

Updated 9/6/2024

FEDERAL PROJECT

BIDDING INSTRUCTIONS

FOR ALL PROJECTS:

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

For a Paper Bid:

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

For an Electronic Bid:

NOTE: Not all projects accept Electronic Bids. Please review the Notice to Contractors and see if it specifically states that Electronic Bids will be accepted.

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

IN ADDITION, FOR FEDERAL AID PROJECTS:

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

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

For complete bidding requirements, refer to Section 102 of the Maine Department of Transportation, Standard Specifications, March 2020 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.

The downloading of bid packages from the MDOT website is not the same as providing an electronic bid to the Department. Electronic bids must be submitted via <http://www.BIDX.com>. For information on electronic bidding contact Rebecca Snowden at rebecca.snowden@maine.gov or Guy Berthiaume at guy.berthiaume@maine.gov.

NOTICE

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

Bid Enclosed - Do Not Open

PIN:

Town:

Date of Bid Opening:

Name of Contractor with mailing address and telephone number:

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

Double Envelope: Bid Enclosed

PIN:

Town:

Date of Bid Opening:

Name of Contractor:

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

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

Bid Enclosed: Do Not Open

PIN:

Town:

Name of Contractor:

October 16, 2001

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

KNOW ALL MEN BY THESE PRESENTS THAT _____

_____, of the City/Town of _____ and State of _____

as Principal, and _____ as Surety, a

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

Business in _____ and hereby held and firmly bound unto the Treasurer of

the State of Maine in the sum of _____, for payment which Principal and Surety bind

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

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

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

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

_____ and if the Department shall accept said bid

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

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

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

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

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

force, and effect.

Signed and sealed this _____ day of _____ 20____

WITNESS:

WITNESS

PRINCIPAL:

By _____

By: _____

By: _____

SURETY:

By _____

By: _____

Name of Local Agency: _____

NOTICE

Bidders:

Please use the attached “Request for Information” form when submitting questions concerning specific Contracts that have been advertised for Bid, include additional numbered pages as required. RFI’s may be faxed to 207-624-3431, 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.

RFI No: _____

Date _____ **Time** _____

WIN(S): _____ **Town(s):** _____ **Bid Date:** _____

Question(s):_____

Company Name: _____ **Phone: ()** _____

Email: _____ **Fax:** (____) _____

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NOTICE

Disadvantaged Business Enterprise Commitment Confirmation

All Bidders must submit the Commitment Confirmation form with their bid.

The Commitment Confirmation form contains information required by USDOT.

The Commitment Confirmation form must be completed by each Prime Contractor.

A copy of the new Commitment Confirmation form and instructions for completing it are attached.

The DBE Directory can be found on the MaineDOT Website at: <https://www.maine.gov/mdot/civilrights/dbe/>

Questions about the Directory or this form should be sent to the Civil Rights Office at mary.bryant@maine.gov or by calling 207-624-3056.

INSTRUCTIONS FOR PREPARING THE MAINE DOT COMMITMENT CONFIRMATION FORM

The Contractor shall extend equal opportunity to MaineDOT certified DBE firms (as listed in MaineDOT's DBE Directory of Certified Businesses) in the selection and utilization of subcontractors and suppliers.

Each prime contractor submitting a bid on a federally funded project must complete each section of the Commitment Confirmation form in its entirety for itself and each subcontractor on that project.

SPECIFIC INSTRUCTIONS FOR COMPLETING THE FORM:

Section A:

1. Insert Contractor Name
2. Insert WIN for the Federal Project bidding on
3. Insert Bid Date
4. Insert Project Location
5. Insert Email address of Contact Person

Section B:

- A. Enter each Contractor's and Sub-Contractor's name and address (including zip code) – Prime Contractor's name should be listed in first box of this section; then each additional line would be proposed subcontractors – DBE or NonDBE
- B. Enter each Contractor's and Sub-Contractor's annual gross receipts bracket (see the legend on the form)
- C. Enter DBE status (DBE or non-DBE) for each contractor/sub-contractor
- D. Enter each Contractor's and Sub-Contractor's NAICS (North Amer. Industry Classification System) code (may be more than one) and Scope of Work
- E. For each Contractor and Sub-Contractor enter the Race and Gender of the firm's majority owner
- F. Enter the Age of each Contractor/Sub-Contractor
- G. Enter the Proposed amount of payment (Bid amount) for each Contractor/Sub-Contractor.

Maine Department of Transportation
COMMITMENT CONFIRMATION

Section A. Bidder/Prime Contractor Information.

This section must be completed by the Bidder/Prime Contractor.

| | | | | | |
|---------------------------|--|-------------------------|--|--------------|--|
| 1. Prime Contractor Name: | | 2. Federal Project WIN: | | 3. Bid Date: | |
| 4. Project Location: | | 5. Email Address: | | | |

Section B. Commitment Details - Prime Contractor and all Proposed Subcontractor Information is Required in This Section

| A. Firm's Name & Address, Including Zip Code Prime must be listed first | B. Annual Gross Receipt Bracket Select 1 to 7* | C. Status DBE or Non-DBE | D. NAICS Code(s) and Scope of Work | E. Race & Gender of each Firm's Majority Owner | F. Age of Each Firm | G. Proposed Amount |
|---|--|--------------------------------|---------------------------------------|--|---------------------------|-----------------------|
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*1) Less Than \$1M, 2) \$1 - \$3M, 3) \$3 - \$6M, 4) \$6 - \$10M, 5) \$10 - \$20M, 6) \$20 - \$50M, 7) Greater Than \$50M - More than 5 Subs use a new form

MaineDOT Use Only:

Form Received: / / Verified by: FHW A FTA FAA

For a complete list of certified DBE firms please visit: <http://www.maine.gov/mdot/civilrights/>

Note: This information is required pursuant to 49 CFR §26.11 and is used to track data in all federally funded MaineDOT contracts.

DBE GOAL NOTICE
Maine Department of Transportation
Disadvantaged Business Enterprise Program

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

Beginning September 1, 2024, MaineDOT has established an annual DBE participation goal of **1.43%** to be achieved through race/gender neutral means. This goal has been approved by the Federal Highway Administration through August 31, 2027. MaineDOT must meet this goal each federal fiscal year. If the goal is not met, MaineDOT must provide a justification for not meeting the goal and provide a plan to ensure the goal is met, which may include contract goals on certain projects that contractors will be required to meet.

MaineDOT asks all contractors, consultants and subcontractors to seek certified DBE firms for projects and to work to meet the determined 1.43% goal without the need to impose contract goals. DBE firms are listed on the MaineDOT website at:

<http://www.maine.gov/mdot/disadvantaged-business-enterprises/pdf/directory.pdf>

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

Maine Department of Transportation Civil Rights Office

Directory of Certified Disadvantaged Business Enterprises

Listing can be found at:

<https://www.maine.gov/mdot/civilrights/dbe/>

For additional information and guidance contact:

Civil Rights Office at (207) 624-3066

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

Vendor Registration

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

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

STATE OF MAINE DEPARTMENT OF TRANSPORTATION

NOTICE TO CONTRACTORS

Sealed bids from contractors addressed to the Maine Department of Transportation, Augusta, Maine 04333 and endorsed on the wrapper "**Bids for Norridgewock Avenue Sidewalk, Skowhegan**" will be received at the MaineDOT Building, Capitol Street, Augusta, Maine, until 11:00 a.m. (prevailing time) on **October 23, 2024**, 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 must successfully complete, a **Highway Prequalification** or a project-specific prequalification to be considered for the award of this contract.

MaineDOT accepts electronic bids for bid packages posted on the [bids.com](https://www.bids.com) website. Electronic bids do not have to be accompanied by paper bids. MaineDOT will accept a facsimile of the bid bond, but **the MaineDOT Contracts Section must receive the original within 72 hours of the bid opening**. Until further notice, MaineDOT will accept dual bids (one paper, one electronic) – with the paper copy taking precedence.

Description: Maine Federal-Aid Project No. 2527700 / WIN: 025277.00

Location: In Somerset County, project is located on Norridgewock Avenue in the town of Skowhegan.

Outline of Work: Sidewalk construction with ADA upgrades, drainage improvements and water utility work for 0.35 mile, starting at the Margaret Chase Smith Library and continuing to Coburn Avenue.

Basis of Award will be lowest total bid for Section 1 Sidewalk Items plus Section 2 Water Utility Items.

Project-specific questions using the electronic RFI form should be faxed to (207) 624-3431, attn.: **Project Manager Aurele Gorneau II**. Questions may be emailed to RFI-Contracts.MDOT@maine.gov – with project name and identification number in the subject line. Questions received after 12:00 Noon of the Monday before bid date (or if the Monday is a holiday, the Friday before) will not be answered. For general information, call George Macdougall at (207) 624-3410. Bidders shall not contact any other MaineDOT staff for clarification of Contract provisions, and MaineDOT will not be responsible for interpretations so obtained. TTY users call Maine Relay 711.

Digital bid documents are available online free of charge: www.maine.gov/mdot/contractors/. Paper bid documents may be purchased from 7:00-3:30 M-F by cash, Visa/Mastercard or check payable to "Treasurer, State of Maine" sent to Maine Department of Transportation, **Attention: Mailroom**, 24 Child St., Augusta, ME 04333-0016. They also may be purchased by phone at (207) 624-3536 from 7:00-3:30, as follows: as follows: full-size plans are **\$48.00** (\$52.50 by mail); half-size plans are **\$24.00** (\$27.00 by mail); bid book is \$10 (\$13 by mail); single sheets are \$2 – payable in advance, all non-refundable.

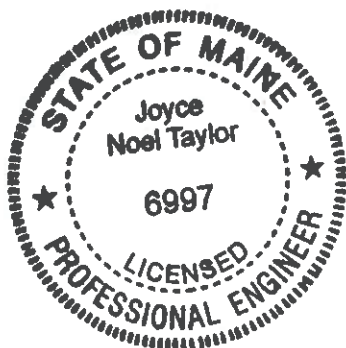
Each Bid must be made upon MaineDOT blank bid forms and accompanied by a bid bond for 5% of the bid amount or official bank check, cashier's check, certified check, certificate of deposit, or U.S. postal money order for 5% of the bid amount, payable to "Treasurer, State of Maine" as a Bid guarantee. A Contract Performance Surety Bond and a Contract Payment Surety Bond, each for 100% of the Contract price, will be required of the successful Bidder.

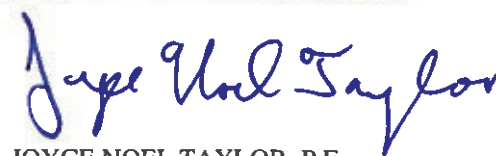
This Contract is subject to all applicable Federal laws and to compliance with the Disadvantaged Business Enterprise Program requirements as set forth by MaineDOT.

All work shall be governed by *State of Maine Department of Transportation, Standard Specifications, March 2020*, price \$10 [\$15 by mail] and *Standard Details, March 2020 Edition*, price \$10 [\$15 by mail]. They may be purchased by phone at (207) 624-3536 from 7:00-3:30 M-F. Updates: www.maine.gov/mdot/contractors/publications/.

MaineDOT hereby reserves the right to reject any or all bids.

Augusta, Maine
October 2, 2024




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 posted at www.maine.gov/mdot/contractors/. It is the Bidder's responsibility to determine if there are Amendments, to download them, to incorporate them into the Bid Package, and to reference the Amendment number and the date in the table below. MaineDOT will not post Bid Amendments later than Noon the day before Bid Opening without individually notifying all the planholders.

| Amendment Number | Date |
|------------------|------|
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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)

9/13/2024

Maine Department of Transportation

Proposal Schedule of Items

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Proposal ID: 025277.00

Project(s): 025277.00

SECTION: 1 SIDEWALK ITEMS

Alt Set ID:

Alt Mbr ID:

Contractor: _____

| Proposal Line Number | Item ID Description | Approximate Quantity and Units | Unit Price | | Bid Amount | |
|----------------------------|---|--------------------------------------|------------|-------|------------|-------|
| | | | Dollars | Cents | Dollars | Cents |
| 0010 | 201.23 REMOVING SINGLE TREE TOP ONLY | 5.000 EA | _____ | _____ | _____ | _____ |
| 0020 | 201.24 REMOVING STUMP | 5.000 EA | _____ | _____ | _____ | _____ |
| 0030 | 202.12 REMOVING EXISTING STRUCTURAL CONCRETE | 10.000 CY | _____ | _____ | _____ | _____ |
| 0040 | 202.15 REMOVING EXISTING MANHOLE OR CATCH BASIN | 2.000 EA | _____ | _____ | _____ | _____ |
| 0050 | 202.202 REMOVING PAVEMENT SURFACE | 220.000 SY | _____ | _____ | _____ | _____ |
| 0060 | 203.20 COMMON EXCAVATION | 2,100.000 CY | _____ | _____ | _____ | _____ |
| 0070 | 206.061 STRUCTURAL EARTH EXCAVATION - DRAINAGE AND MINOR STRUCTURES, BELOW GRADE | 25.000 CY | _____ | _____ | _____ | _____ |
| 0080 | 304.10 AGGREGATE SUBBASE COURSE - GRAVEL | 1,650.000 CY | _____ | _____ | _____ | _____ |
| 0090 | 403.208 HOT MIX ASPHALT 12.5 MM HMA SURFACE | 120.000 T | _____ | _____ | _____ | _____ |
| 0100 | 403.209 HOT MIX ASPHALT 9.5 MM (SIDEWALKS, DRIVES, INCIDENTALS) | 180.000 T | _____ | _____ | _____ | _____ |
| 0110 | 403.213 HOT MIX ASPHALT 12.5 MM BASE | 250.000 T | _____ | _____ | _____ | _____ |

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Maine Department of Transportation

Proposal Schedule of Items

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Proposal ID: 025277.00

Project(s): 025277.00

SECTION: 1 SIDEWALK ITEMS

Alt Set ID:

Alt Mbr ID:

Contractor: _____

| Proposal Line Number | Item ID Description | Approximate Quantity and Units | Unit Price | | Bid Amount | |
|----------------------------|--|--------------------------------------|------------|-------|------------|-------|
| | | | Dollars | Cents | Dollars | Cents |
| 0120 | 409.15 BITUMINOUS TACK COAT - APPLIED | 81.000 G | | | | |
| 0130 | 602.30 FLOWABLE CONCRETE FILL | 9.000 CY | | | | |
| 0140 | 603.159 12 INCH CULVERT PIPE OPTION III | 11.000 LF | | | | |
| 0150 | 603.169 15 INCH CULVERT PIPE OPTION III | 65.000 LF | | | | |
| 0160 | 603.219 36 INCH CULVERT PIPE OPTION III | 8.000 LF | | | | |
| 0170 | 603.76 12 INCH INLET GRATE UNIT | 1.000 EA | | | | |
| 0180 | 604.092 CATCH BASIN TYPE B1-C | 8.125 EA | | | | |
| 0190 | 604.0957 96" CATCH BASIN TYPE B1-C | 1.375 EA | | | | |
| 0200 | 604.096 60 INCH CATCH BASIN TYPE B1-C | 1.000 EA | | | | |
| 0210 | 604.167 CHANGE CATCH BASIN GRATE TO CASCADE | 1.000 EA | | | | |
| 0220 | 604.18 ADJUSTING MANHOLE OR CATCH BASIN TO GRADE | 1.000 EA | | | | |
| 0230 | 604.247 CATCH BASIN TYPE F5-C | 2.000 EA | | | | |
| 0240 | 604.2621 60 " CATCH BASIN TYPE B5-C | 2.500 EA | | | | |

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Maine Department of Transportation

Proposal Schedule of Items

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Proposal ID: 025277.00

Project(s): 025277.00

SECTION: 1 SIDEWALK ITEMS

Alt Set ID:

Alt Mbr ID:

Contractor: _____

| Proposal Line Number | Item ID Description | Approximate Quantity and Units | Unit Price | | Bid Amount | |
|----------------------------|---|--------------------------------------|------------|-------|------------|-------|
| | | | Dollars | Cents | Dollars | Cents |
| 0250 | 605.09 6 INCH UNDERDRAIN TYPE B | 610.000 LF | | | | |
| 0260 | 605.11 12 INCH UNDERDRAIN TYPE C | 430.000 LF | | | | |
| 0270 | 605.13 18 INCH UNDERDRAIN TYPE C | 390.000 LF | | | | |
| 0280 | 605.15 24 INCH UNDERDRAIN TYPE C | 260.000 LF | | | | |
| 0290 | 605.17 30 INCH UNDERDRAIN TYPE C | 47.000 LF | | | | |
| 0300 | 606.47 SINGLE WOOD POST | 3.000 EA | | | | |
| 0310 | 608.26 CURB RAMP DETECTABLE WARNING FIELD | 82.000 SF | | | | |
| 0320 | 609.21 CONCRETE SLIPFORM CURB | 1,200.000 LF | | | | |
| 0330 | 609.219 CONCRETE SLIPFORM CURB - TERMINAL END | 310.000 LF | | | | |
| 0340 | 613.40 TURF REINFORCEMENT MAT - (TRM) | 260.000 SY | | | | |
| 0350 | 615.07 LOAM | 150.000 CY | | | | |
| 0360 | 615.081 COMPOST BLANKET | 42.000 CY | | | | |
| 0370 | 618.13 SEEDING METHOD NUMBER 1 | 12.000 UN | | | | |

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Proposal Schedule of Items

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Proposal ID: 025277.00

Project(s): 025277.00

SECTION: 1 SIDEWALK ITEMS

Alt Set ID:

Alt Mbr ID:

Contractor: _____

| Proposal Line Number | Item ID Description | Approximate Quantity and Units | Unit Price | | Bid Amount | |
|----------------------------|--|--------------------------------------|------------|-------|------------|-------|
| | | | Dollars | Cents | Dollars | Cents |
| 0380 | 618.143 SPECIAL SEED MIX: A | 3.000 UN | _____ | _____ | _____ | _____ |
| 0390 | 618.146 HGM BIOTIC SOIL HYDROMULCH MEDIA | 3.000 UN | _____ | _____ | _____ | _____ |
| 0400 | 619.12 MULCH | 15.000 UN | _____ | _____ | _____ | _____ |
| 0410 | 627.733 4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE | 1,950.000 LF | _____ | _____ | _____ | _____ |
| 0420 | 627.75 WHITE OR YELLOW PAVEMENT & CURB MARKING | 360.000 SF | _____ | _____ | _____ | _____ |
| 0430 | 627.77 REMOVING PAVEMENT MARKINGS | 230.000 SF | _____ | _____ | _____ | _____ |
| 0440 | 629.05 HAND LABOR, STRAIGHT TIME | 20.000 HR | _____ | _____ | _____ | _____ |
| 0450 | 631.10 AIR COMPRESSOR (INCLUDING OPERATOR) | 8.000 HR | _____ | _____ | _____ | _____ |
| 0460 | 631.11 AIR TOOL (INCLUDING OPERATOR) | 8.000 HR | _____ | _____ | _____ | _____ |
| 0470 | 631.12 ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR) | 8.000 HR | _____ | _____ | _____ | _____ |
| 0480 | 631.172 TRUCK - LARGE (INCLUDING OPERATOR) | 8.000 HR | _____ | _____ | _____ | _____ |
| 0490 | 631.18 CHAIN SAW RENTAL (INCLUDING OPERATOR) | 8.000 HR | _____ | _____ | _____ | _____ |

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Proposal Schedule of Items

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Proposal ID: 025277.00

Project(s): 025277.00

SECTION: 1 SIDEWALK ITEMS

Alt Set ID:

Alt Mbr ID:

Contractor: _____

| Proposal Line Number | Item ID Description | Approximate Quantity and Units | Unit Price | | Bid Amount | |
|----------------------------|---|--------------------------------------|------------|-------|------------|-------|
| | | | Dollars | Cents | Dollars | Cents |
| 0500 | 631.20 STUMP CHIPPER (INCLUDING OPERATOR) | 8.000 HR | _____ | _____ | _____ | _____ |
| 0510 | 631.32 CULVERT CLEANER (INCLUDING OPERATOR) | 8.000 HR | _____ | _____ | _____ | _____ |
| 0520 | 639.19 FIELD OFFICE TYPE B | 1.000 EA | _____ | _____ | _____ | _____ |
| 0530 | 645.106 DEMOUNT REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGN | 4.000 EA | _____ | _____ | _____ | _____ |
| 0540 | 645.108 DEMOUNT POLE | 4.000 EA | _____ | _____ | _____ | _____ |
| 0550 | 645.116 REINSTALL REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGN | 3.000 EA | _____ | _____ | _____ | _____ |
| 0560 | 645.118 REINSTALL POLE | 3.000 EA | _____ | _____ | _____ | _____ |
| 0570 | 652.33 DRUM | 75.000 EA | _____ | _____ | _____ | _____ |
| 0580 | 652.34 CONE | 75.000 EA | _____ | _____ | _____ | _____ |
| 0590 | 652.35 CONSTRUCTION SIGNS | 240.000 SF | _____ | _____ | _____ | _____ |
| 0600 | 652.361 MAINTENANCE OF TRAFFIC CONTROL DEVICES | LUMP SUM | LUMP SUM | | _____ | _____ |

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Proposal Schedule of Items

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Proposal ID: 025277.00

Project(s): 025277.00

SECTION: 1 SIDEWALK ITEMS

Alt Set ID: Alt Mbr ID:

Contractor: _____

| Proposal Line Number | Item ID Description | Approximate Quantity and Units | Unit Price | | Bid Amount | |
|----------------------------|---|--------------------------------------|------------|-------|------------|-------|
| | | | Dollars | Cents | Dollars | Cents |
| 0610 | 652.38 FLAGGER | 2,950.000 HR | | | | |
| 0620 | 656.75 TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL | LUMP SUM | | | | |
| 0630 | 659.10 MOBILIZATION - MAIN ITEMS | LUMP SUM | | | | |
| Section: 1 | | | Total: | | | |

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Proposal ID: 025277.00

Project(s): 025277.00

SECTION: 2

WATER UTILITY ITEMS

Alt Set ID:

Alt Mbr ID:

Contractor: _____

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Proposal ID: 025277.00

Project(s): 025277.00

SECTION: 2 WATER UTILITY ITEMS

Alt Set ID:

Alt Mbr ID:

Contractor: _____

| Proposal Line Number | Item ID Description | Approximate Quantity and Units | Unit Price | | Bid Amount | |
|----------------------------|---|--------------------------------------|------------|-------|------------|-------|
| | | | Dollars | Cents | Dollars | Cents |
| 0640 | 206.061 STRUCTURAL EARTH EXCAVATION - DRAINAGE AND MINOR STRUCTURES, BELOW GRADE | 83.000 CY | _____ | _____ | _____ | _____ |
| 0650 | 206.07 STRUCTURAL ROCK EXCAVATION - DRAINAGE AND MINOR STRUCTURES | 56.000 CY | _____ | _____ | _____ | _____ |
| 0660 | 304.10 AGGREGATE SUBBASE COURSE - GRAVEL | 1.000 CY | _____ | _____ | _____ | _____ |
| 0670 | 403.208 HOT MIX ASPHALT 12.5 MM HMA SURFACE | 1.000 T | _____ | _____ | _____ | _____ |
| 0680 | 403.213 HOT MIX ASPHALT 12.5 MM BASE | 1.000 T | _____ | _____ | _____ | _____ |
| 0690 | 615.07 LOAM | 5.000 CY | _____ | _____ | _____ | _____ |
| 0700 | 618.13 SEEDING METHOD NUMBER 1 | 1.000 UN | _____ | _____ | _____ | _____ |
| 0710 | 619.12 MULCH | 1.000 UN | _____ | _____ | _____ | _____ |
| 0720 | 652.361 MAINTENANCE OF TRAFFIC CONTROL DEVICES | LUMP SUM | LUMP SUM | | _____ | _____ |
| 0730 | 652.38 FLAGGER | 100.000 HR | _____ | _____ | _____ | _____ |
| 0740 | 656.75 TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL | LUMP SUM | LUMP SUM | | _____ | _____ |

9/13/2024

Maine Department of Transportation

Proposal Schedule of Items

Page 9 of 9

Proposal ID: 025277.00

Project(s): 025277.00

SECTION: 2 WATER UTILITY ITEMS

Alt Set ID:

Alt Mbr ID:

Contractor: _____

| Proposal Line Number | Item ID Description | Approximate Quantity and Units | Unit Price | | Bid Amount | |
|----------------------------|--|--------------------------------------|------------|----------|------------|-------|
| | | | Dollars | Cents | Dollars | Cents |
| 0750 | 659.10 MOBILIZATION - WATER UTILITY WORK | LUMP SUM | | LUMP SUM | | |
| 0760 | 801.03 TEST PITS | 2.000 EA | | | | |
| 0770 | 822.33 6 INCH CLASS 52 DUCTILE IRON PIPE | 15.000 LF | | | | |
| 0780 | 822.34 8 INCH CLASS 52 DUCTILE IRON PIPE | 350.000 LF | | | | |
| 0790 | 822.36 12 INCH DUCTILE IRON PIPE | 15.000 LF | | | | |
| 0800 | 824.32 REMOVE/RESET HYDRANT | 1.000 EA | | | | |
| 0810 | 825.321 1 INCH CORPORATION | 4.000 EA | | | | |
| 0820 | 825.43 1" COPPER SERVICE | 120.000 LF | | | | |
| 0830 | 825.45 CONNECTIONS AND TIE-INS | 2.000 EA | | | | |
| 0840 | 827.302 UNSUITABLE SOIL EXCAVATION - BELOW GRADE | 10.000 CY | | | | |
| Section: 2 | | | Total: | | | |
| | | | Total Bid: | | | |

CONTRACT AGREEMENT, OFFER & AWARD

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

_____ a corporation or other legal entity organized under the laws of the State of _____, with its principal place of business located at _____

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

A. The Work

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, **WIN 025277.00**, for the construction of **new sidewalk with water utility relocations on Norridgewock Avenue** in the Town of **Skowhegan**, County of **Somerset**, in the **State of, Maine**. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

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

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

B. Time.

The Contractor agrees to complete all Work, except for warranty work, on or before **August 29, 2025**. Furthermore, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the *State of Maine Department of Transportation Standard Specifications, March 2020 Edition* and related Special Provisions.

C. Price.

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

\$_____ Performance Bond and Payment Bond each being 100% of the amount of this Contract.

D. Contract.

This Contract, which may be amended, modified, or supplemented in writing only, consists of the Contract documents as defined in the Plans, *Standard Specifications, March 2020 Edition, Standard Details March 2020 Edition* as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds. It is agreed and understood that this Contract will be governed by the documents listed above.

E. Certifications.

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

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

F. Offer.

The undersigned, having carefully examined the site of work, the Plans, *Standard Specifications March 2020 Edition, Standard Details March 2020 Edition* as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of:

WIN 025277.00 – construction of new sidewalk with associated water utility relocations on Norridgewock Avenue in the Town of Skowhegan, County of Somerset

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

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

As Offeror also agrees:

First: To do any extra work, not covered by the attached “Schedule of Items,” which may be ordered by the Resident, and to accept as full compensation the amount determined upon a “Force Account” basis as provided in the *Standard Specifications, March 2020 Edition*, and as addressed in the contract documents.

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

Third: To begin the Work as stated in Section 107.2 of the *Standard Specifications March 2020 Edition* and complete the Work within the time limits given in the Special Provisions of this Contract.

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

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

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

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

CONTRACTOR

Date

(Signature of Legally Authorized Representative
of the Contractor)

Witness

(Name and Title Printed)

G. Award.

Your offer is hereby accepted. This award consummates the Contract and the documents referenced herein.

MAINE DEPARTMENT OF TRANSPORTATION

Date

By: Bruce A. Van Note, Commissioner

Witness

CONTRACT AGREEMENT, OFFER & AWARD

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

_____ a corporation or other legal entity organized under the laws of the State of _____, with its principal place of business located at _____

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

A. The Work

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

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

B. Time.

The Contractor agrees to complete all Work, except for warranty work, on or before **August 29, 2025**. Furthermore, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the *State of Maine Department of Transportation Standard Specifications, March 2020 Edition* and related Special Provisions.

C. Price.

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

\$_____ Performance Bond and Payment Bond each being 100% of the amount of this Contract.

D. Contract.

This Contract, which may be amended, modified, or supplemented in writing only, consists of the Contract documents as defined in the Plans, *Standard Specifications, March 2020 Edition, Standard Details March 2020 Edition* as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds. It is agreed and understood that this Contract will be governed by the documents listed above.

E. Certifications.

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

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

F. Offer.

The undersigned, having carefully examined the site of work, the Plans, *Standard Specifications March 2020 Edition, Standard Details March 2020 Edition* as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of:

WIN 025277.00 – construction of new sidewalk with associated water utility relocations on Norridgewock Avenue in the Town of Skowhegan, County of Somerset

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

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

As Offeror also agrees:

First: To do any extra work, not covered by the attached “Schedule of Items,” which may be ordered by the Resident, and to accept as full compensation the amount determined upon a “Force Account” basis as provided in the *Standard Specifications, March 2020 Edition*, and as addressed in the contract documents.

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

Third: To begin the Work as stated in Section 107.2 of the *Standard Specifications March 2020 Edition* and complete the Work within the time limits given in the Special Provisions of this Contract.

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

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

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

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

CONTRACTOR

Date

(Signature of Legally Authorized Representative
of the Contractor)

Witness

(Name and Title Printed)

G. Award.

Your offer is hereby accepted. This award consummates the Contract and the documents referenced herein.

MAINE DEPARTMENT OF TRANSPORTATION

Date

By: Bruce A. Van Note, Commissioner

Witness

CONTRACT AGREEMENT, OFFER & AWARD

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

(Name of the firm bidding the job)

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

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

A. The Work.

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, PIN No.01 **12345.00**, for the **Hot Mix Asphalt Overlay** in the town/city of **South Nowhere**, County of **Washington**, Maine. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

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

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

B. Time.

The Contractor agrees to complete all Work, except warranty work, on or before **November 15, 2006**. Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the *State of Maine Department of Transportation Standard Specifications, March 2020 Edition* and related Special Provisions.

C. Price.

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

D. Contract.

This Contract, which may be amended, modified, or supplemented in writing only, consists of the Contract documents as defined in the Plans, *Standard Specifications, March 2020 Edition, Standard Details March 2020 Edition*, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds. It is agreed and understood that this Contract will be governed by the documents listed above.

E. Certifications.

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

1. All of the statements, representations, covenants, and/or certifications required or set forth in the Bid and the Bid Documents, including those in Appendix A to Division 100 of the *Standard Specifications March 2020 Edition* (Federal Contract Provisions Supplement), and the Contract are still complete and accurate as of the date of this Agreement.
2. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.
3. The person signing below is legally authorized by the Contractor to sign this Contract on behalf of the Contractor and to legally bind the Contractor to the terms of the Contract.

F. Offer.

The undersigned, having carefully examined the site of work, the Plans, *Standard Specifications, March 2020 Edition, Standard Details March 2020 Edition*, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of:

PIN 012345.00 South Nowhere, Hot Mix Asphalt Overlay,

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

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

As Offeror also agrees:

First: To do any extra work, not covered by the attached "Schedule of Items," which may be ordered by the Resident, and to accept as full compensation the amount determined upon a "Force Account" basis as provided in the *Standard Specifications, March 2020 Edition*, and as addressed in the contract documents.

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

Third: To begin the Work as stated in Section 107.2 of the *Standard Specifications March 2020 Edition* and complete the Work within the time limits given in the Special Provisions of this Contract.

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

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

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

Date

(Witness Sign Here)
Witness

CONTRACTOR

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

(Print Name Here)
(Name and Title Printed)

G. Award.

Your offer is hereby accepted.
documents referenced herein.

This award consummates the Contract, and the

MAINE DEPARTMENT OF TRANSPORTATION

Date

By: Bruce A. Van Note, Commissioner

(Witness)

BOND # _____

CONTRACT PERFORMANCE BOND
(Surety Company Form)

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

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

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

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

WITNESSES:

Signature.....
Print Name Legibly

Signature

SURETY ADDRESS:

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

TELEPHONE.....

SIGNATURES:

CONTRACTOR:

.....
Print Name Legibly

SURETY:

.....
Print Name Legibly

NAME OF LOCAL AGENCY:

ADDRESS

.....
.....

BOND # _____

CONTRACT PAYMENT BOND
(Surety Company Form)

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

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

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

Signed and sealed this day of, 20

WITNESS:

SIGNATURES:

CONTRACTOR:

Signature.....

.....

Print Name Legibly

Print Name Legibly

SURETY:

Signature.....

.....

Print Name Legibly

Print Name Legibly

SURETY ADDRESS:

NAME OF LOCAL AGENCY:

.....

ADDRESS

.....

.....

TELEPHONE

.....

"General Decision Number: ME20240042 04/05/2024

Superseded General Decision Number: ME20230042

State: Maine

Construction Type: Highway

County: Somerset County in Maine.

HIGHWAY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

| | |
|---|---|
| If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022: | <ul style="list-style-type: none"> . Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$17.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2024. |
| If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022: | <ul style="list-style-type: none"> . Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least \$12.90 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2024. |

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

| Modification Number | Publication Date |
|---------------------|------------------|
| 0 | 01/05/2024 |
| 1 | 02/02/2024 |
| 2 | 04/05/2024 |

* ENGI0004-022 04/01/2024

| | Rates | Fringes |
|--|----------|---------|
| POWER EQUIPMENT OPERATOR: Grader/Blade, Milling Machine..... | \$ 28.60 | 13.80 |

* SUME2014-037 06/23/2017

| | Rates | Fringes |
|---|-------------|---------|
| CARPENTER, Includes Form Work.... | \$ 18.34 | 2.84 |
| HIGHWAY/PARKING LOT STRIPING: Laborer..... | \$ 14.80 ** | 1.27 |
| IRONWORKER, REINFORCING..... | \$ 16.27 ** | 0.00 |
| LABORER: Asphalt, Includes Raker, Shoveler, Spreader and Distributor..... | \$ 15.40 ** | 2.69 |
| LABORER: Common or General..... | \$ 14.42 ** | 2.68 |
| LABORER: Landscape..... | \$ 18.69 | 2.70 |
| LABORER: Wheelman..... | \$ 15.64 ** | 4.29 |
| OPERATOR: Backhoe/Excavator/Trackhoe..... | \$ 18.80 | 4.16 |
| OPERATOR: Bobcat/Skid Steer/Skid Loader..... | \$ 21.66 | 4.91 |
| OPERATOR: Broom/Sweeper..... | \$ 19.09 | 5.20 |
| OPERATOR: Bulldozer..... | \$ 17.30 | 3.50 |
| OPERATOR: Loader..... | \$ 18.59 | 5.53 |
| OPERATOR: Mechanic..... | \$ 22.07 | 8.73 |
| OPERATOR: Paver (Asphalt, Aggregate, and Concrete)..... | \$ 20.92 | 6.19 |
| OPERATOR: Screed..... | \$ 19.02 | 4.82 |
| OPERATOR: Roller (Earth)..... | \$ 16.43 ** | 3.40 |
| OPERATOR: Roller Asphalt..... | \$ 21.56 | 5.42 |
| TRAFFIC CONTROL: Flagger..... | \$ 9.38 ** | 0.00 |
| TRAFFIC CONTROL: Laborer-Cones/ Barricades/Barrels - Setter/Mover/Sweeper..... | \$ 17.47 | 4.80 |
| TRUCK DRIVER: Dump Truck..... | \$ 15.07 ** | 5.15 |
| TRUCK DRIVER: TackTruck..... | \$ 20.18 | 7.75 |

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

=====

** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$17.20) or 13658 (\$12.90). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

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

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

Union Rate Identifiers

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

2014.

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

Survey Rate Identifiers

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

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

Union Average Rate Identifiers

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

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

WAGE DETERMINATION APPEALS PROCESS

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

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

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

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

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

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

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

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

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

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

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

=====

END OF GENERAL DECISION"

**SPECIAL PROVISIONS
SECTION 104
UTILITIES**

UTILITY COORDINATION

The Contractor has primary responsibility for coordinating their work with Utilities and/or Railroad **AFTER** contract award. The Contractor shall communicate directly with the Utilities and/or Railroad regarding any utility work necessary to maintain the Contractor's schedule and prevent project construction delays. The Contractor shall notify the Resident of any issues.

THE CONTRACTOR SHALL PLAN AND CONDUCT WORK ACCORDINGLY.

MEETING

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

GENERAL INFORMATION

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

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

The Contractor shall give all Utilities **10** working days' notice prior to beginning **ANY** work on this project, unless otherwise specified herein.

OVERVIEW

| Utility | Aerial | Subsurface | Contact | Phone |
|-----------------------------|--------|------------|------------------|----------------|
| Beeline Cable TV Inc. | X | | George Allen | (207) 399-6822 |
| Central Maine Power Co. | X | | Derick Hemingway | (207) 215-6136 |
| Consolidated Communications | X | | Marty Pease | (207) 272-7993 |
| Maine Water Co. | | X | Travis Bickford | (207) 691-1899 |
| Town of Skowhegan | | X | Jason Finley | (207) 441-2262 |

Temporary utility adjustments are **NOT** anticipated. If any unexpected utility relocations become necessary, they shall be scheduled in accordance with Section 104 of the Standard Specifications and shall be performed by the appropriate Utility company in conjunction with the work by the Contractor. Should the Contractor choose to have any poles temporarily relocated, all work shall be done at the Contractor's request and expense, with no additional cost or schedule impacts to the Department.

All adjustments are to be made by the respective Utility/Railroad unless otherwise specified herein.

Fire hydrants, if present, shall not be disturbed until all necessary work has been accomplished in order to ensure proper fire protection.

**** Specific information regarding line voltages can be requested from Central Maine Power Co. ****

Utility working days are Monday through Friday.

AERIAL

Aerial utility adjustments are **NOT** anticipated at this time for the project. Though unexpected, if utility relocations become necessary, they will be scheduled in compliance with Section 104 of the Standard Specifications and will be done by the Utilities after the Contractor has finished their work.

Aerial Utilities require **5** working days' notice prior to any operations involving work around their lines.

SUBSURFACE

Subsurface Utility adjustments **ARE** anticipated at this time for the completion of this project and will be scheduled in compliance with Section 104 of the Standard Specifications. Relocation and adjustments of water main and related appurtenances such as hydrants & water gate valves is required.

Maine Water Company (MWC) - has a drinking water system located within the project limits. As a result of this project, MWC has entered into an agreement with the Department to have the Contractor replace/relocate 350± of water main and adjust/relocate all affected appurtenances located within the limits of this project. MWC will require **20** working days' notice prior to the start of the Contractor's work, and **5** working days' notice prior to any excavation around MWC facilities in order to have personnel on-site while excavating.

- **NOTE:** Under the terms and conditions of the Agreement between the Department and Maine Water Company, MWC is requiring an additional \$5 Million in Umbrella liability insurance coverage, as listed in the MWC Specifications, Special Conditions, Section 9, 'Additional Liability Insurance'.

Town of Skowhegan - has a sewer system located within the project limits that is comprised of a forced sewer main, 5 manhole structures, and a number of service lines to homes within the project limits. While sewer manholes will **NOT** be impacted by this project, service lines may be impacted, and the Town will require **20** working days' notice prior to the start of the Contractor's work, and **5** working days' notice prior to any excavation around Town facilities in order to have personnel on-site while excavating.

**** POLE LIST ****

Transfer wire(s) and/or remove poles at the following pole locations, per a **9/12/2024** field review.

Pleasant St.

CMP 3 / CCI ?? - Transfer tel. self-support cable, remove old pole.

CMP 10 / CCI ?? - Transfer overhead-guy, remove old pole.

CMP 14 / CCI ?? - Transfer tel. 'C' wire, remove old pole.

Town: Skowhegan, Norridgewock Ave.
Project: 025277.00
Date: September 18, 2024

CMP 15 / CCI ?? - Transfer tel. 'C' wire & drop, remove old pole.

CMP 16 / CCI 6/16 (History House) - Transfer 2 down-guys, remove anchor.

NOTE: Existing anchor has pulled out of ground approximately 4 ft.

Norridgewock Ave.

CMP 11.1 / CCI 6/25.1 - Transfer tel. drop, remove old pole.

CMP 13 / CCI 27 (Margaret Chase Smith Library) - **NOTE:** 3 tel. drops laying on ground - secure or remove.

MAINTAINING UTILITY LOCATION MARKINGS

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

UTILITY SIGNING

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

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

104.3.8.1 Electronic Payroll Submission The prime contractor and all subcontractors and lower-tier subcontractors must submit certified payrolls electronically using the Elation System web-based reporting. There is no charge for the use of this service. Paper payrolls will not be accepted. Additional information can be found at <https://www.maine.gov/mdot/contractors/bidderinfo/>.

104.3.8.2 Payment Tracking 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

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

105.11 Other Federal Requirements Amend this section by adding the following:

This special provision was created for the Build America, Buy America Act (BABA) to expand the list of construction materials required to be manufactured in the United States beyond what is currently only required for steel/iron products. The Infrastructure Investment and Jobs Act (IIJA), Public Law No. 117-58 includes the Build America, Buy America Act. The Office of Management and Budget issued memorandum M-22-11 to provide guidance on the law which can be found here:

<https://www.whitehouse.gov/wp-content/uploads/2022/04/M-22-11.pdf>

All iron/steel, including the iron/steel in construction materials and manufactured products, must satisfy Buy America 23 CFR 635.410 requirements.

All construction materials, as defined in the following, that are permanently incorporated into federal-aid projects shall meet Build America, Buy America requirements.

For the purpose of this Specification, construction materials shall include an article, material, or supply that is or consists primarily of the following.

- Non-ferrous metals,
- Plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables),
- Glass (including optic glass),
- Lumber, or
- Drywall.

All manufacturing processes for construction materials shall occur within the United States. The category of construction materials excludes cement and cementitious materials, aggregates such as stone, sand, or gravel, or aggregate binding agents or additives.

Due to a nationwide waiver, BABA requirements do not apply to manufactured products for FHWA funded projects. Manufactured products are items that consist of two or more of the listed construction materials that have been combined through a manufacturing process, and items that include at least one of the listed materials combined with a material that is not listed (including steel/iron) through a manufacturing process.

The Contractor shall certify in writing that all permanently incorporated Construction Materials for this contract meet the BABA requirements.

SPECIAL PROVISION 105
GENERAL SCOPE OF WORK
Equal Opportunity and Civil Rights
(Disadvantaged Business Enterprises Program)

105.10.1.1 Disadvantaged Business Enterprises Program The Maine Department of Transportation (MaineDOT) has established a Disadvantaged Business Enterprise (DBE) program in accordance with regulations of the United States Department of Transportation (USDOT), 49 CFR Part 26. The MaineDOT receives federal financial assistance from USDOT, and as a condition of receiving this assistance, the Department has signed an assurance that it will comply with 49 CFR Part 26. The MaineDOT is responsible for determining the eligibility of and certifying DBE firms in Maine.

A DBE is defined as a for-profit business that is owned and controlled by one or more socially and economically disadvantaged person(s). For the purpose of this definition:

1. “Socially and economically disadvantaged person” means an individual who is a citizen or lawful permanent resident of the United States and who is Black, Hispanic, Native American, Asian, Female; or a member of another group or an individual found to be disadvantaged by the Small Business Administration pursuant to Section 3 of the Small Business Act.
2. “Owned and controlled” means a business which is:
 - a. A sole proprietorship legitimately owned and controlled by an individual who is a disadvantaged person.
 - b. A partnership or limited liability company in which at least 51% of the beneficial ownership interests legitimately are held by a disadvantaged person(s).
 - c. A corporation or other entity in which at least 51% of the voting interest and 51% of the beneficial ownership interests legitimately are held by a disadvantaged person(s).

The disadvantaged group owner(s) or stockholder(s) must possess control over management, interest in capital, and interest in earnings commensurate with the percentage of ownership. If the disadvantaged group ownership interests are real, substantial and continuing and not created solely to meet the requirements of this program, a firm is considered a bona fide DBE.

105.10.1.2 Commercially Useful Function MaineDOT will count expenditures of a DBE contractor toward DBE goals only if the DBE is performing a commercially useful function on that contract. A DBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. Credit will only be given when the DBE meets all conditions for a CUF. Credit for labor will be in accordance with the responsibilities outlined in the contract. To perform a commercially useful function, the DBE must also be responsible, with respect to materials and supplies used on the Contract, for negotiating price, determining quality and quantity, ordering the materials, and installing (where applicable) and paying for the material itself. To determine whether a DBE is performing a commercially useful function, MaineDOT will evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the Contract is commensurate with the work it is actually performing and DBE credit claimed for its performance of the work, and other relevant factors.

Rented equipment used by the DBE must not be rented from the Prime Contractor on a job that the DBE is subcontracted with that Prime Contractor for regular course of business.

A current listing of certified DBEs that may wish to participate in the highway construction program and the scope of work for which they are certified can be found at <https://www.maine.gov/mdot/civilrights/dbe/>. Credit will be given for the value described by a DBE performing as:

- A. A prime contractor; 100% of actual value of work performed by own workforces.
- B. An approved subcontractor; 100% of work performed by own workforces.
- C. An owner-operator of construction equipment; 100% of expenditures committed.
- D. A manufacturer; 100% of expenditures committed. The manufacturer must be a firm that operates or maintains a factory or establishment that produces on the premises the materials or supplies obtained by the Contractor. Brokers and packagers shall not be regarded as manufacturers.
- E. A regular dealer; 60% of expenditures committed. A regular dealer is defined as a firm that owns, operates, or maintains a store, warehouse or other establishment in which the materials or supplies required for the performance of the contract are bought, kept in stock, and regularly sold to the public. For purposes of this provision a “Broker” is a DBE that has entered into a legally binding relationship to provide goods or services delivered or performed by a third party. Brokers and packagers shall not be regarded as regular dealers.
- F. A bona fide service provider; 100% of reasonable fees or commissions. Eligible services include professional, technical, consultant, or managerial, services and assistance in the procurement of essential personnel, facilities, equipment, materials or supplies required for the performance of the contract. Eligible services also include agencies providing bonding and insurance specifically required for the performance of the contract.
- G. A trucking, hauling or delivery operation. 100% of expenditures committed when trucks are owned, operated, licensed and insured by the DBE and used on the contract and, if applicable, includes the cost of the self supplied materials and supplies. 100% of expenditures committed when the DBE leases trucks from another DBE firm including an owner-operator. 100% of reasonable fees or commissions the DBE receives as a result of a lease arrangement for trucks from a non-DBE, including an owner-operator.
- H. Any combination of the above.

105.10.1.3 Race-neutral Goals The Maine DOT is required to set an annual goal (approved on a three year basis) for DBE participation in Federal-aid projects. In order to fulfill that goal, bidders are encouraged to utilize DBE businesses certified by the MaineDOT. MaineDOT seeks to meet the established DBE goal solely through race-neutral means. *Race-neutral* DBE participation occurs when a DBE is awarded a prime contract through customary competitive procurement procedures, is awarded a subcontract on a contract that does not carry a DBE contract goal, or wins a subcontract from a prime contractor that did not consider its DBE status in making the award. A DBE/subcontractor Utilization Proposed Form is required to be included in bid documents.

MaineDOT will analyze each project and create a Project Availability Target (PAT), based on a number of factors including project scope, available DBE firms, firms certified in particular project work, etc. Each bid will request that the contractor attempt to meet the PAT. This PAT is developed to assist contractors to better understand what the MaineDOT expectations are for a

specific project. The PAT is NOT a mandate but an assessment of what this particular project can bear for DBE participation. The Department anticipates that each contractor will make the best effort to reach or exceed this PAT for the project.

105.10.1.4 Race-conscious Project Goals If it is determined by the Department that the annual DBE goal will not be met through *race-neutral* means, the Department may implement *race-conscious contract goals* on some projects. Race-conscious contract goals are goals that are enforceable by the Department and require that the prime contractor use good faith effort to achieve the goal set by the Department for that particular project. If race conscious means are implemented on a project, the Prime must comply with the requirements of 49 CFR.

At the time of the bid opening, all Bidders shall submit with their bid a Disadvantaged Business Enterprise (DBE) Commitment Form provided by the Department. This form will list the DBE and non-DBE firms that are proposed to be used during the execution of the Work. The list shall show the name of the firm, the item/material/type of work involved and the dollar amount of work to be performed. The dollar total of each commitment shall be totaled and a percentage determined.

If the project goal is not met, acceptable documentation showing all good faith efforts made to obtain participation may be required in order to award the project. Failure to provide the required listing with the dollar participation total or acceptable documentation of good faith efforts to obtain DBE participation within 3 days after the bid opening date will be considered a lack of responsiveness on the part of the low bidder. Rejection of the low bid under these circumstances will require the low bidder to surrender the Proposal Guaranty to the Department. The submission and approval of the above forms does not constitute a formal subcontract.

If for any reason during the progress of the Work the Contractor finds that DBEs included on the list are unable to perform the proposed work, the Contractor, with written release by the committed DBE or approval of the Department, may substitute other DBE firms for those named on the list. If the Contractor is able to clearly document their inability to find qualified substitute firms to meet the project goal, the Contractor may request in writing approval to substitute the DBE with a non-DBE firm. If at any time during the life of the Contract it is determined that the Contractor is not fulfilling the goal or commitment(s) and is not making a good faith effort to fulfill the DBE requirement, the Department may withhold progress payments. If good faith effort is determined by the Department, failure to meet the DBE contract goal will not be a detriment to the bid award. Fulfillment of the goal percentage shall be determined by dividing the dollars committed to the DBEs by the actual contract dollars. These requirements are in addition to all other Equal Employment Opportunity requirements on Federal-aid contracts.

105.10.1.5 Certification of DBE attainment on Contracts The MaineDOT must certify that it has conducted post-award monitoring of all contracts to ensure that DBEs had done the work for which credit was claimed. The certification is for the purpose of ensuring accountability for monitoring which the regulation already requires. The MaineDOT will certify these contracts through review of CUF forms, Elations sub-contract payment tracking as well as occasional on-site reviews of projects and through the project's final closeout documentation provided by our Contracts Section.

105.10.1.6 Bidders' List Survey Pursuant to 49 CFR 26.11 the MaineDOT is required to “create and maintain” a bidders list and gather bidder information on our construction/consultant projects, Contractors will maintain information on all subcontract bids submitted by DBE and Non-DBE firms and provide that information to the Department. The Following information is required:

Firm Name

Firm Address

Firm status (DBE or non-DBE)

Age of firm (years)

And the annual gross receipts amount as indicated by defined brackets, i.e. \$500,000 to \$800,000, rather than requesting exact figures.

Not only is this information critical in determining the availability of DBE businesses relative to other businesses that do similar work, but the Federal Highway Administration requires that we obtain this information.

MaineDOT DBE Project Attainment Target (PAT)
for this Project is **8.3%**

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

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

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

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

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

- I. To avoid and minimize potential effects to endangered bat species, all work must comply with the following:
 1. If the Contractor sees a bat (dead or alive), activities that may injure live bats must cease immediately, and the Contractor must contact the MaineDOT Environmental (ENV) Office for further coordination. Dead and/or injured bats will be collected by a MaineDOT biologist for further investigation or transfer to a veterinarian. Work in the vicinity of the live/dead bat sighting shall not resume until the ENV Office or project resident confirms it is acceptable to do so.
- II. To protect migratory birds pursuant to the Migratory Bird Treaty Act of 1918:
 1. If the Contractor observes an active bird nest within the project limits, any activities that may disturb the nest or injure birds (i.e., nesting adults, chicks, eggs) must cease immediately, and the Contractor shall contact the ENV Office for further coordination.
- III. Historic Resources are present adjacent to and along the Project. MaineDOT has completed consultation in accordance with Section 106 of the National Historic Preservation Act and Programmatic Agreement for the project as presented. The Contractor shall comply with the provisions from Standard Specification 105.9 related to changes in the design at these historic properties during construction including tree clearing, property impacts, or project materials. The following requirements are project specific:
 1. This project is located along and adjacent to the following Section 106 resources:
 - a. **Skowhegan Residential Historic District:**
 - i. Station 19+45 to 34+00 Left and Station 29+00 to 34+00 Right
 - b. **Individually eligible or listed properties:**
 - i. Station 10+00 to 16+95 Right
 - ii. Station 27+50 to 28+75 Right
 2. Deviations from the approved project design during construction within the above-specified stations shall be approved by the MaineDOT Project Manager, since changes could have adverse effects to the historic resources and jeopardize federal funding. The following requirements are project specific:
 - a. Impacts to the granite and stone wall at Station 28+60 to 31+21 Left shall be avoided.
 - b. Impacts to the stone walls at Station 10+00 to 16+95 Right shall be avoided.
 - c. Tree removal shall be limited to the trees at Stations 27+40 Left and 28+00 Left (as shown on plans).
 - d. Turf reinforced mats shall be used within the historic district (as shown on plans and as specified in Special Provision 615 – Compost Blanket and Special Provision 618 – Seeding, Hydromulch Growth Medium).
 - e. All disturbed lawn areas shall be loamed and seeded, and all walkway and driveway entrances shall be replaced in kind.
- IV. Approvals:
 1. The contractor will send the Temporary Soil Erosion and Water Pollution Control Plan (SEWPCP) to the Environmental Field Contact for approval.

SPECIAL PROVISION
SECTION 107
TIME
(Contract Time)

The Contractor will be allowed to commence work when all plans required under this contract have been approved and pre-construction meeting has been held.

The completion date for this contract is **August 29, 2025**.

All work schedule changes must be submitted to the Department for approval a minimum of 48 hours before the requested change.

All travel lanes shall be open to traffic when the contractor is not performing work, as directed.

WORK PROGRESS:

1. The Contractor shall plan operations so that the Resident will have sufficient advance notification to provide the necessary inspection and testing. Sufficient advance notification is considered 48 hours.
2. A 48-hour notice is required prior to working any Saturdays.
3. The Contractor's traffic control plan shall be operationally effective, complete and in conformity with Federal requirements, Contract provisions, the current edition of the MUTCD, and Department policy and procedures as determined by the Department prior to beginning work.
4. The Contractor shall request absences at least 72 hours in advance. The Department will review and approve based on existing roadway condition, paving deadlines, adherence to schedule, traffic restrictions, detours, etc. The Contractor shall assure that the roadway surface and signage are maintained for safe passage of the traveling public during any approved absences. The Department will not modify the Contract Completion Date for approved absences.
5. Once operations commence, for every weekday not worked, the Contractor will be charged supplemental liquidated damages under Section 107.7.2 of the Standard Specifications; excluding days lost to inclement weather, holidays, and approved absences.

SECTION 401 - HOT MIX ASPHALT PAVEMENT

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

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

| | |
|-----------------------------|--------|
| Asphalt Cement | 702.01 |
| Aggregates for HMA Pavement | 703.07 |
| RAP for HMA Pavement | 703.08 |
| HMA Mixture Composition | 703.09 |

401.03 Composition of Mixtures The Contractor shall compose the Hot Mix Asphalt Pavement with aggregate, Performance Graded Asphalt Binder (PGAB), approved antistrip, warm mix additive, and/or mineral filler if required. HMA shall be designed and tested according to AASHTO R 35 and the volumetric criteria in Table 1. The Contractor shall size, uniformly grade, and combine the aggregate fractions in proportions that provide a mixture meeting the grading requirements of the Job Mix Formula (JMF). Unless otherwise noted in Special Provision 403 - Hot Mix Asphalt Pavement, the design, verification, Quality Control, and Acceptance tests for this mix will be performed at 65 gyrations. **TABLE 1: VOLUMETRIC DESIGN CRITERIA**

| Design ESAL's (Millions) | Required Density (Percent of G _{mm}) | | | Voids in the Mineral Aggregate (VMA) (Minimum Percent) | | | | | Voids Filled with Binder (VFB) (Minimum %) | Fines/Eff · Binder Ratio |
|--------------------------------|---|---------------------|------------------|---|------|------|------|------|---|-----------------------------------|
| | | | | Nominal Maximum Aggregate Size (mm) | | | | | | |
| | N _{initial} | N _{design} | N _{max} | 25.0 | 19.0 | 12.5 | 9.5 | 4.75 | | |
| < 3.0 | ≤90.5 | 96.0 | ≤98.0 | 13.0 | 14.0 | 15.0 | 16.0 | 16.0 | 65-80* | 0.6-1.2 |
| 3 to <10 | ≤89.0 | | | | | | | | | |
| ≥ 10 | ≤89.0 | | | | | | | | | |

*For 9.5 mm nominal maximum aggregate size mixtures, the maximum VFB is 82. For 4.75 mm nominal maximum aggregate size mixtures, the maximum VFB is 84.

The Contractor shall submit a JMF to the Department for each mixture to be supplied. The JMF will be approved by the Department in accordance with the MaineDOT HMA Policies and Procedures for HMA Sampling and Testing Manual. At the time of JMF submittal, the Contractor shall identify and make available the stockpiles of all proposed aggregates at the plant site. There must be a minimum of 150 ton for coarse aggregate stockpiles and 75 ton for fine aggregate stockpiles before the JMF may be submitted. The Contractor shall provide aggregate samples to the Department unless otherwise required. The Contractor shall also make available to the Department the PGAB proposed for use in the mix in sufficient quantity to test the properties of the asphalt and to produce

samples for testing of the mixture. The first day's production shall be monitored, and the approval may be withdrawn if the mixture exhibits undesirable characteristics such as checking, shoving or displacement. The Contractor shall be allowed to submit aim changes for a JMF as outlined in the MaineDOT HMA Policies and Procedures for HMA Sampling and Testing Manual: Mix Design Approval Section.

The Contractor shall submit a new JMF for approval each time a change in material source or materials properties is proposed. The same approval process shall be followed. The cold feed percentage of any aggregate may be adjusted up to 10 percentage points from the amount listed on the JMF, however no aggregate listed on the JMF shall be eliminated. The cold feed percentage for RAP may be reduced up to 10 percentage points from the amount listed on the JMF and shall not exceed the percentage of RAP approved in the JMF or for the specific application under any circumstances.

401.031 Warm Mix Technology The Contractor may place Hot Mix Asphalt Pavement produced with an accepted WMA technology if approved by the Department. Methods or technologies shall generally be at the Contractors option, but will be limited to proven, Agency and Industry accepted practice. Mixture production, placement and volumetric testing details, including temperatures, shall be included in the project specific QCP, and submitted to the Department for approval prior to any work.

401.04 Temperature Requirements The temperature of the mixture shall conform to the tolerances in Table 2 as measured at the truck at the mixing plant and at the paver unless otherwise authorized by the Department.

TABLE 2: ALLOWABLE TEMPERATURE RANGES

| PGAB Grade(s) | Temperature Range (°F) |
|----------------------|-------------------------------|
| PG58-28 / PG64-28 | 275-325 |
| PG64E-28 / PG70E-28 | 285-335 |

401.05 Performance Graded Asphalt Binder The Contractor shall utilize either a PG58-28, PG64-28, PG64E-28, PG70E-28, or other grade as specified in the 403 Special Provision. The Contractor shall utilize a PG64-28 if no liquid grade is specified within the 403 Special Provision.

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

- a. Zone 1 Areas north of US Route 2 from Gilead to Bangor and north of Route 9 from Bangor to Calais.
- b. Zone 2 Areas south of Zone 1 including the US Route 2 and Route 9 boundaries.

TABLE 3: SEASONAL AND TEMPERATURE LIMITATIONS

| Use | Minimum Ambient Air Temperature | Zone 1 Allowable Placement Dates | Zone 2 Allowable Placement Dates |
|--|---------------------------------|---|---|
| Surface course (travelway & adjacent shoulders) less than 1 in. thick placed during conditions defined as “night work” | 50°F | June 1 to Saturday following September 1 | |
| Surface course (travelway & adjacent shoulders) less than 1 in. thick | 50°F | May 15 to Saturday following September 15 | |
| Travelway surface course greater than or equal to 1 in. thick | 50°F | May 1 to Saturday following October 1 | April 15 to Saturday following October 15 |
| HMA for surface course on bridge decks | 50°F | May 1 to Saturday following October 1 | April 15 to Saturday following October 15 |
| HMA for base or shim course on bridge decks | 50°F | April 15 to November 15 | |
| HMA for use other than travelway surface course | 40°F | April 15 to November 15 | |
| HMA for curb, driveways, sidewalks, islands, or other incidentals | 40°F | N/A | N/A |
| HMA produced with an approved WMA technology for base or shim course | 35°F | April 15 to November 15 | |

The ambient air temperature shall be determined by an approved thermometer placed in the shade at the paving location. Unless otherwise specified, the Contractor shall not place Hot Mix Asphalt Pavement on a wet or frozen surface regardless of the ambient air temperature. The Hot Mix Asphalt Pavement produced with an approved WMA technology shall meet the requirements of section 401.04 - Temperature Requirements, unless otherwise approved by the Department. For the purposes of this Section, the traveled way includes truck lanes, ramps, approach roads and auxiliary lanes.

401.07 Hot Mix Asphalt Plant

401.071 General Requirements HMA plants shall conform to AASHTO M 156, Standard Specification for Requirements for Mixing Plants for Hot-Mixed, Hot-Laid Bituminous Paving Mixtures with exception of Section 4.2.1, 4.2.2, 4.3.4, 4.3.5, and 4.12.2.

All HMA plants will be inspected annually by the Department prior to producing HMA for Department projects. The Contractor shall provide the Department at least 72 hours’ notice that the plant is ready for inspection. The Contractor shall equip the plant with ladders and platforms that are accessible and safe to obtain samples of PGAB, aggregate and mix from the relevant tanks, collector belts and haul units. Silo storage time of mixtures shall not exceed 36 hours.

401.072 Stockpiles The Contractor shall provide sufficient space for stockpiles and maintain a minimum of supply for 2 days production of all aggregate products used in MaineDOT approved mix designs currently under production. A minimum stockpile supply of 100 ton (70 yards) shall be maintained at all times. The Contractor shall construct stockpiles to prevent intermingling and to

minimize segregation. All stockpiles used in MaineDOT mixes shall be identified with weatherproof signs at least 12" high and 24" wide, with reflective lettering at least 2" high.

401.073 Cold Feeds Cold Feed Bins will have bin dividers to keep aggregate products separated. Adequate means must be provided for obtaining samples of the combined flow of all Cold feed bins.

401.074 Dryer Dryer shall be capable of heating aggregate to required mixing temperature and shall be in good operation and condition. Dryer shall be subject to annual inspection prior to start-up. The Contractor shall dry and heat the aggregates for the HMA to the required temperature, adjusting flames to avoid damaging the aggregates. The Contractor shall provide the Department a minimum period of 72 hours to inspect the dryer and provide at least 24 hours' notice that the dryer is ready for inspection.

401.075 Asphalt Binder The plant shall include a heating system and insulation to maintain the asphalt binder at a uniform temperature for proper mixing and compaction. A thermometer shall be provided in the asphalt binder line. No direct flame may come in contact with tank. A sampling valve shall be provided in the circulation line downstream of any binder additive used unless otherwise approved by the Department. The Contractor shall drain down the asphalt as low as safely possible in any tank that will be switched to a new source or grade prior to adding the new PGAB.

401.076 Additives Additives (WMA, anti-strip, etc.) introduced into the binder at the HMA plant shall be introduced per the supplier's recommendations and shall be approved by the Department. The system for introducing additives shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all production rates and batch sizes. Additive introduction systems shall be controlled by a proportioning device to the amount required on the JMF plus or minus 0.1% of the target. Additive introduction systems shall be interlocked with the plant and the recordation (batch tickets or drum recordation) shall display the additive and the weight and percentage added. A means for sampling the PG binder with additive introduced will be provided. The sampling point shall be after the additive is mixed with the PGAB before entering the drum or mixer unit.

401.077 Batch Plants

Hot Bins Hot bins shall provide uniform continuous operation and be in good working condition. The plant shall be able to provide samples of hot bins upon request. Overflow shall be provided for each hot bin. Hot bin gates shall close without leaking. Bin walls must prevent intermingling between bins. Each hot bin shall have low level indicators which will alert the operator when the bin is empty.

Mixer Unit Clearance between blades and liner shall be 1" maximum, unless the aggregate exceeds 1 ¼" then the clearance shall be 1 ½". The spray bar length shall be at least 75% of the mixer length. The mixer unit shall be a twin pug mill-type mixer capable of mixing continuously for at least 45 seconds after all materials have been introduced into the mixer. The blades in the mixer shall be capable of producing a homogenous mixture. If the mixer is not enclosed, it shall be equipped with an adjustable hood to prevent loss of dust by dispersion. The mixer unit shall be subject to annual inspection prior to removal of safety features and being readied for service. The Contractor shall provide the Department the opportunity to inspect the mixer unit prior to the annual inspection. The Contractor shall provide the Department a minimum period of 72 hours to inspect the mixer unit and provide at least 24 hours' notice that the mixer unit is ready for inspection.

Mineral Filler Mineral filler and fiber shall utilize separate bins and feed systems to store and proportion the required quantity into the mixture. The feed systems shall be accurate to no more than 10% of the required weight with a convenient and accurate means of calibration. Mineral filler and fiber shall be introduced in the weigh hopper and uniformly distributed prior to the injection of the asphalt binder.

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

The HMA batch plant shall be operated within the following tolerances:

| | |
|--------------------------|------------------------------|
| Each aggregate component | +/- 1.5% cumulative, per bin |
| Mineral Filler | +/- 0.5% |
| Bituminous Material | +/- 0.1% |
| Zero return (aggregate) | +/- 0.5% |
| Zero Return (AC) | +/- 0.1% |
| Additives | +/- 0.1% |

Recordation All plants shall be equipped with an approved digital recording device. The printer shall mark any weight on the ticket that exceeds tolerance. The delivery slip shall contain information required under Section 108.1.3 - Provisions Relating to Certain Measurements, Mass and paragraphs a, b, and c of Section 401.078.

401.078 Drum Plants

Cold Feeds and Delivery System A scalper screen shall be used to remove oversize material. The accuracy of the belt scale shall be within +/- 1.0% of the actual weight being measured. The plant shall be capable of correcting for aggregate moisture. Mineral filler and fiber shall utilize separate bin(s) and feeder systems to store and proportion the required quantity into the mixture. The feed systems shall be accurate to no more than +/- 10% of the required weight with a convenient and accurate means of calibration. The plant shall be equipped with a single control to change all feed rates. Mineral filler and fiber shall be introduced such that dry mixing is accomplished no less than 18 inches prior to the injection of the asphalt binder. The Contractor shall ensure that the mineral filler does not become entrained in the exhaust stream of the dryer.

Binder System The flow of asphalt binder shall adjust automatically with dry aggregate weights. The Department will conduct an asphalt flow meter check annually and after each change of plant location. The flow meter check must be performed prior to producing mix for Department projects. The plant must be configured to provide a convenient means to check accuracy of the flow meter. The flow meter will be considered accurate if the measured weight is within 1% of actual weight.

Drum Mixer The plant shall be equipped with a diversion system where mix can be diverted at startup/shutdown and any time. The drum mixer shall be subject to annual inspection prior to removal of safety features and being readied for service. The Contractor shall provide the Department a minimum period of 72 hours to inspect the drum mixer while providing at least 72 hours' notice that the drum mixer is ready for inspection.

Recordation An approved automatic ticket printer system shall be used to print delivery slips. The requirements for delivery slips for payment of materials measured by weight, as given in the following Sections, shall be waived: 108.1.3 a., 108.1.3 b., 108.1.3 c., and 108.1.3 d. The automatic printed ticket will be considered as the Weight Certificate. The dry aggregate weights and binder flow shall be recorded as well as mineral filler and all binder additives. The recordation of materials shall be printed a minimum of every ten minutes while in production.

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

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

401.079 Scales and Weight Checks Scales shall meeting the requirements of Section 108 - Payment. The scales shall be inspected and sealed by the State Sealer (or approved alternative) as often as the Department deems necessary to verify their accuracy. Plant scales shall be checked prior to the start of the paving season, and each time a plant is moved to a new location. Subsequent checks will be made as determined by the Resident. The Contractor will have at least ten 50 pound masses for scale testing at batch plants. At Contractor's option, the Contractor can use one single test weight that has been checked on sealed scales. This weight shall be 1,000 lbs. or greater. At least twice during each 5 days of production either of the following checks will be performed:

- a. A loaded truck may be intercepted and weighed on a platform scale that has been sealed by the State Sealer of Weights and Measures within the past 12 months. The inspector will notify the producer to take corrective action on any discrepancy over 1.0%. The producer may continue to operate for 48 hours under the following conditions.
 1. If the discrepancy does not exceed 1.5%; payment will still be governed by the printed ticket.
 2. If the discrepancy exceeds 1.5%, the plant will be allowed to operate as long as payment is determined by truck platform scale net weight.

If, after 48 hours the discrepancy has not been addressed and reduced below 1.0%, then plant operations will cease. Plant operation may resume after the discrepancy has been brought within 1.0%.

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

available, a weight with a known mass-verified and sealed annually by a licensed scale company, may be used by hanging weight from silo or surge hopper, at lower middle and upper third levels upon request to verify scale accuracy.

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

401.08 Hauling Equipment Units hauling HMA shall have tight, clean, and smooth metal bodies, which have been thinly coated with a small amount of approved release agent to prevent the mixture from adhering to the bodies. Release agents that dissolve or strip asphalts, including diesel fuel, will not be allowed.

All mix haul units shall have a cover of water repellent material capable of heat retention, which completely covers the mixture. The cover shall be securely fastened on the truck, unless unloading. Haul units shall have an opening on both sides near the midpoint of the body, at least 12 in above the bed, which will accommodate a thermometer stem.

401.09 Pavers The Contractor shall use pavers meeting the requirements of this section unless otherwise authorized by the Department. Pavers shall meet the requirements of Table 4: Paver Requirements.

TABLE 4: PAVER REQUIREMENTS

| Use | Paver Requirement |
|--------------------------------|--|
| Traveled Way & Auxiliary Lanes | Equipped with a 10 ft minimum main screed with activated extensions. The minimum tractor weight shall be 30,000 pounds. |
| | Equipped with automatic grade and slope controls that automatically adjust the screed and increase or decrease the layer thickness to compensate for irregularities in the preceding course. The controls shall maintain the proper transverse slope and be readily adjustable so that transitions and superelevated curves can be properly paved. The controls shall operate from a fixed or moving reference such as a grade wire or ski type device (floating beam) with a minimum length of 30 ft, a non-contact grade control with a minimum span of 24 ft, except that a 40 ft reference shall be used on interstate and divided highway projects. |
| All HMA Placement | Self-contained, self-propelled units of sufficient class and size to place Hot Mix Asphalt Pavement in full lane widths specified in the contract on the main line, shoulder, or similar construction. |
| | Equipped with a free-floating activated heated main screed with activated extensions. Pavers with extendible screeds shall have auger extensions and tunnel extenders as per the manufacturer's recommendations, a copy of which shall be available if requested. |
| | Equipped with a receiving hopper with sufficient capacity for a uniform spreading operation and a distribution system to place the mixture uniformly, without segregation in front of the screed. |
| | Operated in such a manner as to produce a visually uniform surface texture and a thickness within the requirements of Section 401.11 - Surface Tolerances. The screed assembly shall produce a finished surface of the required evenness and texture without tearing, shoving, or gouging the mixture. |

The Contractor shall have the paver at the project site sufficiently before the start of paving operations to be inspected and approved by the Department. The Contractor shall repair or replace any paver found worn or defective, either before or during placement, to the satisfaction of the Department. Pavers that produce an unevenly textured or non-uniform mat will be repaired or replaced before continuing to place HMA on MaineDOT projects. On a daily basis, the Contractor shall perform density testing across that mat as detailed in Section 401.191 Quality Control - Method A, B & C.

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

The Contractor shall repair or replace any roller found to be worn or defective, either before or during placement, to the satisfaction of the Department. Rollers that produce grooved, unevenly textured or non-uniform mat will be repaired or replaced before continuing to place HMA. The type of rollers to be used and their relative position in the compaction sequence shall generally be the Contractor's option unless otherwise specified in the contract, provided specified density is attained and with the following requirements:

- a. On variable-depth courses, the first lift of pavement over gravel, reclaimed pavement, on irregular or milled surfaces, or on bridges, at least one roller shall be 16 ton pneumatic-tired. Pneumatic-tired rollers shall be equipped with skirting to minimize the pickup of HMA materials from the paved surface. When required by the Resident, the roller shall be ballasted to 20 ton.
- b. Compaction with a vibratory or steel wheel roller shall precede pneumatic-tired rolling, unless otherwise authorized by the Department.
- c. Vibratory rollers shall not be operated in the vibratory mode on bridge decks.
- d. Any method, which results in cracking or checking of the mat, will be discontinued and corrective action taken.
- e. The use of an oscillating steel roller shall be required to compact all mixtures placed on bridge decks.

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

401.11 Surface Tolerances The Department will check the following surface tolerances:

- a.) Longitudinally: The pavement surface profile shall be free of deviations in excess of $\pm \frac{1}{4}$ inches from the required pavement surface profile grade. To verify the surface tolerance a straight plane shall be established using 16 foot straight edge or a taught string line placed parallel to the direction of travel and checked continuously across the width of the lane.
- b.) Transversely: The pavement surface profile shall be free of deviations in excess of 0 inches below and $\frac{1}{4}$ inches above the required cross-sectional profile grade. To verify the surface tolerance a straight plane shall be established using a 10 foot straight edge or taught string line

placed perpendicular to the direction of travel and checked continuously along the length of the lane.

The Contractor shall correct defective areas by removing defective work and replacing it with new material as directed by the Department. The Contractor shall furnish a 10 foot straightedge for the Department's use.

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

401.13 Spreading and Finishing On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impracticable, the Contractor shall spread, rake, and lute the HMA with hand tools to provide the required compacted thickness. Release agents that dissolve or strip asphalts, including diesel fuel, will not be allowed. On roadways with adjoining lanes carrying traffic, the Contractor shall place each course per the conditions in Table 5, unless otherwise noted by the Department in Section 403 - Hot Mix Asphalt Pavement.

TABLE 5: PLACEMENT CONDITIONS FOR ADJOINING LANES

| Depth (at centerline) | Placement Conditions |
|---|---|
| Vertical Longitudinal Joint | |
| ¾" and less (incl. shim) | The Contractor may place the HMA course over the full single travel lane width for each production day. |
| 1" to 1 ¼" | The Contractor may place the HMA course over the full single travel lane width for each production day and will be required to place a matching course of HMA over the adjacent section of travel lane before weekend or holiday suspension. |
| 1 ½" to 2" | The Contractor may place the HMA course over the full single travel lane width for each production day and will be required to place a matching course of HMA over the adjacent section of travel lane before the end of the following calendar day. |
| Greater than 2" | The Contractor shall place each course over the full width of the traveled way section being paved that day. |
| Notched-Wedge Longitudinal Joint | |
| 1 ½" to 2" | The Contractor may place the HMA course over the full single travel lane width for each production day and will be required to place a matching course of HMA over the adjacent section of travel lane before weekend or holiday suspension. A maximum unmatched centerline joint length of 0.5 miles will be permitted over the weekend. |
| Greater than 2" | The Contractor may place the HMA course over the full single travel lane width for each production day and will be required to place a matching course of HMA over the adjacent section of travel lane before the end of the following calendar day. |

The Contractor shall place the specified course over the full width of the mainline traveled way being paved, regardless of use, depth, or longitudinal joint type prior to Memorial Day, July 4th, Labor Day, paving suspensions exceeding three days, or other dates as specified by special provision.

The Contractor shall install additional warning signage that clearly defines the centerline elevation differential hazard. Unless otherwise addressed in the contract, the Contractor shall install additional centerline delineation such as a double application of raised pavement markers at 100 foot intervals, or temporary painted line. For any exposed vertical edge between the shoulder and traveled way, at a minimum, the use of temporary painted line, or RPMs placed along the edge of traveled way at 200 foot intervals is required. The Traffic Control Plan shall be amended to include this option and the additional requirements. All signs and traffic control devices will conform to Section 719.01, and Section 652, and will be installed prior to the work, at a maximum spacing of 0.50 mile for the entire length of effected roadway section. If this option is utilized, all additional signing, labor, traffic control devices, or incidentals will not be paid for directly, will be considered incidental to the appropriate 652 items.

401.14 Hot Mix Asphalt Placement on Bridge Decks Hot mix asphalt pavement placed on bridges shall also conform to Section 508.04 and the following requirements.

- a. The minimum production and placement temperature for the Hot Mix Asphalt placed over membrane shall conform to the manufacturer's recommendations.
- b. The bottom course shall be placed with an approved rubber mounted paver of such type and operated in such a manner that the membrane waterproofing will not be damaged in any way.
- c. The top course shall not be placed until the bottom course has cooled sufficiently to provide stability.
- d. The Contractor will not be required to cut sample cores from the compacted pavement on the bridge deck, unless otherwise directed by Special Provision.
- e. After the top course has been placed, the shoulder areas shall be sealed 3 ft wide with two applications of an emulsified bituminous sealer meeting the requirements of Section 612.03 – Sealing and Section 702.12 - Emulsified Bituminous Sealing Compound. The first application shall be pre-mixed with fine, sharp sand, similar to mortar sand, as needed to fill all voids in the mix in the area being sealed. The second application may be applied without sand. The sealer shall be carried to the curb at the gutter line in sufficient quantity to leave a bead or fillet of material at the face of the curb. The area to be sealed shall be clean, dry and the surface shall be at ambient temperature. The furnishing and applying of the required quantity of sealer for the bridge shoulder areas shall be incidental to placing the hot mix asphalt pavement.
- f. The area between the edge of the membrane and the vertical surface shall be completely sealed with hot-applied rubberized asphalt material, meeting the requirements of Type 4 crack seal; shall be applied to form a complete seal between the membrane and the vertical surface and shall extend up the vertical surface to within ½ inch of the top of the HMA wearing surface. This work shall be considered incidental to the contract pavement items unless 508 membrane items are included in the contract.

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

The Contractor shall roll the surface when the mixture is in the proper condition and when the rolling does not cause undue displacement, cracking, or shoving. The Contractor shall prevent adhesion of the HMA to the rollers or vibrating compactors without the use of fuel oil or other petroleum-based

release agents. Solvents designed to strip asphalt binders from aggregates will not be permitted as release agents on equipment, tools, or pavement surfaces.

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

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

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

For all items requiring pavement density testing, the Contractor shall cut 6-inch diameter cores at no additional cost to the Department by the end of the working day following paving. Cores shall be cut such that the nearest edge at least 9 inches from any joint. Pre-testing of the cores will not be allowed. If the Contractor and the Department mutually determine that a core is damaged, the Contractor shall cut new core(s) at the same offset and within 3 ft of the initial sample. The Contractor and the Department will mutually determine if underlying material is adhered to the core and if so will mark the core at the point where sawing is needed. The Department will place the cores in a secure container and the Contractor shall transport the cores to the designated MaineDOT lab. The cores will be saw cut by the Department to remove underlying layers. No recuts are allowed at a test location after the core has been tested.

On all sections of overlay with wearing courses designed to be 1 in or less in thickness, there shall be no pay adjustment for density otherwise noted in Section 403 - Hot Mix Asphalt Pavement. For overlays designed to be 1 in or less in thickness, density shall be obtained by the same rolling train and methods as used on mainline travelway surface courses with a pay adjustment for density, unless otherwise directed by the Department.

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

401.16 Joints The Contractor shall construct wearing course transverse and longitudinal joints in such a manner that minimum tolerances shown in Section 401.11 - Surface Tolerances are met when measured with a straightedge. The paver screed shall maintain a uniform head of HMA during transverse and longitudinal joint construction. The HMA shall be free of segregation and meet temperature requirements outlined in Section 401.04. Transverse joints of the wearing course shall

be straight and neatly trimmed. The Contractor may form a vertical face exposing the full depth of the course by inserting a header, by breaking the bond with the underlying course, or by cutting back with hand tools. The Contractor shall apply a coating of emulsified asphalt immediately before paving all joints to the vertical face and 3 in of the adjacent portion of any pavement being overlaid except those formed by pavers operating in echelon. The Contractor shall use an approved spray apparatus designed for covering a narrow surface. The Department may approve application by a brush for small surfaces, or in the event of a malfunction of the spray apparatus, but for a period of not more than one working day.

Where pavement under this contract joins an existing pavement, or when the Department directs, the Contractor shall cut the existing pavement along a smooth line, producing a neat, even, vertical joint. The Department will not permit broken or raveled edges. The cost of all work necessary for the preparation of joints is incidental to related contract pay items. Longitudinal joints shall be generally straight to the line of travel and constructed in a manner that best ensure joint integrity. Methods or activities that prove detrimental to the construction of straight, sound longitudinal joints will be discontinued.

The Contractor may utilize an approved notched wedge joint device on all HMA layers 1 ½ inches in depth or greater. A notched wedge joint shall be constructed as shown in Figure 1 using a device that is attached to the paver screed and is capable of independently adjusting the top and bottom vertical notches.

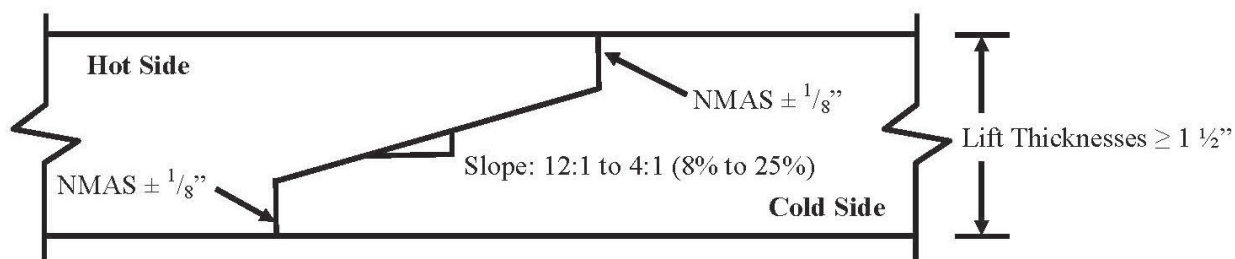


FIGURE 1: Notched Wedge Joint

Notes

1. An emulsified tack coat shall be applied to the vertical edges and the wedge surface so that the total rate is 0.05 G/SY plus the normal specified rate prior to placing the adjacent layer. The Contractor may elect to apply the emulsified tack coat in one or multiple passes.
2. Dimensions shown are compacted depths (after rolling is complete).

The Department reserves the right to have centerline cores cut by the Contractor's QC personnel for informational purposes to monitor the density along the joint. Informational cores at the centerline joint will be taken centered over the tapered part of the wedge joint.

Any notched wedge joint constructed areas that become cracked or broken shall be trimmed back to the limits affected prior to placing the adjoining lane. Any materials that become unbound or separated from the wedge or tapered joint section, or contaminated by materials determined by the Department as being detrimental to the construction of a sound construction joint, shall be removed by sweeping, compressed air and lance, or by hand tools as required. This work, if necessary, will not be paid for directly, but shall be considered incidental to the related contract items.

The Contractor shall apply a coating of emulsified asphalt on the vertical and tapered surface of the longitudinal centerline joint immediately before paving if the notched wedge joint device is used.

The total rate of application shall be 0.050 G/SY plus the normal specified tack coat rate. The Contractor shall use an approved spray apparatus designed for covering a narrow surface. The Department may approve application by a brush for small surfaces.

401.17 Hot Mix Asphalt Documentation The Contractor and the Department shall agree on the amount of Hot Mix Asphalt Pavement that has been placed each day. All delivery slips shall conform to the requirements of 401.078.

401.18 Prepave Meeting Prior to placing any mix, the Department and the Contractor shall hold a Pre-paving conference to discuss the paving schedule, source of mix, type and amount of equipment to be used, sequence of paving pattern, rate of mix supply, random sampling, project lots and sublots and traffic control. A copy of the density QC random numbers to be used on the project shall be provided to the Resident. The Departments' random numbers for Acceptance testing shall be generated and on file with the Resident and the Project Manager. All personnel of the Department and the Contractor who have significant information relevant to the paving items shall attend, including the responsible onsite paving supervisor for the Contractor. The Resident will prepare minutes of the conference and distribute them to all attendees. Any requests to revise the minutes must be made to the Resident within 7 Days of Receipt. These minutes will constitute the final record of the Pre-paving conference. On the first day of paving and whenever there is a change in the onsite paving foreman or paving inspector, the Department and the Contractor shall hold an informal onsite meeting to review the minutes of the Pre-paving conference, Project Specific QCP, Plans, Typical, Special Provisions and communication process. This meeting shall be held prior to placing any mix. The onsite paving supervisor, QCT, Superintendent, Resident and/or paving inspector shall attend.

401.19 Contractor Quality Control – Method A, B, C & D

The Contractor shall operate in accordance with the approved Quality Control Plan (QCP) to assure a product meeting the contract requirements. The Contractor shall not begin paving operations until the Department approves the QCP in writing.

401.191 Quality Control The QCP shall meet the requirements of Section 106.6 - Acceptance and this Section. The QCP shall address any items that affect the quality of the Hot Mix Asphalt Pavement, and shall include the following personnel meeting these minimum requirements:

- a. QCP Administrator - The QCP Administrator must be a full-time employee of or a consultant engaged by the Contractor or paving subcontractor. The QCP Administrator shall have full authority to institute any and all actions necessary for the successful operation of the QCP. The QCP Administrator (or their designee in the QCP Administrator's absence) shall be available to communicate with the Department at all times.
 - For items accepted under Methods A and B, the QCP Administrator shall be certified as a Quality Assurance Technologist (QAT) by NETTCP.
 - For items accepted under Methods C and D, the QCP Administrator shall be certified by NETTCP as a Quality Assurance Technologist (QAT), Plant Technician, or Paving Inspector.
- b. Process Control Technician(s) (PCT) shall utilize test results and other quality control practices to assure the quality of aggregates and other mix components and control proportioning to meet the JMF(s). The PCT shall inspect all equipment used in mixing to assure it is operating

properly and that mixing conforms to the mix design(s) and other Contract requirements, and that delivery slips and plant recordation accurately reflects the mix being produced with all the required information. The QCP shall detail how these duties and responsibilities are to be accomplished and documented, and whether more than one PCT is required. The Plan shall include the criteria to be utilized by the PCT to correct or reject unsatisfactory materials. The PCT shall be certified as a Plant Technician by the NETTCP.

c. Quality Control Technician(s) (QCT) shall perform and utilize quality control tests at the job site to assure that delivered materials meet the requirements of the JMF(s). The QCT shall inspect all equipment utilized in transporting, laydown, and compacting to assure it is operating properly and that all laydown and compaction conform to the Contract requirements. The QCP shall detail how these duties and responsibilities are to be accomplished and documented, and whether more than one QCT is required. The QCP shall include the criteria utilized by the QCT to correct or reject unsatisfactory materials. The QCT shall be certified as a Paving Inspector by the NETTCP.

The QCP shall detail the coordination of the activities of the Plan Administrator, the PCT and the QCT. The Project Superintendent shall be named in the QCP, and the responsibilities for successful implementation of the QCP shall be outlined.

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

a. General Requirements:

- Job Mix Formulas (JMFs)
- Name of QCP Administrator, and certification number
- Description of corrective action process
- Disposition of defective material
- A procedure to take immediate possession of acceptance samples once released by MaineDOT and deliver said samples to the designated acceptance laboratory.

b. Process Control Requirements: Each Hot Mix Asphalt plant shall have a Plant Specific Process Control Plan. At minimum the plan shall include:

- Name of Plant Specific Process Control Technician(s) and certification number(s)
- Hot mix asphalt plant details
- Stockpile Management
- Mixing & transportation
- Silo management and details
- A detailed description of RAP processing, stockpiling and introduction into the plant
- PG Binder management:
 - Tanks and storage (including polymer modified binders if applicable)
 - Binder temperature
 - Sample points
 - Method to ensure mixture contains the specified binder grade
 - Additive introduction details if introduced at the plant
- Testing and inspection plan for control of aggregates and RAP
- Mix Testing and inspection plan

c. Quality Control Requirements – Method A & B

- Name of Quality Control Technicians(s) and certification number(s)
- Laydown operations
- Longitudinal joint construction including the tacking of all joints.
- Procedures for avoiding paving in inclement weather
- Compaction of shoulders
- Methods to ensure that segregation is minimized
- Procedures to determine the maximum rolling and paving speeds based on best engineering practices and past experience in achieving acceptable pavement smoothness.
- Sequence for paving around drainage structures, under guard rail, around curb, at bridges, intersections, drives and minor approaches to ensure proper compaction, finish, and drainage.
- Type of release agent to be used on haul units, tools and rollers.

d. Quality Control Requirements – Method C and D

- Name of QCP Administrator and certification number(s) as specified in Section 401.19.
- Name of Process Control Technicians(s) and certification number(s).
- Name of Quality Control Technicians(s) and certification number(s).
- Anticipated Compaction Temperature Zones for each roller pass during placement.
- Mix TMD to be used for density gauge setting for method spec density work
- Procedures for avoiding paving in inclement weather.
- Type of release agent to be used on haul units, tools and rollers.
- A note stating that the use of petroleum-based fuel oils, such as diesel or kerosene, or asphalt stripping solvents will not be permitted.
-

The Contractor shall also supply a Laydown Operation Plan that addresses sequence of work, layout of work, longitudinal joint construction, compaction of shoulders, methods to minimize segregation, and procedures to achieve acceptable pavement smoothness.

For each production day, a summary of each day's results, including a daily paving report, summarizing the mixture type, mixture temperature, equipment used, environmental conditions, and the number of roller passes, shall be recorded and signed by the QCT and presented to the Department's representative by 1 PM the following working day.

Unless otherwise noted in Section 403 - Hot Mix Asphalt Pavement, the Contractor shall submit a modified QC Plan detailing, how the mix is to be placed, what equipment is to be used, and what HMA plant is to be used for Items covered under the Plan. All mix designs (JMF) shall be approved and verified by MaineDOT prior to use.

A QCP, certified QC personnel, and a Prepave Meeting shall not be required for Item 403.209 - Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (sidewalks, drives, islands & incidentals) accepted under visual or Method D. An approved JMF shall be provided to the Resident prior to placement.

The Contractor shall certify the mix and the test results for each item by a Certificate of Compliance.

The Contractor shall have a testing lab at the plant site, equipped with all testing equipment necessary to complete the tests in Table 6. The Contractor shall generate QC sampling random numbers for each approved mix design. A copy of the random numbers shall be emailed to the QC.mainedot@maine.gov email address and remain on-file (in print) and be available for inspection at the QC laboratory. The Contractor shall sample, test, and evaluate Hot Mix Asphalt Pavement in accordance with the minimum frequencies per each approved mix design:

TABLE 6: MINIMUM QUALITY CONTROL FREQUENCIES

| Test or Action | Frequency | Test Method |
|-----------------------------------|-------------------------------|------------------------------|
| Temperature of mix | 6 per day at street and plant | - |
| Temperature of mat | 4 per day | - |
| %TMD (In-Place Density - Surface) | 1 per 125 ton | AASHTO T 355 or AASHTO T 343 |
| %TMD (In-Place Density - Base) | 1 per 250 ton | AASHTO T 355 or AASHTO T 343 |
| Fines / Effective Binder | 1 per 500 ton | AASHTO T 312* |
| Gradation | 1 per 500 ton | AASHTO T 30 |
| PGAB Content | 1 per 500 ton | AASHTO T 164 or AASHTO T 308 |
| Voids at N_{design} | 1 per 500 ton | AASHTO T 312* |
| VMA at N_{design} | 1 per 500 ton | AASHTO T 312* |
| Rice Specific Gravity | 1 per 500 ton | AASHTO T 209 |
| Percent Fractured Particles | 1 per 5,000 ton | AASHTO T 335 |
| Flat and Elongated Particles | 1 Per 5,000 ton | ASTM D4791 |
| Fine Aggregate Angularity | 1 Per 5,000 ton | AASHTO T 304 |

*Method A and B only

The Contractor shall monitor plant production on each approved mix design using running average of three control charts as specified in Section 106 - Quality. Control limits shall be as noted in Table 7 below. The UCL and LCL, shall not exceed the allowable gradation control points for the particular type of mixture as outlined in Table 1 of Section 703.09.

TABLE 7: CONTROL LIMITS

| Property | UCL and LCL |
|---|----------------------|
| Percent Passing 4.75 mm and larger sieves | Target +/- 4.0 |
| Percent Passing 2.36 mm sieve | Target +/- 2.5 |
| Percent Passing 0.075 mm sieve | Target +/- 1.0 |
| PGAB Content | Target +/- 0.25 |
| VMA at N_{design} | LCL = LSL + 0.2 |
| Voids at N_{design} | JMF Target +/- 1.2 |
| Theoretical Maximum Specific Gravity | JMF Target +/- 0.020 |

The Contractor shall submit all QC test and inspection reports and updated control charts to the Resident and QC.mainedot@maine.gov by email. The reports and updated control charts shall be signed by the appropriate technician and be submitted to the Department by 1:00 P.M. on the next working day, except when otherwise noted in the QCP and approved by the Department.

The Contractor shall also retain splits of the previous 5 QC tests, with QC results enclosed for random selection and testing by the Department. Test results of splits that do not meet the Dispute Resolution

Variance Limits in Table 18 shall trigger an investigation by the MaineDOT Independent Assurance Unit and may result in that lab losing NETTCP certification and the ability to request a dispute [Section 401.50 - Process for Dispute Resolution].

The Contractor shall make density test results, including randomly sampled densities, available to the Department onsite. Summaries of each day's results, including a daily paving report summarizing the mixture type, mixture temperature, equipment used, environmental conditions, and the number of roller passes, shall be recorded and signed by the QCT and provided to the QC.mainedot@maine.gov email address and Resident in writing by 1:00 p.m. the next working day. The Contractor shall fill all holes in the pavement resulting from cutting cores by the Contractor or the Department with a properly compacted, acceptable mixture no later than the following working day. Before filling, the Contractor shall carefully clean the holes and apply a coating of emulsified asphalt. The Contractor may only cut additional cores for verification of the densometer, at a rate not to exceed 3 per day or 2 per 1000 ton placed.

If the Contractor's control chart shows the process for a given mix design to be out of control (defined as a single point outside of the control limits on the running average of three chart) on any property listed in Table 7: Control Limits, the Contractor shall notify the Resident of all affected projects in writing of the corrective action by 1:00 PM the next working day. The written description shall detail what action is being taken by the Contractor to bring the property in question back within control limits. Subsequent quality control results are expected to demonstrate an improvement and regression towards the aim. The Department reserves the right to take action, to include cessation of production, in the case of repeated results outside the Table 7 control chart control limits.

On a daily basis, or whenever equipment type or sequence is modified, the Contractor shall perform density testing across the mat being placed, prior to being compacted by equipment at 12 in intervals. If the density values vary by more than 2.0% from the mean, the Contractor shall make adjustments to the screed until the inconsistencies are remedied. Failure to replace or repair defective placement equipment may result in a letter of suspension of work and notification of a quality control violation resulting in possible monetary penalties as governed by Section 106 – Quality.

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

- a. The quality level for density using all quality control tests for the current Lot is less than 60 PWL.
- b. The Coarse Aggregate Angularity or Fine Aggregate Angularity value falls below the requirements of Section 703.07, Table 3: Aggregate Consensus Properties Criteria for the design traffic level.
- c. The Flat and Elongated Particles value exceeds 10% by ASTM D4791.
- d. There is any visible damage to the aggregate due to over-densification other than on variable depth shim courses.
- e. The Contractor fails to follow the approved QCP.

The Contractor shall notify the Resident in writing as to the reason for shutdown, as well as the corrective action, by the end of the workday. Failure to do so will be treated as a second incident under 106.4.6 QCP Non-compliance. The Department will only allow the continuation of paving operations when it is satisfied the corrective action will result in an improvement in results. The Department may require the submittal of a passing verification sample to allow further production. The Department

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

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

401.192 Quality Control for Method D, (sidewalks, drives, islands & incidentals) and visual acceptance items

A QCP, certified QC personnel, or Prepave Meeting shall not be required for Item 403.209 - Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (sidewalks, drives, islands & incidentals) accepted under visual or Method D. An approved JMF shall be provided to the Resident prior to placement.

401.20 Acceptance Method A & C These methods utilize Quality Level Analysis and pay factor specifications. For Hot Mix Asphalt Pavement designated for acceptance under Quality Assurance provisions, the Department will sample once per subplot on a statistically random basis, test, and evaluate in accordance with the Acceptance Properties as outlined in Table 8:

TABLE 8: ACCEPTANCE PROPERTIES – METHOD A & C

| Properties | Point of Sampling | Test Method |
|---------------------------|------------------------|--------------|
| Gradation | Paver Hopper | AASHTO T 30 |
| PGAB Content | Paver Hopper | AASHTO T 308 |
| % TMD (In-Place Density) | Mat behind all Rollers | AASHTO T 269 |
| Voids at N_{design} | Paver Hopper | AASHTO T 312 |
| VMA at N_{design} | Paver Hopper | AASHTO T 312 |
| Fines to Effective Binder | Paver Hopper | AASHTO T 312 |
| VFB | Paver Hopper | AASHTO T 312 |

The Department will obtain samples of Hot Mix Asphalt Pavement in conformance with AASHTO R 97, Sampling Asphalt Mixtures, and the MaineDOT Policies and Procedures for HMA Sampling and Testing. The Contractor shall transport the samples in containers provided by the Department to the designated MaineDOT Laboratory within 48 hours except when otherwise noted in the project specific QCP or as directed by the Resident. Failure to deliver an acceptance sample to the designated acceptance laboratory will be considered the second incident under 106.4.6–QCP Non-Compliance.

Target values shall be as specified in the JMF. The Department will withhold reporting of the test results for the Acceptance sample until 7:00 AM, on the second working day of receipt of the sample, or after receipt of the Contractors results of the Acceptance sample split. Upon conclusion of each lot being evaluated under quality level analysis, where there is a minimum of four sublots, results shall be examined for statistical outliers, as stated in Section 106.7.2 - Statistical Outliers.

Lot sizes and subplot sizes shall be determined as outlined in Table 9.

TABLE 9: LOT AND SUBLOT SIZES – METHOD A & C

| Lot Size* | Entire production per item per contract up to 6000 ton |
|-------------------------------------|--|
| Maximum Sublot Size – Mix | 750 ton |
| Maximum Sublot Size – Density | Surface Layers – 250 ton Base / Intermediate Layers – 500 ton |
| Minimum Number of Samples – Mix | Four |
| Minimum Number of Samples – Density | Five |

*Unless otherwise agreed upon at the Prepave Meeting

If there is less than one-half of a subplot remaining at the end, then it shall be combined with the previous subplot. If there is more than one-half subplot remaining at the end, then it shall constitute the last subplot

and shall be represented by test results. If it becomes apparent partway through a Lot that, due to an underrun, there will be insufficient mix quantity to obtain the minimum number of sublots needed, the Resident may adjust the size of the remaining sublots and select new sample locations based on the estimated quantity of material remaining in the Lot. Unanticipated over-runs of up to 1500 ton shall be rolled into the last lot. Cases where the lot is terminated prior to reaching completion shall be handled in accordance with Section 106.7.3 Early Termination of Lots. In cases where density incentive/disincentive provision apply, additional cores shall be taken to attain a minimum of three for the Lot.

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

TABLE 10: ACCEPTANCE LIMITS – METHOD A & C

| Property | USL and LSL | |
|---|--|-----------------|
| | Method A | Method C |
| Percent Passing 4.75 mm and larger sieves | Target +/- 7% | Target +/- 7% |
| Percent Passing 2.36 mm to 1.18 mm sieves | Target +/- 4% | Target +/- 5% |
| Percent Passing 0.60 mm sieve | Target +/- 3% | Target +/- 4% |
| Percent Passing 0.30 mm to 0.075 mm sieve | Target +/- 2% | Target +/- 2% |
| PGAB Content | Target +/- 0.4% | Target +/- 0.4% |
| Voids at N_{design} | 4.0% +/- 1.5% | N/A |
| Fines to Effective Binder | 0.9 +/- 0.3 | N/A |
| VMA at N_{design} | LSL from Table 1 | N/A |
| VFB | Table 1 plus a 4% production tolerance for USL | N/A |
| % TMD (In-place Density) | 94.5% +/- 2.5% | 94.5% +/- 2.5% |

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

TABLE 11: CEASE PRODUCTION – METHOD A & C

| Property | Percent Within Limits (PWL) | |
|---------------------------------|-----------------------------|----------|
| | Method A | Method C |
| Percent Passing NMAS sieve* | <60 PWL | <60 PWL |
| Percent Passing 2.36 mm sieve* | | |
| Percent Passing 0.30 mm sieve* | | |
| Percent Passing 0.075 mm sieve* | | |
| PGAB Content | | N/A |
| Voids at N_{design} | | |
| Fines to Effective Binder* | | |
| VMA at N_{design} | | |
| VFB | | |
| % TMD (In-place Density) | | <60 PWL |

*Paving operations shall not be required to cease if the mean test value is equal to the LSL or USL and $s = 0$.

In cases where the Contractor is to cease paving operations based upon an Acceptance result or payfactor, the Contractor will submit a corrective action plan to the Department. The Department will only allow the continuation of paving operations when it is satisfied the corrective action will result in an improvement in results. The Department may require the submittal of a passing verification sample to allow further production.

401.201 Pay Adjustment - Method A & C The Department will use the following criteria for pay adjustment at the completion of the Lot using the pay adjustment factors under Section 106.7 - Quality Level Analysis:

Density Upon conclusion of each lot, density results shall be examined for statistical outliers as stated in Section 106.7.2. If the pay factor for Density falls below 0.80, all of the cores will be randomly re-cut by Sublot. A new pay factor will be calculated that combines all initial and retest results. If the resulting pay factor is below 0.80, the entire Lot shall be removed and replaced with material meeting the specifications at no additional cost to the Department, except that the Department may, when it appears that there is a distinct pattern of defective material, isolate any defective material by investigating each mix sample sublot and require removal of defective mix sample sublots only, leaving any acceptable material in place if it is found to be free of defective material. Pay factors equal to or greater than the reject level will be paid accordingly.

Mix Properties The Department will determine a pay factor (PF) using the applicable Acceptance Limits. If all three pay factors for PGAB Content, VMA at N_{design} , and Voids at N_{design} fall below 0.80 for Method A, then the composite pay factor for PGAB Content, VMA at N_{design} , and Voids at N_{design} shall be 0.50.

The following variables will be used for pay adjustment:

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

The Department will determine a pay adjustment using Table 12: Pay Adjustment Calculations as follows:

TABLE 12: PAY ADJUSTMENT CALCULATIONS – METHOD A & C

| Acceptance Method | Mix Properties / Gradation | Density |
|-------------------|---|--|
| Method A | $PA = (\text{Voids @ } N_d \text{ PF} - 1.0)(Q)(P) \times 0.20 + (\text{VMA @ } N_d - 1.0)(Q)(P) \times 0.20 + (\text{PGAB Content PF} - 1.0)(Q)(P) \times 0.10$ | $PA = (\text{density PF} - 1.0)(Q)(P) \times 0.50$ |
| Method C | $PA = (\% \text{ Passing Nom. Max PF} - 1.0)(Q)(P) \times 0.05 + (\% \text{ passing 2.36 mm PF} - 1.0)(Q)(P) \times 0.05 + (\% \text{ passing 0.30 mm PF} - 1.0)(Q)(P) \times 0.05 + (\% \text{ passing 0.075 mm PF} - 1.0)(Q)(P) \times 0.10 + (\text{PGAB Content PF} - 1.0)(Q)(P) \times 0.25$ | $PA = (\text{density PF} - 1.0)(Q)(P) \times 0.50$ |

In addition, for 9.5 mm NMAS mixtures the following pay adjustment shall also apply:

The average percent passing for the 0.075 mm sieve shall be evaluated for each Lot. If the average is greater than 6.5%, a pay adjustment according to Table 13 below shall apply in addition to the other pay adjustments for the given method of testing.

TABLE 13: 0.075 MM SIEVE PAY ADJUSTMENT

| Average Percent Passing 0.075 mm Sieve | Pay Adjustment |
|--|----------------|
| 6.6% - 7.0% | -5% |
| > 7.0% | -10% |

The Department shall notify the Contractor whenever the average of at least three samples in a given Lot is greater than 6.5%.

401.21 Acceptance Method B & D Unless otherwise stated in the 403 special provision, the Lot shall be the entire mix quantity per item per contract. The Department will sample once per subplot per pay item on a statistically random basis, test, and evaluate in accordance with the Acceptance Properties in Table 14. The Department will obtain samples of Hot Mix Asphalt Pavement in conformance with AASHTO R 97, Sampling Asphalt Mixtures, and the MaineDOT Policies and Procedures for HMA Sampling and Testing. The Contractor shall transport the samples in containers provided by the Department to the designated MaineDOT Laboratory within 48 hours except when otherwise noted in the project specific QCP or as directed by the Resident. Failure to deliver an acceptance sample to the designated acceptance laboratory will be considered the second incident under 106.4.6–QCP Non-Compliance. Target values shall be as specified in the JMF. The Department will withhold reporting of the test results for the Acceptance sample until 7:00 AM, on the second working day of receipt of the sample, or after receipt of the Contractors results of the Acceptance sample split.

TABLE 14: ACCEPTANCE PROPERTIES – METHOD B & D

| Properties | Point of Sampling | | Test Method |
|---------------------------|------------------------|------------------------|--------------|
| | Method B | Method D | |
| Gradation | Paver Hopper | Paver Hopper or Truck | AASHTO T 30 |
| PGAB Content | Paver Hopper | Paver Hopper or Truck | AASHTO T 308 |
| % TMD (In-Place Density) | Mat behind all Rollers | Mat behind all Rollers | AASHTO T 269 |
| Voids at N_{design} | Paver Hopper | N/A | AASHTO T 312 |
| VMA at N_{design} | Paver Hopper | N/A | AASHTO T 312 |
| Fines to Effective Binder | Paver Hopper | N/A | AASHTO T 312 |
| VFB | Paver Hopper | N/A | AASHTO T 312 |

TABLE 15: LOT AND SUBLOT SIZES – METHOD B & D

| Lot Size* | Entire mix quantity per item per contract | |
|---------------------------|---|--------------------------|
| Maximum Sublot Size – Mix | (Lot size \leq 1000 tons) | (Lot size $>$ 1000 tons) |
| | 250 ton | 750 ton |
| Sublot Size – Density | 125 ton (Max 5 Sublots) | 250 ton |

*General – Lot and Sublot size may be adjusted to accommodate the work scope and schedule, or as otherwise agreed upon at the Prepave Meeting

TABLE 16: ACCEPTANCE LIMITS – METHOD B & D

| Property | USL and LSL | |
|------------------------------------|--|-----------------|
| | Method B | Method D |
| Percent Passing 4.75 mm and larger | Target +/- 7% | Target +/- 7% |
| Percent Passing 2.36 mm sieve | Target +/- 5% | Target +/- 7% |
| Percent Passing 1.18 mm sieve | Target +/- 5% | Target +/- 5% |
| Percent Passing 0.60 mm sieve | Target +/- 4% | Target +/- 4% |
| Percent Passing 0.30 mm sieve | Target +/- 3% | Target +/- 3% |
| Percent Passing 0.075 mm sieve | Target +/- 3% | Target +/- 3% |
| PGAB Content | Target +/- 0.5% | Target +/- 0.5% |
| Voids at N_{design} | 4.0% +/- 2.0% | N/A |
| Fines to Effective Binder | 0.9 +/- 0.3 | N/A |
| VMA at N_{design} | LSL from Table 1 | N/A |
| VFB | Table 1 plus a 4% production tolerance for USL | N/A |
| % TMD (In-place Density) | 94.5% +/- 2.5% | LSL of 92.0% |

The Contractor shall cease paving operations whenever two consecutive Method B or D tests fall outside specification limits on the same property. The Contractor will submit a corrective action plan to the Department. The Department will only allow the continuation of paving operations when it is satisfied the corrective action will result in an improvement in results. The Department may require the submittal of a passing verification sample to allow further production.

401.211 Pay Adjustment - Method B & D For items accepted under Method B or D, if the mix is within the tolerances listed in Table 16, the Department will pay the contract unit price, otherwise pay adjustments as shown in Table 17 shall be applied to the quantity of mix represented by the test. The Contractor shall cut one 6 in core per subplot unless otherwise noted in Section 403 - Hot Mix Asphalt Pavement. If the density result is not within the specified limits the disincentive shall apply. If the subplot density is less than 88.5 percent or greater than 99.0 percent of the subplot TMD, two additional cores shall be cut at random locations determined by the Department. If either of the additional cores has a density less than 88.5 percent or greater than 99.0 percent of the subplot TMD, the subplot shall be removed and replaced at no cost to the Department; otherwise, the average of the three cores will be used to determine the subplot pay adjustment.

TABLE 17: PAY ADJUSTMENTS – METHOD B & D

| Property | Method B | | Method D | |
|--------------------------------|--------------------------------|--------|------------------|--------|
| Percent Passing 2.36 mm sieve | N/A | | -2.0% | |
| Percent Passing 0.30 mm sieve | N/A | | -1.0% | |
| Percent Passing 0.075 mm sieve | -2.0% | | -2.0% | |
| PGAB Content | -5.0% | | -5.0% | |
| Voids at N_{design} | -3.0% | | N/A | |
| % TMD (In-place Density) | 91.5% - 91.9% or 97.1% - 97.5% | -5.0% | 91.5% - 91.9% | -5.0% |
| | 90.5% - 91.4% or 97.6% - 98.5% | -10.0% | 90.5% - 91.4% | -10.0% |
| | 89.5% - 90.4% or 98.6% - 99.0% | -20.0% | 89.5% - 90.4% | -20.0% |
| | 88.5% - 89.4% | -30.0% | 88.5% - 89.4% | -30.0% |
| | <88.5% or >99.0% | Reject | <88.5% or >99.0% | Reject |

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

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

The Department will pay for the work specified in Section 401.12, for the HMA used, except that cleaning objectionable material from the pavement and furnishing and applying bituminous material to joints and contact surfaces is incidental. Payment for this work under the appropriate pay items shall be full compensation for all labor, equipment, materials, and incidentals necessary to meet all related contract requirements, including design of the JMF, implementation of the QCP, obtaining core samples, transporting cores and samples, filling core holes, applying emulsified asphalt to joints, and providing testing facilities and equipment. The Department will make a pay adjustment for quality as specified in Section 401.20 Acceptance Method A & B or 401.21 Acceptance Method C & D.

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

Contractor wishes to retain the option of requesting dispute testing of the initial Acceptance sample, the Contractor will test their split of the Acceptance sample in accordance with applicable AASHTO procedure and accepted supplemental practice as described in the Department's HMA Sampling and Testing Policies and Procedures manual. The Contractor shall report their results to the Resident, with a copy to Contractor.mainedot@maine.gov by 7:00 AM, on the second working day from time of QA sampling, otherwise dispute resolution will not be initiated. The Department's dispute resolution split sample will be properly labeled and stored for a period of at least two weeks after it has been reported, or until the sample is tested. The properties eligible for dispute and the respective variances are shown in Table 18.

The Contractor may dispute the Department's Acceptance results and request that the dispute resolution split sample be tested by notifying the Department's Resident and QA Engineer in writing within two working days after the results of the Acceptance test are reported. The following shall be provided in the request:

- Acceptance sample reference number
- The specific test result(s) or property(ies) being disputed, and
- The complete, signed report of the Contractor's testing (In a lab certified by the NETTCP and MaineDOT) of their split of the Acceptance sample indicating that the variances in Table 18 for the specific test result(s) or property(ies) were exceeded.

TABLE 18: DISPUTE RESOLUTION VARIANCE LIMITS

| Property | Method A & B | Method C & D* | Variance Limits |
|---|--|---------------|-----------------|
| PGAB Content | Yes | Yes | +/- 0.4% |
| G _{mb} | Yes | No | +/- 0.030 |
| G _{mm} | Yes | No | +/- 0.020 |
| Voids at N _{design} | Only if G _{mb} or G _{mm} is not disputable | No | +/- 0.8% |
| VMA at N _{design} | Only if G _{mb} or G _{mm} is not disputable | No | +/- 0.8% |
| Percent Passing 4.75 mm and larger sieves | No | Yes | +/- 4.0% |
| Percent Passing 2.36 mm to 0.60 mm sieves | No | Yes | +/- 3.0% |
| Percent Passing 0.30 mm to 0.15 mm sieves | No | Yes | +/- 2.0 % |
| 0.075 mm sieve | Only for 9.5 mm NMA mixtures | Yes | +/- 0.8% |

*Disputes will not be allowed on Item 403.209

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

SECTION 402 - PAVEMENT SMOOTHNESS

402.00 Smoothness Projects Projects to have their pavement smoothness analyzed in accordance with this Specification will be so noted in Special Provision 403 - Hot Mix Asphalt Pavement.

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

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

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

- Bridge decks and joints (no smoothness measurements will be taken within 100 ft of bridge joints)
- Acceleration and deceleration lanes
- Shoulders and ramps
- Side streets and roads
- Within 100 ft of transverse joints at the beginning and end of the project
- Within 100 ft of railroad crossings
- Urban areas with speed limits of 30 mph or lower

Each lot shall have 2 measurements made in each wheel path. The average of the 4 measurements will determine the smoothness for that lot. The smoothness measurements will be statistically evaluated for pay factors as described in Subsection 106.7 - Quality Level Analysis, using the specification limits shown below.

TABLE 1: ACCEPTANCE LIMITS

| Level | USL |
|-------|------------|
| I | 55 in/mile |
| II | 65 in/mile |
| III | 75 in/mile |

Computation of Smoothness Pay Adjustment:

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

where:

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

PF = smoothness pay factor for the Lot

P = Contract unit price for surface pavement

PA = pay adjustment

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

Localized surface tolerance defects will be subject to the provisions outlined in Section 401.11 Surface Tolerances.

Payment will be made under:

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

SECTION 403 - HOT MIX ASPHALT PAVEMENT

403.01 Description This work shall consist of constructing one or more courses of Hot Mix Asphalt pavement on an approved base in accordance with these specifications, and in reasonably close conformity with the lines, grades, thickness and typical cross sections shown on the plans or established. The HMA pavement shall be composed of a mixture of aggregate, filler if required, and asphalt material.

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

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

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

403.05 Basis of Payment The accepted quantities of hot mix asphalt pavement will be paid for at the contract unit price per ton for the mixtures, including hot mix asphalt material complete in place. Method A, Method B, Method C and Method D shall be used for acceptance as specified in Section 401 - Hot Mix Asphalt Pavements. (See Complementary Notes, Section 403 - Hot Mix Asphalt Pavement, for Method location).

Payment will be made under:

| <u>Pay Item</u> | <u>Pay Unit</u> |
|--|-----------------|
| 403.102 Hot Mix Asphalt Pavement for Special Areas | Ton |
| 403.206 Hot Mix Asphalt, 25 mm Nominal Maximum Size | Ton |
| 403.207 Hot Mix Asphalt, 19.0 mm Nominal Maximum Size | Ton |
| 403.2071 Hot Mix Asphalt, 19.0 mm Nominal Maximum Size (Polymer Modified) | Ton |
| 403.2072 Asphalt Rich Hot Mix Asphalt, 19.0 mm Nominal Maximum Size (Asphalt Rich Base and Intermediate course) | Ton |
| 403.208 Hot Mix Asphalt, 12.5 mm Nominal Maximum Size | Ton |
| 403.2081 Hot Mix Asphalt - 12.5 mm Nominal Maximum Size (Polymer Modified) | Ton |
| 403.209 Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (Sidewalks, Drives, Islands & Incidentals) | Ton |
| 403.210 Hot Mix Asphalt, 9.5 mm Nominal Maximum Size | Ton |
| 403.2101 Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (Polymer Modified) | Ton |
| 403.2104 Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (Thin Lift Surface Treatment) | Ton |
| 403.211 Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (Shimming) | Ton |
| 403.2111 Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (Shimming, Polymer Modified)) | Ton |
| 403.212 Hot Mix Asphalt, 4.75 mm Nominal Maximum Size | Ton |
| 403.213 Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (Base and Intermediate Base course) | Ton |
| 403.2131 Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (Base and Intermediate Base course, Polymer Modified) | Ton |
| 403.2132 Asphalt Rich Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (Base and Intermediate Base course) | Ton |
| 403.214 Hot Mix Asphalt, 4.75 Nominal Maximum Size (5/8" Surface Treatment) | Ton |

**Norridgewock Avenue & Pleasant Street
Sidewalk Construction & Drainage Improvements
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SPECIAL PROVISION**SECTION 403****HOT MIX ASPHALT**

| Desc. Of Course | Grad Design. | Item Number | Total Thickness | No. Of Layers | Comp. Notes |
|--|---------------------|--------------------|------------------------|----------------------|---------------------------|
| <u>Full Travel Lane & Adjacent Shoulder Construction</u> | | | | | |
| <u>2" Base w/ 3" Mill & 3" HMA Overlay (As Indicated)</u> | | | | | |
| Wearing | 12.5 mm | 403.208 | 1 ½" | 1 | 4,10,12,30,31,33,34,42,52 |
| Intermediate | 12.5 mm | 403.213 | 1 ½" | 1 | 4,10,12,30,31,33,34,42,52 |
| Base | 12.5 mm | 403.213 | 2" | 1 | 4,10,12,30,31,34,36,42,52 |
| <u>Partial Travel Lane & Adjacent Shoulder Construction</u> | | | | | |
| <u>2" Base w/ 3" Mill & 3" HMA Overlay (As Indicated)</u> | | | | | |
| Wearing | 12.5 mm | 403.208 | 1 ½" | 1 | 4,10,12,30,31,34,37,42,52 |
| Intermediate | 12.5 mm | 403.213 | 1 ½" | 1 | 4,10,12,30,31,34,37,42,52 |
| Base | 12.5 mm | 403.213 | 2" | 1 | 4,10,12,30,31,34,38,42,52 |
| <u>Shoulder ONLY Construction</u> | | | | | |
| <u>5" HMA (As Indicated)</u> | | | | | |
| Wearing | 12.5 mm | 403.208 | 1 ½" | 1 | 4,10,12,30,31,35,39,42,52 |
| Base | 12.5 mm | 403.213 | 3 ½" | 2 | 4,10,12,30,31,35,39,42,52 |
| <u>Drives, Sidewalks, Misc. (As Indicated or Directed)</u> | | | | | |
| Wearing | 9.5 mm | 403.209 | 2" - 3" | 1/more | 3,20,30,32 |

COMPLEMENTARY NOTES

3. The design traffic level for mix placed shall be 0 to <3 million ESALS. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **65 gyrations**.
4. The aggregate qualities shall meet the design traffic level of 3 to <10 million ESALS for mix placed under this contract. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **65 gyrations**.
10. Section 106.6 Acceptance, (2) **Method D** as specified Section 401.21 - Quality Assurance Methods B and D.
12. A Pre-Pave Meeting is **required** prior to the commencement of work paid under this item. The Contractor shall submit an approved Mix Design and a QCP (if required) to the Resident no less than 14 days prior to the beginning of work on this item.
20. The combined aggregate gradation required for this item shall be classified as a 9.5mm Thin Lift Mixture (TLM) mixture, using the Aggregate Gradation Control Points as defined in 703.09.
30. The incentive/disincentive provisions for density shall not apply. Rollers shall meet the requirements of this special provision. The use of an oscillating steel roller shall be required to compact all mixtures pavements placed on **bridge decks**.
31. A **Quality Control Technician (QCT)** shall be required for all roadway mixtures placed under this contract. A daily paving report, summarizing the mixture type, mixture temperature, equipment used, environmental conditions, and number of roller passes, shall be recorded and signed by the QCT and presented to the Department's representative by the **end of the working day**. An approved release agent is required to ensure the mixture does not adhere to hand tools, rollers, pavers, and truck bodies. The use of petroleum based fuel oils, or asphalt stripping solvents will not be permitted.

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32. Compaction of the new Hot Mix Asphalt Pavement will be obtained using a minimal roller train consisting of a **3-5 ton** vibratory roller. Areas less than 2 feet wide shall be compacted with a minimum of a **150 pound** plate compactor.
33. Compaction of the new Hot Mix Asphalt Pavement will be obtained using a minimal roller train consisting of a **10 ton** vibratory, **12 ton** pneumatic, and a **3-5 Ton** finish roller for roadway work.
34. Roadway HMA mixtures shall be placed with a track or rubber tire mounted highway class paver with a minimum tractor weight of 28,000 pounds, equipped with a minimum main screed width of eight feet.
35. Roadway HMA mixtures shall be placed with a track or rubber tire mounted, self-contained, self-propelled paver of sufficient size to place Hot Mix Asphalt Pavement in the shoulder or similar construction.
36. The Contractor shall saw cut/mill at a consistent width of **4 feet from centerline** to accommodate an **8' paver** and a minimal roller train consisting of a **10 ton** vibratory, **12 ton** pneumatic, and a **3-5 ton** finish roller.
37. The Contractor shall mill at a consistent width of **5.5 feet from centerline** to accommodate an **8' paver** and a minimal roller train consisting of a **10 ton** vibratory, **12 ton** pneumatic, and a **3-5 ton** finish roller.
38. The Contractor shall saw cut/mill at a consistent width of **6.5 feet from centerline** to accommodate an **8' paver** and a minimal roller train consisting of a **10 ton** vibratory, **12 ton** pneumatic, and a **3-5 ton** finish roller.
39. The Contractor shall saw cut/mill at a consistent width of **11.0 feet from centerline** to accommodate a **paver** and a roller train consisting of a **3-5 ton** vibratory roller.
42. The Contractor shall be responsible to plan its saw cutting and construction sequencing so that longitudinal joints are parallel to the existing centerline and **do not** fall within the **vehicle wheel path**. Lanes shall be constructed in a manor so that no crown is created at the match point (straight graded) unless otherwise directed. Payment for any additional pavement removal required will be paid under the appropriate contract items.
52. A tack coat of a RS-1, Item #409.15 shall be applied along the longitudinal centerline construction joint, on the horizontal surface immediately adjacent to the construction joint, and in a minimum width of one foot. The rate of application shall be approximately 0.050 to 0.075 G/SY. This application shall be in addition to the normal application of tack coats to the construction joint face and horizontal surfaces prior to placing a new lift.

Tack Coat

A tack coat of emulsified asphalt, RS-1 or RS-1h, Item 409.15 shall be applied to any existing pavement at a rate of approximately 0.030 gal/yd², and on milled pavement approximately 0.05 gal/yd² prior to placing a new course. A fog coat of emulsified asphalt shall be applied between shim /base courses and surface course as well as to any bridge membrane prior to the placement of HMA layers at a rate not to exceed 0.030 gal/yd². Cleaning objectionable material from the pavement and furnishing and applying Item 409.15 bituminous materials to joints and contact surfaces is **incidental to the contract paving items**.

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

| CLASS OF CONCRETE | ITEM NUMBER | DESCRIPTION | P | METHOD |
|----------------------|----------------|---------------------------------------|---|--------|
| A | 608.26 | Curb Ramp Detectable Warning Field | - | C |
| A | 609.21 | Concrete Slipform Curb | - | C |
| A | 609.219 | Concrete Slipform Curb – Terminal End | - | C |

P values listed above reflect the price per cubic yard (yd³) for all pay adjustment purposes.

SPECIAL PROVISION
SECTION 602
FLOWABLE CONCRETE FILL

602.01 Description Provide and install flowable fill material in authorized excavation(s) as shown on the Drawings and/or as specified herein.

Related Work Specified Elsewhere: Earthwork, excavation, backfilling, compaction, piping, manholes, testing and pavement are specified in the appropriate sections of this Division.

602.02 Materials Materials shall meet the following requirements:

General Requirements:

1. Perform work in accordance with ACI 229, Controlled Low-Strength Materials, or as specified here-in.
2. Portland Cement, Type I or II - ASTM C150.
3. Fly Ash (LOI limits do not apply) - ASTM C618.
4. Fine Aggregate/Mineral Filler – ASTM C 33, ASTM or non-ASTM sands or mineral fillers with 100% passing the 1/2" sieve may be considered which produce an acceptable flow and desired performance characteristic. Soils with fine clays will not be considered. All other than ASTM C 33 materials must receive prior approval from the Engineer.
5. Air Entraining Admixtures - As Per Manufacturer's Specifications.
6. Light Weight Cellular Admixture - As Per Manufacturer's Specifications. Water Potable or ASTM C 94.
7. Preformed Foam – Procedures for evaluation ASTM C 796 and ASTM C 869.

Standard Flowable Fill:

1. Compressive strength at 28 days less than 1200 psi

Excavatable Flowable Fill:

1. Compressive strength at 28 days between 100-200 psi.
2. Mix:
 - a. Portland Cement: 50-100 lb/yd³
 - b. Fly Ash: up to 350 lb/yd³, lime content not to exceed 10% by weight.
 - c. Fine Aggregate/Mineral Filler: 2000-3000 lb/yd³
 - d. Water: 325-600 lb/yd³, for Class F fly ash and cement-only mixtures up to 1000 lb/yd³ may be acceptable.
3. Low Density Flowable Fill:
 - a. The preformed foam shall produce stable air cells capable of resisting the chemical and physical forces imposed during mixing, placing and setting.
 - b. Submit the foaming agent Manufacturer's recommended mixing procedures and approved mixing equipment to the Engineer.
 - c. Methods of placement must not cause a change in density due to loss of air content beyond predictable ranges.

602.03 General

Execution Bulk Flowable Fill Backfill

1. Flowable fill shall be produced and delivered using standard concrete construction equipment and practices.
2. Placing flowable fill shall be by chute, pumping, or other method approved by the Engineer.
3. The flowable fill shall be discharged directly from the mixer truck into the space to be filled.
4. No flowable fill shall be placed on frozen ground.
5. At the time of placement, the flowable fill shall have a temperature of at least 40 degrees F.
6. When flowable fill is placed in freezing temperatures, the material should be covered with blankets and protected from freezing until hardening.
7. The Contractor shall provide all necessary means to confine the material within a designated space.
8. Formed walls or other bulkheads shall be constructed to withstand hydrostatic pressure exerted by flowable fill where necessary and as determined by the Engineer. The Contractor is responsible to ensure underground utilities, including but not limited to pipes, tanks, structures, cables, etc. are secured to prevent floating.
9. No compaction or vibration of the material is required.
10. Where flowable fill is being used as pipe bedding it shall be placed in lifts to ensure lateral support of the pipe develops along the side of the pipe before continuing with the backfilling.
11. When paving over flowable fill in cold weather, any frozen material on the surface shall be scraped off and removed prior to paving.
12. The flowable fill shall be left undisturbed until the material obtains sufficient strength. Sufficient strength for paving is achieved when the flowable fill can support the weight of foot traffic without apparent deformation. Sufficient strength for supporting vehicular traffic is 2.5 tons per square foot as measured by a pocket penetrometer.
13. Trenches shall be covered and barricaded until hardening occurs.

Execution Bulk Flowable Fill Backfill

1. Flowable fill for pipe abandonment shall be excavatable or low density flowable fill as detailed in Section 2.1.
2. Abandoning and grouting of water lines must not occur until all existing water mains and services have been transferred to a relocated water line or another line as designated in the Contract Documents. The Contractor will be responsible for the satisfactory coordination of the pipe abandonments with other construction and activities in the area. Delays in work resulting from lack of coordination will not be cause for additional compensation. Any work involving or impacting asbestos concrete pipe must be in accordance with the procedures outlined in the approved specifications for this project and will comply with all federal, state, and local laws, ordinances and regulations regarding the management of asbestos containing materials.
3. Remove all water line appurtenances, such as hydrants, valves and valve casing and castings. These appurtenances must be returned to the designated utility representative.

4. Make cuts, install bulkheads, vents to allow for air release.
5. Remove any free standing water prior to starting fill placement.
6. Place grout/flowable fill using concrete or grout pumps capable of continuous delivery at planned placement rate to fill volume between placement points not to exceed 500 linear ft. at a time. Pump flowable fill through bulkheads constructed for placement to contain grout in line to be abandoned. These bulkheads will be used for injection points or vents during placement. Place grout under pressure into properly vented open system until grout emerges from vent pipes indicating pipe is completely filled. Pumping grout must be completed under sufficient pressure to overcome friction and to fill water main from downstream to upstream end. Remediate areas where flowable fill did not fill voids in water main by pressure grouting from inside water main or from surface if necessary. Plug each end of the water main being abandoned. Ensure that concrete is around plug/bulkhead and around pipe including bedding area such that it is not penetrable by groundwater and that bedding at this location is not a conduit for groundwater. The method of installation must be able to meet the requirement of completely filling the existing water main and any voids adjacent to it.
7. Remove, transport, and, dispose of spoils. Spoils, including pipe, must be hauled to a facility permitted to accept the material. The method must provide for the release of air. When intermediate points are required to be constructed for the abandonment of the system, they must be a part of the abandonment project process. The method must provide for the isolation of water mains to be grouted from water mains that are abandoned in place without grouting as shown on the plans.
8. Submit Mix designs for each mixture to be provided at least 15 days prior to production.

602.04 Method of Measurement Excavatable Flowable fill for abandoning in-place water mains and for pipe support (excavatable fill) at pipeline crossings measured for payment shall be the actual cubic yards of flowable fill placed for either pipe abandonment or trench pipe support (excavatable fill).

602.05 Basis of Payment The Contract unit price per cubic yard of flowable fill shall constitute full compensation for all labor, equipment, and materials necessary to complete this work including placement of the fill, including pumping, pipe preparation, curing, backfill, non-pressurized pipe caps, and all other requirements for safely capping and plugging the pipe.

Payment will be made under:

| | <u>Pay Item</u> | <u>Pay Unit</u> |
|--------|------------------------|-----------------|
| 602.30 | Flowable Concrete Fill | CY |

SPECIAL PROVISION
SECTION 604
MANHOLES AND CATCH BASINS

This section is amended by addition of the following:

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

604.02 Materials Materials shall be in accordance with Subsection 604.02

604.03 Construction Requirements Construction requirements shall be in accordance with Subsection 604.03

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

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

Payment will be made under:

| <u>Pay Item</u> | | <u>Pay Unit</u> |
|-----------------|---------------------------|-----------------|
| 604.0957 | 96" Catch Basin Type B1-C | EA |
| 604.2621 | 60" Catch Basin Type B5-C | EA |

SPECIAL PROVISION
SECTION 609 – CURB
STRUCTURAL CONCRETE
(Slipform Concrete Curb)

609.01 Description This work shall consist of furnishing and placing Slipform Concrete Curb in close conformity with the plans, or as authorized by the Resident.

609.02 Materials Except as provided below, the materials used shall meet the requirements specified in Section 700 – Materials:

| | |
|--|--------|
| Portland Cement and Portland Pozzolan Cement | 701.01 |
| Water | 701.02 |
| Fine Aggregate for Concrete | 703.01 |
| Coarse Aggregate for Concrete | 703.02 |
| Air Entraining Admixtures | 703.03 |

The aggregate shall conform to the requirements of Subsections 703.01 and 703.02.

A mix design for the Portland Cement Concrete shall be submitted to the Resident meeting the requirements of Class A or Class LP with the exception that permeability requirements shall be waived. Entrained air content of Slipform curbing shall be 4.0% to 7.0%.

Partially discharged loads may be retempered with water provided the maximum water to cement ratio is not exceeded.

Maximum concrete temperature at placement shall be 90 F.

Proposed mix designs may contain polypropylene fibers.

609.03 General

- a. Preparation of Base Before placing the curb, the foundation course shall be thoroughly cleaned of all foreign and objectionable material. The Contractor shall not place Slipform Concrete Curb on a wet or frozen base. Base pavement for placing epoxy resin binder and slipform curbing may be in an SSD condition but no standing water shall be allowed. String or chalk lines shall be positioned on the prepared base to provide guide lines. For HMA or PCC base the foundation shall be uniformly painted with an epoxy resin adhesive that meets AASHTO M 235, Type I, II, III, IV, or V. Proposed Epoxy Resin Adhesive from the Departments QPL shall be submitted with the concrete mix design for approval prior to placement and used in accordance with manufacturers recommendations.
- b. Placing Concrete shall be placed with an approved Slipform machine that will produce a finished product according to the design specified in the plans. For cold weather Slipforming, the outside temperature must be at least 36°F (2.2°C) and rising. The curb shall be placed on a firm, uniform bearing surface, shall conform to the section profile specified in the plans, and shall match the appropriate grade. Expansion joints will be provided at ends of curve radii, or wherever the curb meets rigid structures such as building

foundations or fire hydrants. Contraction joints will be placed at 10 foot (3 m) intervals using sawing methods, which shall cut 1-3" into the concrete. Joints shall be constructed perpendicular to the subgrade and match other joints in roadways, sidewalks or other structures when applicable.

- c. Curing and Sealing Proper curing shall be insured through the use of either a combination curing/sealing compound spray that meets ASTM 1315 Type 1-Class A, or a curing compound spray that meets ASTM 309 type 1-D – Class A. Curing may also be accomplished by the methods specified in Section 502.15 of the Specifications.

If a combination curing/sealing compound spray is not used, a separate sealing compound from the MaineDOT Qualified Products List for a Type 2 sealer shall be applied after the concrete has cured.

- d. Protection Slipform curb must be adequately protected after placement. The concrete shall be allowed to cure for at least 72 hours. During cold weather conditions, when temperatures drop below the required temperature of 36°F (2.2°C) after placement, curbing shall be protected by concrete blankets or a combination of plastic sheeting and straw. After any placement of Slipform curb, regardless of weather conditions, the placed curb shall be adequately protected by traffic control devices as necessary.
- e. Marking When required, the curb shall be painted and coated with glass beads in accordance with Section 627 - Pavement Marking. Curb designated to be painted shall not be sealed unless a combination curing/sealing compound is used.
- f. Acceptance Curb shall be accepted or rejected based on finish, alignment, entrained air content, and compressive strength. Acceptance testing for air content and compressive strength will be under 502 Method C. All damaged curb shall be removed and replaced at the Contractor's expense.

609.04 Method of Measurement Concrete Slipform curb will be measured by the linear foot along the front face of the curb at the elevation of the finished pavement, complete in place and accepted.

609.05 Basis of Payment The accepted quantities of curb will be paid for at the contract unit price per linear foot as specified.

There will be no separate payment for concrete, sealing, incidental materials, or labor needed to install the curb, but these will be considered included in the work of the related curb.

Removal of existing curb and necessary excavation for installing curb will not be paid for directly but shall be considered to be included in the curb pay item. Base and Subbase material will be paid for under Section 304 - Aggregate Base and Subbase Course. Backing up machine laid curb is incidental to the curb items. Loam, as directed, will be paid under 615 – Loam.

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Norridgewock Ave. & Pleasant St.
WIN 25277.00
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Payment will be made under:

| | <u>Pay Item</u> | <u>Pay Unit</u> |
|---------|---------------------------------------|-----------------|
| 609.21 | Concrete Slipform Curb | Linear Foot |
| 609.219 | Concrete Slipform Curb - Terminal End | Linear Foot |

SPECIAL PROVISION
SECTION 613
(Turf Reinforcement Mat)

Supplement SECTION 613 - EROSION CONTROL BLANKETS with the following:

613.01 Description This work shall consist of furnishing and placing a Turf Reinforcement Mat (TRM) that is in reasonably close conformity with the locations called for on the Plans or as authorized. TRM shall be installed over a prepared Compost Blanket and subsequently seeded by hydraulically applying Flexible Growth Medium (FGM) and seed mix as set forth in Special Provisions 615 and 618, respectively.

613.02 Materials TRM shall be Enkamat® 7010, Futerra® 7010, or an approved equivalent permanent Turf Reinforcement Mat. The TRM shall be made from 100% synthetic material and contain no biodegradable or photodegradable components or materials.

The TRM shall be a homogeneous, three-dimensional matrix made of continuous monofilament yarns which are thermally fused at the crossover points to provide a structure that will maintain its three-dimensional stability without laminated or stitched layers. No nettings or stitching shall be permitted. The TRM shall have a sufficient Area Holding Capacity and a minimum 95% open space available for soil, FGM and root interaction. The TRM shall not lose its structural integrity and shall not unravel or separate when TRM is cut in the field.

The TRM shall exhibit no buoyancy factor (i.e., the specific gravity of the fibers used should be greater than 1.0) to allow the TRM to maintain intimate contact with the soil (particularly between fasteners) under low flow or submerged conditions.

The TRM shall meet the following property values:

| PROPERTY | TEST METHOD | MINIMUM AVERAGE ROLL VALUE (MARV) |
|-----------------------------------|--------------------|-----------------------------------|
| Mass Per Unit Area | ASTM D6566 | 11 oz/yd ² |
| Thickness | ASTM D6525 | 0.6 in |
| Tensile Strength - MD | ASTM D6818 | 175 lb/ft |
| UV Resistance (2000 hours) | ASTM D6818 & D7238 | 80.0 % |
| Resiliency | ASTM D6524 | 80.0 % |
| Functional Longevity ¹ | Observed | > 36 months |

1. Functional longevity is an estimate of product functionality and is dependent upon moisture, light, microbial and other environmental conditions.

613.031 Delivery, Storage, and Handling Deliver materials and products in UV and weather-resistant factory-labeled packages. Store and handle in strict compliance with manufacturer's instructions and recommendations. Protect from damage, weather, excessive temperatures and construction operations. Handle such that soil does not fill, clog, or otherwise reduce the infill area intended for the FGM.

613.04 Seeding Seeding shall be in accordance with Special Provision 618 and shall be done after the TRM is in place and accepted.

613.041 Surface Preparation The TRM substrate shall be Compost Blanket installed in accordance with Special Provision 615 and accepted. The surface to receive the TRM shall be prepared to relatively smooth conditions and free of obstructions, rocks, dirt clods, roots, stumps, depressions, debris, and soft or yielding areas. Erosion features such as rills, gullies, etc. shall be graded out of the surface and replaced with compost blanket before TRM deployment. The surface shall be proofrolled with a static smooth-drum compactor before deploying TRM to ensure the TRM makes intimate contact with the soil and to ensure that the soil has been lightly compacted. Overcompaction shall be avoided.

613.05 Installation The TRM shall be installed in general conformance with the manufacturer's instructions unless otherwise specified on the Plans or herein. On slopes, the long dimension of the TRM shall be aligned with the direction of water flow (down the fall line). Adjacent sheets of TRM shall overlap a minimum of 4 inches with the upslope sheet lapped over the downslope sheet. Anchor devices (pins or staples) shall be installed at the minimum frequency of 2-1/2 anchors per square yard. Seams between sheets of TRM shall be anchored at 1-foot centers. The TRM shall extend a minimum of 8 feet past the crest of the steep slope and be anchored with additional staples/pins (maximum spacing of 1-foot on center); no anchor trench shall be cut. Care shall be taken during installation to avoid damage occurring to the TRM or the TRM becoming clogged because of the installation process. Should the TRM become damaged or clogged during installation, a TRM patch shall be placed over the damaged area extending 3 feet beyond the perimeter of the damage and secured with multiple anchor devices as approved by the Resident.

613.08 Method of Measurement TRM will be measured by the Square Yard based upon the in-place area of TRM installed and accepted.

613.09 Basis of Payment TRM of the type specified will be paid for at the contract unit price per Square Yard complete in place and accepted. Subgrade preparation, lap and scrap, and anchoring devices will be considered incidental to the contract unit price of TRM.

Payment will be made under:

| | <u>Pay Item</u> | <u>Pay Unit</u> |
|--------|------------------------------|-----------------|
| 613.40 | Turf Reinforcement Mat (TRM) | Square Yard |

SPECIAL PROVISION
SECTION 615
COMPOST BLANKET

615.01 Description

This work shall consist of furnishing and placing compost to create a uniform blanket (compost blanket) for seeding, in reasonably close conformity with the thicknesses and locations called for on the Plans or as authorized.

615.02 Materials

The recipe for the Compost Blanket shall be a 1:4 blend by volume of compost and loam (20% compost/80% loam) meeting the following requirements:

The loam shall meet requirements of Section 615.02 Loam or as approved by the Resident. The compost for the Compost Blanket shall meet the following requirements:

Compost shall be produced by the aerobic (biological) and biochemical decomposition of source separated organic materials.

Compost shall be derived from a mixture of the following feedstock materials:

Green material consisting of chipped, shredded, or ground vegetation, or clean processed recycled wood products (Maine Department of Environmental Protection (MaineDEP) Type IA, IB)

1. Manure
2. Mixed food waste (MaineDEP Type IB, IC)

Compost shall not be derived from mixed municipal solid waste and must be reasonably free of visible contaminants. Compost shall not contain paint, petroleum products, pesticides, industrial residuals or any other chemical residues harmful to animal life or plant growth. Compost shall not possess objectionable odors.

The compost shall be produced at a licensed facility as specified under MaineDEP Chapter 410: Composting Facilities that regulates Solid Waste Facilities. If exempt from State permitting requirements, the composting facility shall certify that it follows guidelines and procedures for production of compost meeting the environmental standards of Chapter 410.

Compost shall meet the following parameters:

| Parameter | Requirement |
|------------------------|---|
| Acidity Range | 5.5 pH to 8.5 pH |
| Moisture Content | 30-60% wet weight basis |
| Organic Content | 25-65% dry weight basis |
| Particle Size | 100% passing 3 inches 90-100% passing 1 inch 65-100% passing ¾ inch 0-75% passing ¼ inch |
| Physical Contaminant | <1% dry weight basis |
| Soluble Salts | < 5.0 mmhos/cm |
| Carbon: Nitrogen Ratio | 15-25:1 |
| Total Nitrogen | <1.7% |
| Organic N | <1.5% |
| Total Phosphorus | <1.0% |
| Total Potassium | <0.5% |
| Stability | <8 mg CO ₂ -C per g OM per day |

Maturity Test: The finished compost must be tested and classified as “Very Mature” by one of the following methods, or another method as approved by the resident:

| Method | Units | Very Mature | Mature | Immature |
|---|--------------------------------|-------------|-----------|----------|
| Oxygen Uptake Rate (OUR Test) | O ₂ / unit TS / hr | <0.4 | 0.4 - 1.3 | >1.3 |
| Specific Oxygen Uptake Rate (SOUR Test) | O ₂ / unit BVS / hr | <0.5 | 0.5 - 1.5 | >1.5 |
| Dewar Self-Heating Test | Temp. rise (°C) | <10 | 10 - 20 | >20 |
| Solvita Test | Index value | 7-8 | 5-6 | <5 |

Compost shall conform to all applicable specification requirements prior to its final placement on the project. The practice of culling deleterious or out-of-specification material after placement and/or grading in place will not be allowed.

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615.021 Submittal Requirements

The contractor shall provide MaineDOT with a 5-gallon compost sample at least 14 days prior to application for laboratory testing if deemed appropriate before use, and documentation from the compost supplier of the following information:

1. The source(s) of compost.
2. Laboratory results that show that the compost delivered to the project meets the compost parameters listed above. An independent Seal of Testing Assurance (STA) Program certified laboratory shall perform the analysis.
3. Compost supplier references documenting that they are fully permitted by MaineDEP to produce compost.

MaineDOT reserves the right to have an additional Soil Analysis Test to reject the material and request an alternative material that passes acceptable standards.

615.022 Batch Mix- Compost and Loam

Compost and Loam shall be combined in the correct portions by volume and mixed to produce a homogeneous product approved by the Resident.

615.023 Preconstruction Site Walk

The Contractor shall have a preconstruction site walk with the Resident and a representative from the MaineDOT Environmental Office Surface Water Resources Unit to review the installation area and to answer questions in regard to the layout and installation. The final locations and limits of compost blanket shall be laid out by the Contractor prior to installation for review and approval by the Resident.

615.03 Preparing Areas

All slopes and other areas where compost is to be placed shall be shaped to the required grade as shown in the Plans. The area shall be uniformly graded and be free of obstructions, rocks, clods, roots and soft or low-density pockets of material that could result in the concentration of surface water drainage. Prior to placing the compost blanket, the slopes shall be roughened by track-walking or rolling with a sheepsfoot roller.

615.04 Placing Compost Blanket

The Compost Blanket material shall be placed as shown in the Plans. The Compost Blanket shall be placed by the Contractor using conventional earthmoving equipment, distributed by hand using a shovel, by mechanical means such as a spreader unit (e.g., bulldozer, excavator, manure spreader), or pneumatic blower. The Compost Blanket shall be spread in a manner as to establish a loose, friable seed bed.

The Compost Blanket shall be spread to the uniform final thickness of 6" inches after light compaction with a 100 pound roller or other approved means after spreading with one of the aforementioned methods.

615.041 Seeding

The finished Compost Blanket shall be seeded using the “Seeding Hydromulch Growth Medium” per Special Provision 618.146. Areas shall be seeded the same Working Day as the placement of the Compost Blanket and before stabilization.

615.042 Stabilization

The Contractor shall maintain the Compost Blanket by repairing all damaged areas and by correcting all shifting of the blanket due to wind, water, or other causes. Turf Reinforcement Mat shall be installed over the seeded compost blanket prior to the end of each Working Day. Any additional disturbed soil stabilization shall be considered incidental to, and be completed in accordance with, Section 656.

615.05 Method of Measurement

Compost Blanket will be measured by the cubic yard complete in place after finishing to the required depths as shown on the plans or directed. Lateral measurements will be parallel with the slope of the ground. No additional payment shall be made for the disruption or replacement of any signage, utilities, or similar manmade items during Compost Blanket installation.

616.06 Basis of Payment

Compost blankets shall be paid for at the contract unit price per cubic yard, in place and accepted. No extra payment will be made for scarifying existing surface. Payment for the “Seeding Hydromulch Growth Medium” shall be made under Pay Item 618.146. Payment for Turf Reinforcement Mat shall be made under Pay Item 613.40. Payment for additional erosion control measures not explicitly mentioned in this special provision shall be considered incidental to the Temporary Erosion and Sediment Control item.

Payment will be made under:

| | <u>Pay Item</u> | <u>Pay Unit</u> |
|---------|-----------------|-----------------|
| 615.081 | Compost Blanket | Cubic Yard |

SPECIAL PROVISION
SECTION 618 - SEEDING
(Seeding Hydromulch Medium)

Supplement SECTION 618 - SEEDING with the following:

618.01 Description: This work shall consist of furnishing and installing Seeding Method Number 1 Park Mix per ***Standard Specifications*** with the substitution of Method 2 Seed and 717.04 c Cellulose Fiber Mulch with Proganics Biotic Soil Hydromulch Medium and Flexterra Flexible Growth Medium. An initial application of Proganics Biotic Soil Hydromulch Medium or equal shall be used as directed by the Resident, followed by two consecutive layers of seed following methodology for Flexterra Flexible Growth Medium with Seed.

618.02 Materials: Special Seeding Mix shall consist of the application of Special Seed Mix, lime or liquid lime, humic acid soil conditioner and fertilizer to loamed areas as directed by the Resident Engineer. Material shall meet the requirements of the following Sections of Division 700 – Materials:

| | |
|-------------------------------------|---------|
| Fertilizer | 717.01 |
| Humic Acid | 717.011 |
| Agricultural Lime Stone/Liquid Lime | 717.02 |
| Biotic Soil Hydromulch Medium | 717.05 |
| Proganics | |
| Flexterra | |

A dual application of Biotic Soil Hydromulch Medium such as Proganics Biotic Soil Conditioner or equal; and Flexterra Flexible Growth medium shall be used as directed by the Resident.

618.021 Delivery, Storage, and Handling Deliver materials and products in UV and weather-resistant factory-labeled packages. Store and handle in strict compliance with manufacturer's instructions and recommendations. Protect from damage, weather, excessive temperatures, and construction operations.

618.03 Rates of Application: shall be per ***Standard Specifications*** with the exception of Proganics Biotic Soil Hydromulch Medium which shall be applied at a starting base layer and a 50% seed layer, followed by applications of Flexterra with seed both at the rate of 2,500 lbs per acre/ 60 lbs/unit.

618.04 Time of Initial Seeding: Seeding dates shall be:
April 15 – July 15 (Spring) and August 15 - September 30 (Fall).

For seeding with Proganics, start with base layer together with fertilizer and lime, then add 50% of seed, and apply seed Proganics seed layer; then apply Flexterra with balance of seed with dual applications from different angles for a final finished product layer.

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Strictly comply with manufacturer's mixing and installation instructions and recommendations. A mechanically-agitated mixing device is recommended.

Use approved hydro-spraying machine with fan-type nozzle to achieve best soil coverage. Apply from opposing directions to ensure 100% surface coverage.

Apply in a 2-Step process as follows, to be completed in immediate succession such that the seed applied in Step 1 is not left unprotected, especially if precipitation is imminent:

- Step 1: apply an initial base layer of Proganics Soil Medium with fertilizer and lime, then apply a second layer with fertilizer, lime, and 50% of seed with the remaining amount of Proganics.
- Step 2: mix balance of seed with Flexterra Medium and apply to a finished product layer of 80s lb /Unit.

618.10 Maintenance and Acceptance Maintenance and acceptance of seeded areas shall be as set forth in Standard Specification Section 618.10.

618.11 Method of Measurement Seeding shall be measured for payment as set forth in standard specification Section 618.11.

618.12 Basis of Payment The Seeding Hydromulch Growth Medium will be paid for at the contract unit price per unit (1,000 square feet) complete in place and accepted. Payment for the Special Seed Mix will be made separately under Pay Item 618.143. All other materials will be considered incidental.

Payment will be made under:

| <u>Pay Item</u> | <u>Pay Unit</u> |
|--|---------------------|
| 618.146 HGM Biotic Soil Hydromulch Media Proganics Flexterra | UNIT [1,000 sq.ft.] |



MAINE WATER COMPANY
SPECIFICATIONS
FOR
WIN 025277.00
NORRIDGEWOCK AVENUE SIDEWALK
SKOWHEGAN, MAINE



The Maine Water Company
93 Industrial Park Road
Saco, ME 04072

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August 22, 2024

Water Main Replacement

WIN 025277.00 Norridgewock Avenue Sidewalk, Skowhegan, Maine

Greetings,

The Maine Water Company (MWC) presents the accompanying 2025 water main replacement project on Norridgewock Avenue in Skowhegan, Maine. The following project overview describes the waterworks infrastructure scope of work for the overall Maine Department of Transportation's sidewalk improvement project. Please reach out directly to MWC regarding any water infrastructure related questions or to discuss the project in greater detail.

Project Overview:

- Install 350 LF of 8-inch ductile iron water main via open trench.
- Renew four 1-inch water service connections via open trench.
- Remove and reset one hydrant.
- All water works material to be supplied by MWC as per the agreement.

Day 1: Contractor to coordinate with MWC on timed water main shut down to install an 8-inch tee and gate valve cluster adjacent to 7 Norridgewock Avenue. Contractor to build tee and gate valve cluster and cut pavement to prepare for digging.

Day 2: MWC shuts down existing water main at 8AM. Contractor to excavate existing main, cut pipe, and install new tee and gate cluster. MWC will turn on water to the existing water main when tee installation is complete and before it is backfilled to check for leaks. MWC will flush the existing water main and take a bacteria sample.

Day 3,4,5: On first piece of new 8-inch main installed, the contractor will install one new 1-inch tap for 7 Norridgewock Avenue service. Install 1-inch CTS plastic pipe to curb line to be used for disinfection of new pipe when pipe is completely installed. Contractor to continue to excavate for new water main and install new water main parallel to existing live water main.

Day 6: Contractor to install tee and gate cluster on end of new water main, with a temporary 2-inch CTS line on end of gate valve for flushing and disinfection of new water main. MWC will operate gate valves for contractor to fill and flush off new water main to prepare for pressure test. Contractor to perform pressure test for 2 hours holding 150 psi. Once pressure test passes, MWC will operate gate valves to assist contractor with injecting liquid sodium hypochlorite at the service for 7 Norridgewock Avenue to properly disinfect new water main to 50ppm. MWC will check for proper residual at the temporary 2-inch CTS line. When proper residual is achieved, MWC will turn off gate valves and the new water main will have to sit for 24 hours.



The Maine Water Company
93 Industrial Park Road
Saco, ME 04072

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www.mainewater.com

DAY 7: After 24 hours has passed since water main was disinfected and turned off, MWC will assist the contractor to flush off new water main by operating gate valves until proper disinfection levels (less than 1ppm) are achieved at the 2-inch CTS line. Once proper levels are reached, the contractor will take 2 samples, 15 minutes apart, and deliver them to a certified lab for 24-hour bacteria tests. Contractor can build last tee and gate cluster to be installed on the old water main and coordinate shut down with MWC.

DAY 8: While waiting for bacteria sample results for new water main, MWC shuts down existing water main at 8AM. The contractor to excavate existing main, cut pipe, and install new tee and gate cluster. MWC will turn on water to existing water main when tee install is complete and before it is backfilled to check for leaks. MWC will flush off existing water main and take a bacteria sample. If time allows, the contractor can excavate and connect the new and old water main at tee clusters. Contractor will need to swab new pipe between the old water main and new watermain with sodium hypochlorite for disinfection. If there is not enough time, the connection between new and old water main will be made on day 9.

Day 9: Once MWC receives passing bacteria test results on the new water main, the contractor can dig up and remove the 2-inch CTS flushing line and install a 2-inch brass plug. The contractor can begin installing all required 1-inch service taps, service lines, and connect to existing customer lines.

Day 10: Contractor to continue to install new 1-inch taps and service lines and connecting to customer lines until completed.

Day 11: Upon completion of all services, contractor to excavate old water main at the new tees and cut and cap the old main after the new gate valve.

Thank you for your time and consideration. If you have any questions, please call me at 207.468.8808 or email me at Patrick.Gere@mainewater.com.

Sincerely,
THE MAINE WATER COMPANY

A handwritten signature in blue ink, appearing to read "P. Gere".

Patrick Gere, PE
Project Engineer

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SPECIAL CONDITIONS

1. COMPLIANCE WITH LAWS

The Contractor shall keep themselves fully informed of all existing and future federal, state, and local laws, ordinances, rules, and regulations affecting those engaged or employed on the Work, the materials and equipment used in the Work and the conduct of the Work, and of all orders, decrees and other requirements of bodies or tribunals having any jurisdiction or authority over the same. If any discrepancy or inconsistency is discovered in the Drawings, Specifications, or other Contract Documents or in the Work in relation to any such law, ordinance, rule, regulation, order, decree or other requirement, the Contractor shall forthwith report the same to the Engineer in writing. The Contractor shall at all times observe and comply with, and cause all his agents, servants, employees, and subcontractors to observe and comply with all such existing and future laws, ordinances, rules, regulations, orders, decrees and other requirements, and they shall protect, indemnify, and save harmless Maine Water Company (MWC), its officers, agents, servants, and employees from and against any and all claims, demands, suits, proceedings, liabilities, judgments, penalties, losses, damages, regulatory fines, costs and expenses, including attorneys' fees, arising from or based upon any violation or claimed violation of any such law, ordinance, rule, regulation, order, decree or other requirement, whether committed by the Contractor or any of his agents, servants, employees or subcontractors; provided, however, that the foregoing indemnity shall not extend to a case involving liability for damage arising out of bodily injury to persons or damage to property caused by or resulting from the sole negligence of any such indemnities.

2. COORDINATION WITH OWNER

The Contractor shall not interrupt the normal operation of the water system without the knowledge and/or approval of the Superintendent. Coordination with the Water District Superintendent will be a requirement of this Contract.

3. SAFETY REGULATIONS

The Contractor shall take all necessary and appropriate precautions for the safety of, and shall provide necessary and appropriate protection to prevent damage, injury, or loss to:

- All agents, servants, employees, or subcontractors of the Contractor involved in the Work and other persons who may be affected thereby, including without limitation the agents, servants, employees, and subcontractors of MWC, the Engineer, MWC's other Contractors and adjoining property owners and other persons on or nearby the site;
- All Work, materials, and equipment incorporated, or to be incorporated therein, whether in storage on or off the Site, under the care, custody, or control of the Contractor or any of their agents, servants, employees, or subcontractors; and

- Other property at the site or adjacent thereto, including without limitation, trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities.

The Contractor shall be solely responsible for initiating, implementing, maintaining, supervising, enforcing, and assuring compliance with safety rules, precautions, and programs which satisfy and comply with all federal, state, and local laws, rules, regulations, orders, codes, and standards applicable to the performance of the Work, including but not limited to, all occupational safety and health standards and requirements adopted or recognized under the Occupational Safety and Health Act of 1970, 29 C.F.R. Part 1926; 29 C.F.R. Part 1910.

The Contractor shall also cause all their agents, servants, employees, and subcontractors to observe and always comply with all such safety rules, precautions, and programs.

The Contractor shall observe and comply with all federal, state, and local environmental and health laws, rules, regulations, orders, codes, and standards applicable to the handling, disposal, storage, generation, or management of any "hazardous substance" as defined in 42 U.S.C. §9601.

The Contractor shall be responsible for establishing hazard communication programs to transmit information on the hazards of chemicals and other substances being used, and all related matters of safety, to all of their agents, servants, employees, and subcontractors by means of labels on containers, safety data sheets, training programs, and any other reasonable safeguards and procedures for safety and protection, in accordance with 29 C.F.R. Part 1926.20.

MWC maintains a file, available to the Contractor, of Safety Data Sheets at each Division Office. It is the Contractor's responsibility to make his personnel aware of the hazards associated with the materials furnished by MWC and the safety precautions suggested for handling and use.

If MWC or its Inspector or Engineer observes any conditions which do not comply with the requirements of this Contract, MWC may instruct the Contractor's superintendent or other representative to promptly correct such noncomplying conditions. If such non-complying conditions are not promptly corrected by the Contractor, MWC may, at its option, either (i) at no additional cost to MWC and with no extension of the completion schedule for the Work, order the Work stopped until the noncomplying condition has been corrected, (ii) correct such noncomplying condition and back charge the Contractor for any costs incurred in connection therewith, or (iii) terminate this Contract by written notice to the Contractor.

The Contractor shall provide sufficient, proper, and safe facilities always for the inspection or observation of the Work and Site by MWC and its authorized representatives, including without limitation such facilities as are necessary to permit MWC and such representatives to observe compliance with all safety rules, precautions, and programs required under this Contract.

While MWC may provide the Contractor with assistance in monitoring safety rules, precautions, and programs, and MWC may correct noncomplying conditions which the Contractor has failed to correct promptly, such action shall in no way obligate MWC to conduct safety inspections or identify or correct noncomplying conditions, nor will it relieve the Contractor from any obligations prescribed above, all of which shall remain the sole responsibility of the Contractor.

Contractor shall protect, indemnify, and save harmless MWC, the Engineer, and their respective officers, agents, servants, and employees from and against any and all claims, demands, suits, proceedings, liabilities, judgments, penalties, losses, damages, costs, and expenses including attorneys' fees, arising from or based upon any violation or claimed violation of any of the provisions of the Supervision of Work, Compliance with Laws, and the Health, Safety and Protection, and Safety Compliance Sections of these general conditions; provided, however, that the foregoing indemnity shall not extend to a case involving liability for damage arising out of bodily injury to persons or damage to property caused by or resulting from the sole negligence of any such indemnity.

4. SAFETY COMPLIANCE

The Contractor shall take all necessary precautions and provide all necessary safeguards to prevent personal injury and property damage. The Contractor shall provide protection for all persons including, but not limited to, their employees and employees of other Contractors or subcontractors; members of the public; and employees, agents, and representatives of the Owner, the Engineer, and regulatory agencies that may be on or about the Work. The Contractor shall provide protection for all public and private property including, but not limited to, structures, pipes, and utilities, above and below ground.

The Contractor shall provide and maintain all necessary safety equipment such as fences, barriers, signs, lights, walkways, guards, and fire prevention and firefighting equipment and shall take such other action as is required to fulfill his obligations under this subsection.

The Contractor shall also be familiar with MWC's Safety Manual and comply with all applicable sections.

5. INSPECTION DURING CONSTRUCTION

MWC will appoint an Inspector to inspect all materials and workmanship and to see that the work conforms with the specifications and drawings.

The failure of the Inspector to reject or condemn improper materials and workmanship shall not prevent MWC from rejecting materials and workmanship found defective at any time prior to the final acceptance of the completed work, nor shall it be considered as a waiver of any defects which may be discovered later, or as preventing MWC at any time subsequently from recovering damages for work actually defective.

The Contractor shall provide sufficient, safe, and proper facilities at all times for inspection, including every reasonable facility for examining and inspecting the work and for ascertaining that the Work is being performed in accordance with the requirements and intent of the

Contract, even to the extent of requiring the uncovering of portions of finished work by the Contractor.

Should the work thus uncovered prove satisfactory, the cost of uncovering and the replacement thereof shall be considered as extra work and paid under a Change Order unless the original work was done in violation of the Contract in point of time or in the absence of the Inspector and without their written authorization, in which case said cost shall be borne by the Contractor. Should the work uncovered prove unsatisfactory, said cost shall be borne by the Contractor.

6. MEASUREMENT OF UNIT ITEMS

Measurement of the items of the work which are to be for on a unit basis will be made by MWC as the work progresses, and the Contractor's monthly estimates shall conform to the measurements. The Contractor shall have the right to have a representative present when measurements are being made, to check the measurements, and to call MWC's attention to any errors or omissions. If the Contractor's measurements exceed MWC's measurements, Contractor shall have the right to demand one (1) remeasurement before their estimates are submitted and the amount so measured shall be final. If the Contractor fails to have a representative present after due notification, shall forfeit the right to demand a remeasurement. Measurements for rock excavation and asphalt paving will be based on actual field measurements and limited to the specified pay limit. Should areas require restoration due to the negligence from the Contractor's operations (i.e. over-excavating, ripping up pavements, unnecessary lawn damage, etc.) all costs for restoration out of the normal work area will be at the Contractor's expense.

7. CLAIMS FOR DAMAGES

If the Contractor makes claim for any damages alleged to have been sustained by breach of contract or otherwise, shall, within ten (10) days after occurrence of the alleged breach or within ten (10) days after such damages are alleged to have been sustained, whichever date is the earlier, file with MWC a written, itemized statement in triplicate of the details of the alleged breach and the details and amount of the alleged damages. The Contractor agrees that unless such statement is made and filed as so required, their claim for damages shall be deemed waived, invalid, and unenforceable, and that they shall not be entitled to any compensation for any such alleged damages.

8. WAIVER OF SUBROGATION

Contractor waives all rights against MWC and their agents, officers, directors, and employees for recovery of damages to the extent these damages are covered by commercial general liability, commercial umbrella liability, business auto liability, workers compensation, and employers' liability insurance maintained by the requirements stated or referred to in the insurance section.

9. ADDITIONAL LIABILITY INSURANCE

The Contractor shall maintain commercial general liability insurance, in broad form, including coverage for completed operations, contractual liability, personal injury liability, and independent contractors. The policy limits shall be not less than \$1,000,000 primary coverage per occurrence and \$2,000,000 in the aggregate for bodily injury and property damage, with \$5,000,000 excess or umbrella liability coverage. The general liability insurance shall be occurrence based.

The Contractor shall purchase the required insurance as indicated here and obtain certificates of insurance and endorsements issued by insurance companies authorized to do business in the state of Maine, before the Contractor begins work hereunder, and thereafter upon renewal or replacement of each required policy of insurance. The insurance policies required shall provide that coverage afforded under the policies will not be cancelled or allowed to expire until at least 30 days' prior written notice has been given to MWC and such provision shall be made by endorsement, if necessary.

10. GENERAL GUARANTEE

The Contractor agrees from and after the date upon which the final completion is formally approved by MWC to guarantee all work for a period of one (1) year. Also, the Contractor shall during this period promptly repair all breaks, failures, or defects which develop in their work because of faulty material or workmanship furnished by them at no cost to the Owner. If the Contractor cannot perform such work promptly, they agree to pay the reasonable cost for such repairs as performed by MWC or its agents.

11. PERMITS

MWC will obtain and pay for applicable local permits to open local roads or state roads within the Urban Compact Zone. If an easement or wetlands permit is required, MWC will obtain and pay for it.

12. CONTRACTOR'S RESPONSIBILITY FOR MATERIALS AND EQUIPMENT

The Contractor shall assume full responsibility for all supplies, materials, and equipment required for the contracted work, whether furnished by the Contractor or by MWC until final acceptance.

13. TRENCHING, BACKFILLING, AND INSTALLING WATER MAINS AND APPURTENANCES

WORK TO BE DONE

The Work to be done includes furnishing all labor, tools, and equipment required for receiving, inspecting, hauling and distributing materials, removing pavement, excavation and backfill, installing, disinfecting, and testing the water piping and appurtenances including valves and fittings, all as shown on the drawings (when available), specified herein, or ordered by MWC, complete in every detail, ready for operation, and providing As-Built installation sketches.

HANDLING AND HAULING MATERIALS

MWC will furnish all pipe, fittings, valves, and appurtenances required for the work as hereinbefore specified. The Contractor shall receive, inspect, handle, haul, store, protect, and distribute them as required for the work. Protection of the pipe is defined as bagging the pipe to reduce the risk of dirt, leaves, animals, or any other material harmful to the pipe, system, or disinfection process.

All materials are to be compliant with the Federal Highway Administration's policy for Build America, Buy America (BABA).

CUTTING PIPE

Pipe shall be cut by means of a pipe saw or other approved method in accordance with the manufacturers operating instructions for the equipment to produce a clean true cut, free from irregularities, and leave a smooth end at right angles to the axis of the pipe. All bevels shall be made with appropriate grinding equipment.

INSTALLING WATER PIPE

All pipes shall be carefully examined for defects and no piece shall be installed which is known to be defective. If any defective piece is discovered after having been installed, it shall be removed and replaced with a sound one at the expense of the Contractor. All pipes and fittings shall be thoroughly cleaned before they are installed and shall be kept clean until they have been accepted in the completed work.

JOINTS

All pipe joints will be push-on type rubber gaskets unless otherwise specified. Each push on joint shall receive two (2) bronze wedges for pipe 8-inch in diameter and less. All pipe diameters greater than 8-inch receive three (3) wedges. All fittings and valves will be of the mechanical joint type unless otherwise specified.

RUBBER GASKET JOINTS

Rubber gasket joints will be of the compressed rubber ring gasket type. The joints shall be thoroughly cleaned, prepared, and installed in strict accordance with the requirements, instructions, and recommendations of the joint manufacturer and of MWC.

Only rubber gaskets furnished by the manufacturer of the pipe shall be used. Gaskets which have become damaged, or which are defective in any way, shall not be used in the work. Gaskets shall be stored in a cool, dark, and dry place and shall be kept warm prior to their use in cold weather. Jointing materials in addition to the gaskets, if required by the type of joint furnished, shall fully comply with and be installed in accordance with the requirements of the manufacturer of the joint. At no time will anything be allowed in the pipe for temporary storage or protection from the elements.

POLYETHYLENE ENCASEMENT

Polyethylene encasement shall be installed in accordance with AWWA standard C105-10 method "A", or latest revision thereof, at locations including all ductile iron pipe, ductile fittings, hydrant laterals and barrels, and any other locations as directed. The polyethylene tube shall be cut to a length approximately two feet longer than that of the pipe section. Slip

the tube around the pipe installations including hydrant laterals and barrel to ground level and all associated service lines, three (3) feet from the main connection.

The polyethylene tube shall be cut to a length approximately 2 feet longer than that of the pipe section. Slip the tube around the pipe, providing a 1-foot overlap at each end. Lower the pipe into the trench and make up the pipe joint, overlapping the wrap at the joint. Take up the slack width to make a snug, but not tight, fit along the barrel of the pipe. Repair any rips, punctures, or other damage with adhesive tape or with a short length of polyethylene tube cut open then wrapped around the pipe and secured in place.

APPURTENANCES

The Contractor shall exercise care in planning the work to arrange for the proper setting of all fittings, valves, and other appurtenances required in the completed pipelines. Fittings shall be properly supported with additional blocking if required to maintain the pipelines in alignment.

Special attention shall be given to the accurate placing of valves so that they will not be subject to undue strains, and where required by MWC, they shall be supported on sound timber blocking. Valves shall be set with their stems truly vertical. Valve boxes shall be carefully placed to insure the free and proper operation of the valves.

TESTS AFTER INSTALLATION

After the pipe has been installed and backfilled, all newly installed pipe shall be subjected to a pressure and leakage test conducted in accordance with AWWA Standard C600-10, Section 5 and as follows.

A) Pressure Test:

All newly installed pipe shall be subjected to a hydrostatic pressure of 1.5 times the working (system) pressure at the point of testing, but in no case less than 150 psi at the highest point along the test section. The test pressure shall not exceed pipe or thrust restraint design limits, twice the rated pressure of closed valves or hydrants located within the test area, or the rated pressure of closed resilient-seated gate or butterfly valves. The test shall be maintained for a minimum of one hour with no more than a 5-psi variation during the test period.

B) Leakage Test:

The leakage test will be conducted at the same time as the pressure test. Leakage is the quantity of water required to maintain the pressure within 5 psi of the specified test pressure, it is not the measured drop in pressure. Leakage shall not exceed the number of gallons per hour as determined by the inspector and is indicated in Table 6 of the above specified AWWA Section.

C) General:

Before applying the specified test pressure, all air shall be expelled from the pipe. If hydrants or blow-offs are not available at high places, the Contractor shall make the necessary taps at points of highest elevation before the test is made and insert the plugs, if desired, after the test has been completed. The section to be tested shall be closed by valves, temporary flanges, plugs, or bulkheads as required.

Each isolated section of pipe shall be slowly filled with water and the specified test pressure shall be applied by means of a pump connected to the pipe in a manner satisfactory to the inspector. The pipe connection and all necessary apparatus including pump shall be furnished by the Contractor. The Contractor shall furnish all necessary labor and materials for conducting the tests.

If leakage is either visible or indicated by the above test procedure, the Contractor shall do whatever is necessary to locate and repair said leak at his own expense. Any repair method will require pre-approval from MWC. Upon completion of the repair the pipeline shall be retested. All pressure and leakage testing will be incidental to Water Main Installation items.

DISINFECTION

Before any section of pipeline is put into service, it shall be thoroughly disinfected in accordance with AWWA Standard C651-14, Section 4.4.2. The completed line shall be slowly filled with water and allowed to stand under pressure for at least 24 hours before being thoroughly flushed. A sample of water from the section shall be collected for analysis in a sterilized bottle at the expense of the Contractor.

No section of main shall be put into service without the approval of MWC, and should the analysis be unsatisfactory, the section shall be re-disinfected and retested until an analysis satisfactory to MWC is obtained. All costs for re-disinfection and retesting shall be borne by the Contractor. Temporary taps and blow-offs for disinfection are to be removed and shut off at the corporation upon successful testing. All disinfection will be incidental to Water Main Installation items.

DECHLORINATION

The Contractor shall be responsible for dechlorination. The discharge of water to the environment with chlorine concentrations greater than the ambient distribution system chlorine residual is prohibited. The highly chlorinated water must be dechlorinated satisfactory to MWC before discharge to the environment. Dechlorination will be incidental to Water Main Installation items.

COST ESTIMATE
WIN 025277.00
NORRIDGEWOCK AVENUE SIDEWALK
SKOWHEGAN, MAINE

| Item No. | Item Description | Unit | Quantity | Unit Cost | Total Cost |
|----------|---|------|----------|-----------|------------|
| 822.33 | 6-INCH CLASS 52 DUCTILE IRON WATER MAIN | LF | 15 | \$100 | \$1,500 |
| 822.34 | 8-INCH CLASS 52 DUCTILE IRON WATER MAIN | LF | 350 | \$200 | \$70,000 |
| 822.36 | 12-INCH CLASS 52 DUCTILE IRON WATER MAIN | LF | 15 | \$200 | \$3,000 |
| 824.32 | REMOVE/RESET HYDRANT | EA | 1 | \$5,000 | \$5,000 |
| 825.321 | 1-INCH CORPORATION | EA | 4 | \$1,000 | \$4,000 |
| 825.43 | 1-INCH COPPER SERVICE | LF | 120 | \$150 | \$18,000 |
| 825.45 | CONNECTIONS AND TIE-INS | EA | 2 | \$5,000 | \$10,000 |
| 652.361 | MAINTENANCE OF TRAFFIC CONTROL DEVICES | LS | 1 | \$1,000 | \$1,000 |
| 652.38 | FLAGGERS | HR | 100 | \$50 | \$5,000 |
| 659.10 | MOBILIZATION | LS | 1 | \$20,445 | \$20,445 |
| 801.03 | TEST PIT | EA | 2 | \$1,200 | \$2,400 |
| 206.061 | STRUCTURAL EARTH EXCAVATION – DRAINAGE & MINOR STRUCTURES BELOW GRADE | CY | 83 | \$75 | \$6,225 |
| 206.07 | STRUCTURAL ROCK EXCAVATION - DRAINAGE & MINOR STRUCTURES | CY | 56 | \$150 | \$8,400 |
| 656.75 | TEMPORARY SOIL EROSION & WATER POLLUTION CONTROL | LS | 1 | \$1,200 | \$1,200 |
| 304.10 | AGGREGATE SUBBASE COURSE-GRAVEL | CY | 1 | \$65 | \$65 |
| 403.213 | HOT MIX ASPHALT, 12.5 MM BASE | TON | 1 | \$300 | \$300 |
| 403.208 | HOT MIX ASPHALT, 12.5 MM SURFACE | TON | 1 | \$300 | \$300 |
| 615.07 | LOAM | CY | 5 | \$75 | \$375 |
| 618.13 | SEEDING METHOD #1 | UNIT | 1 | \$90 | \$90 |
| 619.12 | MULCH | UNIT | 1 | \$90 | \$90 |
| 827.302 | UNSUITABLE SOIL EXCAVATION BELOW GRADE | CY | 10 | \$100 | \$1,000 |

TOTAL COST: \$158,390

SPECIAL PROVISIONS MEASUREMENT & PAYMENT WATER MAIN REPLACEMENT

ITEM 822.33 6-INCH CLASS 52 DUCTILE IRON WATER MAIN

Payment will be made at the Contract Unit Price per linear foot as measured along the axis for the size and class of pipe to be installed, complete in place, as required by MWC. The Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures necessary for the trenching and installation of the water main(s). All costs to complete the pipeline installation are included in the unit price per lineal foot of water main. The unit price for each water main includes, but is not limited to, saw cutting, removal and disposal of pavement, earth excavation, pipe bedding material, installation of water main, polyethylene encasement, fittings, joint bracing, thrust blocks, appurtenances, marking tape, tracer wire, standard dewatering and trench maintenance, pressure and leakage testing, disinfection of water main (and dechlorination of discharge), site cleaning, and maintenance of street and other surfaces, etc. See trenching details and assumptions on depths.

Additionally, the Contractor shall submit schedules, shop drawings, and As-Built records as required by MWC. Refer to Field Notes & As-Built Requirements for specifics on accuracy and format.

ITEM 822.34 8-INCH CLASS 52 DUCTILE IRON WATER MAIN

Same as Item 822.33 except 8-inch water main.

ITEM 822.36 12-INCH DUCTILE IRON WATER MAIN

Same as Item 822.33 except 12-inch water main.

ITEM 824.32 REMOVE/RESET HYDRANT

Payment will be made at the Contract Unit Price for each fire hydrant removed and reset. The removal and resetting of the fire hydrant shall include all excavation, backfill, setting and installing hydrant, gate valve, hydrant tee off the water main, all thrust blocking, polyethylene encasement on barrel, crushed stone, fabric, joint restraint as required or as necessary to make a complete and satisfactory installation. All hydrant lateral pipe will be paid under and in accordance with Item 822.33 6-inch Class 52 Ductile Iron Water Main.

ITEM 825.321 1-INCH CORPORATION

Payment will be made at the Contract Unit Price per each 1-inch diameter corporation for individual services to be installed and shall include all necessary labor and equipment required to do all excavation, backfilling, tapping (wet and/or dry tap) the main, installing the corporation, coupling the service pipe, as necessary, and general clean up and restoration. All service pipes will be paid under and in accordance with Item 825.43 1-inch Copper Service.

ITEM 825.43 1-INCH COPPER SERVICE

Payment will be made at the Contract Unit Price per linear foot for each 1-inch continuous copper service pipe to be installed via trench. The unit price for each service includes but is not limited to saw cutting, removal and disposal of pavement, earth excavation, pipe bedding material, installation of service pipe, fittings, joint bracing, appurtenances, marking tape, tracer wire, standard dewatering

and trench maintenance, pressure and leakage testing, disinfection of service pipe (and dechlorination of discharge), site cleaning, and maintenance of street and other surfaces, etc. See trenching details and assumptions on depths. All service pipe corporations to the main will be paid under and in accordance with Item 825.321 1-inch Corporation.

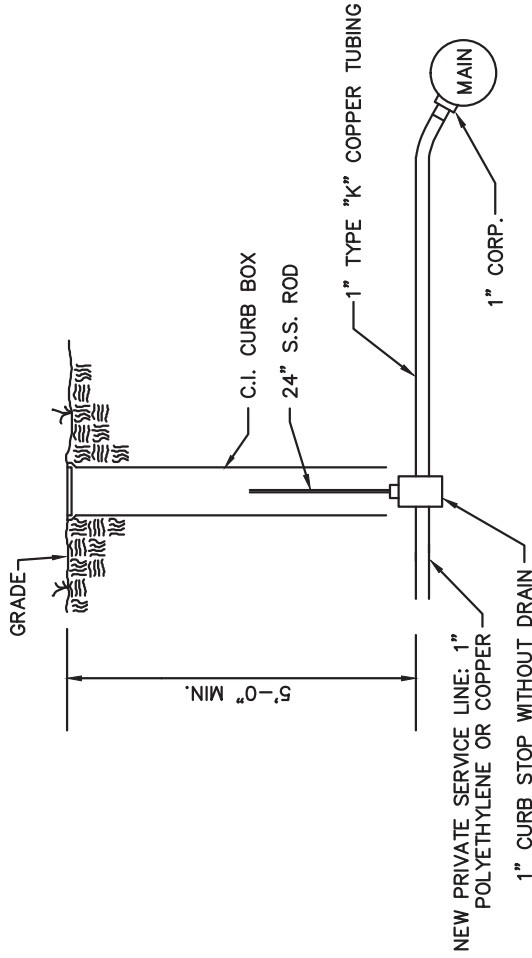
ITEM 825.45 CONNECTIONS AND TIE INS

The Contract Unit Price will be for each location to connect to an existing main. This shall include, but not be limited to, all labor and equipment required to make the necessary excavations including shoring, dewatering, installing, and testing the tap sleeve, tee, or other specified fittings, as well as the valve installation, removing the existing fittings, cutting the existing main, installing the required fitting(s), adjusting existing valves, and capping abandoned main. Connections between new and existing mains shall be made at the points shown on the drawings or directed by MWC. The day and time of making connections shall be coordinated with MWC and the method of making them shall be under the full direction of MWC. Any new water main installed in association to a specific connection will be paid under Items 822.33 6-inch Class 52 Ductile Iron Water Main, 822.34 8-inch Class 52 Ductile Iron Water Main, and 822.36 12-inch Class 52 Ductile Iron Water Main.

ITEM 827.302 UNSUITABLE SOIL EXCAVATION BELOW GRADE

Payment will be made at the Contract Unit Price per cubic yard to remove unsuitable backfill. The unit price shall include full compensation for the cost of all labor, tools, and equipment to be furnished to excavate, remove, haul, and dump unsuitable native backfill, and furnish, place, and compact backfill at the thickness required. If material suitable for backfilling is not available in sufficient quantity from surrounding excavation, the Contractor shall furnish suitable material and be compensated under select gravel by the cubic yard. MWC has the right to accept or reject what is deemed suitable or unsuitable material. The quantity of unsuitable backfill to be measured for payment under this item shall be equal to the number of cubic yards measured in place within the normal trench excavation limits, not to exceed six feet wide unless approved by MWC.

**STANDARD DETAILS & SPECIFICATIONS
MAINE WATER COMPANY**



CURB STOP VALVE

NOTE:

- 1.) CURB BOXES IN PAVEMENT OR IN GRAVEL PRONE TO MOTOR VEHICLE TRAFFIC SHALL BE PROTECTED BY A VALVE BOX TOP.
- 2.) RECONNECT NEW SERVICE PIPE TO EXISTING 3/4" OR 1" SERVICE PIPE.
- 3.) SINGLE STRAND, MINIMUM 12 GAUGE, METALLIC TRACER WIRE SHALL BE TAPED TO ALL NON-METALLIC PIPE AND BONDED TO ASSOCIATED METAL (VALVES, FITTINGS, ETC.) AT THE ENDS FOR DIRECT CONNECTION SIGNAL LOCATING.

Drawn By: LMM

Date: 3/10/16

Approved by:

Title:

Title: CHIEF OF ENGINEERING

Scale: NTS

Drawing Number

MWC SD-1

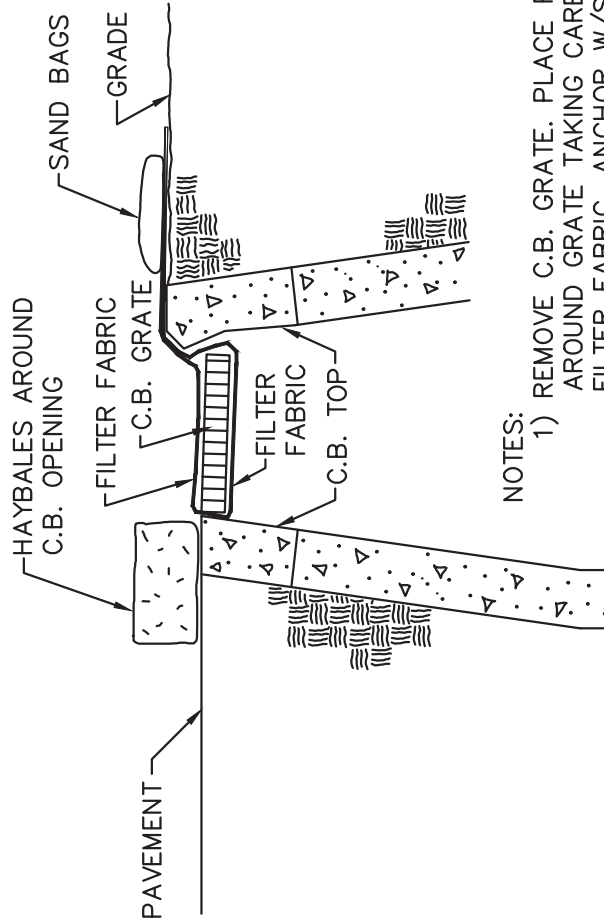
BU Number -

Sheet 1 of 1

SERVICE LINE AND CURB STOP VALVE DETAIL



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NOTES:

- 1) REMOVE C.B. GRATE. PLACE FILTER FABRIC AROUND GRATE TAKING CARE NOT TO DAMAGE FILTER FABRIC. ANCHOR W/SAND BAGS. PLACE HAY BALES IF REQUIRED.
- 2) SILT BARRIER REQUIRED ON ALL CATCH BASINS IN WORK AREA.

Drawn By: LLO/LMM

Date: 3/14/16

Approved by: _____

Title: _____

Title: CHIEF OF ENGINEERING



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CATCH BASIN PROTECTION DETAIL

Scale: NTS

Drawing Number

MWC SD-3

BU Number -
Sheet 1 of 1

ALL VERTICAL EDGES OF REMAINING PAVEMENT SHALL BE PAINTED WITH A TACK OF COAT ASPHALT EMULSION PRIOR TO PAVING. HOT JOINT SEALANT SHALL BE APPLIED UPON COMPLETION.

PAVEMENT REPLACEMENT LIMIT PER SPECIFICATIONS

MIN. 12" (TYP BOTH SIDES WHEN SPECIFIED OR REQUIRED)

CUT

BACK

PAVEMENT LIMIT

VARIES PER MWC DIVISION
MIN. DEPTH OF COVER

PROCESSED GRAVEL SUBBASE

PROCESSED GRAVEL SUBBASE SHALL MEET THE STANDARDS OF THE STATE OR LOCAL HIGHWAY AUTHORITY

COMPACTED NATIVE BACKFILL

COMPACTED SELECT SCREEN SAND CONTAINING NO STONES LARGER THAN ONE HALF INCH IN SIZE

WATER MAIN OR SERVICE PIPE

NORMAL GRADE TRENCH BOTTOM (MINIMUM 6" SAND WHERE LEDGE EXISTS)

SAND

12" PAYMENT LIMIT ROCK EXCAVATION BELOW NORMAL GRADE.

NOTES:

- 1) ALL DUCTILE IRON PIPE SHALL HAVE A MINIMUM OF 2 BRONZE WEDGES AT EVERY JOINT AND 3 FOR PIPE 12" IN DIAMETER AND LARGER.
- 2) ALL NON METALLIC PIPE SHALL HAVE 12 GAUGE TRACER WIRE TAPED EVERY 24" AND BONDED TO ASSOCIATED METAL AT BOTH ENDS.
- 3) ALL ABANDONED PIPE WILL BE CUT AND CAPPED.
- 4) ALL DUCTILE IRON PIPE SHALL BE ENCASED IN TUBE TYPE, BLUE POLYETHYLENE.
- 5) PAVEMENT DETAIL VARIES DUE TO INDIVIDUAL TOWN AND STATE SPECIFICATIONS. DIMENSIONS MAY BE ALTERED DUE TO SPECIFIC REQUIREMENTS OF PROJECT LOCATION.

HALF SECTION IN ROCK

HALF SECTION IN EARTH

Drawn By: LRS/LMM

Date: 3/9/16

Approved by:

Title:

Title: CHIEF OF ENGINEERING

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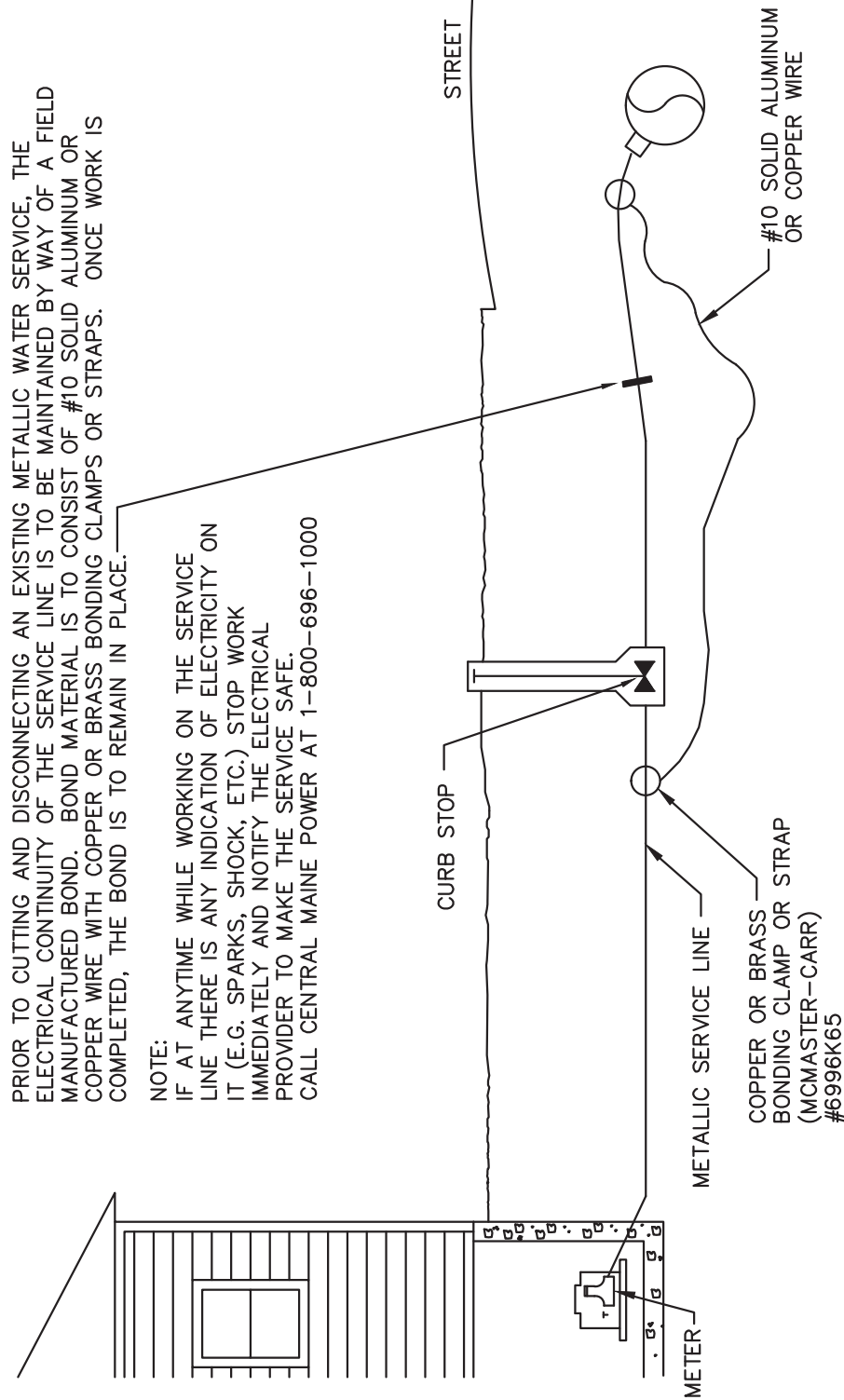
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Drawing Number

MWC SD-4

BU Number -
Sheet 1 of 1

WATER MAIN TRENCH DETAIL



Drawn By: CAL/LMM

Date: 3/14/16

Approved by:

Title: SENIOR ENGINEER

Title:



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Scale: N.T.S.

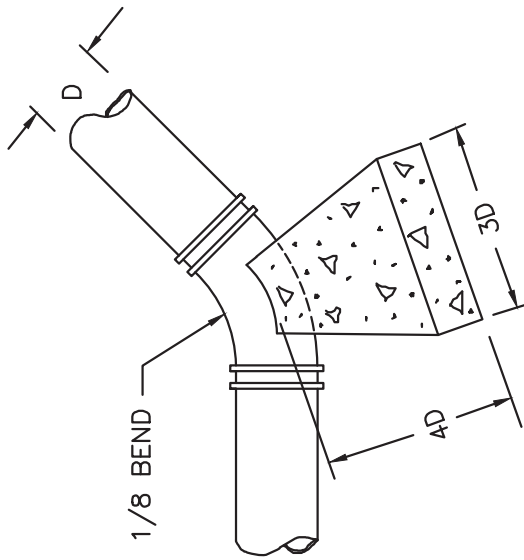
Drawing Number

MWC SD-5

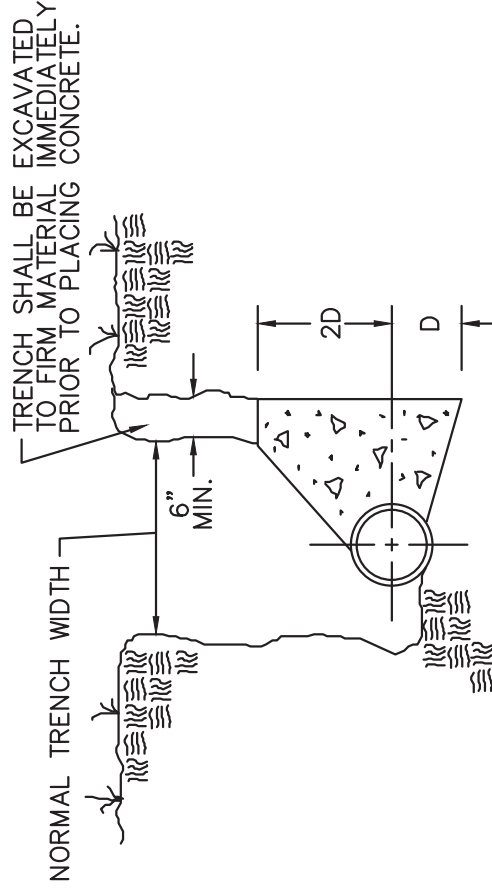
BU Number -

Sheet 1 of 1

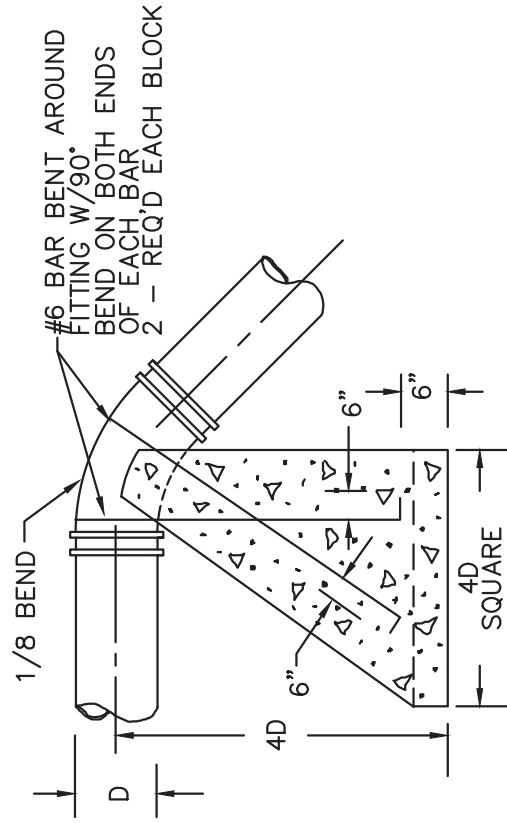
SERVICE LINE ELECTRICAL CONTINUITY DETAIL



HORIZONTAL THRUST BLOCK DETAIL (PLAN VIEW)



HORIZONTAL THRUST BLOCK DETAIL



VERTICAL THRUST BLOCK DETAIL

NOTES:

- 1) 3000 PSI CONCRETE TO BE USED FOR THRUST BLOCKS.
- 2) D-DIAMETER OF WATER MAIN.
- 3) GRIP RING RESTRAINING GLANDS SHALL BE USED ON ALL MJ FITTINGS 12" AND SMALLER. MEGA LUG RESTRAINING GLANDS SHALL BE USED ON ALL MJ FITTINGS GREATER THAN 12".

Drawn By: LRS/LMM

Date: 3/11/16

Approved by:

Title:

Title: CHIEF OF ENGINEERING

Scale: NTS

Drawing Number

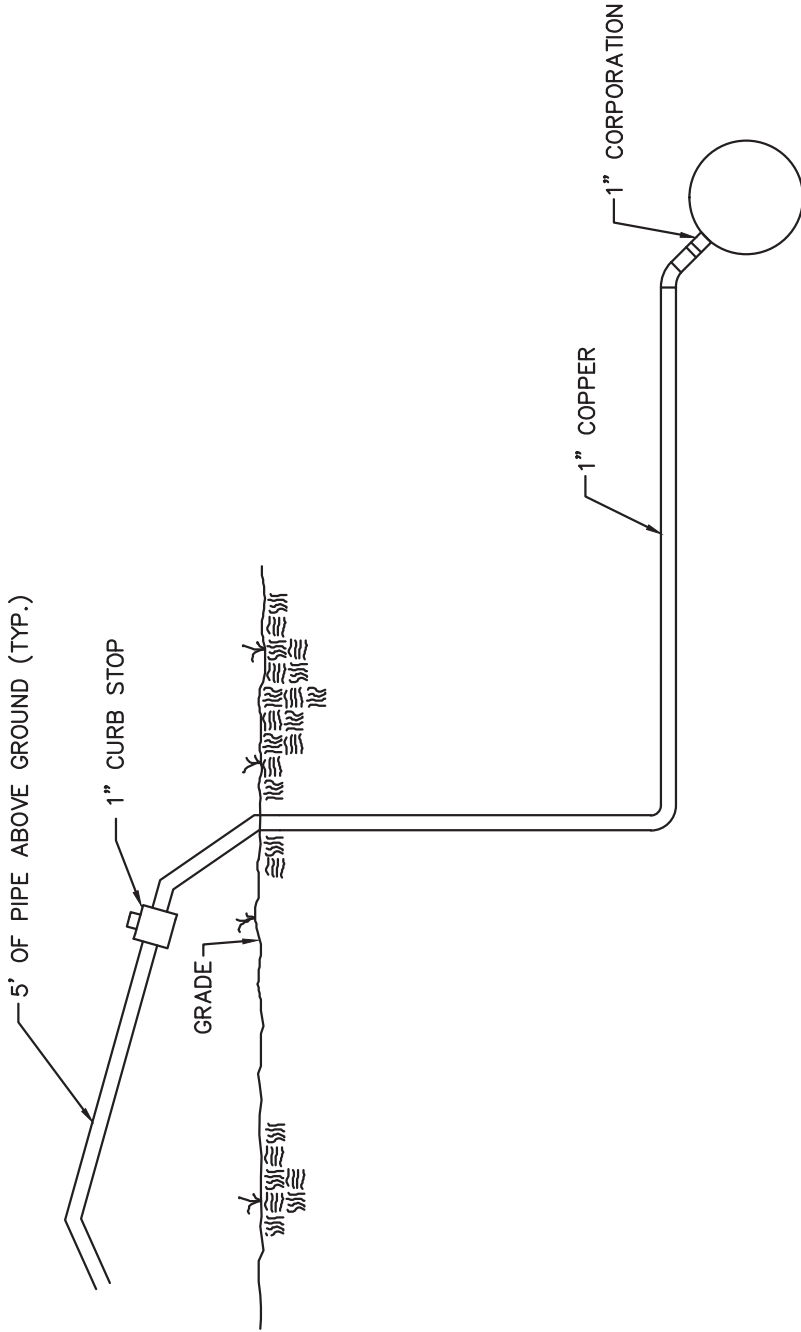
MWC SD-6

BU Number - X
Sheet 1 of 1

**THRUST BLOCK
DETAILS**

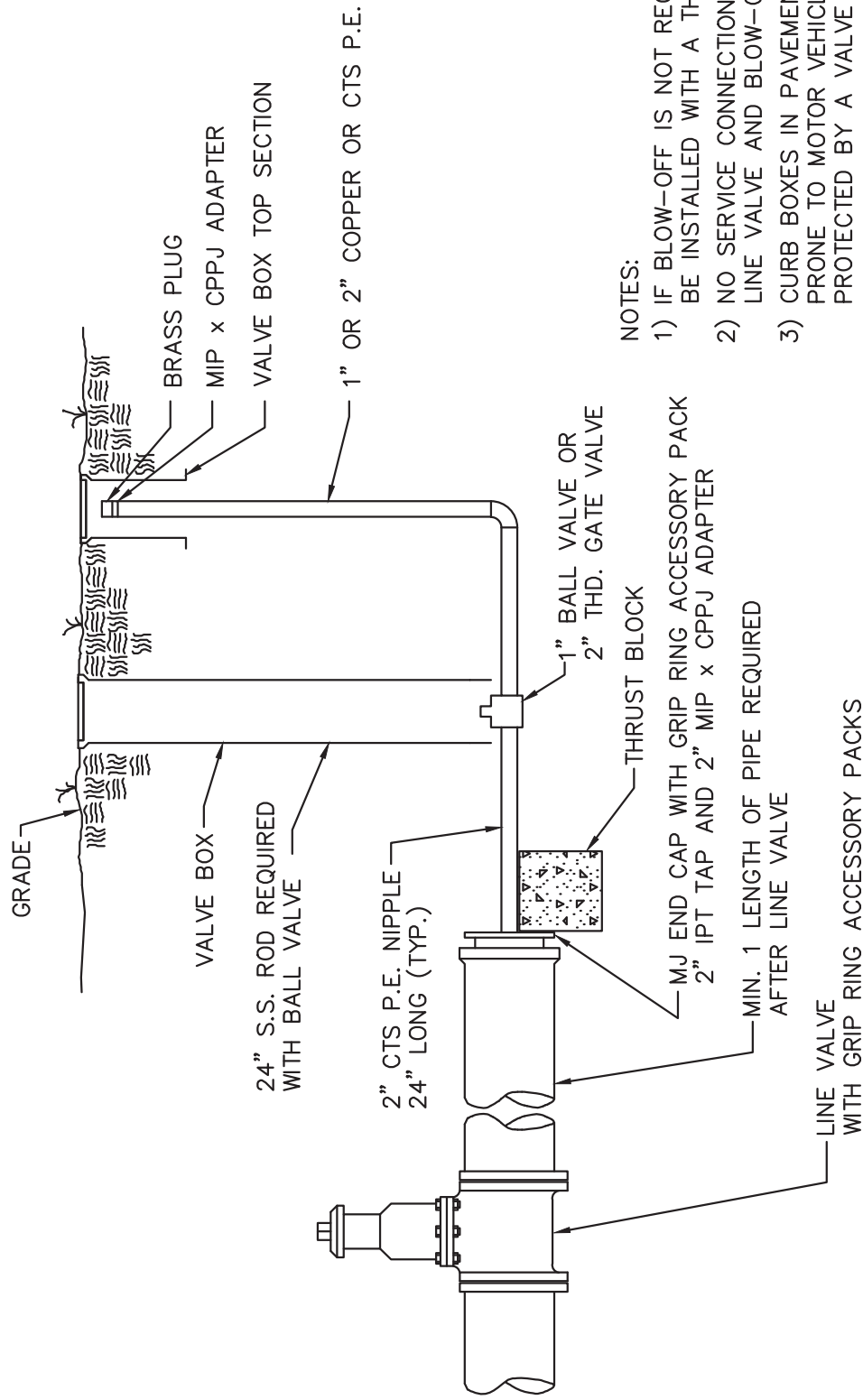


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NOTE:
 1.) DISINFECTION LINE SHALL BE REMOVED AND CORP. SHUT OFF AFTER ALL PIPE TESTING IS COMPLETE.
 (IF THE LINE WILL BE USED AS A SERVICE LINE, REFER TO THE SERVICE LINE DETAIL)

| | | | | | |
|--|--|-----------------------------|--|-----------------------------------|--|
| MaineWater | | DISINFECTION LINE DETAIL | | Scale: NTS | |
| 93 INDUSTRIAL PARK RD. SACO, ME 04072 PH: (207) 282-1543 FAX: (207) 282-1544 www.maineewater.com | | | | Drawing Number MWC SD-7 | |
| Drawn By: LRS/LMM | | | | BU Number - | |
| Date: 3/11/16 | | | | Sheet 1 of 1 | |
| Approved by: _____ | | | | | |
| Title: _____ | | | | | |
| Title: CHIEF OF ENGINEERING | | | | | |



NOTES:

- 1) IF BLOW-OFF IS NOT REQUIRED, CAP CAN BE INSTALLED WITH A THRUST BLOCK.
- 2) NO SERVICE CONNECTIONS BETWEEN LINE VALVE AND BLOW-OFF ASSEMBLY.
- 3) CURB BOXES IN PAVEMENT OR IN GRAVEL PRONE TO MOTOR VEHICLE TRAFFIC SHALL BE PROTECTED BY A VALVE BOX TOP.
- 4) SINGLE STRAND, MINIMUM 12 GAUGE, METALLIC TRACER WIRE SHALL BE TAPED TO ALL NON-METALLIC PIPE AND BONDED TO ASSOCIATED METAL (VALVES, FITTINGS, ETC.) AT THE ENDS FOR DIRECT CONNECTION SIGNAL LOCATING.

Drawn By: LRS/LMM

Date: 3/9/16

Approved by: _____

Title: _____

Title: CHIEF OF ENGINEERING

Scale: NTS

Drawing Number

MWC SD-8

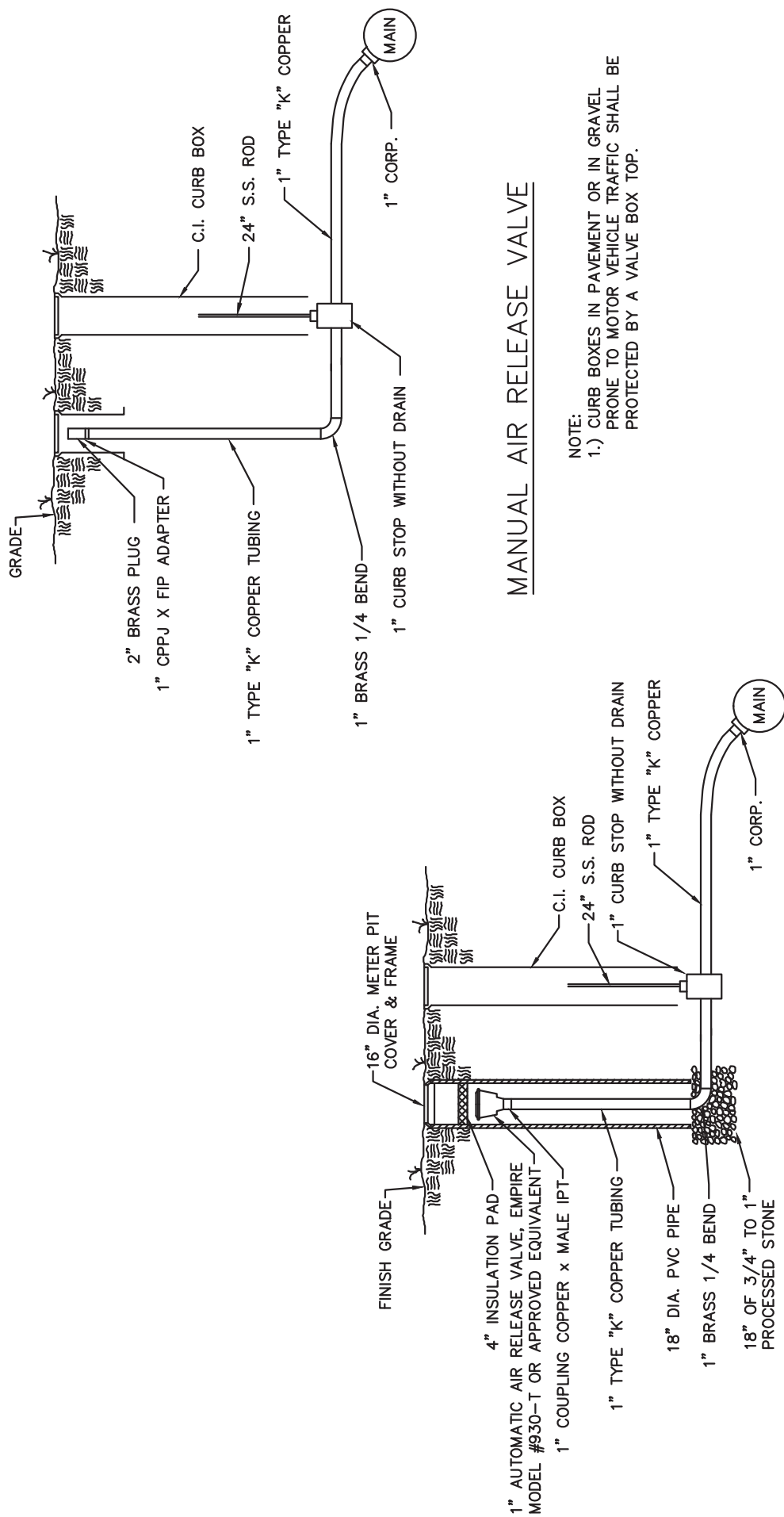
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1-INCH OR 2-INCH BLOW-OFF DETAIL




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NOTE:
 1.) CURB BOXES IN PAVEMENT OR IN GRAVEL PRONE TO MOTOR VEHICLE TRAFFIC SHALL BE PROTECTED BY A VALVE BOX TOP.

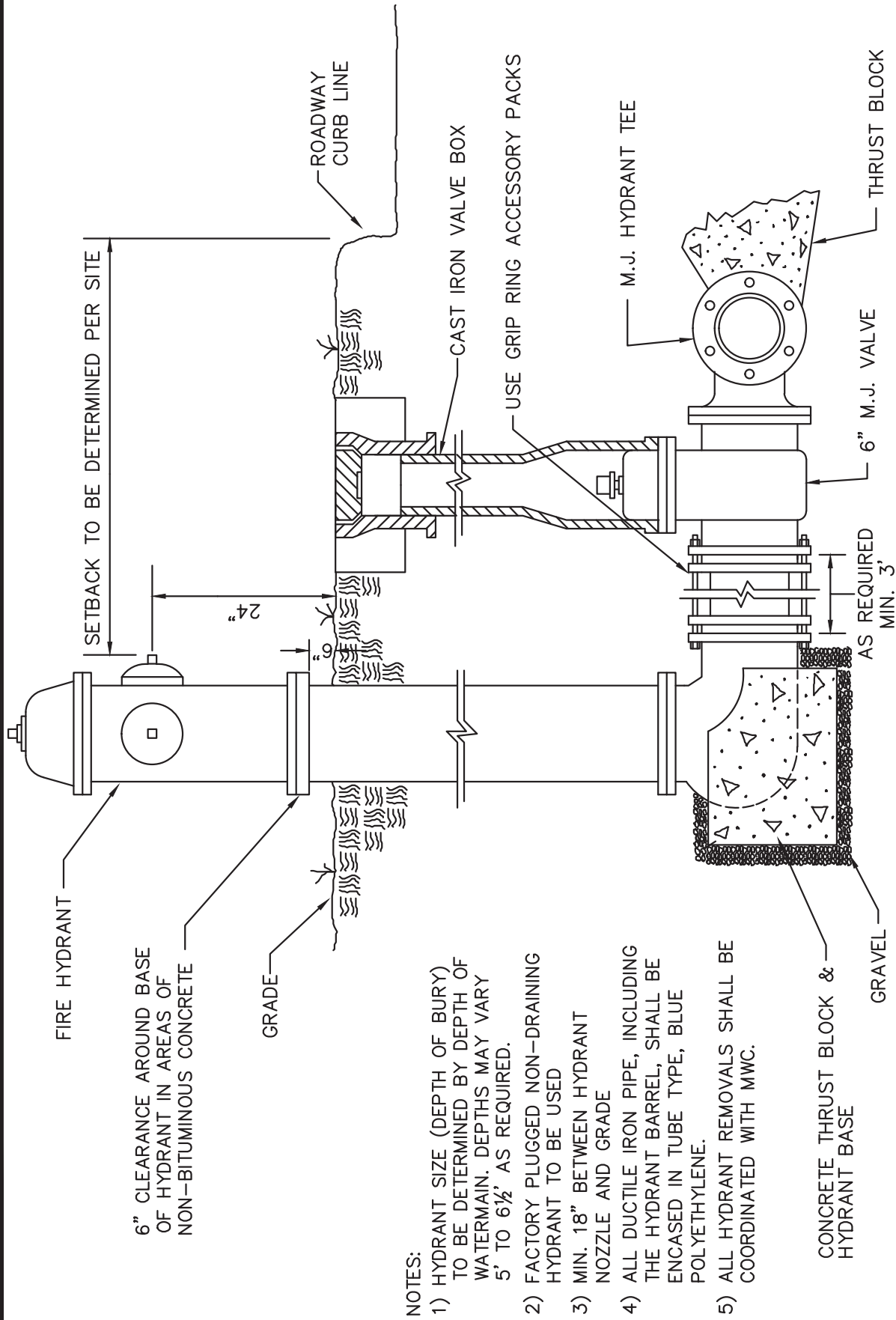
MANUAL AIR RELEASE VALVE

AUTOMATIC AIR RELEASE VALVE

| | | |
|-----------------------------|--|--|
| Drawn By: LRS/LMM | | Scale: NTS |
| Date: 3/14/16 | | |
| Approved by: _____ | | |
| Title: _____ | | |
| Title: CHIEF OF ENGINEERING | | <div></div> <div>93 INDUSTRIAL PARK RD. SACO, ME 04072 PH: (207) 282-1543 FAX: (207) 282-1544 www.mainewater.com</div> |
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| | | Drawing Number |
| | | MWC SD-9 |
| | | BU Number - |
| | | Sheet 1 of 1 |



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NOTES:

- 1) HYDRANT SIZE (DEPTH OF BURY) TO BE DETERMINED BY DEPTH OF WATERMAIN. DEPTHS MAY VARY 5' TO 6½' AS REQUIRED.
- 2) FACTORY PLUGGED NON-DRAINING HYDRANT TO BE USED
- 3) MIN. 18" BETWEEN HYDRANT NOZZLE AND GRADE
- 4) ALL DUCTILE IRON PIPE, INCLUDING THE HYDRANT BARREL, SHALL BE ENCASED IN TUBE TYPE, BLUE POLYETHYLENE.
- 5) ALL HYDRANT REMOVALS SHALL BE COORDINATED WITH MWC.

CONCRETE THRUST BLOCK & HYDRANT BASE

Drawn By: LRS/LMM

Date: 3/10/16

Approved by:

Title:

Title: CHIEF OF ENGINEERING



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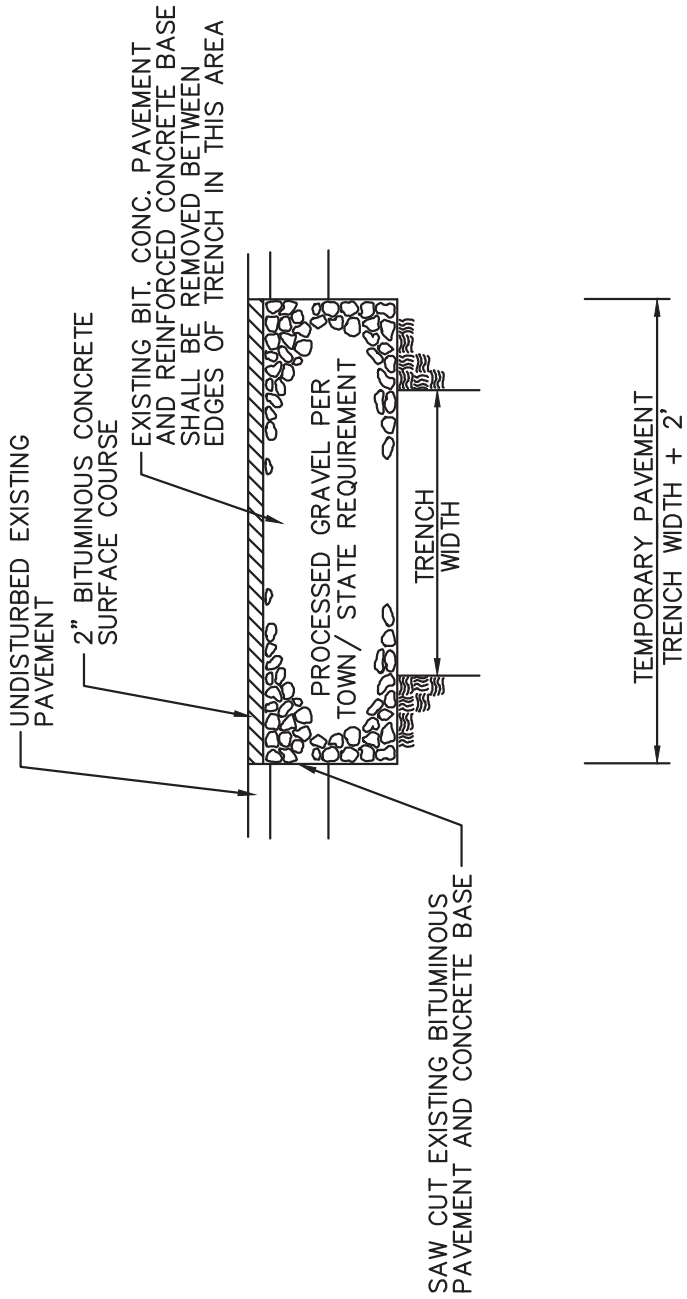
STANDARD FIRE HYDRANT INSTALLATION DETAIL

Scale: NTS

Drawing Number

MWC SD-10

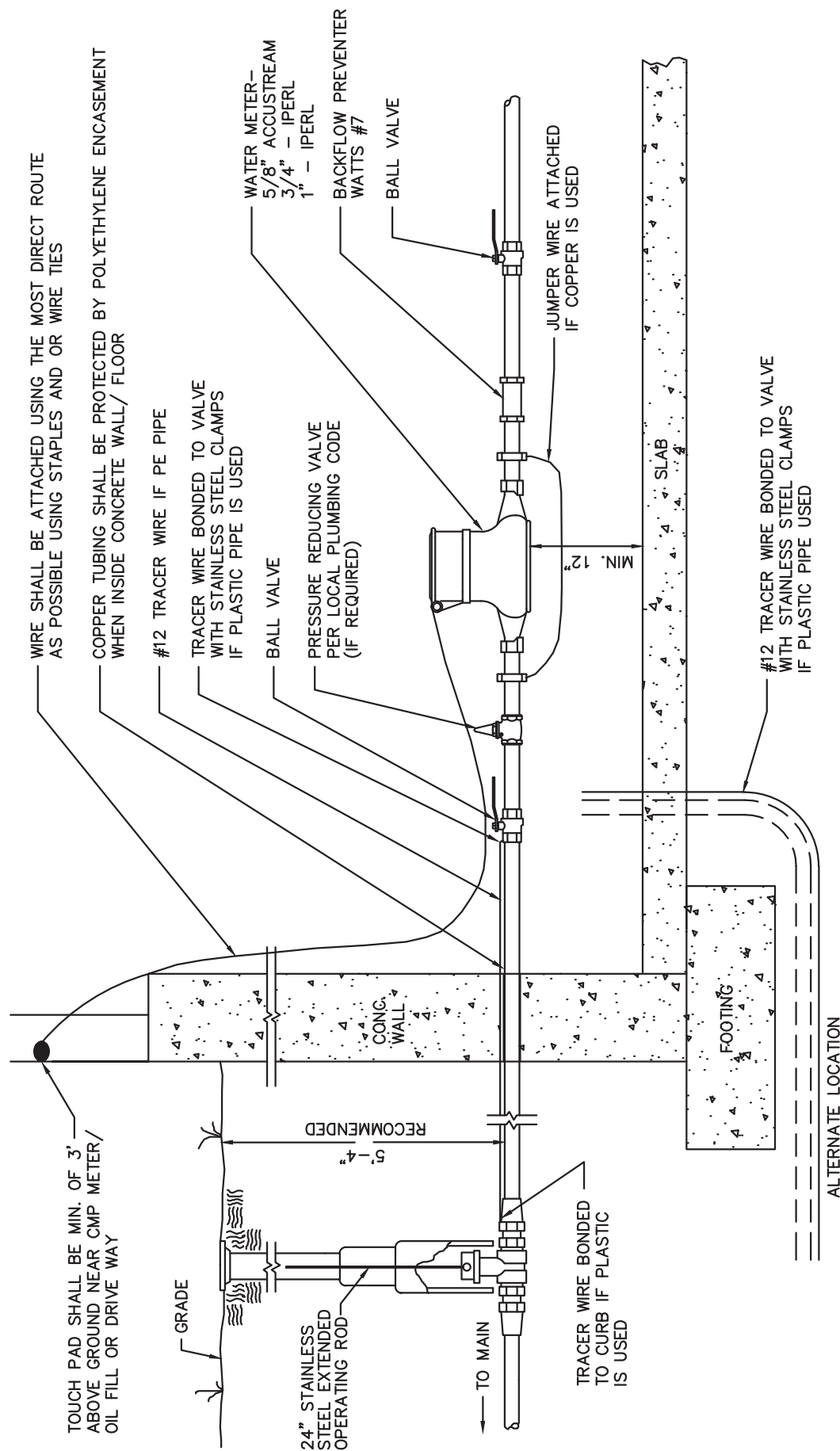
BU Number -
Sheet 1 of 1




STATE AND TOWN
ROADS ASPHALT

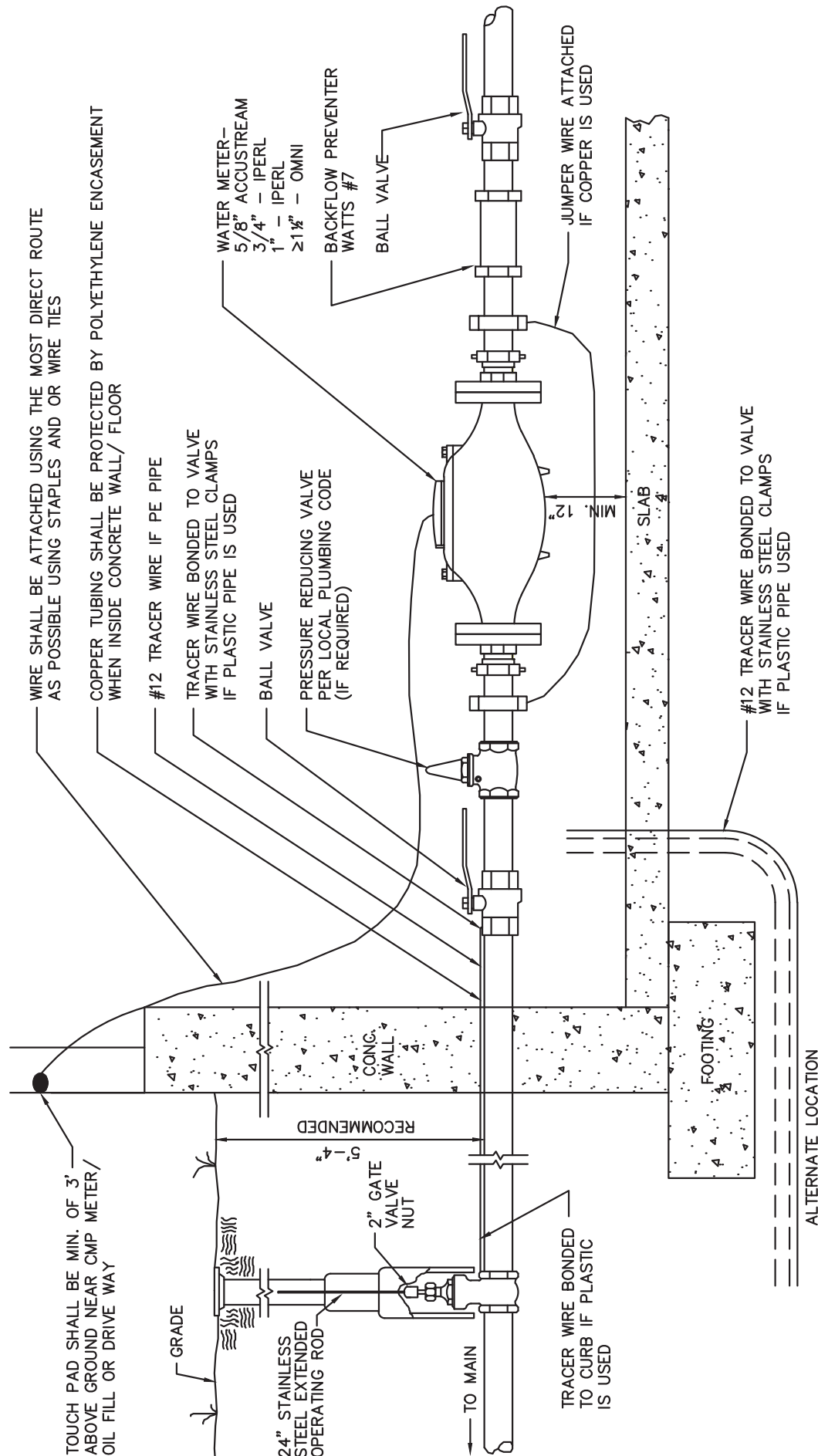
NOTES:
1) DETAIL VARIES DUE TO INDIVIDUAL TOWN AND STATE SPECIFICATIONS.
DIMENSIONS MAY BE ALTERED DUE TO SPECIFIC REQUIREMENTS OF PROJECT LOCATION.

| | | | |
|--|---|---|--|
| Drawn By: LRS/LMM Date: 3/14/16 Approved by: _____ Title: _____ Title: _____ |  93 INDUSTRIAL PARK RD. SACO, ME 04072 PH: (207) 282-1543 FAX: (207) 282-1544 www.maineewater.com | Scale: NTS Drawing Number MWC SD-11 BU Number - Sheet 1 of 1 | |
| | | TEMPORARY TRENCH PAVEMENT DETAIL | |




NOTE:
ALL GROUND CLAMPS SHALL NOT
BE CLAMPED TO METER OR METER
COUPLINGS

| Revision | Description | Date | By | Approved By |
|---------------|---|----------------|----|-------------|
| Drawn By: LRS | <div>  <p>93 INDUSTRIAL PARK RD. SACO, ME 04072 PH: (207) 282-1543 FAX: (207) 282-1544 www.maineewater.com</p> </div> | | | |
| Date: 3/14/16 | | | | |
| Approved by: | | | | |
| Title: | <div> <p>1" SERVICE LINE INSTALLATION DETAILS</p> </div> | | | |
| Title: | | | | |
| Scale: NTS | | Drawing Number | | |
| | | MWC SMS-1 | | |
| | | BU Number - | | |
| | | Sheet of | | |



NOTE:
ALL GROUND CLAMPS SHALL NOT
BE CLAMPED TO METER OR METER
COUPLINGS

| | | | | | |
|--------------------|-------------|---|--|----------------|----|
| | | | | | |
| Revision | Description | | | Date | By |
| Drawn By: LRS/ LMM | | 2" SERVICE LINE INSTALLATION DETAILS | | | |
| Date: 3/14/16 | | | | | |
| Approved by: _____ | | | | | |
| Title: _____ | |  93 INDUSTRIAL PARK RD. SACO, ME 04072 PH: (207) 282-1543 FAX: (207) 282-1544 www.mainewater.com | | | |
| Title: _____ | | | | | |
| Title: _____ | | | | | |
| | | Scale: NTS | | Drawing Number | |
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WATER MAIN INSTALLATION INSTRUCTIONS

These are the specifications for installation of water main, services and hydrants and all appurtenances thereof for Maine Water Company.

SECTION 1 - DESCRIPTION OF WORK:

- 1.1 The work to be done consists of trenching, laying water main, services, hydrants and other necessary appurtenances, backfilling the trench, and properly completing the work of water main construction at locations called for in accordance with plans approved by and at a time required by The Maine Water Company (hereinafter called the Company). All work shall be completed in accordance with the Company's Material Specifications and Installation Instructions.

SECTION 2 – DESIGN CRITERIA:

- 2.1 **Pressure** – All water mains, including those not designed to provide fire protection, shall be reviewed by the Company based on demands and pressure requirements. The system shall be designed to maintain a minimum pressure of 35 psi at ground level at all points in the distribution system under all conditions of flow.
- 2.2 **Diameter** – The minimum size of water main for providing fire protection and serving hydrants shall be eight-inch diameter. Larger size mains will be required if necessary to allow the withdrawal of the required fire flow while maintaining the minimum residual pressure specified in section 2.1.
- 2.3 **Fire Protection** – When fire protection is to be provided, system design should be such that fire flow and facilities are in accordance with requirements of the State Insurance Services Office.
- 2.4 **Small Mains** – Any departure from minimum requirements shall be justified by hydraulic analysis and future water used and can be considered only in special circumstances.
- 2.5 **Hydrants** – Water mains not designed to carry fire flows shall not have fire hydrants connected to them.
- 2.6 **Dead Ends** – In order to provide increased reliability of service and reduce headloss, dead ends shall be minimized by making appropriate tie-ins whenever practical. Where dead end mains occur, they shall be provided with a fire hydrant if flow and pressure are sufficient or with an approved flushing hydrant or blow-off for flushing purposes. Flushing devices should be sized to provide flows that will create a velocity of at least 5.0 feet per second in the water main being flushed. No flushing device shall be directly connected to any sewer.

- 2.7 ***Service Line*** – All service lines shall be a minimum of 1-inch in diameter. The service line diameter, including the customer owned portion, shall be reviewed by the Company based on demands and pressure requirements.

SECTION 3 - DUTIES OF THE COMPANY:

A Water Main Replacement Agreement between the Company and the Contractor/Developer shall clearly identify the scope of work and associated cost estimate for such work. The Company will furnish and perform the following services unless otherwise clearly indicated in the Agreement.

- 3.1 The Company will locate for the Contractor terminal points or connection points of the work and will also locate for the Contractor any of its facilities lying in close proximity to the work which would in any way be a hazard to the Contractor's operations.
- 3.2 The Company will supply all waterworks materials.
- 3.3 The Company will review all required Contractor submittals of plans, specifications, and materials specifications.
- 3.4 The Company will provide on-site inspection and approval of materials and installation procedures and techniques. The Company will perform all valve operation.
- 3.5 The Company will operate all valves that may be found desirable or necessary to be used for any purpose.
- 3.6 The Company will observe all pressure testing and disinfecting operations in accordance with AWWA standards. See sections 11 and 12.
- 3.7 The Company will observe all bacteriological sampling on water from the completed new mains and appurtenances.

SECTION 4 - DUTIES OF THE CONTRACTOR:

The Contractor/Developer will:

- 4.1 Install the water mains so as to supply the Company, upon completion, with a satisfactory, watertight pipeline, laid to the proper grade and alignment as shown on the plans and in accordance with the Material Specifications and Installation Instructions. Submit an electronic copy and a hard copy of "as built" drawings upon completion of the job.
- 4.2 For water mains and appurtenances to be owned and maintained by the Company, the Contractor/Developer shall turn said water mains and appurtenances over to the Company free and clear of liens, damage claims, or lawsuits.
- 4.3 Establish line and grade for the pipeline and associated right-of-way boundaries where

the pipeline is to be installed outside of a public way.

- 4.4 Furnish all fuel, gasoline, oil, etc., for the operation of his equipment, all tools and equipment, dynamite, and all labor and supervision necessary for the handling of the material, excavation, laying, backfilling, and cleaning the site as required. Contractor will make whatever arrangements are necessary for the disposal of excess spoil, and will be solely responsible thereof.
- 4.5 Record a minimum of two (2) lateral measurement “swing ties”, as close to 90 degrees opposed as practical, prior to backfilling pipeline from permanent fixtures such as house corners, telephone poles, fire hydrants, catch basins, manholes etc. to all valves, fittings, couplings, tees etc. for purposes of future location. Permanent fixtures shall be identified such as house numbers or description, pole numbers etc. Also, include information on the subsurface conditions including pavement and road base thickness, soil types and depth to bedrock. These ties must be incorporated into the “as-built” drawings and submitted to the Company prior to final project acceptance.
- 4.6 Furnish all borrow material (sand, gravel, etc.) to bed pipe and completely backfill trench in accordance with Section 9. All water mains must be provided with 5 ½ feet of cover over the top of pipe prior to November 15.
- 4.7 Shall guarantee the workmanship of the pipeline and appurtenances for one (1) year from the date of acceptance by the Company and any charges incurred during that year shall be billed to the Contractor/Developer.

SECTION 5 - MATERIALS:

- 5.1 See "Purchasing Standards for Waterworks Material" for materials generally associated with water main installation. Additional materials that may be required will be evaluated on a case by case basis as the need arises.
- 5.2 Materials that do not meet the Company’s standards will not be accepted without Company approval.

SECTION 6 - EXCAVATION:

6.1 PERMITS AND REPAVING

The Contractor shall pre-mark the area of excavation and contact Dig-Safe a minimum of 3-business days prior to the scheduled excavation. The Contractor shall also contact all utilities that are not members of Dig-Safe with the same minimum 3-business day notice.

6.2 CUTTING OF PAVEMENT

Pavement shall be cut by a method approved by the authority having jurisdiction.

6.3 RIGHT-OF-WAY

For water mains to be owned and maintained by the Company, a minimum 30 foot right-of-way, centered over the water main(s), shall be included in the easement transferring ownership of said water main(s) to the Company and obtained by the Contractor/Developer prior to installation of said water main.

6.4 TRENCHING

The trench shall be dug so that the pipe can be laid to the alignment and depth required and shall be excavated in advance only to the extent necessary for the proper pursuit of the work. The trench shall be kept dewatered, such that no drainage water shall enter the open end of the pipe and said open end of the pipe shall be temporarily plugged off at night and over the weekends, or whenever the work is suspended, or in cases where unstable material could cause a cave-in to enter into the exposed end of the pipe. The trench width shall be in accordance with the Company's "Typical Trench Detail," permitting whatever method of shoring shall be used. The bottom of the trench shall be smooth and even and should be as nearly undisturbed as possible. Provide a minimum of 6-inch of bedding material between the trench bottom and the pipe invert to provide a minimum 6-inch clearance between the invert and any ledge or boulders. All bedding material placed under and around the pipe shall be compacted by mechanical means, as approved by the Company, so as to give it a solid base, precluding future settlement. When the bottom of the trench at subgrade is found to be unstable or to include cinders, refuse, vegetable, organic or any such undesirable material, such materials shall be removed and replaced with suitable material (3/4-inch crushed stone or approved gravel) prior to the pipe being placed. Such replacement material shall be placed in maximum 12-inch lifts and compacted by approved mechanical means.

6.5 BLASTING

Blasting for excavation shall be done at the sole discretion of the Contractor. Damage caused to existing water mains and services by blasting shall be repaired by the Company and paid for by the Contractor/Developer.

6.6 METHOD OF EXCAVATING

Excavating may be done by any acceptable and approved method of excavation, by machine or otherwise as may be desired by the Contractor. Excavation adjacent to nearby water mains or service laterals shall be done by hand to protect these from damage.

6.7 INTERRUPTION OF SERVICE

When as the result of the Contractors scheduled work, the Company must shut down part of its system affecting its customers or fire protection, the Contractor shall provide the Company with a minimum 72 hours'-notice prior to conducting such work. The Contractor or his agents shall operate no valve, hydrant or other facility of The Maine Water Company. The Company will, upon 72 hours advance notice, furnish men and equipment for such activity as necessary.

SECTION 7 - PIPE INSTALLATION:

7.1 GENERAL INSTALLATION

All products and materials listed below shall be placed, supported and installed in strict accordance with the manufacturer's instructions and as directed by the Company:

- i. Push-on joint pipe
- ii. Mechanical joint pipe
- iii. Fittings
- iv. Couplings
- v. Restrained joint devices

Pipe Cleanliness: Foreign material shall be prevented from entering the pipe while it is being placed in the trench. No debris, tools, clothing, or other material shall be placed in the pipe at any time.

Temporary Pipe Plugs: At times when work is not in progress, the open end of the pipe shall be closed by means of a watertight plug or other means acceptable to the Company. When practical, the plug shall remain in place until the trench is pumped completely dry. Care must be taken to prevent pipe floatation should the trench fill with water.

7.2 ALIGNMENT AND GRADE

Pipelines, fittings, valves and other accessories shall be laid to the alignment, grade and location as shown on the plans as approved by the Company. All valve stems shall be plumb with the vertical plane and all fittings, likewise, shall be oriented such that their centerlines shall be at the proper grade and alignment. The main shall be provided with a minimum 5 ½ feet of cover from finish grade as measured to the top of pipe. Any deviation from line and/or grade caused by the encountering of obstructions such as other utilities shall be done so only after the approval of the Company. Pipe grade may vary in location see MWC superintendent for more information.

7.3 UTILITY SEPARATION

Water service pipes shall be laid at least 10 feet horizontally (measured edge to edge) from any sanitary sewer pipe, storm drain pipe, sewer or drainage structure, underground cable or conduit.

When local conditions, (e.g. permanent structures) prevent a horizontal separation of 10 feet, water pipe may be laid closer to the infrastructure provided that:

The bottom of the water pipe is at least 18 inches above the top of the pipe or conduit and minimum of 3 feet (measured edge to edge) is horizontally provided.

7.4 HANDLING OF MATERIAL INTO TRENCH

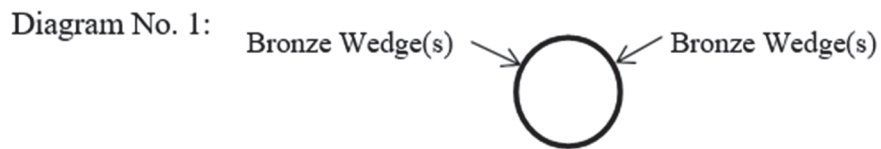
Proper implements, tools and facilities, satisfactory to the Company, shall be provided and used by the Contractor for the safe and convenient handling of all materials. Pipe fittings and accessories shall be carefully lowered into the trench, piece by piece, by

means of crane, slings and other suitable tools and equipment, in a manner such as to prevent damage to the materials or to its protective coatings and linings. No chain or slings shall be passed through any pipe, valve, or fittings. Under no circumstances shall piping materials be dropped or dumped into the trench.

7.5 POLYETHYLENE ENCASEMENT AND BRONZE WEDGES

All ductile iron pipe, fitting and joints shall have polyethylene encasement to AWWA standards. See material standards.

All ductile iron pipe shall have a minimum of two bronze wedges per joint on 3-inch through 8-inch pipe and three per joint on larger diameters. Each wedge shall be driven into the opening between the plain end and the bell until snug to promote pipe connectivity. When four wedges are used, they are inserted side by side, in pairs. See diagram below for suggested bronze wedge locations. For more information contact MWC.



7.6 THRUST RESTRAINT REQUIREMENTS

Thrust restraint shall be provided as needed see MWC detail sheets and local MWC superintendent.

SECTION 8 – SERVICE LINE:

- 8.1 The minimum service line diameter is 1-inch. All 1-inch diameter service line connections from the corporation main valve to the curb stop valve shall only be type “K” copper, unless approved in advance by the Company. 2-inch diameter customer service pipes may be plastic or copper material.

Copper service pipe shall be type "K", soft seamless copper tubing with no soldered joints underground.

Plastic pipe may be used on the customer side of the curb valve, if approved by the Company in advance. Plastic pipe shall be PE 3608 polyethylene copper tubing size (CTS) rated for 200 psi working pressure with this information and the NSF seal appearing on the pipe, in accordance with AWWA C901-02.

All plastic polyethylene pipe installation requires use of stainless-steel inserts at compression fittings. Nonmetallic pipe must be paralleled by a metallic tracer wire grounded to metal at the curb stop valve and interior plumbing for ease of locating. Said wire shall be 12AWG stranded copper with an HMW-PE jacket.

Customer service lines that are required to be greater than 2-inches in diameter shall be increased by 2-inch increments and the material shall be ductile iron or continuously

fused HDPE with tracer wire. 2-inch diameter pipe shall be installed with a tapping saddle, corporation and gate valve.

- 82 Valve box top extensions with cover are required over curb boxes, when curb stop valves are located in a traveled way, i.e. driveway, sidewalk, road, etc.

- 83 Direct service connections to polyethylene encased ductile iron pipe shall be made by applying two or three wraps of polyethylene adhesive tape completely around the pipe to cover the area where the tapping machine and chain will be mounted. After the tapping machine is mounted, the corporation stop is installed directly through the tape and polyethylene. After the tap the entire circumferential area must be inspected for damage and repaired, as necessary.

Direct service connections to all pipe materials, excluding ductile iron and cast iron, require use of a bolt-on mechanical style tapping saddles.

Domestic water service lines shall not be tapped from a fire protection/sprinkler service line but shall be a separate connection at the distribution main. It is possible under unusual circumstances and with prior approval from the Water Company to tap a fire service line for domestic service. This connection would have to be made outside of the building with an appropriate valve configuration so that Water Company personnel can shut off the service lines independently.

- 84 The Company must be contacted with a minimum 72-hour advanced notice of the connection to Company owned water pipe and service line installation. If MWC personnel do not witness the connection and service line installation prior to backfilling, MWC will require passing pressure testing results.

SECTION 9 - BACKFILLING:

- 9.1 All backfill material to be placed in maximum 12-inch lifts and compacted to 95% proctor under and around pipe. Compaction densities from the top of pipe to the top of the trench shall also be 95% proctor unless otherwise specified by authorities having jurisdiction. Do not place frozen materials in backfill or place backfill (and pipes) upon frozen material. Remove all frozen material or allow thawing and then compacting prior to placing new backfill material. No backfill will be permitting with rocks larger than 6-inch.

92 BACKFILLING PIPE TRENCH

Start backfilling and proceed until complete as soon as practicable after the pipes have been placed, and structures such as thrust blocks set.

The Contractor shall be required to backfill the entire trench as part of the scope of work. Upon testing of pipe, if such deficiencies as leaking joints exist, the Contractor shall excavate, expose and repair leaking joints and then backfill the trench to the original specifications - all at his own expense.

a) Material Placement: Do not place stone or rock fragment larger than 2-inch in backfilling under and around the pipe (bedding) nor drop large masses of backfill material into the trench in such a manner as to endanger the pipeline. Wet material by sprinkling when necessary to ensure proper compaction by tamping or rolling, etc. However, no compaction shall be done when material is too wet as determined by the Company. At such times, suspend the work until previously placed materials have dried out.

b) Tamping and Rolling: Before compaction, deposit and spread material in uniform parallel layers not exceeding 12-inch thickness prior to compaction. Before the next layer is placed, uniformly tamp by mechanical means to obtain a thoroughly compacted mass of the specified density. Additional care shall be taken to ensure all material under the pipe and close to the trench sidewalls is thoroughly compacted. When the trench width and depth to which backfill has been placed make it feasible, and it can be done effectively without damage to the pipe, backfill may be compacted by use of vibratory rollers or other approved methods.

93 BACKFILL MATERIAL

Backfill material used from bottom of trench to 1 foot above top of pipe shall be a well-graded gravel or sand material with maximum stone or rock fragment size of 2-inch. This material shall be similar to an MDOT Type A aggregate. Backfill material used from 1 foot above the top of pipe to the top of trench (bottom of base) shall be similar to an MDOT Type D aggregate with maximum stone or rock fragment size of 6-inch or common borrow with a maximum rock fragment size of 12-inch out of paved areas, unless otherwise specified by authorities having jurisdiction. In no case shall materials containing organic, or vegetable matter, refuse, cinders or similar friable materials be used as backfill. Exclude pieces of bituminous pavement from backfill unless use is expressly permitted.

SECTION 10 - FILLING AND TESTING:

10.1 The Company will operate all valves and facilities necessary to fill and flush the water main(s) and appurtenances. The Company requires a minimum 72 hours' advance notice be given prior to such work.

SECTION 11 - PRESSURE AND LEAKAGE TESTING

11.1 The Company will observe all pressure and leakage testing in accordance with AWWA standards. The Company requires a minimum of 72 hours' advance notice be given prior to such work. The Contractor must conduct all pressure and leakage testing with certified individuals in accordance with Company's standards and specifications and the following information is included for such purposes. The Contractor shall provide all necessary tools, equipment, and materials to conduct all required testing.

11.2 The pressure and leakage test shall be conducted as follows:

11.2.1 A pressure test pump shall be connected to the new main at the testing point. The

pressure will be slowly increased to 150 psig and allowed to stabilize (+/- 2.5 psig) for a minimum of 1 hour to stabilize.

- 11.2.2 A reservoir of potable water shall be connected to the test pump and the initial level of water recorded.
- 11.2.3 The pump pressure shall be maintained at 150 psig for a minimum of 1 hour with all makeup water withdrawn from the reservoir.
- 11.2.4 After one hour, the water level in the reservoir will be measured and the volume of water drawn down from the reservoir calculated and compared with the following allowable leakage:
- 11.2.5 Allowable Leakage (gph) = Pipe Length (ft) X Diameter (in) / 10,900

If any test discloses leakage greater than that specified above, the Contractor, at his own expense, shall locate the leak and make repairs as necessary until the leakage is within the specified allowance. Written certification of leakage and pressure testing shall be submitted to the Company upon completion.

SECTION 12 - DISINFECTION:

- 12.1 The Company will observe all disinfecting procedures of water mains and appurtenances in accordance with AWWA standards. The Company requires a minimum 72-hour advance notice be given prior to such work. The Contractor must conduct all disinfecting procedures using certified individuals in accordance with Company's standards and specifications and the following information is included for such purposes. The Contractor shall provide all necessary tools, equipment, and materials to conduct all required testing.

Upon satisfactory completion of the pressure and leakage test, all new water mains, hydrants, and branches 2-inch and larger in diameter shall be flushed and disinfected prior to being placed in service in accordance with AWWA continuous feed method.

- 12.2 The Contractor shall hire experienced individuals to chlorinate the new main and appurtenances in accordance with the continuous feed method specified in Section 5.2 of AWWA Standard C651 (latest revision), using a 5% to 15% sodium hypochlorite solution or properly mixed concentration of calcium hypochlorite solution.
 - 12.2.1 The chlorinated solution shall be injected into the new main between 10 and 20 feet of the connection to the existing main with potable water at a minimum concentration of 25 ppm and a target of 50 ppm free chlorine. Company personnel will operate all valves required to set disinfecting flow rates, etc. The Company requires a minimum 72-hour advance notice for this purpose. All discharge and flushing locations shall be monitored to ensure a minimum concentration of 25 ppm free chlorine throughout the new main including hydrants, branches longer than 10 feet, and services larger than 2-inch diameter.

- 12.2.2 After a 24-hour detention period, the new main, hydrants, branches and large services shall be flushed (valve operation by the Company) until all heavy chlorinated water has been removed.
- 12.2.3 The Contractor shall be responsible for dechlorinating and properly disposing of all flushing water as well as providing hose and equipment that may be necessary to dechlorinate and prevent erosion. The discharge of water to the environment with chlorine concentrations greater than the ambient distribution system chlorine residual is prohibited. The highly chlorinated water must be dechlorinated in accordance with AWWA C655-09 or the latest revision thereof and satisfactory to MWC before discharge to the environment.

SECTION 13 - BACTERIOLOGICAL SAMPLING AND TESTING:

- 13.1 After the final flushing, and with a minimum 72-hour advance notice, the Company will observe bacteriological sampling on the completed new mains and appurtenances; and all additional tests required as the result of improper disinfection will warrant additional Contractor/Developer expense.
- 13.2 Written certification of passing bacteriological testing must be submitted to the Company for our records once completed.

SECTION 14 – PROJECT ACCEPTANCE:

- 14.1 The new main(s) shall not be activated and placed into service until successful pressure, leakage and bacteriological testing and completion of the "Project Acceptance" certificate.
- 14.2 The Company reserves the right to refuse service if the terms and conditions of these Standards and Specifications are not met.

CUSTOMER WATER SERVICE LINES

GENERAL

Maine Water Company (Company or MWC) shall review the size of the service line, including that portion to be owned by the customer. The service line shall be no smaller than 1-inch in diameter.

All materials are to be supplied by Maine Water Company.

Only Company personnel are authorized to operate water system valves, including curb stop valves.

The Company must be contacted with a minimum 72-hour advanced notice of the connection to Company owned water pipe and installation of water service pipe. If MWC personnel do not witness the connection and service line installation prior to backfilling, MWC will require passing pressure testing results.

The Company must be contacted with a minimum 72-hour advanced notice for the meter installation.

MATERIALS

SERVICE PIPE

All 1-inch diameter service line connections from the corporation main valve to the curb stop valve shall only be type "K" copper, unless approved in advance by the Company. 2-inch diameter customer service pipes may be plastic or copper material.

Copper service pipe shall be type "K", soft seamless copper tubing with no soldered joints underground.

Plastic pipe may be used on the customer side of the curb valve, if approved by the Company in advance. Plastic pipe shall be PE 4710 polyethylene copper tubing size (CTS) rated for 250 psi working pressure with this information and the NSF seal appearing on the pipe, in accordance with AWWA C901-02.

All plastic polyethylene pipe installation requires use of stainless steel insert stiffeners at brass compression fittings. Plastics fittings are prohibited.

Nonmetallic pipe must be paralleled by a metallic tracer wire grounded to metal at the curb stop valve and interior plumbing for ease of locating. Said wire shall be 12AWG stranded copper with an HMW-PE jacket.

Customer service lines that are required to be greater than 2-inches in diameter shall be increased by 2-inch increments and the material shall be ductile iron or continuously fused HDPE with tracer wire. 2-inch diameter pipe shall be installed with a tapping saddle, corporation and gate valve.

STRAP SERVICE SADDLES

Double strap service saddles shall have epoxy or nylon coated body and stainless steel nuts, bolts, and double straps.

Strap service saddles shall be compliant with the Federal Highway Administration's policy for Build America, Buy American (BABA) and American Iron and Steel (AIS) requirement and will be supplied by MWC.

CORPORATION STOPS (valves)

Corporation stops shall be rated for 300 psi and manufactured in the United States in accordance with ANSI/AWWA Standard C800-05. The inlet shall have a standard AWWA corporation valve inlet thread and the outlet shall be a compression connection for copper tubing.

Corporation stop valves shall be compliant with the Federal Highway Administration's policy for Build America, Buy American (BABA) and American Iron and Steel (AIS) requirement and will be supplied by MWC.

CURB STOPS (valves)

Curb stop valves shall be ball valve, bronze-body, rated for 300 psi and manufactured in the United States in accordance with ANSI/AWWA Standard C800-5. Both ends of curb stop valves shall be compression connections for copper service tubing.

Curb stop valves shall be compliant with the Federal Highway Administration's policy for Build America, Buy American (BABA) and American Iron and Steel (AIS) requirement and will be supplied by MWC.

CURB BOXES

Curb boxes shall be iron body with close fitting, dirt tight, or screw type covers. The top of the cover shall be flush with the top of the box rim with the word "WATER" clearly marked. Curb boxes shall be Erie Style with stainless steel rod lengths specific to each MWC system.

CUSTOMER WATER SERVICE LINE SPECIFICATIONS

Valve box top extensions with cover are required over curb boxes, when curb stop valves are located in a traveled way, i.e. driveway, sidewalk, road, etc.

| Curb Box Rod Length | |
|-------------------------------|----------------------------|
| <u>MWC Systems</u> | <u>MWC Contracts</u> |
| Biddeford Saco – 24-inches | South Freeport – 24-inches |
| Camden Rockland – 24-inches | Waldoboro – 24-inches |
| Union & Warren – 24-inches | Vinalhaven – 24-inches |
| Skowhegan – 24-inches | |
| Oakland – 24-inches | |
| Hartland – 24-inches | |
| Bucksport – 24-inches | |
| Millinocket – 24-inches | |
| Greenville – 24 or 36-inches* | |
| Freeport – 24-inches | |
| Kezar Falls – 24-inches | |

* - Final approval must be obtained from the Company.

Curb boxes shall be compliant with the Federal Highway Administration's policy for Build America, Buy American (BABA) and American Iron and Steel (AIS) requirement and will be supplied by MWC.

MAIN LINE RESILIENT-SEATED GATE VALVES

Resilient-seated gate valves are required for 2-inch valves. They shall be full weight ductile iron body, threaded (FIP), non-rising stem complete with stainless steel trim, as specified, O-ring seal with a 2-inch x 2-inch operating nut, manufactured in the United States and in accordance with ANSI/AWWA C509-09 or the latest revision thereof.

*Note: Lightweight/thin wall ductile iron body valves are **not** accepted by MWC.*

As a minimum, the inside of the valve body and bonnet are to be coated with a fusion bonded epoxy in accordance with ANSI/AWWA C550-13 or the latest revision thereof. All bolts shall be stainless steel ASTM F593.

Valves shall meet the following required working pressure rating:

| <u>Pipe Diameter (inches)</u> | <u>Working pressure rating (psig)</u> |
|-------------------------------|---------------------------------------|
| Up to 12 | 200 |

Gate valves opening direction should be ordered specific to each MWC System.

CUSTOMER WATER SERVICE LINE SPECIFICATIONS

| <u>Gate Valve Opening Direction</u> | |
|-------------------------------------|-----------------------------|
| <u>MWC Systems</u> | <u>MWC Contracts</u> |
| Biddeford Saco – Open Right | South Freeport – Open Right |
| Camden Rockland – Open Right | Tenants Harbor – Open Left |
| Union & Warren – Open Right | Vinalhaven – Open Left |
| Skowhegan – Open Right | Waldoboro – Open Right |
| Oakland – Open Left | |
| Hartland – Open Right | |
| Bucksport – Open Left | |
| Millinocket – Open Left | |
| Greenville – Open Left | |
| Freeport – Open Right | |
| Kezar Falls – Open Left | |

Resilient-seated gate valves shall be compliant with the Federal Highway Administration’s policy for Build America, Buy American (BABA) and American Iron and Steel (AIS) requirement and will be supplied by MWC.

VALVE BOXES

Valve box top extensions with cover are required over curb boxes, when curb stop valves are located in a traveled way, i.e. driveway, sidewalk, road, etc.

The valve box shall be iron-body with close fitting dirt-tight covers, 2-piece (26-inch or 36-inch top, 36-inch or 48-inch bottom,) 5 ¼-inch shaft adjustable slide type. The top of the cover shall be flush with the top of the box rim with the word “WATER” clearly marked.

Valve boxes shall be compliant with the Federal Highway Administration’s policy for Build America, Buy American (BABA) and American Iron and Steel (AIS) requirement and will be supplied by MWC.

METER HORNS

Meter horns shall be copper corner style for sizes 5/8 - inch x 3/4-inch, 3/4-inch or 1-inch.

Meter horn use is not standard practice in the Camden Rockland, Union, or Warren Divisions, Waldoboro Water Department, and Tenants Harbor Water District.

Meter horns shall be compliant with the Federal Highway Administration's policy for Build America, Buy American (BABA) and American Iron and Steel (AIS) requirement and will be supplied by MWC.

METERS

The Company shall approve the water meter size. The plumbing shall be constructed to allow the meter to be installed in a horizontal position. The meter, remote reading device, and wiring shall be supplied and installed by the Company. The Company must be contacted with a minimum 72-hour advanced notice for meter installations. The customer is responsible for the protection of the water meter, including freeze protection. Water meter damage requiring meter replacement is the customer's financial responsibility.

BACKFLOW PREVENTER

Residential buildings shall install a non-testable, double check valve after the water meter. Watts Model 7 or an equivalent device is recommended.

Commercial buildings shall install a testable backflow prevention device after the meter, with prior product approval by the Company. The customer is responsible for maintenance and testing of all backflow preventers.

INSTALLATION

TRENCH EXCAVATION & BACKFILL

Trench excavation shall provide, at the finished grade, between five and six feet of cover over the top of the service line. If existing conditions limit cover to less than five feet, then subsurface insulation over the top of the pipe is required. The insulation material and configuration requirements are specified on a case-by-case basis. Contact MWC directly for design review and approval.

The trench bottom shall be smooth and of good material. Where ledge or rock is encountered, it shall be removed to provide at least six inches of clearance below and on each side of the pipe.

Where groundwater enters the trench bottom, crushed rock shall be put in the trench bottom to allow the pipe to be above groundwater.

Backfill for the first two feet from the bottom of the trench shall not contain any stones larger than 2" in diameter.

Backfill from two feet above the service line to the rough grade of the roadbed, shall not contain any rocks larger than 6-inch in diameter.

Only proper approved backfill materials shall be used.

All trenches shall be thoroughly compacted using mechanical equipment in 8-inch to

12-inch layers, leaving the finished grade as near as possible to the original grade.

The contractor, when installing the Company's portion of the pipe, shall be responsible for any settling of the trench (to include repaving) for a period of two years from the date of acceptance by the Water Company.

CONNECTION TO COMPANY OWNED WATER PIPE

All connections to Company owned water pipes and service lines shall be made by Company personnel or an agency authorized by the Company.

All materials used in any connections to Company owned water pipes shall be approved by the Company and shall meet the specifications contained herein.

Direct service connections to polyethylene encased ductile iron pipe shall be made by applying two or three wraps of polyethylene adhesive tape completely around the pipe to cover the area where the tapping machine and chain will be mounted. After the tapping machine is mounted, the corporation stop is installed directly through the tape and polyethylene. After the tap the entire circumferential area must be inspected for damage and repaired, as necessary.

Direct service connections to all pipe materials, excluding ductile iron and cast iron, require use of a bolt-on mechanical style tapping saddles.

Domestic water service lines shall not be tapped from a fire protection/sprinkler service line but shall be a separate connection at the distribution main. It is possible under unusual circumstances and with prior approval from the Water Company to tap a fire service line for domestic service. This connection would have to be made outside of the building with an appropriate valve configuration so that Water Company personnel can shut off the service lines independently.

UTILITY SEPARATION AT THE CUSTOMERS PROPERTY LINE

Water service pipes shall be laid at least 10 feet horizontally from any sanitary sewer, storm sewer or sewer manhole, shall be measured edge to edge.

When local conditions, (e.g. permanent structures) prevent a horizontal separation of 10 feet, a water service pipe may be laid closer to a storm or sanitary sewer provided that:

The bottom of the water service pipe is at least 18 inches above the top of the sewer and minimum of 3 feet, edge to edge is horizontally provided.

SEPARATION OF CATV, TELEPHONE, ELECTRIC CABLES AND GAS

PARALLEL INSTALLATION

All underground cable without exception shall be installed with at least a 10-foot separation from the nearest side of the water service pipe.

CROSSINGS

All underground cable that has to cross a water service pipe shall be installed with the following conditions.

The angle of crossing shall not be less than 45 degrees. The distance between the cable and the crossing side of the water main shall be at least 18 inches. At the point of crossing the cable shall be housed in a steel or iron conduit with at least six feet of conduit either side of the water service pipe. This is to be marked with locating or caution tape.

ACCEPTANCE

The Company reserves the right to refuse service if the terms and conditions of these Standards and Specifications are not met.

FIELD NOTES & AS-BUILT REQUIREMENTS

The Contractor shall be responsible for providing As-Built information for the company's installation records in the form of high accuracy GPS points and physical as-built measurements. The information below shall be provided to MWC upon completion of the project and should be provided in a neat and legible format.

As Built Drawings

All project reference points shall each contain two swing ties, which may include, but are not limited to, building corners, hydrants, utility poles, manhole covers, or other permanent structures. Examples are included on the following pages.

High Accuracy GPS Data

High accuracy GPS data collection points of all assets listed below. This data must be collected at accuracies <10 cm into a usable format for MWC. Acceptable formats include a shape file (.shp) projected in the NAD 1983 UTM 19N projection (EPSG Code: 26919). CAD drawing (.dwg) files will also be accepted as long as the file has been spatially referenced to the system mentioned above. The Contractor is responsible for working with MWC to obtain a working high accuracy GPS file.

GPS points are needed for each of the following:

- Hydrants
- Gate valves and service valves
- Fittings (tees, bends, corporations, reducers, etc.)
- Blow off assemblies
- Water main centerline points every 40 feet minimum
- Service line centerline points where the tap and curb box are not perpendicular
- Utility crossings such as sewer or storm drain

Mainline Valves and Fitting As- Built Examples

- Measure and record swing-ties for each mainline valve and fitting
- Measure and record depth of valves and fittings
- Measure and record distances to other nearby valves and fittings
- Record valve and fitting size, type, and make (ex: "8-inch MJ gate valve")
- Include water main(s), underground conflicts, and street names in drawings

Service and Blow off Connections/Installation As-Built Examples

- Measure and record swing-ties for all service line valves, corporations, and fittings
- Measure and record distance from curb box to corporation
- Measure and record depth of all service line valves, corporations, and fittings
- Include size and material of service lines
- Include water main(s), underground conflicts, and street names in drawings

GPS points shall include attributes referring to the assets they represent. For example, a service valve point with the address denoted as “200 Main St domestic” or a tee fitting with label denoted “8x6 tee.” Water main centerline points should be taken every so often and include all fittings on the main such as service corporations or tees.

Reference points for swing-tie measurements (choose two points of reference in this order)

- Two front corners of nearest building marked by address (if available)
- Nearest utility poles marked by pole numbers (if available)
- Nearest manhole covers and storm drains (if available)
- Other permanent structures if needed

Mainline Valves and Fittings

- Measure and record swing-ties for each mainline valve and fitting
- Measure and record depth of valves and fittings
- Measure and record distances to other nearby valves and fittings
- Record valve and fitting size, type, and make (ex: “8-inch MJ gate valve”)
- Include water main(s), underground conflicts, and street names in drawings

Service and Blow off Connections/Installations

- Measure and record swing-ties for all service line valves, corporations, and fittings
- Measure and record distance from curbstop to corporation
- Measure and record depth of all service line valves, corporations, and fittings
- Include size and material of service lines
- Include water main(s), underground conflicts, and street names in drawings

2020 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> |
|------------------------|------------------------------|-----------------------------|
| 502(19) | Bridge Drains | 3/17/2023 |
| 502(15) | Bridge Drains | 3/17/2023 |
| 502(20) | Bridge Drains | 3/17/2023 |
| 502(23) | Bridge Drains | 3/17/2023 |
| 502(24) | Bridge Drains | 3/17/2023 |
| 502(25) | Bridge Drains | 3/17/2023 |
| 502(26) | Bridge Drains | 3/17/2023 |
| 504(07) | Diaphragm & Crossframe Notes | 3/17/2023 |
| 507(20) | Steel Approach Railing 3-Bar | 2/11/2021 |
| 507(21) | Steel Approach Railing 3-Bar | 2/11/2021 |
| 507(22) | Steel Approach Railing 3-Bar | 2/11/2021 |
| 507(23) | Steel Approach Railing 3-Bar | 2/11/2021 |
| 507(27) | Steel Approach Railing | 2/11/2021 |
| 526(01) | Portable Concrete Barrier | 1/14/2021 |
| 526(01A) | Portable Concrete Barrier | 1/14/2021 |
| 526(01B) | Portable Concrete Barrier | 1/14/2021 |
| 526(02) | Portable Concrete Barrier | 1/14/2021 |
| 526(02A) | Portable Concrete Barrier | 1/14/2021 |
| 526(03) | Portable Concrete Barrier | 1/14/2021 |
| 526(04) | Portable Concrete Barrier | 1/14/2021 |
| 526(04A) | Portable Concrete Barrier | 1/14/2021 |
| 526(04B) | Portable Concrete Barrier | 1/14/2021 |
| 526(05) | Permanent Concrete Barrier | 3/17/2023 |
| 526(21) | Permanent Concrete Barrier | 3/17/2023 |
| 526(22) | Concrete Transition Barrier | 3/17/2023 |
| 526(38) | Concrete Transition Barrier | 3/17/2023 |
| 526(39) | Texas Classic Rail | 3/17/2023 |
| 526(55) | Texas Classic Rail | 3/17/2023 |

| | | |
|---------|--|------------|
| 603(10) | Concrete Pipe Ties | 6/10/2021 |
| 605(01) | Underdrain | 7/8/2022 |
| 605(01) | Underdrain Notes | 7/8/2022 |
| 606(17) | Midway Splice Guardrail Transition | 6/10/2022 |
| 606(23) | Standard Bridge Transition – Type “1” | 2/11/2021 |
| 606(24) | Standard Bridge Transition – Type “1A” | 2/11/2021 |
| 608(02) | Detectable Warnings | 6/10/2021 |
| 609(09) | Precast Concrete Vertical Curb | 2/11/2021 |
| 627(07) | Crosswalk | 2/22/2022 |
| 627(08) | Crosswalk | 2/22/2022 |
| 643(11) | ATCC Cabinet | 12/14/2020 |
| 801(11) | Pedestrian Ramp Notes | 11/20/2023 |
| 801(12) | Pedestrian Ramp Requirements | 11/20/2023 |
| 801(13) | Ramp Length Table | 11/20/2023 |
| 801(14) | Parallel Pedestrian Ramp | 11/20/2023 |
| 801(15) | Perpendicular Pedestrian Ramp – Option 1 | 11/20/2023 |
| 801(16) | Parallel Pedestrian Ramp – Option 2A | 11/20/2023 |
| 801(17) | Perpendicular Pedestrian Ramp – Option 2A | 11/20/2023 |
| 801(18) | Parallel Pedestrian Ramp – Option 2B | 11/20/2023 |
| 801(19) | Perpendicular Pedestrian Ramp – Option 2B | 11/20/2023 |
| 801(20) | Parallel Pedestrian Ramp – Option 3 | 11/20/2023 |
| 801(21) | Perpendicular Pedestrian Ramp – Option 3 | 11/20/2023 |
| 801(22) | Side Street Pedestrian Ramp | 11/20/2023 |
| 801(23) | Parallel Pedestrian Ramp – Esplanade | 11/20/2023 |
| 801(24) | Perpendicular Pedestrian Ramp – Esplanade | 11/20/2023 |
| 801(25) | Island Crossings | 11/20/2023 |
| 801(26) | Blended Transition | 11/20/2023 |
| 801(26) | Blended Transition | 1/19/2024 |
| 801(27) | Pedestrian Ramp Adjacent to Driveway or Entrance | 11/20/2023 |
| 802(05) | Roadway Culvert End Slope Treatment | 1/03/2017 |

SUPPLEMENTAL SPECIFICATIONS
(Corrections, Additions, & Revisions to Standard Specifications – March 2020)

SECTION 101
CONTRACT INTERPRETATION

101.2 Definitions

Construction Easement revise this definition by removing it in its entirety and replace with:
“A right acquired by the Department for a specific use of private property outside of the established Right-of-Way. Examples include but are not limited to Drainage Easements, Construction and Maintenance Easements, and Slope Easements. Construction Easement areas, including Temporary Construction Limits and Temporary Road Limits, outside of the Right-of-Way remain private property. No use other than to access and perform the specified work activity is permitted without written permission of the owner.”

Construction Limit Line Remove this definition in its entirety.

Holidays Amend this paragraph by adding “**Juneteenth**” between ‘Memorial Day’ and ‘Independence Day’.

Plans Revise this paragraph by removing “**Standard Details, Supplemental Standard Details**” from the first sentence.

Project Limits Revise this definition by removing it in its entirety and replacing it with:
“Areas within the Right-of-Way, Construction Easements, or Temporary Construction Limits shown on the Plans or otherwise indicated in the Contract. If no Project Limits are indicated in the Contract, the Project Limits shall be determined by the Department. For a related Maine statute, see 23 MRSA § 653. “

Right-Of-Way Revise this definition by removing it in its entirety and replacing it with:
“The area of land, property, or interest therein, acquired for or devoted to the Project or other purposes. Portions of the Right-of-Way may be used for storage of materials and equipment and the location of engineering facilities, subject to written approval by the Department.”

Amend this Section by adding the following two definitions (that replace Construction Limit Line);

Temporary Construction Limits The area within which the Contractor may access and perform the Physical Work and outside of which Work may not be performed without written authorization by the property owner.

Temporary Road Limits The area within which the Contractor may construct and maintain a temporary detour for maintenance of traffic.

SECTION 102 BIDDING

102.11 Bid Responsiveness Revise the paragraph that states
“The Bid is not signed by a duly authorized representative of the Bidder.” So that it reads:

“The Bid is not signed by a duly authorized representative of the Bidder.

- Properly submitted electronic bids meet this requirement.
- Paper bids must include at least one signed copy of the Contract Agreement Offer & Award form.”

SECTION 103 AWARD AND CONTRACTING

103.3.1 Qualification Requirement for Award Revise this subsection so that it reads:

“103.3.1 Qualification Requirement for Award If the Notice to Contractors lists a Prequalification requirement, the Apparent Successful Bidder must successfully complete the Prequalification process as a condition of Award. The Apparent Successful Bidder who does not already hold an Annual Prequalification shall have 21 days to provide the Department with their Prequal documents or the Department may move on to the next low bidder.”

SECTION 104 GENERAL RIGHTS AND RESPONSIBILITIES

104.2.1 Furnishing of Right-of-Way Revise this subsection by removing it in its entirety and replace with the new subsection:

“104.2.1 Furnishing of Property Rights The Department will secure all necessary rights to real property within the Project Limits shown on the Right-of-Way Plans that are provided with the Bid Documents. For related provisions, see Sections 104.3.2 – Furnishing of Other Property Rights, Licenses and Permits and 105.4.5 - Maintenance of Existing Structures. For related definitions, see Construction Easements and Right-of-Way.”

104.3.2 Furnishing of Other Property Rights, Licenses and Permits Revise this subsection by replacing “104.2.1 Furnishing of Right-of-Way” with “**104.2.1 Furnishing of Property Rights**”.

SECTION 105 GENERAL SCOPE OF WORK

105.10.2 Requirements Applicable to All Contracts Under section A, number 2, in the first sentence of the first paragraph, revise this Section by replacing the word “handicap” in two places with the word “disability” so it now reads:

“2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, State that all qualified applicants will receive consideration for employment without regard to race, color, sexual orientation, religious creed, sex, national origin, ancestry, age, physical disability, or mental disability.”

SECTION 106 QUALITY

106.6 Acceptance Revise this Subsection by replacing the paragraph beginning with “Acceptance of Hot Mix Asphalt Pavement will be based” with:

“Acceptance of Hot Mix Asphalt Pavement will be based on Method A or C Statistical Acceptance, or Method B or D Acceptance as specified. The method of acceptance for each item is defined in Special Provision, Section 403, Hot Mix Asphalt Pavement. When items of Hot Mix Asphalt Pavement are not so designated, Method A will be utilized whenever there are more than 1000 tons per Hot Mix Asphalt Pavement item, and Method B will be utilized when there are less than or equal to 1000 tons per Hot Mix Asphalt Pavement item.”

Revise Subsection “B” by removing it and replacing it with:

“B. Items not designated for Statistical Acceptance will utilize Method B or D Acceptance testing to validate the quality of the material incorporated into the Project. For material paid under Item 403.209 – Method D, or designated to be visually accepted, the Contractor shall provide the Department with a Certification Letter that indicates that the material supplied complies with the Specifications. Test results representative of the certified material shall be attached to the letter.

The Department will randomly sample and test the certified Material for properties noted in Table 1 of Section 502 - Structural Concrete or Table 14 of Section –401.21 Acceptance Method B & D. Material will be subject to rejection as noted in Structural Concrete Section 502.195 - Quality Assurance Method C Concrete or Hot Mix Asphalt, Section 401.2022 Pay Adjustment – Method B & D.”

106.7.1 Standard Deviation Method Revise 106.7.1, subsection H by removing the following from the first paragraph:

“Method B: $PF = [70 + (Quality\ Level * 0.33)] * 0.01$ ”

106.9.1 Warranty by Contractor Revise the third paragraph of this section so that it reads:

“For a related provision regarding obligations regarding plantings, see section 621.36 – Maintenance Period. “

SECTION 107 TIME

107.3.1 General Amend this paragraph by adding **“Juneteenth”** between ‘Patriot’s Day’ and ‘the Friday after Thanksgiving’.

SECTION 108 PAYMENT

108.2.3 Mobilization Payments Replace Standard Specification 108.2.3 – Mobilization Payments with the following:

“108.2.3 Mobilization Payments “Mobilization” includes the mobilization and demobilization of all resources as many times as necessary during the Work.

Percent Mobilization Bid will be determined by taking the amount Bid for Mobilization and dividing by the Total Contract Amount less Mobilization. Mob/(Total Contract – Mob).

Payment will be made at the following intervals:

| % Mobilization Bid | % Mobilization Paid at Contract Award | % Mobilization Paid after the Department determines 50% of the work is Complete | % Mobilization Paid at Final Acceptance |
|-----------------------------|--|--|--|
| 10% or less | 50% | 50% | |
| More than 10% to 15% | 33% | 33% | 34% |
| More than 15% to 20% | 25% | 25% | 50% |
| More than 20% to 30% | 15% | 15% | 70% |
| Greater than 30% | 10% | 10% | 80% |

108.3 Retainage Revise the third paragraph of this section so that it reads:

“Upon Final Acceptance, and determination by the department that there are no claims either by or on the Contractor or Subcontractors; no over payments by the department; no LDs due; and no disincentives due, the Department will reduce Retent to 1% of the original Contract Award amount, or \$100,000, whichever is less, as it deems desirable and prudent.”

108.4.1 Price Adjustment for Hot Mix Asphalt Revise this section by removing it in its entirety and replacing it with the following:

“108.4.1 Price Adjustment for Hot Mix Asphalt: For each Contract, a price adjustment for performance graded binder will be made for the following pay items, when the total quantity of Hot Mix Asphalt included in these items is in excess of 500 tons, based on the estimated quantities of these items at the time of bid.

| | |
|----------------|---|
| Item 403.102 | Hot Mix Asphalt – Special Areas |
| 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 403.2084 | Hot Mix Asphalt - 12.5 mm (Highly Modified HiMAP) |
| 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 403.2104 | 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 403.301 | Hot Mix Asphalt (Asphalt Rubber Gap-Graded) |
| Item 461.13 | Light Capital Pavement |
| Item 461.210 | 9.5 mm HMA - Paver Placed Surface |
| Item 461.2101 | Hot Mix Asphalt - 9.5 mm (Polymer Modified) |
| Item 461.216 | Hot Mix Asphalt (Shim) |
| 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 403.207–5.2%
Item 403.2071–5.2%
Item 403.2072–5.8%
Item 403.208–5.6%
Item 403.2081–5.6%
Item 403.2084 – 6.2%
Item 403.209–6.2%
Item 403.210–6.2%
Item 403.2101–6.2%
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 403.301–6.2%
Item 461.13–6.7%
Item 461.210 – 6.4%
Item 461.2101 – 6.4%
Item 461.216 – 6.7%
Item 462.30–0.0021 tons/SY
Item 462.301–0.0021 tons/SY”

SECTION 110 INDEMNIFICATION, BONDING, AND INSURANCE

110.3.9 Administrative & General Provisions Amend this subsection by adding “**Automobile Liability**” under letter A) Additional Insured to the list of exceptions.

SECTION 206 STRUCTURAL EXCAVATION

206.01 Description – *Structural Earth Excavation, Below Grade* delete the entire sentence and replace with “**shall consist of the removal of excavation required for unknown or unanticipated subsurface condition. See 206.04 – Method of Measurement for pay limits.**”

206.04 Method of Measurement – Drainage and Minor Structures Paragraph 1, sentence 2, delete the remainder of the sentence beginning with “....provided the maximum allowable...” And replace with: “**....in accordance with the following limits:**”

- **Vertical pay limits:**
 - **Below a plane parallel with and 12 inches below the bottom of the drainage or minor structure or**
 - **Below the excavation limits shown in the Bid Documents; whichever is greater.**
- **Horizontal pay limits – The maximum allowable horizontal dimensions shall not exceed those bounded by vertical surfaces 18 inches outside the base, or extreme limits of, the structure, and to the vertical neat lines of underdrain trenches, as shown in the Contract Documents.**

SECTION 401 HOT MIX ASPHALT PAVEMENT

401.19 Contractor Quality Control Amend this Section by adding the following to the end: “**Failure to comply with the approved QCP will result in work suspension and pay reductions as outlined in Section 106.4.6. The Quality Control Plan Value shall be the total bid value for all items covered by the QCP as identified in Special Provision 403.**”

SECTION 501 FOUNDATION PILES

501.05 Method of Measurement

c. Piles in Place Revise the third paragraph by replacing the “10” with “20” so that it reads:

Unused pile cutoffs **20** feet or more in length, except those required to accommodate the Contractor’s construction method, as discussed herein, will remain the property of the Department and will be stored at a bridge maintenance yard nearest the project. Hauling and unloading of piles will be done by the Contractor or by the Department, depending upon availability of services.

SECTION 502 STRUCTURAL CONCRETE

502.09 Forms and Falsework Amend this subsection by adding the subsection title “**502.10 Placing Concrete**” after section “D” Removal of Forms and False work” and after the paragraph beginning with “2. Forms and False work, including blocking...”. So that a new subsection starts and reads:

“502.10 Placing Concrete

A. **General** Concrete shall not be placed until forms”

502.1701 Quality Control, Method A and B Revise this Section so that the first paragraph and the first sentence of the second paragraph read:

“502.17 Quality Control The Contractor shall control the quality of the concrete through testing, inspection, and practices which shall be described in the QCP, sufficient to assure a product meeting the Contract requirements. The QCP shall meet the requirements of Section 106, Quality, and this specification. No work under this item shall proceed until the QCP is submitted to and approved by the Department. Failure to comply with the approved QCP will result in work suspension and pay reductions as outlined in Section 106.4.6. The Quality Control Plan Value shall be the total bid value for all cast-in-place items covered by the QCP, using the P value listed in Special Provision 502. If no P value is listed, a value of \$350, or bid value per cubic yard, whichever is less, shall be used.

502.1701 Quality Control, Method A and B The QCP shall address all elements that affect the quality of the structural concrete including, but not limited to, the following: “

Section 502.1701, Quality Control, Revise Table 4 of this Subsection by removing it in its entirety and replacing it with:

TABLE 4
METHOD A & B MINIMUM QUALITY CONTROL TESTING REQUIREMENTS *

| TEST | TEST METHOD | SAMPLING LOCATION | FREQUENCY |
|-----------------------------|--------------------|-------------------|--|
| Gradation | AASHTO T-27 & T-11 | Stockpile | One set per proposed grading before production. One set every 100 yd ³ (Min. 1 set per month) |
| Organic Impurities | AASHTO T-21 | Stockpile | Once per fine aggregate per year ** |
| % Absorption | AASHTO T-84 & T-85 | Stockpile | Once per aggregate per year |
| Specific Gravity | AASHTO T-84 & T-85 | Stockpile | Once per aggregate per year |
| Total Moisture in Aggregate | AASHTO T-255 | Stockpile | One set per day’s production |

| | | | |
|------------------------------|------------------------|------------|---|
| Free Water and Aggregate Wt. | N/A | | One per day's production |
| % Entrained Air | AASHTO T-152 | On Project | On first two loads and every third load thereafter provided consistent results are achieved |
| Compressive Strength | AASHTO T-22 | On Project | One set per subplot |
| Compressive Strength | AASHTO T-22 @ 7days | On Project | One set per subplot |

* Additional QC testing will be required any time a process change occurs during a placement, including changes in type or dosage of admixture. Additional testing shall include, but is not limited to, entrained air testing.

**** If the color produced is a laboratory designation Plate III, then the fine aggregate shall be tested once per month.**

502.18, Method of Measurement, Revise Subsection 'F' by removing the word 'transverse' so that it reads: **"Saw cut grooving of concrete wearing surfaces, complete and accepted, will be measured for payment as one lump sum."**

502.19, Basis of Payment, Revise the third paragraph by removing the word 'transverse' so that it reads: **"Saw cut grooving of concrete wearing surfaces will be paid for at the Contract Lump Sum Price, which shall be payment for furnishing all materials, labor, and equipment, including depth gauges and all incidentals, to satisfactorily complete the work."**

(Also see 535.24 and 535.25 for related changes)

SECTION 503 REINFORCING STEEL

Section 503.07 Splicing Revise this section by removing the table and following footnote and replacing them with:

| Minimum Lap Splice Length (inches) | | | | | | | | | |
|------------------------------------|----------|----|----|----|----|----|----|-----|-----|
| Bar Type | Bar Size | | | | | | | | |
| | #3 | #4 | #5 | #6 | #7 | #8 | #9 | #10 | #11 |
| Plain or Galvanized | 16 | 20 | 24 | 29 | 38 | 47 | 59 | 72 | 85 |
| Epoxy or Dual Coated | 17 | 24 | 36 | 43 | 56 | 71 | 88 | 107 | 128 |
| Stainless | 19 | 24 | 30 | 36 | 47 | 59 | 73 | 89 | 107 |
| Low-carbon Chromium | 24 | 32 | 39 | 47 | 63 | 78 | 97 | 119 | 142 |

“The minimum lap splice lengths in the table above are based on the parameters below. When any of these parameters are altered, appropriate minimum lap splice lengths will be as shown on the Plans.

- **Normal weight concrete**
- **Minimum 28-day concrete compressive strength from 4,000 psi to 10,000 psi**
- **Class B tension lap splice**
- **Minimum center-to-center spacing between bars of 6 inches**
- **Minimum clear cover of 2 inches**
- **Nominal reinforcing steel yield strengths**
 - **Low-carbon Chromium = 100 ksi**
 - **Stainless = 75 ksi**
 - **All others = 60 ksi**
- **Reinforcement with yield strengths greater than 75 ksi shall have beam transverse reinforcement and column ties provided over the required lap splice length in accordance with the current edition of the AASHTO LRFD Bridge Design Specifications**

When lap splices are placed horizontally in an element where the concrete depth below the splice will be 12 inches, or more, the indicated lap splice lengths shall be multiplied by a factor of 1.3.”

SECTION 506 SHOP APPLIED PROTECTIVE COATING – STEEL

506.13 Surface Preparation Amend this section by adding this paragraph to the end:

“Steel shall meet the requirements of SSPC SP8 Pickling prior to being immersed in the zinc tanks. Verification of the surface preparation shall be included in the QC documentation.”

SECTION 523 BEARINGS

523.051 Protective Coating Revise this subsection by removing the paragraph beginning with “Anchor rods shall be galvanized...” and replacing with:

“Anchor rods shall be galvanized. When anchor rods are designated to secure bare unpainted steel or painted steel, a dielectric coating (epoxy or bituminous type coatings are acceptable) shall be applied to the anchor rod and/or adjacent steel to prevent contact between galvanized surfaces and painted or unpainted steel.”

523.22 Fabrication Amend this subsection by adding the following: **“Elastomeric Bearings shall be fabricated in accordance with AASHTO M251.”**

SECTION 526 CONCRETE BARRIER

Amend this section by deleting it in its entirety and replacing it with:

“526.01 Description This work shall consist of the furnishing, constructing, erecting, setting, resetting, and removal of concrete barrier and associated elements in accordance with these specifications, the Standard Details, and the lines and grades shown on the Plans or established by the Resident.

The types of concrete barrier are designated as follows:

Portable Concrete Barrier Type I Double faced removable barrier in accordance with the Standard Details.

Permanent Concrete Barrier Type II Double faced barrier as shown on the Plans.

Permanent Concrete Barrier Type IIIa Single faced barrier 32 inches high in accordance with the Standard Details or as shown on the Plans.

Permanent Concrete Barrier Type IIIb Single faced barrier 42 inches high in accordance with the Standard Details or as shown on the Plans.

Permanent Concrete Transition Barrier Barrier of various heights joining steel bridge rail to steel guardrail in accordance with the Standard Details or as shown on the Plans.

Permanent Texas Classic Rail Barrier Traffic rail or sidewalk rail, in accordance with the Standard Details or as shown on the Plans.

526.02 Materials

a. **Concrete** Concrete for barriers, both permanent and portable, shall have a design strength of 5,000 psi.

For cast-in-place barrier: The concrete shall be Class LP, in accordance with Standard Specification Section 502, Structural Concrete.

For precast barrier: The concrete shall meet the requirements of Standard Specification 712.061, Structural Precast Concrete Units, except that the stripping strength for precast barriers is 4,000 psi.

b. Reinforcing Steel Reinforcing steel shall meet the requirements of Section 503, Reinforcing Steel.

c. Structural Steel Plates and barrier connections shall meet the requirements specified in Standard Specification 504 - Structural Steel and shall be hot dip galvanized after fabrication in accordance with Standard Specification 506, Shop Applied Protective Coating – Steel

d. Bolts Bolts shall meet the requirements specified in Section 713.02, High Strength Bolts.

e. Connecting Pins for Portable Concrete Barrier Portable concrete barriers must be connected using a 1- inch diameter pin. The connecting pin must be smooth, not deformed, i.e., reinforcing bar may not be used, and shall meet the strength requirements of ASTM A449 steel. Materials with greater strength may be used with the approval of the Department.

f. Anchor Pins for Portable Concrete Barrier Anchoring to concrete or asphalt will be required when specified on the Plans. When required, portable concrete barriers must be anchored using a 1 ½ - inch diameter anchor pin. The anchor pin must be smooth, not deformed, i.e., reinforcing bar may not be used, and shall meet the strength requirements of ASTM A36 steel. Materials with greater strength may be used with the approval of the Department.

g. Device Crashworthiness MaineDOT is transitioning to MASH2016 criteria for Portable Concrete Barrier on the following schedule:

New Portable Concrete Barrier shall be crash tested and/or evaluated to MASH2016 criteria.

Current Portable Concrete Barrier in useful serviceable condition that is successfully tested to NCHRP Report 350 or MASH2009 criteria may be utilized through December 31, 2029.

Other current Portable Concrete Barrier that is deemed acceptable by the Department may be utilized on projects off the National Highway System through December 31, 2024.

526.03 Construction Requirements

Cast-in-place barriers shall be fabricated in accordance with Standard Specification Section 502, Structural Concrete. Precast barriers shall be fabricated in accordance with Standard Specification 534, Precast Structural Concrete.

Concrete finish for permanent barrier shall be rubbed as defined in Standard Specification Section 502, Structural Concrete, 502.13 D2 or an approved equal.

Portable concrete barrier shall be generally free from fins and porous areas and shall present a neat and uniform appearance.

Permanent barrier shall have a protective coating applied in accordance with Standard Specification Section 515, Protective Coating for Concrete Surfaces.

Reflective delineators for concrete median barrier shall meet the requirements of Special Provision 645, Highway Signing.

Preformed Joint Filler shall meet the requirements specified in Subsection 705.01, Preformed Expansion Joint Filler.

Permissible dimensional tolerances for all concrete barriers shall be as follows:

- a. Cross-sectional dimensions shall not vary from design dimensions by more than $\frac{1}{4}$ inch. The vertical centerline shall not be out of plumb by more than $\frac{1}{4}$ inch.**
- b. Longitudinal dimensions shall not vary from the design dimensions by more than $\frac{1}{4}$ inch per 10 feet of barrier section and shall not exceed $\frac{3}{4}$ inches per section.**
- c. Location of anchoring holes shall not vary by more than $\frac{1}{2}$ inch from the dimensions shown in the concrete barrier details on the Plans.**
- d. Surface straightness shall not vary more than $\frac{1}{4}$ inch under a 10-foot straightedge.**
- e. The barrier shall have no significant cracking. Significant cracking is defined as fractures or cracks passing through the section, or any continuous crack extending for a length of 12 inches or more, regardless of position in the section.**

526.04 Method of Measurement Permanent Concrete Barrier Type II, IIIa, IIIb, Texas Classic Rail, and Precast Median Barrier will be measured for payment by lump sum, complete in place.

Portable concrete barrier, both anchored and unanchored will be measured for payment by lump sum. Lump sum measurement will include verification of the installation and removal of all portable concrete at the completion of the Contractor's operations.

The Contractor shall replace sections of portable concrete barrier, including anchored barrier damaged by the traveling public when directed by the Resident. Replacement sections will be measured for payment in accordance with Standard Specification 109.7, Equitable Adjustments to Compensation and Time.

Transition barrier will be measured by each, complete in place.

526.05 Basis of Payment The accepted quantities of Concrete Barrier Type II, IIIa, IIIb, Texas Classic Rail, and Precast Median Barrier will be paid for at the Contract lump sum price for the type specified, complete in place.

The accepted quantities of Portable Concrete Barrier Type I, both anchored and unanchored will be paid for at the Contract lump sum price. Such payment shall be full compensation for furnishing all materials, assembling, moving, resetting, transporting, temporarily storing, removing barrier, furnishing new parts as necessary, and all incidentals necessary to complete the work.

Portable barrier shall become the property of the Contractor upon completion of the use of the barrier on the project and shall be removed from the project site by the Contractor.

Transition barrier will be paid for at the Contract price each, complete in place.

The accepted quantity of all types of concrete barrier, whether portable or permanent, will be paid for at the lump sum or per each price, as applicable, which payment shall be full compensation for all materials, including reinforcing steel, protective coating, reflective delineators, steel plates and hardware, equipment, labor and incidentals required, as necessary, to complete the work.

Payment will be made under:

| | <u>Pay Item</u> | <u>Pay Unit</u> |
|---------|--|------------------------|
| 526.301 | Portable Concrete Barrier, Type I | Lump Sum |
| 526.304 | Portable Concrete Barrier, Anchored Type I | Lump Sum |
| 526.312 | Permanent Concrete Barrier Type II | Lump Sum |
| 526.321 | Permanent Concrete Barrier Type IIIa | Lump Sum |
| 526.323 | Texas Classic Rail | Lump Sum |
| 526.331 | Permanent Concrete Barrier Type IIIb | Lump Sum |
| 526.34 | Permanent Concrete Transition Barrier | Each |
| 526.502 | Precast Concrete Median Barrier | Lump Sum" |

SECTION 527 ENERGY ABSORBING UNIT

527.02 Materials Amend this section by deleting it in its entirety and replacing it with:

“MaineDOT is transitioning to MASH2016 criteria for Work Zone Traffic Control Devices on the following schedule:

Portable Crash Cushions will be crash tested and/or evaluated to MASH2016 criteria by January 1, 2030. Current Category 3 devices in useful serviceable condition that are successfully tested to NCHRP Report 350 or MASH2009 criteria may be utilized through December 31, 2029.

Work Zone Crash Cushions shall be selected from the Department’s Qualified Products List of Crash Cushions/Impact Attenuators or approved equal.”

SECTION 535 PRECAST, PRESTRESSED CONCRETE SUPERSTRUCTURE

535.22 Tolerances Amend this section by deleting it in its entirety and replacing it with:

“Product dimensional tolerances shall be in conformance with the latest edition of PCI MNL-135, Tolerance Manual for Precast and Prestressed Concrete Construction, as applicable to the particular product (e.g., slab, I-girder, box beam), the Plans, and this Specification. Use Box Beam fabrication tolerances for voided or solid slab beams and use Double Tee tolerances for NEXT beams. In case of dispute, the Fabrication Engineer shall determine the allowable tolerance.”

535.24 Installation of Slabs, Beams, and Girders Revise the 5th paragraph by replacing “6.0 and 9.0” to “5.0 and 8.0” so it reads: **“Ready mixed grout shall achieve a design compressive strength of 6,000 psi at 28 days, have an entrained air content of between 5.0 and 8.0 percent, be non-shrink, flowable, and contain a non-shrink additive listed on the Department QPL for expansive cements.”**

535.25, Installation of Precast/Prestressed Deck Panels Revise the 2nd paragraph by replacing “6.0 and 9.0” to “5.0 and 8.0” so it reads: **“Ready mixed grout shall achieve a design compressive strength of 6,000 psi at 28 days, have an entrained air content of between 5.0 and 8.0 percent, be non-shrink, flowable, and contain a non-shrink additive listed on the Department QPL for expansive cements.”**

SECTION 606
GUARDRAIL

Amend this section by replacing it with the following:

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

31" W-Beam Guardrail - Mid-Way Splice

Galvanized steel w-beam, 8" wood or composite offset blocks, galvanized steel posts

Thrie Beam

Galvanized steel thrie beam, 8" wood or composite offset blocks, galvanized steel posts

Median guardrail shall consist of two beams of the above types, mounted on single posts.

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

Remove and Reset and Remove, Modify, and Reset guardrail shall consist of removing the existing designated guardrail and resetting in a new location as shown on the plans or directed by the Resident. Remove, Modify, and Reset guardrail and Modify guardrail include the following guardrail modifications: Removing plate washers at all posts, except at anchorage assemblies as noted on the Standard Details, adding offset blocks, and other modifications as listed in the Construction Notes or General Notes. Modifications shall conform to the guardrail Standard Details.

Bridge Connection shall consist of the installation and attachment of beam guardrail to the existing bridge. This work shall consist of constructing a concrete end post or modifying an existing end post as required, furnishing, and installing a terminal connector, necessary hardware, and incidentals required to complete the work as shown on the plans. Bridge Transition shall consist of a bridge connection and furnishing and installing guardrail components as shown in the Standard Details.

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

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

Guardrail components shall meet the applicable standards of "A Guide to Standardized Highway Barrier Hardware" prepared and approved by the AASHTO-AGC-ARTBA Joint Cooperative Committee, Task Force 13 Report.

Posts for underdrain delineators shall be “U” channel steel, 8 ft long, 2 ½ lb/ft minimum and have 3/8-inch round holes, 1-inch center to center for a minimum distance of 2 ft from the top of the post.

Reflectorized Flexible Guardrail Markers shall be mounted on all guardrails. A marker shall be mounted onto guardrail posts at the flared guardrail terminal end point and tangent point, both at the leading and trailing ends of each run of guardrail. The marker’s flexible posts shall be gray with either silver-white or yellow reflectors (to match the edge line striping) at the tangents, red at leading ends, and green at trailing ends. Whenever the guardrail terminal is not flared, markers will only be required at the terminal end point. These shall be red or green as appropriate. Markers shall be installed on the protected side of guardrail posts unless otherwise approved by the Resident. Reflectorized flexible guardrail markers shall be from the Department’s Qualified Products List of Delineators. The marker shall be gray, flexible, durable, and of a non-discoloring material to which 3-inch by 9-inch reflectors shall be applied, and capable of recovering from repeated impacts and meeting MASH 16 requirements. Reflective material shall meet the requirements of Section 719.01 for ASTM D 4956 Type III reflective sheeting. The marker shall be secured to the guardrail post with two fasteners, as shown in the Standard Details.

Reflectorized beam guardrail reflectors shall be mounted on all “w” beam guardrail and shall be either the “butterfly” type or linear delineation system panels. “Butterfly” or linear delineation panels shall be installed at approximately 62.5 foot intervals on tangents (after every tenth post) and 31.25 feet on curves (after every fifth post), and shall be centered on the guardrail beam. On Divided highways, the left-hand delineators shall be yellow and the right-hand delineators shall be silver/ white. On two-way directional highways, the right-hand side will have silver / white reflectors and no reflectorized delineator used on the left. Delineators shall have reflective sheeting that meets or exceeds the requirements of Section 719.01.

“Butterfly” reflectors shall be fabricated from high-impact, ultraviolet & weather resistant thermoplastic. Aluminum, galvanized metal or other materials shall not be used. Reflective sheeting will be applied to only one side of the delineator facing the direction of traffic and shall be centered vertically on the guardrail beam as shown in the Standard Detail 606(7).

Linear delineation system panels shall be 1.5 inches wide by approximately 11 inches nominal length, with a minimum of 5 raised lateral ridges spaced at approximately 2.25 inches. The height of each ridge shall be 0.34 inches with a 45 degree profile and a 0.28 inches radius at the top. Sheeting shall be laminated to thin gauge aluminum with a pre-applied adhesive tape on the back. Panels shall not be installed over seams or bolt heads and shall be centered horizontally on the guardrail beam; linear delineation panels shall be attached to only one guardrail beam. The guardrail beam surface shall be cleaned and prepared according to the manufacturer’s instructions. Air temperature and guardrail surface temperature must be a minimum of 50 degrees F (10 C) with rising temperature at the time of installation.

Exact locations of the either the “butterfly” type or the linear delineation panels shall be approved by the Resident prior to installation.

Single wood post shall be of cedar, white oak, or tamarack, well-seasoned, straight, and sound and have been cut from live trees. The outer and inner bark shall be removed, and all knots trimmed flush with the surface of the post. Posts shall be uniform taper and free of kinks and bends.

Single steel post shall conform to the requirements of Section 710.07 b.

Single steel pipe post shall be galvanized, seamless steel pipe conforming to the requirements of ASTM A120, Schedule No. 40, Standard Weight.

Acceptable multiple mailbox assemblies shall be listed on the Department's Qualified Products List and shall be MASH 16 tested and approved.

Flared and Tangent w-beam guardrail terminals and guardrail offset blocks shall be from the Department's Qualified Products List. Flared terminals shall be installed with a 4 ft offset as shown in the Manufacturer's installation instructions.

Anchorage assemblies used to anchor trailing ends, radius guardrail, or other ends not exposed to traffic shall meet the applicable standards of "A Guide to Standardized Highway Barrier Hardware" prepared and approved by the AASHTO-AGC-ARTBA Joint Cooperative Committee, Task Force 13 Report, Drawing SEW02a.

Existing materials damaged or lost during adjusting, removing and resetting, or removing, modifying, and resetting, shall be replaced by the Contractor without additional compensation. Existing guardrail posts and guardrail beams found to be unfit for reuse shall be replaced when directed by the Resident.

606.03 Posts Posts for guardrail shall be set plumb in holes or they may be driven if suitable driving equipment is used to prevent battering and distorting the post. When posts are driven through pavement, the damaged area around the post shall be repaired with approved bituminous patching. Damage to lighting and signal conduit and conductors shall be repaired by the Contractor.

When set in holes, posts shall be on a stable foundation and the space around the posts, backfilled in layers with suitable material, thoroughly tamped.

The reflectorized flexible guardrail markers shall be set plumb with the reflective surface facing the oncoming traffic. Markers shall be installed on the protected side of guardrail posts. Markers, which become bent or otherwise damaged, shall be removed and replaced with new markers.

Single wood posts shall be set plumb in holes and backfilled in layers with suitable material, thoroughly tamped. The Resident will designate the elevation and shape of the top. The posts, that are not pressure treated, shall be painted two coats of good quality oil base exterior house paint.

Single steel posts shall be set plumb in holes as specified for single wood posts or they may be driven if suitable driving equipment is used to prevent battering and distorting the post.

Additional bolt holes required in existing posts shall be drilled or punched, but the size of the holes shall not exceed the dimensions given in the Standard Details. Metal around the holes shall be thoroughly cleaned and painted with two coats of approved aluminum rust resistant paint. Holes shall not be burned.

606.04 Rails Brackets and fittings shall be placed and fastened as shown on the plans. Rail beams shall be erected and aligned to provide a smooth, continuous barrier. Beams shall be lapped with the exposed end away from approaching traffic.

End assemblies shall be installed as shown on the plans and shall be securely attached to the rail section and end post.

All bolts shall be of sufficient length to extend beyond the nuts but not more than ½ inch. Nuts shall be drawn tight.

Additional bolt holes required in existing beams shall be drilled or punched, but the size of the holes shall not exceed the dimensions given in the Standard Details. Metal around the holes shall be thoroughly cleaned and painted with two coats of approved aluminum rust resistant paint. Holes shall not be burned.

606.045 Offset Blocks The same offset block material is to be provided for the entire project unless otherwise specified.

606.05 Shoulder Widening At designated locations the existing shoulder of the roadway shall be widened as shown on the plans. All grading, paving, seeding, and other necessary work shall be in accordance with the Specifications for the type work being done.

606.06 Mail Box Post Single wood post shall be installed at the designated location for the support of the mailbox. The multiple mailbox assemblies shall be installed at the designated location in accordance with the Standard Details and as recommended by the Manufacturer. Attachment of the mailbox to the post will be the responsibility of the home or business owner.

606.07 Abraded Surfaces All galvanized surfaces of new guardrail and posts, which have been abraded so that the base metal is exposed, and the threaded portions of all fittings and fasteners and cut ends of bolts shall be cleaned and painted with two coats of approved rust resistant paint.

606.08 Method of Measurement Guardrail will be measured by the linear foot from center to center of end posts along the gradient of the rail except where end connections are made to masonry or steel structures, in which case measurement will be as shown on the plans. When connected to radius rail, measurement will be to the end of the last tangent beam.

Guardrail terminal, reflectorized flexible guardrail marker, terminal end, anchorage assembly, bridge transition, bridge connection, multiple mailbox post, and single post will be measured by each unit of the kind specified and installed.

Widened shoulder will be measured as a unit of grading within the limits shown on the plans.

Excavation in solid rock for placement of posts will be paid under force account unless otherwise indicated in the Bid Documents.

Reflectorized beam guardrail reflectors (“butterfly” type or linear delineation system panels) when identified by pay item, will be measured for payment by each.

606.09 Basis of Payment The accepted quantities of guardrail will be paid for at the contract unit price per linear foot for the type specified, complete in place. Reflectorized beam guardrail (“butterfly”-type) delineators will not be paid for directly but will be considered incidental to guardrail items. Reflectorized flexible guardrail marker, terminal end, anchorage assembly, bridge transition, bridge connection, multiple mailbox post, and single post will be paid for at the contract unit price each for the kind specified complete in place.

Guardrail terminals will be paid for at the contract price each, complete in place which price shall be full payment for furnishing and installing all components including the terminal section, posts, offset blocks, "w" beam, cable foundation posts, plates and for all incidentals necessary to complete the installation within the limits as shown on the Standard Details or the Manufacturer's installation instructions. Pay limits for a flared terminal will be 37.5 feet. Pay limits for a tangent terminal will be 50 feet. Each guardrail terminal will be clearly marked with the Manufacturer's name and model number to facilitate any future needed repair. Such payment shall also be full compensation for furnishing all material, excavating, backfilling holes, assembling, and all incidentals necessary to complete the work, except that for excavation for posts or anchorages in solid ledge rock, payment will be made under 109.7.5 – Force Account. Type III Retroreflective Adhesive Sheeting shall be applied to the approach buffer end sections and sized to substantially cover the end section. On all roadways, the ends shall be marked with alternating black and retroreflective yellow stripes. The stripes shall be 3 in wide and sloped down at an angle of 45 degrees toward the side on which traffic is to pass the end section. Guardrail terminals shall also include a set of installation drawings supplied to the Resident.

Anchorage to bridge end posts will be part of the bridge work. Connections thereto will be considered included in the unit bid price for guardrail.

Guardrail to be placed on a radius of curvature of 150 ft or less will be paid for under the designated radius pay item for the type guardrail being placed.

Widened shoulder will be paid for at the contract unit price each complete in place and will be full compensation for furnishing and placing, grading and compaction of aggregate subbase and any required fill material.

Adjust guardrail will be paid for at the contract unit price per linear foot and will be full compensation for adjusting to grade. Payment shall also include adjusting guardrail terminals where required.

Modify guardrail will be paid for at the contract unit price per linear foot and will be full compensation for furnishing and installing offset blocks, additional posts, and other specified modifications; removing, modifying, installing, and adjusting to grade existing posts and beams; removing plate washers and backup plates, and all incidentals necessary to complete the work. Payment shall also include removing and resetting guardrail terminals where required.

Remove and Reset guardrail will be paid for at the contract unit price per linear foot and will be full compensation for removing, transporting, storing, reassembling all parts, necessary cutting, furnishing new parts when necessary, reinstalling at the new location, and all other incidentals necessary to complete the work. Payment shall also include removing and resetting guardrail terminals when required.

Remove, Modify, and Reset guardrail will be paid for at the contract unit price per foot and will be full compensation for the requirements listed in Modify guardrail and Remove and Reset guardrail.

Bridge Connections will be paid for at the contract unit price each. Payment shall include, attaching the connection to the endpost including furnishing and placing concrete and reinforcing steel necessary to construct new endposts if required, furnishing and installing the terminal connector, and all miscellaneous hardware, labor, equipment, and incidentals necessary to complete the work.

Bridge Transitions will be paid for at the contract unit price each. Payment shall include furnishing and installing the thrie beam or “w”-beam terminal connector, doubled beam section, and transition section, where called for, posts, hardware, precast concrete transition curb, and any other necessary materials and labor, including the bridge connection as stated in the previous paragraph.

No payment will be made for guardrail removed, but not reset and all costs for such removal shall be considered incidental to the various contract pay items.

Reflectorized beam guardrail reflectors (“butterfly” type and the linear delineation panels) will not be paid for directly but will be considered incidental to all new guardrail items. The Contractor shall furnish and install either the “butterfly” type or linear delineation panels, at its discretion, for new guardrail items.

Reflectorized beam guardrail reflectors (either “butterfly” type or linear delineation system panels) will be paid for under the applicable pay items for installation in conjunction with Adjust, Modify, Remove and Reset, Remove Modify and Reset guardrail items. The accepted quantity of “butterfly” type or linear delineation system panels will be paid for at the contract unit price each for all work and materials furnished to install, complete in place, including all incidentals necessary to complete the work.

Payment will be made under:

| <u>Pay Item</u> | <u>Pay Unit</u> |
|---|-----------------|
| 606.1301 31" W-Beam Guardrail - Mid-Way Splice – Single Faced | Linear Foot |
| 606.1302 31" W-Beam Guardrail - Mid-Way Splice – Double Faced | Linear Foot |
| 606.1303 31" W-Beam Guardrail - Mid-Way Splice, 15' Radius and Less | Linear Foot |
| 606.1304 31" W-Beam Guardrail - Mid-Way Splice, Over 15' Radius | Linear Foot |
| 606.1305 31" W-Beam Guardrail - Mid-Way Splice Flared Terminal | Each |
| 606.1306 31" W-Beam Guardrail - Mid-Way Splice Tangent Terminal | Each |
| 606.1307 Bridge Transition (Asymmetrical) – Type IA | Each |
| 606.1721 Bridge Transition - Type I | Each |
| 606.1722 Bridge Transition - Type II | Each |
| 606.1731 Bridge Connection - Type I | Each |
| 606.1732 Bridge Connection - Type II | Each |
| 606.178 Guardrail Beam | Linear Foot |
| 606.25 Terminal Connector | Each |
| 606.257 Terminal Connector - Thrie Beam | Each |
| 606.259 Anchorage Assembly | Each |
| 606.265 Terminal End-Single Rail - Galvanized Steel | Each |
| 606.266 Terminal End-Single Rail - Corrosion Resistant Steel | Each |
| 606.275 Terminal End-Double Rail - Galvanized Steel | Each |
| 606.276 Terminal End-Double Rail - Corrosion Resistant Steel | Each |
| 606.352 Reflectorized Beam Guardrail Delineators ("Butterfly" type) | Each |
| 606.3521 Linear Delineation System Panel | Each |
| 606.353 Reflectorized Flexible Guardrail Marker | Each |
| 606.354 Remove and Reset Reflectorized Flexible Guardrail Marker | Each |
| 606.356 Underdrain Delineator Post | Each |
| 606.358 Guardrail, Modify | Linear Foot |
| 606.362 Guardrail, Adjust | Linear Foot |
| 606.365 Guardrail, Remove, Modify, and Reset | Linear Foot |
| 606.366 Guardrail, Remove and Reset | Linear Foot |
| 606.367 Replace Unusable Existing Guardrail Posts | Each |
| 606.3671 Replace Unusable Offset Blocks | Each |
| 606.47 Single Wood Post | Each |
| 606.48 Single Galvanized Steel Post | Each |
| 606.50 Single Steel Pipe Post | Each |
| 606.51 Multiple Mailbox Support | Each |
| 606.568 Guardrail, Modify - Double Rail | Linear Foot |
| 606.63 Thrie Beam Rail Beam | Linear Foot |
| 606.64 Guardrail Thrie Beam - Double Rail | Linear Foot |
| 606.65 Guardrail Thrie Beam - Single Rail | Linear Foot |
| 606.66 Terminal End Thrie Beam | Each |
| 606.70 Transition Section - Thrie Beam | Each |
| 606.71 Guardrail Thrie Beam - 15 ft radius and less | Linear Foot |
| 606.72 Guardrail Thrie Beam - over 15 ft radius | Linear Foot |

| | | |
|---------|---|-------------|
| 606.73 | Guardrail Thrie Beam - Single Rail Bridge Mounted | Linear Foot |
| 606.74 | Guardrail - Single Rail Bridge Mounted | Linear Foot |
| 606.753 | Widen Shoulder for Low Volume Guardrail End | Each |
| 606.754 | Widen Shoulder for Flared Guardrail Terminal | Each |
| 606.78 | Low Volume Guardrail End | Each |
| 606.80 | Buried-in-Slope Guardrail End | Each |

SECTION 608 SIDEWALKS

Section 608.022 Detectable Warning Materials Standard Revise this section by removing the last sentence of this section beginning with “Concrete...” and replacing it with “**Concrete shall meet the requirements of Section 608.021, Sidewalk Materials, of this specification or may be a prepackaged concrete mix from the Department’s Qualified Products List (QPL).**”

SECTION 609 CURB

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

609.01 Description Construct or reset curb, gutter, or combination curb and gutter, paved ditch, and paved flume. The types of curb are designated as follows:

- Type 1 - Stone curbing of quarried granite stone
- Type 2 – Concrete Curbing
- Type 3 - Bituminous curbing
- Type 5 - Stone edging of quarried granite stone

609.02 Materials Except as provided below, the materials used shall meet the requirements of the following Sections of Division 700 - Materials:

| | |
|---|---------|
| Portland Cement and Portland Pozzolan Cement | 701.01 |
| Water | 701.02 |
| Air Entraining Chemical Admixture | 701.03 |
| Fine Aggregate for Concrete | 703.01 |
| Coarse Aggregate for Concrete | 703.02 |
| Joint Mortar | 705.02 |
| Reinforcing Steel | 709.01 |
| Stone Curbing and Edging | 712.04 |
| Epoxy Resin | 712.35 |
| Hot Mix Asphalt Curbing | 712.36 |
| Structural Precast Concrete Units (Concrete Curb) | 712.061 |

The Contractor shall submit a concrete mix design for the Portland Cement Concrete to the Resident, for the uses specified below or in accordance with the Contract Documents.

Circular curb, terminal sections and transition sections shall be in reasonably close conformity with the shape and dimensions shown on the Plans and to the applicable material requirements herein for the type of curb specified.

Dowels shall be reinforcing steel deformed bars.

Concrete for Slipform Concrete Curb shall meet the requirements below:

- a. Class A, with the exception that permeability requirements shall be waived.
- b. Entrained air content of Slipform Concrete Curb shall be 4.0% to 7.0%
- c. Concrete temperature, prior to discharge, shall not exceed 90 F.
- d. Proposed mix designs may contain polypropylene fibers.
- e. Partially discharged loads may be retempered with water provided the maximum water to cement ratio is not exceeded.

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

a. Installation The curb stone shall be set on a compacted foundation so that the front top arris line conforms to the lines and grades required. The foundation shall be prepared in advance of setting the stone by grading the proper elevation and shaping to conform as closely as possible to the shape of the bottom of the stone. The required spacing between stones shall be assured by the use of an approved spacing device to provide an open joint between stones of at least ¼ inch and no greater than ⅝ inch.

b. Backfilling All remaining spaces under the curb shall be filled with approved material and thoroughly hand tamped so the stones will have a firm uniform bearing on the foundation for the entire length and width. Any remaining excavated areas surrounding the curb shall be filled to the required grade with approved materials. This material shall be placed in layers not exceeding 8 inches in depth, loose measure and thoroughly tamped.

When backfill material infiltrates through the joints between the stones, small amounts of joint mortar or other approved material shall be placed in the back portion of the joint to prevent such infiltrating.

c. Protection The curb shall be protected and kept in good condition. All exposed surfaces smeared or discolored shall be cleaned and restored to a satisfactory condition or the curb stone removed and replaced.

d. Curb Inlets Curb placed adjacent to curb inlets shall be installed with steel dowels cemented into each stone with epoxy grout as shown in the Standard Details.

The epoxy grout shall be used in accordance with the manufacturer's instructions. The grout shall be forced into the hole, after which the dowel shall be coated with grout for one-half its length and inserted into the grout filled hole. The hole shall be completely filled with grout around the dowel. All tools and containers must be clean before using.

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 Concrete Fill shall meet the requirements of 609.02. The Contractor shall submit a concrete design for the Portland Cement Concrete, with a minimum designated compressive strength of 3000 PSI meeting the requirements of Class S or Class Fill Concrete. The Contractor may elect to choose a Prepackaged Concrete Mix from the Departments Qualified Products list (QPL). Concrete backfill shall be completed in conformance with a Department supplied concrete backfill detail.

609.04 Bituminous Curb

a. Preparation of Base Before placing the curb, the foundation course shall be thoroughly cleaned of all foreign and objectionable material. String or chalk lines shall be positioned on the prepared base to provide guidelines. The foundation shall be uniformly painted with tack coat at a rate of 0.04 to 0.14 gal/yd².

b. Placing The curb shall be placed by an approved power operated extruding type machine using the shape mold called for. A tight bond shall be obtained between the base and the curb. The Resident may permit the placing of curbing by other than mechanical curb placing machines when short sections or sections with short radii are required. The resulting curbing shall conform in all respects to the curbing produced by the machine.

c. When required, the curb shall be painted and coated with glass beads in accordance with Section 627 - Pavement Marking. Curb designated to be painted shall not be sealed with bituminous sealing compound.

d. Acceptance Curb may be accepted or rejected based on appearance concerning texture, alignment, or both. All damaged curb shall be removed and replaced at the Contractor's expense.

e. Polyester fibers shall be uniformly incorporated into the dry mix at a rate of 0.25 percent of the total batch weight. Certification shall be provided from the supplier with each shipment meeting the following requirements:

| | |
|---------------------|----------------------------|
| Average Length | 0.25 inches \pm 0.005 |
| Average Diameter | 0.0008 inches \pm 0.0001 |
| Specific Gravity | 1.32-1.40 |
| Melting Temperature | 480 °F Minimum |

609.05 Slipform Concrete Curb

a. Preparation of Base Before placing the curb, the foundation course shall be thoroughly cleaned of all foreign and objectionable material. The Contractor shall not place Slipform Concrete Curb on a wet or frozen foundation. The foundation (HMA or concrete) may be in a Saturated Surface Dry condition, but no standing water shall be allowed. String or chalk lines shall be positioned on the prepared foundation to provide guidelines. Prior to placing the curb, the foundation shall be uniformly coated with an epoxy resin adhesive that meets the requirements of AASHTO M 235, Type I, II, III, IV or V and has been tested by AASHTO Product Evaluation & Audit Solutions. The Contractor shall submit the epoxy resin adhesive that they propose to utilize with the concrete mix design. The epoxy resin adhesive must be approved prior to placement and used in accordance with manufacturer's recommendations.

b. Placing Concrete shall be placed with an approved Slipform machine that will produce a finished product according to the design specified in the Plans. For cold weather slip forming, the outside temperature must be at least 36°F and rising. The curb shall be placed on a firm, uniform foundation, shall conform to the section profile specified in the Plans, and shall match the appropriate grade. Expansion joints shall be placed in the curb where it meets rigid structures such as but not limited to building foundations, catch basin headers or fire hydrants. Contraction joints will be placed at 10-foot intervals using sawing methods, which shall cut 1 to 3 inches into the concrete. Contraction joints shall be cut between 1 and 7 days after placement of the concrete. Joints shall be constructed perpendicular to the subgrade and match other joints in roadways, sidewalks, or other structures when applicable.

c. Curing and Sealing Proper curing shall be provided using either a combination curing/sealing compound spray that meets ASTM 1315 Type 1-Class A, or a curing compound spray that meets ASTM 309 Type 1-D – Class A. Curing may also be accomplished by the methods specified in Standard Specification Section 502.14, Curing Concrete.

If a combination curing/sealing compound spray is not used, a separate sealing compound from the MaineDOT Qualified Products List for a Type 1c sealer shall be applied after the concrete has cured.

d. Protection Slipform curb must be adequately protected after placement. The concrete shall be allowed to cure for at least 72 hours. During cold weather conditions, when temperatures drop below the required temperature of 36°F after placement, curbing shall be protected by concrete blankets or a combination of plastic sheeting and straw. After any placement of Slipform curb, regardless of weather conditions, the placed curb shall be adequately protected by traffic control devices as necessary.

e. Marking When required, the curb shall be painted and coated with glass beads in accordance with Section 627 - Pavement Marking. Curb designated to be painted shall not be sealed unless a combination curing/sealing compound is used.

f. Acceptance Curb shall be accepted or rejected based on finish, alignment, entrained air content, and compressive strength. Concrete Quality Control and Acceptance

shall be done in accordance with Standard Specification Section 502, Method C. All damaged curb shall be removed and replaced at the Contractor's expense.
609.06 Stone Edging The curb shall be installed, backfilled and protected in accordance with Section 609.03, except as follows:

- a. Slope The edging shall be set on a slope as shown on the Plans or as directed.
- b. Joints Joints shall be open and not greater than 1½ inch in width.

609.07 Stone Bridge Curb

a. Installation Each stone and the bed upon which it is to be placed shall be cleaned and thoroughly wetted with water before placing the mortar for bedding and setting the stone. The stone shall be set on a fresh bed of joint mortar and well bedded before the mortar has set so that the front top arris line conforms to the line and grade required. Whenever temporary supporting wedges or other devices are used in setting the stones, they shall be removed before the mortar in the bed has become set, and the holes left by them shall be filled with mortar. Concrete behind the stones shall not be placed until the stones have been in place at least two days. Bedding and pointing mortar for joints shall be cured as required under Section 502 - Structural Concrete.

b. Joints Vertical joints shall be ½ inch in width plus or minus ⅛ inch. Whenever possible, the face and top of the joint shall be pointed with joint mortar to a depth of 1½ inch, before the bedding mortar has set. Joints which cannot be so pointed, shall be prepared for pointing by raking them to a depth of 1½ inch before the mortar has set. Joints not pointed at the time the stone is laid shall be thoroughly wetted with clean water and filled with mortar. The mortar shall be well driven into the joint and finished with an approved pointing tool, flush with the pitch line of the stones.

609.08 Resetting Stone or Portland Cement Concrete Curb, Including Terminal Sections and Transitions

The curb shall be installed, backfilled and protected in accordance with Section 609.03, except as follows:

a. Removal of Curbing The Contractor shall carefully remove and store curb specified on the Plans or designated for resetting. Curb damaged or destroyed, because of the Contractor's operations or because of their failure to store and protect it in a manner that would prevent its loss or damage, shall be replaced with curbing of equal quality at the Contractor's expense.

b. Cutting and Fitting Cutting or fitting necessary in order to install the curbing at the locations directed shall be done by the Contractor.

609.09 Method of Measurement Curb, both new and reset, will be measured by the linear foot along the front face of the curb at the elevation of the finished pavement, complete in place and accepted. Curb inlets at catch basins, including doweling, will not be measured for payment but shall be considered included in the cost of the catch basin. New transition sections and terminal curb will be measured by the unit. Reset transition sections and terminal curb will be included in the measurement for resetting curb.

Concrete Slipform Curb and terminal ends will be measured by the linear foot along the front face of the curb at the elevation of the finished pavement, complete in place and accepted.

609.10 Basis of Payment The accepted quantities of curbing will be paid for at the contract unit price per linear foot for each kind and type of curbing as specified.

Payment for terminal curb shall include only that portion of the curbing modified for installation at ends of curb runs shown in the Standard Details. Curb adjacent to terminal ends shall be paid for at the contract unit price per linear foot for the type of curb installed.

Vertical Curb Type 1 is required to have a radius of 60 feet or less, will be paid for as Vertical Curb Type 1 - Circular.

Curb, Type 5 required to have a radius of 30 feet or less will be paid for as Curb Type 5 - Circular.

There will be no separate payment for concrete fill, mortar, reinforcing steel, anchors, tack coat, drilling for and grouting anchors, pointing and bedding of curbing, and for cutting and fitting, but these will be considered included in the work of the related curb.

Removal of existing curb and necessary excavation for installing new or reset curbing will not be paid for directly but shall be considered to be included in the appropriate new or reset curb pay item. Base and Subbase material will be paid for under Section 304 - Aggregate Base and Subbase Course. Backing up bituminous curb is incidental to the curb items. Loam, as directed, will be paid under 615 – Loam.

Payment will be made under:

| | <u>Pay Item</u> | <u>Pay Unit</u> |
|---------|--|-----------------|
| 609.11 | Vertical Curb Type 1 | Linear Foot |
| 609.12 | Vertical Curb Type 1 - Circular | Linear Foot |
| 609.13 | Vertical Bridge Curb Type 1 | Linear Foot |
| 609.131 | Vertical Bridge Curb Type 1A | Linear Foot |
| 609.132 | Vertical Bridge Curb Type 1B | Linear Foot |
| 609.142 | Vertical Bridge Curb Type 1B - Circular | Linear Foot |
| 609.15 | Sloped Curb Type 1 | Linear Foot |
| 609.151 | Sloped Curb Type 1 - Circular | Linear Foot |
| 609.161 | Concrete Slipform Curb – Vertical Type 2 | Linear Foot |
| 609.21 | Concrete Slipform Curb Type 2 | Linear Foot |

| | | |
|----------|--|-------------|
| 609.219 | Concrete Slipform Terminal End Type 2 | Linear Foot |
| 609.23 | Terminal Curb Type 1 | Each |
| 609.234 | Terminal Curb Type 1 - 4 foot | Each |
| 609.237 | Terminal Curb Type 1 - 7 foot | Each |
| 609.2371 | Terminal Curb Type 1 - 7 foot – Circular | Each |
| 609.238 | Terminal Curb Type 1 - 8 foot | Each |
| 609.26 | Curb Transition Section B Type 1 | Each |
| 609.31 | Curb Type 3 | Linear Foot |
| 609.34 | Curb Type 5 | Linear Foot |
| 609.35 | Curb-Type 5 - Circular | Linear Foot |
| 609.38 | Reset Curb Type 1 | Linear Foot |
| 609.39 | Reset Curb Type 2 | Linear Foot |
| 609.40 | Reset Curb Type 5 | Linear Foot |

SECTION 610

STONE FILL, RIPRAP, STONE BLANKET, AND STONE DITCH PROTECTION

610.02 Materials Amend this subsection by adding the following to the end of the material list:
“Stone Ditch Protection 703.29”

SECTION 618

SEEDING

618.08 Mulching Revise this Section so that the third sentence reads: “Mulch for Seeding Method Number 1 shall only be cellulous fiber mulch Section 619.04 (b) or straw mulch Section 619.04 (a).”

SECTION 619

MULCH

619.03 General Amend this Section by adding the following sentence to the end: **“Straw mulch shall be used in all wetland areas.”**

SECTION 626

FOUNDATIONS, CONDUIT, AND JUNCTION BOXES FOR HIGHWAY SIGNING, LIGHTING, AND SIGNALS

Section 626.021 Miscellaneous Materials Revise this section by removing the fourth paragraph beginning with “ All Concrete for concrete encasement...” and replace it with **“All concrete for concrete encasement of conduit shall be Class S or Class Fill concrete in accordance with the applicable requirements of Section 502 – Structural Concrete, or a Prepackaged Concrete Mix from the Department’s Qualified Products List (QPL).”**

Section 626.031 Conduit Revise the fifth paragraph beginning with “After the trench has been...” by removing the last sentence beginning with “Where concrete encasement...” and replacing it with **“Where concrete encasement is required around the conduit, the concrete shall meet Class S, Class Fill in accordance with the applicable requirements of Section 502 – Structural Concrete, or a Prepackaged Concrete Mix from the Department’s Qualified Products List (QPL).”**

626.034 Concrete Foundations Revise this Section by changing ‘626.037’ to ‘**626.036**’ in the Second Paragraph which begins with “Foundations shall consist of cast-in-place...”.

Revise the 10th paragraph beginning with “Before placing concrete, the required elbows...” by removing “...in accordance with **Standard Specification 633.**”

626.036 Precast Foundations Revise the last sentence of paragraph one so that it reads: **“Construction of precast foundations shall conform to the Standard Details and all requirements of 712.061.”**

SECTION 627 **PAVEMENT MARKINGS**

627.02 Materials Amend this section by adding the following to the existing Specification:

“When pavement marking paint must be applied on pavement with an air temperature between 35 °F and 50 °F, a low temperature waterborne paint may be used upon the Department’s approval as noted below.

The Contractor shall submit the following information for Department review and approval at least 10 calendar days prior to application:

The manufacturer and product name of the low temperature waterborne paint

The manufacturer’s technical product data sheets

The product’s SDS sheets

All required and recommended application specifications for the product

The manufacturer’s requirements for temperature, surface preparation, paint thickness and the bead application shall be followed. No additional payment will be made for the use of low temperature waterborne paint. “

627.06 Application Revise this subsection by replacing the paragraph beginning with “ On other final pavement markings...” with the following:

“On other final pavement markings and on curb, where the paint is applied by hand painting or spraying, application shall be one uniform covering coat at least 16 mils thick. Before the 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.

Painted lines and markings shall be applied in accordance with the manufacturer’s published recommendations. These recommendations will be supplied to the Resident prior to installation.”

Revise this subsection by replacing the paragraph beginning with “ If the final reflectivity values are less...” with the following:

The final reflectivity will be acceptable if 90 percent or more of the painted pavement lines and markings meet the specified minimum value. If less than 90 percent of the painted pavement lines and markings meet the specified minimum final reflectivity values, the Contractor shall repaint those areas not meeting required reflectivity at no cost to the Department.

If, after repainting, analysis of the final reflectivity values results in the need for a second repainting, 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 reapply at no cost to the Department.

SECTION 637 DUST CONTROL

Revise this section by removing it in its entirety.

SECTION 643 TRAFFIC SIGNALS

643.021 Materials Amend this subsection by adding the following at the end:

“MaineDOT is transitioning to MASH2016 criteria for Work Zone Traffic Control Devices on the following schedule:

Temporary Traffic Control Signals will be crash tested and/or evaluated to MASH2016 criteria by January 1, 2030. Current Category 4 devices in useful serviceable condition that are successfully tested to NCHRP Report 350 or MASH2009 criteria may be utilized through December 31, 2029.”

643.023 Traffic Signal Structures Remove the third paragraph and replace it with the following:

“Traffic signal support structures shall be classified as Fatigue Category III if they are located on roads with a speed limit of 35 mph or less, Fatigue Category II if they are located on roads with a speed limit of greater than 35 mph, and Fatigue Category I if noted on the Contract Plans. Fatigue Importance Factors shall be as specified in Table 11.6-1 (Fatigue Importance Factors). Fatigue analyses are not required for span-wire (strain) pole traffic signal support structures with heights of 55 feet or less unless required by the current edition of AASHTO “LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals”.

643.09 Service Connection Revise this subsection by removing the paragraph that begins with “Traffic signal services shall have...”.

And by removing the paragraphs beginning with “ A service ground rod shall be installed...” and “A total of 4, 10’ service...” and replace them with “**A total of 4, 10’ service ground rods shall be installed and properly connected together on the outside of the cabinet foundation. One ground rod shall be located at each corner and shall be either flush or slightly below finished grade. The connection between the ground rod and the ground wire shall be an exothermic connection such as a Cadweld. The ground wire from the interconnected ground rods shall be routed through a conduit in the foundation and into the base of the cabinet**”.

SECTION 645 HIGHWAY SIGNING

Section 645.023 Sign Support Structures. Under letter “c.”, revise the fifth paragraph beginning with “In addition to the required details...” by removing the words “**and foundation**” from the 5th sentence.

Section 645.08 Method of Measurement. Revise the second paragraph beginning with “Bridge-type, cantilever and...” by removing the words “**including the foundation**” .

Section 645.09 Basis of Payment. Revise the third paragraph beginning with “The accepted bridge-type, cantilever and...” by removing the word “**foundation**” from the second sentence. Add the following sentence to the end of the paragraph “**Conduits, Junction Boxes, and Foundations will be paid for under Section 626.**”

SECTION 652 MAINTENANCE OF TRAFFIC

652.2.5 Portable Changeable Message Sign Revise the fifth paragraph so it reads:

“The control system shall include a display screen upon which messages can be reviewed before being displayed on the message sign. The control system shall be capable of maintaining memory when power is unavailable. Messages must be changeable with either a portable electronic device like a notebook computer or an on-board keypad. The controller shall have the capability to store a minimum of 200 user-defined and 200 pre-programmed messages. Controller and battery compartments shall be enclosed in lockable, weather-tight boxes. The cabinet shall be locked at all times that the Contractor is not actively changing the message. The Contractor shall change the password for the controller prior to stationing the PCMS and shall provide the password to the Resident. The password shall be unique per PCMS and secure and shall not be written anywhere in, on, around, or stored in the PCMS.”

Amend this Section by adding the following new subsection:

“652.2.6 Device Crashworthiness MaineDOT is transitioning to MASH2016 criteria for Work Zone Traffic Control Devices on the following schedule:

Category 1 (Cones, Drums, Tubular Markers, Flexible Delineators, and similar devices that have little chance of causing windshield penetration, tire damage, or other significant effect on the control or trajectory of a vehicle) – All Category 1 devices will be manufacturer self-certified as MASH2016 by January 1, 2025. Current Category 1 devices in useful serviceable condition that are not self-certified as MASH2016 compliant may be utilized through December 31, 2024.

Category 2 (Barricades, Portable Sign Supports, Category 1 devices with attachments, and similar devices that are not expected to produce significant vehicular velocity change but may be otherwise hazardous) – All Category 2 devices will be crash tested and/or evaluated to MASH2016 criteria by January 1, 2025. Current Category 2 devices in useful serviceable condition that are successfully tested to NCHRP Report 350 or MASH2009 criteria may be utilized through December 31, 2024.

Category 3 (Portable Concrete Barrier, Portable Crash Cushions, Truck Mounted Attenuators, Category 2 devices weighing more than 100 pounds, and similar devices that are expected to produce significant vehicular velocity change or other harmful reactions) – All Category 3 devices will be crash tested and/or evaluated to MASH2016 criteria by January 1, 2030. Current Category 3 devices in useful serviceable condition that are successfully tested to NCHRP Report 350 or MASH2009 criteria may be utilized through December 31, 2029. (See Standard Specification 526 for additional Portable Concrete Barrier information).

Category 4 (Trailer Mounted Devices: Arrow Boards, Temporary Traffic Control Signals, Area Lighting, Portable Changeable Message Sign, and other similar devices.) – All Category 4 devices will be crash tested and/or evaluated to MASH2016 criteria by January 1, 2030. Current Category 4 devices in useful serviceable condition that are successfully tested to NCHRP Report 350 or MASH2009 criteria may be utilized through December 31, 2029.”

652.3.3 Submittal of Traffic Control Plan Amend this section by adding:

“n. A security plan for any PCMS shall be included. The Contractor shall provide a plan for secure access to the PCMS and protection from unauthorized users. The plan shall have details on securing the cabinets via a lock and password from unauthorized users, password changing protocols, and where the access information will be kept so it can be used in the event of emergency. The Contractor shall not identify or store passwords in the TCP.”

652.4 Flaggers Revise the first paragraph of this section so that it reads:

“The Contractor shall furnish flaggers as required by the TCP or as otherwise specified by the Resident. All flaggers must have successfully completed a flagger test approved by the Department and administered by a Department-approved Flagger-Certifier who is employing that flagger. All flaggers must carry an official certification card with them while flagging that has been issued by their employer.”

SECTION 681
PRECAST AGGREGATE-FILLED, CONCRETE BLOCK GRAVITY WALL

681.08 Basis of Payment Amend this section by adding the Item Number “**681.10**” in front of the item “Precast Aggregate-Filled Concrete Block Gravity Wall” at the end of the section.

SECTION 701
STRUCTURAL CONCRETE RELATED MATERIAL

701.01 Portland Cement and Portland Pozzolan Cement Amend the first sentence of Paragraph 3 by adding “**or Type 1L Portland Limestone cement**” so that it reads:

“A Type IP (MS) Portland-pozzolan cement (blended hydraulic cement with moderate sulfate resistance) or Type 1L Portland Limestone cement meeting the requirements of AASHTO M 240, may be used instead of Type II or where Type I Portland cement, meeting the requirements of AASHTO M 85, is allowed.”

SECTION 703
AGGREGATES

Add the following to Section 703 - Aggregates

703.01 Fine Aggregate for Concrete Fine aggregate for concrete shall consist of natural sand or, when approved by the Resident, other inert materials with similar characteristics or combinations thereof, having strong, durable particles. Fine aggregate from different sources of supply shall not be mixed or stored in the same pile nor used alternately in the same class of construction or mix without permission of the Resident.

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 the reference standard color solution (laboratory designation Plate III), the fine aggregate shall be rejected.

Fine aggregate shall have a sand equivalent value of not less than 75 when tested in accordance with AASHTO T 176.

Fine aggregate sources shall meet the Alkali Silica Reactivity (ASR) requirements of Section 703.0201.

The fineness modulus shall not be less than 2.26 or more than 3.14. If this value is exceeded, the fine aggregate will be rejected unless suitable adjustments are made in proportions of coarse and fine aggregate. The fineness modulus of fine aggregate shall be determined by adding the cumulative percentages of material by weight retained on the following sieves: Nos. 4, 8, 16, 30, 50, 100 and dividing by 100.

Fine aggregate, from an individual source when tested for absorption as specified in AASHTO T 84, shall show an absorption of not more than 2.3 percent.

| Sieve Designation | Percentage by Weight Passing Square Mesh Sieves |
|--------------------|---|
| $\frac{3}{8}$ inch | 100 |
| No. 4 | 95-100 |
| No. 8 | 80-100 |
| No. 16 | 50-85 |
| No. 30 | 25-60 |
| No. 50 | 10-30 |
| No. 100 | 2-10 |
| No. 200 | 0-5.0 |

703.02 Coarse Aggregate for Concrete Coarse aggregate for concrete shall consist of crushed stone or gravel having hard, strong, durable pieces, free from adherent coatings and of which the composite blend retained on the $\frac{3}{8}$ inch sieve shall contain no more than 15 percent, by weight of flat and elongated particles when performed in accordance with test method ASTM D 4791, Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate, using a dimensional ratio of 1:5.

The coarse aggregate from an individual source shall have an absorption no greater than 2.0 percent by weight determined in accordance with AASHTO T 85 modified for weight of sample.

The composite blend shall have a Micro-Deval value of 18.0 percent or less as determined by AASHTO T 327 or not exceed 40 percent loss as determined by AASHTO T 96.

Coarse aggregate sources shall meet the Alkali Silica Reactivity (ASR) requirements of Section 703.0201.

Coarse aggregate shall conform to the requirements of the following table for the size or sizes designated and shall be well graded between the limits specified.

| Sieve Designation | Percentage by Weight Passing Square Mesh Sieves | | | |
|---------------------|--|--------------------|---------------------|--------------------|
| Grading | A | AA | S | LATEX |
| Aggregate Size | 1 inch | $\frac{3}{4}$ inch | $1\frac{1}{2}$ inch | $\frac{1}{2}$ inch |
| 2 inch | | | 100 | |
| $1\frac{1}{2}$ inch | 100 | | 95-100 | |
| 1 inch | 95-100 | 100 | - | |
| $\frac{3}{4}$ inch | - | 90-100 | 35-70 | 100 |
| $\frac{1}{2}$ inch | 25-60 | - | - | 90-100 |
| $\frac{3}{8}$ inch | - | 20-55 | 10-30 | 40-70 |
| No. 4 | 0-10 | 0-10 | 0-5 | 0-15 |
| No. 8 | 0-5 | 0-5 | - | 0-5 |
| No. 16 | - | - | - | - |
| No. 50 | - | - | - | - |
| No. 200 | 0 - 1.5 | 0 - 1.5 | 0 - 1.5 | 0 - 1.5 |

703.0201 Alkali Silica Reactive Aggregates 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.

703.05 Aggregate for Sand Leveling Aggregate for sand leveling shall be sand of hard durable particles free from vegetable matter, lumps or balls of clay and other deleterious substances. The aggregate shall meet the grading requirements of the following table.

| Sieve Designation | Percentage by Weight Passing Square Mesh Sieves |
|--------------------|---|
| $\frac{3}{8}$ inch | 85-100 |
| No. 200 | 0-5.0 |

703.06 Aggregate for Base and Subbase 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 $\frac{1}{2}$ inch 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.

Recycled Asphalt Pavement (RAP) shall not be used for or blended with aggregate base or subbase.

- a. Aggregate for base, Type A and B shall be crushed ledge or crushed gravel of hard durable particles free from vegetable matter, lumps or balls of clay and other deleterious substances. The gradation of the part that passes a 3 inch sieve shall meet the grading requirements of the following table:

| Sieve Designation | Percentage by Weight Passing Square Mesh Sieves | |
|--------------------|---|--------|
| | Type A | Type B |
| $\frac{1}{2}$ inch | 45-70 | 35-75 |
| $\frac{1}{4}$ inch | 30-55 | 25-60 |
| No. 40 | 0-20 | 0-25 |
| No. 200 | 0-6.0 | 0-6.0 |

At least 50 percent by weight of the material retained on the No. 4 sieve shall have at least one fractured face as tested by AASHTO T 335.

Type A aggregate for base shall only contain particles of rock that will pass the 2 inch square mesh sieve.

Type B aggregate for base shall only contain particles of rock that will pass the 4 inch square mesh sieve.

- b. Aggregate for base, Type C shall be crushed ledge or crushed gravel of hard durable particles free from vegetable matter, lumps or balls of clay and other deleterious substances. The material shall meet the grading requirements of the following table:

| Sieve Designation | Percentage by Weight Passing Square Mesh Sieves |
|-------------------|--|
| | Type C |
| 4 inches | 100 |
| 3 inches | 90-100 |
| 2 inches | 75-100 |
| 1 inch | 50-80 |
| ½ inch | 30-60 |
| No. 4 | 15-40 |
| No. 200 | 0-6.0 |

At least 50 percent by weight of the material coarser than the No. 4 sieve shall have at least one fractured face as tested by AASHTO T 335.

- c. Aggregate for subbase shall be sand or gravel of hard durable particles free from vegetable matter, lumps or balls of clay and other deleterious substances. The gradation of the part that passes a 3 inch sieve shall meet the grading requirements of the following table:

| Sieve Designation | Percentage by Weight Passing Square Mesh Sieves | |
|-------------------|--|--------|
| | Type D | Type E |
| ½ in | 35-80 | |
| ¼ inch | 25-65 | 25-100 |
| No. 40 | 0-30 | 0-50 |
| No. 200 | 0-7.0 | 0-7.0 |

Type D aggregate for subbase gravel may contain up to 50 percent by weight Recycled Concrete Aggregate (RCA). When RCA is used, the portion of the resulting blend of gravel and RCA retained on a ½” square mesh sieve shall contain a total of no more than 5 percent by weight of other recycled materials such as brick, concrete masonry block, or asphalt pavement as determined by visual inspection.

RCA shall be substantially free of wood, metal, plaster, and gypsum board as defined in Note 9 in Section 7.4 of AASHTO M 319. RCA shall also be free of all substances that fall under the category of solid waste or hazardous materials.

Aggregate for subbase shall not contain particles of rock which will not pass the 6 inch square mesh sieve.

703.08 Recycled Asphalt Pavement Recycled asphalt pavement shall consist of salvaged asphalt materials from milled pavements or production waste that has been processed before use to meet the requirements of the job mix formula. It shall be free of winter sand, granular fill, construction debris, or other materials not generally considered asphalt pavement.

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:

| 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 | |

Table 4: Maximum Percent RAP According to Test Results

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 or PG 58-34 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 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.

SECTION 709 REINFORCING STEEL AND WELDED STEEL WIRE FABRIC

709.01 Reinforcing Steel Remove the second paragraph of Section 709.01 of the standard specification beginning with “Low-Carbon, Chromium,...” and replace with the following:

“ Low-carbon, chromium, reinforcing steel shall be deformed bars conforming to the requirements of ASTM A1035. Bars shall be Grade 100 and alloy Type CS unless otherwise specified on the Plans. “

SECTION 710 FENCE AND GUARDRAIL

710.06 Fence Posts and Braces Revise the first Paragraph so that it reads:

“Wood posts shall be of cedar, white oak, or tamarack or other AWPAs approved species, of the diameter or section and length shown on the plans.”

Remove the fourth paragraph which starts “ That portion of wood posts...”.

Revise the paragraph beginning with “Braces shall be of spruce, eastern hemlock ... so that it now reads:

“Braces shall be of spruce, eastern hemlock, Norway pine, pitch pine, or tamarack timbers or other AWPAs approved species, or spruce, cedar, tamarack or other AWPAs approved species round posts of sufficient length to make a diagonal brace between adjacent posts. All wood posts and braces shall be pressure-treated in accordance with AASHTO M 133 and AWPAs U1, UC4A Commodity Specification B: Posts. “

710.07 Guardrail Posts Revise this section so that the first sentence of section a. reads:

“a. Wood posts shall be of Norway pine, southern yellow pine, pitch pine, Douglas fir, red pine, white pine, or eastern hemlock or other AWPAs approved species.”

Revise the next paragraph so that it reads:

Wood posts and offset brackets shall be preservative treated in accordance with the requirements of AASHTO M 133 and AWPAs U1, UC4A Commodity Specification B: Posts.

710.08 Guardrail Hardware Revise this subsection by replacing “AASHTO M 298” with “ASTM B695”

SECTION 711 MISCELLANEOUS BRIDGE MATERIAL

711.06 Stud Shear Connector Anchors and Fasteners Amend this section by deleting it in its entirety and replacing it with:

“Shear connectors shall meet the dimensional tolerances of Figure 9.1 of the ANSI/AASHTO/AWS D1.5 Bridge Welding Code (D1.5 Code). Shear connectors, anchors and fasteners shall meet the material requirements of Section 9 of the D1.5 Code. Shear connectors shall meet the mechanical property requirements of Table 9.1, Type B of the D1.5 Code. Anchors and fasteners shall meet the mechanical property requirements of Table 9.1 of the D1.5 Code, Type A.”

SECTION 712 MISCELLANEOUS HIGHWAY MATERIAL

712.061 Structural Precast Units Amend this section by adding the following sentence to the end of the first paragraph of the Construction subsection:

“Facilities certified by NPCA or PCI shall provide to the Fabrication Engineer a copy of their annual audit to include deficiency reports and corrective actions.”

Revise this section by changing the letter “b” of ASTM C1611 of the Concrete Testing subsection so that it reads:

“b. Air content shall be 5.0% to 8.0%.”

SECTION 713 STRUCTURAL STEEL AND RELATED MATERIAL

Section 713.02 High Strength Bolts

Revise the second sentence of this subsection so that it reads **“Nuts shall meet the requirement of ASTM A563”**. Revise the third sentence of this subsection so that it reads **“Circular and beveled washers shall conform to the requirement of ASTM F436”**.

SECTION 718 TRAFFIC SIGNALS MATERIAL

718.03 Signal Mounting Amend the paragraph beginning with “All trunions, brackets and...” by adding **“For polycarbonate signal heads with more than 3 sections or requiring mounting extensions greater than 12 inches in length, reinforcing plates shall be used to reinforce the housings at the point of attachment.”** to the end of the paragraph.

718.08 Controller Cabinet Revise this subsection by replacing the paragraph beginning with “The cabinet shall be supplied with LED light panels...” on or about page 7-66 with **“The cabinet shall be supplied with white LED light panels which shall automatically illuminate via a door open switch whenever one of the four main cabinet doors are opened for the ground mount cabinet or two main doors for the side of pole cabinet. The ground mounted cabinet shall contain four LED light panels per side totaling eight panels for the cabinet; one panel each at the top and bottom portion of the front side and back side on the Control side and Power/Auxiliary side of the cabinet. Each light panel shall produce a minimum of 250 lumens for a total minimum lumen output of 2000 lumens with all eight panels illuminated. The minimum output per side would be 1000 lumens. The LED panels shall be protected by a clear shatterproof shield. The side of pole mounted cabinet shall contain four light panels; one at the top of the rack assembly and one at the bottom rack assembly on each side of the cabinet.**

A second door open status switch per door shall activate a controller input to log a report event that one of the doors was opened. All door open status switches shall be connected to the same controller input. For the ground mount cabinet, there shall be two switches on each of the four main doors. For the side-of-pole mount cabinet, there shall be two switches on each of the two main doors.”

Revise this subsection by replacing the paragraph beginning with “The cabinet shall be supplied with a generator panel ...” on or about page 7-68 with:

“The cabinet shall be supplied with a generator panel. The generator panel shall consist of a manual transfer switch and a twist-lock connector for generator hookup. The transfer switch knob and twist-lock connector shall be located inside a stainless steel enclosure with a separate lockable door accessed with a Corbin #2 key. The unit shall be mounted on the left, exterior of the control side wall of the ground mount cabinet a minimum of 36” above the surrounding grade and on the lower left side of the pole mounted cabinet. The generator transfer switch shall be a Reliance C30A1N Signa Series or approved equal. “

Revise this subsection by removing the following from the paragraph beginning with “The ground mounted cabinet shall be supplied and installed with an electric service meter socket trim and electrical service disconnect switch ...” on or about page 7-69: **“(removed: thus preventing that space from being used either by equipment supplied as part of the project, or future equipment that would be installed in the rack system. Joe indicated that he would add this language to the detail so it is covered.)”**.

Revise this subsection by replacing the following in the paragraph beginning with “The Contractor shall reconfigure the default user name...” on or around page 7-70; “MaineDOT IT” with **“MaineDOT Traffic Division”**.

In the paragraph beginning with “Tests shall be conducted by the contractor...” on or around page 7-73, amend this subsection by removing **“in the state of Maine and”** after “The facility shall be”.

Amend this Section by adding the following subsection:

718.13 Field Monitoring Unit (FMU) This item of work shall conform to this specification. This item shall consist of furnishing and installing a Field Monitoring Unit (FMU) and software, as well as all needed accessories required for a full and complete installation, including but not limited to power adapters, Ethernet cables, and interface cables, as described herein.

Where applicable, communications from MaineDOT's cloud-based Central Management System (CMS) to the on-street traffic signal controllers shall be made through fiber optic interconnect cable connected back to existing internet connections and/or the Field Monitoring Unit (FMU). The Contractor shall furnish and install all materials necessary for a complete and operational fiber optic interconnection to all project intersections as shown on the plans. All connections to the CMS cloud-based system shall be via a secure VPN network.

The FMU shall be the only remote connection device used by isolated intersections to connect to the cloud-based system. All connections shall be encrypted VPN tunnels. The Contractor shall coordinate all configuration settings with MaineDOT IT and the Engineer.

The FMU central web based interface shall be a separate element from the CMS.

MATERIALS: The materials for this work shall conform to the following requirements:

1. The work under this item specifies the requirements for the FMU. The FMU shall operate independent of the brand/type of intersection controller deployed in the ATC traffic cabinet.
2. The FMU shall conform to the following requirements:
 - 2.1 The FMU shall function correctly between -34 degrees C and +74 degrees C.
 - 2.2 The FMU shall be provided with appropriately rated connectors that allows the FMU to be exchanged by unplugging connectors, without tools.
 - 2.3 The FMU shall monitor and log all ATC Controller and ATC cabinet faults and or alarms.
 - 2.4 The FMU shall be wired directly to the ATC cabinet.
 - 2.5 The FMU shall have an internal cellular modem running at 4G LTE.
 - 2.5.1 The Cellular modem shall be designed to be replaced / upgraded to 5G service when available.
 - 2.6 The FMU shall incorporate an integrated GPS and cell modem.
 - 2.7 The configuration of the FMU shall be accomplished by accessing the internal web server with a browser. It shall be possible to configure the FMU without any special software.

- 2.8 The FMU shall be powered via a standard 120V input power.
- 2.9 The FMU shall allow for the routing of the controller configuration packets to and from the controller (either by Ethernet or serial communications) for any type of controller utilized by the MaineDOT. In this way it shall be possible to configure the controller and utilize the controller specific software to interrogate the controller, and the FMU shall provide the communications pipe which allows this to be accomplished.
- 2.10 The FMU shall, within the size limitations above, include a battery and battery charging/monitoring circuit, to allow the FMU to function correctly even when all power to the intersection has failed. The battery shall continue to power the FMU for a minimum of 5 hours after all power has failed to the intersection.
- 2.11 The FMU shall incorporate an integrated GPS which will allow the FMU to geo-locate itself on the FMU management software map, without configuration.
- 2.12 The FMU shall operate without requiring a static IP address. The only configuration required at the FMU is to enter the URL of where the FMU management software is hosted.
- 2.13 In the event that the cell service is interrupted or is not available, the FMU shall store any events that occur in internal memory and forward these events automatically to the FMU management software when the cell service is restored. In this way, a complete record of events at the device can be maintained even if cell service is interrupted for a period. The system will store 5000 events.
- 2.14 The FMU shall utilize HTTP and HTTPS protocols, and XML data structures, for communication with the FMU management software. In this way the data will be open for future expansion and competition. The use of secret proprietary protocols is not permitted.
- 2.15 The FMU shall include Ethernet communications via an Ethernet Port with RJ45 connector.
- 2.16 The FMU shall include weather proof antennas.

3. Map Display FMU Management Software

- 3.1 The FMU shall include a scrollable, zoomable map display, with the intersections and other monitored devices shown as representative icons on the map. The map shall include the ability to see the intersections using Google Streetview.
- 3.2 The alarm status of the intersection shall be clearly indicated on the icon on the map, so that the user can see at a glance which intersections are in alarm.

- 3.3 The map display shall also include a list of intersections, with the number and priority of alarms indicated on the list. Intersections in high priority alarm shall be moved to the top of the list, followed by medium priority, low priority and then finally by intersections not in alarm.
- 3.4 The icons shall change to be able to clearly indicate if an intersection is offline.
- 3.5 Clicking on the icon on the map shall expose a box with the current parameters of the intersection shown.
- 3.6 The default map display position and zoom shall be configurable by user, so that the user's view will default to show the intersections that the user is responsible for managing.
- 3.7 The map view shall have the ability to show Google traffic overlays on the map.

4. Intersection Detail Display FMU Management Software

- 4.1 It shall be possible to drill down, either from the map icon or from the list, to a device level detail for the intersection, which as a minimum shall display the following parameters:
 - 4.1.1 The alarm status, with priority indicated, and a text description of the alarm (if an alarm is present for this device).
 - 4.1.2 The time since the last communication with the device
 - 4.1.3 The following parameters (real time now values, minimum for the day values, maximum for the day values, and average for the day values)
 - 4.1.3.1 The AC mains voltage (value)
 - 4.1.3.2 The battery back-up voltage (value)
 - 4.1.3.3 The cabinet temperature (value)
 - 4.1.3.4 The cabinet humidity (value)
 - 4.1.3.5 The presence of AC power (OK or Fail)
 - 4.1.3.6 The flashing status of the intersection (OK or Flashing)
 - 4.1.3.7 Stop Time status (OK or Stop Time Active)
 - 4.1.3.8 The cabinet door status (Open or Closed)
 - 4.1.3.9 The intersection fan status (Fan On or Fan off)

4.1.4 It shall be possible to view graphs of each of the value parameters in graphical form, over the recent two-week period. This includes real time graphs of:

4.1.4.1 The AC mains voltage

4.1.4.2 The battery back-up voltage

4.1.4.3 The cabinet temperature

4.1.4.4 The cabinet humidity

5. Diagnostics and Log Display FMU Management Software

5.1 From the device level detail within the FMU management software, it shall be possible to drill down to get the raw data; the error logs; and the communications logs to allow a technician to fault-find problems.

5.2 It shall be possible to filter the logs by Device; by Device Type and/or by Group as well as between dates.

5.3 It shall be possible to print these selected logs to a local printer or a PDF file.

5.4 It shall be possible to export these logs to Excel on the local computer for further analysis.

6. Alarms FMU Management Software

6.1 The FMU management software shall have a comprehensive alarm generation capability

6.2 It shall be possible to configure alarms to be generated on any parameter becoming out of tolerance, including analog values, digital values and enumerated values.

6.3 Alarms shall be configurable to be of Low, High or Critical Priority.

6.4 The alarm priority shall be displayed throughout the FMU management software, on all displays, using color codes such as red-critical; yellow – high; and amber-low to indicate the priority of the alarm.

6.5 The current active alarms shall be accessible for view via an expandable window, to see which alarms are active and when the alarm occurred. The highest priority alarms shall rise to the top of the list.

7. Alerts FMU Management Software

7.1 The FMU management software shall have comprehensive alerting capability, to enable the response personnel to be notified when an abnormal situation has occurred.

- 7.2 It shall be possible to configure alerts to one or more personnel for each alarm. This will cause, as selected, an SMS and/or an email to be sent to the person when an alarm occurs.
- 7.3 The alert shall be configurable to optionally send via email and/or via SMS a message when an alarm clears.
- 7.4 The intention is that the FMU management software provides the alerts to the user in near real time. The SMS and email shall be issued within 30 seconds of the occurrence of event which results in an alert being issued.

8. Hosting and Connectivity and Service FMU / FMU Management Software

- 8.1 The contractor shall supply the FMU with the FMU manufacturers 10 year options for Connectivity and Service, as part of the purchase price. The Connectivity and Service agreement shall include at a minimum:

- 8.1.1 Cellular Connectivity
- 8.1.2 No cellular overage charges
- 8.1.3 Extended warranty on the hardware for the period of the Connectivity and Service Agreement
- 8.1.4 Over-the-air software updates
- 8.1.5 Over-the-air security updates
- 8.1.6 Future Connected Vehicles Service

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

720.12 Wood Sign Posts Revise the first sentence so that it reads:

Wood sign posts shall be rectangular, straight and sound timber, cut from live growing native spruce, red pine, hemlock, cedar trees or other AWPAs approved species, free from loose knots or other structurally weakening defects of importance, such as shake or holes or heart rot.

Revise the third paragraph that starts with “When pressure treated...” so that it reads:

All sign posts shall be pressure-treated in accordance with AASHTO M 133 and AWPAs Standard U1, UC4A, Commodity Specification A: Sawn Products.

SPECIAL PROVISION

Projects funded by the Transportation Alternatives Program (TAP)

Appendix A to Division 100

(REQUIRED CONTRACT PROVISIONS

FEDERAL-AID CONSTRUCTION CONTRACTS)

Make the following changes to Appendix A to Division 100;

SECTION I. GENERAL

Replace the current Section 1, paragraph 4 with the following:

“4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose.”

SECTION IV. DAVIS-BACON AND RELATED ACT PROVISIONS

Replace the second sentence of the first paragraph in Section IV with:

“The requirements apply to all projects.”

APPENDIX A TO DIVISION 100

SECTION 1 - BIDDING PROVISIONS

A. Federally Required Certifications By signing and delivering a Bid, the Bidder certifies as provided in all certifications set forth in this Appendix A - Federal Contract Provisions Supplement including:

- Certification Regarding No Kickbacks to Procure Contract as provided on this page 1 below.
- Certification Regarding Non-collusion as provided on page 1 below.
- Certification Regarding Non-segregated Facilities as provided by FHWA Form 1273, section III set forth on page 21 below.
- "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion" as provided by FHWA Form 1273, section XI set forth on page 32 below.
- "Certification Regarding Use of Contract Funds for Lobbying" as provided by FHWA Form 1273, section XII set forth on page 35 below.

Unless otherwise provided below, the term "Bidder", for the purposes of these certifications, includes the Bidder, its principals, and the person(s) signing the Bid. Upon execution of the Contract, the Bidder (then called the Contractor) will again make all the certifications indicated in this paragraph above.

CERTIFICATION REGARDING NO KICKBACKS TO PROCURE CONTRACT Except expressly stated by the Bidder on sheets submitted with the Bid (if any), the Bidder hereby certifies, to the best of its knowledge and belief, that it has not:

(A) employed or retained for a commission, percentage, brokerage, contingent fee, or other consideration, any firm or person (other than a bona fide employee working solely for me) to solicit or secure this contract;

(B) agreed, as an express or implied condition for obtaining this contract, to employ or retain the services of any firm or person in connection with carrying out the contract, or;

(C) paid, or agreed to pay, to any firm, organization, or person (other than a bona fide employee working solely for me) any fee, contribution, donation, or consideration of any kind for, or in connection with, procuring or carrying out the contract;

By signing and submitting a Bid, the Bidder acknowledges that this certification is to be furnished to the Maine Department of Transportation and the Federal Highway Administration, U.S. Department of Transportation in connection with this contract in anticipation of federal aid highway funds and is subject to applicable state and federal laws, both criminal and civil.

CERTIFICATION REGARDING NONCOLLUSION Under penalty of perjury as provided by federal law (28 U.S.C. §1746), the Bidder hereby certifies, to the best of its knowledge and belief, that:

the Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of competitive bidding in connection with the Contract.

For a related provisions, see Section 102.7.2 (C) of the Standard Specifications - "Effects of Signing and Delivery of Bids" - "Certifications", Section 3 of this Appendix A entitled "Other Federal Requirements" including section XI - "Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion" and section XII. - "Certification Regarding Use of Contract Funds for Lobbying."

B. Bid Rigging Hotline To report bid rigging activities call: **1-800-424-9071**

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

SECTION 2 - FEDERAL EEO AND CIVIL RIGHTS REQUIREMENTS

Unless expressly otherwise provided in the Bid Documents, the provisions contained in this Section 2 of this "Federal Contract Provisions Supplement" are hereby incorporated into the Bid Documents and Contract.

A. Nondiscrimination & Civil Rights - Title VI The Contractor and its subcontractors shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the Department deems appropriate. The Contractor and subcontractors shall comply with Title VI of the Civil Rights Act of 1964, as amended, and with all State of Maine and other Federal Civil Rights laws.

For related provisions, see Subsection B - "Nondiscrimination and Affirmative Action - Executive Order 11246" of this Section 2 and Section 3 - Other Federal Requirements of this "Federal Contract Provisions Supplement" including section II - "Nondiscrimination" of the "Required Contract Provisions, Federal Aid Construction Contracts", FHWA-1273.

B. Nondiscrimination and Affirmative Action - Executive Order 11246 Pursuant to Executive Order 11246, which was issued by President Johnson in 1965 and amended in 1967 and 1978, this Contract provides as follows.

The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be

based upon its efforts to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

Ensure and maintain a working environment free of harassment, intimidations, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all forepersons, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its union have employment opportunities available, and to maintain a record of the organization's responses.

Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.

Provide immediate written notification to the Department's Civil Rights Office when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Design-Builder's efforts to meet its obligations.

Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under B above.

Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligation; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring,

assignment, layoff, termination, or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Forepersons, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractor's and Subcontractors with whom the Contractor does or anticipates doing business.

Direct its recruitment efforts, both orally and written to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above describing the openings, screenings, procedures, and test to be used in the selection process.

Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth, both on the site and in other areas of a Contractor's workforce.

Validate all tests and other selection requirements.

Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

Ensure that all facilities and company activities are non segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction Contractor's and suppliers, including circulation of solicitations to minority and female Contractor associations and other business associations.

Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

C. Goals for Employment of Women and Minorities Per Executive Order 11246, craft tradesperson goals are 6.9% women and .5% minorities employed. However, goals may be adjusted upward at the mutual agreement of the Contractor and the Department. Calculation of these percentages shall not include On-the-Job Training Program trainees, and shall not include clerical or field clerk position employees.

For a more complete presentation of requirements for such Goals, see the federally required document "Goals for Employment of Females and Minorities" set forth in the next 6 pages below.

Start of GOALS FOR EMPLOYMENT OF FEMALES AND MINORITIES
Federally Required Contract Document

§60-4.2 Solicitations

- (d) The following notice shall be included in, and shall be part of, all solicitations for offers and bids on all Federal and federally assisted construction contracts or subcontracts in excess of \$10,000 to be performed in geographical areas designated by the Director pursuant to §60-4.6 of this part (see 41 CFR 60-4.2(a)):

Notice of Requirement for Affirmative Action to Ensure Equal Opportunity (Executive Order 11246)

1. The Offeror's or bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

| | |
|---|------|
| <u>Goals for female participation in each trade</u> | 6.9% |
|---|------|

Goals for minority participation for each trade

Maine

| | |
|----------------|------|
| 001 Bangor, ME | 0.8% |
|----------------|------|

Non-SMSA Counties (Aroostook, Hancock, Penobscot, Piscataquis, Waldo, Washington)

002 Portland-Lewiston, ME

| | |
|---|------|
| SMSA Counties: 4243 Lewiston-Auburn, ME (Androscoggin) | 0.5% |
|---|------|

| | |
|--|------|
| 6403 Portland, ME (Cumberland, Sagadahoc) | 0.6% |
|--|------|

| | |
|---|------|
| Non-SMSA Counties: (Franklin, Kennebec, Knox, Lincoln, Oxford, Somerset, York) | 0.5% |
|---|------|

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non federally involved construction.

The contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be in violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer identification number of the subcontractor, estimated dollar amount of the subcontract; estimated started and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this Notice, and in the Contract resulting from this solicitation, the "covered area" is (insert description of the geographical areas where the contract is to be performed giving the state, county and city, if any).

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)

1. As used in these specifications:

- a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
- b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
- c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department form 941;
- d. "Minority" includes:
 - (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);

- (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of the North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
2. Whenever the Contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
 3. If the contractor, is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors for Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
 4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7 a. through p. of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical areas where the work is being performed. Goals are published periodically in the Federal Register in notice form and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specific.
 5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant, thereto.
 6. In order for the non working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the

apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as expensive as the following:
 - a. Ensure and maintain a working environment free of harassment, intimidation, coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, when possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - b. Establish and maintain a current list of minority and female recruitment sources provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organization's responses.
 - c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment sources or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.
 - d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
 - e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources complied under 7b above.
 - f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific

review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

- g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
- i. Direct its recruitment, efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing prior to the date for the acceptance of applications for apprenticeship or the openings, screening procedures, and tests to be used in the selection process.
- j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on site and in other areas of a Contractor's work force.
- k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
- l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
- m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
- n. Ensure that all facilities and company activities are non segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
- o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of

solicitation to minority and female contractor associations and other business associations.

- p. Conduct a review, at least annually, of all supervisor's adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7 a through p.). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7 a through p. of these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program and reflected in the Contractor's minority and female work force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions take on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, specific minority group of women is underutilized.)
10. The Contractor shall not use the goals and timetables or affirmative action even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if standards to discriminate against any person because of race, color, religion, sex, or national origin.
11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementation regulations by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the

requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.6.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g. mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and location at which the work was performed. Records be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.
15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

End of GOALS FOR EMPLOYMENT OF FEMALES AND MINORITIES
Federally Required Contract Document

D. Section '**D Disadvantaged Business Enterprise (DBE) Requirements**' is removed in its entirety. The DBE material is in:

Section 105.10 EQUAL OPPORTUNITY AND CIVIL RIGHTS.

SECTION 3 - OTHER FEDERAL REQUIREMENTS

Unless expressly otherwise provided in the Bid Documents, the provisions contained in this Section 3 of this "Federal Contract Provisions Supplement" are hereby incorporated into the Bid Documents and Contract.

A. Buy America

If the cost of products purchased for permanent use in this project which are manufactured of steel, iron or the application of any coating to products of these materials exceeds 0.1 percent of the contract amount, or \$2,500.00, whichever is greater, the products shall have been manufactured and the coating applied in the United States. The coating materials are not subject to this clause, only the application of the coating. In computing that amount, only the cost of the product and coating application cost will be included.

Ore, for the manufacture of steel or iron, may be from outside the United States; however, all other manufacturing processes of steel or iron must be in the United States to qualify as having been manufactured in the United States.

United States includes the 50 United States and any place subject to the jurisdiction thereof.

Products of steel include, but are not limited to, such products as structural steel, piles, guardrail, steel culverts, reinforcing steel, structural plate and steel supports for signs, luminaries and signals.

Products of iron include, but are not limited to, such products as cast iron grates.

Application of coatings include, but are not limited to, such applications as epoxy, galvanized and paint.

To assure compliance with this section, the Contractor shall submit a certification letter on its letterhead to the Department stating the following:

“This is to certify that products made of steel, iron or the application of any coating to products of these materials whose costs are in excess of \$2,500.00 or 0.1 percent of the original contract amount, whichever is greater, were manufactured and the coating, if one was required, was applied in the United States.”

B. Materials

a. Convict Produced Materials References: 23 U.S.C. 114(b)(2), 23 CFR 635.417

Applicability: FHWA's prohibition against the use of convict material only applies to Federal-aid highways. Materials produced after July 1, 1991, by convict labor may only be incorporated in a Federal-aid highway construction project if: 1) such materials have been produced by convicts who are on parole, supervised release, or probation from a prison; or 2) such material has been produced in a qualified prison facility, e.g., prison industry, with the amount produced during any 12-month period, for use in Federal-aid projects, not exceeding the amount produced, for such use, during the 12-month period ending July 1, 1987.

Materials obtained from prison facilities (e.g., prison industries) are subject to the same requirements for Federal-aid participation that are imposed upon materials acquired from other sources. Materials manufactured or produced by convict labor will be given no preferential treatment.

The preferred method of obtaining materials for a project is through normal contracting procedures which require the contractor to furnish all materials to be incorporated in the work. The contractor selects the source, public or private, from which the materials are to be obtained (23 CFR 635.407). Prison industries are prohibited from bidding on projects directly (23 CFR 635.112e), but may act as material supplier to construction contractors.

Prison materials may also be approved as State-furnished material. However, since public agencies may not bid in competition with private firms, direct acquisition of materials from a prison industry for use as State-furnished material is subject to a public interest finding with the Division Administrator's concurrence (23 CFR 635.407d). Selection of materials produced by convict labor as State-furnished materials for mandatory use should be cleared prior to the submittal of the Plans Specifications & Estimates (PS&E).

b. Patented/Proprietary Products References: 23 U.S.C. 112, 23 CFR 635.411

FHWA will not participate, directly or indirectly, in payment for any premium or royalty on any patented or proprietary material, specification, or process specifically set forth in the plans and specifications for a project, unless:

- the item is purchased or obtained through competitive bidding with equally suitable unpatented items,
- the STA certifies either that the proprietary or patented item is essential for synchronization with the existing highway facilities or that no equally suitable alternative exists, or
- the item is used for research or for a special type of construction on relatively short sections of road for experimental purposes. States should follow FHWA's procedures for "Construction Projects Incorporating Experimental Features" ([expermnt.htm](https://www.fhwa.dot.gov/procurement/permits/permmt.htm)) for the submittal of work plans and evaluations.

The primary purpose of the policy is to have competition in selection of materials and allow for development of new materials and products. The policy further permits materials and products that are judged equal may be bid under generic specifications. If only patented or proprietary products are acceptable, they shall be bid as alternatives with all, or at least a reasonable number of, acceptable materials or products listed; and the Division Administrator may approve a single source if it can be found that its utilization is in the public interest.

Trade names are generally the key to identifying patented or proprietary materials. Trade name examples include 3M, Corten, etc. Generally, products identified by their brand or trade name are not to be specified without an "or equal" phrase, and, if trade names are used, all, or at least a reasonable number of acceptable "equal" materials or products should be listed. The licensing of several suppliers to produce a product does not change the fact that it is a single product and should not be specified to the exclusion of other equally suitable products.

c. State Preference References: 23 U.S.C. 112, 23 CFR 635.409

Materials produced within Maine shall not be favored to the exclusion of comparable materials produced outside of Maine. State preference clauses give particular advantage to the designated source and thus restrict competition. Therefore, State preference provisions shall not be used on any Federal-aid construction projects.

This policy also applies to State preference actions against materials of foreign origin, except as otherwise permitted by Federal law. Thus, States cannot give preference to in-State material sources over foreign material sources. Under the Buy America provisions, the States are permitted to expand the Buy America restrictions provided that the STA is legally authorized under State law to impose more stringent requirements.

d. State Owned/Furnished/Designated Materials References: 23 U.S.C. 112, 23 CFR 635.407

Current FHWA policy requires that the contractor must furnish all materials to be incorporated in the work, and the contractor shall be permitted to select the sources from which the materials are to be obtained. Exceptions to this requirement may be made when there is a definite finding, by MaineDOT and concurred in by Federal Highway Administration's (FHWA) Division Administrator, that it is in the public interest to require the contractor to use materials furnished by the MaineDOT or from sources designated by MaineDOT. The exception policy can best be understood by separating State-furnished materials into the categories of manufactured materials and local natural materials.

Manufactured Materials When the use of State-furnished manufactured materials is approved based on a public interest finding, such use must be made mandatory. The optional use of State-furnished manufactured materials is in violation of our policy prohibiting public agencies from competing with private firms. Manufactured materials to be furnished by MaineDOT must be acquired through competitive bidding, unless there is a public interest finding for another method, and concurred in by FHWA's Division Administrator.

Local Natural Materials When MaineDOT owns or controls a local natural materials source such as a borrow pit or a stockpile of salvaged pavement material, etc., the materials may be designated for either optional or mandatory use; however, mandatory use will require a public interest finding (PIF) and FHWA's Division Administrator's concurrence.

In order to permit prospective bidders to properly prepare their bids, the location, cost, and any conditions to be met for obtaining materials that are made available to the contractor shall be stated in the bidding documents.

Mandatory Disposal Sites Normally, the disposal site for surplus excavated materials is to be of the contractor's choosing; although, an optional site(s) may be shown in the contract provisions. A mandatory site shall be specified when there is a finding by MaineDOT, with the concurrence of the Division Administrator, that such placement is the most economical or that the environment would be substantially enhanced without excessive cost. Discussion of the mandatory use of a disposal site in the environmental document may serve as the basis for the public interest finding.

Summarizing FHWA policy for the mandatory use of borrow or disposal sites:

- mandatory use of either requires a public interest finding and FHWA's Division Administrator's concurrence,
- mandatory use of either may be based on environmental consideration where the environment will be substantially enhanced without excessive additional cost, and
- where the use is based on environmental considerations, the discussion in the environmental document may be used as the basis for the public interest finding.

Factors to justify a public interest finding should include such items as cost effectiveness, system integrity, and local shortages of material.

C. Standard FHWA Contract Provisions - FHWA 1273

Unless expressly otherwise provided in the Bid Documents, the following “Required Contract Provisions, Federal Aid Construction Contracts”, FHWA-1273, are hereby incorporated into the Bid Documents and Contract.

Cargo Preference Act : Contractor and Subcontractor Clauses. “Use of United States-flag vessels: The contractor agrees—“(1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.”(2) To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.”(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.”(Reorganization Plans No. 21 of 1950 (64 Stat. 1273) and No. 7 of 1961 (75 Stat. 840) as amended by Pub. L. 91-469 (84 Stat. 1036) and Department of Commerce Organization Order 10-8 (38 FR 19707, July 23, 1973)) [42 FR 57126, Nov. 1, 1977]

The Cargo Preference Act requirements apply to materials or equipment that are acquired for a specific Federal-aid highway project. In general, the requirements are not applicable to goods or materials that come into inventories independent of an FHWA funded-contract. For example, the requirements would not apply to shipments of Portland cement, asphalt cement, or aggregates, as industry suppliers and contractors use these materials to replenish existing inventories. In general, most of the materials used for highway construction originate from existing inventories and are not acquired solely for a specific Federal-aid project. However, if materials or equipment are acquired solely for a Federal-aid project, then the Cargo Preference Act requirements apply.”

Start of FHWA 1273 REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS (As revised through October 23, 2023)

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Non-segregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
- XI. Certification Regarding Use of Contract Funds for Lobbying
- XII. Use of United States-Flag Vessels:

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work

performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR Part 230, Subpart A, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal Employment Opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (see 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140, shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action or are substantially involved in such action, will be made fully cognizant of and will implement the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide

sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants /

Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:

The contractor shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors, suppliers, and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

- (1) Withholding monthly progress payments;
- (2) Assessing sanctions;
- (3) Liquidated damages; and/or
- (4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than \$10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway

Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages (29 CFR 5.5)

a. *Wage rates and fringe benefits.* All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act ([29 CFR part 3](#))), the full amount of basic hourly wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act ([40 U.S.C. 3141\(2\)\(B\)](#)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in paragraph 4. of this section. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph 1.c. of this section) and the Davis-Bacon poster (WH-1321) must be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. *Frequently recurring classifications.* (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in [29 CFR part 1](#), a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:

(i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

(ii) The classification is used in the area by the construction industry; and

(iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

c. *Conformance.* (1) The contracting officer must require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is used in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(3) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the contracting officer by email to DBAconformance@dol.gov. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer will, by email to DBAconformance@dol.gov, refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division

under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

d. *Fringe benefits not expressed as an hourly rate.* Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

e. *Unfunded plans.* If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, That the Secretary of Labor has found, upon the written request of the contractor, in accordance with the criteria set forth in § 5.28, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

f. *Interest.* In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. Withholding (29 CFR 5.5)

a. *Withholding requirements.* The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with paragraph

2.a. of this section or Section V, paragraph 3.a., or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its procurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901–3907](#).

3. Records and certified payrolls (29 CFR 5.5)

a. Basic record requirements (1) Length of record retention. All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

(2) Information required. Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

(3) Additional records relating to fringe benefits. Whenever the Secretary of Labor has found under paragraph 1.e. of this section that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act, the contractor must maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

(4) Additional records relating to apprenticeship. Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

b. Certified payroll requirements (1) Frequency and method of submission. The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting

agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(2) Information required. The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (e.g., the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH-347 or in any other format desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division website at <https://www.dol.gov/sites/dolgov/files/WHDL/legacy/files/wh347.pdf> or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

(3) Statement of Compliance. Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

(ii) That each laborer or mechanic (including each helper and apprentice) working on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in [29 CFR part 3](#); and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

(4) Use of Optional Form WH-347. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 will satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(3) of this section.

(5) *Signature.* The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification.* The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under [18 U.S.C. 1001](#) and [31 U.S.C. 3729](#).

(7) *Length of certified payroll retention.* The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents.* The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access* (1) *Required record disclosures and access to workers.* The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements.* If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under [29 CFR part 6](#) any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures.* Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address

of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity (29 CFR 5.5)

a. *Apprentices (1) Rate of pay.* Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits.* Apprentices must be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio.* The allowable ratio of apprentices to journeyworkers on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates.* Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity.* The use of apprentices and journeyworkers under this part must be in conformity with

the equal employment opportunity requirements of Executive Order 11246, as amended, and [29 CFR part 30](#).

c. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeyworkers shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor must insert FHWA-1273 in any subcontracts, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility. a. By entering into this contract, the contractor certifies that neither it nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

c. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, [18 U.S.C. 1001](#).

11. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#); or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#).

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchpersons and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph 1. of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or

mechanic, including watchpersons and guards, employed in violation of the clause set forth in paragraph 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1. of this section.

* \$31 as of January 15, 2023 (See 88 FR 88 FR 2210) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with Section IV paragraph 2.a. or paragraph 3.a. of this section, or both, over claims to those funds by:

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its procurement costs;
- (3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901](#)–3907.

4. Subcontracts. The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the

event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or

d. Informing any other person about their rights under CWHSSA or this part.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and

health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of \$150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>). 2 CFR 180.300, 180.320, and 180.325.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;.

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

3. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contractor). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily

excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

* * * * *

4. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000. 49 CFR Part 20, App. A.

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or

cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS
ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B)**

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

The United States Department of Transportation (USDOT)

Standard Title VI/Non-Discrimination Assurances

DOT Order No. 1050.2A

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

Statutory/Regulatory Authorities

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

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

General Assurances

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

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

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

Specific Assurances

More specifically, and without limiting the above general Assurance, the Recipient agrees with and gives the following Assurances with respect to its Federally assisted **FHWA Program**.

1. The Recipient agrees that each "activity," "facility," or "program," as defined in §§ 21.23(b) and 21.2(e) of 49 C.F.R. § 21 will be (with regard to an "activity") facilitated, or will be (with regard to a "facility") operated, or will be (with regard to a "program") conducted in compliance with all requirements imposed by, or pursuant to the Acts and the Regulations.
2. The Recipient will insert the following notification in all solicitations for bids, Requests For Proposals for work, or material subject to the Acts and the Regulations made in connection with all **FHWA Programs** and, in adapted form, in all proposals for negotiated agreements regardless of funding source:

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

3. The Recipient will insert the clauses of Appendix A and E of this Assurance in every contract or agreement subject to the Acts and the Regulations.
4. The Recipient will insert the clauses of Appendix B of this Assurance, as a covenant running with the land, in any deed from the United States effecting or recording a transfer of real property, structures, use, or improvements thereon or interest therein to a Recipient.
5. That where the Recipient receives Federal financial assistance to construct a facility, or part of a facility, the Assurance will extend to the entire facility and facilities operated in connection therewith.
6. That where the Recipient receives Federal financial assistance in the form, or for the acquisition of real property or an interest in real property, the Assurance will extend to rights to space on, over, or under such property.
7. That the Recipient will include the clauses set forth in Appendix C and Appendix D of this Assurance, as a covenant running with the land, in any future deeds,

leases, licenses, permits, or similar instruments entered into by the Recipient with other parties:

- a. for the subsequent transfer of real property acquired or improved under the applicable activity, project, or program; and
 - b. for the construction or use of, or access to, space on, over, or under real property acquired or improved under the applicable activity, project, or program.
8. That this Assurance obligates the Recipient for the period during which Federal financial assistance is extended to the program, except where the Federal financial assistance is to provide, or is in the form of, personal property, or real property, or interest therein, or structures or improvements thereon, in which case the Assurance obligates the Recipient, or any transferee for the longer of the following periods:
 - A. the period during which the property is used for a purpose for which the Federal financial assistance is extended, or for another purpose involving the provision of similar services or benefits; or
 - b. the period during which the Recipient retains ownership or possession of the property.
9. The Recipient will provide for such methods of administration for the program as are found by the Secretary of Transportation or the official to whom he/she delegates specific authority to give reasonable guarantee that it, other recipients, sub-recipients, sub-grantees, contractors, subcontractors, consultants, transferees, successors in interest, and other participants of Federal financial assistance under such program will comply with all requirements imposed or pursuant to the Acts, the Regulations, and this Assurance.
10. The Recipient agrees that the United States has a right to seek judicial enforcement with regard to any matter arising under the Acts, the Regulations, and this Assurance.

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

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

Maine Department of Transportation
Bruce Van Note, Commissioner
(Name of Recipient)

By: 
(Signature of Authorized Official)

Dated: 8/30/24

APPENDIX A

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

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

- a. withholding payments to the contractor under the contract until the contractor complies; and/or
 - b. cancelling, terminating, or suspending a contract, in whole or in part.
6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

APPENDIX B

CLAUSES FOR DEEDS TRANSFERRING UNITED STATES PROPERTY

The following clauses will be included in deeds effecting or recording the transfer of real property, structures, or improvements thereon, or granting interest therein from the United States pursuant to the provisions of Assurance 4:

NOW, THEREFORE, the U.S. Department of Transportation as authorized by law and upon the condition that the **Maine Department of Transportation** will accept title to the lands and maintain the project constructed thereon in accordance with all requirements imposed by Title 49, Code of Federal Regulations, Department of Transportation, subtitle A, Office of the Secretary, part 21, Non-discrimination in Federally-assisted Programs of the Department of Transportation pertaining to and effectuating the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252; 42 U.S.C. § 2000d to 2000d-4), the Regulations for the Administration of **Federal Highway Administration (FHWA) Program**, and the policies and procedures prescribed by the **FHWA** of the U.S. Department of Transportation in accordance and in compliance with all requirements imposed by Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation pertaining to and effectuating the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252; 42 U.S.C. § 2000d to 2000d-4), does hereby remise, release, quitclaim and convey unto the **Maine Department of Transportation** all the right, title and interest of the U.S. Department of Transportation in and to said lands described in Exhibit A attached hereto and made a part hereof.

(HABENDUM CLAUSE)

TO HAVE AND TO HOLD said lands and interests therein unto **Maine Department of Transportation** and its successors forever, subject, however, to the covenants, conditions, restrictions and reservations herein contained as follows, which will remain in effect for the period during which the real property or structures are used for a purpose for which Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits and will be binding on the **Maine Department of Transportation**, its successors and assigns.

The **Maine Department of Transportation**, in consideration of the conveyance of said lands and interests in lands, does hereby covenant and agree as a covenant running with the land for itself, its successors and assigns, that (1) no person will on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination with regard to any facility located wholly or in part on, over, or under such lands hereby conveyed [,] [and]* (2) that the **Maine Department of Transportation** will use the lands and interests in lands and interests in lands so conveyed, in compliance with all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non- discrimination in Federally-assisted programs of the U.S. Department of Transportation, Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations and Acts may be amended[, and (3) that in the event of breach of any of the above-mentioned non-discrimination conditions, the Department will have a right to enter or re-enter said lands and facilities on said land, and that above described land and facilities will thereon revert to and vest in and become the absolute property of the U.S. Department of Transportation

and its assigns as such interest existed prior to this instruction].*

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

APPENDIX C

CLAUSES FOR TRANSFER OF REAL PROPERTY ACQUIRED OR IMPROVED UNDER THE ACTIVITY, FACILITY, OR PROGRAM

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

- A. The (grantee, lessee, permittee, etc. as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree [in the case of deeds and leases add "as a covenant running with the land"] that:
 - 1. In the event facilities are constructed, maintained, or otherwise operated on the property described in this (deed, license, lease, permit, etc.) for a purpose for which a U.S. Department of Transportation activity, facility, or program is extended or for another purpose involving the provision of similar services or benefits, the (grantee, licensee, lessee, permittee, etc.) will maintain and operate such facilities and services in compliance with all requirements imposed by the Acts and Regulations (as may be amended) such that no person on the grounds of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities.
- B. With respect to licenses, leases, permits, etc., in the event of breach of any of the above Non-discrimination covenants, **Maine Department of Transportation** will have the right to terminate the (lease, license, permit, etc.) and to enter, re-enter, and repossess said lands and facilities thereon, and hold the same as if the (lease, license, permit, etc.) had never been made or issued.*
- C. With respect to a deed, in the event of breach of any of the above Non-discrimination covenants, the **Maine Department of Transportation** will have the right to enter or re-enter the lands and facilities thereon, and the above described lands and facilities will there upon revert to and vest in and become the absolute property of the **Maine Department of Transportation** and its assigns.*

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

APPENDIX D

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

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

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

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

APPENDIX E

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

Pertinent Non-Discrimination Authorities:

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

compliance with Title VI, you must take reasonable steps to
-ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);

- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).



Environmental Summary Sheet

WIN: 25277.00
Town: Skowhegan
CPD Team Leader: Danielle Tetreau
ENV Field Contact: Valerie Derosier

Date Submitted: 6/4/2024

NEPA Complete: Programmatic Categorical Exclusion (CE) 23 CFR 771.117.c.3 issued on 12/13/2023

Section 106

Review Complete: SHPO Concurrence No adverse effect Approved 11/23/2023

Section 106 Resources: **present – see SP 105**

NR Listed: 66 Elm Street Station 27+50 to 28+75 Right

NR Eligible: MCS Library Station 14+04 to 14+50 Right

Historic District Station 17+50 to 33+00 Left and 26+50 to 33+50 Right

Section 4(f) and 6(f)

Section 4(f)

Review Complete - Temporary occupancy

Section 6(f)

Review Complete - No properties, no takes

Maine Department of Inland Fisheries and Wildlife

Not Applicable

Timing Window: Not Applicable

Section 7

Species of Concern: **northern long-eared bat:** No Effect - FHWA Programmatic approved 9/28/2023
See SP 105

Essential Fish Habitat

No work in mapped EFH proposed.

Maine Department of Agriculture, Conservation, and Forestry

Public Lands, Submerged Land Lease: Not Applicable

Maine Land Use Planning Commission: Not Applicable

Maine Department of Environmental Protection

Not Applicable – no resource impacts

Army Corps of Engineers: Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act.

Not Applicable - no resource impacts

Stormwater Review

Review Complete - N/A -

Hazardous Material Review

Review complete – no concerns



Special Provisions Required

Standard Specification 656-Erosion Control Plan
Special Provision 105-Environmental Requirements

N/A ☐

N/A ☐

Applicable ☒

Applicable ☒