STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

CARIBOU
AROOSTOOK COUNTY
HARDWOOD BROOK BRIDGE
OVER
HARDWOOD BROOK
U.S. ROUTE 1
STATE PROJECT NO. 19319.00
PROJECT LENGTH 0.01 mi.
BRIDGE NO. 6306

SPECIFICATIONS

Design: Load and Resistance Factor Design per AASHTO LRFD Bridge Design Specifications, Sixth Edition 2012.

DESIGN LOADING

Live Load ..... HL - 93 Modified

TRAFFIC DATA

Current (2012) AADT	7540
Future (2022) AADT	9540
DHV - % of AADT	10
Design Hour Volume	1040
Heavy Trucks (% of AADT)	8
Heavy Trucks (% of DHV)	6
Directional Distribution (% of DHV)	55
18 kip Equivalent P 2.0	556
18 kip Equivalent P 2.5	529
Design Speed (mph)	55

HYDROLOGIC DATA

Drainage Area	5.72 sq mi
Design Discharge (Q50)	938.3 cfs
Check Discharge (Q100)	1104.4 cfs
Headwater Elevation (Q50)	496.01 ft
Headwater Elevation (Q100)	497.05 ft
Discharge Velocity (Q50)	15.11 fps
Discharge Velocity (Q100)	16.08 fps
Headwater Elevation (Q1.1)	489.78 ft
Discharge Velocity (Q1.1)	7.57 fps
Headwater Elevation (Q25)	495.01 ft

MATERIALS

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

BASIC DESIGN STRESSES

Precast Concrete	f 'c = 5,000 psi min.
Reinforcing Steel	f y = 60,000 psi
Welded Wire Reinforcement	f y = 65,000 psi min.

LIST OF DRAWINGS

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Boring Logs 6
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UTILITIES

Maine Fiber Company
Maine Public Service Company
Northern New England Telephone Operations LLC
Pioneer Wireless, Inc.
Time Warner Cable

MAINTENANCE OF TRAFFIC

Maintain one 12'-0" wide lane of alternating two - way traffic using traffic signals.

PROJECT LOCATION:	0.15 miles North from the intersection of Route 1 and Maysville Siding Road. Lat.: 46° 47' 0.906"N, Long.: -67° 59' 19.8054"W
PROGRAM AREA:	Bridge Program
OUTLINE OF WORK:	Fabrication and delivery of Precast Concrete Box Culvert

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
APPROVED
COMMISSIONER: DATE 3/19/13
CHIEF ENGINEER: 3/19/13

STATE OF MAINE Michael Harry Wight 8089 LICENSED PROFESSIONAL ENGINEER
SIGNATURE 8089
P.E. NUMBER 3/14/2013
DATE

PROJECT INFORMATION
PROGRAM
PROJECT MANAGER BRIDGE
DESIGNER S. BODGE
CONSULTANT M. WIGHT
PROJECT RESIDENT
CONTRACTOR
PROJECT COMPLETION DATE

WIN 19319.00

19319.00

CARIBOU
HARDWOOD BROOK BRIDGE

TITLE SHEET

SHEET NUMBER
1
OF 16

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ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
203.20	COMMON EXCAVATION	525	CY
203.24	COMMON BORROW	10	CY
203.25	GRANULAR BORROW	855	CY
203.33	SPECIAL FILL	140	CY
205.51	WIDENING OF EXISTING SHOULDER - PLAN QUANTITY	85	SY
304.13	DENSE GRADED CRUSHED AGGREGATE SUBBASE	440	CY
403.2072	19 MM ASPHALT RICH BASE MIXTURE	153	T
403.208	HOT MIX ASPHALT 12.5 MM HMA SURFACE	103	T
403.213	HOT MIX ASPHALT 12.5 MM BASE	103	T
409.15	BITUMINOUS TACK COAT - APPLIED	55	G
511.07	COFFERDAM: UPSTREAM	1	LS
511.07	COFFERDAM: DOWNSTREAM	1	LS
515.20	PROTECTIVE COATING FOR CONCRETE SURFACES	35	SY
524.301	TEMPORARY STRUCTURAL SUPPORT	1	LS
526.301	TEMPORARY CONCRETE BARRIER - TYPE 1 (100 LF)	1	LS
527.34	WORK ZONE CRASH CUSHIONS	4	UN
534.7101	PRECAST CONCRETE BOX CULVERT - STATE SUPPLIED	1	LS
606.23	GUARDRAIL TYPE 3C - SINGLE RAIL	425	LF
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	8	EA
606.754	WIDEN SHOULDER FOR GUARDRAIL 350 FLARED TERMINAL	4	EA
606.79	GUARDRAIL 350 FLARED TERMINAL	4	EA
609.31	CURB TYPE 3	287	LF
610.08	PLAIN RIPRAP	30	CY
610.16	HEAVY RIPRAP	215	CY
613.319	EROSION CONTROL BLANKET	150	SY
615.07	LOAM	10	CY
618.1401	SEEDING METHOD NUMBER 2 - PLAN QUANTITY	2	UN
619.1401	EROSION CONTROL MIX	20	CY
620.58	EROSION CONTROL GEOTEXTILE	410	SY
627.733	4 INCH WHITE OR YELLOW PAINTED PAVE MRK LINE	1000	LF
629.05	HAND LABOR, STRAIGHT TIME	10	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	20	HR
631.131	SMALL BULLDOZER-GRADER (INCLUDING OPERATOR)	10	HR
631.15	ROLLER, EARTH AND BASE COURSE (INCLUDING OPERATOR)	10	HR
631.172	TRUCK - LARGE (INCLUDING OPERATOR)	10	HR
639.19	FIELD OFFICE TYPE B	1	EA
643.72	TEMPORARY TRAFFIC SIGNAL	1	LS
652.312	TYPE III BARRICADE	4	EA
652.33	DRUM	12	EA
652.34	CONE	12	EA
652.35	CONSTRUCTION SIGNS	400	SF
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES (120 CD)	1	LS
652.38	FLAGGER	100	HR
656.75	TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	1	LS
659.10	MOBILIZATION	1	LS

GENERAL CONSTRUCTION NOTES

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

2. The clearing limits will be established in the field by the Resident. Payment for clearing will be considered incidental to Contract items.

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

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

5. In areas where the Resident directs the Contractor not to excavate to the subgrade line shown on the plans, payment for removing existing pavement, grubbing, shaping, ditching, and compacting the existing subbase and layers of new subbase 6 inches or less thick will be made under appropriate equipment rental items.

6. All embankment material, except as otherwise shown, placed below EL. 496 shall be Granular Borrow meeting the requirements of Subsection 703.19, Material for Underwater Backfill.

7. Place riprap on sideslopes up to EL. 500.5 on the upstream end and up to EL. 496.0 on the downstream end.

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

9. 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.

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

11. An NCHRP350 compliant guardrail end treatment shall be installed concurrently with the placement of each section of beam guardrail.

12. 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.

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

Top of exposed concrete on headwalls and ends of box culvert

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

15. 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.

16. The project geotechnical report titled: "Geotechnical Design Report for the Replacement of Hardwood Brook Bridge, Route 1 over Hardwood Brook, Caribou, Maine" Soils Report No. 2013-03 dated January 17, 2013 may be accessed at the MaineDOT web address.

17. 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.

18. 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.

19. A USGS gaging station is located approximately 10 feet upstream of the culvert inlet. This gaging station shall be removed before construction by the USGS. The Contractor shall notify the USGS a minimum of 2 days before construction begins on the project. The contact person at the USG is Gregory Stewart (207-622-8201 ext. 118).

STATE OF MAINE
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19319.00

BRIDGE NO. 6306

WIN 19319.00

BRIDGE PLANS

PROJ. MANAGER	Steve Bodge	BY	DATE
DESIGN-DETAILED	M. Wight	D. Shaw	MAR 2013
CHECKED-REVIEWED	M. Poulin	T.WHITE	SEP 2012
DESIGN2-DETAILED2	L.KRUSINSKI		
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

HARDWOOD BROOK BRIDGE
HARDWOOD BROOK
CARIBOU AROOSTOOK COUNTY

ESTIMATED QUANTITIES AND
GENERAL CONSTRUCTION NOTES

SHEET NUMBER

2

OF 16

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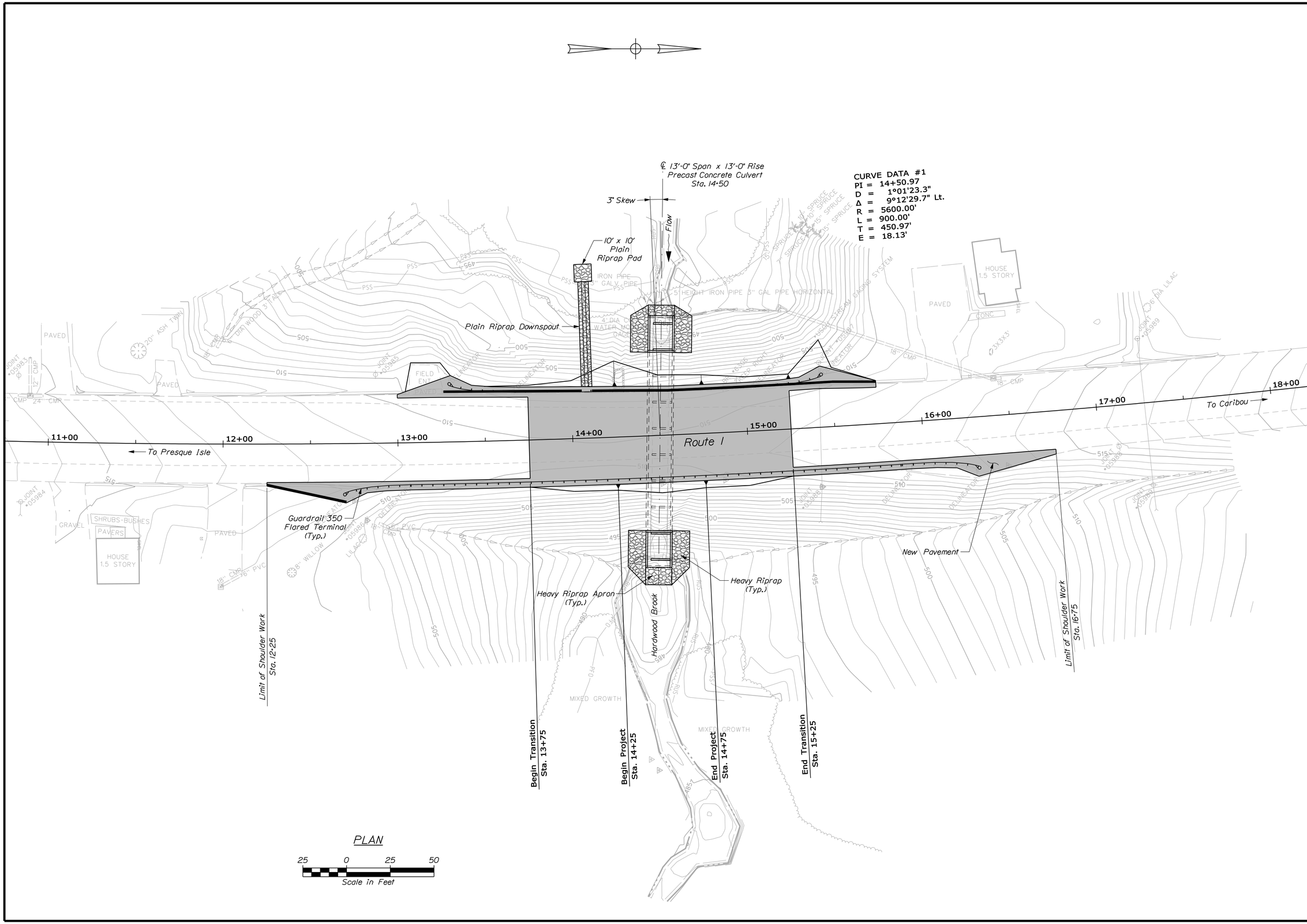

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

19319.00

WIN 19319.00

BRIDGE NO. 6306

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	Steve Bodge		
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CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

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HARDWOOD BROOK BRIDGE
HARDWOOD BROOK
CARIBOU AROOSTOOK COUNTY

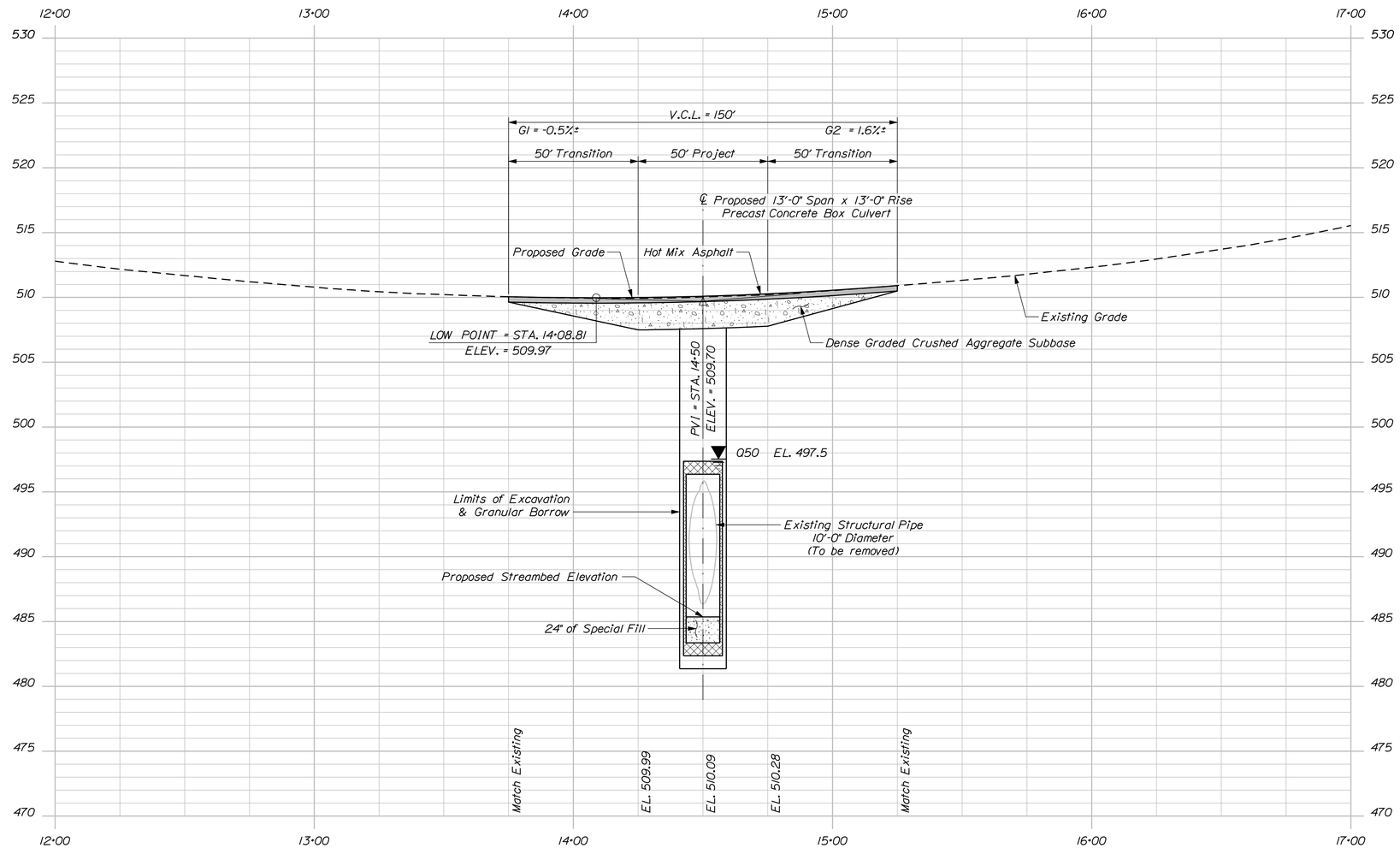
GENERAL PLAN

SHEET NUMBER

3

OF 16

Filename: ...\msta\003_General_Plan.dgn Division: BRIDGE Username: david.show Date:3/14/2013



PROFILE

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

19319.00

BRIDGE NO. 6306

WIN
19319.00

BRIDGE PLANS

PROJ. MANAGER	Steve Bodge	BY	DATE
DESIGN-DETAILED	M. Wight	D. Show	MAR 2013
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DESIGN3-DETAILED3			
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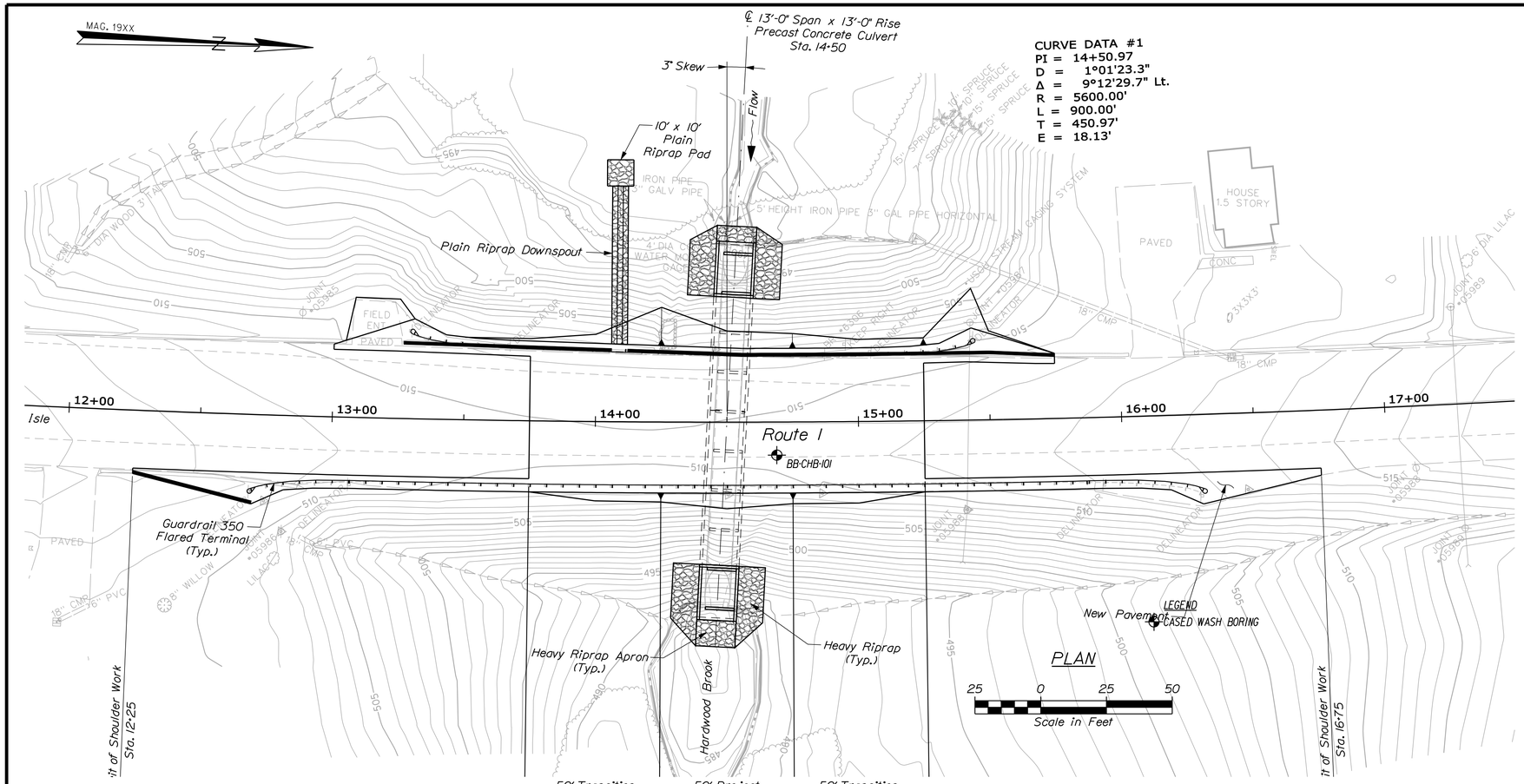
HARDWOOD BROOK BRIDGE
HARDWOOD BROOK
AROOSTOOK COUNTY
CARIBOU

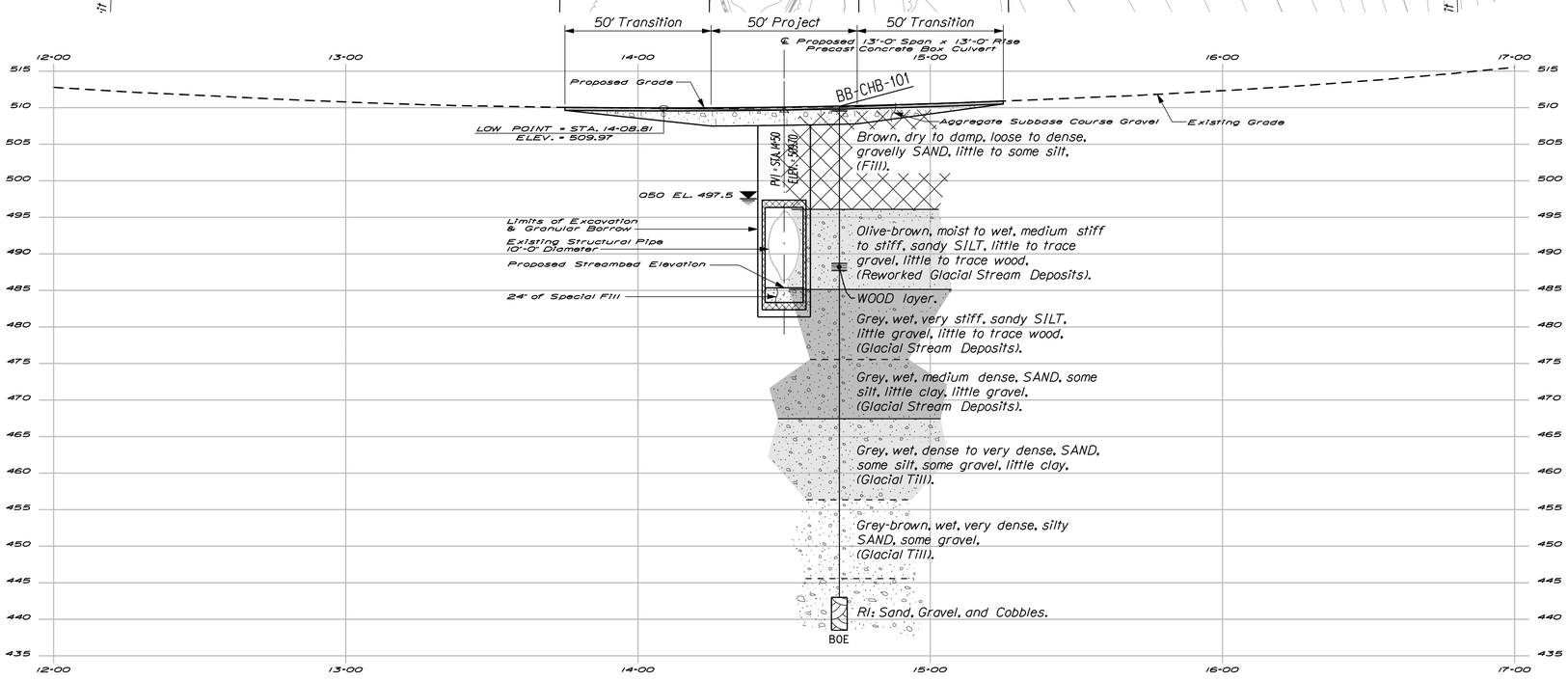
PROFILE

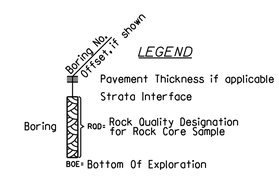
SHEET NUMBER

4

OF 16







PROFILE

HORIZ 25 0 25 50

VERT 10 0 10 20

SCALE

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.

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PROJ. MANAGER	Steve Bodge		
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DESIGN2-DETAILED2	L.KRUSINSKI	T.WHITE	JAN 2013
DESIGN3-DETAILED3	------	------	
REVISIONS 1	------	------	
REVISIONS 2	------	------	
REVISIONS 3	------	------	
REVISIONS 4	------	------	
FIELD CHANGES	------	------	

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HARDWOOD BROOK BRIDGE
HARDWOOD BROOK
AROOSTOOK COUNTY
CARIBOU

BORING LOCATION PLAN &
INTERPRETIVE SUBSURFACE PROFILE

SHEET NUMBER

5

OF 16

Filename: ...\GEOTECH\MSTA\005_BLP&ISP1.dgn Division: BRIDGE Username: dovid.show Date:3/14/2013

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Maine Department of Transportation

Soil/Rock Exploration Log

US CUSTOMARY UNITS

Project: Hardwood Brook Bridge #6306. carries Route 1 over Hardwood
Location: Caribou, Maine

Boring No.: BB-CHB-101
WIN: 19319.00

Driller:	MaineDOT	Elevation (ft.)	510.2	Auger ID/OD:	5" Solid Stem
Operator:	Giles/Daggett	Datum:	NAVD 88	Sampler:	Standard Split Spoon
Logged By:	B. Wilder	Rig Type:	CME 45C	Hammer Wt./Fall:	140#/30"
Date Start/Finish:	9/11/12-9/12/12	Drilling Method:	Cased Wash Boring	Core Barrel:	NQ-2"
Boring Location:	14+68.9, 12.7 ft Rt.	Casing ID/OD:	NW	Water Level*:	None Observed

Hammer Efficiency Factor: 0.756 — Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐

Definitions:
D = Split Spoon Sample
W = Thin Wall Tube Sample
MD = Unsuccessful Thin Wall Tube Sample attempt
R = Rock Core Sample
HSA = Hollow Stem Auger
RC = Roller Cut
MW = Weight of 140lb. hammer
WOR = Weight of rods or casing
WOH = Weight of one person
MV = Unsuccessful Vane Shear Test attempt
PP = Pocket Penetrometer
S_u = Unsuncorrected Field Vane Shear Strength (psf)
S_u = Pocket Torvane Shear Strength (psf)
q_u = Unconfined Compressive Strength (ksf)
N-uncorrected = Raw field SPT N-value
N-corrected = N-uncorrected x Hammer Calibration Value
N60 = SPT N-corrected corrected for hammer efficiency
S_u(lab) = Lab Vane Shear Strength (psf)
WC = Water content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N60	Casing Blows	Elevation (ft.)	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0							SSA	509.53	8" PAVEMENT. (0.67)	
	10	24/18	2.00 - 4.00	12/14/11/14	25	32			Cobble from 1.0-1.4 ft bgs. Brown, dry, dense, gravelly, fine to coarse SAND, little silt. (Fill)	
5	20	24/6	5.00 - 7.00	4/3/4/5	7	9		506.00	(4.20) Brown, damp, loose, gravelly, fine to coarse SAND, some silt. (Fill).	
10	30	24/10	10.00 - 12.00	3/5/7/12	12	15			Similar to above, except medium dense.	
15	40	24/15	15.00 - 17.00	2/5/7/7	12	15		496.20	(14.00) Olive-brown, moist, stiff, fine to coarse sandy SILT, little gravel. (Reworked Fine-grained Glacial Stream Deposit).	GM261915 A-4, SM WC=13.2%
20	50	24/20	20.00 - 22.00	1/2/4/7	6	8	13		Olive, wet, medium stiff, fine to medium sandy SILT, little wood, trace gravel. (Reworked Glacial Stream Deposits).	
							31	488.70	(21.50) WOOD layer from 21.5-22.5 ft bgs.	
							153	487.70	(22.50)	
							32			
							40			
25	60	24/15	25.00 - 27.00	7/9/11/13	20	25	35	485.20	(25.00) Grey, wet, very stiff, fine to coarse sandy SILT, little gravel. (Fine-grained Glacial Stream Deposits.)	
							41			
							61			
							97			
30	70	24/10	30.00 - 32.00	5/7/10/11	17	21	99		Similar to above, except with wood. Roller Coned ahead to 35.0 ft bgs.	
							23			
							36			
							30			
							24			
							23			
35	80	24/20	35.00 - 37.00	2/4/5/9	9	11	31		Grey, wet, medium dense, fine to coarse SAND, some silt, little clay, little gravel. Roller Coned ahead to 40.0 ft bgs.	GM261913 A-4, CL-ML WC=12.4% LL=21 PL=14 PI=7
							34			
							39			
							44			
							62			
40	90	24/16	40.00 - 42.00	2/3/7/13	10	13	97		Similar to above.	GM261914 A-4, CL WC=10.3% LL=21 PL=12 PI=9
							117			
							147	467.70	(42.50)	
							173			
							246			
45	100	24/12	45.00 - 47.00	16/14/15/21	29	37	162		Grey, wet, dense, fine to coarse SAND, some silt, some gravel, little clay (Glacial Till).	*GM261916 A-4, SC-SM WC=11.1%
							183			
							185			
							245			
							297			
50	110	24/13	50.00 - 52.00	20/17/21/25	38	48	83		Similar to above, except very dense. Roller Coned ahead to 55.0 ft bgs.	*GM261916 A-4, SC-SM WC=11.1%
							217			
							112			
							114	456.20	(54.00)	
							115			
55	120	24/14	55.00 - 57.00	26/47/49/35	96	121	181		Grey-brown, wet, very dense, silty, fine to coarse SAND, some gravel. (Glacial Till).	
							185			
							330			
							353			
							79		Roller Coned ahead to 60.0 ft bgs.	
60	130	18/13	60.00 - 61.50	33/57/58	115	145	76		Similar to above.	
							289			
							233			
							333		Roller Coned ahead to 65.0 ft bgs.	
65	140	24/18	65.00 - 67.00	25/24/37/61	61	77		445.20	(65.00) Similar to above, except occasional cobbles. Roller Coned ahead to 67.2 ft bgs.	
	R1	54/2	67.20 - 71.70				NQ-2		R1: Similar to above. R1(Core Times (min:sec) 67.2-68.2 ft (4:00) 68.2-69.2 ft (2:11) 69.2-70.2 ft (3:13) 70.2-71.2 ft (6:00) 71.2-71.7 ft (4:00)	
70								438.50	(71.70) Bottom of Exploration at 71.70 feet below ground surface. Boring terminated per Geotechnical Engineer.	
75										

Remarks:
*Samples 100 and 110 are combined, ie same Reference Number.

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

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1

Boring No.: BB-CHB-101

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

19319.00

WIN 19319.00

BRIDGE NO. 6306

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	Steve Bodge		
DESIGN-DETAILED	M. Wight	D. Sullivan	
CHECKED-REVIEWED	-----	-----	-----
DESIGN2-DETAILED2	L. KRUSINSKI	T. WHITE	JAN 2013
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REVISIONS 1	-----	-----	-----
REVISIONS 2	-----	-----	-----
REVISIONS 3	-----	-----	-----
REVISIONS 4	-----	-----	-----
FIELD CHANGES	-----	-----	-----

SIGNATURE

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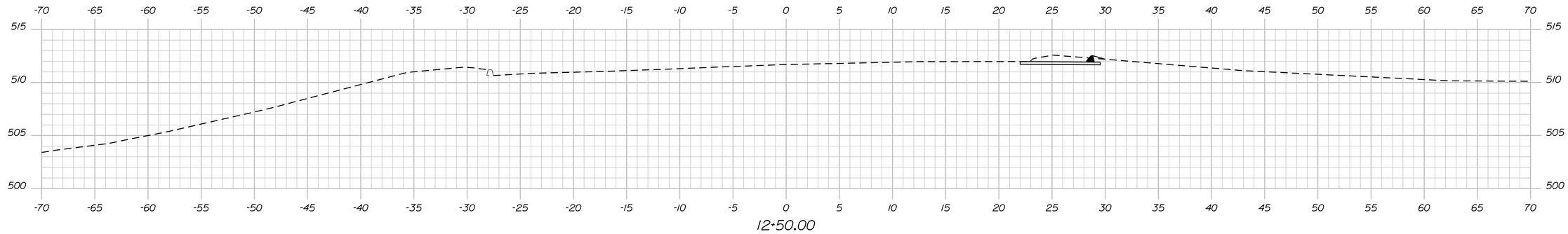
HARDWOOD BROOK BRIDGE
HARDWOOD BROOK
CARIBOU AROOSTOOK COUNTY

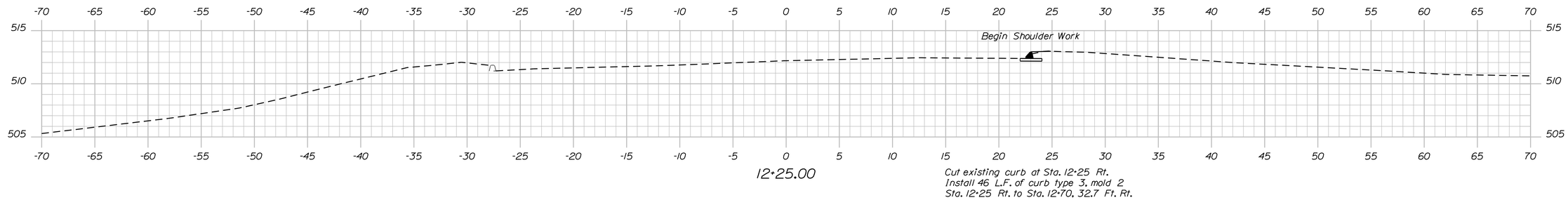
BORING LOGS

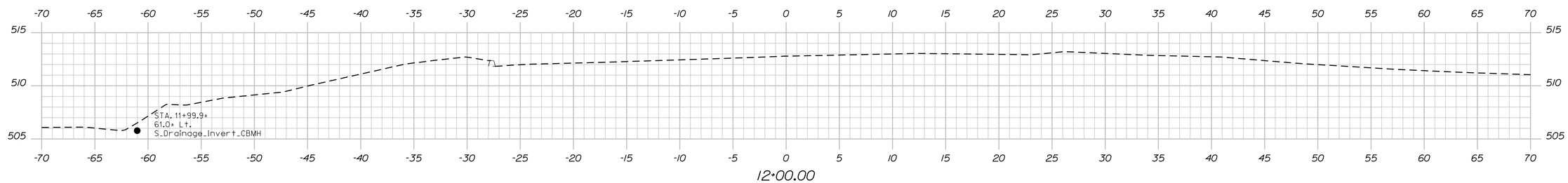
SHEET NUMBER

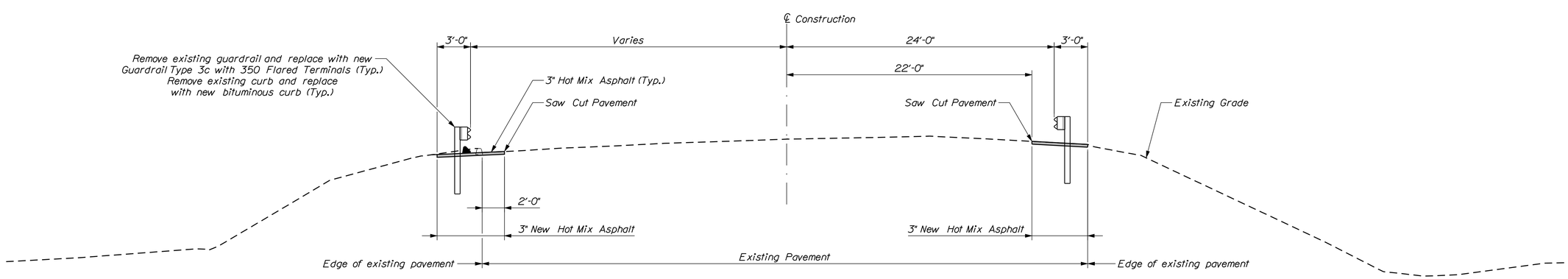
6

OF 16









PROPOSED APPROACH SECTION

Guardrail replacement and new shoulder pavement

STATE OF MAINE
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19319.00

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HARDWOOD BROOK BRIDGE
HARDWOOD BROOK
CARIBOU AROOSTOOK COUNTY

CROSS SECTIONS

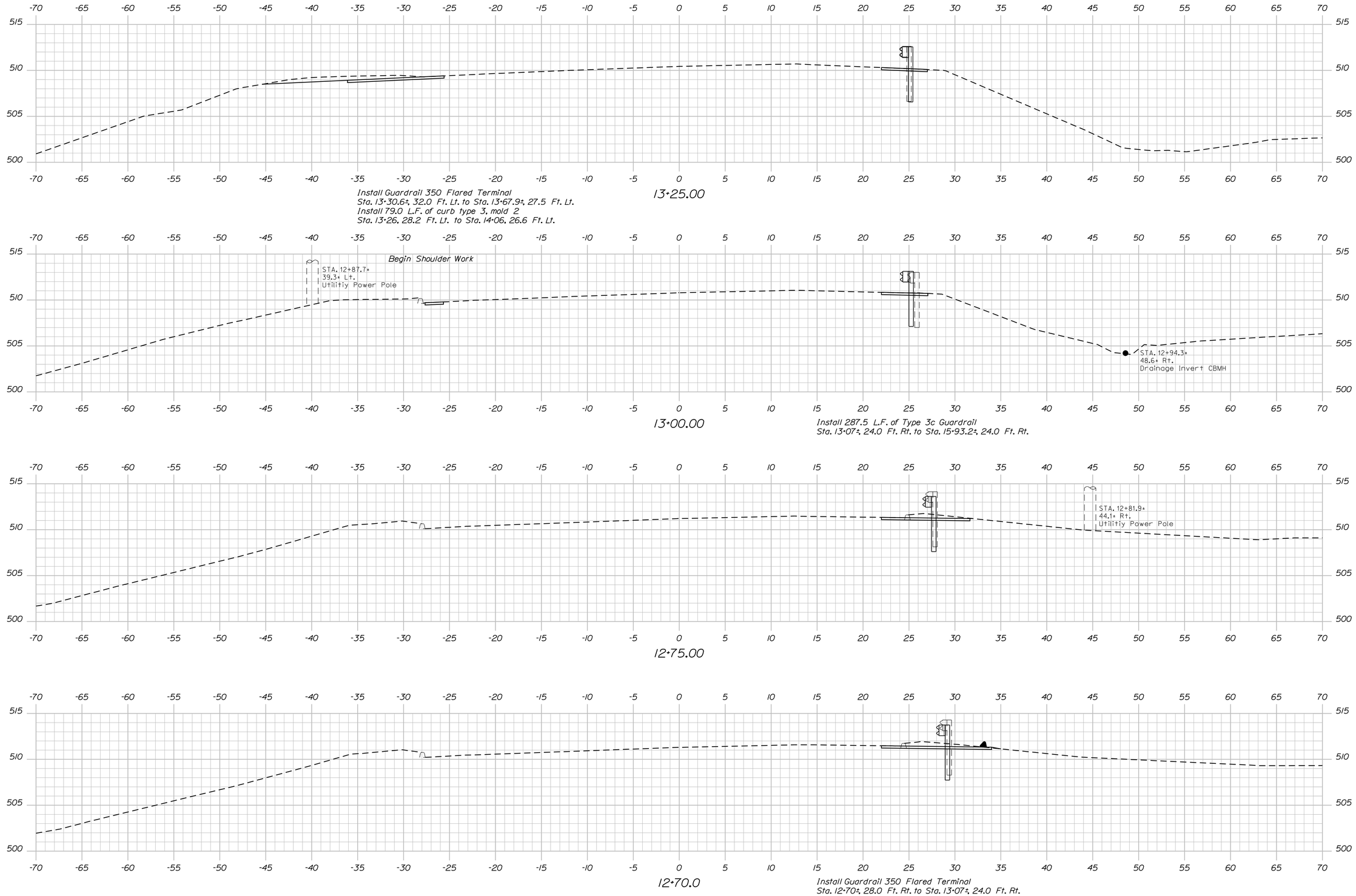
SHEET NUMBER

7

OF 16

Sta. 12+00 to Sta. 12+50

Filename: ...\MSTA\007_Xsect_12+00-12+50.dgn Division: BRIDGE Username: david.show Date:3/14/2013



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

19319.00

WIN 19319.00

BRIDGE NO. 6306

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	Steve Bodge		
DESIGN-DETAILED	M. Wight	D. Show	MAR 2013
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

HARDWOOD BROOK BRIDGE
HARDWOOD BROOK
AROOSTOOK COUNTY
CARIBOU

CROSS SECTIONS

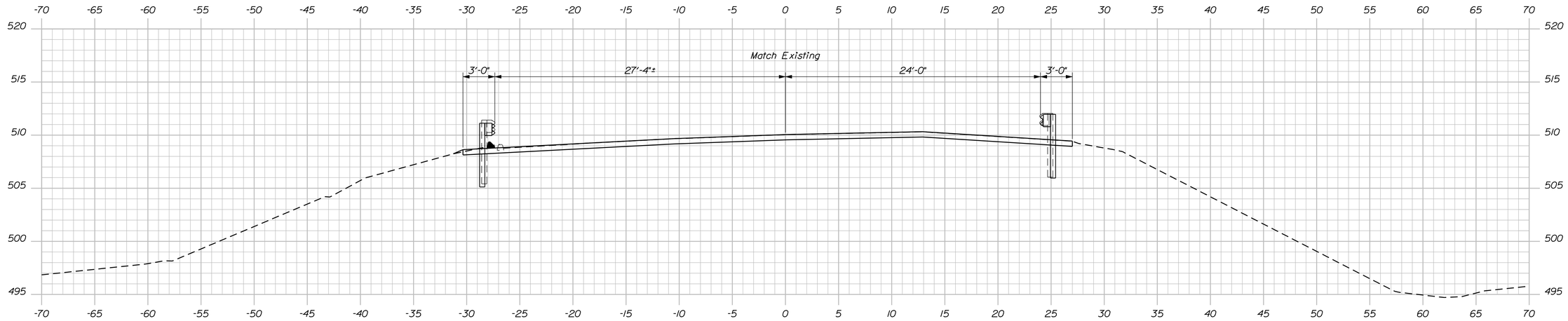
SHEET NUMBER

8

OF 16

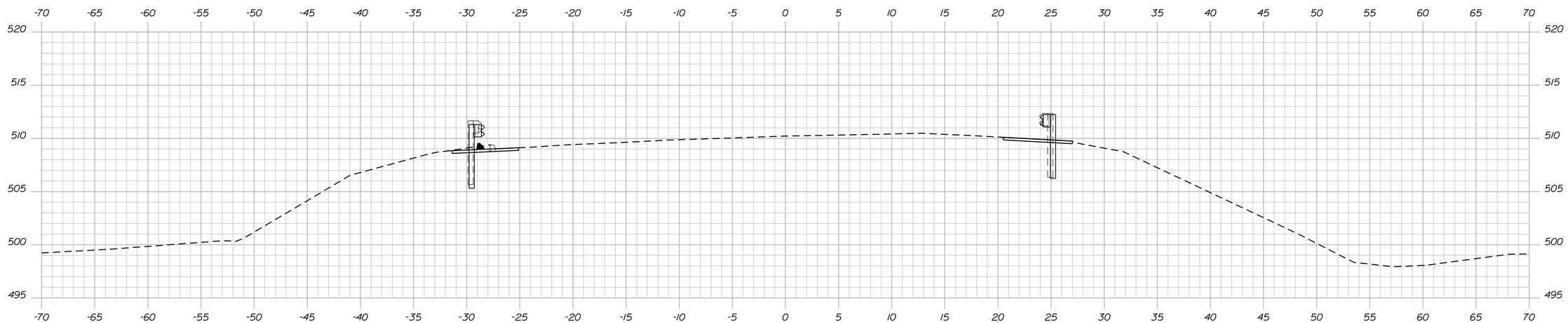
Sta. 12+70.0 to Sta. 13+25

Filename: ...\MSTA\008_Xsect_12+70-13+25.dgn Division: BRIDGE Username: david.show Date:3/14/2013

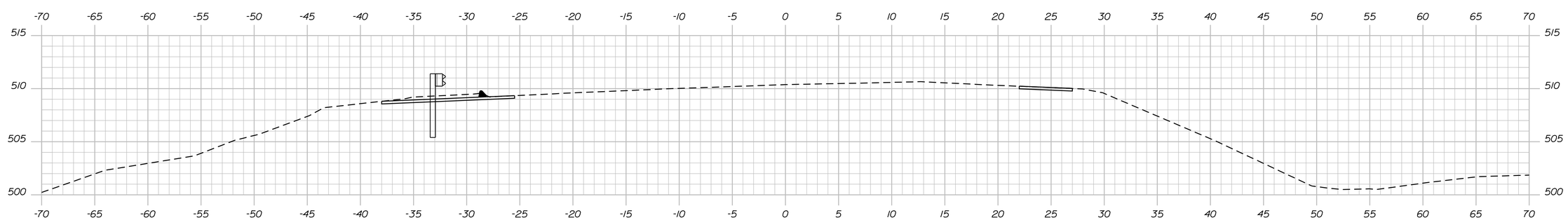


Install 87.5 L.F. of Type 3c Guardrail
Sta. 13+67.9±, 27.5 Ft. Lt. to Sta. 14+55.8±, 25.0 Ft. Lt.

13+75.00
Begin Transition



13+50.00



13+30.7

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

19319.00

WIN 19319.00

BRIDGE NO. 6306

BRIDGE PLANS

PROJ. MANAGER	Steve Bodge	BY	DATE
DESIGN-DETAILED	M. Wight	D. Show	MAR 2013
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
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FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

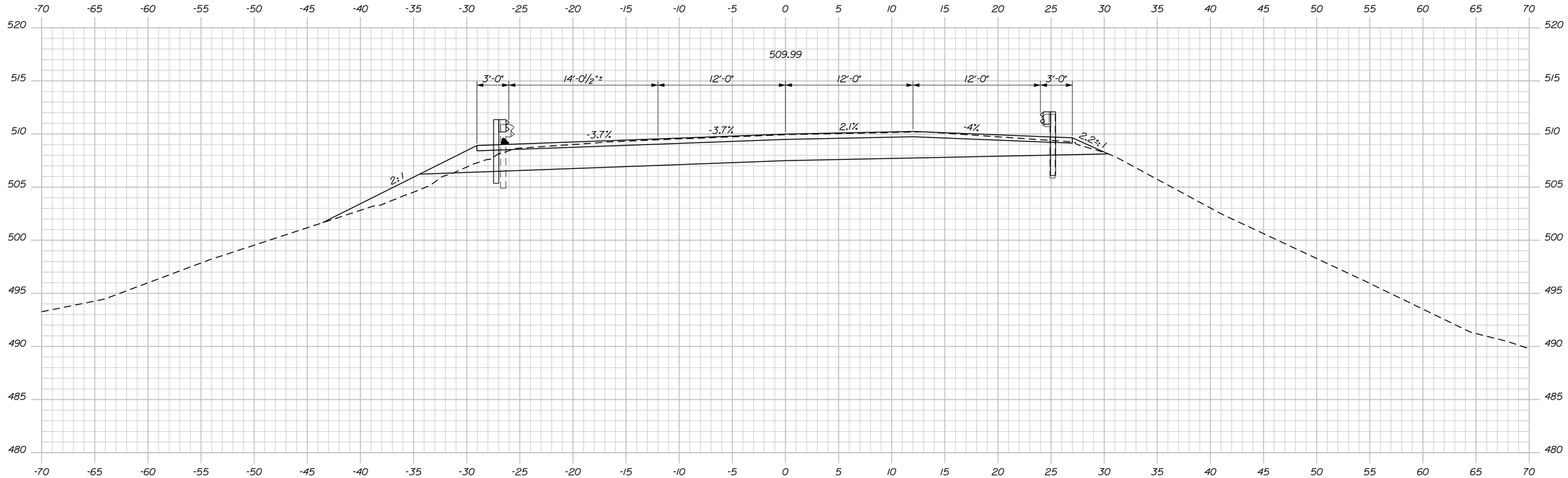
HARDWOOD BROOK BRIDGE
HARDWOOD BROOK
CARIBOU AROOSTOOK COUNTY

CROSS SECTIONS

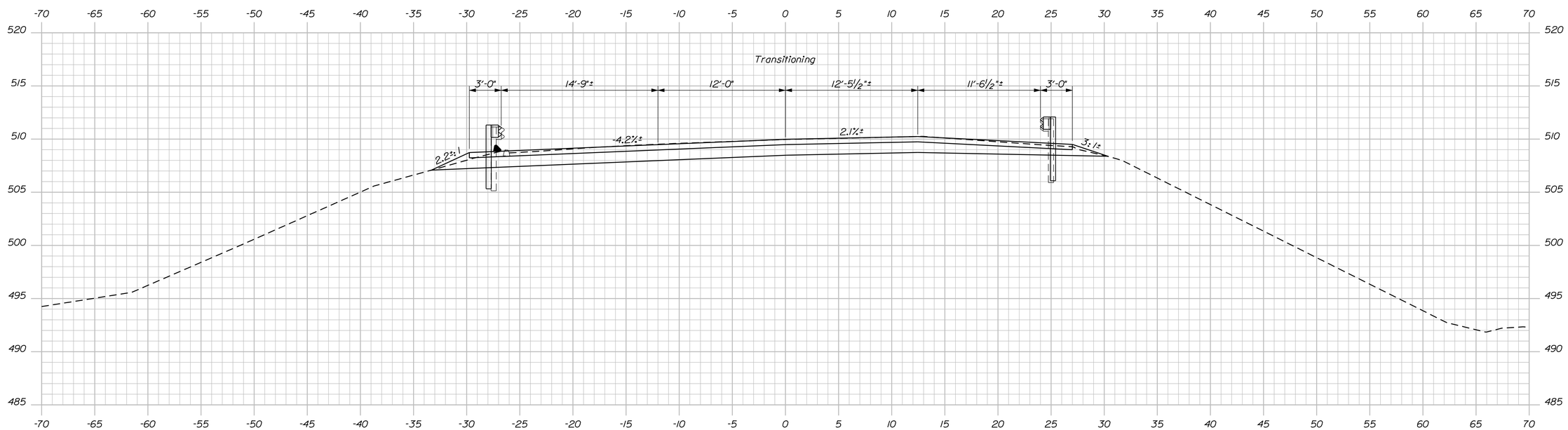
SHEET NUMBER
9
OF 16

Filename: ...\009_Xsect_13+30.7-13+75.dgn Division: BRIDGE Username: david.show Date:3/14/2013

Sta. 13+30.7 to Sta. 13+75



14+25.00
End Transition - Begin Project



Install 10 Ft. wide Riprap Pad
Sta. 14+09, 89.5 Ft. Lt. to 99.5 Ft. Lt.

Install 43.6 L.F. of curb type 3, mold 2
Sta. 14+12, 26.4 Ft. Lt. to Sta. 14+55.8, 25.0 Ft. Lt.
Install Stone Ditch Protection
Sta. 14+09, 29.5 Ft. Lt. to 89.5 Ft. Lt.

14+00.00
Transitioning

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

19319.00

BRIDGE NO. 6306

WIN
19319.00

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	Steve Bodge		
DESIGN-DETAILED	M. Wight	D. Show	MAR 2013
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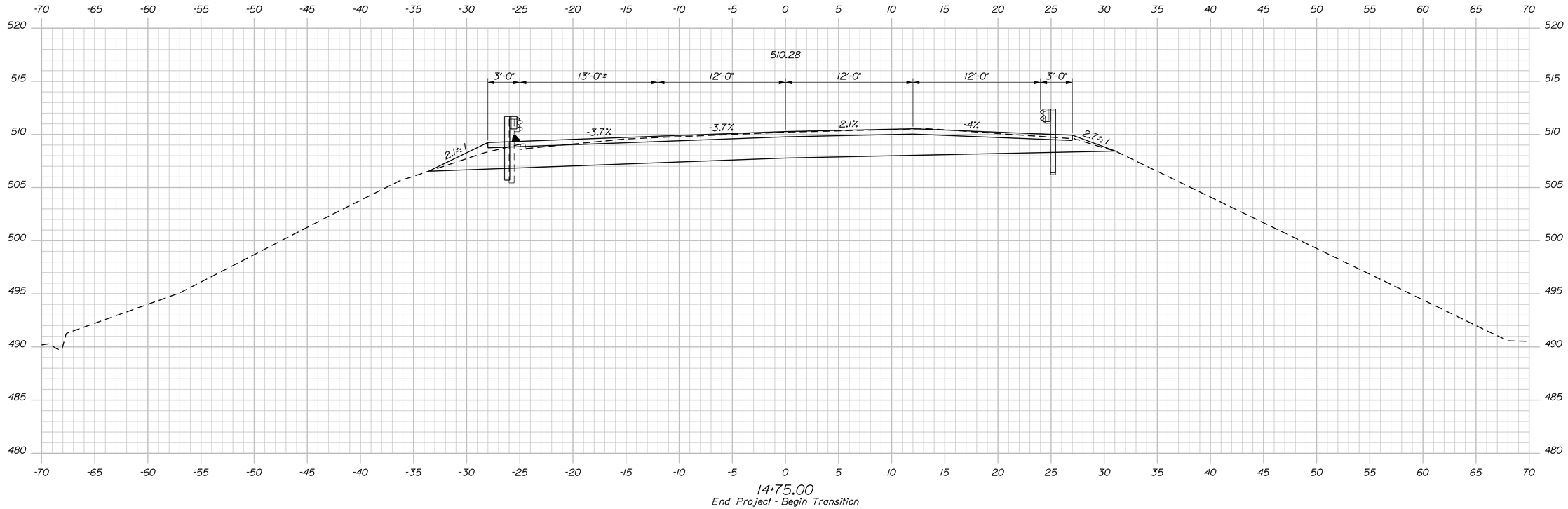
HARDWOOD BROOK BRIDGE
HARDWOOD BROOK
CARIBOU AROOSTOOK COUNTY

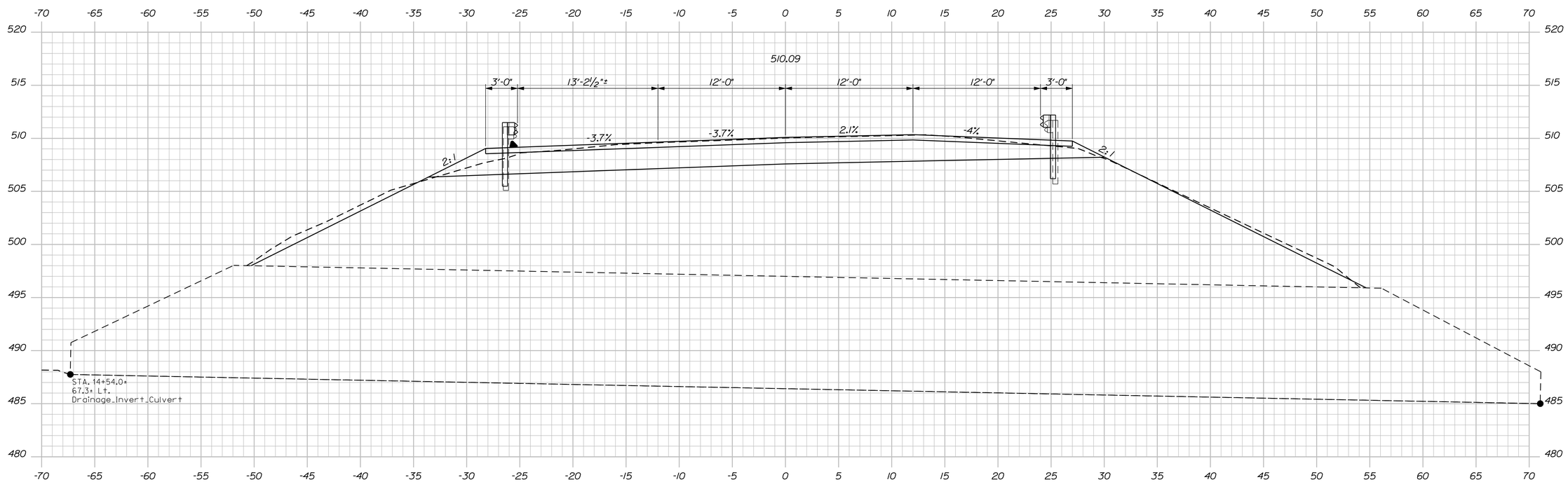
CROSS SECTIONS

SHEET NUMBER
10
OF 16

Sta. 14+00 to Sta. 14+25

Filename: ...\MSTA\010_Xsect_14+00-14+25.dgn Division: BRIDGE Username: david.show Date:3/14/2013





Install 93.8 L.F. of curb type 3, mold 2
Sta. 14+55.8, 25.0 Ft. Lt. to Sta. 15+50, 25.0 Ft. Lt.
Install 50 L.F. of Type 3c Guardrail
Sta. 14+55.8, 25.0 Ft. Lt. to Sta. 15+06±, 25.0 Ft. Lt.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

19319.00

WIN 19319.00

BRIDGE NO. 6306

BRIDGE PLANS

PROJ. MANAGER	Steve Bodge	BY	DATE
DESIGN-DETAILED	M. Wight	D. Show	MAR 2013
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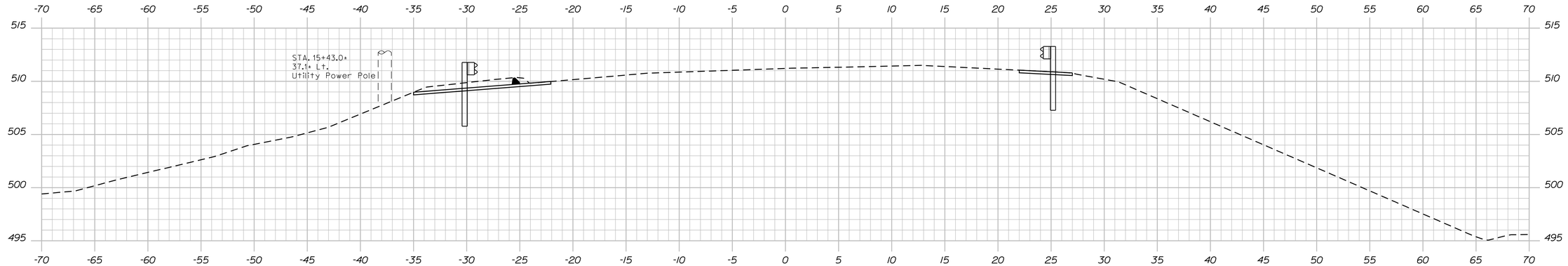
HARDWOOD BROOK BRIDGE
HARDWOOD BROOK
AROOSTOOK COUNTY
CARIBOU

CROSS SECTIONS

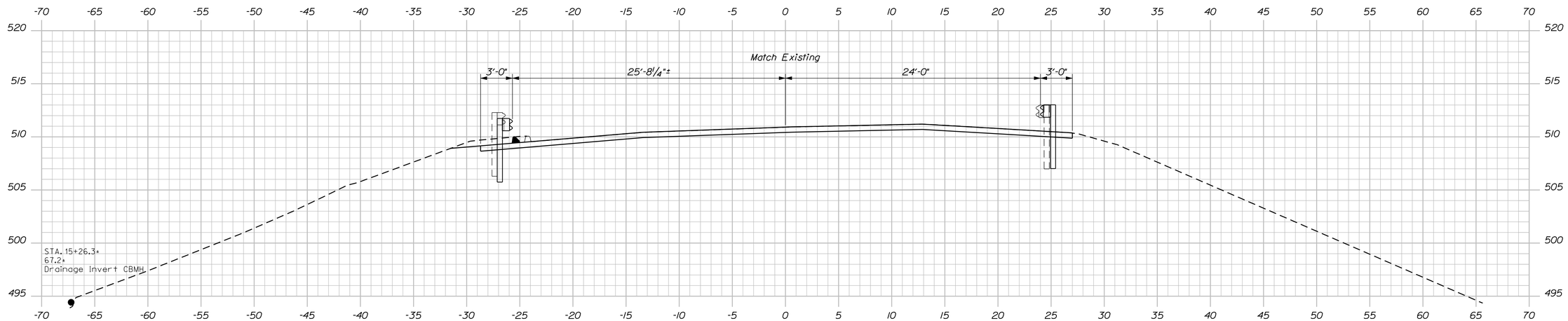
SHEET NUMBER
11
OF 16

Sta. 14+50 to Sta. 14+75

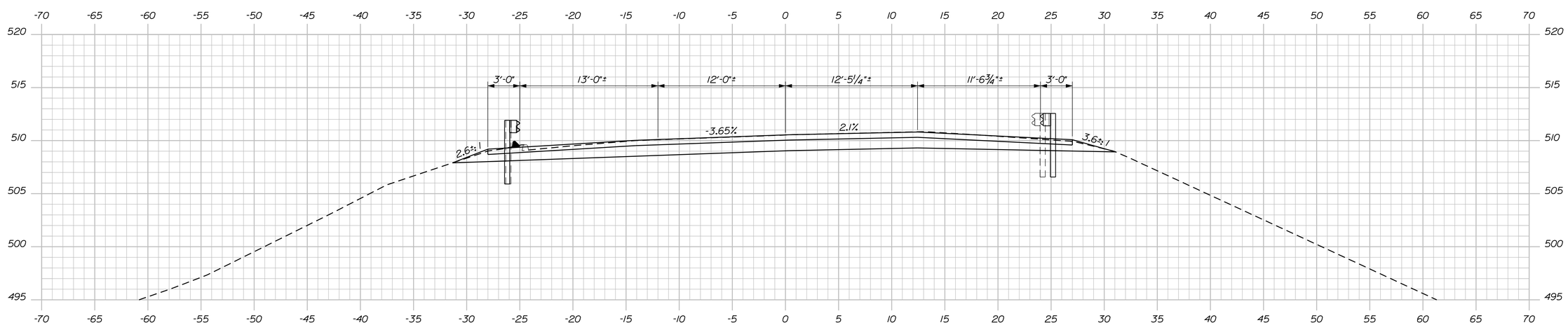
Filename: ...\MSTA\011_Xsect_14+50-14+75.dgn Division: BRIDGE Username: david.show Date:3/14/2013



15+43.3



15+25.00
End Transition



Install Guardrail 350 Flared Terminal
Sta. 15+06±, 25.0 Ft. Lt. to Sta. 15+43.3±, 29.0 Ft. Lt.

15+00.00
Transitioning

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

19319.00

WIN 19319.00

BRIDGE NO. 6306

BRIDGE PLANS

PROJ. MANAGER	Steve Bodge	BY	DATE
DESIGN-DETAILED	M. Wight	D. Show	MAR 2013
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DESIGN3-DETAILED3			
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HARDWOOD BROOK BRIDGE
HARDWOOD BROOK
CARIBOU AROOSTOOK COUNTY

CROSS SECTIONS

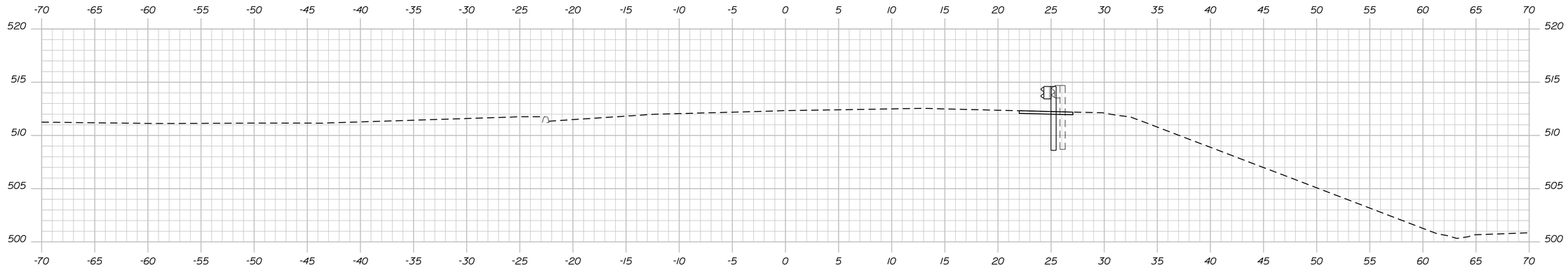
SHEET NUMBER

12

OF 16

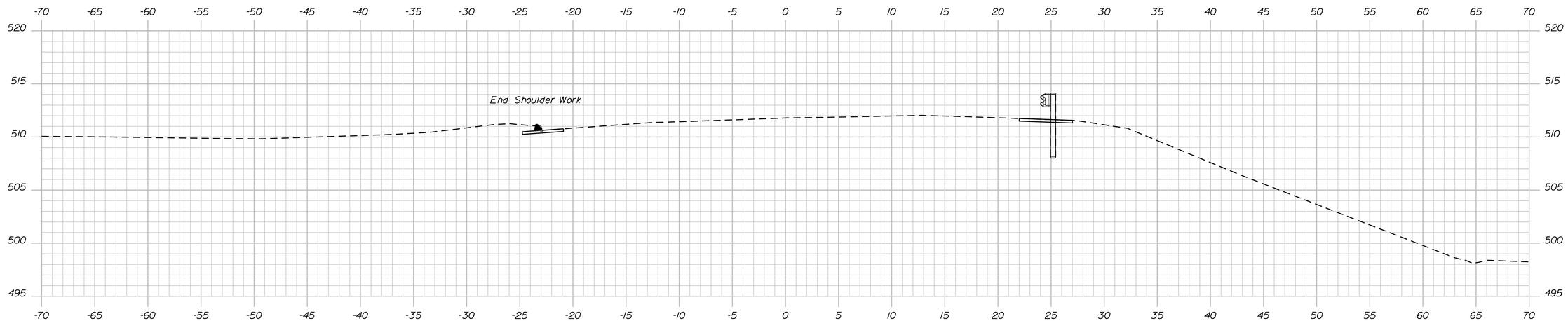
Sta. 15+00 to Sta. 15+43.3

Filename: ...\012_Xsect_15+00-15+43.3.dgn Division: BRIDGE Username: david.show Date:3/14/2013



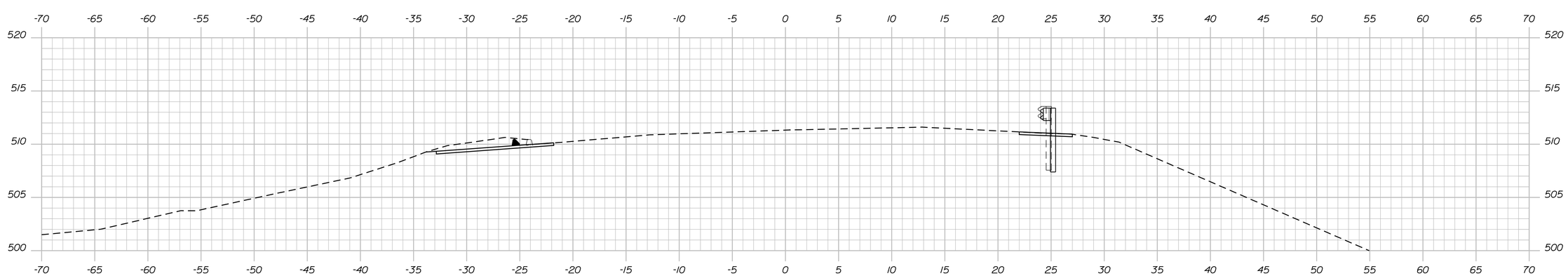
16+00.00

Install Guardrail 350 Flared Terminal
Sta. 15+93.2±, 24.0 Ft. Rt. to Sta. 16+30.2±, 28.0 Ft. Rt.



Cut existing curb at Sta. 15+75 Lt.

15+75.00



Install 25.0± L.F. of curb type 3, mold 2
Sta. 15+50, 25.0 Ft. Lt. To Sta. 15+75 Lt. (Match into existing curb)

15+50.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

19319.00

WIN 19319.00

BRIDGE NO. 6306

BRIDGE PLANS

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DESIGN2-DETAILED2			
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HARDWOOD BROOK BRIDGE
HARDWOOD BROOK
CARIBOU AROOSTOOK COUNTY

CROSS SECTIONS

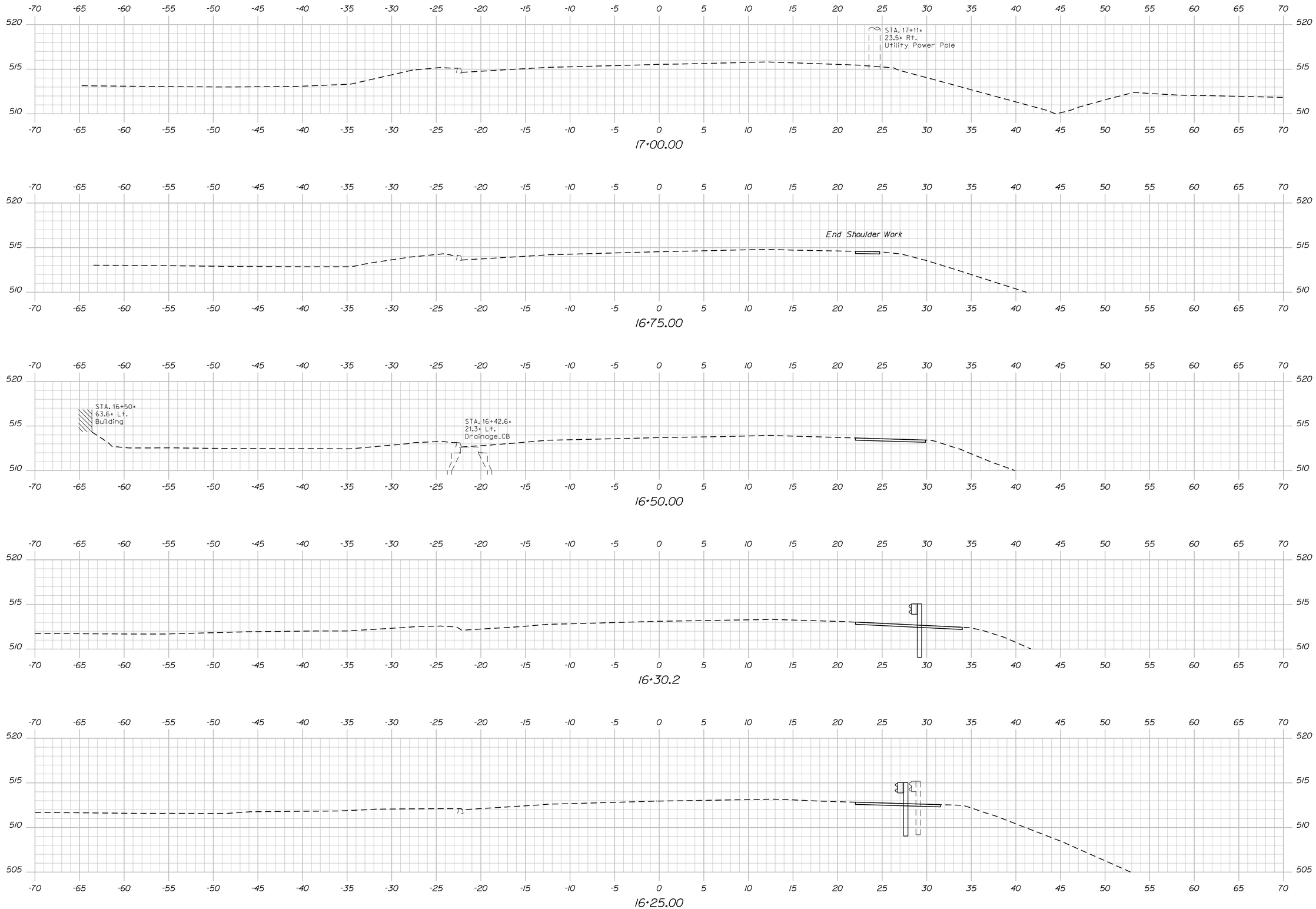
SHEET NUMBER

13

OF 16

Sta. 15+50 to Sta. 16+00

Filename: ...\MSTA\013_Xsect_15+50-16+00.dgn Division: BRIDGE Username: dovid.show Date:3/14/2013



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

19319.00

WIN 19319.00

BRIDGE NO. 6306

BRIDGE PLANS

PROJ. MANAGER	Steve Bodge	BY	DATE
DESIGN-DETAILED	M. Wight	D. Show	MAR 2013
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
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REVISIONS 1			
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FIELD CHANGES			

SIGNATURE

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DATE

HARDWOOD BROOK BRIDGE
HARDWOOD BROOK
CARIBOU AROOSTOOK COUNTY

CROSS SECTIONS

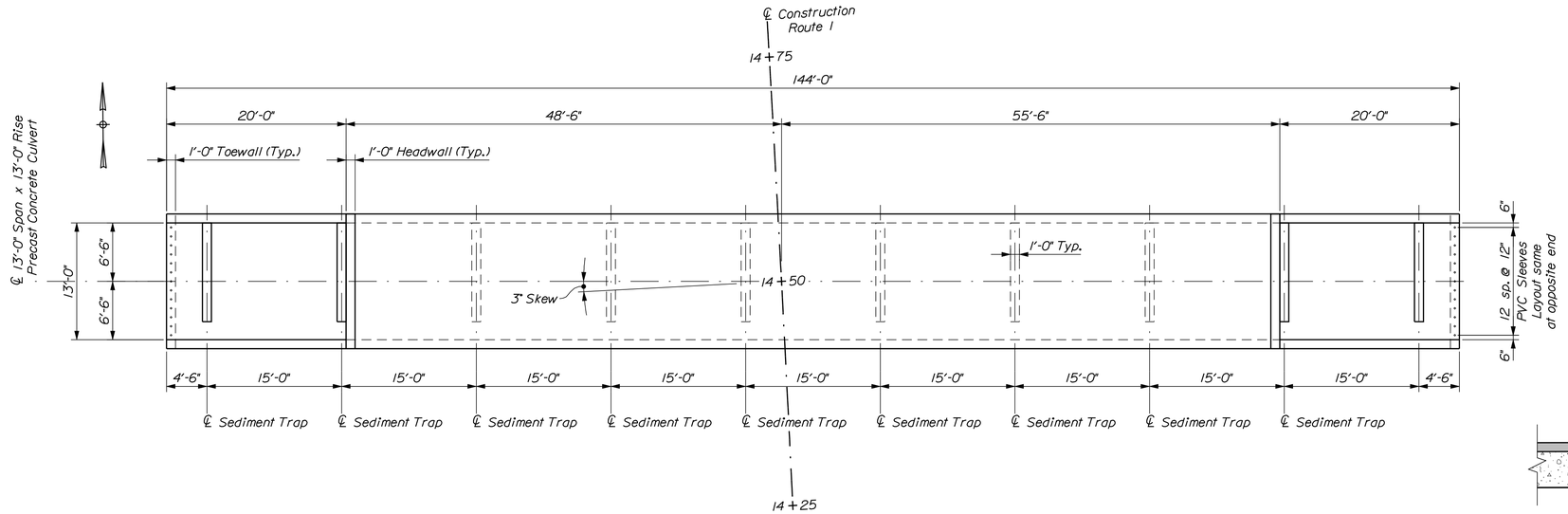
SHEET NUMBER

14

OF 16

Sta. 16+25 to Sta. 17+00

Filename: ...\MSTA\014_Xsect_16-25-17-00.dgn Division: BRIDGE Username: dovid.show Date:3/14/2013

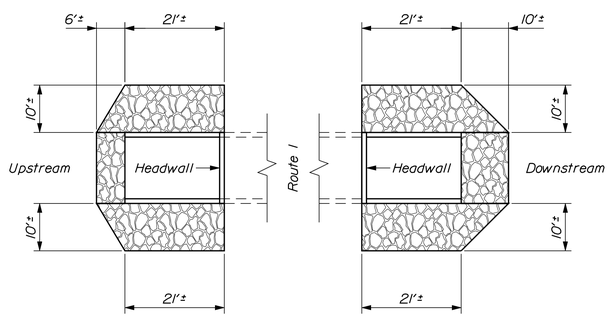


CONCRETE BOX PLAN

PRECAST CONCRETE BOX NOTES

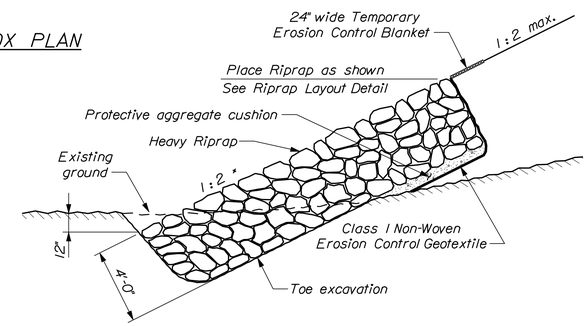
1. The handling, and assembly of the precast units shall be in accordance with Special Provisions Section 534, Precast Structural Concrete, and with the manufacturer's specifications as applicable.

2. Granular Borrow for the Precast Box bedding and backfill within the Limits of excavation shall meet the requirements of Special Provision 534 and be compacted to no less than 92% of AASHTO T-180. All backfill material required for the reconstruction of roadway embankment removed to allow installation of the precast box and outside of the Limits of Excavation shall meet the requirements of Section 203.12 - Construction of Earth Embankment with Moisture and Density Control, except that the minimum required compaction shall be 92% of AASHTO T-180, Method C or D.



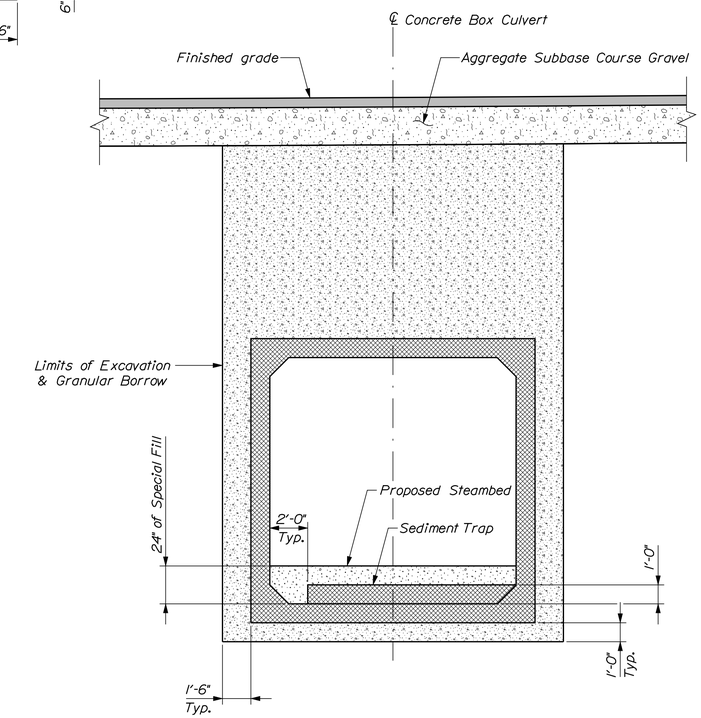
RIPRAP LAYOUT

Sediment Sills not shown for clarity



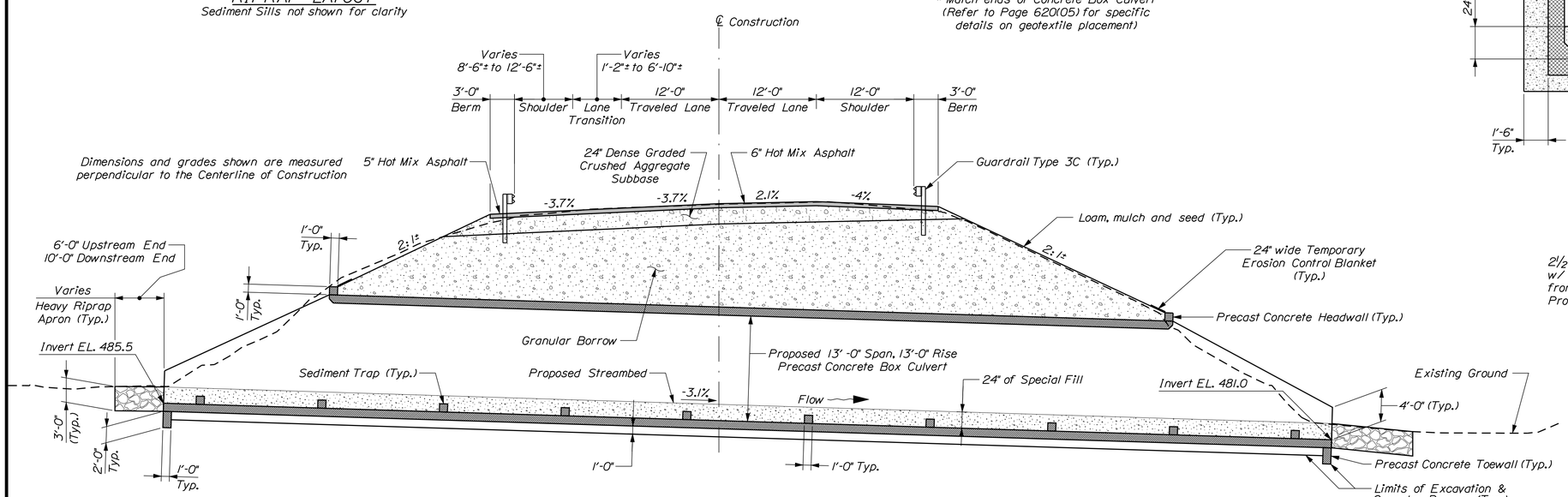
HEAVY RIPRAP SIDE SLOPE

* Match ends of Concrete Box Culvert (Refer to Page 620(05) for specific details on geotextile placement)



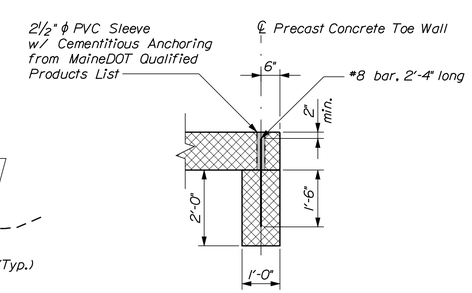
TYPICAL SECTION

(Shown through Sediment Trap)



PROPOSED BRIDGE TRANSVERSE SECTION AND APPROACH SECTION

(Along centerline of concrete box)



PRECAST CONCRETE TOEWALL DETAIL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

19319.00

BRIDGE NO. 6306

WIN 19319.00

BRIDGE PLANS

PROJ. MANAGER	Steve Bodge	BY	DATE
DESIGN-DETAILED	M. Wight	D. Show	MAR 2013
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

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DATE

HARDWOOD BROOK BRIDGE
HARDWOOD BROOK
CARIBOU AROOSTOOK COUNTY

PRECAST CONCRETE BOX DETAILS

SHEET NUMBER

15

OF 16

Filename: ...\015_Precast_Concrete_Box.dgn Division: BRIDGE Username: david.show Date:3/14/2013

Filename: ...\00\ROW\MSTA\001_RWPLAN1.dgn Division: BRIDGE Username: david.show Date:3/14/2013

GRID 19XX
ZONE

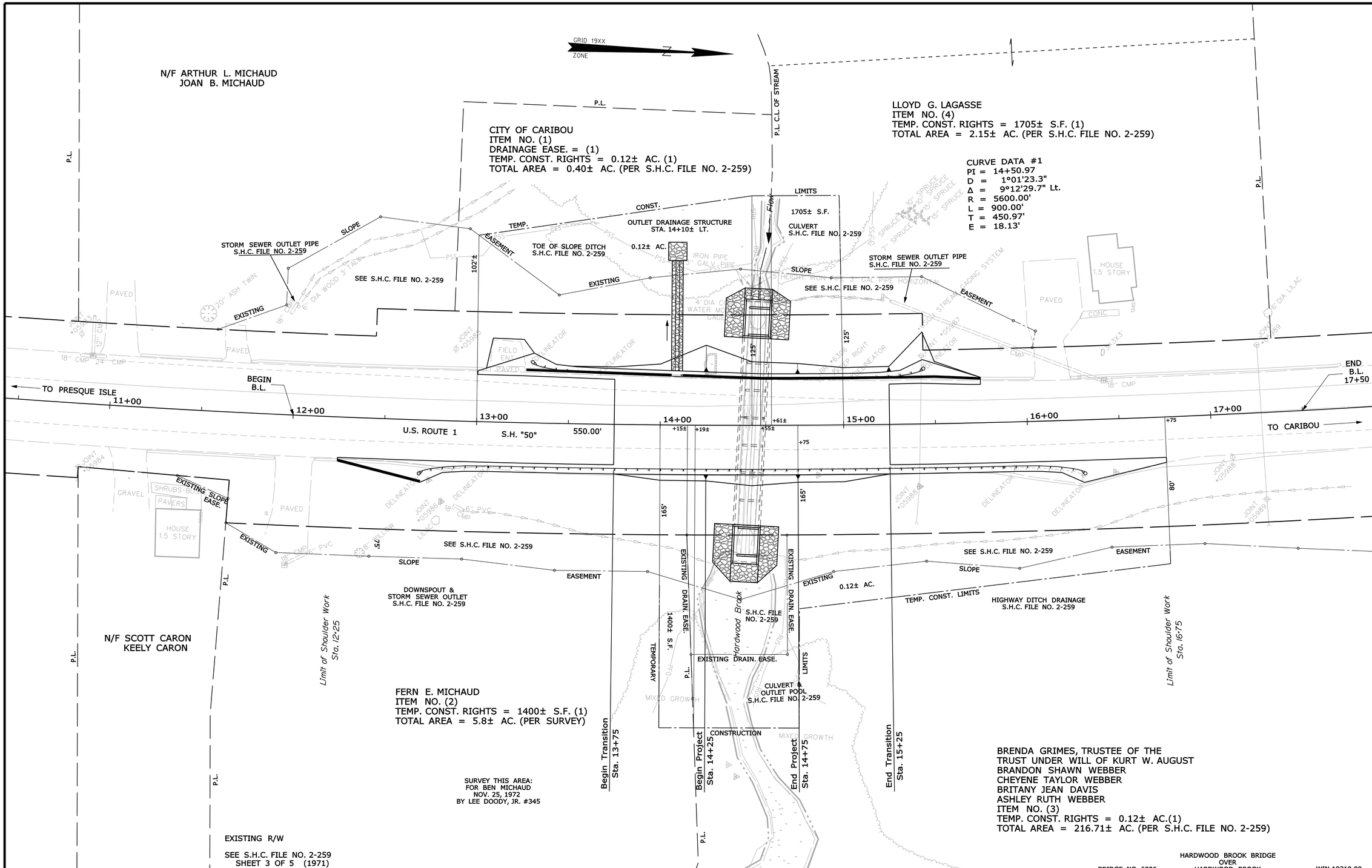
N/F ARTHUR L. MICHAUD
JOAN B. MICHAUD

CITY OF CARIBOU
ITEM NO. (1)
DRAINAGE EASE. = (1)
TEMP. CONST. RIGHTS = 0.12± AC. (1)
TOTAL AREA = 0.40± AC. (PER S.H.C. FILE NO. 2-259)

LLOYD G. LAGASSE
ITEM NO. (4)
TEMP. CONST. RIGHTS = 1705± S.F. (1)
TOTAL AREA = 2.15± AC. (PER S.H.C. FILE NO. 2-259)

CURVE DATA #1
PI = 14+50.97
D = 1°01'23.3"
Δ = 9°12'29.7" Lt.
R = 5600.00'
L = 900.00'
T = 450.97'
E = 18.13'

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



BRIDGE NO. 6306 — HARDWOOD BROOK BRIDGE OVER HARDWOOD BROOK — WIN 19319.00

SYMBOLS

- ● IP or ● IPF (IRON PIPE or PIN FOUND)
- ☐ S.T. (SEPTIC TANK)
- ▣ (ROW MONUMENT)
- △BM (TRAVERSE POINT)
- WELL
- GRADING LIMIT LINE
- CONSTRUCTION LIMIT LINE
- PROPERTY LINE
- LIMITS OF "RIGHT OF PORTION (L.O.W.P.)
- EXISTING RIGHT OF WAY
- NEW RIGHT OF WAY
- NEW ROW WITHIN EXIST. ROW
- CONTROL OF ACCESS
- WATER LINE
- GAS LINE
- ELECTRIC LINE
- TELEPHONE LINE
- SEWER LINE

ITEM	TECH	CHECKED
BASE MAP		
EXIST. R/W	D.S.G.	
PROP. LINES		
AREAS		

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

REVISIONS

NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK		PAGE	COUNTY RECORD			
NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE
		COND.	2/19/13	5153	282

DAVID BERNHARDT
COMMISSIONER
KENNETH L. SWEENEY
CHIEF ENGINEER
DATE

STATE OF MAINE — PETER A. BELANGER 1341 — PROFESSIONAL LAND SURVEYOR

STATE HIGHWAY "50"
U.S. ROUTE 1
CARIBOU — AROOSTOOK COUNTY
STATE PROJECT NO. 19319.00

DECEMBER 2012 | RIGHT-OF-WAY MAP | D.O.T. FILE NO. 2-552
SCALE 1" = 25' | SHEET 1 OF 1

SHEET NUMBER
16
OF 16