STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

RUMFORD
OXFORD COUNTY
SPLIT BROOK BRIDGE
OVER
SPLIT BROOK
ANDOVER ROAD
STATE PROJECT NO. 18487.00
PROJECT LENGTH 0.019 mi.
BRIDGE NO. 6487

SPECIFICATIONS

Design: Load and Resistance Factor Design per AASHTO LRFD Bridge Design Specifications, Seventh (7th) Edition with 2015 Interims.

DESIGN LOADING

Live Load - HL - 93 Modified

TRAFFIC DATA

Current (2014) AADT	890
Future (2034) AADT	1060
DHV - % of AADT	11
Design Hour Volume	117
Heavy Trucks (% of AADT)	15
Heavy Trucks (% of DHV)	10
Directional Distribution (% of DHV)	60
18 kip Equivalent P 2.0	115
18 kip Equivalent P 2.5	109
Design Speed (mph)	35

HYDROLOGIC DATA

Drainage Area	2.80 sq mi
Design Discharge (Q50)	486.8 cfs
Check Discharge (Q100)	575.5 cfs
Headwater Elevation (Q50)	623.33 ft
Headwater Elevation (Q100)	623.85 ft
Discharge Velocity (Q50)	6.88 fps
Discharge Velocity (Q100)	7.87 fps
Headwater Elevation (Q1.1)	620.5 ft
Discharge Velocity (Q1.1)	1.42 fps
Headwater Elevation (Q25)	622.87 ft

*Headwater Elevations and discharge velocities are based on the Precast Concrete Box Culvert option.

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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UTILITIES

Central Maine Power Company	Time Warner Cable
Fairpoint Communications	Greater Augusta Utility District

MAINTENANCE OF TRAFFIC

Close bridge during construction and maintain two way traffic via signed detour.

PROJECT LOCATION:	Located 1.38 miles northwest of the intersection of Route 2 and Andover Road. Latitude: 44^ 31' 36" Longitude: -70^ 38' 16"
PROGRAM AREA:	Bridge Program
OUTLINE OF WORK:	Replace existing Structural Plate Pipe Arch with Precast Concrete Box Culvert or Conspan I Series.

WIN 18487.00

18487.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED

COMMISSIONER: [signature] DATE 4/3/15

CHIEF ENGINEER: [signature] 4-3-15

STATE OF MAINE Michael Harry Wight 8089 LICENSED PROFESSIONAL ENGINEER

SIGNATURE Michael Wight 8089

P.E. NUMBER 3/20/2015

DATE

PROJECT INFORMATION

PROGRAM	BRIDGE
PROJECT MANAGER	MICHAEL WIGHT
DESIGNER	TYLER HJELM
CONSULTANT	
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

RUMFORD
SPLIT BROOK BRIDGE

TITLE SHEET

SHEET NUMBER
1
OF 14

Filename:\00\BRIDGE\MSTA\001_Title.dgn Division: BRIDGE Username: gerald.libby Date:3/20/2015

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
203.20	COMMON EXCAVATION	480	CY
203.24	COMMON BORROW	5	CY
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	610	CY
403.208	HOT MIX ASPHALT 12.5 MM HMA SURFACE	70	T
403.213	HOT MIX ASPHALT 12.5 MM BASE	110	T
409.15	BITUMINOUS TACK COAT - APPLIED	20	G
511.07	COFFERDAM: DOWNSTREAM	1	LS
511.07	COFFERDAM: UPSTREAM	1	LS
513.22	CRUSHED STONE SLOPE PROTECTION	30	SY
526.301	TEMPORARY CONCRETE BARRIER TYPE I (60 LF)	1	LS
527.34	WORK ZONE CRASH CUSHIONS	4	UN
531.51	BRIDGE STRUCTURE - DETAIL BUILD	1	LS
606.23	GUARDRAIL TYPE 3C - SINGLE RAIL	100	LF
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	8	EA
606.79	GUARDRAIL 350 FLARED TERMINAL	4	EA
610.08	PLAIN RIPRAP	50	CY
613.319	EROSION CONTROL BLANKET	60	SY
615.07	LOAM	30	CY
618.14	SEEDING METHOD NUMBER 2 - PLAN QUANTITY	4	UN
619.1201	MULCH - PLAN QUANTITY	4	UN
619.1401	EROSION CONTROL MIX	50	CY
620.58	EROSION CONTROL GEOTEXTILE	40	SY
627.733	4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	200	LF
629.05	HAND LABOR, STRAIGHT TIME	10	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	10	HR
631.15	ROLLER, EARTH AND BASE COURSE (INCLUDING OPERATOR)	10	HR
631.171	TRUCK - SMALL (INCLUDING OPERATOR)	10	HR
639.19	FIELD OFFICE TYPE B	1	EA
652.312	TYPE III BARRICADE	7	EA
652.33	DRUM	20	EA
652.34	CONE	40	EA
652.35	CONSTRUCTION SIGNS	500	SF
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES (60 CD)	1	LS
652.38	FLAGGER	80	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 as shown on the plans are approximate. The exact limits will be established in the field by the Resident. Payment for clearing will be considered incidental to Contract items.

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

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

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

6. All embankment material, except as otherwise shown, placed below EL. 619.93 shall be Granular Borrow meeting the requirements of Subsection 703.19, Material for Underwater Backfill.

7. Place riprap on sideslopes up to EL. 623.33.

8. Riprap adjacent to the box culvert shall be placed so as not to damage the culvert. Any damage to the box culvert during construction shall be repaired or replaced as determined by the Resident at the Contractor's expence.

9. The riprap slope protection shall be constructed as shown in MaineDOT Standard Detail 610(02). The protective aggregate cushion layer shall be 12 inches thick. A class I non woven erosion control geotextile shall be used under the protective aggregate cushion layer.

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

11. Erosion Control Mix may be substituted in those areas normally receiving loam and seed as directed by the Resident. Placement shall be in accordance with Standard Specifications Section 619, Mulch. Payment will be made under Item No. 619.1401, Erosion Control Mix.

12. Place a 24-in. wide strip of Temporary Erosion Control Blanket on the sideslopes along the top of the riprap.

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

14. 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.

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

On all concrete headwalls and box surfaces that are exposed and to limit lines, one foot beyond intersections of surfaces with ground.

16. Project information referred to below may be accessed at the following MaineDOT web address: http://www.maine.gov/mdot/comprehensive-list-projects/project-information.php.

17. The project geotechnical report titled: Soils Report 2014-27, Geotechnical Design Report for the Construction of Split Brook Bridge, Rumford, Maine, December 9, 2014 may be accessed at the MaineDOT web address.

18. 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.

19. 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.

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18487.00

WIN 18487.00

BRIDGE NO. 6487

BRIDGE PLANS

PROJ. MANAGER	S. BODGE	BY	DATE
DESIGN-DETAILED	T. HJELM	D. SHAW	
CHECKED-REVIEWED	M. WIGHT	D. SULLIVAN	MAR 2015
DESIGN2-DETAILED2	L. KRUSINSKI	T. WHITE	JUL 2014
DESIGN3-DETAILED3	------	------	------
REVISIONS 1	------	------	------
REVISIONS 2	------	------	------
REVISIONS 3	------	------	------
REVISIONS 4	------	------	------
FIELD CHANGES	------	------	------

SIGNATURE

P.E. NUMBER

DATE

SPLIT BROOK BRIDGE
SPLIT BROOK
RUMFORD OXFORD COUNTY

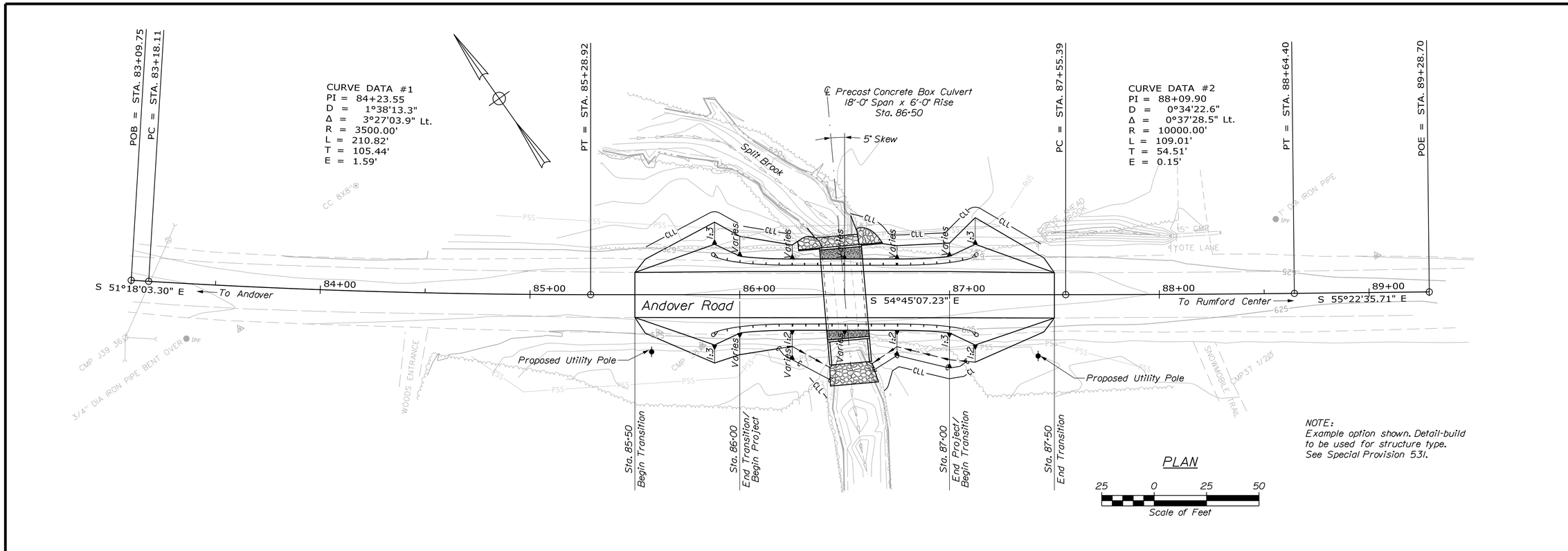
ESTIMATED QUANTITIES

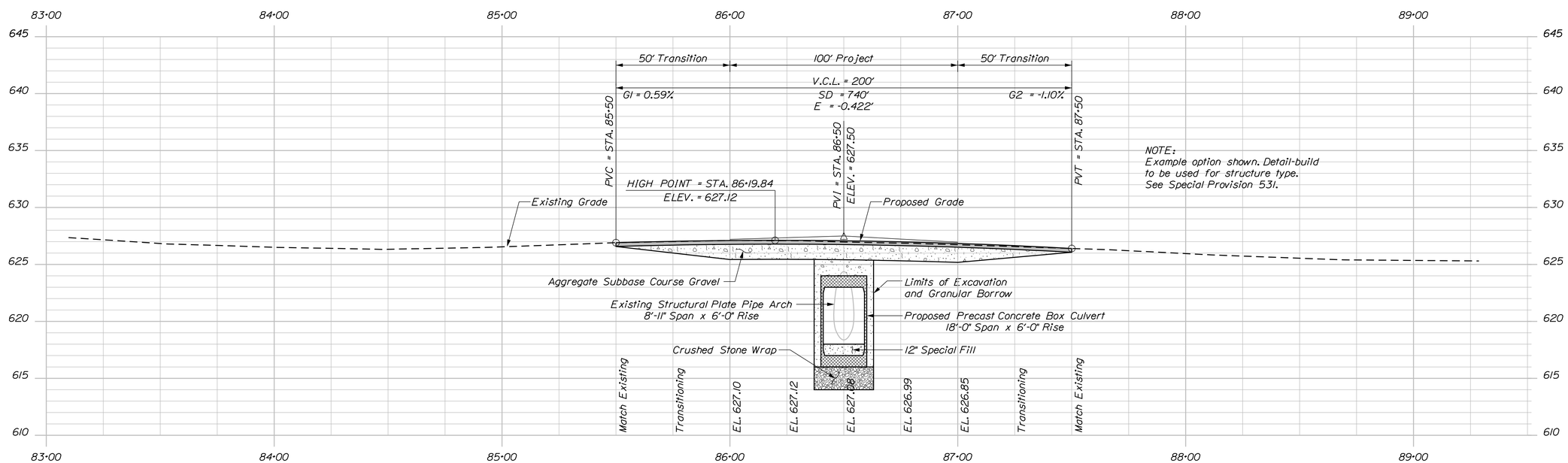
SHEET NUMBER

2

OF 14

Filename: ...\BRIDGE\MSTA\002_Estimate.dgn Division: BRIDGE Username: David.Sullivan Date:3/31/2015





PROFILE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

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BRIDGE NO. 6487

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CHECKED-REVIEWED	M. WIGHT	D. SULLIVAN	MAR 2015
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DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
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REVISIONS 4			
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SIGNATURE

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DATE

SPLIT BROOK BRIDGE
SPLIT BROOK
RUMFORD OXFORD COUNTY

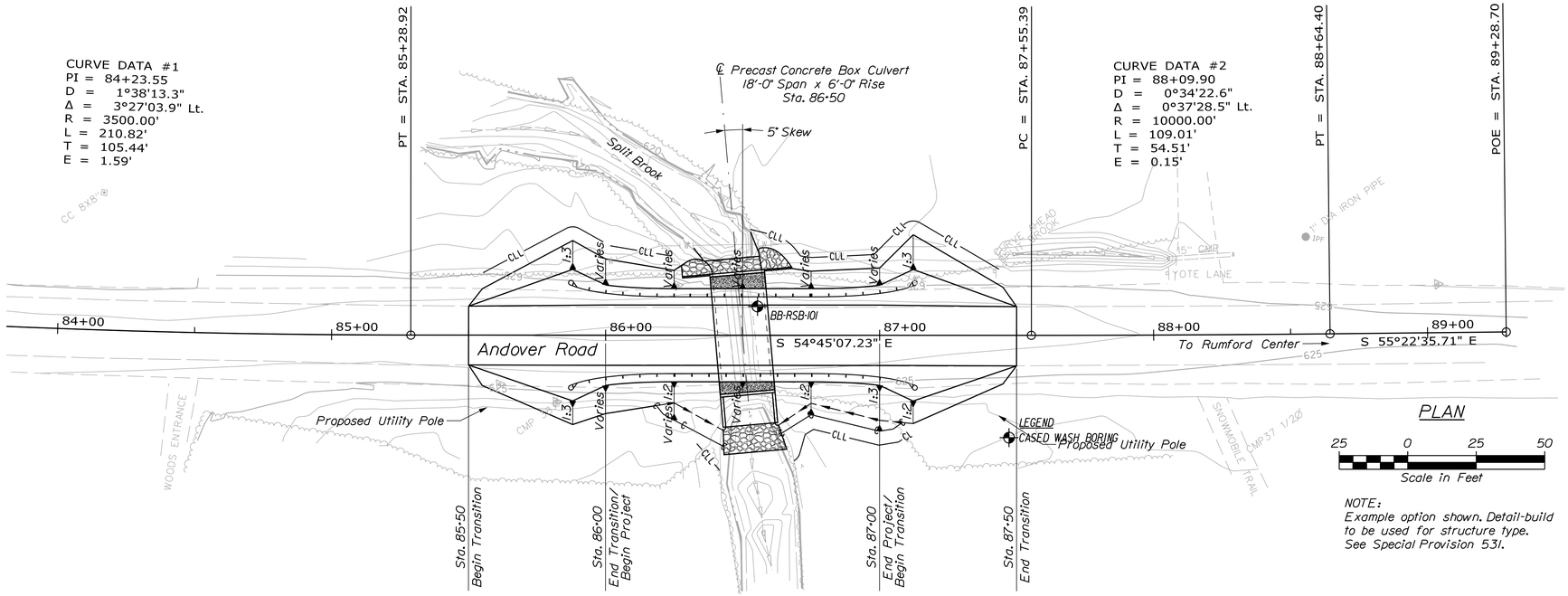
GENERAL PLAN AND PROFILE

SHEET NUMBER

3

OF 14

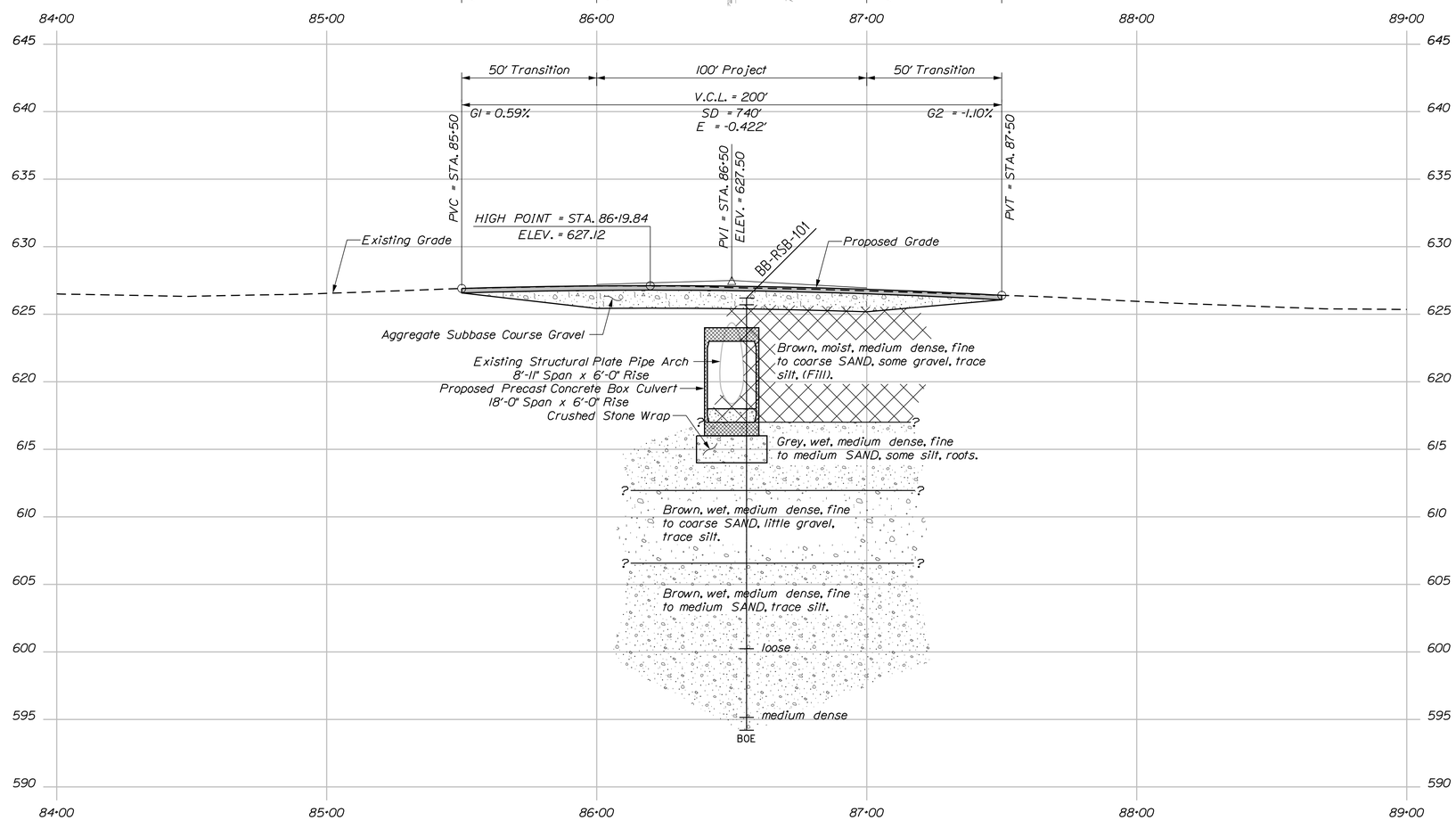
Filename: ...\MSTA\003_GenPlan&Profile.dgn Division: BRIDGE Username: David.Sullivan Date:3/24/2015

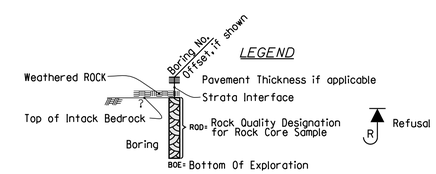


PLAN

25 0 25 50
Scale in Feet

NOTE:
Example option shown. Detail-build to be used for structure type. See Special Provision 531.





PROFILE

HORIZ 25 0 25 50
VERT 5 0 5 10
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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DESIGN-DETAILED	T. HUELM	D. SHAW	------
CHECKED-REVIEWED	------	------	------
DESIGN2-DETAILED2	L. KRUSINSKI	T. WHITE	SEPT 2014
DESIGN3-DETAILED3	------	------	------
REVISIONS 1	------	------	------
REVISIONS 2	------	------	------
REVISIONS 3	------	------	------
REVISIONS 4	------	------	------
FIELD CHANGES	------	------	------

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SPLIT BROOK BRIDGE
SPLIT BROOK
RUMFORD OXFORD COUNTY

BORING LOCATION PLAN & INTERPRETIVE SUBSURFACE PROFILE

SHEET NUMBER
4
OF 14

Filename: ...\GEOTECH\MSTA\004_BLP&SP1.dgn Division: BRIDGE Username: David.Sullivan Date:3/24/2015

Maine Department of Transportation

Soil/Rock Exploration Log

US CUSTOMARY UNITS

Project: Split Brook Bridge #6487 carries Andover Road over Split Brook
Location: Rumford, Maine

Boring No.: BB-RSB-101
WIN: 18487.00

Driller:	MaineDOT	Elevation (ft.)	626.2	Auger ID/OD:	5" Solid Stem
Operator:	Giles/Daggett/Giles	Datum:	NAVD88	Sampler:	Standard Split Spoon
Logged By:	B. Wilder	Rig Type:	CME 45C	Hammer Wt./Fall:	140#/30"
Date Start/Finish:	6/25/2014; 07:00-10:30	Drilling Method:	Cased Wash Boring	Core Barrel:	N/A
Boring Location:	86+55.5, 10.5 ft Lt.	Casing ID/OD:	NW	Water Level*:	9.5 ft bgs.
Hammer Efficiency Factor: 0.867		Hammer Type:	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample attempt
U = Thin Wall Tube Sample
MU = Unsuccessful Thin Wall Tube Sample attempt
V = Insitu Vane Shear Test. PP = Pocket Penetrometer
MV = Unsuccessful Insitu Vane Shear Test attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = weight of 140lb. hammer
WOR/C = weight of rods or casing
WOP = Weight of one person
S_u = Insitu Field Vane Shear Strength (psf)
T_v = Pocket Torvane Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-uncorrected = Raw Field SPT N-value
Hammer Efficiency Factor = Annual Calibration Value
N_{60} = SPT N-uncorrected corrected for hammer efficiency
N_{60} = (Hammer Efficiency Factor/60%)*N-uncorrected
$S_{u(lab)}$ = 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	N_{60}	Casing Blows	Elevation (ft.)	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA	625.70	6" PAVEMENT. (0.50)	
	S1	24/24	1.00 - 3.00						Brown, moist, fine to coarse SAND, some gravel, trace silt. (Fill).	
5	10	24/8	5.00 - 7.00	9/7/7/9	14	20	33		Similar to above, medium dense.	
							36			
							46			
							51			
							69	617.20	(9.00)	
10	20	24/14	10.00 - 12.00	8/5/7/8	12	17	13		Grey, wet, medium dense, fine to medium SAND, some silt, roots.	
							19			
							43			
							25			
							46	612.20	(14.00)	
15	30	24/18	15.00 - 17.00	4/8/7/7	15	22	10		Brown, wet, medium dense, fine to coarse SAND, little gravel, trace silt.	
							31			
							42			
							46			
							40	606.70	(19.50)	
20	40	24/18	20.00 - 22.00	5/4/4/6	8	12	19		Brown, wet, medium dense, fine to medium SAND, trace silt.	
							23			
							47			
							66			
							65			
25	50	24/19	25.00 - 27.00	2/3/3/5	6	9	16		Similar to above, except loose.	
							22			
							33			
							41			
							45			
30	60	24/20	30.00 - 32.00	3/4/4/4	8	12			Similar to above, except medium dense.	
								594.20	(32.00) Bottom of Exploration at 32.00 feet below ground surface. NO REFUSAL	
35										
40										
45										
50										

Remarks:

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.

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BRIDGE NO. 6487

BRIDGE PLANS

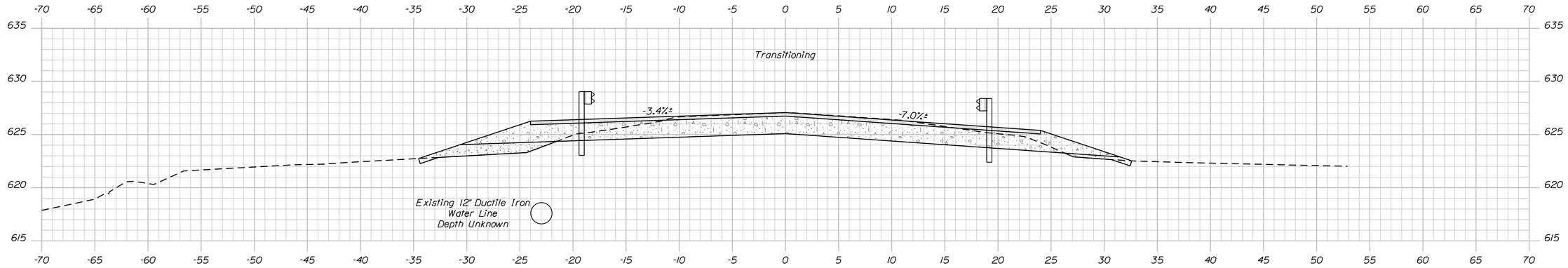
PROJ. MANAGER	S. BOOGE	BY	DATE
DESIGN-DETAILED	T. HUELM	D. SHAW	
CHECKED-REVIEWED	-----	-----	----- SIGNATURE
DESIGN2-DETAILED2	B.SLAVEN	T.WHITE	DEC 2014
DESIGN3-DETAILED3	------	------	------ P.E. NUMBER
REVISIONS 1	------	------	------
REVISIONS 2	------	------	------ DATE
REVISIONS 3	------	------	------
REVISIONS 4	------	------	------
FIELD CHANGES	------	------	------

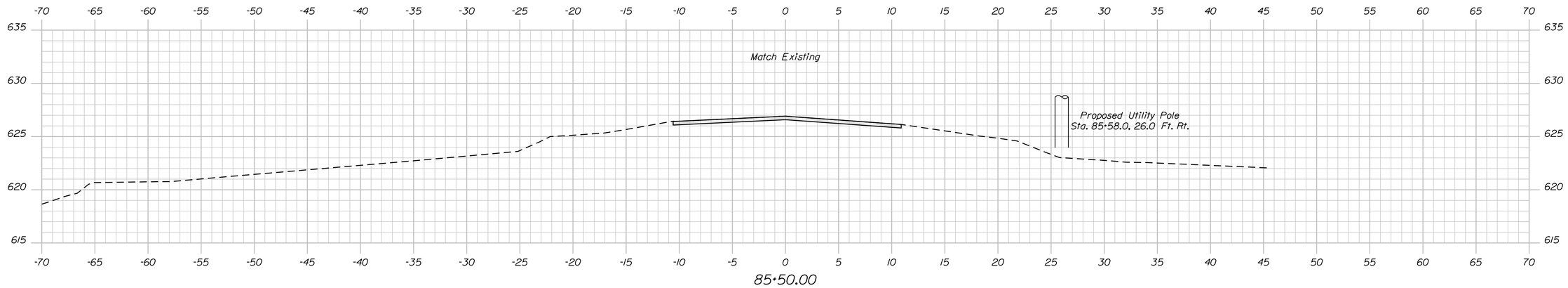
RUMFORD SPLIT BROOK BRIDGE
SPLIT BROOK OXFORD COUNTY

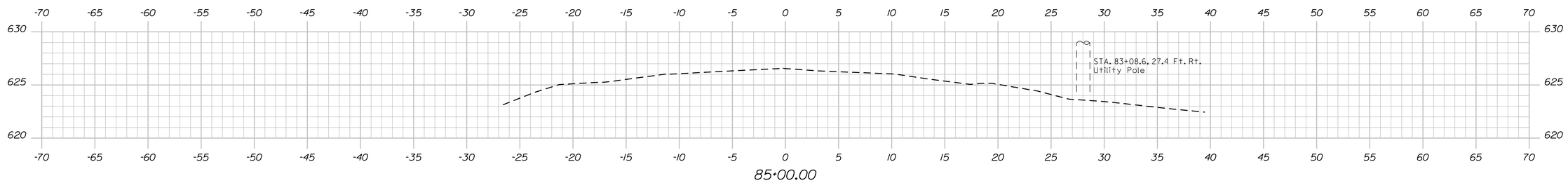
BORING LOGS

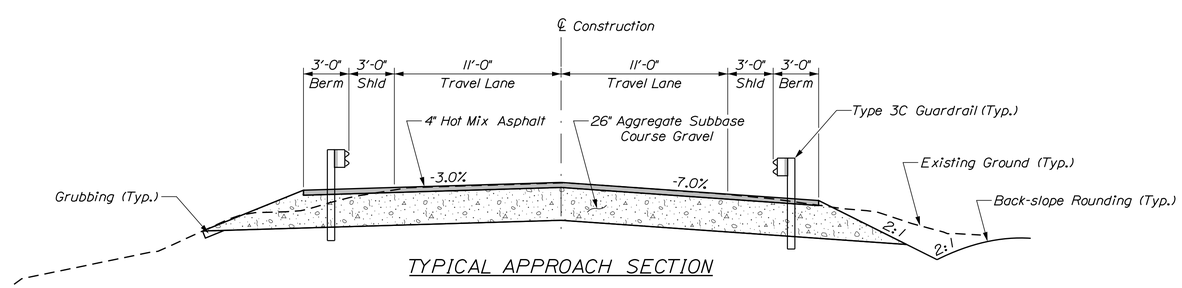
SHEET NUMBER
5
OF 14

Filename: ...\MSTA\005_BORING LOGS1.dgn Division: BRIDGE Username: David.Sullivan Date:3/24/2015









TYPICAL APPROACH SECTION

STATE OF MAINE
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SIGNATURE

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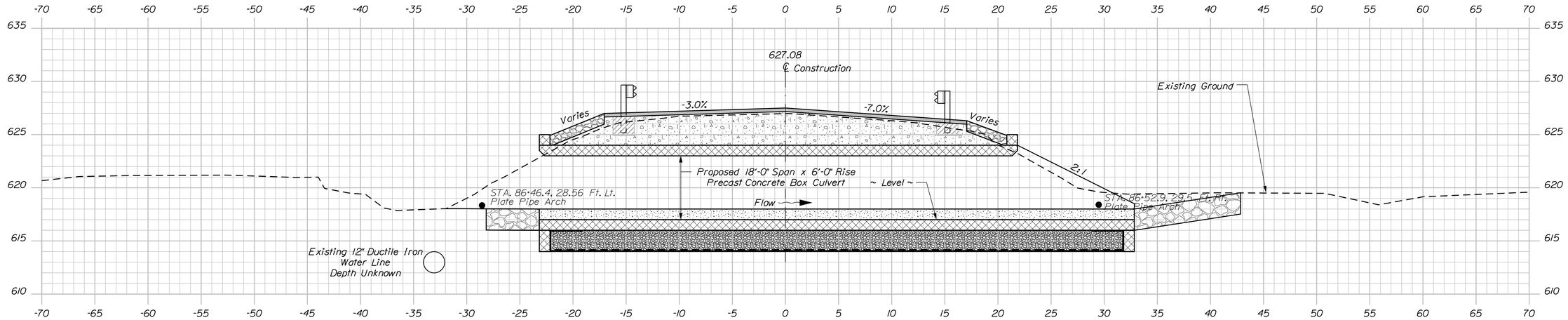
SPLIT BROOK BRIDGE
SPLIT BROOK
RUMFORD OXFORD COUNTY

CROSS SECTIONS

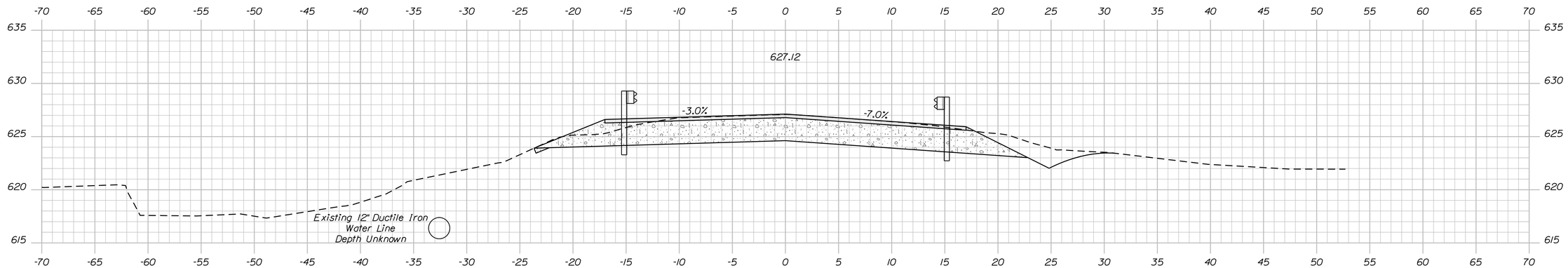
SHEET NUMBER
6
OF 14

Sta. 85+00 to Sta. 85+88

Filename: ...\MSTA\006_XSECT_85+00-85+88.dgn Division: BRIDGE Username: David.Sullivan Date:3/24/2015



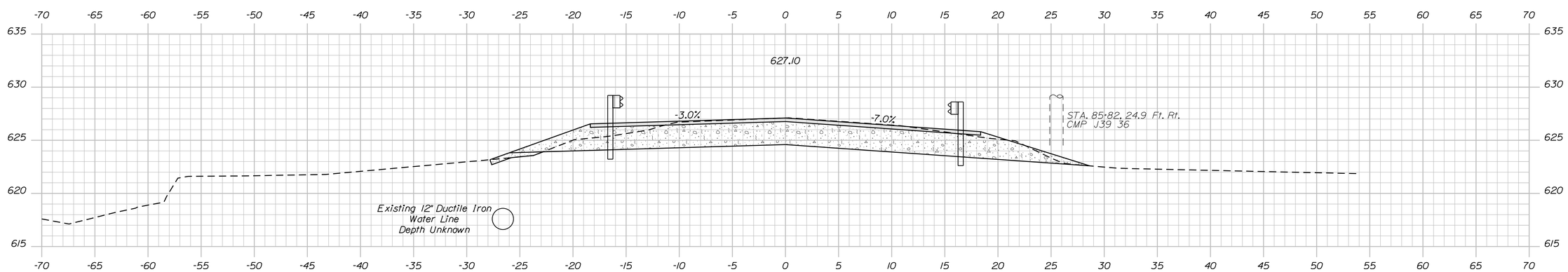
86+50.00



86+25.13

Sta. 86+25.1±, 14.0 Ft. Lt. to Sta. 86+75.1±, 14.0 Ft. Lt.
Install 50 L.F. of Type 3C Guardrail

Sta. 86+25.1±, 14.0 Ft. Rt. to Sta. 86+75.1±, 14.0 Ft. Rt.
Install 50 L.F. of Type 3C Guardrail



86+00.00

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REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

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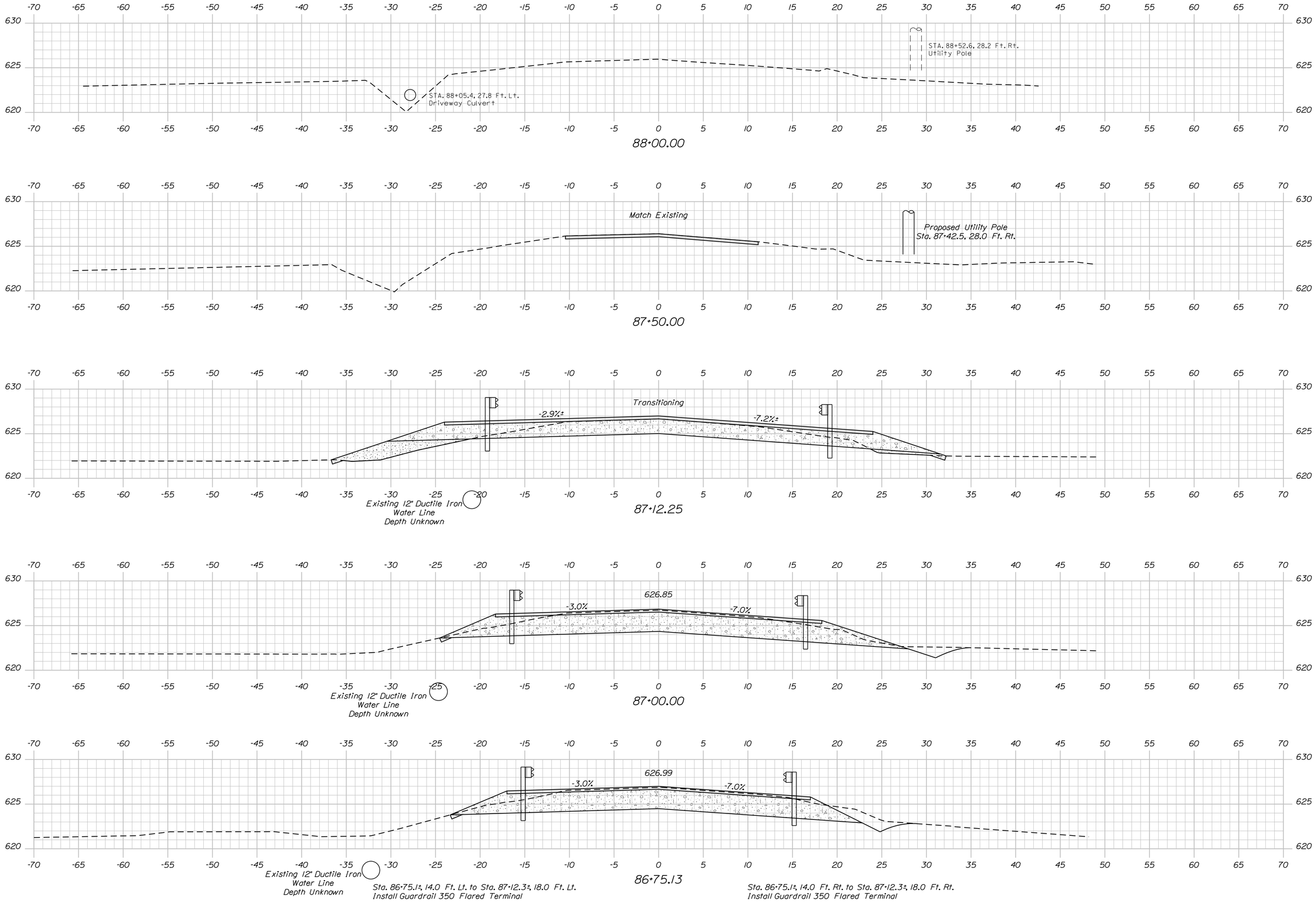
SPLIT BROOK BRIDGE
SPLIT BROOK
RUMFORD OXFORD COUNTY

CROSS SECTIONS

SHEET NUMBER
7
OF 14

Filename: ...\MSTA\007_XSECT_86+00-86+50.dgn Division: BRIDGE Username: David.Sullivan Date:3/24/2015

Sta. 86+00 to Sta. 86+50



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REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

SPLIT BROOK BRIDGE
SPLIT BROOK
RUMFORD OXFORD COUNTY

CROSS SECTIONS

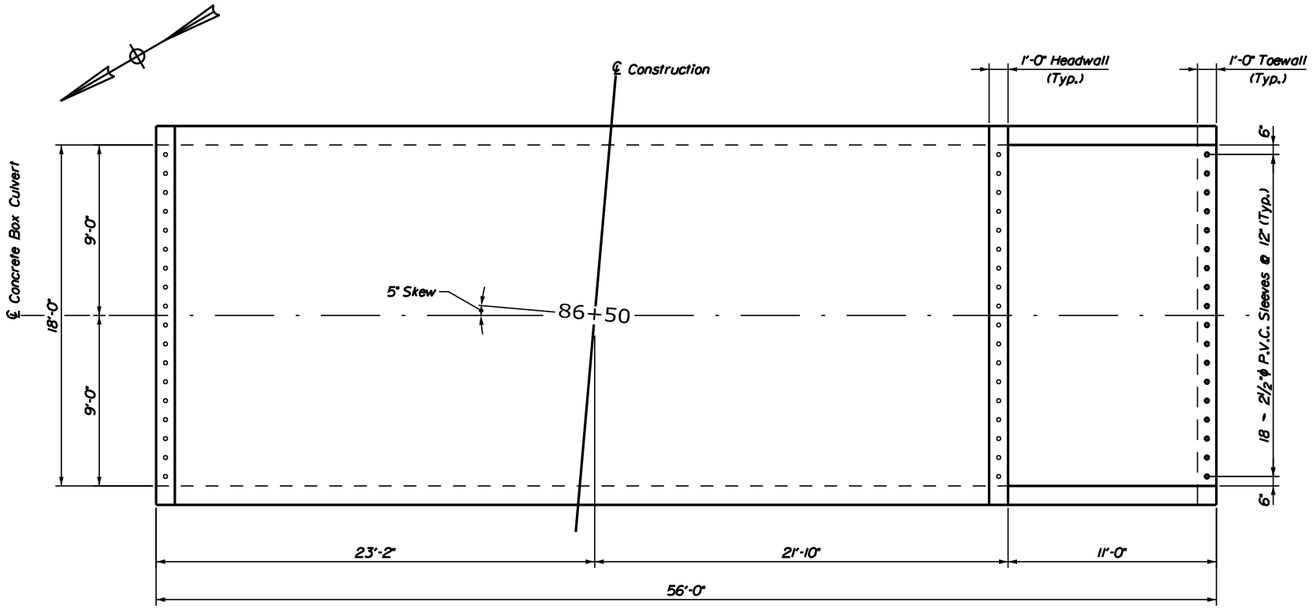
SHEET NUMBER

8

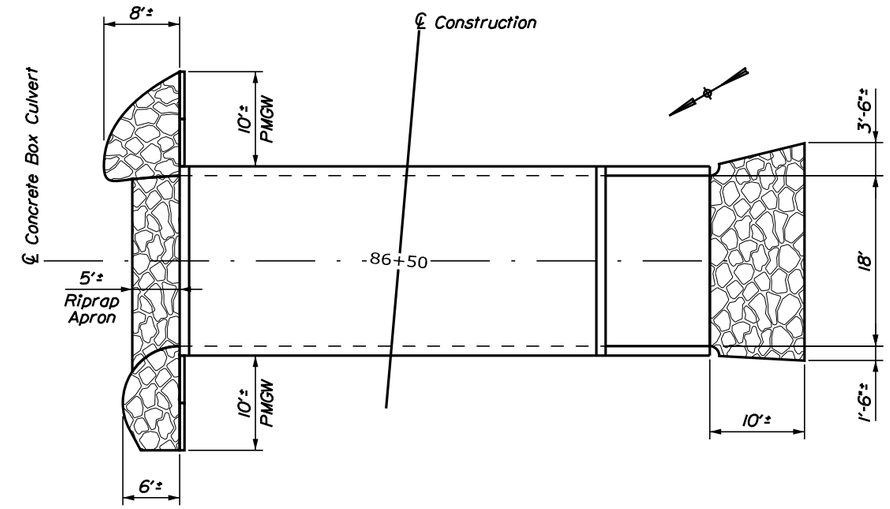
OF 14

Sta. 86+75.13 to Sta. 88+00

Filename: ...\MSTA\008_XSECT_86+75-88+00.dgn Division: BRIDGE Username: David.Sullivan Date:3/24/2015

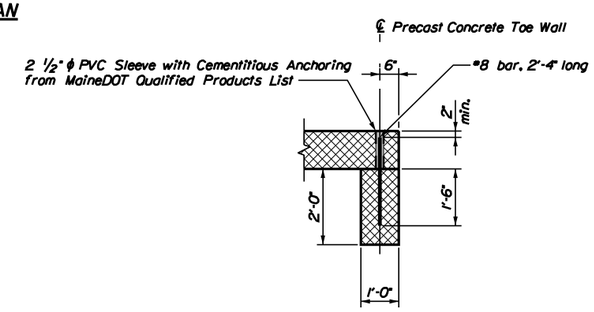


CONCRETE BOX PLAN

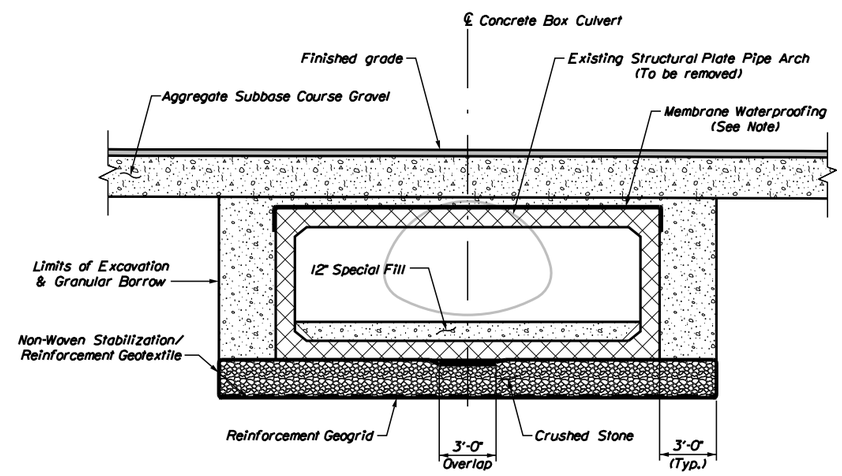


RIPRAP AND PREFABRICATED MODULAR GRAVITY WALL LAYOUT

PMGW = Prefabricated Modular Gravity WALL

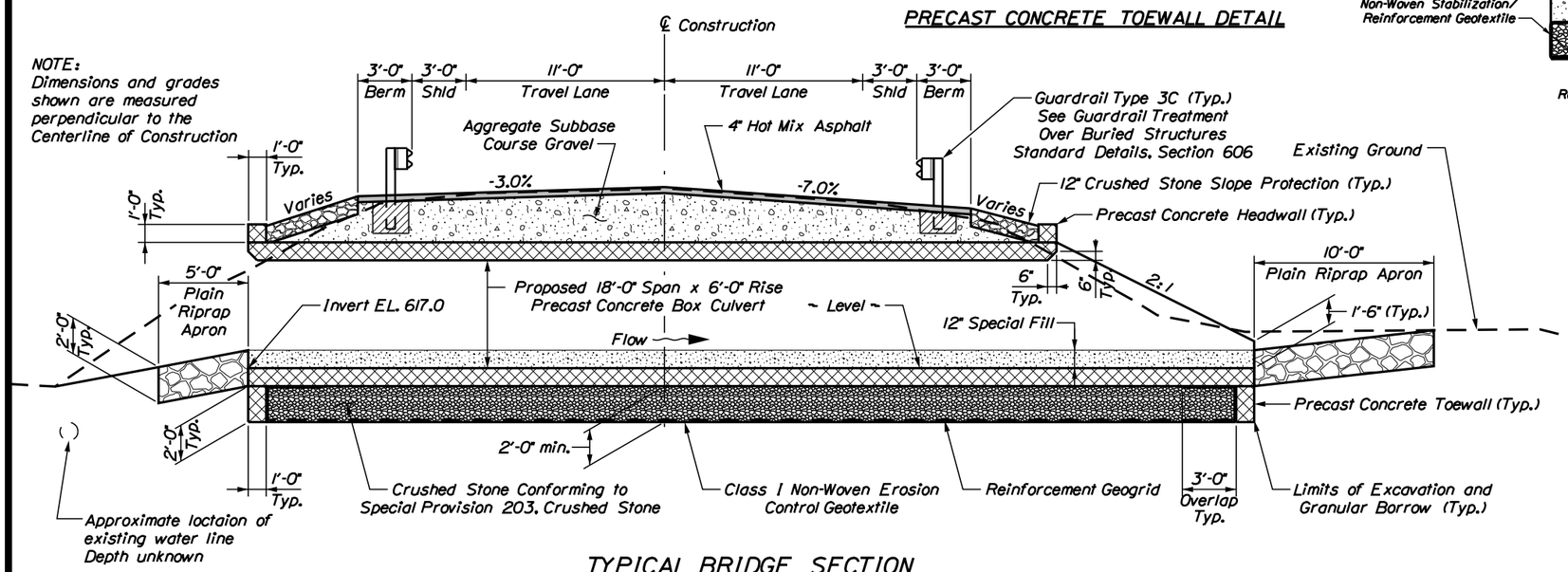


PRECAST CONCRETE TOEWALL DETAIL



TYPICAL SECTION

NOTE:
Dimensions and grades shown are measured perpendicular to the Centerline of Construction



TYPICAL BRIDGE SECTION

PRECAST CONCRETE BOX NOTES

1. The precast units shall be designed to carry construction loadings with a minimum fill cover of 18 inches over the top of the units.

2. Install standard membrane waterproofing over the top and to 12 inches down the exterior sides of the precast units.

3. All embankment material, except as otherwise shown, shall be Granular Borrow meeting the requirements of 703.19, Material for Underwater Backfill with the additional requirement that the maximum particle size shall be limited to 4 inches. The Granular Borrow backfill shall be compacted in accordance with the box culvert manufacturer's recommendations but in no case less than 92 percent of maximum density as determined by AASHTO T180, Method C or D.

4. Riprap adjacent to the box culvert shall be placed so as not to damage the culvert. Any damage to the box culvert during construction shall be repaired or replaced as determined by the Resident at the Contractor's expense.

5. Caution shall be used around the existing water line when placing the riprap at the upstream end of the concrete box culvert. Any damage to the existing water line during construction shall be repaired or replaced as determined by the Resident at the Contractor's expense.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

18487.00

WIN 18487.00

BRIDGE PLANS

BRIDGE NO. 6487

	BY	DATE
PROJ. MANAGER	S. BODGE	
DESIGN-DETAILED	T. HUELM	D. SHAW
CHECKED-REVIEWED	M. WIGHT	D. SULLIVAN	MAR 2015
DESIGN2-DETAILED2	L.KRUSINSKI	T. WHITE	JUL 2014
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

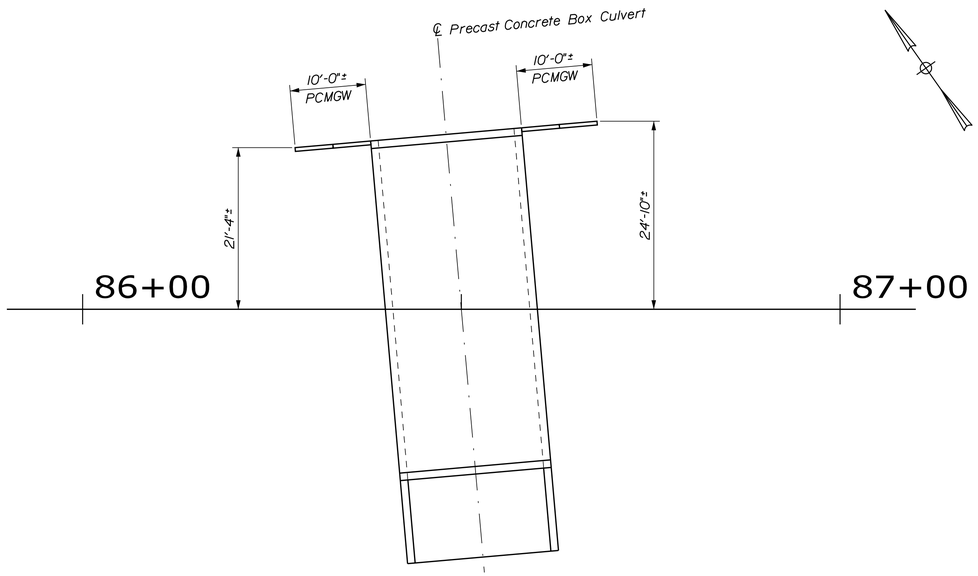
DATE

SPLIT BROOK BRIDGE
SPLIT BROOK
RUMFORD OXFORD COUNTY

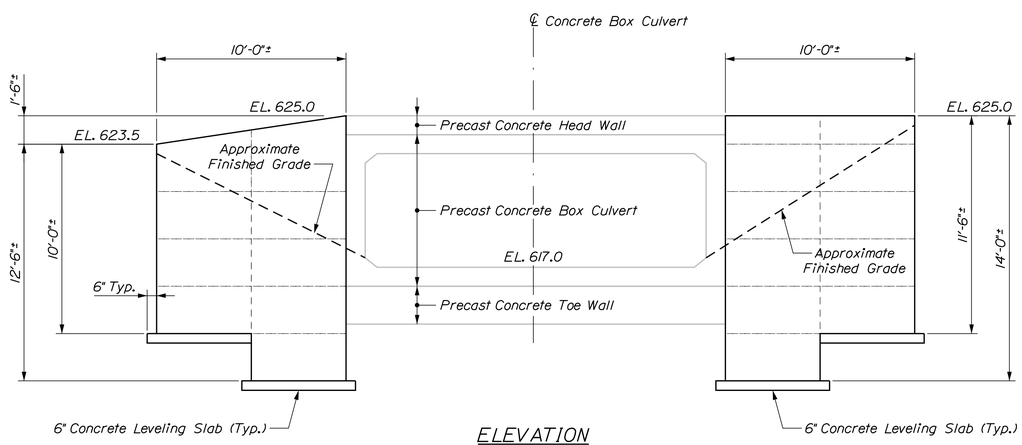
PRECAST CONCRETE BOX DETAILS

SHEET NUMBER
9
OF 14

Filename: ...\MSTA\009_Box_Precast.dgn Division: BRIDGE Username: David.Sullivan Date:3/24/2015



PLAN
PCMGW Layout



ELEVATION
PMGW - Looking downstream

PREFABRICATED CONCRETE MODULAR GRAVITY WALL NOTES

1. The Contractor shall provide a Prefabrication Concrete Modular Gravity (PCMG) Wall in accordance with Standard Specifications Section 674. Plan details are for estimating purposes only. The wall system shall be on the MaineDOT Qualified Products List (QPL) of Proprietary Retaining Wall Systems.

2. For PCMG Walls constructed on granular soils:

* At the strength limit state, the factored bearing pressure shall not exceed the factored bearing resistance of 5.1 ksf for wall system bases less than 8 feet long and 5.7 ksf for wall system bases greater than 10 feet long.

* At the service limit state, the factored bearing pressure shall not exceed the factored bearing resistance of 5.0 ksf.

3. The PCMG wall shall be designed considering a traffic surcharge equal to 2 feet of fill placed on the backfill surface. The wall shall be designed in accordance with Section 674 of the Standard Specifications and AASHTO LRFD Bridge Design Specifications, 7th Edition, 2014.

4. The Contractor may construct the PCMG using crushed stone (MaineDOT 703.13) as backfill for behind, between the PCMG units. In using crushed stone for backfill the PCMG may be designed assuming a friction angle of 40 degrees for soil within the units. Crushed stone shall be compacted using either static or dynamic methods with sufficient energy to achieve a consistent dense course as approved by the Resident. Crushed stone shall be separated from the surrounding soil with erosion control geotextile (MaineDOT 722.03).

5. A 1 foot wide drainage geotextile fabric shall be secured to the back of the units at all horizontal and vertical joints for the full height of the wall.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

18487.00

WIN 18487.00

BRIDGE PLANS

BRIDGE NO. 6487

PROJ. MANAGER	S. BODGE	BY	DATE
DESIGN-DETAILED	T. HUELM	D. SHAW	
CHECKED-REVIEWED	M. WIGHT	D. SULLIVAN	MAR 2015
DESIGN2-DETAILED2	L. KRUSINSKI	T. WHITE	JUL 2014
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

SPLIT BROOK BRIDGE
SPLIT BROOK
RUMFORD OXFORD COUNTY

PREFABRICATED CONCRETE MODULAR GRAVITY WALL

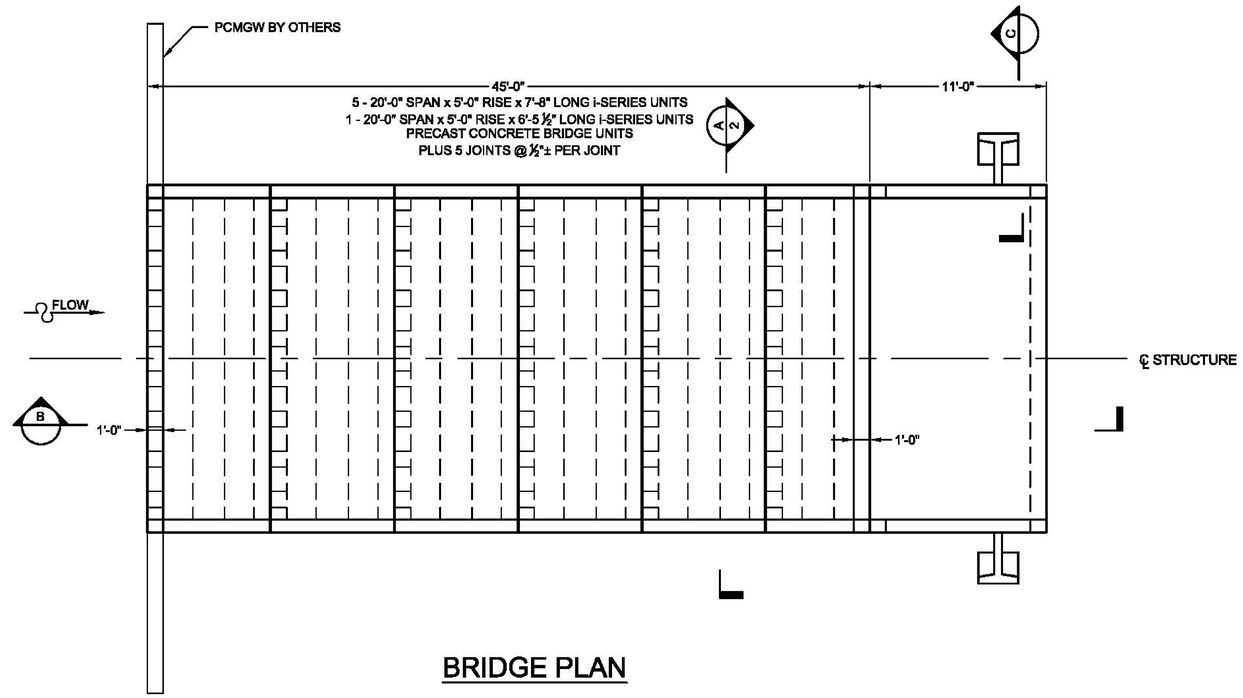
SHEET NUMBER
10
OF 14

Filename: ...\MSTA\010_Precast_PCMGW.dgn Division: BRIDGE Username: David.Sullivan Date:3/24/2015

NOTES

GENERAL NOTES:

1. THIS BRIDGE HAS BEEN DESIGNED FOR GENERAL SITE CONDITIONS. THE PROJECT ENGINEER SHALL BE RESPONSIBLE FOR THE STRUCTURE'S SUITABILITY TO THE EXISTING SITE CONDITIONS AND FOR THE HYDRAULIC EVALUATION – INCLUDING SCOUR AND CONFIRMATION OF SOIL CONDITIONS.
2. PRIOR TO CONSTRUCTION, CONTRACTOR MUST VERIFY ALL ELEVATIONS SHOWN THROUGH THE ENGINEER.
3. ONLY CONTECH ENGINEERED SOLUTIONS LLC, THE CON/SPAN® APPROVED PRECASTER IN MAINE MAY PROVIDE THE STRUCTURE DESIGNED IN ACCORDANCE WITH THESE PLANS.
4. THE USE OF ANOTHER PRECAST STRUCTURE WITH THE DESIGN ASSUMPTIONS USED FOR THE CON/SPAN® STRUCTURE MAY LEAD TO SERIOUS DESIGN ERRORS. USE OF ANY OTHER PRECAST STRUCTURE WITH THIS DESIGN AND DRAWINGS VOIDS ANY CERTIFICATION OF THIS DESIGN AND WARRANTY. CONTECH ENGINEERED SOLUTIONS LLC ASSUMES NO LIABILITY FOR DESIGN OF ANY ALTERNATE OR SIMILAR TYPE STRUCTURES.



BRIDGE PLAN

DESIGN DATA

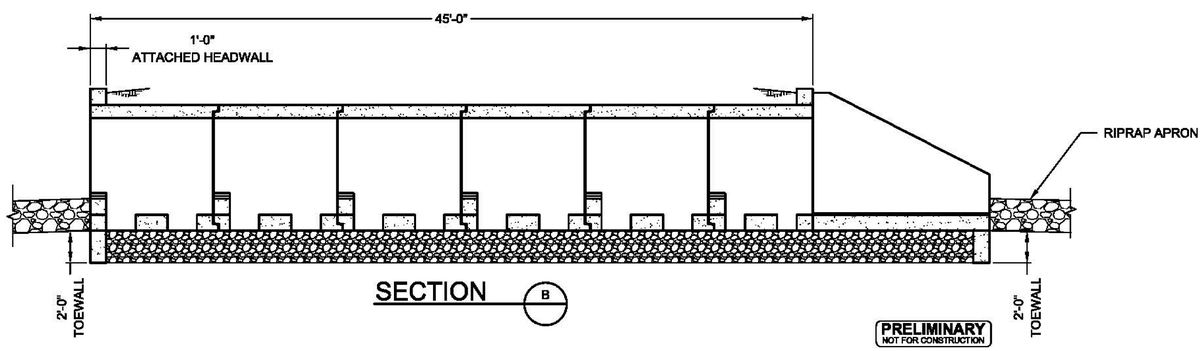
DESIGN LOADING:
- BRIDGE UNITS: HL93 MODIFIED
- HEADWALLS: EARTH PRESSURE ONLY
- WINGWALLS: EARTH PRESSURE ONLY

DESIGN FILL HEIGHT: 4'-0" MAX
FROM TOP OF CROWN TO TOP OF PAVEMENT.
DESIGN METHOD: LOAD RESISTANCE FACTOR DESIGN PER AASHTO LRFD SPECIFICATION
ASSUMED FACTORED BEARING RESISTANCE: 2000 PSF

*AT THE TIME OF DESIGN, A GEOTECHNICAL REPORT FOR THE PROJECT SITE WAS NOT AVAILABLE. IT IS THE PROJECT ENGINEER'S, OWNER'S AND/OR THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THE ACTUAL SITE CONDITIONS AT THE TIME OF CONSTRUCTION ARE CONSISTENT WITH THE ASSUMED ALLOWABLE SOIL BEARING PRESSURE WITH A GEOTECHNICAL INVESTIGATION FROM A QUALIFIED GEOTECHNICAL ENGINEER.

MATERIALS

PRECAST UNITS SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH CON/SPAN® SPECIFICATIONS.



SECTION

PRELIMINARY
NOT FOR CONSTRUCTION

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MARK	DATE	REVISION DESCRIPTION	BY
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CONTECH® ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CON/SPAN® BRIDGE SYSTEMS I - SERIES™
PROPOSAL DRAWING

SPLIT BROOK BRIDGE OF SPLIT BROOK
ANDOVER ROAD

RUMFORD, ME

PROJECT No.:	SEQ. No.:	DATE:
XXXXXX	001	2/11/15
DESIGNED: XXX		DRAWN: N/A
CHECKED: XXX		APPROVED: XXX
SHEET NO.: 1 OF 2		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

18487.00

WIN 18487.00

BRIDGE NO. 6487

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	S. BODGE		
DESIGN-DETAILED	T. HJELM	D. SHAW	
CHECKED-REVIEWED	M. WIGHT	D. SULLIVAN	MAR 2015
DESIGN2-DETAILED2	L. KRUSINSKI	T. WHITE	JUL 2014
DESIGN3-DETAILED3	------	------	------
REVISIONS 1	------	------	------
REVISIONS 2	------	------	------
REVISIONS 3	------	------	------
REVISIONS 4	------	------	------
FIELD CHANGES	------	------	------

SIGNATURE

P.E. NUMBER

DATE

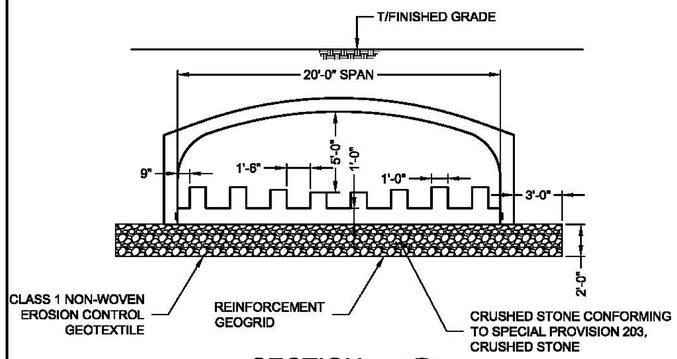
SPLIT BROOK BRIDGE
SPLIT BROOK
RUMFORD OXFORD COUNTY

CONTECH I-SERIES PLANS

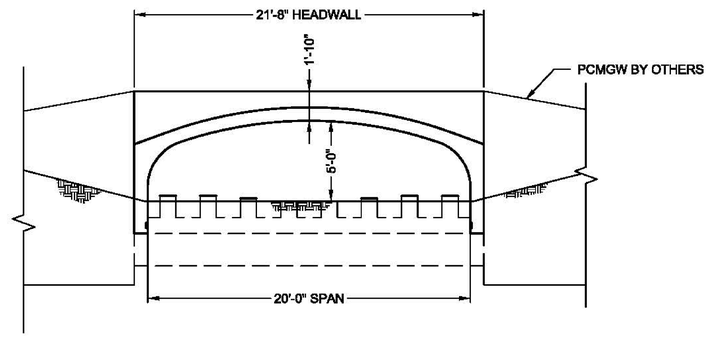
SHEET NUMBER
11
OF 14

Filename: ...\MSTA\011_Precast_ConTech-1.dgn Division: BRIDGE Username: David.Sullivan Date:3/24/2015

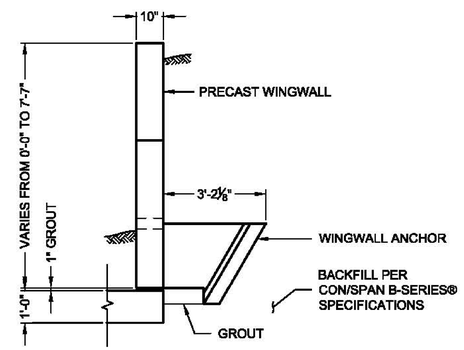
\\BRIDGE\CON-SPAN\DATA\ENGINEERING STANDARDS\I-SERIES\SERIES PROPOSAL DRAWINGS.DWG 2/11/2016 4:24 PM



SECTION A/1



UPSTREAM END ELEVATION



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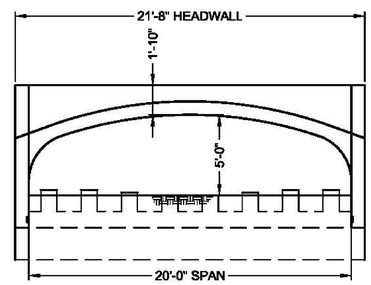

DOWNSTREAM END ELEVATION

PRELIMINARY
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MARK	DATE	REVISION DESCRIPTION	BY
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ENGINEERED SOLUTIONS LLC
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800-338-1122 513-645-7000 513-645-7993 FAX

CON/SPAN® BRIDGE SYSTEMS
I - SERIES™

PROPOSAL DRAWING

SPLIT BROOK BRIDGE OVER SPLIT BROOK
ANDOVER ROAD

RUMFORD, ME

PROJECT No.:	SEQ. No.:	DATE:
XXXXXX	001	2/11/15
DESIGNED: XXX		DRAWN: N/A
CHECKED: XXX		APPROVED: XXX
SHEET NO.: 2 OF 2		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

18487.00

BRIDGE NO. 6487 — WIN 18487.00 — BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	S. BODGE		
DESIGN-DETAILED	T. HUELM	D. SHAW	
CHECKED-REVIEWED	M. WIGHT	D. SULLIVAN	MAR 2015
DESIGN2-DETAILED2	L. KRUSINSKI	T. WHITE	JUL 2014
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

SPLIT BROOK BRIDGE
SPLIT BROOK
RUMFORD OXFORD COUNTY

CONTECH I-SERIES DETAILS

SHEET NUMBER
12
OF 14

Filename: ...\MSTA\012_Precast_ConTech-2.dgn Division: BRIDGE Username: David.Sullivan Date:3/24/2015

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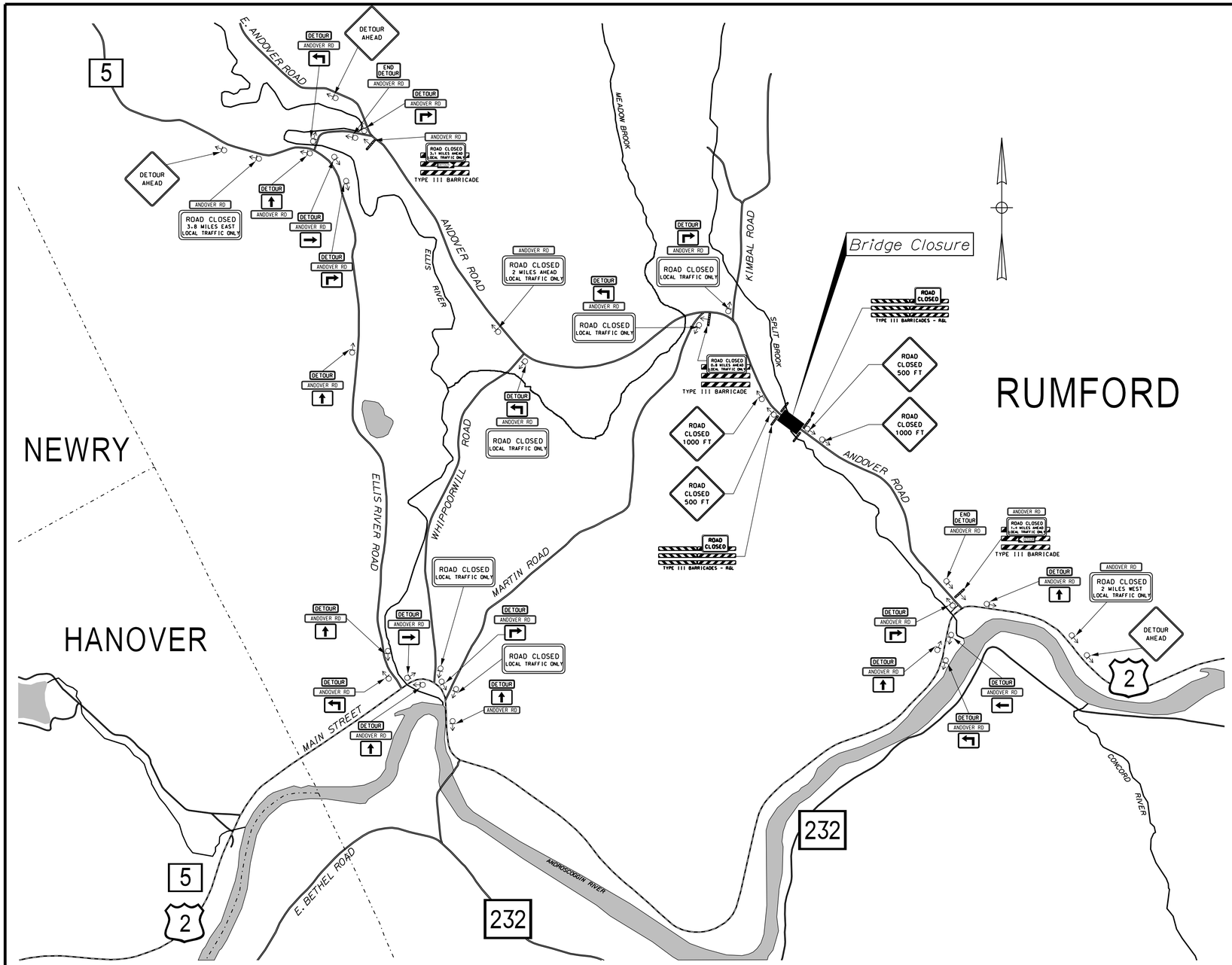

SIGN SUMMARY

SIGN	DIMENSIONS	QTY. / COLOR
TYPE III BARRICADES - L	48 x 60	5- Orange on White
TYPE III BARRICADES - R	48 x 60	2- Orange on White
DETOUR AHEAD W20-3	48 x 48	3- Black on Orange
ROAD CLOSED 1000 FT W20-3	48 x 48	2- Black on Orange
ROAD CLOSED 500 FT W20-3	48 x 48	2- Black on Orange
ROAD CLOSED R11-2	48 x 30	2- Black on White
ROAD CLOSED LOCAL TRAFFIC ONLY R11-3a	60 x 24	5- Black on White
ROAD CLOSED 1.4 MILES AHEAD LOCAL TRAFFIC ONLY R11-3a	60 x 30	1- Black on White
ROAD CLOSED .8 MILES AHEAD LOCAL TRAFFIC ONLY R11-3a	60 x 30	1- Black on White
ROAD CLOSED 2 MILES AHEAD LOCAL TRAFFIC ONLY R11-3a	60 x 30	1- Black on White
ROAD CLOSED 3.8 MILES EAST LOCAL TRAFFIC ONLY R11-3a	60 x 30	1- Black on White
ROAD CLOSED 2 MILES WEST LOCAL TRAFFIC ONLY R11-3a	60 x 30	1- Black on White

SIGN SUMMARY

SIGN	DIMENSIONS	QTY. / COLOR
ROAD CLOSED 3.1 MILES AHEAD LOCAL TRAFFIC ONLY R11-3a	60 x 30	1- Black on White
DETOUR M4-8	24 x 12	20- Black on Orange
DETOUR M4-10R	48 x 18	1- Black on Orange
DETOUR M4-10L	48 x 18	1- Black on Orange
ANDOVER RD D1-1c	54 x 12	27- Black on White
M6-1L	21 x 15	1- Black on White
M6-1R	21 x 15	2- Black on White
M6-3	21 x 15	7- Black on White
M5-1R	21 x 15	5- Black on White
M5-1L	21 x 15	5- Black on White
END DETOUR M4-8A	24 x 18	2- Black on White

DETOUR NOTES

1. Additional signs may be needed as directed by the Resident.
2. The resident shall approve locations of signage along Route 2.
3. Contractor is responsible for placing Traffic Control signs in the immediate area around the bridge and along the surrounding travelways.
4. Spacing to be determined by the Resident in accordance with MUTCD.
5. Install 30' Temporary Concrete Barrier at each end of project (60' feet total).
6. Install 2 Type III Barricades at each side of bridge and one at each of detour (7 total).
7. Cover or remove all conflicting route and directional signs.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

18487.00

WIN 18487.00

BRIDGE NO. 6487

BRIDGE PLANS

PROJ. MANAGER	S. BODGE	BY	DATE
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CHECKED-REVIEWED	M. WIGHT	D. SULLIVAN	MAR 2015
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REVISIONS 3	------	------	------
REVISIONS 4	------	------	------
FIELD CHANGES	------	------	------

SIGNATURE

P.E. NUMBER

DATE

SPLIT BROOK BRIDGE
SPLIT BROOK
RUMFORD OXFORD COUNTY

TRAFFIC CONTROL PLAN

SHEET NUMBER

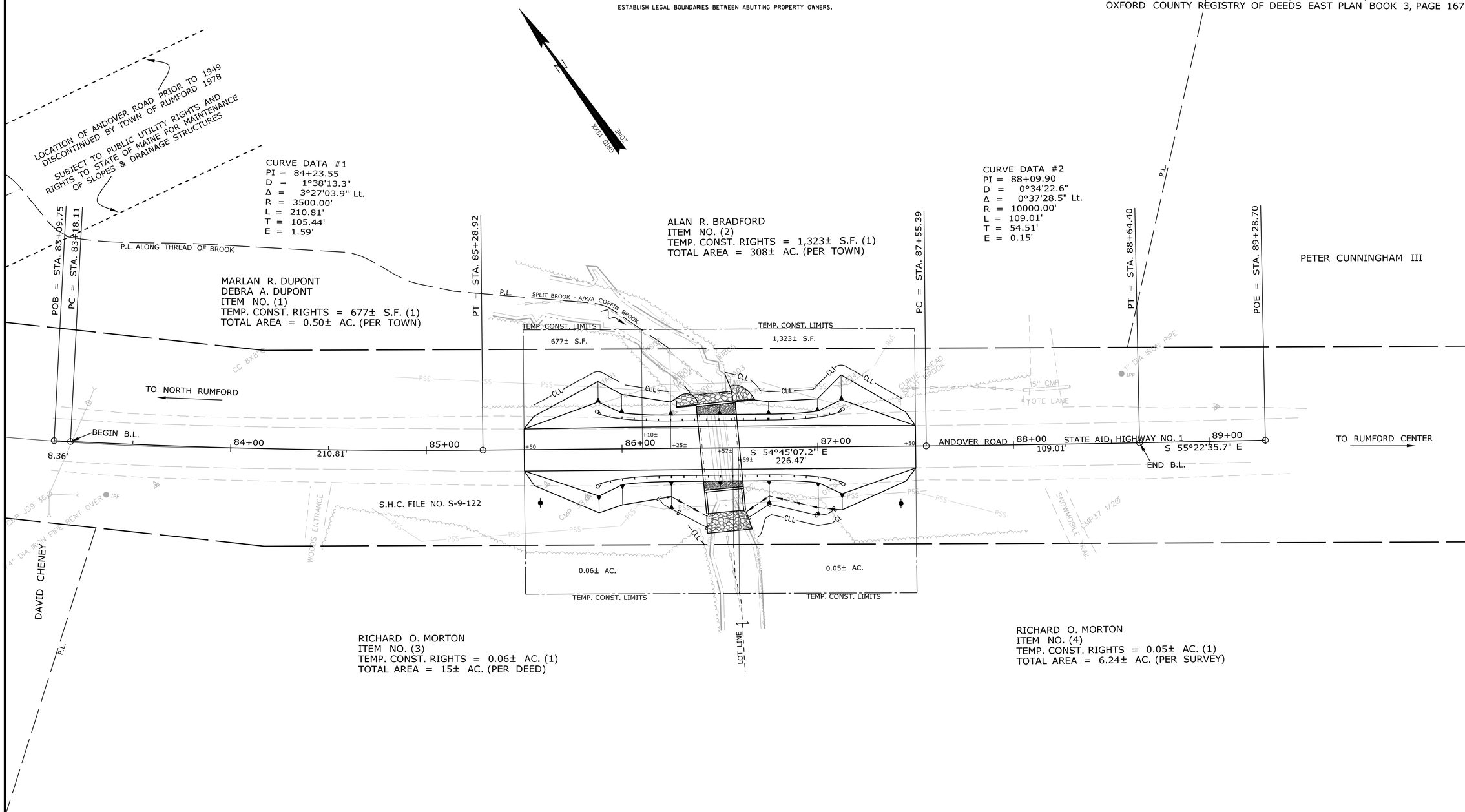
13

OF 14

Filename: ...\013_Traffic_Control_Plan.dgn Division: BRIDGE Username: David.Sullivan Date:3/24/2015

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.

SEE PLOT PLAN OF FRENCH REALTY ACRES
PREPARED BY ROBERT F. BRADFORD, SEPTEMBER 6, 1978
OXFORD COUNTY REGISTRY OF DEEDS EAST PLAN BOOK 3, PAGE 1671



EXISTING RIGHT OF WAY REFERENCES

S.H.C. FILE NO. S-9-122, SHEET 3, JUNE 1949

SEE PLOT PLAN OF FRENCH ESTATES
PREPARED BY ROBERT F. BRADFORD, JULY 1981
OXFORD COUNTY REGISTRY OF DEEDS EAST, PLAN BOOK 4 PAGE 1866

WIN 18487.00

SYMBOLS

- IP or ● IPF (IRON PIPE or PIN FOUND)
- S.T. (SEPTIC TANK)
- (ROW MONUMENT)
- ABM (TRAVERSE POINT)
- WELL (WELL)
- GRADING LIMIT LINE
- CONSTRUCTION LIMIT LINE
- PROPERTY LINE
- LIMITS OF WROUGHT 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	PNS	
PROP. LINES		
AREAS		

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

REVISIONS			
NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK PAGE COUNTY RECORD

NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE
		COND.	EAST 3/23/15	5214	19

DAVID BERNHARDT
COMMISSIONER
JOYCE NOEL TAYLOR
CHIEF ENGINEER
DATE

STATE AID HIGHWAY NO. 1
ANDOVER ROAD
RUMFORD OXFORD COUNTY
STATE PROJECT NO. 18487.00

JANUARY 2015 | RIGHT-OF-WAY MAP | D.O.T. FILE NO. 9-381
SCALE 1" = 25' | SHEET 1 OF 1

SHEET NUMBER
14
OF 14

Filename: ...\00\ROW\MSTA\001_RWPLAN1.dgn Division: BRIDGE Username: David.Sullivan Date:3/24/2015