

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION



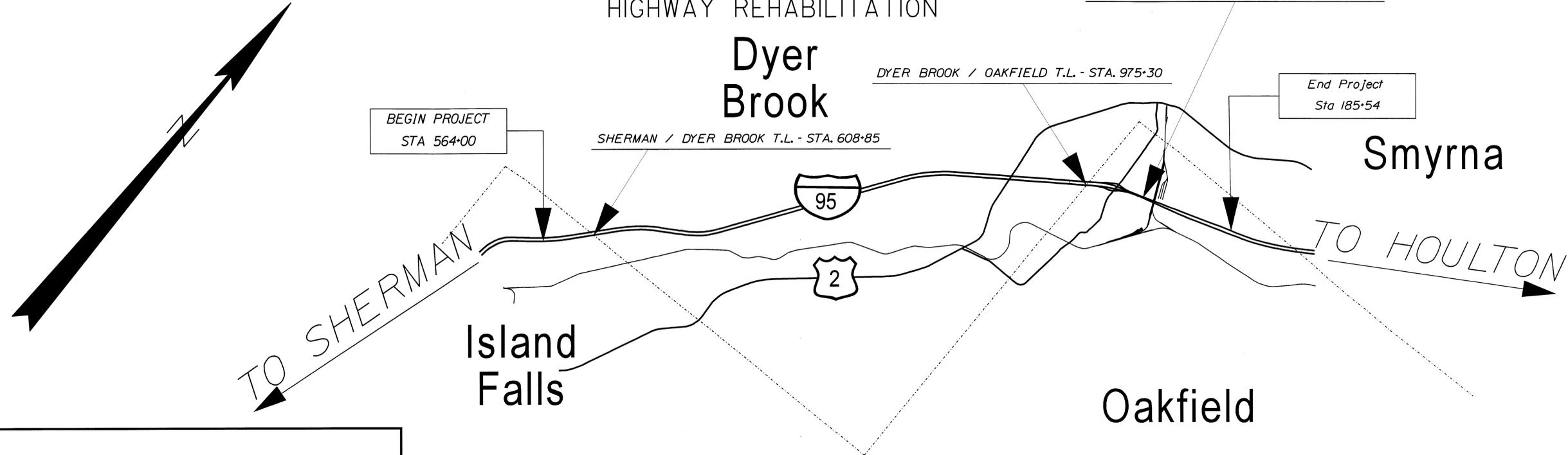
**ISLAND FALLS - OAKFIELD**

AROOSTOOK COUNTY

INTERSTATE 95

**IB-1681(930)E**

PROJECT LENGTH : 9.89 MILES  
HIGHWAY REHABILITATION



TRAFFIC DATA	SEC. 1	SEC. 2
	South of Exit 286	North of Exit 286
Current (2013) AADT	2120	2550
Future (2033) AADT	2540	3060
DHV - % of AADT	14	14
Design Hour Volume	356	428
% Heavy Trucks (AADT)	27	23
% Heavy Trucks (DHV)	18	15
Directional Distribution (DHV)	100	100
18 kip Equivalent P 2.0	1136	1136
18 kip Equivalent P 2.5	1082	1082
Design Speed (mph)	75	75
Functional Class:	PRINCIPAL ARTERIAL INTERSTATE	

<b>PROJECT LOCATION:</b>	Interstate 95 beginning 0.25 miles north of the West Branch Mattawamkeag Bridge and extending northerly to 1.10 miles north of Bridge # 1395
<b>PROGRAM AREA:</b>	Highway Improvements: Interstate
<b>SCOPE OF WORK:</b>	Highway Rehabilitation with Drainage and Safety Improvements

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	APPROVED	DATE
COMMISSIONER:	<i>[Signature]</i>	4/18/13
CHIEF ENGINEER:	<i>[Signature]</i>	4/18/13

STATE OF MAINE Scott Professional Engineer	SIGNATURE	P.E. NUMBER	DATE
<i>[Signature]</i>			

PROJECT INFORMATION	HIGHWAY	PROJECT MANAGER	DESIGNER	CONSULTANT	PROJECT RESIDENT CONTRACTOR	PROJECT COMPLETION DATE
	THOMAS STEVENS ETHAN FLYNN					

ISLAND FALLS-OAKFIELD  
I-95 NORTHBOUND  
**TITLE SHEET**

SHEET NUMBER  
**1**  
OF 1

Date: 4/10/2013

Username: ethan.flynn

Division: HIGHWAY

Filename: ... \30\HIGHWAY\MSTA\001\_Title.dgn

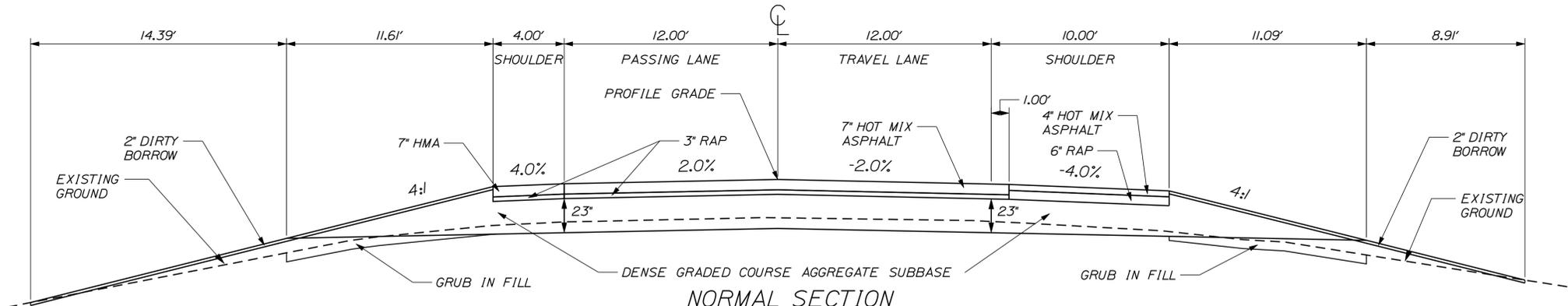
WIN 16819.30 STP-1681(930)E

Date: 4/16/2013

Username: common

Division: HIGHWAY

Filename: ... \MSTA001\_Typical\_Rehab.dgn

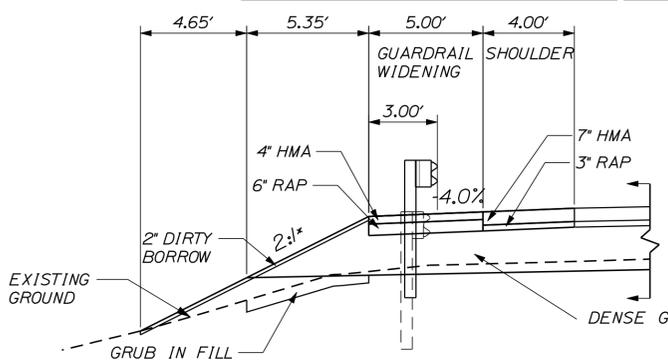


NORMAL SECTION

4.0' SHOULDER WITH 4:1 SLOPE
D. G. C. A. S. = <u>81.97</u> CU. YDS. / 100 L.F.
STA. TO STA. 564+00 TO 664+50 664+50 TO 675+50 752+00 TO 836+75 882+50 TO 907+75

2 - 12.0' TRAVELWAYS
D. G. C. A. S. = <u>192.11</u> CU. YDS. / 100 L.F.
STA. TO STA. 564+00 TO 624+50 664+50 TO 675+50 704+00 TO 838+50 882+50 TO 907+75

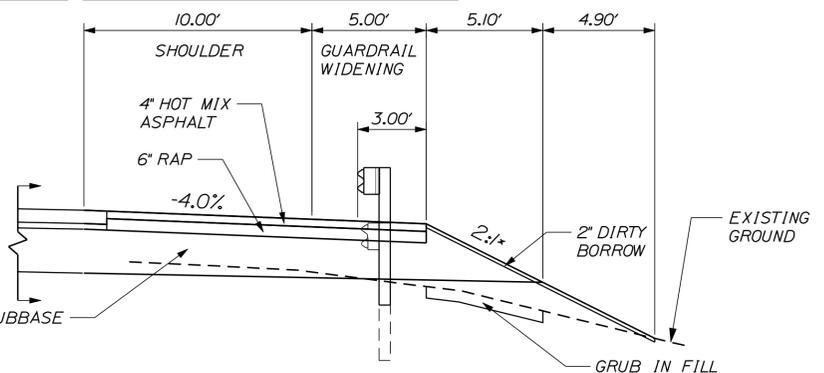
10.0' SHOULDER WITH 4:1 SLOPE
D. G. C. A. S. = <u>130.54</u> CU. YDS. / 100 L.F.
STA. TO STA. 564+00 TO 612+00 620+50 TO 624+50 664+50 TO 675+50 704+00 TO 743+87.5 752+50 TO 834+37.5 882+50 TO 907+75



NORMAL SECTION W/GUARDRAIL LT

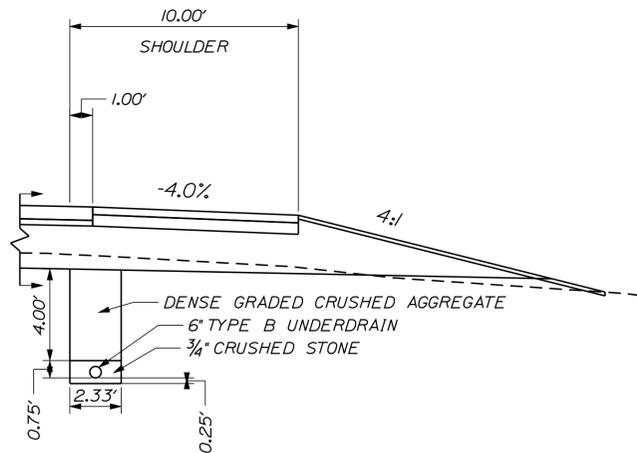
3.0' GUARDRAIL WIDENING WITH 2:1 SLOPE
D. G. C. A. S. = <u>95.95</u> CU. YDS. / 100 L.F.
STA. TO STA. 748+75 TO 752+00 836+75 TO 850+50

\* 1.75:1 IN BRIDGE AREAS



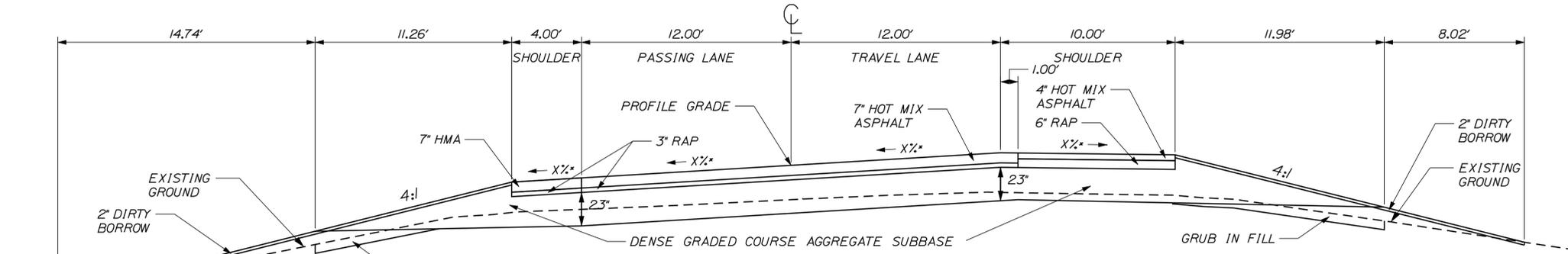
NORMAL SECTION W/GUARDRAIL RT

5.0' GUARDRAIL WIDENING WITH 2:1 SLOPE
D. G. C. A. S. = <u>144.87</u> CU. YDS. / 100 L.F.
STA. TO STA. 612+00 TO 620+50 743+87.5 TO 752+50 834+37.5 TO 841+00



UNDERDRAIN SECTION

NOTE: 605.09 ITEM WILL BE CONSTRUCTED AS SHOWN. ALL MATERIAL SHALL BE CONSIDERED INCIDENTAL TO ITEM 605.09. SEE CONSTRUCTION NOTES FOR LOCATIONS



SUPERELEVATED SECTION \*NOTE: SEE SUPERELEVATION TABLE FOR SLOPES

4.0' SHOULDER WITH 4:1 SLOPE LOW SIDE
D. G. C. A. S. = <u>78.15</u> CU. YDS. / 100 L.F.
STA. TO STA. 675+50 TO 704+00

2 - 12.0' TRAVELWAYS
D. G. C. A. S. = <u>192.52</u> CU. YDS. / 100 L.F.
STA. TO STA. 675+50 TO 704+00

10.0' SHOULDER WITH 4:1 SLOPE HIGH SIDE
D. G. C. A. S. = <u>141.14</u> CU. YDS. / 100 L.F.
STA. TO STA. 675+50 TO 704+00

NOTE:

1. THE PAVEMENT, BASE AND SUBBASE DEPTHS AS SHOWN ON THE PLANS ARE INTENDED TO BE NOMINAL.
2. WHEN SUPERELEVATION EXCEEDS THE SLOPE OF THE LOW SIDE SHOULDER, THE LOW SIDE SHOULDER SHALL HAVE THE SAME SLOPE AS THE TRAVELWAY.
3. CROWNS FOR BOTH NORMAL AND SUPERELEVATION SECTIONS FOR ALL COURSES OF SUBBASE AND PAVEMENT SHALL BE STRAIGHT.
4. THE GRAVEL QUANTITY CALCULATION IS BASED ON A 2" LOAM OR DIRTY BORROW DEPTH. THE ACTUAL DEPTH MAY VARY. SEE THE GENERAL NOTES. THIS GRAVEL QUANTITY CALCULATION INCLUDES THE PLACMENT OF THE RAP. SEE SPECIAL PROVISION 304 AGGREGATE BASE AND SUBBASE COURSE.
5. THE ALGEBRAIC DIFFERENCE BETWEEN THE SHOULDER AND TRAVELWAY CROSS SLOPES "ROLLOVER" SHALL NOT EXCEED 8%.
6. THE STATIONING SHOWN UNDER EACH TYPICAL IS APPROXIMATE.

STATE OF MAINE DEPARTMENT OF TRANSPORTATION IB-1681(930)E	WIN 16819.30 HIGHWAY PLANS
ISLAND FALLS - OAKFIELD I-95 NORTHBOUND	TYPICAL SECTIONS
SHEET NUMBER <b>1</b>	OF 2

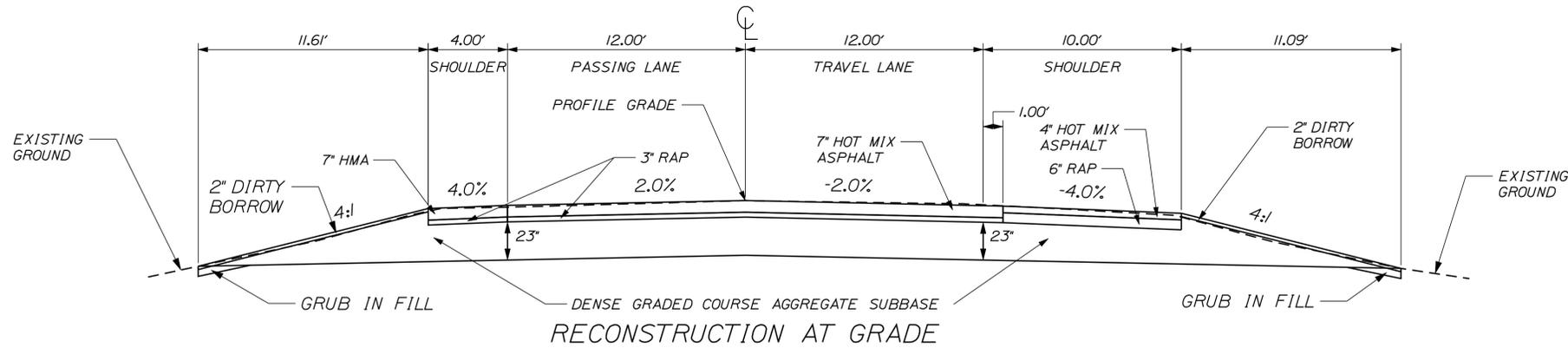
NOT TO SCALE

Date: 4/16/2013

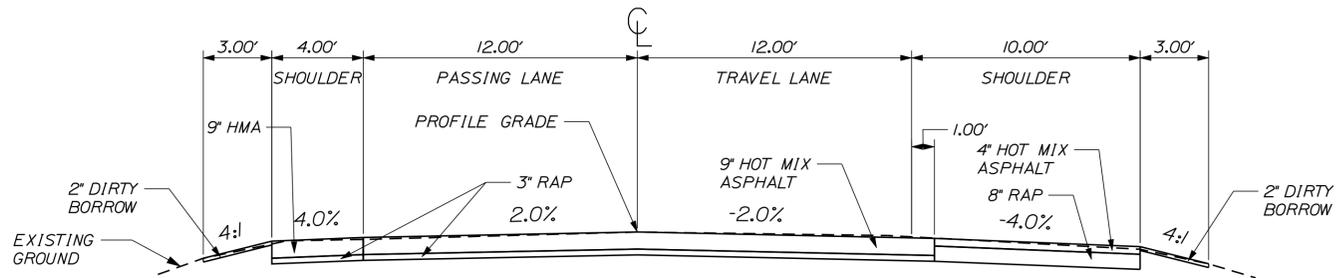
Username: common

Division: HIGHWAY

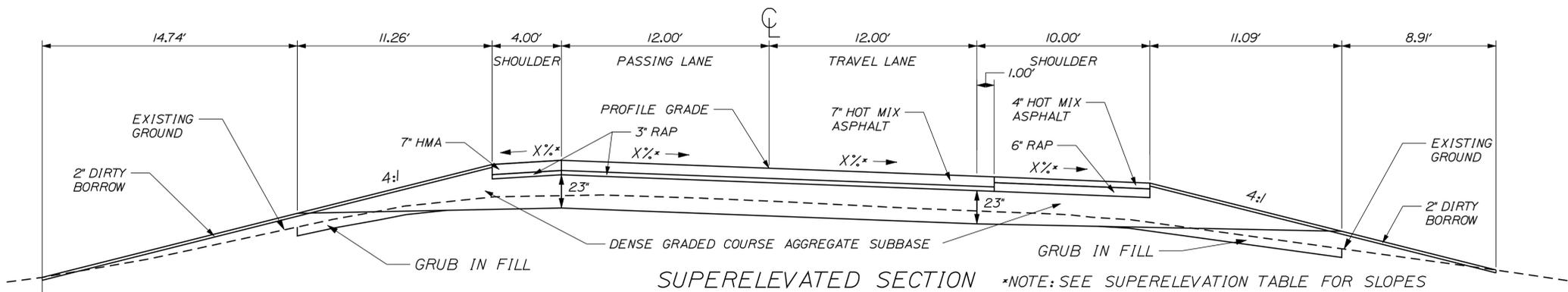
Filename: ... \MSTA002\_Typical\_Renob.dgn



<b>4.0' SHOULDER WITH 4:1 SLOPE</b>	<b>2 - 12.0' TRAVELWAYS</b>	<b>10.0' SHOULDER WITH 4:1 SLOPE</b>
D. G. C. A. S. = <u>81.97</u> CU. YDS. / 100 L.F.	D. G. C. A. S. = <u>192.11</u> CU. YDS. / 100 L.F.	D. G. C. A. S. = <u>130.54</u> CU. YDS. / 100 L.F.
STA. TO STA. 923+50 TO 928+50	STA. TO STA. 923+50 TO 928+50	STA. TO STA. 923+50 TO 928+50



<b>4.0' SHOULDER WITH 4:1 SLOPE</b>	<b>2 - 12.0' TRAVELWAYS</b>	<b>10.0' SHOULDER WITH 4:1 SLOPE</b>
D. G. C. A. S. = <u>3.70</u> CU. YDS. / 100 L.F.	D. G. C. A. S. = <u>23.15</u> CU. YDS. / 100 L.F.	D. G. C. A. S. = <u>23.15</u> CU. YDS. / 100 L.F.
STA. TO STA. 907+75 TO 922+00	STA. TO STA. 907+75 TO 922+00	STA. TO STA. 907+75 TO 922+00



<b>4.0' SHOULDER WITH 4:1 SLOPE HIGH SIDE</b>	<b>2 - 12.0' TRAVELWAYS</b>	<b>10.0' SHOULDER WITH 4:1 SLOPE LOW SIDE</b>
D. G. C. A. S. = <u>78.17</u> CU. YDS. / 100 L.F.	D. G. C. A. S. = <u>192.52</u> CU. YDS. / 100 L.F.	D. G. C. A. S. = <u>130.69</u> CU. YDS. / 100 L.F.
STA. TO STA. 624+50 TO 664+50 850+50 TO 882+50	STA. TO STA. 624+50 TO 664+50 838+50 TO 882+50	STA. TO STA. 624+50 TO 664+50 841+00 TO 882+50

**NOTE:**

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6. THE STATIONING SHOWN UNDER EACH TYPICAL IS APPROXIMATE.

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
IB-1681(930)E  
WIN  
16819.30  
HIGHWAY PLANS

PROJ. MANAGER	DATE	BY	DATE
DESIGN-DETAILED		E. FLYNN	
CHECKED-REVIEWED		J. STEWART	
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

ISLAND FALLS - OAKFIELD  
I-95 NORTHBOUND  
TYPICAL SECTIONS

SHEET NUMBER

2

OF 2

NOT TO SCALE



ESTIMATED BRIDGE QUANTITIES						
ITEM NO.	DESCRIPTION	QUANTITY			TOTAL	UNIT
		Oakfield - Smyrna Road Br. No. 1397	East Branch Mattawamkeag Br. No. 1396	Bangor & Aroostook Railroad Br. No. 1395		
202.202	REMOVING PAVEMENT SURFACE	22	570	0	592	SY
202.30	REMOVING EXISTING CONCRETE WEARING SURFACE (1,285 SY)	0.05	0	0.95	1	LS
403.208	HOT MIX ASPHALT 12.5 MM SURFACE	2	48	123	173	T
403.213	HOT MIX ASPHALT 12.5 MM BASE	2	48	105	155	T
409.15	BITUMINOUS TACK COAT - APPLIED	1	15	32	48	GAL
429.34	GRID/FABRIC COMPOSITE PAVEMENT INTERLAYER	0	0	495	495	SF
502.70	BRIDGE DRAIN - TYPE B	0	3	0	3	EA
502.702	REMOVE BRIDGE DRAIN	0	5	0	5	EA
507.0926	FURNISH ALUMINUM BRIDGE RAIL COMPONENTS	0.35	0.35	0.30	1	LS
507.0927	ALUMINUM BRIDGE RAIL, 2 BAR POST REPLACEMENT	3	1	10	14	EA
507.30	ALUMINUM BRIDGE RAIL SPLICE RETROFIT	10	6	36	52	EA
507.31	ALUMINUM BRIDGE RAIL SPLICE INSPECTION	0.55	0.3	0.15	1	LS
507.32	ALUMINUM BRIDGE RAIL TOGGLE BOLT REPLACEMENT	68	24	0	92	EA
508.14	HIGH PERFORMANCE WATERPROOFING MEMBRANE (1,835 SY)	0.00	0.30	0.70	1	LS
515.21	PROTECTIVE COATING FOR CONCRETE SURFACES (100 SY)	0.35	0.20	0.45	1	LS
* 518.391	REPAIRING GRANITE CURB JOINT AND BEDDING MORTAR	0	94	272	366	LF
* 518.50	REPAIR OF UPWARD FACING SURFACES - TO REINFORCING STEEL <7.9 IN.	0	410	920	1330	SF
* 518.51	REPAIR OF UPWARD FACING SURFACES - BELOW REINFORCING STEEL <7.9 IN.	0	100	210	310	SF
* 518.52	REPAIR OF UPWARD FACING SURFACES >7.9 IN.	0	1	1	2	CY
* 518.60	REPAIR OF VERTICAL SURFACES < 7.9 IN.	10	10	10	30	SF
* 518.61	REPAIR OF VERTICAL SURFACES > 7.9 IN	1	1	1	3	CY
520.242	BRIDGE JOINT MODIFICATION TYPE 2	0	0	1	1	EA
520.244	BRIDGE JOINT MODIFICATION TYPE 4	0	1	0	1	EA
520.246	BRIDGE JOINT MODIFICATION TYPE 6	1	0	0	1	EA
520.247	BRIDGE JOINT MODIFICATION TYPE 7	0	0	1	1	EA
526.301	TEMPORARY CONCRETE BARRIER - TYPE 1 (780 LF)	0.3	0.25	0.45	1	LS
526.34	PERMANENT CONCRETE TRANSITION BARRIER	4	4	4	12	EA
527.34	WORK ZONE CRASH CUSHIONS	1	1	1	3	UN
* 610.08	PLAIN RIPRAP	10	10	10	30	CY
* 620.58	EROSION CONTROL GEOTEXTILE	20	20	20	60	SY
627.77	REMOVING EXISTING PAVEMENT MARKING	1260	1510	1390	4160	SF
* 631.10	AIR COMPRESSOR (INCLUDING OPERATOR)	8	8	8	24	HR
* 631.11	AIR TOOL (INCLUDING OPERATOR)	8	8	8	24	HR
652.30	FLASHING ARROW BOARD	1	1	1	3	EA

\* Undetermined Location

Notes:

1. Estimated Quantities for each bridge are provided here for reference purposes only.

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
IB-1681(930)E  
PIN 016819.30  
BRIDGE NO. Varies  
BRIDGE PLANS

PROJ. MGR.	DATE	BY	DATE
DESIGN-DETAILED	08/12	MFC	08/12
CHECKED-REVIEWED	08/12	DGE	08/12
DESIGN-DETAILED2			
DESIGN-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

INTERSTATE 95 NORTHBOUND  
OAKFIELD  
AROOSTOOK COUNTY  
ESTIMATED BRIDGE QUANTITIES

SHEET NUMBER  
2  
OF 14

Date: 4/16/2013

Username: atower

Division: BRIDGE

Filename: 003\_GeneralNotes-MB.dgn

**GENERAL**

- 1. Project information referred to below may be accessed at the following MaineDOT web address: <http://maine.gov/mdot/comprehensive-list-projects/project-information.php>.
- 2. The existing bridge plans may be accessed at the MaineDOT web address. The plans are reproduction 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.
- 3. All dimensions, angles and stationing shown on existing plans are taken from as-built construction drawings from 1965 through 1990, supplemented by limited field measurements and are not guaranteed to be correct. All existing bridge information shall be verified in the field by the Contractor prior to commencing any work.
- 4. The Resident shall review the embankment armor/slope protection at all drain replacement locations and verify the existing embankment armor/slope protection is adequate to protect the embankment/slope from eroding or undermining during heavy rain events. The Contractor shall undertake embankment armor/slope protection modifications at the request/direction of the Resident. The work, if required, will be paid for under the various hand labor and hourly equipment items.

**UTILITIES**

- 1. Utilities in this contract are listed in Special Provision Section 104, Utilities.
- 2. All utility facilities shall be adjusted by the respective utilities unless otherwise noted. No utility adjustment is anticipated.
- 3. The locations of the existing utilities, bridge wiring and monitoring instruments (i.e. Utilities and Special Equipment) shown on these plans are based on the best available information and are approximate. The Contractor shall verify the location of all existing utilities and special equipment prior to starting work. The Contractor shall protect existing utilities and special equipment during construction and shall provide temporary supports where required by his operations. Temporary supports shall be approved by the utility or special equipment owner prior to their installation and use. The cost of this work shall be considered incidental to the work required under Item 659.10 Mobilization.

**BRIDGE RAILING**

- 1. All aluminum bridge rail, rail posts, and associated hardware components which are to be removed shall be carefully salvaged by the Contractor and will remain property of the Department. Contractor shall transport materials to the Maine DOT maintenance lot at 159 Bangor Street, Houlton, Maine. Contact is Joel Rideout at 532-3684. Payment will be considered incidental to related Contract items.
- 2. The drawings show or note the approximate number of damaged bridge rail posts that are to be replaced on this project. The actual quantity of bridge rail post replacements shall be as directed by the Resident.
- 3. The Contractor shall furnish the quantity of bridge posts, toggle bolts, splice bars and end caps specified in the Contract. The Department will not furnish any bridge materials for this project. See Special Provisions for additional information.
- 4. Misaligned bridge rail splices shall be modified in accordance with the project specifications, standard and supplemental details and as noted on the drawings. All splice rail modification bolts shall be furnished by the Contractor.
- 5. Bridge rail posts that are relocated as part of the concrete transition barrier modifications, and bridge rail sections shortened or extended as part of the concrete transition barrier modifications, shall be considered incidental to the permanent concrete transition barrier pay item. Bridge rail section modifications shall be completed such that all proposed and existing lengths of rail are attached to a minimum of two posts, and such that all rail splices are located two feet from a post. All components necessary to extend rails section or relocate bridge posts including rail, posts, toggle bolts, splice bars, rail post anchor bolts, anchor bolt anchoring materials, and splice rail modification bolts shall be furnished by the Contractor.
- 6. The quantities for bridge rail end caps assume full placement on many bridges. If the contractor determines that rail end caps are present, replacement of those items may not be necessary, coordinate with Resident. Materials purchased under this contract and not used shall become the property of the Department.
- 7. The splice requirements for 2-Bar Aluminum Bridge Rail Type J and 2-Bar Aluminum Bridge Rail Type Z are documented in the Special Provision 507.

**STRUCTURAL**

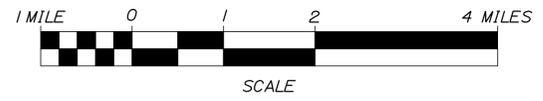
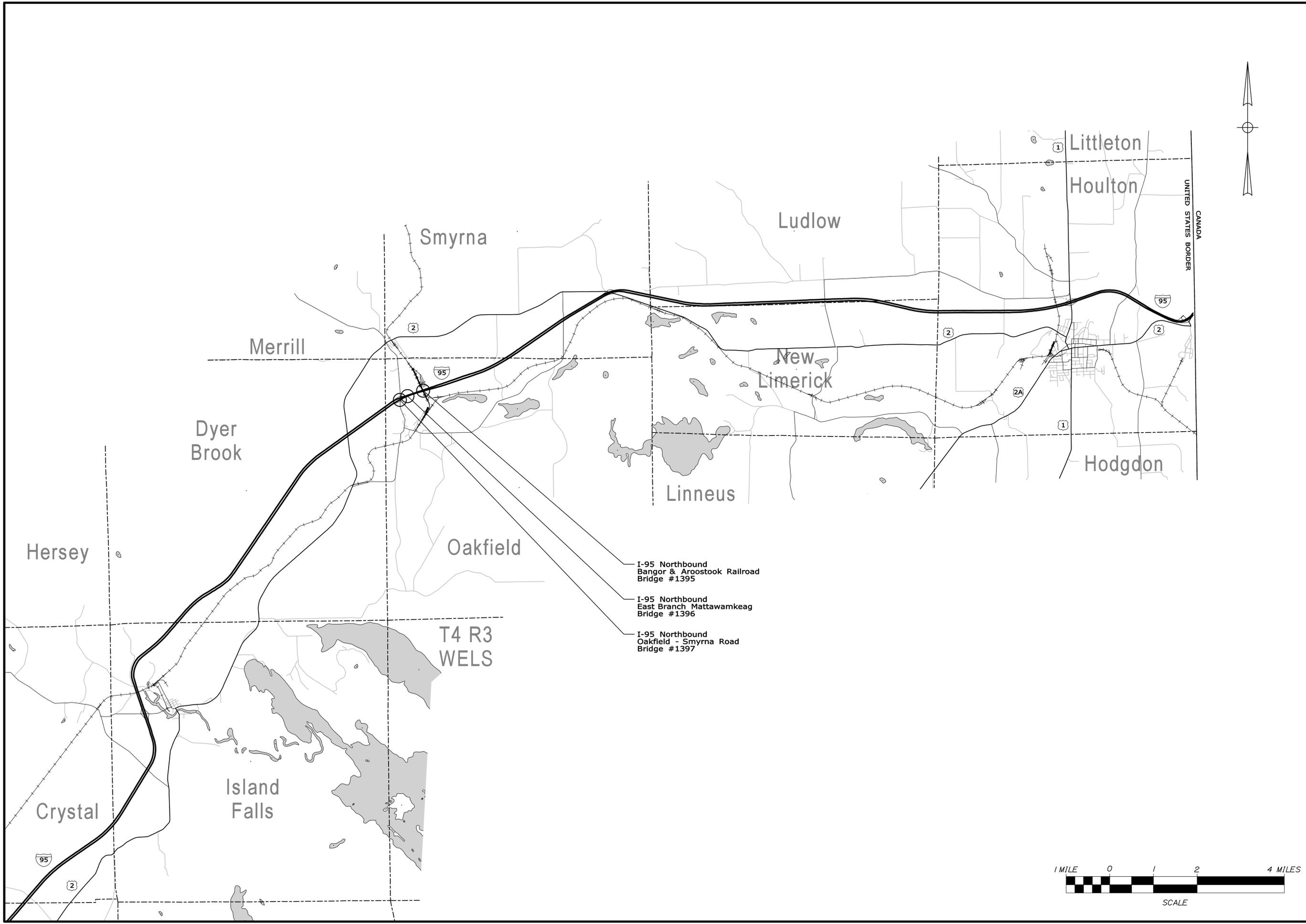
- 1. Payment for removing existing concrete end posts will be considered incidental to item 526.34.
- 2. Reinforcing steel schedules will be the responsibility of the Contractor. Refer to Subsection 503.03 of the Standard Specifications for more information. Payment for all work associated with developing reinforcing steel schedules will be considered incidental to related Contract items.
- 3. Protective coating for concrete surfaces shall be applied to the following areas of new concrete:
  - All exposed surfaces of concrete curbs,
  - Fascias down to the drip notch,
  - All exposed surfaces of Concrete Transition Barriers,
  - 12 Inches below the top of backwalls on the back side,
  - Concrete wearing surfaces.
- 4. An NCHRP350 compliant impact attenuation system (work zone crash cushion) shall be installed concurrently with the placement of each run of concrete barrier.
- 5. Removal of existing bridge rail transition barriers and installation of new bridge rail transition barriers shall occur behind concrete barrier and NCHRP350 compliant impact attenuation systems (work zone crash cushions).
- 6. Any damage to existing concrete or reinforcing steel resulting from the work performed, shall be repaired or replaced by a method approved by the Resident at no cost to the Department.
- 7. All reinforcing steel that is to be exposed and reused shall be cleaned by a method approved by the Resident. Payment shall be incidental to related contract items.
- 8. The integrity of existing approach pavement and subbase gravel shall be maintained during removal of backwall concrete. Payment for any repair or damages shall be incidental to related contract items.
- 9. Gland seal(s) or compression seal(s) shall be approved by the Resident prior to installation of joint armor.
- 10. All expansion joints shall be fabricated so the expansion joints construction joints align with the bridge phasing. New seals shall be installed full length after all sections of the joint armor have been installed.
- 11. Expansion joint seals shall be protected by the Contractor to prevent damage that may occur during the ongoing construction process.
- 12. All existing materials which are removed from the work area shall be removed from the site and properly disposed of by the Contractor in a manner approved by the Resident. These existing materials include, but are not limited to, concrete, metal casing, reinforcing steel, silt and other debris on or attached to the structure within the work areas. The cost of removal and disposal shall be incidental to the cost of the work items for which these removals are required.
- 13. Contractor shall form a one inch V-groove on the fascias at the horizontal joint between the curb and slab.
- 14. Reinforcing steel shall have a 2 inch minimum cover unless otherwise noted.
- 15. Mortar for bedding and for joints in the granite curb shall contain an approved non-shrink additive.
- 16. The Contractor is advised none of the bridge decks are scheduled to be scarified. Only the existing pavement, membrane, and pavement shim (if applicable) are to be removed. See Section 202.031 of the Specifications for additional information.
- 17. If the depth of the deteriorated concrete is below the reinforcing steel then remove the concrete to a minimum depth of 1 inch below the bars.
- 18. Where bridge rail posts are required to be relocated new hot dip galvanized anchor rods conforming to ASTM F1554 Grade 55 shall be furnished and drilled and anchored into the existing curb. This work may also require replacement or repair of rail clamp bars, and replacement of bolts, where the bolt or clamp bar threads are damaged during the rail disassembly process. Where the Contractor elects to repair the damaged mounting bars the existing threads shall be repaired through the use of a stainless steel heli-coil insert. The proposed repair shall be completed in a manner which maintains the original fastener size and diameter. Payment for bridge rail post relocation and associated materials, equipment, labor and incidentals necessary to complete the work will be considered incidental to Item 526.34, Permanent Concrete Transition Barrier.
- 19. All transverse reinforcing steel in the deck and backwall shall run continuously along the full width of the bridge. Payment for lap splices and threaded couplers will not be paid for directly, but shall be considered incidental to the related contract items.
- 20. The reinforcing steel and anchor rod anchoring material shall be selected from Maine DOT's Qualified Products List. The Contractor shall submit the proposed system to the Resident for approval. The selected anchoring material shall be installed in strict accordance with the manufacturer's recommendations. Reinforcing steel, drilled and anchored into existing concrete, shall be embedded to develop 125% of the yield strength of the bar. Anchor rods, drilled and anchored into existing concrete, shall be embedded to develop an ultimate tension capacity of 33 kips per anchor rod.
- 21. When a new joint is being installed or an existing joint is being substantially modified, and field conditions permit, the approach side of the joint shall be set 1/8" - 1/4" higher than the departure side of the joint. Under no circumstances shall the departing side of the joint be higher than the approach side of the joint.
- 22. Deck or backwall repairs located below areas of elastomeric concrete shall be filled with Class LP concrete and allowed to cure prior to placing elastomeric concrete. The concrete repairs shall be completed to provide an elastomeric concrete thickness of 3". The depth of elastomeric concrete may be increased to 4" maximum only in cases where doing so eliminates the need for patching with Class LP concrete.
- 23. The Contractor is required to have on-site a copy of the Technical Guideline No. 03732 or latest version published by the International Concrete Repair Institute as well as a set of nine molded replicas of surfaces textures, for use on this project. All associated costs considered incidental to pay item 508.14.

**CONSTRUCTION PHASING**

- 1. All traffic control shall be in accordance with the Manual for Uniform Traffic Control Devices for Streets and Highways, USDOT, FHWA, Latest Edition
- 2. Contractor shall submit traffic control plans for all bridges in accordance with the Special Provisions 105 & 652 and the Manual of Uniform Traffic Control Devices, latest edition.
- 3. Contractor shall provide one 12 foot travel lane minimum and two 1 foot shoulders in all work zones, unless otherwise noted on the plans or in the specifications.
- 4. All lanes in long term lane closures and work zones shall be delineated with temporary paint lines or temporary raised pavement markings. Temporary paint lines will not be permitted on the surface course of new pavement. Temporary raised pavement markings shall only be used when approved by the Resident.
- 5. Excessively wide lane widths may cause driver confusion. Contractor shall avoid lane widths in excess of 15'-0" unless approved by the Resident.
- 6. Contractor shall install longitudinal pavement joints at crown lines or lane lines.
- 7. Placement of the high performance membrane shall be in accordance with standard specifications and manufacturers published recommendations. Contractor shall submit proposed membrane overlap details at the longitudinal joints to the Resident for review and approval. Details shall include proposed methodology for bond breaker for the overlaps between construction phases as well as procedures for infilling and removal of bituminous material without damage to the membrane.
- 8. Contractor is responsible for all maintenance of traffic required for all work including ramp traffic control.
- 9. Long term lane closures required for bridge work shall be protected with temporary concrete barrier at the work zones.
- 10. Long term lane closures shall be defined as closures that occur at a location for more than 3 days.

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		IB-1681(930)E		PIN 016819.30		BRIDGE NO. Varies		BRIDGE PLANS	
INTERSTATE 95 NORTHBOUND		OAKFIELD		AROOSTOOK COUNTY		GENERAL NOTES		SHEET NUMBER		3	
OF 14											

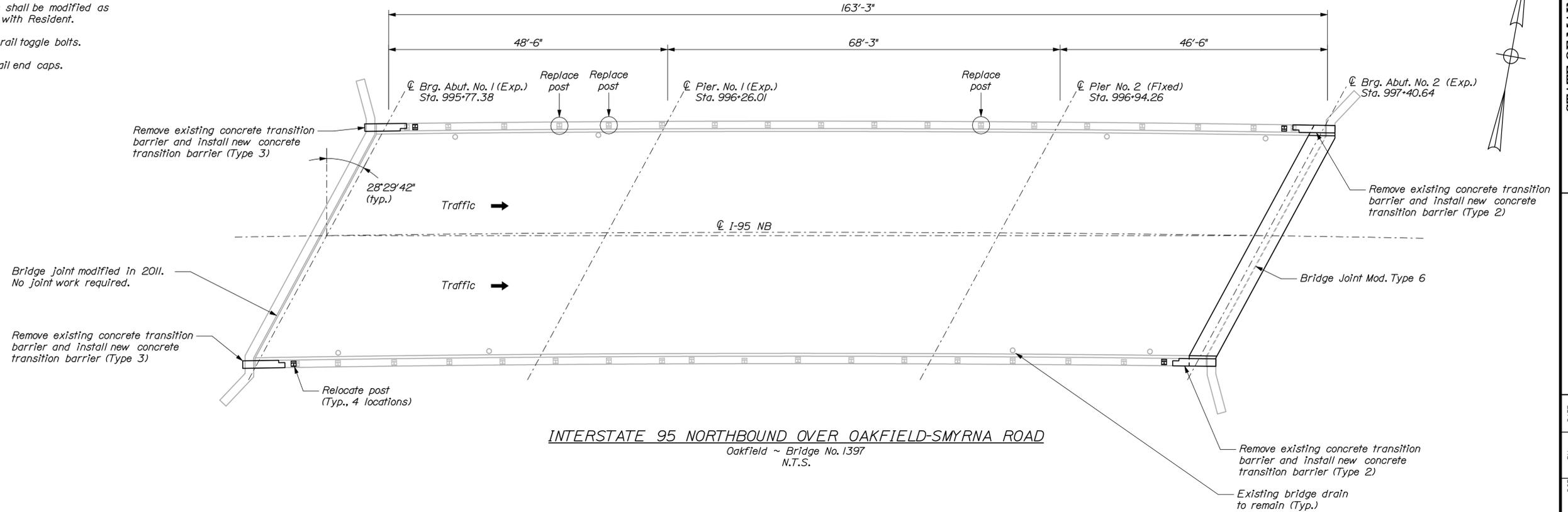
PROJ. MANAGER	DATE	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
DESIGN-DETAILED	06/12	MPC	06/12			
CHECKED-REVIEWED						
DESIGN-DETAILED						
DESIGN-DETAILED						
REVISIONS 1						
REVISIONS 2						
REVISIONS 3						
REVISIONS 4						
FIELD CHANGES						



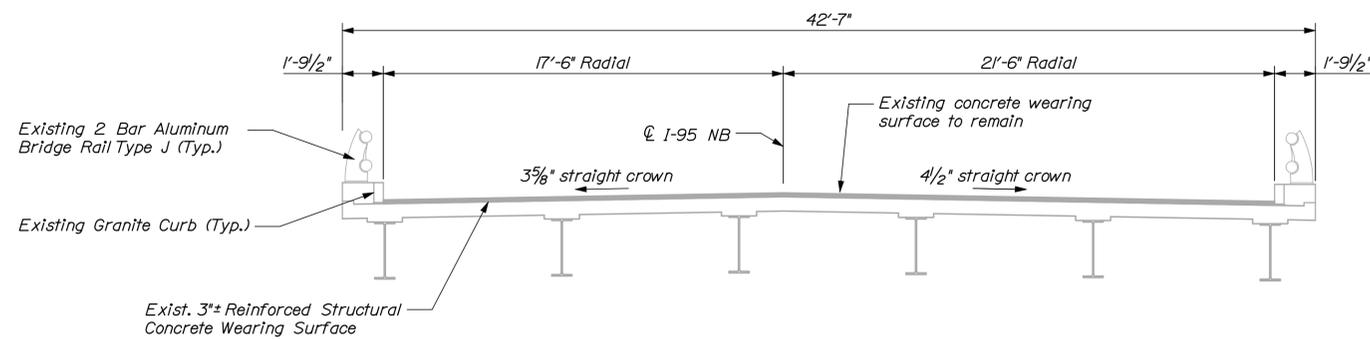
<b>STATE OF MAINE</b>		<b>DEPARTMENT OF TRANSPORTATION</b>	
<b>IB-1681(930)E</b>		<b>PIN 016819.30</b>	
<b>BRIDGE NO. Varies</b>		<b>BRIDGE PLANS</b>	
<b>INTERSTATE 95 NORTHBOUND</b>		<b>LOCATION MAP</b>	
<b>OAKFIELD</b>		<b>SHEET NUMBER</b>	
<b>AROOSTOOK COUNTY</b>		<b>4</b>	
<b>OF 14</b>		<b>DATE</b>	
<b>PROJ. MANAGER</b>	<b>DGE</b>	<b>BY</b>	<b>DATE</b>
DESIGN-DETAILED CAH	MFC	DGE	08/12
CHECKED-REVIEWED DGE	DGE	DGE	08/12
DESIGN-DETAILED	-	-	-
DESIGN-DETAILED	-	-	-
REVISIONS 1	-	-	-
REVISIONS 2	-	-	-
REVISIONS 3	-	-	-
REVISIONS 4	-	-	-
FIELD CHANGES	-	-	-
<b>SIGNATURE</b>	<b>P.E. NUMBER</b>	<b>DATE</b>	

**NOTES:**

1. Inspect all (20) bridge rail splices, replace missing set screws and verify proper splice tube location. See Special Provision.
2. Misaligned splice tubes shall be modified as required. Coordinate work with Resident.
3. Replace all (68) bridge rail toggle bolts.
4. Replace all (8) bridge rail end caps.



**INTERSTATE 95 NORTHBOUND OVER OAKFIELD-SMYRNA ROAD**  
Oakfield ~ Bridge No. 1397  
N.T.S.



**TRANSVERSE SECTION**  
N.T.S.  
Looking Upstation

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
IB-1681(930)E  
PIN 016819.30  
BRIDGE NO. 1397  
BRIDGE PLANS

PROJ. MANAGER	DATE	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
DESIGN-DETAILED	08/12	MPC	08/12			
CHECKED-REVIEWED						
DESIGN-DETAILED						
REVISIONS 1						
REVISIONS 2						
REVISIONS 3						
REVISIONS 4						
FIELD CHANGES						

INTERSTATE 95 NORTHBOUND  
OAKFIELD-SMYRNA ROAD  
OAKFIELD AROOSTOOK COUNTY  
PLAN AND TRANS. SECTION

SHEET NUMBER  
**5**  
OF 14

Date: 4/16/2013

Username: atower

Filename: 006\_PlanXsec-EBRMattawamkeagRiver-1396.dwg

**NOTES:**

1. Contractor shall repair areas of concrete deck deterioration as directed by the Resident. Locations of deck repairs are undetermined for this bridge. Contractor shall identify and mark areas for deck repair after removing the wearing surface. Coordinate work with Resident. Payment for deck repair work shall be under the 518 pay items.

2. Contractor shall repair areas of deteriorated granite curb bedding mortar on the deck as required. Locations of deteriorated granite curb bedding mortar are undetermined. (Typ.)

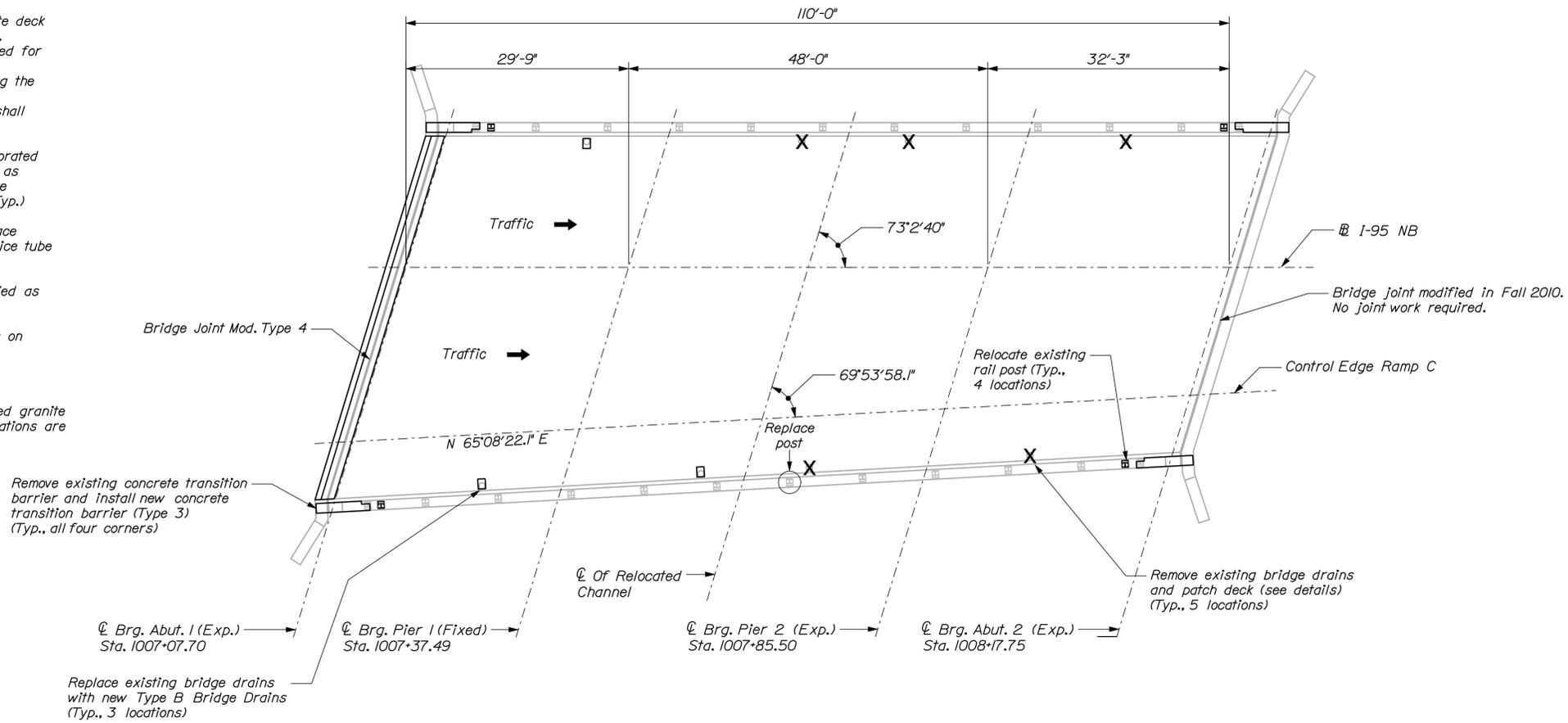
3. Inspect all (12) bridge rail splices, replace missing set screws and verify proper splice tube location. See Special Provision.

4. Misaligned splice tubes shall be modified as required. Coordinate work with Resident.

5. Replace all (24) bridge rail toggle bolts on passing lane side of bridge.

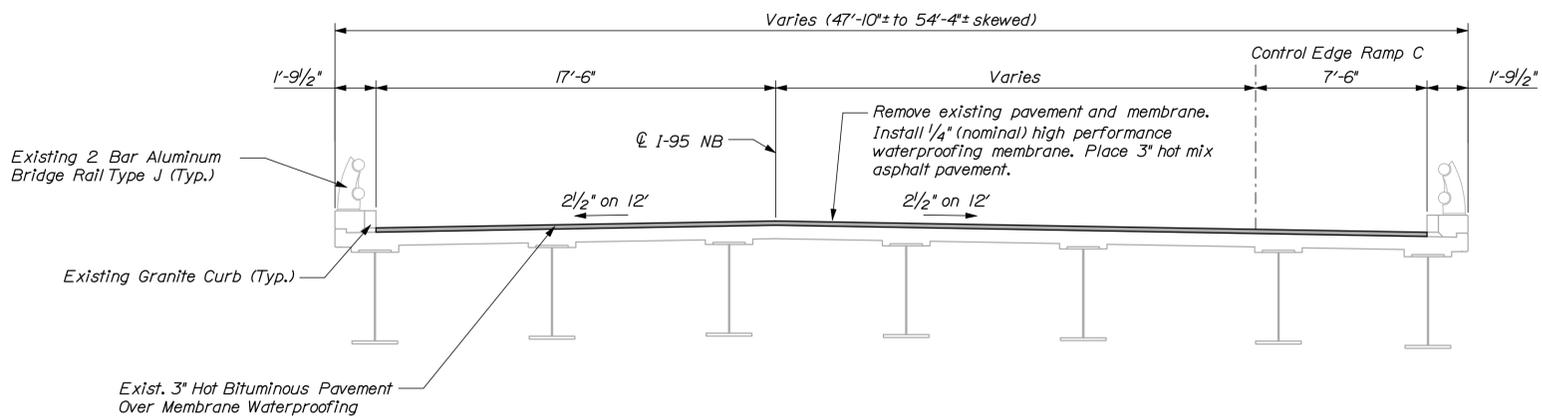
6. Replace all (8) bridge rail end caps.

7. Repoint deteriorated portions of exposed granite curb joints as directed by Resident. Locations are undetermined.



**INTERSTATE 95 NORTHBOUND OVER EAST BRANCH MATTAWAMKEAG RIVER**

Oakfield ~ Bridge No. 1396  
N.T.S.



**TRANSVERSE SECTION**

N.T.S.

Looking Upstation

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
IB-1681(930)E  
BRIDGE NO. 1396  
PIN 016819.30  
BRIDGE PLANS

PROJ. MANAGER	DATE	BY	DATE	SIGNATURE
DESIGN-DETAILED	08/12	MPC	08/12	
CHECKED-REVIEWED				
DESIGN-DETAILED				
DESIGN-DETAILED				
REVISIONS 1				
REVISIONS 2				
REVISIONS 3				
REVISIONS 4				
FIELD CHANGES				

DESIGN-DETAILED	CHECKED-REVIEWED	DESIGN-DETAILED	DESIGN-DETAILED	REVISIONS 1	REVISIONS 2	REVISIONS 3	REVISIONS 4	FIELD CHANGES
CAH	TRC							

INTERSTATE 95 NORTHBOUND  
EAST BRANCH MATTAWAMKEAG RIVER  
OAKFIELD AROOSTOOK COUNTY  
PLAN AND TRANS. SECTION

SHEET NUMBER

6

OF 14

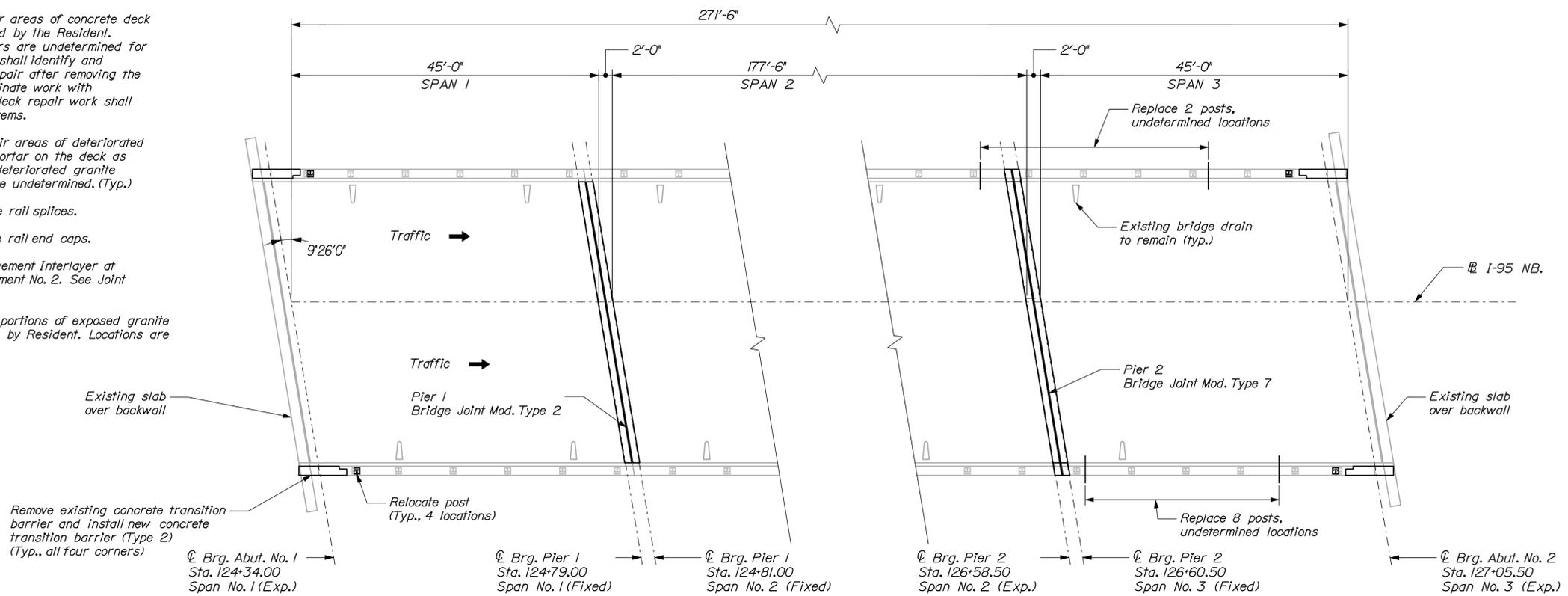
Date: 4/16/2013

Username: atower

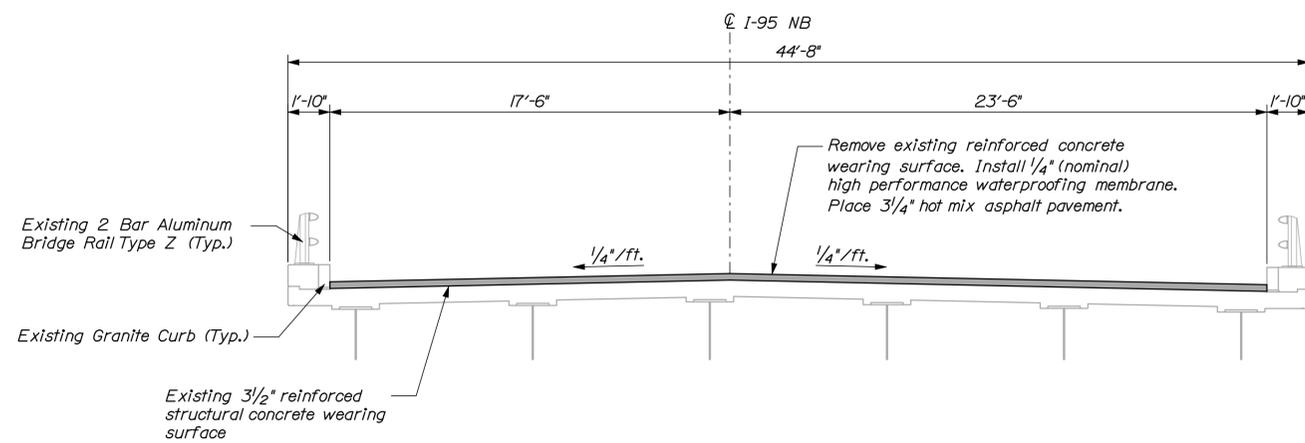
Division: BRIDGE

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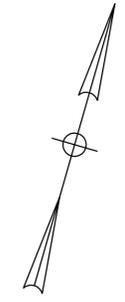
- NOTES:**
- Contractor shall repair areas of concrete deck deterioration as directed by the Resident. Locations of deck repairs are undetermined for this bridge. Contractor shall identify and mark areas for deck repair after removing the wearing surface. Coordinate work with Resident. Payment for deck repair work shall be under the 518 pay items.
  - Contractor shall repair areas of deteriorated granite curb bedding mortar on the deck as required. Locations of deteriorated granite curb bedding mortar are undetermined. (Typ.)
  - Modify all (36) bridge rail splices.
  - Replace all (8) bridge rail end caps.
  - Install Composite Pavement Interlayer at Abutment No. 1 and Abutment No. 2. See Joint Modification Details.
  - Repoint deteriorated portions of exposed granite curb joints as directed by Resident. Locations are undetermined.



**INTERSTATE 95 NORTHBOUND OVER BANGOR & AROOSTOOK RAILROAD**  
Oakfield ~ Bridge No. 1395  
N.T.S.



**TRANSVERSE SECTION**  
N.T.S.  
Looking Upstation



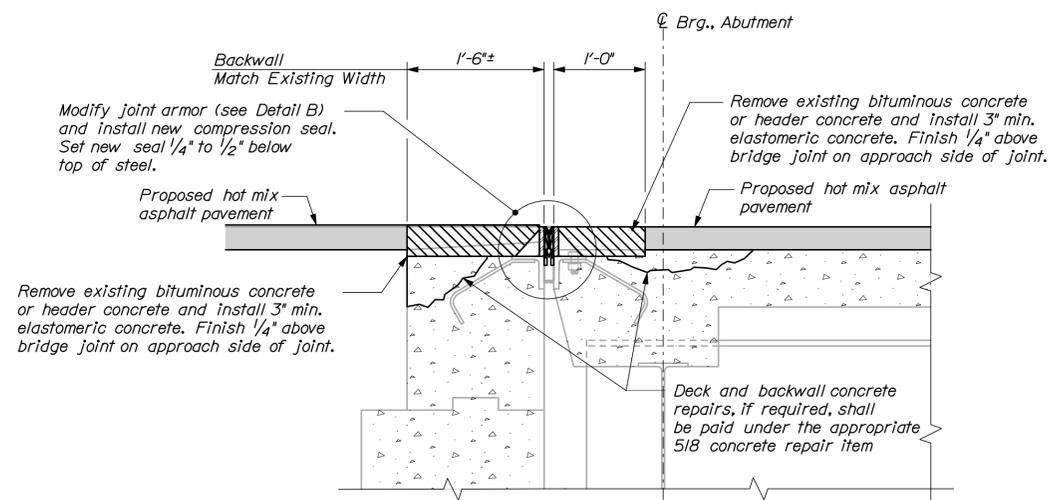
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INTERSTATE 95 NORTHBOUND		BANGOR AND AROOSTOOK RAILROAD		OAKFIELD AROOSTOOK COUNTY		PLAN AND TRANS. SECTION		SHEET NUMBER		7	
PROJ. MANAGER	DESIGN-DETAILED	CAH	DATE	BY	DGE	DATE	SIGNATURE	P.E. NUMBER	DATE	OF 14	
CHECKED-REVIEWED	TRC	08/12	MFC	08/12							
DESIGNS-DETAILED											
REVISIONS 1											
REVISIONS 2											
REVISIONS 3											
REVISIONS 4											
FIELD CHANGES											

Date: 4/16/2013

Username: atower

Division: BRIDGE

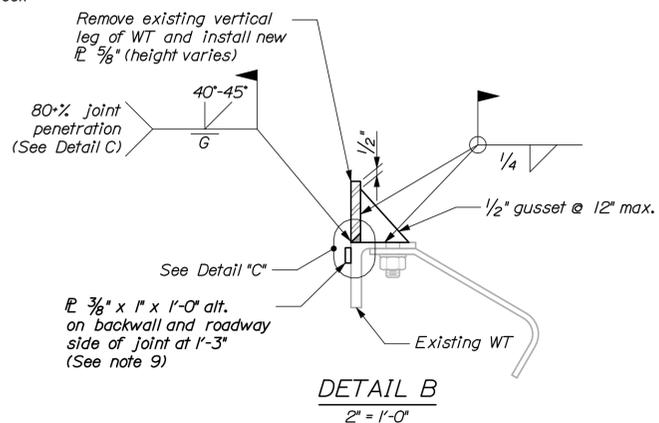
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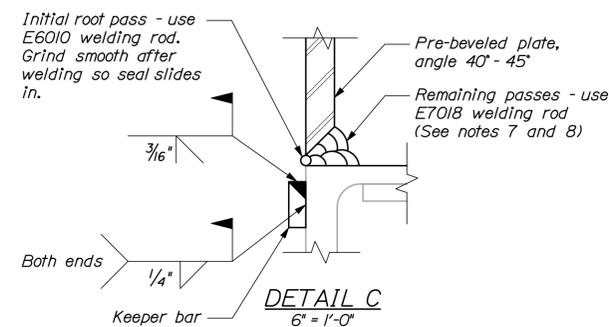
**BRIDGE JOINT MODIFICATION TYPE 2**

1" = 1'-0"

Limits of joint modification:  
 Compression seal - full deck width and completely through raised curbs plus six inch extensions per side;  
 Joint armor replacement and elastomeric concrete - full deck width to face of raised curb.

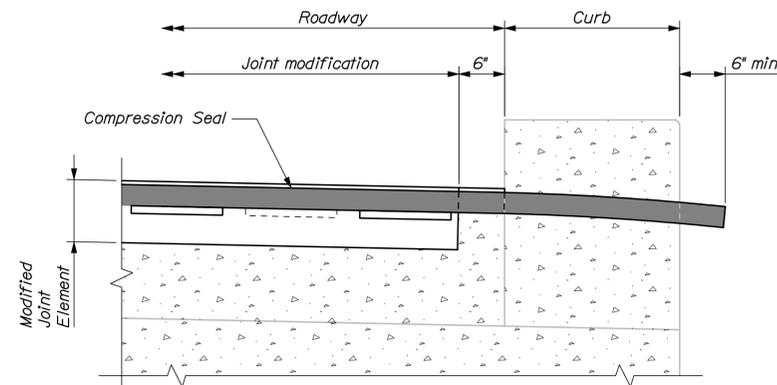


Note:  
 One side of joint repair shown.  
 Repair detail required at both sides of joint.



**NOTES**

1. Refer to Standard Details Section 520 for details and information not shown.
2. All concrete surfaces where elastomeric concrete is to be applied shall have a 1/4-in. minimum anchor profile or roughened surface.
3. Elastomeric concrete shall be applied according to the manufacturer's recommendations.
4. All new steel supplied for the bridge joint modification shall be uncoated.
5. The Contractor shall be fully responsible for selecting the appropriate compression seal based on the bridge movement rating from the approved products list.
6. Removal and replacement of existing bituminous or header concrete shall be completed along the full width of the roadway. Bridge joint armor and extrusion modifications shall extend to the limits described on the respective joint modification details.
7. Welding shall be completed as a series of skip welds to minimize joint distortion during welding.
8. If the base metal temperature falls below 32 degrees Fahrenheit, the base metal shall be heated to a minimum of 80 degrees Fahrenheit before welding. If the base metal temperature falls below 50 degrees Fahrenheit, the base metal shall be heated to remove any moisture. A welding procedure and listing of proposed welding consumables shall be submitted to the Resident for approval.
9. Keeper bars shall be positioned to allow top of compression seal to sit 1/4" to 1/2" below top of armor. If existing keeper bar does not permit the seal to set at the specified depth, contractor shall notify the Resident.



COMPRESSION SEAL JOINT DETAIL AT CURB

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION	
IB-1681(930)E		BRIDGE NO. Varies	
PIN		016819.30	
BRIDGE PLANS			
PROJ. MANAGER	DATE	BY	DATE
DESIGN-DETAILED	08/12	MPC	08/12
CHECKED-REVIEWED		CAH	
DESIGN-DETAILED		TRC	
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			
INTERSTATE 95 NORTHBOUND		SIGNATURE	
OAKFIELD		P.E. NUMBER	
AROOSTOOK COUNTY		DATE	
JOINT MODIFICATION DETAILS I			
SHEET NUMBER			
8			
OF 14			

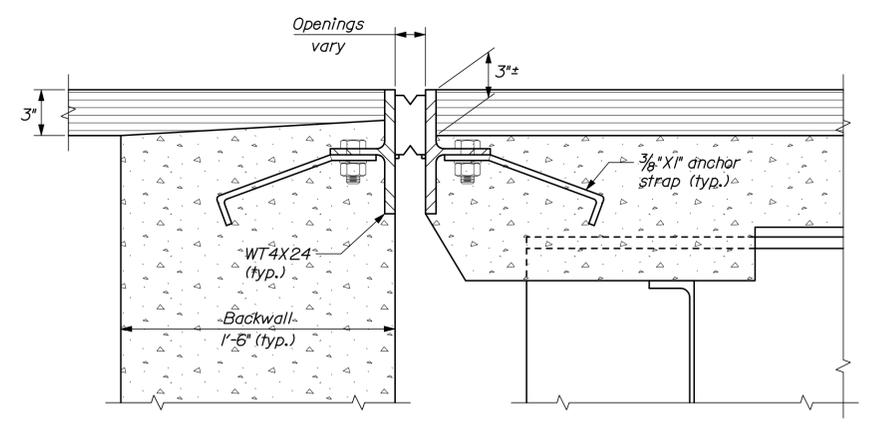


Date: 4/16/2013

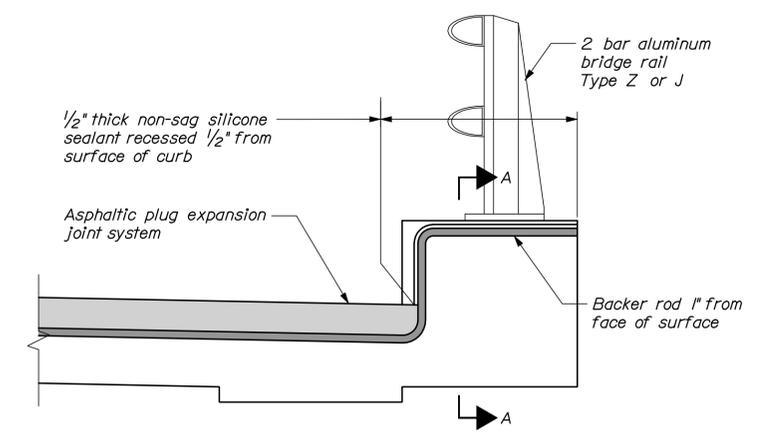
Username: atower

Division: BRIDGE

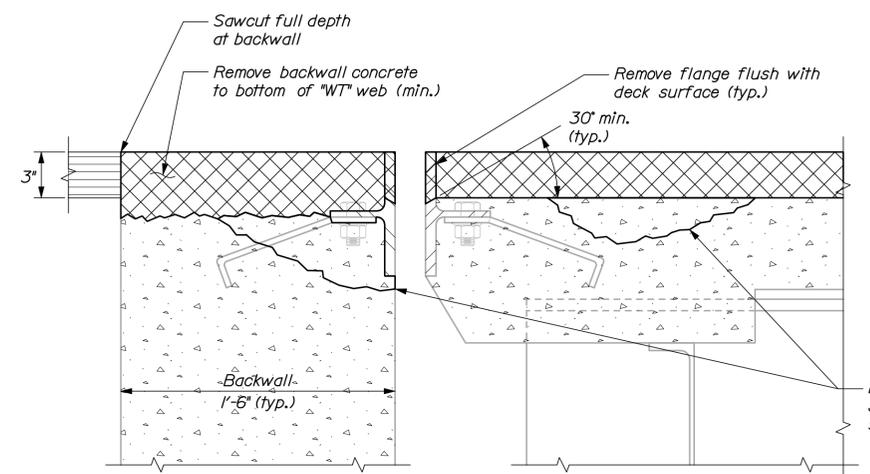
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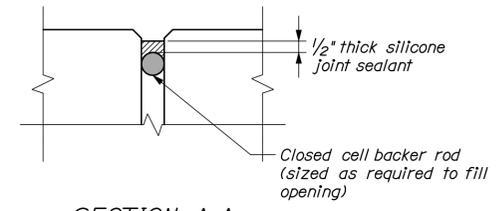
EXISTING COMPRESSION SEAL JOINT



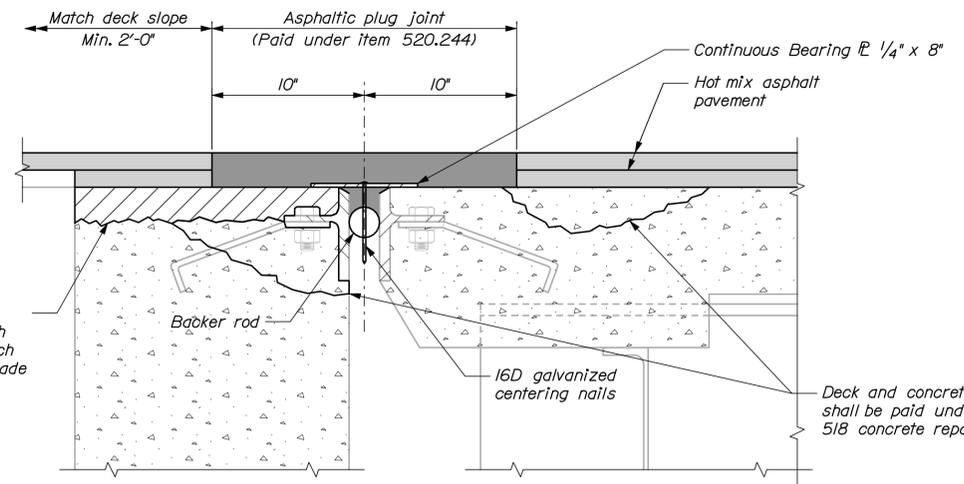
JOINT TREATMENT AT BRIDGE CURB



DEMOLITION



SECTION A-A



JOINT MODIFICATION TYPE 4

Note: Total new pavement thickness to match existing pavement thickness.

Limits of joint modification: Asphaltic plug joint, elastomeric concrete and joint armor modification - full deck width to face of raised curb; Elastomeric sealant with backer rod and preparation of existing curb joint armor and structural concrete - full width of raised curbs.

LEGEND

Approximate limit of concrete and reinforcing steel removal

NOTES:

- Deck and backwall reinforcing not shown for clarity.
- 16D galvanized centering nails shall be spaced at 12" o.c. maximum and placed 2" from joints in the bearing plate.
- The bearing plate shall be galvanized steel 1/4" thick and 8" wide.
- Asphaltic plug joint materials shall meet the requirements of the project specifications and shall be installed per manufacturer's specifications.
- Asphaltic plug joints shall be installed after the second lift of pavement is installed.
- All concrete surfaces where elastomeric concrete is to be applied shall have a 1/4-in. minimum anchor profile or roughened surface.
- Elastomeric concrete shall be installed according to the manufacturer's recommendations.
- Both backwall and deck flange steel to be cut at same elevation.

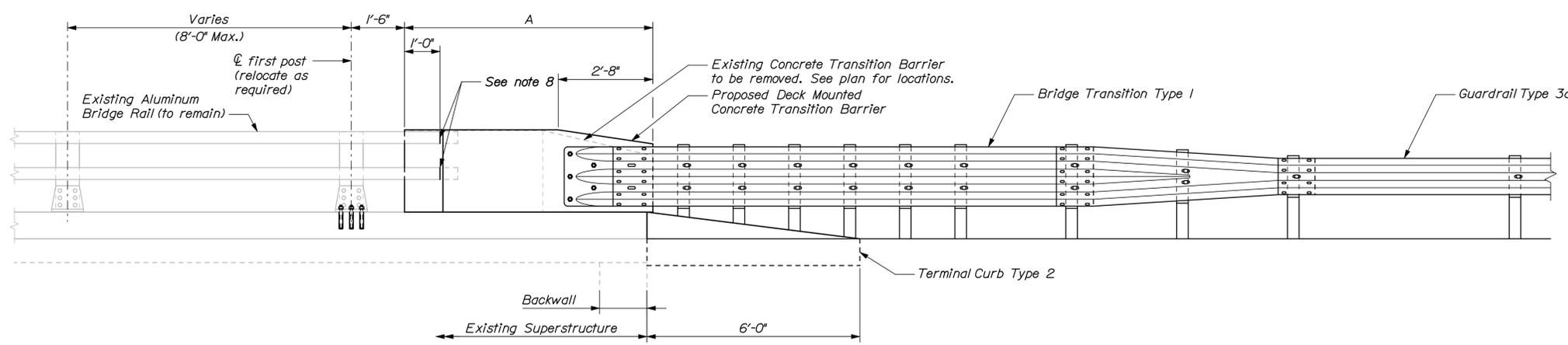
STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		IB-1681(930)E	
INTERSTATE 95 NORTHBOUND		OAKFIELD		AROOSTOOK COUNTY	
JOINT MODIFICATION DETAILS III		SHEET NUMBER		10	
BRIDGE NO. Varies		PIN		016819.30	
BRIDGE PLANS		DATE		FIELD CHANGES	
PROJ. MANAGER	DATE	BY	DATE	SIGNATURE	P.E. NUMBER
DESIGN-DETAILED	08/12	MPC	08/12		
CHECKED-REVIEWED					
DESIGN-DETAILED					
REVISIONS 1					
REVISIONS 2					
REVISIONS 3					
REVISIONS 4					

Date: 4/16/2013

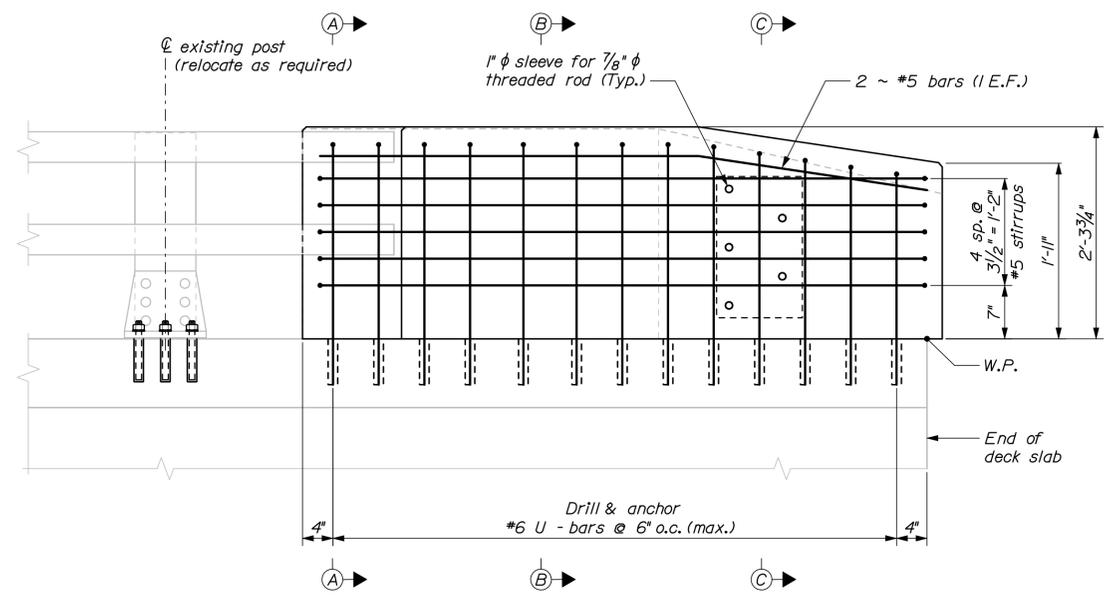
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Division: BRIDGE

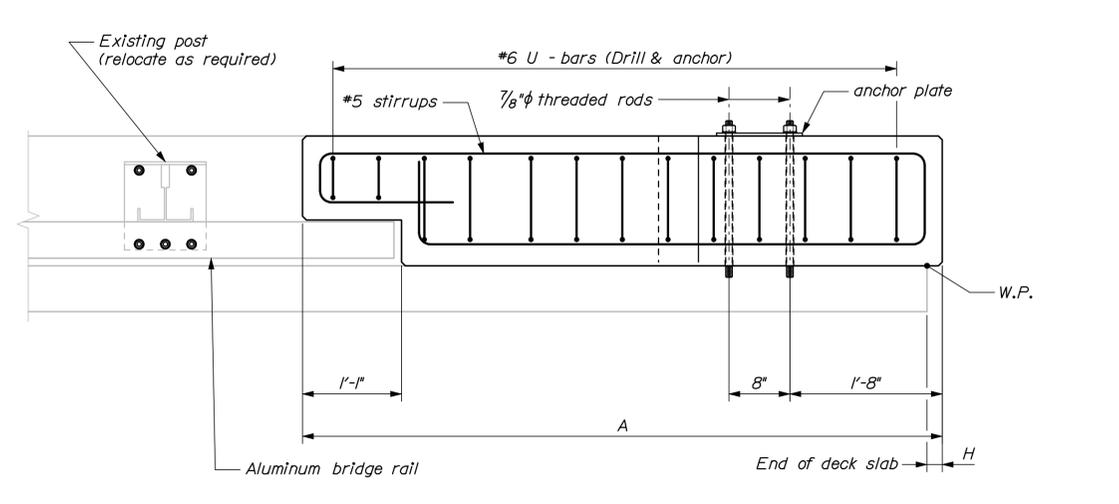
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**CONCRETE TRANSITION BARRIER (TYPE 2)**  
Roadway elevation shown



**TRANSITION BARRIER ELEVATION**  
Roadway elevation shown



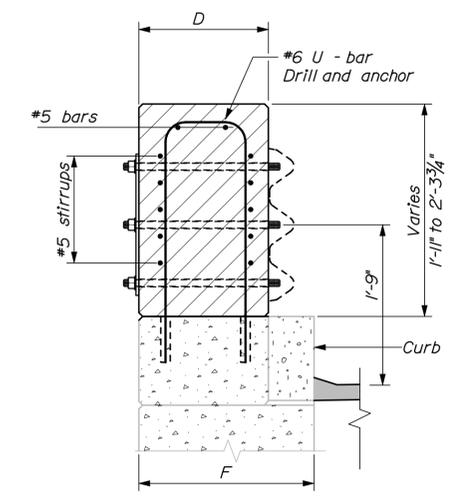
**TRANSITION BARRIER PLAN**

**CONCRETE TRANSITION BARRIER NOTES**

1. Refer to Standard Details Section 526 - Concrete Transition Barrier for details and information not shown.
2. Reinforcing steel for the Transition Barriers is based on details shown in the Standard Details. Reinforcing steel shall be modified to fit the details and conditions shown on the plans. Payment for modifying reinforcing steel and for drilling and anchoring bars as shown will be considered incidental to Item No. 526.34, Permanent Concrete Transition Barrier.
3. Anchor plates and threaded rods shall be galvanized in accordance with the Standard Specifications and the Standard Details.
4. The bridge rail post bolt anchorage system shall be from MaineDOT's Qualified Products List or an approved equal. The Contractor shall submit the proposed system to the Resident for review prior to use. The bolt anchorages shall be installed in strict accordance with the selected manufacturer's recommendations. The anchor bolts shall have an ultimate tension capacity of 33 kips. Payment for bridge rail post relocation and associated materials, equipment, labor and incidentals necessary to complete the work will be considered incidental to Item No. 526.34, Permanent Concrete Transition Barrier.
5. The contractor shall locate existing curb reinforcing steel and conduit and adjust dowel and bridge rail post anchor stud locations to avoid cutting existing bars and damaging existing electrical conduit. Any adjustments from plan dimensions shall be approved by the Resident.
6. Excavation and backfill required for construction or modification of concrete transition barrier shall be incidental to Item 526.34, Permanent Concrete Transition Barrier.
7. The existing expansion joint is not shown for clarity. The contractor shall not damage existing armor scheduled for re-use during concrete demolition, and shall recast re-used armor into the new work.
8. The contractor shall trim or install longer rail sections as directed by the resident to provide 12" of projection into the transition barrier recess.
9. The proposed terminal curb type 2 shall match tightly against the existing bull-nosed granite curb on the transition barrier. The contractor shall notch the existing bull-nosed curb, remove the existing curb and rebuild with reinforced concrete, or trim the proposed terminal curb to produce a tight fit. Payment for this effort will not be made directly, but shall be considered incidental to Item 526.34, Permanent Concrete Transition Barrier.

**TABLE OF DIMENSIONS**

Bridge #	Bridge	Location	A	D	E	F	H
1395	B & A Railroad	Approach Travel Lane	7' - 0"	1' - 4"	11"	1' - 10"	0"
1395	B & A Railroad	Departure Travel Lane	7' - 0"	1' - 4"	11"	1' - 10"	0"
1395	B & A Railroad	Approach Passing Lane	7' - 0"	1' - 4"	11"	1' - 10"	0"
1395	B & A Railroad	Departure Passing Lane	7' - 0"	1' - 4"	11"	1' - 10"	0"
1397	Oakfield-Smyrna	Departure Travel Lane	7' - 6"	1' - 3.5"	10.5"	1' - 9.5"	0"
1397	Oakfield-Smyrna	Departure Passing Lane	7' - 4"	1' - 3.5"	10.5"	1' - 9.5"	0"



**SECTION C-C**

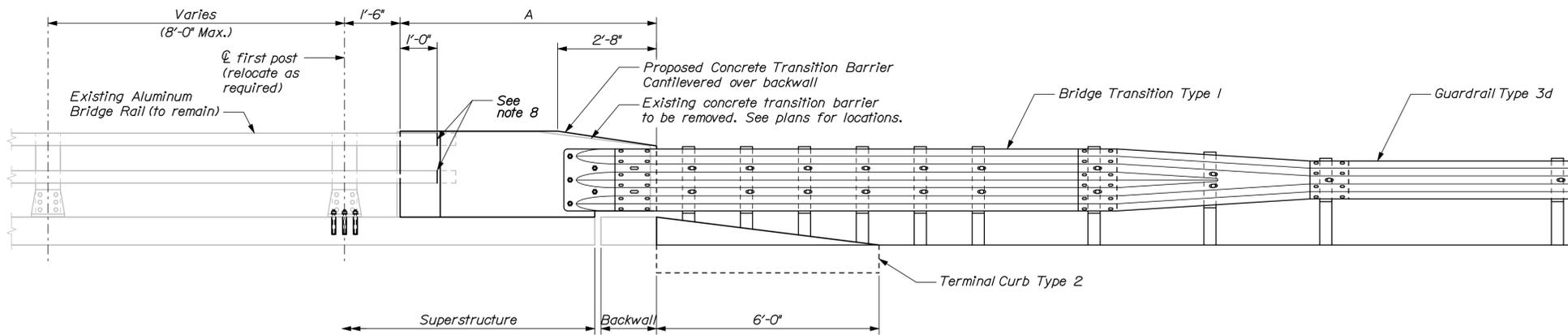
STATE OF MAINE DEPARTMENT OF TRANSPORTATION	IB-1681(930)E	BRIDGE NO. As Noted PIN 016819.30	BRIDGE PLANS
INTERSTATE 95 NORTHBOUND OAKFIELD AROOSTOOK COUNTY	<b>CONCRETE TRANSITION BARRIER (TYPE 2)</b>		
SHEET NUMBER	11		
	OF 14		

Date: 4/16/2013

Username: atower

Division: BRIDGE

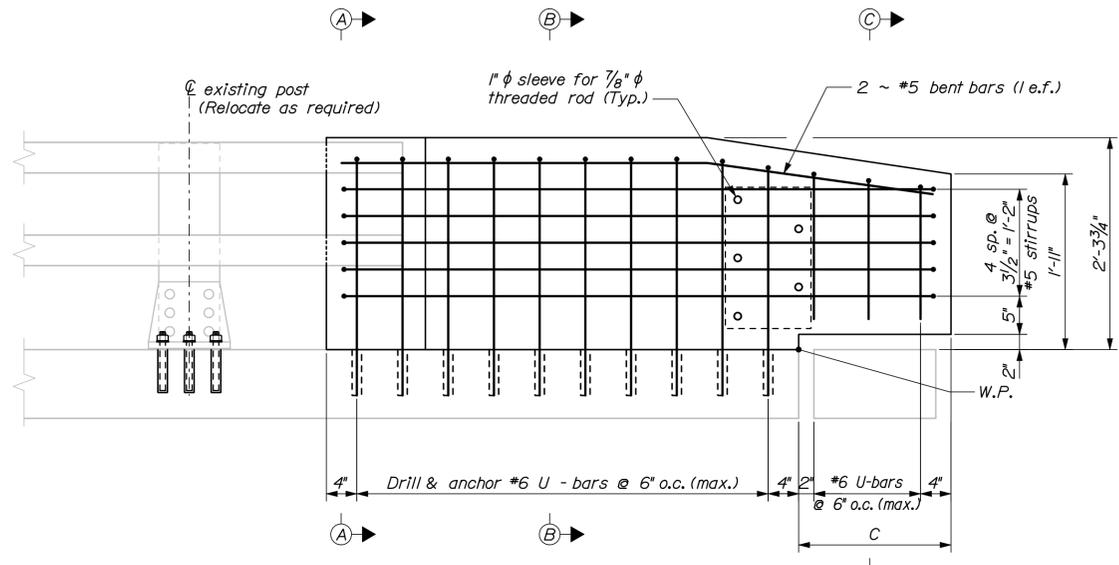
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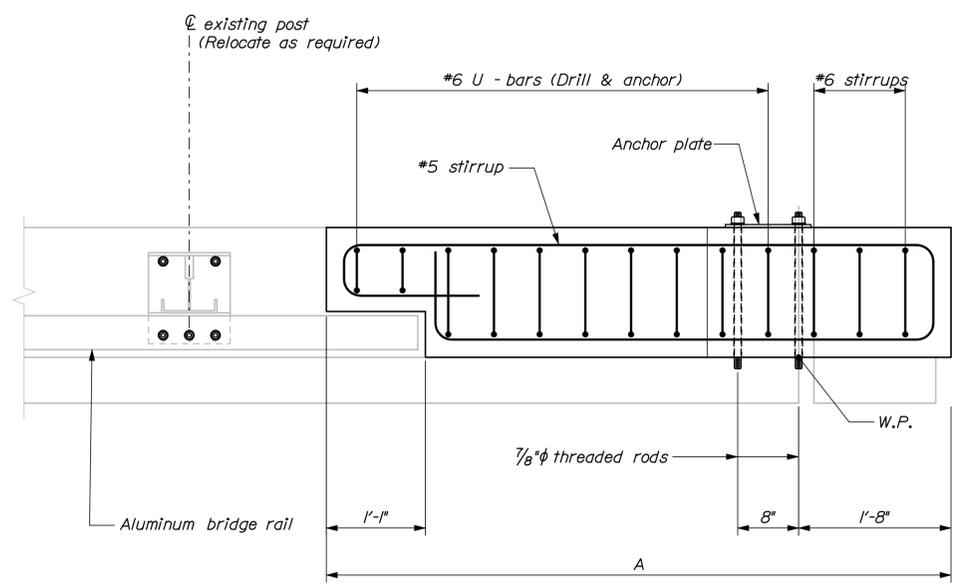
CONCRETE TRANSITION BARRIER (TYPE 3)  
Roadway elevation shown

CONCRETE TRANSITION BARRIER NOTES

1. Refer to Standard Details Section 526 - Concrete Transition Barrier for details and information not shown.
2. Reinforcing steel for the Transition Barriers is based on details shown in the Standard Details. Reinforcing steel shall be modified to fit the details and conditions shown on the plans. Payment for modifying reinforcing steel and for drilling and anchoring bars as shown will be considered incidental to Item No. 526.34, Permanent Concrete Transition Barrier.
3. Anchor plates and threaded rods shall be galvanized in accordance with the Standard Specifications and the Standard Details.
4. The bridge rail post bolt anchorage system shall be from MaineDOT's Qualified Products List or an approved equal. The Contractor shall submit the proposed system to the Resident for review prior to use. The bolt anchorages shall be installed in strict accordance with the selected manufacturer's re-commendations. The anchor bolts shall have an ultimate tension capacity of 33 kips. Payment for bridge rail post relocation and associated materials, equipment, labor and incidentals necessary to complete the work will be considered incidental to Item No. 526.34, Permanent Concrete Transition Barrier.
5. The contractor shall locate existing curb reinforcing steel and conduit and adjust dowel and bridge rail post anchor stud locations to avoid cutting existing bars. Any adjustments from plan dimensions shall be approved by the Resident.
6. Excavation and backfill required for construction or modification of concrete transition barrier shall be incidental to Item 526.34, Permanent Concrete Transition Barrier.
7. The existing expansion joint is not shown for clarity. The contractor shall not damage existing armor scheduled for re-use during concrete demolition, and shall recast re-used armor into the new work.
8. The contractor shall trim or install longer rail sections as directed by the resident to provide 12" of projection into the transition barrier recess.
9. The proposed terminal curb type 2 shall match tightly against the existing bull-nosed granite curb on the transition barrier. The contractor shall notch the existing bull-nosed curb, remove the existing curb and rebuild with reinforced concrete, or trim the proposed terminal curb to produce a tight fit. Payment for this effort will not be made directly, but shall be considered incidental to Item 526.34, Permanent Concrete Transition Barrier.



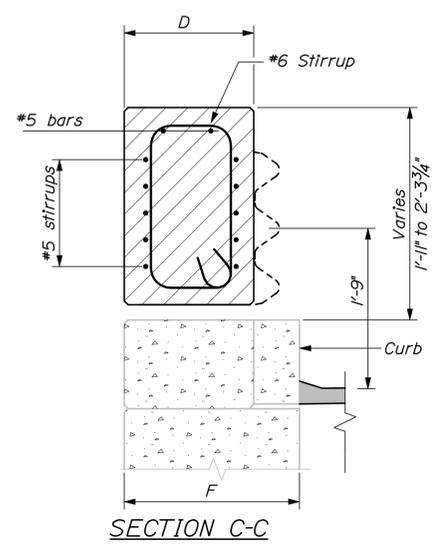
TRANSITION BARRIER ELEVATION  
Roadway elevation shown



TRANSITION BARRIER PLAN  
Roadway elevation shown

TABLE OF DIMENSIONS

Bridge #	Bridge	Location	A	C	D	E	F
1396	East Branch Mattawamkeag	Approach Travel Lane	7' - 2"	1' - 8"	1' - 3.5"	10.5"	1' - 9.5"
1396	East Branch Mattawamkeag	Approach Passing Lane	7' - 2"	1' - 8"	1' - 3.5"	10.5"	1' - 9.5"
1396	East Branch Mattawamkeag	Departure Travel Lane	7' - 7"	1' - 8"	1' - 3.5"	10.5"	1' - 9.5"
1396	East Branch Mattawamkeag	Departure Passing Lane	7' - 2"	1' - 8"	1' - 3.5"	10.5"	1' - 9.5"
1397	Oakland-Smyrna	Approach Travel Lane	7' - 4"	2' - 2"	1' - 3.5"	10.5"	1' - 9.5"
1397	Oakland-Smyrna	Approach Passing Lane	7' - 3"	2' - 0"	1' - 3.5"	10.5"	1' - 9.5"



SECTION C-C

STATE OF MAINE DEPARTMENT OF TRANSPORTATION IB-1681(930)E	BRIDGE NO. As Noted PIN 016819.30	BRIDGE PLANS
INTERSTATE 95 NORTHBOUND OAKFIELD ARROSTOOK COUNTY	CONCRETE TRANSITION BARRIER (TYPE 3)	
SHEET NUMBER <b>12</b> OF 14		

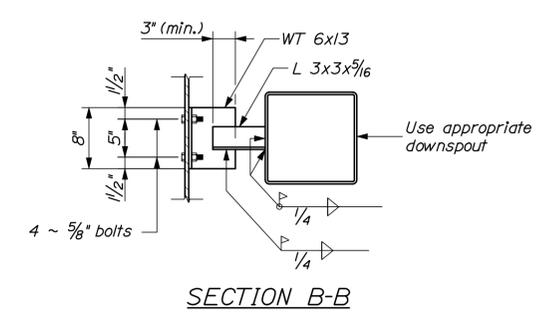
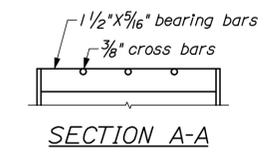
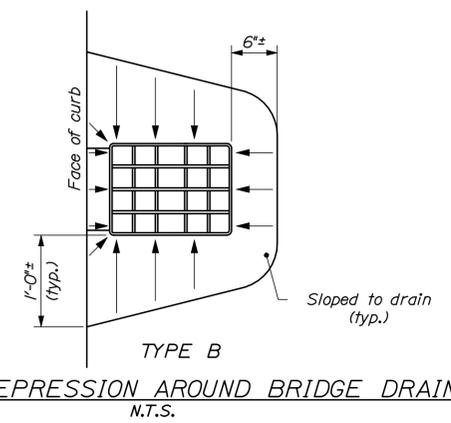
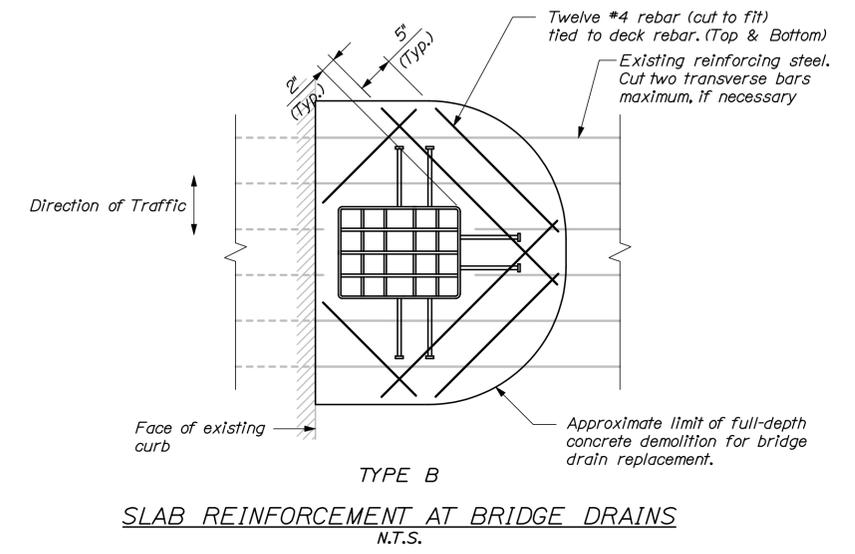
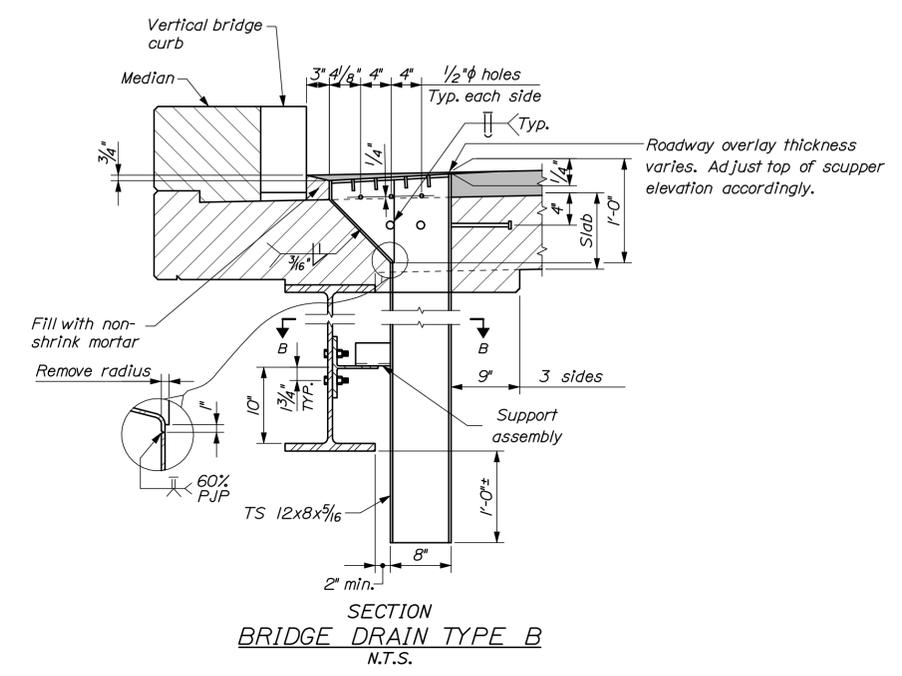
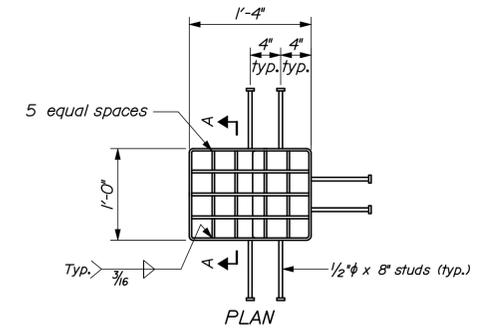
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CAH	08/12	MFC	08/12	DESIGN-REVIEWED			
TRC	08/12			DESIGN-DETAILED			
				REVISIONS 1			
				REVISIONS 2			
				REVISIONS 3			
				REVISIONS 4			
				FIELD CHANGES			

Date: 4/16/2013

Username: atower

Division: BRIDGE

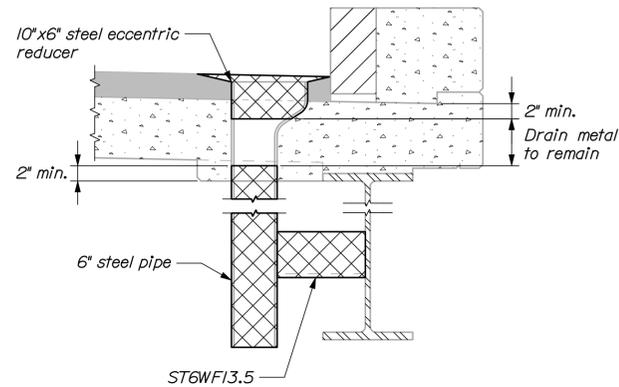
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**BRIDGE DRAIN NOTES:**

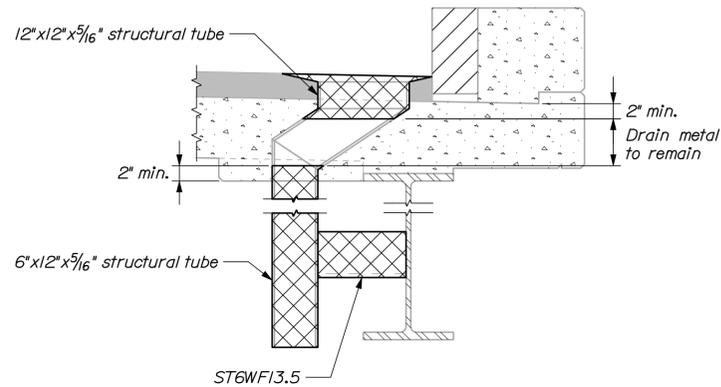
- All plates, if any, shall be 1/4" thick and shall conform to ASTM A 36.
- Downspouts shall conform to ASTM A500.
- Grating shall be a commercial heavy-duty grating with 1/2" x 5/16" bearing bars spaced at 2 3/8" and 3/8" cross bars spaced at 4". Grating shall be centered in the drain top.
- If the minimum thickness of concrete below the drain is 2" or less, the concrete haunch shall be extended as shown.
- At the Contractor's option bridge drain shear studs may be field welded to the drain. Touch up areas with an approved cold galvanizing compound after welding.
- Drains, WT6x13, and L 3x3x5/16 shall be blast cleaned to the requirements of SSPC-SP6/NACE 3 and hot-dipped galvanized in accordance with ASTM A 123. All associated fasteners shall be hot dip galvanized.
- One 1" diameter PVC weep drain shall be installed in the gutter line on the upgrade side of each scupper. All work and materials associated with installing new weep drains shall be considered incidental to the related contract items.
- At a minimum the existing deck concrete shall be removed to a distance 6" beyond the end of the welded studs. Concrete removal need not extend below the existing granite curb. Care shall be taken not to damage the existing reinforcing steel during concrete demolition. After concrete removal the Resident shall direct the Contractor to cut existing reinforcing bars as needed to allow installation of the drains.
- The Contractor shall furnish twelve (12) pieces of #4 reinforcing steel for each drain to be placed around the proposed bridge drain as directed by the Resident. The required length of the proposed reinforcing shall be determined by the Resident in the field. The additional reinforcing steel around each bridge drain will not be paid for directly. Payment will be considered incidental to related contract items.

STATE OF MAINE DEPARTMENT OF TRANSPORTATION IB-1681(930)E		BRIDGE NO. Varies PIN 016819.30		BRIDGE PLANS	
PROJ. MGR.	DESIGN-DETAILED	CAH	DATE	BY	DATE
CHECKED-REVIEWED	MFC	DGE	08/12	DGE	08/12
DESIGN-DETAILED	TRC				
DESIGN-DETAILED					
REVISIONS 1					
REVISIONS 2					
REVISIONS 3					
REVISIONS 4					
FIELD CHANGES		SIGNATURE		P.E. NUMBER	
DATE		DATE		DATE	
INTERSTATE 95 NORTHBOUND OAKFIELD AROOSTOOK COUNTY			BRIDGE DRAIN DETAILS I		
SHEET NUMBER			13		
			OF 14		



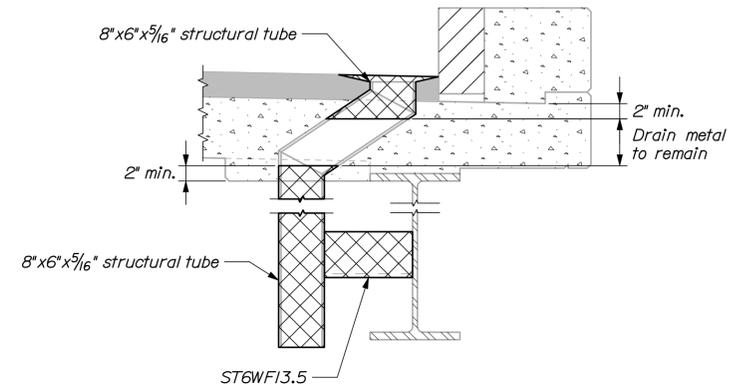
SECTION

EXISTING ECCENTRIC BRIDGE DRAIN REMOVAL  
N.T.S.



SECTION

EXISTING 12" x 12" BRIDGE DRAIN REMOVAL  
N.T.S.



SECTION

EXISTING 6" x 8" BRIDGE DRAIN REMOVAL  
N.T.S.

**NOTES:**

- Contractor shall note that drains may be rotated 180° with downspout under curb.
- Payment for all labor, equipment and material associated with the bridge drain removal will be paid for under Item 502.702, Remove Bridge Drain, see Special Provision 502.
- If a new drain is proposed at the location of a bridge drain removal, payment for the drain removal is considered incidental to the new drain pay item. See Special Provision 502.

**LEGEND**

Approximate limit of drain removal

**BRIDGE DRAIN REMOVAL PROCEDURE (ALL TYPES):**

- Mechanically cut and remove portions of existing drain with less than 2" of embedment into existing deck concrete.
- Chip and remove any loose or deteriorated deck concrete in the vicinity of the bridge drain removal.
- Power tool clean all areas of bridge drain that will receive repair concrete in accordance with SSPC-SP3. All loose rust, paint and other foreign materials shall be removed.
- Install temporary form on underside of bridge deck and apply an epoxy bonding agent to all repair surfaces. The proposed epoxy bonding agent shall be selected from Maine DOT's Qualified Product List.
- Fill drain with Class LP concrete. Concrete shall be placed, finished and cured in accordance with Standard Specification 502.
- Saw cut support angle 1/2" from web. Touch up exposed steel with two coats of zinc rich chromate paint. Strip forms.

PROJ. MGR.	DATE	BY	DATE	SIGNATURE
DESIGN-DETAILED	08/12	MFC	08/12	
CHECKED-REVIEWED		DGE		
DESIGN-DETAILED				
REVISIONS 1				P.E. NUMBER
REVISIONS 2				DATE
REVISIONS 3				
REVISIONS 4				
FIELD CHANGES				