

**Updated 11/05/14**

# **FEDERAL PROJECT**

## BIDDING INSTRUCTIONS

### FOR ALL PROJECTS:

1. Use pen and ink to complete all paper Bids.
2. As a minimum, the following must be received prior to the time of Bid opening:

#### For a Paper Bid:

- a) a copy of the Notice to Contractors, b) the completed Acknowledgement of Bid Amendments form, c) the completed Schedule of Items, d) two copies of the completed and signed Contract Offer, Agreement & Award form, e) a Bid Guaranty, (if required), and f) any other certifications or Bid requirements listed in the Bid Documents as due by Bid opening.

#### For an Electronic Bid:

- a) a completed Bid using Expedite® software and submitted via the Bid Express™ web-based service, b) an electronic Bid Guaranty (if required) or a faxed copy of a Bid Bond (with original to be delivered within 72 hours), and c) any other Certifications or Bid requirements listed in the Bid Documents as due by Bid opening.
3. Include prices for all items in the Schedule of Items (excluding non-selected alternates).
4. Bid Guaranty acceptable forms are:
  - a) a properly completed and signed Bid Bond on the Department's prescribed form (or on a form that does not contain any significant variations from the Department's form as determined by the Department) for 5% of the Bid Amount or
  - b) an Official Bank Check, Cashier's Check, Certified Check, U.S. Postal Money Order or Negotiable Certificate of Deposit in the amount stated in the Notice to Contractors or
  - c) an electronic bid bond submitted with an electronic bid.
5. If a paper Bid is to be sent, "FedEx First Overnight" delivery is suggested as the package is delivered directly to the DOT Headquarters Building located at 16 Child Street in Augusta. Other means, such as U.S. Postal Service's Express Mail has proven not to be reliable.

### IN ADDITION, FOR FEDERAL AID PROJECTS:

6. Complete the DBE Proposed Utilization form, and submit with your bid. If you are submitting your bid electronically, you must FAX the form to (207) 624-3431. This is a curable defect.

*If you need further information regarding Bid preparation, call the DOT  
Contracts Section at (207) 624-3410.*

*For complete bidding requirements, refer to Section 102 of the Maine Department  
of Transportation, Standard Specifications, Revision of November 2014.*

# NOTICE

**The Maine Department of Transportation is attempting to improve the way Bid Amendments/Addendums are handled, and allow for an electronic downloading of bid packages from our website, while continuing to maintain an optional plan holders list.**

**Prospective bidders, subcontractors or suppliers who wish to download a copy of the bid package and receive a courtesy notification of project specific bid amendments must fill out the on-line plan holder registration form and provide an email address to the MDOT Contracts mailbox at: [MDOT.contracts@maine.gov](mailto:MDOT.contracts@maine.gov). Each bid package will require a separate request.**

**Additionally, interested parties will be responsible for reviewing and retrieving the Bid Amendments from our web site, and acknowledging receipt and incorporating those Bid Amendments in their bids using the Acknowledgement of Bid Amendment Form.**

**The downloading of bid packages from the MDOT website is not the same as providing an electronic bid to the Department. Electronic bids must be submitted via <http://www.BIDX.com>. For information on electronic bidding contact Patrick Corum at [patrick.corum@maine.gov](mailto:patrick.corum@maine.gov) , Rebecca Snowden at [rebecca.snowden@maine.gov](mailto:rebecca.snowden@maine.gov) or Diane Barnes at [diane.barnes@maine.gov](mailto:diane.barnes@maine.gov).**

# NOTICE

For security and other reasons, all Bid Packages which are mailed, shall be provided in double (one envelope inside the other) envelopes. The *Inner Envelope* shall have the following information provided on it:

Bid Enclosed - Do Not Open

PIN:

Town:

Date of Bid Opening:

Name of Contractor with mailing address and telephone number:

In Addition to the usual address information, the *Outer Envelope* should have written or typed on it:

Double Envelope: Bid Enclosed

PIN:

Town:

Date of Bid Opening:

Name of Contractor:

*This should not be much of a change for those of you who use Federal Express or similar services.*

Hand-carried Bids may be in one envelope as before, and should be marked with the following information:

Bid Enclosed: Do Not Open

PIN:

Town:

Name of Contractor:

October 16, 2001

**STATE OF MAINE DEPARTMENT OF TRANSPORTATION**  
Bid Guaranty-Bid Bond Form

**KNOW ALL MEN BY THESE PRESENTS THAT** \_\_\_\_\_

\_\_\_\_\_ of the City/Town of \_\_\_\_\_ and State of \_\_\_\_\_

as Principal, and \_\_\_\_\_ as Surety, a

Corporation duly organized under the laws of the State of \_\_\_\_\_ and having a usual place of

Business in \_\_\_\_\_ and hereby held and firmly bound unto the Treasurer of

the State of Maine in the sum of \_\_\_\_\_ for payment which Principal and Surety bind

themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

The condition of this obligation is that the Principal has submitted to the Maine Department of

Transportation, hereafter Department, a certain bid, attached hereto and incorporated as a

part herein, to enter into a written contract for the construction of \_\_\_\_\_

\_\_\_\_\_ and if the Department shall accept said bid

and the Principal shall execute and deliver a contract in the form attached hereto (properly

completed in accordance with said bid) and shall furnish bonds for this faithful performance of

said contract, and for the payment of all persons performing labor or furnishing material in

connection therewith, and shall in all other respects perform the agreement created by the

acceptance of said bid, then this obligation shall be null and void; otherwise it shall remain in full

force, and effect.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_

WITNESS:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

WITNESS

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

PRINCIPAL:

By \_\_\_\_\_

By: \_\_\_\_\_

By: \_\_\_\_\_

SURETY:

By \_\_\_\_\_

By: \_\_\_\_\_

Name of Local Agency: \_\_\_\_\_

# NOTICE

## Bidders:

Please use the attached “Request for Information” form when submitting questions concerning specific Contracts that have been advertised for Bid. Include additional numbered pages as required. RFI’s may be faxed to 207-624-3431 or submitted via e-mail to [RFI-Contracts.MDOT@maine.gov](mailto:RFI-Contracts.MDOT@maine.gov). These are the only allowable mechanisms for answering Project specific questions. Maine DOT will not be bound to any answers to Project specific questions received during the Bidding phase through other processes.

When submitting RFIs by Email please follow the same guidelines as stated on the “Request For Information” form and include the word “RFI” along with the Project Title in the subject line. Example: RFI-Augusta-Sewell Bridge Replacement



# NOTICE

## Disadvantaged Business Enterprise Proposed Utilization

The Apparent Low Bidder shall submit the Disadvantaged Business Enterprise Proposed Utilization form with their bid. This is a curable bid defect.

The Contractor's Disadvantaged Business Enterprise Proposed Utilization Plan form contains additional information that is required by USDOT.

The Contractor's Disadvantaged Business Enterprise Proposed Utilization Plan form should be used.

A copy of the new Contractor's Disadvantaged Business Enterprise Proposed Utilization Plan and instructions for completing it are attached.

Note: Questions about DBE firms, or to obtain a printed copy of the DBE Directory, contact The Office of Civil Rights at (207) 624-3066.

MDOT's DBE Directory of Certified firms can also be obtained at <http://www.maine.gov/mdot/civilrights/dbe.htm>

## INSTRUCTIONS FOR PREPARING THE MaineDOT CONTRACTOR'S DBE/SUBCONTRACTOR UTILIZATION FORM

The Contractor Shall Extend equal opportunity to MaineDOT certified DBE firms (as listed in MaineDOT's DBE Directory of Certified Businesses) in the selection and utilization of Subcontractors and Suppliers.

### SPECIFIC INSTRUCTIONS FOR COMPLETING THE FORM:

Insert Contractor name, the name of the person(s) preparing the form, and that person(s) telephone, fax number and e-mail address.

Calculate and provide percentage of your bid that will be allocated to DBE firms, Federal Project Identification Number, and location of the Project work.

In the columns, name each subcontractor, DBE and non-DBE firm to be used, provide the Unit/Item cost of the work/product to be provided by the subcontractor, give a brief description and the dollar value of the work.

Revised 1/12

**FHWA DBE GOAL NOTICE FFY 2013-15**  
**Maine Department of Transportation**  
**Disadvantaged Business Enterprise Program**

Notice is hereby given that in accordance with US DOT regulation 49 CFR Part 26, the Maine Department of Transportation has established a DBE Program for disadvantaged business participation in the federal-aid highway and bridge construction program; MaineDOT contracts covered by the program include consulting, construction, supplies, manufacturing, and service contracts.

For FFY 2013-15 (October 1, 2012 through September 30, 2015) MaineDOT has established an annual DBE participation goal of **4.0%** to be achieved through race/gender neutral means. This goal has been approved by the Federal Highway Administration and remains in effect through September 30, 2015. Maine DOT must meet this goal each federal fiscal year. If the goal is not met, MaineDOT must provide a justification for not meeting the goal and provide a plan to ensure the goal is met, which may include contract goals on certain projects that contractors will be required to meet.

MaineDOT asks all contractors, consultants and subcontractors to seek certified DBE firms for projects and to work to meet the determined 4.0% goal without the need to impose contract goals. DBE firms are listed on the MaineDOT website at:

<http://www.maine.gov/mdot/civilrights/dbe.htm>

Interested parties may view MaineDOT's DBE goal setting methodology also posted on this website. If you have questions regarding this goal or the DBE program you may contact Sherry Tompkins at the Maine Department of Transportation, Civil Rights Office by telephone at (207) 624-3066 or by e-mail at: [sherry.tompkins@maine.gov](mailto:sherry.tompkins@maine.gov)

**MaineDOT CONTRACTOR'S DBE/SUBCONTRACTOR  
PROPOSED UTILIZATION FORM**

**All Bidders must furnish this form with their bid on Bid Opening day**

**Contractor:** \_\_\_\_\_ **Telephone:** \_\_\_\_\_ **Ext** \_\_\_\_\_

**Contact Person:** \_\_\_\_\_ **Fax:** \_\_\_\_\_

**E-mail:** \_\_\_\_\_

**BID DATE:** \_\_\_\_\_

**FEDERAL PROJECT PIN #** \_\_\_\_\_ **PROJECT LOCATION:** \_\_\_\_\_

**TOTAL ANTICIPATED DBE \_\_\_\_ % PARTICIPATION FOR THIS CONTRACT**

W B E	D B E	Non DBE	Firm Name	Item Number & Description of Work	Quantity	Cost Per Unit/Item	Anticipated \$ Value
<b>Subcontractor Total &gt;</b>							
<b>DBE Total &gt;</b>							

**NOTE: THIS INFORMATION IS USED TO TRACK AND REPORT ANTICIPATED DBE PARTICIPATION IN ALL  
FEDERALLY FUNDED MAINE DOT CONTRACTS. THE ANTICIPATED DBE AMOUNT IS VOLUNTARY AND WILL  
NOT BECOME A PART OF THE CONTRACTUAL TERMS.**

Equal Opportunity Use:

Form received: \_\_\_/\_\_\_/\_\_\_ Verified by: \_\_\_\_\_

FHWA       FTA       FAA

**For a complete list of certified firms and company designation (WBE/DBE) go to  
<http://www.maine.gov/mdot>**

Rev. 05/13

**Maine Department of Transportation Civil Rights Office**

**Directory of Certified Disadvantaged Business Enterprises**

**Listing can be found at:**

<http://www.maine.gov/mdot/civilrights/dbe.htm>

**For additional information and guidance contact:**

**Civil Rights Office at (207) 624-3066**

***It is the responsibility of the Contractor to access the DBE Directory at this site in order to have the most current listing.***

### **Vendor Registration**

Prospective Bidders must register as a vendor with the Department of Administrative & Financial Services if the vendor is awarded a contract. Vendors will not be able to receive payment without first being registered. Vendors/Contractors will find information and register through the following link –

<http://www.maine.gov/purchases/venbid/index.shtml>

**STATE OF MAINE DEPARTMENT OF TRANSPORTATION  
NOTICE TO CONTRACTORS**

Sealed Bids addressed to the Maine Department of Transportation, Augusta, Maine 04333 and endorsed on the wrapper "Bids for Penobscot River Bridge Replacement in the town of HOWLAND & ENFIELD" will be received from contractors at the Reception Desk, Maine DOT Building, Capitol Street, Augusta, Maine, until 11:00 o'clock A.M. (prevailing time) on January 28, 2015 and at that time and place publicly opened and read. Bids will be accepted from all bidders. The lowest responsive bidder must have completed, or successfully complete, a bridge, highway, or project specific prequalification to be considered for the award of this contract. **We now accept electronic bids for those bid packages posted on the bidx.com website. Electronic bids do not have to be accompanied by paper bids. Please note: the Department will accept a facsimile of the bid bond; however, the original bid bond must then be received at the MDOT Contract Section within 72 hours of the bid opening.** Until further notice, dual bids (one paper, one electronic) will be accepted, with the paper copy taking precedence.

Description: Maine Federal Aid Project No. BH-1670(500)X, WIN 016705.00

Location: In Penobscot County, project is located on route 6/ 155 over the Penobscot River approximately 0.3 mile westerly of Route 2.

Scope of Work: Penobscot River Bridge replacement plus other incidental work.

**The basis of award will be Section 1 only.**

For general information regarding Bidding and Contracting procedures, contact George Macdougall at (207) 624-3410. Our webpage at <http://www.maine.gov/mdot/contractors/> contains a copy of the Schedule of Items, Plan Holders List, written portions of bid amendments, drawings, bid results and an electronic form for RFI submittal. For Project-specific information fax all questions to **Project Manager Steve Bodge** at (207) 624-3431, use electronic RFI form or email questions to [RFI-Contracts.MDOT@maine.gov](mailto:RFI-Contracts.MDOT@maine.gov), project name and identification number should be in the subject line. Questions received after 12:00 noon of Monday prior to bid date will not be answered. Bidders shall not contact any other Departmental staff for clarification of Contract provisions, and the Department will not be responsible for any interpretations so obtained. TTY users call Maine Relay 711.

Plans, specifications and bid forms may be seen at the Maine DOT Building in Augusta, Maine and at the Department of Transportation's Regional Office in Bangor. They may be purchased from the Department between the hours of 8:00 a.m. to 4:30 p.m. by cash, credit card (Visa/Mastercard) or check payable to Treasurer, State of Maine sent to Maine Department of Transportation, Attn.: Mailroom, 16 State House Station, Augusta, Maine 04333-0016. They also may be purchased by telephone at (207) 624-3536 between the hours of 8:00 a.m. to 4:30 p.m. Full size plans \$127.00 (\$135.00 by mail). Half size plans \$63.50 (\$67.50 by mail), Bid Book \$10 (\$13 by mail), Single Sheets \$2, payment in advance, all non-refundable.

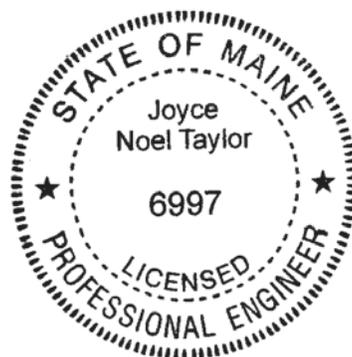
Each Bid must be made upon blank forms provided by the Department and must be accompanied by a bid bond at 5% of the bid amount or an official bank check, cashier's check, certified check, certificate of deposit, or United States postal money order in the amount of \$400,000.00 payable to Treasurer, State of Maine as a Bid guarantee. A Contract Performance Surety Bond and a Contract Payment Surety Bond, each in the amount of 100 percent of the Contract price, will be required of the successful Bidder.

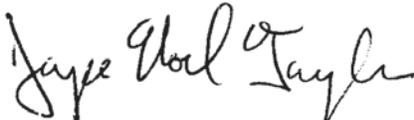
This Contract is subject to all applicable Federal Laws. This contract is subject to compliance with the Disadvantaged Business Enterprise program requirements as set forth by the Maine Department of Transportation.

All work shall be governed by "State of Maine, Department of Transportation, Standard Specifications, Revision of November 2014", price \$10 [\$15 by mail], and Standard Details, Revision of November 2014, price \$20 [\$25 by mail]. They also may be purchased by telephone at (207) 624-3536 between the hours of 8:00 a.m. to 4:30 p.m. Standard Detail updates can be found at <http://www.maine.gov/mdot/contractors/publications/>.

The right is hereby reserved to the Maine DOT to reject any or all bids.

Augusta, Maine  
January 7, 2015



  
JOYCE NOEL TAYLOR P. E.  
CHIEF ENGINEER

**SPECIAL PROVISION 102.7.3  
ACKNOWLEDGMENT OF BID AMENDMENTS**

With this form, the Bidder acknowledges its responsibility to check for all Amendments to the Bid Package. For each Project under Advertisement, Amendments are located at <http://www.maine.gov/mdot/contractors/> . It is the responsibility of the Bidder to determine if there are Amendments to the Project, to download them, to incorporate them into their Bid Package, and to reference the Amendment number and the date on the form below. The Maine DOT will not post Bid Amendments any later than noon the day before Bid opening without individually notifying all the planholders.

Amendment Number	Date

The Contractor, for itself, its successors and assigns, hereby acknowledges that it has received all of the above referenced Amendments to the Bid Package.

CONTRACTOR

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of authorized representative

\_\_\_\_\_  
(Name and Title Printed)

Maine Department of Transportation

Proposal Schedule of Items

Proposal ID: 016705.00

Project(s): 016705.00

SECTION: 1 INITIAL GROUP

Alt Set ID: Alt Mbr ID:

Contractor: \_\_\_\_\_

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0010	201.11 CLEARING	0.700 AC	_____	 _____	_____	 _____
0020	201.23 REMOVING SINGLE TREE TOP ONLY	3.000 EA	_____	 _____	_____	 _____
0030	201.24 REMOVING STUMP	5.000 EA	_____	 _____	_____	 _____
0040	202.08 REMOVING BUILDING NO.: 2	LUMP SUM		 LUMP SUM	_____	 _____
0050	202.08 REMOVING BUILDING NO.: 1	LUMP SUM		 LUMP SUM	_____	 _____
0060	202.15 REMOVING MANHOLE OR CATCH BASIN	3.000 EA	_____	 _____	_____	 _____
0070	202.19 REMOVING EXISTING BRIDGE	LUMP SUM		 LUMP SUM	_____	 _____
0080	203.20 COMMON EXCAVATION	5,723.000 CY	_____	 _____	_____	 _____
0090	203.24 COMMON BORROW	188.000 CY	_____	 _____	_____	 _____
0100	203.25 GRANULAR BORROW	3,750.000 CY	_____	 _____	_____	 _____
0110	206.061 STRUCTURAL EARTH EXCAVATION - DRAINAGE AND MINOR STRUCTURES, BELOW GRADE	50.000 CY	_____	 _____	_____	 _____
0120	206.082 STRUCTURAL EARTH EXCAVATION - MAJOR STRUCTURES	95.000 CY	_____	 _____	_____	 _____

Maine Department of Transportation

Proposal Schedule of Items

Proposal ID: 016705.00

Project(s): 016705.00

SECTION: 1 INITIAL GROUP

Alt Set ID: Alt Mbr ID:

Contractor: \_\_\_\_\_

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0130	206.10 STRUCTURAL EARTH EXCAVATION - PIERS	3,310.000 CY	_____	 _____	_____	 _____
0140	304.16 AGGREGATE BASE COURSE - TYPE C	7,300.000 CY	_____	 _____	_____	 _____
0150	403.207 HOT MIX ASPHALT 19.0 MM HMA	1,225.000 T	_____	 _____	_____	 _____
0160	403.2081 12.5 MM POLYMER MODIFIED HOT MIX ASPHALT	990.000 T	_____	 _____	_____	 _____
0170	403.209 HOT MIX ASPHALT 9.5 MM (SIDEWALKS, DRIVES, INCIDENTALS)	55.000 T	_____	 _____	_____	 _____
0180	403.213 HOT MIX ASPHALT 12.5 MM BASE	990.000 T	_____	 _____	_____	 _____
0190	409.15 BITUMINOUS TACK COAT - APPLIED	505.000 G	_____	 _____	_____	 _____
0200	501.239 DYNAMIC LOADING TESTS - PROVIDING FOR	11.000 EA	_____	 _____	_____	 _____
0210	501.50 STEEL H-BEAM PILES 89 LBS/FT, DELIVERED	1,080.000 LF	_____	 _____	_____	 _____
0220	501.501 STEEL H-BEAM PILES 89 LBS/FT, IN PLACE	1,080.000 LF	_____	 _____	_____	 _____
0230	501.54 STEEL H-BEAM PILES 117 LBS/FT, DELIVERED	1,990.000 LF	_____	 _____	_____	 _____

Maine Department of Transportation

Proposal Schedule of Items

Proposal ID: 016705.00

Project(s): 016705.00

SECTION: 1 INITIAL GROUP

Alt Set ID: Alt Mbr ID:

Contractor: \_\_\_\_\_

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0240	501.541 STEEL H-BEAM PILES 117 LBS/FT, IN PLACE	1,990.000 LF	_____	 _____	_____	 _____
0250	501.90 PILE TIPS	100.000 EA	_____	 _____	_____	 _____
0260	501.91 PILE SPLICES	109.000 EA	_____	 _____	_____	 _____
0270	501.92 PILE DRIVING EQUIPMENT MOBILIZATION	LUMP SUM		LUMP SUM	_____	 _____
0280	502.219 STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS	LUMP SUM		LUMP SUM	_____	 _____
0290	502.239 STRUCTURAL CONCRETE PIERS	LUMP SUM		LUMP SUM	_____	 _____
0300	502.24 STRUCTURAL CONCRETE PIERS (PLACED UNDER WATER)	680.000 CY	_____	 _____	_____	 _____
0310	502.249 STRUCTURAL CONCRETE PIERS (PLACED UNDER WATER)	LUMP SUM		LUMP SUM	_____	 _____
0320	502.26 STRUCTURAL CONCRETE ROADWAY AND SIDEWALK SLABS ON STEEL BRIDGES	LUMP SUM		LUMP SUM	_____	 _____
0330	502.31 STRUCTURAL CONCRETE APPROACH SLABS	LUMP SUM		LUMP SUM	_____	 _____
0340	502.49 STRUCTURAL CONCRETE CURBS AND SIDEWALKS	LUMP SUM		LUMP SUM	_____	 _____

Maine Department of Transportation

Proposal Schedule of Items

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Project(s): 016705.00

SECTION: 1 INITIAL GROUP

Alt Set ID: Alt Mbr ID:

Contractor: \_\_\_\_\_

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0350	502.703 FRP DOWNSPOUT	2.000 EA	_____	_____	_____	_____
0360	502.77 FIBER REINFORCED POLYMER BRIDGE DRAIN - TYPE: B	14.000 EA	_____	_____	_____	_____
0370	502.77 FIBER REINFORCED POLYMER BRIDGE DRAIN - TYPE: G	4.000 EA	_____	_____	_____	_____
0380	503.12 REINFORCING STEEL, FABRICATED AND DELIVERED	225,300.000 LB	_____	_____	_____	_____
0390	503.13 REINFORCING STEEL, PLACING	225,300.000 LB	_____	_____	_____	_____
0400	503.14 EPOXY-COATED REINFORCING STEEL, FABRICATED AND DELIVERED	25,400.000 LB	_____	_____	_____	_____
0410	503.15 EPOXY-COATED REINFORCING STEEL, PLACING	25,400.000 LB	_____	_____	_____	_____
0420	504.702 STRUCTURAL STEEL FABRICATED AND DELIVERED, WELDED	LUMP SUM	LUMP SUM	_____	_____	_____
0430	504.71 STRUCTURAL STEEL ERECTION	LUMP SUM	LUMP SUM	_____	_____	_____
0440	505.08 SHEAR CONNECTORS	LUMP SUM	LUMP SUM	_____	_____	_____
0450	507.0821 STEEL BRIDGE RAILING, 3 BAR	LUMP SUM	LUMP SUM	_____	_____	_____

Maine Department of Transportation

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0460	507.0831 STEEL BRIDGE RAILING, 4 BAR	LUMP SUM	LUMP	SUM	_____	_____
0470	508.14 HIGH PERFORMANCE WATERPROOFING MEMBRANE	LUMP SUM	LUMP	SUM	_____	_____
0480	511.07 COFFERDAM: PIER NO.3	LUMP SUM	LUMP	SUM	_____	_____
0490	511.07 COFFERDAM: PIER NO.2	LUMP SUM	LUMP	SUM	_____	_____
0500	511.07 COFFERDAM: PIER NO.1	LUMP SUM	LUMP	SUM	_____	_____
0510	512.081 FRENCH DRAINS	LUMP SUM	LUMP	SUM	_____	_____
0520	514.06 CURING BOX FOR CONCRETE CYLINDERS	1.000 EA	_____	_____	_____	_____
0530	515.21 PROTECTIVE COATING FOR CONCRETE SURFACES	LUMP SUM	LUMP	SUM	_____	_____
0540	521.23 EXPANSION DEVICE FINGER JOINT	2.000 EA	_____	_____	_____	_____
0550	521.32 FABRIC TROUGH FOR FINGER JOINT	2.000 EA	_____	_____	_____	_____
0560	523.52 BEARING INSTALLATION	27.000 EA	_____	_____	_____	_____
0570	523.5551 POT OR DISC BEARINGS, FIXED	3.000 EA	_____	_____	_____	_____

Maine Department of Transportation

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SECTION: 1 INITIAL GROUP

Alt Set ID: Alt Mbr ID:

Contractor: \_\_\_\_\_

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0580	523.5552 POT OR DISC BEARINGS, EXPANSION	24.000 EA	_____	 _____	_____	 _____
0590	526.301 TEMPORARY CONCRETE BARRIER TYPE I	LUMP SUM	LUMP SUM		_____	 _____
0600	526.34 PERMANENT CONCRETE TRANSITION BARRIER	1.000 EA	_____	 _____	_____	 _____
0610	526.3401 PERMANENT CONCRETE TRANSITION BARRIER - MODIFIED	3.000 EA	_____	 _____	_____	 _____
0620	530.30 GLASS FIBER REINFORCING POLYMER FABRICATED & DELIVERED	383,000.000 LF	_____	 _____	_____	 _____
0630	530.31 GLASS FIBER REINFORCING POLYMER PLACING	383,000.000 LF	_____	 _____	_____	 _____
0640	603.155 12 INCH REINFORCED CONCRETE PIPE CLASS III	52.000 LF	_____	 _____	_____	 _____
0650	603.159 12 INCH CULVERT PIPE OPTION III	20.000 LF	_____	 _____	_____	 _____
0660	603.16 15 INCH CULVERT PIPE OPTION I	80.000 LF	_____	 _____	_____	 _____
0670	603.169 15 INCH CULVERT PIPE OPTION III	32.000 LF	_____	 _____	_____	 _____
0680	603.175 18 INCH REINFORCED CONCRETE PIPE CLASS III	80.000 LF	_____	 _____	_____	 _____

Maine Department of Transportation

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Project(s): 016705.00

SECTION: 1 INITIAL GROUP

Alt Set ID: Alt Mbr ID:

Contractor: \_\_\_\_\_

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0690	603.179 18 INCH CULVERT PIPE OPTION III	88.000 LF	_____	 _____	_____	 _____
0700	603.195 24 INCH REINFORCED CONCRETE PIPE CLASS III	72.000 LF	_____	 _____	_____	 _____
0710	603.199 24 INCH CULVERT PIPE OPTION III	130.000 LF	_____	 _____	_____	 _____
0720	603.55 CONCRETE PIPE TIES	5.000 GP	_____	 _____	_____	 _____
0730	604.09 CATCH BASIN TYPE B1	1.000 EA	_____	 _____	_____	 _____
0740	604.092 CATCH BASIN TYPE B1-C	6.000 EA	_____	 _____	_____	 _____
0750	604.093 60 INCH CATCH BASIN TYPE B1	2.000 EA	_____	 _____	_____	 _____
0760	604.096 60 INCH CATCH BASIN TYPE B1-C	1.000 EA	_____	 _____	_____	 _____
0770	604.18 ADJUSTING MANHOLE OR CATCH BASIN TO GRADE	3.000 EA	_____	 _____	_____	 _____
0780	604.244 CATCH BASIN TYPE F4	1.000 EA	_____	 _____	_____	 _____
0790	604.247 CATCH BASIN TYPE F5-C	1.000 EA	_____	 _____	_____	 _____
0800	605.09 6 INCH UNDERDRAIN TYPE B	1,075.000 LF	_____	 _____	_____	 _____
0810	605.10 6 INCH UNDERDRAIN OUTLET	20.000 LF	_____	 _____	_____	 _____

Maine Department of Transportation

Proposal Schedule of Items

Proposal ID: 016705.00

Project(s): 016705.00

SECTION: 1 INITIAL GROUP

Alt Set ID: Alt Mbr ID:

Contractor: \_\_\_\_\_

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0820	605.11 12 INCH UNDERDRAIN TYPE C	155.000 LF	_____	 _____	_____	 _____
0830	606.1721 BRIDGE TRANSITION - TYPE 1	4.000 EA	_____	 _____	_____	 _____
0840	606.23 GUARDRAIL TYPE 3C - SINGLE RAIL	390.000 LF	_____	 _____	_____	 _____
0850	606.232 GUARDRAIL TYPE 3C - OVER 15 FOOT RADIUS	188.000 LF	_____	 _____	_____	 _____
0860	606.259 ANCHORAGE ASSEMBLY	1.000 EA	_____	 _____	_____	 _____
0870	606.265 TERMINAL END - SINGLE RAIL - GALVANIZED STEEL	1.000 EA	_____	 _____	_____	 _____
0880	606.353 REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	4.000 EA	_____	 _____	_____	 _____
0890	606.356 UNDERDRAIN DELINEATOR POST	1.000 EA	_____	 _____	_____	 _____
0900	606.79 GUARDRAIL 350 FLARED TERMINAL	2.000 EA	_____	 _____	_____	 _____
0910	607.17 CHAIN LINK FENCE - 6 FOOT	170.000 LF	_____	 _____	_____	 _____
0920	608.26 CURB RAMP DETECTABLE WARNING FIELD	18.000 SF	_____	 _____	_____	 _____
0930	609.31 CURB TYPE 3	830.000 LF	_____	 _____	_____	 _____

Maine Department of Transportation

Proposal Schedule of Items

Proposal ID: 016705.00

Project(s): 016705.00

SECTION: 1 INITIAL GROUP

Alt Set ID: Alt Mbr ID:

Contractor: \_\_\_\_\_

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0940	610.08 PLAIN RIPRAP	5,086.000 CY	_____	 _____	_____	 _____
0950	610.18 STONE DITCH PROTECTION	29.000 CY	_____	 _____	_____	 _____
0960	613.319 EROSION CONTROL BLANKET	580.000 SY	_____	 _____	_____	 _____
0970	615.07 LOAM	440.000 CY	_____	 _____	_____	 _____
0980	618.13 SEEDING METHOD NUMBER 1	5.000 UN	_____	 _____	_____	 _____
0990	618.14 SEEDING METHOD NUMBER 2	57.000 UN	_____	 _____	_____	 _____
1000	618.141 SEEDING METHOD NUMBER 3	14.000 UN	_____	 _____	_____	 _____
1010	619.1201 MULCH	76.000 UN	_____	 _____	_____	 _____
1020	619.1401 EROSION CONTROL MIX	10.000 CY	_____	 _____	_____	 _____
1030	620.58 EROSION CONTROL GEOTEXTILE	4,095.000 SY	_____	 _____	_____	 _____
1040	626.22 NON-METALLIC CONDUIT	1,200.000 LF	_____	 _____	_____	 _____
1050	627.18 12 " SOLID WHITE PAVEMENT MARKING	110.000 LF	_____	 _____	_____	 _____
1060	627.733 4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	7,525.000 LF	_____	 _____	_____	 _____

Maine Department of Transportation

Proposal Schedule of Items

Proposal ID: 016705.00

Project(s): 016705.00

SECTION: 1 INITIAL GROUP

Alt Set ID: Alt Mbr ID:

Contractor: \_\_\_\_\_

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
1070	627.76 TEMPORARY PAVEMENT MARKING LINE, WHITE OR YELLOW	LUMP SUM				
1080	629.05 HAND LABOR, STRAIGHT TIME	40.000 HR				
1090	631.10 AIR COMPRESSOR (INCLUDING OPERATOR)	5.000 HR				
1100	631.11 AIR TOOL (INCLUDING OPERATOR)	5.000 HR				
1110	631.12 ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	20.000 HR				
1120	631.172 TRUCK - LARGE (INCLUDING OPERATOR)	30.000 HR				
1130	631.20 STUMP CHIPPER (INCLUDING OPERATOR)	5.000 HR				
1140	631.221 SMALL FRONT-END LOADER (INCLUDING OPERATOR)	20.000 HR				
1150	631.32 CULVERT CLEANER (INCLUDING OPERATOR)	5.000 HR				
1160	634.160 HIGHWAY LIGHTING	LUMP SUM				
1170	634.210 CONVENTIONAL LIGHT STANDARD	7.000 EA				

Maine Department of Transportation

Proposal Schedule of Items

Proposal ID: 016705.00

Project(s): 016705.00

SECTION: 1 INITIAL GROUP

Alt Set ID: Alt Mbr ID:

Contractor: \_\_\_\_\_

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
1180	634.25 SERVICE POLE COMPLETE WITH CABINET AND CONTROLS	2.000 EA	_____	 _____	_____	 _____
1190	637.071 DUST CONTROL	LUMP SUM	LUMP SUM		_____	 _____
1200	639.18 FIELD OFFICE TYPE A	1.000 EA	_____	 _____	_____	 _____
1210	645.106 DEMOUNT REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGN	4.000 EA	_____	 _____	_____	 _____
1220	645.116 REINSTALL REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGN	4.000 EA	_____	 _____	_____	 _____
1230	652.311 TYPE II BARRICADE	20.000 EA	_____	 _____	_____	 _____
1240	652.312 TYPE III BARRICADE	6.000 EA	_____	 _____	_____	 _____
1250	652.33 DRUM	100.000 EA	_____	 _____	_____	 _____
1260	652.34 CONE	300.000 EA	_____	 _____	_____	 _____
1270	652.35 CONSTRUCTION SIGNS	1,000.000 SF	_____	 _____	_____	 _____
1280	652.36 MAINTENANCE OF TRAFFIC CONTROL DEVICES	1,000.000 CD	_____	 _____	_____	 _____
1290	652.38 FLAGGER	7,500.000 HR	_____	 _____	_____	 _____

Maine Department of Transportation

Proposal Schedule of Items

Proposal ID: 016705.00

Project(s): 016705.00

SECTION: 1 INITIAL GROUP

Alt Set ID: Alt Mbr ID:

Contractor: \_\_\_\_\_

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
1300	656.75 TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	LUMP SUM				
1310	658.20 ACRYLIC LATEX COLOR FINISH, GREEN	21.000 SY				
1320	659.10 MOBILIZATION	LUMP SUM				
1330	660.21 ON-THE-JOB TRAINING (BID)	1,000.000 HR				
<b>Section: 1</b>			<b>Total:</b>			

SECTION: 2 OTT & TWC OPTION NO.1

Alt Set ID: Alt Mbr ID:

Contractor: \_\_\_\_\_

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
1340	910.301 SPECIAL WORK UTILITY CONDUIT OTT AND TWC - APPROACHES ONLY	LUMP SUM				
1350	910.301 SPECIAL WORK UTILITY CONDUIT OTT AND TWC - BRIDGE ONLY	LUMP SUM				
<b>Section: 2</b>			<b>Total:</b>			



## **CONTRACT AGREEMENT, OFFER & AWARD**

AGREEMENT made on the date last signed below, by and between the State of Maine, acting through and by its Department of Transportation (Department), an agency of state government with its principal administrative offices located at Child Street Augusta, Maine, with a mailing address at 16 State House Station, Augusta, Maine 04333-0016, and

\_\_\_\_\_ with its principal place of business located at \_\_\_\_\_

The Department and the Contractor, in consideration of the mutual promises set forth in this Agreement (the "Contract"), hereby agree as follows:

### **A. The Work.**

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, WIN **016705.00**, for the **Penobscot River Bridge Replacement** in the town of **Howland** and **Enfield**, County of **Penobscot**, Maine. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

The Contractor shall be responsible for furnishing all supervision, labor, equipment, tools supplies, permanent materials and temporary materials required to perform the Work including construction quality control including inspection, testing and documentation, all required documentation at the conclusion of the project, warranting its work and performing all other work indicated in the Contract.

The Department shall have the right to alter the nature and extent of the Work as provided in the Contract; payment to be made as provided in the same.

### **B. Time.**

The Contractor agrees to complete all Work, except warranty work, on or before **December 30, 2017**. Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the State of Maine Department of Transportation Standard Specifications, Revision of November 2014 and related Special Provisions.

**C. Price.**

The quantities given in the Schedule of Items of the Bid Package will be used as the basis for determining the original Contract amount and for determining the amounts of the required Performance Surety Bond and Payment Surety Bond, and that the amount of this offer is

**Section 1 \$** \_\_\_\_\_

**Section 2 \$** \_\_\_\_\_

**Section 3 \$** \_\_\_\_\_

**Section 4 \$** \_\_\_\_\_

Performance Bond and Payment Bond each being 100% of the amount awarded under this Contract (see award amount in Section G below).

**D. Contract.**

This Contract, which may be amended, modified, or supplemented in writing only, consists of the Contract documents as defined in the Plans, Standard Specifications, Revision of November 2014, Standard Details Revision of November 2014 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds. It is agreed and understood that this Contract will be governed by the documents listed above.

**E. Certifications.**

By signing below, the Contractor hereby certifies that to the best of the Contractor's knowledge and belief:

1. All of the statements, representations, covenants, and/or certifications required or set forth in the Bid and the Bid Documents, including those in Appendix A to Division 100 of the Standard Specifications Revision of November 2014 (Federal Contract Provisions Supplement), and the Contract are still complete and accurate as of the date of this Agreement.
2. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.
3. The person signing below is legally authorized by the Contractor to sign this Contract on behalf of the Contractor and to legally bind the Contractor to the terms of the Contract.

**F. Offer.**

The undersigned, having carefully examined the site of work, the Plans, Standard Specifications Revision of November 2014, Standard Details Revision of November 2014 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of: **WIN 016705.00 Penobscot River Bridge Replacement plus other incidental work**, State of Maine, on which bids will be received until the time specified in the “Notice to Contractors” do(es) hereby bid and offer to enter into this contract to supply all the materials, tools, equipment and labor to construct the whole of the Work in strict accordance with the terms and conditions of this Contract at the unit prices in the attached “Schedule of Items”.

The Offeror agrees to perform the work required at the price specified above and in accordance with the bids provided in the attached “Schedule of Items” in strict accordance with the terms of this solicitation, and to provide the appropriate insurance and bonds if this offer is accepted by the Government in writing.

As Offeror also agrees:

First: To do any extra work, not covered by the attached “Schedule of Items”, which may be ordered by the Resident, and to accept as full compensation the amount determined upon a “Force Account” basis as provided in the Standard Specifications, Revision of November 2014, and as addressed in the contract documents.

Second: That the bid bond at 5% of the bid amount or the official bank check, cashier’s check, certificate of deposit or U. S. Postal Money Order in the amount given in the “Notice to Contractors”, payable to the Treasurer of the State of Maine and accompanying this bid, shall be forfeited, as liquidated damages, if in case this bid is accepted, and the undersigned shall fail to abide by the terms and conditions of the offer and fail to furnish satisfactory insurance and Contract bonds under the conditions stipulated in the Specifications within 15 days of notice of intent to award the contract.

Third: To begin the Work as stated in Section 107.2 of the Standard Specifications Revision of November 2014 and complete the Work within the time limits given in the Special Provisions of this Contract.

Fourth: The Contractor will be bound to the Disadvantaged Business Enterprise (DBE) Requirements contained in the attached Notice (Additional Instructions to Bidders) and submit a completed Contractor’s Disadvantaged Business Enterprise Utilization Plan with their bid.

Fifth: That this offer shall remain open for 30 calendar days after the date of opening of bids.

Sixth: The Bidder hereby certifies, to the best of its knowledge and belief that: the Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of competitive bidding in connection with its bid, and its subsequent contract with the Department.

IN WITNESS WHEREOF, the Contractor, for itself, its successors and assigns, hereby execute two duplicate originals of this Agreement and thereby binds itself to all covenants, terms, and obligations contained in the Contract Documents.

CONTRACTOR

\_\_\_\_\_  
Date

\_\_\_\_\_  
(Signature of Legally Authorized Representative  
of the Contractor)

\_\_\_\_\_  
Witness

\_\_\_\_\_  
(Name and Title Printed)

**G. Award.**

Your offer is hereby accepted for (see checked boxes):

- Section 1
- Section 2
- Section 3
- Section 4

**Contract Amount:** \_\_\_\_\_

This award consummates the Contract, and the documents referenced herein.

MAINE DEPARTMENT OF TRANSPORTATION

\_\_\_\_\_  
Date

\_\_\_\_\_  
By: David Bernhardt, Commissioner

\_\_\_\_\_  
Witness

## **CONTRACT AGREEMENT, OFFER & AWARD**

AGREEMENT made on the date last signed below, by and between the State of Maine, acting through and by its Department of Transportation (Department), an agency of state government with its principal administrative offices located at Child Street Augusta, Maine, with a mailing address at 16 State House Station, Augusta, Maine 04333-0016, and

\_\_\_\_\_ with its principal place of business located at \_\_\_\_\_

The Department and the Contractor, in consideration of the mutual promises set forth in this Agreement (the "Contract"), hereby agree as follows:

### **A. The Work.**

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, WIN **016705.00**, for the **Penobscot River Bridge Replacement** in the town of **Howland** and **Enfield**, County of **Penobscot**, Maine. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

The Contractor shall be responsible for furnishing all supervision, labor, equipment, tools supplies, permanent materials and temporary materials required to perform the Work including construction quality control including inspection, testing and documentation, all required documentation at the conclusion of the project, warranting its work and performing all other work indicated in the Contract.

The Department shall have the right to alter the nature and extent of the Work as provided in the Contract; payment to be made as provided in the same.

### **B. Time.**

The Contractor agrees to complete all Work, except warranty work, on or before **December 30, 2017**. Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the State of Maine Department of Transportation Standard Specifications, Revision of November 2014 and related Special Provisions.

**C. Price.**

The quantities given in the Schedule of Items of the Bid Package will be used as the basis for determining the original Contract amount and for determining the amounts of the required Performance Surety Bond and Payment Surety Bond, and that the amount of this offer is

**Section 1 \$** \_\_\_\_\_

**Section 2 \$** \_\_\_\_\_

**Section 3 \$** \_\_\_\_\_

**Section 4 \$** \_\_\_\_\_

Performance Bond and Payment Bond each being 100% of the amount awarded under this Contract (see award amount in Section G below).

**D. Contract.**

This Contract, which may be amended, modified, or supplemented in writing only, consists of the Contract documents as defined in the Plans, Standard Specifications, Revision of November 2014, Standard Details Revision of November 2014 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds. It is agreed and understood that this Contract will be governed by the documents listed above.

**E. Certifications.**

By signing below, the Contractor hereby certifies that to the best of the Contractor's knowledge and belief:

1. All of the statements, representations, covenants, and/or certifications required or set forth in the Bid and the Bid Documents, including those in Appendix A to Division 100 of the Standard Specifications Revision of November 2014 (Federal Contract Provisions Supplement), and the Contract are still complete and accurate as of the date of this Agreement.
2. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.
3. The person signing below is legally authorized by the Contractor to sign this Contract on behalf of the Contractor and to legally bind the Contractor to the terms of the Contract.

**F. Offer.**

The undersigned, having carefully examined the site of work, the Plans, Standard Specifications Revision of November 2014, Standard Details Revision of November 2014 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of: **WIN 016705.00 Penobscot River Bridge Replacement plus other incidental work**, State of Maine, on which bids will be received until the time specified in the “Notice to Contractors” do(es) hereby bid and offer to enter into this contract to supply all the materials, tools, equipment and labor to construct the whole of the Work in strict accordance with the terms and conditions of this Contract at the unit prices in the attached “Schedule of Items”.

The Offeror agrees to perform the work required at the price specified above and in accordance with the bids provided in the attached “Schedule of Items” in strict accordance with the terms of this solicitation, and to provide the appropriate insurance and bonds if this offer is accepted by the Government in writing.

As Offeror also agrees:

First: To do any extra work, not covered by the attached “Schedule of Items”, which may be ordered by the Resident, and to accept as full compensation the amount determined upon a “Force Account” basis as provided in the Standard Specifications, Revision of November 2014, and as addressed in the contract documents.

Second: That the bid bond at 5% of the bid amount or the official bank check, cashier’s check, certificate of deposit or U. S. Postal Money Order in the amount given in the “Notice to Contractors”, payable to the Treasurer of the State of Maine and accompanying this bid, shall be forfeited, as liquidated damages, if in case this bid is accepted, and the undersigned shall fail to abide by the terms and conditions of the offer and fail to furnish satisfactory insurance and Contract bonds under the conditions stipulated in the Specifications within 15 days of notice of intent to award the contract.

Third: To begin the Work as stated in Section 107.2 of the Standard Specifications Revision of November 2014 and complete the Work within the time limits given in the Special Provisions of this Contract.

Fourth: The Contractor will be bound to the Disadvantaged Business Enterprise (DBE) Requirements contained in the attached Notice (Additional Instructions to Bidders) and submit a completed Contractor’s Disadvantaged Business Enterprise Utilization Plan with their bid.

Fifth: That this offer shall remain open for 30 calendar days after the date of opening of bids.

Sixth: The Bidder hereby certifies, to the best of its knowledge and belief that: the Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of competitive bidding in connection with its bid, and its subsequent contract with the Department.

IN WITNESS WHEREOF, the Contractor, for itself, its successors and assigns, hereby execute two duplicate originals of this Agreement and thereby binds itself to all covenants, terms, and obligations contained in the Contract Documents.

CONTRACTOR

\_\_\_\_\_  
Date

\_\_\_\_\_  
(Signature of Legally Authorized Representative  
of the Contractor)

\_\_\_\_\_  
Witness

\_\_\_\_\_  
(Name and Title Printed)

**G. Award.**

Your offer is hereby accepted for (see checked boxes):

- Section 1
- Section 2
- Section 3
- Section 4

**Contract Amount:** \_\_\_\_\_

This award consummates the Contract, and the documents referenced herein.

MAINE DEPARTMENT OF TRANSPORTATION

\_\_\_\_\_  
Date

\_\_\_\_\_  
By: David Bernhardt, Commissioner

\_\_\_\_\_  
Witness

## CONTRACT AGREEMENT, OFFER & AWARD

AGREEMENT made on the date last signed below, by and between the State of Maine, acting through and by its Department of Transportation (Department), an agency of state government with its principal administrative offices located at Child Street Augusta, Maine, with a mailing address at 16 State House Station, Augusta, Maine 04333-0016, and

(Name of the firm bidding the job)

a corporation or other legal entity organized under the laws of the State of Maine, with its principal place of business located at (address of the firm bidding the job)

The Department and the Contractor, in consideration of the mutual promises set forth in this Agreement (the "Contract"), hereby agree as follows:

**A. The Work.**

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, PIN No. 1224.00, for the Hot Mix Asphalt Overlay in the town/city of South Nowhere, County of Washington, Maine. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

The Contractor shall be responsible for furnishing all supervision, labor, equipment, tools supplies, permanent materials and temporary materials required to perform the Work including construction quality control including inspection, testing and documentation, all required documentation at the conclusion of the project, warranting its work and performing all other work indicated in the Contract.

The Department shall have the right to alter the nature and extent of the Work as provided in the Contract; payment to be made as provided in the same.

**B. Time.**

The Contractor agrees to complete all Work, except warranty work, on or before November 15, 2006. Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the State of Maine Department of Transportation Standard Specifications, Revision of November 2014 and related Special Provisions.

**C. Price.**

The quantities given in the Schedule of Items of the Bid Package will be used as the basis for determining the original Contract amount and for determining the amounts of the required Performance Surety Bond and Payment Surety Bond, and that the amount of this offer is           (Place bid here in alphabetical form such as One Hundred and Two dollars and 10 cents)            
\$ (repeat bid here in numerical terms, such as \$102.10) Performance Bond and Payment Bond each being 100% of the amount of this Contract.

**D. Contract.**

This Contract, which may be amended, modified, or supplemented in writing only, consists of the Contract documents as defined in the Plans, Standard Specifications, Revision of November 2014, Standard Details Revision of November 2014, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds. It is agreed and understood that this Contract will be governed by the documents listed above.

**E. Certifications.**

By signing below, the Contractor hereby certifies that to the best of the Contractor's knowledge and belief:

1. All of the statements, representations, covenants, and/or certifications required or set forth in the Bid and the Bid Documents, including those in Appendix A to Division 100 of the Standard Specifications Revision of November 2014 (Federal Contract Provisions Supplement), and the Contract are still complete and accurate as of the date of this Agreement.
2. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.
3. The person signing below is legally authorized by the Contractor to sign this Contract on behalf of the Contractor and to legally bind the Contractor to the terms of the Contract.

**F. Offer.**

The undersigned, having carefully examined the site of work, the Plans, Standard Specifications, Revision of November 2014, Standard Details Revision of November 2014, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of:

**PIN 1234.00 South Nowhere, Hot Mix Asphalt Overlay**,

State of Maine, on which bids will be received until the time specified in the "Notice to Contractors" do(es) hereby bid and offer to enter into this contract to supply all the materials, tools, equipment and labor to construct the whole of the Work in strict accordance with the terms and conditions of this Contract at the unit prices in the attached "Schedule of Items".

The Offeror agrees to perform the work required at the price specified above and in accordance with the bids provided in the attached "Schedule of Items" in strict accordance with the terms of this solicitation, and to provide the appropriate insurance and bonds if this offer is accepted by the Government in writing.

As Offeror also agrees:

First: To do any extra work, not covered by the attached "Schedule of Items", which may be ordered by the Resident, and to accept as full compensation the amount determined upon a "Force Account" basis as provided in the Standard Specifications, Revision of November 2014, and as addressed in the contract documents.

Second: That the bid bond at 5% of the bid amount or the official bank check, cashier's check, certificate of deposit or U. S. Postal Money Order in the amount given in the "Notice to Contractors", payable to the Treasurer of the State of Maine and accompanying this bid, shall be forfeited, as liquidated damages, if in case this bid is accepted, and the undersigned shall fail to abide by the terms and conditions of the offer and fail to furnish satisfactory insurance and Contract bonds under the conditions stipulated in the Specifications within 15 days of notice of intent to award the contract.

Third: To begin the Work as stated in Section 107.2 of the Standard Specifications Revision of 2002 and complete the Work within the time limits given in the Special Provisions of this Contract.

Fourth: The Contractor will be bound to the Disadvantaged Business Enterprise (DBE) Requirements contained in the attached Notice (Additional Instructions to Bidders) and submit a completed Contractor's Disadvantaged Business Enterprise Utilization Plan with their bid.

Fifth: That this offer shall remain open for 30 calendar days after the date of opening of bids.

Sixth: The Bidder hereby certifies, to the best of its knowledge and belief that: the Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of competitive bidding in connection with its bid, and its subsequent contract with the Department.

IN WITNESS WHEREOF, the Contractor, for itself, its successors and assigns, hereby execute two duplicate originals of this Agreement and thereby binds itself to all covenants, terms, and obligations contained in the Contract Documents.

\_\_\_\_\_  
Date

\_\_\_\_\_  
**(Witness Sign Here)**  
Witness

\_\_\_\_\_  
**(Sign Here)**  
(Signature of Legally Authorized Representative of the Contractor)

\_\_\_\_\_  
**(Print Name Here)**  
(Name and Title Printed)

CONTRACTOR

**G. Award.**

Your offer is hereby accepted. documents referenced herein.

This award consummates the Contract, and the

MAINE DEPARTMENT OF TRANSPORTATION

\_\_\_\_\_  
Date

\_\_\_\_\_  
By: David Bernhardt, Commissioner

\_\_\_\_\_  
(Witness)

BOND # \_\_\_\_\_

CONTRACT PERFORMANCE BOND  
(Surety Company Form)

KNOW ALL MEN BY THESE PRESENTS: That \_\_\_\_\_  
\_\_\_\_\_ in the State of \_\_\_\_\_, as principal,  
and.....  
a corporation duly organized under the laws of the State of ..... and having a  
usual place of business .....  
as Surety, are held and firmly bound unto the Treasurer of the State of Maine in the sum  
of \_\_\_\_\_ and 00/100 Dollars (\$ \_\_\_\_\_),  
to be paid said Treasurer of the State of Maine or his successors in office, for which  
payment well and truly to be made, Principal and Surety bind themselves, their heirs,  
executors and administrators, successors and assigns, jointly and severally by these  
presents.

The condition of this obligation is such that if the Principal designated as Contractor in  
the Contract to construct Project Number \_\_\_\_\_ in the Municipality of  
\_\_\_\_\_ promptly and faithfully performs the Contract, then this  
obligation shall be null and void; otherwise it shall remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the State  
of Maine.

Signed and sealed this ..... day of ....., 20.....

WITNESSES:

SIGNATURES:

CONTRACTOR:

Signature.....

.....

Print Name Legibly .....

Print Name Legibly .....

SURETY:

Signature .....

.....

Print Name Legibly .....

Print Name Legibly .....

SURETY ADDRESS:

NAME OF LOCAL AGENCY:

.....  
.....  
.....

ADDRESS .....  
.....  
.....

TELEPHONE.....

.....

BOND # \_\_\_\_\_

CONTRACT PAYMENT BOND  
(Surety Company Form)

KNOW ALL MEN BY THESE PRESENTS: That \_\_\_\_\_  
\_\_\_\_\_ **in the State of** \_\_\_\_\_, as principal,  
and.....  
a corporation duly organized under the laws of the State of ..... and having a  
usual place of business in .....  
as Surety, are held and firmly bound unto the Treasurer of the State of Maine for the use  
and benefit of claimants as herein below defined, in the sum of  
\_\_\_\_\_ **and 00/100 Dollars (\$** \_\_\_\_\_ **)**  
for the payment whereof Principal and Surety bind themselves, their heirs, executors and  
administrators, successors and assigns, jointly and severally by these presents.

The condition of this obligation is such that if the Principal designated as Contractor in  
the Contract to construct Project Number \_\_\_\_\_ in the Municipality of  
\_\_\_\_\_ promptly satisfies all claims and demands incurred for all  
labor and material, used or required by him in connection with the work contemplated by  
said Contract, and fully reimburses the obligee for all outlay and expense which the  
obligee may incur in making good any default of said Principal, then this obligation shall  
be null and void; otherwise it shall remain in full force and effect.

A claimant is defined as one having a direct contract with the Principal or with a  
Subcontractor of the Principal for labor, material or both, used or reasonably required for  
use in the performance of the contract.

Signed and sealed this ..... day of ....., 20 ... .

WITNESS:

SIGNATURES:

CONTRACTOR:

Signature.....

.....

Print Name Legibly .....

Print Name Legibly .....

SURETY:

Signature.....

.....

Print Name Legibly .....

Print Name Legibly .....

SURETY ADDRESS:

NAME OF LOCAL AGENCY:

.....

ADDRESS .....

.....

.....

TELEPHONE .....

.....

# Maine DOT Map



Map Generated on Tuesday, December 09, 2014 11:06:41 AM

Map Scale 1:160,000

The Maine Department of Transportation provides this publication for information only. Reliance upon this information is at user risk. It is subject to revision and may be incomplete depending upon changing conditions. The Department assumes no liability if injuries or damages result from this information. This map is not intended to support emergency dispatch. Road names used on this map may not match official road names.

## General Roads

 *Interstate*

 *US Routes*

 *State Routes*

 *Public Roads*

## MaineDOT Regions



## State Urban



## Water Bodies



## Boundary Lines

 *coastline*

 *county*

 *state*

 *town*

## Wetlands



## Conserved Lands



General Decision Number: ME150051 01/02/2015 ME51

Superseded General Decision Number: ME20140051

State: Maine

Construction Type: Highway

County: Penobscot County in Maine.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Note: Executive Order (EO) 13658 establishes an hourly minimum wage of \$10.10 for 2015 that applies to all contracts subject to the Davis-Bacon Act for which the solicitation is issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.10 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Modification Number	Publication Date
0	01/02/2015

\* ENGI0004-013 04/01/2014

	Rates	Fringes
<b>POWER EQUIPMENT OPERATOR:</b>		
Grader/ Blade, Milling Machine.....	\$ 20.75	10.84

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SUME2011-046 09/14/2011

	Rates	Fringes
CARPENTER, Includes Form Work....	\$ 14.72	1.72
CEMENT MASON/CONCRETE FINISHER...	\$ 16.94	0.00
ELECTRICIAN.....	\$ 21.55	3.51
IRONWORKER, REINFORCING.....	\$ 17.45	0.00
IRONWORKER, STRUCTURAL.....	\$ 18.75	4.56

LABORER: Common or General.....	\$ 12.83	2.20
LABORER: Flagger.....	\$ 9.00	0.00
LABORER: Highway/Parking Lot Striping.....	\$ 14.63	0.00
LABORER: Landscape.....	\$ 15.43	2.09
OPERATOR: Backhoe.....	\$ 17.27	3.45
OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 16.21	4.60
OPERATOR: Broom/Sweeper.....	\$ 13.49	1.22
OPERATOR: Bulldozer.....	\$ 17.74	2.72
OPERATOR: Crane.....	\$ 19.03	1.70
OPERATOR: Excavator.....	\$ 16.33	2.78
OPERATOR: Loader.....	\$ 15.66	4.79
OPERATOR: Mechanic.....	\$ 21.71	6.29
OPERATOR: Milling Machine Reclaimer Combo.....	\$ 24.77	8.39
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 19.89	7.20
OPERATOR: Roller excluding Asphalt.....	\$ 19.97	7.43
OPERATOR: Screed.....	\$ 19.58	5.95
TRUCK DRIVER, Includes all axles including Dump Trucks.....	\$ 12.31	4.44
TRUCK DRIVER: Lowboy Truck.....	\$ 15.15	5.62

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**WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.**

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

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The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

#### Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i. e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

#### Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

#### Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

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### WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U. S. Department of Labor  
200 Constitution Avenue, N. W.  
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U. S. Department of Labor  
200 Constitution Avenue, N. W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U. S. Department of Labor  
200 Constitution Avenue, N. W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

**The United States Department of Transportation (USDOT)**

**FHWA STANDARD TITLE VI/NONDISCRIMINATION ASSURANCES**

**DOT Order No. 1050.2A**

The Maine Department of Transportation (herein referred to as the "Recipient"), **HEREBY AGREES THAT**, as a condition to receiving any Federal financial assistance from the U.S. Department of Transportation (DOT), through The Federal Highway Administration (FHWA), is subject to and will comply with the following:

**Statutory/Regulatory Authorities**

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);
- 49 C.F.R. Part 21 (entitled *Nondiscrimination In Federally-Assisted Programs Of The Department Of Transportation—Effectuation Of Title VI Of The Civil Rights Act Of 1964*);
- 28 C.F.R. section 50.3 (U.S. Department of Justice Guidelines for Enforcement of Title VI of the Civil Rights Act of 1964);

***FHWA may include additional Statutory/Regulatory Authorities here.***

The preceding statutory and regulatory cites hereinafter are referred to as the "Acts" and "Regulations," respectively.

**General Assurances**

In accordance with the Acts, the Regulations, and other pertinent directives, circulars, policy, memoranda, and/or guidance, the Recipient hereby gives assurance that it will promptly take any measures necessary to ensure that:

*No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity," for which the Recipient receives Federal financial assistance from DOT, including FHWA..*

The Civil Rights Restoration Act of 1987 clarified the original intent of Congress, with respect to Title VI and other Nondiscrimination requirements (The Age Discrimination Act of 1975, and Section 504 of the Rehabilitation Act of 1973), by restoring the broad, institutional-wide scope and coverage of these nondiscrimination statutes and requirements to include all programs and activities of the Recipient, so long as any portion of the program is Federally assisted.

***FHWA may include additional General Assurances in this section, or reference an addendum here.***

**Specific Assurances**

More specifically, and without limiting the above general Assurance, the Recipient agrees with and gives the following Assurances with respect to its federally assisted programs:

1. The Recipient agrees that each "activity," "facility," or "program," as defined in §§ 21.23 (b) and 21.23 (e) of 49 C.F.R. § 21 will be (with regard to an "activity") facilitated, or will be (with regard to a "facility") operated, or will be (with regard to a "program") conducted in compliance with all requirements imposed by, or pursuant to the Acts and the Regulations.
2. The Recipient will insert the following notification in all solicitations for bids, Requests For Proposals for work, or material subject to the Acts and the Regulations made in connection with all Federal Highway Programs and, in adapted form, in all proposals for negotiated agreements regardless of funding source:

*The (Agency), in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively insure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.*

3. The Recipient will insert the clauses of Appendix A and E of this Assurance in every contract or agreement subject to the Acts and the Regulations.
4. The Recipient will insert the clauses of Appendix B of this Assurance, as a covenant running with the land, in any deed from the United States effecting or recording a transfer of real property, structures, use, or improvements thereon or interest therein to a Recipient.
5. That where the Recipient receives Federal financial assistance to construct a facility, or part of a facility, the Assurance will extend to the entire facility and facilities operated in connection therewith.
6. That where the Recipient receives Federal financial assistance in the form, or for the acquisition of real property or an interest in real property, the Assurance will extend to rights to space on, over, or under such property.
7. That the Recipient will include the clauses set forth in Appendix C and Appendix D of this Assurance, as a covenant running with the land, in any future deeds, leases, licenses, permits, or similar instruments entered into by the Recipient with other parties:
  - a. for the subsequent transfer of real property acquired or improved under the applicable activity, project, or program; and
  - b. for the construction or use of, or access to, space on, over, or under real property acquired or improved under the applicable activity, project, or program.
8. That this Assurance obligates the Recipient for the period during which Federal financial assistance is extended to the program, except where the Federal financial assistance is to provide, or is in the form of, personal property, or real property, or interest therein, or structures or improvements thereon, in which case the Assurance obligates the Recipient, or any transferee for the longer of the following periods:

- a. the period during which the property is used for a purpose for which the Federal financial assistance is extended, or for another purpose involving the provision of similar services or benefits; or
  - b. the period during which the Recipient retains ownership or possession of the property.
9. The Recipient will provide for such methods of administration for the program as are found by the Secretary of Transportation or the official to whom he/she delegates specific authority to give reasonable guarantee that it, other recipients, sub-recipients, sub-grantees, contractors, subcontractors, consultants, transferees, successors in interest, and other participants of Federal financial assistance under such program will comply with all requirements imposed or pursuant to the Acts, the Regulations, and this Assurance.
10. The Recipient agrees that the United States has a right to seek judicial enforcement with regard to any matter arising under the Acts, the Regulations, and this Assurance.

***FHWA may include additional Specific Assurances in this section.***

By signing this ASSURANCE, Maine Department of Transportation also agrees to comply (and require any subrecipients, sub-grantees, contractors, successors, transferees, and/or assignees to comply) with all applicable provisions governing the FHWA access to records, accounts, documents, information, facilities, and staff. You also recognize that you must comply with any program or compliance reviews, and/or complaint investigations conducted by FHWA. You must keep records, reports, and submit the material for review upon request to FHWA, or their designees in a timely, complete, and accurate way. Additionally, you must comply with all other reporting, data collection, and evaluation requirements, as prescribed by law or detailed in program guidance.

Maine Department of Transportation gives this ASSURANCE in consideration of and for obtaining any Federal grants, loans, contracts, agreements, property, and/or discounts, or other Federal-aid and Federal financial assistance extended after the date hereof to the recipients by the U.S. Department of Transportation. This ASSURANCE is binding on Maine Department of Transportation, other recipients, sub-recipients, sub-grantees, contractors, subcontractors and their subcontractors', transferees, successors in interest, and any other participants in it programs. . The person(s) signing below is authorized to sign this ASSURANCE on behalf of the Recipient.

***Name of Recipient: Maine Department of Transportation***



***David Bernhardt, Commissioner***

DATED: 9/18/14

## APPENDIX A

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “contractor”) agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Nondiscrimination in Federally-assisted programs of the U.S. Department of Transportation, **Federal Highway Administration**, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Nondiscrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations as set forth in Appendix E, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.
3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor’s obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.
4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the **Federal Highway Administration**, to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the **Federal Highway Administration**, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a contractor’s noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the **Federal Highway Administration**, may determine to be appropriate, including, but not limited to:
  - a. withholding payments to the contractor under the contract until the contractor complies; and/or
  - b. cancelling, terminating, or suspending a contract, in whole or in part.

**Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the **Federal Highway Administration**, may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

**(APPENDIX C TO MAINEDOT TITLE VI ASSURANCE)**

**FEDERAL HIGHWAY ADMINISTRATION ASSISTED PROGRAMS**

The following clauses shall be included in all deeds, licenses, leases, permits, or similar instruments entered into

by the Maine Department of Transportation pursuant to the provisions of Assurance 7(a).

The (grantee, licensee, lessee, permittee, etc., as appropriate) for herself/himself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree [in the case of deeds and leases add "as a covenant running with the land"] that in the event facilities are constructed, maintained, or otherwise operated on the said property described in this (deed, license, lease, permit, etc.) for a purpose for which a Department of Transportation program or activity is extended or for another purpose involving the provision of similar services or benefits, the (grantee, licensee lessee, permittee, etc.) shall maintain and operate such facilities and services in compliance with all other requirements imposed pursuant to Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination of Federally-Assisted Programs of the Department of Transportation - Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations may be amended.

[Include in licenses, leases, permits, etc.]\*

That in the event of breach of any of the above nondiscrimination covenants, Maine Department of Transportation shall have the right to terminate the [license, lease, permit, etc.] and to re-enter and repossess said land and the facilities thereon, and hold the same as if said [licenses, lease, permit, etc.] had never been made or issued.

[Include in deeds]\*

That in the event of breach of any of the above nondiscrimination covenants, Maine Department of Transportation shall have the right to re-enter said lands and facilities thereon, and the above described lands and facilities shall thereupon revert to and vest in and become the absolute property of Maine Department of Transportation and its assigns.

The following shall be included in all deeds, licenses, leases, permits, or similar agreements entered into by Maine Department of Transportation pursuant to the provisions of Assurance 7(b).

The (grantee, licensee, lessee, permittee, etc., as appropriate) for herself/himself, his/her personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree (in case of deeds, and leases add "as a covenant running with the land") that (1) no person on the grounds of race, color, or national origin shall be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, (2) that in the construction of any improvements on, over or under such land and the furnishing services thereon, no person on the grounds of race, color, or national origin shall be excluded from the participation in, be denied the benefits of, or be otherwise subjected to discrimination, and (3) that the (grantee, licensee, lessee, permittee, etc.) shall use the premises in compliance with all other requirements imposed by or pursuant to Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-Assisted Programs of the Department of Transportation - Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations may be amended.

[Include in licenses, leases, permits, etc.]\*

That in the event of breach of any of the above nondiscrimination covenants, Maine Department of Transportation shall have the right to terminate the [license, lease, permit, etc.] and to re-enter and repossess said land and the facilities thereon, and hold the same as if said [license, lease, permit, etc.] had never been made or issued.

[Include in deeds]\*

That in the event of breach of any of the above nondiscrimination covenants, Maine Department of Transportation shall have the right to re-enter said land and facilities thereon, and the above described lands and facilities shall thereupon revert to and vest in and become the absolute property of Maine Department of Transportation and its assigns.

\* Reverter clause and related language to be used only when it is determined that such a clause is necessary in order to effectuate the purpose of Title VI of the Civil Rights Act of 1964.

## APPENDIX D

### CLAUSES FOR CONSTRUCTION/USE/ACCESS TO REAL PROPERTY ACQUIRED UNDER THE ACTIVITY, FACILITY OR PROGRAM

The following clauses will be included in deeds, licenses, permits, or similar instruments/agreements entered into by The Maine Department of Transportation pursuant to the provisions of Assurance 7(b):

- A. The (grantee, licensee, permittee, etc., as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds and leases add, “as a covenant running with the land”) that (1) no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, (2) that in the construction of any improvements on, over, or under such land, and the furnishing of services thereon, no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or otherwise be subjected to discriminations, (3) that the (grantee, licensees, lessee, permittee, etc.) will use the premises in compliance with all other requirements imposed by or pursuant to the Acts and Regulations, as amended, set forth in this Assurance.
- B. With respect to (licenses, leases, permits, etc.), in the event of breach of any of the above Non-discrimination covenants, (**The Maine Department of Transportation**) will have the right to terminate the (license, permit, etc., as appropriate) and to enter or re-enter and repossess said land and the facilities thereon, and hold the same as if said (license, permit, etc., as appropriate) had never been made or issued.\*
- C. With respect to deeds, in the event of breach of any of the above Non-discrimination covenants, (**The Maine Department of Transportation**) will there upon revert to and vest in and become the absolute property of (**The Maine Department of Transportation**) and its assigns.\*

(\*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

## APPENDIX E

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “contractor”) agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

### **Pertinent Non-Discrimination Authorities:**

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. §2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. §4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. §324 *et seq.*), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. §794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. §6101 *et seq.*), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 U.S.C. §471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. Parts 37 and 38;
- The Federal Aviation Administration’s Non-discrimination statute (49 U.S.C. §47123) (prohibits discrimination on the basis of race, color, national origin and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating of sex in education programs or activities (20 U.S.C. 1681 *et seq.*).

MaineDOT DBE Project Attainment Target (PAT)  
for this Project is .03 %

The MaineDOT seeks to meet the specified annual Disadvantaged Business Enterprise (DBE) usage goal set out by 49 CFR 26.45 through the efforts of contractors seeking to employ qualified DBE subcontractors. We seek to meet this goal by race neutral means and do not, at this time, use contract specific requirements for each project. We do however, understand the capacity of Maine's DBE community and the unique characteristics a project may have that would differ from the broad annual goal.

Taking this into consideration, the MaineDOT will review each project and develop an anticipated attainment or Project Attainment Target (PAT) based on several factors that are project specific. Those factors include:

- Scope of Work
- DBE availability according to Specification Item
- Geographic location
- DBE capacity

This PAT is developed to assist contractors to better understand the DBE participation that the MaineDOT can reasonably expect for a specific project. The PAT is NOT a mandate but an assessment of the DBE opportunities that this project could meet or exceed. MaineDOT anticipates that each contractor will make the best effort to reach or exceed the PAT for this project.

HOWLAND/ENFIELD  
ROUTE 155 AND ROUTE 6  
BRIDGE REPLACEMENT  
WIN 16705.00

GENERAL NOTE

A Maine Department of Transportation (MaineDOT) Office of Safety and Compliance investigation specific with this project encountered data suggesting petroleum related contamination was present at several locations along the project. These locations included: roughly MaineDOT station 11+00 to roughly MaineDOT station 15+00 left of center; roughly MaineDOT station 28+50 to roughly MaineDOT station 30+00 right and left of center; and roughly MaineDOT station 31+25 to roughly MaineDOT station 32+00 left of center. Subsequent on-site work failed to unearth any issues within these areas. However, in light of the available environmental data, the contractor shall employ appropriate health and safety measures to protect its workers against hazards associated with working near petroleum-impacted soils. Furthermore, the Contractor shall remain alert for any additionally evidence of contamination. If the Contractor encounters evidence of soil or groundwater contamination, the Contractor shall secure the excavation, stop work in the contaminated area, and immediately notify the Resident. The Resident shall contact the Hydrogeologist in MaineDOT's Office of Safety and Compliance at 207-624-3004 and the Maine Department of Environmental Protection at 800-482-0777. Work may only continue with authorization from the Resident.

**SPECIAL PROVISIONS**  
**SECTION 104**  
**Utilities**

**UTILITY COORDINATION**

The Contractor has primary responsibility for coordinating their work with utilities after contract award. The Contractor shall communicate directly with the utilities regarding any utility work necessary to maintain the Contractor’s schedule and prevent project construction delays. The Contractor shall notify the resident of any issues.

**THE CONTRACTOR SHALL PLAN AND CONDUCT WORK ACCORDINGLY.**

**MEETING**

A Preconstruction Utility Conference, as defined in Subsection 104.4.6 of the Standard Specifications is required.

**GENERAL INFORMATION**

These Special Provisions outline the arrangements that have been made by the Department for utility and/or railroad work to be undertaken in conjunction with this project. The following list identifies all known utilities or railroads having facilities presently located within the limits of this project or intending to install facilities during project construction.

Utilities have been notified and will be furnished a project specification.

**Overview:**

<b>Utility</b>	<b>Aerial</b>	<b>Underground</b>
Emera Maine	X	
OTT Communications	X	X
Polaris Cable & Time Warner Cable	X	X
Town of Enfield		X
Town of Howland		X

**Utility Contact Information**

<b>Utility</b>	<b>Contact Person</b>	<b>Phone</b>	<b>Cell</b>
Emera Maine	Dave Perkins	941-6684	949-3918
OTT Communications	Jim Taplin	688-8824	615-8431
Polaris Cable	Don Dee	592-1571	592-1571
Time Warner Cable	Jamie LaBelle	404-5517	458-8001
Town of Enfield	Theresa Thurlow	732-4270	
Town of Howland	Tracey Hutton Brian Dawson	732-3513 732-3767	

Unless otherwise specified, any underground utility facilities shown on the project plans represent approximate locations gathered from available information. The Department cannot certify the level of accuracy of this data. Underground facilities indicated on the topographic sheets (plan views) have been collected from historical records and/or on-site designations provided by the respective utility companies. Underground facilities indicated on the cross-sections have been carried over from the plan view data and may also include further approximations of the elevations (depths) based upon straight-line interpolation from the nearest manholes, gate valves, or test pits.

All adjustments are to be made by the respective utility/railroad unless otherwise specified herein.

All clearing and tree removal in areas where utilities are involved must be completed before the utilities are able to relocate their facilities.

Fire hydrants shall not be disturbed until all necessary work has been accomplished to provide proper fire protection.

Utility working days are Monday through Friday. Times are estimated on the basis of a single crew for each utility. Any times and dates mentioned are **estimates only** and are dependent upon favorable weather, working conditions, and freedom from emergencies. The Contractor shall have no claim against the Department if they are exceeded.

**There may be project construction activities which will occur beneath or around existing aerial neutral conductors such as ditching or guardrail installation. The Contractor shall conduct their work accordingly.**

**AERIAL**

***Summary:***

Utility	Pole Set	New Wires/Cables	Trans. Wires/Cables	Remove Poles	Estimated Working Days
Emera Maine	X	X	X	X	<b>20</b>
OTT Communications	X	X		X	<b>10</b>
Polaris Cable & Time Warner Cable		X	X		<b>15</b>
<b>Total:</b>					<b>45</b>

**Sequence of Work:**

- 1) **Emera Maine**
- 2) **Polaris Cable & Time Warner Cable**
- 3) **OTT Communications**

***Utility Specific Issues:***

**Emera Maine:**

- The utility will set five (5) new poles within the project limits and an additional three (3) poles located outside the project limits. Please see “Pole List” below for the exact locations. Emera Maine will frame the new poles and transfer their facilities where possible and run new wires where transferring is not possible. The utility estimates 20 working days to complete their work.

**OTT Communications:**

- The utility’s work for OTT is listed below under Subsurface. OTT has estimated 15 working days to complete both aerial and subsurface work if the work is removed from the contract.

**Polaris Cable & Time Warner Cable:**

- **Phase I** - Polaris Cable has 1 fiber line attached to the downstream side of bridge. The cables will be removed from the pole located at Sta. 70+13.14 – 32.9’ LT and relocated to the pole located at Sta. 15+77.00 – 91.3 LT, but keep their cables on the downstream side of bridge. On the Enfield side of the bridge they will remove their cables from the pole located at Sta. 26+79.83 – 42.9’ LT and run the cables across the front face of the bridge and then to the pole located at Sta. 90+68.63 – 80.1’ LT. They will then run their cables across to the new temporary pole located at Sta. 28+05.00 – 81’ LT continue over to the pole located at Sta. 28+00.00 – 27.85’ RT. This pole will be where their facilities split off and continue on to their existing directions.
- **Phase II** - On the Howland side of the bridge, both utilities plans to stay aerial from the pole located at Sta. 13+96.00 – 53.6’ LT then to the pole located at Sta. 70+53.42 – 41.2’ RT drop down and bury their cable from said pole into a manhole located at Sta. 16+47.00 – .97” LT then into conduit across the new bridge between G1 & G2 girders. Once across to the Enfield side of the new bridge the utility will go into another manhole located at Sta. 26+47.00 – 18.8’ LT and rise on the pole located at Sta. 28+00.00 – 27.85’ RT. This pole will be where their facilities split off and continue on to their existing directions.
- Polaris Cable & Time Warner Cable estimates 15 working days after Emera Maine has completed their work.

**NOTE:**

If the bid price exceeds OTT / Time Warner Cable’s estimate by 15% or more, the utilities reserves the right to remove their work from the Department’s contract. If this work is removed they may negotiate with the Contractor or others for the performance of this work. Coordination of the above work will occur between the parties before the installation of the water main begins. These utilities estimate they need 15 working days to complete both aerial and subsurface work if the work is removed from the contract.

**BUY AMERICA**

Utility construction work performed as part of this federal-aid project is subject to the requirements of Buy America in accordance with Federal Regulation 23 CFR 635.410 Section 1518. Specific requirements are presented in MaineDOT Standard Specification Section 100, Appendix A, Section 3.A., Buy America.

**UTILITY SIGNING**

Any utility working within the construction limits of this project shall ensure that the traveling public is adequately protected at all times. All work areas shall be signed, lighted, and traffic flaggers employed as determined by field conditions. All traffic controls shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices for Streets and Highways, as issued by the Federal Highway Administration.

***Pole List:***

Existing Pole #	Existing Station	Left/Right		Existing Offset	Proposed Station	Left/Right		Proposed Offset	Comments
		LT	RT			LT	RT		
	13+96.00	X		53.6'	Near Existing				Replace
	15+77.00	X		91.3'					Remove
	70+13.14	X		32.9'					Remove
	71+12.90	X		26.7'					Remove
					70+53.42		X	41.2'	New Pole
	72+75.67	X		22.9'	Near Existing				Replace
	26+79.83	X		42.9'					Remove
	27+27.01	X		5.4'					Remove
	28+69.85		X	11.7'					Remove
	29+91.44		X	19.3'					Remove
	31+91.14		X	30'					Remove
	90+68.63	X		80.1'					Remove
	61+46.63		X	21.2'					Remove
					28+00.00		X	27.8'	New Pole
					28+05.00	X		81'	New Temporary Pole
					29+92.00		X	35.2'	New Pole
					31+93.76		X	38.2'	New Pole
					61+19.00		X	14.8'	New Pole

**The poles listed below are the 3 additional poles that will be set outside the project limits**

Existing Pole #	Existing Station	Left/Right		Existing Offset	Proposed Station	Left/Right		Proposed Offset	Comments
		LT	RT			LT	RT		
	82+03.36	X		19.5'	82+00.00 +/-	X			New Pole
	91+59.35	X		22.5'	91+59.00 +/-	X			New Pole
	33+48.03		X	45.5'	33+48.00 +/-		X		New Pole

**The existing poles listed in the table above are to be removed once all utilities have transferred.**

**SUBSURFACE**

*Summary:*

Utility	Summary of Work	Estimated Working Days
OTT Communications	See below	5
Town of Enfield	Adjust manholes to grade.	3
Town of Howland	Adjust manholes, air release assembly, and gate valves to grade.	6
<b>Total:</b>		<b>14</b>

*Utility Specific Issues:*

**OTT Communications:**

- **Phase I** - OTT has underground facilities on both sides of the bridge that will need to be relocated onto the poles to avoid excavation of the new roadway. On the Howland side of the bridge, OTT plans to start from the aerial cable on the pole located at Sta. 13+96.00 – 53.6’ LT then to the pole located at Sta. 70+53.42 – 41.2’ RT continue down Edinburg Road to the pole located at Sta. 72+75.67 – 22.9’ LT then continue south on more poles down Edinburg Road and out of the project scope to return to the buried.
- On the Enfield side of the bridge, OTT plans to place buried cable from pedestal located at Sta. 91+18.26 – 31.8’ LT to pole at Sta. 91+59.35 – 22.5’ LT and continue aerial to pole at Sta. 28+00.00 -27.85 RT and continue aerial to pole at Sta. 82+03.36 – 19.5’ RT approximately. OTT plans to place aerial from pole at Sta. 90+68.63-80.1’ LT over to new temporary pole located at Sta. 28+05.00-81’ LT.
- The utility is planning to excavate in the spring once the frost is out of the ground and remove their buried facilities. These facilities will be relocated onto the poles.
- **Phase II** – The utility will drop down and bury their cable from the pole located at Sta. 70+53.42 – 41.2’ RT into a manhole located at Sta. 16+47.00 - .97’ LT then into conduit across the new bridge between G1 & G2 girders. Once across to Enfield the utility will go into another manhole located at Sta. 26+47.00 – 18.8’ LT and rise on the pole located at Sta. 28+00.00 – 27.85’ RT and continue aerial to the pole located at Sta. 33+48.03 – 45.5’ RT.

**NOTE:**

If the bid price exceeds OTT / Time Warner Cable’s estimate by 15% or more, the utilities reserves the right to remove their work from the Department’s contract. If this work is removed they may negotiate with the Contractor or others for the performance of this work. Coordination of the above work will occur between the parties before the work begins.

**Town of Enfield:**

- The Town has 2 manholes that will need to be adjusted. The Town estimates three (3) working days to complete this work.

**Town of Howland:**

- The Town has 3 sewer manholes that will need to be adjusted to grade. In addition, they have an air release assembly (blow-off valve / 1 shut-off valve) that will need to be relocated and 2 water gate valves that need to be adjusted to grade. The Town estimates six (6) working days to complete this work if it is removed from the contract.

**NOTE:**

If the bid price exceeds the Town of Howland's estimate by 15% or more, the Town reserves the right to remove their work from the Department's contract. If this work is removed they may negotiate with the Contractor or others for the performance of this work. Coordination of the above work will occur between the parties before the work begins.

**MAINTAINING UTILITY LOCATION MARKINGS**

The Contractor will be responsible for maintaining the buried utility location markings following the initial locating by the appropriate utility or their designated representative.

**SPECIAL PROVISION**  
**SECTION 105**  
 General Scope of Work  
 (Environmental Requirements)

In-Water work consists of any activity conducted below the normal high water mark of a river, stream, brook, lake, pond or “Coastal Wetland” areas that are subject to tidal action during the highest tide level for the year which an activity is proposed as identified in the tide tables published by the National Ocean Service.

<http://www.oceanservice.noaa.gov/> For the full definition of “Coastal Wetlands”, please refer to 38 MRSA 480-B(2)

I. In-Water Work shall be conditionally allowed anytime as follows:

<b>Activity</b>	<b>Conditions and Requirements</b>
Pile Driving	<ol style="list-style-type: none"> <li>1. Noise levels may not exceed sound level limits of 187dB accumulated sound exposure level (SEL) and 206 dB peak. Pile driving by impact hammer that occurs in the water shall require noise monitoring and probable noise attenuation as further described in Section IV of this Special Provision.</li> <li>2. Noise levels greater than 150dbRMS shall not exceed 12 consecutive hours in a 24-hour period and a 12-hour recovery period (in-water work noise below 150 dB RMS or ambient levels) shall be provided in-between work days.</li> <li>3. Pile driving may occur unrestricted if completed in the dry.</li> </ol>
Cofferdam construction	<ol style="list-style-type: none"> <li>1. Cofferdam construction shall be completed in consultation with MaineDOT Environmental Office to coordinate fish exclusion from work area. The contractor shall allow for access by MaineDOT Biologist(s) to identify and evacuate fish if present in the work area if cofferdam is sealed between April 1 and December 15 of any year.</li> <li>2. To avoid salmon entrapment in partially completed cofferdams, the contractor shall leave at least 60 percent of the cofferdam open, based on perimeter length, if a cofferdam is left overnight or longer than 12 hours at any time.</li> </ol>
Hydraulic rock breaker/hoe ram	<ol style="list-style-type: none"> <li>1. Noise levels may not exceed sound level limits of 187dB accumulated sound exposure level (SEL) and 206 dB peak.</li> <li>2. Noise levels greater than 150dbRMS shall not exceed 12 consecutive hours in a 24-hour period and a 12-hour recovery period (in-water work noise below 150 dB RMS or ambient levels) shall be provided in-between work days.</li> </ol>
Temporary Construction Access	<ol style="list-style-type: none"> <li>1. Pile-supported structures are permitted in accordance with pile-driving requirements listed above</li> <li>2. Temporary wetland and river impacts from access roads, combined with all other temporary wetland and stream impacts shall not exceed 3,000 square feet and shall be located between the existing bridge and the proposed bridge.</li> <li>3. Temporary fill access shall be :</li> </ol>

- |  |  |
|--|--|
|  | <ol style="list-style-type: none"><li>a. Constructed of washed heavy riprap on top of a geotextile fabric filter layer. The fill material shall be free of sediment sources;</li><li>b. Shall not exceed 100 linear feet (both sides of the river added together) at any one time;</li><li>c. Turbidity curtains shall be used to the extent practicable;</li><li>d. Shall be removed and pre-construction grades shall be restored as within 48 hours of completion of its use</li><li>e. Water velocity may not exceed 6.5 ft/sec as a result of the temporary fill.</li></ol> |
|--|--|

II. In-Water work applies to the Penobscot River at the proposed bridge replacement

III. Special Conditions:

1. **Individual Permit Application with the Army Corps of Engineers is currently pending. In-water work may not begin until an ACOE permit has been issued. These documents will be provided to the contractor as soon as they are available. In-water work shall NOT begin without written permission from the MaineDOT.**
2. Special Conditions of Formal Endangered Species Act (Section 7) and Essential Fish Habitat Consultation (EFH) with U.S. Fish and Wildlife Service (summarized in this Special Provision 105).
3. The contractor shall contact Eric Ham of MaineDOT Environmental Office (207-215-7356) at least two weeks prior to installation of cofferdams.
4. The contractor shall hold a pre-construction meeting for each project with appropriate MaineDOT Environmental Office staff, other MaineDOT staff, and the MaineDOT construction crew or contractor(s) to review all procedures and requirements for avoiding and minimizing effects to Atlantic salmon and to emphasize the importance of these measures for protecting salmon and their habitat. ACOE (Jay Clement, [Jay.I.clement@usace.army.mil](mailto:Jay.I.clement@usace.army.mil)), FHWA (Cassandra Chase, [Cassandra.Chase@dot.gov](mailto:Cassandra.Chase@dot.gov)) and U.S. Fish and Wildlife Service staff (Thomas Davidowicz, [thomas\\_davidowicz@fws.gov](mailto:thomas_davidowicz@fws.gov)) shall be invited to attend these meetings.
5. The contractor shall minimize the potential for effects to Atlantic salmon and their habitat by conducting all construction activities for each project in accordance with the MEDOT-approved Soil Erosion and Water Pollution Control Plan. In stream turbidity shall be visually monitored and all erosion controls will be inspected daily to ensure that the measures taken are adequate. If inspection shows that the erosion controls are ineffective, immediate action shall be taken to repair, replace, or reinforce controls as necessary.
6. Disturbed areas adjacent to the stream shall be stabilized and re-vegetated with a seed mix appropriate for riparian areas in Maine, except in areas where riprap has been placed.
7. Cofferdams shall be removed from the stream immediately following completion of construction, allowing for minor delays due to high stream flows following heavy precipitation, so that fish and other aquatic organism passage is not unnecessarily restricted.
8. To minimize the spread of noxious weeds into the riparian zone, all off-road equipment and vehicles (operating off of existing open and maintained roads) shall be cleaned prior to entering the construction site to remove all soil, seeds, vegetation, or other debris that could contain seeds or reproductive portions of plants. All equipment shall be inspected prior to off-loading to ensure that they are clean.
9. As a component of the SEWPCP required for each project, MaineDOT or their contractor will develop and implement a Spill Prevention Control and Countermeasure Plan (SPCCP) designed

to avoid any stream impacts from hazardous chemicals, such as diesel fuel, oil, lubricants, and other hazardous materials. All refueling or equipment maintenance will take place away from the stream and in a careful manner that prohibits chemical or other hazardous materials from entering the stream. These measures include the following:

- a. All vehicle and equipment refueling activities shall occur more than 100 feet from any water course.
  - b. All vehicles carrying fuel shall have specific equipment and materials needed to contain or clean up any incidental spills at the Project site. Equipment and materials would include spill kits appropriately sized for specific quantities of fuel, shovels, absorbent pads, straw bales, containment structures and liners, and/or booms.
  - c. During use, all pumps and generators shall have appropriate spill containment structures and/or absorbent pads in place.
  - d. All equipment used for in-stream work shall be cleaned of external oil, grease, dirt, and mud.
  - e. Any leaks or accumulations of these materials would be corrected before entering areas that drain directly to streams or wetlands.
10. The use of large cranes over water temporary construction accesses will require extra review of the SPCCP. These measures include the following:
- a. All vehicles carrying fuel shall have specific equipment and materials needed to contain or clean up any incidental spills at the project site. Equipment and materials would include spill kits appropriately sized for specific quantities of fuel, shovels, absorbent pads, straw bales, containment structures and liners, and/or booms.
  - b. During use, all pumps and generators shall have appropriate spill containment structures and/or absorbent pads in place.
  - c. All equipment used for in-stream work shall be cleaned of external oil, grease, dirt, and mud. Any leaks or accumulations of these materials would be corrected before entering streams or areas that drain directly to streams or wetlands.
11. If in-water blasting is required for any portion of the project, including but not limited to removal of the existing bridge piers, the contractor shall consult with MaineDOT and include staff from the MaineDOT Environmental Office (Eric Ham, 215-7356, eric.ham@maine.gov). Limitations on blasting will be based on the time of year and the presence or absence of listed species in the project area. The contractor shall prepare a blasting plan that contains sufficient information to allow assessment of effects to listed fish. The blasting plan shall include detailed design information on each charge (e.g., type of explosive and detonation velocity (burn rate); type of blasting technique used; borehole dimensions, spacing, charge weights, delay intervals; method of initiation; and noise mitigation plans. Blasting shall be designed to ensure that there is no potential to harm, harass, injure or kill listed fish. The plan shall be submitted to USFWS no later than 120 days prior to planned detonation. Re-initiation of consultation will be required if there is potential to harm, harass, injure or kill listed species.

IV. Underwater Noise Monitoring and Noise Attenuation (applies to pile-driving with impact hammer),

1. The contractor shall provide MaineDOT and USFWS a draft hydroacoustic monitoring plan at least 30 days prior to implementation for review. **No in-stream noise-generating activities may commence until UFWS has approved the monitoring protocol.** The monitoring plan shall describe monitoring locations, equipment and protocols, and personnel and shall describe how the contractor will complete the following:

- a. Monitor Sound Pressure Level (SPL) during all impact hammer pile-driving using a series of hydrophones and a digital recorder capable of operating at a minimum of 3,000 samples per second for a minimum of one second, with an adjustable trigger level, and a range of at least 30 psi.

Initially, a minimum of three hydrophones must be used, located approximately 33, 66, and 100 feet from the in-stream sound producing activity. Additional hydrophones may be required to document sound levels remain below the previously established thresholds at mid-stream, and at the farthest bank.

- b. Ensure that the sound pressure levels at all hydrophones be maintained below 206 dB PEAK re 1  $\mu$ Pa and below 187 dB CSEL re 1  $\mu$ Pa. In-water noise levels greater than 150dB RMS re 1  $\mu$  Pa measured at any hydrophone must not persist in excess of 12 consecutive hours on any given day, and a 12 hour recovery period (i.e., in-water noise below 150dB RMS re 1  $\mu$  Pa, or a return to ambient levels) must be provided between work days.
- c. Acoustic monitoring will be required at the beginning of each activity and activity location. If noise intensity levels approach the published threshold for having the potential to injure listed species (187 dB re 1  $\mu$ Pa CSEL and/or 206 PEAK dB re 1  $\mu$ Pa), noise minimization measures shall be used during that noise-producing activity. Should recorded underwater noise fall below the threshold for indication of potential injury of listing species (187 dB re 1  $\mu$ Pa CSEL and/or 206 PEAK dB re 1  $\mu$ Pa) during the activity, then persistent acoustic monitoring can be replaced with intermittent subset monitoring for the remainder of the activity at that location. Monitoring will continue until recorded underwater noise is shown to be consistently below the threshold for potential behavioral modification by listed species. This decision will be made in conjunction with FHWA, USACE, and USFWS.
- d. Mitigate excessive underwater noise (>206 dB PEAK re 1  $\mu$ Pa, 187 dB SEL re 1  $\mu$ Pa, or 150dB RMS re 1  $\mu$  Pa in excess of 12 hours) through passive measures such as changing hammer type, reducing driving duration, reducing force settings on the hammer, or through active measures such as but not limited to cushions, blast mats, or bubble curtains. The contractor shall employ all reasonable and prudent measures including but not limited to those listed above. If underwater noise continues to exceed noise limits, the contractor shall the stop noise-producing activity and shall contact MaineDOT to determine next steps.

2. The contractor shall be responsible for implementing monitoring and noise attenuation measures as needed. Payment for this work will be made by contract modification according to Standard Specification Section 109, Changes; **except idle equipment time will not be charged for the first five Working Days to construct, implement, and test noise attenuation devices.** If idle equipment time exceeds more than five (5) Working Days, the Department will pay the Contractor in accordance to Standard Specification 109.7.5c and supplements thereto. Or:

3. Links to information on noise attenuation are provided below:

[http://www.dot.ca.gov/hq/env/bio/files/Guidance\\_Manual\\_2\\_09.pdf](http://www.dot.ca.gov/hq/env/bio/files/Guidance_Manual_2_09.pdf)

<http://www.trb.org/Publications/Blurbs/166159.aspx>

<http://www.trb.org/main/blurbs/162054.aspx>

Town: Howland-Enfield  
WIN #:16705.00  
Date: 12/22/14  
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V. Approvals:

1. Temporary Soil Erosion and Water Pollution Control Plan
2. Hydroacoustic Monitoring Plan

NOTE: Regulatory Review and Approval is required to modify the existing In-Water work restrictions. Requests for work window extensions must be submitted to the MaineDOT Environmental Office. Approvals of requests for work window extensions are not guaranteed and may result in delays in construction schedule that are the sole responsibility of the contractor.

**SPECIAL PROVISION 105**  
**CONSTRUCTION AREA**

A Construction Area located in the **Town of Howland** has been established by the Maine Department of Transportation (MDOT) in accordance with provisions of 29-A § 2382 Maine Revised Statutes Annotated (MRSA).

- (a) The section of highway under construction in the town of Howland and Enfield, Penobscot County on route 155/ 6/ Bridge Road/ Bridge Street over the Penobscot River.
- (b) The section of highway under construction in the town of Howland, Penobscot County on Terrio Street.
- (c) The section of highway under construction in the town of Howland, Penobscot County on route 116.
- (d) (Bridge Road) over the Penobscot River station 10+00.00 to station 32+08.00 of the construction plus approaches.
- (e) (Terrio Street) station 60+00.00 to station 62+02.37 of the construction plus approaches.
- (f) (Route 116) station 70+00.00 to station 73+80.00 of the construction plus approaches.

Per 29-A § 2382 (7) MRSA, the MDOT may “*issue permits for stated periods of time for loads and equipment employed on public way construction projects, United States Government projects or construction of private ways, when within construction areas established by the Department of Transportation. The permit:*

- A. Must be procured from the municipal officers for a construction area within that municipality;*
- B. May require the contractor to be responsible for damage to ways used in the construction areas and may provide for:*
  - (1) Withholding by the agency contracting the work of final payment under contract; or*
  - (2) The furnishing of a bond by the contractor to guarantee suitable repair or payment of damages.*

*The suitability of repairs or the amount of damage is to be determined by the Department of Transportation on state-maintained ways and bridges, otherwise by the municipal officers;*
- C. May be granted by the Department of Transportation or by the state engineer in charge of the construction contract; and*
- D. For construction areas, carries no fee and does not come within the scope of this section.”*

The Municipal Officers for the **Town of Howland** agreed that an Overlimit Permit will be issued to the Contractor for the purpose of using loads and equipment on municipal ways in excess of the limits as specified in 29-A MRSA, on the municipal ways as described in the “Construction Area”.

**SPECIAL PROVISION 105**  
**CONSTRUCTION AREA**

A Construction Area located in the **Town of Enfield** has been established by the Maine Department of Transportation (MDOT) in accordance with provisions of 29-A § 2382 Maine Revised Statutes Annotated (MRSA).

- (a) The section of highway under construction in the town of Howland and Enfield, Penobscot County on route 155/ 6/ Bridge Road/ Bridge Street over the Penobscot River.
- (b) The section of highway under construction in the town of Enfield, Penobscot County on Old County Road North and South.
- (c) (Bridge Street) over the Penobscot River station 10+00.00 to station 32+08.00 of the construction plus approaches.
- (d) (Old County Road North) station 90+00.00 to station 91+10.00 of the construction plus approaches.
- (e) (Old County Road South) station 80+00.00 to station 80+90.00 of the construction plus approaches.

Per 29-A § 2382 (7) MRSA, the MDOT may “*issue permits for stated periods of time for loads and equipment employed on public way construction projects, United States Government projects or construction of private ways, when within construction areas established by the Department of Transportation. The permit:*

*A. Must be procured from the municipal officers for a construction area within that municipality;*

*B. May require the contractor to be responsible for damage to ways used in the construction areas and may provide for:*

*(1) Withholding by the agency contracting the work of final payment under contract; or*

*(2) The furnishing of a bond by the contractor to guarantee suitable repair or payment of damages.*

*The suitability of repairs or the amount of damage is to be determined by the Department of Transportation on state-maintained ways and bridges, otherwise by the municipal officers;*

*C. May be granted by the Department of Transportation or by the state engineer in charge of the construction contract; and*

*D. For construction areas, carries no fee and does not come within the scope of this section.”*

The Municipal Officers for the **Town of Enfield** agreed that an Overlimit Permit will be issued to the Contractor for the purpose of using loads and equipment on municipal ways in excess of the limits as specified in 29-A MRSA, on the municipal ways as described in the “Construction Area”.

**SPECIAL PROVISION**  
**SECTION 107**

**PROSECUTION AND PROGRESS**  
(Contract Time)

The specified contract completion date is December 30, 2017.

**Town: Howland-Enfield**  
**Project: BH-1670(500)X**  
**WIN: 16705.00**  
**Date – December 23rd, 2014**

**Special Provisions**  
**Section 107**  
**(Coast Guard Notification)**

All documents for the US Coast Guard must be submitted through the MaineDOT Forty-Five (45) calendar days prior to beginning construction. The Coast Guard will not consider requests made by the Contractor.

## U.S. Coast Guard Bridge Administration

### GENERAL CONSTRUCTION REQUIREMENTS

1. All bridge closures, or bridge operating schedule changes, must be requested in writing, 30 days in advance, from the First Coast Guard District Bridge Branch Office. No channel restrictions, or vertical clearance reductions may be made without written approval from the above office.
2. Waterway closures or safety zones must also be requested a **minimum** of 90 days in advance. Please contact USCG Sector Northern New England, 259 High Street, South Portland, ME 04106-2028. Ph: (207) 741-5421.
3. All submissions to the Coast Guard for review and approval must first be approved by the *owner of the bridge or their authorized agent*. All submission of plans, scope of work, and schedules of operation must be sent to the First Coast Guard District, Bridge Branch Office.
4. At least 30 days prior to commencement of any work, we must have for our review, a copy of the construction plans, contractor schedule, preferably depicted in a time line graphic format, and the contractor's daily hours of operation. The construction plan package must show the following: **(1)** a plan of the entire waterway area in the vicinity of the project. **(2)** The location of work barges and any anchor lines during working and off-hours. **(3)** In addition, a drawing must be included, if applicable, depicting any scaffolding or containment used indicating the location and the total vertical or horizontal channel reduction. All vertical clearance reductions below low steel or concrete under the bridge as a result of the use of scaffolding must be clearly detailed on the drawings shown in total feet. **(4)** Emergency 24 hour telephone numbers for all responsible individuals for this project must be submitted to this office before any phase of construction begins in case of an emergency situation during off-hours.
5. Scaffolding used under ANY span of the bridge must be lighted with constant burning red lights every 50 feet and on all corners. The placement of scaffolding must not interfere with the ability of a moveable bridge to open for vessel traffic. Moveable bridges must continue to operate according to their normal schedule unless special drawbridge operation regulation changes have been requested. Warning signs must be posted on both sides of the bridge, visible for a 1-mile range, to warn mariners of the vertical clearance reduction. The signs shall face upstream and downstream so as to draw the mariner's attention to the fact that the clearance has been reduced.
6. All barges placed in the waterway must be lighted with constant burning white lights on all four corners of the barge. The contractor is required to comply with all provisions of the Navigation Rules International-Inland, regarding the use of work barges or floating equipment in the waterway. Copies are available from the U.S. Government Bookstore, 710 N Capitol Street NW, Washington, DC, 20403, (202) 512-0132, or [www.navcen.uscg.gov](http://www.navcen.uscg.gov) .
7. Placement of construction barges in the navigable channel shall be done so as to provide a minimum horizontal clearance reduction. Only one navigation channel of a swing bridge may be blocked by work equipment at anytime. Barges must be moved out of the navigable

channel after working hours unless approved in writing by this office.

8. Barges held in place by anchor lines must be marked by anchor buoys, which should be lighted.
9. An as-built survey must be taken upon completion of this project, approved by a professional engineer or land surveyor verifying the bridge clearances.
10. The on-scene contractor must have a VHF-FM marine radio set to the bridge communication channels 16/13 or the designated channel for the bridge. Additional marine radios monitoring the above channels must also be maintained at the main control of any floating equipment or barges on station.
11. Preventive measures must be taken to prevent any hot work, debris, or construction material from entering the waterway. This includes sandblasting material, paint, and any concrete work by-products. Welding and burning must cease upon approach of a vessel and shall not start again until the vessel has passed the bridge.
12. The project manager must contact Coast Guard Sector Northern New England via marine radio before commencement of any and after completion of any Hot Work. A cell phone back-up may be used to contact the above Coast Guard Unit at (207) 780-3251.
13. If permanent bridge navigational lighting cannot be maintained operational during any phase of this project, temporary battery/power lights must be installed at the same locations. These temporary lights must be visible for a distance of **2,000 yards on 90% of the nights of the year**. Generally, a lamp of **(50 candela)** will meet these requirements. Plans for temporary lighting shall be submitted to this office for written approval. Deviations from the approved temporary lighting shall be permitted only upon written authorization from this office.
14. All newly constructed bridge piers, or those in the process of demolition, must be lighted with either red or white flashing (60 flashes per minute) lights. All cofferdams used during construction must also be lighted with red or white flashing (60 flashes per minute) on all four corners.
15. Bridge protective fenders shall not be constructed or rebuilt with any metal surfaces on the rubbing face of the fender system. All bolts, spikes, or other metal fastening devices must be countersunk. Metal splicing plates, if used, shall be mounted on back of outer wales.
16. All piles including those previously damaged or broken that are not being used in the new or repaired fender shall be extracted rather than cut off at the mud line. Upon completion of all fender repairs a bottom sweep is required to determine if any piles or debris are present in the waterway. A wire-drag sweep or side-scan sonar is the preferred method.
17. During the progress of work should any debris or equipment enter the waterway and become a hazard to navigation, immediate notice shall be given to the Coast Guard and the object removed as soon as possible. Until removal can be effected, the obstruction shall be properly marked.
18. Spillage of oil and hazardous substances is specifically prohibited by the **Federal Clean Water Act**, as amended. Approved spill containment equipment and absorbent material must be located at the project site in the event of a spill into the waterway or the shoreline. The Coast Guard must be notified immediately at (800) 424-8802.

19. The bridge owner is responsible to ensure that channel depths are not affected by this work. Any material, machinery or equipment lost, dumped, thrown into, or otherwise entering the waterway must be removed immediately. If immediate removal is impractical and the object entering the waterway could possibly obstruct or hazard navigation, the object must be marked immediately to protect navigation and the Coast Guard shall be notified as soon as possible. Upon request of the Coast Guard or Corps of Engineers, the bridge owner/contractor shall provide the necessary equipment and personnel to determine the presence of any suspected obstructions in the waterway.
20. The bridge owner/contractor shall provide any and all necessary equipment and personnel to determine the presence of any “suspected” obstructions in the waterway at any time either during or following the completion of bridge construction or demolition operations.
21. Upon project completion, the bridge owner shall provide the Coast Guard with a written certification by a registered professional engineer that the waterway depths have not been impaired as a result of any construction or demolition operations, that the waterway is clear of any and all construction debris or remnants from the existing or previous bridge construction or demolition.
22. This approval may be revoked and/or civil penalties imposed for failure to ensure that the above listed stipulations are adhered to or if work is determined to hazard or impair navigation.

**SPECIAL PROVISION**  
**SECTION 107**  
**TIME**  
(Limitation of Operations)  
(Supplemental Liquidated Damages)

2 - 12' travel lanes shall be maintained to the maximum extent possible on Route 115/16.

The new bridge shall be open to two lanes of traffic with surface pavement and bridge rail completed by August 15, 2017.

Supplemental liquidated damages will be assessed to the contract at the rate of Five Hundred (\$500.00) U.S. dollars per day for each day that the project remains incomplete beyond the specified contract completion date.

This assessment of liquidated damages will be in addition to the liquidated damages specified in section 107 of the Department of Transportation Standard specification.

**SPECIAL PROVISION**  
**SECTION 107**  
**TIME**

(Supplemental Liquidated Damages for Fabrication Time)

Append Section 107.8 with the following:

107.8.1 Fabrication Time

The Department has budgeted for the following amounts of continuous fabrication/shop inspection for certain Work components:

<u>Element</u>	<u>Time</u>	<u>Supplemental LD</u>
1) Structural Steel Fabrication	206 calendar days	\$650 per calendar day
2) Precast Prestressed Concrete Deck Panels	70 calendar days	\$650 per calendar day

The Contractor is responsible for requiring their fabricators, manufacturers, and/or suppliers to produce these products for the Work continuously until finished, including any needed actions to correct unacceptable workmanship or materials. If the Department determines that shop inspection beyond these times is required, then the corresponding Supplemental Liquidated Damages will be deducted as they occur from amounts otherwise due the Contractor. The Contractor will be notified by the Department when these times begin and when the allotted time will expire.

If a fabricator or supplier works more than one shift per day and the Department determines that inspection is required for each shift, each shift will count as a calendar day and the LD rate will be the noted amount per shift per calendar day in lieu of per calendar day.

Inspection is required for the following activities:

For metal fabrication work - welding, including tack welding, heat correcting, non-destructive examination, assembly verification, galvanizing, and painting (see also Special Provision 506).

For concrete work - tensioning of strands, batching and casting of concrete, breaking of test cylinders, de-tensioning.

SPECIAL PROVISION  
SECTION 109.5  
ADJUSTMENTS FOR DELAY  
(Delays due to Flooding)

Subsection 109.5.1, Definitions- Types of Delays, is replaced with the following:

109.5.1 Definitions - Types of Delays Delays are defined as follows and may be divided into more than one type depending upon cause.

A. Excusable Delay Except as expressly provided otherwise by this Contract, an "Excusable Delay" is a Delay to the Critical Path that is directly and solely caused by: (1) an Uncontrollable Event, or (2) a flooding event at the affected location of the Project that results in a headwater elevation of 136', or greater, but less than a Q50 headwater elevation. Actual flood headwater elevations will be determined by the Contractor and verified by the Department.

B. Compensable Delay A "Compensable Delay" is a Delay to the Critical Path that is directly and solely caused by: (1) a weather related Uncontrollable Event of such an unusually severe nature that a Federal Emergency Disaster is declared. The Contractor will only be entitled to an Equitable Adjustment if the Project falls within the geographic boundaries prescribed under the disaster declaration (2) an Uncontrollable Event caused by a Utility Company or other third party (not Subcontractors) Working on Project-related Work within the Project Limits if, and only if, the Utility Company or such other third party offers the Department reimbursement for such Delay; (3) acts by the Department that are in violation of applicable laws or the Contract, or (4) a flooding event at the effected location of the Project that results in a Q50 headwater elevation, or greater. Actual Q50 flood headwater elevations will be determined by the Contractor and verified by the Department.

C. Inexcusable Delay "Inexcusable Delays" are all Delays that are not Excusable Delays or Compensable Delays.

For a related provision, see Section 101.2 - Definition of Uncontrollable Event.

**SPECIAL PROVISION**  
**SECTION 202**  
**REMOVAL OF STRUCTURES AND OBSTRUCTIONS**  
**(Building Removal)**

**Description**

The work shall consist of the complete demolition and removal of the following units:

Building No. 1: Foundation for a house at station 26+85+/-, 25' right. The existing foundation hole has been filled in with common borrow.

Building No. 2: Concrete slab for a former garage at station 81+43 +/-, 45' right

General: The following shall be completely removed: Foundations; slabs and footings; steps; walks; piers and posts as well as all pavement.

All excavations shall be filled and compacted using vibratory equipment in one-foot layers to the surrounding existing grade levels. In this process, the contour and grades of the abutting land are to be followed. Erosion control including loaming, seeding, and mulch shall be done and will be considered to be incidental to the contract.

Under Section 202.02 of the Standard Specifications, ownership of buildings and all equipment, fixtures, and materials therein shall be interpreted as meaning all equipment, fixtures, and materials that are recognized as real property. Any items that are recognized as personal property are excepted and are reserved to the owner. If the bidder is in doubt as to whether any item not listed is real or personal property, they shall request a determination of the matter prior to date on which bids are to be received.

All debris and unusable materials shall be removed to an approved transfer station or approved landfill. Under no circumstances shall any material or debris be disposed of by burning on the premises nor shall the debris be burned at an off premise site.

Rodent Control. With the "Notice to Proceed", or when a building becomes available to the Contractor, the Contractor will designate whether rodent control measures are required or not.

The Contractor shall not remove a building until the Contractor has certified it to be free of rodents. Should rodent control measures be required, the Contractor shall procure the extermination services as soon as possible. The Contractor will re-inspect the building within 7 days after the extermination services are performed. The cost of extermination

services until the building is found to be rodent free will be paid for as a specialty item under Section 109.04(g) of the Standard Specifications.

Each building shall be removed promptly after notification that it is free of rodents. All subsequent inspection costs and extermination services necessary to assure that the building is rodent free at time of removal will be at the expense of the Contractor.

This building may or may not contain asbestos. Prior to any demolition of building(s) the Contractor will conduct an asbestos survey on the building(s) to determine if any asbestos exists. The survey will be conducted by a DEP certified Asbestos Inspector. No separate payment will be made for the survey and it shall be considered incidental. The survey results will be communicated with the Resident. If no asbestos is discovered, the demolition process may proceed. If asbestos is found, the Contractor will employ a DEP certified Asbestos Abatement Contractor for its' removal and disposal. The Department will bear all expenses incurred in the abatement of any asbestos containing material as detailed in Standard Specification 109.7.5 – Force Account. Any questions can be directed to the Office of Legal Service (624-3020).

Each building shall be removed promptly after certification that it is free of rodents. All subsequent inspection costs and extermination services necessary to assure that the building is rodent free at time of removal will be at the expense of the Contractor.

The Contractor shall remove all utility service connections prior to demolition of any building.

All fill material used for foundation cavities and other shall meet the Standard Specification requirements for Common Borrow, Section 703.18.

Removal of building shall include all attached structures including barns and garages as well as steps, slabs, walks, piers, posts, driveways and other incidentals, as directed by the Resident.

Contractor shall provide and maintain all temporary barricades, signs or other safety measures as necessary to complete the work. Contractor shall obtain any and all permits or licenses necessary for the performance of the work and conform to all Federal, State and local laws, regulations or ordinances applicable to the work.

For Building #1, the well located south of the foundation at station 80+72, 43' right shall be abandoned in accordance with CMR CHAPTER 232 – Well Drillers and Pump Installer Rules. A Maine Licensed Well Driller shall be employed to properly abandon the potable

water supply in accordance with Chapter 7 of the above referenced rules. The top of the well casing shall be a minimum of 2' below the finished grade.

All plywood panels, hasps, padlocks, and other materials used to secure these buildings will remain the property of the Department of Transportation. These panels and padlocks will be transported to a location in the area to be determined by the Resident.

Method of Measurement: Removing building will each be measured by the lump sum.

Basis of Payment: All work for will be paid for at the contract Lump Sum price, which shall be full compensation for all materials, labor and equipment necessary for the work described above and as shown in the Plans, and/or as directed by the Resident.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
202.08 Removing Building No. 1	Lump Sum
202.08 Removing Building No. 2	Lump Sum

SPECIAL PROVISION  
SECTION 202  
(Removing Existing Bridge)

Description

This work shall include the complete removal and satisfactory disposal of the existing Penobscot River Bridge, except such portions thereof as may be required or permitted to be left in place. This provision neither amends nor modifies other provisions of Section 202 except as specified below.

Construction Requirements

The Contractor shall provide detailed demolition plans. The plans shall include, but shall not be limited to, the proposed method(s) of removal, all required falsework, protective structures, and equipment needed to safely accomplish the bridge removal. The Contractor shall proceed with demolition no earlier than 10 business days after the demolition plan has been submitted to the Resident.

All materials consisting of hazardous substances such as lead paint, asbestos, petroleum products, or other substances of potential harm to the public or the environment shall be handled, stored, treated and disposed of in accordance with local, state and federal environmental regulations. The Contractor shall hire an environmental specialist to prepare a materials handling plan to be followed during the demolition.

The Contractor shall contain all demolition debris (including debris from wearing surface removal, saw cut slurry, dust, etc.) and shall not allow it to discharge to any regulated resource. All demolition debris shall be disposed of in accordance with requirements of the Standard Specifications and of the Maine Solid Waste Law, Title 38 M.R.S.A., Section 1301 et seq. Containment and disposal of demolition debris shall be addressed in the Contractor's Soil Erosion and Water Pollution Control Plan (SEWPCP).

The Contractor shall dismantle the existing bridge structure in a manner that will not cause damage to persons or property. Strict adherence to the Special Provision 656 and other precautions, including protective structures as required or ordered, shall be taken to insure that no debris is allowed to fall into the river below.

The Contractor shall not disturb any utility or property carrying water, sewer, gas, communications, electric or similar service across or under the bridges unless permitted to do so by the Resident.

Method of Measurement

Removing Existing Bridge will be measured by the lump sum and will include the removal of the superstructure, including structural and incidental steel components, reinforced concrete, bridge lighting, rail, and substructure (abutments, piers and wingwalls) to the extent specified on the

plans and herein. It shall also include the removal of approach guardrail and installation and removal of cofferdams.

Basis of Payment

The accepted quantity of Removing Existing Bridge will be paid for at the contract lump sum price, which shall be full compensation for removing and disposing of the existing bridge and associated items to the extent specified on the plans and herein. Loam and seeding shall be paid for under appropriate contract items.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
202.19      Removing Existing Bridge	Lump Sum

SPECIAL PROVISION  
SECTION 203  
EXCAVATION AND EMBANKMENT  
(Dredge Materials)

**Description:** Dredge Material (See MaineDOT Standard Specifications § 101.2) is regulated as a Special Waste. However, select granular materials are exempt from this classification as long as specific regulatory requirements are met. The Dredge Material from the Penobscot River Bridge Replacement Project is granular in nature and meets the grain size exemption for Beneficial Use at the site of generation.

Work associated with the Penobscot River Bridge Replacement initiative will require the excavation of select Dredge Material. It is anticipated that the dredge material will meet the granular Beneficial Use exemption. There is onsite Beneficial Use for all of this Dredge Material. The contractor shall Beneficially Use all Dredge Material excavated at the Penobscot River Bridge Replacement Project in an area adjacent to and draining into the Penobscot River.

It is acknowledged that the excavation of Dredge for this work may include some boulders. The Maine Department of Environmental Protection has determined that sound boulders (rock 12-inches or more in diameter), that are free of adhering sediment or other contaminants, shall be deemed to be Inert Fill material and shall not be included in the Dredge Material Quantities.

CONSTRUCTION REQUIREMENTS

**Management:** The contractor shall Beneficially Use all Dredge Material excavated at the Penobscot River Bridge Replacement Project in areas adjacent to and draining into the Penobscot River.

**Method of Measurement:** Dredge Material will be measured by the cubic yard of material removed.

**Basis of Payment:** Payment for the Beneficial Use of Dredge Material will be incidental to the Contract Pay Items.

Payment shall be full compensation for excavation, dewatering, managing, transporting, and placement of the Dredge Materials.

**SPECIAL PROVISION**  
**SECTION 403**  
**HOT MIX ASPHALT**

<b>Desc. Of Course</b>	<b>Grad Design.</b>	<b>Item Number</b>	<b>Bit Cont. % of Mix</b>	<b>Total Thick</b>	<b>No. Of Layers</b>	<b>Comp. Notes</b>
<b><u>3" Penobscot River Bridge Deck</u></b>						
Wearing	12.5 mm	403.2081	N/A	1½"	1	2,5,8,12,30
Base	12.5 mm	403.213	N/A	1½"	1	1,2,5,8,12
<b><u>6" – Route 155/6 Travel Way Approaches &amp; Shoulders – Full Depth</u></b>						
Wearing	12.5 mm	403.2081	N/A	1½"	1	5,8,12,30
Base	12.5 mm	403.213	N/A	1½"	1	1,5,8
Base	19.0 mm	403.207	N/A	3"	1	1,4,8
<b><u>3" – Route 155/6 Shoulders</u></b>						
Wearing	12.5 mm	403.2081	N/A	1½"	1	5,8,12,30
Base	12.5 mm	403.213	N/A	1½"	1	1,5,8
<b><u>6" – Route 116 Travel Way &amp; Shoulders - Full Depth</u></b>						
Wearing	12.5 mm	403.2081	N/A	1½"	1	5,8,12,30
Base	12.5 mm	403.213	N/A	1½"	1	1,5,8
Base	19.0 mm	403.207	N/A	3"	1	1,4,8
<b><u>3" – Route 116 Shoulders</u></b>						
Base	12.5 mm	403.2081	N/A	1½"	1	5,8,12,30
Base	12.5 mm	403.213	N/A	1½"	1	1,5,8
<b><u>6" – Terrio Street Travel Way &amp; Shoulders</u></b>						
Wearing	12.5 mm	403.2081	N/A	1½"	1	5,8,12,30
Base	12.5 mm	403.213	N/A	1½"	1	1,5,8
Base	19.0 mm	403.207	N/A	3"	1	1,4,8
<b><u>6" – Old County Road (North &amp; South) Travel Way &amp; Shoulders</u></b>						
Wearing	12.5 mm	403.2081	N/A	1½"	1	5,8,12,30
Base	12.5 mm	403.213	N/A	1½"	1	1,5,8
Base	19.0 mm	403.207	N/A	3"	1	1,4,8
<b><u>6" – South Street Travel Way &amp; Shoulders</u></b>						
Wearing	12.5 mm	403.2081	N/A	1½"	1	5,8,12,30
Base	12.5 mm	403.213	N/A	1½"	1	1,5,8
Base	19.0 mm	403.207	N/A	3"	1	1,4,8
<b><u>3" – Commercial Entrances and Drives</u></b>						
Wearing	12.5 mm	403.2081	N/A	1½"	1	5,8,12,30
Base	12.5 mm	403.213	N/A	1½"	1	1,5,8
<b><u>2" – Sidewalks/Paths</u></b>						
Wearing	9.5 mm	403.209	N/A	2"	2/more	2,3,10,14

**COMPLEMENTARY NOTES**

1. The required PGAB for this mixture will meet a **PG 64-28** grading.
2. The density requirements are waived. The use of an oscillating steel roller shall be required to compact all HMA pavements placed on bridge decks in addition to the normal roller train.
3. The design traffic level for mix placed shall be <0.3 million ESALS. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **50 gyrations**.
4. The aggregate qualities shall meet the design traffic level of 3 to <10 million ESALS for mix placed under this contract. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **50 gyrations**.
5. The aggregate qualities shall meet the design traffic level of 3 to <10 million ESALS for mix placed under this contract. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **75 gyrations**.
8. Section 106.6 Acceptance, (2) Method B. The Contractor may request a contract modification to change to testing method "A" prior to work starting on this item.
10. Section 106.6 Acceptance, (2) Method D.
12. The combined aggregate gradation required for this item shall be classified as a 12.5mm "**fine graded**" mixture, (using the Primary Control Sieve control point) as defined in 703.09.
14. The combined aggregate gradation required for this item shall be classified as a 9.5mm Thin Lift Mixture (TLM) mixture, using the Aggregate Gradation Control Points as defined in 703.09.
30. The required PGAB shall be a storage-stable, pre-blended, homogeneous, polymer modified asphalt binder that meets **PG 64E-28** grading requirements in AASHTO MP 19.

Tack Coat

A tack coat of emulsified asphalt, RS-1, Item 409.15 shall be applied to any existing pavement at a rate of approximately 0.025 gal/yd<sup>2</sup>, and on milled pavement approximately 0.05 gal/yd<sup>2</sup>, prior to placing a new course. A fog coat of emulsified asphalt shall be applied between shim / intermediate course and the surface course, at a rate not to exceed 0.025 gal/yd<sup>2</sup>.

Tack used between layers of pavement will be paid for at the contract unit price for Item 409.15 Bituminous Tack Coat.

SPECIAL PROVISION  
SECTION 501  
FOUNDATION PILES  
(Dynamic Loading Test)

Description. This work shall consist of driving foundation piles in accordance with Section 501 of the Standard Specifications, except as amended herein.

Under Section 501.07 Driven Pile Capacity, Pile Testing, and Acceptance, replace the subsection labeled Dynamic Pile Tests, with the following:

Dynamic Pile Testing: This work shall consist of coordinating for dynamic pile load testing, furnishing equipment and personnel to drive piles for testing, and providing access to foundation piles for Agents of the Department to perform dynamic pile load tests. Included with this work is Contractor stand-by-time to allow for dynamic pile load testing. Dynamic pile load tests shall be performed on foundation piles noted on the plans, and as directed by the Engineer. Dynamic load tests will be performed for the full-length of the test pile during initial drive.

The Contractor will provide the proposed dynamic pile testing schedule to the Resident a minimum of 48 hours before the start of testing. In the event that the Contractor is not able to perform the dynamic testing according to schedule, the cost of the Department's testing Agent shall be paid by the Contractor.

*Drilling, Tapping, and Attaching/Removing Instruments:* The Contractor shall provide the Department's Agents reasonable means of access to the piles for drilling and tapping purposes. Preference shall be given to drilling and tapping piles on the ground. For drilling and tapping of pipe pile on the ground the Department's Agent will need up to one hour per pile to be tested. For drilling and tapping of H-pile on the ground the Department's Agent will need up to 30 minutes per pile to be tested. The Contractor shall assist the Department's Agent by moving pile as necessary to complete drilling and tapping.

If the Contractor elects to place the pile in the leads prior to drilling and tapping, the Department's Agent will need up to two hours per pipe pile and up to one hour per H-pile for drilling and tapping per pile to be tested. The Contractor shall provide reasonable means of access to the piles in the leads for drilling and tapping, as required.

At the Contractor's option, the piles may be drilled and tapped by the Contractor. The drilling and tapping layout for pipe piles and H-piles are shown on Figures 1 and 2 of this Section, respectively. If the Contractor elects to drill and tap the piles, the holes shall be center-punched prior to drilling. Care shall be taken to prevent over-drilling and rounding of drill-holes. Prior to instrument attachment, the Department's Agent will inspect the drilled and tapped holes for conformance. If determined necessary by the Department's Agent, the holes will be redrilled and tapped by the Department's Agent. No additional time, or compensation, will be allowed for redrilling and tapping of holes done by the Contractor

The Contractor shall provide reasonable means of access to the piles in the leads for attaching and removing instruments to the piles. It is estimated that the Department's Agents will need up to one hour per pile to attach instruments. The Department's Agent will need up to 30 minutes per pile to remove instruments.

*General Accommodations:* The Contractor shall provide access to electric power for the dynamic test equipment. The power supply at the outlet shall be 10 amp, 115 volt, 55-60 cycle, AC only.

The Contractor shall provide a location that has a line-of-sight to the test piles and is within 75 feet of the piles to be tested, where the Department's Agents can park a wheeled, passenger vehicle (either van or car), from where dynamic pile testing measurements can be processed and analyzed.

The Contractor shall provide access to and a location within 10 feet of the test pile where a representative of the Department can stand and maintain a field driving log for all test piles.

*Testing:* With the dynamic testing equipment attached, the Contractor shall drive the pile to the minimum tip elevation, or to the required capacity, as shown on the plans. The stresses in the piles will be monitored during driving with the dynamic test equipment to ensure that the driving stresses do not exceed the allowable stress shown on the plans. If necessary, the Contractor shall reduce the driving energy transmitted to the pile by using additional cushions or reducing the energy output of the hammer in order to maintain stresses below the allowable driving stresses shown on the plans. If non-axial driving is indicated by the dynamic test measurements, the Contractor shall immediately realign the driving system.

When directed by the Resident, the Contractor shall wait up to 24 hours and, after instruments are reattached, retap (redrive) load test piles. A cold hammer shall not be used for the redrive. The hammer shall be warmed-up before redrive begins by applying at least 20 blows to another pile. The maximum amount of penetration required during redrive shall be 6 in., or the maximum total number of hammer blows will be 50, whichever occurs first. After retapping, the Resident will either provide the cutoff elevation or specify additional pile penetration and testing. The time for the Departments Agent to attach and remove instruments for retapping shall be as specified herein. The general accommodations provided by the Contractor to perform retap testing shall be as specified herein.

*Equipment Damage:* The Contractor shall take measures to not damage dynamic pile load testing equipment. Any equipment of the Department's Agents damaged due to Contractor operations, as determined by the Resident, shall be replaced at no additional cost to the Contract. The compensation due the Department's Agents for equipment damaged by Contractor operations shall be as follows:

Main Cable	\$495.00
Pigtail Cable	\$540.00
Force Transducer	\$670.00
Piezoresistive Accelerometer	\$1225.00
Piezoelectric Accelerometer	\$925.00
Accelerometer Cable	\$350.00

*Driving Equipment Malfunction.* If pile driving equipment is underperforming as required by the rated energy in the Wave Equation rated energy or not functioning correctly, and a relevant dynamic pile test cannot be completed, then the Contractor will compensate the Department's Agent for travel, unsuccessful field testing and overnight stay (if required) according to the schedule below:

Travel	\$ 700.00 /trip
Field Testing	\$1,275.00 /day
Overnight Stay	\$ 165.00 /day

*Pile Acceptance:* Acceptance of foundation piles shall be based on the results of the dynamic testing completed by the Department's Agents. Within 24 hours of the completion of testing, the Resident will provide the Contractor a determination of whether the dynamic load test results is acceptable.

501.11 Method of Measurement. The method of measurement for Dynamic Loading Tests, as described herein, shall be as described in Section 501.11g, of the Standard Specifications.

501.12 Basis of Payment. Payment for Providing for Dynamic Loading Tests, as described herein, shall include coordinating for dynamic pile load testing, moving piles on the ground and providing access to drill and tap piles, drilling and tapping piles (at the Contractor's option), providing access to electric power, providing a location to monitor foundation piles during driving, providing access to foundation piles to attach/remove instruments, furnishing equipment and personnel to drive piles for testing, Contractor time to drive test piles, Contractor time to allow replacement of dynamic testing equipment damaged by the Contractor (as determined by the Resident), and Contractor stand-by-time.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
501.239 Dynamic Loading Tests –Providing For	Each

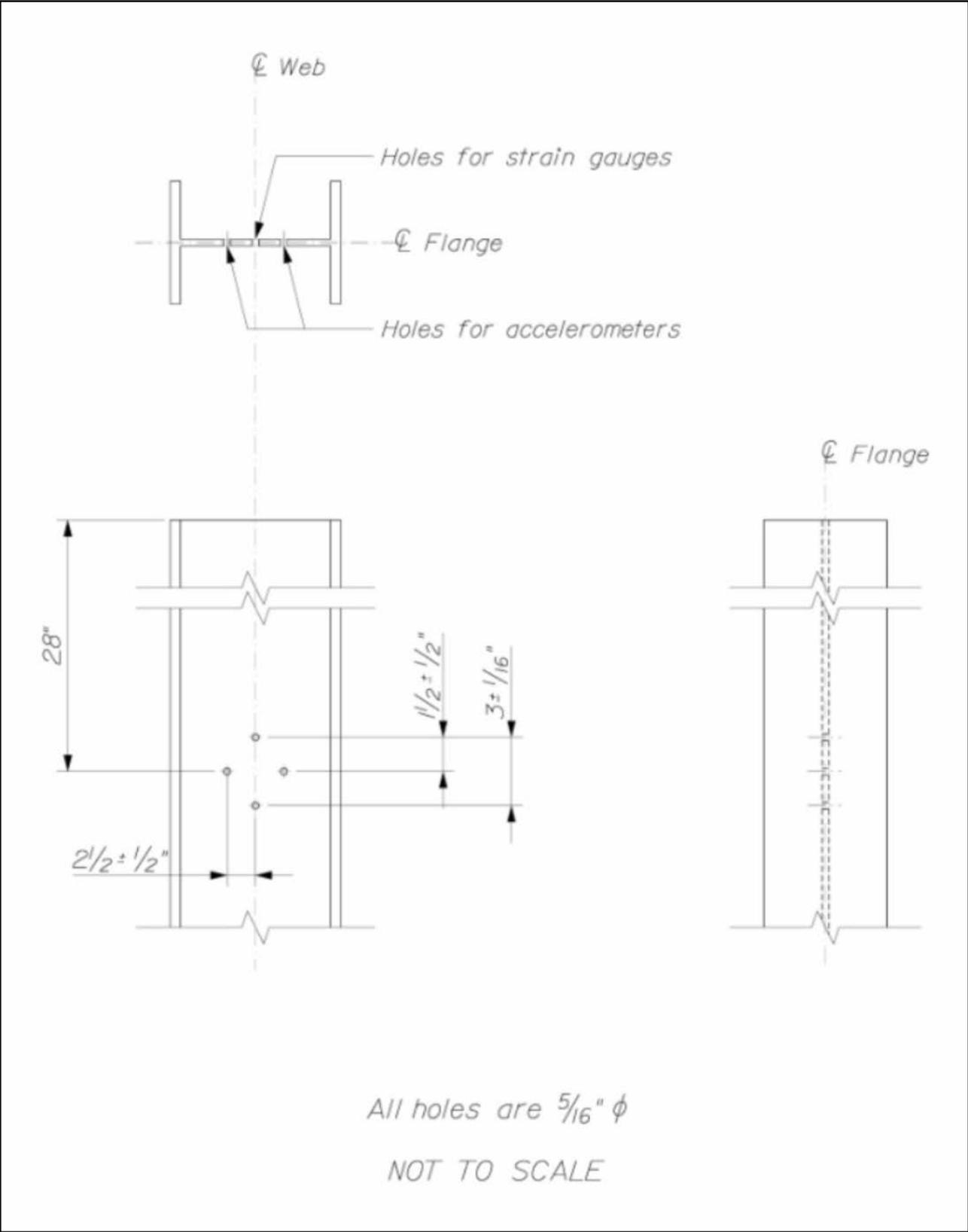


Figure 2. Drill-Hole Layout for H-Piles

**SPECIAL PROVISION**  
**SECTION 502**  
**STRUCTURAL CONCRETE**  
 (QC/QA Acceptance Methods)

CLASS OF CONCRETE	ITEM NUMBER	DESCRIPTION	P	METHOD
A	502.219	Structural Concrete Abut. & Retaining Walls	\$400	A
A	502.239	Structural Concrete Piers	\$400	A
S	502.24	Structural Concrete Piers (Placed under water)		C
S	502.249	Structural Concrete Piers (Placed under water)		C
A	502.26	Structural Concrete Roadway & Sidewalk on Steel Bridges	\$400	A
A	502.31	Structural Concrete Approach Slab		C
LP	502.49	Structural Concrete Curbs and Sidewalks	\$425	A
LP	526.34	Permanent Concrete Transition Barrier	\$425	A
LP	526.3401	Permanent Concrete Transition Barrier - Modified	\$425	A

P values listed above reflect the price per cubic yard (CY) for all pay adjustment purposes.

The quantity used for Pay Adjustment purposes shall be the actual quantity of cast in place concrete placed and accepted. This quantity shall be computed by the Contractor and submitted to the Resident for approval.

**SPECIAL PROVISION**  
**SECTION 502**  
**STRUCTURAL CONCRETE**  
(Fiber Reinforced Polymer Downspout)

Description:

This work shall consist of fabrication, delivery, and installation of Fiber Reinforced Polymer (FRP) Downspouts in accordance with the Plans and this specification.

Company Experience:

The supplier shall demonstrate successful experience producing FRP drainage products and related components that have been in service for a minimum of 3 years.

For local FRP manufacturers please contact:

Steve Von Vogt, Executive Director  
Maine Composites Alliance  
P.O. Box 129  
Portland, ME 04112  
svonvogt@mainecompositesalliance.org  
(207) 828-1414

Materials and Fabrication Requirements:

The Contractor will submit fabrication details to the Resident Engineer for review. The Resident will be allowed 7 working days to review the submittal. Details shall be in accordance with the Plans and these specifications. All material and workmanship will meet or exceed ASTM C 582. The following is specified:

General:

- 3/8" thickness
- Chemical resistant Derakane 510C-350 Resin or equal to be used throughout
- Corrosion Barrier shall be 1 layer of Nexus (Burlington Industries) 100-10 surfacing veil followed by 4 layers .75 oz/sq ft chopped strand mat (Owens Corning Vetrotex), or approved equal. Structural portion shall be alternating plies of 1.5 oz/sq ft chopped strand mat and 24 oz/sq yd woven roving to the required thickness.

Installation:

FRP Downspout shall be stored and handled in accordance with the manufacturer's recommendations. FRP Downspouts will be accurately placed at the locations shown on the Plans or authorized. Any repairs to the downspouts as a result of mishandling shall be done at the expense of the contractor.

Method of Measurement:

FRP Downspouts will be measured by Each, fabricated, delivered, and successfully installed.

Basis of Payment:

FRP Downspout will be paid for at the contract unit price Each. Such payment shall include compensation for all materials and labor necessary for the fabrication, delivery and installation of the Downspouts and all associated hardware in accordance with the Plans and this specification.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
502.703	FRP Downspout	Each

**SPECIAL PROVISION**  
**SECTION 502**  
**STRUCTURAL CONCRETE**  
(Fiber Reinforced Polymer Bridge Drains)

Description

This work shall consist of design, fabrication and delivery of bridge drains using FRP (Fiber Reinforced Polymer) composite materials in accordance with the plans and this specification.

Applicable Standards and References

The design and construction of FRP composite bridge drain components shall be in accordance with this Methods Specification and the relevant requirements of the following standards and specifications, unless otherwise stipulated in this specification. Standards and specifications specifically cited in the body of the specification establish requirements that shall have precedence over all others. Should the requirements in any reference conflict with those in another, the reference highest on the list shall govern. It is the Design-Builder's responsibility to obtain clarification of any unresolved ambiguity prior to proceeding with the design or construction.

Specifications

Work shall be done in general accordance with the following specifications:

- a. AASHTO LRFD Guide Specifications for Design of Concrete-Filled FRP Tubes for Flexural and Axial Members, 2012.
- b. American Composites Manufacturing Association, ACMA Code of Standard Practice, First Edition, 2011.
- c. ISO/IEC Guide 58, Calibration and Testing Laboratory Accreditation Systems - General Requirements for Operation and Recognition.
- d. ISO/IEC 17025 General Requirements for the Competence of testing and Calibration Laboratories.
- e. NBS Voluntary Product Standard PS15-69. Custom Contact-Mold Reinforced Polyester Chemical-Resistant Process Equipment. The Society of the Plastics Industry, Inc., 355 Lexington Ave., N.Y., N.Y. 10017

**2.3 Standards**

- A.) ASTM D 2584. *Standard Test Method for Ignition Loss of Cured Reinforced Resins*. American Society for Testing and Materials, West Conshohocken, PA.

- B.) ASTM D 3039. *Standard Test Method for Tensile Properties of Polymer Matrix Composite Materials*. American Society for Testing and Materials, West Conshohocken, PA.
- C.) ASTM D 3171. *Standard Test Methods for Constituent Content of Composite Materials*. American Society for Testing and Materials, West Conshohocken, PA.
- D.) ASTM D 4385. *Standard Practice for Classifying Visual Defects in Thermosetting Reinforced Plastic Pultruded Products*. American Society for Testing and Materials, West Conshohocken, PA.
- E.) ASTM D 570. *Test Method for Water Absorption of Plastics*. American Society for Testing and Materials, West Conshohocken, PA.
- F.) ASTM E 1356. *Standard Test Method for Assignment of the Glass Transition Temperatures by Differential Scanning Calorimetry*. American Society for Testing and Materials, West Conshohocken, PA.
- G.) ASTM E 1640. *Standard Test Method for Assignment of the Glass Transition Temperature by Dynamic Mechanical Analysis*. American Society for Testing and Materials, West Conshohocken, PA.
- H.) ASTM C 582. *Standard Specification for Contact-Mold Reinforced Thermosetting Plastic (RTP) Laminates for Corrosion-Resistant Equipment*. American Society for Testing and Materials, West Conshohocken, PA.

#### Material

Materials shall conform to the following requirements:

1. FRP composite drain and pipe material shall meet the requirements of Appendix A.
2. All material and workmanship will meet or exceed the requirements of ASTM.

#### Construction Requirements

##### FRP DRAIN MANUFACTURERS

The FRP bridge drains shall be supplied by one of the following companies:

1. Kenway Corporation
2. FRP Bridge Drain Pipe-Westfall Company
3. ACO USA

The above suppliers have been pre-certified by providing materials samples that have been tested in accordance with appendix B. Other suppliers/manufacturers may become certified if FRP bridge drain samples are tested in accordance with the requirements in Appendix B along with the meeting the following requirements.

All manufactures or fabricators of FRP bridge drain systems/components are required to have a minimum of 3 years of experience in providing FRP composite structural grade products to the general market. Manufacturers need to provide documentation that personnel involved in manufacture/fabrication hold and maintain American Composites Manufactures Association (ACMA) certifications in a minimum of two of the following disciplines; 1) Open Molding, 2) Corrosion, 3) Vacuum Infusion, 4) Closed Molding and that the Manufacturer/Fabricator have an ISO 9001:(current year) or other independent certification to ensure that the Manufacturer's process has been independently audited for conformance.

### Design Guide for FRP Composite Scupper Bodies/Drain Inlets

#### General

The bridge shall use a size F offset FRP composite scupper (36 inch long x 12 inch wide x 10 diameter downspout) See appendix B for additional details. The bottom of the downspout shall extend a minimum of 6 inches below the bottom of the beams with a maximum of 12 inches below the bottom of the beams.

#### Deck/interface drain holes.

Drain holes are required on both sides of the scupper to capture moisture at the interface between the top of the deck and bottom of the asphalt pavement. Three holes one half inch in diameter spaced at 6 inches on center and three and one quarter inches on center below the top of the grate, or pavement thickness, shall be placed on both sides of the scupper. If the holes are created after the molding process by punching, drilling or other mechanical means the holes shall be sealed using a compatible epoxy compound.

#### Grates

Grates shall be bicycle friendly and designed for HL-93 Live Load unless otherwise specified. Any gaps in grates shall have a maximum clear width of two inches. The minimum clear opening size in any grating shall be 1 1/8" by 1 1/8". Grates shall be galvanized steel (ASTM A123) or FRP specifically designed and meeting the HL-93 Live Load requirements.

- Steel grating shall be commercial heavy - duty grating with 1 1/2" x 5/16" bearing bars spaced at 2 3/8" and 3/8" diameter cross bars spaced at 2". The grating shall be centered in the drain top. The bearing bars shall run parallel to traffic.
- FRP grating if used shall provide an opening area at least 75% of steel grating noted above. FRP gratings that do not meet this requirement are not acceptable and shall not be used.

Grates shall be designed so that they can be removed by mechanical means. Fasteners for grates shall be stainless. Where selected grates require orientation to flow, the grates will have orienting features included as required, i.e. for orders of paired drains one drain would have left hand orientation and the other right hand orientation.

#### Grate Frames

Grate frames may be either integrated FRP composite or of galvanized steel construction attached to the scupper/inlet body in a matter consistent with the physical design parameters.

#### Anchoring provisions

Scupper/inlet anchoring shall be bonded to the grate framing in a manner that provides a load path into the concrete decking. Anchor details to be specified as part of the shop drawings for the bridge drains.

#### Cross and Longitudinal Slope Compensation

The scupper/inlet designs shall provide a means to match the grate to the deck angles while maintaining the downspout in a plumb orientation. If purchased in pairs one left handed version will be required for each right handed version. This may be achieved when a down spout portion is bonded to the scupper body, through the frame attachment to the scupper body.

#### FRP Composite Drain Sections

Bridge deck downspouts, bridge drain deck extensions, elbows and pipe for under drains shall be constructed using a circular cross section; however other cross sections are allowed with approval of the Fabrication Engineer. Drain sections shall comply with the material requirements set forth in Appendix A and maintain wall thickness of no less than 1/4 inch.

#### FRP Composite Deck Drain Extensions.

Down spout drain extensions be integrated and bonded directly to the scupper bodies.

#### Transitions through Connections and Components.

All transitions and joints to be manufactured through the use of smooth radius molds. Miter joint and edged transitions are not allowed. All internal joint connections are to be smooth and continuous.

#### Pigmented FRP Composite Drain Components

Pipes, fittings, bodies and all FRP composite drain system components shall be pigmented through the wall. The color used shall match the color of the Hillman composite beams. Paint, gel-coat or any other exterior coating shall not be accepted.

#### Joint Connections

Joints may be welded using manufacturer recommended adhesives in accordance to the adhesive manufacturer's application procedures. Adhesives must be compatible with the FRP resins, applied in a way that ensures complete bonding and liquid tight sealing of the resins, and be compatible with the environmental conditions such as temperature, freeze thaw conditions, and wet alkaline environments.

### Shop Drawings/Inspection

Drawings The Contractor shall prepare shop detail, erection and other necessary working drawings in accordance with Section 105.7 - Working Drawings. Drawings shall include dimensions and tolerances necessary for manufacture and installation, all hardware, orienting features, anchor details, fastener details, gasket details, cross and longitudinal matching features, joint details, transition details, material lay-up/composition

Quality Control/Quality Assurance: Within 30 calendar days the Contractor shall submit to the Department a Quality Control Quality Assurance (QCQA) Plan for fabrication of the HCB's. Fabrication of HCB's shall not commence until the QCQA Plan has been reviewed and approved by the Department.

Notice of Beginning Work The Contractor shall give the Fabrication Engineer a minimum of two weeks notice before the beginning of work. No work shall be performed before the Fabrication Engineer has been notified. Before beginning work, a pre-fabrication meeting may be held at the discretion of the Fabrication Engineer or, if requested, by the Contractor.

The Contractor shall advise the Fabrication Engineer of the production schedule and any changes to it. If the Contractor suspends work on a project, the Fabrication Engineer will require 48 hours notice prior to the resumption of work.

Inspection Quality Control (Q.C.) is the responsibility of the Contractor. The Quality Control Inspector (Q.C.I.) shall inspect all aspects of the work and shall supervise all nondestructive examination (NDE). The Q.C.I. shall record measurements and test results in a clear and legible manner. The Q.C.I. shall reject materials and workmanship that do not meet contract requirements. The Contractor may perform NDE in addition to the minimum required. The results of all measurements and testing shall be made available to the Quality Assurance Inspector (Q.A.I.).

Quality Assurance (Q.A.) is the prerogative of the Fabrication Engineer. The Q.A.I. will ensure that the Q.C. Department is performing properly, verify documentation, periodically inspect workmanship and witness NDE. Q.A. testing deemed necessary by the Fabrication Engineer in addition to the minimum testing requirements shall be scheduled to minimize interference with the production schedule.

Inspector's Authority The Q.A.I. will have the authority to reject material or workmanship that does not meet the contract requirements. The acceptance of material or workmanship by the Q.A.I. will not prevent subsequent rejection, if found unacceptable.

Rejections Rejected material and workmanship shall be corrected or replaced by the Contractor.

Bill of Materials The Contractor shall provide the Fabrication Engineer with copies of all bills of materials used in the fabrication of the FRP bridge drains.

Packaging, Storage and Shipping of Components

FRP drains shall be stored and handled in accordance with the manufacturer's recommendation. The drains shall be stored above the ground not be allowed to come into contact with seawater, mud, grease, dirt or other deleterious materials that may be present on the job site.

Installation

The Contractor shall install the FRP drains in accordance to the manufacturer's installation procedures and in accordance to the Contractor's installation drawings. FRP bridge drains will be accurately placed at the locations shown on the Plans or as authorized by the Resident. Adequate means shall be provided for securely holding the drains in place during placement of concrete. Any damaged drain shall be repaired or replaced at the Resident's discretion and at no additional cost to the Department.

Method of Measurement

FRP Bridge Drains will be measured by the number of units, for fabrication and delivery. Installation for the drains will be incidental to the Structural Concrete Superstructure item.

Basis of Payment

FRP Bridge Drains will be paid for at the contract unit price. Such payment will include compensation for the fabrication and delivery of the drains in accordance with this specification.

Payment will be under:

<u>Pay Item</u>		<u>Pay Unit</u>
502.77	FRP Bridge Drain –Type B	Each
502.77	FRP Bridge Drain –Type G	Each

**SPECIAL PROVISION**  
**SECTION 502**  
**STRUCTURAL CONCRETE**  
(Fiber Reinforced Polymer Bridge Drains)

**APPENDIX A**

**A.1 Scope**

This section specifies the material composition, properties, test requirements and reports that shall be submitted and approved prior to and after product certification of each FRP composite drain component type, e.g. scupper body or pipe component. The manufacturer is responsible for testing using an approved independent lab per section A.5.3. Once certified the approved product may be manufactured with only internal testing provided the manufacturing process and laminate composition do not change. Changes to process and or composition do require additional testing and product certification. The manufacturer shall report the individual test results per section A.5.3. If the strength is less than the required properties certification will not be granted.

**A.2 Material/Laminate Composition**

**A.2.1 Fibers**

Fiber sizings and coupling agents shall be compatible with the resin system used to impregnate them.

**A.2.2 Matrix Resins**

Commercial grades of vinyl ester and epoxy resin systems are permitted provided the finished product meets the material property requirements before and after durability conditioning as set forth in Section A. Styrene is permitted to be added to the polymer resin during processing. Added styrene shall be less than 10 percent by mass of the polymer resin. The amount of styrene, as a mass percentage of the polymer resin, added during processing shall be reported per Section A.5.3.

**A.2.3 Fillers and Additives**

Commercial grade inorganic fillers such as kaolin clay, calcium carbonate, and alumina tri-hydrate shall not exceed 20 percent by mass of the polymer resin constituent. Commercial grade additives and process-aids, such as release agents, low profile shrink additives, initiators, promoters, hardeners, catalysts, pigments, fire-retardants, and ultra-violet inhibitors are permitted and depend on the processing method. Shrink additives, if used, shall be less than 20 percent by mass of the polymer resin. Commercial grade inorganic or organic non-woven surfacing mats or veils are permitted.

**A.2.4 Fiber Content**

Fiber content shall be measured by ASTM D 3171 or ASTM D 2584. Fiber content shall be high enough to meet the mechanical property requirements of the FRP system laminate. The manufacturer shall report the fiber content of the end product by volume or by mass in accordance to the method used. If fiber content is not provided by the manufacturer, then the manufacturer shall provide material data sheets with the weight per unit area of the fiber reinforcement used to manufacture the part.

#### **A.2.5 Glass Transition Temperature**

The characteristic value of the glass transition temperature of the composite system, determined in accordance with ASTM E1640, shall be at least 40 degrees Fahrenheit higher than the maximum design temperature,  $T_{MaxDesign}$ , defined in section 3.12.2.2 of the AASHTO LRFD Guide Specifications for Design of Concrete-Filled FRP Tubes for Flexural and Axial Members, 2012. FRP drain systems may not be used in environments with a service temperature higher than the glass transition temperature of the resin used for their manufacturing.

#### **A.2.6 Longitudinal and Transverse Coefficients of Thermal Expansion (CTE)**

The coefficient of Thermal Expansion (CTE) of the tube may vary in the longitudinal and circumferential directions of the component depending on the laminate architecture and type of fibers and resins.

### **A.3 Mechanical Properties**

#### **A.3.1 Tensile Properties**

The tensile strength, tensile modulus of elasticity, and ultimate tensile strain shall be determined for both the axial and hoop directions of the tubular components or in transverse and longitudinal directions of inlet bodies, see Section A.5.1 Test Samples. The tensile strength as reported by the manufacturer for product certification shall be measured according to ASTM Test Method D 3039, or other tension test method designed to determine tensile properties of composite laminates at the approved frequency and number of specimens as specified in section A.5.

#### **A.3.4 Compressive Properties**

The compressive strength and ultimate compressive strain shall be determined for the longitudinal directions of the tube laminate. The compressive strength and ultimate compressive strains shall be derived from specimens tested in accordance with ASTM Test Method D 6641, or other approved compression test method designed to determine compressive properties of the composite.

#### **A.4 Durability Properties**

Material properties shall retain 85% of their baseline values for the material properties listed in Section 2.3 after conditioning for all the durability tests listed below. Durability test methods are adopted from AASHTO Guide Specifications for Design of Bonded FRP Systems for Repair and Strengthening of Concrete Bridge Elements.

Durability property testing is only required for initial product certification and not required for subsequent production orders. The testing is the responsibility of the manufacturer and shall be conducted by an approved independent testing lab per section A.5.2.

#### **A.4.1 Moisture Absorption**

Samples will be immersed in distilled water having a temperature of 100 +/-3 degrees Fahrenheit and tested after 1,000 hours of exposure.

#### **A.4.2 Resistance to Alkaline Environment**

Samples will be immersed in a saturated solution of calcium hydroxide (pH-11) at ambient temperature of 73 +/-3 degrees Fahrenheit for 1,000 hours prior to testing. The pH level will be monitored and the solution will be maintained as needed.

#### **A.4.3 Alternating Ultraviolet Light and Condensation Humidity**

Samples will be conditioned in an apparatus under Cycle I-UV exposure condition according to ASTM G154 Standard Practice. Samples will be tested within two hours after removal from the apparatus.

#### **A.4.4 Freeze-Thaw**

Samples will be exposed to 100 repeated cycles of freezing and thawing in an apparatus meeting the requirements of ASTM C666.

### **A.5 Sampling, Testing & Results.**

#### **A.5.1 Test Samples.**

The manufacturer is responsible for testing and may use samples in accordance to the test methods and needs of test equipment available. Test coupons may be cut from manufactured products or prepared using identical processes e.g. wet lay-up, vacuum infusion, etc. in a flat sheet, or witness plate, in which test coupons may be cut. Approval of the Fabrication Engineer shall be required for acceptance of test specimens produced by a different manufacturing method. Samples derived from special coupon test sheets shall be taken interior to edge sections 1.5x the width of the required coupon width. Samples shall be prepared from samples oriented with the directions illustrated in figures 1 and 2 for scupper body and drain pipes. For samples from filament wound pipes, samples shall be constructed over polygon mandrels allowing for flat panels to be removed for test purposes. Each test shall use a quantity of three samples. See Tables A.5.4 for tests, material requirements and sample breakdown.

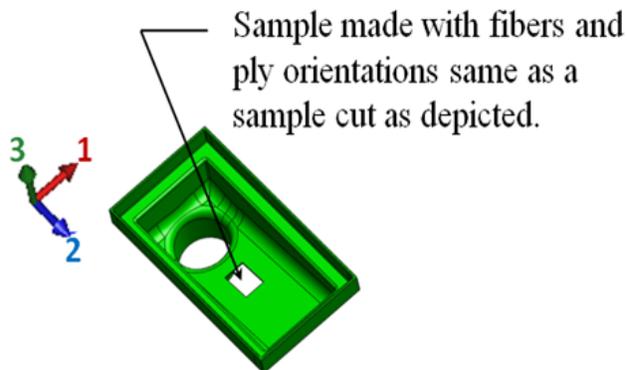


Figure 1.) Scupper Body  
Sample Orientations.

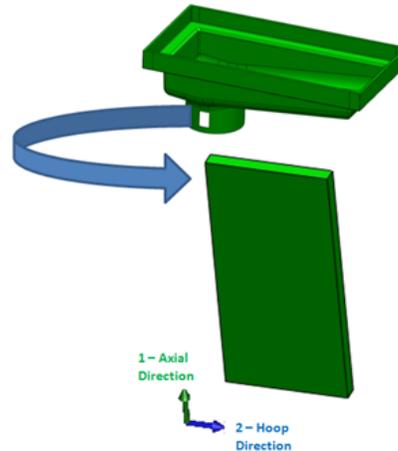


Figure 2.) Drain Pipe  
Sample Orientations.

#### **A.5.2 Test Lab Requirements.**

All testing of FRP material properties is being conducted in accordance to specified standards. Internal or external testing is to be conducted through laboratory facilities in accordance to ISO/IEC Guide 58, *Calibration and Testing Laboratory Accreditation Systems - General Requirements for Operation and Recognition* and ISO/IEC 17025 *General Requirements for the Competence of testing and Calibration Laboratories* as related by AASHTO document R18 "Recommended Practice for Establishing and Implementing a Quality System for Construction Materials Testing Laboratories."

#### **A.5.3 Production Validation (PV) Testing.**

Certification of materials used in FRP drain products must undergo PV testing of the specified material properties before and after environmental conditioning as set forth in Section A.5.4 by an independent lab. PV tests may be conducted internally by the manufacturer for development but are not acceptable for certification. Reported values for the material composition is recorded and reported by the manufacturer, no independent audit is required.

#### **A.5.4 Production Validation Sample Quantities, Minimum Material Properties and Reported Values**

The following data shall be reported for material certification. Note that the tables shown use orientations related to FRP scupper or inlet bodies as set forth in Figure 1 of Section A.5.1, orientation direction 2 as shown in Figure 2 of Section A.5.1 shall be substituted for orientation direction 3 when evaluating tubular sections. The required number of samples have been reduced from ASTM requirements.

**Table A.5.4.a PV reported material composition data. (Recorded by the manufacturer during the manufacturing process)**

Section No.	Characteristic	Applicable Test Standard	Number of Samples	Tolerance	Reported
A.2.2	Styrene, mass percentage of polymer resin	per tolerance	N/A	10% max	
A.2.3	Inorganic fillers, mass percentage of polymer resin.	per tolerance	N/A	20% max	
	Shrink additives, mass percentage of polymer resin.	per tolerance	N/A	20% max	
A.2.4	Fiber Content	ASTM D3171 or ASTM D2584	3	Sufficient to meet mechanical properties	
A.2.5	Glass Transition Temperature	ASTM E1640	3	> Max Design Temperature	

**Table A.5.4.b PV Reported Baseline Mechanical Properties**

(Conducted by an independent laboratory. Samples as Manufactured w/o additional conditioning per Section A.3)

Section No.	Direction	Characteristic	Applicable Test Standard	No. of Samples	Minimum Allowable Values	Independent Lab Reported Values			
						Sample 1	Sample 2	Sample 3	Avg Value
A.3.1	1	Tensile Strength	ASTM D3039	3	10000 (psi)				
		Tensile Modulus of Elasticity			800000 (psi)				
		Ultimate Tensile Strain			0.003 in/in				
	2	Tensile Strength		10000 (psi)					
		Tensile Modulus of Elasticity		800000 (psi)					
		Ultimate Tensile Strain		0.003 in/in					
A.3.4	1	Compressive Strength	ASTM D6641	3	22000 (psi)				
		Ultimate Compressive Strain			0.003 in/in				
	3	Compressive Strength		3	22000 (psi)				
		Ultimate Compressive Strain			0.003 in/in				

**Table A.5.4c PV Reported Mechanical Properties after 1000 hr. Moisture Immersion Conditioning per Section A.4.1**

(Conducted by an independent laboratory)

Section No.	Direction	Characteristic	Applicable Test Standard	No. of Samples	Minimum Allowable Values	Independent Lab Reported Values			
						Sample 1	Sample 2	Sample 3	Avg Value
A.3.1	1	Tensile Strength	ASTM D3039	3	8500 (psi)				
		Tensile Modulus of Elasticity			680000 (psi)				
		Ultimate Tensile Strain			0.0025 in/in				
	2	Tensile Strength		8500 (psi)					
		Tensile Modulus of Elasticity		680000 (psi)					
		Ultimate Tensile Strain		0.0025 in/in					
A.3.4	1	Compressive Strength	ASTM D6641	3	18700 (psi)				
		Ultimate Compressive Strain			0.0025 in/in				
	3	Compressive Strength		3	18700 (psi)				
		Ultimate Compressive Strain			0.0025 in/in				

**Table A.5.4d PV Reported Mechanical Properties after 1000 hr. of Alkaline Environment Conditioning per Section A.4.2**

(Conducted by an independent laboratory)

Section No.	Direction	Characteristic	Applicable Test Standard	No. of Samples	Minimum Allowable Values	Independent Lab Reported Values			
						Sample 1	Sample 2	Sample 3	Avg Value
A.3.1	1	Tensile Strength	ASTM D3039	3	8500 (psi)				
		Tensile Modulus of Elasticity			680000 (psi)				
		Ultimate Tensile Strain			0.0025 in/in				
	2	Tensile Strength		8500 (psi)					
		Tensile Modulus of Elasticity		680000 (psi)					
		Ultimate Tensile Strain		0.0025 in/in					
A.3.4	1	Compressive Strength	ASTM D6641	3	18700 (psi)				
		Ultimate Compressive Strain			0.0025 in/in				
	3	Compressive Strength		3	18700 (psi)				
		Ultimate Compressive Strain			0.0025 in/in				

**Table A.5.4e PV Reported Mechanical Properties after UV Light Conditioning per Section A.4.3 (ASTM G154).**  
(Conducted by an independent laboratory)

Section No.	Direction	Characteristic	Applicable Test Standard	No. of Samples	Minimum Allowable Values	Independent Lab Reported Values			
						Sample 1	Sample 2	Sample 3	Avg Value
A.3.1	1	Tensile Strength	ASTM D3039	3	8500 (psi)				
		Tensile Modulus of Elasticity			680000 (psi)				
		Ultimate Tensile Strain			0.0025 in/in				
	2	Tensile Strength		8500 (psi)					
		Tensile Modulus of Elasticity		680000 (psi)					
		Ultimate Tensile Strain		0.0025 in/in					
A.3.4	1	Compressive Strength	ASTM D6641	3	18700 (psi)				
		Ultimate Compressive Strain			0.0025 in/in				
	3	Compressive Strength		3	18700 (psi)				
		Ultimate Compressive Strain			0.0025 in/in				

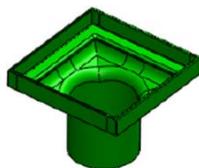
**Table A.5.4f PV Reported Mechanical Properties after 100 Freeze-Thaw Cycle Conditioning per Section A.4.4 (ASTM C666).**  
(Conducted by an independent laboratory)

Section No.	Direction	Characteristic	Applicable Test Standard	No. of Samples	Minimum Allowable Values	Independent Lab Reported Values			
						Sample 1	Sample 2	Sample 3	Avg Value
A.3.1	1	Tensile Strength	ASTM D3039	3	8500 (psi)				
		Tensile Modulus of Elasticity			680000 (psi)				
		Ultimate Tensile Strain			0.0025 in/in				
	2	Tensile Strength		8500 (psi)					
		Tensile Modulus of Elasticity		680000 (psi)					
		Ultimate Tensile Strain		0.0025 in/in					
A.3.4	1	Compressive Strength	ASTM D6641	3	18700 (psi)				
		Ultimate Compressive Strain			0.0025 in/in				
	3	Compressive Strength		3	18700 (psi)				
		Ultimate Compressive Strain			0.0025 in/in				

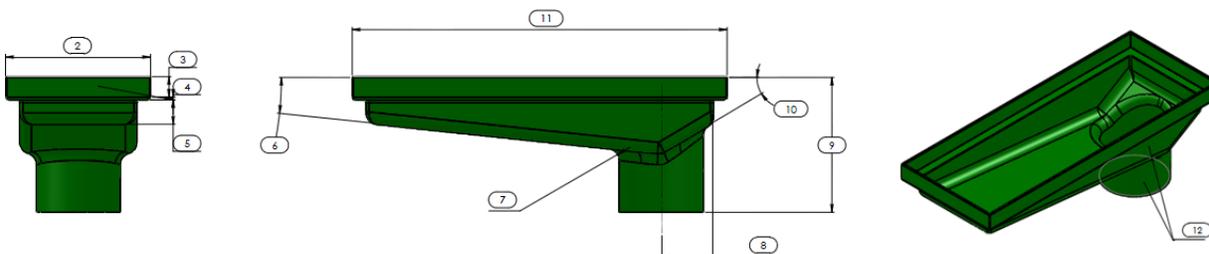
**Table B2 Preferred Offset FRP Composite Scupper Bodies**

Size Designation		D	E	F	G		
Size Dimensions (Grate Length x Width, Down Spout Diameter)		24x12xØ8	30x12xØ10	36x12xØ10	42x12xØ12		
Number	Dimension Name	Nominal Dimensions				Nominal Design Tolerance	Manufacturing Tolerance
1	Down Spout Inner Diameter	8"	10"	10"	12"	min	+/- 0.015"
2	Grate Frame Width	12"	12"	12"	12"	+ 2"/-0"	+/- 0.025"
3	Grate Frame Height	As required to contain grate and recessed from deck surface					
4	Grate Frame Flange & Wall Thickness	0.25"	0.25"	0.25"	0.25"	min	+/- 0.025"
5	Scupper Toe Depth	4"	4"	4"	4"	+1"/-0"	+/- 0.1"
6	Scupper Toe Slope	1:10	1:10	1:10	1:10	min	+ 1 degree
7	Scupper Body Radii	2"	2"	2"	2"	min	+0.1"
8	Down Spout Position to Heel	6"	6"	6"	6"	+/- 0.5"	
9	Height	13.5"	16"	18"	18"	Open	+/- 0.25"
10	Scupper Heel Slope	1:10	1:10	1:10	1:10	min	+0.1"
11	Grate Frame Length	24"	30"	36"	42"	+ 2"/-0"	+/- 0.025"
12	Scupper and Down Spout Wall Thickness	0.25"	0.25"	0.25"	0.25"	min	+0.015"

**SPECIAL PROVISION**  
**SECTION 502**  
**STRUCTURAL CONCRETE**  
 (Fiber Reinforced Polymer Bridge Drains)  
 Standard Details  
**APPENDIX B**

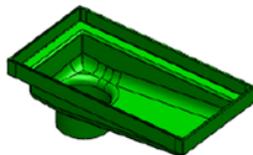


**Bridge Drain – Symmetric Inlet**

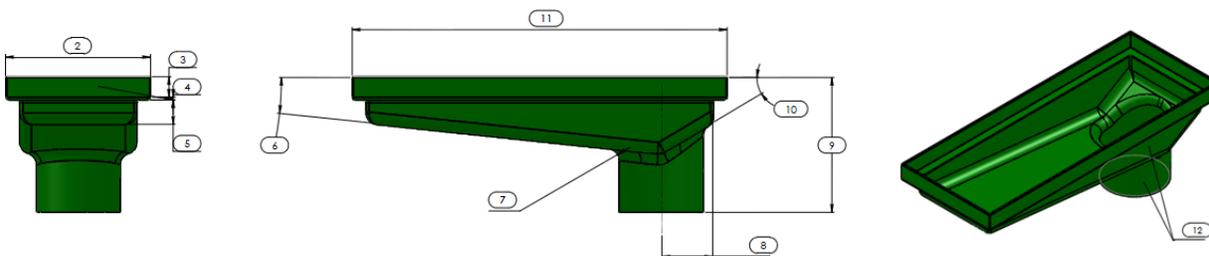


**Table B1 Preferred Symmetric FRP Composite Inlet Bodies**

Size Designation		A	B	C		
Size Dimensions (Grate Length x Width, Down Spout Diameter)		12x12xØ8	14x14xØ10	18x18xØ12		
Number	Dimension Name	Nominal Dimensions			Nominal Design Tolerance	Manufacturing Tolerance
1	Down Spout Inner Diameter	8"	10"	12"	min	+/- 0.015"
2	Grate Frame Width	12"	14"	18"	+/- 1"	+/- 0.025"
3	Grate Frame Height	As required to contain grate and recessed from deck surface				
4	Grate Frame Flange & Wall Thickness	0.25"	0.25"	0.25"	min	+/- 0.025"
5	Scupper Toe Depth	4"	4"	4"	+1"/-0"	+/- 0.1"
6	Scupper Toe Slope	1:10	1:10	1:10	min	+ 1 degree
7	Scupper Body Radii	2"	2"	2"	min	+0.1"
8	Down Spout Position to Heel	6"	6"	6"	+/- 0.5"	
9	Height	18"	18"	18"	Open	+/- 0.25"
10	Scupper Heel Slope	1:10	1:10	1:10	min	+0.1"
11	Grate Frame Length	12"	14"	18"	+/- 1"	+/- 0.025"
12	Scupper and Down Spout Wall Thickness	0.25"	0.25"	0.25"	min	+0.015"



**Bridge Drain-Offset Scupper**



**Table B2 Preferred Offset FRP Composite Scupper Bodies**

Size Designation		D	E	F	G		
Size Dimensions (Grate Length x Width, Down Spout Diameter)		24x12xØ8	30x12xØ10	36x12xØ10	42x12xØ12		
Number	Dimension Name	Nominal Dimensions				Nominal Design Tolerance	Manufacturing Tolerance
1	Down Spout Inner Diameter	8"	10"	10"	12"	min	+/- 0.015"
2	Grate Frame Width	12"	12"	12"	12"	+ 2"/-0"	+/- 0.025"
3	Grate Frame Height	As required to contain grate and recessed from deck surface					
4	Grate Frame Flange & Wall Thickness	0.25"	0.25"	0.25"	0.25"	min	+/- 0.025"
5	Scupper Toe Depth	4"	4"	4"	4"	+1"/-0"	+/- 0.1"
6	Scupper Toe Slope	1:10	1:10	1:10	1:10	min	+ 1 degree
7	Scupper Body Radii	2"	2"	2"	2"	min	+0.1"
8	Down Spout Position to Heel	6"	6"	6"	6"	+/- 0.5"	
9	Height	13.5"	16"	18"	18"	Open	+/- 0.25"
10	Scupper Heel Slope	1:10	1:10	1:10	1:10	min	+0.1"
11	Grate Frame Length	24"	30"	36"	42"	+ 2"/-0"	+/- 0.025"
12	Scupper and Down Spout Wall Thickness	0.25"	0.25"	0.25"	0.25"	min	+0.015"

SPECIAL PROVISION  
SECTION 506  
SHOP APPLIED PROTECTIVE COATING - STEEL  
(Zinc Rich Coating System)

506.61 Basis of Payment.

This section is amended by the addition of the following:

All work associated with Protective Coating in accordance with the Plans and these Specifications will not be paid for directly but shall be considered incidental to the bridge component to which it is applied.

SPECIAL PROVISION  
SECTION 526  
CONCRETE BARRIER

526.05 Basis of Payment.

This section is amended by the addition of the following:

<u>Pay Item</u>		<u>Pay Unit</u>
526.3401	Permanent Concrete Transition Barrier – Modified	Each

**SPECIAL PROVISION**  
**SECTION 530**  
(Glass Fiber Reinforced Polymer)

Section 530 Glass Fiber Reinforced Polymer of the Standard Specifications is added as follows:

530.01 Description This work shall also consist of furnishing and placing Glass Fiber Reinforced Polymer (GFRP) reinforcement bars, in accordance with these specifications and in conformance with the Plans, Supplemental Specifications and Special Provisions.

530.02 Materials All GFRP reinforcement will conform to the requirements shown in the AASHTO Bridge Design Guide Specifications for GFRP Reinforced Concrete Bridge Decks and Traffic Railings (November 2009), except as shown on the plans, and as stated herein. All GFRP reinforcement shall be deformed or sand coated.

GFRP bars shall be according to the modulus grade specified on the plans and shall be from one of the following approved manufacturers:

1. Aslan 100 by Hughes Brothers Inc.
2. V-Rod by Pultrall Inc.
3. ComBAR by Schoeck Bauteile
4. Mateen-bar from Sigma Development Group, LLC

All GFRP bars in the same structural component shall be supplied by the same manufacturer; there shall be no mixing of products from different manufacturers in a component unless permitted in the contract drawings.

Documentation For all GFRP reinforcement to be used on Department projects, the bar manufacturer is to furnish the Resident with two (2) copies of written certifications that the GFRP reinforcement meets the requirements of this specification. In addition, the certification is to list the test values and test procedures used to determine the physical properties of the GFRP reinforcement. Certifications bearing the notarized signature of a responsible authorized representative of the bar manufacturer are required. Each bundle of GFRP reinforcement will be identified with a corresponding lot number with the lot numbers affixed to each bundle by means of a durable tag.

Repair Material The material used to repair the cut ends of GFRP reinforcement shall comply with the requirements established by the bar manufacturer.

530.03 Schedule of Material When the Department does not furnish GFRP reinforcing bar schedules, the Contractor shall submit order lists, shape diagrams and bar layout drawings to the Resident for approval. The reinforcing bars shall not be ordered until these lists and drawings are approved. Approval shall not relieve the Contractor of full responsibility for the satisfactory completion of this item. When the Department allows the use of precast concrete deck panels, or any other significant changes that affect the quantity of reinforcing bars, the Contractor shall be

responsible for revising the reinforcing bar schedule; the revised schedule shall be submitted to the Resident for approval.

530.04 Protection of Material Delivery, storage and handling of GFRP bars shall be in accordance with the manufacturer's instructions to prevent damage. Prevent bending, coating with earth, oil, or other material, or otherwise damaging the GFRP reinforcement. When handling GFRP reinforcement, use equipment that avoids damaging or abrading the GFRP bar. Do not drop or drag GFRP reinforcement.

GFRP reinforcement shall be stored on skids or other supports a minimum of 12 inches above the ground surface and protected at all times from damage and surface contamination. The storage supports shall be constructed of wood or other material that will not damage the surface of the reinforcement or sand coating. Bundles of bars shall be stored on supports in a single layer. Each bundle shall be placed on the supports out of contact with adjacent bundles. If it is expected that GFRP bars will be required to be stored outdoors for a period in excess of two months, then they shall be protected from ultraviolet radiation. Prevent exposure of GFRP to temperatures above 120 degrees Fahrenheit during storage.

The maximum total un-repaired visible damage permitted on each linear foot of each GFRP bar shall not exceed 2 percent of the surface area in that linear foot of bar. The depth of the permissible damage shall not exceed 0.04 inches.

530.05 Fabrication Forming of GFRP reinforcing bars and tolerances for forming of GFRP reinforcing bars shall be in conformance with the latest edition of the "Manual of Standard Practice of the Concrete Reinforcing Steel Institute" and the "Detailing Manual of the American Concrete Institute".

All handling of GFRP reinforcing bars by mechanical means shall be done by equipment having padded contact areas, or by the use of nylon webbing slings. The use of chains or wire rope slings will not be allowed, even when used with padding. All bundles of GFRP bars shall be lifted with a strong back, spreader bar, multiple supports or a platform bridge to prevent bar-to-bar abrasion from sags in the bundles. Support points during lifting or transporting of bundled GFRP reinforcing bars shall be spaced at a maximum of 15 ft, or as required by the manufacturer, whichever is more restrictive. Bundled bars shall be strapped together with non-metallic or padded straps in a manner to prevent bar-to-bar abrasion due to relative movement between bars.

Individual bars shall be handled in a manner that prevents damage to the coating due to abrasion or impact, and at no time shall any bar be moved by dragging over any surface, including other reinforcing bars. Sufficient personnel shall be assigned to assure that there is compliance with the above. Bars loaded for transport shall be loaded and strapped down in a manner that will prevent damage from motion and vibration, to the greatest extent possible. Bundles of bent bars shall be transported strapped to wooden platforms or shall be crated. All individual bundles and layers of bundles shall be separated, and supported by dunnage.

530.06 Placing and Fastening

All GFRP reinforcement shall be accurately placed in the positions shown on the plans and shall be firmly held there during the placing and setting of the concrete. Immediately before placing concrete, GFRP reinforcement shall be free from all foreign material, which could decrease the bond between the GFRP and concrete. Such foreign material shall include, but not be limited to: dirt, paint, oil, bitumen and dried concrete mortar.

GFRP bars within the formwork shall be secured to prevent movement during concrete placement. The bars must be adequately supported or tied to resist settlement, floating upward, or movement in any direction during concrete placement. Field bending of GFRP will not be allowed.

Field cutting of GFRP will be permitted only with the approval of the Resident. The field cutting shall be with a high speed cutter, fine blade saw, diamond blade or masonry saw. The GFRP bars shall not be shear cut. The ends of all field cut bars shall be treated per the manufacturer's recommendations.

GFRP reinforcing bars supported on formwork shall rest on non-metallic bar supports or other acceptable materials. Wire bar supports will not be allowed. Reinforcing bars used as support bars shall be GFRP or epoxy-coated. Tie wire for GFRP reinforcing bars shall be soft annealed wire that has been nylon, epoxy or plastic coated.

Bars shall be fastened together at all intersections except where spacing is less than 1 ft in either direction, in which case, fastening at alternate intersections of each bar with other bars will be permitted providing this will hold all the bars securely in position. This fastening may be tightly twisted polymer coated wire or plastic ties.

Proper distances from the forms shall be maintained by means of stays, blocks, ties, hangers or other approved means. Blocks used for this purpose shall be precast portland cement mortar blocks of approved shape and dimensions. Chairs may be used for this purpose and, when used, must be GFRP or plastic. Layers of bars may be separated by precast portland cement mortar blocks or other approved devices. The use of pebbles, pieces of broken stone or brick, metal pipe or wooden blocks will not be allowed. The placing of reinforcement as concrete placement progresses, without definite and secure means of holding the bar in its correct position, will not be allowed.

Reinforcement shall be inspected and approved by the Resident before any concrete is placed.

530.07 Splicing Reinforcing bars shall be spliced in accordance with the requirements of this section, and in the locations shown on the plans. No modifications of, or additions to, the splice arrangements shown on the plans shall be made without the Resident's prior approval.

Any additional splices authorized shall be staggered as much as possible. All splices shall be made in a manner that will ensure that not less than 75% of the clear concrete cover and not less

than 75% of the minimum clear distance to other bars will be maintained, as compared to the cover and clear distance requirements for the unspliced bar.

Lapped splices shall be made by placing the bars in contact and wiring/tying them together. Splice laps shall be made in accordance with the plans.

530.08 Substitution Substitution of different size bars shall not be permitted except with the written authorization of the Resident.

530.09 Method of Measurement

GFRP reinforcing bars shall be measured by the linear feet reinforcement authorized. Linear feet will be as per plan estimated quantity as shown in the reinforcing schedule. If precast concrete deck panels are used, GFRP in the precast concrete deck panels will not be paid for directly, but will be considered incidental to the deck concrete. Payment for additional bars required excluded from the schedule with the exception of those bars that are included in the precast concrete deck panels will be paid for by the linear foot required as per the revised as-built reinforcing schedule; actual field measuring of bars will not be required for payment.

530.10 Basis of Payment

Payment for GFRP Reinforcement Fabricated and Delivered shall be considered full compensation for furnishing and proper storage off the ground and in accordance with the manufacturers written recommendations for storage of GFRP reinforcement.

Payment for GFRP Reinforcement, Placing shall be full compensation for installation, adjustment, and consumables related to placing reinforcing.

Payment for work associated with revisions to the GFRP reinforcing schedule, required for any significant changes that affect the quantity of reinforcing bars, will be considered incidental to related contract items if it is done at the contractor's request, payment for additional bars required excluded from the schedule with the exception of those bars that are included in the precast concrete deck panels will be paid for by the linear foot required as per revised as-built reinforcing schedule; actual field measuring of bars will not be required.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
530.30	Glass Fiber Reinforced Polymer, Fabricated and Delivered	Linear Foot
530.31	Glass Fiber Reinforced Polymer, Placing	Linear Foot

**SPECIAL PROVISION**  
**SECTION 603**  
**PIPE CULVERTS AND STORM DRAINS**

This section is amended by addition of the following:

Basis of Payment. Payment shall be in accordance with Subsection 603.12.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
603.155	12 inch Reinforced Conc. Pipe Class III	Linear Foot
603.175	18 inch Reinforced Conc. Pipe Class III	Linear Foot
603.195	24 inch Reinforced Conc. Pipe Class III	Linear Foot

**SPECIAL PROVISION**  
**SECTION 604**  
**MANHOLES AND CATCH BASINS**

(Large Type)

This section is amended by addition of the following:

Description. This work shall consist of constructing catch basins and manholes in accordance with the requirements of Section 604 of the Standard Specifications.

**CONSTRUCTION REQUIREMENTS**

Method of Measurement. Measurement shall be in accordance with Subsection 604.05.

Basis of Payment. Payment shall be in accordance with Subsection 604.06.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
604.093      60" Catch Basin Type B1	Each

**SPECIAL PROVISION**  
**SECTION 606**  
**GUARDRAIL**  
(Anchorage Assembly)

Description This work shall consist of furnishing and installing anchorage assemblies in accordance with current Standard Specifications and as shown in the attached detail and as indicated on the plans.

Materials Materials shall meet the requirements specified in the following subsections of Division 700 - Materials:

Timber Preservative	708.05
Metal Beam Rail	710.04
Timber Posts	710.07
Guardrail Hardware	710.08

**CONSTRUCTION REQUIREMENTS**

Posts Posts shall be laid out at the typical offset as if no gaps were being introduced into the guardrail. Gap shall be located as shown on project plans or as directed by the Resident. The first post on either side of the gap shall be offset 1 ft and the second post shall be offset 0.5 ft. This approximates a 151 ft radius. The Contractor shall stake the spacing of posts in the field for the approval of the Resident prior to excavating post holes. See the attached detail.

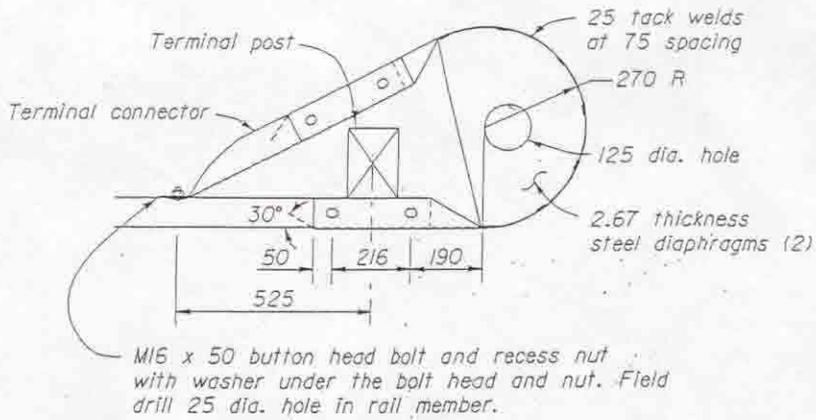
Rails The beam immediately adjacent to the gap shall be a full length 12.5 ft beam. It may be necessary to use a half length of beam in order to get the gap where it needs to be. Cut areas around the ends and at additional bolt holes shall be thoroughly cleaned and painted with two coats of approved aluminum rust resistant paint, or as directed by the project Resident. Holes shall not be burned.

Method of Measurement Anchorage assemblies will be measured by the unit each complete in place and will include one 12.5 ft beam and all components shown on the attached detail.

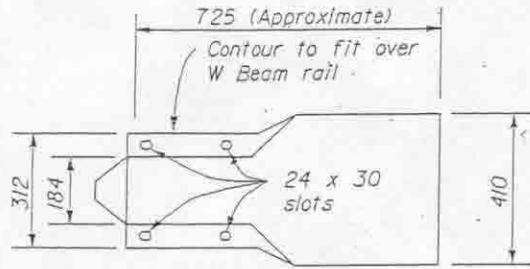
Basis of Payment The accepted quantity of anchorage assemblies will be paid for at the contract unit price per each, complete in place and will include one 12.5 ft beam and all components shown on the attached detail. Payment shall be full compensation for furnishing and installing all components as shown on the attached detail and for incidentals necessary to complete the work.

Payment will be made under:

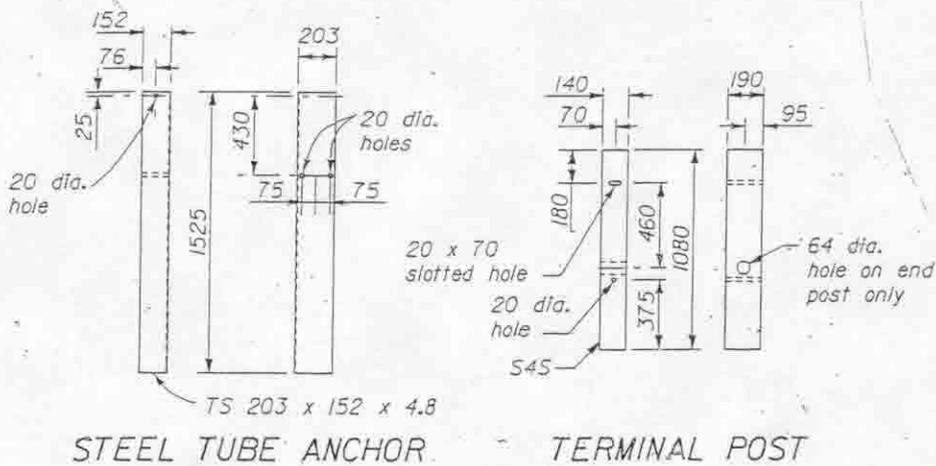
<u>Pay Item</u>	<u>Pay Unit</u>
606.259 Anchorage Assembly	Each



PLAN

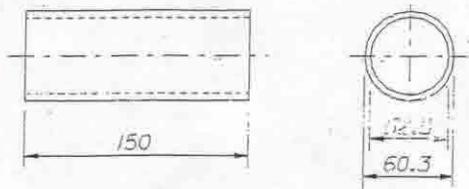


ELEVATION  
TYPE I END SECTION ASSEMBLY

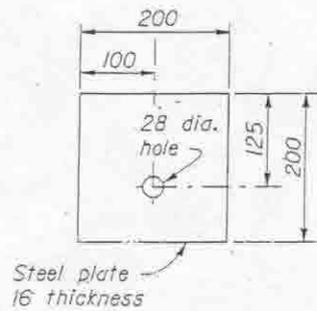


STEEL TUBE ANCHOR

TERMINAL POST

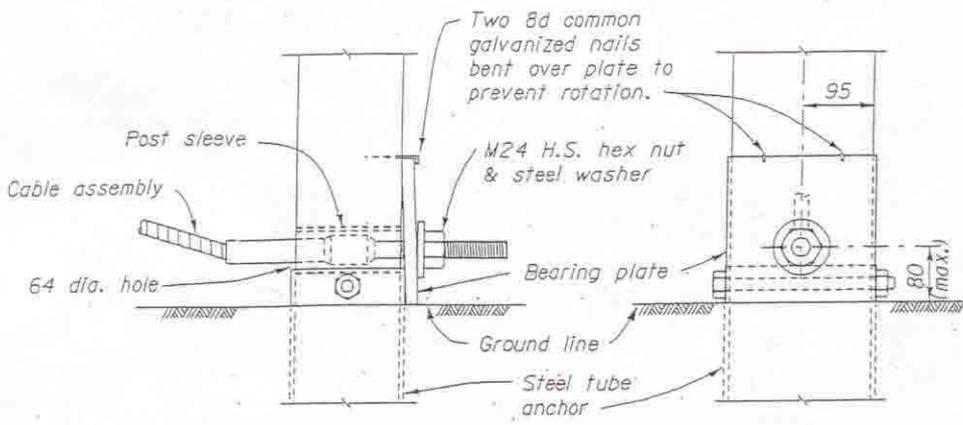


GALVANIZED STANDARD PIPE  
POST SLEEVE

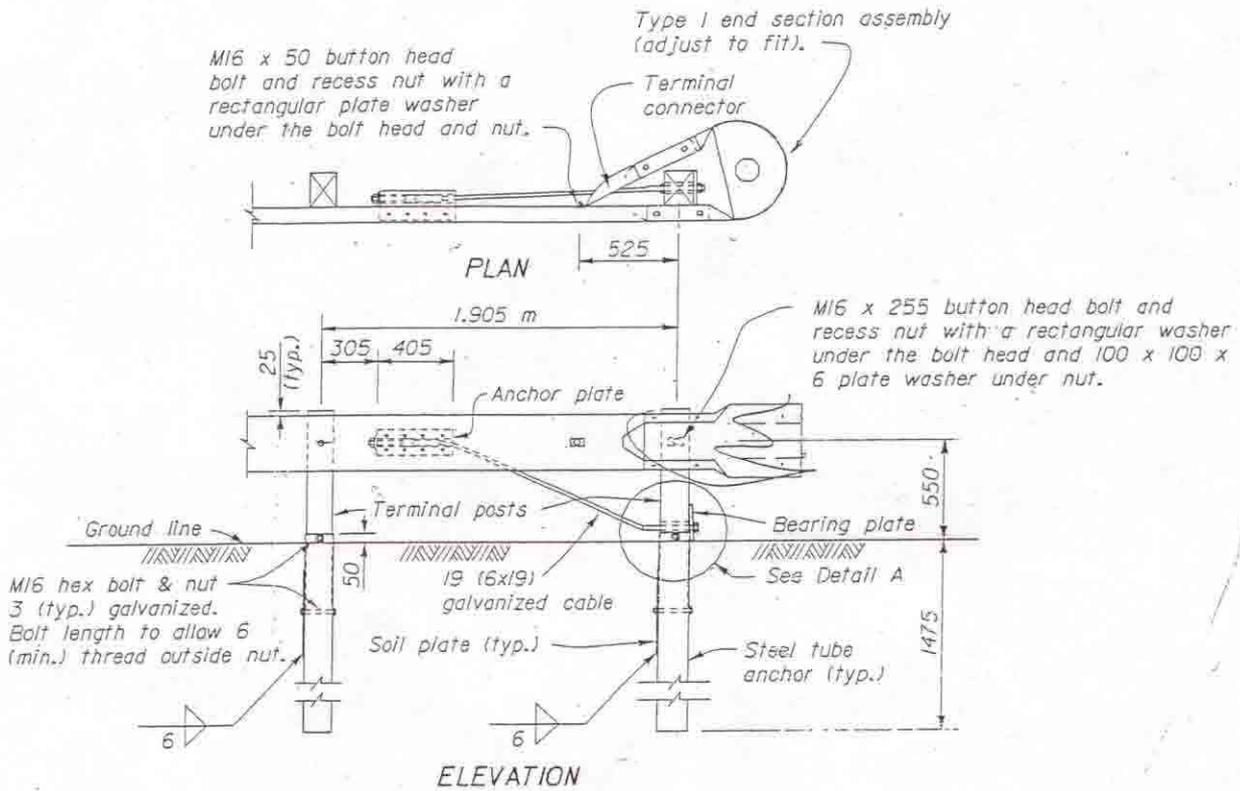


BEARING PLATE

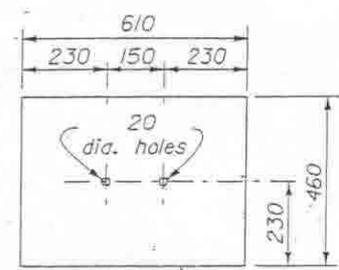
# Anchorage Assembly



DETAIL A



ANCHORAGE ASSEMBLY



Steel plate  
6 thickness  
**SOIL PLATE**  
(2 reqd.)

**NOTES:**

1. Unless otherwise shown, dimension are in millimeters.
2. Dimensional tolerances not shown or implied are intended to be those consistent with the proper functioning of the part, including its appearance, and accepted manufacturing practices.
3. Furnish hardware in metric sizes shown. Equivalent imperial sizes may be used when metric sizes are not available.

**Anchorage Assembly**

**SPECIAL PROVISION  
SECTION 634  
HIGHWAY LIGHTING**

Add to 634.01 Description

This work shall consist of furnishing and installing a wood utility pole, complete with cabinet and controls.

Add Section 634.028 Service Pole Complete With Cabinet and Controller

The Service Pole with Cabinet and Controller installation shall be in accordance with Standard Detail 634(01) and circuited in accordance with Standard Detail 634(02).

The service pole shall be installed in undisturbed soil, set plumb with the butt end not less than six and one-half feet below finish grade at point of installation. Provide a helical ground anchor and guy wire with the guy attached to pole directly opposite the point of attachment and in line with utility company service drop cable. The pole length shall be such as to comply with utility company requirements for the minimum clearance above ground at lowest point of service drop cable sag and shall meet the material requirements of Section 720.10.

The cabinet shall be in accordance with Section 715.11 Service Equipment and include a single photo cell (715.10).

The maximum size for main breaker shall be a 2-pole, 50 -ampere, 240 volt, 1 phase, 3 wire service wired with #8 AWG.

Replace Paragraph 2 of 634.08 Service

The lighting system will be supplied with electrical power by the local power company. The type of service will be single phase, three wire, 120/240 volt, 60 hertz, alternating current. The power company will make all connections of the roadway lighting system cables at the power company's service pole. The Contractor shall notify the power company at least two weeks in advance of the time they intend to start construction at each of the sites and shall make all necessary arrangements with the power company for the required installation.

All meter mounting devices shall be installed so that the meters will be upright (plumb). They shall be installed with the top of the meter not less than 48 inches or more than 60 inches from the floor to the final grade. Exceptions to this height requirement will be made where special permission has been given to install group or modular metering, overall metering enclosures, or pole-mounted meters. Level grade shall be maintained for a minimum of 3 feet in front of the meter enclosure to provide a safe working space. In order to meet this requirement on uneven terrain, as an option, the Contractor may install a pressure-treated wood platform.

For any non-residential (industrial or commercial) self-contained meter socket the bypass requirements are single phase, 100 or 150 amp, single handle lever operated.

\*\* The by-pass is particularly important for use during the Utility Company's normal business hours. Therefore, the following types of non-residential services (200A or less) are exempt from these by-pass requirements and the residential socket (non by-pass) may be utilized: Outdoor lighting (ball field, tennis court, etc.).

Add to 634.093 Basis of Payment

Service pole with cabinet and controller will be paid for at the respective Contract unit price per each, complete, operational, tested, and accepted in place, which prices shall include full compensation for all electrical components, mounting brackets, ground rods, ground wire and ground wire connections, enclosure, wiring, conduit, circuit breakers, load center, meter socket, control wiring, receptacle, device boxes, wire troughs, contactors, pull wire, photo cell and control, locks, delivery of keys to Howland, Enfield and Emera, time clocks, wood utility pole, and all labor, materials, equipment, and incidental costs required to complete the work, including all service coordination with the Emera.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
634.25 Service Pole Complete with Cabinet and Controls	Each

# Highway Lighting Quality Control Checklist

## Subsection 634.09 Field Testing

Project Pin # \_\_\_\_\_

Location (if multiple services, please be specific)- \_\_\_\_\_

Grounding Electrode Resistance at service \_\_\_\_\_

Number of Circuits \_\_\_\_\_

Hand-Off-Auto Switch? \_\_\_\_\_

### Circuit #1

**Open Circuit Resistance-** (Ohm out both hot legs at the cabinet while they are shorted together at the last pole and the fuse holders are disconnected at each pole) \_\_\_\_\_

**Megger Test-** (Meg out both hot legs to ground at the cabinet while they are shorted together at the last pole and the fuse holders are disconnected at each pole) \_\_\_\_\_

**Current draw-** (during normal operation)                      Leg #1      Leg #2  
\_\_\_\_\_

**Operating Voltage at last pole** \_\_\_\_\_

### Circuit #2

**Open Circuit Resistance-** (Ohm out both hot legs at the cabinet while they are shorted together at the last pole and the fuse holders are disconnected at each pole) \_\_\_\_\_

**Megger Test-** (Meg out both hot legs to ground at the cabinet while they are shorted together at the last pole and the fuse holders are disconnected at each pole) \_\_\_\_\_

**Current draw-** (during normal operation)                      Leg #1      Leg #2  
\_\_\_\_\_

**Operating Voltage at last pole** \_\_\_\_\_

I, \_\_\_\_\_, certify that this work was done in accordance with subsection 643.14 and current NEC \_\_\_\_\_ guidelines, and when tested, was functioning as intended. (YEAR)

Electrician's Signature \_\_\_\_\_

Electrician's License # \_\_\_\_\_

# Highway Lighting Quality Control Checklist

## Subsection 634.09 Field Testing

Project Pin # \_\_\_\_\_

Location (if multiple services, please be specific)- \_\_\_\_\_

Grounding Electrode Resistance at service \_\_\_\_\_

Number of Circuits \_\_\_\_\_

Hand-Off-Auto Switch? \_\_\_\_\_

### Circuit #3

**Open Circuit Resistance-** (Ohm out both hot legs at the cabinet while they are shorted together at the last pole and the fuse holders are disconnected at each pole) \_\_\_\_\_

**Megger Test-** (Meg out both hot legs to ground at the cabinet while they are shorted together at the last pole and the fuse holders are disconnected at each pole) \_\_\_\_\_

**Current draw-** (during normal operation) Leg #1 \_\_\_\_\_ Leg #2 \_\_\_\_\_

**Operating Voltage at last pole** \_\_\_\_\_

### Circuit #4

**Open Circuit Resistance-** (Ohm out both hot legs at the cabinet while they are shorted together at the last pole and the fuse holders are disconnected at each pole) \_\_\_\_\_

**Megger Test-** (Meg out both hot legs to ground at the cabinet while they are shorted together at the last pole and the fuse holders are disconnected at each pole) \_\_\_\_\_

**Current draw-** (during normal operation) Leg #1 \_\_\_\_\_ Leg #2 \_\_\_\_\_

**Operating Voltage at last pole** \_\_\_\_\_

I, \_\_\_\_\_, certify that this work was done in accordance with subsection 643.14 and current NEC \_\_\_\_\_ guidelines, and when tested, was functioning as intended. (YEAR)

Electrician's Signature \_\_\_\_\_

Electrician's License # \_\_\_\_\_

# Traffic Signal Quality Control Checklist

## Subsection 643.14 Field Testing

Project Pin # \_\_\_\_\_

Grounding Electrode Resistance at service \_\_\_\_\_

ID tags on loop amps / detector cards? \_\_\_\_\_

**Location** \_\_\_\_\_

Street Approach	_____		
Loop #	Resistance	_____	
Phase #	Meg to ground	_____	
L,C, or R Lane	Amount of bondo covering loop	_____	
Pulse or Presence	_____		

Street Approach	_____		
Loop #	Resistance	_____	
Phase #	Meg to ground	_____	
L,C, or R Lane	Amount of bondo covering loop	_____	
Pulse or Presence	_____		

Street Approach	_____		
Loop #	Resistance	_____	
Phase #	Meg to ground	_____	
L,C, or R Lane	Amount of bondo covering loop	_____	
Pulse or Presence	_____		

I, \_\_\_\_\_, certify that this work was done in accordance with subsection 643.14 and current NEC \_\_\_\_\_ guidelines, and when tested, was functioning as intended. (YEAR)

Electrician's Signature \_\_\_\_\_

Electrician's License # \_\_\_\_\_

# APPENDIX B - SPECIFICATIONS

## SPECIAL PROVISION

### SECTION 910 SPECIAL WORK

(Utility Conduit – Mid-Maine Telecom, LLC and Time Warner Cable – Bridge Only)

Description This item shall consist of all work shown in the Plans, as referenced in Special Provision 104 –Mid-Maine Telecom (MMT) and Time Warner Cable (TWC) – Bridge Only and described in this special provision. This special provision is limited to the work on the bridge and up to 10 feet beyond the end of each at-grade approach slab. Work related to the bridge approaches outside these limits is addressed in separate special provisions for each of the above utilities.

The Bridge work between each abutment shall consist of furnishing and installing all materials and labor for the installation of two (2) 5-inch IPS/XW Champion Fiberglass telecommunication conduits (for MMT) and two (2) 5-inch IPS/HW Champion Fiberglass telecommunications conduits (for TWC) throughout the entire length of bridge between abutments including conduit, expansion joints, conduit support hangers with all of their components and incidentals related to these items necessary to complete the work. The bridge support cross frame M and D members will be predrilled with appropriate sized support bolt hole and hanger spacing. The utility owners' name shall be clearly labeled and visible at each end of the bridge on their respective conduit to differentiate it from conduits intended for other utility owners.

The Bridge work extending through the concrete abutments to ten (10) feet beyond each approach slab shall consist of furnishing and installing all materials and labor for the installation of two (2) 4-inch Schedule 80 PVC conduit (for MMT) and two (2) 4-inch Schedule 80 PVC plastic conduit (for TWC) sleeved within four (4) 4-inch galvanized rigid steel conduit sleeves on each side. The Bridge work conduit shall transition from the 5 inch IPS/HW conduit to the 4 inch Schedule 80 PVC plastic before the conduit passes through the bridge abutments. Installation shall include all trenching and backfilling, sand bed, pull string (5000 lb. mule tape for MMT), tracer wire, warning tape, and all associated hardware and incidentals related to these items necessary to complete the work. The utility owners' name shall be clearly labeled and visible at each terminus on their respective conduit to differentiate it from conduits intended for other utility owners.

### CONSTRUCTION REQUIREMENTS

Materials The Contractor shall be responsible for the furnishing and fabrication of all material and associated hardware as shown in the Plans and described in this specification.

The materials furnished by the Contractor shall be new. All materials shall conform to NEMA or UL standards as applicable. Non-metallic conduit shall be rigid fiberglass reinforce plastic (FRP) and un-plasticized polyvinylchloride (PVC) for both MMT and TWC as shown on the Plans. The galvanized rigid conduit (GRC) used to sleeve the conduits off the bridge shall be rated for direct burial or in concrete per Article 344 of NEC. Mule tape rated at 5000 pounds shall extend through the entire run of each MMT conduit to north and south tie-in points as located on the Plans. The TWC conduit(s) shall have a pull-line of polypropylene rope of a minimum of ¼ inch diameter extending through the entire run to north and south tie-in points as located on the Plans.

## APPENDIX B - SPECIFICATIONS

The Contractor shall within 60 days following execution of the contract, submit a list of materials which are to be installed. The list shall include the manufacturer, size, and identifying number of each item. The list shall be supplemented by such data as may be required, including detailed scale drawings of proposed minor deviations from the plans. The Contractor shall submit for review, design data and sample articles of the material proposed for use. All of the data shall be submitted in duplicate.

Workmanship shall conform to the requirements of: NEC, NESC, ASTM Standards, and the ANSI, the local Utility Companies, the State of Maine, Manufactures Specifications and any local ordinances that may apply except when otherwise noted on the Plans or in the Special Provisions.

Conduits shall be of the sizes noted on the Plans, which are indicated as the nominal inside diameter.

The Contractor shall be responsible for and shall repair all damage caused to underground drainage structures, utilities, or lighting conduit, which are encountered during construction.

Conduits placed in the bridge superstructure shall be securely supported and fastened as shown on the Plans to maintain the conduits position. The support rods, intermediate rods, and all metallic hardware shall be hot dipped galvanized steel and shall meet or exceed requirements of ASTM A507 with ASTM 153 for galvanizing. Metal components that are custom fabricated shall have hot dipped galvanizing applied in accordance with ASTM A153 with a minimum coating of 2.0 oz./sq. ft. using high grade zinc conforming to ASTM B6-00 with less than .03% lead used in the process. Each vertical portion of the support hanger in contact with the conduit shall be sleeved with a FRP tube and all horizontal members such as flat bars or square tubing shall be constructed of FRP. FRP conduit and FRP support hangers shall be manufactured by Champion Fiberglass, Inc. or approved equal.

Expansion fittings in the superstructure shall be double "O"-ring type expansion couplings with a movement capacity as indicated on the plans. During the installation of long runs of conduit, one end shall be left unconnected or a double "O"-ring expansion coupling inserted near one end of the run until the final covering of the conduit is in progress to allow for expansion and contraction. FRP expansion is about 1/3<sup>rd</sup> that of PVC or comparable to stainless steel and should be accounted for in accordance with NEC 2011 Article 355.44.

Basis of Payment: Payment for Special Work – Utility Conduit for MMT and Time Warner Cable - Bridge Only) shall be full compensation for all materials, equipment, labor, and hardware necessary to install the utility conduits. Payment for work shall include furnishing and installing bridge utility support system including brackets, spacers, and threaded anchor rods, furnishing and installing conduits (including pull-lines and conduit sleeves for each conduit) and sleeves, and the required excavation and backfill with granular borrow.

### Method of Measurement

No measurement shall be made

### Basis of Payment

The accepted Special Work will be paid for the contract Lump Sum price, which shall be full compensation for all materials, labor and equipment necessary for the work described above and as shown on the Plans, and/or as directed by the Resident.

## APPENDIX B - SPECIFICATIONS

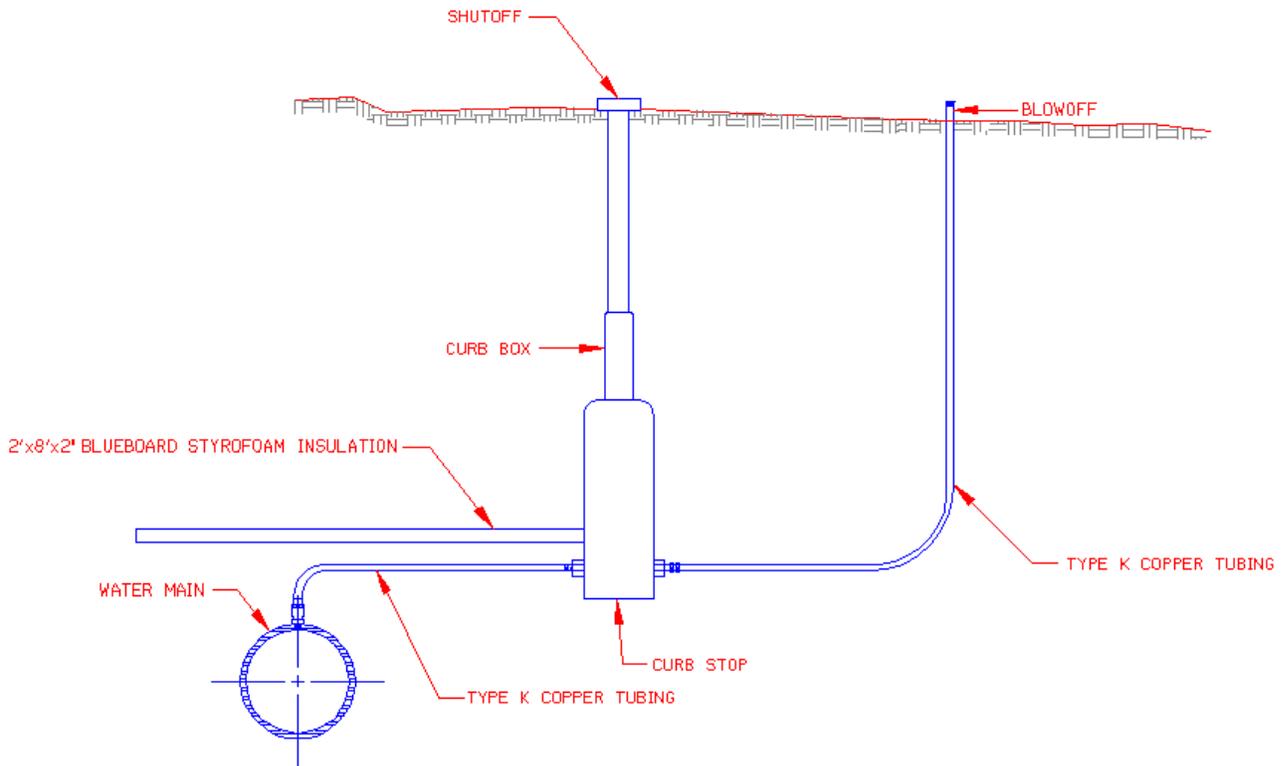
<u>Pay Item</u>	<u>Description</u>	<u>Pay Unit</u>
910.301	Special Work – Utility Conduit (MMT and TWC - Bridge Only)	Lump Sum

Required Pre-Installation Meeting: Before beginning any utility installation work a utility meeting shall be held with all utilities, the MaineDOT Resident, and MaineDOT Utility Coordinator (Calvin Seeley or Denver Small).

**SPECIAL PROVISION**  
**SECTION 910**  
**SPECIAL WORK - WATER**

Description: This work shall consist of the adjustment of gate valve boxes and air release assembly as indicated in the Bid Book, Plans, or as directed by the Resident.

1. Gate Valve Box, Adjust to Grade shall consist of adjusting a gate valve box to the required final grade, including any lowering and any other adjustments that may be necessary prior to setting the final grade.
2. Air Release Assembly:  
The Shutoff Valve Box, Relocate & Adjust to Grade shall consist of relocating/adjusting the shutoff valve box from its existing location to Sta. 15+38.1 – 19' RT to the required final grade, including any lowering and any other adjustments that may be necessary prior to setting the final grade. In addition, the Blow-off, Relocate & Adjust to Grade shall consist of relocating/adjusting the blow-off valve box from its existing location to Sta. 15+39.9 – 22' RT to the required final grade, including any lowering and any other adjustments that may be necessary prior to setting the final grade.



**AIR RELEASE ASSEMBLY**

**WATER LINE BLOW-OFF DETAIL**

NOT TO SCALE

Materials: Any gate valve boxes or air release assembly damaged by improper construction methods or handling by the Contractor, as determined by the Department, shall be replaced at the Contractor's expense.

Method of Measurement: Gate Valve Box, Adjust to Grade and the Air Release Assembly - Relocation will be measured by complete and in place.

Basis of Payment: Payment for Gate Valve Box, Adjust to Grade and the Air Release Assembly - Relocation shall be full compensation for all equipment, labor, and incidental materials necessary to adjust a gate valve box and Air Release Assembly - Relocation as specified above.

Pay Item

Pay Unit

910.301 Special Work - Water

Lump Sum

# APPENDIX B - SPECIFICATIONS

## SPECIAL PROVISION SECTION 910 SPECIAL WORK - SEWER

Description: This work shall consist of the adjustment of manholes to grade as indicated in the Bid Book, Plans, or as directed by the Resident.

Adjust Sewer Manhole to Grade shall consist of adjusting a manhole to the required final grade, including any lowering and any other adjustments that may be necessary prior to setting the final grade and in accordance with this Section and Section 604 - Manholes, Inlets, and Catch Basins.

<u>Pay Item</u>	<u>Pay Unit</u>
910.301 Special Work - Sewer	Lump Sum

Novemebr 05, 2014  
Supersedes March 25, 2014

## STANDARD DETAIL UPDATES

Standard Details and Standard Detail updates are available at:

<http://maine.gov/mdot/contractors/publications/standarddetail/>

<b><u>Detail #</u></b>	<b><u>Description</u></b>	<b><u>Revision Date</u></b>
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	No Changes to the November 2014 Standard Detail Book	
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SUPPLEMENTAL SPECIFICATION  
(Corrections, Additions, & Revisions to Standard Specifications - November 2014)

**SECTION 101**  
**CONTRACT INTERPRETATION**

101.2 Definitions

Page 1-5 – Remove the definition of Bridge in its entirety and replace with:

**“Bridge A structure that is erected over a depression or an obstruction, such as water, a highway or a railway, and has an opening measured along the centerline of the Roadway of more than 20 feet between: The faces of abutments; spring line of arches; extreme ends of openings of box culverts, pipes or pipe arches; or the extreme ends of openings for multiple box culverts, pipes or pipe arches.”**

Page 1-12 – Remove the definition of Large Culvert in its entirety and replace with:

**“Large Culvert Any structure not defined as a Culvert or Bridge that provides a drainage or non-drainage opening under the Roadway or Approaches to the Roadway, with an opening that is 5 feet but less than 10 feet.”**

Remove the definition of Minor Span in its entirety and replace with:

**“Minor Span Same definition as Bridge, except having an opening of between 10 feet and 20 feet, inclusive.”**

**SECTION 105**  
**GENERAL SCOPE OF WORK**

105.4.5 Special Detours Remove this subsection in its entirety and replace with:

**“105.4.5 Maintenance of Existing Structures When a new Bridge or Minor Span is being installed on a new alignment and the existing structure is to remain in service, the Department will maintain the existing structure and the portions of the roadway required for maintaining traffic until such time that the new structure is opened to traffic and the existing structure is taken out of service. A similar situation exists when a new Bridge or Minor Span is being installed on the same alignment as the existing structure, requiring a temporary detour to be installed by the Contractor per Section 510, Special Detours, prior to removal of the existing structure. In this case, the Department will maintain the existing structure and the portions of the existing roadway required for maintaining traffic until such time that either the temporary detour is opened to traffic or the Contractor begins any work on the existing structure, including, but not limited to, repairs, modifications, moving, demolition or removal. In either case, once the new structure or temporary detour is opened to traffic, or the Contractor begins any work on the existing structure, the Contractor shall be solely responsible for all maintenance of the existing structure and the portions of the existing approaches that lie outside the new roadway or the temporary detour, respectively. This specification is not intended to supersede Standard Specification Section 104.3.11, Responsibility for Property of Others.”**

## **APPENDIX A TO DIVISION 100**

Remove Section D in its entirety as this is now covered in Section 105.10 EQUAL OPPORTUNITY AND CIVIL RIGHTS.

### **SECTION 203** **EXCAVATION AND EMBANKMENT**

#### 203.02 Materials

At the bottom of page 2-12, add as the first item in the list:

**Crushed Stone, ¾ inch      703.13**

### **SECTION 304** **AGGREGATE BASE AND SUBBASE COURSE**

#### 304.02 Aggregate

Remove the sentence “Aggregate for base and subbase courses shall be material meeting the aggregate type requirements specified in the following table” in its entirety and the table that follows it with headings of ‘Material’ and ‘Aggregate Type’.

### **SECTION 307** **FULL DEPTH RECYCLED PAVEMENT**

Remove this Section in its entirety and replace with:

#### **SECTION 307** **FULL DEPTH RECYCLING** **(UNTREATED OR TREATED WITH EMULSIFIED ASPHALT STABILIZER)**

**307.01 Description** This work shall consist of pulverizing a portion of the existing roadway structure into a homogenous mass, adding an emulsified asphalt stabilizer (if required) to the depth of the pulverized material specified in the contract, placing and compacting this material to the lines, grades, and dimensions shown on the plans or established by the Resident.

#### **MATERIALS**

**307.02 Pulverized Material** Pulverized material shall consist of the existing asphalt pavement layers and one inch or more as specified of the underlying gravel, pulverized and blended into a homogenous mass. Pulverized material will be processed to 100% passing a 2 inch square mesh sieve.

**307.021 New Aggregate and Additional Recycled Material** New aggregate, if required by the contract, shall meet the requirements of Subsection 703.10 - Aggregate for Untreated Surface Course and Leveling Course, Type A. Aggregate Subbase Course Gravel Type D processed to 100 percent passing a 2 inch square mesh sieve and meeting the

requirements of 703.06 – Aggregate for Base and Subbase may be used in areas requiring depths greater than 2 inches. New aggregate, will be measured and paid for under the appropriate item.

Recycled material, if required, shall consist of salvaged asphalt material from the project or from off-site stockpiles that has been processed before use to 100 percent passing a 2 inch square mesh sieve. Recycled material shall be conditionally accepted at the source by the Resident. It shall be free of winter sand, granular fill, construction debris, or other materials not generally considered asphalt pavement.

Recycled material generated and salvaged from the project shall be used within the roadway limits to the extent it is available as described in 307.09. No additional payment will be made for material salvaged from the project.

Recycled material supplied from off-site stockpiles shall be paid for as described in the contract, or by contract modification.

**307.022 Emulsified Asphalt Stabilizer.** If required, the emulsified asphalt stabilizer shall be grade MS-2, MS-4, SS-1, or CSS-1 meeting the requirements of Subsection 702.04 Emulsified Asphalt.

**307.023 Water** Water shall be clean and free from deleterious concentrations of acids, alkalis, salts or other organic or chemical substances.

**307.024 Portland Cement** If required, Portland Cement shall be Type I or II meeting the requirements of AASHTO M85.

**307.025 Hydrated Lime** If required, Hydrated Lime shall meet the requirements of AASHTO M216.

## EQUIPMENT

**307.03 Pulverizer** The pulverizer shall be a self-propelled machine, specifically manufactured for full-depth recycling work and capable of reducing the required existing materials to a size that will pass a 2 inch square mesh sieve. The machine shall be equipped with standard automatic depth controls and must maintain a consistent cutting depth and width. The machine also shall be equipped with a gauge to show depth of material being processed.

**307.04 Liquid Mixer Unit or Distributor.** If treatment of the recycled layer with emulsified asphalt is required by the contract, a liquid mixing unit or distributor shall be used to introduce the emulsified asphalt stabilizer into the pulverized material. The mixing unit shall contain a liquid distribution and mixing system which has been specifically manufactured for full-depth recycling work, capable of mixing the pulverized material with an evenly metered distribution of emulsified asphalt into a homogeneous mixture, to the depth and width required.

The mixing unit shall be designed, equipped, maintained, and operated so that emulsified asphalt stabilizer at constant temperature may be applied uniformly on variable widths of pulverized material up to 6 feet at readily determined and controlled rates from 0.01 to 1.06 gal/yd<sup>2</sup> with uniform pressure and with an allowable variation from any specified rate not to exceed 0.01 gal/ yd<sup>2</sup>. Mixing units shall include a tachometer, pressure gages, and accurate volume measuring devices or a calibrated tank and a thermometer for measuring temperatures of tank contents.

**307.041 Cement or Lime Spreader** If required by the contract, spreading of the Portland Cement or Hydrated Lime shall be done with a spreader truck designed to spread dry particulate (such as Portland Cement or Lime) or other approved means to insure a uniform distribution across the roadway and minimize fugitive dust. Pneumatic application, including through a slotted pipe, will not be permitted. Other systems that have been developed include fog systems, vacuum systems, etc. Slurry applications may also be accepted. The Department reserves the right to accept or reject the method of spreading cement. The Contractor shall provide a method for verifying that the correct amount of cement is being applied.

**307.05 Placement Equipment** Placement of the Full Depth recycled material to the required slope and grade shall be done with an approved highway grader or by another method approved by the Resident.

**307.06 Rollers** The full depth recycled material shall be rolled with a vibratory pad foot roller, a vibratory steel drum soil compactor and a pneumatic tire roller. The pad foot roller drum shall have a minimum of 112 tamping feet 3 inches in height, a minimum contact area per foot of 17 inch<sup>2</sup>, and a minimum width of 84 inches. The vibratory steel drum roller shall have a minimum 84 inch width single drum. The pneumatic tire roller shall meet the requirements of Section 401.10 and the minimum allowable tire pressure shall be 85 psi.

## MIX DESIGN

If treatment of the recycled layer with emulsified asphalt is required by the contract, the Department will supply a mix design for the emulsified asphalt stabilized material based on test results from pavement and soil analysis taken to the design depth. The Department will provide the following information prior to construction:

1. Percent of emulsified asphalt to be used.
2. Quantity of lime or cement to be added.
3. Optimum moisture content for proper compaction.
4. Additional aggregate (if required).

After a test strip has been completed or as the work progresses, it may be necessary for the Resident to make necessary adjustments to the mix design. Changes to compensation will be in accordance with the Mix Design Special Provision.

## CONSTRUCTION REQUIREMENTS

**307.06 Pulverizing** The entire depth of existing pavement shall be pulverized together with 1 inch or more of the underlying gravel into a homogenous mass. All pulverizing shall be done with equipment that will provide a homogenous mass of pulverized material, processed in-place, which will pass a 2 inch square mesh sieve.

**307.07 Weather Limitations** Full depth recycled work shall be performed when;

- A. Recycling operations will be allowed between May 15<sup>th</sup> and September 15<sup>th</sup> inclusive in Zone 1 - Areas north of US Route 2 from Gilead to Bangor and north of Route 9 from Bangor to Calais.
- B. The atmospheric temperature, as determined by an approved thermometer placed in the shade at the recycling location, is 50°F and rising.
- C. When there is no standing water on the surface.
- D. During generally dry conditions, or when weather conditions are such that proper pulverizing, mixing, grading, finishing and curing can be obtained using proper procedures, and when compaction can be accomplished as determined by the Resident.
- E. When the surface is not frozen and when overnight temperatures are expected to be above 32°F.
- F. Wind conditions are such that the spreading of lime or cement on the roadway ahead of the recycling machine will not adversely affect the operation.

**307.08 Surface Tolerance** The complete surface of the Full Depth Recycled course shall be shaped and maintained to a tolerance, above or below the required cross sectional shape, of 3/8 inch.

**307.09 Full Depth Recycling Procedure** New aggregate or recycled material meeting the requirements of Section 307.021 - New Aggregate and Additional Recycled Material, shall be added as necessary to restore cross-slope and/or grade before pulverizing. Locations will be shown on the plans or described in the construction notes. The Resident may add other locations while construction of the project is in progress. The Contractor will use recycled material to the extent it is available, in lieu of new aggregate. The material shall then be pulverized, processed, and blended into a homogeneous mass passing a 2 inch square mesh sieve. Material found not pulverized down to a 2 inch size will be required to be reprocessed by the recycler with successive passes until approved by the Resident.

Should the Contractor be required to add new aggregate or recycled material to restore cross-slope and/or grade after the initial pulverizing process, those areas will require re-processing to blend into a homogenous mass passing a 2 in square mesh sieve.

Sufficient water shall be added during the recycling process to maintain optimum moisture for compaction.

The resultant material from the initial pulverizing processes shall be graded and

compacted to the cross-slope and profile shown on the plans or as directed by the Resident. The Contractor will also be responsible for re-establishing the existing profile grade. The completed surface of the full depth recycled course shall be shaped and maintained to a tolerance, above or below the required cross sectional shape, of  $\frac{3}{8}$  inch. Areas not meeting this tolerance will be repaired as described in Section 307.091. The initial pulverizing process density requirements will be the same as Section 307.101 unless otherwise directed by the Resident.

Additives, if required, shall be introduced following completion of the initial pulverizing and blending process. Emulsified asphalt stabilizer shall be incorporated into the top of the processed material as specified in section 307.04 to the depth specified in the contract by use of the liquid mixer unit or a distributor, at the rate specified in the mix design. The emulsified asphalt shall then be uniformly blended into a homogeneous mass until an apparent uniform distribution has occurred. The rate of application may be adjusted as necessary by the Resident. Cement or lime shall be introduced as described in section 307.041. The resultant material shall be graded and compacted to the cross-slope and profile shown on the plans or as directed by the Resident. The Contractor will also be responsible for re-establishing the existing profile grade.

After final compaction, the roadway surface shall be treated with a light application of water, and rolled with pneumatic-tired rollers to create a close-knit texture. The finished layer shall be free from:

- A. Surface laminations.
- B. Segregation of fine and coarse aggregate.
- C. Corrugations, centerline differential, potholes, or any other defects that may adversely affect the performance of the layer, or any layers to be placed upon it.

The Contractor shall protect and maintain the recycled layer until a lift of pavement is applied. Any damage or defects in the layer shall be repaired immediately. An even and uniform surface shall be maintained. The recycled surface shall be swept prior to hot mix asphalt overlay placement.

**307.091 Repairs** Repairs and maintenance of the recycled layers, resulting from damage caused by traffic, weather or environmental conditions, or resulting from damage caused by the Contractor's operations or equipment, shall be completed at no additional cost to the Department.

For recycled layers stabilized with emulsified asphalt, low areas will be repaired using a hot mix asphalt shim. Areas up to 1 inch high can be repaired by milling or shimming with hot mix asphalt. Areas greater than 1 inch high will be repaired using a hot mix asphalt shim. All repair work will be done with the Resident's approval at the Contractor's expense.

## TESTING REQUIREMENTS

**307.10 Quality Control** The Contractor shall operate in accordance with the approved Quality Control Plan (QCP) to assure a product meeting the contract requirements. The QCP shall meet the requirements of Section 106.4 - Quality Control and this Section. The Contractor shall not begin recycling operations until the Department approves the QCP in writing.

Prior to performing any recycling process, the Department and the Contractor shall hold a Pre-recycle conference to discuss the recycling schedule, type and amount of equipment to be used, sequence of operations, and traffic control. A copy of the QC random numbers to be used on the project shall be provided to the Resident. All field supervisors including the responsible onsite recycling process supervisor shall attend this meeting.

The QCP shall address any items that affect the quality of the Recycling Process including, but not limited to, the following:

- A. Sources for all materials, including New Aggregate and Additional Recycled Material.
- B. Make and type of rollers including weight, weight per inch of steel wheels, and average contact pressure for pneumatic tired rollers.
- C. Testing Plan.
- D. Recycling operations including recycling speed, methods to ensure that segregation is minimized, grading and compacting operations.
- E. Methods for protecting the finished product from damage and procedures for any necessary corrective action.
- F. Method of grade checks.
- G. Examples of Quality Control forms.
- H. Name, responsibilities, and qualifications of the Responsible onsite Recycling Supervisor experienced and knowledgeable with the process.
- I. A note that all testing will be done in accordance with AASHTO and MDOT/ACM procedures.

The Project Superintendent shall be named in the QCP, and the responsibilities for successful implementation of the QCP shall be outlined.

The Contractor shall sample, test, and evaluate the full depth reclamation process in accordance with the following minimum frequencies:

**MINIMUM QUALITY CONTROL FREQUENCIES**

<b>Test or Action</b>	<b>Frequency</b>	<b>Test Method</b>
<b>Density</b>	<b>1 per 1000 feet / lane</b>	<b>AASHTO T 310</b>
<b>Air Temperature</b>	<b>4 per day at even intervals</b>	
<b>Surface Temperature</b>	<b>At the beginning and end of each days operation</b>	
<b>Yield of all materials (Daily yield, yield since last test, and total project yield.)</b>	<b>1 per 1000 ft/lane</b>	

The Department may view any QC test and request a QC test at any time. The Contractor shall submit all QC test reports and summaries in writing, signed by the appropriate technician, to the Department’s onsite representative by 1:00 P.M. on the next working day, except when otherwise noted in the QCP due to local restrictions. The Contractor shall make all test results, including randomly sampled densities, available to the Department onsite.

The Contractor shall cease recycling operations whenever one of the following occurs:

- A. The Contractor fails to follow the approved QCP.
- B. The Contractor fails to achieve 98 percent density after corrective action has been taken.
- C. The finished product is visually defective, as determined by the Resident.
- D. The computed yield differs from the mix design by 10 percent or more.

Recycling operations shall not resume until the Department approves the corrective action to be taken.

**307.101 Test Strip** The contractor shall assemble all items of equipment for the recycling operation on the first day of the recycling work. The Contractor shall construct a test strip for the project at a location approved by the Resident. The Responsible onsite Recycling Supervisor will work with Department personnel to determine the suitability of the mixed material, moisture control within the mixed material, and compaction and surface finish. The test strip section is required to:

- A. Demonstrate that the equipment and processes can produce recycled layers to meet the requirements specified in these special provisions.
- B. Determine the effect on the gradation of the recycled material by varying the forward speed of the recycling machine and the rotation rate of the milling drum.
- C. Determine the optimum moisture necessary to achieve proper compaction of the recycled layer.
- D. Determine the sequence and manner of rolling necessary to obtain the compaction requirements and establish a target density. The Contractor and the Department will both conduct testing with their respective gauges at this time.

The test strip shall be at least 300 feet in length of a full lane-width (or a half-road width). Full recycling production will not start until a passing test strip has been accomplished. If a test strip fails to meet the requirements of this specification, the Contractor will be required to repair or replace the test strip to the satisfaction of the Resident. Any repairs, replacement, or duplication of the test strip will be at the Contractor's expense.

After the test strip has been pulverized, and the roadway brought to proper shape, the Contractor shall add water until it is determined that optimum moisture has been obtained. The test strip shall then be rolled using the specified compaction equipment as directed until the density readings show an increase in dry density of less than 1 pcf for the final four roller passes of each roller. The Contractor and Department will each determine a target density using their respective gauges by performing several additional density tests and averaging them. The average of these tests will be used as the target density of the recycled material for QC and Acceptance purposes.

Following completion of the test strip, compaction of the material shall continue until a density of not less than 98 percent of the test strip target density has been achieved for the full width and depth of the layer. During the construction and compaction of the Full Depth Recycled base, should three consecutive Acceptance test results for density fail to meet a minimum of 95 percent of the target density, or exceed 102 percent of target density, a new test strip shall be constructed.

#### ACCEPTANCE TEST FREQUENCY

Property	Frequency	Test Method
In-place Density	1 per 2000 ft / lane	AASHTO T 310

**308.102 Curing.** No new pavement shall be placed on the full depth recycled pavement until curing has reduced the moisture content to 1 percent or less by total weight of the mixture, or a curing period of 4 days has elapsed, whichever comes first.

**307.11 Method of Measurement** Full Depth Recycled Pavement (Untreated or Treated with Emulsified Asphalt Stabilizer) will be measured by the square yard.

**307.12 Basis of Payment** The accepted quantity of Full Depth Recycled Asphalt Pavement (Untreated or Treated with Emulsified Asphalt Stabilizer) will be paid for at the contract unit price per square yard, complete in-place which price will be full compensation for furnishing all equipment, materials and labor for pulverizing, blending, placing, grading, compacting, and for all incidentals necessary to complete the work.

The addition of materials to restore profile grade and/or cross-slope in areas shown on the plans or described in the construction notes will be paid separately under designated pay items within the contract. No additional payment will be made for materials salvaged from the project.

**Payments will be made under:**

<u>Pay Item</u>	<u>Pay Unit</u>
<b>307.331 Full Depth Recycled Pavement (Untreated) Yard</b>	<b>Square</b>
<b>307.332 Full Depth Recycled Pavement (with Emulsified Asphalt Stabilizer) 5 in. depth Yard</b>	<b>Square</b>
<b>307.333 Full Depth Recycled Pavement (with Emulsified Asphalt Stabilizer) 6 in. depth Yard</b>	<b>Square</b>

**SECTION 502**  
**STRUCTURAL CONCRETE**

502.05 Composition and Proportioning

Replace Table 1 with

TABLE 1

Concrete CLASS	Minimum Compressive Strength (PSI)	Permeability as indicated by Surface Resistivity (KOhm-cm)	Entrained Air (%)		Notes
			LSL	USL	
S	3,000	LSL N/A	LSL N/A	USL N/A	4,5
A	4,000	14	6.0	9.0	1,4,5
P	-----	-----	5.5	7.5	1,2,3,4
LP	5,000	17	6.0	9.0	1,4,5
Fill	3,000	N/A	6.0	9.0	4,5

In the list of information submitted by the contractor for a mix design:

Item J Replace “Target Coulomb Value.” with “Target KOhm-cm Value.”

502.1703 Acceptance Methods A and B

In the paragraph that starts with “The Department will take Acceptance...” Remove the word chloride from chloride permeability in the last sentence.

Replace the paragraph starting with “Rapid Chloride Permeability specimens...” With the following:

“Surface Resistivity specimens will be tested by the Department in accordance with AASHTO TP-95 at an age  $\geq$  56 days. Four 4 inch x 8 inch cylinders will be cast per subplot placed. The average of three concrete specimens per subplot will constitute a test result and this average will be used to determine the permeability for pay adjustment computations.”

502.1706 Acceptance Method C

Remove in its entirety and Replace with:

**502.1706 Acceptance Method C The Department will determine the acceptability of the concrete through Acceptance testing. Acceptance tests will include compressive strength, air content and permeability. Method C concrete with a failing permeability as indicated by the surface resistivity test may be tested for permeability in accordance with the Rapid Chloride Permeability Test AASHTO T-277 averaging the results from two specimens cut from the samples prepared for the surface resistivity test. Method C concrete not meeting the requirements listed in Table 1 or if the Rapid Chloride Permeability test results in values exceeding 2000 coulombs for Class LP or 2400 for Class A, shall be removed and replaced at no cost to the Department. At the Department’s sole discretion, material not meeting requirements may be left in place and paid for at a reduced price as described in Section 502.195.**

502.1707 Resolution of Disputed Acceptance Test Results

Section B

Remove “Rapid Chloride” from the section heading.

In paragraph 4 replace T-277 with TP-95

502.192 Pay Adjustment for Chloride Permeability

Remove “Chloride” from the heading and from the first sentence.

Replace the sentence that starts with “values greater than...” and replace with “values less than 10 KOhms-cm for Class A concrete or 11 KOhms-cm for Class LP concrete shall be subject to rejection and replacement, at no additional cost to the Department.”

502.194 Pay Adjustments for Compressive Strength, Chloride Permeability and Air Content, Methods A and B

Remove the word “Chloride” from the section heading and from the equation for CPF.

502.195 Pay Adjustment Method C

Table 6: Method C Pay Reductions (page 5-53)

Under “Entrained Air” for “Class Fill”, in the first line, change from “< 4.0 (Removal)” to “< **4.5 (Removal)**”

In Table 6: Method C PAY REDUCTIONS remove the word ‘Chloride’ from ‘Chloride Permeability’.

## **SECTION 621** **LANDSCAPING**

### 621.0002 materials - General

In the list of items change “Organic Humus” to “**Humus**”.

### 621.0019 Plant Pits and Beds

#### c Class A Planting

In the third paragraph beginning with “ The plant pit...” change “½ inch” to “**1 inch**”

## **SECTION 660** **ON-THE-JOB TRAINING**

### 660.06 Method of Measurement

Remove the first sentence in its entirety and replace with “ **The OJT item will be measured by the number of OJT hours by a trainee who has successfully completed an approved training program.**”

### 660.07 Basis of payment to the Contractor

Remove the last word in the first sentence so that the first sentence reads “ The OJT shall be paid for once successfully completed at the contract unit price per **hour.**”

### Payment will be made under

Change the Pay Item from “660.22” to “**660.21**” and change the Pay Unit from “Each” to “**Hour**”.

## **SECTION 703** **AGGREGATES**

### 703.06 Aggregate for Base and Subbase

Remove the first two paragraphs in their entirety and replace with these:

**“The following shall apply to Sections (a.) and (c.) below. The material shall have a Micro-Deval value of 25.0 or less as determined by AASHTO T 327. If the Micro- Deval value exceeds 25.0, the Washington State Degradation DOT Test Method T113, Method of Test for Determination of Degradation Value (January 2009 version) shall be performed, except that the test shall be performed on the portion of the sample that**

**passes the ½ in sieve and is retained on the No. 10 sieve. If the material has a Washington Degradation value of less than 15, the material shall be rejected.**

**The material used in Section (b.) below shall have a Micro-Deval value of 25.0 or less as determined by AASHTO T 327. If the Micro-Deval value exceeds 25.0 the material may be used if it does not exceed 25 percent loss on AASHTO T 96, Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine. “**

#### 703.33 Stone Ballast

In the third paragraph, remove the words “less than” before 2.60 and add the words “**or greater**” after 2.60.

### **SECTION 717** **ROADSIDE IMPROVEMENT MATERIAL**

#### 717.02 Agricultural Ground Limestone

In the table after the third paragraph which starts with “Liquid lime...” change the Specification for Nitrogen (N) from “15.5 percent of which 1% is from ammoniac nitrogen and 14.5 /5 is from Nitrate Nitrogen” to read “**15.5 % of which 1% is from Ammoniacal Nitrogen and 14.5 % is from Nitrate Nitrogen**”



### Environmental Summary Sheet

WIN: 16705.00

Date Submitted: 12/22/14

Town: Howland-Enfield

CPD Team Leader: Kristen Chamberlain

ENV Field Contact: Ryan Annis

NEPA Complete: Individual Categorical Exclusion for Early Acquisition 7/2/14  
Individual Categorical Exclusion for Complete Project 11/24/14

**Section 106**  
SHPO Concurrence- No Effect  
Section 106 Resources: None

**Section 4(f) and 6(f)**  
Section 4(f)  
Review Complete-Project will be a de minimus use of Town of Howland Park property. Any change to impacts on this property must be reviewed and approved by MaineDOT ENV and FHWA.  
Section 6(f)  
Not Applicable

**Maine Department of Inland Fisheries and Wildlife Essential Habitat**  
Not Applicable

**Section 7**  
**Species of Concern: Atlantic Salmon-Critical Habitat**  
**Formal Consultation. Special Conditions apply. See SP 105.**  
  
**Species of Concern: Northern Long-Eared Bat**  
No Jeopardy. Conference resulted in Not Likely to Adversely Affect.

**Maine Department of Conservation/Public Lands, Submerged Land Lease**  
Not Applicable

**Maine Land Use Regulation Commission**  
Not Applicable

**Maine Department of Environmental Protection**  
Exempt from Permitting

**Army Corps of Engineers, Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act.**  
**Individual- ACOE Permit pending.** Contract package completed based on anticipated conditions. In-water work may not occur until the ACOE permit has been issued. **See Special Provision 105.**  
*\*Applicable Standards and Permits will be added to the contract upon receipt.*

**Stormwater Review**  
N/A

**Special Provisions Required**

<b>Special Provision 105-Timing of Work Restriction</b>	N/A <input type="checkbox"/>	Applicable <input checked="" type="checkbox"/>
<b>Special Provision 656-Erosion Control Plan</b>	N/A with November 2014 Standard Specifications	
<b>Special Provision 203-Dredge Spec</b>	N/A <input type="checkbox"/>	Applicable <input checked="" type="checkbox"/>
<b>General Note for Hazardous Waste</b>	N/A <input type="checkbox"/>	Applicable <input checked="" type="checkbox"/>
<b>Special Provision 203-Hazardous Waste</b>	N/A <input checked="" type="checkbox"/>	Applicable <input type="checkbox"/>
<b>Special Provision 105.9</b>	N/A <input checked="" type="checkbox"/>	Applicable <input type="checkbox"/>

\*All permits and approvals based on plans/scope as of:12/22/14