

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



SPECIFICATIONS

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

DESIGN LOADING

Live Load HL - 93 Modified For Strength I

TRAFFIC DATA

CHURCH STREET
Current (2005) AADT 710
Future (2030) AADT 1050
DHV - % of AADT 10
Design Hour Volume 105
Heavy Trucks (% of AADT) 8
Heavy Trucks (% of DHV) 6
Directional Distribution (% of DHV) 55
18 kip Equivalent P 2.0 41
18 kip Equivalent P 2.5 39

U.S. ROUTE 1
Current (2007) AADT 9310
Future (2030) AADT 11510
DHV - % of AADT 10
Design Hour Volume 1151
Heavy Trucks (% of AADT) 12
Heavy Trucks (% of DHV) 10
Directional Distribution (% of DHV) 58
18 kip Equivalent P 2.0 1101
18 kip Equivalent P 2.5 1048

MATERIALS

Concrete:
Barriers, Curbs, Sidewalks & Transition Barriers Class "LP"
All Other Class "A"
Reinforcing Steel ASTM A 615/A 615M, Grade 60

Structural Steel:
All Material (except as noted) ASTM A 709, Grade 50
High Strength Bolts ASTM A 325, Type 1

BASIC DESIGN STRESSES

Concrete f 'c = 4,350 psi
Reinforcing Steel f y = 60,000 psi

Structural Steel:
ASTM A 709, Grade 50 F y = 50,000 psi
ASTM A 709, Grade 36 F y = 36,000 psi
ASTM A 325 F μ = 120,000 psi

STOCKTON SPRINGS
WALDO COUNTY
STOCKTON SPRINGS UNDERPASS
OVER
U.S. ROUTE 1
CHURCH STREET
BH-1510(800)X
PROJECT LENGTH 0.080 mi.
BRIDGE NO. 5760

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UTILITIES

Central Maine Power Company
Fairpoint Communications
Fairpoint Classic
Searsport Water District
Time Warner Cable

MAINTENANCE OF TRAFFIC

Church Street: Closed to vehicular and pedestrian traffic during construction. Traffic will be detoured over state and local roads.

U.S. Route 1: Maintain 2 lanes of traffic except as specified in the Project Specifications.

PROJECT LOCATION:	Stockton Springs Underpass Bridge (#5760) on Church Street over U.S. Route 1. Located 0.1 mile north of Main Street, Stockton Springs. Latitude: 44°29'29" N Longitude: 68°51'27" W
PROGRAM AREA:	Bridge
OUTLINE OF WORK:	Bridge Replacement

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	DATE 2/23/12
APPROVED 	COMMISSIONER 2/17/12
CHIEF ENGINEER 	

STATE OF MAINE RICHARD E. MYERS 12870 LICENSED PROFESSIONAL ENGINEER	SIGNATURE 12670	P.E. NUMBER Feb. 17, 2012	DATE
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PROJECT INFORMATION	PROGRAM Bridge	PROJECT MANAGER S. BODGE	DESIGNER R. MYERS	CONSULTANT	PROJECT RESIDENT	CONTRACTOR	PROJECT COMPLETION DATE
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STOCKTON SPRINGS UNDERPASS U.S. ROUTE 1 STOCKTON SPRINGS WALDO COUNTY	TITLE SHEET
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SHEET NUMBER 1 OF 42

Date:2/16/2012

Username: mark.poulin

Division: BRIDGE

Filename:\00\bridge\ms10\001_ Title.dgn

WIN 15108.00

BH-1510(800)X

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
201.23	REMOVING SINGLE TREE TOP ONLY	2	EA
201.24	REMOVING STUMP	4	EA
202.13	REMOVING EXISTING RAILINGS (RETAINED BY DEPARTMENT)	260	LF
202.15	REMOVING MANHOLE OR CATCH BASIN	2	EA
202.19	REMOVING EXISTING BRIDGE (455 CY)	1	LS
203.20	COMMON EXCAVATION	1,100	CY
203.25	GRANULAR BORROW	680	CY
203.35	CRUSHED STONE	45	CY
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	1,015	CY
403.208	HOT MIX ASPHALT 12.5 MM HMA SURFACE	186	T
403.209	HOT MIX ASPHALT 9.5 MM HMA (SIDEWALKS, DRIVES, INCIDENTALS)	29	T
403.213	HOT MIX ASPHALT 12.5 MM BASE	186	T
409.15	BITUMINOUS TACK COAT - APPLIED	44	G
502.219	STRUCTURAL CONCRETE, ABUTMENTS & RETAINING WALLS (118 CY)	1	LS
502.26	STRUCTURAL CONCRETE SLAB ON STEEL BRIDGE (111 CY)	1	LS
502.49	STRUCTURAL CONCRETE CURBS AND SIDEWALK (29 CY)	1	LS
503.12	REINFORCING STEEL, FABRICATED AND DELIVERED	7,500	LB
503.13	REINFORCING STEEL, PLACING	7,500	LB
504.702	STRUCTURAL STEEL FAB. & DELIVERED, WELDED (94,500 LB)	1	LS
504.71	STRUCTURAL STEEL ERECTION (94,500 LB)	1	LS
505.08	SHEAR CONNECTORS (1,060 EA)	1	LS
506.30	SHOP COATING OF STRUCTURAL STEEL (34,500 LBS)	1	LS
507.0831	STEEL BRIDGE RAILING, 4 BAR (158 LF)	1	LS
514.06	CURING BOX FOR CONCRETE CYLINDERS	1	EA
515.20	PROTECTIVE COATING FOR CONCRETE SURFACES	450	SY
519.301	GALVANIZING NEW STRUCTURAL STEEL (94,500 LBS)	1	LS
523.52	BEARING INSTALLATION	10	EA
523.5401	LAMINATED ELASTOMERIC BEARINGS, FIXED	5	EA
523.5402	LAMINATED ELASTOMERIC BEARINGS, EXPANSION	5	EA
526.301	TEMPORARY CONCRETE BARRIER TYPE I	1	LS
526.34	PERMANENT CONCRETE TRANSITION BARRIER	4	EA
527.303	ENERGY ABSORBING SYSTEM (ET-PLUS)	2	EA
527.34	WORK ZONE CRASH CUSHIONS	4	UN
603.16	15 INCH CULVERT PIPE OPTION I	50	LF
603.169	15 INCH CULVERT PIPE OPTION III	69	LF
603.17	18 INCH CULVERT PIPE OPTION I	70	LF
604.072	CATCH BASIN TYPE AI-C	3	EA
604.092	CATCH BASIN TYPE BI-C	1	EA
605.09	6 INCH UNDERDRAIN	397	LF
605.10	6 INCH UNDERDRAIN OUTLET	20	LF
605.11	12 INCH UNDERDRAIN TYPE C	148	LF
606.1721	BRIDGE TRANSITION - TYPE I	4	EA
606.23	GUARDRAIL TYPE 3C - SINGLE RAIL	295	LF
606.232	GUARDRAIL TYPE 3C - OVER 15 FOOT RADIUS	48	LF
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	10	EA
606.356	UNDERDRAIN DELINEATOR POST	2	EA
606.369	GUARDRAIL, REMOVED AND STACKED	533	LF
606.651	MODIFIED GUARDRAIL - THRIE BEAM	150	LF
606.70	TRANSITION SECTION THRIE BEAM	4	EA
606.79	GUARDRAIL 350 FLARED TERMINAL	4	EA
607.17	CHAIN LINK FENCE 6'	147	LF
607.184	CHAIN LINK SNOW FENCE 3'	147	LF
609.11	VERTICAL CURB TYPE I	197	LF
609.234	TERMINAL CURB TYPE 1 - 4 FOOT	1	EA
609.247	TERMINAL CURB TYPE 2 - 7 FOOT	1	EA
609.31	CURB TYPE 3	136	LF
610.08	PLAIN RIPRAP	10	CY
613.319	EROSION CONTROL BLANKET	645	SY
615.07	LOAM	90	CY
618.1401	SEEDING METHOD NUMBER 2 - PLAN QUANTITY	14	UN
619.12	MULCH	14	UN
619.1401	EROSION CONTROL MIX	180	CY
620.54	STABILIZATION REINFORCEMENT GEOTEXTILE	470	SY
620.56	DRAINAGE GEOTEXTILE	15	SY
627.733	4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	2,600	LF
627.75	WHITE OR YELLOW PAVEMENT AND CURB MARKING	2,500	SF
627.76	TEMPORARY PAVEMENT MARKING LINE, WHITE OR YELLOW	1	LS
627.77	REMOVING PAVEMENT MARKING	2,945	SF
629.05	HAND LABOR, STRAIGHT TIME	10	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	10	HR
631.14	GRADER (INCLUDING OPERATOR)	10	HR
631.15	ROLLER, EARTH AND BASE COURSE (INCLUDING OPERATOR)	10	HR
631.172	TRUCK - LARGE (INCLUDING OPERATOR)	10	HR
631.21	ROAD BROOM (INCLUDING OPERATORS & HAULER)	10	HR
631.32	CULVERT CLEANER (INCLUDING OPERATOR)	10	HR
634.16	HIGHWAY LIGHTING	1	LS
636.40	MECHANICALLY STABILIZED EARTH RETAINING WALL	5,100	SF
639.18	FIELD OFFICE TYPE A	1	EA
645.116	REINSTALL REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGN	1	EA
652.312	TYPE III BARRICADE	12	EA
652.33	DRUM	30	EA
652.34	CONE	10	EA
652.35	CONSTRUCTION SIGNS	1,200	SF
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES (180 CD)	1	LS
652.38	FLAGGER	100	HR
652.381	TRAFFIC OFFICERS	50	HR

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
652.41	PORTABLE CHANGEABLE MESSAGE SIGN	3	EA
656.75	TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	1	LS
659.10	MOBILIZATION	1	LS

GENERAL CONSTRUCTION NOTES

1. For easements, construction limits, and right of way lines, refer to the 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. All aluminum bridge rail, rail posts, and associated hardware which are to be removed shall be carefully salvaged by the Contractor and will remain the property of the Department.

5. Do not excavate for Aggregate Subbase Course where existing material is suitable as determined by the Resident.

6. 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.

7. Place loam 2 inches deep on all new or reconstructed sideslopes or as directed by the Resident.

8. Except on Church Street, 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. 619.1401, Erosion Control Mix. The lawn areas on Church Street shall receive loam and seed.

9. Guardrail posts behind the MSE wall on Church Street shall be modified from the indicated length of 6 feet in the Standard Details to a length of 7'-4" with an embedment of 5 feet. Payment will be considered incidental to the guardrail pay items.

10. Extended-use Erosion Control Blanket, seeded gutters, and riprap downspouts 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.

11. 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, Top of abutment parapets and to one foot below the top of parapets on the backwall side.

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

13. 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.

14. The project geotechnical report titled: Geotechnical Design Report for the Replacement of Stockton Springs Underpass Bridge, Soils Report No. 2011-30, December 5, 2011, may be accessed at the MaineDOT web address.

15. 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.

16. Quantities included for pay items measured and paid for by Lump Sum are estimated quantities and are provided by MaineDOT for informational purposes only. Lump Sum pay items will be paid for at the Contract Bid amount, with no addition or reduction in payment to the Contractor if the actual final quantities are different from the MaineDOT provided estimated quantities, except as follows:

a. If a Lump Sum pay item is eliminated, the requirements of Standard Specifications Section 109.2, Elimination of Items, will take precedence.

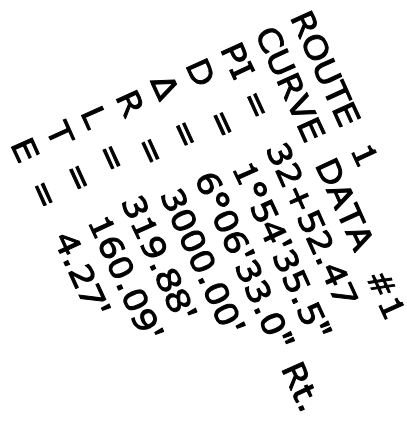
b. If other Contract Documents specifically allow a change in payment for a Lump Sum pay item, those requirements will be followed.

c. If a design change results in changes to estimated quantities for Lump Sum pay items, price adjustments will be made in accordance with Standard Specifications Section 109.7, Equitable Adjustments to Compensation.

17. 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. The Plan shall also include descriptions and layouts of traffic control during all stages of removal. 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.

18. The existing bridge shall be removed by and become the property of the Contractor, except the existing aluminum bridge rail which shall become property of the Department. See also Special Provision 202.

STOCKTON SPRINGS UNDERPASS U.S. ROUTE 1										STATE OF MAINE																																																	
STOCKTON SPRINGS WALDO COUNTY										DEPARTMENT OF TRANSPORTATION																																																	
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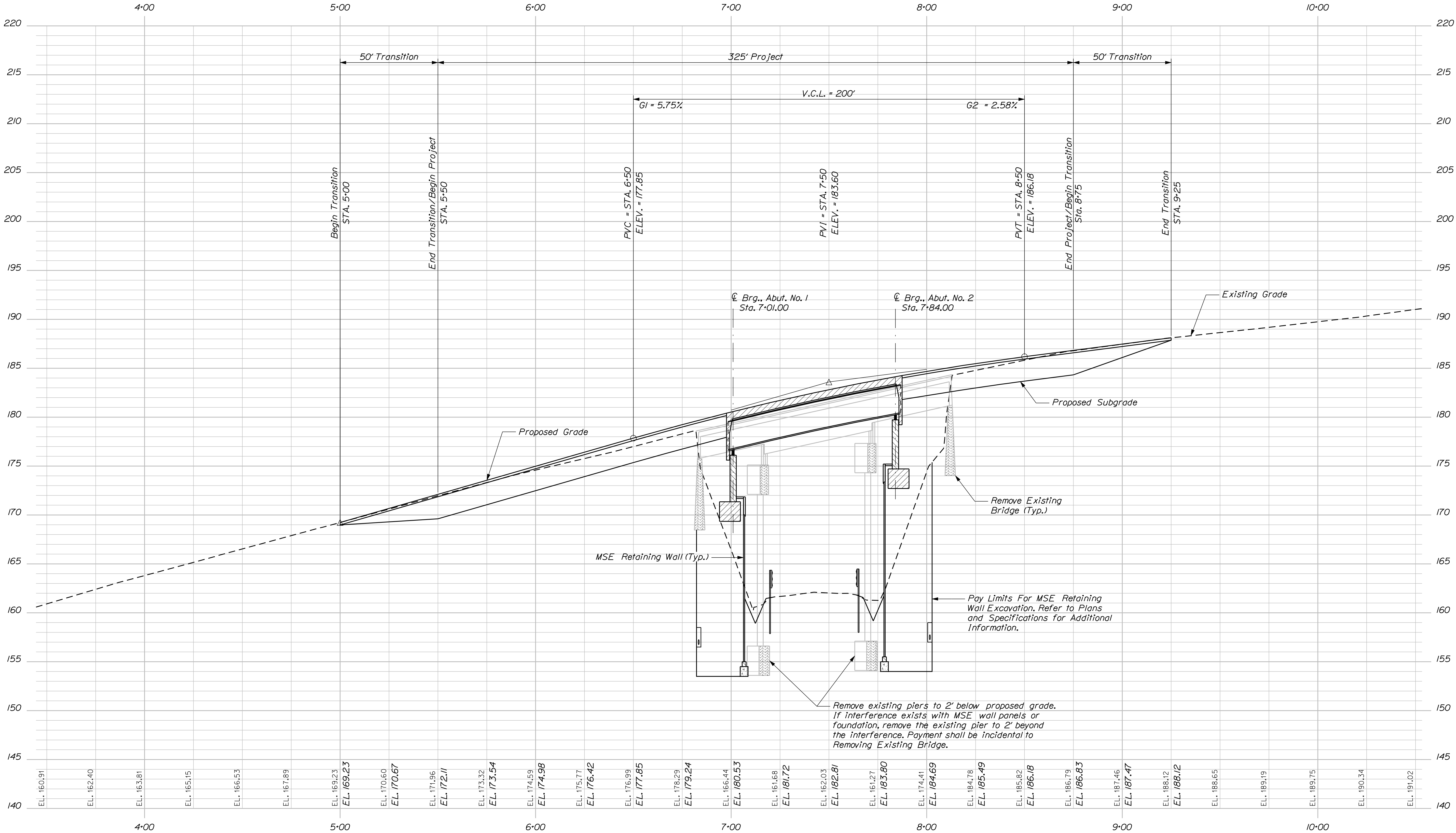
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			U.S. ROUTE 1				DESIGN-DETAILED	R. MYERS	M.R.P.	Sept. 2011		
			STOCKTON SPRINGS WALDO COUNTY				CHECKED-REVIEWED	E. ANTHONY	TEAM	NORTH		SIGNATURE
							DESIGN2-DETAILED2					
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							REVISIONS 1					
							REVISIONS 2					
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							FIELD CHANGES					

Date:2/22/2012

Username: mark.poulin

Division: BRIDGE

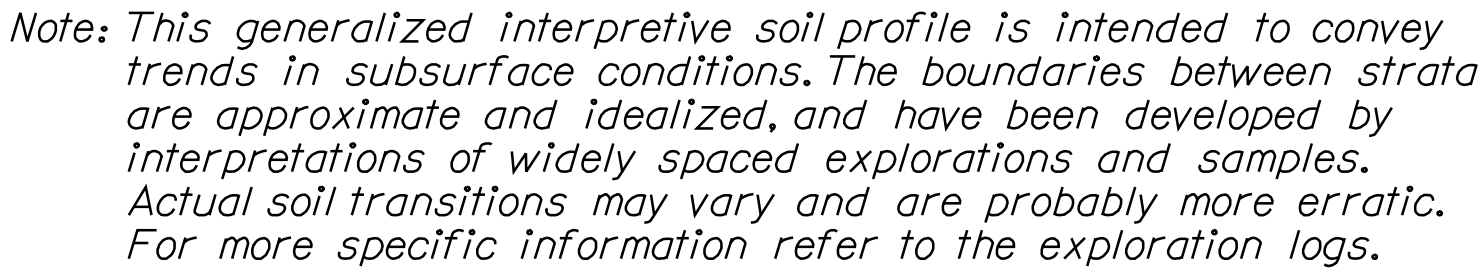
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PROFILE

STATE OF MAINE DEPARTMENT OF TRANSPORTATION BH-1510(800)X	SIGNATURE _____ P.E. NUMBER _____ DATE _____	PROJ. MANAGER S. BOODE BY S. BOODE M.P.P. TEAM NORTH	DESIGN-DETAILED R. MYERS CHECKED-REVIEWED E. ANTHONY DESIGN-DETAILED E. ANTHONY REVISIONS 1 REVISIONS 2 REVISIONS 3 REVISIONS 4 FIELD CHANGES	STOCKTON SPRINGS UNDERPASS U.S. ROUTE 1 STOCKTON SPRINGS WALDO COUNTY	PROFILE
SHEET NUMBER 4 OF 42		BRIDGE NO. 5790 WIN 15108.00 BRIDGE PLANS			

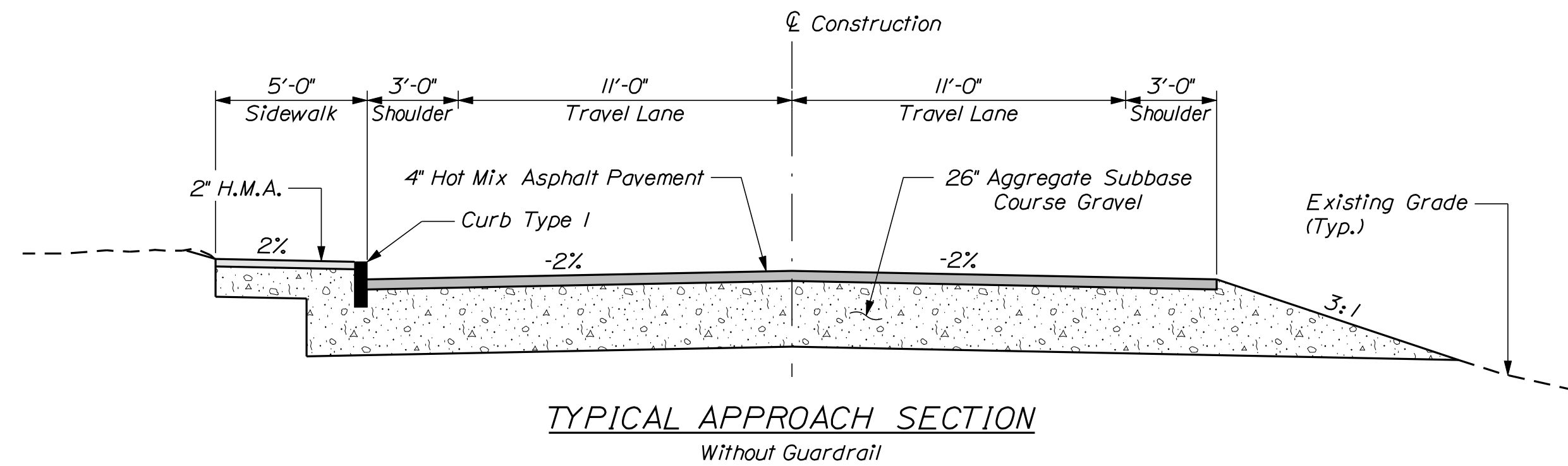




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SHEET NUMBER	STOCKTON SPRINGS UNDERPASS		D. Anderson		BY	DATE	STATE OF MAINE DEPARTMENT OF TRANSPORTATION		
	ROUTE 1		M. MOREAU					T. WHITE	JULY 2008
	STOCKTON SPRINGS WALDO COUNTY		DESIGN-DETAILED		CHECKED-REVISED			SIGNATURE	
			DESIGN2-DETAILED2						
			DESIGN3-DETAILED3						
			REVISIONS 1					P.E. NUMBER	
			REVISIONS 2						
			REVISIONS 3						
			REVISIONS 4						
			FIELD CHANGES					DATE	
BORING LOGS							BRIDGE NO. 5760	WIN 15108.00	BRIDGE PLANS

Maine Department of Transportation										Project: Stockton Springs Underpass Bridge										Boring No.: BB-SSU-103									
Soil/Rock Exploration Log										Location: Stockton Springs, Maine										WIN: 15108.00									
US CUSTOMARY UNITS																													
Drillers: MaineDOT					Elevation (ft.): 161.2					Auger ID/OD: 5" Solid Stem					Sampler: Standard Split Spoon														
Operator: B. Wilber/C. Giles					Datum: NAVD 88																								
Logged by: B. Wilber					Rig Type: CME 45C					Hammer Wt./Fall: 140W/30"																			
Date Spec/Initiated: 6/8/2024/8/20/25					Drilling Method: Cased Wash Boring					Core Borehole: NO-2"																			
Boring Location: 744B.B. 31.8 ft Lt.					Casing ID/OD: HW					Water Level#: 2.1' bgs.																			
Hammer Efficiency Factor: 0.84					Hammer Type: Automatic SS Hydraulic ☐ Rope & Cathead ☐																								
Definitions: S = Split Spoon Sample M = Unconsolidated Split Spoon Sample attempt U = Thin Wall Tube Sample MU = Unconsolidated Thin Wall Tube Sample attempt Bore Description/Initiated: 6/8/2024/8/20/25 Boring Location: 744B.B. 31.8 ft Lt. Hammer Efficiency Factor: 0.84										R = Rock Core Sample SS = Solid Stem Auger HSA = Hollow Stem Auger R = Roller Core Sample WH = Weight of H40S hammer W = Weight of H40S hammer W = Weight of H40S hammer W = Weight of H40S hammer										L = Plastic Field Vane Shear Strength Test TV = Plastic Field Vane Shear Strength Test UC = Uncolored Compressive Strength Test									



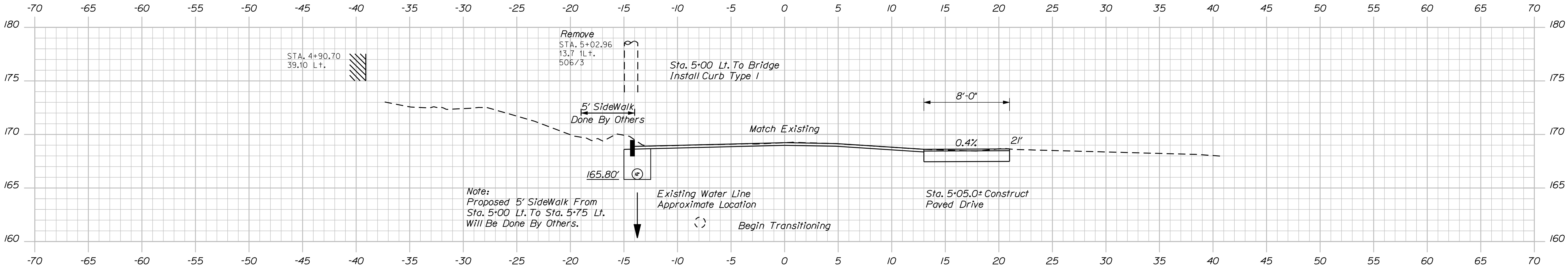
OF 42	SHEET NUMBER	STOCKTON SPRINGS UNDERPASS										STATE OF MAINE	
		U.S. ROUTE 1											
	STOCKTON SPRINGS WALDO COUNTY										DEPARTMENT OF TRANSPORTATION		
	TYPICAL SECTIONS												
	PROJ. MANAGER		S. BOODE		BY		DATE		SIGNATURE				
	DESIGN-DETAILED		R. MYERS		M.R.P.		Sept. 2011						
	CHECKED-REVIEWED		E. ANTHONY		TEAM		NORTH		P.E. NUMBER				
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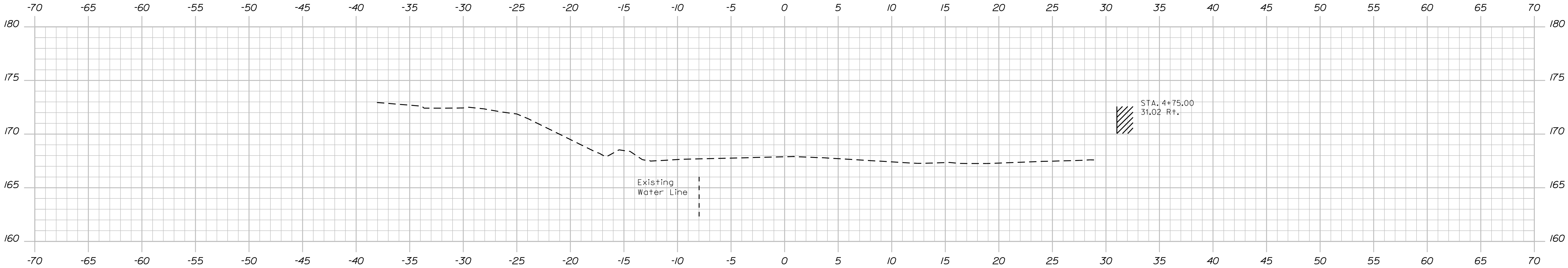
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Division: BRIDGE

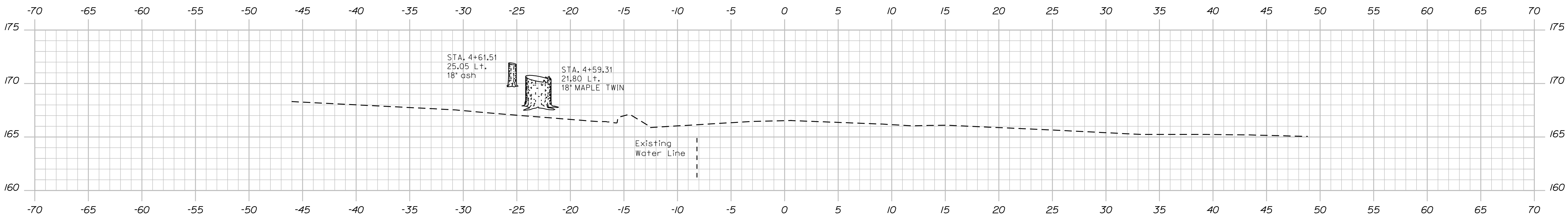
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5+00.00



4+75.00



4+50.00

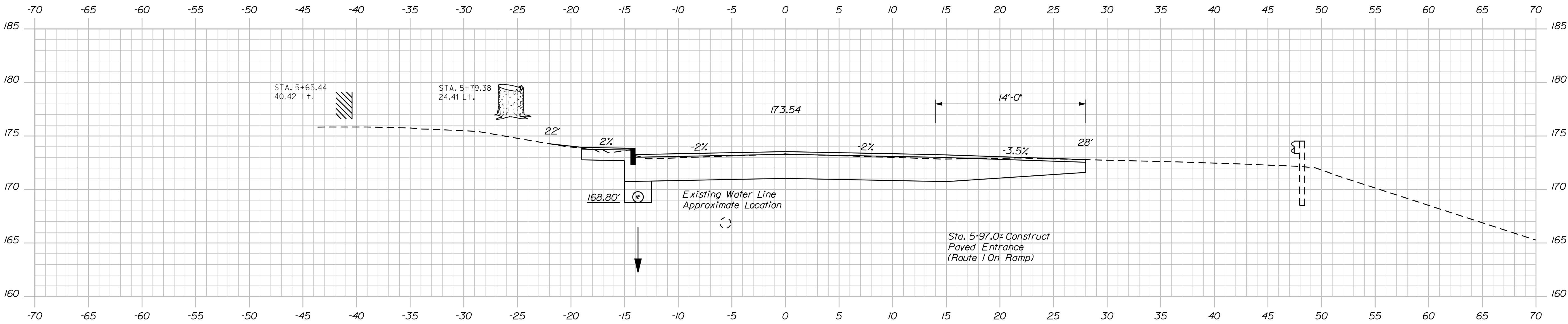
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STOCKTON SPRINGS		CHURCH STREET		WALDO COUNTY		CROSS SECTIONS		OF 42	
PROJ. MANAGER		S. BOODE		BY		DATE		BRIDGE NO. 5790	
DESIGN-DETAILED		R. MYERS		M.P.P.		Sept. 2011		15108.00	
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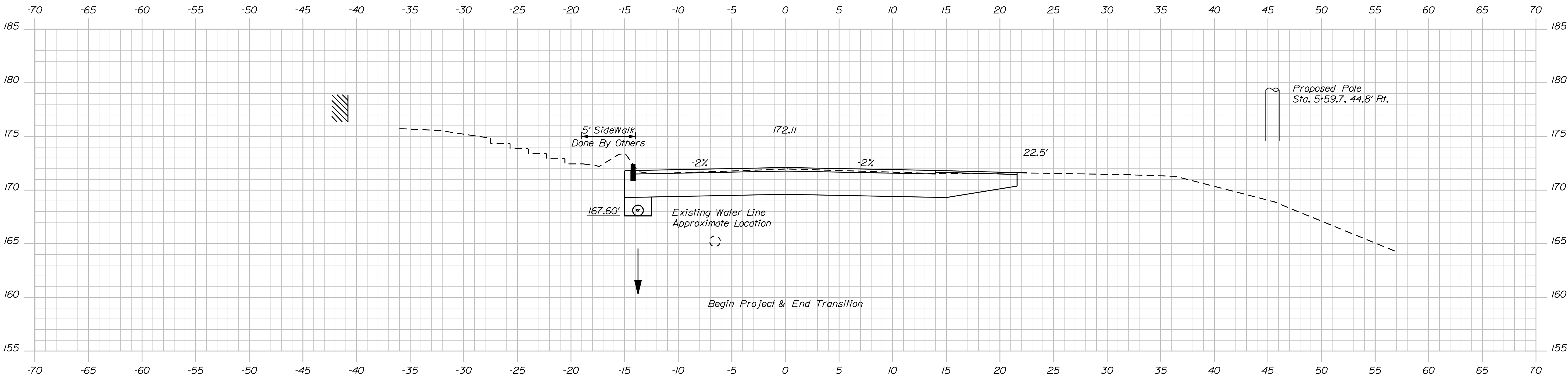
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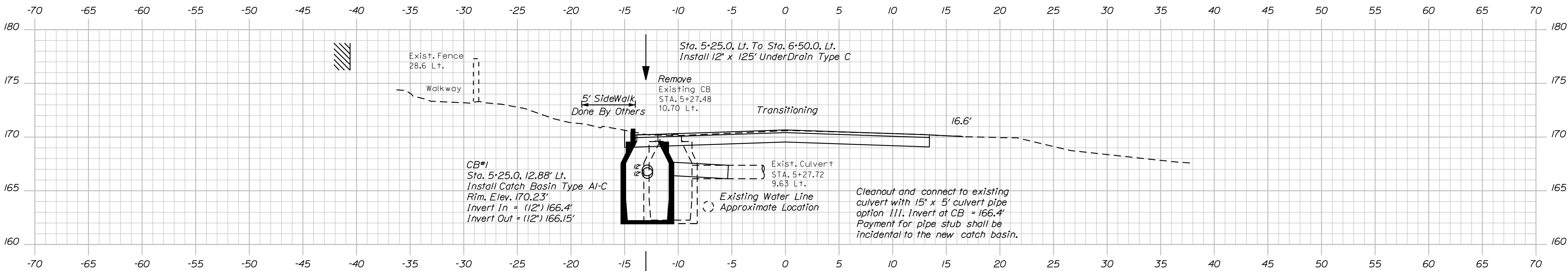
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5*50.00



5*25.00

PROJ. MANAGER	CHECKED	DESIGNED	DATE	BY	DATE
S. BOOGE	R. MYERS	E. ANTHONY	Sept. 2011	TEAM NORTH	
DESIGNED	REVIEWED	DATE			
REVISIONS 1	REVISIONS 2	REVISIONS 3	REVISIONS 4	FIELD CHANGES	

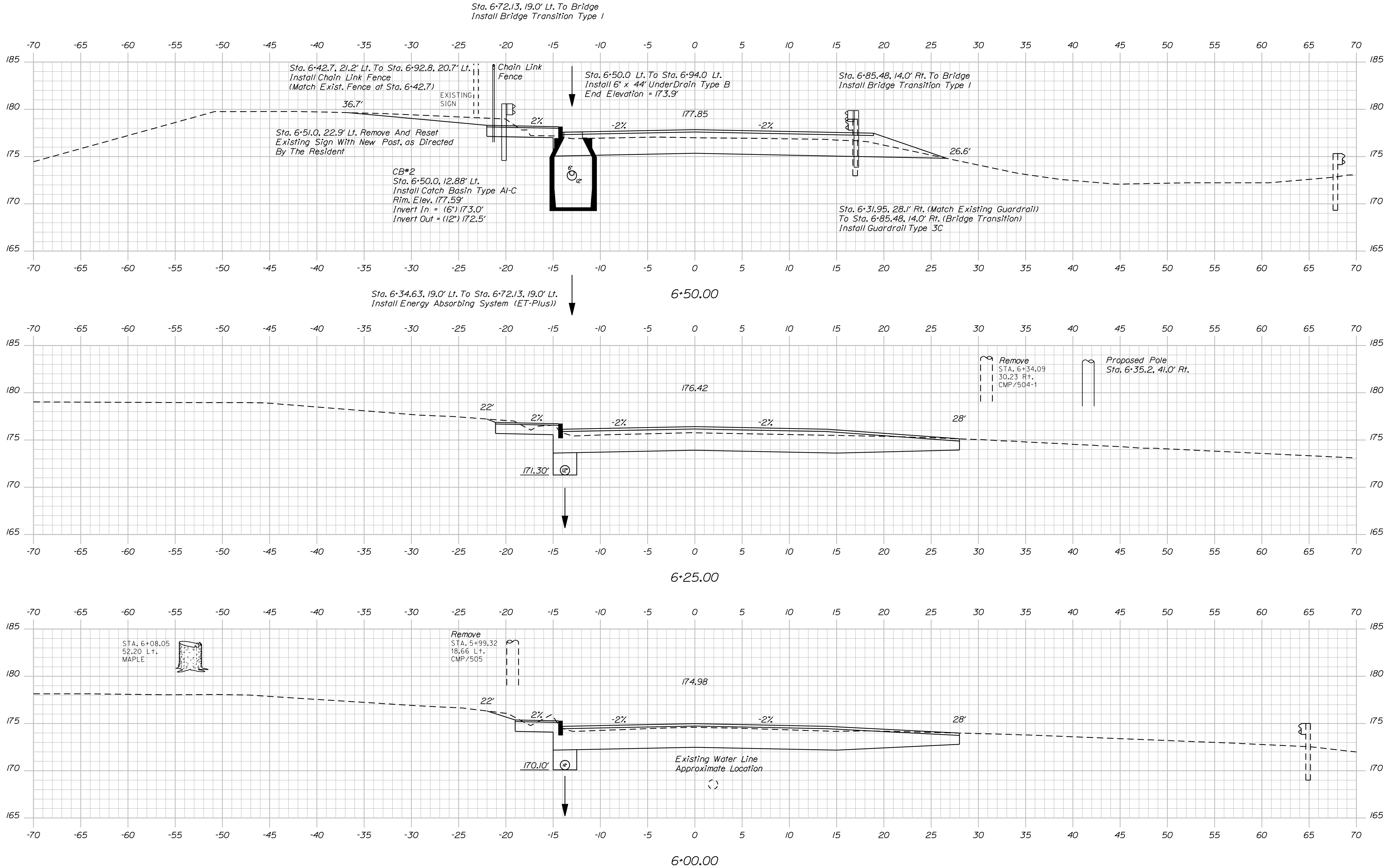
STOCKTON SPRINGS UNDERPASS
CHURCH STREET
STOCKTON SPRINGS WALDO COUNTY
CROSS SECTIONS

Date:2/22/2012

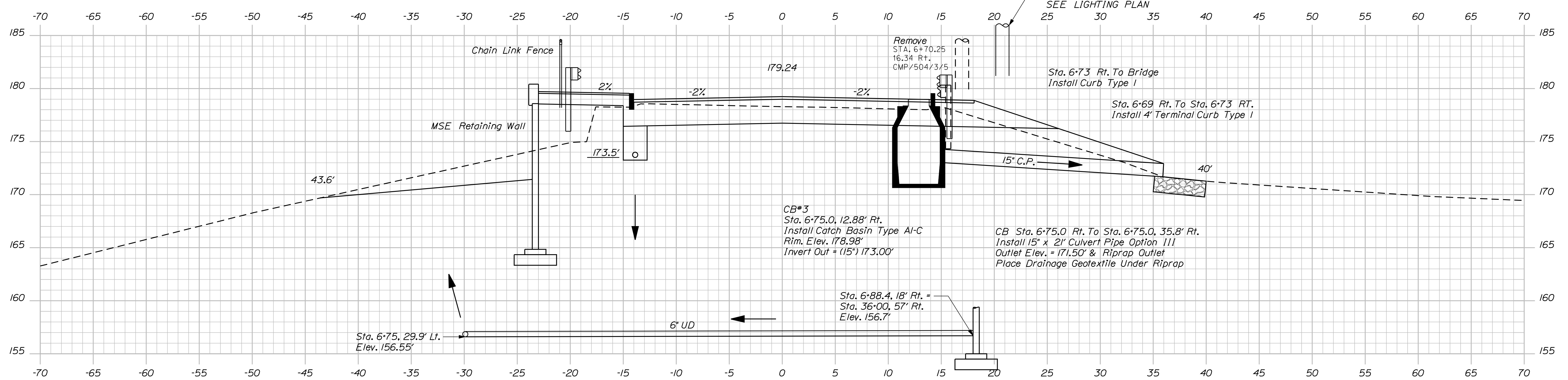
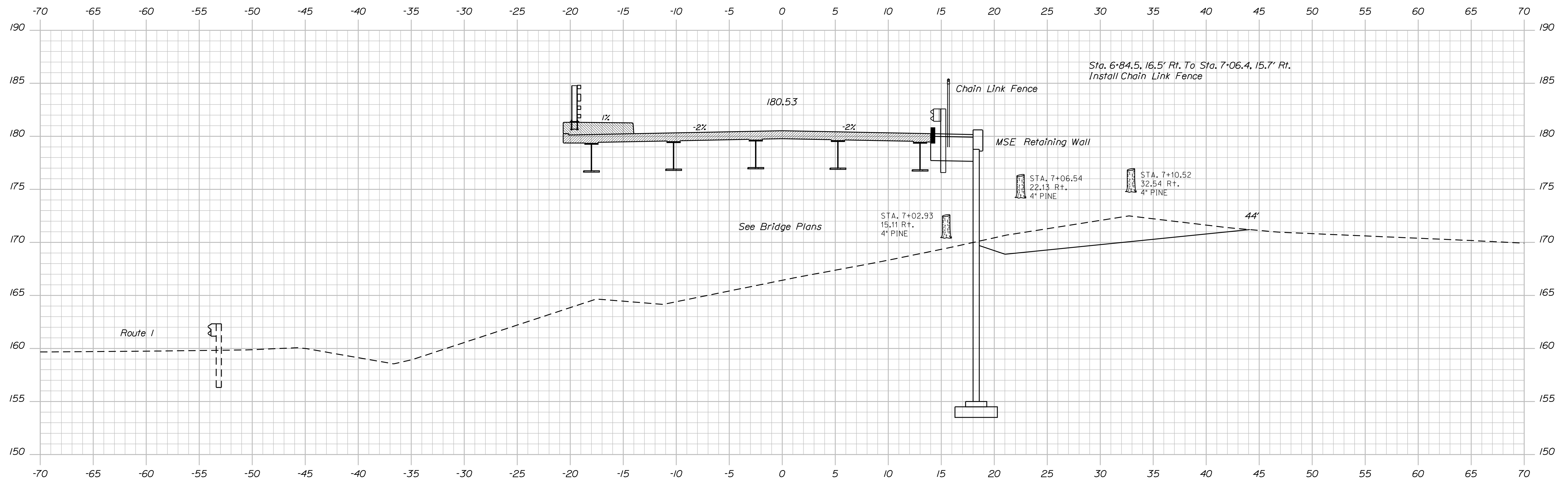
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S. BOOGE	R. MYERS	E. ANTHONY	Sept. 2011	TEAM NORTH				
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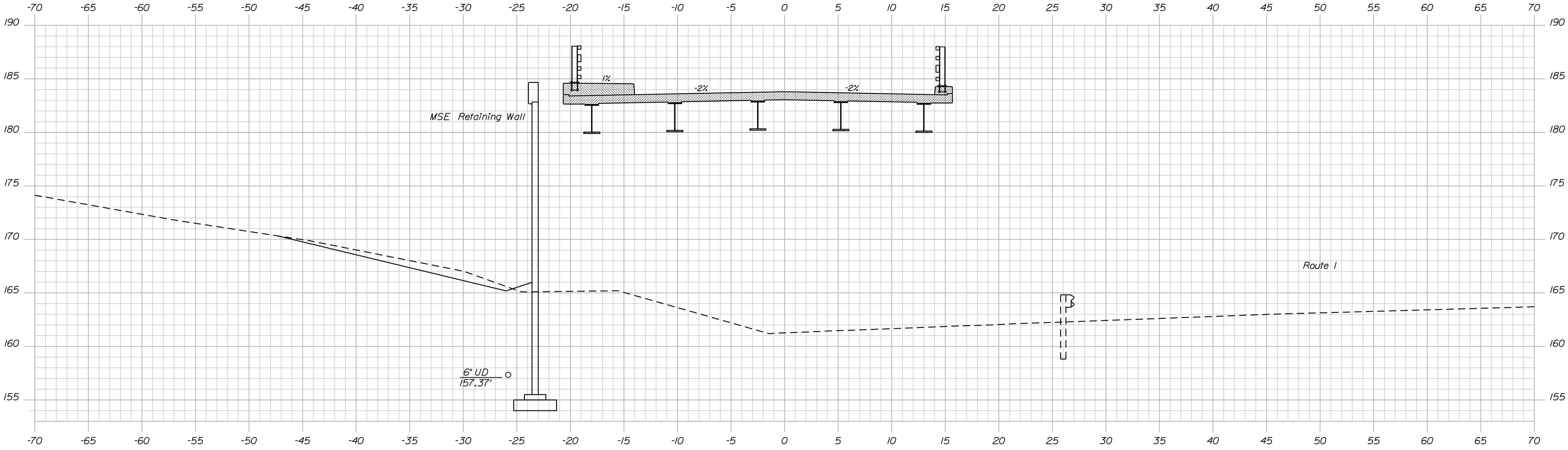


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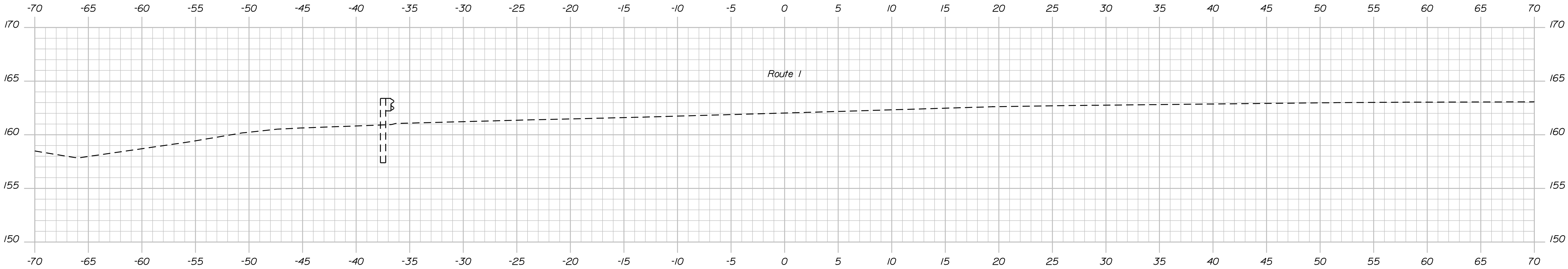
Username: mark.poulin

Division: BRIDGE

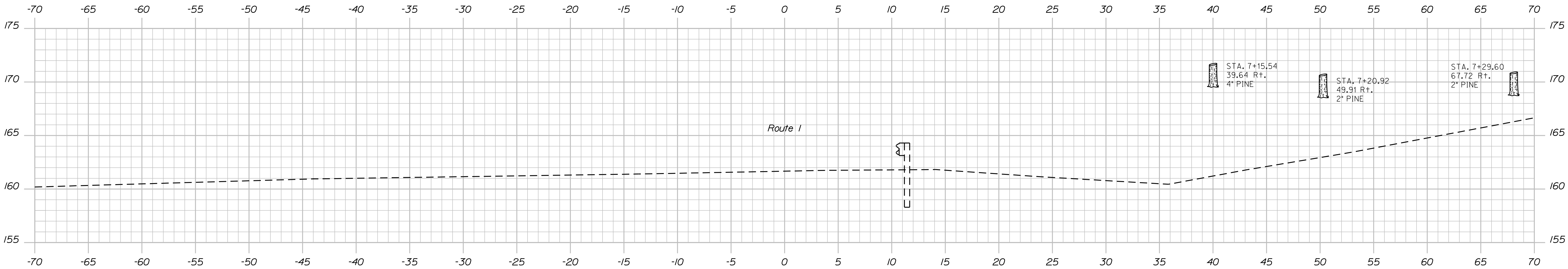
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7+75.00



7+50.00



7+25.00

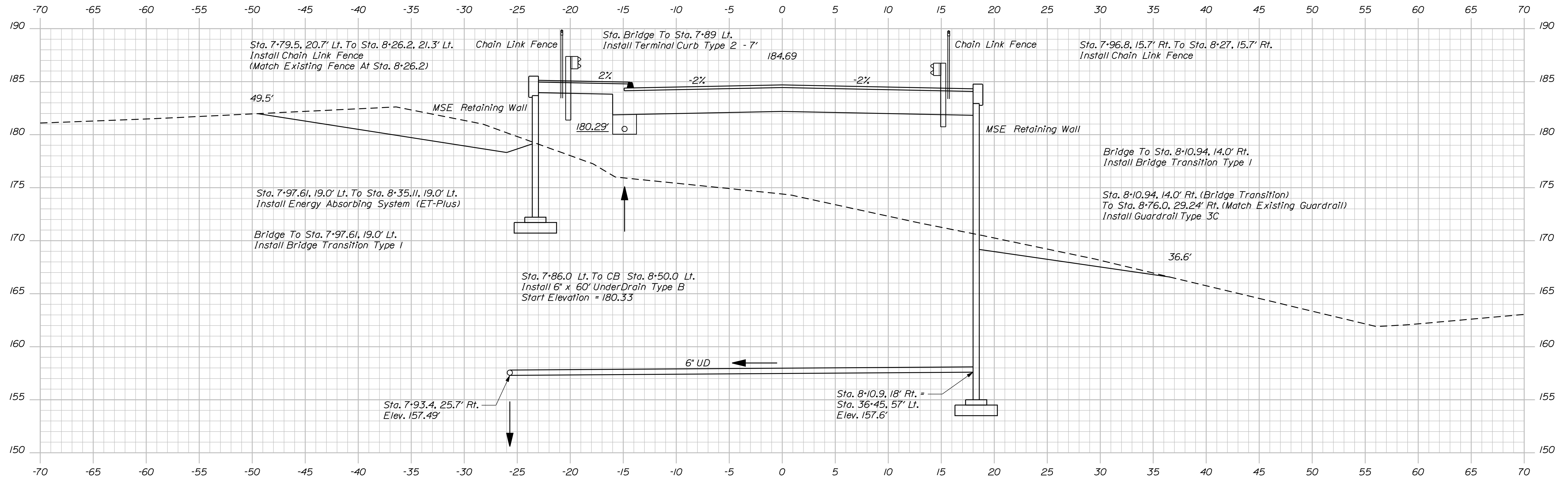
STATE OF MAINE DEPARTMENT OF TRANSPORTATION	BH-1510(800)X	WIN	BRIDGE NO. 5790	BRIDGE PLANS

PROJ. MANAGER S. BOOGE	BY R. MYERS	DATE Sept. 2011	SIGNATURE
DESIGN-DETAILED E. ANTHONY	TEAM NORTH		P.E. NUMBER
DESIGN-DETAILED			DATE
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

STOCKTON SPRINGS UNDERPASS CHURCH STREET STOCKTON SPRINGS	WALDO COUNTY

CROSS SECTIONS	
SHEET NUMBER	
14	
OF 42	

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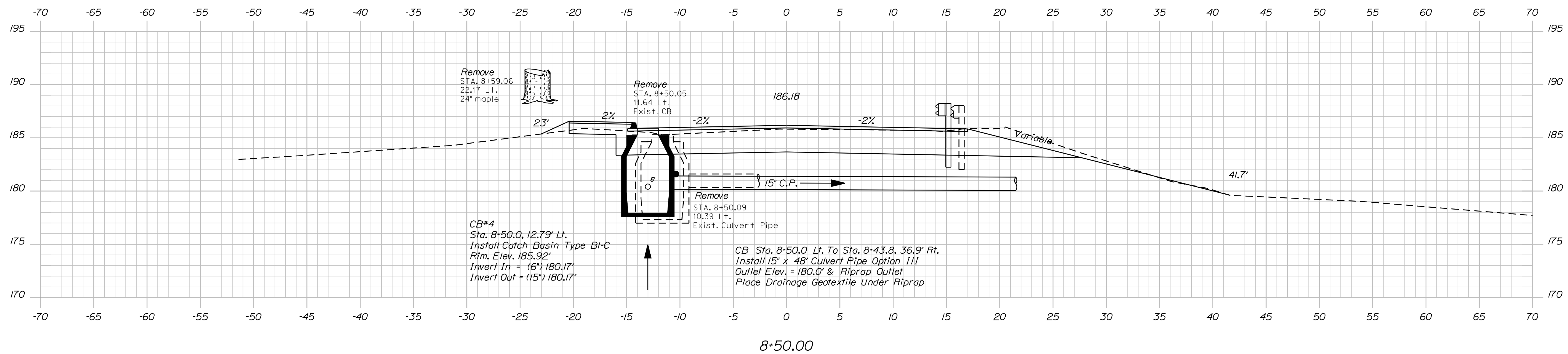
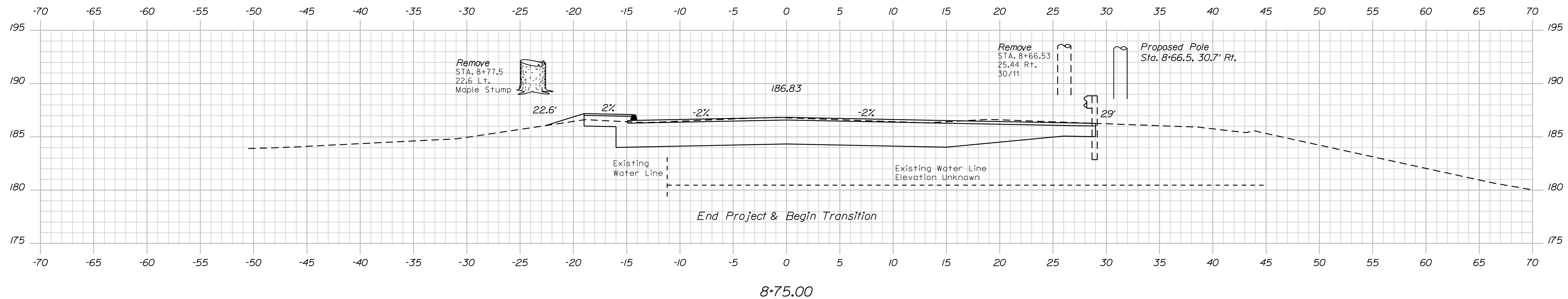
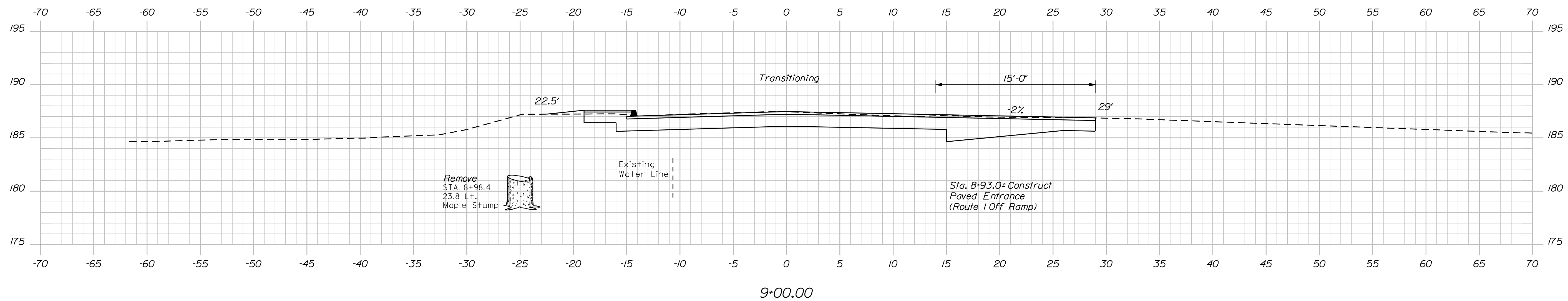
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CHURCH STREET
STOCKTON SPRINGS WALDO COUNTY

SHEET NUMBER

15

OF 42

Sta. 8+00.00 to Sta. 8+25.00



STATE OF MAINE

DEPARTMENT OF TRANSPORTATION

BH-1510(800)X

WIN

WIN
15108.00

BRIDGE NO. 5760

BRIDGE PLANS

STOCKTON SPRINGS UNDERPASS
CHURCH STREET
STOCKTON SPRINGS WALDO COUNTY

CROSS SECTIONS

SHEET NUMBER

16

OF 42

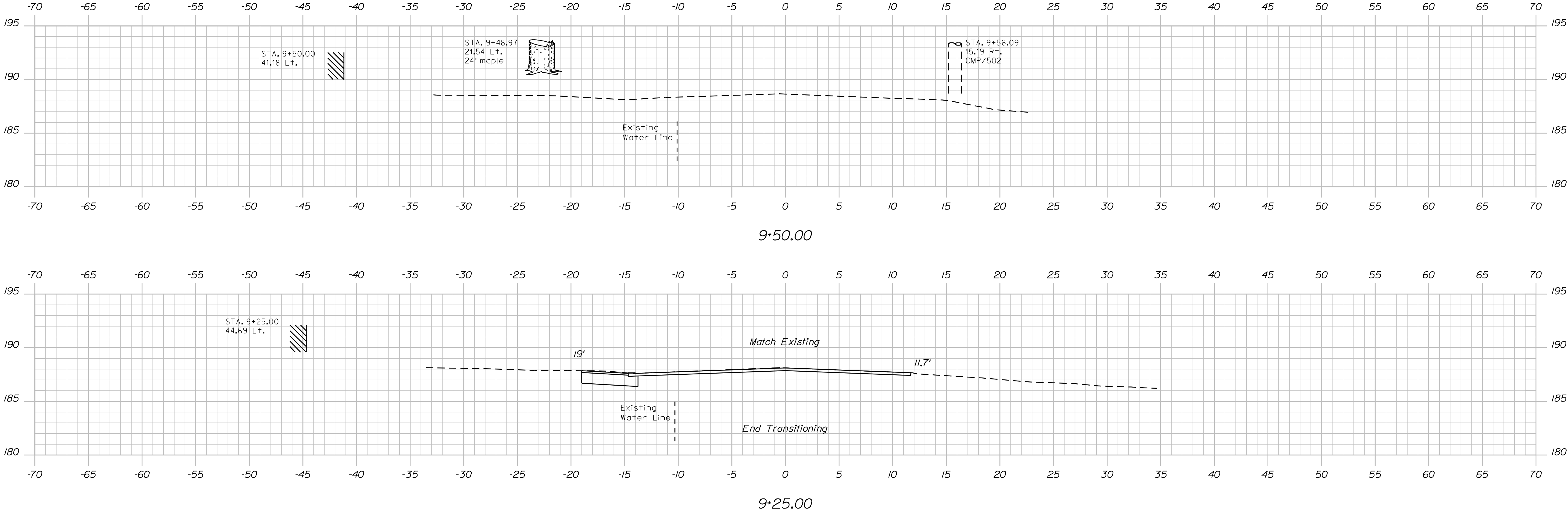
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Date: 2/22/2012

Username: mark.poulin

Division: BRIDGE

Filename: ... \msta\016_z_Xsect_8+50_007.dgn



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
BH-1510(800)X

BRIDGE NO. 5760
WIN
15108.00

BRIDGE PLANS

STOCKTON SPRINGS UNDERPASS
CHURCH STREET
STOCKTON SPRINGS WALDO COUNTY

CROSS SECTIONS

SHEET NUMBER

17

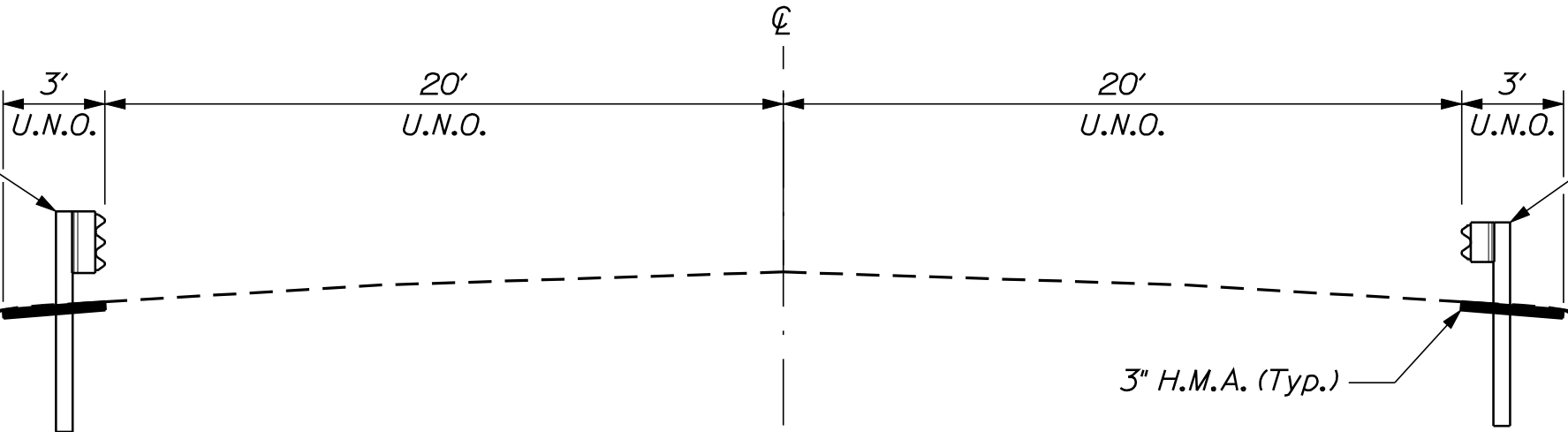
OF 42

Date:2/22/2012

Username: mark.poulin

Filename: ... \018_z_Xsect_Route1_34+00_001.dgn Division: BRIDGE

Modified Thrie Beam Under The Bridge.
See Special Provision 606 - Modified Thrie Beam



Typical Section
U.S. Route 1

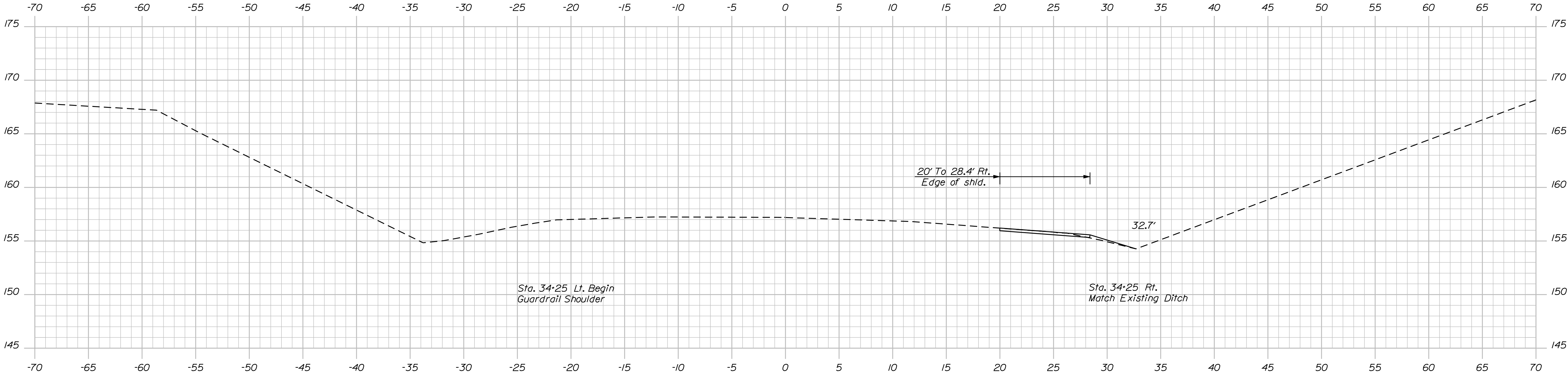
Guardrail Type 3C, Top Of Rail
Height Modified To 29" ± 1" (Typ.) *

* Note:
Achieve Specified Top Of Rail Height
By Decreasing Depth Of Post In Ground.

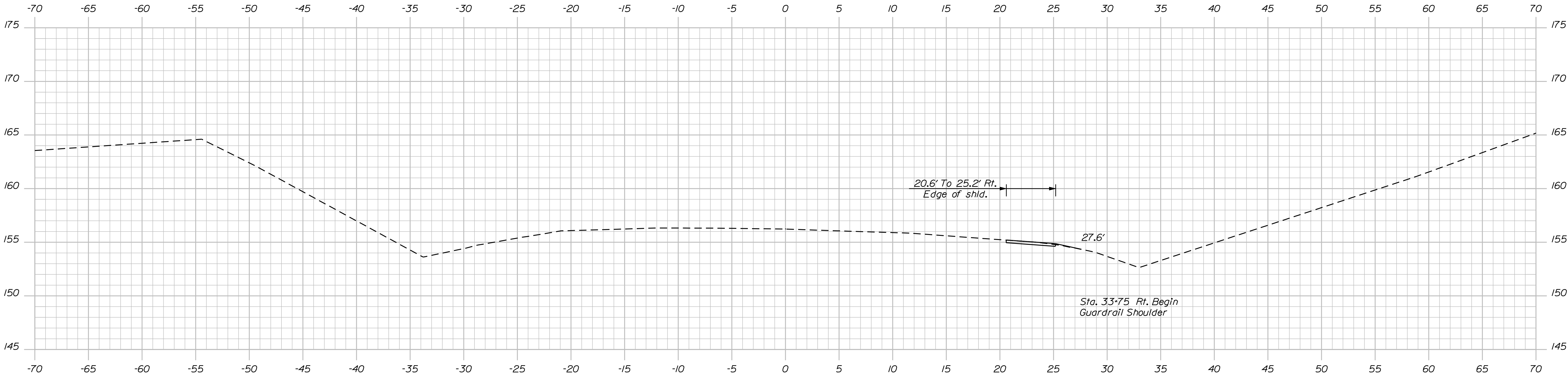
Reconstruct Ditch
(See Cross Sections) Typ.

Existing Grade

3" H.M.A. (Typ.)



34+25.00



34+00.00

STATE OF MAINE	
DEPARTMENT OF TRANSPORTATION	
BH-1510(800)X	
BRIDGE NO. 5790	WIN 15108.00
BRIDGE PLANS	

PROJ. MANAGER	S. BOODE	BY	DATE
DESIGN-DETAILED	R. MYERS	M.R.P.	Sept. 2011
CHECKED-REVIEWED	E. ANTHONY	TEAM NORTH	SIGNATURE
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REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			DATE

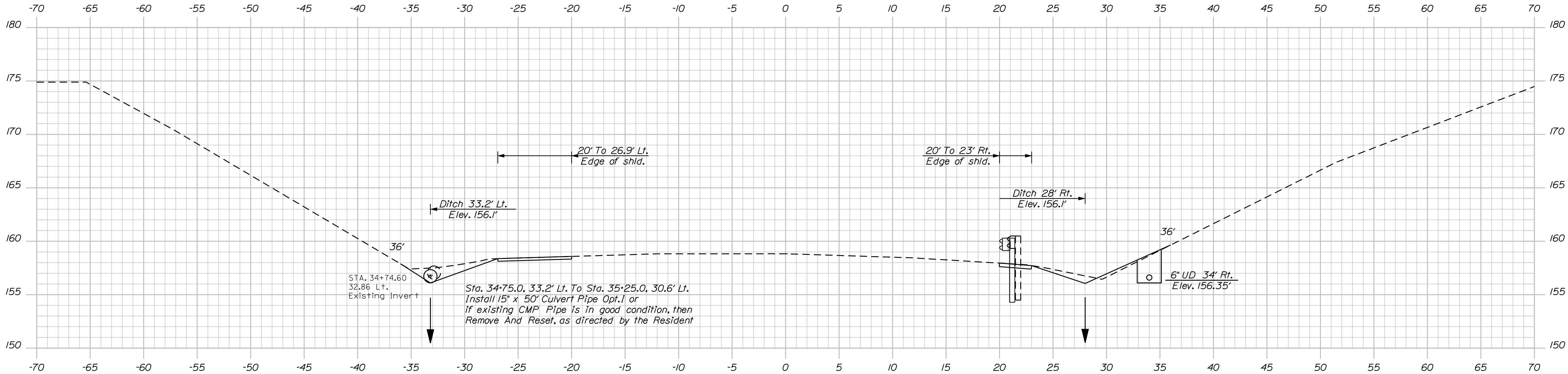
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U.S. ROUTE 1	
STOCKTON SPRINGS WALDO COUNTY	
CROSS SECTIONS	

SHEET NUMBER	
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OF 42	

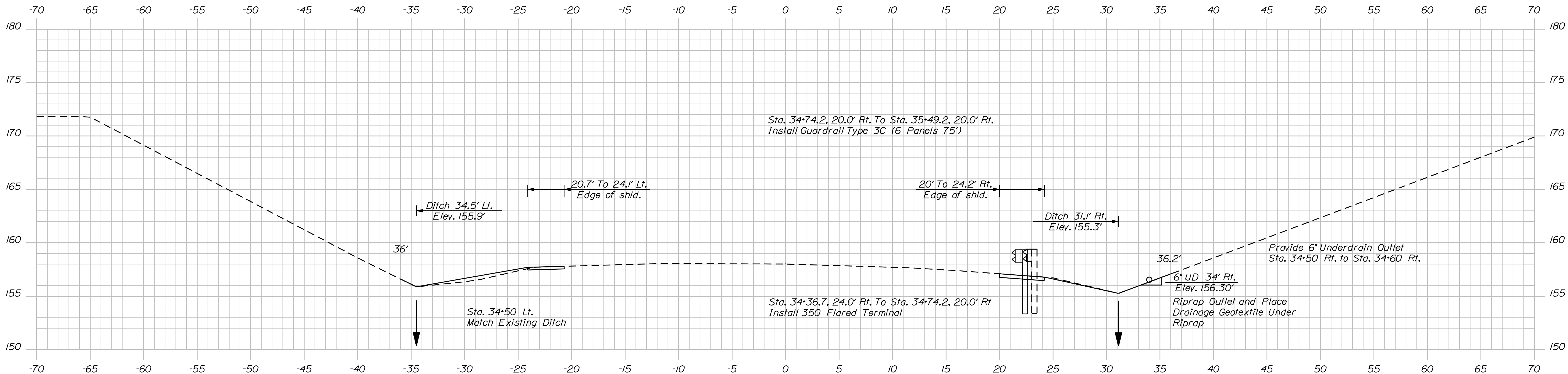
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34+75.00



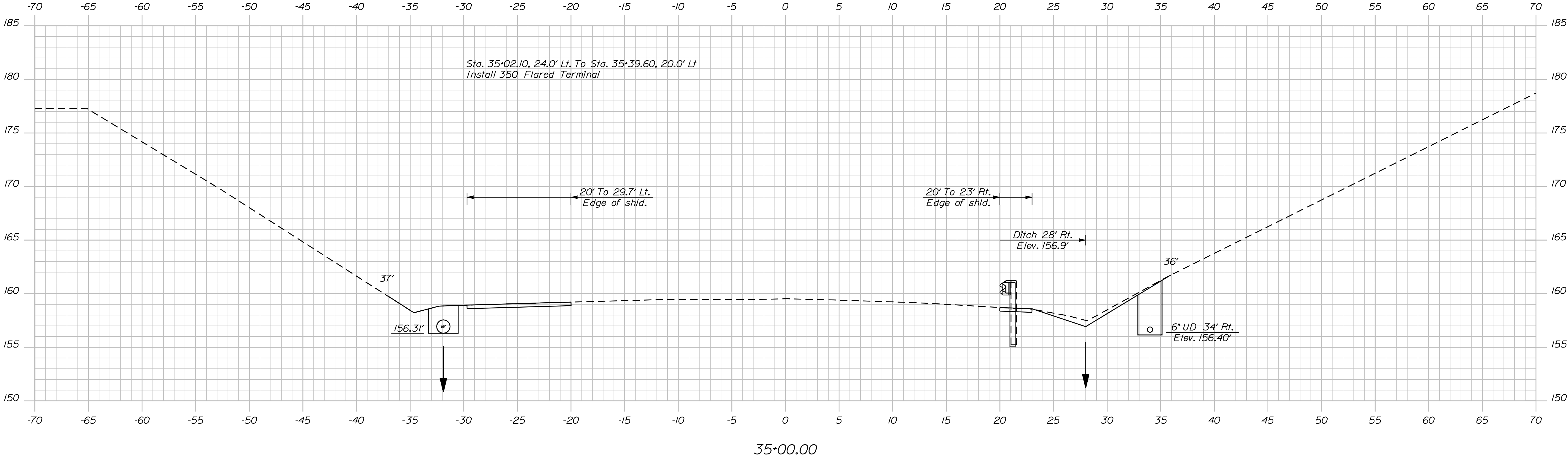
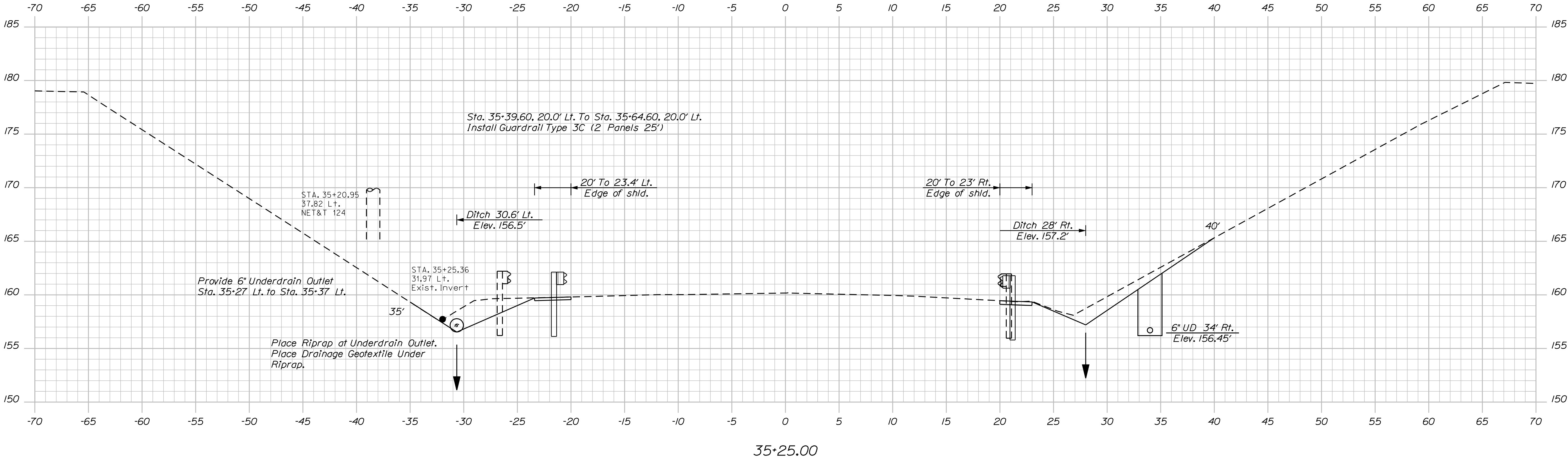
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DESIGN-DETAILED		R. MYERS		M.R.P.		CHECKED-REVIEWED		E. ANTHONY		TEAM NORTH		SEPT. 2011	
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REVISIONS 1						REVISIONS 2							
REVISIONS 3						REVISIONS 4							
FIELD CHANGES													

Date:2/22/2012

Username: mark.poulin

Filename: ... \020_z_xsect_Route1_35+00_003.dgn Division: BRIDGE



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BRIDGE PLANS			

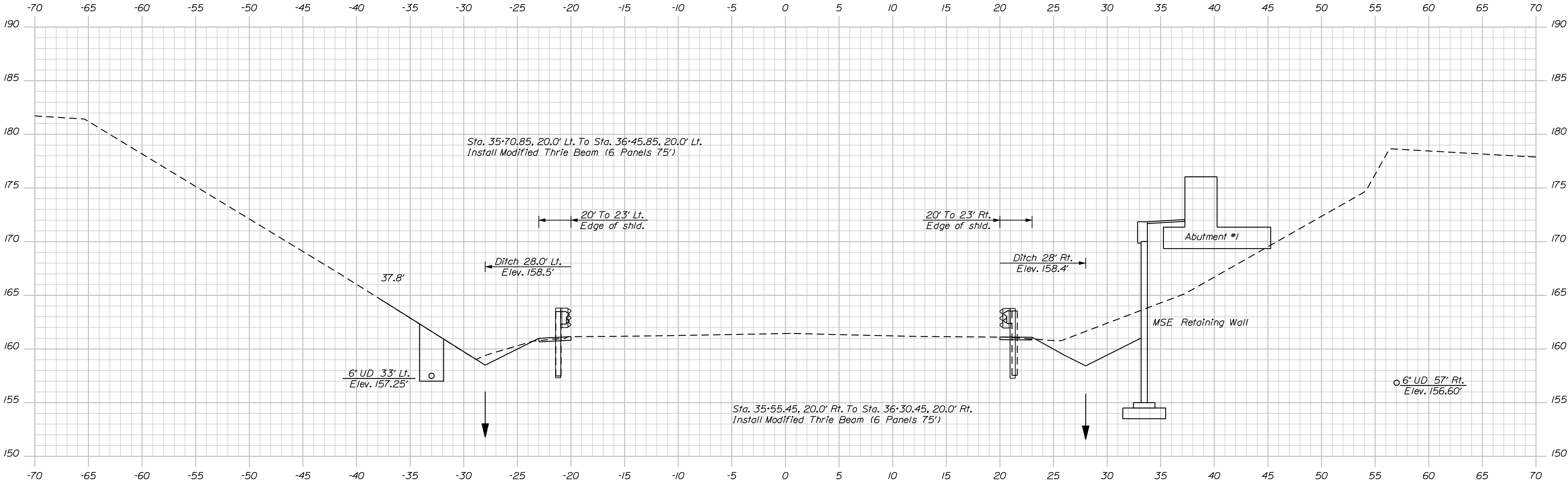
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STOCKTON SPRINGS	WALDO COUNTY
CROSS SECTIONS	

SHEET NUMBER
20
OF 42

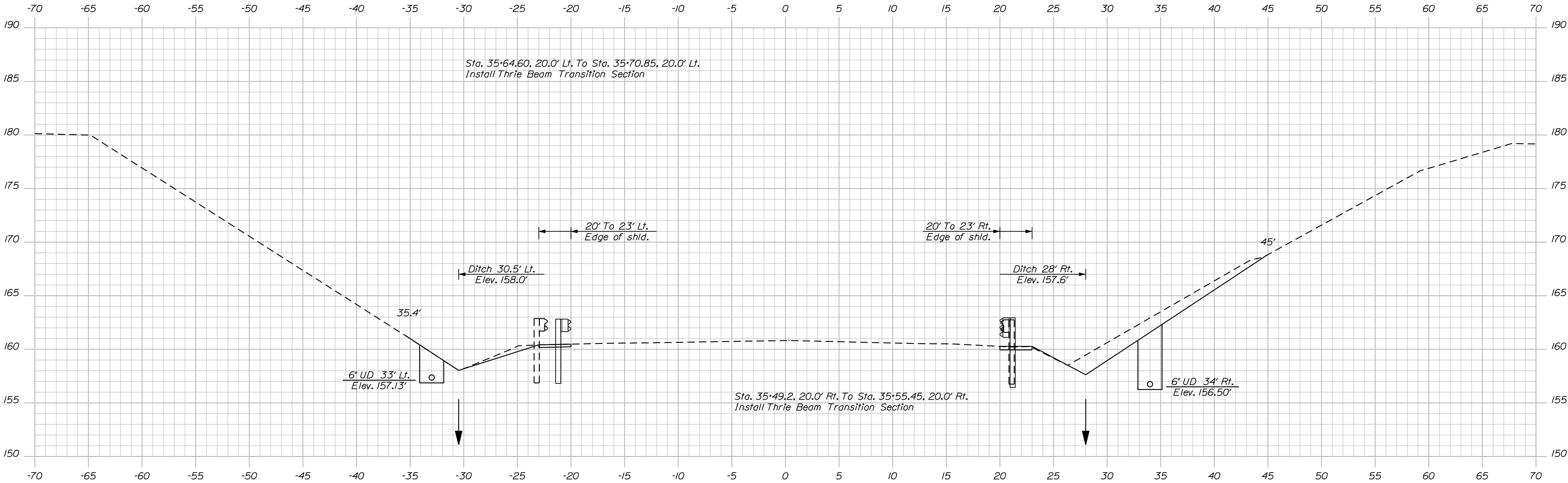
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35+75.00



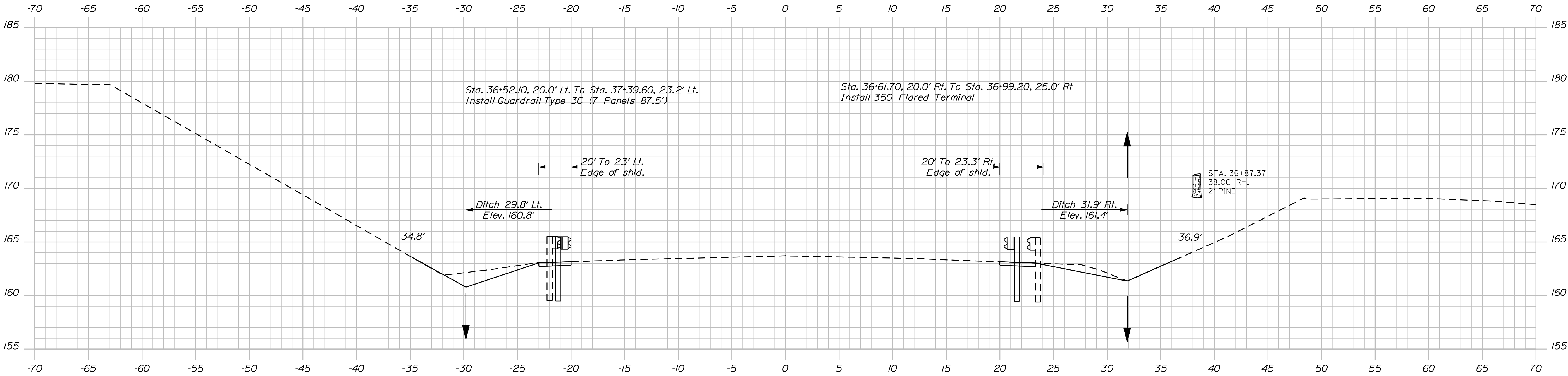
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STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		BH-1510(800)X		WIN		BRIDGE NO. 5790		BRIDGE PLANS	
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PROJ. MANAGER		S. BOODE		BY		DATE		SIGNATURE		P.E. NUMBER	
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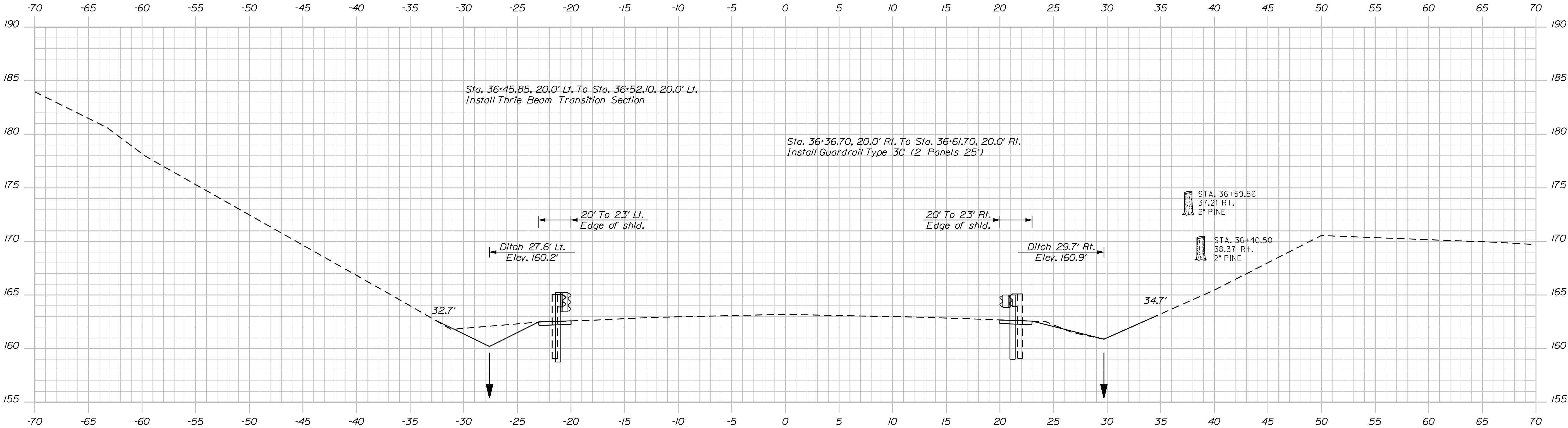
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36+75.00



36+50.00

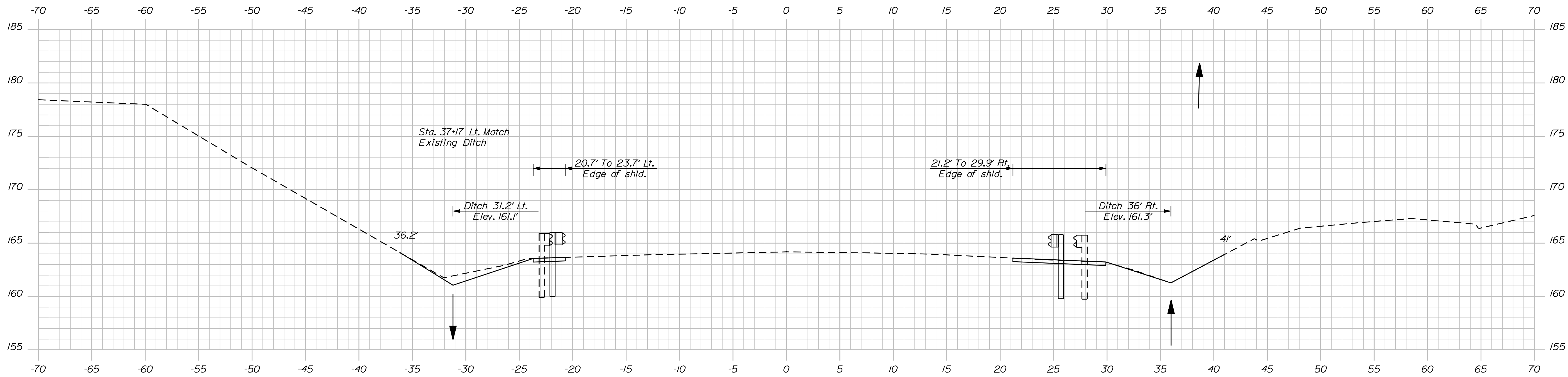
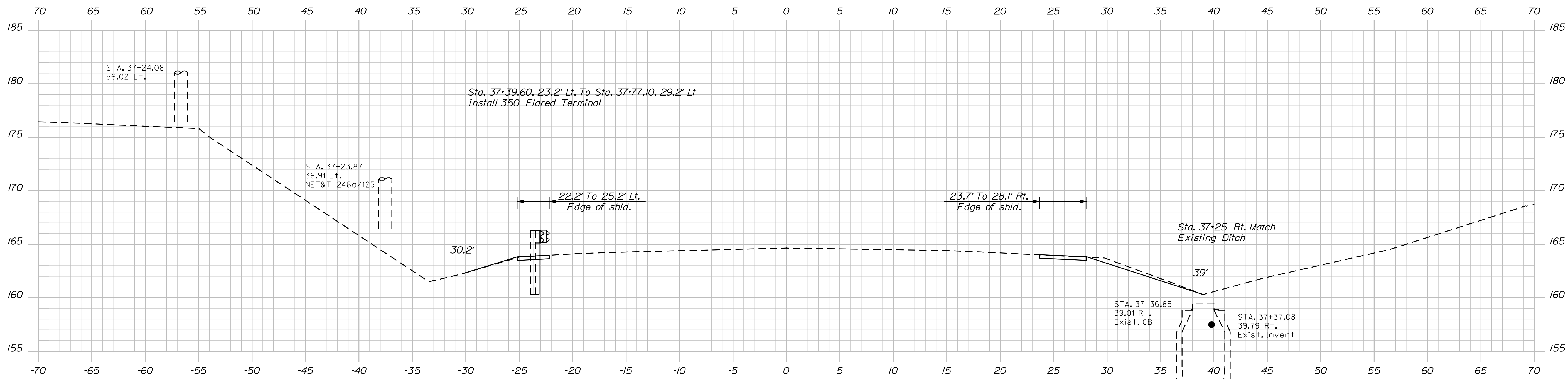
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
BH-1510(800)X
WIN
BRIDGE NO. 5790
15108.00
BRIDGE PLANS

SIGNATURE
P.E. NUMBER
DATE

PROJ. MANAGER	BY	DATE
DESIGN-DETAILED	S. BOODE	Sept. 2011
CHECKED-REVIEWED	R. MYERS	M.P.
DESIGN-DETAILED	E. ANTHONY	TEAM NORTH
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REVISIONS 4		
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STOCKTON SPRINGS UNDERPASS
U.S. ROUTE 1
STOCKTON SPRINGS WALDO COUNTY
CROSS SECTIONS

SHEET NUMBER
23
OF 42

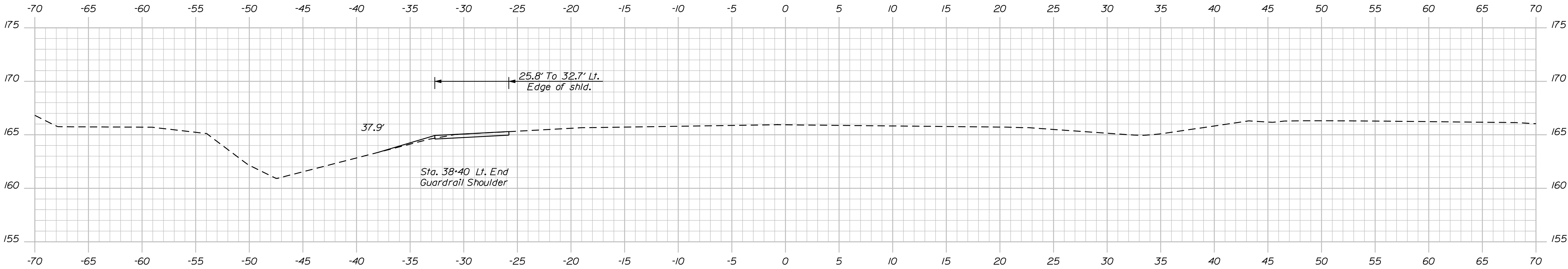


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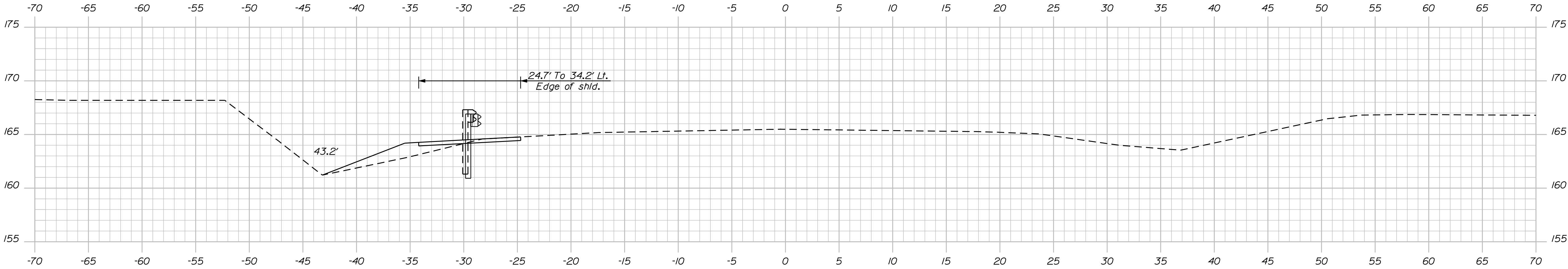
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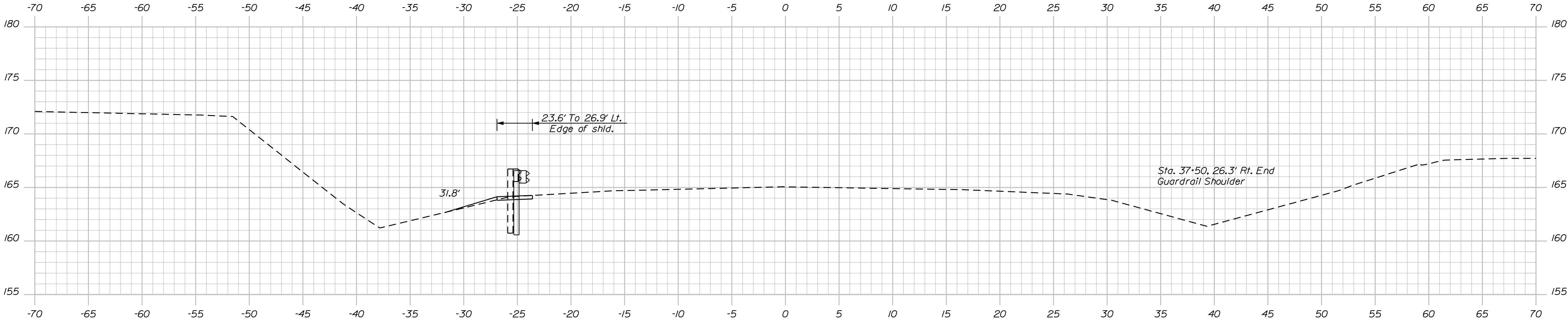
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38+00.00



37+75.00



37+50.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
BH-1510(800)X

BRIDGE NO. 5790
WIN
15108.00
BRIDGE PLANS

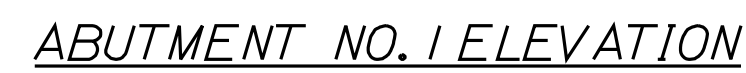
STOCKTON SPRINGS UNDERPASS
U.S. ROUTE 1
STOCKTON SPRINGS WALDO COUNTY

CROSS SECTIONS

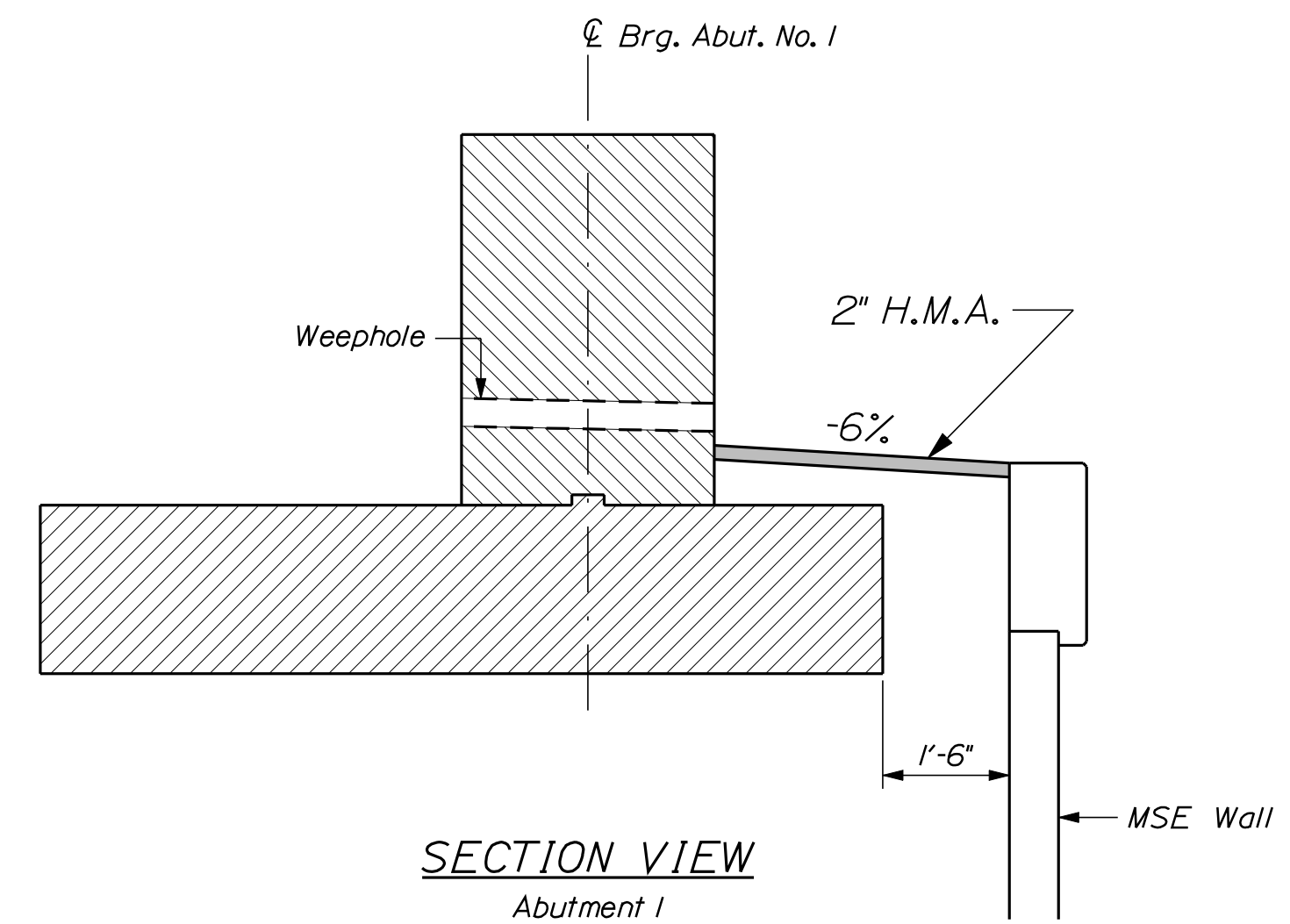
SHEET NUMBER
25
OF 42

DATE
Sept. 2011
BY
M.P.P. TEAM NORTH
S. BOODE
R. MYERS
E. ANTHONY
PROJ. MANAGER
DESIGN-DETAILED
CHECKED-REVIEWED
DESIGN-DETAILED
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REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

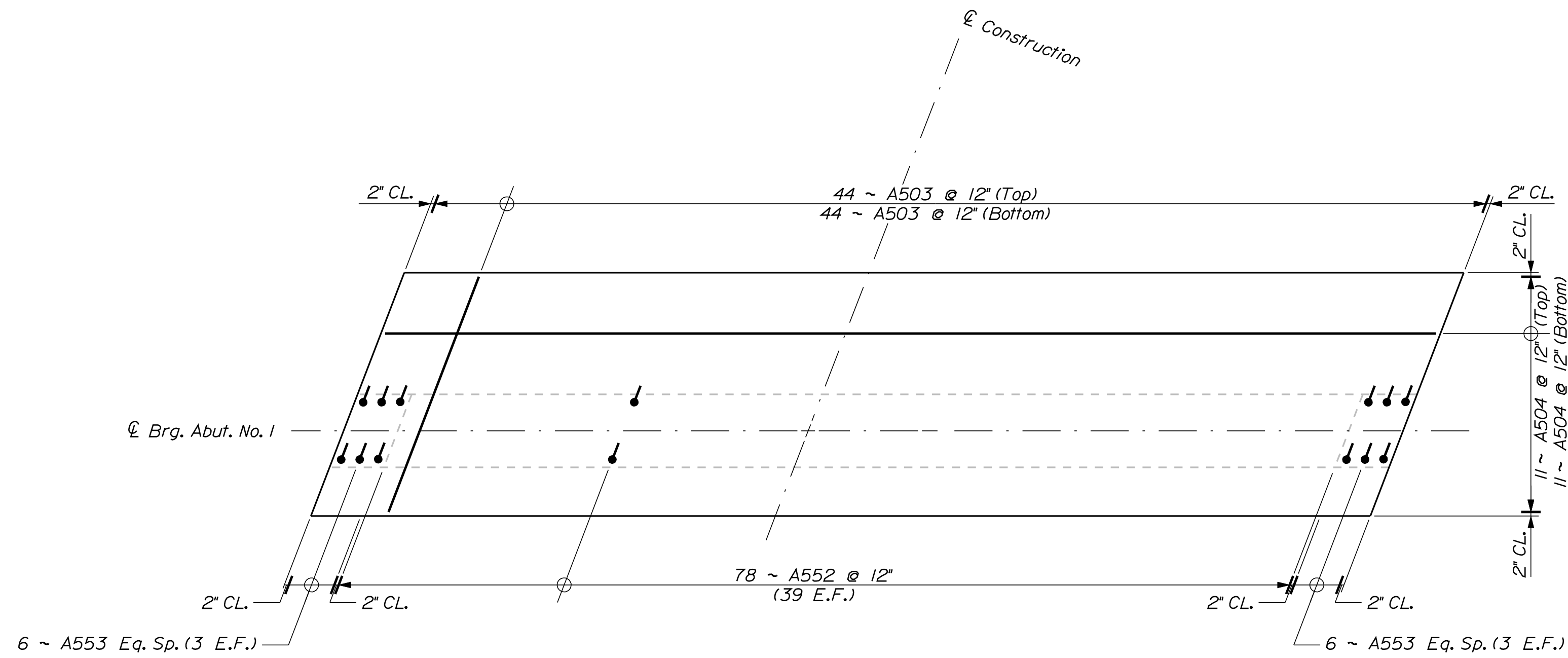
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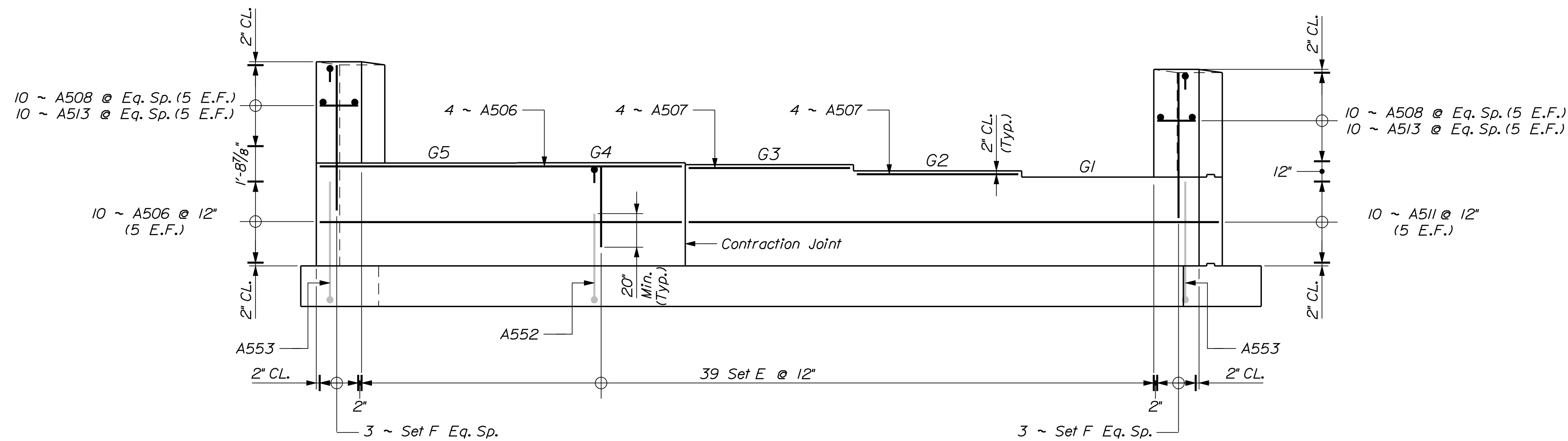
- ## ABUTMENT NOTES
1. *The maximum factored applied footing pressure is 5.10 ksf.*
 2. *Reinforcing steel shall have a minimum concrete cover of 2 inches in the walls and 3 inches in the footings unless otherwise noted.*
 3. *Place 4-in. diameter drains in the breastwall and wingwalls at 10-ft maximum spacing. The exact location will be determined by the Resident.*
 4. *Cover joints where waterstops are not required in accordance with Standard Details Section 502.*



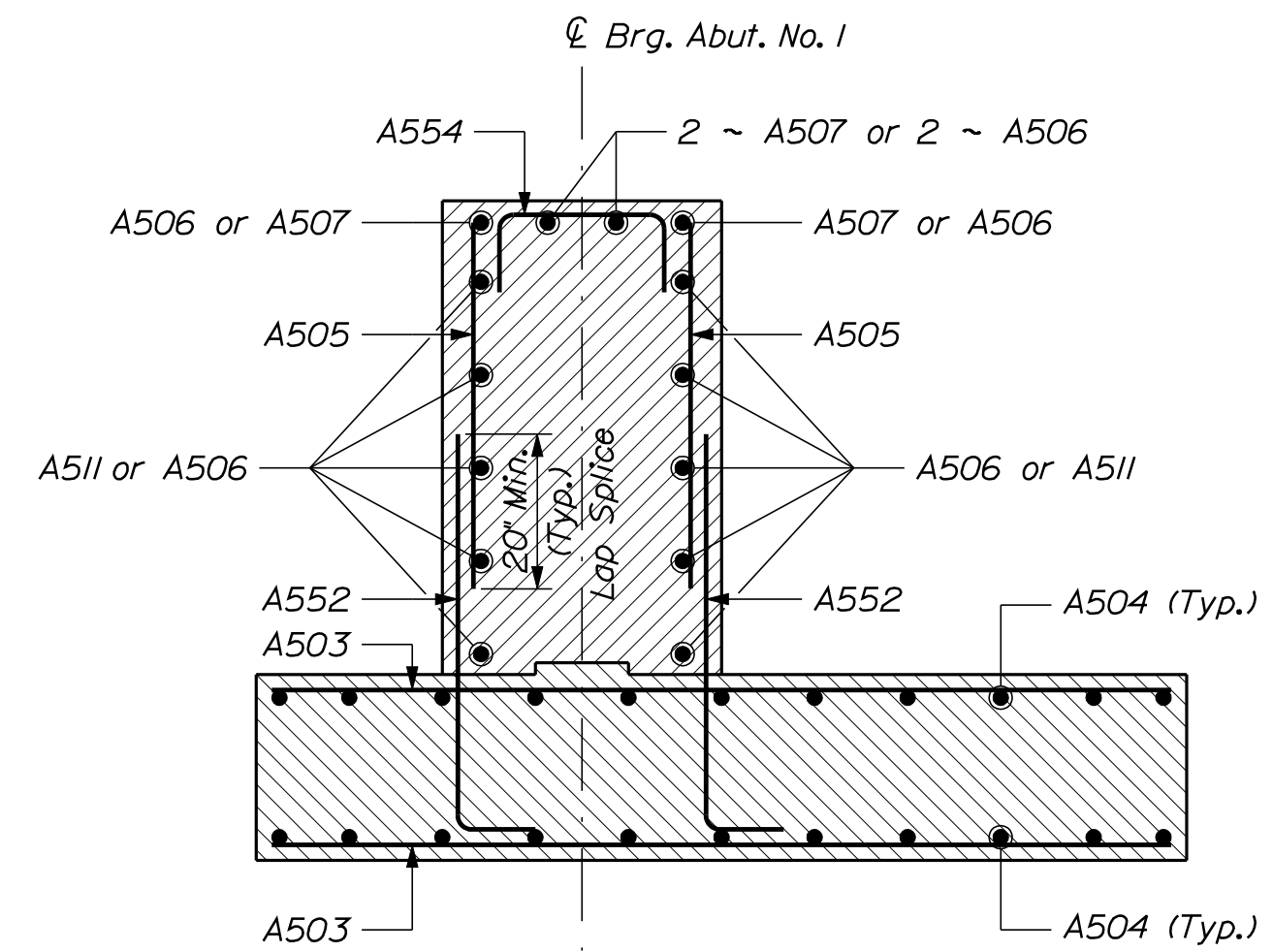
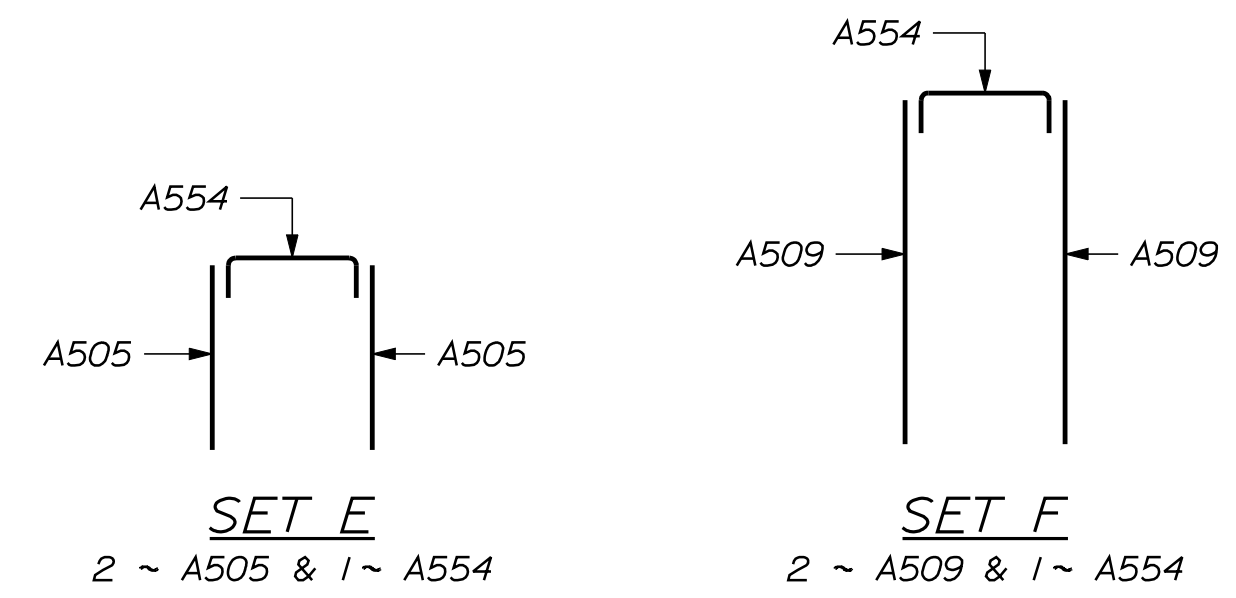
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		PROJ. MANAGER		S. BOODE		R. MYERS		M.R.P		TEAM NORTH		BY		DATE		SIGNATURE							
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						BH-1510(800)X																	
BRIDGE NO. 5760																							
		WIN																					
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						BRIDGE PLANS																	



FOOTING REINFORCEMENT
Abutment No. 1

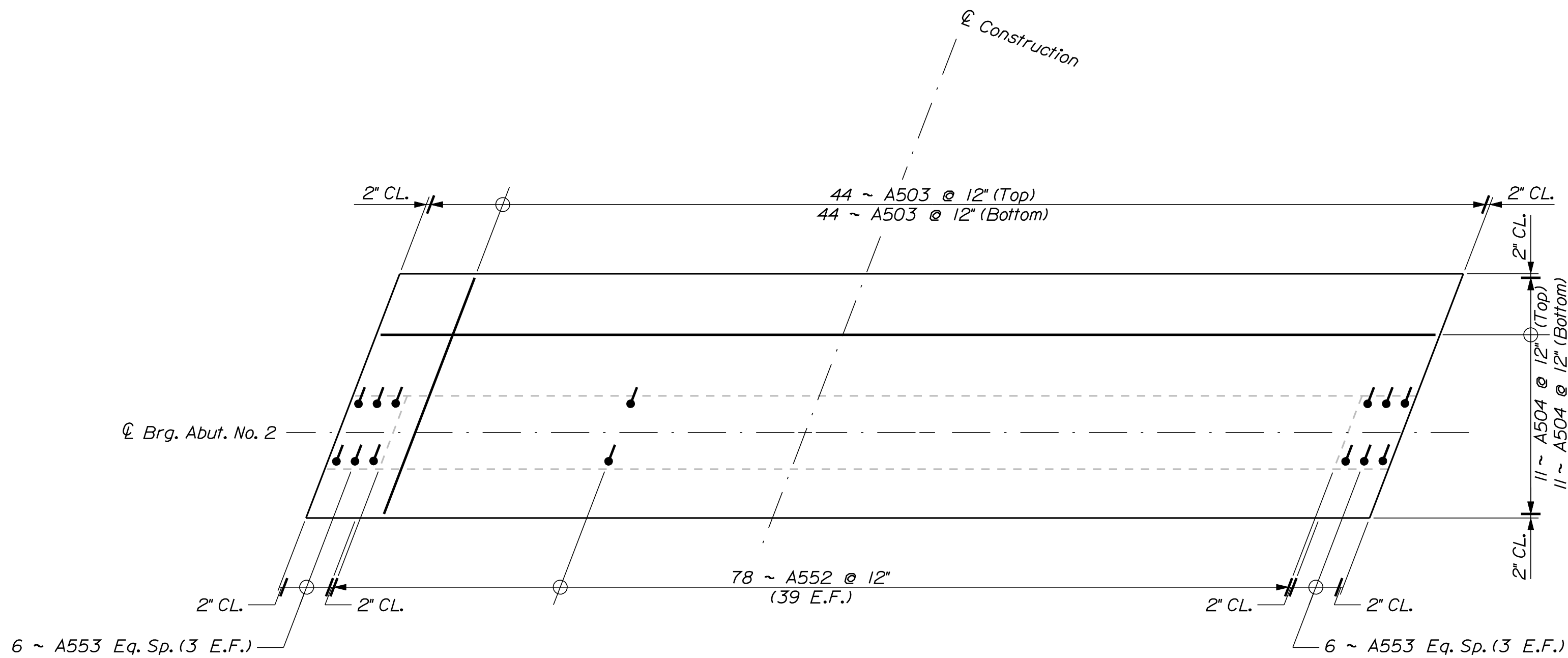


ABUTMENT NO. 1 ELEVATION

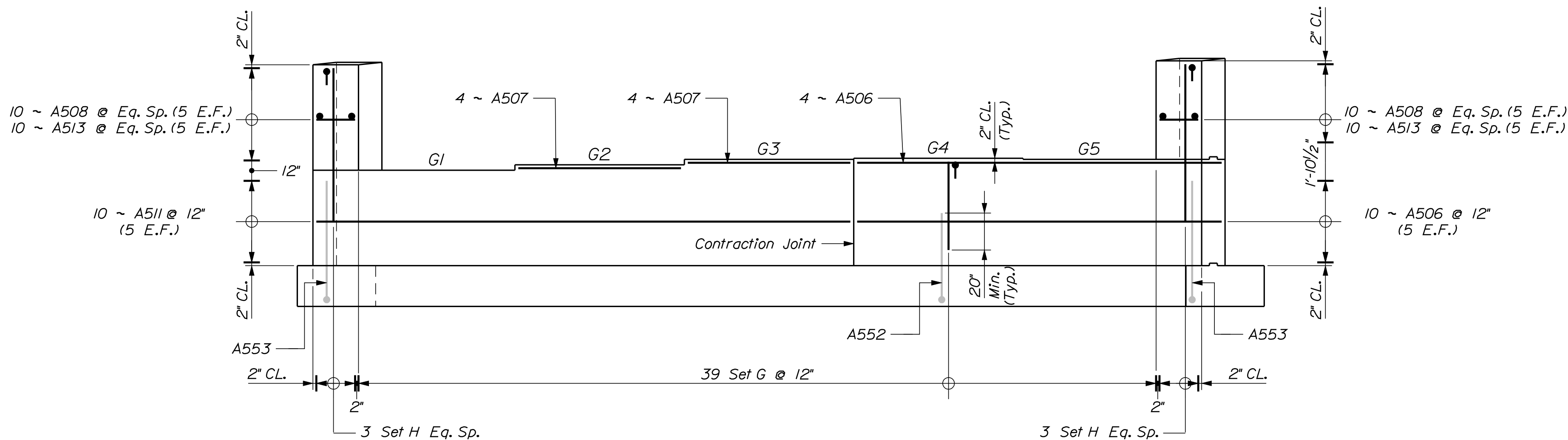


SECTION VIEW
Abutment No. 1

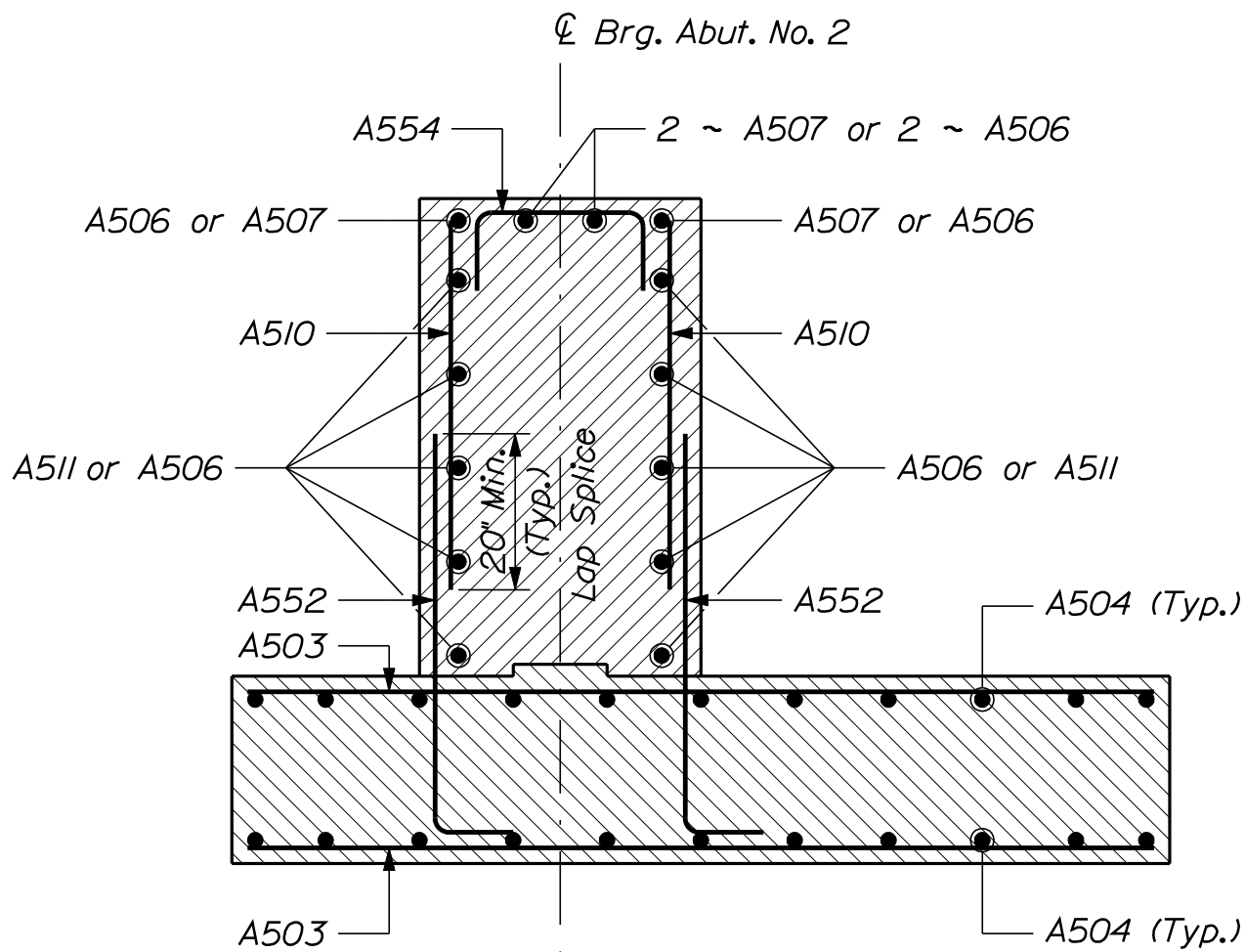
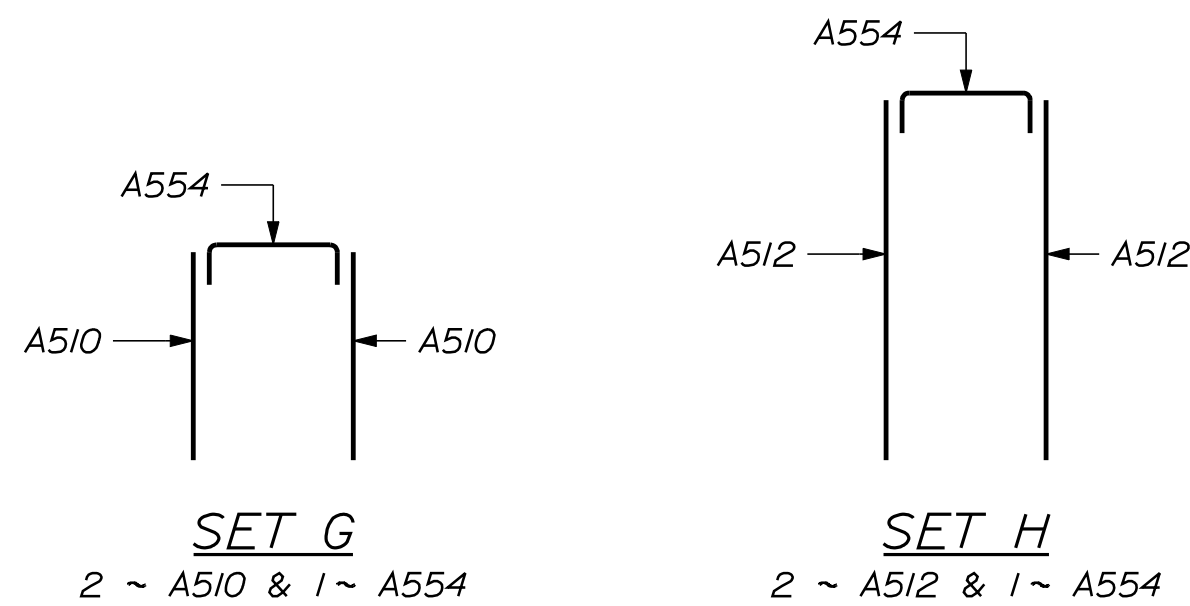
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		ABUTMENT 1 REINFORCING										BH-1510(800)X	
PROJ. MANAGER				S. BOODE		BY		DATE					
DESIGN-DETAILED				R. MYERS		M.R.P.		Sept. 2011					
CHECKED-REVIEWED				E. ANTHONY		TEAM		WORTH		SIGNATURE			
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FIELD CHANGES													
										BRIDGE NO. 5760			
										WIN			
										15108.00			
										BRIDGE PLANS			



FOOTING REINFORCEMENT
Abutment No. 2



ABUTMENT NO. 2 ELEVATION



SECTION VIEW
Abutment No. 2

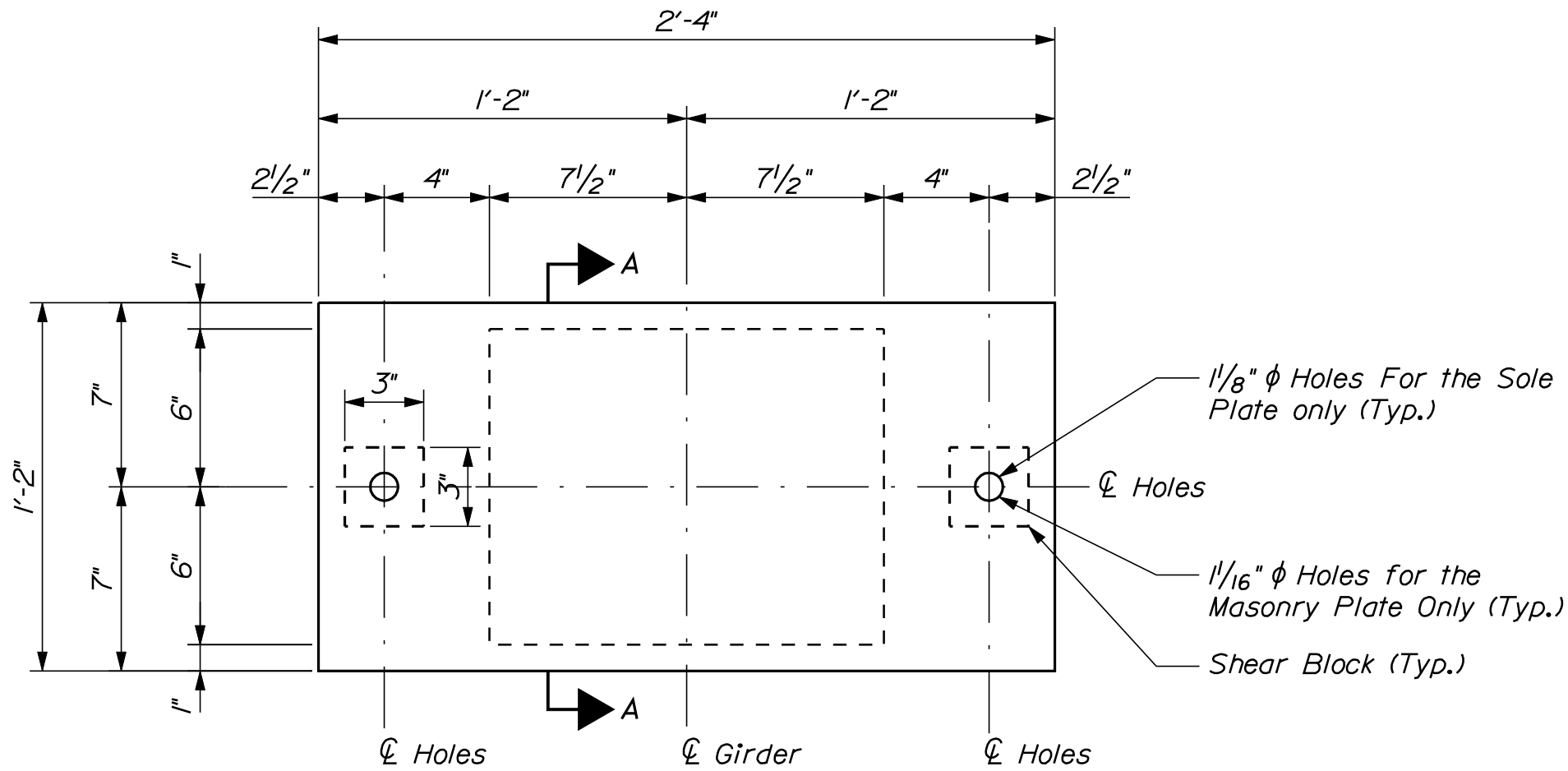
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SHEET NUMBER		BRIDGE PLANS	
29		15108.00	
OF 42		BRIDGE NO. 5760	

Date:2/22/2012

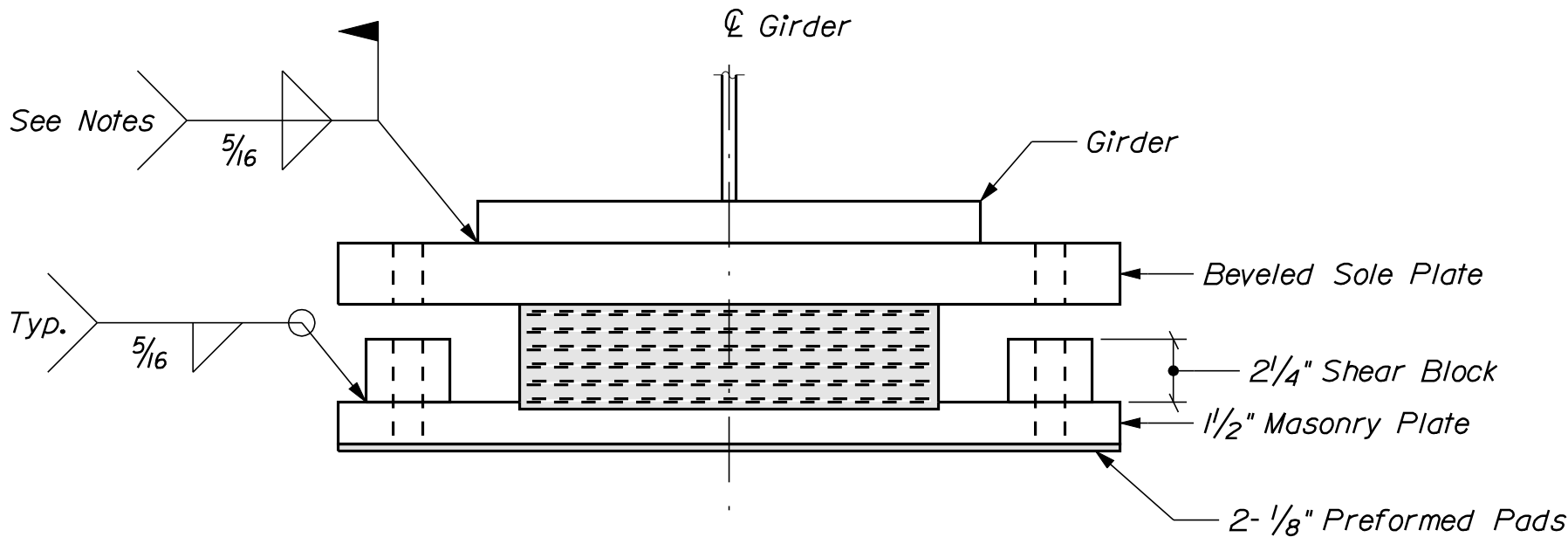
Username: mark.poulin

Division: BRIDGE

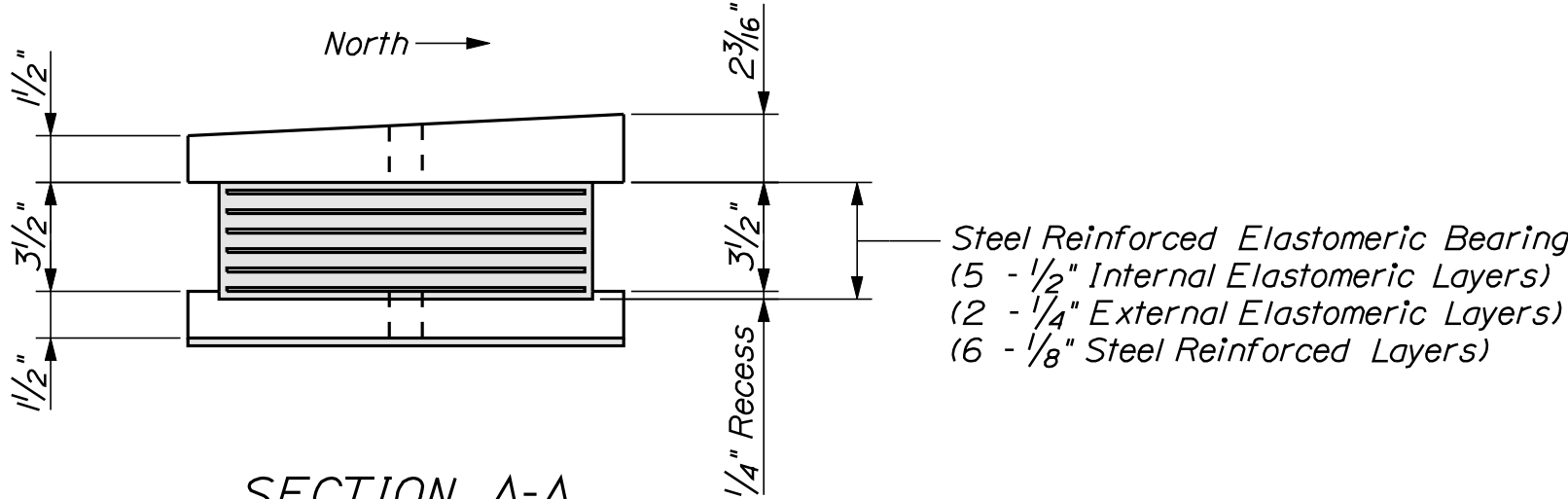
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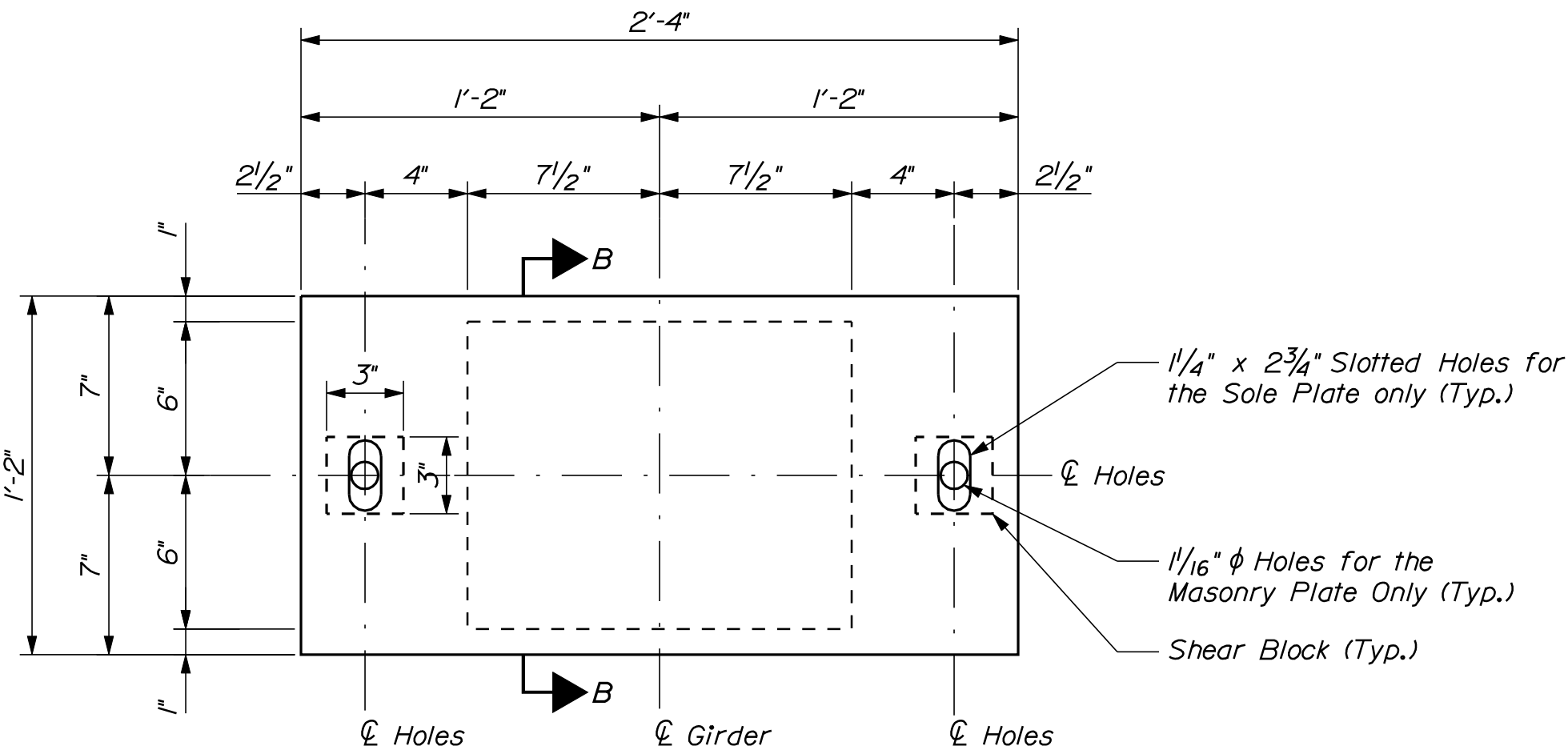
PLAN
Abutment No. 1 - Fix Bearing



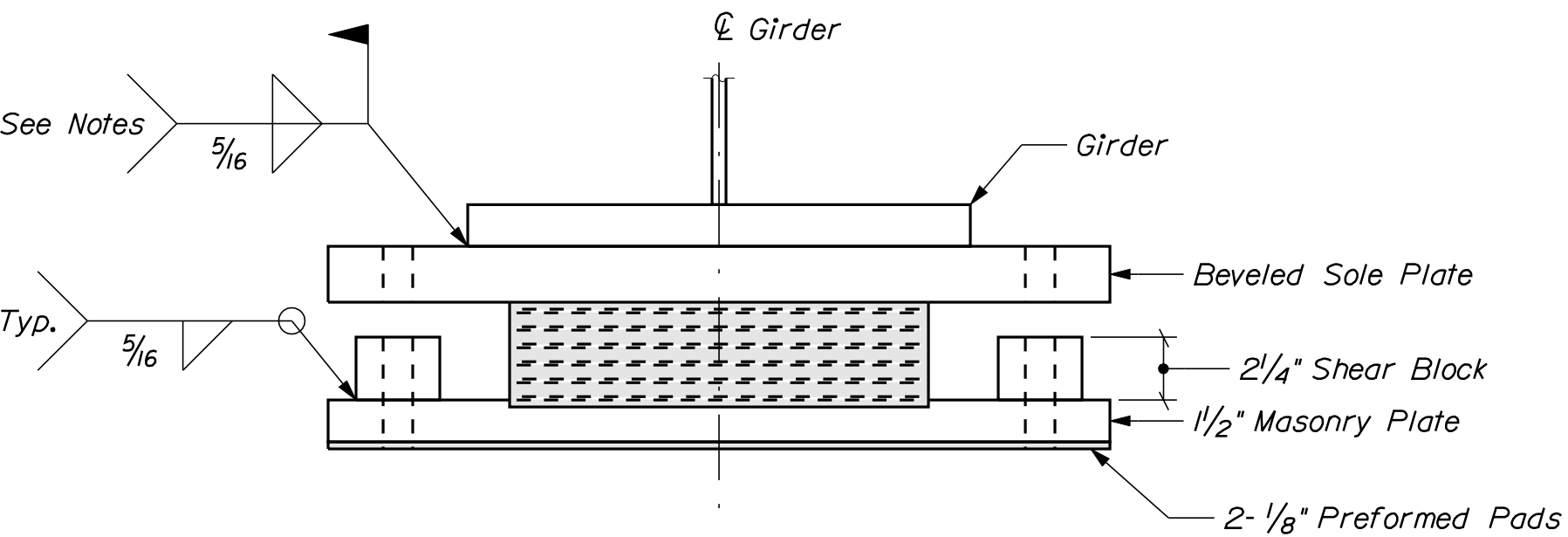
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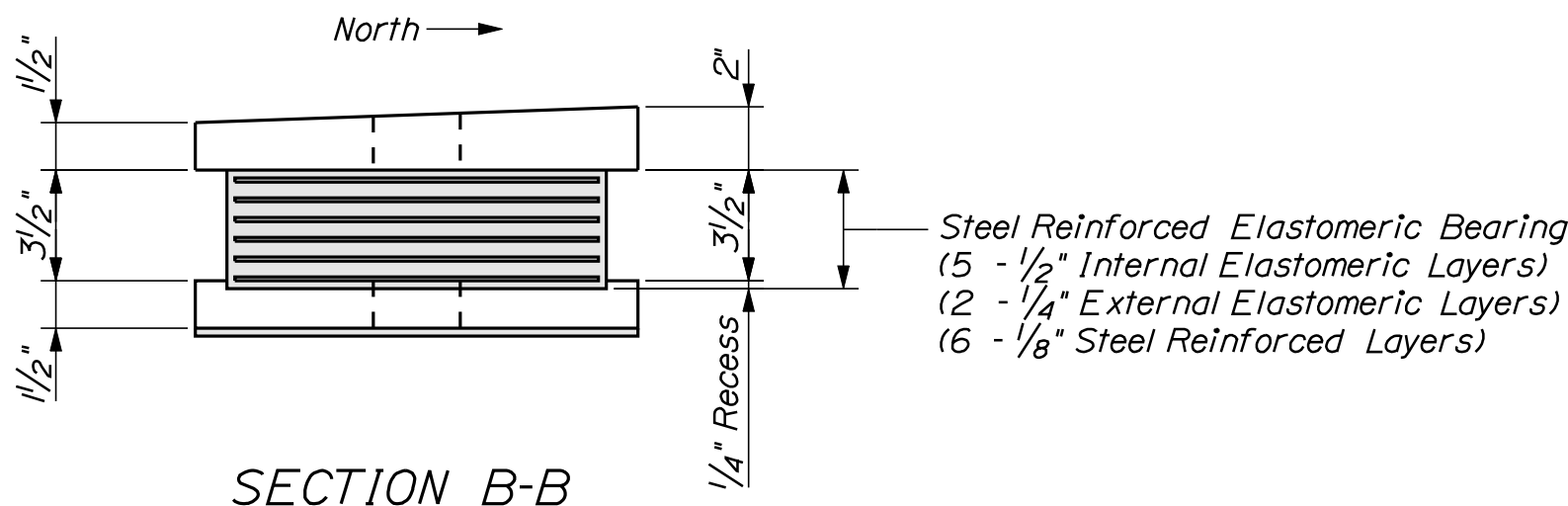
SECTION A-A



PLAN
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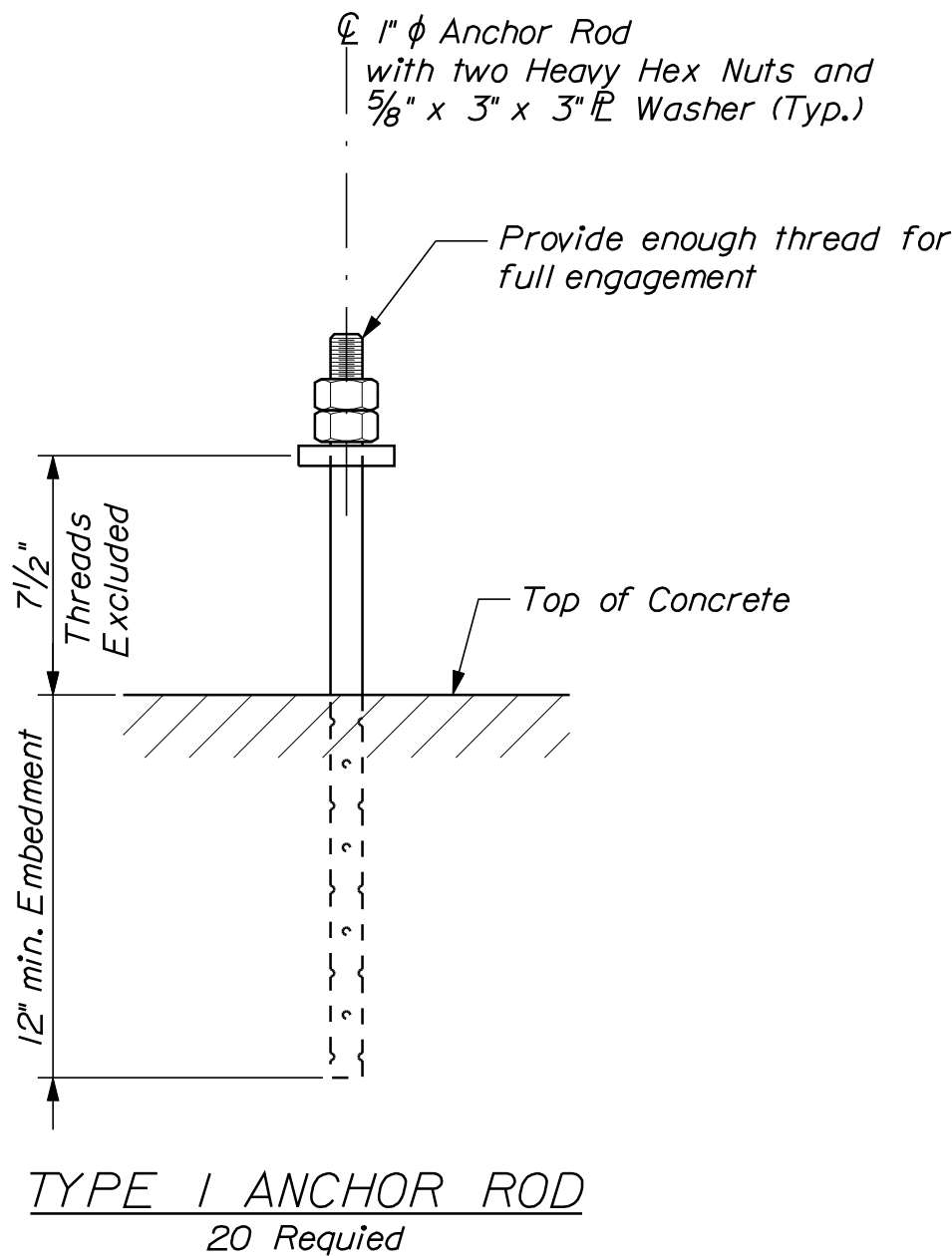
ELEVATION



SECTION B-B

ELASTOMERIC BEARING NOTES

1. The shear modulus of the elastomer shall be 125 psi.
2. Vulcanizing of the elastomer to the steel plates shall be done during the primary mold process. Sole plate shall be vulcanized to elastomer.
3. Masonry plates, sole plates and shear blocks shall meet the requirements of ASTM A 709/A 709M, Grade 50. Anchor rods shall meet the requirements of ASTM F 1554, Grade 105 and shall be swaged on the embedded portion of the rod.
4. Masonry plates shall be galvanized in accordance with Section 506. Sole plates for steel superstructures shall be treated in the same manner as the structural steel. Anchor rods, washers, nuts and shear blocks shall be galvanized to ASTM A 153.
5. All bearings shall be marked prior to shipping. The marks shall include the bearing location on the bridge and a direction arrow that points upstation. All marks shall be permanent and shall be visible after the bearing is installed.
6. Bearings shall be covered during transit.
7. The bearings are designed so that the superstructure may be erected when the ambient air temperature is within the range of 65 °F and 90 °F. If the ambient air temperature is outside this range, the bearings shall be reset as directed by the Resident.
8. All necessary precautions shall be taken to protect bearing components from field weld flash and spatter. Heat from welding operations shall be controlled such that steel adjacent to the elastomer does not exceed 200 °F. The temperature shall be verified by the use of temperature indicating crayons or other suitable means.
9. Upset the threads on the anchor rods after assembly of the bearing.
10. The Contractor shall not weld the girders to the sole plate until after all adjustments have been made in accordance with Standard Specification Section 523.09.4.
11. The "Bearing Design Load" for each bearing as noted in the Standard Specifications, subsection 523.23.4, is 141 kips. This is the total load for the Service 1 load combination, without impact.



STOCKTON SPRINGS UNDERPASS										PROJ. MANAGER		S. BOODE		BY		DATE		STATE OF MAINE									
U.S. ROUTE 1										DESIGN-DETAILED		R. MYERS		M.R.P.		Sept. 1, 2011		DEPARTMENT OF TRANSPORTATION									
STOCKTON SPRINGS										CHECKED-REVIEWED		E. ANTHONY		TEAM NORTH				SIGNATURE									
WALDO COUNTY										DESIGN2-DETAILED2								BH-1510(800)X									
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SHEET NUMBER

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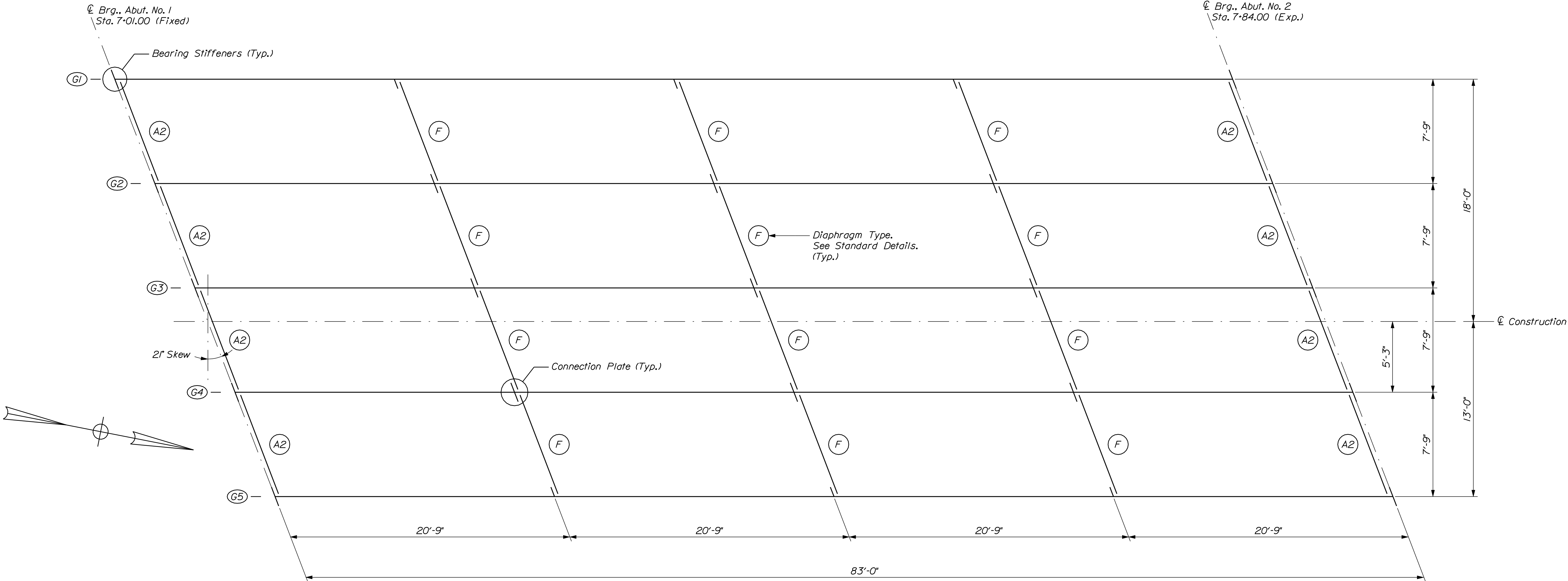
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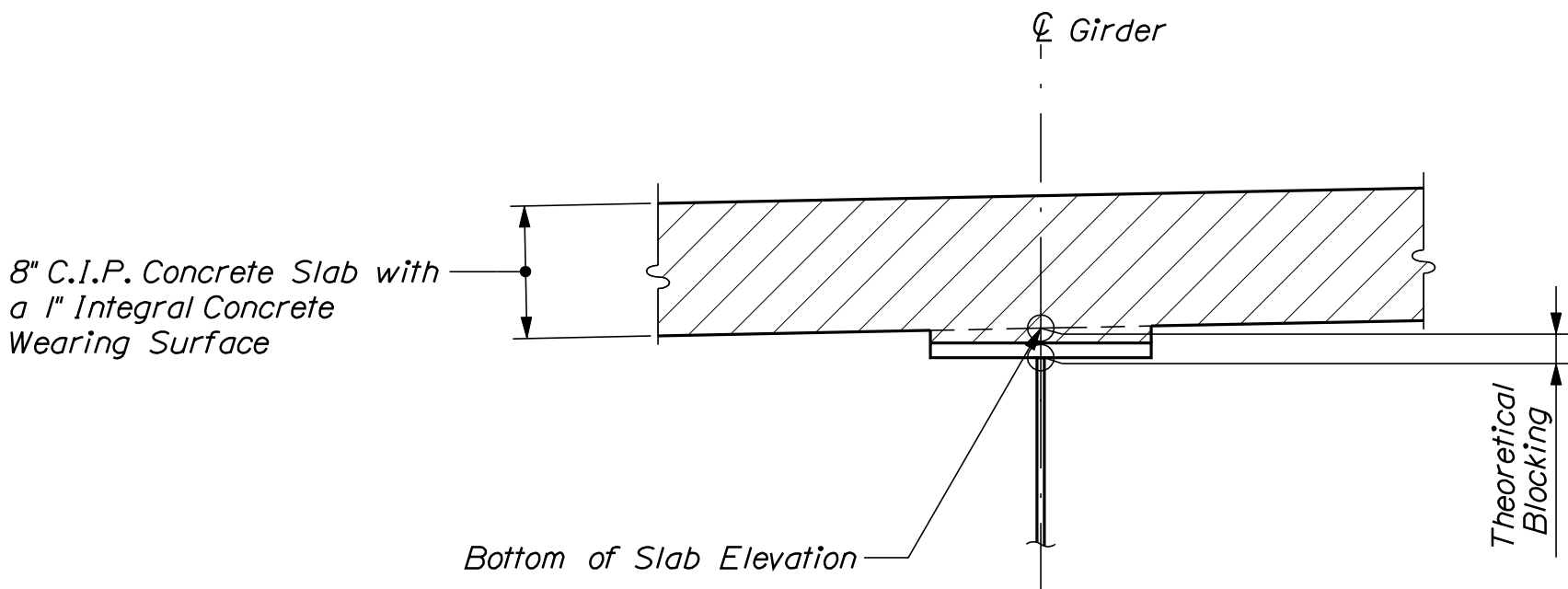
Username: mark.poulin

Division: BRIDGE

Filename: ... \00\bridge\msta\031_Framing.dgn



FRAMING PLAN



BLOCKING DETAIL

Theoretical blocking is 2" at $\bar{C}$ Brg., Abutments
(Do not use theoretical blocking to set forms)

STRUCTURAL STEEL NOTES

- Galvanize all structural steel in accordance with Special Provision Section 506.
- Paint the outside fascia and bottom of the exterior girders as well as the exterior bearing stiffeners in accordance with Special Provision Section 506. Paint shall be green, Federal Color # 14272.
- Camber ordinates, as shown, are computed to compensate for all dead load deflections and for the curvature of the finished grade profile.
- No transverse butt weld splices will be allowed in the flange plates or web plates within 10 feet or 10 percent of the span length (whichever is greater) from the points of maximum moment. Butt weld splices in flanges shall be not less than 3 feet from transverse butt welds in the web plates and no transverse web or flange butt welds shall be located within 3 feet of other transverse welds (e.g. connection plates to web welds) on either flange or web.
- Sections of flange plates or web plates between transverse shop splices or between a transverse shop splice and a field splice shall be not less than 20 feet in length unless otherwise shown on the Plans.
- Bearing stiffeners shall be plumb after erection and dead loading of the structure.
- Crossframe or diaphragm connection plates may be either plumb or normal to the top flange.
- Diaphragm connection plates shall be welded to the bottom flange in lieu of the bolted tension flange connection shown in Standard Detail 504(21).

Bottom of Slab Elevations in Feet											
Girder	Abut. No. 1	1st Tenth	2nd Tenth	3rd Tenth	4th Tenth	Midspan	6th Tenth	7th Tenth	8th Tenth	9th Tenth	Abut. No. 2
1	179.12	179.63	180.10	180.56	180.97	181.36	181.70	182.02	182.29	182.54	182.77
2	179.43	179.92	180.40	180.85	181.27	181.64	181.99	182.29	182.56	182.81	183.04
3	179.73	180.23	180.69	181.15	181.55	181.93	182.26	182.57	182.83	183.08	183.30
4	179.83	180.31	180.78	181.22	181.63	182.00	182.34	182.63	182.90	183.13	183.36
5	179.81	180.30	180.76	181.20	181.60	181.97	182.30	182.60	182.85	183.09	183.30

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
BH-1510(800)X

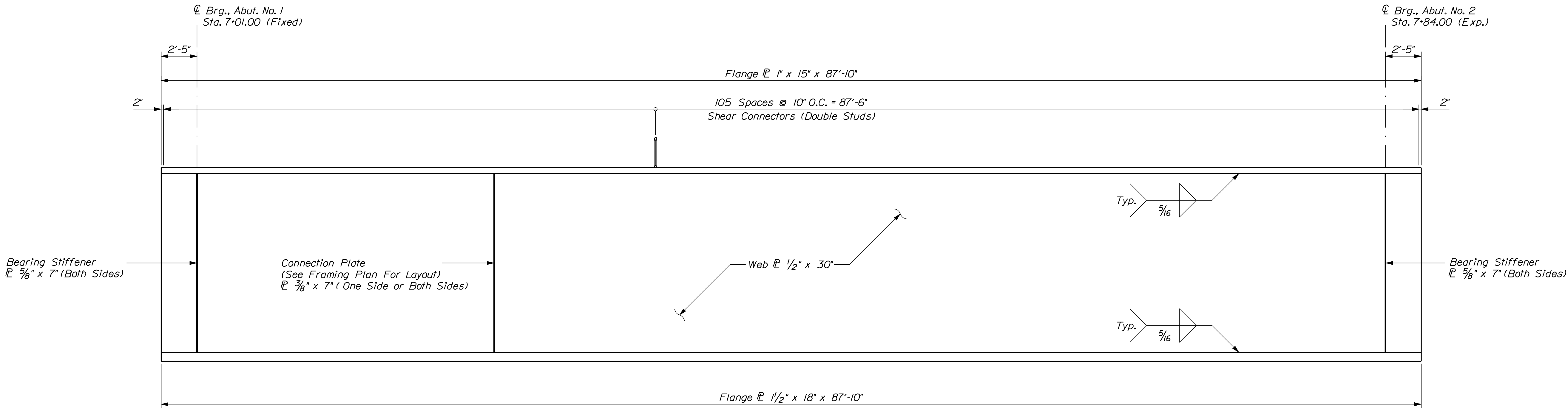
BRIDGE NO. 5760
WIN
15108.00

BRIDGE PLANS

STOCKTON SPRINGS UNDERPASS
U.S. ROUTE 1
STOCKTON SPRINGS WALDO COUNTY

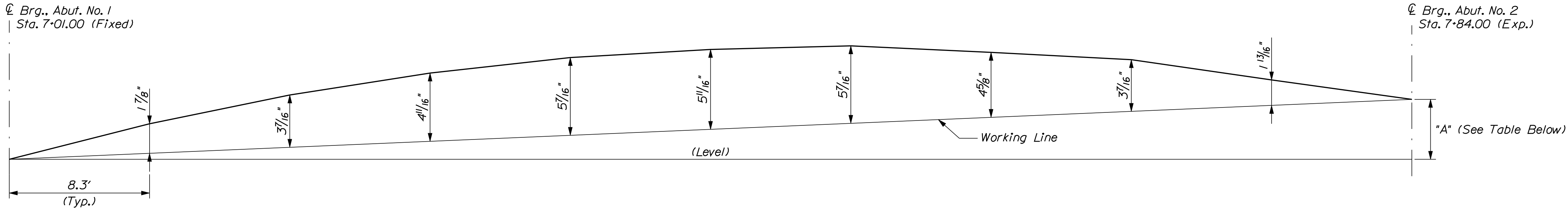
FRAMING PLAN

SHEET NUMBER
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OF 42



GIRDER ELEVATION

212 Shear Connectors / Girder



CAMBER DETAIL

Dead Load Deflections (Inches)											
	Abut. No. 1	1st Tenth	2nd Tenth	3rd Tenth	4th Tenth	Midspan	6th Tenth	7th Tenth	8th Tenth	9th Tenth	Abut. No. 2
Steel	0.00	0.23	0.43	0.59	0.70	0.73	0.70	0.59	0.43	0.23	0.00
Fluid Concrete	0.00	0.89	1.69	2.31	2.71	2.85	2.71	2.31	1.69	0.89	0.00
Superimposed	0.00	0.15	0.28	0.39	0.45	0.48	0.45	0.39	0.28	0.15	0.00
Vertical Alignment Adjust. G1	0.00	0.66	1.08	1.38	1.56	1.62	1.56	1.38	1.08	0.54	0.00
G2	0.00	0.59	1.06	1.40	1.63	1.62	1.61	1.36	0.98	0.61	0.00
G3	0.00	0.64	1.03	1.43	1.58	1.62	1.54	1.33	1.01	0.56	0.00
G4	0.00	0.56	1.01	1.33	1.54	1.62	1.58	1.31	1.03	0.52	0.00
G5	0.00	0.61	1.10	1.36	1.61	1.62	1.63	1.40	1.06	0.59	0.00

A (ft)	
G1	3.65
G2	3.61
G3	3.57
G4	3.53
G5	3.49

STATE OF MAINE

DEPARTMENT OF TRANSPORTATION

BH-1510(800)X

BRIDGE NO. 5760WIN15108.00BRIDGE PLANS

STOCKTON SPRINGS UNDERPASS

U.S. ROUTE 1

STOCKTON SPRINGS WALDO COUNTY

GIRDER DETAILS

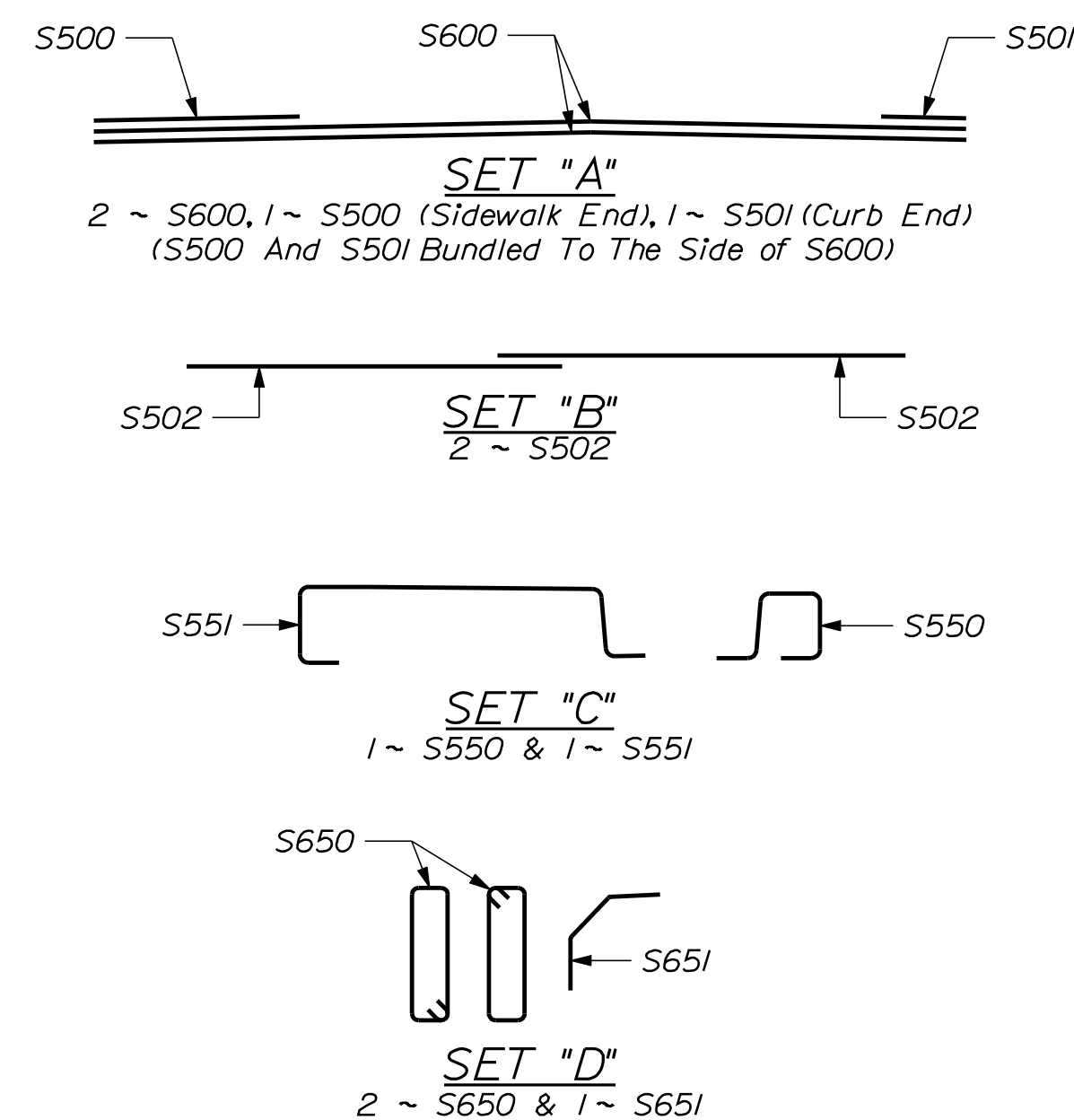
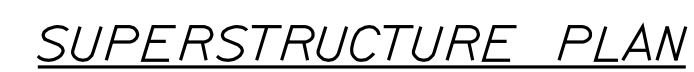
SHEET NUMBER

32

OF 42

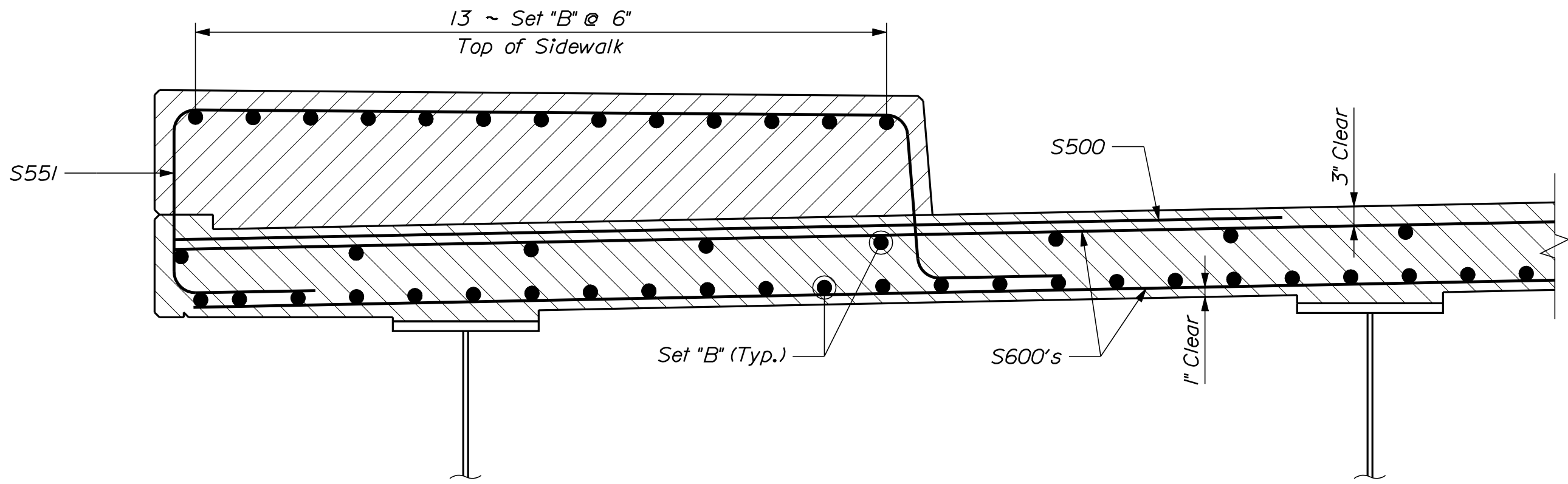
PROJ. MANAGER	BY	DATE
DESIGN-DETAILED	S. BOODE	Sept. 2011
CHECKED-REVIEWED	R. MYERS	
DESIGN-DETAILED	E. ANTHONY	
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE	
P.E. NUMBER	
DATE	

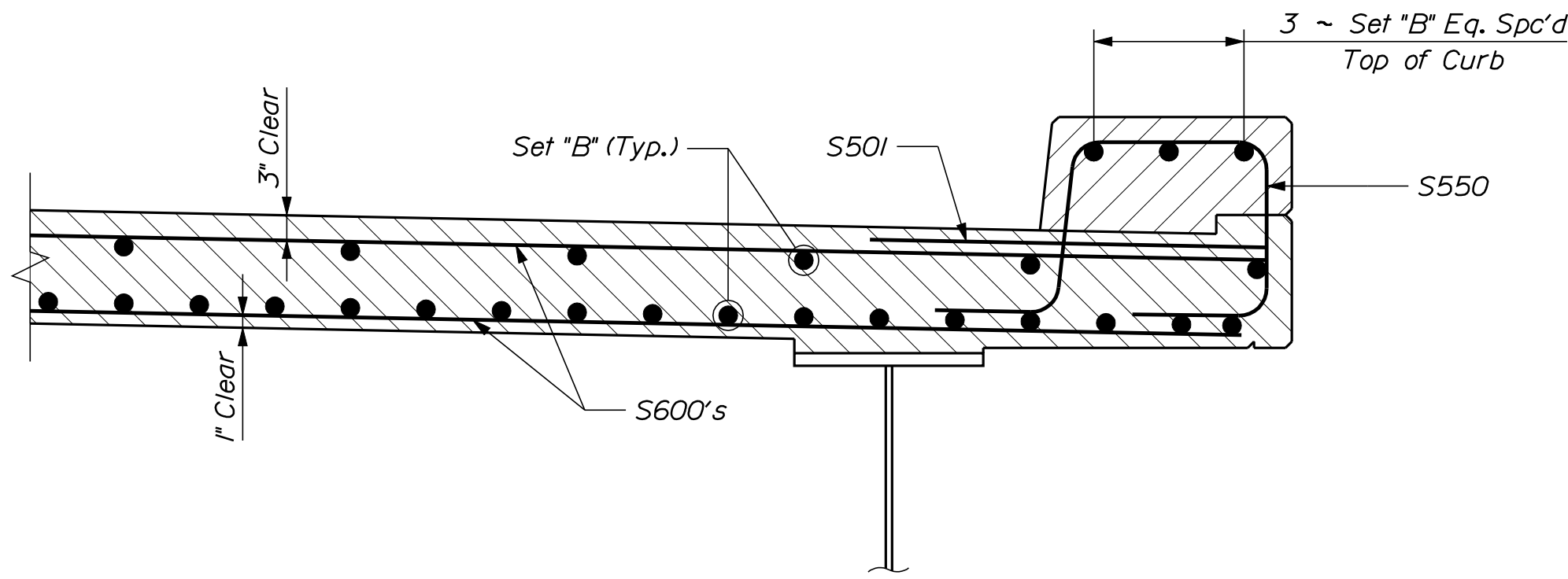


SUPERSTRUCTURE NOTES

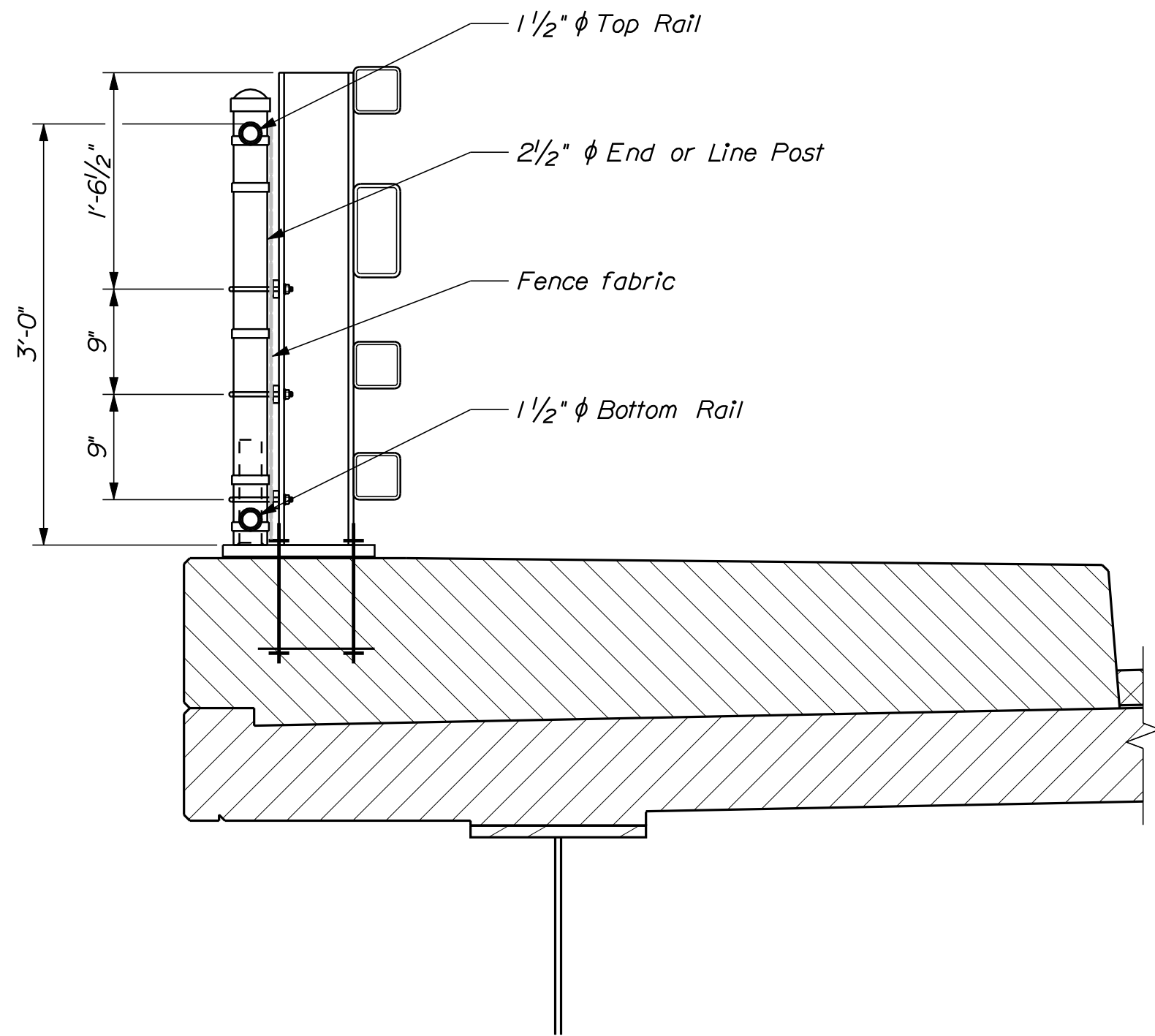
1. *The theoretical blocking used for design of the structure is 2 inches at the centerline of bearing of the abutments. Refer to Standard Detail 502(Q2) for blocking details.*
2. *Reinforcing steel shall have a minimum concrete cover of 2 inches unless otherwise noted.*
3. *Form a one inch V-groove on the fascias at the horizontal joint between the curb and slab.*
4. *The superstructure slab concrete for each span shall be placed continuously and shall be kept plastic until the entire placement has been made.*
5. *At the Contractor's option, Precast Deck Panels may be used in place of the full depth cast-in-place concrete slab in accordance with Special Provision Section 502, Structural Concrete - Precast Deck Panels, and in accordance with the Standard Details.*
6. *Payment for Reinforcing Steel, Fabricated, Delivered, and Placed in the cast-in-place portion of the structural concrete slab, curb, and sidewalk will be considered incidental to the appropriate Standard Specifications Section 502 pay item.*
7. *Provide 3 additional stirrups in the curbs at each Transition Barrier location.*
8. *The Contractor shall install Transition Barrier vertical closed stirrups, as shown in Standard Details Section 526, prior to the placement of the curb or sidewalk concrete.*
9. *The integral concrete wearing surface shall be finished in accordance with Special Provision 502 - Structural Concrete Slab.*



SIDEWALK SECTION



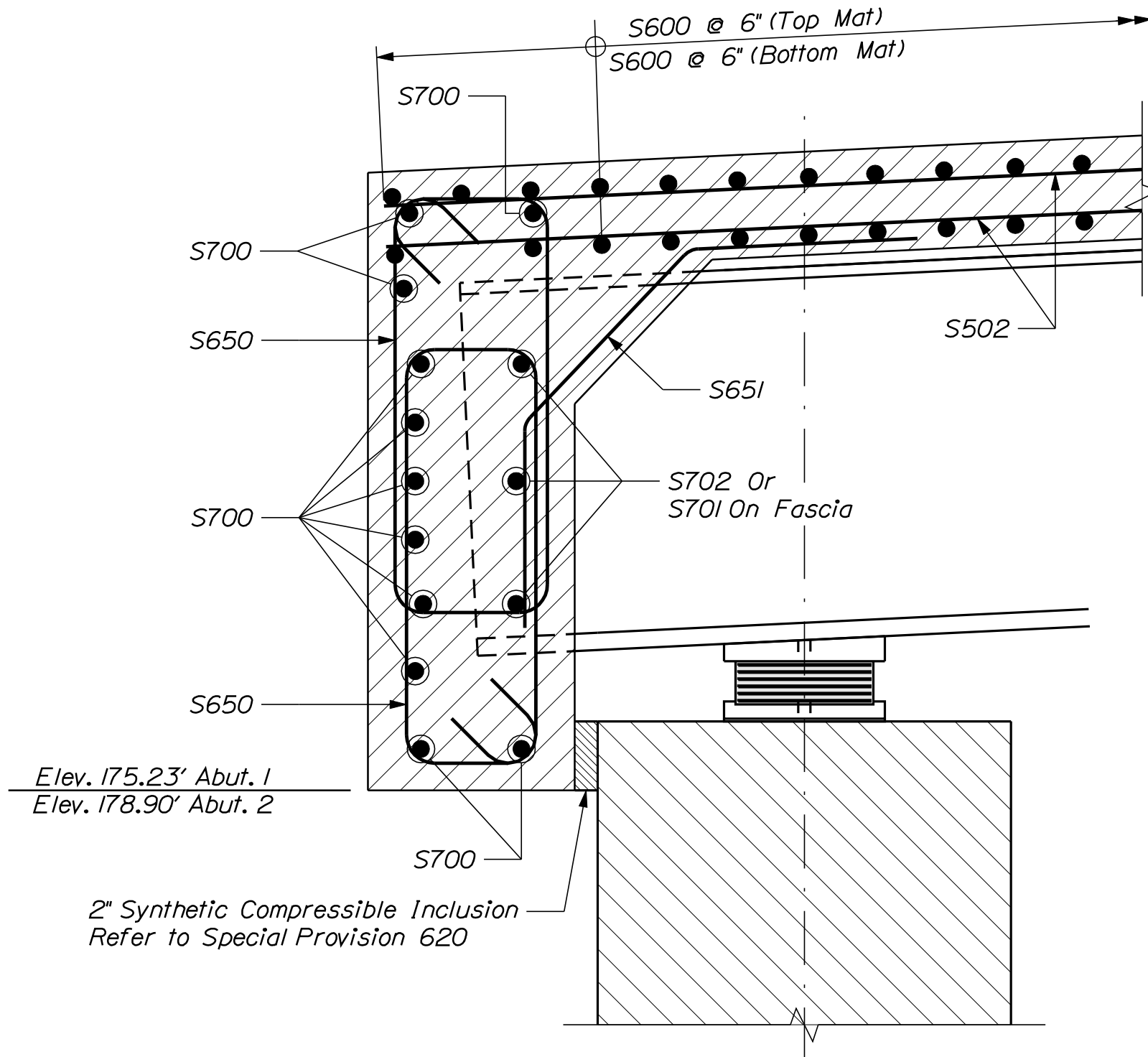
CURB SECTION



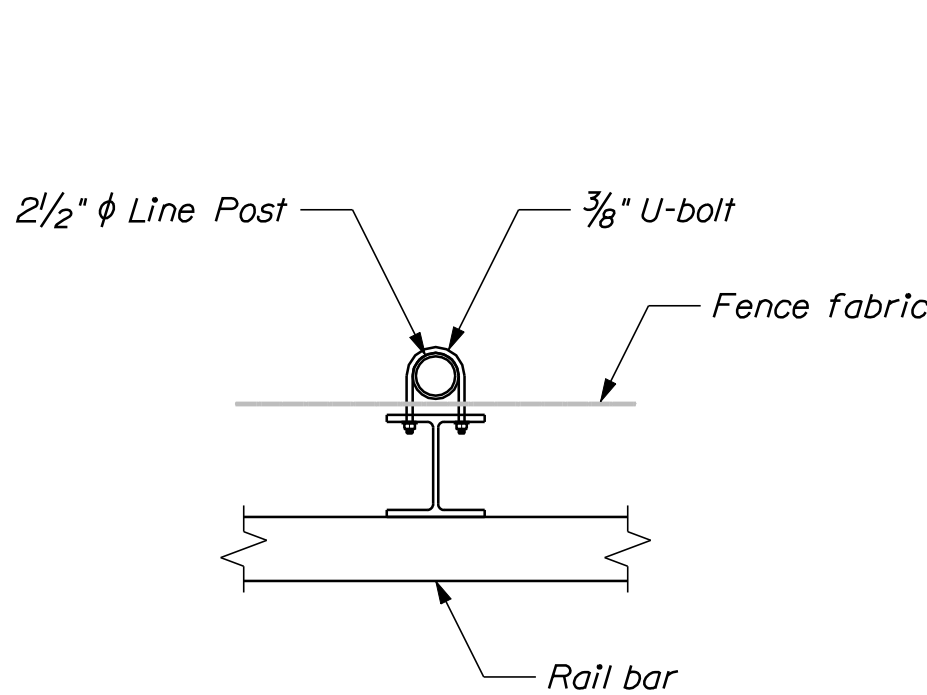
SIDEWALK RAIL SECTION

SNOW FENCE NOTES

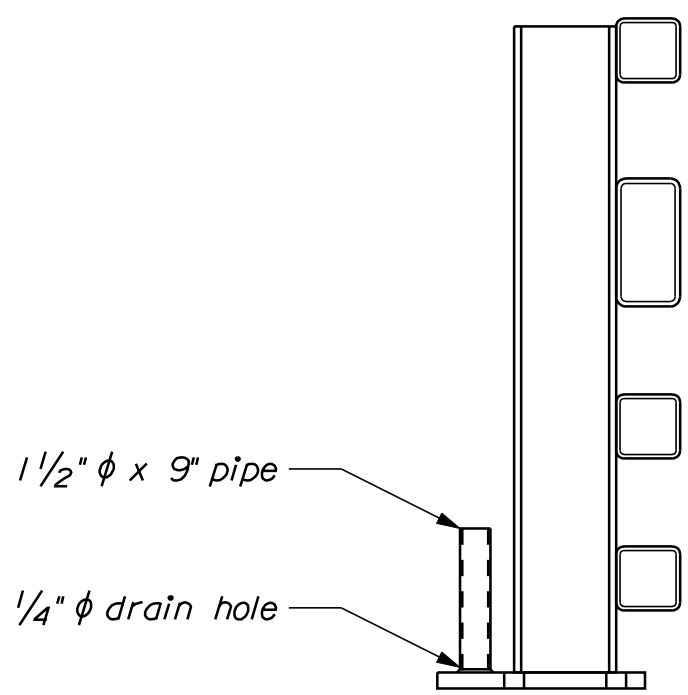
1. For the limits of snow fence installation, refer to "Superstructure" sheet.
2. Payment for modified post base plates will be considered incidental to related contract items.



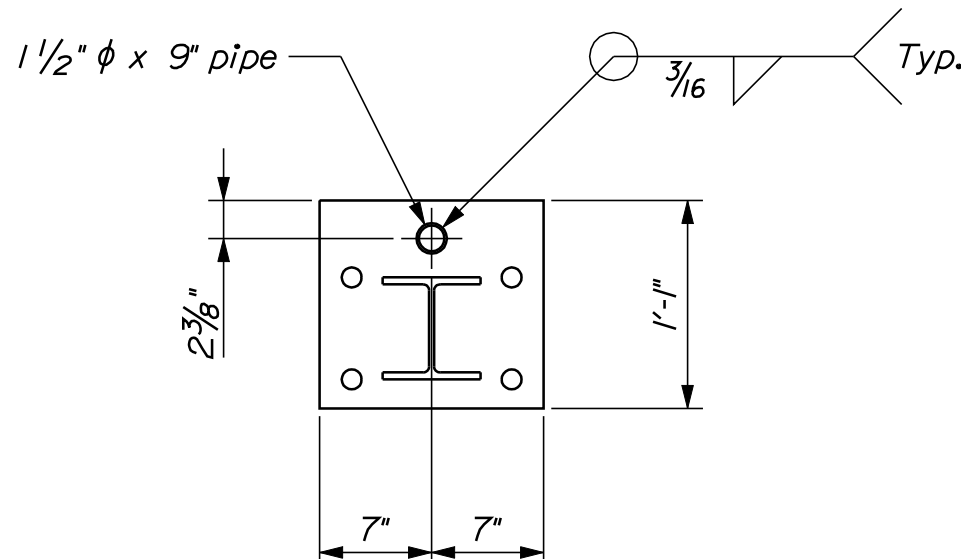
SECTION @ ABUTMENT NO. 1
ABUTMENT NO. 2 SIMILAR



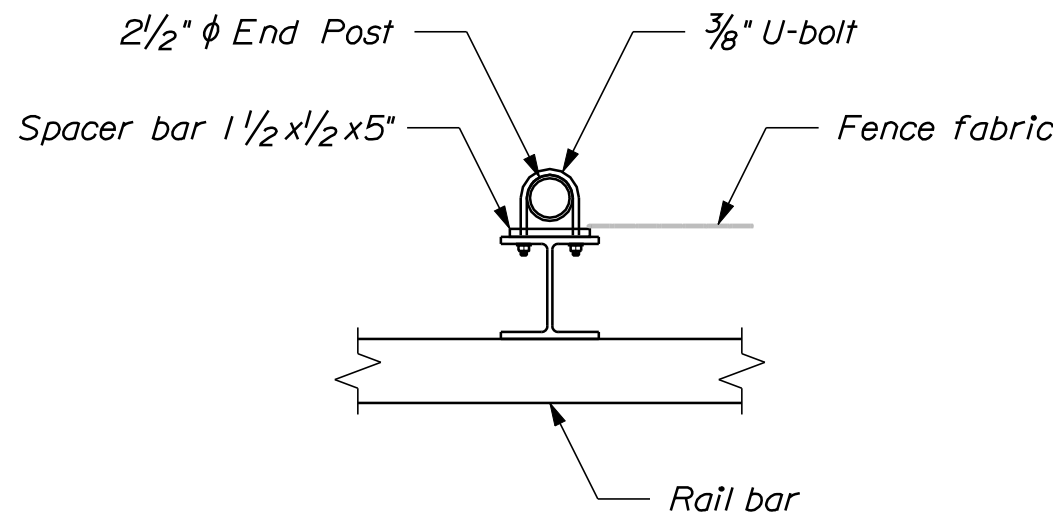
LINE POST DETAIL



MODIFIED RAIL POST SECTION



MODIFIED BASE PLATE PLAN



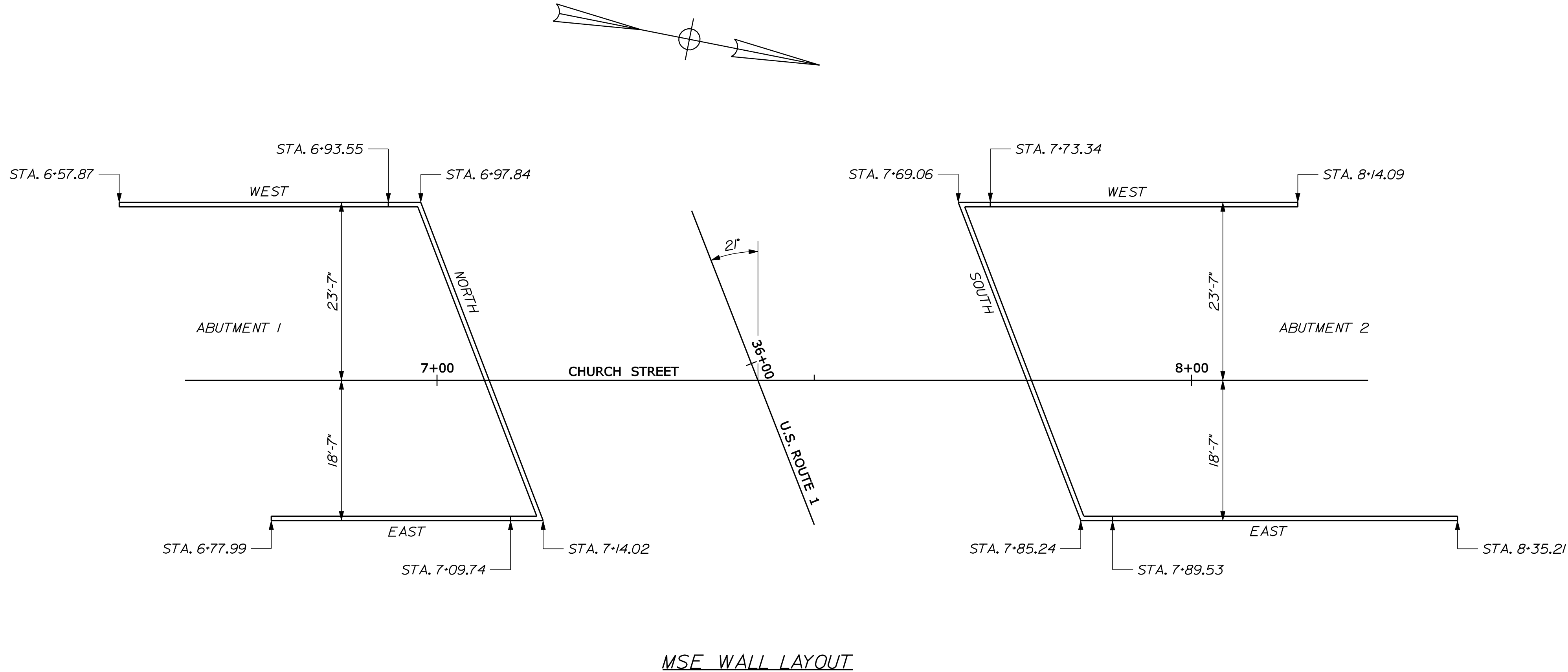
END POST DETAIL

STATE OF MAINE	BRIDGE PLANS
DEPARTMENT OF TRANSPORTATION	WIN
BH-1510(800)X	15108.00
BRIDGE NO. 5760	

PROJ. MANAGER	BY	DATE	SIGNATURE
DESIGN-DETAILED	MR. P.	Sept. 2011	
CHECKED-REVIEWED	MR. P.		
DESIGN-DETAILED	MR. P.		
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

STOCKTON SPRINGS UNDERPASS	WALDO COUNTY
U.S. ROUTE 1	
STOCKTON SPRINGS	
SUPERSTRUCTURE SECTIONS	

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OF 42



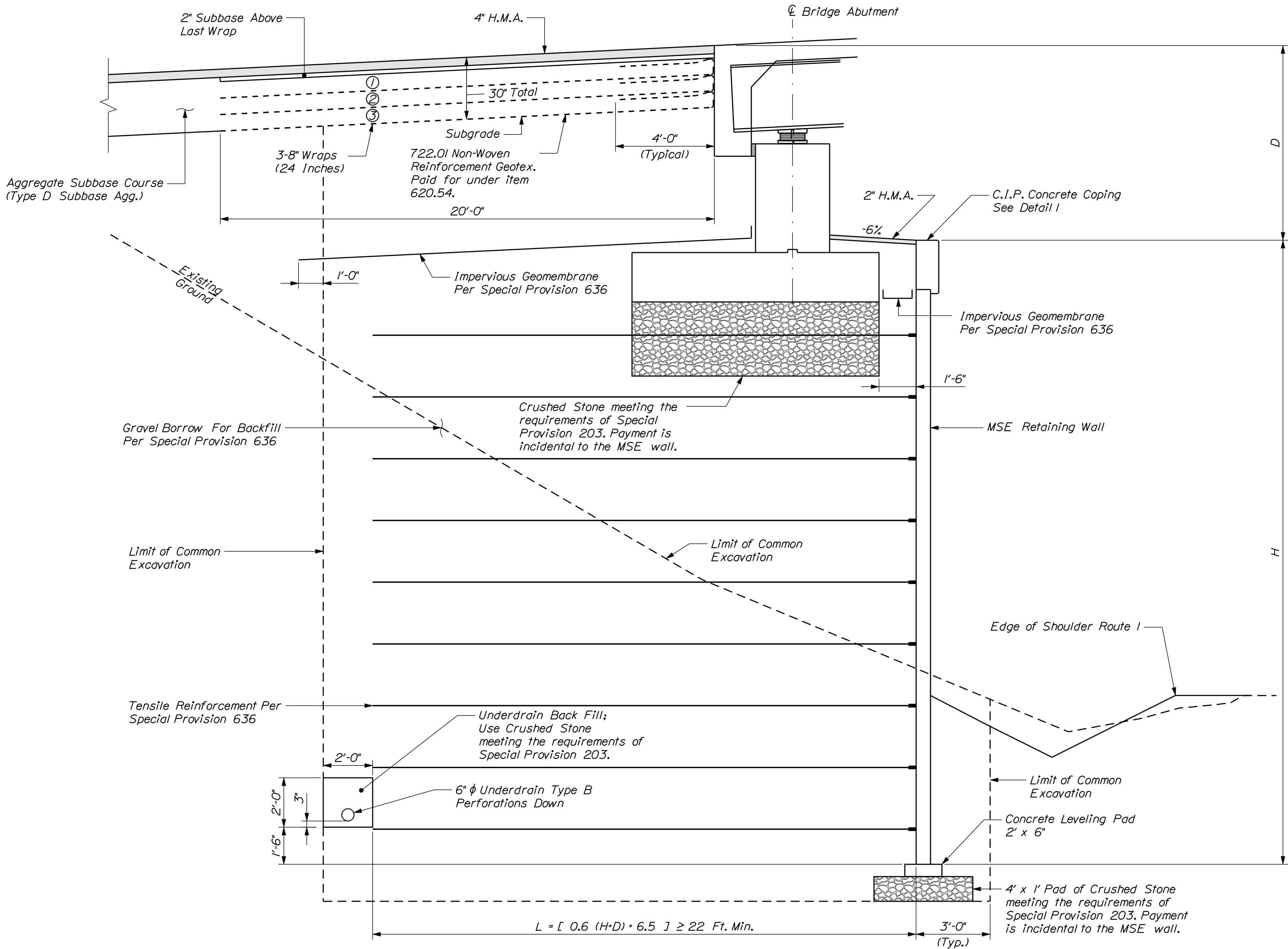
STOCKTON SPRINGS UNDERPASS U.S. ROUTE 1 STOCKTON SPRINGS WALDO COUNTY	STATE OF MAINE			
	DEPARTMENT OF TRANSPORTATION			
	BH-1510(800)X			
SHEET NUMBER 35 OF 42	SIGNATURE		P.E. NUMBER	
	DATE		DATE	
	BRIDGE NO. 5760		WIN	
	15108.00		BRIDGE PLANS	

Date:2/22/2012

Username: mark.poulin

Division: BRIDGE

Filename: ... \bridge\msta\037_Wall_MSE_3.dgn



MSE WALL DETAIL
(Abutment No. 1 Shown, Abutment No. 2 Similar)

MSE WALL NOTES:

1. The Contractor shall provide a mechanically stabilized earth (MSE) retaining wall in accordance with Special Provision 636, Mechanically Stabilized Earth Retaining Wall. The MSE retaining wall shall be designed in accordance with section 11.10 of the AASHTO LRFD Bridge Design Specifications 5th Edition, 2010 and the wall manufacturer's recommendations. All design computations and shop drawings shall be stamped by a professional engineer registered in the state of Maine and shall be submitted to the Resident for review. Plan details are shown for estimating purposes only.

2. For MSE wall elevations, see sheet 36 of 42.

3. The bearing resistance for the reinforced soil volume and leveling pads founded on native soils at this site shall be evaluated at the strength limit state using factored loads and a factored bearing resistance of 14.1 ksf. A factored bearing resistance of 6 ksf shall be used to analyze the service limit state.

4. The factored footing pressure applied by the abutment footing shall be limited to 7 ksf. The MSE retaining wall shall be designed for the additional loads imposed by the footing pressure. Maximum calculated factored footing pressures for all applicable loads and combinations are:

Service I = 3.305 ksf

Strength I = 5.087 ksf

5. Provide impervious waterproofing membrane over the reinforced soil zone in accordance with Special Provision 636 and as shown on the Plans.

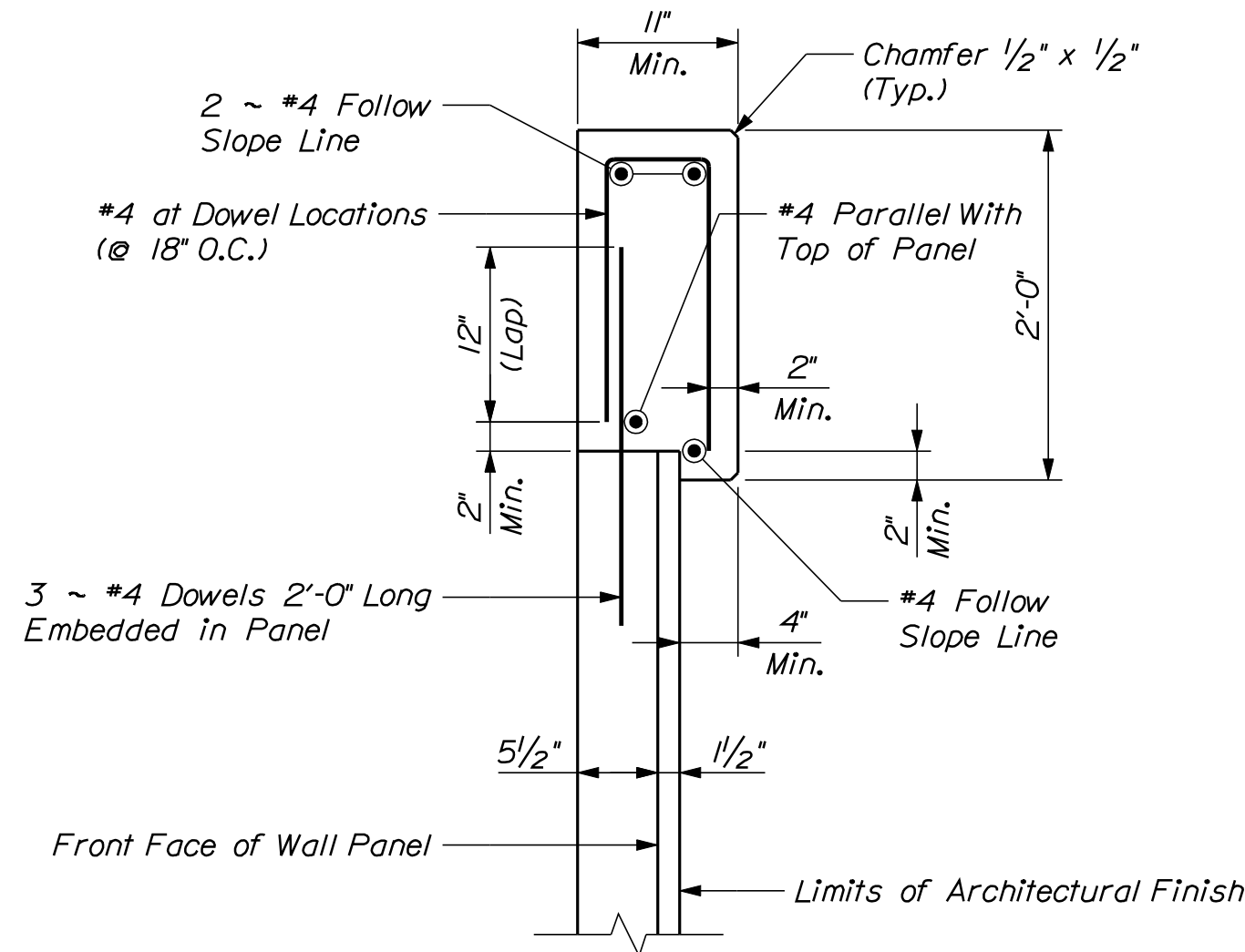
6. Topsoil, granular fill, and organic soils shall be removed entirely from the approach embankment area behind the MSE wall and within the reinforced soil zone as directed by the Resident. Unsuitable foundation material removed below the bottom of the MSE wall gravel borrow fill pay limit shall be replaced with granular borrow meeting the requirements of subsection 703.19, material for under water backfill. Excavation of unsuitable foundation material, shall be paid under item 203.20 - Common Excavation. Payment for placement of granular borrow below the bottom pay limit of the MSE wall gravel borrow fill shall be incidental to item 636.40.

7. All embankment material, except as otherwise shown, placed below the bottom pay limit elevation of the MSE wall shall be granular borrow meeting the requirements of subsection 703.19, material for underwater backfill.

8. The 6 in. diameter underdrain, type B, shall be constructed as shown on the Plans. Payment for the 6 in. underdrain and outlets used to drain the MSE wall fill shall be made under the appropriate underdrain pay items. Crushed Stone for underdrain backfill shall be paid for under Pay Item 203.35 - Crushed Stone.

9. Concrete facing panel finish shall be cruciform ashlar stone similar to that manufactured by Reinforced Earth Company of North Reading, MA or equal. The Contractor shall submit samples of the finish to the Resident for approval prior to casting.

10. The Contractor may use a combination of precast and/or cast-in-place concrete coping. Coping joints shall line up vertically with the top MSE wall panel joints. The shop drawings for the MSE wall shall convey what type of coping will be used, where it will be used, and where the joints are located.



DETAIL I
C.I.P. Concrete Coping

(Note: For this project, the outside face of the architectural finish was used as the control line, assuming a total panel thickness of 7 inches.)

STATE OF MAINE		
DEPARTMENT OF TRANSPORTATION		
	BH-1510(800)X	
	WIN	15108.00
	BRIDGE NO. 5760	BRIDGE PLANS

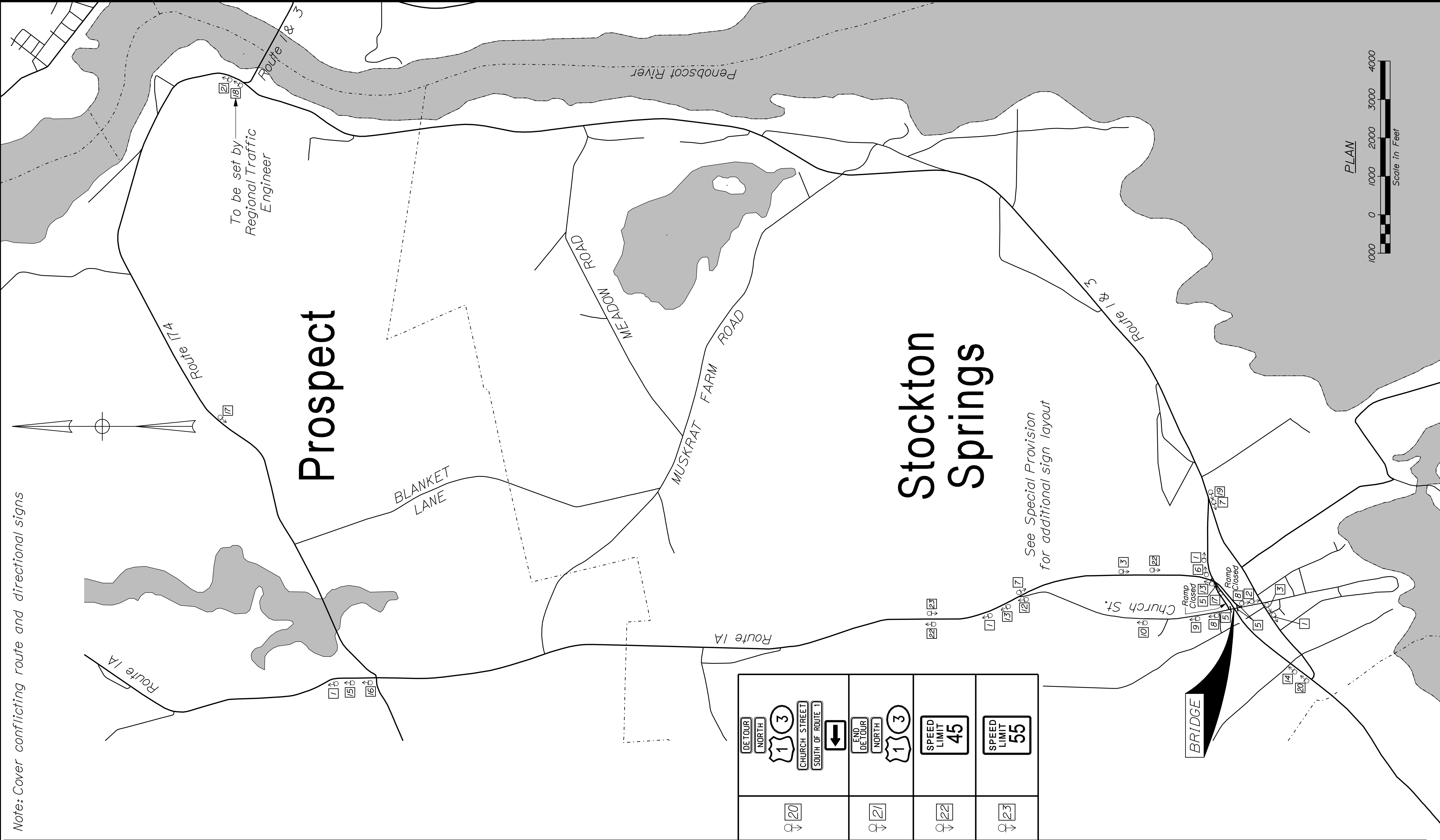
PROJ. MANAGER	CHECKED-REVIEWED	DESIGN-DETAILED	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
S. BOOGE	R. MYERS	M.R.P.	TEAM NORTH	Sept. 2011			
	E. ANTHONY						

STOCKTON SPRINGS UNDERPASS	
U.S. ROUTE 1	
STOCKTON SPRINGS WALDO COUNTY	
MSE WALL DETAILS	

SHEET NUMBER
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OF 42

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Note: Cover conflicting route and directional signs



SHEET NUMBER

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OF 42

STOCKTON SPRINGS UNDERPASS
U.S. ROUTE 1

STOCKTON SPRINGS WALDO COUNTY

TRAFFIC PLAN
WHEN OVERPASS IS CLOSED

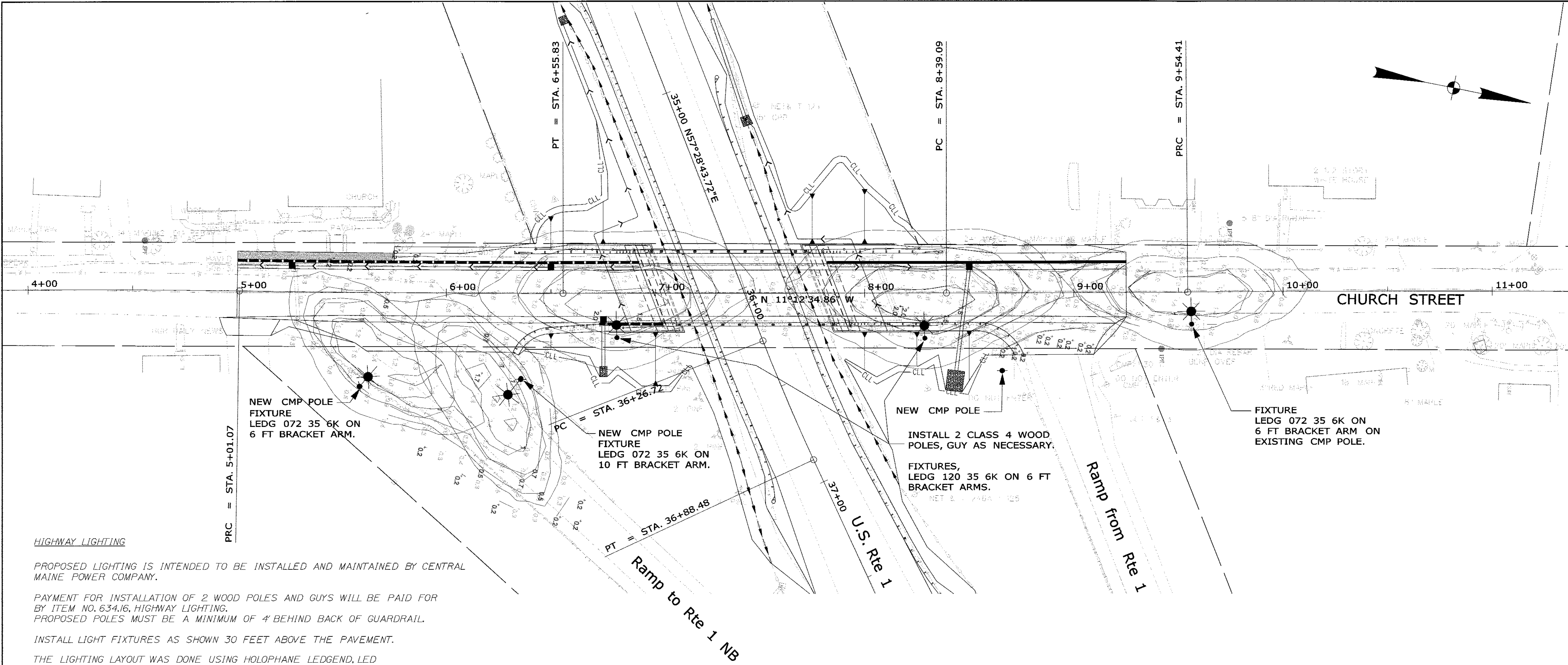
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BH-1510(800)X

BRIDGE NO. 5760
WIN
15108.00

BRIDGE PLANS

PROJ. MANAGER	S. BOOGE	BY	DATE
DESIGN-DETAILED	J. MYERS	M.R.P.	Sept. 2011
CHECKED-REVIEWED	D.E.S.	TEAM	NORTH
DESIGNS-DETAILED			
DESIGNS-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			
SIGNATURE		P.E. NUMBER	
DATE		DATE	



HIGHWAY LIGHTING

PROPOSED LIGHTING IS INTENDED TO BE INSTALLED AND MAINTAINED BY CENTRAL MAINE POWER COMPANY.

PAYMENT FOR INSTALLATION OF 2 WOOD POLES AND GUYS WILL BE PAID FOR BY ITEM NO.634.16, HIGHWAY LIGHTING.
PROPOSED POLES MUST BE A MINIMUM OF 4' BEHIND BACK OF GUARDRAIL.

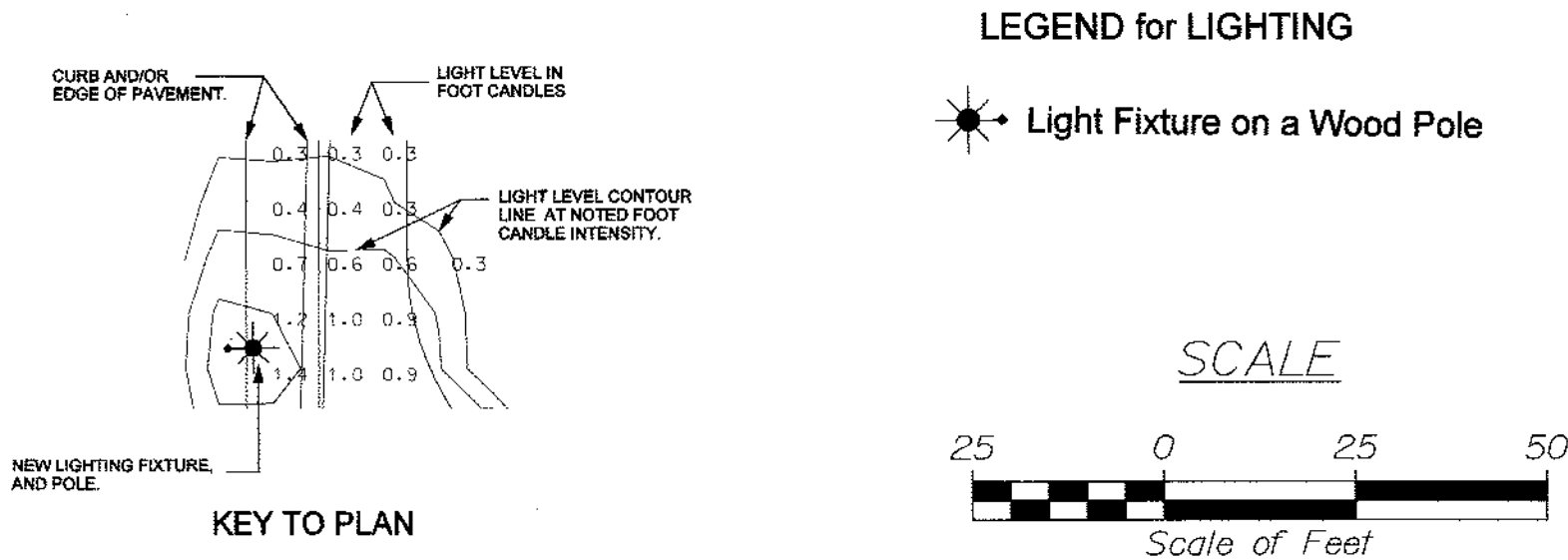
INSTALL LIGHT FIXTURES AS SHOWN 30 FEET ABOVE THE PAVEMENT.

THE LIGHTING LAYOUT WAS DONE USING HOLOPHANE LEDGEND, LED ROADWAY LIGHTING LUMINAIRES, CATALOG NUMBERS:
LEDG 120 35 6K AS XX L3 - 2 TYPE 3 FIXTURES
LEDG 72 35 6K AS XX L2 - 3 TYPE 2 FIXTURE

IF DIFFERENT LED FIXTURES ARE PROPOSED, THEY SHALL BE IES FULL CUTOFF, TYPE 2 AND TYPE 3 IES DISTRIBUTION PROVIDING LIGHT LEVELS MEETING OR EXCEEDING THOSE SHOWN ON THIS PLAN. LIGHT LOSS FACTORS FOR 50,000 HOURS L70 AT 25 DEGREES C SHALL MEET OR EXCEED THOSE SHOWN ON THIS PLAN WITH ASSUMED LDD FACTOR OF 0.95 OR LESS.

LUMINAIRE SCHEDULE								
Symbol	Qty	Catalog Number	Description	Lamp	File	Lumens	LLF	Watts
	2	LEDG 120 35 6K AS 0 X L3	LEDGEND ROADWAY LED	120 LED ARRAY	LEDG_120_35_6K_AS_0_X_L3.lss	Absolute	0.79	130
	3	LEDG 072 35 6K AS 0 X L2	LEDGEND ROADWAY LED	72 LED ARRAY	LEDG_072_35_6K_AS_0_X_L2.lss	Absolute	0.84	81

STATISTICS						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Bridge & Ramps	+	0.8 fc	2.0 fc	0.2 fc	10.0:1	4.0:1
Rte 1 On Ramp & Church St	+	0.7 fc	1.7 fc	0.2 fc	8.5:1	3.5:1
Rte 1 Off Ramp & Church St	+	0.8 fc	2.0 fc	0.2 fc	10.0:1	4.0:1

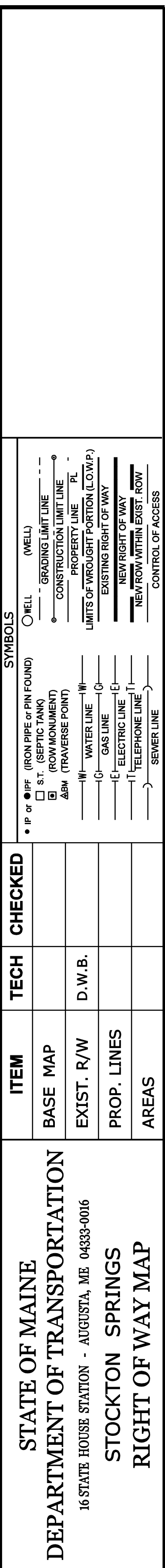


STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
BH - 1510(800)X
BRIDGE NO. 5780
WIN
15108.00
BRIDGE PLANS

SIGNATURE
4226
P.E. NUMBER
2/3/12
DATE

STOCKTON SPRINGS
CHURCH STREET
PROPOSED LIGHTING

SHEET NUMBER
41
OF 42



REVISIONS NO. DATE DESCRIPTION BY				PLAN FILED IN PLAN BOOK PAGE NO. GRANTOR INSTRUMENT DATE BOOK PAGE						DAVID BERNHARDT COMMISSIONER KENNETH L. SWEENEY CHIEF ENGINEER DATE	STATE HIGHWAY NO. "42" U.S. ROUTE I +CHURCH STREET STOCKTON SPRINGS WALDO COUNTY FEDERAL AID PROJECT NO. BH-1510(800)X			SHEET NUMBER 42 OF 42
											JANUARY 2012 SCALE 1" = 25'	RIGHT-OF-WAY MAP SHEET 1 OF 1		