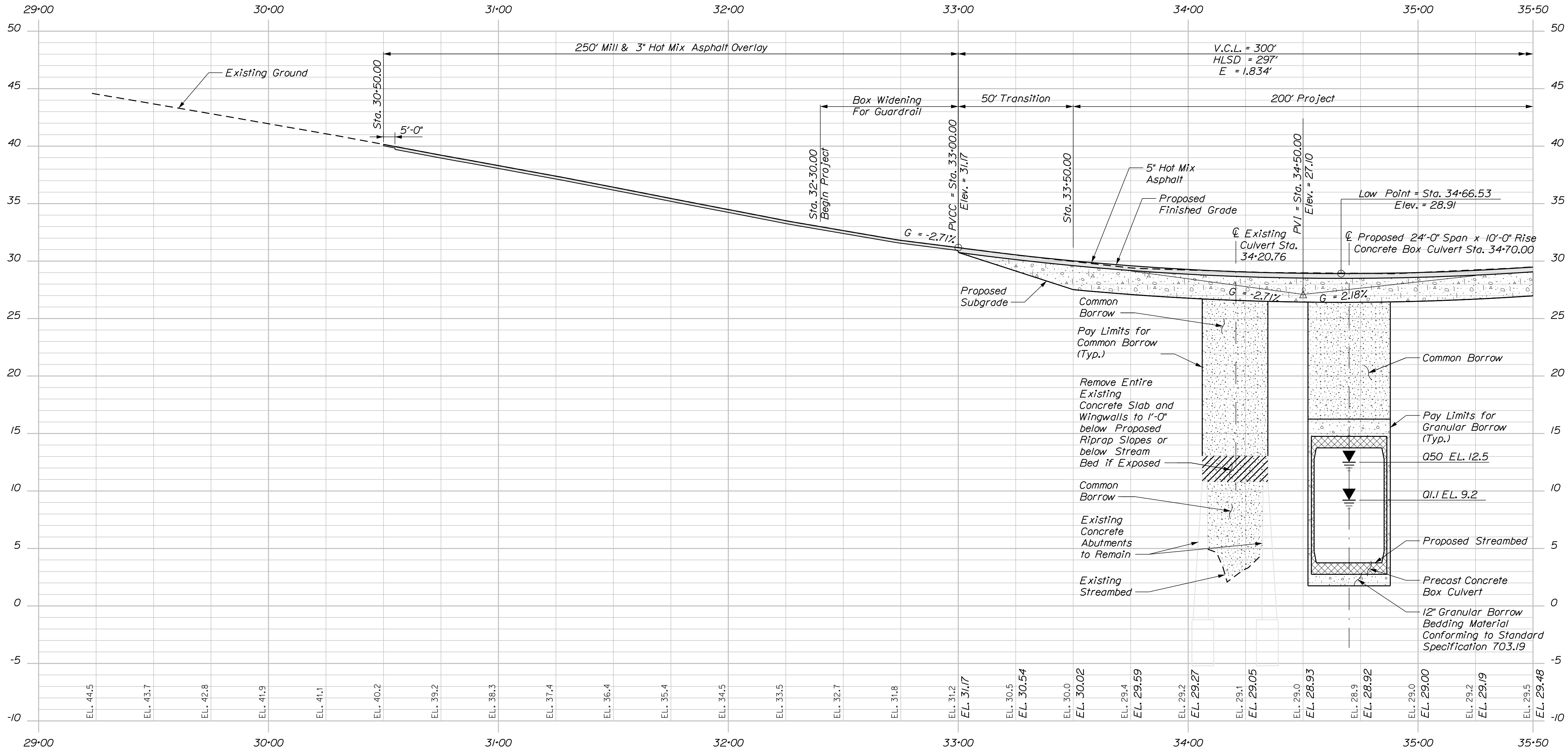
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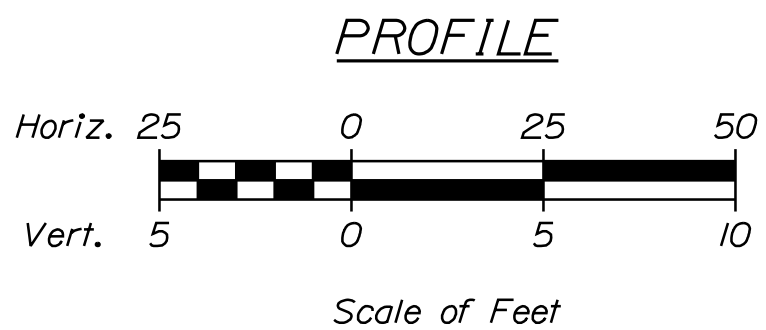
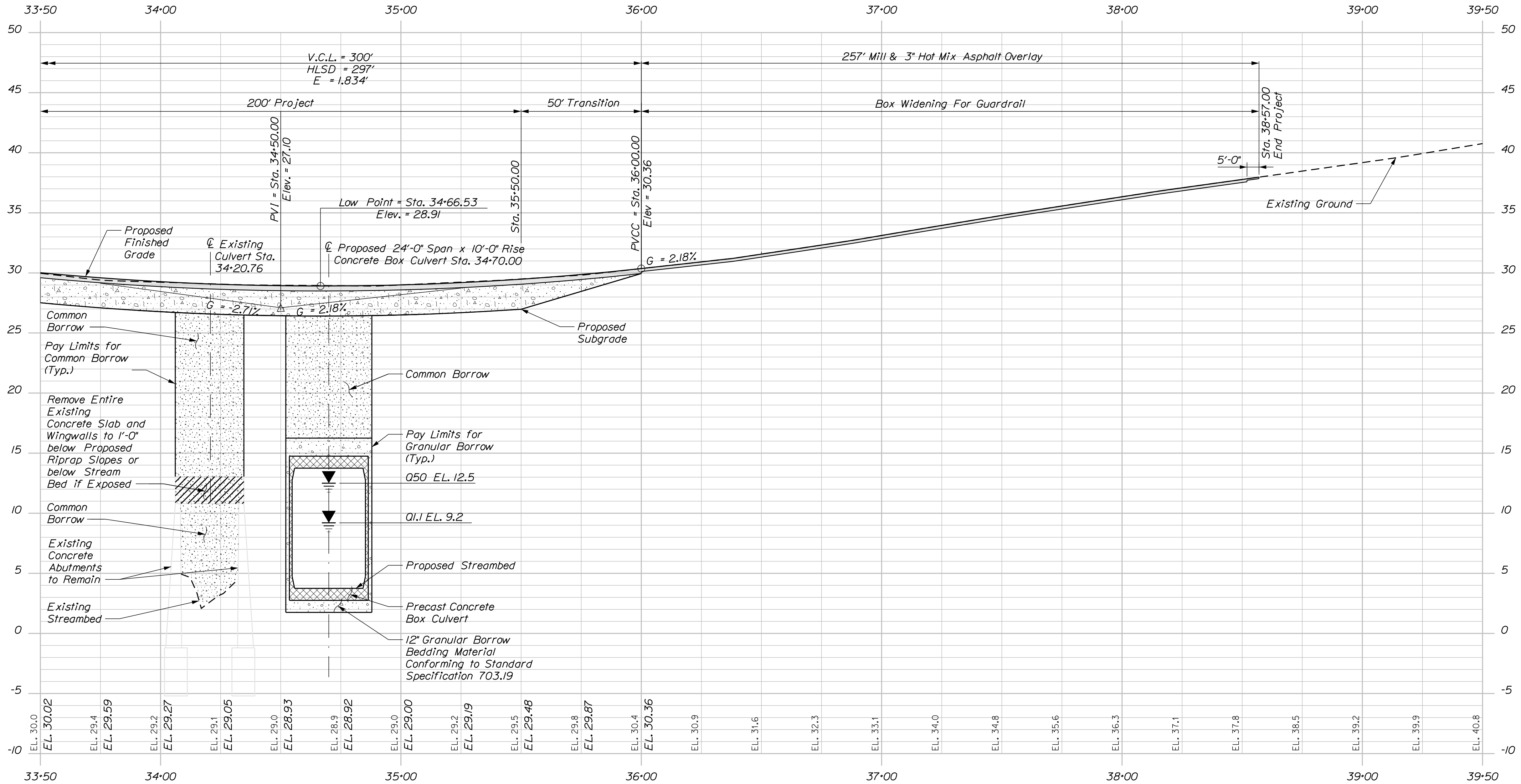
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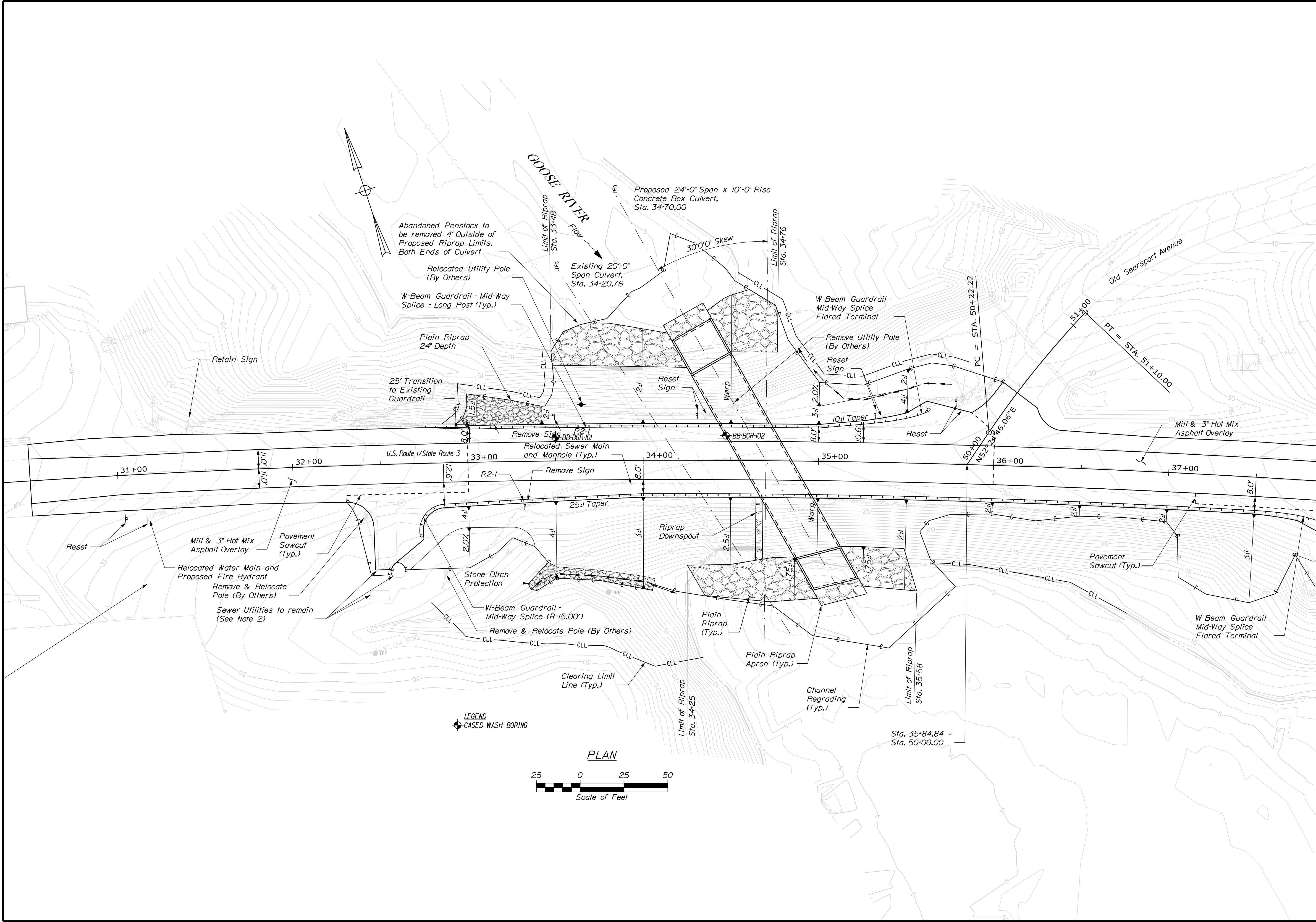




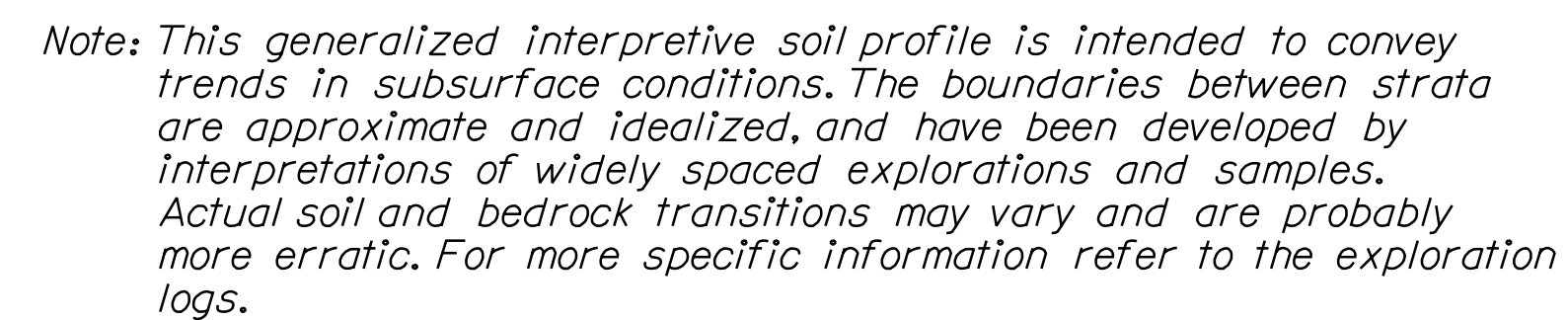








STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		STP-2187(400)		BRIDGE NO. 2319		WIN		21874.00		BRIDGE PLANS	
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PROJ. MANAGER		DESIGN-DETAILED		CHECKED-REVIEWED		DESIGNED-DETAILED		DESIGNED-DETAILED		REVISIONS 1		REVISIONS 2	
DEVAN EATON		T. WHITE		A. VANBUSKIRK		T. WHITE		T. WHITE		T. WHITE		T. WHITE	
BY		DATE		SIGNATURE		P.E. NUMBER		DATE		FIELD CHANGES		FIELD CHANGES	

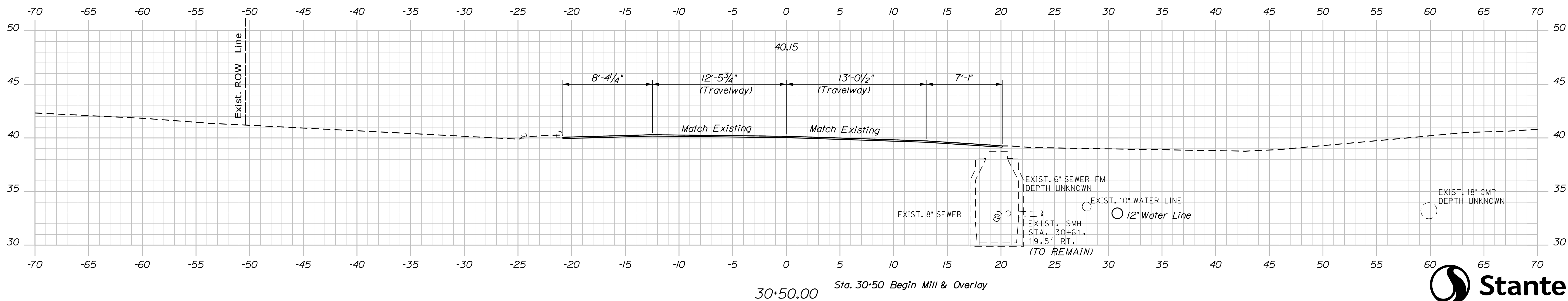
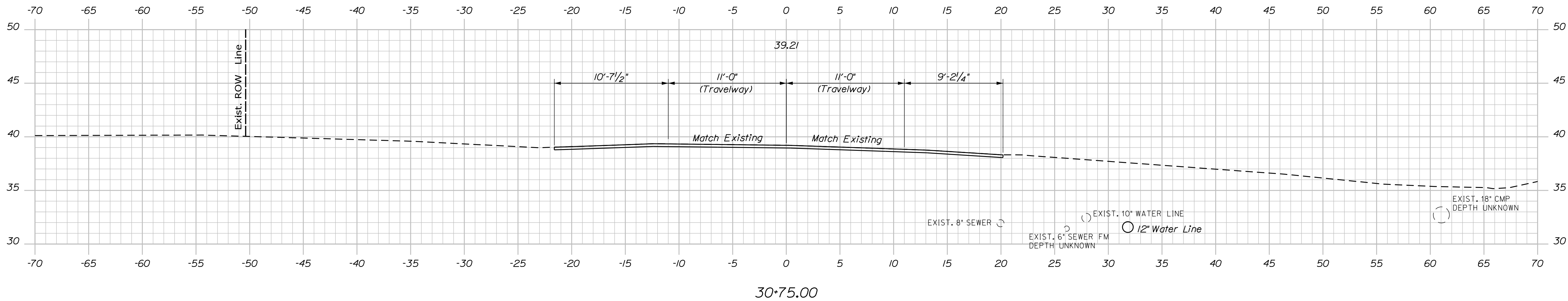
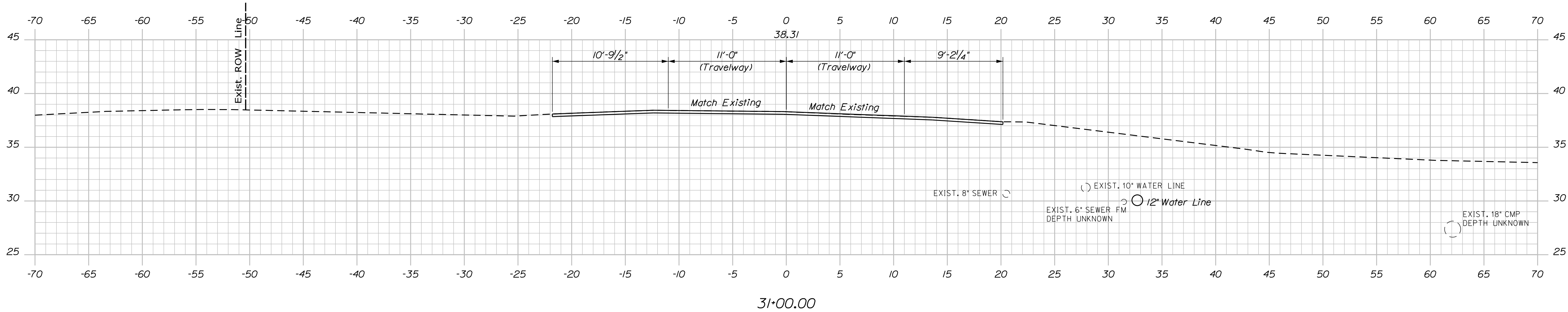


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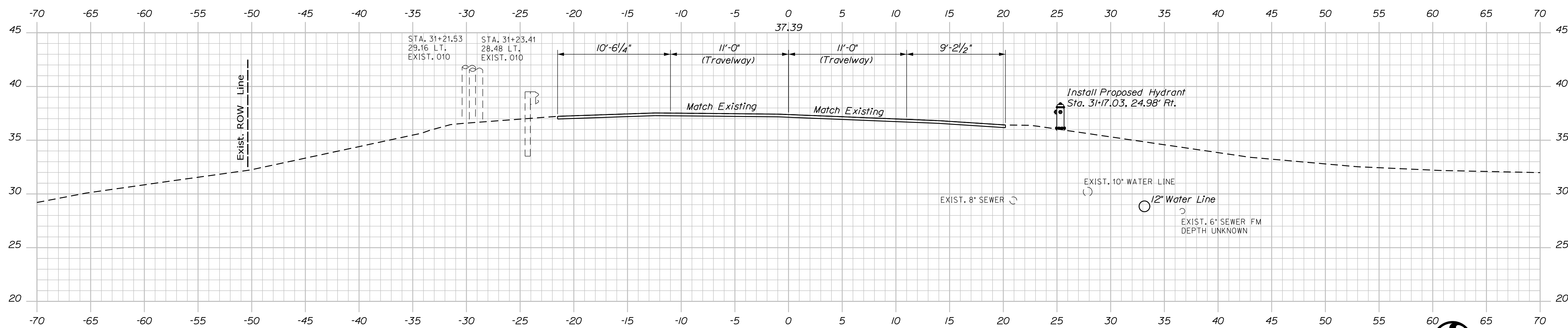
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STATE OF MAINE DEPARTMENT OF TRANSPORTATION	STP-2187(400)		BRIDGE NO. 2319	WIN	21874.00	BRIDGE PLANS
	SIGNATURE		P.E. NUMBER		DATE	
	THG		LEW/TWM		THG	
GOOSE RIVER BRIDGE GOOSE RIVER BELFAST		WALDO COUNTY		CROSS SECTIONS		
SHEET NUMBER		12				
		OF 34				



PROJ. MANAGER	DEVAN EATON	BY	DATE
DESIGN-DETAILED	THC	THC	MAR 2020
CHECKED-REVIEWED	RLW	LEW/THM	MAR 2020
DESIGN3-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			P.E. NUMBER
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			DATE
FIELD CHANGES			

GOOSE RIVER BRIDGE
GOOSE RIVER
BELFAST WALDO COUNTY
CROSS SECTIONS

SHEET NUMBER

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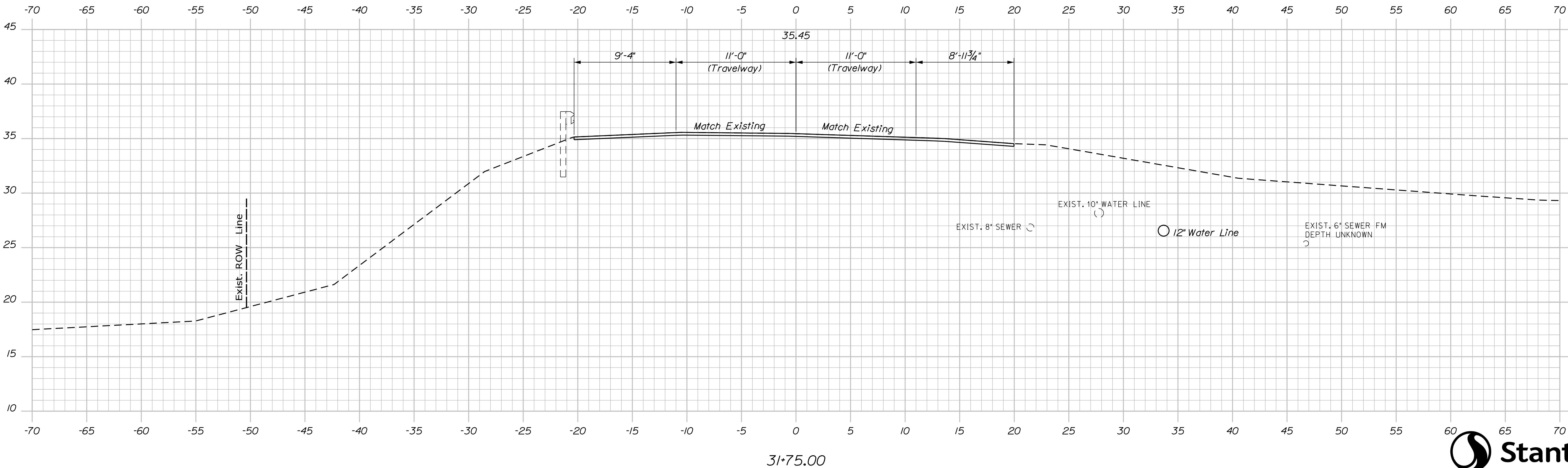
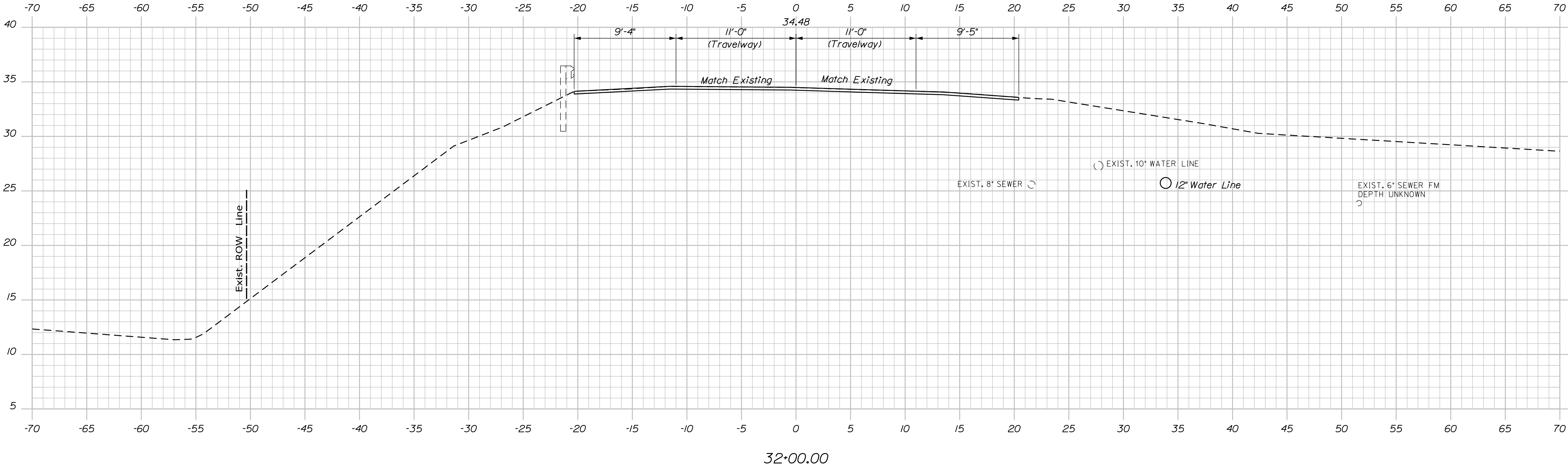
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Date: 4/3/2020

Division: BRIDGE

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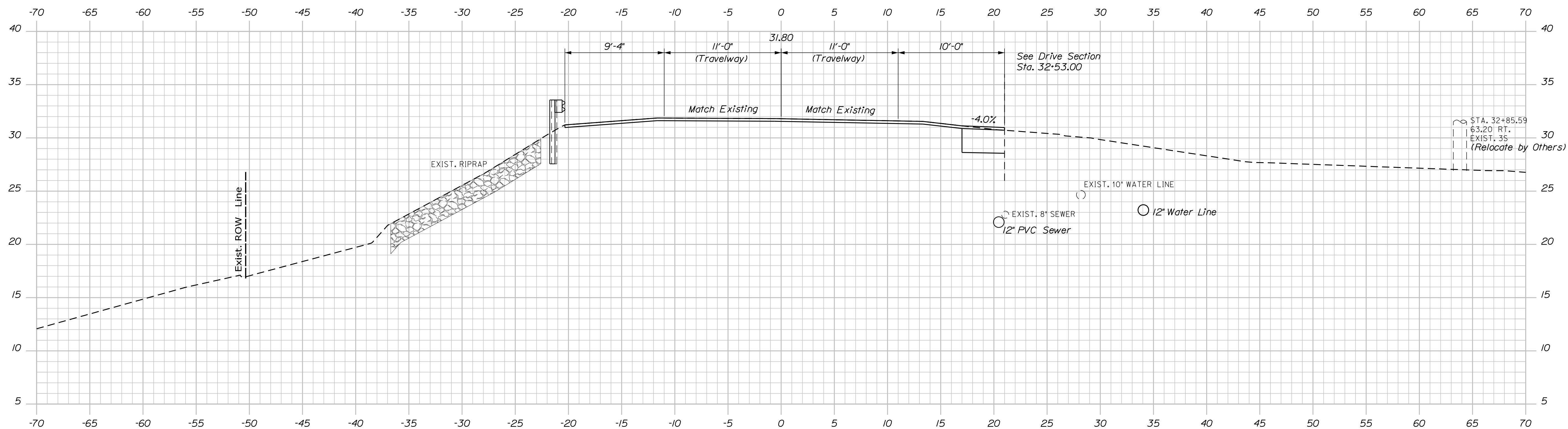


STATE OF MAINE	
DEPARTMENT OF TRANSPORTATION	
STP-2187(400)	
WIN	BRIDGE NO. 2319
21874.00	
BRIDGE PLANS	

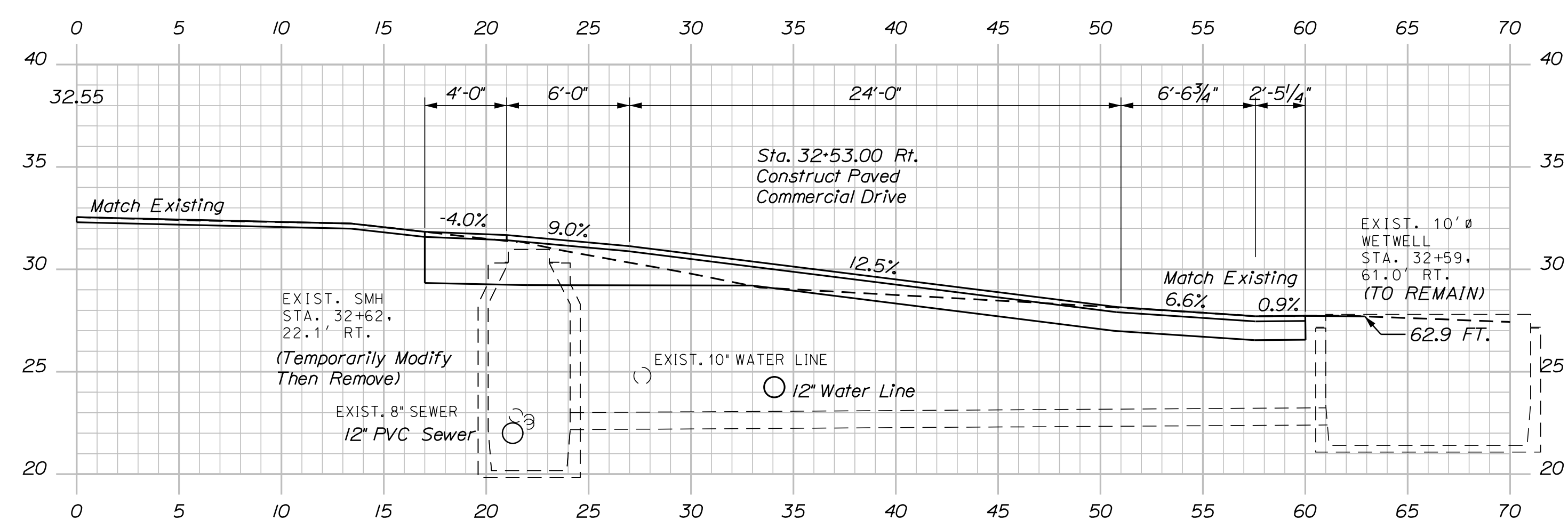
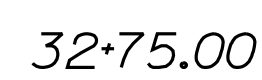
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REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			
SIGNATURE		P.E. NUMBER	
		DATE	

GOOSE RIVER BRIDGE	
GOOSE RIVER	
WALDO COUNTY	
BELFAST	
CROSS SECTIONS	

SHEET NUMBER	
14	
OF 34	



Sta. 32+76.4, 20.3' Lt. to Sta. 35+25.4, 21.6' Lt.
Install 225.00' 31" W-Beam Guardrail - Mid-Way Splice



32+53.00

PROJ. MANAGER	DEVAN EATON	BY	DATE
DESIGN-DETAILED	THG	THG	MAR 2020
CHECKED-REVIEWED	K/LW	LEW/TMM	MAR 2020
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
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REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			
SIGNATURE			
P.E. NUMBER			
DATE			

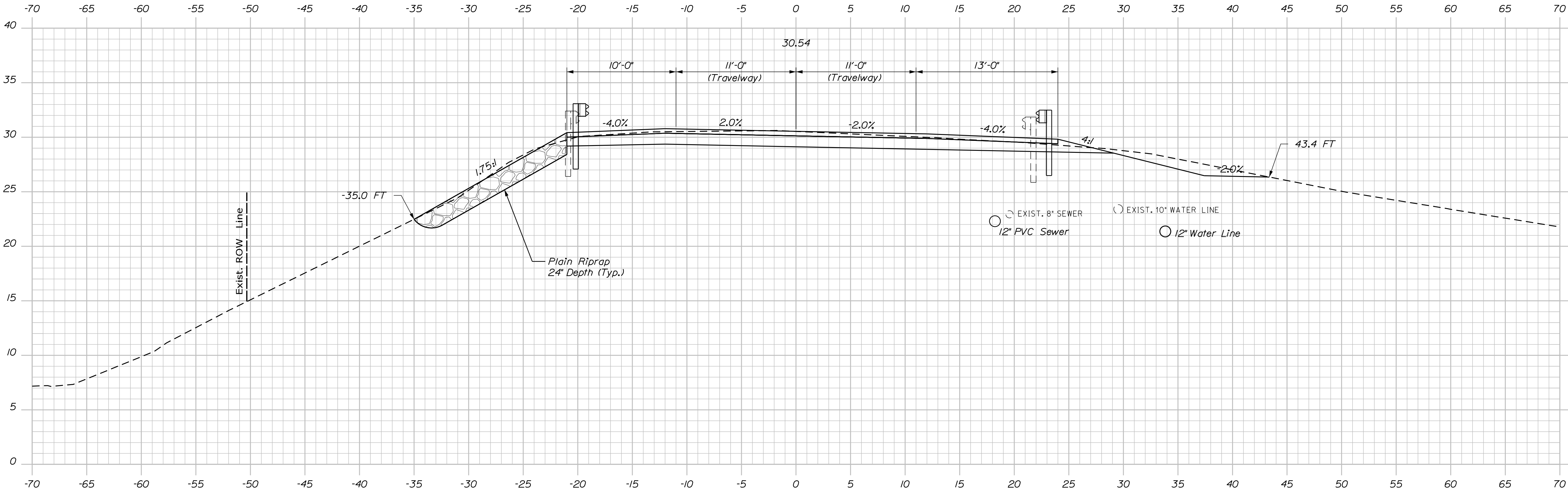
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GOOSE RIVER	
BELFAST	WALDO COUNTY
CROSS SECTIONS	

Date: 4/3/2020

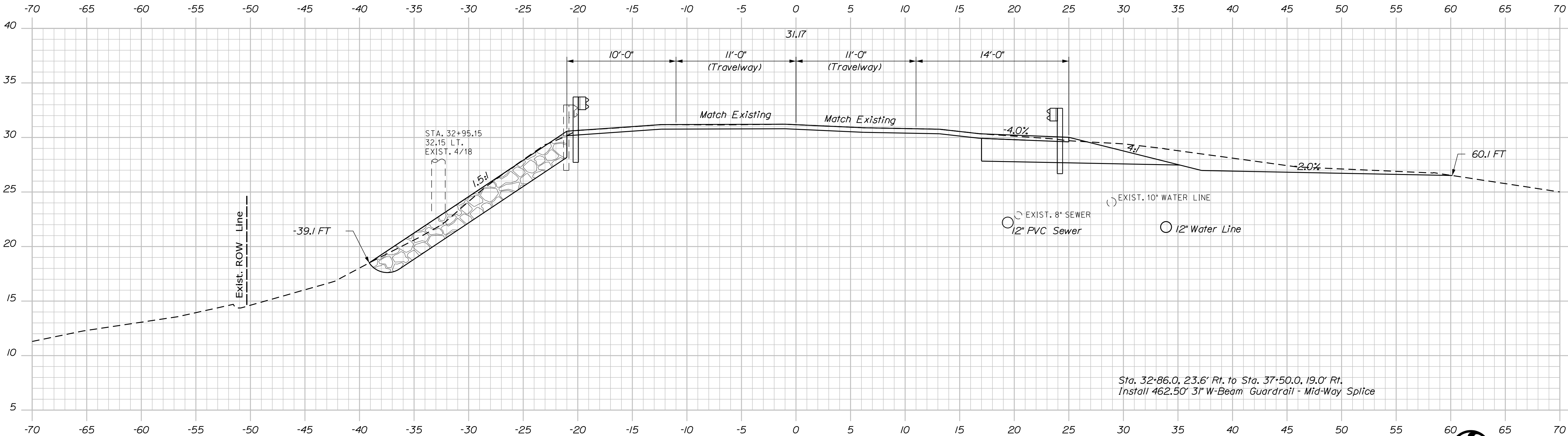
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Division: BRIDGE

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33+25.00



33+00.00

Sta. 33+00 End Mill & Overlay
Begin Transition

Sta. 32+86.0, 23.6' Rt. to Sta. 37+50.0, 19.0' Rt.
Install 462.50' 31" W-Beam Guardrail - Mid-Way Splice

Sta. 32+71.7, 40.6' Rt. to Sta. 32+86.0, 23.6' Rt.
Install 31" W-Beam Guardrail - Mid-Way Splice - 15' Radius & Less



STATE OF MAINE	
DEPARTMENT OF TRANSPORTATION	
STP-2187(400)	
BRIDGE NO. 2319	WIN
21874.00	
BRIDGE PLANS	

PROJ. MANAGER	DEVAN EATON	BY	DATE
DESIGN-DETAILED	THG	THG	MAR 2020
CHECKED-REVIEWED	KLW	LEM/TMM	MAR 2020
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

GOOSE RIVER BRIDGE	
GOOSE RIVER	
WALDO COUNTY	
BELFAST	
CROSS SECTIONS	

SHEET NUMBER
17
OF 34

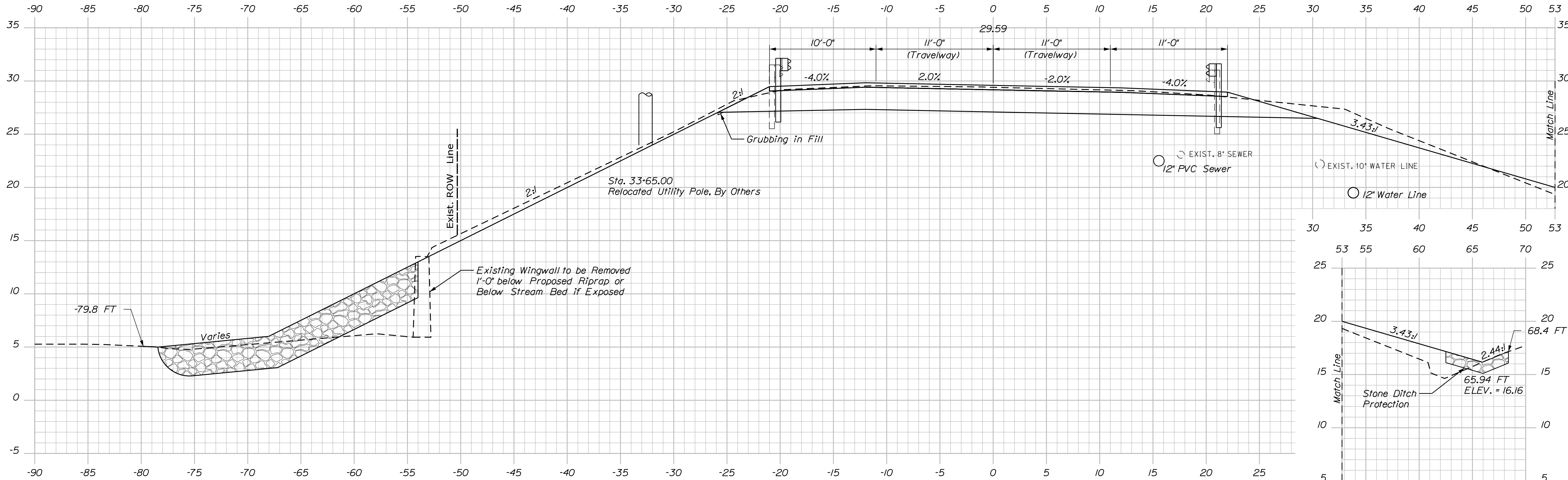
Sta. 33+00.00 to Sta. 33+25.00

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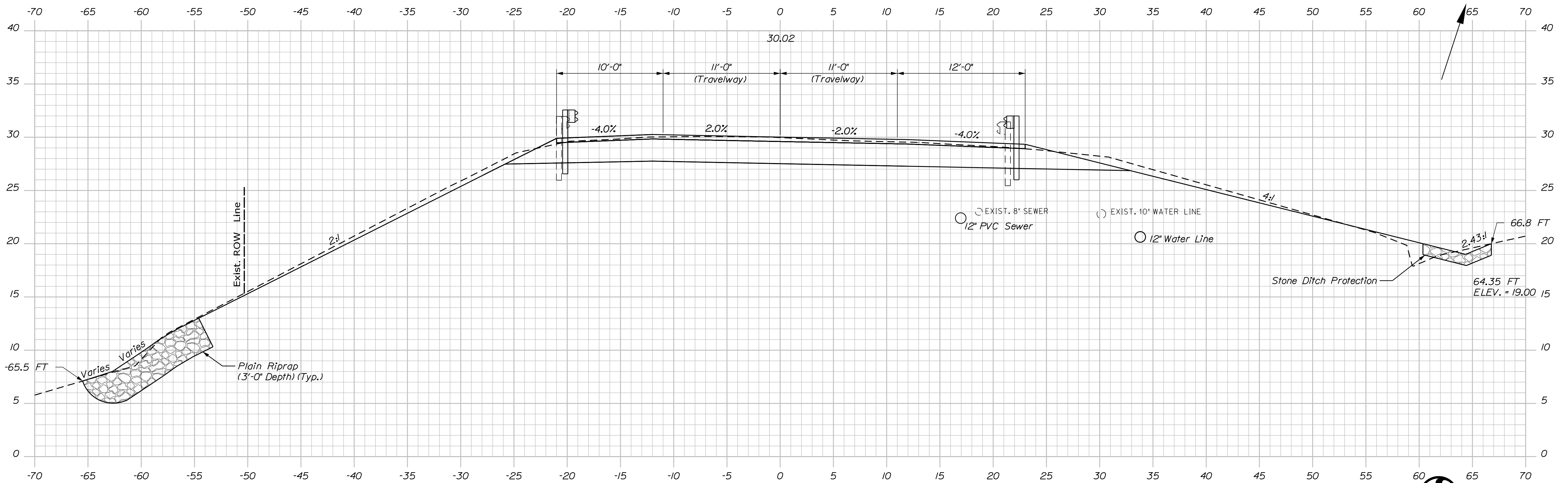
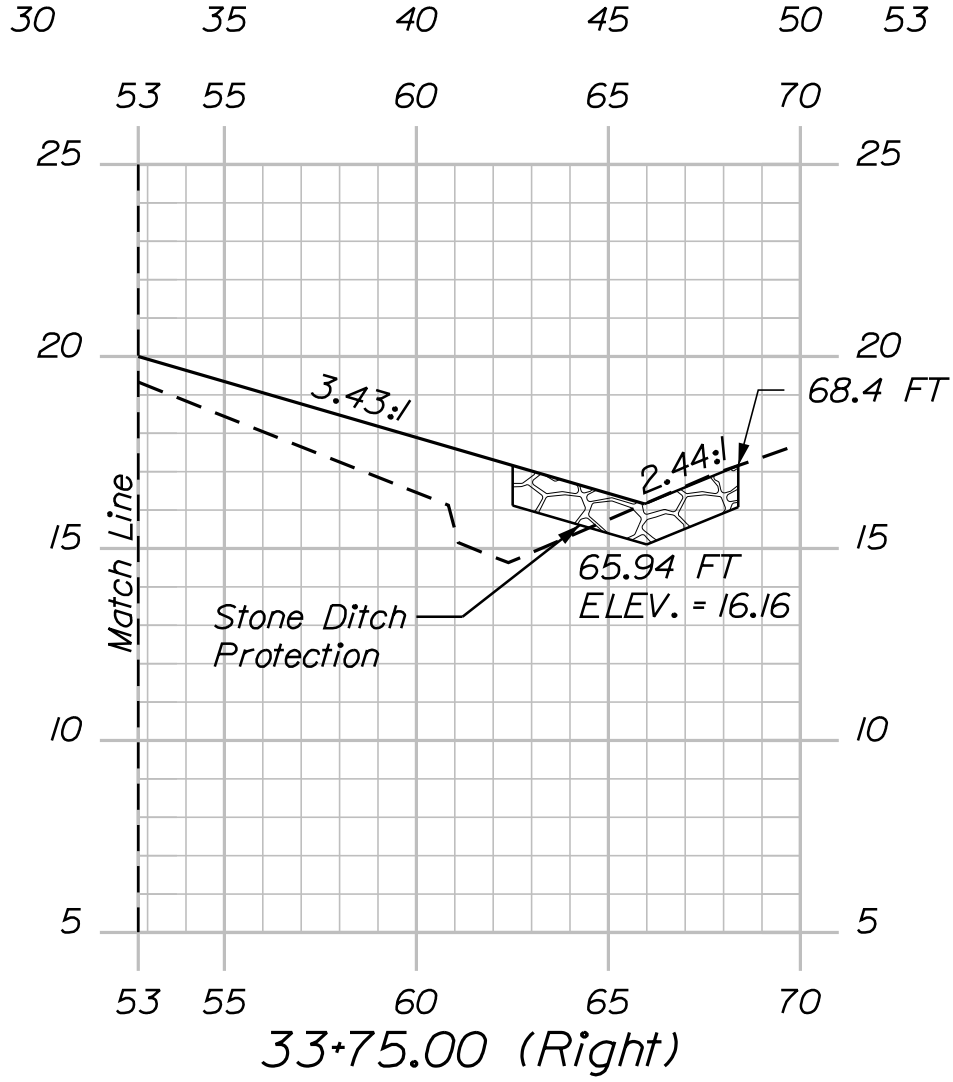
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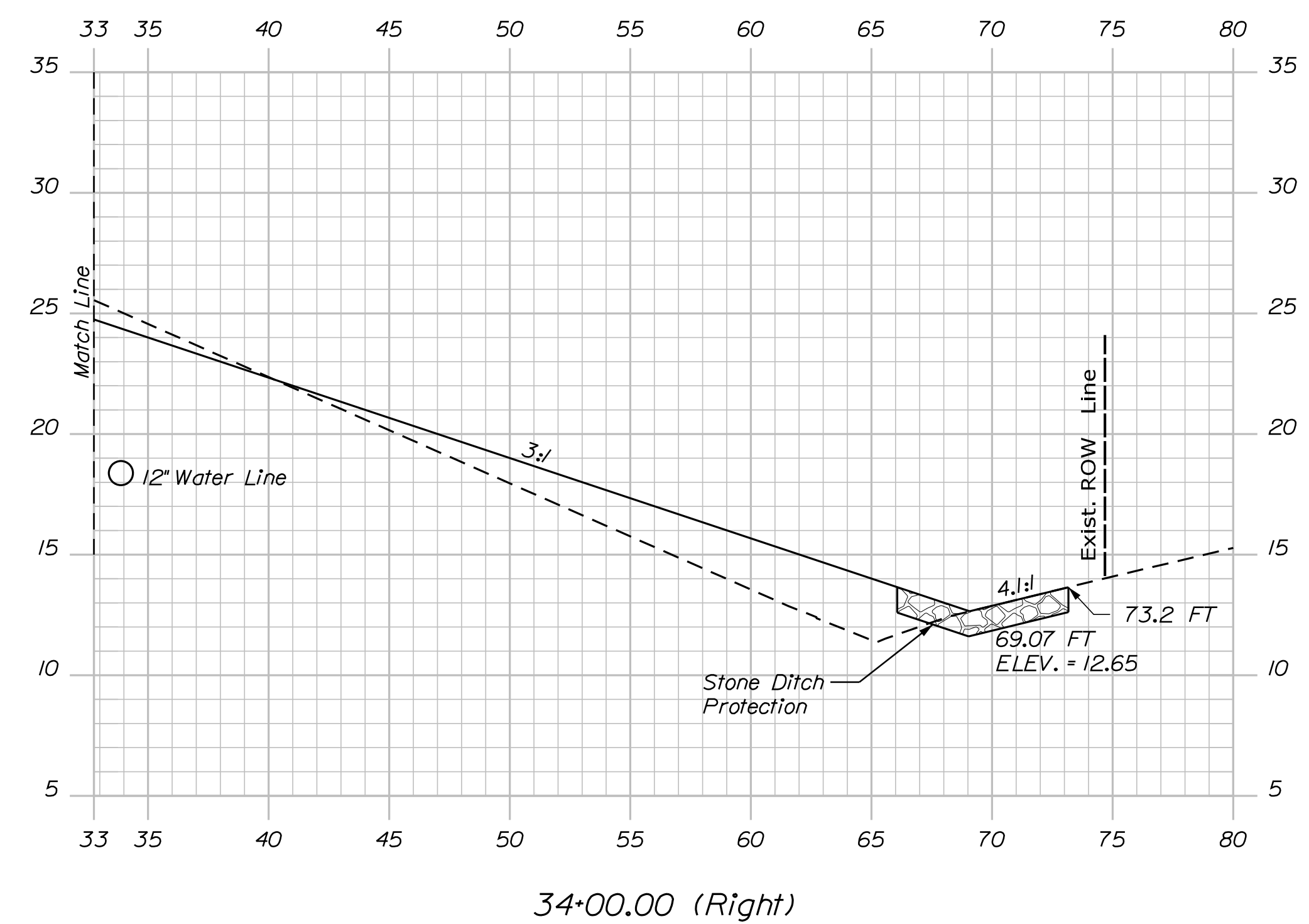
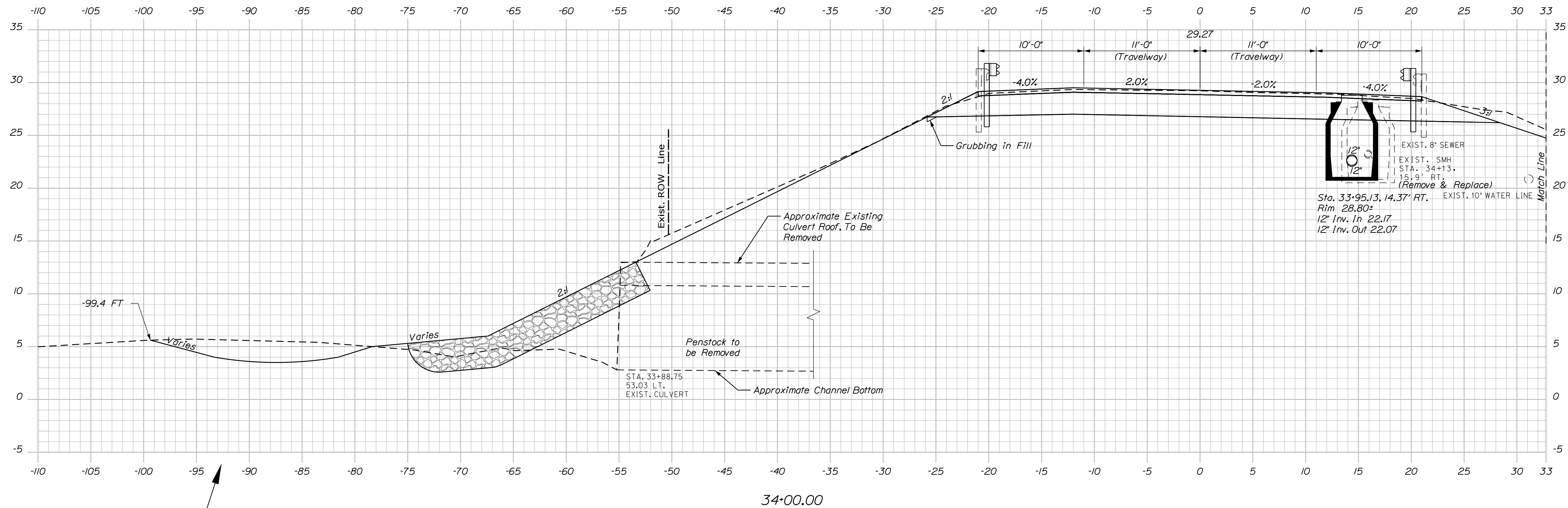
33+75.00



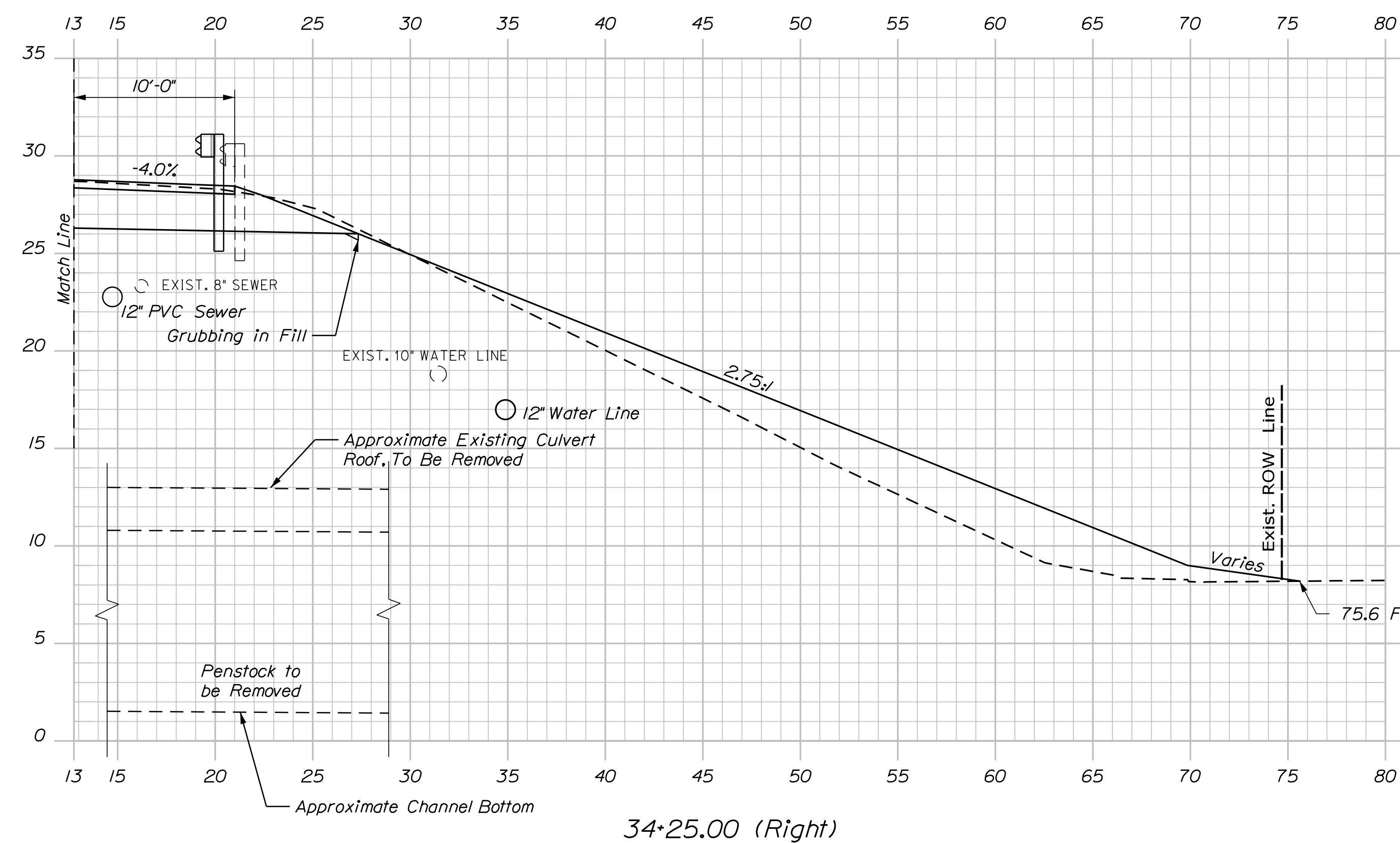
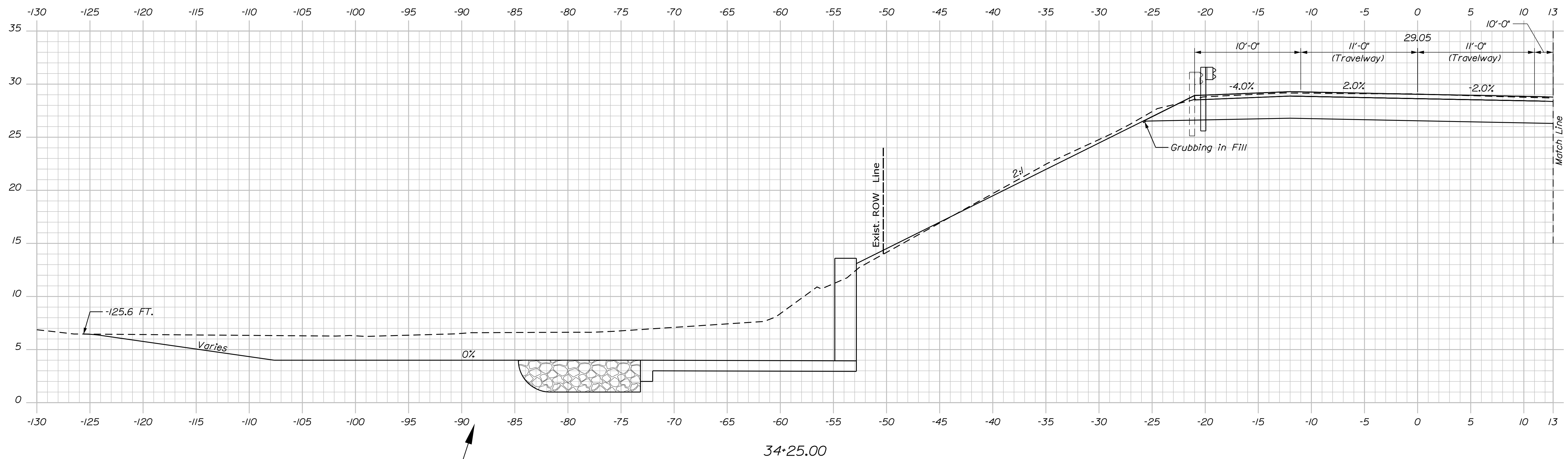
Sta. 33+50.00 End Transition
33+50.00 Begin Project



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DEVAN EATON	THG	LEM/TMM	MAR 2020	THG	MAR 2020			
DESIGN-DETAILED	THG	LEM/TMM						
REVISIONS 1								
REVISIONS 2								
REVISIONS 3								
REVISIONS 4								
FIELD CHANGES								



SHEET NUMBER <div style="font-size: 48pt; text-align: center;">19</div> <div style="text-align: center;">OF 34</div>	GOOSE RIVER BRIDGE GOOSE RIVER BELFAST		WALDO COUNTY		PROJ. MANAGER DEVAN EATON	BY THG	DATE MAR 2020	STATE OF MAINE DEPARTMENT OF TRANSPORTATION STP-2187(400)
					DESIGN-DETAILED THG	MAR 2020		
					CHECKED-REVIEWED KIW	LEM/TMM	SIGNATURE	
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	CROSS SECTIONS				REVISIONS 1			BRIDGE NO. 2319 WIN 21874.00
					REVISIONS 2			
					REVISIONS 3		DATE	
					REVISIONS 4			
					FIELD CHANGES			
BRIDGE PLANS								



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2187(400)

BRIDGE NO. 2319

WIN

21874.00

BRIDGE PLANS

PROJ. MANAGER	DEVAN EATON	BY	DATE
DESIGN-DETAILED	THG	THG	MAR 2020
CHECKED-REVIEWED	KLW	LEW/TMW	MAR 2020
DESIGN-DETAILED02			
DESIGN-DETAILED03			
REVISIONS 1			
REVISIONS 2			
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REVISIONS 4			
FIELD CHANGES			

GOOSE RIVER BRIDGE	GOOSE RIVER	WALDO COUNTY
BELFAST	CROSS SECTIONS	

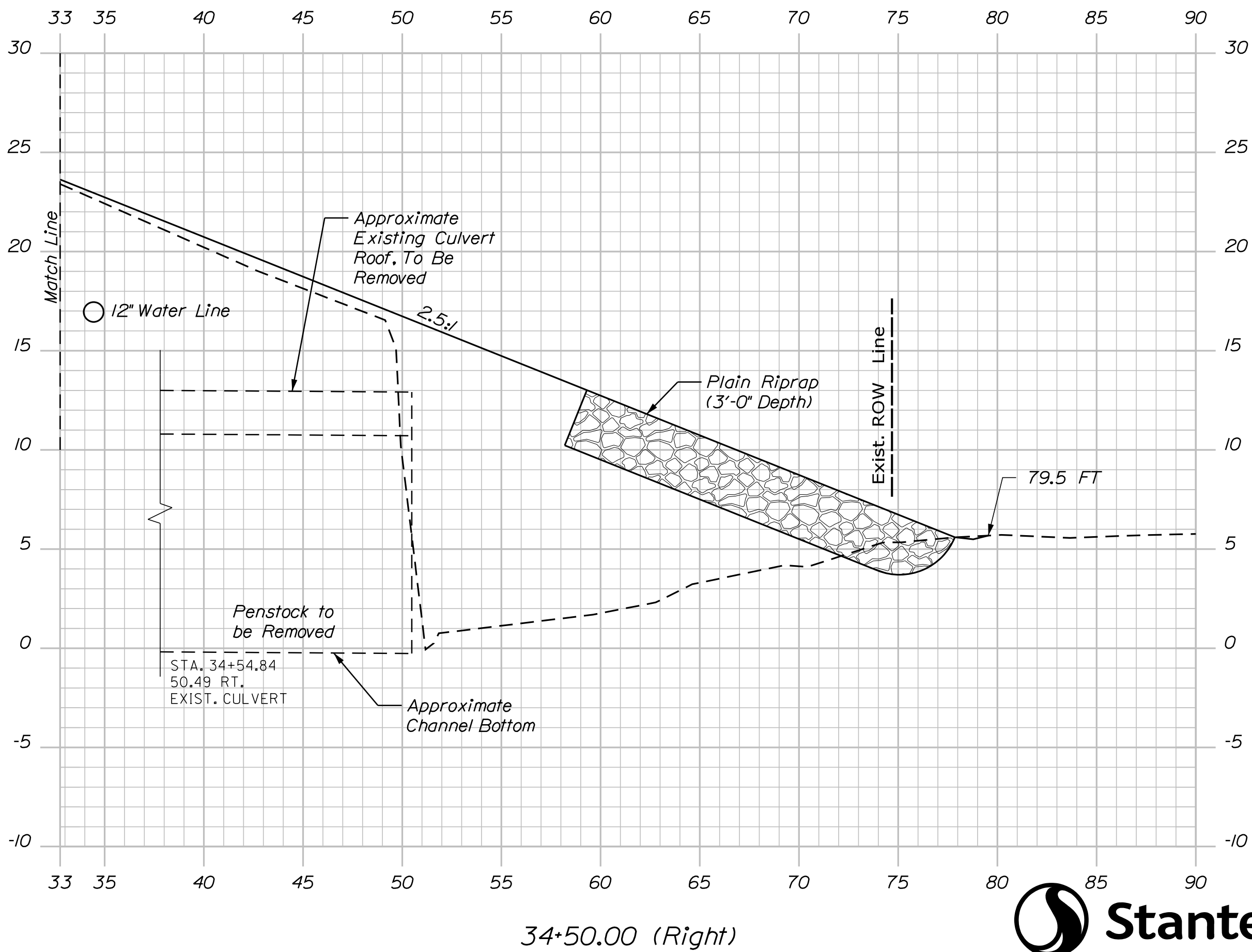
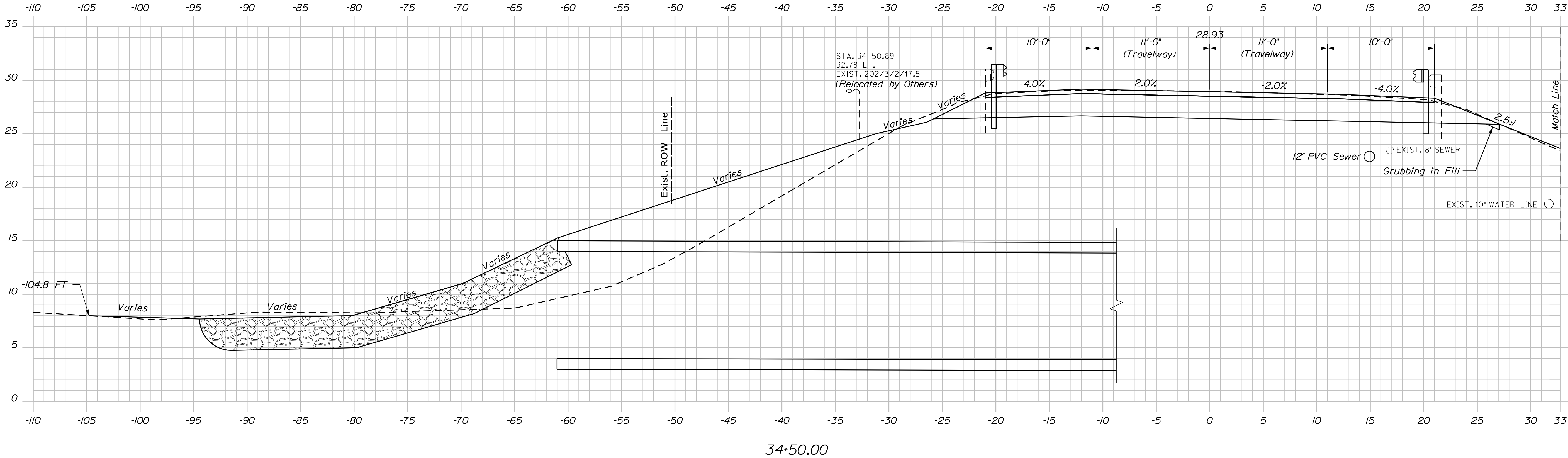
Sta. 34+25.00

Date: 4/3/2020

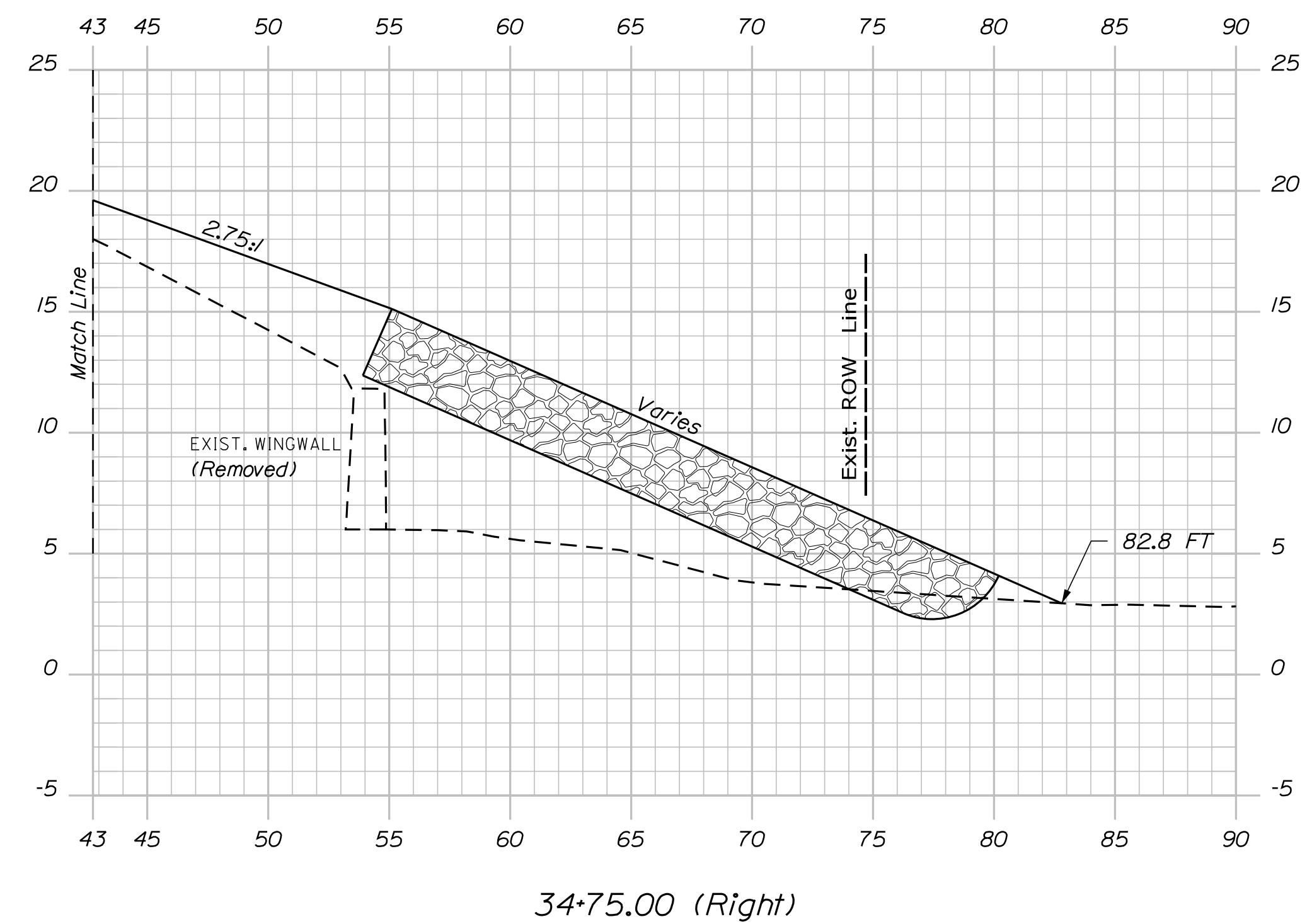
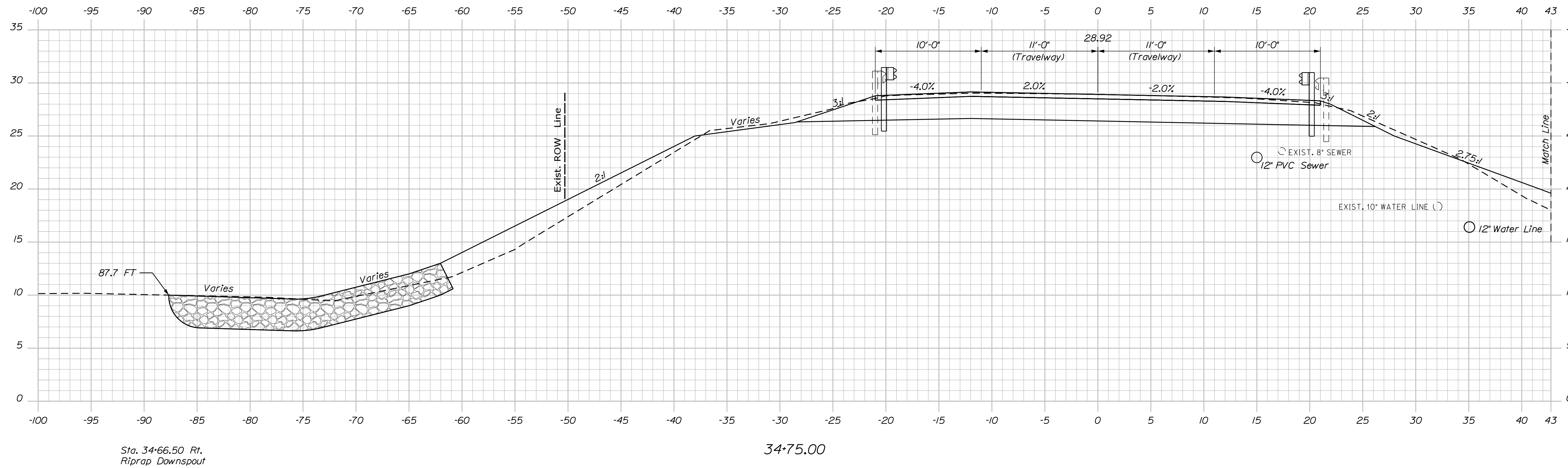
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Division: BRIDGE

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STATE OF MAINE DEPARTMENT OF TRANSPORTATION		STP-2187(400)		BRIDGE NO. 2319		WIN		21874.00		BRIDGE PLANS	
GOOSE RIVER BRIDGE		GOOSE RIVER		WALDO COUNTY		BELFAST		CROSS SECTIONS		SHEET NUMBER	
33		35		40		45		50		21	
OF 34											



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2187(400)

BRIDGE NO. 2319 **21874.00** BRIDGE PLANS

PROJ. MANAGER	DEVAN EATON	THC	BY	DATE
DESIGN-DETAILED	THC	THC	MAR 2020	
CHECKED-REVIEWED	KLW	LEW/TWM	MAR 2020	
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SIGN3-DETAILED3				
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REVISIONS 2				
REVISIONS 3				
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DATE				
P.E. NUMBER				
SIGNATURE				

GOOSE RIVER BRIDGE
GOOSE RIVER

WALDO COUNTY

CROSS SECTIONS

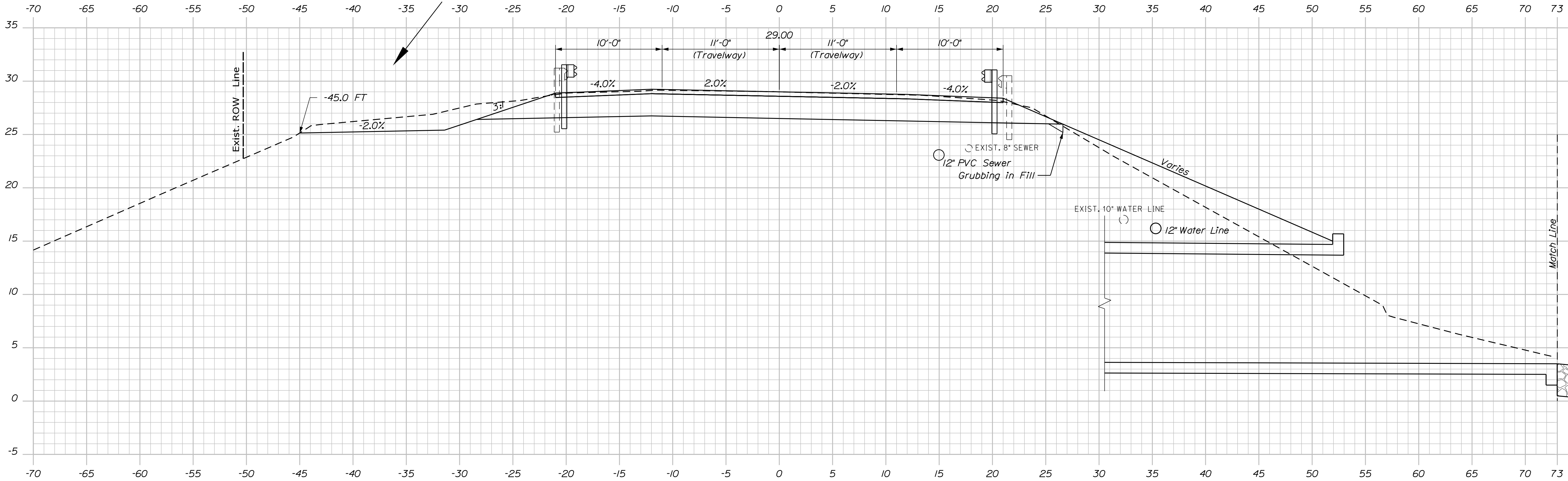
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OF 34

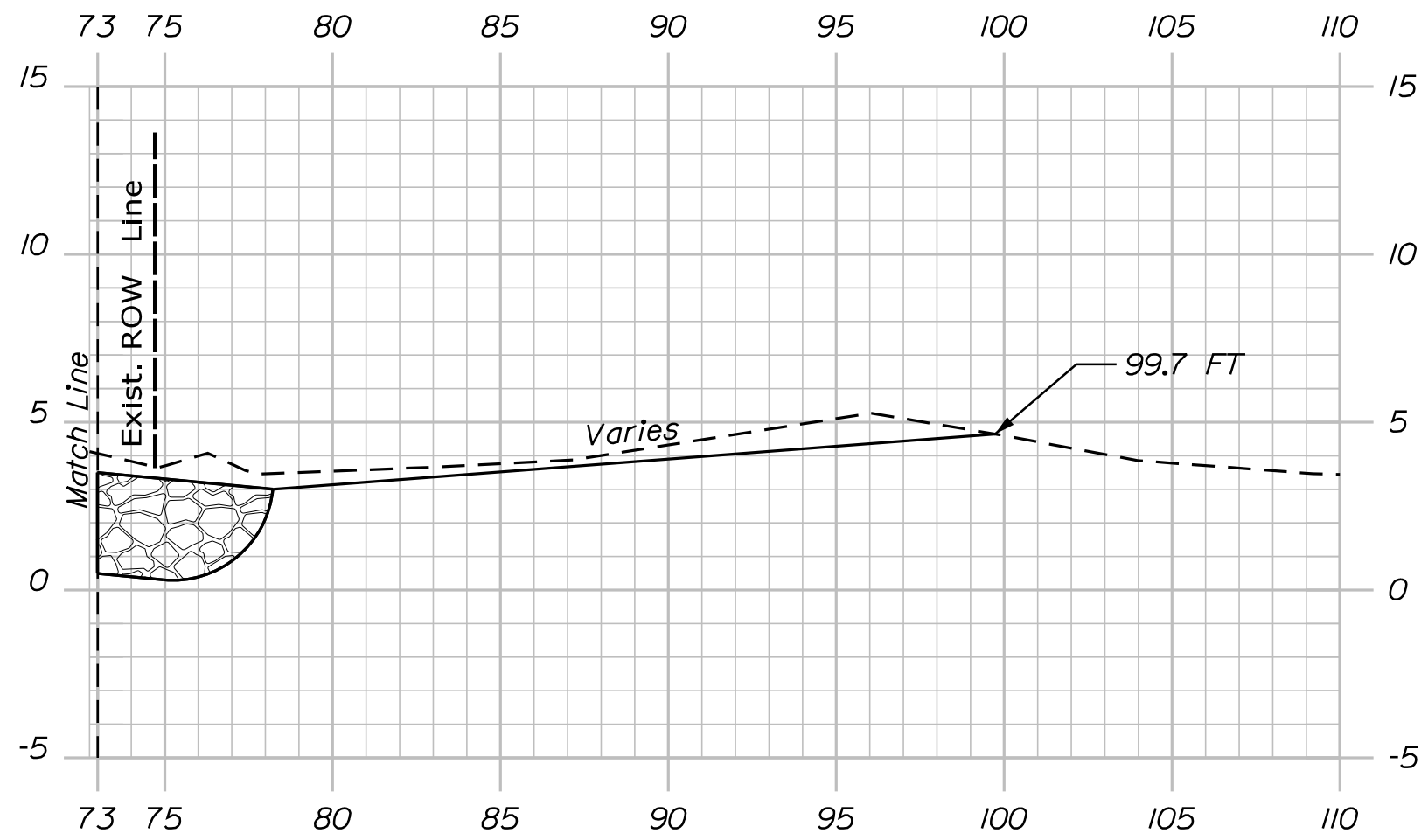
Sta. 34+75.00





Sta. 35+25.4, 21.6' Lt.
Install 31" W-Beam Guardrail - Mid-Way Splice - Flared Terminal

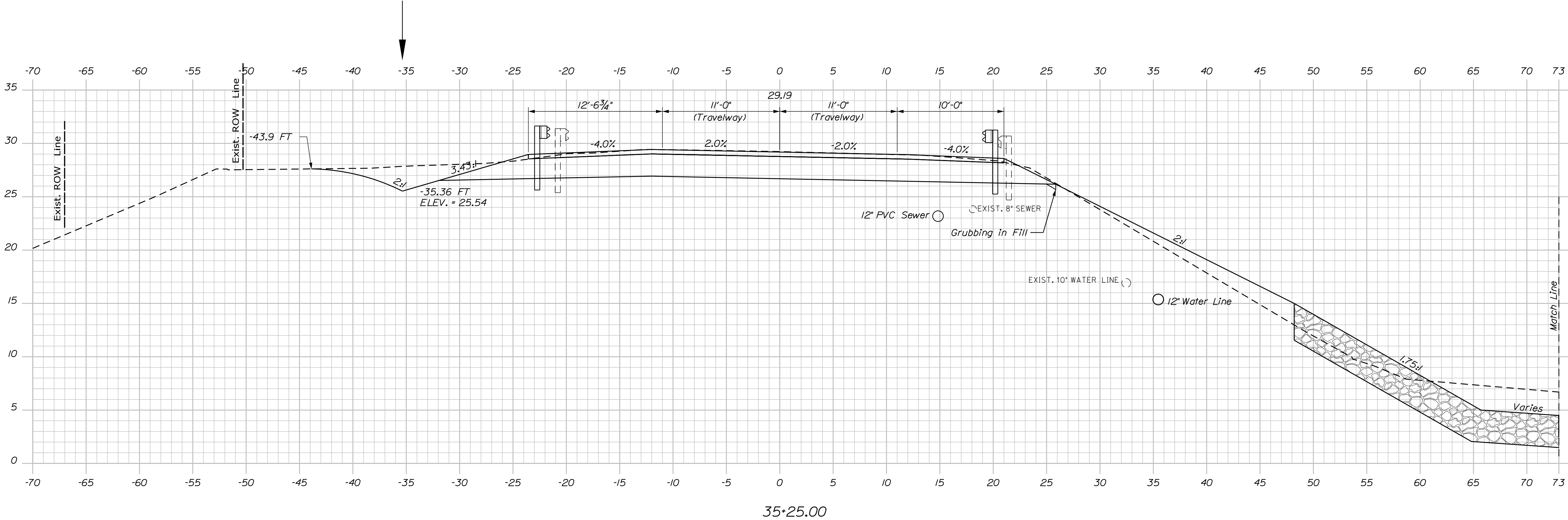
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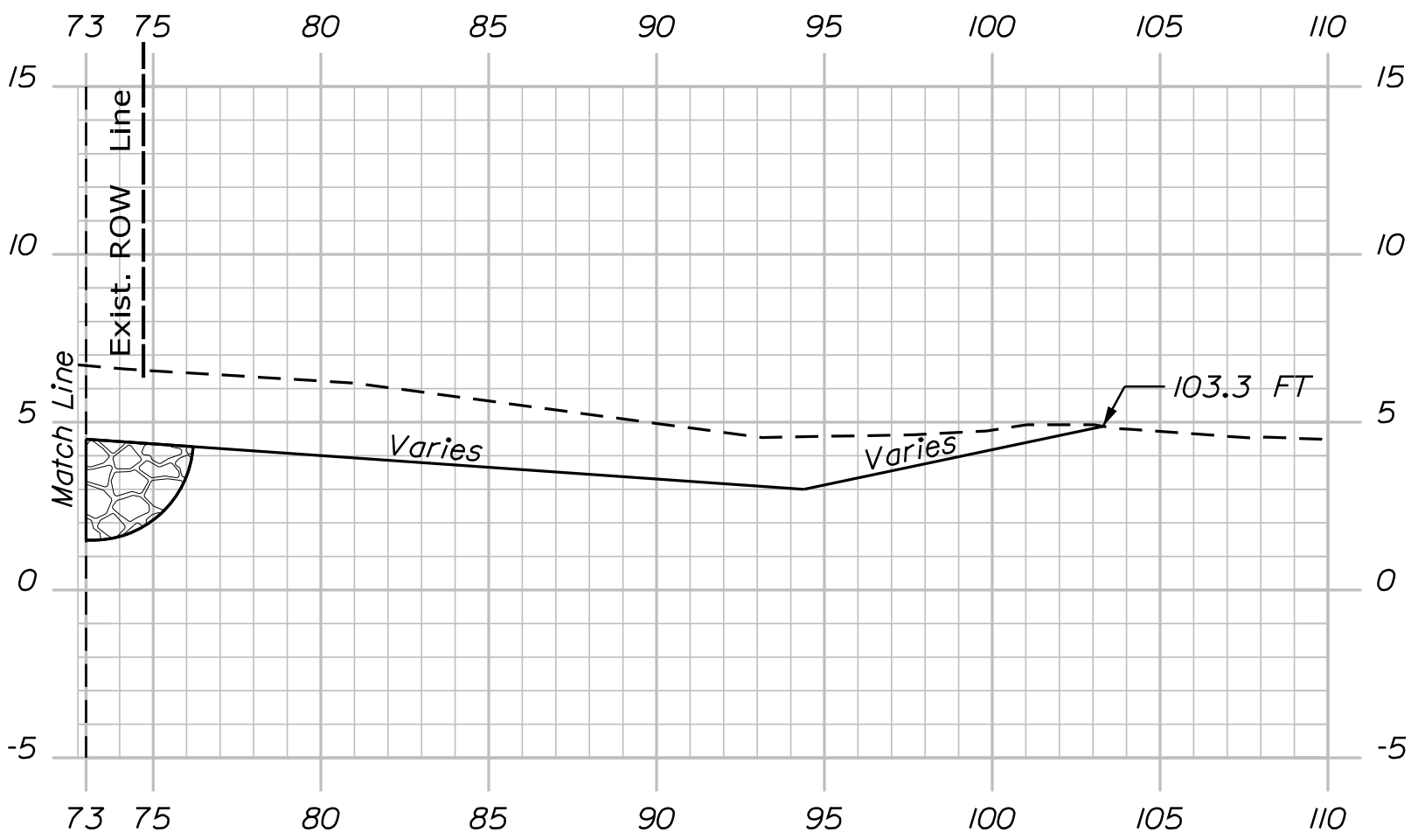
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STATE OF MAINE DEPARTMENT OF TRANSPORTATION		STP-2187(400)		BRIDGE NO. 2319		WIN 21874.00		BRIDGE PLANS	
GOOSE RIVER BRIDGE GOOSE RIVER BELFAST		WALDO COUNTY		CROSS SECTIONS		SHEET NUMBER 23 OF 34			
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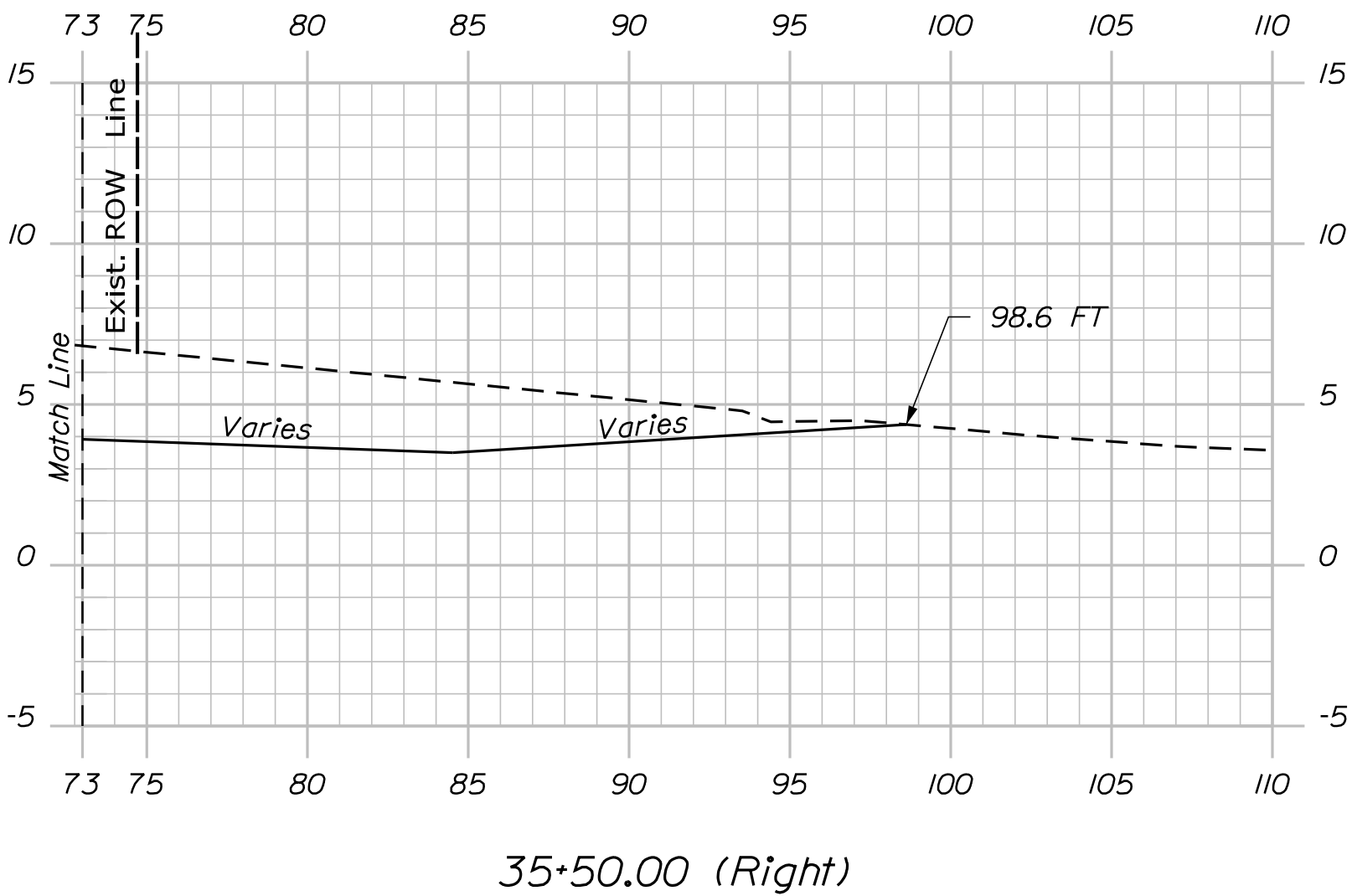
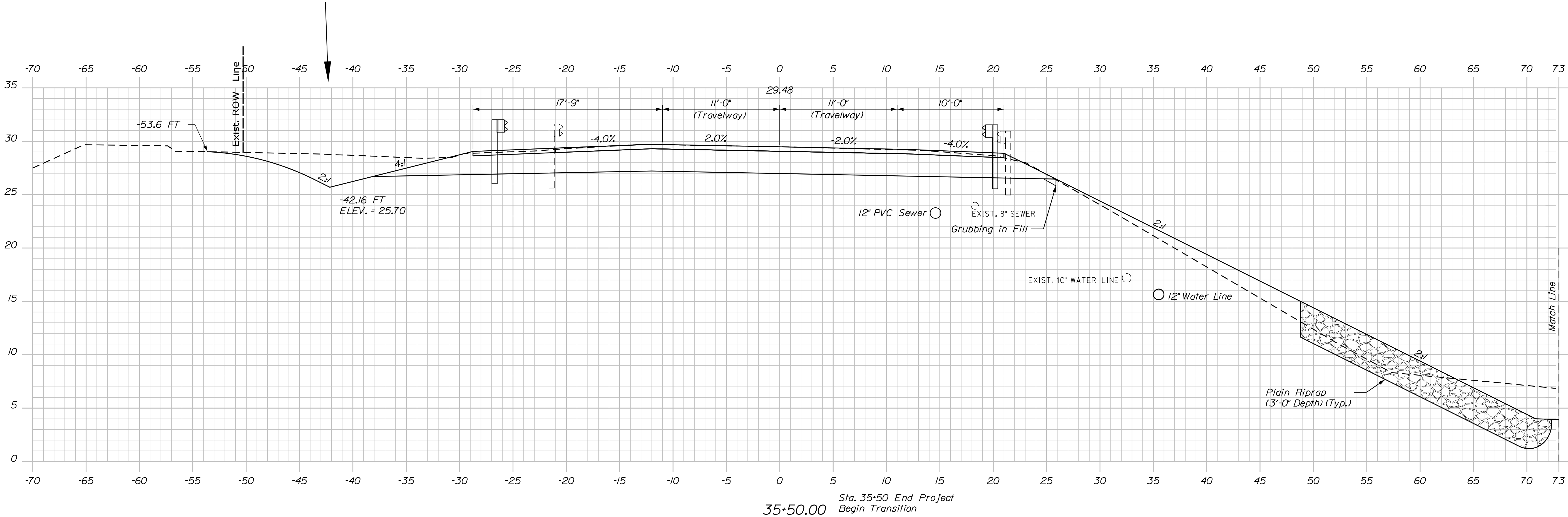
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35+25.00 (Right)



STATE OF MAINE		DEPARTMENT OF TRANSPORTATION	
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BELFAST		SHEET NUMBER	
STP-2187(400)		24	
WIN		OF 34	
BRIDGE NO. 2319		21874.00	
BRIDGE PLANS		DATE	
SIGNATURE		P.E. NUMBER	
DATE		FIELD CHANGES	
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BY		CHECKED-REVIEWED	
DATE		DESIGN-DETAILED	
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MAR 2020		REVISIONS 2	
LEM/TMM		REVISIONS 3	
MAR 2020		REVISIONS 4	



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2187(400)

BRIDGE NO. 2319
WIN
21874.00
BRIDGE PLANS

GOOSE RIVER BRIDGE
GOOSE RIVER
BELFAST
WALDO COUNTY

CROSS SECTIONS

SHEET NUMBER
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OF 34

PROJ. MANAGER	DEVAN EATON	BY	DATE
DESIGN-DETAILED	THG	THG	MAR 2020
CHECKED-REVIEWED	KLW	LEM/TMM	MAR 2020
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FIELD CHANGES			

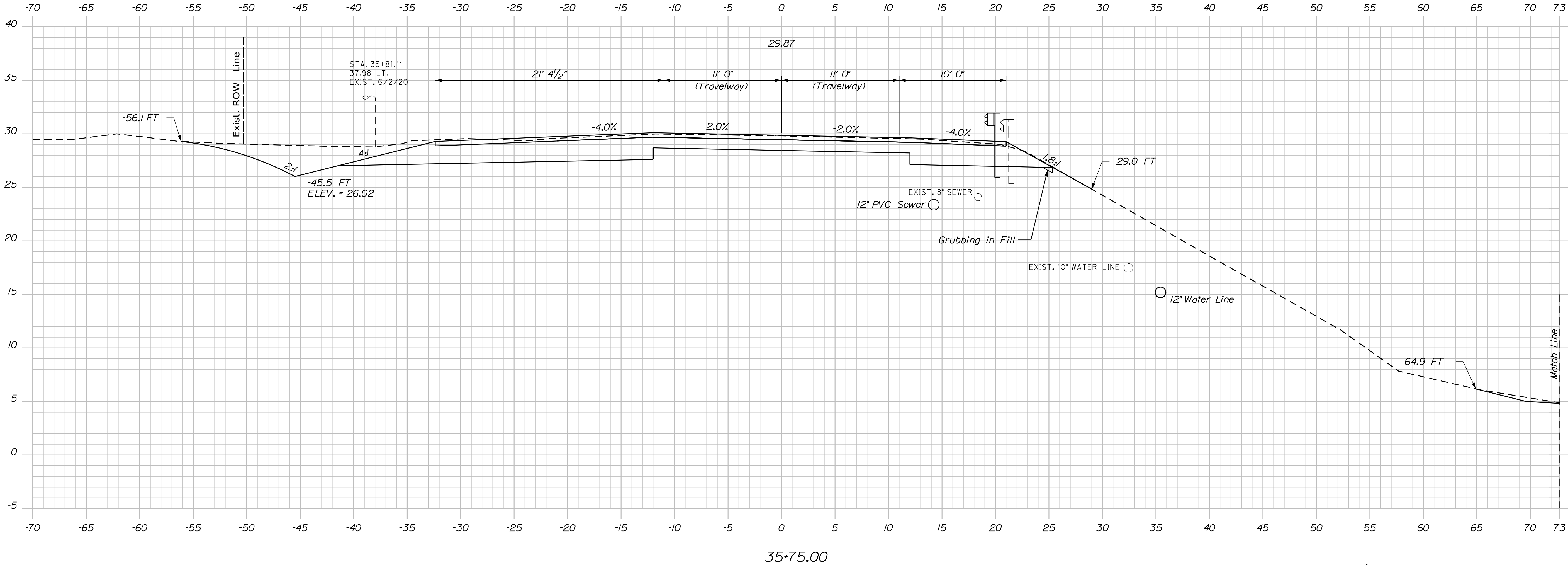
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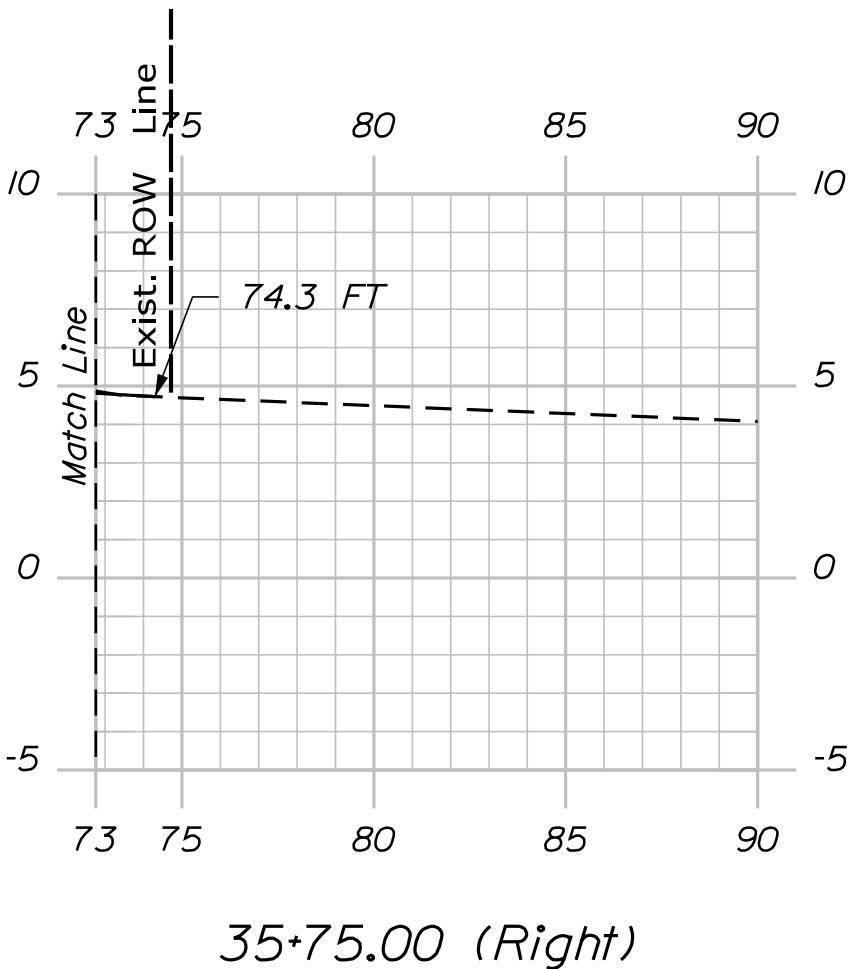
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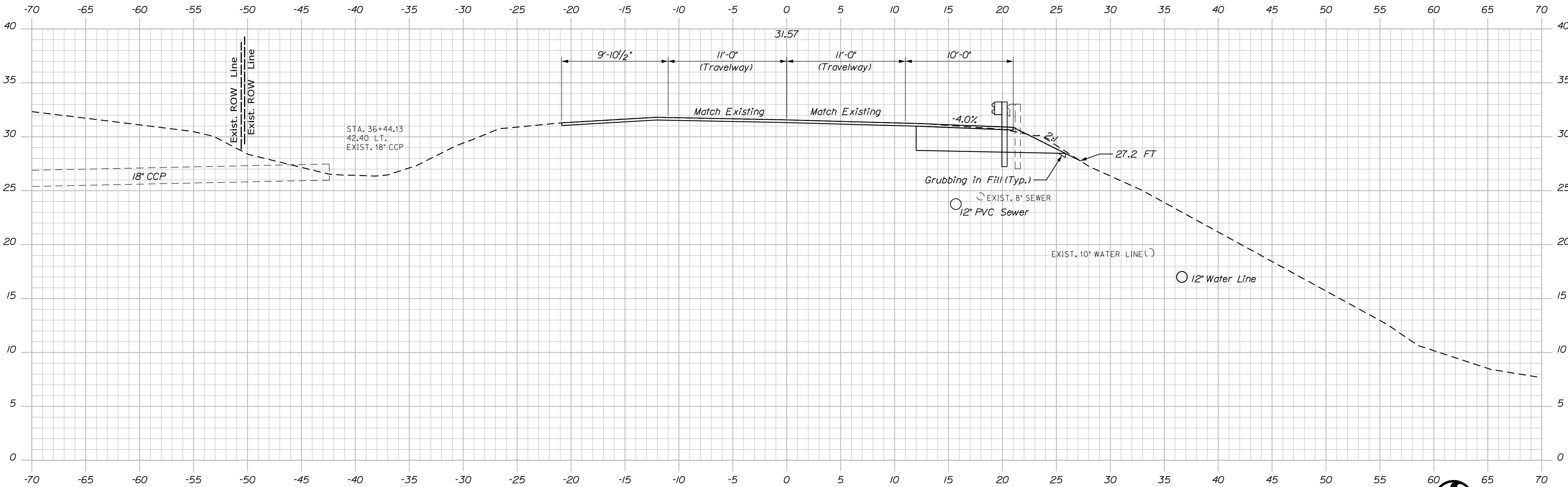
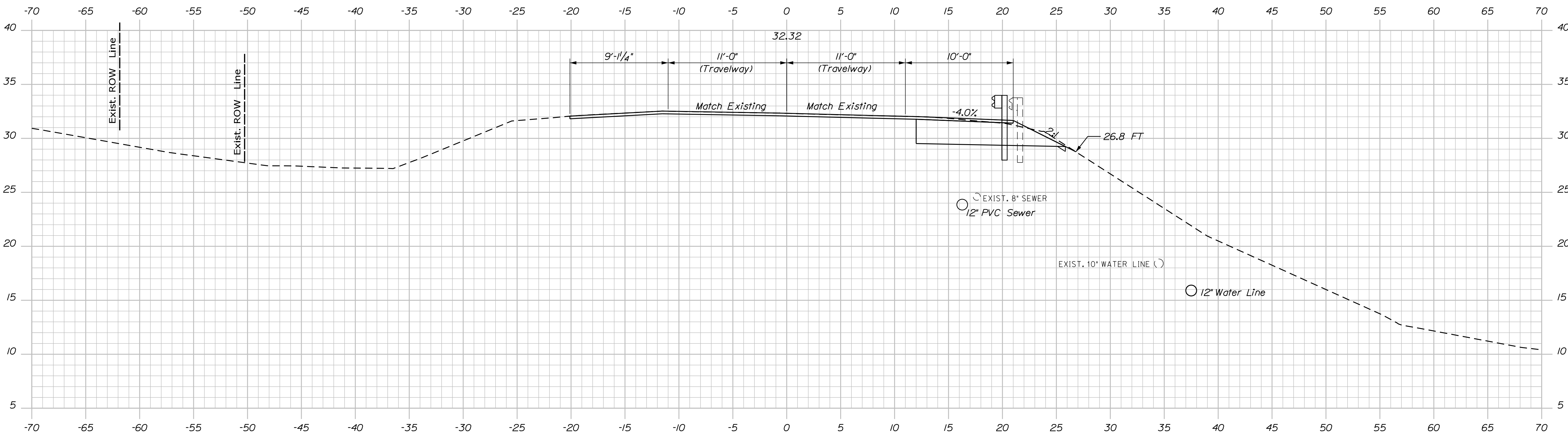
Division: BRIDGE



35+75.00



STATE OF MAINE DEPARTMENT OF TRANSPORTATION	STP-2187(400)		BRIDGE NO. 2319	WIN	21874.00	BRIDGE PLANS																																				
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SHEET NUMBER						26																																				
						OF 34																																				



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2187(400)

BRIDGE NO. 2319
WIN
21874.00

BRIDGE PLANS

GOOSE RIVER BRIDGE
GOOSE RIVER
BELFAST

WALDO COUNTY

CROSS SECTIONS

SHEET NUMBER

28

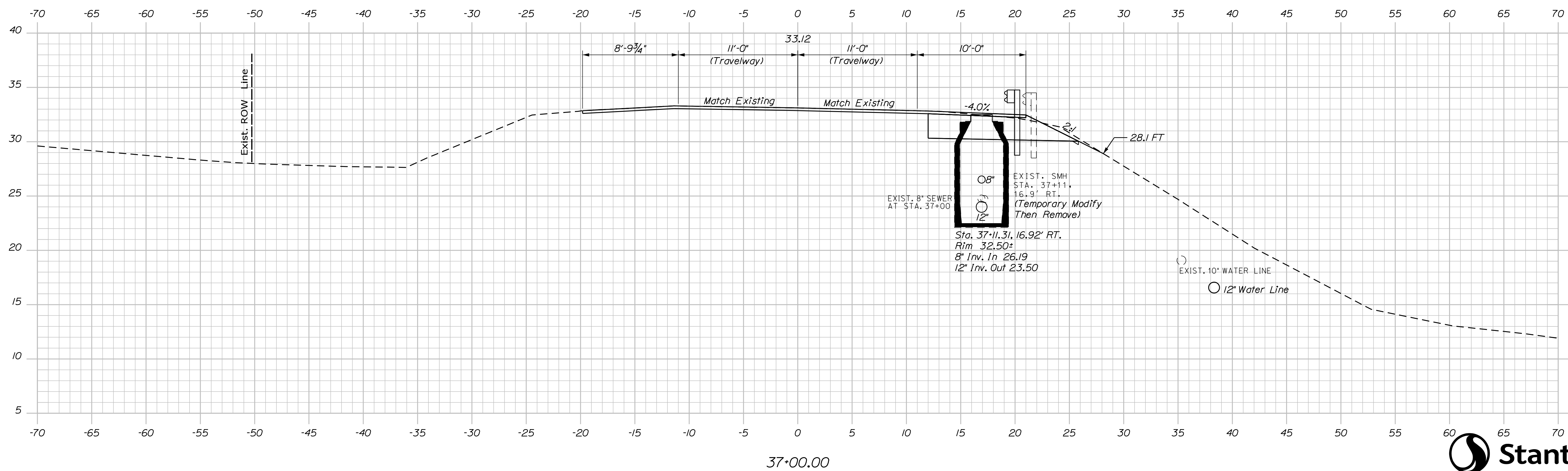
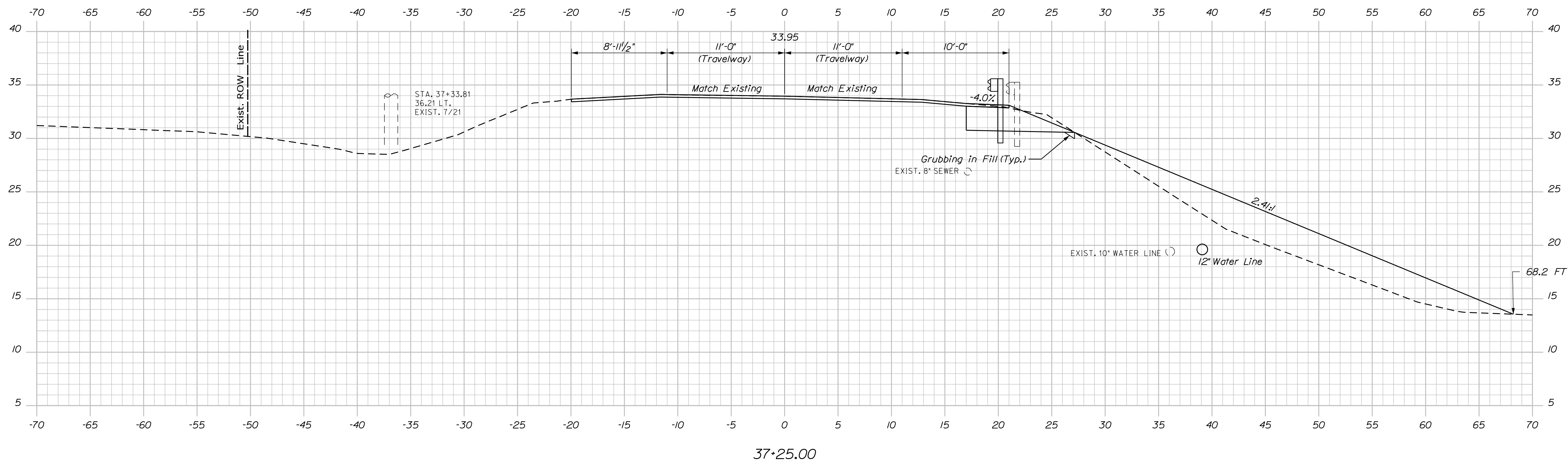
OF 34

PROJ. MANAGER	DEVAN EATON	THG	DATE	BY	DATE
DESIGN-DETAILED	THG	THG	MAR 2020	THG	MAR 2020
CHECKED-REVIEWED	KLW	LEM/TMM	MAR 2020	LEM/TMM	MAR 2020
DESIGN-DETAILED					
REVISIONS 1					
REVISIONS 2					
REVISIONS 3					
REVISIONS 4					
FIELD CHANGES					

SIGNATURE

P.E. NUMBER

DATE



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 **Stantec**

STATE OF MAINE	
DEPARTMENT OF TRANSPORTATION	
STP-2187(400)	
BRIDGE NO. 2319	WIN 21874.00
BRIDGE PLANS	

PROJ. MANAGER	DEVIAN EANTON	BY	DATE
DESIGN-DETAILED	THC	THC	MAR 2020
CHECKED-REVIEWED	KLW	LEW/TMM	MAR 2020
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DESIGN3-DETAILED3			
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DATE			

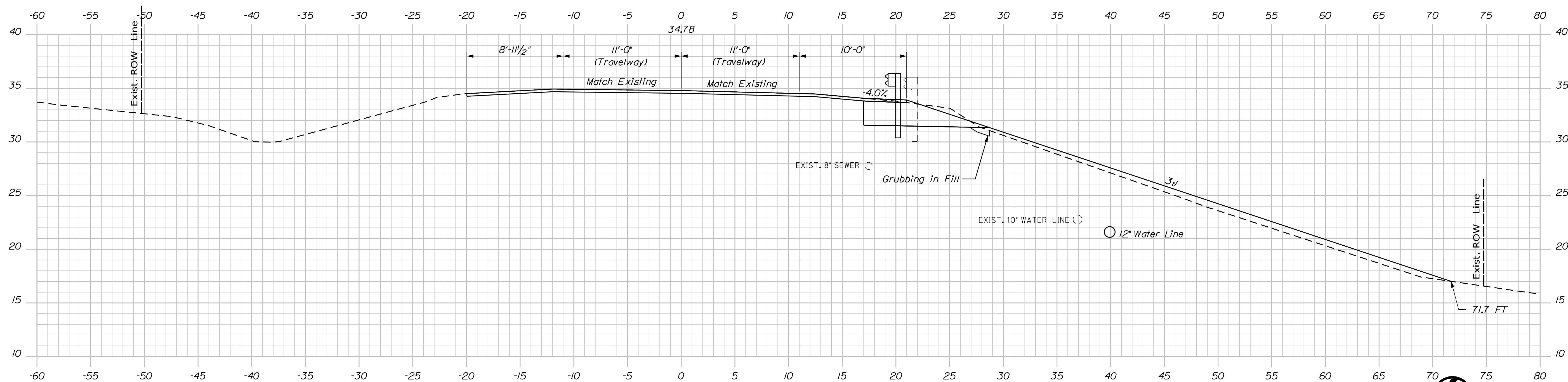
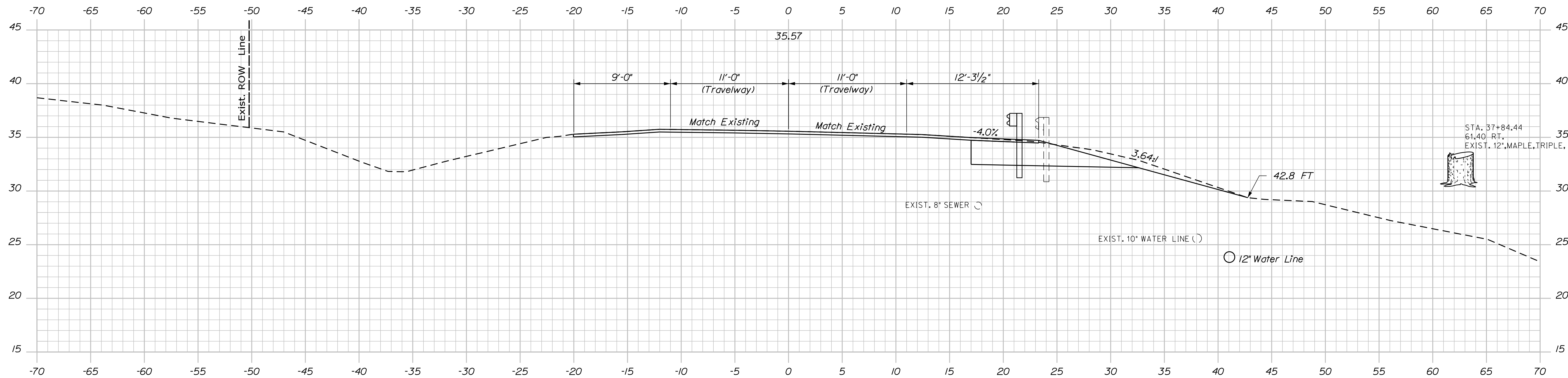
GOOSE RIVER BRIDGE
GOOSE RIVER
BELFAST WALDO COUNTY
CROSS SECTIONS

SHEET NUMBER

29

OF 34

Sta. 37+00.00 to Sta. 37+25.00



Sta. 37+50.0, 19.0' Rt. to Sta. 37+88.6, 24.7' Rt.
Install 31" W-Beam Guardrail - Mid-Way Splice - Flared Terminal



PROJ. MANAGER	DEVAN EATON	BY	DATE
DESIGN-DETAILED	THC	THC	MAR 2020
CHECKED-REVIEWED	KLW	LEM/TMM	MAR 2020
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
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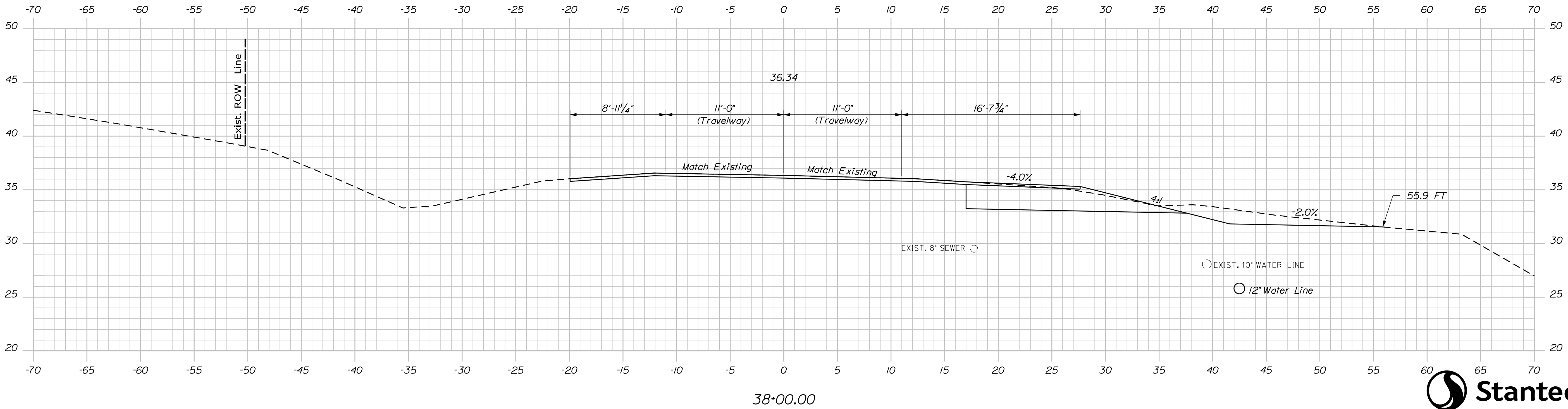
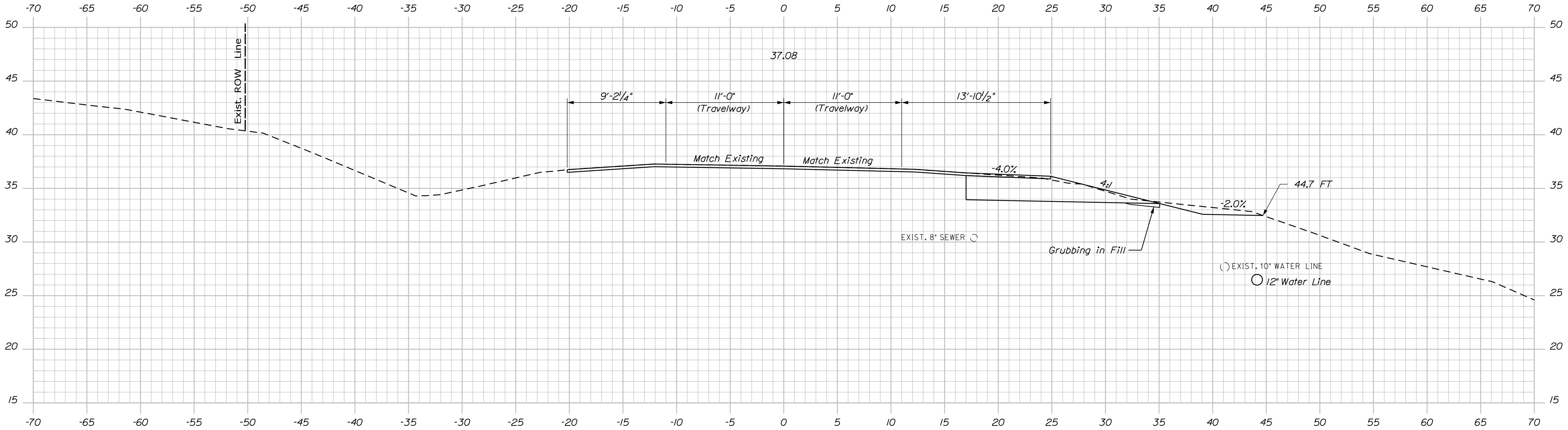
GOOSE RIVER BRIDGE GOOSE RIVER BELFAST	WALDO COUNTY
CROSS SECTIONS	

SHEET NUMBER

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OF 34

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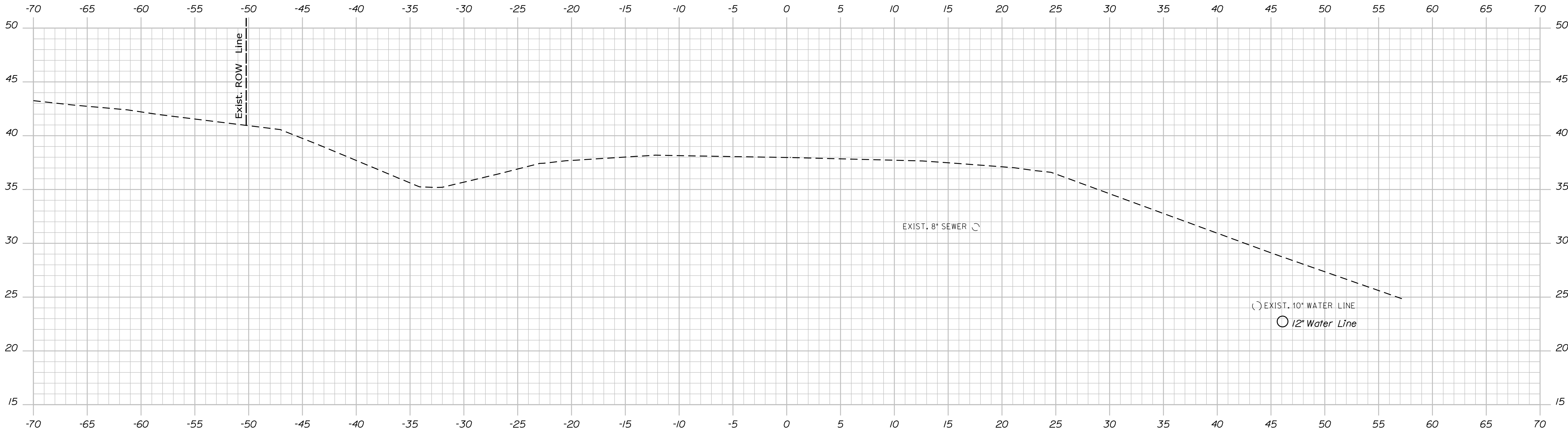
STATE OF MAINE DEPARTMENT OF TRANSPORTATION	STP-2187(400)		BRIDGE NO. 2319 WIN 21874.00 BRIDGE PLANS
GOOSE RIVER BRIDGE GOOSE RIVER WALDO COUNTY BELFAST		DATE	SIGNATURE
		DATE	P.E. NUMBER
		DATE	DATE
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SHEET NUMBER		31	
OF 34			

Username: Mark Poulin

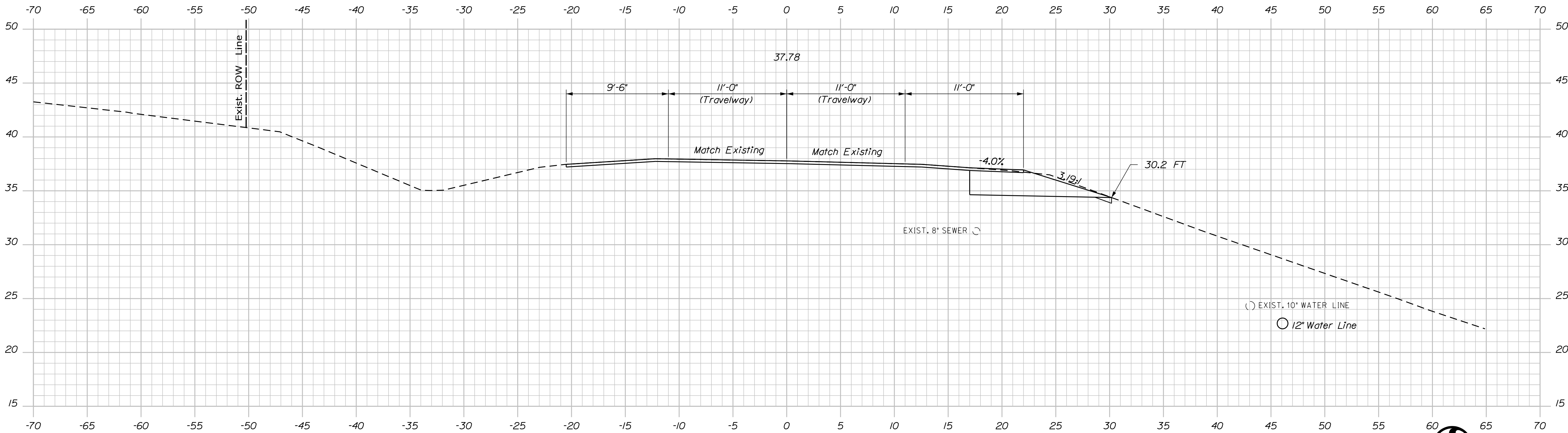
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Division: BRIDGE

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38+57.25 Sta. 36+57.25 End Mill & Overlay
Match Existing



38+50.00



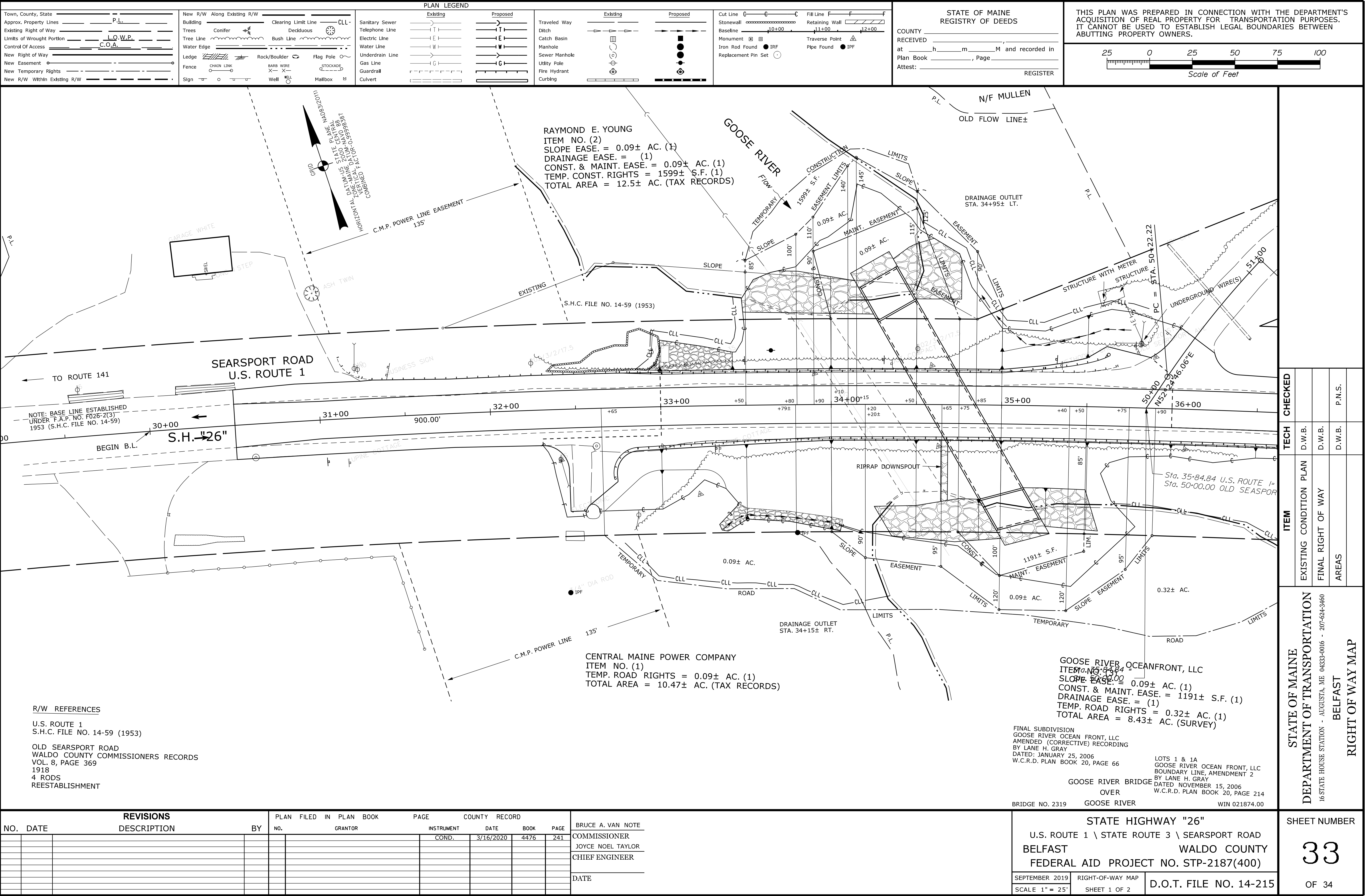
STATE OF MAINE		DEPARTMENT OF TRANSPORTATION	
GOOSE RIVER BRIDGE		STP-2187(400)	
GOOSE RIVER		WIN	
BELFAST		21874.00	
WALDO COUNTY		BRIDGE NO. 2319	
CROSS SECTIONS		BRIDGE PLANS	
SHEET NUMBER		32	
		OF 34	
DATE		SIGNATURE	
P.E. NUMBER		DATE	
FIELD CHANGES			

Date:4/3/2020

Username: Mark Poulin

Division: BRIDGE

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GENERAL NOTES

1) THE PLANS NUMBERED G-1, C-1, C-2, C-3 AND C-4 AND TITLED "GOOSE RIVER SEWER RELOCATION/REPLACEMENT" DEFINE THE SCOPE AND REQUIREMENTS SPECIFIC TO THE RELOCATION AND REPLACEMENT OF THE CITY OF BELFAST'S SANITARY SEWER SYSTEM RELATED TO THE INSTALLATION OF THE PROPOSED GOOSE RIVER CULVERT. SCOPE AND REQUIREMENTS FOR THE CULVERT REPLACEMENT, DETOUR, ROAD RESTORATION, TEMPORARY BRIDGE, WATER SYSTEM MODIFICATIONS, ETC. ARE DEFINED ELSEWHERE IN THE PLANS OR CONTRACT DOCUMENTS.

2) UTILITY LOCATIONS AS SHOWN ARE APPROXIMATE BASED ON AVAILABLE INFORMATION AT TIME OF SURVEY. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD LOCATION AND CONFIRMATION OF ALL EXISTING SEWER UTILITIES. IT IS POSSIBLE THAT OTHER ACTIVE AND INACTIVE SEWER UTILITIES MAY EXIST IN THE PROJECT AREA. CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING EXCAVATION.

3) CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION WITH THE CITY TO FIELD LOCATE EXISTING FACILITIES AND TO MINIMIZE THEIR DISRUPTION. CONTINUOUS SEWER SERVICE MUST BE MAINTAINED BY THE CONTRACTOR AT ALL TIMES DURING CONSTRUCTION.

4) LOCATION OF WATER LINES ARE SHOWN IN APPROXIMATE LOCATIONS AS PROVIDED BY THE BELFAST WATER DISTRICT. ANY INDICATED WATER LINE DEPTH IS APPROXIMATE AND SHALL BE VERIFIED BY CONTRACTOR.

5) CONTRACTOR SHALL FIELD VERIFY LOCATION OF ANY UNDERGROUND PUBLIC OR PRIVATE ELECTRICAL AND TELEPHONE UTILITIES WITH DIG-SAFE OR CITY OF BELFAST PRIOR TO EXCAVATION.

6) CONTRACTOR SHALL FIELD VERIFY ALL EXISTING PIPE SIZES AND MATERIAL FOR CONNECTION OF TEMPORARY AND PERMANENT WORK PRIOR TO STARTING CONSTRUCTION AND ORDERING STRUCTURES.

7) PORTIONS OF SURVEY DATA AND RIGHT-OF-WAY INFORMATION ARE BASED ON PLANS TITLED "STATE OF MAINE DEPT. OF TRANSPORTATION, BELFAST WALDO COUNTY GOOSE RIVER BRIDGE OVER GOOSE RIVER, PROJECT NO. 21874.00". NO LEGAL REPRESENTATION OF PROPERTY LINE AND RIGHT-OF-WAY INFORMATION IS INTENDED, NOR WAS ANY FORMAL BOUNDARY SURVEY CONDUCTED.

8) CONTRACTOR SHALL PROPERLY PROTECT AND AVOID DISTURBING PROPERTY PINS AND MONUMENTS. IF DISTURBED, THE PROPERTY PIN OR MONUMENT SHALL BE RESET AT CONTRACTOR'S EXPENSE BY A REGISTERED LAND SURVEYOR APPROVED BY THE ENGINEER.

9) CONTRACTOR SHALL CONTACT OWNERS OF UTILITY POLES ADJACENT TO EXCAVATION AREAS TO ARRANGE POLE SUPPORT AND OR REMOVAL AND RESETTING DURING EXCAVATION AS REQUIRED.

10) CONTRACTOR IS RESPONSIBLE FOR THE LAYOUT OF ALL TEMPORARY AND PROPOSED PERMANENT WORK. ENGINEER WILL ASSIST ONLY IN PROVIDING REFERENCE POINTS AND ELEVATION DATA FOR INITIAL LAYOUT ONLY. CONTRACTOR SHALL MAINTAIN LAYOUT THROUGHOUT PROJECT.

11) CONTRACTOR SHALL CONTROL DUST GENERATED DURING THE PROJECT TO A LEVEL SATISFACTORY TO THE CITY OF BELFAST AND ENGINEER.

12) REPAIR ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.

13) LOAM AND SEED ALL DISTURBED LAWN AREAS WITH 4" LOAM, HYDROSEED, AND MULCH.

14) ALL AREAS DISTURBED BY CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION UNLESS OTHERWISE NOTED. COST OF RESTORATION IS INCIDENTAL TO CONTRACT OUTSIDE OF PAY LIMITS.

15) CONTRACTOR SHALL PROVIDE REDUNDANT TEMPORARY PUMPING OR GRAVITY SEWER AS NEEDED TO BYPASS SEWAGE FLOWS AROUND WORK AREAS AND MAINTAIN SEWER SERVICE ALONG ROUTE OF NEW WORK. CONTRACTOR IS RESPONSIBLE TO MONITOR AND MAINTAIN TEMPORARY SEWER TO PROVIDE CONTINUOUS SEWER SERVICE.

16) ALL PROJECT AREA SEWER LINES SHALL BE PROPERLY FLUSHED BY CONTRACTOR AT COMPLETION OF PROJECT AND WHENEVER CONSTRUCTION DEBRIS ENTERS OPEN PIPE WORK. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT CONSTRUCTION MATERIALS AND DEBRIS FROM ENTERING OPEN PIPE LINES AND SHALL BE RESPONSIBLE FOR THE COST OF ANY REPAIRS FROM DAMAGE THAT RESULTS FROM SUCH DEBRIS. LINES SHALL BE FLUSHED WITH HIGH PRESSURE JETTING EQUIPMENT AND CLEANED WITH VACUUM TRUCK. GRAVITY FLUSHING IS NOT ACCEPTABLE.

17) MANHOLE RIM ELEVATIONS ARE PROVIDED ON PLAN SHEETS TO ESTABLISH GENERAL HEIGHT OF NEW STRUCTURES FOR BIDDING PURPOSES. EXACT FINAL RIM ELEVATIONS SHALL BE ESTABLISHED IN FIELD SUCH THAT TOP OF RIM IS 3/8" BELOW FINAL PAVEMENT GRADE OR AS SHOWN FOR OTHER AREAS ON PLAN AND PROFILE SHEETS. CONTRACTOR SHALL FIELD VERIFY FINAL ELEVATION WITH FIELD ENGINEER PRIOR TO COMPLETION OF MASONRY WORK.

18) ALL PERMANENT SEWER LINES WITH LESS THAN FIVE FEET OF COVER SHALL BE INSULATED WITH TWO INCHES OF RIGID INSULATION AT FULL TRENCH WIDTH. IF LESS THAN FOUR FEET OF COVER IS AVAILABLE, PROVIDE DOUBLE LAYER OF TWO INCH INSULATION.

19) IF ENCOUNTERED, ALL DISTURBED ASBESTOS CEMENT (AC) PIPING SHALL BE REMOVED FROM TRENCH AND SEGREGATED FROM GENERAL CONSTRUCTION FILL. DISPOSAL OF ALL AC PIPING IS REGULATED UNDER THE MAINE DEP CHAPTER 401 RULES. DISPOSAL OF ALL OTHER MATERIAL SHALL COMPLY WITH DEP DISPOSAL REQUIREMENTS.

20) CONTRACTOR SHALL HAVE THE SOLE RESPONSIBILITY TO ENSURE THAT ALL WORK MEETS ALL OSHA AND OTHER APPLICABLE CODE, HEALTH, AND SAFETY REQUIREMENTS.

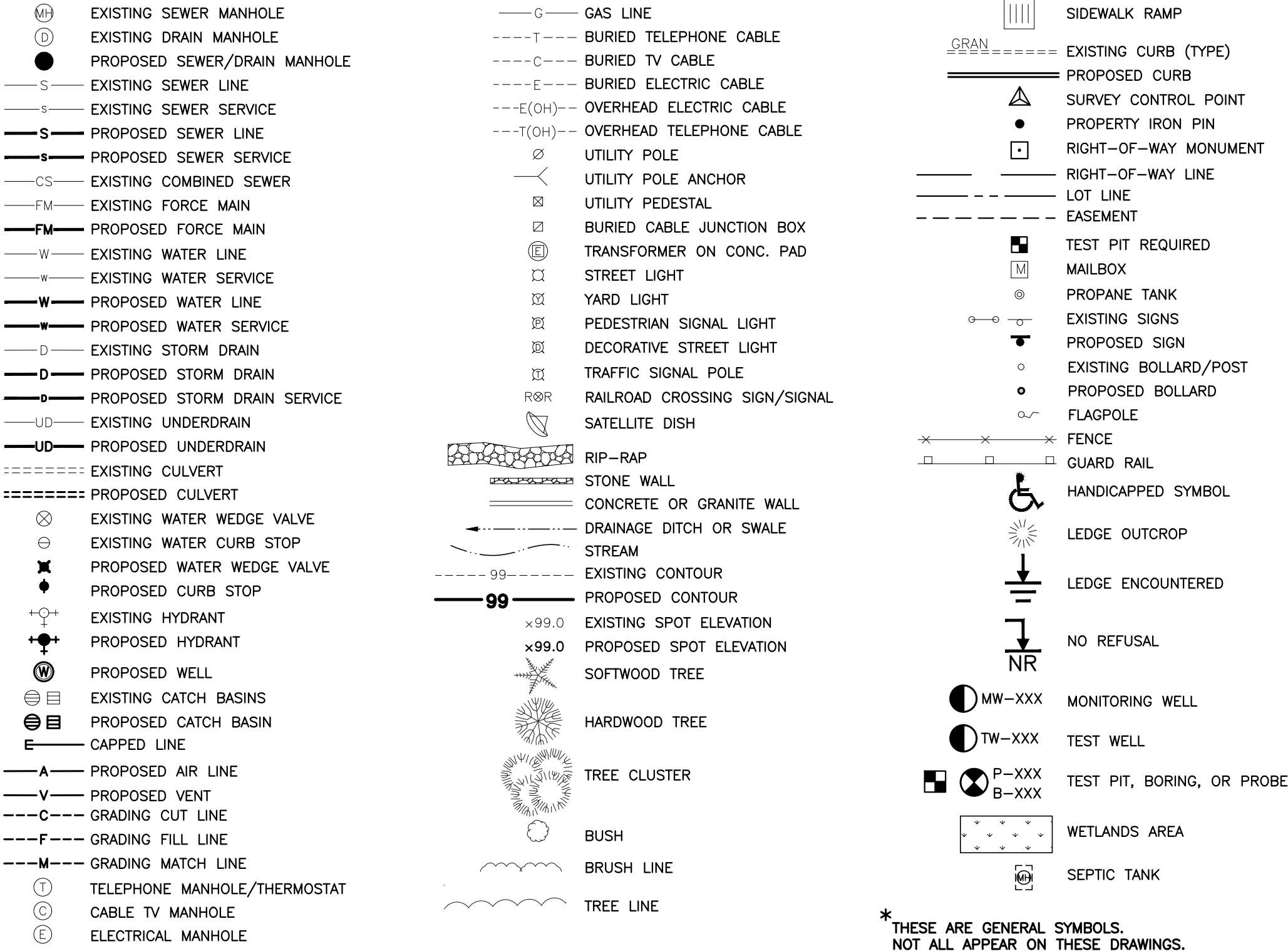
21) CONTRACTOR SHALL EXERCISE APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION IN ACCORDANCE WITH ACCEPTED PRACTICE, APPLICABLE LAWS AND REGULATIONS AND REQUIREMENTS OF THESE CONTRACT DOCUMENTS.

22) CONTRACTOR SHALL MAINTAIN ACCESS AND PROVIDE TEMPORARY GRAVEL ACCESS ROAD AS REQUIRED TO EXISTING MUNICIPAL WASTEWATER PUMP STATION FOR PERSONNEL AND EQUIPMENT. COORDINATE ACCESS REQUIREMENTS WITH CITY OF BELFAST AND FIELD ENGINEER.

23) DESIGN INTENT IS TO COORDINATE TEMPORARY GRAVITY SEWER SYSTEM WITH ROADWAY DETOUR AND TEMPORARY BRIDGE CROSSING STRUCTURE.

24) TEMPORARY BRIDGE SYSTEM PROPOSED BY CONTRACTOR TO BE REVIEWED ONCE SUBMITTED AND ENGINEER WILL ADJUST PROPOSED DESIGN TO ACTUAL PROPOSED SYSTEM IF NECESSARY.

LEGEND*



*THESE ARE GENERAL SYMBOLS.
NOT ALL APPEAR ON THESE DRAWINGS.

ABBREVIATIONS*

AB	ANCHOR BOLTS	Fb	BENDING STRESS	MANUF	MANUFACTURER	S	SLOPE OR SEWER
AC	ASBESTOS CEMENT	Fc	COMPRESSIVE STRESS	MAT'L	MATERIAL	SAN	SANITARY
AFF	ABOVE FINISHED FLOOR	Ft	TENSILE STRESS	MB	MACHINE BOLTS	SDR	STANDARD DIMENSION RATIOS
AGGR	AGGREGATE	FC	FIRE CODE	MAX	MAXIMUM	SCH	SCHEDULE
ALT	ALTERNATE	FCC	FLOOR CLEANOUT	MC	MOISTURE CONTENT	SCP	SURVEY CONTROL POINT
ALUM	ALUMINUM	FCS	FLOW CONTROL STRUCTURE	MCC	MOTOR CONTROL CENTER	SCR	SCREENINGS
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	FD	FLOOR DRAIN	MECH	MECHANICAL	SECT	SECTION
APA	AMERICAN PLYWOOD ASSOCIATION	FDN	FOUNDATION	MFG	MANUFACTURER	SF	SQUARE FEET
APPROX.±	APPROXIMATELY	FE	FIRE EXTINGUISHER	MH	MANHOLE	SERV	SERVICE
AVG	AVERAGE	FF,FIN FLR	FINISH FLOOR	MHW	MEAN HIGH WATER	SHT	SHEET
ARV	AIR RELIEF VALVE	FIN	FINISH	MIL	1/1000 INCH	SHD	ROAD SHOULDER
		FIN GR	FINISH GRADE	MIN	MINIMUM	SI	SPRAY IRRIGATION
BITUM	BITUMINOUS	FLG	FLANGED	MJ	MECHANICAL JOINT	SICPE	SMOOTH INTERIOR CORRUGATED POLYETHYLENE
BL.±	BASELINE	FLR	FLOOR	MLSS	MIXED LIQUOR SUSPENDED SOLIDS	SLG	SLUICE GATE
BLDG	BUILDING	FLR'G	FLOORING	MLW	MEAN LOW WATER	SPEC	SPECIAL
BOF	BOTTOM OF FOOTING	FM	FORCE MAIN	MM	MILLIMETER	SPEC'S	SPECIFICATIONS
BOT	BOTTOM	FOS	FACE OF STUD	MO	MASONRY OPENING	SP	SUMP PUMP
BV	BACK VENT	FPT	FAIRPOINT COMMUNICATION	MON	MONUMENT	SQ	SQUARE
		FR	FIRE RESISTANT	MPS	MAINE PUBLIC SERVICE	SR	SHORT RADIUS
C	CHANNEL	FRP	FIBERGLASS REINFORCED PLASTIC	MRL	MEAN RIVER LEVEL	SWR	SHOWER
CB	CENTERLINE	FT	FEET	MS	MOISTURE SENSOR	SS	STAINLESS STEEL
CFM	CATCH BASIN			MSL	MEAN SEA LEVEL	STA	STATION
CI	CUBIC FEET PER MINUTE	G	GAS LINE	MTL	METAL	STD	STANDARD
CL	CAST IRON	GA	GALLON	MW	MONITORING WELL	STL	STEEL
CLG	CONTROL JOINT	GALV	GALVANIZED			SUSP	SUSPENDED
CLR	CLEARING LIMITS OR CENTERLINE	GDN	GARDEN	N/F	NOW/FORMERLY	SW	SIDEWALK OR SEAWATER
CL	CEILING	GDN	GARDEN	NO	NUMBER		
CL	CEILING	GHT	GARDEN HOSE THREAD	NMFS	NATIONAL MARINE FISHERIES SERVICE	T	TELEPHONE OR THICKNESS
CL	CEILING	GHT	GARDEN HOSE THREAD	NPS	NATIONAL PARK SERVICE	T & B	TOP AND BOTTOM
CL	CEILING	GL	GLASS LINED	NPT	NATIONAL PIPE THREAD	T & G	TONGUE AND GROOVE
CMP	CENTRAL MAINE POWER	GPD	GALLONS PER DAY	NR	NO REFUSAL	TBM	TEMPORARY BENCH MARK
CMP	CORRUGATED METAL PIPE	GPH	GALLONS PER HOUR	NRPA	NATURAL RESOURCES PROTECTION ACT	TDM	TOTAL DYNAMIC HEAD
CMU	CONCRETE MASONRY UNIT	GPM	GALLONS PER MINUTE	NS	NEAR SIDE	TEFC	FULLY ENCLOSED MOTOR
CO	CLEANOUT	GRAN	GRANITE	NTS	NOT TO SCALE	THR*HOLD	THRESHOLD
COL	COLUMN	GRV	GRAVEL			TOP	TOP OF PLATE
CONC.	CONCRETE	GRD	GROUND			TR	TRUSS PIPE
CONN	CONNECTION	GWB	GYPSPUM WALLBOARD	OC	ON CENTER	TYP	TYPICAL
CONST	CONSTRUCTION			OD	OUTSIDE DIAMETER		
CONT	CONTINUOUS	H	HEIGHT	OH	OVERHEAD	UG	UNDERGROUND
CPE	CORRUGATED POLYETHYLENE PIPE	HB	HOSE BIBB	OPER	OPERATOR	URN	URINAL
CS	CARBON STEEL/COMBINED SEWER	HC	HOSE CLEANOUT	PE	POLYETHYLENE OR PLAIN END	USDA	UNITED STATES DEPARTMENT OF AGRICULTURE
CTS	COPPER TUBE SIZE	HDW	HARDWARE	PEN	PENETRATION	UST	UNDERGROUND STORAGE TANK
CU	COPPER	HM	HOLLOW METAL	PERF	PERFORATED		
CULV	CULVERT	HORIZ	HORIZONTAL	PEX	CROSS-LINKED POLYETHYLENE	V	VENT
		H P	HIGH POINT	PD	PURGE DIFFUSER	VAR	VARIABLES
D	DRAIN OR DIAMETER	HPC	HORSEPOWER	PI	PROPERTY IRON	VB	VAPOR BARRIER OR VACUUM BREAKER
DBC	DIRECT BURIAL CABLE	HPT	HORIZONTAL CURVE TANGENT INTERSECTION	PL	PLATE OR PROPERTY LINE	VC	VITRIFIED CLAY
DEP	DEPT OF ENVIRONMENTAL PROTECTION	HT	HEIGHT	PLYWD	PLYWOOD	VER	VERTICAL
DI	DIAMETER	HYD	HYDRANT	POLY	POLYETHYLENE PLASTIC	VERT.	VERTICAL
DIA.±	DIAMETER	HZ	HERTZ	POTW	PUBLICLY OWNED TREATMENT WORKS	VFD	VARIABLE FREQUENCY DRIVE
DIA.±	DIAMETER			PROP	PROPOSED	VPC	BEGIN VERTICAL CURVE
DIM	DIMENSIONS	ID	INSIDE DIAMETER	PSF	POUNDS PER SQUARE FOOT	VPI	VERTICAL CURVE TANGENT INTERSECTION
DIN	GERMAN INSTITUTE FOR STANDARDIZATION	ISI	ISOLATION JOINT	PT	POUNDS PER SQUARE INCH	VPT	VENT THROUGH ROOF
DOW	DOMESTIC COLD WATER	INSUL	INSULATION	PTD	PRESSURE TREATED		
DHW	DOMESTIC HOT WATER	INT	INTERIOR	PVC	POLYVINYL CHLORIDE	W	WATER OR WIDTH
DN	DOWN	INV	INVERT	QPK	PEAK FLOW	WAS	WASTE ACTIVATED SLUDGE
DR	DRIVEWAY	I/O	INPUT/OUTPUT	R	RADIUS OR RIGHT	WC	WATER CLOSET
DRN	DRAIN	IP	IRON PIPE	RAD	RADIUS	WCO	WALL CLEANOUT
DW	DOMESTIC WATER OR DRIVEWAY	JS	JANITOR SINK	RAN	RANGE	WD	WOOD
DWV	DRAIN, WASTE, AND VENT	JB	JUNCTION BOX	RAS	RETURN ACTIVATED SLUDGE	WF	WIDE FLANGE
		KD	KILN DRIED	RCEP	REINFORCED CONCRETE ELLIPTICAL PIPE	WH	WATER HEATER
E	MODULUS OF ELASTICITY OR ELECTRIC	LAT	LATERAL	REF	REFRIGERATOR	WLD	WELDED
EACH	EACH	LAV	LAVATORY	REIN	REINFORCED CONCRETE PIPE	WR	WATER RESISTANT
EB	EMERGENCY BYPASS	LE	LEVEL ELEMENT	RCP	REINFORCED CONCRETE PIPE	WS	WATER SURFACE
EE	EACH END	L	LINEAR FEET	RED	REDUCING	W'STRIPPING	WEATHER STRIPPING
EF	EACH FACE	LG	LONG OR LARGE	REQ	REQUIRED	WW	WET WELL
EHW	EXTREME HIGH WATER	LKR	LEFT OR LENGTH	RESIL	RESILIENT	WWF	WELDED WIRE FABRIC
EJ	EXPANSION JOINT	LL	LONG LEG HORIZONTAL	RET. WALL	RETAINING WALL	WWM	WELDED WIRE MESH
EL-ELEV	ELEVATION	LLH	LONG LEG VERTICAL	RGS	RIGID GALVANIZED STEEL		
ELEC COND	ELECTRICAL CONDUIT	LLV	LONG LEG VERTICAL	R/O	ROUGH OPENING		
ELW	EXTREME LOW WATER	LLOC	LOCATION	RPM	REVOLUTIONS/MINUTE		
EMEC	EASTERN MAINE ELECTRICAL CO-OP INC.	LR	LONG RADIUS	R/W	RIGHT OF WAY		
EMH	ELECTRIC MANHOLE	LT	LEFT				
EMM	EMERA MAINE						
EQUIP	EQUIPMENT						
EST	ESTIMATED						
EW	EACH WAY						
EXIST, EX	EXISTING						
EXP	EXPANSION						
EXT	EXTERIOR						
EXTEN	EXTENSION						

*THESE ARE GENERAL ABBREVIATIONS.
NOT ALL APPEAR ON THESE DRAWINGS.

INDEX

GENERAL

G-1 GENERAL NOTES AND INDEX

CIVIL

C-1 EXISTING SEWER PLAN & PROFILE
C-2 TEMPORARY SEWER PLAN & PROFILE
C-3 PERMANENT SEWER PLAN & PROFILE
C-4 SEWER DETAILS

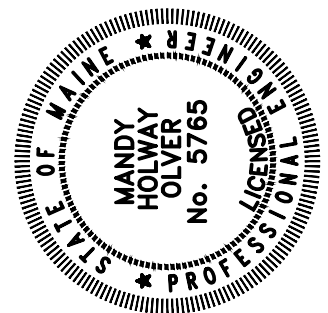
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2187(400)

BRIDGE PLANS

WIN
21874.00

BRIDGE NO. 2319



ADDITION OR REVISION

DATE

DES. BY: EWH

DR. BY: NWD

CK. BY: MHO

OA PROJECT NO.: 1168

SHEET: G-1

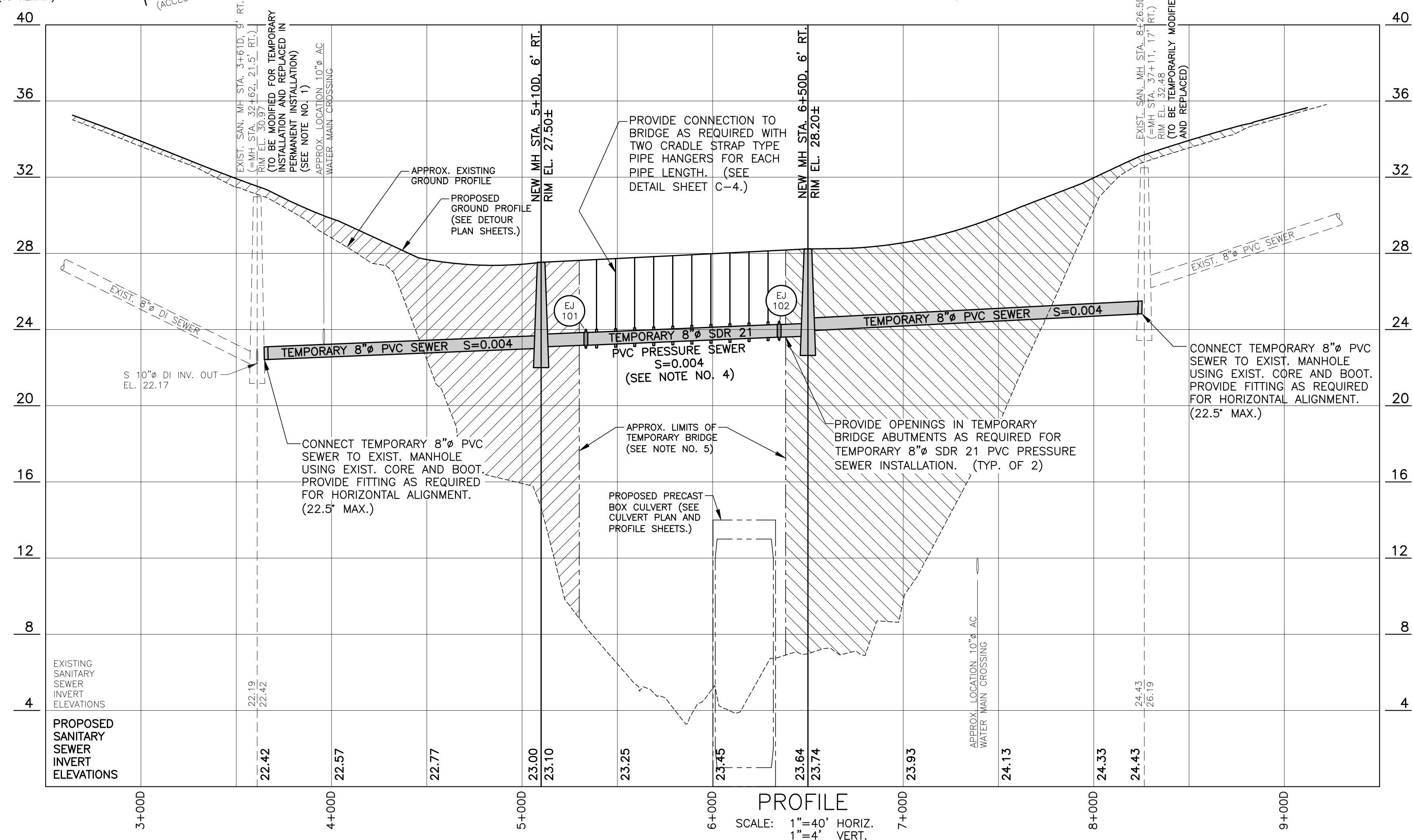
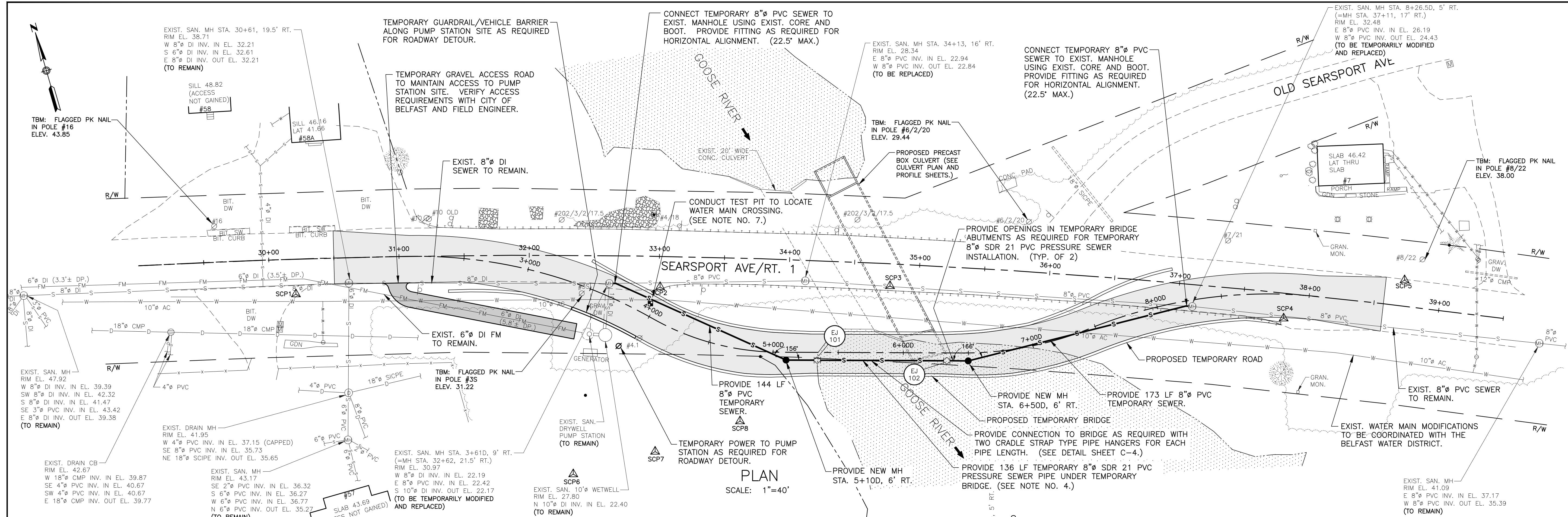
GOOSE RIVER BRIDGE
GOOSE RIVER
BELFAST
CITY OF BELFAST, MAINE
GOOSE RIVER SEWER RELOCATION/REPLACEMENT
GENERAL NOTES AND INDEX

SHEET NUMBER

G-1

OLVER ASSOCIATES INC.

ENVIRONMENTAL ENGINEERS
290 MAIN STREET
WINTERPORT, MAINE



NOTES:

1) THE PLANS NUMBERED G-1, C-1, C-2, C-3 AND C-4 AND TITLED "GOOSE RIVER SEWER RELOCATION/REPLACEMENT" DEFINE THE SCOPE AND REQUIREMENTS SPECIFIC TO THE RELOCATION AND REPLACEMENT OF THE CITY OF BELFAST'S SANITARY SEWER SYSTEM RELATED TO THE INSTALLATION OF THE PROPOSED GOOSE RIVER CULVERT. SCOPE AND REQUIREMENTS FOR THE CULVERT REPLACEMENT, DETOUR, ROAD RESTORATION, TEMPORARY BRIDGE, WATER SYSTEM MODIFICATIONS, ETC. ARE DEFINED ELSEWHERE IN THE PLANS OR CONTRACT DOCUMENTS.

2) 6"Ø DI FORCE MAIN SIZE, MATERIAL, DEPTH FROM CITY OF BELFAST
EAST SIDE SEWER PROJECT RECORD DRAWINGS DATED JULY, 1978.
SHEET 5 OF 11.

3) PROPOSED TEMPORARY ROAD, BRIDGE, CULVERT LOCATION FROM
STATE OF MAINE DEPARTMENT TRANSPORTATION GOOSE RIVER CONTRACT
DRAWINGS.

4) DESIGN INTENT IS TO PROVIDE PVC PRESSURE SEWER PIPE FOR GRAVITY SEWER APPLICATION AT TEMPORARY BRIDGE CROSSING.

5) TEMPORARY BRIDGE AND BARRIER LIMITS ARE APPROXIMATE AND CONCEPTUAL. INTENT IS TO SUSPEND 8"Ø SDR 21 PVC PRESSURE SEWER PIPE FROM PROPOSED TEMPORARY BRIDGE AND PROVIDE OPENINGS IN TEMPORARY RETAINING WALL BRIDGE ABUTMENTS AS REQUIRED FOR TEMPORARY 8"Ø SDR 21 PRESSURE SEWER.

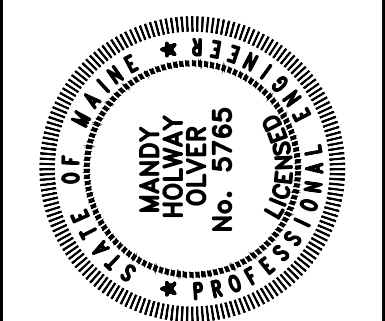
6) CONTRACTOR IS RESPONSIBLE TO MONITOR AND MAINTAIN
TEMPORARY SEWER FOR CONTINUED SEWER SERVICE.

7) CONDUCT TEST PIT IN ADVANCE. ENGINEER MAY SLIGHTLY MODIFY TEMPORARY SEWER PROFILE TO ACCOMMODATE EXISTING WATER MAIN ELEVATIONS.

8) TEMPORARY BRIDGE SYSTEM PROPOSED BY CONTRACTOR TO BE REVIEWED ONCE SUBMITTED AND ENGINEER WILL ADJUST PROPOSED DESIGN TO ACTUAL PROPOSED SYSTEM IF NECESSARY.

OLVER ASSOCIATES INC.
ENVIRONMENTAL ENGINEERS
290 MAIN STREET WINTERPORT, MAINE

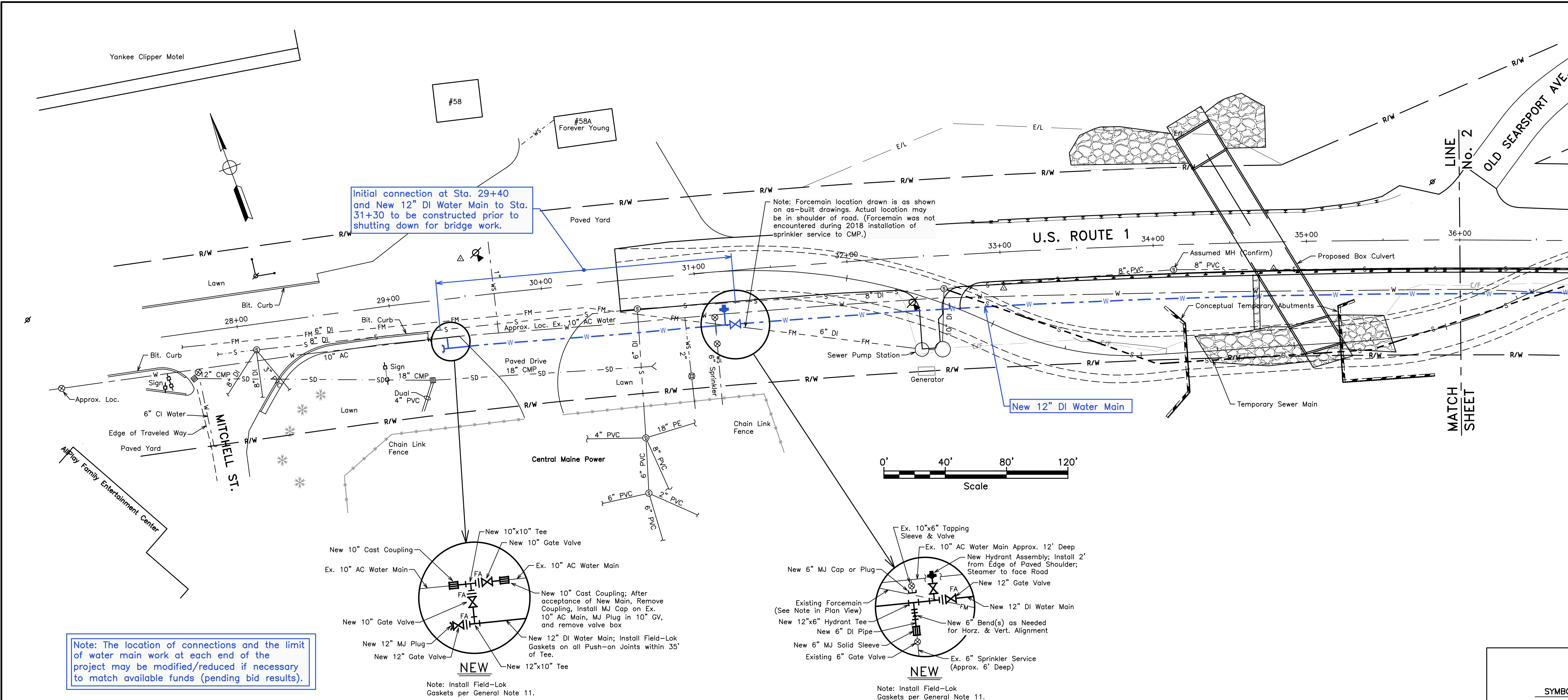
STATE OF MAINE DEPARTMENT OF TRANSPORTATION	
STP-2187(400)	
BRIDGE NO. 2319	WIN 21874.00 BRIDGE PLANS

[illegible]

GOOSE RIVER BRIDGE GOOSE RIVER	WALDO COUNTY
BELFAST CITY OF BELFAST, MAINE GOOSE RIVER SEWER RELOCATION/REPLACEMENT	TEMPORARY SEWER PLAN & PROFILE

SHEET NUMBER

C-2

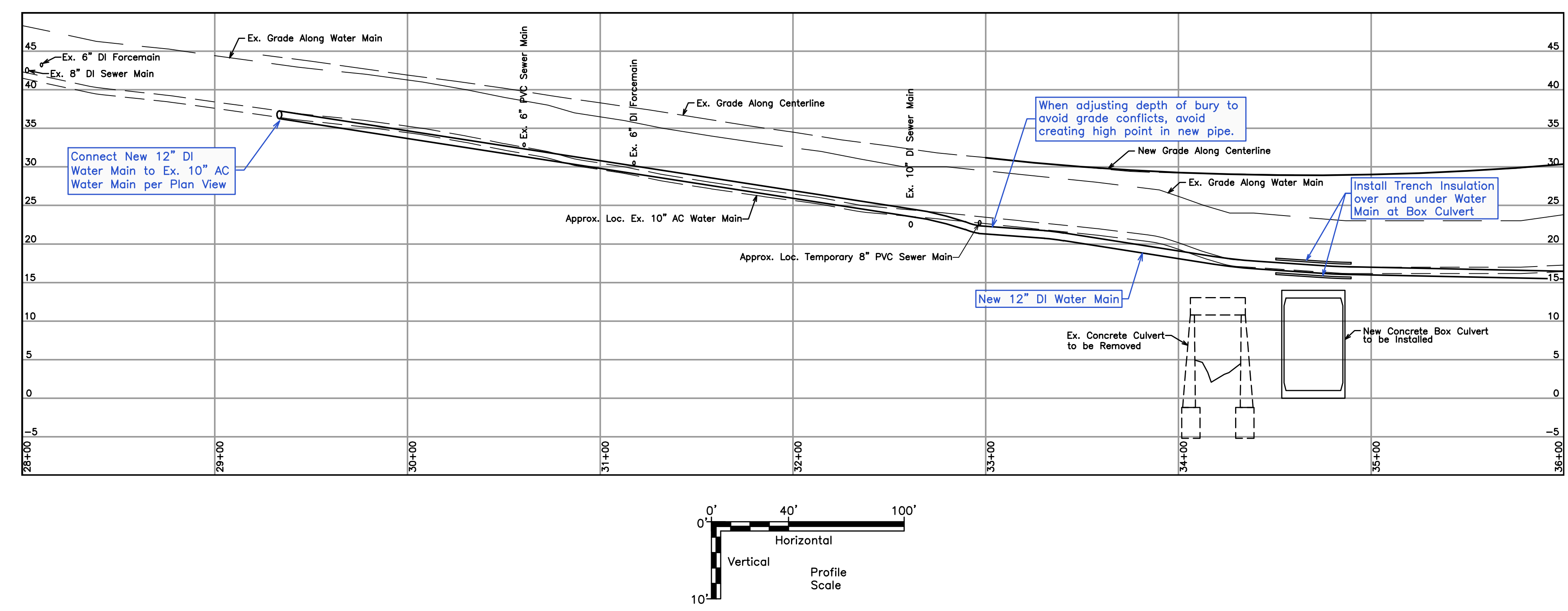


- GENERAL NOTES:
1. Vertical datum is based on MDOT plans.
 2. Base plan from Sta. 30+50 to 39+50 provided by MDOT. Plans beyond those limits based on topographic survey by Dirigo Engineering. Right-of-Way lines and property lines outside of MDOT base plan are assumed/approximate only (based on field evidence, municipal records, and other sources) and are not to be used for conveyances.
 3. The location of the existing utilities shown on the plans were compiled from field survey and various other sources. Locations are approximate and not guaranteed to be accurate nor is it guaranteed that all utilities are shown.
 4. Erosion Control Measures shall comply with *Maine Erosion and Sediment Control Practices Field Guide for Contractors* (latest edition) and shall be installed prior to any construction work.
 5. Excavate Test Pits prior to start of any Construction Work.
 6. Cleanup of Work Areas shall be done concurrently with Pipe Installation.
 7. Backfilling and Compaction shall be strictly monitored. It is highly recommended that a vibratory roller be used for Compaction of all Trenches.
 8. Contractor shall Coordinate with the Electric Utility regarding holding or bracing of utility poles that may need to be held during construction. Any costs related to this shall be borne by the Contractor.
 9. Valve Boxes on discontinued mains shall be removed and delivered to the Owner. Engineer will designate which Valve Boxes are to be removed.
 10. Minimum Depth of cover over the new water main and services shall be 5'-6" as measured from final grade. Some areas will require installation to larger depths to avoid conflicts with existing and proposed utilities. When adjusting depth of bury to avoid grade conflicts, avoid creating high point in new pipe.
 11. All push-on joints within 35 feet of elbows, caps and plugs shall be restrained with Field-Lok gaskets.

- WATER SERVICE NOTES:
1. The Contractor shall provide temporary service on the west side of the crossing if needed. Temporary service method must be approved by the District and are incidental to the water main pay items. Temporary water main is not needed across the box culvert area; water service will be provided from each end. Coordinate with Belfast Water District.
 2. Following successful testing and disinfection of the new water main, connect existing services as close as practical to new main per detail. Water services shall be 1" unless otherwise noted on the plans.
 3. Locations of new water services shall be coordinated with the District. It is the Contractor's responsibility to locate all existing and new water services. New water services shall be installed in approximately the same location as the existing services. Water service shall be maintained to customers at all times.

GENERAL LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
⊙	MANHOLE	=====	PAVED ROAD OR DRIVE
---	SANITARY SEWER MAIN	----	GRAVEL ROAD OR DRIVE
---	FORCE MAIN	---	TRAIL
⊞	CATCH BASIN	---	FENCE - BARBED WIRE OR CHAIN LINK
---	STORM DRAIN	---	FENCE - POST & RAIL, PICKET
---	CULVERT	⊗	LIGHT
---	DITCH	---	RETAINING WALL
---	PIPE DAYLIGHT	---	GUARD RAIL
---	TOP/BOTTOM OF SLOPE OR EDGE OF TRAVEL LANE	⊕	SIGN
---	WATER MAIN - EXISTING	---	EDGE OF WOODS
---	WATER MAIN - NEW	---	STONE WALL (FIELD)
⊗ OR ⊞	GATE VALVE	---	STONE WALL (LAWN/LANDSCAPED)
---	HYDRANT TEE W/ VALVE	⊙	TEST PIT
⊙	HYDRANT	---	LEDGE OUTCROP
FA	FOSTER ADAPTOR	⊙	LEDGE BORING
⊙	CURB STOP	---	REFUSAL
⊙	UTILITY POLE	---	NR
---	GUY WIRE		
▲	BENCH MARK		
△	SURVEY STATION		
⊙	PROPERTY PIN		
⊙ I.P.	IRON PIN		
⊗	GRANITE MONUMENT		
---	PROPERTY LINE		
---	RIGHT-OF-WAY		
---	UNDERGROUND ELECTRICAL		

NOTE: NOT ALL ITEMS IN LEGEND WILL BE NECESSARILY SHOWN ON THE PLANS.



NO.		REVISIONS		DATE	
1		DATE		3/24/20	
2		DRAWN BY		RJB	
3		CHECKED BY		RJB	
4		APPROVED BY		RJB	
5		FIELD BK		59	
6		FILE		01 Goose River Rte 1	
7		PROJECT		#35814	

STATE OF MAINE

TIMOTHY D. SAWTELLE

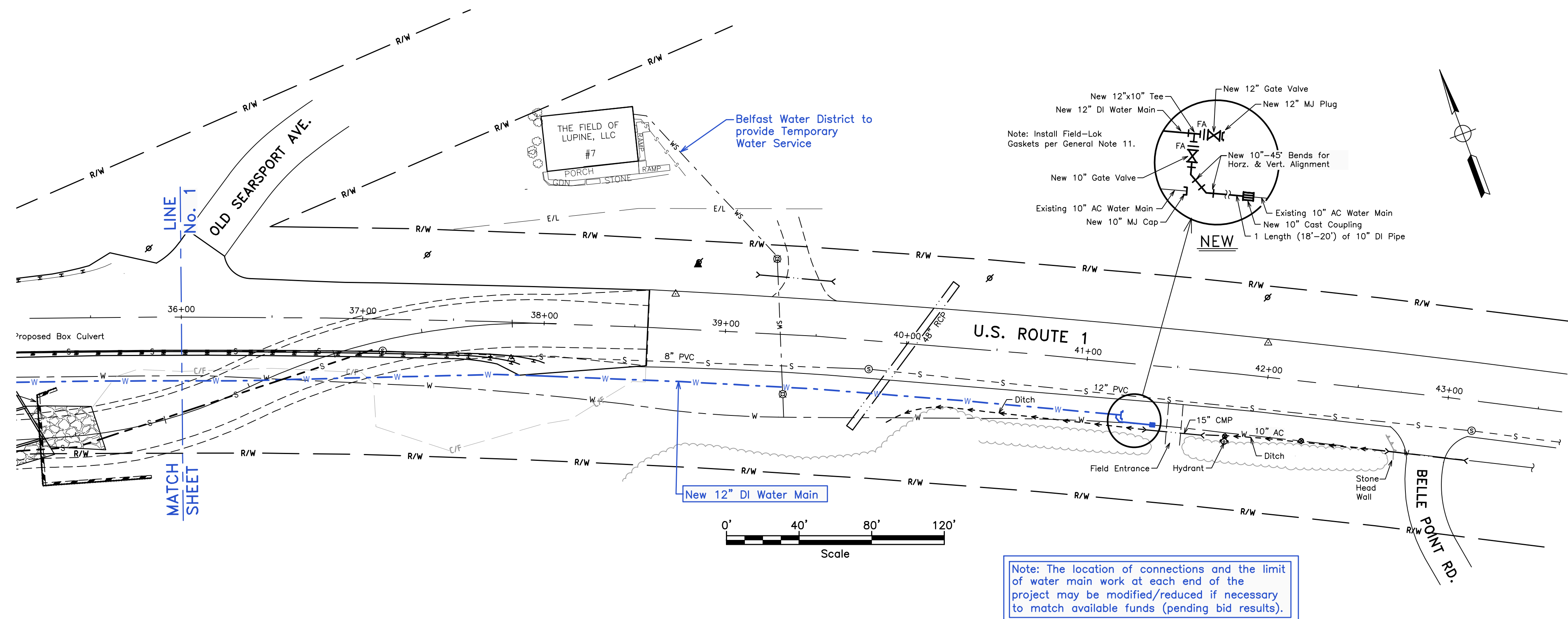
5533

PROFESSIONAL ENGINEER

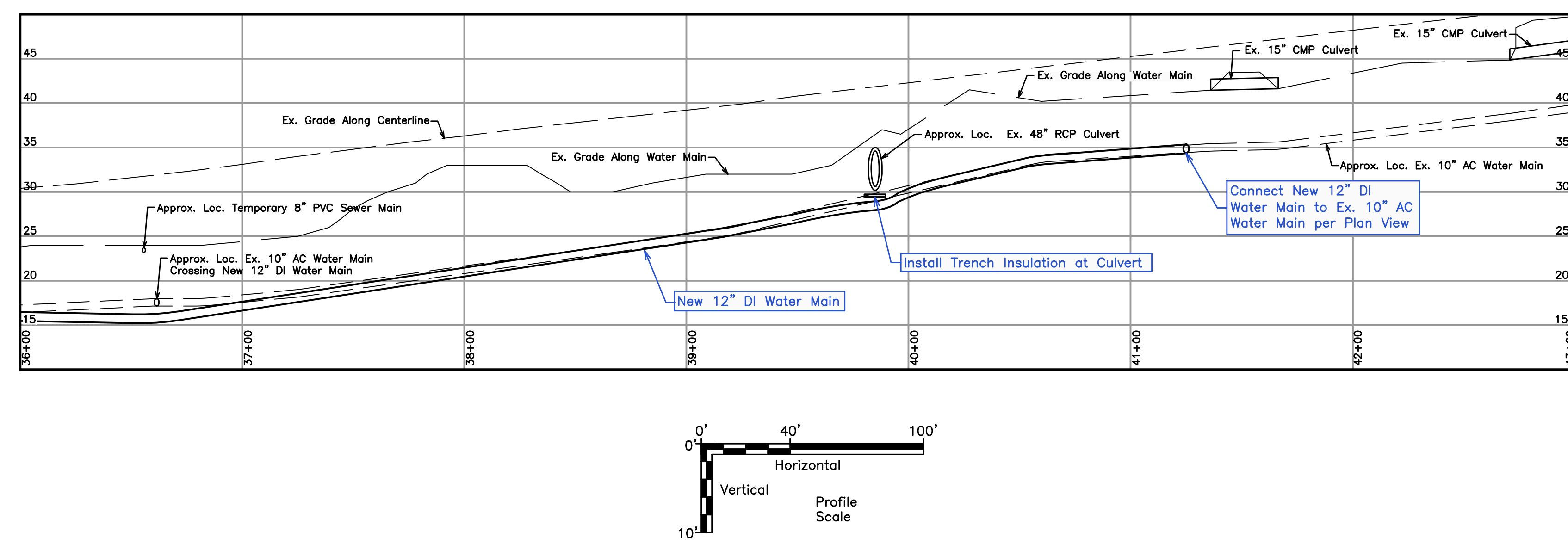
MDOT WIN 21874.00
GOOSE RIVER CROSSING
WATER MAIN RELOCATION FOR
BELFAST WATER DISTRICT
PLAN & PROFILE
STATION 29+30 TO 36+00
DIRIGO ENGINEERING
2 DIRIGO DRIVE, FAIRFIELD, MAINE 04937 (207) 453-2401

SHEET
W1 OF 3

Note: On the Original Full-Scale Drawing, this dimension is 6"



Note: The location of connections and the limit of water main work at each end of the project may be modified/reduced if necessary to match available funds (pending bid results).



NO.		REVISIONS	DATE
VERT. DATUM		N/A	
DATE:		3/24/20	
DRAWN BY:		RJB	
CHECKED:		RJB	
APPROVED:		TS	
FIELD BK:		59	
FILE: 01 Goose River Rte 1			
PROJECT:		#35814	

STATE OF MAINE

TIMOTHY D. SAWTELLE

5533

PROFESSIONAL ENGINEER

MDOT WIN 21874.00

GOOSE RIVER CROSSING

WATER MAIN RELOCATION FOR BELFAST WATER DISTRICT

PLAN & PROFILE

STATION 36+00 TO 41+70

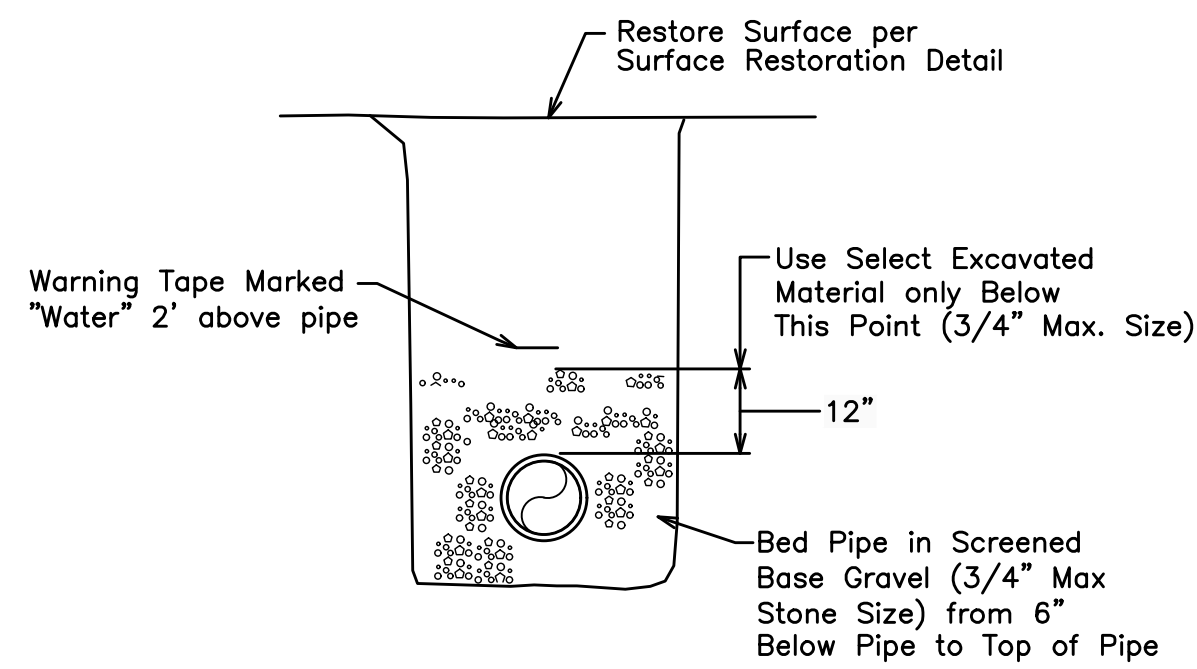
DIRIGO ENGINEERING

2 DIRIGO DRIVE, FAIRFIELD, MAINE 04937 (207) 453-2401

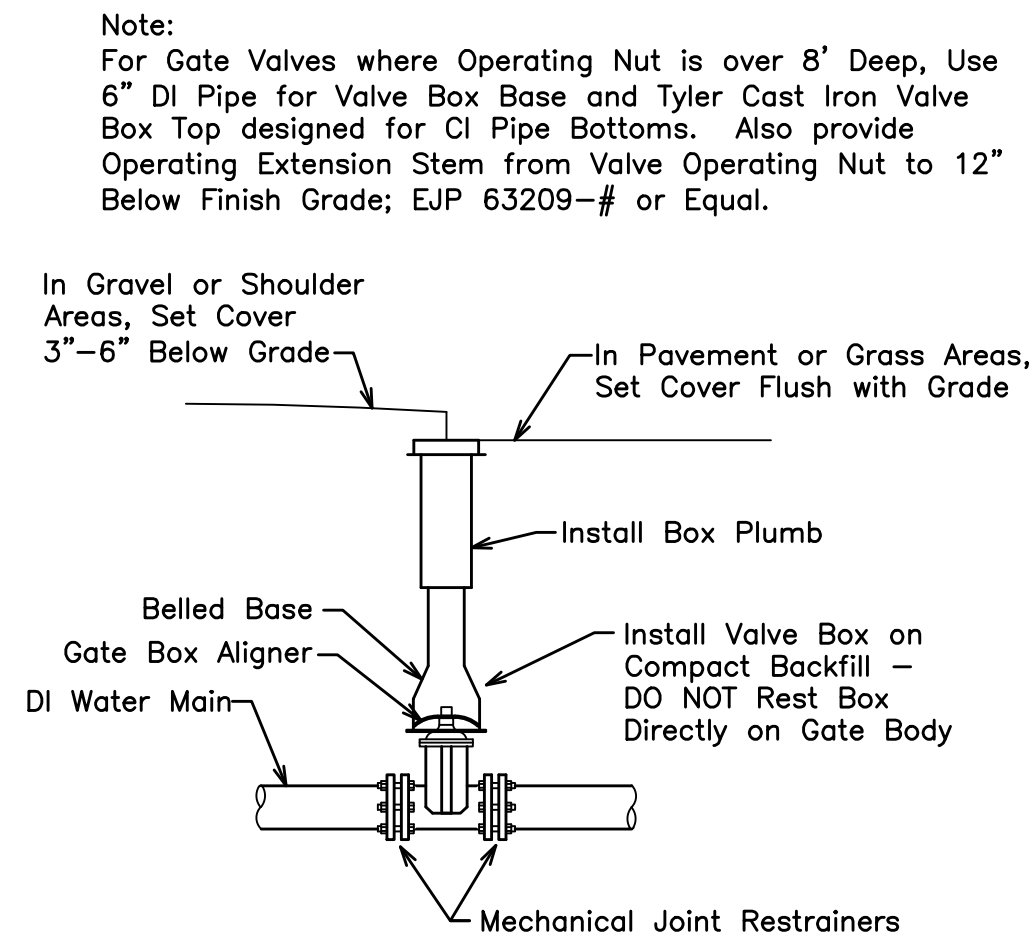
SHEET

W2 OF 3

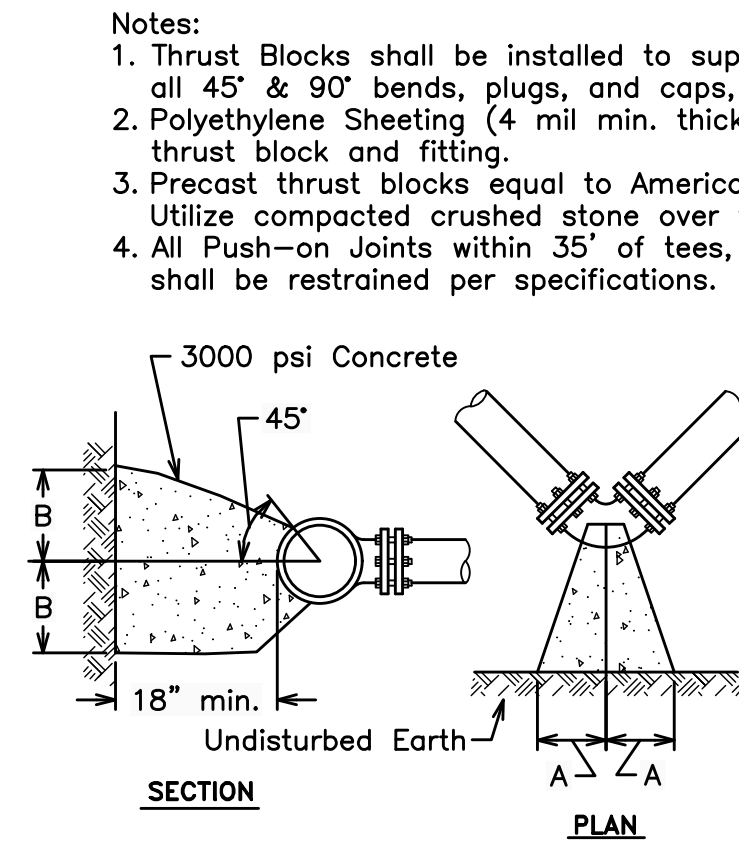
Note: On the Original Full-Scale Drawing, this dimension is 6"



DUCTILE IRON TRENCH DETAIL
NOT TO SCALE



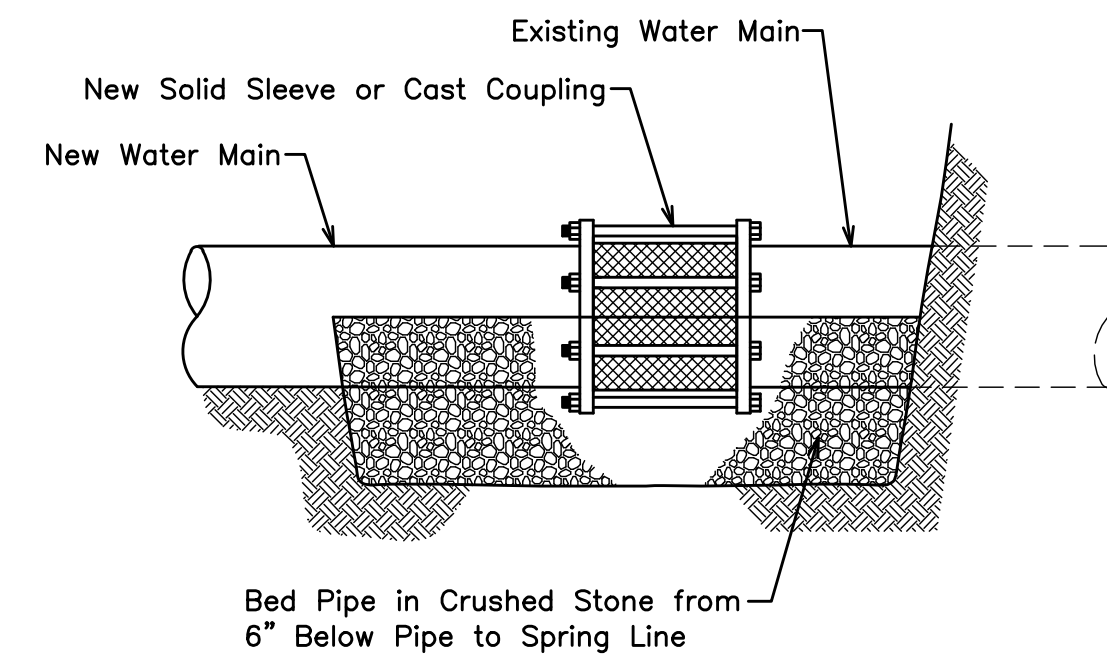
TYPICAL VALVE DETAIL
NOT TO SCALE



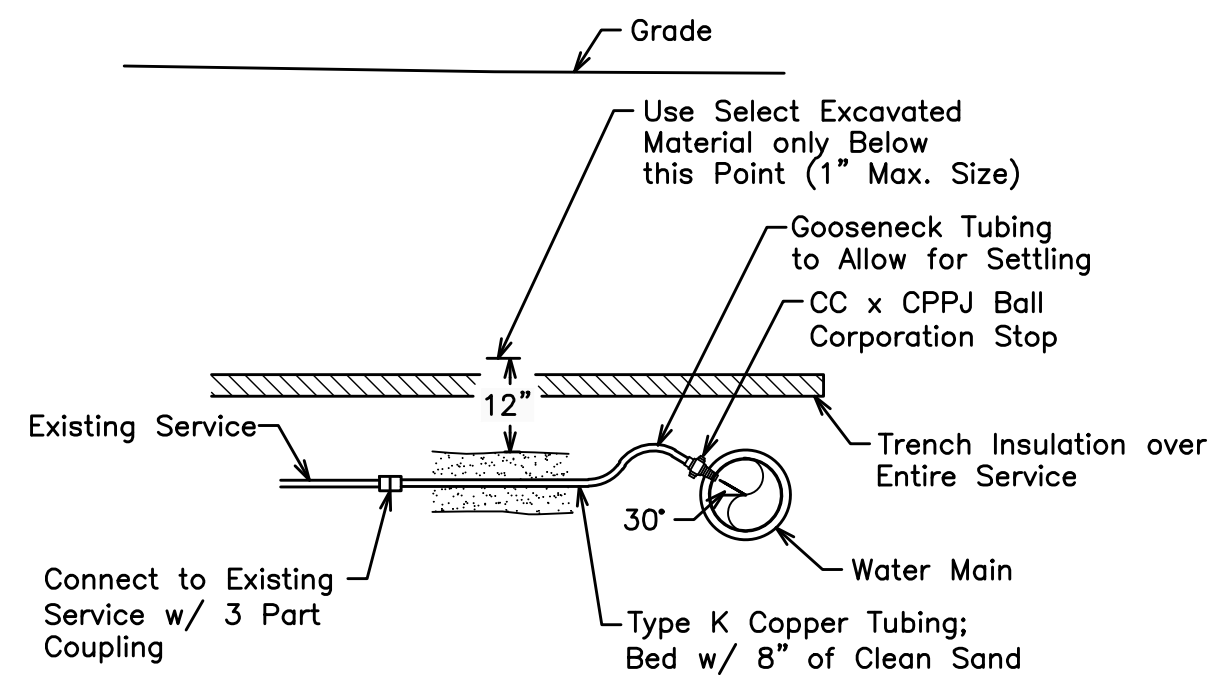
THRUST RESTRAINT DETAIL
NOT TO SCALE

MINIMUM CAST IN PLACE THRUST BLOCK DIMENSIONS			
Pipe Dia.	FITTING	A	B
3"-8"	Dead End/TEE	12"	10"
	90° Bend	16"	12"
	45° Bend	12"	10"
10"-12"	Dead End/TEE	18"	16"
	90° Bend	20"	18"
	45° Bend	18"	16"

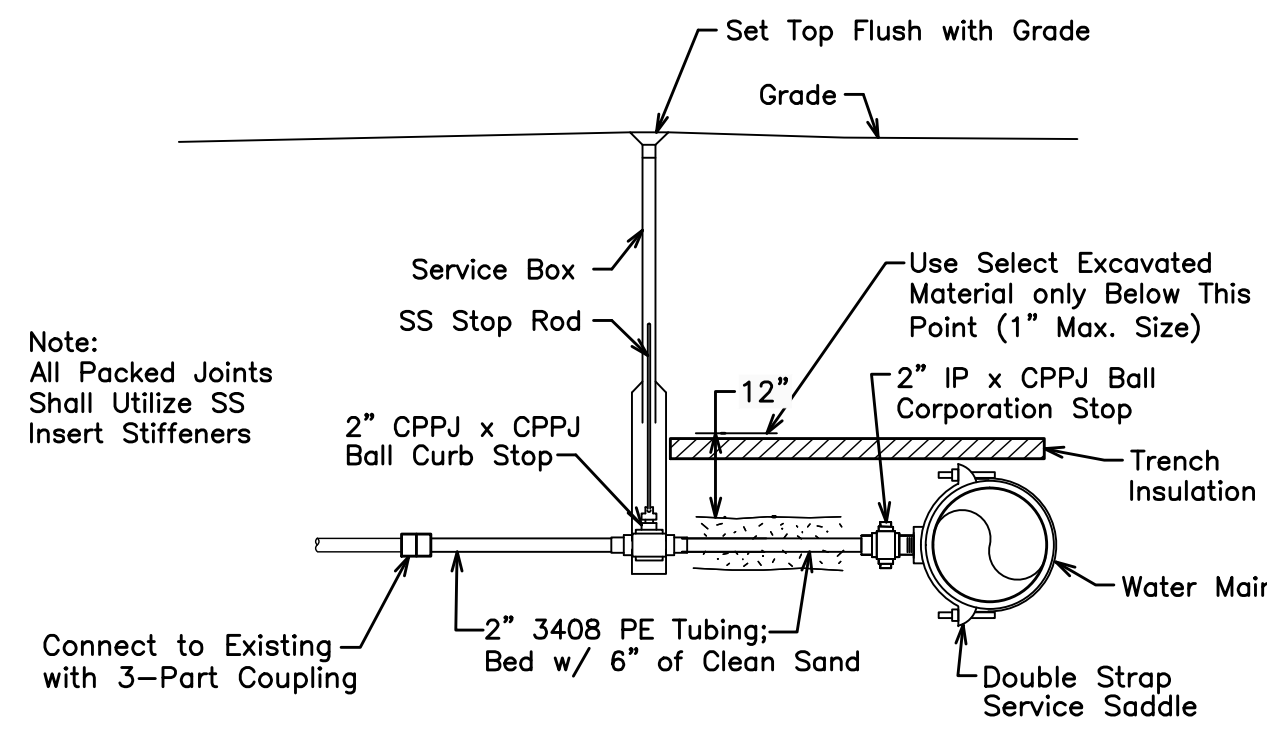
Double Dimensions When in Soft Clay



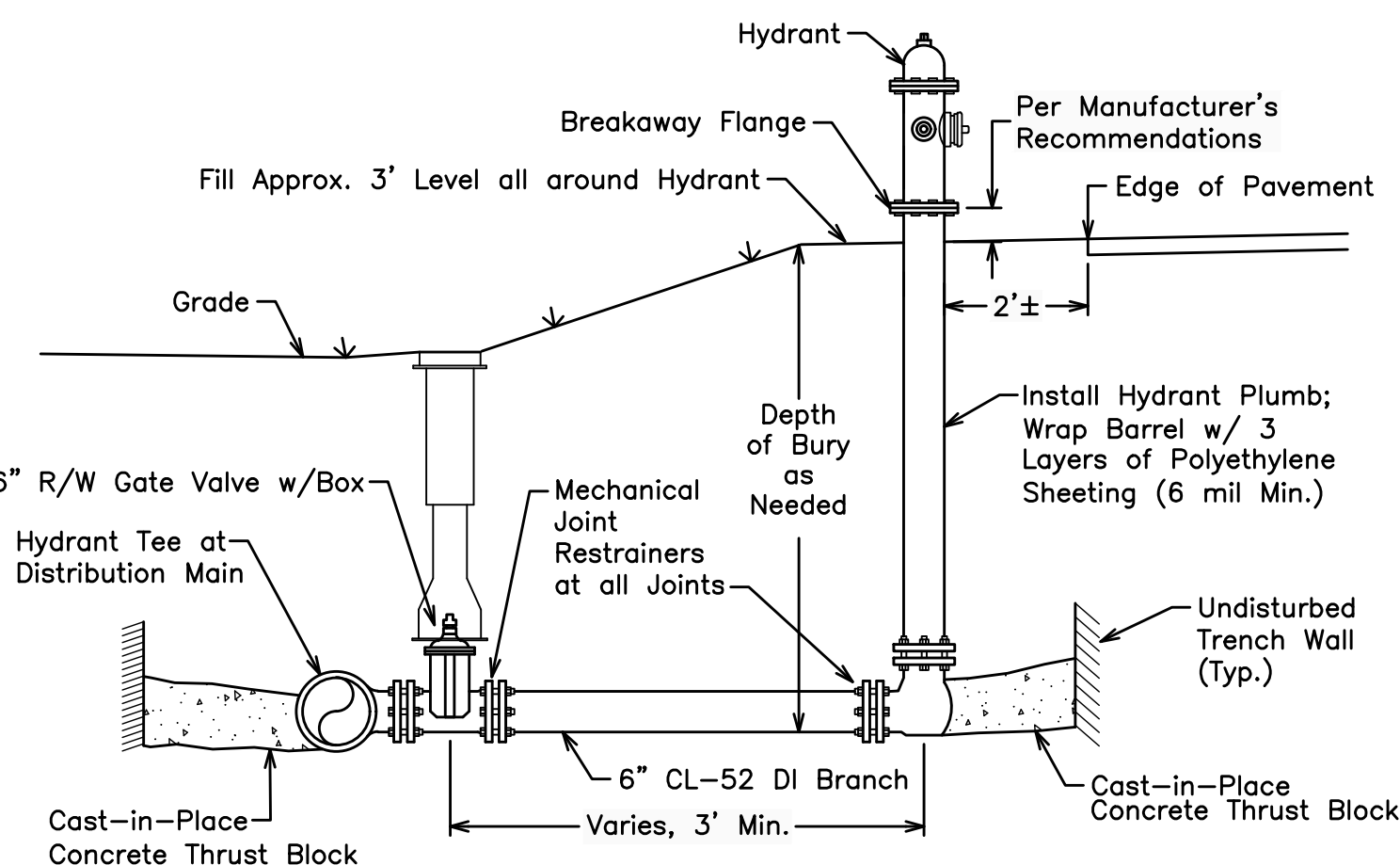
COUPLING/SOLID SLEEVE BEDDING DETAIL
NOT TO SCALE



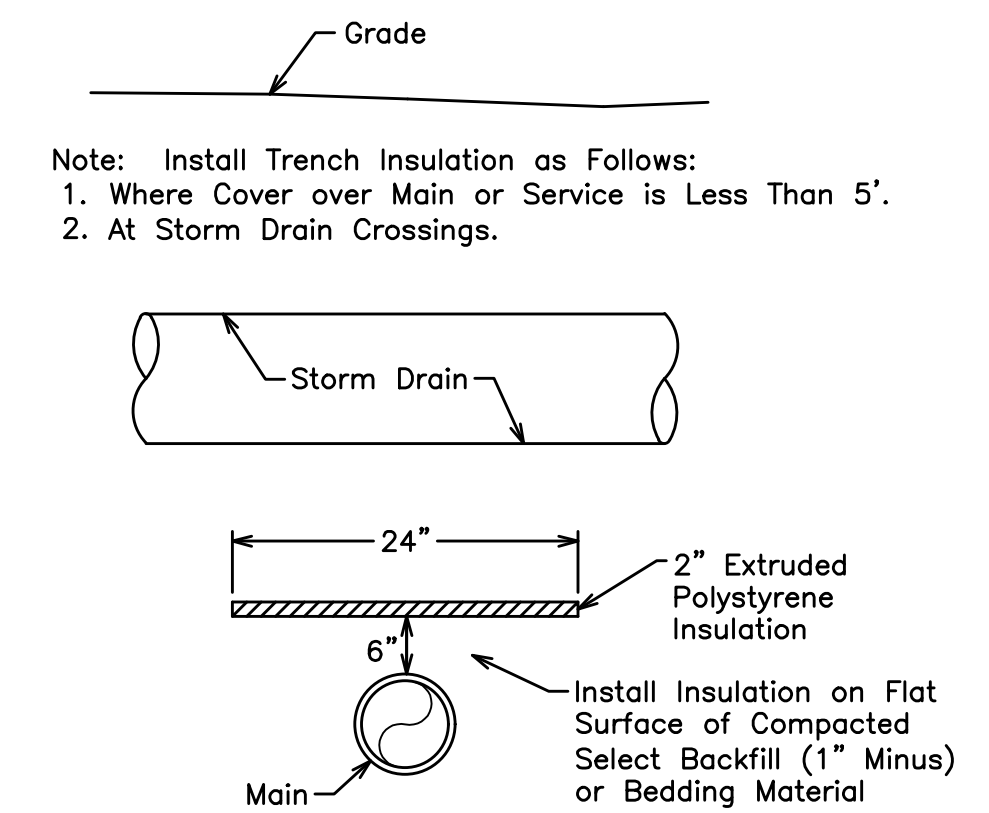
1" WATER SERVICE DETAIL
NOT TO SCALE



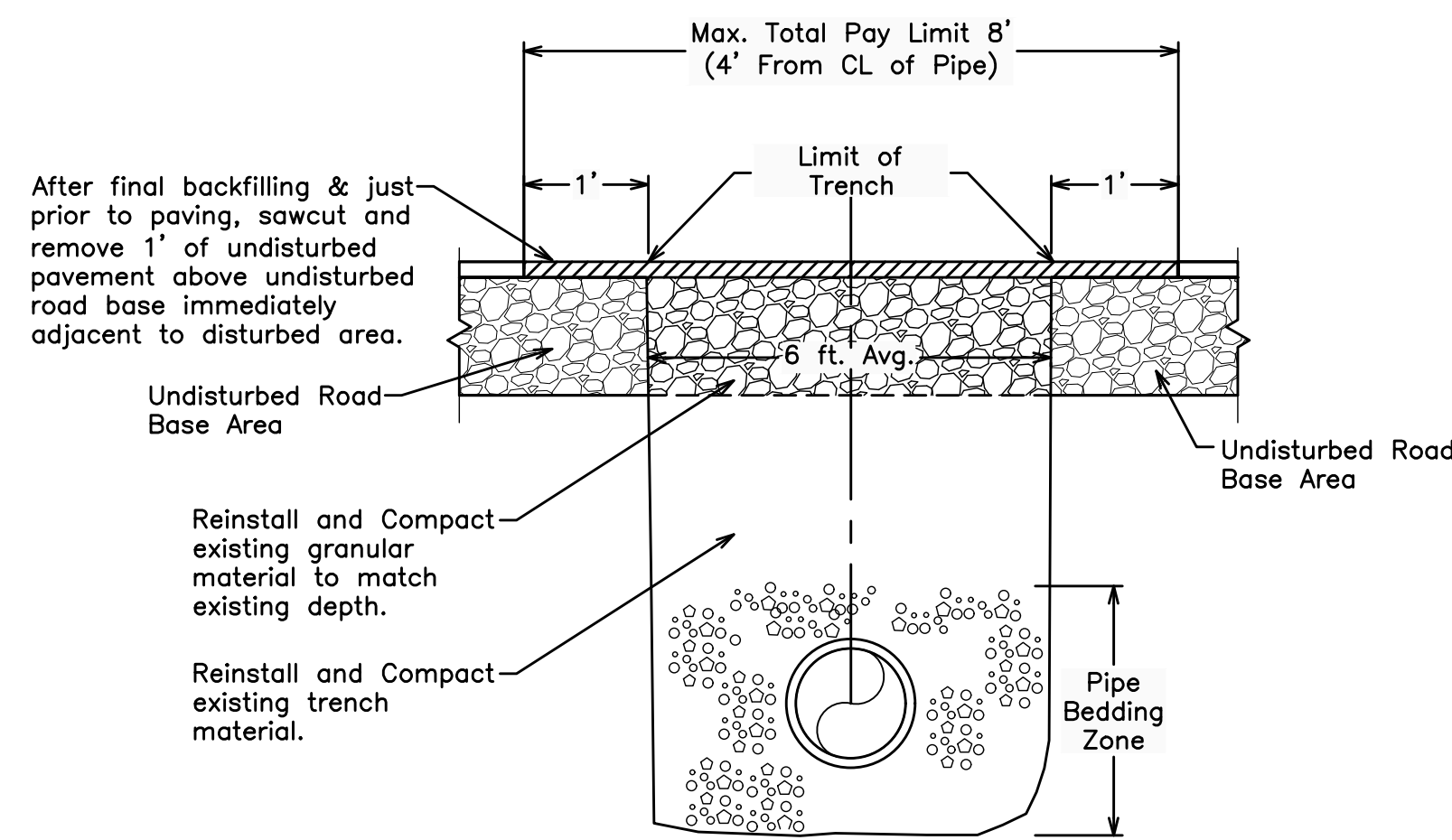
2" WATER SERVICE DETAIL
NOT TO SCALE



TYPICAL HYDRANT ASSEMBLY
NOT TO SCALE



TRENCH INSULATION DETAIL
NOT TO SCALE



- EXCAVATION & BACKFILL NOTES:**
1. Prior to any excavation in paved areas, Contractor shall sawcut areas to be excavated in neat straight lines.
 2. During excavation, separate the existing gravel layer from the common excavation below. Reuse original excavated materials during backfilling, if compactable, in the order that they were removed.
 3. Backfill within the pipe bedding zone shall be per Contract Documents and Trench Details.
 4. Above the pipe bedding zone and below the road gravel zone, backfill material shall match surrounding soils and shall be placed and compacted in lifts not to exceed one foot.
 5. Excavated material with too much water content to compact effectively shall not be used for backfill.

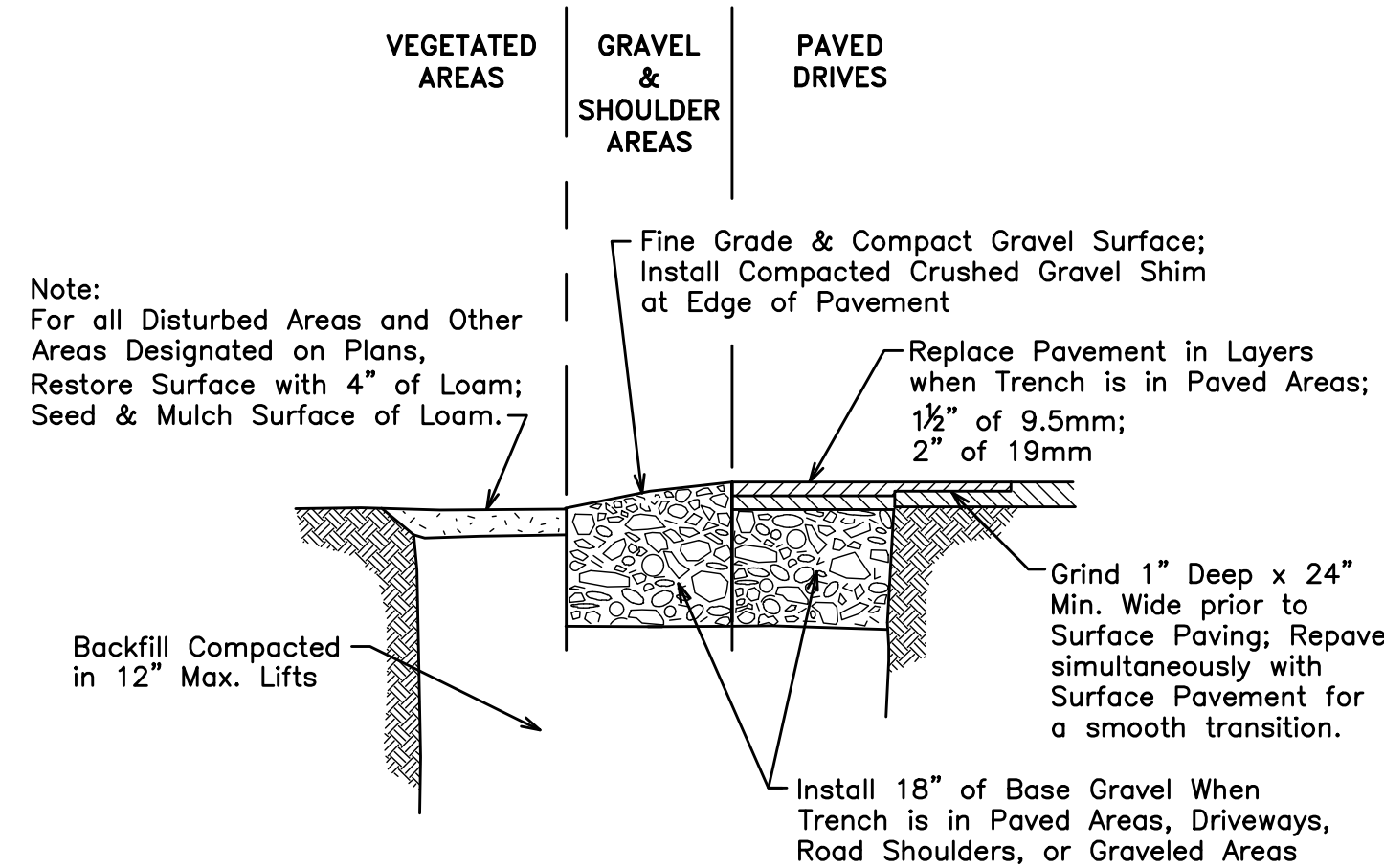
- PAVED SURFACE RESTORATION:**
1. Pavement replacement shall be per Surface Restoration Detail.

2. The final sawcutting of pavement shall be performed after backfilling and compaction to the top of the existing gravel base is complete. After sawcutting and removing the additional one foot of pavement, the entire exposed gravel layer shall be once again compacted, including the undisturbed gravel portion, prior to paving.
3. The Pavement Pay Limit Shall be 3' each side of the centerline of the pipe plus the 1' saw cut area beyond the trench limits for a total maximum pavement pay limit of 4' each side of the centerline of the pipe. Any pavement beyond the 3' limit and the 1' saw cut area shall be replaced at the Contractor's expense.

- GRAVEL SURFACE RESTORATION:**
- Fine grade & compact gravel surface; install compacted crushed gravel shim at edge of pavement to match pavement surface and pre-construction slope.

- VEGETATED SURFACE RESTORATION:**
- For all lawn areas disturbed and other areas designated on plans, restore surface with 2" of loam; seed & mulch surface of loam.

BACKFILL & SURFACE RESTORATION DETAIL
NOT TO SCALE



SURFACE RESTORATION DETAIL
NOT TO SCALE

Note: On the Original Full-Scale Drawing, this dimension is 6"

NO.		REVISIONS		DATE
1		VERT. DATUM		N/A
2		DATE:		3/24/20
3		DRAWN BY:		RUB
4		CHECKED:		RJS
5		APPROVED:		TS
6		FIELD BK:		59
7		FILE:		01 Goose River Route 1
8		PROJECT:		#35814

MDOT WIN 21874.00 GOOSE RIVER CROSSING	
WATER MAIN RELOCATION FOR BELFAST WATER DISTRICT	
MISCELLANEOUS DETAILS	
DIRIGO ENGINEERING 2 DIRIGO DRIVE, FAIRFIELD, MAINE 04937 (207) 453-2401	
SHEET	W3 OF 3