STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SPECIFICATIONS

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

DESIGN LOADING

Live Load ..... HL - 93 Modified

TRAFFIC DATA

Current (2011) AADT	2040
Future (2031) AADT	2450
DHV - % of AADT	14
Design Hour Volume	343
Heavy Trucks (% of AADT)	17
Heavy Trucks (% of DHV)	17
Directional Distribution (% of DHV)	52
18 kip Equivalent P 2.0	356
18 kip Equivalent P 2.5	339
Design Speed (mph)	60

MATERIALS

Concrete:	
Curbs & Transition Barriers	Class "LP"
All Other	Class "A"
Reinforcing Steel:	
Curbs	ASTM A 615 and ASTM A 775
All Other	ASTM A 615/A 615M, Grade 60

BASIC DESIGN STRESSES

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

ABBOT
PISCATAQUIS COUNTY
PAGE - CARR BRIDGE
OVER
PISCATAQUIS RIVER
STATE ROUTES 6 & 15
FEDERAL PROJECT NO. BR-1930(600)
PROJECT LENGTH 0.085 mi.
BRIDGE NO. 5725

LIST OF DRAWINGS

UTILITIES

Central Maine Power Company
Corner Stone Communications LLC.

Fairpoint Communications

MAINTENANCE OF TRAFFIC

Maintain a minimum of at least one 13'-0" wide lane of alternating two - way traffic using traffic signals.

PROJECT LOCATION:	Located 0.10 of a mile southerly of Pond Road. 45° 12' 0" N - 69° 27' 36.00" W
PROGRAM AREA:	Bridge
OUTLINE OF WORK:	Bridge Rehabilitation including deck replacement, bearing replacement with required concrete repairs and placement of scour countermeasures.

WIN 19306.00

BR-1930(600)

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED — DATE 10/27/12

COMMISSIONER:

CHIEF ENGINEER: 10/25/12

STATE OF MAINE * LICENSED PROFESSIONAL ENGINEER * Michael Wright 8089

Michael Wright
SIGNATURE
8089
P.E. NUMBER
10/25/2012
DATE

PROJECT INFORMATION		
PROGRAM	BRIDGE	
PROJECT MANAGER	STEVE BODGE	
DESIGNER	BRIAN REEVES	
CONSULTANT		
PROJECT RESIDENT		
CONTRACTOR		
PROJECT COMPLETION DATE		

ABBOT
PAGE - CARR BRIDGE

TITLE SHEET

SHEET NUMBER
1
OF 15

Filename: \00\BRIDGE\MSTA\001_Title.dgn Division: BRIDGE Date: 10/23/2012 Username: david.sullivan

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.10	REMOVING EXISTING SUPERSTRUCTURE (PROPERTY OF CONTRACTOR) (217 CY)	1	LS
202.12	REMOVING EXISTING STRUCTURAL CONCRETE	8	CY
202.202	REMOVING PAVEMENT SURFACE	875	SY
203.20	COMMON EXCAVATION	35	CY
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	25	CY
403.208	HOT MIX ASPHALT 12.5 MM HMA SURFACE	139	T
403.211	HOT MIX ASPHALT (SHIMMING)	10	T
403.213	HOT MIX ASPHALT 12.5 MM BASE	225	T
409.15	BITUMINOUS TACK COAT - APPLIED	94	G
502.219	STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS (110 CY)	1	LS
502.26	STRUCTURAL CONCRETE SUPERSTRUCTURE SLABS (206 CY)	1	LS
502.49	STRUCTURAL CONCRETE CURBS AND SIDEWALK (28 CY)	1	LS
503.12	REINFORCING STEEL, FABRICATED AND DELIVERED	1200	LB
503.13	REINFORCING STEEL, PLACING	1200	LB
503.14	EPOXY-COATED REINFORCING STEEL, FABRICATED AND DELIVERED	7000	LB
503.15	EPOXY-COATED REINFORCING STEEL, PLACING	7000	LB
503.17	MECHANICAL/WELDED SPLICE	8	EA
504.701	STRUCTURAL STEEL FABRICATED AND DELIVERED, ROLLED (3500 LB)	1	LS
504.71	STRUCTURAL STEEL ERECTION (3500 LB)	1	LS
505.08	SHEAR CONNECTORS (2970 EA)	1	LS
506.144	FIELD PAINTING NEW AND EXISTING STRUCTURAL STEEL (3500 LB)	1	LS
506.17	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL (3360 LB)	1	LS
506.18	CONTAINMENT AND POLLUTION CONTROL (3360 LB)	1	LS
506.191	DISPOSAL OF SPECIAL WASTE OR HAZARDOUS WASTE MATERIAL (3360 LB)	1	LS
506.9102	ZINC RICH COATING SYSTEM (SHOP APPLIED)	1	LS
507.0811	STEEL BRIDGE RAILING, 2 BAR (446 LF)	1	LS
508.14	HIGH PERFORMANCE WATERPROOFING MEMBRANE (810 SY)	1	LS
511.07	COFFERDAM	1	LS
514.06	CURING BOX FOR CONCRETE CYLINDERS	1	EA
515.20	PROTECTIVE COATING FOR CONCRETE SURFACES	285	SY
518.50	REPAIR OF UPWARD FACING SURFACES - TO REINFORCING STEEL < 7.9 IN.	129	SF
518.51	REPAIR OF UPWARD FACING SURFACES - BELOW REINFORCING STEEL < 7.9 IN.	129	SF
518.60	REPAIR OF VERTICAL SURFACES < 7.9 IN.	10	SF
518.61	REPAIR OF VERTICAL SURFACES ≥ 7.9 IN.	1	CY
520.21	EXPANSION DEVICE - GLAND SEAL	2	EA
523.52	BEARING INSTALLATION	20	EA
523.5401	LAMINATED ELASTOMERIC BEARINGS, FIXED	5	EA
523.5402	LAMINATED ELASTOMERIC BEARINGS, EXPANSION	15	EA
524.301	TEMPORARY STRUCTURAL SUPPORT	1	LS
524.40	PROTECTIVE SHIELD	1	LS
526.301	TEMPORARY CONCRETE BARRIER - TYPE 1 (300 LF)	1	LS
526.34	PERMANENT CONCRETE TRANSITION BARRIER	4	EA
527.34	WORK ZONE CRASH CUSHIONS	3	UN
606.1721	BRIDGE TRANSITION - TYPE 1	4	EA
606.23	GUARDRAIL TYPE 3C - SINGLE RAIL	325	LF
606.369	GUARDRAIL REMOVED AND STACKED	456	LF
610.51	ABUT SCM HEAVY RIPRAP	1573	CY
610.52	PIER SCM HEAVY RIPRAP	1947	CY
610.521	PIER SCM PLAIN RIPRAP	487	CY
613.319	EROSION CONTROL BLANKET	42	SY
615.07	LOAM	14	CY
618.1401	SEEDING METHOD NUMBER 2 - PLAN QUANTITY	2	UN
619.1201	MULCH	2	UN
619.1401	EROSION CONTROL MIX	14	CY
620.50	EROSION CONTROL FILTER LAYER	1990	SY
627.733	4 INCH WHITE OR YELLOW PAINTED PAVE MRK LINE	1275	LF
627.76	TEMPORARY PVMT. MARK LINE, W OR YELLOW	1	LS
629.05	HAND LABOR, STRAIGHT TIME	20	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	20	HR
631.15	ROLLER, EARTH AND BASE COURSE (INCLUDING OPERATOR)	20	HR
631.172	TRUCK - LARGE (INCLUDING OPERATOR)	20	HR
631.211	PAVEMENT SWEEPER (INCLUDING OPERATOR)	10	HR
631.212	SMALL PAVEMENT GRINDER (INCLUDING OPERATOR)	10	HR
639.18	FIELD OFFICE TYPE A	1	EA
643.72	TEMPORARY TRAFFIC SIGNAL	1	LS
652.33	DRUM	20	EA
652.34	CONE	40	EA
652.35	CONSTRUCTION SIGNS	425	SF
652.36	MAINTENANCE OF TRAFFIC CONTROL DEVICES	150	CD
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 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 embankment material, except as otherwise shown, placed below EL. 402.00' shall be Granular Borrow meeting the requirements of Subsection 703.19, Material for Underwater Backfill.

5. Construct the riprap shelf at Abutment No. 1 at EL. 421.00 and at Abutment No. 2 at El. 417.66.

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

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

8. 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.

9. 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.

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

    All exposed surfaces of concrete curbs.
    Fascias down to the drip notch.
    All exposed surfaces of Concrete Transition Barriers.
    Top of abutment backwalls and to one foot below the top of backwalls on the back side.

11. The Contractor must profile approaches every 10 ft. out to a match point at a minimum 50 ft. from the bridge joint, incorporating an additional 1 inch of pavement thickness at the bridge, to determine the approach pavement taper. Pavement taper profile and length must be approved by the Resident.

12. Contractor is responsible to verify all existing elevations and adjust new elevations and dimensions as required.

13. The Contractor shall submit a Bridge Deck 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 to be removed as dictated by the plans. 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 concrete removal pay item.

14. The total compact mass of the pier scour countermeasure - heavy riprap shall consist of a maximum of 25% plain riprap. The quantity of plain riprap (item 610.521) included in this Contract shall be used as chinking stone to reduce the size and number of void spaces in the heavy riprap placed around the piers (item 610.52). The plain riprap shall be blended with the heavy riprap before or during placement in order to create a denser mass of riprap in the river.

15. Stone removed during excavation may be reused as plain or heavy riprap if it satisfies the material requirements in the Specifications and is approved by the Resident.

16. The Contractor shall provide the Resident access to all portions of the work, including that which is only accessible by boat. The method, timing, and location of access shall be approved by the Resident. Payment for access will not be made separately, but will be considered incidental to the Contract.

17. In accordance with Special Provision 203, Excavation and Embankment (Dredge Materials), the Contractor may beneficially use dredge material excavated from the site in place of the Granular Borrow, Material for Underwater Backfill used under the abutment riprap if it satisfies the material requirements of 703.19 or where approved by the Resident.

18. The reinforcing steel for drilled and anchored bars shall be paid for under items 503.12 and 503.13. No separate payment will be made for drilling and anchoring.

19. The Contractor shall locate by non-destructive methods, reinforcing steel in existing concrete before drilling and grouting new reinforcing steel and anchor rods. All costs associated with this work shall be incidental to related contract items.

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

21. 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.

22. 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.

23. Bridge drains and drain supports, including the connection to the existing girders, will not be paid directly, but will be considered incidental to Item 502.26.

24. When removing the existing bridge drains the Contractor shall remove the support bars flush with the existing beam.

25. The steel portions of the existing bridge are coated with a lead-based paint system. The Contractor is responsible for the containment, proper management and disposal of all lead-contaminated hazardous waste generated by the process of rehabilitating the bridge. The Contractor is responsible for implementing appropriate OSHA mandated personal protection standards related to this process.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1930(600)

PIN 19306.00

BRIDGE NO. 5725

BRIDGE PLANS

PROJ. MANAGER	S. Bodge	BY	DATE
DESIGN-DETAILED	B. Reeves	D. Sullivan	OCT. 2012
CHECKED-REVIEWED	Ed. & Anth.	M. Poulin	------
DESIGN2-DETAILED2	------	------	------
DESIGN3-DETAILED3	------	------	------
REVISIONS 1	------	------	------
REVISIONS 2	------	------	------
REVISIONS 3	------	------	------
REVISIONS 4	------	------	------
FIELD CHANGES	------	------	------

SIGNATURE

P.E. NUMBER

DATE

PAGE - CARR BRIDGE
PISCATAQUIS RIVER
PISCATAQUIS COUNTY
ABBOT

ESTIMATED QUANTITIES

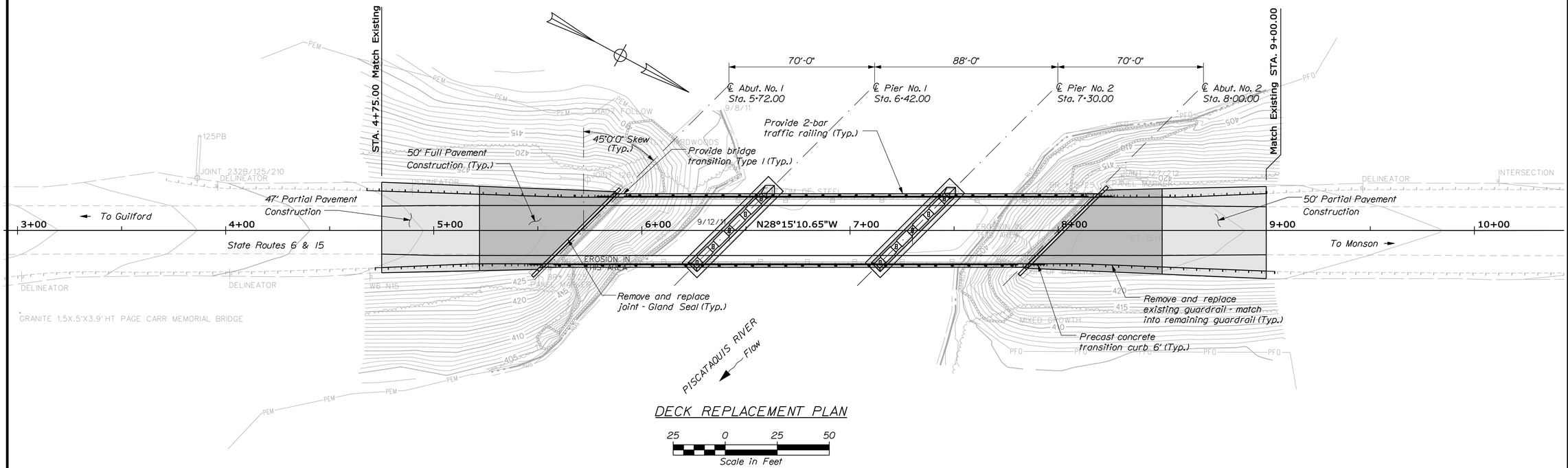
SHEET NUMBER

2

OF 15

Username: david.sullivan Date:11/6/2012

Filename: ...\bridge\msto\002_Estimate.dgn Division: BRIDGE



DECK REPLACEMENT PLAN

25 0 25 50

Scale in Feet

Filename: ...\00\bridge\msta\003_BDPlan1.dgn Division: BRIDGE Username: david.sullivan Date:11/6/2012

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1930(600)

PIN 19306.00

BRIDGE NO. 5725 BRIDGE PLANS

			DATE
PROJ. MANAGER	S. Bodgel	BY	
DESIGN-DETAILED	B. Reeves	D. Sullivan	OCT. 2012
CHECKED-REVIEWED	Engr. & Arch.	M. Poulin	------
DESIGN2-DETAILED2	------	------	------
DESIGN3-DETAILED3	------	------	------
REVISIONS 1	------	------	------
REVISIONS 2	------	------	------
REVISIONS 3	------	------	------
REVISIONS 4	------	------	------
FIELD CHANGES	------	------	------

SIGNATURE

P.E. NUMBER

DATE

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PISCATAQUIS RIVER
ABBOT PISCATAQUIS COUNTY

GENERAL PLAN

SHEET NUMBER

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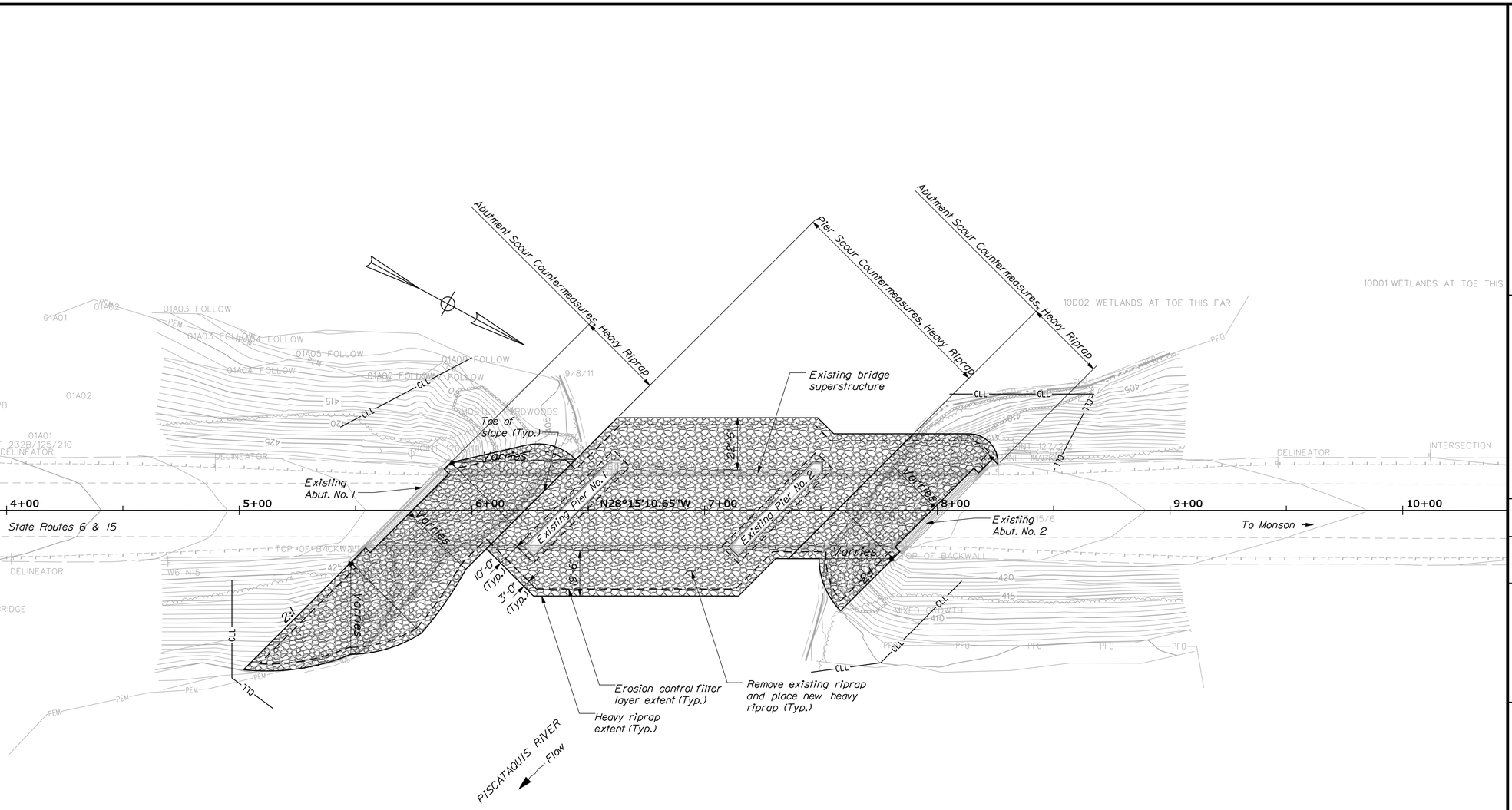
OF 15



SCOUR COUNTERMEASURE PLAN

25 0 25 50

Scale in Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1930(600)

PIN 19306.00

BRIDGE NO. 5725

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	S. Bodge	
DESIGN-DETAILED	B. Reeves	D. Sullivan
CHECKED-REVIEWED	Engr. & Anth.	M. Poulin
DESIGN2-DETAILED2	------	------
DESIGN3-DETAILED3	------	------
REVISIONS 1	------	------
REVISIONS 2	------	------
REVISIONS 3	------	------
REVISIONS 4	------	------
FIELD CHANGES	------	------

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DATE

PAGE - CARR BRIDGE
PISCATAQUIS RIVER
PISCATAQUIS COUNTY
ABBOT

SCOUR COUNTERMEASURES PLAN

SHEET NUMBER

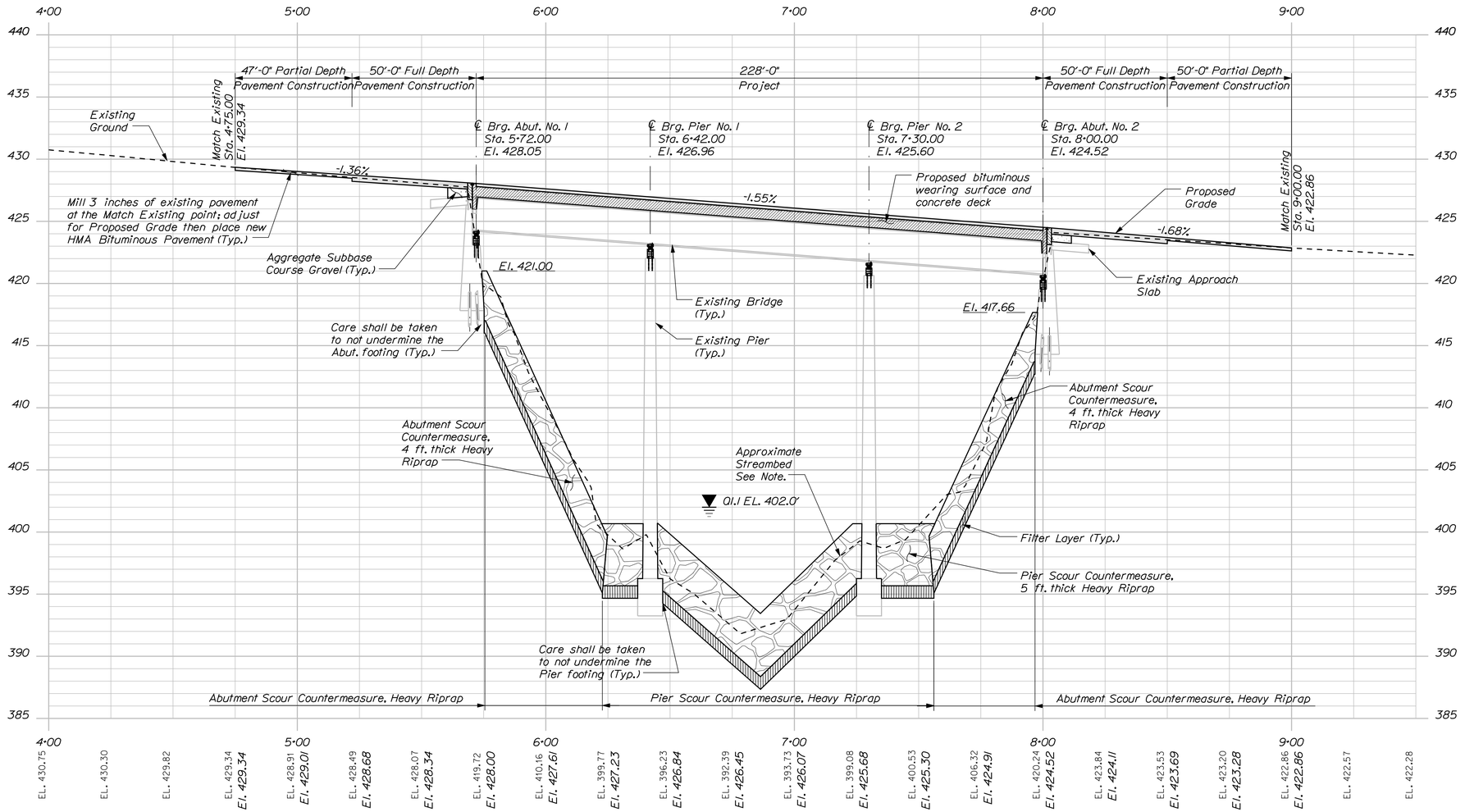
4

OF 15

Filename: ...\mslo\004_BDPlan-Scour.dgn Division: BRIDGE Username: david.sullivan Date:11/6/2012

PROFILE NOTES:

1. The assumed streambed elevations shown represent the upstream and downstream cross-section taken in August 1995. For further cross-sections reference see Appendix D (Hydrology/Hydraulic/ Scour Data/POA) of the Preliminary Design Report (PDR).



PROFILE

Horiz. 25 0 25 50

Vert. 5 0 5 10

Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1930(600)

PIN 19306.00

BRIDGE NO. 5725

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	S. Bridge		
DESIGN-DETAILED	B. Reeves	D. Sullivan	OCT. 2012
CHECKED-REVIEWED	Erd.& Anth.	M. Poulin	------
DESIGN2-DETAILED2	------	------	------
DESIGN3-DETAILED3	------	------	------
REVISIONS 1	------	------	------
REVISIONS 2	------	------	------
REVISIONS 3	------	------	------
REVISIONS 4	------	------	------
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PISCATAQUIS RIVER
PISCATAQUIS COUNTY

ABBOT

PROFILE

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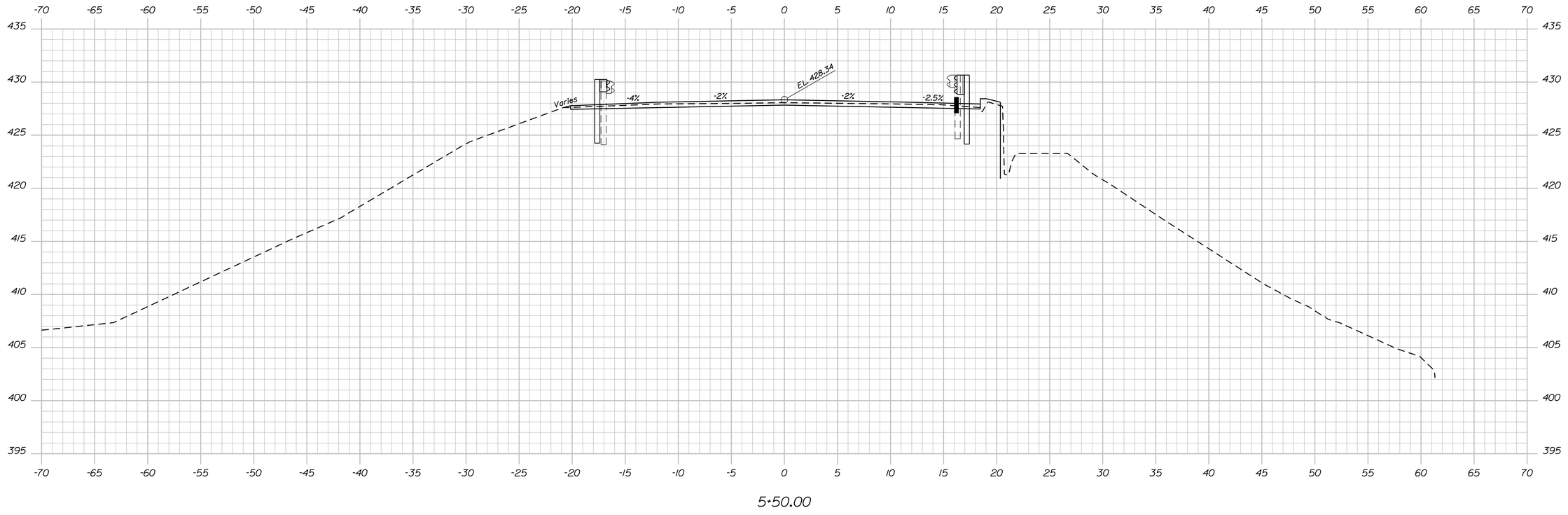

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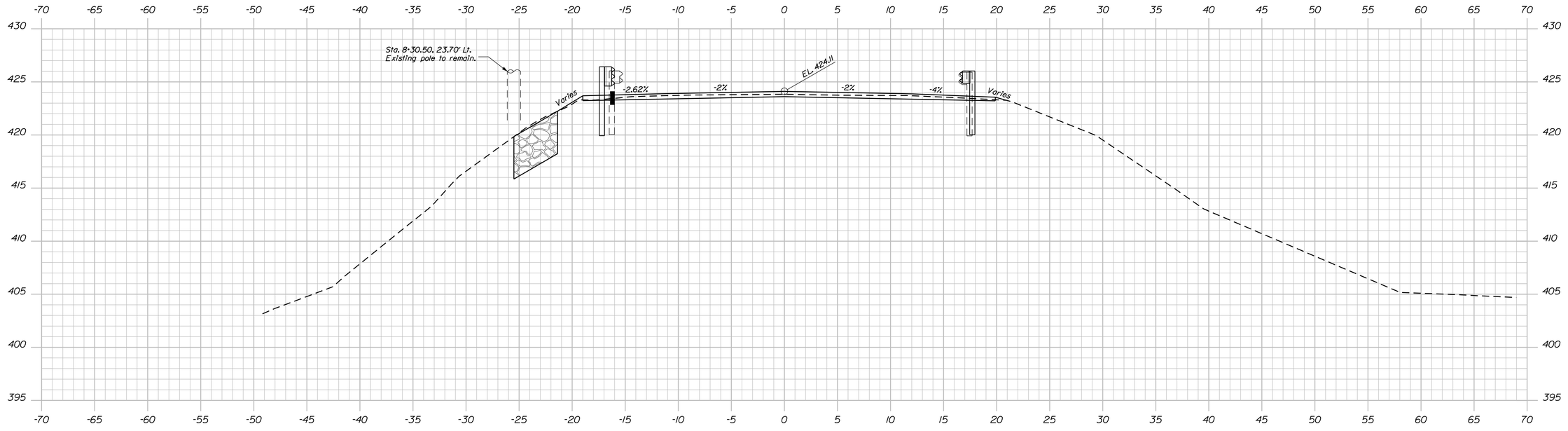

8+25.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1930(600)

PIN 19306.00

BRIDGE NO. 5725

BRIDGE PLANS

PROJ. MANAGER	S. Bodge	BY	DATE
DESIGN-DETAILED	B. Reeves	D. Sullivan	
CHECKED-REVIEWED	Erd. & Anth.	M. Poulin	OCT. 2012
DESIGN2-DETAILED2	------	------	------
DESIGN3-DETAILED3	------	------	------
REVISIONS 1	------	------	------
REVISIONS 2	------	------	------
REVISIONS 3	------	------	------
REVISIONS 4	------	------	------
FIELD CHANGES	------	------	------

SIGNATURE

P.E. NUMBER

DATE

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PISCATAQUIS RIVER
ABBOT PISCATAQUIS COUNTY

CROSS SECTIONS

SHEET NUMBER

6

OF 15

Sta. 5+50.00 and Sta. 8+25.00

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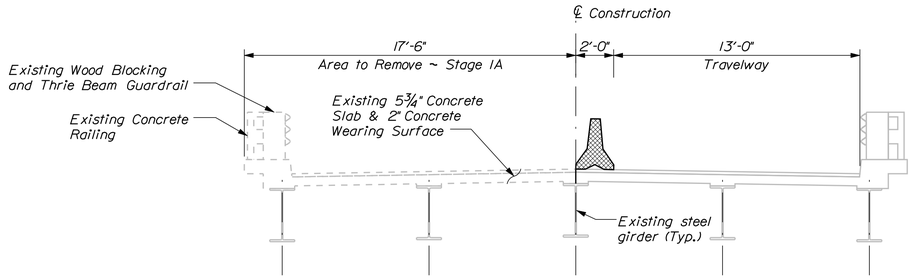
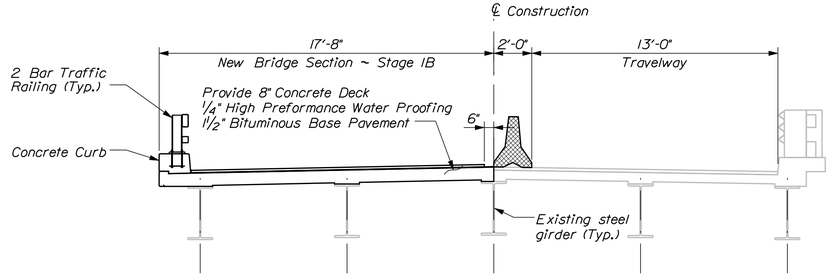


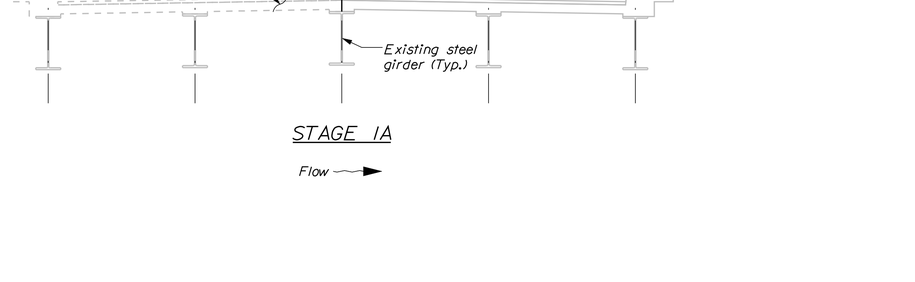
STAGE 1A

Flow →



STAGE 1B

Flow →



STAGE 2A

Flow →

STAGE CONSTRUCTION NOTES:

Stage 1A
Maintain one 13'-0" wide lane of alternating traffic on the downstream side using traffic signals. Remove the upstream side of the existing bridge as shown on the plans.

Stage 1B
Construct upstream portion of 8" concrete deck. Place curb and 4-bar traffic/bicycle bridge rail. Apply membrane and place 1½" bituminous base coat.

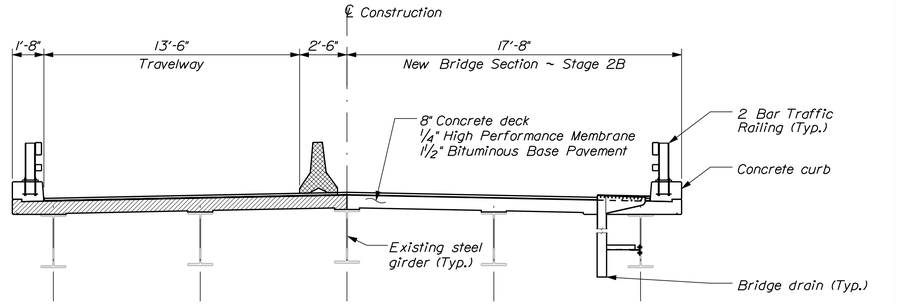
Stage 2A
Maintain one 13'-6" wide lane of alternating traffic on the upstream using traffic signals. Remove the downstream side of the existing bridge as shown on the plans.

Stage 2B
Construct downstream portion of 8" concrete deck. Place curb and 4-bar traffic/bicycle bridge rail. Apply membrane and place 1½" bituminous base coat.

Stage 3
Place 1½" bituminous wearing surface full width using flaggers. Open to traffic.

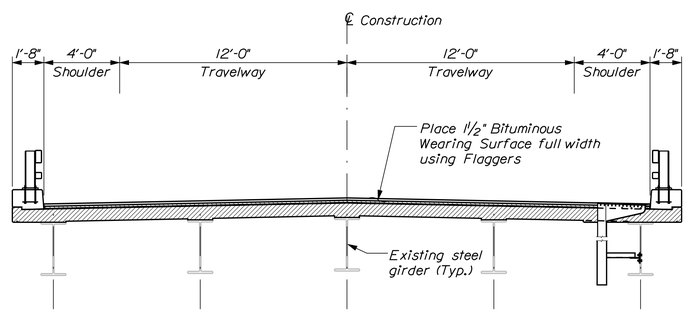
1. Temporary concrete barrier on the existing and new bridge deck shall be positively attached to the bridge deck. Attachments shall meet the requirements of AASHTO LRFD for a TL-4 loading condition. The method of attachment shall be designed and stamped by a Professional Engineer licensed in the State of Maine and approved by the Resident. Payment for attachment shall be considered incidental to Item 526.301.

2. Any damage to the structure caused by attachment of the concrete barrier shall be repaired and paid for under related contract item.



STAGE 2B

Flow →



STAGE 3

Flow →

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1930(600)

PIN 19306.00

BRIDGE NO. 5725

BRIDGE PLANS

		DATE
PROJ. MANAGER	S. Bodge	
DESIGN-DETAILED	B. Reeves	BY
CHECKED-REVIEWED	Ed. & Anth.	D. Sullivan
DESIGN2-DETAILED2	------	M. Poulin
DESIGN3-DETAILED3	------	------
REVISIONS 1	------	------
REVISIONS 2	------	------
REVISIONS 3	------	------
REVISIONS 4	------	------
FIELD CHANGES	------	------

SIGNATURE

OCT. 2012

P.E. NUMBER

DATE

PAGE - CARR BRIDGE
PISCATAQUIS RIVER
ABBOT PISCATAQUIS COUNTY

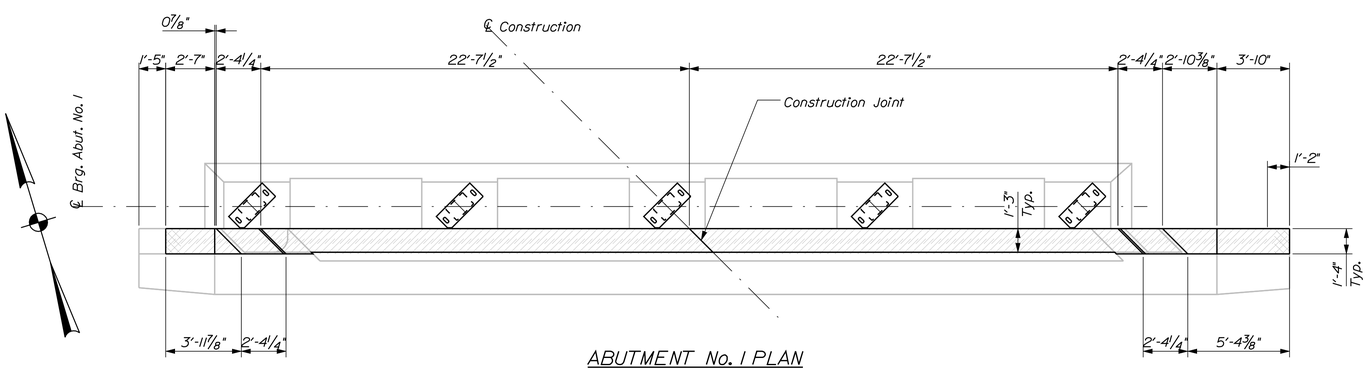
STAGE CONSTRUCTION

SHEET NUMBER

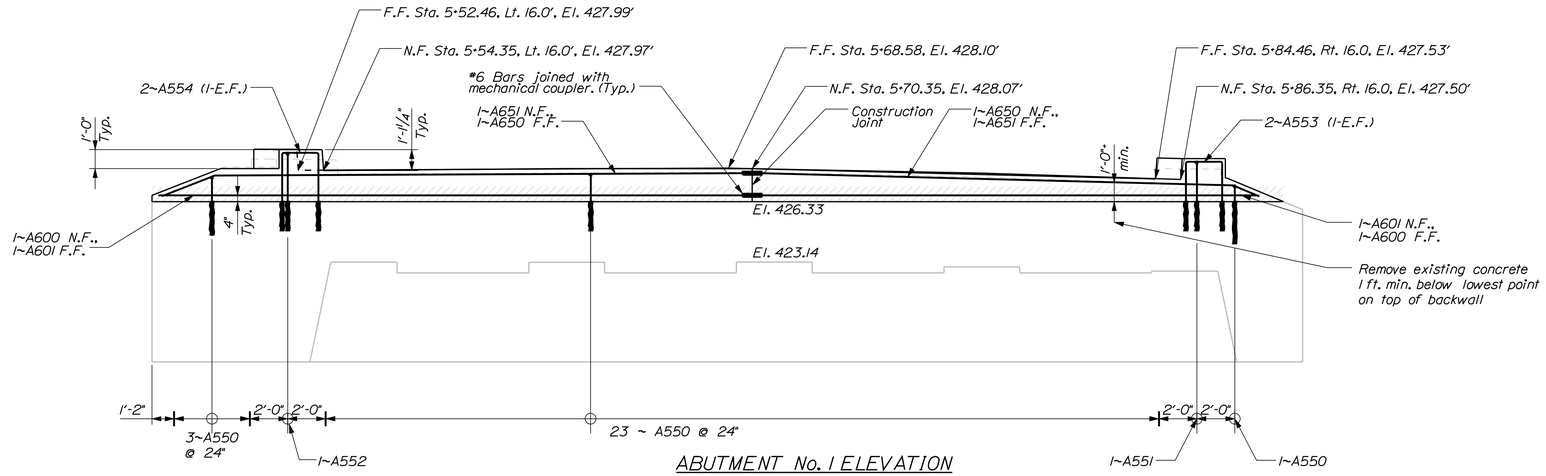
7

OF 15

Filename: ...\mslo\007_StageConstr.dgn Division: BRIDGE Username: david.sullivan Date:11/6/2012

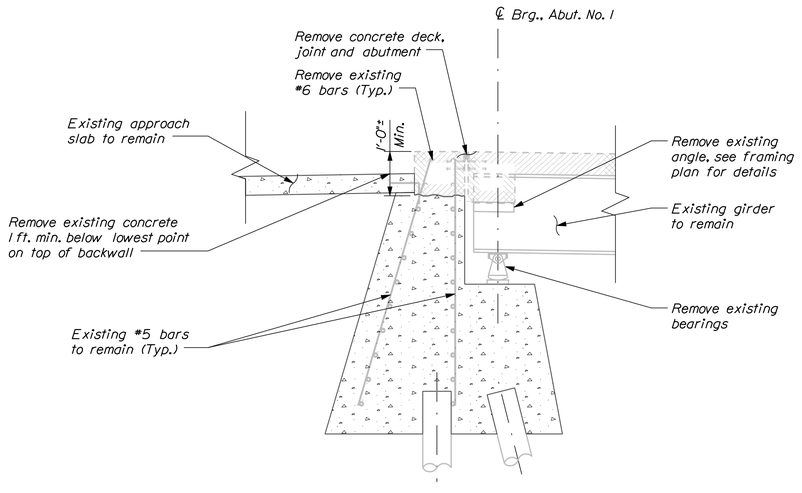


ABUTMENT No. 1 PLAN



ABUTMENT No. 1 ELEVATION

Flow Looking downstation



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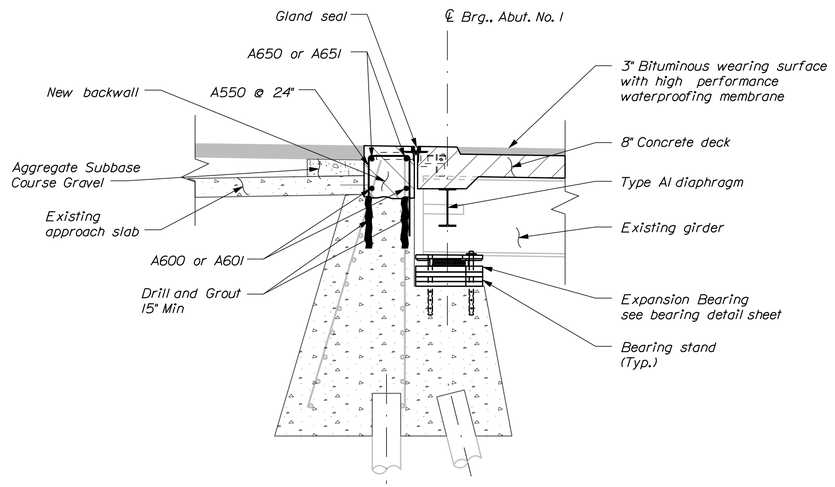

ABUTMENT No. 1 SECTION

ABUTMENT NOTES

1. Reinforcing steel shall have a minimum concrete cover of 2 inches in the walls and 3 inches in the footings unless otherwise noted.

2. Cover joints where water stops are not required in accordance with Standard Details Section 502.

3. Some reinforcing steel will need to be field cut, payment will be incidental to placement Item 503.13 Reinforcing Steel, Placing.

4. Approach slab is to remain along with any associated reinforcing steel

5. Field adjust reinforcing steel for clearance around the gland seal

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1930(600)

PIN 19306.00

BRIDGE NO. 5725

BRIDGE PLANS

PROJ. MANAGER	S. Bodge	BY	DATE
DESIGN-DETAILED	B. Reeves	D. Sullivan	OCT. 2012
CHECKED-REVIEWED	Engr. & Arch.	M. Poulin	------
DESIGN2-DETAILED2	------	------	------
DESIGN3-DETAILED3	------	------	------
REVISIONS 1	------	------	------
REVISIONS 2	------	------	------
REVISIONS 3	------	------	------
REVISIONS 4	------	------	------
FIELD CHANGES	------	------	------

SIGNATURE

P.E. NUMBER

DATE

PAGE - CARR BRIDGE
PISCATAQUIS RIVER
PISCATAQUIS COUNTY
ABBOT

ABUTMENT No. 1 PLANS

SHEET NUMBER

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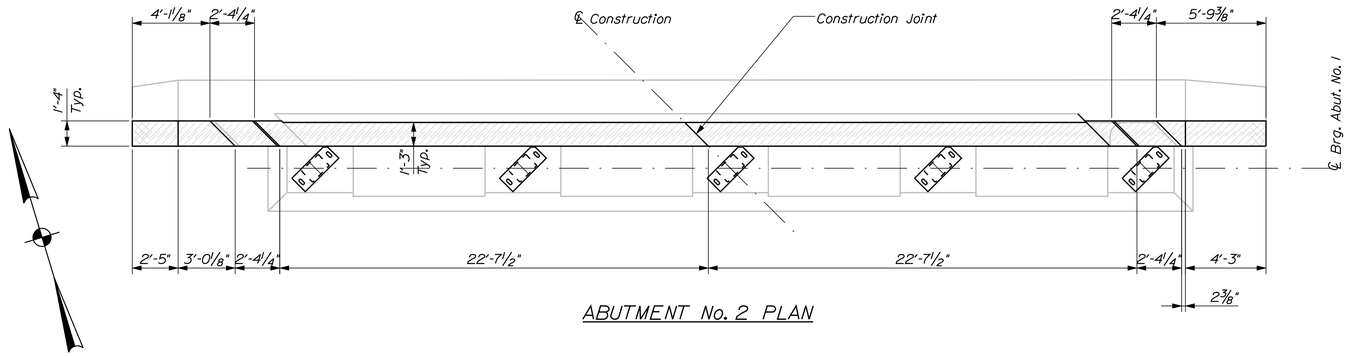
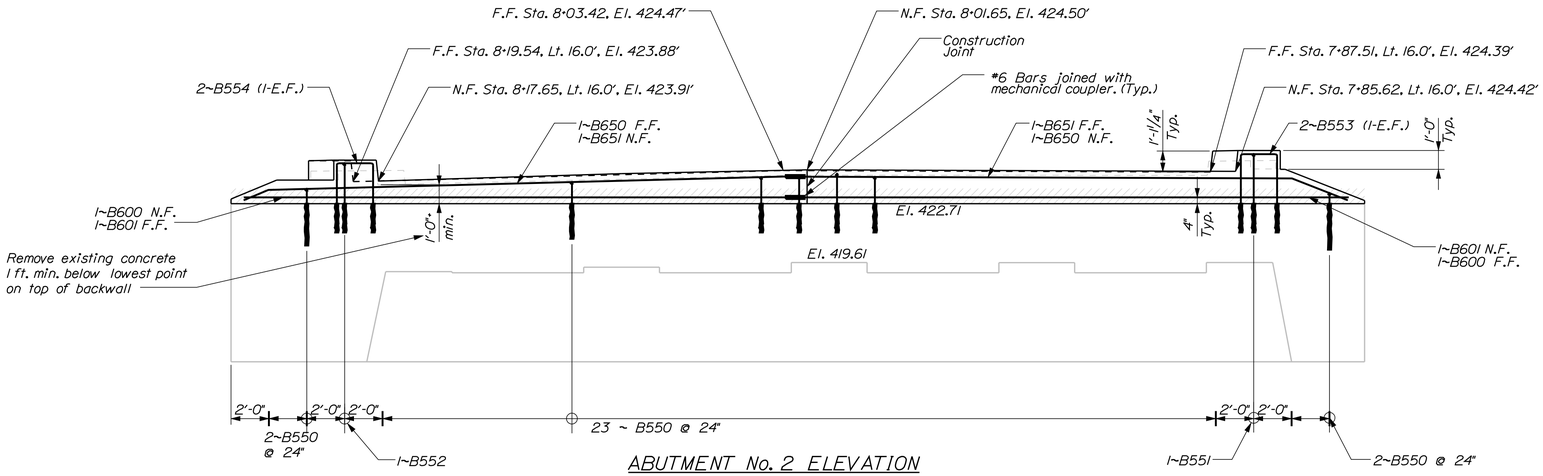
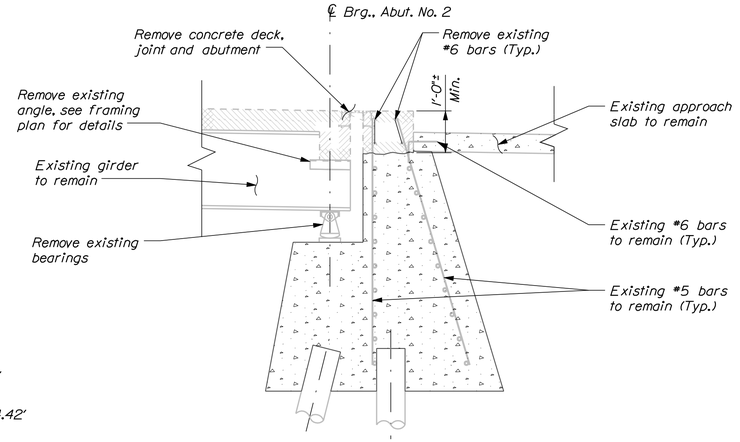
OF 15



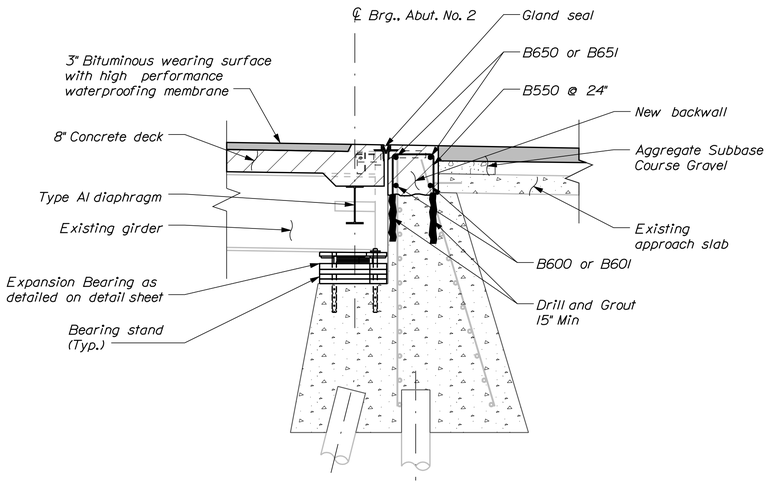
ABUTMENT No. 2 PLAN



ABUTMENT No. 2 ELEVATION



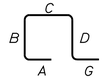
ABUTMENT No. 2 DEMOLITION SECTION



ABUTMENT No. 2 SECTION

ABUTMENT REINFORCING STEEL

MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
ABUTMENT No. 1														
A600	2	31'-7"												Horizontal Transverse
A601	2	26'-10"												Horizontal Transverse
A550	27	6'-6"	S		2'-10"	0'-10"	2'-10"							Vertical Longitudinal Stirup
A551	1	7'-8"	S		3'-5"	0'-10"	3'-5"							Vertical Long. Stirup Upstream
A552	1	8'-8"	S		3'-11"	0'-10"	3'-11"							Vertical Long. Stirup Downstream
A553	2	8'-9"	S		3'-5"	1'-11"	3'-5"							Vertical Long. Stirup Upstream
A554	2	9'-9"	S		3'-11"	1'-11"	3'-11"							Vertical Long. Stirup Downstream
A650	2	27'-1"	V				25'-7"	1'-6"			0'-6 1/2"			Transverse Upstream
A651	2	31'-7"	V				28'-7"	3'-0"			1'-1"			Transverse Downstream
ABUTMENT No. 2														
B600	2	29'-5"												Horizontal Transverse
B601	2	29'-4"												Horizontal Transverse
B550	27	6'-6"	S		2'-10"	0'-10"	2'-10"							Vertical Longitudinal Stirup
B551	1	7'-2"	S		4'-0"	0'-10"	4'-0"							Vertical Long. Stirup Upstream
B552	1	8'-2"	S		3'-6"	0'-10"	3'-6"							Vertical Long. Stirup Downstream
B553	2	8'-3"	S		4'-0"	1'-11"	4'-0"							Vertical Long. Stirup Upstream
B554	2	9'-3"	S		3'-6"	1'-11"	3'-6"							Vertical Long. Stirup Downstream
B650	2	26'-6"	V				28'-1"	1'-5"			1'-3"			Transverse Upstream
B651	2	27'-7"	V				26'-5"	3'-2"			1'-3"			Transverse Downstream



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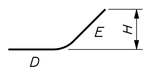

V

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1930(600)

PIN 19306.00

BRIDGE NO. 5725

BRIDGE PLANS

PROJ. MANAGER	S. Bodge	BY	DATE
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FIELD CHANGES	------	------	------

SIGNATURE

P.E. NUMBER

DATE

PAGE - CARR BRIDGE
PISCATAQUIS RIVER
PISCATAQUIS COUNTY
ABBOT

ABUTMENT No. 2 PLANS

SHEET NUMBER

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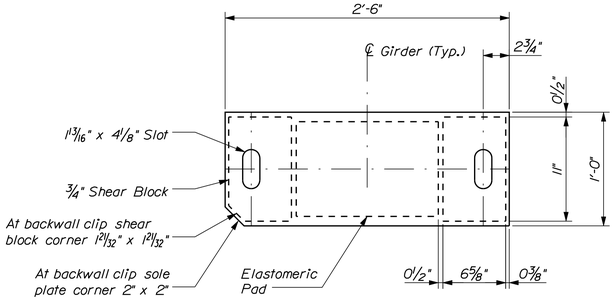
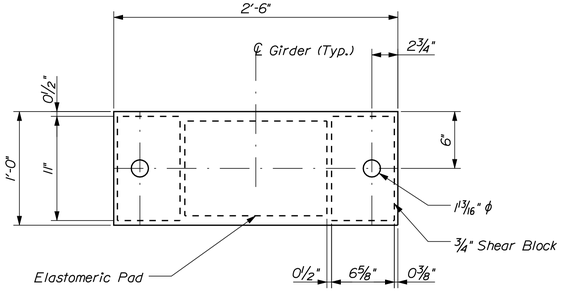
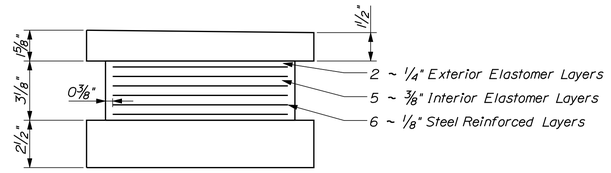


EXPANSION BEARING SOLE PLATE PLAN

Abutment No. 1 Bearing shown; Abutment No. 2 Bearings similar except clipped corners will be diagonally opposite. Pier No. 1 Bearings similar.

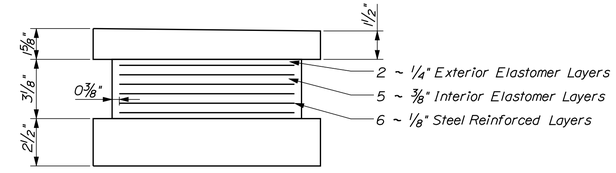


PIER No. 2 FIXED BEARING SOLE PLATE PLAN



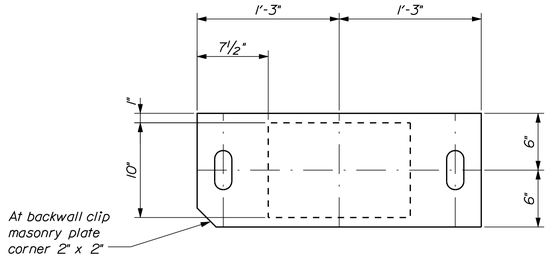
EXPANSION BEARING SECTION

Upstation →

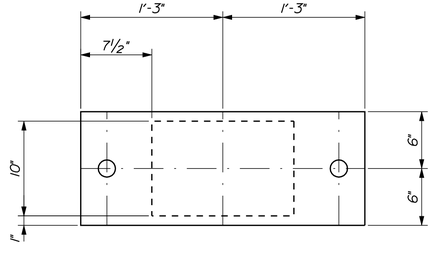


PIER No. 2 FIXED BEARING SECTION

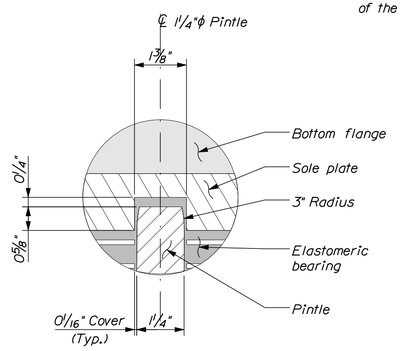
Upstation →



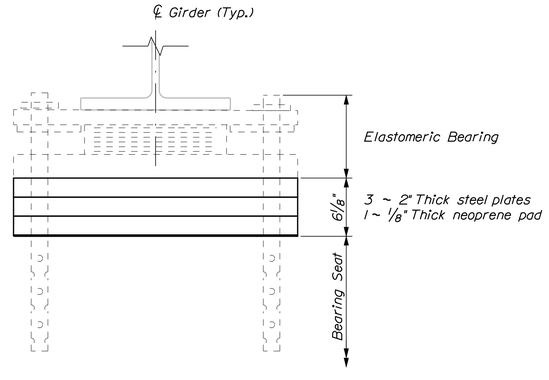
EXPANSION BEARING MASONRY PLATE PLAN



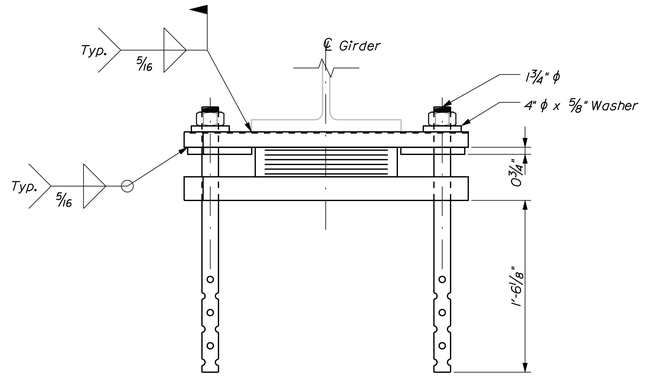
PIER No. 2 FIXED BEARING MASONRY PLATE PLAN



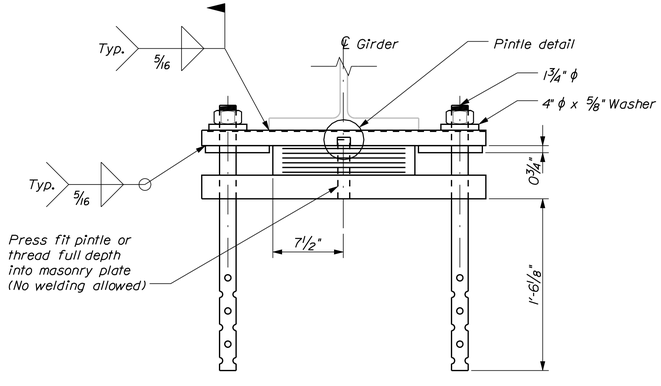
PINTLE DETAIL



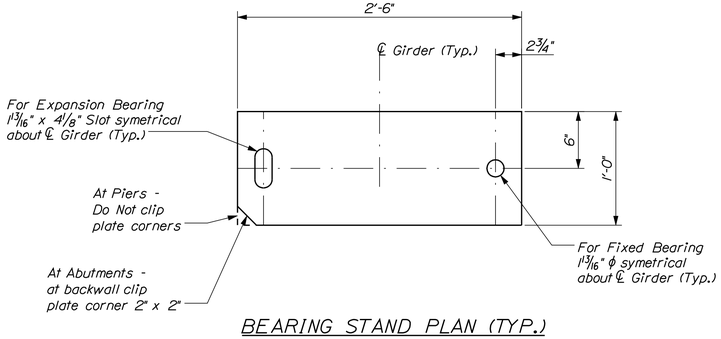
BEARING STAND SECTION



EXPANSION BEARING ELEVATION



PIER No. 2 FIXED BEARING ELEVATION



BEARING STAND PLAN (TYP.)

Abutment No. 1 Bearing plates shown; Abutment No. 2 Bearing plates similar except clipped corners will be diagonally opposite, against backwall. Pier No. 1 Bearing plates similar, without clipped corners.

ELASTOMERIC BEARING NOTES

1. The shear modulus of the elastomer shall be 130 psi. ±15%.

2. Vulcanizing of the elastomer to the steel plates shall be done during the primary mold process.

3. Masonry plates, sole plates and shear pins shall meet the requirements of ASTM A 709/A 709M, Grade 50 or 50W. Anchor rods shall meet the requirements of ASTM F 1554, Grade 105 and shall be swedged 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 pins shall be galvanized to ASTM A 153 or ASTM B 695, Class 50, Type 1.

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. Bearings at Abutment No. 1, Pier No. 1 and Abutment No. 2 shall be expansion type as detailed. Pier No. 2 bearing shall be fixed.

11. The Contractor shall verify the elevation of the bottom of the flange at each bearing, design the proper shim plates, or other bearing support types, so as to not change that elevation and have the design approved by the Department prior to the replacement of the bearings.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1930(600)

PIN 19306.00

BRIDGE NO. 5725

BRIDGE PLANS

PROJ. MANAGER	S. Bridge	BY	DATE
DESIGN-DETAILED	B. Reeves	D. Sullivan	OCT. 2012
CHECKED-REVIEWED	Engr. & Arch.	M. Poulin	------
DESIGN2-DETAILED2	------	------	------
DESIGN3-DETAILED3	------	------	------
REVISIONS 1	------	------	------
REVISIONS 2	------	------	------
REVISIONS 3	------	------	------
REVISIONS 4	------	------	------
FIELD CHANGES	------	------	------

SIGNATURE

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DATE

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PISCATAQUIS RIVER
ABBOT PISCATAQUIS COUNTY

BEARING DETAILS

SHEET NUMBER

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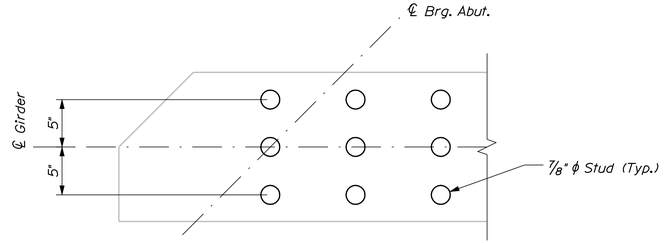


TRANSVERSE SHEAR STUD SPACING

STRUCTURAL STEEL NOTES

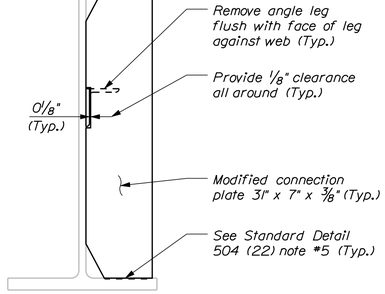
1. Connection plates shall be plumb after erection and dead loading of the structure.

2. Paint shall be shop applied except in areas shown on plans. Some field painting may be necessary including areas around field welds and touch up of damaged areas. Any field painting necessary shall not be paid for directly but shall be considered incidental to Item No. 506.144 - Field Painting of Existing and New Structural Steel.

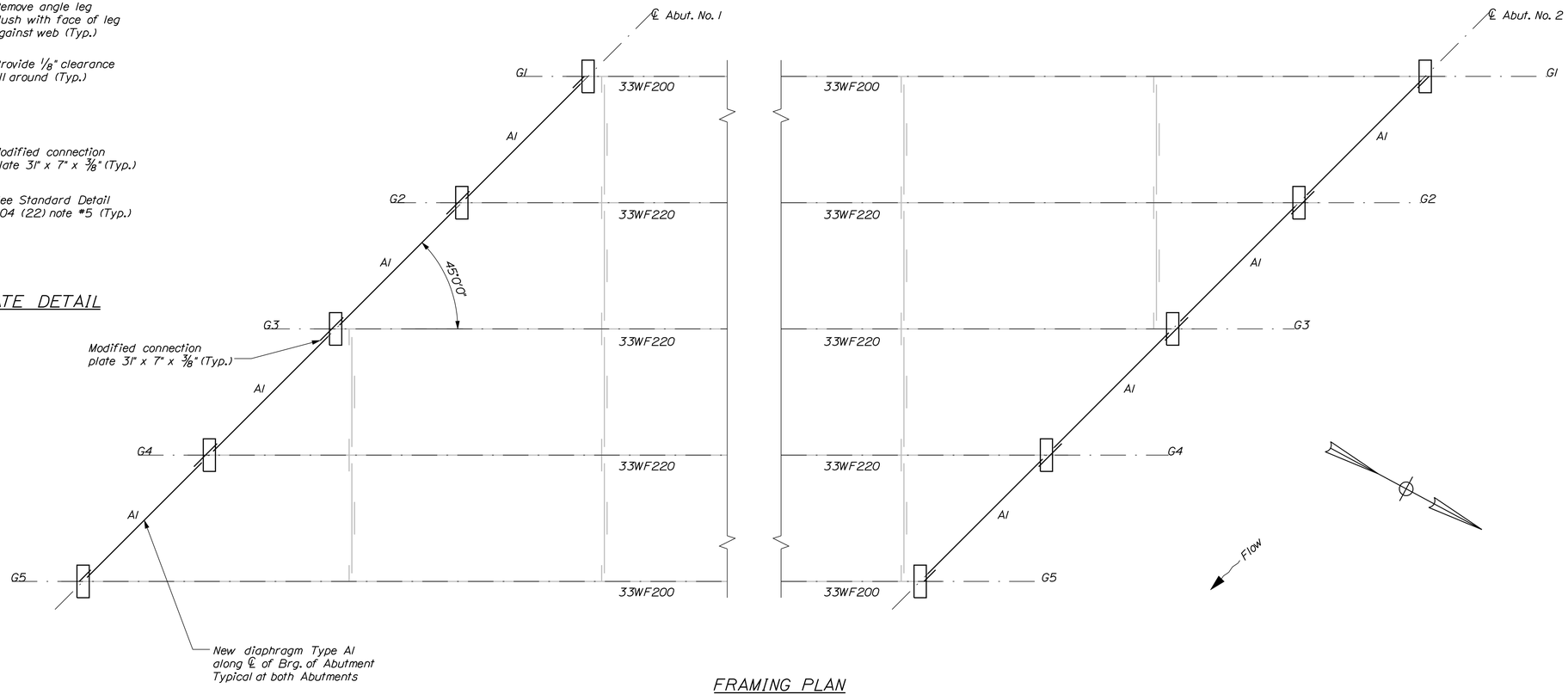
4. Detailing, fabricating and erection of new diaphragms Type A1 along ℄ of bearing shall follow Standard Specification 504- Structural Steel.

5. The Contractor shall verify the spacing of the existing Girders for the correct diaphragm lengths.

SHEAR CONNECTOR LAYOUT



CONNECTION PLATE DETAIL



FRAMING PLAN

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1930(600)

PIN 19306.00

BRIDGE NO. 5725

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	S. Bridge		
DESIGN-DETAILED	B. Reeves	D. Sullivan	OCT. 2012
CHECKED-REVIEWED	Erd. & Anth.	M. Poulin	------
DESIGN2-DETAILED2	------	------	------
DESIGN3-DETAILED3	------	------	------
REVISIONS 1	------	------	------
REVISIONS 2	------	------	------
REVISIONS 3	------	------	------
REVISIONS 4	------	------	------
FIELD CHANGES	------	------	------

SIGNATURE

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DATE

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PISCATAQUIS RIVER
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SHEAR CONNECTORS & FRAMING PLAN

SHEET NUMBER

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BOTTOM OF SLAB ELEVATIONS

Span No. 1											
	℄ Brg	.1 Span	.2 Span	.3 Span	.4 Span	.5 Span	.6 Span	.7 Span	.8 Span	.9 Span	℄ Brg.
G1	426.563	426.471	426.375	426.275	426.196	426.068	425.949	425.828	425.705	425.586	425.473
G2	426.838	426.746	426.651	426.553	426.446	426.343	426.227	426.104	425.980	425.861	425.748
G3	427.113	427.021	426.926	426.828	426.721	426.618	426.502	426.379	426.255	426.136	426.023
G4	427.058	426.986	426.891	426.793	426.686	426.583	426.467	426.344	426.220	426.101	425.988
G5	427.013	426.931	426.855	426.755	426.649	426.538	426.429	426.308	426.185	426.066	425.953

Span No. 2											
	℄ Brg	.1 Span	.2 Span	.3 Span	.4 Span	.5 Span	.6 Span	.7 Span	.8 Span	.9 Span	℄ Brg.
G1	425.473	425.351	425.229	425.117	424.990	424.855	424.720	424.567	424.419	424.261	424.113
G2	425.748	425.626	425.505	425.393	425.266	425.132	424.996	424.843	424.536	424.536	424.388
G3	426.027	425.899	425.782	425.664	425.541	425.411	425.269	425.120	424.966	424.811	424.667
G4	425.992	425.864	425.747	425.629	425.506	425.376	425.234	425.085	424.931	424.776	424.632
G5	425.956	425.829	425.711	425.593	425.470	425.339	425.198	425.048	424.895	424.741	424.596

Span No. 3											
	℄ Brg	.1 Span	.2 Span	.3 Span	.4 Span	.5 Span	.6 Span	.7 Span	.8 Span	.9 Span	℄ Brg.
G1	424.113	424.016	423.915	423.818	423.719	423.618	423.519	423.405	423.285	423.151	423.023
G2	424.388	424.291	424.190	424.094	423.997	423.893	423.796	423.683	423.561	423.436	423.308
G3	424.663	424.566	424.465	424.369	424.272	424.168	424.071	423.958	423.836	423.711	423.583
G4	424.628	424.531	424.430	424.334	424.237	424.133	424.026	423.923	423.801	423.676	423.548
G5	424.593	424.496	424.395	424.298	424.199	424.098	423.989	423.885	423.765	423.641	423.513

TABLE OF DEFLECTIONS

All Values are in Inches

GIRDERS G2, G3 & G4

Span No. 1											
	℄ Brg	7′	14′	21′	28′	35′	42′	49′	56′	63′	℄ Brg.
Fluid D/L	0.00	0.18	0.32	0.42	0.45	0.43	0.36	0.25	0.12	0.03	0.00
Superimp. D/L	0.00	0.04	0.08	0.12	0.13	0.12	0.11	0.07	0.03	0.01	0.00
Total D/L	0.00	0.22	0.40	0.54	0.58	0.55	0.47	0.32	0.15	0.04	0.00

Span No. 2											
	℄ Brg	7′	14′	21′	28′	35′	42′	49′	56′	63′	℄ Brg.
Fluid D/L	0.00	0.07	0.23	0.39	0.52	0.57	0.52	0.39	0.23	0.07	0.00
Superimp. D/L	0.00	0.03	0.1	0.15	0.18	0.2	0.18	0.15	0.1	0.03	0.00
Total D/L	0.00	0.1	0.33	0.54	0.7	0.77	0.7	0.54	0.33	0.1	0.00

Span No. 3											
	℄ Brg	7′	14′	21′	28′	35′	42′	49′	56′	63′	℄ Brg.
Fluid D/L	0.00	0.03	0.12	0.25	0.36	0.43	0.45	0.42	0.32	0.18	0.00
Superimp. D/L	0.00	0.01	0.03	0.07	0.11	0.12	0.13	0.12	0.08	0.04	0.00
Total D/L	0.00	0.04	0.15	0.32	0.47	0.55	0.58	0.54	0.4	0.22	0.00

GIRDERS G1 & G5

Span No. 1											
	℄ Brg	7′	14′	21′	28′	35′	42′	49′	56′	63′	℄ Brg.
Fluid D/L	0.00	0.16	0.28	0.37	0.41	0.39	0.32	0.22	0.11	0.03	0.00
Superimp. D/L	0.00	0.06	0.11	0.14	0.15	0.15	0.12	0.08	0.04	0.01	0.00
Total D/L	0.00	0.22	0.39	0.51	0.56	0.54	0.44	0.3	0.15	0.04	0.00

Span No. 2											
	℄ Brg	7′	14′	21′	28′	35′	42′	49′	56′	63′	℄ Brg.
Fluid D/L	0.00	0.06	0.21	0.35	0.47	0.51	0.47	0.35	0.21	0.06	0.00
Superimp. D/L	0.00	0.04	0.11	0.18	0.22	0.24	0.22	0.18	0.11	0.04	0.00
Total D/L	0.00	0.1	0.32	0.53	0.69	0.75	0.69	0.53	0.32	0.1	0.00

Span No. 3											
	℄ Brg	7′	14′	21′	28′	35′	42′	49′	56′	63′	℄ Brg.
Fluid D/L	0.00	0.03	0.11	0.22	0.32	0.39	0.41	0.37	0.28	0.16	0.00
Superimp. D/L	0.00	0.01	0.04	0.08	0.12	0.15	0.15	0.14	0.11	0.06	0.00
Total D/L	0.00	0.04	0.15	0.3	0.44	0.54	0.56	0.51	0.39	0.22	0.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1930(600)

PIN 19306.00

BRIDGE NO. 5725

BRIDGE PLANS

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SIGNATURE

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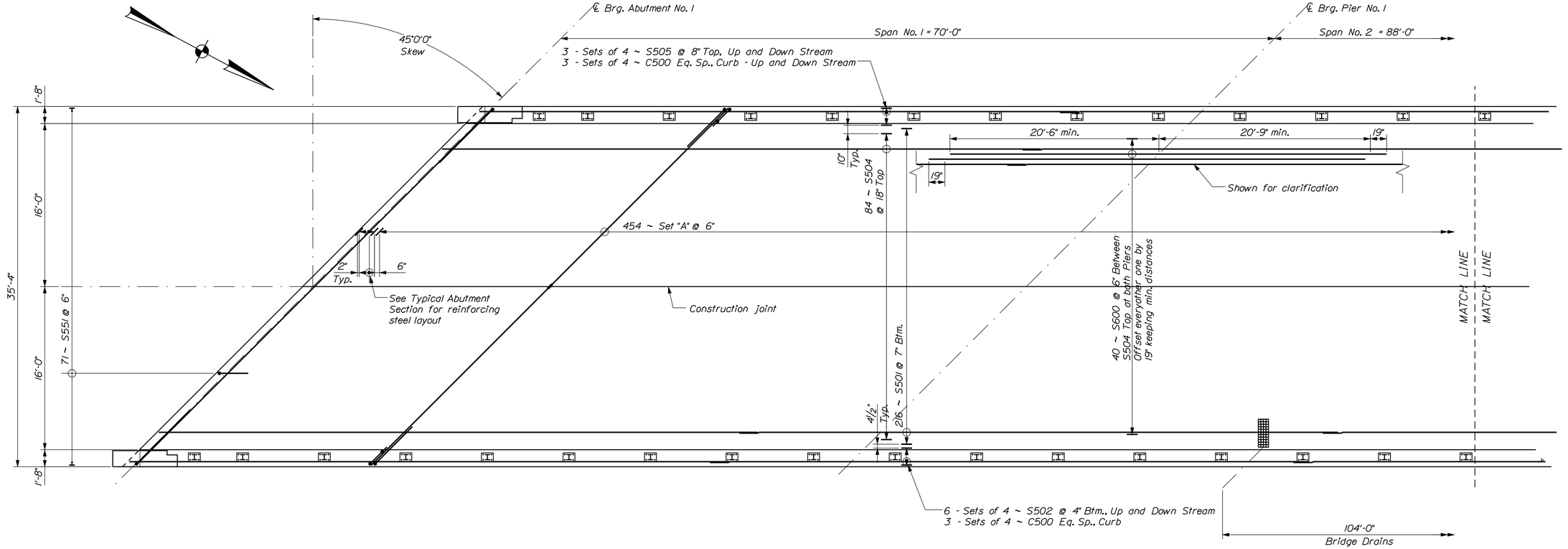
ABBOT

BOTTOM OF SLAB ELEVATIONS

SHEET NUMBER

12

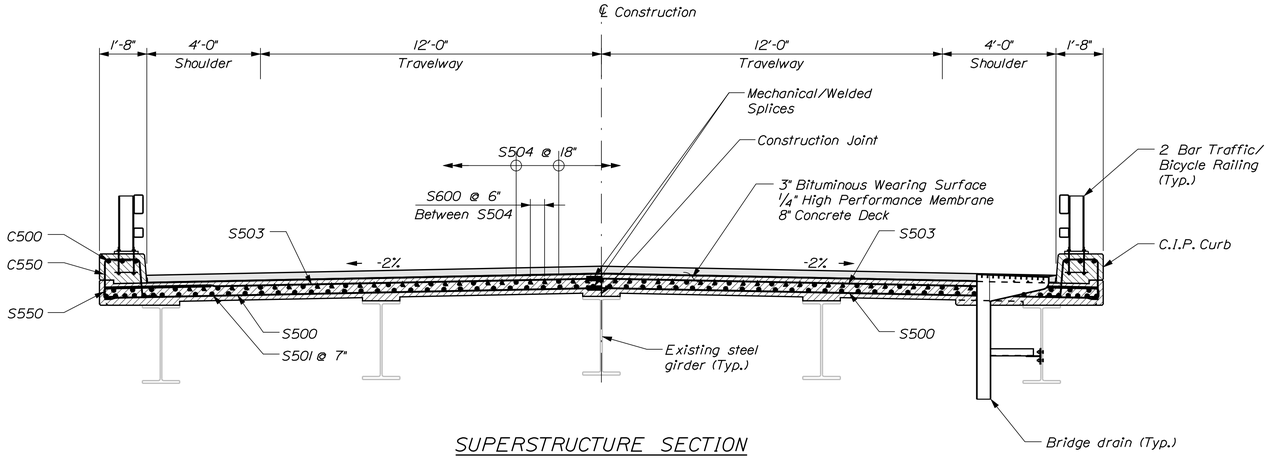
OF 15



Set "A" -> 2- S500 Btm., 2- S503 Top, 2- S550, 2 - C550
Set "B" -> 2- S500 Btm., 2- S503 Top, 2- S552, 2 - C550
Set "C" -> 2- S500 Btm., 2- S503 Top, 2- S553, 2 - C550

SUPERSTRUCTURE PLAN

Rotate 180° about center of bridge for reinforcing steel layout.
See full superstructure plan for bridge drain layout.

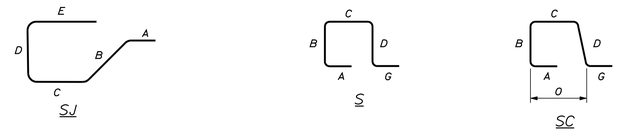


SUPERSTRUCTURE SECTION

SUPERSTRUCTURE REINFORCING STEEL

MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
S500	924	24'-9"												Bottom Transverse
S501	216	58'-9"												Bottom Longitudinal
S502	48	58'-9"												Bottom Longitudinal Overhang
S503	924	24'-9"												Top Transverse
S504	84	58'-9"												Top Longitudinal
S505	24	58'-9"												Top Longitudinal Overhang
* C500	24	58'-9"												Transverse Curb
S600	40	42'-10"												Top Longitudinal at Piers
S550	924	6'-0"	S	0'-3"	0'-5"	5'-4"								Transverse Overhang
S551	142	6'-7¼"	SJ	0'-8"	1'-5"	1'-4¾"	1'-5½"	1'-8"						Longitudinal Superstructure Ends
S552	12	7'-0½"	S	0'-3"	1'-5½"	5'-4"								Trans. Overhang Superstructure Ends
S553	4	6'-9"	S	0'-3"	1'-2"	5'-4"								Trans. Overhang Superstructure Ends
* C550	924	5'-8"	SC	0'-6"	1'-4"	2'-0"	1'-4"			0'-6"		2'-0"		Transverse Curb

NOTE: C500 and C550 will be Epoxy-Coated Reinforcing Steel and will be paid for under
Item * 503.14 Epoxy-Coated Reinforcing Steel, Fabricated and Delivered and
Item * 503.15 Epoxy-Coated Reinforcing Steel, Placing



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1930(600)

PIN 19306.00

BRIDGE NO. 5725

BRIDGE PLANS

	BY	DATE
S. Bridge	D. Sullivan	OCT. 2012
B. Reeves	M. Poulin	------
Erd. & Anth.	------	------
PROJ. MANAGER		
DESIGN-DETAILED		
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

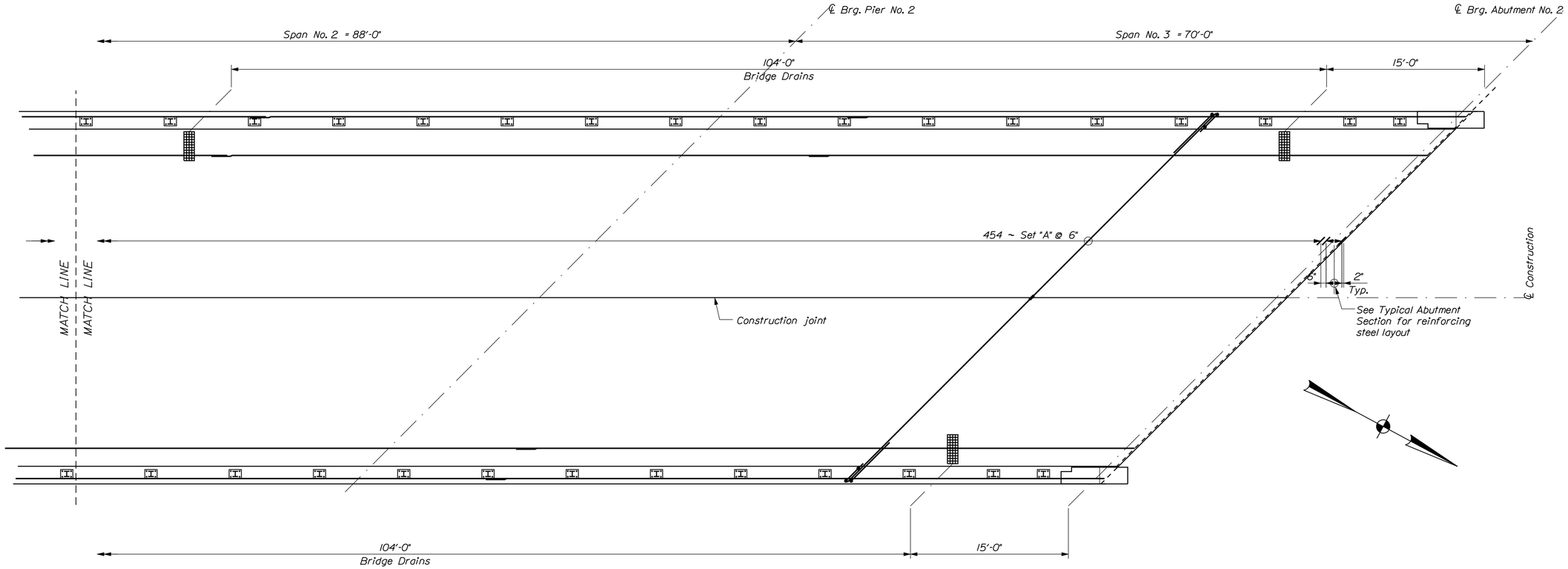
PAGE - CARR BRIDGE
PISCATAQUIS RIVER
ABBOT PISCATAQUIS COUNTY

SUPERSTRUCTURE PLANS

SHEET NUMBER

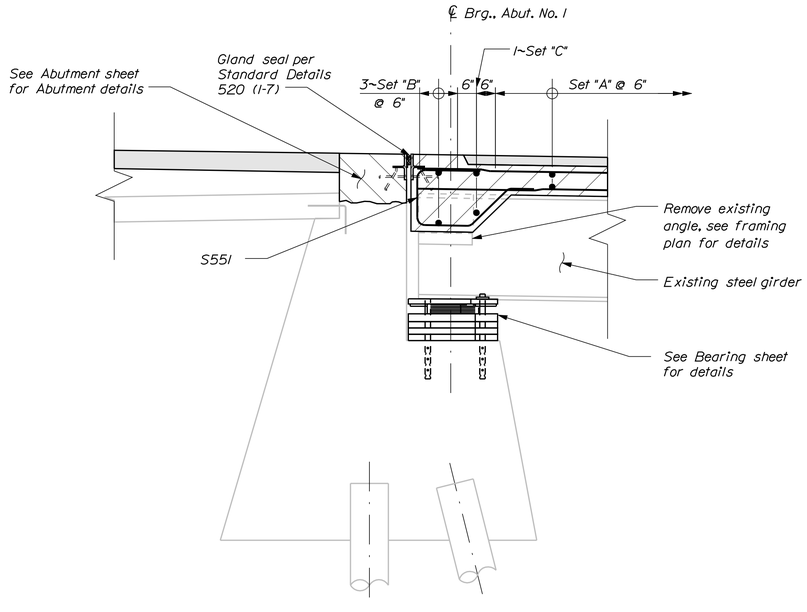
13

OF 15



SUPERSTRUCTURE PLAN

See previous Superstructure Plan sheet for reinforcing steel layout.



TYPICAL ABUTMENT SECTION

SUPERSTRUCTURE NOTES

1. The theoretical blocking used for design of the structure is 1½ inch at the centerline of bearing of the abutments and piers. Refer to Standard Detail 502(02) for blocking details.

2. Reinforcing steel shall have a minimum concrete cover of 2 inches unless otherwise noted.

3. Adjust reinforcing steel to fit around the bridge drains in a manner approved by the Resident. Do not cut transverse reinforcing bars.

4. Form a one inch V-groove on the fascias at the horizontal joint between the curb and slab.

5. The superstructure slab concrete for each span shall be placed continuously and shall be kept plastic until the entire placement has been made.

6. At the Contractor's option, Precast Deck Panels may be used in place of the full depth cast-in-place deck slab, in accordance with Special Provisions Section 502, Structural Concrete - Precast Deck Panels, and in accordance with the Standard Details.

7. Payment for reinforcing steel fabricated, delivered, and placed in the cast-in-place portion of the structural concrete slab will be considered incidental to the appropriate Standard Specifications Section 502 pay item.

8. The seal(s) to be furnished shall have minimum Movement Rating(s) as follows:

   Abutment No. 1 = 1.5 inch
   Abutment No. 2 = 0.75 inch

9. The Resident shall approve the seals prior to fabrication of the Expansion Device.

10. Provide 3 additional stirrups in the curbs at each Transition Barrier location.

11. 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.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1930(600)

PIN 19306.00

BRIDGE NO. 5725

BRIDGE PLANS

PROJ. MANAGER	S. Bodge	BY	DATE
DESIGN-DETAILED	B. Reeves	D. Sullivan	OCT. 2012
CHECKED-REVIEWED	Engr. & Arch.	M. Poulin	------
DESIGN2-DETAILED2	------	------	------
DESIGN3-DETAILED3	------	------	------
REVISIONS 1	------	------	------
REVISIONS 2	------	------	------
REVISIONS 3	------	------	------
REVISIONS 4	------	------	------
FIELD CHANGES	------	------	------

SIGNATURE

P.E. NUMBER

DATE

PAGE - CARR BRIDGE
PISCATAQUIS RIVER
ABBOT PISCATAQUIS COUNTY

SUPERSTRUCTURE PLANS

SHEET NUMBER

14

OF 15

Username: david.sullivan Date:11/6/2012
Filename: ...\014_Superstructure-Cont.dgn Division: BRIDGE

Filename: ...\00\ROW\MSTA\001_RWPLAN1.dgn Division: BRIDGE Username: david.sullivan Date:11/6/2012

POND ROAD

S.H.C. FILE NO. 11-30

DAVID M. KAIN
LINDA L. KAIN

EXIST. SLOPE EASE. LIMITS

S.H.C. FILE NO. 11-30

SEE S.H.C. FILE NO. 11-30
F.A.P. PROJECT NO. F-037-1(5)

BEGIN B.L.
STA. 4+00

TO GUILFORD

S.H. "37"

ROUTE 6/15

N28°15'10.7"W 7+00
600.00'

END B.L.
STA. 10+00

TO MONSON

MAIN ROAD

PISCATAQUIS RIVER
Flow

LORI A. LOWELL

MARK E. FRINK

GRANITE 1.5X.5'X3.9' HT PAGE CARR MEMORIAL BRIDGE

Remove existing riprap and place new heavy riprap (Typ.)

Heavy riprap extent (Typ.)

DECK REPLACEMENT PLAN

25 0 25 50
Scale in Feet

LINDA J. PALMER
RALPH M. PALMER

DAVID M. KAIN
LINDA L. KAIN
PARCEL NO. (1)
LAND TAKEN = 1548± S.F. (ENTIRE PARCEL EAST OF ROUTE 6/15)
TOTAL AREA = 3.4± AC. (PER TOWN)
REM. AREA = 3.36± AC. (REMAINING AREA ON THE WEST SIDE OF ROUTE 6/15)

MARK E. FRINK
ITEM NO. (2)
TEMP. CONST. RIGHTS = 0.06± AC. (1)
TOTAL AREA = 26.98± AC. (PER DEED)

THOMAS PAGE
IDA PAGE

R/W REFERENCE

SEE S.H.C. FILE NO. 11-30
SHEET 2 OF 4, 1956

PAGE-CARR BRIDGE
OVER
PISCATAQUIS RIVER

BRIDGE NO. 5725 WIN 19306.00

SYMBOLS

- (WELL)
- GRADING LIMIT LINE
- CONSTRUCTION LIMIT LINE
- PROPERTY LINE P.L.
- LIMITS OF TYP. RIGHT-OF-WAY (LOW P.)
- EXISTING RIGHT OF WAY
- NEW RIGHT OF WAY
- NEW ROW WITHIN EXIST. ROW
- CONTROL OF ACCESS
- IP or ● RPF (IRON PIPE or PIN FOUND)
- S.T. (SEPTIC TANK)
- (ROW MONUMENT)
- (TRAVERSE POINT)
- WATER LINE
- GAS LINE
- ELECTRIC LINE
- TELEPHONE LINE
- SEWER LINE

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

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

REVISIONS			
NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK				COUNTY RECORD			
NO.	GRANTOR			INSTRUMENT	DATE	BOOK	PAGE
				COND.	10/1/12	2192	1

DAVID BERNHARDT
COMMISSIONER

KENNETH L. SWEENEY
CHIEF ENGINEER

DATE

STATE OF MAINE
BENJAMIN M. DARRAH 2399
PROFESSIONAL LAND SURVEYOR

STATE HIGHWAY "37"
ROUTE 6/15 MAIN ROAD
ABBOT PISCATAQUIS COUNTY
FEDERAL PROJECT NO. BR-1930(600)

MAY 2012	RIGHT-OF-WAY MAP	D.O.T. FILE NO. 11-131
SCALE 1" = 25'	SHEET 1 OF 1	

SHEET NUMBER
15
OF 15