

**ATHENS
ROUTE 151**

PRECAST BOX CULVERT

WIN 023513.00

2018

Updated 04/28/17

STATE PROJECT

BIDDING INSTRUCTIONS

1. Use pen and ink to complete all paper bids.
2. As a minimum, the following are to be completed and must be received prior to the time of bid opening:
 - a. A copy of the Notice to Contractors
 - b. the completed Acknowledgement of Bid Amendments form
 - c. the completed Schedule of Items in Appendix A
 - d. two (2) copies of the completed and signed Contract to Purchase Supplies, Materials and/or Equipment for a Specific Project form
 - e. The completed Contractor Information Sheet
 - f. 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. For security and other reasons, all Bid Packages which are mailed or sent express, 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

WIN & Title: 023513.00

Town: Athens

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

WIN & Title: 023513.00

Town: Athens

Date of Bid Opening:

Name of Contractor:

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

Bid Enclosed: Do Not Open

WIN & Title: 023513.00

Town: Athens

Date of Bid Opening

Name of Contractor:

5. If a paper Bid is to be hand carried, deliver directly to the Reception Desk using the "Public Entrance" which is located on the Capitol Street side of the DOT Headquarters Building in Augusta. <http://www.maine.gov/mdot/mainedotdirections.htm>. If a paper Bid is to be sent express, "FedEx First Overnight" delivery is suggested as the package is delivered directly to the DOT Headquarters Building, Mailroom, in Augusta located at 24 Child Street in Augusta. Other means, such as U.S. Postal's Service Express Mail has proven not to be reliable. If a paper bid is to be mailed, the mailing address is Maine Department of Transportation, 16 State House Station, Augusta, ME 04333-0016.
6. 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 Specification, November 2014 Edition.

NOTICE

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

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

NOTICE

Bidders:

Please use the attached “Request for Information” form when submitting questions concerning specific Contracts that have been advertised for Bid, include additional numbered pages as required. RFI’s may be faxed to 207-624-3431, submitted electronically through the Departments web page of advertised projects by selecting the RFI tab on the project details page or via e-mail to RFI-Contracts.MDOT@maine.gov.

These are the only allowable mechanisms for answering Project specific questions. Maine DOT will not be bound to any answers to Project specific questions received during the Bidding phase through other processes.

When submitting RFIs by Email please follow the same guidelines as stated on the “Request for Information” form and include the word “RFI” along with the Project name and Identification number in the subject line.

Vendor Registration

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

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

CONTRACTOR INFORMATION

Contractor Name: _____

Mailing Address: _____

Vendor Customer Number: _____

Contact Information (Primary Contact): _____

Phone: _____ **Cell Phone:** _____

Fax: _____

Email: _____

Mailing Address (if different from above): _____

The company has the following organizational structure:

Sole Proprietorship

Limited Liability Company

Partnership

Joint Venture

Corporation

Other: _____

(Date)

(Signature)

(Name and Title Printed)

**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 **Supply and Delivery of Precast Concrete Box Culvert** in the town of **ATHENS**" 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 **May 23, 2018** 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, or project specific prequalification to be considered for the award of this contract.

Description: WIN 023513.00

Location: In Somerset County, project is located on Route 151 approximately 1.2 miles southerly of the Athens/Brighton PLT town line.

Scope of Work: Fabricate and deliver a precast box culvert and other incidental work.

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

Bid Documents, specifications and bid forms can be viewed and obtained digitally at no cost at <http://www.maine.gov/mdot/contractors/>. They may be seen at the Maine DOT Building in Augusta, Maine and at the Department of Transportation's Regional Office in Dixfield. They can be obtained at no cost at the Department at 24 Child Street, Augusta, ME, between the hours of 8:00 a.m. to 4:30 p.m., may be requested by telephone at (207) 624-3536 between the hours of 8:00 a.m. to 4:30 p.m, or from Maine Department of Transportation, Attn.: Mailroom, 16 State House Station, Augusta, Maine 04333-0016.

There will be no bid bond, performance bond or payment bond required.

Each Bid must be made upon blank forms provided by the Department.

This Contract is subject to all applicable State Laws.

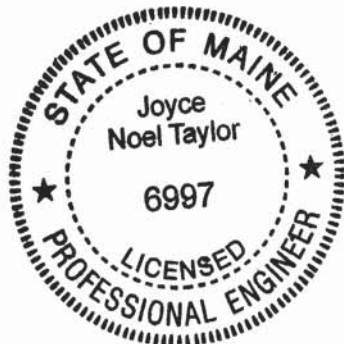
All work shall be governed by "State of Maine, Department of Transportation, Standard Specifications, November 2014 Edition", price \$10 [\$15 by mail], and Standard Details, November 2014 Edition, price \$10 [\$15 by mail]. They also may be purchased by telephone at (207) 624-3536 between the hours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

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

Augusta, Maine
May 2, 2018



JOYCE NOEL TAYLOR, P. E.
CHIEF ENGINEER



SPECIAL PROVISION 102.7.3
ACKNOWLEDGMENT OF BID AMENDMENTS

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

Amendment Number	Date

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

CONTRACTOR

Date

Signature of authorized representative

(Name and Title Printed)

MAINE DEPARTMENT OF TRANSPORTATION

CONTRACT TO PURCHASE SUPPLIES, MATERIALS AND/OR
EQUIPMENT FOR A SPECIFIC PROJECT

This Agreement (the "Contract") is entered into between the Maine Department of Transportation ("Department" or "MaineDOT") with its principal office located at Child Street, Augusta, Maine, and a mailing address of 16 State House Station, Augusta, Maine 04333-0016, and _____ ("Contractor"), a corporation or other legal entity organized under the laws of the State of _____ with its principal place of business located at _____, and a mailing address of _____ and a telephone number as follows: _____.

The Vendor Customer Number of the Contractor is _____.

MaineDOT, pursuant to 23 M.R.S.A. §52, requested bids for the sale and delivery of the Materials, Supplies, and Equipment (the "Materials") described in attached Appendix A. The offer submitted by Contractor (the "Bid Price") is accepted by MaineDOT as the successful bid. The terms and conditions of the purchase of the Materials are set forth below:

A. Deliverables.

The Contractor agrees to provide the Materials known as **Precast Concrete Box Culvert**, more specifically described in Appendix A for use in MaineDOT Project **WIN 023513.00, Athens, Maine** (the "Project").

B. Time.

This Contract becomes effective on the date last signed below. The Contractor agrees the Materials shall be ready for delivery on or before July 15, 2018 and shall be delivered in accordance with Appendix A. This Contract expires on December 31, 2018.

C. Bid Price.

The Bid Price(s) offered by Contractor and accepted by MaineDOT are as provided in Appendix A. These Bid Prices will serve as a basis for the Contract amount set forth in section F below.

MAINE DEPARTMENT OF TRANSPORTATION

CONTRACT TO PURCHASE SUPPLIES, MATERIALS AND/OR
EQUIPMENT FOR A SPECIFIC PROJECT

D. Contract Documents.

The Contract consists of this Agreement and the following attachments which are hereby incorporated into the Contract as part of its terms and conditions:

Appendix A--Description of Materials, Supplies, Equipment and Bid Price
Appendix B--Special Provisions for the Purchase of Supplies, Materials or Equipment
Special Provisions, Supplemental Specifications and Appendices
Standard Specifications, November 2014 Edition, as updated through advertisement
Standard Details November 2014 Edition as updated through advertisement

By agreement, this Contract may be amended, modified, or supplemented by written agreement signed by both parties.

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 Appendix B are accurate as of the date of this Contract.
2. The Contractor certifies that it has not been debarred, suspended, declared ineligible or voluntarily excluded from contracts by the Federal Government or any state agency within the last 3 years.
3. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.
4. 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.

MAINE DEPARTMENT OF TRANSPORTATION

CONTRACT TO PURCHASE SUPPLIES, MATERIALS AND/OR
EQUIPMENT FOR A SPECIFIC PROJECT

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

Dated: _____

CONTRACTOR

(Name and Title Printed)

F. Award.

By signing below, an authorized representative of MaineDOT hereby accepts Contractor's offer and awards this Contract to Contractor in the amount of \$_____ under the terms and conditions set forth above.

Dated: _____

MAINE DEPARTMENT OF TRANSPORTATION

By: David Bernhardt, Commissioner

MAINE DEPARTMENT OF TRANSPORTATION

CONTRACT TO PURCHASE SUPPLIES, MATERIALS AND/OR
EQUIPMENT FOR A SPECIFIC PROJECT

This Agreement (the "Contract") is entered into between the Maine Department of Transportation ("Department" or "MaineDOT") with its principal office located at Child Street, Augusta, Maine, and a mailing address of 16 State House Station, Augusta, Maine 04333-0016, and _____ ("Contractor"), a corporation or other legal entity organized under the laws of the State of _____ with its principal place of business located at _____, and a mailing address of _____ and a telephone number as follows: _____.

The Vendor Customer Number of the Contractor is _____.

MaineDOT, pursuant to 23 M.R.S.A. §52, requested bids for the sale and delivery of the Materials, Supplies, and Equipment (the "Materials") described in attached Appendix A. The offer submitted by Contractor (the "Bid Price") is accepted by MaineDOT as the successful bid. The terms and conditions of the purchase of the Materials are set forth below:

A. Deliverables.

The Contractor agrees to provide the Materials known as **Precast Concrete Box Culvert**, more specifically described in Appendix A for use in MaineDOT Project **WIN 023513.00, Athens, Maine** (the "Project").

B. Time.

This Contract becomes effective on the date last signed below. The Contractor agrees the Materials shall be ready for delivery on or before July 15, 2018 and shall be delivered in accordance with Appendix A. This Contract expires on December 31, 2018.

C. Bid Price.

The Bid Price(s) offered by Contractor and accepted by MaineDOT are as provided in Appendix A. These Bid Prices will serve as a basis for the Contract amount set forth in section F below.

MAINE DEPARTMENT OF TRANSPORTATION

CONTRACT TO PURCHASE SUPPLIES, MATERIALS AND/OR
EQUIPMENT FOR A SPECIFIC PROJECT

D. Contract Documents.

The Contract consists of this Agreement and the following attachments which are hereby incorporated into the Contract as part of its terms and conditions:

Appendix A--Description of Materials, Supplies, Equipment and Bid Price
Appendix B--Special Provisions for the Purchase of Supplies, Materials or Equipment
Special Provisions, Supplemental Specifications and Appendices
Standard Specifications, November 2014 Edition, as updated through advertisement
Standard Details November 2014 Edition as updated through advertisement

By agreement, this Contract may be amended, modified, or supplemented by written agreement signed by both parties.

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 Appendix B are accurate as of the date of this Contract.
2. The Contractor certifies that it has not been debarred, suspended, declared ineligible or voluntarily excluded from contracts by the Federal Government or any state agency within the last 3 years.
3. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.
4. 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.

MAINE DEPARTMENT OF TRANSPORTATION

CONTRACT TO PURCHASE SUPPLIES, MATERIALS AND/OR
EQUIPMENT FOR A SPECIFIC PROJECT

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

Dated: _____

CONTRACTOR

(Name and Title Printed)

F. Award.

By signing below, an authorized representative of MaineDOT hereby accepts Contractor's offer and awards this Contract to Contractor in the amount of \$_____ under the terms and conditions set forth above.

Dated: _____

MAINE DEPARTMENT OF TRANSPORTATION

By: David Bernhardt, Commissioner

MAINE DEPARTMENT OF TRANSPORTATION

CONTRACT TO PURCHASE SUPPLIES, MATERIALS AND/OR EQUIPMENT
FOR A SPECIFIC PROJECT

This Agreement (the "Contract") is entered into between the Maine Department of Transportation ("Department" or "MaineDOT") with its principal office located at Child Street, Augusta, Maine, and a mailing address of 16 State House Station, Augusta, Maine 04333-0016, and CONTRACTOR ABC INC ("Contractor"), a corporation or other legal entity organized under the laws of the State of MAINE with its principal place of business located at ABC STREET, ABC, Maine 00000, and a mailing address of ABC STREET, ABC, MAINE and a telephone number as follows: 207-999-9999

The Vendor Customer Number of the Contractor is VC999999999.

MaineDOT, pursuant to 23 M.R.S.A. §52, requested bids for the sale and delivery of the Materials, Supplies, and Equipment (the "Materials") described in attached Appendix A. The offer submitted by Contractor (the "Bid Price") is accepted by MaineDOT as the successful bid. The terms and conditions of the purchase of the Materials are set forth below:

A. Deliverables.

The Contractor agrees to provide the Materials known as SOMETHING, more specifically described in Appendix A for use in MaineDOT Project No. 99999.00 SOME TOWN (the "Project").

B. Time.

This Contract becomes effective on the date last signed below. The Contractor agrees to deliver the Materials on or before SOME DAY, 20XX. This Contract expires on DECEMBER 31, 20XX.

C. Bid Price.

The Bid Price(s) offered by Contractor and accepted by MaineDOT are as provided in Appendix A. These Bid Prices will serve as a basis for the Contract amount set forth in section F below.

D. Contract Documents.

The Contract consists of this Agreement and the following attachments which are hereby incorporated into the Contract as part of its terms and conditions:

- Appendix A--Description of Materials, Supplies, Equipment and Bid Price
- Appendix B--Special Provisions for the Purchase of Supplies, Materials or Equipment
- Special Provisions, Supplemental Specifications and Appendices
- Standard Specifications, November 2014 Edition, as updated through advertisement
- Standard Details November 2014 Edition as updated through advertisement

By agreement, this Contract may be amended, modified, or supplemented by written agreement signed by both parties.

MAINE DEPARTMENT OF TRANSPORTATION

CONTRACT TO PURCHASE SUPPLIES, MATERIALS AND/OR EQUIPMENT
FOR A SPECIFIC PROJECT

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 Appendix B are accurate as of the date of this Contract.
2. The Contractor certifies that it has not been debarred, suspended, declared ineligible or voluntarily excluded from contracts by the Federal Government or any state agency within the last 3 years.
3. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.
4. 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.

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

Dated: (Date Here)

CONTRACTOR

(Sign Here)

(Print Name Here)

(Name and Title Printed)

F. Award.

By signing below, an authorized representative of MaineDOT hereby accepts Contractor's offer and awards this Contract to Contractor in the amount of \$ _____ under the terms and conditions set forth above.

Dated: _____

MAINE DEPARTMENT OF TRANSPORTATION

(Name and Title Printed)

APPENDIX A
Description of Materials, Supplies, Equipment and Bid Price

Contractor

SCHEDULE OF ITEMS

The Department will reject bids if any one of the following occurs:

- a) the Bid is not Delivered to the precise location and by the precise time set forth in the Notice to Contractors or any applicable Bid Amendment,
- b) the Bid is not signed,
- c) the unit price for any item is not provided or is unreadable, or

Do not make handwritten changes to the bid documents.

The Bidder will have no opportunity to cure the above Non-curable Bid Defects. For clarification, questions, comments/recommendations use the “Request for Information” form as directed in the Bid Book instructions. For a related provision see Standard Specification, Section 102.11 – Bid Responsiveness.

Bidders are required to bid all Items.

SCHEDULE OF ITEMS

Item Description	Approx. Quantity and Units	Unit Price	Bid Amount
534.71 Precast Concrete Box Culvert – Fabrication and Delivery	1 LS	\$	\$
TOTAL			\$

(Print Respondent’s Name and Title)

(Signature)

(Date)

Maine Business and Economic Impact - Bidder Information

Maine Business and Economic Impact	<i>Circle one answer for each row</i>		
% of employees which are Maine Residents	0 0 points	1 – 74% 1 points	75 – 100 % 2 points
% of payroll paid to Maine Residents last calendar year	0 0 points	1 – 74% 1 points	75 – 100 % 2 points
Bidder currently pays Maine Income or corporate taxes		No 0 points	Yes 2 points
Bidder currently pays property taxes to government entities in Maine		No 0 points	Yes 2 points
Bidder currently purchases services and/or supplies from Maine businesses		No 0 points	Yes 2 points

(Print Respondent's Name and Title)

(Signature)

(Date)

Scoring

The Bids will be scored on the basis of the following weighted criteria:

Criteria	Weight
1. Price	90%
2. Economic Impact within the State of Maine	10%

The scoring formula for price is: (Lowest submitted cost bid / Cost of bid being scored) x 90 = pro-rated score. The contract award will be made to the bidder whose Bid receives the Committee's highest score following the final review.

Maine Business and Economic Impact Consideration: The Maine Business and Economic Impact Consideration for this Bid will be scored based on the information provided by Bidders in **Appendix A** , Maine Business and Economic Impact Consideration and the point allocations.

Bidder shall indicate their Maine business and economic impact by completing the questions found on the **Maine Business and Economic Impact - Bidder Information** section found in the Schedule of Items section in Appendix A. The Bidder shall not make variations or alterations when responding to these questions. The use of this information in making contract award decisions is required in accordance with Executive Order 2017-003, which states "Evaluators of competitive bids for goods and services shall give consideration to the investment in the State by business enterprises as a best-value criterion. Consideration for Maine business enterprises may result in low cost or top scoring bids not being considered as the best-value for the State of Maine."

Description The Contractor shall furnish and deliver the materials listed in the Schedule of Items in this Appendix in accordance with the contract documents. The structure must meet the requirements of this Contract, the Plans, the State of Maine, Department of Transportation, Standard Specifications, November 2014 Edition including, but not limited to Section 712.061 – Structural Precast Units and Standard Details November 2014 Edition as updated through advertisement, Supplemental Specifications, and Special Provisions including, but not limited to Special Provision, Section 534, **Precast Structural Concrete** (Precast Structural Concrete Box Culvert, Fabrication and Delivery).

Delivery The materials shall be ready for delivery on or before July 15, 2018. The actual delivery date of the materials shall be determined by the project schedule and coordinated with the MaineDOT in conjunction with the Department's Contractor responsible for installing the precast units. The delivery date is expected to be between July 15, 2018 and August 30, 2018.

The manufacturer shall deliver the precast units to the project site on a weekday (Monday to Friday) in coordination with the field site Contractor who is installing the precast units. The precast units shall be delivered to the project site by the manufacturer:

Project: Athens, State Project 23513.00

Location: The Project is located on Route 151 approximately 1.2 miles southerly of the Athens/Brighton PLT town line.

Date: Must be ready for delivery by July 15, 2018 (Contractor and manufacturer will decide exact date and time.)

The onsite contractor must give the manufacturer 7 calendar days' notice of when the structure shall be delivered.

The Contractor who is installing the precast units shall be responsible for unloading the precast units at or near the project site in a timely fashion. Any incidental materials needed to temporarily store the precast units at the project site shall be provided by the Contractor.

The Manufacturer will supply MaineDOT Project Manager, Guy Whittington, at (207) 592-2655, with the appropriate project submittals. Alternative contact is: Mark Shibles, Project Manager of Region 3, cell phone (207) 592-6295. MaineDOT shall provide the manufacturer with the contact information for the Contractor responsible for installation of the precast concrete box culvert upon award of the installation Contract. The Manufacturer shall coordinate delivery of the materials with the Contractor responsible for installation of the precast concrete box culvert.

Contract Administrator

The contract administrator for this contract will be:

Name: Guy Whittington
Title: Senior Project Manager
Address: Maine Department of Transportation
16 State House Station Road, Augusta, ME 04333-0016

Invoices and Payments The Contractor shall submit an itemized bill to the Department for materials following delivery for approval and payment. At a minimum, invoices shall include the following information:

Contractor name, address & Contract Number
Invoice Date & Number
Dates of Delivery

The Department will pay based upon the materials delivered at the prices bid and the invoices approved. Payments to the Contractor shall be full compensation for furnishing all labor, equipment, materials, services, and incidentals used to supply the materials under the Contract in a complete and acceptable manner, and for all risk, loss, damage, or expense of any kind arising from the nature or prosecution of the Work. The Department may withhold payments claimed by the Contractor on account of incomplete or incorrect invoices or materials that are defective or not in conformance with the contract.

Material Quality Materials and manufactured products shall be new unless otherwise specified, free from defect, and in conformity with the contract. If there is no applicable standard set forth in this Contract for a particular item, then the item shall be in accordance with industry standards prevailing at the time of bid. The Department has the authority to inspect all Materials and every detail of the Work. The Department may reject the finished product if any of the components do not comply with the specifications. The Department may reject materials not conforming to the Specifications at any time.

SPECIAL PROVISION
SECTION 534
PRECAST STRUCTURAL CONCRETE
(Fabrication and Delivery)

534.01 Description The Contractor shall design, manufacture, and deliver precast structural concrete box culvert with headwalls and toe walls, in accordance with the Contract Documents.

534.02 Materials Structural precast elements for the arch, box culvert, or three sided frame and associated precast elements shall meet the requirements of the following Standard Specification Subsection, except as noted otherwise in this specification:

Structural Precast Concrete Units 712.061

New concrete mix designs and mix designs not previously approved by the Fabrication Engineer shall be qualified by trial batches prepared in accordance with AASHTO T 126 (ASTM C192). The test results shall demonstrate that the concrete meets the requirements of the Contract Documents.

534.03 Drawings Prepare shop detail, erection and other necessary Working Drawings in accordance with Standard Specification Section 105.7, Working Drawings. The Department will review the drawings in accordance with the applicable requirements of Section 105.7, Working Drawings. Changes and revisions to the reviewed Working Drawings shall require further review by the Fabrication Engineer. Working Drawings shall include the following minimum details:

1. Fully dimensioned views showing the geometry of the units, including all projections, recesses, notches, openings, block outs, keyways and chamfers.
2. Details and bending schedules of reinforcing steel including the size, spacing, and location. Reinforcing provided under lifting devices shall be shown in detail.
3. Details and locations of all items to be embedded.
4. Total weight of each unit.

Concrete mix designs shall be part of the Working Drawing submittal. Include aggregate specific gravity, absorption, percent fracture, fineness modulus and gradation as part of the mix design. Provide the mix design calculations demonstrating how the batch weights, water-cement ratio and admixture dosage rate were determined.

534.04 Design Requirements The Contractor shall design the precast structural concrete structure in accordance with the AASHTO LRFD Bridge Design Specifications, latest edition. The HL-93 live load specified in the AASHTO LRFD Bridge Design Specifications shall be used for all limit states, except for Strength I. The live load used for the Strength I limit state shall be the Maine Modified live load, which consists of the standard HL-93 Live Load with a 25 percent increase in the Design Truck only. (Wheel loads based on the Design Truck shall be increased 25

percent). Additionally, if the governing load rating factor based on the HL-93 live load is equal to or less than 1.10 and the span is 14 feet, or greater, then a load rating based on the Maine legal truck (Configuration #6) shall also be checked to insure the rating factor is equal to, or greater than, 1.0.

The live load deflection check, per AASHTO LRFD Bridge Design Specifications, for the top slab of box culverts and frames with clear spans of 15 feet, or greater, and cover depths of 4 feet, or less, is mandatory. The live load deflection check shall be documented in the design computations submittal.

Design calculations that consist of computer program generated output shall be supplemented with at least one hand calculation and graphics demonstrating the design methodology used. The hand calculation shall document, at a minimum, the Strength I load case flexural design check of the top slab positive moment reinforcing steel. Design calculations shall provide thorough documentation of the sources of equations used and material properties.

The design shall be load rated in accordance with the AASHTO Manual for Bridge Evaluation, latest edition, by the LRFR method and in accordance with the MaineDOT Load Rating Guide.

The Contractor shall submit design calculations and load rating, if applicable, for the precast structure to the Department for review. A Professional Engineer, licensed in accordance with State of Maine laws, shall sign and seal all design calculations and drawings.

The Contractor shall submit the following items for review by the Department, at least fourteen (14) Working Days prior to production:

- A. The name and location of the manufacturer
- B. Method of manufacture and material certificates
- C. Description of method of handling, storing, transporting, and erecting the units
- D. Design computations (bound and indexed)
- E. Load rating computations and completed load rating form (bound and indexed)

534.05 Facilities for Inspection Provide a private office at the fabrication plant for the Department's inspection personnel, or Quality Assurance Inspectors (QAI's), in accordance with Section 535.05, Facilities for Inspection.

Failure to comply with the above requirements will be considered denial of access to the Work for purpose of inspection. The Department will reject all Work done when access for inspection is denied.

534.06 Notice of Beginning Work Refer to Section 712.061.

534.07 Quality Control Quality Control (QC) is the responsibility of the Contractor.

Provide a copy of the Quality System Manual (QSM) to the Fabrication Engineer, if requested.

Inspect all aspects of the Work in accordance with the Contractor's QSM. Reject materials and workmanship that do not meet Contract requirements.

Record measurements and test results on the appropriate forms from APPENDIX E of Precast/Prestressed Concrete Institute Manual for Quality Control for Plants and Production of Structural Precast Concrete Products (MNL 116), or an equivalent form prepared by the user. Provide copies of measurements and test results to the QAI as follows:

Type of Report	When Provided to QAI
Aggregate gradations fine aggregate and coarse aggregate	Prior to beginning work and at least once a week thereafter
Material certifications / calibration certifications	Prior to beginning work (anticipate adequate time for review by QAI)
Pre-placement inspection reports	Prior to the concrete placement
Concrete batch slips	The morning of the next work day
Results of concrete testing	The morning of the next work day
Concrete temperature records	Provide with compressive strength testing
Nonconformance reports/repair procedures	Within 24 hours of discovery
Results of compressive strength testing (for design strength)	Prior to stopping curing / Prior to final acceptance
Post-placement inspection report	Prior to final acceptance

* The Contractor and QAI may, by mutual agreement, modify any part of the schedule; however, failure to provide the documentation when required by the Fabrication Engineer will result in the product being deemed unacceptable. The Contractor may perform testing in addition to the minimum required. The results of all testing shall be made available to the Department

534.08 Quality Assurance Quality Assurance (QA) is the prerogative of the Department. Refer to Section 712.061.

534.09 Nonconforming Work Refer to Section 712.061.

534.10 Forms Construct forms in accordance with the Working Drawings. The forms shall be well constructed, carefully aligned and sufficiently tight to prevent leakage of mortar. Reject forms that do not maintain the dimensions shown on the Working Drawings.

Seal wooden forms to prevent absorption of water. Apply and cure the sealer in accordance with the manufacturer's product data sheet.

Remove all paint, adherent material, foreign matter and debris prior to placing concrete.

Apply a non-staining bond-breaking compound to the forms in accordance with the manufacturer's product data sheet. Solvent clean reinforcing steel and welded steel wire fabric contaminated with the bond-breaking compound.

534.11 Reinforcing Steel and Welded Steel Wire Fabric Refer to Sections 712.061 and 503 for fabrication, packaging, handling, storing, placing, splicing and repair of reinforcing steel, welded steel wire fabric and mechanical/welded reinforcing steel splices.

The concrete cover over the outside circumferential reinforcement shall be 2 inches, minimum, and the concrete cover over the inside reinforcement shall be 1-½ inches, minimum. The clear distance of the end of circumferential wires shall not be less than 1 inch or more than 2 inches from the end of the units. Use sufficient supports and spacers to maintain the minimum concrete cover. The supports and spacers shall be made of a dielectric material or other material approved by the Fabrication Engineer.

Welded steel wire fabric shall meet the spacing requirements and contain sufficient longitudinal wires extending through the unit to maintain the shape and position of the reinforcement. Longitudinal distribution reinforcement may be welded steel wire fabric or deformed steel bars which meet the spacing requirements. The ends of the longitudinal distribution reinforcement shall not be more than 3 inches from the ends of the units.

Do not use more than three layers of reinforcing to form a single mat. If reinforcing steel is cut to install lifting devices, install additional reinforcing adjacent to the cut steel, as shown on the Working Drawings.

Tension splices in the reinforcement will not be permitted. For splices other than tension splices, the overlap shall be a minimum of 12 inches for welded steel wire fabric and as specified in Standard Specification Section 503 for deformed steel bars. The center-to-center wire spacing in wire fabric sheets shall not be less than 2 inches, or more than 4 inches, for the circumferential wires, and shall not be more than eight inches for the longitudinal wires. The center-to-center spacing of the longitudinal distribution steel for either line of reinforcing in the top slab shall not be more than 15 inches.

534.12 Inserts Refer to Section 712.061.

534.13 Concrete Placement Do not batch or place concrete until all the form(s) for any continuous placement have been inspected and accepted by the Quality Control Inspector (QCI), and the QAI concurs.

Test concrete in accordance with the Standards included in Section 712.061.

Test the first two loads of concrete for temperature, air entrainment and slump flow for Self-Consolidating Concrete (SCC). If the first load is unacceptable, test the second load as the first. Continue this process until two consecutive loads are acceptable. After two consecutive loads are acceptable, the frequency of testing shall be at the discretion of the QAI.

If there is a change in the dosage rate of any admixture or a change of more than 5° F in mix temperature, then test the concrete for temperature, air entrainment and slump flow for SCC.

Test every load of 1 cubic yard, or less, from a stationary mixer or 2 cubic yards, or less, from a transit mixer for temperature, air entrainment and slump flow for SCC, prior to placing the concrete in the forms.

Perform all testing in the presence of the QAI. The QAI will designate the loads to be tested. Make cylinders used to determine stripping strength during the last 1/3 of the placement.

Place the concrete as nearly as possible to its final location. Control the depth of each lift in order to minimize entrapped air voids. The maximum depth of an unconsolidated lift shall be 18 inches. Vibrate the concrete with internal or internal and external vibrators. Do not use external vibrators, only. Insert internal vibrators vertically and penetrate the lower layer of concrete by at least 4 inches. Insert the vibrators in the concrete to assure that the radii of action of the vibrators overlap. Hold the vibrators in position from 5 to 15 seconds; vibration time shall be reduced by 50 percent when placing SCC. Do not use vibrators to move concrete horizontally. Each lift of concrete shall have sufficient plasticity to be consolidated with subsequent lifts.

Do not re-temper the concrete with water after discharging has begun. The Contractor may add High Range, Water Reducing, admixture to the concrete after batching if that practice conforms to the manufacturer's product data sheet. Discard concrete that becomes unworkable.

Do not use water or water-based products to aid in finishing fresh concrete.

After the concrete has been placed and finished and before the forms are covered, remove all concrete from projecting reinforcing steel.

534.14 Acceptance and Quality Control Testing of Concrete Refer to Section 712.061.

534.15 Manufacture of Precast Units The units shall be free of fractures. The ends of the units shall be normal to the walls and centerline of the unit, within the limits of variation provided, except where beveled ends are specified. The surfaces of the units shall be a smooth steel form or troweled surface finish, unless a form liner is specified. The ends and interior of the assembled structure shall make a continuous line of units with a smooth interior surface.

Defects which may cause rejection of precast units include, but are not limited to, the

following:

- A. Any discontinuity (crack, rock pocket, etc.) of the concrete which could allow moisture to reach the reinforcing steel.
- B. Rock pockets or honeycomb over 6 square inches in area or over 1 inch deep.
- C. Edge or corner breakage exceeding 12 inches in length or 1 inch in depth.
- D. Any other defect that clearly and substantially impacts the quality, durability, or maintainability of the structure, as determined by the Fabrication Engineer.

The manufacturer of the units shall sequentially number and shop fit each adjacent unit to ensure that they fit together in the field. This fit up shall be witnessed by the QAI. Any non-fitting units shall be corrected or replaced at no cost to the Department.

The manufacturer of the units shall keep accurate records of aggregate gradations, concrete batching, testing, curing, and inspection activities to verify that forms, reinforcing and unit dimensions conform to these requirements. Copies of reports shall be furnished to the Resident when requested.

534.16 Tolerances Dimensional tolerances shall be in conformance with the following:

- A. The internal dimensions shall not vary by more than 1 percent from the design dimensions or 1 ½”, whichever is less, with the exception of the cross diagonal dimension which shall not vary by more than one-half inch from the design dimension.
- B. The haunch dimensions shall not vary by more than three-quarters inch from the design dimension.
- C. The dimension of the legs shall not vary by more than one-quarter inch from the dimension shown on the reviewed Working Drawings.
- D. The slab and wall thickness shall not be less than the design thickness by more than ¼”. A thickness greater than the design thickness shall not be cause for rejection.
- E. Variations in laying lengths of two opposite surfaces shall not be more than five-eighths inch in any unit, except where beveled ends for laying of curves are specified.
- F. The under-run in length of any unit shall not be more than one-half inch.

534.17 Finishing Concrete Products shall be finished to meet the ordinary finish requirements of Standard Specification Section 502. Units, or portions of units, that will be exposed to view in their final location shall receive a rubbed finish, per Section 502. The Contractor may use alternative methods of achieving an acceptable finish on exposed units if approved by the Fabrication Engineer.

Marking: The date of manufacture, the production lot number, and the type of unit shall be clearly and indelibly scribed on a rear, unexposed portion of each unit.

534.18 Repairing Defects Defects requiring repair will be considered either non-structural or structural.

Non-Structural Defects: Exposed surfaces shall be of uniform appearance; only minor repairs to remove and blend fins, patch minor spalls and to repair small, entrapped air pockets, shall be permitted. Repair honeycombing, ragged or irregular edges and other non-structural or cosmetic defects using a patching material from the MaineDOT Qualified Products List (QPL). The repair, including preparation of the repair area, mixing and application and curing of the patching material, shall be in accordance with the manufacturer's product data sheet. Corners not exposed in the final product may be ground smooth with no further repair necessary, if the depth of the defect does not exceed one-half inch. Remove form ties and other hardware to a depth of not less than one inch from the face of the concrete and patch the holes using a patching material from the MaineDOT QPL.

Structural Defects: Repair structural defects only with the approval of the Fabrication Engineer. Submit a nonconformance report (NCR) to the Fabrication Engineer with a proposed repair procedure. Do not perform structural repairs without an NCR that has been reviewed by the Fabrication Engineer. Structural defects include, but are not be limited to, exposed reinforcing steel, cracks in bearing areas, through cracks and cracks 0.013 inch in width that extend more than 12 inches in length in any direction. Give the QAI adequate notice prior to beginning any structural repairs.

534.19 Handling, Storage and Transportation Handle, store and transport units in a manner as to eliminate the danger of chipping, cracks, fracture, and excessive bending stresses. Any units found damaged upon delivery, or damaged after delivery, shall be subject to rejection.

Do not place precast units in an upright position until a compressive strength of at least 4,000 psi is attained. Precast units may be handled and moved, but not transported, until the 28 day design strength has been attained.

Support stored precast units above the ground on dunnage in a manner to prevent twisting or distortion. Protect the units from discoloration and damage.

Set precast units on one-half inch thick neoprene pads during shipment to prevent damage to the unit legs. The Contractor shall repair any damage to precast units resulting from shipping or handling; this shall be accomplished by saw cutting a minimum of one-half inch deep around the perimeter of the damaged area, removing any loose concrete out to the saw cut perimeter and installing a polymer-modified cementitious patching material, from the Department's QPL, per the manufacturer's product data sheet.

534.21 Method of Measurement Precast Structural Concrete Arches, including three-sided frames, and Precast Concrete Box Culverts will be measured as one lump sum, complete, delivered and accepted.

534.22 Basis of Payment The accepted Precast Structural Concrete Arches, including three-sided frames, or Precast Concrete Box Culverts will be paid for at the respective Contract lump sum price. The lump sum price shall be full compensation for all labor, equipment, materials, professional services, and incidentals necessary for designing, manufacturing and delivering the precast concrete elements and accessories. Falsework, reinforcing steel, welded steel wire fabric, joint wrap, geotextile, repair material, or grout will not be measured and paid for separately, but will be incidental to the lump sum pay item. Pay adjustments for quality level will not be made for precast concrete.

Payment will be made under:

Pay Item

Pay Unit

534.71 Precast Concrete Box Culvert

Lump Sum

SPECIAL PROVISIONS
ADDITIONS AND REVISIONS TO STANDARD SPECIFICATIONS

SPECIAL PROVISION SECTION 101
CONTRACT INTERPRETATION

101.2 Definitions Add the following:

MaineDOT The Department of Transportation of the State of Maine, as established by 23 MRSA §4205 et seq. for the administration of Highway, Bridge, and other public Works; acting through the Commissioner and his/her duly authorized representatives.

101.2 Definitions Apparent Low Bidder Delete the section in its entirety and replace with the following:

“A Bidder that submits the lowest apparently responsive Bid. The Apparent Low Bidder may not be Awarded the Contract if a) the Bid is later found to be non-responsive in accordance with Section 102.11, b) the Bidder is found to be not responsible, c) the Bidder fails to comply with all applicable pre-Award Conditions, other pre-execution requirements of the Contract, d) consideration for Maine business enterprises results in low cost bids not being considered as the best-value for the State of Maine or e) the Department chooses not to Award a Contract.”

101.2 Definitions Apparent Successful Bidder Delete the section in its entirety and replace with the following:

“The Bidder with the lowest responsive Bid which regarding the consideration Maine business enterprise is considered as best-value for the State of Maine, all as determined by the Department. A responsive responsible Bidder, usually the Apparent Low Bidder, that is Awarded the Contract. The Department may not execute the Contract with the Apparent Successful Bidder if a) the Apparent Successful Bidder fails to comply with all applicable pre-Award conditions or other pre-execution requirements of the Contract or b) if the Department chooses not to Award a Contract.”

101.2 Definitions Contract Completion Date Delete the entire section and replace with the following:

“The required completion date of all Work pursuant to the Contract, except warranty work. The Contract Completion Date is usually on the Contract form.”

101.2 Definitions Contract Execution Delete the entire section and replace with the following:

“Execution of the Contract by the Commissioner or their authorized agent by signing the Contract form which action, upon written notification to the Contractor, forms a Contract as provided in Section 103.8 - Execution of Contract by Department.”

101.2 Definitions Contractor Delete the entire section and replace with the following:

“After the Department has executed the Contract by cosigning the Contract form provided in the Bid Documents, previously signed by the successful bidder, the Successful Bidder becomes the Contractor. The Contractor will be the single point of responsibility for all Contract obligations to the Department. The Contractor shall be an independent Contractor with respect to the Department and shall not be an employee, agent, or representative of the Department. Alternatively, “Contractor,” with a lower case “c,” may mean a firm engaged in construction Work.”

101.2 Definitions Manufacturer Add the following:

“The Contractor”.

101.2 Definitions Successful Bidder Delete the section in its entirety and replace with the following:

“The low, responsive, responsible bidder, which regarding the consideration Maine business enterprise is considered as best-value for the State of Maine and to whom the Department intends to award the Contract. This status is evidenced by a “Notice of Intent to Award” Letter sent to the Successful Bidder.”

SPECIAL PROVISION SECTION 102
BIDDING

102.6 Bid Guaranty Delete the entire section 102.6.

102.7.1 Location and Time Delete the entire section and replace with the following:

The Bidder must Deliver its Bid and Bid Guaranty in a sealed envelope to the exact location and before the precise time (as determined by the Department) specified in the Notice to Contractors or any applicable Bid Amendment. The sealed envelope must be labeled with the Bidder's name, the Project location, WIN, and the words “Bid Enclosed”. 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 in Appendix A, 2 copies of the completed Contract form, and any other Certifications or Bid Requirements listed in the Bid Book. For a related provision, see Section 102.11 - "Bid Responsiveness".

102.11.2 Curable Bid Defects A. Change “Contract Agreement Offer and Award forms” to Contract form.

102.11.2 Curable Bid Defects A. Delete the section and replace with the following:

“The Bidder only signs one of the Contract forms or the Bidder does not sign the Contract form but does sign the Schedule of Items.

102.11.2 Curable Bid Defects Add the following after 102.11.2 E:

“F. If a submitted bid contains any additional conditions or alternate bidding language, the Bidder may cure the defect by removing all conditions and alternate language or the Department will reject the bid as non-responsive.”

102.11.2 Curable Bid Defects ADD the following:

“G. The question which reads “Are you a Maine Business as defined in this Request for Proposals?” in the Schedule of Items, Appendix A has not been completed.

Upon Notification, the Contractor may be given 5 business days to complete the question regarding Maine Business in the Schedule of Items, Appendix A. After the 5 days has elapsed, the Bidder shall be compared as a non-Maine business.”

SPECIAL PROVISION SECTION 103
AWARD AND CONTRACTING

103.1 Add the following at the end of the section:

103.1.4 Bids for goods and services “Evaluators of competitive bids for goods and services shall give consideration to the investment in the State by business enterprises as a best-value criterion. Consideration for Maine business enterprises may result in low cost or top scoring bids not being considered as the best-value for the State of Maine.”

103.5 Award Conditions Replace the first paragraph with the following:

The Apparent Successful Bidder must provide and/or perform all of the items listed in this Section 103.5 within 14 Days of Receipt of the Notice of Intent to Award. Unless indicated otherwise, all items must be Delivered to the Department’s Bureau of Maintenance & Operations.

103.5.1 Performance and Payment Bonds Delete the entire section 103.5.1.

103.5.4 Execution of Contract By Bidder Delete the entire section and replace with the following:

“The properly completed and signed Contract form provided with the Bid constitutes the Bidder’s offer. Once the Department has received any pre-award items required, the Department will sign and execute the Contract. The point of Contract execution is when the Contractor receives written notice that the contract has been signed by the Department and executed.”

SPECIAL PROVISION SECTION 107
TIME

Delete the entire section 107.4 (or the entire section 107) and replace with the following:

107.4.1 General Duty of Contractor The Contractor is solely responsible for the planning and execution of Work in order to complete the Work within the Contract Time.

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- 1) **WARRANTY.** Contractor warrants:
- a) That all articles and services to be supplied by it under this contract are fit and sufficient for the purpose intended;
 - b) That all articles and services covered by this contract will conform to the specifications, drawing samples, symbols or other description specified by the Department;
 - c) That such articles are merchantable, good quality and free from defects whether patent or latent in material and workmanship;
 - d) That all workmanship, materials and articles to be provided are of the best grade and quality; and,
 - e) That it has good and clear title to all articles to be supplied by it and the same are free and clear from all liens, encumbrances and security interest.

Neither the final certificate of payment nor any provision herein, nor partial nor entire use of the articles provided shall constitute an acceptance of work not done in accordance with this Contract or relieve the Contractor from liability in respect of any warranties or responsibility for faulty material or workmanship. The Contractor shall remedy any defects in the materials and articles delivered pursuant to this Contract and pay any damages resulting from such defects which shall appear within 1 year from the date of final acceptance of the materials and articles provided hereunder. The Department shall give written notice of observed defects with reasonable promptness.

- 2) **TAXES.** Contractor agrees that, unless otherwise indicated in this Contract, the prices herein do not include federal, state or local sales, or use the tax from which an exemption is available for purposes of this order. Contractor agrees to accept and use tax exemption certificates when supplied by the Department as applicable. In case it shall ever be determined that any tax included in the prices herein was not required to be paid by Contractor, Contractor agrees to notify the Department and to make prompt application for the refund thereof, to take all proper steps to procure the same and when received to pay the same to the Department.
- 3) **PACKING & SHIPMENT.** Deliveries shall be made as specified without charge for boxing, shipping or storage, unless otherwise specified. Articles shall be suitably packed to secure lowest transportation cost and to conform with the requirements of common carriers and any applicable specifications. Order numbers and symbols must

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be plainly marked on all invoices, packages, bills of lading and shipping orders. Bill of lading should accompany each invoice. Count or weight shall be final and conclusive on shipments not accompanied by packing lists. Shipping terms F.O.B. destination.

- 4) **DELIVERY.** Delivery should be strictly in accordance with delivery schedule. Articles fabricated beyond the Department's releases are at Contractor's risk. Contractor shall not make material commitments or production arrangements in excess of the amount or in advance of the time necessary to meet delivery schedule. Unless otherwise specified herein, or receipt of written approval, no deliveries shall be made in advance of the Department's delivery schedule. Neither party shall be liable for excess costs of deliveries or defaults due to causes beyond its control and without its fault or negligence, provided, however, that when the Contractor has reason to believe that the deliveries will not be made as scheduled, written notice setting forth the cause of the anticipated delay will be given immediately to the Department. If the Contractor's delay or default is caused by the delay or default of a subcontractor, such delay or default shall be excusable only if it arose out of causes beyond the control of both Contractor and subcontractor and without fault of negligence or either of them and the articles or services to be furnished were not obtainable from other sources in sufficient time to permit Contractor to meet the required delivery schedule.
- 5) **REMEDY.** If Contractor's deliveries fail to meet such schedule, the Department, without limiting its other remedies, may direct expedited shipping, and the difference between the expedited routing and the order routing costs shall be paid by the Contractor.
- 6) **INSPECTION.** All articles and work will be subject to final inspection and approval after delivery, notwithstanding prior payment, it being expressly agreed that payment will not constitute final acceptance. The Department at its option may either reject any article or work not in conformity with the requirements and terms of this order, or re-work the same at Contractor's expense. The Department may reject an entire shipment of similar articles if a sample inspection discloses that ten (10%) percent of the articles inspected are defective. This may be waived if the Contractor agrees to reimburse the Department for the cost of a complete inspection of the articles included in such shipment. Rejected material will be returned at Contractor's risk and expense at the full invoice price plus applicable transportation charges, if any. No replacement of defective articles of work shall be made unless specified by the Department.

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- 7) **BENEFITS AND DEDUCTIONS.** If the Contractor is an individual, the Contractor understands and agrees that he/she is an independent contractor for whom no Federal or State Income Tax will be deducted by the Department, and for whom no retirement benefits, survivor benefit insurance, group life insurance, vacation and sick leave, and similar benefits available to State employees will accrue. The Contractor further understands that annual information returns, as required by the Internal Revenue Code or State of Maine Income Tax Law, will be filed by the State Controller with the Internal Revenue Service and the State of Maine Bureau of Revenue Services, copies of which will be furnished to the Contractor for his/her Income Tax records.
- 8) **INDEPENDENT CAPACITY.** In the performance of this Contract, the parties hereto agree that the Contractor, and any agents and employees of the Contractor shall act in the capacity of an independent contractor and not as officers or employees or agents of the State.
- 9) **DEPARTMENT'S REPRESENTATIVE.** The Contract Administrator shall be the Department's representative during the period of this Contract. He/she has authority to curtail services if necessary to ensure proper execution. He/she shall certify to the Department when payments under the Contract are due and the amounts to be paid. He/she shall make decisions on all claims of the Contractor.
- 10) **CHANGES IN THE WORK.** The Department may make changes to its order, the Contract Amount will be amended accordingly, these changes will not invalidate this Contract. In no event shall Contractor fail or refuse to continue the performance of its obligations under this Contract because of the inability of the parties to agree on an adjustment or adjustments. Any monetary adjustment or any substantive change in the articles or materials shall be in the form of an amendment, signed by both parties and approved by the MaineDOT. Said amendment must be effective prior to delivery of the articles or materials.
- 11) **SUBLETTING, ASSIGNMENT OR TRANSFER.** The Contractor shall not sublet, sell, transfer, assign or otherwise dispose of this Contract or any portion thereof, or of its right, title or interest therein, without written request to and written consent of the Contract Administrator. No subcontracts or transfer of Contract shall in any case release the Contractor of its liability under this Contract.
- 12) **PERSONNEL.** The Contractor warrants that it has not employed or contracted with any company or person, other than for assistance with the normal study and preparation of a proposal, to solicit or secure this Contract and that it has not paid, or agreed to pay, any company or person, other than a bona fide employee working solely for the Contractor, any fee, commission, percentage, brokerage fee, gifts, or

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any other consideration, contingent upon, or resulting from the award for making this Contract. For breach or violation of this warranty, the Department shall have the right to annul this Contract without liability or, in its discretion to otherwise recover the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee.

13) **EQUAL EMPLOYMENT OPPORTUNITY.** During the performance of this Contract, the Contractor agrees as follows:

- a) The Contractor shall not discriminate against any employee or applicant for employment relating to this Contract because of race, color, religious creed, sex, national origin, ancestry, age, physical or mental disability, or sexual orientation, unless related to a bona fide occupational qualification. The Contractor shall take affirmative action to ensure that applicants are employed and employees are treated during employment, without regard to their race, color, religion, sex, age, national origin, physical or mental disability, or sexual orientation.

Such action shall include but not be limited to the following: employment, upgrading, demotions, or transfers; recruitment or recruitment advertising; layoffs or terminations; rates of pay or other forms of compensation; and selection for training including apprenticeship. The Contractor agrees to post in conspicuous places available to employees and applicants for employment notices setting forth the provisions of this nondiscrimination clause.

- b) The Contractor shall, in all solicitations or advertising for employees placed by or on behalf of the Contractor relating to this Contract, state that all qualified applicants shall receive consideration for employment without regard to race, color, religious creed, sex, national origin, ancestry, age, physical or mental disability, or sexual orientation.
- c) The Contractor shall send to each labor union or representative of the workers with which it has a collective bargaining agreement, or other agreement or understanding, whereby it is furnished with labor for the performance of this Contract a notice to be provided by the contracting agency, advising the said labor union or workers' representative of the Contractor's commitment under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- d) The Contractor shall inform the Department's Equal Employment Opportunity Coordinator of any discrimination complaints brought to an external regulatory body (Maine Human Rights Commission, EEOC, Office of Civil Rights) against

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their agency by any individual as well as any lawsuit regarding alleged discriminatory practice.

- e) The Contractor shall comply with all aspects of the Americans with Disabilities Act (ADA) in employment and in the provision of service to include accessibility and reasonable accommodations for employees and clients.
 - f) Contractors and subcontractors with contracts in excess of \$50,000 shall also pursue in good faith affirmative action programs.
 - g) The Contractor shall cause the foregoing provisions to be inserted in any subcontract for any work covered by this Contract so that such provisions shall be binding upon each subcontractor, provided that the foregoing provisions shall not apply to contracts or subcontracts for standard commercial supplies or raw materials.
- 14) **STATE EMPLOYEES NOT TO BENEFIT.** No individual employed by the State at the time this Contract is executed or any time thereafter shall be admitted to any share or part of this Contract or to any benefit that might arise therefrom directly or indirectly that would constitute a violation of 5 MRSA § 18 or 17 MRSA § 3104. No other individual employed by the State at the time this Contract is executed or any time thereafter shall be admitted to any share or part of this Contract or to any benefit that might arise therefrom directly or indirectly due to his employment by or financial interest in the Contractor or any affiliate of the Contractor. The Contractor shall cause the foregoing provisions to be inserted in any subcontract for any work covered by this Contract so that such provisions shall be binding upon each subcontractor, provided that the foregoing provisions shall not apply to contracts or subcontracts for standard commercial supplies or raw materials.
- 15) **MATERIAL SAFETY DATA SHEETS.** All manufacturers, importers, suppliers, or distributors of hazardous chemicals doing business in this State must provide a copy of the current material safety data sheet for any hazardous chemical to their direct purchasers of that chemical.
- 16) **ACCESS TO RECORDS.** The Contractor shall maintain all books, documents, payrolls, papers, accounting records and other evidence pertaining to this Contract and make such materials available at its offices at all reasonable times during the period of this Contract and for such subsequent period as specified under Maine Uniform Accounting and Auditing Practices for Community Agencies (MAAP) rules. The Contractor shall allow inspection of pertinent documents by the Department or

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any authorized representative of the State of Maine or Federal Government, and shall furnish copies thereof, if requested.

- 17) **TERMINATION**. The performance of work under the Contract may be terminated by the Department in whole, or in part, whenever the Contract Administrator determines that such termination is in the best interest of the Department including but not limited to the following circumstances:
- (a) The Contractor fails to make delivery of articles, or to perform services within the time or time specified herein, or
 - (b) The Contractor fails to make delivery of articles, or specified materials, or
 - (c) If Contractor defaults under any other term or condition of this contract, or
 - (d) If Contractor fails to make progress as to endanger the performance of this contract in accordance with its terms; or,
 - (e) If Contractor is adjudged bankrupt, or if it makes a general assignment for the benefit of its creditors or if a receiver is appointed on account of its insolvency.

In the event that the Division terminates this agreement in whole or in part pursuant to this paragraph, the Division may procure (articles and services similar to those so terminated) upon such terms and in such manner as deemed appropriate by the Department, and Contractor shall be liable to the Department for any excess cost incurred.

- 18) **GOVERNMENTAL REQUIREMENTS**. The Contractor warrants and represents that it will comply with all governmental ordinances, laws and regulations.
- 19) **GOVERNING LAW**. This Contract is pursuant to 23 M.R.S.A. §52, and shall be governed in all respects by the laws, statutes, and regulations of the United States of America and of the State of Maine. Any legal proceeding against the State regarding this Contract shall be brought in State of Maine administrative or judicial forums. The Contractor consents to personal jurisdiction in the State of Maine.
- 20) **STATE HELD HARMLESS**. The Contractor agrees to indemnify, defend and save harmless the State, its officers, agents and employees from any and all claims, costs, expenses, injuries, liabilities, losses and damages of every kind and description (hereinafter in this paragraph referred to as “claims”) resulting from or arising out of the performance of this Contract by the Contractor, its employees, agents, or

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subcontractors. This indemnification includes all legal costs and other expenses of defense against any asserted claims to which this indemnification applies. This indemnification does not extend to a claim that results solely and directly from (i) the Department's negligence or unlawful act, or (ii) action by the Contractor taken in reasonable reliance upon an instruction or direction given by an authorized person acting on behalf of the Department in accordance with this Contract.

- 21) **NOTICE OF CLAIMS**. The Contractor shall give the Department Contract Administrator immediate notice in writing of any legal action or suit filed related in any way to the Contract or which may affect the performance of duties under the Contract, and prompt notice of any claim made against the Contractor by any subcontractor which may result in litigation related in any way to the Contract or which may affect the performance of duties under the Contract.
- 22) **NON-APPROPRIATION**. Notwithstanding any other provision of this Contract, if the State does not receive sufficient funds to fund this Contract and other obligations of the State, if funds are de-appropriated, or if the State does not receive legal authority to expend funds from the Maine State Legislature or Maine courts, then the State is not obligated to make payment under this Contract.
- 23) **SEVERABILITY**. The invalidity or unenforceability of any particular provision or part thereof of this Contract shall not affect the remainder of said provision or any other provisions, and this Contract shall be construed in all respects as if such invalid or unenforceable provision or part thereof had been omitted.
- 24) **FORCE MAJEURE**. The Department may, at its discretion, excuse the performance of an obligation by a party under this Contract in the event that performance of that obligation by that party is prevented by an act of God, act of war, riot, fire, explosion, flood or other catastrophe, sabotage, severe shortage of fuel, power or raw materials, change in law, court order, national defense requirement, or strike or labor dispute, provided that any such event and the delay caused thereby is beyond the control of, and could not reasonably be avoided by, that party. The Department may, at its discretion, extend the time period for performance of the obligation excused under this section by the period of the excused delay together with a reasonable period to reinstate compliance with the terms of this Contract.
- 25) **DEBARMENT, SUSPENSION, INELIGIBILITY, OR EXCLUSION**. By signing the Contract, the Contractor certifies that it has not been debarred, suspended, declared ineligible or voluntarily excluded from contracts by the Federal Government or any state agency within the last 3 years.

**Maine Department of Transportation
Special Provisions for the Purchase of
Supplies, Materials or Equipment for a Specific Project
Pursuant to 23 MRSA § 52**

- 26) **SET-OFF RIGHTS**. The State shall have all of its common law, equitable and statutory rights of set-off. These rights shall include, but not be limited to, the State's option to withhold for the purposes of set-off any monies due to the Contractor under this Contract up to any amounts due and owing to the State with regard to this Contract, any other Contract, any other Contract with any State department or agency, including any Contract for a term commencing prior to the term of this Contract, plus any amounts due and owing to the State for any other reason including, without limitation, tax delinquencies, fee delinquencies or monetary penalties relative thereto. The State shall exercise its set-off rights in accordance with normal State practices including, in cases of set-off pursuant to an audit, the finalization of such audit by the State agency, its representatives, or the State Controller.

STANDARD DETAIL UPDATES

Standard Details and Standard Detail updates are available at:
<http://maine.gov/mdot/contractors/publications/standarddetail/>

<u>Detail #</u>	<u>Description</u>	<u>Revision Date</u>
501(02)	Pipe Pile Splice	3/05/2015
501(03)	H – Pile Splice	3/05/2015
504(07)	Diaphragm & Crossframe Notes	10/13/2015
505(01)	Shear Connectors	10/24/2016
507(13)	Steel Bridge Railing	6/03/2015
507(14)	Steel Bridge Railing	6/03/2015
507(31)	Barrier – Mounted Steel Bridge	8/06/2015
526(02)	Temporary Concrete Barrier	8/06/2015
652(06)	Construction Signs	10/24/2016
652(12)	Construction Traffic Control	10/24/2016
802(05)	Roadway Culvert End Slope Treatment	1/03/2017
504(10)	Drip Bar Details	9/06/2017

SUPPLEMENTAL SPECIFICATIONS
(Corrections, Additions, & Revisions to Standard Specifications - November 2014)

SECTION 101
CONTRACT INTERPRETATION

101.1 Abbreviations Revise the definition of AWWPA to “**American Wood Protection Association**”.

101.2 Definitions

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

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

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

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

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

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

SECTION 103
AWARD AND CONTRACTING

Amend this Section by adding the following:

“**103.1a Tie Bids** - In the case where two responsive bids from responsible bidders are equal monetarily, the Department shall determine the apparent low bidder by flipping a coin. The coin shall have sides clearly marked as heads and tails. The contractor whose first letter in their official company name that comes first in the alphabet shall be heads.

If there are three bids, each bidder will flip the coin and the bidder with the odd toss will be the winner. (i.e. if the results are two heads and a tails, the bidder who had tails is the winner). For a three way tie, bidders may flip their own coin or have the Contracts Engineer flip for them.

The coin flip will occur at the next bid opening by the Contracts and Specifications Engineer or a designee. The tied bidders may attend the coin flip in person or watch on the internet as they choose.”

In 103.3.2 Notice of Determination Revise this section by removing sections A – M and replacing with the following A - K:

(A) Default(s) or termination(s) on past or current Contracts.

**(B) Failure on past or current Contracts to pay or settle all bills for labor, Materials or services;
to comply with directives of the Department, to fulfill warranty obligations, or to provide Closeout Documentation.**

(C) "Below Standard" performance as determined from the Department's Contractor's Performance Rating process.

(D) Insufficient bonding capability or Inability of the Contractor to obtain or retain performance or Payment Bonds meeting MDOT requirements, or a pattern of unsupported Claims.

(E) Failure to accept an Award of a Contract made by the Department.

(F) Failure to provide information requested by the Department in a timely manner.

(G) Debarment, suspension or a denial of prequalification or 'award of contract' by any federal, State, or local governmental procurement agency or the Contractor's Agreement to refrain from Bidding as part of the settlement with any such agencies or any of the reasons contained in Section 102.02 of the "Rules Regarding Debarment of Contractors", Maine Department of Transportation Register 17-229, Chapter 102 (October 2, 1985).

(H) Failure to demonstrate ability to do work to the satisfaction and at the sole discretion of the Department.

(I) Number of personnel working directly for the Contractor with applicable knowledge and experience is significantly below industry standards.

(J) Safety Record, Environmental Record, Civil Rights or Equal Opportunity Record significantly below industry standards.

(K) Serious misconduct that the Department reasonably determines will substantially and adversely affect the cost, quality or timeliness of Work, or the safety of Workers or the public, any deceptive, evasive or fraudulent statements or omissions contained in the Application, made or omitted at any interview or hearing, or otherwise made to or omitted from the Department; or any other substantial deficiencies in experience or conduct that are clearly below industry standards and that clearly demonstrate in the sole discretion of the Department, that the Contractor is "Not Qualified".

SECTION 104 **GENERAL RIGHTS AND RESPONSIBILITIES**

This Section shall be amended by adding the following two sub-sections:

104.3.8.1 Electronic Payroll Submission On federally funded projects the prime contractor, all subcontractors, and lower-tier subcontractors will submit their certified payrolls electronically utilizing the Elations system. 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/contractors/> under the “Bidder Info” go to “Electronic Payroll System.”

104.3.8.2 Payment Tracking On federally funded projects the prime contractor and all subcontractors and lower-tier subcontractors will track and confirm the delivery and receipt of all payments through the Elation System

104.4.10 Coordination of Road Closure / Bridge Closure / Bridge Width Restrictions
Revise the last sentence by adding a period after ‘Resident’; remove the “and” after Resident; and adding “**not covered by Pay Items**” between ‘costs’ and ‘will’. So that the last paragraph reads “**All Newspaper notices, radio announcements and any notifications will be subject to the approval of the Resident. All costs not covered by Pay Items will be considered incidental to the Contract.**”.

104.5.5 Prompt Payment of Subcontractors Add the following paragraph to this subsection:

C. Payment Tracking Federal Projects On federally funded projects, the prime contractor, subcontractors and lower-tier subcontractors will track and confirm the delivery and receipt of all payments through the Elation System. They will be responsible for entering all payments to all sub and lower tier contractors. MaineDOT will run a query monthly to ensure that contractors are complying and generate an e-mail to contractors who have not responded to confirm receipt of MaineDOT payment or contractor payment to lower tier subcontractors.

SECTION 105 **GENERAL SCOPE OF WORK**

105.2.5 Compliance with Health and Safety Laws Remove the second paragraph of this subsection in its entirety and replace with:

“For related provisions, see Sections 105.2.3 – Project Specific Emergency Planning, 105.3 – Traffic Control and Management and 105.4 – Maintenance of work.”

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

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

105.6.2.4 Department Verification Add the following to the end of the first sentence: **“or other approved method, such as reference staking, to allow the Department to independently verify the accuracy of the work, as approved by the Department.”**

SECTION 106 **QUALITY**

106.3.4 Storage Revise this Section by adding the following sentence after the first sentence: **“Materials shall not be stored under or in close proximity to Highway Structures unless the Contractor receives written permission from the Resident.”**

106.4.1 General - In the first sentence, remove “When required by Special Provision,” and replace with **“When required elsewhere in the Contract,”**

Revise Subsection C by replacing the last sentence with the following:

Approval of both standard and project specific QCPs shall be as outlined in paragraph B above, with the exception that the initial 14 day review period for standard plans will begin on March 1, and that the supplemental project specific QCP for the project shall be submitted a minimum of 14 days prior to any related work being performed with an initial review period of 7 days.

SECTION 107
TIME

107.7.2 SCHEDULE OF LIQUIDATED DAMAGES

Revise this section by removing the numbers in the chart and replace with the following:

Original Contract Amount		Per Diem Amount of Liquidated Damages
From More Than	To and Including	Calendar Day
\$ 0	to \$ 100,000.00	\$250.00
\$ 100,000.00	to \$ 250,000.00	\$500.00
\$ 250,000.00	to \$ 500,000.00	\$650.00
\$ 500,000.00	to \$1,000,000.00	\$800.00
\$1,000,000.00	to \$2,000,000.00	\$1,000.00
\$2,000,000.00	to \$4,000,000.00	\$1,200.00
\$4,000,000.00	and More	\$2,100.00

SECTION 108
PAYMENT

108.3 Retainage - Remove the paragraph beginning with “ The Contractor may withdraw...” in its entirety.

108.4.1 Price Adjustment for Hot Mix Asphalt:

Remove this section in its entirety and replace with the following

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 403.102	Hot Mix Asphalt – Special Areas
Item 403.206	Hot Mix Asphalt - 25 mm
Item 403.207	Hot Mix Asphalt - 19 mm
Item 403.2071	Hot Mix Asphalt - 19 mm (Polymer Modified)
Item 403.2072	Hot Mix Asphalt - 19 mm (Asphalt Rich Base)
Item 403.208	Hot Mix Asphalt - 12.5 mm
Item 403.2081	Hot Mix Asphalt - 12.5 mm (Polymer Modified)
Item 403.209	Hot Mix Asphalt - 9.5 mm (sidewalks, drives, & incidentals)
Item 403.210	Hot Mix Asphalt - 9.5 mm
Item 403.2101	Hot Mix Asphalt - 9.5 mm (Polymer Modified)
Item 403.2102	Hot Mix Asphalt - 9.5 mm (Asphalt Rich Base)

Item 403.2104	Hot Mix Asphalt - 9.5 mm (Thin Lift Surface Treatment)
Item 403.21041	Hot Mix Asphalt - 9.5 mm (Polymer Modified Thin Lift Surface Treatment)
Item 403.211	Hot Mix Asphalt – Shim
Item 403.2111	Hot Mix Asphalt – Shim (Polymer Modified)
Item 403.212	Hot Mix Asphalt - 4.75 mm (Shim)
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 Polymer Modified)
Item 403.2132	Hot Mix Asphalt - 12.5 mm (Asphalt Rich Base and intermediate course)
Item 403.214	Hot Mix Asphalt - 4.75 mm (Surface)
Item 403.235	Hot Mix Asphalt (High Performance Rubberized HMA)
Item 403.301	Hot Mix Asphalt (Asphalt Rubber Gap-Graded)
Item 404.70	Colored Hot Mix Asphalt – 9.5mm (Surface)
Item 404.72	Colored Hot Mix Asphalt – 9.5mm (Islands, sidewalks, & incidentals)
Item 461.13	Light Capital Pavement
Item 461.210	9.5 mm HMA - Paver Placed Surface
Item 462.30	Ultra-Thin Bonded Wearing Course
Item 462.301	Polymer Modified Ultra-Thin Bonded Wearing Course

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 403.102	-6.2%
Item 403.206	-4.8%
Item 403.207	-5.2%
Item 403.2071	-5.2%
Item 403.2072	-5.8%
Item 403.208	-5.6%
Item 403.2081	-5.6%
Item 403.209	-6.2%
Item 403.210	-6.2%
Item 403.2101	-6.2%
Item 403.2102	-6.8%
Item 403.2104	-6.2%
Item 403.21041	-6.2%
Item 403.211	-6.2%
Item 403.2111	-6.2%
Item 403.212	-6.8%
Item 403.213	-5.6%
Item 403.2131	-5.6%

Item 403.2132–6.2%
Item 403.214–6.8%
Item 403.235–5.5%
Item 403.301–6.2%
Item 404.70–6.2%
Item 404.72–6.2%
Item 461.13–6.5%
Item 461.210 – 6.4%
Item 462.30–0.0021 tons/SY
Item 462.301–0.0021 tons/SY

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 (Excluding the Connecticut market area), 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 (Excluding the Connecticut market area), 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.

SECTION 109 **CHANGES**

109.5.1 Definitions - Types of Delays

Delete Paragraph 'A' in its entirety and replace with:

"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) a weather related Event of such an unusually severe nature that a Federal Emergency Disaster is declared. The Contractor will only be entitled to an adjustment of time if the Project falls within the geographic boundaries prescribed under the disaster declaration. 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 or (3) An Uncontrollable Event.”

APPENDIX A TO DIVISION 100

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

SECTION 203

EXCAVATION AND EMBANKMENT

203.02 Materials

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

Crushed Stone, ¾ inch 703.13

203.042 Rock Excavation and Blasting

On page 2-16, add the word “**No**” to the third sentence in Section 5 Submittals, Subsection V, 1 so that it reads:

“No blasting products will be allowed on the job site if the date codes are missing.”

203.09 Preparation of Embankment Area Revise the first sentence of the second paragraph so that it reads:

“When fill material is placed against existing slopes or previously placed fill, the interface shall be continuously benched by excavating steps of sufficient width to permit operations of placing and compacting the additional material.”

SECTION 304 AGGREGATE BASE AND SUBBASE COURSE

304.02 – Aggregate Add the following sentence before the sentence starting with “When designated on the plans...”: **“Aggregate Base Course – Type C will be capped with 2” of millings or Untreated Aggregate Surface Course – Type B. Payment for this material will be made under 304.16”**

Revise the sentence beginning “When designated on the Plans, Type E...” by removing “When designated on the Plans,” so it reads **“Type E subbase may be used 9 inches below and lower beneath the pavement.”**

SECTION 307 FULL DEPTH RECYCLED PAVEMENT

Remove this Section in its entirety and replace with:

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

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

MATERIALS

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

307.021 New Aggregate and Additional Recycled Material New aggregate, if required by the contract, shall meet the requirements of Subsection 703.10 - Aggregate for Untreated Surface Course and Leveling Course, Type A. Aggregate Subbase Course Gravel Type D processed to 100 percent passing a 2 inch square mesh sieve and meeting the requirements of 703.06 – Aggregate for Base and Subbase may be used in areas requiring depths greater than 2 inches. New aggregate, will be measured and paid for under the appropriate item.

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

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

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

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

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

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

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

EQUIPMENT

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

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

The mixing unit shall be designed, equipped, maintained, and operated so that emulsified asphalt stabilizer at constant temperature may be applied uniformly on variable widths of pulverized material up to 6 feet at readily determined and controlled rates from 0.01 to 1.06 gal/yd² with uniform pressure and with an allowable variation from any specified rate not to exceed 0.01 gal/ yd². Mixing units shall include a tachometer, pressure gages, and accurate volume measuring devices or a calibrated tank and a thermometer for measuring temperatures of tank contents.

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

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

307.06 Rollers The full depth recycled material shall be rolled with a vibratory pad foot roller, a vibratory steel drum soil compactor and a pneumatic tire roller. The pad foot roller drum shall have a minimum of 112 tamping feet 3 inches in height, a minimum contact area per foot of 17 inch², and a minimum width of 84 inches. The vibratory steel drum roller shall have a minimum 84 inch width single drum. The pneumatic tire roller shall meet the requirements of Section 401.10 and the minimum allowable tire pressure shall be 85 psi.

MIX DESIGN

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

1. Percent of emulsified asphalt to be used.
2. Quantity of lime or cement to be added.
3. Optimum moisture content for proper compaction.

4. Additional aggregate (if required).

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

CONSTRUCTION REQUIREMENTS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

TESTING REQUIREMENTS

307.10 Quality Control The Contractor shall operate in accordance with the approved Quality Control Plan (QCP) to assure a product meeting the contract requirements. The QCP shall meet the requirements of Section 106.4 - Quality Control and this Section. The Contractor shall not begin recycling operations until the Department approves the QCP in writing. Prior to performing any recycling process, the Department and the Contractor shall hold a Pre-recycle conference to discuss the recycling schedule, type and amount of equipment to be used, sequence of operations, and traffic control. A copy of the QC random numbers to be used on the project shall be provided to the Resident. All field supervisors including the responsible onsite recycling process supervisor shall attend this meeting.

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

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

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

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

MINIMUM QUALITY CONTROL FREQUENCIES

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

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

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

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

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

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

- A. Demonstrate that the equipment and processes can produce recycled layers to meet the requirements specified in these special provisions.
- B. Determine the effect on the gradation of the recycled material by varying the forward speed of the recycling machine and the rotation rate of the milling drum.

- C. Determine the optimum moisture necessary to achieve proper compaction of the recycled layer.
- D. Determine the sequence and manner of rolling necessary to obtain the compaction requirements and establish a target density. The Contractor and the Department will both conduct testing with their respective gauges at this time.

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

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

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

ACCEPTANCE TEST FREQUENCY

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

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

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

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

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

Payments will be made under:

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

SECTION 411
UNTREATED AGGREGATE SURFACE COURSE

411.02 – Aggregate Add the following to the end of the first sentence: “- Type A”

SECTION 501
FOUNDATION PILES

501.05 – Method of Measurement

- b. Piles Furnished – After the second sentence, add the sentence “**Measurement will not include any pile tips**”.
- c. Piles in Place – Add the sentence to the end of the second paragraph, “**Measurement will include the pile tips**”.
- d. Pile Tips – Add the words “**on the Pile**” to the end of the sentence.

SECTION 502
STRUCTURAL CONCRETE

502.05 Composition and Proportioning

Replace Table 1 with

TABLE 1

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

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

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

Note #1 - Remove, “...**Standard Specification Section 711.05, Protective Coating for Concrete Surfaces, and per the manufacturer’s recommendations, at no additional cost to the Department.**” and replace with, “...**Standard Specification Section 515, Protective Coating for Concrete Surfaces, at no additional cost to the Department.**”

502.1703 Acceptance Methods A and B

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

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

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

502.1706 Acceptance Method C

Remove in its entirety and Replace with:

502.1706 Acceptance Method C The Department will determine the acceptability of the concrete through Acceptance testing. Acceptance tests will include compressive strength, air content and permeability. Method C concrete not meeting the requirements listed in Table 1 shall be removed and replaced at no cost to the Department. At the Department’s sole discretion, material not meeting requirements may be left in place and paid for at a reduced price as described in Section 502.195.

502.1707 Resolution of Disputed Acceptance Test Results
Section B

Remove “Rapid Chloride” from the section heading.
In paragraph 4 replace T-277 with TP-95

502.192 Pay Adjustment for Chloride Permeability

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

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

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

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

502.195 Pay Adjustment Method C

In Table 6: Method C Pay Reductions (page 5-53)
Under “Entrained Air” for “Class Fill”, in the first line,
change from “< 4.0 (Removal)” to “< **4.5 (Removal)**”

In Table 6: Method C PAY REDUCTIONS, revise the Chloride Permeability section by removing it in its entirety and replacing it with:

Surface Resistivity {Permeability in Kohm-cms and Pay Reduction per CY}			
15-16 (\$50)	13 (\$25)	N/A	N/A
13-14 (\$75)	12(\$50)	N/A	N/A
12 (\$100)	11 (\$75)	N/A	N/A
11 (\$125)	10 (\$100)	N/A	N/A
< 11 (Removal)	< 10 (Removal)	N/A	N/A

SECTION 503 **REINFORCING STEEL**

503.06 Placing and Fastening Revise this Subsection by removing, in its entirety, the paragraph which begins, “Stainless steel reinforcement shall not be tied to any other type of reinforcement.....”

SECTION 504 **STRUCTURAL STEEL**

504.26 Welding Remove the second paragraph beginning with “The range of heat....” in its entirety.

504.29 Welding ASTM A 709 HPS 70W Steel. Remove the third paragraph beginning with “Make Weld runoff tabs...” in its entirety.

SECTION 510 **SPECIAL DETOURS**

510.032 Geometric and Approach Design a. Horizontal alignment
The third paragraph of this section is revised to read as follows:

“The roadway width shall be increased on curved portions of the Special Detour to account for the off tracking characteristics of WB-62 vehicle in accordance with **the AASHTO publication A Policy On Geometric Design of Highways and Streets (the Green Book), chapter 3 table entitled Design Widths of Pavements for Turning Roadways.**”

SECTION 527 **ENERGY ABSORBING UNIT**

527.02 Materials This section is revised to read as follows.

527.02 Materials Work Zone Crash Cushions must comply with NCHRP Report 350. Work Zone Crash Cushions shall be selected from MaineDOT’s Qualified Products List of Crash Cushions / Impact Attenuators, or an approved equal.

SECTION 534 **PRECAST STRUCTURAL CONCRETE**

534.14 Process Control Test Cylinders
Revise this subsection to read:

“**534.14 Acceptance and Quality Control Testing of Concrete Refer to Section 712.061.**”

SECTION 535 **PRECAST, PRESTRESSED CONCRETE SUPERSTRUCTURE**

Section 535.08 – Quality Assurance

Revise the second paragraph to read:

“The QAI will perform acceptance sampling and testing and will witness or review documentation, workmanship and testing to assure the Work is being performed in accordance with the Contract Documents.”

Section 535.15 - Process Control Test Cylinders

Revise the first paragraph to read:

“535.15 Acceptance and Quality Control Testing of Concrete Acceptance of structural precast/prestressed units, for each day’s production, will be determined by the Department, based on compliance with this specification and satisfactory concrete testing results. At least once per week, the QAI will make 2 concrete cylinders (6 cylinders when the Contract includes permeability requirements) for use by the Department; cylinders shall be standard cured in accordance with AASHTO T23 (ASTM C31). The QAI will perform entrained air content and slump flow testing, determine water-cement ratio and determine temperature of the sampled concrete at the time of cylinder casting. All testing equipment required by the QAI to perform this testing shall be provided in accordance with Standard Specification Section 502.041, Testing Equipment. In addition, the Contractor shall provide a slump cone meeting the requirements of AASHTO T 119. Providing and maintaining testing and curing equipment shall be considered incidental to the work and no additional payment will be made.”

Insert the following as the second paragraph of Section 535.15:

“Quality Control concrete test cylinders shall be made for each day’s cast and each form bed used. Cylinders tested to determine strand release strength and design strength shall be field cured in accordance with AASHTO T23 (ASTM C31). 28 day cylinders shall be standard cured. Record unit identification, entrained air content, water-cement ratio, slump flow and temperature of the sampled concrete at the time of cylinder casting.”

SECTION 604 **MANHOLES, INLETS CATCH BASINS**

604.04 Adjusting Catch Basins and Manholes,

Add the following paragraph to the end of 604.04 b:

The Department will allow the use of metal ring inserts set into the manhole top frame or composite risers placed beneath the manhole frame to adjust manhole slope and grade for paving projects. The use of metal ring inserts shall be in accordance with 604.04 d. Ring Insert Requirements. The use of composite risers shall be in accordance with 604.04 e. Composite Riser Requirements.

Add the following paragraph after the first paragraph of 604.04 c:

The Department will allow the use of metal ring inserts set into the manhole top frame or composite risers placed beneath the manhole frame to adjust manhole slope and grade for paving projects. The use of metal ring inserts shall be in accordance with 604.04 d. Ring Insert Requirements. The use of composite risers shall be in accordance with 604.04 e. Composite Riser Requirements.

Add the following sections to 604.04:

d. Ring Insert Requirements Ring inserts to adjust manhole top frame slope and grade will be allowed in accordance with the following requirements:

1) Materials

- i. All ring inserts must be made of iron. *Multiple ring inserts will not be allowed.* The single ring insert may be any height up to a maximum of 2 inches tall.**
- ii. Ring inserts shall not be welded to the manhole frame to prevent brittle failure of the cast iron frame.**
- iii. Ring inserts shall be fastened to the manhole frame using liquid steel-filled epoxy such as Loctite Fixmaster Steel Liquid or equivalent. The epoxy shall be installed in accordance with the manufacturer's recommendations.**

2) Where Ring Inserts May/May Not Be Used

- i. MaineDOT will allow the use of a single manhole ring insert to raise manholes on state and state-aid highways.**
- ii. *Manhole ring inserts may not be used along state and state-aid highway sections where the speed limit is 40 miles per hour or more.* The standard brick and mortar or flat composite risers beneath the manhole frame must be used at these locations.**

3) Construction Requirements For The Use of Iron Manhole Ring Inserts

- i. Wherever iron ring inserts are used to raise manhole top elevations, the rings shall be fastened to the existing manhole frame using liquid steel-filled epoxy. The liquid steel-filled epoxy shall be placed evenly around the entire manhole frame before placing the ring insert. *Unbonded ring inserts will not be allowed.* If the manufacturer's recommended construction practices result in loose or unacceptable manhole cover restraint, standard brick and mortar or flat composite risers beneath the manhole frame must be used at these locations.

e. Composite Riser Requirements Flat or beveled, doughnut-shaped, composite risers placed beneath the manhole frame to adjust slope and grade are allowed. The composite riser shall be fastened to both the top of the concrete cone and bottom of the manhole frame with the manufacturer's recommended epoxy. Composite risers may be used at all locations on state and state-aid highways under any legal speed limit without restriction.

SECTION 606 **GUARDRAIL**

606.09 Basis of Payment Amend the first sentence of the eighth paragraph of this subsection by removing the word "meter" and replace it with "linear foot".

SECTION 608 **SIDEWALKS**

608.021 Sidewalk Materials Revise this section by removing the second paragraph which begins with "Portland cement concrete shall..." in its entirety and replace with "**Portland cement concrete shall be Class A and meet the requirements of Section 502, Structural Concrete.**"

SECTION 609 **CURB**

609.03 Vertical Stone Curb, Terminal Section and Transition Sections and Portland Cement Concrete Curb, Terminal Sections and Transition Sections

Amend this section by adding the following paragraph to the end of it:

"The Contractor may elect to substitute concrete to backfill Stone Curbing or Stone Edging at their option. If the concrete backfill option is elected, the following is added to Standard Specification 609 – Curb"

609.02 Materials Amend this section by adding the following to it:

Portland cement and Portland Pozzolan Cement	701.01
Water	701.02
Fine Aggregate for Concrete	703.01
Coarse Aggregate for Concrete	703.02

The Contractor shall submit a concrete mix design for the Portland Cement Concrete to the Resident, with a minimum designed compressive strength of 4000 psi Class A concrete.

609.10 Basis of Payment Revise by changing the fifth paragraph which begins with “There will be no separate payment...” this section by removing the word “cement” and replacing it with “**concrete fill, mortar**”.

SECTION 619 **MULCH**

619.07 Basis of Payment Amend this section by adding the words “; **Bark Mulch and Erosion Control Mix will be paid for by the Cubic Yard;**” into the first sentence so that it reads:

“The accepted areas mulched will be paid for at the contract price per unit; **Bark Mulch and Erosion Control Mix will be paid for by the Cubic Yard;** which shall be full compensation for furnishing and spreading the hay or straw and mulch binder, cellulose fiber mulch, bark mulch or erosion control mix.

Revise the second sentence by removing “ **for pay item 619.1201**” So that it reads:

“When Mulch is measured in Bales, each bale will be paid for at 60% of the contract price per Unit”.

Revise this section by removing all pay items and replace them with the following:

619.12 Mulch	Unit
619.13 Bark Mulch	Cubic Yard
619.14 Erosion Control Mix	Cubic Yard

SECTION 621 **LANDSCAPING**

621.0002 Materials - General

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

621.0019 Plant Pits and Beds

c Class A Planting

In the third paragraph beginning with “ The plant pit...” change “½ inch” to “**1 inch**”

SECTION 626
**FOUNDATIONS, CONDUIT AND JUNCTION BOXES FOR HIGHWAY
SIGNING, LIGHTING AND SIGNALS**

626.02 General Amend the Material list by adding the following to the list:

Gravel Borrow	703.20
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Revise the Material List by removing:

Prewired Conduit	715.04
Metallic Junction and Fuse Box	715.05

626.021 Miscellaneous Material Amend this section by adding the following to the end of it:

“All concrete for concrete encasement of conduit shall be Fill Class concrete in accordance with the applicable requirements of Section 502 – Structural Concrete.”

Amend the third paragraph that begins with “If grouting is necessary...” by adding “**included on the Qualified Product List and**” after the word “material”.

626.03 General Amend this section by adding the following section to the end of it

“626.0301 Electrical Supply Lines and Service Connections The following requirements shall apply to Electric Supply Lines and Service Connections feeding traffic signalization equipment control boxes and lighting breaker boxes.

Whenever possible, the meter and breaker panel feeding traffic signal control boxes or lighting control boxes shall be constructed within 30 feet of the service drop pole.

All service connections to MaineDOT traffic signal control boxes or lighting breaker boxes constructed in trenches shall be in steel conduit or concrete encased PVC conduit.

Where trenchless technologies are employed to install the service connection conduit, Schedule 120 PVC conduit shall be used for the trenchless bore section of conduit. In addition, concrete encasement shall be used for any conduit placed in trench sections more than 10 feet before or after the limits of the trenchless bore conduit.

The construction practices described above shall be used for service connections up to a maximum of 600 feet. There may be rare exceptional cases where the service connection must exceed 600 feet. In these cases, the power companies may require primary power be run over 600 feet for the purpose of power consumption and dependable service. These cases will be evaluated on a case-by-case basis for alternate power feed methods and/or the need for steel or concrete encased conduit.”

626.031 Conduit Revise this section by removing the second paragraph which begins with “Trenches for conduits...” and replace it with the following:

“Trenches for conduits shall be excavated to a width that will permit proper installation of the conduit and to a minimum depth of 3 feet below finish grade as measured from the top of the conduit. If deeper depths are required, the conduit shall be installed at the depth shown on the plans or as directed. Conduit shall not interfere with poles, guardrail posts, sign foundations or other objects.”

Amend the third paragraph which begins with “All junction or pull boxes...” by adding “**concrete, in accordance with the applicable requirements of Section 502 – Structural Concrete,**” after Class LP.

Revise the fifth paragraph which begins with “After the trench has been...” by adding the following to the end of it:

“Where concrete encasement is required around the conduit, backfilling with approved material may begin adjacent to and above the encased conduit no sooner than 24 hours after concrete placement.”

Remove the following:

“All underground conduit shall be placed to at least the depth shown on the plans and shall not interfere with poles, guardrail posts, sign foundations or other objects.”

Revise the paragraph beginning with “All conduit ends shall...” by removing “Prewired Conduit shall be sealed during construction to prevent entry of moisture, dirt, or rocks.”

626.033 Polyvinylchloride Conduit Installation Amend the first paragraph of this section which begins with “Polyvinylchloride conduit and High Density...” by adding the following to the end of it:

“In addition, PVC conduit used for Electrical Supply Lines and Services feeding control cabinets for traffic signalization equipment or highway lighting breaker boxes shall be concrete encased. When trenchless technologies are used to install PVC conduit, concrete encasement shall not be required.

Concrete encasement shall consist of a minimum of 4 inches of concrete above, below and on both sides of the conduit that shall have a minimum compressive strength of 3000 psi and a maximum aggregate size of 1-inch (Fill Class concrete). The concrete encasement may be backfilled no sooner than 24 hours after placement. “

“NON-METALLIC UNDER PAVEMENT CONDUIT INSTALLATION

Where noted on the drawings, non-metallic under pavement conduit of schedule 80 or greater rating shall be provided to facilitate conduit crossing of the existing highway and ramps without disruption to the existing highway and ramp pavement surface. The non-metallic under pavement conduit shall be hydraulically jacked or directional bored below the highway and ramp at a depth of not less than (36 inches). Under pavement conduit shall extend for a distance of (10 feet) beyond the highway or ramp edge at each side.”

Amend the sixth paragraph which begins with “Where PVC conduit runs are...” by changing “3 inch minimum bedding” to “**6 inch minimum bedding**”.

626.034 Concrete Foundations

Revise this section by removing the third paragraph which begins with “In the absence of Design Requirements...” in its entirety and replace with the following:

“In the absence of design requirements being provided on the plans, the Contractor shall prepare and submit the foundation design(s) to the Department for review. The Contractor may propose an alternate shallow spread footing or drilled shaft configuration/design than that set forth on the drawings. Design shall be in accordance with AASHTO LRFD Specifications for Structural Supports for Highway Sign, Luminaires and Traffic Signals, current edition; AASHTO LRFD Bridge Design Specifications, current edition; and FHWA-NHI-10-016 Drilled Shafts, Construction Procedures and Design Methods, current edition. Where conflicting requirements occur, the more stringent requirements shall govern. In addition to other design requirements, foundation design shall account for Torsion for which a minimum Factor of Safety equal to 1.2 shall be achieved. In evaluating axial capacity and torsional resistance in cohesionless soils, load transfer coefficient or side resistance coefficient (beta, β) will be used in accordance with Subsection 13.3.5.1 of FHWA-NHI-10-016, with beta determined in accordance with Equations 13-13 and 13-11 for silty sands to sandy silts (with varying amounts of gravel). The design criteria for the resistance of drilled shaft and spread footing foundations against overturning, sliding and bearing capacity failure shall meet the requirements of Section 4 of AASHTO LRFD Bridge Design Specifications, current edition. The structural design of foundations shall meet the requirements of AASHTO LRFD Bridge Design Specifications, current edition. The Contractor shall submit to the Department for review, three (3) copies of detailed plans and calculations of the proposed design. Design shall be prepared and sealed by a Professional Engineer licensed in the State of Maine. Construction of foundation(s) shall not commence until the Department has reviewed the foundation design.”

On Page 6-85, add the following paragraph before the paragraph beginning with “Drilled shafts shall not be...”.

“ No foundation design will be required for 18- and 24-inch diameter foundations for structures less than 30-feet tall and with no projecting arms. A foundation design prepared by a Professional Engineer licensed in accordance with the laws of the State of Maine will be required for all other foundations Precast foundations will be permitted for 18 and 24-inch diameter foundations for structures less than 30-feet tall and with no projecting arms. Where precast foundations are permitted flowable concrete fill shall be used as backfill in the annular space, and placed from the bottom up. Construction of precast foundations shall conform to the Standard Details and all requirements of Section 712.061 except that the concrete shall have a minimum permeability of 17 kOhm-cm and the use of calcium nitrite will not be required. “

On Page 6-86, Revise the paragraph beginning with “Concrete for drilled shafts...” so that a portion of it reads as follows:

“...The Contractor shall provide temporary dewatering of excavations for foundations such that concrete is placed in the dry. Concrete for drilled shafts shall be placed in accordance with Section 502.10 as temporary casing is withdrawn to prevent debris from contaminating the foundation and to ensure concrete is cast against the surrounding soil. Concrete for drilled shafts and spread footings shall be Class LP in accordance with Section 502 - Structural Concrete. Precast foundations will not be permitted except as specified above in this Section. Backfill for spread footing foundations shall be Gravel Borrow meeting the requirements of Section 703.20 - Gravel Borrow.....”

626.05 Basis of Payment Amend this section by removing the following paragraphs:
The one which starts with “Payment will be made for the total number of linear feet of prewired conduit...”

The one which starts with “Prewired conduit within the foundations...”

Amend this subsection by adding the following paragraph and Pay Items:

“Payment will be made for the total number of linear feet of under pavement conduit actually furnished, installed and accepted at the contract price per linear foot. This price shall include the cost of: furnishing and installing the conduit; excavating; furnishing special backfilling materials, pull wire, fittings, grounding and bonding; test cleaning interiors of conduits and all materials, labor, equipment and incidentals necessary to complete the work.”

Pay Item	PayUnit
626.221 Non-metallic Conduit, Concrete Encased	Linear Foot
626.251 Non-Metallic Under pavement Conduit (Schedule 80 or greater rating)	Linear Foot

Remove the following Pay Items:

626.23	Prewired Conduit Secondary Wiring	Linear Foot
626.24	Prewired Conduit Primary Wiring	Linear Foot

SECTION 627
PAVEMENT MARKINGS

Revise this section by removing it in its entirety and replacing with the following:

627.01 Description This work shall consist of furnishing and placing reflectorized pavement lines and markings, removing pavement lines and markings, and furnishing and applying reflectorized paint to curbing in reasonably close conformity with the plans and as designated.

627.02 Materials Materials shall conform to the requirements specified in the following Sections of Division 700 - Materials.

Pavement Marking Paint	708.03
Reflectorized Plastic Pavement Marking	712.05

Temporary Bi-directional Yellow Delineators shall be Temporary Object Markers (T.O.M.) as manufactured by the Davidson Plastic Company, 18726 East Valley Highway, Kent, WA 98031 or an approved equal.

627.04 General All pavement lines and markings shall be applied in accordance with the latest edition of Manual on Uniform Traffic Control Devices.

Longitudinal lines placed on tangent roadway segments shall be straight and true. Longitudinal lines placed on curves shall be continuous smoothly curved lines consistent with the roadway alignment. All pavement markings placed shall meet the tolerance limits shown on the plans.

Unless otherwise shown on the plans, non-interstate lines shall be 4 inches wide and broken lines shall consist of alternate 10 foot painted line segments and 30 foot gaps. On controlled access divided highways and on the interstate system lines shall be 6 inches wide and broken lines shall consist of alternate 15 foot painted line segments and 25 foot gaps. Width tolerance shall be +/- 1/4 inch.

Temporary pavement marking lines, defined in Special Provision Section 652, Maintenance of Traffic, Temporary Centerline, will be applied as many times as necessary to properly delineate traffic lanes for the safe passage of traffic. Bi-directional delineators may be used in place of temporary lines, except where specified otherwise in Special Provision 652 Maintenance of Traffic, Temporary Centerline. Delineators will be applied at 40 foot intervals.

In overnight lane closure areas that are not to be overlaid, temporary plastic lines or raised pavement markers shall be used through the length of the taper.

Newly painted lines, markings and curb shall be protected from traffic by the use of cones, stationary vehicles or other approved methods until the paint is dry.

627.05 Preparation of Surface Immediately before applying the pavement marking paint to the pavement or curb, the surface shall be dry and entirely free from dirt, grease, oil, or other foreign matter.

Surface preparation for application of plastic markings shall conform to the manufacturer's recommendations.

627.06 Application Prior to applying paint for final pavement lines, the Contractor shall perform a test for paint thickness by furnishing and placing a piece of smooth, clean metal with an area of at least 144 in² in the path of the striping truck. The striping truck shall be passed over the piece of metal, painting the surface as it passes, without applying beads. The result of this test will be used to determine the pressure setting and speed of the truck when applying paint to obtain the specified thickness. Additional paint thickness testing may be required on the final paint markings. The wet thickness of paint without beads on final pavement lines shall be a minimum of 16 mils.

On other final pavement markings and on curb, where the paint is applied by hand painting or spraying, application shall be in two uniform covering coats, each at least 10 mils thick. Before the second coat of paint has dried, the glass beads shall be applied by a pressure system that will force the glass beads onto the undried paint as uniformly as possible.

Glass beads shall be applied to the final and temporary pavement lines, marking and curb at a sufficient rate and in sufficient quantity to assure complete and uniform coverage of hand painted surfaces and achieve proper reflectivity.

Permanent and temporary white lines and markings shall have a minimum final reflectivity value of 250 millicandelas per square meter per lux (mcd/m²/lux) and permanent and temporary yellow lines and markings shall have a minimum final reflectivity value of 150 millicandelas per square meter per lux (mcd/m²/lux), as measured by the Department. Measurements taken to determine reflectivity shall be done within 4 weeks after final placement.

If the final reflectivity values are less than the described minimums, the Contractor shall repaint those areas not meeting required reflectivity at no cost to the Department. If the final reflectivity values are less than the described minimums after the second attempt, the Contractor will submit in writing a plan of action to meet the reflectivity minimums prior to continuing any work. Once the plan has been reviewed and approved by the Department, the Contractor shall re apply at no cost to the Department.

Temporary painted lines and markings shall be applied as specified for permanent painted lines, except that the thickness shall be a minimum of 16 mils.

Temporary pliant polymer marking material shall be used for temporary markings on the final pavement and on pavements not to be resurfaced when such pavement markings do not conform to the final pavement markings pattern.

The plastic final pavement lines and markings shall be applied in accordance with the manufacturer's recommendations by the inlay method of application.

627.07 Establishment Period Inlaid plastic pavement lines and marking material furnished and installed under this contract for final pavement markings shall still be subject to a six-month period of establishment.

The period of establishment shall commence as soon as the plastic pavement lines and markings are complete and in place and shall continue for six months. At the end of the establishment period, a minimum of 95% of the plastic pavement lines and markings shall still be in place to be acceptable.

If less than 95% of the plastic pavement lines and markings are in place after six months, the Contractor shall replace all unsatisfactory plastic pavement lines and markings on the project without additional payment. Plastic pavement lines and markings designated for replacement shall be installed according to these specifications, unless otherwise directed. Plastic pavement lines and markings replaced at the end of the six month establishment period will not be subject to a further establishment period.

627.08 Removing Lines and Markings When it is necessary to remove pavement lines and markings, it shall be done by high pressure water, grinding or other approved acceptable means. The method chosen must be capable of completely eradicating the existing line or marking without excessive damage to the pavement. Burning and the use of solvents to remove temporary markings from final pavement or from existing pavement not to be resurfaced will not be permitted.

627.09 Method of Measurement The quantity of pavement marking lines identified in the contract as a plan quantity pay item, the measurement of payment will be the number of feet shown in the Schedule of Items. This quantity will be considered final and no adjustments will be made except when changes resulting in increases or decreases are made by the Resident.

The accepted quantity of temporary or permanent pavement marking lines when identified in the contract as a linear foot item shall be measured and paid for at the contract unit price per linear foot for the total amount applied and accepted.

Double yellow centerline, broken or solid, will be considered one line for measurement purposes. The measurement of broken lines will include the gaps when painted and will not include the gaps when plastic. Double Yellow Centerline, broken or solid shall not be paid through intersections or side roads and will be paid for the actual length of painted line.

Broken white lines will include the gaps when painted and will not include the gaps when plastic inlaid pavement lines are applied. Yellow or white solid edge lines and will not be paid through intersections or side roads and will be measured by the actual length of painted line.

Temporary pavement marking lines shall not be paid through intersections or side roads and will be measured per linear foot of actual length of painted and accepted.

Reflectorized curb will be measured or computed by the square foot of curb surface actually painted and reflectorized.

The accepted quantity of removing existing pavement markings will be measured by the square foot.

Temporary Bi-directional Yellow Delineators will be measured by each unit, complete in place, maintained, and accepted.

627.10 Basis of Payment The accepted quantity of pavement marking lines identified in the contract as a plan quantity pay item will be paid for at the contract unit price for plan quantity. No adjustment will be made to the quantity for payment, except as described 627.09 Method of Measurement

The quantity of permanent or temporary pavement marking lines identified in the contract paid by the linear foot will be measured for payment as described under section 627.09 Method of Measurement.

All other permanent pavement markings will be paid for at the contract unit price per square foot in accordance with 627.09 Method of Measurement.

If allowed by Special Provision, the Contractor may utilize Temporary Bi-Directional Yellow and White (as required) Delineators. When utilized, payment will be made as temporary pavement marking lines, measured and paid at the contract unit price per linear foot. Such payment will include as many applications as required and removal.

Payment for final plastic pavement lines and markings will be made in two parts. The first payment of 75% will be made when plastic pavement lines and markings are placed. The payment of the remaining 25% will be made at the end of the establishment period for all plastic line and pavement markings accepted.

The accepted quantity of any pavement marking lines will be paid for at the contract unit price and will include as many applications as required and removal when required.

The accepted quantity of Temporary Bi-directional Yellow Delineators will be paid for at the contract unit price.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
627.18 12 inch Solid White Pavement Marking Line	Linear Foot
627.711 White or Yellow Pavement Marking Line - Plan Quantity	Linear Foot
627.733 4" White or Yellow Painted Pavement Marking Line	Linear Foot
627.744 6" White or Yellow Painted Pavement Marking Line	Linear Foot
627.75 White or Yellow Pavement & Curb Marking	Square Foot
627.77 Removing Existing Pavement Marking	Square Foot
627.78 Temporary 4" Painted Pavement Marking Line, White or Yellow	Linear Foot
627.781 Temporary 6" Painted Pavement Marking Line, White or Yellow	Linear Foot
627.407 Reflectorized Plastic, White or Yellow Pavement Marking	Square Foot
627.4071 Reflectorized Plastic, White or Yellow Pavement Marking Line - Plan Quantity	Linear Foot
627.811 Temporary Bi-directional Yellow Delineators	Each

SECTION 639 ENGINEERING FACILITIES

Revise this section by removing this section in its entirety and replace with the following:

639.01 Description This work shall consist of providing, erecting, lighting, equipping and maintaining buildings to be solely used by the Resident and other assigned Department representatives as a field office. Upon completion of the work, the buildings and equipment shall remain the property of the Contractor.

639.02 Materials Materials for buildings shall be of good quality customarily used in standard frame house or office trailer construction.

639.03 General The building of the type called for shall be provided before the start of work, and shall remain until work is completed and accepted, unless earlier removal is authorized. The location shall be approved by the Resident and should be adjacent or virtually adjacent to the Project.

A fire extinguisher shall be provided in each building or office trailer for electrical and chemical fires and effective on all solvents used in the building.

Walls, roof, floor, windows, and doors shall be tightly constructed to the required area.

Furnishings shall be supplied as called for. Doors shall be equipped with locks and all keys shall be in the possession of the Resident. Windows shall be equipped with latches so they may be locked on the inside. Window screens and screen doors shall be supplied when necessary. Adequate desk and desk space shall be provided. If a portable table is supplied, it should be adjustable to accommodate the various heights of employees. A 5-way adjustable office chair shall be provided in the quantities listed.

639.04 Field Offices Field Offices are designated Type A, Type B, or Type C. Buildings, including trailers, may be provided if they substantially equal or exceed the following requirements. Air conditioning, appropriate to the building size, shall be provided in all field offices.

The walls, roof, and floor of the building shall be completely insulated with a minimum insulation value of R-15. Office trailers shall be either new or in very good used condition. The interior walls shall be covered with suitable wall paneling. The entire office trailer shall be for the exclusive use of the Resident. The office trailer shall be winterized and completely enclosed at the bottom, if the trailer will be used in cold weather.

Other types of buildings and facilities may be furnished of equal or better quality.

A public work area will be provided in the field office that shall be designed and constructed so that individuals with disabilities can approach, enter, and exit this area.

At least one accessible route to the field office shall be provided from accessible parking. The accessible route shall comply with the Americans with Disabilities Act Accessibility Guidelines (ADAAG) and this specification.

The minimum clear width of an accessible route shall be 36 inches except at doors. The least possible slope shall be used for an accessible route. An accessible route with a running slope greater than 1:20 shall be considered a ramp. Maximum ramp slope is 1:12. The maximum rise for any run of a ramp shall be 30 inches and the minimum clear width shall be 36 inches. Nowhere shall the cross slope of an accessible route exceed 1:50. Changes in level up to ¼ inch may be vertical and without edge treatment. Changes in level between ¼ inch and ½ inch shall be beveled with a slope no greater than 1:2. Ramp floor surfaces shall be stable, firm, and slip-resistant.

Ground floor surfaces along accessible routes and in accessible rooms and spaces including floors, walks, ramps, stairs, and curb ramps, shall be stable, firm, and slip-resistant.

The main door to the public work area shall have a minimum clear opening of 32 inches with the door opened 90 degrees, measured between the face of door and the opposite stop. Minimum maneuvering clearances at doors shall be provided. The floor or ground area within the required clearances shall be level and clear.

The handle and other operating devices on accessible doors shall have a shape that is easy to grasp with one hand and does not require tight grasping. Lever-operated mechanisms push type mechanisms, and U-shaped handles are acceptable designs. Hardware required for accessible door passage shall be mounted no higher than 48 inches above finished floor.

A minimum of 3 parking spaces will be supplied for Class B & C Field Offices and 6 for Class A. One wheelchair accessible parking space shall be located on the shortest accessible route of travel from adjacent parking to an accessible entrance.

Level landings shall be provided at bottom and top of each run. The landing shall be at least as wide as the ramp run leading to it with a minimum length of 60 inches.

If a ramp run has a rise greater than 6 inches or a horizontal projection greater than 72 inches, then it shall have handrails on both sides. Handrails shall have the following features:

- 1) Handrails shall be provided along both sides of ramp segments. The inside handrail on switchback ramps shall always be continuous.**
- 2) If handrails are not continuous, they shall extend at least 12 inches beyond the top and bottom of the ramp segment and shall be parallel with the floor or ground surface.**
- 3) The clear space between the handrail and the wall shall be 1½ inch.**
- 4) Gripping surfaces shall be continuous.**
- 5) Top of handrail gripping surfaces shall be mounted between 34 and 38 inches above ramp surfaces.**

- 6) Ends of handrails shall be either rounded or returned smoothly to floor, wall, or post.
- 7) Handrails shall not rotate within their fittings.
- 8) The diameter or width of the gripping surfaces of a handrail shall be 1¼ to 1½ inch, or the shape shall provide an equivalent gripping surface.

Firm and sturdy steps shall also be provided with 7 inch maximum riser and 11 inch minimum depth, and at least one handrail extending from the top of the steps to a minimum 12 inches beyond the bottom of the steps.

The Contractor will make reasonable effort(s) to provide wheelchair accessible toilet facilities when "portable" facilities are provided.

The Contractor shall provide wheelchair accessible toilet facilities when flush type facilities, that is, those with running water, are provided; and the Contractor shall provide wheelchair accessible portable facilities, if used, when the contract duration exceeds two continuous construction seasons.

In addition to the facilities previously specified in this subsection, each field office shall meet the following minimum requirements:

<u>Description</u>	<u>Quantity</u>		
	<u>Type A</u>	<u>Type B</u>	<u>Type C</u>
Floor Area (Outside Dimension) - ft ²	312	220	125
Inside Wall Height – feet	7	7	7
Window Area - ft ²	55	35	35
Drafting Table Surface Area - ft ²	15	15	15
Drafting Stools - each	2	1	1
Office Desks - each	2	1	1
Ergonomic Swivel Chairs -ea (5-way adjustable)	3	2	2
Folding Chairs - each	3	2	2
Lighting Units - each	4	2	2
Electric Wall Outlets - each	6	4	3
Power Strip Surge Protectors - each	3	2	1
Wall Closets - each	1	1	1
Plan Rack for minimum of 6 sets of plans	1	1	0
Toilet Facility	1	1	1
Wastebaskets - each	2	2	1

All windows shall be provided with shades or blinds.

The toilet facility shall be for the exclusive use of State personnel. If requested, the Contractor will supply a lock to ensure exclusive use.

The Resident will have the option to reject any furniture or supplies provided to the field office based on general condition.

One hundred ten volt, 60 cycle, continuous electric service shall be supplied for lighting and 15 amp duplex wall outlets. Lighting shall consist of florescent light units with rapid start bulbs or LED shop style lights located over the work areas for a minimum of 50 foot candles overall. At least one external light source will be provided.

Drafting surfaces shall be 40 inches above the floor and have shelves beneath. Shelves for plans and rolls shall also be furnished overhead. Drafting stools shall be approximately 28 inches high.

Desks shall be single or double pedestal standard office type, and shall be in addition to “built-in” type desks in the office trailer.

Field offices shall be furnished with one four-drawer letter size metal filing cabinet.

Wall closets shall be 21 inches wide, 15 inches deep, and at least 4 feet high.

Each office shall be furnished with a broom, dustpan, sweeping compound, trash bags, and with cleaning material for cleaning glass. If the field office is carpeted, then a vacuum cleaner will be provided. The contractor will be responsible for disposing of trash from the field office.

The Contractor shall provide a fully functional wireless desktop copier/scanner/printer, capable of copying field books, for the Resident’s use during the project. All maintenance and supplies, except paper, shall be the responsibility of the Contractor.

The Contractor shall provide bottled water and a microwave for the duration of the project. All maintenance and supplies shall be the responsibility of the Contractor. Alternate source of water, such as a water cooler, may be provided as approved by resident.

The Contractor shall provide a 4 cubic-foot refrigerator in the field office for the duration of the project.

Each office shall be furnished with a 10-person general-purpose first aid kit. The first aid kit shall be periodically inspected and refilled as necessary.

639.08 Heat Heat appropriate to the building size shall be supplied by the Contractor to maintain an acceptable room temperature during occupancy.

639.091 Broadband Connection The contractor will supply one computer broadband connection, modem lease and router. The router shall have wireless access and be 802.11n or newer capable. 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 download connection of 5.0 Mbps and 1.0 Mbps upload. 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.

639.10 Method of Measurement Field office will be measured by the unit or lump sum for each building provided, equipped and maintained satisfactorily.

639.11 Basis of Payment The accepted quantity of field office will be paid for at the contract unit price each or lump sum which payment shall be full compensation for furnishing until contract completion, erecting, equipping, maintaining, furnishing electricity, heating, installing and maintaining toilet facilities and if necessary removing the buildings or office trailers.

Payment for these items will be made in 3 parts; the first payment of ½ to be made after the Contractor has supplied the building or office trailer and it has been approved. The remaining payments shall be made at intervals as follows:

A second payment of ¼ shall be made when one-half of the anticipated work has been completed.

The final payment of the remaining ¼ shall be made upon completion of the work.

Payment will be made under:

	<u>Pay Item</u>	<u>Pay Unit</u>
639.18	Field Office, Type A	Each
639.19	Field Office, Type B	Each
639.20	Field Office, Type C	Each

SECTION 652 **MAINTENANCE OF TRAFFIC**

652.2.4 Other Devices Revise this Section by removing the following paragraph:
“ STOP/SLOW paddles shall be the primary and preferred hand held signaling device. Flags shall be limited to Emergencies. The paddle shall have an octagonal shape and be at least 18 inches wide with letters at least 6 inches high and should be fabricated from semi-rigid material”

And replace with these two paragraphs

“Flaggers shall use a STOP / SLOW hand held paddle as the primary and preferred hand signaling device. Use of flags shall be limited to emergency situations.

STOP / SLOW paddles shall have high intensity prismatic retro reflective sheeting Type XI, have an octagonal shape on a rigid handle and shall be at least 18 inches wide with letters at least 6 inches high and shall be constructed from light semi-rigid material. The STOP (R1-1) face shall have white letters and a white border on a red background. The SLOW (W20-8) face shall have black letters and a black border on an orange background. Paddles in existing stock meeting the current specification (Type VII, Type VIII, or Type IX) may be utilized until the end of the service life or until 12/31/18. All new paddles must meet the Type XI requirements.”

652.3.3 Submittal of Traffic Control Plan On page 6-148, note f, in the last sentence revise the “105.2.2” to “105.2.3” so that the last sentence reads, **“For a related provision, see Section 105.2.3 – Project Specific Emergency Planning.”**

652.3.4 General Revise the eighth paragraph by removing “Earth Berm” and replace it with **“Concrete Barrier”**.

Amend this section by adding the following paragraph before the paragraph beginning with “Special Detours and temporary structures...”:

“A temporary ramp shall be constructed with HMA at the ends of the roadway section paved or milled each day. The use of millings or RAP will not be allowed, but cold patch may be temporarily utilized until HMA plants are open for the season. The maximum ramp change in elevation shall not exceed 4” vertical. For Interstate Highways or roadways with speed limits equaling or exceeding 50 mph; temporary ramps shall be constructed at a length of eight feet per inch of transition depth. For roadways with speed limits less than 50 mph and greater than 25 mph, temporary ramps shall be constructed at a length of four feet per inch of transition depth. For roadways with speed limits 25 mph or less, temporary ramps shall be constructed at a length of two feet per inch of transition depth. Materials, placement, maintenance, and removal shall be incidental to contract items.”

652.4 Flaggers Revise this section by removing the first paragraph, and replace it 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. All flaggers must carry an official certification card with them at all times while flagging.

For daytime conditions, flaggers shall wear a top (vest, shirt or jacket) that is orange, yellow, yellow-green, or fluorescent versions of these colors meeting ANSI 107-2004, Class 2 or Class 3, along with a hardhat with 360 ° retro-reflectivity.

For nighttime conditions, flaggers shall wear all Class 3 apparel, meeting ANSI 107-2004, including a Class 3 top (vest, shirt or jacket) and a Class E bottom (pants or coveralls), shall be worn along with a hardhat with 360 ° retro-reflectivity and shall be visible at a minimum distance of 1000 ft. Flagger stations must be illuminated in nighttime conditions to assure visibility and will be specifically addressed in detail in the Contractor’s TCP”.

652.41 TRAFFIC OFFICERS

Revise this subsection so that the subsection number and title is

“652.4.1 TRAFFIC OFFICERS ”

SECTION 656

TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL

656.5.2 If No Pay Item Add the following to the end of the first paragraph:

“Failure by the Contractor to follow Standard Specification or Special Provision - Section 656 will result in a violation letter and a reduction in payment as shown in the schedule list in 656.5.1. 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 660

ON-THE-JOB TRAINING

660.06 Method of Measurement

Remove the first sentence in its entirety and replace with **“ The OJT item will be measured by the number of OJT hours by a trainee who has successfully completed an approved training program.”**

660.07 Basis of payment to the Contractor

Remove the last word in the first sentence so that the first sentence reads **“ The OJT shall be paid for once successfully completed at the contract unit price per hour.”**

Payment will be made under

Change the Pay Item from **“660.22”** to **“660.21”** and change the Pay Unit from **“Each”** to **“Hour”**.

SECTION 672

PRECAST CONCRETE BLOCK GRAVITY WALL

672.035 Backfill Material– Revise this section by adding the following after the second paragraph: **Backfill materials shall meet the criteria in the following table.**

<u>Base Polymer</u>	<u>Property</u>	<u>Criteria</u>	<u>Test Method</u>
Polyester (PET)	pH	3 < pH < 9	AASHTO T-289
Polyolefin (PP & HDPE)	pH	pH > 3	AASHTO T-289

672.04 Design Requirements – Revise this section by replacing items 2 and 3 in the second paragraph with the following:

- 2. FHWA-NHI-10-024 and FHWA-NHI-10-025, Design and Construction of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes, Volumes I and II, current edition.**
- 3. FHWA-NHI-09-087 Corrosion/Degradation of Soil Reinforcements for Mechanically Stabilized Earth Walls and Reinforced Soil Slopes, current edition.**

SECTION 673 **WETCAST SMALL LANDSCAPE BLOCK WALL**

673.035 Backfill Material – Revise this section by adding the following after the second paragraph:

Backfill materials shall meet the criteria in the following table.

<u>Base Polymer</u>	<u>Property</u>	<u>Criteria</u>	<u>Test Method</u>
Polyester (PET)	pH	3 < pH < 9	AASHTO T-289
Polyolefin (PP & HDPE)	pH	pH > 3	AASHTO T-289

673.04 Design Requirements – Revise this section by replacing items 2 and 3 in the second paragraph with the following:

- 2. FHWA-NHI-10-024 and FHWA-NHI-10-025, Design and Construction of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes, Volumes I and II, current edition.**
- 3. FHWA-NHI-09-087 Corrosion/Degradation of Soil Reinforcements for Mechanically Stabilized Earth Walls and Reinforced Soil Slopes, current edition**

SECTION 674

PREFABRICATED CONCRETE MODULAR GRAVITY WALL

674.02 Materials

Amend this section by adding the following after “Concrete Units:” and before the paragraph beginning with “Tolerances”.

Concrete shall be Class P. The concrete shall contain a minimum of 5.5 gallons per cubic yard of calcium nitrite solution.

The minimum permeability of the concrete as indicated by Surface Resistivity shall be 17 KOhm-cm.

Defects Defects which may cause rejection of precast units include, but are not limited to, the following:

Any discontinuity (crack, rock pocket, etc.) of the concrete which could allow moisture to reach the reinforcing steel.

Rock pockets or honeycomb over 6 square inches in area or over 1 inch deep.

Edge or corner breakage exceeding 12 inches in length or 1 inch in depth.

Any other defect that clearly and substantially impacts the quality, durability, or maintainability of the structure, as determined by the Fabrication Engineer.

Repair honeycombing, ragged or irregular edges and other non-structural or cosmetic defects using a patching material from the MaineDOT Qualified Products List (QPL). The repair, including preparation of the repair area, mixing and application and curing of the patching material, shall be in accordance with the manufacturer's product data sheet. Corners that are not exposed in the final product may be ground smooth with no further repair necessary if the depth of the defect does not exceed 1/2 inch. Remove form ties and other hardware to a depth of not less than 1 inch from the face of the concrete and patch the holes using a patching material from the MaineDOT QPL.

Repair structural defects only with the approval of the Fabrication Engineer. Submit a nonconformance report (NCR) to the Fabrication Engineer with a proposed repair procedure. Do not perform structural repairs without an NCR that has been reviewed by the Fabrication Engineer. Structural defects include, but are not be limited to, exposed reinforcing steel or strand, cracks in bearing areas, through cracks and cracks 0.013 inch in width that extend more than 12 inches in length in any direction. Give the QAI adequate notice prior to beginning any structural repairs.

SECTION 677

MECHANICALLY STABILIZED EARTH RETAINING WALL

677.03 Design Requirements – Revise this section by replacing items 6, 7 and 8 in the second paragraph with the following:

6. FHWA-NHI-10-024, Design and Construction of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes, Volumes I, current edition.
7. FHWA-NHI-10-025, Design and Construction of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes, Volumes II, current edition.
8. FHWA-NHI-09-087 Corrosion/Degradation of Soil Reinforcements for Mechanically Stabilized Earth Walls and Reinforced Soil Slopes, current edition

On page 6 - 203 change “636.041” to “677.041”

Amend 677.042 Precast Panel Tolerances and Surface Finish by the addition of the following:

Defects Defects which may cause rejection of precast units include, but are not limited to, the following:

Any discontinuity (crack, rock pocket, etc.) of the concrete which could allow moisture to reach the reinforcing steel.

Rock pockets or honeycomb over 6 square inches in area or over 1 inch deep.

Edge or corner breakage exceeding 12 inches in length or 1 inch in depth.

Any other defect that clearly and substantially impacts the quality, durability, or maintainability of the structure, as determined by the Fabrication Engineer.

Repair honeycombing, ragged or irregular edges and other non-structural or cosmetic defects using a patching material from the MaineDOT Qualified Products List (QPL). The repair, including preparation of the repair area, mixing and application and curing of the patching material, shall be in accordance with the manufacturer's product data sheet. Corners that are not exposed in the final product may be ground smooth with no further repair necessary if the depth of the defect does not exceed 1/2 inch. Remove form ties and other hardware to a depth of not less than 1 inch from the face of the concrete and patch the holes using a patching material from the MaineDOT QPL.

Repair structural defects only with the approval of the Fabrication Engineer. Submit a nonconformance report (NCR) to the Fabrication Engineer with a proposed repair procedure. Do not perform structural repairs without an NCR that has been reviewed by the Fabrication Engineer. Structural defects include, but are not be limited to, exposed reinforcing steel or strand, cracks in bearing areas, through cracks and cracks 0.013 inch in width that extend more than 12 inches in length in any direction. Give the QAI adequate notice prior to beginning any structural repairs.

SECTION 702 BITUMINOUS MATERIAL

702.01 Asphalt Cement - Remove this section in its entirety and replace with the following:
Performance-Graded Asphalt Binder (PGAB) that has not been modified with polymer shall

conform to the requirements of AASHTO M 320. Polymer modified binder shall meet the requirements of AASHTO M 332 (including Appendix X1), except that the percent difference in nonrecoverable creep compliance, Jnrdiff, shall not be enforced. Performance-Graded Asphalt Binder shall not contain re-refined engine oil bottoms (REOB).

The Contractor shall arrange for the Supplier to furnish the following items to the Department's Asphalt Pavement Engineer:

- a. A Quality Control Plan that conforms to the requirements of AASHTO R 26 "Certifying Suppliers of Performance-Graded Asphalt Binders" and
- b. A CERTIFICATE OF ANALYSIS for all asphalt materials furnished for use on the project. The Certificate shall include the actual test results of the material in storage from which the shipments are being made. Certificates shall be supplied for each lot, batch, or blend of each type and grade of material. A new certificate shall be issued at least every 30 days or upon receiving or manufacture of a new material. The original of each Certificate of Analysis shall be mailed to the Departments Asphalt Pavement Engineer.

The Contractor shall give the supplier sufficient notice of orders to permit testing and certification. Material not certified will not be accepted for use.

Deliveries of asphalt materials shall be accompanied by a Bill of Lading containing the information required under Section 108.1.3 f. The Bill of Lading shall include the applicable certificate number and shall include a printed or stamped statement such as the following: "THIS IS TO CERTIFY THAT THE ASPHALT MATERIAL REPRESENTED BY THIS LOADING INVOICE CONFORMS TO THE SPECIFICATIONS OF THE PURCHASER FOR THE MATERIAL TYPE AND GRADE STATED THEREON."

In the event an intermediate hauler of the asphalt material is involved, a copy of their own delivery slip shall be furnished, as well as a copy of the supplier's loading invoice. The hauler's delivery slip and the supplier's loading invoice shall be cross-referenced by use of their respective serial numbers.

All non-bituminous components added to the binder prior to the sampling point for binder certification shall be included on the asphalt binder Certificate of Analysis identifying their presence. All non-bituminous components added after the certification sampling point and prior to transport shall be included on the Bill of Lading. All non-bituminous components added to the binder at the HMA plant shall be identified on the mix plant documentation and accompanied by test results and certification showing the effect of the additives introduced, if any.

702.04 Emulsified Asphalt

Revise this Section by removing the first paragraph in its entirety and replace with the following:

Emulsified Asphalt shall conform to the requirements of AASHTO M 140. Cationic emulsified asphalt shall conform to the requirements of AASHTO M 208. Anionic emulsified asphalt Grade RS-1h shall conform to the requirements in the following table:

Type	Rapid-Setting	
Grade	RS-1h	
Tests on Emulsions	min	max
Viscosity, Saybolt Furol at 25°C SFS	20	100
Storage Stability test, 24-h, % ^A	-	1.0
Demulsibility, 35 ml, 0.02 N CaCl ₂ , %	60	-
Sieve Test, % ^A	-	0.10
Residue by distillation, %	55	-
Tests on Residue from Distillation Test	min	max
Penetration, 25°C 100g, 5 s	40	90
Ductility, 25°C 5 cm/min, cm	40	-
Solubility in trichloroethylene or n-propyl bromide, %	97.5	-

^A This requirement is waived if successful application of material has been achieved in the field.

SECTION 703 AGGREGATES

703.01 Fine Aggregate for Concrete Replace the second paragraph with the following:

“All fine aggregate shall be free from injurious amounts of organic impurities. Should the fine aggregate, when subjected to the colorimetric test for organic impurities, AASHTO T 21, produce a color darker than organic plate number 3, the fine aggregate shall be rejected.”

703.0201 Alkali Silica Reactive Aggregates. Remove this section in its entirety and replace with the following:

All coarse and fine aggregates proposed for use in concrete shall be tested for Alkali Silica Reactivity (ASR) potential under AASHTO T 303 (ASTM C 1260), Accelerated Detection of Potentially Deleterious Expansion of Mortar Bars Due to Alkali-Silica Reaction, prior to being accepted for use. Acceptance will be based on testing performed by an accredited independent lab submitted to the Department. Aggregate submittals will be required on a 5-year cycle, unless the source or character of the aggregate in question has changed within 5 years from the last test date.

As per AASHTO T 303 (ASTM C 1260): Use of a particular coarse or fine aggregate will be allowed with no restrictions when the mortar bars made with this aggregate expand less than or equal to 0.10 percent at 30 days from casting. Use of a particular coarse or fine aggregate will be classified as potentially reactive when the mortar bars made with this aggregate expand greater than 0.10 percent at 30 days from casting. Use of this aggregate will only be allowed with the use of cement-pozzolan blends and/or chemical admixtures that result in mortar bar expansion of less than 0.10 percent at 30 days from casting as tested under ASTM C 1567.

Acceptable pozzolans and chemical admixtures that may be used when an aggregate is classified as potentially reactive include, but are not limited to the following:

Class F Coal Fly Ash meeting the requirements of AASHTO M 295.

Ground Granulated Blast Furnace Slag (Grade 100 or 120) meeting the requirements of AASHTO M 302.

Densified Silica Fume meeting the requirements of AASHTO M 307.

Lithium based admixtures

Metakaolin

Pozzolans or chemical admixtures required to offset the effects of potentially reactive aggregates will be incorporated into the concrete at no additional cost to the Department.

703.06 Aggregate for Base and Subbase - Remove the first two paragraphs in their entirety and replace with these:

“The following shall apply to Sections (a.) and (c.) below. The material shall have a Micro-Deval value of 25.0 or less as determined by AASHTO T 327. If the Micro-Deval value exceeds 25.0, the Washington State Degradation DOT Test Method T113, Method of Test for Determination of Degradation Value (January 2009 version) shall be performed, except that the test shall be performed on the portion of the sample that passes the ½ in sieve and is retained on the No. 10 sieve. If the material has a Washington Degradation value of less than 15, the material shall be rejected.

The material used in Section (b.) below shall have a Micro-Deval value of 25.0 or less as determined by AASHTO T 327. If the Micro-Deval value exceeds 25.0 the material may be used if it does not exceed 25 percent loss on AASHTO T 96, Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine. “

703.081 RAP for Asphalt Pavement

Remove this section in its entirety and replace with the following:

703.081 RAP for Asphalt Pavement Recycled Asphalt Pavement (RAP) may be introduced into hot-mix asphalt pavement at percentages approved by the Department according to the MaineDOT Policies and Procedures for HMA Sampling and Testing.

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.

The maximum allowable percent of RAP shall be determined by the asphalt content, the percent passing the 0.075 mm sieve, the ratio between the percent passing the 0.075 mm sieve and the asphalt content, and Coarse Micro-Deval loss values as tested by the Department. The maximum percentage of RAP allowable shall be the lowest percentage as determined according to Table 4 below:

Table 4: Maximum Percent RAP According to Test Results

Classification	Maximum RAP Percentage Allowed	Asphalt content standard deviation	Percent passing 0.075 mm sieve standard deviation	Percent passing 0.075 mm sieve / asphalt content ratio	Residual aggregate M-D loss value
Class III	10%	≤ 1.0	N/A	≤ 4.0	≤ 18
Class II	20%	≤ 0.5	≤ 1.0	≤ 2.8	
Class I	30%	≤ 0.3	≤ 0.5	≤ 1.8	

The Department will monitor RAP asphalt content and gradation during production by testing samples from the stockpile at approximately 15,000 T intervals (in terms of mix production). The allowable variance limits (from the numerical average values used for mix designs) for this testing are determined based upon the maximum allowable RAP percentage, and are shown below in Table 5.

Table 5: RAP Verification Limits

Classification	Asphalt content (compared to aim)	Percent passing 0.075 mm sieve (compared to aim)
Class III	± 1.5	± 2.0
Class II	± 1.0	± 1.5
Class I	± 0.5	± 0.7

For specification purposes, RAP will be categorized as follows:

Class III – A maximum of 10.0 percent of Class III RAP may be used in any base, intermediate base, surface, or shim mixture. A maximum of 20.0 percent of Class III RAP may be used in hand-placed mixes for item 403.209.

Class II – A maximum of 20.0 percent Class II RAP in any base, binder, surface, or shim course.

Class I – A maximum of 20.0 percent Class I RAP may be used in any base, intermediate base, surface, or shim mixture without requiring a change to the specified asphalt binder. A maximum of 30.0 percent Class I RAP may be used in in any base or intermediate base mixture provided that a PG 58-28 asphalt binder is used. A maximum of 30.0 percent Class I RAP may be used in any surface or shim mixture provided that PG 58-34 or 52-34 asphalt binder is used. Mixtures exceeding 20.0 percent Class I RAP must be evaluated and approved by the Department.

The Contractor may use up to two different RAP sources in any one mix design. The total RAP percentage of the mix shall not exceed the maximum allowed for the highest classification RAP source used (i.e. if a Class I & Class III used, total RAP must not exceed 30.0%). The blended RAP material must meet all the requirements of the classification for which the RAP is entered (i.e. 10% Class III with 20% Class I, blend must meet Class I criteria). The Department may take belt cuts of the blended RAP to verify the material meets these requirements. If the Contractor elects to use more than one RAP source in a design, the Contractor shall provide an acceptable point of sampling blended RAP material from the feed belt.

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.

703.19 Granular Borrow

Remove the gradation requirements table, and replace with the following:

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves	
	Material for Underwater Backfill	Material for Embankment Construction
6 inch	100	
No. 40	0-70	0-70
No. 200	0-7.0	0-20.0

703.33 Stone Ballast - In the third paragraph, remove the words “less than” before 2.60 and add the words “or greater” after 2.60.

SECTION 708 PAINTS AND PRESERVATIVES

708.05 Timber Preservative Revise this section by removing it in its entirety and replacing with: **“Timber preservatives shall conform to the requirements of AASHTO M 133 and AWPA Standard U1. All preservatives shall meet the requirements of the US EPA regulations under the Federal Insecticide, Fungicide and Rodenticide Act.”**

SECTION 710 FENCE AND GUARDRAIL

710.07 Guardrail Posts Amend subsection ‘a’ by removing the words “white oak”, “cedar”, “tamarack”, “maple”, “beech”, “birch” and “red oak” from the first sentence. Also in the first sentence, place an “or” between “pine” and “eastern hemlock”. In the second sentence remove the words “well seasoned”. Remove the sentence beginning with “Wood posts and offset brackets...” and replace it with: **“Wood posts and offset brackets shall be preservative treated in accordance with the requirements of AASHTO M 133 and AWPA U1, UC4A Commodity Specification A: Sawn Products.”**

SECTION 712 MISCELLANEOUS HIGHWAY MATERIAL

712.061- Structural Precast Concrete Units

Under the heading, Quality Control and Quality Assurance, revise the fourth paragraph to read:

“Acceptance is the prerogative of the Department. The Department will conduct Quality Assurance (QA) in accordance with Standard Specification Subsection 106.5. Testing deemed necessary by the Department that is in addition to the minimum testing requirements will be scheduled to minimize interference with the production schedule. The QAI will perform acceptance sampling and testing and will witness or review documentation, workmanship and testing to assure the Work is being performed in accordance with the Contract Documents.”

Under the heading, Concrete Testing, revise the first paragraph to read as the following two paragraphs:

“Concrete Testing Acceptance of structural precast units, for each day’s production, will be determined by the Department, based on compliance with this specification and satisfactory concrete testing results.

At least once per week, the QAI will make 2 concrete cylinders (6 cylinders when the Contract includes permeability requirements) for use by the Department; cylinders shall be standard cured in accordance with AASHTO T23 (ASTM C31). The QAI will perform entrained air content and slump flow testing, determine water-cement ratio and determine temperature of the sampled concrete at the time of cylinder casting. All testing equipment required by the QAI to perform this testing shall be in accordance with Standard Specification Section 502.041, Testing Equipment. In addition, the Contractor shall provide a slump cone meeting the requirements of AASHTO T 119. Providing and maintaining testing and curing equipment shall be considered incidental to the work and no additional payment will be made.

Quality Control test cylinders shall be made and tested in accordance with the following standards:

AASHTO T 22 (ASTM C39) Test Method for Compressive Strength of Cylindrical Concrete Specimens

AASHTO T23 (ASTM C31) Practice for Making and Curing Concrete Test Specimens in Field

AASHTO T141 (ASTM C172) Practice for Sampling Freshly Mixed Concrete

AASHTO T152 (ASTM C231) Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method

AASHTO T196 (ASTM C173) Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method

ASTM C1064 Test Method for Temperature of Freshly mixed Portland Cement Concrete

ASTM C1611 Standard Test Method for Slump Flow of Self-Consolidating Concrete'

Under the heading, Concrete Testing, delete the paragraph that begins:

“At least once per week, the Contractor shall make 2 concrete cylinders.....for use by the Department.....”

SECTION 713 **STRUCTURAL STEEL AND RELATED MATERIAL**

Section 713.01- Structural Steel Revise this Section by removing the sentence:

“ Impact test sampling and testing procedures shall be in accordance with AASHTO T.”

And replace it with: “**Impact test sampling and testing procedures shall be in accordance with AASHTO T 243 M/T 243 and AASHTO T 244.**”

SECTION 717 **ROADSIDE IMPROVEMENT MATERIAL**

717.02 Agricultural Ground Limestone

In the table after the third paragraph which starts with “Liquid lime...” change the Specification for Nitrogen (N) from “15.5 percent of which 1% is from ammoniac nitrogen and 14.5 /5 is from Nitrate Nitrogen” to read “**15.5 % of which 1% is from Ammoniacal Nitrogen and 14.5 % is from Nitrate Nitrogen**”

717.061 Erosion Control Blankets Revise this section by removing it in its entirety and replacing it with the following:

“717.061 Erosion Control Blankets Shall consist of a machine produced rolled blanket of biodegradable fibers, evenly distributed over the entire area of blanket, of a consistent thickness, sewn into a biodegradable mesh on the top and bottom surface using a cotton blend thread. The blanket shall remain in place when subject to shear stress of 1.55 lb/ft². The blanket shall remain intact until grass is established. The blanket shall be a product currently listed on the department’s Qualified Products List (QPL) of Erosion Control Products. See Section 618.10 - Seeding, Maintenance and Acceptance.”

SECTION 720
STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS

720.10 Wood Utility Pole Amend the first sentence in this section by adding “, **Red Pine**” after “Douglas Fir”.

Replace the paragraph beginning with “Wood Utility poles...” with:

“Wood Utility poles shall be pressure treated, after fabrication in accordance with AASHTO Specifications M 133 and AWWA U1, UC4B, Commodity Specification D: Poles.”

720.12 Wood Sign Posts Remove the first sentence and replace with “**Wood sign posts shall be rectangular, straight and sound timber, cut from live growing native spruce, red pine, hemlock or cedar trees, free from loose knots or other structurally weakening defects of importance, such as shake or holes or heart rot.**”

Remove the paragraph beginning with “When pressure treated sign posts are called for on the plans ...” with “**When pressure treated sign posts are called for on the plans, the wood shall be Yellow Pine, Number 2 or better, or the species listed above. The pressure treated wood shall meet AASHTO M 133 and AWWA Standard U1, UC4A, Commodity Specification A: Sawn Products.**”