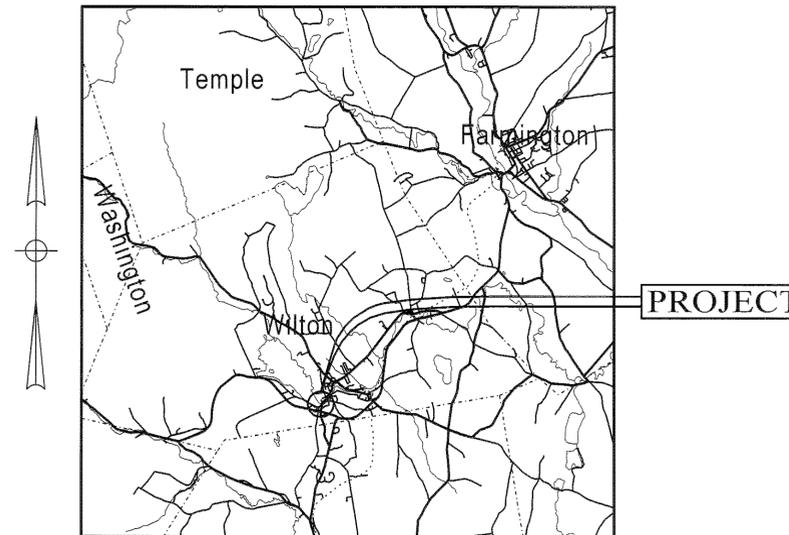


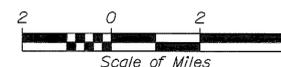
# STATE OF MAINE DEPARTMENT OF TRANSPORTATION



## WILTON FRANKLIN COUNTY CANAL STREET BRIDGE OVER WILSON STREAM CANAL STREET FEDERAL AID PROJECT NO. BH-1708(500)X PROJECT LENGTH 0.019 mi. BRIDGE REPLACEMENT BRIDGE NO. 0439



LOCATION MAP



### SPECIFICATIONS

Design: Load and Resistance Factor Design per AASHTO LRFD Bridge Design Specifications, Fifth Edition 2010.

### DESIGN LOADING

Live Load ..... HL - 93 Modified

### TRAFFIC DATA

Current (2010) AADT .....	340
Future (2030) AADT .....	410
DHV - % of AADT .....	17
Design Hour Volume .....	70
Heavy Trucks (% of AADT) .....	4
Heavy Trucks (% of DHV) .....	4
Directional Distribution (% of DHV) .....	91
18 kip Equivalent P 2.0 .....	5
18 kip Equivalent P 2.5 .....	4
Design Speed (mph) .....	25

### HYDROLOGIC DATA

Drainage Area .....	28.95 sq mi
Design Discharge (Q50) .....	2,955 cfs
Check Discharge (Q100) .....	3,424 cfs
Headwater Elevation (Q100) .....	573.5 ft

### MATERIALS

Concrete:	
Structural Wearing Surface .....	Class "LP"
Barriers, Curbs, Sidewalks & Transition Barriers .....	Class "LP"
Precast .....	Class "P"
All Other .....	Class "A"
Reinforcing Steel .....	ASTM A 615/A 615M, Grade 60
Prestressing Strands .....	AASHTO 203 (ASTM A 416), Grade 270, Low Relaxation
Structural Steel:	
All Material (except as noted) .....	ASTM A 709/A572, Grade 50 (Galvanized)
High Strength Bolts .....	ASTM A 325, Type 1 (Galvanized)

### BASIC DESIGN STRESSES

Concrete .....	f'c = 4,350 psi
Reinforcing Steel .....	f <sub>y</sub> = 60,000 psi
Prestressing Strand .....	F <sub>μ</sub> = 270,000 psi
Structural Steel:	
ASTM A 709/A572, Grade 50 .....	F <sub>y</sub> = 50,000 psi
ASTM A 325 .....	F <sub>μ</sub> = 120,000 psi

### UTILITIES

Central Maine Power Company      Wilton Water & Sewer Department  
Bee Line Cable      Northern New England Telephone Operations, LLC.

### MAINTENANCE OF TRAFFIC

The bridge will be closed to traffic during construction.

### LIST OF DRAWINGS

Title Sheet .....	1
Quantities & Notes .....	2
General Plan .....	3
Profile .....	4
Boring Location Plan & Interpretive Subsurface Profile .....	5
Boring Logs .....	6
Highway Approach Cross - Sections .....	7-11
Abutment Details .....	12
Detour .....	13
Right of Way Map .....	14
Sewer Work .....	C-1, C-2 & C-3

Date: 5/27/2011

Username: Joel.R.Veilieux

Division: BRIDGE

Filename: \\00\BRIDGE\WSTA\001\_Title.dgn

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
APPROVED
DATE 5/4/11
COMMISSIONER: [Signature]
CHIEF ENGINEER: [Signature]

STATE OF MAINE
PROFESSIONAL ENGINEER
Professional Seal
Signature: [Signature]
P.E. NUMBER: 7918
DATE: 05/02/2011

PROJECT INFORMATION
PROGRAM
BRIDGE PROGRAM
PROJECT MANAGER
DESIGNER
CONSULTANT
PROJECT RESIDENT
CONTRACTOR
DATE
COMPLETION DATE

BH-1708(500)X      PIN 17085.00

WILTON  
CANAL STREET BRIDGE

TITLE SHEET

SHEET NUMBER

1

OF 14

Date: 5/5/2011

Username: coy.williams

Division: BRIDGE

Filename: ... \BRIDGE\MSTA\002\_Estimate.dgn

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
SECTION 0001			
202.19	REMOVING EXISTING BRIDGE (108 CY)	1	LS
203.20	COMMON EXCAVATION	105	CY
203.24	COMMON BORROW	10	CY
203.25	GRANULAR BORROW	157	CY
206.082	STRUCTURAL EARTH EXCAVATION - MAJOR STRUCTURES	100	CY
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	130	CY
403.209	HOT MIX ASPHALT 9.5MM HMA (SIDEWALKS, DRIVES, INCIDENTALS)	5	T
403.210	HOT MIX ASPHALT 9.5MM HMA	65	T
409.15	BITUMINOUS TACK COAT - APPLIED	10	G
501.231	DYNAMIC LOADING TEST	2	EA
501.50	STEEL H-BEAM PILES 89 LBS/FT, DELIVERED	160	LF
501.501	STEEL H-BEAM PILES 89 LBS/FT, IN PLACE	160	LF
501.903	PILE TIPS	8	EA
501.92	PILE DRIVING EQUIPMENT MOBILIZATION	1	LS
502.219	STRUCTURAL CONCRETE, ABUT. AND RET. WALLS (45 CY)	1	LS
503.12	REINFORCING STEEL FABRICATED AND DELIVERED	2050	LB
503.13	REINFORCING STEEL, PLACING	2050	LB
511.07	COFFERDAM: ABUTMENT #1	1	LS
511.07	COFFERDAM: ABUTMENT #2	1	LS
531.51	BRIDGE STRUCTURE - DETAIL BUILD	1	LS
606.1721	BRIDGE TRANSITION - TYPE 1	4	EA
606.23	GUARDRAIL TYPE 3C - SINGLE RAIL	25	LF
606.231	GUARDRAIL TYPE 3C - 15 FOOT RADIUS AND LESS	25	LF
606.232	GUARDRAIL TYPE 3C - OVER 15 FOOT RADIUS	50	LF
606.265	TERMINAL END - SINGLE RAIL - GALVANIZED STEEL	2	EA
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	8	EA
609.11	VERTICAL CURB TYPE 1	20	LF
609.12	VERTICAL CURB TYPE 1 - CIRCULAR	60	LF
610.16	HEAVY RIPRAP	205	CY
613.319	EROSION CONTROL BLANKET	10	SY
615.07	LOAM	5	CY
618.1301	SEEDING METHOD NUMBER 1 - PLAN QUANTITY	1	UN
619.1201	MULCH - PLAN QUANTITY	1	UN
620.58	NON-WOVEN EROSION CONTROL GEOTEXTILE	210	SY
620.661	DRAINAGE GEOCOMPOSITE	65	SY
629.05	HAND LABOR, STRAIGHT TIME	40	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	40	HR
631.14	GRADER (INCLUDING OPERATOR)	10	HR
631.172	TRUCK - LARGE (INCLUDING OPERATOR)	40	HR
639.18	FIELD OFFICE TYPE A	1	EA
652.312	TYPE III BARRICADE	5	EA
652.33	DRUM	5	EA
652.34	CONE	10	EA
652.35	CONSTRUCTION SIGNS	160	SF
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES (150 CD)	1	LS
652.38	FLAGGER	50	HR
656.75	TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	1	LS
659.10	MOBILIZATION	1	LS
890.01	SPECIAL WORK #1 - SEWER ATTACHMENT	1	LS
SECTION 0002 - OPTION NO. 1			
890.021	SPECIAL WORK #2 - TEMPORARY SEWER SUPPORT	1	LS

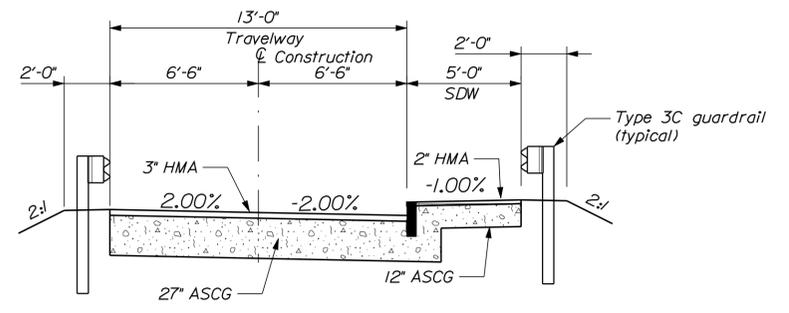
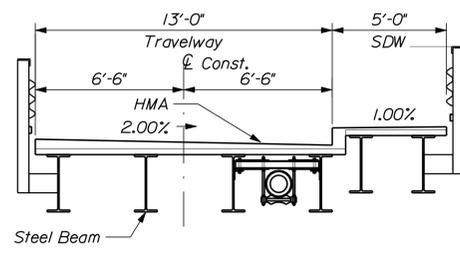
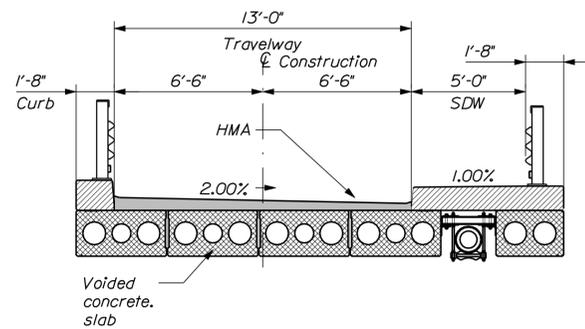
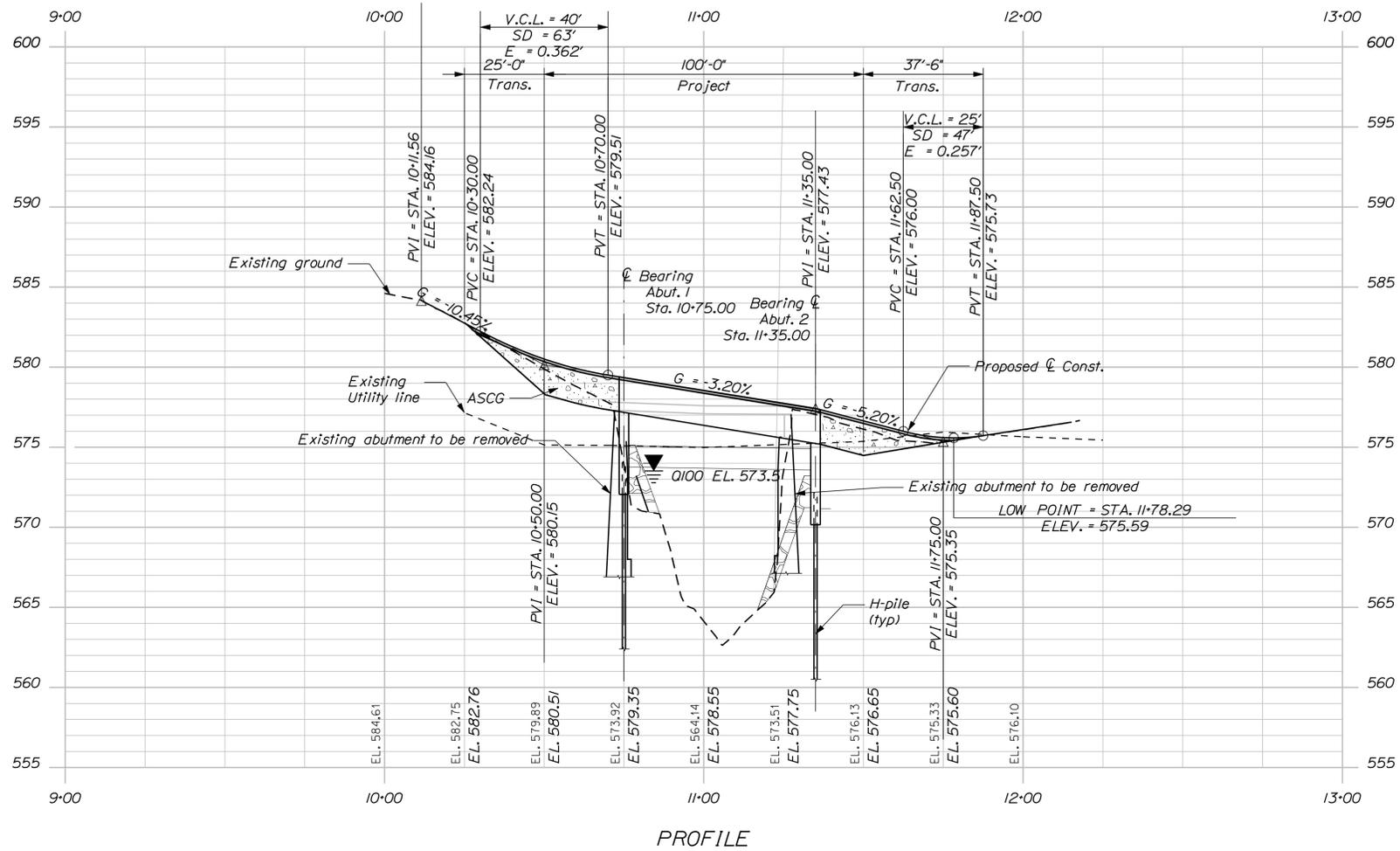
GENERAL CONSTRUCTION NOTES

- 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 equipment rental items.
- All embankment material, except as otherwise shown, placed below EL. 573 shall be Granular Borrow meeting the requirements of Subsection 703.19, Material for Underwater Backfill.
- Place loam 2 inches deep on all new or reconstructed sideslopes or as directed by the Resident.
- Place a 24-in. wide strip of Temporary Erosion Control Blanket on the sideslopes along the top of the riprap and behind the wingwalls.
- Guardrail posts as shown in the Standard Details shall be modified from the indicated length of 6 feet to a length of 7 feet with an embedment of 4.5 feet. Payment will be considered incidental to the guardrail pay items.
- A Low Volume Guardrail End 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:  
 All exposed surfaces of concrete curbs and sidewalks, Fascias down to the drip notch,  
 All exposed surfaces of Concrete Transition Barriers,  
 Concrete wearing surfaces,  
 Concrete barrier railing,  
 Top of abutment backwalls and to one foot below the top of backwalls on the back side.

- Project information referred to below may be accessed at the following MaineDOT web address: <http://www.maine.gov/mdot/contractors/>
- 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 Canal Street Bridge Over Wilson Stream Wilton, Maine, Soils Report No. 2010-34, December 13, 2010 may be accessed at the MaineDOT web address.
- 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.
- 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.
- The Contractor shall submit a Bridge Demolition Plan to the Resident at least 10 business days prior to the start of demolition work. The plan shall outline the methods and equipment to be used to remove and dispose of all materials included in the existing bridge. No work related to the removal of the bridge shall be undertaken by the Contractor until MaineDOT has reviewed the Bridge Demolition Plan for appropriateness and completeness. Payment for all work necessary for developing, submitting and finalizing the Demolition Plan will be considered incidental to the bridge removal pay item.
- The existing bridge shall be removed by and become the property of the Contractor. The steel portions of the existing bridge may be coated with a lead-based paint system. The Contractor is responsible for the containment, proper management and disposal of all lead-contaminated hazardous waste generated by the process of demolishing the bridge. The Contractor is responsible for implementing appropriate OSHA mandated personal protection standards related to this process. Once the existing bridge is removed, the Contractor is solely responsible for the care, custody and control of the components of the existing bridge and any hazardous waste generated as a result of the storage, recycling or disposal of the bridge components, including lead-coated steel. The Contractor shall recycle or reuse the steel in accordance with the Maine Department of Environmental Protection's "Maine Hazardous Waste Management Regulations," Chapter 850. A copy of this regulation is available at MaineDOT's offices on Child Street in Augusta. Payment for all labor, materials, equipment and other costs required to remove and dispose of the existing bridge will be considered incidental to the bridge removal pay item.

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	BH-1708(600)X	PIN 17085.00	BRIDGE NO. 0439	BRIDGE PLANS
CANAL STREET BRIDGE WILSON STREAM FRANKLIN COUNTY	WILTON	ESTIMATED QUANTITIES		
SHEET NUMBER				
2				
OF 14				





PROJ. MANAGER	N. BENNETT	BY	DATE
CHECKED-REVIEWED	TEAM SOUTH	ADN	OCT 2010
DESIGN DETAILED			
DESIGNS DET AILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE	DATE
P.E. NUMBER	

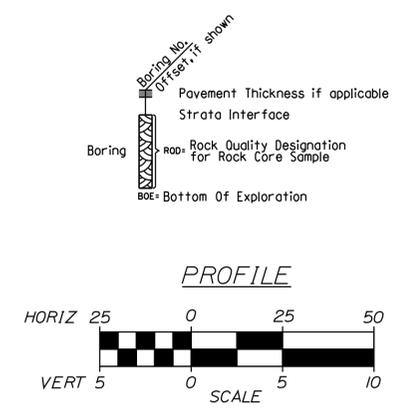
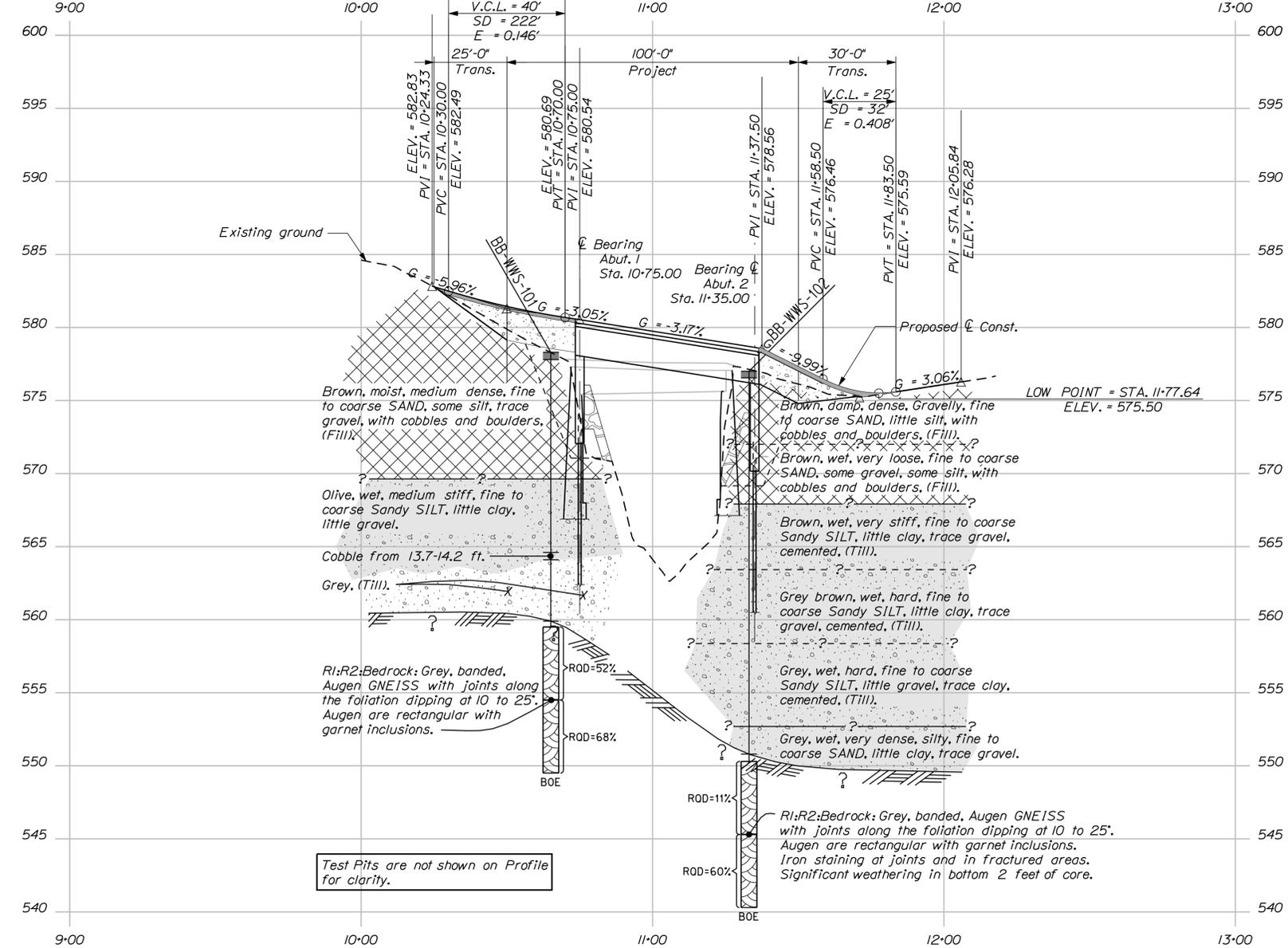
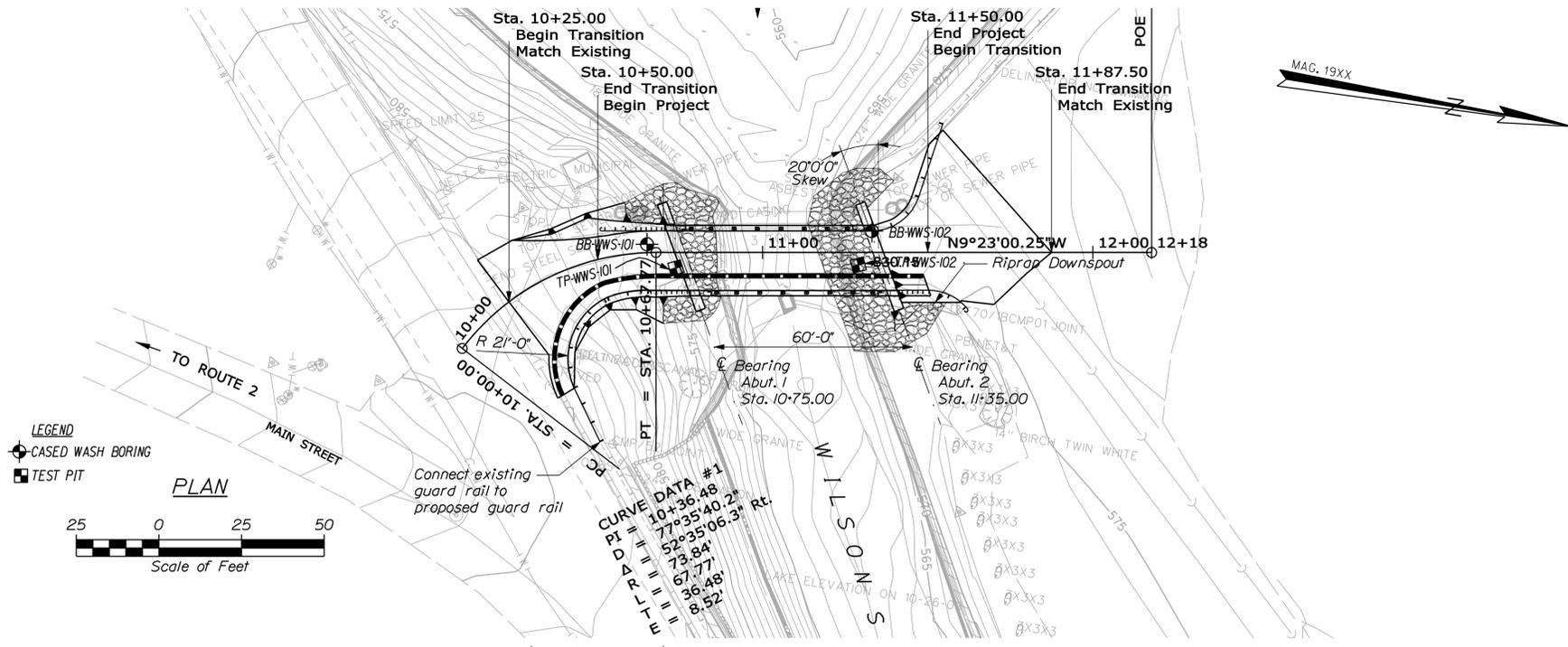
CANAL STREET BRIDGE  
 WILSON STREAM  
 FRANKLIN COUNTY  
 WILTON  
**PROFILE**

Date: 5/2/2011

Username: Joel R. Veilleux

Division: BRIDGE

Filename: ... \GEO\TECH\MSTA\005\_BLP8\ISP1.dgn



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

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION	
CANAL STREET BRIDGE		BH-1708(500)X	
WILSON STREAM		FRANKLIN COUNTY	
WILTON		BRIDGE NO. 0439	
BORING LOCATION PLAN & INTERPRETIVE SUBSURFACE PROFILE		PIN 17085.00	
SHEET NUMBER		BRIDGE PLANS	
5			
OF 14			



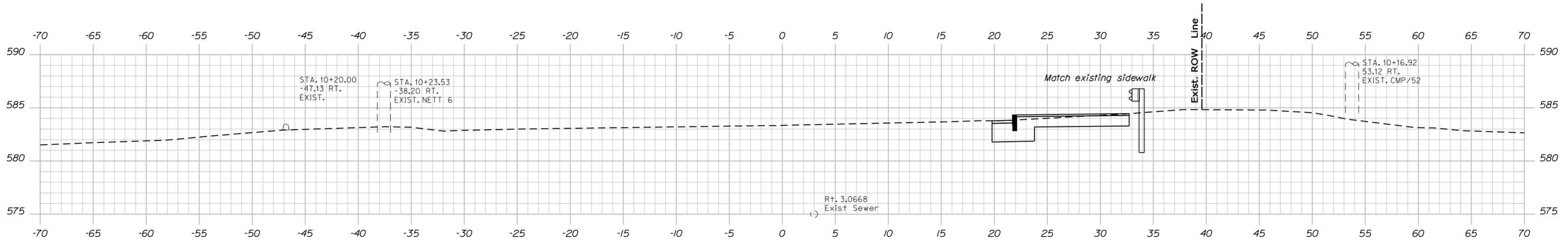
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Username: Joel R. Veilleux

Division: BRIDGE

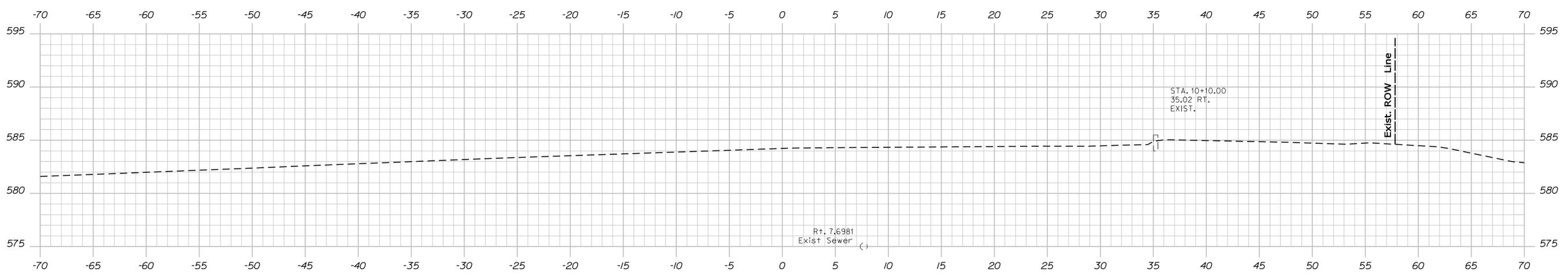
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Begin Transition 10+25.00 Match Existing



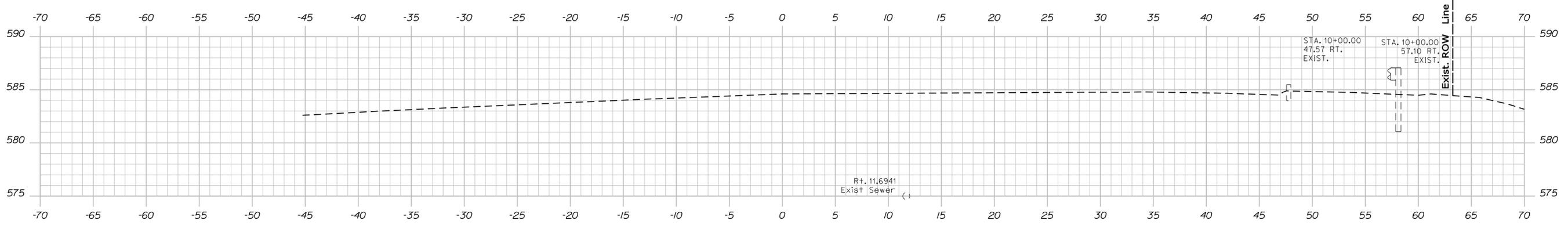
10+20.00

Sta 10+20, 32.73' Rt. to Sta. 10+66, 11.40' rt.  
Install 28.5' Type 3C Guardrail over 15' radius



10+10.00

Sta 10+09.20, 50.10' Rt. to Sta. 10+20, 32.73' Rt.  
Install 18.0' Type 3C Guardrail



10+00.00

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
BH-1708(500)X  
BRIDGE NO. 0499  
PIN 17085.00  
BRIDGE PLANS

DESIGN DETAILED	BY	DATE
CHECKED-REVIEWED	N. BENNETT	OCT 2010
DESIGNS DETAILED	TEAM SOUTH	
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE	P.E. NUMBER	DATE

CANAL STREET BRIDGE  
WILSON STREAM  
FRANKLIN COUNTY  
WILTON  
CROSS SECTIONS

SHEET NUMBER  
7  
OF 14

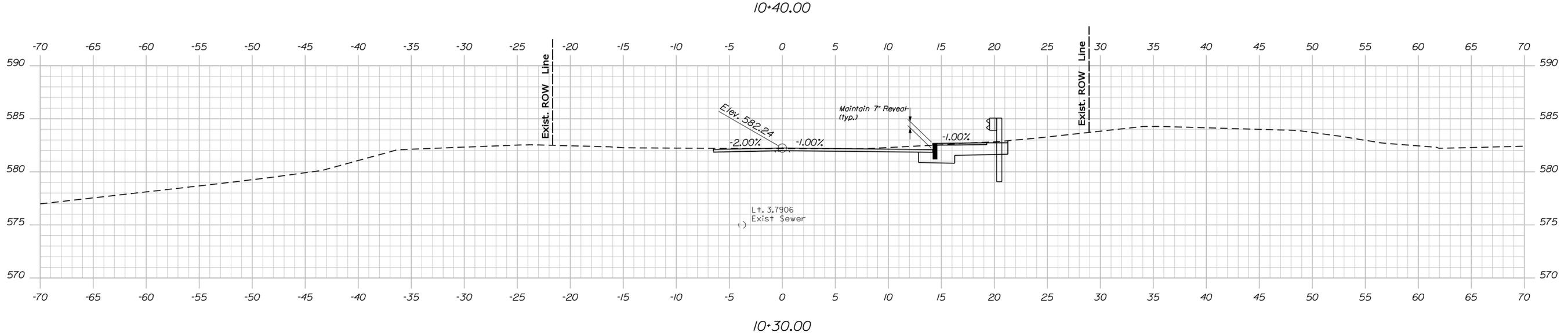
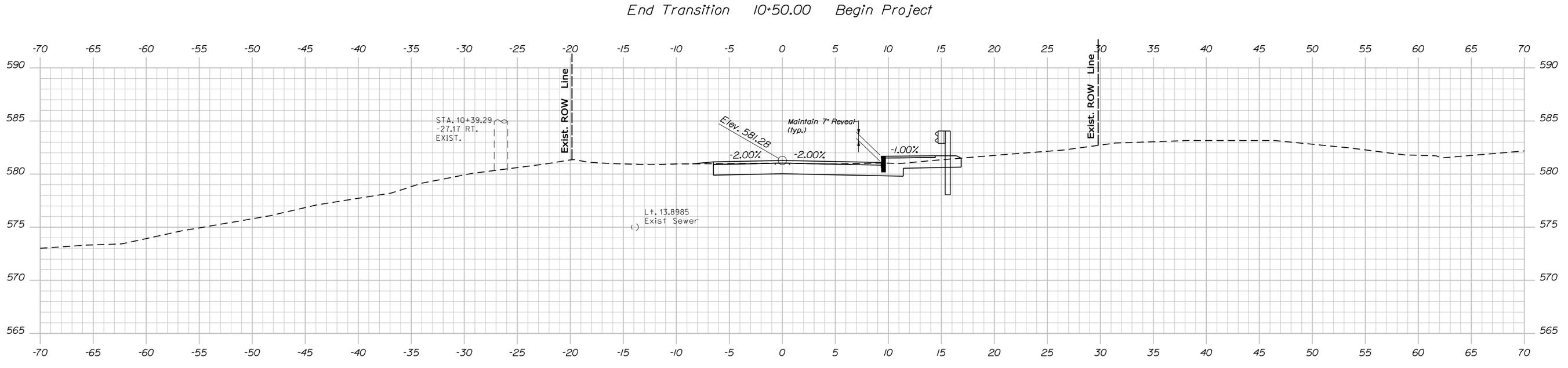
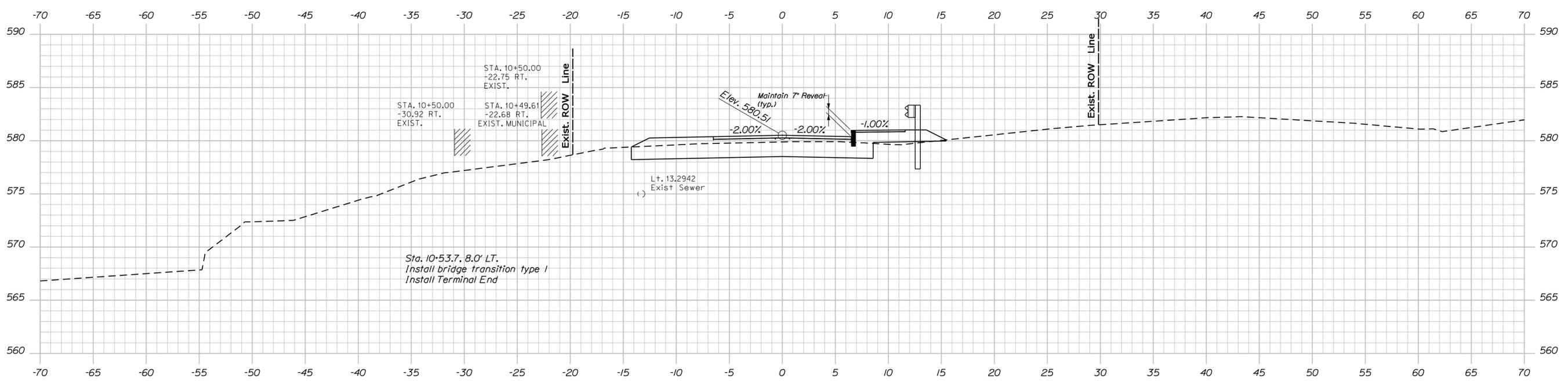
Sta. 10+00.00 to Sta. 10+20.00

Date: 5/2/2011

Username: Joel R. Veilleux

Division: BRIDGE

Filename: ... \MSTAN008\_XSECT\_10+30\_002.dgn



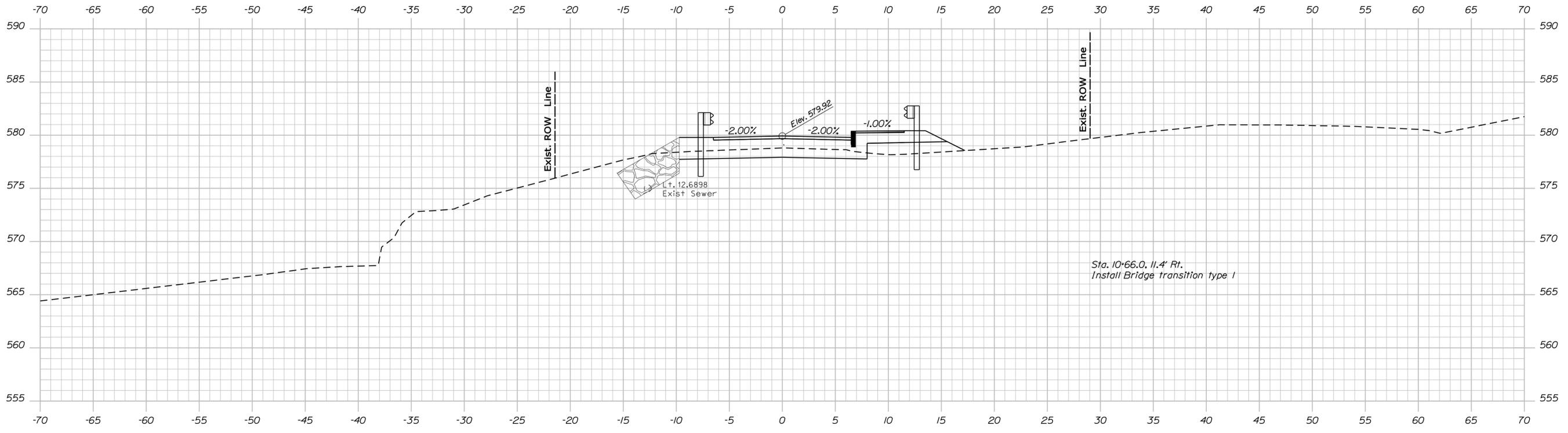
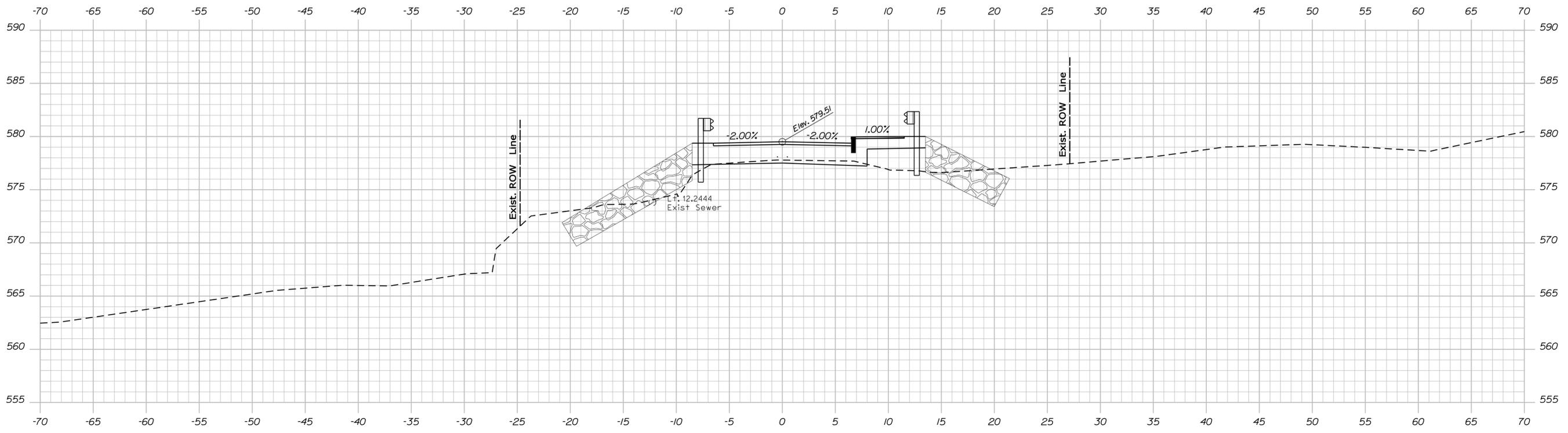
STATE OF MAINE DEPARTMENT OF TRANSPORTATION		BH-1708(500)X	
BRIDGE NO. 0439		PIN 17085.00	
BRIDGE PLANS			
PROJ. MANAGER	N. BENNETT	BY	DATE
DESIGN/DETAILED	TEAM SOUTH	ADN	OCT 2010
CHECKED/REVIEWED			
DESIGNS DET AILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			
CANAL STREET BRIDGE WILSON STREAM FRANKLIN COUNTY		WILTON	
CROSS SECTIONS			
SHEET NUMBER			
8			
OF 14			

Date: 5/2/2011

Username: Joel R. Veilleux

Division: BRIDGE

Filename: ... \MSTAN009\_XSECT\_10+60\_003.dgn



STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
**BH-1708(500)X**  
BRIDGE NO. 0499  
PIN 17085.00  
BRIDGE PLANS

PROJ. MANAGER	N. BENEFIT	BY	DATE
DESIGN DETAILED	TEAM SOUTH	ADN	OCT 2010
CHECKED/REVIEWED			
DESIGNS DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

CANAL STREET BRIDGE  
WILSON STREAM  
FRANKLIN COUNTY  
WILTON  
CROSS SECTIONS

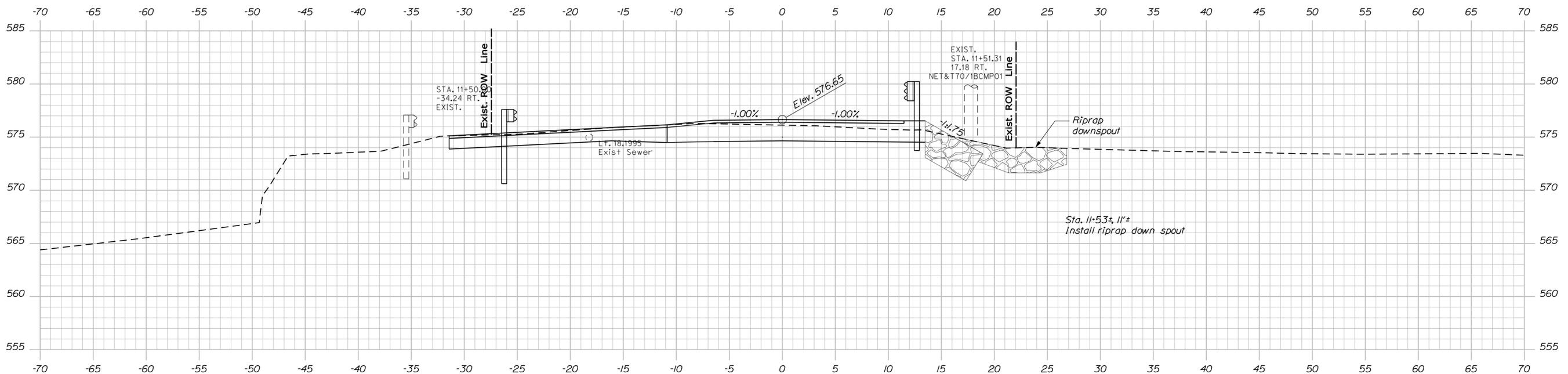
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OF 14

Date: 5/2/2011

Username: Joel R. Veilleux

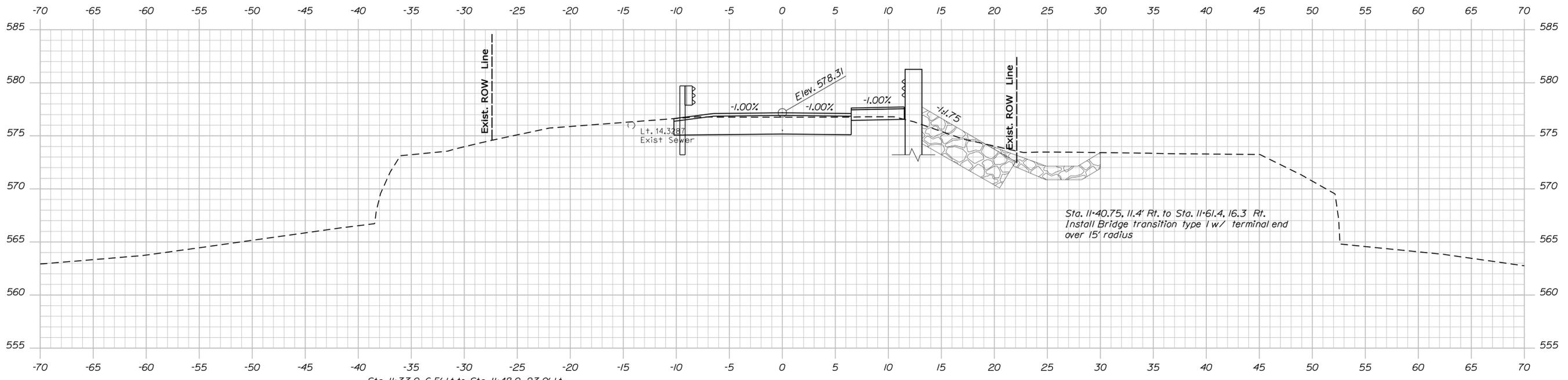
Division: BRIDGE

Filename: ... \MST\A010\_XSECT\_11+40\_007.dgn



Sta. 11+48.0, 23.0' Lt. to Sta. 11+54.60, 39.0' Lt.  
 Install Type 3C Guardrail 25.0'  
 Match existing guardrail

End Project 11+50.00 Begin Transition



Sta. 11+33.0, 6.5' Lt to Sta. 11+48.0, 23.0' Lt.  
 Install Bridge Transition type 1 w/ terminal end over 15' radius

11+40.00

STATE OF MAINE  
 DEPARTMENT OF TRANSPORTATION  
**BH-1708(500)X**  
 BRIDGE NO. 0439 PIN 17085.00  
 BRIDGE PLANS

PROJ. MANAGER	N. BENEFIT	BY	DATE
CHECKED-REVIEWED	TEAM SOUTH	ADN	OCT 2010
DESIGNS DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

CANAL STREET BRIDGE  
 WILSON STREAM  
 FRANKLIN COUNTY  
 WILTON  
**CROSS SECTIONS**

SHEET NUMBER  
**10**  
 OF 14

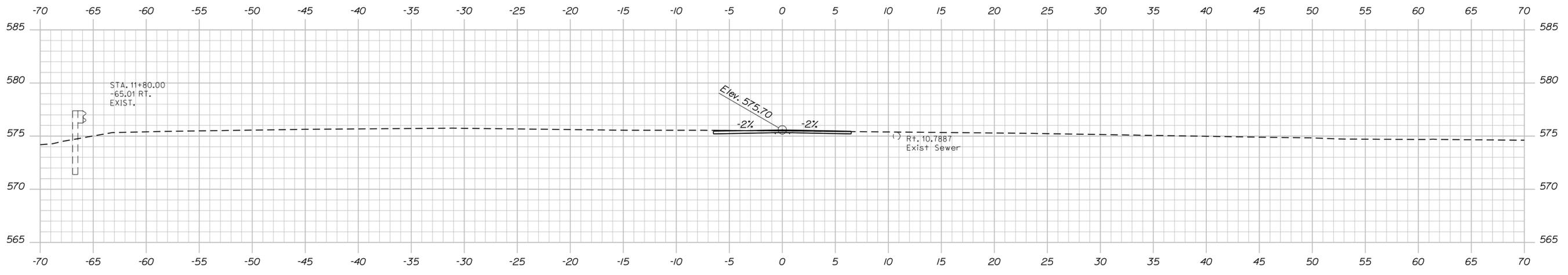
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Username: Joel R. Veilleux

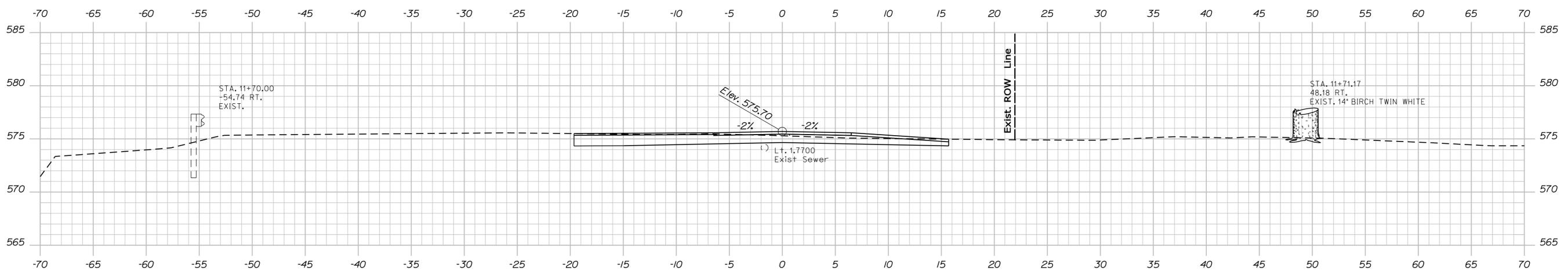
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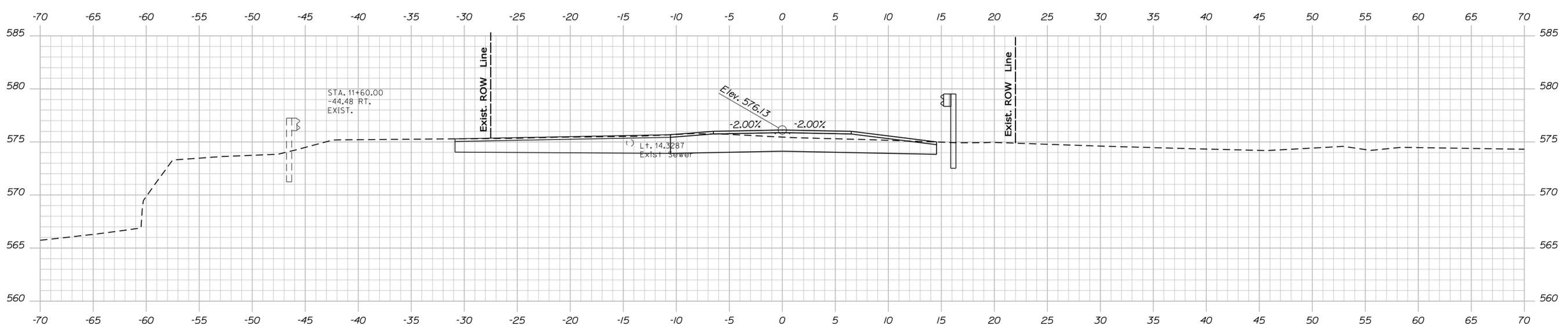
End Transition 11+87.50 Match Existing



11+80.00



11+70.00



11+60.00

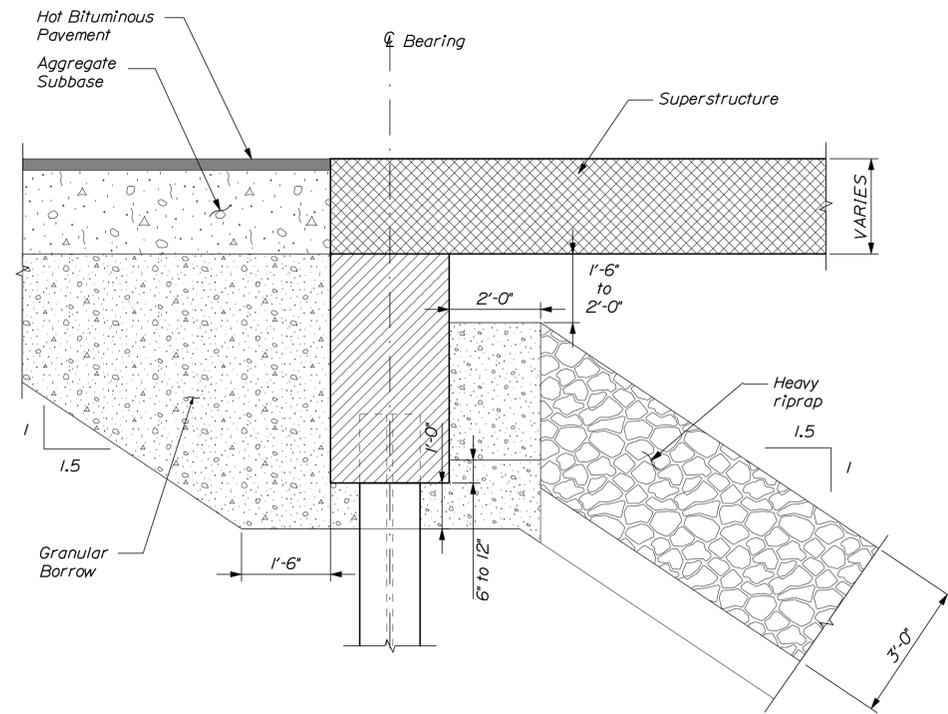
STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
BH-1708(500)X  
PIN 17085.00  
BRIDGE NO. 0439  
BRIDGE PLANS

PROJ. MANAGER	N. BENNETT	BY	DATE
DESIGN/DETAILED	TEAM SOUTH	ADN	OCT 2010
CHECKED/REVIEWED			
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REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

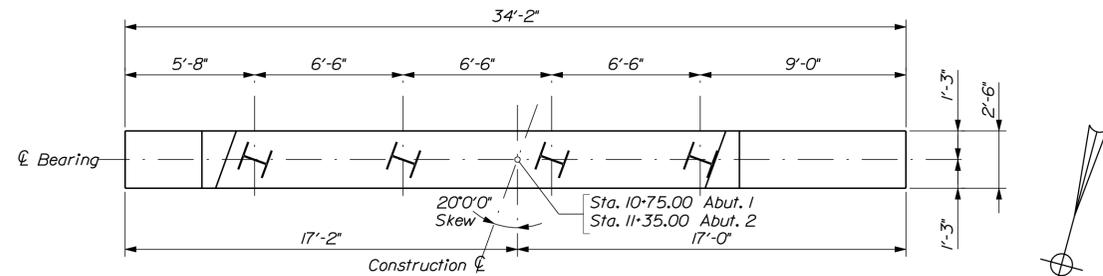
CANAL STREET BRIDGE  
WILSON STREAM  
FRANKLIN COUNTY  
WILTON  
CROSS SECTIONS

SHEET NUMBER  
**11**  
OF 14

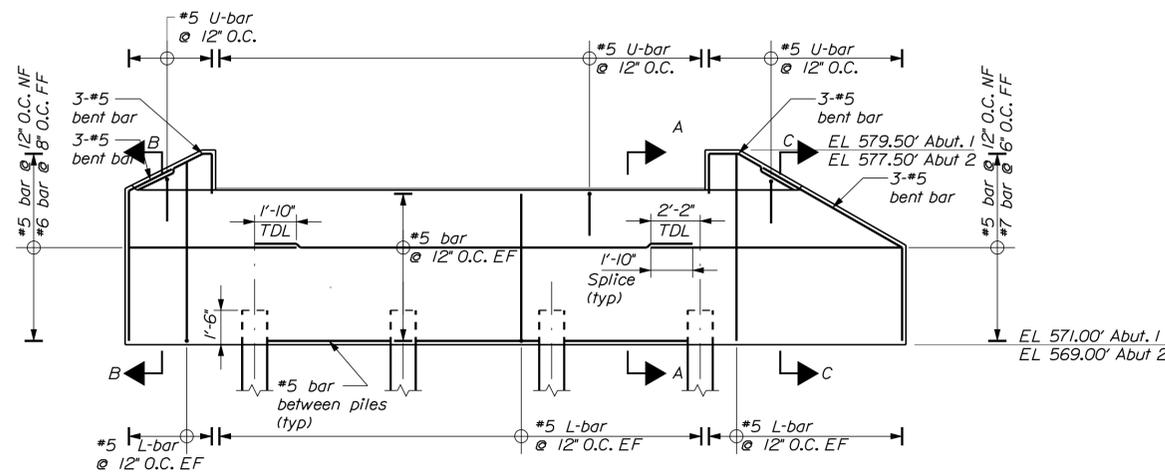
Sta. 11+60.00 to Sta. 11+80.00



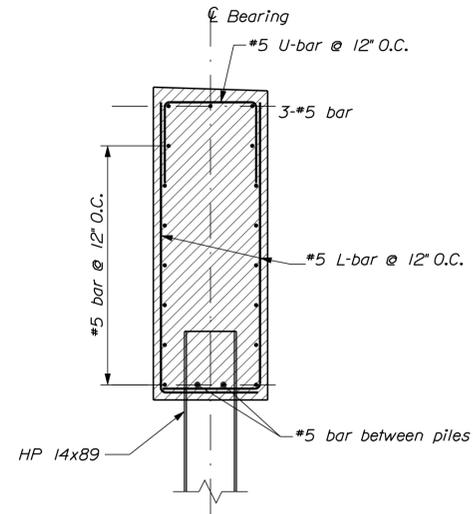
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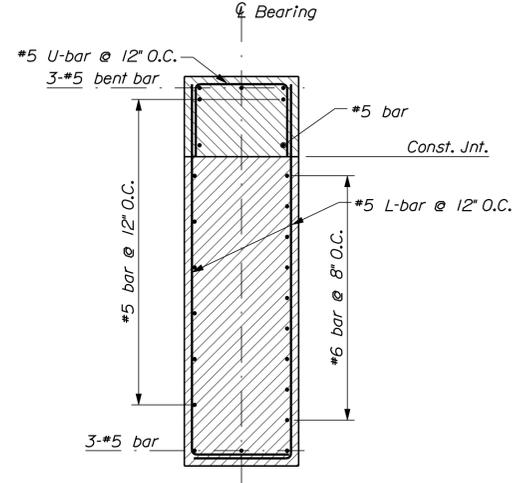
ABUTMENT NO. 1 PLAN  
Abutment No. 2 similar



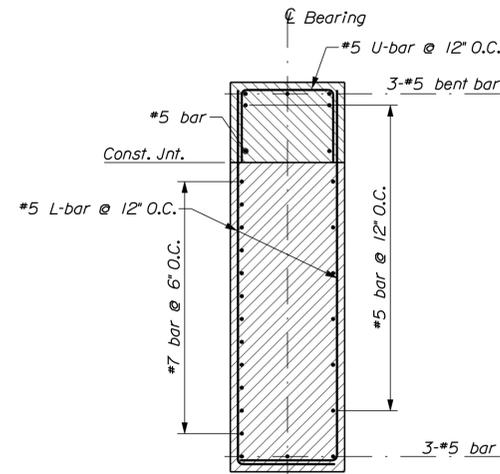
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Abutment No. 2 similar



SECTION A-A



SECTION B-B



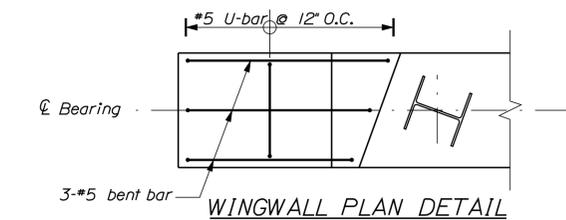
SECTION C-C

ABUTMENT NOTES

1. Structural Earth Excavation, Abutments and Retaining Walls, required more than 12 inches below the bottom of the structure, will be paid for in accordance with Standard Specifications Section 206, Structural Excavation.
2. Reinforcing steel shall have a minimum concrete cover of 3 inches.
3. To ensure an accurate match with the superstructure, the parapet portions of the wingwalls shall be placed after erection of the superstructure units.
4. Provide 3 additional stirrups in the curbs at each Transition Barrier location, when transition barriers are specified.
5. When applicable, the Contractor shall install Transition Barrier vertical closed stirrups, as shown in Standard Details Section 526, prior to the placement of the curb concrete.
6. Cover joints where waterstops are not required in accordance with Standard Details Section 502.
7. Abutments, wingwalls and their footings shall be backfilled with Granular Borrow. Pay limits will be the structural excavation limits in cut areas and a vertical plane located 10 feet behind the walls in fill areas.
8. The back side of both abutments shall have applied Geocomposite Drain meeting the requirements of Miradrain 6000, Amerdrain 500, Enkadrain, or equal. Installation shall be in accordance with Special Provision 620.
9. Geocomposite Drain shall be placed such that it drains along the width of the abutment.
10. Reinforcing steel schedule will be the responsibility of the Contractor. Refer to subsection 503.03 of the Standard Specifications for more information. Payment for all work associated with developing reinforcing schedules will be considered incidental to related Contract items.

PILE NOTES

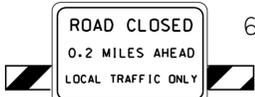
1. The maximum factored pile load shall be determined by the Engineer of Record but shall not exceed 255 kips and shall be determined based on design conditions.
2. H-pile material shall be ASTM A 572, Grade 50.
3. Estimate of piles required:  
Abutment No. 1: 4 ~ HP 14x89 @ 15 feet  
Abutment No. 2: 4 ~ HP 14x89 @ 25 feet
4. All piles shall be equipped with a Rock Injector HP-80500 Pile Point manufactured by Associated Pile & Fitting LLC or equal. Pile tips shall be attached according to the Manufacturer's recommendations and in accordance with Standard Specifications Section 501.10 Prefabricated Pile Tips.
5. The Contractor shall perform and submit a wave equation analysis for review and acceptance by the Resident. The maximum allowable driving stress is 0.90 times Fy. The submittal analyses shall include the proposed stopping criteria based on the wave equation analysis and the proposed driving system. The stopping criteria shall include the blows per inch and the number of 1-in. intervals at which pile installation may be terminated. The cost of performing the wave equation analysis will be considered incidental to Item No. 501.92, Pile Driving Equipment Mobilization.
6. The Contractor shall perform 2 dynamic load test(s) to confirm the ultimate capacity of the piles. The required nominal resistance for the pile is the factored axial pile load divided by a resistance factor of 0.65 per LRFD Specifications. The dynamic test shall be performed on the first production pile driven at each abutment.
7. Piles shall be driven to bedrock.
8. It is anticipated that the Contractor will encounter obstructions during pile driving operations. Clearing of all obstructions shall be as specified in Section 501 of the Standard Specifications. The method of clearing obstructions shall be approved by the Resident. The cost of clearing obstructions shall be considered incidental to related contract items.
9. Piles shall not be out of position by more than 2 inches in any direction.
10. Due to the presence of sloping bedrock at the site, piles walking during driving is possible. No compensation will be made for piles which need to be removed and re-driven due to the Contractor's pile driving operations.

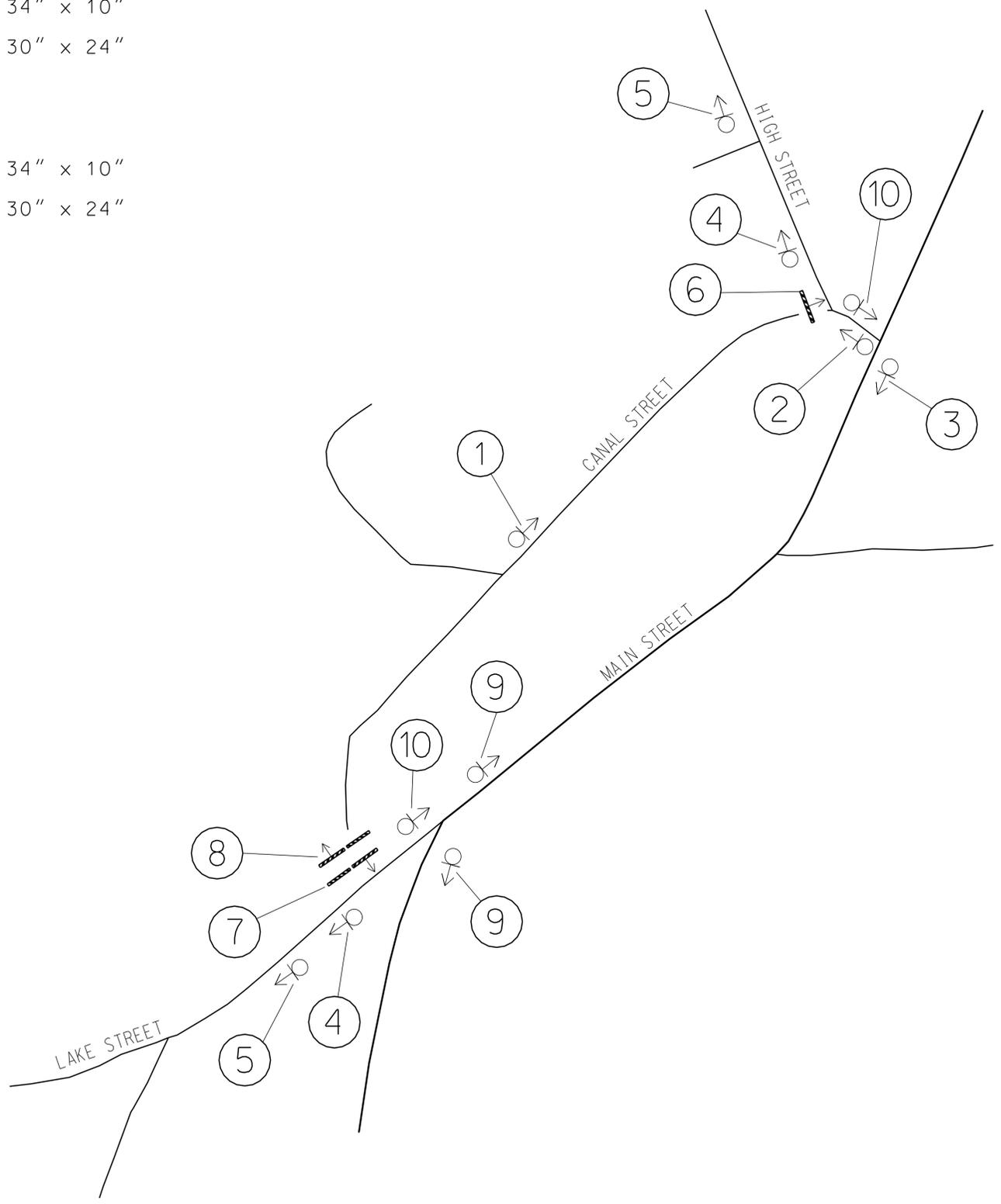


WINGWALL PLAN DETAIL

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

DATE	SIGNATURE	P.E. NUMBER	DATE
OCT 2010			

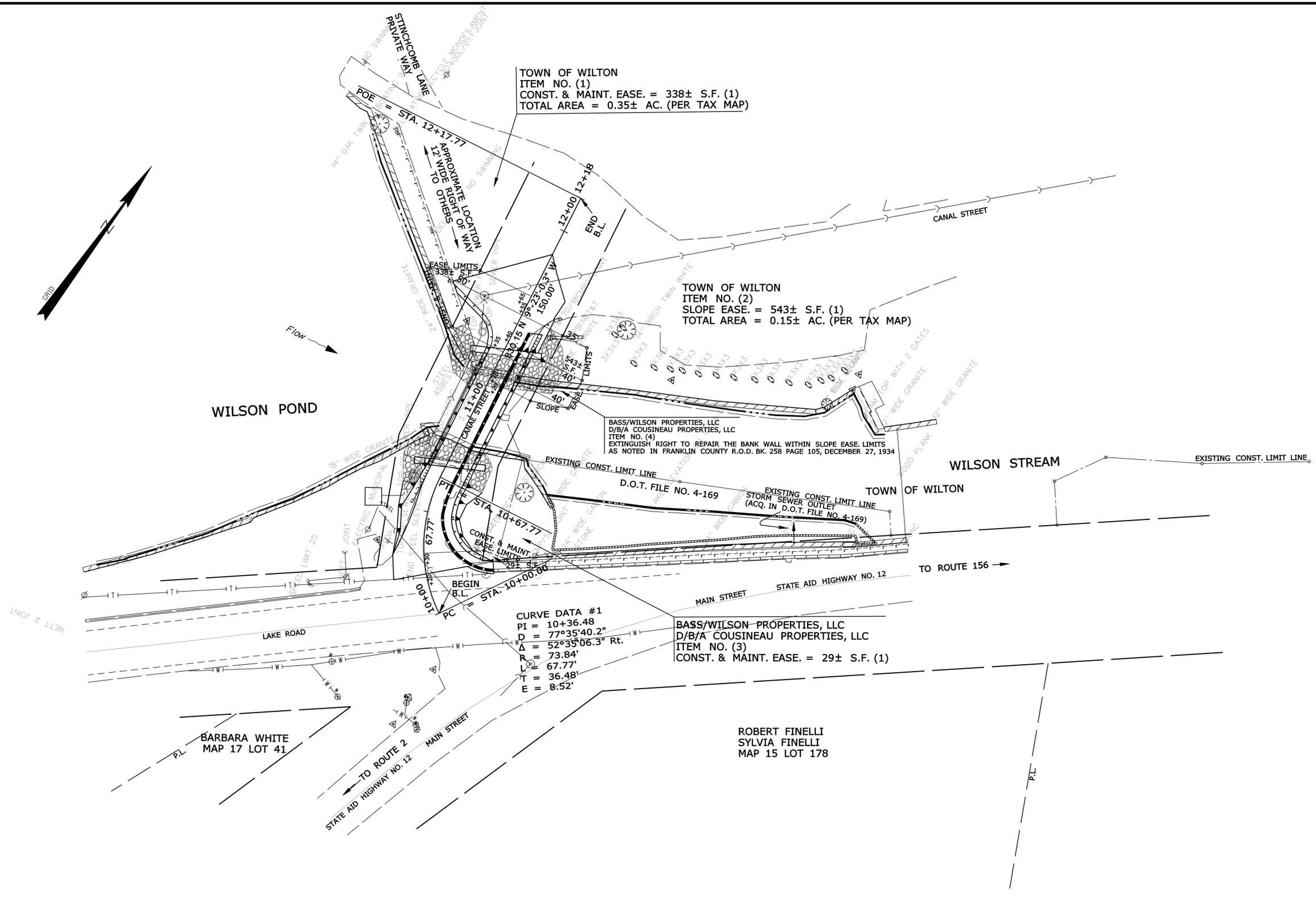
- ①  48" x 48"
- ②  34" x 12"  
30" x 24"
- ③  34" x 12"  
30" x 24"
- ④  34" x 10"  
30" x 24"
- ⑤  48" x 48"
- ⑥  60" x 30"  
 48" x 18"
- ⑦  48" x 30"  
 48" x 18"
- ⑧  48" x 30"
- ⑨  34" x 10"  
30" x 24"
- ⑩  34" x 10"  
30" x 24"



NOT TO SCALE

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION	
CANAL STREET BRIDGE		BH-1708(500)X	
WILSON STREAM		PIN 17085.00	
FRANKLIN COUNTY		BRIDGE NO. 0439	
WILTON		BRIDGE PLANS	
DETOUR PLAN		SHEET NUMBER	
13		OF 14	
PROJ. MANAGER	N. BENNETT	BY	DATE
DESIGN/DETAILED	TEAM SOUTH	ADN	OCT 2010
CHECKED/REVIEWED			SIGNATURE
DESIGN/DETAILED			P.E. NUMBER
REVISIONS 1			DATE
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

Filename: ... \00\ROW\MSTA001\_RWPLAN1.dgn Division: BRIDGE Username: Joel.R.Veillex Date: 5/2/2011



TOWN OF WILTON  
ITEM NO. (1)  
CONST. & MAINT. EASE. = 338± S.F. (1)  
TOTAL AREA = 0.35± AC. (PER TAX MAP)

TOWN OF WILTON  
ITEM NO. (2)  
SLOPE EASE. = 543± S.F. (1)  
TOTAL AREA = 0.15± AC. (PER TAX MAP)

BASS/WILSON PROPERTIES, LLC  
D/B/A COUSINEAU PROPERTIES, LLC  
ITEM NO. (4)  
EXTINGUISH RIGHT TO REPAIR THE BANK WALL WITHIN SLOPE EASE. LIMITS  
AS NOTED IN FRANKLIN COUNTY R.O.D. BK. 258 PAGE 105, DECEMBER 27, 1934

BASS/WILSON PROPERTIES, LLC  
D/B/A COUSINEAU PROPERTIES, LLC  
ITEM NO. (3)  
CONST. & MAINT. EASE. = 29± S.F. (1)

CURVE DATA #1  
PI = 10+36.48  
D = 77°35'40.2"  
Δ = 52°35'06.3" Rt.  
R = 73.84'  
L = 67.77'  
T = 36.48'  
E = 8.52'

EXISTING RIGHT-OF-WAY REFERENCES:

CANAL STREET AT BRIDGE  
LINCOLN COUNTY  
VOL. 2, PAGE 214  
1797, 3 RODS WIDE  
D.O.T. FILE NO. 4-169

SEE SURVEY PLAN PREPARED FOR G.H. BASS & CO.  
BY ACME ENGINEERING AND DESIGN  
FRANKLIN COUNTY R.O.D. PLAN 1028

BRIDGE NO. 0439 CANAL STREET BRIDGE OVER WILSON STREAM PIN 17085.00

SYMBOLS

• IP or • PIP (IRON PIPE or PIN FOUND)	○ WELL
□ S.T. (SEPTIC TANK)	--- GRADING LIMIT LINE
△ BM (BENCH MARK)	--- CONSTRUCTION LIMIT LINE
— WATER LINE	— PROPERTY LINE
— GAS LINE	— LIMITS OF TROUGHT PORTION (L.O.W.P.)
— ELECTRIC LINE	— EXISTING RIGHT OF WAY
— TELEPHONE LINE	— NEW RIGHT OF WAY
— SEWER LINE	— NEW ROW WITHIN EXIST. ROW
	— CONTROL OF ACCESS

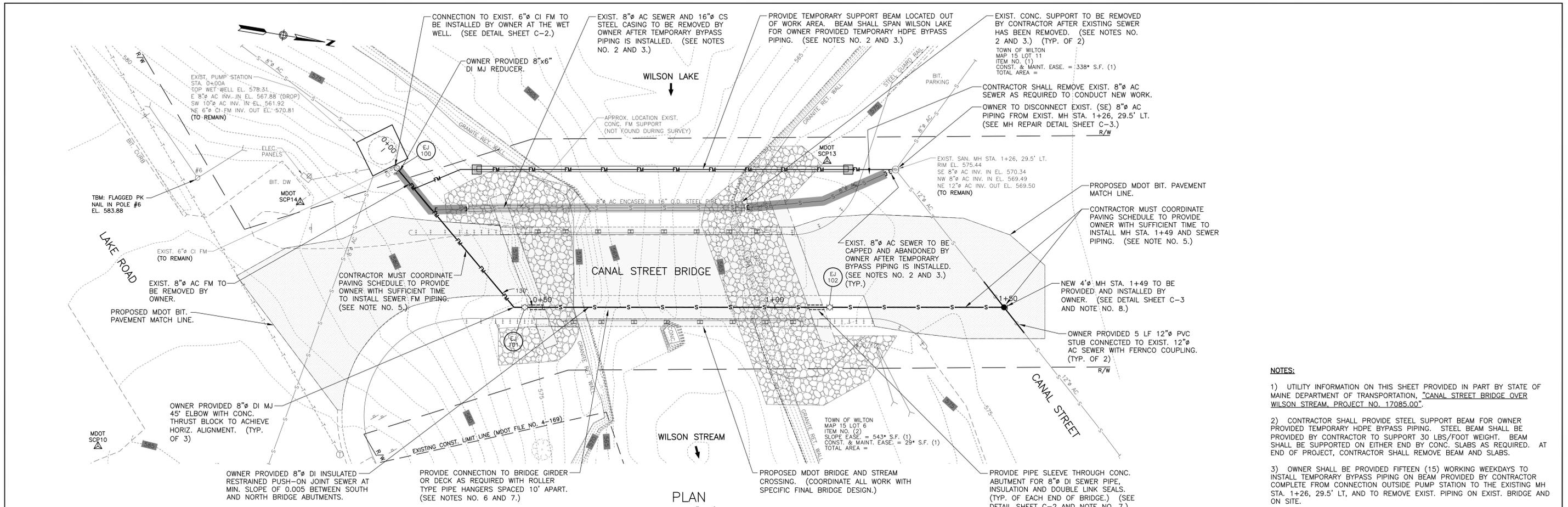
ITEM	TECH	CHECKED
BASE MAP		
EXIST. R/W	PNS	
PROP. LINES	PNS	
AREAS	PNS	DWB

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
16 STATE HOUSE STATION - AUGUSTA, ME. 04333-0016  
WILTON  
RIGHT OF WAY MAP

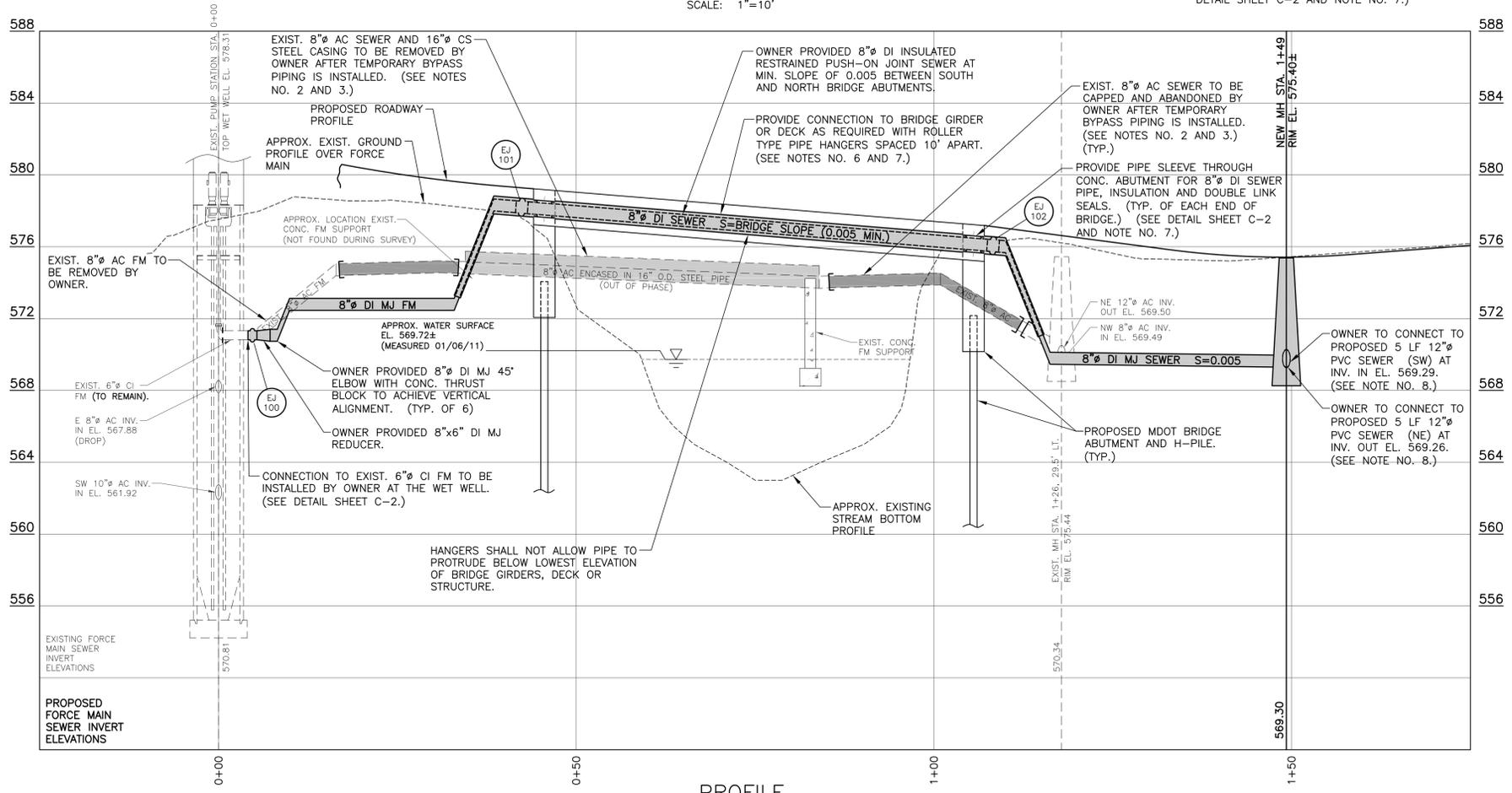
NO.	DATE	REVISIONS DESCRIPTION	BY	PLAN FILED IN PLAN BOOK		COUNTY RECORD				DAVID BERNHARDT COMMISSIONER KENNETH L. SWEENEY CHIEF ENGINEER DATE	
				NO.	GRANTOR	PAGE	INSTRUMENT	DATE	BOOK		PAGE

CANAL STREET  
WILTON FRANKLIN COUNTY  
FEDERAL AID PROJECT NO. BH-1708(500)X  
FEBRUARY 2011 RIGHT-OF-WAY MAP  
SCALE 1" = 25' SHEET 1 OF 1  
D.O.T. FILE NO. 4-245

SHEET NUMBER  
**14**  
OF 14



PLAN  
SCALE: 1"=10'



PROFILE  
SCALE: 1"=10' HORIZ.  
1"=4' VERT.

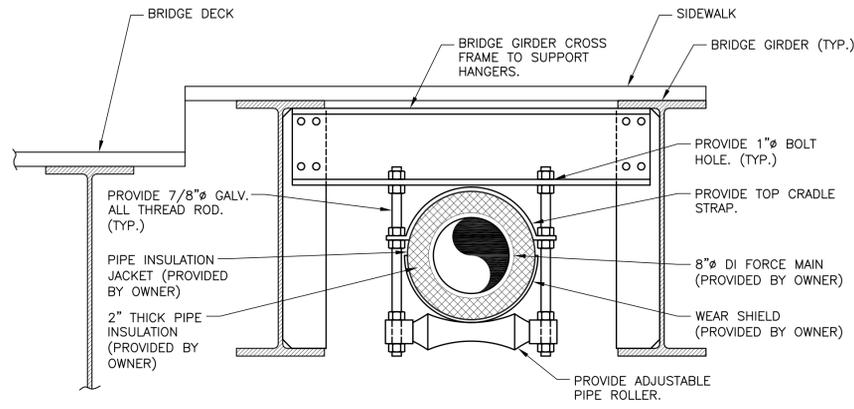
- NOTES:**
- UTILITY INFORMATION ON THIS SHEET PROVIDED IN PART BY STATE OF MAINE DEPARTMENT OF TRANSPORTATION, "CANAL STREET BRIDGE OVER WILSON STREAM, PROJECT NO. 17085.00".
  - CONTRACTOR SHALL PROVIDE STEEL SUPPORT BEAM FOR OWNER PROVIDED TEMPORARY HDPE BYPASS PIPING. STEEL BEAM SHALL BE PROVIDED BY CONTRACTOR TO SUPPORT 30 LBS/FOOT WEIGHT. BEAM SHALL BE SUPPORTED ON EITHER END BY CONC. SLABS AS REQUIRED. AT END OF PROJECT, CONTRACTOR SHALL REMOVE BEAM AND SLABS.
  - OWNER SHALL BE PROVIDED FIFTEEN (15) WORKING WEEKDAYS TO INSTALL TEMPORARY BYPASS PIPING ON BEAM PROVIDED BY CONTRACTOR COMPLETE FROM CONNECTION OUTSIDE PUMP STATION TO THE EXISTING MH STA. 1+26, 29.5' LT, AND TO REMOVE EXIST. PIPING ON EXIST. BRIDGE AND ON SITE.
  - STEEL SUPPORT BEAM IS INCLUDED IN MDOT CONTRACT AS AN "OPT OUT" PROVISION. IF OWNER DOES NOT ACCEPT CONTRACTOR'S PROPOSAL FOR INSTALLATION OF BEAM, OWNER SHALL PROVIDE BEAM.
  - OWNER SHALL HAVE FIFTEEN (15) WORKING WEEKDAYS TO INSTALL NEW FM AND SEWER PIPING COMPLETE FROM CONNECTION OUTSIDE PUMP STATION TO THE NEW MH STA. 1+49 AFTER BRIDGE AND HANGERS ARE INSTALLED BY CONTRACTOR.
  - THE OWNER PROVIDED 8" DI FM HAS A WEIGHT OF 60 LBS/FOOT. CONTRACTOR SHALL PROVIDE SUPPORT HANGERS SPACED 10' APART MAXIMUM. PIPE DEFLECTION MUST NOT EXCEED 5". EXACT HANGER DESIGN SHALL BE PROVIDED BY CONTRACTOR BASED ON SPECIFIC BRIDGE DESIGN. CONTRACTOR SHALL SUBMIT FINAL PIPE HANGER DESIGN TO ENGINEER FOR REVIEW. HANGER SUPPORTS SHALL BE ROLLER STYLE EQUAL TO DETAILS ON SHEET C-2.
  - CONTRACTOR SHALL ACCOMMODATE THE OWNER'S 8" DI PIPE AND LINK SEAL THROUGH CONC. BRIDGE ABUTMENTS BY PROVIDING A PIPE SLEEVE CAST WITHIN THE CONC. ABUTMENT. MINIMUM INVERT ELEVATION SHALL BE MAINTAINED WITHIN BRIDGE GIRDERS AS APPLICABLE. (NO PART OF PIPE SHALL HANG BELOW LOWEST ELEVATION OF BRIDGE DECK, GIRDERS, OR SUPPORTS.)
  - EXACT LOCATION AND INVERT ELEVATIONS OF MH STA. 1+49 WILL BE COORDINATED ON-SITE BY OWNER TO PROVIDE STRAIGHT ALIGNMENT OF NEW PIPING ACROSS NEW BRIDGE.



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

DATE	ADDITION OR REVISION
DES. BY: AH	DR. BY: RMR/AWL
CK. BY: WMO	
TOWN OF WILTON, MAINE	
CANAL STREET FORCE MAIN RELOCATION	
<b>FORCE MAIN PLAN AND PROFILE</b>	
SCALE: AS NOTED	PROJECT NO.: 1031
DATE: MARCH, 2011	SHEET: C-1

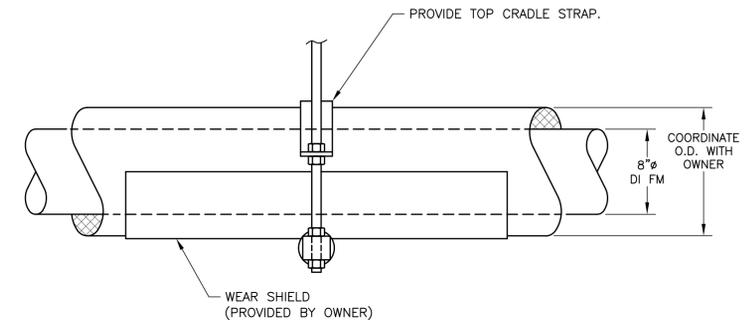
X:\massasolet\Projects\WILTON\CANAL STREET FM RELOCATION\Bld\_Sht\_04-11-11\1031C-01.DWG, 4/11/2011 10:39:07 AM



END VIEW

**TYPICAL TWO ROD ROLLER HANGER FOR PREFABRICATED STEEL BRIDGE**

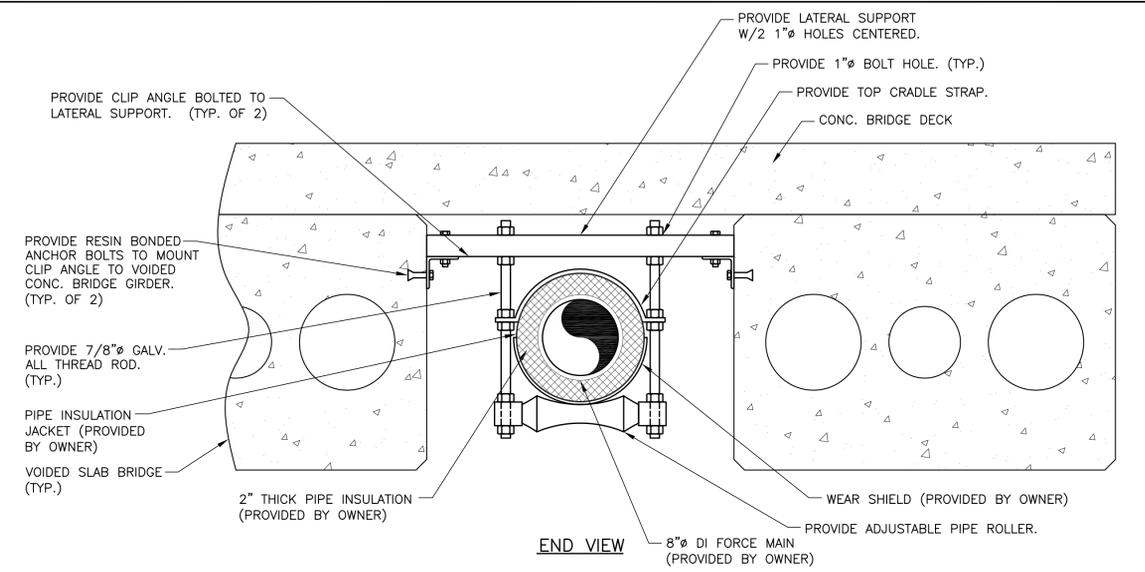
MDOT BRIDGE OPTION 1



SIDE VIEW

**PIPE HANGER NOTES:**

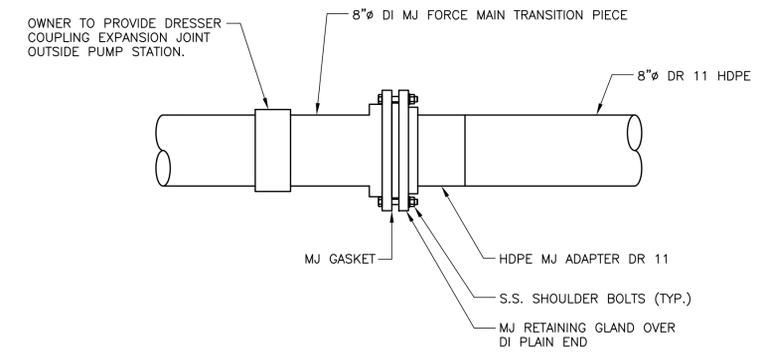
- 1) THE OWNER PROVIDED 8" DI FM INCLUDING CONTENTS HAS A WEIGHT OF 60 LBS /LF.
- 2) CONTRACTOR SHALL PROVIDE SUPPORT HANGERS SPACED 10' APART MAXIMUM.
- 3) EXACT HANGER DESIGN SHALL BE PROVIDED BY CONTRACTOR TO ACCOMMODATE OWNER'S PIPING BASED ON SPECIFIC BRIDGE DESIGN.
- 4) CONTRACTOR SHALL SUBMIT FINAL PIPE HANGER DESIGN TO ENGINEER FOR REVIEW.
- 5) MATERIALS FOR PIPE HANGERS AND SUPPORTS MUST COMPLY WITH ANSI/MSS SP-58.
- 6) INSTALLATION MUST COMPLY WITH ANSI/MSS SP-69.
- 7) PROVIDE GALVANIZED FINISH.



END VIEW

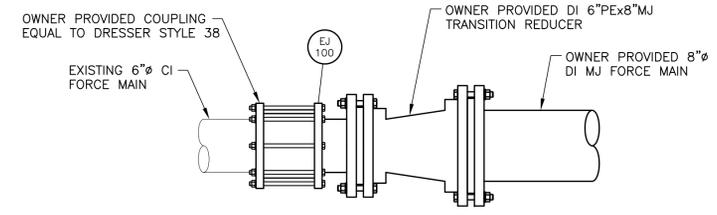
**TYPICAL TWO ROD ROLLER HANGER FOR VOIDED OR CONCRETE BRIDGE SLAB**

MDOT BRIDGE OPTION 2



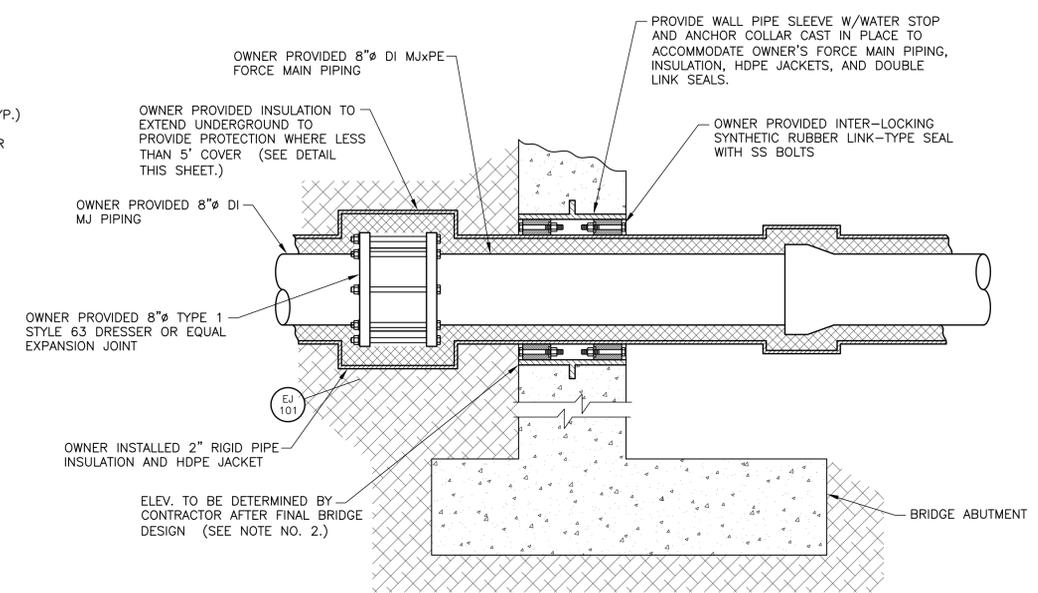
**CAST IRON TO HDPE FORCE MAIN TRANSITION DETAIL**

(OWNER PROVIDED TEMPORARY FM CONNECTION)



**CAST IRON TO DI FORCE MAIN TRANSITION DETAIL**

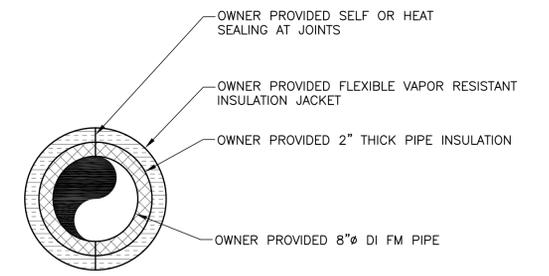
(OWNER PROVIDED PERMANENT FM CONNECTION)



**TYPICAL ABUTMENT PENETRATION**

**NOTES:**

- 1) CONFIGURATION SHOWN IS FOR SOUTH ABUTMENT WALL.
- 2) ELEVATION OF WALL SLEEVE TO BE DETERMINED BY CONTRACTOR BASED UPON FINAL BRIDGE DESIGN SUCH THAT FORCE MAIN IS NOT BELOW BOTTOM OF BRIDGE DECK, GIRDERS, OR STRUCTURE BETWEEN ABUTMENTS.
- 3) COORDINATE EXACT MATERIAL DIMENSIONS FOR FM AND LINK SEALS WITH OWNER PRIOR TO CASTING WALL PIPE.



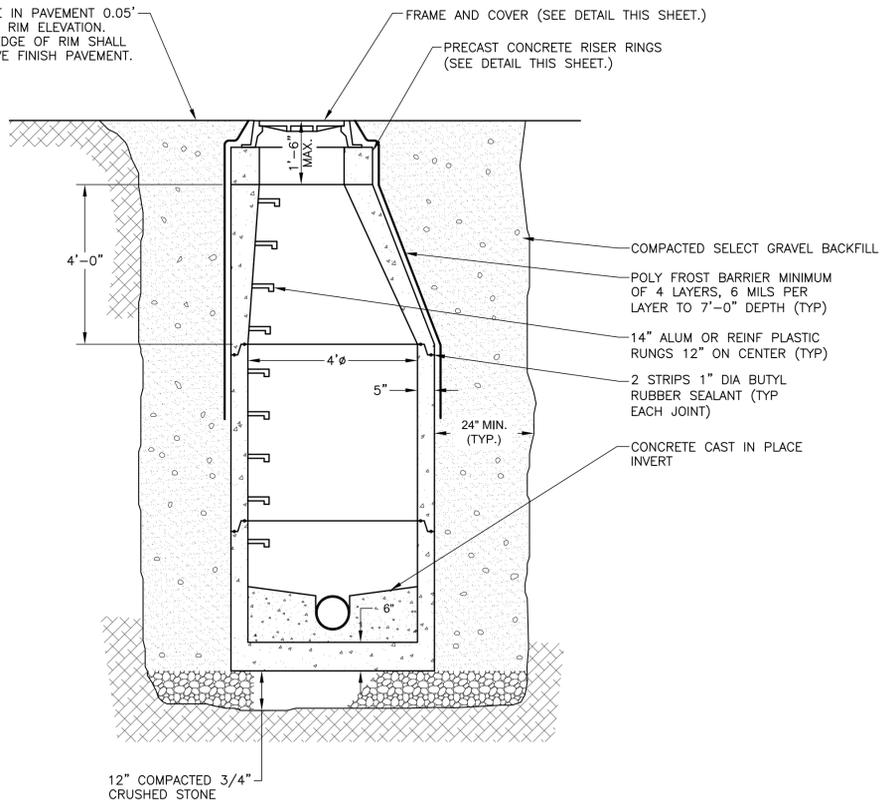
**BURIED PIPE INSULATION DETAIL**



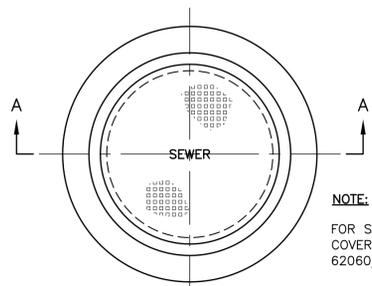
<b>OLVER ASSOCIATES INC.</b> ENVIRONMENTAL ENGINEERS 290 MAIN STREET WINTERPORT, MAINE	
DATE	ADDITION OR REVISION
DES. BY: AH	DR. BY: FLE CK. BY: WMO
TOWN OF WILTON, MAINE	
CANAL STREET FORCE MAIN RELOCATION	
<b>CIVIL DETAILS</b>	
SCALE: NONE	PROJECT NO.: 1031
DATE: MARCH, 2011	SHEET: C-2

X:\massse\Projects\WILTON\Canal Street FM Relocation\Bld Ser\_04-11-11\1031C-02.DWG, 4/11/2011 10:42:21 AM

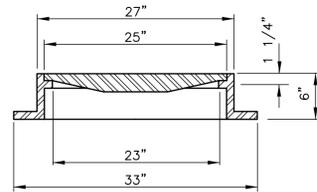
FINISH GRADE IN PAVEMENT 0.05' HIGHER THAN RIM ELEVATION. NOTE: NO EDGE OF RIM SHALL EXTEND ABOVE FINISH PAVEMENT.



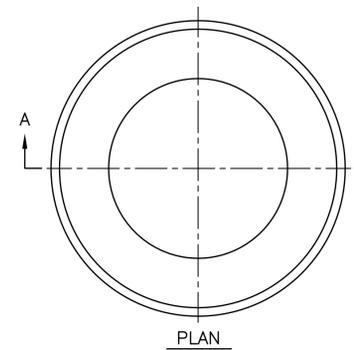
**PRECAST MANHOLE DETAIL**  
(OWNER PROVIDED)



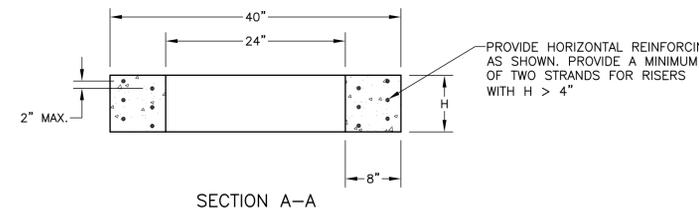
NOTE:  
FOR SANITARY MH'S, MH FRAME AND COVER ARE EJ PRESCOTT QWP#23 62060/62070 OR EQUAL.



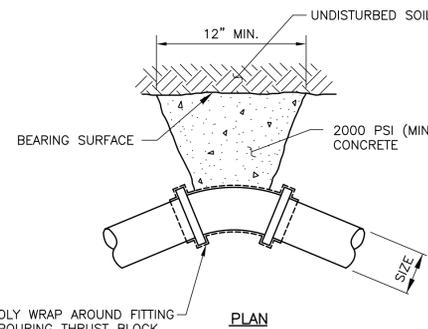
**MANHOLE FRAME AND COVER DETAIL**  
(OWNER PROVIDED)



- NOTES:
- 1) PROVIDE H OF 4" MIN. TO 9" MAX. AS REQUIRED TO BRING FRAME TO FINAL GRADE.
  - 2) FOR FRAME ADJUSTMENTS OF LESS THAN 4" USE APPROVED ALTERNATE STRUCTURE FRAME AND/OR ATTACH FRAME DIRECTLY TO PRECAST STRUCTURE CONE.
  - 3) DO NOT MAKE FINAL ADJUSTMENT OF RIM ELEVATION UNTIL AFTER BINDER PAVEMENT COURSE HAS BEEN PLACED.
  - 4) SET RIM ELEVATION 0.05' BELOW FINAL SURFACE COURSE ELEVATION.



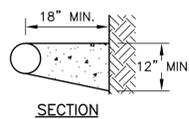
**PRECAST CONCRETE GRADE RINGS DETAIL**  
(OWNER PROVIDED)



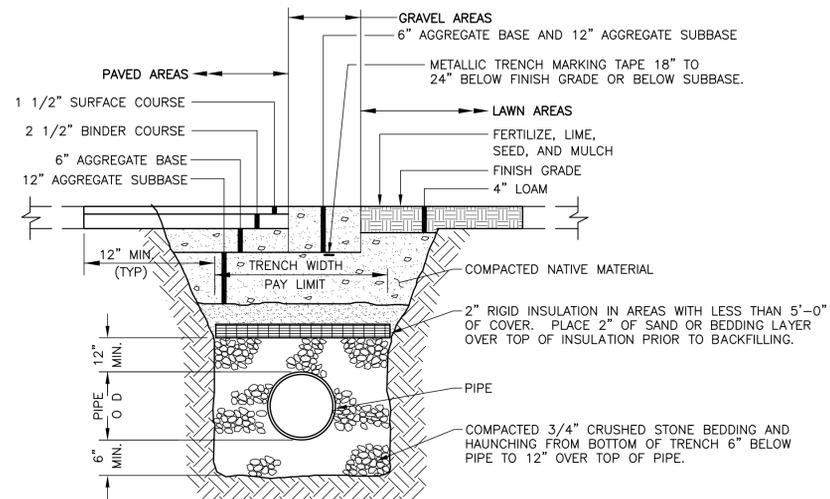
- NOTES:
- 1) THRUST BLOCK CONFIGURATION SHALL BE APPROX. SQUARE AT BEARING SURFACE, THEN TRANSITION IN DEPTH AND WIDTH TO PIPE, 12"x 12" MINIMUM AT BEARING SURFACE AND 18" MINIMUM DEPTH.
  - 2) THRUST BLOCKS ARE REQUIRED AT ALL CHANGES OF DIRECTION AND FITTINGS IN PRESSURIZED FORCE MAINS.
  - 3) THRUST BLOCK BEARING SURFACES BASED UPON UP TO 100 PSI LINE PRESSURE IN SAND/GRAVEL WITH SOIL BEARING PRESSURE OF 3000 PSI. (ADJUSTMENTS TO SURFACE AREA MAY BE REQUIRED IN POOR QUALITY SOILS OR IF LINE PRESSURE EXCEEDS 100 PSI.)
  - 4) SAFETY FACTOR = 1.5.

SIZE, IN	BEARING SURFACE, FT <sup>2</sup>			
	TEE, 90°	45°	22 1/2°	11 1/4°
6	2.6	1.4	1.0	1.0
8	4.6	2.5	1.4	1.0

PROVIDE POLY WRAP AROUND FITTING PRIOR TO POURING THRUST BLOCK TO PROTECT BOLTS FROM CONCRETE.

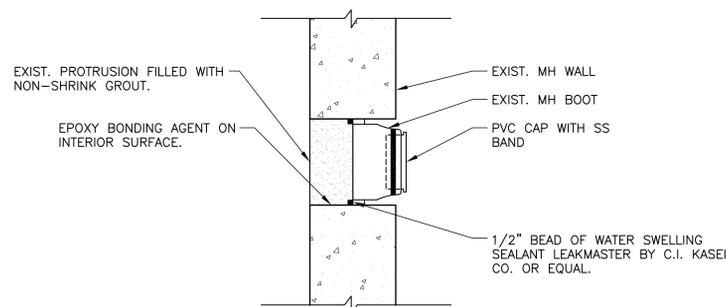


**THRUST BLOCK DETAIL**  
(OWNER PROVIDED)



**TYPICAL SEWER TRENCH DETAIL**  
(OWNER PROVIDED UNLESS OTHERWISE NOTED)

- NOTES:
- 1) MAINTAIN UNIFORM TRENCH WIDTH TO 12" OVER PIPE.
  - 2) PAVEMENT TO BE PROVIDED BY CONTRACTOR.



**EXISTING MH STA. 1+26, 29.5' LT REPAIR DETAIL**  
(OWNER PROVIDED)



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

DATE		ADDITION OR REVISION	
DES. BY:	AH	DR. BY:	FLE
CK. BY:	WMO	TOWN OF WILTON, MAINE	
CANAL STREET FORCE MAIN RELOCATION			
<b>CIVIL DETAILS</b>			
SCALE:	NONE	PROJECT NO.:	1031
DATE:	MARCH, 2011	SHEET:	C-3