

Updated 09/28/10

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, 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™ webbased service, b) a Bid Guaranty (as described below) 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.
4. Include a 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.
5. If a paper Bid is to be sent, Federal Express overnight delivery is suggested as the package is delivered directly to the DOT Headquarters Building located at 16 Child Street in Augusta.
6. Other means, such as U.S. Postal Service's Express Mail has proven not to be reliable.

IN ADDITION, FOR FEDERAL AID PROJECTS:

7. Complete the DBE Proposed Utilization form in the proper amounts, and submit with your bid on bid opening day. If you are submitting your bid electronically, you must FAX your DBE Utilization Form to (207) 624-3431.

*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 December 2002.*

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 a planholders 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 provide an email address to Diane Barnes or Mike Babb at the MDOT Contracts mailbox at: 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 Larry Childs at Larry.Childs@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 faxing questions and comments concerning specific Contracts that have been Advertised for Bid. Include additional numbered pages as required. Questions are to be faxed to the number listed in the Notice to Contractors. This is the only allowable mechanism 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.

REQUEST FOR INFORMATION

Date _____ Time _____

Information Requested: **PIN:** _____ **Town(s):** _____

[illegible]

Request by: _____ Phone: (____)_____

Bid Date: _____ **Fax:** (____) _____

Complete top portion of form and transmit to the number listed in the Notice to Contractors

RFI No: _____ RFI received: _____

Response:

[illegible]

Response By: _____ Date: _____

NOTICE

Disadvantaged Business Enterprise Proposed Utilization

All Bidders must submit the Disadvantaged Business Enterprise Proposed Utilization form with their bid.

The Contractor's Disadvantaged Business Enterprise Proposed Utilization Plan form contains information that is required by U.S. DOT.

The Maine Department of Transportation's Contractor's Disadvantaged Business Enterprise Proposed Utilization Plan form must 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.

MDOTs DBE Directory of Certified firms can also be obtained at www.maine.gov/mdot/disadvantaged-business-enterprises/dbe-home.php

INSTRUCTIONS FOR PREPARING THE CONTRACTOR'S DISADVANTAGED BUSINESS ENTERPRISE UTILIZATION PLAN

The Contractor Shall:

1. Submit a completed Contractor's Disadvantaged Business Enterprise Utilization Plan with your bid on the Bid day.
2. Extend equal opportunity to MDOT certified DBE firms (as listed in MDOT'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.

Provide total Bid price, 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.

DBE GOAL NOTICE

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 construction program; MaineDOT contracts covered by the program include consulting, construction, supplies, manufacturing, and service contracts.

For FFY 2010 (October 1, 2009 through September 30, 2010), MaineDOT has established a DBE participation goal of 5.9% to be achieved through race/gender neutral means.

Interested parties may view MaineDOT's DBE goal setting methodology posted on this website. If you have questions regarding this goal you may contact the Maine Department of Transportation, Civil Rights Office by telephone at (207) 624-3042 or by e-mail at: theresa.savoy@maine.gov.

This DBE goal, at the request of Federal Highway Administration, has been recalculated and was resubmitted for approval on May 6, 2010. This goal remains in effect through September 30, 2012 unless otherwise determined by Federal Highway Administration.

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

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

Contractor: _____ Telephone: _____ Ext. _____

Contact Person: _____ Fax: _____

E-mail: _____

BID PRICE: \$ _____ BID DATE: ____/____/____

FEDERAL PROJECT PIN # _____ PROJECT LOCATION: _____

TOTAL ANTICIPATED DBE _____ % PARTICIPATION FOR THIS SUBMISSION

W B E•	D B E•	Non DBE	Firm Name	Item Number & Description of Work	Quantity	Cost per Unit/Item	Actual \$ Value
Subcontractor Total >							
DBE Total >							

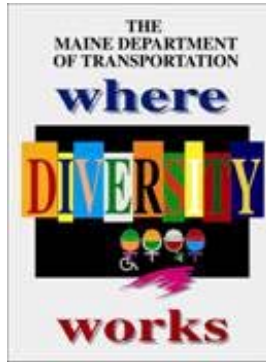
**NOTE: THIS INFORMATION IS USED TO TRACK AND REPORT ANTICIPATED DBE PARTICIPATION IN ALL
FEDERALLY FUNDED MAINE DOT CONTRACTS. THE ANTICIPATED DBE AMOUNT IS VOLUNTARY AND WILL NOT
BECOME A PART OF THE CONTRACTUAL TERMS.**

Equal Opportunity Use:

Form received: ____/____/____ Verified by: _____

cc: ☐ Contracts ☐ Other _____

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



Maine Department of Transportation Civil Rights Office

Directory of Certified Disadvantaged Business Enterprises

Listing can be found at:

**[www.maine.gov/mdot/disadvantagedbusiness-
enterprises/dbe-home.php](http://www.maine.gov/mdot/disadvantagedbusiness-enterprises/dbe-home.php)**

**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 listings.*

September 14, 2007

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/vendorinfo/vss.htm>

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 Webb River Bridge Replacement and Highway Reconstruction in the town of **MEXICO** and **DIXFIELD**" 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 November 17, 2010 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. BR-A562(000)E, PIN 15620.00 & STP-1514(300)X PIN 015143.00

Location: In Oxford County, project is located at the town line on route 2 over Webb River.

Scope of Work: Webb River Bridge replacement, highway reconstruction, plus other incidental work.

The basis of award will be Section 0001 plus the chosen alternate

For general information regarding Bidding and Contracting procedures, contact Scott Bickford at (207)624-3410. Our webpage at http://www.maine.gov/mdot/contractor-consultant-information/contractor_cons.php contains a copy of the schedule of items, Plan Holders List, written portions of bid amendments (not drawings), and bid results. For Project-specific information fax all questions to **Project Manager Leanne Timberlake** at (207)624-3431. 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. Hearing impaired persons may call the Telecommunication Device for the Deaf at 888-516-9364.

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 Dixfield. 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 \$87.00 (\$93.00 by mail). Half size plans \$43.50 (\$47.00 by mail), Bid Book \$10 (\$13 by mail), Single Sheets \$2, payment in advance, all non-refundable.

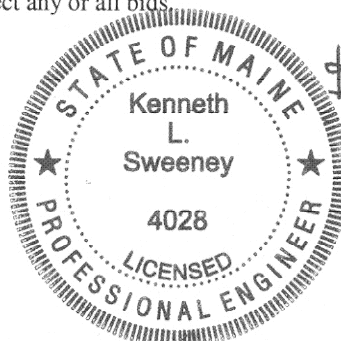
Each Bid must be made upon blank forms provided by the Department and must be accompanied by a bid bond at 5% of the bid amount or an official bank check, cashier's check, certified check, certificate of deposit, or United States postal money order in the amount of \$115,000.00 payable to Treasurer, 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.

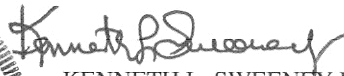
This Contract is subject to all applicable Federal Laws. This contract is subject to compliance with the Disadvantaged Business Enterprise program requirements as set forth by the Maine Department of Transportation.

All work shall be governed by "State of Maine, Department of Transportation, Standard Specifications, Revision of December 2002", price \$10 [\$13 by mail], and Standard Details, Revision of December 2002, price \$20 [\$25 by mail]. Standard Detail updates can be found at http://www.maine.gov/mdot/contractor-consultant-information/contractor_cons.php

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

Augusta, Maine
October 27, 2010




KENNETH L. SWEENEY 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/comprehensive-list-projects/project-information.php>. 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)

NOTICE

All bids for Federal Projects opened after December 1, 2008 **MUST** be accompanied by the DBE Proposed Utilization form. If you are submitting an electronic bid, the DBE Utilization Form may be faxed to 207-624-3431.

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 015143.00

PROJECT(S): STP-1514(300)X

BR-A562(000)E

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
SECTION 0001 COMMON ITEMS						
0010	201.23 REMOVING SINGLE TREE TOP ONLY	2.000 EA				
0020	201.24 REMOVING STUMP	2.000 EA				
0030	202.08 REMOVING BUILDING NO.: 1	LUMP	LUMP			
0040	202.08 REMOVING BUILDING NO.: 2	LUMP	LUMP			
0050	202.10 REMOVING EXISTING SUPERSTRUCTURE (PROPERTY OF CONTRACTOR)	LUMP	LUMP			
0060	202.121 REMOVING EXISTING CONCRETE	LUMP	LUMP			
0070	202.15 REMOVING MANHOLE OR CATCH BASIN	7.000 EA				
0080	203.20 COMMON EXCAVATION	5940.000 CY				
0090	203.21 ROCK EXCAVATION	120.000 CY				
0100	203.2312 HEALTH AND SAFETY PLAN	LUMP	LUMP			4

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 015143.00

PROJECT(S): STP-1514(300)X

BR-A562(000)E

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0110	203.25 GRANULAR BORROW	635.000 CY				
0120	203.4339 GEOFOAM LIGHTWEIGHT FILL	17.000 CY				
0130	206.061 STRUCTURAL EARTH EXCAVATION - DRAINAGE AND MINOR STRUCTURES, BELOW GRADE	50.000 CY				
0140	206.07 STRUCTURAL ROCK EXCAVATION - DRAINAGE AND MINOR STRUCTURES	15.000 CY				
0150	206.082 STRUCTURAL EARTH EXCAVATION - MAJOR STRUCTURES	1000.000 CY				
0160	304.09 AGGREGATE BASE COURSE - CRUSHED	2210.000 CY				
0170	304.10 AGGREGATE SUBBASE COURSE - GRAVEL	3310.000 CY				
0180	403.207 HOT MIX ASPHALT 19.0 MM HMA	900.000 T				
0190	403.208 HOT MIX ASPHALT 12.5 MM HMA SURFACE	650.000 T				
0200	403.209 HOT MIX ASPHALT 9.5 MM (SIDEWALKS, DRIVES, INCIDENTALS)	300.000 T				

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 015143.00

PROJECT(S): STP-1514(300)X

BR-A562(000)E

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0210	403.213 HOT MIX ASPHALT 12.5 MM BASE	890.000 T				
0220	409.15 BITUMINOUS TACK COAT - APPLIED	478.000 G				
0230	419.20 SAWING, SEALING JOINTS IN BITUMINOUS CONCRETE SURFACE	92.000 LF				
0240	502.219 STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS	LUMP	LUMP			
0250	502.26 STRUCTURAL CONCRETE ROADWAY AND SIDEWALK SLABS ON STEEL BRIDGES	LUMP	LUMP			
0260	502.31 STRUCTURAL CONCRETE APPROACH SLABS	LUMP	LUMP			
0270	502.341 STRUCTURAL CONCRETE ROADWAY MEDIAN	12.000 CY				
0280	502.49 STRUCTURAL CONCRETE CURBS AND SIDEWALKS	LUMP	LUMP			
0290	502.56 CONCRETE FILL	155.000 CY				
0300	503.12 REINFORCING STEEL, FABRICATED AND DELIVERED	91200.000 LB				

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 015143.00

PROJECT(S): STP-1514(300)X

BR-A562(000)E

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0310	503.13 REINFORCING STEEL, PLACING	91200.000 LB				
0320	503.17 MECHANICAL WELDED SPlice	644.000 EA				
0330	503.30 CORROSION RESISTANT REINFORCING SYSTEM, FABRICATED AND DELIVERED	6900.000 LB				
0340	503.31 CORROSION RESISTANT REINFORCING SYSTEM, PLACING	6900.000 LB				
0350	504.702 STRUCTURAL STEEL FABRICATED AND DELIVERED, WELDED	LUMP	LUMP			
0360	504.71 STRUCTURAL STEEL ERECTION	LUMP	LUMP			
0370	505.08 SHEAR CONNECTORS	LUMP	LUMP			
0380	506.9102 ZINC RICH COATING SYSTEM (SHOP APPLIED)	LUMP	LUMP			
0390	507.0811 STEEL BRIDGE RAILING, 2 BAR	LUMP	LUMP			
0400	507.0831 STEEL BRIDGE RAILING, 4 BAR	LUMP	LUMP			

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 015143.00

PROJECT(S): STP-1514(300)X

BR-A562(000)E

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0410	508.14 HIGH PERFORMANCE WATERPROOFING MEMBRANE	LUMP	LUMP			
0420	510.12 SPECIAL DETOUR FOOT ROADWAY WIDTH, VEHICULAR AND PEDESTRIAN TRAFFIC SEPARATED 12 FT	LUMP	LUMP			
0430	511.07 COFFERDAM: ABUTMENT NO.1	LUMP	LUMP			
0440	511.07 COFFERDAM: ABUTMENT NO.2	LUMP	LUMP			
0450	511.07 COFFERDAM: PIER	LUMP	LUMP			
0460	512.081 FRENCH DRAINS	LUMP	LUMP			
0470	513.09 SLOPE PROTECTION - PORTLAND CEMENT CONCRETE	190.000 SY				
0480	515.20 PROTECTIVE COATING FOR CONCRETE SURFACES	340.000 SY				
0490	518.60 REPAIR OF VERTICAL SURFACES < 7.9 IN.	120.000 SF				
0500	518.61 REPAIR OF VERTICAL SURFACES > 7.9 IN.	1.000 CY				

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 015143.00

PROJECT(S): STP-1514(300)X

BR-A562(000)E

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0510	520.232 EXPANSION DEVICE - ASPHALTIC PLUG JOINT	94.000 LF				
0520	523.52 BEARING INSTALLATION	12.000 EA				
0530	523.5401 LAMINATED ELASTOMERIC BEARINGS, FIXED	6.000 EA				
0540	523.5402 LAMINATED ELASTOMERIC BEARINGS, EXPANSION	6.000 EA				
0550	525.61 EXISTING GRANITE WALL REPAIR	LUMP	LUMP			
0560	526.301 TEMPORARY CONCRETE BARRIER TYPE I	LUMP	LUMP			
0570	526.34 PERMANENT CONCRETE TRANSITION BARRIER	4.000 EA				
0580	527.303 ENERGY ABSORBING SYSTEM (ET-PLUS)	1.000 EA				
0590	527.305 QUADGUARD CRASH CUSHION	1.000 UN				
0600	527.34 WORK ZONE CRASH CUSHIONS	6.000 UN				
0610	603.159 12 INCH CULVERT PIPE OPTION III	48.000 LF				9

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 015143.00

PROJECT(S): STP-1514(300)X

BR-A562(000)E

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0620	603.179 18 INCH CULVERT PIPE OPTION III	440.000 LF				
0630	604.072 CATCH BASIN TYPE A1-C	6.000 EA				
0640	604.092 CATCH BASIN TYPE B1-C	27.380 EA				
0650	604.164 REBUILDING CATCH BASIN	2.000 EA				
0660	604.18 ADJUSTING MANHOLE OR CATCH BASIN TO GRADE	4.000 EA				
0670	604.247 CATCH BASIN TYPE F5-C	2.000 EA				
0680	604.262 CATCH BASIN TYPE B5-C	2.880 EA				
0690	605.09 6 INCH UNDERDRAIN TYPE B	860.000 LF				
0700	605.11 12 INCH UNDERDRAIN TYPE C	1480.000 LF				
0710	605.13 18 INCH UNDERDRAIN TYPE C	230.000 LF				
0720	606.1721 BRIDGE TRANSITION - TYPE 1	3.000 EA				10

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 015143.00

PROJECT(S): STP-1514(300)X

BR-A562(000)E

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0730	606.23 GUARDRAIL TYPE 3C - SINGLE RAIL	62.500 LF				
0740	606.23 GUARDRAIL TYPE 3C - SINGLE RAIL WITH RUB RAIL	50.000 LF				
0750	606.231 GUARDRAIL TYPE 3C - 15 FOOT RADIUS AND LESS	8.640 LF				
0760	606.232 GUARDRAIL TYPE 3C - OVER 15 FOOT RADIUS	62.500 LF				
0770	606.2602 TERMINAL END - TRAILING END	2.000 EA				
0780	606.353 REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	14.000 EA				
0790	606.362 GUARDRAIL ADJUSTED	49.240 LF				
0800	606.79 GUARDRAIL 350 FLARED TERMINAL	3.000 EA				
0810	607.22 CEDAR RAIL FENCE	170.000 LF				
0820	608.26 CURB RAMP DETECTABLE WARNING FIELD	16.000 SF				
0830	609.19 VERTICAL CURB TYPE 2	130.000 LF				11

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 015143.00

PROJECT(S): STP-1514(300)X

BR-A562(000)E

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0840	609.20 VERTICAL CURB, CIRCULAR, TYPE 2	61.000 LF				
0850	609.244 TERMINAL CURB TYPE 2 - 4 FOOT	4.000 EA				
0860	609.247 TERMINAL CURB TYPE 2 - 7 FOOT	9.000 EA				
0870	609.31 CURB TYPE 3	2486.000 LF				
0880	610.08 PLAIN RIPRAP	302.500 CY				
0890	610.18 STONE DITCH PROTECTION	49.000 CY				
0900	613.319 EROSION CONTROL BLANKET	256.000 SY				
0910	615.07 LOAM	272.000 CY				
0920	618.1301 SEEDING METHOD NUMBER 1 - PLAN QUANTITY	3.500 UN				
0930	618.1401 SEEDING METHOD NUMBER 2 - PLAN QUANTITY	11.500 UN				

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 015143.00

PROJECT(S): STP-1514(300)X

BR-A562(000)E

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0940	618.1411 SEEDING METHOD NUMBER 3 - PLAN QUANTITY	30.000 UN				
0950	618.15 TEMPORARY SEEDING	5.700 LB				
0960	619.1201 MULCH - PLAN QUANTITY	45.500 UN				
0970	619.1401 EROSION CONTROL MIX	50.000 CY				
0980	620.58 EROSION CONTROL GEOTEXTILE	460.000 SY				
0990	620.6012 HDPE GEOMEMBRANE	320.000 SY				
1000	621.037 EVERGREEN TREES (5 FOOT - 6 FOOT) GROUP A	6.000 EA				
1010	621.184 MEDIUM DECIDUOUS TREES (8 FOOT - 10 FOOT) GROUP A	12.000 EA				
1020	621.273 LARGE DECIDUOUS TREE (2 INCH - 2.50 INCH CALIPER) GROUP A	1.000 EA				
1030	621.395 DWARF EVERGREENS (18 INCH - 24 INCH) GROUP A	24.000 EA				

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 015143.00

PROJECT(S): STP-1514(300)X

BR-A562(000)E

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1040	621.413 DWARF EVERGREENS (3 FOOT - 3.50 FOOT) GROUP A	36.000 EA				
1050	621.54 DECIDUOUS SHRUBS (18 INCH - 24 INCH) GROUP A	48.000 EA				
1060	627.733 4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	8260.000 LF				
1070	627.75 WHITE OR YELLOW PAVEMENT & CURB MARKING	380.000 SF				
1080	627.76 TEMPORARY PVMT. MARK LINE, W OR YELLOW	LUMP	LUMP			
1090	629.05 HAND LABOR, STRAIGHT TIME	20.000 HR				
1100	631.10 AIR COMPRESSOR (INCLUDING OPERATOR)	10.000 HR				
1110	631.11 AIR TOOL (INCLUDING OPERATOR)	10.000 HR				
1120	631.12 ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	20.000 HR				
1130	631.171 TRUCK - SMALL (INCLUDING OPERATOR)	20.000 HR				
1140	631.172 TRUCK - LARGE (INCLUDING OPERATOR)	20.000 HR				14

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 015143.00

PROJECT(S): STP-1514(300)X

BR-A562(000)E

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1150	631.18 CHAIN SAW RENTAL (INCLUDING OPERATOR)	10.000 HR				
1160	631.20 STUMP CHIPPER (INCLUDING OPERATOR)	10.000 HR				
1170	631.22 FRONT END LOADER (INCLUDING OPERATOR)	20.000 HR				
1180	631.32 CULVERT CLEANER (INCLUDING OPERATOR)	20.000 HR				
1190	637.071 DUST CONTROL	LUMP	LUMP			
1200	639.18 FIELD OFFICE TYPE A	1.000 EA				
1210	652.31 TYPE I BARRICADE	2.000 EA				
1220	652.33 DRUM	58.000 EA				
1230	652.34 CONE	58.000 EA				
1240	652.35 CONSTRUCTION SIGNS	700.000 SF				
1250	652.361 MAINTENANCE OF TRAFFIC CONTROL DEVICES	LUMP	LUMP			15

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 015143.00

PROJECT(S): STP-1514(300)X

BR-A562(000)E

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1260	652.38 FLAGGER	4000.000 HR				
1270	653.22 2 INCH POLYSTYRENE PLASTIC INSULATION	12.000 SY				
1280	656.75 TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	LUMP	LUMP			
1290	658.20 ACRYLIC LATEX COLOR FINISH, GREEN	46.000 SY				
1300	659.10 MOBILIZATION	LUMP	LUMP			
1310	660.21 ON-THE-JOB TRAINING (BID)	1000.000 HR				
1320	801.13 SEWER FORCE MAIN	LUMP	LUMP			
1330	801.51 DEMOLISH EXISTING FORCE MAIN	LUMP	LUMP			
1340	822.301 PRE-INSULATED DUCTILE IRON PIPE	155.000 LF				
1350	822.35 10 INCH CLASS 52 DUCTILE IRON PIPE	225.000 LF				
1360	825.324 BLOW OFF CHAMBER RECONNECTION	LUMP	LUMP			16

SCHEDULE OF ITEMS

REVISED:

CONTRACT ID: 015143.00

PROJECT(S): STP-1514(300)X

BR-A562(000)E

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1370	827.331 TRENCH INSULATION	90.000 SY				
1380	833.313 AIR RELEASE ASSEMBLY MODIFY AT LEAVITT ST.	1.000 EA				
1390	845.10 STRUCTURAL STEEL UTILITY SUPPORT	LUMP	LUMP			
	SECTION 0001 TOTAL					.

SECTION 0002 ALTERNATE 1
ALT GROUP A1

1400 1	635.31 PREFAB CONCRETE BLOCK GRAVITY WALL	1170.000 SF				
	SECTION 0002 TOTAL					.

SECTION 0003 ALTERNATE 2
ALT GROUP A2

1410 2	635.40 PRECAST AGGREGATE FILLED CONCRETE BLOCK GRAVITY WALL	1170.000 SF				
	SECTION 0003 TOTAL					
	TOTAL BID					

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

_____ a corporation or other legal entity organized under the laws of the State of _____, 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, PIN **015620.00 & 015143.00**, for the **Webb River Bridge Replacement and Highway Reconstruction** in the town of **Mexico** and **Dixfield**, County of **Oxford**, 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 **September 28, 2012**. 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 December 2002 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 _____

\$_____ 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 December 2002, Standard Details Revision of December 2002 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 the 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 December 2002, Standard Details Revision of December 2002 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of: **PIN 015620.00 & 015143.00 Webb River Bridge Replacement and Highway Reconstruction**, 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 December 2002, 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 December 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.

CONTRACTOR

Date

(Signature of Legally Authorized Representative
of the Contractor)

Witness

(Name and Title Printed)

G. Award.

Your offer is hereby accepted.
documents referenced herein.

This award consummates the Contract, and the

MAINE DEPARTMENT OF TRANSPORTATION

Date

By: David A. Cole, 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

_____ a corporation or other legal entity organized under the laws of the State of _____, 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, PIN **015620.00 & 015143.00**, for the **Webb River Bridge Replacement and Highway Reconstruction** in the town of **Mexico** and **Dixfield**, County of **Oxford**, 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 **September 28, 2012**. 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 December 2002 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 _____

\$_____ 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 December 2002, Standard Details Revision of December 2002 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 the 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 December 2002, Standard Details Revision of December 2002 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of: **PIN 015620.00 & 015143.00 Webb River Bridge Replacement and Highway Reconstruction**, 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 December 2002, 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 December 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.

CONTRACTOR

Date

(Signature of Legally Authorized Representative
of the Contractor)

Witness

(Name and Title Printed)

G. Award.

Your offer is hereby accepted.
documents referenced herein.

This award consummates the Contract, and the

MAINE DEPARTMENT OF TRANSPORTATION

Date

By: David A. Cole, 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 December 2002 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 December 2002, Standard Details, Revision of December 2002, 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 December 2002 (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 December 2002, Standard Details Revision of December 2002, 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 December 2002, 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

CONTRACTOR

(Sign Here)
(Signature of Legally Authorized Representative
of the Contractor)

(Print Name Here)
(Name and Title Printed)

G. Award.

Your offer is hereby accepted.
documents referenced herein.

This award consummates the Contract, and the

MAINE DEPARTMENT OF TRANSPORTATION

Date

By: David A. Cole, 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:

Signature.....
Print Name Legibly

Signature

Print Name Legibly

SURETY ADDRESS:

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

TELEPHONE.....

SIGNATURES:

CONTRACTOR:

.....
Print Name Legibly

SURETY:

.....
Print Name Legibly

NAME OF LOCAL AGENCY:

ADDRESS

.....
.....

.....

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

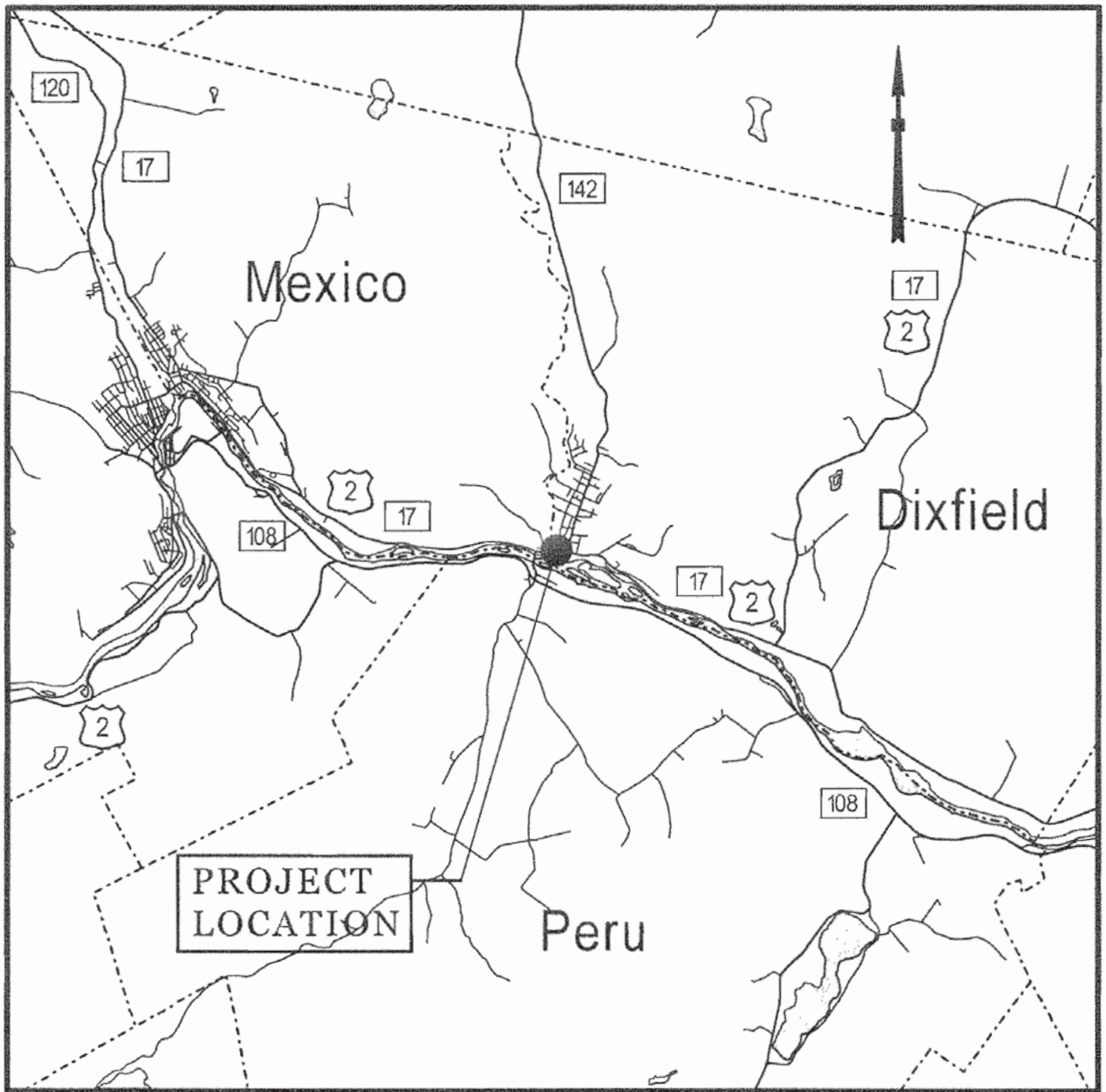
.....

.....

TELEPHONE

.....

BRIDGE NO. 2917



LOCATION MAP

General Decision Number: ME100009 09/03/2010 ME9

Superseded General Decision Number: ME20080009

State: Maine

Construction Type: Highway

Counties: Aroostook, Franklin, Hancock, Kennebec, Knox, Lincoln, Oxford, Piscataquis, Sagadahoc, Somerset, Waldo and York Counties in Maine.

HIGHWAY CONSTRUCTION PROJECTS excluding major bridging (for example: bascule, suspension and spandrel arch bridges; those bridging waters presently navigating or to be navigatable; and those involving marine construction in any degree); tunnels, building structures in rest area projects and railroad construction.

Modification Number	Publication Date
0	03/12/2010
1	03/26/2010
2	05/14/2010
3	09/03/2010

* ENGI0004-015 04/01/2010

	Rates	Fringes
Power equipment operators:		
Asphalt Roller.....	\$ 19.43	9.06
Pavers.....	\$ 19.43	9.06

SUME2000-008 10/24/2000		

	Rates	Fringes
CARPENTER.....	\$ 11.60	1.51
Ironworkers:		
Structural.....	\$ 12.03	1.58
Laborers:		
Drillers.....	\$ 10.00	2.50
Flaggers.....	\$ 7.25	
Guardrail Installers.....	\$ 7.92	
Landscape.....	\$ 7.87	.16
Line Stripper.....	\$ 8.69	.23

Pipelayers.....	\$ 9.21	2.31
Rakers.....	\$ 9.00	1.51
Sign Erectors.....	\$ 10.00	
Unskilled.....	\$ 8.66	1.38
Wheelman.....	\$ 8.50	.43

Power equipment operators:

Backhoes.....	\$ 11.87	2.05
Bulldozers.....	\$ 12.33	2.88
Cranes.....	\$ 14.06	1.75
Excavators.....	\$ 12.38	2.48
Graders.....	\$ 13.06	3.73
Loaders.....	\$ 11.41	2.87
Mechanics.....	\$ 13.18	2.57

Truck drivers:

Dump.....	\$ 9.35	3.10
Tri axle.....	\$ 8.70	1.18
Two axle.....	\$ 8.56	2.19

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

=====

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)).

In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

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.

=====

END OF GENERAL DECISION

SPECIAL PROVISION
SECTION 102.3
EXAMINATION OF DOCUMENTS, SITE, AND OTHER INFORMATION
(Geotechnical Information)

Add the following to Section 102.3, Examination of Documents, Site and Other Information:

102.3.1 Geotechnical Information In most cases, Geotechnical Information pertaining to the project has been collected and assembled. Bidders and Contractors are obligated to examine and, if necessary, obtain geotechnical information. If one is available, the project geotechnical report may be accessed at the following web address:

<http://www.maine.gov/mdot/comprehensive-list-projects/project-information.php>.

The Department shall not be responsible for the Bidders' and Contractors' interpretations of or estimates or conclusions drawn from the Geotechnical Information. Data provided may not be representative of the subsurface conditions between the boring locations.

This section does not diminish the duties imposed upon parties in Section 102 or in any other sections.

SPECIAL PROVISION
SECTION 104
GENERAL RIGHTS AND RESPONSIBILITIES
(Electronic Payroll Submission)

104.3.8.1 Electronic Payroll Submission The prime contractor and all subcontractors and lower-tier subcontractors will submit their certified payrolls electronically on this contract utilizing the Elation System web based reporting. There is no charge to the contracting community for the use of this service. The submission of paper payrolls will not be allowed or accepted. Additional information can be found at <http://www.maine.gov/mdot/comprehensive-list-projects/project-information.php> under the first "Notice".

SPECIAL PROVISIONS
SECTION 104
Utilities

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

.Overview:

Utility/Railroad	Aerial	Underground	Railroad
Central Maine Power Company	X		
Fairpoint Communications	X	X	
Mexico Sewer District		X	
Mexico Water District		X	
Time Warner Cable	X		
Town of Dixfield		X	

Temporary utility adjustments are anticipated.

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 utility crossings over the highways will provide not less than 20 feet vertical clearance over finished grade elevation during construction of this project.

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

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

Manholes, valve boxes, service connections, and similar incidental utility plant are to be adjusted in cooperation with work being done by the Contractor.

Unless otherwise provided, utilities will not be required to make underground installations in frozen ground.

Towns: **Mexico & Dixfield**

Project: **15620 & 15143**

Date: **June 10, 2010**

Any times and dates mentioned are **estimates only** and are dependent upon favorable weather, working conditions, and freedom from emergencies. The Contractors shall have no claim against the Department if they are exceeded.

Utility working days are Monday through Friday, conditions permitting. Times are estimated based on a single crew for each utility.

In all cases, the utilities shall be advised well in advance (generally three weeks) before work, dependent upon other work to be done by the Contractor, in any particular area, is to be commenced by them.

AERIAL

Summary:

Utility	Set Poles	New Wires/ Cables	Trans. Wires/ Cables	Remove Poles	Estimated Working Days
Central Maine Power			30		30
Fairpoint	15	70		5	90
Time Warner Cable		20			20
Total:					140

Utility Specific Issues:

**** Special Note to Contractor**

All clearing and tree removal in areas where utilities are involved must be completed before the utilities are able to relocate their facilities. The Contractor shall provide the utilities access to the new pole locations and all cuts/fills must be completed before the poles can be set. This work will be scheduled at the pre-construction utility meeting.

For each below: Description of work, e.g. # pole sets, anchors, # phases of work, estimated days for each phase and when each must occur, special requirements/conditions Contractor should know, advance notice required to begin work.

Aerial utilities collectively request contractor to avoid requesting cover on any aerial line or to request moving lines during blasting operations. Instead, they request the contractor to work within the blasting standards of 'no harm' to the lines.

Sequence of aerial utility work: Fairpoint set poles, CMP cutover, Time Warner cutover, Fairpoint cutover and Fairpoint pole removal. Aerial utilities agreed that some overlap of schedules was possible but it would not amount to a lot of timesavings.

The Town of Dixfield and MaineDOT requests the contractor submit a written plan addressing the temporary transport of raw sewage required from any damage or breaks in pipe and for cutover operations, as there is no storage capacity in system. The Town of Dixfield and MaineDOT to review and approve plan prior to work.

**** Special Note to Contractor – cont.**

Town of Dixfield cautions the contractor during blasting as the existing sewer pipe is fragile.

The contractor will be responsible for laying out an offset centerline on the side that poles will be set, as noted on the attached pole list. Fairpoint will not start staking poles until this work is complete.

AERIAL

Central Maine Power has three-phase power 34kV on the project site and any work within 10' of conductors is prohibited. The utility requires (30) thirty working days after Fairpoint has set the poles. The local mill currently operates two shifts and cannot have any power outages.

Fairpoint Communications requires (15) fifteen working days for setting poles, (70) seventy working days to install new infrastructure, cutover, removal of old infrastructure and (5) five working days for pole removals. The utility will complete their work after Central Maine Power Company and Time Warner Cable have completed their work.

Time Warner Cable have estimated running all new cable which requires (20) twenty working days to complete their work.

Pole List:

Existing Pole #	Existing Station	Existing Offset	Proposed Station	Proposed Offset	Required Spot Cut	Required Spot Fill	Proposed Span Length	Comments
218A/VZ2	12+73.10	34.25 Left	12+73 +/-	35+/- Left	N/A	N/A		Change out at existing location with 50 foot pole (new riser pole for Fairpoint)
VZ60/20	12+84.39	29.57 Right	12+92	46.0 Right	N/A	4.0'+/- See Comments	82'	To become service pole; actual spot fill height to be determined in the field prior to construction
							128'	12+73 Left - 14+04 Left
CMP1221/19	13+92.84	26.21 Right	N/A	N/A	N/A	N/A		Remain at existing location
NET218A/1/122	14+04.70	31.50 Left	N/A	N/A	N/A	N/A		Remain at existing location
CMP 02S	14+10+/-	66'+/- Left	N/A	N/A	N/A	N/A		Remain at existing location
CMP 501S/18S	15+10+/-	85'+/- Right	N/A	N/A	N/A	N/A		Remain at existing location
							123'	14+04 Left - 15+25 Right
CMP501/218A/60/18	15+15.60	16.44 Right	15+25.0	26 Right	N/A	N/A		Relocate to new offset (Field side of pole to be 1' from face of curb at back of sidewalk)
							77'	15+25 Right - 16+00 Right

Towns: **Mexico & Dixfield**

Project: **15620 & 15143**

Date: **June 10, 2010**

VZ17/502	16+24.03	8.04 Right	16+00	26.0 Right	N/A	N/A		Relocate to new offset (Field side of proposed pole to be 1' from face of curb at back of sidewalk)
							114'	16+00 Right - 17+11 Right
CMP16/503	17+05.60	7.42 Right	17+11	33.0 Right	N/A	2'+/-		Relocate to new station/offset
CMP504/60/15NET	18+00.27	13.05 Right	N/A	N/A	N/A	N/A		Eliminate
							198'	17+11 Right - 19+06 Right
CMPJ505/14	18+92.45	14.18 Right	19+06	34.0 Right	N/A	N/A		Relocate to new station/offset (straight line between 17+11 - 22+75)
							183'	19+06 Right - 20+88 Right
CMP506/13	20+03.84	16.78 Right	20+88	37.0 Right	N/A	N/A		Relocate to new station/offset (straight line between 17+11 - 22+75)
CMP 607	21+09+/-	21.5+/- Left	N/A	N/A	N/A	N/A	N/A	Remain at existing location
CMP507/12	21+51.23	8.19 Right	N/A	N/A	N/A	N/A		Eliminate
							188'	20+88 Right - 22+75 Right
CMPJ508/11	22+74.87	5.31 Right	22+75	41.0 Right	N/A	15'+/-		Relocate to new station/offset , actual spot fill height to be determined in the field prior to construction
CMP1S	24+45+/-	32'+/- Left	N/A	N/A	N/A	N/A		Eliminate
NET60/10	24+46.94	15.76 Right	N/A	N/A	N/A	N/A		Eliminate
?	24+75+/-	18'+/- Right	24+65	41.0 Right	N/A	10'		Relocate to new station/offset (Provides 10' clearance from roadside 3Ø to bridge face)
							119'	22+75 Right -25+60 Left
CMP3/6	25+61.28	23.48 Left	25+60	32 Left				Relocate to new station/offset (Field side of proposed pole to be 1' from face of curb at back of sidewalk)
VZ51/4.1	26+45.30	25.05 Right	N/A	N/A	N/A	N/A		Remain at existing location
	Leavitt Street							
CMPJ1	3+21.81	15.27 Left	N/A	N/A	N/A	N/A		Remain at existing location
?	4+36.77	11.57 Left	N/A	N/A	N/A	N/A		Remain at existing location
.								

SUBSURFACE

Summary:

Utility	Summary of Work	Estimated Working Days
Fairpoint Communications	Relocate two concrete duct banks	10
Mexico Sewer District	n/a	
Mexico Water District	n/a	
Town of Dixfield	Adjust valves to grade	2
Total:		12 see below

Utility Specific Issues:

Fairpoint Communications has two sections of concrete underground duct banks to relocate. The utility requires (10) ten working days, (5) five per underground location. These days are included in the aerial working days and this work is to be accomplished as one process so no additional time is anticipated at this time.

Mexico Sewer District has agreed to shift construction oversight for sewer main to the Town of Dixfield. The utility has no additional infrastructure present.

Mexico Water District records show the ‘field operations’ of the Dixfield Water Department is provided by the utility. Mexico Water District has no active water main within contract area; however, there are records of an abandoned line to the Rowe’s restaurant. The Contractor shall coordinate with Mexico Water District to confirm. Mexico Water District will be the contact for adjusting water valves to grade as noted under Town of Dixfield.

Town of Dixfield has entered into an agreement with Maine DOT to include the sewer force main work as part of the contract and to be built by the MaineDOT’s Contractor. The Town plans to replace and extend their Sewer Main throughout a portion of the project. The Town has reserved the option to accept or reject the bid price for their work based on bid prices. The Town shall be notified of bid prices on the day the bids are opened, they will have 48 hrs to accept or reject the bid prices. If the Town accepts the bid prices, the Contractor will construct the new sewer main system as part of the contract and shall include all sewer work scheduled for construction. Should the Town decide to reject the bid price for the above-mentioned work; the Town will remain responsible for the New Sewer Work. The Town will be responsible for coordinating with the MaineDOT’s Contractor within the Project limits in such a manner as to not cause delay the Contractor of the Project. The existing sewer force main will remain in service until the new main has been accepted. Installation of the sewer main shall be paid for under the applicable contract bid items included as part of this project and the Town is responsible for inspection.

The Town of Dixfield has a water main, one hydrant and valves within the project limits. The water gate valves will require adjustment to grade. A blow-off valve may also require adjustment. The Town will be

Town of Dixfield – cont.

responsible, through the Mexico Water District, for adjustment of water gate valves and blow-off valve and requires two (2) working days total for adjusting gate valves to grade and adjustment of the blow-off valve.

In the event that discrepancies or conflicts between MaineDOT specifications, special provisions, and plans occur with the sewer main specifications, special provisions and plans, MaineDOT or more restrictive shall prevail.

****Special care should be taken around all sewer/water lines in the project area. Prior to construction, the exact location of all sewer/water lines shall be marked. Notify sewer/water district for location purposes.**

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.

BLASTING

In addition to any other notice which may be required, the Contractor shall notify an authorized representative of each utility that have plant close to the site not later than 3:00 p.m. on the working day (Monday through Friday) before the Contractor intends to blast. Notice shall state the approximate time of the blast.

UTILITY SPECIFIC ISSUES

A qualified contractor must do any tree removal or tree trimming required within ten feet of electrical conductors. A list of tree removal contractors qualified to remove trees or limbs within ten feet of the electrical conductors may be obtained from the power company.

DIG SAFE

The contractor will be responsible for determining the presence of underground utility facilities prior to commencing any excavation work and shall notify utilities of proposed excavation in accordance with **M.R.S.A. Title 23 §3360-A, Maine “Dig Safe” System. Call 1-888-344-7233.**

SAFE PRACTICES AROUND UTILITY FACILITIES

The Contractor shall be responsible for complying with M.R.S.A. Title 35-A, Chapter 7-A-Sections 751–761 Overhead High-Voltage Line Safety Act. Prior to commencing any work, that may come within ten (10) feet of any aerial electrical line; the Contractor shall notify the aerial utilities as per Section 757 of the above act.

THE CONTRACTOR SHALL PLAN AND CONDUCT HIS WORK ACCORDINGLY.

SPECIAL PROVISION
SECTION 105
GENERAL SCOPE OF WORK
(Buy America Certification)

105.11 Federal Requirements Add the following as the third paragraph:

“Prior to payment by the Department, the Contractor shall provide a certification from the producer of steel or iron, or any product containing steel or iron as a component, stating that all steel or iron furnished or incorporated into the furnished product was manufactured in the United States in accordance with the requirements of the Buy America provisions of 23 CFR 635.410, as amended. Such certification shall also include (1) a statement that the product was produced entirely within the United States, or (2) a statement that the product was produced within the United States except for minimal quantities of foreign steel and iron valued at \$ (actual value).”

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 is allowed Anytime

II. In-Water work window applies to the following water bodies at the following station #'s:

1. Webb River, Station 23+00 through 24+00

III. Special Conditions:

1. Must follow conditions of the Department of Environmental Protection and Army Corps of Engineers Special Conditions.

IV. Approvals:

1. Temporary Soil Erosion and Water Pollution Control Plan

V. All activities are prohibited (including placement and removal of cofferdams unless otherwise permitted by Regulatory Agencies) below the normal high water mark if outside the prescribed in-water work window, except for the following:

1. Work within a cofferdam constructed according to MaineDOT's Standard Specifications and in adherence with the contractors approved “Soil Erosion and Water Pollution Control Plan”.

VI. No work is allowed that completely blocks a river, stream, or brook without providing downstream flow.

NOTE: Regulatory Review and Approval is required to modify the existing In-Water work window.

SPECIAL PROVISION 105
OVERLIMIT PERMITS

Title 29-A § 2382 MRSA Overlimit Movement Permits.

1. Overlimit movement permits issued by State. The Secretary of State, acting under guidelines and advice of the Commissioner of Transportation, may grant permits to move nondivisible objects having a length, width, height or weight greater than specified in this Title over a way or bridge maintained by the Department of Transportation

2. Permit fee. The Secretary of State, with the advice of the Commissioner of Transportation, may set the fee for single trip permits, at not less than \$6, nor more than \$30, based on weight, height, length and width. The Secretary of State may, by rule, implement fees that have been set by the Commissioner of Transportation for multiple trip, long-term overweight movement permits. Rules established pursuant to this section are routine technical rules pursuant to Title 5, chapter 375, subchapter II-A.

3. County and municipal permits. A county commissioner or municipal officer may grant a permit, for a reasonable fee, for travel over a way or bridge maintained by that county or municipality

4. Permits for weight. A vehicle granted a permit for excess weight must first be registered for the maximum gross vehicle weight allowed for that vehicle.

5. Special mobile equipment. The Secretary of State may grant a permit, for no more than one year, to move pneumatic-tire equipment under its own power, including Class A and Class B special mobile equipment, over ways and bridges maintained by the Department of Transportation. The fee for that permit is \$15 for each 30-day period.

6. Scope of permit. A permit is limited to the particular vehicle or object to be moved, the trailer or semitrailer hauling the overlimit object and particular ways and bridges.

7. Construction permits. A permit for a stated period of time may be issued 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.

8. Gross vehicle weight permits. The following may grant permits to operate a vehicle having a gross vehicle weight exceeding the prescribed limit:

A. The Secretary of State, with the consent of the Department of Transportation, for state and state aid highways and bridges within city or compact village limits;

B. Municipal officers, for all other ways and bridges within that city and compact village limits; and

C. The county commissioners, for county roads and bridges located in unorganized territory.

9. Pilot vehicles. The following restrictions apply to pilot vehicles.

A. Pilot vehicles required by a permit must be equipped with warning lights and signs as required by the Secretary of State with the advice of the Department of Transportation.

B. Warning lights may be operated and lettering on the signs may be visible on a pilot vehicle only while it is escorting a vehicle with a permit on a public way.

With the advice of the Commissioner of Transportation and the Chief of the State Police, the Secretary of State shall establish rules for the operation of pilot vehicles.

9-A. Police escort. A person may not operate a single vehicle or a combination of vehicles of 125 feet or more in length or 16 feet or more in width on a public way unless the vehicle or combination of vehicles is accompanied by a police escort. The Secretary of State, with the advice of the Commissioner of Transportation, may require a police escort for vehicles of lesser dimensions.

A. The Bureau of State Police shall establish a fee for state police escorts to defray the costs of providing a police escort. A county sheriff or municipal police department may establish a fee to defray the costs of providing police escorts.

B. The Bureau of State Police shall provide a police escort if a request is made by a permittee. A county sheriff or municipal police department may refuse a permittee's request for a police escort.

C. A vehicle or combination of vehicles for which a police escort is required must be accompanied by a state police escort when operating on the interstate highway system.

10. Taxes paid. A permit for a mobile home may not be granted unless the applicant provides reasonable assurance that all property taxes, sewage disposal charges and drain and sewer assessments applicable to the mobile home, including those for the current tax year, have been paid or that the mobile home is exempt from those taxes. A municipality may waive the requirement that those taxes be paid before the issuance of a permit if the mobile home is to be moved from one location in the municipality to another location in the same municipality for purposes not related to the sale of the mobile home.

11. Violation. A person who moves an object over the public way in violation of this section commits a traffic infraction.

Section History:

PL 1993, Ch. 683, §A2 (NEW).

PL 1993, Ch. 683, §B5 (AFF).

PL 1997, Ch. 144, §1,2 (AMD).

PL 1999, Ch. 117, §2 (AMD).

PL 1999, Ch. 125, §1 (AMD).

PL 1999, Ch. 580, §13 (AMD).

PL 2001, Ch. 671, §30 (AMD).

PL 2003, Ch. 166, §13 (AMD).

PL 2003, Ch. 452, §Q73,74 (AMD).

PL 2003, Ch. 452, §X2 (AFF).

SPECIAL PROVISION
SECTION 105
LEGAL RELATIONS WITH AND RESPONSIBILITY TO PUBLIC
(NPDES)

105.8.2 Permit Requirements This Section is revised by the addition of the following paragraph:

”The Contractor is advised that the Environmental Protection Agency has issued a final National Pollutant Discharge Elimination System (NPDES) General Permit for storm water discharges from construction sites disturbing more than 2 ha [5 acres]. This permit requires:

- Storm Water Pollution Prevention Plan
- Submission of a Notification of Intent (NOI) at least 48 hours before construction commences
- Submission of a Notification of Termination (NOT) when a site has been finally stabilized and all storm water discharges from construction activities are eliminated.

If the project’s land disturbances is 2 ha [5 acres] or more, the Department will prepare the plan and submit the NOI (and NOT). The Contractor shall prepare plans and submit NOI’s (and NOT’s) for regulated construction activities beyond the project limits (e.g., borrow pits).

The Contractor shall be familiar with and comply with these regulations.”

SPECIAL PROVISION 105
CONSTRUCTION AREA

A Construction Area located in the **Town of Dixfield** and **Mexico** 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 Dixfield and Mexico, Oxford County on North Main Street, U.S. Route 2 over Webb River, Leavitt Street, and High Street.
- b) (North Main Street) Station 59+95.00 to station 61+29.99 of the construction plus approaches.
- c) (U.S. Route 2) Station 12+75.00 to station 26+75.00 of the construction over Meadow Brook plus approaches.
- d) (Leavitt Street) station 2+00.00 to station 4+45.00 of the construction plus approaches.
- e) (High Street) station 40+00.00 to station 40+41.92 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 Dixfield** 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”.

As noted above, a bond may be required by the municipality, the exact amount of said bond to be determined prior to use of any municipal way. The MDOT will assist in determining the bond amount if requested by the municipality.

The maximum speed limits for trucks on any town way will be 25 mph (40 km per hour) unless a higher legal limit is specifically agreed upon in writing by the Municipal Officers concerned.

SPECIAL PROVISION 105
CONSTRUCTION AREA

A Construction Area located in the **Town of Mexico and Dixfield** 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 Mexico and Dixfield, Oxford County on North Main Street, U.S. Route 2 over Webb River, Leavitt Street, and High Street.
- b) (North Main Street) Station 59+95.00 to station 61+29.99 of the construction plus approaches.
- c) (U.S. Route 2) Station 12+75.00 to station 26+75.00 of the construction over Meadow Brook plus approaches.
- d) (Leavitt Street) station 2+00.00 to station 4+45.00 of the construction plus approaches.
- e) (High Street) station 40+00.00 to station 40+41.92 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 Mexico** 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”.

As noted above, a bond may be required by the municipality, the exact amount of said bond to be determined prior to use of any municipal way. The MDOT will assist in determining the bond amount if requested by the municipality.

The maximum speed limits for trucks on any town way will be 25 mph (40 km per hour) unless a higher legal limit is specifically agreed upon in writing by the Municipal Officers concerned.

SPECIAL PROVISION
SECTION 106
QUALITY
(Quality Level Analysis- Structural Concrete)

106.7.1 Standard Deviation Method Under H. Replace the Method A payfactor with the following;

“Method A: $PF = [32.5 + (\text{Quality Level} * 0.75)] * 0.01$ ”

SPECIAL PROVISION
SECTION 107
PROSECUTION AND PROGRESS
(Open to Traffic)
(Limitation of Operations)

The road shall remain open with partial traffic detours around the site in accordance with the signs and details shown on the plans.

The Contractor shall conduct his operation in such a manner that the bridge and roadway will be paved and project completed and open to two lanes of traffic on or before **September 28, 2012.**

SPECIAL PROVISION
SECTION 107
PROSECUTION AND PROGRESS
(Contract Time)

The Specified contract completion date is September 28, 2012.

**SPECIAL PROVISION
SECTION 107
TIME
(Suspension of Work)**

Work shall be suspended on the following dates:

- For the Trek Across Maine
 - June 17, 2011
 - The corresponding date for 2012 when the bicyclists are scheduled to ride through Mexico and Dixfield; to be determined but tentatively the Friday before Father's Day Weekend.
- For the Town of Dixfield's Outdoor Market
 - August 21, 2011
 - The corresponding date for 2012; to be determined.

There shall be no work during this time frame. In addition, the roadway and bridge shall be left in an acceptable manner for the Trek Across Maine event as determined by the Resident and in consideration of the number of bicycles that will traverse the project site.

SPECIAL PROVISION
SECTION 107
TIME

(Supplemental Liquidated Damages for Fabrication Time)

107.8.1 Fabrication Time.

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

<u>Element</u>	<u>Time</u>	<u>Supplemental LD</u>
1) Structural Steel	28 calendar days	\$500 per calendar day
2) Precast Deck Panels (if used)	21 calendar days	\$500 per calendar day

The Contractor is responsible for requiring their fabricators and 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 the 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.

For concrete work (if precast deck panels are used) – tensioning of strands, batching and casting of concrete, breaking of test cylinders, de-tensioning.

SPECIAL PROVISION

SECTION 107

TIME

(Scheduling of Work – Projected Payment Schedule)

Description The Contractor shall also provide the Department with a Quarterly Projected Payment Schedule that estimates the value of the Work as scheduled, including requests for payment of Delivered Materials. The Projected Payment Schedule must be in accordance with the Contractor's Schedule of Work and prices submitted by the Contractor's Bid. The Contractor shall submit the Projected Payment Schedule as a condition of Award.

SPECIAL PROVISION
SECTION 107
SCHEDULING OF WORK

Replace Section 107.4.2 with the following:

"107.4.2 Schedule of Work Required Within 21 Days of Contract Execution and before beginning any on-site activities, the Contractor shall provide the Department with its Schedule of Work. The Contractor shall plan the Work, including the activity of Subcontractors, vendors, and suppliers, such that all Work will be performed in Substantial Conformity with its Schedule of Work. The Schedule must include sufficient time for the Department to perform its functions as indicated in this Contract, including QA inspection and testing, approval of the Contractor's TCP, SEWPCP and QCP, and review of Working Drawings.

At a minimum, the Schedule of Work shall include a bar chart which shows the major Work activities, milestones, durations, and a timeline. Milestones to be included in the schedule include: (A) start of Work, (B) beginning and ending of planned Work suspensions, (C) Completion of Physical Work, and (D) Completion. If the Contractor Plans to Complete the Work before the specified Completion date, the Schedule shall so indicate.

Any restrictions that affect the Schedule of Work such as paving restrictions or In-Stream Work windows must be charted with the related activities to demonstrate that the Schedule of Work complies with the Contract.

The Department will review the Schedule of Work and provide comments to the Contractor within 20 days of receipt of the schedule. The Contractor will make the requested changes to the schedule and issue the finalized version to the Department."

SPECIAL PROVISION
SECTION 108
PAYMENT
(Asphalt Escalator)

108.4.1 Price Adjustment for Hot Mix Asphalt: For all contracts with hot mix asphalt in excess of 500 tons total, a price adjustment for performance graded binder will be made for the following pay items:

Item 403.206 Hot Mix Asphalt - 25 mm
Item 403.207 Hot Mix Asphalt - 19 mm
Item 403.208 Hot Mix Asphalt - 12.5 mm
Item 403.2081 Hot Mix Asphalt - 12.5 mm (PG 70-28)
Item 403.2083 Warm Mix Asphalt - 12.5 mm
Item 403.209 Hot Mix Asphalt - 9.5 mm (sidewalks, drives, & incidentals)
Item 403.210 Hot Mix Asphalt - 9.5 mm
Item 403.2102 Hot Mix Asphalt - 9.5 mm
Item 403.2103 Warm Mix Asphalt - 9.5 mm
Item 403.211 Hot Mix Asphalt - Shim
Item 403.2113 Warm Mix Asphalt - Shim
Item 403.212 Hot Mix Asphalt - 4.75 mm
Item 403.213 Hot Mix Asphalt - 12.5 mm (base and intermediate course)
Item 403.2131 Hot Mix Asphalt - 12.5 mm (base and intermediate course PG 70-28)
Item 403.2132 Hot Mix Asphalt - 12.5 mm (Asphalt Rich Base and intermediate course)
Item 403.2133 Warm Mix Asphalt - 12.5 mm (base and intermediate course)
Item 461.13 Maintenance Surface Treatment

Price adjustments will be based on the variance in costs for the performance graded binder component of hot mix asphalt. They will be determined as follows:

The quantity of hot mix asphalt for each pay item will be multiplied by the performance graded binder percentages given in the table below times the difference in price between the base price and the period price of asphalt cement. Adjustments will be made upward or downward, as prices increase or decrease.

Item 403.206: 4.8%	Item 403.2102: 6.2%
Item 403.207: 5.2%	Item 403.211: 6.2%
Item 403.208: 5.6%	Item 403.2113: 6.2%
Item 403.2081: 5.6%	Item 403.212: 6.8%
Item 403.2083: 5.6%	Item 403.213: 5.6%
Item 403.209: 6.2%	Item 403.2131: 5.6%
Item 403.210: 6.2%	Item 403.2132: 5.6%
Item 403.2103: 6.2%	Item 403.2133: 5.6%
Item 461.13: 6.4%	

Hot Mix Asphalt: The quantity of hot mix asphalt will be determined from the quantity shown on the progress estimate for each pay period.

Base Price: The base price of performance graded binder to be used is the price per standard ton current with the bid opening date. This price is determined by using the average New England Selling Price, as listed in the Asphalt Weekly Monitor.

Period Price: The period price of performance graded binder will be determined by the Department by using the average New England Selling Price, listed in the Asphalt Weekly Monitor current with the paving date. The maximum Period Price for paving after the adjusted Contract Completion Date will be the Period Price on the adjusted Contract Completion Date.

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 effected location of the Project that results in a Q25 headwater elevation, or greater, but less than a Q50 headwater elevation. Theoretical headwater elevations will be determined by the Department; actual 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. Theoretical Q50 headwater elevations will be determined by the Department; actual 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**

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.

The following list of items is to be reserved to the property owners and/or occupants of Buildings No. 1.

No Reservations

Buildings to be removed under Section 202 - Removing Structures and Obstructions of the contract will be made available to the Contractor at the time of Contract Award.

Failure by the Maine State Department of Transportation to meet dates of availability may entitle the Contractor to time extension if requested by the Contractor, in writing, such request indicating delays in construction, if any, caused by changes in availability dates.

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

The Contractor shall not remove a building until the Department 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 Department will re-inspect the building within seven 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 Pay Item under Section 109.3 - Extra Work.

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 - Equitable Adjustments to Compensation. Any questions can be directed to the Office of Legal Service (624-3020).

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.

Contractor shall remove all utility service connections prior to demolition of any building. Contractor shall coordinate disconnection of overhead utilities with the appropriate utility companies. Sewer connections shall be cut off and sealed with a water and gas tight seal or removed in its entirety. Water connections or services shall be cut and completely capped or plugged in a manner to prevent any flow or seepage of water into the excavated area. Contractor shall coordinate with the Mexico Water District for service shut-off.

This house is serviced by a private septic system or cistern. The system shall be pumped out to remove waste material prior to demolition work. The septic system shall be removed or broken up and backfilled to the limits of the surrounding ground.

All fill material used for foundation cavities, septic systems 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.

**SPECIAL PROVISION
SECTION 203
EXCAVATION AND EMBANKMENT
(CONTAMINATED SOIL AND GROUNDWATER MANAGEMENT)**

General. The work under this specification, shall be performed in conformance with all the procedures and requirements described herein for the following activities: contaminated soil handling, reuse, temporary stockpiling, transportation, storage and disposal and, contaminated water handling, storage, treatment and disposal. This specification also addresses contaminated soil location, identification, and classification. The intent of this specification is to ensure that any contaminated soil and/or water encountered during construction will be managed in a manner that protects worker health and safety, public welfare and the environment.

Environmental Site Conditions. The Maine Department of Transportation's Environmental Office (MaineDOT's-ENV.) has conducted a series of assessments related to the Mexico-Dixfield Route 2 Highway and Bridge Improvement Project. An initial Phase I Environmental Assessment for the project area was completed to obtain a general understanding of the environmental conditions along the project corridor. Data garnered from this assessment was used to design a Modified, Phase II Contamination Assessment for the project. The primary focus of the assessments was to evaluate the type and extent of subsurface contamination along the project corridor. The Phase I Assessment included a review of relevant Maine Department of Environmental Protection's (MDEP's) and Environmental Protection Agency's (EPA's) databases and field reconnaissance of the project area. Borings were advanced along the project's length for investigative purposes. During the advancement of these borings, one area with impacted soil was identified. A photo-ionization detector (PID) was used to test soil grab samples from select explorations for volatile organic compound (VOC) concentrations indicative of petroleum products. (See *Identified Areas Of Contamination* below). Select samples for laboratory testing were also taken to further aid in evaluating subsurface conditions. The results of these investigations are available for review from the Hydrogeologist at MaineDOT's Environmental Office in Augusta (207-624-3100).

Identified Area of Contamination. MaineDOT's-ENV investigation identified one area of soil contamination associated with the Route 2 highway and bridge improvement project in Mexico-Dixfield, Maine. For reference, the area is designated as "Area A". The location of **Area A** is defined as along Route 2, roughly between MaineDOT stations 21+50 to roughly 22+50 left of center in the vicinity of the former

Dick and Son's retail gasoline station. Within **Area A**, poly-bag field samples screened with a photo-ionization detector (PID) ranged from below detection limit (BDL) to 14.33 ppm gasoline equivalents. Laboratory results of sample SS-1 taken from a depth of approximately 5.0 feet below ground surface (BGS) indicates GRO at BDL, DRO at 160 ppm, VOCs at BDL and total lead at 80 ppm. These concentrations define the soils as special waste per State remedial guidelines. Soil contamination in **Area A** appears to be related to use and storage of gasoline.

Identifying and Screening Contaminated Soil and Groundwater. Within the contaminated sections designated **Area A**, excavated soils will be classified by the Resident (or a MaineDOT-ENV representative) based on photo-ionization detector (PID) field screening measurements. Field screening with a PID shall be performed according to the MDEP "Jar/Poly Bag Headspace Technique" contained in Appendix Q of *Regulations for Registration, Installation, Operation and Closure of Underground Oil Storage Facilities, Chapter 691* (MDEP 4/3/07) using MDEP's November 2008 calibration set-points.

The excavated soils shall be classified as Group 1, Group 2 or Group 3.

Group 1 soils shall have PID field screening measurements indicating relative concentrations of volatile organic compounds (VOCs) less than or equal to 20 parts per million (ppm) as measured in the soil headspace.

Group 2 soils shall have PID field screening measurements indicating VOC concentrations greater than 20 ppm but less than or equal to 1000 ppm and contain no "petroleum saturated" soils or free-phase petroleum product.

Group 3 soils shall have PID field screening measurements greater than 1000 ppm or be "petroleum saturated." Analysis to determine "petroleum saturation" shall be performed according to MDEP guidance in *Procedural Guidelines for Establishing Standards for Remediation of Oil Contaminated Soil and Ground Water in Maine* (MDEP, 1/11/95)

Handling and Disposition of Soil Materials. Within **Area A** soil material excavated during construction shall be handled as follows:

Group 1 soils are not considered contaminated. Thus, special handling and disposal are not required for Group 1 soils.

Group 2 soils shall be placed back into their excavation section of origin. The Contractor shall make every attempt to side cast any Group 2 soils next to their excavation site. Upon completion of the given constructional feature, the Group 2 soils shall be placed back into the excavation. Group 2 materials not handled in this manner shall be considered Surplus Group 2 soils. Surplus Group 2 soils

must be disposed of or treated at a facility licensed by the MDEP to accept petroleum contaminated special waste. The Contractor is solely responsible for obtaining the associated permits and approvals for the disposal or treatment of the Surplus Group 2 soils from all relevant Municipal, State, and Federal agencies at no additional cost to the State. Notification shall be given to the Resident once approval is granted for the acceptance of this material at the off site facility. No removal of Surplus Group 2 soils from the project shall occur without prior approval by the Resident. If any Surplus Group 2 soils cannot be transported to the pre-approved, properly licensed facility within 8 hours of their excavation, they must be placed in a Temporary Secure Stockpile Area somewhere within the project limits (See Temporary Secured Stockpile Area below).

Group 3 soils shall not be excavated without prior approval by the Resident. The Contractor shall arrange and undertake disposal of all Group 3 soils at a landfill or treatment facility licensed to accept petroleum contaminated special waste. The Contractor is responsible for all additional testing required by the receiving facility. Group 3 soils that cannot be disposed of within 8 hours of excavation shall be stored in a Temporary Secured Stockpile area. If the Contractor proposes other disposal or treatment options, the Contractor is solely responsible for obtaining the associated permits and approvals from all relevant Municipal, State, and Federal agencies at no additional cost to the State.

The Resident is responsible for signing any manifests or bills of lading required to transport and dispose of contaminated soil. The Resident will send all manifests and bills of lading to MaineDOT, Environmental Office, Station 16, Augusta, Maine 04333.

Trench and Underdrain/Stormdrain Design in Contaminated Sections. In **Area A** solid Option III, non-perforated pipe shall be used instead of perforated underdrain pipe to help prevent the infiltration and transportation of potentially contaminated groundwater within the underdrain/stormdrain system. The Contractor shall backfill around the pipe in this section with uncontaminated material. Backfilling of the trench shall be in accordance with Section 206.03. All stones larger than 3 inches, frozen lumps, dry chunks of clay or any other objectionable matter shall be removed before backfilling.

Seepage control dikes (SCD) shall be installed roughly every 60 feet along the stormwater pipe trench.

The SCDs shall consist of a mineral clay material with a liquid limit of equal to or greater than 24 and a natural moisture content of at least 20 percent. The clay should be placed in dry excavations in 6 inch maximum, thick lifts and compacted to 90% of the maximum dry unit weight as determined by AASHTO T99 (Standard Proctor). The SCDs shall be 5 feet long, be in intimate contact with the trench floor, trench walls and circumference of the pipe and extend up to the bottom of the road base. The excavated existing road base or similar material may be placed on top of the SCDs. The Contractor

shall take care to ensure that no voids or uncompacted soil is left beside or beneath the Option III culvert pipe.

Secured Stockpile Area. Direct transport of Surplus Group 2 or Group 3 soils to a pre-approved management facility is recommended. However, should the Contractor temporarily store any Surplus Group 2 or Group 3 soils at the site for more than 8 hours following excavation, they must be placed into a properly constructed Temporary Secured Stockpile Area. The Temporary Secured Stockpile Area must be constructed as defined herein and must be approved by the Resident prior to its use.

Should the Contractor utilize a Temporary Secured Stockpile Area, they shall install a continuous 0.3 meter high compacted soil berm around the Secured Stockpile. The Secured Stockpile shall be placed on a liner of 20-mil polyethylene and securely covered with 20-mil polyethylene. The polyethylene liner and cover shall be placed over the soil berm and be installed to ensure that precipitation water drains directly to the outside of the berm perimeter while leachate from the contaminated soil is retained within the stockpile. The Secured Stockpile and soil berm shall be enclosed within a perimeter of concrete Jersey barriers or wooden barricades. The area within the Jersey barriers (or wooden barricades) shall be identified as a "restricted area" to prevent unauthorized access to the contaminated soils.

Secured Stockpile Area - Materials.

A. Polyethylene. Polyethylene used for liner in the Secured Stockpile Area shall have a minimum of 20-mil thickness and shall meet the requirements of ASTM D3020.

B. Common Borrow. Fill used in the construction of the Temporary Secured Stockpile Area soil berm shall consist of Common Borrow and meet the requirements of Section 703.18

C. Concrete Barriers or Wooden Barricades. Concrete barriers or Wooden Barricades to form the sides of the Temporary Secured Stockpile Area shall meet the requirements of Section 526 or 652.05.

Health and Safety/Right-to-Know. Contractors and subcontractors are required to notify their workers of the history of the site and contamination that may be present and to be alert for evidence of contaminated soil and groundwater. The Contractor shall notify the Resident at **least three business days** prior to commencing any excavation in **Area A**.

The Contractor shall prepare a site specific Health and Safety Plan (HASP) for its workers and subcontractors who may work in the contaminated areas of the site. A Qualified Health and Safety Professional shall complete the HASP. The Qualified Health

and Safety Professional will be an expert in field implementation of the following federal regulations:

29 CFR 1910.120 or 29 CFR 1926.65	Hazardous Waste Operations and Emergency Response
29 CFR 1910.134	Respiratory Protection
29 CFR 1926.650	Subpart D - Excavations
29 CFR 1926.651	General Requirements
29 CFR 1926.652	Requirements for Protective Systems

MaineDOT is voluntarily ameliorating the contamination in **Area A**. The remedial efforts defined herein have been reviewed and approved by MDEP. Given that this is a voluntary clean up effort approved by a regulatory agency, the OSHA requirements as defined in 29 CFR 1910.120 apply. These requirements mandate that workers and any subcontractors working in the contaminated areas shall comply with all OSHA regulations for Hazardous Waste Operations and Emergency Response including a 40 hour initial hazardous waste operations certification [OSHA 1910.120(e)], annual 8 hour refresher course within the last 12 months and medical surveillance [OSHA 1910.120(f)] within the last 12 months.

The contractor shall designate a person to provide direct on-site supervision of the work in the contaminated areas. This person shall have the training under OSHA 1910.120 (e) as above and in addition be qualified as a construction Competent Person. It is the responsibility of the Competent Person to make those inspections necessary to identify situations that could result in hazardous conditions (e.g., possible cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions), and then to insure that corrective measures are taken.

Submittals. The Contractor shall submit a site specific Health and Safety Plan (HASP) to the Resident at least two weeks in advance of any excavation work on the project. The Contractor shall not proceed with work until MaineDOT has reviewed the plan and notified the Contractor that it is acceptable.

Health and Safety Monitoring. Within the contaminated areas of the project, the Contractor's designated on-site person shall monitor the worker breathing zone for those constituents specified in the Contractor's HASP. The Contractor shall provide all required health and safety monitoring equipment.

Dewatering. Groundwater may be encountered and its removal necessary to complete work within **Area A**. If encountered, it will be treated as “contaminated” water. The Contractor shall inform the Resident before any dewatering commences. The “contaminated” water shall be pumped into a temporary holding tank(s). The Contractor will be responsible for the procurement of any holding tank(s). Any testing, treatment and/or disposal of the stored, petroleum-contaminated water shall be undertaken by the Contractor in accordance with applicable Federal, State and local regulatory requirements.

On-Site Water Storage Tanks - Materials. If dewatering within the identified contaminated area becomes necessary the holding tanks used for temporary storage of contaminated water pumped from excavations shall be contamination free and have a minimum capacity of 2,000 gallons.

Dust Control. The Contractor shall employ dust control measures to minimize the creation of airborne dust during the construction process in potentially contaminated areas. As a minimum, standard dust control techniques shall be employed where heavy equipment and the public will be traveling. These may include techniques such as watering-down the site or spreading hygroscopic salts.

Unanticipated Contamination. If the Contractor encounters previously undiscovered contamination or potentially hazardous conditions related to contamination, the Contractor shall immediately suspend work and secure the area. The Contractor will then notify the Resident immediately. These potentially hazardous conditions include, but are not limited to, buried containers, drums, tanks, “oil saturated soils”, strong odors, or the presence of petroleum sufficient to cause a sheen on the groundwater. The area of potential hazard shall be secured to minimize health risks to workers and the public and to prevent a release of contaminants into the environment. The source of any suspected contamination shall be evaluated by the Resident (or MaineDOT’s- ENV representative). As appropriate, the Resident will notify the Maine Department of Environmental Protection’s Response Services Unit in Augusta and MaineDOT’s Environmental Office. The Mexico and/or Dixfield Fire Departments must also be notified prior to removal of buried storage tanks and associated piping. The Contractor will evaluate the impact of the hazard on construction, amend the HASP if necessary, and with the Resident’s approval, recommence work in accordance with the procedures of this Special Provision.

Method of Measurement. There will be no measurement for identification and environmental screening of contaminated soil material (this will be done by the Resident or MaineDOT-ENV representative).

Measurement for the development of a Health and Safety Plan (HASP) and providing health and safety equipment and personnel shall be by lump sum.

Measurement of the off site treatment or disposal of Surplus Group 2 and all Group 3 soils will be by the Ton of Special Excavation.

There will be no measurement for construction of a Temporary Secured Stockpile Area. Construction of a Temporary Secured Stockpile Area, if necessary, is considered incidental to project construction. There will be no measurement for hauling Surplus Group 2 material or Group 3 soils to the Temporary Secure Stockpile area or placement and removal of Surplus Group 2 or Group 3 soils in or out of the Temporary Secure Stockpile area. All hauling and any subsequent management/placement of contaminated soils are considered incidental to project construction.

There will be no measurement for additional laboratory testing of contaminated soil that is required by the landfill or treatment facility. Testing is incidental to the disposal of Special Excavation.

Measurement for the following items shall be according to Subsection 109:04 (“Change Order”/Force Account): any necessary contaminated water holding tank(s) and treatment or disposal of any contaminated groundwater.

Basis of Payment. There will be no payment for the identification and environmental screening of contaminated soil material (this will be done by the Resident or MaineDOT-ENV representative).

Payment for the development of a Health and Safety Plan (HASP) and providing health and safety equipment and personnel shall be by the lump sum

Payment for off site disposal or treatment of contaminated Surplus Group 2 and all Group 3 soils at a MDEP licensed facility shall be by the Ton of Special Excavation.

There will be no payment for the construction of the Temporary Secured Stockpile Area or hauling/management/placement of contaminated soils to the Temporary Secured Stockpile Area. The Temporary Secured Stockpile Area shall be considered incidental to project construction.

Payment for the following items shall be according to Subsection 109:04 (“Change Order”/Force Account): any necessary contaminated water holding tank(s) and treatment or disposal of any contaminated groundwater.

Pay Item	Pay Unit
203.2312 Health and Safety Plan (HASP)	L.S.
203.2333 Disposal/Treatment of Special Excavation	Ton

SPECIAL PROVISION
SECTION 203
EXCAVATION AND EMBANKMENT
(Dredge Materials)

Description: Dredge Material (See MaineDOT Standard Specifications § 101.2) is regulated as a Special Waste.

Work associated with the Webb River Bridge Replacement Project will require the excavation of select Dredge Material. In accordance with Maine Department of Environmental Protection Regulations (CMR 418), 100-cubic yards or less of Dredge Material can be Beneficially Used in the area adjacent to and draining into the dredged water body without the need for a Beneficial Use Permit. It is currently anticipated that less than 100-cubic yards of Dredge Material will be removed in association with this project. There is onsite Beneficial Use for all of the excavated Dredge Material.

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.

The contractor shall Beneficially Use all Dredge Material excavated at the Webb River Bridge Replacement Project in an area adjacent to and draining into the dredged water body. No more than 100-cubic yards of Dredge Material may be excavated.

CONSTRUCTION REQUIREMENTS

Management: The contractor shall Beneficially Use all Dredge Material excavated at the Webb River Bridge Replacement Project in areas adjacent to and draining into the dredged water body. No more than 100-cubic yards of Dredge Material may be excavated at any of the individual culvert sites.

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 203
EXCAVATION AND EMBANKMENT
(EPS Geofoam Lightweight Fill)

203.01 Description

The following sentence is added:

This work shall consist of furnishing all qualifications, shop drawings, material and equipment, disposal of material, providing approved field quality control personnel to oversee and certify installation, and placing expanded polystyrene (EPS) Geofoam Lightweight Fill, referred to in this Specification as Geofoam, complete, as specified herein, and shown on the reviewed shop drawings, or as directed by the Resident. Provide all labor, materials and equipment necessary to complete the work of this Section.

The following Subsection is added:

203.011 Reference Publications

Some or all of the publications referred to hereinafter form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only. The latest edition of the reference publication shall govern:

203.02 Materials

ASTM Designation	Standard Test Method for
C203-05a	Breaking Load and Flexural Properties of Block-Type Thermal Insulation
C578-09e1	Rigid, Cellular Polystyrene Thermal Insulation
D732-02	Shear Strength of Plastics by Punch Tool
C272-01	Water Absorption of Core Materials for Structural Sandwich Constructions
D1621-04a	Compressive Properties of Rigid Cellular Plastics
D1622-08	Apparent Density of Rigid Cellular Plastics
D1623-03	Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics
D6817-07	Standard Specification for Rigid Cellular Polystyrene Geofoam

MATERIALS

The Contractor shall provide Geofoam, mechanical fasteners, shop drawings for installation and fulltime on site supervision of Geofoam installation. The Contractor shall provide the Geofoam

Supplier with a copy of this Specification. All Geofoam materials delivered to the site shall be in accordance with the requirements of this Section.

Geofoam product marking shall meet the minimum requirements of ASTM D6817-07.

The following Subsections are added:

203.021 Contractor and/or Geofoam Supplier Qualifications Submittal

At least thirty working days prior to first delivery of EPS to the site, the Contractor and/or Geofoam Supplier shall submit the following:

- List of at least three successful, similar projects using Geofoam in a load bearing or embankment application.
- Contact reference for each project with telephone number and addresses.
- Resume(s) of construction quality control personnel listing specific EPS experience in load bearing and/or embankment applications. The field quality control personnel shall have a minimum of two (2) years' experience in this work and shall have worked on at least one of the three successful EPS projects listed. Personnel to be assigned to the project must be identified by the Geofoam Supplier and approved by the Department. Alternate personnel may be used only after their qualifications are reviewed and approved by the Department.
- Written documentation verifying that the Geofoam Supplier has a third-party certification program in force. If multiple Geofoam Suppliers are used, each Supplier shall have a program in force. If multiple Geofoam Suppliers are used, third-party certification must be acceptable for each and every Supplier; otherwise, it will be denied for each and every molder. The documentation shall identify the business entity providing the third-party certification and shall describe in detail the steps to be taken by the agency to verify the Geofoam Supplier(s) compliance with the specific requirements described herein.
- Detailed description of the manufacturing and construction quality control services to be provided for this project.

A review of the Contractor's and Geofoam Supplier's qualifications will be completed by the Department within ten working days of receipt.

At least ten working days prior to the first delivery of Geofoam to the site, the Contractor shall provide certification, in the form of a letter prepared by the Geofoam Supplier, that the Geofoam will be, or has been, manufactured in accordance with these Specifications and that the specified minimum physical property requirements will be, or have been, met.

No Geofoam shall be shipped to the site until such time as all qualification related submittals have been reviewed and approved by the Department.

Upon completion of the installation, the Contractor shall provide a letter certifying that the Geofoam was manufactured and installed in accordance with the Specifications and approved shop drawings.

203.022 Contractor Shop Drawing and Geofoam Sample Submittal

At least twenty working days prior to first delivery of material to the site, the Contractor shall submit the following:

- Complete, accurate, full-size shop drawings to scale for both EPS fill structures (North and South Approach Embankments) in this Contract. In general, the submitted drawings shall include plans, elevations and cross-sections as needed to clearly show the configuration and limits of the Geofoam structures. Specifically, the drawings shall include the following:
 - The proposed layout and limits of Geofoam based on the plan, section and profile limits and the Geofoam details shown in the Contract Drawings. Layout drawings shall include station/offset information as needed to determine plan limits of each layer of Geofoam in the field.
 - The proposed Geofoam sizes, laying pattern as well as the orientation of blocks with each course and layout of all Geofoam inter-block connections.
 - Geofoam sizes and laying pattern.
- A step by step procedure for and description of the anticipated installation and construction sequence of the Geofoam structures (East and West Approach Embankments) in this Contract. The procedure and description shall include the use of temporary shoring and temporary ballasting/stabilizing required to prevent movement during construction prior to placement of the roadway subbase and pavement.
- A minimum of three full-size Geofoam blocks for each geofoam type to be used on the project shall be shipped/delivered to a location specified by the Department. If multiple Geofoam Suppliers are used, there shall be three blocks from each Supplier. The blocks shall in all respects be the same as blocks to be used on the project, including required seasoning. The Department will weigh, measure, sample, and test a random number of blocks to evaluate the ability of the Geofoam Supplier(s) to produce Geofoam of quality as specified herein.

A review of the shop drawings or revised shop drawings will be completed by the Department within ten working days of receipt. If revisions are required, the Contractor and/or Geofoam Supplier shall submit the revised shop drawings for review. Geofoam shall not be shipped to the site prior to notification from the Department that the shop drawings have been reviewed and all outstanding submittal comments have been addressed.

203.023 Geofoam Lightweight Fill

Geofoam shall be material designation EPS29 per ASTM D6817-07 conforming to this Specification, as supplied by:

Branch River Plastics, Inc.
15 Thurber Boulevard
Smithfield, Rhode Island 02917

Tel: 1-401-232-0270
Fax: 1-401-231-3434

Insulation Technology, Inc.
35 First Street,
P.O. Box 578
Bridgewater, Massachusetts 02324

Tel: 1-508-697-6926
Fax: 1-508-697-6934

Thermal Forms, Inc.
6173 South Bay Rd.,
P.O. Box 1981
Cicero, New York 13039

Tel: 1-315-699-8734
Fax: 1-315-699-4969

or approved equal.

Geofoam shall be fabricated using virgin feedstock manufactured into blocks having no more than five percent regrind content. If regrind is to be used, its use shall be clearly stated by the Geofoam Supplier. The source of the regrind (block-molded versus shape-molded, in-plant versus post-consumer) shall also be stated clearly.

All Geofoam shall be adequately seasoned prior to shipment to the project site. Seasoning is defined as storage in an area suitable for the intended purpose as subsequently defined herein for a minimum of 72 hours at normal ambient room temperature after the Geofoam is released from the mold. Seasoning shall be done within a building or other structure that protects the Geofoam from moisture as well as ultraviolet (UV) radiation. The area in which Geofoam is stored for seasoning shall also be such that adequate space is allowed between blocks and such that positive air circulation and venting of the structure are provided so as to foster the outgassing of blowing agent and trapped condensate from within the blocks. The Department shall be allowed to inspect the manufacturing facility including the structure(s) to be used for seasoning upon request, during normal business days and hours, including prior to the start of the project. The Geofoam Supplier may request a shortened seasoning period if the Geofoam is seasoned within an appropriate heated storage space and the Geofoam Supplier demonstrates to the satisfaction of the Department that the alternative seasoning treatment produces Geofoam that equal or exceed the quality of Geofoam subjected to the normal 72-hour seasoning period.

Geofoam shall conform to EPS29 as specified by ASTM D 6817. Only this material designation shall be used in any correspondence or other communication related to this project. Geofoam specified herein shall have the following minimum allowable physical properties:

Physical Property	ASTM Test Procedure	Accepted Value ASTM EPS29
Density	D1622-08	1.8 pounds per cubic foot (pcf) minimum
Compressive Strength	D1621-04a	29 pounds per square inch. (psi) minimum at yield or 10% deformation
Compressive Strength	D1621-04a	10.9 psi, minimum, at 1% deformation
Flexural Strength	C203-05a	50 psi minimum
Water Absorption	C272-01	Less than 2 percent by volume

The Geofoam material properties are to be obtained by testing specimens prepared from samples taken from actual Geofoam blocks produced for the project, after the period of seasoning, as defined herein.

Geofoam blocks shall have a height of at least 2 ft, a width of at least 4 ft, and a length of at least 8 ft. Other Geofoam block sizes could be used as approved by the Department. All blocks shall be shop-trimmed as necessary so that all surfaces are smooth and flat. The dimensions of each block shall not deviate from the theoretical dimensions by more than 0.5 percent. The corner or edge formed by any two faces of a block shall be perpendicular, i.e., forms an angle of 90 degrees. The deviation of any face of the block from a theoretical perpendicular plane shall not exceed 0.12 in. over a distance of 20 in. Any one face of a block shall not deviate from planarity by more than 0.2 in. when measured using a straightedge with a length of 9.8 ft. Additional field and/or shop-trimming and cutting may be required as necessitated by the geometry of the Geofoam fill being constructed.

The Geofoam shall contain a flame retardant additive and shall have UL Certification of Classification as to External Fire Expose and Surface Burning Characteristics so as to comply with Oxygen Index requirements of ASTM C578-09e1. Geofoam should be considered combustible and shall not be exposed to open flame or any source of ignition. Geofoam shall be treated to prevent insect attack and shall be protected from burrowing animals. The Geofoam Supplier shall present proposed treatment methods to the Resident for review and approval prior to the first shipment of Geofoam to the site.

Connectors shall be galvanized 20 gage, minimum, steel multi-barbed connectors. Each connector shall be capable of penetrating the Geofoam up to 3/4 inch, minimum, and have a lateral holding strength of at least 60 lbs. when tested with ASTM D6817 (EPS29), with a safety factor of two.

CONSTRUCTION REQUIREMENTS

203.04 General

The following paragraphs are added:

Prior to delivery of any Geofoam to the project site, a meeting shall be held between, at a minimum, the Department, Contractor, and Geofoam Supplier(s). The purpose of this meeting shall be to review Contractor and Geofoam Supplier(s) submittals, the results of the testing specified in Section 203.022 as well as the manufacturing and construction quality control and quality assurance requirements shown on the attached Table I, to ensure that all parties are familiar with the requirements of this specification. At the satisfactory conclusion of this meeting, the Contractor shall be allowed to begin on-site receipt, storage (if desired), and placement of Geofoam if the requirements of Section 203.02 have been satisfied.

The Contractor shall be directly responsible for all construction quality control including earthwork and all related activities other than manufacturing and shipment of the Geofoam. The Resident will be responsible for providing construction quality assurance of the Contractor's construction activities.

The following Subsections are added:

203.042 Sampling and Testing

Quality assurance testing and sampling, to monitor the conformance of the Geofoam with the Specification requirements, will be completed as directed by the Resident as the Geofoam is delivered to the project site. The Contractor shall cooperate with and assist the Resident, as necessary.

On-site visual inspection of each Geofoam delivered to the project site shall be conducted to check for damage and to visually verify the labeled information on each block. Damage shall be assessed and corrected, if required, in accordance with Section 203.043.

The unit weight and geometry (dimensional tolerances) testing shall be conducted using full-sized blocks. At least one truckload of Geofoam blocks will be checked, and additional blocks will be checked if initial measurements indicate lack of compliance. A truckload of Geofoam blocks shall be defined as either a full-length box-trailer or a flat-bed trailer of typical dimensions, i.e., approximately 40 ft or more in length, fully loaded with Geofoam blocks. The Contractor shall provide a digital scale on site with sufficient capacity and precision for weighing a full-size Geofoam block. The scale shall be recently calibrated, and certification of such calibration shall be provided to the Resident. The Contractor shall provide assistance to lift and attach blocks to the scale and reasonable means of access to the blocks for block size tolerance measurements. Blocks in conformance with contract requirement can be used to make required fills.

During construction, Geofoam blocks shall be sampled for laboratory testing. The laboratory tests shall check for compliance with the physical property requirements specified in Section 203.023. Testing shall be conducted by the Resident. A minimum of one full-size Geofoam block shall be selected for sampling from the first truckload of Geofoam delivered to the job site. Additional blocks shall be selected for sampling during the course of the project, at a rate of sampling not to exceed one sample for every 325 cubic yards of Geofoam delivered or as accepted by the Resident. Portions of sampled blocks that are otherwise acceptable can be used as desired by the Contractor. The Resident shall make every reasonable effort to conduct the laboratory testing expeditiously. However, if unsatisfactory test results are obtained, the Contractor may be directed to remove potentially defective Geofoam blocks and replace them with blocks of acceptable quality per the direction of the Resident, at no additional cost to the Department.

The Resident has the right to random sample the manufacturing plant. If any block does not conform to the physical requirements or if it is damaged in any way, it may be rejected by the Resident.

As-built drawings as well as additional record keeping necessary to document the location of all Geofoam placed for the project shall be prepared. The Contractor shall cooperate with and assist the Resident as necessary.

203.043 Shipment, Storage, and Protection

The Contractor and Geofoam Supplier shall prevent damage to the Geofoam during all stages of manufacturing, shipment, storage, and construction. The Geofoam shall be handled in a manner so as to minimize physical damage to the blocks. No method of lifting or transporting the blocks that creates dents or holes in the block surfaces or losses of portions of the block shall be allowed. Prior to delivery of the Geofoam to the project site, the Contractor shall review and be thoroughly knowledgeable with the Geofoam Suppliers care and handling procedures and recommendations.

Each Geofoam block delivered to the site shall be labeled to indicate the name of the Geofoam Supplier, the dates the block was molded and shipped from the plant, the mass/weight of the entire block as measured after a satisfactory period of seasoning as specified herein, the dimensions of the block, and the actual dry density/unit weight. Additional markings and/or symbols shall be applied as necessary by the Geofoam Supplier to indicate the location of placement of each block relative to the approved shop drawings.

If the Geofoam blocks are to be stockpiled at the project site until placement, a secure storage area shall be designated for this purpose. The storage area shall be away from any heat source or construction activity that produces heat or flame. Personal tobacco smoking shall not be allowed in the storage area.

Geofoam in temporary on-site storage shall be secured with sandbags and/or other similar "soft" weights to prevent their being dislodged by wind. The Geofoam shall not be covered in any manner that might allow the buildup of heat beneath the cover. Any Geofoam fill to be exposed to sunlight for more than 30 days shall be covered with opaque material which will prevent ultraviolet light degradation.

Leveling Sand, HDPE Geomembrane and Embankment Fill over the side slopes of the Geofoam shall be placed starting at the bottom of the slope in such a manner as to prevent damage to the Geofoam. The Embankment Fill over the side slopes shall be compacted using approved manually-operated compaction equipment.

Placement of the Geofoam blocks will require special procedures and careful selection of appropriate construction equipment to prevent damage to the Geofoam fill. The surfaces of the Geofoam blocks shall not be directly traversed by any vehicle or construction equipment during or after placement of the Geofoam. Geofoam must be protected from petroleum-based solvents such as gasoline and diesel fuel.

Damage to Geofoam shall be corrected as follows:

- Slight damage (less than 0.12 cubic ft) with no linear dimension greater than 1 ft may be left in place as-is.
- Moderate damage (less than 0.35 cubic feet) with no linear dimension greater than 3.3 ft shall be filled with leveling sand.
- Geofoam with excessive damage (i.e. exceeding the "moderate" category) shall be replaced with Geofoam which meet the damage criteria. Geofoam not meeting the damage criteria may be cut to eliminate the excessive damage and the remaining undamaged

portion of the block may be used within the fill, provided the undamaged portion of the block meets all other requirements.

Any damage to the Geofoam resulting from the Contractor's vehicles, equipment or operations, or other Contractor activity shall be replaced by the Contractor at no additional cost.

203.044 Placement

Geofoam shall be placed to the lines and grades shown on the Contract Drawings, reviewed shop drawings, and as directed by the Resident. There shall be no standing water or accumulated snow or ice on the approach slab where Geofoam blocks are placed at the time of block placement. The surface of a layer of Geofoam to receive additional Geofoam shall be constructed with a variation in surface tolerance of no more than 1/2 inch in any 10-ft interval. Geofoam blocks shall not be placed above blocks in which ice has developed on the surface. All blocks shall accurately fit relative to adjacent blocks and structures. No gaps greater than 3/4 inch will be allowed on vertical joints. The finished surface of the Geofoam beneath pavement section shall be constructed to within the tolerances of 0 to -0.2 ft (below) of the indicated grade. The finished surface of the Geofoam on the side slopes that receive soil cover shall be constructed to within a tolerance of +0.3 to -0.3 ft of the indicated grade. The finished vertical surface of the Geofoam adjacent to Panel Walls (except for uppermost layer of Geofoam) shall be constructed to within a tolerance of 0 to +0.1 ft of the indicated surface. The finished vertical surface of the uppermost layer of Geofoam adjacent to Panel Walls shall be 0 ft.

Within a given layer of Geofoam, the longitudinal axes of blocks shall be parallel to each other. Blocks placed in a row in a particular layer shall be offset 2 ft relative to blocks placed in adjacent rows of the same layer as shown on the approved shop drawings. In order to avoid continuous joints, each subsequent layer of blocks shall be offset 2 ft relative to blocks placed in the previous layer. The longitudinal axes of blocks for layers above and/or below a given layer must be perpendicular to the longitudinal axes of blocks within that given layer. Connector plates, a minimum of three per block, shall be placed between horizontal layers of blocks. Geofoam blocks shall be cut using a saw or hot wire, where necessary.

Because of the low unit weight of Geofoam, the Contractor shall provide temporary ballasting and/or guying as necessary until all blocks are built into a homogeneous mass and the fill, and pavement section are in place. Improper ballasting may result in the Geofoam becoming buoyant during periods of heavy rain. The Contractor shall replace Geofoam fill that becomes displaced due to buoyancy per the direction of the Resident. The Contractor shall direct surface water away from the Geofoam during Geofoam placement. With the exception of ballasting and/or guying material, no construction material other than that shown on the contract drawings shall be placed or stockpiled on the Geofoam.

Install a minimum of three galvanized connector plates for each 4 ft by 8 ft section of Geofoam material or as shown on reviewed shop drawings or as directed by the Resident. Press firmly into

the rigid foam until the connector is flush with the surface. Position the next foam block as specified and set firmly before placing subsequent blocks.

203.18 Method of measurement The following

sentence is added:

Geofoam furnished and placed in accordance with the Plans and Specifications shall be measured by the cubic yard in place and accepted.

203.19 Basis of Payment

The following paragraphs are added:

Geofoam will be paid for at the Contract unit price cubic yard which shall be full compensation for furnishing all qualifications, on site supervision from Supplier and Contractor, field quality control, shop drawings, labor, materials, equipment and incidentals, and any required off-site disposal of Geofoam materials necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
203.4339 Geofoam Lightweight Fill	Cubic Yard

SPECIAL PROVISION
SECTION 304
AGGREGATE BASE AND SUBBASE COURSE
(Aggregate Subbase)

If the Contractor wishes to route public traffic over the completed aggregate subbase course, the course shall be constructed with a minimum 50 mm [2 in] surcharge above the design grade, except as described below. Whenever the surcharge is used, it shall be constructed with material meeting the requirements underlying Aggregate. Also, whenever, the surcharge is used, it shall be placed on all the aggregate subbase course subjected to public driveways, sidewalks, approach roads, or the outer portions of the shoulders. Removal of the surcharge shall be followed immediately in succession by the fine grading of the aggregate subbase and construction of the next course.

The furnishing, placing, maintaining, and removal of the surcharge will not be paid for directly, but will be considered incidental to the Aggregate Subbase Course pay item.

SPECIAL PROVISION
DIVISION 400
PAVEMENTS

SECTION 401 - HOT MIX ASPHALT PAVEMENT

401.01 Description The Contractor shall furnish and place one or more courses of Hot Mix Asphalt Pavement (HMA) on an approved base in accordance with the contract documents and in reasonably close conformity with the lines, grades, thickness, and typical cross sections shown on the plans or established by the Resident. The Department will accept this work under Quality Assurance provisions, in accordance with these specifications and the requirements of Section 106 – Quality, the provisions of AASHTO M 323 except where otherwise noted in sections 401 and 703 of these specifications, and the Maine DOT Policies and Procedures for HMA Sampling and Testing.

401.02 Materials Materials shall meet the requirements specified in Section 700 - Materials:

Asphalt Cement	702.01
Aggregates for HMA Pavement	703.07
HMA Mixture Composition	703.09

401.021 Recycled Asphalt Materials Recycled Asphalt Pavement (RAP) may be introduced into the mixture at percentages approved by the Department. If approved by the Department, the Contractor shall provide documentation stating the source, test results for average residual asphalt content, and stockpile gradations showing RAP materials have been sized to meet the maximum aggregate size requirements of each mix designation. The Department will obtain samples for verification and approval prior to its use.

For specification purposes, RAP will be categorized as follows:

Classified RAP – RAP consisting of processed millings from federal, state or municipal roadways that is free of materials not generally considered to be asphalt pavement. Millings from other sources that have been fractionated or otherwise processed so as to improve the consistency of the RAP may be considered Classified RAP if approved by the Department.

Unclassified RAP – RAP from unknown sources, from excavated or reclaimed pavements, millings from repaired areas or other sources.

In the event that RAP source or properties change, the Contractor shall notify the Department of the change and submit new documentation stating the new source or properties a minimum of 72 hours prior to the change to allow for obtaining new samples and approval.

401.03 Composition of Mixtures The Contractor shall compose the Hot Mix Asphalt Pavement with aggregate, Performance Graded Asphalt Binder (PGAB), and mineral filler if required. HMA shall be designed and tested according to AASHTO R35 and the volumetric criteria in Table 1. The Contractor shall size, uniformly grade, and combine the aggregate fractions in proportions that provide a mixture meeting the grading requirements of the Job Mix Formula (JMF). The Contractor may use a maximum of 20 percent Classified RAP in any base, binder, surface, or shim course. For Unclassified RAP stockpiles no more than 15 percent shall be used. The Contractor may be allowed to use more than 20 percent Classified RAP, up to a maximum of 25 percent Classified RAP, in a base, binder, or shim course provided that PG 58-34 asphalt binder is used in the mixture. A PG 52-34 may be used when approved by the Department.

The Contractor shall submit for Department approval a JMF to the Central Laboratory in Bangor for each mixture to be supplied. The Department may approve 1 active design per nominal maximum size, per traffic level, per plant, plus a 9.5mm “fine” mix for shimming and where required, a non-RAP design for bridge decks. The Department shall then have 15 calendar days in which to process a new design before approval. The JMF shall establish a single percentage of aggregate passing each sieve size within the limits shown in section 703.09. The mixture shall be designed and produced, including all production tolerances, to comply with the allowable control points for the particular type of mixture as outlined in 703.09. The JMF shall state the original source, gradation, and percentage to be used of each portion of the aggregate including RAP when utilized, and mineral filler if required. It shall also state the proposed PGAB content, the name and location of the refiner, the supplier, the source of PGAB submitted for approval, the type of PGAB modification if applicable, and the location of the terminal if applicable.

In addition, the Contractor shall provide the following information with the proposed JMF:

- Properly completed JMF indicating all mix properties (Gmm, VMA, VFB, etc.)
- Stockpile Gradation Summary
- Design Aggregate Structure Consensus Property Summary
- Design Aggregate Structure Trial Blend Gradation Plots (0.45 power chart)
- Trial Blend Test Results for at least three different asphalt contents
- Design Aggregate Structure for at least three trial blends
- Test results for the selected aggregate blend at a minimum of three binder contents
- Specific Gravity and temperature/viscosity charts for the PGAB to be used
- Recommended mixing and compaction temperatures from the PGAB supplier
- Material Safety Data Sheets (MSDS) For PGAB
- Asphalt Content vs. Air Voids trial blend curve
- Test report for Contractor’s Verification sample
- Summary of RAP test results (if used), including count, average and standard deviation of binder content and gradation

At the time of JMF submittal, the Contractor shall identify and make available the stockpiles of all proposed aggregates at the plant site. There must be a minimum of 150 Mg [150 ton] for stone stockpiles, 75 Mg [75 ton] for sand stockpiles, and 50 Mg [50 ton] of blend sand before the Department will sample. The Department shall obtain samples for laboratory testing. The Contractor shall also make available to the Department the PGAB proposed for use in the mix in sufficient quantity to test the properties of the asphalt and to produce samples for testing of the mixture. Before the start of paving, the Contractor and the Department shall split a production sample for evaluation. The Contractor shall test its split of the sample and determine if the results meet the requirements of the Department’s written policy for mix design verification (See Maine DOT Policies and Procedures for HMA Sampling and Testing available at the Central Laboratory in Bangor). If the results are found to be acceptable, the Contractor will forward their results to the Department’s Lab, which will test the Department’s split of the sample. The results of the two split samples will be compared and shared between the Department and the Contractor. If the Department finds the mixture acceptable, an approved JMF will be forwarded to the Contractor and paving may commence. The first day’s production shall be monitored, and the approval may be withdrawn if the mixture exhibits undesirable characteristics such as checking, shoving or displacement. The Contractor shall be allowed to submit aim changes within 24 hours of receipt of the first Acceptance test result. Adjustments will be allowed of up to 2% on the percent passing the 2.36 mm sieve through the 0.075 mm and 3% on the percent passing the 4.75 mm or larger sieves. Adjustments will be allowed on the %PGAB of up to 0.2%. Adjustments will be allowed on GMM of up to 0.010.

The Contractor shall submit a new JMF for approval each time a change in material source or materials properties is proposed. The same approval process shall be followed. The cold feed percentage of any aggregate may be adjusted up to 10 percentage points from the amount listed on the JMF, however no aggregate listed on the JMF shall be eliminated. The cold feed percentage for RAP may be adjusted up to 5

percentage points from the amount listed on the JMF but shall not exceed the maximum allowable percentage for RAP for the specific application.

TABLE 1: VOLUMETRIC DESIGN CRITERIA

Design ESAL's (Millions)	Required Density (Percent of G _{mm})			Voids in the Mineral Aggregate (VMA)(Minimum Percent)					Voids Filled with Binder (VFB) (Minimum)	Fines/Eff. Binder Ratio
				Nominal Maximum Aggregate Size (mm)						
	N _{initial}	N _{design}	N _{max}	25	19	12.5	9.5	4.75		
<0.3	≤91.5	96.0	≤98.0	13.0	14.0	15.0	16.0	16.0	70-80	0.6-1.2**
0.3 to <3	≤90.5								65-80	
3 to <10	≤89.0								65-80*	
10 to <30										
> 30										

*For 9.5 mm nominal maximum aggregate size mixtures, the maximum VFB is 82.

*For 4.75 mm nominal maximum aggregate size mixtures, the maximum VFB is 84.

**For 4.75 mm nominal maximum aggregate size mixtures, the Fines/Effective Binder Ratio is 0.6-1.4.

401.04 Temperature Requirements After the JMF is established, the temperatures of the mixture shall conform to the following tolerances:

In the truck at the mixing plant – allowable range 135° to 163°C [275 to 325°F]

At the Paver – allowable range 135° to 163°C [275 to 325°F]

The JMF and the mix subsequently produced shall meet the requirements of Tables 1 and Section 703.07.

401.05 Performance Graded Asphalt Binder Unless otherwise noted in Special Provision 403 - Hot Mix Asphalt Pavement, the PGAB shall be 64-28, except that for mixtures containing greater than 20 percent but no more than 25 percent RAP the PGAB shall be PG 58-34 (or PG 52-34 when approved by the Department). The PGAB shall meet the applicable requirements of AASHTO M320 - Standard Specification for PGAB. The Contractor shall provide the Department with an approved copy of the Quality Control Plan for PGAB in accordance with AASHTO R 26 Certifying Suppliers of PGAB.

The Contractor shall request approval from the Department for a change in PGAB supplier or source by submitting documentation stating the new supplier or source a minimum of 24 hours prior to the change. In the event that the PGAB supplier or source is changed, the Contractor shall make efforts to minimize the occurrence of PGAB co-mingling.

401.06 Weather and Seasonal Limitations The State is divided into two paving zones as follows:

a. Zone 1 Areas north of US Route 2 from Gilead to Bangor and north of Route 9 from Bangor to Calais.

b. Zone 2 Areas south of Zone 1 including the US Route 2 and Route 9 boundaries.

The Contractor may place Hot Mix Asphalt Pavement for use other than a traveled way wearing course in either Zone between the dates of April 15th and November 15th, provided that the air temperature as determined by an approved thermometer (placed in the shade at the paving location) is 4°C [40°F] or higher and the area to be paved is not frozen. The Contractor may place Hot Mix Asphalt Pavement as traveled way wearing course in Zone 1 between the dates of May 1st and the Saturday following October 1st and in Zone 2 between the dates of April 15th and the Saturday following October 15th, provided the air temperature determined as above is 10°C [50°F] or higher. For the purposes of this Section, the traveled way includes truck lanes, ramps, approach roads and auxiliary lanes. The atmospheric temperature for all courses on bridge decks shall be 10°C [50°F] or higher.

Hot Mix Asphalt Pavement used for curb, driveways, sidewalks, islands, or other incidentals is not subject to seasonal limitations, except that conditions shall be satisfactory for proper handling and finishing of the mixture. All mixtures used for curb, driveways, sidewalks, islands, or other incidentals shall conform to section 401.04 - Temperature Requirements. Unless otherwise specified, the Contractor shall not place Hot Mix Asphalt Pavement on a wet or frozen surface and the air temperature shall be 4°C [40°F] or higher.

On all sections of overlay with wearing courses less than 25 mm [1 in] thick, the wearing course for the travelway and adjacent shoulders shall be placed between the dates of May 15th and the Saturday following September 15th.

On all sections of overlay with wearing courses less than 1 inch thick, the wearing course for the travelway and adjacent shoulders shall be placed between the dates of June 1st and the Saturday following September 1st if the work is to be performed, either by contract requirement, or Contractor option, during conditions defined as “night work”.

401.07 Hot Mix Asphalt Plant

401.071 General Requirements HMA plants shall conform to AASHTO M156.

a. Truck Scales When the hot mix asphalt is to be weighed on scales meeting the requirements of Section 108 - Payment, the scales shall be inspected and sealed by the State Sealer as often as the Department deems necessary to verify their accuracy.

Plant scales shall be checked prior to the start of the paving season, and each time a plant is moved to a new location. Subsequent checks will be made as determined by the Resident. The Contractor will have at least ten 20 Kg [50 pound] masses for scale testing.

401.072 Automation of Batching Batch plants shall be automated for weighing, recycling, and monitoring the system. In the case of a malfunction of the printing system, the requirements of Section 401.074 c. of this specification will apply.

The batch plant shall accurately proportion the various materials in the proper order by weight. The entire batching and mixing cycle shall be continuous and shall not require any manual operations. The batch plant shall use auxiliary interlock circuits to trigger an audible alarm whenever an error exceeding the acceptable tolerance occurs. Along with the alarm, the printer shall print an asterisk on the delivery slip in the same row containing the out-of-tolerance weight. The automatic proportioning system shall be capable of consistently delivering material within the full range of batch sizes. When RAP is being used, the plant must be capable of automatically compensating for the moisture content of the RAP.

All plants shall be equipped with an approved digital recording device. The delivery slip load ticket shall contain information required under Section 108.1.3 - Provisions Relating to Certain Measurements, Mass and paragraphs a, b, and c of Section 401.073

401.073 Automatic Ticket Printer System on Automatic HMA Plant An approved automatic ticket printer system shall be used with all approved automatic HMA plants. The requirements for delivery slips for payment of materials measured by weight, as given in the following Sections, shall be waived: 108.1.3 a., 108.1.3 b., 108.1.3 c., and 108.1.3 d. The automatic printed ticket will be considered as the Weight Certificate.

The requirements of Section 108.1.3 f. - Delivery Slips, shall be met by the weigh slip or ticket, printed by the automatic system, which accompanies each truckload, except for the following changes:

- a. The quantity information required shall be individual weights of each batch or total net weight of each truckload.
- b. Signatures (legible initials acceptable) of Weighmaster (required only in the event of a malfunction as described in 401.074 c.).
- c. The MDOT designation for the JMF.

401.074 Weight Checks on Automatic HMA Plant At least twice during each 5 days of production either of the following checks will be performed:

a. A loaded truck may be intercepted and weighed on a platform scale that has been sealed by the State Sealer of Weights and Measures within the past 12 months. Whenever the discrepancy in net weights is greater than 1.0%, but does not exceed 1.5%, the plant inspector will notify the producer to take corrective action; payment will still be governed by the printed ticket.

The producer will be allowed a period of two days to make any needed repairs to the plant and/or platform scales so that the discrepancy in net weights between the two is less than 1.0%. If the discrepancy exceeds 1.5%, the plant will be allowed to operate as long as payment is determined by truck platform scale net weight. Effective corrective action shall be taken within two working days.

b. Where platform scales are not readily available, a check will be made to verify the accuracy and sensitivity of each scale within the normal weighing range and to assure that the interlocking devices and automatic printer system are functioning properly.

c. In the event of a malfunction of the automatic printer system, production may be continued without the use of platform truck scales for a period not to exceed the next two working days, providing total weights of each batch are recorded on weight tickets and certified by a Licensed Public Weighmaster.

401.08 Hauling Equipment Trucks for hauling Hot Mix Asphalt Pavement shall have tight, clean, and smooth metal dump bodies, which have been thinly coated with a small amount of approved release agent to prevent the mixture from adhering to the bodies. Solvent based agents developed to strip asphalts from aggregates will not be allowed as release agents.

All truck dump bodies shall have a cover of canvas or other water repellent material capable of heat retention, which completely covers the mixture. The cover shall be securely fastened on the truck, unless unloading.

All truck bodies shall have an opening on both sides, which will accommodate a thermometer stem. The opening shall be located near the midpoint of the body, at least 300 mm [12 in] above the bed.

401.09 Pavers Pavers shall be self-contained, self-propelled units with an activated screed (heated if necessary) capable of placing courses of Hot Mix Asphalt Pavement in full lane widths specified in the contract on the main line, shoulder, or similar construction.

On projects with no price adjustment for smoothness, pavers shall be of sufficient class and size to place Hot Mix Asphalt Pavement over the full width of the mainline travel way with a 3 m [10 ft] minimum main screed with activated extensions.

The Contractor shall place Hot Mix Asphalt Pavement on the main line with a paver using an automatic grade and slope controlled screed, unless otherwise authorized by the Department. The controls shall automatically adjust the screed and increase or decrease the layer thickness to compensate for irregularities in the preceding course. The controls shall maintain the proper transverse slope and be readily adjustable so that transitions and superelevated curves can be properly paved. The controls shall operate from a fixed or moving reference such as a grade wire or ski type device (floating beam) with a minimum length of 10 m [30 ft], a non-contact grade control with a minimum span of 7.3 m [24 ft], except that a 12 m [40 ft] reference shall be used on Expressway projects.

The Contractor shall operate the paver in such a manner as to produce a visually uniform surface texture and a thickness within the requirements of Section 401.101 - Surface Tolerances. The paver shall have a receiving hopper with sufficient capacity for a uniform spreading operation and a distribution system to place the mixture uniformly, without segregation in front of the screed. The screed assembly shall produce a finished surface of the required evenness and texture without tearing, shoving, or gouging the mixture. Pavers with extendible screeds shall have auger extensions and tunnel extenders as per the manufacturer's recommendations, a copy of which shall be available if requested.

The Contractor shall have the paver at the project site sufficiently before the start of paving operations to be inspected and approved by the Department. The Contractor shall repair or replace any paver found worn or defective, either before or during placement, to the satisfaction of the Department. Pavers that produce an unevenly textured or non-uniform mat will be repaired or replaced before continuing to place HMA on MaineDOT projects.

On a daily basis, the Contractor shall perform nuclear density testing across the mat being placed, prior to being compacted by equipment., at 300 mm [12 in] intervals, If the density values vary by more than 2.0% from the mean, the Contractor shall make adjustments to the screed until the inconsistencies are remedied.

Failure to replace or repair defective placement equipment may result in a letter of suspension of work and notification of a quality control violation resulting in possible monetary penalties as governed by Section 106 - Quality

401.10 Rollers Rollers shall be static steel, pneumatic tire, or approved vibrator type. Rollers shall be in good mechanical condition, capable of starting and stopping smoothly, and be free from backlash when reversing direction. Rollers shall be equipped and operated in such a way as to prevent the picking up of hot mixed material by the roller surface. The use of rollers, which result in crushing of the aggregate or in displacement of the HMA will not be permitted. Any Hot Mix Asphalt Pavement that becomes loose, broken, contaminated, shows an excess or deficiency of Performance Graded Asphalt Binder, or is in any other way defective shall be removed and replaced at no additional cost with fresh Hot Mix Asphalt Pavement, which shall be immediately compacted to conform to the adjacent area.

The Contractor shall repair or replace any roller found to be worn or defective, either before or during placement, to the satisfaction of the Department. Rollers that produce grooved, unevenly textured or non-uniform mat will be repaired or replaced before continuing to place HMA on MaineDOT projects.

The type of rollers to be used and their relative position in the compaction sequence shall generally be the Contractor's option, provided specification densities are attained and with the following requirements:

- a. On variable-depth courses, the first lift of pavement over gravel, reclaimed pavement, an irregular surface, or on bridges, at least one roller shall be 14.5 Mg [16 ton] pneumatic-tired. Unless otherwise allowed by the Resident, pneumatic-tired rollers shall be equipped with skirting to minimize the pickup of

HMA materials from the paved surface. When required by the Resident, the roller shall be ballasted to 18.1 Mg [20 ton].

b. Compaction with a vibratory or steel wheel roller shall precede pneumatic-tired rolling, unless otherwise authorized by the Department.

c. Vibratory rollers shall not be operated in the vibratory mode when checking or cracking of the mat occurs, or on bridge decks.

d. Any method, which results in cracking or checking of the mat, will be discontinued and corrective action taken.

The maximum operating speed for a steel wheel or pneumatic roller shall not exceed the manufacturer's recommendations, a copy of which shall be available if requested.

401.101 Surface Tolerances The Department will check surface tolerance utilizing the following methods :

- a.) A 5 m [16 ft] straightedge or string line placed directly on the surface, parallel to the centerline of pavement.
- b.) A 3 m [10 ft] straightedge or string line placed directly on the surface, transverse to the centerline of pavement.

The Contractor shall correct variations exceeding 6 mm [$\frac{1}{4}$ in] by removing defective work and replacing it with new material as directed by the Department. The Contractor shall furnish a 10 foot straightedge for the Departments use.

401.11 Preparation of Existing Surface The Contractor shall thoroughly clean the surface upon which Hot Mix Asphalt Pavement is to be placed of all objectionable material. When the surface of the existing base or pavement is irregular, the Contractor shall bring it to uniform grade and cross section. All surfaces shall have a tack coat applied prior to placing any new HMA course. Tack coat shall conform to the requirements of Section 409 – Bituminous Tack Coat, Section 702 – Bituminous Material, and all applicable sections of the contract.

401.12 Hot Mix Asphalt Documentation The Contractor and the Department shall agree on the amount of Hot Mix Asphalt Pavement that has been placed each day.

401.13 Preparation of Aggregates The Contractor shall dry and heat the aggregates for the HMA to the required temperature. The Contractor shall properly adjust flames to avoid physical damage to the aggregate and to avoid depositing soot on the aggregate.

401.14 Mixing The Contractor shall combine the dried aggregate in the mixer in the amount of each fraction of aggregate required to meet the JMF. The Contractor shall measure the amount of PGAB and introduce it into the mixer in the amount specified by the JMF.

The Contractor shall produce the HMA at the temperature established by the JMF.

The Contractor shall dry the aggregate sufficiently so that the HMA will not flush, foam excessively, or displace excessively under the action of the rollers. The Contractor shall introduce the aggregate into the mixer at a temperature of not more than 14°C [25°F] above the temperature at which the viscosity of the PGAB being used is 0.150 Pa·s.

The Contractor shall store and introduce into the mixer the Performance Graded Asphalt Binder at a uniformly maintained temperature at which the viscosity of the PGAB is between 0.150 Pa·s and 0.300 Pa·s. The aggregate shall be coated completely and uniformly with a thorough distribution of the PGAB. The Contractor shall determine the wet mixing time for each plant and for each type of aggregate used.

401.15 Spreading and Finishing On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impracticable, the Contractor shall spread, rake, and lute the HMA with hand tools to provide the required compacted thickness. Solvent based agents developed to strip asphalts from aggregates will not be allowed as release agents.

On roadways with adjoining lanes carrying traffic, the Contractor shall place each course over the full width of the traveled way section being paved that day, unless otherwise noted by the Department in Section 403 - Hot Bituminous Pavement.

401.16 Compaction Immediately after the Hot Mix Asphalt Pavement has been spread, struck off, and any surface irregularities adjusted, the Contractor shall thoroughly and uniformly compact the HMA by rolling.

The Contractor shall roll the surface when the mixture is in the proper condition and when the rolling does not cause undue displacement, cracking, or shoving. The Contractor shall prevent adhesion of the HMA to the rollers or vibrating compactors without the use of fuel oil or other petroleum based release agents. Solvents designed to strip asphalt binders from aggregates will not be permitted as release agents on equipment, tools, or pavement surfaces.

The Contractor shall immediately correct any displacement occurring as a result of the reversing of the direction of a roller or from other causes to the satisfaction of the Department. Any operation other than placement of variable depth shim course that results in breakdown of the aggregate shall be discontinued. Any new pavement that shows obvious cracking, checking, or displacement shall be removed and replaced for the full lane width as directed by the Resident at no cost to the Department.

Along forms, curbs, headers, walls, and other places not accessible to the rollers, the Contractor shall thoroughly compact the HMA with mechanical vibrating compactors. The Contractor shall only use hand tamping in areas inaccessible to all other compaction equipment. On depressed areas, the Contractor may use a trench roller or cleated compression strips under a roller to transmit compression to the depressed area.

Any HMA that becomes unacceptable due to cooling, cracking, checking, segregation or deformation as a result of an interruption in mix delivery shall be removed and replaced, with material that meets contract specifications at no cost to the Department.

401.17 Joints The Contractor shall construct wearing course transverse joints in such a manner that minimum tolerances shown in Section 401.101 - Surface Tolerances are met when measured with a straightedge.

The paver shall maintain a uniform head of HMA during transverse and longitudinal joint construction.

The HMA shall be free of segregation and meet temperature requirements outlined in section 401.04. Transverse joints of the wearing course shall be straight and neatly trimmed. The Contractor may form a vertical face exposing the full depth of the course by inserting a header, by breaking the bond with the underlying course, or by cutting back with hand tools. The Department may allow feathered or "lap" joints on lower base courses or when matching existing base type pavements.

Longitudinal joints shall be generally straight to the line of travel, and constructed in a manner that best ensure joint integrity. Methods or activities that prove detrimental to the construction of straight, sound longitudinal joints will be discontinued.

The Contractor shall apply a coating of emulsified asphalt immediately before paving all joints to the vertical face and 75 mm [3 in] of the adjacent portion of any pavement being overlaid except those formed by pavers operating in echelon. The Contractor shall use an approved spray apparatus designed for covering a narrow surface. The Department may approve application by a brush for small surfaces, or in the event of a malfunction of the spray apparatus, but for a period of not more than one working day.

Where pavement under this contract joins an existing pavement, or when the Department directs, the Contractor shall cut the existing pavement along a smooth line, producing a neat, even, vertical joint. The Department will not permit broken or raveled edges. The cost of all work necessary for the preparation of joints is incidental to related contract pay items.

401.18 Quality Control Method A, B & C 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 106.6 - Acceptance and this Section. The Contractor shall not begin paving operations until the Department approves the QCP in writing.

Prior to placing any mix, the Department and the Contractor shall hold a Pre-paving conference to discuss the paving schedule, source of mix, type and amount of equipment to be used, sequence of paving pattern, rate of mix supply, random sampling, project lots and sublots and traffic control. A copy of the QC random numbers to be used on the project shall be provided to The Resident. The Departments' random numbers for Acceptance testing shall be generated and on file with the Resident and the Project Manager. All field and plant supervisors including the responsible onsite paving supervisor shall attend this meeting.

The QCP shall address any items that affect the quality of the Hot Mix Asphalt Pavement including, but not limited to, the following:

- a. JMF(s)
- b. Hot mix asphalt plant details
- c. Stockpile Management (to include provisions for a minimum 2 day stockpile)
- d. Make and type of paver(s)
- e. Make and type of rollers including weight, weight per inch of steel wheels, and average contact pressure for pneumatic tired rollers
- f. Name of QCP Administrator, and certification number
- g. Name of Process Control Technician(s) and certification number(s)
- h. Name of Quality Control Technicians(s) and certification number(s)
- i. Mixing & transportation including process for ensuring that truck bodies are clean and free of debris or contamination that could adversely affect the finished pavement
- j. Testing Plan
- k. Laydown operations including longitudinal joint construction, procedures for avoiding paving in inclement weather, type of release agent to be used on trucks tools and rollers, compaction of shoulders, tacking of all joints, methods to ensure that segregation is minimized, procedures to determine the maximum rolling and paving speeds based on best engineering practices as well as past experience in achieving the best possible smoothness of the pavement. Solvent based agents developed to strip asphalts from aggregates will not be allowed as release agents.
- l. Examples of Quality Control forms including a daily plant report and a daily paving report

- m. Silo management and details (can show storage for use on project of up to 36 hours)
- n. Provisions for varying mix temperature due to extraordinary conditions.
- o. Name and responsibilities of the Responsible onsite Paving Supervisor.
- p. Method for calibration/verification of Density Gauge
- q. A note that all testing will be done in accordance with AASHTO and the Maine DOT Policies and Procedures for HMA Sampling and Testing.
- r. A detailed description of RAP processing, stockpiling and introduction into the plant as well as a note detailing conditions under which the percent of RAP will vary from that specified on the JMF.
- s. A detailed procedure outlining when production will be halted due to QC or Acceptance testing results.
- t. A plan to address the change in PGAB source or supplier and the potential co-mingling of differing PGAB's.
- u. A procedure to take immediate possession of acceptance samples once released by MaineDOT and deliver said samples to the designated acceptance laboratory.

The QCP shall include the following technicians together with following minimum requirements:

- a. QCP Administrator - A qualified individual shall administer the QCP. The QCP Administrator must be a full-time employee of or a consultant engaged by the Contractor or paving subcontractor. The QCP Administrator shall have full authority to institute any and all actions necessary for the successful operation of the QCP. The QCP Administrator (or its designee in the QCP Administrator's absence) shall be available to communicate with the Department at all times. The QCP Administrator shall be certified as a Quality Assurance Technologist certified by the New England Transportation Technician Certification Program (NETTCP).
- b. Process Control Technician(s) (PCT) shall utilize test results and other quality control practices to assure the quality of aggregates and other mix components and control proportioning to meet the JMF(s). The PCT shall inspect all equipment used in mixing to assure it is operating properly and that mixing conforms to the mix design(s) and other Contract requirements. The QCP shall detail how these duties and responsibilities are to be accomplished and documented, and whether more than one PCT is required. The Plan shall include the criteria to be utilized by the PCT to correct or reject unsatisfactory materials. The PCT shall be certified as a Plant Technician by the NETTCP.
- c. Quality Control Technician(s) (QCT) shall perform and utilize quality control tests at the job site to assure that delivered materials meet the requirements of the JMF(s). The QCT shall inspect all equipment utilized in transporting, laydown, and compacting to assure it is operating properly and that all laydown and compaction conform to the Contract requirements. The QCP shall detail how these duties and responsibilities are to be accomplished and documented, and whether more than one QCT is required. The QCP shall include the criteria utilized by the QCT to correct or reject unsatisfactory materials. The QCT shall be certified as a Paving Inspector by the NETTCP.

The QCP shall detail the coordination of the activities of the Plan Administrator, the PCT and the QCT. 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 Hot Mix Asphalt Pavement in accordance with the following minimum frequencies:

TABLE 2 : MINIMUM QUALITY CONTROL FREQUENCIES

Test or Action	Frequency	Test Method
Temperature of mix	6 per day at street and plant	-
Temperature of mat	4 per day	-
%TMD (Surface)	1 per 125 Mg [125 ton] (As noted in QC Plan)	ASTM D2950
%TMD (Base)	1 per 250 Mg [250 ton] (As noted in QC Plan)	AASHTO T269
Fines / Effective Binder	1 per 500 Mg [500 ton]	AASHTO T 312*
Gradation	1 per 500 Mg [500 ton]	AASHTO T30
PGAB content	1 per 500 Mg [500 ton]	AASHTO T164 or T308
Voids at N_{design}	1 per 500 Mg [500 ton]	AASHTO T 312*
Voids in Mineral Aggregate at N_{design}	1 per 500 Mg [500 ton]	AASHTO T 312*
Rice Specific Gravity	1 per 500 Mg [500 ton]	AASHTO T209
Coarse Aggregate Angularity	1 per 5000 Mg [5000 ton]	ASTM D5821
Flat and Elongated Particles	1 Per 5000 Mg [5000 ton]	ASTM D4791
Fine Aggregate Angularity	1 Per 5000 Mg [5000 ton]	AASHTO T304

*Method A and B only

The Contractor may utilize innovative equipment or techniques not addressed by the Contract documents to produce or monitor the production of the mix, subject to approval by the Department.

The Contractor shall submit all Hot Mix Asphalt Pavement plant test reports, inspection reports and updated pay factors in writing, signed by the appropriate technician and present them to the Department by 1:00 P.M. on the next working day, except when otherwise noted in the QCP due to local restrictions. The Contractor shall also retain splits of the previous 5 QC tests, with QC results enclosed for random selection and testing by The Department during QA inspections of the HMA production facility. Test results of splits that do not meet the Dispute Resolution Variance Limits in Table 10 shall trigger an investigation by the MDOT Independent Assurance Unit, and may result in that lab losing NETTCP certification and the ability to request a dispute [Section 401.223 - Process for Dispute Resolution (Methods A , B and C only)].

The Contractor shall make density test results, including randomly sampled densities, available to the Department onsite. Summaries of each day's results, including a daily paving report, shall be recorded and signed by the QCT and presented to the Department by 1:00 p.m. the next working day.

The Contractor shall have a testing lab at the plant site, equipped with all testing equipment necessary to complete the tests in Table 2. The Contractor shall locate an approved Gyratory Compactor at the plant testing lab or within 30 minutes of the plant site.

The Contractor shall fill all holes in the pavement resulting from cutting cores by the Contractor or the Department with a properly compacted, acceptable mixture no later than the following working day. Before filling, the Contractor shall carefully clean the holes and apply a coating of emulsified asphalt. On surface courses, cores shall not be cut except for Verification of the Nuclear Density Gauge, at a rate not to exceed 3 per day or 2 per 1000 Mg [1000 ton] placed.

The Contractor shall monitor plant production using running average of three control charts as specified in Section 106 - Quality. Control limits shall be as noted in Table 3 below. The UCL and LCL, shall not exceed the allowable control points for the particular type of mixture as outlined in Table 1 of section 703.09

TABLE 3: Control Limits

Property	UCL and LCL
Passing 4.75 mm and larger sieves	Target +/-4.0
Passing 2.36 mm sieve	Target +/-2.5
Passing .075 mm sieve	Target +/-1.2
PGAB Content*	Target +/-0.3
Voids in the Mineral Aggregate	LCL = LSL + 0.2
% Voids at N_{design}	JMF Target +/-1.3

*Based on AASHTO T 308

The Contractor shall cease paving operations whenever one of the following occurs on a lot in progress:

- a. Method A: The Pay Factor for VMA, Voids @ N_d , Percent PGAB, composite gradation, VFB, fines to effective binder or density using all Acceptance or all Quality Control tests for the current lot is less than 0.85.
- b. Method B: The Pay Factor for VMA, Voids @ N_d , Percent PGAB, composite gradation, VFB, fines to effective binder or density using all Acceptance or all Quality Control tests for the current lot is less than 0.90.
- c. Method C: The Pay Factor for VMA, Voids @ N_d , Percent PGAB, percent passing the nominal maximum sieve, percent passing 2.36 mm sieve, percent passing 0.300 mm sieve, percent passing 0.075 mm sieve or density using all Acceptance or all available Quality Control tests for the current lot is less than 0.85.
- d. The Coarse Aggregate Angularity or Fine Aggregate Angularity value falls below the requirements of Table 3: Aggregate Consensus Properties Criteria in Section 703.07 for the design traffic level.
- e. Each of the first 2 control tests for a Method A or B lot fall outside the upper or lower limits for VMA, Voids @ N_d , or Percent PGAB; or under Method C, each of the first 2 control tests for the lot fall outside the upper or lower limits for the nominal maximum, 2.36 mm, 0.300 mm or 0.075 mm sieves, or percent PGAB.
- f. The Flat and Elongated Particles value exceeds 10% by ASTM D4791.
- g. There is any visible damage to the aggregate due to over-densification other than on variable depth shim courses.
- h. The Contractor fails to follow the approved QCP.

The Contractor shall notify the Resident in writing as to the reason for shutdown, as well as the proposed corrective action, by the end of the work day. Failure to do so will be treated as a second incident under 106.4.6 QCP Non-compliance. The Department will consider corrective action acceptable if the pay factor for the failing property increases, based on samples already in transit, or a verification sample is tested and the property falls within the specification limits.

In cases where the corrective action can be accomplished immediately, such as batch weight or cold feed changes, the Contractor may elect to resume production once the corrective action is completed. Additional QC testing shall be performed to verify the effectiveness of the corrective action. Subsequent occurrences of shutdown for the same property in a Lot in progress will require paving operations to cease. Paving operations shall not resume until the Contractor and the Department determines that material meeting the Contract requirements will be produced. The Department may allow the Contractor to resume production based upon a passing QC sample, with a split of the sample being sent to the Department for verification testing. If the submitted verification sample test results fall outside the specification limits, the Contractor shall cease production until a verification sample is submitted to the Department has been tested by the Department and found to be within specification limits.

If the Contractor's control chart shows the process to be out of control (defined as a single point outside of the control limits on the running average of three chart) on any property listed in Table 3: Control Limits, the Contractor shall notify the Resident in writing of any proposed corrective action by 1:00 PM the next working day.

The Department retains the exclusive right, with the exception of the first day's production of a new JMF, to determine whether the resumption of production involves a significant change to the production process. If the Department so determines, then the current lot will be terminated, a pay factor established, and a new lot will begin.

401.19 Quality Control Method D For Items covered under Method D, the Contractor shall submit a modified QC Plan detailing, how the mix is to be placed, what equipment is to be used, and what HMA plant is to be used. All mix designs (JMF) shall be approved and verified by MDOT prior to use. Certified QC personnel shall not be required. The Contractor shall certify the mix and the test results for each item by a Certificate of Compliance.

401.20 Acceptance Method A, B & C These methods utilizes Quality Level Analysis and pay factor specifications.

For Hot Mix Asphalt Pavement designated for acceptance under Quality Assurance provisions, the Department will sample once per subplot on a statistically random basis, test, and evaluate in accordance with the following Acceptance Criteria:

TABLE 4: ACCEPTANCE CRITERIA

PROPERTIES	POINT OF SAMPLING	TEST METHOD
Gradation	Paver Hopper	AASHTO T30
PGAB Content	Paver Hopper	AASHTO T308
%TMD (Surface)	Mat behind all Rollers	AASHTO T269
%TMD (Base or Binder)	Mat behind all Rollers	AASHTO T269
Air Voids at N_d	Paver Hopper	AASHTO T 312
% VMA at N_d	Paver Hopper	AASHTO T 312
Fines to Effective Binder	Paver Hopper	AASHTO T 312
% VFB	Paver Hopper	AASHTO T 312

In the event the Department terminates a Lot prematurely but fails to obtain the required number of acceptance samples to calculate the volumetric property pay factor under the test method specified in the contract, the pay factor shall be calculated using the number of samples actually obtained from the contract. Should the number of acceptance samples taken total less than three, the resulting pay factor shall be 1.0 for volumetric properties. A minimum of three cores will be used for a density pay factor, if applicable, for quantities placed to date.

Should the Contractor request a termination of the Lot in progress prior to three acceptance samples being obtained, and the Department agrees to terminate the Lot, then the pay factor for mixture properties shall be 0.80. A minimum of three cores will be used to determine a density pay factor, if applicable, for quantities placed to date.

Lot Size For purposes of evaluating all acceptance test properties, a lot shall consist of the total quantity represented by each item listed under the lot size heading.

Sublot size - Refer to section 401.201, 401.202, and 401.203 for minimum size and number of sublots. The quantity represented by each sample will constitute a sublot.

If there is less than one-half of a sublot remaining at the end, then it shall be combined with the previous sublot. If there is more than one-half sublot remaining at the end, then it shall constitute the last sublot and shall be represented by test results. If it becomes apparent partway through a Lot that, due to an underrun, there will be insufficient mix quantity to obtain the minimum number of sublots needed, the Resident may adjust the size of the remaining sublots and select new sample locations based on the estimated quantity of material remaining in the Lot.

Acceptance Testing The Department will obtain samples of Hot Mix Asphalt Pavement in conformance with AASHTO T168 Sampling Bituminous Paving Mixtures, and the Maine DOT Policies and Procedures for HMA Sampling and Testing, which will then be transported by the Contractor to the designated MDOT Laboratory within 48 hours (except when otherwise noted in the project specific QCP due to local restrictions), as directed by MDOT in approved transport containers to be provided by the Department, unless otherwise directed by the Resident. Failure to deliver an acceptance sample to the designated acceptance laboratory will be considered the second incident under 106.4.6–QCP Non-Compliance.

The Department will take the sample randomly within each sublot. Target values shall be as specified in the JMF. The Department will use Table 5 for calculating pay factors for gradation, PGAB Content, Air Voids at N_{design} , VMA, Fines to Effective Binder and VFB. The Department will withhold reporting of the test results for the Acceptance sample until 7:00 AM, on the second working day of receipt of the sample, or after receipt of the Contractors results of the Acceptance sample split. Upon conclusion of each lot, where there is a minimum of four sublots, results shall be examined for statistical outliers, as stated in Section 106.7.2 - Statistical Outliers.

Isolated Areas During the course of inspection, should it appear that there is an isolated area that is not representative of the lot based on a lack of observed compactive effort, excessive segregation or any other questionable practice, that area may be isolated and tested separately. An area so isolated that has a calculated pay factor below 0.80, based on three random tests shall be removed and replaced at the expense of the Contractor for the full lane width and a length not to be less than 50 m [150 ft].

Pavement Density The Department will measure pavement density using core samples tested according to AASHTO T-166. The Department will randomly determine core locations. The Contractor shall cut 6 inch diameter cores at no additional cost to the Department by the end of the working day following the day the pavement is placed, and immediately give them to the Department. Cores for Acceptance testing shall be cut such that the nearest edge is never within 0.225 m (9 inches) of any joint. The cores will be placed in a transport container provided by the Department and transported by the Contractor to the designated MDOT Lab as directed by the Department. Pre-testing of the cores will not be allowed. At the time of sampling, the Contractor and the Department shall mutually determine if a core is damaged. If it is determined that the core(s) is damaged, the Contractor shall cut new core(s) at the same offset and within 1 m [3 ft] of the initial sample. At the time the core is cut, the Contractor and the Department will mutually determine if saw cutting of the core is needed, and will mark the core at the point where sawing is needed. The core may be saw cut by the Contractor in the Department's presence onsite, or in an MDOT Lab by The Department, without disturbing the layer being tested to remove lower layers of Hot Mix Asphalt Pavement, gravel, or RAP. No recuts are allowed at a test location after the core has been tested. Upon conclusion of each lot, density results shall be examined for statistical outliers as stated in Section 106.7.2.

On all sections of overlay with wearing courses designed to be 19 mm [3/4 in] or less in thickness, there shall be no pay adjustment for density otherwise noted in Section 403 - Hot Bituminous Pavement. For overlays designed to be 19 mm [3/4 in] or less in thickness, density shall be obtained by the same rolling train and methods as used on mainline travelway surface courses with a pay adjustments for density, unless otherwise directed by the Department.

There shall be no pay adjustment for density on shoulders unless otherwise noted in Section 403 - Hot Bituminous Pavement. Density for shoulders shall be obtained by the same rolling train and methods as used on mainline travelway, unless otherwise directed by the Department. Efforts to obtain optimum compaction will not be waived by the Department unless it is apparent during construction that local conditions make densification to this point detrimental to the finished pavement surface course.

401.201 Method A Lot Size will be the entire production per JMF for the project, or if so agreed at the Pre-paving Conference, equal lots of up to 4500 Mg [4500 tons], with unanticipated over-runs of up to 1500 Mg [1500 ton] rolled into the last lot. Sublot sizes shall be 750 Mg [750 ton] for mixture properties, 500 Mg [500 ton] for base or binder densities and 250 Mg [250 ton] for surface densities. The minimum number of sublots for mixture properties shall be 4, and the minimum number of sublots for density shall be five.

TABLE 5: METHOD A ACCEPTANCE LIMITS

Property	USL and LSL
Passing 4.75 mm and larger sieves	Target +/-7%
Passing 2.36 mm to 1.18 mm sieves	Target +/-4%
Passing 0.60 mm	Target +/-3%
Passing 0.30 mm to 0.075 mm sieve	Target +/-2%
PGAB Content	Target +/-0.4%
Air Voids	4.0% +/-1.5%
Fines to Effective Binder	0.6 to 1.2
Voids in the Mineral Aggregate	LSL Only from Table 1
Voids Filled with Binder	Table 1 values plus a 4% production tolerance for USL only
% TMD (In place density)	95.0% +/- 2.5%

**For 4.75 mm nominal maximum aggregate size mixtures, the Fines/Effective Binder Ratio is 0.6-1.4.

401.202 Method B Lot Size will be the entire production per JMF for the project and shall be divided into 3 equal sublots for Mixture Properties and 3 equal sublots for density.

TABLE 6: METHOD B ACCEPTANCE LIMITS

Property	USL and LSL
Percent Passing 4.75 mm and larger sieves	Target +/-7
Percent Passing 2.36 mm to 1.18 mm sieves	Target +/-5
Percent Passing 0.60 mm	Target +/-4
Percent Passing 0.30 mm to 0.075 mm sieve	Target +/-3
PGAB Content	Target +/-0.5
Air Voids	4.0% +/-2.0
Fines to Effective Binder	0.6 to 1.4
Voids in the Mineral Aggregate	LSL from Table 1
Voids Filled with Binder	Table1 plus a 4% production tolerance for USL.
% TMD (In-place Density)	95.0% +/- 2.5%

401.203 Testing Method C Lot Size will be the entire production per JMF for the project, or if so agreed at the Pre-paving Conference, equal lots of up to 4500 Mg [4500 tons], with unanticipated over-runs of up to 1500 Mg [1500 ton] rolled into the last lot. Sublot sizes shall be 750 Mg [750 ton] for mixture properties, 500 Mg [500 ton] for base or binder densities and 250 Mg [250 ton] for surface densities. The minimum number of sublots for mixture properties shall be 4, and the minimum number of sublots for density shall be five.

TABLE 7: METHOD C ACCEPTANCE LIMITS

Property	USL and LSL
Passing 4.75 mm and larger sieves	Target +/-7%
Passing 2.36 mm to 1.18 mm sieves	Target +/-5%
Passing 0.60 mm	Target +/-4%
Passing 0.30 mm to 0.075 mm sieve	Target +/-2%
PGAB Content	Target +/-0.4%
Air Voids	4.0% +/-1.5%
Fines to Effective Binder	0.6 to 1.2
Voids in the Mineral Aggregate	LSL Only from Table 1
Voids Filled with Binder	Table 1 values plus a 4% production tolerance for USL only
% TMD (In place density)	95.0% +/- 2.5%

**For 4.75 mm nominal maximum aggregate size mixtures, the Fines/Effective Binder Ratio is 0.6-1.4.

401.204 Testing Method D For hot mix asphalt items designated as Method D in Section 403 - Hot Bituminous Pavement, one sample will be taken from the paver hopper or the truck body per 250 Mg [250 ton] per pay item. The mix will be tested for gradation and PGAB content. Disputes will not be allowed. If the mix is within the tolerances listed in Table 8: Method D Acceptance Limits, the Department will pay the contract unit price. If the test results for each 250 Mg [250 ton] increment are outside these limits, the following deductions (Table 8b) shall apply to the HMA quantity represented by the test.

TABLE 8: METHOD D ACCEPTANCE LIMITS

Property	USL and LSL
Percent Passing 4.75 mm and larger sieves	Target +/-7
Percent Passing 2.36 mm to 1.18 mm sieves	Target +/-5
Percent Passing 0.60 mm	Target +/-4
Percent Passing 0.30 mm to 0.075 mm sieve	Target +/-3
PGAB Content	Target +/-0.5
% TMD (In-place Density)	95.0% +/- 2.5%

TABLE 8b Method "D" Price Adjustments

PGAB Content	-5%
2.36 mm sieve	-2%
0.30 mm sieve	-1%
0.075 mm sieve	-2%
Density	-10%*

*Only applies when called for in Section 403 - Hot Bituminous Pavement. Contractor shall cut two 150 mm [6 in] cores, which shall be tested for percent TMD per AASHTO T-269. If the average for the two tests falls below 92.5% the disincentive shall apply.

401.21 Method of Measurement The Department will measure Hot Mix Asphalt Pavement by the Mg [ton] in accordance with Section 108.1 - Measurement of Quantities for Payment.

401.22 Basis of Payment The Department will pay for the work, in place and accepted, in accordance with the applicable sections of this Section, for each type of HMA specified.

The Department will pay for the work specified in Section 401.11, for the HMA used, except that cleaning objectionable material from the pavement and furnishing and applying bituminous material to joints and contact surfaces is incidental.

Payment for this work under the appropriate pay items shall be full compensation for all labor, equipment, materials, and incidentals necessary to meet all related contract requirements, including design of the JMF, implementation of the QCP, obtaining core samples, transporting cores and samples, filling core holes, applying emulsified asphalt to joints, and providing testing facilities and equipment.

The Department will make a pay adjustment for quality as specified below.

401.221 Pay Adjustment The Department will sample, test, and evaluate Hot Mix Asphalt Pavement in accordance with Section 106 - Quality and Section 401.20 - Acceptance, of this Specification.

401.222 Pay Factor (PF) The Department will use the following criteria for pay adjustment using the pay adjustment factors under Section 106.7 - Quality Level Analysis:

Density If the pay factor for Density falls below 0.80 for Method A or C or 0.86 for Method B, all of the cores will be randomly re-cut by Sublot. A new pay factor will be calculated that combines all initial and retest results. If the resulting pay factor is below 0.80 for Method A or C or below 0.86 for Method B, the entire Lot shall be removed and replaced with material meeting the specifications at no additional cost to the Department, except that the Department may, when it appears that there is a distinct pattern of defective material, isolate any defective material by investigating each mix sample subplot and require removal of defective mix sample sublots only, leaving any acceptable material in place if it is found to be free of defective material. Pay factors equal to or greater than the reject level will be paid accordingly.

Gradation For HMA evaluated under Acceptance Method A or B, the Department will determine a composite pay factor (CPF) using applicable price adjustment factors "f" from Table 9: Table of Gradation Composite "f" Factors, and Acceptance limits from Table 5: Method A Acceptance Limits, for Method A or Table 6: Method B Acceptance Limits, for Method B. The Department will not make price adjustments for gradation on Methods A and B, but will monitor them as shutdown criteria.

TABLE 9: TABLE OF GRADATION COMPOSITE "f" FACTORS (Methods A and B)

Constituent		"f" Factor			
		19 mm	12.5 mm	9.5 mm	4.75 mm
Gradation	25 mm	-	-	-	-
	19 mm	4	-	-	-
	12.5 mm		4	4	-
	9.50 mm				4
	2.36 mm	6	6	6	8
	1.18 mm				
	0.60 mm	2	2	2	2
	0.30 mm	2	2	2	2
	0.075 mm	6	6	6	8

For HMA evaluated under Acceptance Method C, the Department will determine a pay factor using acceptance limits from Table 7: Method C Acceptance Limits.

VMA, Air Voids, VFB and Fines to Effective Binder The Department will determine a pay factor (PF) using the applicable Acceptance Limits.

The following variables will be used for pay adjustment:

- PA = Pay Adjustment
- Q = Quantity represented by PF in Mg [ton]
- P = Contract price per Mg [ton]
- PF = Pay Factor

Pay Adjustment Method A

The Department will use the following criteria for pay adjustment: density, Performance Graded Asphalt Binder content, voids @N_d, VMA, VFB, F/B_{eff}, and the screen sizes listed in Table 9 for the type of HMA represented in the JMF. If any single pay factor for PGAB Content, VMA, or Air Voids falls below 0.80, then the composite pay factor for PGAB Content, VMA, and Air Voids shall be 0.55.

Density: For mixes having a density requirement, the Department will determine a pay factor using Table 5: Method A Acceptance Limits:

$$PA = (\text{density PF} - 1.0)(Q)(P) \times 0.50$$

PGAB Content, VMA and Air Voids: The Department will determine a pay adjustment using Table 5: Method A Acceptance Limits as follows:

$$PA = (\text{voids @ } N_d \text{ PF} - 1.0)(Q)(P) \times 0.20 + (\text{VMA @ } N_d \text{ PF} - 1.0)(Q)(P) \times 0.20 + (\text{PGAB PF} - 1.0)(Q)(P) \times 0.10$$

VFB and Fines to Effective Binder The Department will determine a pay factor (PF) using Table 5: Method A Acceptance Limits. The Department will not make price adjustments for VFB or Fines to Effective Binder, but will monitor them as shutdown criteria.

Pay Adjustment Method B

The Department will use the following criteria for pay adjustment: density, Performance Graded Asphalt Binder content, voids @N_d, VMA, VFB, F/B_{eff}, and the screen sizes listed in Table 9 for the type of HMA represented in the JMF. If any single pay factor for PGAB Content, VMA, or Air Voids falls below 0.86, then the composite pay factor for PGAB Content, VMA, and Air Voids shall be 0.70.

Density: For mixes having a density requirement, the Department will determine a pay factor using Table 6: Method B Acceptance Limits:

$$PA = (\text{density PF} - 1.0)(Q)(P) \times 0.50$$

PGAB Content, VMA and Air Voids: The Department will determine a pay adjustment using Table 6: Method B Acceptance Limits as follows:

$$PA = (\text{voids @ } N_d \text{ PF} - 1.0)(Q)(P) \times 0.20 + (\text{VMA @ } N_d \text{ PF} - 1.0)(Q)(P) \times 0.20 + (\text{PGAB PF} - 1.0)(Q)(P) \times 0.10$$

VFB and Fines to Effective Binder The Department will determine a pay factor (PF) using Table 6: Method B Acceptance Limits. The Department will not make price adjustments for VFB or Fines to Effective Binder, but will monitor them as shutdown criteria.

Pay Adjustment Method C

The Department will use density, Performance Graded Asphalt Binder content, and the percent passing the nominal maximum, 2.36 mm, 0.300 mm and 0.075 mm sieves for the type of HMA represented in the JMF. If the PGAB content falls below 0.80, then the PGAB pay factor shall be 0.55.

Density: For mixes having a density requirement, the Department will determine a pay factor using Table 7: Method C Acceptance Limits:

$$PA = (\text{density PF} - 1.0)(Q)(P) \times 0.50$$

PGAB Content and Gradation The Department will determine a pay factor using Table 7: Method C Acceptance Limits. The Department will calculate the price adjustment for Mixture Properties as follows:

$$PA = (\% \text{ Passing Nom. Max PF} - 1.0)(Q)(P) \times 0.05 + (\% \text{ passing 2.36 mm PF} - 1.0)(Q)(P) \times 0.05 + (\% \text{ passing 0.30 mm PF} - 1.0)(Q)(P) \times 0.05 + (\% \text{ passing 0.075 mm PF} - 1.0)(Q)(P) \times 0.10 + (\text{PGAB PF} - 1.0)(Q)(P) \times 0.25$$

VMA, Air Voids, VFB and Fines to Effective Binder The Department will determine a pay factor (PF) using Table 7: Method C Acceptance Limits. The Department will not make price adjustments for VMA, Air Voids, VFB or Fines to Effective Binder, but will monitor them as shutdown criteria.

Pay Adjustment Method D

The Department will use density, Performance Graded Asphalt Binder content, and the screen sizes listed in Table 8b for the type of HMA represented in the JMF. If test results do not meet the Table 8 requirements, deducts as shown in Table 8b shall be applied to the quantity of mix represented by the test.

401.223 Process for Dispute Resolution (Methods A B & C only)

a. Dispute Resolution sampling At the time of Hot-Mix Asphalt sampling, the Department will obtain a split sample of each Acceptance test random sample for possible dispute resolution testing. The Contractor shall also obtain a split sample of the HMA at this same time. If the Contractor wishes to retain the option of requesting dispute testing of the initial Acceptance sample, the Contractor will test their split of the

Acceptance sample and shall report their results to the Resident, with a copy to the QA Engineer at the Central Laboratory in Bangor by 7:00 AM, on the second working day from time of QA sampling, otherwise dispute resolution will not be initiated. The Department's dispute resolution split sample will be properly labeled and stored for a period of not more than two weeks, or until the sample is tested.

b. Disputing Acceptance results The Contractor may dispute the Department's Acceptance results and request (Methods A, B, & C) that the dispute resolution split sample be tested by notifying the Department's Resident and the QA Engineer at the Central Laboratory in Bangor in writing within two working days after receiving the results of the Acceptance test. The following shall be provided in the request:

- Acceptance sample reference number
- The specific test result(s) or property(ies) being disputed, and
- The complete, signed report of the Contractor's testing (In a lab certified by the NETTCP and MDOT) of their split of the Acceptance sample indicating that the variances in Table 10: Dispute Resolution Variance Limits, for the specific test result(s) or property(ies) were exceeded.

c. Disputable items The Contractor may dispute any or all of the following Method A or B test results when the difference between the Department's value and the Contractor's value for that test equals or exceeds the corresponding allowable variation in Table 10: Dispute Resolution Variance Limits, PGAB content, G_{mb} , and G_{mm} . In addition, if the allowable variation for these tests is not met or exceeded, the Contractor may dispute either or both of the following material properties provided the difference between results for them equals or exceeds the corresponding allowable variation in Table 10: Voids at N_{design} , and VMA.

For Method C only: The results for PGAB content and the screen sizes used for pay adjustment may be disputed.

d. Outcome The value of any disputed result or property reported for the initial Acceptance sample shall stand if the value reported for the dispute resolution sample is not closer to the value the Contractor reported for their split sample than to the value reported for the initial Acceptance sample. If the value reported for the dispute resolution falls precisely half-way between the other two values the value reported for the dispute resolution will replace the original acceptance value. Otherwise, the value reported for the dispute resolution sample will replace the value reported for the initial Acceptance sample, and will be used to re-calculate any other affected results or properties.

TABLE 10: DISPUTE RESOLUTION VARIANCE LIMITS

PGAB Content	+/-0.4%
G_{mb}	+/-0.030
G_{mm}	+/-0.020
Voids @ N_d	+/-0.8%
VMA	+/-0.8%
Passing 4.75 mm and larger sieves	+/- 4.0%
Passing 2.36 mm to 0.60 mm sieves	+/- 3.0%
Passing 0.30 mm to 0.15	+/- 2.0 %
0.075 mm sieve	+/- 1.0%

SECTION 402 - PAVEMENT SMOOTHNESS

402.00 Smoothness Projects Projects to have their pavement smoothness analyzed in accordance with this Specification will be so noted in Special Provision 403 - Bituminous Box

402.01 Pavement Smoothness The final pavement surface shall be evaluated for smoothness using a Class I or Class II profiler as defined by ASTM E950 (94). Smoothness measurements will be expressed in terms of the International Roughness Index (IRI) as defined by the World Bank, in units of inches/mile.

402.02 Lot Size Lot size for smoothness will be 1000 lane-meters [3000 lane-feet]. A subplot will consist of 20 lane-meters [50 lane-feet]. Partial lots will be included in the previous lot if less than one-half the size of a normal lot. If equal to or greater than one-half the normal lot size, it will be tested as a separate lot.

402.03 Acceptance Testing The Department will conduct Acceptance testing following completion of the surface course. Sections to be excluded from testing include the following:

- Bridge decks and joints (no smoothness measurements will be taken within 30 m [100 ft] of bridge joints)
 - Acceleration and deceleration lanes
 - Shoulders and ramps
 - Side streets and roads
 - Within 30 m [100 ft] of transverse joints at the beginning and end of the project
 - Within 30 m [100 ft] of railroad crossings
 - Urban areas with speed limits of 50 kph [30 mph] or lower
- Each lot shall have 2 measurements made in each wheel path. The average of the 4 measurements will determine the smoothness for that lot.

The smoothness measurements will be statistically evaluated for pay factors as described in Subsection 106.7 - Quality Level Analysis, using the specification limits shown below.

ACCEPTANCE LIMITS	
Level	USL
I	0.95 m/km [60 in/mile]
II	1.10 m/km [70 in/mile]
III	1.25 m/km [80 in/mile]

Computation of Smoothness Pay Adjustment:

$$PA = (PF-1.0)(Q)(P)$$

where:

Q = Quantity of surface course in the Lot (excluding shoulders, side streets, bridge decks, ramps, acceleration and deceleration lanes)

PF = smoothness pay factor for the Lot

P = Contract unit price for surface pavement

PA = pay adjustment

402.04 Unacceptable Work In the event that any Lot is found to have a pay factor less than 0.80, the Contractor shall take whatever remedial action is required to correct the pavement surface in that Lot at no additional expense to the Department. Such remedial action may include but is not limited to removal and replacement of the unacceptable pavement. In the event remedial action is necessary, the Contractor shall submit a written plan to the Resident outlining the scope of the remedial work. The Resident must approve this plan before the remedial work can begin. Following remedial work, the Lot shall be retested, and will be subject to the specification limits listed above. The resulting pay factor, if within the acceptable range, will be used in the final pay adjustment. The Contractor shall pay the cost of retesting the pavement following corrective action.

Localized surface tolerance defects will be subject to the provisions outlined in Section 401.101 Surface Tolerances.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
402.10 Incentive/Disincentive - Pavement Smoothness	Lump Sum

SECTION 403 - HOT BITUMINOUS PAVEMENT

403.01 Description This work shall consist of constructing one or more courses of bituminous pavement on an approved base in accordance with these specifications, and in reasonably close conformity with the lines, grades, thickness and typical cross sections shown on the plans or established.

The bituminous pavement shall be composed of a mixture of aggregate, filler if required, and bituminous material.

403.02 General The materials and their use shall conform to the requirements of Section 401 - Hot Mix Asphalt Pavement.

403.03 Construction The construction requirements shall be as specified in Section 401 - Hot Mix Asphalt Pavement.

In addition, hot bituminous pavement placed on bridges shall also conform to the following requirements.

- a. The mixture shall be composed of aggregate, PGAB and mineral filler but no recycled asphalt pavement and placed in courses as specified in the Special Provisions.
- b. The bottom course shall be placed with an approved rubber mounted bituminous paver of such type and operated in such a manner that the membrane waterproofing will not be damaged in any way.
- c. The top course shall not be placed until the bottom course has cooled sufficiently to provide stability.
- d. The Contractor will not be required to cut sample cores from the compacted pavement on the bridge deck.
- e. After the top course has been placed, the shoulder areas shall be sealed 1 meter [3 ft] wide with two applications of an emulsified bituminous sealer meeting the requirements of Section 702.12 - Emulsified Bituminous Sealing Compound. The first application shall be pre-mixed with fine, sharp sand, similar to mortar sand, as needed to fill all voids in the mix in the area being sealed. The second application may be applied without sand. The sealer shall be carried to the curb at the gutter line in sufficient quantity to leave a bead or fillet of material at the face of the curb. The area to be sealed shall be clean, dry and the surface shall be at ambient temperature.
- f. The furnishing and applying of the required quantity of sealer for the bridge shoulder areas shall be incidental to placing the hot bituminous pavement.
- g. The atmospheric temperature for all courses on bridge decks shall be 10°C [50°F] or higher.

403.04 Method of Measurement Hot bituminous pavement will be measured as specified in Section 401.21- Method of Measurement.

403.05 Basis of Payment The accepted quantities of hot bituminous pavement will be paid for at the contract unit price per Megagram [ton] for the bituminous mixtures, including bituminous material complete in place.

Method A, Method B, Method C and Method D shall be used for acceptance as specified in Section 401 - Hot Mix Asphalt Pavements. (See Complementary Notes, Section 403 - Hot Bituminous Pavement, for Method location).

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
403.102 Hot Mix Asphalt Pavement for Special Areas	MG [Ton]
403.206 Hot Mix Asphalt, 25 mm Nominal Maximum Size	MG [Ton]
403.207 Hot Mix Asphalt, 19.0 mm Nominal Maximum Size	MG [Ton]
403.2071 Hot Mix Asphalt , 19.0 mm Nominal Maximum Size	MG [Ton]
403.2072 Asphalt Rich Hot Mix Asphalt, 19.0 mm Nominal Maximum Size (Asphalt Rich Base and Intermediate course)	MG [Ton]
403.208 Hot Mix Asphalt, 12.5 mm Nominal Maximum Size	MG [Ton]
403.2081 Hot Mix Asphalt - 12.5 mm Nominal Maximum Size (PG 70-28)	MG [Ton]
403.209 Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (sidewalks, drives, islands & incidentals)	MG [Ton]
403.210 Hot Mix Asphalt, 9.5 mm Nominal Maximum Size	MG [Ton]
403.2101 Hot Mix Asphalt - 9.5 mm Nominal Maximum Size (PG 70-28)	MG [Ton]
403.2102 Asphalt Rich Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (Asphalt Rich Intermediate course)	MG [Ton]
403.211 Hot Mix Asphalt (shimming)	MG [Ton]
403.212 Hot Mix Asphalt, 4.75 mm Nominal Maximum Size	MG [Ton]
403.2131 Hot Mix Asphalt, 12.5 mm Nominal Maximum Size, (PG 70-28) (Base and Intermediate Base course)	MG [Ton]
403.2132 Asphalt Rich Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (Base and Intermediate Base course)	MG [Ton]

SPECIAL PROVISION
SECTION 403
HOT MIX ASPHALT

Desc. Of Course	Grad Design.	Item Number	Bit Cont. % of Mix	Total Thick	No. Of Layers	Comp. Notes
<u>Bridge Deck</u>						
Wearing	12.5 mm	403.208	N/A	1.5 in	1	1,2,5,8,11
Base	12.5 mm	403.213	N/A	1.5 in	1	1,2,5,8,11
<u>US Route 2 Travel Way and Shoulder Approach Areas</u>						
<u>Sta 12+75 to Sta 15+00</u>						
Wearing	12.5 mm	403.208	N/A	1.5 in	1	5,8
Binder	12.5 mm	403.213	N/A	2.5 in	1	5,8
Base	19.0 mm	403.207	N/A	3.0 in	1	4,8,16
<u>US Route 2 Travel Way</u>						
<u>Sta 16+50 to Sta 25+25</u>						
Wearing	12.5 mm	403.208	N/A	1.5 in	1	5,8
Binder	12.5 mm	403.213	N/A	2.5 in	1	5,8
Base	19.0 mm	403.207	N/A	3.0 in	1	4,8,16
<u>US Route 2 Shoulder Way</u>						
<u>Sta 16+50 to Sta 25+25</u>						
Wearing	12.5 mm	403.208	N/A	1.5 in	1	5,8
Binder	12.5 mm	403.213	N/A	2.5 in	1	5,8
<u>Leavitt Street Travel Way & Shoulder</u>						
Wearing	12.5 mm	403.208	N/A	2.0 in	1	5,8
Base	19.0 mm	403.207	N/A	3.0 in	1	4,8,16
<u>Sidewalks, Drives, Islands & Incidentals</u>						
Wearing	9.5 mm	403.209	N/A	2 in	2/more	2,3,10,13

COMPLEMENTARY NOTES

1. The use of Recycled Asphalt Pavement (RAP) will not be permitted.
2. The density requirements are waived. In addition, the use of an oscillating steel roller shall be required to compact all HMA pavements placed on bridge decks.
3. The design traffic level for mix placed shall be <0.3 million ESALS.
4. The design traffic level for mix placed shall be 0.3 to <3 million ESALS. 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**. (Ndesign)
8. Section 106.6 Acceptance, (2) Method B.
10. Section 106.6 Acceptance, (2) Method D.

**Mexico/Dixfield
15143.00 & 15620.00
US Route 2/River Road
Bridge Replacement
October 22, 2010**

11. A **“FINE”** 12.5 mm mix with a gradation above or through the restricted zone shall be used for this item.
13. A mixture meeting the requirements of section 703.09 Grading ‘D’, with a minimum PGAB content of 6%, and the limits of Special Provision 401, Table 9 (Drives and Sidewalks) for PGAB content and gradation may be substituted for this item. A job mix formula shall be submitted to the department for approval.
16. Any base or binder mix left exposed to traffic over the winter shall have a layer of 12.5 mm mix substituted for the 19mm mix. If this substitution is made, the specified layers may need to be modified, as approved by the Resident.

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/yd², and on milled pavement approximately 0.05 gal/yd², 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/yd².

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 419
SAWING AND SEALING JOINTS IN BITUMINOUS PAVEMENT
(Sawing and Sealing Bituminous Pavement)

419.01 Description

This work consists of sawing and sealing bituminous concrete pavement as shown on the Plans, as specified herein or as directed by the Resident.

419.02 Materials

Joint seal materials shall be one of the silicone or polyurethane-based joint seal projects on the Maine Department of Transportation Qualified Products List of Joint Sealant suitable for use in roadway applications.

419.03 Construction

The bituminous concrete pavement to be sawn shall be accurately marked before cutting. The marking shall be in accordance with the locations as shown on the Plans or as directed by the Resident. Cutting shall be with an approved power driven saw with an abrasive blade.

Unless otherwise noted or directed, the saw cut shall be 1½" deep vertical, a minimum of 3/8 inch wide.

Residue or debris from the sawing operation shall be removed immediately and legally disposed of by the Contractor.

Before installation of the joint sealant, the surfaces in the joint shall be cleaned of dust, dirt, debris, and other loose materials as recommended by the manufacturer. Mixing and installation of sealant shall be in strict conformance with the manufacturer's written recommendations. Traffic must not be allowed on the newly sealed joint for 60 minutes after sealant installation unless otherwise specified by the manufacturer.

419.03 Method of Measurement

Sawing and Sealing Joints in Bituminous Pavement will be measured by the linear foot of pavement actually cut and sealed to the depth specified on the Plans and accepted.

419.04 Basis of Payment

Sawing and Sealing Joints in Bituminous Pavement will be paid for at the Contract unit price per linear foot which shall be full compensation for all materials, tools, equipment, labor and

all incidentals necessary for the completion of the work to the satisfaction of the Resident. The disposal of saw cut residue shall be incidental to this item.

Payment will be made under:

Pay Item

Pay Unit

419.20 Sawing and Sealing Joints in Bituminous Pavement

Linear Foot

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

CLASS OF CONCRETE	ITEM NUMBER	DESCRIPTION	P	METHOD
A	502.219	Structural Concrete Abut & Ret Walls	\$400.00	A
A	502.26	Structural Concrete Roadway and Sidewalk Slabs on Steel	\$400.00	A
A	502.31	Structural Concrete Approach Slab	-	C
LP	502.341	Structural Concrete Roadway Median	\$450.00	A
LP	502.49	Structural Concrete Curbs and Sidewalk	\$450.00	A
S	502.56	Concrete Fill	-	C
LP	526.34	Permanent Concrete Transition Barrier	\$450.00	A

SPECIAL PROVISION
SECTION 502
STRUCTURAL CONCRETE
(Roadway Median)

Description This work shall consist of furnishing and placing a portland cement concrete pavement and incidental construction as shown on the plans, or as directed by the Resident. Except as otherwise specified in this Special Provision, all work shall be in conformity with the applicable provisions of Section 502 - Structural Concrete, Section 503 - Reinforcing Steel, and Section 515 - Protective Coating for Concrete Surfaces.

MATERIALS

Concrete Concrete shall be Class A.

Reinforcing Steel Reinforcing steel shall be Grade 60 and conform to Section 503 - Reinforcing Steel and be epoxy coated or galvanized.

Epoxy coated reinforcing steel shall meet the requirements of Section 503 - Reinforcing Steel.

Galvanized reinforcing steel shall be hot-dipped galvanized with a Class I coating in accordance with ASTM A767. Nickel and aluminum shall be allowed in the galvanizing bath, but the zinc content shall not be less than 98 percent by mass. The Contractor shall furnish a written certification that the coating and coated bars meet the requirements of ASTM A767.

Control Joint Zip strip control joint shall be 38 mm [1 ½ inch] type as manufactured by Superior Featherweight Tool Company, 1325, Bixby Drive, City of Industry, CA 91745; Harris Plastic Control Joint Former 38 mm [1 ½ inch] type as manufactured by A.H. Harris & Sons, Inc., 21 Ellis Street, New Britain, CT 06050; or an equivalent.

Joint Sealant Per Section 714.04 - Sealant.

CONSTRUCTION REQUIREMENTS

Preparation of Foundation The foundation bed shall be well graded and compacted, as directed by the Resident, to provide the thickness of concrete indicated on the plans.

Prior to the concrete placement, the foundation bed shall be thoroughly and uniformly saturated with water. The bed shall be free of puddles and excessive surface water.

Placement of Concrete The concrete mix shall be placed in a continuous placement operation when possible so that construction joints will be kept to a minimum. Construction joints shall be constructed when there is a break in a placement.

Construction joints shall be used to provide access to driveways and roads as directed by the Resident. 600 mm [2 ft] long dowels spaced at 300 mm [12 in] on center shall be placed at the construction joint. Construction joints shall be brushed with a neat cement paste immediately prior to making the adjacent placement. Control joints shall be constructed with a zip strip placed transversely at 3 m [10 ft] on centers.

Joint sealant shall be applied at the top surface of the concrete median at construction joints.

The surface of the concrete shall receive a float finish in accordance with Section 502.14(A) - Float Finish. Immediately following the float finish, the surface shall be textured at right angles to the roadway using an approved open-pile, stiff bristle broom or mat.

The curing period for the concrete shall be four days and shall meet the requirements of Section 502.15 - Curing Concrete. The finished surface of the concrete shall receive a protecting coating in accordance with Section 515 - Protective Coating for Concrete Surfaces.

Method of Measurement Structural concrete, roadway median, satisfactorily placed and accepted, will be measured for payment by the cubic meter [cubic yard], in accordance with the dimensions shown on the plans or authorized by the Resident.

Basis of Payment The accepted quantity of Structural Concrete, Roadway Median will be paid for at the contract unit price per cubic meter [cubic yard], which payment will be full compensation for all labor, materials, equipment, and incidentals necessary to complete the work, including the fabrication, delivery, and placement of reinforcement; the furnishing and the application of the protective coating; the fabrication, delivery, and placement of dowels; furnishing and placement of control joint strip and sealant.

Excavation for the placement of the Structural Concrete, Roadway Median will be paid for under the appropriate contract pay item, Section 203 - Excavation and Embankments.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
502.341 Structural Concrete Roadway Median	Cubic Meter [Cubic Yard]

SPECIAL PROVISION
SECTION 502
STRUCTURAL CONCRETE
(Structural Concrete, Abutments and Retaining Walls)

502.03 Materials

Add the following:

Closed Cell Foam Joint Filler: Closed cell foam to be used as a joint filler between different components of bridges and walls shall have a compact closed cell structure composed of synthetic isomeric polymers and shall be gray in color. It shall offer sufficient heat resistance so that it is compatible with hot applied sealing compounds. Closed cell foam shall meet the requirements of Section 5.1 through 5.4 of ASTM D1752, with the compression requirement modified to 10 psi minimum to 25 psi maximum. Typical physical properties, as determined using test method ASTM D545, shall be as follows:

Compression, 50%	13 psi
Extrusion	0.1 inch
Recovery	99.21%
Water absorption, volume	0.246%

The Contractor shall provide certified test data which documents compliance with the required physical properties. The certified test data shall be submitted to the Engineer for approval.

Bonded Closed Cell Joint System: The joint seal shall be composed of either closed cell cross linked ethylene vinyl acetate polyethylene copolymer or of closed cell polychloroprene (neoprene). The joint seal shall feature grooves or ribs which run the full length of the joint. The joint seal shall be bonded to the concrete surfaces on each side of the joint using a two-component epoxy based adhesive.

The joint seal shall have the following physical properties:

Tensile strength, (ASTM D412).....	115 psi, minimum
Elongation @ break (ASTM D3575).....	200%, minimum
Water absorption, volume %	5%

The two-component epoxy based adhesive shall conform to ASTM C881, Type I & II, Grade 2, Class B & C, and shall have the following physical properties:

Tensile strength, (ASTM D638).....	3,500 psi, minimum
Compressive strength	7,000 psi
Bond strength.....	430 psi, minimum

The Contractor shall provide certified test data which documents compliance with the required physical properties. The certified test data shall be submitted to the Engineer for approval.

502.04 Method of Measurement

Add the following:

Closed cell foam and bonded closed cell joint material will not be measured for payment separately but shall be considered incidental to the associated contract items.

SPECIAL PROVISION
SECTION 502
STRUCTURAL CONCRETE
(Quality Level Analysis)

502.01 Description In second sentence, replace "...METHOD B Small Quantity Product Verification..." with "...METHOD B Statistical Acceptance..."

502.05 Composition and Proportioning Delete Table 1 and replace with the following;

TABLE 1- Methods A, B, and C

Concrete CLASS	Compressive Strength (PSI)		Permeability (COULOMBS)		Entrained Air (%)		Notes
	LSL	USL	LSL	USL	LSL	USL	
S	2,900	N/A	N/A	N/A	6.0	8.5	1, 5
A	4,350	-----	-----	2,400	6.0	8.5	1,2,5,6
P	-----	-----	-----	-----	5 ½	7 ½	1,2,3,4,5
LP	5,075	-----	-----	2,000	6.0	8.5	1,2,5,6
Fill	2,900	N/A	N/A	N/A	N/A	N/A	6

502.503 Delete and replace with the following;

"502.0503 Quality Assurance METHOD B The Department will determine the acceptability of the concrete through a quality assurance program.

The Department will take Quality Assurance samples a minimum of once per subplot on a statistically random basis. Quality Assurance tests will include compressive strength, air content and permeability.

Concrete sampling for quality assurance tests will be taken at the discharge point, with pumped concrete sampling taken at the discharge end of the pump line.

Lot Size A lot size shall consist of the total quantity represented by each class of concrete in the Contract, except in the case when the same class of concrete is paid for under both lump sum items and unit price items in the Contract; in this case, the lump sum item quantities shall comprise 1 lot and the unit price item quantities shall comprise a separate lot. A lot shall consist of a minimum of 3 and a maximum of 10 sublots. If a lot is comprised of more than 10 sublots, sized in accordance with Table #3, then this quantity shall be divided equally into 2, or more, lots such that there is a minimum of 3 and a maximum of 10 sublots per lot. If there is insufficient quantity in a lot to meet the recommended minimum subplot size, then the lot shall be divided into 3 equal sublots.

Sublot Size, General The size of each sublot shall be determined in accordance with Table #3. The Resident may vary sublot sizes based on placement sizes and sequence.

Sublot Size, Unit Price Items Sublot sizes will initially be determined from estimated quantities. When the actual final quantity of concrete is determined: If there is less than one-half the estimated sublot quantity in the remaining quantity, then this quantity shall be combined with the previous sublot, and no further Acceptance testing will be performed; if there is more than one-half the estimated sublot quantity in the remaining quantity, then this quantity shall constitute the last sublot and shall be represented by Acceptance test results. If it becomes apparent part way through a lot that, due to an underrun in quantity, there will be an insufficient quantity of concrete to comprise three sublots, then the Resident may adjust the sizes of the remaining sublots and select new sample locations based on the revised estimated quantity of concrete remaining in the lot.

Sublot Size, Lump Sum Items Each lot shall be divided into sublots of equal size, based on the estimated quantity of concrete.

TABLE 3

Quantity m ³ [cy]	Recommended Sublot Size m ³ [cy]
0-400 [0-500]	40 [50]
401-800 [501-1000]	60 [75]
801-1600 [1001-2000]	80 [100]
1601 [2001] or greater	200 [250]

Determination of the concrete cover over reinforcing steel for structural concrete shall be made prior to concrete being placed in the forms. Bar supports, chairs, slab bolsters, and side form spacers shall meet the requirements of Concrete Reinforcing Steel Institute (CRSI) Manual of Standard Practice, Chapter 3 Section 2.5 Class 1, Section 2.6 Class 1A, or Section 4. All supports shall meet the requirements for type and spacing as stated in the CRSI Manual of Standard Practice, Chapter 3. Concrete will not be placed until the placing of the reinforcing steel and supports have been approved by the Resident. If the Contractor fails to secure Department approval prior to placement, the Contractor's failure shall be cause for removal and replacement at the Contractor's expense. The Contractor shall notify the Resident, at least 48 hours prior to the placement, when the reinforcing steel will be ready for checking. Sufficient time must be allowed for the checking process and any needed repairs.

Evaluation of materials will be made using the specification limits in Table 1.

Compressive strength tests will be completed by the Department in accordance with AASHTO-T22 at ≥ 28 days, except that no slump will be taken. The average of two concrete cylinders per sublot will constitute a test result and this average will be used to determine the compressive strength for pay adjustment computations.

Testing for Entrained Air in concrete, at the rate of one test per subplot, shall be in accordance with AASHTO T152.

Rapid Chloride Permeability test specimens will be completed by the Resident in accordance with AASHTO T-277 at an age ≥ 56 days. Two 100 mm x 200 mm [4 in x 8 in] cylinders will be taken per subplot placed.

Surface Tolerance, Alignment and Trueness, Plumb and Batter, and Finish will be measured as described in Section 502.0502.

Rejection by Resident For an individual subplot with a calculated pay factor of less than 0.80, the Department will, at its sole discretion:

A. Require the Contractor to remove and replace the entire affected placement with concrete meeting the Contract requirements at no additional expense to the Department, or

B. Accept the material, at a reduced payment as determined by the Department. (See also Section 502.191)

For a lot in progress, the Contractor shall discontinue operations whenever one or more of the following occurs:

A. The pay factor for any property drops below 1.00 and the Contractor is taking no corrective action

B. The pay factor for any property is less than 0.90

C. The Contractor fails to follow the QC Plan”

502.18 Method of Measurement Under Section E. make the following change from “...Method A, and under Section 502.19...” to “...Method A, Section 502.0503- Quality Assurance Method B, and under Section 502.19...”

502.19 Basis of Payment Modify the first sentence of the seventh paragraph from “...accepted under Method A.” to “...accepted under Method A and Method B.”

502.191 Pay Adjustment for Compressive Strength Add the following as the second sentence to the first paragraph; “Pay factors (PF) for pay adjustments for compressive strength will be determined using the Quality Level Analysis as specified in Section 106.”

502.192 Pay Adjustment for Chloride Permeability Delete and replace with the following;

“Pay factors (PF) for pay adjustments for Chloride Permeability will be determined using the Quality Level Analysis as specified in Section 106.

Values greater than 4000 coulombs shall be subject to rejection and replacement at no additional cost to the Department.”

502.193 Pay Adjustment for Air Content Delete and replace with the following;

“Pay factors (PF) for pay adjustments for air content will be determined using the Quality Level Analysis as specified in Section 106.”

Add the following Section;

“502.195 Pay Adjustments for Compressive Strength, Chloride Permeability and Air Content The Composite Pay Factor (CPF) for each lot of concrete shall be computed as follows:

$$\text{CPF} = [(\text{Compressive Strength PF}-1)(0.20)] + [(\text{Air Content PF}-1)(0.40)] \\ + [(\text{Chloride Permeability PF}-1)(0.40)]$$

The pay adjustment for each lot of concrete shall be computed as follows:

$$\text{Lot Pay Adjustment} = P \times \text{CPF} \times \text{Lot Size}$$

There will be no positive pay adjustments for Method B Concrete.”

SPECIAL PROVISION
SECTION 502
STRUCTURAL CONCRETE
(Precast Deck Panels)

Description This work shall consist of casting, furnishing, and erecting prestressed structural concrete deck panels (hereafter called “precast deck panels”) and all related materials as an optional stay-in-place forming system in accordance with the contract plans and specifications.

Construction Precast Deck Panels shall comply with Section 535 – Precast, Prestressed Concrete Superstructure.

Precast deck panels shall be manufactured in conformity with the following tolerances:

Depth of slab	- 3 mm, + 6 mm [- 1/8 in, + 1/4 in]
Width of slab	-0, + 6 mm [-0, + 1/4 in]
Length of slab	± 6 mm [± 1/4 in]
Horizontal alignment	6 mm [1/4 in] (deviation from line parallel to centerline)
Squareness	13 mm [1/2 in] max. Difference in diagonal meas.
Vertical Position of Strand group	+0, - 6 mm [+0, - 1/4 in] Meas. from bottom of slab
Vertical position of individual strands	± 6 mm [± 1/4 in]
Horizontal strand position	± 13 mm [± 1/2 in]
Strand Projection	-6mm, +19 mm [- 1/4 in, + 3/4 in]
Bowing	± 6 mm [± 1/4 in]
Threaded jack inserts	± 6 mm [± 1/4 in] longitudinally and transversely

Basis of Payment All work will be considered incidental to and included in Pay Item 502.26 Structural Concrete Roadway and Sidewalk Slab on Steel Bridges. Payment shall include full compensation for all materials wholly or partly in the precast deck panels and related materials or work required for the panel erected as shown on the plans. Related materials and work will include, but not limited to furnishing and installing temporary supports, including adhesive and grout bedding, reinforcing steel, welded wire fabric and cast-in-place concrete.

SPECIAL PROVISION
SECTION 503
REINFORCING STEEL
(Corrosion Resistant Reinforcing System, Fabricated and Delivered)
(Corrosion Resistant Reinforcing System, Placing)

The following are corrections, additions and revisions to the Standard Specification Section 503, Reinforcing Steel.

503.01 Description:

This work shall consist of furnishing and placing corrosion resistant reinforcing, in accordance with these specifications and in conformance with the Plans, Supplemental Specifications and Special Provisions.

503.02 Materials

Add the following:

Corrosion resistant reinforcing shall consist of any of the following materials:

- a) MMFX reinforcing steel
- b) stainless reinforcing steel
- c) ZBAR reinforcing steel

Corrosion resistant reinforcing systems shall be placed at the locations shown on the plans or as directed by the Resident.

All corrosion resistant reinforcing systems shall have a minimum yield strength, $F_y = 60$ ksi.

MMFX reinforcing steel shall consist of MMFX 2 steel bars as manufactured by MMFX Steel Corporation of America. MMFX reinforcing steel is a high strength, low carbon, chromium-rich deformed bar meeting the requirements of ASTM A1035.

Stainless reinforcing steel shall consist of deformed bars made of solid stainless steel meeting the requirements of ASTM A955.

ZBAR reinforcing steel shall consist of a dual-coated deformed bar with a metalized zinc inner layer under a polymer outer layer, meeting the requirements of ASTM A1055 and manufactured by Gerdau Ameristeel.

503.04 Protection of Material

The first sentence of the first paragraph is modified to read:

Reinforcement shall be stored on skids or other supports a minimum of 12 in above the ground surface and protected at all times from damage and surface contamination.

503.05 Fabrication

The following is added:

Welding to aid fabrication shall not be permitted. Reinforcing bars shall be bent cold and shall not be bent or straightened in a manner that will injure the material. Heating of the bars to facilitate bending shall not be permitted. Bar cutting shall be accomplished by shearing or with a water-cooled saw. Torch cutting reinforcing steel shall not be permitted. Field welding as an aid to installation shall not be permitted.

503.06 Placing and Fastening

The following is added

Reinforcing bars shall be bent cold and shall not be bent or straightened in a manner that will injure the material. Heating of the bars to facilitate bending shall not be permitted. Bar cutting shall be accomplished by shearing or with a water-cooled saw. Torch cutting reinforcing steel shall not be permitted. Field welding as an aid to installation shall not be permitted.

503.06 Placing and Fastening

The sixth paragraph is modified to include:

Tie wire shall be soft- annealed wire that has been nylon or plastic coated. Non-metallic ties may be used with approval from the Resident.

503.07 Splicing

This section is removed in its entirety and replaced with the following:

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 them together. Splice laps shall be made in accordance with the following table, unless noted otherwise on the plans:

Minimum Lap Splice Length (inches)*									
Bar Type	Bar Size								
	#3	#4	#5	#6	#7	#8	#9	#10	#11
Stainless MMFX 2, or z-bar	21	26	32	39	46	61	77	97	120

* Lap splice length are based on the following parameters: Minimum center to center spacing between bars of 6 inch; nominal yield strength of the reinforcing steel of 75 ksi; minimum 28 day compressive strength of concrete of 4350 psi. When any of the preceding parameters is altered appropriate minimum lap splice lengths will be determined by the Resident. When lap splices are placed horizontally in an element where the concrete depth below the splice will be 12 inches or more, the indicated lap splice lengths shall be multiplied by a factor of 1.4.

Mechanical couplers may be used for splicing reinforcing bars, provided they are approved by the Resident and conform to the following requirements:

Couplers shall be made from the same material as the attached reinforcing bars to which they are attached, or shall be approved for use by the manufacturer of the corrosion resistant reinforcing system provided.

a. Tension couplers Coupler shall be able to develop 1.25 times the theoretical yield strength of the spliced bar in tension. Bolted and wedge-lock type couplers will not be allowed

b. Compression Couplers Couplers shall be capable of maintaining the spliced bars in alignment prior to and during concrete placement. For reinforcing bars designed to act in compression, the individual bars ends shall be within 1 1/2" of being "square" to the final 12 inches of the bar. Additionally, abutting bar ends shall be in contact, and the angle of the gap between abutting bar ends shall be 3°, or less.

Welded splices shall not be allowed.

503.10 Method of Measurement

The first sentence is modified to read:

Corrosion resistant reinforcing shall be measured by the computed number of pounds of steel reinforcement authorized.

503.11 Basis of Payment

The following sentence is added:

Payment for field cutting reinforcing steel and the treatment of cut ends shall be considered incidental to related contract items.

Pay Item:

Pay Unit:

503.30	Corrosion Resistant Reinforcing System, Fabricated and Delivered	Pound
503.31	Corrosion Resistant Reinforcing System, Placing	Pound

SPECIAL PROVISION
SECTION 506
STEEL COATINGS

506.01 Description of Work

This work shall consist of surface preparation and application of a protective coating to steel substrate in accordance with the Plans and this Specification.

506.02 Materials Requirements

506.02.1 General Material Requirements

The Contractor shall supply the Resident (for work performed in shops, away from the job site, Resident refers to the Fabrication Engineer) with the applicable current product data sheets and material safety data sheets (MSDS) before any coating work is performed.

506.02.2 Paint Material Requirements:

Paint systems shall be from the Northeast Protective Coating Committee (NEPCOAT) Qualified Products List (QPL) A or B, (<http://www.nepcoat.org>). The primer, intermediate and topcoat shall be contrasting colors. The topcoat color shall be a lusterless brown, Federal Standard 595B, color number 30045, unless otherwise specified.

The Contractor shall provide the paint batch description, lot number, date of manufacture, shelf life and the manufacturer's published storage requirements to The Department's authorized representative. The Contractor shall provide the manufacturer's published data sheet for application of each coat of the coating system including equipment, surface cleanliness, anchor profile, mixing, thinning, application, cure time for the entire range of allowable environmental conditions and dry film thickness (DFT).

506.02.3 Galvanizing Material Requirements:

Hot-dip galvanizing shall meet the requirements of AASHTO M 111M/M 111 (ASTM A 123/A 123M) including any applicable requirements from AASHTO M 111M/M 111 (ASTM A 123/A 123M) Section 2-Referenced Documents. The minimum average coating thickness grade shall conform to Table 1. The Quality Assurance Inspector shall verify Quality Control thickness test results using the same test method used by the Quality Control Inspector.

Certification of compliance and written test results shall be provided to The Department in accordance with AASHTO M 111M/M 111 (ASTM A 123/A 123M).

506.03 Construction Requirements

506.03.1 General Construction Requirements:

The Contractor shall shop apply all three coats in accordance with the manufacturer's published data sheet and this Specification. In the event of a conflict between the published data sheet and this Specification, the more stringent requirement will prevail.

When bridge beams are coated, the following information shall be stenciled over the top coat: paint system used, including coating manufacturer, number of coats and coat description, month and year coated. The stenciling material shall be identical to touch up material recommended by the top coat manufacturer and the color shall contrast with the top coat. Stenciling shall be on the inside face of the fascia beam, near Abutment No. 1. Information shall be in block characters three to five inches high. All top coated systems shall be stenciled, including one, two or three coat systems, top coated galvanized systems and dry powder systems.

Submittals: The Contractor shall submit for review by the Department the following, as applicable, two weeks prior to the Pre-work Conference:

- The manufacturers' published data sheet(s) for the specified protective coating system.
- Quality Control Plan.
- Containment Plan.
- The Contractor's qualifications.
- Material Safety Data Sheets.
- Environment Protection Plan
- Waste Management Plan
- All other documentation specified herein.

Pre-Work Conference: Two weeks prior to the beginning of work, the Contractor shall have a pre-job work conference. Two weeks notice shall be given to the Resident prior to the meeting. The Resident and the Contractor shall agree on the agenda, which may include the following as applicable:

- Status of submittals and review
- Procedures for lead abatement
- Coating application
- Inspection hold points
- Responsibilities and documentation methods of all parties
- Safety
- Progress Payments
- Schedule

Quality Control/Quality Assurance: The Contractor shall develop, submit, and implement a Quality Control Plan for all work done under Section 506 in accordance with Section 106.4 Quality Control. The Department will conduct Quality Assurance as outlined in 106.5 Quality Assurance. The QC plan shall include the names of all the Contractor's representatives on site, including the certified coating inspector who shall be responsible for the inspection and the

acceptance of the Contractor's work prior to the Department's inspection. The plan shall also define hold points from surface preparation inspection to final inspection, frequency of inspections, frequency of tests, submittal of daily work reports, coating/DFT reports and the process for rework. For non-compliance with the QC Plan see Standard Specification Section 106.4.6 QCP Non-Compliance.

Inspection: Quality Control (QC) is the responsibility of the Contractor. The Quality Control Inspector (Q.C.I.), the Contractor's authorized representative, shall inspect all aspects of the work and shall supervise required testing. The Q.C.I. shall record measurements and test results in a Job Control Record (JCR). The Q.C.I. shall reject materials and workmanship that do not meet contract requirements. The results of all testing shall be documented and a copy made available to the Department's Quality Assurance Inspector (Q.A.I.) on a daily basis or as requested by the Q.A.I.

Quality Assurance (QA) is the prerogative of The Department. The Q.A.I. will ensure that the QC role is functioning properly; verify documentation, periodically inspect workmanship and witness testing. QA testing deemed necessary by the Resident in addition to the minimum test requirements will be scheduled to minimize interference with the production schedule.

The JCR shall include the following, as applicable:

- Type of containment, when required.
- Surface preparation - cleanliness and anchor profile.
- Environmental conditions – ambient temperature, surface temperature, relative humidity, dew point.
- Coating batch and/or lot number, date of manufacture and shelf life.
- Manufacturer's certification of conformance.
- Dry Film Thickness (DFT) required/DFT measured.
- Cure data-time/temperature/relative humidity.
- Final inspection by the Q.C.I. and acceptance by the Resident.
- Disposition of non-conforming items.

Quality Assurance Inspector's Authority: The Q.A.I. has the authority to reject material or workmanship that does not meet the contract requirements.

Facilities for Inspection: For projects that have protective coating application in the shop or off-site, the Contractor shall provide a private office at the coating site for inspection personnel authorized by the Department. The office shall have an area not less than 100 ft² and shall be in close proximity to the work. The office shall be climate controlled to maintain the temperature between 65° F and 80° F. All exit(s) to the office shall have door(s) equipped with a lock and two keys, which shall be furnished to the Inspector(s). The office shall be equipped with a desk or table having a minimum size of 48 in. by 30 in, two chairs, a telephone, telephone answering machine, separate high speed internet line, plan rack and 2-drawer letter size file cabinet with a lock and two keys that shall be furnished to the Inspector(s).

The facilities and all furnishings shall remain the property of the Contractor upon completion of the work. Payment for the facilities, climate control, lighting, telephone installation, basic monthly telephone charges and all furnishings shall be incidental to the contract.

506.03.2 Painting Construction Requirements:

The following documents are incorporated into the Contract by reference and the Contractor shall provide the latest copies on site:

- SSPC Structures Painting Manual, Volumes 1 and 2 (Good Painting Practice and Systems and Specifications).
- SSPC Vis 1, Visual Standard for Abrasive Blast Cleaned Steel
- SSPC Guide 6-Guide for Containing Debris Generated During Paint Removal.
- SSPC Guide 7, Guide for the Disposal of Lead-Contaminated Surface Preparation Debris.

The manufacturer's printed product data sheets at the time of bid shall be those used during the duration of the project. New printed product data sheets may be substituted with the Resident's approval. The Contractor shall obtain in writing from the coating manufacturer, and provide to the Resident, a chart or table listing minimum and maximum recoat times for the primer and intermediate coat over the expected range of temperatures, relative humidity, and range of acceptable primer thickness.

The Contractor shall sample each batch of coating. Paint shall be sent to an independent lab to be "fingerprinted" by IR (infrared spectroscopy) to check the formulation and determine unit weight compared to that on the NEPCOAT list at the Contractor's expense. This sampling will be witnessed by the Department's Q.A.I.

All Contractors and subcontractors involved with the field application and touch up of the paint shall have SSPC-QP1 certification prior to bid opening and shall maintain this certification current throughout the duration of the Contract until final acceptance of the work.

Shop-applied coating systems shall be applied by applicators that hold a current AISC Sophisticated Paint Endorsement (SPE) or are qualified in accordance with SSPC QP3-*Standard Procedure for Evaluating Qualifications of Shop Painting Applicators*.

Limits of work: All surfaces located within 10 feet of a bearing stiffener, including the end diaphragms, shall be coated with primer, intermediate, and topcoat. The top of top flange surface shall receive a mist coat (0.5 to 1.0 mils) of primer only. At the Contractors option, end diaphragms may be hot dip galvanized.

Faying surfaces of bolted connections shall be primed with a product that complies with a class B slip coefficient in accordance with the "*Specification for Structural Joints Using ASTM A325 or A 490 Bolts*" by the Research Council of Structural Connections (RCSC).

Personnel: The Contractor shall provide Quality Control personnel in accordance with the requirements of AISC SPE or SSPC QP-3 or have successfully completed SSPC BCI training and are so certified.

Surface Preparation: Surface preparation shall be a minimum of SSPC SP-10 unless a higher standard of surface cleanliness is required by the manufacturer's published data sheet. SSPC Vis 1 shall be used to determine acceptable surface cleanliness.

Pre-Production Surface Preparation Test Section: The Contractor shall prepare a test section at least 1 square meter in size to the specified degree of cleaning (SSPC-SP10), using the same equipment, materials and procedures that will be used for the length of the project. This test section shall be used as a reference for the balance of the work.

The Resident will take site-specific photographs of the approved SSPC SP-10 test section for use on the project. Use the site-specific photographs of the approved test sections together with SSPC-Vis 1 and the written surface preparation specifications as the standards of cleaning for the project. If all parties agree, the site-specific photographs may be used in place of SSPC-Vis 1. In the event of a conflict between the site-specific photographs, SSPC-Vis 1, and the written definitions, the written definitions will prevail.

Prior to abrasive blast cleaning *new* steel, all corners exposed in the assembled product shall be rounded to approximately a 1/8 inch radius. A series of tangents to the approximate radius will be considered as a rounded. The Contractor shall prepare a plate approximately 3 inches by 12 inches with the appropriate rounded corner. The plate shall become the Job Standard for corner preparation. The plate shall remain the property of the Contractor. In lieu of rounding the corners, the Contractor may provide an application process that ensures minimum coating thickness build-up on the corners. The process must be demonstrated in advance of application and during production.

After abrasive blast cleaning, the surface shall be visually inspected by the Q.C.I. and Q.A.I. for fins, tears, delaminations and other unacceptable discontinuities. Unacceptable discontinuities shall be removed with a grinder or other suitable power tool and the area shall be blended at a slope of approximately 1:20. The affected area(s) shall be abrasive blast cleaned to develop an acceptable anchor profile.

The Contractor may propose an alternative method of developing an acceptable anchor profile on the substrate. The Contractor shall demonstrate the effectiveness of the proposed method by preparing a 12 inch by 12 inch plate using the proposed method and coating the plate with primer in a manner that duplicates production application technique. The plate shall be divided into four equal quadrants. After the primer has cured, an adhesion test shall be performed in the center of each quadrant in accordance with ASTM D 4541. The minimum tensile bond shall be 725-psi unless a higher tensile bond is required in the manufacturer's published literature. If all four adhesion tests meet or exceed the specified requirements, the proposed method will be acceptable. The proposed alternative method of developing an acceptable anchor profile shall be limited to areas no greater than 6 in.².

The anchor profile shall meet the requirements of the manufacturer's published data sheet. The anchor profile shall be measured in accordance with ASTM D 4417 Method C. If the anchor profile fails to meet the minimum requirements, the Contractor shall re-blast the substrate until the minimum required anchor profile is achieved. If the anchor profile exceeds the maximum allowed in the manufacturer's published data sheet, the substrate may be coated only with the prior approval of the Resident.

The Q.C.I. shall measure the anchor profile of the substrate on each plane of the first piece and each additional piece with a significant change in size or geometry. The Q.A.I. will witness the testing. After it has been established to the satisfaction of the Resident that the abrasive blast equipment is capable of providing uniform, acceptable surface preparation, a diminished degree of testing shall be agreed upon by the Q.C.I. and Q.A.I. but shall not be less than one set of tests per shift.

Material that has been contaminated after blasting by handling, storage or other means shall be solvent cleaned and re-blasted prior to primer application.

If compressed air is used for abrasive blast cleaning, a blotter test shall be performed in accordance with ASTM D 4285 at the beginning of each shift. The Q.A.I. shall be present to witness the blotter test.

The allowable time between abrasive blast cleaning and primer application shall not exceed the manufacturer's published recommendations or eight hours, whichever is less.

Application: Coating shall only be applied to clean surfaces that comply with the coating manufacturer's published recommendations and this specification. The Q.A.I. shall witness the mixing and thinning of the coatings. Failure to notify the Q.A.I. shall result in the coating being rejected.

Thinning and mixing of coatings shall be in conformance with the manufacturer's published data sheet. Thinner shall be measured using a graduated cup or other container that clearly indicates the amount of thinner being added. Mixing shall be done using the method, equipment, and time recommended by the coating manufacturer.

The Q.C.I. shall record the batch and lot numbers of the coating, the type and amount of thinner used, the time and pot life of the coating. The Q.A.I. shall confirm that the record is correct.

Coating equipment including mixers, hoses, tip size and guns shall meet the recommendations of the manufacturer's published data sheet.

The environmental conditions in the immediate vicinity of the steel to be coated shall be within the ranges in the manufacturer's published data sheet during the coating operation and during the cure period. Ambient temperature, surface temperature, relative humidity and dew point shall be measured and recorded by the Q.C.I. The Q.A.I. may perform environmental testing in addition

to the testing performed by the Q.C.I. If there are differences between the test results, the differences shall be resolved or explained to the satisfaction of the Resident prior to coating application. The results of the environmental testing shall be recorded in the JCR.

Corners, fasteners, welds, and inaccessible locations shall be striped in accordance with SSPC PA 1. The striping shall extend a minimum of 1 inch from each edge. Striping will not be required for inorganic zinc primers, on intermediate and topcoat; however, the Contractor shall meet the minimum DFT requirements on all surfaces.

Caulking is required to seal all gaps between abutting surfaces over 1/8 inch wide as directed by the Resident. When the use of caulking is required the Contractor shall provide the name, generic type, technical data sheets, and application instructions for the material to the Resident, and shall receive concurrence from the coating supplier that the caulking is compatible for use with the coating.

Cure and recoat time shall be in accordance with the manufacturer's published data sheet for the environmental conditions at the time of application and cure. The Contractor shall provide the cure and recoat times for the environmental conditions in the immediate vicinity of the coated product. The cure and recoat times shall be provided on the coating manufacturer's letterhead and shall be authorized by a technical representative of the company.

The Contractor shall provide digital data recorders that measure and record temperature and relative humidity. The Contractor shall provide the software necessary to download the recorded data. The Contractor shall provide a minimum of two data recorders which shall be placed in the immediate vicinity of the application operation. The data recorders shall measure and record the temperature and relative humidity during the entire curing cycle. No subsequent coating shall be applied until the Contractor demonstrates that the curing cycle meets the requirements of the manufacturer's product data sheet. This requirement shall apply to both shop and field application.

The Q.A.I. shall be given ample notice in order to inspect the product prior to coating. Substrates that are coated without notification of the Q.A.I. will be rejected.

Dry Film Thickness: DFT shall be measured in accordance with SSPC PA 2. The results shall be documented in the JCR. The JCR documentation shall include the actual gage readings, spot average and the location(s). Each piece or area presented for acceptance, regardless of size shall be considered a separate structure for purposes of determining the number of spot measurements to be taken except that large quantities of small parts and/or secondary framing members coated at the same time may be measured at a lesser frequency as directed by the Resident. When random DFT testing of a large quantity of small parts and/or secondary framing members results in unacceptable DFTs, the Contractor shall have the option of measuring and documenting the DFT of each piece or removing the coating and/or recoating all pieces represented in the production lot.

Touch-up and Repairs: Touch-up shall be done in accordance with the manufacturer's published data sheet and this Specification. Areas to be touched up shall be prepared to assure proper adhesion of each coat. Each existing coat shall be feathered back to assure that each touch-up coat is continuous with each corresponding existing coat. The top-coat shall be smooth and uniform in appearance.

Damaged or unacceptable shop coating shall be repaired before the piece is removed from the paint area. Damaged areas shall be prepared in accordance with the manufacturer's published instructions or as directed by the Resident. Damaged or unacceptable coatings shall be repaired using the same coating system. Environmental conditions cure times and DFTs shall be in accordance with manufacturer's published data sheet for the coating being applied. Repairs to topcoat shall result in a uniform gloss and color match. The Resident shall have final authority concerning acceptable appearance.

If repairs larger than 6 in.² are made to the top coat of fascia beam, the entire beam shall be re-coated after repairs are completed.

Handling and Storage: The coating shall be adequately cured before handling but under no circumstances shall the product be handled before the coating has achieved the manufacturer's published minimum cure and/or handling time. Coated members shall be handled in a manner to avoid damage to the coating. Members shall be lifted and moved using non-metallic slings, padded chains and beam clamps, softeners, or by other non-injurious methods. Material shall be stored in a manner that prevents damage to the coating.

Damage to the coating that is discovered after the product is loaded for shipment to the job site shall be documented by the Q.C.I. Minor damage as a result of handling shall be considered field repair unless, in the opinion of the Resident, the damage is the result of negligence or poor handling methods. Damage that is deemed to be the result of negligence or poor handling methods shall be repaired as directed by the Resident.

506.4 Method of Measurement

Steel coating shall be measured by the lump sum method, complete, and accepted. The limits shall be as shown on the plans or as described within the respective subsection.

506.5 Basis of Payment

All work for Steel Coating will be paid for at the lump sum price for the respective item. Payment will be full compensation for all work and materials needed to complete the item; coating and cleaning materials, staging or accessing, testing, labor, surface preparation, cleaning, application, curing, and shop and field repairs to coating.

Pay Item

Pay Unit

506.9102	Zinc Rich Coating System (Shop Applied)	Lump Sum
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SPECIAL PROVISION
SECTION 510
SPECIAL DETOURS

Section 510, Special Detours, of the Standard Specifications is replaced in its entirety with the following:

510.01 Description This work shall consist of the design, construction, maintenance in good condition, and removal of temporary structures and approaches required for the satisfactory maintenance of vehicular and pedestrian traffic.

Easements or right-of-way for the Special Detour will be furnished by the Department and will be shown on the Contract Plans. If the Contractor proposes an alternative location for the Special Detour, and the alternative location is approved by Department, that easement may only be acquired by the Department. All additional costs associated with the acquisition, including but not limited to obtaining easements, environmental mitigation, restoration and Department time, shall be borne by the Contractor.

510.02 Materials The Materials used for the Special Detour structure and approaches shall conform to the detailed plans and specifications submitted by the Contractor.

510.03 Vehicular and Pedestrian Traffic Not Separated The Special Detour shall be located as close as practicable to the new work or as shown on the plans.

The Special Detour, including the temporary structure and approaches, shall be designed and sealed by a Professional Engineer, licensed in accordance with the laws of the State of Maine. The Contractor shall submit the design computations and detailed plans of the temporary structure and approaches that will serve as the temporary detour to the Resident prior to beginning construction of the Special Detour.

No fill may be placed in a wetland/river associated with the temporary detour.

If the Department requires changes to Temporary Detour plans or computations, based on Contract requirements, then the Contractor shall implement the changes at no additional cost to the Department.

The Department shall have no obligation to review or comment on any design, construction, maintenance or removal of Temporary Detours. No review or comment by the Department, or any lack of review or comment by the Department, shall relieve the Contractor of its responsibility to properly design, construct, maintain in good condition, and remove Temporary Detours in accordance with the Contract, or to shift any responsibility to the Department. The Contractor shall be responsible for all damages resulting from the failure of temporary structures or approaches.

The Special Detour shall not be opened to traffic until the Professional Engineer who designed the special detour inspects the temporary structure and provides the Department with a signed and sealed document certifying that the structure and approaches were built in accordance with the previously submitted sealed plans and design details of the structure and approaches.

510.031 Structure Design Temporary structures shall be designed in accordance with the AASHTO Standard Specifications for Highway Bridges, 17th Edition, 2002, or the current edition of AASHTO LRFD Bridge Design Specifications, except as noted herein, to meet live load requirements of HS25, for ASD and LFD, or HL-93 Maine Modified, for LRFD designs

a. Deflections Primary structural members shall be designed so that deflection due to live load plus impact shall not exceed 1/300 of the span.

b. Fatigue Stresses Fatigue stresses for steel need not be considered if the steel is judged by the Contractor's Professional Engineer to be in sound structural condition.

c. Bridge Railing Loads Bridge railing shall be designed in accordance with AASHTO Standard Specifications, 17th Edition, 2002 or the current edition of AASHTO LRFD Bridge Specifications, except that the Standard Specification design load "P" specified as 10 kips may be decreased to 5 kips. However, allowable design stresses for material used in bridge rails and posts shall not be increased above those allowed by AASHTO Standard Specifications.

d. Waterway Opening The minimum waterway opening of the temporary structure shall be designed to pass the Design Discharge indicated in the Contract Specifications, without any overtopping of the roadway.

e. Foundations Temporary foundations, embankment foundations and earth retaining structures shall be designed in accordance with the AASHTO Standard Specifications, 17th Edition, or the current edition of the AASHTO LRFD Bridge Design Specifications and AASHTO LRFD Bridge Construction Specifications, except as noted herein. The Contractor is responsible for determining the ultimate load carrying capacity of the foundation materials and foundation elements for the Special Detour. The determination of the ultimate load carrying capacity may require characterization of the subsurface conditions by the Contractor by means of subsurface investigation.

The applied loads on foundations shall consider both dead and live loads and all other applicable loads and forces. The Contractor is responsible for choosing an applicable factor of safety for foundations on soil and rock and an appropriate design load group. The factor of safety and maximum applied load, or LRFD factored applied loads and factored geotechnical resistances, used for each foundation design shall be clearly stated on the submitted calculations.

510.032 Geometric and Approach Design The geometric design of the Special Detour, except as otherwise shown on the plans or as noted herein, shall be designed in accordance with the current AASHTO Specification "A Policy on Geometric Design of Highways and Streets".

a. Horizontal Alignment Horizontal curve radius shall not be less than 200 feet at the centerline of roadway, except as otherwise shown on the Plans or as approved by the Resident.

Roadway width as indicated in the Contract and on the plans shall be the minimum clear travel width between faces of bridge curbs, bridge rails or approach rails, whichever is less. The approach roadway shall have 2 feet wide shoulders, minimum, to the roadway berms, where guardrail is not required, in addition to the roadway width indicated in the Contract.

The roadway width shall be increased on curved portions of the Special Detour to account for the off tracking characteristics of a WB-62 vehicle in accordance with Exhibit 3-49, Case I or Case III, of the AASHTO Standard Specifications.

b. Vertical Alignment Grades shall not exceed 10% and any change in grade shall accommodate all legal highway vehicle components or attached loads.

c. Approach Road Guardrail The Special Detour approaches shall have guardrail where side slopes are steeper than three horizontal to one vertical. Approach guardrail shall be attached to the bridge rail in a manner that develops the approach guardrail in tension. Approach guardrail shall consist of Type 3 guardrail or an approved equal, unless other rail or barriers are specified.

The termination of approach guardrail and the end treatment of the rail shall be in accordance with the current AASHTO Roadside Design Guide.

d. Approach embankments Approach embankments shall be constructed from suitable earth material, as shown in the Contractor's plans submitted to the Resident. The earth material shall have sufficient strength under the placement method specified in the Contractor's plans to maintain stability throughout the duration of the Special Detour.

e. Approach Road Base Drainage The approach road base structure shall consist of a 18" thick layer, minimum, of aggregate subbase course gravel, Type D or E. This layer shall be designed to support legal loads during the use of the detour. Drainage shall be designed to drain the approach area.

f. Approach Road Surface The approach road surface, including the shoulders, shall be paved with a 6 inch, minimum thickness hot mix asphalt pavement accepted at the discretion of the Resident. Pavement depth of existing shoulders within the limits of the special detour shall be confirmed to have a minimum of 6 inches of pavement as well. Otherwise, existing shoulders shall be repaved to provide the minimum pavement thickness for the detour

operation. Surface pavement shall be 1.5 inch Hot Mix Asphalt, 9.5mm or 12.5mm. Base pavement shall be Hot Mix Asphalt 12.5mm or 19.0mm.

g. Design Speed The design speed of the Special Detour shall be not less than the construction area posted speed limit, or the advisory speed limit, as applicable, unless otherwise indicated in the Contract.

510.04 Pedestrian Traffic Only The provisions of Section 510.03 - Vehicular and Pedestrian Traffic Not Separated, shall apply to this Section with the following modifications:

- a. Structures shall be designed for a live load of 85 lb/ft².
- b. The Special Detour shall have a minimum clear width of 5 ft or as specified in the Contract.
- c. Vertical alignment and ramps shall be ADA compliant.
- d. Deflections due to live load shall not exceed 1/300 of the span.

510.05 Vehicular and Pedestrian Traffic Separated The provisions of both Section 510.03 - Vehicular and Pedestrian Traffic Not Separated, and Section 510.04 - Pedestrian Traffic Only, shall apply to this Section. If vehicles and pedestrians are carried on the same structure, each shall have its own lane as specified. The pedestrian lane shall be protected from vehicular traffic by being at least 225 mm [9 in] above the roadway surface or suitably protected by means of an adequate curb at least 225 mm [9 in] in height above the roadway surface. No bridge rail will be required between vehicle traffic and pedestrian traffic, unless otherwise specified, but shall be located at the exterior side of the sidewalk.

510.06 Special Detour Construction The Special Detour, including temporary structures and approaches, shall be constructed in accordance with the plans submitted by the Contractor. Barricades, warning signs, lights and other traffic control devices shall be provided in accordance with the Contract and the approved Traffic Control Plan.

The temporary structure's deck and floor members shall be fastened or anchored so that all contact surfaces with adjacent supporting members bear continuously. If timber plank decking is used, it shall be secured into timber nailer strips with screw-type nails, or securely fastened by an alternate method that will prevent the decking from loosening. Immediate corrective action shall be taken by the Contractor to remedy any condition in the structure that results in objectionable or distractive noise levels, or results in the decking becoming loose, when subject to traffic loads.

Screw-type nails will not be required to anchor timber plank decking for pedestrian traffic use.

The approach road surface, including shoulders, whether paved or graveled, shall be maintained in a compacted and acceptably smooth condition, as determined by the Resident. The temporary structure travel surface shall be constructed and maintained in an acceptably smooth condition, as determined by the Resident. Immediate corrective action shall be taken by the

Contractor to remedy objectionable roughness of the Special Detour riding surface as requested by the Resident.

Provisions shall be made for a skid resistant wearing surface throughout the period of time the temporary structure is open to public travel for vehicular and pedestrian traffic. A steel grid floor may be used for vehicular traffic if installed in accordance with the design plans and these specifications.

Erosion control shall be accomplished in accordance with Section 656 - Temporary Soil Erosion and Water Pollution Control.

When the Project has been opened to traffic, the temporary structure and approaches shall be removed to, or below, the streambed, finish ground line or original ground line, as applicable. The approaches shall be obliterated and the disturbed areas shall be stabilized to original, or better than original, conditions. The provisions of Section 104 - General Rights and Responsibilities, shall apply.

510.07 Contractor's Responsibility The Contractor shall be responsible for removal of snow from areas provided for pedestrian traffic as well as vehicular traffic in accordance with Section 105, General Scope of Work. In addition to normal maintenance, should any part, or all, of the Special Detour be damaged or destroyed by high water, or any other cause, prior to, or after, opening the Special Detour to traffic, it shall be repaired or replaced by the Contractor without additional compensation.

510.08 Method of Measurement Special Detours will be paid by the lump sum.

510.09 Basis of Payment The accepted Special Detour will be paid for at the contract lump sum price which price shall be full compensation for the respective items, as called for in the Contract, including design, construction, maintenance, complete removal, rehabilitation and permanent stabilization, including loaming, seeding and mulching. All pavement, gravel or borrow material, temporary earth support, and excavation needed to accommodate changes in elevation between temporary structures and existing roadways shall be incidental to this item. The lump sum price shall also include the cost of furnishing and revising, as necessary, all plans, computations and certifications, as called for in the Contract.

Traffic control devices, temporary erosion control, and dust control will be paid in accordance with the applicable Contract items.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
510.12 Special Detour, 12 foot Roadway Width Vehicular and Pedestrian Traffic Separated	Lump Sum

SPECIAL PROVISION
SECTION 520
EXPANSION DEVICES -- NON MODULAR
(Asphaltic Plug Joint)

520.01 Description

This work shall consist of furnishing and installing asphaltic plug joint systems at the locations shown on the Plans, in accordance with these Specifications or as approved by the Resident.

This work shall also include having the approved manufacturer provide a qualified technical representative(s) to supervise the installation of the joint systems. The representative(s) shall instruct, train and supervise the Contractor's personnel in the proper methods of installation. All costs associated with this service shall be included in the unit price of the work.

520.011 Submittals

Prior to construction, the Contractor shall submit the following to the Resident for review and approval:

- (a) Complete and detailed Shop Drawings of asphaltic plug joint system. Shop Drawings shall include information covering materials, their properties, installation procedures, storage and handling requirements, and Materials Safety Data Sheets.
- (b) The resume of the manufacturer's technical representative, which shall include the representative's experience installing the asphaltic plug joint system along with the names and telephone numbers of contact persons for recent projects where technical assistance was provided.
- (c) Certified test reports of the asphaltic binder, closed cell foam backer rod and the plastic compound.
- (d) Certificates of Compliance for bridging plates, centering nails and aggregate.

520.02 Materials

The asphaltic plug joints shall consist of a system including bridge joint binder material, aggregate, backer rod, bridging plate, elastomeric concrete header material and polysulfide joint sealant conforming to the details and dimensions shown on the Plans, in accordance with these Specifications or as approved by the Resident.

The following systems are acceptable for use as asphaltic plug joints:

Thorma-Joint
Dynamic Surface Applications
373 Village Road
Pennsdale, PA 17756

Polyjoint
A.H. Harris
321 Ellis Street
New Britain, CT 06050

Koch BJS
Koch
P.O. Box 510
Stroud, OK 74079

FlexAble Bridge Joint System
Deery American Corporation
PO Box 4099
Grand Junction, CO 81502

Matrix 502 Asphalt Plug
D.S. Brown Co.
300 E. Cherry St
North Baltimore, OH 45872

Wabo-Expandex
Watson Bowman
95 Pine View Dr.
Amherst, NY 14228

Materials which are incorporated in or used in conjunction with approved asphaltic plug joint systems are as follows:

- (a) Asphaltic Binder: Binder shall meet or exceed requirements of AASHTO M301 (ASTM D3405) and consist of hot applied, thermoplastic polymeric modified asphalt with the following properties when tested in accordance with the following ASTM methods:

PROPERTY	REQUIREMENT	TEST METHOD
Softening Point, °F	180 min.	ASTM D36
Tensile Adhesion @ 77°F, %	800 min.	ASTM D3583
Ductility @ 77°F, inch	16 min.	ASTM D113
Penetration, 0.1 mm 77°F, 150 g, 5 s 0°F, 200 g, 60 s	90 max. 10 max.	ASTM D3407
Flow 5 hrs @ 140°F, mm	3.0 max.	ASTM D3407
Bond @ -20°F	pass 3 cycles	ASTM D3407
Resilience @ 77°F, %	60 min.	ASTM D3407
Asphalt Compatibility @ 140°F	pass	ASTM D3407
Recommended Pouring Temperature, °F	380 to 390	
Safe Heating Temperature, °F	410	

- (b) Backer Rod: Backer rod shall be a cylindrical closed cell expanded polyethylene foam rod, with a diameter of 150 percent of joint opening width, capable of withstanding the temperature of the hot binder materials and having the following properties:

PROPERTY	REQUIREMENT	TEST METHOD
Density, lb/ft ³	2.0 min.	ASTM D1622

Tensile Strength, psi	25 min.	ASTM D1623
Water Absorption, % of wt.	1.0 max.	ASTM C509

- (c) Bridging Plate: Bridging plate shall be ASTM A36 steel, minimum of 1/8 inch thick and galvanized. Holes for the centering nails shall be approximately one foot center-to-center along the centerline of plates.
- (d) Centering Nail: Nail shall be 16d or larger and hot dip galvanized in accordance with ASTM A153.
- (e) Aggregates: Aggregate shall be crushed, double-washed and dried granite or basalt and meet ASTM C 33 Size No. 6 gradation. This aggregate shall also be used for top dressing on the finished joints.
- (f) Plastic Compound: Plastic compound used for repairing overcuts in bituminous concrete overlays shall be a two-component liquid with a synthetic resin base. It shall have a minimum viscosity of 3,500 cps at 77°F and a maximum viscosity of 65,000 cps at 25°F. The plastic compound shall be cured by the addition of a specific hardener. Sufficient hardener shall be used to cure the plastic compound in approximately 30 minutes at 77°F. It shall have sufficient strength and resiliency to withstand stresses setup by vibration, expansion and contraction due to temperature changes. It shall also be resistant to most chemicals and solvents, including most salts, acids and hydrocarbons.

520.06 Installations

Asphaltic plug joint system shall be installed in accordance with manufacturer's latest instructions and specifications. Manufacturer's representatives shall be present during the entire installation to ensure satisfactory results are obtained.

Asphaltic plug joint system shall allow total joint movement for up to two inches. The installation shall be centered over the expansion joint gap as indicated on the Plans. It shall not be installed when ambient or substrate temperatures are below 40°F, when rain is imminent, or as directed by the Resident.

Sawcut and remove bituminous concrete overlay and waterproofing membrane to the required dimensions as shown on the Plans. If required, a leveling course shall be applied to concrete surfaces prior to placing bridging plates. Vertical surfaces of bituminous concrete overlay shall be cleaned to remove all water and cutting dust.

Backer rods shall be installed in expansion joint openings at a minimum of one inch depth at locations and as indicated on the Plans.

Binder shall be heated to a safe temperature as recommended by manufacturer. Heating kettles shall be equipped with continuous agitation system, temperature controller, calibrated

thermometer and double steel jacket with an oil layer in between to prevent scorching of the binder. During application, the temperature of binder shall be maintained at a minimum of 350°F. It shall be poured into expansion joint openings until it runs over edges.

Steel bridging plates shall be placed from curb-to-curb on the roadway portion of expansion joints. Plates shall be centered over joint openings. Centering nails shall be placed in pre-drilled holes and hammered in to secure plates.

Aggregate shall be heated in a rotating drum mixer to a minimum of 350°F or as recommended by the Resident. The thermoplastic polymeric modified asphalt Binder shall be added to the mixer to precoat aggregates.

Coated aggregate shall be placed into blockouts in layers as recommended by the manufacturer. Blockouts shall be overfilled with coated aggregate as required to compensate for compaction. Equipment for compaction shall be as recommended by the manufacturer. Additional thermoplastic polymeric modified asphalt binder shall be screeded over the compacted joint to fill any surface voids.

Top dressing aggregate shall be applied per the manufacturer's recommendation.

Plastic compound shall be used for repairing overcuts in bituminous concrete. Cleaning, mixing and application shall be in conformance with the manufacturer's instructions.

Vehicular traffic may pass over finished joints two-hours after compaction or as recommended by the manufacturer.

520.07 Method of Measurement

Asphaltic Plug Joint system will be measured by the linear foot along the top surface of installed joints to the limits as shown on the Plan. Preparation of surfaces for the proposed joint system including cutting, grinding and cleaning, will not be measured separately for payment, but shall be incidental to the Asphaltic Plug Joint item.

520.08 Basis of Payment

Asphaltic Plug Joint system will be paid for at the Contract unit price per linear foot which price shall be full compensation for all labor, materials, equipment and incidentals required for furnishing and installing the Asphaltic Plug Joint system as shown on the Plans, in accordance with these Specifications or as approved by the Resident.

The backer rod, non-sag joint seal, bridging plate and elastomeric sealant, will not be measured separately for payment, but shall be incidental to the Asphaltic Plug Joint item.

Payment will be made under:

Pay Item

Pay Unit

520.232 Expansion Device - Asphaltic Plug Joint

Linear Foot

SPECIAL PROVISION
SECTION 525
MASONRY
(Existing Granite Wall Repair)

This Subsection is deleted in its entirety and replaced with the following:

525.01 Description

This work shall include all labor, materials and equipment necessary to complete repairs to the existing dry-laid granite abutments and wingwalls. The work shall consist of filling voids in the existing substructure, as directed by the Resident, with a combination of Portland Cement mortar and stones as described in this section.

525.02 Materials

Except as provided below, the materials used shall meet the requirements of the following sections of Division 700 – Materials:

Water	701.02
Joint Mortar	705.02

Cement shall conform to the requirements of Portland cement AASHTO M85 (ASTM C150), Type IIA.

Stone shall consist of sound, durable granite that will not disintegrate by exposure to water or weather. Stones may be field stone, blasted or rough, unhewn quarry stone. Rounded stones or cobbles will not be permitted. Stone shall be delivered to the site in sizes and shapes appropriate for placement into the voids without the need for significant reshaping or working.

502.03 Installation

The Contractor shall fill voids in the existing granite abutments and wingwalls with stone and mortar as directed by the Resident. The intent is for voids greater than three inches in height or width to be identified for repair.

The abutments shall be cleaned prior to setting any stone or mortar to remove any dirt, loose stones or other debris that would inhibit the proper adhesion of the mortar. Cleaning shall be completed through the use of compressed air and hand tools to ensure a clean bonding surface is achieved. Small to medium sized loose stones shall be removed; rocks firmly in place shall

remain. Large stones that are identified as being loose shall be thoroughly grouted into place. The Contractor shall use great care to avoid undermining or otherwise destabilizing the existing substructure.

A dry mixture of mortar shall be prepared and a number stones of varying size and shape shall be readily available to the installer. Prior to beginning any repair, the existing granite to receive the repair, as well as any stones to be incorporated into the repair, shall be thoroughly wetted with water. Using a trowel, mortar shall be placed into the void and thoroughly tamped into place to fill the rear of the cavity and to serve as a bedding material for the new stone. Alternating layers of stone and mortar shall then be installed and tamped firmly into place. Tamping shall be completed with a wooden mallet or similar tool to ensure the stones are properly set and that the void is adequately filled. If necessary, stones shall be coated with mortar prior to installation to prevent the formation of air pockets. Mortar and stone shall be added as needed to completely fill the void.

Wherever possible the thickness of the mortar layer between adjacent stones shall be limited to a maximum of two inches. As few stones as practicable shall be used to complete the repair, the minimum stone size shall be 1 ½". Once a void has been filled, the surface of the repair shall be given a neat, workmanlike finish.

525.09 Method of Measurement

Granite Wall Repairs will be measured by the Lump Sum.

502.05 Basis of Payment

All work done under the item "Granite Wall Repairs" shall be paid at the corresponding contract lump sum price. This payment shall be full compensation for furnishing all equipment, materials and labor to complete the work as described above and as directed by the Resident.

<u>Pay Item</u>	<u>Unit</u>
525.61 Existing Granite Wall Repair	Lump Sum

SPECIAL PROVISION
SECTION 526
CONCRETE BARRIER
(Temporary Concrete Barrier)

Materials

Temporary concrete barriers must be connected using a 1-1/8 inch diameter rod, with a washer and cotter pin on the bottom. The contractor has the option to use a nut and washer connection as shown on the Standard Detail 526(02) or the top of the rod may be hooked over the top connector. The connecting pin must be smooth and not deformed. Reinforcing bar will not be permitted.

SPECIAL PROVISION
SECTION 527
ENERGY ABSORBING UNIT
(ET-2000 System)

Description. This work consists of furnishing and installing a ET-2000 crash cushion as a permanent energy absorbing system in accordance with these specifications at location(s) shown on the plans or established by the Engineer.

Materials. The energy absorbing system shall be the ET-2000 System as manufactured by Syro Steel Company of Girard, Ohio as approved and crash tested by the Federal Highway Administration.

Replacement Parts. The Contractor shall provide a complete spare set of all above ground parts for five of the energy absorbing systems. All spare sets will be delivered to the local Division Office.

Installation. A set of installation drawings will be provided to the Engineer for the system installed. The system shall be installed in accordance with the manufacturer's recommendations and the installation drawings.

Method of Measurement. Energy absorbing system will be measured by each unit, complete in place and accepted.

Basis of Payment. The accepted quantity of energy absorbing system will be paid for at the contract unit price which shall include a complete spare set of all above ground parts for five energy absorbing systems and all incidentals necessary.

Payment will be made under:

Pay Item

Pay Unit

527.303 Energy Absorbing System (ET-2,000)

Each

SPECIAL PROVISION
SECTION 527
ENERGY ABSORBING UNIT
(QuadGuard System)

Description This work consists of furnishing and installing a new QuadGuard System crash cushion with a Tension Strut Backup, Quad end shoe transition panels and deflector assemblies including the concrete base as a permanent energy absorbing system in accordance with these specifications and as directed by the Resident at location shown on the plans or established by the Resident.

Materials The energy absorbing system shall be the QuadGuard System as manufactured by Energy Absorption Systems, Inc. of Chicago, IL as approved and crash tested by the Federal Highway Administration. The QuadGuard System shall be model QS2403Y Test Level 2. The QuadGuard System shall be placed on a concrete pad as shown on the plans and in accordance with the manufactures recommendations. All work involving the concrete pad shall be done in general accordance with section 502 standard specifications. The Portland Cement Concrete for the concrete pad shall conform to Subsection 712.03 except the minimum 28 day compressive strength shall be 4350 psi.

Installation A set of installation drawing will be provided to the Resident for the system installed in accordance with the manufacturer's recommendations and the installation drawings.

The Quad end shoe transition panel (i.e. side panel, end shoe) between the QuadGuard Tension Strut Backup and the concrete transition barrier shall be attached to the concrete transition barrier per the manufacturer's recommendations and as directed by the Resident.

The deflector assembly shall be attached per the manufacturer's recommendations and as directed by the Resident.

Method of Measurement Energy absorbing system will be measured by each unit, complete in place and accepted.

Basis of Payment The accepted quantity of Energy Absorbing System will be paid for at the contract unit price which shall include furnishing and installing a new QuadGuard System Crash Cushion including furnishing and placing a concrete pad excluding reinforcing steel, all common and granular borrow, all common and structural excavation, all aggregate subbase course gravel, removal of existing curbing and guardrail, resetting of any curbing, placement of new pavement and any attachments to the transition barrier and any equipment, labor, tools, and incidentals necessary to complete the work. Reinforcing steel shall be paid for under item 503.12 and 503.13 respectively.

Payment will be made under:

Pay Item		Pay Unit
527.305	QuadGuard Crash Cushion	Each

SPECIAL PROVISION
SECTION 606
GUARDRAIL

606.01 Description This work shall consist of furnishing and installing guardrail components in accordance with these specifications and in reasonably close conformity with the lines and grades shown on the plans or as established. The types of guardrail are designated as follows:

Type 3-Galvanized steel "w" beam, wood posts or galvanized steel posts.

Type 3a-Galvanized steel "w" beam, wood posts, wood or composite offset blocks.

Type 3aa-Corrosion resistant steel "w" beam, wood posts, wood or composite offset blocks.

Type 3b-Galvanized steel "w" beam, galvanized steel posts, galvanized steel offset blocks.

Type 3c-Galvanized steel "w" beam, wood posts or galvanized steel posts, wood or composite offset blocks.

Type 3d-Galvanized steel "w" beam, galvanized steel posts, wood or composite offset blocks.

Thrie Beam-Galvanized steel thrie beam, wood posts or galvanized steel posts, wood or composite offset blocks.

Median barriers shall consist of two beams of the above types, mounted on single posts. Except for thrie beam, median barriers may include rub rails when called for.

Bridge mounted guardrail shall consist of furnishing all labor, materials, and equipment necessary to install guardrail as shown on the plans. This work shall also include drilling for and installation of offset blocks if specified, and incidental hardware necessary for satisfactory completion of the work.

Remove and Reset and Remove, Modify, and Reset guardrail shall consist of removing the existing designated guardrail and resetting in a new location as shown on the plans or directed by the Resident. Remove, Modify, and Reset guardrail and Modify guardrail include the following guardrail modifications: Removing plate washers at all posts, except at anchorage assemblies as noted on the Standard Details, Adding offset blocks, and other modifications as listed in the Construction Notes or General Notes. Modifications shall conform to the guardrail Standard Details.

Bridge Connection shall consist of the installation and attachment of beam guardrail to the existing bridge. This work shall consist of constructing a concrete end post or modifying an existing endpost as required, furnishing, and installing a terminal connector, necessary hardware, and incidentals required to complete the work as shown on the plans. Bridge Transition shall consist of a bridge connection and furnishing and installing guardrail components as shown in the Standard Details.

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

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

Guardrail components shall meet the applicable standards of "A Guide to Standardized Highway Barrier Hardware" prepared and approved by the AASHTO-AGC-ARTBA Joint Cooperative Committee, Task Force 13 Report.

Posts for underdrain delineators shall be "U" channel steel, 2.44m [8 ft] long, 3.72 kg/m [2 ½ lb/ft] minimum and have 9.5 mm [3/8 in] round holes, 25 mm [1 in] center to center for a minimum distance of 610 mm [2 ft] from the top of the post.

Reflectorized Flexible Guardrail Markers shall be mounted on all guardrails. A marker shall be mounted onto guardrail posts at the flared end treatment's terminal and its tangent point, both at the leading and trailing ends of each run of guardrail. The marker's flexible posts shall be grey with either silver-white or yellow reflectors (to match the edge line striping) at the tangents, red at leading ends, and green at trailing ends. Whenever the end treatment is not flared, markers will only be required at the end treatment's terminal. These shall be red or green as appropriate. Markers shall be installed on the protected side of guardrail posts unless otherwise approved by the Resident. Reflectorized flexible guardrail markers shall be from the Maine DOT's Approved Product List of Guardrail Material. The marker shall be grey, flexible, durable, and of a non-discoloring material to which 75 mm [3 in] by 225 mm [9 in] reflectors shall be applied, and capable of recovering from repeated impacts. Reflective material shall meet the requirements of Section 719.01 for ASTM D 4956 Type III reflective sheeting. The marker shall be secured to the guardrail post with two fasteners, as shown in the Standard Details.

Reflectorized beam guardrail ("butterfly"-type) delineators shall be mounted on all "w"-beam guardrail. The delineators shall be mounted within the guardrail beam at guardrail posts. Delineators shall be fabricated from high-impact, ultraviolet & weather resistant thermoplastic. Reflectorized beam guardrail delineators shall be placed at approximately 20 m [62.5 ft] intervals or every tenth post on tangents and at approximately 10 m [31.25 ft] intervals or every fifth post on curves. Exact locations of the delineators shall be as directed by the Resident. On divided highways, the left hand delineators shall be yellow and the right hand delineators shall be silver/white. On two directional highways, the right hand side shall be silver/white and no reflectorized delineator used on the left. All reflectors shall have reflective sheeting applied to only one side of the delineator facing the direction of traffic as shown in the Standard Detail 606(07). Reflectorized sheeting for guardrail delineators shall meet the requirements of Section 719.01.

Single wood post shall be of cedar, white oak, or tamarack, well seasoned, straight, and sound and have been cut from live trees. The outer and inner bark shall be removed and all knots trimmed flush with the surface of the post. Posts shall be uniform taper and free of kinks and bends.

Single steel post shall conform to the requirements of Section 710.07 b.

Single steel pipe post shall be galvanized, seamless steel pipe conforming to the requirements of ASTM A120, Schedule No. 40, Standard Weight.

Acceptable multiple mailbox assemblies shall be listed on the Department's Approved Products List and shall be NCHRP 350 tested and approved.

The Guardrail 350 Flared Terminal shall be a terminal with a 1.2 m [4 ft] offset as shown in the Manufacturer's installation instructions.

Existing materials damaged or lost during adjusting, removing and resetting, or removing, modifying, and resetting, shall be replaced by the Contractor without additional compensation. Existing guardrail posts and guardrail beams found to be unfit for reuse shall be replaced when directed by the Resident.

606.03 Posts Posts for guardrail shall be set plumb in holes or they may be driven if suitable driving equipment is used to prevent battering and distorting the post. When posts are driven through pavement, the damaged area around the post shall be repaired with approved bituminous patching. Damage to lighting and signal conduit and conductors shall be repaired by the Contractor.

When set in holes, posts shall be on a stable foundation and the space around the posts, backfilled in layers with suitable material, thoroughly tamped.

The reflectorized flexible guardrail markers shall be set plumb with the reflective surface facing the oncoming traffic. Markers shall be installed on the protected side of guardrail posts. Markers, which become bent or otherwise damaged, shall be removed and replaced with new markers.

Single wood posts shall be set plumb in holes and backfilled in layers with suitable material, thoroughly tamped. The Resident will designate the elevation and shape of the top. The posts, that are not pressure treated, shall be painted two coats of good quality oil base exterior house paint.

Single steel posts shall be set plumb in holes as specified for single wood posts or they may be driven if suitable driving equipment is used to prevent battering and distorting the post.

Additional bolt holes required in existing posts shall be drilled or punched, but the size of the holes shall not exceed the dimensions given in the Standard Details. Metal around the holes shall be thoroughly cleaned and painted with two coats of approved aluminum rust resistant paint. Holes shall not be burned.

606.04 Rails Brackets and fittings shall be placed and fastened as shown on the plans. Rail beams shall be erected and aligned to provide a smooth, continuous barrier. Beams shall be lapped with the exposed end away from approaching traffic.

End assemblies shall be installed as shown on the plans and shall be securely attached to the rail section and end post.

All bolts shall be of sufficient length to extend beyond the nuts but not more than 13 mm [$\frac{1}{2}$ in]. Nuts shall be drawn tight.

Additional bolt holes required in existing beams shall be drilled or punched, but the size of the holes shall not exceed the dimensions given in the Standard Details. Metal around the holes shall be thoroughly cleaned and painted with two coats of approved aluminum rust resistant paint. Holes shall not be burned.

606.045 Offset Blocks The same offset block material is to be provided for the entire project unless otherwise specified.

606.05 Shoulder Widening At designated locations the existing shoulder of the roadway shall be widened as shown on the plans. All grading, paving, seeding, and other necessary work shall be in accordance with the Specifications for the type work being done.

606.06 Mail Box Post Single wood post shall be installed at the designated location for the support of the mailbox. The multiple mailbox assemblies shall be installed at the designated location in accordance with the Standard Details and as recommended by the Manufacturer. Attachment of the mailbox to the post will be the responsibility of the home or business owner.

606.07 Abraded Surfaces All galvanized surfaces of new guardrail and posts, which have been abraded so that the base metal is exposed, and the threaded portions of all fittings and fasteners and cut ends of bolts shall be cleaned and painted with two coats of approved rust resistant paint.

606.08 Method of Measurement Guardrail will be measured by the meter [linear foot] from center to center of end posts along the gradient of the rail except where end connections are made to masonry or steel structures, in which case measurement will be as shown on the plans.

Terminal section, low volume end, NCHRP 350 end treatments, reflectorized flexible guardrail marker, terminal end, bridge transition, bridge connection, multiple mailbox post, and single post will be measured by each unit of the kind specified and installed.

Widened shoulder will be measured as a unit of grading within the limits shown on the plans.

Excavation in solid rock for placement of posts will be measured by the cubic meter [cubic yard] determined from the actual depth of the hole and a hypothetical circle diameter of 600 mm [2 ft].

606.09 Basis of Payment The accepted quantities of guardrail will be paid for at the contract unit price per meter [linear foot] for the type specified, complete in place. Reflectorized beam guardrail ("butterfly"-type) delineators will not be paid for directly, but will be considered incidental to guardrail items. Terminal section, buffer end, NCHRP 350 end treatment, bridge connection, single post and reflectorized flexible guardrail markers will be paid for at the contract unit price each for the kind specified complete in place.

NCHRP 350 end treatments and low volume guardrail ends will be paid for at the contract price each, complete in place which price shall be full payment for furnishing and installing all components including the terminal section, posts, offset blocks, "w" beam, cable foundation posts, plates and for all incidentals necessary to complete the installation within the limits as shown on the Standard Details or the Manufacturer's installation instructions. Each end treatment will be clearly marked with the manufacturers name and model number to facilitate any future needed repair. Such payment shall also be full compensation for furnishing all material, excavating, backfilling holes, assembling, and all incidentals necessary to complete the work, except that for excavation for posts or anchorages in solid ledge rock, payment will be made under Pay Item 206.07. Type III Retroreflective Adhesive Sheeting

shall be applied to the approach buffer end sections and sized to substantially cover the end section. On all roadways, the ends shall be marked with alternating black and retroreflective yellow stripes. The stripes shall be 75 mm [3 in] wide and sloped down at an angle of 45 degrees toward the side on which traffic is to pass the end section. Guardrail 350 flared terminal shall also include a set of installation drawings supplied to the Resident.

Anchorage to bridge end posts will be part of the bridge work. Connections thereto will be considered included in the unit bid price for guardrail.

Guardrail to be placed on a radius of curvature of 45 m [150 ft] or less will be paid for under the designated radius pay item for the type guardrail being placed.

Widened shoulder will be paid for at the contract unit price each complete in place and will be full compensation for furnishing and placing, grading and compaction of aggregate subbase and any required fill material.

Adjust guardrail will be paid for at the contract unit price per meter and will be full compensation for adjusting to grade. Payment shall also include adjusting terminal end treatments where required.

Modify guardrail will be paid for at the contract unit price per meter and will be full compensation for furnishing and installing offset blocks, additional posts, and other specified modifications; removing, modifying, installing, and adjusting to grade existing posts and beams; removing plate washers and backup plates, and all incidentals necessary to complete the work. Payment shall also include removing and resetting terminal ends where required.

Remove and Reset guardrail will be paid for at the contract unit price per meter and will be full compensation for removing, transporting, storing, reassembling all parts, necessary cutting, furnishing new parts when necessary, reinstalling at the new location, and all other incidentals necessary to complete the work. Payment shall also include removing and resetting terminal ends when required. No payment will be made for guardrail removed, but not reset and all costs for such removal shall be considered incidental to the various contract pay items.

Remove, Modify, and Reset guardrail will be paid for at the contract unit price per meter and will be full compensation for the requirements listed in Modify guardrail and Remove and Reset guardrail.

Bridge Connections will be paid for at the contract unit price each. Payment shall include, attaching the connection to the endpost including furnishing and placing concrete and reinforcing steel necessary to construct new endposts if required, furnishing and installing the terminal connector, and all miscellaneous hardware, labor, equipment, and incidentals necessary to complete the work.

Bridge Transitions will be paid for at the contract unit price each. Payment shall include furnishing and installing the thrie beam or "w"-beam terminal connector, doubled beam section, and transition section, where called for, posts, hardware, precast concrete transition curb, and any other necessary materials and labor, including the bridge connection as stated in the previous paragraph.

Payment will be made under:

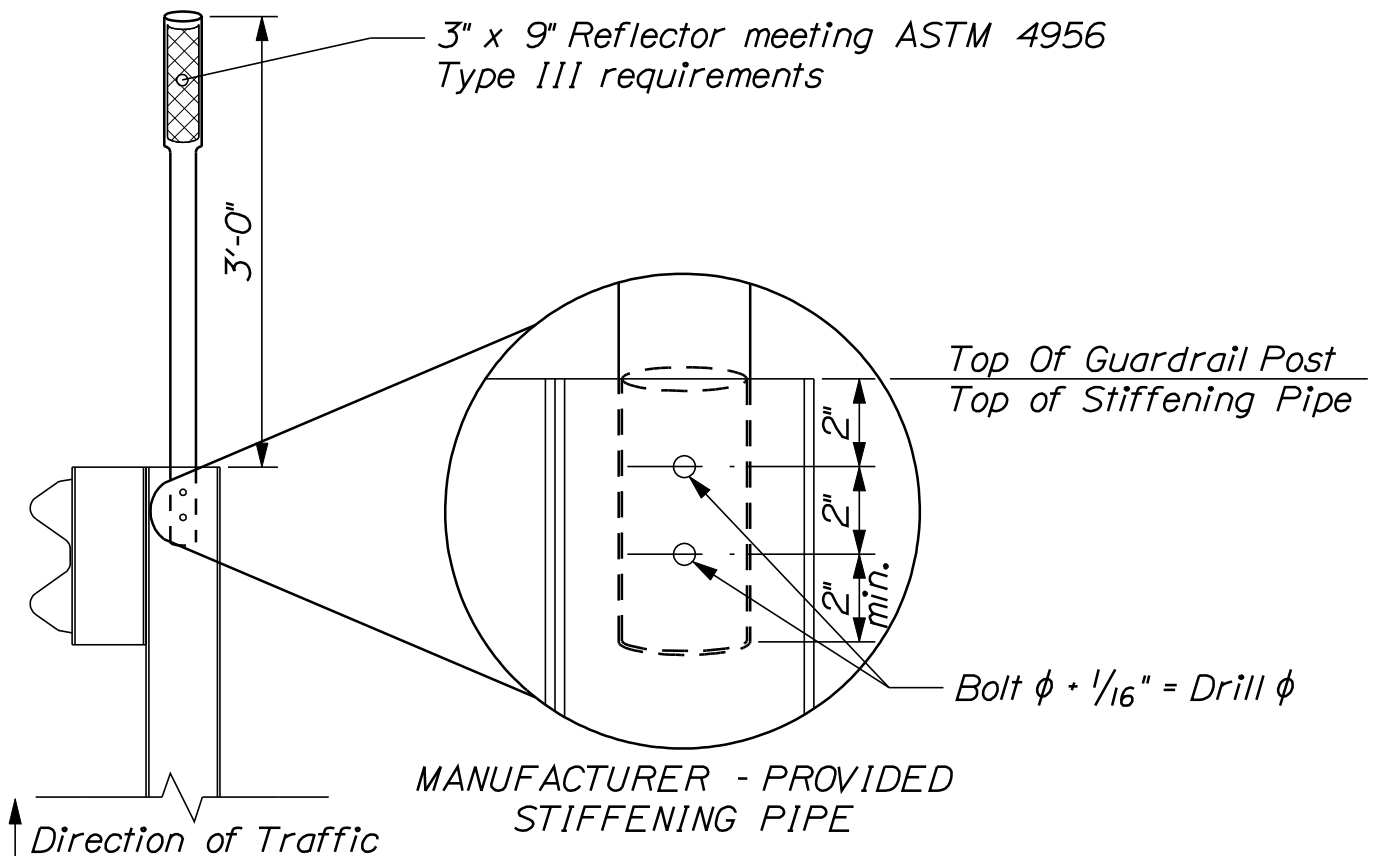
	<u>Pay Item</u>	<u>Pay Unit</u>
606.15	Guardrail Type 3a-Single Rail	meter [Linear Foot]
606.151	Guardrail Type 3aa-Single Rail	meter [Linear Foot]
606.17	Guardrail Type 3b-Single Rail	meter [Linear Foot]
606.1721	Bridge Transition - Type I	Each
606.1722	Bridge Transition - Type II	Each
606.1731	Bridge Connection - Type I	Each
606.1732	Bridge Connection - Type II	Each
606.178	Guardrail Beam	meter [Linear foot]
606.18	Guardrail Type 3b - Double Rail	meter [Linear foot]
606.19	Guardrail Type 3a - 4.5 m [15 ft] radius and less	meter [Linear Foot]
606.191	Guardrail Type 3aa - 4.5 m [15 ft] radius and less	meter [Linear Foot]
606.20	Guardrail Type 3a - over 4.5 m [15 ft] radius	meter [Linear Foot]
606.201	Guardrail Type 3aa - over 4.5 m [15 ft] radius	meter [Linear Foot]
606.21	Guardrail Type 3b - 4.5 m [15 ft] radius and less	meter [Linear Foot]
606.22	Guardrail Type 3b - over 4.5 m [15 ft] radius	meter [Linear Foot]
606.23	Guardrail Type 3c - Single Rail	meter [Linear Foot]
606.2301	Guardrail Type 3c - Double Rail	meter [Linear Foot]
606.231	Guardrail Type 3c - 4.5 m [15 ft] radius and less	meter [Linear Foot]
606.232	Guardrail Type 3c - over 4.5 m [15 ft] radius	meter [Linear Foot]
606.24	Guardrail Type 3d - Single Rail	meter [Linear Foot]
606.2401	Guardrail Type 3d - Double Rail	meter [Linear Foot]
606.241	Guardrail Type 3d - 4.5 m [15 ft] radius and less	meter [Linear Foot]
606.242	Guardrail Type 3d - over 4.5 m [15 feet] radius	meter [Linear Foot]
606.25	Terminal Connector	Each
606.257	Terminal Connector - Thrie Beam	Each
606.265	Terminal End-Single Rail - Galvanized Steel	Each
606.266	Terminal End-Single Rail - Corrosion Resistant Steel	Each
606.275	Terminal End-Double Rail - Galvanized Steel	Each
606.276	Terminal End-Double Rail - Corrosion Resistant Steel	Each
606.353	Reflectorized Flexible Guardrail Marker	Each
606.354	Remove and Reset Reflectorized Flexible Guardrail Marker	Each
606.356	Underdrain Delineator Post	Each
606.358	Guardrail, Modify, Type 3b to 3c	meter [Linear Foot]
606.3581	Guardrail, Modify Existing to Type 3d	meter [Linear Foot]
606.362	Guardrail, Adjust	meter [Linear Foot]
606.365	Guardrail, Remove, Modify, and Reset, Type 3b to 3c	meter [Linear Foot]
606.3651	Guardrail, Remove, Modify, and Reset Existing to Type 3d	meter [Linear Foot]
606.366	Guardrail, Removed and Reset, Type 3c	meter [Linear Foot]
606.367	Replace Unusable Existing Guardrail Posts	Each
606.47	Single Wood Post	Each
606.48	Single Galvanized Steel Post	Each
606.50	Single Steel Pipe Post	Each

606.51	Multiple Mailbox Support	Each
606.55	Guardrail Type 3 - Single Rail	meter [Linear Foot]
606.551	Guardrail Type 3 - Single Rail with Rub Rail	meter [Linear Foot]
606.56	Guardrail Type 3 - Double Rail	meter [Linear Foot]
606.561	Guardrail Type 3 - Double Rail with Rub Rail	meter [Linear Foot]
606.568	Guardrail, Modify Type 3c -Double Rail	meter [Linear Foot]
606.59	Guardrail Type 3 - 4.5 m [15 ft] radius and less	meter [Linear Foot]
606.60	Guardrail Type 3 - over 4.5 m [15 ft] radius	meter [Linear Foot]
606.63	Thrie Beam Rail Beam	meter [Linear Foot]
606.64	Guardrail Thrie Beam - Double Rail	meter [Linear Foot]
606.65	Guardrail Thrie Beam - Single Rail	meter [Linear Foot]
606.66	Terminal End Thrie Beam	Each
606.70	Transition Section - Thrie Beam	Each
606.71	Guardrail Thrie Beam - 4.5 m [15 ft] radius and less	meter [Linear Foot]
606.72	Guardrail Thrie Beam - over 4.5 m [15 ft] radius	meter [Linear Foot]
606.73	Guardrail Thrie Beam - Single Rail Bridge Mounted	meter [Linear Foot]
606.74	Guardrail Type 3 - Single Rail Bridge Mounted	meter [Linear Foot]
606.753	Widen Shoulder for Low Volume Guardrail End - Type 3	Each
606.754	Widen Shoulder for Guardrail 350 Flared Terminal	Each
606.78	Low Volume Guardrail End - Type 3	Each
606.79	Guardrail 350 Flared Terminal	Each

1. *Reflectorized Flexible Guardrail Markers shall be from Maine DOT's Approved Product List of Guardrail Material.*

2. *Installation:*

- a. *Each bolt-hole diameter shall be the bolt diameter + $\frac{1}{16}$ ".*
- b. *Wood post attachment - attach marker with 2, $\frac{5}{16}$ " diameter zinc-coated lag bolts, having 2" of embedment into wood post.*
- c. *Steel post attachment - attach marker with 2, $\frac{1}{4}$ " diameter zinc-coated bolt, washer and nut assemblies, having $\frac{1}{2}$ " of bolt extension behind steel post.*
- d. *When provided by the marker manufacturer, a stiffening pipe shall be inserted into the base of the marker prior to drilling bolt holes and shall remain in-place.*



REFLECTORIZED FLEXIBLE GUARDRAIL MARKER DETAILS

606(34)

SPECIAL PROVISION
SECTION 606
GUARDRAIL
(Guardrail Adjusted - Install Rub Rail)

606.01 Description

The following paragraphs are added:

This work shall consist of 1.) adjusting the height of the existing guardrail in locations where the existing height of rail is 24 inches or lower and 30 inches or greater than the proposed ground, and 2.) installing channel-section rub rail. The guardrail shall be adjusted to a height of 27 inches.

The guardrail adjustment and rub rail installation shall take place at all necessary locations; approximate locations are shown on the plans. Exact locations for adjustment shall be determined by the Resident.

The following Subsections are added:

606.021 General

All existing guardrail to be raised or lowered shall be completed prior to new guardrail or end treatments being attached.

606.036 Adjusting Existing Guardrail

Any materials or galvanizing damaged by the Contractor's operations shall be replaced or touched-up at no additional cost to the Department.

Guardrail posts shall be raised to a minimum of five inches above final elevation prior to driving post to final elevation; this applies to both raising and lowering rail.

Any given length of guardrail to be adjusted shall be done in such a way that top of rail elevations do not vary drastically between each section of guardrail. Rail height tolerance shall be one inch either side of 27. The 27 inches shall be measured from the edge of pavement to the top of rail beam.

For all adjusted posts the earth around each post shall be raked and compacted with a hand tamper or an approved device.

606.06 Method of Measurement

The following sentence is added:

Adjusting of guardrail and installation of rub rail shall be measured by the linear foot of Guardrail Adjusted and accepted.

606.09 Basis of Payment

The following paragraphs are added:

Adjusting of guardrail and installation of rub rail will be paid for at the Contract unit price per linear foot and shall be full compensation for furnishing all labor, equipment and materials necessary to complete the work. Rail will not be measured for payment until all compaction has been completed.

Payment will be made under:

Pay Item

Pay Unit

606.362 Guardrail Adjusted – Install Rub Rail

Linear Foot

SPECIAL PROVISION
SECTION 606
GUARDRAIL
(Terminal End - Trailing End)

606.01 Description - The following sentence is added:

This work shall also consist of furnishing and installing Terminal End - Trailing End end treatments and adhesive backed retroreflective lens sheeting in accordance with these Specifications, the AASHTO-AGC-ARBTA Joint Committee Task Force 13 Report, dated May 15, 1995; and in reasonably close conformity with the lines and grades shown on the Plans or as directed by the Construction Manager.

MATERIALS

606.02 Materials - The following sentences are added:

The guardrail elements shall be per the Components List found on Sheet No. 2 of 2 of Drawing SEW02a - Trailing End Terminal - Foundation Tube Option (attached).

The adhesive backed retroreflective lens sheeting shall meet the requirements of Section 719.01, Reflective Sheeting - High Intensity Reflective Sheeting, Type III.

CONSTRUCTION REQUIREMENTS

606.041 Reflective Sheeting - The following Subsection is added:

The color for the adhesive backed retroreflective lens sheeting shall be amber (yellow).

606.042 Terminal End - Trailing End

Installation of the Terminal End - Trailing End shall be in strict accordance with the AASHTO-AGC-ARBTA Joint Committee Task force 13 Report and the Details on sheet No. 1 of 2 of Drawing SEW02a - Trailing End Terminal - Foundation Tube Option (attached).

606.08 Method of Measurement - The second paragraph is amended by the addition of: “,Terminal End - Trailing End,” after the words “breakaway cable terminal”.

606.09 Basis of Payment - The second paragraph is amended by the addition of: “, Terminal End - Trailing End,” after the words “breakaway cable terminal”.

The adhesive backed retroreflective lens sheeting will not be paid for separately, but shall be considered incidental to the Terminal End - Trailing end item.

Payment will be made under:

Pay Item

606.2602

Terminal End - Trailing End

Pay Unit

Each

SPECIAL PROVISION
SECTION 608
DETECTABLE WARNINGS
(Curb Ramp Detectable Warning Field – Cast Iron)

Description This work shall consist of furnishing and installing curb ramp detectable warning plates with truncated domes at the locations shown on the plans or as established by the Resident.

MATERIALS

Detectable warning fields The Contractor shall provide new cast iron detectable warning plates as manufactured by one of the manufacturers listed on Maine DOT's Qualified Products list of Cast Iron Detectable Warning Plates. This list can be found at:

<http://www.maine.gov/mdot/transportation-research/qpl.php>

Each field shall match the width of the trail and shall have a natural finish.

Prior to starting this work, the Contractor shall submit for approval the name of the selected supplier, manufacturer's literature describing the product, installation procedures, and routine maintenance required.

Concrete Portland cement concrete shall meet the requirements of Section 502, Structural Concrete, Class A

CONSTRUCTION REQUIREMENTS

New Asphalt Asphalt shall be saw cut and removed to provide an opening that will allow for the dimensions of the cast iron plate surrounded by an additional 4" border on all sides of the plate. New concrete shall be placed in the resulting opening and finished, and the new plates set into the wet concrete, according to manufacturer recommendations. New plates shall be set square with the curb edge and the base of the truncated domes shall be flush with adjacent surfaces to allow proper drainage.

Method of Measurement Detectable warning fields properly placed and accepted shall be measured for payment by the square foot. Measurement shall include actual plate area, not surrounding concrete.

Basis of Payment Payment will be full compensation at the contract unit price for all labor, materials, and equipment required to install the detectable warning fields. This shall include surface preparation and removal of concrete or asphalt, and necessary replacement concrete.

<u>Pay Item</u>	
608.26 Curb Ramp Detectable Warning Field	

<u>Pay Unit</u>
SF

SPECIAL PROVISION
SECTION 618
SEEDING
(Seeding Method Number 1)

Add the following:

618.11 Method of Measurement Payment for seeding by the unit will be along the slope of the ground. One Unit will be 100 m² [1000 ft²].

Payment will be under:

<u>Pay Item</u>	<u>Pay Unit</u>
618.1301 Seeding Method Number 1	Unit

SPECIAL PROVISION
SECTION 619
MULCH
(Mulch)

Add the following:

619.06 Method of Measurement Payment for hay and straw mulch by the unit will be along the slope of the ground. One Unit will be 100 m² [1000 ft²].

Payment will be under:

<u>Pay Item</u>	<u>Pay Unit</u>
619.1201 Mulch	Unit

SPECIAL
PROVISION SECTION
620 GEOTEXTILES
(HDPE Geomembrane)

620.1 Description

The following sentence is added:

This work shall include installation of HDPE Geomembrane as shown in the Contract Drawings, or as directed by the Resident.

MATERIALS

620.2 Materials

The following sentence is added:

HDPE Geomembrane shall be Poly-Flex 40 mil. High Density Polyethylene (HDPE) as manufactured by Poly-Flex, Inc., 2000 W. Marshall Drive, Grand Prairie, TX 75051, (972) 647-4374, Fax (972) 988-8331, or an approved equal.

620.021 Contractor Shop Drawing Submittal (twenty work days prior to first delivery)

At least twenty work days prior to first delivery of material to the site, the Contractor shall submit the following:

1. A sample and specification sheet for the proposed HDPE Geomembrane.
2. A narrative of means, methods and materials for welding to create seams for adjacent sheets of HDPE Geomembrane and to seal penetrations in the HDPE Geomembrane. The sealant material (typically asphalt based, trowel applied mastic or pre-fabricated HDPE boots that are welded to the adjacent HDPE Geomembrane liner) should be compatible for use with the HDPE Geomembrane per the requirements of the membrane manufacturer.
3. Means and methods for attaching/welding HDPE Geomembrane to panel walls, abutments and/or steel sheeting.

A review of the shop drawings or revised shop drawings will be completed by the Department within ten working days of receipt. If revisions are required, the Contractor shall submit the revised shop drawings for review. EPS block shall not be shipped to the site prior to notification that all shop drawings related to EPS fill have been approved for construction.

CONSTRUCTION REQUIREMENTS

620.3 Placement

The following paragraphs are added:

HDPE Geomembrane shall be placed around the EPS blocks and sealed to provide a water-tight enclosure as shown on the Contract Drawings.

HDPE Geomembrane deployment shall proceed only when ambient temperatures are between 32°F to 104°F. Geomembrane shall not be placed during precipitation or moisture of any type (e.g., fog, rain, dew), or in the presence of excessive winds, as determined by the Resident. Observation of temperature, humidity, precipitation, and wind should be noted to ensure that the weather conditions are acceptable prior to HDPE Geomembrane placement.

620.4 Overlap and Seams

The following paragraphs are added:

Approved seaming processes are hot shoe fusion and extrusion welding. On side slopes, seams shall be oriented in the general direction of maximum slope, (i.e., oriented down, not across slope). In corners and odd-shaped geometric locations, the number of field seams shall be minimized. Seams shall be aligned with the least possible number of wrinkles and "fishmouths". If a fishmouth or wrinkle is found, it shall be relieved and cap-stripped.

Geomembrane panels must have finished minimum overlap of four inches for hot shoe fusion welding and three inches for extrusion welding.

Penetrations through the geomembrane panels must be sealed using either asphalt-based mastic or pre-fabricated HDPE boots to provide a tight seal around the penetrating element. Alternative methods for sealing penetrations shall be approved by the Department during the submittal review process.

Cleaning solvents may not be used unless the product is approved by the liner manufacturer. Field test seams may be conducted on the liner in accordance with the manufacturer's recommendation to verify that seaming conditions are satisfactory.

620.7 Method of Measurement

The words, "HDPE Geomembrane" shall be added after the word "geotextiles" in the first sentence of the first paragraph.

620.8 Basis of Payment

The words, "HDPE Geomembrane" shall be added after the word "geotextiles" in the first sentence of the first paragraph.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
620.6012 HDPE Geomembrane	Square Yard

SPECIAL PROVISIONS
SECTION 621
LANDSCAPE
(Plant Species Specification and Quantities List)

The following list of items provides the estimated quantities for use on this project. The scientific name of the plant material is provided along with the common name in parenthesis.

The contractor shall follow MDOT Standard Specifications Rev. December, 2002 for landscape materials and installation procedures (sec 621).

The MDOT Landscape Architect or his designee will be available to inspect plant materials and stake the location of plant materials at the time of planting.

Per Section 104.5.9 a separate Performance Bond will not be required for the Landscape portion of this contract. The requirement for a Maintenance Bond for a Two-Year Establishment period shall be waived..

PLANT MATERIALS

ITEM NO	Description	Unit	Quantity	Total
621.037	Evergreen Trees 5' – 6' Group A B&B/Cont.	Ea.		6
	Thuja occidentalis 'Nigra'		6	
621.184	Medium Deciduous Trees 8' – 10' Multistem Clump B&B/Cont.	Ea.		12
	Acer rubrum (Swamp Maple)		6	
	Betula nigra 'Heritage' (Heritage Birch)		6	
621.273	Large Deciduous Trees 2' -2 ½" cal. B&B	Ea.		1
	Quercus alba (Northern White Oak)		1	
621.395	Dwarf Evergreens 18" – 24" B&B/Cont.	Ea.		24
	Juniperus 'Hetzii' Spreading Juniper		24	
621.413	Dwarf Evergreens 3' – 4' Group A B&B	Ea.		36
	Taxus media 'Hicksii' (Hick's Yew)		36	
621.540	Deciduous Shrubs 18" – 24" B&B/Cont.	Ea.		48
	Forsythia suspensa 'Meadowlark' (Forsythia)		24	
	Rosa Rugosa (Beach Rose)		24	

SPECIAL PROVISION
SECTION 627
PAVEMENT MARKINGS

The last paragraph of Subsection 627.10, Basis of Payment is revised by the addition of the following:

<u>Pay Item</u>		<u>Pay Unit</u>
627.733	4" White or Yellow Painted Pavement Marking Line	LF
627.744	6" White or Yellow Painted Pavement Marking Line	LF

SPECIAL PROVISION
SECTION 635
PRECAST CONCRETE BLOCK GRAVITY WALL

The following replaces Section 635 in the Standard Specifications in its entirety:

635.01 Description The work under this item shall consist of design, fabrication, furnishing and construction of a Precast Concrete Block Gravity Wall in accordance with these specifications and in close conformance with the lines and grades shown on the Plans, or established by the Resident. The Precast Concrete Block Gravity Wall shall consist of facing blocks made of wet cast concrete made from Portland cement, water, chemical admixtures, and aggregates, supported on concrete leveling pads, and if required, geosynthetic-reinforced backfill.

Included in the scope of the precast gravity wall construction are: geotechnical design of any wall with a exposed height greater than 4.5 feet or as specified on the Plans, all grading necessary for wall construction, compaction of the wall foundation soil, backfill, piped drainage, construction of leveling pads, and block wall installation. The top of the upper row of blocks shall be at or above the top of the face elevation shown on the Plans.

635.02 Quality Assurance The wall system shall be one of the approved combinations of facing block and soil reinforcement systems noted in the Plans or on the Department's Qualified Products List (QPL). Alternate wall systems will not be considered for this Item.

All design calculations and Shop Drawings shall be signed and sealed by a Professional Engineer licensed in the State of Maine.

The Contractor shall require the wall design-supplier to provide an on-site, qualified experienced technical representative to advise the Contractor concerning proper installation procedures. The technical representative shall be on-site during initial stages of installation and thereafter shall remain available for consultation as necessary for the Contractor or as required by the Resident.

635.03 Materials Materials for walls shall meet the requirements of the following sections of Division 700:

Gravel Borrow	703.20
Underdrain Backfill Type C	703.22
Underdrain Pipe	706.06 or 706.09
Reinforcing Steel	709.01
Structural Precast Concrete Units	712.061
Reinforcement Geotextile	722.01
Drainage Geotextile	722.02

The Contractor is cautioned that all of the materials listed are not required for every Precast Concrete Block Gravity Wall. The Contractor shall furnish the Resident a Materials

Certification Letter certifying that the applicable materials comply with this section of the specifications. Materials shall meet the following additional requirements:

635.031 Concrete Units The Materials Certification Letter described above shall contain the date of concrete casting; a lot identification number, compressive strength results, and entrained air results. All prefabricated concrete units shall conform to the requirements of 712.061 with the following exceptions:

A. Materials. Materials are modified as follows: the maximum water cement ratio shall be 0.42, use of calcium nitrite is not required, and the minimum 28 day compressive strength shall be 4600 psi.

B. Quality Control and Quality Assurance. Quality Control and Quality Assurance is modified as follows: delete the second and third paragraphs.

C. Construction. Construction requirements are modified as follows:

Delete the second paragraph and replace it with the following:

All units for a designated wall system, including end blocks, steps, caps and other wall units shall be manufactured from the same material sources of aggregates, brand and type of cement and color pigment.

Replace the first sentence in the paragraph which begins "The forms shall remain ..." with the following:

The forms shall remain in place until the concrete has gained sufficient strength such that removal of the forms and subsequent handling will not damage the units.

Replace the paragraph which begins "A minimum of 8" with the following:

The Contractor shall make and test at least one set of cylinders for every 50 yd³ of production concrete used to cast the concrete units.

Replace the paragraph which begins "At least once ..." with the following:

The Contractor shall make four cylinders for use by the Department for every 200 yd³.

Add the following paragraph at the end of the Construction section:

Face texture of the units shall be a formed finish on all exposed surfaces. Pigment shall be added during the casting process of the concrete unit to achieve a consistent shade of gray or other color as determined by the Resident.

D. Tolerances. Maximum dimensional deviation of formed unit dimensions shall be ½ - inch or 2 percent or the manufacturer's published tolerances, whichever is less. Units not meeting the specified tolerances will be rejected.

635.032 Geosynthetic Reinforcement Geosynthetic reinforcement shall be as required by the proprietary wall system manufacturer or wall designer. Geosynthetic reinforcement shall consist of a geotextile or geogrid approved by the Geotechnical Engineer. Substitution of a

geosynthetic other than that required by the proprietary wall system manufacturer shall not be allowed unless approved by the Geotechnical Engineer after submittal of shop drawings and pullout and interface friction test data.

- A. Geotextiles and Thread for Sewing. Woven or nonwoven geotextiles shall consist of long chain polymeric filaments or yarns formed into a stable network such that the filaments or yarns retain their position relative to each other during handling, placement, and design life. At least 95 percent by weight of the long chain polymer shall be polyolefin or polyester. The material shall be free of defects and tears. Geotextiles used for reinforcement shall conform as a minimum to the properties indicated for 722.01, Stabilization/Reinforcement Geotextile and shall meet the requirements of part D and E below. Geotextiles shall have a minimum permeability greater or equal to that shown on the Shop Drawings and the reinforced soil permeability.
- B. Geogrids. The geogrid shall be a regular network of integrally connected polymer tensile elements with aperture geometry sufficient to permit significant mechanical interlock with the surrounding soil or rock. The geogrid structure shall be dimensionally stable and able to retain its geometry under manufacture, transport and installation. Geogrids shall conform as a minimum to the criteria specified in part D and E below.
- C. Required Properties. The specific geosynthetic materials shall be preapproved and shall have the ultimate tensile strength (T_{ult}) shown on the approved Shop Drawings for the geosynthetic specified and for the fill type shown. T_{ult} shall be determined from wide width tests specified in ASTM D 4595 for geotextiles and ASTM D 6637 or GRI:GG1 for geogrids. The ultimate tensile strength value is based on the minimum average roll values (MARV) for the product.
- D. The geosynthetic shall conform to the following criteria:
 - 1. PP and HDPE: Min. retained strength of 70 percent after 150 hours, per ASTM D-4355.
 - 2. HDPE: Grade = E-4, E-5, E-8, E-9, E-10, E-11, J-3, J-4, or J-5, per ASTM D-1248.
 - 3. PET: Molecular weight (M_n) > 25,000, per GRI:GG8 and ASTM D-4603.
 - 4. PET: Carboxyl end group (CEG) ≥ 15 mmol/kg, GRI:GG7.
 - 5. All polymers: Minimum Weight per Unit Area of 8 oz/yd², per ASTM D-5261.
 - 6. All Polymers: Maximum 0 percent post consumer recycled material by weight.
 - 7. A default total reduction factor for creep, durability, and installation damage of $RF = 7$ may be used in design, provided the criteria of 2 through 6 are satisfied and 1 is adjusted to 70 percent after 500 hours is satisfied.
- E. Manufacturer Quality Control. The geosynthetic reinforcements shall be manufactured with a high degree of quality control. The Manufacturer is responsible for establishing and maintaining a quality control program to ensure compliance with the requirements of the specification. The purpose of the QC testing program is to verify that the reinforcement geosynthetic being supplied to the project is representative of the material used for performance testing and approval. Conformance testing shall be performed as

part of the manufacturing process and may vary for each type of product. As a minimum the following index tests shall be considered as applicable for an acceptable QA/QC program:

<u>Property</u>	<u>Test Procedure</u>
1. Specific Gravity (HDPE only)	ASTM D-1505
2. Ultimate Tensile Strength	ASTM D-4595 GRI:GG1
3. Melt Flow (HDPE and PP only)	ASTM D-1238
4. Intrinsic Viscosity (PET only)	ASTM D-4603
5. Carboxyl End Group (PET only)	ASTM D-2455

F. Sampling Testing and Acceptance. Sampling and conformance testing shall be in accordance with ASTM D-4354. Conformance testing procedures are established above. Geosynthetic product acceptance shall be based on ASTM D-4759. The quality control certificate shall include:

1. Roll numbers and identification
2. Sampling procedures
3. Results of quality control tests, including a description of test methods used.

G. Certification. The Contractor shall submit a manufacturer's certification that the geosynthetics supplied meet the respective index criteria set when the geosynthetic was approved, measured in full accordance with all test methods and standards specified, or referenced, in this specification.

The manufacturer's certificate shall state that the furnished geosynthetic meets the requirements of these specifications as evaluated by the manufacturer's quality control program. The values submitted shall be certified by a person having legal authority to bond the manufacturer. In case of dispute over validity of values, the Resident can require the Contractor to supply test data from an agency approved laboratory to support the values submitted, at the Contractor's cost.

635.033 Geosynthetic Connection Reinforcing bar used in the geosynthetic connection shall be ½-inch diameter epoxy coated reinforcing bar, coated on the ends and meeting the requirements of Section 503, Reinforcing Steel. Installation shall be in accordance with manufacturer's recommendations.

635.034 Concrete Leveling Pad Concrete for leveling pads shall be Fill Concrete conforming to the requirements of Section 502 Structural Concrete. Unless otherwise specified, concrete for leveling pads shall be accepted under Method "C" requirements.

635.035 Backfill Material Backfill material placed behind the concrete units shall meet the requirements of Section 703.20 Gravel Borrow, except that the backfill material shall only contain particles that will pass the 3-inch square mesh sieve. The contractor is required to submit a grain size distribution curve (ASTM D 422) and a moisture-density relationship curve

(AASHTO T-180) for acceptance of the proposed backfill material and determination of the appropriate installation damage reduction factor (RF_{ID}).

Walls with reinforced backfill require that the backfill material be subjected to pH testing to determine the appropriate durability reduction factor (RF_D).

Material between blocks must be Gravel Borrow, or Underdrain Backfill Material meeting the requirements of Section 703.22, Type C.

635.036 Materials Certification Letter The Contractor, or the supplier as his agent, shall furnish the Resident a Materials Certification Letter for the above materials, including the backfill material, in accordance with Section 700 of the Standard Specifications. A copy of all test results performed by the Contractor or his supplier necessary to assure contract compliance shall also be furnished to the Resident. The Resident will base acceptance upon the materials Certificate Letter, accompanying test reports, and visual inspection.

635.04 Design Requirements The wall shall be designed with a service life of not less than 75 years. The Precast Concrete Block Gravity Wall shall be designed and sealed by a Professional Engineer licensed in the State of Maine. The wall shall be designed in accordance with the following:

1. AASHTO LRFD Bridge Design Specifications, current edition, herein referred to as LRFD
2. FHWA-NHI-00-043 Mechanically Stabilized Earth Walls and Reinforced Soil Slopes Design and Construction Guidelines, 2001
3. FHWA-NHI-00-044 Corrosion/Degradation of Soil Reinforcements for Mechanically Stabilized Earth Walls and Reinforced Soil Slopes, 2000
4. The Contract Plans
5. The requirements specified herein
6. The manufacturer's requirements

Where conflicting requirements occur, the more stringent requirements shall govern.

Forty-five days prior to beginning construction of the wall, the design computations shall be submitted to the Resident for review by the Geotechnical Engineer. Any additional design or costs arising as a result of rejection of a wall design by the Geotechnical Engineer shall be borne by the Contractor.

Design calculations that consist of computer program generated output shall be supplemented with at least one hand calculation and graphic demonstrating the design methodology used. Design calculations shall provide thorough documentation of the sources of equations used and material properties. The design by the wall system supplier shall consider the stability of the wall as outlined below and in the Contract Documents:

- A. Failure Plane The theoretical failure plane within the reinforced soil mass shall be determined in accordance with LRFD Article 11 and be analyzed so that the soil

stabilizing components extend sufficiently beyond the failure plane within the reinforced soil mass to stabilize the material.

- B. External Loads External loads which affect the internal and external stability such as those applied through traffic loadings, impact on traffic barrier posts, slope surcharge, hydrostatic, and seismic loads shall be accounted for in the design. Traffic surcharge and traffic impact loads shall be calculated and applied in compliance with LRFD Section 11.
- C. External Stability Loads and load combinations selected for design shall be consistent with LRFD. Application of load factors shall be taken as specified in LRFD Section 11. Sliding resistance factors and bearing resistance factors shall be consistent with LRFD. Overturning and sliding provisions of LRFD shall apply.
- D. Internal Stability Evaluation of reinforcement pullout, reinforcement rupture and reinforcement/block connection pullout or rupture shall be consistent with LRFD Section 11, and checked at each level. Loads, load combinations and load factors shall be as specified in LRFD Section 11. Resistance factors for internal design are specified in LRFD Section 11. Maximum reinforcement loads shall be calculated using the Simplified Method approach. Calculations for factored stresses and resistances shall be based upon assumed conditions at the end of the design life.
 - a. Geosynthetic Reinforcement Design Tensile Resistance The nominal long term reinforcement design strength (T_{al}) shall be determined by reducing T_{ult} by reduction factors (RF) in accordance with the documents referenced above. The designer shall procure and use the manufacturers tested and certified geosynthetic reinforcement reduction factors for creep (RF_{CR}), durability (RF_D), and installation damage (RF_{ID}) to determine T_{al} . In absence of manufacturers tested and certified reduction factors, a combined default reduction factor $RF = 7$ shall be used in accordance with the referenced documents. For RF_{ID} , the installation damage reduction factor shall be checked in accordance with LRFD and FHWA-NHI-00-044.
 - b. Reinforcement/Facing Connection Design Strength The nominal long-term connection strength between the geosynthetic reinforcement and the concrete blocks shall be checked in accordance with LRFD and FHWA-NHI-00-043.
 - c. Reinforcement Pullout The pullout resistance factor, (F^*), and scale effect correction factor (α) used in pullout design, shall be determined from project specific pullout tests using the proposed geosynthetic in the specified project backfill material or equivalent soil. The pullout resistance factors shall be determined in accordance with LRFD and FHWA-NHI-00-043. In the absence of test data, empirical relationships may be used to determine the pullout resistance factors, any empirical relationships used in design shall be referenced in the design calculations.

- E. Backfill and Foundation Soils Parameters The friction angle of the backfill used in the reinforced fill zone for internal stability design shall be assumed have a friction angle of 34 degrees unless specific project select backfill is tested for frictional strength. The friction angle of the foundation soils and random backfill shall be assumed to be 30 degrees unless otherwise shown on the plans.
- F. Reinforcement Length The soil reinforcement shall be the same length from the bottom to the top of each wall section. The reinforcement length defining the width of the entire reinforced soil mass may vary with wall height. The minimum length of the soil reinforcement shall be 8 ft, but shall not be less than 70 percent of the wall height, H, for walls with level surcharges, or 70 percent of H₁ for walls with a sloped surcharge or walls supporting an abutment. The mechanical wall height, H or H₁, shall be the vertical difference between the top of the leveling footing and the elevation at which the failure surface, as described above, intercepts the ground surface supported by the wall.
- G. Bearing Resistance The factored bearing pressures under the Precast Concrete Block Gravity Wall shall be clearly indicated on the Shop Drawings. Walls shall be dimensioned so that the factored bearing resistance of the foundation soils, as noted on the Plans, is not exceeded.
- H. Facing Stability Stability calculations for the concrete facing blocks shall be in accordance with LRFD, and shall include an evaluation of the maximum vertical spacing between reinforcement layers.
- I. Stability During Construction Walls shall be designed to resist failure by instability of temporary construction slope. Passive pressure in front of the wall mass shall be assumed to be zero for design purposes.
- J. Design Life The wall design life shall be a minimum of 75 years.
- K. Depth of Embedment The depth of embedment for frost protection and stability shall be at or below the elevation shown on the Plans and the approved Shop Drawings.
- L. Drainage System Piped drainage shall be designed to collect and dispose of water from the base of the reinforced soil zone and backfill soil. This shall outlet into surrounding drainage systems or ditches.

635.05 Submittals The Contractor shall supply wall design computations, wall details, dimensions, quantities, and cross sections necessary to construct the wall. A sample hand calculation including all equations, parameter values used, units, theory, free-body diagram, comparison to design requirements, etc. shall be provided. Spread sheet calculations alone are not acceptable.

Forty-five days prior to beginning construction of the wall, four (4) sets of the wall design computations and Shop Drawings shall be submitted to the Resident for review by the

Geotechnical Engineer. Mix design information shall be submitted at the same time, including aggregate source, current gradation, aggregate quality information and concrete unit weight.

The contractor shall also submit backfill material test results as part of the wall submittal package. Backfill material test results shall include grain size distribution curve, moisture-density relationship curve, and pH test results required for reinforced backfill only.

If geotechnical design is required, the fully detailed plans shall be prepared in conformance with Section 105 and shall include, but not be limited to the following items:

- A. A plan and elevation sheet or sheets for each wall, containing the following: elevations at the top of leveling pads, the distance along the face of the wall to all steps in the leveling pads, the location of the original and final ground line.
- B. All details for foundations and leveling pads, including details for steps in the leveling pads, as well as allowable and actual maximum bearing pressures shall be provided.
- C. Details for the barriers, posts, curbs and facing as required by the project conditions.
- D. Design computations prepared and sealed by a licensed Professional Engineer.
- E. Prior to the beginning of construction, the contractor shall supply the Resident with two copies of the design-supplier's Installation Manual. In addition, the Contractor shall have two copies of the Installation Manual on the project site.

635.06 Construction Requirements The Precast Concrete Block Gravity Wall shall have the following construction requirements:

- A. Excavation. The excavation and use as fill disposal of all excavated material shall meet the requirements of Section 203 - Excavation and Embankment, except as modified herein.
- B. Foundation. The area upon which the prefabricated block gravity wall structure is to rest, and within the limits shown on the submitted plans, shall be graded for a width equal to, or exceeding, the length of the blocks. Prior to wall and leveling pad construction, this foundation material shall be compacted to at least 95 percent of maximum laboratory dry density (AASHTO T-180 Method C or D). Frozen and unsuitable soil shall be removed and replaced with gravel borrow compacted to 95 percent of AASHTO T-180.

A concrete leveling pad shall be constructed as indicated on the plans. Dimensions may be modified per the wall supplier's recommendations, with written approval of the Geotechnical Engineer. The leveling pad shall be cast to the design elevations as shown on the plans, or as required by the wall supplier upon written approval of the Geotechnical Engineer. The allowable elevation tolerances from the design elevations are +0.01 feet and -0.02 feet. Leveling pads which do not meet this requirement shall be

repaired or replaced as directed by the Resident at no additional cost to the Department. Placement of wall units may begin after the strength of the concrete leveling pad reaches 1000 psi or is adequate to support the proposed loads. Contractor may begin placement of concrete block units after 12 hours at his own risk.

- C. Method and Equipment. Prior to erection of the prefabricated concrete block wall, the Contractor shall furnish the Resident with detailed information concerning the proposed construction method and equipment to be used. The erection procedure shall be in accordance with the manufacturer's instructions. Any units that are damaged due to handling will be replaced at the Contractor's expense.
- D. Installation of Wall Units. A field representative from the wall system being used shall be available, as needed, during the erection of the wall. The services of the representative shall be at no additional cost to the project. Horizontal joint fillers shall be installed as needed.

The maximum offset in any unit horizontal joint shall be 1/4 inch. The prefabricated wall blocks shall be installed to a tolerance of plus or minus 3/4 inch in 10 feet in vertical alignment and horizontal alignment.

- E. Backfill Placement. Backfill placement shall closely follow the erection of each row of prefabricated wall units. The Contractor shall decrease the lift thickness if necessary to obtain the specified density. The maximum lift thickness shall be 8 inches loose. Gravel borrow backfill shall be compacted in accordance with Section 203.12 except that the minimum required compaction shall be at least 92 percent of maximum density as determined by AASHTO T-180 Method C or D. Backfill compaction shall be accomplished without disturbance or displacement of the wall blocks. Sheepsfoot rollers will not be allowed. Whenever a compaction test fails, no additional backfill shall be placed over the area until the lift is recompacted and a passing test achieved.

The moisture content of the backfill material prior to and during compaction shall be uniform throughout each layer. Backfill material shall have a placement moisture content less than or equal to the optimum moisture content. Backfill material with a placement moisture content in excess of the optimum moisture content shall be removed and reworked until the moisture content is uniform and acceptable throughout the entire lift. The optimum moisture content shall be determined in accordance with AASHTO T-180, Method C or D. At the end of the day's operations, the Contractor shall shape the last level of backfill so as to direct runoff of rain water away from the wall face.

Material between blocks must be Gravel Borrow or Underdrain Backfill Material meeting the requirements of Section 703.22, Type C. If Gravel Borrow is used between blocks, 722.02 drainage geotextile shall be placed behind vertical joints to prevent loss of granular material between blocks. Compliance with the gradation requirements shall be the responsibility of the Contractor, who shall furnish a copy of the backfill test results prior to construction. If Underdrain Backfill Material is used between blocks, no geotextile is required behind vertical joints.

635.07 Method of Measurement Precast Concrete Block Gravity Wall will be measured by the square foot of front surface not to exceed the dimensions shown on the Contract Plans unless authorized by the Resident. Vertical and horizontal dimensions will be from the edges of the blocks. No field measurements for computations will be made unless the Resident specifies, in writing, a change in the limits indicated on the Plans.

635.08 Basis of Payment The accepted quantity of Precast Concrete Block Gravity Wall will be paid for at the contract unit price per square foot complete in place. Payment shall be full compensation for furnishing geotechnical design as required, all labor, equipment and materials including all precast concrete units, hardware, joint fillers, geosynthetics, reinforcing steel, drainage pipe, backfill materials and technical field representative.

Cost of cast-in-place concrete for leveling pad will not be paid for separately, but will be considered incidental to the Precast Concrete Block Gravity Wall. Excavation, foundation material and backfill material will all be incidental to the Precast Concrete Block Gravity Wall.

There will be no allowance for excavating and backfilling for the Precast Concrete Block Gravity Wall beyond the limits shown on the approved submitted plans, except for excavation required to remove unsuitable subsoil in preparation for the foundation. Payment for excavating unsuitable subsoil shall be full compensation for all costs of pumping, drainage, sheeting, bracing and incidentals for proper execution of the work, and will be paid as Common Excavation in accordance with Section 203.

Payment will be made under:

Pay Item

Pay Unit

635.31 Precast Concrete Block Gravity Wall

square foot

SPECIAL PROVISION
SECTION 635
PRECAST AGGREGATE-FILLED, CONCRETE BLOCK GRAVITY WALL

The following replaces Section 635 in the Standard Specifications in its entirety:

635.01 Description The work under this item shall consist of the design, fabrication, furnishing and construction of a Precast Aggregate-filled Concrete Block Gravity Wall in accordance with these specifications and in conformance with the lines and grades shown on the Plans, or established by the Resident. The Precast Aggregate-filled Concrete Block Gravity Wall shall consist of blocks made of Structural Precast concrete made from Portland cement, water, chemical admixtures, and aggregates, supported on concrete leveling pads, and if required, geosynthetic reinforced backfill.

Included in the scope of the precast gravity wall construction are: geotechnical design of any wall with an exposed height greater than 4.5 ft or as specified on the Plans, all grading necessary for wall construction, compaction of the wall foundation soil, backfill, piped drainage, construction of leveling pads, and concrete wall unit installation. The top of the upper row of concrete wall units shall be at or above the top of the face elevation shown on the Plans.

635.02 Quality Assurance The wall system shall be one of the approved combinations of facing block and soil reinforcement systems noted in the Plans or on the Department's Qualified Products List (QPL). Alternate wall systems will not be considered for this Item.

All design calculations and Shop Drawings shall be signed and sealed by a Professional Engineer licensed in the State of Maine.

The Contractor shall require the wall design-supplier to provide an on-site, qualified experienced technical representative to advise the Contractor concerning proper installation procedures. The technical representative shall be on-site during initial stages of installation and thereafter shall remain available for consultation as necessary for the Contractor or as required by the Resident.

635.03 Materials Materials for walls shall meet the requirements of the following sections of Division 700:

Gravel Borrow	703.20
Underdrain Backfill Type C	703.22
Underdrain Pipe	706.06 or 706.09
Reinforcing Steel	709.01
Structural Precast Concrete Units	712.061
Reinforcement Geotextile	722.01
Drainage Geosynthetic	722.02

The Contractor is cautioned that all of the materials listed are not required for every Precast Aggregate-filled Concrete Block Gravity Wall. The Contractor shall furnish the Resident a Materials Certification Letter certifying that the applicable materials comply with this section of the specifications. Materials shall meet the following additional requirements:

635.031 Concrete Units The Materials Certification Letter described above shall contain the date of concrete casting, a lot identification number, compressive strength results, and entrained air results. All prefabricated concrete units shall conform to the requirements of 712.061 with the following exceptions:

A. Materials. Materials are modified as follows: the maximum water cement ratio shall be 0.42, use of calcium nitrite is not required, and the minimum 28 day compressive strength shall be 4600 psi.

B. Quality Control and Quality Assurance. Quality Control and Quality Assurance is modified as follows: delete the second and third paragraphs.

C. Construction. Construction requirements are modified as follows:

Delete the second paragraph and replace it with the following:

All units for a designated wall system, including end blocks, steps, caps and other wall units shall be manufactured from the same material sources of aggregates, brand and type of cement and color pigment.

Replace the first sentence in the paragraph which begins "The forms shall remain ..." with the following:

The forms shall remain in place until the concrete has gained sufficient strength such that removal of the forms and subsequent handling will not damage the units.

Replace the paragraph which begins "A minimum of 8" With the following:

The Contractor shall make and test at least one set of cylinders for every 50 yd³ of production concrete used to cast the concrete units.

Replace the paragraph which begins "At least once ..." with the following:

The Contractor shall make four cylinders for use by the Department for every 200 yd³.

Add the following paragraph at the end of the Construction section:

Face texture of the units shall be a formed finish on all exposed surfaces. Pigment shall be added during the casting process of the concrete unit to achieve a consistent shade of gray or other color as determined by the Resident.

D. Tolerances. Maximum dimensional deviation of formed unit dimensions shall not vary more than 1/2-inch or 2 percent of the unit dimension or the manufacturer's published tolerances, whichever is less. All units not meeting the specified tolerances will be rejected.

635.032 Geosynthetic Reinforcement Geosynthetic Reinforcement shall be as required by the proprietary wall system manufacturer or wall designer. Geosynthetic reinforcement shall consist of a geotextile or geogrid approved by the Geotechnical Engineer. Substitution of a geosynthetic other than that required by the proprietary wall system manufacturer shall not be allowed unless approved by the Geotechnical Engineer after submittal of shop drawings and pullout and interface friction test data.

A. Geotextiles and Thread for Sewing. Woven or nonwoven geotextiles shall consist of long chain polymeric filaments or yarns formed into a stable network such that the filaments or yarns retain their position relative to each other during handling, placement, and design

life. At least 95 percent by weight of the long chain polymer shall be polyolefin or polyester. The material shall be free of defects and tears. Geotextiles used for reinforcement shall conform as a minimum to the properties indicated for 722.01, Stabilization/Reinforcement Geotextile and shall meet the requirements of part D and E below. Geotextiles shall have a minimum permeability greater or equal to that shown on the Shop Drawings and the reinforced soil permeability.

B. Geogrids. The geogrid shall be a regular network of integrally connected polymer tensile elements with aperture geometry sufficient to permit significant mechanical interlock with the surrounding soil or rock. The geogrid structure shall be dimensionally stable and able to retain its geometry under manufacture, transport and installation. Geogrids shall conform as a minimum to the criteria specified in part D and E below.

C. Required Properties. The specific geosynthetic materials shall be preapproved and shall have the ultimate tensile strength (T_{ult}) shown on the approved Shop Drawings for the geosynthetic specified and for the fill type shown. T_{ult} shall be determined from wide width tests specified in ASTM D 4595 for geotextiles and ASTM D 6637 or GRI:GG1 for geogrids. The ultimate tensile strength value is based on the minimum average roll values (MARV) for the product.

D. The geosynthetic shall conform to the following criteria:

1. PP and HDPE: Min. retained strength of 70 percent after 150 hours, per ASTM D-4355.
2. HDPE: Grade = E-4, E-5, E-8, E-9, E-10, E-11, J-3, J-4, or J-5, per ASTM D-1248.
3. PET: Molecular weight (M_n) > 25,000, per GRI:GG8 and ASTM D-4603.
4. PET: Carboxyl end group (CEG) ≥ 15 mmol/kg, GRI:GG7.
5. All polymers: Minimum Weight per Unit Area of 8 oz/yd², per ASTM D-5261.
6. All Polymers: Maximum 0 percent post consumer recycled material by weight.
7. A default total reduction factor for creep, durability, and installation damage of RF = 7 may be used in design, provided the criteria of 2 through 6 are satisfied and 1 is adjusted to 70 percent after 500 hours is satisfied.

E. Manufacturer Quality Control. The geosynthetic reinforcements shall be manufactured with a high degree of quality control. The Manufacturer is responsible for establishing and maintaining a quality control program to ensure compliance with the requirements of the specification. The purpose of the QC testing program is to verify that the reinforcement geosynthetic being supplied to the project is representative of the material used for performance testing and approval. Conformance testing shall be performed as part of the manufacturing process and may vary for each type of product. As a minimum the following index tests shall be considered as applicable for an acceptable QA/QC program:

<u>Property</u>	<u>Test Procedure</u>
1. Specific Gravity (HDPE only)	ASTM D-1505
2. Ultimate Tensile Strength	ASTM D-4595 GRI:GG1
3. Melt Flow (HDPE and PP only)	ASTM D-1238
4. Intrinsic Viscosity (PET only)	ASTM D-4603
5. Carboxyl End Group (PET only)	ASTM D-2455

F. Sampling Testing and Acceptance. Sampling and conformance testing shall be in accordance with ASTM D-4354. Conformance testing procedures are established above.

Geosynthetic product acceptance shall be based on ASTM D-4759. The quality control certificate shall include:

1. Roll numbers and identification
2. Sampling procedures
3. Results of quality control tests, including a description of test methods used.

G. Certification. The Contractor shall submit a manufacturer's certification that the geosynthetics supplied meet the respective index criteria set when the geosynthetic was approved, measured in full accordance with all test methods and standards specified, or referenced, in this specification.

The manufacturer's certificate shall state that the furnished geosynthetic meets the requirements of these specifications as evaluated by the manufacturer's quality control program. The values submitted shall be certified by a person having legal authority to bond the manufacturer. In case of dispute over validity of values, the Resident can require the Contractor to supply test data from an agency approved laboratory to support the values submitted, at the Contractor's cost.

635.033 Concrete Leveling Pad Concrete for leveling pads shall be Fill Concrete conforming to the requirements of Section 502 Structural Concrete. Unless otherwise specified, concrete for leveling pads shall be accepted under Method "C" requirements.

635.034 Drainage Stone Fill Concrete wall unit voids shall be filled with drainage stone material that conforms to the requirements of 703.22, Underdrain Backfill Material, Type C.

635.035 Backfill Material Backfill material placed behind the concrete wall units shall meet the requirements of Section 703.20 Gravel Borrow, except that the backfill material shall only contain particles that will pass the 3-inch square mesh sieve. The contractor is required to submit a grain size distribution curve (ASTM D 422) and a moisture-density relationship curve (AASHTO T-180) for acceptance of the proposed backfill material and determination of the appropriate installation damage reduction factor (RF_D).

Walls with reinforced backfill also require that the backfill material be subjected to pH testing to determine the appropriate durability reduction factor (RF_D).

635.036 Materials Certificate Letter The Contractor, or the supplier as their agent, shall furnish the Resident a Materials Certificate Letter for the above materials, including the backfill material, in accordance with Section 700 of the Standard Specifications. A copy of all test results performed by the Contractor or their supplier necessary to assure contract compliance shall also be furnished to the Resident. The Resident will base acceptance upon the materials Certificate Letter, accompanying test reports, and visual inspection.

635.04 Design Requirements The wall shall be designed with a service life of not less than 75 years. The Precast Aggregate-filled Concrete Block Gravity Wall shall be designed and sealed by a Professional Engineer licensed in the State of Maine. The wall shall be designed in accordance with the following:

1. AASHTO LRFD Bridge Design Specifications, current edition, herein referred to as LRFD
2. FHWA-NHI-00-043 Mechanically Stabilized Earth Walls and Reinforced Soil Slopes Design and Construction Guidelines, 2001

3. FHWA-NHI-00-044 Corrosion/Degradation of Soil Reinforcements for Mechanically Stabilized Earth Walls and Reinforced Soil Slopes, 2000
4. The Contract Plans
5. The requirements specified herein
6. The manufacturer's requirements

Where conflicting requirements occur, the more stringent requirements shall govern.

Forty-five days prior to beginning construction of the wall, the design computations shall be submitted to the Resident for review by the Geotechnical Engineer. Any additional design or costs arising as a result of rejection of a wall design by the Geotechnical Engineer shall be borne by the Contractor.

Design calculations that consist of computer program generated output shall be supplemented with at least one hand calculation and graphic demonstrating the design methodology used. Design calculations shall provide thorough documentation of the sources of equations used and material properties. The design by the wall system supplier shall consider the stability of the wall as outlined below and in the Contract Documents:

- A. Failure Plane The theoretical failure plane within the reinforced soil mass shall be determined in accordance with LRFD Article 11 and be analyzed so that the soil stabilizing components extend sufficiently beyond the failure plane within the reinforced soil mass to stabilize the material.
- B. External Loads External loads which affect the internal and external stability such as those applied through traffic loadings, impact on traffic barrier posts, slope surcharge, hydrostatic, and seismic loads shall be accounted for in the design. Traffic surcharge and traffic impact loads shall be calculated and applied in compliance with LRFD Section 11.
- C. External Stability Loads and load combinations selected for design shall be consistent with LRFD. Application of load factors shall be taken as specified in LRFD Section 11. Sliding resistance factors and bearing resistance factors shall be consistent with LRFD. Overturning and sliding provisions of LRFD shall apply.
- D. Internal Stability Evaluation of reinforcement pullout, reinforcement rupture and reinforcement/block connection pullout or rupture shall be consistent with LRFD Section 11, and checked at each level. Loads, load combinations and load factors shall be as specified in LRFD Section 11. Resistance factors for internal design are specified in LRFD Section 11. Maximum reinforcement loads shall be calculated using the Simplified Method approach. Calculations for factored stresses and resistances shall be based upon assumed conditions at the end of the design life.
 - a. Geosynthetic Reinforcement Design Tensile Resistance The nominal long term reinforcement design strength (T_{ai}) shall be determined by reducing T_{ult} by reduction factors (RF) in accordance with the documents referenced above. The designer shall procure and use the manufacturers tested and certified geosynthetic reinforcement reduction factors for creep (RF_{CR}), durability (RF_D), and installation damage (RF_{ID}) to determine T_{ai} . In absence of manufacturers tested and certified reduction factors, a combined default reduction factor $RF = 7$ shall be used in accordance with the referenced

documents. For RF_{ID} , the installation damage reduction factor shall be checked in accordance with LRFD and FHWA-NHI-00-044.

b. Reinforcement/Facing Connection Design Strength The nominal long-term connection strength between the geosynthetic reinforcement and the concrete blocks shall be checked in accordance with LRFD and FHWA-NHI-00-043.

c. Reinforcement Pullout The pullout resistance factor, (F^*), and scale effect correction factor (α) used in pullout design, shall be determined from project specific pullout tests using the proposed geosynthetic in the specified project backfill material or equivalent soil. The pullout resistance factors shall be determined in accordance with LRFD and FHWA-NHI-00-043. In the absence of test data, empirical relationships may be used to determine the pullout resistance factors, any empirical relationships used in design shall be referenced in the design calculations.

E. Backfill and Foundation Soils Parameters The friction angle of the backfill used in the reinforced fill zone for internal stability design shall be assumed have a friction angle of 34 degrees unless specific project select backfill is tested for frictional strength. The friction angle of the foundation soils and random backfill shall be assumed to be 30 degrees unless otherwise shown on the plans.

F. Reinforcement Length The soil reinforcement shall be the same length from the bottom to the top of each wall section. The reinforcement length defining the width of the entire reinforced soil mass may vary with wall height. The minimum length of the soil reinforcement shall be 8 ft, but shall not be less than 70 percent of the wall height, H , for walls with level surcharges, or 70 percent of H_1 for walls with a sloped surcharge or walls supporting an abutment. The mechanical wall height, H or H_1 , shall be the vertical difference between the top of the leveling footing and the elevation at which the failure surface, as described above, intercepts the ground surface supported by the wall.

G. Bearing Resistance The factored bearing pressures under the Precast Aggregate-filled Concrete Block Gravity Wall shall be clearly indicated on the Shop Drawings. Walls shall be dimensioned so that the factored bearing resistance of the foundation soils, as noted on the Plans, is not exceeded.

H. Facing Stability Stability calculations for the concrete facing blocks shall be in accordance with LRFD, and shall include an evaluation of the maximum vertical spacing between reinforcement layers.

I. Stability During Construction Walls shall be designed to resist failure by instability of temporary construction slope. Passive pressure in front of the wall mass shall be assumed to be zero for design purposes.

J. Design Life The wall design life shall be a minimum of 75 years.

K. Depth of Embedment The depth of embedment for frost protection and stability shall be at or below the elevation shown on the Plans and the approved Shop Drawings.

- L. Drainage System Piped drainage shall be designed to collect and dispose of water from the base of the reinforced soil zone and backfill soil. This shall outlet into surrounding drainage systems or ditches.

635.05 Submittals. The Contractor shall supply wall design computations, wall details, dimensions, quantities, and cross sections necessary to construct the wall. A sample hand calculation including all equations, parameter values used, units, theory, free-body diagram, comparison to design requirements, etc. shall be provided. Spreadsheet calculations alone are not acceptable.

Forty-five (45) days prior to beginning construction of the wall, four (4) sets of the wall design computations and Shop Drawings shall be submitted to the Resident for review by the Geotechnical Engineer. Mix design information shall be submitted at the same time, including aggregate source, current gradation, aggregate quality information and concrete unit weight.

The contractor shall also submit backfill material test results as part of the wall submittal package. Backfill material test results shall include grain size distribution curve, moisture-density relationship curve, and pH test results required for reinforced backfill only.

If geotechnical design is required, the fully detailed plans shall be prepared in conformance with Section 105 and shall include, but not be limited to the following items:

- A. A plan and elevation sheet or sheets for each wall, containing the following: elevations at the top of leveling pads, the distance along the face of the wall to all steps in the leveling pads, the location of the original and final ground line.
- B. All details for foundations and leveling pads, including details for steps in the leveling pads, as well as allowable and actual maximum bearing pressures shall be provided.
- C. Details for the barriers, posts, curbs and facing as required by the project conditions.
- D. Design computations prepared and sealed by a licensed Professional Engineer.
- E. Prior to the beginning of construction, the contractor shall supply the Resident with two copies of the design-supplier's Installation Manual. In addition, the Contractor shall have two copies of the Installation Manual on the project site.

635.06 Construction Requirements The Precast Aggregate-Filled Concrete Block Gravity Wall shall have the following construction requirements:

- A. Excavation. The excavation and use as fill disposal of all excavated material shall meet the requirements of Section 203 -- Excavation and Embankment, except as modified herein.
- B. Foundation. The area upon which the prefabricated, aggregate-filled concrete block gravity wall structure is to rest, and within the limits shown on the submitted plans, shall be graded for a width equal to, or exceeding, the length of the blocks. Prior to wall and leveling pad construction, this foundation material shall be compacted to at least 95 percent of maximum laboratory dry density (AASHTO T-180 Method C or D). Frozen

and unsuitable soil shall be removed and replaced with gravel borrow compacted to 95 percent of AASHTO T-180, or as shown on the plans.

A concrete leveling pad shall be constructed a minimum of 6 inches beyond the front and back of the concrete wall units, or as indicated on the plans. Dimensions may be modified per the wall supplier's recommendations, with written approval of the Geotechnical Engineer. The leveling pad shall be cast to the design elevations as shown on the plans, or as required by the wall supplier upon written approval of the Geotechnical Engineer.

The allowable elevation tolerances from the design elevations are +0.01 ft and -0.02 ft. Leveling pads which do not meet this requirement shall be repaired or replaced as directed by the Resident at no additional cost to the Department. Placement of wall units may begin after the strength of the concrete leveling pad reaches 1000 psi or is adequate to support the proposed loads. Contractor may begin placement of concrete block units after 12 hours at their own risk.

- C. Method and Equipment. Prior to erection of the wall, the Contractor shall furnish the Resident with detailed information concerning the proposed construction method and equipment to be used. The erection procedure shall be in accordance with the manufacturer's instructions. Any units that are damaged due to handling will be replaced at the Contractor's expense.

- D. Installation of Concrete Wall Units. A field representative from the wall system being used shall be available, as needed, during the erection of the wall. The services of the representative shall be at no additional cost to the project.

The contractor shall place the first course of wall units directly on the leveling pad and check for level and alignment. Adjacent units should be in contact. The prefabricated concrete wall units shall be installed to a tolerance of plus or minus 3/4 inch in 10 ft in vertical and horizontal alignment.

Fill all voids between and within the wall units with drainage stone as described in this specification. The drainage stone fill shall extend a minimum of 6 in behind the tails of the wall units unless a geotextile filter is placed over the inside joint at the back of adjacent wall units. If used, the drainage geotextile shall conform to the requirements of Section 722.02.

- E. Backfill Placement. Backfill placement shall closely follow the erection of each row of prefabricated wall units. The maximum lift thickness shall be 8 inches loose. The Contractor shall decrease the lift thickness if necessary to obtain the specified density. The backfill shall be compacted in accordance with Section 203.12 except that the minimum required compaction shall be at least 92 percent of maximum density as determined by AASHTO T-180 Method C or D. Backfill compaction shall be accomplished without disturbance or displacement of the concrete wall units. Sheepfoot rollers will not be allowed. Whenever a compaction test fails, no additional backfill shall be placed over the area until the lift is recompacted and a passing test achieved.

The moisture content of the backfill material prior to and during compaction shall be uniform throughout each layer. Backfill material shall have a placement moisture content less than or equal to the optimum moisture content. Backfill material with placement

moisture content in excess of the optimum moisture content shall be removed and reworked until the moisture content is uniform and acceptable throughout the entire lift. The optimum moisture content shall be determined in accordance with AASHTO T-180, Method C or D. At the end of the day's operations, the Contractor shall shape the last level of backfill so as to direct runoff of rainwater away from the wall face.

635.07 Method of Measurement Precast Aggregate-filled Concrete Block Gravity Wall will be measured by the square foot of front surface not to exceed the dimensions shown on the Contract Plans unless authorized by the Resident. Vertical and horizontal dimensions will be from the edges of the blocks. No field measurements for computations will be made unless the Resident specifies, in writing, a change in the limits indicated on the Plans.

635.08 Basis of Payment The accepted quantity of Precast Aggregate-Filled Concrete Block Gravity Wall will be paid for at the contract unit price per square foot complete in place. Payment shall be full compensation for furnishing geotechnical design as required, all labor, equipment and materials including all precast concrete units, hardware, joint fillers, geosynthetic, drainage pipe, and technical field representative.

Cost of cast-in-place concrete for leveling pad will not be paid for separately, but will be considered incidental to the Precast Aggregate-Filled Concrete Block Gravity Wall. Excavation, foundation material and backfill material will all be incidental to the Precast Aggregate-Filled Concrete Block Gravity Wall.

There will be no allowance for excavating and backfilling for the Precast Aggregate-Filled Concrete Block Gravity Wall beyond the limits shown on the approved submitted plans, except for excavation required to remove unsuitable subsoil in preparation for the foundation. Payment for excavating unsuitable subsoil shall be full compensation for all costs of pumping, drainage, sheeting, bracing and incidentals for proper execution of the work, and will be paid as common excavation in accordance with Section 203.

Payment will be made under:

Pay Item

Pay Unit

635.40 Precast Aggregate-Filled Concrete Block Gravity Wall

Square Foot

SPECIAL PROVISION
SECTION 652
 MAINTENANCE OF TRAFFIC
 (Traffic Control)

Failure by the contractor to follow the Contracts 652 Special Provisions and Standard Specification and/or The Manual on Uniform Traffic Control Devices (MUTCD) and/or The Contractors own Traffic Control Plan will result in a violation letter and result in a reduction in payment as shown in the schedule below. The Departments Resident or any other representative of The Department reserves the right to suspend the work at any time and request a meeting to discuss violations and remedies. The Department shall not be held responsible for any delay in the work due to any suspension under this item. Any reduction in payment under this Special Provision will be in addition to forfeiting payment of maintenance of traffic control devices for that day.

ORIGINAL CONTRACT AMOUNT

from	Up to and	Amount of Penalty
<u>More Than</u>	<u>Including</u>	<u>Damages per Violation</u>
\$0	\$100,000	\$250
\$100,000	\$300,000	\$500
\$300,000	\$500,000	\$750
\$500,000	\$1,000,000	\$1,500
\$1,000,000	\$2,000,000	\$2,500
\$2,000,000	\$4,000,000	\$5,000
\$4,000,000	and more	\$10,000

SPECIAL PROVISION
SECTION 652
MAINTENANCE OF TRAFFIC
Construction Sign Sheeting Material

Super high intensity fluorescent retroreflective sheeting, ASTM D 4956 - Type VII, Type VIII, or Type IX (prismatic), is required for all construction signs.

SPECIAL PROVISION
SECTION 656
Temporary Soil Erosion and Water Pollution Control

The following is added to Section 656 regarding Project Specific Information and Requirements. All references to the Maine Department of Transportation Best Management Practices for Erosion and Sedimentation Control (a.k.a. Best Management Practices manual or BMP Manual) are a reference to the latest revision of said manual. The latest version is dated "February 2008" and is available at;

<http://www.maine.gov/mdot/environmental-office-homepage/surface-water-resources.php>

Procedures specified shall be according to the BMP Manual unless stated otherwise.

Project Specific Information and Requirements

The following information and requirements apply specifically to this Project. The temporary soil erosion and water pollution control measures associated with this work shall be addressed in the Soil Erosion and Water Pollution Control Plan (SEWPCP.)

This project is considered Sensitive; strict adherence to the MaineDOT BMP Manual is required.

1. Newly disturbed earth shall be mulched by the end of each workday. Mulch shall be maintained on a daily basis.
2. The SEWPCP shall describe the location and method of temporary erosion and sediment control for existing and proposed catch basins, outlet areas and culvert inlets and outlets.
3. **If water is flowing within the drainage system, the water shall be diverted to a stable area or conduit and work shall be conducted in the dry.** The Contractor's plan shall address when and where the diversions will be necessary.
4. Dust control items other than those under *Standard Specification, Section 637 – Dust Control*, if applicable, shall be included in the plan.
5. Permanent slope stabilization measures shall be applied within one week of the last soil disturbance. Temporary slope stabilization is required on a daily basis.
6. Permanent seeding shall be done in accordance with *Standard Specification, Section 618 – Seeding* unless the Contract states otherwise.
7. Culvert inlet and outlet protection shall be installed within 48 hours of culvert installation, or prior to a storm event, whichever is sooner.
8. Temporary winter stabilization must be used between November 1 and April 1 or outside of said time period if the ground is frozen or snow covered. Temporary winter stabilization involves, at a minimum, covering all disturbed soils and seeded ground that is not Acceptable Work with an approved method. If temporary winter stabilization

SPECIAL PROVISION
SECTION 656

Temporary Soil Erosion and Water Pollution Control

practices are used, spring procedures for permanent stabilization shall also be described in the SEWPCP. Use of these methods for over-winter temporary erosion control will be incidental to the contract and be paid for as part of Pay Item 656.75.

9. All disturbed ditches/slopes shall be stabilized by the end of each workday. Stabilization shall be maintained on a daily basis.
10. Erosion control blanket shall be installed in the bottoms of all ditches except where a stone lining is planned. Seed shall be applied prior to the placement of the blanket.
11. If check dams are used, they shall be constructed of stone in accordance with BMP Manual, Section III.E.1. *Hay Bale Temporary Check Dams* **are not allowed**. Delete all reference to them.
12. Demolition debris (including debris from wearing surface removal, saw cut slurry, dust, etc.) shall be contained and shall not be allowed to discharge to any resource. All demolition debris shall be disposed of in accordance with *Standard Specifications, Section 202.03 Removing Existing Superstructure, Structural Concrete, Railings, Curbs, Sidewalks and Bridges*. Containment and disposal of demolition debris shall be addressed in the Contractor's SEWPCP.
13. If a cofferdam sedimentation basin is used, it shall be located in an upland area where the water can settle and sink into the ground or be released slowly to the resource in a manner that will not cause erosion. The location of such a cofferdam sedimentation basin shall be addressed in the SEWPCP.
14. Prior to release to a natural resource, any impounded water that has been in contact with concrete placed during construction must have a pH between 6.0 and 8.5, must be within one pH unit of the background pH level of the resource and shall have turbidity no greater than the receiving resource. This requirement is applicable to concrete that is placed or spilled (including leakage from forms) as well as indirect contact via tools or equipment. Water not meeting release criteria shall be addressed in the SEWPCP. Discharging impounded water to the stream must take place in a manner that does not disturb the stream bottom or cause erosion.
15. The Contractor shall be responsible for monitoring pH with a calibrated meter accurate to 0.1 units. A record of pH measurements shall be kept in the Environmental Coordinator's log (*Standard Specification, Section 656.4.4 Inspection and Record Keeping*.)

**SPECIAL PROVISIONS
SECTION 801
SEWER FORCE MAIN - TEMPORARY**

Description.

- A. The Contractor shall temporarily bypass flows during the period of time when the portion of existing force main must be shut down for the reconstruction of the Webb River Bridge.
- B. The Contractor shall furnish, install, operate and maintain the temporary bypass system. The temporary system must be able to reliably handle all incoming wastewater flows.
- C. Contractor is responsible to completely clean any impacted area if an overflow occurs as a result of any work done by the Contractor. The Contractor is responsible to notify the Maine DEP for any overflow or release of sewage to the environment, and complete any paper work required by the Town and DEP.

MATERIALS.

General

- A. The Contractor shall furnish, install, test, operate, maintain and remove a wastewater bypass pumping system that will be capable of handling the following estimated range of flows:

	FLOW	
CONDITION	MGD	GPM
Average	0.15	105
Peak	1.32	915

- B. The temporary bypass system shall be capable of continuous operation, as long as necessary, including over the winter. The schedule for the temporary bypass system is tied to the Webb River Bridge construction timetable.
- C. Temporary force main shall be rigidly supported to prevent movement and vibration.
- D. Exposed temporary force main to be left in service through the winter shall be designed in a manner which prevents freezing, damage from snow and ice, and damage from plowing operations.

Submittals.

- A. Submit the following as specified herein.
 - 1. Proposed sequence of construction.
 - 2. Coordination Drawings showing detailed layout of piping, piping fittings, valves, supports and materials provided under this section.
 - 3. List of equipment, piping, fittings, valves, and materials to be utilized by the Contactor for the temporary bypass system.

- a. If equipment is furnished under another section, the list shall identify the equipment and section reference. Work shall not proceed until shop drawings submitted under this section and related sections have been returned with no exceptions taken.
 - b. Provide a list of standby equipment and spare parts, available on-site.
4. Submit brochures and technical data on proposed materials.

Construction Requirements.

- A. The Contractor shall install, test and debug all systems and verify that all necessary equipment, materials, spare parts, and labor are available on-site prior to operation of the system.
- B. Provide all labor and equipment necessary to coordinate work of this section and maintain communications.
- C. Notify all personnel seven days in advance of any temporary bypass work. The Owner will identify personnel to be notified in addition to those identified by the Contractor.

Method of Measurement. Temporary Force Main will be measured for payment by the lump sum, consisting of all work and materials required to maintain sewer flows during all phases of construction of the new Webb River Bridge and force main over the bridge.

Basis of Payment. Temporary Force Main will be paid for at the contract lump sum price, which price shall be full compensation for furnishing, installing, and removing, all temporary force main, fittings, valves, couplings, and all labor, materials, equipment, and incidentals required to complete the work.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
801.13	Sewer Force Main - Temporary	Lump Sum

SPECIAL PROVISIONS
SECTION 801
DEMOLISH EXISTING FORCE MAIN - WITH AIR RELEASE

Description.

- A. The Contractor shall furnish all labor, materials, tools, equipment and apparatus necessary and shall do all work required to complete the demolition, removal, and alterations of existing facilities as indicated on the Drawings, as herein specified, and/or as directed by the Engineer.
- B. Demolition and alteration work within occupied areas shall be accomplished with minimum interference to the pump station which shall be in continuous operation during construction.
- C. All equipment, piping, and other materials that are not to be relocated or to be returned to the Owner shall become the property of the Contractor and shall be disposed of by him, away from the site of the work and at his own expense.
- D. All demolition or removal of existing structures, utilities, equipment, and appurtenances shall be accomplished without damaging the integrity of existing structures, equipment, and appurtenances to remain, to be salvaged for relocation or stored for future use.
- E. Such items that are damaged shall be either repaired or replaced at the Contractor's expense to a condition at least equal to that which existed prior to the start of his work.

MATERIALS

Not Applicable.

CONSTRUCTION REQUIREMENTS

Job Conditions.

- A. Condition of Structures:
 - 1. The Owner assumes no responsibility for the actual condition of structures to be demolished.
 - 2. Conditions existing at the time of inspection for bidding purposes will be maintained by the Owner as far as practicable. However, variations within the structures may occur due to Owner's removal and salvage operations prior to the start of demolition work (where applicable).

Utilities.

- A. Utility Location
 - 1. Utility locations shown on the plans are approximate only, based on information supplied by the utility companies.
- B. Coordination with Utilities:
 - 1. The Contractor shall make all necessary arrangements and perform any necessary work to the satisfaction of affected utility companies and

governmental divisions involved with the discontinuance or interruption of affected public utilities and services.

Submittals.

- A. Schedule - Demolition:
 - 1. Submit two (2) copies of proposed methods and operations of demolition to the Engineer for review prior to the start of work. Include in the schedule the coordination for shut-off, capping and continuation of utility services as required.
 - 2. Provide a detailed sequence of demolition and removal work to ensure the uninterrupted progress of the Owner's operations.

Protections.

- A. Ensure the safe passage of persons around the area of demolition. Conduct operations to prevent injury to adjacent buildings, structures, other facilities and persons. Erect temporary, covered passageways as required by authorities having jurisdiction.
- B. Provide interior and exterior shoring, bracing, or support to prevent movement, settlement or collapse of structures to be demolished and adjacent facilities to remain.

Damages.

- A. The Contractor shall promptly repair damages caused by demolition operations to adjacent facilities at no cost to the Owner.

Performance.

- A. Remove and dispose of non-salvageable material in accordance with all applicable local and state laws, ordinances and code requirements.
- B. Dispose of material daily as it accumulates.
- C. Carefully remove, store and protect from damage all materials to be salvaged.
- D. Buildings and Adjacent Property:
 - 1. Protect all buildings and property adjacent to equipment to be removed from damage by erecting suitable barriers or by other suitable means.
 - 2. Leave such buildings in a permanently safe and satisfactory condition.
- E. Salvage:
 - 1. Salvaged items shall be stored on site for the Owner in an acceptable location and manner.
- F. Demolition Sequence:
 - 1. The demolition sequence is to conform to the reviewed and approved project schedule.

Method of Measurement. Demolish Existing Force Main - With Air Release will be measured for payment by the lump sum, consisting of all labor, materials, tools, equipment and apparatus necessary to complete the demolition, removal, and alterations of existing facilities.

Basis of Payment. Demolish Existing Force Main - With Air Release will be paid for at the contract lump sum price, which price shall be full compensation for all labor, materials, tools, equipment, apparatus, and incidentals required to complete the work.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
801.51	Demolish Existing Force Main - With Air Release	Lump Sum

SPECIAL PROVISIONS
SECTION 822
PRE-INSULATED DUCTILE IRON PIPE

Description. This work shall consist of furnishing and installing pre-insulated pipe system and accessories where shown on the Drawings.

MATERIALS

Core Pipe.

- A. Class 52 Ductile Iron Mech-Lok Mechanical and Flanged Joint Pipe as detailed in Specification Section 822.35

Insulation.

- A. Material: rigid polyurethane foam, factory applied.
- B. Thickness: 80 mm (*3.16 in.*) or as required.
- C. Density: (ASTM D 1622) 35 to 46 kg/m³ (*2.1 to 3.0 lbs/ft³*).
- D. Closed cell content: (ASTM D 2856) 90%, minimum.
- E. Water absorption: (ASTM D 2842) 4.0% by volume.
- F. Thermal conductivity: (ASTM C518) 0.020 to 0.026 W/m °C (*0.14 to 0.17 Btu • in/ft² • hr • °F*).

Outer Jacket.

- A. HDPE with 0.200" thick wall.
- B. Jacket outer diameter shall be 17.83"

Insulation Kits for Fittings.

- A. Insulation kits for fittings shall consist of rigid polyisocyanurate or urethane foam insulation complete with a thin elastomeric coating on the outside surfaces for strength during transit and installation, and fabricated HDPE outer protective jacket consistent with that on the factory insulated pipe. All kits to be supplied complete with stainless steel bands, band-it clips, and screws to suit.

Quality Assurance.

- A. Acceptable Manufacturers:
 - 1. Tricon Piping Systems, Inc.,
 - 2. Urecon, Ltd.
 - 3. Or approved equal meeting all requirements of this Section.
- B. Manufacturer shall submit shop drawings for approval.
 - 1. Shop drawings shall show jacket system, insulation, end seals, joint kits, heat trace cable and controls, etc.
 - 2. The entire system shall be factory engineered.
 - 3. The product shall be manufactured in accordance with ISO 9001-2000 Standards or approved equal.
- C. A representative of the manufacturer shall be present for all critical periods.
 - 1. Critical periods shall include but not be limited to:
 - a. Inspection of materials for damages after receipt at jobsite.

- b. Supervision of joint assembly.
- c. Supervision of hydrostatic testing.
- d. Other supervision as required to provide a complete integral system.

CONSTRUCTION REQUIREMENTS

Installation

- A. All pre-insulated piping shall be installed per the manufacturer's recommendations.
- B. Bridge crossing pipe section shall be pressure tested and cleaned in accordance with Specification Section - Final Sewer Testing

Method of Measurement. The quantity of Pre-Insulated pipe to be paid for under this Item shall be the actual length in linear feet as measured along the center line of the pipe as laid including all fittings and valves. The limit of Pre-Insulated pipe shall be to a point either side of the bridge where pipe insulation is no longer necessary or where rigid pipe trench insulation can be substituted.

Basis of Payment. Pre-Insulated pipe shall be paid for at the unit price per linear foot as stated in the Bid Schedule. Said unit price shall be full compensation for furnishing all Pre-Insulated pipes, pipe fittings, expansion/contraction joints, and other materials required for the installation of the pipeline (other than pipe supports); for dewatering, for installing the pipeline; for excavating, laying, setting, and jointing all pipes and fittings; for compaction; for thrust blocks; for restraining joints; for furnishing and placing all temporary and/or permanent sheeting and bracing; for all labor, tools and construction equipment; for all connections to existing force main, unless otherwise paid for; and for all other work and expenses incidental thereto.

Payment will be made under:

Pay Item
822.301 Pre-insulated Ductile Iron Pipe

Pay Unit
Linear Foot

SPECIAL PROVISIONS
SECTION 822
10" CLASS 52 DUCTILE IRON PIPE

Description. This work shall include; furnish, install, support, and test ductile iron pipe, pipe fittings, valves, couplings, and connectors of the type(s) and size(s) in the location(s) shown on the Drawings and as specified herein.

MATERIALS

Materials:

- A. Standards (As Applicable):
 - 1. Cement-mortar lining for water: ANSI A21.4 (AWWA C104).
 - 2. Rubber gasket joints: ANSI A21.11 (AWWA C111).
 - 3. Ductile iron pipe thickness: ANSI A21.50 (AWWA C150).
 - 4. Ductile iron pipe centrifugally cast in metal or sand lined molds: ANSI A21.51 (AWWA C151).
 - 5. Pipe flanges and fittings: ANSI B16.1 and ANSI A21.10 (AWWA C110).
 - 6. Threaded, flanged pipe: ANSI A21.15 (AWWA C115).
 - 7. Cast and ductile iron fittings: ANSI A21.10 (AWWA C110).
 - 8. Ductile Iron Compact Fittings: ANSI 21.53 (AWWA C153).
- B. Delivery, Storage & Handling
 - 1. Exercise extra care when handling ductile iron pipe because it is comparatively brittle.
 - 2. Exercise extra care when handling cement lined pipe because damage to the lining will render it unfit for use.
 - 3. Protect the spherical spigot ends and the plain ends of all pipe during shipment by wood lagging securely fastened in place.

Pipe

- A. All exterior (buried) ductile iron pipe shall have push-on or mechanical joints unless otherwise specified or shown on the Drawings.
- B. Unless otherwise shown on the Drawings, the minimum thickness of ductile iron pipe shall be:
 - 1. For pipe 6 inches in diameter and larger: Class 52.
- C. Pipe for use with sleeve type couplings shall have plain ends (without bells or beads) cast or machined at right angles to the axis.
- D. Pipe shall be double thickness cement lined and seal coated unless noted otherwise on the Drawings.
- E. Pipe for use with split type couplings shall have ends with cast or machined shoulders or grooves that meet the requirements of the manufacturer of the couplings.
- F. Factory applied bituminous coatings (in accordance with AWWA C151) shall be furnished on the exterior of all underground piping unless specified otherwise.
- G. The outside of pipe within structures and exposed shall not be coated with bituminous coating, but shall be thoroughly cleaned and given one shop coat of

Intertol Rustinhibitive Primer 621 by Koppers Co.; Multiprime by PPG Industries; Chromox 13R50 Primer made by Mobil Chemical Co.; or equivalent.

H. Acceptable Manufacturers:

1. Tyler
2. Griffin
3. Union
4. US Pipe
5. Or equivalent.

Joints (as shown on Drawings or as specified):

A. Push-on and Mechanical Joint:

1. The plain ends of push-on pipes shall be factory machined to a true circle and chamfered to facilitate fitting the gasket.
2. Provide gaskets manufactured from a composition material suitable for exposure to the fluid to be contained within the pipe. On high temperature applications such as air lines, the gaskets shall be suitable for service from 40° F to 250°F.
3. Bolts and nuts for buried mechanical joints shall meet the AWWA C-111 requirements and be made of A588 steel.

B. Joint Bracing:

1. Provide joint bracing to prevent the piping from pulling apart under pressure as required and as shown on the Drawings.
2. Types of bracing:
 - (1) Pipe and fittings furnished with approved lugs or hooks cast integrally for use with socket pipe clamps, tie rods, or bridles. Bridles and tie rods shall be a minimum of 3/4 inch diameter except where they replace flange bolts of a smaller size, in which case they shall be fitted with a nut on each side of the pair of flanges. The clamps, tie rods, and bridles shall be coated with bituminous paint in buried installations and shall be coated with the same coatings as the piping system in interior installations after assembly or, if necessary, prior to assembly.
 - (2) Mechanical joint follower gland pipe restrainers.
 - (a) Ductile iron gland and restraining ring.
 - (b) Gasket shall be standard MJ gasket -ANSI/AWWA-C111/A21.11.
 - (c) Working pressure 350 psi, up to 8 inches; 250 psi, 10 inches to 16 inches.
 - (d) Test pressure two times working pressure.
 - (e) Grip Rings™, Romac Industries, or other equivalent as approved by Engineer.
 - (3) Other types of bracing as shown on the Drawings.

Couplings and Connectors.

A. All Couplings and Connectors:

1. Gasket Materials: Composition suitable for exposure to the liquids to be contained within the pipes.

2. Diameters to properly fit the specific types of pipes on which couplings and connectors are to be installed.
- B. Sleeve Type Couplings (When Applicable):
 1. Buried Couplings (When Applicable):
 - a. Cast iron or epoxy coated steel middle rings with pipe stops removed,
 - b. Two malleable iron or epoxy coated steel follower rings with ribbed construction,
 - c. Two wedge-section gaskets,
 - d. Sufficient AWWA C-111 or galvanized steel nuts and bolts to properly compress the gaskets,
 - e. Acceptable Manufacturers:
 - (1) Dresser Manufacturing Co. - Style 38 and/or 153,
 - (2) Rockwell - Style 431, and/or 441,
 - (3) Or equivalent.
- E. Flexible Joints:
 1. Expansion Joints:
 - a. Materials shall be capable of withstanding the temperature, pressure and type of material in the pipeline.
 - b. Shall be the filled arch type that will prevent sediment build up for all sludge, sewage, and other lines with similar service.
 - c. Supplied with control rods to restrict elongation and compression.
 - d. Metal retaining rings shall be split and bevelled galvanized steel for placement against the flange of the expansion joint.

Fittings

- A. Standard Fittings:
 1. Pressure rating of 350 psi for D.I. compact fittings and 250 psi for all others unless indicated otherwise on the Drawings or as specified.
 2. Joints the same as the pipe with which they are used or as shown on the Drawings.
 3. Cement lining and seal coat as specified for pipe.
 4. Factory applied bituminous coatings shall be furnished for all underground fittings.

Buried Utility Markings:

- A. Materials and color shall be in accordance with latest AASHTO specifications for pipe and utility marking.
- B. For ferrous pipe material use 0.004" minimum polyethylene film; 6" wide clearly marking type of buried utility
- C. For non-ferrous pipe material (e.g. Concrete, PVC, PE, etc.) use detection tape composite of polyethylene and metallic core 6" wide clearly marking type of buried utility.
- D. Seton Identification Products, New Haven, CT, or equal

CONSTRUCTION REQUIREMENTS

General.

- A. Install in strict accordance with the pipe and fitting manufacturer's instructions and recommendations and as specified or as shown on the Drawings.
- B. Concrete thrust blocks or other acceptable thrust resistant system is required at all fittings on pressure pipe. Where thrust blocks are used, these shall be placed against undisturbed soil or screened gravel compacted to 95 percent and shall be placed so that the joints are accessible for repairs.

Inspection.

- A. Provide all labor necessary to assist the Engineer to inspect pipe, fittings, gaskets, and other materials.
- B. Carefully inspect all materials at the time of delivery and just prior to installation.
- C. Carefully inspect all pipe and fittings for:
 - 1. Defects, such as weak structural components that adversely affect the execution and quality of work.
 - 2. Deviations beyond allowable tolerances for pipe clearances.
- D. Immediately remove all rejected materials from the project site.

Assembling Joints:

- 1. Push-on Joints:
 - a. Insert the gasket into the groove of the bell.
 - b. Uniformly apply a thin film of special lubricant over the inner surface of the gasket that will contact the spigot end of the pipe.
 - c. Insert the chamfered end of the plain pipe into the gasket and push until it seats against the bottom of the socket.
- 2. Bolted Joints:
 - a. Remove rust preventive coatings from machined surfaces prior to assembly.
 - b. Thoroughly clean and carefully smooth all burrs and other defects from pipe ends, sockets, sleeves, housings and gaskets.
 - c. After jointing coat all bolts with bituminous material compatible with the pipe coating required herein.
- 3. Mechanical Joints:
 - a. Thoroughly clean, with a wire brush, surfaces that will be in contact with the gaskets.
 - b. Lubricate the gasket, bell, and spigot by washing with soapy water.
 - c. Slip the gland and gasket, in that order, over the spigot and insert the spigot into the bell until properly seated.
 - d. Evenly seat the gasket in the bell at all points, center the spigot, and firmly press the gland against the gasket.
 - e. Insert the bolts, install the nuts finger tight, and progressively tighten diametrically opposite nuts uniformly around the joint to the proper tension with a torque wrench.

- f. The correct range of torque (as indicated by a torque wrench) and the length of wrench (if not a torque wrench) shall not exceed:
 - (1) Range or Torque: 60-90 ft.-lbs.
 - (2) Length of Wrench: 10 inches.
- g. If effective joint sealing is not attained at the maximum torque specified above, disassemble, thoroughly clean, and reassemble the joint. Do not overstress the bolts to tighten a leaking joint.
- 4. Bell and Spigot Joints:
 - a. Thoroughly clean the bell and spigots and remove excess tar and other obstructions.
 - b. Insert the spigot firmly into place and hold securely until the joint has been properly completed.

Fabrication.

- 1. Tapped Connections:
 - a. Make all tapped connections as shown on the Drawings or as required by the Engineer.
 - b. Make all connections watertight and of adequate strength to prevent pullout.
 - c. Drill and tap normal to the longitudinal axis of the pipe.
 - d. Taps in fittings shall be located where indicated by the manufacturer for that particular type of fitting.
 - e. The maximum sizes of taps in pipes and fittings without busses shall not exceed the sizes listed in the appendix of ANS A21.51 based on 2 full threads for ductile iron and 3 full threads for cast iron.
- 2. Cutting:
 - a. Perform all cutting as set forth in AWWA C600.
 - b. Carefully chamfer all cut ends to be used with push-on joints to prevent damage to gaskets when pipe is installed.

Pipe Deflection.

- 1. Push-on and Mechanical Joints:
 - a. The maximum permissible deflection of alignment at joints shall be limited to that given in AWWA C600.
- 2. Flexible Joints:
 - a. The maximum deflection in any direction shall not exceed the manufacturer's instructions and recommendations.

Couplings and Connectors.

- A. Sleeve Type Couplings (When Applicable):
 - 1. Thoroughly clean pipe ends for a distance of 8 inches from the ends prior to installing couplings, and use soapy water as a gasket lubricant.
 - 2. Slip a follower ring and gasket (in that order) over each pipe and place the middle ring centered over the joint.
 - 3. Insert the other pipe length into the middle ring the proper distance.
 - 4. Press the gaskets and followers evenly and firmly into the middle ring flares.

5. Insert the bolts, finger tighten and progressively tighten diametrically opposite nuts uniformly around the adapter with a torque wrench applying the torque recommended by the manufacturer.
 6. Insert and tighten the tapered threaded lock pins.
 7. Insert the nuts and bolts for the flange, finger tighten and progressively tighten diametrically opposite bolts uniformly around the flange to the torque recommended by the manufacturer.
- B. Split Type Flange Adapters (When Applicable): Install in the same manner as Split Type Couplings.
- C. Buried Cast Iron Couplings, Adapters and Connectors (When Applicable): Thoroughly coat all exterior surfaces, including nuts and bolts, after assembly and inspection by the Engineer with a heavy-bodied bituminous mastic as approved by the Engineer.
- D. Buried Epoxy Coated Steel Couplings: Thoroughly coat all exterior surfaces, including nuts and bolts after assembly and inspection by the Engineer with a coal tar approved by the Engineer. Prior to coating, roughen the epoxy with emory paper and follow with a solvent cleaner (aeromatic similar to xylol). Dry film thickness of the coal tar is to be 12-16 mils.
- E. Install thrust rods, supports, and other provisions to properly support pipe weight and axial equipment loads.

Buried Utility Markings

- A. Marking tape shall be installed over utility lines centerline and buried 24" below grade.
- B. Markings damaged during opening of trench shall be reinstalled with 2' overlap at broken sections

Testing

- A. General:
1. Final sewer testing work includes the performance of testing and inspecting each and every length of sewer pipe, pipe joints and each item of appurtenant construction.
 2. Perform testing at a time acceptable to the Engineer, which may be during the construction operations, after completion of a substantial and convenient section of the work, or after the completion of all pipe laying operations.
 3. Provide all labor, pumps, pipe, connections, gages, measuring devices and all other necessary apparatus to conduct tests.
- B. Performance
1. All sewers, and appurtenant work, in order to be eligible for acceptance by the Engineer, shall be subjected to tests that will determine the degree of watertightness and horizontal and vertical alignment.
 2. Thoroughly clean and/or flush all sewer lines to be tested, in a manner and to the extent acceptable to the Engineer, prior to initiating test procedures.
 3. Perform all tests and inspections in the presence of the Engineer and the plumbing or building inspector in accordance with the requirements of the local and state plumbing codes.

4. Perform testing by test patterns determined by or acceptable to the Engineer.
 5. Remedial Work:
 - a. Perform all work necessary to correct deficiencies discovered as a result of testing and/or inspections.
 - b. Completely retest all portions of the original construction on which remedial work has been performed.
 - c. Perform all remedial work and retesting in a manner and at a time acceptable to by the Engineer at no additional cost to the Owner.
- C. Testing Pressure Sewers
1. The section of pipe to be tested shall be filled with water of approved quality, and all air shall be expelled from the pipe. If blowoffs are not available at high points for releasing air, the Contractor shall make the necessary excavations backfilling and taps at such points and shall plug said holes after completion of the test.
 2. The section under test shall be maintained full of water for a period of 24 hours prior to the combined pressure and leakage test being applied.
 3. Perform pressure and leakage test at 1-½ times the maximum system pressure or 100 psi which ever is greater (based on the elevation of the lowest point of the section under test and corrected to the gage location).
 4. While maintaining this pressure, the Contractor shall make a leakage test by metering the flow of water into the pipe. If the average leakage during a two-hour period exceeds a rate of 10 gallons per inch of diameter per 24 hours per mile of pipeline the section shall be considered as having failed the test. All joints within chambers and all flanged joints shall have no visible leakage.
 5. If the section fails to pass the pressure and leakage test, the Contractor shall do everything necessary to locate, uncover, and repair or replace the defective pipe, fitting, or joint, all at his own expense and without extension of time for completion of the work. Additional tests and repairs shall be made until the section passes the specified test.

Method of Measurement. The quantity of Ductile Iron pipe to be paid for under this Item will be measured by length in linear feet along the center line of the pipe as laid including all fittings and valves, complete in place, and accepted.

Basis of Payment. The accepted quantities of ductile iron pipe for force main will be paid for at the contract unit price per linear foot, for size specified, complete and in place. Said unit price shall be full compensation for furnishing all pipes, pipe fittings, valves, solid sleeves, buried utility markers, labor, equipment, tools, and other materials required for the installation of the pipeline; for dewatering; for excavating, laying, setting, and jointing all pipes and fittings; for furnishing and placing all bedding, haunching and initial backfill; for backfilling; for thrust blocks and cradles; for restraining joints; for furnishing and placing all temporary sheeting and bracing; for compaction of trenches; for cleaning and testing of pipeline; for connections to existing force main , for all labor, tools and construction equipment; and for all other work and expenses incidental thereto.

Payment will be made under:

<u>Pay Item</u>	
822.35	10" Class 52 Ductile Iron Pipe

<u>Pay Unit</u>
Linear Foot

SPECIAL PROVISIONS
SECTION 823
GATE VALVES

Description. The work shall include furnishing, installing and testing gate valves of the type(s) and size(s) and in the location(s) shown on the Drawings and as specified.

MATERIALS

Materials.

- A. All gate valves of same type and style shall be manufactured by one manufacturer.
- B. Acceptable Manufacturers:
 - 1. American Flow Control
 - 2. Kennedy
 - 3. Darling
 - 4. Mueller
 - 5. Or approved equal

Waterworks type NRS valves (AWWA):

- A. Waterworks type NRS valves (AWWA):
 - 1. Valve Body, bonnet and stuffing box - Cast iron (ASTM A126, C1B), coated inside and out with fusion bonded epoxy meeting AWWA C550. Face-to-face dimensions shall comply with ANSI B16.10 and flanges to comply with ANSI B16.1.
 - 2. Resilient Wedge - Ductile iron wedge with bonded Nitrile elastomer covering.
 - 3. Stem - Manganese bronze, ASTM B584
 - 4. Stuffing box O-rings
 - a. Two O-rings, each nitrile rubber.
 - b. Capable of changing under pressure.
 - 5. Wedgenut - Bronze, ASTM B62
 - 6. Bolting - stainless steel Type 18-8, ASTM F593, GP1
 - 7. End Connections
 - a. Buried valves - mechanical joints
 - 8. Operation
 - a. Buried valves - 2 inch square nut, cast iron, ASTM A126, C1B
 - b. Opening Direction - counterclockwise
 - 9. Water working pressure: 250 psi
 - 10. Standards - valves shall meet or exceed AWWA C509, latest edition.

CONSTRUCTION REQUIREMENTS

Installation

- A. Install valves with stem position vertical.
- B. Valve box vertical and centered over operating nut.
- C. Valve box supported during backfilling and maintained vertical.

- D. Install and test in accordance with AWWA C500 and AWWA C-509, latest revision.
- E. For PVC or PE main, install anchor rods around the valve body or through the mounting lugs and embed the rods in concrete beneath the valve.

Basis of Payment. No additional payment will be made for this item. This work is incidental to the project.

SPECIAL PROVISIONS
SECTION 823
VALVE BOXES

Description. Furnish and install valve boxes of type(s) and size(s) and in the locations shown on the Drawings and as specified herein.

MATERIALS

Materials.

- A. All valve boxes of same type and style shall be manufactured by one manufacturer.
- B. Products to have been proven reliable in similar installations over a reasonable number of years.
- C. The valve box shall be ductile iron, slip type two-piece integral base, 5-1/4 inch shaft. Top section with flanges.
- D. Cast or Ductile iron, with the word "SEWER" cast in covers.
- E. Belled Base Section.
- F. Acceptable Manufacturers:
 - 1. Mueller
 - 2. Quality Water Products
 - 3. Or Equivalent

CONSTRUCTION REQUIREMENTS

Installation

- A. Installation as specified herein.
 - 1. When installation is complete, no pressure shall be exerted by valve box on the force main or on the valve.
 - 2. Be of such length as required without full extension. Minimum lap 6 inches.

Basis of Payment. No additional payment will be made for this item. This work is incidental to the project

SPECIAL PROVISIONS
SECTION 825
BLOW OFF CHAMBER - RECONNECTION

Description. This work shall consist of furnishing and installing a 6-inch gate valve and box and 6-inch ductile iron pipe and fittings as necessary to reestablish connection from proposed 10-inch force main to existing blow off chamber as shown on the Drawings, and as specified herein.

MATERIALS

Materials.

- A. Pipe and Fittings
 - 1. Class 52 Ductile Iron Pipe and Fittings as specified in Special Provision Section 822.35
- B. Gate Valve and Valve Box
 - 1. 6" Gate Valve and Valve Box as specified in Special Provision Section 823

Measurement and Payment. Reconnect to Blow Off Chamber will be measured for payment by the lump sum, including all ductile iron pipe and fittings gate valves and boxes, complete in place, and accepted.

Basis of Payment. Reconnect to Blow Off Chamber will be paid for at the contract lump sum price, which price shall be full compensation for furnishing all pipes, pipe fittings, solid sleeves, labor, equipment, tools, and other materials required for installation of the pipe; for dewatering; for excavating laying, setting, and jointing all pipes and fittings; for furnishing and placing all bedding, haunching and initial backfill; for backfilling; for thrust blocks and cradles; for restraining joints; for furnishing and placing all temporary sheeting and bracing; for compaction of trenches; for cleaning and testing of pipeline; for connections to existing pipeline, for all labor, tools, and construction equipment, and for all other work and expenses incidental thereto.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
825.324	Blow Off Chamber - Reconnection	Lump Sum

SPECIAL PROVISIONS
SECTION 827
TRENCH INSULATION

Description. Furnish and install polystyrene rigid board insulation of type indicated and in locations shown on the drawings or as directed by the engineer.

MATERIALS

Materials

- A. Polystyrene rigid board insulation with thickness of 2 inches, and a width of 4 feet.
- B. Qualifications of Manufacturer: Products have proven reliable in similar installations over a reasonable number of years.

CONSTRUCTION REQUIREMENTS

General. Install pipe trench insulation as shown in the details.

Method of Measurement: Trench Insulation measured for payment shall consist of the actual number of square yards of trench insulation installed as directed by the Engineer.

Basis of Payment: The contract unit price for Trench Insulation shall constitute full compensation for all labor, equipment and materials necessary to complete the work including excavation, backfill, compaction, furnishing and installing insulation, coordination with the Town of Dixfield and all incidentals needed to complete the item.

Payment will be made under:

Pay Item

Pay Unit

827.331 Trench Insulation

Square Yard

SPECIAL PROVISIONS
SECTION 833
AIR RELEASE ASSEMBLY – MODIFY AT LEAVITT STREET

Description.

- A. The Contractor shall furnish all labor, materials, tools, equipment and apparatus necessary and shall do all work required to complete the removal of existing vent pipe to the limits shown on the Drawings, and cap vent pipe at limits of removal, as herein specified, and/or as directed by the Engineer.
- B. All demolition or removal of existing appurtenances shall be accomplished without damaging the integrity of existing structures, equipment, and appurtenances to remain..

MATERIALS

Not Applicable.

CONSTRUCTION REQUIREMENTS

Utilities.

- A. Utility Location
 - 1. Utility locations shown on the plans are approximate only, based on information supplied by the utility companies.
- B. Coordination with Utilities:
 - 1. The Contractor shall make all necessary arrangements and perform any necessary work to the satisfaction of affected utility companies and governmental divisions involved with the discontinuance or interruption of affected public utilities and services.

Damages.

- A. The Contractor shall promptly repair damages caused by demolition operations to adjacent facilities at no cost to the Owner.

Method of Measurement. Modify Air Release at Leavitt Street will be measured for payment by each, consisting of all labor, materials, tools, equipment and apparatus necessary to complete the demolition, removal, and alterations of existing facilities.

Basis of Payment. Modify Air Release at Leavitt Street will be paid for at the contract unit price per each, which price shall be full compensation for all labor, materials, tools, equipment, apparatus, and incidentals required to complete the work.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
833.313	Air Release Assembly – Modify at Leavitt Street	Per Each

SPECIAL PROVISIONS
SECTION 845
STRUCTURAL STEEL UTILITY SUPPORT

Description. This work shall consist of furnishing and installing pipe supports to rigidly support pipes, maintain the necessary pitch, prevent vibration, prevent movement, and to allow expansion and contraction of the type(s) and in the location(s) shown on the Drawings and specified herein.

Materials. The pipe roller support assembly shall consist of a 615 Pipe Roller as manufactured by Erico, or approved equal. The entire assembly shall be hot dipped galvanized carbon steel, and shall be capable of supporting a pipe up to 18" in diameter.

CONSTRUCTION REQUIREMENTS

Installation

A. General:

1. Install in accordance with MSS SP-58, MSS SP-69, MSS SP-89 and at a minimum, install supports, bolts or other supporting devices at each location indicated on the Drawings. Provide additional devices as required to meet the intent of the specification with respect to support, pitch, vibration, movement, and expansion and contraction.
2. Install all supports, bolts and other supporting devices of sizes and spacings to prevent loads from exceeding the manufacturer's maximum recommended loading with a safety factor of 5.
3. Provide lock washers or locknuts on, supports, bolts and other supporting devices.
5. When piping is installed on structural steel supports, provide blocking of pipe rolls to prevent lateral pipe movement.
6. Do not support piping from other pipes or from stairs and walkways.

B. Expansion and Contraction:

1. Rigidly support all piping with adequate provisions for expansion and contraction.
2. Firmly anchor horizontal runs over 50 feet in length at the midpoint of the runs to force expansion equally toward the ends.

C. Spacing:

1. Install supports at each Crossframe Type MN and Utility Support Type MO as shown in the Drawings.
2. Maximum spacing of hangers and supports: 11'-6"

Testing

- A. Demonstrate compliance with the requirements of this section with respect to support, pitch, vibration, movement, and expansion and contraction by operating all pumping systems under simulated operating conditions in the presence of the Engineer. Review demonstration procedures with Engineer sufficiently prior to the actual demonstration to allow incorporation of comments and concerns of the Engineer.

- B. Systems which do not meet the requirements of this section with respect to support, pitch, vibration, movement, and expansion and contraction will be supplemented with additional devices as required and re-demonstrated until compliance is achieved.

Method of Measurement. The quantity of pipe supports to be paid for under this Item shall be the actual number of supports needed as detailed.

Basis of Payment. Pipe supports for the bridge crossing shall be full compensation for furnishing and installing all supports, and other materials required for the installation of the pipe brackets; for all labor, tools and construction equipment; and for all other work and expenses incidental thereto.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
845.10	Structural Steel Utility Support	Lump Sum

SECTION 00406
COMPLIANCE STATEMENT

This statement relates to a proposed contract with _____

(Name of borrower or grantee)

who expects to finance the contract with assistance from either the Rural Housing Service (RHS), Rural Business-Cooperative Service (RBS), or the Rural Utilities Service (RUS) or their successor agencies, United States Department of Agriculture (whether by a loan, grant, loan insurance, guarantee, or other form of financial assistance). I am the undersigned bidder or prospective contractor, I represent that:

1. I ☐ have, ☐ have not, participated in a previous contract or subcontract subject to Executive 11246 (regarding equal employment opportunity) or a preceding similar Executive Order.
2. If I have participated in such a contract or subcontract, I ☐ have, ☐ have not, filed all compliance reports that have been required to file in connection with the contract or subcontract.

If the proposed contract is for \$50,000 or more and I have 50 or more employees, I also represent that:

3. I ☐ have, ☐ have not previously had contracts subject to the written affirmative action programs requirements of the Secretary of Labor.
4. If I have participated in such a contract or subcontract, I ☐ have, ☐ have not developed and placed on file at each establishment affirmative action programs as required by the rules and regulations of the Secretary of Labor.

I understand that if I have failed to file any compliance reports that have been required of me, I am not eligible and will not be eligible to have my bid considered or to enter into the proposed contract unless and until I make an arrangement regarding such reports that is satisfactory to either the RHS, RBS or RUS, or to the office where the reports are required to be filed.

I also certify that I do not maintain or provide for my employees any segregated facilities at any of my establishments, and that I do not permit my employees to perform their services at any location, under my control, where segregated facilities are maintained. I certify further that I will not maintain or provide for my employees any segregated facilities at any of my establishments, and that I will not permit my employees to perform their services at any location, under my control, where segregated facilities are maintained. I agree that a breach of this certification is a violation of the Equal Opportunity clause in my contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and wash rooms, restaurants and other eating areas time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin, because of habit, local custom, or otherwise. I further agree that (except where I have obtained identical certifications for proposed subcontractors for specific time periods) I will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity clause; that I will retain such certifications in my files; and that I will forward the following notice to such proposed subcontractors (except where the proposed subcontractors have submitted identical certifications for specific time periods):

(See Reverse).

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0575-0018. The time required to complete this information collection is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

**NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENTS FOR
CERTIFICATIONS OF NON-SEGREGATED FACILITIES**

A certification of Nonsegregated Facilities, as required by the May 9, 1967, order (32F.R. 7439, May 19, 1967) on Elimination of Segregated Facilities, by the Secretary of Labor, must be submitted prior to the award of a subcontract exceeding \$10,000 which is not exempt from the provisions of the Equal Opportunity clause. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e. quarterly, semiannually, or annually).

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

DATE _____

(Signature of Bidder or Prospective Contractor)

Address (including Zip Code)

END OF SECTION

SECTION 00408

U.S. DEPARTMENT OF AGRICULTURE

**CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY
AND VOLUNTARY EXCLUSION - LOWER TIER COVERED TRANSACTIONS**

This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, 7 CFR Part 3017, Section 3017.510, Participant's responsibilities. The regulations were published as Part IV of the January 30, 1989, Federal Register (pages 4722-4733). Copies of the regulations may be obtained by contacting the Department of Agriculture agency with which this transaction originated

(BEFORE COMPLETING CERTIFICATION, READ INSTRUCTIONS ON REVERSE)

- (1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- (2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Organization Name

PR/Award Number or Project Name

Name(s) and Title(s) of Authorized Representative(s)

Signature(s)

Date

Form AD-1048 (1/92)

Instructions for Certification

1. By signing and submitting this form, the prospective lower tier participant is providing the certification set out on the reverse side in accordance with these instructions.
2. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
3. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
4. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.
5. The prospective lower tier participant agrees by submitting this form that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
6. The prospective lower tier participant further agrees by submitting this form that it will include this clause titled "Certification regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
7. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.
8. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
9. Except for transactions authorized under paragraph 5 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

SECTION 00409RD INSTRUCTION 1940-Q

RD Instruction 1940-Q
Exhibit A-1

CERTIFICATION FOR CONTRACTS, GRANTS AND LOANS

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant or Federal loan, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant or loan.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant or loan, the undersigned shall complete and submit Standard Form - LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including contracts, subcontracts, and subgrants under grants and loans) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

(name)

(date)

(title)

**[NTS: THE REMAINDER OF THIS SECTION IS NOT PUT IN THE
SPECIFICATIONS. HOWEVER, REVIEW THE FOLLOWING REGULATIONS
REGARDING USE OF THIS SECTION]**

RD Instruction 1940-Q

PART 1940 - GENERAL

Subpart Q - Restrictions on Lobbying

§1940.801 Purpose.

This subpart implements section 319 of Public Law 101-121, which prohibits applicants and recipients of Federal contracts, grants and loans from using appropriated funds for lobbying the Federal Government in connection with a specific award. Section 319 also requires that each person who requests or receives a Federal contract, grant, loan, or a Federal commitment to guarantee a loan, must disclose the expenditure of any funds, other than appropriated funds, for lobbying activities. This subpart provides administrative guidance regarding the information contained in U.S. Department of Agriculture's (USDA) 7 CFR part 3018 and Departmental Regulation (DR) 2400-5, which are attached as Exhibits A and B of this subpart.

§1940.802 [Reserved] (Revised 07-31-96, PN 264.)

§1940.803 Definitions.

In addition to the following, refer to the definitions in §3018.105 of Exhibit A of this subpart.

Appropriated funds. Federal funds received from any Federal agency for a purpose or purposes authorized by such agency.

Communication. Includes written, oral, electronic or other means of communications.

Receiving office. The State, District, or County Office that is the primary office responsible for processing an application.

§§1940.804 - 1940.809 [Reserved]

DISTRIBUTION: WSDC

Loan and Grant Making
General

08-21-91) PN 171
RD Instruction 1940-Q

§1940.810 Certification for contracts, grants and loans.

(a) The Certification for Contracts, Grants and Loans, contained in Exhibit A-1 of this subpart, must be completed at the time an application or bid proposal is submitted by a person requesting a contract or grant exceeding \$100,000, or a loan exceeding \$150,000.

(b) Any person who requests or receives a contract, subcontract or subgrant exceeding \$100,000 at any tier under a covered contract, grant or loan, must complete and submit a certification to the next higher tier.

(c) The certification completed by a person referred to in paragraph (a) of this section will be collected by the receiving office and filed in the case folder.

(d) Recipients of contracts, grants or loans, or their subs, who receive certifications from lower tier applicants or recipients shall file the certifications with documents related to the subaward, and shall make them available for Agency examination upon request.

(e) Refer to §3018.110 of Exhibit A of this subpart for additional information.

§1940.811 Statement for loan guarantees.

(a) The Statement for Loan Guarantees, contained in Exhibit A-2 of this subpart, must be completed by the lender at the time an application is filed for each loan exceeding \$150,000.

(b) The statement will be collected by the receiving office and filed in the case folder.

(c) Refer to §3018.110 of Exhibit A of this subpart for additional information.

§1940.812 Disclosure of lobbying activities.

(a) Standard Form (SF) LLL, "Disclosure of Lobbying Activities," which is part of Exhibit A of this subpart, must be completed by a person requesting or receiving a Agency contract, grant, loan, or a Agency commitment to guarantee a loan, and who meets the following conditions:

(1) the award amount exceeds the threshold stated in §1940.810(a) or §1940.811(a) of this subpart; and

§1940.812 (a) (Con.)

RD Instruction 1940-Q

(2) the person has made or has agreed to make any payment, using funds other than appropriated funds, to influence or attempt to influence a decision in connection with that specific award.

(b) SF-LLL must also be completed by any person who requests or receives a contract, subcontract or subgrant at any tier under a covered contract, grant or loan, and who meets the following conditions:

(1) the award amount exceeds \$100,000; and

(2) the person has made or has agreed to make any payment, using funds other than appropriated funds, to influence or attempt to influence a decision in connection with that specific award.

(c) Each person who meets all conditions of paragraph (a) or (b) of this section will submit a disclosure form at the time of the application or bid proposal, and, at the end of each calendar quarter in which there occurs an event as specified in §3018.110 (c) of Exhibit A of this subpart.

(d) All disclosure forms, including quarterly updates, will be collected in the receiving office. The forms completed by persons under paragraph (a) of this section will be submitted directly to the receiving office. Forms completed by persons under paragraph (b) of this section will be submitted to the next higher tier. They will then be forwarded from tier to tier until they reach the receiving office. The original completed form will be retained in the case folder. One copy will be forwarded to the State Director, and a second copy will be sent immediately to the following address:

USDA, Office of Operations
Procurement Division
Policy and Review Team
14th and Independence Ave., S.W.
Room 1575-S
Washington, D.C. 20250

(e) The information provided on this form cannot be used by the FmHA as a basis for denying Federal assistance.

(f) Refer to Exhibit B of this subpart for additional information.

§§1940.813 - 1940.819 [Reserved]

RD Instruction 1940-Q

§1940.820 Exceptions.

(a) The prohibition on the use of appropriated funds and disclosure requirements governing the use of funds, other than appropriated funds, do not apply to certain activities. These activities are described in Subparts B and C of Exhibit A of this subpart.

(b) Section 319 of P.L. 101-121 imposes no restrictions on the use of any funds for general lobbying; i.e., attempts to influence Congress or the Executive Branch with respect to a program, rather than a specific award. Such general lobbying need not be disclosed on SF LLL. However, Section 319 does not authorize lobbying otherwise restricted or prohibited by law.

§1940.821 Examples.

Several examples of activities addressed by this Instruction are contained in Exhibit C of this subpart. They are to be used for guidance purposes only.

§§1940.822 - 1940.839 [Reserved]

§1940.840 Penalties and enforcement.

(a) Failure to comply with the provisions of this subpart may result in civil penalties, as described in §3018.400 of Exhibit A of this subpart.

(b) The Administrator, FmHA, shall take such actions as are necessary to ensure that the provisions in Section 319 of P.L. 101-121 are vigorously implemented and enforced.

§§1940.841 - 1940.850 [Reserved]

Attachments: Exhibits A, A-1, A-2, B, and C

1940-Q Exhibit A-1 (moved to front page)

RD Instruction 1940-Q
Exhibit A-2

STATEMENT FOR LOAN GUARANTEES

The undersigned states, to the best of his or her knowledge and belief, that:

If any funds have been or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this commitment providing for the United States to guarantee a loan, the undersigned shall complete and submit Standard Form - LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.

Submission of this statement is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required statement shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

(name)

(organization)

(title)

(date)

1940-Q Exhibit B not automated see manual
RD Instruction 1940-Q
Exhibit C

EXAMPLES OF ACTIVITIES ADDRESSED BY RD INSTRUCTION 1940-Q

1. [A] is an applicant for a \$1,000,000 FmHA Rural Rental Housing Loan. [B] is an architectural firm retained by [A] for preliminary design studies. [A] has requested [B] to visit the FmHA State Office to discuss design options for use in developing an application.

This technical activity is specifically authorized for use of appropriated funds and does not need to be reported by [A] as a lobbying activity. However, if the visit includes any communication with FmHA officials on application issues that are not architecturally related, the activity is not exempt from the law.

2. [C] will be submitting a loan application in the amount of \$149,000 for a community facility. [C] has paid, with its own funds, [D], a consultant, to visit the National Office to help expedite the application when it is received.

[C] will not be required to submit a certification nor a disclosure form because the loan amount is less than \$150,000.

3. [E] is borrowing \$2,000,000 from FmHA to construct a hospital. The construction contract with [F] is in the amount of \$1,700,000. [F] has a mechanical subcontract with [G] in the amount of \$150,000.

[E] must submit a certification to FmHA at the time of the application. [F] must submit its certificate with the proposed bid to [E]. [G], having a subcontract of more than \$100,000, must submit a certificate to [F]. [E] and [F] will retain the certifications they received from the lower tier awardees.

4. [H] is a lender who has requested an 80 percent guarantee on a \$175,000 guaranteed loan for applicant [I]. [I] submitted the loan application without a signed statement from [H] because the guaranteed portion of the loan (80% of \$175,000) was less than \$150,000.

The amount that determines whether or not a statement is required from the lender is the total guaranteed loan (amount obligated = \$175,000); therefore, the application should have included a statement from [H]. [I] is not required to sign a certification.

5. [J] is a long time FmHA borrower who submitted a Form SF LLL because she paid [K], a lobbyist, with her own funds, to visit Washington in an attempt to persuade a Member of Congress to increase the Farmer Programs budget for the next fiscal year.

The disclosure form is not required when the lobbying activity involves a program and not a specific application or award.

STANDARD DETAIL UPDATES

Standard Details and Standard Detail updates are available at:

http://www.maine.gov/mdot/contractor-consultant-information/ss_standard_details_updates.php

<u>Detail #</u>	<u>Description</u>	<u>Revision Date</u>
504(15)	Diaphragms	12/30/02
507(04)	Steel Bridge Railing	2/05/03
526(33)	Concrete Transition Barrier	8/18/03
645(06)	H-Beam Posts – Highway Signing	7/21/04
645(09)	Installation of Type II Signs	7/21/04
626(09)	Electrical Junction Box for Traffic Signals and Lighting	2/25/05
604(01)	Catch Basins	11/16/05
604(05)	Type “A” & “B” Catch Basin Tops	11/16/05
604(06)	Type “C” Catch Basin Tops	11/16/05
604(07)	Manhole Top “D”	11/16/05
604(09)	Catch Basin Type “E”	11/16/05
606(02)	Multiple Mailbox Support	11/16/05
606(07)	Reflectorized Beam Guardrail Delineator Details	11/16/05
609(06)	Vertical Bridge Curb	11/16/05
504(23)	Hand-Hold Details	12/08/05
609(03)	Curb Type 3	6/27/06
609(07)	Curb Type 1	6/27/06
535(01)	Precast Superstructure - Shear Key	10/12/06
535(02)	Precast Superstructure - Curb Key & Drip Notch	10/12/06
535(03)	Precast Superstructure - Shear Key	10/12/06

535(04)	Precast Superstructure - Shear Key	10/12/06
535(05)	Precast Superstructure - Post Tensioning	10/12/06
535(06)	Precast Superstructure - Sections	10/12/06
535(07)	Precast Superstructure - Precast Slab & Box	10/12/06
535(08)	Precast Superstructure - Sections	10/12/06
535(09)	Precast Superstructure - Sections	10/12/06
535(10)	Precast Superstructure - Sections	10/12/06
535(11)	Precast Superstructure - Sections	10/12/06
535(12)	Precast Superstructure - Sections	10/12/06
535(13)	Precast Superstructure - Sections	10/12/06
535(14)	Precast Superstructure - Stirrups	10/12/06
535(15)	Precast Superstructure - Plan	10/12/06
535(16)	Precast Superstructure - Reinforcing	10/12/06
535(17)	Precast Superstructure - Notes	10/12/06
801(01)	Drives on Sidewalk Sections	2/06/07
801(02)	Drives on Non-Sidewalk Sections	2/06/07
535(03)	Precast Superstructure - Shear Key	12/5/07
535(04)	Precast Superstructure - Shear Key	12/5/07
535(05)	Precast Superstructure - Post Tensioning	12/5/07
535(17)	Precast Superstructure - Notes	12/5/07
801(01)	Drives on Sidewalk Sections	1/04/08
801(02)	Drives on Non-Sidewalk Sections	1/04/08
203(03)	Backslope Rounding	1/29/08
535(02)	Precast Superstructure - Curb Key & Drip Notch	5/20/08

535(05)	Precast Superstructure - Post Tensioning	5/20/08
502(03)	Concrete Curb - Bituminous Wearing Surface	2/2/09
502(03)A	Concrete Curb - Concrete Wearing Surface	2/2/09
502(07)	Precast Concrete Deck Panels - Layout Plan	2/2/09
502(07)A	Precast Concrete Deck Panels - Layout Plan	2/2/09
502(08)	Precast Concrete Deck Panels - Panel Plan	2/2/09
502(09)	Precast Concrete Deck Panels - Blocking Detail	2/2/09
502(10)	Precast Concrete Deck Panels	2/2/09
502(11)	Precast Concrete Deck Panels	2/2/09
502(12)	Precast Concrete Deck Panels - Notes	2/2/09
502(12)A	Precast Concrete Deck Panels - Notes	2/2/09
526(06)	Permanent Concrete Barrier	2/2/09
526(08)	Permanent Concrete Barrier – Type IIIA	2/2/09
526(08)A	Permanent Concrete Barrier – Type IIIA	2/2/09
526(13)	Permanent Concrete Barrier – Type IIIB	2/2/09
526(14)	Permanent Concrete Barrier – Type IIIB	2/2/09
526(21)	Concrete Transition Barrier	2/2/09
526(39)	Texas Classic Rail – Between Window	2/2/09
526(40)	Texas Classic Rail – Through Window	2/2/09
526(41)	Texas Classic Rail – Through Post	2/2/09
526(42)	Texas Classic Rail – Through Nose	2/2/09
606(20)	Guardrail - Type 3 - Single Rail - Bridge Mounted	2/2/09
606(21)	Guardrail - Type 3 - Single Rail - Bridge Mounted	2/2/09
606(22)	Guardrail - Type 3 - Single Rail - Bridge Mounted	2/2/09

606(23)	Guardrail - Type 3 - Single Rail - Bridge Mounted	2/2/09
609(06)	Vertical Bridge Curb	2/2/09
609(08)	Precast Concrete Transition Curb	2/2/09
502(12)	Precast Concrete Desk Panels	9/09
504(22)	Diaphragm & Crossframe Notes	9/09
626(09)	Electrical Junction Box for Traffic Signals and Lighting	8/20/10

SUPPLEMENTAL SPECIFICATION

(Corrections, Additions, & Revisions to Standard Specifications - Revision of December 2002)

SECTION 101

CONTRACT INTERPRETATION

101.2 Definitions

Closeout Documentation Replace the sentence “A letter stating the amount..... DBE goals.” with “DBE Goal Attainment Verification Form”

Add “Environmental Information Hazardous waste assessments, dredge material test results, boring logs, geophysical studies, and other records and reports of the environmental conditions. For a related provision, see Section 104.3.14 - Interpretation and Interpolation.”

Add “Fabrication Engineer The Department’s representative responsible for Quality Assurance of pre-fabricated products that are produced off-site.”

Geotechnical Information Replace with the following: “Boring logs, soil reports, geotechnical design reports, ground penetrating radar evaluations, seismic refraction studies, and other records of subsurface conditions. For a related provision, see Section 104.3.14 - Interpretation and Interpolation.”

SECTION 102

DELIVERY OF BIDS

102.7.1 Location and Time Add the following sentence “As a minimum, the Bidder will submit a Bid Package consisting of the Notice to Contractors, the completed Acknowledgement of Bid Amendments form, the completed Schedule of Items, 2 copies of the completed Agreement, Offer, & Award form, a Bid Bond or Bid Guarantee, and any other Certifications or Bid Requirements listed in the Bid Book.”

102.11.1 Non-curable Bid Defects Replace E. with “E. The unit price and bid amount is not provided or a lump sum price is not provided or is illegible as determined by the Department.”

SECTION 103

AWARD AND CONTRACTING

103.3.1 Notice and Information Gathering Change the first paragraph to read as follows: “After Bid Opening and as a condition for Award of a Contract, the Department may require an Apparent Successful Bidder to demonstrate to the Department’s satisfaction that the Bidder is responsible and qualified to perform the Work.”

SECTION 104

GENERAL RIGHTS AND RESPONSIBILITIES

104.3.14 Interpretation and Interpolation In the first sentence, change “...and Geotechnical Information.” to “...Environmental Information, and Geotechnical Information.”

Delete the entire Section 104.5.9 and replace with the following:

SECTION 105 GENERAL SCOPE OF WORK

Delete the entire Section 105.6 and replace with the following:

105.6.1 Department Provided Services The Department will provide the Contractor with the description and coordinates of vertical and horizontal control points, set by the Department, within the Project Limits, for full construction Projects and other Projects where survey control is necessary. For Projects of 1,500 feet in length, or less: The Department will provide three points. For Projects between 1,500 and 5,000 feet in length: The Department will provide one set of two points at each end of the Project. For Projects in excess of 5,000 feet in length, the Department will provide one set of two points at each end of the Project, plus one additional set of two points for each mile of Project length. For non-full construction Projects and other Projects where survey control is not necessary, the Department will not set any control points and, therefore, will not provide description and coordinates of any control points. Upon request of the Contractor, the Department will provide the Department's survey data management software and Survey Manual to the Contractor, or its survey Subcontractor, for the exclusive use on the Department's Projects.

105.6.2 Contractor Provided Services Utilizing the survey information and points provided by the Department, described in Subsection 105.6.1, Department Provided Services, the Contractor shall provide all additional survey layout necessary to complete the Work. This may include, but not be limited to, reestablishing all points provided by the Department, establishing additional control points, running axis lines, providing layout and maintenance of all other lines, grades, or points, and survey quality control to ensure conformance with the Contract. The Contractor is also responsible for providing construction centerline, or close reference points, for all Utility Facilities relocations and adjustments as necessary to complete the Work. When the Work is to connect with existing Structures, the Contractor shall verify all dimensions before proceeding with the Work. The Contractor shall employ or retain competent engineering and/or surveying personnel to fulfill these responsibilities.

The Contractor must notify the Department of any errors or inconsistencies regarding the data and layout provided by the Department as provided by Section 104.3.3 - Duty to Notify Department If Ambiguities Discovered.

105.6.2.1 Survey Quality Control The Contractor is responsible for all construction survey quality control. Construction survey quality control is generally defined as, first, performing initial field survey layout of the Work and, second, performing an independent check of the initial layout using independent survey data to assure the accuracy of the initial layout; additional iterations of checks may be required if significant discrepancies are discovered in this process. Construction survey layout quality control also requires written documentation of the layout process such that the process can be followed and repeated, if necessary, by an independent survey crew.

105.6.3 Survey Quality Assurance It is the Department's prerogative to perform construction survey quality assurance. Construction survey quality assurance may, or may not, be performed by the Department. Construction survey quality assurance is generally defined as an independent check of the construction survey quality control. The construction survey

quality assurance process may involve physically checking the Contractor's construction survey layout using independent survey data, or may simply involve reviewing the construction survey quality control written documentation. If the Department elects to physically check the Contractor's survey layout, the Contractor's designated surveyor may be required to be present. The Department will provide a minimum notice of 48 hours to the Contractor, whenever possible, if the Contractor's designated surveyor's presence is required. Any errors discovered through the quality assurance process shall be corrected by the Contractor, at no additional cost to the Department.

105.6.4 Boundary Markers The Contractor shall preserve and protect from damage all monuments or other points that mark the boundaries of the Right-of-Way or abutting parcels that are outside the area that must be disturbed to perform the Work. The Contractor indemnifies and holds harmless the Department from all claims to reestablish the former location of all such monuments or points including claims arising from 14 MRSA § 7554-A. For a related provision, see Section 104.3.11 - Responsibility for Property of Others.

SECTION 106 QUALITY

106.4.3 Testing Change the first sentence in paragraph three from "...maintain records of all inspections and tests." to "...maintain original documentation of all inspections, tests, and calculations used to generate reports."

106.6 Acceptance Add the following to paragraph 1 of A: "This includes Sections 401 - Hot Mix Asphalt, 402 - Pavement Smoothness, and 502 - Structural Concrete - Method A - Air Content."

Add the following to the beginning of paragraph 3 of A: "For pay factors based on Quality Level Analysis, and"

106.7.1 Standard Deviation Method Add the following to F: "Note: In cases where the mean of the values is equal to either the USL or the LSL, then the PWL will be 50 regardless of the computed value of s."

Add the following to H: "Method C Hot Mix Asphalt: $PF = [55 + (Quality\ Level * 0.5)] * 0.01$ "

SECTION 107 TIME

107.3.1 General Add the following: "If a Holiday occurs on a Sunday, the following Monday shall be considered a Holiday. Sunday or Holiday work must be approved by the Department, except that the Contractor may work on Martin Luther King Day, President's Day, Patriot's Day, the Friday after Thanksgiving, and Columbus Day without the Department's approval."

107.7.2 Schedule of Liquidated Damages Replace the table of Liquidated Damages as follows:

From	Up to and	Amount of Liquidated
------	-----------	----------------------

<u>More Than</u>	<u>Including</u>	<u>Damages per Calendar Day</u>
\$0	\$100,000	\$225
\$100,000	\$250,000	\$350
\$250,000	\$500,000	\$475
\$500,000	\$1,000,000	\$675
\$1,000,000	\$2,000,000	\$900
\$2,000,000	\$4,000,000	\$1,000
\$4,000,000	and more	\$2,100

SECTION 108 PAYMENT

Remove Section 108.4 and replace with the following:

“108.4 Payment for Materials Obtained and Stored Acting upon a request from the Contractor and accompanied by bills or receipted bills, the Department will pay for all or part of the value of acceptable, non-perishable Materials that are to be incorporated in the Work, including Materials that are to be incorporated into the Work, not delivered on the Work site, and stored at places acceptable to the Department. Examples of such Materials include steel piles, stone masonry, curbing, timber and lumber, metal Culverts, stone and sand, gravel, and other Materials. The Department will not make payment on living or perishable Materials until acceptably planted in their final locations.

If payment for Materials is made to the Contractor based on bills, only, then the Contractor must provide receipted bills to the Department for these Materials within 14 days of the date the Contractor receives payment for the Materials. Failure of the Contractor to provide receipted bills for these Materials within 14 days of the date the Contractor receives payment will result in the paid amount being withheld from the subsequent progress payment, or payments, until such time the receipted bills are received by the Department.

Materials paid for by the Department are the property of the Department, but the risk of loss shall remain with the Contractor. Payment for Materials does not constitute Acceptance of the Material. If Materials for which the Department has paid are later found to be unacceptable, then the Department may withhold amounts reflecting such unacceptable Materials from payments otherwise due the Contractor.

In the event of Default, the Department may use or cause to be used all paid-for Materials in any manner that is in the best interest of the Department.”

SECTION 109 CHANGES

109.1.1 Changes Permitted Add the following to the end of the paragraph: “There will be no adjustment to Contract Time due to an increase or decrease in quantities, compared to those estimated, except as addressed through Contract Modification(s).”

109.1.2 Substantial Changes to Major Items Add the following to the end of the paragraph: “Contract Time adjustments may be made for substantial changes to Major Items when the change affects the Critical Path, as determined by the Department”

109.4.4 Investigation / Adjustment Third sentence, delete the words “subsections (A) - (E)”

109.5.1 Definitions - Types of Delays

B. Compensable Delay Replace (1) with the following; “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.”

109.7.2 Basis of Payment Replace with the following: “Adjustments will be established by mutual Agreement based upon Unit or Lump Sum Prices. These agreed Unit or Lump Sum prices will be full compensation and no additions or mark-ups are allowed. If Agreement cannot be reached, the Contractor shall accept payment on a Force Account basis as provided in Section 109.7.5 - Force Account Work, as full and complete compensation for all Work relating to the Equitable Adjustment.”

109.7.3 Compensable Items Delete this Section entirely.

109.7.4 Non-Compensable Items Replace with the following: “The Contractor is not entitled to compensation or reimbursement for any of the following items:

- A. Total profit or home office overhead in excess of 15%,
- B.”

109.7.5 Force Account Work

C. Equipment

Paragraph 2, delete sentence 1 which starts; “Equipment leased....”

Paragraph 6, change sentence 2 from “The Contractor may furnish...” to read “If requested by the Department, the Contractor will produce cost data to assist the Department in the establishment of such rental rate, including all records that are relevant to the Actual Costs including rental Receipts, acquisition costs, financing documents, lease Agreements, and maintenance and operational cost records.”

Add the following paragraph; “Equipment leased by the Contractor for Force Account Work and actually used on the Project will be paid for at the actual invoice amount plus 10% markup for administrative costs.”

Add the following section;

“F. Subcontractor Work When accomplishing Force Account Work that utilizes Subcontractors, the Contractor will be allowed a maximum markup of 5% for profit and overhead on the Subcontractor’s portion of the Force Account Work. If the Department does not accept the Subcontractor quote, then the Subcontractor work will be subject to the Force Account provisions with a 5% markup for profit & overhead..”

SECTION 110 INDEMNIFICATION, BONDING, AND INSURANCE

Delete the entire Section 110.2.3 and replace with the following:

110.2.3 Bonding for Landscape Establishment Period The Contractor shall provide a signed, valid, and enforceable Performance, Warranty, or Maintenance Bond complying with the Contract, to the Department at Final Acceptance.

The bond shall be in the full amount for all Pay Items for work pursuant to Sec 621, Landscape, payable to the “Treasurer - State of Maine,” and on the Department’s forms, on exact copies thereof, or on forms that do not contain any significant variations from the Department’s forms as solely determined by the Department.

The Contractor shall pay all premiums and take all other actions necessary to keep said bond in effect for the duration of the Landscape Establishment Period described in Special Provision 621.0036 - Establishment Period. If the Surety becomes financially insolvent, ceases to be licensed or approved to do business in the State of Maine, or stops operating in the United States, the Contractor shall file new bonds complying with this Section within 10 Days of the date the Contractor is notified or becomes aware of such change.

All Bonds shall be procured from a company organized and operating in the United States, licensed or approved to do business in the State of Maine by the State of Maine Department of Business Regulation, Bureau of Insurance, and listed on the latest Federal Department of the Treasury listing for “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies.”

By issuing a bond, the Surety agrees to be bound by all terms of the Contract, including those related to payment, time for performance, quality, warranties, and the Department’s self-help remedy provided in Section 112.1 - Default to the same extent as if all terms of the Contract are contained in the bond(s).

Regarding claims related to any obligations covered by the bond, the Surety shall provide, within 60 Days of Receipt of written notice thereof, full payment of the entire claim or written notice of all bases upon which it is denying or contesting payment. Failure of the Surety to provide such notice within the 60-day period constitutes the Surety’s waiver of any right to deny or contest payment and the Surety’s acknowledgment that the claim is valid and undisputed.

SECTION 202 REMOVING STRUCTURES AND OBSTRUCTIONS

202.02 Removing Buildings Make the following change to the last sentence in the final paragraph, change “...Code of Maine Regulations 401.” to “...Department of Environmental Protection Maine Solid Waste Management Rules, 06-096 CMR Ch. 401, Landfill Siting, Design and Operation.”

SECTION 203 EXCAVATION AND EMBANKMENT

203.01 Description Under b. Rock Excavation; add the following sentence: “The use of perchlorate is not allowed in blasting operations.”

Delete the entire Section 203.041 and replace with the following:

“203.041 Salvage of Existing Hot Mix Asphalt Pavement All existing hot mix asphalt pavement designated to be removed under this contract must be salvaged for utilization. Existing hot mix asphalt pavement material shall not be deposited in any waste area or be placed below subgrade in any embankment.

Methods of utilization may be any of the following:

1. Used as a replacement for untreated aggregate surface course on entrances provided the material contains no particles greater than 50 mm [2 in] in any dimension. Payment will be made under Pay Item 411.09, Untreated Aggregate Surface Course or 411.10, Untreated Aggregate Surface Course, Truck Measure. Material shall be placed, shaped, compacted and stabilized as directed by the Resident.

2. Stockpiled at commercial or approved sites for commercial or MaineDOT use.

3. Other approved methods proposed by the Contractor, and approved by the Resident which will assure proper use of the existing hot mix asphalt pavement.

The cost of salvaging hot mix asphalt material will be included for payment under the applicable pay item, with no additional allowances made, which will be full compensation for removing, temporarily stockpiling, and rehandling, if necessary, and utilizing the material in entrances or other approved uses, or stockpiling at an approved site as described above. The material will also be measured and paid for under the applicable Pay Item if it is reused for aggregate in entrances, or other approved uses.”

SECTION 502 STRUCTURAL CONCRETE

502.05 Composition and Proportioning: TABLE #1; NOTE #2; third sentence; Change “...alcohol based saline sealer...” to “alcohol based silane sealer...”. Add NOTE #6 to Class S Concrete.

502.0502 Quality Assurance Method A - Rejection by Resident Change the first sentence to read: “For an individual subplot with test results failing to meet the criteria in Table #1, or if the calculated pay factor for Air Content is less than 0.80.....”

502.0503 Quality Assurance Method B - Rejection by Resident Change the first sentence to read: “For material represented by a verification test with test results failing to meet the criteria in Table #1, the Department will.....”

502.0505 Resolution of Disputed Acceptance Test Results Combine the second and third sentence to read: "Circumstances may arise, however, where the Department may"

502.10 Forms and False work

D. Removal of Forms and False work 1., First paragraph; first, second, and third sentence; replace "forms" with "forms and false work"

502.11 Placing Concrete

G. Concrete Wearing Surface and Structural Slabs on Precast Superstructures Last paragraph; third sentence; replace "The temperature of the concrete shall not exceed 24° C [75° F] at the time of placement." with "The temperature of the concrete shall not exceed 24° C [75° F] at the time the concrete is placed in its final position."

502.15 Curing Concrete First paragraph; replace the first sentence with the following: "All concrete surfaces shall be kept wet with clean, fresh water for a curing period of at least 7 days after concrete placing, with the exception of vertical surfaces as provided for in Section 502.10 (D) - Removal of Forms and False work."

Second paragraph; delete the first two sentences.

Third paragraph; delete the entire paragraph which starts "When the ambient temperature...."

Fourth paragraph; delete "approved" to now read "...continuously wet for the entire curing period..."

Fifth paragraph; second sentence; change "...as soon as it is possible to do so without damaging the concrete surface." to "...as soon as possible."

Seventh paragraph; first sentence; change "...until the end of the curing period." to "...until the end of the curing period, except as provided for in Section 502.10(D) - Removal of Forms and False work."

502.19 Basis of Payment First paragraph, second sentence; add "pier nose armor" to the list of items included in the contract price for concrete.

SECTION 503 REINFORCING STEEL

503.06 Placing and Fastening Change the second paragraph, first sentence from: "All tack welding shall be done in accordance with Section 504, Structural Steel." to "All tack welding shall be done in accordance with AWS D1.4 Structural Welding Code - Reinforcing Steel."

SECTION 504 STRUCTURAL STEEL

504.09 Facilities for Inspection Add the follow as the last paragraph: "Failure to comply with the above requirements will be consider to be a denial to allow access to work by the Contractor. The Department will reject any work done when access for inspection is denied."

504.18 Plates for Fabricated Members Change the second paragraph, first sentence from: "...ASTM A 898/A 898 M..." to "...ASTM A 898/A 898 M or ASTM A 435/A 435 M as applicable and..."

504.31 Shop Assembly Add the following as the last sentence: "The minimum assembly length shall include bearing centerlines of at least two substructure units."

504.64 Non Destructive Testing-Ancillary Bridge Products and Support Structures Change the third paragraph, first sentence from "One hundred percent..." to "Twenty five percent..."

SECTION 535

PRECAST, PRESTRESSED CONCRETE SUPERSTRUCTURE

535.02 Materials Change "Steel Strand for Concrete Reinforcement" to "Steel Strand." Add the following to the beginning of the third paragraph; "Concrete shall be Class P conforming to the requirements in this section. 28 day compressive strength shall be as stated on the plans. Coarse aggregate...."

535.05 Inspection Facilities Add the follow as the last paragraph: "If the above requirements are not met, the Contractor shall be considered to be in violation of Standard Specification 104.2.5 – Right to Inspect Work. All work occurring during a violation of this specification will be rejected."

535.26 Lateral Post-Tensioning Replace the first paragraph; "A final tension..." with "Overstressing strands for setting losses cannot be accomplished for chuck to chuck lengths of 7.6 m [25 ft] and less. In such instances, refer to the Plans for all materials and methods. Otherwise, post-tensioning shall be in accordance with PCI standards and shall provide the anchorage force noted in the Plans. The applied jacking force shall be no less than 100% of the design jacking force."

SECTION 603

PIPE CULVERTS AND STORM DRAINS

603.0311 Corrugated Polyethylene Pipe for Option III Replace the Minimum Mandrel Diameter Table with the following:

Nominal Size US Customary (in)	Minimum Mandrel Diameter (in)	Nominal Size Metric (mm)	Minimum Mandrel Diameter (mm)
12	11.23	300	280.73
15	14.04	375	350.91
18	16.84	450	421.09
24	22.46	600	561.45
30	28.07	750	701.81
36	33.69	900	842.18
42	39.30	1050	982.54
48	44.92	1200	1122.90

SECTION 604
MANHOLES, INLETS, AND CATCH BASINS

604.02 Materials Add the following:

“Tops and Traps	712.07
Corrugated Metal Units	712.08
Catch Basin and Manhole Steps	712.09”

SECTION 605
UNDERDRAINS

605.05 Underdrain Outlets Make the following change:

In the first paragraph, second sentence, delete the words “metal pipe”.

SECTION 606
GUARDRAIL

606.02 Materials Delete the entire paragraph which reads “The sole patented supplier of multiple mailbox....” and replace with “Acceptable multiple mailbox assemblies shall be listed on the Department’s Approved Products List and shall be NCHRP 350 tested and approved.” Delete the entire paragraph which reads “Retroreflective beam guardrail delineators....” and replace with “Reflectorized sheeting for Guardrail Delineators shall meet the requirements of Section 719.01 - Reflective Sheeting. Delineators shall be fabricated from high-impact, ultraviolet and weather resistant thermoplastic.

606.09 Basis of Payment First paragraph; delete the second and third sentence in their entirety and replace with “Butterfly-type guardrail reflectorized delineators shall be mounted on all W-beam guardrail at an interval of every 10 posts [62.5 ft] on tangents sections and every 5 posts [31.25 ft] on curved sections as directed by the Resident. On divided highways, the delineators shall be yellow on the left hand side and silver/white on the right hand side. On two-way roadways, the delineators shall be silver/white on the right hand side. All delineators shall have retroreflective sheeting applied to only the traffic facing side. Reflectorized guardrail delineators will not be paid for directly, but will be considered incidental to the guardrail items.”

SECTION 609
CURB

609.04 Bituminous Curb f., Delete the requirement “Color Natural (White)”

SECTION 610
**STONE FILL, RIPRAP, STONE BLANKET,
AND STONE DITCH PROTECTION**

Add the following paragraph to Section 610.02:

“Materials shall meet the requirements of the following Sections of Special Provision 703:

Stone Fill	703.25
Plain and Hand Laid Riprap	703.26
Stone Blanket	703.27
Heavy Riprap	703.28
Definitions	703.32”

Add the following paragraph to Section 610.032.a.

“Stone fill and stone blanket shall be placed on the slope in a well-knit, compact and uniform layer. The surface stones shall be chinked with smaller stone from the same source.”

Add the following paragraph to Section 610.032.b:

“Riprap shall be placed on the slope in a well-knit, compact and uniform layer. The surface stones shall be chinked with smaller stone from the same source.”

Add the following to Section 610.032: “Section 610.032.d. The grading of riprap, stone fill, stone blanket and stone ditch protection shall be determined by the Resident by visual inspection of the load before it is dumped into place, or, if ordered by the Resident, by dumping individual loads on a flat surface and sorting and measuring the individual rocks contained in the load. A separate, reference pile of stone with the required gradation will be placed by the Contractor at a convenient location where the Resident can see and judge by eye the suitability of the rock being placed during the duration of the project. The Resident reserves the right to reject stone at the job site or stockpile, and in place. Stone rejected at the job site or in place shall be removed from the site at no additional cost to the Department.”

SECTION 615
LOAM

615.02 Materials Make the following change:

<u>Organic Content</u>	<u>Percent by Volume</u>
Humus	“5% - 10%”, as determined by Ignition Test

SECTION 618
SEEDING

618.01 Description Change the first sentence to read as follows: “This work shall consist of furnishing and applying seed” Also remove “,and cellulose fiber mulch” from 618.01(a).

618.03 Rates of Application In 618.03(a), remove the last sentence and replace with the following: “These rates shall apply to Seeding Method 2, 3, and Crown Vetch.”

In 618.03(c) “1.8 kg [4 lb]/unit.” to “1.95 kg [4 lb]/unit.”

618.09 Construction Method In 618.09(a) 1, sentence two, replace “100 mm [4 in]” with “25 mm [1 in] (Method 1 areas) and 50 mm [2 in] (Method 2 areas)”

618.15 Temporary Seeding Change the Pay Unit from Unit to Kg [lb].

SECTION 620 GEOTEXTILES

620.03 Placement Section (c)

Title: Replace “Non-woven” in title with “Erosion Control”.

First Paragraph: Replace first word “Non-woven” with “Woven monofilament”.

Second Paragraph: Replace second word “Non-woven” with “Erosion Control”.

620.07 Shipment, Storage, Protection and Repair of Fabric Section (a)

Replace the second sentence with the following: “Damaged geotextiles, as identified by the Resident, shall be repaired immediately.”

620.09 Basis of Payment

Pay Item 620.58: Replace “Non-woven” with “Erosion Control”

Pay Item 620.59: Replace “Non-woven” with “Erosion Control”

SECTION 621 LANDSCAPING

621.0036 Establishment Period In paragraph 4 and 5, change “time of Final Acceptance” to “end of the period of establishment”. In Paragraph 7, change “Final Acceptance date” to “end of the period of establishment” and change “date of Final Acceptance” to “end of the period of establishment”.

SECTION 626 HIGHWAY SIGNING

626.034 Concrete Foundations Add to the following to the end of the second paragraph: “Pre-cast and cast-in-place foundations shall be warranted against leaning and corrosion for two years after the project is completed. If the lean is greater than 2 degrees from normal or the foundation is spalling within the first two years, the Contractor shall replace the foundation at no extra cost.”

SECTION 627 PAVEMENT MARKINGS

627.10 Basis of Payment Add to the following to the end of the third paragraph: “If allowed by Special Provision, the Contractor may utilize Temporary Bi-Directional Yellow and White(As required) Delineators as temporary pavement marking lines and paid for at the contract lump sum price. Such payment will include as many applications as required and removal.”

SECTION 637 DUST CONTROL

637.06 Basis of Payment Add the following after the second sentence of the third paragraph: “Failure by the Contractor to follow Standard Specification or Special Provision - Section 637 and/or the Contractor’s own Soil Erosion and Pollution Control Plan concerning Dust Control and/or the Contractor’s own Traffic Control Plan concerning Dust Control and/or visible evidence of excessive dust problems, as determined by the Resident, will result in a reduction in payment, computed by reducing the Lump Sum Total by 5% per occurrence per day. The Department’s Resident or any other representative of the Department reserves the right to suspend the work at any time and request a meeting to discuss violations and remedies. The Department shall not be held responsible for any delay in the work due to any suspension under this item. Additional penalties may also be assessed in accordance with Special Provision 652 - Work Zone Traffic Control and Standard Specification 656 - Temporary Soil Erosion and Water Pollution Control.”

SECTION 639 ENGINEERING FACILITIES

639.04 Field Offices Change the forth to last paragraph from: “The Contractor shall provide a fully functional desktop copier...” to “....desktop copier/scanner...”

Description Change “Floor Area” to “Floor Area (Outside Dimension)”. Change Type B floor area from “15 (160)” to “20 (217)”.

639.09 Telephone Paragraph 1 is amended as follows:

“The contractor shall provide **two** telephone lines and two telephones,....”

Add- “In addition the contractor will supply one computer broadband connection, modem lease and router. The router shall have wireless access and be 802.11n or 802.11g capable and wireless. The type of connection supplied will be contingent upon the availability of services (i.e. DSL or Cable Broadband). It shall be the contractor’s option to provide dynamic or static IP addresses through the service. **The selected service will have a minimum downstream connection of 1.5 Mbps and 384 Kbps upstream.** The contractor shall be responsible for the installation charges and all reinstallation charges following suspended periods. Monthly service and maintenance charges shall be billed by the Internet Service Provider (ISP) directly to the contractor.”

SECTION 652 MAINTENANCE OF TRAFFIC

652.2.3 Flashing Arrow Board Delete the existing 5 paragraphs and replace with the following: Flashing Arrow Panels (FAP) must be of a type that has been submitted to AASHTO’s National Transportation Product Evaluation Program (NTPEP) for evaluation and placed on the Maine Department of Transportations’ Approved Products List of Portable Changeable Message Signs & Flashing Arrow Panels.

FAP units shall meet requirements of the current Manual on Uniform Traffic Control Devices

(MUTCD) for Type “C” panels as described in Section 6F.56 - Temporary Traffic Control Devices. An FAP shall have matrix of a minimum of 15 low-glare, sealed beam, Par 46 elements capable of either flashing or sequential displays as well as the various operating modes as described in the MUTCD, Chapter 6-F. If an FAP consisting of a bulb matrix is used, each element should be recess-mounted or equipped with an upper hood of not less than 180 degrees. The color presented by the elements shall be yellow.

FAP elements shall be capable of at least a 50 percent dimming from full brilliance. Full brilliance should be used for daytime operation and the dimmed mode shall be used for nighttime operation. FAP shall be at least 2.4 M x 1.2 M [96” x 48”] and finished in non-reflective black. The FAP shall be interpretable for a distance not less than 1.6 km [1 mile].

Operating modes shall include, flashing arrow, sequential arrow, sequential chevron, flashing double arrow, and flashing caution. In the three arrow signals, the second light from the arrow point shall not operate.

The minimum element on-time shall be 50 percent for the flashing mode, with equal intervals of 25 percent for each sequential phase. The flashing rate shall be not less than 25 nor more than 40 flashes per minute. All on-board circuitry shall be solid state.

Primary power source shall be 12 volt solar with a battery back-up to provide continuous operation when failure of the primary power source occurs, up to 30 days with fully charged batteries. Batteries must be capable of being charged from an onboard 110 volt AC power source and the unit shall be equipped with a cable for this purpose.

Controller and battery compartments shall be enclosed in lockable, weather-tight boxes. The FAP shall be mounted on a pneumatic-tired trailer or other suitable support for hauling to various locations, as directed. The minimum mounting height of an arrow panel should be 2.1 M [7 feet] from the roadway to the bottom of the panel.

The face of the trailer shall be delineated on a permanent basis by affixing retro-reflective material, known as conspicuity material, in a continuous line as seen by oncoming drivers.

A portable changeable message sign may be used to simulate an arrow panel display.”

652.2.4 Other Devices Delete the last paragraph and add the following:

“652.2.5 Portable Changeable Message Sign Trailer mounted Portable Changeable Message Signs (PCMS) must be of a type that has been submitted to AASHTO’s National Transportation Product Evaluation Program (NTPEP) for evaluation and placed on the Maine Department of Transportations’ Approved Products List of Portable Changeable Message Signs & Flashing Arrow Panels. The PCMS unit shall meet or exceed the current specifications of the Manual on Uniform Traffic Control Devices (MUTCD), 6F.55.

The front face of the sign should be covered with a low-glare protective material. The color of the LED elements shall be amber on a black background. The PCMS should be visible from a distance of 0.8 km [0.5 mile] day and night and have a minimum 15° viewing angle. Characters must be legible from a distance of at least 200 M [650 feet].

The message panel should have adjustable display rates (minimum of 3 seconds per phase), so that the entire message can be read at least twice at the posted speed, the off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed. Each message shall consist of either one or two phases. A phase shall consist of up to eight characters per line. The unit must be capable of displaying at least three lines of text with eight characters per line. Each character shall be 457 mm [18"] high. Each character module shall use at least a five wide and seven high pixel matrix. The text of the messages shall not scroll or travel horizontally or vertically across the face of the sign.

Units shall automatically adjust their brightness under varying light conditions to maintain legibility.

The control system shall include a display screen upon which messages can be reviewed before being displayed on the message sign. The control system shall be capable of maintaining memory when power is unavailable. Message must be changeable with either a notebook computer or an on-board keypad. The controller shall have the capability to store a minimum of 200 user-defined and 200 pre-programmed messages. Controller and battery compartments shall be enclosed in lockable, weather-tight boxes.

PCMS units shall have the capability of being made programmable by means of wireless communications. PCMS units shall also be fully capable of having an on-board radar system installed if required for a particular application.

PCMS' primary power source shall be solar with a battery back-up to provide continuous operation when failure of the primary power source occurs. Batteries must be capable of being charged from a 110 volt AC power source. The unit must also be capable of being operated solely from a 110 volt AC power source and be equipped with a cable for this purpose.

The PCMS shall be mounted on a trailer in such a way that the bottom of the message sign panel shall be a minimum of 2.1 M [7 ft] above the roadway in urban areas and 1.5 M [5 ft] above the roadway in rural areas when it is in the operating mode. PCMS trailers should be of a heavy duty type with a 51 mm [2"] ball hitch and a minimum of four leveling jacks (at each corner). The sign shall be capable of being rotated 360° relative to the trailer. The face of the trailer shall be delineated on a permanent basis by affixing retro-reflective material, known as conspicuity material, in a continuous line as seen by oncoming drivers."

652.3.3 Submittal of Traffic Control Plan In item e. change "A list of all certified flaggers..." to "A list of all the Contractor's certified flaggers..."

|| Add the follow to the list of requirements: "k. The plan for unexpected nighttime work along with a list of emergency nighttime equipment available on-site." ||

In the last paragraph add the following as the second sentence: "The Department will review and provide comments to the Contractor within 14 days of receipt of the TCP." Add the following as the last sentence: "The creation and modification of the TCP will be considered incidental to the related 652 items."

652.3.5 Installation of Traffic Control Devices In the first paragraph, first sentence; change "Signs shall be erected..." to "Portable signs shall be erected.." In the third sentence; change

“Signs must be erected so that the sign face...” to “Post-mounted signs must also be erected so that the sign face...”

652.4 Flaggers Replace the first paragraph with the following; “The Contractor shall furnish flaggers as required by the TCP or as otherwise specified by the Resident. All flaggers must have successfully completed a flagger test approved by the Department and administered by a Department-approved Flagger-Certifier who is employing that flagger. All flaggers must carry an official certification card with them while flagging that has been issued by their employer. Flaggers shall wear safety apparel meeting ANSI 107-2004 Class 2 risk exposure that clearly identifies the wearer as a person, and is visible at a minimum distance of 300 m [1000 ft], and shall wear a hardhat with 360° retro-reflectivity. For nighttime conditions, Class 3 apparel, meeting ANSI 107-2004, shall be worn along with a hardhat with 360° retro-reflectivity. Retro-reflective or flashing SLOW/STOP paddles shall be used, and the flagger station shall be illuminated to assure visibility in accordance with 652.6.2.”

Second paragraph, first sentence; change “...have sufficient distance to stop before entering the workspace.” to “...have sufficient distance to stop at the intended stopping point.” Third sentence; change “At a spot obstruction...” to “At a spot obstruction with adequate sight distance...”

Fourth paragraph, delete and replace with “Flaggers shall be provided as a minimum, a 10 minute break, every 2 hours and a 30 minute or longer lunch period away from the work station. Flaggers may only receive 1 unpaid break per day; all other breaks must be paid. Sufficient certified flaggers shall be available onsite to provide for continuous flagging operations during break periods. Breaker flaggers will not be paid for separately, but shall be considered incidental to the appropriate pay item.”

Add the following:

“652.5.1 Rumble Strip Crossing When lane shifts or lane closures require traffic to cross a permanent longitudinal rumble strip for 7 calendar days or less, the Contractor shall install warning signs that read “RUMBLE STRIP CROSSING” with a supplemental Motorcycle Plaque, (W8-15P).

When lane shifts or lane closures require traffic to cross a permanent longitudinal rumble strip for more than 7 calendar days, the Contractor shall pave in the rumble strips in the area that traffic will cross, unless otherwise directed by the Resident. Rumble strips shall be replaced prior to the end of the project, when it is no longer necessary to cross them.”

652.6 Nightwork Delete this section entirely and replace with the following:

“652.6.1 Daylight Work Times Unless otherwise described in the Contract, the Contractor is allowed to commence work and end work daily according to the Sunrise/Sunset Table at: <http://www.sunrisesunset.com/usa/Maine.asp> . If the Project town is not listed, the closest town on the list will be used as agreed at the Preconstruction Meeting. Any work conducted before sunrise or after sunset will be considered Night Work.

652.6.2 Night Work When Night Work occurs (either scheduled or unscheduled), the Contractor shall provide and maintain lighting on all equipment and at all work stations.

The lighting facilities shall be capable of providing light of sufficient intensity to permit good workmanship, safety and proper inspection at all times. The lighting shall be cut off and arranged on stanchions at a height that will provide perimeter lighting for each piece of equipment and will not interfere with traffic, including commercial vehicles, approaching the work site from either direction.

The Contractor shall have available portable floodlights for special areas.

The Contractor shall utilize padding, shielding or other insulation of mechanical and electrical equipment, if necessary, to minimize noise, and shall provide sufficient fuel, spare lamps, generators, etc. to maintain lighting of the work site.

The Contractor shall submit a lighting plan at the Preconstruction Conference, showing the type and location of lights to be used for night work. The Resident may require modifications be made to the lighting set up in actual field conditions.

Prior to beginning any Night Work, the Contractor shall furnish a light meter for the Residents use that is capable of measuring the range of light levels from 5 to 20 foot-candles.

Horizontal illumination, for activities on the ground, shall be measured with the photometer parallel to the road surface. For purposes of roadway lighting, the photometer is placed on the pavement. Vertical illumination, for overhead activities, shall be measured with the photometer perpendicular to the road surface. Measurements shall be taken at the height and location of the overhead activity.

The following minimum light levels are required for Night Work lighting;

Level I: (5 foot-candles)

- All work operations by Contractor's personnel in areas of general construction operations, including layout and measurements ahead of the actual work, , cleaning and sweeping, , and seeding.
- Areas where crew movement may take place.
- Stockpile areas.
- At the area of lane closure, continuously through the lane closure, including the setup and removal of the closures.
- State Field Offices and facilities.

Level II: (10 foot-candles)

- On and around (360 degrees) construction equipment in the work zone.
- 50 feet ahead of, 100 feet behind, and along the sides of paving or milling machines in the work zone.

Level III: (20 foot-candles)

- Flagging Stations
- Pavement or structural crack and pothole filling.
- Pavement patching and repairs.
- Installation of signal equipment, or other electrical or mechanical equipment.
- Curb work, drainage, sidewalk work, excavation, landscaping, and any other work using ground labor, supervision, or inspection.

All workers shall wear safety apparel labeled as meeting the ANSI 107-2004 standard performance for Class 3 risk exposure.

The Contractor shall apply 2- inch wide retro-reflective tape, with alternating red and white segments, to outline the front back and sides of construction vehicles and equipment, to define their shape and size to the extent practicable. Pickup trucks and personal vehicles are exempt from this requirement. The Contractor shall furnish approved signs reading "Construction Vehicle - Keep Back" to be used on trucks hauling to the project when such signs are deemed necessary by the Resident. The signs shall be a minimum of 30 inches by 60 inches, Black and Orange, ASTM D 4956 - Type VII, Type VIII, or Type IX (prismatic).

All vehicles used on the project, including pickup trucks and personal vehicles, shall be equipped with amber flashing lights, visible from both front and rear, or by means of single, approved type, revolving, flashing or strobe lights mounted so as to be visible 360°. The vehicle flashing system shall be in continuous operation while the vehicle is on any part of the project.

The Resident or any other representative of the Department reserves the right to suspend the work at any time and request a meeting to discuss violations and remedies. The Department shall not be held responsible for any delay in the work due to any suspension under this item.

Payment for lighting, vehicle mounted signs and other costs accrued because of night work will not be made directly but will be considered incidental to the related contract items."

652.8.2 Other Items Replace the last paragraph with the following: "There will be no payment made under any 652 pay items after the expiration of the adjusted total contract time."

SECTION 653 POLYSTYRENE PLASTIC INSULATION

653.05 Placing Backfill In the second sentence; change "...shall be not less than 150 mm [6 in] loose measure." to "...shall be not less than 250 mm [10 in] loose measure." In the third sentence; change "...crawler type bulldozer of not more than 390 kg/m² [80 lb/ft²] ground contact pressure..." to "...crawler type bulldozer of not more than 4875 kg/m² [2000 lb/ft²] ground contact pressure..."

653.06 Compaction In the last sentence; change "...not more than 390 kg/m² [80 lb/ft²] ground contact..." to "...not more than 4875 kg/m² [2000 lb/ft²] ground contact..."

SECTION 656 TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL

656.5.1 If Pay Item 656.75 Provided Replace the second paragraph with the following: "Failure by the Contractor to follow Standard Specification or Special Provision - Section 656

and/or the Contractor's own Soil Erosion and Pollution Control Plan will result in a reduction in payment, computed by reducing the Lump Sum Total by 5% per occurrence per day. The Department's Resident or any other representative of the Department reserves the right to suspend the work at any time and request a meeting to discuss violations and remedies. The Department shall not be held responsible for any delay in the work due to any suspension under this item."

SECTION 701 STRUCTURAL CONCRETE RELATED MATERIALS

701.10 Fly Ash - Chemical Requirements Change all references from "ASTM C311" to "ASTM C114".

SECTION 703 AGGREGATES

703.05 Aggregate for Sand Leveling Change the percent passing the 9.5 mm [3/8 in] sieve from "85 – 10" to "85 – 100"

703.06 Aggregate for Base and Subbase Delete the first paragraph: "The material shall have..." and replace with "The material shall have a minimum degradation value of 15 as determined by Washington State DOT Test Method T113, Method of Test for Determination of Degradation Value (March 2002 version), except that the reported degradation value will be the result of testing a single specimen from that portion of a sample that passes the 12.5 mm [1/2 in] sieve and is retained on the 2.00 mm [No. 10] sieve, minus any reclaimed asphalt pavement used."

703.07 Aggregates for HMA Pavements Delete the forth paragraph: "The composite blend shall have..." and replace with "The composite blend, minus any reclaimed asphalt pavement used, shall have a Micro-Deval value of 18.0 or less as determined by AASHTO T 327. In the event the material exceeds the Micro Deval limit, a Washington Degradation test shall be performed. The material shall be acceptable if it has a value of 30 or more as determined by Washington State DOT Test Method T 113, Method of Test for Determination of Degradation Value (March 2002 version) except that the reported degradation value will be the result of testing a single composite specimen from that portion of the sample that passes the 12.5mm [1/2 inch] sieve and is retained on the 2.00mm [No 10] sieve, minus any reclaimed asphalt pavement used."

703.09 HMA Mixture Composition The coarse and fine aggregate shall meet the requirements of Section 703.07. The several aggregate fractions for mixtures shall be sized, graded, and combined in such proportions that the resulting composite blends will meet the grading requirements of the following table.

AGGREGATE GRADATION CONTROL POINTS

SIEVE SIZE	Nominal Maximum Aggregate Size---Control Points (Percent Passing)				
	TYPE 25 mm	TYPE 19 mm	TYPE 12.5 mm	TYPE 9.5 mm	TYPE 4.75 mm
	PERCENT BY WEIGHT PASSING - COMBINED AGGREGATE				
37.5 mm	100				
25 mm	90-100	100			
19 mm	-90	90-100	100		
12.5 mm		-90	90-100	100	100
9.5 mm		-	-90	90-100	95-100
4.75 mm		-	-	-90	80-100
2.36 mm	19-45	23-49	28-58	32-67	40 - 80
1.18 mm		-	-	-	-
600 µm		-	-	-	-
300 µm		-	-	-	-
75 µm	1-7	2-8	2-10	2-10	2-10

Gradation Classification---- The combined aggregate gradation shall be classified as coarse-graded when it passes below the Primary Control Sieve (PCS) control point as defined in the following table. All other gradations shall be classified as fine-graded.

GRADATION CLASSIFICATION

PCS Control Point for Mixture Nominal Maximum Aggregate Size (% passing)				
Nominal Maximum Aggregate Size	TYPE 25 mm	TYPE 19 mm	TYPE 12.5 mm	TYPE 9.5 mm
Primary Control Sieve	4.75 mm	4.75 mm	2.36 mm	2.36 mm
PCS Control Point (% passing)	40	47	39	47

If a Grading “D” mixture is allowed per Special Provision Section 403, it shall meet the following gradation and the aggregate requirements of Section 703.07.

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves
½ inch	100
¾ inch	93-100
No. 4	60-80
No. 8	46-65
No. 16	25-55
No. 30	16-40
No. 50	10-30
No. 100	6-22
No. 200	3.0-8.0

703.18 Common Borrow Replace the first paragraph with the following: “Common borrow shall consist of earth, suitable for embankment construction. It shall be free from frozen material, perishable rubbish, peat, and other unsuitable material including material currently or

previously contaminated by chemical, radiological, or biological agents unless the material is from a DOT project and authorized by DEP for use.”

703.22 Underdrain Backfill Material Change the first paragraph from “...for Underdrain Type B...” to “...for Underdrain Type B and C...”

Replace subsections 703.25 through 703.28 with the following:

“703.25 Stone Fill Stones for stone fill shall consist of hard, sound, durable rock that will not disintegrate by exposure to water or weather. Stone for stone fill shall be angular and rough. Rounded, subrounded, or long thin stones will not be allowed. Stone for stone fill may be obtained from quarries or by screening oversized rock from earth borrow pits. The maximum allowable length to thickness ratio will be 3:1. The minimum stone size (10 lbs) shall have an average dimension of 5 inches. The maximum stone size (500 lbs) shall have a maximum dimension of approximately 36 inches. Larger stones may be used if approved by the Resident. Fifty percent of the stones by volume shall have an average dimension of 12 inches (200 lbs).

703.26 Plain and Hand Laid Riprap Stone for riprap shall consist of hard, sound durable rock that will not disintegrate by exposure to water or weather. Stone for riprap shall be angular and rough. Rounded, subrounded or long thin stones will not be allowed. The maximum allowable length to width ratio will be 3:1. Stone for riprap may be obtained from quarries or by screening oversized rock from earth borrow pits. The minimum stone size (10 lbs) shall have an average dimension of 5 inches. The maximum stone size (200 lbs) shall have an average dimension of approximately 12 inches. Larger stones may be used if approved by the Resident. Fifty percent of the stones by volume shall have an average dimension greater than 9 inches (50 lbs).

703.27 Stone Blanket Stones for stone blanket shall consist of sound durable rock that will not disintegrate by exposure to water or weather. Stone for stone blanket shall be angular and rough. Rounded or subrounded stones will not be allowed. Stones may be obtained from quarries or by screening oversized rock from earth borrow pits. The minimum stone size (300 lbs) shall have minimum dimension of 14 inches, and the maximum stone size (3000 lbs) shall have a maximum dimension of approximately 66 inches. Fifty percent of the stones by volume shall have average dimension greater than 24 inches (1000 lbs).

703.28 Heavy Riprap Stone for heavy riprap shall consist of hard, sound, durable rock that will not disintegrate by exposure to water or weather. Stone for heavy riprap shall be angular and rough. Rounded, subrounded, or thin, flat stones will not be allowed. The maximum allowable length to width ratio will be 3:1. Stone for heavy riprap may be obtained from quarries or by screening oversized rock from earth borrow pits. The minimum stone size (500 lbs) shall have minimum dimension of 15 inches, and at least fifty percent of the stones by volume shall have an average dimension greater than 24 inches (1000 lbs).”

Add the following paragraph:

“703.32 Definitions (ASTM D 2488, Table 1).

Angular: Particles have sharp edges and relatively plane sides with unpolished surfaces

Subrounded: Particles have nearly plane sides but have well-rounded corners and edges

Rounded: Particles have smoothly curved sides and no edges”

SECTION 706 NON-METALLIC PIPE

706.06 Corrugated Polyethylene Pipe for Underdrain, Option I and Option III Culvert Pipe Change the first sentence from "...300 mm diameters to 900 mm" to "...300 mm diameters to 1200 mm" Delete, in it's entirety, the last sentence which begins "This pipe and resins..." and replace with the following; "Manufacturers of corrugated polyethylene pipe must participate in, and maintain compliance with, AASHTO's National Transportation Product Evaluation Program (www.ntpep.org) which audits producers of plastic pipe. A certificate of compliance must be provided with each shipment."

SECTION 709 REINFORCING STEEL AND WELDED STEEL WIRE FABIC

709.03 Steel Strand Change the second paragraph from "...shall be 12mm [½ inch] AASHTO M203M/M203 (ASTM A416/A416M)..." to "...shall be 15.24 mm [0.600 inch] diameter AASHTO M203 (ASTM A416)..."

SECTION 710 FENCE AND GUARDRAIL

710.03 Chain Link Fabric Add the following sentence: "Chain Link fabric for PVC coated shall conform to the requirements of AASHTO M181, Type IV-Class B."

710.04 Metal Beam Rail Replace with the following: "Galvanized steel rail elements shall conform to the requirements of AASHTO M 180, Class A, Type II.

When corrosion resistant steel is specified, rail shall conform to AASHTO M 180, Class A, Type IV. Beams of corrosion resistant steel shall not be painted or galvanized. They shall be so handled and stored that the traffic face of these beams, used in a continuous run of guardrail, shall not show a distinctive color differential.

When metal beam rail is to be installed on a curve having a radius of curvature of 150 ft. or less, the beam sections shall be fabricated on an arc to the required radius and permanently stamped or embossed with the designated radius.

The engineer may take one piece of guardrail, a backup plate, and end or buffer section from each 200 pieces in a lot, or from each lot if less than 200 pieces are included therein for determination of compliance with specification requirements. If one piece fails to conform to the requirements of this specification, two other pieces shall be tested. If either of these pieces fails to conform to the requirements of this specification, the lot of material represented by these samples shall be rejected. A lot shall be considered that quantity of material offered for inspection at one time that bears the same heat and coating identification."

710.07 Guardrail Posts Section b. change "...AASHTO M183/M183M..." to "...AASHTO M 270M/M 270 Grade 250 (36)..."

SECTION 712
MISCELLANEOUS HIGHWAY MATERIALS

712.04 Stone Curbing and Edging Delete the existing and replace with the following: “Stone for curbing and edging shall be approved granite from acceptable sources. The stone shall be hard and durable, predominantly gray in color, free from seams that would be likely to impair its structural integrity, and of a smooth splitting character. Natural grain size and color variations characteristic of the source deposit will be permitted. Such natural variations may include bands or clusters of mineral crystallization provided they do not impair the structural integrity of the curb stone. The Contractor shall submit for approval the name of the quarry that is the proposed source of the granite for curb materials along with full scale color photos of the granite. Such submission shall be made sufficiently in advance of ordering so that the Resident may have an opportunity to judge the stone, both as to quality and appearance. Samples of curbing shall be submitted for approval only when requested by the Resident. The dimensions, shape, and other details shall be as shown on the plans.”

712.06 Precast Concrete Units In the first paragraph, change “...ASTM C478M...” to “...AASHTO M199...” Delete the second paragraph and replace with the following; “Approved structural fibers may be used as a replacement of 6 x 6 #10 gauge welded wire fabric when used at an approved dosage rate for the construction of manhole and catch basin units. The material used shall be one of the products listed on the Maine Department of Transportation’s Approved Product List of Structural Fiber Reinforcement.” Delete the fifth paragraph and replace with the following; “The concrete mix design shall be approved by the Department. Concrete shall contain 6% air content, plus or minus 1½% tolerance when tested according to AASHTO T152. All concrete shall develop a minimum compressive strength of 28 MPa [4000 psi] in 28 days when tested according to AASHTO T22. The absorption of a specimen, when tested according to AASHTO T280, Test Method “A”, shall not exceed nine percent of the dry mass.”

Add the following:

“712.07 Tops, and Traps These metal units shall conform to the plan dimensions and to the following specification requirements for the designated materials.

Gray iron or ductile iron castings shall conform to the requirements of AASHTO M306 unless otherwise designated.”

712.08 Corrugated Metal Units The units shall conform to plan dimensions and the metal to AASHTO M36/M36M. Bituminous coating, when specified, shall conform to AASHTO M190 Type A.

712.09 Catch Basin and Manhole Steps Steps for catch basins and for manholes shall conform to ASTM C478M [ASTM C478], Section 13 for either of the following material:

- (a) Aluminum steps-ASTM B221M, [ASTM B211] Alloy 6061-T6 or 6005-T5.

(b) Reinforced plastic steps Steel reinforcing bar with injection molded plastic coating copolymer polypropylene. Polypropylene shall conform to ASTM D 4101.

712.23 Flashing Lights Flashing Lights shall be power operated or battery operated as specified.

(a) Power operated flashing lights shall consist of housing, adapters, lamps, sockets, reflectors, lens, hoods and other necessary equipment designed to give clearly visible signal indications within an angle of at least 45 degrees and from 3 to 90 m [10 to 300 ft] under all light and atmospheric conditions.

Two circuit flasher controllers with a two-circuit filter capable of providing alternate flashing operations at the rate of not less than 50 nor more than 60 flashes per minute shall be provided.

The lamps shall be 650 lumens, 120 volt traffic signal lamps with sockets constructed to properly focus and hold the lamp firmly in position.

The housing shall have a rotatable sun visor not less than 175 mm [7 in] in length designed to shield the lens.

Reflectors shall be of such design that light from a properly focused lamp will reflect the light rays parallel. Reflectors shall have a maximum diameter at the point of contact with the lens of approximately 200 mm [8 in].

The lens shall consist of a round one-piece convex amber material which, when mounted, shall have a visible diameter of approximately 200 mm [8 in]. They shall distribute light and not diffuse it. The distribution of the light shall be asymmetrical in a downward direction. The light distribution of the lens shall not be uniform, but shall consist of a small high intensity portion with narrow distribution for long distance throw and a larger low intensity portion with wide distribution for short distance throw. Lenses shall be marked to indicate the top and bottom of the lens.

(b) Battery operated flashing lights shall be self-illuminated by an electric lamp behind the lens. These lights shall also be externally illuminated by reflex-reflective elements built into the lens to enable it to be seen by reflex-reflection of the light from the headlights of oncoming traffic. The batteries must be entirely enclosed in a case. A locking device must secure the case. The light shall have a flash rate of not less than 50 nor more than 60 flashes per minute from minus 30 °C [minus 20 °F] to plus 65 °C [plus 150 °F]. The light shall have an on time of not less than 10 percent of the flash cycle. The light beam projected upon a surface perpendicular to the axis of the light beam shall produce a lighted rectangular projection whose minimum horizontal dimension shall be 5 degrees each side of the horizontal axis. The effective intensity shall not have an initial value greater than 15.0 candelas or drop below 4.0 candelas during the first 336 hours of continuous flashing. The illuminated lens shall appear to be uniformly bright over its entire illuminated surface when viewed from any point within an angle of 9 degrees each side of the vertical axis and 5 degrees each side of the horizontal axis. The lens shall not be less than 175 mm [7 in] in diameter including a reflex-reflector ring of 13 mm [½ in] minimum width around the periphery. The lens shall be yellow in color and have a minimum relative luminous transmittance of 0.440 with a luminance of 2854° Kelvin.

The lens shall be one-piece construction. The lens material shall be plastic and meet the luminous transmission requirements of this specification. The case containing the batteries and circuitry shall be constructed of a material capable of withstanding abuse equal to or greater than 1.21 mm thick steel [No. 18 U.S. Standard Gage Steel]. The housing and the lens frame, if of metal shall be properly cleaned, degreased and pretreated to promote adhesion. It shall be given one or more coats of enamel which, when dry shall completely obscure the metal. The enamel coating shall be of such quality that when the coated case is struck a light blow with a sharp tool, the paint will not chip or crack and if scratched with a knife will not powder. The case shall be so constructed and closed as to exclude moisture that would affect the proper operation of light. The case shall have a weep hole to allow the escape of moisture from condensation. Photoelectric controls, if provided, shall keep the light operating whenever the ambient light falls below 215 lx [20 foot candles]. Each light shall be plainly marked as to the manufacturer's name and model number.

If required by the Resident, certification as to conformance to these specifications shall be furnished based on results of tests made by an independent testing laboratory. All lights are subject to random inspection and testing. All necessary random samples shall be provided to the Resident upon request without cost to the Department. All such samples shall be returned to the Contractor upon completion of the tests.

712.32 Copper Tubing Copper tubing and fittings shall conform to the requirements of ASTM B88M Type A [ASTM B88, Type K] or better.

712.33 Non-metallic Pipe, Flexible Non-metallic pipe and pipe fittings shall be acceptable flexible pipe manufactured from virgin polyethylene polymer suitable for transmitting liquids intended for human or animal consumption.

712.34 Non-metallic Pipe, Rigid Non-metallic pipe shall be Schedule 40 polyvinylchloride (PVC) that meets the requirement of ASTM D1785. Fittings shall be of the same material.

712.341 Metallic Pipe Metallic pipe shall be ANSI, Standard B36.10, Schedule 40 steel pipe conforming to the requirements of ASTM A53 Types E or S, Grade B. End plates shall be steel conforming to ASTM A36/A36M.

Both the sleeve and end plates shall be hot dip galvanized. Pipe sleeve splices shall be welded splices with full penetration weld before galvanizing.

712.35 Epoxy Resin Epoxy resin for grouting or sealing shall consist of a mineral filled thixotropic, flexible epoxy resin having a pot life of approximately one hour at 10°C [50°F]. The grout shall be an approved product suitable for cementing steel dowels into the preformed holes of curb inlets and adjacent curbing. The sealant shall be an approved product, light gray in color and suitable for coating the surface.

712.36 Bituminous Curb The asphalt cement for bituminous curb shall be of the grade required for the wearing course, or shall be Viscosity Grade AC-20 meeting the current requirements of Subsection 702.01 Asphalt Cement. The aggregate shall conform to the

requirements of Subsection 703.07. The coarse aggregate portion retained on the 2.36 mm [No. 8] sieve may be either crushed rock or crushed gravel.

The mineral constituents of the bituminous mixture shall be sized and graded and combined in a composite blend that will produce a stable durable curbing with an acceptable texture.

Bituminous material for curb shall meet the requirements of Section 403 - Hot Bituminous Pavement.

712.37 Precast Concrete Slab Portland cement concrete for precast slabs shall meet the requirements of Section 502 - Structural Concrete, Class A.

The slabs shall be precast to the dimension shown on the plans and cross section and in accordance with the Standard Detail plans for Concrete Sidewalk Slab. The surface shall be finished with a float finish in accordance with Subsection 502.14(c). Lift devices of sufficient strength to hold the slab while suspended from cables shall be cast into the top or back of the slab.

712.38 Stone Slab Stone slabs shall be of granite from an acceptable source, hard, durable, predominantly gray in color, free from seams which impair the structural integrity and be of smooth splitting character. Natural color variations characteristic of the deposit will be permitted. Exposed surfaces shall be free from drill holes or indications of drill holes. The granite slabs in any one section of backslope must be all the same finish.

The granite slabs shall be scabble dressed or sawed to an approximately true plane having no projections or depressions over 13 mm [$\frac{1}{2}$ in] under a 600 mm [2 ft] straightedge or over 25 mm [1 in] under a 1200 mm [4 ft] straightedge. The arris at the intersection of the top surface and exposed front face shall be pitched so that the arris line is uniform throughout the length of the installed slabs. The sides shall be square to the exposed face unless the slabs are to be set on a radius or other special condition which requires that the joints be cut to fit, but in any case shall be so finished that when the stones are placed side by side no space more than 20 mm [$\frac{3}{4}$ in] shall show in the joint for the full exposed height.

Liftpin holes in all sides will be allowed except on the exposed face.

SECTION 717 ROADSIDE IMPROVEMENT MATERIAL

717.03 C. Method #3 - Roadside Mixture #3 Change the seed proportions to the following:

Crown Vetch	25%
Perennial Lupine	25%
Red Clover	12.5%
Annual Rye	37.5%

717.05 Mulch Binder Change the third sentence to read as follows:

“Paper fiber mulch may be used as a binder at the rate of 2.3 kg/unit [5 lb/unit].”

SECTION 720
STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND
TRAFFIC SIGNALS

720.08 U-Channel Posts Change the first sentence from "..., U-Channel posts..." to "..., Rib Back U-Channel posts..."

SECTION 722
GEOTEXTILES

722.01 Stabilization/Reinforcement Geotextile Add the following to note #3; "The strengths specified in the columns labeled "<50%" and "≥ 50%" refer to the elongation at which the geotextile material was tested. For example; if a fabric is tested at 15% elongation then it must meet or exceed the minimum strength shown in the "<50%" column. Submittals must include the percent elongation at which the material was tested."

722.02 Drainage Geotextile Add the following to note #3; "The strengths specified in the columns labeled "<50%" and "≥ 50%" refer to the elongation at which the geotextile material was tested. For example; if a fabric is tested at 15% elongation then it must meet or exceed the minimum strength shown in the "<50%" column. Submittals must include the percent elongation at which the material was tested."

722.01 Erosion Control Geotextile Add the following note to Elongation in the Mechanical Property Table; "The strengths specified in the columns labeled "<50%" and "≥ 50%" refer to the elongation at which the geotextile material was tested. For example; if a fabric is tested at 15% elongation then it must meet or exceed the minimum strength shown in the "<50%" column. Submittals must include the percent elongation at which the material was tested."

APPENDIX A TO DIVISION 100

SECTION 1 - BIDDING PROVISIONS

A. Federally Required Certifications By signing and delivering a Bid, the Bidder certifies as provided in all certifications set forth in this Appendix A - Federal Contract Provisions Supplement including:

- Certification Regarding No Kickbacks to Procure Contract as provided on this page 1 below.
- Certification Regarding Non-collusion as provided on page 1 below.
- Certification Regarding Non-segregated Facilities as provided by FHWA Form 1273, section III set forth on page 21 below.
- "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion" as provided by FHWA Form 1273, section XI set forth on page 32 below.
- "Certification Regarding Use of Contract Funds for Lobbying" as provided by FHWA Form 1273, section XII set forth on page 35 below.

Unless otherwise provided below, the term "Bidder", for the purposes of these certifications, includes the Bidder, its principals, and the person(s) signing the Bid. Upon execution of the Contract, the Bidder (then called the Contractor) will again make all the certifications indicated in this paragraph above. Upon execution of the Contract, the Bidder (then called the Contractor) will again make all the certifications indicated in this paragraph above.

CERTIFICATION REGARDING NO KICKBACKS TO PROCURE CONTRACT Except expressly stated by the Bidder on sheets submitted with the Bid (if any), the Bidder hereby certifies, to the best of its knowledge and belief, that it has not:

(A) employed or retained for a commission, percentage, brokerage, contingent fee, or other consideration, any firm or person (other than a bona fide employee working solely for me) to solicit or secure this contract;

(B) agreed, as an express or implied condition for obtaining this contract, to employ or retain the services of any firm or person in connection with carrying out the contract, or;

C) paid, or agreed to pay, to any firm, organization, or person (other than a bona fide employee working solely for me) any fee, contribution, donation, or consideration of any kind for, or in connection with, procuring or carrying out the contract;

By signing and submitting a Bid, the Bidder acknowledges that this certification is to be furnished to the Maine Department of Transportation and the Federal Highway Administration, U.S. Department of Transportation in connection with this contract in anticipation of federal aid highway funds and is subject to applicable state and federal laws, both criminal and civil.

CERTIFICATION REGARDING NONCOLLUSION Under penalty of perjury as provided by federal law (28 U.S.C. §1746), 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 the Contract.

For a related provisions, see Section 102.7.2 (C) of the Standard Specifications - "Effects of Signing and Delivery of Bids" - "Certifications", Section 3 of this Appendix A entitled "Other Federal Requirements" including section XI - "Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion" and section XII. - "Certification Regarding Use of Contract Funds for Lobbying."

B. Bid Rigging Hotline To report bid rigging activities call: **1-800-424-9071**

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

SECTION 2 - FEDERAL EEO AND CIVIL RIGHTS REQUIREMENTS

Unless expressly otherwise provided in the Bid Documents, the provisions contained in this Section 2 of this "Federal Contract Provisions Supplement" are hereby incorporated into the Bid Documents and Contract.

A. Nondiscrimination & Civil Rights - Title VI The Contractor and its subcontractors shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the Department deems appropriate. The Contractor and subcontractors shall comply with Title VI of the Civil Rights Act of 1964, as amended, and with all State of Maine and other Federal Civil Rights laws.

For related provisions, see Subsection B - "Nondiscrimination and Affirmative Action - Executive Order 11246" of this Section 2 and Section 3 - Other Federal Requirements of this "Federal Contract Provisions Supplement" including section II - "Nondiscrimination" of the "Required Contract Provisions, Federal Aid Construction Contracts", FHWA-1273.

B. Nondiscrimination and Affirmative Action - Executive Order 11246 Pursuant to Executive Order 11246, which was issued by President Johnson in 1965 and amended in 1967 and 1978, this Contract provides as follows.

The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its efforts to achieve maximum results from its actions. The Contractor shall

document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

1. Ensure and maintain a working environment free of harassment, intimidations, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all forepersons, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
2. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its union have employment opportunities available, and to maintain a record of the organization's responses.
3. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.
4. Provide immediate written notification to the Department's Civil Rights Office when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Design-Builder's efforts to meet its obligations.
5. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under B above.
6. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligation; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
7. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions including specific review

of these items with on-site supervisory personnel such as Superintendents, General Forepersons, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

8. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractor's and Subcontractors with whom the Contractor does or anticipates doing business.
9. Direct its recruitment efforts, both orally and written to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above describing the openings, screenings, procedures, and test to be used in the selection process.
10. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth, both on the site and in other areas of a Contractor's workforce.
11. Validate all tests and other selection requirements.
12. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
13. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
14. Ensure that all facilities and company activities are non segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
15. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction Contractor's and suppliers, including circulation of solicitations to minority and female Contractor associations and other business associations.
16. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

C. Goals for Employment of Women and Minorities Per Executive Order 11246, craft tradesperson goals are 6.9% women and .5% minorities employed. However, goals may be adjusted upward at the mutual agreement of the Contractor and the Department. Calculation of these percentages shall not include On-the-Job Training Program trainees, and shall not include clerical or field clerk position employees.

For a more complete presentation of requirements for such Goals, see the federally required document "Goals for Employment of Females and Minorities" set forth in the next 6 pages below.

Start of GOALS FOR EMPLOYMENT OF FEMALES AND MINORITIES
Federally Required Contract Document

§60-4.2 Solicitations

- (d) The following notice shall be included in, and shall be part of, all solicitations for offers and bids on all Federal and federally assisted construction contracts or subcontracts in excess of \$10,000 to be performed in geographical areas designated by the Director pursuant to §60-4.6 of this part (see 41 CFR 60-4.2(a)):

Notice of Requirement for Affirmative Action to Ensure Equal Opportunity (Executive Order 11246)

1. The Offeror's or bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

<u>Goals for female participation in each trade</u>	6.9%
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Goals for minority participation for each trade

Maine

001 Bangor, ME	0.8%
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Non-SMSA Counties (Aroostook, Hancock, Penobscot, Piscataquis, Waldo, Washington)

002 Portland-Lewiston, ME

SMSA Counties: 4243 Lewiston-Auburn, ME (Androscoggin)	0.5%
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6403 Portland, ME (Cumberland, Sagadahoc)	0.6%
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Non-SMSA Counties: (Franklin, Kennebec, Knox, Lincoln, Oxford, Somerset, York)	0.5%
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These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non federally involved construction.

The contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be in violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer identification number of the subcontractor, estimated dollar amount of the subcontract; estimated started and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this Notice, and in the Contract resulting from this solicitation, the "covered area" is (insert description of the geographical areas where the contract is to be performed giving the state, county and city, if any).

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)

1. As used in these specifications:
 - a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
 - b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
 - c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department form 941;
 - d. "Minority" includes:
 - (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);

- (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of the North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
2. Whenever the Contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
 3. If the contractor, is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors for Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
 4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7 a. through p. of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical areas where the work is being performed. Goals are published periodically in the Federal Register in notice form and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specific.
 5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant, thereto.
 6. In order for the non working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the

apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as expensive as the following:
 - a. Ensure and maintain a working environment free of harassment, intimidation, coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, when possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - b. Establish and maintain a current list of minority and female recruitment sources provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organization's responses.
 - c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment sources or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.
 - d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
 - e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources complied under 7b above.
 - f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific

review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

- g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
- i. Direct its recruitment, efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing prior to the date for the acceptance of applications for apprenticeship or the openings, screening procedures, and tests to be used in the selection process.
- j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on site and in other areas of a Contractor's work force.
- k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
- l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
- m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
- n. Ensure that all facilities and company activities are non segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
- o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of

solicitation to minority and female contractor associations and other business associations.

- p. Conduct a review, at least annually, of all supervisor's adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7 a through p.). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7 a through p. of these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program and reflected in the Contractor's minority and female work force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions take on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, specific minority group of women is underutilized.)
10. The Contractor shall not use the goals and timetables or affirmative action even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if standards to discriminate against any person because of race, color, religion, sex, or national origin.
11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementation regulations by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the

requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.6.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g. mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and location at which the work was performed. Records be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.
15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

End of GOALS FOR EMPLOYMENT OF FEMALES AND MINORITIES
Federally Required Contract Document

D. Disadvantaged Business Enterprise (DBE) Requirements The Department has established an annual Disadvantaged Business Enterprise goal to be achieved through race neutral means. This goal will adjusted periodically and will be provided by Supplemental Provision. The Contractor shall comply with all provisions of this section regarding DBE participation and the Department's latest version of the Disadvantaged Business Enterprise Program Manual, said Manual being incorporated herein by reference. In the case of conflict between this Contract and said Manual, this Contract shall control. The Department reserves the right to adjust DBE goals on a project-by-project basis by addendum.

Policy. It is the Department's policy that DBEs as defined in 23 CFR Part 26 and referenced in the Transportation Equity Act for 21st Century of 1998, as amended from the Surface Transportation Uniform Relocation Assistance Act of 1987, and the Intermeddle Surface Transportation Efficiency Act of 1991. The intent hereto remains to provide the maximum opportunity for DBEs to participate in the performance of contracts financed in whole or in part with federal funds.

The Department and its Contractors shall not discriminate on the basis of race, color, national origin, ancestry, sex, age, or disability in the award and performance of DOT assisted contracts.

Disadvantaged Business Enterprises are those so certified by the Maine Department of Transportation Civil Rights Office prior to bid opening date.

The Department has determined that elements of a good faith effort to meet the contract goal include but are not limited to the following:

1. Whether the Contractor advertised in general circulation, trade association, and minority/women's-focus media concerning the subcontracting opportunities;
2. Whether the Contractor provided written notice to a reasonable number of specific DBEs that their interest in the contract is being solicited;
3. Whether the Contractor followed up on initial solicitations of interest by contacting DBEs to determine with certainty whether the DBEs were interested;
4. Whether the Contractor selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the DBE goals;
5. Whether the Contractor provided interested DBEs with adequate information about the plans, specification and requirements of the contract;
6. Whether the Contractor negotiated in good faith with interested DBEs, not rejecting the DBE as unqualified without sound reasons based on a thorough investigation of their capabilities;
7. Whether the Contractor made efforts to assist interested DBEs with other appropriate technical/financial assistance required by the Department or Contractor;
8. Whether the Contractor effectively used the services of available minority/women's community organizations, minority/women's business assistance offices; and other organizations that provide assistance in the recruitment and placement of DBEs.

Substitutions of DBEs. The following may be acceptable reasons for Civil Rights Office approval of such a change order:

- The DBE defaults, voluntarily removes itself or is over-extended;
- The Department deletes portions of the work to be performed by the DBE.

It is not intended that the ability to negotiate a more advantageous contract with another certified DBE be considered a valid basis for such a change in DBE utilization once the DBE Bid Submission review has been passed. Any requests to alter the DBE commitment must be in writing and included with the change order.

Failure to carry out terms of this Standard Specification shall be treated as a violation of this contract and will result in contract sanctions which may include withholding of partial payments totaling the creditable dollars amount which would have been paid for said DBE participation, termination of this contract or other measures which may affect the ability of the Contractor to obtain Department contracts.

Copies of the Maine Department of Transportation's DBE Program may be obtained from:

Maine Department of Transportation
Civil Rights Office
#16 State House Station
Augusta, Maine 04333-0016
tel. (207) 624-3519

Quarterly Reporting Requirement. The Contractor must submit Semi-annual reports of actual dollars paid to Disadvantaged Business Enterprises (DBE's) on this Project to the MDOT Civil Rights Office by the end of the third week of April and October for the period covering the preceding six months considered Federal Fiscal Year periods. The reports will be submitted directly to the Civil Rights Office on the form provided in the latest version of the DBE Program Manual. Failure to submit the report by the deadline may result in a withholding of approval of partial payment estimates by the Department.

SECTION 3 - OTHER FEDERAL REQUIREMENTS

Unless expressly otherwise provided in the Bid Documents, the provisions contained in this Section 3 of this "Federal Contract Provisions Supplement" are hereby incorporated into the Bid Documents and Contract.

A. Buy America

If the cost of products purchased for permanent use in this project which are manufactured of steel, iron or the application of any coating to products of these materials exceeds 0.1 percent of the contract amount, or \$2,500.00, whichever is greater, the products shall have been manufactured and the coating applied in the United States. The coating materials are not subject to this clause, only the application of the coating. In computing that amount, only the cost of the product and coating application cost will be included.

Ore, for the manufacture of steel or iron, may be from outside the United States; however, all other manufacturing processes of steel or iron must be in the United States to qualify as having been manufactured in the United States.

United States includes the 50 United States and any place subject to the jurisdiction thereof.

Products of steel include, but are not limited to, such products as structural steel, piles, guardrail, steel culverts, reinforcing steel, structural plate and steel supports for signs, luminaries and signals.

Products of iron include, but are not limited to, such products as cast iron grates.

Application of coatings include, but are not limited to, such applications as epoxy, galvanized and paint.

To assure compliance with this section, the Contractor shall submit a certification letter on its letterhead to the Department stating the following:

“This is to certify that products made of steel, iron or the application of any coating to products of these materials whose costs are in excess of \$2,500.00 or 0.1 percent of the original contract amount, whichever is greater, were manufactured and the coating, if one was required, was applied in the United States.”

B. Materials

a. Convict Produced Materials References: 23 U.S.C. 114(b)(2), 23 CFR 635.417

Applicability: FHWA's prohibition against the use of convict material only applies to Federal-aid highways. Materials produced after July 1, 1991, by convict labor may only be incorporated in a Federal-aid highway construction project if: 1) such materials have been produced by convicts who are on parole, supervised release, or probation from a prison; or 2) such material has been produced in a qualified prison facility, e.g., prison industry, with the amount produced during any 12-month period, for use in Federal-aid projects, not exceeding the amount produced, for such use, during the 12-month period ending July 1, 1987.

Materials obtained from prison facilities (e.g., prison industries) are subject to the same requirements for Federal-aid participation that are imposed upon materials acquired from other sources. Materials manufactured or produced by convict labor will be given no preferential treatment.

The preferred method of obtaining materials for a project is through normal contracting procedures which require the contractor to furnish all materials to be incorporated in the work. The contractor selects the source, public or private, from which the materials are to be obtained (23 CFR 635.407). Prison industries are prohibited from bidding on projects directly (23 CFR 635.112e), but may act as material supplier to construction contractors.

Prison materials may also be approved as State-furnished material. However, since public agencies may not bid in competition with private firms, direct acquisition of materials from a prison industry for use as State-furnished material is subject to a public interest finding with the Division Administrator's concurrence (23 CFR 635.407d). Selection of materials produced by convict labor as State-furnished materials for mandatory use should be cleared prior to the submittal of the Plans Specifications & Estimates (PS&E).

b. Patented/Proprietary Products References: 23 U.S.C. 112, 23 CFR 635.411

FHWA will not participate, directly or indirectly, in payment for any premium or royalty on any patented or proprietary material, specification, or process specifically set forth in the plans and specifications for a project, unless:

- the item is purchased or obtained through competitive bidding with equally suitable unpatented items,
- the STA certifies either that the proprietary or patented item is essential for synchronization with the existing highway facilities or that no equally suitable alternative exists, or
- the item is used for research or for a special type of construction on relatively short sections of road for experimental purposes. States should follow FHWA's procedures for "Construction Projects Incorporating Experimental Features" ([expermnt.htm](#)) for the submittal of work plans and evaluations.

The primary purpose of the policy is to have competition in selection of materials and allow for development of new materials and products. The policy further permits materials and products that are judged equal may be bid under generic specifications. If only patented or proprietary products are acceptable, they shall be bid as alternatives with all, or at least a

reasonable number of, acceptable materials or products listed; and the Division Administrator may approve a single source if it can be found that its utilization is in the public interest.

Trade names are generally the key to identifying patented or proprietary materials. Trade name examples include 3M, Corten, etc. Generally, products identified by their brand or trade name are not to be specified without an "or equal" phrase, and, if trade names are used, all, or at least a reasonable number of acceptable "equal" materials or products should be listed. The licensing of several suppliers to produce a product does not change the fact that it is a single product and should not be specified to the exclusion of other equally suitable products.

c. State Preference References: 23 U.S.C. 112, 23 CFR 635.409

Materials produced within Maine shall not be favored to the exclusion of comparable materials produced outside of Maine. State preference clauses give particular advantage to the designated source and thus restrict competition. Therefore, State preference provisions shall not be used on any Federal-aid construction projects.

This policy also applies to State preference actions against materials of foreign origin, except as otherwise permitted by Federal law. Thus, States cannot give preference to in-State material sources over foreign material sources. Under the Buy America provisions, the States are permitted to expand the Buy America restrictions provided that the STA is legally authorized under State law to impose more stringent requirements.

d. State Owned/Furnished/Designated Materials References: 23 U.S.C. 112, 23 CFR 635.407

Current FHWA policy requires that the contractor must furnish all materials to be incorporated in the work, and the contractor shall be permitted to select the sources from which the materials are to be obtained. Exceptions to this requirement may be made when there is a definite finding, by MDOT and concurred in by Federal Highway Administration's (FHWA) Division Administrator, that it is in the public interest to require the contractor to use materials furnished by the MDOT or from sources designated by MDOT. The exception policy can best be understood by separating State-furnished materials into the categories of manufactured materials and local natural materials.

Manufactured Materials When the use of State-furnished manufactured materials is approved based on a public interest finding, such use must be made mandatory. The optional use of State-furnished manufactured materials is in violation of our policy prohibiting public agencies from competing with private firms. Manufactured materials to be furnished by MDOT must be acquired through competitive bidding, unless there is a public interest finding for another method, and concurred in by FHWA's Division Administrator.

Local Natural Materials When MDOT owns or controls a local natural materials source such as a borrow pit or a stockpile of salvaged pavement material, etc., the materials may be designated for either optional or mandatory use; however, mandatory use will require a public interest finding (PIF) and FHWA's Division Administrator's concurrence.

In order to permit prospective bidders to properly prepare their bids, the location, cost, and any conditions to be met for obtaining materials that are made available to the contractor shall be stated in the bidding documents.

Mandatory Disposal Sites Normally, the disposal site for surplus excavated materials is to be of the contractor's choosing; although, an optional site(s) may be shown in the contract provisions. A mandatory site shall be specified when there is a finding by MDOT, with the concurrence of the Division Administrator, that such placement is the most economical or that the environment would be substantially enhanced without excessive cost. Discussion of the mandatory use of a disposal site in the environmental document may serve as the basis for the public interest finding.

Summarizing FHWA policy for the mandatory use of borrow or disposal sites:

- mandatory use of either requires a public interest finding and FHWA's Division Administrator's concurrence,
- mandatory use of either may be based on environmental consideration where the environment will be substantially enhanced without excessive additional cost, and
- where the use is based on environmental considerations, the discussion in the environmental document may be used as the basis for the public interest finding.

Factors to justify a public interest finding should include such items as cost effectiveness, system integrity, and local shortages of material.

C. Standard FHWA Contract Provisions - FHWA 1273

Unless expressly otherwise provided in the Bid Documents, the following "Required Contract Provisions, Federal Aid Construction Contracts", FHWA-1273, are hereby incorporated into the Bid Documents and Contract.

Start of FHWA 1273 REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS(As revised through March 10, 1994)

I. GENERAL

1. These contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.
2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.

3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.
4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

Section I, paragraph 2;
Section IV, paragraphs 1, 2, 3, 4, and 7;
Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the DOL, or the contractor's employees or their representatives.
6. Selection of Labor: During the performance of this contract, the contractor shall not:
 - a. discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or
 - b. employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

II. NONDISCRIMINATION (Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:
 - a. The contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.
 - b. The contractor will accept as his operating policy the following statement:
"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment,

upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job training."

2. EEO Officer. The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so.
3. Dissemination of Policy. All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:
 - a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.
 - b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.
 - c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minority group employees.
 - d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.
 - e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.
4. Recruitment. When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.
 - a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.

- b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)
 - c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.
5. Personnel Actions. Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:
- a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.
 - b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.
 - c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.
 - d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.
6. Training and Promotion.
- a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.
 - b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision

for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

- c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.
 - d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.
7. Unions. If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:
- a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.
 - b. The contractor will use best efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.
 - c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the SHA and shall set forth what efforts have been made to obtain such information.
 - d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.
8. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment. The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

- a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.
 - b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.
 - c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.
9. Records and Reports. The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.
- a. The records kept by the contractor shall document the following:
 - (1) The number of minority and non-minority group members and women employed in each work classification on the project;
 - (2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women;
 - (3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and
 - (4) The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.
 - b. All such records must be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the MDOT and the Federal Highway Administration.

The Contractor will submit to the MDOT a report for the month of July, indicating the total hours worked by minority, women and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form PR-1391. If on-the-job training is being required by "Training Special Provision," the Contractor will be required to furnish Form FHWA-1409. The report is required for week ending July 15 and can be obtained from MDOT, is due by week ending August 20th. This report is to be furnished directly to MDOT - Civil Rights Office.

III. NONSEGREGATED FACILITIES (Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

- a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.
- b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, time clocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).
- c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of \$10,000 or more and that it will retain such certifications in its files.

IV. PAYMENT OF PREDETERMINED MINIMUM WAGE (Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. General:

- a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account [except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the

provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

- b. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.
- c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. Classification:

- a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.
- b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:
 - (1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;
 - (2) the additional classification is utilized in the area by the construction industry;
 - (3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and
 - (4) with respect to helpers, when such a classification prevails in the area in which the work is performed.
- c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

- d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary
- e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. Payment of Fringe Benefits:

- a. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.
- b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

4. Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:

a. Apprentices:

- (1) Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.
- (2) The allowable ratio of apprentices to journeyman-level employees on the job site in any craft classification shall not be greater than the ratio permitted to the contractor

as to the entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate listed in the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor or subcontractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

- (3) Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator for the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.
- (4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

b. Trainees:

- (1) Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the DOL, Employment and Training Administration.
- (2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

- (3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which case such trainees shall receive the same fringe benefits as apprentices.
 - (4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
- c. **Helpers.** Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV.2. Any worker listed on a payroll at a helper wage rate, who is not a helper under a approved definition, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed.
5. **Apprentices and Trainees (Programs of the U.S. DOT).** Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.
6. **Withholding.** The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.
7. **Overtime Requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4

and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. Violation. Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of \$10 for each calendar day on which such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.
9. Withholding for Unpaid Wages and Liquidated Damages. The SHA shall upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 8 above.

V. STATEMENTS AND PAYROLLS (Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

1. Compliance with Copeland Regulations (29 CFR 3). The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.
2. Payrolls and Payroll Records:
 - a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.
 - b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in

Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis Bacon Act, the contractor and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.

- c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices, trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period). The payroll submitted shall set out accurately and completely all of the information required to be maintained under paragraph 2b of this Section V. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.
- d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
 - (1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;
 - (2) that such laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR 3;
 - (3) that each laborer or mechanic has been paid not less than the applicable wage rate and fringe benefits or cash equivalent for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.
- e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.
- f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

- g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

1. On all Federal-aid contracts on the National Highway System, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than \$1,000,000 (23 CFR 635) the contractor shall:
 - a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.
 - b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.
 - c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.
2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

VII. SUBLETTING OR ASSIGNING THE CONTRACT

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635).
 - a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the prime contractor,

with or without operators. Such term does not include employees or equipment of a subcontractor, assignee, or agent of the prime contractor.

- b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.
2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.
3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the SHA contracting officer determines is necessary to assure the performance of the contract.
4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. SAFETY: ACCIDENT PREVENTION

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.
2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).
3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health

standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, the following notice shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined not more than \$10,000 or imprisoned not more than 5 years or both."

X. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (Applicable to all Federal-aid construction contracts and to all related subcontracts of \$100,000 or more.)

By submission of this bid or the execution of this contract, or subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Pub.L. 92-500), Executive Order 11738, and regulations

in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.

2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.
3. That the firm shall promptly notify the SHA of the receipt of any communication from the Director, Office of Federal Activities, EPA, indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.
4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

XI. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

1. Instructions for Certification - Primary Covered Transactions:
(Applicable to all Federal-aid contracts - 49 CFR 29)
 - a. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.
 - b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.
 - c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.
 - d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
 - e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out

in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations.

- f. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.
- g. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
- h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded From Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.
- i. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- j. Except for transactions authorized under paragraph f of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--
Primary Covered Transactions

- 1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:
 - a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
 - b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or

local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1b of this certification; and
- d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Covered Transactions: (Applicable to all subcontracts, purchase orders and other lower tier transactions of \$25,000 or more - 49 CFR 29)

- a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.
- b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
- c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.
- d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.
- e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
- f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

- g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.
- h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--
Lower Tier Covered Transactions:

- 1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- 2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 - 49 CFR 20)

- 1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:
 - a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
 - b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a

Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.
3. The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

End of FHWA 1273

DEPARTMENT OF THE ARMY PERMIT

Permittee_ **Maine Dept. of Transportation, 16 State House Station, Augusta, Maine 04333**

Permit No. **NAE-2009-00514**

Issuing Office **New England District**

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description:

Place permanent and temporary fill below the ordinary high water line and the high tide line of numerous waterways and in their adjacent freshwater and tidal wetlands throughout the State of Maine in order to repair, rehabilitate, or replace numerous existing deteriorated bridges or culverts.

Project Description Continued on Page 4

This work is shown on the attached plans entitled, "MAINE DOT, 2 YEAR BRIDGE PROJECTS", on six sheets, and dated "JUNE 2009" and with the 1:2000 USGS Quadrangle Map location plans and tables contained in the administrative record.

Project Location:

In numerous waterways and in their adjacent freshwater and tidal wetlands throughout the State of Maine

Permit Conditions:

General Conditions:

December 31, 2019

1. The time limit for completing the work authorized ends on _____. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

1. The permittee shall ensure that a copy of this permit is at the work site whenever work is being performed and that all personnel performing work at the site of the work authorized by this permit are fully aware of the terms and conditions of the permit. This permit, including its drawings and any appendices and other attachments, shall be made a part of any and all contracts and sub-contracts for work which affects areas of Corps of Engineers jurisdiction at the site of the work authorized by this permit. This shall be done by including the entire permit in the specifications for work.

Special Conditions continued on Page 4

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

☒ Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

☒ Section 404 of the Clean Water Act (33 U.S.C. 1344).

☐ Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

Judy C. Gates for
(PERMITTEE) John Darity

7/15/09
(DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

Philip T. Feir
for (DISTRICT ENGINEER)

7/15/09
(DATE)

Philip T. Feir
Colonel, Corps of Engineers

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

(TRANSFeree)

(DATE)

Project Description Continued from Page 1

This work is being conducted in response to Federal and State stimulus efforts and is designed to address critical bridges and other structures that need immediate attention to insure public safety and protect the economic vitality of Maine's transportation network. Refer to attached table(s) for a list of locations, scope of work, and anticipated impacts.

Special Conditions continued from Page 2

If the permit is issued after the construction specifications but before receipt of bids or quotes, the entire permit shall be included as an addendum to the specifications. If the permit is issued after receipt of bids or quotes, the entire permit shall be included in the contract or sub-contract as a change order. The term "entire permit" includes permit amendments. Although the permittee may assign various aspects of the work to different contractors or sub-contractors, all contractors and sub-contractors shall be obligated by contract to comply with all environmental protection provisions of the entire permit, and no contract or sub-contract shall require or allow unauthorized work in areas of Corps jurisdiction.

2. The permittee shall complete and return the enclosed Compliance Certification Form within one month following the completion of the authorized work.
3. Adequate sedimentation and erosion control devices, such as geotextile silt fences or other devices capable of filtering the fines involved, shall be installed and properly maintained to minimize impacts during construction. These devices must be removed upon completion of work and stabilization of disturbed areas. The sediment collected by these devices must also be removed and placed upland, in a manner that will prevent its later erosion and transport to a waterway or wetland.
4. The permittee shall implement all terms and conditions contained in the attached water quality certification from the Maine Dept. of Environmental Protection dated "May 13, 2008". Copies of all required submittals shall also be provided to the Corps.
5. No temporary fill (e.g., access roads, cofferdams) may be placed in waters or wetlands unless specifically authorized by this permit. If temporary fill is used, it shall be disposed of at an upland site and suitably contained to prevent its subsequent erosion into a water of the U.S., and the area shall be restored to its original contours (but not higher) and character upon completion of the project. During use, such temporary fill must be stabilized to prevent erosion or, in the case fill placed in flowing water (rivers or streams), clean washed stone should be used.
6. Except where stated otherwise, reports, drawings, correspondence and any other submittals required by this permit shall be marked with the words "Permit No. NAE-2009-00514" and shall be addressed to "Inspection Section, CENAE-R, U.S. Army Corps of Engineers, 696 Virginia Road, Concord, MA 01742-2751." Documents which are not marked and addressed in this manner may not reach their intended destination and do not comply with the requirements of this permit.

Special Conditions Continued on Page 5

Special Conditions Continued from Page 4

7. In order to minimize potential impacts to federally endangered shortnose sturgeon and Atlantic salmon and its critical habitat (NMFS Resources), the permittee shall comply with the attached conditions entitled "Corps of Engineers Permit No. NAE-2009-00514, Permit Special Conditions Resulting From Informal Endangered Species Act Consultation With National Marine Fisheries Service".

8. The permittee shall minimize the adverse effects to Atlantic salmon and its critical habitat and incidental take of Atlantic salmon in the rivers and streams where bridge or culvert projects will occur by employing construction techniques that avoid or minimize adverse effects to water quality, aquatic and riparian habitats, and other aquatic organisms. He shall also minimize adverse effects to Atlantic salmon and its critical habitat and incidental take of Atlantic salmon by ensuring that fish passage and habitat connectivity at culverts and bridges is either maintained in its current condition or is improved by the replacement or rehabilitated structure. In meeting these requirements, the permittee shall comply with the attached conditions entitled "Corps of Engineers Permit No. NAE-2009-00514, Permit Special Conditions Resulting From Formal Endangered Species Act Consultation With US Fish & Wildlife Service".

9. In-water work window extension. A project-specific time-of-year restriction may be extended by as much as 10 days without having to formally request permit modification provided:

a. The project site does not support federally endangered shortnose sturgeon, Atlantic salmon, or Atlantic salmon critical habitat. Any extension requests for these sites will be reviewed on a case-by-case basis and may require re-initiation of consultation.

b. Only the Maine DOT Coordination & Permits Division Manager or the Environmental Office Director may grant such an extension and only after state and/or federal fisheries agencies that initially requested the restriction have been notified and approve the extension request. It is understood that any request to fisheries agencies will include the need and justification for such an extension; that it will be a one-time only request; and that Maine DOT will not submit extension requests for projects delayed due to issues of scheduling or failure to complete work due to conditions within a contractor's control.

For any project that receives an extension to its time of year restriction, Maine DOT shall notify the Corps in writing to include the agency approval so the modification of an approved in-water work window for the project can be documented in the permit record.

10. Prior to construction on any single project, the permittee shall provide the Corps of Engineers with project plans for that project. The plans must be on 8-1/2" x 11" paper with a 3/4" margin at the top and must adequately show the proposed work. All plans must be labeled with the bridge number, DOT PIN if applicable, location (roadway name), town, and county. Plans shall be sent to the US Army Corps of Engineers, Maine Project Office, 675 Western Avenue #3, Manchester, Maine 04351; ATTN: Jay Clement. Any submittal(s) to the Corps in compliance with this condition should reference Corps permit no. NAE-2009-00514.

Special Conditions Continued on Page 6

Special Conditions Continued from Page 5

11. This permit does not authorize construction identified as a "Design Build" project. Any work subject to Corps jurisdiction for those bridges may not begin until after the permittee provides project plans that adequately show the proposed work and the Corps approves the work in writing by either an amendment to this permit or a separate permit action. Project plans shall be submitted in a timely fashion that will allow for review and as necessary, coordination/consultation with federal and state resource agencies and the Maine Historic Preservation Commission.

12. In order to fulfill the requirements of Section 106 of the National Historic Preservation Act of 1966, the permittee shall implement the stipulations contained in the attached Memorandum of Agreement.

13. For any bridge project that crosses navigable waters, the permittee must obtain a bridge permit or exemption from the US Coast Guard before beginning construction. For information contact Commander (obr), First Coast Guard District, One South Street - Battery Bldg, New York, NY 10004-5073; phone (212) 668-7021. Navigable waters in the State of Maine are all waters subject to the ebb and flood of the tide, the Penobscot River to Medway, the Kennebec River to Moosehead Lake, and the portion of Lake Umbagog within Maine.



**US Army Corps
of Engineers®**
New England District

**INDIVIDUAL PERMIT
WORK-START NOTIFICATION FORM**
(Minimum Notice: Two weeks before work begins)

* MAIL TO: U.S. Army Corps of Engineers, New England District *
*
* Policy Analysis/Technical Support Branch *
* Regulatory Division *
* 696 Virginia Road *
* Concord, Massachusetts 01742-2751 *

Corps of Engineers Permit No. NAE-2009-00514 was issued to the Maine Dept. of Transportation. This work is located in numerous waterways and wetlands throughout the State of Maine. The permit authorized the permittee to place permanent and temporary fills in order to repair, rehabilitate, or replace existing deteriorated bridges and culverts.

The people (e.g., contractor) listed below will do the work, and they understand the permit's conditions and limitations.

PLEASE PRINT OR TYPE

Name of Person/Firm: _____

Business Address: _____

Telephone Numbers: () _____ () _____

Proposed Work Dates: **Start:** _____ **Finish:** _____

Permittee/Agent Signature: _____ **Date:** _____

Printed Name: _____ **Title:** _____

Date Permit Issued: _____ **Date Permit Expires:** _____

FOR USE BY THE CORPS OF ENGINEERS

PM: Clement **Submittals Required:** _____

Inspection Recommendation: Inspections should be tied to annual random inspections of PGP projects



**US Army Corps
of Engineers®**
New England District

(Minimum Notice: Permittee must sign and return notification
within one month of the completion of work.)

COMPLIANCE CERTIFICATION FORM

USACE Project Number: NAE-2009-00514

Name of Permittee: Maine Dept. of Transportation

Permit Issuance Date: _____

Please sign this certification and return it to the following address upon completion of the activity and any mitigation required by the permit. You must submit this after the mitigation is complete, but not the mitigation monitoring, which requires separate submittals.

* MAIL TO: U.S. Army Corps of Engineers, New England District *

* Policy Analysis/Technical Support Branch, ATTN: Marie Farese *

* Regulatory Division *

* 696 Virginia Road *

* Concord, Massachusetts 01742-2751 *

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit was completed in accordance with the terms and conditions of the above referenced permit, and any required mitigation was completed in accordance with the permit conditions.

Signature of Permittee

Date

Printed Name

Date of Work Completion

() _____

() _____

Telephone Number

Telephone Number

Corps of Engineers Permit No. NAE-2009-00514
Permit Special Conditions Resulting From
Formal Endangered Species Act Consultation
With US Fish & Wildlife Service
(Reference USFWS Biological Opinion dated "June 19, 2009")

1. Maine DOT shall hold a pre-construction meeting for each project with appropriate Maine DOT Environmental Office staff, other Maine DOT staff, and the Maine DOT construction crew (as practicable) or the contractor(s), to review all procedures and requirements for avoiding and minimizing impacts to Atlantic salmon and to emphasize the importance of these measures for protecting salmon and their habitat. Corps staff will attend these meetings as practicable.
2. Maine DOT and their contractors will minimize the potential for impacts to Atlantic salmon and their habitat by conducting all instream work (which includes the installation and removal of cofferdams, as well as other activities) according to the work windows specified in Table 1 (page 6) of the US Fish & Wildlife Service Biological Opinion dated "June 19, 2009".
3. Maine DOT and their contractors will minimize the potential for impacts to Atlantic salmon and their habitat by conducting all construction activities for each project in accordance with the Maine DOT-approved Soil Erosion and Water Pollution Control Plan.
4. A fish evacuation plan must be implemented by appropriate Maine DOT staff during construction and dewatering of all cofferdams to carefully remove juvenile Atlantic salmon from the work area.
5. All Atlantic salmon mortalities from electrofishing or other activities will be reported to the USFWS (Wende Mahaney at 827-5938, Ext. 20; FAX 827-6099; or wende_mahaney@fws.gov) and NMFS (Jeff Murphy at 866-7379; FAX 866-7342; or jeff.murphy@noaa.gov) within 48 hours of occurrence. Mortalities shall be immediately preserved (refrigerate or freeze) for delivery to the NMFS office in Orono, Maine (contact Jeff Murphy at 866-7379 to arrange for delivery).
6. To minimize the effects of entrainment and impingement from diversion pumps, Maine DOT and their contractors shall use a screen on all intake hoses with a maximum mesh size of 6.35 mm. Furthermore, Maine DOT shall insure that the approach velocity to the intake hose does not exceed 0.24 m/sec. Intake hoses shall be regularly monitored while pumping to minimize adverse effects to Atlantic salmon.
7. The Maine DOT or their contractor will follow a Spill Prevention Control and Countermeasure Plan designed to avoid effects to rivers and streams from hazardous materials associated with construction activities. This plan will be approved by appropriate Maine DOT Environmental Office staff prior to the start of construction and then carefully enforced throughout the duration of each construction project.
8. To minimize adverse effects to Atlantic salmon and ensure that salmon and other fish species are able to pass through rehabilitated culverts and that stream habitat is not fragmented, Maine DOT will monitor the efficacy of fish passage through all culverts rehabilitated by invert lining or slip lining, regardless of whether or not fish passage structures are installed (e.g., weirs). Monitoring reports shall be submitted to USFWS (Attn: Wende Mahaney, 1168 Main Street, Old Town, ME 04468) with a copy to the Corps (Attn: Jay Clement, Maine Project Office, 675 Western Avenue #3, Manchester, ME 04351).

Monitoring will be completed at the following projects: 1) Farmington PIN 15640, 2) Farmington PIN 12693, and 3) Ebeemee PIN 17088. Monitoring will follow the procedures outlined in Appendix D, except as modified below. Monitoring will be completed during the first, third, and fifth years after construction during appropriate stream flows as discussed in Appendix D. Monitoring reports will be submitted in a timely fashion that will allow for the planning and implementation of any necessary instream construction work to correct identified fish passage problems during the following July 15 to September 30 work window (unless another work window is approved by USFWS). After the fifth year monitoring report is evaluated, the USFWS will determine the need for any further monitoring or corrective measures.

9. To minimize adverse effects to Atlantic salmon and ensure that salmon and other fish species are able to pass through replacement culverts and that stream habitat is not fragmented, Maine DOT will monitor the efficacy of fish passage through the following culvert replacement projects: 1) Prentiss Township (PIN 16742); 2) Meddybemps (No PIN); 3) Weston (PIN 15968); and 4) Bradley (PIN 16687). Electro-fishing is not necessary at Prentiss unless indirect monitoring indicates there may be problems with fish passage through the new structure.

Monitoring will follow the procedures outlined in Appendix D, except as modified below. Monitoring will be completed during the first, third, and fifth years after construction during appropriate stream flows. Monitoring reports will be submitted in a timely fashion that will allow for the planning and implementation of any necessary instream construction work to correct identified fish passage problems during the following July 15 to September 30 work window (unless another work window is approved by USFWS). After the fifth year monitoring report is evaluated, the USFWS will determine the need for any further monitoring or corrective measures.

10. All 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 life passage is not unnecessarily restricted. If a project is not completed but there will be substantial delays in construction, cofferdams will need to be at least partially removed to allow unobstructed passage of Atlantic salmon until construction resumes.

11. If any project proposes to use blasting, Maine DOT will submit a project-specific blasting plan to USFWS for review and approval prior to any blasting activities. This plan must demonstrate that blasting will not produce overpressure in surrounding waters that exceeds 100 kPa. These plans must be submitted at least 30 days before the anticipated blasting activities to allow for adequate review and approval by USFWS.

12. To minimize adverse effects to Atlantic salmon from pile driving, equipment operators shall conduct a few light “taps” on the pile prior to normal pile driving operations in an effort to scare Atlantic salmon and other fish away from the piles.

13. To minimize adverse effects to Atlantic salmon from water column noise produced by demolition of the existing bridge piers (likely with a hoe ram), pier demolition shall be conducted inside a cofferdam at the following projects: 1) Island Falls (PIN 15097), Oakfield (PIN 15630), and New Sharon (PIN 16719). The cofferdam does not need to be dewatered, but dewatering would serve to further reduce the amount of noise in the adjacent water column and minimize effects on Atlantic salmon.

14. To minimize adverse effects to Atlantic salmon, particularly physical injury or mortality, any piles larger than 61 cm (24 in) in diameter will be driven using one or more noise attenuation techniques. Such techniques can include (but are not limited to) an air bubble curtain and isolation of the piles within a cofferdam. Driving of piles with noise attenuation techniques shall meet the interim noise criteria of the FHWG (2008) of 206 dB_{Peak} and 187 dB SEL measured in the water at 10 m from pile.

15. Corps of Engineers staff shall carefully monitor the actions described in this opinion and document the level of incidental take to ensure that these projects are minimizing the take of Atlantic salmon. The Corps will provide the USFWS with an annual report summarizing the work done under this opinion and accounting for all cumulative take of Atlantic salmon, until such time as all projects are completed. When all construction projects are completed, the Corps shall submit a final report to the USFWS summarizing the total amount of incidental take from all projects.

Table 1. Projects being considered under the 2009 MEDOT bridge and culvert batched section 7 consultation.

Atlantic Salmon								
No.	Project	PIN	DPS	CH	Stream/River	Watershed	Scope	Instream Work Window
<u>Rehabilitation (with/without external weirs)</u>								
1	Farmington	15640	X	X	Abbott Brook	Sandy River	Sipline	July 15-Sept 30
2	Farmington	12693	X	X	Cascade Str.	Sandy River	Invert Line	July 15-Sept 30
3	Ebeemee		X	X	Stinking Brook	WB Pleasant	Sipline	July 15-Sept 30
4	Sebec	11487	X	X	Piscataquis	Repair	July 15-Sept 30	
<u>Replacement (culverts and boxes)</u>								
5	Prentiss Twp	16742	X	X	Mud Brook	Mattawamkeag	Bridge Replacement	July 15-Sept 30
6	Meddybemps	No Pin	X	X	Unnamed Trib	Dennys River	Culvert Replacement	July 15-Sept 30
7	Weston	15968	X		Trout Brook	Mattawamkeag	Strut Replacement	July 15-Sept 30
<u>Bridge abutment work on stream banks (no in-channel piers)</u>								
8	Winterport	16763	X	X	Marsh Stream	Penobscot	Bridge Replacement	July 15-Sept 30
9	New Sharon	16721	X	X	Fillibrown Brook	Sandy River	Bridge Replacement	July 15-Sept 30
<u>Bridge Pier(s) work with/without associated abutment work</u>								
10	Whitneyville	16762	X	X	Machias River	Machias River	Pier Rehab	July 15-Sept 30
11	Bradley	16687	X	X	Great Works St	Penobscot	Bridge Replacement	July 15-Sept 30
12	Island Falls	15097	X	X	WB Mattawam	Mattawamkeag	Bridge Replacement	July 15-Sept 30
13	Bangor	15090	X	X	Meadow Brook	Penobscot	Bridge Replacement	Sept 1-May 1
14	Howland	15635	X	X	Piscataquis	Piscataquis	Bridge Replacement	Open
15	Oakfield	15630	X	X	Mattawamkeag	Mattawamkeag	Bridge Replacement	July 15-Sept 30
16	Norridgewock	6900.01	X	X	Kennebec	Kennebec	Bridge Replacement	Open
<u>Bridge Removal</u>								
17	New Sharon	16719	X	X	Muddy Brook	Sandy River	Bridge Removal	July 15-Sept 30
<u>Linear Projects with Multiple Stream Crossings</u>								
18	Sherman to Houlton	16819	X	X	Tributaries	Mattawamkeag	I-95 Reconstruction	July 15-Sept 30
19	T2R9-Veazie	15954	X	X	Unnamed Trib	Penobscot	I-95 Reconstruction	July 15-Sept 30
<u>New England Cottontail Project</u>								
20	Falmouth	15094			New England Cottontail	Presumpscot R	Presumpscot R Bridge Replacement	

Corps of Engineers Permit No. NAE-2009-00514
Permit Special Conditions Resulting From
Informal Endangered Species Act Consultation
With National Marine Fisheries Service
(Reference COE/Maine DOT Biological Assessment dated "March 2009")

1. The permittee shall implement Maine DOT Best Management Practices ("BMPs") for Erosion and Sedimentation Control for all work authorized by this permit.
2. All work authorized by this permit shall be designed in accordance with Maine DOT's 2008 Waterway and Wildlife Crossing Policy and Design Guide.
3. All projects authorized by this permit shall utilize works windows specified in Matrix 1 of the biological assessment ("BA") and as noted below:
 - a. Open Work Window - Mayfield Township, Garland, Waldoboro, Amherst, Canaan, Lincoln, Monroe, Ellsworth Rail Trail, Lisbon, Searsmont, Carmel, Lisbon-Sabattus, Ellsworth Rout 1A,
 - b. July 15 to September 30 Work Window – Brooks, Auburn Route 136, Old Town,
 - c. November 8 to April 9 Work Window - South Thomaston, Topsham, Sedgewick-Deer Isle,
 - d. Modified Work Window (July 15 to September 30 and November 8 to April 9) – Orland
 - e. Modified Work Window (June 1 to September 30) - Gardiner-Brunswick I-295
4. Any cofferdam constructed as part of the authorized project shall adhere to the specifications contained in Section 3.1 (Coffer Dam Descriptions) of the BA.
5. Any culvert installations authorized by this permit must adhere to the specifications contained in Section 3.1.2 (Replacement Projects) of the BA.
6. If any listed shortnose sturgeon or Atlantic salmon are encountered in the project areas of this permit, including during dewatering of cofferdams, all work must cease and NMFS shall be contacted immediately.
7. Within 90 days of permit issuance, the permittee must develop fish passage monitoring plans in consultation with NMFS, USFWS, and the Corps for any stream crossings requiring the installation of invert or slip-lined culverts. Instream work shall not begin on these projects until the monitoring plans have been approved by the Services and the Corps.

Maine DOT



2 Year Bridge Projects

Legend

● 2 Yr Bridge Projects

MAINE DOT
2 YEAR BRIDGE PROJECTS

SHEET 1 OF 7

JUNE 2009



Project Location				Project Information	
BR#	Location	Town	County	Bridge Name	Scope
0077	Old Danville Road	Auburn	Aroostook	ROYAL RIVER BRIDGE	Bridge Replacement (wider)
125	Richardson Road	Easton	Aroostook	PRESTILE STREAM #1	Bridge Culvert Replacement (Longer, possible removal?)
2403	Route 2	Island Falls	Aroostook	IRON	Bridge Replacement
2898	Main Street	Oakfield	Aroostook	Village	Bridge Replacement
	Bancroft Road	Weston	Aroostook		Shut Replacement
5340	Winn Road	Cumberland		RIDEOUT	Bridge Culvert Rehabilitation (Invert w/ weirs)
2702	Route 26/100	Falmouth	Cumberland	RR and River CROSSING	Bridge Replacement
5646	Hallowell Road/ Route 9	Pownal	Cumberland	POWNAL CENTER	Bridge Culvert Rehabilitation (Invert w/ weirs)
3945	Route 1	South Portland	Cumberland	VETERANS MEMORIAL	Design Build Bridge Replacement *
3987	E. Bridge Street	Westbrook	Cumberland	LITTLE	Arch with Natural Bottom

Construction Overview

Demolish deck and rail with hydraulic hammer, remove debris from channel with clam-shell/hand labor. Remove existing bridge beams with large excavator. Excavate for new footings and abutments behind existing abutments until it is time to demolish existing structure. Divert flow away from abutment (sandbags, Jersey barriers). Demolish abutment. Form/place footing and abutment, place riprap. Swap diversion to opposite abutment and repeat. Set beams, form/cast deck, install membrane, foam/seed, pave, stripe.

Place cofferdam upstream at narrowest point of stream (some clearing may be required to access cofferdam locations). Sandbags: compress substrate, minor sedimentation. Jersey barriers with sheet plastic: compress substrate, minor sedimentation) repeat downstream below outlet pool. Install diversion: most likely pump, install "sleeve" under work area to protect hose. Pump outlet installed so that discharge does not scour. Clean water pumped from above upstream cofferdam back into stream below downstream cofferdam. Dirty water within cofferdam is pumped to a cofferdam sedimentation basin. Pipe removed, new pipe/riprap installed in "dry" work area between cofferdams. The diversion pump system will be stopped and the upstream coffer dam will slowly be breached. First flush of dirty water and sent to cofferdam sedimentation basin. When the water behind downstream cofferdam is clean, that dam will be breached as well. The remainder of the upstream cofferdam and the diversion pump system will then be removed.

Drive pile (H-pile or Pipe-pile, may require preexcavation by crane with clam-shell) for temporary work trestle beside existing bridge. Drive pile to support "false-work" under structure to contain debris from deck/rail removal. Install barges, if sufficient depth of water, to contain bulk of pier demo. If there is not sufficient depth: remove center pier via open demolition with a hoe-ramp from work trestle and/or blast; remove concrete from river with clam-shell. Cannot blast inside a cofferdam, generally destroys cofferdam. Repeat for other piers. Install cofferdams for new pier placement: sheet-pile, may require pre-excavation with clam-shell. Excavate for concrete seal within flooded cofferdam. Place seal concrete underwater in flooded cofferdam. Dewater cofferdam by pumping clean water into river. When water gets within a few feet of seal, pump to a cofferdam sediment basin to capture water with concrete sediment. Once dewatered, manually clean seal surface (shovels, and brooms. Once cleaned, the cofferdam can be allowed to flood at night and dewatered the next day by pumping overboard. Form, cast, and clean footing and pier in the "dry". Remove cofferdam. Repeat for other piers. Divert flow away from existing abutments/riprap (sandbags/Jersey barriers), demo, excavate for footing, form, cast, and clean for abutments behind existing abutments until it is time to demolish existing structure. Divert flow away from abutment (sandbags, Jersey barriers). Demolish abutment. Form/place footing and abutment, place riprap. Swap diversion to opposite abutment and repeat. Set beams, form/cast deck, install membrane, foam/seed, pave, stripe.

Place cofferdam upstream at narrowest point of stream (some clearing may be required to access cofferdam locations). Sandbags: compress substrate, minor sedimentation. Jersey barriers with sheet plastic: compress substrate, minor sedimentation) repeat downstream below outlet pool. Install diversion: most likely pump, install "sleeve" under work area to protect hose. Pump outlet installed so that discharge does not scour. Clean water pumped from above upstream cofferdam back into stream below downstream cofferdam. Dirty water within cofferdam is pumped to a cofferdam sedimentation basin. Pipe removed, new pipe/riprap installed in "dry" work area between cofferdams. The diversion pump system will be stopped and the upstream coffer dam will slowly be breached as well. The remainder of the upstream cofferdam and the diversion pump system will then be removed.

Place cofferdam upstream at narrowest point of stream (some cutting may be required to access cofferdam locations). Sandbags: compress substrate, minor sedimentation. Jersey barriers with sheet plastic: compress substrate, minor sedimentation) repeat downstream below outlet pool. Install diversion: most likely pump, install "sleeve" under work area to protect hose. Pump outlet installed so that discharge does not scour. Clean water pumped from above upstream cofferdam back into stream below downstream cofferdam. Dirty water within cofferdam is pumped to a cofferdam sedimentation basin. Pipe removed, new pipe/riprap installed in "dry" work area between cofferdams. The diversion pump system will be stopped and the upstream coffer dam will slowly be breached as well. The remainder of the upstream cofferdam and the diversion pump system will then be removed.

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There appears to be very little in-stream work associated with this project. Pier replacement: install cofferdams for new pier placement: sheet-pile, may require pre-excavation with clam-shell. Sandbags: compress substrate, minor sedimentation. Jersey barriers with sheet plastic: compress substrate, minor sedimentation) repeat downstream below outlet pool. Install diversion: most likely pump, install "sleeve" under work area to protect hose. Pump outlet installed so that discharge does not scour. Clean water pumped from above upstream cofferdam back into stream below downstream cofferdam. Dirty water within cofferdam is pumped to a cofferdam sedimentation basin. Pipe removed, new pipe/riprap installed in "dry" work area between cofferdams. The diversion pump system will be stopped and the upstream coffer dam will slowly be breached as well. The remainder of the upstream cofferdam and the diversion pump system will then be removed.

Dewater cofferdam by pumping clean water into river. When water gets within a few feet of seal, pump to a cofferdam sediment basin to capture water with concrete sediment. Once dewatered, manually clean seal surface (shovels, and brooms. Once cleaned, the cofferdam can be allowed to flood at night and dewatered the next day by pumping overboard. Form, cast, and clean footing and pier in the "dry". Remove cofferdam. Repeat for other piers. Divert flow away from existing abutments/riprap (sandbags/Jersey barriers), demo, excavate for footing, form, cast, a

Place cofferdam upstream at narrowest point of stream (some cutting may be required to access cofferdam locations). Sandbags: compress substrate, minor sedimentation. Jersey barriers with sheet plastic: compress substrate, minor sedimentation) repeat downstream below outlet pool. Install diversion: most likely pump, install "sleeve" under work area to protect hose. Pump outlet installed so that discharge does not scour. Clean water pumped from above upstream cofferdam back into stream below downstream cofferdam. Dirty water within cofferdam is pumped to a cofferdam sedimentation basin. Pipe removed, new pipe/riprap installed in "dry" work area between cofferdams. The diversion pump system will be stopped and the upstream coffer dam will slowly be breached as well. The remainder of the upstream cofferdam and the diversion pump system will then be removed.

*Will apply "MaineDOT Special In-water Work Conditions" as standard practice.

Attachment 3

1 of 6

MAINE DOT
2 YEAR BRIDGE PROJECTS

*Will apply "MaineDOT Special In-water Work Conditions" as standard practice.

Project Location				Project Information	
BR#	Location	Town	County	Bridge Name	Scope
5855	Coburn Fields Road	Riley Twp	Oxford	BULL BRANCH	Replacement (Possible Rehabilitation)
0792	Coburn Fields Road	Riley Twp	Oxford	BULL BRANCH #2	Replacement (Possible Rehabilitation)
2711	Route 2	Bangor	Penobscot	Red	Bridge Replacement
3365	Cram Street	Bradley	Penobscot	JENKINS (CRAM STREET)	Bridge Replacement (In-kind or possible span)
5102	Fuller Road	Carmel	Penobscot	Norton	Bridge Replacement
3872	Bradford Road	Charleston	Penobscot	RICHARDS	Bridge Culvert Rehabilitation (slip line or possible replacement)
2436	Caribou Road	Enfield	Penobscot	Kimball	Bridge Replacement
3040	Coffin Street/Route 116	Howland	Penobscot	PISCATAQUIS	Design Build Bridge Replacement
2170	Route 2	Lincoln	Penobscot	COMBELLASSIE	Bridge Replacement w/ pipe or box
2501	Route 2	Newport	Penobscot	Main Street	Bridge Replacement
6103	Moosehead Trail/Route 711	Newport	Penobscot	MULLIGAN STREAM	Bridge Culvert Replacement

*Will apply "MaineDOT Special In-water Work Conditions" as standard practice.

Attachment 3

3 of 6

MAINE DOT 2 YEAR BRIDGE PROJECTS

SHEET 4 OF 7 JUNE 2009

Project Location				Project Information	
BR#	Location	Town	County	Bridge Name	Scope
5707	Center Street/ Route 171	Prentiss Twp	Penobscot	LITTLE MUD BROOK	Bridge Replacement (arch w/ longer structure)
3868	Route 11	Ebeemee (T5 R9 NWP)	Piscataquis	Sinking Brook Bridge	Sillpipe w/ weirs
3825	Forside Road	Topsham	Sagadahoc	MUDDY RIVER	Bridge Substructure Rehabilitation
5584	River Road/ Route 128	Woolwich	Sagadahoc	CHOPPS CREEK	Bridge Culvert Rehabilitation (Invert w/ weirs)
2767	Route 2	Canaan	Somerset	SIBLEY POND	Design Build Bridge Replacement
3496	Route 23	Canaan	Somerset	HASKELL	In-kind Bridge Replacement
2579	Route 201A/B/16	Embsden	Somerset	MOORE	Bridge Replacement Staged Construction
2625	Route 16	Mayfield Twp	Somerset	MAYFIELD	Bridge Culvert Rehabilitation (Invert w/ weirs)
2187	Route 2	Norridgewock	Somerset	Covered	Bridge Replacement

Construction Overview

Place cofferdam upstream at narrowest point of stream (some cutting may be required to access cofferdam locations). Sandbags: compress substrate, minor sedimentation. Jersey barriers with sheet plastic: compress substrate, minor sedimentation) repeat downstream below outlet pool. Install diversion: most likely pump, install "sleeve" under work area to protect hose; intake installed in sump surrounded by small plastic perforated riser filled with crushed stone to prevent clogging. Pump outlet installed so that discharge does not scour. Clean water pumped from above upstream cofferdam back into stream below downstream cofferdam. Dirty water within cofferdam is pumped to a cofferdam sedimentation basin. Demolish structure and remove debris. Undercut existing material, install new "bed", pipebox and riprap installed in "dry" work area between cofferdams. The diversion pump system will be stopped and the upstream coffer dam will slowly be breached. First flush of dirty water captured by the "dirty water" pump and sent to cofferdam sedimentation basin. When the water behind downstream cofferdam is clean, that dam will be breached as well. The remainder of the upstream cofferdam system will then be removed.

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Build temporary access by placing Jersey barriers/driving sheets, lining with geotextile and placing stone fill. Drive pile on both sides of bridge and on either side of pier, slide beams under bridge creating temporary piers. Remove existing pier with chainsaw to midline. Install sandbag/Jersey barrier around pier "footing". Excavate for new pier from access road. Place distribution slab (like a seal using excavated hole as "form" instead of sheetpile. Form/cast footing, form cast pier shaft and cap. Place riprap around new pier. Remove temporary piers. Build temporary access road with Jersey barriers, geotextile and granular fill. Divert flow away from abutments with sandbags or Jersey barriers and sheet plastic, remove spalling concrete with rock-hammers/small hydraulic hammer, form/cast abutment repairs, finish concrete, place riprap, and remove cofferdam.

Place cofferdam upstream at narrowest point of stream (some cutting may be required to access cofferdam locations). Sandbags: compress substrate, minor sedimentation. Jersey barriers with sheet plastic: compress substrate, minor sedimentation) repeat downstream below outlet pool. Install diversion: most likely pump, install "sleeve" under work area to protect hose; intake installed in sump surrounded by small plastic perforated riser filled with crushed stone to prevent clogging. Pump outlet installed so that discharge does not scour. Clean water pumped from above upstream cofferdam back into stream below downstream cofferdam. Dirty water within cofferdam is pumped to a cofferdam sedimentation basin. Demolish structure and remove debris. Undercut existing material, install new "bed", pipebox and riprap installed in "dry" work area between cofferdams. The diversion pump system will be stopped and the upstream coffer dam will slowly be breached. First flush of dirty water captured by the "dirty water" pump and sent to cofferdam sedimentation basin. When the water behind downstream cofferdam is clean, that dam will be breached as well. The remainder of the upstream cofferdam system will then be removed.

Construct new structure on new alignment, leaving old structure as delour. Work from barges. Drive pipe piles to refusal for foundation. Install floating boom around piles. Air-lift to clean piles, install re-bar "cages", fill with concrete. Form, cast and finish pier caps, set beams. Form/cast deck, install membrane, pave, beam and seed. Put traffic on new structure. Move barges under old structure to contain demolition debris. If the debris is falling from too great a height (can destroy a barge) plug bridge drains, saw cut into manageable places and lift out with crane. Pull existing piles if possible, if not, cut underwater by diver at midlines.

Place cofferdam upstream at narrowest point of stream (some cutting may be required to access cofferdam locations). Sandbags: compress substrate, minor sedimentation. Jersey barriers with sheet plastic: compress substrate, minor sedimentation) repeat downstream below outlet pool. Install diversion: most likely pump, install "sleeve" under work area to protect hose; intake installed in sump surrounded by small plastic perforated riser filled with crushed stone to prevent clogging. Pump outlet installed so that discharge does not scour. Clean water pumped from above upstream cofferdam back into stream below downstream cofferdam. Dirty water within cofferdam is pumped to a cofferdam sedimentation basin. Demolish structure and remove debris. Undercut existing material, install new "bed", pipebox and riprap installed in "dry" work area between cofferdams. The diversion pump system will be stopped and the upstream coffer dam will slowly be breached. First flush of dirty water captured by the "dirty water" pump and sent to cofferdam sedimentation basin. When the water behind downstream cofferdam is clean, that dam will be breached as well. The remainder of the upstream cofferdam system will then be removed.

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Build temporary abutments with sheetpile/riprap fill. Drive temporary piles (H-pile, pipe-pile) bents for temporary delour. Set old bridge beams and install precast concrete panels to create temporary bridge deck. Construct false-work under structure to be demolished to catch debris from deck. Demolish arches, deck and piers with hydraulic hammer. Remove demolition debris from ice via hand labor or small machine. Drill and blast piers. Remove rubble with a clam-shell when excavating for riprap. Install cofferdams for new pier placement: sheet-pile, may require pre-excavation with clam-shell. Excavate for concrete seal within dewatered cofferdam. Place seal concrete underwater in flooded cofferdam. Dewater cofferdam by pumping clean water into river. When water gets within a few feet of seal, pump to a cofferdam sediment basin to capture water with concrete sediment. Once dewatered, manually clean seal surface (shovels, and brooms. Once cleaned, the cofferdam can be allowed to flood at night and dewatered the next day by pumping overboard. Form, cast, and clean footing and pier in the "dry". Remove cofferdam. Repeat for other piers. Set beams, form/cast deck, install membrane, pave, beam and seed.

*Will apply "MaineDOT Special
In-water Work Conditions" as
standard practice.

Attachment 3

4 of 6

MAINE DOT 2 YEAR BRIDGE PROJECTS

SHEET 5 OF 7 JUNE 2009

Project Location				Project Information		Construction Overview
BR#	Location	Town	County	Bridge Name	Scope	
5233	Route 201	Sandy Bay Twp	Somerset	KELLEY BROOK	Bridge Replacement	Place cofferdam upstream at narrowest point of stream (some cutting may be required to access cofferdam locations. Sandbags: compress substrate, minor sedimentation. Jersey barriers with sheet plastic: compress substrate, minor sedimentation) repeat downstream below outlet pool. Install diversion: most likely pump, install "sleeve" under work area to protect hose. Pump outlet installed so that discharge does not scour. Clean water pumped from above upstream cofferdam back into stream below downstream cofferdam. Dirty water within cofferdam is pumped to a cofferdam sedimentation basin. Demolish structure and remove debris. Undercut existing material, install new "bed", pipebox and riprap installed in "dry" work area between cofferdams. The diversion pump system will be stopped and the upstream coffer dam will slowly be breached. First flush of dirty water captured by the "dirty water" pump and sent to cofferdam sedimentation basin. When the water behind downstream cofferdam is clean, that dam will be breached as well. The remainder of the upstream cofferdam and the diversion pump system will then be removed.
2777	Hilton Hill Road	Skowhegan	Somerset	SMITH POND (OLD)	Bridge Removal	Place bargelift under deck to contain debris and demolish with hydraulic hammer to remove deck and rail. Lift beams off abutments, "crack" abutments with hydraulic hammer, pull pieces of abutment away from pond. Remove to water level, cover with riprap, final grading of slopes, loan and seed.
2775	Route 139	Monroe	Waldo	SMITH	Bridge Replacement w/ pipe or box (longer/deeper)	Place cofferdam upstream at narrowest point of stream (some cutting may be required to access cofferdam locations. Sandbags: compress substrate, minor sedimentation. Jersey barriers with sheet plastic: compress substrate, minor sedimentation) repeat downstream below outlet pool. Install diversion: most likely pump, install "sleeve" under work area to protect hose. Pump outlet installed so that discharge does not scour. Clean water pumped from above upstream cofferdam back into stream below downstream cofferdam. Dirty water within cofferdam is pumped to a cofferdam sedimentation basin. Demolish structure and remove debris. Undercut existing material, install new "bed", pipebox and riprap installed in "dry" work area between cofferdams. The diversion pump system will be stopped and the upstream coffer dam will slowly be breached. First flush of dirty water captured by the "dirty water" pump and sent to cofferdam sedimentation basin. When the water behind downstream cofferdam is clean, that dam will be breached as well. The remainder of the upstream cofferdam and the diversion pump system will then be removed.
3344	Loggin Road	Winterport	Waldo	TIBBETTS	Bridge Replacement	After suspending false-work from existing structure, demolish deck and rail with hydraulic hammer and catch the debris on false work. Excavate for new footings and abutments behind existing abutments until it is time to demolish existing abutment. Divert flow away from abutment (sandbags/Jersey barriers). Demolish abutment with hydraulic hammer. Form/place footing and abutment, place riprap. Swap diversion to opposite abutment and repeat. Set beams, form/cast deck, install membrane, loam/seed, pave, stripe.
5875	Vanceboro Road/ Route 6	Codyville Pk	Washington	BEAVER BROOK	Bridge Culvert Rehabilitation (Invert w/ wiers)	Place cofferdam upstream at narrowest point of stream (some cutting may be required to access cofferdam locations. Sandbags: compress substrate, minor sedimentation. Jersey barriers with sheet plastic: compress substrate, minor sedimentation) repeat downstream below outlet pool. Install diversion: most likely pump, install "sleeve" under work area to protect hose. Pump outlet installed so that discharge does not scour. Clean water pumped from above upstream cofferdam back into stream below downstream cofferdam. Dirty water within cofferdam is pumped to a cofferdam sedimentation basin. Place invert liner by spraying shot-crete, form and place water for liner. Flush water captured behind the last weir will be pumped to the cofferdam sedimentation basin until pH is tested to be within one pH of the receiving waters. The diversion pump system will be stopped and the upstream coffer dam will slowly be breached/removed. When the water behind downstream cofferdam is clean the downstream cofferdam will be removed.
3584	Milford Street	Grand Lake Stream Pk	Washington	MILFORD STREET	Replacement (wider w/ longer span)	Demolish coffer dam and rail with hydraulic hammer, remove debris from channel with dam-shell/hard labor. Excavate for new footings and abutments behind existing abutments until it is time to demolish existing abutment. Divert flow away from abutment (sandbags/Jersey barriers). Demolish abutment with hydraulic hammer. Form/place footing and abutment, place riprap. Swap diversion to opposite abutment and repeat. Set beams, form/cast deck, install membrane, loam/seed, pave, stripe.
2688	Calais Road, Route 1	Princeton	Washington	PRINCETON	Replacement (wider structure)	Build Temporary abutments with Jersey barriers/concrete "waste" blocks. Line with geotextile and backfill with granular material. Set beams, place pre-cast concrete deck panels, and install temporary rail. Excavate for new footings and abutments behind existing abutments until it is time to demolish existing structure. Divert flow with sandbags away from abutment. Demolish abutment. Form/place footing and abutment, place riprap. Swap sandbags to opposite abutment and repeat. Set beams, form/cast deck, install membrane, loam/seed, pave, stripe.
5375	Route 191	Twp 18 Ed Bpp	Washington	SOUTHERN INLET	Bridge Culvert Replacement (longer pipe or box)	Place cofferdam upstream at narrowest point of stream (some cutting may be required to access cofferdam locations. Sandbags: compress substrate, minor sedimentation. Jersey barriers with sheet plastic: compress substrate, minor sedimentation) repeat downstream below outlet pool. Install diversion: most likely pump, install "sleeve" under work area to protect hose. Pump outlet installed so that discharge does not scour. Clean water pumped from above upstream cofferdam back into stream below downstream cofferdam. Dirty water within cofferdam is pumped to a cofferdam sedimentation basin. Demolish structure and remove debris. Undercut existing material, install new "bed", pipebox and riprap installed in "dry" work area between cofferdams. The diversion pump system will be stopped and the upstream coffer dam will slowly be breached. First flush of dirty water captured by the "dirty water" pump and sent to cofferdam sedimentation basin. When the water behind downstream cofferdam is clean, that dam will be breached as well. The remainder of the upstream cofferdam and the diversion pump system will then be removed.
3462	Route 1A	Whitneyville	Washington	MACHIAS RIVER	Bridge Substructure Rehabilitation	Build temporary abutments with sheep/pile/granular fill. Drive pile (H-pile or Pipe-pile, may require pre-excavation by crane with dam-shell) to create a temporary work trestle(s) beside existing bridge. Remove spalling concrete with hand-held rock hammers. Remove debris by hand. Insert dowels in good concrete and build forms. Pump concrete from temporary trestle. Place riprap from temporary trestle(s).
3300	Action Bridge Road	Action	York	BALCH MILLS	In-kind Bridge Culvert Replacement	Substrate, minor sedimentation) repeat downstream below outlet pool. Install diversion: most likely pump, install "sleeve" under work area to protect hose. Pump outlet installed so that discharge does not scour. Clean water pumped from above upstream cofferdam back into stream below downstream cofferdam. Dirty water within cofferdam is pumped to a cofferdam sedimentation basin. Demolish structure and remove debris. Undercut existing material, install new "bed", pipebox and riprap installed in "dry" work area between cofferdams. The diversion pump system will be stopped and the upstream coffer dam will slowly be breached. First flush of dirty water captured by the "dirty water" pump and sent to cofferdam sedimentation basin. When the water behind downstream cofferdam is clean, that dam will be breached as well. The remainder of the upstream cofferdam and the diversion pump system will then be removed.
1271	Back Road	Alfred	York	NUTTERS	Bridge Replacement (wider w/ longer span)	Demolish deck and rail with hydraulic hammer, remove debris from channel with dam-shell/hard labor. Excavate for new footings and abutments behind existing abutments until it is time to demolish existing abutment. Divert flow away from abutment (sandbags/Jersey barriers). Demolish abutment with hydraulic hammer. Form/place footing and abutment, place riprap. Swap diversion to opposite abutment and repeat. Set beams, form/cast deck, install membrane, loam/seed, pave, stripe.
5825	Alfred Road/ Route 111	Lyman	York	KENNEBUNK RIVER	Bridge Culvert Rehabilitation (Invert w/ wiers)	Place cofferdam upstream at narrowest point of stream (some cutting may be required to access cofferdam locations. Sandbags: compress substrate, minor sedimentation. Jersey barriers with sheet plastic: compress substrate, minor sedimentation) repeat downstream below outlet pool. Install diversion: most likely pump, install "sleeve" under work area to protect hose. Pump outlet installed so that discharge does not scour. Clean water pumped from above upstream cofferdam back into stream below downstream cofferdam. Dirty water within cofferdam is pumped to a cofferdam sedimentation basin. Place invert liner by spraying shot-crete, form and place external weirs, install riprap installed in "dry" work area between cofferdams. Block final weir outlet notch and use as containment for flushing of liner. The diversion pump system will be stopped intermittently to provide flush water for liner. Flush water captured behind the last weir will be pumped to the cofferdam sedimentation basin until pH is tested to be within one pH of the receiving waters. The diversion pump system will be stopped and the upstream coffer dam will slowly be breached/removed. When the water behind downstream cofferdam is clean the downstream cofferdam will be removed.

*Will apply "MaineDOT Special In-water Work Conditions" as standard practice.

Attachment 3

5 of 6

Project Location					Project Information		
BR#	Location	Town	County	Bridge Name	Scope	On-Site Temporary Detour?	Construction Overview
1236	Great Hill Road	South Berwick	York	GREAT HILL BR	Replacement (longer span w/ slight re-alignment)	??	Remove wooden deck cut saw cutting and removing with an excavator. Excavate for new footings and abutments behind existing abutments until it is time to demolish existing structure. Divert flow with sandbags away from abutment. Demolish abutment with hydraulic hammer. Form/place footing and abutment, place riprap. Swap diversion to opposite abutment and repeat. Set beams, form/cast deck, install membrane, loam/seed, pave, stripe.
5610	Dow Highway/ Route 236	South Berwick	York	GREAT WORKS RIVER	Bridge Replacement	No	Place barge/float under deck to contain debris and demolish with Hydraulic hammer to remove deck and rail. Lift beams off abutments. Excavate behind abutments, "crack" abutments with hydraulic hammer, pull pieces of abutment away from River down just above water level. Divert flow with sandbags away from remaining abutment/footing. Demolish abutment/footing. Form/place footing and abutment, place riprap. Swap sandbags to opposite abutment and repeat. Set beams, form/cast deck, install membrane, loam/seed, pave, stripe.
3096	Organug Road	York	York	SEWALLS	Bridge Rehabilitation	No	Build temporary access by placing Jersey barriers/driving sheets, lining with geotextile and placing stone fill. Drive pile on both sides of bridge and on either side of pier, slide beams under bridge creating temporary piers. Remove existing pier with chainsaw to mudline. Install sandbag/Jersey barrier around pier "footing". Excavate for new pier from access road. Place distribution slab (like a seal using excavated hole as "form" instead of sheetpile. Form/cast footing, form cast pier shaft and cap. Place riprap around new pier. Remove temporary piers. Build temporary access road with Jersey barriers, geotextile and granular fill. Divert flow away from abutments with sandbags or Jersey barriers and sheet plastic, remove spalling concrete with rock-hammers/small hydraulic hammer, form/cast abutment repairs, finish concrete, place riprap, and remove cofferdam.
5848	Route 103	York	York	Station 34	Bridge Replacement with Box Culvert	No	Place cofferdam upstream at narrowest point of stream (some cutting may be required to access cofferdam locations. Sandbags: compress substrate, minor sedimentation. Jersey barriers with sheet plastic: compress substrate, minor sedimentation) repeat downstream below outlet pool. Install diversion: most likely pump, install "sleeve" under work area to protect hose. Pump outlet installed so that discharge does not scour. Clean water pumped from above upstream cofferdam back into stream below downstream cofferdam. Dirty water within cofferdam is pumped to a cofferdam sedimentation basin. Demolish structure and remove debris. Undercut existing material, install new "bed", pipe/box and riprap installed in "dry" work area between cofferdams. The diversion pump system will be stopped and the upstream coffer dam will slowly be breached. First flush of dirty water captured by the "dirty water" pump and sent to cofferdam sedimentation basin. When the water behind downstream cofferdam is clean, that dam will be breached as well. The remainder of the upstream cofferdam and the diversion pump system will then be removed.

*Will apply "MaineDOT Special
In-water Work Conditions" as
standard practice.

Attachment 3

6 of 6

MAINE DOT
2 YEAR BRIDGE PROJECTS

SHEET 7 OF 7 JUNE 2009

MEMORANDUM OF AGREEMENT
AMONG THE UNITED STATES ARMY
CORPS OF ENGINEERS, NEW ENGLAND DISTRICT,
THE MAINE STATE HISTORIC PRESERVATION OFFICER,
AND THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
REGARDING VARIOUS BRIDGE PROJECTS WITHIN THE STATE OF MAINE

WHEREAS, the Maine Department of Transportation (MaineDOT), is proposing a variety of bridge projects which will be processed under a single United States Army Corps of Engineers (ACOE) Permit; and

WHEREAS, the projects are located throughout the state and, cumulatively, cover a large land area; and

WHEREAS, the bridge projects are part of the 2010-2011 Maine DOT Work Plan and are listed in Attachment 1; and

WHEREAS, the ACOE and MaineDOT will establish an Area of Potential Effect for each specific project in accordance with 36 CFR Section 800.16(d); and

WHEREAS, the ACOE has determined that some of these projects may have an effect on National Register (NR)-listed or -eligible architectural and archaeological resources and has consulted with the Maine State Historic Preservation Officer, referred herein as the Maine Historic Preservation Commission (MHPC), pursuant to 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act (16 U.S.C. Section 470(f); and

WHEREAS, the ACOE and the MHPC have identified the likely presence of architectural and archeological properties within the cumulative area of potential effects through background research, consultation and an appropriate level of field investigation; and

WHEREAS, the ACOE is consulting with the Aroostook Band of Micmacs, the Houlton Band of Maliseet Indians, the Passamaquoddy Tribe, and the Penobscot Nation in accordance with 36 CFR Section 800.3 (f)(2) and will apprise them of any findings; and

WHEREAS, the scope and limits of these projects still remain under investigation; and

WHEREAS, 36 CFR Section 800.4(b)(2) allows for phased identification and evaluation of historic properties where alternatives under consideration consist of corridors or large land areas, and allows the agency official to defer final identification and evaluation of historic properties if it is specifically provided for in a memorandum of agreement executed pursuant to

Section 800.6, a programmatic agreement executed pursuant to Section 800.14 (b), or the documents used by an agency official to comply with the National Environmental Policy Act pursuant to Section 800.8; and

WHEREAS, the ACOE has consulted with MaineDOT regarding the effects of the undertaking on potential National Register-eligible resources and has invited them to sign this MOA as a concurring party; and

WHEREAS, in accordance with 36 CFR Section 800.6(a)(1), the ACOE has notified the Advisory Council on Historic Preservation (Council) of the potential for an adverse effect determination. ACOE has invited the Council to consult and the Council has chosen not to participate in the consultation pursuant to 36 CFR Section 800.6(a)(1)(iii);

NOW, THEREFORE, the ACOE and the MHPC agree that the undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on potential historic properties.

STIPULATIONS

The ACOE shall ensure that the following measures are carried out:

- I. For each project, the MaineDOT shall conduct identification and evaluation of architectural and archeological properties in accordance with 36 CFR Section 800.4(b)(1) and (c), as the limits and scopes of that project are refined, and in accordance with the provisions of the current Statewide Programmatic Agreement for Federal Aid Highway and Federal Transit Programs in Maine.
- II. Identification (Phase I) archeological field investigations shall begin during the spring of 2009, followed as needed by eligibility determination (Phase II) investigations. Archaeological investigations shall be directed by archaeologist(s) meeting the Maine State Historic Preservation Officer's Standards for Archaeological Work in Maine (Chapter 812[94-089]), and meeting the Secretary of the Interior's Standards (36 CFR 61).
- III. In order to ensure that historic properties are fully considered during the project development phase, Section 106 consultation must be concluded, prior to the approval of any applicable National Environmental Policy Act and Section 4(f) documentation. Resolution of any adverse effects shall be conducted in accordance with 36 CFR Section 800.6 which seeks ways to avoid, minimize or mitigate adverse effects. Any disputed determinations shall be processed in accordance with Stipulation VII.
- IV. DURATION. This agreement will be null and void if its terms are not carried out within five (5) years from the date of its execution. Prior to such time, The ACOE may consult with the other signatories to reconsider the terms of the agreement and amend in accordance with

Stipulation VIII below.

V. POST-REVIEW DISCOVERIES. If potential historic properties are discovered or unanticipated effects on historic properties found, the signatory parties shall consult in accordance with 36 CFR Section 800.6(c)(6).

VI. MONITORING AND REPORTING. Each year following the execution of this agreement until it expires or is terminated, MaineDOT shall provide all parties to this agreement a summary report detailing work undertaken pursuant to its terms. Such report shall include any scheduling changes proposed, any problems encountered, and any disputes and objections received in MaineDOT's efforts to carry out the terms of this agreement. Failure to provide such summary report may be considered noncompliance with the terms of this MOA pursuant to Stipulation VIII, below.

VII. DISPUTE RESOLUTION. Should any signatory to this Agreement object within 30 days to any actions proposed or carried out pursuant to this agreement, the ACOE shall consult with all parties to resolve the objection. If the ACOE determines that the objection cannot be resolved, the ACOE will request that the Council join consultation pursuant to 36 CFR Part 800.6(b). Any Council comment provided in response to such a request will be taken into account by the ACOE in accordance with 36 CFR Part 800.6(c)(2) with reference only to the subject of the dispute. The ACOE's responsibility to carry out all actions under this agreement that are not the subjects of the dispute will remain unchanged.

VIII. AMENDMENTS AND NONCOMPLIANCE. If any signatory to this MOA, including any invited signatory, determines that its terms will not or cannot be carried out or that an amendment to its terms must be made, that party shall immediately consult with the other parties to develop an amendment to this MOA pursuant to 36 CFR Sections 800.6(c)(7) and 800.6(c)(8). The amendment will be effective on the date a copy signed by all of the original signatories is filed with the Council. If the signatories cannot agree to appropriate terms to amend the MOA, any signatory may terminate the agreement in accordance with Stipulation IX, below.

IX. TERMINATION. If an MOA is not amended following the consultation set out in Stipulation IX, it may be terminated by any signatory or invited signatory. Within 30 days following termination, the ACOE shall notify the signatories if it will initiate consultation to execute an MOA with the signatories under 36 CFR Section 800.6(c)(1) or request the comments of the Council under 36 CFR Section 800.7(a) and proceed accordingly.

Execution of this Memorandum of Agreement by ACOE and MHPC, and implementation of its terms, are evidence that ACOE has afforded MHPC an opportunity to comment on this project and its effects on historic properties, and ACOE has taken into account the effects of the undertaking on historic properties.

NEW ENGLAND DISTRICT, U.S. ARMY CORPS OF ENGINEERS

By: *Heather L. Sullivan* 2/26/09 Date:
Heather L. Sullivan, Acting Chief, Regulatory Division

MAINE STATE HISTORIC PRESERVATION OFFICER

By: *Earle G. Shettleworth, Jr.* Date: 2/2/09
Earle G. Shettleworth, Jr., State Historic Preservation Officer

CONCURRENCE by Maine Dept. of Transportation

By: *David A. Cole* 2-5-09 Date:
David A. Cole, Commissioner



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION
AUGUSTA, ME 04333

DEPARTMENT ORDER

IN THE MATTER OF

MAINE DEPARTMENT OF TRANSPORTATION) NATURAL RESOURCES PROTECTION
Falmouth & S. Portland, Cumberland County) COASTAL WETLAND ALTERATION
Princeton, Washington County) FRESHWATER WETLAND ALTERATION
2010-2011 BRIDGE PERMIT) WATER QUALITY CERTIFICATION
L-24524-L6-A-N (approval))
L-24524-2B-B-N) FINDINGS OF FACT AND ORDER

Pursuant to the provisions of 38 M.R.S.A. § 480-A et seq. and Section 401 of the Federal Water Pollution Control Act, the Department of Environmental Protection has considered the application of MAINE DEPARTMENT OF TRANSPORTATION with the supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. PROJECT DESCRIPTION:

A. History: The project is being proposed in response to Public Law, Chapter 647 “An Act To Keep Bridges Safe” and “Keeping our Bridges Safe”, a report on Maine’s bridge inspection and improvements program dated November 26, 2007. The report listed critical bridges requiring immediate attention to ensure public safety and protect the economic vitality of Maine’s transportation network. The Maine Department of Transportation (applicant) screened approximately 300 bridges that had been identified on the list of critical bridges and determined that a significant number of the proposed bridge repair projects do not require a permit from the Department based on the scope or nature of the work required to complete the repair. The remaining bridges were divided into two permitting phases: phase I (2010-2011), included herein, and phase II (2012-2013), which will be submitted to the Department for permitting in 2011. In February 2009, the applicant and the Department established a Memorandum of Agreement (MOA), which established an umbrella style of permitting multiple projects within a single application.

B. Summary: The applicant proposes to repair and/or replace 51 bridges at various locations across the State as phase I of the “Keeping our Bridges Safe” initiative. The applicant has designed 49 of the bridge repair and/or replacement projects to meet the standards pursuant to Chapter 305, Permit-by-Rule Standards (PBR), Sections # 4 Replacement of Structures and #11 State Transportation Facilities (PBR #47992). The applicant agrees to all the terms and conditions of Chapter 305 for the 49 qualifying bridges including work window timing restrictions required by the Maine Department of Inland Fisheries & Wildlife (MDIF&W), except as provided by the Special Permit Conditions associated with this permit. The bridges are listed in Attachments #1 and #3 of the application, which includes the bridge identification numbers, locations, scope of the work, proposed impacts, and review agency comments.

In addition to the 49 bridge projects that qualify for permitting pursuant to Chapter 305, the applicant proposes to undertake repairs at two (2) bridge locations that require approval through an individual Natural Resources Protection Act (NRPA) permit. The two (2) bridges are the Route 26/100 Presumpscot River bridge in Falmouth and the Route 1 Calais Road bridge located over Lewy Lake in Princeton. The specific detail of these three proposed bridge projects are as follows:

1) Falmouth, Route 26/100, Presumpscot River Bridge. The bridge project is identified as bridge #2702 in attachments #1 and #3 of the application. The applicant proposes to replace and expand the existing bridge structure, impacting approximately 18,000 square feet of palustrine scrub shrub wetland and 4,000 square feet of river bottom for the placement of piers for the new bridge.

2) Princeton, Calais Road (Rt # 1) bridge. The bridge project is identified as bridge #2688 in attachments #1 and #3 of the application. The applicant proposes to replace the existing structure with a wider structure and impact approximately 10,000 square feet of palustrine unconsolidated bottom and emergent wetland impacts to accommodate snowmobile and pedestrian use at the request of the Passamaquoddy Nation.

The applicant has proposed project specifications for all in-water work associated with the bridge repair and replacements as discussed further in Findings #3-5. The entire project specifications will be annually reviewed beginning in January 2010, which will provide the Department an opportunity to request the applicant address any project specific concerns. The applicant intends to advertise and construct the bridges at various times over the next 2 years starting in May 2009. To facilitate construction monitoring, the applicant included in the application a spreadsheet, which will facilitate project tracking review, and construction under this application. Starting in May, the applicant will update the spreadsheet on a monthly basis to provide current information regarding project status and construction timing to the Department.

C. Current Use of the Site: The proposed project sites contain bridges over numerous rivers, streams, brooks, great ponds, and tidal wetlands throughout the State of Maine.

2. EXISTING SCENIC, AESTHETIC, RECREATIONAL OR NAVIGATIONAL USES:

In accordance with Chapter 315, Assessing and Mitigating Impacts to Scenic and Aesthetic Uses, the applicant submitted a copy of the Department's Visual Evaluation Field Survey Checklist as Appendix A to the application along with a description of the property and the proposed project. The applicant also submitted several photographs of each proposed project site.

The proposed projects requiring individual permit review are located over the Presumpscot River and Lewy Lake, which are scenic resources visited by the general public, in part, for the use, observation, enjoyment and appreciation of its natural and cultural visual qualities. The proposed projects are expansions or replacements of existing bridges. The applicant has submitted photographs of all the sites where work is proposed. The proposed replacements or expansions do not significantly change the dimensions of the bridges as viewed from the scenic resource.

The proposed projects were evaluated using the Department's Visual Impact Assessment Matrix and were found to have an acceptable potential visual impact rating. Based on the information submitted in the application and the visual impact rating, the Department determined that the location and scale

of the proposed activity is compatible with the existing visual quality and landscape characteristics found within the viewshed of the scenic resource in the project area.

The Department did not identify any issues involving existing recreational and navigational uses.

The Department finds that the proposed activities will not unreasonably interfere with existing scenic, aesthetic, recreational or navigational uses of the protected natural resources.

3. SOIL EROSION:

The applicant proposes to adhere to the most recent version of MaineDOT's Highway Standard Specifications including Special Provision 656-Temporary Soil Erosion and Water Pollution Control Plan (SEWPCP) for each bridge project. Language requiring that all contractors follow these specifications will be incorporated into the contract terms and conditions for all construction project contracts. In addition, the applicant will ensure that the following erosion control provisions are followed for each bridge repair project:

A. The MaineDOT Best Management Practices (BMPs) for Erosion and Sedimentation Control Manual (February 2008) will be applied and maintained on all projects. As standard practice for all projects, Surface Water Quality personnel and Regional Environmental Coordinators will review the draft SEWPCP, make final recommendations, and the project resident will approve temporary and permanent erosion and sedimentation provisions for inclusion in each contract awarded by the applicant. In addition, Maine DOT Environmental Office staff will provide oversight of the appropriate application of BMPs, technical assistance to resident engineers, and on-site response on a project specific basis.

B. The applicant will utilize the following in-water work standards to mitigate against unreasonable erosion of soil material and operate outside of standard in-water work windows provided that:

- 1). The applicant will use turbidity limiting measures to limit the effects of siltation for all pile removals and replacements in fine substrates such as clay, silt and mud. Turbidity limiting measure will include but are not limited to working on an out-going tide, or the use of silt booms, floating curtains, etc.
- 2). Stream flow diversion and re-establishment will be performed in conformance with the latest version of the MaineDOT BMP manual.
- 3). Sandbags or jersey barriers used for coffer dams or temporary stream diversions will be removed either by hand or by use of shore-based machinery and reach-in techniques.
- 4). The applicant will utilize temporary work staging platforms to facilitate bridge repair and re-construction activities. Staging platforms will consist of temporary pile supported work platforms, work via barge, work via adjacent upland, or work from the existing structure. Placement and/or removal of staging equipment will occur in accordance with the MaineDOT BMP manual.
- 5). In all waterways, the applicant will divert stream flow as necessary to create a stable dry work environment using techniques described in the MaineDOT BMP manual.

Based on a review of the Best Management Practices documents submitted by the applicant as part of the application and the standard project provisions outlined above, the Department has determined that the applicant has made adequate provision to ensure that the project will not result in an unreasonable discharge of sediment into the resource.

Therefore, the Department finds that the activities will not cause the unreasonable erosion of soil or sediment discharge into the resource nor unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment provided that the applicant: applies the provisions of the MaineDOT BMPs for Erosion and Sedimentation Control BMP Manual (February 2008) on all projects; ensures that Surface Water Quality personnel and Regional Environmental Coordinators review, and approve temporary and permanent erosion and sedimentation provisions for inclusion in each contract awarded; ensures that Environmental Office staff provide oversight of the appropriate application of BMPs, technical assistance to resident engineers and on-site response on a project specific basis; and follows the in-water work standards outlined above for all bridge repair and replacement projects.

4. HABITAT CONSIDERATIONS:

The applicant proposes to utilize its “Waterway and Wildlife Crossing Policy and Design Guide” (July 2008) on all projects. The Waterway and Wildlife Crossing Policy and Design Guide requires the applicant to develop effective methods of building, repairing, and maintaining transportation infrastructure, while protecting important aquatic, wildlife, and surface water resources. The applicant is not proposing to block fish passage during the re-construction of any of the Route 26/100, Presumpscot River Bridge or the Calais Road Bridge.

A. Falmouth, Route 26/100, Presumpscot River Bridge (Bridge #2702): The Department reviewed a Geographic Information System database and did not identify any significant wildlife habitat associated with this project site. The proposed project was reviewed by the Department of Inland Fisheries & Wildlife (MDIFW), which stated that it did not identify any issues with regard to rare, threatened or endangered species at the proposed project site. The Department of Marine Resources (DMR) review the proposed project and requests that the applicant limit construction activity for the Route 26/100 Presumpscot River bridge project to the period between August 1st and April 31st due to the presence of alewives and herring. The applicant has agreed to this in-water work window restriction.

B. Princeton, Calais Road (Rt #1) bridge (Bridge #2688): The Department reviewed a Geographic Information System database, which did not identify any rare, threatened or endangered species with the proposed project site. MDIFW reviewed the proposed project site and did not identify any issues of concern, rare, threatened or endangered species at the site. DMR has reviewed the proposed project site and did not identify any species of concern or any construction window restrictions.

The applicant further proposes to include language within each bridge repair/replacement contract that restricts in-water work to a specific time of year if determined necessary in consultation with MDIFW and DMR. Agency staff from MDIFW and DMR and/or the Department may modify any in-water work window if necessary to address specific fisheries concerns identified during the construction process. In addition, the Coordination and Permits Division Manager or the Environmental Office Director at MaineDOT may extend a project’s in-water work window by up to 10 days without requesting a permit modification from the Department provided that a notice of justification and need is submitted to the Department prior to granting the extension.

The Department finds that the activities will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic or adjacent upland habitat, travel corridor, freshwater, estuarine or marine fisheries or other aquatic life provided that the applicant will limit construction of the Route 26/100 Presumpscot River Bridge in Falmouth to a August 1st to April 30th in-water work window, the applicant will apply its “Waterway and Wildlife Crossing Policy and Design Guide” (July 2008) to all projects, and the applicant may extend a project’s in-water work window by up to 10 days without requesting a permit modification from the Department provided that they submit a notice of justification and need to the Department prior to granting the extension.

5. WATER QUALITY CONSIDERATIONS:

The applicant’s Best Management Practices for Erosion and Sedimentation Control Manual requires each contractor to install and maintain appropriate erosion controls and to utilize good housekeeping practices for equipment utilized on construction projects. Each contractor is required to utilize proper fuel filling procedures for equipment and maintain equipment to prevent leaks. Each site is required to have a spill kit to clean up spills if they occur and a project specific plan for responding to spills including contacting the Department to report and remediate a spill.

The Department finds that the proposed project will violate any state water quality law, including those governing the classification of the State’s waters.

6. WETLANDS AND WATERBODIES PROTECTION RULES:

The applicant proposes to impact approximately 18,000 square feet of palustrine scrub shrub and 4,000 square feet of riverine bottom to replace the Route 26/100 Presumpscot River bridge in Falmouth and impact approximately 10,000 square feet of palustrine unconsolidated bottom and palustrine emergent wetlands associated with Lewy Lake to replace the Route 1 Lewy Lake bridge in Princeton..

The Department’s Wetlands and Waterbodies Protection Rules, Chapter 310, require that the applicant meet the following standards:

A. Avoidance. No activity may be permitted if there is a practicable alternative to the project that would be less damaging to the environment. Each application for a Natural Resources Protection Act permit must provide an analysis of alternatives in order to demonstrate that a practicable alternative does not exist. The applicant submitted an alternatives analysis for the proposed project dated February 18, 2009. The applicant considered alternatives to bridge replacement where ever possible; however given the structural condition of some of the bridges the applicant is unable to avoid impacts while meeting the project purpose of ensuring an adequate transportation system and protecting public safety.

B. Minimal Alteration. The amount of waterbody to be altered must be kept to the minimum amount necessary for meeting the overall purpose of the project. The applicant has minimized wetland impacts by installing new abutments in back of existing structures and removing the existing abutments to increase the bank full width of the waterway whenever practicable. The 48 bridges qualifying for PBR include replacing 10 of the bridges with wider structures, 6 of the projects consist of large pipes that will have weirs installed to enhance fish passage, and 1 project

will have a natural bottom pipe-arch installed. The Department notes that replacing the existing structures with longer spans or wider structures will increase aquatic habitat and flood flow capacity. Some of these projects will restore fish passage in water bodies where previously none occurred due to the structure limitations such as hanging culverts. Weirs will be installed in structures where a need is identified to improve aquatic organism passage. Finally, the applicant intends to remove 2 redundant bridges: the Muddy Brook Bridge on the Townway Road in New Sharon and the Smith Pond Bridge on the Hilton Hill Road in Skowhegan, both of which contain critical habitat for Atlantic salmon.

C. Compensation. In accordance with Chapter 310 Section 5 (C), compensation is required to achieve the goal of no net loss of waterbody functions and values. The applicant is not proposing compensation as many of the projects meet PBR standards and have minimal impact. The remaining two projects involve approximately 28,000 square feet of impacts and would otherwise require compensation in accordance with Chapter 310. However, the scope of the projects include the removal of 2 redundant or archaic bridges, increasing channel width in the majority of replacement projects, and improving hydrologic capacity wherever possible, which will offset the proposed impacts. In addition, the 10 projects involving longer spans or wider structures will result in more riverine habitat at the locations. Therefore, the Department is not requiring compensation as the nature of the projects is self-mitigating.

The Department finds that the applicant has avoided and minimized waterbody impacts to the greatest extent practicable, and that the proposed projects represent the least environmentally damaging alternative that meets the overall purpose of the project, and that the function and value benefits of the projects overall outweigh any potential adverse impacts resulting from limited encroachment of replaced or rehabilitated structures into the protected natural resources.

7. OTHER CONSIDERATIONS:

The Department did not identify any other issues involving existing scenic, aesthetic, or navigational uses, soil erosion, habitat or fisheries, the natural transfer of soil, natural flow of water, water quality, or flooding.

BASED on the above findings of fact, and subject to the conditions listed below, the Department makes the following conclusions pursuant to 38 M.R.S.A. Sections 480-A et seq. and Section 401 of the Federal Water Pollution Control Act:

A. The proposed activity will not unreasonably interfere with existing scenic, aesthetic, recreational, or navigational uses.

B. The proposed activity will not cause unreasonable erosion of soil or sediment provided that the applicant's BMP manual for Erosion and Sedimentation Control Manual (February 2008) will be applied and maintained on all projects as indicated in Finding #3A.

C. The proposed activity will not unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment.

D. The proposed activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic or adjacent upland habitat, travel corridor, freshwater, estuarine, or marine fisheries or other aquatic life provided that the applicant will

utilize an August 1st to April 30th in-water work window for the Route 26/100 Presumpscot River Bridge in Falmouth except as specified in the Special In-Water Work Provisions included in the application, the applicant will apply its “Waterway and Wildlife Crossing Policy and Design Guide” (July 2008) to all projects, and the applicant may extend a project’s in-water work window by up to 10 days without requesting a permit modification from the Department provided that they submit a notice of justification and need to the Department prior to granting the extension.

E. The proposed activity will not unreasonably interfere with the natural flow of any surface or subsurface waters.

F. The proposed activity will not violate any state water quality law including those governing the classifications of the State's waters.

G. The proposed activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties.

H. The proposed activity is not on or adjacent to a sand dune.

I. The proposed activity is not on an outstanding river segment as noted in Title 38 M.R.S.A. Section 480-P.

THEREFORE, the Department APPROVES the above noted application of MAINE DEPARTMENT OF TRANSPORTATION for the 2010-2011 replacement, rehabilitation, or removal of bridges as proposed, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations:

1. Standard Conditions of Approval, a copy attached.

2. The applicant shall take all necessary measures to ensure that its activities or those of its agents do not result in measurable erosion of soil on the site during the construction of the project covered by this approval.

3. The applicant’s BMP manual for Erosion and Sedimentation Control Manual (February 2008) shall be applied and maintained on all projects.

4. The applicant shall utilize an August 1st to April 30th in-water work window for the Route 26/100 Presumpscot River Bridge in Falmouth except as specified in the Special In-Water Work Provisions included in the application.

5. The applicant shall apply its “Waterway and Wildlife Crossing Policy and Design Guide” (July 2008) to all projects.

6. The applicant may extend a project specific time of year restriction by as much as 10 days without having to formally modify the permit provided that it submits a notice of justification and need to the Department prior to granting the extension.

7. Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

THIS APPROVAL DOES NOT CONSTITUTE OR SUBSTITUTE FOR ANY OTHER REQUIRED STATE, FEDERAL OR LOCAL APPROVALS NOR DOES IT VERIFY COMPLIANCE WITH ANY APPLICABLE SHORELAND ZONING ORDINANCES.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

do/ats#69527/124524an



Natural Resource Protection Act (NRPA) Standard Conditions

THE FOLLOWING STANDARD CONDITIONS SHALL APPLY TO ALL PERMITS GRANTED UNDER THE NATURAL RESOURCE PROTECTION ACT, TITLE 38, M.R.S.A. SECTION 480-A ET.SEQ. UNLESS OTHERWISE SPECIFICALLY STATED IN THE PERMIT.

A. Approval of Variations From Plans. The granting of this permit is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation.

B. Compliance With All Applicable Laws. The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.

C. Erosion Control. The applicant shall take all necessary measures to ensure that his activities or those of his agents do not result in measurable erosion of soils on the site during the construction and operation of the project covered by this Approval.

D. Compliance With Conditions. Should the project be found, at any time, not to be in compliance with any of the Conditions of this Approval, or should the applicant construct or operate this development in any way other the specified in the Application or Supporting Documents, as modified by the Conditions of this Approval, then the terms of this Approval shall be considered to have been violated.

E. Initiation of Activity Within Two Years. If construction or operation of the activity is not begun within two years, this permit shall lapse and the applicant shall reapply to the Board for a new permit. The applicant may not begin construction or operation of the activity until a new permit is granted. Reapplications for permits shall state the reasons why the applicant will be able to begin the activity within two years form the granting of a new permit, if so granted. Reapplications for permits may include information submitted in the initial application by reference.

F. Reexamination After Five Years. If the approved activity is not completed within five years from the date of the granting of a permit, the Board may reexamine its permit approval and impose additional terms or conditions to respond to significant changes in circumstances which may have occurred during the five-year period.

G. No Construction Equipment Below High Water. No construction equipment used in the undertaking of an approved activity is allowed below the mean high water line unless otherwise specified by this permit.

H. Permit Included In Contract Bids. A copy of this permit must be included in or attached to all contract bid specifications for the approved activity.

I. Permit Shown To Contractor. Work done by a contractor pursuant to this permit shall not begin before the contractor has been shown by the applicant a copy of this permit.

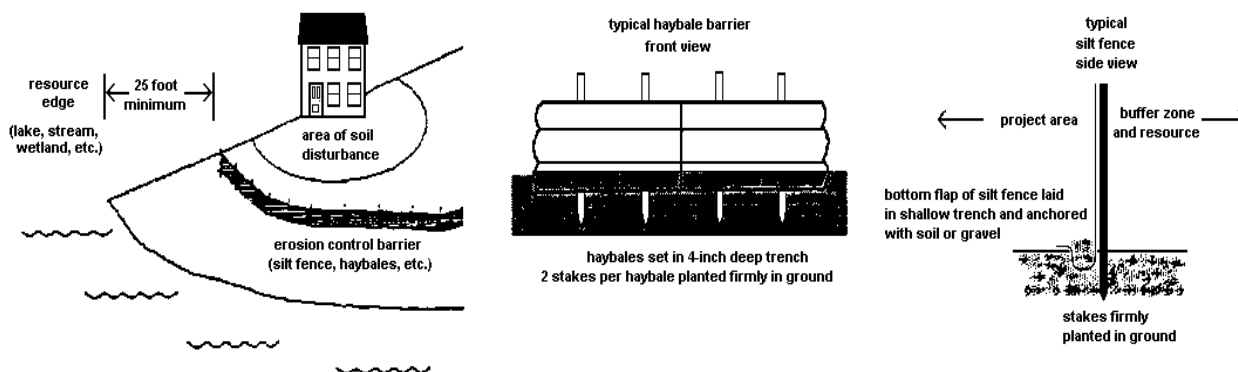
Revised (4/92/DEP LW0428

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Erosion Control for Homeowners

Before Construction

1. If you have hired a contractor, make sure you discuss your permit-by-rule with them. Talk about what measures they plan to take to control erosion. Everybody involved should understand what the resource is, and where it is located. Most people can identify the edge of a lake or river. However, the edges of wetlands are often not so obvious. Your contractor may be the person actually pushing dirt around, but you are both responsible for complying with the permit-by-rule.
2. Call around to find where erosion control materials are available. Chances are your contractor has these materials already on hand. You probably will need silt fence, hay bales, wooden stakes, grass seed (or conservation mix), and perhaps filter fabric. Places to check for these items include farm & feed supply stores, garden & lawn suppliers, and landscaping companies. It is not always easy to find hay or straw during late winter and early spring. It also may be more expensive during those times of year. Plan ahead -- buy a supply early and keep it under a tarp.
3. Before any soil is disturbed, make sure an erosion control barrier has been installed. The barrier can be either a silt fence, a row of staked hay bales, or both. Use the drawings below as a guide for correct installation and placement. The barrier should be placed as close as possible to the soil-disturbance activity.
4. If a contractor is installing the erosion control barrier, double check it as a precaution. Erosion control barriers should be installed "on the contour", meaning at the same level or elevation across the land slope, whenever possible. This keeps stormwater from flowing to the lowest point along the barrier where it can build up and overflow or destroy the barrier.



During Construction

1. Use lots of hay or straw mulch on disturbed soil. The idea behind mulch is to prevent rain from striking the soil directly. It is the force of raindrops hitting the bare ground that makes the soil begin to move downslope with the runoff water, and cause erosion. More than 90% of erosion is prevented by keeping the soil covered.
2. Inspect your erosion control barriers frequently. This is especially important after a rainfall. If there is muddy water leaving the project site, then your erosion controls are not working as intended. You or your contractor then need to figure out what can be done to prevent more soil from getting past the barrier.
3. Keep your erosion control barrier up and maintained until you get a good and healthy growth of grass and the area is permanently stabilized.

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Maine Dept. of Transportation	File Number: NAE-2009-00514	Date:
Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
X	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
	APPROVED JURISDICTIONAL DETERMINATION	D
X	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://usace.army.mil/inet/functions/cw/cecwo/reg> or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the District Engineer for final authorization in care of "Regulatory Division." If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the District Engineer, in care of the Chief, Regulatory Division, as specified in the last paragraph of the coverletter. Your objections must be received within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the District Engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the District Engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the District Engineer for final authorization in care of "Regulatory Division." If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the Division Engineer in care of: Michael G. Vissichelli, Administrative Appeals Review Officer, North Atlantic Division, Corps of Engineers, North Atlantic Fort Hamilton Military Community, Bldg. 301, General Lee Avenue, Brooklyn, NY 11252-6700 Telephone: (718) 765-7163, E-mail: Michael.G.Vissichelli@usace.army.mil The Division Engineer must receive this form within 60 days of the date of this notice.

- C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the Division Engineer in care of: Michael G. Vissichelli, Administrative Appeals Review Officer, North Atlantic Division, Corps of Engineers, North Atlantic Fort Hamilton Military Community, Bldg. 301, General Lee Avenue, Brooklyn, NY 11252-6700 Telephone: (718) 765-7163, E-mail: Michael.G.Vissichelli@usace.army.mil The Division Engineer must receive this form within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the Division Engineer in care of: Michael G. Vissichelli, Administrative Appeals Review Officer, North Atlantic Division, Corps of Engineers, North Atlantic Fort Hamilton Military Community, Bldg. 301, General Lee Avenue, Brooklyn, NY 11252-6700 Telephone: (718) 765-7163, E-mail: Michael.G.Vissichelli@usace.army.mil The Division Engineer must receive this form within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district at the address below for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

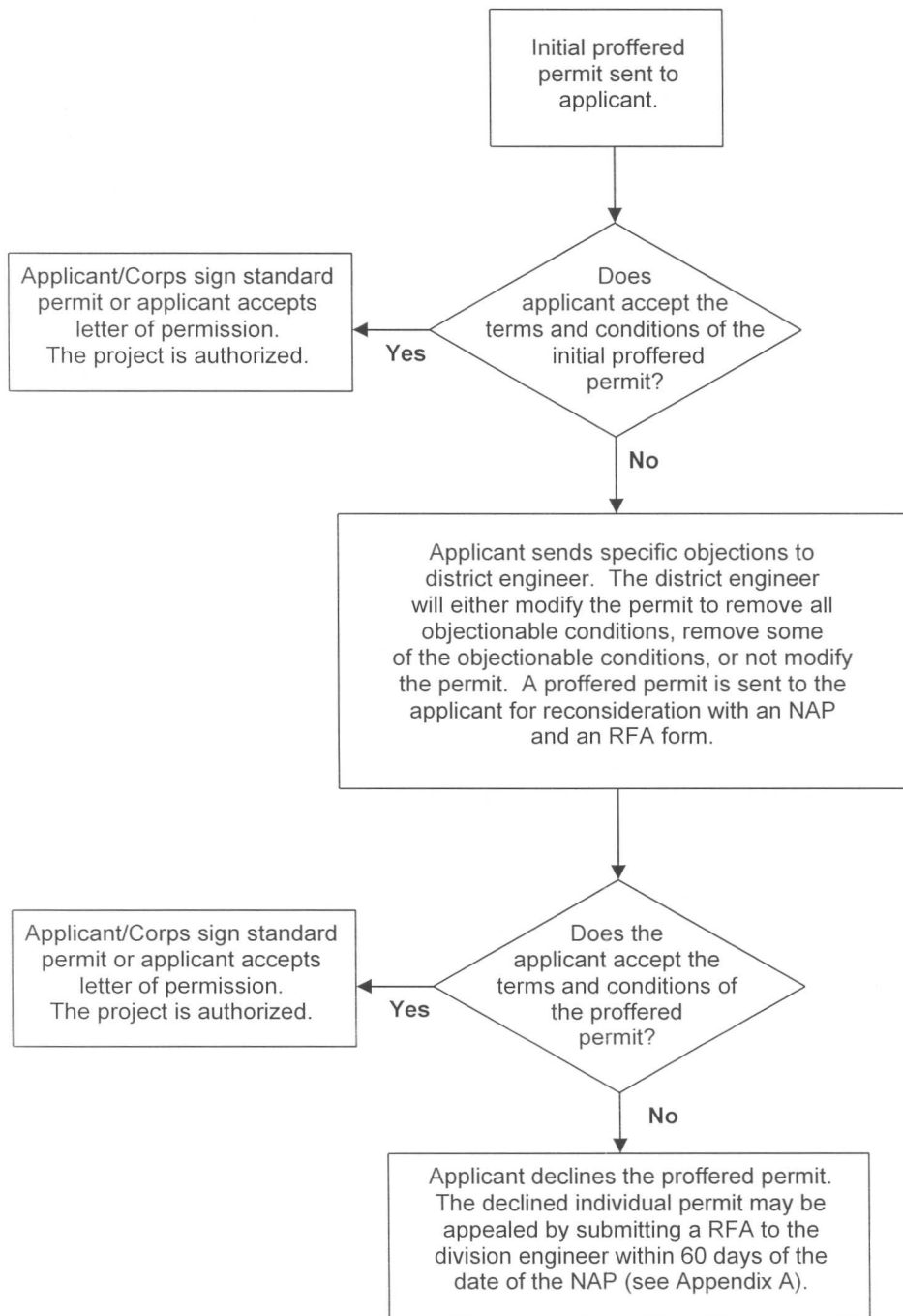
If you have questions regarding this decision and/or the appeal process you may contact Ms. Ruth Ladd at:

Chief, Policy Analysis/Technical Support Branch
Corps of Engineers
696 Virginia Road
Concord, MA 01742 or by calling (978) 318-8818

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15-day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent.	Date:	Telephone number:
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Applicant Options with Initial/Proffered Permit



Appendix B

ATTACHMENT to MaineDOT Batch Permit

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD): 2/25/09

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:
Richard Bostwick, MaineDOT Environmental Office, 16 SHS, Augusta, ME 04333

C. DISTRICT OFFICE, FILE NAME, AND NUMBER: New England District;
ME DOT 2-Year Bridge Permit Application; NAE-2009-00514

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION: Place fill below the ordinary high water line and the high tide line of numerous waterways and in their adjacent freshwater and tidal wetlands throughout the State of Maine in order to replace, rehabilitate, or repair numerous bridges and culverts. This work is being conducted in response to Federal and State stimulus efforts and is designed to address critical bridges that need immediate attention to insure public safety and protect the economic vitality of Maine's transportation network.

SEE ATTACHED TABLE OF WATERS AND WETLANDS AND THEIR IMPACTS

State: **Maine** County/parish/borough: **Various** City: **Various**
Center coordinates of site (lat/long in degree decimal format): Lat. ° **Pick List**
, Long. ° **Pick List**.
Universal Transverse Mercator: **Zone 19N - see Table**
Name of nearest waterbody: **Various- see Table**

Identify (estimate) amount of waters in the review area: **See attached Table**
Non-wetland waters: linear feet: width (ft) and/or acres.
Cowardin Class:
Stream Flow:
Wetlands: acres.
Cowardin Class:

Name of any water bodies on the site that have been identified as Section 10 waters: **See attached Table**
Tidal: **Noted on attached table**
Non-Tidal: **Penobscot & Kennebec Rivers**

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- ☒ Office (Desk) Determination. Date: Various- last on 2/25/09
☒ Field Determination. Date(s): Various and limited

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary

to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable. This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply

- checked items should be included in case file and, where checked and requested, appropriately reference sources below):

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: **Contained in administrative record.**

☐ Data sheets prepared/submitted by or on behalf of the applicant/consultant.

☐ Office concurs with data sheets/delineation report.

☐ Office does not concur with data sheets/delineation report.

☐ Data sheets prepared by the Corps:

☐ Corps navigable waters' study:

☐ U.S. Geological Survey Hydrologic Atlas:

☐ USGS NHD data.

☒ USGS 8 and 12 digit HUC maps.

☒ U.S. Geological Survey map(s). Cite scale & quad name: **Multiple.**

☒ USDA Natural Resources Conservation Service Soil Survey. Citation **all**

Maine counties Mapped

☒ National wetlands inventory map(s). Cite name: **Statewide layer in**

Maine Office of GIS (MEGIS) Database used:

☐ State/Local wetland inventory map(s):

☒ FEMA/FIRM maps: **Various as Mapped in the MEGIS database:**

☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)


☒ Photographs: ☒ Aerial (Name & Date): **MEGIS Ortho Rectified mapping of various dates since 2002.**


or ☒ Other (Name & Date): **Ground photos taken by John Perry and Dan Tierney (DOT Staff) taken fall 2008 and MaineDOT Bridge maintenance files from 1970s to present..**

☐ Previous determination(s). File no. and date of response letter:

☒ Other information (please specify): **All of these projects are bridges or culverts with wetland area immediately adjacent to USGS mapped streams, that flow into other mapped waterways and eventually into the Gulf of Maine**

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.


Jay L. Clement Date
Senior Project Manager
Maine Project Office


Judy Gates Date
Director, Environmental Office
Maine Dept. of Transportation

Matrix for Jurisdictional Determination- County, Town , Road, Waterway, and UTM coordinates; and Resource by Cowardin type, and Impact Amounts							Waterway and permit type	
BR#	UTM Easting in Meters	UTM Northing in Meters	Location	Town	County	Bridge Name	Resource Name & Max. Anticipated Impacts (S.F.) to cowardin types and non-wetland waters (RUS)	Anticipated Permitting Levels All are CORPS 404 permitting unless noted
0077	398053	4874310	Old Danville Road	Auburn	Androscoggin	ROYAL RIVER BRIDGE	Royal River RUS 3000 PSS, 1000	DEP PBR ACOE Cat II
125	584702	5167200	Richardson Road	Easton	Aroostook	PRESTILE STREAM #1	Prestile Stream PFO/EM 9000	DEP PBR ACOE Cat II
2403	556684	5095124	Route 2	Island Falls	Aroostook	IRON	5000 PSS/FO on Alignment 10000 PSS/FO off alignment.	DEP PBR ACOE Ind. As of April 2009
2898	565173	5105531	Main Street	Oakfield	Aroostook	Village	Mattawamkeag River <7000 PEM/PSS	DEP PBR ACOE Ind. As of April 2009
0168?	585597	5060774	Bancroft Road	Weston	Aroostook	Trout Brook	1000 RUS	DEP PBR ACOE Ind. As of April 2009
5340	398774	4848250	Winn Road	Cumberland	Cumberland	RIDEOUT	Mill Brook PFO/SS 6500	DEP PBR ACOE Cat II
2702	395649	4842677	Route 26/100	Falmouth	Cumberland	RR and River CROSSING	Presumpscot River 18000 PSS wetland impact 4000 RUS	DEP Individual ACOE Cat II
5646	404674	4860324	Hallowell Road/ Route 9	Pownal	Cumberland	POWNAL CENTER	E Branch Royal River PSS/EM 5000	DEP PBR ACOE Cat II
3945	396452	4832981	Route 1	South Portland	Cumberland	VETERANS MEMORIAL	Fore River 5000 EUS Inter tidal flats, cobble gravel, adjacent to shellfish	Condition requiring agency review and approval of plans prior to construction.
3987	392783	4839316	E. Bridge Street	Westbrook	Cumberland	LITTLE	Mill Brook 3000 PEM	DEP PBR ACOE Cat II
2004	408841	4946157	Route 4/27/43	Farmington	Franklin	Abbot	Abbott Brook 2000 PSS	DEP PBR ACOE Ind. As of April 2009
2311	410348	4945082	Route 2/27	Farmington	Franklin	Gilbert Brook	PEM, 1000 RUS	DEP PBR ACOE Ind. As of April 2009
0408	422519	4942730	Swan Road	New Sharon	Franklin	SWAN ROAD	Fillibrown Brook 4000 PFO	DEP PBR ACOE Cat II
2594	418424	4944055	Townway Road	New Sharon	Franklin	MUDDY BROOK	Muddy Brook 2000 PSS	DEP PBR ACOE Ind. As of April 2009
5570	560512	4905066	Route 3	Mt Desert	Hancock	STANLEY BROOK	Stanley Brook New Bridge will have no impacts. Describable on site detour.	DEP PBR ACOE Cat II SECTION 10
498	441105	4911005	Blair Road	Augusta	Kennebec	BLAIR ROAD	Riggs Brook/LAP less than 4300 PFO/SS	DEP PBR ACOE Cat II
2719	439629	4909699	Route 100/201	Augusta	Kennebec	RIGGS	Riggs Brook 2000 RUS	DEP PBR ACOE Cat II
2412	422789	4896235	Cobbosseecontee	Monmouth	Kennebec	JOCK STREAM	Jock Stream Great Pond 4000 Unveg	DEP PBR ACOE Cat II
5578	490047	4872527	Island Road	Thomasston	Knox	SPRUCE HEAD	Atlantic Ocean 1000 EEM Veg. w/o TD - ACOE	DEP PBR need to be less than 1000 vegetated to stay at ACOE Cat II SECT
2151	344138	4888200	Shave Hill Road	Fryeburg	Oxford	CHARLES RIVER	Charles River 2500 PFO	DEP PBR ACOE Cat II
2708	344924	4887925	McNeil Road	Fryeburg	Oxford	RED IRON	Old Course Saco River 2500	DEP PBR ACOE Cat II
2917	384032	4931922	Route 2	Mexico	Oxford	WEBB RIVER	PFO/SS w/ Detour	DEP PBR ACOE Cat II
5855	347822	4929548	Coburn Fields	Riley Twp	Oxford	BULL BRANCH	Goose Eye Brook 5000 PFO	LURC ACOE Cat II
0792	347791	4929513	Coburn Fields	Riley Twp	Oxford	BULL BRANCH #2	Goose Eye Brook 5000 PFO	LURC ACOE Cat II

Matrix for Jurisdictional Determination- County, Town , Road, Waterway, and UTM coordinates; and Resource by Cowardin type, and Impact Amounts							Waterway and permit type	
BR#	UTM Easting in Meters	UTM Northing in Meters	Location	Town	County	Bridge Name	Resource Name & Max. Anticipated Impacts (S.F.) to cowardin types and non-wetland waters (RUS)	Anticipated Permitting Levels All are CORPS 404 permitting unless noted
2711	531324	4962820	Route 2	Bangor	Penobscot	Red	Meadow Brook Great Works Stream w/o TD	DEP PBR ACOE Ind. As of April 2009
3365	530509	4973809	Cram Street	Bradley	Penobscot	JENKINS (GRAM STREET)	3000 PSS Black Stream	DEP PBR ACOE Ind. As of April 2009
5102	500736	496377	Fuller Road	Carmel	Penobscot	Norton	Richards Brook	DEP PBR ACOE Cat II
3972	500673	4989204	Bradford Road	Charleston	Penobscot	RICHARDS	8000 PSS Cold Stream	DEP PBR ACOE Cat II
2436	533484	5009699	Caribou Road	Enfield	Penobscot	Kimball	PFO/PSS	DEP PBR ACOE Ind. As of April 2009
3040	526769	5009656	Coffin Street/	Howland	Penobscot	PISCATAQUIS	4000 PFO/SS- RUS	DEP PBR ACOE Ind. As of April 2009
2170	539454	5026232	Route 2	Lincoln	Penobscot	COMBELLASSIE	2000 RUS	DEP PBR ACOE Cat II
2501	478870	4964681	Route 2	Newport	Penobscot	Main Street	East Branch <4300 PFO	DEP PBR ACOE Cat II
6103	478246	4970546	Moosehead Trail/	Newport	Penobscot	MULLIGAN STREAM	7000 PEM/SS	DEP PBR ACOE Cat II
5707	571378	5040896	Center Street/	Prentiss Twp	Penobscot	LITTLE MUD BROOK	5000 PEM	DEP PBR ACOE Ind. As of April 2009
3868	497678	5032813	Route 11	Ebeemee (T5 R9 NWP)	Piscataquis	Stinking Brook Bridge	<4300 PFO	LURC ACOE Ind. As of April 2009
3825	428253	4866986	Forside Road	Topsham	Sagadahoc	MUDDY RIVER	4999 EUS	DEP PBR ACOE Cat II SECTION 10
5584	435322	4872525	River Road/	Woolwich	Sagadahoc	CHOPPS CREEK	6000 PEM/SS/FO	DEP PBR ACOE Cat II SECTION 10
2767	459233	4959549	Route 2	Canaan	Somerset	SIBLEY POND	10000 PEM/SS w/ staged construction. 30000 PEM/SS w/ 10000 PFO	DEP PBR ACOE Cat II
3496	454073	4951420	Route 23	Canaan	Somerset	HASKELL	PEM/Stream	DEP PBR ACOE Cat II
2579	431684	4971122	Route 201A/8/16	Embden	Somerset	MOORE	4000 PFO	DEP PBR ACOE Cat II
2525	445558	4994720	Route 16	Mayfield Twp	Somerset	MAYFIELD	6000 PFO Add 3500 PFO w/ TD	LURC ACOE Cat II
2187	436848	4951821	Route 2	Norridgewock	Somerset	Covered	<3000 RUS 100 PEM	DEP PBR ACOE Ind. As of April 2009 SECTION 10
5233	392761	5072918	Route 201	Sandy Bay Twp	Somerset	KELLEY BROOK 2	5000 PSS/FO	LURC ACOE Cat II
2777	444425	4961659	Hilton Hill Road	Skowhegan	Somerset	SMITH POND (OLD)	PEM/FO	DEP PBR ACOE Cat II
2775	493785	4937618	Route 139	Monroe	Waldo	SMITH	4300 PFO	DEP PBR ACOE Cat II
3344	503875	4940737	Loggin Road	Winterport	Waldo	TIBBETTS	Marsh Stream 5000 PFO	DEP PBR ACOE Ind.

Matrix for Jurisdictional Determination- County, Town , Road, Waterway, and UTM coordinates; and Resource by Cowardin type, and Impact Amounts							Waterway and permit type	
BR#	UTM Easting in Meters	UTM Northing in Meters	Location	Town	County	Bridge Name	Resource Name & Max. Anticipated Impacts (S.F.) to cowardin types and non-wetland waters (RUS)	Anticipated Permitting Levels All are CORPS 404 permitting unless noted
5875	608659	5037044	Vanceboro Road/ Route 6	Codyville Plt Grand Lake Stream Plt	Washington	BEAVER BROOK	Beaver Brook 8000 PEM/SS Grand Lake Stream 1000 PEM.	LURC ACOE Cat II
3584	596173	5003557	Milford Street		Washington	MILFORD STREET	3000 RUS w/ TD Lewy Lake/ Grand Lake Flowage	LURC ACOE Cat II
2688	611771	5008935	Calais Road, Route 1	Princeton	Washington	PRINCETON	10000 PUB/ PEM shorland stabilization to a Great Pond.	DEP Individual ACOE Cat II
5375	624478	4967704	Route 191	Twp 18 Ed Bpp	Washington	SOUTHERN INLET	Southern Inlet 6000 PEM/SS Machias River (Norm Channel) 4000 PEM/SS	LURC ACOE Cat II
3462	616915	4953459	Route 1A	Whitneyville	Washington	MACHIAS RIVER		DEP PBR ACOE Ind.
3300	343588	4829846	Acton Bridge Road	Acton	York	BALCH MILLS	Little Ossipee River 3000 PFO	DEP PBR ACOE Cat II
1271	362278	4815379	Back Road	Alfred	York	NUTTER'S	Littlefield River PSS/FO 3000	DEP PBR ACOE Cat II
5825	368769	4815326	Alfred Road/ Route 111	Lyman	York	KENNEBUNK RIVER	Kennebunk River 5000 PEM Great Works River 3500 PFOw/o	DEP PBR ACOE Cat II
1236	359120	4792113	Great Hill Road	South Berwick	York	GREAT HILL BR	TD	DEP PBR ACOE Cat II
5610	354481	4786352	Dow Highway/ Route 236	South Berwick	York	GREAT WORKS RIVER	Great Works River 7000 PFO/SS w/o TD	DEP PBR ACOE Cat II
3096	364948	4777253	Organug Road	York	York	SEWALLS	Tidal w/ Shellfish 1000 EUS Shellfish 5000 Tidal	DEP PBR ACOE Cat II SECTION 10
5848	365803	4776595	Route 103	York	York	Station 34	1614 EUS Mudflat without shellfish	DEP PBR ACOE Ind. SECTION 10



STATE OF MAINE
Department of Environmental Protection

JOHN ELIAS BALDACCI
GOVERNOR

David P. Littell
COMMISSIONER

May, 2009

Ben Condon
MDOT
16 State House Station
Augusta ME 04333-0016

RE: Natural Resources Protection Act Application, Falmouth #L-24569-TB-A-N

Dear Mr. Condon:

Under cover please find a signed copy of the permit for your project which the Department has reviewed and approved. Your permit is written to include a description of your project, findings of fact that relate to the approval criteria the Department used in evaluating your project, and conditions that are based on those findings and the particulars of your project. Please take a moment to carefully read your permit, paying particular attention to the conditions of the approval. The Department works hard to craft reasonable conditions that meet the requirements of Maine law. I have also included some materials that describe the Department's appeal procedures for your information.

If you have any questions about the permit or thoughts on how the Department processed this application please get in touch with me directly. I can be reached at 207- 287-7691 or at james.cassida@maine.gov

Yours sincerely,

James Cassida, Licensing Coordinator
Division of Land Resource Regulation
Bureau of Land & Water Quality

pc: File

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 624-6550 FAX: (207) 624-6024
RAY BLDG., HOSPITAL ST.

BANGOR
106 HOGAN ROAD
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769-2094
(207) 764-6477 FAX: (207) 764-1507

web site: www.maine.gov/den



DEP INFORMATION SHEET

Appealing a Commissioner's Licensing Decision

Dated: May 2004

Contact: (207) 287-2811

SUMMARY

There are two methods available to an aggrieved person seeking to appeal a licensing decision made by the Department of Environmental Protection's (DEP) Commissioner: (1) in an administrative process before the Board of Environmental Protection (Board); or (2) in a judicial process before Maine's Superior Court. This INFORMATION SHEET, in conjunction with consulting statutory and regulatory provisions referred to herein, can help aggrieved persons with understanding their rights and obligations in filing an administrative or judicial appeal.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

DEP's General Laws, 38 M.R.S.A. § 341-D(4), and its Rules Concerning the Processing of Applications and Other Administrative Matters (Chapter 2), 06-096 CMR 2.24 (April 1, 2003).

HOW LONG YOU HAVE TO SUBMIT AN APPEAL TO THE BOARD

The Board must receive a written notice of appeal within 30 calendar days of the date on which the Commissioner's decision was filed with the Board. Appeals filed after 30 calendar days will be rejected.

HOW TO SUBMIT AN APPEAL TO THE BOARD

Signed original appeal documents must be sent to: Chair, Board of Environmental Protection, c/o Department of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017; faxes are acceptable for purposes of meeting the deadline when followed by receipt of mailed original documents within five (5) working days. Receipt on a particular day must be by 5:00 PM at DEP's offices in Augusta; materials received after 5:00 PM are not considered received until the following day. The person appealing a licensing decision must also send the DEP's Commissioner and the applicant a copy of the documents. All the information listed in the next section must be submitted at the time the appeal is filed. Only the extraordinary circumstances described at the end of that section will justify evidence not in the DEP's record at the time of decision being added to the record for consideration by the Board as part of an appeal.

WHAT YOUR APPEAL PAPERWORK MUST CONTAIN

The materials constituting an appeal must contain the following information at the time submitted:

1. *Aggrieved Status.* Standing to maintain an appeal requires the appellant to show they are particularly injured by the Commissioner's decision.
2. *The findings, conclusions or conditions objected to or believed to be in error.* Specific references and facts regarding the appellant's issues with the decision must be provided in the notice of appeal.
3. *The basis of the objections or challenge.* If possible, specific regulations, statutes or other facts should be referenced. This may include citing omissions of relevant requirements, and errors believed to have been made in interpretations, conclusions, and relevant requirements.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license or permit to changes in specific permit conditions.

5. *All the matters to be contested.* The Board will limit its consideration to those arguments specifically raised in the written notice of appeal.
6. *Request for hearing.* The Board will hear presentations on appeals at its regularly scheduled meetings, unless a public hearing is requested and granted. A request for public hearing on an appeal must be filed as part of the notice of appeal.
7. *New or additional evidence to be offered.* The Board may allow new or additional evidence as part of an appeal only when the person seeking to add information to the record can show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process or show that the evidence itself is newly discovered and could not have been presented earlier in the process. Specific requirements for additional evidence are found in Chapter 2, Section 24(B)(5)

OTHER CONSIDERATIONS IN APPEALING A DECISION TO THE BOARD

1. *Be familiar with all relevant material in the DEP record.* A license file is public information made easily accessible by DEP. Upon request, the DEP will make the material available during normal working hours, provide space to review the file, and provide opportunity for photocopying materials. There is a charge for copies or copying services.
2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing your appeal.* DEP staff will provide this information on request and answer questions regarding applicable requirements.
3. *The filing of an appeal does not operate as a stay to any decision.* An applicant proceeding with a project pending the outcome of an appeal runs the risk of the decision being reversed or modified as a result of the appeal.

WHAT TO EXPECT ONCE YOU FILE A TIMELY APPEAL WITH THE BOARD

The Board will formally acknowledge initiation of the appeals procedure, including the name of the DEP project manager assigned to the specific appeal, within 15 days of receiving a timely filing. The notice of appeal, all materials accepted by the Board Chair as additional evidence, and any materials submitted in response to the appeal will be sent to Board members along with a briefing and recommendation from DEP staff. Parties filing appeals and interested persons are notified in advance of the final date set for Board consideration of an appeal or request for public hearing. With or without holding a public hearing, the Board may affirm, amend, or reverse a Commissioner decision. The Board will notify parties to an appeal and interested persons of its decision.

II APPEALS TO MAINE SUPERIOR COURT

Maine law allows aggrieved persons to appeal final Commissioner licensing decisions to Maine's Superior Court, see 38 M.R.S.A. § 346(1); 06-096 CMR 2.26; 5 M.R.S.A. § 11001; & MRCivP 80C. Parties to the licensing decision must file a petition for review within 30 days after receipt of notice of the Commissioner's written decision. A petition for review by any other person aggrieved must be filed within 40-days from the date the written decision is rendered. The laws cited in this paragraph and other legal procedures govern the contents and processing of a Superior Court appeal.

ADDITIONAL INFORMATION: If you have questions or need additional information on the appeal process, contact the DEP's Director of Procedures and Enforcement at (207) 287-2811.

Note: The DEP provides this INFORMATION SHEET for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.

11. State transportation facilities

A. Applicability

- (1) This section applies to the maintenance, repair, reconstruction, rehabilitation, replacement or minor construction of a State Transportation Facility carried out by, or under the authority of, the Maine Department of Transportation or the Maine Turnpike Authority, including any testing or preconstruction engineering, and associated technical support services.
- (2) This section does not apply to an activity within a coastal sand dune system.

NOTE: The construction of a transportation facility other than roads and associated facilities may be subject to the Storm Water Management Law, 38 M.R.S.A. Section 420-D.

B. Standards

- (1) Photographs of the area to be altered by the activity must be taken before work on the site begins. The photographs must be kept on file and be made available at the request of the DEP.
- (2) The activity must be reviewed by the Department of Inland Fisheries and Wildlife, the Department of Marine Resources, and the Atlantic Salmon Authority. The activity must be performed according to any recommendations from these authorities.
- (3) The activity must be performed in accordance with erosion control measures conforming with the State of Maine Department of Transportation Standard Specifications for Highways and Bridges Revision of April 1995 and with the Department of Transportation's Best Management Practices for Erosion and Sediment Control, September 1997.

NOTE: Guidance on the use of erosion control best management practices can be obtained from the on site Construction Manager.

- (4) Alignment changes may not exceed a distance of 200 feet between the old and new center lines in any natural resource.
- (5) The activity may not alter more than 300 feet of shoreline (both shores added together) within a mile stretch of any river, stream or brook, including any bridge width or length of culvert.
- (6) The activity may not alter more than 150 feet of shoreline (both shores added together) within a mile stretch of any outstanding river segment identified in 38 M.R.S.A. 480-P, including any bridge width or length of culvert.
- (7) The activity must minimize wetland intrusion. The activity is exempt from the provisions of Chapter 310, the Wetland Protection Rules, if the activity alters less than 15,000 square feet of natural resources per mile of roadway (centerline measurement) provided that the following impacts are not exceeded within the 15,000 square foot area:

- (a) 1,000 square feet of coastal wetland consisting of salt tolerant vegetation or shellfish habitat; or
- (b) 5,000 square feet of coastal wetland not containing salt tolerant vegetation or shellfish habitat; or
- (c) 1,000 square feet of a great pond.

All other activities must be performed in compliance with all sections of Chapter 310, the Wetland Protection Rules, except 310.2(C), 5(A), 9(1), 9(B) and 9(C).

- (8) The activity may not permanently block any fish passage in any watercourse containing fish. The applicant must improve passage beyond what restriction may already exist unless the Department of Inland Fisheries and Wildlife, the Department of Marine Resources, and the Atlantic Salmon Authority concur that the improvement is not necessary.
- (9) Rocks may not be removed from below the normal high water line of any coastal wetland, freshwater wetland, great pond, river, stream or brook except to the minimum extent necessary for completion of work within the limits of construction.
- (10) If work is performed in a river, stream or brook that is less than three feet deep at the time and location of the activity, with the exception of culvert installation, the applicant must divert flow away from the activity while work is in progress.
 - (a) Diversion may be accomplished by the use of stable, inert material. No more than two thirds (2/3) of stream width may be diverted at one time.
 - (b) Any material used to divert water flow must be completely removed upon completion of the activity, and the stream bottom must be restored to its original condition.
 - (c) A pump may be operated, where necessary, for a temporary diversion. The pump outlet must be located and operated such that erosion or the discharge of sediment to the water is prevented.

NOTE: Guidance on the appropriate location of a diversion and materials which should be used for a stream diversion can be obtained from the on site Construction Manager.

- (11) Wheeled or tracked equipment may not operate in the water. Equipment operating on the shore may reach into the water with a bucket or similar extension. Equipment may cross streams on rock, gravel or ledge bottom.
- (12) All wheeled or tracked equipment that must travel or work in a vegetated wetland area must travel and work on mats or platforms.
- (13) Any debris or excavated material must be stockpiled either outside the wetland or on mats or platforms. Hay bales or silt fence must be used, where necessary, to prevent sedimentation. Any debris generated during the activity must be prevented from washing downstream and must be removed from the wetland or water body. Disposal

of debris must be in conformance with the Maine Hazardous Waste, Septage and Solid Waste Management Act, 38 M.R.S.A. Section 1301 *et seq.*

- (14) Work below the normal high water line of a great pond, river, stream or brook must be done at low water except for emergency work or work agreed to by the resource agencies listed in paragraph 2 above. Measures, such as a silt boom or staked fencing, must be employed to reduce and isolate turbidity.
- (15) Perimeter controls must be installed before the work starts. Disturbance of natural resources beyond the construction limits shown on the plans is not allowed under this rule.

NOTE: Guidance on the location of construction limits can be obtained from the on site Construction Manager.

- (16) The use of untreated lumber is preferred. Lumber pressure treated with chromated copper arsenate (CCA) may be used, provided it is cured on dry land in a manner that exposes all surfaces to the air for a period of at least 21 days prior to construction. Wood treated with creosote or pentachlorophenol may not be used where it will contact water.
- (17) A temporary road for equipment access must be constructed of crushed stone, blasted ledge, or similar materials that will not cause sedimentation or restrict fish passage. Such roads must be completely removed at the completion of the activity. In addition, any such temporary roads which are in rivers, streams or brooks, must allow for a passage of stormwater flows associated with a 10-year storm.
- (18) Soil may not be disturbed during any period when soils are saturated due to rain or snow melt, except as necessary to protect work in progress or as required for bridge maintenance activities. Areas where soils are saturated (i.e. water drips from the soil when squeezed by hand, or the soil is capable of being rolled into a rod 1/8th inch in diameter that does not crumble) must be immediately mulched if they are disturbed.
- (19) Disturbed soil must be protected within one week from the time it was last actively worked, and prior to any storm event, using temporary or permanent measures such as the placement of riprap, sod, mulch, erosion control blankets, or other comparable measures.
- (20) Hay bale or straw mulch, where used, must be applied at a rate of at least one bale per 500 square feet (1 to 2 tons per acre).
- (21) If mulch is likely to be moved because of steep slopes or wind exposure, it must be anchored with netting, peg and twine, binder or other suitable method and must be maintained until a catch of vegetation is established over the entire disturbed area.
- (22) In addition to the placement of riprap, sod, erosion control blankets or mulch, additional steps must be taken where necessary to prevent sedimentation of the water. Evidence of sedimentation includes visible sheet, rill or gully erosion, discoloration of water by suspended particles and/or slumping of banks. Silt fences, staked hay bales and other sedimentation control measures, where planned for, must be in place

prior to the commencement of an activity, but must also be installed whenever necessary to prevent erosion and sedimentation.

NOTE: Guidance on the location and proper installation of erosion control measures can be obtained from the on site Construction Manager.

- (23) Temporary erosion control measures must be maintained and inspected weekly until the site is permanently stabilized with vegetation or other permanent control measures. Erosion control measures must also be inspected immediately prior to and following storms.
- (24) Permanent erosion control measures protecting all disturbed areas must be implemented within 30 days from the time the areas were last actively worked, or for fall and winter activities by the following June 15, except where precluded by the type of activity (e.g. riprap, road surfaces, etc.). The permanent erosion control measures must be maintained.
- (25) The applicant shall immediately take appropriate measures to prevent erosion or sedimentation from occurring or to correct any existing problems, regardless of the time of year.
- (26) Non-native species may not be planted in restored areas.
- (27) Disposal of debris must be in conformance with Maine Hazardous Waste, Septage and Solid Waste Management Act, 38 M.R.S.A. Sections 1301 *et seq.*
- (28) Disturbance of vegetation must be avoided, if possible. Where vegetation is disturbed outside of the area covered by any road or structure construction, it must be reestablished immediately upon completion of the activity and must be maintained.
- (29) A vegetated area at least 25 feet wide must be established and maintained between any new stormwater outfall structure and the high water line of any open water body. A velocity reducing structure must be constructed at the outlet of the stormwater outfall that will create sheet flow of stormwater, and prevent erosion of soil within the vegetated buffer. If the 25 foot vegetated buffer is not practicable, the applicant must explain the reason for a lesser setback in writing. Approval from the DEP must be in writing and any recommendations must be incorporated into the activity.

C. Definitions. The following terms, as used in this chapter, have the following meanings, unless the context indicates otherwise:

- (1) Diversion. A rerouting of a river, stream or brook to a location outside of its established channel.
- (2) Fill. a. (verb) To put into or upon, supply to, or allow to enter a water body or wetland any earth, rock, gravel, sand, silt, clay, peat, or debris; b. (noun) Material, other than structures, placed in or immediately adjacent to a wetland or water body.
- (3) Floodplain wetlands. Freshwater wetlands that are inundated with flood water during a 100-year flood event based on flood insurance maps produced by the Federal Emergency Agency or other site specific information.

- (4) Riprap. Rocks that are fit into place, usually without mortar, on a slope as defined in the State of Maine, Department of Transportation, Standard Specifications for Highway and Bridges, revision of April 1995.

Environmental Summary Sheet

PIN #: 15620.00 & 15143.00

Town: Mexico - Dixfield

Environmental Office Contact: **Ben Condon** (ben.condon@maine.gov) 592-0921

Coordination & Permits Manager: Matt Steele

Date Submitted: 8/4/09

Database/Projex ☒

☒ **Section 106 and Tribal Consultation**

Architectural Resources

PA ☐ Applicable ☒

Approved ☒

Archeological Resources

PA ☐ Applicable ☒

Approved ☒

Tribal Consultation

Tribal Letters Sent ☒

Approved ☐

Town & Local Hist. Society Contacted

Yes ☒ No ☐

☒ **4(f) and 6(f)**

Section 4(f)

Are there Right of Way Takes or Easements on Public Park Property

☐ Yes ☒ No

Are there Right of Way Takes or Easements on Public Recreational Property

☐ Yes ☒ No

Are there Right of Way Takes or Easements on Public Wildlife Refuge Property

☐ Yes ☒ No

Are there Right of Way Takes or Easements on Historic Eligible or Listed Property

☒ Yes ☐ No

Are there Right of Way Takes or Easements on Property within a Historic District

☐ Yes ☒ No

Has MHPC Determined an Adverse Effect

☐ Yes ☒ No

Is a Programmatic or Full 4(f) Document Required

☐ Yes ☒ No

LAWCON 6(f)

N/A ☒ Applicable ☐ Approved ☐

☒ **FEMA**

GIS Floodplains Checked ☐

N/A ☐ Applicable ☐

Approved ☐

☒ **Maine Department of Inland Fisheries and Wildlife (MDIFW) Essential Habitat**

GIS Essential Habitats Checked ☒

Eagle Nest

N/A ☒ Applicable ☐

Approved ☐

Piping Plover

N/A ☒ Applicable ☐

Approved ☐

Roseate Tern

N/A ☒ Applicable ☐

Approved ☐

☒ **Maine Department of Conservation/ Public Lands, Submerged Land Lease**

N/A ☒ Applicable ☐

☒ **Land Use Regulation Commission (LURC)**

Not Applicable ☒

No permit Required ☐

Notice

☐

Approved ☐

Permit

☐

Approved ☐

☒ **Maine Department of Environmental Protection (MDEP) Site Location of Development**

N/A ☒ Applicable ☐

Approved ☐

☒ **Maine Department of Environmental Protection (MDEP), Natural Resource Protection Act**

No permit required ☐

Exempt ☐

(Must use erosion and sediment control and not block fish passage.)

PBR ☒

Approved ☒

Tier 1 ☐

Approved ☐

Tier 2 ☐

Approved ☐

Individual ☒

Approved ☒

☒ **Army Corps of Engineers (ACOE), Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act.**

No permit required ☐

Category 1-NR ☐

Approved ☐

Category 2 ☐

Approved ☐

Category 3 ☒

Approved ☒

NOTE: If project requires a Category 2 or 3 Permit from the ACOE, then the MaineDOT Resident **must** fill out a "Work Start Notification Form" and a "Compliance Certification Form" (when project has been completed) and send them to the address listed on the forms.

☒ **IN-STREAM TIMING RESTRICTIONS: 105 Special Provision** ☒

n/a ☐

Dates instream work is allowed: Open In-Water Work Window

☒ **NEPA Complete**

☒ Special Provision 656, Erosion Control Plan ☒ Special Provision 203, Dredge Spec and/or Hazardous Waste Spec